制 品 仕 样 书 PRODUCT SPECIFICATION

1. 适用范围 Scope

此作业规范适用于： 0.8mm Pitch 浮动板对板系列

This product specifications is applied for: 0.8mm pitch Floating board to board connector series

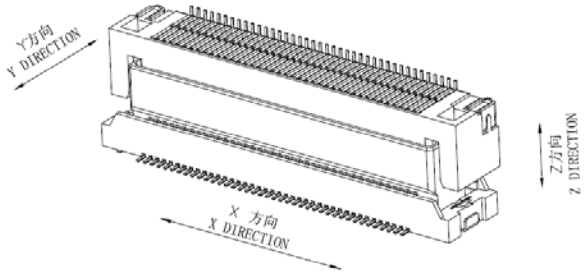
2. 关联规格 Related Specifications

EIA-364 :电子连接器及接插件测试程序 Electronic connectors and sockets test procedure.

UL STD-94 :关于塑材设备零配件及器材阻燃性测试规范 Specification for fire resistance test of plastic material equipment, spare parts and equipment.

3. 构造，尺寸，材料 Structure, Dimensions and Materials

参见结构图 Refer to the drawing.



Horizontal type

4. 移动量 Floating Range

本系列产品插拔时允许以下的浮动范围

Following are the floating range:

1) X 方向可移动量/ X Direction: ±0.5mm
2) Y 方向可移动量/ Y Direction: ±0.5mm
3) Z 方向可移动量/ Z Direction: ±0.5mm

5. 标准状态 Standard State

5.1 额定电压 Rating voltage: AC/DC 50V

5.2 额定电流 Rating current: 0.5A

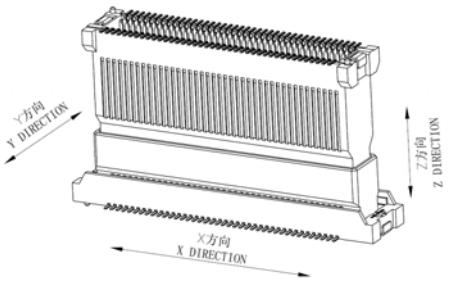
5.3 温湿度范围 Temperature and humidity range

5.3.1 使用温度范围 operating temperature：-40℃~+80℃;

5.3.2 储存温度范围 storage temperature：-10℃~+40℃;

5.3.3 开封使用温度范围 open using temperature range：+15℃~+35℃;
开封使用湿度 open using humidity 60%RH max.

5.3.4 保存湿度范围：相对湿度 75%RH 以下; storage humidity range：75%RH max.



Vertical type

6. 性能 Performance

6.1 构造 Structure

序号 NO.	项 目 Item	测试方法 Test Method	规格要求 Specifications
1	外观 Appearance	目视 Visual Check	无损坏 No physical damage

6.2 电气性能 Electrical Performance

序号 NO.	项 目 Item	测试方法 Test Method	规格要求 Specifications
1	接触阻抗 Contact Resistance	最大开放电压：20mV 以下,短路电流：1mA，周波数 1KHz. Voltage: 20mV MAXIMUM,current:1mA MAXIMUM , frequency: 1KHz	初始值 Initial：80mΩ Max. 各试验验后 After each test : 80mΩ Max.
2	绝缘阻抗 Insulation Resistance	相邻端子间 DC 250V，60±5 秒 Apply DC 250V between next terminals for 60±5 seconds	初始值 Initial：500MΩ Min. 耐湿试验后 After each test : 100 MΩ Min.
3	耐电压 Dielectric withstanding voltage	相邻端子间 AC 250V，60±5 秒 AC 250V between adjacent terminals, 60±5 seconds	无击穿，无短路 No Breakdown， No short circuit.
4	温度上升 Temperature rise	温度安定后 1H 通电 After the temperature stabilizes, energizing for one hour	30℃ max.

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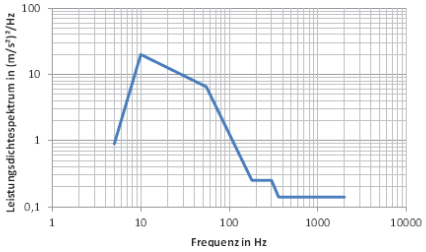
THIS PRODUCT ALL MATERIAL MUST BE COMPLY WITH SS-00259 OR RoHS

6.3 机械性能 Mechanical performance

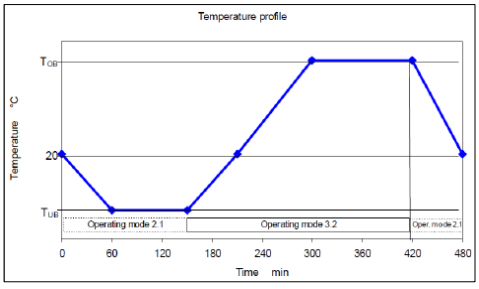
序号 NO.	项 目 Item	测试方法 Test Method	规格要求 Specifications
1	端子保持力 Terminal Retention Force	将端子 25mm/分匀速垂直从胶芯槽内拔出 Extract the terminal vertically from the housing at a rate of 25mm/minute.	2.9N/terminal Min.
2	固定片保持力 Anchor-Plate Retention Force	将固定片 25mm/分匀速垂直从胶芯槽内拔出 Extract the anchor-plate vertically from the housing at a rate of 25mm/minute.	2.9N/terminal Min.
3	插入力及拔出力 Insertion/extraction force	将插座以 25mm/分匀速垂直从插头中拔出， The socket connector shall be extracted vertically from the plug connector at the constant speed of 25mm/min.	初始值 Initial: 插入力 Insertion force: 0.39N/PIN Max. 拔出力 Extraction force: 0.05N/PIN Min.
4	振动试验 Vibration test	插座与插头嵌合,实验条件如下： 测试：功率密度频普-振动曲线 D 振动方向 vibration direction：X,Y,Z 振动加速 Vibration acceleration： 30.8m/s² 每个轴测试时间 Each axis test time： 8 试梯度 Test the gradient：1℃/min 最高温度 The highest temperature：70℃ 最低温度 The lowest temperature：-40℃ 宽频随机振动参数值 test parameters, wide-band random vibration for sprung masses:	接触阻抗 80mΩ Max. Contact Resistance: 80mΩ Max. 试验中 1μs 以上瞬断无； Discontinuity: 1μs or less.

Vibration excitation	Wide-band random vibration	
Test duration for each spatial axis	8 h	
RMS value of acceleration	30.8 m/s²	
Vibration profile Figure 32	Frequency in Hz	Power density spectrum in (m/s²)²/Hz
	5	0.884
	10	20
	55	6.5
	180	0.25
	300	0.25
	360	0.14
	1 000	0.14
	2 000	0.14



一次温度持继时间温度与时间关系 The temperature is at a time relative to time

Time (min)	Temperatures (℃)
0	20
60	T_{uB}
150	T_{uB}
210	20
300	T_{oB}
420	T_{oB}
480	20



温度曲线

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序号 NO.	项 目 Item	测试方法 Test conditions	规格要求 Specifications
5	冲击试验 Shock test	插座与插头嵌合，按以下条件： Socket and plug connector mated, according to the following conditions: Operating mode of the DUT: "$Driving_{min}$" and "$Driving_{max}$" intermittently Peak acceleration: 500 m/s^2 Shock duration: 6 ms Pulse shape: Half-sine Number of shocks per direction (±X, ±Y, ±Z): 10 Number of DUTs: 6	接触阻抗 80mΩ Max. Contact Resistance: 80mΩ Max. 试验中 1μs 以上瞬断无； Discontinuity: 1μs or less.
6	插拔耐久性 Insertion/extraction endurance	插座和插头以 25mm/分的速度进行插入和拔出 30 次 The socket and plug mated and unmated 30 times at a speed of 25mm per minute	接触阻抗 Contact Resistance 80mΩ Max .

6.4 环境性能和其它 Environmental Performance and Others

序号 NO.	项 目 Item	测试方法 Test conditions	规格要求 Specifications
1	耐热性 Heat Resistance	插座与插头嵌合，105±2℃中放置时间 96H 后取出，1~2 小时常温放置后进行测试. Socket and plug connector mated are exposed in the heat chamber 105±2℃for 96 hours. Then it shall be tested after being placed for 1~2 hours under room temperature.	接触阻抗 80mΩ 以下. Contact Resistance: 80mΩ or below
2	耐湿性 Humidity	插座与插头嵌合，温度 60±2℃，相对湿度 90~95%RH 环境中放置 96 小时，放置后测接触阻抗。 Socket and plug connector mated are exposed in the humidity chamber 60±2℃, 90~95%RH for 96 hours. It shall be measured the contact resistance after the test.	
3	盐水喷雾试验 Salt Spray test	插座与插头嵌合，温度 35±2℃；盐水比重 5±1%喷雾试验，试验后常温水洗干燥后进行测试。 A: 镀金 48h B: 镀锡 24h C：单 pin 端子 48h Socket and plug connector mated , temperature:35±2℃, the proportion of salt water was 5±1%. Then it shall be tested at room temperature after washing and drying. A: gold plating 48H B: tin 24h C: single pin terminal 48H	
4	四种气体混合实验	插座与插头嵌合,温度 23±5℃，相对湿度 75%RH，环境中放置 21 天，浓度见下列表，放置后测接触阻抗。 The socket is chimed with the plug, the temperature is 23 plus or minus 5, the relative humidity is 75%RH, the environment is set for 21 days, the concentration is shown in the following table, and the contact resistance is measured after placement. Operating mode of the DUT: $Assembly_{assembly}$ Temperature: T_{RT} Humidity: 75% relative humidity Harmful gas concentration: SO_2 0.2 ppm; H_2S 0.01 ppm; NO_2 0.2 ppm; Cl_2 0.01 ppm Test duration: 21 days Number of DUTs: 6	接触阻抗 80mΩ 以下. Contact Resistance: 80mΩ or below

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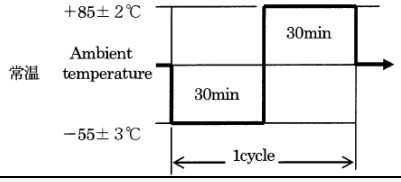
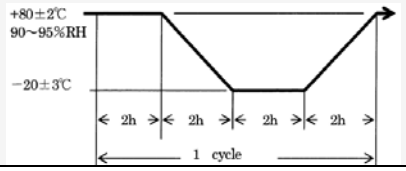
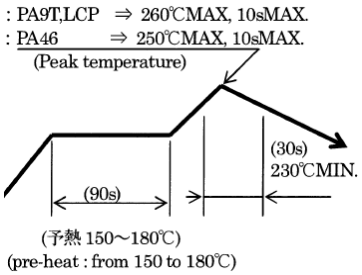
序号 NO.	项 目 Item	测试方法 Test conditions	规格要求 Specifications
5	冷热冲击试验 Thermal shock test	插座与插头嵌合,按下图温度条件 10 次循环，试验后测接触阻抗。 Socket and plug connector mated are exposed 10 cycles in the following temperature. It shall be measured the contact resistance after the test. 	接触阻抗 80mΩ 以下. Contact Resistance: 80mΩ or below
6	温湿度循环试验 Humidity resistance(cycling)	插座与插头嵌合,依下温湿度条件 10 次循环，试验后测接触阻抗。 Socket and plug connector mated are exposed 10 cycles in the following conditions. It shall be measured the contact resistance after the test. 	
7	可焊性 Solderability	连接器焊接部位浸入无铅锡槽内，245±5℃，3±0.5 秒 The connector weld area is immersed in lead-free tin groove245±5℃，3±0.5s	焊接区域 Soldering area ≧95%
8	焊锡耐热性 Resistance to soldering heat	依下记条件进行焊锡耐热性试验： The pin header shall be tested resistance to soldering heat in the following condition. 条件/condition (1)回流焊/Reflow 适用回数/Applied number:2 回/twice 峰值温度：  温度应在产品表面测量 The temperature shall be measured on the surface of the product (2)手工焊接/Manual soldering 焊接温度/Soldering temperature:350℃ Max. 时间/time :3±0.5s 基板厚/thickness of PCB :1.6mm	端子无损伤等异常 The terminal has no damage and so on

本制品不含 SS-00259 和 ROHS 禁止使用的环境物质
This product does not contain SS-00259 and ROHS banned the use of environmental substances

7.包装 Packing

参见捆包图。See the drawing

8.产品保质期 Term of a guarantee

从交货日起 1 年（1 year from delivery day）

9.修改内容 Change content

版本 Rev.	改正日期 Modify date	改正内容 Modifications	Written by	Checked by
A	2017/08/23	New	Rain	Rain
B	2018/06/27	新增 B410 规格	May	Rain
C	2018/10/30	新增 B470 规格	May	Rain

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操作方法 Handling method

1.使用注间事项/Attention of using connector

a.产品插入时，须慢慢垂直插入，不可倾斜、扭转。
When the connector is mating, connector shall not be twisted, and then mated it slowly.

b.带有一定角度插入有卡顿现象时，请拔出后再重新插入。若直接插入会有胶削产生。
Please do not be locked at an angle. When locked, please extraction and re-mated. The angle mating, occurs shavings.

c.产品两端嵌合的松紧度,确认两端嵌合轻松后水平插入。
After locate , Please mate connector where the molds fit loosely,after check the molds fit loosely , Push it straight.

d.拔出时，产品须垂直拔起。仅一端拔出，会损坏主体。
Please be pulled out straight. Pulling on one side, the mold is broken

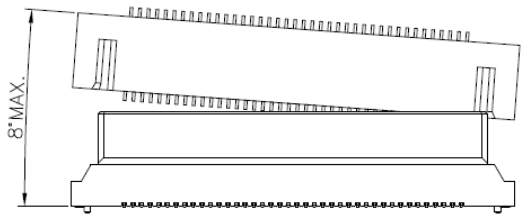
e.装配连接器和P.C.B板时，不能只固定连接器;实际应用时，连接器安装位附近须用铆钉固定在基板上;产品振动加速度：43.12/s^2以下。（不应增加连接器产品而增加整机振动加速度）

It shall not be held the connector only, when you are assembled for the connector and P.C.B.; When it shall be used the connector ,the P.C.B are held by the rivet certainty near mounting of the connector; Acceleration of connector: 43.12/s^2 or less.(The connector shall not be added to be added to resonance acceleration.)

f.图示一及图二卧式结构&图三及图四立式结构所示指导角度，插入前不可大于此角度（未锁定）；
Guide Angle as shown in figure 1 and figure 2 horizontal structure and figure 3 and figure 4 vertical structure, not greater than this Angle before insertion (not locked)

g.指导角度是初始位置角度,不是装配角度

Guiding angle is initial location angle. It is not the angle to mate



初始角度
Guiding angle

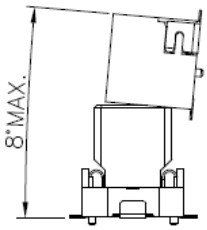
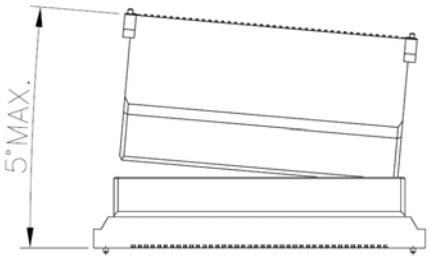


图 1/Fig.1 - **Horizontal type**

图 2/Fig.2 -**Horizontal type**



初始角度
Guiding angle

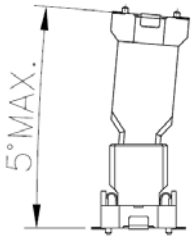


图 3/Fig.3 - **Vertical type**

图 4/Fig.4 - **Vertical type**

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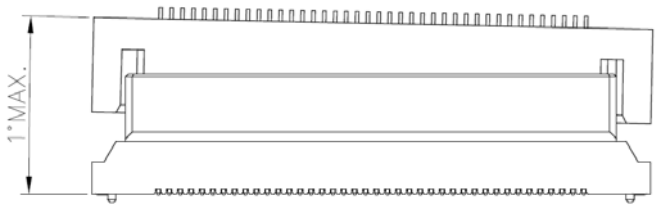
制 品 仕 样 书 Product specification		Part name	0.8mm pitch Floating board to board connector series		
Horus Int. Electronics. Co., LTD. Horustech Electronics. Co., LTD.		Part No.	HRS-B406-1B7L1-112**-E100 HRS-B407-1B7L1-112**-E100 HRS-B408-1B7L1-112**-E100 HRS-B409-1B7L1-112**-E100 HRS-B410/HRS-B470-1B7L1-112**-E200		6/7
Document No.: IS.EQC.134	Date: 2018/10/30	Rev.: C	Written by: May	Checked by: Rain	Approved by: Hongkui.Liu

操作方法 Handling method

1.使用注间事项/Attention of using connector

h.请在图 5,6 及图 7.8 的角度下进行装配.

Please mate below the angle of the figure 5.6 and figure 7.8



装配角度
Mating angle

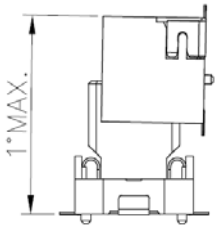
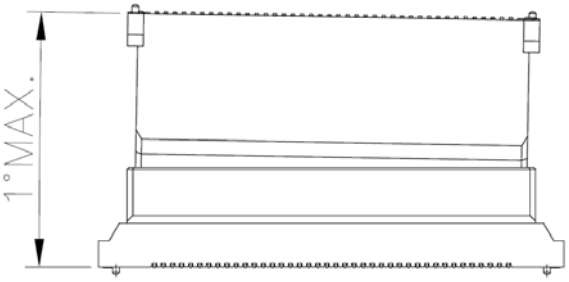


图 5/Fig.5 - **Horizontal type**

图 6/Fig.6- **Horizontal type**



装配角度
Mating angle

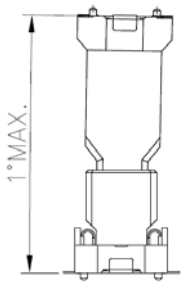


图 7/Fig.7 - **Vertical type**

图 8/Fig.8 - **Vertical type**

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