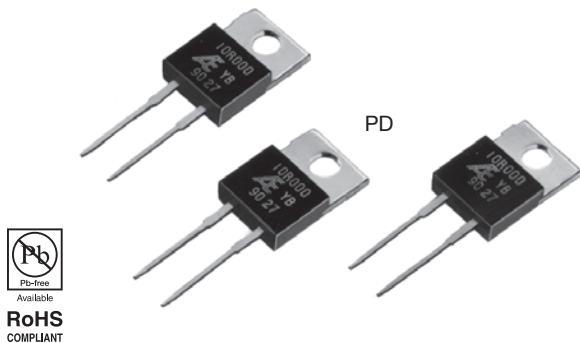


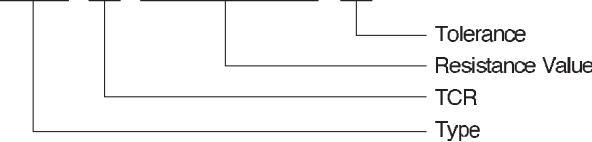
Ultra Precision Power Resistor (8 Watts, TO-220)



COMPOSITION OF TYPE NUMBER

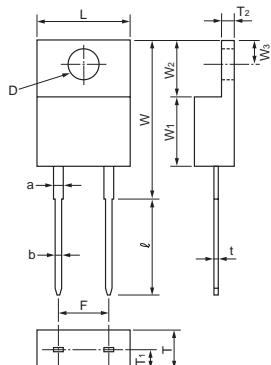
Example:

PD X 50R000 B



Resistance value, in ohm, is expressed by a series of six characters, five of which represent significant digits. R or K is a dual-purpose letter that designates both the value range (R for ohmic; K for kilo-ohm) and the location of decimal point.

CONFIGURATION (DIMENSIONS IN mm)



Type	PD
L	10.6 max.
W	19.0±0.5
W ₁	8.5±0.2
W ₂	6.5±0.2
W ₃	2.7±0.5
T	4.5±0.2
T ₁	2.0±0.5
T ₂	1.5±0.2
F	5.08±0.5
ℓ	11.0±2
t	0.5±0.05
a	1.2±0.1
b	0.75±0.05
D	Dia. 3.6

TCR, RESISTANCE RANGE, TOLERANCE, RATED POWER

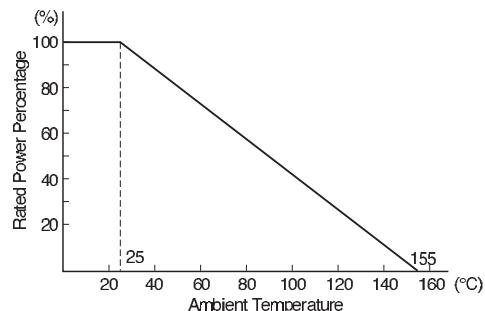
Type	TCR (ppm/°C) -25°C to +125°C*	Resistance Range (Ω)	Resistance Tolerance (%)*†	Rated Power (W) at 25°C
PD	0±15 (W)	0.1 to 1	±1 to ±5 (F, G, J)	1.5 In free air
	0±15 (W) 0±5 (X)	1 to 5	±0.5 to ±5 (D, F, G, J)	
	0±15 (W)	5 to 10	±0.1 to ±5 (B, D, F, G, J)	and 8 On heat sink**
	0±5 (X)	10 to 25	±0.05 to ±5 (A, B, D, F, G, J)	
	0±2.5 (Y)	25 to 10k	±0.02 to ±5 (Q, A, B, D, F, G, J)	

* Symbols in parentheses are for type number composition.

† Resistance figures are the values obtained by measuring the leads at point 5.08±0.6 mm away from the root.

** For heat sinking, an aluminum chassis in 152.4 (L) x 101.6 (W) x 50.8 (H) x 1.0 mm (T) should be used.

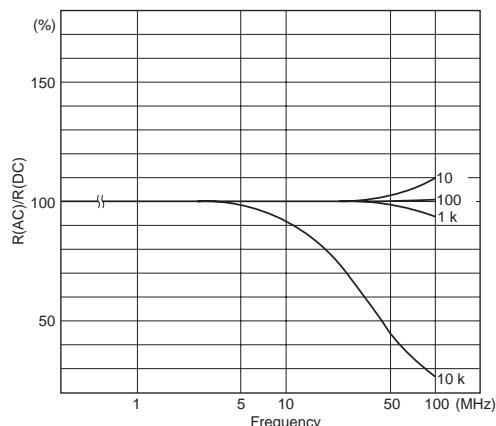
POWER DERATING CURVE



PERFORMANCE

Parameters	Test Condition	MIL-R-39009 Specification	ALPHA Typical Test Data
Maximum Rated Operating Temperature		25°C	
Working Temperature Range		-55°C to +155°C	
Maximum Working Voltage		250V	
Maximum Working Current		4A	
Power Conditioning	25°C, Rated Voltage, 96 hrs.	±0.2%	±0.02%
Low Temperature Storage	-55°C, No Load, 24 hrs.	±0.3%	±0.005%
Dielectric Withstanding Voltage	Atmo. Pres.: AC 1 kV, 1 min. Baro. Pres. 8 mHg: AC 500V, 1min.	±0.2%	±0.005%
Insulation Resistance	DC 500V, 2 min.	over 10,000 MΩ	over 10,000 MΩ
Low Temperature Operation	-55°C, Rated Voltage	±0.3%	±0.005%
Overload	Rated Voltage x 2.5, 5 sec.	±0.3%	±0.01%
Moisture Resistance	+65°C to -10°C, 90% RH to 98% RH, Rated Voltage, 10 cycles (240 hrs.)	±0.5%	±0.05%
Terminal Strength	0.908 kg (2 pounds), 10 sec.	±0.2%	±0.005%
Shock	100G, 6 ms, Sawtooth Wave, X, Y, Z, each 3 shocks	±0.2%	±0.005%
Vibration, High Frequency	20G, 10 Hz to 2,000 Hz to 10 Hz, 20min., X, Y, Z, each 4 hrs.	±0.2%	±0.005%
Life	25°C, Rated Power, 1.5 hr. - ON, 0.5 hr. - OFF, 2,000 hrs.	±1.0%	±0.01%
High Temperature Exposure	155°C, No Load, 2,000 hrs.	±1.0%	±0.01%
Solderability	245°C, 5 sec.	over 95% coverage	

FREQUENCY CHARACTERISTICS



TEMPERATURE OF RESISTOR SURFACE

