

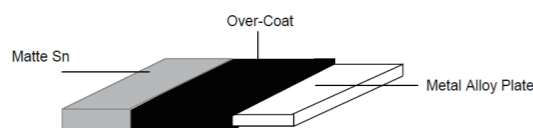
合金低阻贴片电阻(MRMF)Metal Alloy Low-Resistance Resistors

Resume 摘要

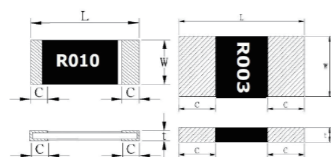
High power rating up to 3Watts/Low TCR down to 75PPM/Resistance values from 1mΩ to 60mΩ/Customized resistance available.

大功率 (3Watts), 低温度系数 (75PPM), 阻值范围 (1mΩ ~ 60mΩ), 可订做阻值

Construction 结构图



Dimensions 尺寸



| Size 规格 | L           | W           | T                            | C                            |
|---------|-------------|-------------|------------------------------|------------------------------|
| 0805    | 2.00 ± 0.10 | 1.25 ± 0.10 | 0.60 ± 0.20                  | 0.40 ± 0.20                  |
| 1206    | 3.20 ± 0.20 | 1.60 ± 0.20 | 0.75 ± 0.20 (R=1mΩ)          | 1.10 ± 0.30 (R=1mΩ)          |
|         |             |             | 0.60 ± 0.20 (2mΩ ≤ R ≤ 30mΩ) | 0.50 ± 0.30 (2mΩ ≤ R ≤ 30mΩ) |
| 2010    | 5.00 ± 0.20 | 2.50 ± 0.20 | 0.60 ± 0.20                  | 0.60 ± 0.30                  |
| 2512    | 6.40 ± 0.20 | 3.20 ± 0.20 | 0.60 ± 0.20                  | 2.0 ± 0.20 (R ≤ 3mΩ)         |
|         |             |             |                              | 0.9 ± 0.2 (R > 3mΩ)          |
| *2512   | 6.40 ± 0.20 | 3.20 ± 0.20 | 0.70 ± 0.20                  | 2.0 ± 0.20 (R ≤ 4mΩ)         |
|         |             |             |                              | 0.9 ± 0.2 (R > 4mΩ)          |

Part Numbering 型号名称

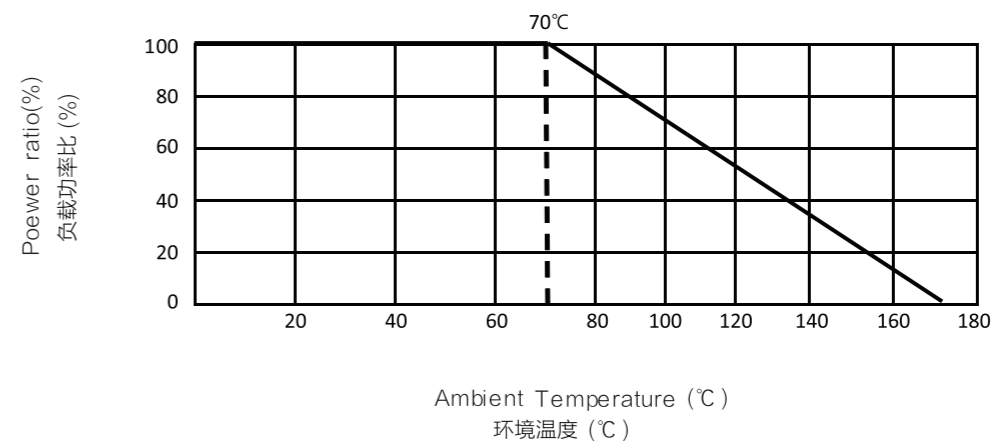
| MRMF                 | 6432 (2512)                                              | LR002                                                                                                    | F                            | T                                     | S                                  |
|----------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------|------------------------------------|
| Product Type<br>产品型号 | Resistor Size<br>电阻规格                                    | Resistance<br>阻值                                                                                         | Resistance Tolerance<br>阻值公差 | Packing Code<br>包装形式                  | High Power<br>升功率                  |
|                      | 2012 (0805)<br>3216 (1206)<br>5025 (2010)<br>6432 (2512) | 5%<br>LR001:0.001Ω<br>LR010:0.01Ω<br>LR3M5:0.0035Ω<br>1%<br>LR002:0.002Ω<br>LR050:0.05Ω<br>LR3M5:0.0035Ω | F=1%<br>G=2%<br>J=5%         | T: Taping Reel<br>卷装<br>B: Bulk<br>散装 | R: 3W<br>S: 2W<br>A: 1.5W<br>N: 1W |

Standard Electrical Specifications 标准规格表

| Item<br>Type<br>项目<br>型号 | Power Rating<br>额定功率       | Operating Temp.<br>Range<br>操作温度范围 | Max.<br>Operating<br>Voltage<br>最大工作电压 | Resistance Range<br>阻值范围 |    |    | Insulation<br>Resistance<br>绝缘阻抗 | TCR<br>温度系数<br>(PPM/°C)                                                      |
|--------------------------|----------------------------|------------------------------------|----------------------------------------|--------------------------|----|----|----------------------------------|------------------------------------------------------------------------------|
|                          |                            |                                    |                                        | 1%                       | 2% | 5% |                                  |                                                                              |
| 0805                     | 1/8W<br>1/4W<br>1/2W       | -55° C~170°C                       | √(P*R)                                 | 5mΩ ≤ R ≤ 20mΩ           |    |    | > 100MΩ                          | ± 100ppm/°C                                                                  |
| 1206                     | 1/4W<br>1/2W<br>1W         | -55° C~170°C                       | √(P*R)                                 | 1mΩ ≤ R ≤ 30mΩ           |    |    | > 100MΩ                          | ± 200ppm/°C (R=1mΩ)<br>± 100ppm/°C (2mΩ ≤ R ≤ 10mΩ)<br>± 75ppm/°C (R > 10mΩ) |
| 2010                     | 1/2W<br>3/4W<br>1W<br>1.5W | -55° C~170°C                       | √(P*R)                                 | 5mΩ ≤ R ≤ 30mΩ           |    |    | > 100MΩ                          | ± 100ppm/°C (5mΩ ≤ R ≤ 10mΩ)<br>± 75ppm/°C (R > 10mΩ)                        |
| 2512                     | 1W                         | -55° C~170°C                       | √(P*R)                                 | 2mΩ ≤ R ≤ 50mΩ           |    |    | > 100MΩ                          | ± 100ppm/°C (2mΩ ≤ R ≤ 10mΩ)<br>± 75ppm/°C (R > 10mΩ)                        |
|                          | 1.5W                       |                                    |                                        | R ≤ 15mΩ                 |    |    |                                  |                                                                              |
|                          | 2W                         |                                    |                                        | R ≤ 10mΩ                 |    |    |                                  |                                                                              |
| *2512                    | 1W<br>1.5W<br>2W<br>3W     | -55° C~170°C                       | √(P*R)                                 | 1mΩ ≤ R ≤ 60mΩ           |    |    | > 100MΩ                          | ± 75ppm/°C                                                                   |

\*:Ultra High Power 超大功率

Derating Curve 功率衰减曲线图



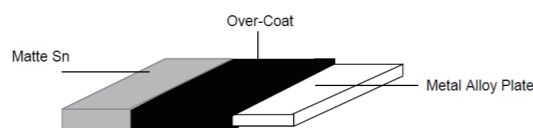
合金低阻贴片电阻(MRMF)Metal Alloy Low-Resistance Resistors

■ Resume 摘要

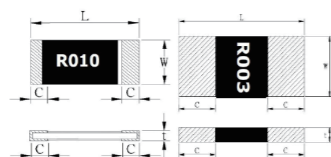
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■ Construction 结构图



■ Dimensions 尺寸



| Size 规格 | L           | W           | T                            | C                            |
|---------|-------------|-------------|------------------------------|------------------------------|
| 0805    | 2.00 ± 0.10 | 1.25 ± 0.10 | 0.60 ± 0.20                  | 0.40 ± 0.20                  |
| 1206    | 3.20 ± 0.20 | 1.60 ± 0.20 | 0.75 ± 0.20 (R=1mΩ)          | 1.10 ± 0.30 (R=1mΩ)          |
|         |             |             | 0.60 ± 0.20 (2mΩ ≤ R ≤ 30mΩ) | 0.50 ± 0.30 (2mΩ ≤ R ≤ 30mΩ) |
| 2010    | 5.00 ± 0.20 | 2.50 ± 0.20 | 0.60 ± 0.20                  | 0.60 ± 0.30                  |
| 2512    | 6.40 ± 0.20 | 3.20 ± 0.20 | 0.60 ± 0.20                  | 2.0 ± 0.20 (R ≤ 3mΩ)         |
|         |             |             |                              | 0.9 ± 0.2 (R > 3mΩ)          |
| *2512   | 6.40 ± 0.20 | 3.20 ± 0.20 | 0.70 ± 0.20                  | 2.0 ± 0.20 (R ≤ 4mΩ)         |
|         |             |             |                              | 0.9 ± 0.2 (R > 4mΩ)          |

■ Part Numbering 型号名称

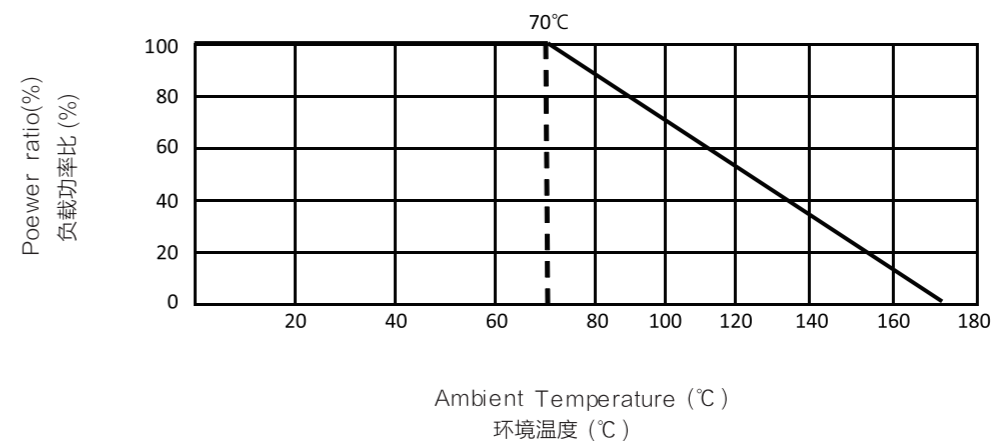
| MRMF                 | 6432 (2512)                                              | LR002                                                                                                    | F                            | T                                     | S                                  |
|----------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------|------------------------------------|
| Product Type<br>产品型号 | Resistor Size<br>电阻规格                                    | Resistance<br>阻值                                                                                         | Resistance Tolerance<br>阻值公差 | Packing Code<br>包装形式                  | High Power<br>升功率                  |
|                      | 2012 (0805)<br>3216 (1206)<br>5025 (2010)<br>6432 (2512) | 5%<br>LR001:0.001Ω<br>LR010:0.01Ω<br>LR3M5:0.0035Ω<br>1%<br>LR002:0.002Ω<br>LR050:0.05Ω<br>LR3M5:0.0035Ω | F=1%<br>G=2%<br>J=5%         | T: Taping Reel<br>卷装<br>B: Bulk<br>散装 | R: 3W<br>S: 2W<br>A: 1.5W<br>N: 1W |

■ Standard Electrical Specifications 标准规格表

| Item<br>Type<br>项目<br>型号 | Power Rating<br>额定功率       | Operating Temp.<br>Range<br>操作温度范围 | Max.<br>Operating<br>Voltage<br>最大工作电压 | Resistance Range<br>阻值范围 |    |    | Insulation<br>Resistance<br>绝缘阻抗 | TCR<br>温度系数<br>(PPM/°C)                                                      |
|--------------------------|----------------------------|------------------------------------|----------------------------------------|--------------------------|----|----|----------------------------------|------------------------------------------------------------------------------|
|                          |                            |                                    |                                        | 1%                       | 2% | 5% |                                  |                                                                              |
| 0805                     | 1/8W<br>1/4W<br>1/2W       | -55° C~170°C                       | √(P*R)                                 | 5mΩ ≤ R ≤ 20mΩ           |    |    | > 100MΩ                          | ± 100ppm/°C                                                                  |
| 1206                     | 1/4W<br>1/2W<br>1W         | -55° C~170°C                       | √(P*R)                                 | 1mΩ ≤ R ≤ 30mΩ           |    |    | > 100MΩ                          | ± 200ppm/°C (R=1mΩ)<br>± 100ppm/°C (2mΩ ≤ R ≤ 10mΩ)<br>± 75ppm/°C (R > 10mΩ) |
| 2010                     | 1/2W<br>3/4W<br>1W<br>1.5W | -55° C~170°C                       | √(P*R)                                 | 5mΩ ≤ R ≤ 30mΩ           |    |    | > 100MΩ                          | ± 100ppm/°C (5mΩ ≤ R ≤ 10mΩ)<br>± 75ppm/°C (R > 10mΩ)                        |
| 2512                     | 1W                         | -55° C~170°C                       | √(P*R)                                 | 2mΩ ≤ R ≤ 50mΩ           |    |    | > 100MΩ                          | ± 100ppm/°C (2mΩ ≤ R ≤ 10mΩ)<br>± 75ppm/°C (R > 10mΩ)                        |
|                          | 1.5W                       |                                    |                                        | R ≤ 15mΩ                 |    |    |                                  |                                                                              |
|                          | 2W                         |                                    |                                        | R ≤ 10mΩ                 |    |    |                                  |                                                                              |
| *2512                    | 1W<br>1.5W<br>2W<br>3W     | -55° C~170°C                       | √(P*R)                                 | 1mΩ ≤ R ≤ 60mΩ           |    |    | > 100MΩ                          | ± 75ppm/°C                                                                   |

\*:Ultra High Power 超大功率

■ Derating Curve 功率衰减曲线图



Environmental Characteristics 信赖性试验项目

| Item 项目                                                       | Requirement 条件                   | Test Method 测试方法                                                                                          |
|---------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Temperature Coefficient of Resistance(T.C.R.)<br>温度系数(T.C.R.) | Refer 4.0<br>参考 4.0              | +25°C~+125°C                                                                                              |
| Load Life<br>负载寿命                                             | < ± 1%                           | 1000hours at rated power,70°C<br>1.5 hrs"ON" and 0.5 hrs "OFF"<br>70°C温度中施加额定电压,1.5小时"开",0.5小时"关",共1000小时 |
| Short Time Overload<br>短时间过负载                                 | < ± 0.5%                         | 5 X rated power for 5s<br>额定功率*5倍,持续5秒                                                                    |
| Moisture no Load<br>水分空载                                      | < ± 1%                           | 85°C,85%RH,1000hrs<br>85°C,85%RH,持续1000小时                                                                 |
| Temperature Cycle<br>温度循环                                     | < ± 0.5%                         | -55°C & +155°C, 300cycle, 15min per extreme condition<br>-55°C & +155°C, 极端条件下每次15分钟,共300次                |
| Resistance to Soldering Heat<br>耐热性试验                         | < ± 0.5%                         | 260 ± 5°C for 20 ± 1 seconds<br>260 ± 5°C锡炉中,持续20 ± 1秒                                                    |
| Solderability<br>焊锡性                                          | 95% min. coverage<br>导体爬锡面积大于95% | 245 ± 5°C for 2 ± 0.5 seconds<br>245 ± 5°C锡炉中,持续2 ± 0.5秒                                                  |
| High Temperature Exposure<br>高温曝光                             | < ± 1%                           | 170°C,1000hrs<br>170°C,持续1000小时                                                                           |
| Low Temperature Storage<br>低温存储                               | < ± 0.5%                         | -55°C, 1000hrs<br>-55°C,持续1000小时                                                                          |
| Substrate Bending<br>基板弯折强度                                   | < ± 1%                           | Bending width 2mm<br>弯折宽度 2mm                                                                             |
| Insulation Resistance<br>绝缘阻抗                                 | ≥ 100MΩ                          | 100V DC for 1 minute<br>100V DC, 持续1分钟                                                                    |

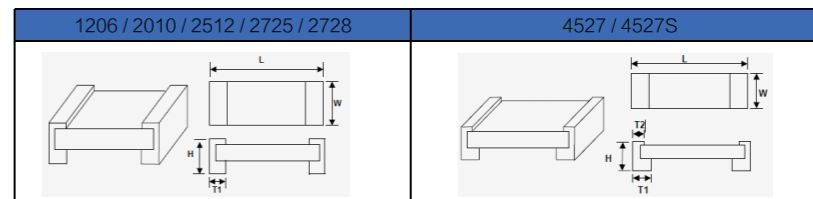
Operating Voltage= $\sqrt{P \cdot R}$  or Max.Operating Voltage listed above,whichever is lower.  
 Overload Voltage= $2.5 \cdot \sqrt{P \cdot R}$  or Max.Overload Voltage listed above,whichever is lower.  
 RCWV(Rated Continuous Working Voltage)= $\sqrt{P \cdot R}$  or Max. Operating Voltage whichever is lower.  
 ■Reference Standards:IEC 60115-1,60068-2-58;JIS-C 5201-1  
 操作电压= $\sqrt{P \cdot R}$ , 过负载电压= $2.5 \cdot \sqrt{P \cdot R}$ ,操作电流= $\sqrt{P/R}$   
 ■依据标准:IEC 60115-1,60068-2-58;JIS-C 5201-1

合金低阻贴片电阻 (MRE) Metal Alloy Low-Resistance Resistors

Resume 摘要

- |                       |                                      |
|-----------------------|--------------------------------------|
| 1、高精度 (1%、5%、0.5%)    | Tight tolerance (1%、5%、0.5%)         |
| 2、高温特性 (最高温度170°C)    | High temperature (Max.170°C)         |
| 3、低温漂 (最低可15PPM/°C)   | Low TCR (Min.15PPM/°C)               |
| 4、大阻值范围 (0.2mΩ~330mΩ) | More resistance values (0.2mΩ~330mΩ) |
| 5、高功率                 | High power                           |

Dimensions 尺寸



| Size 规格 | 功率 (W)   | 阻值范围 (mΩ)     | 尺寸 Dimensions  |               |               |                |                |
|---------|----------|---------------|----------------|---------------|---------------|----------------|----------------|
|         |          |               | L              | W             | H             | T <sub>1</sub> | T <sub>2</sub> |
| 0805    | 0.5      | 3~50          | 2.032 ± 0.20   | 1.270 ± 0.20  | 0.30 ± 0.05   | 0.35 ± 0.20    |                |
| 1206    | 0.5/1.0  | 0.6           | 3.0 ± 0.25     | 1.6 ± 0.25    | 1.000 ± 0.254 | 0.725 ± 0.254  |                |
|         |          | 1             |                |               | 0.645 ± 0.254 | 0.508 ± 0.254  |                |
|         |          | 2.0~4.0       |                |               | 0.545 ± 0.254 | 0.600 ± 0.254  |                |
|         |          | 5             |                |               |               | 0.508 ± 0.254  |                |
| 2010    | 1        | 1.0~3.0       | 5.080 ± 0.254  | 2.540 ± 0.254 | 0.787 ± 0.254 | 1.295 ± 0.254  |                |
|         |          | 3.1~100.0     |                |               | 0.645 ± 0.254 | 0.787 ± 0.254  |                |
| 2512    | 1        | 0.5~4.0       | 6.248 ± 0.254  | 3.202 ± 0.254 | 0.787 ± 0.254 | 1.880 ± 0.254  |                |
|         |          | 4.1~75.0      |                |               | 0.645 ± 0.254 | 1.118 ± 0.254  |                |
|         |          | 75.1~100.0    |                |               | 0.645 ± 0.254 | 0.868 ± 0.254  |                |
|         |          | 100~200       |                |               | 0.645 ± 0.254 | 0.868 ± 0.254  |                |
|         |          | 201~300       |                |               | 0.600 ± 0.254 | 0.868 ± 0.254  |                |
|         |          | 100~200       |                |               | 0.787 ± 0.254 | 1.880 ± 0.254  |                |
|         | 1.5      | 0.5~4.0       | 6.248 ± 0.254  | 3.202 ± 0.254 | 0.645 ± 0.254 | 1.118 ± 0.254  |                |
|         |          | 4.1~75.0      |                |               | 0.645 ± 0.254 | 0.868 ± 0.254  |                |
|         |          | 75.1~100.0    |                |               | 0.645 ± 0.254 | 0.868 ± 0.254  |                |
|         |          | 101~200       |                |               | 0.600 ± 0.254 | 0.868 ± 0.254  |                |
|         |          | 201~220       |                |               | 0.787 ± 0.254 | 1.880 ± 0.254  |                |
|         |          | 201~220       |                |               | 0.645 ± 0.254 | 1.118 ± 0.254  |                |
| 2       | 0.5~4.0  | 6.248 ± 0.254 | 3.202 ± 0.254  | 0.787 ± 0.254 | 1.880 ± 0.254 |                |                |
|         | 4.1~75.0 |               |                | 0.645 ± 0.254 | 1.118 ± 0.254 |                |                |
|         | 0.5      |               |                | 0.787 ± 0.254 | 1.880 ± 0.254 |                |                |
|         | 0.6~2.9  |               |                | 1.118 ± 0.254 | 1.676 ± 0.254 |                |                |
|         | 3.0~4.0  |               |                | 0.645 ± 0.254 | 1.118 ± 0.254 |                |                |
|         | 4.1~10.0 |               |                | 0.991 ± 0.254 | 2.159 ± 0.254 |                |                |
| 2725    | 4        | 0.2~0.5       | 6.807 ± 0.254  | 6.452 ± 0.254 | 1.092 ± 0.254 | 2.159 ± 0.254  |                |
|         |          | 1             |                |               | 0.991 ± 0.254 | 1.803 ± 0.254  |                |
|         |          | 1.5           |                |               | 0.889 ± 0.254 | 1.651 ± 0.254  |                |
|         |          | 2             |                |               | 1.295 ± 0.254 | 1.295 ± 0.254  |                |
|         |          | 2.5           |                |               |               |                |                |
| 2728    | 3        | 4.0~100.0     | 6.706 ± 0.254  | 7.188 ± 0.254 | 0.991 ± 0.254 | 1.143 ± 0.254  |                |
|         |          | 4.0~100.0     |                |               |               |                |                |
|         |          | 101~200       |                |               |               |                |                |
| 4527S   | 3        | 0.5~5.0       | 11.430 ± 0.254 | 6.850 ± 0.254 | 1.400 ± 0.254 | 3.215 ± 0.254  | 0.965 ± 0.254  |
|         |          | 5.1~20        |                |               | 1.815 ± 0.254 | 1.815 ± 0.254  |                |
|         |          | 0.5~50        |                |               | 3.2 ± 0.25    | 3.2 ± 0.25     |                |
|         |          | 5.1~120       |                |               | 1.500 ± 0.254 | 1.8 ± 0.25     |                |

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[SR731ERTTP8R20F](#) [SR731ERTTP3R9J](#) [SR731ERTTP8R2J](#) [SR731ERTTP2R0J](#) [SR731ERTTP4R7J](#) [SR731ERTTP9R1J](#) [SR731ERTTP1R0J](#)  
[SR731ERTTP2R2J](#) [SR731ERTTP5R1J](#) [SR731ERTTP6R8J](#) [SR731ERTTP9R10F](#)