

FEATURES

- High Reliability and Excellent Stability at different environmental conditions
- Low noise, THIN FILM(NiCr) construction
- EIA Standard case size(0402, 0603, 0805, 1206)
- RoHS Compliance and 100% Lead-Free (Matte Sn termination finished)

APPLICATIONS

- Automotive
- Test & Measurement
- Optical & Telecommunication
- Medical and Industrial Equipment

Electrical Specification

| Type | Size | Power Rating ar 85 °C | | Resistance Tolerance (Code) | Resistance Rnage (ohm) | Temperature Coefficient (Code) | Max. operating Voltage | Resistance Vaues (E-series) | Packaging |
|--------|------|-----------------------|-------------------|-----------------------------|------------------------|--------------------------------|------------------------|-----------------------------|--------------------------|
| | | Regular | Ultra Reliability | | | (ppm/°C) | | | |
| RG1005 | 0402 | 0.063W | 0.032W | ±0.01% (L) | 240 - 3.9K | 5 (V) | 25V | E-24, E-96 | T05:500pcs T1:1000pcs |
| RG1608 | 0603 | 0.1W | 0.063W | | 240 - 7.5K | 5 (V) | 75V | | |
| RG2012 | 0805 | 0.125W | 0.1W | | 250 - 36K | 5 (V) 2 (L) | 150V | | |
| RG3216 | 1206 | 0.25W | 0.125W | | 250 - 68K | 5 (V) 2 (L) | 200V | | |

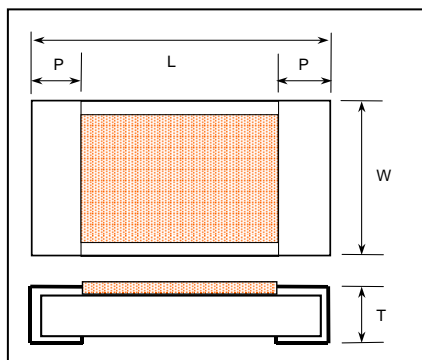
Reliability Test Data

| Item | Test Methode | Performance of High Reliability | | |
|---------------------|---|---------------------------------|-------------------|-----------|
| | | Rgluar | Ultra-Reliability | Typical |
| Short Time Overload | 2.5 times of Rated Load X 5sec. | +/- 0.05% | +/- 0.05% | +/- 0.01% |
| Load Life | 85°C Rated Load 90min. On/ 30min. Off per Cycle X1000 | +/- 0.25% | +/- 0.1% | +/- 0.01% |
| Temp. Hum. Biasa | 85°C 85% RH 1/10 power loaded 90min. On/ 30min. Off per Cycle X1000 | +/- 0.25% | +/- 0.1% | +/- 0.05% |
| Temperature Cycles | -55°C (30min)/room temp.(2min) / +125°C(30min)/room temp.(2min) No Load per Cycle X1000 | +/- 0.1% | +/- 0.1% | +/- 0.05% |
| High Temperature | 155°C for 1000h with No Load | +/- 0.1% | +/- 0.1% | +/- 0.01% |

Remarks: Depending on customer's reliability requirements, power rating between high power, regular power and low power can be selected.

Dimensions & Footprints

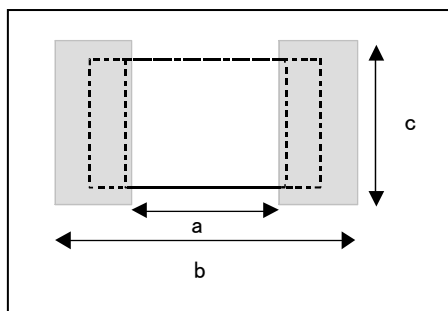
Dimensions inch (mm)



| | L | W | P | T |
|--------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| RG1005 | .040±.002 (1.0 ± 0.05) | .020±.002 (0.5 ± 0.05) | .008±.004 (0.2 ± 0.1) | .014±.002 (0.35 ± 0.05) |
| RG1608 | .063 ± .008 (1.6 ± 0.2) | .031 ± .008 (0.8 ± 0.2) | .012 ± .008 (0.3 ± 0.2) | 0.016 ± .004 (0.4 ± 0.1) |
| RG2012 | .079 ± .008 (2.0 ± 0.2) | .049 ± .008 (1.25 ± 0.2) | .016 ± .008 (0.4 ± 0.2) | 0.016 ± .004 (0.4 ± 0.1) |
| RG3216 | .126 ± .008 (3.2 ± 0.2) | .063 ± .008 (1.6 ± 0.2) | .02 ± .01 (0.5 ± 0.25) | 0.016 ± .004 (0.4 ± 0.1) |

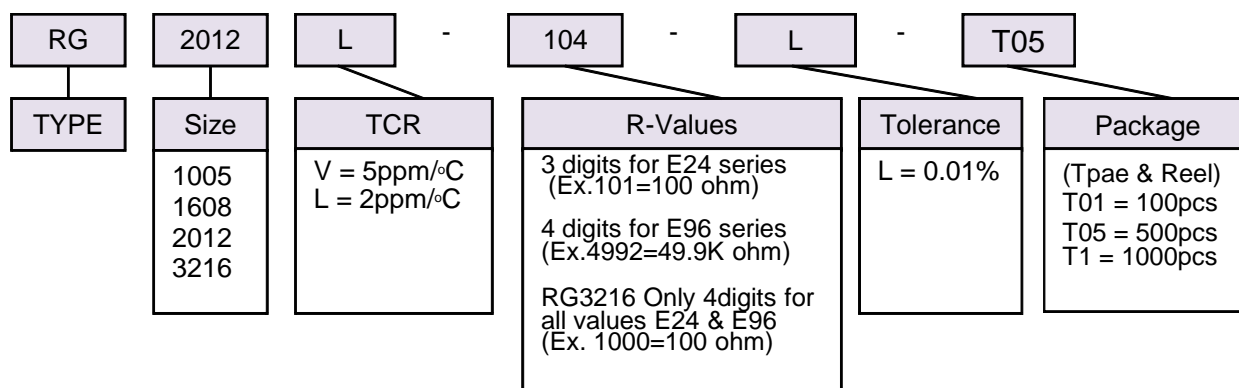
Recommended Mounting Footprints

Dimensions (mm)



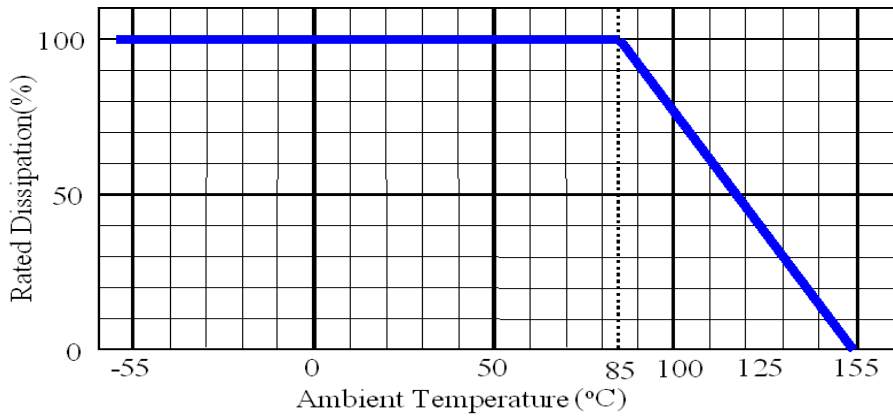
| | a | b | c |
|--------|-----|-----|-----|
| RG1005 | 0.5 | 1.6 | 0.6 |
| RG1608 | 1.0 | 3.0 | 1.2 |
| RG2012 | 1.2 | 4.0 | 1.7 |
| RG3216 | 2.0 | 5.0 | 2.0 |

Ordering information

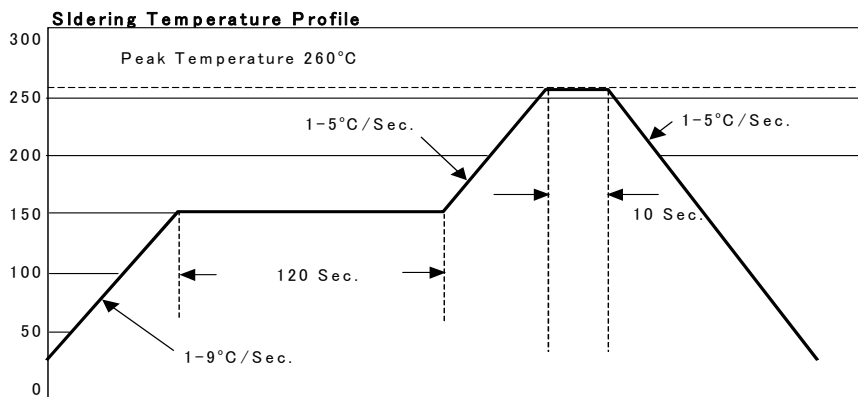


Power Derating Curve

For operation above 85degC, power rating must be derated according to the following chart.

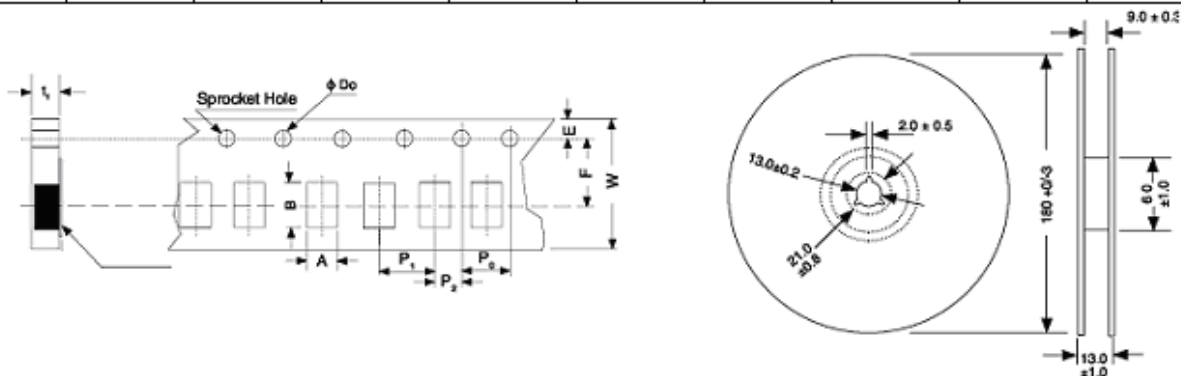


Recommended Reflow Curve



Tape & Reel Dimensions (mm)

| Type | A | B | E | F | W | P ₀ | P ₁ | P ₂ | t ₁ |
|--------|-------------|-------------|------------|------------|-----------|----------------|----------------|----------------|----------------|
| RG1005 | 0.63 ± 0.05 | 1.13 ± 0.05 | 1.75 ± 0.1 | 3.5 ± 0.05 | 8.0 ± 0.3 | 4.0 ± 0.1 | 2.0 ± 0.05 | 2.0 ± 0.05 | 0.43 ± 0.05 |
| RG1608 | 1.1 ± 0.1 | 1.9 ± 0.1 | | | | | 0.6 ± 0.05 | | |
| RG2012 | 1.65 ± 0.2 | 2.4 ± 0.2 | | | | | 0.75 ± 0.05 | | |
| RG3216 | 1.9 ± 0.1 | 3.5 ± 0.1 | | | | | 1.0 ± 0.2 | | |



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