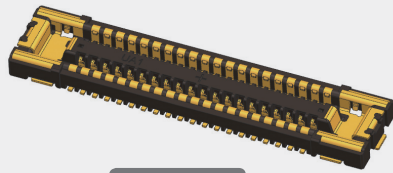


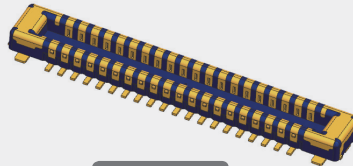
# Board To Board Connector

BJ

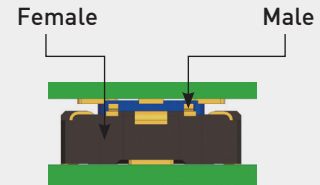
**Applications** | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices



Female



Male



Mated

- ▶ For contact stability, Double Contact and Bellows Type Contact Structure
- ▶ Functional Fitting Nail
  - 1) Robust type (Mold Prevention of damage)
  - 2) High Current
- ▶ FEMALE , MALE – Terminal / Fitting Nail Full-Insert Structure
  - 1) Mold Prevention of damage and Reinforcement of strength
  - 2) Improving product quality reliability.

## Code & Specification

Mating Size / Unit : (mm)

Product Code	Pitch (mm)	No. of Contacts	Width (mm)	Height (mm)	Length	Remark
BF035-I20B-C08-D	0.35	20	2.20	0.80	6.86	Receptacle
BM035-I20B-C08-D	0.35	20	2.20	0.80	6.86	Plug
BF035-I40B-C08-D	0.35	40	2.20	0.80	10.36	Receptacle
BM035-I40B-C08-D	0.35	40	2.20	0.80	10.36	Plug

Rated Current	Contact Resistance	Dielectric Strength	Temperature Range
Signal 0.3A/Pin Power 4.0A/Pin	Signal 50mΩ [Max.] Power 30mΩ [Max.]	AC 250V	-35°C ~ 85°C

# Board To Board Connector



**Applications** | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

## Product Specification

Ratings	Rated current	Signal : 0.3A/Pin Power : 4.0A/Pin	Operating temperature range	-35°C to +85°C 1	Storage temperature range	-10°C to +60 °C (Product only)
	Rated voltage	30V AC(RMS) / DC	Operating humidity range	85%RH Max.2	Storage humidity range	65%RH Max. 2

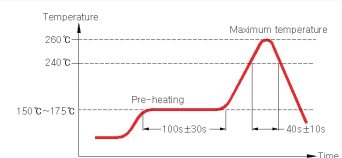
1) Including terminal temperature rise.

2) Storage area is to be free of corrosive gases and dew formation.

Items	Specifications	Conditions
1. Contact resistance	- Signal : 50mΩ [Max.] - Power : 30mΩ [Max.]	- Open circuit voltage: 20mV (AC) - Test current: 1mA.
2. Insulation resistance	50MΩ [Min.]	250V DC
3. Withstanding voltage	No flashover or dielectric breakdown	250V AC(RMS) for 1minute
4. Insertion force / Separation force	1) Insertion force : 5.0kgf [Max.] 2) Separation force : 0.012kgf/Pin [Min]	Insert and withdraw connectors at the speed rate of 25mm per minute.
5. Durability	1) Contact resistance - Signal : 90mΩ [Max.] - Power : 50mΩ [Max.]	When mated up to 30 cycles repeatedly by the rate of 10mm per minute
6. Vibration	1) Discontinuity : 1.0 microsec. [Max.] 2) Contact resistance - Signal : 90mΩ [Max.] - Power : 50mΩ [Max.]	- Vibration frequency range : 10~55Hz - Total amplitude : 1.5mm - Sweep ration : 10-55-10Hz/Min - Duration : 2h each (6h in total)
7. Shock	1) Discontinuity : 1.0 microsec. [Max.] 2) Contact resistance - Signal : 90mΩ [Max.] - Power : 50mΩ [Max.]	- Acceleration : 50G (490m/s <sup>2</sup> ) - Duration : 11ms - Number of shocks : 3 times per each direction - Test current : 100mA
8. Humidity	1) Contact resistance - Signal : 90mΩ [Max.] - Power : 50mΩ [Max.] 2) Insulation resistance : 25MΩ [Min.]	- Temperature : 40°C±2°C - Relative humidity : 90% RH to 95% RH - Duration : 96hr

9. Solder heat resistance No loose contacts no deformation.

Reflow condition.  
(Refer to Reflow)



## Materials / Finish

Part	Materials	Finish	UL Regulation
Female Base	LCP	Black	UL94V-0
Female Terminal	Phosphor Bronze	Au, Ni plated	-
Female Fitting Nail	Copper Alloy	Au, Ni plated	-
Male Base	LCP	Black	UL94V-0
Male Terminal	Phosphor Bronze	Au, Ni plated	-
Male Fitting Nail	Copper Alloy	Au, Ni plated	-

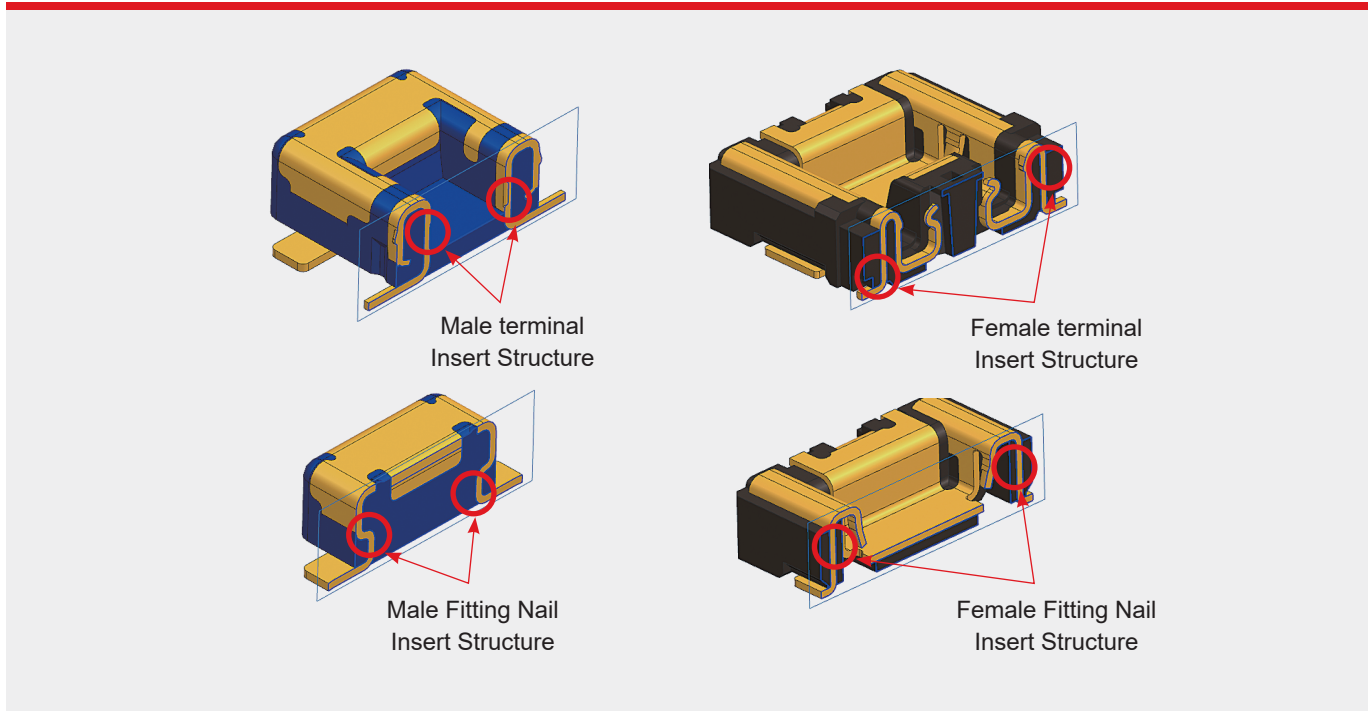
# Board To Board Connector



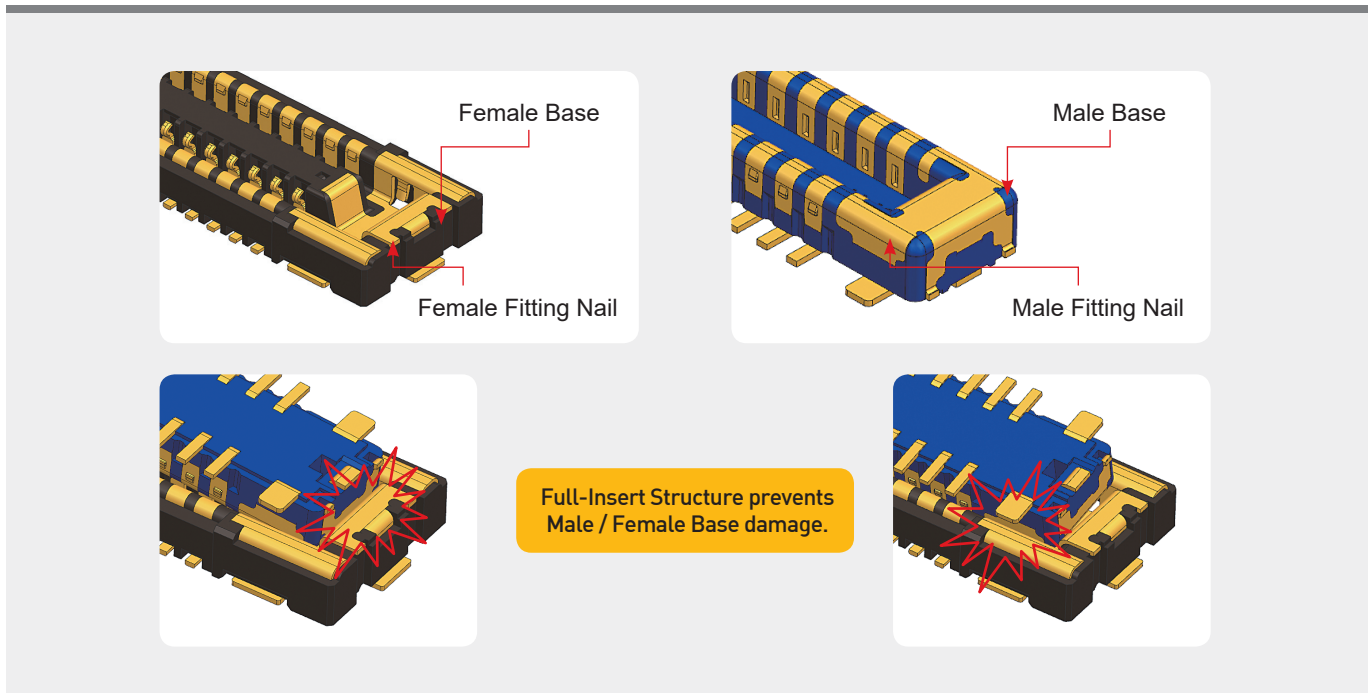
Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

## FEATURES AND ADVANTAGES

► Insert Structure for preventing Lead solder over rise



► Full-Insert Structure for prevention of Base damage



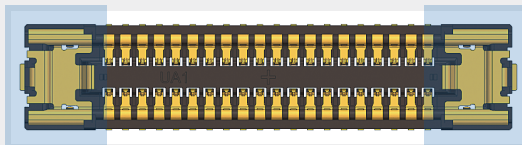
# Board To Board Connector



Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

## ► High current(4A) for Power Contact

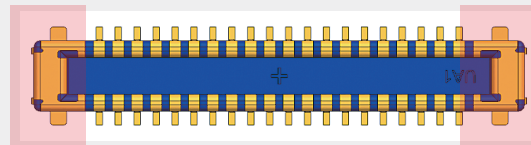
4A Power Contact



Female (Receptacle)

4A Power Contact

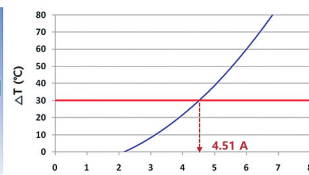
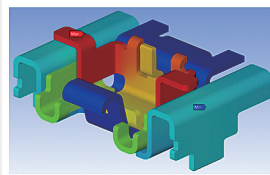
4A Power Contact



Male (Plug)

4A Power Contact

허용전류(A)	1	2	3	4	5	6	7	$\Delta T = 30\text{ }^{\circ}\text{C}$
$\Delta\text{Temperature}(\text{ }^{\circ}\text{C})$	0	0	8.3	21.7	38.9	60.0	85.0	4.51 A



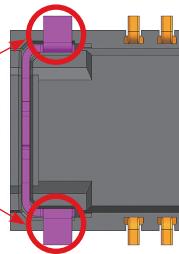
Allowable Current Simulation

## ► Three Fitting Nail Leads for reinforced Solder Peeling Strength

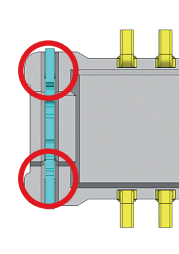
BR1

Female (Receptacle)

2 Mounting  
Points  
(Fitting Nail)



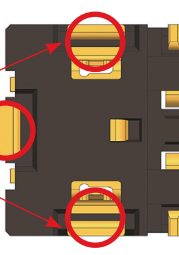
Male (Plug)



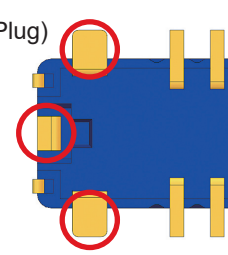
BJ

Female (Receptacle)

3 Mounting  
Points  
(Fitting Nail)



Male (Plug)



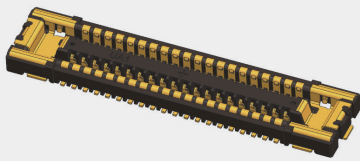
# Board To Board Connector



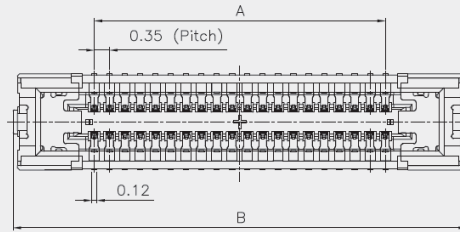
Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

## TYPE : RECEPTACLE (FEMALE)

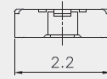
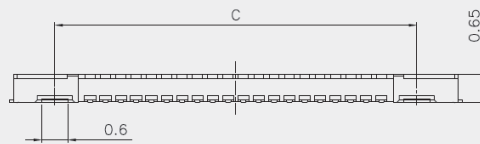
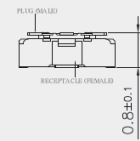
### Product Drawing



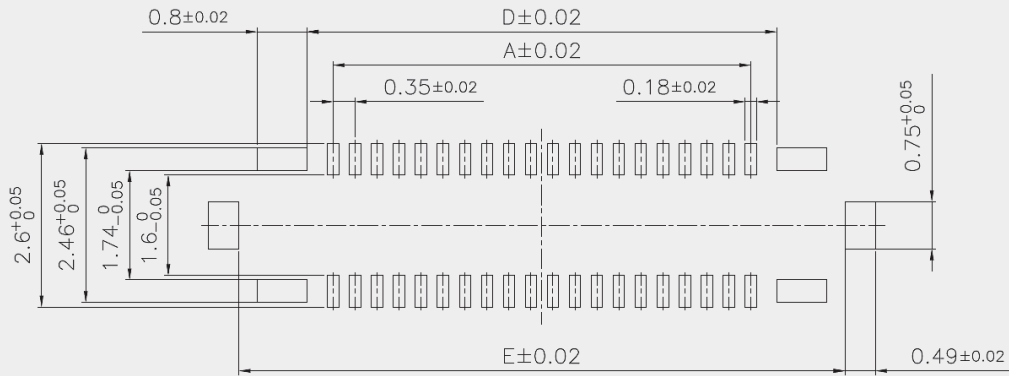
Female (Receptacle)



[ ENGAGEMENT FIGURE ]



### Recommended PCB , Metal Mask Layout



【 RECOMMENDED PAD LAYOUT 】

Mating Size / Unit : (mm)

Product No.	No. of Contacts	A	B	C	D	E
BF035-I20B-C08-D	20	3.15	6.86	4.77	3.97	6.15
BF035-I40B-C08-D	40	6.65	10.36	8.27	7.47	9.65

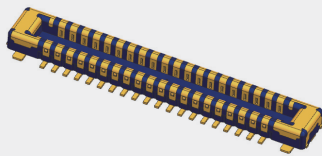
# Board To Board Connector



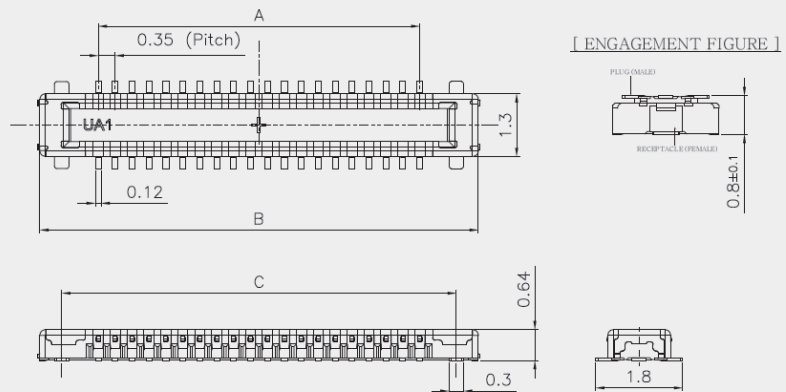
Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

## TYPE : PLUG (MALE)

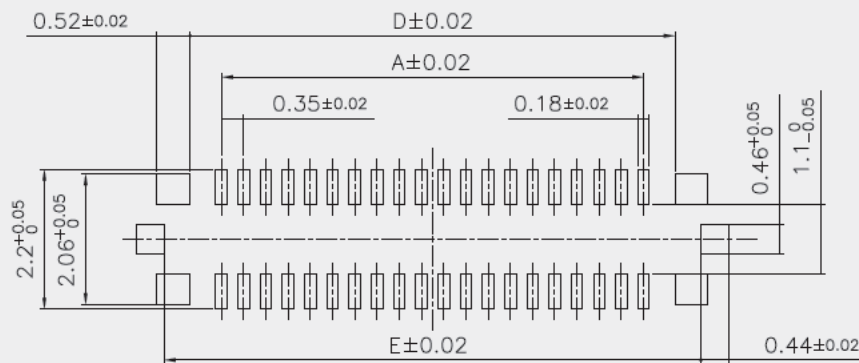
### Product Drawing



Male (Plug)



### Recommended PCB , Metal Mask Layout



【 RECOMMENDED PAD LAYOUT 】

Mating Size / Unit : (mm)

Product No.	No. of Contacts	A	B	C	D	E
BM035-I20B-C08-D	20	3.15	5.57	4.66	4.14	4.96
BM035-I40B-C08-D	40	6.65	9.07	8.16	7.64	8.46