

## 1. 适用范围 Scope

此作业规范适用于： 0.5mm Pitch 浮动板对板系列

This product specifications is applied for: 0.5mm pitch Floating board to board connector series

## 2. 关联规格 Related Specifications

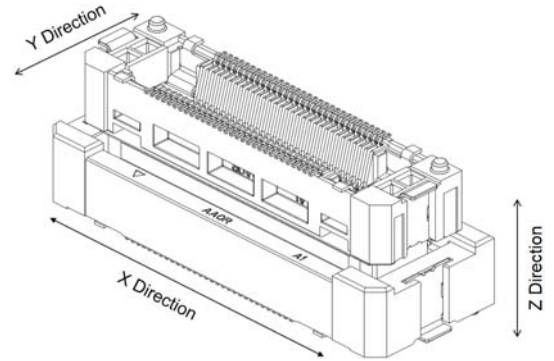
EIA-364 :电子连接器及接插件测试程序 Electronic connectors and sockets test procedure.

IEC 60068 :汽车电子试验规范 Automotive electronic test specification.

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

详见成品图 Refer to the drawing.



## 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:  $\pm 0.6\text{mm}$
- 2) Y 方向可移动量/ Y Direction:  $\pm 0.6\text{mm}$
- 3) Z 方向可移动量/ Z Direction:  $\pm 0.5\text{mm}$

## 5. 标准状态 Standard State

5.1 额定电压 Rating voltage: AC/DC 50V

5.2.1 信号额定电流 Signal Rating current: 0.5A

5.2.2 电源额定电流 Power Rating current: 5A

5.3 温湿度范围 Temperature and humidity range

5.3.1 使用温度 operating temperature:  $-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$ ;

5.3.2 使用湿度 operating humidity: 25%~85%RH;

5.3.3 储存温度 storage temperature:  $-10^{\circ}\text{C}\sim+40^{\circ}\text{C}$ ;

5.3.4 储存湿度 storage humidity range: 75%RH.

本制品不含 SS-00259 和 ROHS 禁止使用的环境物质

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

|  |                  |   |                        |                    |                      |
|--|------------------|---|------------------------|--------------------|----------------------|
| 制 品 仕 样 书<br>Product specification           | Part name        | Pitch 0.50 SH10.0 Floating BTB connector series |                        |                    |                      |
| Amphenol Aorora Technology (Huizhou) Co.,Ltd | Part No.         | B321-1B7L1-112**-E100<br>B322-1B7L1-112**-E100  | 1/7                    |                    |                      |
| Document No. : IS.EQC.175                    | Date: 2020/11/27 | Rev. : A  | Written by:<br>SH Chen | Checked by:<br>May | Approved by:<br>Rain |

## 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<br>Appearance | 依照 EIA364-18 确认<br>Confirm in accordance with EIA 364-18. | 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<br>Contact Resistance             | 依照 EIA 364-23 测试。最大开放电压：20mV 以下，短路电流：1mA，周波数 1KHz。<br>Comply with method EIA 364-23. Voltage: 20mV Max., current: 1mA Max., frequency: 1KHz   | 初始值 Initial: 60mΩ Max.<br>测试后 After test : 80mΩ Max.            |
| 2      | 绝缘阻抗<br>Insulation Resistance          | 依照 EIA 364-21C 测试。相邻端子间 DC 250V, 60±5 秒<br>Comply with method EIA 364-21C. Apply DC 250V between next terminals for 60±5 seconds.   | 初始值 Initial: 500MΩ Min.<br>测试后 After each test :<br>100 MΩ Min. |
| 3      | 耐电压<br>Dielectric withstanding voltage | 依照 EIA 364-20 测试。相邻端子间 AC 250V, 60±5 秒<br>Comply with method EIA 364-20. AC 250V between adjacent terminals, 60±5 seconds.  | 无击穿，无短路<br>No Breakdown, No short circuit.                      |
| 4      | 温升测试<br>Temperature rise               | 依照 EIA 364-70 测试。<br>Comply with method EIA 364-70.<br>满足以下细节：<br>The following details shall apply:<br>(a) 测试电流及环境温度：信号电流 0.5A @ 95±2℃。电源电流 5A@95±2℃<br>(a) Test current and ambient temperature : Signal current 0.5A @ 95±2℃. Power current 5A@ 110±2℃.<br>(b) 测试持续时间：1 小时<br>(b) Test duration : 1 hour | Allowable Max temp: 125℃<br>including T-Rise                    |

本制品不含 SS-00259 和 ROHS 禁止使用的环境物质

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

|   |                  |   |                        |                    |                      |
|---|------------------|---|------------------------|--------------------|----------------------|
| 制 品 仕 样 书<br>Product specification                  | Part name        | Pitch 0.50 SH10.0 Floating BTB connector series |                        |                    |                      |
| <b>Amphenol Aorora Technology (Huizhou) Co.,Ltd</b> | Part No.         | B321-1B7L1-112**-E100<br>B322-1B7L1-112**-E100  | 2/7                    |                    |                      |
| Document No. : IS.EQC.175                           | Date: 2020/11/27 | Rev. : A  | Written by:<br>SH Chen | Checked by:<br>May | Approved by:<br>Rain |

| 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<br>Terminal Retention Force       | 依照 EIA 364-05B 测试。将端子 25mm/分匀速垂直从胶芯槽内拔出<br>Comply with method EIA 364-05B. Extract the terminal vertically from the housing at a rate of 25mm/minute.   | 2.5N/terminal Min.  |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 2   | 插入力及拔出力<br>Insertion/extraction force   | 依照 EIA 364-09 测试。将插座以 25mm/分匀速垂直从插头中拔出，<br>Comply with method EIA 364-13. The socket connector shall be extracted vertically from the plug connector at the constant speed of 25mm/min.   | 初始值 Initial:<br>插入力 Insertion force:<br>1 N/PIN Max.<br>拔出力 Extraction force:<br>0.03N/PIN Min.               |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 3   | 振动试验<br>Vibration test                  | 依照 EIA 364-28E 测试。<br>Comply with method EIA 364-28E.<br>插座与插头嵌合, 实验条件如下:<br>The connector shall be mounted on the test PC Board.<br>振动方向 vibration direction: X, Y, Z<br>振动加速 Vibration acceleration: 30.8m/s <sup>2</sup><br>每个轴测试时间 Each axis test time: 8<br>测试电流 Test current: 100mA<br>测试表格 Test table:   | 试验中无 1 μs 以上瞬断;<br>Discontinuity:<br>1 μs or less.  |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   |   | <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <thead> <tr> <th style="text-align: center;">Excitation</th> <th colspan="2" style="text-align: center;">Broadband random vibration</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Test duration for each dimensional axis</td> <td colspan="2" style="text-align: center;">8 h</td> </tr> <tr> <td style="text-align: center;">Acceleration rms value</td> <td colspan="2" style="text-align: center;">30.8 m/s<sup>2</sup></td> </tr> <tr> <td></td> <td style="text-align: center;">Frequency in Hz</td> <td style="text-align: center;">Power spectral density in (m/s<sup>2</sup>)<sup>2</sup>/Hz</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td style="text-align: center;">0.884</td> </tr> <tr> <td></td> <td style="text-align: center;">10</td> <td style="text-align: center;">.20</td> </tr> <tr> <td></td> <td style="text-align: center;">55</td> <td style="text-align: center;">6.5</td> </tr> <tr> <td></td> <td style="text-align: center;">180</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td></td> <td style="text-align: center;">300</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td></td> <td style="text-align: center;">360</td> <td style="text-align: center;">0.14</td> </tr> <tr> <td></td> <td style="text-align: center;">1000</td> <td style="text-align: center;">0.14</td> </tr> <tr> <td></td> <td style="text-align: center;">2000</td> <td style="text-align: center;">0.14</td> </tr> </tbody> </table> | Excitation  | Broadband random vibration |                      | Test duration for each dimensional axis | 8 h         |    | Acceleration rms value | 30.8 m/s <sup>2</sup> |            |           | Frequency in Hz                             | Power spectral density in (m/s <sup>2</sup> ) <sup>2</sup> /Hz |                | 5 | 0.884 |  | 10 | .20 |  | 55 | 6.5 |  | 180 | 0.25 |  | 300 | 0.25 |  | 360 | 0.14 |  | 1000 | 0.14 |  | 2000 | 0.14 |  |  |
| Excitation  | Broadband random vibration              |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Test duration for each dimensional axis   | 8 h                                     |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Acceleration rms value  | 30.8 m/s <sup>2</sup>                   |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | Frequency in Hz                         | Power spectral density in (m/s <sup>2</sup> ) <sup>2</sup> /Hz  |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 5                                       | 0.884   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 10                                      | .20   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 55                                      | 6.5   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 180                                     | 0.25  |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 300                                     | 0.25  |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 360                                     | 0.14  |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 1000                                    | 0.14  |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   | 2000                                    | 0.14  |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 5   | 冲击试验<br>Shock test                      | 依照 EIA 364-27B 测试。<br>Comply with method EIA 364-27B.<br>插座与插头嵌合, 按以下条件:<br>Socket and plug connector mated, according to the following conditions:   | 试验中无 1 μs 以上瞬断;<br>Discontinuity:<br>1 μs or less.  |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
|   |   | <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tbody> <tr> <td style="text-align: center;">Operating mode of DUT</td> <td style="text-align: center;">Operating mode II c</td> </tr> <tr> <td style="text-align: center;">Peak acceleration</td> <td style="text-align: center;">500 m/s<sup>2</sup></td> </tr> <tr> <td style="text-align: center;">Temperature</td> <td style="text-align: center;">RT</td> </tr> <tr> <td style="text-align: center;">Duration of pulse</td> <td style="text-align: center;">6 ms</td> </tr> <tr> <td style="text-align: center;">shock form</td> <td style="text-align: center;">Half-sine</td> </tr> <tr> <td style="text-align: center;">Number of shocks per direction (±X, ±Y, ±Z)</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">Number of DUTs</td> <td style="text-align: center;">6</td> </tr> </tbody> </table>  | Operating mode of DUT   | Operating mode II c        | Peak acceleration    | 500 m/s <sup>2</sup>                    | Temperature | RT | Duration of pulse      | 6 ms                  | shock form | Half-sine | Number of shocks per direction (±X, ±Y, ±Z) | 10   | Number of DUTs | 6 |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Operating mode of DUT   | Operating mode II c                     |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Peak acceleration   | 500 m/s <sup>2</sup>                    |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Temperature   | RT                                      |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Duration of pulse   | 6 ms                                    |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| shock form  | Half-sine                               |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Number of shocks per direction (±X, ±Y, ±Z)   | 10                                      |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| Number of DUTs  | 6                                       |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 6   | 微震腐蚀<br>Fretting corrosion              | The connector shall be mounted on the test PC Board.<br>插座与插头嵌合, 按以下条件测试<br>- 0.5mm, 10Hz, 10 万次循环<br>Tested according to Continental requirement (B2B mating system (plug mated in socket))<br>- 0.5mm, 10Hz, 100 000 cycles   | 试验中无 1 μs 以上瞬断;<br>Discontinuity:<br>1 μs or less.  |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 7   | 插拔耐久性<br>Insertion/extraction endurance | 依照 EIA 364-09 测试。插座和插头以 25mm/分的速度进行插入和拔出 100 次<br>Comply with method EIA 364-09. The socket and plug mated and unmated 100 times at a speed of 25mm per minute  | 无明显外观不良<br>电气性能满足要求<br>No evidence of damage.<br>The electrical performances should meet the spec. specified. |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 本制品不含 SS-00259 和 ROHS 禁止使用的环境物质<br>THIS PRODUCT ALL MATERIAL MUST BE COMPLY WITH SS-00259 OR RoHS |   |   |   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
| 制品仕様书<br>Product specification  |   | Part name   | Pitch 0.50 SH10.0 Floating BTB connector series   |                            |                      |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |
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| Document No. : IS.EQC.175   | Date: 2020/11/27                        | Rev. : A  | Written by:<br>SH Chen  | Checked by:<br>May         | Approved by:<br>Rain |   |             |    |                        |                       |            |           |   |  |                |   |       |  |    |     |  |    |     |  |     |      |  |     |      |  |     |      |  |      |      |  |      |      |  |  |

| 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<br>Heat Resistance                   | 依照 EIA 364-17 测试。插座与插头嵌合，125±2℃中放置时间 1000H 后取出，1~2 小时常温放置后进行测试。<br>Comply with method EIA 364-31B.<br>Socket and plug connector mated are exposed in the heat chamber 125±2℃for 1000 hours. Then it shall be tested after being placed for 1~2 hours under room temperature.   | 无明显外观不良<br>电气性能满足要求<br>No evidence of damage.<br>The electrical performances should meet the spec. specified. |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 2  | 耐湿性<br>Humidity                          | 依照 EIA 364-31B 测试。<br>插座与插头嵌合，温度 85±2℃，相对湿度 85%RH 环境放置 1500 小时<br>Comply with method EIA 364-31B.<br>Socket and plug connector mated are exposed in the humidity chamber 85±2℃, 85%RH for 1500 hours.  | 无明显外观不良<br>电气性能满足要求<br>No evidence of damage.<br>The electrical performances should meet the spec. specified. |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 3  | 盐雾试验<br>Salt Spray test                  | 依照 EIA 364-26B 测试。<br>插座与插头嵌合，温度 35±2℃；盐水比重 5±1% 喷雾试验，48h，试验后常温水洗干燥后进行测试。<br>Comply with method EIA 364-26B, Method II, Condition A. Socket and plug connector mated , temperature:35±2℃, the proportion of salt water was 5±1%. 48 hours. Then it shall be tested at room temperature after washing and drying.   | Appearance:<br>No evident corrosion   |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 4  | 冷热冲击试验<br>Thermal shock test             | 依照 EIA 364-32C, Condition I 测试。插座与插头嵌合，温度-45° C - +125° C，1000 小时/最低和最高温保持 30 分钟一次循环。<br>Comply with method EIA 364-32C, Condition I. Socket and plug connector mated are exposed -40° C - +125° C, 1000h / holding time 30min je tmin / tmax .  | 无明显外观不良<br>电气性能满足要求<br>No evidence of damage.<br>The electrical performances should meet the spec. specified. |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
|  |  | <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th>STEP</th> <th>TEMP. (°C)</th> <th>TIME (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-45 ±0/-5</td> <td>30</td> </tr> <tr> <td>2</td> <td>-45 to +125</td> <td>5max</td> </tr> <tr> <td>3</td> <td>+125 ±3/-0</td> <td>30</td> </tr> <tr> <td>4</td> <td>+125 to -45</td> <td>5max</td> </tr> </tbody> </table> | STEP  | TEMP. (°C) | TIME (min.) | 1 | -45 ±0/-5 | 30 | 2 | -45 to +125 | 5max | 3 | +125 ±3/-0 | 30 | 4 | +125 to -45 | 5max |  |  |  |
| STEP   | TEMP. (°C)                               | TIME (min.)  |   |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 1  | -45 ±0/-5                                | 30   |   |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 2  | -45 to +125                              | 5max   |   |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 3  | +125 ±3/-0                               | 30   |   |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 4  | +125 to -45                              | 5max   |   |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 5  | 温湿度循环试验<br>Humidity resistance (cycling) | 依照 EIA 364-32C 测试。插座与插头嵌合，温度-55° C - +125° C，1500 小时，速率 4K/分钟，每温度保持 30 分钟，试验后测接触阻抗。<br>Comply with method EIA 364-31C.<br>Socket and plug connector mated are exposed -55° C - +125° C, 1500h / 4K/min / holding time 30min. It shall be measured the contact resistance after the test.   | 无明显外观不良<br>电气性能满足要求<br>No evidence of damage.<br>The electrical performances should meet the spec. specified. |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |
| 6  | 焊接性测试<br>Solderability test              | 依照 EIA 364-52 测试。按以下条件进行焊接性测试：<br>Comply with method EIA 364-56A. Solderability test according to the following condition.<br>(a) Pre heating : 150~180° C, 60~120s<br>(b) Soldering : 225° C min., 20±5s<br>(c) Peak temp. : 230±3℃<br>(d) Solder : SAC305 96.5Sn / 3.0Ag / 0.5Cu<br>(e) Paste : ALPHA OM-338.  | 粘锡面积大于 95%<br>Actual soldered area must be more than 95% of the dipped area intended to be soldered.          |            |             |   |           |    |   |             |      |   |            |    |   |             |      |  |  |  |

本制品不含 SS-00259 和 ROHS 禁止使用的环境物质  
 THIS PRODUCT ALL MATERIAL MUST BE COMPLY WITH SS-00259 OR RoHS

|   |                  |   |                        |                    |                      |
|---|------------------|---|------------------------|--------------------|----------------------|
| 制品仕様书<br>Product specification                      | Part name        | Pitch 0.50 SH10.0 Floating BTB connector series |                        |                    |                      |
| <b>Amphenol Aorora Technology (Huizhou) Co.,Ltd</b> | Part No.         | B321-1B7L1-112**-E100<br>B322-1B7L1-112**-E100  | 4/7                    |                    |                      |
| Document No. : IS.EQC.175                           | Date: 2020/11/27 | Rev. : A  | Written by:<br>SH Chen | Checked by:<br>May | Approved by:<br>Rain |

| 序号 NO. | 项目 Item                 | 测试方法 Test conditions   | 规格要求 Specifications   |
|--------|-------------------------|--|---|
| 7      | 脱湿测试<br>De-Wetting test | <p>After exposed to preconditioning environment, solderability of the connector shall be confirmed. Test based on the following flow chart.</p> <p>For preconditioning, the following details shall apply.</p> <p>[Dry heat ageing]</p> <p>(a) Standard : IEC 60068-2-20 Ageing 3b<br/>(b) Temperature : 155°C<br/>(c) Soak time : 16h</p> <p>[Steam ageing]</p> <p>(a) Standard : IEC 60068-2-20 Ageing 1a or Ageing 1b<br/>(b) Temperature : Steam ageing<br/>(c) Soak time : 1h</p> <p>Test condition:</p> <p>(a) Soldering bath temp. : 260±5 °C<br/>(b) Dipping time : 5±0.5 sec.</p> <p>For Flow chart, the following details shall apply.</p> <pre> graph TD     A[Initial Inspection] --&gt; B[Dry Heat]     A --&gt; C[High Humidity or Steam]     B --&gt; D[Wetting/Dewetting Test]     C --&gt; E[Wetting/Dewetting Test]     D --&gt; F[Final Inspection]     E --&gt; F     </pre> | A maximum of 5% of the termination area is allowed to be dewetted or dissolved. |

| 8              | 焊锡耐热性<br>Resistance to soldering heat | <p>依照 EIA 364-56A 测试。以下记条件进行焊锡耐热性试验：<br/>Comply with method EIA 364-56A. The pin header shall be tested resistance to soldering heat in the following condition.</p> <p>条件/condition<br/>(1) 回流焊/Reflow<br/>适用回数/Applied number: 3 回/twice<br/>峰值温度:</p> <table border="1"> <thead> <tr> <th>Component Size</th> <th>Ramp up to 150 °C</th> <th>T<sub>Smin</sub></th> <th>t<sub>s</sub></th> <th>T<sub>Smax</sub></th> <th>T<sub>L</sub></th> <th>t<sub>L</sub></th> <th>T<sub>peak</sub>*</th> <th>t<sub>p</sub>**</th> <th>T 25 °C to peak</th> <th>Ramp down</th> </tr> </thead> <tbody> <tr> <td>All</td> <td>Min 3.0 °C/sec</td> <td>≥190 °C</td> <td>≥110 sec</td> <td>≥200 °C</td> <td>≥217 °C</td> <td>≥90 sec</td> <td>≥260 °C</td> <td>≥40 sec***</td> <td>≥300 sec</td> <td>Min 6.0 °C/sec</td> </tr> </tbody> </table> | Component Size | Ramp up to 150 °C | T <sub>Smin</sub> | t <sub>s</sub> | T <sub>Smax</sub>   | T <sub>L</sub>    | t <sub>L</sub>  | T <sub>peak</sub> * | t <sub>p</sub> ** | T 25 °C to peak | Ramp down | All | Min 3.0 °C/sec | ≥190 °C | ≥110 sec | ≥200 °C | ≥217 °C | ≥90 sec | ≥260 °C | ≥40 sec*** | ≥300 sec | Min 6.0 °C/sec | 粘锡面积大于 95%<br>Actual soldered area must be more than 95% of the dipped area intended to be soldered. |
|----------------|---------------------------------------|--|----------------|-------------------|-------------------|----------------|---------------------|-------------------|-----------------|---------------------|-------------------|-----------------|-----------|-----|----------------|---------|----------|---------|---------|---------|---------|------------|----------|----------------|--|
| Component Size | Ramp up to 150 °C                     | T <sub>Smin</sub>  | t <sub>s</sub> | T <sub>Smax</sub> | T <sub>L</sub>    | t <sub>L</sub> | T <sub>peak</sub> * | t <sub>p</sub> ** | T 25 °C to peak | Ramp down           |                   |                 |           |     |                |         |          |         |         |         |         |            |          |                |  |
| All            | Min 3.0 °C/sec                        | ≥190 °C  | ≥110 sec       | ≥200 °C           | ≥217 °C           | ≥90 sec        | ≥260 °C             | ≥40 sec***        | ≥300 sec        | Min 6.0 °C/sec      |                   |                 |           |     |                |         |          |         |         |         |         |            |          |                |  |

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

|  |                  |           |   |                    |                      |
|--|------------------|-----------|---|--------------------|----------------------|
| 制品仕様书<br>Product specification               |                  | Part name | Pitch 0.50 SH10.0 Floating BTB connector series |                    |                      |
| Amphenol Aorora Technology (Huizhou) Co.,Ltd |                  | Part No.  | B321-1B7L1-112**-E100<br>B322-1B7L1-112**-E100  | 5/7                |                      |
| Document No. : IS.EQC.175                    | Date: 2020/11/27 | Rev. : A  | Written by:<br>SH Chen                          | Checked by:<br>May | Approved by:<br>Rain |

## 7. 测试顺序表 Test Sequence

| Test Description                   | Products qualification test sequence |     |     |     |     |     |     |     |      |     |     |     |     |     |     |
|------------------------------------|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|
|                                    | A                                    | B   | C   | D   | E   | F   | G   | H   | I    | J   | K   | L   | M   | N   | P   |
| 1. Appearance                      | 1,4                                  | 1,3 | 1,4 | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 | 1,10 | 1,6 | 1,6 | 1,6 | 1,3 | 1,3 | 1,3 |
| 2. Contact Resistance              |                                      |     |     | 3,5 | 3,5 | 3,5 | 3,5 | 3,5 | 3,7  | 3,5 | 3,5 | 3,5 |     |     |     |
| 3. Insulation Resistance           |                                      |     |     |     |     |     |     |     | 4,8  |     |     |     |     |     |     |
| 4. Dielectric Withstanding Voltage |                                      |     |     |     |     |     |     |     | 5,9  |     |     |     |     |     |     |
| 5. Temperature rise                | 3                                    |     |     |     |     |     |     |     |      |     |     |     |     |     |     |
| 6. Terminal Retention Force        |                                      | 2   |     |     |     |     |     |     |      |     |     |     |     |     |     |
| 7. Insertion/extraction Force      |                                      |     | 3   |     |     |     |     |     |      |     |     |     |     |     |     |
| 8. Vibration test                  |                                      |     |     | 4   |     |     |     |     |      |     |     |     |     |     |     |
| 9. Shock test                      |                                      |     |     |     | 4   |     |     |     |      |     |     |     |     |     |     |
| 10. Fretting corrosion             |                                      |     |     |     |     | 4   |     |     |      |     |     |     |     |     |     |
| 11. Insertion/extraction endurance |                                      |     |     |     |     |     | 4   |     |      |     |     |     |     |     |     |
| 12. Heat Resistance                |                                      |     |     |     |     |     |     | 4   |      |     |     |     |     |     |     |
| 13. Humidity                       |                                      |     |     |     |     |     |     |     | 6    |     |     |     |     |     |     |
| 14. Salt Spray test                |                                      |     |     |     |     |     |     |     |      | 4   |     |     |     |     |     |
| 15. Thermal Shock test             |                                      |     |     |     |     |     |     |     |      |     | 4   |     |     |     |     |
| 16. Humidity resistance(cycling)   |                                      |     |     |     |     |     |     |     |      |     |     | 4   |     |     |     |
| 17. Solderability                  | 2                                    |     | 2   | 2   | 2   | 2   | 2   | 2   | 2    | 2   | 2   | 2   | 2   |     |     |
| 18. De-Wetting test                |                                      |     |     |     |     |     |     |     |      |     |     |     |     | 2   |     |
| 19. Resistance to soldering heat   |                                      |     |     |     |     |     |     |     |      |     |     |     |     |     | 2   |
| Sample Size                        | 5                                    | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5   | 5   | 5   | 10  | 10  | 30  |

## 8. 包装 Packing

详见包装图。See the packaging drawing

## 9. 产品保质期 Term of a guarantee

从交货日起1年 (1 year from delivery day)

## 10. 修改内容 Change content

| 版本<br>Rev. | 改正日期<br>Modify date | 改正内容<br>Modifications | Written by | Checked by |
|------------|---------------------|-----------------------|------------|------------|
| A          | 2020/11/27          | New                   | SH Chen    | May        |
|            |                     |                       |            |            |

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

|  |                  |   |                        |  |
|--|------------------|---|------------------------|--|
| 制品仕様书<br>Product specification               | Part name        | Pitch 0.50 SH10.0 Floating BTB connector series |                        |  |
| Amphenol Aorora Technology (Huizhou) Co.,Ltd | Part No.         | B321-1B7L1-112**-E100<br>B322-1B7L1-112**-E100  | 6/7                    |  |
| Document No. : IS.EQC.175                    | Date: 2020/11/27 | Rev. : A  | Written by:<br>SH Chen | Checked by:<br>May<br>Approved by:<br>Rain |

## 操作方法 Handling method

### 1. 使用注意事项/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 PCB 板时，不能只固定连接器；实际应用时，PCB 需在连接器附近用铆钉固定；

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;

f. 图 8 及图 9 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 8 and figure 9, 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.

h. 请在图 10, 11 的角度下进行装配。

Please mate below the angle of the figure 10.11

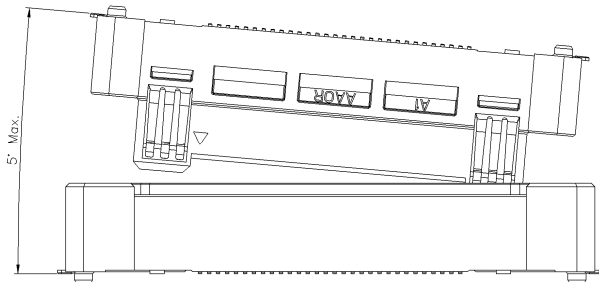


图 8/Fig8

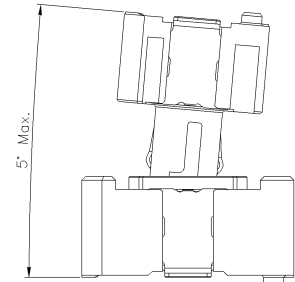


图 9/Fig9

初始角度  
Guiding angle

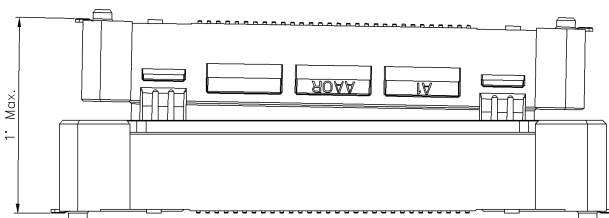


图 10/Fig. 10

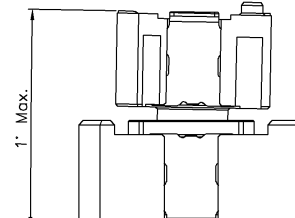


图 11/Fig. 11

装配角度  
Mating angle

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