江苏宇飞特电子科技有限公司
Jiangsu Yufeite Electronic Technology Co., Ltd

承 认 书

SPECIFICATION FOR APPROVAL

客户名称：
CUSTOMER _____

产品名称：
PART NAME 圆形贴片压敏电阻 Round Patch Varistor

产品规格：
PART NUMBER _____

日期：
DATE 2023/07/30

	供应商确认签章栏 Supplier Confirmation Signature Column	
品质部 Quality Department	工程部 Engineering Department	批准 Ratify
谢超	林林	于光哲

	客户确认签章栏 Customer Confirmation Signature Column	
品质部 Quality Department	工程部 Engineering Department	批准 Ratify

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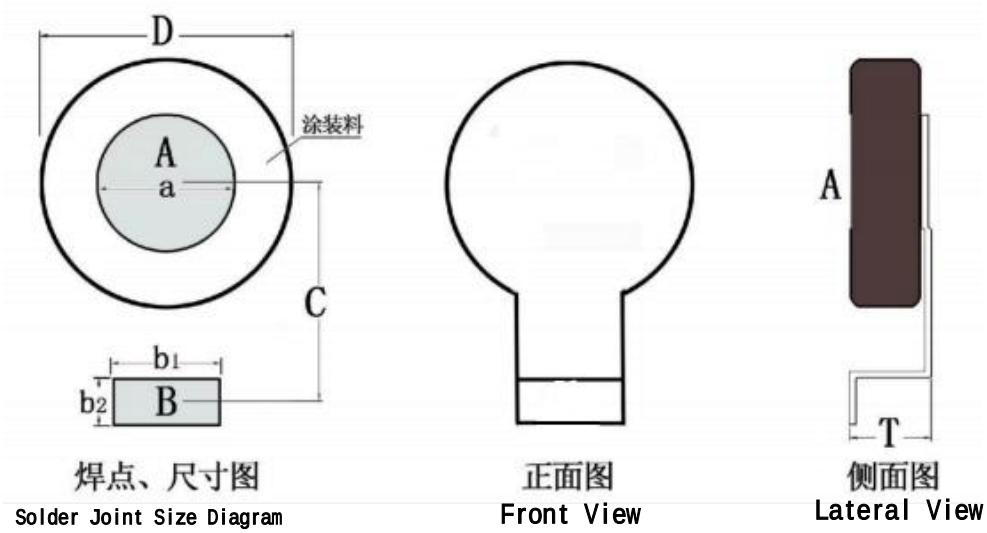
一 、尺寸、外观标志及封装 (mm)

I. Dimensions, Appearance Identification and Packaging (mm)

1- 1 外形尺寸及外观

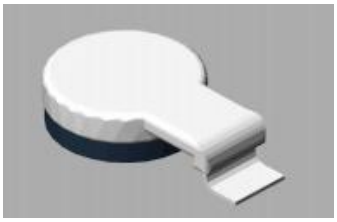
1- 1 External dimensions and appearance



焊点、尺寸图 Solder Joint Size Diagram　　正面图 Front View　　侧面图 Lateral View

型号 Model YFT~	焊盘A Bonding Pad A	焊盘B Bonding Pad B		焊盘中心距C Pad Center Distance C	直径D DIA-D	厚度T TH-T	涂装料及备注 Coating Materials and Remarks （绝缘漆） Insulation Varnish
	Φa	b1	b2				
5D271	3.9	2.9	2.0	5.0	**5.0**	**2.0**	**颜色Colour 白色White 270VDC±10%； 470VDC±10%； 560VDC±10%。 620VDC±10%。 15寸托盘编带封装: 15 "pallet braid package 05D 3000PCS; 07D 2000PCS; 10D 1600PCS.**
5D511						**2.5**	
5D471 5D561						2.9	
7D271	5.5	2.9	2.0	5.0	**7.0**	**2.0**	
7D511						**2.9**	
7D471 7D561						2.9	
10D271	**8.0**	**4.0**	**2.5**	**8.25**	**10.0**	**2.0**	
10D471 10D561						**3.0**	
10D621	8	4	2.5	8.25	10	**3.0**	

1-2 3D 效果图 3D Rendering



二、电气性能

II. Electrical Performance

系列型号 Series/ Model YFT~	压敏电阻 VDC Pressure nsitive ance VDC	最大允许回路电压 Maximum Allowable Circuit Pressure		最大限制电压（8/20us） Maximum Limiting Pressure (8/20us)		能量耐量 Energy Tolerance Dose		最大通流能量 Maximum Circulation Energy		最大静态功率 Maximum Static Power	电容量 Electric Capacity	VI特性曲线 VI Characteristic Curv	脉冲降额曲线 Pulse Derating Curve
		VAC	VDC	VAC	AIp	标准	高能	标准品	高能品	W	pF		
5D271	270±10%	175	225	475	5A	8.5	11.0	400	800	0.1	98	附件一 Attachment I	附件二 Attachment II
5D471	470±10%	300	385	810	5A	15.0	21.0	400	800	0.1	55		
5D511	510±10%	320	415	845	5A	16.0	22.5	400	800	0.1	50		
5D56 1	560 ±10%	350	460	920	5A	16.8	24.0	400	800	0.1	45		
7D271	270±10%	175	225	475	10A	18.0	32.2	1.2K	1.75K	0.25	150		
7D471	470±10%	300	385	810	10A	29.0	56.0	1.2K	1.75K	0.25	100		
7D511	510±10%	320	415	845	10A	31.0	56.0	1.2K	1.75K	0.25	90		
7D56 1	56 0±10%	350	460	920	10A	35.0	56.0	1.2K	1.76K	0.25	90		
10D271	270±10%	175	225	475	25A	37.0	57.4	2.5K	3.5K	0.40	350		
10D471	470±10%	300	385	810	25A	67.0	99.4	2.5K	3.5K	0.40	230		
10D511	510±10%	320	415	845	25A	69.0	99.4	2.5K	3.5K	0.40	210		
10D561	56 0±10%	350	460	920	25A	70.0	99.4	2.5K	3.5K	0.40	180		
10D621	620±10%	385	505	1025	25A	72.0	102.2	2.5K	3.5K	0.40	190		

针对不同的应用电压环境，推荐如下压敏组合对ACLED提供过压、浪涌、雷击防护：

For different voltage application environments, we recommend the following pressure sensitive combinations to provide overvoltage, surge and lightning stroke protection for ACLED.

工作电压环境 Working Voltage Environment	**前级压敏参数 Last-level Pressure Sensitive Parameter**	**后级压敏参数 Next-level Pressure Sensitive Parameter**	**备注 Remarks**
110VAC±20%	270VDC±10%		两级压敏可提升至4KV防雷，用户根据对防浪涌等级需求选用压敏体积大小配合 。 Tow levels of pressure sensitive combinations can be improved to 4KV lightning protection; user can select pressure sensitive volume as needed.
220-230VAC±20%	51 0VDC±10%	470VDC±10%	
240VAC±20%	560VDC±10%	51 0VDC±10%	印度、巴西国家推荐该组合 The combination is recommended for users in Indian and Brazil.

因为压敏电阻在电压波动较大的环境中容易劣化的特性，所以在灯板上 IC(MOS 管)+灯珠耐压足够大及电压波动较大区域的前提下，尽可能选用压敏电压值较高的组合，并在成本允许的前提下尽可能选择流通量大且体积尺寸大的压敏电阻 。

Since pressure sensitive resistor is easy to degrade under the environment with strong voltage fluctuation, it is required to select the combination with high pressure sensitive

voltage value as much as possible under the premise that withstand voltage of IC (MOStube) +lamp bead on lamp board is pretty high and that voltage has a large fluctuation area; besides, it is necessary to select pressure sensitive resistor with large circulation and volume as far as possible, without exceeding cost limit.

三、交收检验

III. Acceptance

抽样方法按GB2828-87符合该规格书要求。

Sampling should follow GB2828-87 and this Specification.

项　目 Item	**IL**	**AQL**
4- 1 外观、尺寸、标志 4- 1 Appearance, Dimension and Logo	II	0.65
4-2 压敏电压 4-2 Pressure Sensitive Voltage	II	0.65
4-3 电容量 4-3 Electric Capacity	**S-3**	0.65
4-4 可焊性 4-4 Weldability	**S-3**	2.5

四、使用环境条件

IV. Using Environment Condition

环境温度 Environment Temperature	-40－125℃
相对湿度 Relative Humidity	≤95%
大气压 Atmospheric Pressure	86－106Kpa
振动频率 Vibration Frequency	10－50HZ
加速度 Acceleration	98m/S²
贮存温度 Storage Temperature	-40－85℃

五、其他性能
V. Other Properties

项　目 Item	技 术 要 求 Technical Requirement	测试条件及试验方法 Testing Condition and Method
4- 1 外观 4- 1Appearance	无明显气泡、针孔等缺陷；无任何降低使用性的可见性损伤；标志清晰耐久。 No obvious bubble, pinhole and other defects; no any visible damage lowering using performance; clear and long-lasting sign	目　测 Visual inspection
4-2 可焊性 4-2Weldability	浸锡部分上锡均匀,上锡面积≥90%。 Tin is uniform in tin immersion part; tinned area is ≥90%.	将压敏电阻导线侵入235℃±5℃的焊锡液中2±0.5s取出，观察外观。 Soak pressure sensitive resistor into 235℃±5℃ tin soldering liquid for 2±0.5 s; then take it out and observe its appearance.
4-3 耐焊接热 4-3 Resistance to Soldering Heat	试验前后压敏电压变化率≤±5% Change rate of pressure sensitive voltage before and after test is ≤±5%.	将压敏电阻导线侵入350℃±10℃的焊锡液中，侵入深度距基座平面2-0.5mm，采用1.5±0.2mm的隔热层，并维持5±0.5s，恢复时间1小时以上2小时以下测量压敏电压。 Soak wire of pressure sensitive resistor into 350℃±10℃tin soldering liquid, with soak depth for 2-0.5 mm far away from pedestal. Adopt 1.5±0.2 mm thermal insulation layer and keep it for 5±0.5 s; measure pressure sensitive voltage with recovery time within 1 h-2 h.
4-4 高温负荷 4-4High Temperature Load	试验前后 压敏电压变化率 ≤±10% 限制电压变化率 ≤±20% Before and after test, change rate of pressure sensitive voltage is ≤±10%; change rate of limiting voltage ≤±20%.	将压敏电阻放置在125±2℃环境中1000小时，并施加该温度相应的最大允许使用交流电压，通电90分钟，断电30分钟。取出后在常温下放置1小时以上，4小时以内测量压敏电压和限制电压。 Put pressure sensitive resistor in 85±2℃ for 1,000 h and apply corresponding allowable using AC pressure of the temperature; power on for 90 min and power off for 30 min. After taking pressure sensitive resistor out, put it under normal temperature for more than 1 h; measure pressure sensitive voltage and limiting voltage within 4 h.
4-5 引出端强度 4-5 Outlet Terminal Strength	试验前后压敏电压变化率≤±5% Change rate of pressure sensitive voltage before and after test is ≤±5%.	将拉力施加于引出端轴向并作用于离开样品主体的方向，施加10N荷重10秒钟。 Apply tension to outlet terminal axis and make it act in sample main body direction; apply 10N load for 10 s.