



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)

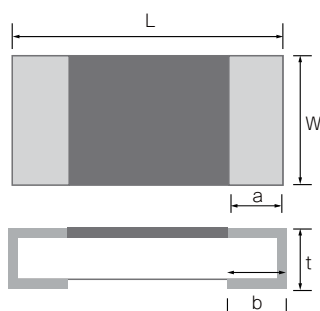
Resistance tolerance

Nominal resistance value(all 4 digit)

◆Electrical Specification

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

◆Dimensions



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

(unit : mm)

◆Reliability specification

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

Thin film surface mount resistors

RGV series

◆Derating Curve

