



Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

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

## 索引【INDEX】

1. 适用范围 【Scope】
2. 规格与料号 【Spec and Part number】
3. 材质与表面处理 【Disposal of Material and surface】
4. 额定等级 【Ratings and applicable wires】
5. 性能 【 Performance 】
  - 5-1. 电气的性能【Electrical Performance.】
  - 5-2. 机械的性能【Mechanical Performance】
  - 5-3. 环境性能及其它【Environmental Performance and Others】
6. 综合插入力及拔出力 【 Insertion/Withdrawal Force 】
7. SMT 红外线回流条件 【 SMT Infrared Reflow Condition 】



Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

## 【1.适用范围 Scope】

此种规格包括 1.80mm Pitch 1800 Series 连接器规格说明.

This Specification Covers the 1.80mm Pitch 1800 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	NONE
胶壳/Housing	1800H-02-N0 1800H-02A-N0	NONE
针座/Wafer	1800WRS-02-XXXX 1800WRS-02A-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	Nickel: Over 30μ" .Tin: Over 70μ" .
胶壳/Housing	PA66	UL 94V-0
针座/Wafer	Base	High Temperature Plastic
	PIN	黄铜/Brass
	Solder tab	黄铜/Brass

(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	-25℃ ~ +85℃	
适用线径 Applicable wire insulation O.D	H Type: AWG 22~26# Insulation O.D. 1.30mm(Max.) L Type: AWG 26~30# Insulation O.D. 1.25mm(Max.)	

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



Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

## 【5.性能 PERFORMANCE】

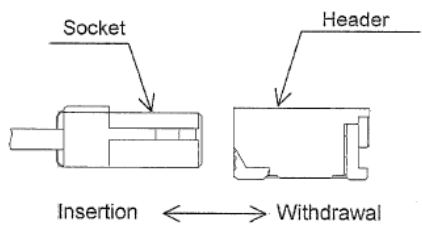
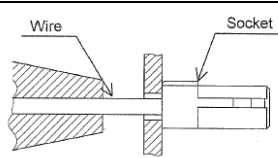
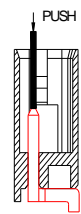
### 5-1. 电气的性能 Electrical Performance.

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> <div style="text-align: center;"> <p style="font-size: small;">A B (The end of connector)</p> </div>	<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>	<p>不出现中断等情况 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.



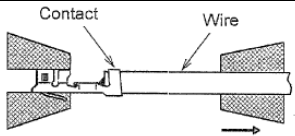
Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

## 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 25.4±3mm 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute.</p> 	<p>参照第 6 项 Refer to paragraph 6</p>
5-2-2 端子保持力 Terminal/ Housing Retention Force	<p>以每分 25.4±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 25.4±3mm/minute on the FFC in the housing.</p> 	<p>9.8N {1.0kgf} Min.</p>
5-2-3 Pin 针保持力 Pin Retention Force	<p>以每分 25.4±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 25.4±3mm/minute.</p> 	<p>4.9N {0.50kgf} Min.</p>
5-2-4 Lock HSG 卡扣保持 力 Lock Retention Force	<p>以每分 25.4±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 25.4±3mm/minute.</p>	<p>12N {1.20kgf} Min.</p>



Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

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	#28	#30
		Spec. kgf Min.	5.0	3.0	2.0	1.0	0.50
		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℃ 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.
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.



# ShenZhen Vigorconn Precision Connector Co., Ltd.

ADD:Times Central Plaza 7C, Zhong Xin Lu, Shajin Street, Baoan District, Shenzhen City.

Tel : 0755-2303 3395 Fax : 0755-29308769 E-mail:jass.yang@vigorconn.com http://www.vigorconn.com.

Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

项目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-6	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.
5-3-7	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.
5-3-8	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	100 Megohms Min.
5-3-9	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.
5-3-10	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-364-26A/MIL-STD-202 Method 101D Cond.B).	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-11	焊锡附着性 Solder-ability	焊接时间: 3±0.5 秒. 焊接温度: 245±3℃. Soldering Time: 3±0.5second. Solder Temperature: 245±3℃. (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.



Product Specification [产品规格书]:	ISSUED BY: Engineering Dept	
Subject [主题]: 1.80mm Pitch 1800 Series Connector Specification	Date Issued	2012/01/10
	Date Revised	2013/07/27

项目 【Item】	条件 【Test Condition】	规格 【Requirement】	
5-3-12 焊锡耐热性 Solder-Resistance	焊接时间: 5~10 秒. 焊接温度: 255+5/-5 ℃. Soldering time:5~10 sec solder. Temperature:255+5/-5 ℃. (Based upon EIA-364-56A)	外观 Appearance	无异状 No Damage

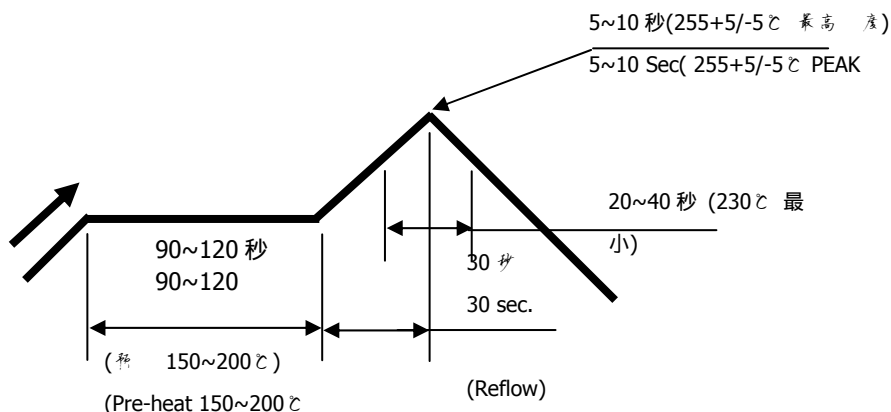
### 【6. 综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>

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 30Cycles

### 【7. SMT 红外线回流条件 SMT INFRARED 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.