

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 $1.25\text{mm}(0.049\text{'})$.
- ▶ 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 $0.551\text{'})$
- * 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 ⑥

*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 | [Gold plating thickness of contact area] Omit : $0.25\ \mu\text{m}$ min. B : $0.1\ \mu\text{m}$ min. |
| ⑤ | [Number of packaging] Omit : 1,000pcs, per reel A : 500pcs, per reel |
| ⑥ | [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 ⑥

*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 | [Gold plating thickness of contact area] Omit : $0.25\ \mu\text{m}$ min. B : $0.1\ \mu\text{m}$ min. |
| ⑤ | [Stacked height] (S type) 1 : 5mm($0.197\text{'})$ 2 : 6mm($0.236\text{'})$ 3 : 7mm($0.276\text{'})$ 4 : 8mm($0.315\text{'})$ 5 : 9mm($0.354\text{'})$ 6 : 10mm($0.394\text{'})$
(FS type) 1 : 11mm($0.433\text{'})$ 2 : 12mm($0.472\text{'})$ 3 : 13mm($0.512\text{'})$ 4 : 14mm($0.551\text{'})$ |
| ⑥ | [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) |

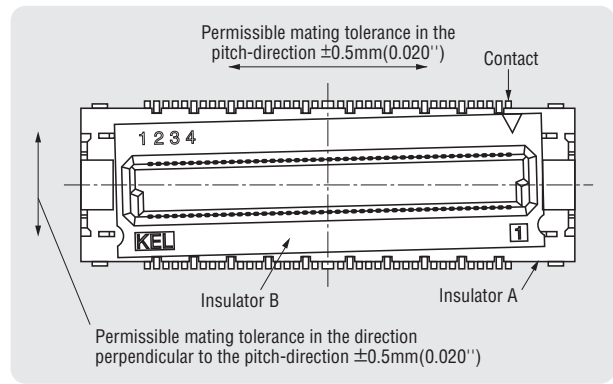
SPECIFICATIONS

Material and plating		Electrical Characteristics	
Insulator material	Glass-filled LCP (UL94V-0), Black	Current rating	0.4A per contact (Stacked Mating) 0.3A per contact (Vertical Mating)
Contact material	Copper alloy	Contact resistance	80m Ω max. (Stacked Mating) 100m Ω max. (Vertical Mating)
Contact plating	Gold over Nickel	Dielectric withstanding voltage	200V AC for 1 minute
Retention clip material	Copper alloy	Insulation resistance	100M Ω 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

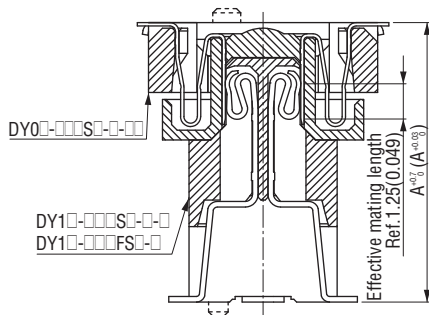
When the connector is mounted on the printed circuit board, a location error in the two directions of horizontal and vertical(XY direction) may occur at both connectors. In addition, if each printed circuit board is fixed to a case by screws after mating connectors, the connectors may have to compensate 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

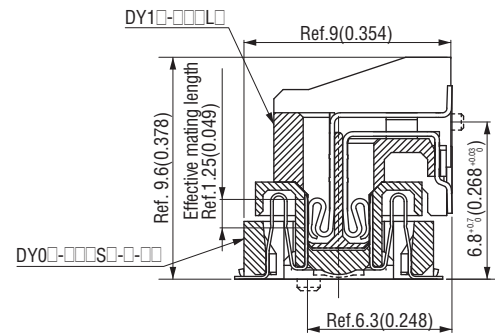
Unit : mm(inch)

Stacked Mating



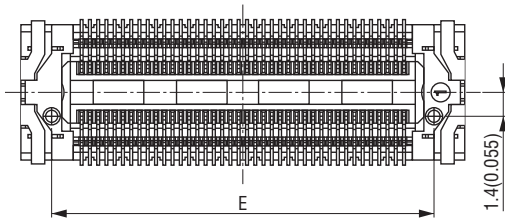
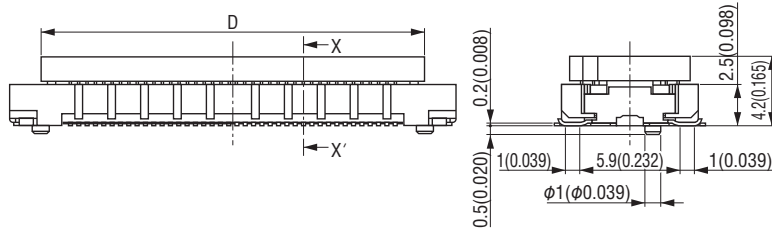
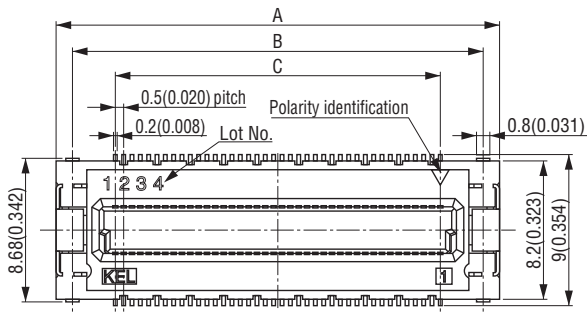
Part Number	A
DY1□-□□□S□-1-□	5(0.197)
DY1□-□□□S□-2	6(0.236)
DY1□-□□□S□-3	7(0.276)
DY1□-□□□S□-4	8(0.315)
DY1□-□□□S□-5	9(0.354)
DY1□-□□□S□-6	10(0.394)
DY1□-□□□FS□-1	11(0.433)
DY1□-□□□FS□-2	12(0.472)
DY1□-□□□FS□-3	13(0.512)
DY1□-□□□FS□-4	14(0.551)

Vertical Mating

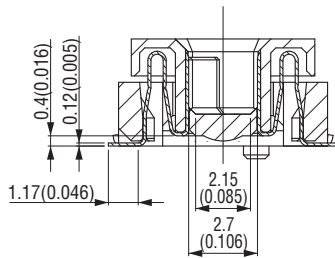


DY0-□□□S-□-□□ (Receptacle, Straight)

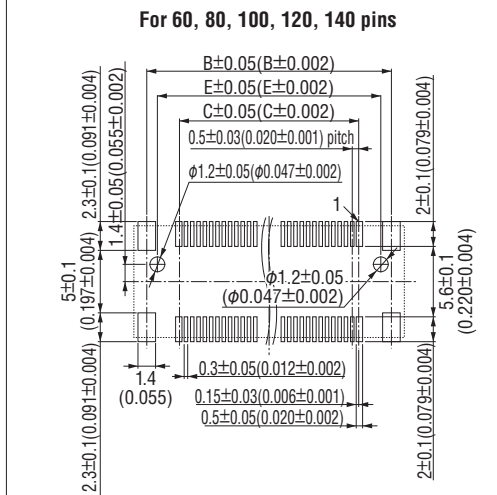
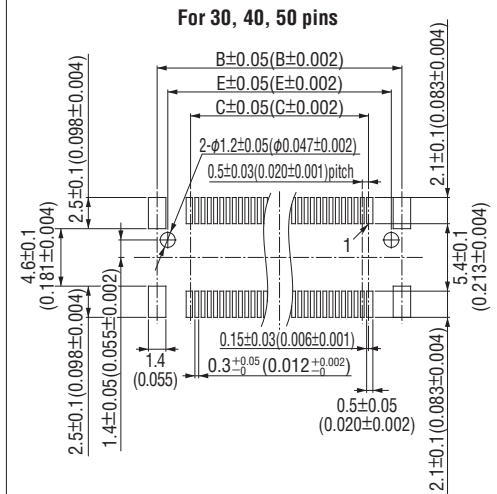
Unit : mm (inch)



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



Packaging style

Embossed tape

Product Table

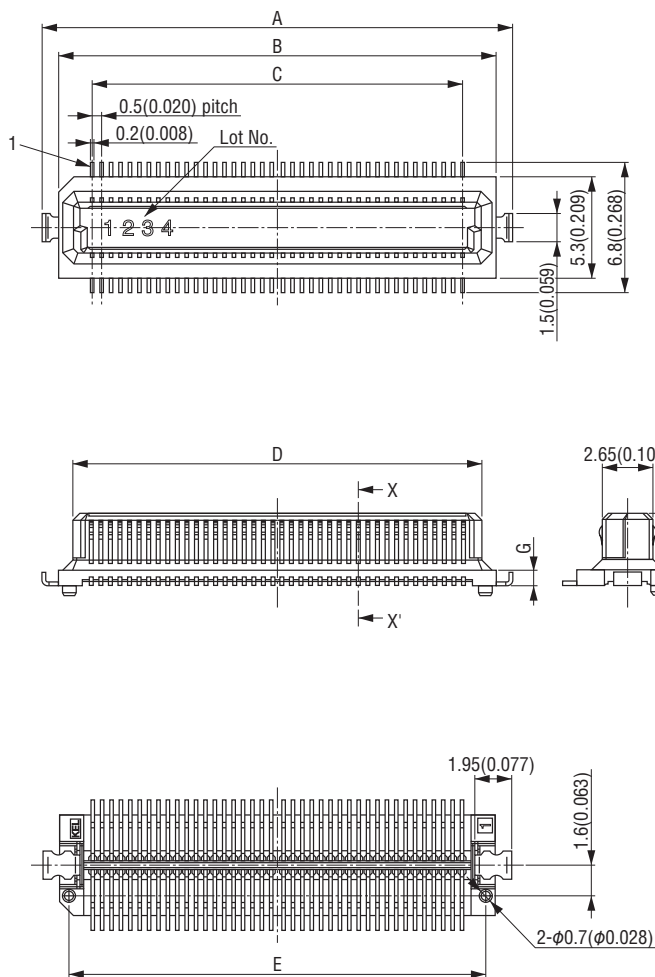
Part Number	No. of packaging
DY0-□□□S-□-□□	1,000
DY0-□□□S-□-□□-A	500

Product Table / Dimensions

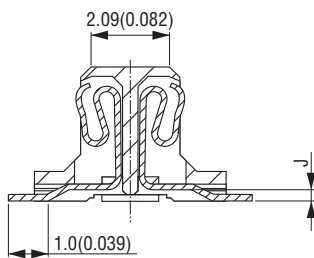
No. of contacts	Part Number	A	B	C	D	E
30	DY0-030S-□-□□	14.2 (0.559)	12.2 (0.480)	7.0 (0.276)	10.5 (0.413)	10.5 (0.413)
40	DY0-040S-□-□□	16.7 (0.657)	14.7 (0.579)	9.5 (0.374)	13.0 (0.512)	13.0 (0.512)
50	DY0-050S-□-□	19.2 (0.756)	17.2 (0.677)	12.0 (0.472)	15.5 (0.610)	15.5 (0.610)
60	DY0-060S-□-□□	21.7 (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)

DY1□-□□□S□-□-□ (Plug, Straight, For 5, 6 and 7mm stacked height)

Unit : mm (inch)

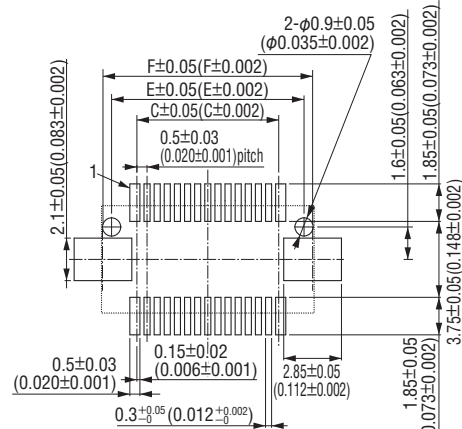


X-X' Cross Section

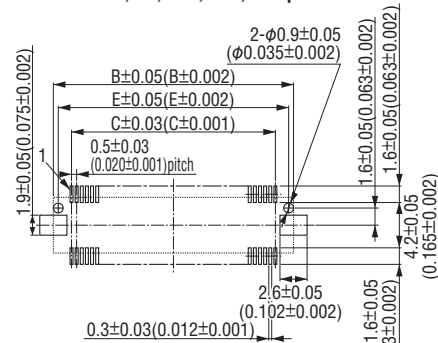


Printed Circuit Board Layout (Component Side View)

For 30, 40, 50 pins



For 60, 80, 100, 120, 140 pins



Packaging style

Embossed tape

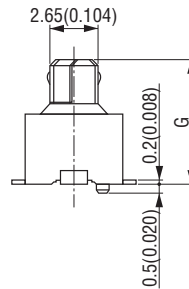
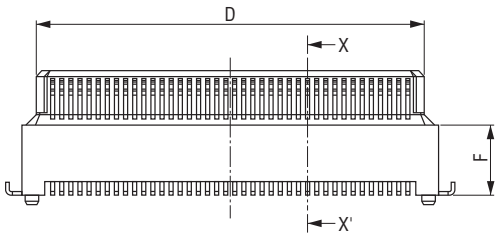
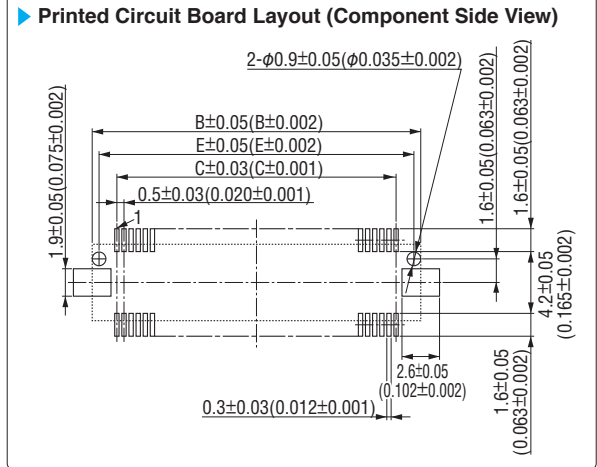
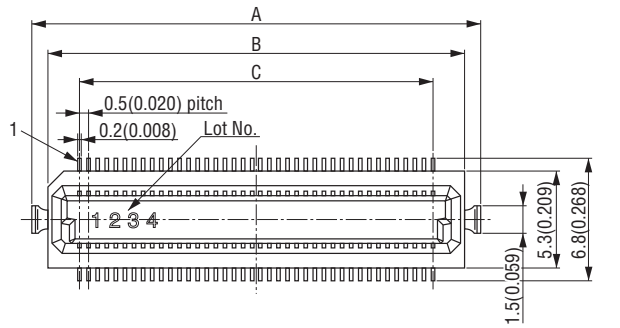
Part Number	Stacked height	G	H	J	No. of packaging
DY1□-□□□S□-1	5.0 (0.197)	0.8 (0.031)	3.73 (0.147)	0.27 (0.011)	1,000
DY1□-□□□S□-1-A	5.0 (0.197)	0.8 (0.031)	3.73 (0.147)	0.27 (0.011)	500
DY1□-□□□S□-2	6.0 (0.236)	1.8 (0.071)	4.73 (0.186)	1.27 (0.050)	500
DY1□-□□□S□-3	7.0 (0.276)	2.8 (0.110)	5.73 (0.226)	2.27 (0.089)	500

Product Table / Dimensions

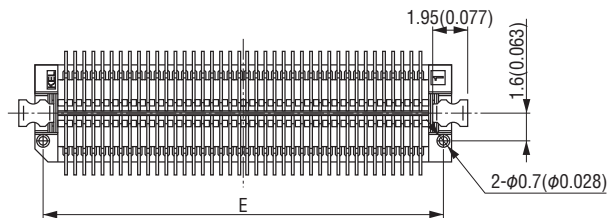
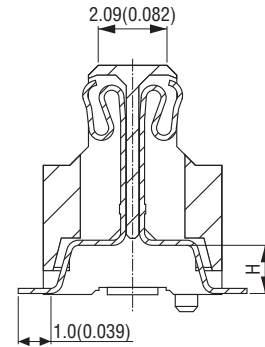
No. of contacts	Part Number	A	B	C	D	E	F
30	DY1□-030S□-□-□	12.2 (0.480)	10.5 (0.413)	7.0 (0.276)	8.9 (0.350)	9.5 (0.374)	10.35 (0.407)
40	DY1□-040S□-□-□	14.7 (0.579)	13.0 (0.512)	9.5 (0.374)	11.4 (0.449)	12.0 (0.472)	12.85 (0.506)
50	DY1□-050S□-□-□	17.2 (0.677)	15.5 (0.610)	12.0 (0.472)	13.9 (0.547)	14.5 (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

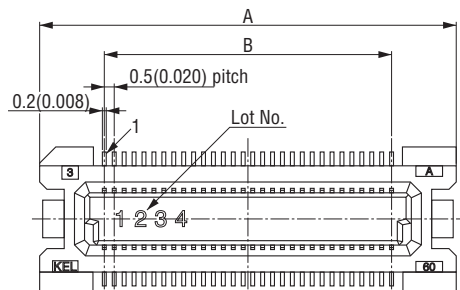


Packaging style
Embossed tape

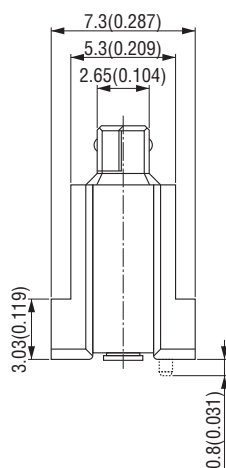
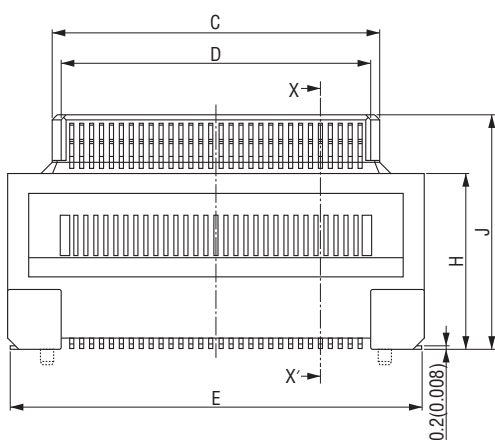
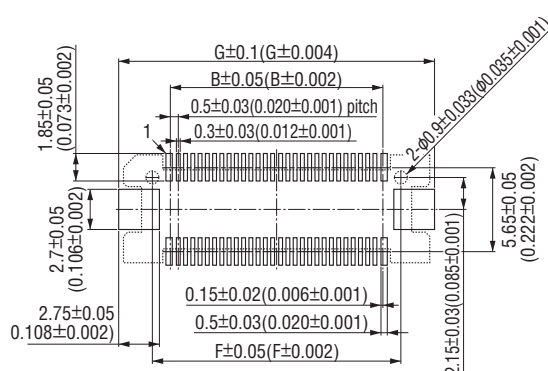
Part Number	Stacked height	F	G	H	No. of packaging
DY1□-□□□S□-4	8.0 (0.315)	3.8 (0.150)	6.73 (0.265)	1.4 (0.055)	500
DY1□-□□□S□-5	9.0 (0.354)	4.8 (0.189)	7.73 (0.304)	2.4 (0.094)	500
DY1□-□□□S□-6	10.0 (0.394)	5.8 (0.228)	8.73 (0.344)	3.4 (0.134)	500

▶ Product Table / Dimensions

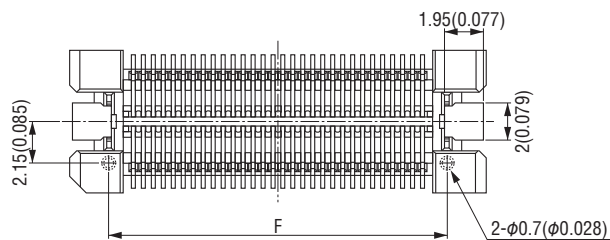
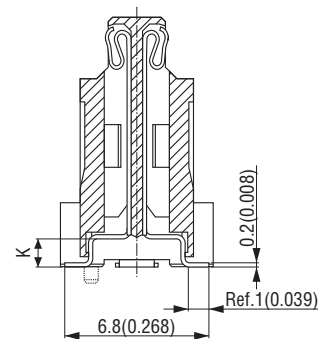
No. of contacts	Part Number	A	B	C	D	E
60	DY1□-060S□-□	19.7 (0.776)	18.0 (0.709)	14.5 (0.571)	16.4 (0.646)	17.0 (0.669)
80	DY1□-080S□-□	24.7 (0.972)	23.0 (0.906)	19.5 (0.768)	21.4 (0.843)	22.0 (0.866)
100	DY1□-100S□-□	29.7 (1.169)	28.0 (1.102)	24.5 (0.965)	26.4 (1.039)	27.0 (1.063)
120	DY1□-120S□-□	34.7 (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)

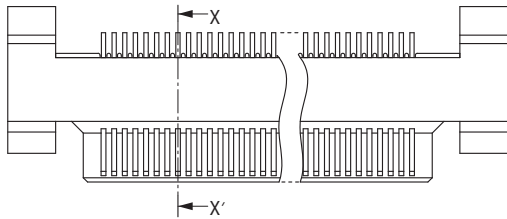
Packaging style

Tray

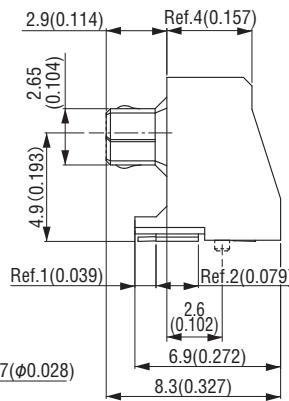
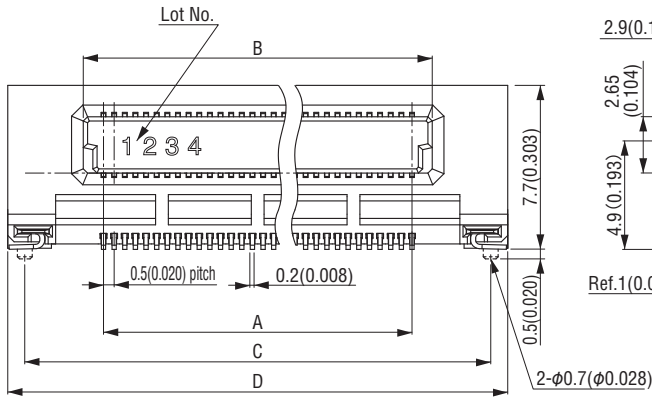
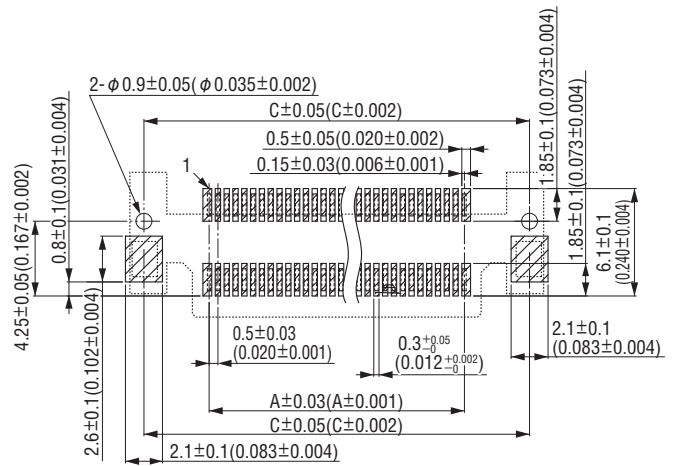
▶ Product Table / Dimensions

No. of contacts	Part Number	A	B	C	D	E	F	G	No. 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

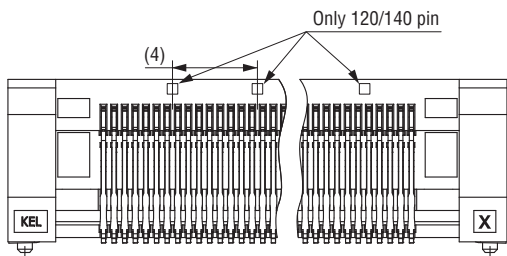
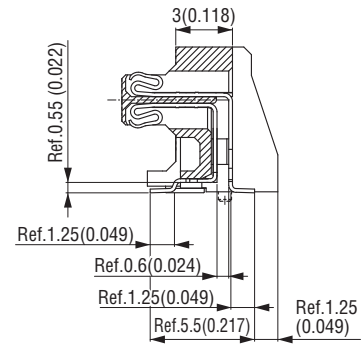
The connectors are supplied in trays. Please order a minimum of 500 pieces and in multiples of the quantity per package.



▶ Printed Circuit Board Layout (Component Side View)



X-X' Cross Section



Part Number	No. of packaging
DY1□-□□□L	500
DY1□-□□□LB	600

Packaging style
Embossed tape

▶ Product Table / Dimensions

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

DY03/04 SERIES

0.5mm PITCH FLOATING CONNECTOR / HIGH HEAT RESISTANCE TYPE

RoHS
Compliant



FEATURES

- ▶ The operating temperature supports up to + 105 °C.
- ▶ Location error offsets $\pm 0.5\text{mm}$ in the XY direction.
- ▶ High reliable design with effective mating length of 1.25mm (0.049").
- ▶ Positioning posts are optional for manual mounting.
- ▶ Wide variations of contacts (50, 60, 80, 100, 120 and 140 pins) are available.
- ▶ Stacked mating heights of 5, 11, 12, 13 and 14mm. (0.197, 0.433, 0.472, 0.512 and 0.551")

* Stack height 11mm-14mm type can be used in an environment of + 105 °C by mating with DY1 □-□□□ FS □-□-□□.

ORDER CODE

DY0 □ - □□□ **S** □ - **BT**

① ② ③ ④ ⑤ ⑥

*Please order in multiples of the quantity per package.

- | | |
|---|--|
| ① | [Type] Receptacle DY03 : With positioning posts DY04 : Without positioning posts |
| ② | [Number of contacts] 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 | [Gold plating thickness of contact part] No code : 0.25 μm min. B : 0.1 μm min. |
| ⑤ | [Number of packaging] B : 1,000 pcs per reel |
| ⑥ | [Anti-dust tape] T : With anti-dust tape |

ORDER CODE

DY1 □ - □□□ **S** □ - **1-T-H**

① ② ③ ④ ⑤ ⑥ ⑦

*Please order in multiples of the quantity per package.

- | | |
|---|--|
| ① | [Type] Plug DY10 : Without positioning posts DY11 : With positioning posts |
| ② | [Number of contacts] 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 | [Gold plating thickness of contact part] No code : 0.25 μm min. B : 0.1 μm min. |
| ⑤ | [Stacked height] 1 : 5mm(0.197") |
| ⑥ | [Anti-dust cover] T : With anti-dust cover |
| ⑦ | [Operating temperature] H : - 40°C~ +105°C (However, the condition is that it mate with DY03/04- □□□ S □ -BT.) |

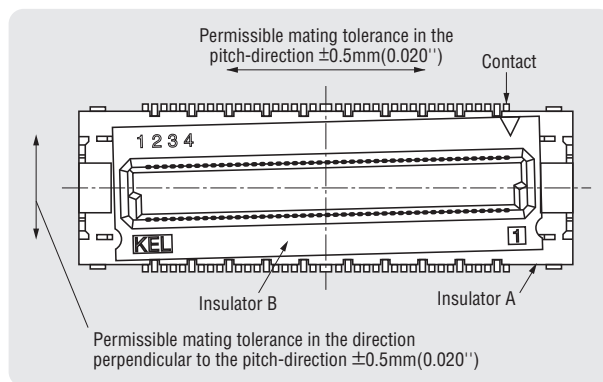
SPECIFICATIONS

Material and plating		Electrical Characteristics	
Insulator material [DY03/04]	Insulator A: Glass-filled LCP (UL94V-0), Black Insulator B: Glass-filled Nylon 9T (UL94V-0), Black	Current rating*	0.4A per contact
Insulator material [DY1□]	Glass-filled LCP (UL94V-0), Black	Contact resistance	80m Ω max.
Contact / Retention clip material	Copper alloy	Dielectric withstanding voltage	200V AC for 1 minute
Contact / Retention clip plating	Gold over Nickel	Insulation resistance	100M Ω min. at 250V DC
Anti-dust tape material	Polyimide	Operating temperature	-40°C to +105°C
Anti-dust cover material	Nylon 9T UL94V-0 , Black		

*1. Depending on the number of contacts and the mating combination, it may be possible to obtain a current value that exceeds the current rating.
Please contact your local KEL sales office.

Floating Connector

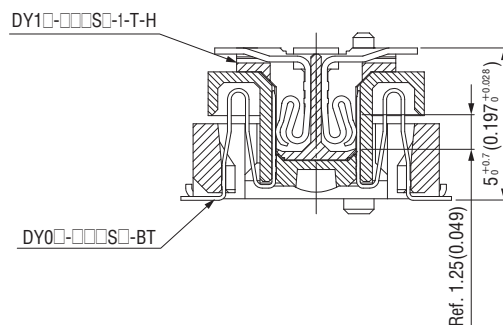
When the connector is mounted on the printed circuit board, a location error in the two directions of horizontal and vertical(XY direction) may occur at both connectors. In addition, if each printed circuit board is fixed to a case by screws after mating connectors, the connectors may have to compensate 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

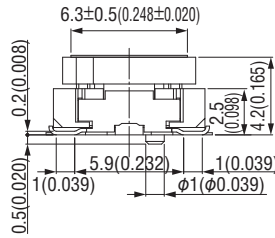
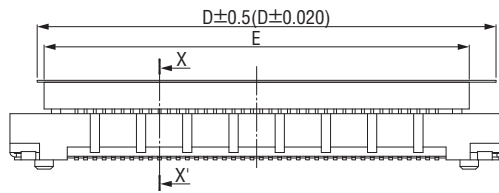
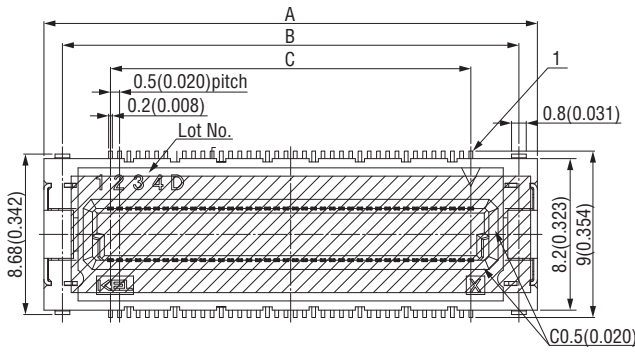
Unit : mm(inch)

◆ Stacked Mating

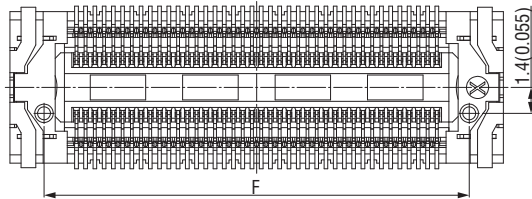
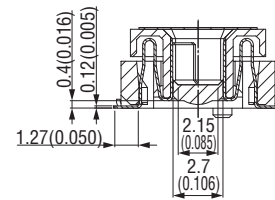


DY0□-□□□S□-BT (Receptacle, Straight, High heat resistance type)

Unit : mm(inch)

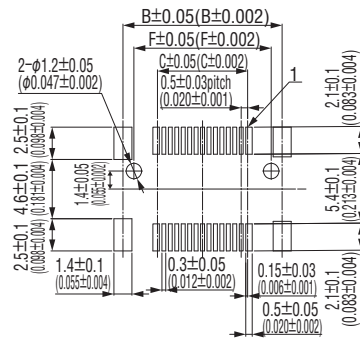


X-X' Cross Section

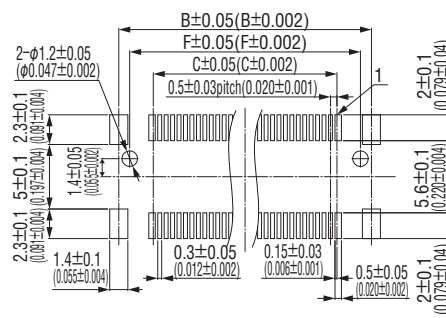


Printed Circuit Board Layout (Component Side View)

For 50 pin



For 60,80,100,120,140 pin



Packaging style

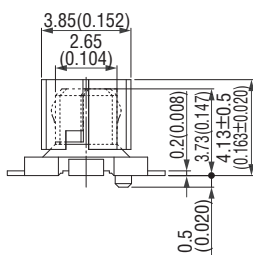
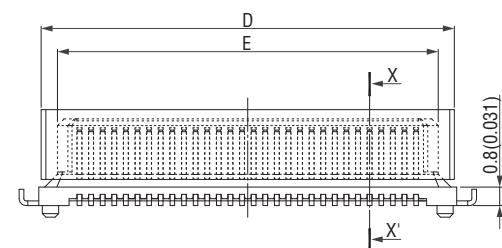
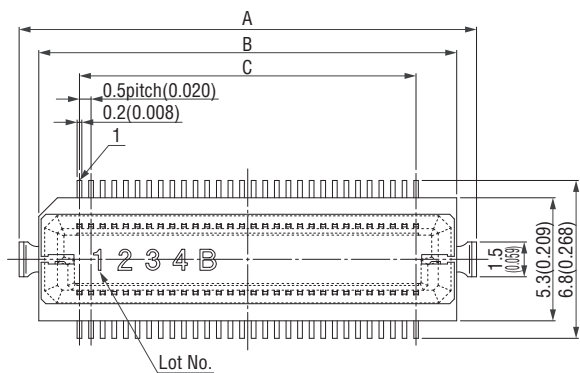
Embossed tape

Product Table / Dimensions

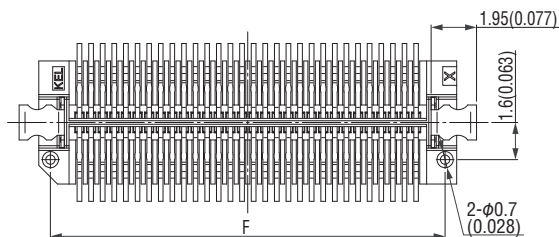
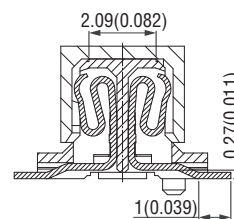
No. of contacts	Part Number	A	B	C	D	E	F	Number of packaging
50	DY0□-050S□-BT	19.2 (0.756)	17.2 (0.677)	12.0 (0.472)	17.3 (0.681)	15.5 (0.610)	15.5 (0.610)	1,000
60	DY0□-060S□-BT	21.7 (0.854)	19.7 (0.776)	14.5 (0.571)	19.8 (0.780)	18.0 (0.709)	18.0 (0.709)	1,000
80	DY0□-080S□-BT	26.7 (1.051)	24.7 (0.972)	19.5 (0.768)	24.8 (0.976)	23.0 (0.906)	23.0 (0.906)	1,000
100	DY0□-100S□-BT	31.7 (1.248)	29.7 (1.169)	24.5 (0.965)	29.8 (1.173)	28.0 (1.102)	28.0 (1.102)	1,000
120	DY0□-120S□-BT	36.7 (1.445)	34.7 (1.366)	29.5 (1.161)	34.8 (1.370)	33.0 (1.299)	33.0 (1.299)	1,000
140	DY0□-140S□-BT	41.7 (1.642)	39.7 (1.563)	34.5 (1.358)	39.8 (1.567)	38.0 (1.496)	38.0 (1.496)	1,000

DY1□-□□□S□-1-T-H (Plug , Straight , High heat resistance type)

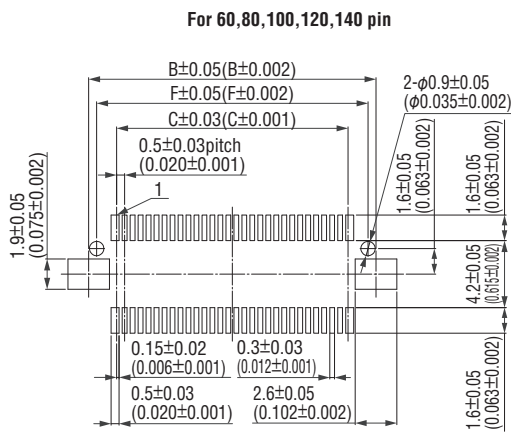
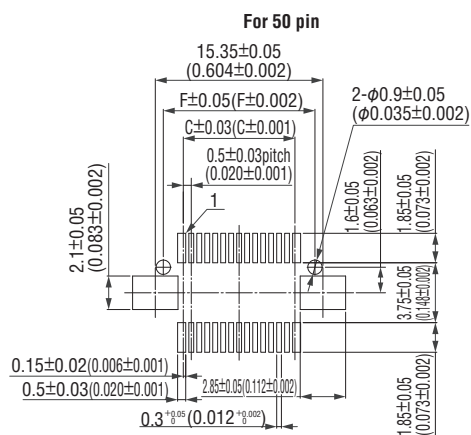
Unit : mm(inch)



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



Packaging style
Embossed tape

Product Table / Dimensions

No. of contacts	Part Number	A	B	C	D	E	F	Number of packaging
50	DY1□-050S□-1-T-H	17.2 (0.677)	15.5 (0.610)	12.0 (0.472)	15.3 (0.602)	13.9 (0.547)	14.5 (0.571)	1,000
60	DY1□-060S□-1-T-H	19.7 (0.776)	18.0 (0.709)	14.5 (0.571)	17.8 (0.701)	16.4 (0.646)	17.0 (0.669)	1,000
80	DY1□-080S□-1-T-H	24.7 (0.972)	23.0 (0.906)	19.5 (0.768)	22.8 (0.898)	21.4 (0.843)	22.0 (0.866)	1,000
100	DY1□-100S□-1-T-H	29.7 (1.169)	28.0 (1.102)	24.5 (0.965)	27.8 (1.094)	26.4 (1.039)	27.0 (1.063)	1,000
120	DY1□-120S□-1-T-H	34.7 (1.366)	33.0 (1.299)	29.5 (1.161)	32.8 (1.291)	31.4 (1.236)	32.0 (1.260)	1,000
140	DY1□-140S□-1-T-H	39.7 (1.563)	38.0 (1.496)	34.5 (1.358)	37.8 (1.488)	36.4 (1.433)	37.0 (1.457)	1,000