



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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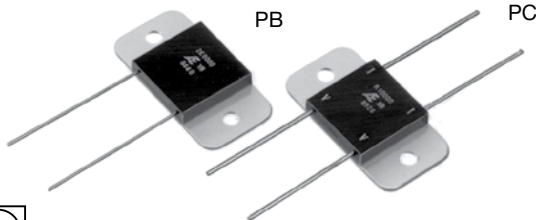
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Ultra Precision Power Resistor (10 Watts)

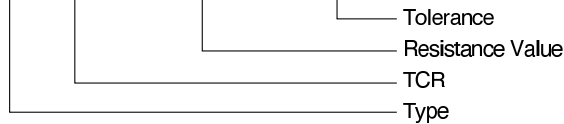


RoHS COMPLIANT

COMPOSITION OF TYPE NUMBER

Example:

PB 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.

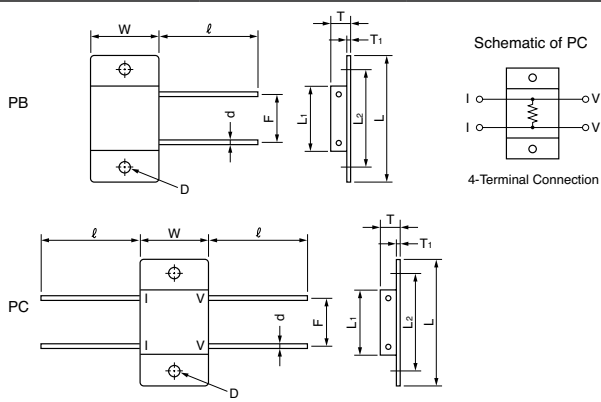
| TCR, RESISTANCE RANGE, TOLERANCE, RATED POWER | | | | |
|---|----------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|
| Type | TCR (ppm/°C) -25°C to 125°C* | Resistance Range (Ω) | Resistance Tolerance (%)† | Rated Power (W) at 25°C |
| PB | 0±15 (W) | 0.4 to 1 | 1 to ±5 (F, G, J) | 2 in free air and 10 On heat sink ** |
| | 0±15 (W) 0±5 (X) 0±2.5 (Y) | 1 to 5 | ±0.5 to ±5 (D, F, G, J) | |
| | | 5 to 10 | ±0.1 to ±5 (B, D, F, G, J) | |
| | | 10 to 25 | ±0.05 to ±5 (A, B, D, F, G, J) | |
| | | 25 to 50 | ±0.02 to ±5 (Q, A, B, D, F, G, J) | |
| | 50 to 50k | ±0.01 to ±5 (T, Q, A, B, D, F, G, J) | | |
| PC | 0±15 (W) | 0.002 to 0.05 | ±0.5 to ±5 (D, F, G, J) | |
| | 0±15 (W) 0±5 (X) | 0.05 to 0.1 | ±0.5 to ±5 (D, F, G, J) | |
| | 0±15 (W) 0±5 (X) 0±2.5 (Y) | 0.1 to 5 | ±0.1 to ±5 (B, D, F, G, J) | |
| | | 5 to 10 | ±0.05 to ±5 (A, B, D, F, G, J) | |
| | | 10 to 25 | ±0.02 to ±5 (Q, A, B, D, F, G, J) | |
| | 25 to 100 | ±0.01 to ±5 (T, Q, A, B, D, F, G, J) | | |

* Symbols in parentheses are for type number composition.

† Resistance figures for type PB are the values obtained by measuring the leads at point 12.7±3.2 mm away from the root, but in case of resistance below 10 ohm, the values at 5.08±0.6 mm away.

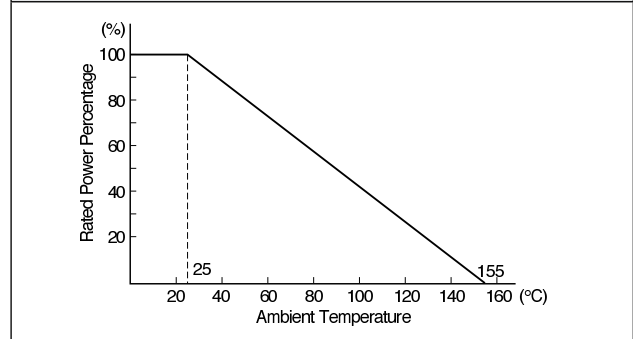
** For heat sinking, an aluminum chassis in 152.4 (L) x 101.6 (W) x 50.8 (H) x 1.0 mm (T) shall be used.

CONFIGURATION (DIMENSIONS IN mm)



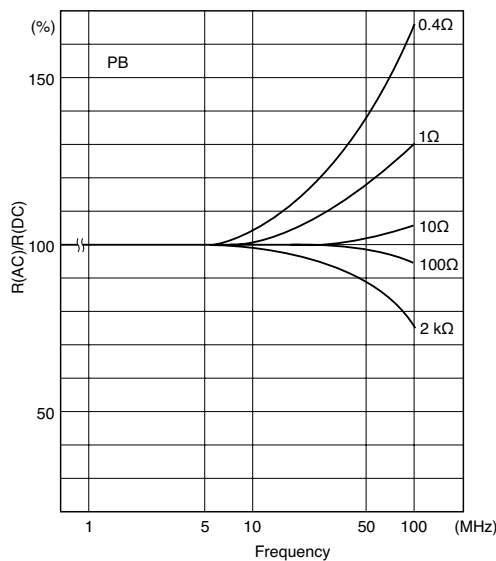
| Type | PB | PC |
|------|---------------|---------------|
| L | 40.0±0.2 | |
| L1 | 20.0±0.2 | |
| L2 | 30.0±0.5 | |
| W | 20.0±0.2 | |
| T | 5.0±0.2 | |
| T1 | 1.0±0.1 | |
| F | 15.0±0.5 | |
| l | 30±10 | |
| D | Dia. 4.0 | |
| d | Dia. 0.8±0.05 | Dia. 1.2±0.05 |

POWER DERATING CURVE

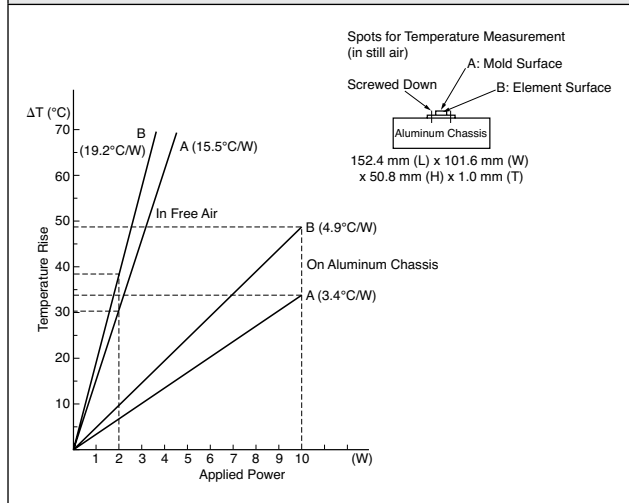


| PERFORMANCE | | | |
|--|---|--|--|
| Parameters | Test Condition | MIL-R-39009 Specification | ALPHA Typical Test Data |
| Maximum Rated Operating Temperature Working Temperature Range Maximum Working Voltage Maximum Working Current | | 25°C -55°C to +155°C 750V PB=5A, PC=32A | |
| Power Conditioning | 25°C, Rated Voltage, 96 hrs. | ±0.2% | ±0.2% |
| Low Temperature Storage Dielectric Withstanding Voltage Insulation Resistance Low Temperature Operation Overload Moisture Resistance Terminal Strength | -55°C, No Load, 24 hrs. Atmo. Pres.: AC 1 KV, 1 min. Baro. Pres. 8 mHg: AC 500V, 1min. DC 500V, 2 min. -55°C, Rated Voltage Rated Voltage x 2.5, 5 sec. +65°C to -10°C, 90% RH to 98% RH, Rated Voltage, 10 cycles (240 hrs.) 2.27 kg (5 pounds), 10 sec. | ±0.3% ±0.2% over 10,000 MΩ ±0.3% ±0.3% ±0.5% ±0.2% | ±0.005% ±0.005% over 10,000 MΩ ±0.005% ±0.01% ±0.05% ±0.005% |
| Shock Vibration, High Frequency | 100G, 6 ms., Sawtooth Wave, X, Y, Z, each 3 shocks 20G, 10 Hz to 2,000 Hz to 10 Hz, 20 min., X, Y, Z, each 4 hrs. | ±0.2% ±0.2% | ±0.005% ±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

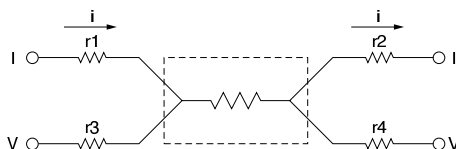


TEMPERATURE OF RESISTOR SURFACE



FOUR-TERMINAL RESISTOR

For low ohmic resistor (less than 10 ohm), the resistance value and TCR of the copper lead increases overall resistance value. Four-terminal (Kelvin) connection is recommended per the following figure. Loading current at terminals (V) causes measurement error.



AFFECT OF PB TYPE LEAD FOR RESISTANCE VALUE AND TCR

