

# 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 :  $\pm 25$  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.



Thin film surface mount resistors

RGV series

## ◆ Part numbering system

**RGV 3216 P - 2004 - B - T5**

Series code

Size : RGV3216, RGV3225

Temperature coefficient of resistance

Nominal resistance value(all 4 digit)

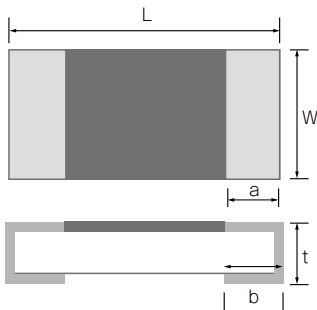
T1(1,000pcs) T5(5,000pcs)

Resistance tolerance

## ◆ Electrical Specification

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

## ◆ Dimensions



Type	Size (inch)	L	W	a	b	t
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 <sup>*1</sup> , 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

