

# 大亞秋田電子科技（深圳）有限公司

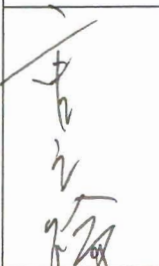
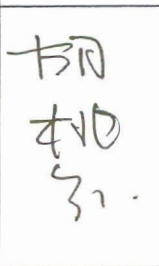
正温度系数热敏电阻器  
 規格：WMZ11A Series  
 产品規格書

製造廠商：

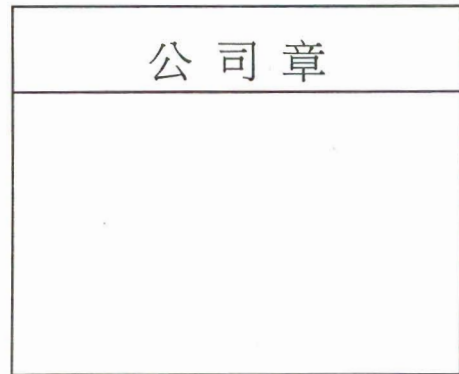
使用廠商：

大亞秋田電子科技（深圳）  
 有限公司

立創

| 認可  | 審核  | 製作          |
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| 認可 | 審核 | 製作 |
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|  |                |                             |
|--|----------------|-----------------------------|
| Part No.: WMZ11A Series<br>料号: WMZ11A Series | PTC THERMISTOR | Rev No.: 0/A (Dec 24, 2019) |
|--|----------------|-----------------------------|

1. APPEARANCE 外形

|  |   |             |          |   |  |   |  |  |   |   |  |  |   |
|--|---|-------------|----------|---|--|---|--|--|---|---|--|--|---|
| <p>1-1. Dimensions 尺寸<br/>See WMZ12A(V) series Spec. Table attached<br/>参见所附 WMZ12A(V)系列规格表</p> <p>直线型                      内弯型                      轴弯型</p> | <p>1-2. Marking 标志<br/>See WMZ11A series Spec. Table attached<br/>参见所附 WMZ11A 系列规格表中标志</p> <p>1-3. Coating 包封<br/> <input type="checkbox"/> No coating 无包封<br/> <input checked="" type="checkbox"/> Coating 包封</p> <table border="1" data-bbox="890 616 1476 840"> <tr> <td>Material 材料</td> <td>Color 颜色</td> </tr> <tr> <td><input checked="" type="checkbox"/> PF resin 酚醛树脂</td> <td><input checked="" type="checkbox"/> Green 绿色</td> </tr> <tr> <td><input checked="" type="checkbox"/> Silicon 硅树脂</td> <td><input checked="" type="checkbox"/> Red 红色</td> </tr> <tr> <td><input checked="" type="checkbox"/> Epoxy 环氧树脂</td> <td><input checked="" type="checkbox"/> Yellow 黄色</td> </tr> <tr> <td><input checked="" type="checkbox"/> Others 其它</td> <td><input checked="" type="checkbox"/> Black 黑色</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> Blue 蓝色</td> </tr> </table> <p>1-4. Leads 引线<br/> <input checked="" type="checkbox"/> Tin-plated copper wire 镀锡铜线<br/> <input checked="" type="checkbox"/> Tin-plated steel wire 镀锡钢线<br/> <input checked="" type="checkbox"/> Straight 直线      <input checked="" type="checkbox"/> Axis Formed 轴弯<br/> <input checked="" type="checkbox"/> In-Forming 内弯</p> | Material 材料 | Color 颜色 | <input checked="" type="checkbox"/> PF resin 酚醛树脂 | <input checked="" type="checkbox"/> Green 绿色 | <input checked="" type="checkbox"/> Silicon 硅树脂 | <input checked="" type="checkbox"/> Red 红色 | <input checked="" type="checkbox"/> Epoxy 环氧树脂 | <input checked="" type="checkbox"/> Yellow 黄色 | <input checked="" type="checkbox"/> Others 其它 | <input checked="" type="checkbox"/> Black 黑色 |  | <input checked="" type="checkbox"/> Blue 蓝色 |
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| <input checked="" type="checkbox"/> Silicon 硅树脂  | <input checked="" type="checkbox"/> Red 红色  |             |          |   |  |   |  |  |   |   |  |  |   |
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| <input checked="" type="checkbox"/> Others 其它  | <input checked="" type="checkbox"/> Black 黑色  |             |          |   |  |   |  |  |   |   |  |  |   |
|  | <input checked="" type="checkbox"/> Blue 蓝色   |             |          |   |  |   |  |  |   |   |  |  |   |

2. MECHANICAL CHARACTERISTICS 机械性能


(Remark 注: The items with \* are periodic inspection items 带\*号者为例行周期性检验项目)

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

| Part No.: WMZ11A Series<br>料号: WMZ11A Series   | PTC THERMISTOR  | Rev No.: 0/A (Dec 24, 2019)   |
|--|---|---|
| Item<br>项目   | Specification<br>规格要求   | Test Conditions & Methods<br>测试条件 / 方法  |
| *2-3. Strength of lead terminal<br>引出端强度   | No break out<br>无损坏 (允许引线根部<br>封装材料部分脱落)  | Fasten the body and apply a force gradually to each lead until 10 N and then keep for 10sec.(See IEC68-2-21/GB24 23.29 Ua)<br>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 Ub)<br>固定 PTC 本体, 沿引线轴向逐步加力至 10N, 持续 10 秒。<br>(参见 IEC68-2-21 /GB2423.29 试验 Ua)<br>固定 PTC 本体, 将一条引线弯曲 90° 后沿引线轴向缓慢加力至 5N, 持续 10 秒。将另一条引线向反方向弯曲 90° 后沿引线轴向缓慢加力至 5N, 持续 10 秒。(参见 IEC68-2-21 /GB2423.29 试验 Ub) |
| *2-4. Non-burning<br>不燃性   | Burning last 0 sec.<br>持续燃烧时间 0 秒   | Test as the standard of UL-94 (V-0).<br>按 UL-94 (V-0).标准要求试验。   |
| 3. ELECTRICAL CHARACTERISTICS 电气性能   |   |   |
| 3-1. Rating 额定参数<br>See WMZ11 series Spec. Table attached 参见所附 WMZ11 系列规格表   |   |   |
| 3-2. Test Condition & Methods 试验条件/方法<br>(Remark 注: The items with * are periodic inspection items 带*号者为例行周期性检验项目) |   |   |
| 3-2-1. Rated Zero-Power<br>Resistance (R <sub>N</sub> )<br>额定零功率电阻   | See WMZ11A Series<br>Spec. Table attached<br>参见所附 WMZ11A 系列<br>规格表  | Ambient temp. T <sub>A</sub> : 25°C ± 2°C<br>Testing voltage: 1.5V <sub>DC</sub><br>After placing for 1~2 hours under T <sub>A</sub> , the resistance value shall be measured.<br>环境温度 T <sub>A</sub> : 25°C ± 2°C<br>测试电压: 1.5V <sub>DC</sub><br>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> 。  |
| *3-2-2. Curie Temp. (T <sub>C</sub> )<br>(For Information Only)<br>居里温度 (仅供参考)                                     |   | The resistance value is twice of R <sub>N</sub> at T <sub>C</sub> .<br>在 T <sub>C</sub> 条件下测得的阻值等于 2R <sub>N</sub> 。  |
| 3-2-3. Breakdown Voltage (V <sub>b</sub> )<br>耐电压  | See WMZ11A Series<br>Spec. Table attached<br>Δ R <sub>N</sub> /R <sub>N</sub> ≤ 20%<br>(Δ R <sub>N</sub> =   R <sub>N</sub> -R <sub>N'</sub>   )<br>参见所附 WMZ11A 系<br>列规格表 | T <sub>A</sub> : 25°C ± 2°C<br>Initial Current 起始电流 t: I <sub>max</sub><br>Test vol. 测试电压: 220V <sub>rms</sub> / 10s → V <sub>b</sub> / 10s<br>(I <sub>max</sub> , V <sub>B</sub> See WMZ11A series Spec. Table attached )<br>参见所附 WMZ11A 系列规格表   |

| Part No.: WMZ11A Series<br>料号: WMZ11A Series   |  | PTC THERMISTOR  |   | Rev No.: 0/A (Dec 24, 2019) |     |
|--|--|---|---|-----------------------------|-----|
| Item<br>项目   | Specification<br>规格要求  | Test Conditions & Methods<br>测试条件 / 方法  |   |                             |     |
| *3-2-4. Max Permissible Repetitive Turn Over Current ( $I_{max}$ ) (Endurance)<br>最大可重复通断电流 (耐久性)  | $\Delta R_N/R_N \leq 20\%$<br>( $\Delta R_N =  R_N - R_N' $ )<br>参见所附 WMZ11A 系列规格表<br>See WMZ11A Series Spec. Table attached | $T_A: 25^\circ\text{C} \pm 2^\circ\text{C}$<br>Initial Current 起始电流: $I_{max}$<br>参见所附 WMZ11A 系列规格表<br>See WMZ11A series Spec. Table attached<br>Circles 通断次数: 20,000 times (On / Off: 1s / 59s)<br>After recovering for 4~5 hours under $T_A$ the resistance value $R_N'$ shall be measured.<br>在常温 $T_A$ 条件下恢复 4~5 小时后, 复测额定零功率电阻值 $R_N'$ 。   |   |                             |     |
| 3-2-5. Over Current withstanding ( $I_b$ )<br>耐电流能力  | 265V / $I_b$ 20times<br>$\Delta R/R_N \leq 20\%$<br>( $\Delta R =  R_N - R_N' $ )  | $T_A: 25^\circ\text{C} \pm 2^\circ\text{C}$<br>Initial current 起始电流: $I_b = 1.5 * I_{max}$<br>(See WMZ11A series Spec. Table attached)<br>参见所附 WMZ11A 系列规格表<br>Test Vol. 测试电压: 265Vrms<br>Testing cycle 测试次数: 20 times (On / Off: 30S / 60S)<br>After recovering for 4~5 hours under normal temperature.<br>The resistance value shall be measured. ( $R_N'$ )<br>在常温条件下恢复 4~5 小时后, 复测额定零功率电阻值 $R_N'$ 。 |   |                             |     |
| 4. INSPECTION 交收检验<br>Sampling with 抽样方法按 IEC410 / DIN ISO 2859-1 (GB/T2828.1-2003); Testing with 试验方法按 IEC60738-1 / QC 440000 (GB7153-2002), Spec. No. WL11A-130619-1 |  |   |   |                             |     |
| Item<br>检验项目   | IL   | AQL   | Item<br>检验项目                                  | IL                          | AQL |
| 4-1. Appearance<br>外观  | II   | 0.65  | 4-4. Breakdown Voltage $V_B$<br>耐电压           | S-2                         | 2.5 |
| 4-2. Solder-ability<br>可焊性   | S-2  | 2.5   | 4-5. Over Current withstanding $I_B$<br>耐电流能力 | S-2                         | 2.5 |
| 4-3. Rated Zero Power Resistance $R_N$<br>额定零功率电阻值   | II   | 0.65  |   |                             |     |

|  |                |                            |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
|--|----------------|----------------------------|---------|----|-----|---------|-----|-----|----|-----|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|
| Part No.: WMZ12A(V) Series<br>料号   | PTC THERMISTOR | Rev No.:0/A (Dec 24, 2019) |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| 5. NUMBERING SYSTEM AND PACKING 编号方法和包装方式  |                |                            |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| 5-1. Part Numbering 料号编号方法   |                |                            |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 15%;">WMZ11A</td> <td style="width: 5%;">75</td> <td style="width: 5%;">A</td> <td style="width: 5%;">151</td> <td style="width: 5%;">N</td> <td style="width: 5%;">U</td> <td style="width: 5%;">P</td> <td style="width: 5%;">500</td> <td style="width: 5%;">B</td> <td style="width: 5%;">10</td> <td style="width: 5%;">-</td> <td style="width: 5%;">E</td> <td style="width: 5%;">6</td> <td style="width: 5%;">B</td> </tr> <tr> <td>①</td> <td>②</td> <td>③</td> <td>④</td> <td>⑤</td> <td>⑥</td> <td>⑦</td> <td>⑧</td> <td>⑨</td> <td>⑩</td> <td></td> <td>⑪</td> <td>⑫</td> <td>⑬</td> </tr> </table> <p>① Series WMZ11A: PTC Thermistors for preheating of the CFL / Ballast<br/>系列 用于电子节能灯 / 镇流器预热启动系列 PTC 热敏电阻器</p> <p>② Curie temperature 居里温度 105: 105°C (80 : 80°C 85: 85°C ……)</p> <p>③ Diameter 外径 Dmax A : 6.5mm (M: 11.5mm A : 6.5mm HV : 6.5mm L: 5.5mm……)</p> <p>④ Rated zero power resistance 额定零功率电阻(RN)121: 120 Ω (681: 680 Ω; 202: 2K Ω 153: 10K Ω … )</p> <p>⑤ Tolerance 电阻允差 M: ±20% (V: ±25% N: ±30% P: ±50% ; X:Else 其它 …… )</p> <p>⑥ Leads form 引线形状 U: Inside kink 内弯 ( A: Axis wind 轴弯 S: Straight 直形 F: No coating 无包封)</p> <p>⑦ Leads 引线材质 P: 铜包钢线(U: Tin-plated copper wire 铜线)</p> <p>⑧ Breakdown Voltage 耐电压 500:500V (600:600V 800:800V)</p> <p>⑨ Packing Type 包装方式 B: Bulk 散装 ( A: Ammo 条带 C: Reel 盘带 ……)</p> <p>⑩ Leads length 引线长度: 10: 10.0±1.0mm 8: 8±1.0mm 5: 5.0±1.0mm 25: 25.0±1.0mm</p> <p>□ Coating Material 包封材料: S - Black Silicone 硅树脂 G - Green Silicone 绿色硅树脂 N - No Coating 无包封<br/>P-PF Resin 酚醛树脂 E-Epoxy 环氧树脂</p> <p>⑫ Leads Diameter 引线直径: 5 - Φ0.5mm 6 - Φ0.6mm 8 - Φ0.8mm 1 - Φ1.0mm</p> <p>⑬ Leads Distance 引线间距: A - 2.5mm B - 5.5mm C - 7.5mm D - 10.0mm</p> |                |                            | WMZ11A  | 75 | A   | 151     | N   | U   | P  | 500 | B | 10 | - | E | 6 | B | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |  | ⑪ | ⑫ | ⑬ |
| WMZ11A   | 75             | A                          | 151     | N  | U   | P       | 500 | B   | 10 | -   | E | 6  | B |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| ①  | ②              | ③                          | ④       | ⑤  | ⑥   | ⑦       | ⑧   | ⑨   | ⑩  |     | ⑪ | ⑫  | ⑬ |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| 5-2. Lot Numbering 批号编号方法  |                |                            |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 15%;">75</td> <td style="width: 10%;">A</td> <td style="width: 10%;">A</td> <td style="width: 25%;">1307226</td> <td style="width: 5%;">-</td> <td style="width: 15%;">1/2</td> </tr> <tr> <td>①</td> <td>②</td> <td>③</td> <td>④</td> <td></td> <td>⑤</td> </tr> </table> <p>① Curie temperature 居里温度 75: 75°C(105: 105°C 85: 85°C ……).</p> <p>② Diameter 外径 Dmax S : 5.0mm (M: 11.5mm S: 4.5mm L: 5.5mm……).</p> <p>③ Series 系列: WMZ11A- PTC Thermistors for preheating of the CFL / Ballast<br/>系列 用于电子节能灯 / 镇流器预热启动系列 PTC 热敏电阻器</p> <p>④ Pipelined batch number 流水批号: 1307226 :</p> <p>⑤ Shipment branch card batch number 分卡号: 1/2 ;</p>  |                |                            | 75      | A  | A   | 1307226 | -   | 1/2 | ①  | ②   | ③ | ④  |   | ⑤ |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| 75   | A              | A                          | 1307226 | -  | 1/2 |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| ①  | ②              | ③                          | ④       |    | ⑤   |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| 5-3. Packing Type 包装方式<br>See Appendix II attached 详见附件 II   |                |                            |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |
| 6. Operating Temp. Range 工作温度范围<br>-10°C ~ +60°C (V=V <sub>max</sub> )   |                |                            |         |    |     |         |     |     |    |     |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |

|  |                |                             |
|--|----------------|-----------------------------|
| Part No.: WMZ11A Series<br>料 号: WMZ11A Series  | PTC THERMISTOR | Rev No.: 0/A (Dec 24, 2019) |
| <p>7. STORAGE CONDITIONS 贮存环境条件</p> <p>7-1. Temperature 温度: -10℃~+40℃</p> <p>7-2. Humidity 湿度: ≤70%RH</p> <p>7-3. Term 期限: ≤6 months (First-in/ First-out 先进先出)</p> <p>7-4. Place 地点:</p> <p style="padding-left: 20px;">Do not exposing PTC components to the following conditions; otherwise, it may result in deterioration of characteristics.<br/> 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:</p> <ol style="list-style-type: none"> <li>1) Corrosive gas or deoxidizing gas 腐蚀性或易氧化气体</li> <li>2) Flammable and explosive gases 易燃易爆气体</li> <li>3) Oil, water and chemical liquid 油、水和化学溶液</li> <li>4) Under the sunlight 太阳光下</li> </ol> <p>7-5. Handling after seal open 开封后的处理:</p> <p style="padding-left: 20px;">After unpacking of the minimum package, reseal it promptly or store it inside a sealed container with a drying agent.<br/> 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.</p> <p>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> <ol style="list-style-type: none"> <li>1) Exceeding I<sub>max</sub> or V<sub>max</sub>. 超过最大工作电流或工作电压</li> <li>2) Exceeding rated temperature range. 超过许可工作温度范围</li> <li>3) Inferior thermal dissipation. (Due to badly inferior thermal dissipation, some part of the components will become overheated and then be damaged.)<br/> 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)</li> </ol>   |                |                             |

■ SPECIFICATIONS TABLE 规格表

Max. Operating Vol. 最大工作电压:  $U_{Max} = 265V_{AC}$

| 商品编号    | 商品名称 | 厂家型号                         | 零功率<br>电阻值<br>R25( $\Omega$ ) | 居里温度<br>Tc( $^{\circ}C$ ) | 耐电压<br>Vb(V <sub>AC</sub> ) | 最大可重<br>复通断<br>电流<br>I <sub>max</sub> (mA) | 外型尺寸             |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
|---------|------|------------------------------|-------------------------------|---------------------------|-----------------------------|--|------------------|------------------|--------------------|-----------------|-----|---|-----|-----|-----|-----|---|-----|-----|-----|
|         |      |                              |                               |                           |                             |  | D <sub>max</sub> | T <sub>max</sub> | d <sup>±0.05</sup> | F <sup>±1</sup> |     |   |     |     |     |     |   |     |     |     |
| C471761 | 热敏电阻 | WMZ11A-105S151XUU            | 100-200                       | 105±7                     | 400                         | 200  | 5                | 4.8              | 0.5                | 5.0             |     |   |     |     |     |     |   |     |     |     |
| C471621 | 热敏电阻 | WMZ11A-105S100-200XUU        | 100-200                       | 105±7                     |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471561 | 热敏电阻 | WMZ11A-105S151MAP            | 150±20%                       | 105±7                     |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471695 | 热敏电阻 | WMZ11A-105S151NUU            | 150±30%                       | 105±7                     |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471666 | 热敏电阻 | WMZ11A-80S151MAP             | 150±20%                       | 80±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471706 | 热敏电阻 | WMZ12A-50S201PLS             | 200±50%                       | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471742 | 热敏电阻 | WMZ11A-75S201PUP             | 100-300                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471556 | 热敏电阻 | WMZ11A-85S200-300UP          | 250±20%                       | 85±7                      | 500                         |  |                  |                  |                    |                 | 200 | 5 | 4.8 | 0.5 | 5.0 |     |   |     |     |     |
| C471664 | 热敏电阻 | WMZ11A-50S301XUU             | 200-400                       | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471618 | 压敏电阻 | WMZ11A-75S331NSP             | 330±30%                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471633 | 热敏电阻 | WMZ11A-75S401VUP             | 300-500                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471690 | 热敏电阻 | WMZ11A-75S401VUU             | 300-500                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471683 | 热敏电阻 | WMZ12A-75S401MUU             | 400±20%                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471735 | 热敏电阻 | WMZ11A-75S501MUP             | 500±20%                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471684 | 热敏电阻 | WMZ11A-50S681XUU             | 500-800                       | 50±7                      | 600                         |  |                  |                  |                    |                 |     |   |     |     |     | 200 | 5 | 4.8 | 0.5 | 5.0 |
| C471721 | 热敏电阻 | WMZ11A-75S701XUP             | 550-850                       | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471705 | 热敏电阻 | WMZ11A-75S751XSP             | 500-1000                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471744 | 热敏电阻 | WMZ11A-50S102MIU             | 1000±20%                      | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471704 | 热敏电阻 | WMZ11A-50S102VUP             | 1000±25%                      | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471750 | 热敏电阻 | WMZ11A-50S102MSU             | 1000±20%                      | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471707 | 热敏电阻 | WMZ11A-50S102MUU             | 1000±20%                      | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471697 | 热敏电阻 | WMZ11A-75S102XUP             | 800-1.3K                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471653 | 热敏电阻 | WMZ11A-75S102MSU             | 1000±20%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471661 | 热敏电阻 | WMZ11A-75S102NUP             | 1000±30%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471533 | 热敏电阻 | WMZ11A-75S102MSP             | 1000±20%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471674 | 热敏电阻 | WMZ12A(V)-75S222NUP          | 2200±30%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471736 | 热敏电阻 | WMZ12A-75S222MUU             | 2200±20%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471547 | 热敏电阻 | WMZ11A-75S252MSU             | 2500±20%                      | 75±7                      | 90                          | 200  | 5                | 4.8              | 0.5                | 5.0             |     |   |     |     |     |     |   |     |     |     |
| C471733 | 热敏电阻 | WMZ11A-75S252NUU             | 2500±30%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471699 | 热敏电阻 | WMZ11A-75S252XUP             | 2.5K-3.5K                     | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471693 | 热敏电阻 | WMZ11A-75S252MUU             | 2500±20%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471741 | 热敏电阻 | WMZ11-75S252MUP              | 2500±20%                      | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471549 | 热敏电阻 | WMZ11A-75S 2K-3K SU          | 2000-3000                     | 75±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471702 | 热敏电阻 | WMZ11A-50S332XIU             | 2.5K-4.5K                     | 50±7                      |                             |  |                  |                  |                    |                 |     |   |     |     |     |     |   |     |     |     |
| C471542 | 热敏电阻 | WMZ11A-50S2.5K-4.5KSUB<br>22 | 2.5-4.5K                      | 50±7                      | 60                          |  |                  |                  |                    |                 | 200 | 5 | 4.8 | 0.5 | 5.0 |     |   |     |     |     |

|         |      |                     |           |       |     |     |     |     |     |     |
|---------|------|---------------------|-----------|-------|-----|-----|-----|-----|-----|-----|
| C471728 | 热敏电阻 | WMZ11A-50S4~7KSP    | 4-7K      | 50±7  | 40  |     |     |     |     |     |
| C471756 | 热敏电阻 | WMZ11A-50S4-7K      | 4-7K      | 50±7  |     |     |     |     |     |     |
| C471722 | 热敏电阻 | WMZ11A-75S552XUP    | 4-7K      | 75±7  |     |     |     |     |     |     |
| C471660 | 热敏电阻 | WMZ11-50S682XUU     | 5K-8K     | 50±7  |     |     |     |     |     |     |
| C471641 | 热敏电阻 | WMZ11A-75S682XUP    | 5K-8K     | 75±7  |     |     |     |     |     |     |
| C471751 | 热敏电阻 | WMZ11A-75S702XSP    | 5-9K      | 75±7  |     |     |     |     |     |     |
| C471668 | 热敏电阻 | WMZ11A-75S103MUP    | 8K-12K    | 75±7  |     |     |     |     |     |     |
| C471724 | 热敏电阻 | WMZ12A-120L121VSP   | 120±25%   | 120±7 | 400 |     |     |     |     |     |
| C471689 | 热敏电阻 | WMZ11A-75L201PUU    | 200±50%   | 75±7  |     |     |     |     |     |     |
| C471732 | 热敏电阻 | WMZ11A-75L201PUP    | 200±50%   | 75±7  |     |     |     |     |     |     |
| C471565 | 热敏电阻 | WMZ11A-75L201PSU    | 200±50%   | 75±7  |     |     |     |     |     |     |
| C471647 | 热敏电阻 | WMZ11A-75L221MAP    | 220±20%   | 75±7  | 500 | 300 |     |     |     |     |
| C471759 | 热敏电阻 | WMZ11A-75L331NUP    | 330±30%   | 75±7  |     |     |     |     |     |     |
| C471678 | 热敏电阻 | WMZ11A-75L401VUU    | 400±25%   | 75±7  |     |     |     |     |     |     |
| C471667 | 热敏电阻 | WMZ11A-75L401NUP    | 400±30%   | 75±7  | 600 | 200 | 5.5 | 5.0 | 0.6 | 5.0 |
| C471696 | 热敏电阻 | WMZ12A-130L501NUU   | 500±30%   | 130±7 |     |     |     |     |     |     |
| C471563 | 热敏电阻 | WMZ11A-75L601XUP    | 500-700   | 75±7  |     |     |     |     |     |     |
| C471701 | 热敏电阻 | WMZ11A-75L600-750UP | 600-750   | 75±7  |     |     |     |     |     |     |
| C471629 | 热敏电阻 | WMZ11A-75L500-800AP | 500-800   | 75±7  |     |     |     |     |     |     |
| C471745 | 热敏电阻 | WMZ11A-75L681XSU    | 500-800   | 75±7  |     |     |     |     |     |     |
| C471730 | 热敏电阻 | WMZ11A-75L102MUP    | 1000±20%  | 75±7  |     |     |     |     |     |     |
| C471672 | 热敏电阻 | WMZ11A-75L102MUU    | 1000±20%  | 75±7  |     |     |     |     |     |     |
| C471747 | 热敏电阻 | WMZ12A-75L102MUU    | 1000±20%  | 75±7  |     |     |     |     |     |     |
| C471657 | 热敏电阻 | WMZ11A-75L122NSP    | 1200±30%  | 75±7  |     |     |     |     |     |     |
| C471636 | 热敏电阻 | WMZ11A-105L122XSP   | 1K-1.5K   | 105±7 |     |     |     |     |     |     |
| C471623 | 热敏电阻 | WMZ11A-75L122XUP    | 800-1.5K  | 75±7  |     |     |     |     |     |     |
| C471567 | 压敏电阻 | WMZ11A-75L122XIP    | 800-1.5K  | 75±7  |     |     |     |     |     |     |
| C471543 | 热敏电阻 | WMZ12A-130L152NUUB  | 1500±30%  | 130±7 |     |     |     |     |     |     |
| C471639 | 热敏电阻 | WMZ11A-75L162XAP    | 1.3K-1.9K | 75±7  |     |     |     |     |     |     |
| C471628 | 热敏电阻 | WMZ11A-75L162XUP    | 1.2K-2K   | 75±7  |     |     |     |     |     |     |
| C471566 | 压敏电阻 | WMZ12A-75L202MUU    | 2000±20%  | 75±7  |     |     |     |     |     |     |
| C471654 | 热敏电阻 | WMZ11A-75L252MAU    | 2500±20%  | 75±7  |     |     |     |     |     |     |
| C471648 | 热敏电阻 | WMZ11A-75L252MUU    | 2500±20%  | 75±7  |     |     |     |     |     |     |
| C471726 | 热敏电阻 | WMZ12A-75L302MUU    | 3000±20%  | 75±7  |     |     |     |     |     |     |
| C471638 | 热敏电阻 | WMZ11A-120L332NAU   | 3300±30%  | 120±7 |     |     |     |     |     |     |
| C471553 | 热敏电阻 | WMZ11A-75L402VIP    | 4000±25%  | 75±7  |     |     |     |     |     |     |
| C471749 | 热敏电阻 | WMZ11A-75L402VUP    | 4000±25%  | 75±7  |     |     |     |     |     |     |
| C471698 | 热敏电阻 | WMZ11-75L402VUP     | 4000±25%  | 75±7  |     |     |     |     |     |     |
| C471694 | 热敏电阻 | WMZ12A-125L472MSP   | 4700±20%  | 125±7 |     |     |     |     |     |     |
| C471671 | 热敏电阻 | WMZ11A-75L502MAP    | 5000±20%  | 75±7  |     |     |     |     |     |     |
| C471540 | 热敏电阻 | WMZ11A-75L502MUP    | 5000±20%  | 75±7  |     |     |     |     |     |     |
| C471624 | 热敏电阻 | WMZ12A-75HV68RXUP   | 50-100    | 75±7  | 400 | 400 | 6.5 | 5.5 | 0.6 | 5.0 |
| C471644 | 热敏电阻 | WMZ11A-125A68RNUP   | 68±30%    | 125±7 |     |     |     |     |     |     |



|         |      |                         |             |       |     |  |  |  |  |     |
|---------|------|-------------------------|-------------|-------|-----|--|--|--|--|-----|
| C471717 | 热敏电阻 | WMZ12A-75HV151NUP       | 150±30%     | 75±7  | 500 |  |  |  |  |     |
| C471528 | 热敏电阻 | WMZ11A-75A151XUP        | 100-200     | 75±7  |     |  |  |  |  |     |
| C471655 | 热敏电阻 | WMZ12A-75HV151MUP       | 150±20%     | 75±7  |     |  |  |  |  |     |
| C471737 | 热敏电阻 | WMZ11A-105A201PUU       | 200±50%     | 105±7 |     |  |  |  |  |     |
| C471676 | 热敏电阻 | WMZ11A-110A201PSP       | 200±50%     | 110±7 |     |  |  |  |  |     |
| C471680 | 热敏电阻 | WMZ11A-105A201PAU       | 200±50%     | 105±7 |     |  |  |  |  |     |
| C471758 | 热敏电阻 | WMZ11A-75A201MUP        | 200±20%     | 75±7  |     |  |  |  |  |     |
| C471643 | 热敏电阻 | WMZ11-75A201MUP         | 200±20%     | 75±7  |     |  |  |  |  |     |
| C471656 | 热敏电阻 | WMZ11A-75A251XUP        | 150-350     | 75±7  |     |  |  |  |  |     |
| C471718 | 热敏电阻 | WMZ11A-75HV251MSP       | 250±20%     | 75±7  |     |  |  |  |  |     |
| C471560 | 热敏电阻 | WMZ11A-75HV251MUP       | 250±20%     | 75±7  |     |  |  |  |  |     |
| C471649 | 热敏电阻 | WMZ11A-75HV301NSP       | 300±30%     | 75±7  |     |  |  |  |  |     |
| C471651 | 热敏电阻 | WMZ11A-75A331NUP        | 330±30%     | 75±7  | 600 |  |  |  |  |     |
| C471740 | 热敏电阻 | WMZ11A-75A331NUP        | 330±30%     | 75±7  |     |  |  |  |  |     |
| C471713 | 热敏电阻 | WMZ12A-75HV331MUP       | 330±20%     | 75±7  |     |  |  |  |  |     |
| C471632 | 热敏电阻 | WMZ11-75A351XUP         | 300-400     | 75±7  |     |  |  |  |  |     |
| C471729 | 热敏电阻 | WMZ11A-105A100-300PUU   | 100-300     | 105±7 |     |  |  |  |  |     |
| C471755 | 热敏电阻 | WMZ11A-75HV300-500UP    | 300-500     | 75±7  |     |  |  |  |  |     |
| C471743 | 热敏电阻 | WMZ11A-75HV401MAP       | 400±20%     | 75±7  |     |  |  |  |  |     |
| C471719 | 热敏电阻 | WMZ11A-75HV401VUP       | 400±25%     | 75±7  |     |  |  |  |  |     |
| C471677 | 热敏电阻 | WMZ11A-75HV401VUU       | 400±25%     | 75±7  |     |  |  |  |  |     |
| C471675 | 热敏电阻 | WMZ11A-105A471NUU       | 470±30%     | 105±7 |     |  |  |  |  |     |
| C471738 | 热敏电阻 | WMZ11A-75A471NUP        | 470±30%     | 75±7  |     |  |  |  |  |     |
| C471551 | 热敏电阻 | WMZ12A (IV) -85HV471MUU | 470±20%     | 85±7  |     |  |  |  |  |     |
| C471681 | 热敏电阻 | WMZ11-75A601XUP         | 500-700     | 75±7  | 300 |  |  |  |  |     |
| C471652 | 热敏电阻 | WMZ11A-75HV631MUP       | 630±20%     | 75±7  |     |  |  |  |  |     |
| C471650 | 热敏电阻 | WMZ11A-75HV681XUP       | 500-800     | 75±7  |     |  |  |  |  |     |
| C471635 | 热敏电阻 | WMZ11A-75A681NUP        | 680±30%     | 75±7  |     |  |  |  |  |     |
| C471714 | 热敏电阻 | WMZ11A-50HV681MUP       | 680±20%     | 50±7  |     |  |  |  |  |     |
| C471665 | 热敏电阻 | WMZ12A-75HV102MUP       | 1000±20%    | 75±7  |     |  |  |  |  | 200 |
| C471544 | 热敏电阻 | WMZ11A-75HV102MUP       | 1000±20%    | 75±7  |     |  |  |  |  |     |
| C471682 | 热敏电阻 | WMZ11A-75A102MUU        | 1000±20%    | 75±7  |     |  |  |  |  |     |
| C471688 | 热敏电阻 | WMZ11A-75HV122MAP       | 1200±20%    | 75±7  |     |  |  |  |  |     |
| C471692 | 热敏电阻 | WMZ12A-75A122VUP        | 1200±25%    | 75±7  |     |  |  |  |  |     |
| C471715 | 热敏电阻 | WMZ11A-75HV122MUP       | 1200±20%    | 75±7  |     |  |  |  |  |     |
| C471691 | 热敏电阻 | WMZ11A-75A152XIP        | 1. 2K-2K    | 75±7  | 140 |  |  |  |  |     |
| C471687 | 热敏电阻 | WMZ12A-75HV152MSP       | 150±20%     | 75±7  |     |  |  |  |  |     |
| C471646 | 热敏电阻 | WMZ12A-75HB152MSP       | 1500±20%    | 75±7  |     |  |  |  |  |     |
| C471564 | 热敏电阻 | WMZ11A-75HV152MSP       | 1500±20%    | 75±7  |     |  |  |  |  |     |
| C471529 | 热敏电阻 | WMZ11A-75A172XUP        | 1K-2. 5K    | 75±7  |     |  |  |  |  |     |
| C471536 | 热敏电阻 | WMZ11A-75A202XUP        | 1. 5K-2. 5K | 75±7  |     |  |  |  |  | 90  |
| C471535 | 热敏电阻 | WMZ11A-75A252MUP        | 2500±20%    | 75±7  |     |  |  |  |  |     |
| C471685 | 热敏电阻 | WMZ11A-75HV252MUP       | 2500±20%    | 75±7  |     |  |  |  |  |     |

|         |      |                     |           |      |     |     |  |  |  |  |     |
|---------|------|---------------------|-----------|------|-----|-----|--|--|--|--|-----|
| C471752 | 热敏电阻 | WMZ11A-75A252MUU    | 2500±20%  | 75±7 |     |     |  |  |  |  |     |
| C471739 | 热敏电阻 | WMZ11A-75A252MAU    | 2500±20%  | 75±7 |     |     |  |  |  |  |     |
| C471727 | 热敏电阻 | WMZ11A-50A302XSP    | 2.5K-4K   | 50±7 |     |     |  |  |  |  |     |
| C471753 | 热敏电阻 | WMZ11A-50A332XSU    | 2.5K-4K   | 50±7 |     |     |  |  |  |  |     |
| C471659 | 热敏电阻 | WMZ11A-50A2.5K-4KAU | 2.5K-4K   | 50±7 |     |     |  |  |  |  |     |
| C471634 | 热敏电阻 | WMZ11A-75A352XUP    | 3K-4K     | 75±7 |     |     |  |  |  |  |     |
| C471754 | 热敏电阻 | WMZ11A-75A452NSU    | 3.5K-5.5K | 75±7 |     |     |  |  |  |  |     |
| C471622 | 热敏电阻 | WMZ12A-75HV502MUU   | 5000±20%  | 75±7 |     |     |  |  |  |  |     |
| C471746 | 热敏电阻 | WMZ11A-75HV502MSU   | 5000±20%  | 75±7 |     |     |  |  |  |  |     |
| C471703 | 热敏电阻 | WMZ11A-50B101NUU    | 100±30%   | 50±7 |     |     |  |  |  |  | 500 |
| C471679 | 热敏电阻 | WMZ12A-85B251MUP    | 250±20%   | 85±7 | 600 |     |  |  |  |  |     |
| C471625 | 热敏电阻 | WMZ11A-80B561NUP    | 560±30%   | 80±7 |     | 300 |  |  |  |  |     |
| C471531 | 热敏电阻 | WMZ11A-75BHV452MAU  | 4500±20%  | 75±7 |     | 40  |  |  |  |  |     |