

Lead

Thin film surface mount resistors







■HRG series

AEC-Q200 Compliant

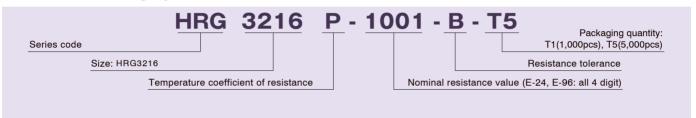
Features

- · Wider bottom terminal enabling higher power capability (short side terminal)
- Significantly larger power handling capability than existing same size resistors Size: 3216, Power rating: 1.0W, Resistance range: $10 \sim 100 K\Omega$
- · Precision resistance tolerance: ±0.1%, very small TCR: ±25ppm/°C
- · Thin film structure enabling low noise and anti-sulfur

Applications

- · Power source related devises
- · DC motors, inverters
- · Robotics, Industrial control system

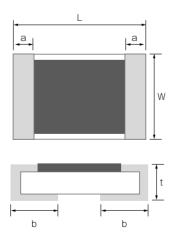
♦Part numbering system



◆Electrical Specification

Туре	Power ratings	Temperature coefficient of resistance	Resistance range(Ω) Resistance tolerance ±0.1% (B) ±0.5% (D)		Maximum voltage	Resistance value series	Operating temperature	Packaging quantity
HRG3216	1.0W	±25(P)	47≦R≦100k		0001	504 500	5500 7 4550	T1
		±50(Q)	47≦R≦100k	10≦R≦100k	200V	E-24, E-96	-55℃ ~ 155℃	T5

♦Dimensions



	Туре	Size (inch)	L	W	а	b	t
	HRG3216	1206	3.20±0.20	1.60±0.20	0.50±0.25	1.10±0.20	0.45±0.10

(unit: mm)

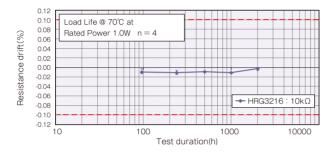
◆Reliability specification

Trondomy oppositionation			Standard		
Test items	Condition (test methods (JIS C5201-1)	≦47Ω	≧47Ω		
Life (biased)	70°C, rated voltage,*1 90min on 30min off, 1000hours	$\pm (0.5\% + 0.05\Omega)$	±(0.25%+0.01Ω)		
High temperature high humidity	85°C, 85%RH, 1/10 of rated power, 90min on 30min off, 1000hours	±(0.25%+0.05Ω)	±(0.1%+0.01Ω)		
Temperature shock	-55°C (30min) ~ 125°C (30min) 1000cycles	±(0.25%+0.05Ω)	±(0.1%+0.01Ω)		
High temperature exposure	155℃, no bias, 1000hours	±(0.25%+0.05Ω)	±(0.1%+0.01Ω)		
Resistance to soldering heat	260±5℃, 10 seconds (reflow)	±(0.25%+0.05Ω)	±(0.1%+0.01Ω)		

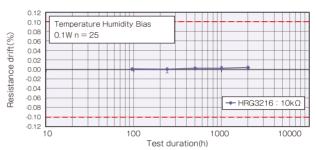
Rated voltage is given by $E = \sqrt{R \times P}$ E= rated voltage (V), R=nominal resistance value(Ω), P=rated power(W) If rated voltage exceeds maximum voltage /element, maximum voltage/element is the rated voltage.

Reliability test data

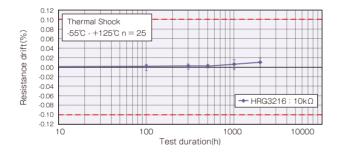
OBiased life test



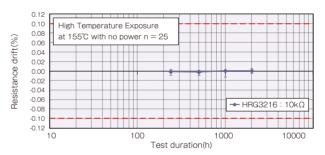
OHigh temperature high humidity (biased)



OTemperature shock



OHigh temperature exposure



▶Derating Curve

