



Metal thin film chip resistors (high voltage operation)

■ RGV series

AEC-Q200 Compliant

Features

- High voltage operation is possible because the limiting element voltage is high. (RGV3225 1000V)
- Long term stability with inorganic passivation.
- Resistance tolerance : $\pm 0.1\%$, TCR : ± 25 ppm/ $^{\circ}\text{C}$
- Thin film structure enabling low noise and anti-sulfur

Applications

- Automotive electronics
- Industrial measurement instrumentation, Industrial machines.
- High voltage circuit and equipment.

◆ Part numbering system

RGV 3216 P - 2004 - B - T5

Series code

Size : RGV1608, RGV2012, RGV3216, RGV3225

Temperature coefficient of resistance

T1(1,000pcs) T5(5,000pcs)

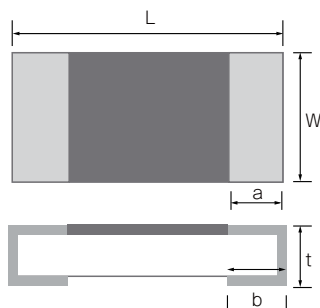
Resistance tolerance

Nominal resistance value(all 4 digit)

◆ Electrical Specification

Type	Power ratings	Temperature coefficient of resistance (ppm/ $^{\circ}\text{C}$)	Resistance range(Ω) Resistance tolerance		Maximum voltage	Resistance value series	Operating temperature	Packaging quantity
			$\pm 0.1\%$ (B)	$\pm 0.5\%$ (D)				
RGV1608	1/10W	± 25 (P)	100K Ω \leq R \leq 1M Ω		200V	E-24, E-96	-55 $^{\circ}\text{C}$ ~ 155 $^{\circ}\text{C}$	T1 T5
		± 50 (Q)						
RGV2012	1/8W	± 25 (P)	100K Ω \leq R \leq 2M Ω		300V	E-24, E-96	-55 $^{\circ}\text{C}$ ~ 155 $^{\circ}\text{C}$	T1 T5
		± 50 (Q)						
RGV3216	1/4W	± 5 (V)	2M Ω		700V	E-24, E-96	-55 $^{\circ}\text{C}$ ~ 155 $^{\circ}\text{C}$	T1 T5
		± 25 (P)	120K Ω \leq R \leq 3M Ω					
		± 50 (Q)						
RGV3225	1/3W	± 25 (P)	120K Ω \leq R \leq 4.3M Ω		1000V	E-24, E-96	-55 $^{\circ}\text{C}$ ~ 155 $^{\circ}\text{C}$	T1 T5
		± 50 (Q)						

◆ Dimensions



Type	Size (inch)	L	W	a	b	t
RGV1608	0603	1.60 \pm 0.20	0.80 \pm 0.20	0.30 \pm 0.20	0.30 \pm 0.20	0.40+0.15/-0.10
RGV2012	0805	2.00 \pm 0.20	1.25 \pm 0.20	0.40 \pm 0.20	0.40 \pm 0.20	0.40+0.15/-0.10
RGV3216	1206	3.20 \pm 0.20	1.60 \pm 0.25	0.50 \pm 0.25	0.50 \pm 0.20	0.40+0.15/-0.1
RGV3225	1210	3.20 \pm 0.20	2.50 \pm 0.25	0.50 \pm 0.25	0.50 \pm 0.20	0.40+0.15/-0.1

(unit : mm)

◆ Reliability specification

Test items	Condition(IEC60115-1/JIS C5201-1)	Standard
Life (Biased)	85°C, rated voltage ^{※1} , 90min. ON/ 30min. OFF, 1000hours	±(0.05%+0.05Ω)
High temperature high humidity	85°C、85%RH, 1/10 of rated power, 90min. ON/ 30min. OFF, 1000hours	±(0.1%+0.05Ω)
Temperature shock	-55°C (30min) ~ 125°C(30min) 1000 cycles	±(0.1%+0.01Ω)
High temperature exposure	155°C, no bias, not mounted, 1000h	±(0.1%+0.01Ω)
Resistance to soldering heat	260±5°C, 10seconds (reflow)	±(0.05%+0.01Ω)

*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.

◆ Derating Curve

