元精技术	产品规格书				
	文件类别	文件编号	生效日期	版　次	产品项目编号
	三阶技术标准	CPT-SS-R-122	2026.02.26	B	B104 系列
	适用产品	0.5mm 间距，3.0~5.0mm 堆叠高度，板对板或板对 FPC 连接器			

文件编制、审批及受控状态

Document preparation, approval, and controlled status

受控印章及保密状态 Controlled Seal and Confidentiality Status	编制部门 prepared by	研发中心 R&D Center		
受控印章 Controlled Seal	编制日期 Preparation Date	2026.02.27		
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保密等级: □绝密■机密□秘密□解密 Classification Level:□Top Secret ☑ confidential□secret□decrypt	批　准 approve	LEO	签　名 Signature	

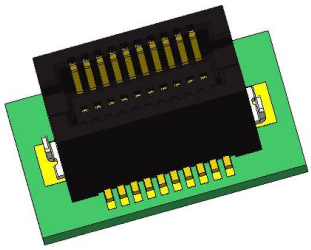
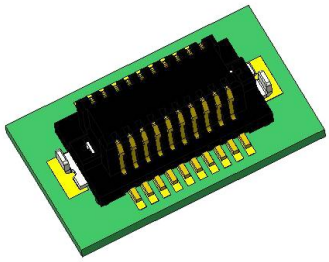
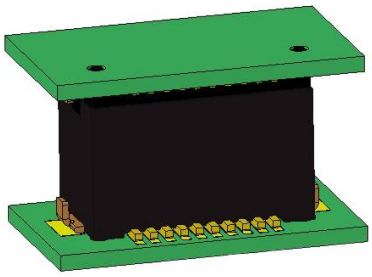
文件修订履历

Document Revision History

日期 date	版次 edition	修订内容 Revised content	修订人 Reviser
2026.02.27	A	新发行 new release	FENG
2026.07.2	B	增加料号描述 Add part number description	FENG

元精技术	产品规格书				
	文件类别	文件编号	生效日期	版　次	产品项目编号
	三阶技术标准	CPT-SS-R-122	2026.02.26	B	B104 系列
	适用产品	0.5mm 间距，3.0~5.0mm 堆叠高度，板对板或板对 FPC 连接器			

B104 Series 0.5mm Pitch SMT Board-to-Board Connectors

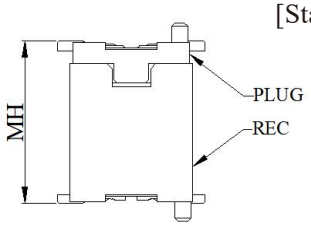




■Features（特点）

1. Wide Variety of Stacking Heights（多种不同堆叠高度）

Stacking heights of 3mm, 3.5mm 4mm and 5mm are provided in addition to the ultra-compact size of 0.5mm pitch.
（除了超紧凑 0.5mm 间距外，还提供了 3.0mm，3.5mm，4.0mm，5.0mm 堆叠高度选项）

[Stacking Height Variations]（堆叠高度的变化）



Receptacle/Plug	BB0112PXXA	BB0104PXXX
BB0112RXXA	3.0	_____
BB0110RXXX	_____	3.5
BB0111RXXX	_____	4.0
BB0104RXXX	_____	5.0

Note 1 : The stacking height does not include the soldering paste thickness.

（注 1：堆叠高度不包括锡膏厚度）

Stacking Height		3.0mm	3.5mm	4.0mm	5.0mm
No. of Pos.	10pos.	✔	_____	_____	_____
	14pos.	✔	_____	_____	_____
	20pos.	✔	✔	✔	✔
	30pos.	✔	✔	✔	✔
	32pos.	✔	_____	✔	_____
	36pos.	✔	✔	✔	✔
	40pos.	✔	✔	✔	✔
	50pos.	✔	✔	✔	✔
	60pos.	✔	✔	✔	✔
	80pos.	✔	_____	_____	_____

2. 5Gbps Transmission Speed 传输速度 5Gbps

■Environment protection 环保

Meet the halogen free requirement（符合无卤要求）
As defined in IEC 61249-2-21（如 **IEC 61249-2-21** 所定义）
Br : 900ppm Max, **Cl : 900ppm** Max , **Br+Cl :1500ppm** Max

■Product specification（产品规格）

Rated current 额定电流	0.3A	Operating temperature 操作温度范围	-55 ~ 125°C （注释 2）Note 2	Storage temperatur 储存温度范围	-10 ~ 60°C （注释 3）Note 3
Rated voltage 额定电压	50V AC	Operating humidity 操作湿度范围	40 ~ 80%	Storage humidity 储存湿度范围	40 ~ 70%（注释 3）Note 3

项目	规格	条件
1. Electrical Performance（电器性能）:		
1. 1Contact Resistance 接触阻抗	50mΩ Max	Make the BTB plugs and receptacles on board be fully mated ,then apply 20mV AC, 100mA current to the mated specimens , 将焊板的 BTB 公母端实配后通电测试，电流及电压规格：20mV AC, 100mA。测试公母端实配后 LLCR
1.2 Insulation Resistance 绝缘电阻	500 MΩ Min	**EIA 364-21** (or MIL-STD-202F, Method 302, Test Condition B) Apply a voltage of 100 V DC between adjacent terminals. of the plugs and receptacles. Electrification Time: 2 min 施加 100V DC 到公端&母端相邻两根端子之间，通电时间：2 min
1.3 Dielectric Withstanding Voltage 耐电压	1). samples no breakdown. 样品无击穿，烧焦等不良。 2). Cut off current: 2mA Maximum 表面漏电：2 mA Maximum	**EIA 364-20** (or MIL-STD-202F, Method 301, Test Condition B) Apply a voltage of 150 VAC between adjacent terminals. of the plugs and receptacles. Electrification Time: 1 min. 施加 150VAC 到公端&母端相邻两根端子之间，通电时间：1 min
2.Mechanical Performance（机械性能）		
2.1 Durability 寿命	1).Shall meet visual requirement, show no physical damage. 外观没有任何物理损坏 2). Contact Resistance value 测试后变化值均≤20mΩ	**EIA 364-09** Make the specimens that are on board mated, then fix the receptacles to the machine on horizontal or perpendicular direction. Use the machine catch the plugs and separate the specimens, then make the plugs be fully mated with receptacles at a rate of 12.5millimeters/minute on horizontal or perpendicular direction.duration:50 cycles

		将焊板的 BTB 公端与母端配合好后将母端水平或垂直固定在测试仪器上，用仪器夹住公端分离，然后将公端以 12.5 millimeters/minute 的速度水平或垂直插入焊板母端直到配合到位，循环 50 次
2.2 Mating Force 插入力	0.8N/PIN Max	**EIA 364-13** Make the specimens that are on board mated, then fix the receptacles to the machine on horizontal or perpendicular direction. Use the machine catch the plugs and separate the specimens, then make the plugs be fully mated with receptacles at a rate of 12.5millimeters/minute on horizontal or perpendicular direction. 将焊板的 BTB 公端与母端配合好后将母端水平或垂直固定在测试仪器上，用仪器夹住公端分离，然后将公端以 12.5 millimeters/minute 的速度水平或垂直插入焊板母端直到配合到位
2.3 Unmating Force 总拔出力	0.1N/PIN MIN	
2.4 Contact Retention Force 端子保持力	0.1kgf/Pin Min	**EIA 364-35** The pull speed shall 12.5 mm per minute on the terminal assembled in the housing(Only for female group vertical PIN terminal signal and power PIN) 以 12.5 mm per minute 的速度，将组装在胶芯内的以垂直方向端子拔出
2.5. SMT Retention force 焊板保持力	Horizontal direction: 30N Min Vertical direction:30N Min 水平方向： 30N Min 垂直方向： 30N Min	The product is welded to the PCB board and pushed horizontally and vertically to remove the product from the PCB at a speed of 12.5mm per minute 产品焊接在 PCB 板子上，以 12.5 mm per minute 的速度，从水平方向和垂直方向推产品，使产品和 PCB 剥离
3. Environmental performance（环境性能）		
3.1. Vibration 振动测试	1).Shall meet visual requirement, show no physical damage. 外观没有任何物理损坏 2).No discontinuities of 1 μ sec or longer duration. 扣合测试导通瞬断不可超过 1.0 微秒	**MIL-STD-202, Method-201** frequency:10-55 Hz; double amplitude: 1.5mm sweep time:1 minute the connectors condition is PCB mounting and the plugs mated with receptacles , they must be tested 2hours in each of the 3 axis(X,Y,Z),total 6 hours. 测试频率:10-55 Hz; 双振幅: 1.50mm 波形完成扫描时间:1 minute；将公母头配合好之后在 X,Y,Z 3 个轴向各测试 2 小时，共 6 小时。
3.2. Physical Shock 机械冲击测试		**EIA 364-27 Test Condition A** Physical Shock EIA 364-27 Test Condition A

	1).Shall meet visual requirement, show no physical damage. 外观没有任何物理损坏 2).No discontinuities of 1 μ sec or longer duration. 扣合测试，导通瞬断不可超过 1.0 微秒	(orMIL-STD-202F, Method 213) half-sine wave, apply 0.1ADC current Acceleration:50G(490m/s2) duration:11ms. the connectors condition is PCB mounting and the plugs mated with receptacles , shocking apply to 3 times in each of the 6 direction of 3 axis.18 total shock. 半正弦波，通以 0.1ADC 电流。 测试的重力加速度:50G(490m/s2) 测试时间：11ms.　将焊接 PCB 公母头配合，在 X,Y,Z 三轴 3 个方向各冲击 3 次，总共 18 次
3.3. Humidity 恒温恒湿测试	1). Appearance shall not be distinct damage. 不能出现明显的外观损坏 2). Contact Resistance value 测试后变化值均≤20mΩ	EIA 364-31, Test Condition A Method Ⅲ, (or MIL-202F, Method 103B Test Condition B.) The specimens shall be separated and left in the chamber of 25℃ ~65℃temperature and 90%～95% humidity for 96hrs. After test drying in ambient condition for 1 hours 将测试样本公母端分离放在一个恒温恒湿的空间内暴露 96 小时，此空间温度：25℃~65℃，相对湿度：90%～95%。测试完成后将样本擦干放置在周围环境中 1 小时
3.4. Temperature shock 冷热冲击测试	1). Appearance shall not be distinct damage. 不能出现明显的外观损坏 2). Contact Resistance value 测试后变化值均≤20mΩ	- 55 + 3 ° C: → 85 + 2 ° C for 30 minutes, 30 minutes. Cycle 5 times -55±3°C : 30 分钟 → 85±2°C : 30 分钟， 循环 5 次
3.5. Resistance to soldering heat 耐焊接热	Appearance: No abnormality. 外观无明显损伤； Coplanarity of the solder tail should be not beyond 0.08mm 焊脚平面度不超过 0.08mm	According to the following conditions to test connector. 1. Infrared reflow soldering, the peak temperature of 260 degrees Celsius, reference temperature curve, and the requirements of the SMT2 time; 2. electric soldering iron, requires 300 degrees 5 seconds, 350 degrees below 3 seconds. 按下列条件进行测试： 1.红外线回流焊接，峰值温度260度以下，可参考温度曲线图（5.0），且要求SMT2次； 2. 电烙铁，需要 300 度 5 秒，350 度以下 3 秒。
3.6.Solder ability 焊接性	The surface of the portion to be soldered shall at least 95% covered area must show no voids, pin holes 要求焊脚润锡面积达到浸润面积的 95%以上	**EIA 364-52** Make the specimens tail tested by the last testing step immersion into molten solder at 245+/-5℃ for 3+/-0.5 seconds. 测试样本焊脚浸润在温度为 245+/-5℃的熔融态锡里面

		2+/-0.5s。然后将样本拿出。
3.7.Resistance to high storage temperature 高温存储测试	1). Appearance shall not be distinct damage. 不能出现明显的外观损坏 2). Contact Resistance value 测试后变化值均≤20mΩ	Make the samples be separated and Leave them in the chamber of temperature +110℃+/-3℃ for 96hr, then it shall be subjected to standard atmospheric condition for 1～2h 将测试样本分离放置在一个+110℃+/-3℃的空间里暴露 96 小时，然后在标准环境下放置 1—2h.
3.8. resistance to low storage temperature 低温存储测试	1). Appearance shall not be distinct damage. 不能出现明显的外观损坏 2). Contact Resistance value 测试后变化值均≤20mΩ	Make the samples be separated and Leave them in the chamber of temperature -40℃+/-2℃ for 96hr, then it shall be subjected to standard atmospheric condition for 1～2h 将测试样本分离放置在一个-40℃+/-3℃的空间里暴露 96 小时，然后在标准环境下放置 1—2h
3.9. Salt water spray 盐雾测试	1). Appearance shall not be distinct damage. 不能出现明显的外观损坏 2) . Contact Resistance value 测试后变化值均≤20mΩ	**EIA 364—16A (MIL-STD-202 METHOD 101)** Temperature: 35℃±2℃ 温度：35℃±2℃ Density of salt water : 5±1% 盐水浓度：5±1% Duration: 48±2 hours. 持续时间: 48±2 hours.
3.10. Times of Rework Soldering 耐焊接次数	1). Appearance shall not be distinct damage. 不能出现明显的外观损坏	IR Reflow welding twice 过两次回流焊
3.11.Temperature rise test 温升测试	Temperature rise 30℃ Max 温度升高最大 30℃	Apply the maximum rated current to the paired connectors and measure the temperature rise. (EIA 364-70 Method1) 将最大额定电流施加到配合的连接器并测量温升。（EIA 364-70 Method1）

Note2: Contains temperature rise due to current

注释 2：包含电流引起的温升

Note 3: Storage refers to the long-term storage of unused items before they are installed on the PCB

注释 3：存储是指在将未使用的物品安装在 PCB 上之前的长期存储。

The operating temperature/humidity range is suitable for temporary storage conditions, such as when there is no current after installation on the PCB, and when there is no current during transportation.

工作温度/湿度范围适用于临时存储状态，如安装在 PCB 上以后未通电流和运输期间无电流时。

测试项目 Test Description	测试组别及顺序 Test Group and Sequence													
	A 组 Group A	B 组 Group B	C 组 Group C	D 组 Group D	E 组 Group E	F 组 Group F	G 组 Group G	H 组 Group H	I 组 Group I	J 组 Group J	K 组 Group K	L 组 Group L	M 组 Group M	N 组 Group N
产品形态 Conformation of Product	1	1,5	1,7	1	1,4	1,4	1,4	1,4	1,4	1,4	1,5	1,3	1,3	1,3
尺寸测试 FAI	2													
接触阻抗 Low Level Contact Resistance		2	2,8		2,5	2,5	2,5	2,5	2,5	2,5	2,6			
绝缘阻抗 Insulation Resistance		3									3,7			
耐电压 Dielectric Withstanding Voltage		4												
插拔力 Mating and Unmating Force			3,4											
寿命测试 Durability			5											
端子保持力 Contact Retention Force				2										
恒温恒湿测试 Resistance to soldering heat					3									
冷热冲击测试 Temperature shock						3								
高温存储测试 Resistance to high storage temperature							3							
低温存储测试 resistance to low storage temperature								3						
振动测试 Vibration									3					
耐冲击测试 Shock resistance										3				
盐雾测试 Salt Spray											4			
焊接性测试 Solder ability												2		
焊板保持力 SMT Retention force												4		
耐焊接热 Resistance to soldering heat													2	
升温测试 Temperature rise test														2
样品数量 Sample size	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS

■材质 / 处理

(Product) 产品	(Part) 部件	(material) 材质	Description 描述	UL 规格
(Plug) 插头	(Insulator) 主体	LCP	-	UL94V-0
	(Signal Pin) 信号 pin	Phosphor Bronze T=0.20mm	GOLD ON CONTACT AREA, GOLD ON SOIDER AREA 接触区镀金，焊接区镀金。	----------
	(GND Pin) 接地 pin	Brass T=0.20mm	Tn ALL OVER 全区域镀雾锡	----------

(Product) 产品	(Part) 部件	(material) 材质	Description 描述	(UL SPEC) UL 规格
(Receptacle) 插座	(Insulator) 主体	LCP	-	UL94V-0
	(Signal Pin) 信号 pin	Phosphor Bronze T=0.25mm	GOLD ON CONTACT AREA, GOLD ON SOIDER AREA 接触区镀金，焊接区镀金。	----------
	(GND Pin) 接地 pin	Brass T=0.20mm	Tn ALL OVER 全区域镀雾锡	----------

■The composition of the product model (产品型号的构成)

Please refer to the figure below to determine the product specifications according to the product model. When purchasing, please select the desired product model from this catalog

请参考下图，根据产品型号确定产品规格。采购时，请从本目录中选择所需的产品型号。

■PART NO.（料号）

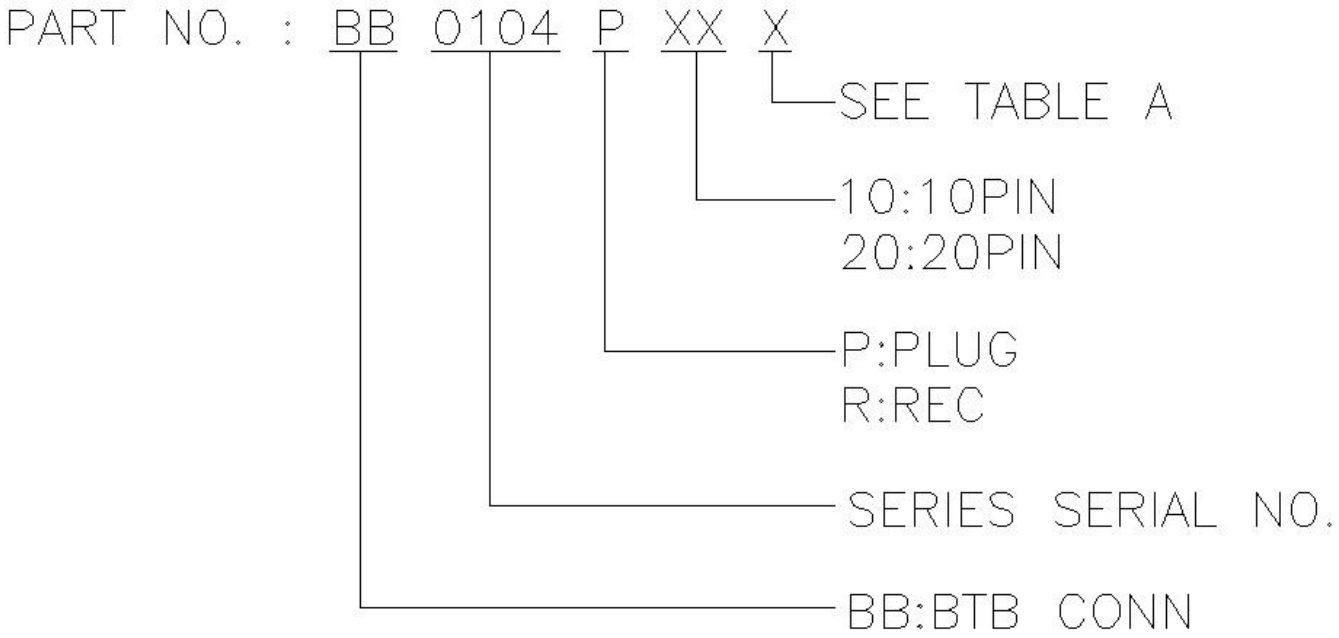
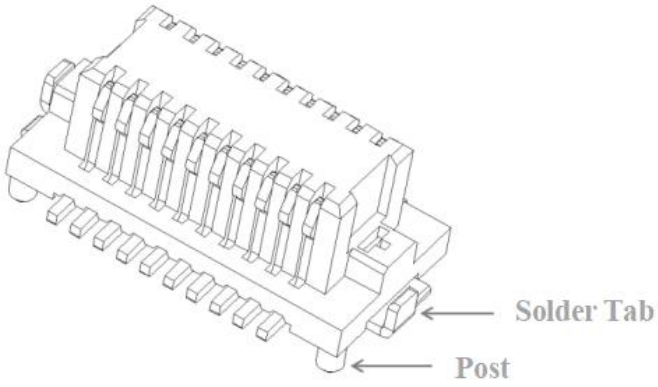
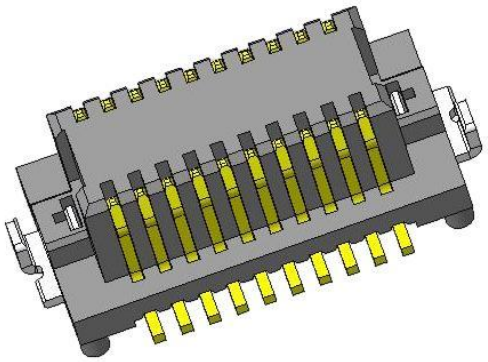


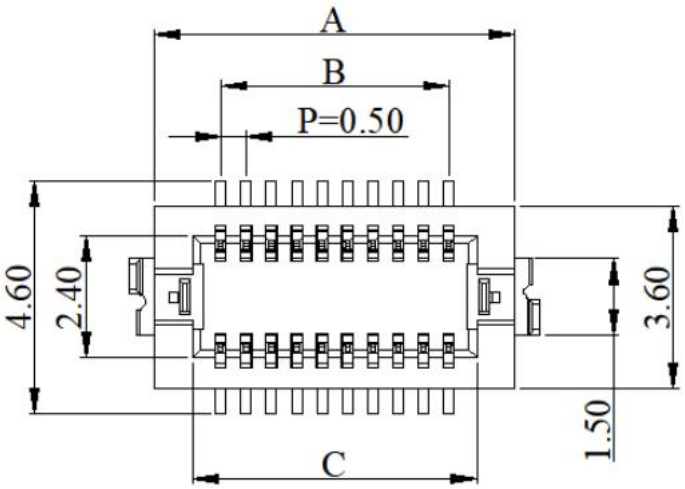
TABLE A:　　●：代表有，○：代表无

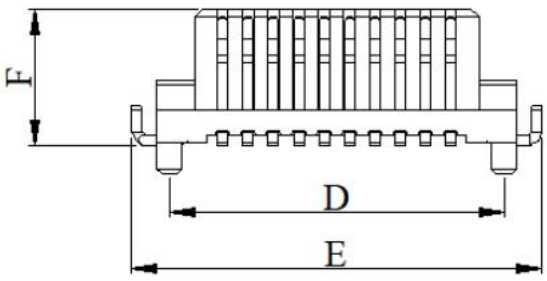
料号	电镀	塑胶颜色	塑胶柱	接地片	其他
A	G/F	黑色	○	○	
B	G/F	黑色	●	○	
C	G/F	黑色	○	●	
D	G/F	黑色	●	●	
E	G/F	本色	●	○	
F	G/F	本色	●	●	
G	G/F	本色	○	○	
H	G/F	本色	○	●	

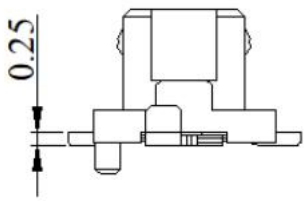
■PLUG（插头）











●Stacking Height : 3.0mm Product

Unit : mm

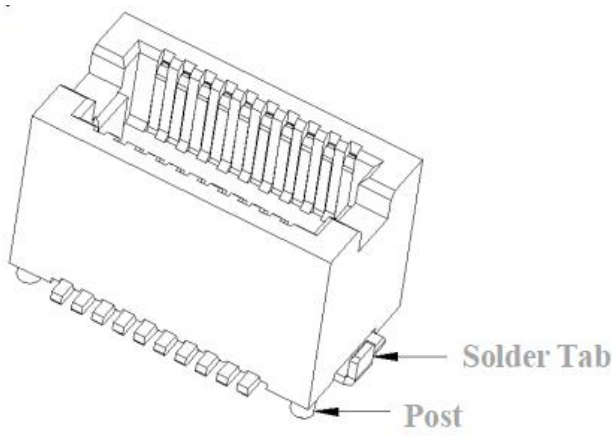
Part No.	POST	Solder Tab	PIN	A	B	C	D	E	F
BB0112P10X	✗	✗	10	4.6	2.0	3.1	/	/	2.2
	✓	✗					4.1	/	
	✗	✓					/	5.6	
	✓	✓					4.1	5.6	
BB0112P14X	✗	✗	14	5.6	3.0	4.1	/	/	
	✓	✗					5.1	/	
	✗	✓					/	6.6	
	✓	✓					5.1	6.6	
BB0112P20X	✗	✗	20	7.1	4.5	5.6	/	/	
	✓	✗					6.6	/	
	✗	✓					/	8.1	
	✓	✓					6.6	8.1	
BB0112P22X	✗	✗	22	7.6	5.0	6.1	/	/	
	✓	✗					7.1	/	
	✗	✓					/	8.6	
	✓	✓					7.1	8.6	
BB0112P30X	✗	✗	30	9.6	7.0	8.1	/	/	
	✓	✗					9.1	/	
	✗	✓					/	10.6	
	✓	✓					9.1	10.6	
BB0112P32X	✗	✗	32	10.1	7.5	8.6	/	/	
	✓	✗					9.6	/	
	✗	✓					/	11.1	
	✓	✓					9.6	11.1	
BB0112P36X	✗	✗	36	11.1	8.5	9.6	/	/	
	✓	✗					10.6	/	
	✗	✓					/	12.1	
	✓	✓					10.6	12.1	
BB0112P40X	✗	✗	40	12.1	9.5	10.6	/	/	
	✓	✗					11.6	/	
	✗	✓					/	13.1	
	✓	✓					11.6	13.1	
BB0112P50X	✗	✗	50	14.6	12.0	13.1	/	/	
	✓	✗					14.1	/	
	✗	✓					/	15.6	
	✓	✓					14.1	15.6	
BB0112P60X	✗	✗	60	17.1	14.5	15.6	/	/	
	✓	✗					16.6	/	
	✗	✓					/	18.1	
	✓	✓					16.6	18.1	
BB0112P80X	✗	✗	80	22.1	19.5	20.6	/	/	
	✓	✗					21.6	/	
	✗	✓					/	23.1	
	✓	✓					21.6	23.1	

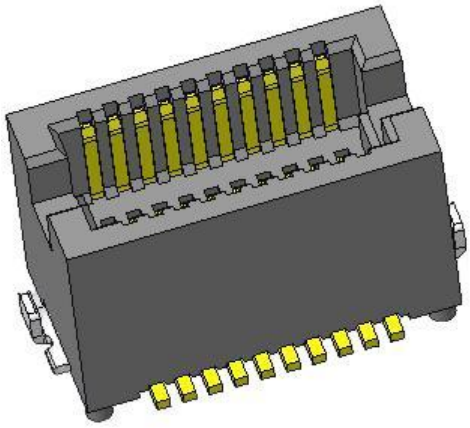
●Stacking Height : 3.5 to 5.0mm Product

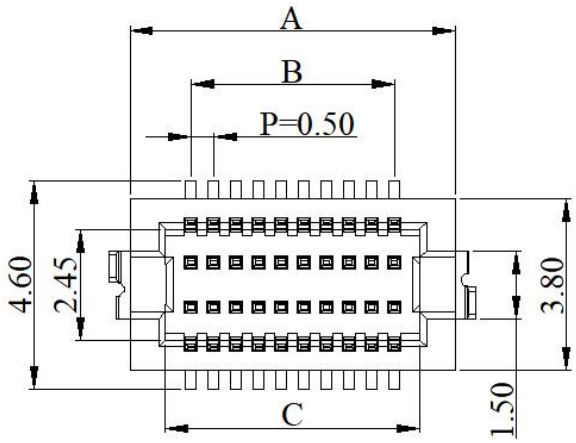
Unit : mm

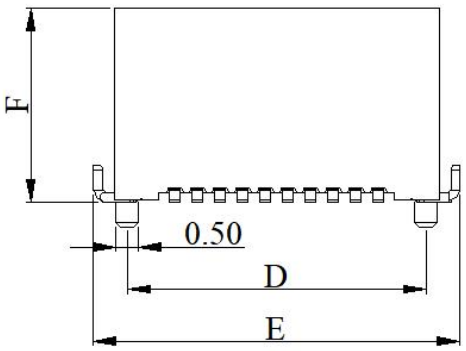
Part No.	POST	Solder Tab	PIN	A	B	C	D	E	F
BB0104P10X	☒	☒	10	4.6	2.0	3.1	/	/	2.7
	☑	☒					4.1	/	
	☒	☑					/	5.6	
	☑	☑					4.1	5.6	
BB0104P14X	☒	☒	14	5.6	3.0	4.1	/	/	
	☑	☒					5.1	/	
	☒	☑					/	6.6	
	☑	☑					5.1	6.6	
BB0104P20X	☒	☒	20	7.1	4.5	5.6	/	/	
	☑	☒					6.6	/	
	☒	☑					/	8.1	
	☑	☑					6.6	8.1	
BB0104P24X	☒	☒	24	8.1	5.5	6.6	/	/	
	☑	☒					7.6	/	
	☒	☑					/	9.1	
	☑	☑					7.6	9.1	
BB0104P30X	☒	☒	30	9.6	7.0	8.1	/	/	
	☑	☒					9.1	/	
	☒	☑					/	10.6	
	☑	☑					9.1	10.6	
BB0104P32X	☒	☒	32	10.1	7.5	8.6	/	/	
	☑	☒					9.6	/	
	☒	☑					/	11.1	
	☑	☑					9.6	11.1	
BB0104P36X	☒	☒	36	11.1	8.5	9.6	/	/	
	☑	☒					10.6	/	
	☒	☑					/	12.1	
	☑	☑					10.6	12.1	
BB0104P40X	☒	☒	40	12.1	9.5	10.6	/	/	
	☑	☒					11.6	/	
	☒	☑					/	13.1	
	☑	☑					11.6	13.1	
BB0104P50X	☒	☒	50	14.6	12.0	13.1	/	/	
	☑	☒					14.1	/	
	☒	☑					/	15.6	
	☑	☑					14.1	15.6	
BB0104P60X	☒	☒	60	17.1	14.5	15.6	/	/	
	☑	☒					16.6	/	
	☒	☑					/	18.1	
	☑	☑					16.6	18.1	
BB0104P80X	☒	☒	80	22.1	19.5	20.6	/	/	
	☑	☒					21.6	/	
	☒	☑					/	23.1	
	☑	☑					21.6	23.1	

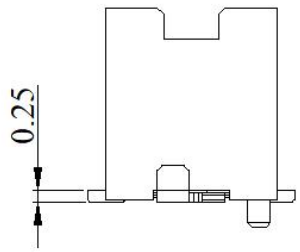
■Receptacle（插座）











●Stacking Height : 3.0mm Product

Unit : mm

Part No.	POST	Solder Tab	PIN	A	B	C	D	E	F
BB0112R10X	☒	☒	10	4.7	2.0	3.2	/	/	2.3
	☑	☒					4.1	/	
	☒	☑					/	5.6	
	☑	☑					4.1	5.6	
BB0112R14X	☒	☒	14	5.7	3.0	4.2	/	/	
	☑	☒					5.1	/	
	☒	☑					/	6.6	
	☑	☑					5.1	6.6	
BB0112R20X	☒	☒	20	7.2	4.5	5.7	/	/	
	☑	☒					6.6	/	
	☒	☑					/	8.1	
	☑	☑					6.6	8.1	
BB0112R22X	☒	☒	22	7.7	5.0	6.2	/	/	
	☑	☒					7.1	/	
	☒	☑					/	8.6	
	☑	☑					7.1	8.6	
BB0112R30X	☒	☒	30	9.7	7.0	8.2	/	/	
	☑	☒					9.1	/	
	☒	☑					/	10.6	
	☑	☑					9.1	10.6	
BB0112R32X	☒	☒	32	10.2	7.5	8.7	/	/	
	☑	☒					9.6	/	
	☒	☑					/	11.1	
	☑	☑					9.6	11.1	
BB0112R36X	☒	☒	36	11.2	8.5	9.7	/	/	
	☑	☒					10.6	/	
	☒	☑					/	12.1	
	☑	☑					10.6	12.1	
BB0112R40X	☒	☒	40	12.2	9.5	10.7	/	/	
	☑	☒					11.6	/	
	☒	☑					/	13.1	
	☑	☑					11.6	13.1	
BB0112R50X	☒	☒	50	14.7	12.0	13.2	/	/	
	☑	☒					14.1	/	
	☒	☑					/	15.6	
	☑	☑					14.1	15.6	
BB0112R60X	☒	☒	60	17.2	14.5	15.7	/	/	
	☑	☒					16.6	/	
	☒	☑					/	18.1	
	☑	☑					16.6	18.1	
BB0112R80X	☒	☒	80	22.2	19.5	20.7	/	/	
	☑	☒					21.6	/	
	☒	☑					/	23.1	
	☑	☑					21.6	23.1	

●Stacking Height: 3.5mm Product

Unit：mm

Part No.	POST	Solder Tab	PIN	A	B	C	D	E	F
BB0110R20X	✗	✗	20	7.2	4.5	5.7	/	/	2.8
	✓	✗					6.6	/	
	✗	✓					/	8.1	
	✓	✓					6.6	8.1	
BB0110R30X	✗	✗	30	9.7	7.0	8.2	/	/	
	✓	✗					9.1	/	
	✗	✓					/	10.6	
	✓	✓					9.1	10.6	
BB0110R36X	✗	✗	36	11.2	8.5	9.7	/	/	
	✓	✗					10.6	/	
	✗	✓					/	12.1	
	✓	✓					10.6	12.1	
BB0110R40X	✗	✗	40	12.2	9.5	10.7	/	/	
	✓	✗					11.6	/	
	✗	✓					/	13.1	
	✓	✓					11.6	13.1	
BB0110R50X	✗	✗	50	14.7	12.0	13.2	/	/	
	✓	✗					14.1	/	
	✗	✓					/	15.6	
	✓	✓					14.1	15.6	
BB0110R60X	✗	✗	60	17.2	14.5	15.7	/	/	
	✓	✗					16.6	/	
	✗	✓					/	18.1	
	✓	✓					16.6	18.1	

●Stacking Height : 4.0mm Product

Unit : mm

Part No.	POST	Solder Tab	PIN	A	B	C	D	E	F
BB0111R20X	✗	✗	20	7.2	4.5	5.7	/	/	3.3
	✓	✗					6.6	/	
	✗	✓					/	8.1	
	✓	✓					6.6	8.1	
BB0111R30X	✗	✗	30	9.7	7.0	8.2	/	/	
	✓	✗					9.1	/	
	✗	✓					/	10.6	
	✓	✓					9.1	10.6	
BB0111R32X	✗	✗	32	10.2	7.5	8.7	/	/	
	✓	✗					9.6	/	
	✗	✓					/	11.1	
	✓	✓					9.6	11.1	
BB0111R36X	✗	✗	36	11.2	8.5	9.7	/	/	
	✓	✗					10.6	/	
	✗	✓					/	12.1	
	✓	✓					10.6	12.1	
BB0111R40X	✗	✗	40	12.2	9.5	10.7	/	/	
	✓	✗					11.6	/	
	✗	✓					/	13.1	
	✓	✓					11.6	13.1	
BB0111R50X	✗	✗	50	14.7	12.0	13.2	/	/	
	✓	✗					14.1	/	
	✗	✓					/	15.6	
	✓	✓					14.1	15.6	
BB0111R60X	✗	✗	60	17.2	14.5	15.7	/	/	
	✓	✗					16.6	/	
	✗	✓					/	18.1	
	✓	✓					16.6	18.1	

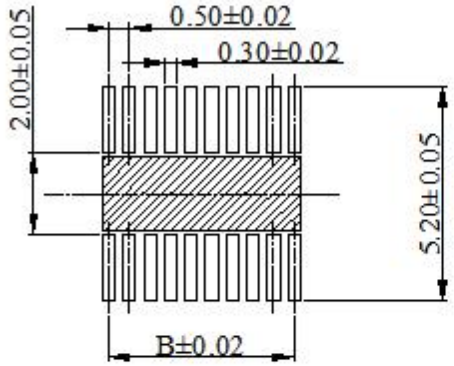
●Stacking Height : 5.0mm Product

Unit : mm

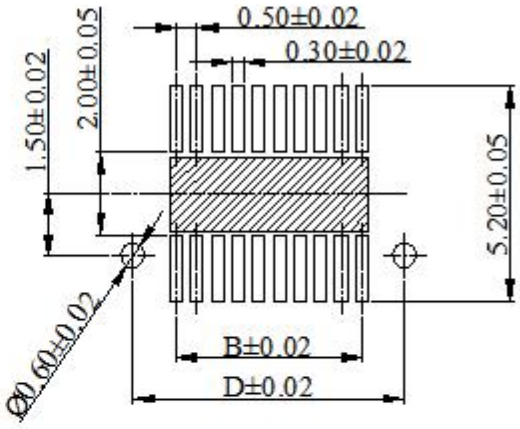
Part No.	POST	Solder Tab	PIN	A	B	C	D	E	F
BB0104R10X	✗	✗	10	4.7	2.0	3.2	/	/	4.3
	✓	✗					4.1	/	
	✗	✓					/	5.6	
	✓	✓					4.1	5.6	
BB0104R14X	✗	✗	14	5.7	3.0	4.2	/	/	
	✓	✗					5.1	/	
	✗	✓					/	6.6	
	✓	✓					5.1	6.6	
BB0104R20X	✗	✗	20	7.2	4.5	5.7	/	/	
	✓	✗					6.6	/	
	✗	✓					/	8.1	
	✓	✓					6.6	8.1	
BB0104R24X	✗	✗	24	8.2	5.5	6.7	/	/	
	✓	✗					7.6	/	
	✗	✓					/	9.1	
	✓	✓					7.6	9.1	
BB0104R30X	✗	✗	30	9.7	7.0	8.2	/	/	
	✓	✗					9.1	/	
	✗	✓					/	10.6	
	✓	✓					9.1	10.6	
BB0104R36X	✗	✗	36	11.2	8.5	9.7	/	/	
	✓	✗					10.6	/	
	✗	✓					/	12.1	
	✓	✓					10.6	12.1	
BB0104R40X	✗	✗	40	12.2	9.5	10.7	/	/	
	✓	✗					11.6	/	
	✗	✓					/	13.1	
	✓	✓					11.6	13.1	
BB0104R50X	✗	✗	50	14.7	12.0	13.2	/	/	
	✓	✗					14.1	/	
	✗	✓					/	15.6	
	✓	✓					14.1	15.6	
BB0104R60X	✗	✗	60	17.2	14.5	15.7	/	/	
	✓	✗					16.6	/	
	✗	✓					/	18.1	
	✓	✓					16.6	18.1	
BB0104R80X	✗	✗	80	22.2	19.5	20.7	/	/	
	✓	✗					21.6	/	
	✗	✓					/	23.1	
	✓	✓					21.6	23.1	

■ PCB LAYOUT（推荐的 PCB 主板配置图）

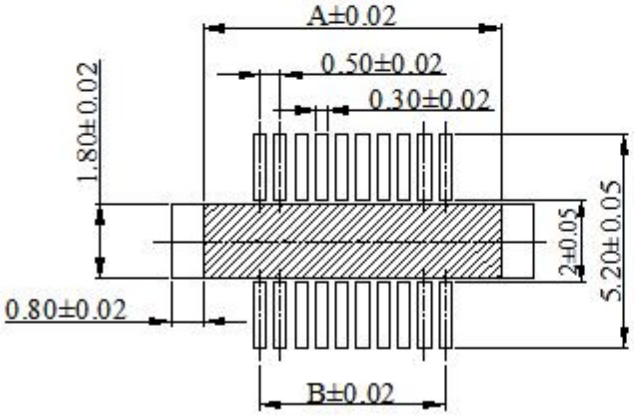
■ Without POST/without Solder Tab
无塑胶柱/无接地片



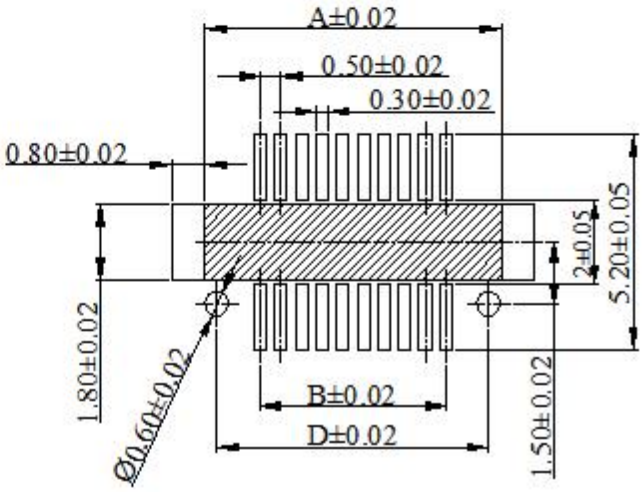
■ With POST/without Solder Tab
有塑胶柱/无接地片



■ Without POST/with Solder Tab
无塑胶柱/有接地片



■ With POST/with Solder Tab
有塑胶柱/有接地片



：　　、

（注 ：有关尺寸　、　和　，请参见　至　页）

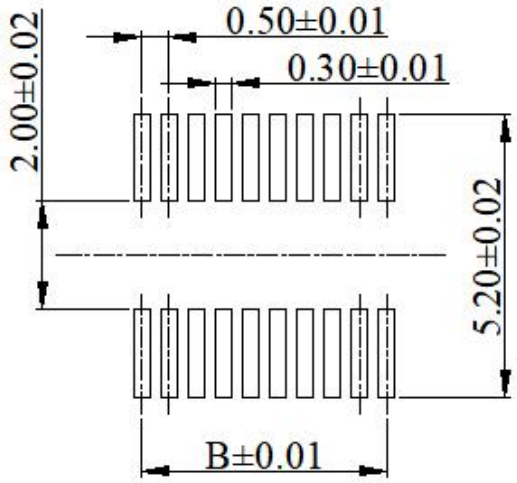
：

注 ：如果阴影区域有图案且未涂覆抗蚀剂，可能会与连接器触点接触

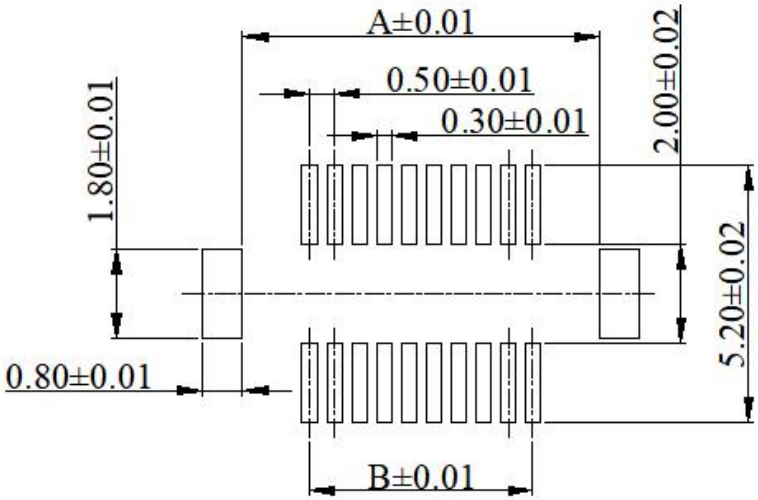
■ METAL DIMENSIONS(Thickness of steel mesh:80μm)

推荐钢网尺寸（钢网厚度 ：0.12mm）

■ Without Solder Tab
无接地片



■ With Solder Tab
有接地片



：　　、

（注 ：有关尺寸　、　和　，请参见　　至　　页）

■ Packing specification（包装规格）

● Receptacle

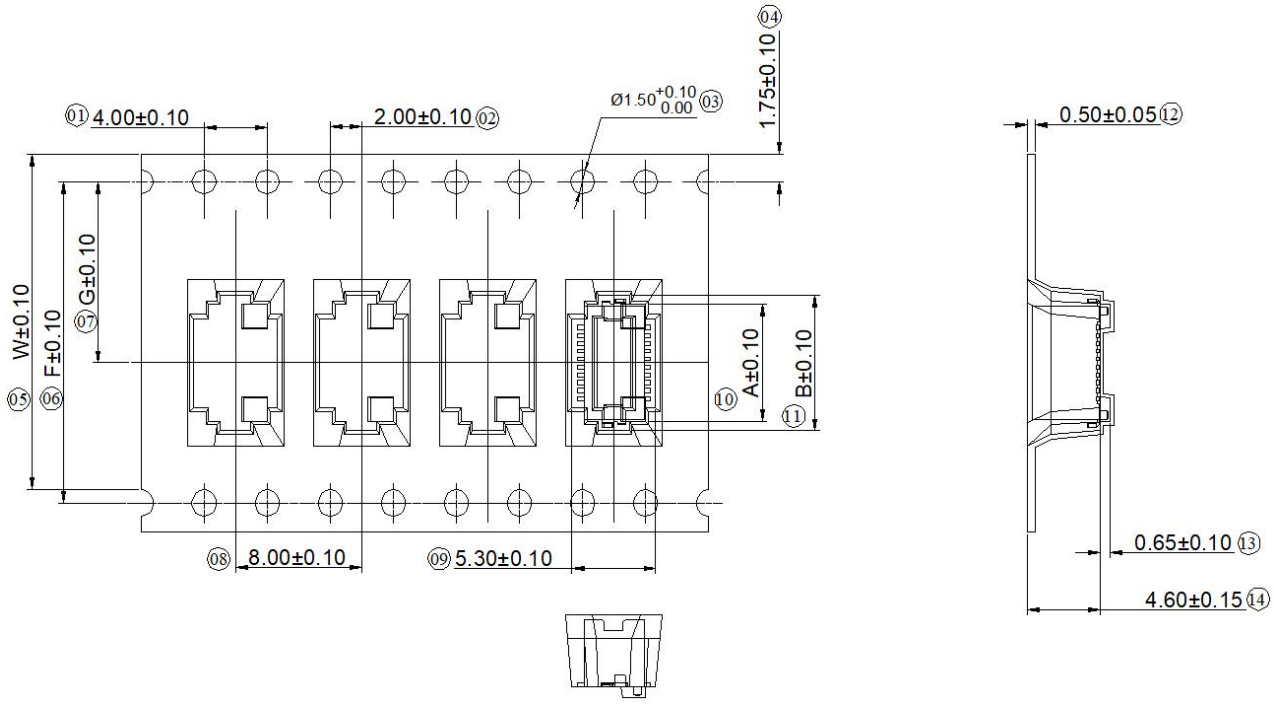


TABLE A:

CONNECTOR	PIN NO.	A	B	W	F	G	H
REC MH5.0	10	4.90	6.10	16	–	7.5	4.60
	14	5.90	7.10				
	20	7.40	8.60	24	–	11.5	
	24	8.40	9.60				
	30	9.90	11.10				
	32	10.40	11.60				
	36	11.40	12.60				
	40	12.40	13.60				
	50	14.90	16.10				
	60	17.40	18.60	32	28.4	14.2	
	80	22.40	23.60				

CONNECTOR	PIN NO.	A	B	W	F	G	H
REC MH4.0	10	4.90	6.10	16	–	7.5	3.60
	14	5.90	7.10				
	20	7.40	8.60	24	–	11.5	
	24	8.40	9.60				
	30	9.90	11.10				
	32	10.40	11.60				
	36	11.40	12.60				
	40	12.40	13.60				
	50	14.90	16.10				
	60	17.40	18.60	32	28.4	14.2	
	80	22.40	23.60				

CONNECTOR	PIN NO.	A	B	W	F	G	H
REC MH3.5	10	4.90	6.10	16	–	7.5	3.10
	14	5.90	7.10				
	20	7.40	8.60	24	–	11.5	
	24	8.40	9.60				
	30	9.90	11.10				
	32	10.40	11.60				
	36	11.40	12.60				
	40	12.40	13.60				
	50	14.90	16.10				
	60	17.40	18.60	32	28.4	14.2	
	80	22.40	23.60				

CONNECTOR	PIN NO.	A	B	W	F	G	H
REC MH3.0	10	4.90	6.10	16	–	7.5	2.60
	14	5.90	7.10				
	20	7.40	8.60	24	–	11.5	
	24	8.40	9.60				
	30	9.90	11.10				
	32	10.40	11.60				
	36	11.40	12.60				
	40	12.40	13.60				
	50	14.90	16.10				
	60	17.40	18.60	32	28.4	14.2	
	80	22.40	23.60				

● Plug

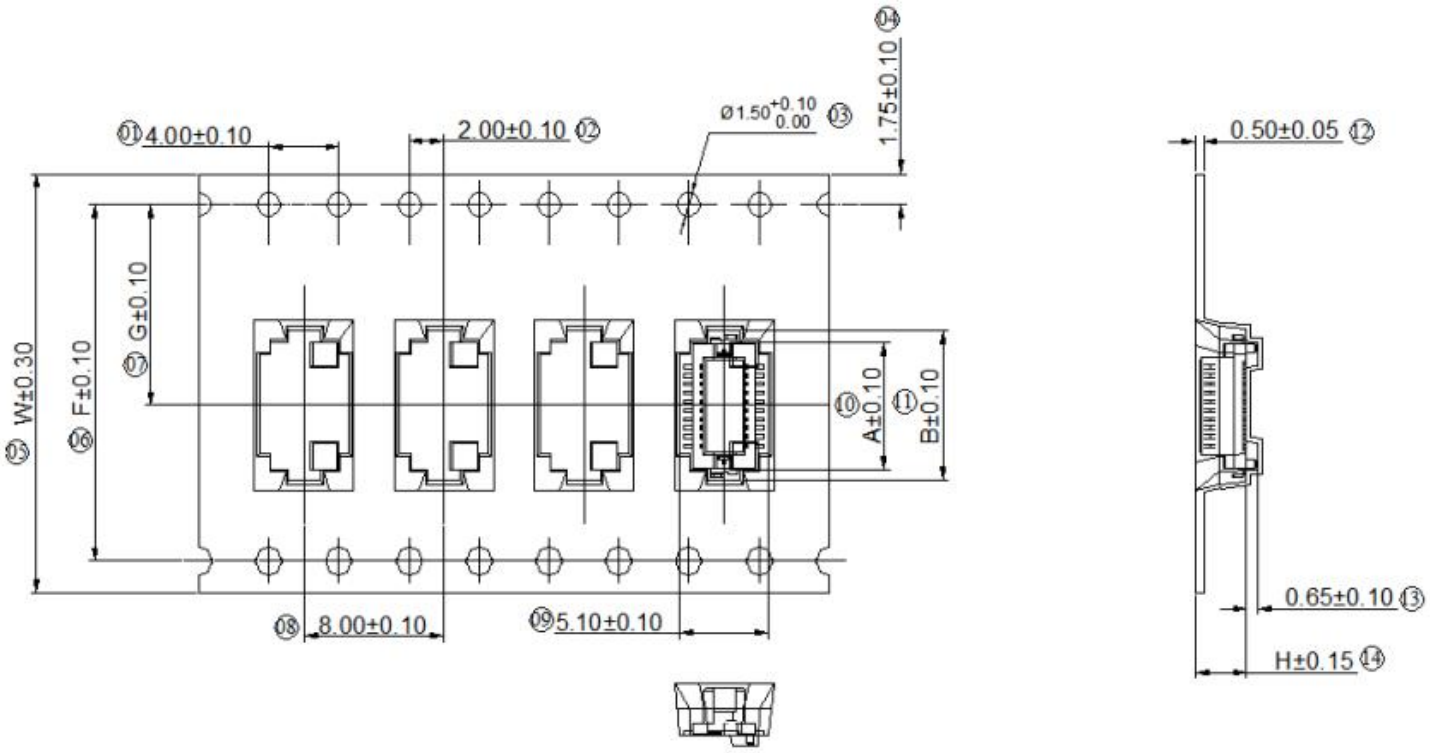
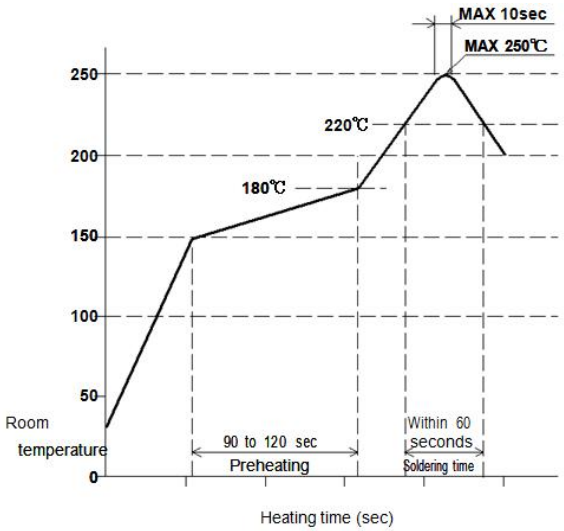


TABLE A:

CONNECTOR	PIN NO.	A	B	W	F	G	H
PLUG MH3.5-5.0	10	4.80	6.10	16	–	7.5	2.95
	14	5.80	7.10				
	20	7.30	8.60	24	–	11.5	
	24	8.30	9.60				
	30	9.80	11.10				
	32	10.30	11.60				
	36	11.30	12.60				
	40	12.30	13.60				
	50	14.80	16.10				
	60	17.30	18.60	32	28.4	14.2	
	80	22.30	23.60				

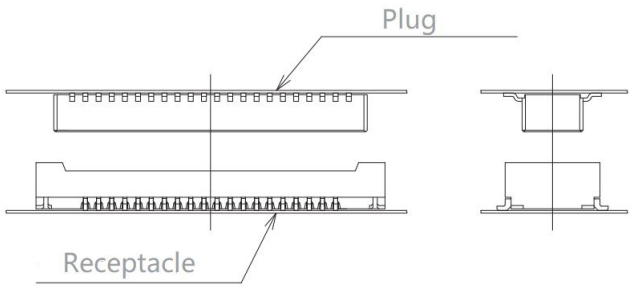
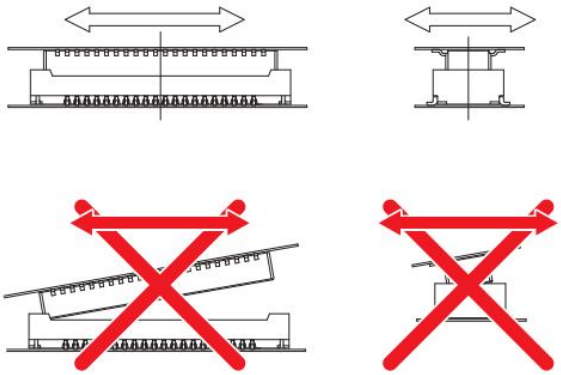
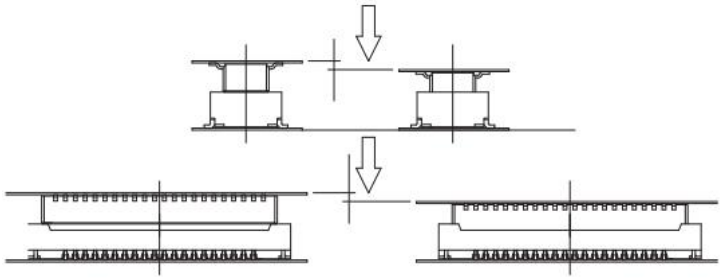
CONNECTOR	PIN NO.	A	B	W	F	G	H
PLUG MH3.0	10	4.80	6.10	16	–	7.5	2.45
	14	5.80	7.10				
	20	7.30	8.60	24	–	11.5	
	24	8.30	9.60				
	30	9.80	11.10				
	32	10.30	11.60				
	36	11.30	12.60				
	40	12.30	13.60				
	50	14.80	16.10				
	60	17.30	18.60	32	28.4	14.2	
	80	22.30	23.60				

■Matters needing attention 注意事项

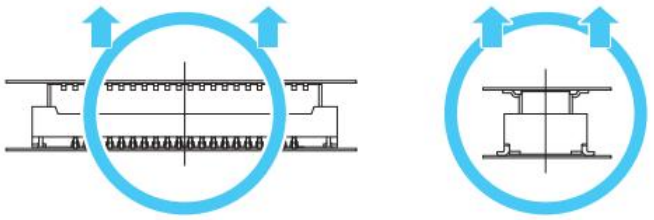
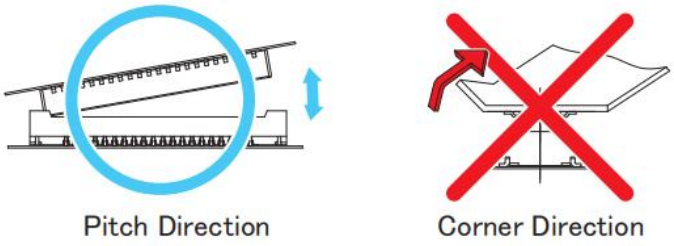
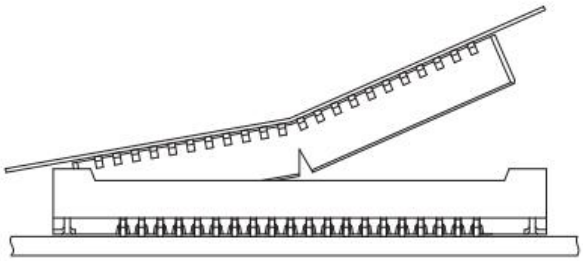
1.Recommended Soldering temperature 推荐焊锡温度	 condition［条件］ 1. Maximum temperature: 250° C Max 峰值温度 ： 最大到 250° C 2. Heating stage temperature: 220° C Min,60s Max 加热部分 ： 220° C 以上，60 秒以内 3. Preheating stage: 150~180° C;90s～120s 预热部分 ： 150 到 180° C， 90 到 120 秒 4. Number of IR reflow: 2 次 Max 焊锡次数 ： 最多 2 次。 Note 1: Temperature refers to the PCB surface temperature 注释 1 ： 温度是指 PCB 板表面温度。
3. Manual welding conditions are recommended 推荐手动焊接条件	Soldering iron temperature:340 ± 10°C 焊铁温度 ：340 ± 10°C ; Soldering time: 3s Max 焊锡时间 ：3 秒内
4. Recommended thickness of steel mesh, Ratio of steel mesh to pad area on PCB board 推荐钢网厚度，钢网孔所占 PCB 板上焊盘面积比	thickness of steel mesh:0.12mm 钢网厚度 ：0.12mm 钢网孔所占 PCB 板焊盘面积比: DS 侧 100% ; DP 侧：信号端子 100%，电源端子 80%
4. Motherboard warping	warpage from the connector center to the connector ends : 0.03mm Max

主板翘曲	从连接器中心到连接器两端的最大翘曲为 0.03mm
5. clean 清洁	Cleaning is not recommended. If you clean this product, evaluate its performance before use(Because cleaning may damage its plugging characteristics and reduce resistance to environmental factors) 不建议进行清洗。如果您要清洁此产品，请在使用前评估其性能。（因清洁可能会损害其插拔的特性，并降低对环境因素的抵抗力）
6. Matters needing attention 注意事项	●Do not insert or remove the connector before it is installed on the mainboard. Otherwise, the connector may be damaged 连接器还未安装在主板上时不建议进行插拔，否则可能会出现损坏 ●Do not use only connectors to support the PCB board because contacts may be damaged or deformed. Use other methods to support the board, such as bolts and studs 因可能会造成触点的损坏或变形，请避免仅靠连接器支撑 PCB 板，请采用其他方式来支撑主板例如螺栓、螺栓、螺柱等 ●Excessive insertion or removal may damage the connector. Pay more attention to this 过度插拔可能会造成损伤，请多注意 ●Do not use any flux for manual welding 如果是手工焊接，请勿使用任何助焊剂。 ●There may be slight color differences between production batches that do not affect performance 不同批次可能会有轻微的颜色差异，不影响性能。 ●See the next page for precautions when inserting and removing 有关插拔时的注意事项，请参阅下一页。 Since the product may fall off when dropped (or otherwise shock), it is recommended to secure the paired connectors to the board using housing and cushioning materials ●由于产品在跌落（或其他冲击）时可能会脱落，建议使用外壳和缓冲材料将配对的连接器固定到板上。 ●Please use the product under the recommended specifications (such as rated current, rated voltage, PCB board design and working environment, etc.). f the parameter is not recommended, smoke, fire, and short circuit may occur. For precautions, please refer to the specifications and guidelines. For conditions other than those specified in the specifications and operation guidelines, please consult our company 请在推荐的规格参数下使用本产品（例如额定电流、额定电压、PCB 板设计和工作环境等），如使用非推荐的参数可能会造成冒烟，起火，短路等故障。有关注意事项，请参阅规范和指南，如使用规格书及操作指南上规定以外的条件参数，请咨询本公司

■Connectors inserting Precautions（扣合连接器时的注意事项）

<table>
<tr>
<td>
</td>
<td></td>
</tr>
<tr>
<td>Alignment method（对正方法）
</td>
<td>Use parallel alignment to ensure correct insertion. Do not apply excessive force. If excessive force is applied, the connector may be damaged or scratched, resulting in electrical contact failure
扣合时请平行对齐以确保正确插入，不要施加过大的力，如果施加过大的力，连接器可能会发生破损、刮伤，从而导致电接触发生故障</td>
</tr>
<tr>
<td>Please align the connectors
（请对准连接器）
</td>
<td>Insert guide will guide the connector into parallel during insertion and limit its movement from front to back and left to right. Please insert it in parallel according to the picture on the left
扣合导向在扣合时会引导连接器平行进入，限制其前后左右的移动，请按照左图所示扣合时平行扣入</td>
</tr>
</table>

■ Connector Un-mating Precautions（拔出连接器时的注意事项）

	Pull out the connector in parallel 拔出连接器时请平行拔出
	If you cannot pull out the connector in parallel, lift it from the center of one end of the connector as shown in the figure. However, when the FPC strength is insufficient, the connector may be broken. Please confirm while operating 操作时如无法平行拔出，请如图所示从连接器的一端中心位置翘起。 但当 FPC 刚性不足时可能会发生连接器折断，请在试操作时进行确认。
	As shown in the picture, when the PCB board is pulled out by force at only one Angle, the terminals and connectors may be damaged. 如图片所示，PCB 板只有一个角受力拔出操作时，有可能会对端子及连接器造成损伤。
	Please do the design of the FPC reinforcement board. When the FPC strength is poor, the connector will break, as shown in the figure. Please repeat the operation to confirm when using FPC. The auxiliary reinforcement plate is recommended to use epoxy resin material of 0.3mm or above and stainless steel sheet of 0.2mm or above. 请务必做 FPC 增强板的设计。当 FPC 刚性较差时就会发生如图中的连接器折断。请客户使用 FPC 过程中反复操作确认。所说的辅助增强板推荐使用 0.3mm 以上的环氧树脂材料、0.2mm 以上的不锈钢片。