产 品 规 格 书（0.8系列通用版）
PRODUCT SPECIFICATION

1 适用范围 Scope

本产品规格书捷康电子科技有限公司浮动板对板连接器(Floating Board to Board Connector)0.8-5系列的相关性能要求、测试方法及质量保证等规定。
本规格书适用的产品系列为：浮动板对板0.8-5系列 (若适用多款产品，则列成清单)。
This specification covers the requirements for product performance, test methods and quality assurance provisions of floating board to board connector.
This specification suitable for the product: Floating Board to Board Connector 0.8-5 series.(If suit for more than one products, list it.)

2 参考文件 Reference Documents

本产品规格书参考以下规范文件作成，若有冲突，以本规格及图纸为准。
The following documents are to be considered as a part of this specification.
In case of conflict, this specification and products drawing shall prevail.

EIA -364,
MIL-STD-202
IEC-512-3

3 产品描述 Product description

3.1 产品组成 Components
3.1.1 接触件(端子)：磷青铜；
Contact(Terminal)：Phosphor Bronze;
3.1.2 塑料本体：PA9T;
Housing：PA9T;
3.2 额定范围 Ratings
3.2.1 温度范围 Temperature Rating
贮藏温度 Storage temperature：-10～40℃、75%RH Max. 。
工作温度 Working temperature：-40℃～+105℃(潜在最高温度 Potential Peak Temperature)
3.2.2 额定电压 Voltage Rating
产品额定电压 Voltage Rating：50V DC/AC;
产品额定电流 Current Rating：0.5A Continuous Max.。
3.2.3 储存期限Storage life：1年

4 默认测试条件 Default test conditions

出去特别指定条件的项目外，按下记环境条件下测试。
环境温度：(15～35)℃;
空气相对湿度：25%～85%;
All performance test, unless otherwise specified, is taken as per following environment condition.
Ambient temperature: (15～35)℃;
Relative humidity: 25%～85%;

5. 性能要求与试验描述 PERFORMANCE REQUIREMENTS AND TEST DESCRIPTIONS

5-1 电气特性 Electrical performances

序号 No.	实验项目 Test Items	规格值 Specifications	条件·方法/Test conditions
1	接触电阻 Contact Resistance（Low Level）	100mΩ以下（初期） 120mΩ以下（各试验后） 100mΩ Max.（Initial） 120mΩ Max.（Final）	嵌合状态下，开路电压20mV以下，1mA It shall be measured by mated, at open circuit voltage of 20mV Max, 1mA .
2	耐电压 Dielectric withstanding voltage	没有闪络、火花放电及绝缘破坏 No flashover, spark over nor dielectric breakdown.	对相邻端子间施加电压AC250V 1min. AC250V shall be applied for 1 minute to between next terminals
3	绝缘电阻 Insulation Resistance	500MΩ以上（初期值） 100MΩ以上（实验后） 500MΩ Min.（Initial） 100MΩ Min.（Final）	对相邻端子间施加电压DC250V 进行测定 DC250V shall be applied to between next terminals
4	外观 Appearance	没有对机能有影响的生锈、脏污、伤、变形等。 No rust, contamination, damage or deformation harming functions.	目视 Visual

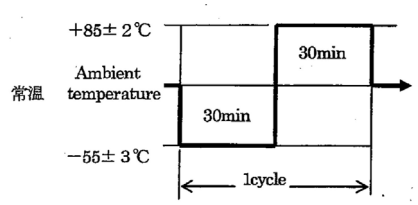
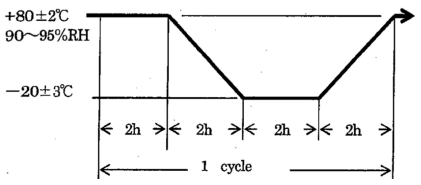
5-2 机械特性 Mechanical performances

序号 No.	实验项目 Test Items	规格值 Specifications	条件·方法/Test conditions
1	端子保持力 Contact Retention Force	2.9N Min.	以25mm/分的速度，把端子从塑胶本体拔出。 It shall be pulled to the contact at the speed of 25mm Per minute, and measured the force when the contact begins to remove from the housing.
2	插拔力 Inserted/Extracted force	初期 initial 插入力 Inserted force 2.45N Max./pin 拔去力 Extracted force 0.05N Min./pin	以25mm/分的速度，对公母座进行插拔 The socket and plug shall be inserted and extracted at the speed of 25mm per minute and measured the force of insertion and extraction.
3	插拔耐久性 Insertion/Extraction endurance	120mΩMax/ 30 times	以25mm/分的速度，对公母座进行30回重复插拔，测试试验后的接触电阻 The socket and plug shall be mated and unmated 30 times at the speed of 25mm per minute and measured the contact resistance after the test.

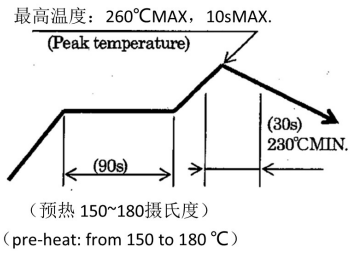
4	振动试验 Vibration test	试验中无出现 1μs 以上的瞬断 试验后：120mΩ以下 外观 Appearance 没有机械性的破损、部品松动、裂纹等。 Discontinuity: 1μs or less After the test: 120mΩ or below No damage, loose part or crack.	公母座嵌合状态下，以振幅 1.5mm/振动频率10~55~10Hz每分的条件,对XYZ三个方向各实施 2 小时，共 6 小时振动。确认振动中有无瞬断，测量实验后的接触阻抗。 The connector shall be mated, and is vibrated in the frequency range of 10~55~10Hz per minute, in the constant vibration amplitude 1.5mm.This motion is applied for period of 6 hours in XYZ directions, per direction 2hours. It shall be tested the discontinuity of the contact current during the test and measured the contact resistance after the test.
5s	冲击试验 Shock test	试验中无出现 1μs 以上的瞬断 试验后：120mΩ以下 外观 Appearance 没有机械性的破损、部品松动、裂纹等。 Discontinuity: 1μs or less After the test: 120mΩ or below No damage, loose part or crack.	公母座嵌合状态下，固定在治具上，以加速度 490m/s^2（50G）、对 XYZ 方向的 6 面进行各 3 次、作用时间 11ms 的冲击。确认试验中有无瞬断，测量实验后的接触阻抗。 The connector mated are installed in the machine. They are applied 3 times to each 6 surface of XYZ directions. In conditions as specified: acceleration of 490m/s^2(50G) and shock pulses for a duration of 11ms. It shall be tested the discontinuity of the contact current during the test and measured the contact resistance after the test.

5-3 环境特性 Environmental performances

序号 No.	实验项目 Test Items	规格值 Specifications	条件·方法/Test conditions
1	耐热性 Heat resistance	120mΩ Max.	公母座嵌合状态下，放置于 105±2℃环境中 96 小时。测量试验后的接触电阻。 The connector mated is exposed in the heat chamber 105±2℃ for 96 hours. It shall be measured the contact resistance after the test.
2	耐湿性 Humidity	120mΩ Max.	公母座嵌合状态下，放置于 60±2℃、相对湿度 90~95%RH 的环境中 96 小时。测量试验后的接触电阻。 The connector mated is exposed in the humidity chamber 60 ±2℃,90~95%RH for 96 hours. It shall be measured the contact resistance after the test.
3	耐寒性 Cold resistance	120mΩ Max.	公母座嵌合状态下，放置于-40±2℃环境中 96 小时。测量试验后的接触电阻。 The connector mated is exposed in the heat chamber -40±2℃ for 96 hours. It shall be measured the contact resistance after the test.
4	盐水喷雾试验 Salt spray test	120mΩ Max.	公母座嵌合状态下，放置于 35±2℃、浓度 5±1%的盐水喷雾中 48 小时。取出之后使用纯水清洗，干燥后测量接触电阻。 The connector mated is exposed in the salt spray chamber 35±2℃,5±1 salt density for 48 hours. It shall be measured the contact resistance after the test.
5	SO2 气体实验 SO2 gas test	120mΩ Max.	公母座嵌合状态下，放置于 40±2℃、相对湿度 75%RH、SO2 浓度 10±3ppm 的环境中 96 小时。测量试验后的接触电阻。 The connector mated is exposed in the SO2 gas chamber 40 ±2℃,75%RH 、10±3ppm for 96 hours. It shall be measured the contact resistance after the test.

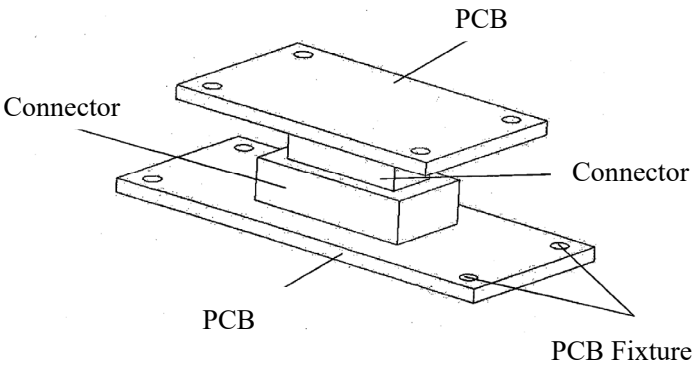
6	H2S 气体实验 H2S gas test	120mΩ Max.	公母座嵌合状态下，放置于 40±2℃、相对湿度 75%RH、H2S 浓度 3±1ppm 的环境中 96 小时。测量试验后的接触电阻。 The connector mated is exposed in the H2S gas chamber 40 ± 2℃,75%RH 、3±1ppm for 96 hours. It shall be measured the contact resistance after the test.
7	冷热冲击试验 Thermal shock test	120mΩ Max.	公母座嵌合状态下，放置于下图所示的环境中，实施 10 个循环。测量试验后的接触电阻。 The connector mated is exposed 10 cycles in the following temperature. It shall be measured the contact resistance after the test. 
8	温湿度循环试验 Humidity resistance (cycling)	120mΩ Max.	公母座嵌合状态下，放置于下图所示的环境中，实施 10 个循环。测量试验后的接触电阻。 The connector mated is exposed 10 cycles in the following conditions. It shall be measured the contact resistance after the test. 

5-4 其他特性 Other performances

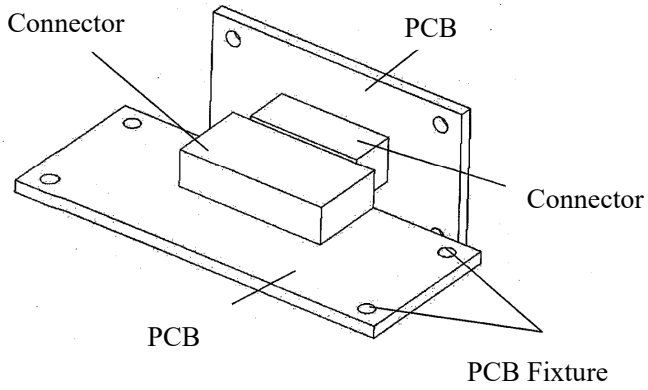
序号 No.	实验项目 Test Items	规格值 Specifications	条件・方法/Test conditions
1	焊锡性 Solder ability	浸渍部 95%以上有被焊锡覆盖 Solder shall be covered 95% or more of the area that is dipped into the bath.	将端子焊锡部用助焊剂湿润后，放入245±5℃ 的无铅Sn-Ag-Cu系锡槽中浸 3±0.5 秒。 The contact of connector shall be put into the flux and dipped into Pb free solder bath(Type of Sn-Ag-Cu)245±5℃、3±0.5s.
2	焊锡耐热性 Resistance to soldering heat	产品无脱落，端子没有松动、变形 The product shall not fell off, and no loose contacts nor deformation.	按下记条件进行焊锡试验 The connector shall be tested as following conditions. 条件/condition (1) 回流炉场合/In case of reflow 适用回数/Applied times:2 回/twice  （预热 150~180摄氏度） （pre-heat: from 150 to 180 ℃） 温度为制品上的温度。 The temperature shall be measured on the surface of the product. (2) 手焊锡场合/In case of manual soldering 焊锡温度/temperature:350℃MAX. A1 时间/time :3±0.5s 基板厚度/thickness of PCB:1.6mm

6.接触区分 Connection Discrimination

平行接触
Parallel connection



垂直接触
Vertically connection



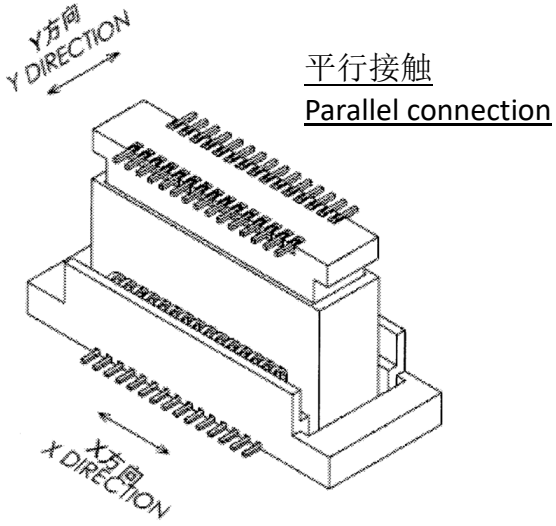
7.浮动量/Floating Range

本规格书所限定浮动板对板产品，在嵌合状态下允许浮动范围:

The floating range of the following

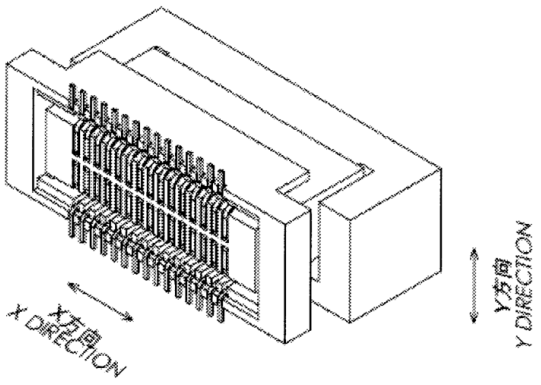
① X 方向浮动量/X Direction:±0.5mm

② Y 方向浮动量/Y Direction:±0.5mm



平行接触
Parallel connection

垂直接触
Vertically connection



※注意：使用过程中请勿超出所允许的浮动量！

Note: Do not exceed the allowed floating range during use!

8. 使用注意事项/Attention of using

- 确保在无倾斜状态下嵌合，请勿暴力插拔。
  When the connector is mating, shall not be twisted, and then mated it slowly.
- 在带有斜度状态下嵌合时，胶座前端会因为摩擦而产生树脂碎屑。
  Under the angled mating, housing may occurs shavings.

- 嵌合时，先让公母座的胶座位置对准，滑入导向倒角之后，再直插进去。
  After positioning, please check that housing both ends have fitted in loosely, and push in straight.
- 分离作业时，请进行垂直拔去。若偏向单边拔去，有可能会造成胶座的破损。
  Please be pulled out straight. Pulling on one side, the housing may be broken.
- 请勿使用连接器来进行固定 PCB 板。在实际应用场合中，在连接器贴片的附近位置，必须使用螺丝来进行固定。对连接器，或是模组状态下施加加速度时，请设定在 43.12m/sˆ2 以下。（无共振叠加）
  It shall not be held the connector only, when you are assembled for the connector and PCB. When it shall be used the connector, the PCB are held by the rivet certainty near mounting of the connector.
  Acceleration of connector:43.12m/sˆ2 or less (The connector shall not be added to be added to resonance acceleration)
- 导向角度如下图 1 和图 2 所示，请在此角度以内进行嵌合定位。
  Figure 1 and 2 show guiding angle. Please locate it below the described angle.
  导向角度仅限于最初找准定位，并不是可以按这个角度进行嵌合。
  Guiding angle is initial location angle. It is not the angle to mate.

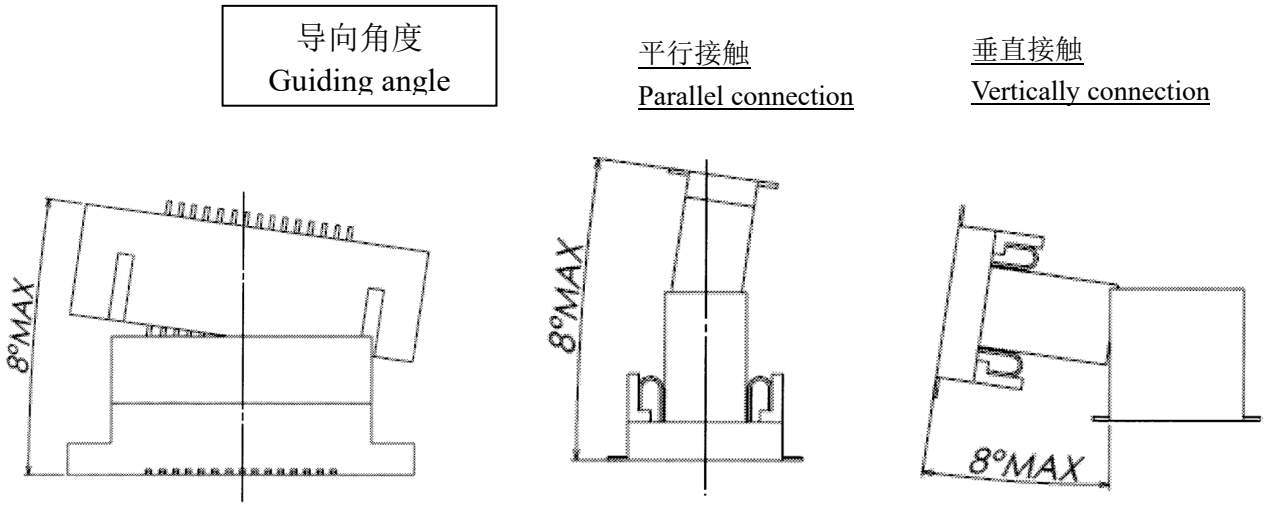


Fig.1

Fig.2

• 嵌合容许角度如下图 3 和图 4 所示，请在容许角度以下进行作业。
Please mate below the angle of the figure 3,4.

嵌合角度 Mating angle	平行接触 Parallel connection	垂直接触 Vertically connection

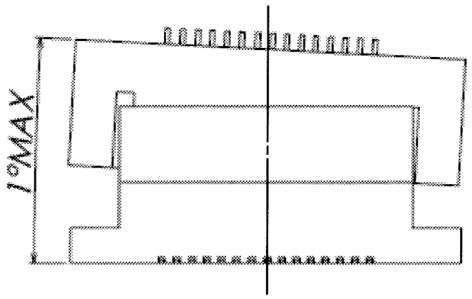


Fig.3

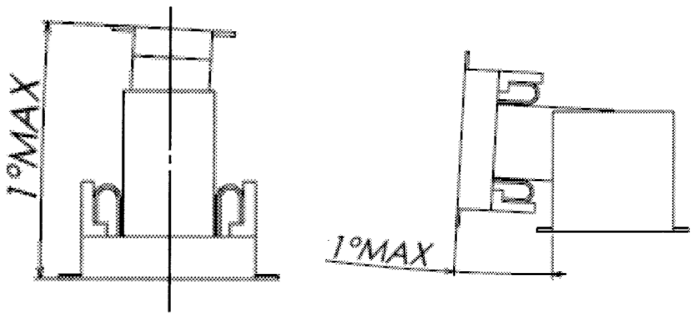


Fig.4

变更履历

版次 **REVISION**	日期 **DATE**	变更履历 **MODIFY**	作成者 **REVISER**
A0	2017-05-23	初版发行 INITIAL RELEASE	YX.ZHANG
A1	2024-04-15	内容修正 Correction	QF.DONG