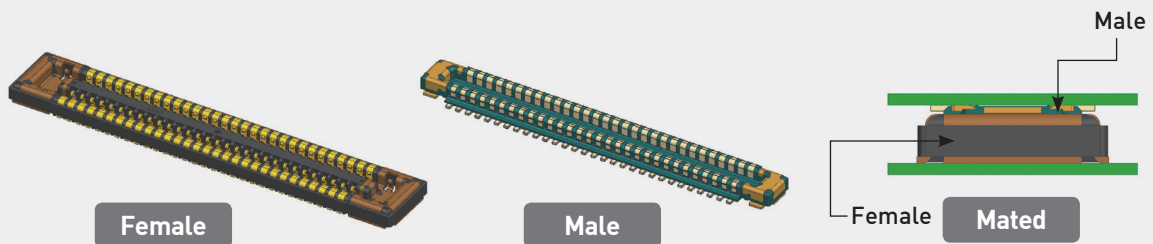


Board To Board Connector

BQ

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



- ▶ For contact stability, Double Contact and Bellows Type Contact Structure
- ▶ 0.3mm pitch, 0.6mm slim stacking design for saving space
- ▶ Functional Fitting Nail
 - 1) Robust type (Mold Prevention of damage)
 - 2) High Current
- ▶ Female, Male – Terminal / Fitting Nail Full-Insert Structure
 - 1) Prevention of Base 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
BF030-I24B-C06-C	0.30	24	2.00	0.60	6.50	Receptacle
BM030-I24B-C06-C	0.30	24	2.00	0.60	5.46	Plug
BF030-I30B-C06-C	0.30	30	2.00	0.60	7.40	Receptacle
BM030-I30B-C06-C	0.30	30	2.00	0.60	6.36	Plug
BF030-I32B-C06-C	0.30	32	2.00	0.60	7.70	Receptacle
BM030-I32B-C06-C	0.30	32	2.00	0.60	6.66	Plug
BF030-I40B-C06-C	0.30	40	2.00	0.60	8.90	Receptacle
BM030-I40B-C06-C	0.30	40	2.00	0.60	7.86	Plug
BF030-I50B-C06-C	0.30	50	2.00	0.60	10.40	Receptacle
BM030-I50B-C06-C	0.30	50	2.00	0.60	9.36	Plug
BF030-I60B-C06-C	0.30	60	2.00	0.60	11.90	Receptacle
BM030-I60B-C06-C	0.30	60	2.00	0.60	11.90	Plug
BF030-I78B-C06-C	0.30	78	2.00	0.60	14.60	Receptacle
BM030-I78B-C06-C	0.30	78	2.00	0.60	14.60	Plug

Rated Current	Contact Resistance	Withstanding voltage	Temperature Range
Signal 0.3A/Pin Power 5.0A/Pin	Signal 50mΩ [Max.] Power 30mΩ [Max.]	250V AC(RMS)	-35°C ~ 85°C

Board To Board Connector



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

Product Specification

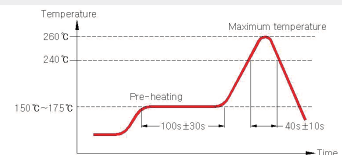
Ratings	Rated current	Signal : 0.3A/Pin Power : 5.0A/Pin	Operating temperature range	-35°C to +85°C	Storage temperature range	+15°C to +35 °C
	Rated voltage	30V AC(RMS)/DC	Operating humidity range	70%RH Max.2	Storage humidity range	65%RH Max. 2

- 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 ²) - Duration : 11ms - Number of shocks : 3 times per each direction - Test current : 100mA
8. Humidity	1) Contact resistance - Signal : 90mΩ [Max.] - Power : 50mΩ [Max.]	- 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	-
Female Inner Nail	Copper Alloy	Ni plated	-
Male Base	LCP	Black	UL94V-0
Male Terminal	Phosphor Bronze	Au, Ni plated	-
Male Fitting Nail	Copper Alloy	Au, Ni plated	-

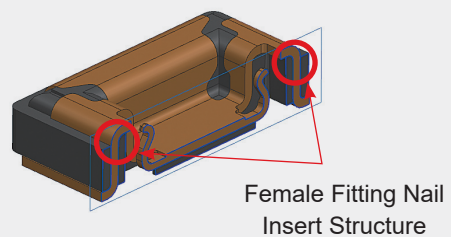
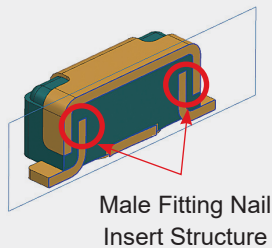
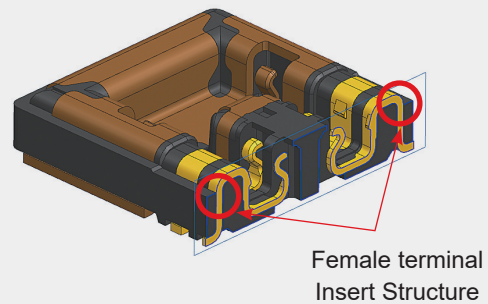
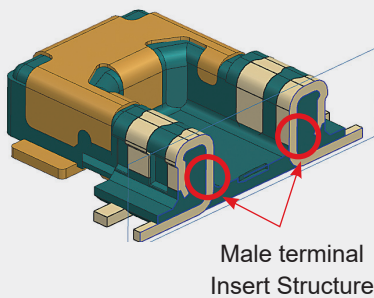
Board To Board Connector

BQ

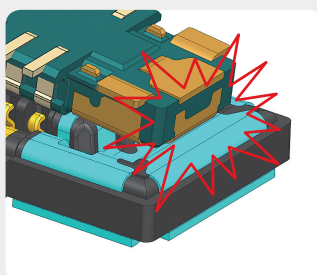
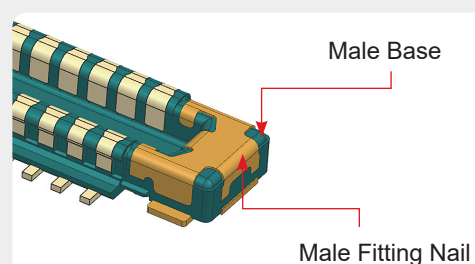
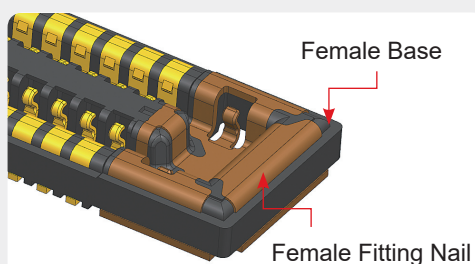
Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

FEATURES AND ADVANTAGES

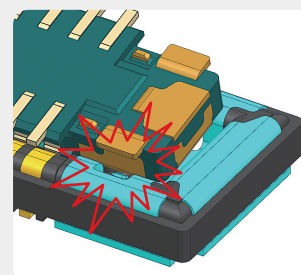
► Insert Structure for preventing Lead solder over rise



► Full-Insert Structure for prevention of Base damage



Full-Insert Structure prevents
Male / Female Base damage.



Board To Board Connector



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

- ▶ 0.3mm narrow pitch for saving space
- ▶ High current (5A) for Power Contact

0.30mm Pitch 60Pin Product (BQ)

5A Power Contact 5A Power Contact

11.90

Saving Space

Allowable Current Simulation

0.35mm Pitch 60Pin Product (BR1)

No Power Contacts

12.75

- ▶ Inner SMT Lead for reinforced Solder Peeling Strength

Female Bottom View

PCB PAD

Inner SMT Lead

Male Bottom View

PCB PAD

Inner SMT Lead

Inner SMT Lead reinforces Product Solderability.

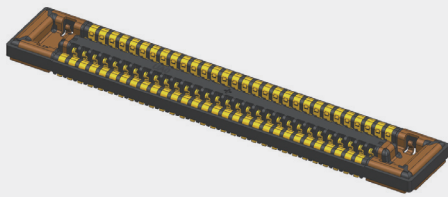
Board To Board Connector



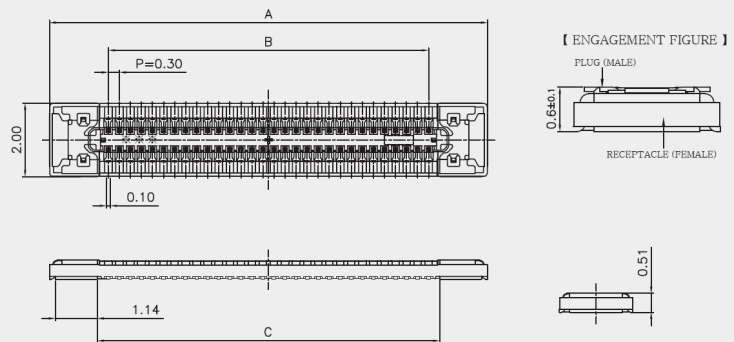
Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

TYPE : RECEPTACLE (FEMALE)

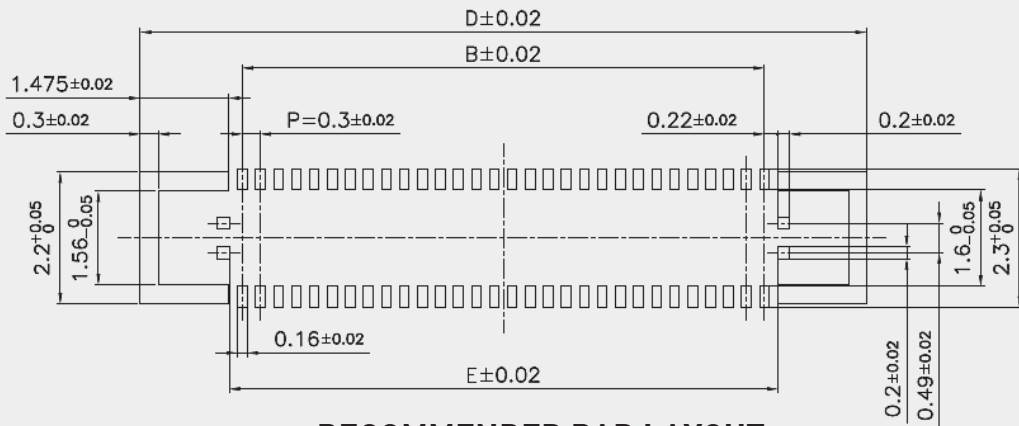
Product Drawing



Female (Receptacle)



Recommended PCB , Metal Mask Layout



RECOMMENDED PAD LAYOUT

(Metal Mask 개구부 Size 1:1 t0.08)

Mating Size / Unit : (mm)

Product Code	No. of Contacts	BQ : Receptacle			PCB PAD	
		A	B	C	D	E
BF030-I24B-C06-C	24	6.50	3.30	3.90	6.70	3.74
BF030-I30B-C06-C	30	7.40	4.20	4.80	7.60	4.64
BF030-I32B-C06-C	32	7.70	4.50	5.10	7.90	4.94
BF030-I40B-C06-C	40	8.90	5.70	6.30	9.10	6.14
BF030-I50B-C06-C	50	10.40	7.20	7.80	10.60	7.64
BF030-I60B-C06-C	60	11.90	8.70	9.30	12.10	9.14
BF030-I78B-C06-C	78	14.60	11.40	12.00	14.80	11.84

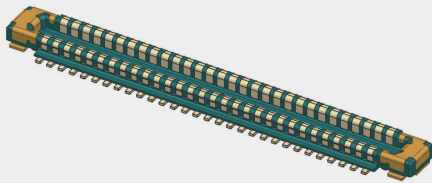
Board To Board Connector



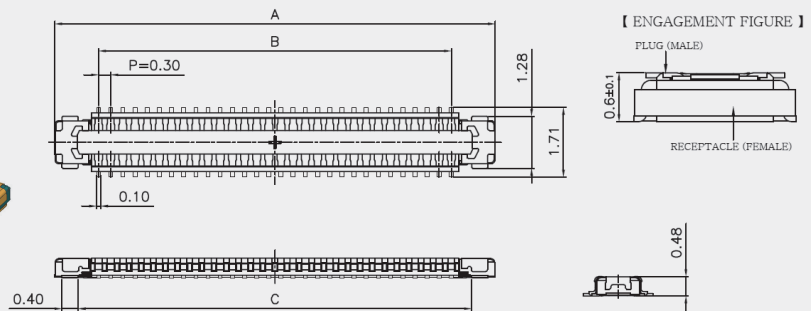
Applications | Smart Phone, Smart Watch, Tablet PC, Mobile Devices, Wearable Devices

TYPE : PLUG (MALE)

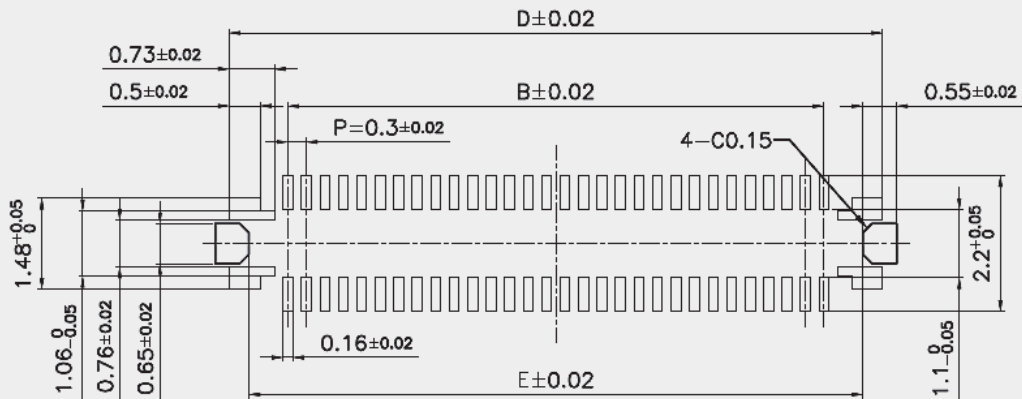
Product Drawing



Male (Plug)



Recommended PCB , Metal Mask Layout



RECOMMENDED PAD LAYOUT

(Metal Mask 개구부 Size 1:1 t0.08)

Mating Size / Unit : (mm)

Product Code	No. of Contacts	BQ : Plug			PCB PAD	
		A	B	C	D	E
BM030-I24B-C06-C	24	5.46	3.30	4.30	5.20	4.56
BM030-I30B-C06-C	30	6.36	4.20	5.20	6.10	5.46
BM030-I32B-C06-C	32	6.66	4.50	5.50	6.40	5.76
BM030-I40B-C06-C	40	7.86	5.70	6.70	7.60	6.96
BM030-I50B-C06-C	50	9.36	7.20	8.20	9.10	8.46
BM030-I60B-C06-C	60	10.86	8.70	9.70	10.60	9.96
BM030-I78B-C06-C	78	13.56	11.40	12.40	13.30	12.66