Product Specification [产品规格书]:	Document No	PS-3004-01
Subject [主题]:	Date Issued	2020/5/19
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This specification is referred to the 3.00mm series wire to board connector

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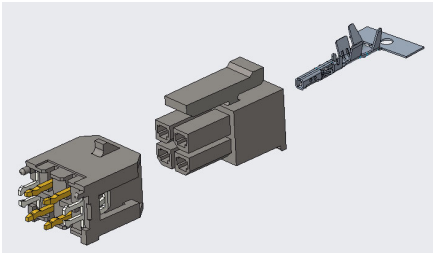
【1.适用范围 Scope】

此种规格包括 3.00mm Pitch 3004 Series 连接器规格说明.

This Specification Covers the 3.00mm Pitch 3004 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	3004THF-HSN1	
胶壳/Housing	3004HM-2*XX-N0HFBK	
针座/Wafer	3004WV-2xXXPHF-LPSW1BT	

【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	高导铜/C7025-TM02	亮锡 100~180u" ;镍底 50~100u"
胶壳/Housing	PA66	/
针座/Wafer	空壳：LCP 四方针：高导铜/C1100 鱼叉：黄铜/C2680	镍底 50u"Min，雾锡 100u"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】							
4-1.	额定电压 Rated Voltage (Max.)	250V							
4-2.	额定电流 Rated Current (Max.)		2PIN	3~4PIN	5~8PIN	9~10PIN	11~12PIN	13~18PIN	19~24PIN	[AC/DC]
		#16	12.5A	12A	10.5A	10A	9A	8.5A	8A	
		#18	10.5A	10A	10A	8A	8A	7.5A	7A	
4-3.	使用温度范围 Ambient temperature Range	-40°C~+105°C							
4-4.	适用线径 Applicable wire insulation O.D	AWG#16~18							

【 *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 10mA 检测连接器 A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).	Initial: 10 milliohms Max. After Test: △R 20 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)	1000 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 1000V 的交流电 1 分钟,检测连接器. Mate connectors, apply 1000V 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
5-1-4	铆线后端子接触阻抗 Contact resistance on crimped portion	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.	10 milliohms Max.

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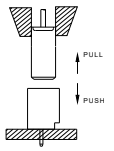
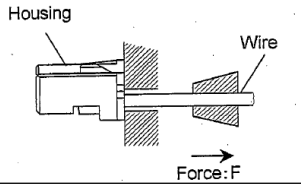
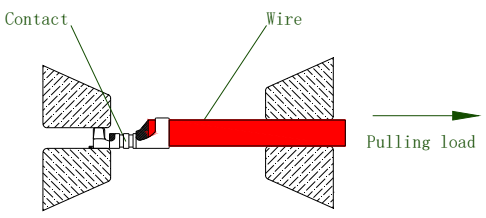
5-2. 机械的性能 Mechanical Performance.

项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】
5-2-1	插拔力 Insertion & Withdraw Force	以每分锺 25.4±3mm 的速率插入和拔出. Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute. 	插入力 Insertion force： 8N Max./Per Pin 拔出力 Withdraw force： 2N Min./Per Pin
5-2-2	端子保持力 Terminal/ Housing Retention Force	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 terminal assembled in the housing. 	24.5N 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 Max.
5-2-4	PIN 针保持力 Terminal/Housing Retention Force	以每分 25.4±3mm 的速率,将端子从本体内轴向拔出的力量. Apply axial push force at the speed rate of 25.4±3mm/minute.	13.7N Min.
5-2-5	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#16~#18: 57.8N Min.
5-2-6	公母座带卡扣保持力 Male/Female Housing Retention Force	将插好端子的公母座含卡扣以每分钟 25±6mm 的速度拔出所需要力量。 Mate connectors and apply pull-out force at the speed rate of 25±6mm/min. This Test should be done with positive lock locked.	68.4N Min

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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.	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	△R20 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） Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the termperature rise. （EIA364-70,Method）	温升 Temperature rise	30℃ Max.
5-3-3	振动测试 Vibration test	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	△R20 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.
5-3-4	冲击测试 Shock test	在 X.Y.Z 上 6 个方向上,以 490m/s2(50g 的力量)冲击下各 3 回.490m/s2{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	△R20 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.

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

项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-5	耐热性 Heat Resistance	105±2°C,240 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	△R20 milliohms Max.
5-3-6	耐寒性 Cold Resistance	-40±2°C,96 hours. (Based upon EIA-364-105) (Based upon EIA-364-105)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	△R20 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	△R20 milliohms Max.
			耐电压 Dielectric Strength	500V AC/1 分钟
			绝缘阻抗 Insulation Resistance	1000 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	△R20 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-364-26A/MIL-STD-202 Method 101D Cond.B).	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	△R20 milliohms Max.
5-3-10	焊锡附着性 Solder-ability	焊接时间: 5±0.5 秒. 焊接温度: 245±5℃. Soldering time: 5±0.5sec 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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5-3-11	焊锡耐热性 Resistance to Soldering Heat	焊接时间: 5~10 秒. 焊接温度: 260+0/-10°C. Soldering time:5~10 sec solder. Temperature:260+0/-10°C. (Based upon EIA-364-56A)	外观 Appearance	无异状 No Damage

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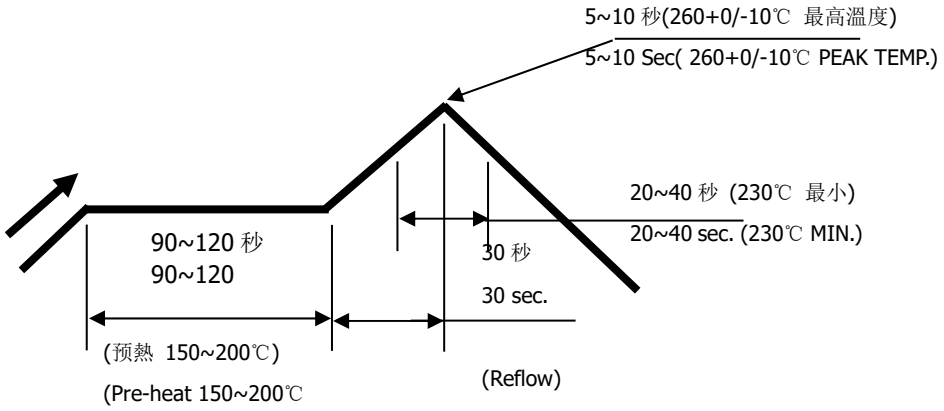
【6. SMT 回流条件 SMT REFLOW CONDITION】



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.