

PBV, PBH PRECISION SHUNT RESISTOR



These are high power, low resistance, precision shunt resistors. These models exhibit a low temperature coefficient, excellent load life stability and short time over load characteristics. These units are ideal for current sensing applications

GENERAL SPECIFICATIONS

Model	Heat Sink Wattage	Free Air Wattage	Resistance [Ω]	Tolerance
PBV	10W	1.5W	0.5mto1	+0.5, +-1, +-5
PBH	10W	1.5W	0.01to10	

Model	Terminals	Operating Temp	Temp coefficient	Term./base resistance
PBV	4	-55C to +125C	+ - 30ppm/C (R > 10m Ω)	3C/W (6C/WR < 2m Ω)
PBH	2		+ - 50ppm/C (R > 20m Ω)	4C/W

Weight: PBV 5g, PBH 3g

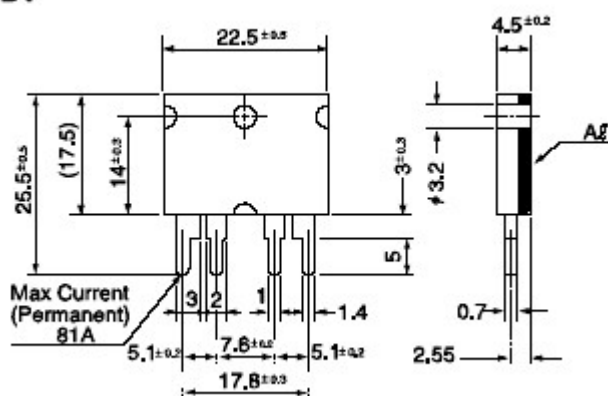
CHARACTERISTICS

Values in [] mean change in ohmic value after test

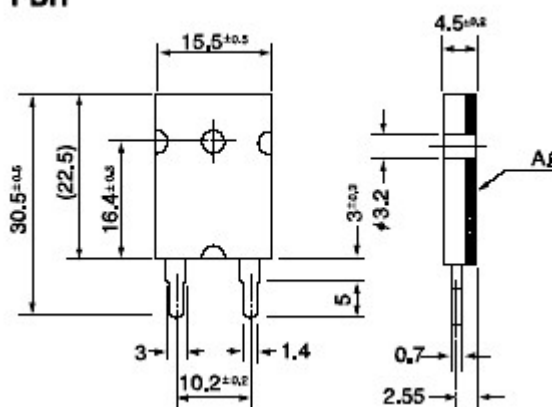
TEST	LIMIT	TYPICAL	CONDITION
Thermal Shock	0.1% max	0.02%	-65 C 30min, +125 C 30min 25Cycles
Over Load	0.1% max	0.01%	2.5 \times Rated Power 5sec
Solderability	> 95% Coverage	99%	245 C 5sec
Resistance to Solvent	No Damage	No Damage	IPA 10min
Terminal Strength	0.02% max	0	44N 5to10sec
Insulation Resistance	100M Ω min	10G Ω	DC 1000V
Resistance to Soldering	0.02% max	0	350 C 3sec
Moisture Resistance	0.1% max	+ - (0.05%+0.05%)	90to97%RH, 25C, 65 C, -10CX10 10days
Load Life	0.1% max	0.01%	1.5hr on, 0.5hr off 2000hr
High Temp Storage	0.1% max	0.02to0.05%	70 C 2000hr
Thermal EMF	-2microV/C max.	-0.05microV/Cmax	0 C to 100 C
Frequency Characteristic	< 20 nH	4nH	Inductance (PBV 3.3m Ω)
Dielectric Withstanding V	+ - 0.02% max	0	AC 300V 1min.

DIMENSIONS

PBV

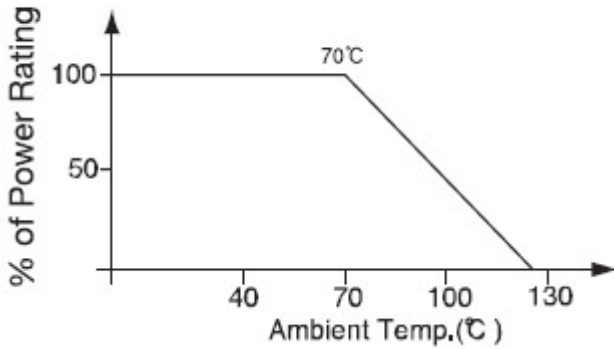


PBH

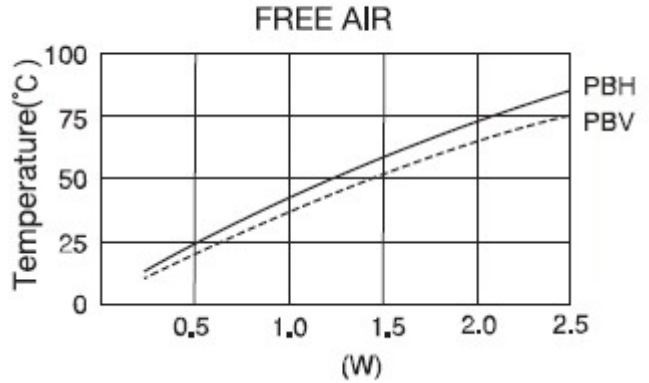


DERATING AND SURFACE TEMPERATURE INCREASE VS POWER LOAD

Ambient Temp. Derating Curve

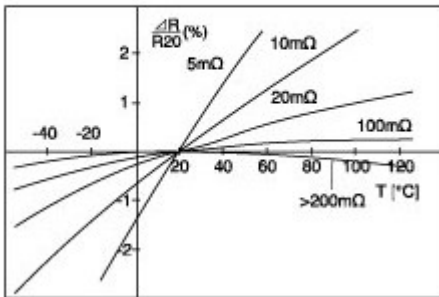


Surface Temperature Versus Power Load (Free Air)

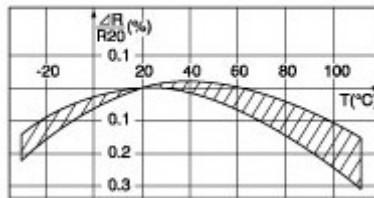


TCR AND RESISTANCE VS. TEMPERATURE CURVES

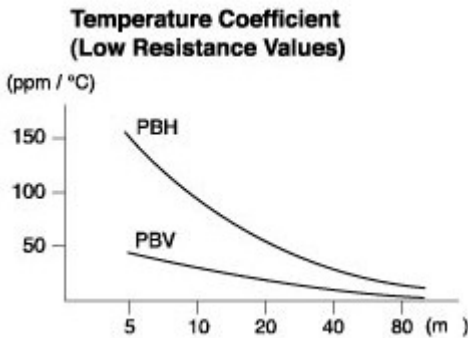
Change of the R(T)-curve to the TCR of copper-terminals of very low ohmic 2-terminal-resistors PBH.



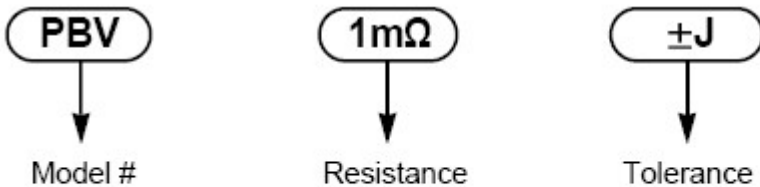
Resistance Change Versus Temp.



LOW R TCR CURVE



ORDERING PROCEDURE EXAMPLE



- Standard Resistance (Stock) PBV : 1 1.5 2 2.2 3.3 4.7 5 6.8 (mΩ) ±0.5%
- 10 15 20 22 33 47 50 68 (mΩ) ±0.5%
- 100 150 220 330 470 680 (mΩ) (Ω) ±0.5%