

### 》特征 Features

|                                    |                                 |
|------------------------------------|---------------------------------|
| 阻值范围 Resistance value              | 0.5~500mΩ                       |
| 精度 Tolerance                       | ±1%、±2%、±5%                     |
| 功率 Power                           | 1W、2W、3W                        |
| 温度系数 Temperature coefficient       | ±350ppm/°C、±100ppm/°C、±50ppm/°C |
| 工作温度范围 Operating temperature range | -55°C~170°C                     |
| 低电感 Low inductance                 | < 5nH (1MHz)                    |
| 绝缘阻抗 Insulation resistance         | ≥100MΩ                          |
| 耐压值 Withstand voltage              | 500V                            |
| 符合RoHS要求                           | RoHS compliant                  |



### 》应用范围 Applications

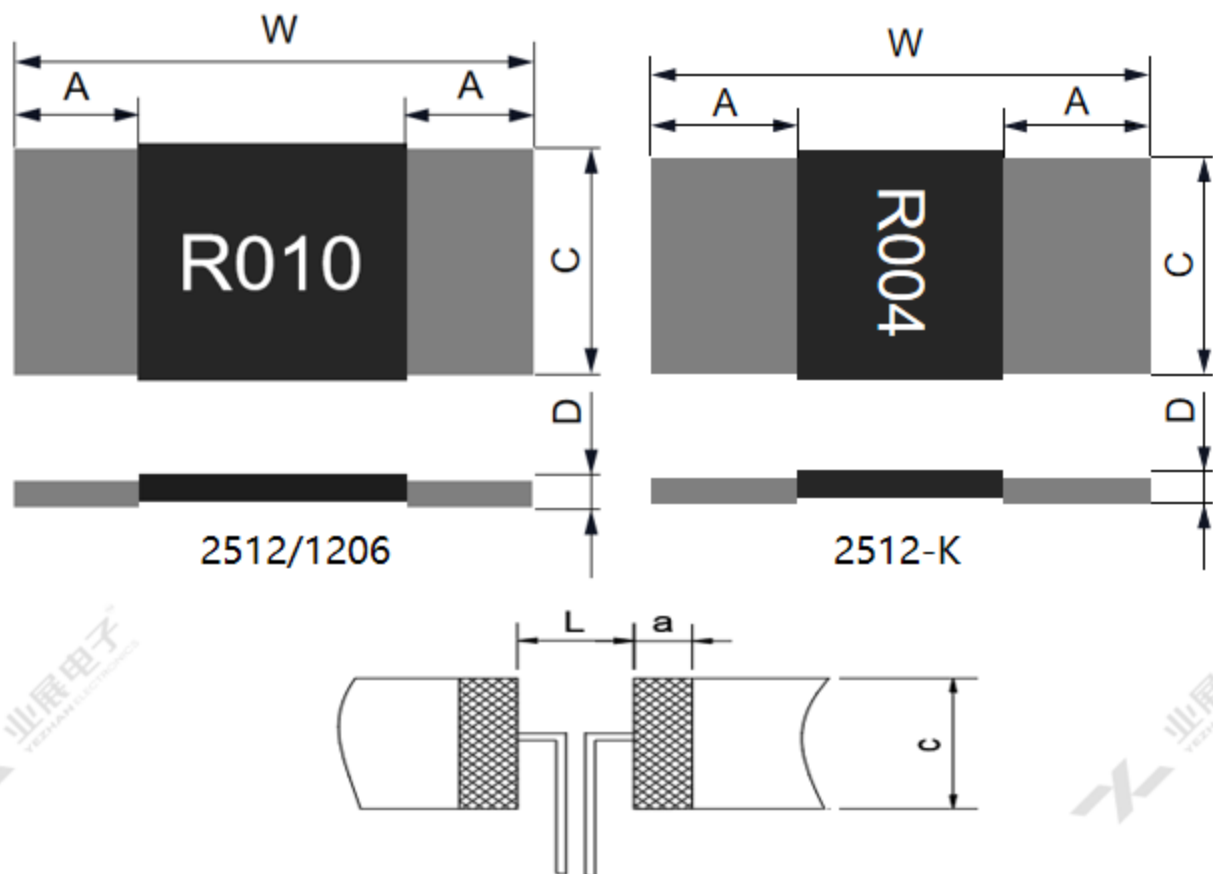
|          |                              |
|----------|------------------------------|
| 电流采样     | Current Sensing              |
| 过流保护     | Over current protection      |
| 伺服电机控制电路 | Servo motor control circuits |
| 变频电源     | Inverter power               |
| 电子控制系统   | Electric control system      |
| 锂电池控制板   | Li-battery management system |

### 》订购信息 Ordering Information

|            |                      |                                 |                       |                            |           |
|------------|----------------------|---------------------------------|-----------------------|----------------------------|-----------|
| YLRY       | 12                   | -3                              | -10                   | F                          | -K        |
| 类型<br>Type | 尺寸<br>Size           | 功率<br>Power                     | 阻值<br>Resistance      | 精度<br>Tolerance            | 电极<br>Pin |
| YLRY       | 06: 1206<br>12: 2512 | Unit: W<br>1:1W<br>2:2W<br>3:3W | Unit: mΩ<br>10: 10 mΩ | F: ±1%<br>G: ±2%<br>J: ±5% | K: 宽电极    |

### 产品尺寸和推荐焊盘尺寸

### Products & Recommend Pad Dimension



Unit: mm

| Type     | Resistance | W±0.2 | C±0.2 | A±0.2 | D±0.1 | L   | a   | c   |
|----------|------------|-------|-------|-------|-------|-----|-----|-----|
| YLRY06   | 1~6        | 3.2   | 1.6   | 0.6   | 0.7   | 1.6 | 1.7 | 1.8 |
|          | 6~100      |       |       |       | 0.55  |     |     |     |
| YLRY12   | 0.5~500    | 6.4   | 3.2   | 1.0   | 0.8   | 4.1 | 2.1 | 4   |
| YLRY12-K | 0.5~4      | 6.4   | 3.2   | 2.2   | 0.8   | 1.3 | 3.1 | 4   |

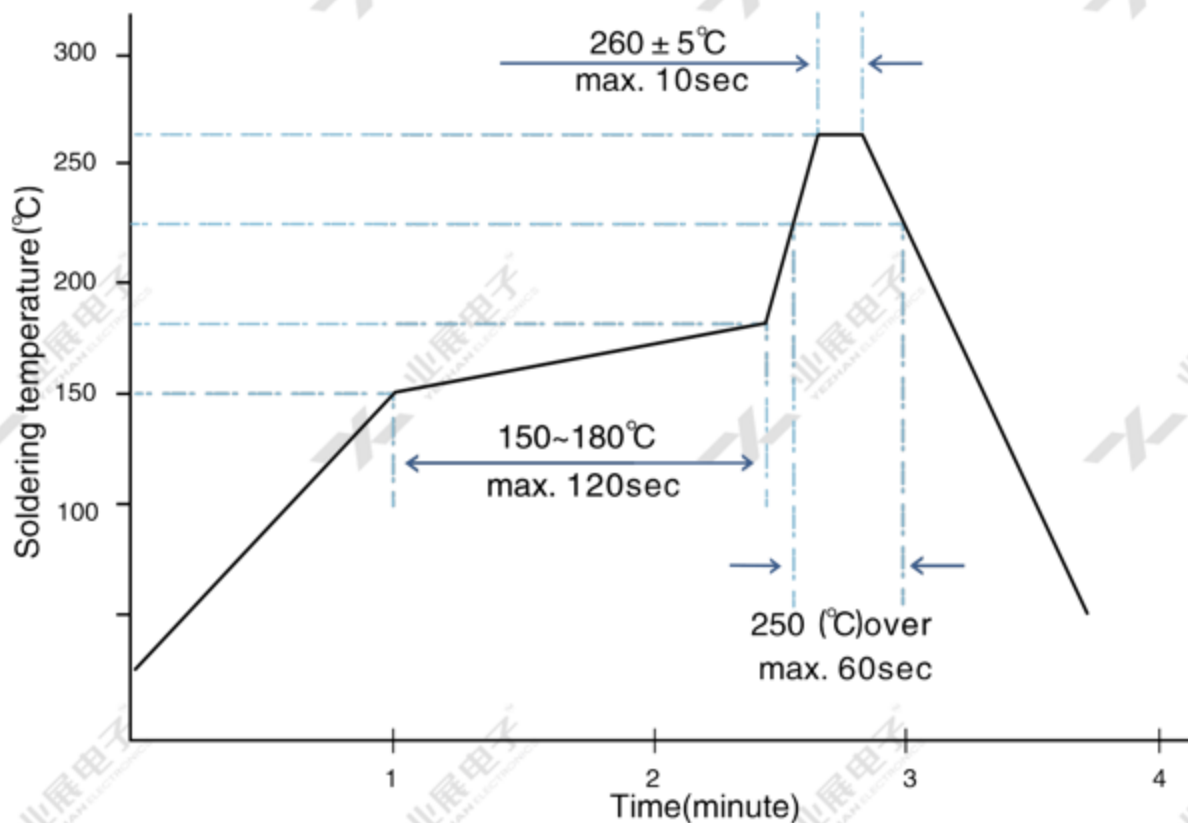
## 标准电气规范 Standard Electrical Specifications

| 系列<br>Type | 功率<br>Rated Power(W) | 阻值<br>Resistance<br>/mΩ | 温漂<br>TCR®<br>(ppm/°C) | 精度<br>Resistance<br>Tolerance (%) | 工作温度<br>Operating<br>Temperature<br>(°C) |
|------------|----------------------|-------------------------|------------------------|-----------------------------------|--|
|            | P70°C                |                         |                        |                                   |  |
| YLRY06     | 1                    | 1~4                     | ±350                   | ±1%<br>±2%<br>±5%                 | -55°C~170°C                              |
|            |                      | 4~100                   | ±50                    |                                   |  |
| YLRY12     | 2、3                  | 0.5~1.5                 | ±350                   |                                   |  |
|            |                      | 1.5~500                 | ±50                    |                                   |  |
| YLRY12-K   | 2、3                  | 0.5~1                   | ±350                   |                                   |  |
|            |                      | 1~4                     | ±50                    |                                   |  |

## 耐久性测试 Endurance Test

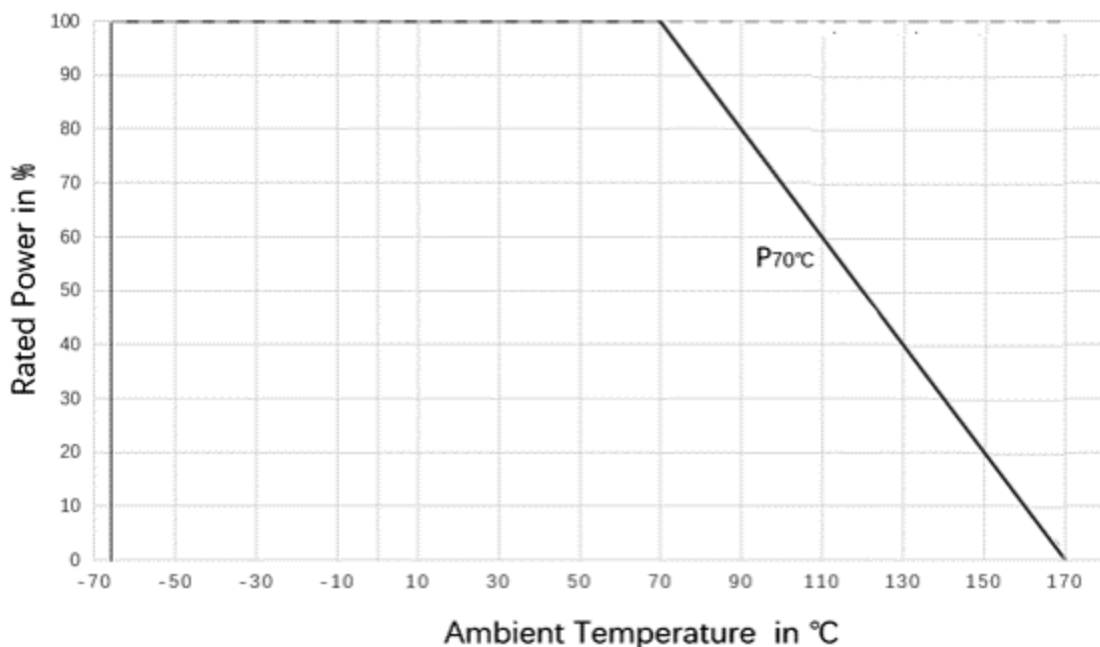
| Items                        | Additional Requirements   | Reference              | Limits               |
|------------------------------|---|------------------------|----------------------|
| Temperature Cycling          | 1000 Cycles (-55°C to +150°C)   | JESD22 Method JA-104   | ±0.5%                |
| ESD Test                     | 1) Direct Contact (DC): ±6kV;<br>2) Air Discharge (AD): ±12kV, ±16kV, ±25kV;  | AEC-Q200 REV D June 1  | ±1.0%                |
| High Temperature Exposure    | 1000hrs.@T=170°C.Unpowered.   | MIL-STD-202 Method 108 | ±1.0%                |
| Moisture Resistance          | t=24hrs/cycle.Note: Steps 7a & 7b not required. Unpowered.  | MIL-STD-202 Method 106 | ±1.0%                |
| Biased Humidity              | 1000hrs 85°C/85%RH. Note: Specified conditions:10% of operating power.  | MIL-STD-202 Method 103 | ±1.0%                |
| Operational Life             | Condition D Steady State TA=125°C at rated power.   | MIL-STD-202 Method 108 | ±1.0%                |
| Thermal Shock                | 1000X(-55°C to +150°C)  | MIL-STD-202Method107G  | ±1.0%                |
| Solderability                | 235°C±5°C,2s±0.5s   | J-STD-202              | 95% Coverage Minimum |
| Resistance to Soldering Heat | 260°C±5°C, 10s±1s   | MIL-STD-202 Method 210 | ±0.5%                |
| Short Time Overload          | 5×Rated power for 5 s   | MIL-STD-202 Method 201 | ±1.0%                |
| Shock                        | 100g , 6ms , Orientation & Shock time: ±X, ±Y, ±Z; 3 times each orientation, total 18 times.  | MIL-STD-202 Method 213 | ±1.0%                |
| Vibration                    | 5 g's for 20 min, 12 cycles each of 3 orientations. Note: Use 8"X5" PCB .031" thick 7 secure points on one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz. | MIL-STD-202Method204   | ±1.0%                |

### 回流焊温度曲线 Solder Reflow Temperature Condition



### 降功率曲线 Power Derating Curve

POWER DERATING CURVE



### 印字标识 Marking

All the products marking are 4 digits. 'R' designates the decimal location in ohms

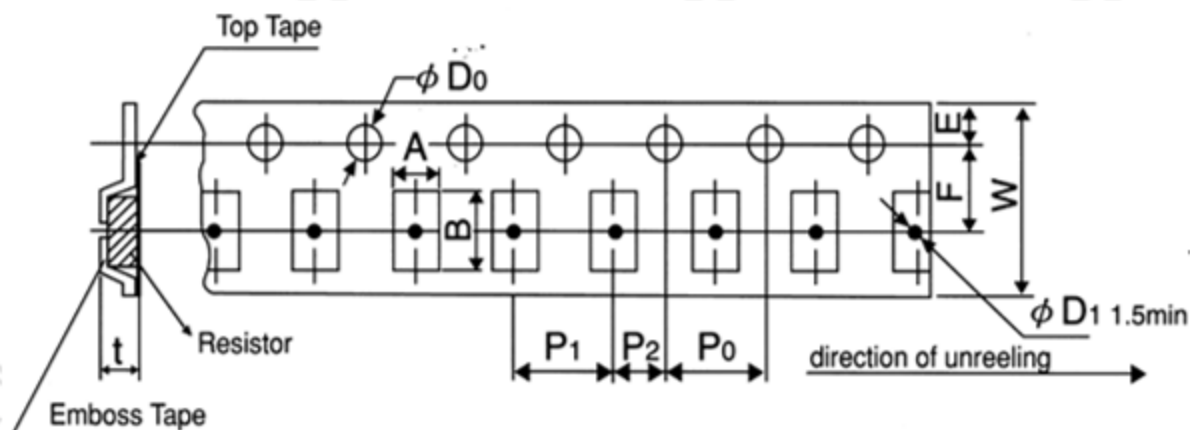
E.g.,

0.5mΩ = R0005; 5mΩ = R005; 50mΩ = R050

### 包装 Packing

存储条件 Storage Conditions: Temperature: 5°C~35°C, Humidity: 40%~75%

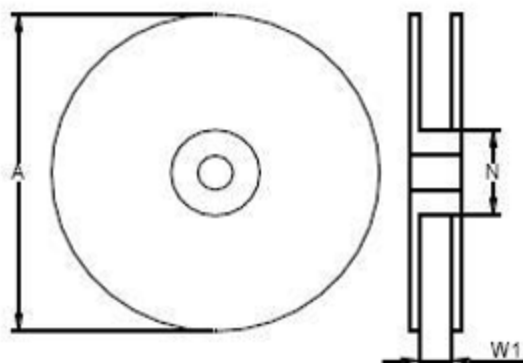
编带盘装: Embossed Plastic Tape



Unit/mm

| Type     | A±0.15 | B±0.1 | W±0.2 | F±0.05 | E±0.1 | P <sub>1</sub> ±0.1 | P <sub>2</sub> ±0.05 | P <sub>0</sub> ±0.05 | D <sub>0</sub> ±0.1 | t±0.1 | Qty/reel |
|----------|--------|-------|-------|--------|-------|---------------------|----------------------|----------------------|---------------------|-------|----------|
| YLRY06   | 2.0    | 3.6   | 8.0   | 3.5    | 1.75  | 4.0                 | 2.0                  | 4.0                  | Φ1.5                | 0.8   | 5000     |
| YLRY12   | 3.5    | 6.8   | 12.0  | 5.5    | 1.75  | 4.0                 | 2.0                  | 4.0                  | Φ1.5                | 1.0   | 4000     |
| YLRY12-K | 3.5    | 6.8   | 12.0  | 5.5    | 1.75  | 4.0                 | 2.0                  | 4.0                  | Φ1.5                | 1.0   | 4000     |

» 料盘规格 Reel & Tape Specifications



Unit/mm

| Type     | A       | N      | W1       |
|----------|---------|--------|----------|
| YLRY06   | 178±2.0 | 60±1.0 | 9±0.3    |
| YLRY12   | 178±2.0 | 60±1.0 | 13.3±0.5 |
| YLRY12-K | 178±2.0 | 60±1.0 | 13.3±0.5 |

» 版本信息 Version History

| 版本<br>Version | 日期<br>Date  | 修订描述<br>Description of amendment | 拟定<br>Draft | 审核<br>Checked |
|---------------|-------------|----------------------------------|-------------|---------------|
| A1.0          | 05-Jun-2023 | 首版发行                             | 罗国涛         | 胡紫阳           |

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