

# Resistors & Potentiometers

## 0603 Chip Resistors (1/10W)

Detailed product specifications are available on: [us.100y.com.tw](http://us.100y.com.tw)



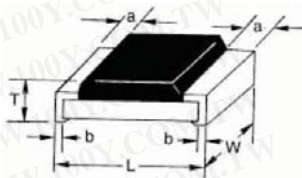
### FEATURES

The chip resistor is metal glazed thick film on high purity ceramic substrate and by protective glass paste, it provides uniform quality and stable characteristic. Latest automated system plus high technology enable us to turn out quality product with competitive price.

- High reliability and stability
- Lower assembly costs
- Reduced size of final equipment
- Higher component and equipment reliability

### Description

The resistors are constructed in a high grade ceramic body (aluminum oxide). Internal metal electrodes are added at each end and connected by a resistive paste that is applied to the top surface of the substrate. The composition of the paste is adjusted to give the approximate resistance required and the value is trimmed to within tolerance by laser cutting of this resistive layer. The resistive layer is covered with a protective coat. Finally, the two external end terminations are added. For ease of soldering the outer layer of these end terminations is a Lead-tin or Tin solder alloy.



| STYLE | DIMENSIONS: (mm) |           |           |           |           |
|-------|------------------|-----------|-----------|-----------|-----------|
|       | L                | W         | a         | b         | T         |
| 0603  | 1.60±0.10        | 0.85±0.10 | 0.30±0.20 | 0.30±0.20 | 0.45±0.05 |

### RATING

| TYPE | Rated Power at 70°C | Max. Working Voltage | Max. Overload Voltage | Resistance Range |          | Operating Temp Range |
|------|---------------------|----------------------|-----------------------|------------------|----------|----------------------|
|      |                     |                      |                       | 1%, E-96         | 5%, E-24 |                      |
| 0603 | 1/10W               | 50V                  | 100V                  | 10Ω-1MΩ          | 1Ω-10MΩ  | -55°C~ +125°C        |

### HARACTERISTICS

| TEST ITEM                             | DESCRIPTION   | TEST METHODS  |
|---------------------------------------|---|---|
| Temperature Coefficient Of resistance | Temp:-55°C~±125°C<br>Requirement: 5%1Ω~10Ω ≤±400PPM/°C<br>11Ω~≤200PPM/°C<br>1%10Ω~1mΩ≤±100ppm/°C                | JIS C 5202.....clause 5.2<br>Natural resistance change per temperature degree centigrade.<br>R2-R1 / (R1 * 10 <sup>6</sup> ) (PPM/°C)<br>R1 (t2-t1)   |
| Short-Time Over load                  | (WV)=√WR On5secs<br>Requirement:(2.0%±0.1Ω)   | JIS C 5202.....clause 5.5<br>Permanent resistance change after the application of a potential of 2.5 time RCWV. Or the max. Over load voltage respectively specified in the above list, whichever less for 5 secs |
| Strength Bending                      | Y/X=5/ FOR 10secs<br>Requirement: (1.0%±0.05Ω)  | JIS C 5202.....clause<br>Bending Test : y/x= / 1 time   |
| Resistance to Soldering Heat          | Test Temp: 260°C±5 °C For 10secs<br>Requirement: (1.0%±0.05Ω)Max  | JIS C 5202.....clause 6.4<br>Test temperature : 260±5°C Dip time : 10 secs  |
| Temp cycling                          | -55°C(30mins)→+25°C(10~15mins)<br>+125°C(30mins)→+25°C(10~15mins)5cycles<br>Requirement:±(1.0%±0.05Ω)Max        | JIS C 5202.....clause 7.4<br>Resistance change after continuous five cycles for duty cycle specified below  |
| Humidity (stead state)                | Temp:40°C±2°C R.H:90~95%<br>Continuors 1000hrs<br>Requirement:±(3.0%±0.1Ω)Max                                   | JIS C 5202.....clause 7.5<br>Temporary resistance change after 1000hours exercise in a humidity test chamber controlled at 40±2°C and 90% to 95% relative humidity.   |
| Loading Life in Moisture              | Temp: 40°C±2°C R.H:90~95%<br>(WV)=√WR on-1.5hrs OFF+0.5hrs<br>Continuors 1000hrs<br>Requirement:±(3.0%±0.1Ω)Max | JIS C 5202.....clause 7.9<br>Resistance change after 1000hours (1.5h "on"0.5h"off")at RCWV or max. less in a humidity chamber controlled at 40±2°C and 90%to95% relative humidity.                                |
| Load Life                             | Temp: 70°C±2°C (WV) = √WR<br>Continuors 1000hrs ON-1.5hrs OFF-0.5hr<br>Requirement:±(3.0%±0.1Ω)Max              | JIS C 5202.....clause 7.10<br>Resistance change after 1000hours operating at RCWV or msx. RCWV, which less with duty cycle of 1.5h "on"at 70±2°C ambient  |

| Part No. | Product No.    | Manufacturer | Description                    | Resistance(Ω) | Tolerance(±) | Package      |
|----------|----------------|--------------|--------------------------------|---------------|--------------|--------------|
| 29622    | 0603-150K±1%   |              | 0603 Chip Resistors (1/10W)    | 150KΩ         | ±1%          | 5000pcs/R    |
| 28319    | 0603-2.4KΩ±5%  | LIKET        | SMD 0603 Resistor              | 2.4K ohm      | ±5%          | 5000pcs/R    |
| 24939    | 0603-2.4KΩ±5%  | LIKET        | SMD 0603 Resistor              | 2.4K ohm      | ±5%          |              |
| 29620    | 0603-200Ω±1%   |              | 0603 Chip Resistors (1/10W)    | 200Ω          | ±1%          | 5000pcs/R    |
| 24921    | 0603-20Ω±5%    | LIKET        | SMD 0603 Resistor              | 20 ohm        | ±5%          |              |
| 20399    | 0603-300Ω±1%   | LIKET        | 0603 Chip Resistors-Thick Film | 300 ohm       | +/-1%        |              |
| 20153    | 0603-330Ω ±1%  | LIKET        | 0603 Chip Resistors-Thick Film | 330 ohm       | +/-1%        | 5000Pcs/Roll |
| 28110    | 0603-39Ω±1%    | LIKET        | SMD Resistor                   | 39Ω           | ±1%          |              |
| 20615    | 0603-4.7KΩ ±1% | LIKET        | 0603 Chip Resistors-Thick Film | 4K7 ohm       | +/-1%        | 5000PCS/R    |
| 20150    | 0603-4.7KΩ±5%  | LIKET        | 0603 Chip Resistors-Thick Film | 4.7K ohm      | +/-5%        | 5000Pcs/Roll |
| 23158    | 0603-4.99Ω±1%  | LIKET        | 0603 Chip Resistors-Thick Film | 4.99Ω         | ±1%          |              |
| 20590    | 0603-5.1KΩ ±1% | LIKET        | 0603 Chip Resistors-Thick Film | 5.1K ohm      | +/-1%        | 5000pcs/R    |
| 20147    | 0603-53.6Ω ±1% | LIKET        | 0603 Chip Resistors-Thick Film | 53.6 ohm      | +/-1%        | 1R/5000pcs   |
| 20595    | 0603-560Ω ±5%  | LIKET        | 0603 Chip Resistors-Thick Film | 560 ohm       | +/-5%        | 5000pcs/R    |
| 18107    | 0603-5.1Ω±1%   | LIKET        | 0603 Chip Resistors-Thick Film | 5.1 ohm       | +/-1%        |              |
| 18109    | 0603-6.49KΩ±1% | LIKET        | 0603 Chip Resistors-Thick Film | 6.49K ohm     | +/-1%        |              |



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