产品名称 Description		

	产品料号 Part No.	产品型号规格 Description
包括但不仅限于右边所列产品	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。

3.3. BILL OF MATERIAL ($料%&)

Harmful material controlling follows the requirements of RoHS. The bill of material is described in drawing.

有' ( ) * +, - RoHS. / 要求。本产品O用的$料参见图面。

3.4. MECHANICAL & ELECTRICAL CHARACTERISTIC (1 2及电器特性)

The connector shall have the mechanical and electrical performance as described in drawing.

本产品的1 2及电器特性参见3方456 (测试要求7方法) .

3.5. PACKAGING (包8)

Products shall be packaged according to requirements specified in purchase order for safe delivery,connector container and the packaging method are shown in package specification.

产品9: ; <=. 定要求包8 , 包8$料7包8方>参见产品包8规?.

3.6. RATING CURRENT AND RATING VOLTAGE (@定电流7@定电A)

Rating current is (0.5)A , rating voltage is (50)V DC/AC RMS.

@定电流: (0.5) A , @定电A (50) V DC/AC RMS.

3.7. STORAGE AND OPERATING TEMPERATURE (BC7O用DE)

Temperature range:-(40)F G+(105)F , including terminal temperature rise for rating current. DE?H : -(40)F G+(105)F , 包含接I J 子的@定电流DK

4. Environmental (   )

4.1.SOLDERABILITY (9L性)

Connectors meet solder-ability to MIL-STD-202,and shall be free of contaminants.

(产品9L性, - MIL-STD-202标准规定的相关要求 , 5面不M有NO(.)

4.2.INFRARED REFLOW (PQRS流L)

Each cycle consists of three consecutive

(TUL接VW包括XU连YZ[, 见45X)

1. Preheat \ ]

Increase in temperature not to exceed 3^C per second.

(DE_` a 不bc 3^C /d)

2. Soldering (L接)

Maximum allowable time above reflow temperature of 150^C is 370 seconds. Maximum temperature in this interval is 260^C, duration is 20~40 seconds.

(S流LDEe150^Cf g的hi j k bc370d。j I DE260^Chi 20~40d。)

3. Cool Down (mn)

Cool down shall not exceed 6^C per second.

(mnaE不bc6^C/d.)

4.3. RESISTANCE TO SOLDER HEAT (oL接])

WAVE SOLDER (pqL接)

Each cycle consists of three consecutive phases.

(TUL接VW包括XU连YZ[.)

1.Preheat (\ ])

The steady temperature of the preheat zone is 90G125F .

\ ] r j sDE* +e90G125F.

2. Soldering (L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DE不Mbc160F，t 铅产品板面DE不的bc200F，f uvwx零件yz{锡。板面DE7板| 的DED} 不Mbc100F。板3DEq~有铅产品 ! e230G250F，t 铅产品* +e260G270F."锡hi * +e3G10d.)

3.Cool Down (mn)

Cool down shall not exceed 6F per second.

(mnaE不bcTd6F)

Note:

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

(设#DE量测hf $%&' i () 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, - 456所列的12，电器及+, 要求)

TEST CONDITION (测试- 件)

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

(. /特O12，所有测试的3D- 件345)

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' ：1；<，所有测试c的6品不M重=O用。6品f \ >?@10z ，TA测试BC有5U6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45y)

Table I: Test Requirements and Test Methods

456：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QO 尺寸及PQ
2. Contact Resistance (接I RS)	30 mT Max.Inital UVWXj Y30 mT	Subject mated contacts assembled in housing to closed circuit of 100 mA max.20 mV max. 所Z[定eQ\]的J 子连接^6U封_S" ' 测试：电流100mA max,电A20 mV max. 适用：MIL-STD-202，方法 307。
3. Insulation Resistance (` aSR)	500 MT Min j 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dJ 子i f 及J 子7接ei 的电S 适用：MIL-STD-202,方法 302，f 件 B (500V DCc10%)
4. Dielectric Withstanding Strength (o电A)	Connector must withstand test potential os ,annec	

5.Durability (Repeated Mating/Un- mating）ol 性	Contact Resistance:50 mT Max.after testing. 测试m接l SRj Y 50mT	Repeat mate and unmated for connector 500 cycles,At a speed of 300 mm/minute 重=n行o- 产品500z ?@，f 300mm/i j 的aE测试。
6.Connector Pin Mating/Un-mating Force ?pq/@r q	Mating force:(60)gf/Pin Max. Un-mating force:(10)gf/Pin Min. ?pqj Y （60） gf/Pin @r qj b （10）gf/Pin	At a speed of 25c3 mm/minute,apply axial insert the mating part into fully or pull out from the subject product. f 25c3mm/i j 的aE，st 4u?p对o?件^v测产品' w$v测产品' @r.
7.Contact Retention Force (J 子x! q)	(0.20)kgf/Pin Min. j b (0.20)kgf/Pin	Apply axial pull out force at a 25c3mm/minute On the contact assembled in the housing. f 25c3mm/i j 的aEy` st zq${ | 本}g@r J 子.
8. Thermal shock (] ~)	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t ! " ，接l SR： 35 mTj Y#o电A测试 OK, $%SR 500MTj b;)	is no more than 30 seconds. Total 5 cycles. MIL-STD-202, Method 107D, condition A. (DE&' ?H： -55^C ~ +85^C#$ -55^C (V，30 i j m) ^+85^C#*) hi 不bc 30 d#+ 10U, +. - 用：MIL-STD-202，方法 107，- 件 A.)
9. Humidity （. D. /）	After testing, no damage,Contact Resistance 35mT max.. Dielectric Strength should be OK,Insulation Resistance should be 500MTmin. 测试m,产品t ! " ，接l SR： 35 mTj Y#o电A测试 OK, $%SR 500MTj b;	Temperature: 40c2^C. Relative Humidity: 90-95%. Duration: 96 Hours. MIL-STD-202, Method 103, condition B. DE：40c2^C。 相对/ E：90-95%。 ! Yhi ：96 bO。 适用：MIL-STD-202，方法 103，- 件 B。
10. Solder ability (9L性)	giving a magnification of 10 X for any damage such as pinholes, void or rough surface. 6品e测试45m，e1Y23* 10 2的显453，MNQO! "6：b 7，8L，Q09: E#)	Soldering time: 4 to 6 seconds. Temperature: 260c5^C. MIL-STD-202, Method 208. L接hi ：4~6 d。 DE：260c5^C。 L锡面; ：95%f g 适用：MIL-STD-202，方法 208。

11. Humidity （. D. /）	After testing, no damage,Contact Resistance 35mT max.. Dielectric Strength should be OK,Insulation Resistance should be 500MT min. 测试m,产品t！''，接I SR： 35 mTj Y#o电A测试 OK, $%SR 500MTj b;	Temperature: 40c2^C. Relative Humidity: 90-95%. Duration: 96 Hours. MIL-STD-202, Method 103, condition B. DE：40c2^C。 相对/E：90-95%。 ! Yhi ：96 bO。 适用：MIL-STD-202，方法 103，- 件 B。
12. Solder ability (9L性)	giving a magnification of 10 X for any damage such as pinholes, void or rough surface. 6品e测试45m，e1Y23* 10 2的显453，MNQO! ''6：b 7，8L，Q09: E#)	Soldering time: 4 to 6 seconds. Temperature: 260c5^C. MIL-STD-202, Method 208. L接hi ：4~6 d。 DE：260c5^C。 L锡面; ：95%f g 适用：MIL-STD-202，方法 208。

Table II: Product Qualification Test Sequence

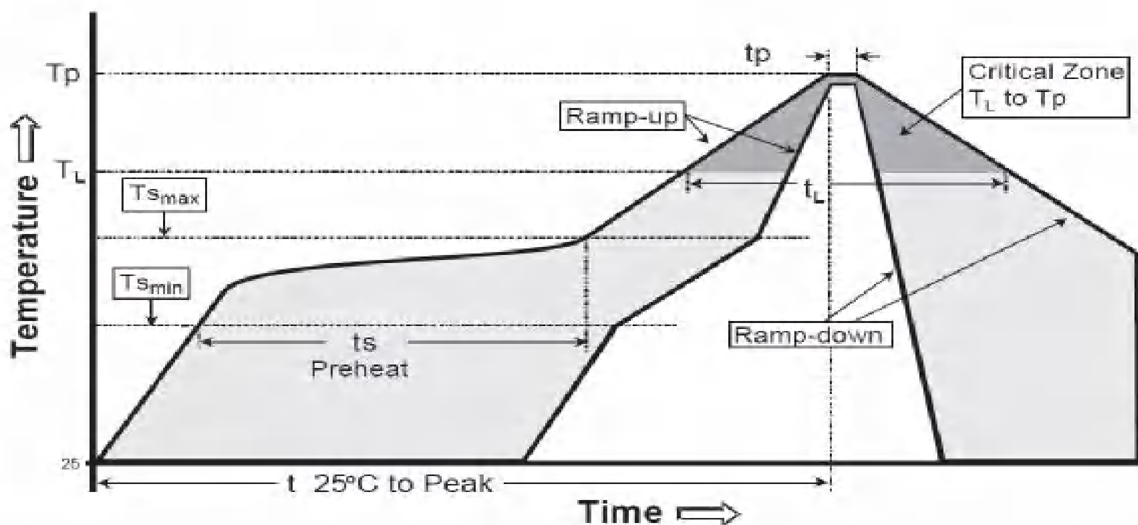
45y：产品测试DE

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I SR	2,6		2,6	2,6		2,6	2,6
3. Insulation Resistance ` aSR	3		3,7	3,7		3,7	3,7
4.Dielectric Withstanding Voltage o电A	4		4,8	4,8		4,8	4,8
5.Durability (Repeated Mating/Un-mating) oI 性	5						
6. Connector Pin Mating/Un-mating Force &=J 子?p/@r		2					
7. Contact Retention Force J 子x!		3					
8. Thermal Shock] ~			5				
9. Humidity (Steady State) . D. /				5			
10. Solder-ability 9L性					2		
11. Salt Spray >?						5	
12. High Temperature Life I D '							5

Table III: Reflow Soldering Profile
附表三：回流焊接曲线图

Lead-free reflow profile requirements:
t 铅S流L接@R：

Parameter 参3	Reference 参A	Specification 规格
KDr Ramp-up	25^C ~150^C	3^C /S Max
\ ] r (Pre-heatimg) Temperature Min(Tsmin) Temperature Max(Tsmax) Time(Tsmin to tsmax)	150F ~200F	60~180sec
Time maintained above(x! h i) Temperature(TL) Time(tL)	217^C	60~150sec
Time within 5^C of actual peak Temperature(tp)	260-/+5^C	20~40sec
mnr 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.

BU@R图CDEF件器件L接R] 的G本要求。H用e对L接' 的] I J 方>C] K对流。L^特定@R图eMNDEO要：P7S流L接设#。

5.

5.1 (料的包8对(料有6定的xQR用和S封R用，xT(料eUVcW' 不Xh^! "。

5.2 包8YHZ[u\，u] ^uA和u_` 要求。

5.3 j b包8&F的标aKL有bcd标^产品型号^名称^(料ef 和3量。

5.4 包85Y的产品，He+，DE* -10FG+40F，相对/Ee80%f 3，VH8K' t g性，h性wi j kl 性K} 的mn] oB，egZ- 件3，p生产qWQr st oBW，eBst u (料v* - 格品。