Product Specification [产品规格书]:	Document No	PS-2010-01
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This specification is referred to the 2.00mm series wire to board connector

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【1.适用范围 Scope】

此种规格包括 2.00mm Pitch 2010 Series 连接器规格说明.

This Specification Covers the 2.00mm Pitch 2010 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	2010T-PSN 201TH-PSN	
胶壳/Housing	2010H-XX-PTBK	
针座/Wafer	2010WRS-XX-PPSNBKR	

【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	Nickel Plated: 30u" Min Bright Tin Plated: 80u" Min
胶壳/Housing		PBT	UL94V-0
针座/Wafer	Base	PPS	UL94V-0
	PIN	黄铜(C2680)/Brass	Nickel Plated: 30u" Min Bright Tin Plated: 80u" Min
	Solder tab	黄铜(C2680)/Brass	Nickel Plated: 30u" Min Bright Tin Plated: 80u" Min

（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	-40℃~+105℃		
适用线径 Applicable wire insulation O.D	2010T-PSN	AWG#22~24 (0.35~0.22 mm^2)	Insulation O.D. 1.50mm (Max.)
	2010TH-PSN	AWG#20 (0.5 mm^2)	

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

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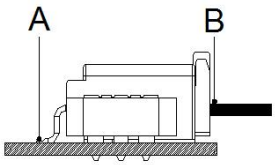
【5.性能 PERFORMANCE】

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	公母配合,开放电压 20mV 以下,电流 0.1mA 检测连接器 A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A). 	Initial: 30 milliohms Max. After Test: 60 milliohms Max.
5-1-2	绝缘阻抗 Insulation Resistance	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)	100 Megohms Min.
5-1-3	耐电压 Dielectric Strength	公母配合,在相邻端子,端子与地片之间,使用 650V 的交流电 1 分锺,检测连接器. Mate connectors, apply 650V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301)	外观无损伤，无打火花 No Breakdown and Flashover

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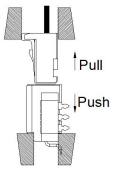
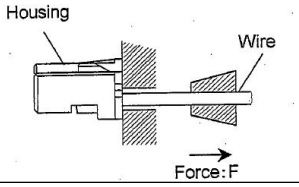
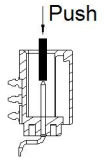
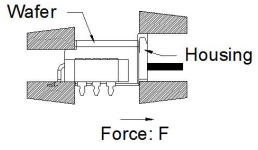
5-2. 机械的性能 Mechanical Performance.

项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】
5-2-1	插拔力 Insertion & Retention Force	以每分锺 50±3mm 的速率插入和拔出. Insert and withdraw Connectors at the speed rate of 50±3mm/minute. 	参照第 6 项 Refer to paragraph 6
5-2-2	端子保持力 Terminal/ Housing Retention Force	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 terminal assembled in the housing. 	14.7N {1.5kgf} Min.
5-2-3	端子插入力 Terminal Insertion Force	铆线后之端子插入 Housing 所需最大力量. Insert the crimped terminal into the housing.	14.7N {1.5kgf} Max.
5-2-4	Pin 针保持力 Pin Retention Force	以每分 100±3mm 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 100±3mm/minute. 	9.8N {1.0kgf} min.
5-2-5	Lock 保持力 Lock Retention Force	将 Housing 与 Wafer 匹配后，将 Housing 从 Wafer 内轴向拔出的力量，看其卡扣的承受力量 A housing and a header shall be mated , Pulling load shall be applied them, the load to make them come off each other shall be measured 	8pin: 98N {10.0kgf} min.

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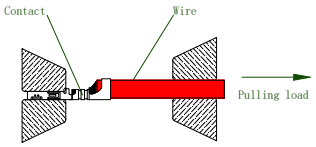
项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】			
5-2-6	端子压着强度 Tensile strength (Crimped connections)	固定铆线后的端子，使电线与端子分离时所需的最小力量. Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part).	AWG(mm^2)	#20 (0.5mm^2)	#22 (0.35mm^2)	#24 (0.22mm^2)
			Spec;Kgf. Min	6.0	4.0	3.0
			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	以每分锺不超过 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	60 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.	温升测试 Temperature rise	30℃ Max.
5-3-3	振动测试 Vibration test	振幅: 1.5mm P-P 时间: 20~200~20 H_z in 3minute 持续时间: 每轴向 3 小时 加速度：44m/S^2 开放电压：20mV 以下 开放电流：10mA 以下 Amplitude: 1.5mm P-P Sweep time: 20~200~20 H_z 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	60 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 981m/s2(100G 的力量)冲击下各 3 回. 作用时间：6ms 981m/s2{100G}, 3 strokes in each X.Y.Z. axes. Operation time:6ms (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	60 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.

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项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-5	耐热性 Heat Resistance	105±2℃,300 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	60 milliohms Max.
5-3-6	耐寒性 Cold Resistance	-40±3℃,120 hours. (Based upon EIA-364-105)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	60 milliohms Max.
5-3-7	耐湿性 Humidity	温度: 60±2℃ 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 60±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	60 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℃持续 30 分锺升至+105℃持续 30 分锺,循环 100 次. 100 cycles of: a) -40℃ 30 minutes. b) +105℃ 30 minutes. (Based upon EIA-364-32B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	60 milliohms Max.
5-3-9	酸性气体测试 RESISTANCE TO HSO3 GAS	暴露于 500 ppm 浓度 放置 8h。 EXPOSE TO THE GAS WITH CONCENTRATION OF 500 PPM FOR 8h.	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	60 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: 3~5sec solder. Temperature: 245±5℃.`	Solder Wetting	浸渍面积需 95%以上 95% of immersed area must show no voids, pin holes.

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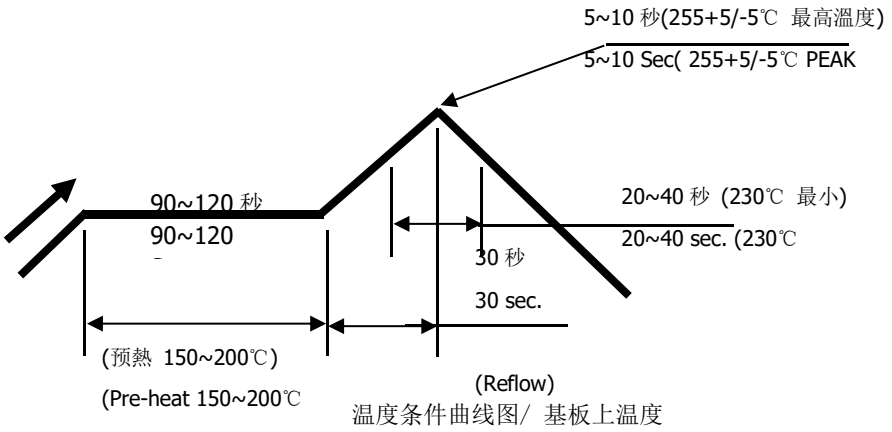
项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-11	焊锡耐热性 Solder-Resistance	焊接时间: 5~10 秒. 焊接温度: 255+5/-5℃. Soldering time:5~10 sec solder. Temperature:255+5/-5℃. (Based upon EIA-364-56A)	外观 Appearance	无异状 No Damage

【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) 30th 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) 30th Withdrawal (kgf Min.)
2	1.2	0.20	8	3.6	1.10
3	1.6	0.35	9	4.0	1.25
4	2.0	0.50	10	4.4	1.40
5	2.4	0.65	11	4.8	1.55
6	2.8	0.80	12	5.2	1.70
7	3.2	0.95	14	6.0	2.00

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

【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.