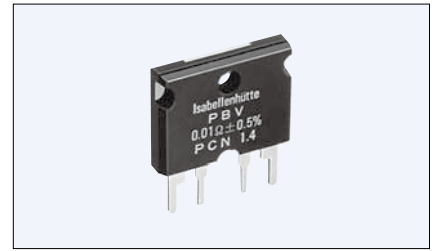


ISA-PLAN LOW-COST SHUNT RESISTORS

PBV

Features:

- Embedded with metal foil element with a heat dissipation function (aluminum plate on the back side) and molded by epoxy resin
- Ideal for highly precise current detection
- Widely adopted in automotive and industrial applications due to excellent temperature characteristics



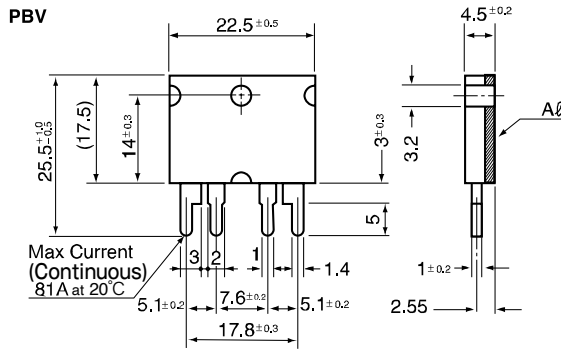
The real is marked with laser.(picture: ink print)

Type	Load Capacity (W)*		Resistance Range (Ω)	Resistance Tolerance (%)	Terminal	Temp. Coefficient (20°C ~ 60°C)	Operating Temp.	Terminal Resistance to Base Plate	Weight (g)
	Heat Sink Mounted	Free Air							
PBV	10	1.5	1m~1	±0.5, ±1, ±5	4	±30ppm/°C(R≥10mΩ) ±75ppm/°C(R<10mΩ)	-55°C ~ +125°C	3°C/W (6°C/W R<2mΩ)	5

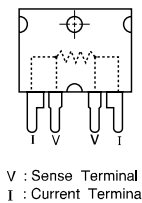
*Refer to the power derating curve. Proper measures for heat radiation should be taken.

Precautions

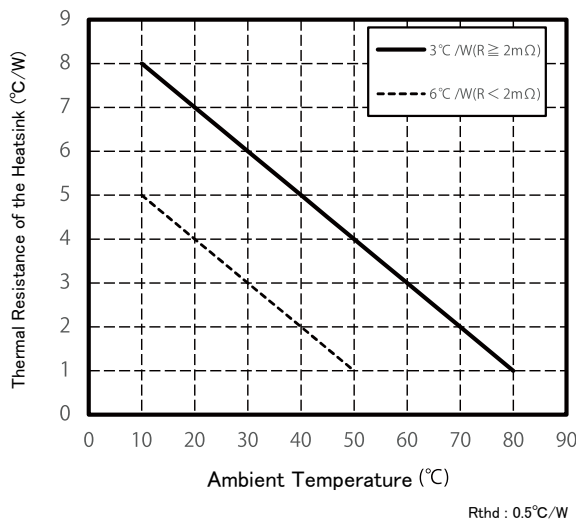
Dimensions (mm)



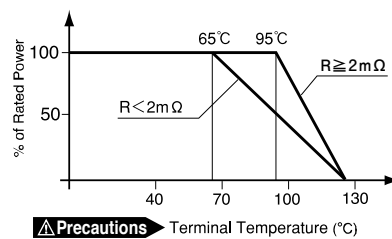
Inner Circuit



Ambient temp. Selection of Heatsink



Ambient Temp. Derating Curve



Precautions



PCN Corporation

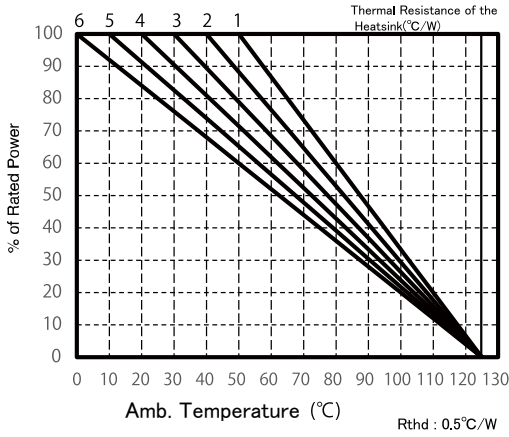
Sagamihara Business Office

4-3-17 Sagamihara, Chuo-ku, Sagamihara-shi, Kanagawa-Pref., JAPAN 252-0231
 Phone : 81-42-776-0931 Fax : 81-42-776-0940 E-mail : sales@pcn.co.jp

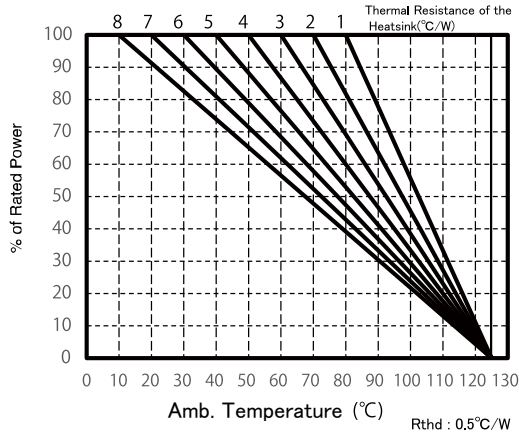
ISA-PLAN LOW-COST SHUNT RESISTORS

PBV

Power Derating Curve (Thermal Resistance of the Heatsink)
 $R < 2m\Omega$



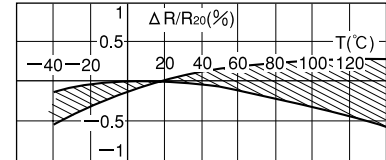
Power Derating Curve (Thermal Resistance of the Heatsink)
 $R \geq 2m\Omega$



Performance

Parameters	Test Condition	Specification	Typical Test Data
Thermal Shock	-65°C, 25°C, 125°C, 25°C 25cycles	±0.1%	±0.1%
Overload	5×Wattage Rating 5sec	±0.2%	±0.1%
Solderability	MIL-STD-202 method 208	>95% Coverage	>95% Coverage
Resistance to Solvents	IPA 3min	No Damage	No Damage
Low Temp. Storage and Operation	MIL-R-26E	±0.1%	±0.05%
Terminal Strength	50N 5~10sec	±0.02%	±0.02%
Dielectric Withstanding Voltage	AC300V 1min	±0.02%	0
Insulation Resistance	DC100V	100MΩ MIN	10GΩ
Resistance to Soldering Heat	MIL-STD-202 Method 210B	±0.1%	±0.05%
Moisture Resistance	Near 100%RH, +25°C, +65°C, -10°C 10cycles (10days)	±0.1%	±0.02%
Shock	50g's 11ms	±0.2%	±0.1%
Vibration High Frequency	MIL-STD-202 Method 204D-B	±0.2%	±0.05%
Load Life	Wattage Rating(1.5Hr ON-0.5Hr OFF)2000Hr	±0.2%	±0.02%~0.05%
Storage Life at Elevated Temp	MIL-STD-202 method 108A-F	±0.3%	±0.2%
High Temperature Exposure	140°C 2000Hz	±0.5%	±0.2%
Thermal EMF	0°C~100°C	2μV/°C MAX	0.05μV/°C
Frequency Characteristic	Inductance	<50nH	<10nH

Resistance Change Versus Temp.



How to order

PBV 1mΩ ±0.5%
 Type Resistance Tolerance

● Order for a single piece of standard in-stock items accepted

Standard Resistance

1 1.5 2.2 3.3 4.7 5 6.8 10 (mΩ)±0.5%
 15 20 22 33 47 50 68 (mΩ)±0.5%
 100 150 220 680 (mΩ)±0.5%
 1 (Ω)±0.5%

Precautions

Assembly Instruction
 Maximum torque for M3 screws : 1N·m



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