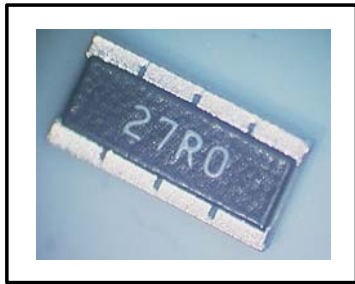


**High Power thin film chip resistor with long side termination**



**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

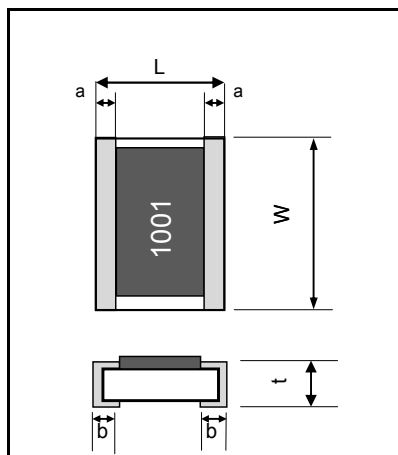
**Electrical Specification**

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	Tape & Reel T4 = 4000pcs
			±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.	

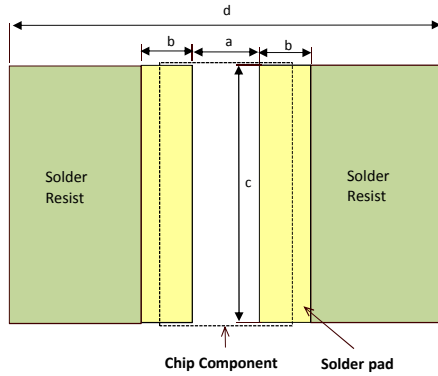
**Dimensions**



Unit (mm)

Type	PRG3216	PRG5025	PRG6432
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**



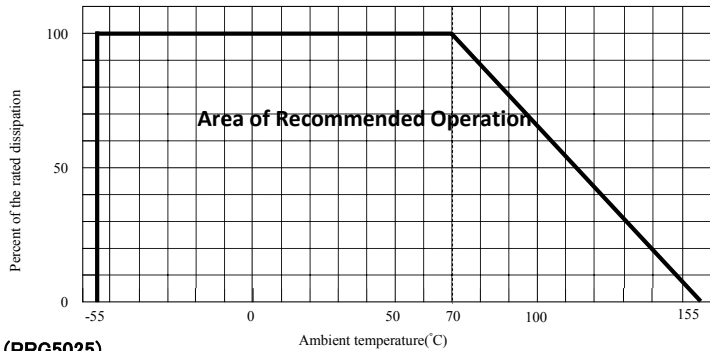
TYPE	a	b	c	Unit (mm)	
				d (*1)	(Reference value)
PRG3216	0.8±0.1	1.1±0.1	3.7±0.1	27mm or more	
PRG5025	1.3±0.1	1.6±0.1	5.7±0.1	27mm or more	
PRG6432	2.0±0.1	2.1±0.1	6.9±0.1	27mm or more	

(\*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**

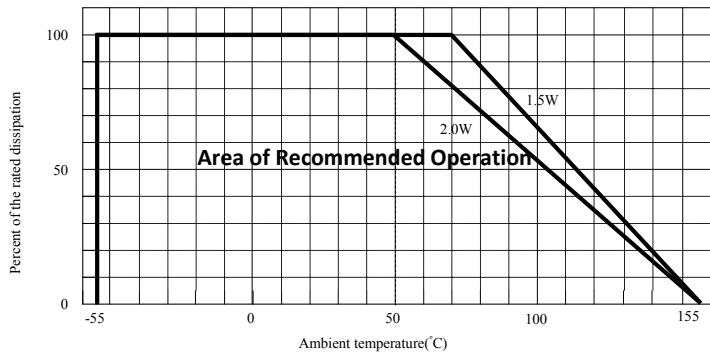
(PRG3216)

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.



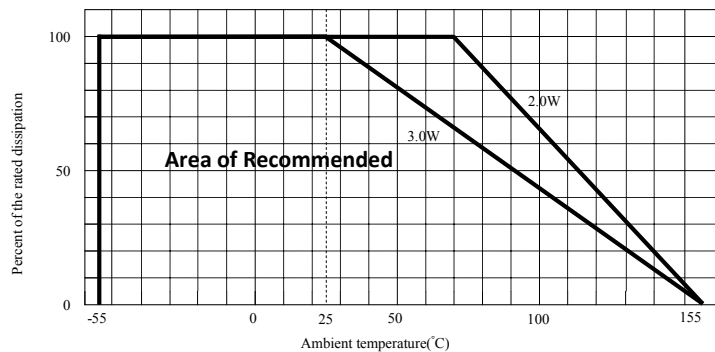
(PRG5025)

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.

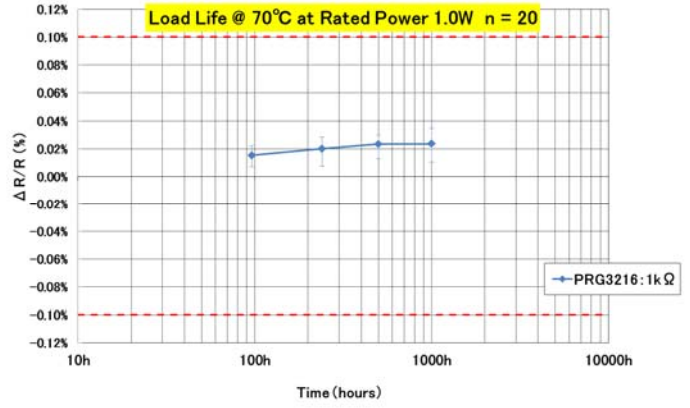


(PRG6432)

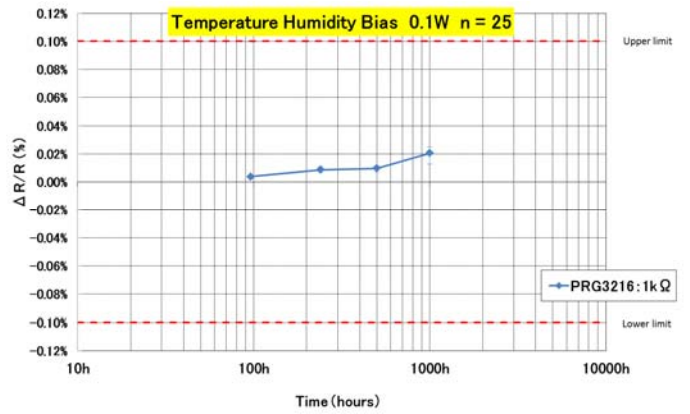
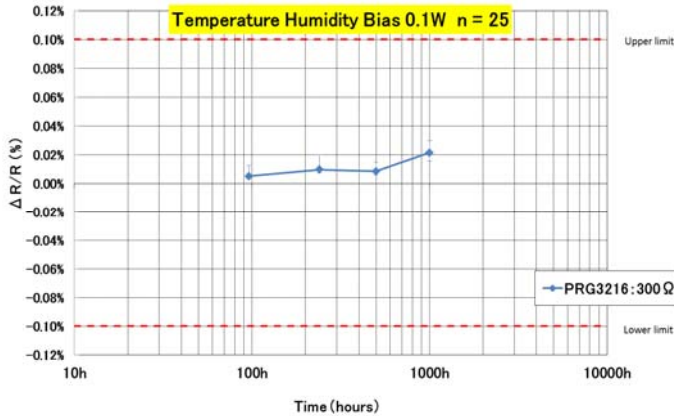
For operation above 2.0W:70°C, 3.0W:25°C, power must be derated according to the following chart.  
However, in actual use, verify the fillet temperature is not exceeding 155°C.



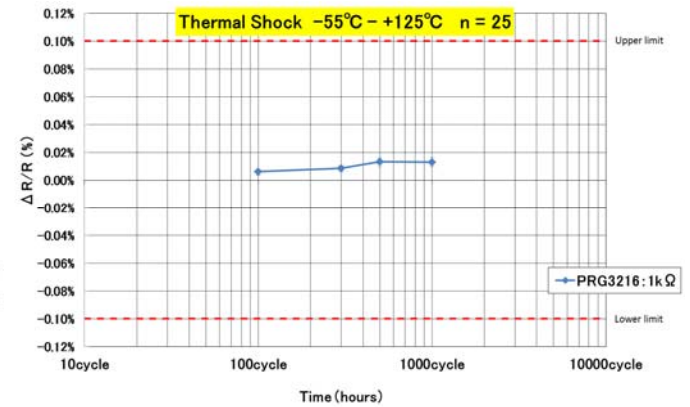
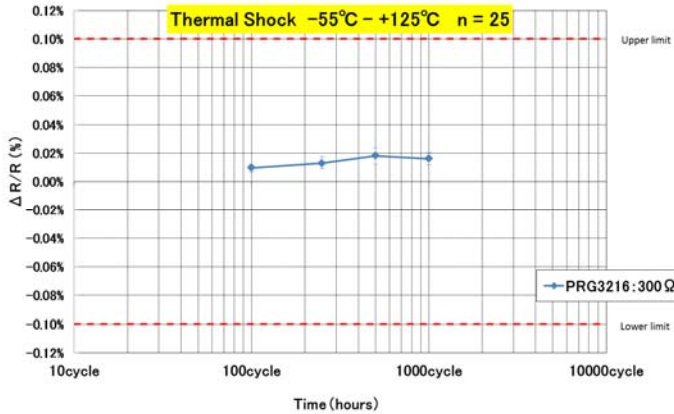
**Load Life @ 70°C at Rated Power 1.0W**



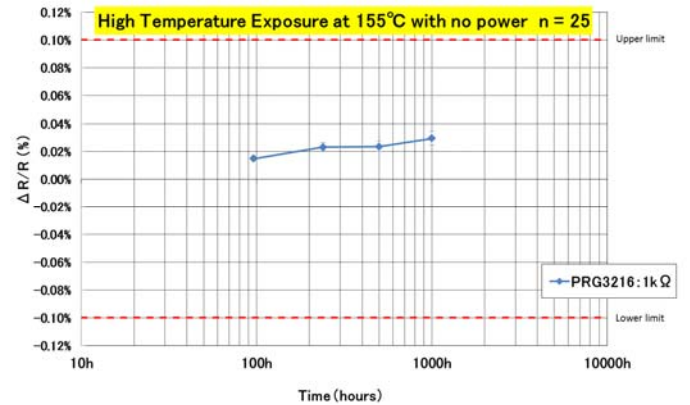
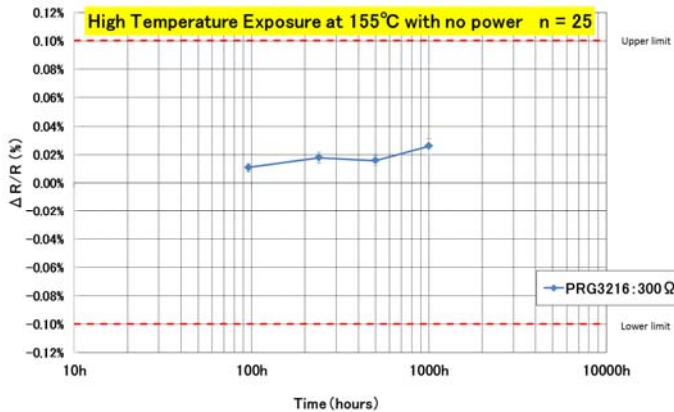
**Temperature Humidity Bias**



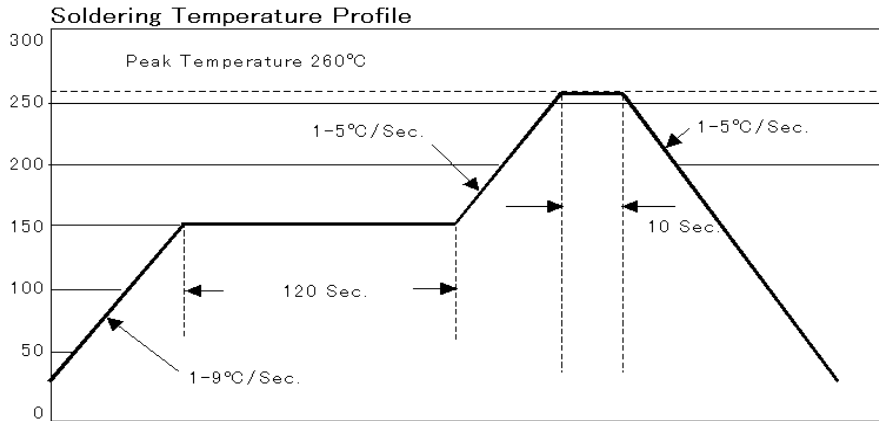
**Thermal Shock -55°C - +125°C**



**High Temperature Exposure at 155°C with no power**

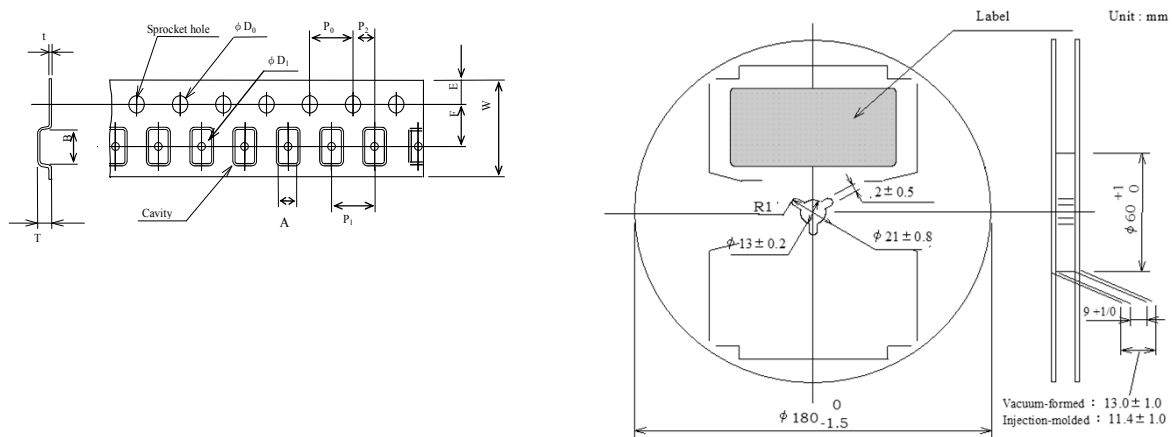


**Recommended Reflow Profile**

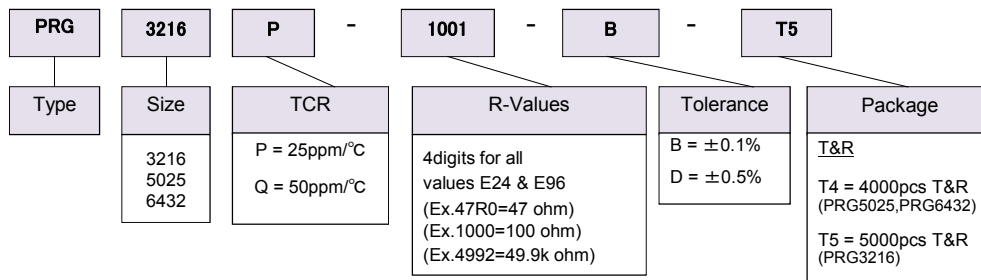


**Tape & Reel Dimensions (mm)**

TYPE	unit(mm)											
	A	B	W	F	E	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	D <sub>0</sub>	D <sub>1</sub>	T	t
PRG3216	2.0±0.2	3.6±0.2	8.0±0.3	3.5±0.05	1.75±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.55±0.05	1.05±0.05	1.5 max	0.3 max
PRG5025	2.8±0.1	5.3±0.1	12.0±0.2	5.5±0.1	1.75±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.55±0.05	1.1±0.1	1.0±0.1	0.2±0.05
PRG6432	3.5±0.1	6.9±0.1	12.0±0.2	5.5±0.1	1.75±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.5±0.1/0	1.5±0.1/0	0.75±0.1	0.25±0.05



**Ordering information**



**Notice**

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