蝶形刺破端子（MAG-MATE terminal Series）

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文 件 修 订 履 历(Modify history)				
标记 Tag	修订日期 revision date	修 订 内 容 摘 要 Revision content	修订者 reviser	备 注 Note
1	2024/07/03	初版发行 The first edition	王佩双	

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编号: Document Number:	PS-166	版本: Revision:	A00	发行日期: Release Date:	2024/07/03

1、范围 Scope

本规格书规定本公司刺破端子系列产品。
This specification covers the MAG-MATE terminal Series.

2、产品描述 Product Description

产品名称 Product name	规格型号 Part No.	材质 Material	表面处理 Surface
蝶形刺破端子	TR20013G-1701	黄铜（Brass）	高温雾锡
蝶形刺破短端子	TR20015G-1301	黄铜（Brass）	亮锡

3、参数范围 Parameter Ratings

额定电压 Voltage Rating	依据相应的绕组 According to applied winding
额定电流 Current Rating	依据所用的导线尺寸 According to applied wire size
温度范围 Temperature Rating	-40℃～+125℃

4、产品性能 Performance Specification

产品应满足电气,机械和环境性能要求

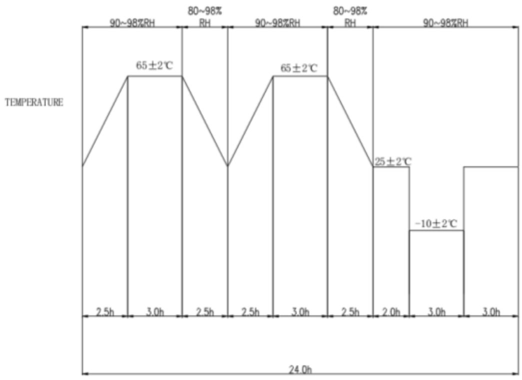
根据 EIA-364，所有试验应在环境条件下进行，除非另有规定。.

The product should meet the electrical, mechanical and environmental performance requirements

As shown in the table All tests shall be performed at ambient environmental conditions per EIA-364 unless otherwise specified

4.1 测试项目及条件 Test Content and Conditions

序号 COD	项 目 Test project	测试方法及条件 Test methods and conditions	标 准 规 格 standard
4.1.1	外观 Appearance	EIA-364-18 目测 Checking by eye 视力 Eyesight：＞1.0 照明 Lamp：（200-300）lx 目测距离 Space：0.3-0.5m	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.
电气特性 Electrical R equirements			
4.1.2	接触电阻 Low Level Contact Resistance	EIA-364-23 将试样置于最大100毫安和最大20毫伏的开路电压下，测量刺破位置的接触电阻 Subject specimens to 100 milliamperes maximum and 20 millivolts maximum open circuit voltage,measure the contact resistance at the punctured location.	接触电阻：5mΩ Max. Contact resistance:5mΩ Max.
4.1.3	电流循环 Current Cycling	EIA-364-55 在规定电流下，对试样进行 250 次 15 分钟开启和 15 分钟关闭的循环，见图一 Subject specimens to 250 cycles of 15 minutes ON and 15 minutes OFF. Read initially and after final cycles.Measure the resistance of The last cycle,See Figure 1	外观：无损伤 Appearance: No Damage. 接触电阻：10mΩ Max. Contact resistance:10mΩ Max.
4.1.4	端子与塑壳保持力 Retention force	EIA-364-8 沿端子轴向插入端子和拉伸导线，测定端子与插入塑壳的力和脱出时的拉力。 Insert the terminal and the stretching wire along the terminal axially, and measure the insertion force and retention force between the terminal and the housing.	保持力:40N Min Retention force:40N Min

环境特性 Environmental Requirements			
4.1.5	热冲击 Thermal Shock	EIA-364-32 Test Condition III 在-40℃和+125℃之间对试样进行25次循环，每个极端温度下30分钟，转换过渡时间小于1分钟 Subject specimens to 25 cycles between -40 and 125° C with 30 minute dwells at temperature extremes and less than 1 minute transition time between temperatures. Measure LLCR initially and after testing	外观：无损伤 Appearance: No Damage 接触电阻：10mΩ Max. Contact resistance:10mΩ Max.
4.1.6	温湿度循环 Humidity/temperature cycling.	EIA-364-31 Method III 在80%至100%相对湿度条件下，温度在25℃至65℃，进行10次循环（10天） Subject specimens to 10 cycles (10 days) between 25 and 65° C at 80 to 100% RH. Measure LLCR initially and after testing 	外观：无损伤 Appearance: No Damage 接触电阻：10mΩ Max. Contact resistance:10mΩ Max.
4.1.7	温度寿命 Temperature Life	EIA-364-17 Method A 118℃下33天 Subject specimens to 118° C for 33 days. Measure LLCR initially and after testing	外观：无损伤 Appearance: No Damage 接触电阻：10mΩ Max. Contact resistance:10mΩ Max.

备注：应符合外观要求，无物理损伤，并满足附加要求，测试顺序符合 4.2

NOTE: Shall meet visual requirements, show no physical damage, and meet requirements of additional, Test Sequence shown in 4.2

4.2 测试分组 Test Sequences

NO.	项目 Item	测试顺序 TEST SEQUENCE			
		A	B	C	D
1	外观 Appearance	1	1	1	1
2	接触电阻 Low Level Contact Resistance	2			2
3	电流循环 Current Cycling		2		
4	端子与塑壳保持力 Retention force			2	
5	热冲击 Thermal Shock	4			
6	温湿度循环 Humidity/Temperature Cycling	3			
7	温度寿命 Temperature Life				3

4.3 测试条件 Test Conditions

除非另有规定，否则所有组合实验应在下列条件下进行。

Unless otherwise specified, all the tests shall be performed in any combination of the following test

室温 Temperature	15℃- 35℃
相对湿度 Relative Humidity	45%-75%
大气压 Atmospheric Pressure	86.6-106.6 kPa

4.4 样品准备 Sample preparation

每个试验组至少应包括 5 个试样

Each test group shall consist of a minimum of 5 specimens.

电流要求（图 1）

Current requirement(Figure1)

Wire Size (AWG [mm Ø])	Current Carrying Capacity (amperes)			Wire Size (AWG [mm Ø])	Current Carrying Capacity (amperes)	
	Copper wire	Aluminum wire			Copper wire	Aluminum wire
18 [1.02]	13	9.0		27[0.36]	3.5	2.4
19[0.91]	11	7.7		28[0.32]	3.0	2.1
20[0.81]	10	7.0		29[0.29]	2.5	1.7
21[0.72]	9	6.3		30[0.25]	2	1.4
22[0.65]	8	5.4		31[0.23]	1.5	1.0
23[0.57]	7	4.9		32[0.20]	1	0.7
24[0.51]	6	4.2		33[0.18]	1	0.7
25[0.46]	5	3.5		34[0.16]	0.75	0.5
26[0.40]	4	2.8				