

Product Specification [产品规格书]:	Document No:	PS- HRS -1274-01
Subject [主题]:	Date Issued	2019/10/15
1.27mm Pitch HRS-1274 Series Connector Specification	Date Revised	2020/06/10
	Version	A

This specification is referred to the 1.27mm 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 回流条件【SMT Reflow Condition】

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【1. 适用范围 Scope】

此种规格包括 1.27mm Pitch HRS-1274 Series 连接器规格说明.

This Specification Covers the 1.27mm Pitch HRS-1274 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	HRS-1274T-EXXS-01F	
胶壳/Housing	HRS-1274HM-2x07-LPBGH01F	
针座/Wafer	HRS-1274WR-2x07-LPBPXXGH001F HRS-1274WRS-2x07-LPBPXXRH001F	

【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		镀铜/Be Bronze	Gold Flash over the Ni 50 u"min
胶壳/Housing		LCP	UL 94V-0
针座/Wafer	Base	LCP	UL 94V-0
	PIN	磷铜/Phosphor Bronze	Sn area 100u"min, Au area 10 u" over the Ni 50 u"min
	Solder tab	磷铜/Phosphor Bronze	Sn 100u"min over the Ni 50 u"min

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(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.)	275V	[AC]
额定电流 Rated Current (Max.)	3A	
使用温度范围 Ambient temperature Range	-55℃~+105℃	
适用线径 Applicable wire insulation O.D	AWG #28 ~ AWG #30 (0.05~0.08mm ²) Insulation O.D. 1.0mm(Max.)	

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

【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: 30 milliohms Max. After Test: 50 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)	不出现击穿或火花等情况 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 Mating & Unmating Force	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.	参照第 6 项 Refer to paragraph 6		
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.	9.8N {1kgf} 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.	4.9N {0.5kgf} Max.		
5-2-4	Pin 针/固定片保持力 Pin/Weld TABS Retention Force	以每分 25.4±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 25.4±3mm/minute.	3.43N {0.35kgf} min.		
5-2-5	线芯与端子的拉力 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 线号 (平方毫米)	#28 (0.08mm ²)	#30 (0.05mm ²)
			Spec. kgf. Min.	0.91	0.68
			Note> As for unspecified wire sizes in this specification define values with clients		

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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】	
5-3-1	Durability 耐用性	EIA-364-09C 1000cycles	循环次数 Cycle Number	1000cycles
5-3-2	Random Vibration 随机振动	EIA-364-28 Condition V, Letter B EIA-364-28 条件 V, 字母 B 7.56 G 'RMS', 50 to 2000 Hz, 2 hours per axis, 3 axis total , PSD 0.04 7.56 G 'RMS', 50 to 2000 Hz, 3 轴, 每轴 2 小时	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	50 milliohms Max.
			瞬断 Discontinuity	1 micro- second Max.
5-3-3	Mechanical Shock 机械冲击	EIA-364-27 100 G, 6 milliseconds, EIA-364-27 100 G, 6 毫秒 sawtooth wave, 11.3 fps, 锯齿波 11.3fps 3 shocks/direction, 3 axis (18 total shocks) 3 轴 6 向, 每向 3 次共 18 次	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	50 milliohms Max.
			瞬断 Discontinuity	1 micro- second Max.
5-3-4	Thermal Shock 热冲击	EIA-364-32 Thermal Cycles: 100 (30 minute dwell) 热循环 Hot Temp: 85° C (高温: 85° C) Cold Temp: -25° C (低温: -25° C) Hot/Cold Transition: Immediate 立即切换	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	50 milliohms Max.
5-3-5	Thermal Aging 热时效 (Temp Life)	EIA-364-17 Test Condition @ 105° C 测试条件 105° C Condition B for 250 hours 条件 B 150 小时	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	50 milliohms Max.

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项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-3-6	Cyclic Humidity 湿气循环	EIA-364-31 Test Temp: 25° C to 65° C 测试温度 Relative Humidity: 90 to 95% 相对湿度 Test Duration: 240 hours 测试时长	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	50 milliohms Max.
5-3-7	盐水喷雾 Salt Spray	在温度 35±2℃, 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℃. (Based upon EIA-364-26B/MIL-STD-202 Method 101D Cond.B).	耐电压 Dielectric Strength	Must meet 5-1-3
			绝缘阻抗 Insulation Resistance	100 Megohms Min.
			外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	50 milliohms Max.
5-3-8	焊锡附着性 Solder-ability	焊接时间: 5±0.5 秒. 焊接温度: 245±5℃. Soldering Time: 5±0.5second. 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.
5-3-9	焊锡耐热性 Solder-Resistance	焊接条件: 260+5/-5℃ 10~20 秒. 230+5/-5℃ 60 秒 焊接温度: 260+5/-5℃. Soldering Conditions: 260+5/-5℃ 10~20 Sec. 230+5/-5℃ 60 Sec (Based upon EIA-364-56A)	外观 Appearance	无异状 No Damage

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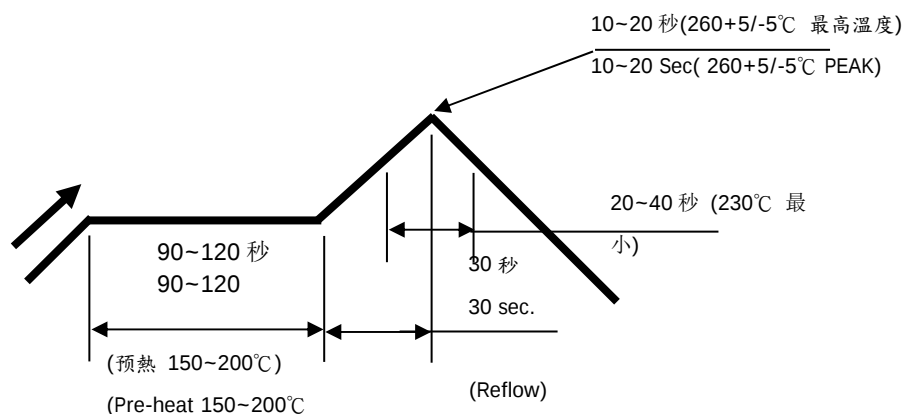
项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】
5-3-10 温升测试 Temperature Rise	仅对一根电流 PIN 加载 3A 的电流, 直到温度不再上升达到稳定状态 Only one power pin shall be energized at 2A until thermal stability is achieved. (Based upon EIA 364-70 mothod 1)	温升测试 Temperature rise Maximum +30°C.

【6. 综合插入力及拔出力 MATING/UNMATING FORCE】<Connector mating force>

PIN 数 No. of CKT	初次插入力(最大值) First MATING	30 次拔出力(最小值) 30 th UNMATING (Without Latch)	30 次拔出力(最小值) 30 th UNMATING (With Latch)
2*07	4.41bs (2.0kgf) Max	0.331bs(0.15kgf) Min	3.31bs(1.50kgf) Min

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.