

# DY SERIES

## 0.5mm PITCH FLOATING CONNECTOR



### FEATURES

- ▶ Location error offsets  $\pm 0.5\text{mm}$  in the XY direction.
- ▶ High reliable design with effective mating length of  $1.25\text{mm}(0.049")$ .
- ▶ Suction area for automated mounting provided.
- ▶ Positioning posts are optional for manual mounting.
- ▶ Wide variations of contacts (30, 40, 50, 60, 80, 100, 120 and 140 pins) are available.
- \* Available pin count varies with the product type.
- ▶ Vertical and Stacked mating combinations.
- ▶ Stacked mating heights of 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14mm. (0.197, 0.236, 0.276, 0.315, 0.354, 0.394, 0.433, 0.472, 0.512 and 0.551")
- \* Available mating height varies with the product type.
- ▶ Shape of retention clip forming the large fillet.
- \* Optional type with a dust cap provided on a plug side is also available.

### ORDER CODE

**DY0**  -   **S** -  -

①                      ②                      ③                      ④                      ⑤

\*Please order in multiples of the quantity per package.

- ① **[Type] Receptacle** **DY00** : Without positioning posts **DY01** : With positioning posts
- ② **[Number of contacts]** **030** : 30 pin **040** : 40 pin **050** : 50 pin **060** : 60 pin **080** : 80 pin **100** : 100 pin **120** : 120 pin **140** : 140 pin
- ③ **[Contact tail style]** **S** : Straight
- ④ **[Number of packaging]** **Omit** : 1000pcs, per reel **A** : 500pcs, per reel
- ⑤ **[Anti-dust tape]** **Omit** : without anti-dust tape **BT** : with anti-dust tape (excl. DY00, DY01-50 pins, and DY01-A)

### ORDER CODE

**DY1**  -    -  -

①                      ②                      ③                      ④                      ⑤

\*Please order in multiples of the quantity per package.

- ① **[Type] Plug** **DY10** : Without positioning posts **DY11** : With positioning posts
- ② **[Number of contacts]** (S type) **030** : 30pin **040** : 40pin **050** : 50pin **060** : 60pin **080** : 80pin **100** : 100pin **120** : 120 pin **140** : 140 pin  
 \*The product of 30pin, 40pin and 50pin corresponds to the type of 5mm, 6mm and 7mm in the stack height.  
 (FS type) **060** : 60 pin **080** : 80 pin **100** : 100 pin **120** : 120 pin **140** : 140 pin  
 (L type) **030** : 30 pin **040** : 40 pin **050** : 50 pin **060** : 60 pin **080** : 80 pin **100** : 100 pin **120** : 120 pin **140** : 140 pin
- ③ **[Contact tail style]** **S** : Straight (Stacked height: 5 to 10mm) **FS** : Flexible straight (Stacked height: 11 to 14mm) **L** : Right angle
- ④ **[Stacked height]** (S type) **1** : 5mm(0.197") **2** : 6mm(0.236") **3** : 7mm(0.276") **4** : 8mm(0.315") **5** : 9mm(0.354") **6** : 10mm(0.394")  
 (FS type) **1** : 11mm(0.433") **2** : 12mm(0.472") **3** : 13mm(0.512") **4** : 14mm(0.551")
- ⑤ **[Number of packaging]** (S type) **Omit** : 500pcs, per reel (Stacked height 6 to 10mm) 1,000pcs, per reel (Stacked height 5mm)  
**A** : 500pcs, per reel (Stacked height 5mm)

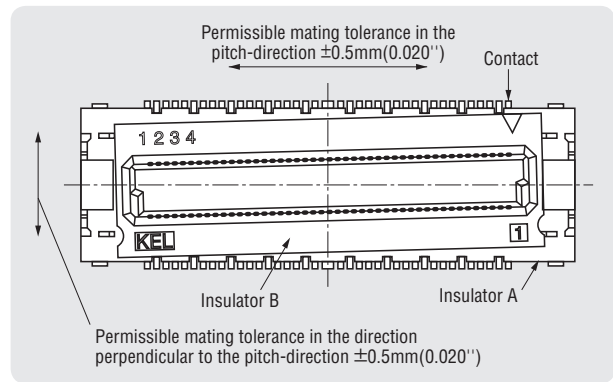
### SPECIFICATIONS

Material and plating		Electrical Characteristics	
Insulator material	Glass-filled LCP (UL94V-0), Black	Current rating	0.4A per contact 0.3A per contact (DY1□-□□□L)
Contact material	Copper alloy	Contact resistance	80mΩ max. 100mΩ max. (DY1□-□□□L)
Contact plating	Gold over Nickel	Dielectric withstanding voltage	200V AC for 1 minute
Retention clip material	Copper alloy	Insulation resistance	100MΩ min. at 250V DC
Retention clip plating	Gold over Nickel	Operating temperature	-40°C to +85°C

\*Regarding the rated current of the DY series, it is possible to design a current capacity exceeding the standard 0.4 A / pin. i.e. 0.5 A / pin.  
 Please contact your local KEL sales office.

## Floating Connector

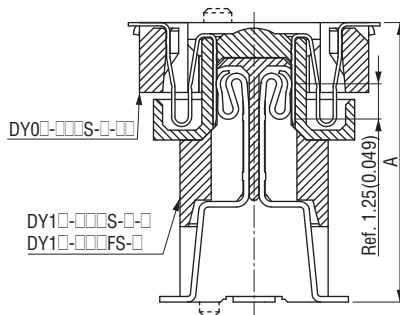
When the connector is mounted on the printed circuit board, a location error in the two directions of horizontal and vertical(XY direction) may occur at both connectors. In addition, if each printed circuit board is fixed to a case by screws after mating connectors, the connectors may have to compensate for the location error because a gap occurs during screwing to the printed circuit board. A connector having a tolerance to compensate for such an error or gap caused by vibration is called a floating connector. The DY series is a 0.5mm(0.020") fine pitch connector with  $\pm 0.5\text{mm}(0.020\text{'})$  floating mechanism and ensures sufficient compensation for location errors.



## Mating Drawing

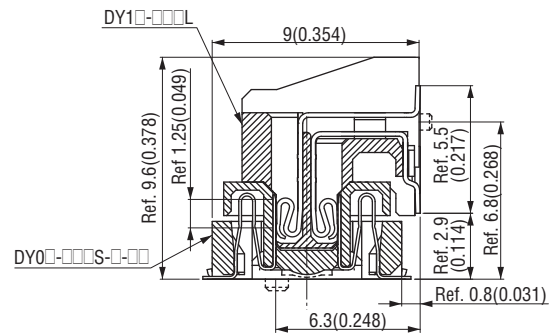
Unit : mm(inch)

### Stacked Mating



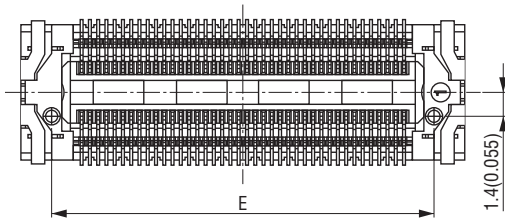
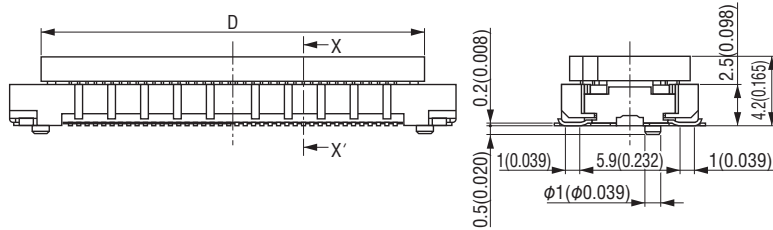
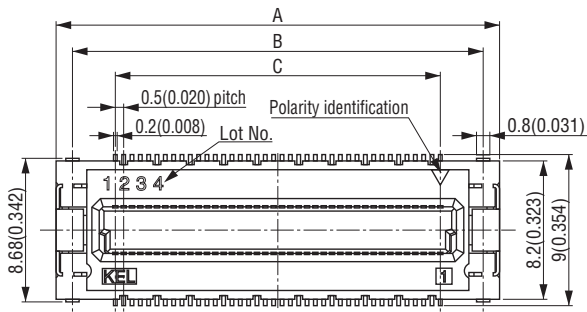
Part Number	A
DY1□-□□□S-1-□	5(0.197)
DY1□-□□□S-2	6(0.236)
DY1□-□□□S-3	7(0.276)
DY1□-□□□S-4	8(0.315)
DY1□-□□□S-5	9(0.354)
DY1□-□□□S-6	10(0.394)
DY1□-□□□FS-1	11(0.433)
DY1□-□□□FS-2	12(0.472)
DY1□-□□□FS-3	13(0.512)
DY1□-□□□FS-4	14(0.551)

### Vertical Mating

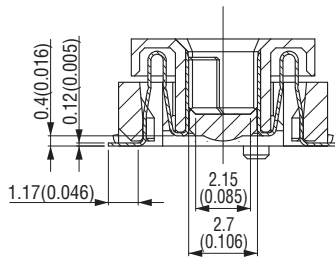


# DY0-□-□-□-□S-□-□ (Receptacle, Straight)

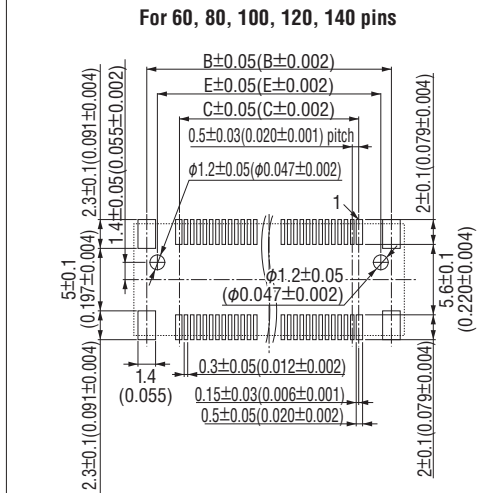
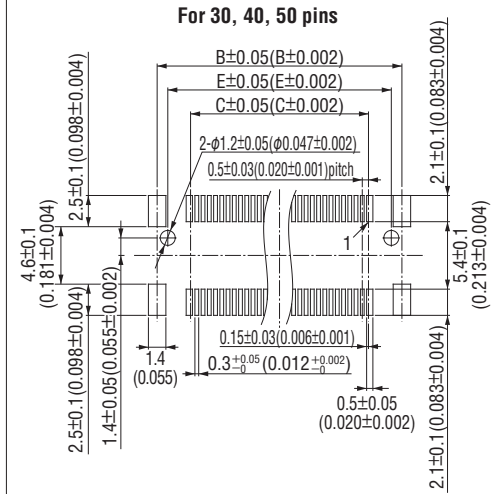
Unit : mm (inch)



### X-X' Cross Section



### Printed Circuit Board Layout (Component Side View)



Packaging style

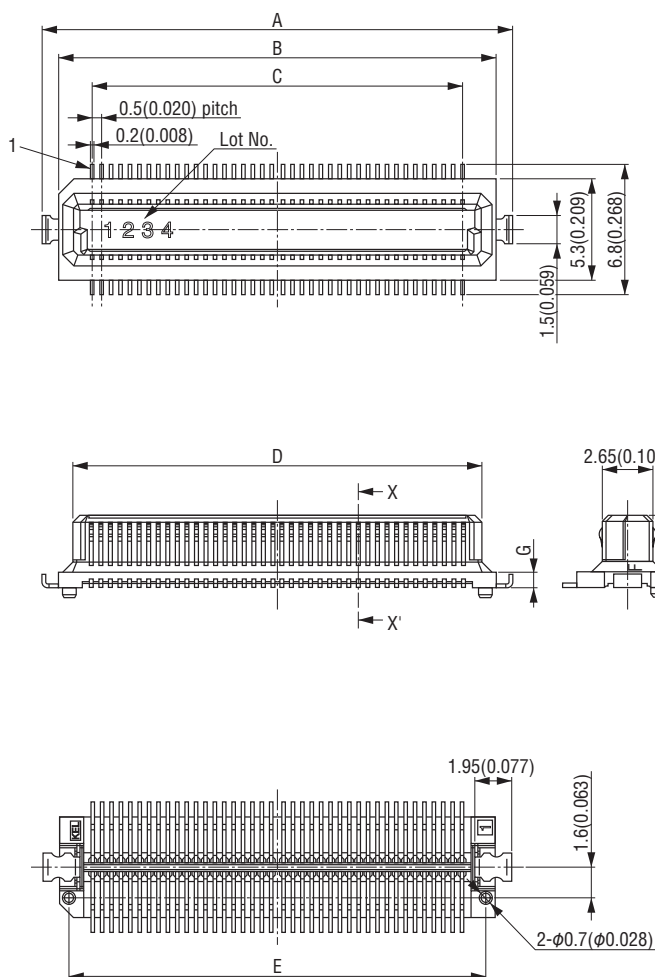
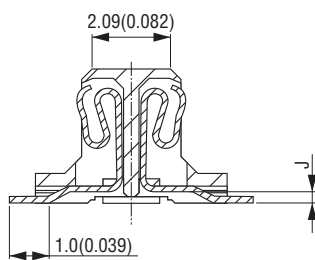
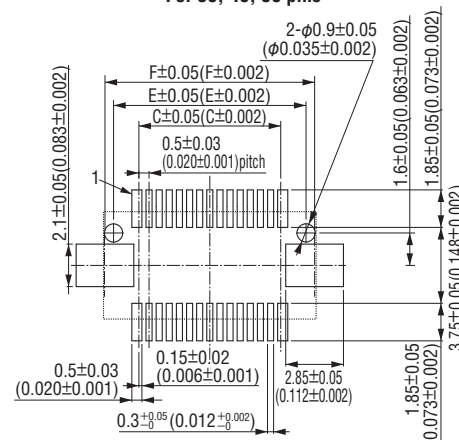
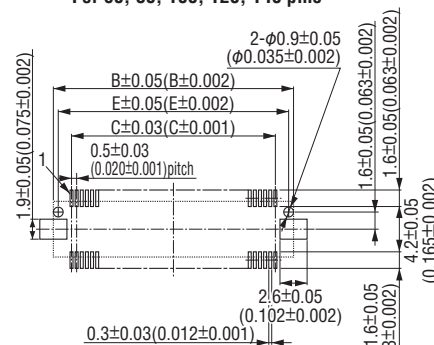
Embossed tape

### Product Table

Part Number	Number of packaging
DY0-□-□-□S-□	1,000
DY0-□-□-□S-A	500

### Product Table / Dimensions

No. of contacts	Part Number	A	B	C	D	E
30	DY0-030S-□-□	14.2 (0.559)	12.2 (0.480)	7.0 (0.276)	10.5 (0.413)	10.5 (0.413)
40	DY0-040S-□-□	16.7 (0.657)	14.7 (0.579)	9.5 (0.374)	13.0 (0.512)	13.0 (0.512)
50	DY0-050S-□	19.2 (0.756)	17.2 (0.677)	12.0 (0.472)	15.5 (0.610)	15.5 (0.610)
60	DY0-060S-□-□	21.7 (0.854)	19.7 (0.776)	14.5 (0.571)	18.0 (0.709)	18.0 (0.709)
80	DY0-080S-□-□	26.7 (1.051)	24.7 (0.972)	19.5 (0.768)	23.0 (0.906)	23.0 (0.906)
100	DY0-100S-□-□	31.7 (1.248)	29.7 (1.169)	24.5 (0.965)	28.0 (1.102)	28.0 (1.102)
120	DY0-120S-□-□	36.7 (1.445)	34.7 (1.366)	29.5 (1.161)	33.0 (1.299)	33.0 (1.299)
140	DY0-140S-□-□	41.7 (1.642)	39.7 (1.563)	34.5 (1.358)	38.0 (1.496)	38.0 (1.496)


**X-X' Cross Section**

**Printed Circuit Board Layout (Component Side View)**
**For 30, 40, 50 pins**

**For 60, 80, 100, 120, 140 pins**


Packaging style

Embossed tape

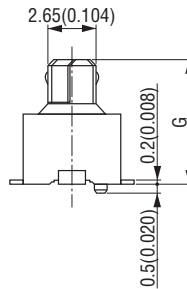
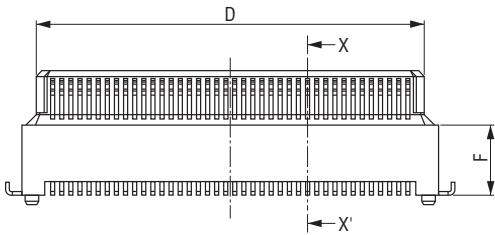
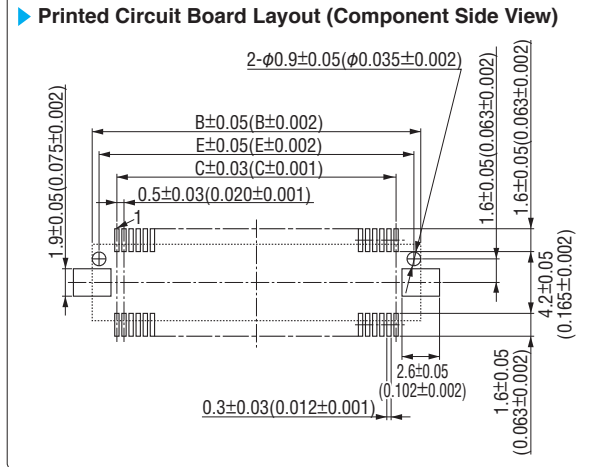
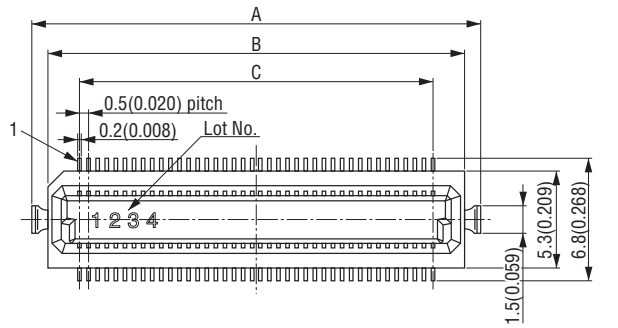
Part Number	Stacked height	G	H	J	Number of packaging
DY1□-□□□S-1	5.0 (0.197)	0.8 (0.031)	3.73 (0.147)	0.27 (0.011)	1,000
DY1□-□□□S-1-A	5.0 (0.197)	0.8 (0.031)	3.73 (0.147)	0.27 (0.011)	500
DY1□-□□□S-2	6.0 (0.236)	1.8 (0.071)	4.73 (0.186)	1.27 (0.050)	500
DY1□-□□□S-3	7.0 (0.276)	2.8 (0.110)	5.73 (0.226)	2.27 (0.089)	500

**Product Table / Dimensions**

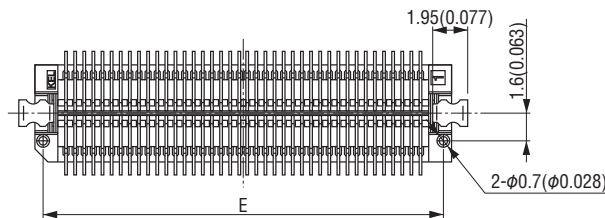
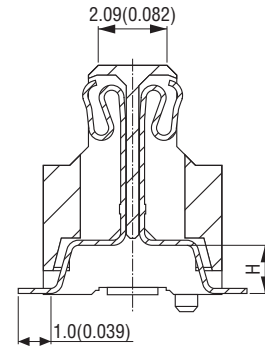
No. of contacts	Part Number	A	B	C	D	E	F
30	DY1□-030S-□-□	12.2 (0.480)	10.5 (0.413)	7.0 (0.276)	8.9 (0.350)	9.5 (0.374)	10.35 (0.407)
40	DY1□-040S-□-□	14.7 (0.579)	13.0 (0.512)	9.5 (0.374)	11.4 (0.449)	12.0 (0.472)	12.85 (0.506)
50	DY1□-050S-□-□	17.2 (0.677)	15.5 (0.610)	12.0 (0.472)	13.9 (0.547)	14.5 (0.571)	15.35 (0.604)
60	DY1□-060S-□-□	19.7 (0.776)	18.0 (0.709)	14.5 (0.571)	16.4 (0.646)	17.0 (0.669)	-
80	DY1□-080S-□-□	24.7 (0.972)	23.0 (0.906)	19.5 (0.768)	21.4 (0.843)	22.0 (0.866)	-
100	DY1□-100S-□-□	29.7 (1.169)	28.0 (1.102)	24.5 (0.965)	26.4 (1.039)	27.0 (1.063)	-
120	DY1□-120S-□-□	34.7 (1.366)	33.0 (1.299)	29.5 (1.161)	31.4 (1.236)	32.0 (1.260)	-
140	DY1□-140S-□-□	39.7 (1.563)	38.0 (1.496)	34.5 (1.358)	36.4 (1.433)	37.0 (1.457)	-

# DY1□-□□□S-□ (Plug, Straight, For 8, 9 and 10mm stacked height)

Unit : mm(inch)



X-X' Cross Section

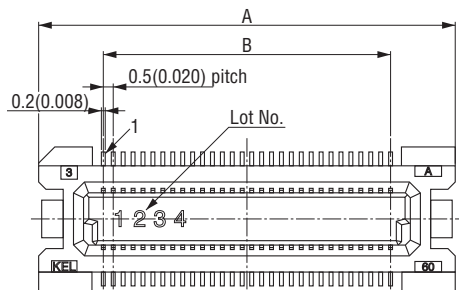
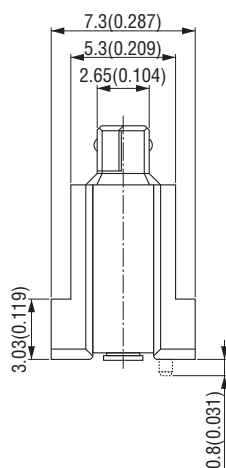
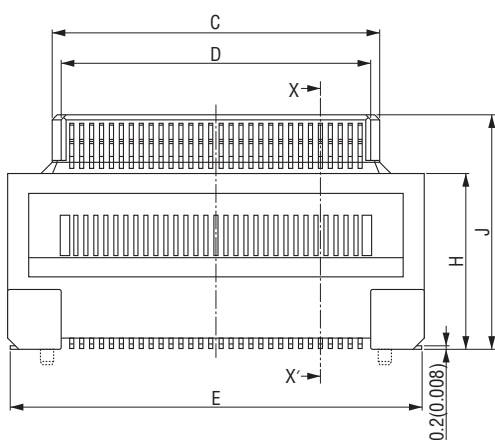
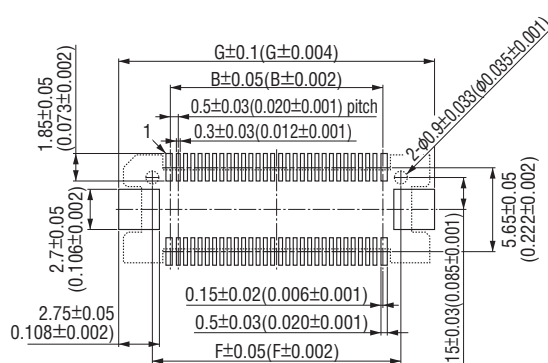
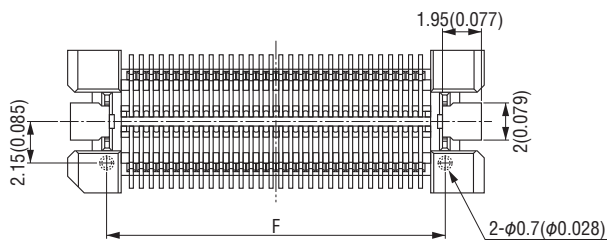
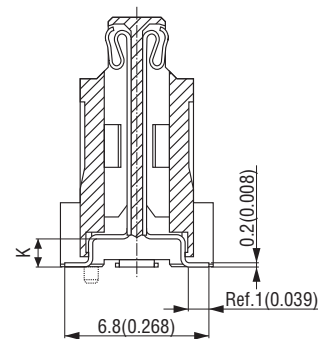


Packaging style
Embossed tape

Part Number	Stacked height	F	G	H	Number of packaging
DY1□-□□□S-4	8.0 (0.315)	3.8 (0.150)	6.73 (0.265)	1.4 (0.055)	500
DY1□-□□□S-5	9.0 (0.354)	4.8 (0.189)	7.73 (0.304)	2.4 (0.094)	500
DY1□-□□□S-6	10.0 (0.394)	5.8 (0.228)	8.73 (0.344)	3.4 (0.134)	500

### Product Table / Dimensions

No. of contacts	Part Number	A	B	C	D	E
60	DY1□-060S-□	19.7 (0.776)	18.0 (0.709)	14.5 (0.571)	16.4 (0.646)	17.0 (0.669)
80	DY1□-080S-□	24.7 (0.972)	23.0 (0.906)	19.5 (0.768)	21.4 (0.843)	22.0 (0.866)
100	DY1□-100S-□	29.7 (1.169)	28.0 (1.102)	24.5 (0.965)	26.4 (1.039)	27.0 (1.063)
120	DY1□-120S-□	34.7 (1.366)	33.0 (1.299)	29.5 (1.161)	31.4 (1.236)	32.0 (1.260)
140	DY1□-140S-□	39.7 (1.563)	38.0 (1.496)	34.5 (1.358)	36.4 (1.433)	37.0 (1.457)


**Printed Circuit Board Layout (Component Side View)**

**X-X' Cross Section**


Part Number	Stacked height	H	J	K
DY1□-□□□FS-1	11.0 (0.433)	6.8 (0.268)	9.73 (0.383)	0.3 (0.012)
DY1□-□□□FS-2	12.0 (0.472)	7.8 (0.307)	10.73 (0.422)	1.3 (0.051)
DY1□-□□□FS-3	13.0 (0.512)	8.8 (0.346)	11.73 (0.462)	1.3 (0.051)
DY1□-□□□FS-4	14.0 (0.551)	9.8 (0.386)	12.73 (0.501)	1.3 (0.051)

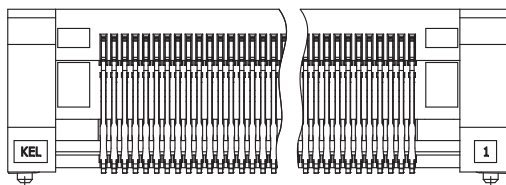
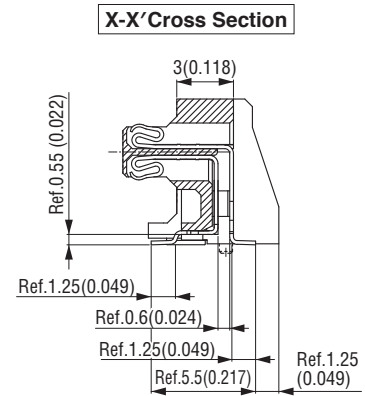
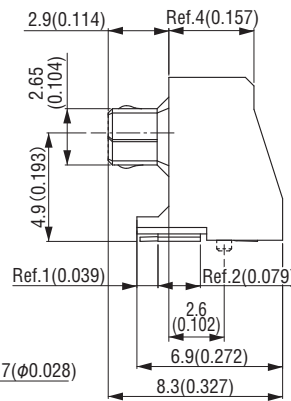
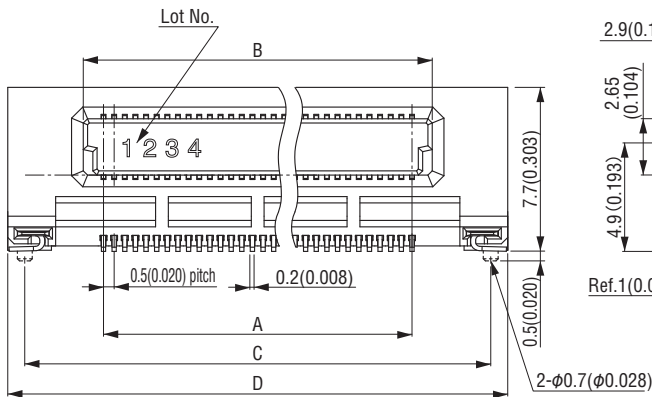
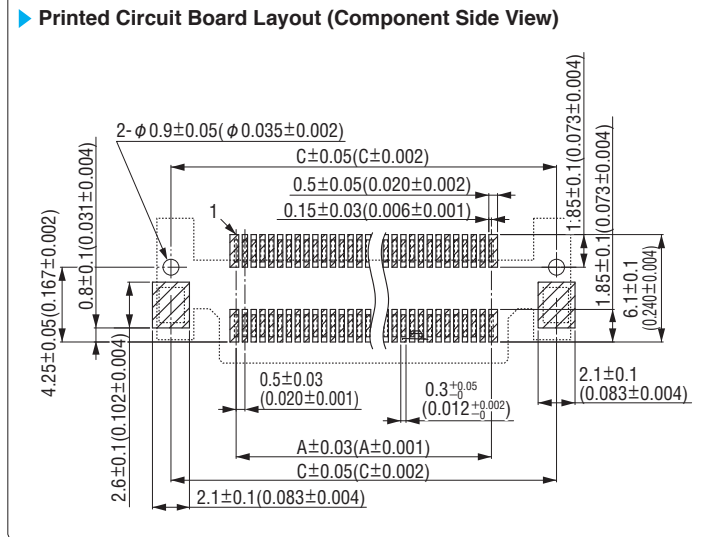
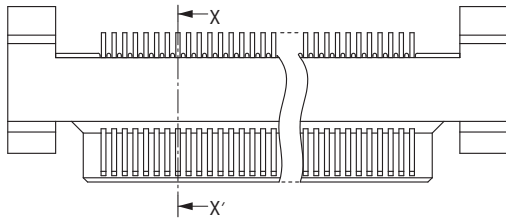
**Packaging style**

Tray

**Product Table / Dimensions**

No. of contacts	Part Number	A	B	C	D	E	F	G	Number of packaging
60	DY1□-060FS-□	20.9 (0.823)	14.5 (0.571)	16.4 (0.646)	15.5 (0.610)	20.7 (0.815)	17 (0.669)	21.5 (0.846)	60
80	DY1□-080FS-□	25.9 (1.020)	19.5 (0.768)	21.4 (0.843)	20.5 (0.807)	25.7 (1.012)	22 (0.866)	26.5 (1.043)	50
100	DY1□-100FS-□	30.9 (1.217)	24.5 (0.965)	26.4 (1.039)	25.5 (1.004)	30.7 (1.209)	27 (1.063)	31.5 (1.240)	50
120	DY1□-120FS-□	35.9 (1.413)	29.5 (1.161)	31.4 (1.236)	30.5 (1.201)	35.7 (1.406)	32 (1.260)	36.5 (1.437)	40
140	DY1□-140FS-□	40.9 (1.610)	34.5 (1.358)	36.4 (1.433)	35.5 (1.398)	40.7 (1.602)	37 (1.457)	41.5 (1.634)	40

The connectors are supplied in trays. Please order a minimum of 500 pieces and in multiples of the quantity per package.



Packaging style

Embossed tape

## ► Product Table / Dimensions

No. of contacts	Part Number	A	B	C	D	Number of packaging
30	DY1□-030L	7.0 (0.276)	8.9 (0.350)	14.4 (0.567)	16.0 (0.630)	500
40	DY1□-040L	9.5 (0.374)	11.4 (0.449)	16.9 (0.665)	18.5 (0.728)	500
50	DY1□-050L	12.0 (0.472)	13.9 (0.547)	19.4 (0.764)	21.0 (0.827)	500
60	DY1□-060L	14.5 (0.571)	16.4 (0.646)	21.9 (0.862)	23.5 (0.925)	500
80	DY1□-080L	19.5 (0.768)	21.4 (0.843)	26.9 (1.059)	28.5 (1.122)	500
100	DY1□-100L	24.5 (0.965)	26.4 (1.039)	31.9 (1.256)	33.5 (1.319)	500
120	DY1□-120L	29.5 (1.161)	31.4 (1.236)	36.9 (1.453)	38.5 (1.516)	500
140	DY1□-140L	34.5 (1.358)	36.4 (1.433)	41.9 (1.650)	43.5 (1.713)	500