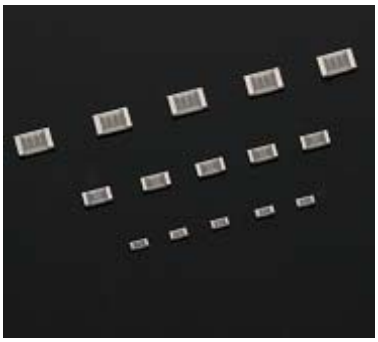
SUSUMU CO.,LTD

RG series

Ultra precision 0.01% Tol, 2ppm TCR

Thin Film Chip Resistor



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

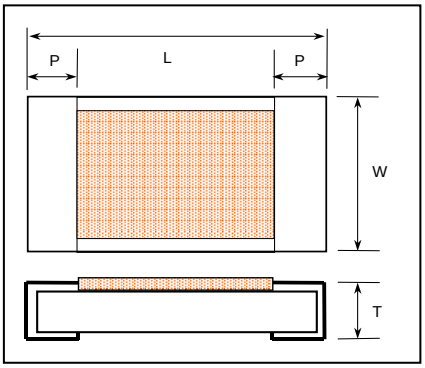
Type	Size	Power Rating ar 85 °C		Resistance Tolerance (Code)	Resistance Rnage (ohm)	Temperature Cofficient (Code)	Max. operating Voltage	Resistance Vaues (E-series)	Packaging
		Regular	Ultra Reliability			(ppm/°C)			
RG1005	0402	0.063W	0.032W	±0.01% (L)	240 - 3.9K	5 (V)	25V	E-24, E-96	T05:500pcs T1:1000pcs
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.

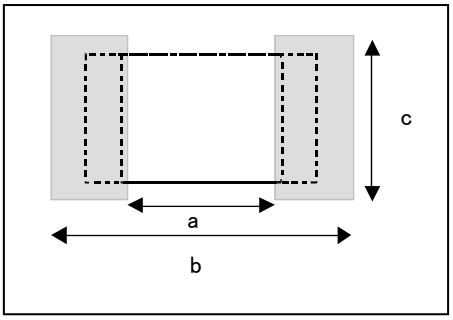
Dimensions & Footprints



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

RG - 2012 - L - 104 - L - T05

TYPE: RG

Size: 1005, 1608, 2012, 3216

TCR:
V = 5ppm/°C
L = 2ppm/°C

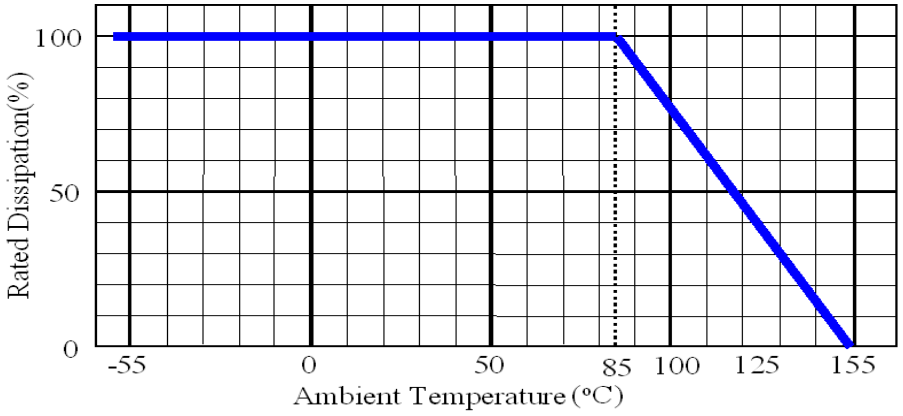
R-Values:
3 digits for E24 series (Ex.101=100 ohm)
4 digits for E96 series (Ex.4992=49.9K ohm)
RG3216 Only 4digits for all values E24 & E96 (Ex. 1000=100 ohm)

Tolerance:
L = 0.01%

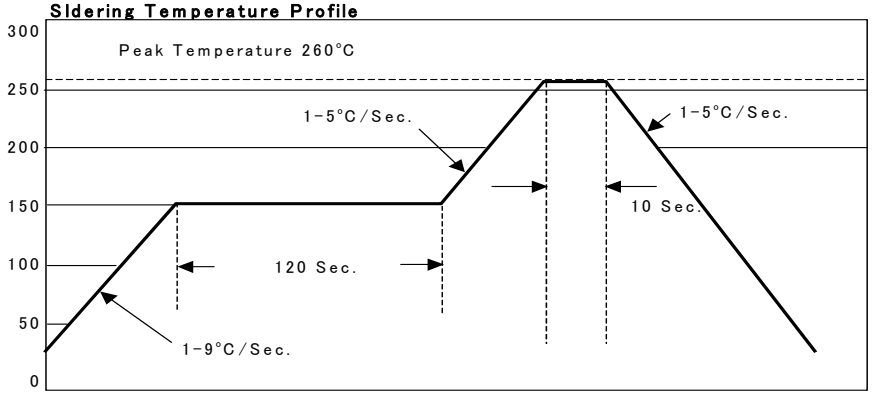
Package:
(Tpae & Reel)
T01 = 100pcs
T05 = 500pcs
T1 = 1000pcs

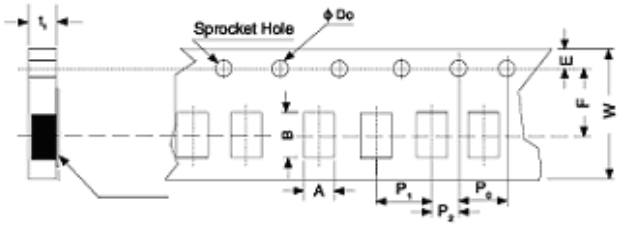
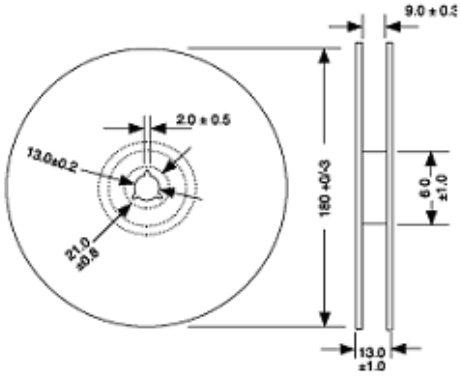
Power Derating Curve

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					4.0 ± 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