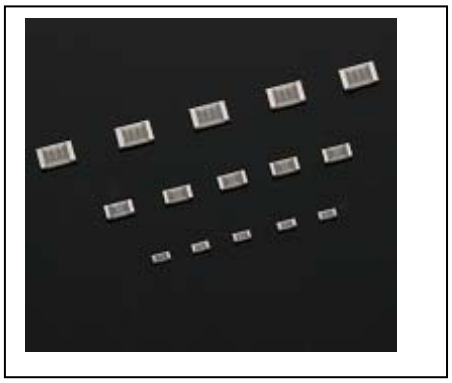
Ultra precision 0.02%, 0.05%, 0.1%, 0.25%, 0.5%, tolerance Thin Film Chip Resistor



FEATURES

- High Reliability and Excellent Stability at different environmental conditions
- Low noise, THIN FILM(NiCr) construction
- EIA Standard case size(0402, 0603, 0805, 1206)
- RoHS Compliance and 100% Lead-Free (Matte Sn termination finished)

APPLICATIONS

- Automotive
- Test & Measurement
- Optical & Telecommunication
- Medical and Industrial Equipment

Electrical Specification

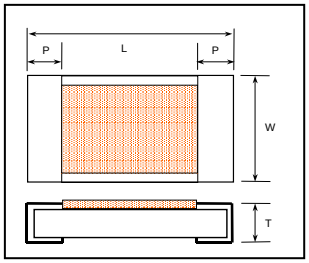
Type	Size	Power Rating ar 85 ◦C			Resistance Tolerance (Code)	Resistance Range (ohm)	Temperature Coefficient (Code)		Max. operating Voltage	Resistance Values (E-series)
		Low (ultra precision)	Regular	High			(ohm)	(ppm/◦C)		
RG1005	0402	0.032W	0.063W	0.125W	±0.5% (D)	10-100K	10-46.4	100(R)	25V	E-24, E-96
							47-100K	25(P), 10(N)		
							100-2.94K	5(V)		
					±0.25% (C)	47-100K	47-100K	25(P), 10(N)		
							100-2.94K	5(V)		
					±0.1% (B)		47-100K	25(P), 10(N)		
							100-2.94K	5(V)		
					±0.05% (W)		47-100K	25(P), 10(N)		
							100-2.94K	5(V)		
					±0.02% (V)	100-2.94K	100-2.94K	25(P), 10(N), 5(V)		
RG1608	0603	0.063W	0.1W	0.166W	±0.5% (D)	10-360K	10-46.4	50(Q)	75V	E-24, E-96
							47-360K	25(P)		
							47-274K	10(N)		
							100-4.99K	5(V)		
					±0.25% (C)	47-274K	47-274K	25(P), 10(N)		
							100-4.99K	5(V)		
					±0.1% (B)	47-332K	47-332K	25(P)		
							47-274K	10(N)		
							100-4.99K	5(V)		
					±0.05% (W)		47-332K	25(P)		
							47-274K	10(N)		
							100-4.99K	5(V)		
					±0.02% (V)	100-4.99K	100-4.99K	25(P), 10(N), 5(V)		
RG2012	0805	0.1W	0.125W	0.25W	±0.5% (D)	10-1M	10-46.4	50(Q)	100V	E-24, E-96
							47-1M	25(P)		
							47-475K	10(N)		
							100-10K	5(V)		
					±0.25% (C)	47-1M	47-1M	25(P), 10(N)		
							100-10K	5(V)		
					±0.1% (B)	47-1M	47-1M	25(P)		
							47-475K	10(N)		
							100-10K	5(V)		
					±0.05% (W)	47-475K	47-475K	25(P)		
							47-475K	10(N)		
							100-10K	5(V)		
					±0.02% (V)	100-10K	100-10K	25(P), 10(N), 5(V)		
RG3216	1206	0.125W	0.25W		±0.5% (D)	47-1M	10-46.4	50(Q)	150V	E-24, E-96
							10-1M	25(P), 10(N)		
							100-33.2K	5(V)		
					±0.25% (C)	47-1M	47-1M	25(P), 10(N)		
							100-33.2K	5(V)		
					±0.1% (B)	47-1M	47-1M	25(P), 10(N)		
							100-33.2K	5(V)		
					±0.05% (W)	47-1M	47-1M	25(P), 10(N)		
							100-33.2K	5(V)		
					±0.02% (V)	100-33.2K	100-33.2K	25(P), 10(N), 5(V)		

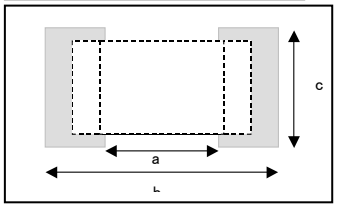
Ultra precision 0.02%, 0.05%, 0.1%, 0.25%, 0.5%, tolerance Thin Film Chip Resistor

Performance

Item	Test Method	Specification: drift limits for each power rating						(Typical)
		Low		Regular		High		
		≦47Ω	≧47Ω	≦47Ω	≧47Ω	≦47Ω	≧47Ω	
Short time Overload	Appled voltage : 2.5 times. Test duration: 5 seconds. (When maximun operationg voltage: 2 times or less)	±0.10%	±0.05%	±0.10%	±0.05%	–	±0.10%	±(0.01%)
Load Life	Test temperature : 85℃ (When high voltage : 70℃). Applied voltage : rated voltage. Repeat 1000 hours as follow : 90 mins on/30mins off.	±0.25%	±0.10%	±0.50%	±0.25%	–	±0.50%	±(0.01%)
Moisture load life	Test condition: 85℃, 85% RH. Applied power : 1/10 rated power. Repeat 1000 hours as follow : 90 mins on/30mins off.	±0.25%	±0.10%	±0.50%	±0.25%	–	±0.50%	±(0.05%)
Temperature Cycle	Repeat 1000 cycle as follow : −55℃ (30 min.)/Room Temp.(2 min.) / +125℃ (30min.)/Room Temp.(2min.)	±0.25%	±0.10%	±0.25%	±0.10%	–	±0.10%	±(0.01%)
High temperature Exposure	+155℃ for 1000 hours with no load	±0.25%	±0.10%	±0.25%	±0.10%	–	±0.10%	±(0.01%)

Dimensions & Footprints





Dimensions inch (mm)

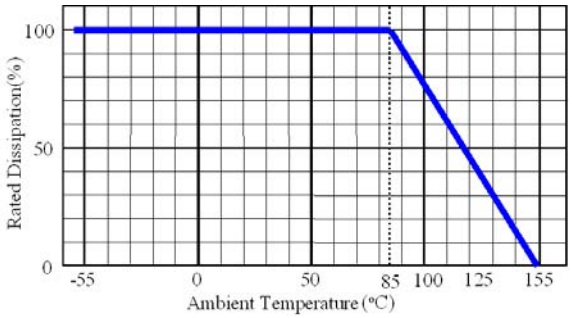
	L	W	P	T
RG1005	.040±.002 (1.0 ± 0.05)	.020±.002 (0.5 ± 0.05)	.008±.004 (0.2 ± 0.1)	.014±.002 (0.35 ± 0.05)
RG1608	.063 ± .008 (1.6 ± 0.2)	.031 ± .008 (0.8 ± 0.2)	.012 ± .008 (0.3 ± 0.2)	0.016 ± .004 (0.4 ± 0.1)
RG2012	.079 ± .008 (2.0 ± 0.2)	.049 ± .008 (1.25 ± 0.2)	.016 ± .008 (0.4 ± 0.2)	0.016 ± .004 (0.4 ± 0.1)
RG3216	.126 ± .008 (3.2 ± 0.2)	.063 ± .008 (1.6 ± 0.2)	.02 ± .01 (0.5 ± 0.25)	0.016 ± .004 (0.4 ± 0.1)

Dimensions (mm)

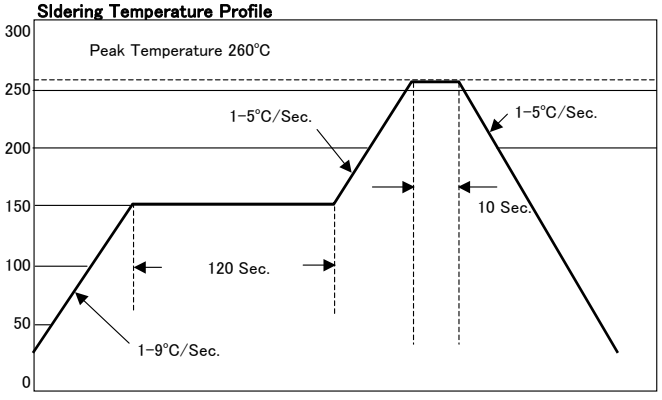
	a	b	c
RG1005	0.5	1.6	0.6
RG1608	1.0	3.0	1.2
RG2012	1.2	4.0	1.7
RG3216	2.0	5.0	2.0

Power Derating Curve

:For operation above 85degC, power rating must be derated according to the following chart



Recommended Reflow Curve



Ordering information

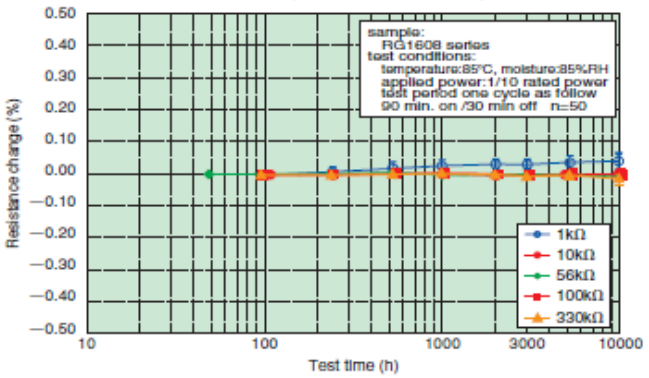
RG	1608	N	-	104	-	W	-	T5

TYPE	Size	TCR	R-Values	Tolerance	Package
	1005 1608 2012 3216	V=5ppm/°C N=10ppm/°C P=25ppm/°C Q=50ppm/°C R=100ppm/°C	3 digits for E24 series (Ex.104=100K ohm) 4 digits for E96 series (Ex.4992=49.9K ohm)	P=0.02% W=0.05% B=0.1% C=0.25% D=0.5%	T1=1000 T5=5000

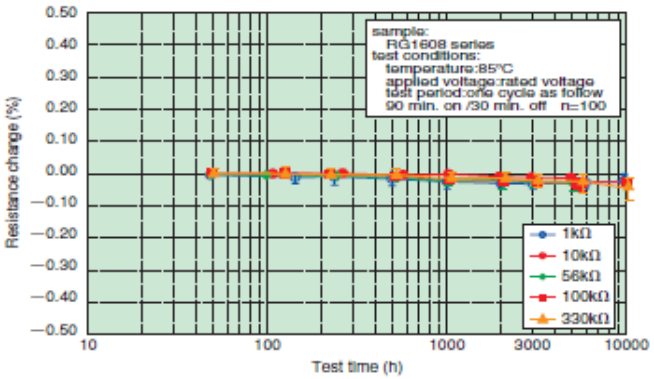
Ultra precision 0.02%, 0.05%, 0.1%, 0.25%, 0.5%, tolerance Thin Film Chip Resistor

Reliability Test Data

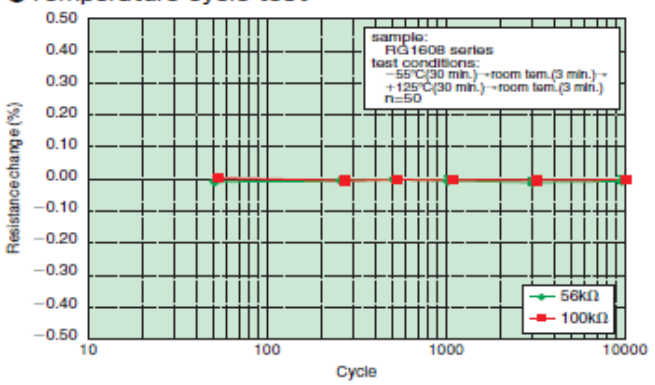
●Moisture and life test (THB 85℃ 85%)



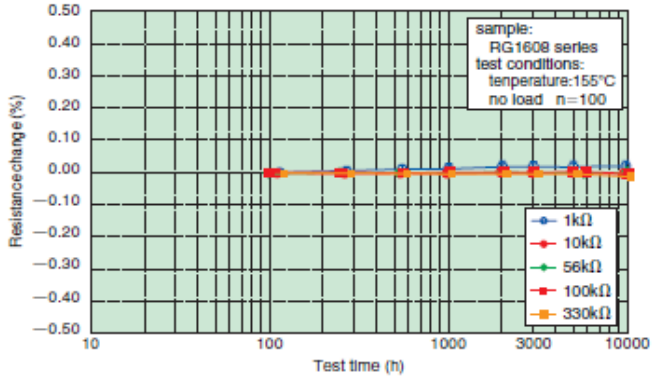
●Load life test (85℃)



●Temperature cycle test

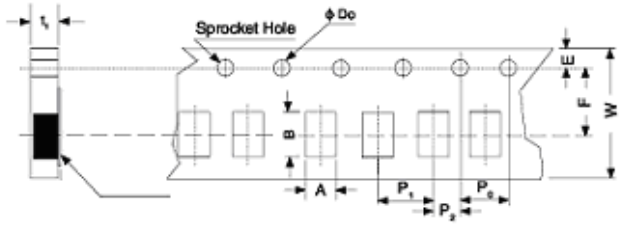


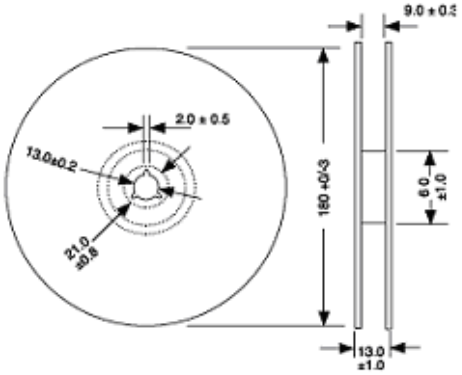
●High temperature expouse test (155℃)



Tape & Reel Dimensions (mm)

Type	A	B	E	F	W	P0	P1	P2	t1
RG1005	0.63 ± 0.05	1.13 ± 0.05	1.75 ± 0.1	3.5 ± 0.05	8.0 ± 0.3	4.0 ± 0.1	2.0 ± 0.05	2.0 ± 0.05	0.43 ± 0.05
RG1608	1.1 ± 0.1	1.9 ± 0.1					4.0 ± 0.1		0.6 ± 0.05
RG2012	1.65 ± 0.2	2.4 ± 0.2							0.75 ± 0.05
RG3216	1.9 ± 0.1	3.5 ± 0.1							1.0 ± 0.2





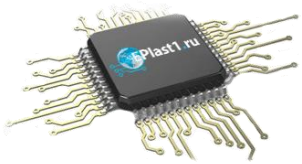
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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