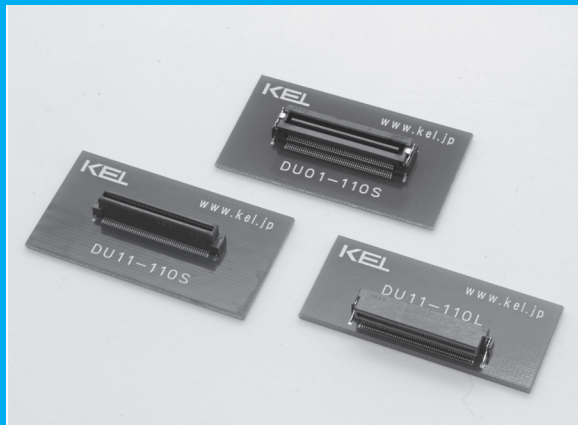


# DU SERIES

## 0.4mm PITCH FLOATING CONNECTOR

RoHS  
Compliant



### FEATURES

- ▶ Location error offsets  $\pm 0.4\text{mm}$  in the XY direction.
- ▶ High reliable design with effective mating length of  $1.2\text{mm}(0.047")$ .  
\*Stack height 5 mm : 1.1 mm (Effective mating length)
- ▶ Stacked mating and vertical mating combinations.
- ▶ A high heat resistance type of  $+105^{\circ}\text{C}$  is available.
- ▶ Compared to the DY series (0.5 mm pitch), the PCB occupying area is reduced.
- ▶ Highly reliable contact performance has been achieved by providing box-shaped insulator to protect the contacts.
- ▶ Due to that the bottom of receptacle connector is covered with resin, circuit may be printed under the connector.

### ORDER CODE

DU0   -     SB -   

①                      ②                      ③ ④                      ⑤

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

- ① **[Type]** Receptacle **DU00** : Without positioning posts **DU01** : With positioning posts
- ② **[Number of contacts]** **080** : 80 pin **110** : 110 pin **120** : 120 pin **140** : 140 pin **200** : 200 pin
- ③ **[Contact tail style]** **S** : Straight
- ④ **[Gold plating thickness of contact part]** **B** :  $0.1\text{ }\mu\text{m}$  min.
- ⑤ **[Anti-dust tape]** **T** : With anti-dust tape **No code** : Without anti-dust tape

### ORDER CODE

DU1   -       **B** -    -   

①                      ②                      ③ ④                      ⑤                      ⑥

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

- ① **[Type]** Plug **DU10** : Without positioning posts **DU11** : With positioning posts  
**DU12** : Without positioning posts(High heat resistance type: Straight type only)
- ② **[Number of contacts]** (S type) **080** : 80 pin **110** : 110 pin **200** : 200 pin  
(L type) **080** : 80 pin **110** : 110 pin **120** : 120 pin **140** : 140 pin **200** : 200 pin
- ③ **[Contact tail style]** **S** : Straight **L** : Right angle
- ④ **[Gold plating thickness of contact part]** **B** :  $0.1\text{ }\mu\text{m}$  min.
- ⑤ **[Stacked height]** **5** : 5 mm (110 pin) **7** : 7 mm (80 pin, 200 pin)
- ⑥ **[Anti-dust tape]** **T** : With anti-dust tape(S type) **No code** : Without anti-dust tape(L type)

### SPECIFICATIONS

| Material and plating    |                                  | Electrical Characteristics      |                                                   |
|-------------------------|----------------------------------|---------------------------------|---------------------------------------------------|
| Insulator material      | Glass-filled LCP(UL94V-0), Black | Current rating *1               | 0.4A per contact *2                               |
| Contact material        | Copper alloy                     | Contact resistance              | 100mΩ max.                                        |
| 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  | Tin over Nickel                  | Operating temperature           | $-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ *3 |
| Anti-dust tape material | Polyimide                        |                                 |                                                   |

\*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.

\*2. In the case of the mating combination of DU0□ -110SB-□ and DU12-110SB-5-T, the current rating is 0.35A per contact.

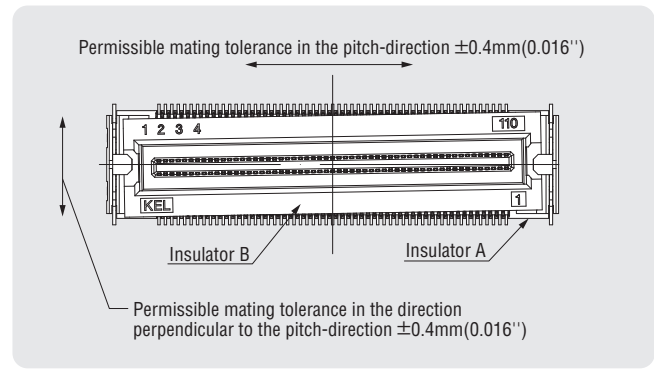
\*3. In the case of the mating combination of DU0□ -110SB-□ and DU12-110SB-5-T is compatible with high temperatures of  $+105^{\circ}\text{C}$ .

## Floating Structure

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 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.

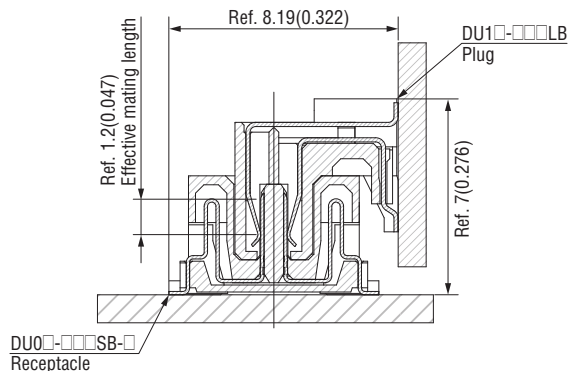
The DU series is a 0.4mm(0.016") fine pitch connector with  $\pm 0.4\text{mm}(0.016")$  floating structure and ensures sufficient compensation for location errors.



## Mating Drawing

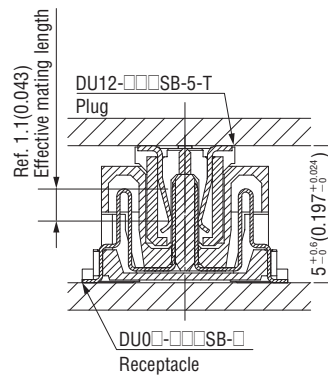
Unit : mm(inch)

### Vertical Mating

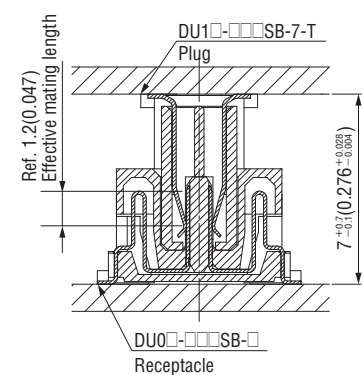


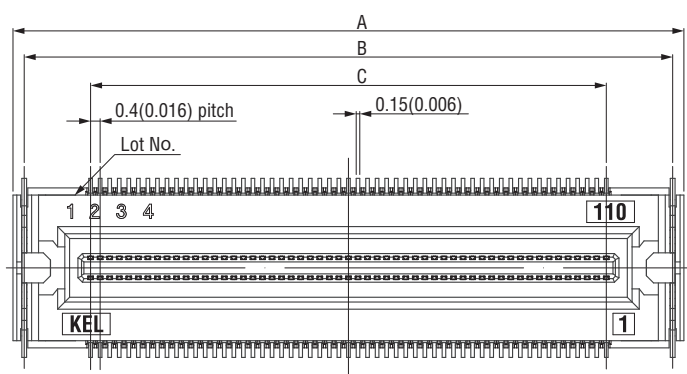
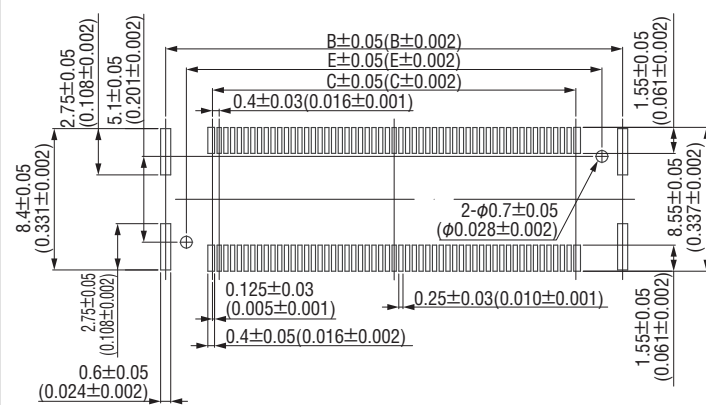
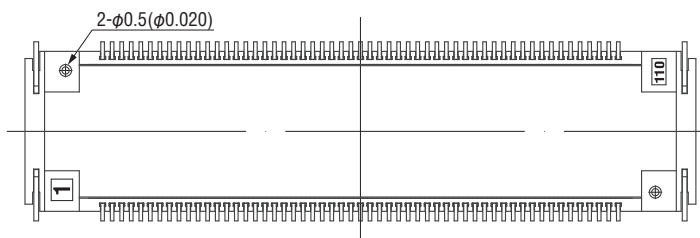
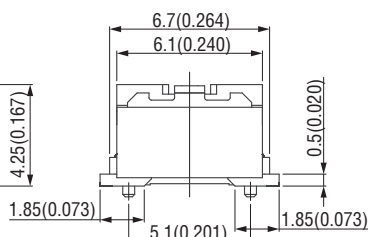
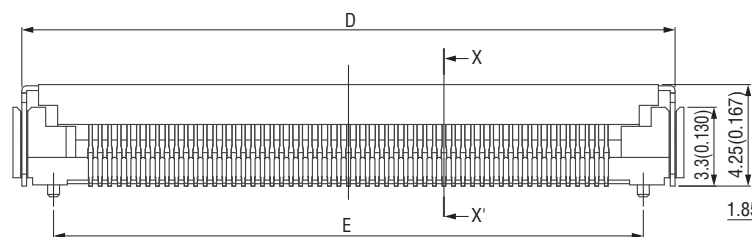
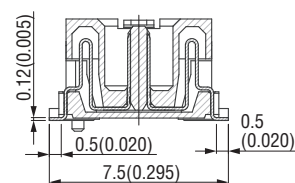
### Stacked Mating

Stack height : 5mm



Stack height : 7mm



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

**X-X' Cross Section**


Packaging style

Embossed tape

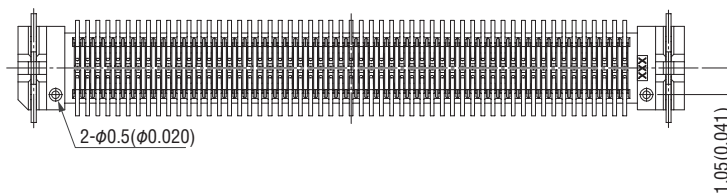
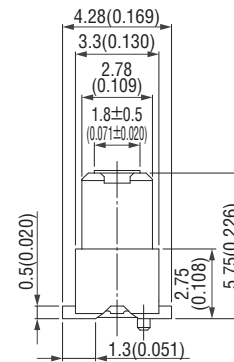
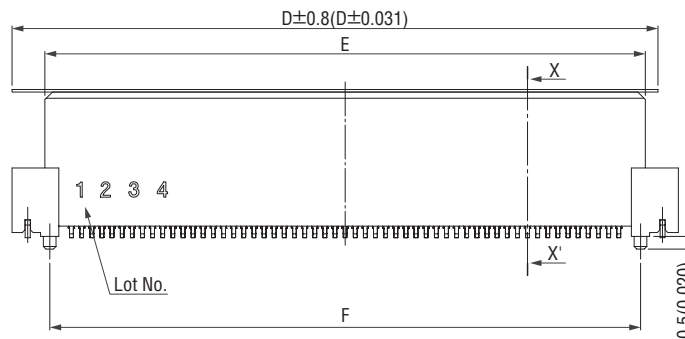
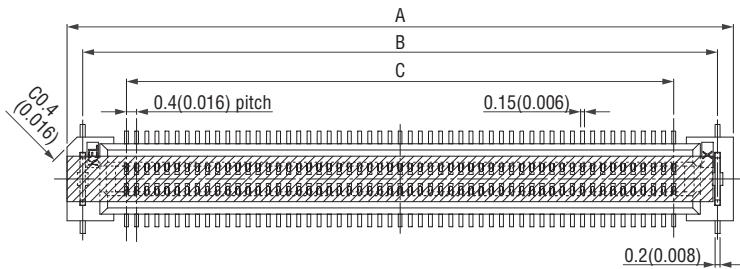
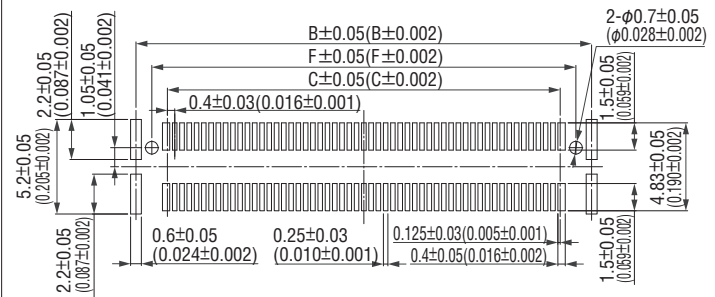
**▶ Product Table / Dimensions**

| No. of contacts | Part Number  | A                | B                | C                | D                | E                | Number of packaging |
|-----------------|--------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| 80              | DU0□-080SB-□ | 22.10<br>(0.870) | 21.16<br>(0.833) | 15.60<br>(0.614) | 21.36<br>(0.841) | 18.70<br>(0.736) | 1,000               |
| 110             | DU0□-110SB-□ | 28.10<br>(1.106) | 27.16<br>(1.069) | 21.60<br>(0.850) | 27.36<br>(1.077) | 24.70<br>(0.972) | 1,000               |
| 120             | DU0□-120SB-□ | 30.10<br>(1.185) | 29.16<br>(1.148) | 23.60<br>(0.929) | 29.36<br>(1.156) | 26.70<br>(1.051) | 1,000               |
| 140             | DU0□-140SB-□ | 34.10<br>(1.343) | 33.16<br>(1.306) | 27.60<br>(1.087) | 33.50<br>(1.319) | 30.70<br>(1.209) | 1,000               |
| 200             | DU0□-200SB-□ | 46.10<br>(1.815) | 45.16<br>(1.778) | 39.60<br>(1.559) | 46.36<br>(1.825) | 42.70<br>(1.681) | 1,000               |

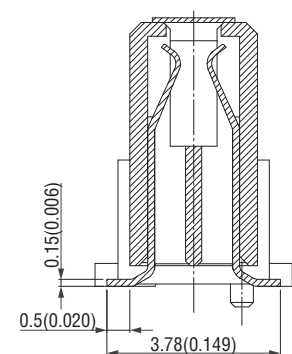
# DU1□-□□□SB-7-T (Plug, Straight)

Unit : mm(inch)

## Printed Circuit Board Layout (Component Side View)



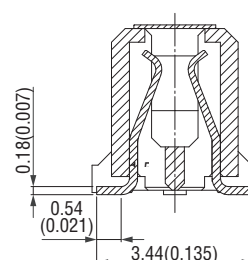
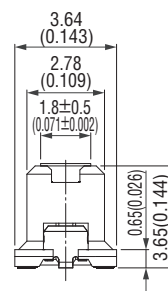
## X-X' Cross Section



## Product Table / Dimensions

| No. of contacts | Part Number    | A                | B                | C                | D                | E                | F                | Number of packaging |
|-----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| 80              | DU1□-080SB-7-T | 20.30<br>(0.799) | 19.06<br>(0.750) | 15.60<br>(0.614) | 19.50<br>(0.768) | 17.70<br>(0.697) | 17.32<br>(0.682) | 1,000               |
| 200             | DU1□-200SB-7-T | 44.30<br>(1.744) | 43.06<br>(1.695) | 39.60<br>(1.559) | 43.50<br>(1.713) | 41.70<br>(1.642) | 41.32<br>(1.627) | 1,000               |

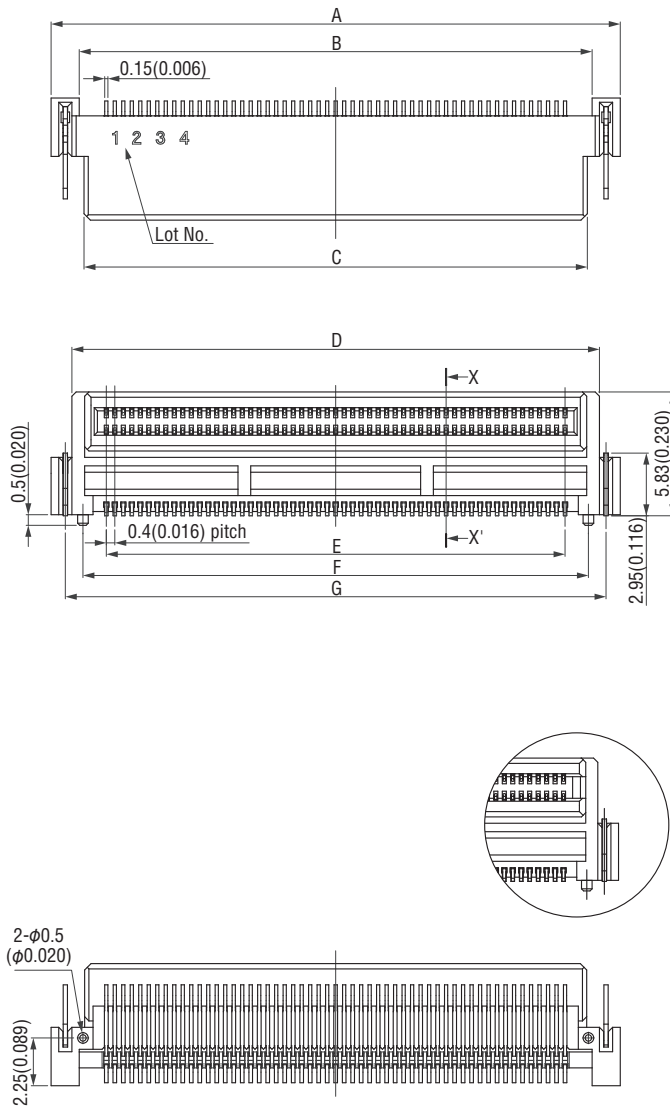
Packaging style  
Embossed tape

[illegible]

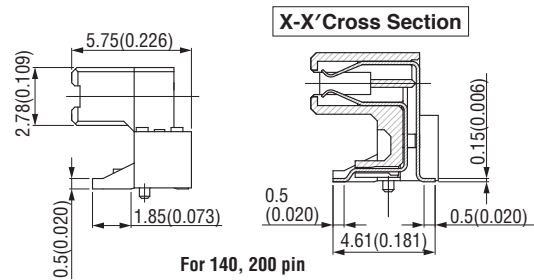
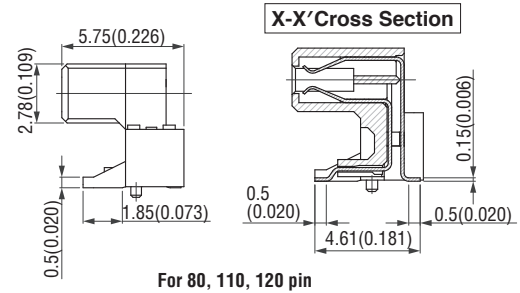
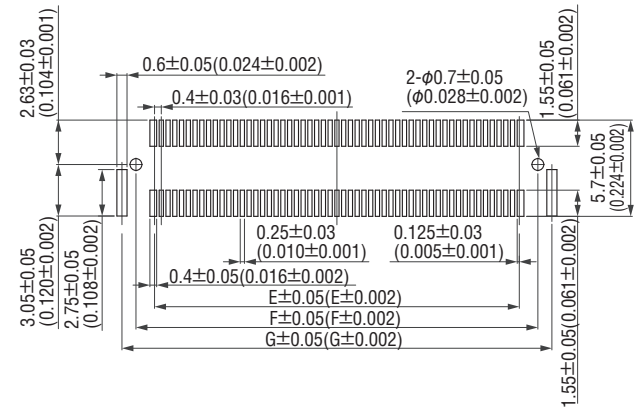
|                        |                     |
|------------------------|---------------------|
| ▶ <b>Product Table</b> | Packaging style     |
|                        | Embossed tape       |
| Part Number            | Number of packaging |
| DU12-110SB-5-T         | 1,000               |

# DU1□-□□□LB (Plug, Right angle)

Unit : mm(inch)



## 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                | G                | Number of packaging |
|-----------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| 80              | DU1□-080LB  | 20.80<br>(0.819) | 18.15<br>(0.715) | 17.70<br>(0.697) | 18.84<br>(0.742) | 15.60<br>(0.614) | 17.80<br>(0.701) | 19.46<br>(0.766) | 1,000               |
| 110             | DU1□-110LB  | 26.80<br>(1.055) | 24.15<br>(0.951) | 23.70<br>(0.933) | 24.84<br>(0.978) | 21.60<br>(0.850) | 23.80<br>(0.937) | 25.46<br>(1.002) | 1,000               |
| 120             | DU1□-120LB  | 28.80<br>(1.134) | 26.15<br>(1.030) | 25.70<br>(1.012) | 26.84<br>(1.057) | 23.60<br>(0.929) | 25.80<br>(1.016) | 27.46<br>(1.081) | 1,000               |
| 140             | DU1□-140LB  | 32.80<br>(1.291) | 30.15<br>(1.187) | 29.70<br>(1.169) | 30.84<br>(1.214) | 27.60<br>(1.087) | 29.80<br>(1.173) | 31.46<br>(1.239) | 1,000               |
| 200             | DU1□-200LB  | 44.80<br>(1.764) | 42.15<br>(1.659) | 41.70<br>(1.642) | 42.84<br>(1.687) | 39.60<br>(1.559) | 41.80<br>(1.646) | 43.46<br>(1.711) | 1,000               |