

Metal thin film chip resistors (wide temperature range)

■ RGT series

AEC-Q200 Compliant

Features

- Wide temperature operation (Upper category temperature : 175°C)
- Long term stability with inorganic passivation
- Resistance tolerance : $\pm 0.1\%$, TCR : $\pm 10\text{ppm}/^\circ\text{C}$
- Thin film structure enabling low noise and anti-sulfur

Applications

- Automotive electronics
- Industrial measurement instrumentation, industrial machines
- Wide temperature operation machines



Thin film surface mount resistors

RGT series

◆ Part numbering system

RGT 2012 N - 105 - B - T5

Series code

Size: RGT1005, RGT1608, RGT2012

Temperature coefficient of resistance

Packaging quantity :
T5(5,000pcs)

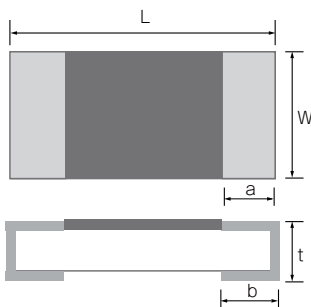
Resistance tolerance

Nominal resistance value
(E-24 : 3 digit, E-96 : 4 digit)

◆ Electrical Specification

Type	Power ratings	Temperature coefficient of resistance (ppm/°C)	Resistance range(Ω) Resistance tolerance		Maximum voltage	Resistance value series	Operating temperature	Packaging quantity
			$\pm 0.1\%$ (B)	$\pm 0.5\%$ (D)				
RGT1005	1/32W	± 10 (N)	10 $\leq R \leq$ 100k		50V	E-24, E-96	-55°C~ 175°C	T5
		± 25 (P)	10 $\leq R \leq$ 150k					
RGT1608	1/16W	± 10 (N)	10 $\leq R \leq$ 270k		100V			
		± 25 (P)	10 $\leq R \leq$ 1M					
RGT2012	1/10W	± 10 (N)	10 $\leq R \leq$ 475k		150V			
		± 25 (P)	10 $\leq R \leq$ 2.7M					

◆ Dimensions



Type	Size (inch)	L	W	a	b	t
RGT1005	0402	1.00 \pm 0.1/-0.05	0.50 \pm 0.05	0.20 \pm 0.10	0.25 \pm 0.05	0.35 \pm 0.05
RGT1608	0603	1.60 \pm 0.20	0.80 \pm 0.20	0.30 \pm 0.20	0.30 \pm 0.20	0.40 \pm 0.10
RGT2012	0805	2.00 \pm 0.20	1.25 \pm 0.20	0.40 \pm 0.20	0.40 \pm 0.20	0.40 \pm 0.10

(unit : mm)

◆ Reliability specification

Test items	Condition(IEC60115-1/JIS C5201-1)	Standard	
		<47Ω	≥47Ω
Short time overload	2.5 x rated voltage, ^{*1} 5 seconds	±0.05%	
Life (biased)	125°C, rated voltage ^{*1} , 90min. ON/ 30min. OFF, 1000hours	±0.5%	±0.25%
High temperature high humidity	85°C, 85%RH, 1/10 of rated power, 90min. ON/ 30min. OFF, 1000hours	±0.5%	±0.25%
Temperature shock	-55°C (30min) ~ 125°C(30min) 1000 cycles	±0.25%	±0.1%
High temperature exposure	175°C, no bias, not mounted, 1000h	±0.25%	±0.1%

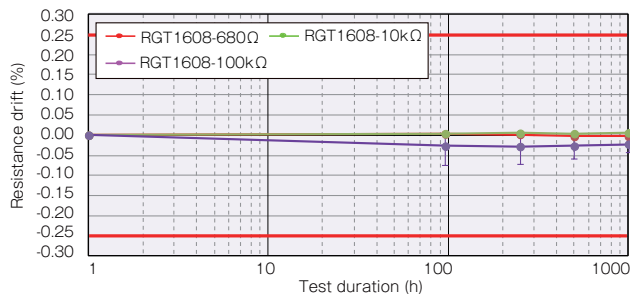
*1 Rated voltage is given by $E = \sqrt{R \times P}$ E= rated voltage (V), R=nominal resistance value(Ω), P=rated power(W)
 If rated voltage exceeds maximum voltage /element, maximum voltage/element is the rated voltage.

Thin film surface mount resistors

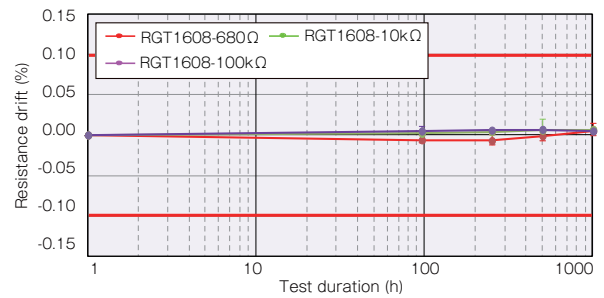
RGT series

◆ Reliability test data

○ Biased life test



○ High temperature exposure



◆ Derating Curve

