

Product Specification [产品规格书]:	Document No:	PS-2581-01
Subject [主题]:	Date Issued	2019/09/08
2.50mm Pitch 2581 Series Connector Specification	Date Revised	2021/03/31
	Version	B

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 2581 Series 连接器规格说明。

This Specification Covers the 2.50mm Pitch 2581 Series Connector Specification.

【2.规格与料号 Specification and Part number】

规格内容 Specification	产品料号 Production No.	产品图示 Picture of Product
端子/Terminal	2581T-PSN1-S	
胶壳/Housing	2581H-XXHF-N0NC	
针座/Wafer	2581WR-XXHF-N0SN1N 2581WV-XXHF-N0SN1N	 

【3.材质与表面处理 Material & surface treatment】

规格内容 Specification	材质 Materials	表面处理 Disposal of Surface

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端子/Terminal	磷铜/Phosphor Bronze	Underplated: Ni (1~3 μ m)overall; Top plating: Sn (2~5 μ m) overall
胶壳/Housing	PA66	UL 94V-0
针座/Wafer	Base	PA66 UL 94V-0
	PIN	黄铜/Brass Underplated: Ni (1~3 μ m)overall; Top plating: Sn (2~5 μ m) overall

(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&接线范围 Ratings and applicable wires & Wiring range】

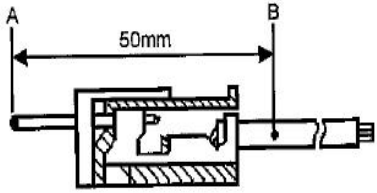
项目【Item】	规格【Standard】	
额定电压 Rated Voltage	250V	[AC/DC]
额定电流 Rated Current	3A	
使用温度范围 Ambient temperature Range	-40 $^{\circ}$ C~+105 $^{\circ}$ C	
适用线径 Applicable wire insulation O.D	AWG 22#~24# Insulation O.D. 1.60mm(Max.)	

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

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【5.性能 PERFORMANCE】

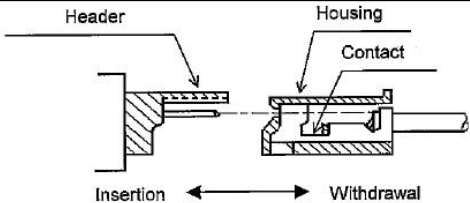
5-1. 电气的性能 Electrical Performance.

项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】
5-1-1 接触阻抗 Contact Resistance	<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> 	<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 800V 的交流电 1 分钟,检测连接器. Mate connectors, apply 800V 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.

5-2. 机械的性能 Mechanical Performance.

项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】
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5-2-1	插拔力 Insertion & withdraw Force	以每分钟 50mm 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of 50mm/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 50mm 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 50mm/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.	9.8N {1kgf} Max.	
5-2-4	Pin 针保持力 Pin Retention Force	在相对湿度 95~98%和 40°C 环境下潮湿样品并保持 6 小时, 然后拔出。 The samples were kept moist at 95~98% relative humidity and 40°C for 6 hours before being pulled out(USCAR-2 5.7.1)	15N {1.53kgf} MIN.	

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项目 【Item】	条件 【Test Condition】	规格 【Requirement】		
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# (FLR)	22# (0.35mm ²)	24# (0.22mm ²)
		Spec Min. N	50N	40N

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 耐振动性 Vibration	将插头对配, 在线束两端距端子压接 75mm 处接线, 前后均测试电阻 (减去导线电阻), 按以下条件测试 TC:0min/20°C; 60min/-40°C; 150min/-40°C; 300min/120°C; 420min/120°C; 480min/20°C. 20h per axis RMS value of ac-celeration 27.8m/s ² (vw75174, TG17)	瞬断 Discontinuity	1 micro-second Max.
		接触阻抗 Contact Resistance	30 milliohms Max.
5-3-4 耐冲击性 Shock	在 X.Y.Z 上 6 个方向上,以 29.43m/s ² (30g 的力量)冲击各 6000 回。 作用时间: 6ms With mounted to equipment and mated connectors, subject to the following shock conditions: Peak value: 29.43m/s ² (30G) No.of shocks:6000 in each X, Y, Z axes. T=6ms sinusoidal half-wave (vw75174, TG17)	外观 Appearance	无异状 No Damage
		瞬断 Discontinuity	1 micro-second Max.
		接触阻抗 Contact Resistance	30 milliohms 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°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,120 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	冷热冲击 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	20 milliohms Max.
			电压降落 Voltage Drop	20mV/A 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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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.
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【6.连接器对配插入力及拔出力 Insertion/Withdrawal force of Connector】

Connector mating force>

PIN 数 No. of CKT	初次插入力(最大值) First Insertion (N Max.)	初次拔出力(最小值) First Withdrawal (N Min.)	30 次拔出力(最小值) 30th Withdrawal (N Min.)
02	20.00	4.00	2.00
03	25.00	5.00	3.00
04	30.00	6.00	4.00
05	35.00	7.00	5.00
06	40.00	8.00	6.00
07	45.00	9.00	7.00
08	55.00	10.00	8.00
09	60.00	11.00	9.00
10	65.00	12.00	10.00
11	70.00	13.00	11.00
12	75.00	14.00	12.00
13	80.00	15.00	13.00
14	85.00	16.00	14.00
15	90.00	17.00	15.00

注：以上插拔次数为 30 次

Note: Insertion and Withdrawal for 30Cycles