



Product Specification [产品规格书]:	Document No	PS-1800-02
Subject [主题]: 1.80mm Pitch 1800 Series Connector	Date Issued	2019/06/09
	Date Revised	2018/05/26
	Version	A0

**This specification is referred to the 1.80mm series wire to board connector**

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**【1.适用范围 Scope】**

此种规格包括 1.80mm Pitch 1806 Series 连接器规格说明.

This Specification Covers the 1.80mm Pitch 1806 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	1800TX-PSN-X	NONE
胶壳/Housing	1800H-02-N0XX 1800H-02X-N0XX	NONE
针座/Wafer	1800WRS-02-XXXX 1800WRS-02X-XXXX	NONE

**【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/Phosphor Bronze	40~120u" Ni \80~200u" Bright Tin
胶壳/Housing	PA66	UL 94V-0
针座/Wafer	Base	High Temperature Plastic
	PIN	黄铜/Brass
	Solder tab	黄铜/Brass
		40~120u" Ni \80~200u" Matte Tin

(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.)	350V	[AC/DC]
额定电流 Rated Current (Max.)	3.2A	
使用温度范围 Ambient temperature Range	-40°C~+105°C	
适用线径 Applicable wire insulation O.D	AWG#22~26(0.35~0.13mm <sup>2</sup> ) Insulation O.D:1.30mm(Max.)	

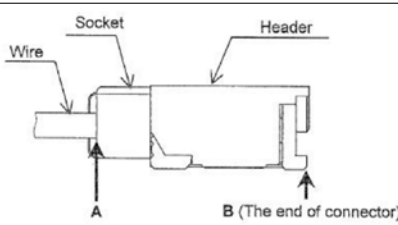
\*升温时含端子.Including terminal temperature rise.



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**【5.性能 PERFORMANCE】**

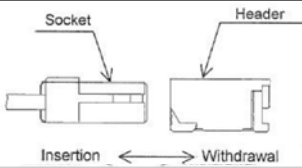
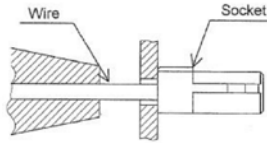
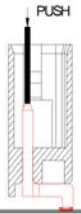
**5-1. 电气的性能 Electrical Performance.**

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 1700V 的交流电 1 分钟,检测连接器. Mate connectors, apply 1700V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301)</p>	不出现中断等情况 No Breakdown and Flashover
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 & withdraw Force	<p>以每分钟 50±3mm 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of 50±3mm/minute.</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 50±3mm 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 50±3mm/minute on the FFC in the housing.</p> 	15N {1.58kgf} Min.
5-2-3 Pin 针保持力 Pin Retention Force	<p>以每分 100±3mm 的速率,将 PIN 针从 Wafer 内轴向推出 的力量。 Apply axial push force at the speed rate of 100±3mm/minute.</p> 	4.9N {0.50kgf} Min.
5-2-4 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.
5-2-5 Lock HSG 卡扣保持力 Lock Retention Force	<p>以每分 50±3mm 的速率,将 HSG 从 Wafer 内轴向拔出 的力量。 Apply axial push force at the speed rate of 50±3mm/minute.</p>	15N {1.58kgf} Min.

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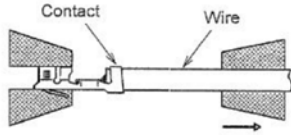
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项目 【Item】		条件 【Test Condition】	规格 【Requirement】			
5-2-6	端子压着强度 (Crimped connections)	固定铆线后的端子, 使电线与端子分离时所需的最小力量. Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part).	AWG 线号 (平方毫米)	#22 (0.35 mm <sup>2</sup> )	#24 (0.22 mm <sup>2</sup> )	#26 (0.13 mm <sup>2</sup> )
			Spec. kgf Min.	5.0	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 30 次. When mated up to 30 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	公母对插后,在通过额定电流下,所测定的温度.Carrying rated current load. (UL 1977)	温升测试 Temperature rise	30°C Max.
5-3-3	振动测试 Vibration test	振幅: 1.5mm P-P 时间: 20~200~20 Hz in 3minute 持续时间: 每轴向 3 小时 加速度: 44m/S <sup>2</sup> 开放电压: 20mV 以下 开放电流: 10mA 以下 Amplitude: 1.5mm P-P Sweep time: 20~200~20 Hz in 3 minute Duration: 3 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.
			电压降落 Voltage Drop	20mV/A Max
5-3-4	冲击测试 Shock test	在 X.Y.Z 上 6 个方向上,以 491m/s <sup>2</sup> (100g 的力量)冲击下各 3 回. 491m/s <sup>2</sup> {100G}, 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.



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5-3-5	耐热性 Heat Resistance	105±2°C,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.

项目 【Item】		条件 【Test Condition】	规格 【Requirement】	
5-3-6	耐寒性 Cold Resistance	-40±5°C,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°C 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 40±2°C 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-40°C持续 30 分钟升至+105°C持续 30 分钟,循环 5 次. 5 cycles of: a) -40°C 30 minutes. b) +105°C 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°C,盐水浓度 5±1%下,盐水喷雾 48±1 小时. 48±1 hours exposure to a salt spray from the 5±1% solution at 35±2°C. (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°C. Soldering Time: 3~5second. Solder Temperature: 245±5°C. (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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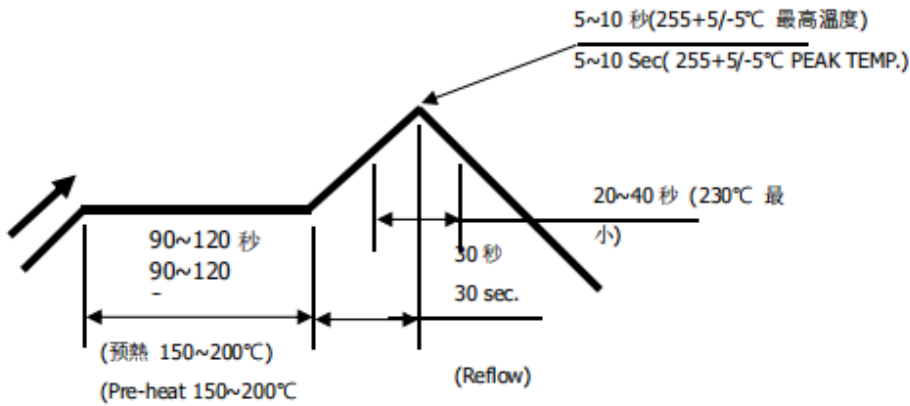
项目 【Item】	条件 【Test Condition】	规格 【Requirement】	
5-3-11 焊锡耐热性 Solder-Resistance	焊接时间: 5~10 秒. 焊接温度: 255+5/-5°C. Soldering time: 5~10 sec solder. Temperature: 255+5/-5°C. (Based upon EIA-364-56A)	外观 Appearance	无异状 No Damage

**【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.)
2	2.00	0.20			

注: 以上插拔次数为 30 次 Note: Insertion and Withdrawal for 30 Cycles

**【7. SMT 回流条件 SMT REFLOW CONDITION】**



温度条件曲线图/ 基板上温度

TEMPERATURE CONDITION GRAPH/ (TEMPERATURE ON BOARD PATTERN SIDE)

注记: 由于 P.C 板等焊接装置改变条件, 所以请预先用自己的装置检查回流焊的条件。

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