

# 东莞市翰皓精密电子有限公司

DONGGUAN HANHAO PRECISION ELECTRONIC CO.,LTD

Product Specification [产品规格书]:	Document No	PS-2530-01
Subject [主题]: 2.54mm Pitch 2530 Series Connector Specification	Date Issued	2014/03/08
	Date Revised	2020/03/17
	Version	B

This specification is referred to the 2.54mm series wire to board connector

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## 【1.适用范围 Scope】

此种规格包括 2.54mm Pitch 2530 Series 连接器规格说明.

This Specification Covers the 2.54mm Pitch 2530 Series Connector Specification.

## 【2.规格与料号 Spec and Part number】

规格内容 Specification	产品料号 Production No.	产品图示 Picture of Product
端子/Terminal	A2549T/A2549FT	
胶壳/Housing	A2549H-XX A2549H-2*XX	
针座/Wafer	A2549W-XX A2549WR-XX A2549W-2*XX A2549WR-2*XX	

## 【3.材质与表面处理 Disposal of Material and surface】

规格内容 Specification	材质 Materials	表面处理 Disposal of Surface	
端子/Terminal	磷铜(C5191)/Phosphor Bronze	1、Nickel Plated: 30u" Min ,Bright Tin Plated: 70u" Min. 2、Contact area 10u" Au	
胶壳/Housing	PBT	UL 94V-0	
针座/Wafer	Base	PBT	UL 94V-0
	PIN	黄铜(C2680/H65)/Brass	1、Nickel Plated: 30u" Min ,Bright Tin Plated: 80u" Min. 2、Glod flash

(上述参数请以工程图为准/Please Refer to the Project drawing for the above Specification)

## 【4. 额定等级 Ratings and applicable wires】

项目【Item】	规格【Standard】	
额定电压 Rated Voltage (Max.)	250V	[AC/DC]
额定电流 Rated Current (Max.)	3A	
使用温度范围 Ambient temperature Range	-25℃ ~ +85℃	
适用线径 Applicable wire insulation AWG(mm <sup>2</sup> )	AWG #22~26	Insulation O.D. 1.55mm(Max.)

【 \*升温时含端子.Including terminal temperature rise. 】

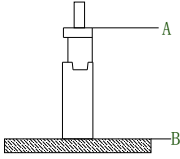
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## 【5.性能 PERFORMANCE】

### 5-1. 电气的性能 Electrical Performance.

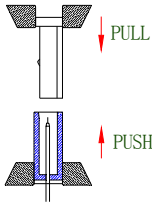
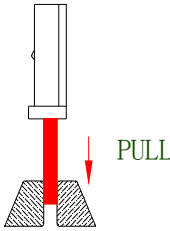
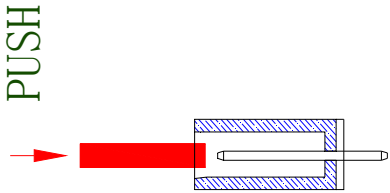
项目 【Item】	条件 【Test Condition】	规格 【Requirement】
5-1-1 接触阻抗 Contact Resistance	<p>公母配合,开放电压 20mV 以下,电流 10mA 检测连接器 A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).</p> 	<p>Initial: 10 milliohms Max. After Test: 20 milliohms Max.</p>
5-1-2 绝缘阻抗 Insulation Resistance	<p>公母配合,在相邻端子,端子与地片之间,使用 500V 的直流电,检测连接器. Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B)</p>	1000 Megohms Min.
5-1-3 耐电压 Dielectric Strength	<p>公母配合,在相邻端子,端子与地片之间,使用 800V 的交流电 1 分钟,检测连接器. Mate connectors, apply 800V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301)</p>	<p>外观无损伤, 无打火花 No Breakdown and Flashover</p>
5-1-4 铆线后端子接触 阻抗 Contact resistance on crimped portion	<p>铆线后之端子,开放电压 20mV 以下,电流 10mA 检测连接器. Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA.</p>	10 milliohms Max.

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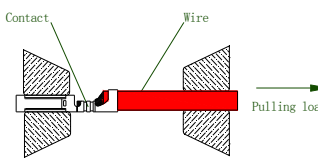
## 5-2. 机械的性能 Mechanical Performance.

项目 【Item】		条件 【Test Condition】	规格 【Requirement】
5-2-1	插拔力 Insertion & Retention Force	<p>以每分钟 <math>25.4 \pm 3\text{mm}</math> 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of <math>25.4 \pm 3\text{mm}/\text{minute}</math>.</p> 	参照第 6 项 Refer to paragraph 6
5-2-2	端子保持力 Terminal/Housing Retention Force	<p>以每分钟 <math>25.4 \pm 3\text{mm}</math> 的速率,将端子从 Housing 内轴向拔出的力量。 Apply axial pull out force at the speed rate of <math>25.4 \pm 3\text{mm}/\text{minute}</math> on the terminal assembled in the housing.</p> 	19.6N {2.0kgf} Min.
5-2-3	端子插入力 Terminal Insertion Force	<p>铆线后之端子插入 Housing 所需最大力量。 Insert the crimped terminal into the housing.</p>	9.8N {1.0kgf} Max.
5-2-4	Pin 针保持力 Pin Retention Force	<p>以每分钟 <math>25.4 \pm 3\text{mm}</math> 的速率,将 PIN 针从 Wafer 内轴向拔出的力量。 Apply axial push force at the speed rate of <math>25.4 \pm 3\text{mm}/\text{minute}</math>.</p> 	14.7N {1.5kgf} min.

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项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】			
5-2-5	端子压着强度 Tensile strength (Crimped connections)	固定铆线后的端子, 使电线与端子分离时所需的最小力量. Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part).	AWG#	#22	#24	#26
			Spec. .kgf. Min.	4.0	3.0	2.0
			Note> As for unspecified wire sizes in this specification define values with clients			

### 5-3. 环境性能及其它 Environmental Performance and Others.

项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-1	重复插拔 Repeated Insertion/ Withdrawal	以每分钟不超过 10 次的速率,将公母插拔 50 次。 When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.	接触阻抗 Contact Resistance	20 milliohms Max.
5-3-2	温升测试 Temperature Rise	公母连接器配合后, 加载额定电流直到温度上升到稳定状态, 然后再测量温升 (EIA364-70, Method 1) Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise. (EIA364-70, Method 1)	温升测试 Temperature rise	30°C Max.
5-3-3	耐振动性 Vibration	振幅: 1.5mm P-P 时间: 10~55~10 HZ in 1 minute 持续时间: 每轴向 2 小时 Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.
5-3-4	耐冲击性 Shock	在 X.Y.Z 上 6 个方向上, 以 490m/s <sup>2</sup> (50g 的力量) 冲击下各 3 回. 490m/s <sup>2</sup> {50G}, 3 strokes in each X.Y.Z. axes. (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.

WRITTEN BY: Alan qin

APPROVED BY: Robing

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项目 【Item】		条件 【Test Condition】	规格 【Requirement】	
5-3-5	耐热性 Heat Resistance	85±2℃,96 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-6	耐寒性 Cold Resistance	-25±5℃,96 hours. ( Based upon EIA-364-105)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-7	耐湿性 Humidity	温度: 40±2℃ 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 40±2℃ Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
			耐电压 Dielectric Strength	Must meet 5-1-3
			绝缘阻抗 Insulation Resistance	500 Megohms Min.
5-3-8	温度变化 Temperature Cycling	从-55℃持续 30 分钟升至+85℃持续 30 分钟,循环 5 次. 5 cycles of: a) -55℃ 30 minutes. b) +85℃ 30 minutes. (Based upon EIA-364-32B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-9	盐水喷雾 Salt Spray	在温度 35±2℃,盐水浓度 5±1%下,盐水喷雾 24±1 小时. 24±1 hours exposure to a salt spray from the 5±1% solution at 35±2℃. (Based upon EIA-364-26B/MIL-STD-202 Method 101D Cond.B).	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-10	焊锡附着性 Solder-ability	焊接时间: 3~5 秒. 焊接温度: 245±5℃. Soldering Time: 3~5second. Solder Temperature: 245±5℃. (Based upon EIA-364-52)	Solder Wetting	浸渍面积需 95%以上 95% of immersed area must show no voids, pin holes.

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项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-11	焊锡耐热性 Solder-Resistance	焊接时间: 5~10 秒. 焊接温度: 255+5/-5°C. Soldering time:5~10 sec solder. Temperature:255+5/-5°C. (Based upon EIA-364-56A)	外观 Appearance	无异状 No Damage

## 【6.综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>

PIN 数 No. of CKT	初次插入力(最大值) First Insertion (kgf Max.)	30 次拔出力(最小值) 30 <sup>th</sup> Withdrawal (kgf Min.)	PIN 数 No. of CKT	初次插入力(最大值) First Insertion (kgf Max.)	30 次拔出力(最小值) 30 <sup>th</sup> Withdrawal (kgf Min.)
Single	1.0	0.10	10	6.0	2.10
2	2.0	0.50	11	6.5	2.30
3	2.5	0.70	12	7.0	2.50
4	3.0	0.90	13	7.5	2.70
5	3.5	1.10	14	8.0	2.90
6	4.0	1.30	15	8.5	3.10
7	4.5	1.50	16	9.0	3.30
8	5.0	1.70	17	9.5	3.50
9	5.5	1.90	18	10.0	3.70

注: 以上插拔次数为 30 次

Note: Insertion and Withdrawal for 30Cycles