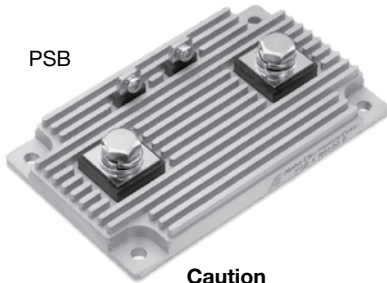


Ultra Precision Shunt Resistor (40 Watts)

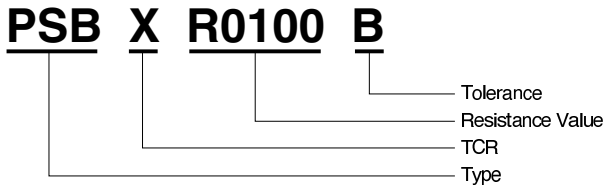


RoHS COMPLIANT

Caution
Please screw current terminals >5N · m, voltage terminal >1N · m

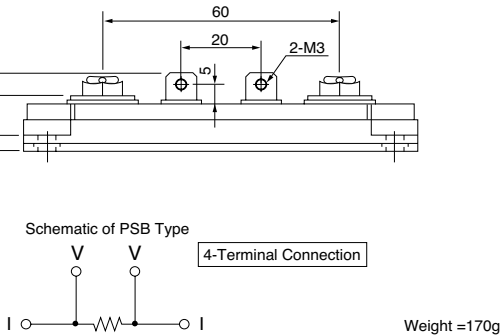
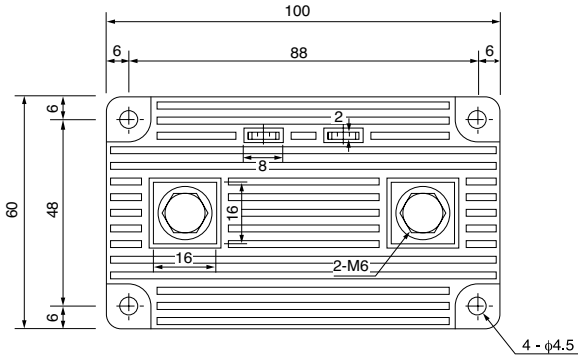
COMPOSITION OF TYPE NUMBER

Example:



Resistance value in ohm is expressed by a series of four significant digits and an R designating the decimal point.

CONFIGURATION (DIMENSIONS IN mm)



FEATURES

- Excellent temperature characteristics created by Bulk Metal® foil technology
- Accurate value on four-terminal wiring, even in low extremity of resistance
- High heat dissipation due to aluminum-clad construction with fins
- Readiness to mount to heat sink or water-cooled radiator
- Availability of threaded holes to fix cables with screw

APPLICATIONS

- Current-sensing in precise power supply, motor driver, etc.

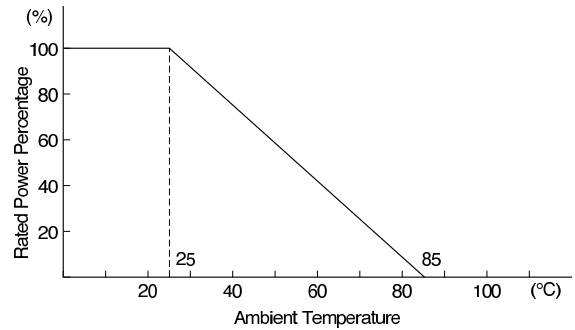
TCR, RESISTANCE RANGE, TOLERANCE, RATED POWER

TCR (ppm/°C) 0°C to +60°C	Resistance Range (Ω)	Resistance Tolerance (%)	Rated Power (W) at 25°C
0±15 (W)	0.001 to 0.005	±0.1 (B) ±0.5 (D) ±1 (F)	12 in free air and 40 On heat sink*
0±5 (X) 0±15 (W)	0.005 to 1		

*Thermal resistance of the heat sink 1°C/W.

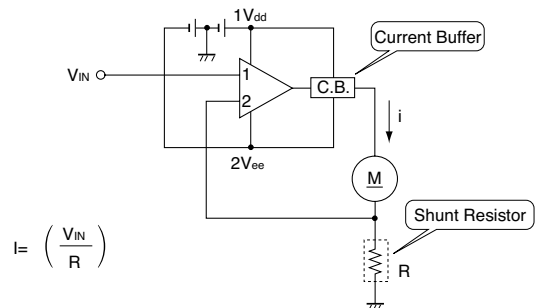
Available to use higher rated power with elevation of cooling effect. Please keep temperature of element surface less than 60°C.

POWER DERATING CURVE



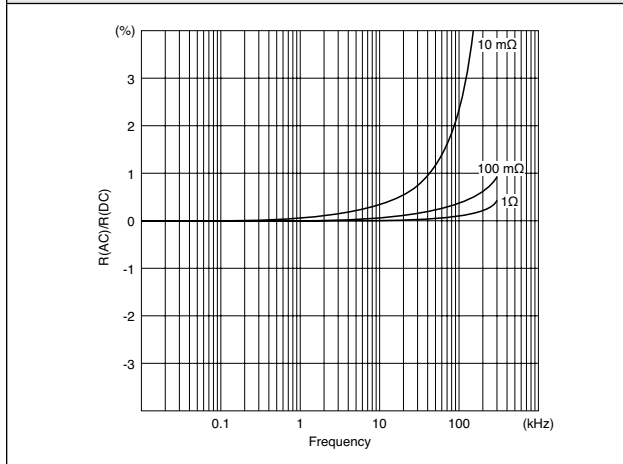
EXAMPLE OF APPLICATIONS

Motor Control Circuit Using Shunt Resistor



PERFORMANCE			
Parameters	Test Condition	ALPHA Specification	ALPHA Typical Test Data
Maximum Rated Operating Temperature Working Temperature Range Maximum Working Current			25°C -55°C to +85°C 100A
Power Conditioning	25°C, Rated Power, 96 hrs.	±0.1%	±0.05%
Low Temperature Storage and Operation	-55°C, No Load, 24 hrs.	±0.1%	±0.05%
Dielectric Withstanding Voltage Insulation Resistance Low Temperature Operation Overload	Atmo. Pres.: AC 750V, 1 min. DC 500V, 2 min. -55°C, Rated Power Rated Power x 2.5, 5 sec.	±0.05% over 10,000 MΩ ±0.1% ±0.1%	±0.01% over 10,000 MΩ ±0.05% ±0.05%
Moisture Resistance	+65°C to -10°C, 90% RH to 98% RH, Rated Voltage, 10 cycles (240 hrs.)	±0.1%	±0.05%
Shock High Frequency Shock	30G, 11 ms., Half-Sine Wave, X, Y, Z, 10 shocks each 10 Hz to 50 Hz to 10 Hz, 1 min. X, Y, Z, 2.0 hrs. each	±0.05% ±0.05%	±0.1% ±0.1%
Life	25°C, Rated Power, 1.5 hrs. – ON, 0.5 hrs. – OFF, 2,000 hrs.	±0.2%	±0.05%
High Temperature Exposure	85°C, No Load, 2,000 hrs.	±0.2%	±0.05%
Storage Life	15°C to 35°C, 15% RH to 75% RH, No Load, 10,000 hrs.	±0.05%	±0.01%
Internal Thermal Resistance	Between resistive element and base plate		0.3°C/W
Thermal Electromotive Force			1 μV/°C

FREQUENCY CHARACTERISTICS



TEMPERATURE OF RESISTOR SURFACE

