

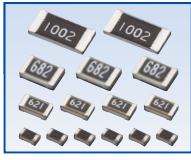
Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Susumu](#)
[RG1005P-1691-B-T5](#)

For any questions, you can email us directly:
sales@integrated-circuit.com



Metal thin film chip resistors (Ultra-precision)

■ RG series (This series now includes the former RGH series.) AEC-Q200 Compliant

Features

- Ultimate chip resistors: the result of all of our thin film technology expertise including inorganic passivation
- Resistance drift: less than +/-0.1% after 10000 hour accelerated reliability test
- +/-0.02% of resistance tolerance and +/-5ppm/°C of temperature coefficient of resistance
- Excellent tolerance to power surges

Applications

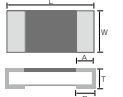
- Any applications that require precision resistors such as automotive electronics, industrial test and measurement equipment, and consumer electronics

Specifications

* Standard stock item: E-24 series with TCR P, Q, and R grades, as well as tolerance D and B grades. Other E-24 grades and E-96 series are made to order

unit : mm

Dimensions



Dimension (inch)	RG1005 (0402) (OLD RGH1005-2B included)	RG1608 (0603)	RG2012 (0805) (OLD RGH2012-2E included)	RG3216 (1206)
L	1.00±0.05	1.60±0.20	2.00±0.20	3.20±0.20
W	0.50±0.05	0.80±0.20	1.25±0.20	1.60±0.20
A	0.20±0.10	0.30±0.20	0.40±0.20	0.50±0.25
B	0.25±0.05	0.30±0.20	0.40±0.10	0.50±0.20
T	0.35±0.05	0.40±0.10	0.40±0.10	0.40±0.10

NOTE: Obsolete: RGH1005-2B (0402) RGH1608-2C (0603) RGH2012-2E (0805)
Alternative P/N: RG1005 (0402) RG1608 (0603) RG2012 (0805)

Electrical characteristics

Series name	RG1005 (0402)				RG1608 (0603)					
	1/8W (OLD: RGH1005-2B)				1/8W (OLD: RGH1608-2C)					
Rated power*	1/16W				1/16W					
High power applications	1/32W				1/16W					
High precision	E-24, E-96				E-24, E-96					
E series offered	E-24, E-96				E-24, E-96					
Resistance range (Ω)	10~46.4	47~97.6	100~2.94k	3k~100k	10~46.4	47~97.6	100~4.99k	5.1k~270k	274k~332k	340k~390k
Resistance tolerance (%)	±0.02% (P)	±0.05% (W)	±0.1% (B)	±0.25% (C)	±0.5% (D)	±1% (N)	±25% (P)	±50% (Q)	±100% (R)	±100% (R)
Temperature coefficient of resistance (ppm/°C)	±5 (V)	±10 (N)	±25 (P)	±50 (Q)	±100 (R)	±50 (Q)	±100 (R)	±50 (Q)	±100 (R)	±100 (R)
Maximum voltage	75V				100V					
Operating temperature	-55°C~155°C				-55°C~155°C					
Package	5,000pcs CodeT5				5,000pcs CodeT5					
Package	10,000pcs CodeT10				10,000pcs CodeT10					
Series name	RG2012 (0805)				RG3216 (1206)					
	1/4W (OLD: RGH2012-2E)				1/4W (OLD: RGH3216-2F)					
Rated power*	1/8W				1/8W					
High power applications	1/10W				1/8W					
High precision	E-24, E-96				E-24, E-96					
E series offered	E-24, E-96				E-24, E-96					
Resistance range (Ω)	10~46.4	47~97.6	100~10k	10.2k~477k	487k~1M	10~46.4	47~97.6	100~33.2k	34k~1M	
Resistance tolerance (%)	±0.02% (P)	±0.05% (W)	±0.1% (B)	±0.25% (C)	±0.5% (D)	±1% (N)	±25% (P)	±50% (Q)	±100% (R)	
Temperature coefficient of resistance (ppm/°C)	±5 (V)	±10 (N)	±25 (P)	±50 (Q)	±100 (R)	±50 (Q)	±100 (R)	±50 (Q)	±100 (R)	
Maximum voltage	150V				200V					
Operating temperature	-55°C~155°C				-55°C~155°C					
Package	5,000pcs CodeT5				5,000pcs CodeT5					

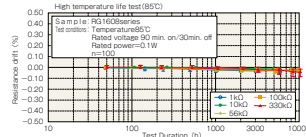
* Depending on customer's reliability requirements, power rating between high power and regular power can be selected.
* Contact us for RG3225 with 1/2W rated power.

Reliability characteristics

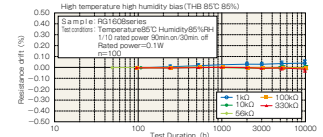
Item	Test Method	Specification: drift limits for each power rating				Typical
		Low	Regular	High	High	
Short time Overload	Applied voltage : 2.5 times, Test duration : 5 seconds. (When maximum operating voltage: 2 times or less)	±0.1%	±0.05%	±0.1%	±0.05%	±0.10%
Load Life	Test temperature : 85°C (When high voltage : 70°C). Applied voltage : rated voltage. Repeat : 1000 hours as follow : 90 mins on/30mins off.	±0.2%	±0.1%	±0.50%	±0.25%	±0.50%
Moisture load life	Test condition: 85°C, 85% RH. Applied power : 1/10 rated power. Repeat : 1000 hours as follow : 90 mins on/30mins off.	±0.2%	±0.1%	±0.50%	±0.25%	±0.50%
Temperature Cycle	Repeat : 1000 cycle as follow : -55°C (30 min.)/Room Temp.(2 min.) / +125°C (30min.)/Room Temp.(2min.)	±0.2%	±0.1%	±0.25%	±0.10%	±0.10%
High temperature Exposure	+155°C for 1000 hours with no load	±0.2%	±0.1%	±0.25%	±0.10%	±0.10%

10000 hour reliability test data

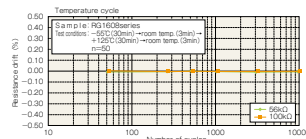
Life test



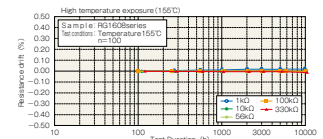
High temperature high humidity bias test



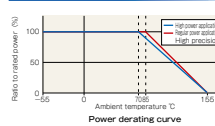
Temperature cycle test



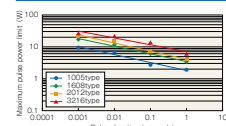
High temperature exposure test



Power derating characteristics



Maximum pulse power limit



Test procedure
Voltage pulse is applied to the test samples mounted on the test board. After each pulse, resistance drift is measured. Pulse voltage is increased until the drift exceeds +/-0.5%. The power at that voltage is defined as the maximum pulse power.

Part numbering system

