

<b>Product Specification</b> [产品规格书]:	Document No	PS-2508-01
	Date Issued	2019/04/18
<b>Subject</b> [主题]: 2.50mm Pitch 2508 Series Connector Specification	Date Revised	2024/03/26
	Version	B2

This specification is referred to the 2.50mm series wire to board connector

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**【1.适用范围 Scope】**

此种规格包括 2.50mm Pitch 2508 Series 连接器规格说明。

This Specification Covers the 2.50mm Pitch 2508 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	2508T-PSN1	NONE
胶壳/Housing	2508H-XX-N0	NONE
针座/Wafer	2508WR-XXX-9TSW 2508WV-XXX-9TSW 2508WVS-XX/XXE-9TSWR 2508WRS-XX/XXE-9TSWR	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	锡/Tin80~200 $\mu$ ".镍/Ni: 40~120 $\mu$ "	
胶壳/Housing	PA66	UL 94V-0	
针座/Wafer	Base	PA9T	UL 94V-0
	PIN	黄铜/Brass	锡/Tin80~200 $\mu$ ".镍/Ni: 40~120 $\mu$ "
	Solder tab	黄铜/Brass	锡/Tin80~200 $\mu$ ".镍/Ni: 40~120 $\mu$ "

(上述参数请以工程图为准/Please Refer to the Project drawing for the above Specification)

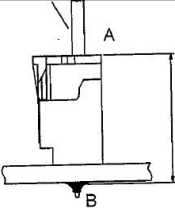
**【4. 额定等级 Ratings and applicable wires】**

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°C~+105°C	
适用线径 Applicable wire insulation O.D	AWG#22~26 (0.35~0.13 mm <sup>2</sup> )	绝缘 $\varnothing$ O.D: 1.60mm(Max.)

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

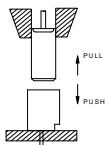
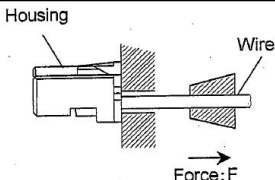
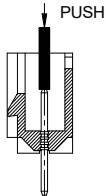
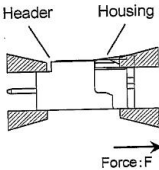
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**【5.性能 PERFORMANCE】****5-1. 电气的性能 Electrical Performance.**

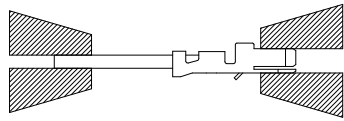
项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】
5-1-1 接触阻抗 Contact Resistance	公母配合,开放电压 20mV 以下,电流 10mA 检测连接器 A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A). 	Initial: 10 milliohms Max. After Test: 20 milliohms Max.
5-1-2 绝缘阻抗 Insulation Resistance	公母配合,在相邻端子,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, 无跳火 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	<p>以每分钟 <math>25.4\pm 3\text{mm}</math> 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of <math>25.4\pm 3\text{mm}/\text{minute}</math>.</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 <math>25.4\pm 3\text{mm}</math> 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 <math>25.4\pm 3\text{mm}/\text{minute}</math> on the terminal assembled in the housing.</p> 	14.7N {1.5kgf} Min.
5-2-3 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.
5-2-4 Pin 针保持力 Pin Retention Force	<p>以每分 <math>25.4\pm 3\text{mm}</math> 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 <math>25.4\pm 3\text{mm}/\text{minute}</math>.</p> 	14.7N {1.5kgf} Min.
5-2-5 Lock 保持力 Lock Retention Force	<p>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</p> 	<p>1、2-circuit product : 20N {2.04kgf} min.</p> <p>2、3-circuit or more 30N {3.06kgf} min</p>

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5-2-5 端子压着强度 Crimped contact	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 (0.35mm <sup>2</sup> )	#24 (0.22mm <sup>2</sup> )	#26 (0.13mm <sup>2</sup> )
		Spec. N Min.	50.0N	40.0N	13.70N
		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 1） Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise. (EIA364-70,Method 1)	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: 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 冲击测试 Shock test	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.

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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.
5-3-6	耐寒性 Cold Resistance	-40±3°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 25 次. 25 cycles of: a) -40±3°C 30 minutes. b) +105±2°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.

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项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
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.
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

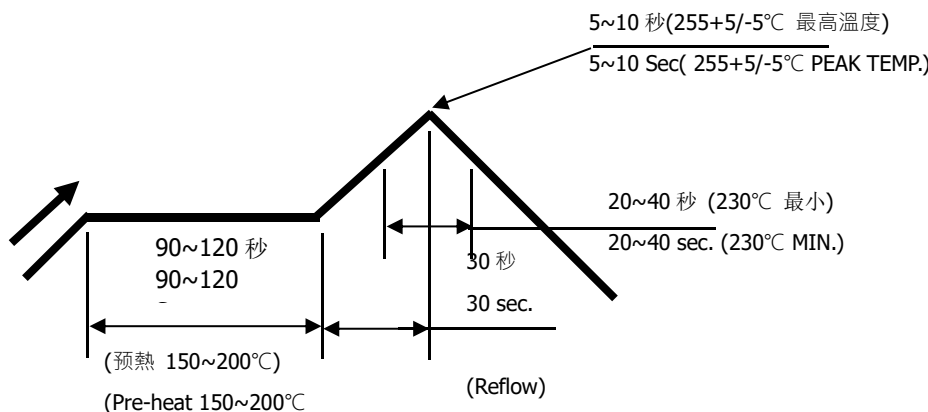
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**【6.综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>**

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.)
Single	/	/	09	6.75	0.90
02	1.70	0.20	10	7.50	1.00
03	2.25	0.30	11	8.25	1.10
04	3.00	0.40	12	9.00	1.20
05	3.75	0.50	13	9.75	1.30
06	4.50	0.60	14	10.50	1.40
07	5.25	0.70	15	11.25	1.50
08	6.00	0.80			

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.