KONNRA	东莞市康瑞电子有限公司	
• • **Product Specification(产品规格书)**	**Issued By: Engineering Dept.**	
Subject (主题): 30+4P&30+8P 2.00mm Pitch KR2021 Series Connector Specification	**Date Issued**	2023/6/19
	Date Revised	2023/6/19
Document Number： PS-KR2021-01	**Revised /Edition**	A1

1.0 适用范围 (Scope)

此种规格包括30+4P&30+8P 2.00mm Pitch KR2021Series 连接器规格说明.

This Specification Covers the 2.00mm Pitch KR2021 Series Connector Specification.

2.0 规格与料号 (Spec and Part number)

规格内容 **Specification**	产品料号 **Production No.**
胶壳/Housing/下胶壳/Bottom Housing	H20210***240*A
TPA/CPA	H202121342401A/H202131342401A
端子/Terminal	T20210C***01A
MX Header Housings/主体	/
PIN/PIN 针	/

3.0 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**
胶壳/Housing /下胶壳/Bottom Housing	PA66 GF35%	UL94 V-0/HB
TPA / CPA	PA66 GF50%	UL94 V-0/HB
端子/Terminal	Phosphor bronze	Tin/Gold Plated Over Nickel
MX Header Housings/主体	SPS GF30%	UL94 V-0/HB
导 体 /Contact	BRASS	Tin/Gold Plated Over Nickel

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

端子压接 Terminal Crimping Specification	Wire Size		24 AWG	26 AWG	28 AWG
	①	Crimp width	1.40±0.1		
		Crimp height	0.75±0 05	0.70±0.05	0.60±0.05
	②	Crimp width	1.60 Max		
		Crimp height	1.55±0.10	1.45±0.10	1.30±0.10
	Crimp stre th		3.63 Min.	2.27 Min	1.36 Min.
	Stripping (mm)		1.6～2.3		
	①Conductor(mm) ②Insulation(mm)				

4.0 额定等级 (Ratings and applicable wires)

项 目 **Item**	规 格 **Standard**	
额定电压Rated Voltage (Max.)	14V	AC/DC
额定电流Rated Current (Max.)	4A	
使用温度范围Ambient temperature Range	-40℃~+105℃	

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)	20 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)	100 Megohms Min.
5.3	温升 Temperatue Rise	配合端子:测量额定电流下的温升: 1008小时的台架测试 (每小时45分钟开、15分钟关) Mate terminals: measure the temperature rise at the rated current after: 1008 hours of bench top testing (45 minutes ON and 15 minutes OFF per hour)	温度上升到环境: 最高+55℃ Temperature rises over Ambient: +55 Cº MAX
5.4	耐电压 Dielectric Strength	配对连接器，在相邻端子或地之间施加1000V交流电1分钟。(根据环评-364- 20a) Mate connectors, apply 1000V 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

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 For e	插拔连接器的速度为50±6mm/分钟。(不包括塑料牙箍)(基于EIA-364-13D) Insert and withdraw connectors at the speedrate of 50±6mm/minute. (Excluding plastic detents) (Based upon EIA-364-13D)	插入力最大75牛顿 Mate 75 Newtons MAX 拔出力最大100牛顿 Unmate w/o latch 100 Newtons MAX. 带锁扣拔出力最小80牛顿 Unmate w/ latch 80 Newtons MIN.
6.2	端子保持力 Terminal Retention Force (in Housing)	对装配在外壳内的端子施加50±6mm/分钟的轴向拔力 Apply axial pull out force at the speed rate of 50±6mm/minute on the terminal assembled in the housing.	1:解锁中的TPA最小20牛顿 1: TPA in Un-Lock 20 Newtons MINIMUM. 2: TPA闭锁机构的最小55牛顿 2:TPA in Final-Lock 55 Newtons MINIMUM
6.3	端子插入力 Terminal Insertion Force (into Housing)	在端子上施加轴向插入力，速度为每分钟50±6mm。 Apply an axial insertion force on the terminal at a rate of 50 ± 6 mm per minute.	TPA最终锁定 最小30牛顿 TPA in Final-Lock 30 Newtons MINIMUM
6.4	连接器位置保证（CPA）啮合力 Connector Position Assurance (CPA) Engage Force	以每分钟50 ± 6 mm（2 ±¼英寸）的速度对CPA施加轴向插入力。 Apply an axial insertion force on the CPA at a rate of 50 ± 6 mm per minute.	配合连接器： 最大22牛顿 Mated Connector: 22 Newtons MAXIMUM 未配合的连接器： 最小50牛顿 Unmated Connector: 50 Newtons MINIMUM
6.5	连接器的位置保证(CPA)脱离力 Connector Position Assurance (CPA) Extraction Force	以每分钟50 ± 6 mm（2 ±¼英寸）的速度对CPA施加轴向插入力。 Apply an axial pullout force on the CPA at a rate of 50 ± 6 mm per minute.	最小10牛顿 10 Newtons MIN. 最大50牛顿 50 Newtons MAX.
6.6	连接器位置保证（CPA）提取力 Connector Position Assurance (CPA) Extraction Force	以每分钟50 ± 6 mm（2 ±¼英寸）的速度对CPA施加轴向插入力。 Apply an axial pullout force on the CPA at a rate of 50 ± 6 mm per minute.	最小25牛顿 25 Newtons MINIMUM
6.7	保证(TPA)脱离力 Assurance (TPA) Extraction Force (in housing)	将TPA从最终位置提取到解锁位置的力，速率为50±6mm每分钟。 The force to extract the TPA from the final position to the unlock pos ition at a rate of 50 ± 6 mm per minute.	最小20牛顿 20 Newtons MIN. 最大45牛顿 45 Newtons MAX.

7.0 环境性能 (ENVIROMENTAL REQUIREMENTS)

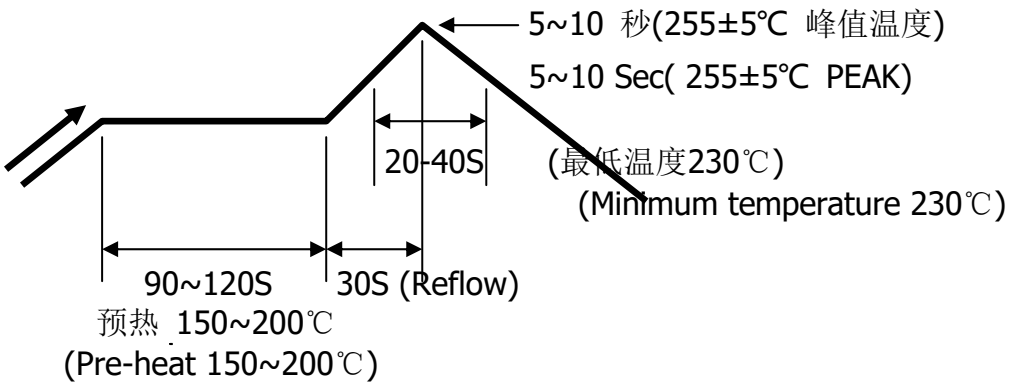
项 目 **Item**		条 件 **Test Condition**	规 格 **Requirement**
7.1	耐久 Durability	在环境测试之前，将连接器配对10次 Mate connectors up to 10 cycles prior to environmental tests.	20 milliohms MAX.
7.2	热冲击 Thermal Shock	按耐久性配对连接器;暴露于300次循环: 持续时间(分钟) -40 +0/-3 30 +105 +3/-0 30 Mate connectors per durability; expose to 300 cycles of: Temperature Cº Duration (Minutes) -40 +0/-3 30 +105 +3/-0 30	20 milliohms MAX.
7.3	振动/机械冲击 Vibration/ Mechanical Shock (Electrical)	根据耐久性对连接器进行配对。连接器组件应振动(22小时/轴@ 2.13 Grms，132次冲击@ 25 g /轴，3次冲击@ 100 g /轴)，不与发动机耦合。 Mate connectors per durability. Connector assembly shall be vibrated for (22 hours / axes @ 2.13 Grms, 132 shocks @ 25 Gs / axes, 3 shocks @ 100 Gs / axes) Not coupled to engine.	20 milliohms MAX.
7.4	湿热循环 Humid Heat Cyclic	根据耐久性对连接器进行配对。受试者连接器系统GMW3191 2012温度/湿度剖面 Mate connectors per durability. Subject connector system GMW3191 2012 temperature/humidity profile	20 milliohms MAX.
7.5	潮湿的热常数 Humid Heat Constant	根据耐久性对连接器进行配对。将连接器系统置于85 +/-3° C和90 +/- 5%湿度下10天 Mate connectors per durability. Subject connector system to 10 days @ 85 +/-3 °C and 90 +/-5 % humidity	20 milliohms MAX.
7.6	热暴露 High Temperature Exposure	根据耐久性对连接器进行配对。将连接器系统置于105℃下1008小时。 Mate connectors per durability. Subject connector system to 105 Cº for 1008 hours.	20 milliohms MAX.

7.0 环境性能 (ENVIROMENTAL REQUIREMENTS)

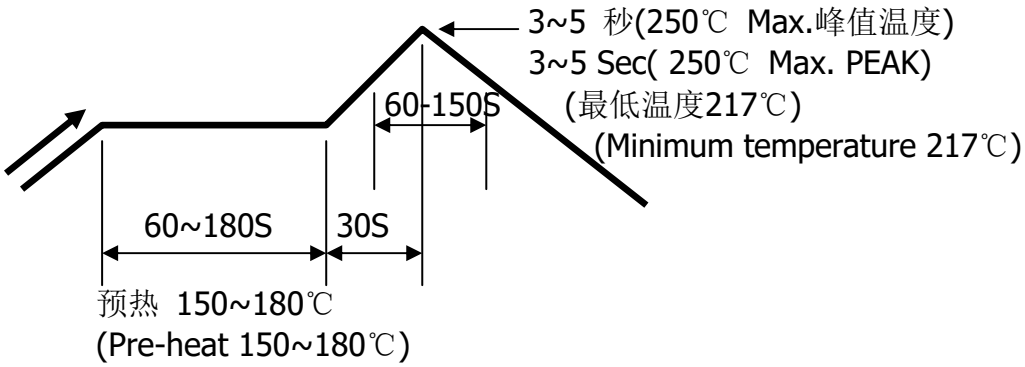
项 目 **Item**		条 件 **Test Condition**	规 格 **Requirement**
7.7	焊锡附着性 Solderability	根据EIA-364-52。 Per EIA-364-52.	Solder coverage: 95% MINIMUM(per SMES-152)
7.8	IR工艺焊接 IR Process Soldering	最高温度：260℃。 Maximum temperature:260℃.	Visual inspection.

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 beannounced in advance. Please contact our sales representative for the latest information.

Written: Arvin Checked: / Approved: WESLEY