

# 大亞秋田電子科技（深圳）有限公司

热压敏电阻器

規格：WMZY1 Series

产品規格書

製造廠商：

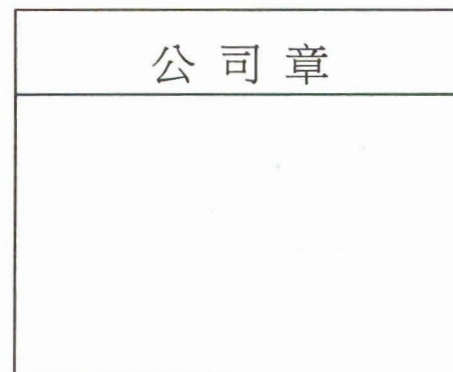
大亞秋田電子科技（深圳）  
有限公司

使用廠商：

立創

認可	審核	製作
李立輝	胡柏弘	肖明艷

認可	審核	製作



Part No.: <b>WMZY1 Series</b>	<b>PTC THERMISTOR</b> 25mA / 390V	Rev: 0/A (Dec 24, 2019)
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1. APPEARANCE 外观

1-1. Dimensions (mm)尺寸

1-2. Marking 标志

No marking

Items 项目	Claim 要求
Dmax	12.0
Tmax	10.0
Amax	15.0
B	3.5 ± 0.5
W <sup>±1.0</sup>	4.0
E <sup>±1.0</sup>	4.0
F <sup>±1.0</sup>	2.0
d1 <sup>±0.1</sup>	1.2
d2 <sup>±0.05</sup>	0.8
d3 <sup>±0.05</sup>	0.3

2-2. The position of the jack (mm) 插孔位置

W1	2.0
W2	4.0
W3	6.0
f	4.0

2. RATINGS 额定参数

- 2-1. Rated Operating Voltage 额定工作电压  $U_R$ : 220V<sub>rms</sub>
- 2-2. Max Operating Voltage 最大工作电压  $U_R$ : 264V<sub>rms</sub>
- 2-3. Operating Temperature 工作温度: -40°C ~ +85°C (U=0) -40°C ~ +70°C (U=U<sub>max</sub>)

3. MECHANICAL CHARACTERISTICS 机械性能

Item 指标项目	Specification 技术要求	Test Conditions & Methods 测试条件/方法
3-1. Solder-ability 可焊性	The terminals shall be uniformly tinned, and its area ≥ 95% 浸润部分上锡均匀, 上锡面积 ≥ 95%	Dipping the PTC terminals to a depth of 15mm in a soldering bath of 245°C ± 5°C and to the place of 6mm far from PTC body for 3 ± 0.5s (See IEC68-2-20 /GB2423.28 Ta) 将引出端沾助焊剂后, 浸入到温度为 245°C ± 5°C、深度为 15mm 的锡槽中锡面距 PTC 本体下端 6mm 处, 持续 3 ± 0.5 秒。(参见 IEC68-2-20 /GB2423.28 试验 Ta)
3-2. Resistance To Soldering Heat 耐焊接热	No visible mechanical damage. 无可见损伤 $\Delta R/R_N \leq 20\%$ ( $\Delta R =  R_N - R_N' $ )	Dipping the terminals to a depth of 15mm in a soldering bath of 260°C ± 5°C and to the place of 6mm far from PTC body for 3 ± 0.5s. After recovering for 4~5 hours under normal temperature. The resistance (R <sub>N'</sub> ) shall be measured. (See IEC68-2-20 /GB2423.28 Tb) 将引出端沾助焊剂后, 浸入到温度为 260°C ± 5°C、深度为 15mm 的锡槽中锡面距 PTC 本体下端 6mm 处, 持续 3 ± 0.5 秒。在常温条件下恢复 4~5 小时后, 复测额定零功率电阻值 R <sub>N'</sub> 。(参见 IEC68-2-20 /GB2423.28 试验 Tb)

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3-3. Strength of lead terminal 引出端强度	No break out 无损坏	Fasten the body and apply a force gradually to each lead until 10 N and then keep for 10sec, Hold the body and apply a force to each lead until 90° slowly at 5 N in the direction of lead axis and then keep for 10sec, and do this in the opposite direction repeat for other terminal. (See IEC68-2-21/GB2423.29 Ua / Ub) 根据 IEC68-2-21 (GB2423.29) 试验 U 进行试验。 试验 Ua: 拉力 10N, 持续 10 S; 试验 Ub: 弯曲 90°, 拉力 5N, 连续两次; 试验 Uc: 扭转 180°, 连续两次。 在常温常湿条件下恢复 4~5 h 后, 复测额定零功率电阻 Rn'
<b>4. ELECTRICAL CHARACTERISTICS 电气性能</b>		
Item 指标项目	Specification 技术要求	Test Conditions & Methods 测试条件/方法
4-1. Rated Zero-power Resistance 额定零功率电阻 (R <sub>N</sub> )	See WMZY1 Series Spec. Table attached 参见所附 WMZY1 系列规格表	Ambient temp. T <sub>A</sub> : 25°C ± 2°C Testing voltage: 1.5V <sub>DC</sub> After placing for 1~2 hours under T <sub>A</sub> , the resistance value shall be measured. 环境温度 T <sub>A</sub> : 25°C ± 2°C (T <sub>c</sub> =50°C时 25°C ± 1°C) 测试电压: 1.5V <sub>DC</sub> 在常温 T <sub>A</sub> 条件下, 放置 1~2 小时 后测得阻值 R <sub>N</sub> 。
4-2. Curie Temperature 居里温度 (T <sub>c</sub> ) (For information only)		The resistance at T <sub>c</sub> is twice of R <sub>N</sub> 电阻为零功率电阻的 2 倍时所对应的温度为 T <sub>c</sub> 。
4-3. Max Non-operating Current 最大不动作电流 (I <sub>N</sub> )		Ambient temp. Range 环境温度: 60°C ± 2°C In static air 静止空气中 Voltage of power supply 电源电压: 220V <sub>rms</sub> . Hold current 电流: 25mA Energized time 持续时间: 60min, Resistance (R <sub>N</sub> ') shall be measured
4-4. Trip Current 动作电流 (I <sub>sw</sub> )		Ambient temp. Range 环境温度: 25°C ± 2°C In static air 静止空气中 Voltage of power supply 电源电压: 220V <sub>rms</sub> . Hold current 电流: 120 mA Energized time 持续时间: 5min, Resistance (R <sub>N</sub> ') shall be measured
4-6. Varistor-Vol 压敏电压 (V <sub>v</sub> )		Ambient temp. range 环境温度 T <sub>A</sub> : 25°C ± 2°C Testing Current 测试电流: 1.0mA

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Item 指标项目	Specification 技术要求	Test Conditions & Methods 测试条件/方法
4-8. Over-Vol. Withstanding 耐电压能力 (U <sub>b</sub> )	420V <sub>rms</sub> ΔR/R <sub>N</sub> ≤ 20% ΔV <sub>V</sub> /V <sub>V</sub> ≤ 10% (ΔR =  R <sub>N</sub> -R <sub>N'</sub>   ΔV <sub>V</sub> =  V <sub>V</sub> -V <sub>V'</sub>   (1、3脚之间)	T <sub>A</sub> : 25°C ± 2°C Test vol. 测试电压: U <sub>b</sub> /4h After recovering for 4~5 hours under normal temperature. The resistance (R <sub>N'</sub> ) shall be measured. 在常温条件下, 放置 4~5 小时 后测得阻值 R <sub>N'</sub> .
4-9. Room Temperature Intermittent Load Test 常温断续负荷	ΔR/R <sub>N</sub> ≤ 20% ΔV <sub>V</sub> /V <sub>V</sub> ≤ 10% (ΔR =  R <sub>N</sub> -R <sub>N'</sub>   ΔV <sub>V</sub> =  V <sub>V</sub> -V <sub>V'</sub>   (1、3脚之间)	Normal temperature and humidity. Voltage: 420 V <sub>AC</sub> 1min on--9min off. 20 times. Test Circuit: See Fig. 1. 常温常湿的条件, 电压: 420 V <sub>AC</sub> , 通电 1min -断电 9min. 时间: 20 次. 测试电路: 见图 1.

5. APPLICATION CIRCUIT 应用电路

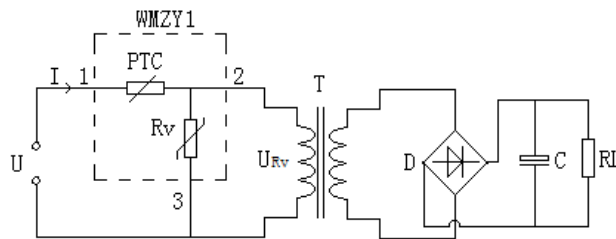


图 1

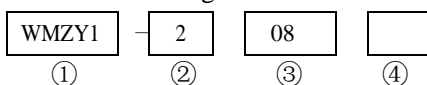
5. INSPECTION 检验方法

Sampling with IEC410 / DIN ISO 2859-1 (GB/T2828.1-2003); Testing with IEC60738-1 / QC 440000 (GB7153-2002), Spec. No. WLY1-191219-1  
 抽样方法按 IEC410 / DIN ISO 2859-1 (GB/T2828.1-2003); 试验方法按 IEC60738-1 / QC 440000 (GB7153-2002), Spec. No. WLY1-191219-1


Item 指标项目	IL	AQL	Ac	Item 指标项目	IL	AQL	Ac
5-1. Appearance 外观	S-4	1.0		5-4. Varistor-Vol 压敏电压	S-2	0.25	0
5-2. Rated Zero-power Resistance 额定零功率电阻 (R <sub>N</sub> )	II	0.65	0	5-5. Solder-ability 可焊性	5PCS/Lot		0
5-3. Non-operating Current 不动作电流(I <sub>N</sub> )	5PCS/Lot		0				

7. NUMBERING SYSTEM AND PACKING 编号方法和包装方式

7-1. Part Numbering 料号编号方法



- ① Series 系列: WMZY1 PTC thermistors for over-current / over-voltage protection  
过电流/过压保护热压敏电阻焊封系列
- ② Working voltage 工作电压 2: 220V (1:100 3:36V 4:24V 5:57.7V……)
- ③ Varistor Size 压敏电阻尺寸 10: Φ10 (07: Φ7 14: Φ14)
- ④ Serial number 同电压、同压敏不同 PTC 热敏电阻, 产品序号

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<p>6-2. Lot Numbering 批号编号方法</p> <table border="1" data-bbox="295 331 593 376"> <tr> <td>ZY</td> <td>12</td> <td>1</td> <td>01</td> </tr> </table> <p style="text-align: center;">①      ②      ③      ④</p> <p>① Product series 产品系列: ZY 热压敏电阻系列          ② Year of ex-factory 出厂年份 10: 2010 (11: 2011, ..., 19: 2019)          ③ Month of ex-factory 出厂月份 1: January (2: Feb, ..., 9: Sep, O: Oct, N: Nov, D: Dec).          ④ Serial number of ex-factory in current month 当月出库序号: 01~99: No. 01~99</p>			ZY	12	1	01
ZY	12	1	01			
<p>6-3. PACKING TYPE 包装方式</p> <p>■ Bulk            _____ Pcs / Bag            _____ KPcs, _____ × _____ × _____ mm, _____ Kg/Ctn          ■ Ammo          _____ Pcs / Bar            _____ KPcs, _____ × _____ × _____ mm, _____ Kg/Ctn          ■ Reel            _____ Pcs / Reel            _____ KPcs, _____ × _____ × _____ mm, _____ Kg/Ctn</p>						
<p>7. STORAGE CONDITIONS 贮存环境条件</p> <p>7-1. Temperature 温度: -10℃~+40℃          7-2. Humidity 湿度: ≤70%RH          7-2. Term 期限: ≤12 months (First-in/ First-out 先进先出)          7-3. Place 地点:              Do not exposing PTC components to the following conditions, otherwise, it may result to deterioration of characteristics.              不要暴露在下列环境条件下, 否则将导致性能衰退或参数飘移:          1) Corrosive gas or deoxidizing gas. 腐蚀性或易氧化气体          2) Flammable and explosive gases. 易燃易爆气体          3) Oil, water and chemical liquid. 油、水和化学溶液          4) Under the sunlight. 太阳光下          7-4. Handling after seal open 开封后的处理:              After unpacking of the minimum package, reseal it promptly or store it inside a sealed container with a drying agent.              尽量保证开口最小化, 立即重新封好, 并贮存在密封、带有干燥剂的容器中。</p>						
<p>8. WARNING 注意.警告 </p> <p>Do not apply the components under the following conditions, otherwise, it may result in deterioration of characteristics, destruction of product or in the worst case, to catching fire.          请不要在下列条件下使用本元件, 否则将可能导致产品性能衰退或产品损毁, 甚至引发火灾:</p> <p>1) Exceeding I<sub>max</sub> or V<sub>max</sub>. 超过最大工作电流或工作电压          2) Exceeding rated temperature range. 超过许可工作温度范围          3) Inferior thermal dissipation (Due to badly inferior thermal dissipation, some part of the components will become overheated and then be damaged.)          散热不良 (由于散热不良, 本元件可能因部分过热而导致破坏)</p>						

■ SPECIFICATIONS TABLE 规格表

商品编号	商品名称	厂家型号	零功率电阻值 R25 (Ω)	居里温度 Tc (°C)	不动作电流 I <sub>N60</sub> (mA)	动作电流 I <sub>T25</sub> (mA)	压敏电压 V <sub>v</sub> (V)	耐电压 V <sub>b</sub> (V)	外型尺寸							
									Dmax	Tmax	Amax	B <sup>±0.5</sup>	d <sup>±0.05</sup>	W <sup>±1</sup>	E <sup>±1</sup>	F <sup>±1</sup>
C471539	热敏电阻	WMZY1 Series	150-250	115±7	25	120	390±10%	420	12.0	10.0	15.0	3.5	0.6	5.0	4.0	2.0
C471552	热敏电阻	WMZY1-207(201E)	150-250	115±7	25	120	390±10%	420	9.0	10.0	12.0	3.5	0.6	5.0	4.0	2.0
C471663	热敏电阻	WMZY1-211	60-120	115±7	70°C/40	200	390±10%	420	16.0	10.0	20.0	3.6	0.6	5.0	5.0	2.0
C471637	热敏电阻	WMZY1-211C	30-50	115±7	70°C/60	250	390±10%	420	16.0	10.0	20.0	3.6	0.6	5.0	5.0	2.0
C471554	热敏电阻	WMZY1-207	150-250	115±7	25	120	390±10%	420	9.0	10.0	12.0	3.5	0.6	5.0	4.0	2.0
C471527	热敏电阻	WMZY1 SeriesAH	80-150	115±7	40	150	430±10%	420	12.0	10.0	15.0	3.5	0.6	5.0	4.0	2.0