

# 浙江创都电子科技有限公司

ZHE JIANG CHUANG DU ELECTRONICS CO., LTD

## APPROVAL SHEET

CUSTOMER: \_\_\_\_\_

CUSTOMER P/N: \_\_\_\_\_

(小批可用管装) (批货推荐卷装)

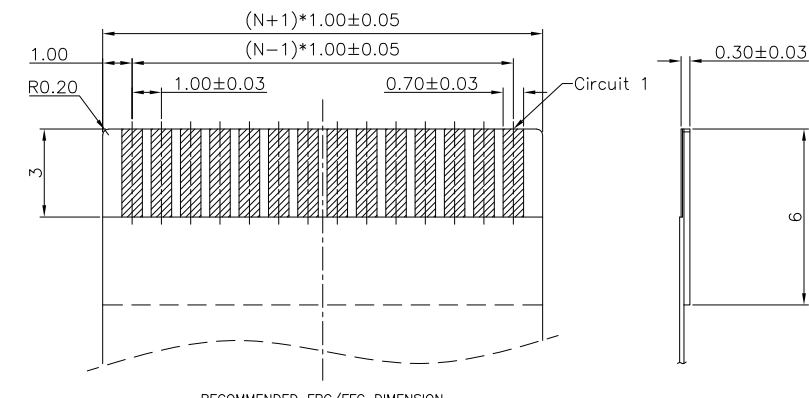
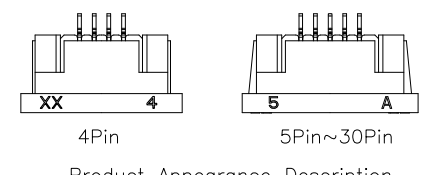
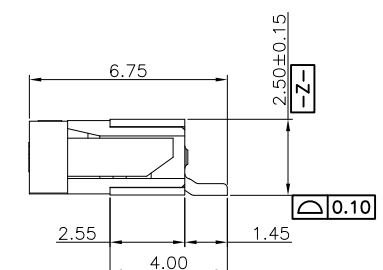
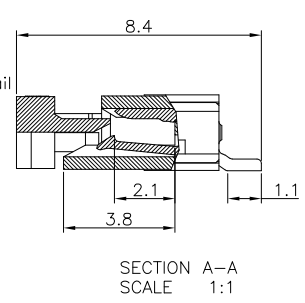
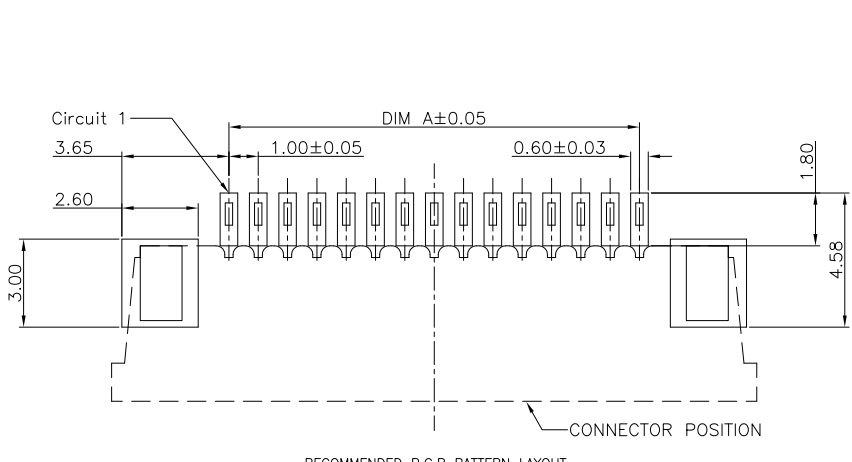
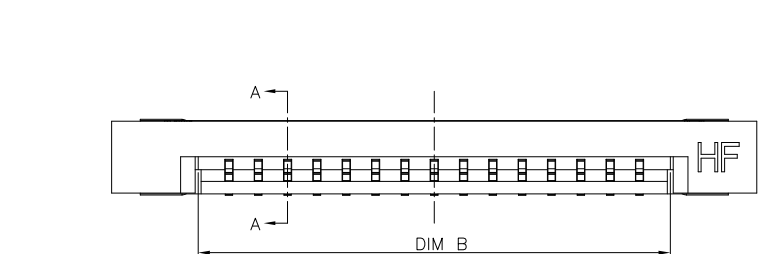
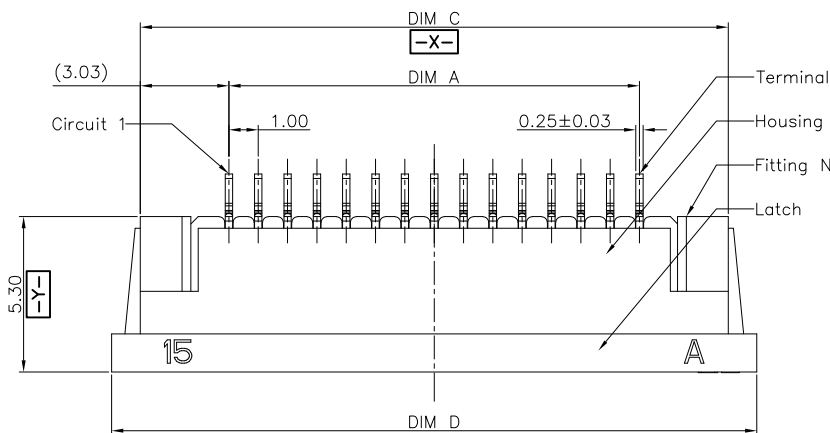
PART NAME: \_\_\_\_\_

1.0mmPitch H=2.5mm SMT 拉拔K型 下接

PART NO. : \_\_\_\_\_

CAX-AFC01-12XCB-H2.0

MANUFACTURE SIGNATURE			CUSTOMER SIGNATURE
SALES REP.	R&D DEPT.	QA DEPT	
DATE:	DATE:	DATE:	DAET:



Note:

- Material:
  - Housing: thermoplastic high temp.UL94V-0;
  - Latch: thermoplastic high temp.UL94V-0;
  - Terminal: copper alloy.
  - Fitting Nail: copper alloy.
- Finish:
  - Terminal: Underplating: Au/matte Tin overall.
  - Fitting Nail: Underplating: matte Tin overall.
- Product must comply HF RoHS specification.
- Product No:
 

AFA07-S	**	F	*	*	-	**
CKTS						
CONTACTS TYPE						
F:Lower						

PLATING

- Gold flash 1u"
- Gold flash 2u"
- Gold flash 3u"
- Matte-Tin 80-150u"

REMARKS

- HF:Halogen free
- Housing White,Latch Black
- OZ:Halogen free(Without ZY)
- Housing White,Latch Black
- 3F:Halogen free(Without ZY)
- Housing White,Latch White

PACKING

- A:Tape&Reel
- C:Tube

CKTS	DIM A	DIM B	DIM C	DIM D
4	3.00	5.10	9.05	11.00
5	4.00	6.10	10.05	12.00
6	5.00	7.10	11.05	13.00
7	6.00	8.10	12.05	14.00
8	7.00	9.10	13.05	15.00
9	8.00	10.10	14.05	16.00
10	9.00	11.10	15.05	17.00
11	10.00	12.10	16.05	18.00
12	11.00	13.10	17.05	19.00
13	12.00	14.10	18.05	20.00
14	13.00	15.10	19.05	21.00
15	14.00	16.10	20.05	22.00
16	15.00	17.10	21.05	23.00
17	16.00	18.10	22.05	24.00
18	17.00	19.10	23.05	25.00
19	18.00	20.10	24.05	26.00
20	19.00	21.10	25.05	27.00
21	20.00	22.10	26.05	28.00
22	21.00	23.10	27.05	29.00
23	22.00	24.10	28.05	30.00
24	23.00	25.10	29.05	31.00
25	24.00	26.10	30.05	32.00
26	25.00	27.10	31.05	33.00
27	26.00	28.10	32.05	34.00
28	27.00	29.10	33.05	35.00
29	28.00	30.10	34.05	36.00
30	29.00	31.10	35.05	37.00

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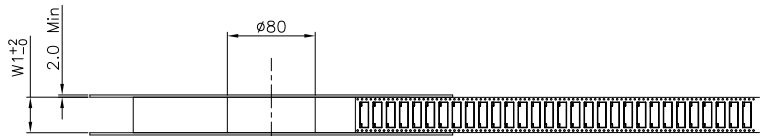
Product Name(产品名称): 1.0Pitch H=2.5 FPC/FFC ZIF R/A TypeK1 Lower SMT CONN  
 Product No(产品料号): **CAX-AFC01-12XCB-H2.0**

Designer(设计): \_\_\_\_\_ Checked(审核): \_\_\_\_\_ Approved(核准): \_\_\_\_\_

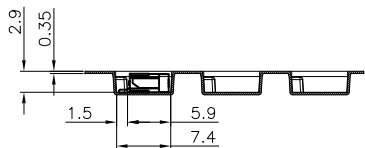
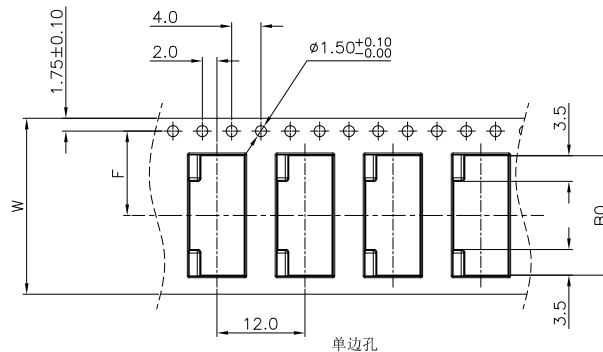
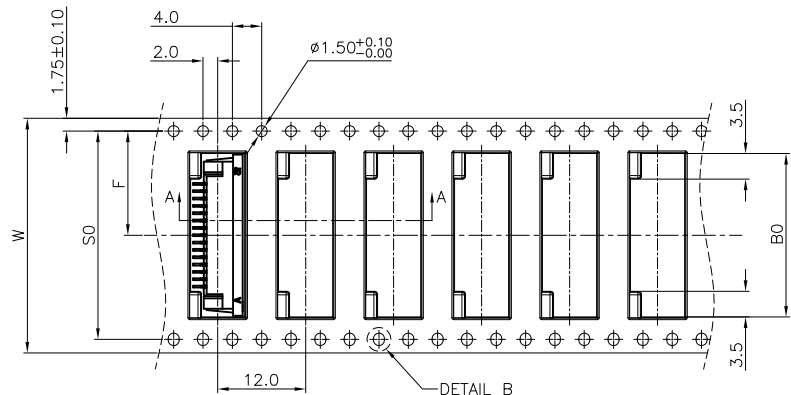
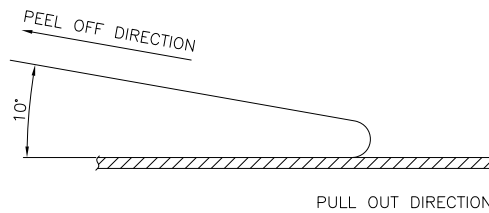
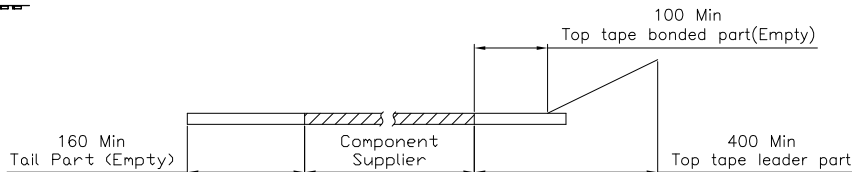
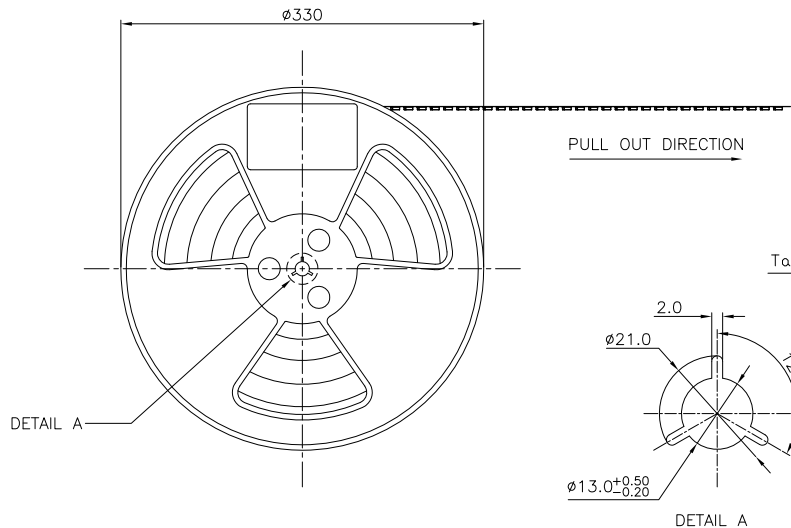
Tolerance Unspecified (未注公差)		Size(图幅): A4	
0.0 ±0.25 0° ±5°	Unit(单位): MM	Product View(投影视图): 1 OF 1	
0.00 ±0.15 0°0 ±3°	Scale(比例): 1:1	Rev(版本): A	
0.000 ±0.10 0°00 ±1°			

Rev 版本	Change Description 变更内容	Date 日期	Revisor 制修订人
A	初版发行	2011/03/23	

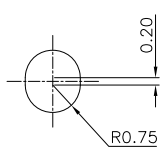
Rev 版本	Change Description 变更内容	Date 日期	Revisor 制修订人
A	初版发行	2011/03/23	



- NOTES:
1. 10 SPROCKET HOLE PITCH CUMULATIVE TOLERANCE.  $\pm 0.20\text{mm}$
  2. CARRIER CAMBER NOT TO EXCEED 1mm IN 250mm.
  3. ALL DIMENSIONS MEET EIA-481-C REQUIREMENTS.
  4. MATERIAL: BLACK ANTI-STATIC POLYSTYRENE.
  5. THICKNESS:  $0.35 \pm 0.05\text{mm}$ .
  6. PACKING LENGTH PER 13" REEL : 18.60 METERS.
  7. COMPONENT LOAD PER 13" REEL : 1500PCS
  8. PEELING OFF FORCE OF TOP TAPE  $0.1\text{N} \sim 0.7\text{N} (10.2\text{gf} \sim 71.4\text{gf})$ .



SECTION A-A  
SCALE 1:1



DETAIL B  
SCALE 5:1

CKTS	B0±0.10	W	W1	F	S0±0.10
4	11.30	24+0.3/-0	24.4	11.5±0.10	单边孔
5	12.30				
6	13.30				
7	14.30				
8	15.30	32±0.30	32.4	14.2±0.10	28.4
9	16.30				
10	17.30				
11	18.30				
12	19.30	44±0.30	44.4	20.2±0.15	40.4
13	20.30				
14	21.30				
15	22.30				
16	23.30	56±0.30	56.4	26.2±0.15	52.4
17	24.30				
18	25.30				
19	26.30				
20	27.30	66±0.30	66.4	32.2±0.15	58.4
21	28.30				
22	29.30				
23	30.30				
24	31.30	76±0.30	76.4	38.2±0.15	60.4
25	32.30				
26	33.30				
27	34.30				
28	35.30	86±0.30	86.4	44.2±0.15	62.4
29	36.30				
30	37.30				

CLASSIFICATION DIMENSION (尺寸类别):  
 FAT (首次检验): ⊙To ⊙  
 ■ MARK IS MAJOR DIM (重点尺寸标示)  
 \*⊙ MARK IS CRITICAL DIM (Cpk&Cp标示)

Tolerance Unspecified (未注公差)	Size (图幅): A4
0.0 ±0.10 0° ±3°	Unit (单位): MM
0.00 ±0.05 0° 0° ±2°	Scale (比例): 1:1
0.000 ±0.02 0° 0° ±1°	Page (页数): 10 OF 10
Project View (投影视角)	Rev (版本): 1.0

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Product Name (产品名称): 1.0Pitch H=2.5 FPC/FPC 拉拔卧式K型 载带		
Product No (产品料号): EB-740XXX290-00		
Drawing No (图面编号): DNE00015-1	Date (日期): 2011/04/09	
Designer (设计):	Checked (审核):	Approved (核准):

1.0	初版发行	2011/04/09	
Rev 版本	Change Description 变更内容	Date 日期	Revisor 制/修订人



# 浙江创都电子科技有限公司

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REV. A

## 产 品 规 格 书 PRODUCT SPECIFICATION

### 【1】适用范围 SCOPE

本规格书适用于 1.0mm Pitch H=2.5 FPC/FFC 拉拔卧式 K 型 SMT 型连接器系列。

This specification covers the 1.0mm Pitch H=2.5 FPC/FFC ZIF R/A TypeK SMT Connectors series.

### 【2】外观尺寸 CONNECTOR DIMENSIONS

请参照图面

See attached drawings.

### 【3】材质 MATERIAL

绝缘胶体 Housing: LCP

颜色 Color: 自然色 Natural.

耐燃等级 (UL94V-0) Flammability Rating (UL94V-0).

后盖 Latch: LCP

颜色 Color: 黑色 Black.

耐燃等级 (UL94V-0) Flammability Rating (UL94V-0).

端子 Terminal: 磷青铜 Phosphor Bronze.

焊片 Fitting Nail: 磷青铜 Phosphor Bronze.

### 【4】建议 P. C. B LAYOUT 图 ACCOMMODATED P. C. B LAYOUT

请参照图面

See attached drawings.

### 【5】等级 RATING

项 目 ITEM	规 格 SPECIFICATIONS
最大容许电压 Operating Voltage (Max.)	50V AC
最大容许电流 Current Rating (Max.)	0.5A DC
使用温度范围 Operating Temperature range	*-55° C ~ +85° C
使用湿度范围 Operating humidity range	相对湿度90%以下 Relative humidity 90% max.
保存温度范围 Storage temperature range	-40° C ~ +50° C
保存湿度范围 Storage humidity range	相对湿度90%以下 Relative humidity 90% max.

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\*:包含电流通过所产生的上升温度 Including terminal temperature rise.

## 【6】性能 PERFORMANCE

### 6.1 电气特性 ELECTRICAL PERFORMANCE

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT
接触阻抗 Contact Resistance	将样品与适合之FPC/FFC连接, 测试电压20mV, 限电流100mA下进行阻抗测试。(EIA-364-23) Mate applicable FPC/FFC and measure by dry circuit, 20mV Max, 100mA. (EIA-364-23)	40 mΩ最大. 40 mΩ Max.
绝缘阻抗 Insulation Resistance	将样品与适合之FPC/FFC连接, 提供相邻端子间测试电压500V DC进行绝缘阻抗测试(EIA-364-21) Mate applicable FPC/FFC and apply 500V DC between adjacent terminal or ground. (EIA-364-21)	500 MΩ最小. 500 MΩ Min.
耐电压 Dielectric Strength	将样品与适合之FPC/FFC连接, 相邻端子间需可承受250V AC(rms) 1分钟。(EIA-364-20) Mate applicable FPC/FFC , apply 250V AC(rms) for 1 minute between adjacent terminal or ground. (EIA-364-20)	目视外观无任何损坏异状 No Breakdown

### 6.2 机械特性 MECHANICAL PERFORMANCE

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT
FPC保持力 FPC Retention Force	将盖子盖上, 与FPC/FFC连接, 以操作速度每分钟位移25±3mm进行FPC/FFC保持力测试。(EIA-364-13) Insert the Latch, pull the FPC at a rate of 25±3mm per minute. (EIA-364-13)	Pos. x 0.40N最小 Pos. x 0.40N Min.

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端子保持力 Terminal Retention Force	端子与Housing组装后,以操作速度每分钟位移 $25 \pm 3$ mm将端子拔出Housing,进行端子保持力测试。 (EIA-364-29) Apply axial pull out force at the rate of $25 \pm 3$ mm/minute on the terminal assembled in the housing. (EIA-364-29)	3.0N最小. 3.0N Min.
项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT
焊片保持力 Fitting Nail Retention Force	焊片与Housing组装后,以操作速度每分钟位移 $25 \pm 3$ mm将焊片拔出Housing,进行焊片保持力测试。 (EIA-364-29) Apply axial pull out force at the rate of $25 \pm 3$ mm/minute on the Fitting Nail assembled in the housing. (EIA-364-29)	1.0N最小. 1.0N Min

## 6.3 环境特性及其它性能 ENVIRONMENTAL PERFORMANCE AND OTHERS

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT	
耐久性 Durability	将盖子与FPC/FFC反复连接,以每分钟小于10 Cycles连续操作20次。 (EIA-364-09) Insert and withdraw actuator up to 20 cycles at the speed rate of less than 10 cycles/minute. (EIA-364-09)	接触阻抗 Contact Resistance	60m $\Omega$ 最大. 60m $\Omega$ Max.
温度上升 Temperature Rise	量测通过FPC/FFC最大容许电流时,样品接触点之温升。 (EIA-364-70 Method2) Mate applicable FPC/FFC and measure the temperature rise of contact when the maximum AC rated current is passed. (EIA-364-70 Method 2)	温升 Temperature Rise	30° C最大. 30° C Max.

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耐振性 Vibration	通过DC电流100mA，位移相对距离1.5mm，振动周期10~ 55~ 10 Hz在1分钟内，持续2小时，方向在X, Y, Z轴做测试。(EIA-364-28 Condition I) Mate connectors and subject to the following vibration conditions, for period of 2 hours in each of 3 mutually perpendicular axes, passing DC 100mA during the test. Amplitude : 1.5mm P-P Frequency : 10~ 55~ 10 Hz in 1 minute. Duration : 2 hours in each of X, Y, Z axes. (EIA-364-28 Condition I)	外观 Appearance	目视外观无任何损坏异状 NoDamage
		接触阻抗 Contact Resistance	60mΩ最大. 60mΩ Max.
		瞬间断电 Discontinuity	1 μ sec最大 1 μ sec Max.
项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT	
耐冲击性 Shock	将样品与适合之FPC/FFC连接，通过DC 100 mA测试条件，连续测试3次。在X、Y、Z 3轴6个垂直方向施于重力加速度490m/s <sup>2</sup> {50G} 冲击。 (EIA-364-27, Test condition A) Mate applicable FPC/FFC and subject to the following shock conditions. 3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 100 mA current during the test. (Total of 18 shocks) Peak value : 490m/s <sup>2</sup> {50G} (EIA-364-27, Test condition A)	外观 Appearance	目视外观无任何损坏异状 NoDamage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
		瞬间断电 Discontinuity	1 μ sec 最大 1 μ sec Max.
耐热性 Heat Resistance	将样品与适合之FPC/FFC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。 (EIA-364-17) Mate applicable FPC/FFC and expose	外观 Appearance	目视外观无任何损坏异状 NoDamage

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	to 85±2° C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (EIA-364-17)	接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
耐寒性 Cold Resistance	将样品与适合之FPC/FFC连接, 置于环境温度-40±2° C, 测试时间96小时, 再置放于室温下1~ 2小时。 (EIA-364-59) Mate applicable FPC/FFC and expose to -40±2° C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (EIA-364-59)	外观 Appearance	目视外观无任何损坏异状 NoDamage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT	
耐湿性 Humidity	将样品与适合之FPC/FFC连接, 置于环境温度40±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。(EIA-364-31) Mate applicable FPC/FFC and expose to 40 ± 2° C, relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (EIA-364-31)	外观 Appearance	目视外观无任何损坏异状 NoDamage
		接触阻抗 Contact Resistance	60mΩ最大. 60mΩMax.
		耐电压 Dielectric Strength	需能符合耐电压测试 No Breakdown
		绝缘阻抗 Insulation Resistance	20 MΩ 最小. 20 MΩ Min



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<p>热冲击 Thermal Shock</p>	<p>将样品与适合之FPC/FFC连接, 承受5 cycles冷热冲击后置放于室温下1~ 2小时。1 cycle time如下 a) <math>-55 \pm 3^{\circ} \text{C}</math> 30分钟 b) <math>+85 \pm 3^{\circ} \text{C}</math> 30分钟 (EIA-364-32) Mate applicable FPC/FFC and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 1 cycle a) <math>-55 \pm 3^{\circ} \text{C}</math> 30minutes b) <math>+85 \pm 3^{\circ} \text{C}</math> 30minutes (EIA-364-32)</p>	<p>外观 Appearance</p>	<p>目视外观无任何损坏异状 NoDamage</p>
<p>盐水喷雾 Salt Spray</p>	<p>将样品与适合之FPC/FFC连接, 使用 <math>5 \pm 1\%</math>浓度盐水, 测试温度 <math>35 \pm 2^{\circ} \text{C}</math>, 镀金: 1~ 2u", 测试时间 <math>24 \pm 4</math>小时, 镀金: 3u" 及以上, 测试时间 <math>48 \pm 4</math>小时, 后于室温下使用清水冲洗后再干燥。(EIA-364-26) Mate applicable FPC/FFC and 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 measurements shall be performed. NaCl solution Concentration : <math>5 \pm 1\%</math> Gold plating: 1~ 2u " Spray time : <math>24 \pm 4</math> hours Gold plating: 3u "and above Spray time : <math>48 \pm 4</math> hours Ambient temperature : <math>35 \pm 2^{\circ} \text{C}</math> (EIA-364-26)</p>	<p>外观 Appearance</p>	<p>目视外观无任何损坏异状 NoDamage</p>
<p>项目</p>	<p>测试条件</p>	<p>规格</p>	

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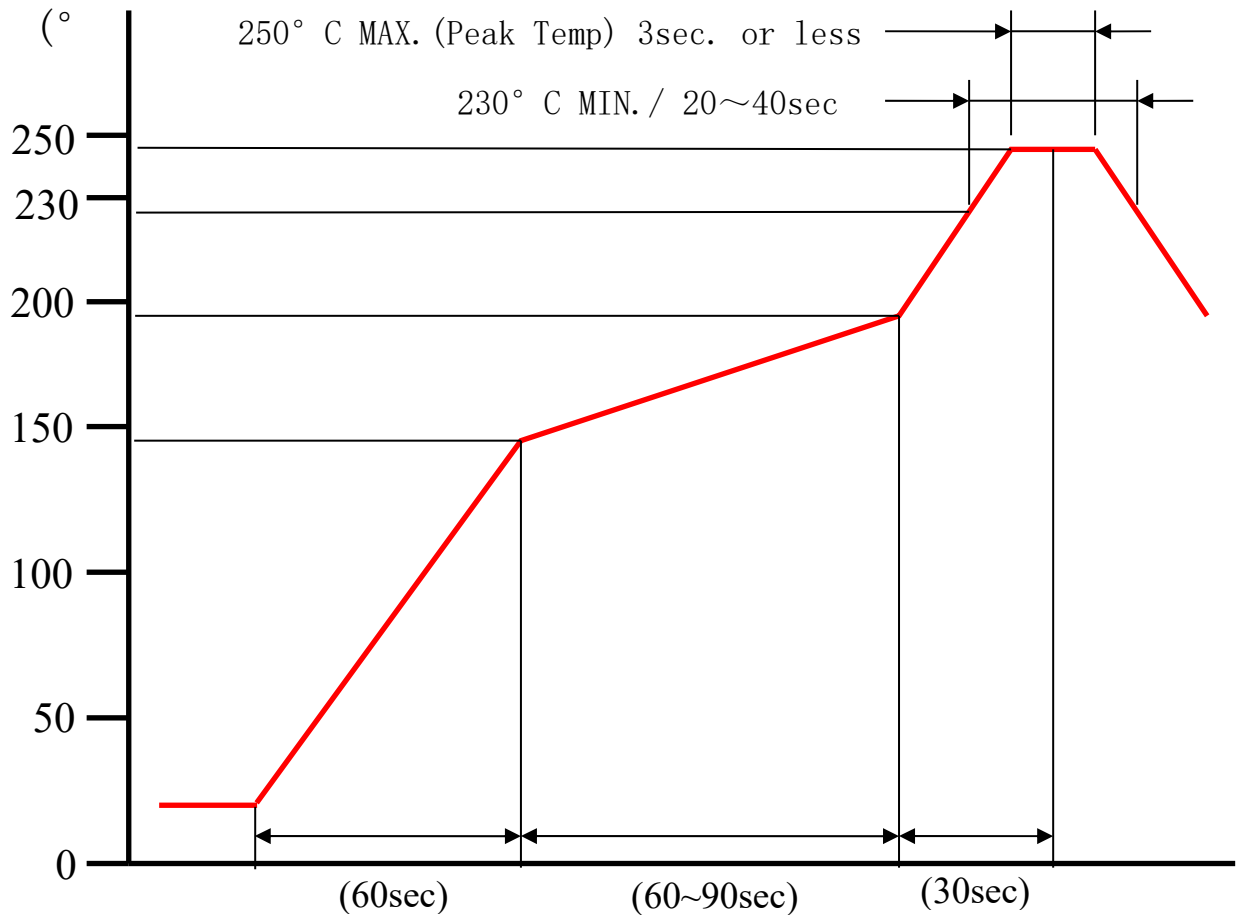
ITEM	TEST CONDITION	REQUIRMENT	
焊锡性 Solderability	锡温 $245 \pm 5^{\circ} \text{C}$ , 将导电端子浸入锡炉液面至Housing距离锡面0.1mm位置, 焊锡时间 $3 \pm 0.5$ 秒。(EIA-364-52) Tip of solder tails and fitting nails into the molten solder (held at $245 \pm 5^{\circ} \text{C}$ ) up to 0.1mm from the bottom of the housing for $3 \pm 0.5$ seconds. (EIA-364-52)	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.
焊锡耐热性 Resistance to Soldering Heat	使用红外线回焊时请参考第7 When reflowing Refer to paragraph 7. 使用烙铁手焊时须可符合下述焊锡条件。(EIA-364-56) Soldering iron method 0.2mm from terminal tip and fitting nail tip. Soldering time : 5 seconds Max. Solder temperature : $370 \sim 400^{\circ} \text{C}$ . (EIA-364-56)	外观 Appearance	目视外观无任何损坏异状 NoDamage

# 浙江创都电子科技有限公司

ZHE JIANG CHUANG DU ELECTRONICS CO., LTD

REV. A

## 【7】红外线回焊温度曲线 INFRARED REFLOW CONDITION



Start (Pre-Heat 150° C MAX.)

Time (seconds)

温度条件TEMPERATURE CONDITION GRAPH  
(基板表面温度) (TEMPERATURE ON BOARD PATTERN SIDE)