

# RG series, ultra-precision & ultra-reliability metal film chip resistors NEW

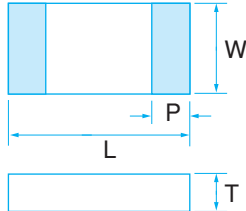


Tight resistance tolerance of  $\pm 0.02\%$  and temperature coefficient of resistance of  $5\text{ppm}/^\circ\text{C}$  are achieved. Under high temperature and humid condition of  $85^\circ\text{C}$  and  $85\%RH$ , and at  $155^\circ\text{C}$  (1000 hours operation), superior reliability of only less than  $\pm 0.1\%$  of change in resistance value is realized.



## SPECIFICATIONS

### Mechanical



Dimension (mm)	RG1005 (0402)	RG1608 (0603)	RG2012 (0805)
L	$1.0 \pm 0.05$	$1.6 \pm 0.2$	$2.0 \pm 0.2$
W	$0.5 \pm 0.05$	$0.8 \pm 0.2$	$1.25 \pm 0.2$
P	$0.2 \pm 0.10$	$0.3 \pm 0.2$	$0.4 \pm 0.2$
T	$0.35 \pm 0.05$	$0.4 \pm 0.1$	$0.4 \pm 0.1$

### Electrical

Type	RG1005			RG1608			RG2012			
Power	general	1/16W			1/10W			1/8W		
	Ultra-reliability	1/32W			1/16W			1/10W		
Resistance Tolerance (%)	$\pm 0.02$ (P), $\pm 0.05$ (W), $\pm 0.1$ (B), $\pm 0.25$ (C)			$\pm 0.02$ (P), $\pm 0.05$ (W), $\pm 0.1$ (B), $\pm 0.25$ (C)			$\pm 0.02$ (P), $\pm 0.05$ (W), $\pm 0.1$ (B), $\pm 0.25$ (C)			
Resistance Range ( $\Omega$ )	47~97.6	100~2.94k	3k~100k	47~97.6	100~4.99k	5.1k~270k	47~97.6	100~10k	10.2k~470k	
Temperature Coefficient of Resistance ppm/ $^\circ\text{C}$ (code)	$\pm 10$ (N) $\pm 25$ (P)	$\pm 5$ (V) $\pm 10$ (N) $\pm 25$ (P)	$\pm 10$ (N) $\pm 25$ (P)	$\pm 10$ (N) $\pm 25$ (P)	$\pm 5$ (V) $\pm 10$ (N) $\pm 25$ (P)	$\pm 10$ (N) $\pm 25$ (P)	$\pm 10$ (N) $\pm 25$ (P)	$\pm 5$ (V) $\pm 10$ (N) $\pm 25$ (P)	$\pm 10$ (N) $\pm 25$ (P)	
Maximum Operating Voltage for an element	25V			75V			150V			
Resistance Value	E-24, E-96									
Operating Tem. Range	$-55^\circ\text{C} \sim 155^\circ\text{C}$									
Package	5,000pcs/reel (T5) 10,000pcs/reel (TA)			1,000pcs/reel (T1) 5,000pcs/reel (T5)			1,000pcs/reel (T1) 5,000pcs/reel (T5)			

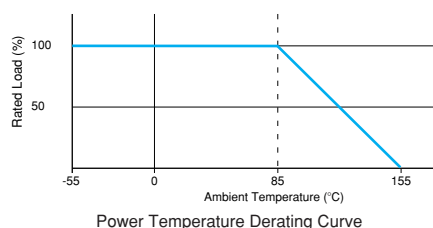
· Please contact us for Resistance tolerance  $\pm 0.01\%$ . · Also please Contact us for 1/4W for RG3216

### Reliability

Item	Test Method	Specification		Typical
		Ultra-reliability	general	Ultra-reliability
Short time overload	Applied voltage: $2.5 \times$ rated voltage or $2 \times$ maximum operating voltage which ever is less Test Time: 5 seconds	$\pm (0.05\% + 0.01\Omega)$	$\pm (0.05\% + 0.01\Omega)$	$\pm (0.01\% + 0.01\Omega)$
Load Life	Test Temperature: $85^\circ\text{C}$ Applied voltage: rated voltage Test period: repeat 1000 cycle as follow: 90 min. on/30 min. off cycled	$\pm (0.1\% + 0.01\Omega)$	$\pm (0.25\% + 0.05\Omega)$	$\pm (0.01\% + 0.01\Omega)$
Endurance	Test condition: $85^\circ\text{C}85\%RH$ Applied power: 1/10 rated Power Test period: repeat 1000 cycle as follow: 90 min. on/30 min. off cycled	$\pm (0.1\% + 0.01\Omega)$	$\pm (0.25\% + 0.05\Omega)$	$\pm (0.05\% + 0.01\Omega)$
Rapid change of Temperature	Repeat 1000 cycle as follow: $-55^\circ\text{C}$ (30 min.) / Room Tem. (2 min.) / $+155^\circ\text{C}$ (30 min.) / Room Tem. (2 min.)	$\pm (0.1\% + 0.01\Omega)$	$\pm (0.25\% + 0.05\Omega)$	$\pm (0.01\% + 0.01\Omega)$
High Temperature store	$+155^\circ\text{C}$ for 1000 hours with no load	$\pm (0.1\% + 0.01\Omega)$	$\pm (0.25\% + 0.05\Omega)$	$\pm (0.01\% + 0.01\Omega)$



## CHARACTERISTICS



## PART NUMBER

**RG 1608 N - 102 - B - T5** — Package (T1, T5, TA)

- Resistance Tolerance
- Resistance (E-24: in a three-digit number, E-96: in a four-digit number)
- Temperature Coefficient of Resistance
- Dimensions
- Part Code