SHUNT
- MAX. 10W
- TOL. 0.5%
- TC. 30ppm/°C

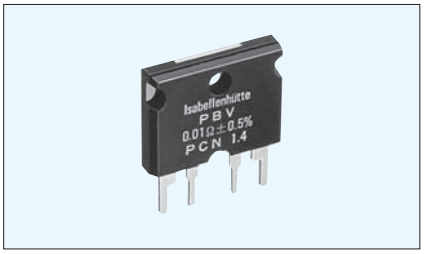
05.2021

PCN RESISTORS

RoHS Compliance

ISA-PLAN LOW-COST SHUNT RESISTORS — PBV

Features :
Low cost. Small size.
High power low resistance values and precision.
Low temperature coefficient. Excellent load life stability.
Excellent short time over load.
Ideal for current sensing application.



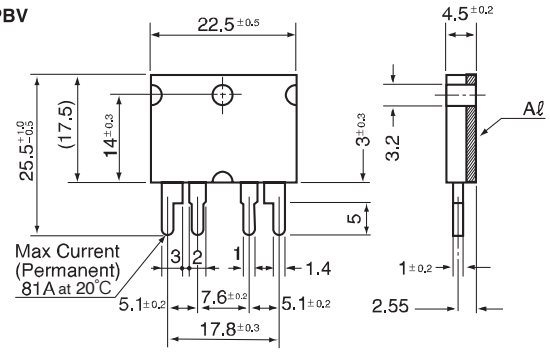
The real is marked with laser.(picture: ink print)

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

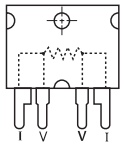
*Referring to power derating curve. Proper measures for heat radiation hould should be taken. ⚠ CAUTION

Dimensions (mm)

PBV

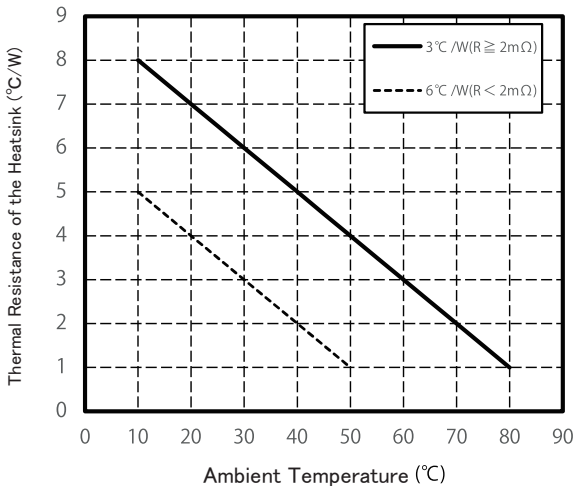


Inner Circuit



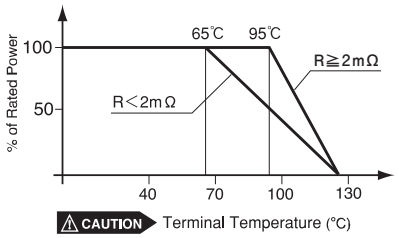
V : Sense Terminal
I : Current Terminal

Ambient temp. Selection of Heatsink



Rthd : 0.5°C/W

Ambient Temp. Derating Curve



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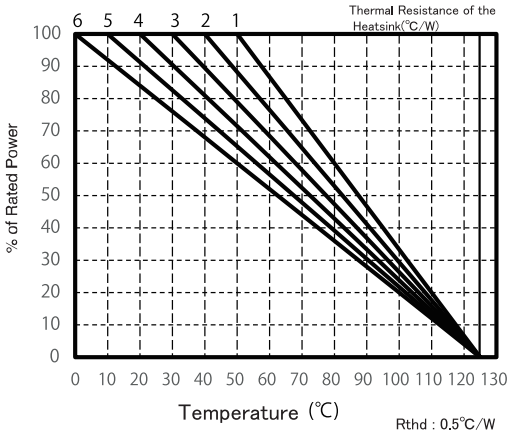
ISA-PLAN LOW-COST SHUNT RESISTORS

PBV

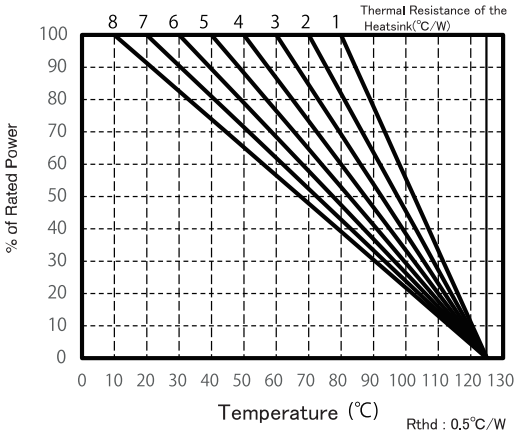
Power Derating Curve (Thermal Resistance of the Heatsink)

R<2mΩ



Power Derating Curve (Thermal Resistance of the Heatsink)

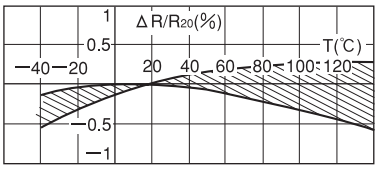
R≧2mΩ



■ **Performance**

Parameters	Test Condition	Specification	Typical Test Data
Thermal Shock	-65˚C, 25˚C, 125˚C, 25˚C 25cycles	±0.1%	±0.1%
Over Load	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 (Type) 1mΩ (Resistance) ±0.5% (Tolerance)

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%

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

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