连兴旺电子(深圳)有限公司

承认书

SPECIFICATIONS FOR APPROVAL

客户：
Customer：

客户料号：
Customer Part No:

公司料号：
Part No：LB2**-***P-WXR / LB2**-***S-WXR

产品名称：
Description：0.50mm BTB PLUG/ 0.50mm BTB SOCKET

发行日期：
Issue Date：2022.04.25

客户签核 （Customer Approval）：

采购	品保	工程

内部签核 （Signature）：

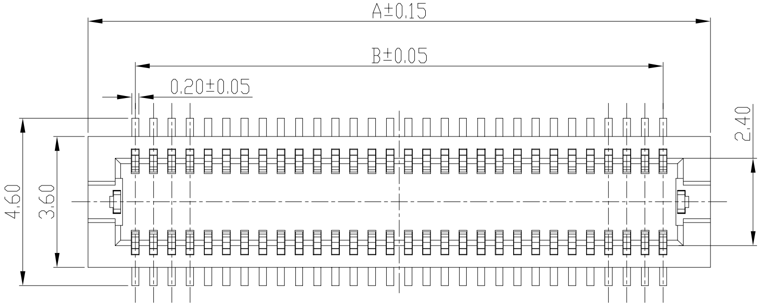
核准	审核	制作
赵云	tong	Jerry

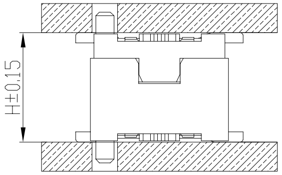
连兴旺电子(深圳)有限公司

LXWCONN ELECTRONICS (SHENZHEN) CO.,LTD

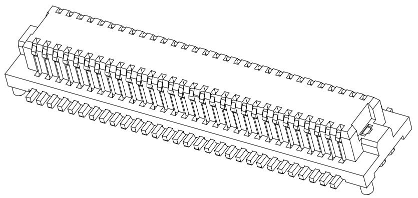
TEL：+86-0755 2369 8715 FAX：+86-0755 2369 8719

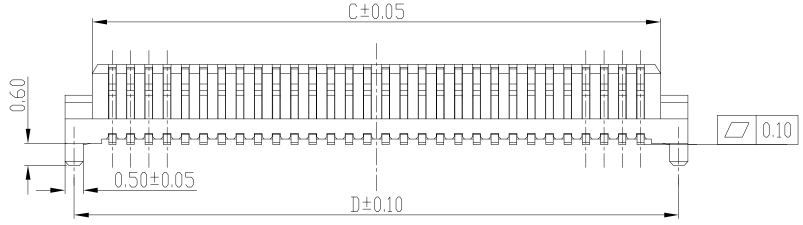
ADD：东莞市虎门镇新联社区高科一路 1 号钧益工业园 E 栋

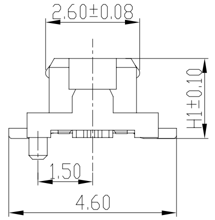




Note:
Electrical
Current Rating:0.5A max
Contact Resistance:50mΩ max(Initial),75mΩ max(After)
Dieletric Withstanding Voltage:150VAC
Insulation Resistance 500mega ohms min. at 100 VDC
Physical
Housing:thermoplastic, UL 94V-0 rated,inWhite Color
Contact: Copper alloy
Operating Temperature:-40°C to +85°C







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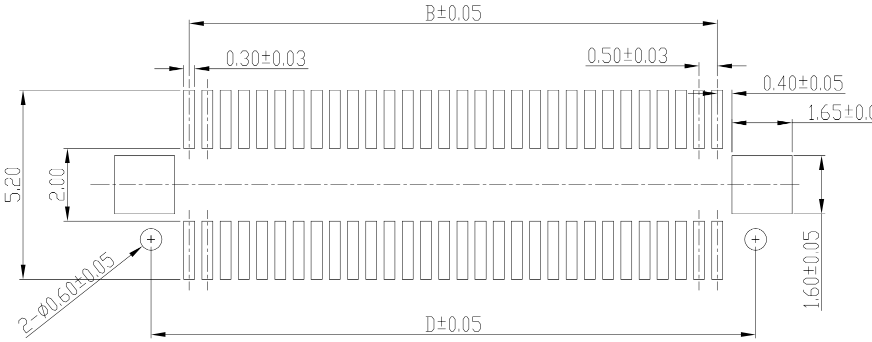
3.0	2.2	2.3
3.5	2.7	2.8
4.0	2.7	3.3
5.0	2.7	4.3

	A	B	C	D
10 PIN	4.60	2.00	3.10	4.10
12 PIN	5.10	2.50	3.60	4.60
14 PIN	5.60	3.00	4.10	5.10
20 PIN	7.10	4.50	5.60	6.60
22 PIN	7.60	5.00	6.10	7.10
24 PIN	8.10	5.50	6.60	7.60
30 PIN	9.60	7.00	8.10	9.10
32 PIN	10.10	7.50	8.60	9.60
36 PIN	11.10	8.50	9.60	10.60
40 PIN	12.10	9.50	10.60	11.60
50 PIN	14.60	12.00	13.10	14.10
60 PIN	17.10	14.50	15.60	16.60
80 PIN	22.10	19.50	20.60	21.60



RECOMMENDED PCB LAYOUT(TOP VIEW)

LB222-GXXP-WXR02
01: NO GROUND LUG
02: GROUND LUG
PACKING: R:REEL
0:WITH POSITIONING POSTS
1:WITHOUT POSITIONING POSTS
COLOR:WHITE
PLUG
PIN
PLATING: G:GOLD FLASH
0.5 BTB
HEIGHT:22--2.2H 27--2.7H
LXWCONN BTB CONNECTOR SERIES

LXW connectivity 连兴旺电子(深圳)有限公司
LXWCONN ELECTRONICS(SHENZHEN)CO.,LTD

一般公差
GENERAL TOLERANCE
.X ±0.35
.XX ±0.25
.XXX ±0.10
ANGLES ±1°

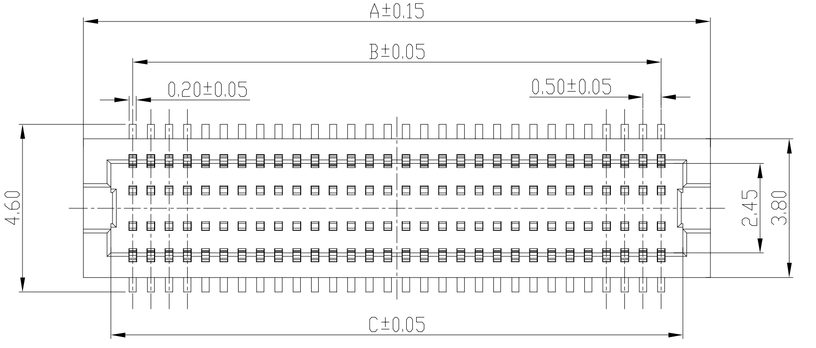
修订 SER	修 改 摘 要 REVISION DESCRIPTION	签 名 SIGNATURE	日期 DATE

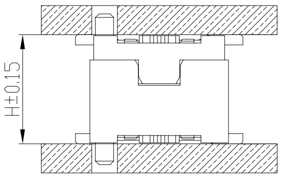
版本 (REV) A

制图 (DR): Jerry 2022.02.21	品名(TITLE): DF12 PLUG BTB带接地片		
审核 (CHKD):	料号(PART NO): LB2XX-GXXP-WXR02		
核准 (APPD): Tong 2022.02.21	比例(SCALE) 1:1	单位(UNITS) mm	张数(SHEET) 1 OF 1

图幅(SIZE) A4

RoHS Compliant 2013/95/EC
Pb Process Capable





Note:

Electrical

Current Rating:0.5A max

Contact Resistance:50mΩ max(Initial),75mΩ max(After)

Dieletric Withstanding Voltage:150VAC

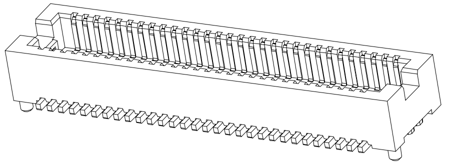
Insulation Resistance 500mega ohms min. at 100 VDC

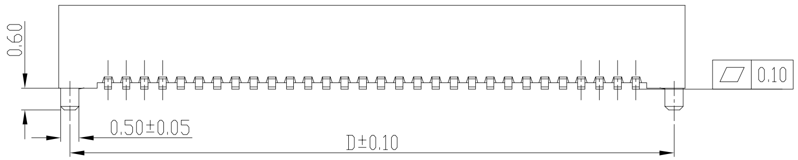
Physical

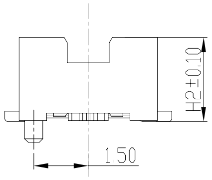
Housing:thermoplastic, UL 94V-0 rated,inWhite Color

Contact: Copper alloy

Operating Temperature:-40°C to +85°C

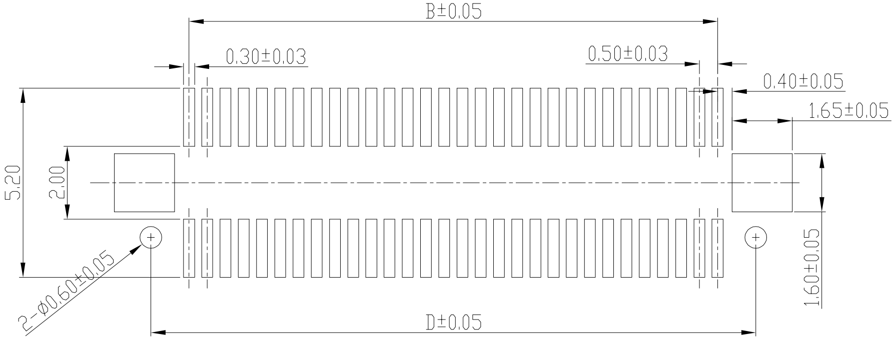






H	H1	H2
3.0	2.2	2.3
3.5	2.7	2.8
4.0	2.7	3.3
5.0	2.7	4.3

	A	B	C	D
10 PIN	4.70	2.00	3.20	4.10
12 PIN	5.20	2.50	3.70	4.60
14 PIN	5.70	3.00	4.20	5.10
20 PIN	7.20	4.50	5.70	6.60
22 PIN	7.70	5.00	6.20	7.10
24 PIN	8.20	5.50	6.70	7.60
30 PIN	9.70	7.00	8.20	9.10
32 PIN	10.20	7.50	8.70	9.60
36 PIN	11.20	8.50	9.70	10.60
40 PIN	12.20	9.50	10.70	11.60
50 PIN	14.70	12.00	13.20	14.10
60 PIN	17.20	14.50	15.70	16.60
80 PIN	22.20	19.50	20.70	21.60



RECOMMENDED PCB LAYOUT(TOP VIEW)

LB 2XX-GXXS-WXR02

01: NO GROUND LUG
02: GROUND LUG

PACKING: R:REEL

0:WITH POSITIONING POSTS
1:WITHOUT POSITIONING POSTS

COLOR:WHITE

SOCKET

PIN

PLATING: G:GOLD FLASH

0.5 BTB
HEIGHT:23--2.3H 28--2.8H
33--3.3H 43--4.3H

LXWCONN BTB CONNECTOR SERIES

LXW connectivity 连兴旺电子(深圳)有限公司
LXWCONN ELECTRONICS(SHENZHEN)CO.,LTD

一般公差
GENERAL TOLERANCE
.X ±0.35
.XX ±0.25
.XXX ±0.10
ANGLES ±1°

修订 SER	修 改 摘 要 REVISION DESCRIPTION	签 名 SIGNATURE	日期 DATE

版本 (REV) A

制图 (DR): Jerry 2022.02.21

审核 (CHKD):

核准 (APPD): Tong 2022.02.21

品名(TITLE): DF12 SOCKET BTB带接地片

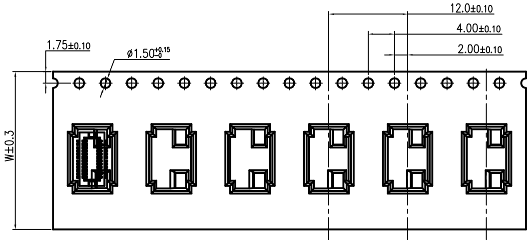
料号(PART NO): LB2XX-GXXS-WXR02

比例(SCALE)	单位(UNITS)	张数(SHEET)	图幅(SIZE)
1:1	mm	1 OF 1	A4

RoHS Compliant 2013/95/EC

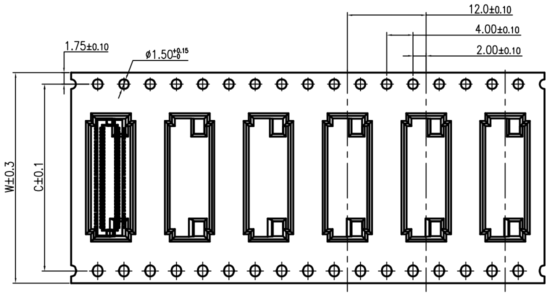
Pb Process Capable

Tape width 16 and 24 mm



PULL OUT DIRECTION →

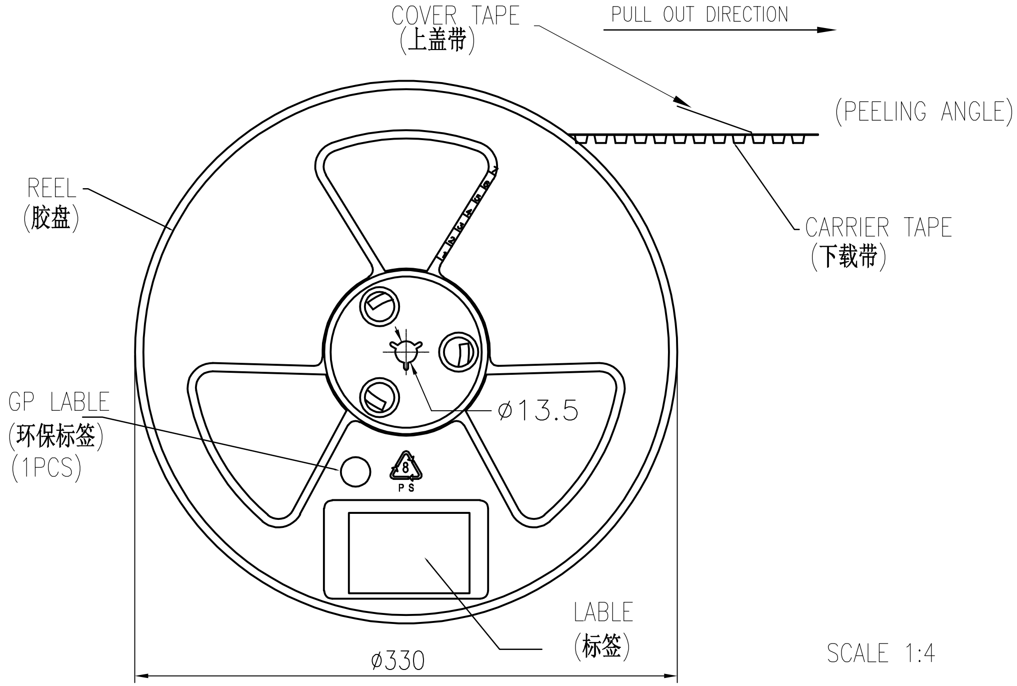
Tape width 32 and 44 mm

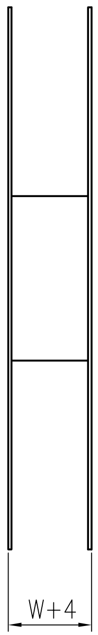


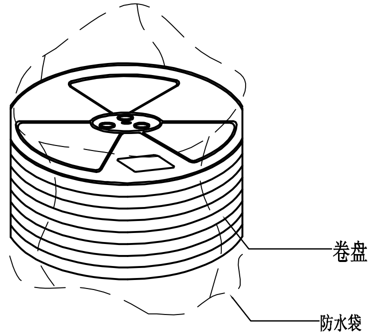
PULL OUT DIRECTION →

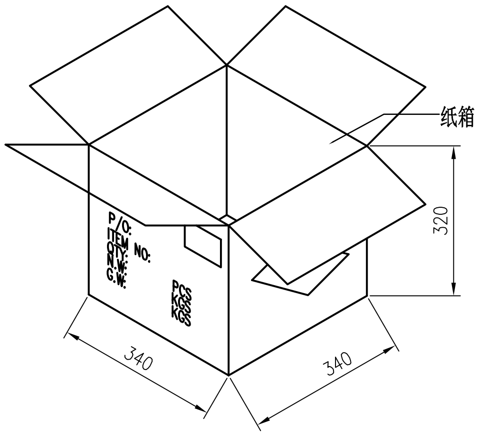
NOTE:

1.10 Sprocket hole pitch cumulative tolerance ±0.20.
2.Carrier camber is within 1mm in 100mm.
3.Material: white conductive polystyrene alloy.
4.Material Thickness: 0.3±0.05mm.
5.For tape width(dim W)16 and 24mm pilot holes are provided on one sides.
For tape width(dim W)32, 44 and 56mm pilot holes are provided on both sides.









PIN NO.	W	C	PCS /REEL	REEL/CARTON	SUM(PCS)
8PIN~16PIN	16	–	1500	15	22500
18PIN~48PIN	24	–	1500	10	15000
50Pin~68PIN	32	28.4	1500	8	12000
70Pin~100PIN	44	40.4	1500	6	9000

RoHS Compliant
2013/95/EC
Pb Process Capable

修订 SER	修 改 摘 要 REVISION DESCRIPTION	签 名 SIGNATURE	日期 DATE

LXW connectivity 连兴旺电子(深圳)有限公司
LXWCONN ELECTRONICS(SHENZHEN)CO.,LTD

一 般 公 差
GENERAL TOLERANCE
.X ±0.10
.XX ±0.05
.XXX ±0.02
ANGLES ±1°

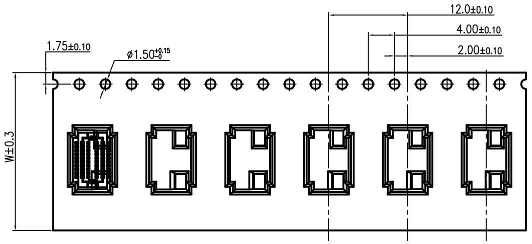
版本 (REV) A

制图 (DR): Kavin 2016.07.09
审核 (CHKD):
核准 (APPD):

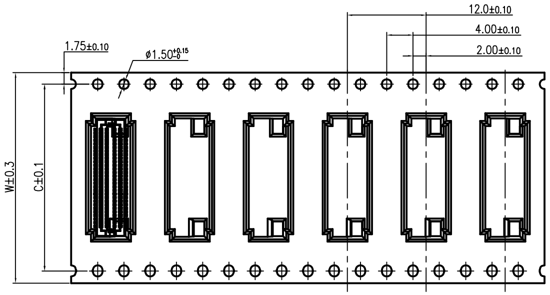
品名(TITLE): BOARD to BOARD EMBOSSED TAPE PACKING
料号(PART NO): LB2**-G**P-WOR0*

比例(SCALE)	单位(UNITS)	张数(SHEET)	图幅(SIZE)
1:1	mm	1 OF 1	A4

Tape width 16 and 24 mm



Tape width 32 and 44 mm



PULL OUT DIRECTION

PULL OUT DIRECTION

NOTE:

1.10 Sprocket hole pitch cumulative tolerance ±0.20.
2.Carrier camber is within 1mm in 100mm.
3.Material: white conductive polystyrene alloy.
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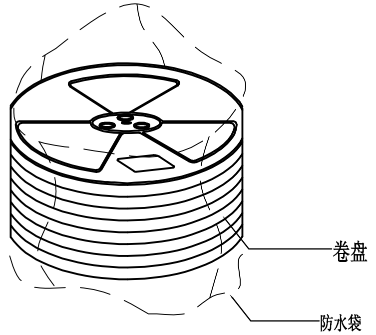
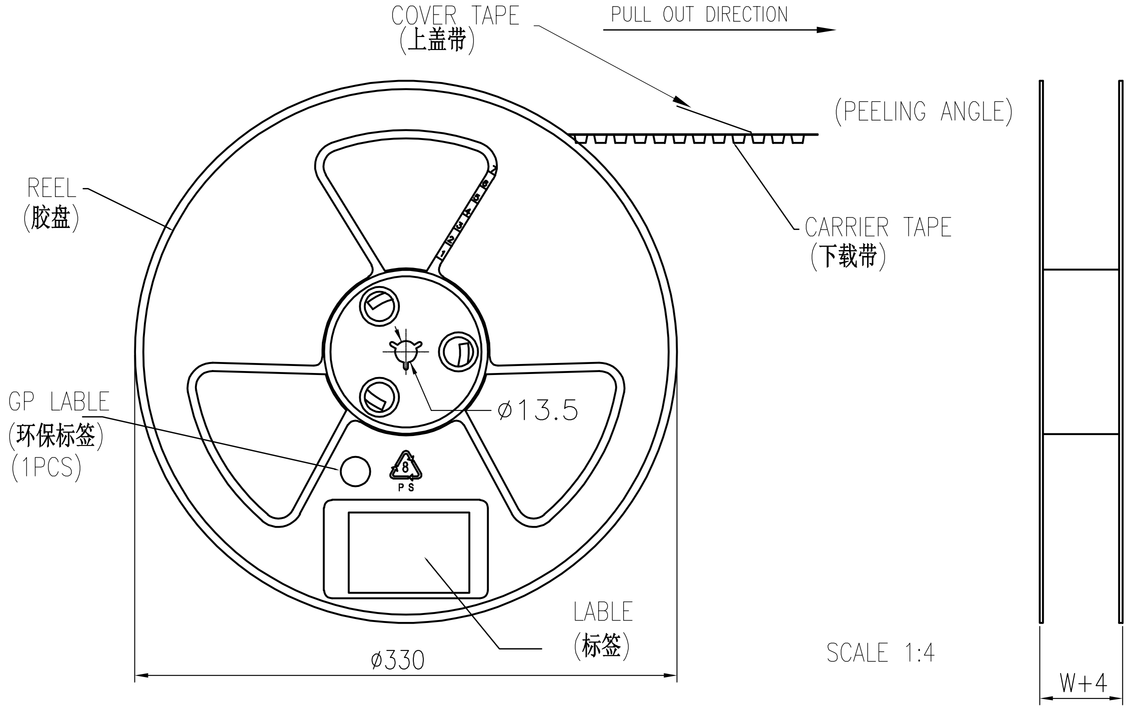
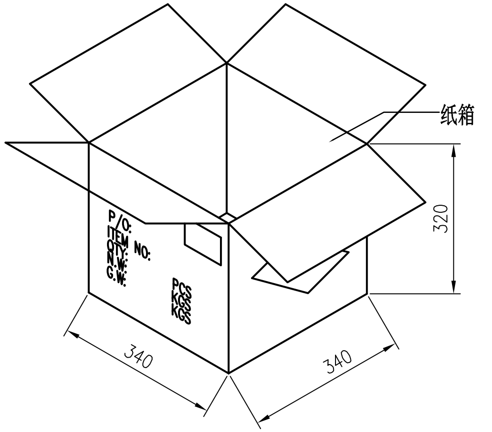






SCALE 1:4

PIN NO.	W	C	PCS /REEL	REEL/CARTON	SUM(PCS)
8PIN~16PIN	16	-	1500	15	22500
18PIN~48PIN	24	-	1500	10	15000
50Pin~68PIN	32	28.4	1500	8	12000
70Pin~100PIN	44	40.4	1500	6	9000

RoHS Compliant
2013/95/EC
Pb Process Capable

修订 SER	修 改 摘 要 REVISION DESCRIPTION	签 名 SIGNATURE	日期 DATE

LXW connectivity 连兴旺电子(深圳)有限公司
LXWCONN ELECTRONICS(SHENZHEN)CO.,LTD

一 般 公 差 GENERAL TOLERANCE .X ±0.10 .XX ±0.05 .XXX ±0.02 ANGLES ±1°	制图 (DR): Kavin 2016.07.09	品名(TITLE): BOARD to BOARD EMBOSSED TAPE PACKING			
	审核 (CHKD):	料号(PART NO): LB2**-G**S-WORO*			
版本 (REV) A	核准 (APPD):	比例(SCALE) 1:1	单位(UNITS) mm	张数(SHEET) 1 OF 1	图幅(SIZE) A4

1. SCOPE

1.1. CONTENTS

This specification covers the performance, tests and quality requirements for the 0.5mm Pitch BOARD to BOARD Connector .

2. APPLICABLE DOCUMENT

The following LXWCONN documents form a part of this specification to the extent specified herein.
Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawings, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

Product shall be of the design, construction and physical dimensions specified on the applicable product drawings.

A. **MATERIALS**

B. Housing: thermoplastic,High-temp UL94v-0.

Terminal:a)Contact Area: Gold plated based on order information.

b)Under plate: Nickel-plated all over

3.2. RATINGS

A. Voltage rating:50VAC

B. Current rating: 0.3A Max.

C. Operating Temperature: - 40 °C to +85°C (Including terminal temperature rise)

D. Operating Humidity range: Relative humidity 93%Max

E. Storage temperature range:20±8°C

F. Storage Humidity range: Relative humidity 60%Max

3.3. PERFORMANCE REQUEIREMENT AND TEST DESCRIPTION

The product shall be designed to meet the electrical, mechanical and environmental performance Requirements specified in Figure 1. All tests shall be performed at ambient environmental conditions

测试项目 TEST ITEM		规格 REQUIREMENT	测试方式/条件 PROCEDURE
1	外观检查 Examination of Product	符合图面外观，无任何形状损坏 Meets requirements of product Drawing. No physical damage.	目视检查 Visual inspection.
电气特性 **ELECTRICAL REQUIREMENT**			
2	接触电阻 Contact Resistance	50mΩ max(Initial) 75mΩ max(After) .	将样品成对连接，开放电压 20mV 以下； 限电流 100mA 的状态下进行测试。 Mate The sample connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)
3	绝缘阻抗 Insulation Resistance	100 MΩ min. initial	未连接的样品，提供相邻端子间或端子与地面间加 AC500V 进行绝缘阻抗测试。 Impressed Voltage 500V AC Test between adjacent circuits of unmated connectors. (EIA-364-21)
4	耐电压 Dielectric withstanding Voltage	目视外观无任何击穿损坏 No Breakdown 电流泄漏：1 mA max. Current leakage: 1 mA max.	未连接的样品，提供相邻端子间或端子与地 面间加 AC 250V (有效值)历时 1 分钟下 测定耐电压。 Unmated The sample connectors, Apply 250 V AC for 1minute Test between adjacent circuit of unmated connector. (EIA-364-20)
机械特性 **MECHANICAL REQUIREMENT**			
5	端子保持力 Contact Retention Force	0.2Kgf/Pin 以上 0.2Kgf/Pin Min.	将样品成对连接，以操作速度每分钟位移 25±3mm 进行接触保持力测试。 Load shall be applied on each at a speed of 25±3mm/minute as shown below then pin retention force shall be measured.
6	插拔力 Mating and Unmating force	0.98N maximum.per pin 0.13N minimum.per pin	将成对连接器焊板连接，以操作速度每分钟 位移 25±3mm 进行插入力测试。 Mate The sample connectors shall be soldered on a board and inserted and separated at speed of 25±3mm/min. (EIA-364-13)

	测试项目 **TEST ITEM**		规格 **REQUIREMENT**	测试方式/条件 **PROCEDURE**
			机械特性 **MECHANICAL REQUIREMENT**	
7	耐插拔 Durability	外观 Appearance	目视外观无任何 损坏异状 No Damage	将样品成对连接，以操作速度每分钟位移25+3mm 进行 30 次插拔测试。 Mate The sample connectors should be mounted in the tester and fully mated and unmated the number of 30cycles specified at the rate of 25±3 mm/min. (EIA-364-09)
		接触阻抗 Contact Resistance	50mΩ max(Initial) 75mΩ max(After)	
8	耐振动 Vibration	接触阻抗 Contact Resistance	50mΩ max(Initial) 75mΩ max(After)	通过 DC 电流 1mA,位移相对距离 1.5mm, 振动周期 10~55~10Hz 在 1 分钟内，持续 2 小时，方向在 X, Y, Z 轴做测试 Mate connectors and subject to the following vibration conditions for period of 2 hours in each of 3 mutually perpendicular axes passing DC 1mA during the test.Amplitude:1.5mm P-P frequency:10~55~10 Hz in 1 minute
		外观 Appearance	目视外观无任何 损坏异状 No Damage	
		瞬间断电 Discontinuity	1 μ sec Max.	
9	耐冲击性 Shock (Mechanical)	外观 Appearance	目视外观无任何 损坏异状 No Damage	将样品成对连接，通过 DC1mA 测试条 件，连续测试 3 次。在 X、Y、Z 3 轴 6 个 垂直方向施予重力加速度 490m/s2{50G}冲 击。 Mate The sample connectors shall and subject to the following shock condition.3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 1mA current during the test.(Total of 18 shocks) Peak value490m/s2{50G}
		接触阻抗 Contact Resistance	50mΩ max(Initial) 75mΩ max(After)	
		瞬间断电 Discontinuity	1 μ sec Max..	
			环境特性及其它性能(**ENVIRONMENT PERFORMANCE AND OTHERS)**	
10	温升 Temperature Rising		负载额定电流下温度 30° C 30° C Max. Under loaded rating current	量测通过成对连样品接最大容许电流时，样 品接触点这温升。 Mate The sample connectors and measure the temperature rise of contact when the maximum AC rated current is passed. (EIA-364-70 METHOD 2)

测试项目 **TEST ITEM**		规格 **REQUIREMENT**		测试方式/条件 **PROCEDURE**
环境特性及其它性能(**ENVIRONMENT PERFORMANCE AND OTHERS)**				
11	耐热性 Heat Resistance	外观 Appearance	目视外观无任何损坏异状 No Damage	将样品成对连接置于环境温度 85±2° C 测试时间 96 小时。再置放于室温下 1~2 小时。 Mate The sample connectors shall expose to 85士2 ° C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.
		接触阻抗 Contact Resistance	50mΩ max(Initial) 75mΩ max(After)	
12	耐寒性 Cold Resistance	外观 Appearance	目视外观无任何损坏异状 No Damage	将样品成对连接置于环境温度-55±2，C 测试时间 96 小时。再置放于室温下 1~2 小时。 Mate The sample connectors shall expose to-25±2° C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.
		接触阻抗 Contact Resistance	50mΩ max(Initial) 75mΩ max(After)	
11	耐湿性 Humidity	接触阻抗 Contact Resistance	50mΩ 以下. 75mΩ Max.	将样品成对连接置于环境温度-55±2° C,相对湿度 90-95%,测试时间 96 小时。再置放于室温下 1~2 小时。 Mate The sample connectors shall expose to -55±2° C relative humidity 90~95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.
		耐电压 Dielectric Strength	需能符合电压试 No Breakdown	
		外观 Appearance	目视外观无任何损坏异状 No Damage	
		绝缘阻抗 Insulation Resistance	50mΩ max(Initial) 75mΩ max(After)	

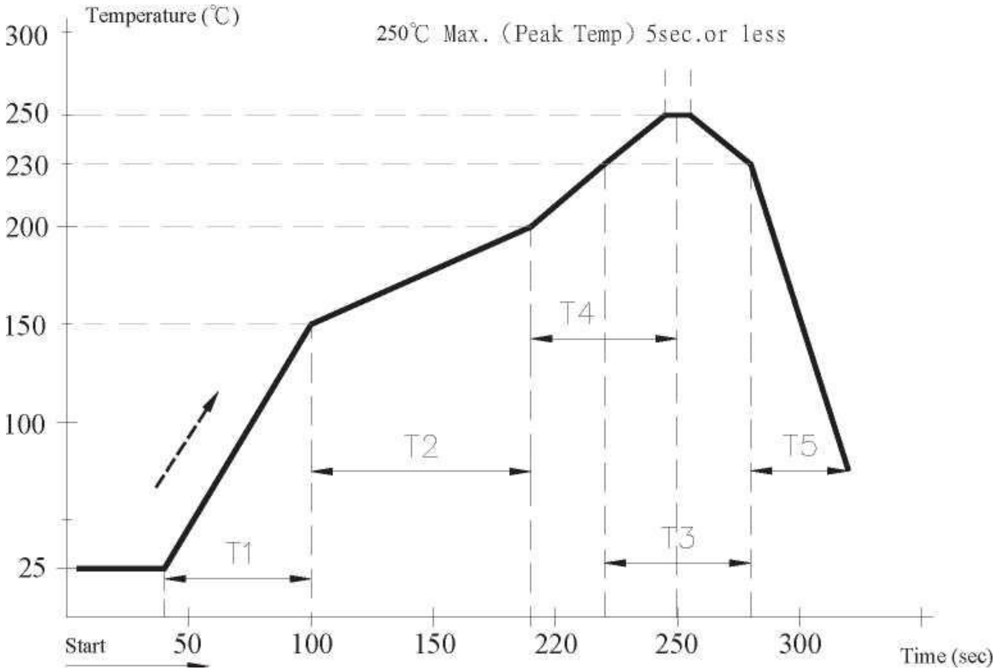
测试项目 **TEST ITEM**		规格 **REQUIREMENT**		测试方式/条件 **PROCEDURE**
环境特性及其它性能(**ENVIRONMENT PERFORMANCE AND OTHERS)**				
12	温度循环 Temperature Cycling	接触阻抗 Contact Resistance	50mΩ max(Initial) 75mΩ max(After).	将样品成对连接，承受 5 cycles 冷热冲击后， 置放于室温下 1~2 小时。1cycle time 如下 -55±3° C,30 分钟 +85±3° C,30 分钟 A connector shall and subject to the following condition for 5 cycles .Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed. 1cycle -55±3° C,30 minutes +88±3° C,30 minutes (Transit time shall be with in 3 minutes) (EIA-364-31, Test condition A)
		外观 Appearance	目视外观无任何 损坏异状 No Damage	
13	盐水喷雾 Salt Spray	外观 Appearance	目视外观无任何 损坏异状 No Damage	将样品成对连接，使用 5+1%浓度盐水，测试 温度 35±2° C，测试时间 24 小时后，于室温 下使用清水冲洗后再干燥。 Mate The sample connectors shall expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified NaCl solution Concentration:5 +1% Spray time:24hours Ambient temperature:35±2° C (EIA-364-26,Test condition B)
14	焊锡性 Solder ability	润湿性 Solder Wetting	润湿面积 95%以 上，并不得有漏 焊针孔现象。 95% of immersed area must show no voids, pin holes.	锡温 250±5° C，将导电端子浸入锡炉液面至 Housing 距离锡面 0.1mm 位置，焊锡时间 3 ±0.5 秒。 Tip of solder tails and fitting mails into the molten solder (held at 250±5° C) up to 0.1mm from the Housing for 3±0.5sec onds. (EIA-364-52)

<table>
<tr><th colspan="2">测试项目
TEST ITEM</th><th colspan="2">规格
REQUIREMENT</th><th>测试方式/条件
PROCEDURE</th></tr>
<tr><td colspan="5">环境特性及其它性能(ENVIRONMENT PERFORMANCE AND OTHERS)</td></tr>
<tr><td>15</td><td>焊锡耐热性
Resistance to Reflow Soldering Heat</td><td>外观
Appearance</td><td>目视外观无任何 损坏异状
No Damage</td><td>使用红外线回流焊时请参考第 4 点
When reflowing....Refer to paragraph 4. 使用烙铁手焊时须符合下述焊锡条件
Soldering iron method 0.2 mm from terminal tip and fitting nail tip. Soldering time:5 seconds Max. Soldering temperature:370~400° C</td></tr>
</table>

Figure 1

NOTE: Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

4. INFRARED REFLOW CONDITION (Lead Free)



T1	Temperature Ramp Up Rate	21∽5'/Sec
T2	Preheat:150Y ∽200'	60~90Sec
T3	Time Over 230t	30~50Sec
T4	Preheat:200P ∽250C	30Sec
T5	Ramp Down Rate During Cooling	如∽
	Peak Temperature	250tMax

NOTE:

Please check the reflow soldering condition by your own devices beforehand. Because the condition changes by the soldering devices, P.C.Boarde and so on.

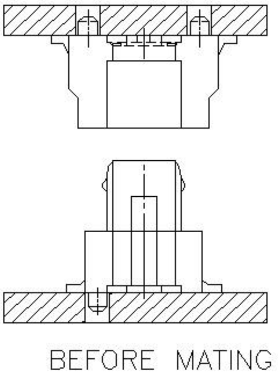
5.0. PRODUCT QUALIFICATION AND RELIABILITY TEST SEQUENCE

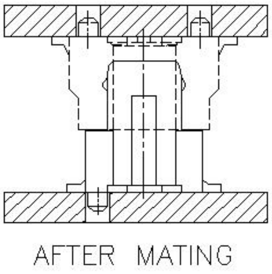
Test or Examination	1st Group											
	A	B	C	D	E	F	G	H	I	J	K	L
Appearance （外观）	1；7	1;3	1;6	1;6	1;6	1;3	1;6	1;6	1;5	1;5	1;3	1;3
Contact Resistance （接触电阻）			2;5	2;5	2;5		2;5	2;5	2;4	2;4		
Dielectric Withstanding Voltage（耐电压）	3；6											
Insulation Resistance （绝缘阻抗）	2;5											
Insertion Force （插入力）		2										
Contact Retention Force（接触保持力）			3,4									
Vibration（耐振动）				3,4								
Shock Mechanical （耐冲击性）					3,4							
Temperature Rising （温升）						2						
Heat Resistance（抗热性）							3,4					
Cold Resistance（耐寒性）								3,4				
Humidity（耐湿性）	4											
Temperature Cycling （温度循环）									3			
Salt Spray （盐水喷雾）										3		
Solder ability （可焊性）											2	
Resistance to Soldering Heat （焊锡耐热性）												2

Figure 2

NOTE: （a） Numbers indicate sequence in which tests are performed.
（b） Discontinuities shall not take place in this test group, during test

6.0. CONNECTOR USAGE


BEFORE MATING


AFTER MATING