

# 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 : ±0.1% , TCR : ±10ppm/°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

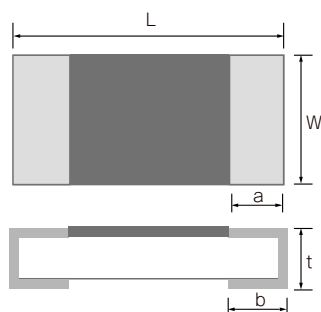
Packaging quantity :  
T5(5,000pcs)

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

## ◆ Electrical Specification

Type	Power ratings	Temperature coefficient of resistance	Resistance range(Ω) Resistance tolerance		Maximum voltage	Resistance value series	Operating temperature	Packaging quantity
		(ppm/°C)	±0.1%(B)	±0.5%(D)				
RGT1005	1/32W	±10(N)	47≤R≤100k		50V	E-24, E-96	-55°C~ 175°C	T5
		±25(P)	47≤R≤150k					
RGT1608	1/16W	±10(N)	47≤R≤270k		100V			
		±25(P)	47≤R≤1M					
RGT2012	1/10W	±10(N)	47≤R≤475k		150V			
		±25(P)	47≤R≤2.7M					

## ◆ Dimensions



Type	Size (inch)	L	W	a	b	t
RGT1005	0402	1.00±0.1/-0.05	0.50±0.05	0.20±0.10	0.25±0.05	0.35±0.05
RGT1608	0603	1.60±0.20	0.80±0.20	0.30±0.20	0.30±0.20	0.40±0.10
RGT2012	0805	2.00±0.20	1.25±0.20	0.40±0.20	0.40±0.20	0.40±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, <sup>**1</sup> 5 seconds	±0.05%	
Life (biased)	125°C, rated voltage <sup>**1</sup> , 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%

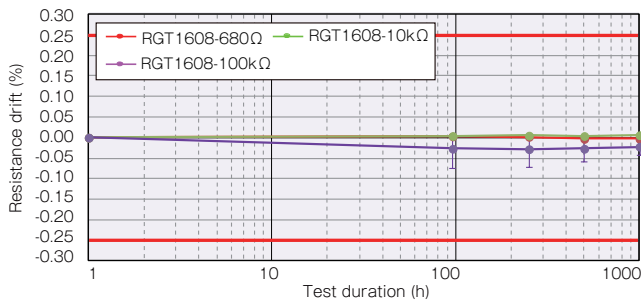
\*1 Rated voltage is given by  $E = \sqrt{R \times P}$  E= rated voltage (V), R=nominal resistance value(Ω), P=rated power(W)  
 If rated voltage exceeds maximum voltage /element, maximum voltage/element is the rated voltage.

Thin film surface mount resistors

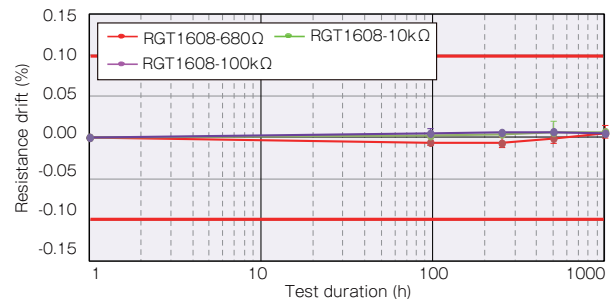
RGT series

## ◆ Reliability test data

### ○ Biased life test



### ○ High temperature exposure



## ◆ Derating Curve

