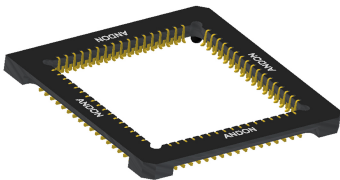
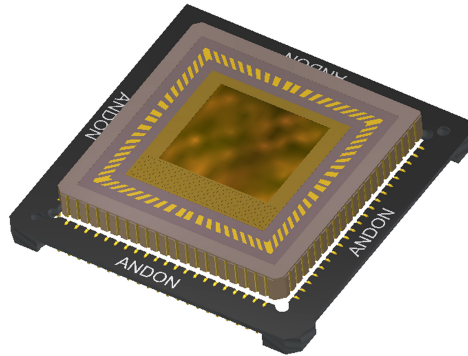
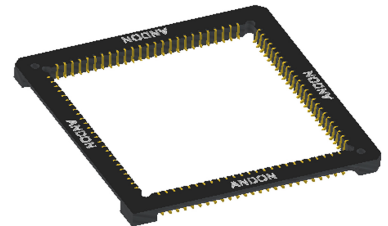




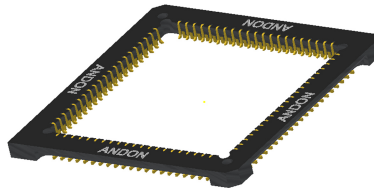
IMAGE SENSOR LCC SOCKETS



68 Pins LCC



100 Pins LCC



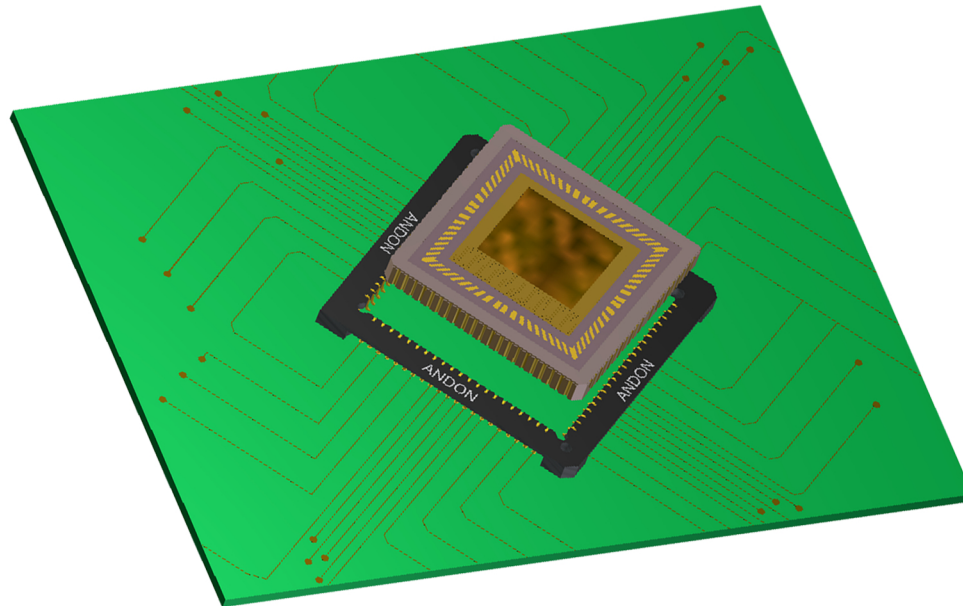
84 Pins LCC

OTHER CONFIGURATIONS AVAILABLE

***Largest Line of High Reliability Sensor Sockets
with Andon's Patented Contact***

www.andonelect.com or www.andonelectronics.com

LCC IMAGE SENSOR SOCKETS SOLUTION FOR THERMAL EXPANSION CRACKING OF SOLDER JOINTS



US PAT# 5,588,847

The popularity of *LEADLESS CHIP CARRIERS (LCC)* Image Sensors is increasing, due to the large number of connections on a smaller surface area, as compared to leaded DIP CCD/CMOS Image Sensors. Historically, the LCC Sensor is soldered directly on the printed circuit board (PCB), either by hand soldering each castellation or by convection soldering.

PROBLEM

A common problem occurs when soldering LCC Image Sensors directly on the PCB. The cracking of the solder joints is caused by the temperature build-up during hand soldering of the castellation or later, during the operation of the camera. The ceramic substrate expands, while the solder joints are fixed. The result is cracked ceramic or cracked solder joints. The problem is more severe with "Lead Free" soldering, requiring higher temperatures and longer soldering time.

SOLUTION

Andon developed a patented beryllium copper contact for LCC sockets to enter into the castellation of the LCC Image Sensor. The contact design has one leg imbedded into the plastic housing for stability, while the other leg is the spring member, exerting contact force to provide mechanical security and electrical contact. As the temperature rises, the ceramic substrate of the Image Sensor expands. The contact adjusts to the expansion and prevents cracking of the ceramic or the solder joint.

INSTALLATION

The LCC Socket is convection soldered or hand soldered. The LCC Image Sensor is installed into the socket by pressing on top edge of the Image Sensor, all the way down, directly to the PCB surface. A snap can be heard, which indicates the contacts have made the proper connection with the castellations.

LCC IMAGE SENSOR SOCKETS

The Image Sensor is securely held within the centerline of the LCC Socket due to the equal normal force of all the opposing contacts surrounding the plastic housing. This assures accurate positioning and focal length. The outstanding features of the

LCC Socket were originally praised by the cell phone industry for being able to withstand a drop test in four axis, without movement of the device. Millions of contacts have been in use with "ZERO" defects.

ADVANTAGES FOR USING LCC SOCKETS

- Reduce electro static discharge (ESD) due to less handling
- Eliminate soldering temperature which may affect the color array
- Eliminate need to de-solder
- Eliminate cleaning solution and scratches to glass plate
- Eliminate assembly line temperatures, humidity and shock

COST SAVINGS

Another cost savings feature is the economy achieved by soldering the Andon LCC Image Sensor Socket directly on the PCB instead of soldering the Image Sensor on the PCB. This provides for production line assembly throughput, without the concern for ESD problems. After PCB assembly, the Image Sensor can be plugged-into the socket as required. It is not necessary to maintain a large inventory of Image Sensors already soldered on PCB's. This saves a considerable amount of money (cash flow). In the event of an up-grade, simply un-plug the old sensor and install the new one.

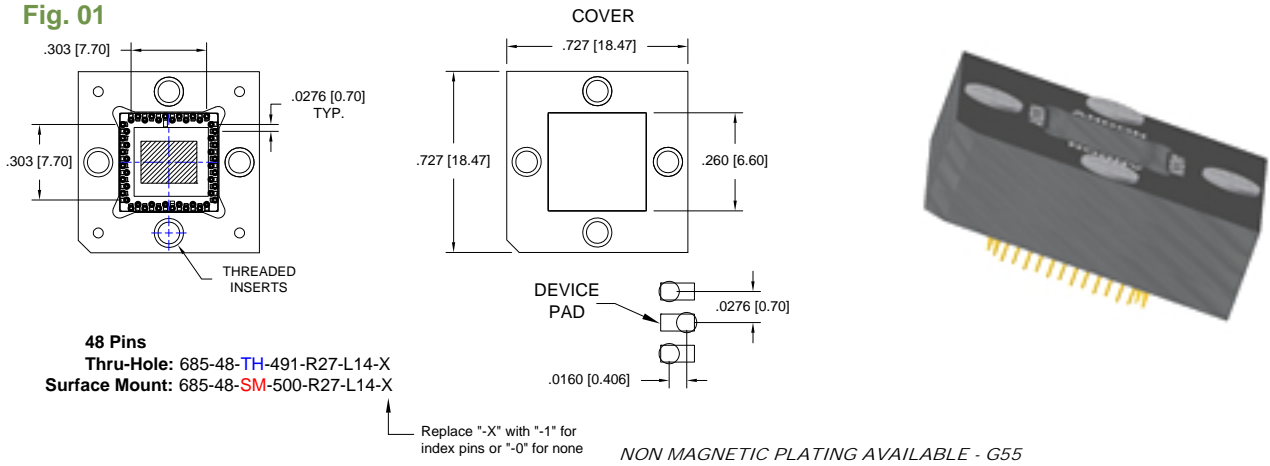
HIGH RELIABILITY

Image Sensors Sockets provide higher reliability because the sockets can be soldered to the motherboard in large quantities, later, as required, the Sensors can be plugged-in or unplugged and upgraded easily. The sockets simplify re-work and replacement problems as well as eliminate de-soldering blistering of the PCB. For Vision Systems, down time is minimized by being able to replace a defective Image Sensor quickly, especially where high speed production line failures can be costly delays.

Andon's Image Sensor Sockets provide Product Improvement and Cost Reduction. Andon Electronics provides interconnection components that help companies to cost effectively Test, Assemble and Replace their semiconductor devices.

.0276 [0.70] Pitch iLCC LGA Test Socket
48 PINS

Fig. 01

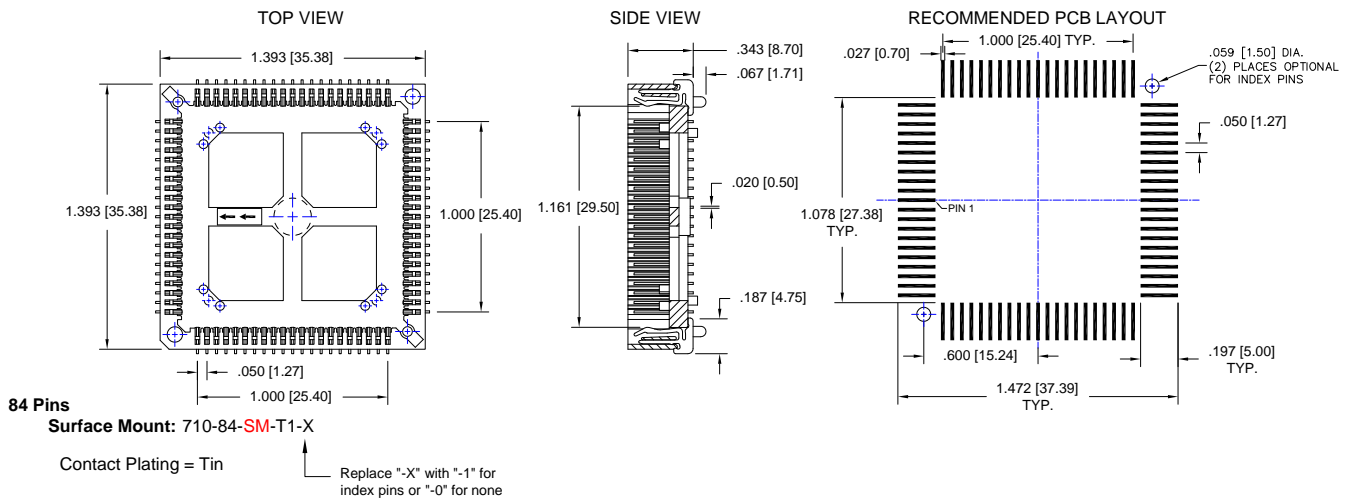


Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55

.050 [1.27] Pitch PLCC Socket
84 PINS

Fig. 02

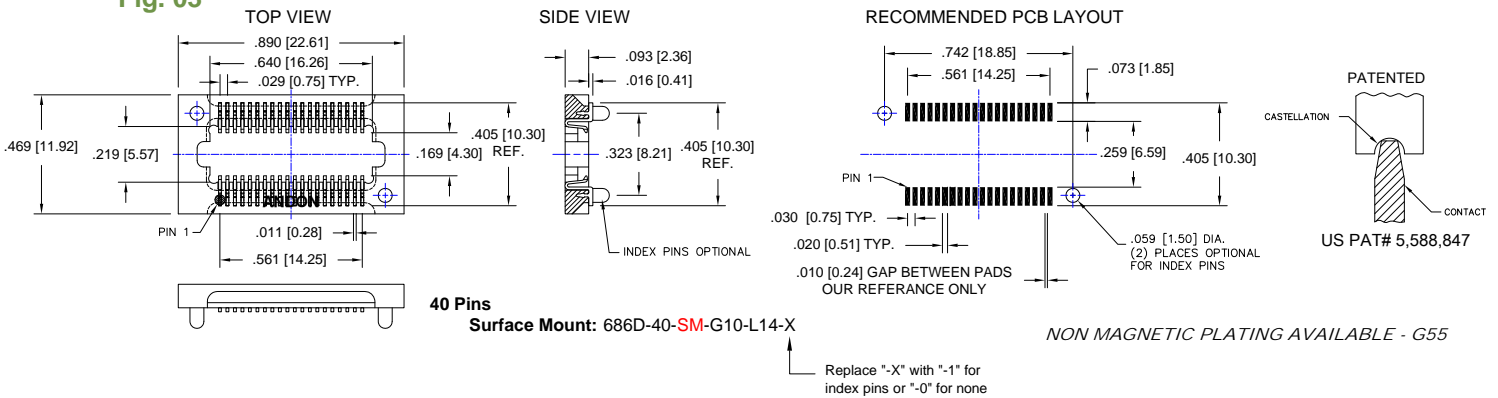


Replace "-X" with "-1" for index pins or "-0" for none

EXTRACTION TOOL AVAILABLE

Custom 20x2 .0295 [0.75] Pitch PLCC Socket

Fig. 03

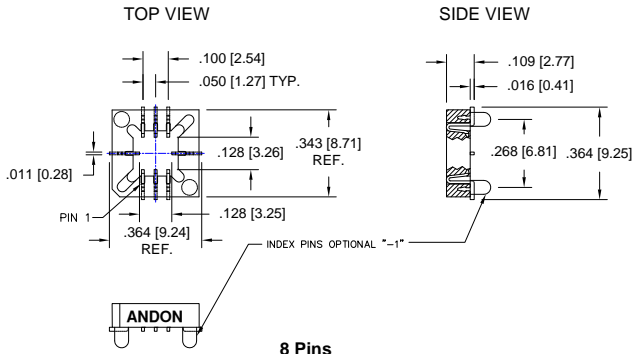


Replace "-X" with "-1" for index pins or "-0" for none

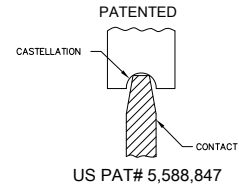
NON MAGNETIC PLATING AVAILABLE - G55

Custom .050 [1.27] Pitch LCC Sockets

Fig. 04



EXTRACTION TOOL AVAILABLE



8 Pins
Surface Mount: 620-08B-SM-G10-L14-X

Contact Plating = Gold

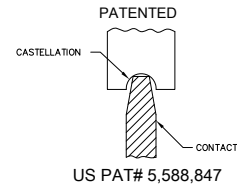
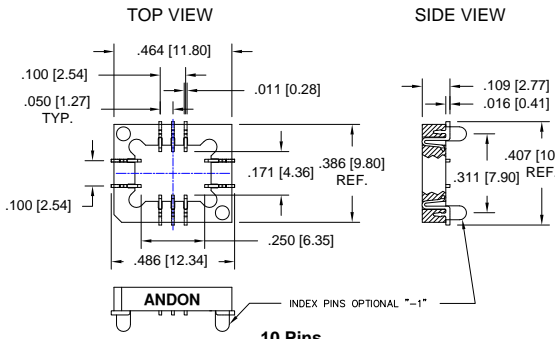
Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55

Fig. 05

Custom .050 [1.27] Pitch LCC Sockets

EXTRACTION TOOL AVAILABLE



10 Pins
Surface Mount: 620-10A-SM-G10-L14-X

Contact Plating = Gold

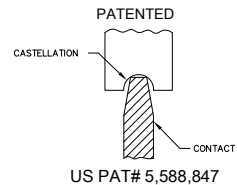
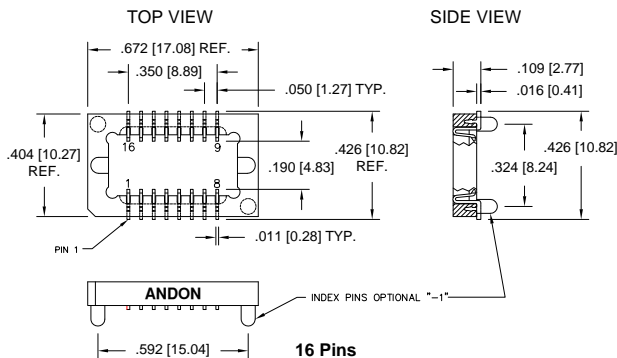
Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55

Fig. 06

Custom .050 [1.27] Pitch LCC Sockets

EXTRACTION TOOL AVAILABLE



16 Pins
Surface Mount: 620-16A-SM-G10-L14-X

Contact Plating = Gold

Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55

For Other Pin Configuration or Layouts, Contact Factory.

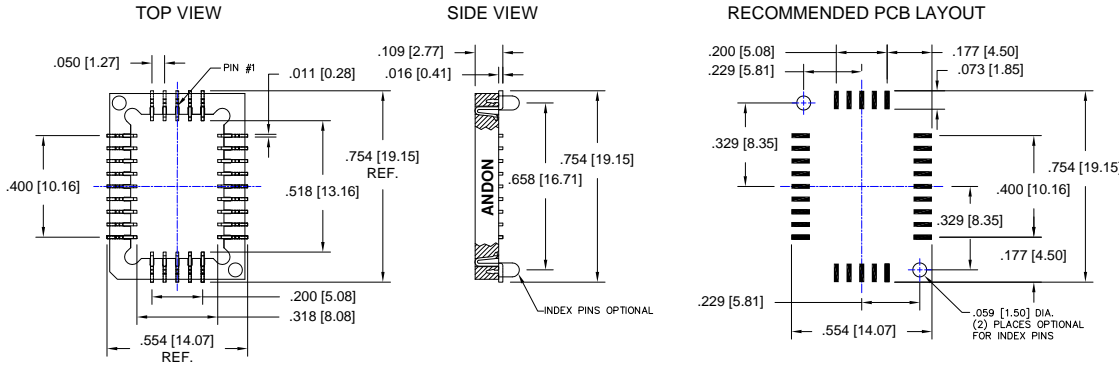
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RoHS Compliant
Andon Proprietary Information
LCC Sockets 06/20/2013

Fig. 07

Custom .050 [1.27] Pitch LCC Sockets

EXTRACTION TOOL
AVAILABLE



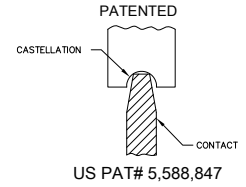
28 Pins

Surface Mount: 620-28A-SM-G10-L14-X

Contact Plating = Gold

Replace "-X" with "-1" for
index pins or "-0" for none

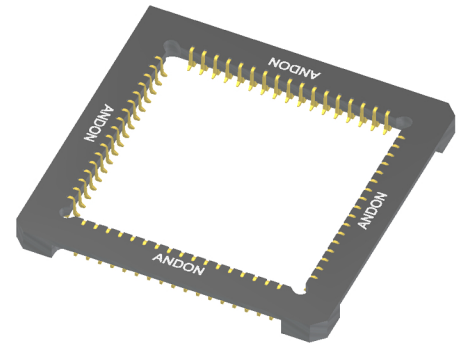
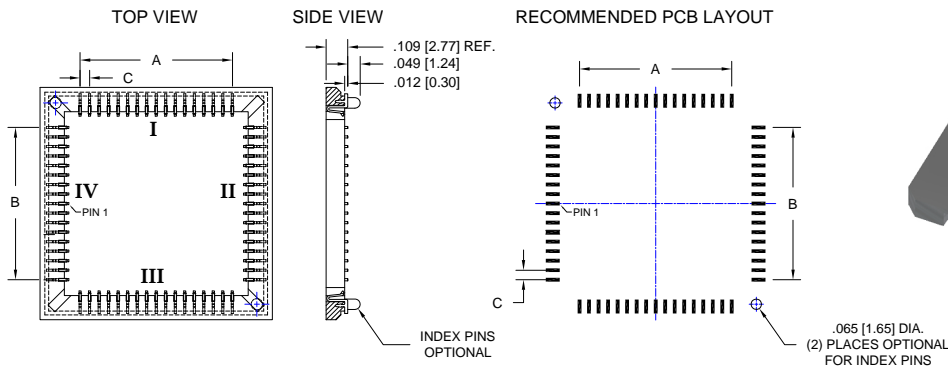
NON MAGNETIC PLATING AVAILABLE - G55



.050 [1.27] Pitch LCC Sockets

EXTRACTION TOOL
AVAILABLE

Fig. 08

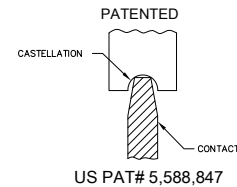


Andon Part Number	Pin QTY.	A	B	C	Number of Pins (per side)			
					I	II	III	IV
620-16-SM-G10-L14-X	16	.150 (3.81)	.150 (3.81)	.050 (1.27)	4	4	4	4
620-20-SM-G10-L14-X	20	.200 (5.08)	.200 (5.08)	.050 (1.27)	5	5	5	5
620-28-SM-G10-L14-X	28	.300 (7.62)	.300 (7.62)	.050 (1.27)	7	7	7	7
620-40A-SM-G10-L14-X	40	.950 (24.13)	.950 (24.13)	.050 (1.27)	20	0	20	0
620-44-SM-G10-L14-X	44	.500 (12.70)	.500 (12.70)	.050 (1.27)	11	11	11	11
620-52-SM-G10-L14-X	52	.600 (15.24)	.600 (15.24)	.050 (1.27)	13	13	13	13
620-68-SM-G10-S14-X	68	.800 (20.32)	.800 (20.32)	.050 (1.27)	17	17	17	17
620-84-SM-G10-L14-X	84	1.000 (25.40)	1.000 (25.40)	.050 (1.27)	21	21	21	21
620-100-SM-G10-L14-X	100	1.200 (30.48)	1.200 (30.48)	.050 (1.27)	25	25	25	25

Replace "-X" with "-1" for
index pins or "-0" for none

Contact Plating = Gold

NON MAGNETIC PLATING AVAILABLE - G55



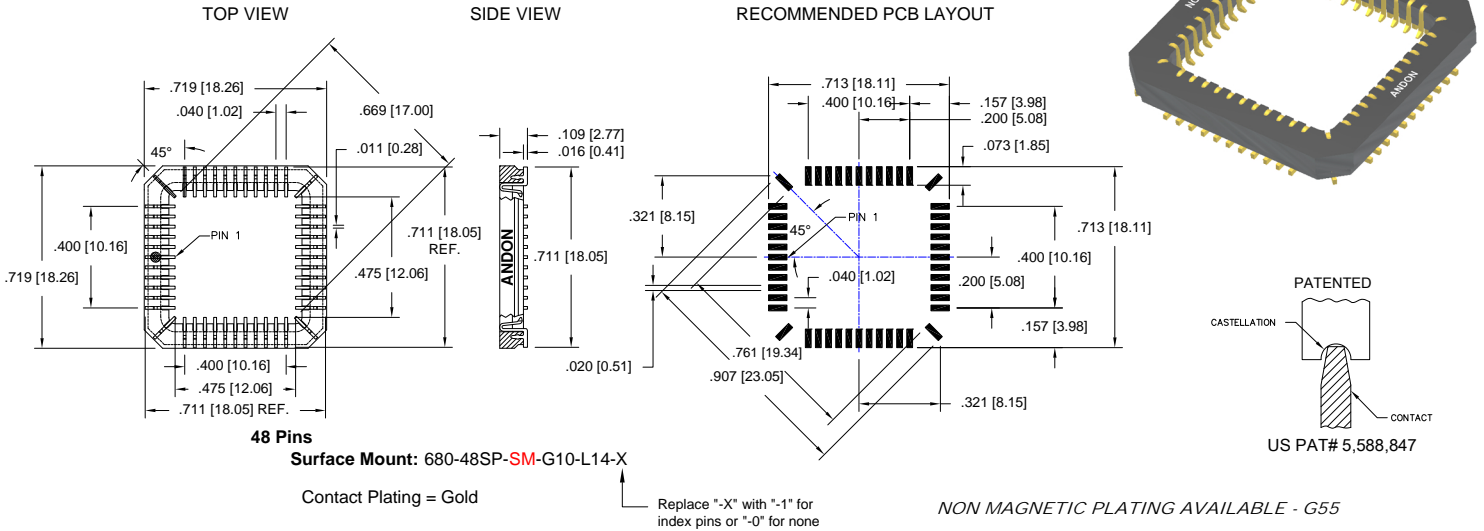
For Other Pin Configuration or Layouts, Contact Factory.

Custom .040 [1.02] Pitch LCC Sockets

EXTRACTION TOOL AVAILABLE

Fig. 11

DEVICE SIZE .500 X .500 OUTSIDE W/ .0079 CASTILATIONS

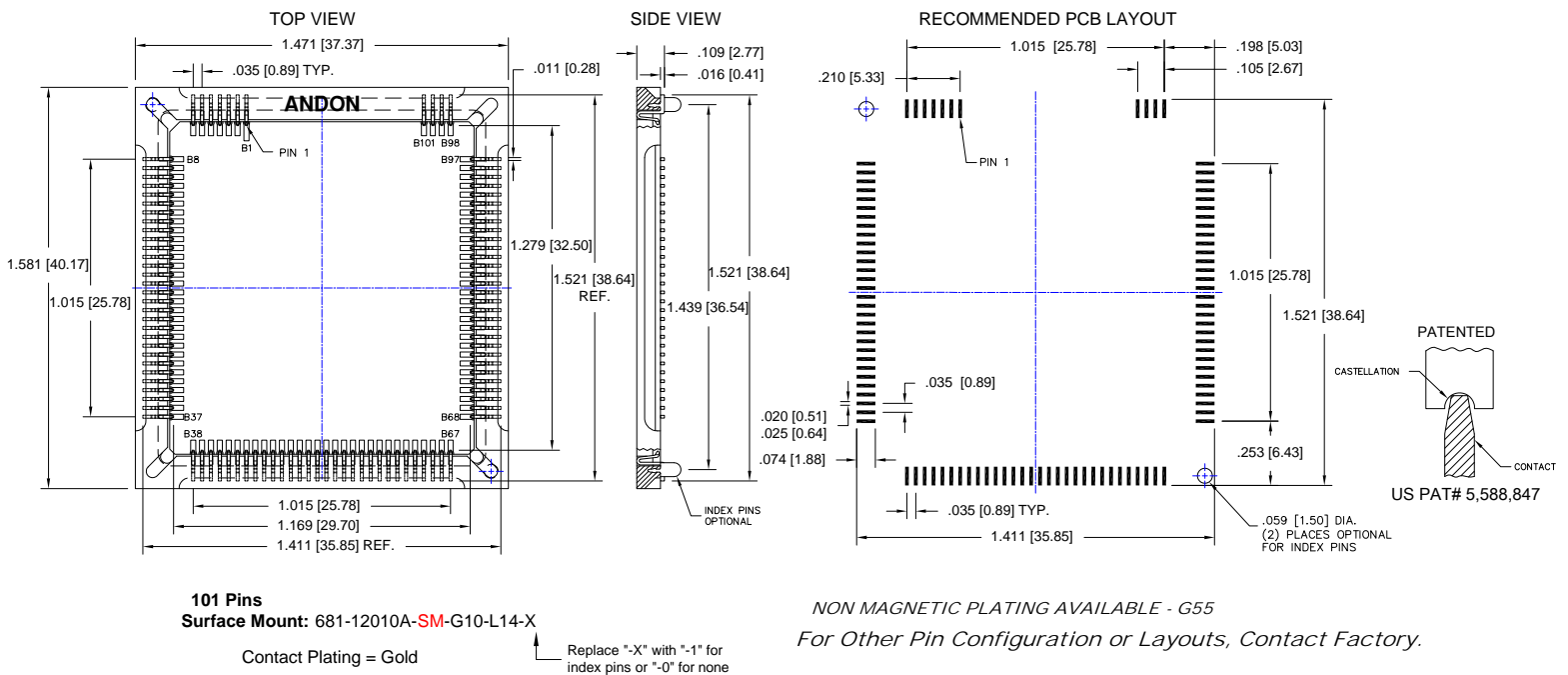


For Other Pin Configuration or Layouts, Contact Factory.

Fig. 12

Custom .035 [0.89] Pitch LCC Sockets

EXTRACTION TOOL AVAILABLE



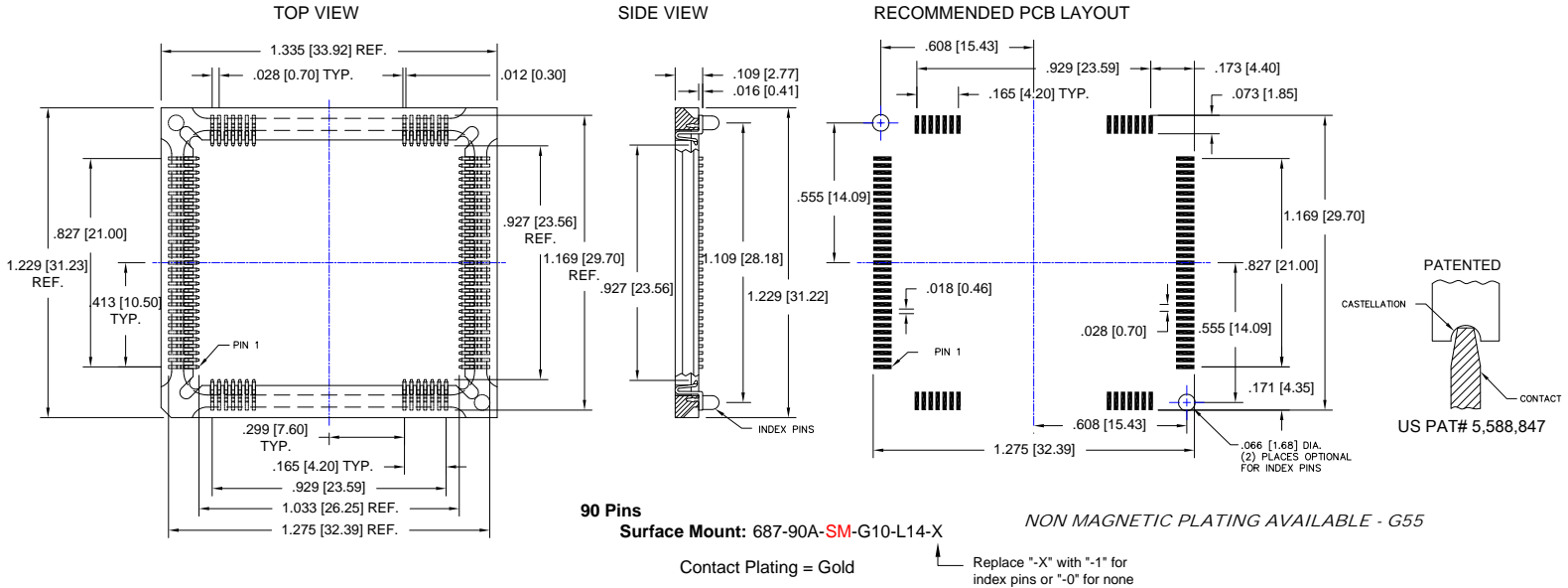
For Other Pin Configuration or Layouts, Contact Factory.

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Fig. 13

Custom .0276 [0.70] Pitch LCC Sockets

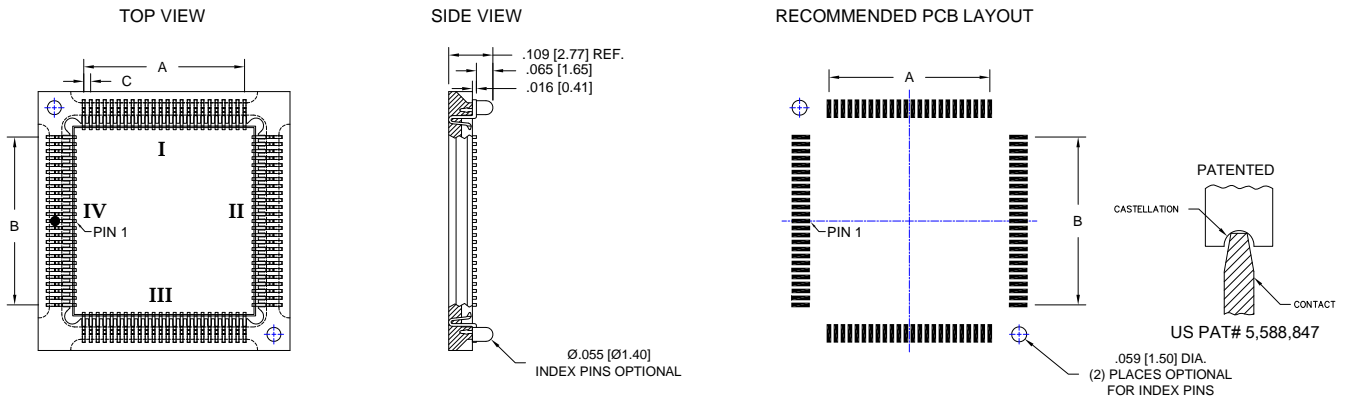
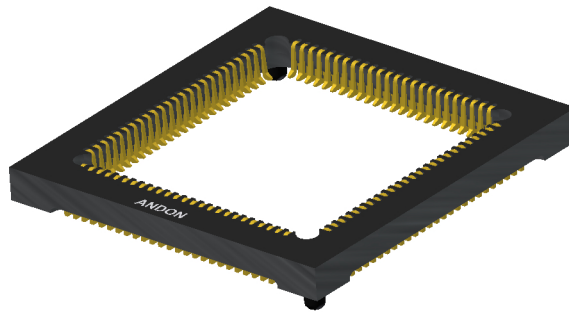
EXTRACTION TOOL AVAILABLE



.0276 [0.70] Pitch LCC Sockets

EXTRACTION TOOL AVAILABLE

Fig. 14



Andon Part Number	Pin QTY.	A	B	C	Number of Pins (per side)			
					I	II	III	IV
687-28-SM-G10-L14-X	28	.165 (4.19)	.165 (4.19)	.0276 (.070)	7	7	7	7
687-98-SM-G10-L14-X	98	.634 (16.10)	.634 (16.10)	.0276 (.070)	24	24	24	24

Replace "-X" with "-1" for index pins or "-0" for none

Contact Plating = Gold

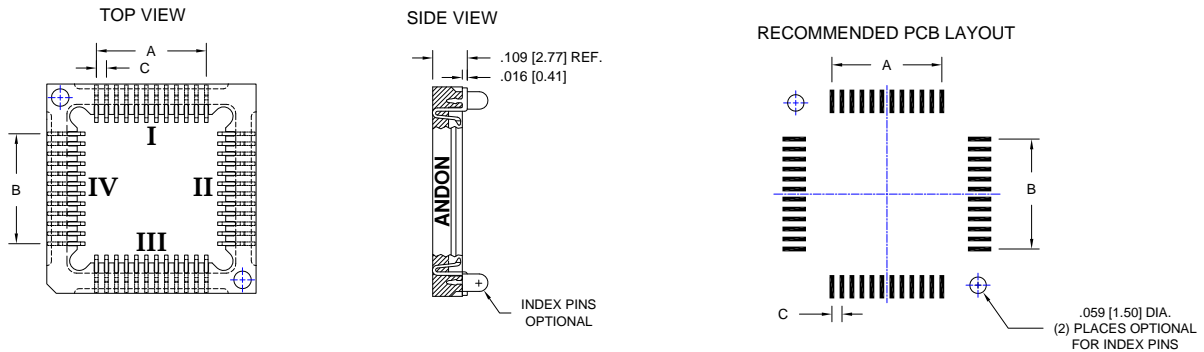
NON MAGNETIC PLATING AVAILABLE - G55

For Other Pin Configuration or Layouts, Contact Factory.

.0315 [0.80] Pitch LCC Socket

EXTRACTION TOOL AVAILABLE

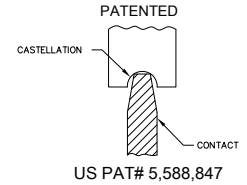
Fig. 15



Andon Part Number	Pin QTY.	A	B	C	Number of Pins (per side)			
					I	II	III	IV
690-48-SM-G10-L14-X	48	.346 (8.79)	.346 (8.79)	.0315 (0.80)	5	5	5	5
690-168-SM-G10-L14-X	168	1.354 (34.39)	1.354 (34.39)	.0315 (0.80)	42	42	42	42

Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55



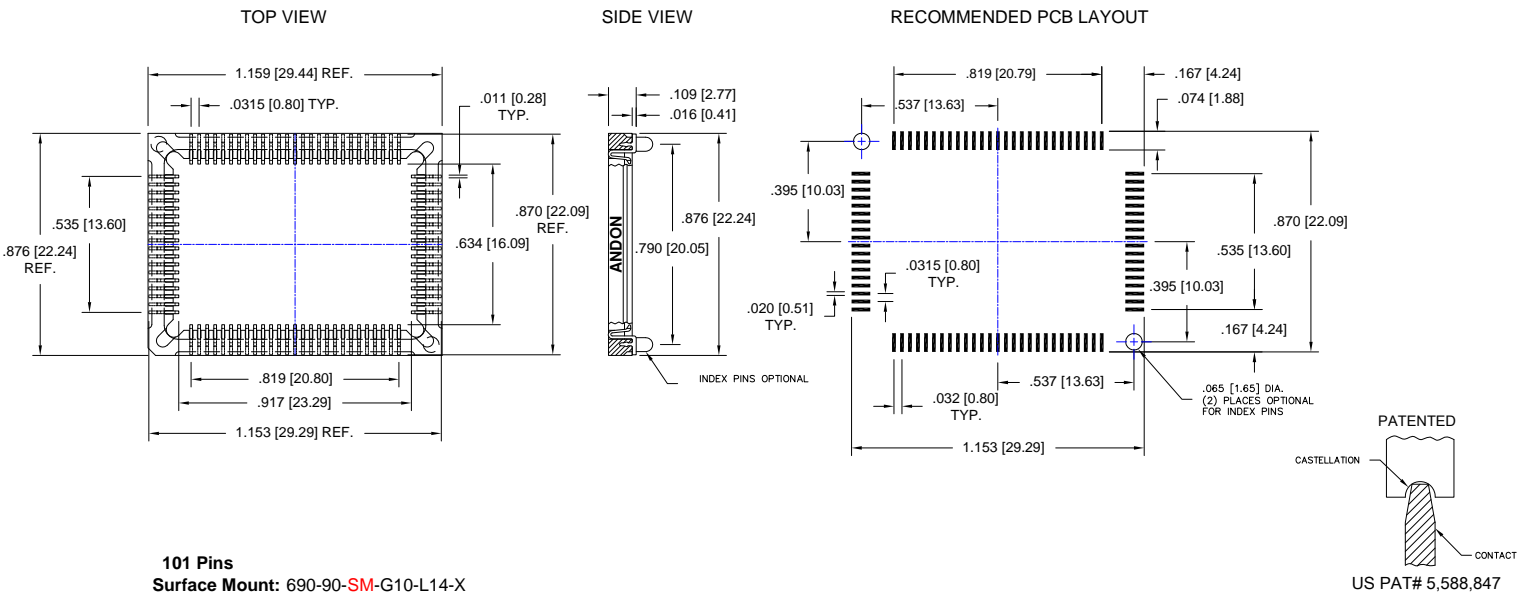
For Other Pin Configuration or Layouts, Contact Factory.

Contact Plating = Gold

Fig. 16

Custom .0315 [0.80] Pitch LCC Sockets

EXTRACTION TOOL AVAILABLE



101 Pins
Surface Mount: 690-90-SM-G10-L14-X

Contact Plating = Gold

Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55

For Other Pin Configuration or Layouts, Contact Factory.



B.C.E. s.r.l.

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