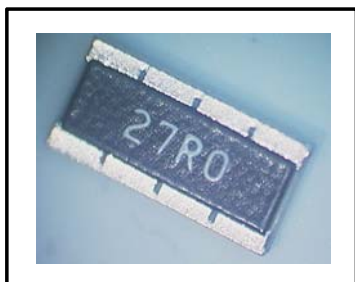


High Power thin film chip resistor with long side termination



FEATURES

- Excellent reliability and stability even under harsh conditions
- Low noise, THIN FILM construction
- EIA Standard case size(1206)
- RoHS Compliance and 100% Lead-Free

APPLICATIONS

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

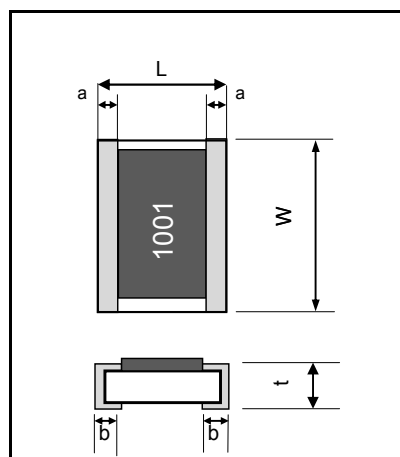
Electrical Specification

Type	Size (in inch)	Power Rating	Resistance Tolerance	TCR	Resistance Range (ohm) *E24 & E96 series R value	Packaging
PRG3216	1206	1.0W	±0.1%(B)	±25ppm/°C(P) ±50ppm/°C(Q)	47 – 100k	Tape & Reel T5 = 5000pcs
			±0.5%(D)	±25ppm/°C(P) ±50ppm/°C(Q)	10 – 100k 2.5 – 100k	
PRG5025	2010	1.5W~2.0W	±0.1%(B)	±25ppm/°C(P) ±50ppm/°C(Q)	47 – 200k	Tape & Reel T4 = 4000pcs
			±0.5%(D)	±25ppm/°C(P) ±50ppm/°C(Q)	10 – 200k 2.5 – 100k	
PRG6432	2512	2.0W~3.0W	±0.1%(B)	±25ppm/°C(P) ±50ppm/°C(Q)	47 – 250k	
			±0.5%(D)	±25ppm/°C(P) ±50ppm/°C(Q)	10 – 250k 2.5 – 250k	

Reliability Specification

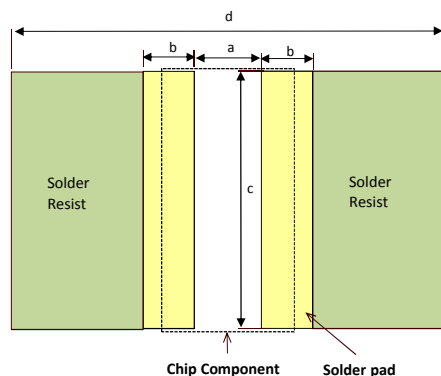
Test Item	Test Method (JIS C5201-1)	Δ R Limits
Short Time Overload	2.5 times of rated power for 5sec.	Under 47 Ω ±(0.1%+0.01 Ω) 47 Ω and higher ±(0.05%+0.01 Ω)
Load Life	70°C, rated power, 90min. on/ 30min. Off, 1000hrs.	Under 47 Ω ±(0.25%+0.05 Ω) 47 Ω and higher ±(0.1%+0.01 Ω)
Temp. Hum. Bias	85°C 85% RH, 1/10 rated power, 90min. on/ 30min. Off, 1000hrs.	
Thermal Shock	-55°C (30min)/room temp.(2min) /+125°C(30min)/room temp.(2min), no bias, 1000 cycles	
High Temp. Exposure	155°C for 1000h, no bias.	

Dimensions



Unit (mm)			
Type	PRG3216	PRG5025	PRG6432
Dimensions			
W	3.2+0.4/-0.2	5.0±0.2	6.4+0.2/-0.4
L	1.6±0.2	2.5±0.2	3.2±0.2
t	0.45±0.1	0.45±0.1	0.45±0.1
a	0.30±0.2	0.55±0.2	0.40±0.2
b	0.35±0.2	0.60±0.2	0.55±0.2

Recommended Land Pattern



TYPE	a	b	c	Unit (mm)
				d (*1) (Reference value)
PRG3216	0.8±0.1	1.1±0.1	3.7±0.1	27mm or more
PRG5025	1.3±0.1	1.6±0.1	5.7±0.1	27mm or more
PRG6432	2.0±0.1	2.1±0.1	6.9±0.1	27mm or more

(*1) Please give consideration to heat dissipation of the resistor.

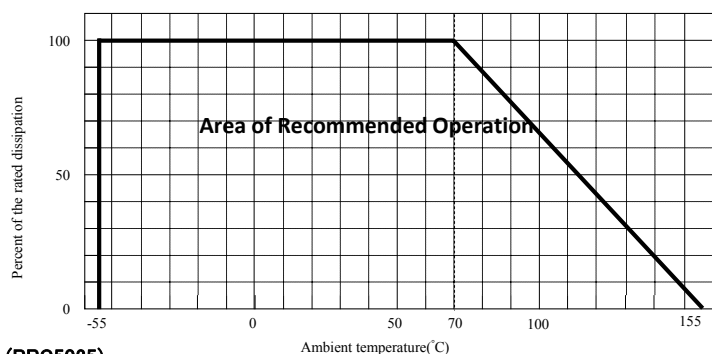
The solder fillet when resistor is powered up should not exceed 155°C.

Power Derating Curve

(PRG3216)

For operation above 70°C, power must be derated according to the following chart.

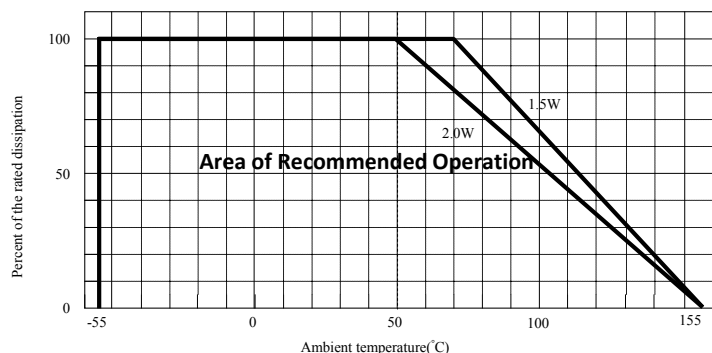
However, in actual use, verify the fillet temperature is not exceeding 155°C.



(PRG5025)

For operation above 1.5W:70°C, 2.0W:50°C, power must be derated according to the following chart

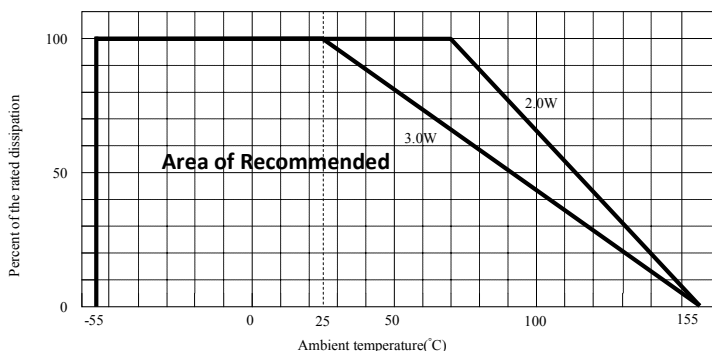
However, in actual use, verify the fillet temperature is not exceeding 155°C.



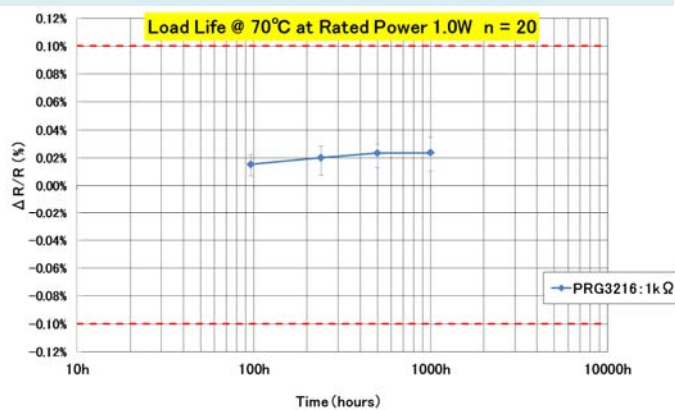
(PRG6432)

For operation above 2.0W:70°C, 3.0W:25°C, power must be derated according to the following chart

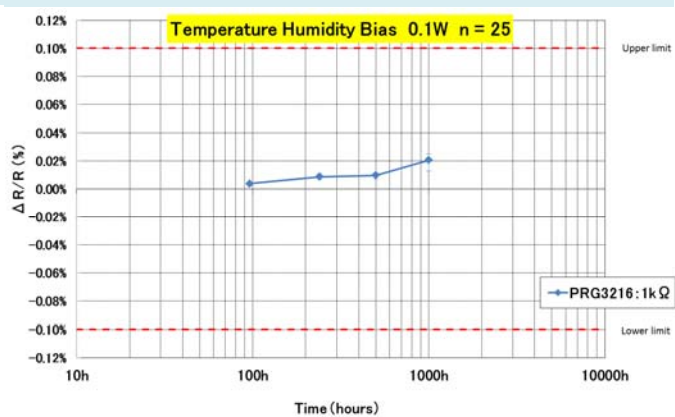
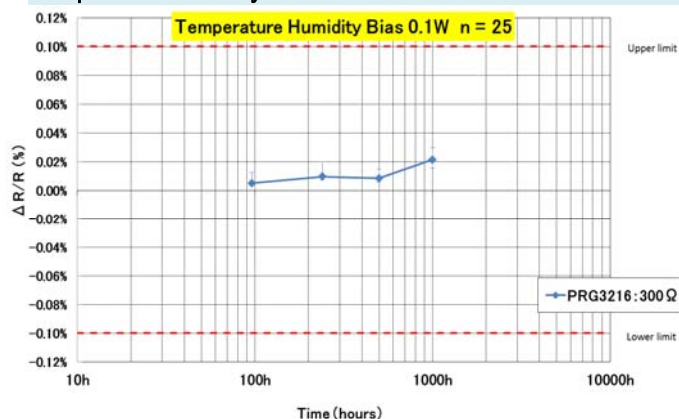
However, in actual use, verify the fillet temperature is not exceeding 155°C.



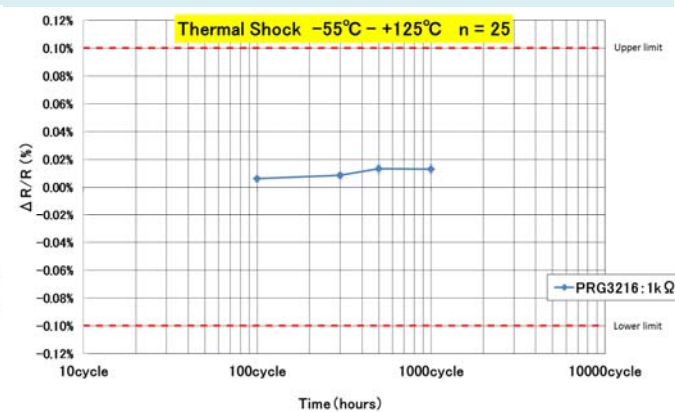
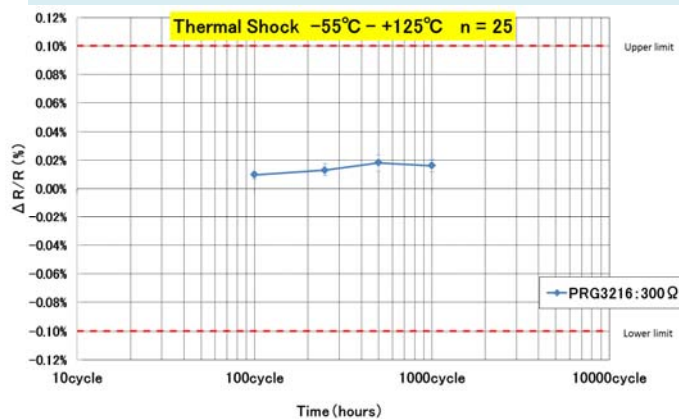
Load Life @ 70°C at Rated Power 1.0W



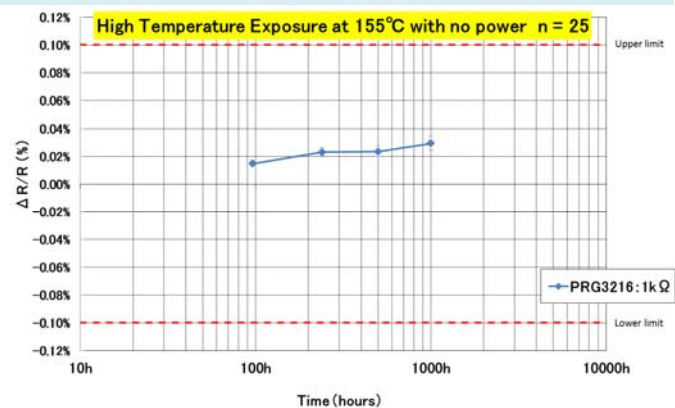
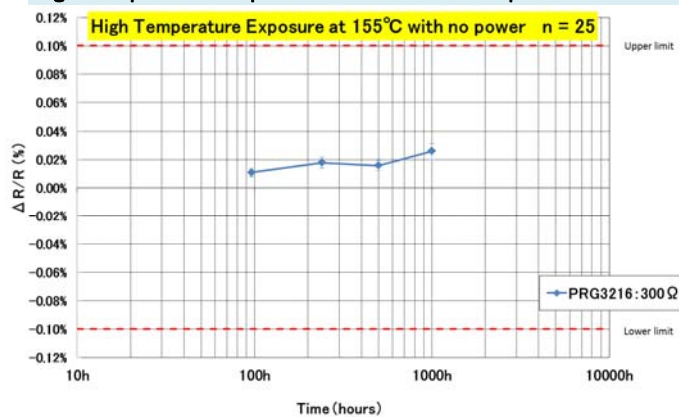
Temperature Humidity Bias



Thermal Shock -55°C - +125°C



High Temperature Exposure at 155°C with no power



Soldering Temperature Profile



Unit : mm

Label

$R1$

$\phi 13 \pm 0.2$

$\phi 21 \pm 0.8$

2 ± 0.5

$\phi 60 \pm 0$

$\phi 180 \pm 1.5$

$\phi 1 \pm 0$

Vacuum-formed : 13.0 ± 1.0
 Injection-molded : 11.4 ± 1.0

PRG	3216	P	-	1001	-	B	-	T5
Type	Size	TCR		R-Values		Tolerance		Package
	3216 5025 6432	P = 25ppm/°C Q = 50ppm/°C		4digits for all values E24 & E96 (Ex.47R0=47 ohm) (Ex.1000=100 ohm) (Ex.4992=49.9k ohm)		B = ±0.1% D = ±0.5%		<u>T&R</u> T4 = 4000pcs T&R (PRG5025,PRG6432) T5 = 5000pcs T&R (PRG3216)

For non-standard R-value requests, please contact our technical support.

Mouser Electronics

Authorized Distributor

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Susumu:

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[PRG6432Q-7321-D-T4](#) [PRG6432Q-49R9-B-T4](#) [PRG3216P-39R2-D-T5](#) [PRG3216P-1052-B-T5](#) [PRG3216Q-2550-B-](#)
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