

Product Specification [产品规格书]:	Document No	PS-5004-01
Subject [主题]:	Date Issued	2021/11/18
5.00mmPitch 5004 Series Connector Specification	Date Revised	
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This specification is only referred to the 5004 series connector

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【1.适用范围 Scope】

此种规格包括 5.00mm Pitch 5004 Series 连接器规格说明.

This Specification Covers the 5.00mm Pitch 5004 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
Poke In 连接器/Connector	5004H-XX-PTNC-D	

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【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
Poke In 连接器 /Connector	端子/Terminal	高导电铜/High Conductivity Copper	Underplated: Ni (1~3 μ m)overall; Top plating: Sn (2~5 μ m) overall
	盖板/cover	PBT+GF	本色 natural
	手柄/Lever	PBT+GF	灰色 gray
	胶壳/Housing	PBT+GF	本色 natural

(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 Max	[AC/DC]
额定电流 Rated Current (Max.)	18 AWG	5A Max	
	20, 22, 24 AWG	3A Max	
使用温度范围 Ambient temperature Range		-40 $^{\circ}$ C ~+85 $^{\circ}$ C	
适用线径 Applicable wire insulation O.D		AWG #18~24(solid) AWG #18~22(stranded)	

【5.测试方法及要求 Test Methods and Requirements】

5-1. 外观检查 Examination of product.

项目 【Item】	条件 【Test Condition】	规格 【Requirement】
5-1 产品外观检查 Visual Inspection	借助 10 倍放大镜对每一个试验样品进行检查，详细记录所有制造或材料的瑕疵，如：裂缝、变色、毛刺等。 Inspect each sample with a 10x magnification, recording all defects in all process or material defects such as cracks, discoloration, flash, etc.	EIA-364-18

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5-2. 电气性能 Electrical Performance.

项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】
5-2-1 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.
5-2-2 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.
5-2-3 耐电压 Dielectric Strength	公母配合,在相邻端子,端子与地片之间,使用 1500V 的交流电 1 分锺,检测连接器. Mate connectors, apply 1500V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301)	没有击穿或者出现电火花 No Breakdown and Flashover

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5-3. 机械的性能 Mechanical Performance.

项 目 【Item】		条 件 【Test Condition】		规 格 【Requirement】				
5-3-1	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				
5-3-2	电线插入力 Wire Insertion force	以每分钟12.7mm 的速率,将电线从Housing 内轴向插入的力量. Measure force necessary to insert wire at a maximum rate of 12.7 mm [0.5 in.] per minute. Wire release lever shall not be depressed during wire insertion.		9.8N {1.0kgf} Min				
5-3-3	电线保持力 Wire Extraction Force	固定连接器的端子, 使电线与端子分离时所需的最小力量. (EIA-364-8) Fix the connector terminal, apply axial pull out force on the wire. (Do not crimp insulation part). (EIA-364-8)	Awg 线号 (mm ²)	#18Awg 0.75mm ²	20Awg 0.50mm ²	22Awg 0.32mm ²	24Awg 0.20mm ²	
			Stranding	Solid/Stranded			Solid	
			Min Force	30N	30N	20N	13.4N	
5-3-4	连接器固定力 Connector retention	连接器安装到安装面板之后的, 测试其脱离面板的力 connector installed on test mount plate, measure force necessary to remove connector from test mount plate		70N {7.14kgf} Max.				

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5-4. 环境性能及其它 Environmental Performance and Others.

项 目 【Item】		条 件 【Test Condition】	规 格 【Requirement】	
5-4-1	重复插拔 Repeated Insertion/ Withdrawal	以每分钟不超过 6 次的速率,将公母插拔 10 次。 When mated up to 10 cycles repeatedly by the rate of 6 cycles per minute.	接触阻抗 Contact Resistance	40 milliohms Max.
5-4-2	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.
5-4-3	耐振动性 Vibration	振幅: 1.5mm P-P 时间: 20~200~20 HZ in 3minute 持续时间: 每轴向 3 小时 加速度: 44m/S2 开放电压: 20mV 以下 开放电流: 10mA 以下 Amplitude: 1.5mm P-P Sweep time: 20~200~20 HZ in 3 minute Duration: 3 hours in each X.Y.Z axis. (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	40 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.
5-4-4	耐冲击性 Shock	在 X.Y.Z 上 6 个方向上,以 294m/s2(30g 的力量)冲击下各 3 回.作用时间: 6ms 294m/s2{30G}, 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
			Discontinuity	1 micro-second Max.
5-4-5	耐热性 Heat Resistance	85±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	40 milliohms Max.

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项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】		
5-4-6	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	40 milliohms Max.
5-4-7	耐湿性 Humidity	温度: 60±2°C 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 60±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	40 milliohms Max.
			耐电压 Dielectric Strength	Must meet 5-2-3
			绝缘阻抗 Insulation Resistance	100 Meg ohm Min.
5-4-8	温度变化 Temperature Cycling	从-40°C持续 30 分钟升至+85°C持续 30 分钟, 循环 1000 次. 1000 cycles of: a) -40°C 30 minutes. b) +85°C 30 minutes. (Based upon EIA-364-32B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
5-4-9	盐水喷雾 Salt Spray	在温度 35±2°C, 盐水浓度 5±1%下, 盐水喷雾 48± 4 小时. 48±4 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	40 milliohms Max.

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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 th 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 th Withdrawal (kgf Min.)
02	1.10	/	06	3.29	/
03	1.65	/	07	3.84	/
04	2.19	/	08	4.39	/
05	2.74	/			

注：以上插拔次数为 30 次

Note: Insertion and Withdrawal for 30Cycles