

<b>Product Specification(产品规格书)</b>	<b>Issued By: Engineering Dept.</b>	
<b>Subject (主题):</b> 2.00mm Pitch KR2022 Series Connector Specification	<b>Date Issued</b>	2023/04/09
	<b>Date Revised</b>	2023/04/09
<b>Document Number:</b> PS-KR2022-01	<b>Revised /Edition</b>	A01

### 1.0 适用范围 (Scope)

此种规格包括2.00mm Pitch KR2022Series 连接器规格说明.

This Specification Covers the 2.00mm Pitch KR2022 Series Connector Specification.

### 2.0 规格与料号 (Spec and Part number)

规格内容 <b>Specification</b>	产品料号 <b>Production No.</b>	产品图示 <b>Picture of Product</b>
胶壳/Housing&锁扣/TPA	H202201**0101A/H202201**2411A	
端子/Terminal	T20220P*****A	
针座/Wafer	C2014VD1****M01**PA C2014RD1****M01**PA C2014RS1****M01**RA C2014VS1****M01**RA	

### 3.0 材质与表面处理 (Disposal of Material and surface)

规格内容 <b>Specification</b>		材质 <b>Materials</b>	表面处理 <b>Disposal of Surface</b>	
胶壳/Housing & 锁扣/TPA		PA66/PBT	UL94 V-0	
端子/Terminal		Phosphor bronze	Tin/Gold Plated Over Nickel	
针座/ Wafer	SMT Type	主体 Base	PA9T or LCP	
		导体 Contact	Brass	
		固定片 Solder tab	Brass	
	DIP Type	主体 Base	PA9T or LCP	UL94 V-0
		导体 Contact	Brass	Matte-Tin/Gold Plated Over Nickel
		固定片 Solder tab	None	None

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

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**4.0 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(24AWG)	
使用温度范围Ambient temperature Range	-40°C ~ +125°C	
适用线径Applicable wire insulation O.D	AWG 20# ~24# Insulation O.D. 1.40 to 1.60 mm	

**5.0 电气性能 (Electrical Performance)**

项 目 Item	条 件 Test Condition	规 格 Requirement
5.1 接触阻抗 Contact Resistance	公母配合,开放电压 20mV 最大,电流 100mA最大 检测连接器A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 100mA MAX. (Based upon EIA-364-23C)	25 milliohms Max.
5.2 绝缘阻抗 Insulation Resistance	公母配合,对相邻两接触导体,于1分钟内施 加500V 的直流电,并量测其间绝缘阻抗. Mate connectors, apply 500V DC for 1 minute between adjacent contacts to measure the insulation resistance. (Based upon EIA-364-21B)	1000 Megohms Min.
5.3 耐电压 Dielectric Strength	公母配合,在相邻端子或端子与接地端之 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)	无损毁或出现电火花 No Breakdown and Flashover

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## 6.0 机械性能 (Mechanical Performance)

	项 目 Item	条 件 Test Condition	规 格 Requirement			
6.1	插拔力 Insertion & Withdrawal Force	以每分钟 $25.4 \pm 3$ mm的速率插入和拔出。 (不包含卡榫结合力) Insert and withdraw connectors at the speed rate of $25.4 \pm 3$ mm/minute. (Excluding plastic detents) (Based upon EIA-364-13D)	参照第8.0项 Refer to paragraph 8.0			
6.2	端子插入力 Terminal Insertion Force	铆线后之端子插入胶壳。 Insert the crimped terminal into the housing.	1.0 kgf (9.8 N) Max.			
6.3	端子保持力 Terminal/Housing Retention Force	以每分钟 $25.4 \pm 3$ mm 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 $25.4 \pm 3$ mm/minute on the terminal assembled in the housing.	2.08 kgf (20 N) Min.			
6.4	Pin 针保持力 Pin Retention Force	以每分钟 $25.4 \pm 3$ mm 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 $25.4 \pm 3$ mm/minute.	1.2 kgf (11.76 N) min.			
6.5	端子压接 Terminal Crimping Specification	Wire Size	24 AWG	22AWG	20 AWG	
		①	Crimp width	1.25±0.1		
			Crimp height	0.65±0.05	0.74±0.05	0.80±0.05
		②	Crimp width	1.60 Max		
			Crimp height	1.55±0.10	1.45±0.10	1.30±0.10
		Crimp strength (kgf)	4 Min.	4 Min	6 Min.	
		Stripping (mm)	1.6~2.3			
①Conductor(mm) ②Insulation(mm)						

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**7.0 环境性能及其它 (Environmental Performance and Others)**

项 目 Item		条 件 Test Condition	规 格 Requirement	
7.1	耐久性 Durability	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. (Based upon EIA-364-09C)	接触阻抗 Contact Resistance	40 milliohms Max.
7.2	温升测试 Temperature Rise	公母对插后,在通过额定电流下,所测定的温度. Carrying rated current load. (Based upon EIA-364-70B)	温升测试 Temperature Rise	30°C Max.
7.3	耐振动性 Vibration	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)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.
7.4	耐冲击性 Shock	在 X.Y.Z 上 6 个方向上,以 490m/s <sup>2</sup> (50g) 冲击下各 3 回. 490m/s <sup>2</sup> {50g}, 3strokes in each X.Y.Z. axes. (Based upon EIA-364-27B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.
7.5	耐热性 Heat Resistance	125±2°C, 96 hours. (Based upon EIA-364-17B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
7.6	耐寒性 Cold Resistance	-40±2°C, 96 hours. ( Based upon EIA-364-59)	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	
7.7	耐湿性 Humidity	温度: 40±2℃ 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 40±2℃ Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
			耐电压 Dielectric Strength	Must meet 5.3
			绝缘阻抗 Insulation Resistance	100 Megohms Min.
7.8	热冲击 Thermal shock	以-40℃持续30分钟经室温5分钟,而后以125℃持续30分钟再经室温5分钟为一个循环,共循环5次. One Cycle Consists Of: -40℃ for 30 minutes. → Room Temp. 5 minutes, +125℃ for 30minutes. → Room Temp. 5 minutes Total Cycles: 5 Cycles. (Based upon EIA-364-32B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
7.9	盐水喷雾 Salt Spray	在温度35±2℃,盐水浓度5±1%下,盐水喷雾24小时. 24 hours exposure to a salt spray from the 5±1% solution at 35±2℃. (Based upon EIA-364-26B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	40 milliohms Max.
7.10	焊锡附着性 Solder-ability	焊接时间: 3±0.5 秒. 焊接温度: 245±5℃. Soldering Time: 3±0.5 second. 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.

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7.11	焊锡耐热性 Solder-Resistance	SMT型产品，能够承受焊锡耐热范围。 SMT type products, able to withstand the solder heat resistance range. 参考温度曲线图9.1 Refer to Temperature Profile9.1 (Based upon EIA-364-56D)	外观 Appearance	无异状 No Damage
		DIP型产品，能够承受焊锡耐热范围。 DIP type products, able to withstand the solder heat resistance range. 参考温度曲线图9.2 Refer to Temperature Profile9.2 (Based upon EIA-364-71B)	外观 Appearance	无异状 No Damage

**8.0 综合插入力及拔出力 (Insertion/withdrawal force)**

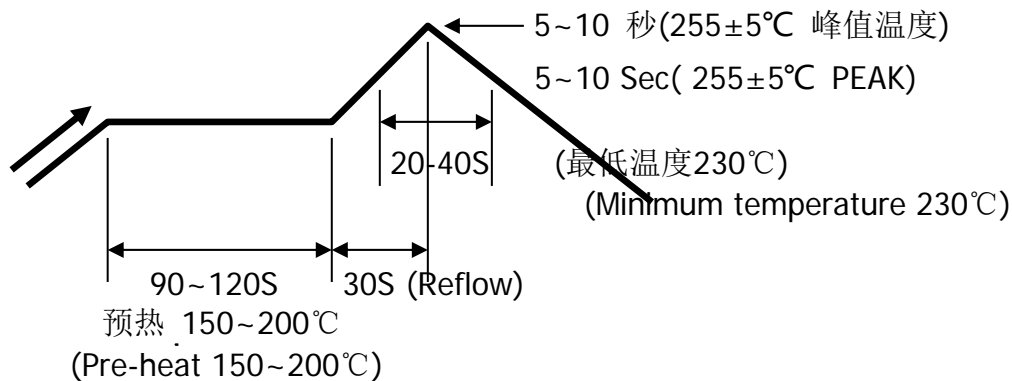
<Unit: kgf>

No. of Circuits PIN数	At Initial 首次插入与拔出力 (初始值)		At 30 <sup>th</sup> 30次插入 与拔出后	No. of Circuits PIN数	At Initial 首次插入与拔出力 (初始值)		At 30 <sup>th</sup> 30次插入与 拔出后
	I.F.(MAX.) 插入力	R.F.(MIN.) 拔出力			R.F.(MIN.) 拔出力	I.F.(MAX.) 插入力	
2	1.5	0.20	0.15	9	5.0	0.90	0.85
3	2.0	0.30	0.25	10	5.5	1.00	0.95
4	2.5	0.40	0.35	11	6.0	1.10	1.05
5	3.0	0.50	0.45	12	6.5	1.20	1.15
6	3.5	0.60	0.55	13	7.0	1.30	1.25
7	4.0	0.70	0.65	14	7.5	1.40	1.35
8	4.5	0.80	0.75	15	8.0	1.50	1.45

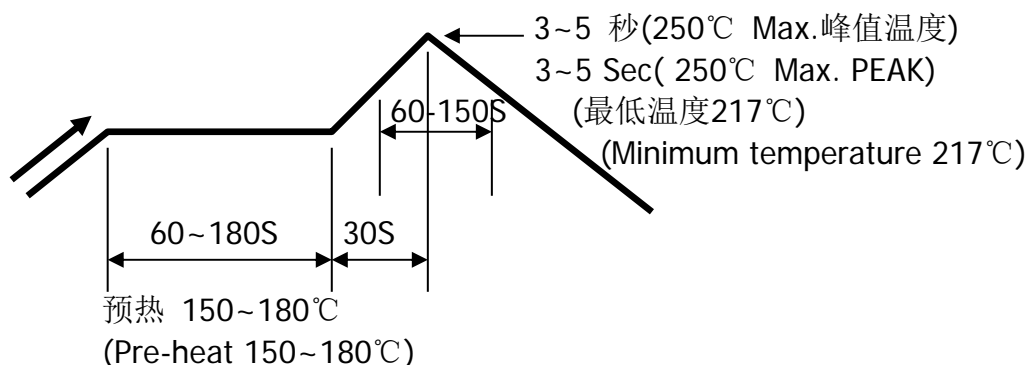
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**9.0 温度曲线 (Temperature Profile)**

**9.1 SMT红外线回流曲线(SMT Infrared Reflow Profile)**



**9.2 波峰焊曲线(Wave soldering profile)**



注：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焊接条件.

Notes: Please check welding conditions by your own devices beforehand. Because the condition changes by the soldering devices, P.C.boards, and so on.

**10.0 备注 (Remark)**

有关规格书内容经变更或改版,如未能及时发布与通知,烦请联系我司业务人员提供产品最新资讯

Any change or revision for the product specification will not be announced in advance. Please contact our sales representative for the latest information.

Written: Arvin

Checked: /

Approved: Min xinhao