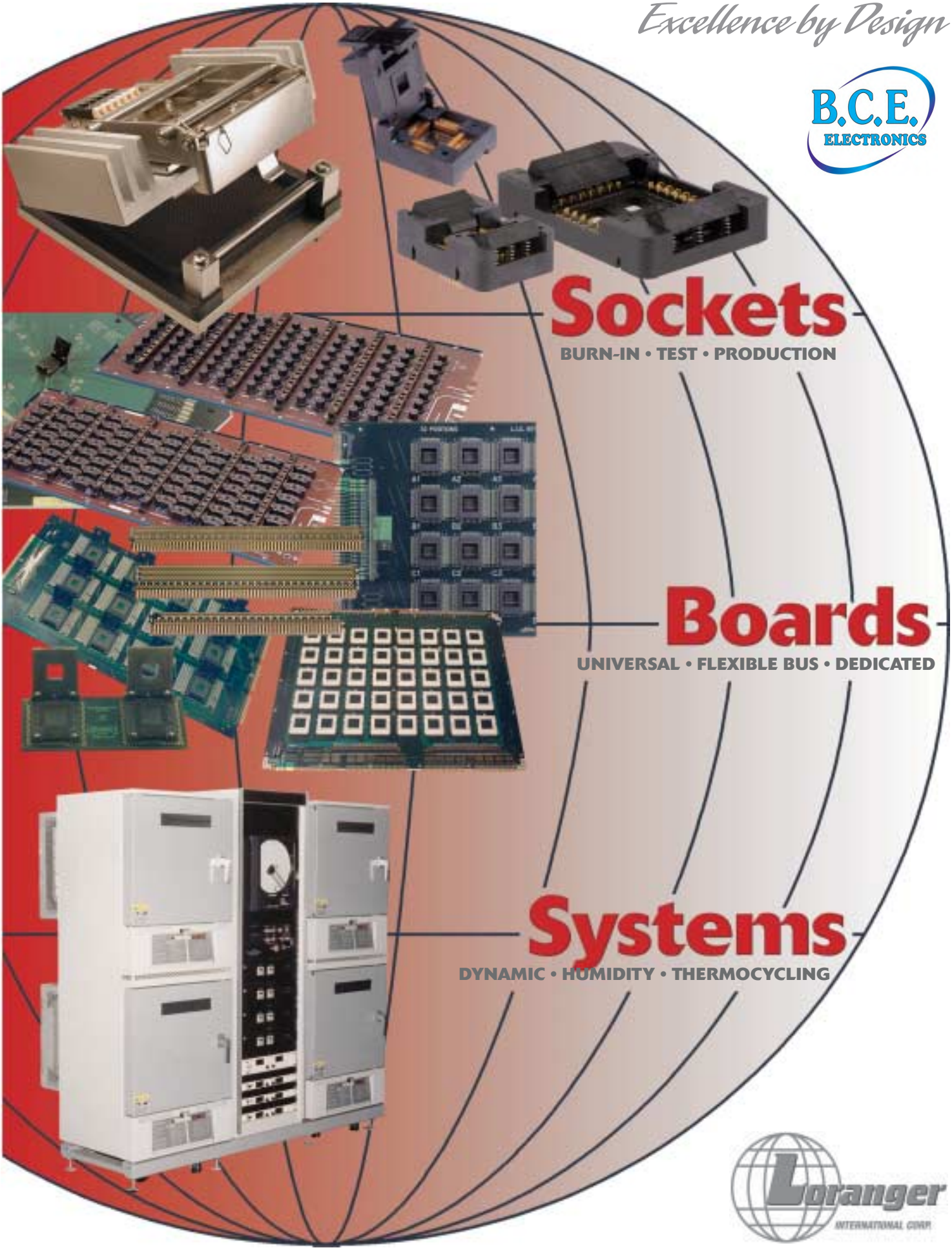
Excellence by Design

B.C.E. ELECTRONICS



Sockets

BURN-IN • TEST • PRODUCTION

Boards

UNIVERSAL • FLEXIBLE BUS • DEDICATED

Systems

DYNAMIC • HUMIDITY • THERMOCYCLING

Loranger INTERNATIONAL CORP.

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"Your Complete Burn-in Source for Sockets, Boards and Systems"

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Best Selection of Fine Pitch Sockets Including QFN

Design Features

**** Loranger manufactures more than 3,000 sockets including CSP, BGA, High-Power, LGA, SOIC, TO and over 800 QFN designs***

**** Loranger SMT and PTH contacts are available for pitches of 0.25mm and larger, and for contact pad/bump sizes of 0.20mm and larger***

**** Loranger offers socket features that include: Open-Top, Clamshell, Kelvin, Double Duty Kelvin, 50 Ohm termination, heat sinks, heaters, and RTDs***

**** Loranger offers custom burn-in boards and environmental systems***

Visit us at www.loranger.com for additional information.
We look forward to serving you!

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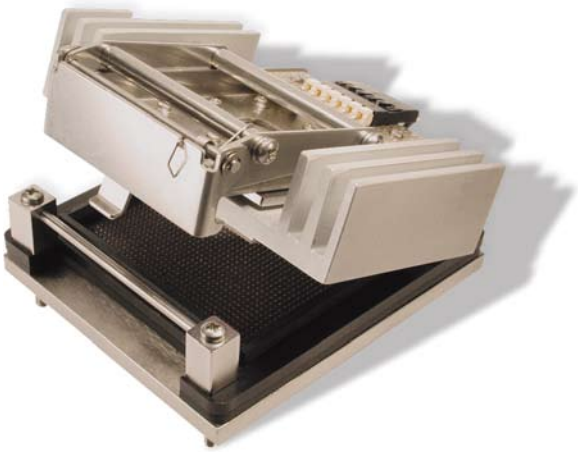
QFN Socket Family

Design Features

- *Loranger Standard and APS Contacts Available for Pad Pitches of 0.25 mm and Greater*
- *Depth-Controlled Wiping Contact with Compliant Cover*
- *Accurate, Tightly-Controlled Package Fit*
- *Zero-Insertion-Force*
- *Open Top and Clam Shell Socket Designs*
- *Optional Case Contacts and Bottom Mounted Heat Sinks*

SmartSocket™ with Heat Sinks, Heaters, Local Temperature Sensing, and Logic Circuits for Local Control



Design Features

- *Heatsink Cover Dissipates Heat from Package*
- *Pitches of 0.25mm and Up*
- *Optional Package Temperature Sensor (RTD or Thermocouple)*
- *Optional Socket Heater to Stabilize Package Temperature*
- *Proven Contact Design*
- *SMT and Efficient Size for High Board Densities*
- *Package Aligns Quickly in Socket*
- *Fast Delivery in High Quantities*

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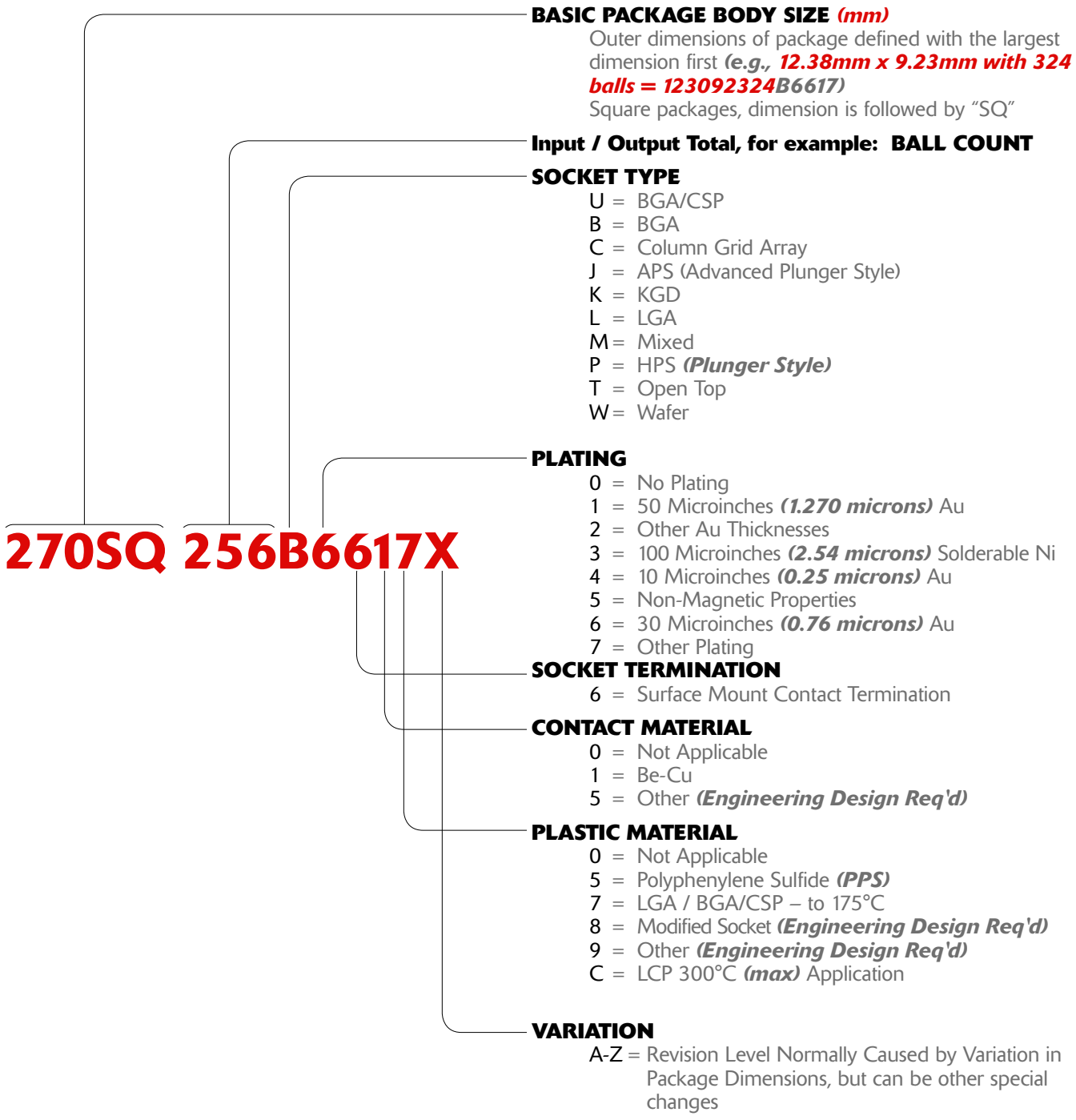
Part Number Designations

For BGA/CSP & LGA Sockets Only



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Part Number Designations

For Other Sockets

02748-161-6217

SOCKET FAMILY

NUMBER OF DEVICE LEADS

A = 10
B = 11
C = 12
D = 13
E = 14
F = 15
G = 16
H = 17

For numbers over 99, use a letter in Position #5, starting with "A" = 100
Example: C8 = 128
D0 = 130

MECHANICAL MOUNTING

1 = Not Applicable
2 = Mechanical Mounting Available

PLATING

0 = No Plating
1 = 50 microinches ***(1.27 microns)*** Au
2 = Other Au Thicknesses
3 = 100 microinches ***(2.54 microns)*** Solderable Ni
4 = 10 microinches ***(0.254 microns)*** Au
5 = Non-Magnetic Properties
6 = 30 microinches ***(0.762 microns)*** Au
7 = Other Plating

SOCKET TERMINATION

0 = Not Applicable
1 = 1/2" Extended Contact
2 = Printed Circuit Contact
3 = Other ***(Engineering Design Req'd)***
4 = Studs
6 = Surface-Mount Termination

CONTACT MATERIAL

0 = Not Applicable
1 = Beryllium-Copper ***(Be-Cu)*** Standard Material
2 = Beryllium-Nickel ***(Be-Ni)*** Special Order, Contact Sales
4 = Phosphor Bronze Special Order, Contact Sales
5 = Spinodal Special Order, Contact Sales
6 = Other ***(Engineering Design Req'd)***

PLASTIC MATERIAL

0 = Not Applicable
5 = Polyphenylene Sulfide ***(PPS)***
7 = Mixed Plastics
8 = Modified Socket ***(Engineering Design Req'd)***
9 = Other (Engineering Design Req'd)
C = LCP 300°C ***(max)*** application

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Information given herein is believed to be accurate but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied, by Loranger International Corporation.

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QFN Sockets

Design Features

- *Contact Pitches of 0.25mm and Greater*
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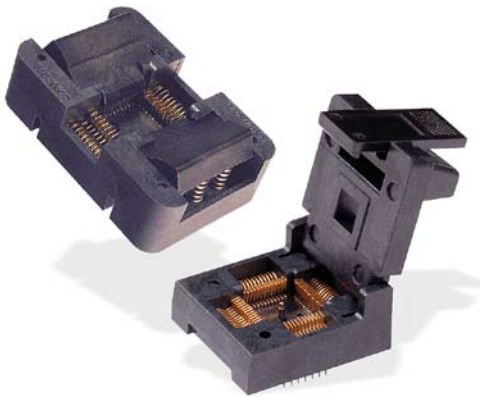
- *Accurate, Tightly-controlled Package Fit*
- *Zero-insertion-force*
- *Loranger "Double Duty Kelvin" contacts available*
- *Center Pad Contacts and Bottom Mounted Heat Sinks or "Heat Pipes" Available*



Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.350	1.00	1.00	6	3 on 2	0.35	QFN	No	ClamShell	1.050	0.750	0.536	010SQ 006J6617
0.350	1.00	1.00	6	3 on 2	0.46	QFN	No	ClamShell	1.050	0.750	0.425	010SQ 006J6618A
0.350	1.00	1.00	6	3 on 2	0.37	QFN	No	ClamShell	1.030	0.750	0.425	010SQ 006J6618B
0.350	1.00	1.00	6	3 on 2	0.39	QFN	No	ClamShell	1.030	0.750	0.425	010SQ 006J6618C
0.350	1.40	1.00	8	4 on 2	0.37	DFN	No	ClamShell	1.050	0.750	0.535	014010008J6617
0.400	1.20	1.00	6	3 on 2	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03940 061 6217
0.400	1.20	1.00	6	3 on 2	0.50	QFN	No	ClamShell	0.770	0.510	0.710	03940 061 6218A
0.400	1.20	1.10	6	3 on 2	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03942 061 X217
0.400	1.20	1.20	7	3 on 2 plus 1	0.37	DFN	No	ClamShell	1.050	0.750	0.530	012SQ 007J6617
0.400	1.30	2.00	7	3 on 2 plus 1	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03940 071 6217
0.400	1.40	1.40	8	3 on 2,1 on 2	0.55	QFN	No	ClamShell	1.050	0.750	0.530	014SQ 008J6617
0.400	1.40	1.40	8	3 on 2,1 on 2	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03941 081 6217
0.400	1.40	1.20	8	3 on 2,1 on 2	0.50	QFN	No	ClamShell	0.770	0.510	0.720	03942 081 6217
0.400	1.40	1.80	10	3 on 2,2 on 2	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03940 101 6218A
0.400	1.50	1.50	8	3 on 2, 1 on 2	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03940 081 6217
0.400	1.50	1.50	9	4 on 2 plus 1	0.45	QFN	No	ClamShell	1.050	0.750	0.530	015SQ 009J6618C
0.400	1.60	1.30	10	3 on 2,2 on 2	0.55	QFN	No	ClamShell	1.050	0.750	0.530	016013010J6617
0.400	1.70	1.35	8	4 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.530	017013008J6617
0.400	1.80	2.20	8	4 on 2	0.45	DFN	No	ClamShell	1.050	0.750	0.530	018022008J6617
0.400	1.80	1.40	10	3 on 2,2 on 2	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03940 101 6217
0.400	1.80	1.40	10	3 on 2,2 on 2	0.50	QFN	No	ClamShell	0.770	0.510	0.710	03940 101 6218B
0.400	1.80	1.40	10	3 on 2,2 on 2	0.85	QFN	No	ClamShell	0.770	0.510	0.710	03940 101 6218D
0.400	1.80	1.80	12	4 on 2, 2 on 2	0.50	QFN	No	ClamShell	0.770	0.510	0.710	03941 121 X217
0.400	2.00	2.00	9	4 on 2 plus 1	0.45	QFN	No	ClamShell	1.050	0.750	0.530	020SQ 009J6617
0.400	2.00	2.00	10	5 on 2	0.56	QFN	No	ClamShell	0.770	0.510	0.710	03940 111 6218A
0.400	2.00	1.40	12	5 on 2,1 on 2	0.35	QFN	No	ClamShell	1.050	0.750	0.530	020014012J6618A
0.400	2.00	2.00	12	4 on 2, 2 on 2	0.55	DFN	No	ClamShell	1.050	0.750	0.530	020SQ 012J6617
0.400	2.00	2.00	13	3 on 4 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	020SQ 013J6617
0.400	2.00	2.00	13	3 on 4 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.530	020SQ 013J6618A
0.400	2.00	2.00	13	3 on 4 plus 1	0.46	QFN	No	ClamShell	0.770	0.510	0.710	03940 131 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	2.00	2.00	14	4 on 2,3 on 2	0.55	QFN	No	ClamShell	1.050	0.750	0.530	020SQ 014J6618B
0.400	2.20	2.20	11	5 on 2 plus 1	0.55	MLP	Yes	ClamShell	0.810	0.510	0.740	04740 111 6217
0.400	2.20	1.40	12	3 on 4	0.50	QFN	No	ClamShell	0.770	0.510	0.710	03940 121 6217
0.400	2.30	2.30	10	5 on 2	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03941 111 6218A
0.400	2.30	2.30	19	5 on 2, 4 on 2 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.530	023SQ 019J6617
0.400	2.50	2.50	13	6 on 2 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.530	025SQ 013J6617
0.400	2.50	2.50	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	025SQ 013J6618B
0.400	2.50	2.50	14	4 on 2,3 on 2	0.55	QFN	No	ClamShell	1.050	0.750	0.550	025SQ 014J6617
0.400	2.50	2.00	16	5 on 2,3 on 2	0.55	QFN	No	ClamShell	1.050	0.750	0.530	025020016J6617
0.400	2.50	2.50	17	4 on 4, plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.550	025SQ 017J6617
0.400	2.60	1.80	16	4 on 4	0.50	QFN	No	ClamShell	1.050	0.750	0.550	026018016J6617
0.400	2.60	1.80	16	4 on 4	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03940 171 6217
0.400	2.60	1.80	16	4 on 4	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03940 171 6218B
0.400	2.60	1.80	16	4 on 4	0.50	QFN	No	ClamShell	0.770	0.510	0.710	03940 171 6218C
0.400	3.00	2.50	13	6on1, 2on1, 5on1	0.90	QFN	No	ClamShell	1.050	0.750	0.530	030025013J6617
0.400	3.00	3.00	13	6 on 2 plus 1	0.75	QFN	Yes	ClamShell	0.810	0.510	0.740	03941 131 6217
0.400	3.00	2.00	15	7 on 2, plus 1	0.75	DFN	No	ClamShell	1.050	0.750	0.530	030020015J6617
0.400	3.00	3.00	15	7 on 2 plus 1	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03940 151 6217
0.400	3.00	3.00	15	7 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03940 151 X218B
0.400	3.00	2.00	17	5 on 2,3 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	030020017J6617
0.400	3.00	2.00	17	7 on 2, 1 on 2,	0.75	QFN	No	ClamShell	1.050	0.750	0.530	030020017J6618B
0.400	3.00	2.00	19	6 on 2, 3 on 2 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.530	030020019J6617
0.400	3.00	2.00	19	7 on 2, 2 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	030020019J6618A
0.400	3.00	3.00	21	5 on 4 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 021J6617
0.400	3.00	3.00	21	5 on 4	0.60	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 021J6618A
0.400	3.00	3.00	24	6 on 4	0.85	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 024J6617
0.400	3.00	3.00	25	6 on 4 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 025J6617
0.400	3.30	1.35	17	8 on 2 plus 1	0.75	TDFN	No	ClamShell	1.050	0.750	0.550	033013017J6617
0.400	3.30	1.35	17	8 on 2 plus 1	0.75	TDFN	No	ClamShell	1.050	0.750	0.550	033013017J6618A
0.400	3.40	2.50	24	6 on 4	0.50	QFN	No	ClamShell	1.050	0.750	0.530	034025024J6617
0.400	3.50	2.00	19	8 on 2, 1 on 2,	0.75	QFN	No	ClamShell	1.050	0.750	0.530	035020019J6617
0.400	3.80	3.00	28	8 on 2, 5 on 2,	0.75	QFN	No	ClamShell	1.050	0.750	0.530	038030028J6617
0.400	4.00	2.00	21	9 on 2, 1 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.530	040020021J6617
0.400	4.00	3.00	25	7 on 2,5 on 2 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.530	040030025J6617
0.400	4.00	4.00	29	7 on 4 plus 1	0.876	QFN	No	ClamShell	0.770	0.600	0.710	03940 291 6217
0.400	4.00	4.00	29	7 on 4 plus 1	0.750	QFN	No	ClamShell	0.770	0.600	0.710	03940 291 6218B
0.400	4.00	4.00	29	7 on 4 plus 1	0.600	QFN	No	ClamShell	0.770	0.600	0.710	03940 291 X218C
0.400	4.00	4.00	29	7 on 4 plus 1	1.150	QFN	No	ClamShell	0.770	0.600	0.710	03940 291 X218D
0.400	4.00	3.50	29	9 on 2,5 on 2 plus 1	0.50	QFN	No	ClamShell	1.050	0.750	0.530	040035029J6617
0.400	4.00	4.00	29	7 on 4 plus 1	0.75	QFN	No	Clamshell	1.050	0.750	0.530	040SQ 029J6618A
0.400	4.00	4.00	29	7 on 4 plus 1	0.55	QFN	No	Clamshell	1.050	0.750	0.530	040SQ 029J6618C
0.400	4.00	4.00	33	8 on 4	0.75	QFN	No	Clamshell	1.050	0.750	0.530	040SQ 033J6617

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	4.50	4.00	35	9 on 2, 8 on 2 plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.530	045040035J6617
0.400	4.50	4.00	35	9 on 2, 8 on 2 plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.530	045040035J6618A
0.400	5.00	4.00	25	5 on 2,7 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	050040025J6617
0.400	5.00	3.00	31	10 on 2, 5 on 2	0.85	QFN	No	ClamShell	1.050	0.750	0.530	050030031J6617
0.400	5.00	4.00	33	9 on 2,7 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	050040033J6617
0.400	5.00	4.00	33	9 on 2,7 on 2 plus 1	0.85	QFN	No	ClamShell	1.050	0.750	0.530	050040033J6618B
0.400	5.00	4.00	35	10 on 2,7 on 2	0.90	QFN	No	ClamShell	1.050	0.750	0.530	050040035J6617
0.400	5.00	5.00	37	9 on 4 plus 1	0.750	QFN	No	ClamShell	0.770	0.600	0.710	03940 371 6217
0.400	5.00	5.00	37	9 on 4 plus 1	0.450	QFN	No	ClamShell	0.770	0.600	0.710	03940 371 6218B
0.400	5.00	5.00	41	10 on 4, plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	050SQ 041J6617
0.400	5.50	5.50	76	11 on 4,10 on 2,6	0.80	QFN	No	ClamShell	1.050	0.750	0.530	055SQ 076J6617
0.400	6.00	3.00	33	11 on 2, 5 on 2,	0.80	QFN	No	ClamShell	1.050	0.750	0.530	060030033J6617
0.400	6.00	6.00	49	12 on 4, plus 1	0.55	QFN	No	ClamShell	0.920	0.710	0.710	03940 531 X218C
0.400	6.00	6.00	53	12 on 4,1 each	0.90	QFN	No	ClamShell	0.920	0.710	0.710	03940 531 6217
0.400	6.00	6.00	53	12 on 4,1 each	0.90	QFN	No	ClamShell	0.920	0.710	0.710	03940 531 6218B
0.400	6.00	6.00	85	Interstitial 12 on 4, 7	0.75	QFN	No	ClamShell	1.050	0.750	0.530	060SQ 085J6617
0.400	6.50	4.50	47	14 on 2, 9 on 2	0.85	QFN	No	ClamShell	1.050	0.750	0.530	065045047J6617
0.400	7.00	7.00	65	One Complete	0.85	QFN	No	ClamShell	1.050	0.750	0.530	070SQ 065J6617
0.400	7.20	7.20	53	13 on 4 plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.530	072SQ 053J6617
0.400	8.00	8.00	69	17 on 4 plus 1	0.90	QFN	No	ClamShell	0.920	0.710	0.710	03940 691 6217
0.400	8.00	8.00	69	17 on 4, plus 1	0.85	QFN	No	ClamShell	1.050	0.750	0.530	080SQ 069J6617
0.400	8.00	8.00	70	17 on 4 plus 2	0.85	QFN	No	ClamShell	0.920	0.710	0.710	03940 691 6218A
0.400	8.90	5.00	45	22 on 2, plus 1	0.85	QFN	No	ClamShell	1.050	0.750	0.530	089050045J6617
0.400	9.00	5.00	61	20 on 2,10 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.530	090050061J6617
0.400	9.00	7.00	65	19 on 2,13 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.530	090070065J6617
0.400	9.00	9.00	77	19 on 4 plus 1	0.85	CSP	No	ClamShell	0.920	0.710	0.710	03940 771 6217
0.400	10.00	10.00	89	22 on 4 plus 1	0.85	CSP	No	ClamShell	1.000	0.840	0.710	03940 891 6217
0.400	10.00	10.00	89	22 on 4 plus 1	0.85	QFN	No	ClamShell	1.000	0.840	0.710	03940 891 6218A
0.400	10.00	10.00	89	22 on 4 plus 1	0.75	QFN	No	ClamShell	1.000	0.840	0.710	03940 891 6218B
0.400	10.00	10.00	89	22 on 4	0.85	QFN	No	ClamShell	1.470	1.050	0.600	100SQ 089J6617
0.400	10.00	10.00	222	Interstitial 3 rows on	0.90	QFN	No	ClamShell	1.050	0.750	0.535	100SQ 222J6617
0.400	11.43	11.43	10	3 on 2,2 on 2	2.51	QFN	No	ClamShell	1.230	0.940	0.740	03712 111 6217
0.400	12.00	9.00	88	19 on 2, 25 on 2,	0.85	DFN	No	ClamShell	1.470	1.050	0.600	120090089J6617
0.400	12.00	9.00	89	19 on 2, 25 on 2,	0.85	DFN	No	ClamShell	1.470	1.050	0.600	120090089J6618A
0.400	12.00	12.00	108	27 on 4	0.85	QFN	No	ClamShell	1.470	1.050	0.600	120SQ 109J6618B
0.400	12.00	12.00	108	27 on 4	0.85	MLF2	No	ClamShell	1.470	1.050	0.535	120SQ 144J6618E
0.400	12.00	12.00	109	27 on 4 plus 36	0.85	MLF2	No	ClamShell	1.470	1.050	0.535	120SQ 109J6617
0.400	16.38	11.05	20	5 on 4	3.10	QFN	No	ClamShell	1.230	0.940	0.740	03712 211 6217
0.400	22.48	11.05	26	5 on 2,6 on 1,10	3.10	QFN	No	ClamShell	1.500	0.940	0.740	03712 261 6217
0.450	2.00	2.00	5	4 on 1 plus 1	0.75	QFN	Yes	ClamShell	0.810	0.510	0.740	04712 051 6217
0.450	2.00	2.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	1.030	0.510	0.740	04712 091 6218A
0.450	2.00	2.00	9	4 on 2 plus 1	0.55	QFN	Yes	ClamShell	1.030	0.510	0.740	04712 091 6218B

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.450	2.00	2.00	9	4 on 2 plus 1	0.75	QFN	Yes	ClamShell	1.030	0.510	0.740	04712 091 6218C
0.450	2.80	2.50	17	6 on 2,3 on 1,2 on 1	0.85	QFN	No	ClamShell	0.770	0.510	0.710	03946 171 6217
0.450	3.00	2.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03945 091 6217
0.450	3.00	3.00	12	6 on 2	0.75	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 121 6218A
0.450	3.00	2.00	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03945 131 6217
0.450	3.00	3.00	13	6 on 2 plus 1	0.50	QFN	No	ClamShell	0.770	0.510	0.710	03946 131 6217
0.450	3.00	3.00	13	6 on 2 plus 1	0.60	QFN	No	ClamShell	0.770	0.510	0.710	03946 131 6218B
0.450	3.00	3.00	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03946 131 6218C
0.450	3.00	3.00	13	6 on 2 plus 1	0.80	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 131 6217
0.450	3.00	3.00	13	6 on 2 plus 1	0.95	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 131 6218B
0.450	3.00	3.00	13	6 on 2 plus 1	0.75	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 131 6218C
0.450	3.00	3.00	13	6 on 2 plus 1	0.90	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 131 6218D
0.450	3.20	2.50	19	5 on 2, 4 on 2,	0.95	QFN	No	ClamShell	1.050	0.750	0.530	032025019J6618B
0.450	3.20	2.50	21	7 on 2, 3 on 2,	0.90	QFN	No	ClamShell	1.050	0.750	0.445	032025021J6617
0.450	4.00	4.00	16	8 on 2	0.75	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 171 6218A
0.450	4.00	3.00	17	8 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03945 171 6217
0.450	4.00	4.00	17	8 on 2 plus 1	0.75	QFN	Yes	ClamShell	1.030	0.510	0.770	04712 171 6217
0.450	4.00	4.00	29	7 on 4 plus 1	0.75	QFN	No	Clamshell	1.050	0.750	0.530	040SQ 029J6617
0.450	4.00	4.00	29	7 on 4 plus 1	0.90	QFN	No	Clamshell	1.050	0.750	0.530	040SQ 029J6618B
0.475	2.50	2.50	17	5 on 2, 3 on 2 plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.530	025SQ 017J6618A
0.480	0.80	0.80	5	2 x 2, plus 1	0.37	DFN	No	ClamShell	1.050	0.750	0.450	008SQ 010J6617
0.500	1.00	1.00	6	2 on 2,1 on 2	0.45	QFN	No	ClamShell	1.050	0.750	0.530	010SQ 012J6617
0.500	1.20	1.20	4	2 on 2 Dual	0.75	DFN	No	ClamShell	1.050	0.750	0.450	012SQ 008J6617
0.500	1.20	1.60	5	2 on 2,plus 1 Dual	0.55	DFN	No	ClamShell	1.050	0.750	0.450	012016010J6617
0.500	1.30	1.00	4	2 on 2 Dual	0.50	QFN	No	ClamShell	0.810	0.510	0.740	03723 081 6217
0.500	1.30	2.00	7	3 on 2 plus 1	0.45	QFN	No	ClamShell	1.050	0.750	0.440	020013007J6617
0.500	1.40	1.00	6	3 on 2	0.39	DFN	Yes	ClamShell	0.810	0.510	0.740	04713 061 X217
0.500	1.45	1.00	6	3 on 2 Dual	0.50	QFN	No	ClamShell	0.810	0.510	0.740	03732 121 6217
0.500	1.50	1.00	6	3 on 2	0.75	QFN	No	ClamShell	0.760	0.510	0.740	03732 061 6217
0.500	1.50	1.00	6	3 on 2	0.50	QFN	No	ClamShell	0.810	0.510	0.740	03732 061 X218A
0.500	1.50	1.20	6	3 on 2	0.82	QFN	No	ClamShell	0.810	0.510	0.740	03733 061 6217
0.500	1.50	1.20	6	3 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03733 061 6218A
0.500	1.50	1.50	6	3 on 2	0.75	QFN	Yes	ClamShell	0.810	0.510	0.740	03743 061 6217
0.500	1.50	1.50	7	3 on 2 plus 1	0.46	QFN	No	ClamShell	1.050	0.750	0.440	015SQ 007J6617
0.500	1.50	1.50	8	3 on 2,1 on 2	0.55	QFN	No	ClamShell	1.050	0.750	0.450	015SQ 008J6617
0.500	1.50	1.50	8	3 on 2,1 on 2	0.37	QFN	No	ClamShell	1.050	0.750	0.445	015SQ 008J6618A
0.500	1.60	1.20	6	3 on 2	0.55	SOT-563	No	ClamShell	1.050	0.750	0.440	016012006J6617
0.500	1.60	1.60	6	3 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.440	016SQ 006J6617
0.500	1.60	1.60	6	3 on 2	0.50	QFN	No	ClamShell	1.050	0.750	0.440	016SQ 006J6618A
0.500	1.60	1.20	6	3 on 2 Dual	0.57	QFN	No	ClamShell	0.780	0.510	0.740	03780 121 6218A
0.500	1.60	1.60	7	3 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.440	016SQ 007J6617
0.500	1.60	1.60	7	3 on 2 plus 1	0.50	QFN	No	ClamShell	1.050	0.750	0.440	016SQ 007J6618A

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QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	1.60	1.60	8	3 on 2 plus 2	0.40	QFN	No	ClamShell	1.050	0.750	0.440	016SQ 008J6617
0.500	1.60	1.60	8	3 on 2,1 on 2	0.50	QFN	No	ClamShell	0.750	0.510	0.740	03732 081 6217
0.500	1.60	1.60	8	3 on 2,1 on 2	0.32	QFN	No	ClamShell	0.810	0.510	0.740	03732 081 X218A
0.500	1.60	1.60	8	3 on 2 plus 2	0.75	DFN	Yes	ClamShell	0.810	0.510	0.740	04713 081 6217
0.500	1.66	1.20	6	3 on 2 Dual	0.57	SOT-666/SC-89	No	ClamShell	0.780	0.510	0.740	03780 121 6217
0.500	1.81	2.01	7	3 on 2 plus 1	0.58	DFN	Yes	ClamShell	0.810	0.510	0.740	04713 071 X217
0.500	1.96	1.98	9	4 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03613 091 6218B
0.500	2.00	2.00	3	2 on 1,1 on 1	0.50	DFN	No	ClamShell	0.810	0.510	0.740	03722 071 6218C
0.500	2.00	1.00	6	3 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03722 061 6217
0.500	2.00	2.00	6	3 on 2	0.55	DFN	No	ClamShell	0.810	0.510	0.740	03722 071 6218D
0.500	2.00	1.50	7	3 on 2 plus 1	0.46	QFN	No	ClamShell	1.050	0.750	0.440	020015007J6617
0.500	2.00	1.50	7	3 on 2 plus 1	0.35	QFN	No	ClamShell	0.760	0.510	0.740	03721 071 6217
0.500	2.00	1.50	7	3 on 2 plus 1	0.53	QFN	No	ClamShell	0.810	0.510	0.740	03721 071 6218B
0.500	2.00	2.00	7	3 on 2 plus 1	0.75	SLP-8L	No	ClamShell	0.810	0.510	0.740	03722 071 6217
0.500	2.00	2.00	7	3 on 2 plus 1	0.55	SLP-8L	No	ClamShell	0.810	0.510	0.740	03722 071 6218B
0.500	2.00	1.70	8	4 on 2	0.75	DFN	No	ClamShell	0.770	0.510	0.710	03612 091 X218A
0.500	2.00	2.00	8	4 on 2	0.90	MLP	No	ClamShell	0.750	0.500	0.730	03613 091 6218A
0.500	2.00	2.00	8	4 on 2	0.75	SLP-8L	No	ClamShell	0.810	0.510	0.740	03722 091 6218A
0.500	2.00	3.00	8	4 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03727 091 6218A
0.500	2.00	3.00	8	4 on 2	0.45	DFN	No	ClamShell	0.810	0.510	0.740	03727 091 X218D
0.500	2.00	1.50	8	3 on 2,1 on 2	0.75	QFN	No	ClamShell	0.750	0.510	0.710	03743 081 X217
0.500	2.00	2.00	9	4 on 2 plus 1	0.90	MLP	No	ClamShell	0.750	0.500	0.730	03613 091 6217
0.500	2.00	2.00	9	4 on 2 plus 1	0.55	QFN	No	ClamShell	0.760	0.510	0.740	03721 091 6217
0.500	2.00	2.00	9	4 on 2 plus 1	0.88	SLP-8L	No	ClamShell	0.760	0.510	0.740	03722 091 6217
0.500	2.00	2.00	9	4 on 2 plus 1	0.75	SLP-8L	No	ClamShell	0.810	0.510	0.740	03722 091 6218B
0.500	2.00	2.00	9	4 on 2 plus 1	0.50	QFN	No	ClamShell	0.810	0.510	0.740	03722 091 6218C
0.500	2.00	2.00	9	4 on 2	1.10	QFN	No	ClamShell	0.810	0.510	0.740	03722 091 X218D
0.500	2.00	3.00	9	4 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03727 091 6217
0.500	2.00	3.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03727 091 6218B
0.500	2.00	3.00	9	4 on 2 plus 1	0.55	QFN	No	ClamShell	0.810	0.510	0.740	03727 091 6218C
0.500	2.00	2.00	10	4 on 2,1 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03723 101 6217
0.500	2.00	2.00	10	4 on 2,1 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03723 101 6218B
0.500	2.00	2.00	10	4 on 2,1 on 2	0.45	QFN	No	ClamShell	0.810	0.510	0.740	03723 101 X218A
0.500	2.00	2.00	10	4 on 2, plus 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03723 101 X218C
0.500	2.00	2.00	10	4 on 2, 1 on 2	0.65	QFN	No	ClamShell	0.760	0.510	0.410	03723 101 X218D
0.500	2.00	1.50	10	1 on 2,4 on 2	0.65	QFN	No	ClamShell	0.770	0.510	0.710	03733 101 6217
0.500	2.00	1.50	10	4 on 2,1 on 2	0.37	QFN	No	ClamShell	0.770	0.510	0.710	03733 101 6218A
0.500	2.00	2.00	13	3 on 4 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.450	020SQ 013J6618B
0.500	2.10	1.60	10	4 on 2,1 on 2	0.50	QFN	No	ClamShell	0.810	0.560	0.740	03732 101 6217
0.500	2.10	1.60	10	4 on 2,1 on 2	0.55	QFN	No	ClamShell	0.810	0.560	0.740	03732 101 6218A
0.500	2.30	2.30	8	4 on 2	0.70	QFN	No	ClamShell	0.810	0.510	0.740	03742 091 6218A
0.500	2.30	2.30	8	4 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03742 091 6218B

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	2.50	2.50	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03743 091 6217
0.500	2.50	2.50	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03743 151 6218B
0.500	2.50	2.50	10	5 on 2 plus 1	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03732 111 X218C
0.500	2.50	2.50	11	5 on 2 plus 1	0.85	CSP	No	ClamShell	0.770	0.510	0.710	03732 111 6217
0.500	2.50	2.50	11	5 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03732 111 6218B
0.500	2.50	2.50	12	3 on 4	0.40	QFN	No	ClamShell	0.770	0.510	0.710	03724 131 6218A
0.500	2.50	2.50	12	4 on 2,3 on 2 plus 1	0.55	QFN	No	ClamShell	0.810	0.600	0.740	03743 151 6218C
0.500	2.50	2.50	12	5 on 2 plus 2	0.75	DFN	Yes	ClamShell	0.810	0.510	0.740	04713 111 6217
0.500	2.50	2.50	13	3 on 4 plus 1	0.90	LPCC	No	ClamShell	0.810	0.610	0.740	03724 131 6217
0.500	2.50	2.50	15	4 on 2,3 on 2 plus 1	0.85	QFN	No	ClamShell	0.760	0.600	0.740	03743 151 6217
0.500	2.50	2.50	17	4 on 4 plus 1	0.55	QFN	No	ClamShell	1.050	0.750	0.450	025SQ 016J6618A
0.500	2.50	2.50	17	4 on 4 plus 1	0.40	QFN	No	ClamShell	1.050	0.750	0.450	025SQ 017J6618B
0.500	2.50	2.50	17	4 on 4 plus 1	0.55	QFN	No	ClamShell	0.760	0.560	0.740	03724 171 6217
0.500	2.60	2.60	11	5 on 2 plus 1	0.60	QFN	No	ClamShell	0.810	0.510	0.740	03731 111 6217
0.500	3.00	2.00	6	3 on 2	0.35	QFN	No	ClamShell	0.810	0.510	0.740	03727 071 6218A
0.500	3.00	3.00	8	4 on 2	0.75	QFN	No	ClamShell	0.790	0.600	0.740	03713 081 6217
0.500	3.00	2.00	8	4 on 2 plus 1	0.75	DFN	Yes	ClamShell	0.081	0.510	0.740	04723 091 X217
0.500	3.00	2.50	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03713 091 6217
0.500	3.00	3.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218J
0.500	3.00	3.00	9	4 on 2, plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 X218N
0.500	3.00	3.00	10	5 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03713 101 6217
0.500	3.00	3.00	10	5 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03727 111 6218A
0.500	3.00	3.00	11	5 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03713 101 6218A
0.500	3.00	3.00	11	5 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03713 101 6218B
0.500	3.00	3.00	11	5 on 2 plus 1	0.85	QFN	No	ClamShell	0.810	0.510	0.740	03713 101 6218C
0.500	3.00	3.00	11	5 on 2 plus 1	0.90	MLPM	No	ClamShell	0.710	0.510	0.840	03713 111 6217
0.500	3.00	4.00	11	5 on 2 plus 1	0.90	CSP	No	ClamShell	0.770	0.510	0.710	03721 111 6217
0.500	3.00	3.00	11	5 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03727 111 6217
0.500	3.00	3.00	11	5 on 2 plus 1	0.53	QFN	No	ClamShell	0.810	0.510	0.740	03727 111 6218C
0.500	3.00	2.00	11	5 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03742 111 6217
0.500	3.00	3.00	11	5 on 2 plus 1	0.90	QFN	No	ClamShell	0.780	0.510	0.710	03743 111 6218B
0.500	3.00	3.50	11	5 on2 plus 1	1.00	DFN	No	ClamShell	0.810	0.510	0.740	03813 111 X217
0.500	3.00	3.50	11	5 on2 plus 1	0.66	DFN	No	ClamShell	0.810	0.510	0.740	03813 111 X218B
0.500	3.00	3.00	12	3 on 4	0.88	QFN	No	ClamShell	0.810	0.600	0.740	03714 131 6218A
0.500	3.00	3.00	12	3 on 4	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03714 131 6218B
0.500	3.00	1.35	13	12 on 2 plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.450	030013013J6617
0.500	3.00	1.35	13	12 on 2 plus 1	0.50	QFN	No	ClamShell	1.050	0.750	0.450	030013013J6618A
0.500	3.00	2.00	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03713 141 6218A
0.500	3.00	3.00	13	3 on 4 plus 1	0.88	QFN	No	ClamShell	0.810	0.600	0.740	03714 131 6217
0.500	3.00	3.00	13	6 on 2 plus 1	0.85	SLP-12	No	ClamShell	0.770	0.510	0.710	03722 131 6217
0.500	3.00	3.00	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03722 131 X218B
0.500	3.00	3.00	13	6 on 2 plus 1	0.50	DFN	No	ClamShell	0.770	0.510	0.710	03722 131 X218C

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	3.00	2.00	14	6 on 2 plus 2	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03713 141 6217
0.500	3.00	2.50	15	5 on 2,2 on 2 plus 1	0.85	SOT-763-1	No	ClamShell	0.750	0.590	0.730	03722 151 6217
0.500	3.00	2.50	15	5 on 2,2 on 2 plus 1	0.75	MLP	No	ClamShell	0.750	0.590	0.730	03722 151 6218A
0.500	3.00	2.50	15	5 on 2,2 on 2 plus 1	0.95	QFN	No	ClamShell	0.810	0.600	0.740	03722 151 6218B
0.500	3.00	3.00	16	4 on 4	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218M
0.500	3.00	3.00	16	4 on 4	1.45	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 X218P
0.500	3.00	3.00	16	5 on 2, 3 on 2	0.95	QFN	No	ClamShell	0.760	0.600	0.740	03742 171 6218A
0.500	3.00	3.00	16	5 on 2, 3 on 2	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03742 171 X218B
0.500	3.00	3.00	17	4 on 4 plus 1	1.00	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 017J6618A
0.500	3.00	3.00	17	4 on 4 plus 1	1.30	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 017J6618B
0.500	3.00	3.00	17	4 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6217
0.500	3.00	3.00	17	4 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6217A
0.500	3.00	3.00	17	4 on 4 plus 1	0.90	QFN	No	ClamShell	0.760	0.600	0.410	03714 171 6218B
0.500	3.00	3.00	17	4 on 4 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218C
0.500	3.00	3.00	17	4 on 4 plus 1	0.70	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218E
0.500	3.00	3.00	17	4 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218F
0.500	3.00	3.00	17	4 on 4 plus 1	0.70	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218G
0.500	3.00	3.00	17	4 on 4 plus 1	0.50	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218H
0.500	3.00	3.00	17	4 on 4 plus 1	0.55	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 X218R
0.500	3.00	3.00	17	3 on 2,5 on 2 plus 1	0.75	HBCC	No	ClamShell	0.810	0.680	0.740	03717 171 6217
0.500	3.00	3.00	17	5 on 2,3 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03717 171 6218A
0.500	3.00	3.00	17	5 on 2,3 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03727 171 6217
0.500	3.00	3.00	17	5 on 2,3 on 2 plus 1	0.55	QFN	No	ClamShell	0.810	0.680	0.740	03727 171 6218B
0.500	3.00	3.00	17	4 on 4 plus 1	0.75	QFN	Yes	ClamShell	0.810	0.600	0.740	03734 171 X217
0.500	3.00	3.00	17	4 on 4 plus 1	0.60	QFN	Yes	ClamShell	0.810	0.510	0.740	04713 171 6217
0.500	3.00	3.00	21	4 on 4, 4 corner	0.85	QFN	No	ClamShell	1.050	0.750	0.450	030SQ 021J6618B
0.500	3.00	3.00	28	6 on 4 plus 4	0.90	QFN	No	ClamShell	1.050	0.750	0.530	030SQ 028J6617
0.500	3.04	3.04	17	5 on 2,3 on 2 plus 1	1.00	QFN	No	ClamShell	0.810	0.680	0.740	03716 171 6217
0.500	3.05	3.05	10	5 on 2	1.00	QFN	No	ClamShell	0.810	0.510	0.740	03720 111 X218A
0.500	3.20	2.50	15	4 on 2, 3 on 2,	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03721 151 X217
0.500	3.20	3.20	21	6 on 2, 4 on 2 plus 1	0.85	Laminate MCM	No	ClamShell	0.810	0.600	0.740	03720 211 X217
0.500	3.25	2.50	13	4 on 3,1 on 1	0.95	QFN	No	ClamShell	0.810	0.600	0.740	03731 131 6217
0.500	3.50	2.00	7	3 on 2 plus 1	0.65	DFN	No	ClamShell	0.810	0.510	0.740	04268 071 X217
0.500	3.50	3.00	11	5 on 2 plus 1	0.90	QFN	No	ClamShell	0.750	0.590	0.730	03722 111 6217
0.500	3.50	3.00	11	5 on 2 plus 1	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03733 151 6218A
0.500	3.50	3.00	15	7 on 2 plus 1	1.10	QFN	No	ClamShell	0.810	0.510	0.740	03733 151 X218B
0.500	3.50	3.50	16	3 on 2,5 on 2	1.00	Laminated Plastic	No	ClamShell	0.800	0.600	0.740	03713 161 6217
0.500	3.50	3.50	16	5 on 2,3 on 2	0.55	QFN	No	ClamShell	0.810	0.600	0.740	03713 161 6218A
0.500	3.50	2.50	17	6 on 2,2 on 2 plus 1	0.85	SOT-763-1	No	ClamShell	0.750	0.590	0.730	03722 171 6217
0.500	3.50	2.50	17	6 on 2,2 on 2 plus 1	0.75	MLP	No	ClamShell	0.750	0.590	0.730	03722 171 6218A
0.500	3.50	2.50	17	6 on 2,2 on 2 plus 1	0.95	QFN	No	ClamShell	0.810	0.600	0.740	03722 171 6218B
0.500	3.50	3.50	20	7 on 2,3 on 2	0.55	QFN	No	ClamShell	0.810	0.600	0.740	03723 211 6218A

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	3.75	3.25	17	6 on 2,4 on 1 plus 1	0.95	PolarPAK	No	ClamShell	0.810	0.600	0.740	03741 171 6217
0.500	4.00	3.00	10	5 on 2	0.90	CSP	No	ClamShell	0.770	0.510	0.740	03721 111 6218A
0.500	4.00	3.00	11	5 on 2 plus 1	0.75	QFN	No	ClamShell	0.800	0.510	0.740	03723 111 6217
0.500	4.00	3.00	12	6 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03713 131 6218A
0.500	4.00	3.00	12	6 on 2 plus 1	0.60	QFN	No	ClamShell	0.810	0.510	0.740	03713 131 X218E
0.500	4.00	3.00	12	6 on 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03713 131 X218F
0.500	4.00	3.00	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03713 131 6218B
0.500	4.00	3.00	13	6 on 2 plus 1	0.85	QFN	No	ClamShell	0.810	0.510	0.740	03713 131 6218D
0.500	4.00	4.00	13	6 on 2 plus 1	0.75	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218M
0.500	4.00	3.00	13	7 on 1,3 on 2	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03723 231 6218B
0.500	4.00	3.00	14	6 on 2 plus 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03713 131 6218C
0.500	4.00	4.00	15	7 on 2 plus 1	0.75	QFN	No	ClamShell	0.750	0.590	0.730	03713 151 6217
0.500	4.00	4.00	15	7 on 2 plus 1	1.20	QFN	No	ClamShell	0.810	0.600	0.740	03713 151 6218B
0.500	4.00	3.00	15	7 on 2 plus 1	0.75	MLP	No	ClamShell	0.740	0.590	0.730	03723 151 6217
0.500	4.00	3.00	15	7 on 2 plus 1	0.75	QFN	No	ClamShell	0.740	0.590	0.730	03723 151 6218A
0.500	4.00	3.00	15	7 on 2 plus 1	0.85	QFN	No	ClamShell	0.790	0.600	0.740	03723 151 6218B
0.500	4.00	3.00	15	7 on 2 plus 1	0.90	DFN	No	ClamShell	0.810	0.600	0.740	03723 151 X218C
0.500	4.00	3.00	15	7 on 2 plus 1	0.60	DFN	No	ClamShell	0.810	0.600	0.740	03723 151 X218D
0.500	4.00	3.00	15	7 on 1,2 on 1,3 on 2	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03723 231 6218C
0.500	4.00	4.00	15	7 on 2 plus 1	0.75	QFN	No	Clamshell	1.050	0.750	0.530	040SQ 015J6617
0.500	4.00	4.00	16	4 on 4	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03714 161 6217
0.500	4.00	4.00	16	4 on 4	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218K
0.500	4.00	3.00	16	5 on 2, 3 on 2	1.00	QFN	No	ClamShell	0.810	0.600	0.740	03742 161 X217
0.500	4.00	3.00	16	5 on 2, 3 on 2	1.15	QFN	No	ClamShell	0.810	0.600	0.740	03742 161 X218A
0.500	4.00	4.00	16	4 on 4	0.75	QFN	Yes	ClamShell	1.030	0.860	0.770	04714 171 6218A
0.500	4.00	4.00	17	4 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218D
0.500	4.00	4.00	17	4 on 4 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03714 171 6218L
0.500	4.00	1.60	17	8 on 2 plus 1	0.75	QFN	No	ClamShell	0.770	0.510	0.710	03720 171 6217
0.500	4.00	4.00	19	5 on 2,4 on 2 plus 1	0.85	QFN	No	ClamShell	0.800	0.600	0.740	03713 191 6217
0.500	4.00	4.00	20	5 on 4	0.90	LPCC	No	ClamShell	0.810	0.600	0.740	03714 201 6217
0.500	4.00	4.00	20	5 on 4	0.75	LLP	No	ClamShell	0.800	0.600	0.740	03714 211 6218A
0.500	4.00	3.00	20	6 on 2,4 on 2	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03733 211 X218F
0.500	4.00	4.00	21	5 on 4 plus 1	0.95	QFN	No	ClamShell	0.800	0.600	0.740	03714 211 6217
0.500	4.00	4.00	21	5 on 4 plus 1	0.75	LLP	No	ClamShell	0.810	0.600	0.740	03714 211 6218B
0.500	4.00	4.00	21	5 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 211 6218C
0.500	4.00	4.00	21	5 on 4 plus 1	0.75	QFN	No	ClamShell	0.800	0.590	0.730	03714 211 6218D
0.500	4.00	4.00	21	5 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 211 6218E
0.500	4.00	4.00	21	5 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03714 211 X218F
0.500	4.00	4.00	21	5 on 4 plus 1	0.60	QFN	No	ClamShell	0.810	0.600	0.740	03714 211 X218G
0.500	4.00	3.00	21	6 on 2,4 on 2 plus 1	0.95	SOT-797-1	No	ClamShell	0.760	0.600	0.740	03733 211 6217
0.500	4.00	3.00	21	6 on 2,4 on 2 plus 1	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03733 211 6218B
0.500	4.00	3.00	21	6 on 2,4 on 2 plus 1	0.55	QFN	No	ClamShell	0.810	0.600	0.740	03733 211 6218C

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	4.00	3.00	21	6 on 2,4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03733 211 6218D
0.500	4.00	3.00	21	6 on 2,4 on 2 plus 1	0.50	QFN	No	ClamShell	0.810	0.600	0.740	03733 211 6218E
0.500	4.00	3.00	21	6 on 2, 4 on 2, plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03733 211 X218G
0.500	4.00	4.00	21	5 on 4 plus 1	0.75	CSP	No	OpenTop	0.970	0.590	0.390	Q0404 211 6217
0.500	4.00	4.00	24	6 on 4	0.90	LPCC	No	ClamShell	0.800	0.600	0.740	03714 251 6218A
0.500	4.00	4.00	24	6 on 4	0.80	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218D
0.500	4.00	4.00	24	7 on 2,5 on 2	0.75	BCC	No	ClamShell	0.810	0.600	0.740	03723 241 6218A
0.500	4.00	4.00	25	6 on 4 plus 1	0.95	SOT-616-1	No	ClamShell	0.800	0.600	0.740	03714 251 6217
0.500	4.00	4.00	25	6 on 4 plus 1	0.86	LPCC	No	ClamShell	0.810	0.600	0.740	03714 251 6218B
0.500	4.00	4.00	25	6 on 4 plus 1	0.80	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218C
0.500	4.00	4.00	25	6 on 4 plus 1	0.95	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218E
0.500	4.00	4.00	25	6 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 251 6218F
0.500	4.00	4.00	25	6 on 4 plus 1	0.75	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218G
0.500	4.00	4.00	25	6 on 4 plus 1	0.55	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218J
0.500	4.00	4.00	25	6 on 4 plus 1	0.50	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218K
0.500	4.00	4.00	25	6 on 4 plus 1	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 6218L
0.500	4.00	4.00	25	6 on 2 plus 1	0.88	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 X218P
0.500	4.00	4.00	25	6 on 4, plus 1	0.94	QFN	No	ClamShell	0.800	0.600	0.740	03714 251 X218R
0.500	4.00	4.00	25	7 on 2,5 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03723 251 6217
0.500	4.00	3.00	25	7 on 2, 5 on 2	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03743 251 X218A
0.500	4.00	4.00	25	6 on 4 plus 1	0.93	QFN	No	OpenTop	0.970	0.590	0.390	Q0404 251 X217
0.500	4.00	4.00	27	6 on 2, 7 on 2,	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03733 271 X217
0.500	4.00	4.00	29	8 on 2,6 on 2 plus 1	0.85	QFN	No	ClamShell	0.800	0.600	0.740	03713 291 6217
0.500	4.00	4.50	37	9 on 2, 6 on 2 plus 7	0.85	QFN	Yes	ClamShell	1.050	0.750	0.450	045040037J6617
0.500	4.04	4.04	25	7 on 2, 5 on 2 plus 1	1.00	QFN	No	ClamShell	0.810	0.600	0.740	03732 251 6217
0.500	4.50	3.25	17	6 on 2,4 on 1 plus 1	0.95	CSP	No	ClamShell	0.810	0.600	0.740	03721 211 6218A
0.500	4.50	4.00	17	5 on 1, 6 on 2,	0.95	QFN	No	ClamShell	0.810	0.680	0.740	03731 211 6218A
0.500	4.50	2.50	20	8 on 2,2 on 2 plus 1	0.85	SOT-764-1	No	ClamShell	0.810	0.600	0.740	03722 211 6217
0.500	4.50	2.50	20	8 on 2,2 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03722 211 6218A
0.500	4.50	2.50	20	8 on 2,2 on 2 plus 2	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03722 211 X218B
0.500	4.50	3.50	24	3 on 2,9 on 2	1.00	Laminated Plastic	No	ClamShell	0.810	0.600	0.740	03713 241 6217
0.500	4.50	3.50	24	3 on 2,9 on 2	0.75	Laminated Plastic	No	ClamShell	0.810	0.600	0.740	03713 241 6218C
0.500	4.50	3.50	24	3 on 2,9 on 2	0.55	Laminated Plastic	No	ClamShell	0.750	0.590	0.730	03713 241 6218D
0.500	4.50	4.50	24	6 on 4	1.15	MCM	No	ClamShell	0.810	0.600	0.740	03724 251 6218A
0.500	4.55	2.00	8	3 on 2,1 on 2	0.76	QFN	No	ClamShell	0.810	0.860	0.790	04264 081 6217
0.500	4.93	4.93	33	8 on 4 plus 1	0.90	LPCC	No	ClamShell	0.810	0.680	0.740	03714 331 6218B
0.500	5.00	2.05	10	3 on 2, 2 on 2	0.76	QFN	No	ClamShell	0.810	0.510	0.740	04263 071 6217
0.500	5.00	5.00	14	7 on 2	1.50	CSP	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218B
0.500	5.00	5.00	14	7 on 2	1.20	CSP	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218D
0.500	5.00	5.00	15	7 on 2	1.20	DFN	No	OpenTop	1.060	0.650	0.360	Q0505 015J6617
0.500	5.00	5.00	15	7 on 2	1.20	DFN	No	OpenTop	0.980	0.650	0.360	Q0505 015J6618A
0.500	5.00	5.00	15	7 on 2 plus 1	1.20	CSP	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218C

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	5.00	5.00	16	4 on 4	1.45	QFN	No	ClamShell	0.810	0.680	0.740	03714 331 6218D
0.500	5.00	4.00	16	8 on 2	0.95	--	No	ClamShell	0.760	0.510	0.740	03732 171 6218A
0.500	5.00	5.00	17	8 on 2 plus 1	0.75	LLP	No	ClamShell	0.810	0.680	0.740	03714 171 6218A
0.500	5.00	3.00	17	8 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03721 171 6217
0.500	5.00	3.00	17	8 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03721 171 X218B
0.500	5.00	4.00	17	8 on 2 plus 1	0.75	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218C
0.500	5.00	4.00	17	8 on 2 plus 1	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218E
0.500	5.00	4.00	18	8 on 2 plus 2	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218F
0.500	5.00	3.00	19	9 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03721 191 6217
0.500	5.00	3.00	19	9 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03721 191 X218B
0.500	5.00	5.00	21	9 on 2 plus 3	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03723 191 6217
0.500	5.00	4.00	21	4 on 2,6 on 2 plus 1	0.75	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218B
0.500	5.00	4.00	24	7 on 2,5 on 2	0.75	Laminated Plastic	No	ClamShell	0.810	0.600	0.740	03713 241 6218A
0.500	5.00	4.00	24	7 on 2,5 on 2	0.90	Laminated Plastic	No	ClamShell	0.790	0.600	0.740	03713 241 6218B
0.500	5.00	4.00	25	7 on 2,5 on 2 plus 1	0.75	LLP	No	ClamShell	0.750	0.590	0.730	03713 251 6218A
0.500	5.00	4.00	25	7 on 2,5 on 2 plus 1	0.90	LLP	No	ClamShell	0.750	0.600	0.740	03713 251 6218B
0.500	5.00	4.00	25	7 on 2, 5 on 2 plus 1	0.75	LLP	No	ClamShell	0.800	0.600	0.740	03713 251 6218C
0.500	5.00	4.00	25	5 on 2,7 on 2 plus 1	0.90	QFN	No	Clamshell	0.810	0.600	0.740	03713 251 6218E
0.500	5.00	3.00	25	8 on 2, 4 on 2,	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03719 251 X217
0.500	5.00	4.00	25	7 on 3,3 on 1 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03721 251 6217
0.500	5.00	3.00	27	7 on 2, 6 on 2	0.91	QFN	No	ClamShell	0.810	0.600	0.740	03721 271 X218A
0.500	5.00	3.50	27	8 on 2,5 on 2 plus 1	0.85	QFN	No	ClamShell	0.800	0.600	0.740	03722 271 X217
0.500	5.00	4.00	28	6 on 2,8 on 2	1.40	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218G
0.500	5.00	5.00	28	7 on 4	0.92	QFN	No	ClamShell	0.810	0.680	0.740	03724 281 6217
0.500	5.00	5.00	28	7 on 4	0.75	LLP	No	ClamShell	0.810	0.680	0.740	03734 281 6217
0.500	5.00	5.00	28	7 on 4	1.65	CSP	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218A
0.500	5.00	5.00	28	7 on 4	1.20	CSP	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218E
0.500	5.00	5.00	29	9 on 2,8 on 1 plus 3	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03722 291 6217
0.500	5.00	4.00	29	8 on 2,6 on 2 plus 1	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6217
0.500	5.00	4.00	29	8 on 2,6 on 2 plus 1	0.75	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218D
0.500	5.00	4.00	29	6 on 2,8 on 2 plus 1	0.85	QFN	No	ClamShell	0.800	0.600	0.740	03723 291 6218H
0.500	5.00	5.00	29	7 on 4 plus 1	0.90	QFN	No	ClamShell	0.760	0.680	0.740	03724 291 6217
0.500	5.00	5.00	29	7 on 4 plus 1	1.00	LLP	No	ClamShell	0.810	0.680	0.740	03734 281 6218B
0.500	5.00	5.00	29	7 on 4 plus 1	0.75	MO-220	No	ClamShell	0.760	0.680	0.740	03734 291 6217
0.500	5.00	5.00	29	7 on 4 plus 1	0.35	QFN	No	ClamShell	0.810	0.680	0.740	03734 291 6218B
0.500	5.00	5.00	29	7 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.680	0.740	03734 291 6218C
0.500	5.00	5.00	29	7 on 4 plus 1	1.20	CSP	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218F
0.500	5.00	5.00	32	8 on 4	0.84	LPCC-32	No	ClamShell	0.810	0.680	0.740	03714 321 6217
0.500	5.00	5.00	32	8 on 4	0.98	QFN	No	ClamShell	0.810	0.680	0.740	03714 321 6218A
0.500	5.00	5.00	33	8 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.680	0.740	03714 331 6218A
0.500	5.00	5.00	33	8 on 4 plus 1	0.85	QFN	No	ClamShell	0.760	0.670	0.730	03714 331 6218C
0.500	5.00	5.00	33	8 on 4 plus 1	0.90	LPCC	No	ClamShell	0.810	0.680	0.740	03723 331 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	5.00	5.00	33	8 on 4 plus 1	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03723 331 6218B
0.500	5.00	5.00	33	8 on 4 plus 1	0.90	QFN	No	ClamShell	1.600	1.630	0.740	03723 331 6218C
0.500	5.00	5.00	33	9 on 2, 7 on 2 plus 1	0.74	BCC	No	ClamShell	1.050	0.750	0.650	050SQ 032U6617
0.500	5.00	5.00	37	8 on 4, 4 corner plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.450	050SQ 037J6617
0.500	5.04	5.04	28	7 on 4	0.89	QFN	No	ClamShell	0.810	0.680	0.740	03714 281 6217
0.500	5.04	5.04	29	7 on 4 plus 1	0.89	QFN	No	ClamShell	0.810	0.680	0.740	03714 291 6217
0.500	5.04	5.04	33	7 on 2,9 on 2 plus 1	1.20	QFN	No	ClamShell	0.810	0.680	0.740	03714 331 6217
0.500	5.04	5.04	33	9 on 2,7 on 2 plus 1	1.00	QFN	No	ClamShell	0.810	0.680	0.740	03714 331 6218E
0.500	5.04	5.04	41	9 on 2, 7 on 2 plus 9	1.00	QFN	No	ClamShell	0.810	0.680	0.740	03712 411 6217
0.500	5.50	4.00	19	7 on 2, 5 on 1	0.95	QFN	No	ClamShell	0.810	0.680	0.740	03731 311 X218B
0.500	5.50	4.00	21	10 on 2 plus 1	1.35	QFN	No	ClamShell	0.810	0.680	0.740	03742 211 6217
0.500	5.50	3.50	25	10 on 2,2 on 2 plus 1	0.85	SOT815	No	ClamShell	0.810	0.710	0.740	03722 251 6217
0.500	5.50	4.50	28	7 on 4	1.00	LCC	No	ClamShell	0.810	0.680	0.740	03713 281 6217
0.500	5.50	4.50	32	7 on 2,9 on 2	1.00	QFN	No	ClamShell	0.810	0.680	0.740	03713 321 6217
0.500	5.50	4.50	32	7 on 2,9 on 2	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03713 321 6218A
0.500	6.00	5.00	18	9 on 2	0.90	QFN	No	OpenTop	1.030	0.610	0.450	Q0605 018 6217
0.500	6.00	6.00	21	6 on 2,4 on 2 plus 1	1.75	QFN	No	ClamShell	0.860	0.710	0.740	03724 411 6218B
0.500	6.00	5.00	21	10 on 2 plus 1	0.90	MLP	No	ClamShell	0.810	0.510	0.740	03732 211 6217
0.500	6.00	5.00	22	11 on 2	0.90	QFN	No	OpenTop	1.030	0.610	0.450	Q0605 022 6217
0.500	6.00	5.00	23	11 on 2 plus 1	0.90	QFN	No	OpenTop	1.030	0.610	0.450	Q0605 023 6217
0.500	6.00	4.00	28	10 on 2,6 on 1	0.75	QFN	No	ClamShell	0.770	0.600	0.710	03721 331 6218B
0.500	6.00	4.00	29	11 on 2,6 on 1 plus 1	0.85	QFN	No	ClamShell	0.810	0.680	0.740	03721 291 6217
0.500	6.00	6.00	31	5 on 1,9 on 1,11 on	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03743 311 X217
0.500	6.00	5.00	32	9 on 2,7 on 2	0.75	QFN	No	ClamShell	0.810	0.710	0.740	03733 331 6218A
0.500	6.00	6.00	33	8 on 4 plus 1	0.75	LLP	No	ClamShell	0.860	0.700	0.730	03714 411 6218B
0.500	6.00	6.00	33	8 on 4, plus one	0.95	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 X218R
0.500	6.00	4.00	33	10 on 2,6 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03721 331 6217
0.500	6.00	5.00	33	9 on 2,7 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.710	0.740	03733 331 6217
0.500	6.00	5.00	33	9 on 2,7 on 2 plus 1	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03733 331 6218B
0.500	6.00	5.00	33	9 on 2,7 on 2 plus 1	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03733 331 6218C
0.500	6.00	4.00	35	11 on 2,6 on 2 plus 1	1.85	QFN	No	ClamShell	0.810	0.680	0.740	03721 351 X217
0.500	6.00	6.00	36	10 on 2,8 on 2	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218M
0.500	6.00	6.00	36	9 on 4	0.75	QFN	No	ClamShell	0.860	0.710	0.740	03724 371 6218A
0.500	6.00	6.00	37	9 on 4 plus 1	1.35	QFN	No	ClamShell	0.810	0.680	0.740	03714 391 X218D
0.500	6.00	6.00	37	9 on 4 plus 1	0.90	QFN	No	ClamShell	0.860	0.700	0.730	03724 371 6217
0.500	6.00	6.00	37	9 on 4 plus 1	0.75	QFN	No	ClamShell	0.860	0.710	0.740	03724 371 6218B
0.500	6.00	6.00	37	9 on 4 plus 1	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03724 371 6218C
0.500	6.00	5.00	38	10 on 2,8 on 2	0.75	QFN	No	ClamShell	0.810	0.710	0.740	03733 381 X217
0.500	6.00	6.00	39	9 on 4 plus 3	0.75	QFN	No	ClamShell	0.760	0.670	0.730	03714 391 6217
0.500	6.00	6.00	40	10 on 4	0.95	MLF	No	ClamShell	0.860	0.700	0.730	03714 411 6218A
0.500	6.00	6.00	40	10 on 2,8 on 2	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218L
0.500	6.00	6.00	41	10 on 4 plus 1	0.95	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	6.00	6.00	41	10 on 4 plus 1	0.75	QFN	No	ClamShell	0.860	0.700	0.730	03714 411 6218D
0.500	6.00	6.00	41	10 on 4 plus 1	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218E
0.500	6.00	6.00	41	10 on 4 plus 1	1.45	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218G
0.500	6.00	6.00	41	10 on 4 plus 1	0.90	QFN	No	ClamShell	2.000	1.630	0.740	03714 411 6218H
0.500	6.00	6.00	41	10 on 4 plus 1	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218J
0.500	6.00	6.00	41	10 on 4 plus 1	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218K
0.500	6.00	6.00	41	10 on 2, 8 on 2	0.90	QFN	No	ClamShell	0.810	0.710	0.740	03714 411 6218P
0.500	6.00	6.00	43	10 on 4 plus 3	0.75	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218N
0.500	6.00	6.00	43	10 on 4 plus 3	1.00	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 X218S
0.500	6.00	6.00	77	Dual Row	0.84	QFN	No	ClamShell	1.050	0.750	0.450	D0606 077J6617
0.500	6.02	6.02	41	10 on 4 plus 1	0.58	QFN	No	ClamShell	0.860	0.710	0.740	03714 411 6218F
0.500	6.04	6.04	41	9 on 2,11 on 2 plus 1	1.00	QFN	No	ClamShell	0.810	0.680	0.740	03723 411 6217
0.500	6.04	6.04	41	9 on 2,11 on 2 plus 1	2.03	QFN	No	ClamShell	0.860	0.710	0.740	03723 411 6218B
0.500	6.04	6.04	41	11 on 2,9 on 2 plus 1	1.00	QFN	No	ClamShell	0.860	0.710	0.740	03724 411 6217
0.500	6.05	6.05	33	8 on 4 plus 1	0.75	LLP	No	ClamShell	0.860	0.700	0.730	03714 411 6218C
0.500	6.20	5.20	32	9 on 2,7 on 2	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03722 331 6218A
0.500	6.50	3.25	17	8 on 2, 4 on 1, 1	0.95	QFN	No	ClamShell	0.810	0.600	0.740	03731 171 6217
0.500	6.50	4.00	29	5 on 1, 8 on 2,	0.95	QFN	No	ClamShell	0.810	0.680	0.740	03733 291 6218A
0.500	6.50	4.50	30	8 on 1,11 on 2	0.95	QFN	No	ClamShell	0.760	0.680	0.740	03713 301 6217
0.500	6.50	5.50	40	9 on 2,11 on 2	1.00	Laminated Plastic	No	ClamShell	0.810	0.680	0.740	03713 401 6217
0.500	6.50	6.50	65	Interstitial 8 on 4, 7	0.75	BCC	No	ClamShell	1.050	0.750	0.650	065SQ 065U6617
0.500	7.00	4.00	27	12 on 2 plus 3	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03723 271 6217
0.500	7.00	4.00	27	12 on 2 plus 3	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03723 271 X218B
0.500	7.00	3.50	35	12 on 2,5 on 2	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03713 351 6217
0.500	7.00	5.00	39	12 on 2,7 on 2	0.90	MLP	No	ClamShell	0.860	0.710	0.740	03713 391 6217
0.500	7.00	5.00	39	12 on 2,7 on 2	0.75	MLP	No	ClamShell	0.860	0.710	0.740	03713 391 6218B
0.500	7.00	5.00	40	12 on 2,8 on 2	0.90	QFN	No	Clamshell	0.920	0.710	0.710	03733 411 6218B
0.500	7.00	5.00	41	12 on 2,8 on 2	0.90	QFN	No	Clamshell	0.920	0.710	0.710	03733 411 6217
0.500	7.00	5.00	41	12 on 2,8 on 2	1.47	QFN	No	Clamshell	0.920	0.710	0.710	03733 411 X218C
0.500	7.00	7.00	44	12 on 2,10 on 2	0.75	QFN	No	ClamShell	0.860	0.710	0.740	03713 441 6217
0.500	7.00	7.00	44	11 on 4	0.93	MLF2	No	ClamShell	0.860	0.710	0.740	03714 451 6218A
0.500	7.00	5.00	44	14 on 2,7 on 2,	0.65	QFN	No	ClamShell	0.870	0.710	0.710	03723 441 6217
0.500	7.00	5.00	44	14 on 2,7 on 2,	0.65	QFN	No	ClamShell	0.920	0.710	0.710	03723 441 6218A
0.500	7.00	5.00	44	14 on 2,7 on 2,	0.85	QFN	No	ClamShell	0.920	0.710	0.710	03723 441 X218B
0.500	7.00	7.00	45	12 on 2,10 on 2	0.75	QFN	No	ClamShell	0.860	0.710	0.740	03713 451 6217
0.500	7.00	7.00	45	11 on 4 plus 1	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03714 451 6217
0.500	7.00	7.00	45	11 on 4 plus 1	0.75	QFN	No	ClamShell	0.860	0.710	0.740	03714 451 6218C
0.500	7.00	7.00	48	10 on 2,14 on 2	1.00	QFN	No	ClamShell	0.860	0.710	0.740	03713 491 6218A
0.500	7.00	7.00	48	12 on 4	1.80	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218D
0.500	7.00	7.00	48	12 on 4	0.90	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218K
0.500	7.00	7.00	49	12 on 4 plus 1	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03714 491 6218A
0.500	7.00	7.00	49	12 on 4 minus 3	1.80	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218C

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	7.00	7.00	49	12 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.710	0.410	03714 491 6218E
0.500	7.00	7.00	49	12 on 4 plus 1	0.90	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218F
0.500	7.00	7.00	49	12 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.710	0.410	03714 491 6218G
0.500	7.00	7.00	49	12 on 4 plus 1	0.90	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218J
0.500	7.00	7.00	49	12 on 4 plus 1	0.75	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218L
0.500	7.00	7.00	49	12 on 4 plus 1	1.35	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218M
0.500	7.00	7.00	49	12 on 4 plus 1	0.85	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218N
0.500	7.00	7.00	49	12 on 4 plus 1	0.90	QFN	No	ClamShell	0.870	0.710	0.740	03714 491 6218P
0.500	7.00	7.00	49	13 on 2,11 on 2 plus 1	0.75	QFN	No	ClamShell	0.930	0.750	0.740	03723 491 6217
0.500	7.00	7.00	53	14 on 2,12 on 2 plus 1	0.75	QFN	No	ClamShell	0.940	0.760	0.740	03713 531 6217
0.500	7.00	7.00	77	Dual Rows: 18 on 4, plus 5	1.00	QFN	No	ClamShell	1.050	0.750	0.440	D0707 077P6617
0.500	7.00	7.00	85	Interstitial 23 on 2, 19 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.450	D0707 085J6617
0.500	7.00	7.00	93	Interstitial 27 on 2, 19 on 2 plus 1	0.90	DUAL ROW QFN	No	ClamShell	1.050	0.750	0.450	D0707 093J6617
0.500	7.00	7.00	93	Dual row peripheal	0.84	QFN	No	ClamShell	1.050	0.750	0.450	D0707 093J6618A
0.500	7.00	7.00	96	Dual Row, Depop plus 2	0.80	QFN	No	ClamShell	1.050	0.750	0.450	D0707 096J6617
0.500	7.04	7.04	49	11 on 2,13 on 2 plus 1	1.00	QFN	No	ClamShell	0.870	0.740	0.730	03714 491 6218B
0.500	7.05	7.05	49	12 on 4 plus 1	0.75	QFN	No	ClamShell	0.870	0.710	0.740	03724 491 6217
0.500	7.07	7.07	48	11 on 2,13 on 2	1.20	RF-LGA	No	ClamShell	0.930	0.750	0.730	03714 481 6217
0.500	7.07	7.07	49	11 on 2,13 on 2	1.20	QFN	No	ClamShell	0.930	0.750	0.740	03714 491 6217
0.500	8.00	6.00	45	13 on 2,9 on 2	0.85	QFN	No	ClamShell	0.940	0.760	0.740	03723 451 6217
0.500	8.00	7.00	49	12 on 4 plus 1	1.27	QFN	No	Clamshell	0.940	0.760	0.740	03733 491 6217
0.500	8.00	8.00	49	12 on 4 plus 1	0.75	QFN	No	OpenTop	1.150	0.780	0.450	Q0808 049 6217
0.500	8.00	6.00	52	14 on 2,11 on 2	0.65	QFN	No	ClamShell	0.930	0.760	0.740	03723 521 X217
0.500	8.00	8.00	53	13 on 4 plus 1	0.84	QFN	No	ClamShell	0.920	0.710	0.710	03714 531 6217
0.500	8.00	8.00	56	14 on 4	0.85	MLF	No	ClamShell	0.940	0.760	0.740	03734 561 6217
0.500	8.00	8.00	56	14 on 4	0.85	MLF	No	ClamShell	0.890	0.760	0.410	03734 561 6218A
0.500	8.00	8.00	56	14 on 4	0.85	MLF	No	ClamShell	0.940	0.760	0.740	03734 561 6218C
0.500	8.00	8.00	56	14 on 4	0.90	MLF	No	ClamShell	1.600	1.630	2.030	03734 571 6218D
0.500	8.00	8.00	57	14 on 4 plus 1	0.95	MLF	No	ClamShell	0.940	0.760	0.740	03734 571 6217
0.500	8.00	8.00	57	14 on 4 plus 1	0.85	QFN	No	ClamShell	0.890	0.760	0.410	03734 571 6218A
0.500	8.00	8.00	57	14 on 4 plus 1	0.85	MLF	No	ClamShell	0.890	0.760	0.410	03734 571 6218B
0.500	8.00	8.00	57	14 on 4 plus 1	0.85	MLF	No	ClamShell	0.890	0.760	0.410	03734 571 6218C
0.500	8.00	8.00	57	14 on 4 plus 1	0.85	QFN	No	OpenTop	1.090	0.710	0.390	Q0808 571 X217
0.500	8.00	8.00	60	16 on 2, 14 on 2	0.65	QFN	No	ClamShell	0.940	0.760	0.740	03734 621 X217
0.500	8.04	8.04	60	15 on 2,13 on 2	1.00	QFN	No	ClamShell	0.950	0.760	0.740	03714 571 6218B
0.500	8.06	8.06	57	15 on 2,13 on 2	1.20	RF-LGA	No	ClamShell	0.940	0.760	0.740	03714 571 6217
0.500	8.06	8.06	57	15 on 2,13 on 2	1.00	QFN	No	ClamShell	0.950	0.760	0.740	03714 571 6218A
0.500	8.07	8.07	56	13 on 2,15 on 2	1.20	RF-LGA	No	ClamShell	0.950	0.760	0.740	03714 561 6217
0.500	8.70	8.70	44	11 on 4	1.40	PLLP	No	ClamShell	0.990	0.810	0.840	03814 441 6218A
0.500	9.00	3.50	43	17 on 2,4 on 2	0.75	QFN	No	ClamShell	0.950	0.760	0.740	03722 431 6217
0.500	9.00	5.00	49	16 on 2, 8 on 2	0.85	QFN	No	ClamShell	0.990	0.810	0.740	03722 491 X217
0.500	9.00	9.00	57	14 on 4 plus 1	0.75	LLP	No	ClamShell	0.990	0.810	0.740	03724 571 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	9.00	9.00	65	16 on 4 plus 1	0.85	MLF	No	ClamShell	0.990	0.810	0.740	03714 651 6217
0.500	9.00	9.00	65	16 on 4 plus 1	0.85	QFN	No	ClamShell	0.930	0.800	0.730	03714 651 6218A
0.500	9.00	9.00	65	16 on 4 plus 1	0.90	QFN	No	ClamShell	2.000	1.630	2.092	03714 651 6218B
0.500	9.00	9.00	65	16 on 4 plus 1	0.90	QFN	No	ClamShell	0.990	0.810	0.740	03714 651 6218C
0.500	9.00	9.00	65	16 on 4 plus 1	0.90	QFN	No	ClamShell	0.990	0.810	0.740	03714 651 X218D
0.500	9.04	9.04	65	17 on 2,15 on 2 plus 1	1.20	RF-LGA	No	ClamShell	0.990	0.810	0.740	03713 651 6218A
0.500	9.04	9.04	65	17 on 2,15 on 2 plus 4	1.00	QFN	No	ClamShell	0.990	0.810	0.740	03713 651 6218B
0.500	10.00	6.00	45	9 on 2, 13 on 2 plus 1	1.05	QFN	No	Clamshell	1.000	0.840	0.740	03733 451 X217
0.500	10.00	5.00	51	17 on 2,8 on 2 plus 1	0.95	LF-CSP	No	ClamShell	0.990	0.810	0.740	03713 511 6217
0.500	10.00	5.00	51	17 on 2,8 on 2 plus 1	0.95	LF-CSP	No	ClamShell	0.990	0.810	0.740	03713 511 6218B
0.500	10.00	10.00	65	16 on 4 plus 1	0.85	QFN	No	ClamShell	1.000	0.840	0.740	03714 731 6218C
0.500	10.00	10.00	73	18 on 4 plus 1	0.80	QFN	No	ClamShell	0.950	0.840	0.740	03714 731 6217
0.500	10.00	10.00	73	18 on 4 plus 1	0.85	MLF2	No	ClamShell	0.950	0.840	0.740	03714 731 6218A
0.500	10.00	10.00	73	18 on 4 plus 1	0.90	MO-220 PNAF	No	ClamShell	0.950	0.840	0.740	03714 731 6218B
0.500	10.00	10.00	73	18 on 4 plus 1	0.85	QFN	No	ClamShell	0.950	0.840	0.740	03714 731 6218D
0.500	11.00	5.00	56	20 on 2, 8 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.450	110050056J6617
0.500	11.00	6.00	61	19 on 2,11 on 2 plus1	1.15	QFN	No	Clamshell	1.030	0.860	0.740	03713 611 6217
0.500	11.00	7.00	64	20 on 2, 12 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.450	110070066J6617
0.500	11.00	10.00	75	19 on 2,18 on 2	1.45	MCM	No	Clamshell	1.030	0.860	0.740	03713 751 6217
0.500	12.00	12.00	79	Interstitial 39 on 2,	0.90	QFN	No	ClamShell	1.470	1.050	0.600	D1212 161J6618B
0.500	12.00	12.00	88	22 on 4	0.85	QFN	No	ClamShell	1.470	1.050	0.600	120SQ 089J6618B
0.500	12.00	12.00	89	22 on 4 plus 1	0.85	QFN	No	ClamShell	1.470	1.050	0.600	120SQ 089J6617
0.500	12.00	12.00	161	40 on 4 plus 1	0.75	QFN	No	ClamShell	1.470	1.050	0.600	D1212 161J6617
0.500	12.00	12.00	161	40 on 4 plus 1	0.90	QFN	No	ClamShell	1.470	1.050	0.600	D1212 161J6618A
0.500	12.00	12.00	173	43 on 4 plus 1	0.55	QFN	No	ClamShell	1.470	1.050	0.600	D1212 173J6617
0.500	12.50	8.10	48	24 on 2	1.00	LCC	No	ClamShell	0.930	0.750	0.730	03713 481 6217
0.500	13.50	9.00	149	Interstitial P2 Depop,	0.75	QFN	No	ClamShell	1.470	1.050	0.600	D1309 149J6617
0.500	13.50	9.00	153	Interstitial P2 Depop,	0.75	QFN	No	ClamShell	1.470	1.050	0.600	D1309 149J6618A
0.510	11.43	11.43	10	4 on 2, 1 on 2	2.67	QFN	No	ClamShell	1.000	0.840	0.740	03711 101 6217
0.510	11.43	11.43	10	4 on 2, 1 on 2	2.67	QFN	No	ClamShell	1.000	0.840	0.710	03711 101 6218A
0.530	5.00	5.00	46	Interstitial 2 rows on	0.90	QFN	No	ClamShell	1.050	0.750	0.450	D0505 045J6617
0.540	1.70	2.30	8	3 on 2 plus 2	0.70	DFN	No	ClamShell	1.050	0.750	0.440	023017008J6617
0.600	3.00	3.00	11	5 on 2 plus 1	0.85	QFN	No	ClamShell	0.810	0.510	0.740	03715 111 6217
0.600	3.00	3.00	11	5 on 2 plus 1	1.00	QFN	No	ClamShell	0.810	0.510	0.740	03715 111 X218B
0.600	3.00	3.00	11	5 on 2 plus 1	0.85	QFN	No	ClamShell	0.810	0.510	0.740	03716 111 6217
0.600	3.00	4.00	11	5 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03726 111 6217
0.600	5.00	5.00	27	8 on 2, 5 on 2 plus 2	0.94	QFN	No	ClamShell	1.050	0.750	0.450	050SQ 028J6617
0.610	8.00	8.00	25	6 on 2,10 on 1,3	1.80	QFN	No	ClamShell	0.940	0.760	0.740	03715 251 6217
0.620	7.50	7.00	28	12 on 2,1 on 2	1.10	QFN	No	ClamShell	0.940	0.760	0.740	03715 271 6217
0.625	1.00	1.00	5	2 on 2,plus 1 Dual	0.55	QFN	No	ClamShell	1.050	0.750	0.450	010SQ 010J6617
0.625	5.00	5.00	13	8 on 1, 3 on 1 plus 2	1.02	QFN	No	ClamShell	0.810	0.680	0.740	03726 171 6218B
0.625	5.00	5.00	18	8 on 2 Plus 2	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03726 171 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.640	12.00	5.00	38	18 on 2 plus 2	0.90	DFN	No	ClamShell	0.910	0.760	0.740	03716 381 X217
0.650	1.00	1.00	5	2 on 2 plus 1	0.37	DFN	Yes	ClamShell	0.810	0.510	0.740	04717 051 X217
0.650	1.20	1.80	5	2 on 2,plus 1 Dual	0.50	DFN	No	ClamShell	1.050	0.750	0.450	012018010J6617
0.650	1.60	1.20	10	2 on 2,plus 1 Dual	0.50	DFN	No	ClamShell	1.050	0.750	0.450	012016010J5618A
0.650	2.00	2.00	3	2 on 1,1 on 1	0.92	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 6218D
0.650	2.00	2.00	3	2 on1, 1 on 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 X218H
0.650	2.00	2.00	5	3 on 1,2 on 1	0.90	MLP	No	OpenTop	0.490	0.220	0.360	03713 051 6215
0.650	2.00	2.00	6	3 on 2	0.90	MLP	No	OpenTop	0.490	0.220	0.360	03713 061 6215
0.650	2.00	2.00	6	3 on 2, plus 1	0.90	MLP	No	OpenTop	0.490	0.220	0.360	03713 061 6218A
0.650	2.00	2.00	6	3 on 1,2 on 1 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 6218C
0.650	2.00	2.00	6	3 on 2	0.60	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 6218E
0.650	2.00	2.00	7	3 on 2 plus 1	0.93	SLP-6L	No	ClamShell	0.760	0.510	0.740	03717 071 6217
0.650	2.00	2.00	7	3 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 6218B
0.650	2.00	2.00	7	3 on 2 plus 1	0.50	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 6218F
0.650	2.00	2.00	7	3 on 2 plus 1	0.88	QFN	No	ClamShell	0.810	0.510	0.740	03717 071 6218G
0.650	2.00	2.21	7	3 on 2 plus 1	0.91	QFN	No	ClamShell	0.770	0.500	0.710	03728 071 6217
0.650	2.00	2.00	7	3 on 2 plus 1	0.75	DFN	Yes	ClamShell	0.810	0.510	0.740	04717 071 6217
0.650	2.00	2.00	9	3 on 2,1 on 2 Plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03726 091 6217
0.650	2.00	2.00	9	2 on 4 plus 1	0.75	LLP	No	ClamShell	0.750	0.500	0.730	03728 091 6217
0.650	2.05	2.05	8	3 on 2 plus 2	0.75	DFN	Yes	ClamShell	0.810	0.510	0.740	04717 081 6217
0.650	2.05	2.05	8	2 or 3 on 2 plus 2	0.55	DFN	Yes	ClamShell	0.810	0.510	0.740	04717 081 X218A
0.650	2.20	2.50	7	3 on 2 plus 1	0.75	CSP	No	ClamShell	0.810	0.510	0.740	03718 071 6217
0.650	2.90	2.30	8	4 on 2	0.80	QFN	Yes	ClamShell	1.030	0.510	0.770	04626 081 6217
0.650	3.00	3.00	7	3 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03718 131 6218B
0.650	3.00	3.00	7	3 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.730	03718 131 6218C
0.650	3.00	3.00	8	4 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03717 091 6218B
0.650	3.00	3.00	8	2 on 4	0.90	MLP	No	ClamShell	0.800	0.590	0.730	03718 081 6217
0.650	3.00	3.00	8	4 on 2	0.90	QFN	No	ClamShell	1.800	0.510	0.740	03723 091 6218A
0.650	3.00	3.00	8	4 on 2	0.75	QFN	No	ClamShell	1.800	0.510	0.740	03723 091 6218B
0.650	3.00	3.00	8	4 on 2	0.80	QFN	No	ClamShell	0.800	0.510	0.740	03723 091 6218C
0.650	3.00	3.00	8	4 on 2	0.90	QFN	Yes	ClamShell	0.810	0.510	0.740	04266 091 6218A
0.650	3.00	3.00	8	4 on 2 plus 2	0.60	DFN	Yes	ClamShell	1.030	0.510	0.770	04713 091 X218B
0.650	3.00	1.90	8	4 on 2	0.75	DFN	Yes	ClamShell	1.030	0.860	0.770	04717 091 6218A
0.650	3.00	1.70	8	4 on 2	0.80	DFN	Yes	ClamShell	0.081	0.510	0.740	04718 091 6218A
0.650	3.00	3.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.750	0.510	0.740	03717 091 6217
0.650	3.00	3.00	9	4 on 2, plus 1	0.65	QFN	No	ClamShell	0.810	0.510	0.740	03717 091 X218C
0.650	3.00	3.00	9	4 on 2, plus 1	0.65	QFN	No	ClamShell	0.760	0.510	0.410	03717 091 X218D
0.650	3.00	3.00	9	2 on 4 plus 1	0.90	LPCC	No	ClamShell	0.800	0.590	0.730	03718 091 6215
0.650	3.00	3.00	9	4 on 2 plus 1	0.90	QFN	No	ClamShell	1.800	0.510	0.740	03723 091 6217
0.650	3.00	3.00	9	4 on 2 plus 1	0.90	SON	Yes	ClamShell	1.030	0.770	0.770	04713 091 6218A
0.650	3.00	1.90	9	4 on 2, plus 1	0.80	DFN	Yes	ClamShell	1.030	0.860	0.770	04717 091 6217
0.650	3.00	3.00	10	4 on 2,1 on 2	0.91	QFN	No	ClamShell	0.810	0.600	0.740	03717 111 6218A

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.650	3.00	3.00	10	4 on 2 plus 2	0.75	DFN	Yes	ClamShell	0.810	0.510	0.740	04713 101 X217
0.650	3.00	2.00	10	4 on 2,1 on 2	0.90	MLP	Yes	ClamShell	1.030	0.510	0.770	04718 081 6217
0.650	3.00	3.00	13	3 on 4 plus 1	0.90	QFN	No	ClamShell	0.800	0.600	0.730	03718 131 6217
0.650	3.05	3.05	6	4 on 1, 1 on 1	1.04	QFN	No	ClamShell	0.810	0.510	0.740	04265 061 6217
0.650	3.05	3.05	6	4 on 1, 1 on 1	1.04	QFN	Yes	ClamShell	0.810	0.510	0.740	04266 061 6217
0.650	3.05	3.20	8	4 on 2	0.80	QFN	No	ClamShell	0.810	0.510	0.740	04266 061 6218A
0.650	3.05	3.05	10	4 on 1,3 on 2	0.70	QFN	No	ClamShell	0.810	0.600	0.740	03728 101 6217
0.650	3.30	3.30	5	4 on 1, 1 on 1	0.75	DFN	No	ClamShell	0.810	0.510	0.740	03737 091 X218C
0.650	3.30	3.05	8	4 on 2	0.85	QFN	Yes	ClamShell	0.810	0.510	0.740	04266 061 X218B
0.650	3.30	3.30	9	4 on 1, 3 on 1	0.97	QFN	No	ClamShell	0.810	0.510	0.740	03737 091 X218A
0.650	3.30	3.30	9	4 on 2, plust 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03737 091 X218B
0.650	4.00	4.00	10	5 on 2	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03718 111 6218A
0.650	4.00	4.00	11	5 on 2 plus 1	0.90	QFN	No	ClamShell	0.790	0.590	0.730	03718 111 6217
0.650	4.00	4.00	12	5 on 2 plus 2	0.75	QFN	No	ClamShell	0.800	0.600	0.740	03718 111 6218B
0.650	4.00	4.00	13	3 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03717 131 6217
0.650	4.00	4.00	16	4 on 4	0.97	MLF	No	ClamShell	0.800	0.600	0.740	03718 161 6215
0.650	4.00	4.00	16	4 on 4	0.90	LPCC	No	ClamShell	0.800	0.600	0.740	03718 161 6218B
0.650	4.00	4.00	16	4 on 4	2.60	QFN	No	ClamShell	0.800	0.600	0.740	03718 161 6218C
0.650	4.00	4.00	16	4 on 4	1.45	MLF	No	ClamShell	0.760	0.600	0.740	03718 171 6218A
0.650	4.00	4.00	16	4 on 4	1.30	QFN	No	ClamShell	0.810	0.600	0.740	03718 171 6218C
0.650	4.00	4.00	16	4 on 4	0.85	QFN	No	ClamShell	1.630	1.600	2.030	03718 171 6218E
0.650	4.00	4.00	16	4 x 4	1.31	QFN	No	Clamshell	1.050	0.750	0.450	040SQ 016J6618A
0.650	4.00	4.00	17	4 on 4 plus 1	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03718 171 6217
0.650	4.00	4.00	17	4 on 4 plus 1	0.90	MLF	No	ClamShell	0.810	0.600	0.740	03718 171 6218B
0.650	4.00	4.00	17	4 on 4 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03718 171 6218D
0.650	4.06	4.06	17	4 on 4 plus 1	1.19	QFN	No	ClamShell	0.800	0.600	0.740	03718 171 6218F
0.650	5.00	5.00	12	6 on 2	1.20	QFN	No	ClamShell	0.770	0.600	0.710	03728 251 6218A
0.650	5.00	5.00	12	6 on 2	0.90	QFN	No	ClamShell	0.770	0.600	0.710	03728 251 6218B
0.650	5.00	5.00	20	5 on 4	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03718 211 6218A
0.650	5.00	5.00	20	5 on 4	1.10	QFN	No	ClamShell	0.810	0.680	0.740	03728 211 6217
0.650	5.00	5.00	21	5 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03718 211 6217
0.650	5.00	5.00	21	5 on 4 plus 1	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03718 211 6218B
0.650	5.00	5.00	24	6 on 4	0.85	QFN	No	ClamShell	0.770	0.600	0.710	03718 251 6218A
0.650	5.00	5.00	25	6 on 4 plus 1	0.85	QFN	No	ClamShell	0.770	0.600	0.710	03718 251 6217
0.650	5.00	5.00	25	6 on 4 plus 1	0.75	QFN	No	ClamShell	0.770	0.600	0.710	03718 251 6218B
0.650	5.00	5.00	25	6 on 4 plus 1	0.90	QFN	No	ClamShell	0.770	0.600	0.710	03718 251 6218D
0.650	6.00	4.50	22	8 on 2,3 on 1,1 on	1.10	QFN	No	ClamShell	0.810	0.680	0.740	03718 221 6217
0.650	6.00	5.00	23	7 on 1,6 on 2,3 on	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03728 231 6217
0.650	6.00	5.00	23	7 on 1, 4 on 2, 1 on	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03729 231 6217
0.650	6.00	6.00	25	6 on 4 plus 1	0.85	QFN	No	ClamShell	0.920	0.710	0.710	03728 331 6218B
0.650	6.00	6.00	26	8 on 3,2 on 1	0.75	QFN	No	ClamShell	0.810	0.680	0.740	03718 261 6217
0.650	6.00	6.00	28	7 on 4	0.92	MLF	No	ClamShell	0.810	0.680	0.740	03718 281 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.650	6.00	6.00	29	7 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03718 281 6218
0.650	6.00	6.00	29	7 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.680	0.740	03718 281 6218B
0.650	6.00	5.00	29	8 on 2, 6 on 2, plus 1	0.85	QFN	No	ClamShell	0.860	0.710	0.740	03728 291 X217
0.650	6.00	6.00	33	8 on 4 plus 1	0.90	QFN	No	ClamShell	0.950	0.710	0.710	03728 331 6217
0.650	6.40	3.00	8	4 on 2	0.75	QFN	No	ClamShell	1.030	0.510	0.740	03738 091 6218A
0.650	7.00	7.00	21	10 on 2 plus 1	0.90	QFN	No	ClamShell	0.940	0.760	0.740	03717 211 6217
0.650	7.00	5.00	23	10 on 2,1 on 2,plus 1	0.90	QFN	No	ClamShell	1.600	1.630	1.882	070050023J6617
0.650	7.00	7.00	32	8 on 4	0.90	QFN	No	ClamShell	0.860	0.700	0.730	03718 331 6218A
0.650	7.00	7.00	33	8 on 4 plus 1	2.60	QFN	No	ClamShell	0.860	0.710	0.740	03718 331 6218B
0.650	7.00	7.00	33	8 on 4 plus 1	1.20	QFN	No	ClamShell	0.860	0.710	0.740	03718 331 6218C
0.650	7.00	6.00	38	9 on 2,8 on 2 plus 4	0.95	QFN	No	ClamShell	0.940	0.760	0.740	03718 381 6217
0.650	7.00	5.00	57	Dual Rows: 20 on 2, 8 on 2	0.75	QFN	No	ClamShell	1.050	0.750	0.450	D0705 057J6617
0.650	8.00	6.00	40	10 on 2,9 on 2 plus 2	1.45	QFN	No	ClamShell	0.940	0.760	0.740	03718 391 6217
0.650	8.00	8.00	44	11 on 4	0.90	QFN	No	ClamShell	0.880	0.750	0.730	03718 451 6218A
0.650	8.00	8.00	44	11 on 4	0.90	QFN	No	OpenTop	1.140	0.770	0.440	Q0808 044 6217
0.650	9.00	9.00	45	11 on 4 plus 1	1.00	QFN	No	ClamShell	0.950	0.760	0.740	03728 451 6217
0.700	6.00	4.00	25	6 on 4 plus 1	1.50	QFN	No	ClamShell	1.050	0.750	0.530	060040025J6617
0.700	6.04	6.04	29	8 on 2,6 on 2 plus 1	1.45	QFN	No	ClamShell	0.860	0.710	0.740	03726 291 6217
0.700	6.04	6.04	29	8 on 2,6 on 2 plus 1	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03726 291 6218B
0.700	7.50	6.00	27	10 on 1,9 on 1, 4 on 2	1.10	QFN	No	ClamShell	1.050	0.750	0.450	075060027J6617
0.700	8.00	6.00	35	9 on 2,8 on 2 Plus 1	1.10	QFN	No	ClamShell	0.940	0.760	0.740	03726 351 6217
0.700	8.00	6.00	35	11 on 2,6 on 2 plus 1	1.05	QFN	No	ClamShell	0.940	0.760	0.740	03726 351 6218B
0.700	8.00	6.00	35	11 on 2,6 on 2 plus 1	0.90	QFN	No	ClamShell	0.940	0.760	0.740	03726 351 X218C
0.730	1.42	1.18	4	2 on 2 Dual	0.64	QFN	No	ClamShell	0.740	0.500	0.730	03733 081 6217
0.750	3.50	3.00	8	4 on 2	1.00	COB	No	ClamShell	0.810	0.510	0.740	03675 081 6217
0.750	7.00	6.00	32	8 on 2, 7 on 2 plus 2	0.90	QFN	No	ClamShell	0.940	0.760	0.740	03775 311 6217
0.750	11.00	7.00	28	14 on 2	0.90	MLP	No	ClamShell	0.860	0.710	0.740	03775 291 6218A
0.760	6.00	6.00	29	8 on 2,6 on 2 plus 1	1.10	QFN	No	ClamShell	0.810	0.680	0.740	03739 291 6217
0.760	9.04	5.42	35	12 on 2,5 on 2	1.10	QFN	No	ClamShell	0.990	0.810	0.740	03739 351 6217
0.800	3.00	3.00	9	4 on 2 plus 1	1.20	QFN	No	ClamShell	0.760	0.600	0.740	03719 091 6217
0.800	3.00	3.00	9	4 on 2 plus 1	1.32	QFN	No	ClamShell	0.810	0.600	0.740	03719 091 6218B
0.800	3.00	3.00	9	4 on 2 plus 1	1.05	QFN	No	ClamShell	0.810	0.600	0.740	03719 091 6218C
0.800	3.00	3.00	9	4 on 2 plus 1	0.95	QFN	No	ClamShell	0.810	0.600	0.740	03719 091 6218D
0.800	3.00	3.00	9	4 on 2 plus 1	1.15	QFN	No	ClamShell	0.810	0.600	0.740	03719 091 6218E
0.800	3.00	3.00	9	4 on 2 plus 1	0.60	QFN	No	ClamShell	0.810	0.600	0.740	03719 091 6218F
0.800	3.50	3.50	13	3 on 4 plus 1	0.85	MLF	No	ClamShell	0.810	0.600	0.740	03719 131 6217
0.800	4.00	4.00	8	4 on 2	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03714 081 6217
0.800	4.00	4.00	8	4 on 2	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 091 6218A
0.800	4.00	4.00	9	4 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03714 091 6217
0.800	4.00	4.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03714 091 6218B
0.800	4.00	4.00	9	4 on 2 plus 1	0.55	QFN	No	ClamShell	0.810	0.600	0.740	03714 091 6218C
0.800	4.00	4.00	13	3 on 4 plus 1	0.90	QFN	No	ClamShell	0.800	0.600	0.740	03723 131 6217

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.800	4.00	4.00	13	3 on 4 plus 1	0.75	QFN	No	ClamShell	0.740	0.590	0.730	03723 131 6218A
0.800	4.00	4.00	17	5 on 2,3 on 2 plus 1	0.75	BCC	No	ClamShell	0.810	0.600	0.740	03723 171 6217
0.800	4.00	4.00	17	5 on 2,3 on 2 plus 1	0.85	QFN	No	ClamShell	0.810	0.600	0.740	03723 171 6218B
0.800	4.50	3.50	9	4 on 2 plus 1	0.90	QFN	No	ClamShell	0.810	0.600	0.740	03912 091 6217
0.800	5.00	4.00	11	2 on 2,3 on 2 plus 1	0.75	LPP	No	ClamShell	0.800	0.600	0.740	03733 111 6217
0.800	5.00	3.00	14	6 on 2,1 on 2	1.45	MLF	No	ClamShell	0.800	0.600	0.740	03719 141 6217
0.800	5.00	3.00	14	6 on 2,1 on 2	0.95	MLF	No	ClamShell	0.800	0.600	0.740	03719 141 6218A
0.800	5.00	5.00	16	4 on 4	1.00	MLFP	No	ClamShell	0.800	0.680	0.740	03719 161 6217
0.800	5.00	5.00	17	4 on 4 plus 1	0.85	QFN	No	ClamShell	0.810	0.680	0.740	03719 171 6217
0.800	5.00	5.00	17	4 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03719 171 6218B
0.800	5.00	5.00	20	4 on 2,6 on 2	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03719 211 6218A
0.800	5.00	5.00	21	5 on 4 plus 1	0.90	QFN	No	ClamShell	0.810	0.680	0.740	03719 211 6217
0.800	5.00	5.00	21	5 on 4 plus 1	0.90	QFN	No	ClamShell	0.770	0.600	0.710	03912 211 6217
0.800	6.00	5.00	15	7 on 2 plus 1	0.95	LLP	No	ClamShell	0.810	0.510	0.740	03913 151 6217
0.800	6.00	6.00	20	5 on 4	0.85	MLFP	No	ClamShell	0.750	0.680	0.730	03913 211 6218A
0.800	6.00	6.00	21	5 on 4 plus 1	0.95	LF-CSP	No	ClamShell	0.810	0.680	0.740	03913 211 6218B
0.800	7.00	6.00	16	8 on 2	0.90	MLP	No	ClamShell	0.860	0.710	0.740	03713 171 6218A
0.800	7.00	5.00	18	5 on 2,5 on 1,3 on 1	2.00	QFN	No	ClamShell	0.860	0.710	0.740	03713 271 6218B
0.800	7.00	5.00	26	5 on 2,8 on 2	1.69	QFN	No	ClamShell	0.860	0.710	0.740	03713 271 6218A
0.800	8.00	8.00	29	7 on 4 plus 1	1.45	QFN	No	ClamShell	0.930	0.750	0.730	03719 291 6217
0.800	8.00	8.00	32	7 on 4 plus 4	1.45	QFN	No	ClamShell	0.940	0.760	0.740	03719 291 6218A
0.800	9.00	9.00	37	9 on 4 plus 1	0.75	LLP	No	ClamShell	0.990	0.810	0.740	03714 371 6217
0.800	9.00	9.00	37	9 on 4 plus 1	1.45	QFN	No	ClamShell	0.930	0.800	0.730	03719 371 6217
0.800	10.00	10.00	31	2 on 2, 22 Dual on	2.10	QFN	Yes	ClamShell	0.950	0.840	0.740	03790 311 6217
0.800	10.00	10.00	36	9 on 4	1.55	QFN	No	ClamShell	1.000	0.840	0.740	03913 371 6218A
0.800	10.00	10.00	37	9 on 4 plus 1	1.90	QFN	No	ClamShell	1.000	0.840	0.740	03913 371 6218B
0.800	12.00	12.00	36	8 on 2, 14, 4 plus 2	2.10	QFN	Yes	ClamShell	1.090	1.010	0.750	03719 361M6217
0.850	10.00	8.00	38	9 on 4 plus 2	1.10	QFN	No	ClamShell	1.000	0.840	0.740	03729 381 6217
0.850	10.00	8.00	38	9 on 4 plus 2	1.35	QFN	No	ClamShell	1.000	0.840	0.740	03729 381 6218A
0.850	14.00	10.00	50	14 on 2,10 on 2	0.90	QFN	No	ClamShell	1.230	0.940	0.740	03729 501 6217
0.880	8.00	8.00	29	8 on 2,6 on 2 plus 1	1.45	QFN	No	ClamShell	0.940	0.760	0.740	03919 291 6217
0.900	4.50	4.50	22	3 on 2, 4 on 2, 1 per	1.00	QFN	No	ClamShell	1.050	0.750	0.450	045SQ 022J6617
0.900	6.00	3.00	16	7 on 2 plus 2	1.10	QFN	No	ClamShell	0.810	0.600	0.740	03739 161 6217
0.900	7.00	4.00	22	6 on 2,4 on 2 plus 2	1.10	QFN	No	ClamShell	0.860	0.710	0.740	03739 211 6217
0.900	7.00	4.00	22	6 on 2,4 on 2 plus 2	1.20	QFN	No	ClamShell	0.810	0.710	0.740	03749 211 6217
0.900	7.00	4.00	22	6 on 2,4 on 2 plus 2	1.02	QFN	No	ClamShell	0.810	0.710	0.740	03749 211 6218B
0.950	3.00	2.00	3	1 on 1, 2 on 1	0.90	QFN	No	ClamShell	0.750	0.500	0.730	03433 031 6215
0.950	3.00	3.00	6	3 on 2	0.75	QFN	No	ClamShell	0.800	0.510	0.740	03729 071 6218A
0.950	3.00	2.00	6	3 on 2	0.95	MLP	No	ClamShell	0.800	0.510	0.740	03733 071 6218A
0.950	3.00	3.00	7	3 on 2 plus 1	0.90	MLP	No	ClamShell	0.800	0.510	0.740	03713 071 6217
0.950	3.00	3.00	7	3 on 2 plus 1	0.75	QFN	No	ClamShell	0.760	0.510	0.740	03729 071 6217
0.950	3.00	3.00	7	3 on 2 plus 1	0.90	QFN	No	ClamShell	0.800	0.510	0.740	03729 071 6218B

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.950	3.00	3.00	7	3 on 2 plus 1	0.85	QFN	No	ClamShell	0.800	0.510	0.740	03729 071 6218C
0.950	3.00	3.00	7	3 on 2 plus 1	0.90	QFN	No	ClamShell	0.800	0.510	0.740	03729 071 6218E
0.950	3.29	2.92	7	3 on 2 plus 1	0.75	QFN	No	ClamShell	0.800	0.510	0.740	03723 071 6217
0.950	5.00	2.00	6	2 on 2 plus 2	0.70	QFN	No	ClamShell	0.810	0.510	0.740	03729 061 6217
0.950	5.00	2.00	6	2 on 2, plus 2	0.75	QFN	No	ClamShell	0.810	0.510	0.740	03729 061 6218A
0.950	5.00	4.00	10	4 on 2 plus 2	0.90	MLPD	No	ClamShell	0.810	0.510	0.740	03729 091 6217
0.950	5.00	4.00	11	5 on 2 plus 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03739 111 X217
0.960	6.60	6.60	20	7 on 2,3 on 2	1.20	QFN	No	ClamShell	0.860	0.710	0.740	03729 221 6217
0.965	3.00	3.00	6	3 on 2	1.30	QFN	No	ClamShell	0.810	0.510	0.740	03713 101 6218D
0.988	8.00	8.00	28	8 on 2, 6 on 2 plus 4	1.05	QFN	No	ClamShell	0.940	0.760	0.740	03729 291 X218E
0.988	8.00	8.00	29	7 on 4 plus 1	1.45	QFN	No	ClamShell	0.940	0.760	0.740	03729 291 6218C
0.988	8.00	8.00	30	8 on 2,6 on 2 plus 2	1.15	QFN	No	ClamShell	0.860	0.760	0.740	03729 291 6217
0.988	8.00	8.00	32	8 on 2, 6 on 2 plus 4	1.30	QFN	No	ClamShell	0.940	0.760	0.740	03729 291 6218D
1.000	5.00	3.00	6	5 on 2, D*	0.90	QFN	No	ClamShell	0.800	0.510	0.740	03729 111 X218B
1.000	5.00	3.00	10	5 on 2	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03729 111 X218A
1.000	5.00	5.00	13	3 on 4 plus 1	1.98	QFN	No	ClamShell	0.810	0.680	0.740	03744 131 6217
1.000	6.00	6.00	17	4 on 4 plus 1	1.45	QFN	No	ClamShell	0.810	0.680	0.740	03714 391 6218B
1.000	6.00	6.00	17	4 on 4 plus 1	1.98	QFN	No	ClamShell	0.810	0.680	0.740	03714 391 6218C
1.000	6.00	5.00	19	5 on 2,4 on 2 plus 1	1.45	QFN	No	ClamShell	0.810	0.680	0.740	03743 191 6217
1.000	6.00	6.00	21	6 on 2,4 on 2 plus 1	2.30	QFN	No	ClamShell	0.860	0.710	0.740	03724 411 X218C
1.000	6.00	6.00	21	6 on 2, 4 on 2, plus 2	1.25	QFN	No	ClamShell	0.860	0.710	0.740	03744 211 X217
1.000	6.00	6.00	21	6 on 2, 4 on 2, plus 1	1.30	QFN	No	ClamShell	0.860	0.710	0.740	03744 211 X218B
1.000	6.84	6.84	16	4 on 4	2.60	QFN	No	ClamShell	0.870	0.710	0.740	03744 171 6218A
1.000	7.50	5.50	21	7 on 2,3 on 2 plus 1	1.40	Oscar Module	No	ClamShell	0.860	0.600	0.740	03713 211 6215
1.000	8.00	6.00	21	6 on 2,4 on 2 plus 1	1.15	QFN	No	ClamShell	0.940	0.760	0.740	03743 211 6217
1.000	8.00	5.00	23	5 on 2,6 on 2 plus 1	1.45	QFN	No	ClamShell	0.940	0.760	0.740	03743 231 6217
1.000	8.00	7.00	24	7 on 2,5 on 2	2.00	QFN	No	ClamShell	1.050	0.750	0.540	D0807 043J6618D
1.000	8.00	7.00	25	7 on 2,5 on 2 plus 1	1.40	QFN	No	ClamShell	1.050	0.750	0.455	D0807 043J6618C
1.000	8.00	8.00	29	7 on 4 plus 1	1.15	QFN	No	ClamShell	0.940	0.760	0.740	03729 291 6218B
1.000	8.00	8.00	29	8 on 2, 6 on 2 plus 1	1.35	QFN	No	ClamShell	0.940	0.760	0.740	03729 291 X218F
1.000	8.00	7.00	31	7 on 2,5 on 2 plus 7	1.35	QFN	No	ClamShell	1.050	0.750	0.455	D0807 043J6618B
1.000	8.40	6.00	14	7 on 2	1.60	QFN	No	ClamShell	0.860	0.710	0.740	03742 151 X218A
1.000	9.85	9.00	36	9 on 2,8 on 2 plus 2	1.40	QFN	No	ClamShell	1.050	0.750	0.450	098090036J6617
1.000	9.90	9.00	36	9 on 2,8 on 2 plus 2	1.45	QFN	No	ClamShell	1.050	0.750	0.450	099090036J6617
1.000	10.00	8.00	33	8 on 4 plus 1	1.20	QFN	No	ClamShell	0.950	0.840	0.740	03743 331 6217
1.000	10.00	8.00	33	8 on 4 plus 1	1.70	QFN	No	ClamShell	0.950	0.840	0.740	03743 331 6218A
1.000	12.00	8.00	18	9 on 2	2.10	QFN	No	ClamShell	0.900	0.760	0.740	03733 251 6218A
1.000	12.00	8.00	21	12 on 2, plus 3	2.10	QFN	No	ClamShell	0.900	0.760	0.740	03733 251 6218B
1.000	12.00	8.00	36	9 on 2, plus 3	2.10	QFN	No	ClamShell	0.900	0.760	0.740	03733 251 6218C
1.000	12.00	9.00	46	10 on 2,9 on 2	1.70	MCM	No	ClamShell	1.470	1.050	0.605	120090046J6617
1.000	14.00	12.00	40	14 on 2,5 on 1, 7	1.80	QFN	No	OpenTop	1.360	0.920	0.440	Q1412 040 6217
1.020	10.67	10.67	36	9 on 4	2.10	LCC	No	ClamShell	1.082	0.860	0.750	04440 361 6215

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.050	3.20	2.50	7	3 on 2 plus 1	0.85	DFN	No	ClamShell	0.810	0.510	0.740	03745 071 X217
1.250	6.00	6.00	17	5 on 2,3 on 2 plus 1	1.40	QFN	No	ClamShell	0.860	0.710	0.740	03733 171 6217
1.250	6.00	6.00	17	5 on 2,3 on 2 plus 1	1.40	QFN	No	ClamShell	0.860	0.710	0.740	03733 171 6218A
1.270	5.00	3.20	7	3 on 2 plus 1	0.85	DFN	No	ClamShell	0.810	0.560	0.740	03746 071 X217
1.270	5.00	5.00	8	3 on 2,1 on 2	1.52	QFN	No	ClamShell	0.810	0.680	0.740	03853 081 6218B
1.270	5.00	5.00	8	3 on 2,1 on 2	1.17	QFN	No	ClamShell	0.810	0.680	0.740	03853 081 6218C
1.270	5.00	5.00	8	3 on 2,1 on 2	1.98	QFN	No	ClamShell	0.810	0.680	0.740	03853 081 6218D
1.270	5.00	6.00	8	4 on 2	1.50	QFN	No	ClamShell	0.810	0.510	0.740	04260 091 X218C
1.270	5.00	6.00	9	4 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.510	0.740	04260 091 6218B
1.270	5.00	5.00	10	4 on 2 plus 2	0.85	QFN	No	ClamShell	0.810	0.510	0.740	04260 101 6217
1.270	5.00	5.00	14	3 on 2,4 on 2	0.89	QFN	No	ClamShell	0.810	0.680	0.740	03853 141 6217
1.270	5.15	5.90	8	4 on 2	1.00	CSP	Yes	ClamShell	0.810	0.510	0.740	04262 081 6217
1.270	5.20	5.55	8	4 on 1, 1 on 1	0.90	DFN	No	ClamShell	0.940	0.760	0.740	04258 081 6217
1.270	5.20	5.55	8	4 on 2, plus 1	0.95	DFN	No	ClamShell	0.940	0.760	0.740	04258 081 X218A
1.270	5.20	5.55	8	4 on 1, 1 on 1	0.90	DFN	Yes	ClamShell	0.940	0.760	0.740	04259 081 6217
1.270	5.59	3.81	4	2 on 2 Dual	1.73	DFN	Yes	ClamShell	0.810	0.680	0.740	04272 081 6217
1.270	5.89	4.90	6	4 on 1,2 on 1	1.04	QFN	Yes	ClamShell	0.900	0.760	0.740	04261 061 6217
1.270	5.89	4.90	6	4 on 1,2 on 1	1.04	QFN	No	ClamShell	0.950	0.760	0.740	04261 061 6218A
1.270	5.99	4.92	8	4 on 2	0.93	MLP	No	ClamShell	0.810	0.510	0.740	04260 081 6217
1.270	5.99	5.00	8	4 on 2	0.95	MLP	No	ClamShell	0.810	0.510	0.740	04260 091 6217
1.270	6.00	5.00	6	4 on 1, 2 on 1	0.90	MLP	No	ClamShell	0.760	0.680	0.740	04260 061 6217
1.270	6.00	5.00	8	4 on 2	0.90	MLP	Yes	ClamShell	1.110	0.510	0.770	04270 091 6218A
1.270	6.00	3.73	8	3 on 2 plus 2	0.75	DFN	Yes	ClamShell	0.810	0.510	0.740	04271 081 6217
1.270	6.00	5.00	9	4 on 2 plus 2	0.90	DFN	Yes	ClamShell	1.110	0.510	0.770	04270 091 X218E
1.270	6.00	5.00	10	4 on 2 plus 2	0.70	DFN	Yes	ClamShell	1.110	0.510	0.770	04270 091 6218B
1.270	6.00	5.00	10	4 on 2 plus 2	0.75	DFN	Yes	ClamShell	1.060	0.510	0.770	04270 091 6218C
1.270	6.22	4.32	6	3 on 2	1.30	QFN	No	ClamShell	0.800	0.600	0.740	03723 061 6217
1.270	7.00	7.00	18	4 on 4 plus 2	0.85	QFN	No	ClamShell	0.860	0.710	0.740	04260 181 6217
1.270	7.57	7.57	16	4 on 4	1.98	QFN	No	ClamShell	0.940	0.760	0.740	03830 161 X217
1.270	14.04	10.04	33	7 on 2 9 on 2 plus 1	1.75	QFN	No	ClamShell	1.140	1.010	0.750	03830 331 6217
1.320	6.10	3.56	5	1 x 5	0.76	QFN	Yes	ClamShell	0.810	0.510	0.740	03731 051 6217
1.370	4.90	3.20	8	3 on 2,1 on 2	1.00	QFN	No	ClamShell	1.050	0.750	0.450	049032008J6617
1.380	10.00	8.00	26	P1 plus 4	1.32	QFN	No	ClamShell	0.950	0.840	0.740	D1008 026M6217
1.600	6.40	3.20	15	4 on 2	0.74	QFN	No	ClamShell	0.810	0.510	0.740	03719 151 X218B
1.650	2.50	2.00	4	2 on 2	0.35	QFN	No	ClamShell	0.810	0.510	0.740	03732 041 X218A
1.650	2.50	2.00	4	2 on 2	0.55	QFN	No	ClamShell	0.810	0.510	0.740	03732 041 X218B
1.700	8.00	8.00	18	5 on 2,3 on 2 plus 2	1.45	QFN	No	ClamShell	0.940	0.760	0.740	D0808 018M6217
1.700	10.00	11.00	6	5 on 1, plus 1	0.90	DFN	Yes	ClamShell	0.990	0.810	0.740	04275 061 X217
1.750	2.50	2.00	4	2 on 2	0.85	QFN	No	ClamShell	0.810	0.510	0.740	03732 041 6217
1.760	3.00	2.90	3	1 on 1, 2 on 1	1.60	QFN	Yes	ClamShell	0.810	0.510	0.740	03434 031 6215
1.797	9.20	9.20	16	4 on 4	3.30	QFN	No	ClamShell	1.000	0.810	0.740	03715 171 6218A
1.800	7.00	7.00	12	3 on 4	3.41	QFN	No	ClamShell	0.860	0.710	0.740	03714 451 6218B

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QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.800	15.00	11.40	16	7 on 2,1 on 2	2.70	QFN	No	ClamShell	1.260	1.090	0.740	03746 161 6217
1.800	15.00	11.40	16	7 on 2,1 on 2	2.70	QFN	No	ClamShell	1.260	1.090	0.740	03746 161 6218A
1.900	3.00	3.00	3	2 on 1, 1 on 1	1.00	QFN	No	ClamShell	0.800	0.510	0.740	03729 071 6218D
1.900	8.37	8.37	13	3 on 4 plus 1	1.45	QFN	No	ClamShell	0.940	0.760	0.740	03747 131 6217
1.900	11.08	11.08	20	5 on 4	5.20	QFN	No	ClamShell	1.030	0.860	0.750	03747 211 6218A
1.910	11.64	9.14	17	5 on 2,3 on 2 plus 1	1.50	QFN	No	ClamShell	1.000	0.840	0.680	03747 171 6218A
1.980	8.00	8.00	5	4 on 1 plus 1	1.85	DFN	No	ClamShell	0.940	0.760	0.740	03747 051 X217
2.100	3.20	2.50	4	2 on 2	0.85	QFN	No	ClamShell	0.810	0.510	0.740	03748 041 6217
2.520	3.00	3.00	3	1 on 2 plus 1	0.75	QFN	Yes	ClamShell	0.810	0.510	0.740	03727 111 6218B
2.540	5.00	3.20	4	2 x 2	.85 to 1.04	DFN	No	ClamShell	0.810	0.560	0.740	03740 041 6217
2.540	6.15	5.16	4	1 x 4	0.80	PolarPAK	Yes	ClamShell	0.810	0.680	0.740	03741 041 6217
2.540	7.00	5.00	7	3 on 2, plus 1	0.85	DFN	No	ClamShell	0.810	0.600	0.740	03740 071 X217
2.540	14.00	9.00	9	3 on 2,3 on 1	3.06	QFN	No	ClamShell	1.280	1.160	0.780	03743 131 6218B
2.540	25.40	30.48	12	8 on 1, 4 on 1	4.82	CO-223	No	ClamShell	1.870	1.300	0.830	04349 121 6215
2.540	25.40	30.48	12	4 on 1,8 on 1	6.35	LCC	No	ClamShell	1.870	1.300	0.830	04349 121 6218A
2.540	26.00	26.00	17	3 on 2,7 on 1,4 on 1	2.77	HPH IMS	Yes	OpenTop	1.850	1.310	0.560	Q2626 017 6217
2.540	30.48	25.40	11	7 on 1,4 on 1	4.95	Oscillator	No	ClamShell	1.820	1.300	0.750	04341 111 6217
2.540	30.48	25.40	11	7 on 1,4 on 1	4.95	Oscillator	No	ClamShell	1.870	1.300	0.810	04341 111 6218A
2.540	30.48	27.94	12	8 on 1,4 on 1	4.95	Oscillator	No	ClamShell	1.950	1.300	0.810	04341 121 6218B
2.550	6.00	5.00	3	2 on 1, 1 on 1	1.85	QFN	No	ClamShell	0.810	0.680	0.740	04244 031 6215
3.400	5.00	4.00	3	1 on 2 plus 1	0.75	QFN	No	ClamShell	0.810	0.600	0.740	03713 251 6218D
5.080	25.00	25.00	16	4 on 4	4.51	SOC	Yes	OpenTop	1.740	1.370	0.560	Q2525 016 6217
Multi	2.00	2.00	12	2 on 4, plus 4 corners	0.95	QFN	No	ClamShell	1.050	0.750	0.450	020SQ 012J6618A
Multi	2.00	2.00	15	5 on 2, 2 on 2 plus 1	0.55	QFN	No	ClamShell	0.770	0.510	0.710	03941 151 X217
Multi	2.30	2.30	17	5 on 2, 3 on 2 plus 1	0.75	QFN	No	ClamShell	1.050	0.750	0.530	023SQ 017J6617
Multi	2.91	2.50	4	2 on 2	0.93	QFN	No	ClamShell	0.810	0.510	0.740	03747 041 X217
Multi	3.00	3.00	14	4 on 3, 2 on 1	0.90	QFN	Yes	ClamShell	0.810	0.600	0.740	04713 141 X217
Multi	3.00	3.25	16	6 on 2, 2 on 2	1.00	QFN	No	ClamShell	1.050	0.750	0.445	032030016J5617
Multi	3.10	1.80	9	4 on 1, 2 on 2, 1	0.95	QFN	No	ClamShell	0.810	0.600	0.740	03731 091 X217
Multi	3.20	2.50	19	6 on 2 plus 1	0.90	QFN	No	ClamShell	1.050	0.750	0.530	032025019J6617
Multi	4.00	3.00	10	5 Center	1.00	QFN	No	ClamShell	1.050	0.750	0.540	040030010J6617
Multi	4.10	3.20	15	6 on 1, 8 on 1	1.15	DFN	No	ClamShell	0.810	0.510	0.740	03744 151 X217
Multi	4.10	3.20	16	8 on 1, 6 on 1,	0.90	QFN	No	ClamShell	0.810	0.510	0.740	03743 161 X217
Multi	4.72	3.76	6	3 on 2	1.00	QFN	Yes	ClamShell	1.050	0.750	0.440	047037012J6617
Multi	5.00	3.20	10	3 on 2, 2 on 2	0.85	QFN	No	ClamShell	0.810	0.680	0.740	03746 101 X217
Multi	5.00	3.00	14	6 on 2 plus 2	1.10	QFN	No	ClamShell	0.800	0.600	0.740	03729 141 6217
Multi	5.00	3.00	14	6 on 2 plus 2	1.10	QFN	No	ClamShell	0.800	0.600	0.740	03729 141 6218A
Multi	5.50	5.00	29	8 on 2,6 on 2 plus 1	1.30	QFN	No	ClamShell	0.860	0.710	0.740	03736 291 X217
Multi	6.00	6.00	9	3 on 2,1 on 2 plus 1	1.40	SSLGA	No	ClamShell	0.860	0.710	0.740	03733 091 6217
Multi	6.00	3.75	16	5 on 2, 6 on 1	0.95	QFN	No	ClamShell	0.810	0.680	0.740	03731 161 X217
Multi	6.00	4.50	32	5 on 2, 10 on 2	1.05	QFN	No	ClamShell	1.050	0.750	0.450	060045032J6617
Multi	6.00	5.00	32	Multi array	0.92	QFN	No	ClamShell	1.050	0.750	0.450	060050032J6617

QFN Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
Multi	6.15	5.16	10	1 x 4	0.80	PolarPAK	Yes	ClamShell	0.810	0.680	0.740	03741 101 6217
Multi	7.00	4.00	16	4 on 1, 5 on 1, 3 on 1, 4 on 1	1.15	QFN	No	ClamShell	0.860	0.710	0.740	03743 171 6218A
Multi	7.00	4.00	17	3 on 2, 4 on 1, 6 on 1, plus 1	1.08	QFN	No	ClamShell	0.860	0.710	0.740	03743 171 6218B
Multi	7.00	4.00	18	5 on 2, 2on1,1on1, 4 corner, +2	1.05	QFN	No	ClamShell	0.860	0.710	0.740	03743 181 X217
Multi	7.00	5.00	28	11 on 2, 1 on 2, plus 2	0.90	QFN	No	ClamShell	0.860	0.710	0.740	03717 301 X217
Multi	8.00	8.00	12	3 on 2,4 on 1,1 on 1 plus 1	1.60	QFN	No	ClamShell	0.930	0.760	0.740	03723 121 6217
Multi	8.00	8.00	21	4 on 2,7on 1,6 on 1	1.30	QFN	No	Clamshell	0.940	0.760	0.740	03729 201 6217
Multi	8.00	7.00	49	Dual Row plus 1	1.35	QFN	No	ClamShell	1.050	0.750	0.455	D0807 043J6617
Multi	10.00	8.00	18	6 on 2,3 on 2	1.33	QFN	No	ClamShell	0.990	0.830	0.730	D1008 020M6217
Multi	10.00	8.00	35	9 on 2,8 on 2 plus 1	1.10	QFN	No	ClamShell	1.000	0.840	0.740	03729 351 6217
Multi	10.20	8.00	31	9 on 2,6 on 2 plus 1	1.30	SOT831-1	No	ClamShell	1.000	0.840	0.740	03729 311 6217
Multi	12.00	12.00	16	12 on 1,2 on 1, plus 2	2.10	QFN	Yes	ClamShell	1.150	1.010	0.750	03729 161 6217
Multi	12.00	6.00	90	9 on 2, 16 on 2, plus 40	1.45	MCM	No	ClamShell	1.050	0.750	0.450	D1206 051J6617

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BGA/CSP Sockets

Design Features

- *Designed to Connect to Packages for Burn-in and Test and Accommodate Variations in Package Thickness*
- *Contact Pitches of 0.25mm and Greater using Loranger Standard and APS Contacts*
- *Compression Mount Sockets Connect Package Solder Balls to Surface Mount Pads on Board*
- *Up to 20 Grams Contact Normal Force per Solder Ball for Reduced Witness Marking and Assuring Good Contact with High Hertz-Forces*
- *Low-Profile and Small Footprint Design Increases Board Density*
- *Surface-mount Design Irons Out Coplanarity Issues and Reduces Need for Extra Board Layers*
- *Top or Bottom Mounted Heat Sink Options*

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	0.77	0.77	4	2 x 2	0.45	ClamShell	1.050	0.750	0.530	007SQ 004J6617
0.400	0.82	0.82	4	2 x 2	0.58	ClamShell	1.050	0.750	0.530	008SQ 004J6617
0.400	0.85	0.85	8	2 x 2	0.51	ClamShell	1.050	0.750	0.550	008SQ 008J5617
0.400	1.09	0.80	5	Interstitial	0.63	ClamShell	1.050	0.750	0.550	010008005J6617
0.400	1.20	0.83	4	2 x 2	0.58	ClamShell	1.050	0.750	0.530	012008004J6617
0.400	1.25	1.25	9	3 x 3	0.58	ClamShell	1.050	0.750	0.535	012SQ 009J6618A
0.400	1.38	1.00	6	2 x 3	0.58	ClamShell	1.050	0.750	0.530	013010006J6617
0.400	1.47	0.79	6	2 x 3	0.55	ClamShell	1.050	0.750	0.530	014007006J6617
0.400	1.52	0.84	6	2 x 3	0.55	ClamShell	1.050	0.750	0.530	015008006J6617
0.400	1.60	0.80	8	8 x 2 Dual	0.58	ClamShell	1.050	0.750	0.530	016008016J6617
0.400	1.60	0.80	8	8 x 2	0.58	ClamShell	1.050	0.750	0.530	016008016J6618A
0.400	1.67	0.87	8	4 x 2	0.58	ClamShell	1.050	0.750	0.530	016008016J6618B
0.400	1.96	1.56	20	5 x 4	0.58	ClamShell	1.050	0.750	0.530	019015020J6617
0.400	1.97	1.97	25	5 x 5	0.05	ClamShell	1.050	0.750	0.530	019SQ 025J6617
0.400	1.98	1.96	20	4 x 5	0.58	ClamShell	1.050	0.750	0.530	019019020J6617
0.400	2.00	1.60	20	5x4	0.58	ClamShell	1.050	0.750	0.530	020016020J6617
0.400	2.07	2.07	25	5 x 5	0.46	ClamShell	1.050	0.750	0.530	020SQ 025J6617
0.400	2.28	2.23	25	5 x 5	0.55	ClamShell	1.050	0.750	0.530	022022025J6617
0.400	2.30	1.71	20	5 x 4	0.58	ClamShell	1.050	0.750	0.530	023017020J6617
0.400	2.40	2.00	30	6 x 5	0.45	ClamShell	1.050	0.750	0.530	024020030J6617
0.400	2.54	2.45	30	6 x 5	0.60	ClamShell	1.050	0.750	0.530	025024030J6617
0.400	3.00	3.00	32	6 x 6 D*	0.88	ClamShell	1.050	0.750	0.530	030SQ 032J6617
0.400	3.00	3.00	49	7 x 7	0.95	ClamShell	1.050	0.750	0.530	030SQ 049J6617
0.400	3.50	3.50	49	7 x 7	0.80	ClamShell	1.050	0.750	0.530	035SQ 049J6618A
0.400	4.00	4.00	64	8 x 8	1.00	ClamShell	1.050	0.750	0.530	040SQ 064J6618A

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	4.00	4.00	64	8 x 8	0.91	ClamShell	1.050	0.750	0.530	040SQ 064J6618B
0.400	4.25	3.12	49	9 x 7 D*	0.51	ClamShell	1.050	0.750	0.530	042031049J6617
0.400	4.51	4.31	105	11x10 *D	0.50	ClamShell	1.050	0.750	0.530	045043105J6617
0.400	5.49	5.50	145	13 x 13 D*	0.50	ClamShell	1.050	0.750	0.530	055054169J6617
0.400	8.00	8.00	244	18 x 18 D*	0.91	ClamShell	1.050	0.750	0.535	080SQ 244J6617
0.440	3.42	2.68	42	7 x 6	0.55	ClamShell	1.050	0.750	0.530	034026042J6617
0.450	2.26	2.26	25	5 x 5	0.76	ClamShell	1.050	0.750	0.530	022SQ 025J6617
0.450	2.57	2.52	25	5 x 5	0.76	ClamShell	1.050	0.750	0.530	025025025J6617
0.480	3.84	3.74	49	7 x 7	0.46	ClamShell	1.050	0.750	0.450	037038049J6617
0.500	0.96	0.96	4	2 x 2	0.51	ClamShell	1.050	0.750	0.440	009SQ 004J6617
0.500	0.96	0.96	4	2 x 2	0.46	ClamShell	1.050	0.750	0.440	009SQ 004U6617
0.500	1.06	0.96	4	2 x 2	0.74	ClamShell	1.050	0.750	0.440	010009004U6617
0.500	1.06	1.06	4	2 x 2	0.74	ClamShell	1.050	0.750	0.440	010SQ 004J6617
0.500	1.32	0.82	5	Interstitial 2	0.55	ClamShell	1.050	0.750	0.440	013008005U6617
0.500	1.33	0.96	5	Interstitial 2	0.45	ClamShell	1.050	0.750	0.440	013009005J6617
0.500	1.33	0.83	5	Interstitial 2	0.58	ClamShell	1.050	0.750	0.440	013008005J6617
0.500	1.33	0.96	5	Interstitial 2	0.74	ClamShell	1.050	0.750	0.440	013009005U6617
0.500	1.41	1.00	5	Interstitial	0.55	ClamShell	1.050	0.750	0.530	014010005J6617
0.500	1.43	1.43	9	3 x 3 8X	0.87	ClamShell	1.050	0.750	0.650	014SQ 009U6617
0.500	1.46	0.96	6	3 x 2	0.50	ClamShell	1.050	0.750	0.440	014009006J6617
0.500	1.50	1.50	9	3 x 3	0.75	ClamShell	1.050	0.750	0.440	015SQ 009J6618A
0.500	1.52	1.52	83	x 3, depop	0.58	ClamShell	1.050	0.750	0.440	015SQ 008J6618B
0.500	1.52	1.52	9	3 x 3	0.58	ClamShell	1.050	0.750	0.440	015SQ 009J6618B
0.500	1.54	1.04	6	2 x 3	0.50	ClamShell	1.050	0.750	0.440	015010006J6618A
0.500	1.54	1.08	6	2 x 3	0.50	ClamShell	1.050	0.750	0.440	015010006J6618B
0.500	1.55	1.55	4	2 x 2	0.58	ClamShell	1.050	0.750	0.440	016SQ 004U6617
0.500	1.58	1.08	6	2 x 3	0.58	ClamShell	1.050	0.750	0.440	015010006J6617
0.500	1.76	0.96	6	3 x 2	0.35	ClamShell	1.050	0.750	0.440	017009006J6617
0.500	1.92	1.00	4	2 x 2 Dual	0.43	ClamShell	1.050	0.750	0.450	019010008J6617
0.500	2.00	2.00	8	4 on 2	0.95	ClamShell	1.050	0.750	0.450	020SQ 008J6617
0.500	2.00	2.00	8	3 x 3 D*	0.90	ClamShell	1.050	0.750	0.650	020SQ 008U6617
0.500	2.00	2.00	8	3 x 3 D*	0.72	ClamShell	1.050	0.750	0.650	020SQ 008U6618A
0.500	2.00	1.40	12	3 x 4	0.73	ClamShell	1.050	0.750	0.650	020014012U6617
0.500	2.00	1.50	12	3 x 4	0.62	ClamShell	1.050	0.750	0.440	020015012J6617
0.500	2.00	1.64	12	3 x 4	0.58	ClamShell	1.050	0.750	0.450	020016012J6617
0.500	2.06	1.22	8	2 x 2	0.54	ClamShell	1.050	0.750	0.450	020012008J6617
0.500	2.07	1.55	10	3 x 4 D*	0.69	ClamShell	1.050	0.750	0.440	020015010J6617
0.500	2.09	0.99	8	2 x 4	0.56	ClamShell	1.050	0.750	0.650	020009008U6617
0.500	2.16	2.01	16	4 x 4	0.58	ClamShell	1.050	0.750	0.450	021020016J6617
0.500	2.24	1.49	8	2 x 4	0.67	ClamShell	1.050	0.750	0.440	022014008U6617
0.500	2.26	1.56	8	2 x 4	0.70	ClamShell	1.050	0.750	0.450	022015008J6617
0.500	2.50	2.50	15	4 x 4 D*	0.90	ClamShell	1.050	0.750	0.560	025SQ 015U6617
0.500	2.50	2.50	16	4 x 4	1.00	ClamShell	1.050	0.750	0.440	025SQ 016U6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	2.75	2.55	25	5 x 5	0.58	ClamShell	1.050	0.750	0.450	027025025U6617
0.500	2.75	2.67	25	5 x 5	0.65	ClamShell	1.050	0.750	0.450	027026025J6617
0.500	3.00	3.00	16	5 x 5 D*	1.00	ClamShell	1.050	0.750	0.670	030SQ 016U6617
0.500	3.00	3.00	24	5 x 5 D*	1.00	ClamShell	1.050	0.750	0.440	030SQ 024U6617
0.500	3.00	3.00	25	5 x 5	0.75	ClamShell	1.050	0.750	0.440	030SQ 025U6617
0.500	3.47	2.97	40	7 x 6	0.61	ClamShell	1.050	0.750	0.450	034029040J6617
0.500	3.50	3.50	36	6 x 6	1.03	ClamShell	1.050	0.750	0.450	035SQ 036J6617
0.500	3.53	2.37	15	3 x 6 D*	0.93	ClamShell	1.050	0.750	0.650	035023015U6617
0.500	3.56	3.56	49	7 x 7	0.60	ClamShell	1.050	0.750	0.450	035SQ 049J6617
0.500	3.66	3.66	36	6 x 6	0.57	ClamShell	1.050	0.750	0.450	036SQ 036J6617
0.500	3.70	3.70	49	7 x 7	0.92	ClamShell	1.050	0.750	0.450	037SQ 049U6617
0.500	4.00	4.00	40	7 x 7 D*	0.65	ClamShell	1.050	0.750	0.450	040SQ 040U6617
0.500	4.00	4.00	48	7 x 7 D*	0.90	ClamShell	1.050	0.750	0.445	040SQ 048U6617
0.500	4.00	4.00	48	7 x 7 D*	1.15	ClamShell	1.050	0.750	0.450	040SQ 048U6618A
0.500	4.00	4.00	49	7 x 7	0.95	ClamShell	1.050	0.750	0.450	040SQ 049U6617
0.500	4.00	4.00	49	7 x 7	1.05	ClamShell	1.050	0.750	0.450	040SQ 049U6618A
0.500	4.55	4.55	81	9 x 9	0.64	ClamShell	1.050	0.750	0.450	045SQ 081J6617
0.500	5.00	5.00	52	9 x 9 D*	1.05	ClamShell	1.050	0.750	0.650	050SQ 052U6617
0.500	5.00	5.00	54	9 x 9 D*	0.95	Clamshell	1.050	0.750	0.450	050SQ 054J6617
0.500	5.00	5.00	60	9 x 9 D*	1.04	ClamShell	1.050	0.750	0.440	050SQ 081U6618B
0.500	5.00	5.00	68	9 x 9 D*	1.09	Clamshell	1.050	0.750	0.440	050SQ 068U6617
0.500	5.00	5.00	70	9 x 9	1.10	ClamShell	1.050	0.750	0.440	050SQ 081U6618A
0.500	5.00	5.00	72	9 x 9 D*	1.01	Clamshell	1.050	0.750	0.440	050SQ 072U6617
0.500	5.00	5.00	80	9 x 9 D*	1.00	ClamShell	1.050	0.750	0.650	050SQ 032U6618B
0.500	5.00	5.00	80	9 x 9 D*	0.95	ClamShell	1.050	0.750	0.450	050SQ 080J6617
0.500	5.00	5.00	80	9 x 9 D*	1.00	ClamShell	1.050	0.750	0.650	050SQ 080U6617
0.500	5.00	5.00	81	9 x 9	1.00	ClamShell	1.050	0.750	0.440	050SQ 081U6617
0.500	5.50	5.50	98	Interstitial	0.98	ClamShell	1.050	0.750	0.650	055SQ 098U6617
0.500	6.00	6.00	48	10 x 10 D*	1.25	ClamShell	1.050	0.750	0.650	060SQ 048U6618A
0.500	6.00	6.00	56	10 x 10 D*	1.11	ClamShell	1.050	0.750	0.450	060SQ 056J6617
0.500	6.00	6.00	56	10 x 10 D*	1.25	ClamShell	1.050	0.750	0.650	060SQ 056U6617
0.500	6.00	6.00	56	10 x 10 D*	1.02	ClamShell	1.050	0.750	0.650	060SQ 056U6618A
0.500	6.00	6.00	56	10 x 10 D*	1.25	ClamShell	1.050	0.750	0.650	060SQ 056U6618B
0.500	6.00	6.00	56	10 x 10 D*	1.10	ClamShell	1.050	0.750	0.650	060SQ 056U6618C
0.500	6.00	6.00	60	9 x 9 D*	0.89	Clamshell	1.050	0.750	0.440	060SQ 081U6617
0.500	6.00	6.00	64	10 x 10 D*	1.02	Clamshell	1.050	0.750	0.450	060SQ 064U6617
0.500	6.00	6.00	64	8 x 8	0.94	ClamShell	1.050	0.750	0.450	060SQ 064U6618A
0.500	6.00	6.00	80	9 x 9 D*	1.10	ClamShell	1.050	0.750	0.650	060SQ 080U6617
0.500	6.00	6.00	80	10 x 10 D*	1.24	ClamShell	1.050	0.750	0.450	060SQ 080U6618A
0.500	6.00	5.00	84	11 x 9 D*	1.20	ClamShell	1.050	0.750	0.440	060050084U6617
0.500	6.00	6.00	88	11 x 11 D*	1.04	Clamshell	1.050	0.750	0.440	060SQ 088U6617
0.500	6.50	6.20	131	Interstitial	0.91	ClamShell	1.050	0.750	0.650	065062131J6617
0.500	7.00	7.00	68	12 x 12 D*	1.09	ClamShell	1.050	0.750	0.440	070SQ 144U6618A

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	7.00	7.00	80	12 x 12 D*	1.45	ClamShell	1.050	0.750	0.440	070SQ 080U6617
0.500	7.00	7.00	84	12 x 12 D*	1.25	ClamShell	1.050	0.750	0.650	070SQ 084U6617
0.500	7.00	7.00	100	10 x 10	1.10	ClamShell	1.050	0.750	0.650	070SQ 100U6617
0.500	7.00	7.00	112	12 x 12 D*	1.02	ClamShell	1.050	0.750	0.650	070SQ 112U6617
0.500	7.00	7.00	113	12 x 12 D*	1.15	ClamShell	1.050	0.750	0.502	070SQ 113U6617
0.500	7.00	7.00	124	12 x 12 D*	1.00	ClamShell	1.050	0.750	0.650	070SQ 124U6617
0.500	7.00	7.00	143	12 x 12 D*	1.00	ClamShell	1.050	0.750	0.650	070SQ 144U6617
0.500	7.00	7.00	143	12 x 12 D*	1.00	ClamShell	1.050	0.750	0.650	070SQU143U6618
0.500	7.00	7.00	144	12 x 12 D*	1.00	ClamShell	1.050	0.750	0.650	070SQU144U6618
0.500	7.00	7.00	154	13 x 13	1.04	ClamShell	1.050	0.750	0.440	070SQ 154U6617
0.500	7.00	7.00	169	13 x 13	0.97	ClamShell	1.050	0.750	0.450	070SQ 169J6617
0.500	7.00	7.00	169	13 x 13	1.15	ClamShell	1.050	0.750	0.440	070SQ 169U6617
0.500	7.00	7.00	169	13 x 13	1.12	ClamShell	1.050	0.750	0.440	070SQ 169U6618A
0.500	8.00	7.00	46	12 x 10 D*	1.10	ClamShell	1.050	0.750	0.650	080070040U6617
0.500	8.00	8.00	84	13 x 13 D*	1.15	ClamShell	1.050	0.750	0.650	080SQ 084U6617
0.500	8.00	8.00	84	13 x 13 D*	1.14	ClamShell	1.050	0.750	0.650	080SQ 084U6618A
0.500	8.00	8.00	96	14 x 14 D*	1.07	ClamShell	1.050	0.750	0.650	080SQ 096U6617
0.500	8.00	8.00	96	14 x 14 D*	1.80	ClamShell	1.050	0.750	0.450	080SQ 096U6618A
0.500	8.00	8.00	96	14 x 14 D*	1.46	ClamShell	1.050	0.750	0.450	080SQ 096U6618B
0.500	8.00	8.00	124	12 x 12 D*	1.00	ClamShell	1.050	0.750	0.650	080SQ 124U6617
0.500	8.00	8.00	132	14 x 14 D*	1.00	ClamShell	1.050	0.750	0.450	080SQ 132U6617
0.500	8.00	8.00	132	14 x 14 D*	1.05	ClamShell	1.050	0.750	0.450	080SQ 132U6618A
0.500	8.00	8.00	132	14 x 14 D*	1.23	ClamShell	1.050	0.750	0.450	080SQ 132U6618B
0.500	8.00	8.00	167	13 x 13 D*	1.14	ClamShell	1.050	0.750	0.650	080SQ 167U6617
0.500	8.00	8.00	169	13 x 13	1.15	ClamShell	1.050	0.750	0.650	080SQ 169U6617
0.500	8.00	8.00	196	14 x 14	1.14	ClamShell	1.050	0.750	0.450	080SQ 196U6617
0.500	8.00	8.00	196	15 x 15 D*	1.23	ClamShell	1.050	0.750	0.450	080SQ 196U6618A
0.500	8.00	8.00	196	14 x 14	1.30	ClamShell	1.050	0.750	0.450	080SQ 196U6618B
0.500	8.00	8.00	225	15 x 15	0.96	ClamShell	1.050	0.750	0.450	080SQ 225J6617
0.500	8.00	8.00	225	15 x 15	0.86	ClamShell	1.050	0.750	0.550	080SQ 225U6617
0.500	9.00	9.00	148	16 x 16 D*	1.26	ClamShell	1.050	0.750	0.440	090SQ 148U6617
0.500	9.00	9.00	289	17 x 17	1.15	ClamShell	1.470	1.050	0.600	090SQ 289U6617
0.500	9.30	7.15	40	4 x 10	0.69	ClamShell	1.050	0.750	0.650	093071040U6617
0.500	9.95	6.95	40	Special D*	1.10	ClamShell	1.050	0.750	0.650	099069040U6617
0.500	10.00	10.00	144	15 x 15 D*	1.13	ClamShell	1.050	0.750	0.502	100SQ 144U6617
0.500	10.00	10.00	151	18 x 18 D*	1.17	ClamShell	1.050	0.750	0.650	100SQ 151U6617
0.500	10.00	10.00	181	17 x 17 D*	1.13	ClamShell	1.050	0.750	0.440	100SQ 181U6617
0.500	10.00	10.00	216	18 x 18 D*	1.18	ClamShell	1.050	0.750	0.440	100SQ 216J6617
0.500	10.00	10.00	236	18 x 18 D*	1.45	ClamShell	1.050	0.750	0.502	100SQ 236U6617
0.500	10.00	10.00	236	18 x 18 D*	1.15	ClamShell	1.050	0.750	0.440	100SQ 236U6618A
0.500	10.00	10.00	275	18 x 18 D*	0.95	ClamShell	1.470	1.050	0.600	100SQ 275U6617
0.500	11.00	11.00	278	20 x 20 D*	0.95	ClamShell	1.050	0.750	0.440	110SQ 278U6617
0.500	12.00	12.00	84	22 x 22 D*	1.02	ClamShell	1.470	1.050	0.850	120SQ 084U6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	12.00	12.00	99	12 x 12 D*	1.00	ClamShell	1.470	1.050	0.600	120SQ 099U6617
0.500	12.00	8.00	204	14 x 22 D*	1.24	ClamShell	1.470	1.050	0.600	120080204J6617
0.500	12.00	8.00	228	14 x 22 D*	1.24	ClamShell	1.470	1.050	0.600	120080228J6617
0.500	12.00	12.00	228	22 x 22 D*	1.02	ClamShell	1.470	1.050	0.662	120SQ 228U6617
0.500	12.00	12.00	254	21 x 21 D*	1.14	ClamShell	1.470	1.050	0.502	120SQ 254U6617
0.500	12.00	12.00	254	21 x 21 D*	1.14	ClamShell	1.470	1.050	0.502	120SQ 254U6618A
0.500	12.00	12.00	254	21 x 21 D*	1.14	ClamShell	1.470	1.050	0.472	120SQU254U6617
0.500	12.00	12.00	254	21 x 21 D*	1.14	ClamShell	1.470	1.050	0.530	120SQU254U6618A
0.500	12.00	12.00	260	22 x 22 D*	1.10	ClamShell	1.470	1.050	0.600	120SQ 260U6617
0.500	12.00	12.00	300	22 x 22 D*	1.25	ClamShell	1.470	1.050	0.600	120SQ 300U6617
0.500	12.00	12.00	308	22 x 22 D*	1.25	ClamShell	1.470	1.050	0.600	120SQ 308U6617
0.500	12.00	12.00	308	22 x 22 D*	1.19	ClamShell	1.470	1.050	0.600	120SQ 308U6618A
0.500	12.00	12.00	405	22 x 22 D*	1.20	ClamShell	1.470	1.050	0.530	120SQ 405U6617
0.500	13.00	13.00	276	24 x 24 D*	1.08	ClamShell	1.470	1.050	0.600	130SQ 276U6617
0.500	13.00	13.00	300	22 x 22 D*	1.44	ClamShell	1.470	1.050	0.667	130SQ 300U6617
0.500	13.00	13.00	341	24 x 24 D*	1.15	ClamShell	1.470	1.050	0.662	130SQ 341U6617
0.500	13.00	13.00	356	24 x 24 D*	0.95	ClamShell	1.470	1.050	0.662	130SQ 356U6617
0.500	13.00	13.00	356	24 x 24 D*	1.15	ClamShell	1.470	1.050	0.600	130SQ 356U6618A
0.500	13.00	13.00	362	25 x 25 D*	1.10	ClamShell	1.470	1.050	0.600	130SQ 416U6617
0.500	13.00	13.00	417	25 x 25 D*	1.16	ClamShell	1.470	1.050	0.600	130SQ 417U6617
0.500	13.00	13.00	625	25 x 25	1.15	ClamShell	1.470	1.050	0.590	130SQ 625U6617
0.500	14.00	14.00	167	26 x 26 D*	1.40	ClamShell	1.470	1.050	0.600	140SQ 167U6617
0.500	14.00	7.00	184	26 x 12 D*	1.15	ClamShell	1.470	1.050	0.600	140070184U6617
0.500	14.00	14.00	344	26 x 26 D*	1.15	ClamShell	1.470	1.050	0.600	140SQ 344U6617
0.500	14.00	14.00	356	24 x 24 D*	1.00	ClamShell	1.470	1.050	0.667	140SQ 356U6617
0.500	14.00	14.00	408	26 x 26 D*	1.15	ClamShell	1.470	1.050	0.600	140SQ 408U6617
0.500	14.00	14.00	436	26 x 26 D*	1.27	ClamShell	1.470	1.050	0.600	140SQ 436U6617
0.500	14.00	14.00	469	22 x 22 D*	1.44	ClamShell	1.470	1.050	0.600	140SQ 484U6617
0.500	15.00	15.00	571	28 x 28 D*	1.50	ClamShell	1.470	1.050	0.600	150SQ 571J6617
0.500	16.00	16.00	408	29 x 29 D*	0.95	ClamShell	1.470	1.050	0.662	160SQ 408U6617
0.500	17.00	10.00	376	32 x 18 D*	1.15	ClamShell	1.580	1.200	0.600	170100376U6617
0.500	18.00	8.40	260	35 x 16 D*	0.99	ClamShell	1.580	1.200	0.600	180084260J6617
0.500	20.45	9.98	595	35 x 17	0.97	ClamShell	1.580	1.200	0.600	204099237J6618A
0.500	20.45	9.98	595	35 x 17	0.97	ClamShell	1.580	1.200	0.600	204099595J6618A
0.500	21.08	10.62	595	38 x 17 D*	0.86	ClamShell	1.580	1.200	0.600	210106237J6618A
0.570	3.72	3.52	24	5 x 5 D*	0.96	ClamShell	1.050	0.750	0.450	037035024J6617
0.600	1.20	1.20	4	2 x 2	0.67	ClamShell	1.050	0.750	0.445	012SQ 004J6617
0.620	4.01	2.61	14	5 x 3 D*	0.79	ClamShell	1.050	0.750	0.450	040026014J6617
0.620	9.12	8.12	36	12 x 13	0.80	ClamShell	1.050	0.750	0.440	091081136U6617
0.650	3.00	2.00	8	2 x 4	1.40	ClamShell	1.050	0.750	0.507	030020008U6617
0.650	4.00	3.00	20	5 x 4	0.98	ClamShell	1.050	0.750	0.650	040030020U6617
0.650	4.00	3.50	30	6 x 5	0.71	ClamShell	1.050	0.750	0.450	040035030J6617
0.650	4.44	4.44	32	6 x 6 D*	0.78	ClamShell	1.050	0.750	0.445	044SQ 032U6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.650	4.44	4.44	32	6 x 6 D*	0.78	ClamShell	1.050	0.750	0.445	044SQ 032U6619
0.650	5.00	5.00	49	7 x 7	1.15	ClamShell	1.050	0.750	0.650	050SQ 049U6617
0.650	6.30	5.20	40	4x5, 4on2, plus 2	1.03	ClamShell	1.050	0.750	0.450	063051022J6617
0.650	6.50	2.60	40	10 x 4	0.64	ClamShell	1.050	0.750	0.650	065026040U6617
0.650	7.00	7.00	71	9 x 9 D*	0.95	ClamShell	1.050	0.750	0.445	070SQ 071U6617
0.650	7.00	7.00	100	10 x 10	1.24	ClamShell	1.050	0.750	0.507	070SQ 100U6618A
0.650	10.30	7.69	46	8 x 6 D*	0.78	ClamShell	1.050	1.470	0.690	103077047U6617
0.650	10.30	7.69	46	8 x 6 D*	0.78	ClamShell	1.050	1.470	0.650	103077047U6618A
0.650	10.71	5.60	44	8 x 6 D*	0.96	ClamShell	1.050	1.470	0.650	107056046U6617
0.650	10.71	5.60	44	8 x 6 D*	0.96	ClamShell	1.050	1.470	0.650	107056046U6618A
0.650	11.00	11.00	106	Interstitial	1.52	ClamShell	1.470	1.050	0.650	110SQ 106U6617
0.650	12.00	5.00	119	17 x 7	0.95	ClamShell	1.470	1.050	0.600	120050119U6617
0.650	12.00	12.00	289	17 x 17	1.35	ClamShell	1.470	1.050	0.600	120SQ 289U6617
0.650	13.00	13.00	237	19 x 19 D*	1.31	ClamShell	1.470	1.050	0.600	130SQ 237U6617
0.650	13.00	13.00	361	19 x 19	1.30	ClamShell	1.470	1.050	0.600	130SQ 361U6617
0.650	14.00	12.00	190	20 x 17 D*	0.65	ClamShell	1.470	1.050	0.660	140120190U6617
0.650	15.00	15.00	481	Interstitial	1.15	ClamShell	1.470	1.050	0.600	150SQ 481U6617
0.650	25.05	13.35	600	38 X 20 D*	2.31	ClamShell	1.810	1.520	0.600	250133600U6617
0.650	25.20	13.50	588	38 X 20 D*	1.95	ClamShell	1.810	1.520	0.600	252135588U6617
0.680	1.92	1.18	4	2 x 2 Dual	0.43	ClamShell	1.050	0.750	0.450	019011008J6617
0.750	5.00	5.00	31	6 x 6 D*	1.12	ClamShell	1.050	0.750	0.507	050SQ 031U6617
0.750	7.00	7.00	48	6 x 8	1.24	ClamShell	1.050	0.750	0.650	070SQ 048U1618A
0.750	7.00	7.00	48	6 x 8	1.10	ClamShell	1.050	0.750	0.650	070SQ 048U6618B
0.750	7.87	5.76	46	6 x 8 D*	0.91	ClamShell	1.050	0.750	0.650	078057046U6617
0.750	8.00	7.00	46	6 x 8 D*	1.10	ClamShell	1.050	0.750	0.650	080070046U6617
0.750	8.00	7.00	48	6 x 8	1.20	ClamShell	1.050	0.750	0.650	080070048U6618A
0.750	8.50	6.90	46	6 x 8 D*	1.30	ClamShell	1.050	0.750	0.650	085069046U6617
0.750	8.87	7.24	46	6 x 8 D*	0.76	ClamShell	1.050	0.750	0.650	088072046U6617
0.750	9.00	7.00	48	6 x 8	0.90	ClamShell	1.050	0.750	0.450	090070048J6617
0.750	9.40	7.32	48	6 x 8	0.75	ClamShell	1.050	0.750	0.650	094073048U6617
0.750	9.62	6.85	48	6 x 8	0.68	ClamShell	1.050	0.750	0.650	096068048U6617
0.750	9.62	6.85	48	6 x 8	0.78	ClamShell	1.050	0.750	0.650	096068048U6618A
0.750	11.00	5.00	84	14 x 6	0.95	ClamShell	1.470	1.050	0.650	110050084U6617
0.750	12.00	7.00	48	6 x 8	1.15	ClamShell	1.050	0.750	0.650	120070048U6618A
0.750	12.00	7.00	56	8 x 7	1.15	ClamShell	1.050	0.750	0.650	120070056U6617
0.750	14.40	12.25	106	16 x 18 D*	0.89	ClamShell	1.470	1.050	0.667	144122106U6617
0.750	14.40	12.25	106	16 x 18 D*	0.81	ClamShell	1.470	1.050	0.667	144122106U6618A
0.760	14.35	14.12	191	16 x 16 D*	0.81	ClamShell	1.470	1.050	0.850	144141191U6617
0.800	2.85	2.25	9	3 X 3	0.90	ClamShell	1.050	0.750	0.440	028022009J6617
0.800	2.85	2.25	9	3 X 3	0.70	ClamShell	1.050	0.750	0.440	028022009J6618A
0.800	4.00	3.20	14	4 x 5 D*	0.94	ClamShell	1.050	0.750	0.445	040032014U6617
0.800	4.00	3.50	14	5 x 4 D*	0.95	ClamShell	1.050	0.750	0.650	040035014U6617
0.800	4.00	4.00	24	5 x 5 D* 4X	1.35	ClamShell	1.470	1.050	0.605	130SQ 200U6618A

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.800	4.06	1.99	10	5 x 2 max Dual	0.63	ClamShell	1.050	0.750	0.650	040019014J6617
0.800	4.17	4.17	25	5 x 5	0.82	ClamShell	1.050	0.750	0.660	041SQ 025U6617
0.800	5.00	5.00	25	5 x 5	1.30	ClamShell	1.050	0.750	0.650	050SQ 025U6617
0.800	5.50	16.00	114	19 x 6	1.40	ClamShell	1.470	1.050	0.850	160055114U6617
0.800	6.00	6.00	36	6 x 6	1.56	ClamShell	1.050	0.750	0.445	060SQ 036U6617
0.800	6.00	6.00	36	6 x 6	1.60	ClamShell	1.050	0.750	0.650	060SQ 036U6618A
0.800	6.00	6.00	49	7 x 7	1.19	ClamShell	1.050	0.750	0.650	060SQ 049U6617
0.800	6.00	6.00	49	7 x 7	1.36	ClamShell	1.050	0.750	0.445	060SQ 049U6618A
0.800	7.00	7.00	48	7 x 7 D*	1.55	ClamShell	1.050	0.750	0.650	070SQ 048U6617
0.800	7.00	7.00	48	7 x 7 D*	1.40	ClamShell	1.050	0.750	0.650	070SQ 048U6618C
0.800	7.00	7.00	49	7 x 7	1.20	ClamShell	1.050	0.750	0.650	070SQ 049U6617
0.800	7.00	7.00	49	7 x 7	1.45	ClamShell	1.050	0.750	0.650	070SQ 049U6618A
0.800	7.00	7.00	49	7 x 7	1.40	ClamShell	1.050	0.750	0.650	070SQ 049U6618B
0.800	7.00	7.00	64	8 x 8	1.62	ClamShell	1.050	0.750	0.507	070SQ 064U6617
0.800	7.26	6.31	44	6 x 8 D*	0.84	ClamShell	1.050	0.750	0.650	072063044U6617
0.800	7.60	7.00	19	6 x 7 D*	1.55	ClamShell	1.050	0.750	0.650	076070019U6617
0.800	7.60	7.00	52	8 x 9 D*	1.55	ClamShell	1.050	0.750	0.445	076070019J6617
0.800	7.60	7.00	52	8 x 9 D*	1.36	ClamShell	1.050	0.750	0.445	076070019J6618A
0.800	8.00	8.00	64	9 x 9 D*	1.19	ClamShell	1.050	0.750	0.445	080SQ 064J6617
0.800	8.00	8.00	64	8 x 8	1.37	ClamShell	1.050	0.750	0.650	080SQ 064U6617
0.800	8.00	8.00	64	8 x 8	1.10	ClamShell	1.050	0.750	0.650	080SQ 064U6618A
0.800	8.00	8.00	64	8 x 8	0.90	ClamShell	1.050	0.750	0.445	080SQ 064U6618B
0.800	8.00	8.00	64	8 x 8	1.65	ClamShell	1.050	0.750	0.445	080SQ 064U6618C
0.800	8.00	8.00	64	8 x 8 3X	1.35	ClamShell	4.900	1.100	0.031	080SQ 192C6618A
0.800	8.00	8.00	64	8 x 8	1.35	ClamShell	1.050	0.750	0.507	080SQU064U6617
0.800	8.00	8.00	65	8 x 9 D*	1.19	ClamShell	1.050	0.750	0.445	080SQ 065J6617
0.800	8.00	8.00	72	9 x 9 D*	1.10	ClamShell	1.050	0.750	0.650	080SQ 072U6617
0.800	8.00	8.00	73	9 x 9 D*	1.10	ClamShell	1.050	0.750	0.650	080SQ 073U6617
0.800	8.00	8.00	80	9 x 9 D*	1.45	ClamShell	1.050	0.750	0.650	080SQ 080U6617
0.800	8.00	8.00	81	9 x 9	1.12	ClamShell	1.050	0.750	0.650	080SQ 081U6617
0.800	8.00	8.00	81	9 x 9	1.12	ClamShell	1.050	0.750	0.650	080SQ 081U6618A
0.800	8.15	6.15	48	6 x 8	1.15	ClamShell	1.050	0.750	0.445	081061048J6617
0.800	8.15	6.15	48	6 x 8	0.95	ClamShell	1.050	0.750	0.445	081061048J6618A
0.800	8.15	6.15	48	6 x 8	1.15	ClamShell	1.050	0.750	0.445	081061048U6617
0.800	8.80	8.80	64	9 x 9 D*	1.19	ClamShell	1.050	0.750	0.445	088080064J6617
0.800	9.00	8.00	48	6 x 8	1.10	ClamShell	1.050	0.750	0.650	090080048U6617
0.800	9.00	8.00	48	6 x 8	1.25	ClamShell	1.050	0.750	0.650	090080048U6618A
0.800	9.00	8.00	48	6 x 8	1.10	ClamShell	1.050	0.750	0.650	090080048U6618B
0.800	9.00	9.00	80	10 x 10 D*	1.45	ClamShell	1.050	0.750	0.650	090SQ 080U6617
0.800	9.00	9.00	80	10 x 10 D*	1.35	ClamShell	1.050	0.750	0.650	090SQ 080U6618A
0.800	9.00	9.00	81	9 x 9	1.40	ClamShell	1.050	0.750	0.650	090SQ 081U6617
0.800	9.00	9.00	81	9 x 9	1.18	ClamShell	1.050	0.750	0.650	090SQ 081U6618A
0.800	9.00	9.00	100	10 x 10	1.40	ClamShell	1.050	0.750	0.445	090SQ 100J6618B

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.800	9.00	9.00	100	10 x 10	1.10	ClamShell	1.050	0.750	0.650	090SQ 100U6617
0.800	9.00	9.00	100	10 x 10	1.35	ClamShell	1.050	0.750	0.445	090SQ 100U6618B
0.800	9.00	9.00	110	11 x 11 D*	0.87	ClamShell	1.050	0.750	0.445	090SQ 121U6617
0.800	10.00	10.00	80	10 x 10 D*	1.30	ClamShell	1.050	0.750	0.650	100SQ 080U6617
0.800	10.00	10.00	100	10 x 10	1.40	ClamShell	1.050	0.750	0.650	100SQ 100U6617
0.800	10.00	10.00	100	10 x 10	1.30	ClamShell	1.050	0.750	0.650	100SQ 100U6618A
0.800	10.00	10.00	100	10 x 10	1.30	ClamShell	1.050	0.750	0.507	100SQ 100U6618B
0.800	10.00	10.00	100	10 x 10	1.40	ClamShell	1.050	0.750	0.507	100SQU100U6617
0.800	10.00	10.00	112	12 X 12 D*	0.91	ClamShell	1.050	0.750	0.460	100SQ 112U6617
0.800	10.00	10.00	121	11 x 11	1.70	ClamShell	1.050	0.750	0.650	100SQ 121U6617
0.800	10.00	10.00	121	11 x 11	1.30	ClamShell	1.050	0.750	0.522	100SQ 121U6618A
0.800	10.00	10.00	128	12 x 12 D*	1.15	ClamShell	1.050	0.750	0.460	100SQ 128U6618A
0.800	10.00	10.00	144	12 x 12	1.37	ClamShell	1.050	0.750	0.445	100SQ 144J6617
0.800	10.00	10.00	144	12 x 12	1.13	ClamShell	1.050	0.750	0.650	100SQ 144U6618A
0.800	10.00	10.00	144	12 x 12	1.35	ClamShell	1.050	0.750	0.522	100SQ 144U6618B
0.800	10.00	10.00	144	12 x 12	1.75	ClamShell	1.050	0.750	0.522	100SQ 144U6618C
0.800	10.00	10.00	144	12 x 12	1.22	ClamShell	1.050	0.750	0.460	100SQ 144U6618D
0.800	10.95	10.95	128	12 x 12 D*	1.35	ClamShell	1.470	1.050	0.650	110SQ 128U6618A
0.800	11.00	8.00	88	8 x 12 D*	1.35	ClamShell	1.050	1.470	0.650	110080088U6617
0.800	11.00	8.00	88	8 x 12 D*	1.23	ClamShell	1.050	1.470	0.650	110080088U6618A
0.800	11.00	11.00	124	12 x 12 D*	1.26	ClamShell	1.470	1.050	0.605	110SQ 124U6617
0.800	11.00	11.00	128	12 x 12 D*	1.40	ClamShell	1.470	1.050	0.650	110SQ 128U6617
0.800	11.00	11.00	128	12 x 12 D*	1.40	ClamShell	1.470	1.050	0.650	110SQ 128U6618B
0.800	11.00	11.00	144	12 x 12	2.95	ClamShell	1.470	1.050	0.850	110SQ 144U6617
0.800	11.00	11.00	144	12 x 12	1.26	ClamShell	1.470	1.050	0.650	110SQ 144U6618A
0.800	11.00	11.00	169	13 x 13	1.45	ClamShell	1.470	1.050	0.650	110SQ 169U6617
0.800	11.50	7.50	55	8 x 13 D*	2.96	ClamShell	1.470	1.050	0.650	115075055U6617
0.800	11.50	7.50	56	8 x 13 D*	2.96	ClamShell	1.470	1.050	0.650	115075056U6617
0.800	11.50	11.00	60	9 x 11 D*	1.07	ClamShell	1.050	0.750	0.450	115110060J6617
0.800	11.50	11.00	60	9 x 11 D*	1.07	ClamShell	1.050	0.750	0.460	115110060U6617
0.800	11.79	8.95	62	12 x 9 D*	1.14	ClamShell	1.050	0.750	0.650	117089062U6618A
0.800	12.00	7.00	48	6 x 8	1.40	ClamShell	1.050	0.750	0.650	120070048U6617
0.800	12.00	7.00	48	6 x 8	1.20	ClamShell	1.050	0.750	0.650	120070048U6618B
0.800	12.00	10.00	48	6 x 8	1.56	ClamShell	1.050	0.750	0.650	120100048U6617
0.800	12.00	8.00	64	8 x 8	1.20	ClamShell	1.050	0.750	0.650	120080064U6617
0.800	12.00	8.00	64	8 x 12 D*	1.30	ClamShell	1.050	0.750	0.650	120080064U6618A
0.800	12.00	8.00	67	8 x 12 D*	1.15	ClamShell	1.050	0.750	0.507	120080067U6617
0.800	12.00	12.00	116	12 x 12 D*	1.13	ClamShell	1.470	1.050	0.850	120SQ 116U6617
0.800	12.00	12.00	132	14 x 14 D*	1.02	ClamShell	1.470	1.050	0.850	120SQ 132U6617
0.800	12.00	12.00	132	14 x 14 D*	1.10	ClamShell	1.470	1.050	0.850	120SQ 132U6618A
0.800	12.00	12.00	144	13 x 13 D*	1.30	ClamShell	1.470	1.050	0.850	120SQ 144U6617A
0.800	12.00	12.00	144	13 x 13 D*	1.10	ClamShell	1.470	1.050	0.850	120SQ 144U6618B
0.800	12.00	12.00	144	13 x 13 D*	1.45	ClamShell	1.470	1.050	0.850	120SQ 144U6618C

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.800	12.00	12.00	144	13 x 13 D*	1.40	ClamShell	1.470	1.050	0.667	120SQ 144U6618D
0.800	12.00	12.00	144	13 x 13 D*	1.30	ClamShell	1.470	1.050	0.850	120SQU144U6618A
0.800	12.00	12.00	160	14 x 14 D*	1.10	ClamShell	1.470	1.050	0.850	120SQ 160U6617
0.800	12.00	12.00	160	14 x 14 D*	1.33	ClamShell	1.470	1.050	0.672	120SQ 160U6618A
0.800	12.00	12.00	169	13 x 13	1.35	ClamShell	1.470	1.050	0.600	120SQ 169J6617
0.800	12.00	12.00	179	14 x 14 D*	1.13	ClamShell	1.470	1.050	0.850	120SQ 179U6617
0.800	12.00	12.00	179	14 x 14 D*	1.30	ClamShell	1.470	1.050	0.850	120SQ 179U6618A
0.800	12.00	12.00	179	14 x 14 D*	1.30	ClamShell	1.470	1.050	0.850	120SQ 179U6618B
0.800	12.00	12.00	180	14 x 14 D*	1.10	ClamShell	1.470	1.050	0.850	120SQ 180U6617
0.800	12.00	12.00	180	14 x 14 D*	1.35	ClamShell	1.470	1.050	0.850	120SQ 180U6618A
0.800	12.00	12.00	180	14 x 14 D*	1.29	ClamShell	1.470	1.050	0.850	120SQ 180U6618B
0.800	12.00	12.00	196	14 x 14	1.10	ClamShell	1.470	1.050	0.850	120SQ 196U6617
0.800	12.00	12.00	196	14 x 14	1.29	ClamShell	1.470	1.050	0.605	120SQ 196U6618A
0.800	12.34	18.82	90	8 x 15 D*	1.20	ClamShell	1.580	1.200	0.745	240190090U6617
0.800	12.34	18.82	90	8 x 15 D*	1.20	ClamShell	1.580	1.200	0.745	240190090U6618A
0.800	12.50	11.00	154	15 x 11 D*	1.50	ClamShell	1.470	1.050	0.530	125110154J6617
0.800	13.00	13.00	144	13 x 13 D*	1.34	ClamShell	1.470	1.050	0.850	130SQ 144U6617
0.800	13.00	13.00	144	14 x 14 D*	1.26	ClamShell	1.470	1.050	0.662	130SQ 144U6618A
0.800	13.00	13.00	160	14 x 14 D*	1.43	ClamShell	1.470	1.050	0.850	130SQ 160U6617
0.800	13.00	13.00	180	14 x 14 D*	1.45	ClamShell	1.470	1.050	0.850	130SQ 180U6617
0.800	13.00	11.00	185	15 x 13 D*	2.96	ClamShell	1.470	1.050	0.850	130110185U6617
0.800	13.00	13.00	200	15 x 15 D*	1.33	ClamShell	1.470	1.050	0.850	130SQ 200U6617
0.800	13.00	13.00	208	15 x 15 D*	1.60	ClamShell	1.470	1.050	0.605	130SQ 208U6617
0.800	13.00	13.00	224	15 x 15 D*	1.15	ClamShell	1.470	1.050	0.605	130SQ 224U6617
0.800	13.00	13.00	224	15 x 15 D*	1.16	ClamShell	1.470	1.050	0.605	130SQ 224U6618A
0.800	13.00	13.00	225	15 x 15	1.13	ClamShell	1.470	1.050	0.605	130SQ 225U6617
0.800	13.00	13.00	225	15 x 15	0.98	ClamShell	1.470	1.050	0.667	130SQ 225U6618A
0.800	13.00	13.00	225	15 x 15	1.45	ClamShell	1.470	1.050	0.605	130SQ 225U6618B
0.800	13.13	16.97	168	20 x 14 D*	1.40	ClamShell	1.470	1.050	0.850	170131168U6617
0.800	13.50	5.50	96	6 x 16	1.40	ClamShell	1.470	1.050	0.850	135055096U6617
0.800	14.00	9.00	123	16 x 10 D*	1.55	ClamShell	1.470	1.060	0.605	140090123U6617
0.800	14.00	10.00	150	16 x 11 D*	1.40	ClamShell	1.470	1.050	0.605	140100150U6617
0.800	14.00	14.00	165	11 x 15	1.26	ClamShell	1.470	1.050	0.652	140SQ 165U6617
0.800	14.00	14.00	192	16 x 16 D*	1.40	ClamShell	1.470	1.050	0.850	140SQ 192U6617
0.800	14.00	14.00	232	16 x 16 D*	1.13	ClamShell	1.470	1.050	0.667	140SQ 232U6617
0.800	14.00	14.00	256	16 x 16	2.96	ClamShell	1.470	1.060	0.605	140SQ 256U6617
0.800	14.00	14.00	256	16 x 16	1.36	ClamShell	1.470	1.060	0.061	140SQ 256U6618A
0.800	14.00	14.00	256	16 x 16	1.60	ClamShell	1.470	1.050	0.605	140SQ 256U6618B
0.800	15.00	15.00	176	17 x 17 D*	1.30	ClamShell	1.470	1.050	0.605	150SQ 176U6617
0.800	15.00	15.00	208	17 x 17 D*	1.10	ClamShell	1.470	1.050	0.605	150SQ 208U6617
0.800	15.00	15.00	208	17 x 17 D*	1.40	ClamShell	1.470	1.050	0.605	150SQ 208U6618A
0.800	15.00	15.00	208	17 x 17 D*	1.65	ClamShell	1.470	1.050	0.605	150SQ 208U6618B
0.800	15.00	15.00	233	17 x 17 D*	1.13	ClamShell	1.470	1.050	0.667	150SQ 233U6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.800	15.00	15.00	233	17 x 17 D*	1.25	ClamShell	1.470	1.050	0.605	150SQ 233U6618A
0.800	15.00	15.00	233	17 x 17 D*	1.13	ClamShell	1.470	1.050	0.605	150SQ 233U6618B
0.800	15.00	15.00	233	17 x 17 D*	1.13	ClamShell	1.470	1.050	0.605	150SQ 233U6618C
0.800	15.00	15.00	240	17 x 17 D*	1.35	ClamShell	1.470	1.050	0.600	150SQ 240J6617
0.800	15.00	15.00	240	17 x 17 D*	1.35	ClamShell	1.470	1.050	0.605	150SQ 240U6617
0.800	15.00	15.00	256	17 x 17 D*	1.65	ClamShell	1.470	1.050	0.605	150SQ 256U6617
0.800	15.00	15.00	261	17 x 17 D*	1.13	ClamShell	1.470	1.050	0.605	150SQ 261U6617
0.800	15.00	15.00	280	18 x 18 D*	1.21	ClamShell	1.470	1.050	0.667	150SQ 280U6617
0.800	15.00	15.00	324	18 x 18	1.10	ClamShell	1.470	1.050	0.672	150SQ 324U6617
0.800	15.00	15.00	324	18 x 18	1.33	ClamShell	1.470	1.050	0.610	150SQ 324U6618A
0.800	15.00	15.00	324	18 x 18	1.85	ClamShell	1.470	1.050	0.610	150SQ 324U6618B
0.800	16.00	16.00	209	19 x 19 D*	1.34	ClamShell	1.470	1.050	0.667	160SQ 209U6617
0.800	16.00	16.00	212	19 x 19 D*	1.34	ClamShell	1.470	1.050	0.605	160SQ 212U6617
0.800	16.00	16.00	224	18 x 18 D*	1.45	ClamShell	1.470	1.050	0.667	160SQ 224U6617
0.800	16.00	16.00	227	19 x 19 D*	1.17	ClamShell	1.470	1.050	0.667	160SQ 227U6617
0.800	16.00	16.00	228	19 x 19 D*	1.31	ClamShell	1.470	1.050	0.667	160SQ 228U6617
0.800	16.00	16.00	240	17 x 17 D*	1.59	ClamShell	1.470	1.050	0.667	160SQ 240U6617
0.800	16.00	16.00	257	19 x 19 D*	1.25	ClamShell	1.470	1.050	0.672	160SQ 257U6617
0.800	16.00	16.00	280	19 x 19 D*	1.10	ClamShell	1.470	1.050	0.667	160SQ 280U6617
0.800	16.00	16.00	280	19 x 19 D*	1.34	ClamShell	1.470	1.050	0.667	160SQ 280U6618A
0.800	16.00	16.00	285	18 x 18 D*	1.35	ClamShell	1.470	1.050	0.667	160SQ 285U6617
0.800	16.00	16.00	285	18 x 18 D*	1.35	ClamShell	1.470	1.050	0.350	160SQU285U6617
0.800	16.00	16.00	285	18 x 18 D*	1.71	ClamShell	1.470	1.050	0.667	160SQU285U6618A
0.800	16.00	16.00	288	19 x 19 D*	1.31	ClamShell	1.470	1.050	0.605	160SQ 288U6617
0.800	17.00	17.00	256	20 x 20 D*	1.40	ClamShell	1.580	1.200	0.600	170SQ 256U6617
0.800	17.00	17.00	316	20 x 20 D*	1.40	ClamShell	1.470	1.050	0.682	170SQ 316U6617
0.800	17.00	17.00	332	20 x 20 D*	1.95	ClamShell	1.580	1.200	0.610	170SQ 332U6617
0.800	17.00	17.00	361	19 x 19	1.44	ClamShell	1.470	1.050	0.600	170SQ 361J6617
0.800	17.00	17.00	399	20 x 20 D*	1.60	ClamShell	1.470	1.050	0.672	170SQ 399U6617
0.800	17.16	10.20	92	10 x 18 D*	0.96	ClamShell	1.470	1.050	0.650	171102092U6617
0.800	18.00	18.00	320	21 x 21 D*	1.35	ClamShell	1.580	1.200	0.667	180SQ 320U6617
0.800	19.00	19.00	288	22 x 22 D*	1.40	ClamShell	1.580	1.200	0.667	190SQ 288U6617
0.800	19.00	19.00	288	22 x 22 D*	1.10	ClamShell	1.580	1.200	0.667	190SQ 288U6618A
0.800	19.00	19.00	352	22 x 22 D*	1.51	ClamShell	1.580	1.200	0.667	190SQ 352U6617
0.800	19.00	19.00	375	22 x 22 D*	2.07	ClamShell	1.580	1.200	0.640	190SQ 375U6617
0.800	19.00	19.00	399	22 x 22 D*	2.07	ClamShell	1.580	1.200	0.640	190SQ 399U6617
0.800	19.00	19.00	399	22 x 22 D*	1.55	ClamShell	1.580	1.200	0.605	190SQ 399U6618A
0.800	19.00	19.00	424	23 x 23 D*	1.40	ClamShell	1.660	1.320	0.667	190SQ 424U6617
0.800	19.00	19.00	484	22 x 22 D*	1.62	ClamShell	1.580	1.200	0.610	190SQ 484U6617
0.800	27.00	14.00	544	17 x 33	1.82	ClamShell	1.810	1.520	0.600	270140544U6617
0.983	31.00	31.00	925	Interstitial	1.17	ClamShell	2.700	2.340	0.920	310SQ 925B6617
1.000	6.00	6.00	32	6 x 6 D*	1.84	ClamShell	1.050	0.750	0.507	060SQ 032B6617
1.000	8.00	8.00	43	7 x 7 D*	2.60	ClamShell	1.050	0.750	0.507	080SQ 043B6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	8.00	8.00	49	7 x 7	1.30	ClamShell	1.050	0.750	0.667	080SQ 049B6617
1.000	9.00	9.00	64	8 x 8	1.13	ClamShell	1.050	0.750	0.507	090SQ 064B6617
1.000	9.00	9.00	64	8 x 8	1.53	ClamShell	1.050	0.750	0.507	090SQ 064B6618A
1.000	9.11	9.11	64	9 x 9 D*	2.25	ClamShell	1.050	0.750	0.507	091SQ 064B6617
1.000	10.00	13.00	64	8 x 8	1.10	ClamShell	1.470	1.050	0.667	130100064B6617
1.000	10.00	12.00	80	8 x 10	1.60	ClamShell	1.050	0.750	0.507	120100080B6617
1.000	10.00	10.00	81	9 x 9	1.17	ClamShell	1.050	0.750	0.507	100SQ 081B6617
1.000	10.00	10.00	84	10 x 10 D*	1.80	ClamShell	1.050	0.750	1.062	100SQ 084B6617
1.000	10.00	10.00	84	10 x 10 D*	1.84	ClamShell	1.050	0.750	0.672	100SQ 084B6618A
1.000	11.00	11.00	80	10 x 10 D*	1.60	ClamShell	1.050	0.750	0.507	110SQ 080B6617
1.000	11.00	11.00	84	10 x 10 D*	1.54	ClamShell	1.050	0.750	0.507	110SQ 084B6617
1.000	11.00	11.00	84	10 x 10 D*	1.37	ClamShell	1.050	0.750	0.507	110SQ 084B6618A
1.000	11.00	11.00	100	10 x 10	1.10	ClamShell	1.050	0.750	0.507	110SQ 100B6617
1.000	11.00	11.00	100	10 x 10	1.29	ClamShell	1.050	0.750	0.507	110SQ 100B6618A
1.000	11.00	11.00	100	10 x 10	1.70	ClamShell	1.050	0.750	1.090	110SQ 100J6617
1.000	12.00	10.00	48	6 x 8	1.56	ClamShell	1.050	0.750	0.507	120100048B6617
1.000	12.00	10.00	48	6 x 8	1.56	ClamShell	1.050	0.750	0.570	120100048B6618A
1.000	12.00	10.00	48	6 x 8	1.15	ClamShell	1.050	0.750	0.507	120100048B6618B
1.000	12.00	10.00	48	6 x 8	1.25	ClamShell	1.050	0.750	0.507	120100048B6618C
1.000	12.00	12.00	112	11 x 11 D*	2.90	ClamShell	1.470	1.050	0.605	120SQ 112B6617
1.000	12.00	12.00	121	11 x 11	1.71	ClamShell	1.470	1.050	0.667	120SQ 121B6617
1.000	12.00	12.00	121	11 x 11	1.71	ClamShell	1.470	1.050	0.410	120SQU121B6617
1.000	12.00	12.00	121	11 x 11	1.71	ClamShell	1.520	1.810	0.552	120SQU121P6617
1.000	13.00	10.00	54	8 x 8 D*	1.30	ClamShell	1.470	1.050	0.667	130100054B6617
1.000	13.00	11.27	62	9 x 12 D*	0.92	ClamShell	1.470	1.050	0.667	130112062U6617
1.000	13.00	13.00	80	12 x 12 D*	1.40	ClamShell	1.470	1.050	0.667	130SQ 080B6617
1.000	13.00	13.00	80	12 x 12 D*	4.79	ClamShell	1.470	1.050	0.522	130SQ 080B6618A
1.000	13.00	11.00	108	12 x 12 D*	1.54	ClamShell	1.470	1.050	0.507	130SQ 108B6617
1.000	13.00	13.00	143	12 x 12 D*	4.79	ClamShell	1.470	1.050	1.080	130SQ 080B6618B
1.000	13.00	13.00	144	12 x 12	1.54	ClamShell	1.470	1.050	0.507	130SQ 144B6617
1.000	13.00	13.00	144	12 x 12	1.45	ClamShell	1.470	1.050	0.507	130SQ 144B6618A
1.000	13.00	13.00	144	12 x 12	1.13	ClamShell	1.470	1.050	0.507	130SQ 144B6618B
1.000	13.00	13.00	144	12 x 12	2.67	ClamShell	1.470	1.050	0.507	130SQ 144B6618C
1.000	13.00	13.00	144	12 x 12	1.45	ClamShell	1.470	1.050	0.772	130SQ 144P6618A
1.000	15.00	15.00	144	14 x 14 D*	1.54	ClamShell	1.470	1.050	0.667	150SQ 144B6617
1.000	15.00	15.00	144	14 x 14 D*	1.54	ClamShell	1.470	1.050	0.667	150SQ 144B6618A
1.000	15.00	15.00	176	14 x 14 D*	1.65	ClamShell	1.470	1.050	0.522	150SQ 176B6617
1.000	15.00	15.00	196	14 x 14	1.54	ClamShell	1.470	1.050	0.667	150SQ 196B6617
1.000	15.00	15.00	196	14 x 14	1.54	ClamShell	1.470	1.050	0.507	150SQ 196B6618A
1.000	15.00	15.00	196	14 x 14	1.13	ClamShell	1.470	1.050	0.507	150SQ 196B6618B
1.000	15.00	15.00	196	14 x 14	1.35	ClamShell	1.470	1.050	0.507	150SQ 196B6618C
1.000	15.00	15.00	196	14 x 14	1.45	ClamShell	1.470	1.050	0.522	150SQ 196B6618G
1.000	15.00	15.00	196	14 x 14	1.54	ClamShell	1.470	1.050	0.667	150SQ 196B6618H

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	15.00	15.00	196	14 x 14	1.76	ClamShell	1.470	1.050	0.522	150SQ 196B6618J
1.000	15.00	15.00	196	14 x 14	1.30	ClamShell	1.470	1.050	0.460	150SQ 196B6618K
1.000	15.00	15.00	196	14 x 14	1.40	ClamShell	1.470	1.050	0.605	150SQ 196J6617
1.000	16.00	16.00	132	15 x 15 D*	5.52	ClamShell	1.470	1.050	2.242	160SQ 132B6617
1.000	17.00	11.00	120	10 x 16 D*	1.60	ClamShell	1.470	1.050	0.667	170110120B6617
1.000	17.00	17.00	196	14 x 14	1.56	ClamShell	1.470	1.050	0.507	170SQ 196B6618A
1.000	17.00	17.00	208	16 x 16 D*	1.56	ClamShell	1.470	1.050	0.667	170SQ 208B6617
1.000	17.00	17.00	208	16 x 16 D*	1.40	ClamShell	1.470	1.050	0.667	170SQ 208B6618A
1.000	17.00	17.00	208	16 x 16 D*	2.26	ClamShell	1.470	1.050	0.667	170SQ 208B6618B
1.000	17.00	17.00	208	16 x 16 D*	1.30	ClamShell	1.470	1.050	0.667	170SQ 208B6618C
1.000	17.00	17.00	220	16 x 16 D*	1.60	ClamShell	1.470	1.050	0.667	170SQ 220B6617
1.000	17.00	17.00	228	16 x 16 D*	1.91	ClamShell	1.470	1.050	0.610	170SQ 228B6617
1.000	17.00	17.00	236	16 x 16 D*	1.66	ClamShell	1.470	1.050	0.667	170SQ 236B6617
1.000	17.00	17.00	256	16 x 16	1.56	ClamShell	1.470	1.050	0.667	170SQ 256B6617
1.000	17.00	17.00	256	16 x 16	1.76	ClamShell	1.470	1.050	0.667	170SQ 256B6618A
1.000	17.00	17.00	256	16 x 16	1.13	ClamShell	1.470	1.050	0.667	170SQ 256B6618B
1.000	17.00	17.00	256	16 x 16	1.10	ClamShell	1.470	1.050	0.667	170SQ 256B6618C
1.000	17.00	17.00	256	16 x 16	1.45	ClamShell	1.470	1.050	0.667	170SQ 256B6618D
1.000	17.00	17.00	256	16 x 16	1.13	ClamShell	1.470	1.050	0.507	170SQ 256B6618E
1.000	17.00	17.00	256	16 x 16	1.29	ClamShell	1.470	1.050	0.667	170SQ 256B6618F
1.000	17.00	17.00	256	16 x 16	1.62	ClamShell	1.470	1.050	0.667	170SQ 256B6618G
1.000	17.00	17.00	256	16 x 16	1.53	ClamShell	1.580	1.200	0.672	170SQ 256B6618J
1.000	17.00	17.00	256	16 x 16	1.73	ClamShell	1.470	1.050	0.650	170SQ 256B6618K
1.000	17.00	17.00	256	16 x 16	1.81	ClamShell	1.470	1.050	0.650	170SQ 256B6618L
1.000	17.00	17.00	256	16 x 16	1.40	ClamShell	1.470	1.050	0.610	170SQ 256B6618N
1.000	17.00	17.00	256	16 x 16	1.56	ClamShell	1.470	1.050	0.667	170SQU256B6618
1.000	18.00	14.16	47	8 x 8 D*	3.46	ClamShell	1.470	1.050	0.667	180141047B6617
1.000	18.00	14.00	64	8 x 8	4.42	ClamShell	1.470	1.050	0.667	180140064B6617
1.000	18.00	14.16	64	8 x 8	3.16	ClamShell	1.470	1.050	0.605	180141064J6617
1.000	19.00	19.00	120	17 x 17 D*	1.40	ClamShell	1.580	1.200	0.667	190SQ 120B6617
1.000	19.00	19.00	225	18 x 18 D*	2.01	ClamShell	1.660	1.320	0.667	190SQ 225B6617
1.000	19.00	19.00	233	18 x 18 D*	2.21	ClamShell	1.660	1.320	0.605	190SQ 233B6617
1.000	19.00	19.00	256	16 x 16	1.56	ClamShell	1.470	1.050	0.667	190SQ 256B6617
1.000	19.00	19.00	276	18 x 18 D*	1.44	ClamShell	1.660	1.320	0.667	190SQ 276B6617
1.000	19.00	19.00	300	18 x 18 D*	1.40	ClamShell	1.660	1.320	0.605	190SQ 300B6617
1.000	19.00	19.00	324	18 x 18	1.67	ClamShell	1.660	1.320	0.610	190SQ 324B6617
1.000	19.00	19.00	324	18 x 18	2.20	ClamShell	1.660	1.320	0.667	190SQ 324B6618A
1.000	19.00	19.00	324	18 x 18	2.03	ClamShell	1.660	1.320	0.667	190SQ 324B6618B
1.000	19.00	19.00	324	18 x 18	1.55	ClamShell	1.660	1.320	0.605	190SQ 324B6618C
1.000	19.00	19.00	324	18 x 18 D*	1.81	ClamShell	1.660	1.320	0.605	190SQ 324B6618D
1.000	19.00	19.00	324	18 x 18	2.03	ClamShell	1.660	1.320	0.605	190SQ 324B6618E
1.000	19.00	19.00	324	18 x 18	1.77	ClamShell	1.660	1.320	0.605	190SQ 324J6617
1.000	20.32	20.32	128	18 x 18 D*	2.95	ClamShell	1.660	1.320	0.667	203SQ 128B6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	20.32	20.32	324	18 x 18	2.95	ClamShell	1.660	1.320	0.667	203SQ 324B6617
1.000	20.60	20.60	128	18 x 18 D*	3.45	ClamShell	1.660	1.320	0.667	206SQ 128B6617
1.000	21.00	21.00	364	20 x 20 D*	2.23	ClamShell	1.660	1.320	0.610	210SQ 364B6617
1.000	21.00	21.00	364	20 x 20 D*	2.23	ClamShell	1.660	1.320	0.610	210SQ 364J6617
1.000	21.00	21.00	400	20 x 20	1.76	ClamShell	1.660	1.320	0.667	210SQ 400B6617
1.000	21.00	21.00	400	20 x 20	2.23	ClamShell	1.660	1.320	0.610	210SQ 400B6618A
1.000	21.59	21.59	289	17 x 17	2.79	ClamShell	1.660	1.320	0.667	215SQ 289B6617
1.000	22.00	16.00	238	21 x 15 D*	1.83	ClamShell	1.660	1.320	0.667	220160238B6617
1.000	22.50	22.50	289	17 x 17	2.34	ClamShell	1.660	1.320	0.667	225SQ 289B6617
1.000	23.00	23.00	324	22 x 22 D*	2.25	ClamShell	1.660	1.320	0.667	230SQ 324B6618A
1.000	23.00	23.00	324	22 x 22 D*	1.76	ClamShell	1.660	1.320	0.667	230SQ 324B6618B
1.000	23.00	23.00	324	22 x 22 D*	2.25	ClamShell	1.660	1.320	0.667	230SQ 324B6618C
1.000	23.00	23.00	338	22 x 22 D*	2.20	ClamShell	1.660	1.320	0.605	230SQ 338B6617
1.000	23.00	23.00	340	22 x 22 D*	2.40	ClamShell	1.660	1.320	0.605	230SQ 340B6617
1.000	23.00	23.00	388	22 x 22 D*	2.25	ClamShell	1.660	1.320	0.667	230SQ 388B6617
1.000	23.00	23.00	456	22 x 22 D*	2.23	ClamShell	1.660	1.320	0.667	230SQ 456B6617
1.000	23.00	23.00	456	22 x 22 D*	2.23	ClamShell	1.660	1.320	0.605	230SQ 456B6618A
1.000	23.00	23.00	484	22 x 22	1.82	ClamShell	1.660	1.320	0.650	230SQ 484B6617
1.000	23.00	23.00	484	22 x 22	1.97	ClamShell	1.660	1.320	0.650	230SQ 484B6618A
1.000	23.00	23.00	484	22 x 22	3.20	ClamShell	1.660	1.320	0.650	230SQ 484B6618B
1.000	23.00	23.00	484	22 x 22	2.23	ClamShell	1.660	1.320	0.650	230SQ 484B6618C
1.000	23.00	23.00	484	22 x 22 D*	1.93	ClamShell	1.660	1.320	0.605	230SQ 484B6618D
1.000	25.00	25.00	320	24 x 24 D*	1.50	ClamShell	1.810	1.520	0.667	250SQ 320B6617
1.000	25.00	25.00	320	24 x 24 D*	1.50	ClamShell	1.810	1.520	1.012	250SQ 320B6618A
1.000	25.00	25.00	575	24 x 24 D*	3.23	ClamShell	1.810	1.520	0.700	250SQ 575B6617
1.000	25.00	25.00	575	24 x 24 D*	3.26	ClamShell	1.810	1.520	0.700	250SQ 575B6618A
1.000	27.00	27.00	158	26 x 26 D*	3.50	ClamShell	1.810	1.520	0.650	270SQ 672B6618C
1.000	27.00	27.00	352	26 x 26 D*	3.43	ClamShell	1.810	1.520	2.033	270SQ 352B6618C
1.000	27.00	27.00	368	26 x 26 D*	2.23	ClamShell	1.810	1.520	0.605	270SQ 228J6618A
1.000	27.00	27.00	368	26 x 26 D*	2.23	ClamShell	1.810	1.520	0.700	270SQ 558J6617
1.000	27.00	27.00	420	26 x 26 D*	0.56	ClamShell	1.810	1.520	0.605	270SQ 420B6617
1.000	27.00	27.00	484	26 x 26 D*	2.23	ClamShell	1.810	1.520	0.650	270SQ 484B6617
1.000	27.00	14.00	544	33 x 17 D*	1.94	ClamShell	1.810	1.520	0.600	282250269B6617
1.000	27.00	27.00	668	26 x 26	2.65	ClamShell	1.810	1.520	0.605	270SQ 668B6617
1.000	27.00	27.00	672	26 x 26 D*	1.86	ClamShell	1.810	1.520	0.650	270SQ 672B6617
1.000	27.00	27.00	672	26 x 26 D*	2.01	ClamShell	1.810	1.520	0.650	270SQ 672B6618A
1.000	27.00	27.00	672	26 x 26 D*	3.50	ClamShell	1.810	1.520	0.650	270SQ 672B6618B
1.000	27.00	27.00	672	26 x 26 D*	2.23	ClamShell	1.810	1.520	0.650	270SQ 672B6618D
1.000	27.00	27.00	672	26 x 26 D*	1.97	ClamShell	1.810	1.520	0.650	270SQ 672B6618E
1.000	27.00	27.00	676	26 x 26	3.15	ClamShell	1.810	1.520	0.650	270SQ 676B6617
1.000	29.00	29.00	266	28 x 28 D*	3.15	ClamShell	2.700	2.340	1.000	290SQ 266B6617
1.000	29.00	29.00	780	28 x 28 D*	3.15	ClamShell	2.190	1.900	1.020	290SQ 780B6617
1.000	29.46	33.78	384	25 x 23 D*	3.05	ClamShell	1.990	1.660	0.450	04481 420 661A

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	31.00	31.00	458	30 x 30 D*	2.23	ClamShell	2.190	1.900	0.792	310SQ 458B6617
1.000	31.00	31.00	484	26 x 26 D*	2.13	ClamShell	2.190	1.900	0.792	310SQ 484B6617
1.000	31.00	31.00	538	30 x 30 D*	3.05	ClamShell	2.190	1.900	0.792	310SQ 538B6617
1.000	31.00	31.00	538	30 x 30 D*	3.05	ClamShell	2.190	1.900	0.792	310SQ 538B6618A
1.000	31.00	31.00	556	30 x 30 D*	2.25	ClamShell	2.190	1.900	1.020	310SQ 556B6617
1.000	31.00	31.00	560	30 x 30 D*	2.23	ClamShell	2.190	1.900	1.020	310SQ 560B6617
1.000	31.00	31.00	657	30 x 30 D*	2.23	ClamShell	2.190	1.900	0.730	310SQ 657J6617
1.000	31.00	31.00	676	30 x 30 D*	2.23	ClamShell	2.190	1.900	1.020	310SQ 676B6617
1.000	31.00	31.00	696	30 x 30 D*	2.13	ClamShell	2.190	1.900	1.020	310SQ 696B6617
1.000	31.00	31.00	696	30 x 30 D*	2.13	ClamShell	2.190	1.900	0.792	310SQ 696B6618A
1.000	31.00	31.00	708	30 x 30 D*	2.13	ClamShell	2.190	1.900	0.792	310SQ 708B6617
1.000	31.00	31.00	708	30 x 30 D*	2.36	ClamShell	2.190	1.900	0.730	310SQ 708B6618A
1.000	31.00	31.00	896	30 x 30 D*	2.23	ClamShell	2.700	2.340	0.940	310SQ 896B6617
1.000	31.00	31.00	900	30 x 30	2.41	ClamShell	2.700	2.340	0.940	310SQ 900B6617
1.000	31.00	31.00	900	30 x 30	2.23	ClamShell	2.700	2.340	0.940	310SQ 900B6618A
1.000	32.50	25.00	720	24 x 31 D*	4.99	ClamShell	2.190	1.900	1.902	325250720B6617
1.000	33.00	33.00	229	32 x 32 D*	3.45	ClamShell	2.190	1.900	0.792	330SQ 229B6617
1.000	33.00	33.00	1020	32 x 32 D*	3.60	ClamShell	2.700	2.340	1.310	330SQ1020B6617
1.000	33.00	33.00	1020	32 x 32 D*	3.40	ClamShell	2.700	2.340	1.310	330SQ1020B6618A
1.000	35.00	35.00	580	34 x 34 D*	2.37	ClamShell	2.190	1.900	1.020	350SQ 580B6617
1.000	35.00	35.00	580	34 x 34 D*	1.47	ClamShell	2.190	1.900	0.730	350SQ 580B6618A
1.000	35.00	35.00	700	34 x 34 D*	2.23	ClamShell	2.190	1.900	1.020	350SQ 700B6617
1.000	35.00	35.00	787	32 x 32 D*	3.23	ClamShell	2.190	1.900	1.020	350SQ 787B6617
1.000	35.00	35.00	788	34 x 34 D*	2.40	ClamShell	2.700	1.900	1.000	350SQ 788B6617
1.000	35.00	35.00	1148	34 x 34 D*	3.20	ClamShell	2.700	2.340	0.810	350SQ1148B6617
1.000	35.00	35.00	1152	34 x 34 D*	3.20	ClamShell	2.700	2.340	1.000	350SQ1156B6618C
1.000	35.00	35.00	1155	34 x 34 D*	3.17	ClamShell	2.700	2.340	1.910	350SQ1156B6617
1.000	35.00	35.00	1155	34 x 34	3.17	ClamShell	2.700	3.500	1.910	350SQ1156J6617
1.000	35.00	35.00	1156	34 x 34	3.75	ClamShell	2.700	2.340	1.000	350SQ1156B6618A
1.000	35.00	35.00	1156	34 x 34	2.25	ClamShell	2.700	2.340	1.000	350SQ1156B6618D
1.000	37.50	37.50	901	36 x 36 D*	2.23	ClamShell	2.700	2.340	1.020	375SQ 901B6617
1.000	40.00	40.00	680	39 x 39 D*	2.25	ClamShell	2.390	2.100	0.730	400SQ 680B6617
1.000	40.00	40.00	680	39 x 39 D*	1.60	ClamShell	2.390	2.100	1.020	400SQ 680B6618A
1.000	40.00	40.00	680	39 x 39 D*	1.40	ClamShell	2.390	2.100	1.020	400SQ 680B6618B
1.000	40.00	40.00	913	39 x 39 D*	2.23	ClamShell	2.390	2.100	1.020	400SQ 913B6617
1.000	40.00	40.00	1000	38 x 38 D*	2.23	ClamShell	2.700	2.340	1.062	400SQ1000B6617
1.000	40.00	40.00	1004	38 x 38 D*	3.05	ClamShell	2.700	2.340	1.250	400SQ1004B6617
1.000	40.00	40.00	1063	39 x 39 D*	2.23	ClamShell	2.700	2.340	0.972	400SQ1069B6617
1.000	40.00	40.00	1121	39 x 39 D*	3.10	ClamShell	2.700	2.340	0.972	400SQ1117B6617
1.000	40.00	40.00	1121	39 x 39 D*	3.20	ClamShell	2.700	2.340	0.972	400SQ1121B6617
1.000	40.00	40.00	1157	39 x 39 D*	2.45	ClamShell	2.700	2.340	1.250	400SQ1157B6617
1.000	40.00	40.00	1157	39 x 39 D*	2.45	ClamShell	2.700	2.340	1.250	400SQ1157B6618A
1.000	40.00	40.00	1413	39 x 39 D*	3.11	ClamShell	2.700	2.340	1.250	400SQ1417B6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	40.00	40.00	1413	39 x 39 D*	2.25	ClamShell	2.700	2.340	1.250	400SQ1417B6618A
1.000	40.00	40.00	1413	39 x 39 D*	3.11	ClamShell	2.700	2.340	0.972	400SQ1417B6618B
1.000	40.00	40.00	1508	39 x 39 D*	3.30	ClamShell	2.700	2.340	1.000	400SQ1508B6617
1.000	40.00	40.00	1508	39 x 39 D*	3.12	ClamShell	2.700	2.340	1.275	400SQ1508B6618A
1.000	40.00	40.00	1517	39 x 39 D*	3.20	ClamShell	2.700	2.340	1.275	400SQ1517B6617
1.000	40.00	40.00	1521	39 x 39	2.50	ClamShell	2.390	2.100	1.020	400SQ 232B6617
1.000	42.50	42.50	860	42 x 42 D*	3.04	ClamShell	2.590	2.300	1.020	425SQ 860B6617
1.000	42.50	42.50	1760	42 x 42 D*	3.27	ClamShell	3.250	2.740	1.190	425SQ1764B6617
1.000	45.00	45.00	1936	44 x 44	2.96	ClamShell	3.250	2.740	1.350	450SQ1936B6617
1.000	50.00	50.00	836	49 x 49 D*	2.61	ClamShell	3.250	2.740	1.212	500SQ 836B6617
1.000	50.00	50.00	1428	49 x 49 *D	3.23	ClamShell	3.250	3.400	1.350	500SQ1428B6617
1.000	50.00	50.00	2397	49 x 49	2.25	ClamShell	3.250	2.740	1.212	500SQ2397B6617
1.000	50.00	50.00	2401	49 x 49	3.23	ClamShell	3.250	3.400	1.360	500SQ2401B6617
1.000	52.80	52.80	2549	51 x 51 D*	4.65	ClamShell	3.250	2.740	1.220	528SQ 106B6617
1.270	10.00	9.00	36	6 x 7 D*	1.47	ClamShell	1.050	0.750	0.507	100090036B6617
1.270	12.93	11.66	54	7 x 9 D*	1.05	ClamShell	1.470	1.050	0.672	129116054P6617
1.270	15.36	9.35	27	10 x 6 *D	3.93	ClamShell	1.470	1.050	0.605	153093027J6617
1.270	15.36	9.35	66	11 x 6 D*	3.73	ClamShell	1.470	1.050	0.605	153093029J6617
1.270	16.99	16.99	168	13 x 13 D*	3.45	ClamShell	1.660	1.320	0.610	169SQ 168B6617
1.270	16.99	16.99	168	13 x 13 D*	3.45	ClamShell	1.660	1.320	0.610	169SQ 168J6617
1.270	16.99	16.99	168	13 x 13 D*	3.45	ClamShell	1.660	1.320	0.610	169SQ 168J6618A
1.270	22.00	14.00	119	17 x 7	2.63	ClamShell	1.660	1.320	0.667	220140119B6617
1.270	23.00	23.00	217	17 x 17 D*	2.13	ClamShell	1.660	1.320	0.667	230SQ 217B6617
1.270	23.00	23.00	233	17 x 17 D*	2.13	ClamShell	1.660	1.320	0.667	230SQ 233B6617
1.270	23.00	23.00	233	17 x 17 D*	2.04	ClamShell	1.660	1.320	0.667	230SQ 233B6618A
1.270	23.00	23.00	233	17 x 17 D*	2.33	ClamShell	1.660	1.320	0.667	230SQ 233B6618B
1.270	23.00	23.00	240	17 x 17 D*	2.13	ClamShell	1.660	1.320	0.605	230SQ 240B6617
1.270	23.00	23.00	312	18 x 18 D*	3.65	ClamShell	1.810	1.520	0.732	230SQ 312B6617
1.270	25.00	21.00	255	16 x 16 D*	3.50	ClamShell	1.810	1.520	1.102	250210255B6617
1.270	27.00	27.00	256	20 x 20 D*	1.80	ClamShell	1.810	1.520	0.275	270SQ 256B1618B
1.270	27.00	27.00	256	20 x 20 D*	2.13	ClamShell	1.810	1.520	0.667	270SQ 256B6617
1.270	27.00	27.00	256	20 x 20 D*	1.45	ClamShell	1.810	1.520	0.667	270SQ 256B6618A
1.270	27.00	27.00	256	20 x 20 D*	1.45	ClamShell	1.810	1.520	0.667	270SQ 256B6618D
1.270	27.00	27.00	256	20 x 20 D*	1.65	ClamShell	1.810	1.520	0.667	270SQ 256B6618E
1.270	27.00	27.00	256	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 256B6618F
1.270	27.00	27.00	256	20 x 20 D*	1.80	ClamShell	1.810	1.520	1.263	270SQ 256B6618H
1.270	27.00	27.00	256	20 x 20 D*	2.27	ClamShell	1.810	1.520	0.605	270SQ 256B6618I
1.270	27.00	27.00	256	20 x 20 D*	2.43	ClamShell	1.810	1.520	0.605	270SQ 256B6618J
1.270	27.00	27.00	272	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 272B6617
1.270	27.00	27.00	272	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.605	270SQ 272B6618A
1.270	27.00	27.00	272	20 x 20 D*	2.23	ClamShell	1.810	1.520	0.667	270SQ 272B6618B
1.270	27.00	27.00	280	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.672	270SQ 280B6617
1.270	27.00	27.00	292	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 292B6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	27.00	27.00	292	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.605	270SQ 292B6618A
1.270	27.00	27.00	296	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 296B6617
1.270	27.00	27.00	300	20 x 20 D*	2.13	ClamShell	1.810	1.520	0.667	270SQ 300B6617
1.270	27.00	27.00	300	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 300B6618A
1.270	27.00	27.00	316	20 x 20 D*	2.13	ClamShell	1.810	1.520	0.667	270SQ 316B6617
1.270	27.00	27.00	316	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 316B6618A
1.270	27.00	27.00	324	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 324B6617
1.270	27.00	27.00	324	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.275	270SQ 324B6618A
1.270	27.00	27.00	328	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 328B6617
1.270	27.00	27.00	328	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 328B6618A
1.270	27.00	27.00	336	20 x 20 D*	2.33	ClamShell	1.810	1.520	0.667	270SQ 336B6617
1.270	27.00	27.00	336	20 x 20 D*	3.05	ClamShell	1.810	1.520	0.667	270SQ 336B6618A
1.270	27.00	27.00	352	26 x 26 D*	2.47	ClamShell	1.810	1.520	0.667	270SQ 352B6618A
1.270	27.00	27.00	388	20 x 20 D*	2.64	ClamShell	1.810	1.520	0.667	270SQ 388B6617
1.270	27.00	27.00	400	20 x 20	2.13	ClamShell	1.810	1.520	0.667	270SQ 400B6617
1.270	27.00	27.00	400	20 x 20	2.38	ClamShell	1.810	1.520	0.667	270SQ 400B6618A
1.270	29.00	29.00	472	22 x 22 D*	4.17	ClamShell	2.190	1.900	0.730	290SQ 472B6617
1.270	31.00	31.00	304	23 x 23 D*	1.51	ClamShell	2.190	1.900	0.730	310SQ 304B6617
1.270	31.00	31.00	304	23 x 23 D*	1.51	ClamShell	2.190	1.900	0.730	310SQ 304B6618B
1.270	31.00	31.00	304	23 x 23 D*	2.44	ClamShell	2.190	1.900	0.730	310SQ 304B6618C
1.270	31.00	31.00	304	23 x 23 D*	1.24	ClamShell	2.190	1.900	0.792	350SQ 304B6618
1.270	31.00	31.00	329	23 x 23 D*	2.33	ClamShell	2.190	1.900	0.792	310SQ 329B6617
1.270	31.00	31.00	329	23 x 23 D*	2.33	ClamShell	2.190	1.900	0.792	310SQ 329B6618A
1.270	31.00	31.00	385	23 x 23 D*	2.33	ClamShell	2.190	1.900	0.792	310SQ 385B6617
1.270	31.00	31.00	529	23 x 23	2.33	ClamShell	2.190	1.900	0.792	310SQ 529B6617
1.270	35.00	35.00	352	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 352B6617
1.270	35.00	35.00	352	26 x 26 D*	1.40	ClamShell	2.190	1.900	0.792	350SQ 352B6618A
1.270	35.00	35.00	352	26 x 26 D*	1.50	ClamShell	2.190	1.900	0.792	350SQ 352B6618B
1.270	35.00	35.00	352	26 x 26 D*	2.36	ClamShell	2.190	1.900	0.792	350SQ 352B6618C
1.270	35.00	35.00	352	26 x 26 D*	1.73	ClamShell	2.190	1.900	0.792	350SQ 352B6618D
1.270	35.00	35.00	352	26 x 26 D*	1.73	ClamShell	2.190	1.900	0.263	350SQ 352B6618E
1.270	35.00	35.00	352	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 352B6618F
1.270	35.00	35.00	352	26 x 26 D*	2.44	ClamShell	2.210	1.900	0.730	350SQ 352B6618G
1.270	35.00	35.00	352	26 x 26 D*	1.38	ClamShell	2.210	1.900	0.487	350SQD352B6618
1.270	35.00	35.00	352	26 x 26 D*	1.50	ClamShell	2.210	1.900	0.487	350SQD352B6618A
1.270	35.00	35.00	356	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 356B6617
1.270	35.00	35.00	368	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 368B6617
1.270	35.00	35.00	371	26 x 26 D*	2.38	ClamShell	2.190	1.900	0.730	350SQ 371B6617
1.270	35.00	35.00	388	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 388B6617
1.270	35.00	35.00	388	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 388B6618A
1.270	35.00	35.00	388	26 x 26 D*	2.34	ClamShell	2.190	1.900	2.482	350SQ 388B6618B
1.270	35.00	35.00	388	26 x 26 D*	2.34	ClamShell	2.190	1.900	0.792	350SQ 388B6618C
1.270	35.00	35.00	388	26 x 26 D*	3.62	ClamShell	2.190	1.900	0.792	350SQ 388B6618D

D* = Depopulated, See Drawing for Specific Array

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BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	35.00	35.00	388	26 x 26 D*	2.34	ClamShell	2.190	1.900	0.666	350SQU388B6617
1.270	35.00	35.00	420	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.730	350SQ 420B6617
1.270	35.00	35.00	420	26 x 26 D*	2.45	ClamShell	2.210	1.900	0.730	350SQ 420B6618A
1.270	35.00	35.00	432	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 476B6617
1.270	35.00	31.00	440	22 x 21 D*	3.57	ClamShell	2.190	1.900	0.730	350310462B6617
1.270	35.00	35.00	440	26 x 26 D*	2.22	ClamShell	2.190	1.900	0.792	350SQ 440B6618A
1.270	35.00	35.00	452	26 x 26 D*	2.33	OpenTop	2.190	1.900	0.730	350SQ 452B6617
1.270	35.00	35.00	456	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 456B6617
1.270	35.00	35.00	456	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 456B6618
1.270	35.00	35.00	456	26 x 26 D*	2.13	ClamShell	2.190	1.900	0.792	350SQ 456B6618A
1.270	35.00	35.00	456	26 x 26 D*	2.46	ClamShell	2.190	1.900	0.792	350SQ 456B6618B
1.270	35.00	35.00	456	26 x 26 D*	2.55	ClamShell	2.190	1.900	0.792	350SQ 456B6618C
1.270	35.00	35.00	456	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.730	350SQ 456B6618D
1.270	35.00	35.00	464	26 x 26 D*	2.33	ClamShell	2.190	1.900	0.792	350SQ 464B6618
1.270	35.00	35.00	492	26 x 26 D*	2.33	ClamShell	2.190	1.900	1.020	350SQ 492B6617
1.270	35.00	35.00	505	26 x 26 D*	2.33	ClamShell	2.190	1.900	1.020	350SQ 505B6617
1.270	35.00	35.00	516	26 x 26 D*	2.38	ClamShell	2.190	1.900	1.020	350SQ 516B6617
1.270	35.00	35.00	560	26 x 26 D*	2.33	ClamShell	2.190	1.900	1.020	350SQ 560B6617
1.270	35.00	35.00	625	26 x 26 D*	2.38	ClamShell	2.190	1.900	1.020	350SQ 625B6617
1.270	35.00	35.00	664	26 x 26 D*	6.42	ClamShell	2.190	1.900	0.730	350SQ 664C6617
1.270	35.00	35.00	672	26 x 26 D*	3.20	ClamShell	2.600	2.600	0.950	350SQ 672B6617
1.270	35.00	35.00	672	26 x 26 D*	2.36	ClamShell	2.600	2.600	0.890	350SQ 672B6618A
1.270	35.00	35.00	676	26 x 26	2.22	ClamShell	2.190	1.900	1.020	350SQ 676B6617
1.270	35.00	35.00	676	26 x 26	2.33	ClamShell	2.190	1.900	1.020	350SQ 676B6618A
1.270	35.00	35.00	676	26 x 26	2.22	ClamShell	2.190	1.900	1.020	350SQ 676B6618B
1.270	37.50	37.50	312	29 x 29 D*	1.54	ClamShell	2.390	2.100	0.792	375SQ 312B6617
1.270	37.50	37.50	529	29 x 29 D*	2.33	ClamShell	2.390	2.100	0.730	375SQ 529B6617
1.270	37.50	37.50	553	29 x 29 D*	2.33	ClamShell	2.390	2.100	1.020	375SQ 553B6617
1.270	37.50	37.50	587	28 x 28 D*	3.40	ClamShell	2.390	2.100	1.020	375SQ 587B6617
1.270	37.50	37.50	652	28 x 28 D*	3.40	ClamShell	2.390	2.100	1.020	375SQ 652B6617
1.270	40.00	40.00	432	31 x 31 D*	1.54	ClamShell	2.390	2.100	0.792	400SQ 432B6617
1.270	40.00	40.00	503	29 x 29 D*	2.33	ClamShell	2.590	2.300	1.020	400SQ 503B6617
1.270	40.00	40.00	520	31 x 31 D*	2.10	ClamShell	2.390	2.100	1.020	400SQ 520B6617
1.270	40.00	40.00	520	31 x 31 D*	1.70	ClamShell	2.390	2.100	1.020	400SQ 520B6618A
1.270	40.00	40.00	520	31 x 31 D*	2.33	ClamShell	2.390	2.100	1.020	400SQ 520B6618B
1.270	40.00	40.00	520	31 x 31 D*	1.50	ClamShell	2.390	2.100	0.730	400SQ 520B6618C
1.270	40.00	40.00	560	30 x 30 D*	2.49	ClamShell	2.390	2.100	0.730	400SQ 560B6617
1.270	40.00	40.00	569	31 x 31 D*	2.33	ClamShell	2.390	2.100	1.020	400SQ 569B6617
1.270	40.00	40.00	569	31 x 31 D*	3.10	ClamShell	2.390	2.100	1.020	400SQ 569B6618A
1.270	40.00	40.00	600	31 x 31 D*	2.50	ClamShell	2.390	2.100	1.020	400SQ 600B6617
1.270	40.00	40.00	624	30 x 30 D*	2.49	ClamShell	2.390	2.100	0.730	400SQ 624B6617
1.270	40.00	40.00	665	31 x 31 D*	2.25	ClamShell	2.390	2.100	1.020	400SQ 665B6617
1.270	40.00	40.00	729	27 x 27	3.19	ClamShell	2.700	2.340	1.022	400SQ 729B6617

D* = Depopulated, See Drawing for Specific Array

BGA/CSP Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	40.00	40.00	956	31 x 31 D*	3.22	ClamShell	2.700	2.340	0.972	400SQ 956B6617
1.270	42.50	42.50	560	33 x 33 D*	1.54	ClamShell	2.590	2.300	1.020	425SQ 560B6617
1.270	42.50	42.50	560	33 x 33 D*	3.50	ClamShell	2.590	2.300	0.730	425SQ 560B6618A
1.270	43.00	43.00	521	33 x 33 D*	3.41	ClamShell	2.590	2.300	1.020	430SQ 521B6617
1.270	45.00	45.00	600	35 x 35 D*	1.54	ClamShell	2.590	2.300	1.020	450SQ 600B6617
1.270	45.00	45.00	655	34 x 34 D*	2.60	ClamShell	2.590	2.300	1.020	450SQ 655B6617
1.500	27.00	27.00	225	15 x 15	2.13	ClamShell	1.810	1.520	0.667	270SQ 225B6617
1.800	35.00	35.00	313	Interstitial 25 x 25 D*	2.27	ClamShell	2.190	1.900	0.792	350SQ 313B1617
2.500	3.50	3.50	4	2 x 2	1.15	ClamShell	1.050	0.750	0.440	035SQ 004B6617
3.592	35.00	35.00	313	Interstitial 25 x 25 D*	3.03	ClamShell	2.190	1.900	0.792	350SQ 313B6618A
Multi	1.44	1.05	8	2 x 4 Dual	0.63	ClamShell	1.050	0.750	0.535	014010016J6617
Multi	2.20	0.98	10	5 X 2	0.80	ClamShell	1.050	0.750	0.530	022009010J6617
Multi	2.54	1.14	10	2 x 5	0.75	ClamShell	1.050	0.750	0.450	025011010J6617
Multi	11.79	8.95	62	12 x 9 D*	1.14	ClamShell	1.050	0.750	0.650	117089062U6617

D* = Depopulated, See Drawing for Specific Array

LGA Sockets

Design Features

- *Loranger Standard and APS Contacts Available for Pitches of 0.25mm and Greater*
- *Standard Contact Wipes Diameter of Land Pad*
- *Low-Profile and Small Footprint Design Increases Board Density*
- *Surface-mount Design Corrects Coplanarity Issues and Reduces Need for Extra Board Layers*
- *Top and Bottom Mounted Heat Sink Options*

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	5.00	5.00	65	Special D*	0.75	ClamShell	1.050	0.750	0.530	050SQ 065J6617
0.500	1.60	1.60	7	3 on 2 plus 1	0.55	ClamShell	1.050	0.750	0.440	016SQ 007J6618B
0.500	5.00	5.00	81	10 X 10	0.85	ClamShell	1.050	0.750	0.450	050SQ 081J6617
0.500	5.04	5.04	45	Special D*	0.85	ClamShell	1.050	0.750	0.450	050SQ 045J6617
0.500	7.04	6.04	59	13on2, 9on2,	1.00	ClamShell	1.050	0.750	0.450	D0706 059J6617
0.500	10.00	10.00	128	Special D*	1.00	ClamShell	1.050	0.750	0.650	100SQ 128U6617
0.500	11.00	7.00	65	19on2, 13on2,	1.15	ClamShell	1.050	0.450	0.450	110070065J6617
0.500	13.00	13.00	176	Special D*	1.00	ClamShell	1.470	1.050	0.850	130SQ 176U6617
0.600	7.00	7.00	22	11 on 2	4.50	ClamShell	1.050	0.750	0.440	070SQ 022L6617
0.600	7.20	7.20	116	11 x 11 D*	0.51	ClamShell	1.050	0.750	0.440	072SQ 116J6617
0.650	6.00	6.00	64	8 x 8	0.81	Clamshell	1.050	0.750	0.450	060SQ 064J6617
0.680	4.00	4.00	16	P1 Depop	1.20	Clamshell	1.050	0.750	0.450	040SQ 028J6617
0.700	7.00	7.00	20	10 on 2	4.50	ClamShell	1.050	0.750	0.450	070SQ 020J6617
0.750	4.00	4.00	16	4 x 4	0.90	Clamshell	1.050	0.750	0.450	040SQ 016J6617
0.750	8.00	8.00	78	10 x 10 D*	0.95	ClamShell	1.050	0.750	0.440	080SQ 078U6617
0.750	26.00	20.75	114	Special D*	1.70	ClamShell	1.810	1.520	0.650	260207114U6617
0.800	3.00	3.00	9	3 x 3	0.90	ClamShell	1.050	0.750	0.450	030SQ 009J6617
0.800	8.00	6.00	32	10 on 2,5 on 2	1.10	ClamShell	1.050	0.750	0.450	080060031J6618B
0.800	8.00	8.00	36	10 on 2 plus 16	1.40	ClamShell	1.050	0.750	0.450	080SQ 036J6617
0.800	8.00	8.00	36	3x10, plus 4,	1.15	ClamShell	1.050	0.750	0.450	080SQ 036J6618B
0.800	9.00	9.00	36	9 on 4	1.92	ClamShell	0.940	0.810	0.740	03719 371 6218B
0.800	9.00	9.00	37	10 x 10 D*	3.18	ClamShell	1.050	0.750	0.445	090SQ 037U6617
0.800	9.00	9.00	56	8 x 8 D*	1.10	ClamShell	1.050	0.750	0.650	090SQ 056L6617
0.800	9.00	9.00	100	10 x 10	3.18	ClamShell	1.050	0.750	0.507	090SQ 100U6618A
0.800	13.00	13.00	64	16 on 2,14 on 2	1.36	ClamShell	1.210	1.090	0.740	03719 641 6217
0.800	13.00	13.00	144	12 x 12 D*	1.40	ClamShell	1.470	1.050	0.850	130SQ 144L6617
1.000	9.00	9.00	36	8 x 8 D*	1.06	ClamShell	1.050	0.750	0.650	090SQ 036L6617
1.000	10.60	9.80	90	9 x 10	1.45	ClamShell	1.050	0.750	0.450	106098090J6617
1.000	12.00	10.00	48	6 x 8	1.56	ClamShell	1.050	0.750	0.650	120100048L6617
1.000	13.00	10.00	64	8 x 8	1.10	ClamShell	1.470	1.050	0.605	130100064J6617
1.000	14.00	10.00	48	14 on 2, 8 on 2,	1.35	ClamShell	1.470	1.050	0.605	140100048J6617

D* = Depopulated, See Drawing for Specific Array

LGA Sockets

Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	15.00	15.00	196	14 x 14	2.02	ClamShell	1.470	1.050	0.650	150SQ 196L6617
1.000	17.00	17.00	228	16 x 16 D*	2.77	ClamShell	1.470	1.050	0.667	170SQ 228LAPKB
1.000	17.00	17.00	256	16 x 16	1.12	ClamShell	1.470	1.050	0.650	170SQ 256L6617
1.000	20.00	20.00	400	20 x 20	1.70	ClamShell	1.660	1.320	0.650	200SQ 400L6617
1.000	21.00	21.00	255	16 x 16 D*	2.82	ClamShell	1.660	1.320	0.650	210SQ 255L6617
1.000	28.00	28.00	410	27 x 27 D*	1.91	ClamShell	2.190	1.900	1.162	280SQ 728L6618A
1.000	35.00	35.00	767	32 x 32 D*	11.24	ClamShell	2.190	1.900	1.020	350SQ 767L6617
1.000	35.00	35.00	767	32 x 32 D*	3.99	ClamShell	2.190	1.900	1.020	350SQ 767L6618A
1.000	40.00	40.00	30	39 x 39 D*	1.50	ClamShell	2.390	2.100	0.730	400SQ 030J6617
1.100	9.50	9.50	20	8 on 2,2 on 2	7.60	ClamShell	1.470	1.050	0.605	140120020L6617
1.100	14.00	8.50	18	7 on 2,2 on 2	6.10	ClamShell	1.470	1.050	0.605	140085018L6617
1.120	45.00	45.00	1368	37 x 37 D*	3.19	ClamShell	2.700	2.340	0.932	450SQ1368L6617
1.120	45.00	45.00	1368	37 x 37 D*	3.19	ClamShell	2.700	2.340	1.180	450SQ1368L6618A
1.120	45.00	45.00	1368	37 x 37 D*	3.19	ClamShell	2.700	2.340	1.430	450SQ1368L6618B
1.120	45.00	45.00	1368	37 x 37 D*	3.19	ClamShell	2.700	2.340	1.140	450SQ1368L6618C
1.120	45.00	45.00	1368	37 x 37 D*	3.19	ClamShell	2.700	2.340	1.290	450SQ1368L6618D
1.120	45.00	45.00	1368	37 x 37 D*	3.19	ClamShell	2.700	2.340	1.290	450SQ1368L6618E
1.120	45.00	45.00	1368	37 x 37 D*	2.31	ClamShell	2.700	2.340	0.357	450SQ1368L6618F
1.270	1.57	1.07	2	Special D* 12X	0.89	Clamshell	1.050	0.750	0.502	015010048U6617
1.270	8.13	5.84	24	Interstitial 6 x	1.91	ClamShell	1.050	0.750	0.507	081058012L6617
1.270	10.06	5.66	25	Interstitial 10 x	1.91	ClamShell	1.050	0.750	0.507	105056023L6617
1.270	10.97	8.94	44	Interstitial 8 x	1.91	ClamShell	1.050	0.750	0.507	109089040L6617
1.270	11.02	11.02	10	Interstitial 11 x	1.91	ClamShell	1.050	0.750	0.507	110SQ 010L6617
1.270	11.02	11.02	32	Interstitial 11 x	1.91	ClamShell	1.050	0.750	0.507	110SQ 032L6617
1.270	11.02	11.02	46	Interstitial 11 X	1.91	ClamShell	1.050	0.750	0.445	110SQ 046J6617
1.270	11.02	11.02	61	Interstitial 11 x	1.91	ClamShell	1.050	0.750	0.507	110SQ 034L6617
1.270	11.02	11.02	61	Interstitial 11 X	1.91	ClamShell	1.050	0.750	0.445	110SQ 046L6617
1.270	11.02	11.02	61	Interstitial 11 X	3.00	ClamShell	1.050	0.750	0.445	110SQ 061J6617
1.270	13.08	13.08	61	Interstitial 11 x	2.92	ClamShell	1.470	1.050	0.605	135130061J6617
1.270	24.87	24.87	160	Special D*	0.64	ClamShell	1.810	1.520	1.190	248SQ 160L6617
1.270	25.00	21.00	165	15 x 11	2.40	ClamShell	1.810	1.520	0.605	250210165J6617
1.270	25.00	25.00	360	19 x 19 D*	1.98	ClamShell	1.810	1.520	0.650	250SQ 360L6617
1.270	25.00	25.00	360	19 x 19 D*	2.03	ClamShell	1.810	1.520	0.650	250SQ 360L6618A
1.270	25.00	25.00	360	19 x 19 D*	2.03	ClamShell	1.810	1.520	0.650	250SQ 360L6618B
1.270	25.00	25.00	360	18 x 18 D*	1.98	ClamShell	1.810	1.520	0.410	250SQU360L6618
1.270	27.00	27.00	272	20 x 20 D*	1.53	ClamShell	1.810	1.520	0.662	270SQ 272L6617
1.270	27.00	27.00	388	20 x 20 D*	1.81	ClamShell	1.810	1.520	0.650	270SQ 388L6617
1.270	27.03	27.03	256	20 x 20 D*	1.53	ClamShell	1.810	1.520	0.650	270SQ 256L6617
1.270	29.00	29.00	472	22 x 22 D*	2.84	ClamShell	2.190	1.900	1.020	290SQ 472L6617
1.270	29.00	29.00	472	22 x 22 D*	3.24	ClamShell	2.190	1.900	0.832	290SQ 472L6618A
1.270	29.00	29.00	472	22 x 22 D*	3.14	ClamShell	2.190	1.900	0.832	290SQ 472L6618B

D* = Depopulated, See Drawing for Specific Array

LGA Sockets

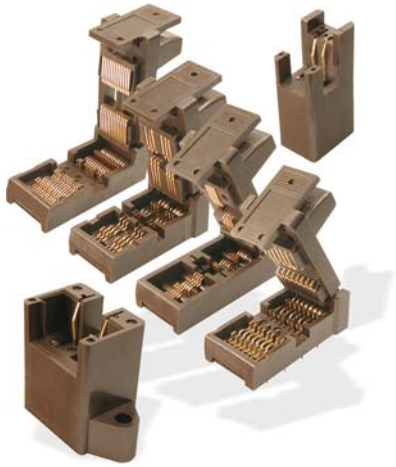
Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	I/O	Array	Pkg H / T (mm)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	29.00	29.00	472	22 x 22 D*	2.84	ClamShell	2.190	1.900	0.832	290SQ 472P6617
1.270	29.00	29.00	472	22 x 22 D*	3.24	ClamShell	2.190	1.900	0.730	290SQ 472P6618A
1.270	29.00	29.00	472	22 x 22 D*	3.14	ClamShell	2.190	1.900	0.730	290SQ 472P6618B
1.270	31.00	31.00	575	24 x 24 D*	1.07	ClamShell	2.190	1.900	1.020	310SQ 575L6617
1.270	31.00	31.00	575	24 x 24 D*	1.07	ClamShell	2.190	1.900	1.020	310SQ 575L6618A
1.270	31.00	31.00	575	24 x 24 D*	1.07	ClamShell	2.190	1.900	1.020	310SQU575L6618E
1.270	35.00	35.00	644	26 x 26 D*	4.41	ClamShell	2.190	1.900	1.020	350SQ 664L6617
1.270	37.50	37.50	312	29 x 29 D*	0.91	ClamShell	2.390	2.100	1.020	375SQ 312L6617
1.270	37.50	37.50	587	28 x 28 D*	4.03	ClamShell	2.390	2.100	1.020	375SQ 587L6617
1.270	37.50	37.50	587	28 x 28 D*	4.03	ClamShell	2.390	2.100	1.020	375SQ 587L6618A
1.270	40.00	40.00	949	31 x 31 D*	3.14	ClamShell	2.700	2.340	1.300	400SQ 949L6617
1.270	42.82	16.30	81	9 x 9	15.46	ClamShell	1.460	1.140	0.762	428127081L6617
1.400	10.56	8.66	22	Special D*	5.80	ClamShell	1.050	0.750	0.507	105086022L6617
1.670	8.00	8.00	16	4 on 4	4.60	ClamShell	0.930	0.760	0.740	03719 291 6218B
2.002	2.49	2.49	2	9X pkgs	1.78	ClamShell	1.470	1.050	0.850	150SQ 036L6617
Multi	8.00	6.00	31	P1 Deopop	1.15	ClamShell	1.050	0.750	0.450	080060031J6617
Multi	8.00	6.00	31	P1 plus 1	1.15	ClamShell	1.050	0.750	0.450	080060031J6618A
Multi	11.20	9.00	132	11 x 12	1.35	ClamShell	1.050	0.750	0.450	112090132J6617
Multi	35.00	14.90	13	6 on 1,7 on 1	0.57	ClamShell	2.190	1.900	0.730	349142013L6617

D* = Depopulated, See Drawing for Specific Array

Gull Wing Sockets

Design Features

- *Open Top and Clamshell*
- *Enables Greatest Airflow Over Package with Low Profile*
- *"Live Bug" and "Dead Bug" Insertion for Burn-in and Test*
- *Kelvin and non Kelvin Contacts*
- *Heat Sink Options Available*



Pitch (mm)	Pitch (in)	Body W (mm)	I/O	Body L (mm)	Body H (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	0.016	3.90	48	9.90	1.60	SOP	No	ClamShell	0.850	0.510	0.710	04270 481 X217
0.500	0.020	0.80	3	1.60	0.80	SOT-523	No	ClamShell	0.790	0.510	0.730	03285 121 6218A
0.500	0.020	0.80	3	1.60	0.80	SOT-523	Yes	ClamShell	1.110	0.510	0.740	04285 121 X218A
0.500	0.020	1.25	8	2.00	0.90	8L-SOIC	No	ClamShell	0.790	0.510	0.730	04322 081 X217
0.500	0.020	1.75	8	2.00	1.05	TSOP8	No	ClamShell	0.780	0.510	0.720	04321 081 6217
0.500	0.020	2.33	8	2.00	0.75	8L-SOIC	Yes	ClamShell	0.790	0.510	0.730	04320 081 6217
0.500	0.020	3.00	10	3.00	1.02	MIRO MAX	Yes	ClamShell	1.200	0.510	0.740	04333 101 6215
0.500	0.020	3.00	10	3.00	1.10	MINI SOIC	No	ClamShell	1.200	0.510	0.740	04333 101 6218
0.500	0.020	3.00	10	3.00	1.02	10L-TSSOP	No	ClamShell	1.200	0.510	0.740	04333 101 6218A
0.500	0.020	3.00	11	3.00	0.95	10L-TSSOP	Yes	ClamShell	1.200	0.510	0.740	04333 111 6215
0.500	0.020	3.00	11	3.00	0.95	10L-TSSOP	No	ClamShell	1.200	0.510	0.740	04333 111 6218A
0.500	0.020	3.00	17	4.04	1.00	MSE MSOP DAP	Yes	ClamShell	1.200	0.510	0.740	04320 171 6217
0.500	0.020	3.90	17	4.90	1.52	PwSSO-16	Yes	ClamShell	1.390	0.630	0.740	04333 171 6217
0.500	0.020	3.90	40	9.90	1.60	SOP	No	ClamShell	1.120	0.550	0.750	04320 401 X217
0.500	0.020	3.90	80	20.50	1.60	SOP	No	ClamShell	1.150	1.010	0.750	04320 801 X217
0.500	0.020	4.40	38	9.70	1.05	TSSOP	No	ClamShell	1.010	0.610	0.740	04320 381 6217
0.500	0.020	5.30	44	12.80	1.85	44 L SSOP	No	ClamShell	1.070	0.650	0.740	04320 441 6217
0.500	0.020	11.00	47	15.90	3.30	PwSSO-46	Yes	ClamShell	1.630	0.850	0.740	04333 471 6217
0.600	0.024	1.60	8	2.90	1.05	SOIC 8 WIDE LEAD	No	ClamShell	0.790	0.510	0.730	04233 081 6215
0.600	0.024	1.60	8	2.90	1.05	8L-SOIC	No	ClamShell	0.790	0.510	0.730	04334 081 6218B
0.635	0.025	2.74	10	3.00	1.40	NAIO-10	No	ClamShell	1.390	0.620	0.750	03875 161 6218A
0.635	0.025	2.74	16	4.90	1.32	HP MSOP	No	ClamShell	1.340	0.620	0.750	03875 161 6215
0.635	0.025	3.91	16	4.45	1.40	16L-SSOP	No	ClamShell	1.390	0.620	0.750	03925 281 6218A
0.635	0.025	3.91	24	10.30	1.40	24L-SSOP	No	ClamShell	1.340	0.620	0.750	03925 281 6218B
0.635	0.025	3.91	24	8.64	1.55	SSOP	No	ClamShell	1.250	0.570	0.740	04323 281 6218A
0.635	0.025	3.91	28	10.03	1.40	28L-SSOP	No	ClamShell	1.340	0.620	0.750	03925 281 6215
0.635	0.025	3.91	28	5.03	1.40	SSOP	No	ClamShell	1.390	0.620	0.750	03925 281 6218
0.635	0.025	3.91	28	10.03	1.40	SSOP	Yes	ClamShell	1.250	0.570	0.740	04323 281 6217
0.650	0.026	1.24	4	2.01	0.89	SC-70 / SOT-343	No	ClamShell	1.390	0.620	0.750	03256 181 6218A
0.650	0.026	1.24	6	2.01	0.89	H-P SC-70	No	ClamShell	1.340	0.620	0.750	03256 181 6215
0.650	0.026	1.25	5	2.00	0.90	SC70	Yes	ClamShell	1.100	0.510	0.740	04335 121 6218A

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Gull Wing Sockets

Pitch (mm)	Pitch (in)	Body W (mm)	I/O	Body L (mm)	Body H (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.650	0.026	1.25	6	2.00	0.90	SOIC	Yes	ClamShell	1.100	0.510	0.740	04335 121 6215
0.650	0.026	1.27	3	2.00	0.91	SOT-323, SC-70	Yes	ClamShell	1.100	0.510	0.740	04335 121 6218C
0.650	0.026	1.63	8	2.90	1.17	SOT-23	Yes	ClamShell	1.120	0.510	0.740	04336 081 6215
0.650	0.026	1.65	8	2.90	1.19	SOT-23	No	ClamShell	0.790	0.510	0.730	04334 081 6215
0.650	0.026	2.79	8	2.95	1.10	DCT SSOP	Yes	ClamShell	1.200	0.510	0.740	04338 081 6215
0.650	0.026	3.00	8	3.00	1.02	Micro 8	Yes	ClamShell	1.120	0.510	0.740	04335 081 6215
0.650	0.026	3.00	8	3.00	0.97	MINI SOIC	Yes	ClamShell	1.200	0.510	0.740	04335 081 6218A
0.650	0.026	3.00	8	3.00	0.97	MINI SOIC	No	ClamShell	1.200	0.510	0.740	04335 081 6218B
0.650	0.026	3.00	8	3.00	1.02	MINI SOIC	No	ClamShell	1.200	0.510	0.740	04335 081 6218C
0.650	0.026	3.00	13	4.04	1.00	MSE MSOP DAP	Yes	ClamShell	1.250	0.510	0.740	04335 131 6215
0.650	0.026	3.90	15	4.90	1.52	SOIC 14	Yes	ClamShell	1.250	0.510	0.740	04335 141 6215
0.650	0.026	3.90	24	8.65	1.70	SOIC 24	Yes	ClamShell	1.250	0.570	0.740	04334 241 6215
0.650	0.026	3.90	24	8.65	1.70	Gull Wing	Yes	ClamShell	1.250	0.570	0.740	04334 281 6218A
0.650	0.033	3.90	28	9.95	1.70	SOIC 28	Yes	ClamShell	1.250	0.570	0.740	04334 281 6215
0.650	0.026	4.39	24	7.80	1.19	24L-TSSOP	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218A
0.650	0.026	4.39	24	7.80	1.10	TSSOP24	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218B
0.650	0.026	4.39	28	9.91	1.02	TSSOP28	Yes	ClamShell	1.250	0.570	0.740	04335 281 6215
0.650	0.026	4.40	8	3.00	1.10	TSSOP-8	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218C
0.650	0.026	4.40	8	3.00	1.10	TSSOP-8	No	ClamShell	1.250	0.570	0.740	04335 281 6218F
0.650	0.026	4.40	14	5.00	1.05	TSSOP-16	Yes	ClamShell	1.250	0.510	0.740	04335 161 6218B
0.650	0.026	4.40	15	5.00	1.00	SOT	Yes	ClamShell	1.250	0.510	0.740	04335 161 6218E
0.650	0.026	4.40	16	5.00	1.10	16L-TSSOP	Yes	ClamShell	1.250	0.510	0.740	04335 161 6215
0.650	0.026	4.40	16	6.00	1.15	TSSOP-16	No	ClamShell	1.250	0.510	0.740	04335 161 6218A
0.650	0.026	4.40	16	5.00	1.10	SOT	Yes	ClamShell	1.250	0.510	0.740	04335 161 6218D
0.650	0.026	4.40	20	6.50	1.09	TSSOP-20	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218E
0.650	0.026	4.40	20	6.50	1.00	TSSOP-8	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218G
0.650	0.026	4.40	24	7.80	1.10	TSSOP28	Yes	ClamShell	1.250	0.570	0.740	04335 281 X218J
0.650	0.026	4.40	28	9.70	1.00	TSSOP28	Yes	ClamShell	1.250	0.570	0.740	04335 281 X218H
0.650	0.026	4.40	28	9.70	1.10	TSSOP28	No	ClamShell	1.250	0.570	0.740	04335 281 X218K
0.650	0.026	5.30	16	6.20	1.86	28L-SSOP	No	ClamShell	1.340	0.620	0.750	03825 281 6218A
0.650	0.026	5.30	24	8.20	1.86	SSOP	Yes	ClamShell	1.340	0.630	0.740	04335 241 6215
0.650	0.026	5.30	28	10.20	1.85	28L-SSOP	No	ClamShell	1.340	0.620	0.750	03825 281 6215
0.760	0.030	5.84	16	5.84	1.45	FlatPack	No	ClamShell	1.070	1.020	0.750	03725 161 6218A
0.760	0.030	5.84	17	5.84	1.45	FlatPack	No	ClamShell	1.070	1.020	0.750	03725 171 6217
0.760	0.030	6.76	24	9.68	1.78	SP6T	No	ClamShell	1.110	0.560	0.740	04113 241 6217
0.800	0.031	3.50	8	2.20	1.25	SOT23 L8	No	ClamShell	0.790	0.510	0.715	04354 081 6215
0.800	0.032	3.90	12	4.90	1.57	SOIC	No	ClamShell	1.030	0.610	0.440	Q0403 131 6218A
0.800	0.031	4.90	12	3.90	1.57	SOIC 12	Yes	ClamShell	1.220	0.560	0.740	04354 131 6215
0.800	0.031	4.90	12	3.90	1.70	SOIC 12	Yes	ClamShell	1.210	0.560	0.740	04354 131 6218A
0.800	0.031	7.03	17	7.03	2.15	SOIC 16	No	ClamShell	1.120	0.550	0.750	04124 171 6215
0.800	0.031	7.03	17	7.03	2.15	SOIC 16	No	ClamShell	1.120	0.550	0.750	04124 171 6218A
0.800	0.031	7.50	30	12.80	2.65	SOIC 30	No	ClamShell	1.100	0.650	0.730	04124 301 6217
0.800	0.031	13.50	27	8.70	4.20	SOIC 28	No	ClamShell	1.220	0.650	0.740	04354 281 X218A

Gull Wing Sockets

Pitch (mm)	Pitch (in)	Body W (mm)	I/O	Body L (mm)	Body H (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.950	0.037	1.30	3	2.90	1.00	MW-8	No	ClamShell	0.790	0.510	0.730	03293 121 6217
0.950	0.037	1.30	3	2.90	0.99	L-3 SOT	No	ClamShell	0.790	0.510	0.730	03293 121 6218A
0.950	0.037	1.40	3	2.97	0.94	SOT-23	Yes	ClamShell	1.120	0.560	0.740	04334 121 6218D
0.950	0.037	1.60	3	2.90	0.70	SOT-23-6	Yes	ClamShell	0.790	0.510	0.730	04331 121 6218D
0.950	0.037	1.60	3	2.92	1.15	SOT-23-3	Yes	ClamShell	0.790	0.510	0.730	04331 121 X218E
0.950	0.037	1.60	4	2.90	1.05	TSOP-6-6-1	No	ClamShell	0.740	0.510	0.740	03295 121 6218A
0.950	0.037	1.60	5	2.89	1.09	SOT-595	Yes	ClamShell	1.120	0.510	0.740	04234 101 6215
0.950	0.037	1.60	6	2.90	1.05	TSOP-6-6-1	No	ClamShell	0.740	0.510	0.740	03295 121 6217
0.950	0.037	1.63	6	2.97	0.97	SOT-23, -24, -25, -26	Yes	ClamShell	1.120	0.560	0.740	04334 121 6218C
0.950	0.037	1.65	5	2.92	1.23	SOT-23-5	Yes	ClamShell	0.790	0.600	0.740	04331 101 6217
0.950	0.037	1.65	6	2.92	1.23	SOT-23-6	Yes	ClamShell	0.790	0.510	0.730	04331 121 6217
0.950	0.037	1.65	6	2.95	1.04	SOT-23-6, TSOP-6	No	ClamShell	0.780	0.510	0.730	04331 121 6218B
0.950	0.037	1.65	6	2.92	1.33	SOT-23-6	Yes	ClamShell	0.790	0.510	0.750	04331 121 6218C
0.950	0.037	1.65	6	2.90	1.14	SOT-23, -24, -25, -26	Yes	ClamShell	1.120	0.510	0.740	04334 121 6215
0.950	0.037	1.65	6	2.90	1.14	SOT-23, -24, -25, -26	No	ClamShell	1.120	0.510	0.740	04334 121 6218
0.950	0.037	1.65	6	2.90	1.19	SOT-23	Yes	ClamShell	1.120	0.560	0.740	04334 121 6218B
0.950	0.037	1.70	6	3.00	1.19	SOT	No	ClamShell	1.120	0.560	0.740	04334 121 6218E
0.950	0.037	1.80	6	2.90	0.88	SOT23	No	ClamShell	0.740	0.510	0.740	03295 121 X218B
0.950	0.037	2.20	6	3.40	1.33	SOT-23-6	Yes	ClamShell	0.790	0.510	0.730	04331 121 6218A
0.953	0.038	1.40	3	2.92	1.02	Super SOT	Yes	ClamShell	0.790	0.510	0.730	04330 061 6217
0.953	0.038	1.40	3	2.92	1.02	Super SOT	Yes	ClamShell	0.790	0.510	0.730	04330 121 6217
0.953	0.038	1.98	3	3.00	0.99	SOT-23	No	ClamShell	0.790	0.510	0.730	04329 121 6218A
1.000	0.039	7.80	12	7.70	2.60	P-DSO-12	Yes	ClamShell	1.390	0.630	0.740	04350 121 6215
1.000	0.039	8.50	32	19.65	4.28	Gull Wing	No	ClamShell	1.130	0.950	0.750	04125 321 6217
1.000	0.039	8.70	25	15.50	4.20	GULL WING	No	ClamShell	1.220	0.650	0.740	04355 241 X218A
1.020	0.040	3.30	8	9.14	4.57	Micro Path	No	ClamShell	1.070	0.510	0.740	04100 081 6215
1.020	0.040	7.56	34	18.16	2.57	34L-SOIC	No	ClamShell	1.650	1.050	0.750	03340 341 6215
1.250	0.050	6.50	10	6.50	1.70	Gull Wing	Yes	ClamShell	1.380	0.710	0.740	04337 281 6218
1.270	0.050	3.50	6	6.50	1.70	PSOIC	Yes	ClamShell	1.070	0.510	0.740	04222 061 6215
1.270	0.050	3.90	8	4.90	1.55	SOIC 8	Yes	ClamShell	1.220	0.560	0.740	04337 081 6218A
1.270	0.050	3.90	8	4.90	1.55	SOIC	No	ClamShell	1.220	0.560	0.740	04337 161 6218G
1.270	0.050	3.90	8	4.90	1.55	SOIC	No	ClamShell	1.220	0.560	0.740	04337 161 6218H
1.270	0.050	3.90	8	4.89	1.55	SOIC	No	ClamShell	1.220	0.560	0.740	04337 161 6218J
1.270	0.050	3.90	8	4.90	1.55	SOIC	No	ClamShell	1.220	0.560	0.740	04337 161 6218K
1.270	0.050	3.90	8	4.90	1.55	SOIC	Yes	ClamShell	1.220	0.650	0.740	04351 081 6215
1.270	0.050	3.90	16	9.90	1.55	SOIC	No	ClamShell	1.220	0.560	0.730	04337 161 6218E
1.270	0.050	3.90	16	9.95	1.45	SOIC	No	ClamShell	1.220	0.560	0.740	04337 161 X218M
1.270	0.050	3.91	9	4.90	1.55	SO-8	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218B
1.270	0.050	3.91	16	9.91	1.80	SOIC 16	Yes	ClamShell	1.220	0.560	0.740	04337 161 6215
1.270	0.050	3.91	14	8.64	1.80	SOIC	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218F
1.270	0.050	3.91	14	8.64	1.80	SOIC	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218L
1.270	0.050	3.93	9	4.88	1.63	SOIC-8L	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218C
1.270	0.050	3.96	8	4.95	1.45	8L Gull Wing	No	ClamShell	1.390	0.620	0.750	03337 161S6218Z

Gull Wing Sockets

Pitch (mm)	Pitch (in)	Body W (mm)	I/O	Body L (mm)	Body H (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	0.050	3.98	4	4.90	1.05	SOT669	Yes	Clamshell	1.120	0.510	0.740	04254 041 6217
1.270	0.050	4.01	8	4.93	1.78	8L-SOIC	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218A
1.270	0.050	4.01	8	4.90	1.63	SOIC-8L	No	ClamShell	1.220	0.560	0.740	04337 161 6218D
1.270	0.050	4.01	16	10.01	1.78	SOT-109A (SOIC)	No	ClamShell	1.390	0.620	0.740	03337 161S6215
1.270	0.050	4.14	16	10.00	1.73	Bat Wing SOIC	No	ClamShell	1.340	0.820	0.750	03337 161S6218I
1.270	0.050	4.17	8	4.90	1.55	SOIC	Yes	ClamShell	1.220	0.650	0.740	04351 081 6218A
1.270	0.050	4.39	3	3.61	2.49	5L-SOIC	No	ClamShell	1.340	0.620	0.750	03337 161S6218C
1.270	0.050	4.47	11	13.21	4.50	SIR	No	ClamShell	1.290	0.840	0.710	04100 111 6215
1.270	0.050	4.57	8	4.57	1.45	16-SOIC	No	ClamShell	1.340	0.620	0.750	03337 161S6218A
1.270	0.050	4.57	8	4.57	1.78	SA3736	No	ClamShell	1.340	0.620	0.750	03730 091 6215
1.270	0.050	4.90	6	3.30	1.17	SOIC 6	No	ClamShell	1.070	0.550	0.750	04120 161 6218B
1.270	0.050	5.00	9	5.00	1.70	Flat Lead	No	ClamShell	1.390	0.620	0.750	03730 091 6218B
1.270	0.050	5.13	5	5.00	1.03	SOT 1023 1205	Yes	Clamshell	1.070	0.510	0.740	04254 061 X217
1.270	0.050	5.24	16	11.05	4.24	SA 30E SOIC	No	ClamShell	1.070	0.550	0.750	04120 161 6215
1.270	0.050	5.59	16	16.26	2.16	16L-SOIC	No	ClamShell	1.340	0.620	0.750	03337 161S6218B
1.270	0.050	5.97	16	6.86	2.16	16 SOIC	No	ClamShell	1.430	0.620	0.750	03337 161S6218
1.270	0.050	6.05	14	11.10	4.95	SP-13	No	ClamShell	1.330	0.510	0.740	04337 141 6218C
1.270	0.050	6.05	14	11.10	3.90	SP-13	No	ClamShell	1.330	0.510	0.740	04337 141 6218E
1.270	0.050	6.05	14	11.09	3.90	SOIC 14	No	ClamShell	1.330	0.510	0.740	04337 141 X218F
1.270	0.050	6.10	10	6.15	1.65	SOT	Yes	ClamShell	1.390	0.510	0.740	04340 101 6215
1.270	0.050	6.31	10	6.76	1.65	SOT	Yes	ClamShell	1.330	0.510	0.740	04340 141 6218A
1.270	0.050	6.35	8	5.08	2.01	SOT	Yes	ClamShell	1.330	0.510	0.740	04340 081 6218B
1.270	0.050	6.37	14	10.82	1.73	DBXCPDSO-GILD	Yes	ClamShell	1.550	0.870	0.510	04337 141 6218B
1.270	0.050	6.45	14	10.82	1.57	Wide Body SOIC	Yes	ClamShell	1.330	0.510	0.740	04337 141 6215
1.270	0.050	6.86	10	13.21	6.22	SIR	No	ClamShell	1.290	0.840	0.710	04100 101 6215
1.270	0.050	7.49	16	10.21	2.54	16L-SOIC	Yes	ClamShell	1.380	0.860	0.740	04337 281 6218E
1.270	0.050	7.49	20	12.70	2.54	SOT-163-1	Yes	ClamShell	1.380	0.088	0.740	04337 281 6218D
1.270	0.050	7.49	28	15.34	2.49	28L-SOIC	Yes	ClamShell	1.380	0.860	0.740	04337 281 6218B
1.270	0.050	7.49	28	17.91	2.64	28L-SOIC	Yes	ClamShell	1.380	0.860	0.740	04337 281 6218C
1.270	0.050	7.50	28	17.91	2.65	SOIC 28	No	ClamShell	1.120	0.950	0.750	03437 321 X218A
1.270	0.050	7.50	32	20.50	2.65	SOT287	No	ClamShell	1.120	0.950	0.750	03437 321 6217
1.270	0.050	7.52	28	17.93	2.54	28L-SOIC	Yes	ClamShell	1.380	0.860	0.740	04337 281 6215
1.270	0.050	7.87	28	19.81	1.78	SOT-136, 137, 167, 163	No	ClamShell	1.870	1.220	0.760	03337 281 6215
1.270	0.050	7.90	16	11.06	4.25	SAR 10 SOIC	No	ClamShell	1.120	0.550	0.750	04122 161 6215
1.270	0.050	8.38	16	8.38	--	16L-SOIC	No	ClamShell	1.430	0.620	0.750	03337 161S6218R
1.270	0.050	9.02	8	9.02	1.91	POWER FLEX	Yes	ClamShell	1.070	0.650	0.740	04137 071 6217
1.270	0.050	9.02	8	9.40	1.91	KTN	Yes	ClamShell	1.070	0.510	0.740	04237 071 6215
1.270	0.050	9.32	10	9.53	3.45	HIP SO-10	No	ClamShell	1.570	1.050	0.750	03337 321 6218G
1.270	0.050	9.65	15	19.56	1.91	KTC	Yes	ClamShell	1.220	0.965	0.740	04237 151 6215
1.270	0.050	10.16	32	21.34	1.65	32L-SOIC	No	ClamShell	1.650	1.050	0.750	03337 321 6215
1.270	0.050	11.00	20	15.90	3.35	20L-SOIC	Yes	ClamShell	1.475	0.660	0.740	04337 201 6215
1.270	0.050	15.49	20	8.64	1.88	SO	Yes	ClamShell	1.540	0.850	0.740	04350 201 X217
1.270	0.050	16.51	44	16.51	3.05	QFP	No	ClamShell	1.610	1.470	0.780	04115 441 6217

Gull Wing Sockets

Pitch (mm)	Pitch (in)	Body W (mm)	I/O	Body L (mm)	Body H (mm)	Pkg Name	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	0.050	16.51	44	16.51	5.00	QFP	No	ClamShell	1.610	1.470	0.780	04115 441 X218A
1.270	0.050	19.33	15	9.65	1.91	KTC	Yes	ClamShell	1.170	0.965	0.740	04237 151 6218B
1.270	0.050	19.56	15	9.65	1.91	KTC	Yes	ClamShell	1.440	0.910	0.510	04237 151 1218A
1.270	0.050	--	8	6.20	3.47	HMX 2000-P11	No	ClamShell	1.070	0.550	0.750	04120 161 6218A
1.270	0.050	--	16	--	--	SO-8	No	ClamShell	1.390	0.620	0.750	03337 161S6218T
1.400	0.055	21.60	18	9.24	4.40	TO-263	Yes	ClamShell	1.300	1.030	0.740	04230 151 6215
1.500	0.059	3.55	5	6.50	1.68	SOT-223	Yes	ClamShell	1.070	0.510	0.740	04220 051 6215
1.500	0.059	4.45	6	4.45	3.68	SOIC 6	No	ClamShell	0.880	0.510	0.750	04110 121 X217
1.700	0.067	9.02	6	9.40	1.91	KTG	Yes	ClamShell	1.070	0.510	0.740	04238 051 6215
1.700	0.067	9.80	5	15.00	4.00	5L D2PAK	Yes	ClamShell	1.240	0.510	0.740	04245 051 6218A
1.700	0.067	10.03	6	10.46	4.45	PSMP	Yes	ClamShell	1.240	0.510	0.740	04245 051 6215
1.778	0.070	29.00	23	12.00	3.25	eSOP 12	No	ClamShell	1.370	1.260	0.750	04357 131 6217
1.778	0.070	29.00	23	12.00	3.25	pDIP 23	No	ClamShell	1.370	1.260	0.750	04357 301 6218A
1.780	0.070	10.16	13	8.89	2.34	GULL WING	Yes	ClamShell	1.130	0.550	0.750	04357 131 X218B
1.910	0.075	1.30	4	2.87	0.90	SOT-143	No	ClamShell	1.390	0.620	0.750	03331 081 X215
1.910	0.075	2.54	3	3.05	1.91	SOT-23	No	ClamShell	1.640	0.910	0.760	03333 061 X215
1.910	0.075	9.65	9	19.56	1.91	KTA	Yes	ClamShell	1.310	0.910	0.740	04239 091 1218A
1.910	0.075	9.65	10	19.56	1.91	KTA	Yes	ClamShell	1.090	0.910	0.740	04239 091 6215
2.290	0.090	6.05	3	7.16	1.91	TI KPT	Yes	OpenTop	0.470	0.390	0.880	03662 031 6215
2.300	0.091	6.05	3	7.16	1.91	KTP	Yes	ClamShell	1.070	0.510	0.740	04241 031 6215
2.540	0.100	4.39	4	3.61	2.49	4L-SOIC	No	ClamShell	1.390	0.620	0.750	03337 161S6218S
2.540	0.100	6.35	6	8.51	3.98	6L-SOIC	No	OpenTop	1.110	0.830	0.730	03557 281 6258
2.540	0.100	6.35	8	9.78	3.30	SMD-8	Yes	ClamShell	1.330	0.510	0.740	04340 081 6215
2.540	0.100	6.57	8	9.50	4.70	PDID	Yes	ClamShell	1.330	0.510	0.740	04340 081 6218A
2.540	0.100	8.39	12	15.58	5.08	12L-SOIC	No	ClamShell	1.080	0.730	0.740	04127 121 6215
2.540	0.100	9.02	4	9.40	1.91	KTE	Yes	ClamShell	1.070	0.510	0.740	04240 031 6215
2.540	0.100	9.20	8	11.23	4.70	8 PIN WIDE	No	ClamShell	1.220	0.650	0.740	04127 081 X217
2.540	0.100	10.00	4	10.24	4.40	P-TO263-32	Yes	ClamShell	1.240	0.510	0.740	04246 041 6215
2.540	0.100	10.54	7	10.54	3.10	VOLT REG	No	ClamShell	1.630	1.600	2.030	07815 SKT ASSY
2.540	0.100	25.40	16	25.40	5.08	Gull Wing	No	ClamShell	1.820	1.310	0.830	04127 161 6217
5.080	0.200	6.35	4	8.32	3.38	SOIC	Yes	ClamShell	1.090	0.510	0.730	04128 041 X215
5.460	0.215	15.95	3	14.98	5.03	D-3	Yes	OpenTop	1.200	0.530	0.940	03661 032 6215
--	--	1.25	2	1.70	0.94	SOD-323	Yes	ClamShell	0.880	0.510	0.750	04332 041 6217
--	--	1.60	2	2.70	1.15	SOD-123	Yes	ClamShell	0.790	0.510	0.730	04328 041 6217
--	--	1.91	2	1.91	1.02	POWERMITE	Yes	ClamShell	0.970	0.510	0.740	04140 061 6217
--	--	1.91	2	1.91	1.02	POWERMITE	No	ClamShell	0.970	0.510	0.740	04140 061 6218A
--	--	6.86	2	5.97	2.16	DO-214AB	Yes	ClamShell	1.340	0.620	0.750	03337 161S6218F
--	--	7.62	7	6.99	1.91	SKDO-178	No	ClamShell	1.230	1.160	0.750	03410 071 6217
--	--	10.31	2	7.52	1.73	SOT	Yes	ClamShell	1.090	0.510	0.730	04142 021 X217
--	--	10.31	2	7.52	1.73	SOT	Yes	ClamShell	1.090	0.510	0.730	04142 031 X217
--	--	13.46	3	13.46	3.99	Gull Wing	Yes	ClamShell	1.390	0.760	0.750	03794 031 X217
Multi	Multi	1.60	5	2.90	1.14	SOT23	No	ClamShell	1.340	0.620	0.750	03332 101 X215
Multi	Multi	15.90	17	11.00	3.50	SOT822-1	No	ClamShell	1.250	0.730	0.740	04352 171 6217

"--": See Socket Drawing for Details

TO Sockets

Design Features

- *Open Top and Clam Shell Style Sockets for Burn-in and Test*
- *Kelvin, Non-Kelvin, and "Double Duty Kelvin" Contact Options Available*
- *Small Size Offers Maximum Board Density*
- *Wide Funnel Entry Guides Device Package Leads*
- *Positive Contact Wiping Action*

I/O	Pitch (mm)	Pitch (in)	Pkg Name	Pin Circle Dia. (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	2.540	0.100	TO-220		1.250	0.400	0.780	02902 032 6218A
2	5.080	0.200	TO 220		1.250	0.400	0.780	02901 032 6218A
2	5.100	0.201	TO-273		0.570	0.420	0.940	03664 031 6215
3	1.700	0.067	TO-92		0.860	0.400	0.780	02447 031 6215
3	1.700	0.067	TO-92		1.250	0.400	0.780	02447 032 6215
3	2.280	0.090	TO-252		1.070	0.510	0.740	04241 031 6218C
3	2.286	0.090	TO-252AA, DPAK		1.070	0.510	0.740	04241 031 6218A
3	2.290	0.090	GTM		1.020	0.510	0.740	04241 031 6218B
3	2.290	0.090	REVERSE LEADFORM SMD		1.020	0.500	0.730	04248 031 6217
3	2.300	0.091	TO-252AA, TO-252AD		1.250	0.820	0.750	03360 061 6215
3	2.300	0.091	TO-252		1.070	0.510	0.740	04241 031 6218D
3	2.300	0.091	I-PAK		1.070	0.510	0.740	04241 031 6218E
3	2.300	0.091	TO 252		1.070	0.510	0.740	04249 031 6215
3	2.300	0.090	DPAK		1.070	0.510	0.740	04249 031 6218A
3	2.540	0.100	T0-220		0.860	0.400	0.780	02901 031 6215
3	2.540	0.100	TO-220		1.250	0.400	0.780	02901 032 6215
3	2.540	0.100	TO-220		1.250	0.400	0.780	02902 032 6215
3	2.540	0.100	TO-220, D2 PAK, 418B-02		0.540	0.390	1.040	03660 031 6215
3	2.540	0.100	TO-220, D2 PAK		0.540	0.390	1.040	03660 031 6218D
3	2.540	0.100	TO-263		0.540	0.390	1.040	03660 031 6218E
3	2.540	0.100	TO-263		0.540	0.390	1.040	03660 031 6218F
3	2.540	0.100	TO-220, D2 PAK		0.550	0.400	1.050	03660 031 X218
3	2.540	0.100	TO-220, D2 PAK		0.540	0.390	1.040	03660 031 X218B
3	2.540	0.100	TO-220, D2 PAK		0.540	0.390	1.040	03660 031 X218C
3	2.540	0.100	SUPER D2 PAK, TO-220		1.670	0.560	0.740	04242 031 6215
3	2.550	0.100	TO-273		0.570	0.420	0.940	03663 031 6215
3	3.810	0.150	TO-254		0.590	0.400	0.750	02475 031 6215
3	3.810	0.150	HV ISOPLUS		1.690	0.540	0.930	03651 052 6118A
3	5.080	0.200	TO-66, 124, 213, 423		1.540	0.720	0.870	03534 032 6215
3	5.440	0.214	TO-247		1.200	0.530	0.940	03668 032 X215

TO Sockets

I/O	Pitch (mm)	Pitch (in)	Pkg Name	Pin Circle Dia. (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
3	5.650	0.222	TO-3P, -126 (Case 77-04), -127 (Case 90-05) -202, -218, -220, -221, -225, -247, -251, -254, -257 and -258		0.760	0.410	0.850	02903 031 6215
3	5.650	0.222	TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, 251, 257		0.760	0.410	0.850	02903 031 6215A
3	5.650	0.222	TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, 251, 257		0.760	0.410	0.850	02903 031 6218B
3	5.650	0.222	TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, 251, 257		0.760	0.410	0.850	02903 031 6415A
3	5.650	0.222	TO-3P		1.470	0.410	0.850	02903 032 6215
3	5.650	0.222	TO-3P		1.470	0.410	0.850	02903 032 6415A
3	6.430	0.253	TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, 251, 257		0.760	0.410	0.850	02903 031 5215A
3	6.430	0.253	TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, 251, 257		0.760	0.410	0.850	02903 031 ASSY
3	6.430	0.253	TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, 251, 257		0.760	0.410	0.850	02903 031 HSAS
3	10.920	0.430	TO-3		1.540	0.720	0.895	03127 032 6215
3	10.920	0.430	TO-3, TO-204		1.540	0.720	0.870	03128 032 6215
3	10.920	0.430	TO-3, TO-204		1.540	0.720	0.870	03128 032 6215A
3	--	--	TO-61, -62, -63	--	1.760	0.760	0.760	02542 032 6215
3	--	--	TO-5, TO-39	0.2	0.860	0.860	0.670	02789 031 6215B
3	--	--	TO-5	0.2	0.610	0.610	0.730	02789 031 X215
3	--	--	TO-5		0.620	0.620	0.670	02789 031 X215A
3	--	--	TO-5	0.2	1.060	0.602	0.730	02789 032 X215
3	--	--	TO-5 and -18	0.1	0.610	0.610	0.770	03518 041 X218D
4	1.020	0.040	TO-HEADER		0.460	0.230	0.360	04520 041 621A
4	1.270	0.050	INLINE 4		0.330	0.260	0.580	02950 041 6215
4	1.270	0.050	TO-5 and -18	0.1	0.610	0.610	0.770	03518 041 6218B
4	1.270	0.050	TO-5 and -18	0.1	0.610	0.610	0.770	03518 041 6218C
4	1.270	0.050	TO-252		1.120	0.510	0.740	04244 051 6218A
4	1.270	0.050	PPAK		1.250	0.510	0.740	04244 061 6217
4	1.500	0.059	SOT-89		1.120	0.510	0.740	04253 041 6217
4	1.700	0.067	TO-263-5-2		1.240	0.510	0.740	04245 041 6215
4	2.300	0.091	SOT-223, TO-261		1.070	0.510	0.740	04243 041 6215
4	2.540	0.100	TO-263		1.190	0.510	0.740	04246 041 6218A
4	2.670	0.105	INLINE 4		0.710	0.540	0.610	03548 051 X218B
4	5.080	0.200	TO-263		1.220	0.510	0.740	04246 041 6218
4	--	--	TO-5 in Carrier		1.010	0.740	0.600	02737 082 6228A
4	--	--	TO-5	0.35	0.610	0.610	0.660	02767 041 6215
4	--	--	TO-5	0.2	0.615	0.615	0.760	02789 041 6215A
4	--	--	TO-5	0.2	1.040	0.603	0.730	02789 042 X215
4	--	--	TO 8		0.480	0.480	0.620	03127 042 X215
4	--	--	P003-S	0.5	1.540	0.750	0.895	03127 092 6218A
4	--	--	TO-5 and -18	0.08 TO 0.250	0.610	0.610	0.770	03518 041 6255A
4	--	--	TO-5 and -18	0.1	0.610	0.610	0.770	03518 042 6215
4	--	--	TO-HEADER	0.056	0.490	0.200	0.730	03520 041 6255
4	Multi	Multi	TO-220		0.550	0.490	0.350	04522 061 6218B
5	0.650	0.026	TO		1.080	0.510	0.730	04112 081 X217
5	1.140	0.045	P-TO-252-5-1		1.240	0.510	0.740	04244 041 6215
5	1.270	0.050	TO-252		1.120	0.510	0.740	04244 051 6215
5	1.700	0.067	TO-220 5L		0.620	0.550	0.580	03561 071 6218B
5	1.700	0.067	DDPAK		1.220	0.650	0.740	04232 051 X217
5	1.700	0.067	TO 263 5		1.220	0.650	0.740	04252 051 X217
5	2.670	0.105	TO-3P, -126, -152		0.710	0.540	0.640	03548 051 6215
5	2.670	0.105	TO-220, -218, -247 and -3		1.510	0.540	0.850	03650 052 6115

"--": See Socket Drawing for Details

TO Sockets

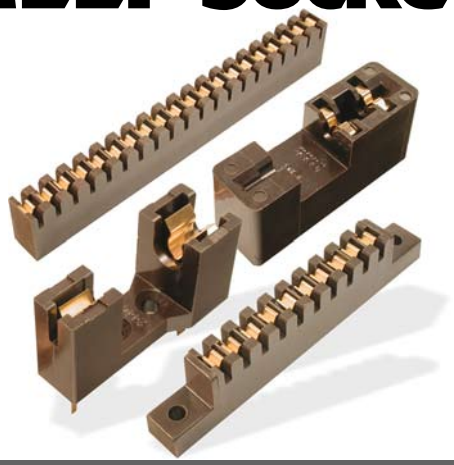
I/O	Pitch (mm)	Pitch (in)	Pkg Name	Pin Circle Dia. (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
5	3.810	0.150	HV ISOPLUS		1.690	0.540	0.930	03651 052 6115
5	5.080	0.200	TO-3, 204 / TO-66, -213, -123, -124		1.540	0.720	0.870	03534 052 6215A
5	5.080	0.200	TO-3, 204 / TO-66, -213, -123, -124		1.540	0.720	0.870	03534 052 6218C
5	--	--	TO-46	0.2	0.610	0.610	0.650	02767 051 6215
5	--	--	TO-3, 66, 123, 124, 204, 213	--	1.540	0.720	0.870	03534 052 6215
5	--	--	TO-3GK	--	1.550	0.760	0.860	03544 052 6215
6	1.270	0.050	TO-220		1.430	0.530	0.740	04225 071 6215
6	1.270	0.050	TO-220		1.430	0.530	0.740	04235 071 6215
6	1.270	0.050	TO-263		1.170	0.650	0.740	04257 061 6217
6	1.700	0.067	5L D2PAK		1.240	0.510	0.740	04245 051 X218B
6	--	--	TO-5	0.2	0.610	0.610	0.660	02767 061 6215
6	--	--	TO-5	0.2	0.860	0.860	0.720	02789 061 6215A
6	Multi	Multi	TO-HEADER		0.550	0.490	0.350	04522 061 6218A
6	Multi	Multi	TO-220		0.550	0.490	0.350	04523 061 X218A
7	0.850	0.034	TO-252		1.080	0.510	0.740	04185 081 6218A
7	1.270	0.050	TO-220, D2 PAK		0.510	0.530	0.940	03660 071X6215
7	1.270	0.050	HEPTAWATT		1.290	0.650	0.770	04224 081 X217
7	1.270	0.050	TO-263		1.220	0.650	0.740	04255 071 6218A
7	1.270	0.050	TO-263		1.170	0.650	0.740	04255 071 6218B
7	1.270	0.050	TO-263		1.170	0.650	0.740	04255 071 6218C
7	1.270	0.050	TO-263		0.510	0.460	0.600	04524 071 6215
8	1.270	0.050	TO-263, -267		1.220	0.650	0.740	04255 071 6217
8	1.270	0.050	TO PMOD		1.220	0.650	0.740	04256 071 X217
8	--	--	TO-5 in Carrier		1.010	0.740	0.660	02737 082 6225
8	--	--	TO-5	0.2	0.610	0.610	0.660	02767 081 6215
8	--	--	TO-5	0.23	0.630	0.630	0.660	02768 081 6215
8	--	--	TO-5	0.2	0.860	0.860	0.710	02789 081 6215
9	1.750	0.069	SMD 9		1.360	0.980	0.800	04231 091 6215
9	--	--	TO-3	0.5	1.540	0.760	0.895	03127 092 6215
10	--	--	TO-5 in Carrier		1.010	0.740	0.600	02737 102 6225
10	--	--	TO-100 in Carrier, TO-230		1.010	0.740	0.590	02738 102 6225
10	--	--	TO-5	0.2	0.610	0.610	0.660	02767 101 6215
10	--	--	T0-5 /L10	0.2	0.610	0.610	0.530	02767 101 6218A
11	1.700	0.067	TO-220		0.960	0.550	0.600	03551 111 6215
11	1.700	0.067	TO-218		0.890	0.550	0.690	03561 111 6215
12	1.270	0.050	Gull Wing TO		1.540	0.850	0.740	04255 121 X217
12	1.700	0.067	TO-220		0.700	0.950	1.030	03551 121 6215
12	2.410	0.095	TO-8		0.710	0.710	0.770	03162 121 6215A
12	2.540	0.100	TO-8		1.010	0.870	0.740	02998 121 6225
15	1.270	0.050	TO 220 STYLE SMD		0.910	0.530	0.940	03660 151 6215
15	1.270	0.050	KTD/KTS		1.350	0.910	0.530	04236 151 1218A
15	1.270	0.050	Gull Wing TO		1.540	0.850	0.740	04255 161 X217
16	1.270	0.050	KTD/KTS		1.140	0.910	0.770	04236 151 6215
16	--	--	MO-097 / TO-204	0.6	1.540	0.885	0.700	03127 162 6215
23	Multi	Multi	Smart Power 23 lead		1.430	1.620	0.445	04540 301 6218A
27	1.000	0.039	Flexiwatt-SMD-27		1.350	1.590	0.750	04227 271 6217
27	1.000	0.039	Flexiwatt-SMD-27		3.000	1.840	1.400	04227 271 6218A
37	1.000	0.039	SOT 725-1		1.900	1.290	0.420	04228 371 6217

"--": See Socket Drawing for Details

Axial, Radial & MELF Sockets

Design Features

- *Building-block Stripsockets for Automated Carrier Packaging*
- *Accepts Multiple-lead Diameters*
- *Excellent Contact Design for Wiping Action on Lead's Diameter*
- *Tailored for Production, Burn-in and Testing*
- *Modifications Available*
- *Kelvin and Double-sided Contacts*



Pitch (mm)	Pitch (in)	I/O	Pkg Type	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2.540	0.100	9	--	OpenTop	1.030	0.330	0.690	03533 091 6215
2.540	0.100	22	--	OpenTop	2.180	1.610	0.270	035XX SKT SET
3.180	0.125	6	--	OpenTop	0.940	0.540	0.690	03533 061 6215
3.180	0.125	6	--	OpenTop	0.940	0.540	0.690	03533 061 6218D
3.180	0.125	6	--	OpenTop	0.940	0.540	0.690	03533 061 6218E
3.300	0.130	2	Dual Diode	OpenTop	0.315	0.315	0.690	03532 021 6215
3.810	0.150	3	--	OpenTop	0.880	0.185	0.690	03533 031 6215
4.570	0.180	25	--	OpenTop	4.670	0.360	0.630	03312 251 6251
4.830	0.190	2	Hybrid	OpenTop	0.430	0.200	0.680	03533 021 X215
4.830	0.190	4	--	OpenTop	0.875	0.185	0.690	03533 081 6218A
4.830	0.190	8	--	OpenTop	1.635	0.185	0.690	03533 081 6215
5.080	0.200	6	--	OpenTop	1.230	0.360	0.640	02992 101 6218F
5.080	0.200	8	--	OpenTop	1.600	0.310	0.630	03600 081 6218A
5.080	0.200	8	--	OpenTop	1.600	0.270	0.630	03600 251 6218E
5.080	0.200	10	--	OpenTop	2.000	0.360	0.690	02992 101 6215A
5.080	0.200	10	--	OpenTop	3.010	0.360	0.690	02992 102 6215
5.080	0.200	10	--	OpenTop	2.100	0.310	0.650	03600 251 6218C
5.080	0.200	16	--	OpenTop	2.300	0.310	0.650	03600 082 6215
5.080	0.200	18	--	OpenTop	3.600	0.360	0.640	02992 181 6215A
5.080	0.200	19	--	OpenTop	3.650	0.360	0.620	03546 191 6215
5.080	0.200	19	--	OpenTop	3.650	0.360	0.600	03546 191 6218
5.080	0.200	20	--	OpenTop	4.000	0.360	0.640	02991 201 6215A
5.080	0.200	20	--	OpenTop	4.000	0.360	0.640	02992 201 6215A
5.080	0.200	21	--	OpenTop	4.030	0.360	0.640	03547 211 6215
5.080	0.200	21	--	OpenTop	4.030	0.360	0.640	03547 211 6218
5.080	0.200	25	--	OpenTop	5.000	0.360	0.640	02991 251 6215A
5.080	0.200	25	--	OpenTop	5.000	0.360	0.640	02992 251 6215A
5.080	0.200	25	--	OpenTop	5.000	0.360	0.640	02992 251 6218D
5.080	0.200	25	--	OpenTop	6.010	0.360	0.640	02992 252 6215
5.080	0.200	25	--	OpenTop	5.000	0.310	0.650	03600 251 6215
5.080	0.200	25	--	OpenTop	5.000	0.710	0.650	03600 252 6215
5.720	0.225	20	--	OpenTop	4.990	0.725	0.640	03549 201 6215

"--": See Socket Drawing for Details

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Axial, Radial & MELF Sockets

Pitch (mm)	Pitch (in)	I/O	Pkg Type	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
7.620	0.300	2	--	OpenTop	1.380	0.460	0.630	03555 021 6215
7.620	0.300	15	--	OpenTop	4.510	0.310	0.650	03630 251 6218K
7.620	0.300	25	--	OpenTop	7.510	0.310	0.650	03630 251 6215
15.240	0.600	8	--	OpenTop	5.000	0.360	0.640	02992 251 6218B
15.240	0.600	9	--	OpenTop	5.000	0.360	0.640	02992 251 6218A
15.240	0.600	12	--	OpenTop	6.900	0.310	0.650	03630 251 X218L
--	--	2	Stud Mount	OpenTop	1.020	0.770	0.850	02444 022 X215
--	--	2	Stud Mount	OpenTop	0.920	0.570	0.780	02445 021 6215
--	--	2	--	OpenTop	1.485	0.570	0.780	02446 022 6215
--	--	2	--	OpenTop	1.800	0.370	0.780	03186 021 6215
--	--	2	CHIP	OpenTop	0.630	0.270	0.680	03451 041 6218B
--	--	2	CHIP	OpenTop	0.635	0.270	0.725	03451 041 6218C
--	--	2	CHIP	OpenTop	0.635	0.270	0.725	03451 041 6218D
--	--	2	CHIP	OpenTop	0.870	0.560	0.690	03480 101 X215
--	--	2	CHIP	OpenTop	0.870	0.620	0.690	03481 101 6215
--	--	2	CHIP	OpenTop	0.870	0.620	0.690	03481 101 6218
Multi	Multi	24	--	OpenTop				03600 241 ASSY

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SIP Sockets

Design Features

- *For In-line TO and SIP Packages, Top Loading*
- *Variety of Pitches, Lead Lengths and Diameters*
- *Modified and Custom Sockets Available*
- *Kelvin or Double-sided Contact Options*
- *Package Body Length, Width and Thickness are Independent of Socket. Select Socket Based on Lead Count, Pitch, and JEDEC Reference*
- *May Accommodate More Than One Package*

Pitch (mm)	Pitch (in)	I/O	Pkg Name	Socket Sytle	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	0.050	3	TO	OpenTop	0.330	0.260	0.580	02950 041 6218A
1.270	0.050	4	--	OpenTop	0.330	0.260	0.580	02789 041 X215
1.270	0.050	4	TO	OpenTop	0.330	0.260	0.580	02950 041 6215
1.270	0.050	7	SIP	OpenTop	0.710	0.580	0.580	03235 241 6218C
1.270	0.050	7	SIP	OpenTop	0.710	0.290	0.570	03235 241 X218G
1.270	0.050	10	SIP	OpenTop	0.710	0.580	0.580	03235 241 6218F
1.270	0.050	15	SIP	OpenTop	0.860	0.680	0.580	03235 301 6215
1.270	0.050	22	SIP	OpenTop	1.220	0.680	0.580	03235 441 6215
1.700	0.067	5	TO	OpenTop	0.620	0.550	0.600	03561 071 6215
1.780	0.070	21	--	OpenTop	1.540	0.260	0.580	02970 211 6215
1.780	0.070	28	--	OpenTop	2.030	0.260	0.580	02970 281 6215
1.910	0.075	17	--	OpenTop	1.340	0.260	0.580	02975 171 6215
1.910	0.075	28	--	OpenTop	2.165	0.260	0.580	02975 281 6215
2.540	0.100	2	--	OpenTop	0.220	0.310	0.600	02997 161 6218M
2.540	0.100	3	TO	OpenTop	0.860	0.400	0.780	02901 031 6215
2.540	0.100	3	SIP	OpenTop	0.710	0.580	0.580	03235 241 6218E
2.540	0.100	4	--	OpenTop	1.110	0.310	0.620	02997 101 6218D
2.540	0.100	4	--	OpenTop	1.110	0.310	0.620	02997 101 6218F
2.540	0.100	6	--	OpenTop	1.100	0.300	0.650	02996 062 6215
2.540	0.100	7	--	OpenTop	0.780	0.310	0.600	02997 071 6218
2.540	0.100	8	--	OpenTop	1.110	0.310	0.620	02997 101 X218A
2.540	0.100	9	--	OpenTop	1.010	0.310	0.620	02997 091 6215
2.540	0.100	9	--	OpenTop	1.010	0.310	0.620	02997 091 6218C
2.540	0.100	10	--	OpenTop	1.110	0.310	0.620	02997 101 6215
2.540	0.100	10	--	OpenTop	1.000	0.310	0.620	02997 101 6218E
2.540	0.100	12	--	OpenTop	1.600	0.300	0.620	02997 161 6218K
2.540	0.100	12	--	OpenTop	1.710	0.300	0.620	02997 161 6218L
2.540	0.100	15	--	OpenTop	1.710	0.310	0.620	02997 161 X218H
2.540	0.100	15	--	OpenTop	2.210	0.310	0.620	02997 211 6218B
2.540	0.100	16	--	OpenTop	1.710	0.310	0.620	02997 161 6215
2.540	0.100	16	--	OpenTop	1.600	0.300	0.620	02997 161 6218J
2.540	0.100	16	--	OpenTop	2.510	0.310	0.620	02997 162 6215

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SIP Sockets

Pitch (mm)	Pitch (in)	I/O	Pkg Name	Socket Sytle	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2.540	0.100	16	--	OpenTop	1.250	0.340	0.600	03545 202 6218G
2.540	0.100	20	--	OpenTop	2.210	0.310	0.620	02997 211 6218F
2.540	0.100	20	--	OpenTop	2.210	0.310	0.620	02997 211 X218P
2.540	0.100	20	--	OpenTop	0.336	2.860	0.615	03545 202 6215
2.540	0.100	20	--	OpenTop	2.290	0.340	0.625	03545 202 6218E
2.540	0.100	21	--	OpenTop	2.210	0.310	0.620	02997 211 6215
2.540	0.100	21	--	OpenTop	3.010	0.310	0.620	02997 212 6215
2.540	0.100	22	--	OpenTop	3.070	0.340	0.625	03545 202 6218B
2.540	0.100	32	--	OpenTop	2.870	0.340	0.620	03545 202 6218F
2.540	0.100	36	--	OpenTop	3.710	0.310	0.620	02997 361 6218A
2.540	0.100	36	--	OpenTop	4.470	0.340	0.625	03545 202 6218C
2.800	0.110	5	TO	OpenTop	0.700	0.550	0.610	03560 051 X215
3.180	0.125	6	--	OpenTop	1.450	0.270	0.740	03125 062 6215
3.810	0.150	4	--	OpenTop	0.660	0.280	0.680	03530 041 6215
3.810	0.150	6	--	OpenTop	1.710	0.350	0.640	03548 062 X215
3.810	0.150	8	--	OpenTop	1.330	0.530	0.630	03548 081 6215
4.110	0.162	4	TO	OpenTop	1.630	0.350	0.610	03129 042 6215
5.080	0.200	6	--	OpenTop	2.210	0.310	0.620	02997 211 6218N
5.080	0.200	10	--	OpenTop	2.210	0.310	0.620	02997 211 6218L
5.080	0.200	25	--	OpenTop	4.950	0.420	0.600	03237 251 6211
12.040	0.474	2	TO	OpenTop	0.760	0.410	0.850	02903 031 6218A

"--": See Socket Drawing for Details

Connectors

Design Features

- *Independent Contacts Provide Maximum I/O Possibilities*
- *Contact Termination Pitches of 0.100", 0.150" and 0.156"*
- *V-slot Guides the PCB Edgefingers to the Contacts for Board Thicknesses of 0.054" min. to 0.070" (max)*
- *With or Without Mounting Ears*

Pitch (mm)	Pitch (in)	I/O	Connector L (in)	Connector W (in)	Connector H (in)	Mounting	P/N
2.540	0.100	32	6.370	0.460	0.750	Thru Hole	03198 C01 X218D
2.540	0.100	42	3.140	0.460	0.750	Mounting Ears	03199 442 6218C
2.540	0.100	44	4.440	0.460	0.760	Mounting Ears	03199 442 6215
2.540	0.100	48	2.790	0.460	0.750	Thru Hole	03199 501 6218A
2.540	0.100	50	2.790	0.460	0.750	Thru Hole	03199 501 6215
2.540	0.100	52	2.970	0.460	0.750	Thru Hole	03199 521 6215
2.540	0.100	52	2.970	0.460	0.750	Mounting Ears	03199 522 6215
2.540	0.100	70	4.440	0.460	0.750	Mounting Ears	03199 702 6215
2.540	0.100	86	5.230	0.460	0.750	Mounting Ears	03199 862 6215
2.540	0.100	98	5.400	0.450	0.650	Thru Hole	03199 A01 6218A
2.540	0.100	98	5.400	0.450	0.650	Thru Hole	03199 A01 6218B
2.540	0.100	98	9.560	0.460	0.760	Mounting Ears	03199 H22 6218E
2.540	0.100	100	5.400	0.460	0.660	Thru Hole	03199 A01 6215
2.540	0.100	100	6.000	0.460	0.660	Mounting Ears	03199 A02 6215
2.540	0.100	118	6.370	0.460	0.750	Thru Hole	03198 C01 6218A
2.540	0.100	120	6.370	0.460	0.660	Thru Hole	03199 C01 6215
2.540	0.100	120	7.000	0.460	0.750	Mounting Ears	03199 C02 6215
2.540	0.100	128	6.870	0.460	0.660	Thru Hole	03199 C81 6215
2.540	0.100	130	6.870	0.460	0.660	Thru Hole	03199 D01 6215
2.540	0.100	131	9.560	0.460	0.760	Mounting Ears	03199 H22 6218F
2.540	0.100	168	9.560	0.460	0.750	Mounting Ears	03199 H22 6218J
2.540	0.100	172	9.560	0.460	0.760	Mounting Ears	03199 H02 6215
2.540	0.100	172	9.560	0.460	0.750	Mounting Ears	03199 H22 6215
3.810	0.150	40	16.650	0.450	0.740	Mounting Ears	03150 L02 6218
3.810	0.150	40	16.650	0.450	0.740	Mounting Ears	03150 L02 6218A
3.810	0.150	116	9.610	0.460	0.760	Mounting Ears	03150 B62 6215
3.960	0.156	7	3.150	0.700	1.030	Mounting Ears	03989 111 6218A
3.960	0.156	7	3.150	0.700	1.030	Mounting Ears	03989 111 6218B
3.960	0.156	7	3.150	0.700	1.030	Mounting Ears	03989 111 6218C
3.960	0.156	30	3.200	0.460	0.750	Mounting Ears	02989 302 6215
3.960	0.156	30	3.200	0.460	0.750	Mounting Ears	02989 302 6218A

Connectors

Pitch (mm)	Pitch (in)	I/O	Connector L (in)	Connector W (in)	Connector H (in)	Mounting	P/N
3.960	0.156	36	4.440	0.460	0.760	Mounting Ears	02989 362 6215
3.960	0.156	44	4.440	0.460	0.760	Mounting Ears	02989 442 6215
3.960	0.156	44	4.440	0.460	0.760	Mounting Ears	02989 442 6218D
3.960	0.156	60	6.000	0.460	0.760	Mounting Ears	02989 602 6215
3.960	0.156	68	6.000	0.460	0.760	Mounting Ears	02989 682 6215
3.960	0.156	68	6.630	0.460	0.760	Thru Hole	02989 722 X218B
3.960	0.156	72	6.630	0.460	0.760	Mounting Ears	02989 722 6215
3.960	0.156	72	5.210	0.460	0.740	Thru Hole	02989 722 6218A
3.960	0.156	86	7.630	0.460	0.750	Mounting Ears	02989 862 6215
3.960	0.156	86	7.630	0.460	0.750	Mounting Ears	02989 862 6218B

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LCC w/Castellations Sockets

Design Features

- *"Live Bug" and "Dead Bug" Loading Options*
- *Positive Wiping Action Insures Reliable Contact Deep Inside the Castellation*
- *Clamshell Designs with Loranger APS and "C" Style Contacts Available*
- *Custom and Modified Sockets Available*
- *Fit is Typically Independent of Package Thickness*

Pitch (mm)	Pitch (in)	Body L (mm)	Body W (mm)	Body H / T (mm)	I/O	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.510	0.020	9.00	9.00	2.35	48	ClamShell	0.950	0.760	0.740	03735 491 6218A
0.635	0.025	14.22	14.22	2.24	68	Clamshell	1.280	1.160	0.630	04440 681 6217
0.635	0.025	14.22	14.22	2.36	68	Clamshell	1.280	1.160	0.780	04440 681 X218A
0.800	0.031	11.43	11.43	2.30	48	ClamShell	1.030	0.860	0.740	03719 491 6218B
0.800	0.031	11.43	11.43	2.25	49	ClamShell	1.030	0.860	0.740	03719 491 6217
0.953	0.038	3.05	2.54	1.57	3	ClamShell	0.770	0.510	0.710	03432 031 6218A
0.953	0.038	3.05	2.54	1.57	3	ClamShell	0.770	0.510	0.710	03432 031 X218C
0.955	0.038	3.05	2.54	1.30	3	ClamShell	0.770	0.510	0.710	03432 031 X218B
0.960	0.038	3.05	2.54	1.30	3	ClamShell	0.770	0.510	0.710	03432 031 6217
1.016	0.040	5.06	12.60	2.08	26	Clamshell	1.070	0.065	0.740	04440 261 6215
1.016	0.040	7.98	1.47	0.41	16	Clamshell	1.050	0.750	0.445	079014016J6617
1.020	0.040	4.57	4.57	1.70	12	OpenTop	0.620	0.620	0.650	03458 121 6215
1.020	0.040	12.19	12.19	1.78	40	OpenTop	0.870	0.870	0.600	04040 40D 6215B
1.020	0.040	14.20	16.61	3.66	48	ClamShell	1.270	1.160	0.780	04450 481 6215
1.020	0.040	14.22	14.22	2.24	48	Clamshell	1.280	1.160	0.780	04440 481 6215
1.020	0.040	23.37	23.37	2.06	84	OpenTop	1.330	1.330	0.710	03458 841 6215
1.130	0.044	5.00	3.20	1.14	6	OpenTop	0.600	0.500	0.580	04051 101 6215
1.270	0.050	2.54	3.81	0.64	4	ClamShell	0.810	0.600	0.740	03850 081 6217
1.270	0.050	4.57	4.57	1.07	6	OpenTop	0.570	0.360	0.690	03452 061 6215
1.270	0.050	4.57	4.57	1.91	12	OpenTop	0.620	0.620	0.650	03450 121 6215
1.270	0.050	5.00	5.00	0.93	8	ClamShell	0.810	0.680	0.740	03853 081 6218A
1.270	0.050	5.00	5.00	1.44	8	ClamShell	0.810	0.680	0.740	03853 081 X218E
1.270	0.050	5.00	3.20	1.42	8	OpenTop	0.600	0.500	0.580	04051 081 6215
1.270	0.050	5.13	5.13	1.19	12	ClamShell	0.770	0.600	0.710	03854 131 6217
1.270	0.050	5.50	5.50	1.40	8	ClamShell	0.810	0.680	0.740	03853 081 6217
1.270	0.050	5.50	5.50	1.40	8	ClamShell	1.280	1.160	0.750	03853 321 6217
1.270	0.050	5.50	5.50	1.40	8	ClamShell	1.470	1.050	0.605	055SQ 032J6617
1.270	0.050	5.50	5.50	2.70	12	ClamShell	0.920	0.710	0.730	04365 121 6215
1.270	0.050	5.59	3.81	1.40	4	OpenTop	0.635	0.335	0.725	03451 041 6215
1.270	0.050	5.59	3.81	1.65	4	ClamShell	0.810	0.680	0.740	04270 081 X218A
1.270	0.050	5.59	5.59	1.14	8	OpenTop	0.620	0.620	0.650	03450 081 6215
1.270	0.050	6.22	4.32	1.65	6	OpenTop	0.640	0.360	0.690	03451 061 6215
1.270	0.050	6.22	4.32	1.73	6	ClamShell	0.810	0.600	0.740	04270 061 6217
1.270	0.050	6.22	4.32	1.80	8	ClamShell	0.810	0.510	0.740	03851 081 X217
1.270	0.050	6.35	6.35	1.78	16	ClamShell	0.860	0.710	0.740	03853 161 6217

LCC w/Castellations Sockets

Pitch (mm)	Pitch (in)	Body L (mm)	Body W (mm)	Body H / T (mm)	I/O	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	0.050	6.35	6.35	1.63	18	ClamShell	0.920	0.710	0.710	03853 181 6217
1.270	0.050	6.35	6.35	2.24	18	Clamshell	1.050	0.750	0.445	063SQ 018J6617
1.270	0.050	6.41	6.41	1.14	12	ClamShell	0.920	0.710	0.710	03853 121 6217
1.270	0.050	6.48	6.48	6.22	16	ClamShell	0.860	0.710	0.840	03854 161 6217
1.270	0.050	7.00	5.00	1.90	10	OpenTop	0.730	0.730	0.700	03452 101 6215
1.270	0.050	7.01	5.00	1.70	10	OpenTop	0.590	0.415	0.650	03451 101 6215
1.270	0.050	7.03	7.03	1.64	16	OpenTop	0.730	0.730	0.590	04040 16D 6215
1.270	0.050	7.06	5.08	1.70	13	OpenTop	0.720	0.630	0.710	03451 131 6215
1.270	0.050	7.49	4.95	1.78	10	OpenTop	0.590	0.415	0.650	03451 101 6218
1.270	0.050	7.62	7.62	2.05	16	ClamShell	0.940	0.760	0.740	03830 161 X218A
1.270	0.050	8.89	7.24	1.78	18	OpenTop	0.750	0.685	0.710	03452 181 6215A
1.270	0.050	8.89	8.89	1.78	20	OpenTop	0.750	0.750	0.740	03450 201 6215B
1.270	0.050	8.89	8.89	1.96	20	ClamShell	0.950	0.760	0.740	03853 201 6217
1.270	0.050	8.89	8.89	1.65	20	ClamShell	0.950	0.760	0.740	03853 201 6218A
1.270	0.050	8.89	8.89	2.78	20	ClamShell	0.950	0.760	0.740	03853 201 6218B
1.270	0.050	8.89	8.89	2.11	20	OpenTop	0.730	0.730	0.590	04040 20D 6215A
1.270	0.050	8.95	7.30	1.40	18	ClamShell	0.940	0.760	0.740	03852 181 X217
1.270	0.050	8.97	7.32	2.67	18	OpenTop	0.750	0.685	0.710	03452 181 6218B
1.270	0.050	8.97	7.32	2.67	18	ClamShell	0.940	0.760	0.740	03852 181 6218A
1.270	0.050	9.58	8.69	1.52	22	OpenTop	0.785	0.730	0.720	03452 221 6215
1.270	0.050	10.22	10.22	--	24	OpenTop	0.850	0.850	0.725	03450 241 6215
1.270	0.050	10.41	5.84	1.78	16	OpenTop	0.870	0.620	0.670	03453 161 6215
1.270	0.050	10.41	3.81	1.14	16	OpenTop	0.870	0.620	0.670	03454 161 6215
1.270	0.050	10.86	7.30	--	18	OpenTop	0.885	0.745	0.740	03451 181 6215
1.270	0.050	11.43	11.43	1.78	28	OpenTop	0.850	0.850	0.710	03450 281 6215B
1.270	0.050	11.43	11.43	1.78	28	OpenTop	0.850	0.850	0.710	03450 281 6255C
1.270	0.050	11.43	11.43	1.78	28	OpenTop	0.910	0.910	0.740	03450 281 6255D
1.270	0.050	11.43	9.80	2.49	28	OpenTop	0.880	0.810	0.710	03451 281 6258
1.270	0.050	11.43	9.60	2.49	28	OpenTop	0.880	0.810	0.730	03451 281 6258A
1.270	0.050	11.43	11.43	2.16	28	ClamShell	1.030	0.860	0.740	03853 281 6217
1.270	0.050	11.43	11.43	4.00	28	Clamshell	1.050	0.750	0.445	114SQ 028J6617
1.270	0.050	11.46	11.46	1.93	28	OpenTop	0.830	0.830	0.590	04040 28D 6215A
1.270	0.050	14.00	11.43	2.03	32	OpenTop	0.850	0.950	0.740	03451 321 6215A
1.270	0.050	17.78	11.43	2.03	32	OpenTop	1.100	0.850	0.730	03452 321 6215
1.270	0.050	20.83	10.16	2.29	32	ClamShell	1.230	1.160	0.780	03850 321 6215
1.270	0.050	29.21	29.21	2.03	84	ClamShell	1.860	1.570	0.750	03853 841 6217
1.270	0.050	29.21	29.21	2.03	84	ClamShell	1.860	1.570	0.750	03853 841 6218A
1.270	0.050	40.00	28.00	3.64	104	ClamShell	2.110	2.100	0.760	03853 A41 X217
1.400	0.055	4.45	3.05	1.78	4	ClamShell	1.340	0.620	0.750	03770 081 6215
1.650	0.065	17.27	17.27	5.08	9	ClamShell	1.470	1.050	0.610	172SQ 009J6617
1.780	0.070	22.86	17.78	3.81	8	ClamShell	1.660	1.320	0.610	228177008J6617
1.780	0.070	22.86	17.78	3.76	8	ClamShell	1.660	1.320	0.610	228177008J6618A
1.800	0.071	3.65	7.00	1.76	4	ClamShell	1.020	0.610	0.740	04138 041 X217
2.540	0.100	7.00	5.00	1.60	6	OpenTop	0.720	0.630	0.710	03451 131 6218A
2.540	0.100	7.49	5.08	2.26	6	OpenTop	0.590	0.415	0.650	03451 101 6218A
2.540	0.100	10.92	8.64	2.67	6	OpenTop	0.850	0.750	0.710	03456 061 6215

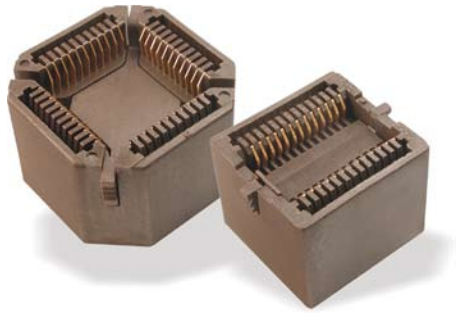
LCC w/Castellations Sockets

Pitch (mm)	Pitch (in)	Body L (mm)	Body W (mm)	Body H / T (mm)	I/O	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2.540	0.100	11.43	17.78	3.45	12	ClamShell	1.280	1.160	0.780	04361 121 6218A
2.540	0.100	13.46	9.14	3.20	6	ClamShell	1.070	0.650	0.740	04341 061 6217
2.540	0.100	13.72	20.52	5.47	6	ClamShell	1.220	0.940	0.740	04347 061 6215
2.540	0.100	13.72	20.52	5.72	6	ClamShell	1.220	0.940	0.740	04348 061 6215
2.540	0.100	13.97	8.89	3.43	6	OpenTop	0.850	0.750	0.840	03457 061 6215
2.540	0.100	13.97	11.43	3.30	10	OpenTop	0.850	0.950	0.730	03455 101 6255
2.540	0.100	14.05	8.95	3.43	6	OpenTop	0.850	0.750	0.710	03457 061 6218A
2.540	0.100	14.10	9.09	6.86	8	OpenTop	0.820	0.755	0.730	03457 101 X255
2.540	0.100	15.11	22.73	3.45	14	ClamShell	1.280	1.160	0.780	04362 141 6218A
2.540	0.100	20.32	13.72	6.60	14	OpenTop	1.070	0.930	0.700	03460 141 6255
2.540	0.100	20.45	12.95	5.47	6	OpenTop	1.070	0.930	0.700	03460 061 6255
2.540	0.100	25.40	30.48	4.95	13	OpenTop	1.590	1.260	0.700	04018 131 6255
2.600	0.102	3.20	1.60	1.50	2	OpenTop	0.515	0.210	0.360	03713 021 621B
3.810	0.150	7.62	6.10	2.29	4	ClamShell	1.340	0.620	0.750	03771 041 6215
5.080	0.200	10.16	8.64	2.41	4	ClamShell	1.340	0.620	0.750	03337 161S6218D
7.520	0.296	11.28	19.10	0.91	4	ClamShell	1.390	0.760	0.750	04348 041 6215
7.520	0.296	11.78	17.78	5.84	4	ClamShell	1.340	0.760	0.750	04347 041 6215
7.620	0.300	23.10	18.00	3.61	4	ClamShell	1.270	1.160	0.780	04342 041 6215
Multi	Multi	2.46	4.57	1.98	2	ClamShell	0.910	0.520	0.740	04133 041 X217A
Multi	Multi	14.48	9.14	5.84	9	ClamShell	1.470	1.050	0.780	144091009J6617
Multi	Multi	25.40	22.00	12.70	7	ClamShell	0.915	1.310	0.860	04347 071 X217
Multi	Multi	29.20	25.40	10.03	5	OpenTop	1.410	1.350	0.700	04018 051 6215
Multi	Multi	29.21	25.40	5.08	6	OpenTop	1.350	1.410	0.700	04018 061 X255
Multi	Multi	29.21	25.40	5.08	9	ClamShell	2.190	1.900	0.730	292254009J6617

PLCC/SOJ Sockets

Design Features

- *Top Loading and Clam Shell Styles in a Variety of Pitches*
- *Wide Contact Area for Reliable Connection and Current-carrying Capacity*
- *No Device Lead Deformation or Excess Stress on the Device Lead*
- *Easy Manual or Automatic Loading and Unloading*



Pitch (mm)	Pitch (in)	Body L (mm)	Body W (mm)	Body H/T (mm)	I/O	Kelvin Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.400	0.016	2.26	1.75	1.00	10	No	ClamShell	0.770	0.510	0.710	03620 101 6217
0.400	0.016	3.05	2.40	1.01	14	No	ClamShell	0.720	0.510	0.710	03620 141 6217
0.400	0.016	3.70	3.70	0.97	28	No	ClamShell	0.770	0.510	0.710	03620 281 6217
0.500	0.020	3.05	2.41	1.05	12	Yes	ClamShell	0.970	0.500	0.760	04621 121 6217
0.500	0.020	4.14	4.14	1.00	24	No	ClamShell	0.810	0.500	0.740	03621 241 6217
0.650	0.026	3.05	2.41	1.05	8	Yes	ClamShell	0.970	0.500	0.760	04625 081 6217
0.950	0.037	3.05	2.40	1.02	6	Yes	ClamShell	0.810	0.510	0.740	04629 061 6217
1.020	0.040	15.24	15.24	3.18	48	No	OpenTop	1.050	1.050	0.710	03540 481 6255
1.270	0.050	6.86	6.86	1.42	10	No	ClamShell	1.390	0.620	0.750	03337 161S6218J
1.270	0.050	9.86	9.86	4.57	20	No	OpenTop	0.860	0.860	0.740	03553 201 6255
1.270	0.050	10.41	8.81	3.18	16	No	OpenTop	1.110	0.830	0.750	03557 161 6255
1.270	0.050	11.13	11.13	4.42	24	No	OpenTop	0.910	0.910	0.740	03553 241 6255
1.270	0.050	12.41	12.41	--	28	No	OpenTop	0.960	0.960	0.740	03553 281 6255
1.270	0.050	12.80	14.96	4.75	20	No	OpenTop	1.100	0.870	0.740	03556 201 6255
1.270	0.050	12.95	8.81	3.18	20	No	OpenTop	1.100	0.830	0.730	03557 201 6255
1.270	0.050	14.99	12.45	3.35	32	No	OpenTop	1.090	0.990	0.725	03553 321 6255
1.270	0.050	15.54	8.81	3.30	24	No	OpenTop	1.100	0.830	0.730	03557 241 6255
1.270	0.050	17.15	8.51	4.57	20	No	OpenTop	1.040	0.800	0.710	03554 201 6255
1.270	0.050	17.15	8.51	4.57	26	No	OpenTop	1.040	0.800	0.710	03554 261 6255
1.270	0.050	17.30	9.78	3.48	20	No	OpenTop	0.990	0.850	0.710	03558 201 6255
1.270	0.050	17.30	9.78	3.48	26	No	OpenTop	0.990	0.850	0.710	03558 261 6255
1.270	0.050	17.48	17.48	4.45	44	No	OpenTop	1.160	1.160	0.720	03553 441 6215
1.270	0.050	18.03	8.81	3.18	28	No	OpenTop	1.110	0.830	0.730	03557 281 6255
1.270	0.050	18.24	11.86	1.78	32	No	OpenTop	1.180	0.920	0.710	03542 321 6255
1.270	0.050	20.02	20.02	4.57	52	No	OpenTop	1.260	1.260	0.740	03553 521 6255
1.270	0.050	25.10	25.10	4.57	68	No	OpenTop	1.460	1.460	0.740	03553 681 625A
1.270	0.050	25.15	25.15	4.01	68	No	ClamShell	1.540	1.450	0.770	03853 681 6217
1.270	0.050	30.35	30.35	4.57	84	No	OpenTop	1.630	1.630	0.720	03553 841 6215
2.540	0.100	13.97	9.30	4.52	6	No	ClamShell	0.870	0.870	0.610	03470 061 6215
5.080	0.200	14.02	9.45	4.06	4	No	OpenTop	0.990	0.850	0.710	03558 201 6258
--	--	3.56	4.32	2.16	2	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218M
--	--	6.12	6.15	5.38	2	Yes	ClamShell	1.640	0.910	0.760	03337 161S6218W
--	--	6.43	4.95	2.79	2	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218K
--	--	6.43	4.95	2.79	2	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218L
--	--	6.86	5.97	2.16	2	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218N

"--": See Socket Drawing for Details

SMD Sockets

Design Features

- *Constant Force on DUT Assures Reliability Throughout Burn-in and Test*
- *Kelvin and Non-Kelvin for Burn-in and Test Applications*
- *Zero-Insertion-Force in ClamShell Models and Low-Insertion-Force in Top-loading OpenTop Models*

Body W (mm)	I/O	Body L (mm)	Body HT (mm)	Pitch (mm)	Pkg Name	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.30	2	0.60	0.28	0.360	CHIP	ClamShell	0.770	0.510	0.710	03583 041 6217
0.80	2	0.60	0.40	0.800	SMD	ClamShell	1.050	0.750	0.440	006008004J6617
0.80	3	0.60	0.38	--	SMD	ClamShell	1.050	0.750	0.535	006008006J6617
0.80	6	1.00	0.45	0.350	SMD	ClamShell	1.050	0.750	0.535	010008006J6617
0.86	2	1.52	0.77	--	CHIP	ClamShell	0.790	0.510	0.730	03589 021 X217
0.90	6	1.00	0.36	--	SMD	ClamShell	1.050	0.750	0.440	010009006J6617
1.00	2	0.60	0.50	--	CHIP	ClamShell	0.760	0.510	0.710	03584 021 6217
1.00	4	0.60	0.36	--	SMD	ClamShell	1.050	0.750	0.440	010006004J6617
1.03	4	0.64	0.36	0.650	SMD	ClamShell	1.050	0.750	0.430	010006004J6618A
1.07	2	0.56	0.38	--	CHIP	ClamShell	0.760	0.510	0.710	03582 021 6217
1.20	2	0.80	0.60	--	CHIP	ClamShell	0.790	0.510	0.730	04327 081 6217
1.20	6	1.60	0.58	0.500	SOT 553	ClamShell	0.810	0.510	0.740	04780 121 X217
1.27	2	1.27	0.46	--	CHIP	ClamShell	0.970	0.510	0.740	04139 081 6215
1.40	2	1.27	0.56	--	CHIP	ClamShell	0.760	0.510	0.710	04582 041 6217
1.42	4	2.18	0.89	--	CHIP	OpenTop	0.480	0.480	0.360	03485 041 6215
1.58	2	0.85	0.45	--	CHIP	ClamShell	0.790	0.510	0.730	03580 021 6217
1.60	2	0.79	0.51	--	CHIP	ClamShell	0.810	0.510	0.730	03582 041 X217
2.05	2	1.25	0.45	--	CHIP	ClamShell	0.790	0.510	0.730	03581 021 6217
2.06	2	1.27	0.58	--	CHIP	ClamShell	0.790	0.510	0.730	03581 041 X217
2.50	6	4.50	1.50	1.500	SOT 89	ClamShell	1.190	0.510	0.740	04253 061 X217
2.54	3	3.05	1.91	1.910	SOT-23	ClamShell	1.620	0.910	0.760	03333 061 X218A
3.00	5	4.00	1.00	--	SMD	ClamShell	0.770	0.510	0.710	03587 051 X217
3.20	2	1.68	0.66	--	CHIP	ClamShell	0.790	0.510	0.730	03580 041 X217
3.20	2	2.16	0.61	--	CHIP	ClamShell	1.700	0.910	0.760	03335 121 6215
3.20	4	2.70	1.10	1.700	SMD	OpenTop	0.515	0.255	0.360	03723 051 6218A
3.35	3	2.50	0.98	--	SMD	ClamShell	1.050	0.750	0.450	033025003J6617
3.35	3	2.50	0.98	--	SMD	ClamShell	0.810	0.510	0.740	03586 031 X217
3.50	2	1.60	0.70	--	CHIP	ClamShell	0.740	0.510	0.730	03583 021 6217
3.50	2	2.79	1.91	--	CHIP	ClamShell	0.910	0.520	0.740	04135 041 6217
3.76	5	6.15	1.20	--	SMD	ClamShell	0.810	0.680	0.740	03585 051 6217
3.94	2	3.18	3.40	3.300	CHIP	ClamShell	0.810	0.510	0.740	03579 021 X217

"--": See Socket Drawing for Details In the above chart, the package width is typically the dimension of the side that does not have a contact pad(s)

SMD Sockets

Body W (mm)	I/O	Body L (mm)	Body HT (mm)	Pitch (in)	Pkg Name	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
4.10	3	8.00	2.00	--	CHIP	ClamShell	0.790	0.510	0.730	04312 031 X217
4.35	2	3.65	2.20	--	CHIP	ClamShell	0.910	0.520	0.730	04130 041 6215
4.72	6	3.76	1.00	--	SMD	ClamShell	0.770	0.510	0.710	03588 061 X217
4.98	2	2.46	2.46	--	CHIP	OpenTop	0.635	0.270	0.680	03452 041 X215
5.00	2	2.50	1.26	--	MELF	ClamShell	0.910	0.520	0.740	04134 041 X218A
5.00	2	2.50	1.32	--	MELF	ClamShell	0.910	0.520	0.740	04134 041 X218B
5.00	2	2.51	1.76	--	SMD	ClamShell	0.910	0.520	0.740	04134 041 6217
5.00	3	4.95	1.55	--	SMD	ClamShell	0.810	0.680	0.740	03792 061 6217
5.00	3	4.95	1.55	--	SMD	ClamShell	0.810	0.680	0.740	03792 061 6218A
5.40	2	3.62	2.28	--	CHIP	OpenTop	0.635	0.335	0.725	03451 041 6218A
5.41	2	3.63	1.32	--	CHIP	ClamShell	1.020	0.610	0.740	04151 041 X217
5.59	2	6.53	2.26	4.830	CHIP	ClamShell	1.020	0.680	0.740	04154 041 X217
5.59	4	3.81	1.73	1.270	SMD	ClamShell	0.810	0.680	0.740	04270 081 6217
5.66	2	4.98	4.98	--	CHIP	OpenTop	0.670	0.410	0.690	03451 021 X215
5.72	4	4.88	4.88	--	CHIP	OpenTop	0.620	0.620	0.650	03450 081 6218
5.94	4	5.05	1.98	--	CHIP	OpenTop	0.660	0.630	0.360	03486 041 6215
6.00	2	3.20	2.49	--	CHIP	ClamShell	1.020	0.610	0.740	04136 041 6217
6.10	3	4.30	1.10	2.100	SMD	ClamShell	1.030	0.510	0.740	04147 031 X215
6.10	5	6.55	2.29	1.140	DPAK-5	ClamShell	1.120	0.510	0.740	04247 051 6215
6.30	3	5.20	0.75	--	SMD-3.1	ClamShell	0.910	0.610	0.740	04343 031 6217
6.35	8	9.65	3.30	1.270	SMD-8	OpenTop	0.990	0.850	0.710	03558 281 6258A
6.45	2	5.00	2.70	--	CHIP	ClamShell	1.010	0.610	0.740	04131 041 6215
6.71	2	5.51	2.44	--	DO-214AB	ClamShell	1.390	0.620	0.750	03337 161S6218U
7.29	2	4.29	3.99	--	CHIP	ClamShell	1.390	0.620	0.750	03337 161S6218Y
7.30	2	4.30	2.90	--	CHIP	ClamShell	1.020	0.610	0.740	04132 041 6215
7.75	3	5.33	2.03	--	SMD-3.1	ClamShell	0.800	0.510	0.740	04344 031 6215
7.75	3	5.33	2.03	--	SMD	ClamShell	0.800	0.510	0.740	04344 031 X218A
7.87	3	6.48	2.31	--	SMD	ClamShell	0.940	0.760	0.740	03793 061 6217
7.87	3	6.48	2.31	--	SMD	ClamShell	0.940	0.760	0.740	03793 061 6218A
7.95	3	5.41	2.26	--	SMD	ClamShell	0.800	0.510	0.740	04144 031 6215
7.95	3	5.41	2.26	--	SMD	ClamShell	0.800	0.510	0.740	04144 031 X218A
8.89	3	7.62	3.05	--	Lo-Power SMD	ClamShell	1.390	0.620	0.750	03337 161S6218G
9.25	24	12.70	3.70	0.800	SMD	ClamShell	1.160	0.650	0.730	03619 241 X217

"--": See Socket Drawing for Details In the above chart, the package width is typically the dimension of the side that does not have a contact pad(s)

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SMD Sockets

Body W (mm)	I/O	Body L (mm)	Body HT (mm)	Pitch (in)	Pkg Name	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
10.16	3	7.52	3.00	--	SMD	ClamShell	1.390	0.860	0.750	04346 031 6215
10.16	3	7.52	3.28	--	SMD-5	ClamShell	1.390	0.860	0.750	04346 031 6218A
10.16	3	7.52	3.00	--	SMD-5	ClamShell	1.390	0.860	0.750	04346 031 X218B
10.16	3	7.52	3.28	--	SMD-5	ClamShell	1.390	0.860	0.750	04346 031 X218C
10.16	4	7.52	3.81	3.280	SMD-4	ClamShell	0.900	0.760	0.740	03791 041M6217
10.96	8	6.00	5.24	1.270	SAC60	ClamShell	0.820	0.710	0.870	04105 081 6217
13.46	3	13.46	3.99	--	SMD	ClamShell	1.390	0.760	0.750	03793 031 X217
13.84	5	7.52	3.00	--	SMD-3.1	ClamShell	0.990	0.810	0.740	04345 051 6215
15.49	3	9.40	2.79	--	SMD	OpenTop	0.710	0.530	0.360	03483 031 6215
15.62	2	12.57	3.81	--	SMD	ClamShell	1.220	0.650	0.740	04141 021 6217
15.88	3	11.43	3.56	1.270	SMD-1	ClamShell	1.870	1.220	0.760	03346 031 6215
15.88	3	11.43	3.56	--	HP XTR	ClamShell	1.870	1.220	0.760	03346 031 6218B
15.88	3	11.43	3.45	1.270	SMD-1.1	ClamShell	1.810	1.220	0.760	03346 031 6218C
15.88	3	11.43	3.56	--	3L SMD-2	ClamShell	1.000	0.840	0.740	04146 031 6215
15.88	3	11.43	3.56	--	SMD	ClamShell	1.000	0.840	0.740	04146 031 X218A
15.88	3	12.70	3.05	--	M-259	ClamShell	1.870	1.220	0.760	03346 031 6218A
16.64	3	11.43	3.18	--	SMD	ClamShell	1.760	1.220	0.760	03346 031 6218D
16.64	3	11.43	3.18	--	SMD	ClamShell	1.760	1.220	0.760	03346 031 6218E
17.53	3	13.34	3.56	--	SMD-2.1	ClamShell	1.810	1.220	0.760	03345 031 6218A
17.53	3	13.34	3.45	--	3L SMD-2	ClamShell	1.280	1.160	0.780	04145 031 6215
17.53	3	13.34	3.45	--	3L SMD-2	ClamShell	1.280	1.160	0.780	04145 031 6225
17.53	3	13.34	3.45	--	3L SMD-2	ClamShell	1.280	1.160	0.780	04145 031 X218A
17.53	3	13.59	3.81	--	SMD-2	ClamShell	1.810	1.220	0.760	03345 031 6218B
19.18	3	13.59	4.83	--	SMD-2	ClamShell	1.870	1.220	0.760	03345 031 6215
19.69	3	12.70	3.56	--	SMD-3.1	ClamShell	1.390	0.860	0.750	04345 031 6215
27.43	3	15.88	3.56	--	SMD-4	ClamShell	1.490	0.940	0.740	03245 031 6215

"--": See Socket Drawing for Details In the above chart, the package width is typically the dimension of the side that does not have a contact pad(s)

ZigZag Sockets

Design Features

- *For In-line and Zig Zag Packages, Top Loading*
- *For a Variety of Pitches, Lead Lengths and Diameters*
- *Modified and Custom Sockets Available*
- *Kelvin or Double-sided Contact Options*

Pitch (mm)	Pitch (in)	Row-to-Row (in)	I/O	Name	Body L (in)	Body W (in)	Body HT (in)	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.000	0.039	0.157	9	ZigZag	--	--	--	OpenTop	0.465	0.460	0.550	03565 251 6218
1.000	0.039	0.157	25	ZigZag	29.00	15.50	4.50	OpenTop	1.150	0.460	0.680	03564 251 6215
1.000	0.039	0.157	25	ZigZag	29.00	15.50	4.50	OpenTop	1.150	0.460	0.660	03565 251 6215
1.000	0.039	0.157	27	SOT-521-1	12.00	30.50	4.45	OpenTop	1.450	0.800	0.520	04555 271 6217
1.000	0.039	0.157	27	SOT827-1 DBS27	15.70	29.00	4.50	OpenTop	1.460	0.800	0.520	04556 271 6217
1.000	0.039	0.157	27	Flexiwatt 27 HB	15.70	29.23	4.50	OpenTop	1.460	0.800	0.520	04556 271 6218A
1.000	0.039	0.157	27	SOT-521-1	12.00	30.50	4.45	OpenTop	1.450	0.570	0.610	04565 271 6217
1.000	0.039	0.157	27	PO35N	15.70	29.23	4.50	OpenTop	1.450	0.570	0.610	04566 271 6217
1.000	0.039	0.157	27	PO35N	15.70	29.23	4.50	OpenTop	1.580	0.570	0.480	04566 271 6218A
1.000	0.039	0.157	27	PO35N	15.70	29.23	4.50	OpenTop	1.450	0.570	0.610	04575 271 6217
1.000	0.039	0.157	27	PO35N	15.70	29.23	4.50	OpenTop	1.450	0.570	0.610	04575 271 6218A
1.000	0.039	0.157	27	PO35N	15.70	29.23	4.50	OpenTop	1.580	0.570	0.630	04575 271 6218B
1.000	0.039	0.157	37	SOT725-1	15.70	41.95	4.50	OpenTop	1.910	0.800	0.580	04566 371 6217
1.000	0.039	0.157	37	DBS37P	15.70	41.95	4.50	OpenTop	1.910	0.800	0.470	04567 371 6217
1.000	0.039	0.158	27	SOT827-1	22.50	29.00	4.50	OpenTop	1.460	0.800	0.520	04557 271 6217
1.270	0.050	0.100	16	ZigZag	--	--	--	OpenTop	0.930	0.350	0.580	03562 161 6218
1.270	0.050	0.100	20	ZigZag	--	--	--	OpenTop	1.130	0.350	0.690	03562 201 6215
1.270	0.050	0.100	24	ZigZag	--	--	--	OpenTop	1.330	0.350	0.580	03562 241 6215
1.270	0.050	0.100	28	ZigZag	--	--	--	OpenTop	1.530	0.350	0.690	03562 281 6215
1.270	0.050	0.100	32	ZigZag	46.30	12.70	8.38	OpenTop	1.700	0.350	0.690	03562 321 6215
1.270	0.050	0.200	9	SOT-523-1	13.30	13.30	2.50	OpenTop	0.880	0.800	0.700	04552 091 6217
1.270	0.050	0.200	9	SOT-523-1	13.30	13.30	2.50	OpenTop	0.870	0.570	0.700	04562 091 6217
1.270	0.050	0.200	15	MS-31, MT-72	20.00	17.75	4.50	OpenTop	0.960	0.550	0.600	03551 151 6215
1.270	0.050	0.200	17	SOT-243-1	12.00	24.00	4.40	OpenTop	1.250	0.800	0.595	04552 171 6217
1.270	0.050	0.200	17	SOT-243-1	12.00	24.00	4.40	OpenTop	1.240	0.590	0.610	04562 171 6217
1.270	0.050	0.200	17	SOT-475-1	12.00	23.80	4.40	OpenTop	1.240	0.590	0.610	04563 171 6217
1.270	0.050	0.200	23	TO-220	30.18	17.50	4.50	OpenTop	2.060	0.610	0.510	02937 232 6215
1.270	0.050	0.200	23	SOT-411-1	12.00	30.54	4.45	OpenTop	1.550	0.800	0.520	04552 231 6217
1.270	0.050	0.200	23	SOT-411-1	12.00	30.50	4.45	OpenTop	1.550	0.800	0.520	04553 231 6217
1.270	0.050	0.200	23	SOT-411-1	12.00	30.50	4.45	OpenTop	1.540	0.590	0.520	04562 231 6217
1.700	0.067	0.150	5	Power Transistor	--	--	--	OpenTop	1.240	0.540	0.490	02937 052 6215
1.700	0.067	0.150	5	Power Transistor	--	--	--	OpenTop	1.250	0.550	0.510	02937 052 6218A
1.700	0.067	0.150	5	Power Transistor	--	--	--	OpenTop	0.560	0.550	0.510	02937 052 6218B
2.030	0.080	0.160	15	ZIP ZIG ZAG	31.24	18.00	2.26	OpenTop	1.380	0.510	0.610	03550 151 X215

"--": See Socket Drawing for Details

DIP Sockets

Design Features

- *High-side Contacts Accept Misaligned Leads*
- *Positive Contact Wiping Action*
- *Easy Package Removal with Quickstick Unloading Tool or Fingertip Insertion and Removal*
- *Standoffs Help Board Cleaning and Decrease Solder Wicking*
- *"Forgiving" Long-life Contacts*

Pitch (mm)	Pitch (in)	Row-to-Row (in)	I/O	Socket L (in)	Socket W (in)	Socket H (in)	Style	P/N
1.270	0.050	0.300	16	0.710	0.580	0.580	OpenTop	03235 241 6218A
1.270	0.050	0.300	20	0.710	0.580	0.580	OpenTop	03235 241 6218
1.270	0.050	0.300	24	0.710	0.580	0.580	OpenTop	03235 241 6215
1.270	0.050	0.400	30	0.860	0.680	0.580	OpenTop	03235 301 6215
1.270	0.050	0.400	30	0.860	0.680	0.580	OpenTop	03235 301 6218D
1.270	0.050	0.400	40	1.110	0.690	0.580	OpenTop	03235 401 6215
1.270	0.050	0.400	44	1.220	0.680	0.580	OpenTop	03235 441 6215
1.270	0.050	--	10	0.710	0.580	0.580	OpenTop	03235 241 6218D
2.540	0.100	0.300	14	0.810	0.590	0.590	OpenTop	02758 141 6215
2.540	0.100	0.300	14	0.810	0.570	0.600	OpenTop	03111 141 6215
2.540	0.100	0.300	14	0.910	0.570	0.590	OpenTop	03111 161 X218A
2.540	0.100	0.300	16	0.910	0.590	0.590	OpenTop	02758 161 6215
2.540	0.100	0.300	16	1.110	0.590	0.590	OpenTop	02758 201 6218B
2.540	0.100	0.300	16	0.910	0.570	0.700	OpenTop	03111 161 6215
2.540	0.100	0.300	16	1.110	0.570	0.600	OpenTop	03111 201 6218A
2.540	0.100	0.300	18	1.010	0.570	0.600	OpenTop	03111 181 6215
2.540	0.100	0.300	20	1.110	0.590	0.590	OpenTop	02758 201 6215
2.540	0.100	0.300	20	1.110	0.570	0.600	OpenTop	03111 201 6215
2.540	0.100	0.300	28	1.510	0.570	0.610	OpenTop	03112 281 6215
2.540	0.100	0.300	28	1.270	0.570	0.610	OpenTop	03112 281 6218A
2.540	0.100	0.300	40	2.100	0.570	0.600	OpenTop	03111 201 6218
2.540	0.100	0.336	8	2.290	0.680	0.620	OpenTop	03545 202 6218H
2.540	0.100	0.400	18	1.010	0.590	0.580	OpenTop	02758 181 6215
2.540	0.100	0.400	22	1.210	0.690	0.590	OpenTop	02758 221 6211
2.540	0.100	0.400	22	1.210	0.690	0.600	OpenTop	03111 221 6215
2.540	0.100	0.600	24	1.310	0.900	0.610	OpenTop	02758 241 6211
2.540	0.100	0.600	24	1.310	0.870	0.600	OpenTop	03111 241 6215
2.540	0.100	0.600	28	1.520	0.900	0.610	OpenTop	02758 282 6215
2.540	0.100	0.600	28	1.510	0.870	0.600	OpenTop	03111 281 6215
2.540	0.100	0.600	32	2.110	0.890	0.590	OpenTop	02758 401 6218A
2.540	0.100	0.600	40	2.110	0.890	0.590	OpenTop	02758 401 6211
2.540	0.100	0.600	40	2.110	0.870	0.600	OpenTop	03111 401 6215
2.540	0.100	0.600	48	2.110	0.805	0.250	OpenTop	03000 482 642C
2.540	0.100	0.875	19	1.290	1.070	0.390	OpenTop	03140 192 6215
2.540	0.100	0.900	12	1.100	0.300	0.650	OpenTop	02993 121 6215
2.540	0.100	1.000	64	3.310	1.190	0.590	OpenTop	02758 641 6218
2.540	0.100	1.525	43	2.000	1.750	0.440	OpenTop	03140 432 6215
Multi	Multi	0.713	21	1.710	0.998	0.620	OpenTop	0297002997ASSYA
Multi	Multi	1.045	26	1.710	1.330	0.580	OpenTop	0297002997ASSY
Multi	Multi	Multi	27	2.040	2.100	0.525	OpenTop	03570 271 6217

"--": See Socket Drawing for Details

Microwave/Hybrid Sockets

Design Features

- *Standard and Custom Designs for a Variety of Package Sizes, including Custom Hybrids & Microwave Packages*
- *Stand-alone Sockets and Integrated 50 Ohm Impedance Sockets with Corresponding Printed Circuit Board Design and Manufacturing*
- *Options for Heatsinks and Special Lead Configurations*

Body W (in)	Body L (in)	I/O	Body H/T (in)	Pitch (in)	Package Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.049	0.079	3	0.037	0.026	H-P SC-70	ClamShell			0.615	03366 041 0005F
0.070	0.070	4	0.045	--	KUKJE	ClamShell	1.590	0.910	0.760	03326 041 6215
0.070	0.070	4	0.035	--	HP-70	ClamShell	1.590	0.910	0.620	03365 041 ASSY
0.079	0.049	3	0.037	0.026	H-P SC-70	ClamShell	1.590	0.910	0.615	03366 041 0005G
0.079	0.079	4	0.065	--	MPO-100133 Rev D	ClamShell	1.260	0.730	0.740	03386 081 X217
0.104	0.104	2	0.030	--	TSSOP	ClamShell	1.590	0.910	0.760	03322 041 6215
0.109	0.109	4	0.070	--	HPAC-70GT	ClamShell	1.590	0.910	0.760	03336 041 6215A
0.110	0.110	4	0.054	--	HPAC-100	ClamShell	1.590	0.910	0.620	03366 041 0005A
0.135	3.850	18	0.170	--	--	OpenTop	5.200	2.300	2.100	07521 SKT ASSY
0.184	0.190	4	0.060	--	MAR-8SM	ClamShell	1.590	0.910	0.760	03336 041 6218E
0.230	0.800	3	0.150	--	--	ClamShell	1.480	1.270	0.810	03358 031 6218A
0.246	0.532	5	0.125	--	--	ClamShell	1.420	1.060	0.560	03372 061 ASSY
0.246	0.532	5	0.125	--	--	ClamShell	1.420	1.060	0.590	03372 061 ASSYA
0.246	0.750	3	0.124	--	--	ClamShell		1.000	0.560	03373 041 ASSY
0.250	0.250	3	0.086	--	Microwave SA-374	ClamShell	1.275	1.140	0.815	03349 031 6215
0.250	0.250	3	0.112	--	--	ClamShell	0.860	0.710	0.740	03466 071 6218A
0.250	0.250	5	0.138	--	H-P PlanPak	ClamShell	1.590	0.910	0.800	03366 051 ASSY
0.250	0.250	5	0.120	--	SM-25XX	ClamShell	1.610	1.000	0.630	03366 051 ASSYB
0.250	0.536	5	0.134	0.200	ODS-821, ODS-821	ClamShell	1.870	1.220	0.760	03342 101 6215
0.250	0.754	3	0.135	--	ODS-819	ClamShell	1.870	1.220	0.760	03343 081 6215
0.250	0.800	3	0.155	--	M-124, -170, -171	ClamShell	1.535	1.270	0.815	03357 031 6215
0.250	0.800	3	0.250	--	M-151	ClamShell	1.535	1.270	0.815	03358 031 6215
0.255	0.255	3	0.140	--	ODS-115 -180	ClamShell	1.870	1.220	0.760	03344 061 6215
0.260	0.050	4	0.270	--	ODS-844	ClamShell	1.870	1.220	0.760	03338 041 6215
0.260	0.050	4	0.280	--	--	ClamShell	1.810	1.220	0.760	03338 041 6218B
0.335	0.774	32	0.163	0.039	SO	ClamShell	7.600	1.760	0.850	04125 192 6217
0.349	0.742	33	0.028	0.035	ABB HAFO	ClamShell	1.630	2.060	0.780	03706 331 6215
0.370	0.738	8	0.028	0.050	--	ClamShell	1.710	2.060	0.780	03705 081 621A
0.372	0.372	3	0.173	--	--	ClamShell	0.800	0.580	0.560	03362 031 ASSY
0.375	0.375	5	--	--	H-P PlanPak	ClamShell	1.590	0.910	0.790	03367 051 ASSY
0.385	0.650	3	0.230	--	Microwave M-259	ClamShell	1.480	1.270	0.815	03347 051 6218A
0.385	0.675	3	0.143	--	--	ClamShell	1.480	1.270	0.810	03347 031 6218B
0.385	1.340	3	0.142	--	RF705	ClamShell	3.000	2.750	2.870	03363 031 ASSY

"--": See Socket Drawing for Details

Microwave/Hybrid Sockets

Body W (in)	Body L (in)	I/O	Body H/T (in)	Pitch (in)	Package Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.390	0.360	28	0.063	0.030	QFP	ClamShell	1.140	1.010	0.750	04113 281 6217
0.399	0.900	5	0.230	--	M-112, 115, 036, 038,	ClamShell	1.480	1.270	0.815	03347 051 6215
0.400	0.400	3	0.104	--	SA3085, SA3088	ClamShell	1.275	1.140	0.815	03348 031 6215
0.400	0.500	3	0.160	--	2-LD	ClamShell	1.480	1.270	0.815	03347 031 6218A
0.400	0.680	5	0.200	0.435	--	ClamShell	2.020	1.570	0.770	03355 051 6215
0.400	0.720	28	0.090	0.050	CLCC	ClamShell	0.940	1.010	0.740	03850 281 6215
0.400	0.900	3	0.176	--	NG 56 Series	ClamShell	1.500	0.940	0.740	03387 031 X215
0.400	0.900	3	0.220	--	Microwave	ClamShell	1.500	0.940	0.740	03387 031 X218A
0.400	1.030	3	0.145	--	NG 561R844 G	ClamShell	1.500	0.940	0.740	03388 031 X215
0.400	1.620	5	0.189	--		ClamShell	1.830	1.900	0.750	03387 051 X217
0.430	0.430	4	0.160	--	M-107, -123, -126,	ClamShell	1.690	1.090	0.820	03339 041 6215
0.433	0.626	24	0.132	0.039	HSOP	ClamShell	1.200	0.730	0.740	04125 241 6217
0.450	0.450	5	0.175	--	Microwave SMTO-8	ClamShell	1.590	0.910	0.615	03369 051 ASSY
0.450	0.450	5	0.170	--	SMTO-8	ClamShell		0.725	0.560	03379 051 ASSY
0.476	0.480	17	0.115	--	--	ClamShell	1.670	1.460	0.720	03711 171 6215
0.480	0.480	40	0.113	0.040	QFP	ClamShell	1.300	1.050	1.000	03801 401 6215
0.480	0.610	34	0.115	--	--	ClamShell	1.670	1.460	0.720	03711 251 6215
0.480	0.730	36	0.094	0.040	ABB HAFO AB	ClamShell	1.630	2.060	0.780	03716 361 6215
0.485	0.525	23	0.115	0.050	--	ClamShell	1.670	1.460	0.720	03711 231 6215
0.492	0.874	36	0.256	0.039	--	ClamShell	1.280	1.160	0.780	03787 361 6217
0.500	0.400	3	0.140	--	RF	ClamShell	1.330	1.140	0.815	03348 031 6218A
0.500	0.500	4	0.145	--	--	ClamShell	1.590	1.060	0.560	03375 051 ASSY
0.510	0.815	34	0.115	--	--	ClamShell	1.670	1.460	0.720	03712 171 6215
0.525	0.525	6	0.170	--	SMTO-8	ClamShell		1.060	0.560	03378 071 ASSY
0.540	0.515	7	0.090	--	MCM	ClamShell	1.670	1.460	0.720	03715 071 6215
0.550	0.550	4	0.280	--	--	ClamShell	1.810	1.220	0.760	03338 041 6218D
0.550	1.000	10	0.028	0.100	--	ClamShell	1.710	2.060	0.780	03710 101 621A
0.551	1.260	25	0.335	0.050	--	ClamShell	1.340	1.470	0.750	03785 251 6217
0.551	1.270	25	0.215	0.050	--	ClamShell	1.340	1.470	1.090	03786 251 6217
0.560	0.620	11	0.115	--	--	ClamShell	1.670	1.460	0.720	03711 111 6215
0.560	0.620	11	0.115	--	--	ClamShell	1.670	1.460	0.720	03711 111 621A
0.570	1.065	18	0.028	0.100	--	ClamShell	1.710	2.060	0.780	03710 181 621A
0.575	0.78	4	0.210	--	--		1.500	1.400	1.980	07724 SKT ASSY
0.58	1.18	4	0.210	--	--		2.000	2.000	1.290	07727 SKT ASSY
0.580	0.715	9	0.115	--	--	ClamShell	1.670	1.460	0.720	03711 091 6215
0.586	1.340	5	0.195	0.425	--	ClamShell	2.020	1.570	0.770	03355 051 6218A
0.592	0.802	4	0.184	--	--	ClamShell		1.010	0.570	03376 041 ASSY
0.627	0.807	53	0.115	0.030	--	ClamShell	1.670	1.460	0.720	03711 531 6215
0.627	0.807	53	0.110	Multi	--	ClamShell	1.720	1.460	0.720	03711 531 X218A
0.650	1.500	15	0.190	0.150	SOP	ClamShell	1.710	2.420	0.750	03720 151 6215
0.682	0.682	40	0.127	0.050	TapePak	OpenTop	1.100	1.100	0.750	03567 401 6255
0.710	0.580	10	0.124	0.040	--	ClamShell	1.590	0.910	0.560	03374 101 ASSY
0.710	0.580	10	0.124	0.040	--	ClamShell	1.590	0.910	0.560	03374 101 ASSYA

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Microwave/Hybrid Sockets

Body W (in)	Body L (in)	I/O	Body H/T (in)	Pitch (in)	Package Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.765	1.340	3	0.143	--	--	ClamShell	1.480	1.270	0.810	03347 031 6218C
0.800	1.030	3	0.183	--	--	ClamShell	1.480	1.270	0.810	03347 031 6218D
0.803	2.430	7	0.175	--	--	OpenTop				07522 SKT ASSY
0.820	3.540	2	0.207	--	Multiplier/IF Amp	ClamShell	3.870	2.150	0.780	03750 022 6215
0.830	1.690	8	0.207	0.100	Switch/Diplexer	ClamShell	3.870	2.150	0.780	03750 082 6215
0.840	1.990	3	0.210	--	Dual Oscillator	ClamShell	2.010	1.490	0.762	03758 032 6215
0.846	1.170	3	0.330	--	IF AMP	ClamShell	1.600	1.330	0.770	03768 032 6215B
0.850	1.001	101	0.115	0.028	--	ClamShell	1.670	1.460	0.720	03711 A11 6215
0.860	3.060	7	0.210	0.100	Veii Delta	ClamShell	2.060	3.900	1.550	03764 072 6215
0.890	0.890	104	0.115	--	--	ClamShell	1.670	1.460	0.720	03711 A41 6215
0.930	3.100	5	0.185	--	--	OpenTop	4.000	2.300	2.100	07523 SKT ASSY
0.930	4.160	11	0.185	--	--	OpenTop	5.200	2.300	2.100	07524 SKT ASSY
0.930	4.160	12	0.175	--	--	OpenTop	5.200	2.300	2.100	07520 SKT ASSY
0.975	1.64	5	0.310	--	--		2.500	1.900	1.890	07725 SKT ASSY
1.000	2.760	10	0.210	0.100	Veii Sum	ClamShell	2.060	3.900	1.550	03762 102 6218
1.000	2.760	10	0.210	0.100	Veii Sum	ClamShell	3.900	2.060	1.550	03762 102 6218A
1.010	1.110	3	0.330	--	IF AMP	ClamShell	1.600	1.330	0.770	03768 032 6215A
1.010	1.175	128	0.115	--	--	ClamShell	1.870	1.460	0.720	03711 C81 6215
1.030	1.970	9	0.207	0.075	Transmitter	ClamShell	2.250	2.750	0.780	03753 092 6215
1.065	1.325	5	0.240	0.075	Oscillator	ClamShell	2.160	2.750	0.780	03766 052 6215
1.090	0.900	4	0.250	--	--	OpenTop	2.110	2.100	0.648	07610 031 ASSY
1.200	4.900	21	0.205	0.080	--	OpenTop	5.700	3.000	2.200	07463 SKT ASSY
1.240	1.310	5	0.207	0.075	Receiver	ClamShell	2.250	2.750	0.780	03752 052 6215
1.250	3.100	4	0.320	0.200	Voltage Controlled	ClamShell	2.060	3.900	1.590	03765 042 6215
1.254	2.719	5	0.185	--	--	OpenTop	3.100	2.480	2.200	07525 SKT ASSY
1.370	1.370	11	0.165	0.075	--	ClamShell	1.045	0.525	0.504	03352 111 6215
1.370	1.845	8	0.247	0.050	Reg/Mode	ClamShell	2.750	2.250	0.780	03756 082 6215
1.370	2.740	7	0.207	0.100	Transmit Drive	ClamShell	2.060	3.900	0.780	03760 072 6215
1.380	2.240	10	0.347	0.075	Switch/Limiter	ClamShell	2.250	2.750	0.780	03754 102 6215
1.405	1.405	136	0.189	0.026	TapePak	OpenTop	1.875	1.875	0.570	03570 D61 6255
1.430	2.310	5	0.270	0.100	Switch/Diplexer	ClamShell	2.420	3.870	0.700	03763 052 6215
1.590	2.240	13	0.315	0.090	SW/LNA	ClamShell	2.150	2.730	0.770	03767 132 6215
1.590	2.240	16	0.294	0.090	SW/LNA	ClamShell	2.150	2.730	0.770	03767 162 6215A
1.590	2.240	16	0.294	0.090	SW/LNA	ClamShell	2.150	2.730	0.770	03767 162 6215B
1.600	1.875	16	0.137	--	--	ClamShell	1.750	1.250	1.000	07238 SKT ASSY
1.650	2.684	3	0.270	--	LO Genterator	ClamShell	2.420	3.870	0.700	03763 032 6215
1.756	2.700	47	0.160	--	--	OpenTop	4.000	2.900	2.200	07579 SKT ASSY
1.830	3.230	9	0.270	0.100	Transmit Drive	ClamShell	2.420	3.870	0.700	03763 092 6215
1.850	3.210	9	0.395	--	--	ClamShell	4.700	3.500	1.260	07233 SKT ASSY
1.945	3.730	7	0.185	--	--	OpenTop	4.800	3.000	2.200	07526 SKT ASSY
1.970	2.571	11	0.170	--	--	OpenTop	3.400	3.400	2.200	07590 SKT ASSY
1.990	2.400	9	0.270	0.100	Dual Transmitter	ClamShell	2.420	3.200	0.700	03759 092 6215
2.000	2.380	3	0.225	--	LO Genterator	ClamShell	3.000	2.100	0.740	03767 032 ASSY

"--": See Socket Drawing for Details

Microwave/Hybrid Sockets

Body W (in)	Body L (in)	I/O	Body H/T (in)	Pitch (in)	Package Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2.000	2.400	8	0.310	0.100	Dual Receiver	ClamShell	2.420	3.200	0.700	03759 082 6215
2.020	3.700	28	0.310	--	--	OpenTop	4.500	3.250	2.200	07550 SKT ASSY
2.170	2.130	18	0.300	--	--	OpenTop	6.900	6.900	2.200	07603 SKT ASSY
3.068	2.620	18	0.170	--	--	OpenTop	4.000	4.000	2.200	07589 SKT ASSY
--	--	3	--	--	PLL Converter Module	ClamShell	2.900	2.120	0.800	03761 032 ASSYA
--	--	4	--	--	--	ClamShell	1.680	0.910	0.760	03336 041 X218B
--	--	4	--	0.100	ODS-801	Clamshell	1.870	1.220	0.760	03341 081 6215
--	--	4	--	--	--	ClamShell	1.900	1.850	1.090	03377 041 ASSY
--	--	8	--	0.200	--	OpenTop	0.890	0.550	0.690	03561 111 6218A
--	--	11	--	--	IF AMP	ClamShell	1.600	1.330	0.770	03769 112 6215
--	--	19	--	0.095	Hybrid QUAD	OpenTop	0.900	0.700	0.655	03161 192 6215
--	--	26	--	0.090	Hybrid QUAD	OpenTop	1.020	0.920	0.630	03161 262 6215
--	--	41	--	--	--	ClamShell	1.290	1.960	1.250	07813 SKT ASSY
--	--	**	--	--	--	ClamShell	1.290	1.960	1.250	07811 SKT ASSY
--	--	**	--	--	--	ClamShell	1.630	1.910	1.250	07812 SKT ASSY
--	--	**	--	--	--	ClamShell	3.840	3.900	1.270	07814 SKT ASSY
--	--	**	--	--	--		3.740	2.800	0.990	07832 SKT ASSY
--	--	**	--	--	--		2.600	1.900	2.000	07837 SKT ASSY
--	--	**	--	--	--		4.000	3.000	2.150	07889 SKT ASSY

"--": See Socket Drawing for Details

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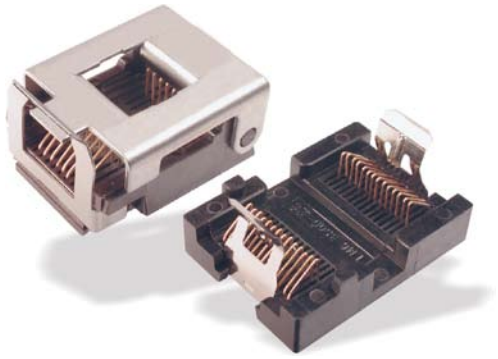
FlatPack Sockets

Design Features



OpenTop Sockets

- *Easy Auto Loading and Unloading of Packages*
- *OpenTop Promotes Air Flow Across Device*
- *Lowest Price for Burn-in and Test*

ClamShell Sockets

- *Rugged Construction*
- *Reliable Connections with Wire-formed Contacts*
- *Solid Clamping Throughout the Burn-in Cycle*
- *Both Styles Accommodate Standard Carriers*

Pitch (mm)	Pitch (in)	I/O	Body W (in)	Body L (in)	Body H (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
0.500	0.020	84	0.900	1.100	0.155	ClamShell	2.810	1.450	0.740	04250 841 6217
0.760	0.030	16	0.230	0.230	0.055	ClamShell	1.070	1.020	0.750	03725 161 6217
1.016	0.040	64	--	--	--	ClamShell	2.300	1.930	0.720	03802 641 X217
1.020	0.040	16	1.370	1.370	--	OpenTop	1.310	0.820	0.710	03250 161 6211
1.020	0.040	22	0.460	0.500	0.113	ClamShell	1.210	1.090	0.850	03466 221 6215
1.020	0.040	40	0.400	0.400	0.081	ClamShell	1.310	1.050	0.740	03801 401 X218A
1.020	0.040	48	0.565	0.565	0.113	ClamShell	2.500	2.640	0.780	03701 681 6218B
1.020	0.040	68	0.755	0.755	0.070	ClamShell	2.500	2.640	0.880	03701 681 6215
1.140	0.045	7	0.215	0.260	0.055	ClamShell	1.540	0.870	0.750	03708 081 6218A
1.140	0.045	8	0.420	0.420	0.060	ClamShell	1.560	0.870	0.860	03708 081 6215
1.140	0.045	11	0.335	0.260	0.065	ClamShell	1.560	0.870	0.860	03707 111 6215
1.270	0.050	8	0.255	0.255	0.093	ClamShell	1.110	0.850	0.660	03370 141 X218A
1.270	0.050	10	0.255	0.255	0.093	ClamShell	1.040	0.510	0.730	04325 101 6217
1.270	0.050	10	0.255	0.255	0.100	ClamShell	1.040	0.510	0.730	04325 101 6218A
1.270	0.050	14	0.750	1.000	0.175	ClamShell	1.370	0.840	0.640	03370 141 6215
1.270	0.050	14	--	--	--	OpenTop	1.310	0.820	0.710	03194 141 6211
1.270	0.050	16	0.293	0.441	0.119	ClamShell	1.070	0.550	0.750	04123 161 6217
1.270	0.050	16	0.293	0.441	0.136	ClamShell	1.120	0.550	0.750	04123 161 6218A
1.270	0.050	16	0.293	0.441	0.136	ClamShell	1.120	0.550	0.750	04123 161 X218B
1.270	0.050	16	0.350	0.450	0.080	ClamShell	0.940	0.760	0.750	04121 161 X217
1.270	0.050	16	1.370	1.370	0.165	ClamShell	1.045	0.525	0.614	03350 161 6215
1.270	0.050	16	1.370	1.370	0.165	ClamShell	1.370	0.840	0.640	03370 161 6215
1.270	0.050	16	--	--	--	OpenTop	1.310	0.820	0.710	03194 161 6211
1.270	0.050	16	--	--	--	OpenTop	1.310	0.910	0.760	03227 161 1215
1.270	0.050	16	--	--	--	OpenTop	1.310	0.910	0.760	03229 161 1215
1.270	0.050	16	--	--	--	OpenTop	1.310	0.910	0.880	03230 161 1215
1.270	0.050	16	--	--	--	ClamShell	1.045	0.525	0.614	03350 161 6218D
1.270	0.050	24	0.616	0.400	0.195	ClamShell	2.170	2.100	0.740	04437 641 6218A
1.270	0.050	24	1.250	1.250	--	OpenTop	1.580	1.160	0.710	03500 241 6211
1.270	0.050	24	--	--	--	OpenTop	1.310	0.820	0.710	03194 241 6215
1.270	0.050	24	--	--	--	ClamShell	1.600	0.820	0.640	03370 241 6215
1.270	0.050	26	--	--	--	OpenTop	1.580	1.160	0.710	03500 261 6211

"--": See Socket Drawing for Details

FlatPack Sockets

Pitch (mm)	Pitch (in)	I/O	Body W (in)	Body L (in)	Body H (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1.270	0.050	28	--	--	--	OpenTop	1.580	1.160	0.710	03500 281 6211
1.270	0.050	30	1.250	1.250	--	OpenTop	1.580	1.160	0.710	03500 301 6215
1.270	0.050	36	0.335	0.732	0.161	ClamShell	1.350	1.470	0.750	04114 361 6215
1.270	0.050	44	2.000	2.000	--	ClamShell	2.530	2.130	1.130	02900 441 6215
1.270	0.050	46	--	--	--	ClamShell	2.530	2.130	1.130	02900 461 6215
1.270	0.050	50	--	--	--	ClamShell	2.530	2.130	1.130	02900 501 6215
1.270	0.050	64	1.730	0.705	0.195	ClamShell	2.100	2.090	0.730	04437 641 6217
1.270	0.050	64	--	--	--	ClamShell	2.500	2.640	0.900	03700 641 6215
1.270	0.050	68	1.370	1.180	0.165	ClamShell	2.500	2.640	0.900	03702 682 6215
1.270	0.050	74	1.995	0.890	0.165	ClamShell	2.280	2.340	0.730	04437 741 6217
1.520	0.060	13	1.370	1.370	0.165	ClamShell	1.045	0.525	0.614	03351 131 6215
2.700	0.106	10	0.328	0.388	0.055	ClamShell	1.590	0.910	0.615	03368 101 ASSY
3.810	0.150	11	1.195	1.195	0.340	ClamShell	2.170	1.210	0.740	04326 111 X217
3.810	0.150	15	1.195	1.759	0.340	ClamShell	2.170	2.100	0.740	04326 151 X217
--	--	3	0.250	0.250	0.112	ClamShell	0.860	0.700	0.730	03466 071 6215
--	--	3	--	--	--	ClamShell	1.670	1.460	0.720	03711 032 6215
--	--	8	0.250	0.250	0.152	ClamShell	0.900	0.760	0.740	03467 081 6215
Multi	Multi	40	0.714	1.550	0.551	ClamShell	2.660	1.540	0.730	223181040 6217
Multi	Multi	40	0.714	1.550	1.390	ClamShell	1.810	1.540	0.575	223181040 6218A
Multi	Multi	332	0.714	1.550	0.139	ClamShell	2.660	1.540	0.730	223181334M6617
Multi	Multi	332	0.714	1.550	0.139	ClamShell	2.660	1.540	0.255	223181334M6618A

"--": See Socket Drawing for Details

Optical Transceiver Sockets

Design Features

- *Contact Pitches of 0.30mm and Greater*
- *Openings for the Fiber Optic Connector to Attach to Device during Testing*
- *ClamShell Lid Design Opens Widely for Insertion and Withdrawal*
- *Floating Covers Accommodate Irregular or Oddly-shaped Devices*

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
58	1.130	53.75	14.59	11.56	MTX and MRX	16 x 12 D*	ClamShell	2.590	2.300	1.082	440180058B6617
72	1.270	41.80	14.00	12.56	Multi Channel	12 x 8 D*	ClamShell	1.520	1.350	1.102	300140072B6617
72	1.270	41.80	14.00	12.56	Multi Channel	12 x 8 D*	ClamShell	1.520	1.350	1.280	300140072L6617
143	1.000	13.00	13.00	4.79	BGA/CSP	12 x 12 D*	ClamShell	1.810	1.520	2.340	130SQ 143P6617

D* = Depopulated, See Drawing for Specific Array

PGA Sockets

Design Features

- *Reliable Normally-closed Contacts*
- *Multiple-point Wiping Action Cleans Contact Area*
- *Zero-insertion-force*
- *Small Footprint Enables Higher Board Density*

I/O	Pitch (in)	Pkg Body L (in)	Pkg Body W (in)	Pkg Body H/T (in)	Array	Rows	Columns	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
168	0.100	1.750	1.750	0.084	17 x 17 D*	17	17	OpenTop	2.360	2.210	0.450	01919 168L6255
257	0.100	--	--	--	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.300	01919 257L6255
361	0.100	--	--	--	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.300	01919 361L6255

D* = Depopulated, See Drawing for Specific Array

Sockets Accessories

Design Features

- *Kelvin Alligator Clips*
- *High temperature application ≤175°C*
- *Optional Wiring with Length-to-order*

I/O	Kelvin	Style	Length (in)	Width (in)	Height (in)	P/N
2	Yes	Clip	1.640	0.340	0.660	0500700
2	Yes	Clip	1.640	0.340	0.660	0500700W-2W
2	Yes	Clip	1.640	0.340	0.660	0500700W-3W
2	Yes	Clip	1.640	0.340	0.660	0500700W-XW
	N/A					Torque Set BGA
	N/A					Torque Set CSP

- Socket Assembly Torgue Wrench Kit
- Fixed and adjustible torgue wrench Kits for BGA/LGA socket mountting

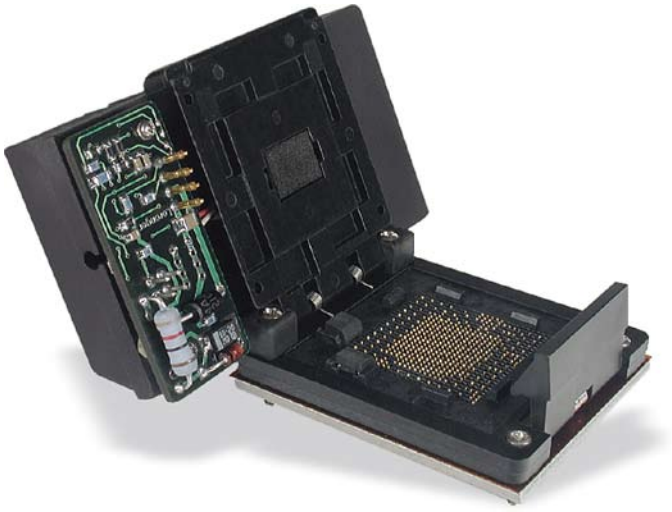
Loranger SmartSocket

WHAT IT IS... The SmartSocket™ consists of a base socket and cover design for any package along with a combination of components to monitor and control the temperature of each individual device package during burn-in.

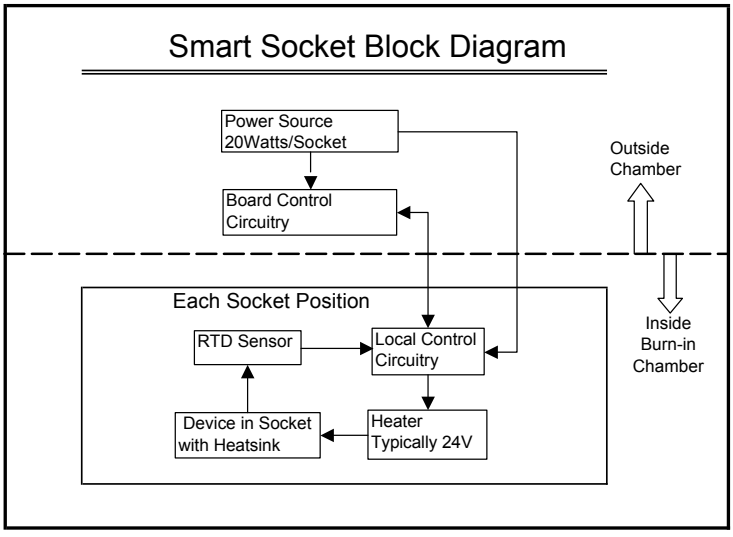
HOW IT WORKS... A temperature setpoint for the heater control is programmed by the user using Loranger software. If a device under burn-in has diode input/outputs, the SmartSocket™ can monitor the diode output, instead of the RTD, to control the heater output and maintain a given temperature setpoint.

DESIGN FEATURES...

- SmartSockets are available with a combination of an RTD temperature sensor, heater, heatsink, and control circuitry within the socket.
- Heaters and RTDs without control circuitry are optionally available for connection to customer-supplied monitoring and controlling equipment.
- Forward voltage drop monitoring of the DUT's diodes (when accessible) can be used to monitor the junction temperature and control the heater within the SmartSocket™.
- Loranger Software can be used to set and monitor the temperature of each socket.
- Compensates for varying DUT output wattages in the same chamber to achieve a consistent burn-in temperature for each socket.
- Lower chamber temperatures achieved while maintaining a given package temperature.



Loranger Smart Socket
with Control Circuitry



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Loranger SmartSocket

FEATURES

- Individual Temperature Monitor/Controller embedded on each socket.
- Heater wattage outputs can be customized for customer applications. Typical heater cartridges are 24V at 20 Watts.
- Electronics located on the heat sink are rated to operate to 125°C ambient temperature. (The setpoint for the temperature reading within the socket can be higher than 125°C. The requirement is that the air outside the socket around the electronics is less than or equal to 125°C.)
- Overall accuracy of the measured temperature is ±2°C.
- Overshoot/undershoot of temperature setpoint controller is ±1°C.
- The SmartSocket™ has four connections, including +24V. Interface to burn-in board can be by plunger pins or wire leads.
- Up to 100 SmartSockets™ can be bussed together on a burn-in board before additional electronic switching hardware would be required. Switching hardware could be on the burn-in board or back plane board.
- SmartSocket™ software is installed on the connecting PC to program the temperature setpoint of each socket and monitor the sockets. Once programmed, the PC does not actually need to be connected to the socket for the socket to operate.
- A SmartCable™ is used to connect the SmartSocket™ to a Serial Port of a PC for setting temperature setpoint and reading of the temperature data. For PC's without a standard Serial Port, a USB to Serial Adapter can be used to connect the SmartSocket™ to a USB port.
- The four electrical connections required by each SmartSocket™ are 24VDC input, 24VDC return, Clock, and Data. All four of these can be bussed on the burn-in board, meaning that all 24VDC inputs can be tied together, 24VDC returns can be tied together, Clock lines can be tied together, and Data lines can be tied together. However, because of the high currents required by the 24VDC input and return lines, care must be taken that edgefingers or other input connections to the burn-in board do not have their current ratings exceeded. For example, a typical edgefinger is rated at 5 Amps current. So if 20 SmartSockets™ each drawing 0.9 Amps are on one board, then at least 4 edgefinger pairs would be required for the 24VDC input and at least 4 edgefingers would be required for the 24VDC return. Since Clock and Data lines are low current, each needs only a single edgefinger or connector contact.

Loranger Smart Socket with heater and temperature sensor for external control

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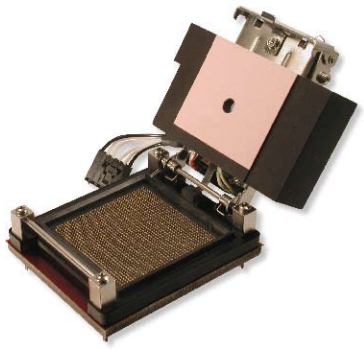
Loranger SmartSocket

Loranger SmartSocket Specifications

FEATURE	Loranger SmartSocket
Input Power	16 - 25 Volts DC (nominal 24V); Other DC voltages possible with component changes.
Temperature Range	Software capable of 0C to +160C but temperature of package determined by Burn-in System Environment. RTD and Heater are rated to 200C. Other electronic components on SmartSocket are rated to 125C.
Output Power to Control Load	Pulse Width Modulated (PWM) using 24VDC at 20 to 80 Watts (0.83 to 3.33 Amps). Other DC voltages possible.
Load Type	Resistive Heater(s) located in the base of the heat sink.
Displayability and Settability	1 C
Overshoot/Undershoot	+/-1C
Accuracy	+/-2C
End User Calibration	Both offset and gain (span) adjustments.
Basic Control Algorithm	Proportional/Integral (PI) – Proportional Band is +/- 2C
Sensor	100 Ohm Platinum RTD located at the tip of the heat pipe near the device; Internal package Diode optional
Interface to Burn-in Board	Four connections (Data, Clock, 24V, Common) by plunger contacts or wire leads. Connections on burn-in board from multiple SmartSockets can be bussed together.
Mechanical Mounting	Smart Socket Circuitry on PC Board (0.45" x 0.8" x 1.78") is attached via standoffs and screws to socket heatsink. Other arrangements are possible.
PC Computer Control	Through Software Application
PC Computer Interface	Through RS-232 port with SmartCable.
Addressability	Each SmartSocket has identifying number/address from 1 to 100. Software allows user to change socket number.
SmartSockets per PC	Up to 100; More than 100 with Additional Electronic Switching Hardware/Software
SmartSockets per Power Supply	Determined by Wattage per Socket and Size of Power Supply.
Data Logging	Temperature data from all SmartSockets logged to PC disk at user set interval. Graphs of temperature can be displayed on monitor.



Thermoplastic Materials

THERMOPLASTICS >>>	Nylon 6 / 12	Nylon 4 / 6 (30% glass)	Polyester PET	Polycarbonate Lexan®	Polyester PBT (Valox®)	Polysulfone	Modified Polyester TFE (Tefzel®)	Polyetheretherketone PEEK	Polyetherimide PEI (Ultem®)	LCP 175°C Max Use	LCP 300°C Max Use	Polyphenylene Sulfide PPS (Ryton®)	Polyethere Sulfide PES	Polyamide-imide PAI (Torlon®)
GENERAL PROPERTIES														
Specific Gravity	1.07	1.68	1.27	1.21	1.62	1.24	1.86	1.32	1.51	1.61	1.57	1.60	1.51	1.40
Water Absorption (% at 24 hrs)	0.40	1.60	0.05	0.15	0.07	0.22	0.20	0.50	0.16	0.02	.01-.02	0.05	0.20	0.28
Max Suggested Continuous Temp (°C)	65	149	120	125	140	150	150	160	165	175	250	210	225	250
MECHANICAL PROPERTIES														
Flexural Strength ($x\ 10^4$ psi - average)	1.40	3.40	3.35	1.32	2.70	1.54	3.00	2.40	3.30	3.70	2.30	2.68	1.72	3.07
Flexural Modulus ($x\ 10^6$ psi - average)	0.29	1.30	1.30	0.325	1.10	0.39	0.95	0.59	1.30	2.10	1.50	1.70	0.59	0.644
Compressive Strength ($x10^4$ psi - average)	2.40	N/A	2.50	1.25	1.80	1.39	1.00	2.50	3.70	2.00	N/A	2.10	N/A	4.00
Tensile Strength ($x\ 10^4$ psi - average)	8.80	2.30	2.30	9.00	1.70	1.02	1.20	1.45	2.00	3.00	2.40	1.90	1.20	2.69
Izod Impact Strength (notch side ft-lbs/in)	1.00	1.30	1.90	12.00	1.30	1.20	7.00	1.80	2.00	2.80	2.20	1.40	1.50	2.50
Hardness Rockwell Scale	R-114	R-120	M-100	M-70	M-90	M-69	R-50	M-99	M-114	M-87	N/A	R-123	M-98	E-78
ELECTRICAL PROPERTIES														
Dielectric Constant (60 Hz, dry)	4.00	4.20	3.60	3.01	3.80	3.07	2.60	3.20	3.70	4.10	2.90	3.90	N/A	4.00
Dielectric Strength (volts/mil, short time, dry)	400	N/A	550	425	750	425	400	480	770	1100	1100	450	780	600
Dissipation Power Factor (1 MHz dry)	0.02	0.023	0.012	0.01	0.02	0.003	0.005	0.003	0.005	0.006	0.003	0.006	N/A	0.009
Volume Resistivity ($10^{15}\Omega$-cm at 23°C)	1	3	30	10	3.4	50	10	49	30	1	1	4.5	10	3
Arc Resistance (seconds)	121	N/A	90	120	28	122	72	N/A	85	137	137	34	N/A	125
THERMAL PROPERTIES														
Deflection Temperature (°C at 264 psi)	82	284	224	132	204	174	210	160	210	230	241	243	210	275
Coefficient of Linear Expansion (10^{-5} inch/inch/°C at 23°C)	5.00	N/A	29	3.75	3.30	3.10	0.72	2.60	3.10	5.00	N/A	1.20	2.60	2.00

Information given herein is believed to be accurate but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied, by Loranger International Corporation.

Socket Contact Metallurgy

PROPERTIES	Phosphor Bronze C51000 Grade A	Beryllium-Copper C17200 (Alloy 25)	Beryllium-Nickel Alloy N03360	Stainless Steel 302	Cu-Ni-Sn C72900 (Spinodal)	Solder 63Sn37Pb (for reference)
Density (lbs/in^3) (g/cc)	 0.320 8.86	 0.302 8.35	 0.294 8.14	 0.29 8.14	 0.317 8.77	 0.30 8.4
Melting Temperature (°F) (°C)	 1750 - 1920 950 - 1050	 1600 - 1800 870 - 980	 2185 - 2420 1195 - 1325	 2550 - 2590 1399 - 1421	 1742 (solidus) 950	 361 183
Coefficient of Thermal Expansion (10^{-6} in/in-°F) (10^{-6} in/in-°C)	 9.9 17.8	 9.9 17.8	 8.0 14.5	 9.6 17.3	 9.1 16.4	 13.3 23.9
Electrical Conductivity (% IASC)	15	22	4 - 6	2.4	7.8	11.9
Tensile Modulus of Elasticity (x10^6 psi)	16	19	28 - 30	28	18.5 - 19.5	2.3
Ultimate Tensile Strength (x10^3 psi) SEE NOTE 1	91 - 105	152 - 212	215 - 270	85 - 110	130 - 195	4.4 - 6.7
Yield Strength (x10^3 psi) SEE NOTE 1	52 - 122	125 - 195	150 - 230	35 - 75	100 - 185	4.0 - 4.4
Elongation (%) SEE NOTE 1	4 - 45	3 - 10	8 - 12	1 - 10	2 - 6 (min)	35 - 53
Rockwell Hardness (C Scale) SEE NOTE 1	67 - 78 (Scale B)	36 - 42	37 - 63 (converted value) Diamond Pyramid	80 - 85 (Scale B) Vickers	26 - 42 (converted value) 343 - 695	12.2 (16W Scale) 275 - 410
Endurance Strength (Stress x10^3 psi after 10^6 cycles in reverse bending)	30	30 - 48	90 - 110	34	N/A	1.5 - 2.3
Recommended Temp Usage (°C maximum)	100	175	350	300	225	140

NOTE 1 VALUE DEPENDS ON HEAT TREATMENT/WORK HARDENING.

Socket Contact Plating

Plating is normally recommended for testing above ambient temperature to prevent oxide growth and thus reduce increases in contact resistance with age. We use a minimum of 30 microinches gold plating, as the standard, applied in a manner related to Military Standard #G-452204B. Porosity is checked by examination under a 10X microscope for pores. Some cost savings have been made by plating with 100 microinches of solderable nickel, which offers good protection of the base metal at elevated temperatures, as an option to the designer. Normal shelf life is 5 months ***(without use)***.

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Socket Performance Data

For BGA/CSP & LGA Sockets

Electrical Performance

Pitch (mm)	Socket Style	Contact Style	Self-Induction (nH)	Capacitance (pF)	Delay (ps)	Crosstalk (mV/V)
1.0, 1.27	Standard APS	Standard Plunger	8.3 2	0.7 0.2	162.3 20	0.036 —
0.65, 0.8	Standard APS	Standard Plunger	6.8 1.4*	0.7* 0.4*	69 24*	— —
0.5	Standard APS	Standard Plunger	6 1.4*	0.4* 0.4*	49 24*	— —
0.4	APS	Plunger	1.2*	0.4*	22*	—
0.35	APS	Plunger	1.2*	0.4*	22*	—

* estimated value – other values are results of tests

Pitch (mm)	Socket Style	Contact Style	Contact Resistance (ohms)	Current to Raise Temp in Cell by 50°C (amps)
1.0, 1.27	Standard APS	Standard Plunger	0.139* 0.048	0.139 1.11
0.65	Standard APS	Standard Plunger	0.25* 0.047	0.097 1.034*
0.5	Standard APS	Standard Plunger	0.249* 0.047	0.102 1.034*
0.4	APS	Plunger	0.039	1.052*
0.35	APS	Plunger	0.039	1.052*

* estimated value – other values are results of tests

Materials

Property	Material	Value
UL Temperature Index	LCP/PPS	220-240°C/200-220°C
Insulation Resistance	LCP/PPS	$10^{14}/10^{16}$ -cm

Underwriters Laboratories, Inc. Relative Thermal Index is maximum temperature below which electrical and mechanical integrity of material is maintained over a reasonable time.

LCP = liquid crystal plastic

PPS = polyphentlene sulfide

Accelerated Testing

Socket Style	P/N	Successful Cycles
ClamShell	350SQ664B8817	51,800[2]
OpenTop	099069040T6617	50,000[3]

Test reports available upon request

[2] 50,000 cycles of opening and closing cover with device in socket plus 1,800 cycles with device out of socket. No failure of contacts or hinges occurred.

[3] 50,000 cycles of compression and relaxation of socket top with no device installed.

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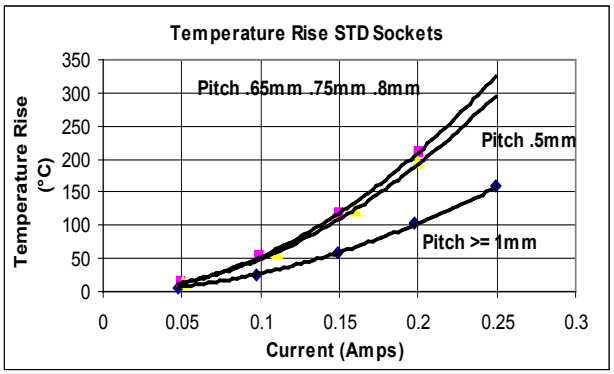
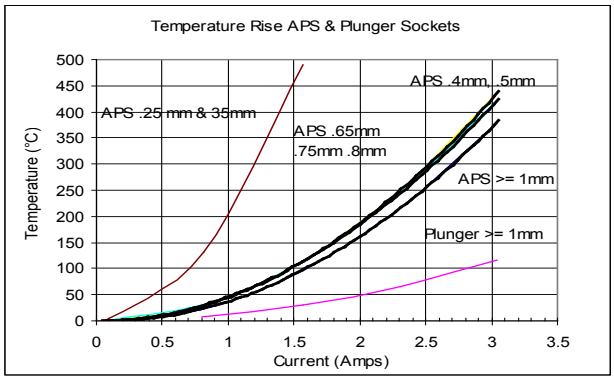
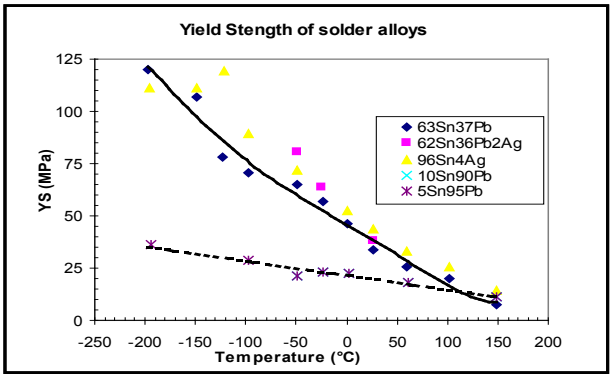
Socket Performance Data

For Surface Mount Contacts



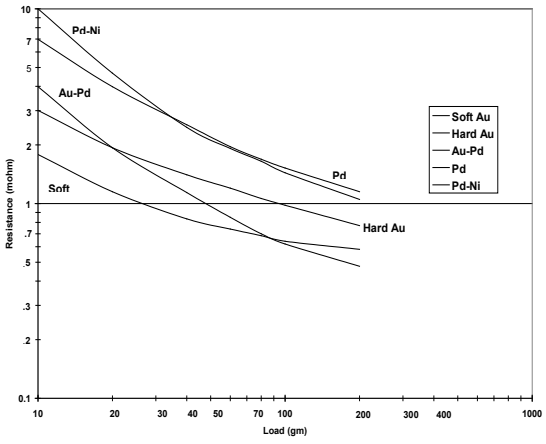




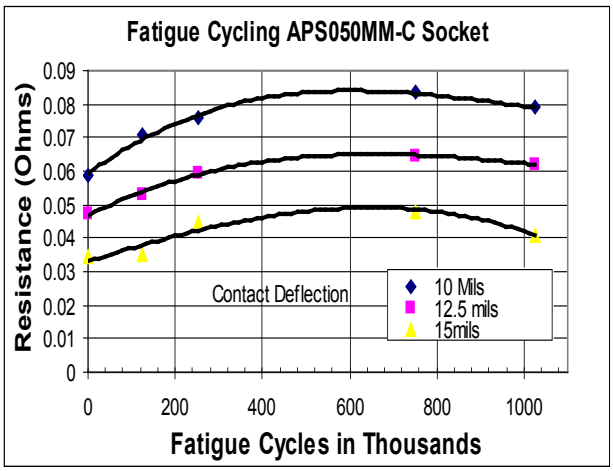
Special Socket Features

- Sockets are easily removed/replaced from/to burn-in boards for maintenance or inspection by removal of four nuts. No soldering required.
- Witness marks placed on solder balls during burn-in is verification that burn-in has been done.
- Socket designs are suitable for QFN, BGA, LGA CSP packages with 0.25mm pitches or greater.
- Contacts compression load solder balls eliminating concern over tensile forces at ball-package interface.
- Socket contacts are electroplated gold over nickel, providing the lowest interface resistance and highest corrosion resistance.

Resistance vs. Load for Gold and Alternatives



From Robert S. Mroczkowski Electronic Connector Handbook McGraw-hill 1998



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Signal Degradation

Calculated for Socket Contacts

Contact L & C		Delay	Signal Delay Frequency (GHz)					Z	Signal Attenuation for DC Contact Resistance (mOhms)					
Self L (nH)	Self C (pF)	(ns)	1	2.5	5	10	20	(Ohms)	25	50	100	150	200	250
0.25	0.2	0.007	0.7%	1.8%	3.5%	7.1%	14.1%	35.4	0.1%	0.1%	0.3%	0.4%	0.6%	0.7%
0.25	0.4	0.010	1.0%	2.5%	5.0%	10.0%	20.0%	25.0	0.1%	0.2%	0.4%	0.6%	0.8%	1.0%
0.25	0.6	0.012	1.2%	3.1%	6.1%	12.2%	24.5%	20.4	0.1%	0.2%	0.5%	0.7%	1.0%	1.2%
0.25	0.8	0.014	1.4%	3.5%	7.1%	14.1%	28.3%	17.7	0.1%	0.3%	0.6%	0.8%	1.1%	1.4%
0.25	1.0	0.016	1.6%	4.0%	7.9%	15.8%	31.6%	15.8	0.2%	0.3%	0.6%	0.9%	1.2%	1.6%
0.5	0.2	0.010	1.0%	2.5%	5.0%	10.0%	20.0%	50.0	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
0.5	0.4	0.014	1.4%	3.5%	7.1%	14.1%	28.3%	35.4	0.1%	0.1%	0.3%	0.4%	0.6%	0.7%
0.5	0.6	0.017	1.7%	4.3%	8.7%	17.3%	34.6%	28.9	0.1%	0.2%	0.3%	0.5%	0.7%	0.9%
0.5	0.8	0.020	2.0%	5.0%	10.0%	20.0%	40.0%	25.0	0.1%	0.2%	0.4%	0.6%	0.8%	1.0%
0.5	1.0	0.022	2.2%	5.6%	11.2%	22.4%	44.7%	22.4	0.1%	0.2%	0.4%	0.7%	0.9%	1.1%
1.0	0.2	0.014	1.4%	3.5%	7.1%	14.1%	28.3%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
1.0	0.4	0.020	2.0%	5.0%	10.0%	20.0%	40.0%	50.0	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
1.0	0.6	0.024	2.4%	6.1%	12.2%	24.5%	49.0%	40.8	0.1%	0.1%	0.2%	0.4%	0.5%	0.6%
1.0	0.8	0.028	2.8%	7.1%	14.1%	28.3%	56.6%	35.4	0.1%	0.1%	0.3%	0.4%	0.6%	0.7%
1.0	1.0	0.032	3.2%	7.9%	15.8%	31.6%	63.2%	31.6	0.1%	0.2%	0.3%	0.5%	0.6%	0.8%
2.0	0.2	0.020	2.0%	5.0%	10.0%	20.0%	40.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
2.0	0.4	0.028	2.8%	7.1%	14.1%	28.3%	56.6%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
2.0	0.6	0.035	3.5%	8.7%	17.3%	34.6%	69.3%	57.7	0.0%	0.1%	0.2%	0.3%	0.3%	0.4%
2.0	0.8	0.040	4.0%	10.0%	20.0%	40.0%	80.0%	50.0	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
2.0	1.0	0.045	4.5%	11.2%	22.4%	44.7%	89.4%	44.7	0.1%	0.1%	0.2%	0.3%	0.4%	0.6%
3.0	0.2	0.024	2.4%	6.1%	12.2%	24.5%	49.0%	122.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
3.0	0.4	0.035	3.5%	8.7%	17.3%	34.6%	69.3%	86.6	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
3.0	0.6	0.042	4.2%	10.6%	21.2%	42.4%	84.9%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
3.0	0.8	0.049	4.9%	12.2%	24.5%	49.0%	98.0%	61.2	0.0%	0.1%	0.2%	0.2%	0.3%	0.4%
3.0	1.0	0.055	5.5%	13.7%	27.4%	54.8%	109.5%	54.8	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
4.0	0.2	0.028	2.8%	7.1%	14.1%	28.3%	56.6%	141.4	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
4.0	0.4	0.040	4.0%	10.0%	20.0%	40.0%	80.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
4.0	0.6	0.049	4.9%	12.2%	24.5%	49.0%	98.0%	81.6	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
4.0	0.8	0.057	5.7%	14.1%	28.3%	56.6%	113.1%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
4.0	1.0	0.063	6.3%	15.8%	31.6%	63.2%	126.5%	63.2	0.0%	0.1%	0.2%	0.2%	0.3%	0.4%
5.0	0.2	0.032	3.2%	7.9%	15.8%	31.6%	63.2%	158.1	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
5.0	0.4	0.045	4.5%	11.2%	22.4%	44.7%	89.4%	111.8	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
5.0	0.6	0.055	5.5%	13.7%	27.4%	54.8%	109.5%	91.3	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
5.0	0.8	0.063	6.3%	15.8%	31.6%	63.2%	126.5%	79.1	0.0%	0.1%	0.1%	0.2%	0.3%	0.3%
5.0	1.0	0.071	7.1%	17.7%	35.4%	70.7%	141.4%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
6.0	0.2	0.035	3.5%	8.7%	17.3%	34.6%	69.3%	173.2	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
6.0	0.4	0.049	4.9%	12.2%	24.5%	49.0%	98.0%	122.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
6.0	0.6	0.060	6.0%	15.0%	30.0%	60.0%	120.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
6.0	0.8	0.069	6.9%	17.3%	34.6%	69.3%	138.6%	86.6	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
6.0	1.0	0.077	7.7%	19.4%	38.7%	77.5%	154.9%	77.5	0.0%	0.1%	0.1%	0.2%	0.3%	0.3%
7.0	0.2	0.037	3.7%	9.4%	18.7%	37.4%	74.8%	187.1	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%

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Signal Degradation

Calculated for Socket Contacts

Contact L & C		Delay	Signal Delay Frequency (GHz)					Z	Signal Attenuation for DC Contact Resistance (mOhms)					
Self L (nH)	Self C (pF)	(ns)	1	2.5	5	10	20	(Ohms)	25	50	100	150	200	250
7.0	0.4	0.053	5.3%	13.2%	26.5%	52.9%	105.8%	132.3	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
7.0	0.6	0.065	6.5%	16.2%	32.4%	64.8%	129.6%	108.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
7.0	0.8	0.075	7.5%	18.7%	37.4%	74.8%	149.7%	93.5	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
7.0	1.0	0.084	8.4%	20.9%	41.8%	83.7%	167.3%	83.7	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
8.0	0.2	0.040	4.0%	10.0%	20.0%	40.0%	80.0%	200.0	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
8.0	0.4	0.057	5.7%	14.1%	28.3%	56.6%	113.1%	141.4	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
8.0	0.6	0.069	6.9%	17.3%	34.6%	69.3%	138.6%	115.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
8.0	0.8	0.080	8.0%	20.0%	40.0%	80.0%	160.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
8.0	1.0	0.089	8.9%	22.4%	44.7%	89.4%	178.9%	89.4	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
9.0	0.2	0.042	4.2%	10.6%	21.2%	42.4%	84.9%	212.1	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
9.0	0.4	0.060	6.0%	15.0%	30.0%	60.0%	120.0%	150.0	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
9.0	0.6	0.073	7.3%	18.4%	36.7%	73.5%	147.0%	122.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
9.0	0.8	0.085	8.5%	21.2%	42.4%	84.9%	169.7%	106.1	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
9.0	1.0	0.095	9.5%	23.7%	47.4%	94.9%	189.7%	94.9	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%

L = self-inductance in nH
C = self-capacitance in pF
td = time delay in seconds
Z = characteristic impedance in Ohms
μ = 10^{-6}
n = 10^{-9}
p = 10^{-12}

NOTES

- Delay and attenuation are only for socket contacts. Actual values for sockets on a burn-in board will be different because of contributions from device, burn-in board, equipment, cables, connectors, etc.
- Maximum frequency appropriate for a socket depends on how much signal degradation is acceptable for the application. Signal delays in red are for values >10%.
- Values for delay and attenuation are independent of contact type. BGAs, LGAs and QFNs all have the same delay and attenuation for the same L, C and R.

Pitch	Socket/Contacts	L (nH)	C (pF)
1.0mm & 1.27mm	Standard/Standard	8.3	0.7
	HPS/Plunger	2.1	0.6
0.65mm	Standard/Standard	6.8	0.7*
	HPS/Plunger	1.1	0.4
0.5mm	Standard/Standard	6.0	0.4*
	HPS/Plunger	1.1	0.4

*Estimated value. Other values are test results.

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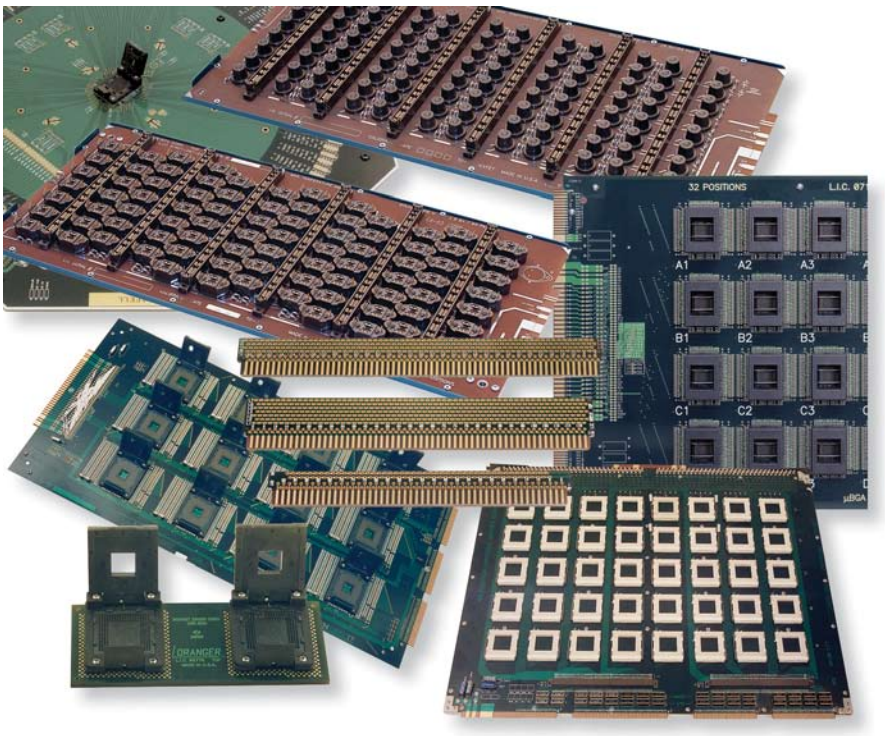
Burn-in Boards



Dedicated • Flexible Bus • Programmable • Universal

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Key Design Features of Loranger Burn-in Boards

- ***Engineering Excellence** – Careful Evaluation in the Preparation of New Designs Results in the Highest Density for Lowest Cost-per-position*
- ***Double-sided and Multilayer***
- ***Full-scale Quality Control** – 100% Tested Assures Reliability and User Confidence*
- ***CAD/CAM and Laser Plot Artwork Generation***
- ***Expedited Delivery***
- ***Isolation/Support Frame** – Protects boards from damage, high-temperature warpage or twisting due to heat coming from adjacent boards. Guarantees accurate board alignment in the oven rack and allows easy storage. Protects personnel from exposure to the sharp solder joint on the underside of board.*
- ***Long Finger Tab (2.75")** — The correct length to allow easy access to the mating edgecard connector OUTSIDE the chamber environment. ("Short" finger tab boards require connector to be located INSIDE the chamber which could cause reliability problems and difficulty for maintenance.)*
- ***Offset Finger Tab** – Prevents operator from improperly installing board assembly in oven chamber.*
- ***Optional Test Fingers** – Spot check (setup) or continuously monitor (during burn-in) the bias supplies and dynamic signals at the farthest point from where they enter the board.*
- ***Support Puller** – An integral part of the assembly which allows easy insertion and removal of the board inside the test chamber.*
- ***Board Width Dimension (11")** – This width is the best trade-off to get the lowest cost and maximum overall DUT socket density in a chamber. Permits additional customer cost savings as fewer board assemblies, edgecard connectors, and internal rack supports, need to be purchased to achieve the desired burn-in part throughput.*

Information given herein is believed to be accurate but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied, by Loranger International Corporation.

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Part Number Designations

For Printed Circuit Boards

07128-X01-XXXX

BOARD DESIGNATION

COPPER WEIGHT (oz)

DENOTES COPPER CLADDING

EDGEBOARD FINGER PLATING

0 = Not Applicable
1 = 0.00003" (min) Au over 0.0001" (min) Ni
2 = 0.00005" (min) Au over 0.0001" (min) Ni
3 =
4 = Other Au over 0.0001" (min) Ni
5 =
6-9 = Other

CONDUCTOR PATH PLATING

0 = Auxiliary Jumpers (no conductor paths)
1 = 0.00005" (min) Au over 0.0001" (min) Ni
2 = Other Au Thicknesses over Ni
4 = 0.000005" (min) Flash Au over 0.0001" min Ni
5 = HASL to 0.0003" (min) 63/37 Sn-Pb
6 = SMOBC and HASL (solder mask over bare copper and hot air solder leveling) to 0.0003" (min) 63/37 Sn-Pb
7 Lead Free HASL for High Temperature
8 SMOBC and Lead Free HASL for High Temperature
9 = Other

CONDUCTOR PATH CONFIGURATION

1 = Single-Sided
2 = Double-Sided with Plated-Thru Holes
3-8 = Multilayer Designating Number of Layers
9 = Other

LAMINATE MATERIAL

1 = FR-4 Epoxy Glass – up to 75°C (fire-retardant versions of G-10)
2 = FR-5 Epoxy Glass – to 100°C (fire retardant version of G-11)
3 = Teflon® – to 205°C (low adhesion strength)
4 = Addition Polyimide – to 210°C
6 = Epoxy Copolymer – to 175°C
7 = Special Epoxy (for 85°C / 85% relativity

Program Card Numbering System

Cu or Ni weight (oz) — 1 = Cu, 2 = Ni — Materials specifications to be the same as those of the USD board

02205-271-XXXXG

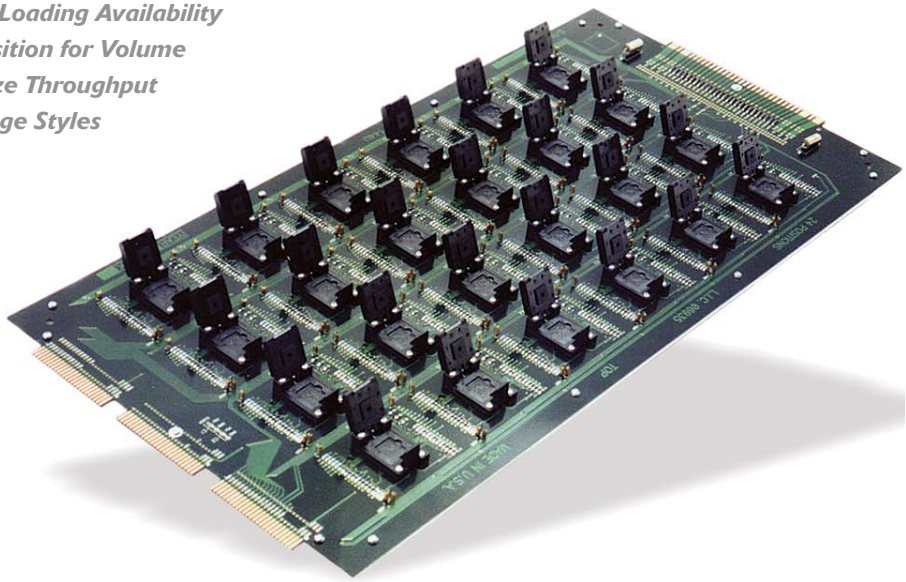
Program Card P/N	Number of lines	** Total No. of Segments per Card		
	1	A = 1	I = 9	Q = 17
	2	B = 2	J = 10	R = 18
	3	C = 3	K = 11	S = 19
	4	D = 4	L = 12	T = 20
	5	E = 5	M = 13	U = 21
	6	F = 6	N = 14	V = 22
	7	G = 7	O = 15	W = 23
	8 = Other EDR	H = 8	P = 16	X = 24
				Y = 26
				Z = Other EDR

* EDR = Engineering Drawing Required per customer specifications
** Cards are designed with approximately the same number of plated-thru-holes per segment.

Dedicated Boards

Design Features

- *Input Isolation and Output Loading Availability*
- *Lowest Cost per Device Position for Volume*
- *Highest Density to Maximize Throughput*
- *All Device Types and Package Styles*
- *Clean Dynamic Signals and Low Power Supply Noise Through Optional Use of Power Gridding, Decoupling, and Line Termination Techniques*
- *Custom Engineering by Professionals with Years of Experience in Device Socket and Board Design Manufacturing*



In production burn-in areas, the need exists to burn-in large quantities of certain devices or families of devices. Here the requirement of flexibility or versatility, is overshadowed by the need for maximum throughputs at the lowest possible cost. To meet this need, we manufacture thousands of "dedicated" board designs to customer satisfaction.

Dedicated Boards achieve high device socket density because space is not required for programming hardware. This style can be made for all device families, package styles and board sizes for either static or dynamic burn-in. Resistors, capacitors and other discrete components for input isolation, output loading, and supply decoupling may be added to simulate the circuit the devices will actually experience in field use.

For customers experienced in burn-in, we will review burn-in schematics and provide quotations regardless of the burn-in system being used.

For customers just getting started in burn-in, we can recommend static or dynamic burn-in schematics and provide standard dedicated boards which will stress and exercise semiconductor devices to determine their reliability. As with all of our boards, these dedicated circuits are unique in the testing industry in that the design, manufacture, and assembly of both boards and the device sockets are done at Loranger.

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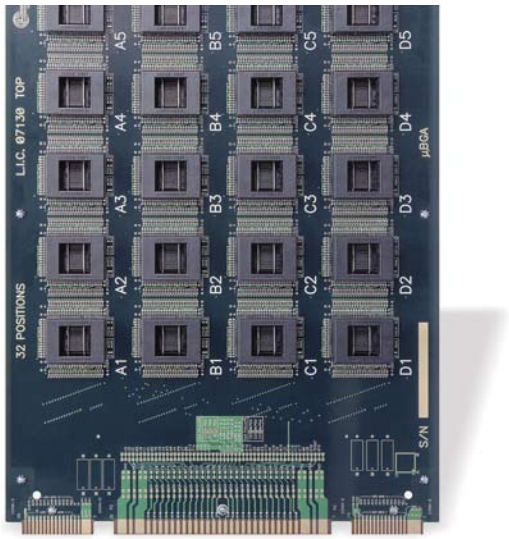
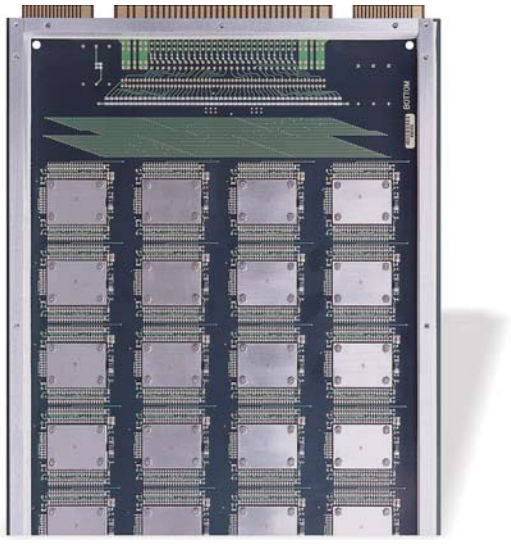
Flexible Bus Boards



Design Features

- *Next Highest Density of Burn-in Sockets with some Programming Capabilities*
- *Decreases Board Inventory*
- *Pin Programmability and Gross Loading by Board or Column Within a Board*

Flexible Bus burn-in boards, usually used for static burn in, permit the user to program any incoming bias power to any pin on all the sockets. To accomplish this, each equivalent pin on each socket is connected to all the equivalent pins on the remaining sockets via a trace on the burn-in board. For example, all Pin 1s are connected together, all Pin 2s are connected together, etc. A trace is then run on the burn-in board from each pin number to a programming station. This programming station may be (1) a program board and edge connector pair, (2) a program socket, or (3) other means of interconnection. The incoming bias power lines, which enter the burn-in board via edgeboard fingers or other means, also proceed to the programming station. The user can then connect each pin to the proper incoming bias power line using jumper wires, resistors or other passive components.



Flexible Bus board should be used when the operation involves static burn-in of large quantities of different device types. The main disadvantage of using the Flexible Bus concept is that individual devices are not protected from interaction with adjacent devices unless resistors and fuses are used separately at each socket.

A common modification of this idea is called "resistor isolated flexible bus" which is actually a dedicated board with resistors to locally protect each device. Another subset for protection is to isolate by row or column only.

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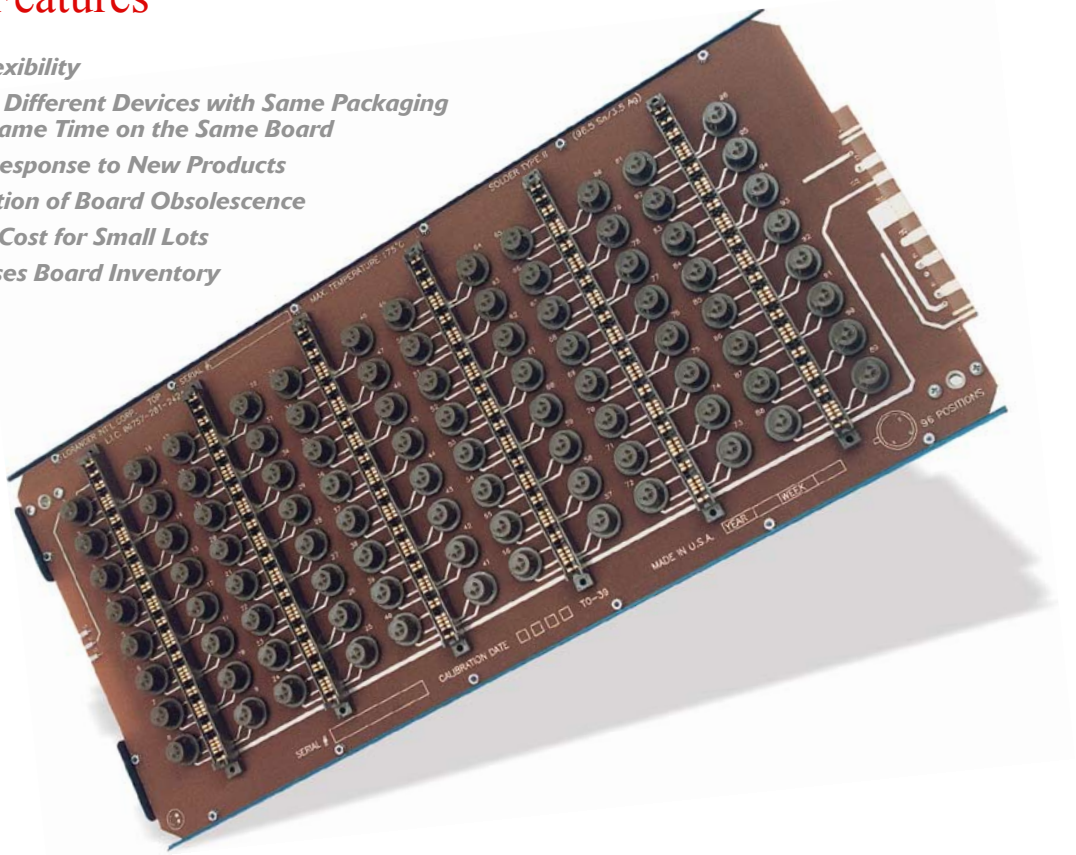
Programmable Boards

Design Features

- *High Flexibility*
- *Burn-in Different Devices with Same Packaging at the Same Time on the Same Board*
- *Quick Response to New Products*
- *Elimination of Board Obsolescence*
- *Lowest Cost for Small Lots*
- *Decreases Board Inventory*



Until we developed the **Programmable Board**, test engineers or quality managers responsible for burn-in faced a dilemma. Usually the last to know about a pressing need, the engineer had the least time to respond. But with the advent of the **Programmable Board**, that same engineer can now have a new circuit design functioning in hours rather than weeks.

To accomplish this quick response, boards had to be developed to offer the customer maximum flexibility down to the individual socket level. This flexibility is achieved through the use of removable program cards which plug into edge connectors soldered to the burn-in board. The edge connectors are placed between rows of device sockets which accept the DUTs. Each pin of each device socket is connected to the nearest pin on its edge connector by a trace on the burn-in board. Signal and bias power buses are also established by traces between each of the edge connectors. The incoming signals and bias power are hard wired with the customer desired program to the signal and bias power buses on the USD board, which in turn dedicates the pin selection on the parallel-wired edge connector. Once this is done, any pin of any socket can be connected to any signal or bias power present by wiring and inserting an inexpensive program card. Resistors and capacitors can also be included on the program card to provide device isolation and output loading.

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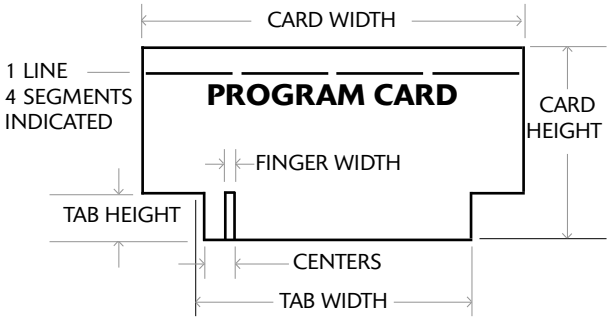
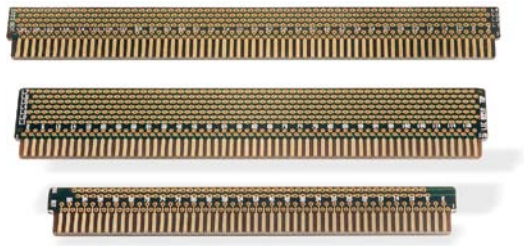
Program Cards





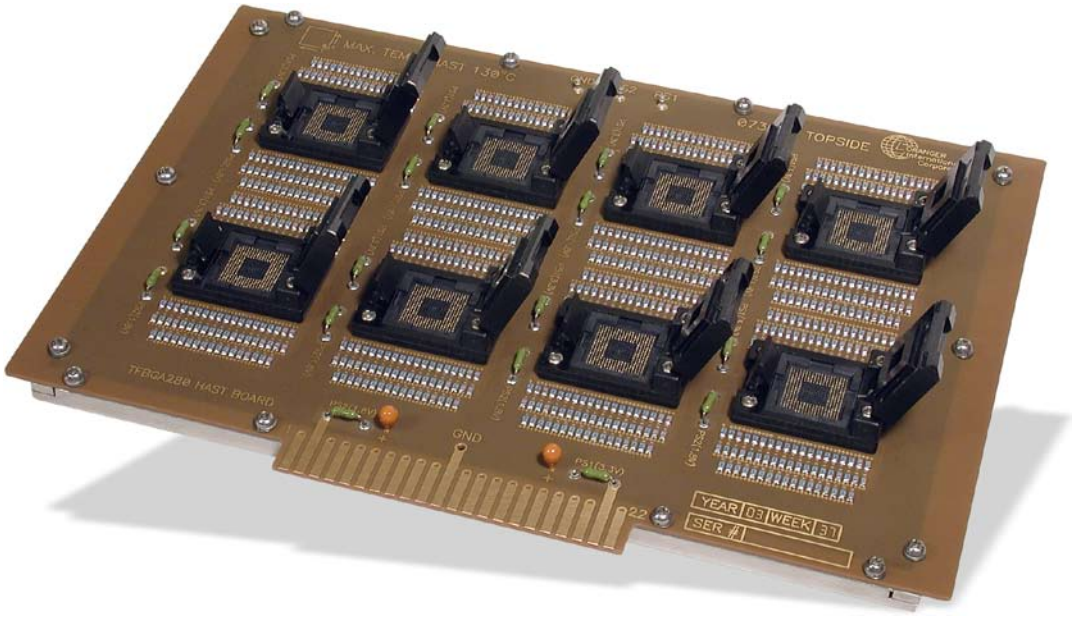
Custom, Populated Cards Also Available

Edgefingers	Key Slot	Pitch (in)	Connector P/N	Tab W* (in) (+0.015)	Tab H (in) (+0.015)	Card W (in) (+0.015)	Card H (in) (+0.015)	P/N
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	1.555	02201-271-1226G
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.885	02201-241-1226D
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.710	02201-221-1226B
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	1.155	02201-271-1224G
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.885	02201-241-1224D
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.710	02201-221-1224B
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	1.555	02203-271-1226G
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.885	02203-241-1226D
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.710	02203-221-1226B
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	1.155	02203-271-1224G
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.885	02203-241-1224D
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.710	02203-221-1224B
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	1.155	02205-271-1226G
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.885	02205-241-1226D
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.710	02205-221-1226B
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	1.155	02205-271-1224G
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.885	02205-241-1224D
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.710	02205-221-1224B
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	1.155	02208-271-1226G
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.885	02208-241-1226D
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.710	02208-221-1226B
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	1.155	02208-271-1226G
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.885	02208-241-1226D
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.710	02208-221-1226B
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	1.155	02212-271-1226G
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.885	02212-241-1226D
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.710	02212-221-1226B
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	1.155	02212-271-1226G
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.885	02212-241-1226D
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.710	02212-221-1226B
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	1.155	02218-271-1226G
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.885	02218-241-1226D
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.710	02218-221-1226B
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	1.155	02218-271-1226G
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.885	02218-241-1226D
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.710	02218-221-1226B
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	1.155	02223-271-1226G
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.885	02223-241-1226D
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.710	02223-221-1226B
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	1.155	02223-271-1226G
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.885	02223-241-1226D
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.710	02223-221-1226B

HAST AND HUMIDITY Boards

Design Features

- *Special board materials are available for HAST and Humidity applications*
- *Boards are designed with optimal trace and component spacing*
- *Conformal coating is available for additional protection*
- *Boards are available without frames to minimize thermal mass*
- *Surface mount or plated through hole component designs are available*
- *Traces can be placed only on the inner layers of the board for protection from the humidity environment*
- *Contact your Loranger sales representative to discuss your specific requirements*



With years of experience, Loranger has produced thousands of boards in a variety of configurations for every conceivable device. The board shown above is an example of a Humidity and HAST (Highly Accelerated Stress Test) design. Humidity conditions (typically 85 C and 85% relative humidity), and HAST conditions (typically 130 C, 85% relative humidity and elevated pressure) require special material and design considerations.

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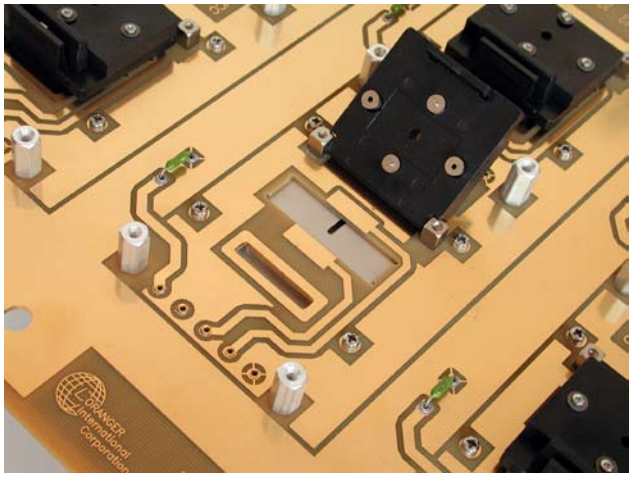
Specialty Boards

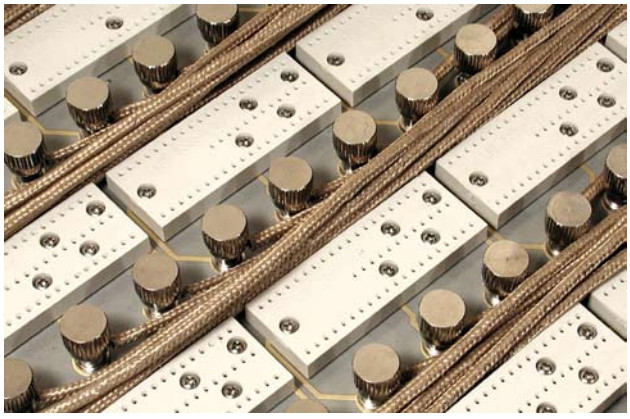
Design Features

- **Sockets and Boards for High Frequency Use** – Loranger offers over 30 years of experience in designing boards and sockets for high frequency burn-in. Low inductance contacts are used, or device leads can make contact directly to the gold plated pads on the board. Trace width and length, as well as characteristic impedance and signal termination are considered in the design.



High Frequency Board and Sockets

- **Sockets and Boards for up to 300 C Use** – For tests that require temperatures up to **300 C**, Loranger offers multiple solutions. Standard Plated Thru Hole sockets are available in high temperature plastics and contact materials. For up to 300 C use, porcelainized ceramic coated metal boards and solder-free surface mount DIP sockets are available.



High Temperature Board and Sockets

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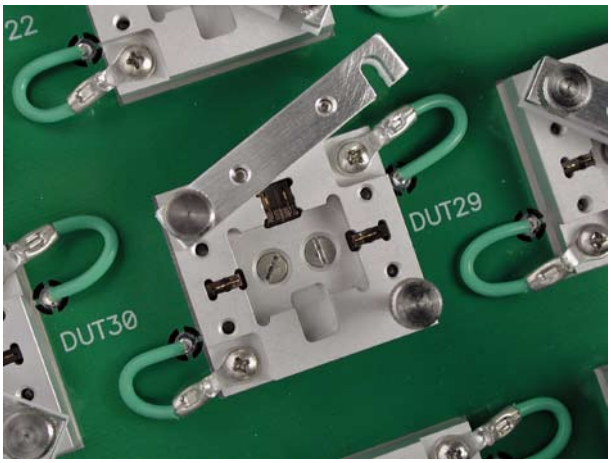
Specialty Boards

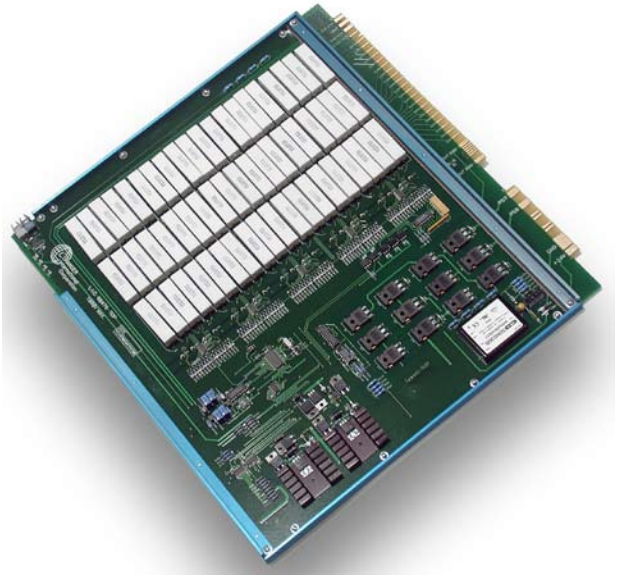
Design Features

- **Sockets and Boards for Custom Modules** – Loranger offers over 30 years of experience in designing custom boards and sockets for modules. Sockets utilize various contact methods. Heat sinks can be used to maintain a desired case temperature range. Trace width and length, as well as characteristic impedance and signal termination are considered in these designs.



Custom Module Sockets and Board

- **Multifunction Boards for Burn-in and Test Systems** – Loranger offers complete design and manufacturing services for System Multifunction boards for various burn-in and test systems. Designs include fuse, signal generation, and monitoring boards, as well as custom designs.



Environmental System Multifunction Board

Protection Equipment

Design Features

Isolation/Support Frame

- *Protect Boards from Physical Damage during Handling and Storage*
- *Stiffen Boards to Prevent Board Warpage and Twisting*
- *Guides Board Edgefingers into Mating Edge Connector*
- *Improve Dynamic Signal Integrity with Electrical Noise Isolator*
- *Safety Feature – Protect Operators from Sharp Solder Joint on Bottom of Board*
- *Protect Boards from Potential Fire from Shorted Devices on the adjacent Board Below*

Powered Cool-down Storage Rack

- *Maintain Power During Cool-Down*
- *Provide Safe Mobile Transportation of Boards*

A dependable burn-in assembly must rely on high-quality test sockets, board materials, special printed circuit layout techniques, and careful, experienced assembly procedures. The board support structure, powered cool-down racks and mobile storage carts are important but often overlooked items when burn-in boards are purchased.

We use a special **Isolation/Support Frame** to guard your investment by protecting the burn-in board assemblies for many years. The main purpose of the isolation/support frame is to protect the board from damage, since these assemblies are often roughly handled, especially when removed hot from burn-in chambers. The Isolation/Support Frame protects the burn-in board in the event it is dropped from a table or cart, a frequent accident in production burn-in areas.

Storage of board assemblies is also easier with this Isolation/Support Frame and our **Powered Cool-down Storage Rack**.

In the chamber, where boards experience severe environmental conditions for long periods of time, the Isolation/Support Frame stiffens the board along its entire length, minimizing board warpage and twisting as well as protecting the boards in case a shorted device on the board below bursts into flames.

For dynamic burn-in applications, the Isolation/Support Frame acts as a shield to prevent signals from radiating between boards, resulting in improved signal integrity. The Powered Cool-down Storage Rack enables boards to maintain power during cool-down – meeting certain military conditions.

Since static burn-in applications normally do not require such cool-down, our **Guardian™ Mobile Storage Cabinet** protects your investment while affording easy, safe transportation to and from the burn-in ovens economically.

PCB Layout Design Goals

Each PC board design must be treated uniquely as each layout is a combination of proper material selections, mechanical constraints and electrical wizardry. However, the following list of design goals should be reviewed on each layout.

- **Maximize Voltage Spacing** – generally line spaces of 0.010" (min) can be maintained for differentials of less than 50 volts. However, we've built boards with 1,000 volt differentials with consequent increased trace spacing.

- **Minimum Line Widths and Spaces** – generally 0.010" line widths and spaces can be easily obtained. However, 0.025" minimum spaces and traces are preferred to accommodate manufacturing cost and wear concerns. Smaller dimensions add significant costs, but we've produced boards having 0.004" lines and spaces!

- **Multilayer Design** – where possible, double-sided PC boards with plated-thru-holes are preferred for economy, reliability and ease of repair. However, multi-layers of 4 to 26 layers are available.

- **Circuit Layout** – we normally prefer a 1/2" "circuit-free" zone around the entire perimeter of the PC board, save the edgefinger area, to meet manufacturing standards, sharpness of layout and mechanical attachment spacing for framing like the **Isolation/Support Frame**.

- **Plated-thru-hole Design** – economic concerns generally force our designers to consider four rules for PTH sizing:
    1) Minimize the number of different hole sizes to avoid drill bit changes
    2) Ideally design the PTHs to be 0.010" over the diagonal of the socket or device lead fitting the hole for good solderability and ease of component loading
    3) Refrain from holes under 0.031" diameter to meet manufacturing concerns (drill bits below 0.031" break and wander easily – adding significant cost for holes below 0.015" diameter.)
    4) Respect the ratio hole diameter to PC board thickness (1:3 maximum). To assure accuracy and economy, 0.040" minimum holes to 0.062" thick PC boards work well.

- **Feed-thru Holes** – minimize the number of feed-thru holes that do not have a component lead soldered into it to enhance reliability.

- **Pad Areas Around PTHs** – for soundness of solder joints, design with a minimum of 50% more pad area than PTH area (0.010" minimum annular ring).

- **Blind and Buried or Built-Up Vias** – minimize the use of vias in multilayer design for circuit integrity and cost.

- **Other Design Issues** – Following are guidelines for the proper techniques to be used when designing burn-in boards for RAM, ROM, CPU and other electrically-delicate devices. Based upon individual customer requirements, we incorporate these and other proprietary techniques to produce high-quality burn-in boards with exceptional signal integrity. Separate cost must be quoted, however, to uniquely tune a design for a specific device type.

Continued on Following Page

PCB Layout Design Goals

- **Power Distribution** – The single most important aspect of successful memory burn-in board design is good power distribution accompanied with carefully designed decoupling and power girding.

- **Power Grids** – Power distribution is an important layout consideration. Both voltage and ground buses should be bused up and down the burn-in board throughout every device position, providing multiple paths through the array, reducing the effective inductance of the power distribution system. Traces running the power supply voltages throughout the array should be as wide as possible.

- **Bulk Decoupling** – For low-frequency decoupling, use 47 to 200µF capacitors between the supply voltage and common return. These capacitors should be solid tantalum capacitors which have better transient response than most other large value capacitors and put more capacitance into a small package, simplifying board layout. Half the bulk capacitance should be placed near the point where the supplies enter the board and the other half at the far side of the DUT so the array lies between the bulk decoupling capacitors. It is important that both the capacitance and voltage ratings of solid tantalum capacitors be derated for use at 125°C, the maximum operating temperature specified by most capacitor manufacturers. Although solid tantalum capacitors are expensive, their cost is insignificant when compared to the value of the DUT they protect.

- **Local Decoupling** – to avoid high frequencies and overcome the voltage spikes developed on power supply pins of memory devices when turned on or off by dynamic control signals. Board layout utilizing a 0.1µF capacitor per DUT. Located physically close to each chip and have the shortest possible traces from their respective power supply to the ground. To reduce inductance further, these traces should be as wide as area will allow.

- **Speed and Signal Distribution** – the second most important aspect of successful burn-in board design is signal distribution.

TABLE I - ADVANCED CMOS DESIGN GUIDELINES

Description	Crosstalk	Internal Rail Noise	Power Dist Noise	EMI
Use outputs close to ground for asychronous outputs		X		
Run traces perpendicularly to adjacent layers	X			X
Keep coupled as short as possible	X			X
Shield asychronous traces	X			X
Avoid wirewrap on long backplane asychronous signals	X			X
Separate analog traces	X			X
Use power and ground planes	X	X	X	X
Use decoupling capacitors		X	X	X
Use termination	X			X
Keep I/O traces short	X			X
Minimize trace length	X			X
Minimize power impedance			X	X
Keep system boxes electrically isolated				X
Use leadless components when possible	X			X

In summary, the foregoing rules are general, sound, engineering design practices. Unique needs may force the modification or enhancement of these rules. Other concerns for electrical noise, line termination and decoupling, may further augment the design and layouts. PTH pads, conductor paths, edgefinger plating, nomenclature, solder mask and fabrication details are covered by IPC-A600 Process Specifications.

Laminate Materials Data

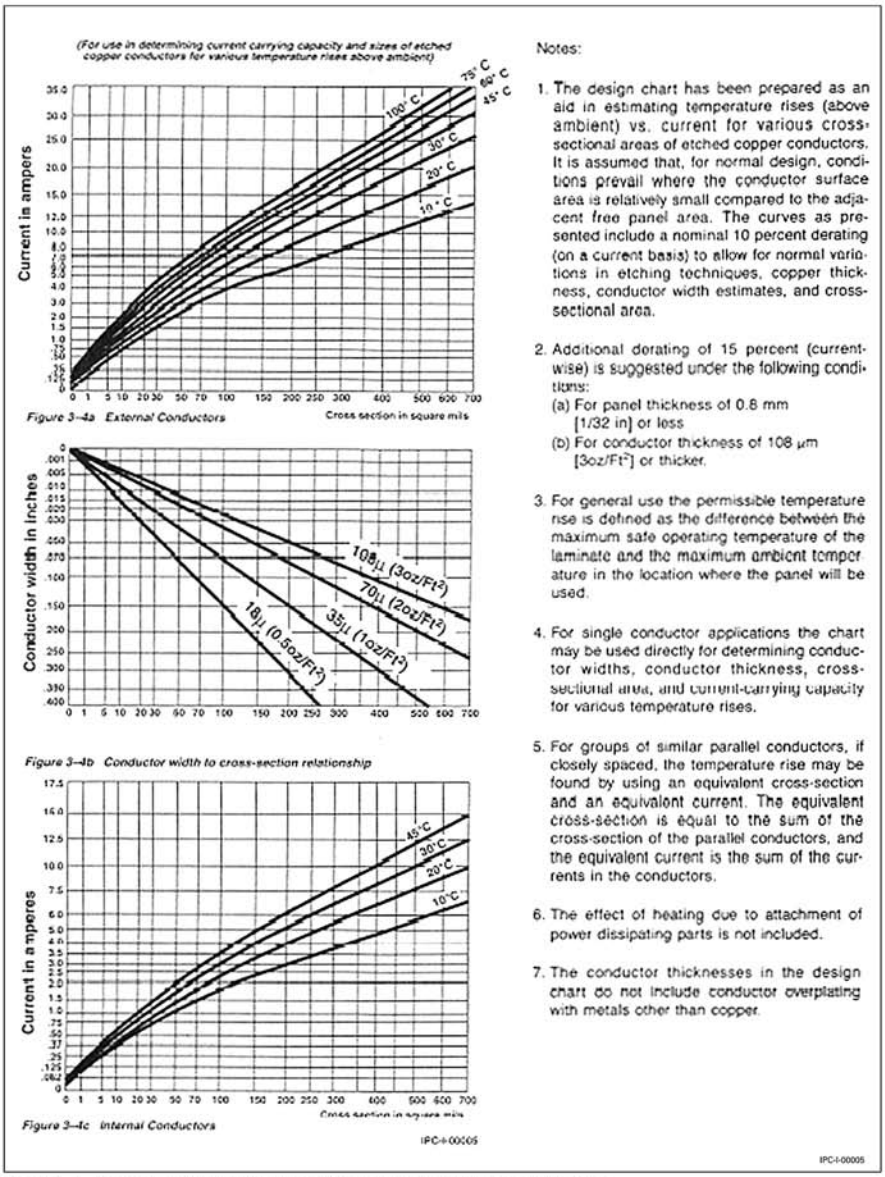


Figure 3–4 Conductor thickness and width for internal and external layers (inches)

PC Board Conductor Current-Carrying Capacity

The above charts illustrate the current-carrying capacity of various PC board conductor widths for different temperature rises above ambient. Since burn-in is normally performed at elevated temperatures, a safety factor is required. The charts are copied from Mil-STD-275C.

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Laminate Materials Data

TYPE	FR-4/G-10[1]	FR-5/G-11[2]	Addition[4] Polyimide	Epoxy[5] Copolymer	Special[6] Epoxy	Teflon®[3] (PTFE)
PROPERTIES						
GENERAL PROPERTIES						
General Applications	Ambient Temp to 100°C	Low-Cost 125°C Applications	Best to 210°C Applications	Best to 160°C Applications	Low Leakage	Microwave Substrate
Water Absorption (% in 24 hrs)	0.08 - 0.20	0.11 - 0.25	0.16 - 0.40	0.11 - 0.20	0.08	0.01 - 0.02
Normal Color	Whitish Green	Whitish Green	Reddish Brown	Reddish Brown	White or Natural	Gray
Specific Gravity	1.80 - 1.93	1.80 - 1.90	1.80 - 1.85	1.80	1.8 (min)	2.20
MECHANICAL PROPERTIES						
Peel Strength (lbs/in of width)	8.0 - 10.5	8.0 - 9.0	4.8 - 9.0	6.0 - 9.5	10.0 - 12.0	8.0
Flexural Strength L-W (psi x 10^3)	70 - 95	70 - 80	50 - 97	75 - 100	70	15
Izod Impact L-W (notched, ft-lbs/in)	13 - 15	11 - 12	10.3 - 13	N/A	11	N/A
Hardness (Rockwell M Scale)	110	110	120	N/A	115	Soft
Compression Strength (psi x 10^3) FW	55 - 65	65	N/A	N/A	N/A	4
Tensile Strength (psi x 10^3)	50 - 54	50	50	N/A	N/A	4
ELECTRICAL PROPERTIES						
Dielectric Constant (at 1 MHz)	4.6 - 4.8	4.7 - 4.8	4.4 - 5.3	4.5 - 4.8	4.7 - 4.9	2.1 - 2.6
Dielectric Strength (volts/mil S-T)	500 - 800	500 - 800	22 kV - 60 kV	800	60 kV (min)	50 kV
Dissipation Factor (at 1MHz)	0.019 - 0.021	0.02	0.003 - 0.02	0.002 - 0.015	0.02	0.0004 - 0.0008
Volume Resistivity ($10^{14}\Omega$-cm at 23°C)	0.05 - 5.10	0.01 - 3.00	10.00	3.00	1.00 - 10.00	0.10 - 1.00
Surface Resistivity (Ω/square at 23°C)	0.01 - 0.90	0.001 - 0.04	5.00	0.30	0.50	0.01 - 3.00
Arc Resistance (seconds)	75 - 120	120	127 - 180	123	100	180
THERMAL PROPERTIES						
Loranger Estimated Continuous Heat Resistance	100°C	125°C	210°C	160°C	125°C	210°C
Mfg'er Temp Rating - Electrical	130 - 138°C	140 - 149°C	260°C	200°C	130°C	260°C

[1] FR-4 is the flame-retardant version of Nema G-10*
[2] FR-5 is the flame-retardant version of Nema G-11 laminate for critical electrical applications
[3] UL 94 VEO = 10-second flameout after source removed and no drip (i.e., socket adaptors, humidity tests)
[4] UL 94 VEO = 10-second flameout after source removed and no drip
[5] UL 94 VE2 = 30-second flameout after source removed with drip

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Component Materials Data

PC Board Capacitor Specifications

Characteristics of Capacitors Used in Burn-in

TYPE >>>>	Tantalum		Ceramic			
Parameters	Wet Slug	Solid	NPO	X7R	Film	Mica
Mfg Rated Temp Limit	125-175°C[1]	125°C	125-200°C[2]	125°C	100-175°C[3]	85°C
Generally Selected for	150°C and Hi-capacitance	125°C and Hi-capacitanc	150°C	125°C	Not For Burn-in	Not For Burn-in
Voltage Rating	3-500V	3-100V	50-200V	50-200V	100-600V	200-500V
Type Voltage Selected	35-50V	35-50V	500-100V	50-100V	100-200V	200V
Surge Voltage @ 85% (% rated)	115%	115%	250%	250%	150%	200%
Capacitor Rating	1-1200µF	0.001-300µF	1-10,000pF	1-270,000pF	200pF - 10µF	1-5,500pF
Capacitor Change Due to Temp (% at Rated Temp)	+20 to -80%	+15 to -10%	±30 ppm/°C	±15%	±5%	±100 ppm/°C
General Tolerance	5-20%	10-20%	1-5%	10-20%	5-20%	1-20%
Dissipation Factor	9-20%	4-10%	0.10%	2.5%	0.75%	0.2%
Frequency Limit at 23°C	100 kHz	1 MHz	70 MHz	11 MHz	100 kHz	100 MHz
Insulation Resistance at 23°C	N/A	N/A	100,000 MΩ	100,000 MΩ	30,000 MΩ	100,000 MΩ
Relative Cost	Most Expensive	Moderately Expensive	Moderately Expensive	Above Average	Average	Least Expensive

[1] Some go to 175°C w/voltage derating.
[2] Glass-cased NPO caps work up to 200°C in small cap values (below 1000pF) and derated voltage.
[3] Teflon® film can go to 175°C with low cap values and derated voltages.

NOTE: Many factors affect cost and this relative listing may change depending on specific situations (particularly higher temperature in a class.) Specific manufacturers' data may vary from data shown (reference only).

Additional Considerations

Uninsulated Wire Data

Ave. Gauge	Dia (in)	Circular (mils)	Current Carrying Capacity	Lbs per 1000 ft	DC Resistance (mΩ / ft)
24	0.02	404	1	1.2	51.0
22	0.025	640	1.5	1.9	32.0
20	0.032	1,020	2.4	3.1	20.0
18	0.04	1,620	3.8	4.9	13.0
16	0.051	2,580	6	7.8	8.0
14	0.064	4,110	9.7	12	5.0
12	0.081	6,530	15	20	3.0
10	0.102	10,380	24	31	2.0
8	0.129	16,510	39	50	1.3
6	0.162	26,204	62	79	0.8
4	0.204	41,740	99	126	0.5
2	0.258	66,400	157	201	0.32
0	0.325	106,000	252	320	0.2
00	0.365	133,000	316	403	0.16
000	0.410	167,800	386	508	0.13

NOTE: Current-carry capacity is based on maximum current that will cause less than a 10°C rise above ambient.

Recommended Conductor Spacing

Minimum Space Between Conductors at Various Altitudes

Applied Voltage	Sea Level (in)	6,500 ft (in)	10,000 ft (in)
0-200	0.010	0.013	0.018
300	0.026	0.033	0.038
400	0.044	0.057	0.065
500	0.069	0.087	0.100
600	0.096	0.122	0.140
700	0.131	0.165	0.190
800	0.166	0.209	0.240
900	0.207	0.261	0.300
1000	0.252	0.318	0.365

NOTE: 1) Voltage and altitude affect minimum spacing requirements.
2) Humidity and salt contaminating environments require further derating on the above values. Conformal coating enhances reliability by protecting the board from contamination and

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Component Materials Data

PC Board Resistor Specifications

Characteristics of Resistors Used in Burn-in

RESISTOR TYPE >>> PARAMETER	Wirewound	Metal Film	Carbon Film	Carbon Composite	Thick Film Pwd Oxide
Cost	Most Expensive	Above Average	Average	Least Expensive	Above Average
Generally Selected for	160°C (Type III)	150°C (Type II)	125°C (Type I)	Not for Burn-in	to 175°C
Wattage Range	1 to 1000W	1/10 to 3W	1/2 to 2W	1/8 to 2W	1 to 9W
Practical Resistance Range (Ω)	0.1 to 10k	10 to 1 M	5 to 1 M	5 to 1M	0.1 to 240k
Temperature Coefficient (ppm/°C)	+20 to +4000	+25 to +100	+200 to +600	+625 to +3000	+200
Momentary Overload (5 seconds)	800% rated wattage	500% rated wattage	500% rated wattage	500% rated wattage	250% rated wattage
Noise	Most Quiet if Noninductive	Quiet	Less Quiet	Least Quiet	Quiet
Moisture Resistance	Good	Good	Fair	Very Poor	Average
General Tolerance	1 to 5%	1%	5%	10%	2 to 5%
Hi-Frequency	Inductive (Noninductive	Low Series Inductance	Negligible Series Inductance	Negligible Series Inductance	No Series Inductance
Characteristics	Wound-type increases cost)	Low Shunt Capacitance	Low Shunt Capacitance	Low Shunt Capacitance	Low Shunt apacitance

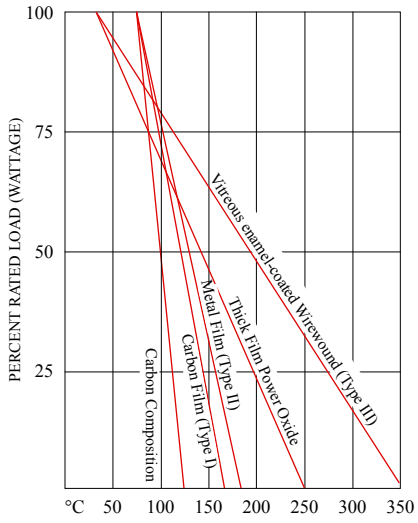
Derating Chart

Free Air Rating

Note: Reference Only. Specific manufacturers' devices may vary from data shown.

Ambient Temperature in °C

Typical Resistor Chart for Environmental Temperature



PC Board Solder Selections

Solder Point	Eutectic Max Use	Recommended	Composition
Type I	183°C	143°C	60% Sn, 40% Pb or equivalent
Type II	221°C	175°C	96% Sn, 4% Ag or equivalent
Type III A	310°C	250°C	97.5% Pb, 1% Sn, 1.5% Ag or equivalent
Type III B	308°C	250°C	5% Sn, 95% Pb or equivalent

Conformal Coating and Solder Masks

Solder masks are generally required. However, where insulation needs are great or where humidity or other atmospheric contaminates are present, conformal coating may be recommended also. Consult Loranger for recommendation of special applications.

Wire Size Selection

Generally, wire sizes should be one size larger than required to insure safety, minimize voltage drops and cross-talk between lines. Wire insulation is normally silicone or Teflon® for all oven atmospheres to 200°C and silicone glass braid above 200°C. Stranded wire is preferred over solid conductors. Outside the oven, THHN insulation is used.

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