25062 系列

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1、 范围 Scope

本产品规格书适用于浙江珠城科技股份有限公司生产的 25062 系列塑壳连接器

This Specification covers the 25062 series housing connector made by ZHEJIANG ZUCH TECHNOLOGY CO., LTD.

2、 相关标准 Related Standards

注：本规格书为系列产品通用，当规格书参数要求与产品图纸发生冲突时，以产品图纸中的要求为准，当规格书参数与参考标准内容冲突时，以本规格书中的要求为准。

Note: This specification is for one full series normal version. If this specification has any conflicting items with products drawings, should take product drawings as right one. If any parameter is this specification conflict with reference standard, should take the parameter in this specification as right one.

参考文件：Reference standard.

GB/T 2421 电工电子产品环境试验 第一部分 总则

Testing Method for Environmental of Electrical Connectors Class 1: General Principles

GB/T 2423 电工电子产品环境试验方法

Testing Method for Environmental of Electrical Connectors

GB/T 2424 电工电子产品环境试验导则

Testing Method for Environmental of Electrical Connectors

GB/T 5095 电子设备用机电元件基本试验规程及测量方法

Testing procedure/Method for components of electric equipment

GB/T 5095 电工电子产品着火危险试验第11 部分灼热丝/热丝基本实验方法成品的灼热丝可燃性试验方法

Fire hazard testing for electric and electric products — Part 11: Glowing/hot-wire based test methods - Glowing-wire flammability test method for end-products.

3、 产品描述 Product Description

产品名称 Product name	规格型号 Part No.	材质 Material	阻燃等级	压接范围 Applicable Wire Size	备注 Remarks
250 平板直插 250 tablet in line	TP25062K-*	黄铜 Brass	/	AWG 18#-14#	镀锡 Tin-plating
250 插片 250 insert	TR25062K-*	黄铜 Brass	/	AWG 18#-14#	镀锡 Tin-plating
6.3 公端 6.3 Male End	HP25062K-1Y	PA66 GWT	UL94 V-0	/	公端 1 孔 Male end 1 hole
MG610043	HP25062K-2Y	PA66	UL94 V-2	/	公端 2 孔 Male end 2 hole
MG610043	HP25062K-2Y	PA66 GWT	UL94 V-0	/	公端 2 孔 Male end 2 hole
MG610045	HP25062K-3Y	PA66	UL94 V-2	/	公端 3 孔 Male end 3 hole
MG610045	HP25062K-3Y	PA66 GWT	UL94 V-0	/	公端 3 孔 Male end 3 hole
MG620040	HR25062K-1Y	PA66	UL94 V-2	/	母端 1 孔 Female end 1 hole
MG620040	HR25062K-1Y	PA66 GWT	UL94 V-0	/	母端 1 孔 Female end 1 hole
MG620042	HR25062K-2Y	PA66	UL94 V-2	/	母端 2 孔 Female end 2 hole
MG620042	HR25062K-2Y	PA66 GWT	UL94 V-0	/	母端 2 孔 Female end 2 hole
MG620044	HR25062K-3Y	PA66	UL94 V-2	/	母端 3 孔 Female end 3 hole
MG620044	HR25062K-3Y	PA66 GWT	UL94 V-0	/	母端 3 孔 Female end 3 hole

4、 参数范围 Parameter Ratings

额定电压 Rated Voltage	250V AC/DC	
额定电流 Rated Current	适用电线 Wire Size	电流 AC Current AC
	18AWG	7A
	16AWG	10A
	14AWG	15A
使用温度范围 Operation temperature range	-40℃～105℃ (含通电温度上升值) Including temperature rise	
存储条件 Storage conditions	温度 temperature：（-5~30）℃ 相对湿度 relative humidity≤70%	

5、 产品性能 Performance Specification

产品应满足电气,机械和环境性能要求，测试方法及判断标准如 5.1.、5.2、5.3、

所有测试在室温进行,除非另有说明.

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in 5.1,5.2 and 5.3.

All tests shall be performed in the room temperature, unless otherwise specified.

5.1 电气特性 Electrical Requirements

序号 COD	项 目 Test project	测试方法及条件 Test methods and conditions	标 准 规 格 Standard
5.1.1	外观 Appearance	目测 Visual inspection 视力 Eyesight：＞1.0 照明 Luminance：（200-300）1x 目测距离 Space：0.3-0.5m **GB/T 5095.2 Method 1a**	a. 塑料件应无明显疤痕、凹陷、开裂、变色及影响使用的变形。 Plastic parts shall not be no obvious scar, dent, crack, discoloration, deformation and other bad effects on use and test b. 金属件应无锈蚀氧化、无明显的机械损伤及电镀层脱落等。 Metal parts should no rust and oxidation, no obvious mechanical damage and plating off.
5.1.2	接触电阻 Contact Resistance	端子公母对插后，通过 20mV 电压，10mA 的电流，测试公母端接触电阻 Mate connectors：apply a maximum voltage of 20 mV at rated current of 10 mA	3 mΩ Max.(初始值) 3mΩ Max.(Initial) 6 mΩ Max.(试验后) 6mΩ Max.(final)
5.1.3	耐电压 Withstand voltage	相邻接触件之间或地线之间施加电压 1100V AC，时间 1 分钟。 1100 VAC for 1 minute.Test between adjacent circuits of mated connectors. **GB/T 5095.2 Method 4a / EIA-364-20B**	外观：无击穿和飞弧现象 No creeping discharge nor flashover shall occur. 漏电流：1mA Max Current leakage：1mA Max

5.1.4	绝缘电阻 Insulation resistance	在相邻的接触件这间或地线之间施加 500V DC 电压，持续时间 1min。 500V DC shall be applied a voltage of between adjacent contacts of a mated specimen to measure insulation resistance for one minute. **GB/T 5095.2 Method 3a / EIA-364-21C**	1000MΩ Min (初始值) 1000MΩ Min (initial value) 500 MΩ Min (实验后) 500 MΩ Min (After experiment)
5.1.5	温升 Temperature Rise	将产品串联在额定电压、电流的电路中，测量端子与导线连接处的温升值. Measure temperature rising at wire crimped by applied current to all positions.	Δ30℃ Max.
5.1.6	周期性载流（热循环） thermal cycle	完成温升测试操作后继续进行周期性载流测试，共测试 500 个循环周期，每个循环周期包含 45 分钟通电和 15 分钟断电，测试电流如下： After the testing No.4.1.3 finished, apply periodic current loading testing with total 500 cycles, 45 Minutes loading current and 15 minutes outage for one cycle, Loading current as following table	第 500 循环的温升应不会比第 24 循环的温升高 15℃，而且两者的温升都不应高于 85℃ The temperature of No. 500 cycle can not be higher more than 15℃ comparing with No. 24 cycle. The temperature of two cycles can not be higher than 85℃.

适用电线 Wire Size	电流 Current
18AWG	14A
16AWG	20A
14AWG	30A

4.2 机械特性 Mechanical Requirements

5.2.1	端子与塑壳的保持力 The holding force betwe terminal and the plastic	沿端子轴向插入端子和拉伸导线，测定端子脱出塑壳时的拉力。 Insert the terminal and stretch the wire along the terminal axis to measure the tension when the terminal comes out of the plastic case. **GB/T 5095.8 Method 15d / EIA-364-29B**	保持力:50N Min Retention force: 50N Min	
5.2.2	机械寿命 Durability	将产品与对配端进行 30 次插拔。 Plug and unplug the product with the mating end for 30 times. **GB/T 5095.5 Method 9a / EIA-364-09C**	外观无损伤 No damage to appearance	
5.2.3	振动 Vibration	振幅：1.5mm 振频率：10-55-10 Hz/1 分钟 持续时间：X-Y-Z 各 2 小时 Amplitude:1.5mm peak to peak Sweep:10-55-10 Hz in one minute Duration:2 hours in each X-Y-Z axis	外观：无损伤 Appearance: No Damage 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max 振动过程中，电路瞬断时间 不超过 1 μ sec. No electrical discontinuity greater than 1 μ sec.	
5.2.4	压着抗张强度 Crimp Tensile Strength	在实验装置夹头上固定实验样品，以 25±6mm/分钟的速度沿连接的轴线方向施加拉力 The experimental sample is fixed on the chuck of the experimental device, and the tension is applied along the axis direction of 25 + 6mm/ minutes	适用电线 Wire Size	抗张强度 Tensile Strength
			18AWG	89N Min.
			16AWG	133N Min.
			14AWG	223N Min.

5.2.5	机械冲击 Mechanical shock	插合连接器，串联在直流电源上，允许电流100mA；在冲击试验台上，模拟正常工作状态，在三个互相垂直方向的每一方向连续施加三次冲击，即共 18 次，冲击加速度为 490m/s2（50G），脉冲持续时间为 11ms，施加波形为半正弦波。 The plug-in connector is connected in series with the DC power source and allows the current 100mA; the normal working state is simulated on the impact test platform, and the three is in the two Three shocks are applied continuously in each direction, i.e., 18 times, the impact acceleration is 490m/s2 (50G), and the pulse duration is constant Time is 6ms, and the waveform is half sine wave. Test equipment should be installed in the test, the instantaneous opening time should not exceed 1 s. **GB/T 5095.4 Method 6c / EIA-364-27B**	试验后应无影响正常操作的损伤 There should be no damage to normal operation after the test. 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max 振动过程中，电路瞬断时间不超过 1 μ sec. No electrical discontinuity greater than 1 μ sec.

4.3 环境特性 Environmental Requirements

5.3.1	冷热冲击 Thermal Shock	端子公母端插接后置于实验装置中进行循环测试，按下列步骤调试温度： a) 在(85+3/-0)℃的恒温条件下放置 30min； b) 在+25℃常温条件下放置不超过 5max, c) 在(-55+0/-3)℃的恒温条件下放置 30min； d) 在+25℃常温条件下放置不超过 5max, 从 a)到 d)为一个循环周期，共进行 25 个循环，恢复 1~2h。 The male and female terminals of the terminal are inserted into the experimental device to be tested in circulation, Temperature ℃ Duration (Minutes) a 85+3/-0 30 b +25 5Max. c -55+0/-3 30 d +25 5Max. Step a to d is one cycle, 25 cycles shall be tested. Recovery time 1~2 hours. **GB/T 5095.6 method 11d / EIA-364-32C**	外观：无损伤 Appearance: No Damage 绝缘电阻：500 MΩ Min Insulation resistance：500 MΩ Min 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max 耐电压：满足 5.1.3 Withstand voltage：meet 5.1.3

5.3.2	高温测试 Heat Resistance	将嵌合状态下的插头与插座在温度为 105±5℃的高温环境中连续放置 96 小时，然后测量其两端接触电阻。 The plug and socket in the embedded state are continuously placed in the high temperature environment with a temperature of 105±5 DEG C for about 96 hours, and then the contact resistance is measured. **GB/T 5095.6 Method 11i / EIA-364-17B**	外观：无损伤 Appearance: No Damage 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max
5.3.3	低温测试 Cold Resistance	将样品放进温度为-30℃的低温箱存放96小时后待其恢复到室温。 The sample is placed in a low temperature box with a temperature of -30 DEG C for 96 hours, and then it is returned to the room temperature. **GB/T 5095.6 Method 11j**	外观：无明显变形、开裂等对使用有影响的缺陷。 Appearance: No obvious deformation, cracking and other defects affecting the use 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max
5.3.4	耐湿性 Humidity	端子公母端插接后置于实验装置中进行测试 温度：40℃ 湿度：90-95% 持续时间：96 小时 The male and female terminals are inserted into the experimental device to be tested Temperature：40℃ Humidity：90-95% Duration：96 hour **GB/T 5095.6 Method 11c /EIA-364-31B**	外观：无露出底金属的严重锈蚀 Appearance：No erosion with material exposed is acceptable 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max
5.3.5	盐水喷雾 Salt spray	端子公母端插接后置于实验装置中进行测试 盐水浓度：5% 温度：35+1/-2℃ 持续时间：48 小时 The male and female terminals are inserted into the experimental device to be tested Salt concentration:5% Temperature：35+1/-2℃ Duration：48 hour	外观：无露出底金属的严重锈蚀 Appearance：No erosion with material exposed is acceptable 接触电阻：6 mΩ Max Contact Resistance：6 mΩ Max

6、 测试分组 Test Sequences

序号	测试项目 Test item	A	B	C	D	E	F	G	H
5.1.1	外观检测 Appearance	1	1	1	1	1	1	1	1
5.1.2	接触电阻 Contact Resistance			2	2		2		2
5.1.3	耐电压 Withstand Voltage						3		
5.1.4	绝缘电阻 Insulation Resistance						4		
5.1.5	温升 Temperature Rise	2							
5.1.6	周期性载流（热循环）thermal cycle	3							
5.2.1	端子与塑壳的保持力 The holding force between the terminal and the plastic		2						
5.2.2	机械寿命 Durability			3					
5.2.3	振动 Vibration				3				
5.2.4	压着抗张强度 Crimp Tensile Strength					2			
5.2.5	机械冲击 Mechanical Shock				4				
5.3.1	冷热冲击 Thermal Shock						5		
5.3.2	高温测试 Heat Resistance						6		
5.3.3	低温测试 Cold Resistance							3	
5.3.4	耐湿性 Humidity						7		
5.3.5	盐水喷雾 Salt spray								3