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| 产品名称 Description | | |
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| | 产品料号 Part No. | 产品型号规格 Description |
|--------------|--------------------|------------------------|
| 包括但不限于右边所列产品 | 3720MXXX022XXXXXX | 0.5BTB-NPin 公座H2.2 |
| | 3720MXXX012XXXXXX | P型0.5BTB-NPin 公座H1.23 |
| | 3720MXXX037XXXXXX | 0.5BTB-NPin 公座H3.7 |
| | 3723-MXXX008XXXXXX | 0.5BTB-NPin 双槽型 公座H3.7 |
| | 3723-MXXX010XXXXXX | 0.5BTB-NPin 双槽型 公座H1.0 |
| | 3723-MXXX013XXXXXX | 0.5BTB-NPin 双槽型 公座H1.3 |
| | 3723-MXXX020XXXXXX | 0.5BTB-NPin 双槽型 公座H2.0 |
| | 3720FXXX013XXXXXX | 0.5BTB-NPin 母座H1.32 |
| | 3720FXXX023XXXXXX | 0.5BTB-NPin 母座H2.3 |
| | 3720FXXX043XXXXXX | 0.5BTB-NPin 母座H4.3 |
| | 3720FXXX018XXXXXX | P型0.5BTB-NPin 母座H1.85 |
| | 3723-FXXX022XXXXXX | 0.5BTB-NPin 双槽型 母座H2.2 |
| | 3723-FXXX030XXXXXX | 0.5BTB-NPin 双槽型 母座H3.0 |
| | 3723-FXXX035XXXXXX | 0.5BTB-NPin 双槽型 母座H3.5 |
| | 3723-FXXX040XXXXXX | 0.5BTB-NPin 双槽型 母座H4.0 |
| | 3723-FXXX045XXXXXX | 0.5BTB-NPin 双槽型 母座H4.5 |

1. SCOPE ()

This product specification defines the product performance and the test methods to ascertain the performance of the (0.5mm Board To Board) Connector ,which si designed and manufactured by JILN Electronic Co.,Ltd.This product specification is applicable but not only for those part numbers which be shown in the cover page.

本产品规格书规定了由锦凌电子有限公司设计生产的(0.5mm板对板)型连接器,产品的特性及产品的测试方法。本产品规格书适用于但不局限于封面所显示的产品料号

2. REFERENCE DOCUMENTS

| | |
|--------------|---|
| MIL-STD-1344 | Test method for electrical connector 电子连接器方法 |
| MIL-STD-202 | Test method for electrical connectors 电子零件测试方法 |
| EIA364 | Test method for electrical connectors 电子零件测试方法 |
| JIS C 0051 | Test method for electrical connectors 电子零件测试方法 |
| MIL-G-45204C | Specification for gold plating 镀金规格 |
| IEC-512-3 | IEC standard for current carrying capacity tests IEC 电流测试标准 |
| QQ-N-290A | Specification for nickel plating 镀镍规格 |
| MIL-P-81728A | Specification for tin/lead plating 镀锡规格 |
| MIL-T-10727B | Specification for tin plating 镀锡规格 |
| UL498 | UL standard for safety of attachment plug and receptacle UL安规要求标准 |
| IEC62321 | Determination of total lead &cadmium content 总铅和总镉含量测定 |
| IEC62321 | Determination of total lead &cadmium content 总铅和总镉含量测定 |
| IEC62321 | Determination of heavy metals content 重金属含量测定 |
| IEC62321 | Determination of total lead &cadmium content 总铅和总镉含量测定 |

3. FEATURE & DIMENSIONS

3.1. PRODUCT DIMENSION (产品尺寸)

These connectors shall have the dimensions as shown in drawing.

本产品的相关尺寸参见图面.

3.2. PCB/panel layout (电 板 局)

The recommended PCB layout is shown in drawing.

本产品适用的 PCB layout 参见图面.

3. Cool Down ()

Cool down shall not exceed 6 C per second.

(不 6 C/)

4.3. RESISTANCE TO SOLDER HEAT (接)

WAVE SOLDER (接)

Each cycle consists of three consecutive phases.

(接 包括 连)

1.Preheat ()

The steady temperature of the preheat zone is 90 125 .

90 125 .

2. Soldering (接)

To avoid the secondary tin-melting, the temperature on PCB upper surface is 160 C Max. for products with lead, or 200 C Max. for lead-free products. The temperature of the PCB bottom surface shall not be exceed 100 C more than the temperature of the PCB upper surface. The peak temperature is during 230~250 C for products with lead, or 255~265 C for lead-free products. The tin dip time is duration for 3~5 seconds.

(有铅产品板面 不 160 , 铅产品板面 不的 200 , 零件
 锡。板面 板的 不 100 。板 有铅产品 ! 230 250 , 铅
 产品 260 270 ." 锡 3 10)

3.Cool Down ()

Cool down shall not exceed 6 per second.

(不 6)

Note:

Device temperature measurements are referenced from the top-center of the package outer surface.

(设# 量测 \$%&' () 测量* 准.)

PERFORMANCE AND TEST DESCRIPTION ()

REQUIREMENT (要求)

Product is designed to meet electrical,mechanical,and environmental performance requirements specified in Table 1

(本产品设计 所列的 , 电器及+, 要求)

TEST CONDITION (测试- 件)

Unless otherwise specified,all tests shall be performed at ambient environmental conditions.

(. / 特012, 所有测试的3 - 件 45)

SAMPLE SELECTION (6品78)

Test samples shall be selected at random from current production. No test samples shall be reused.

Samples are pre-conditioned with 10cycles of durability. Each group shall be containing 5 test samples.

(测试6品\$9生产的产品' : ; < , 所有测试 的6品不 重= 用。6品 >?@10 , A测试 BC有5 6品.)

5.4. TEST SEQUENCE (测试DE)

Product qualification test sequence as shown in Table II.

(产品品F 测试DE见)

Table I: Test Requirements and Test Methods

: 测试要求和测试方法

| Items (GH) | Requirements (要求) | Test Methods (测试方法) |
|--|---|--|
| 1. Confirmation of Product (产品I J) | Product shall be conforming to the requirements of applicable product drawing 产品KL 相关产品图面的要求 | Visually dimensions and functionally inspected per applicable product drawing. 产品相关图面, MN产品的 O 尺寸及PQ |
| 2. Contact Resistance (接 RS) | 30 mT Max.Inital UVWX Y 30 mT | Subject mated contacts assembled in housing to closed circuit of 100 mA max.20 mV max. 所Z [定 \] 的 子连接^ 封_ ' 测试: 电流100mA max,电 20 mV max. 适用: MIL-STD-202, 方法 307。 |
| 3. Insulation Resistance (a SR) | 500 MT Min b 500 MT | Measure by applying test potential between the adjacent contacts,and between the contacts and ground in the mated connector . MIL-STD-202, Method 302, Condition B (500 V DCc10%). 测试产品相d 子 及 子 接e 的电S 适用: MIL-STD-202,方法 302, f 件 B (500V DCc10%) |
| 4. Dielectric Withstanding Strength (电) | Connector must withstand test potential os ,annec | |

| | | |
|--|--|--|
| <p>5. Durability (Repeated Mating/Un-mating) 耐久性</p> | <p>Contact Resistance: 50 mT Max. after testing. 测试接触 SR Y 50mT</p> | <p>Repeat mate and unmated for connector 500 cycles, At a speed of 300 mm/minute 重 = n 行 o 产品 500 ? @ , 300mm/i j 的测试。</p> |
| <p>6. Connector Pin Mating/Un-mating Force ? p q / @ r q</p> | <p>Mating force: (60) gf/ Pin Max. Un-mating force: (10) gf/ Pin Min. ? p q Y (60) gf/ Pin @ r q b (10) gf/ Pin</p> | <p>At a speed of 25c3 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. 25c3mm/i j 的 , s t 4 u ? p 对 o ? 件 ^ v 测产品' w \$ v 测产品' @ r .</p> |
| <p>7. Contact Retention Force (子 x ! q)</p> | <p>(0.20) kgf/ Pin Min. b (0.20) kgf/ Pin</p> | <p>Apply axial pull out force at a 25c3mm/minute On the contact assembled in the housing. 25c3mm/i j 的 y s t z q \$ { 本 } @ r 子.</p> |
| <p>8. Thermal shock (~)</p> | <p>After testing, no damage, Contact Resistance 35 mT max.. Dielectric Strength should be OK, Insulation Resistance should be 500 MT min. (测试 m, 产品 ! " , 接 SR : 35 mT Y # 电 测试 OK, \$ % SR 500MT b ;)</p> | <p>is no more than 30 seconds. Total 5 cycles. MIL-STD-202, Method 107D, condition A. (& ' : -55 C ~ +85 C # \$ -55 C (V , 30 i j m) ^ +85 C # *) 不 30 # + 10 , + . - 用 : MIL-STD-202 , 方法 107 , - 件 A.)</p> |
| <p>9. Humidity (. . /)</p> | <p>After testing, no damage, Contact Resistance 35mT max.. Dielectric Strength should be OK, Insulation Resistance should be 500MT min. 测试 m, 产品 ! " , 接 SR : 35 mT Y # 电 测试 OK, \$ % SR 500MT b ;</p> | <p>Temperature: 40c2 C. Relative Humidity: 90-95%. Duration: 96 Hours. MIL-STD-202, Method 103, condition B. : 40c2 C. 相对 / : 90-95%. ! : 96 b O. 适用 : MIL-STD-202 , 方法 103 , - 件 B.</p> |
| <p>10. Solder ability (性)</p> | <p>giving a magnification of 10 X for any damage such as pinholes, void or rough surface. 6 品 测试 45m , 1 Y 2 3 * 10 2 的显 45 , MN O ! " 6 : b 7 , 8 , O 9 : #)</p> | <p>Soldering time: 4 to 6 seconds. Temperature: 260c5 C. MIL-STD-202, Method 208. 接 : 4~6 . : 260c5 C. 锡面 : 95% 适用 : MIL-STD-202 , 方法 208.</p> |

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|------------------------------------|---|---|
| <p>11. Humidity (. . /)</p> | <p>After testing, no damage, Contact Resistance 35mT max.. Dielectric Strength should be OK, Insulation Resistance should be 500MT min. 测试m,产品 ! " ,接 SR : 35 mT Y# 电 测试 OK, \$%SR 500MT b;</p> | <p>Temperature: 40c2 C. Relative Humidity: 90-95%. Duration: 96 Hours. MIL-STD-202, Method 103, condition B. : 40c2 C. 相对/ : 90-95%. ! : 96 b O。 适用 : MIL-STD-202 , 方法 103 , - 件 B。</p> |
| <p>12. Solder ability (性)</p> | <p>giving a magnification of 10 X for any damage such as pinholes, void or rough surface. 6品 测试45m , 1 Y 2 3 * 10 2的显45 , MN O! " 6 : b 7 , 8 , O9: #)</p> | <p>Soldering time: 4 to 6 seconds. Temperature: 260c5 C. MIL-STD-202, Method 208. 接 : 4~6 。 : 260c5 C。 锡面: : 95% 适用 : MIL-STD-202 , 方法 208。</p> |

Table II: Product Qualification Test Sequence

: 产品测试DE

| Test Description 测试 < Z | TestGroup 测试i A | | | | | | |
|--|-----------------|-----|-----|-----|-----|-----|-----|
| | A | B | C | D | E | F | G |
| 1. Conformation of Product 产品I J | 1,7 | 1,4 | 1,9 | 1,9 | 1,3 | 1,9 | 1,9 |
| 2. Contact Resistance 接 SR | 2,6 | | 2,6 | 2,6 | | 2,6 | 2,6 |
| 3. Insulation Resistance ` a SR | 3 | | 3,7 | 3,7 | | 3,7 | 3,7 |
| 4. Dielectric Withstanding Voltage 电 | 4 | | 4,8 | 4,8 | | 4,8 | 4,8 |
| 5. Durability (Repeated Mating/Un-mating) I 性 | 5 | | | | | | |
| 6. Connector Pin Mating/Un-mating Force = 子? p/@r " | | 2 | | | | | |
| 7. Contact Retention Force 子x! " | | 3 | | | | | |
| 8. Thermal Shock ~ | | | 5 | | | | |
| 9. Humidity (Steady State) . . / | | | | 5 | | | |
| 10. Solder-ability 性 | | | | | 2 | | |
| 11. Salt Spray >? | | | | | | 5 | |
| 12. High Temperature Life # ' | | | | | | | 5 |

Table III: Reflow Soldering Profile

附表三：回流焊接曲线图

Lead-free reflow profile requirements:

铅 流 接@ :

| Parameter 参3 | Reference 参A | Specification 规格 |
|---|-------------------|---------------------|
| Ramp-up | 25 C ~150 C | 3 C /S Max |
| (Pre-heating) Temperature Min(Tsmin) Temperature Max(Tsmax) Time(Tsmin to tsmax) | 150 ~200 | 60~180sec |
| Time maintained above(x !) Temperature(TL) Time(tL) | 217 C | 60~150sec |
| Time within 5 C of actual peak Temperature(tp) | 260-/+5 C | 20~40sec |
| Cooling | Ramp-Down Rate | 6 C /S(Max) |
| Time 25 C to Peak Temperature | 25 C ~ Peak Temp. | 8 minutes maximum |

This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile largely dependent on the reflow equipment.

B @ 图CDEF 件器件 接R 的G本要求。H用 对 接' 的 I J方 C K对流。L ^特
定@ 图eMN O要 P 流 接设#。

5.

5.1 料的包 对 料有 定的x QR用和S封R用 , xT 料 UV W' 不Xh ^! " 。

5.2 包 YHZ [\ ,] ^ 和 _` 要求。

5.3 b包 F的标a KL有bcd标^产品型号^名称^ 料ef和3量。

5.4 包 5Y的产品 , H + , * -10 +40 , 相对/ 80% , 8K' g性 ,
h性wi j k l 性K} 的mn] o , Z- 件 , p生产q Orsto , Bstu
料v * 格品。