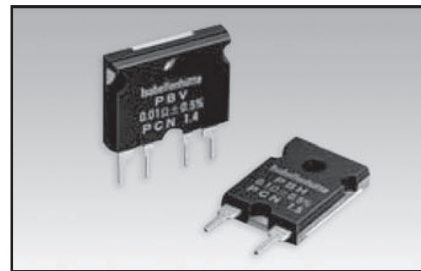


Precision Shunt Resistors


- Max: 10W
- Tolerance: 0.5%
- TCR: 30ppm/°C

High power low resistance values and high precision. Low temperature coefficient. Excellent load life stability. Excellent short time over load. Ideal for current sensing applications.



■ GENERAL SPECIFICATIONS

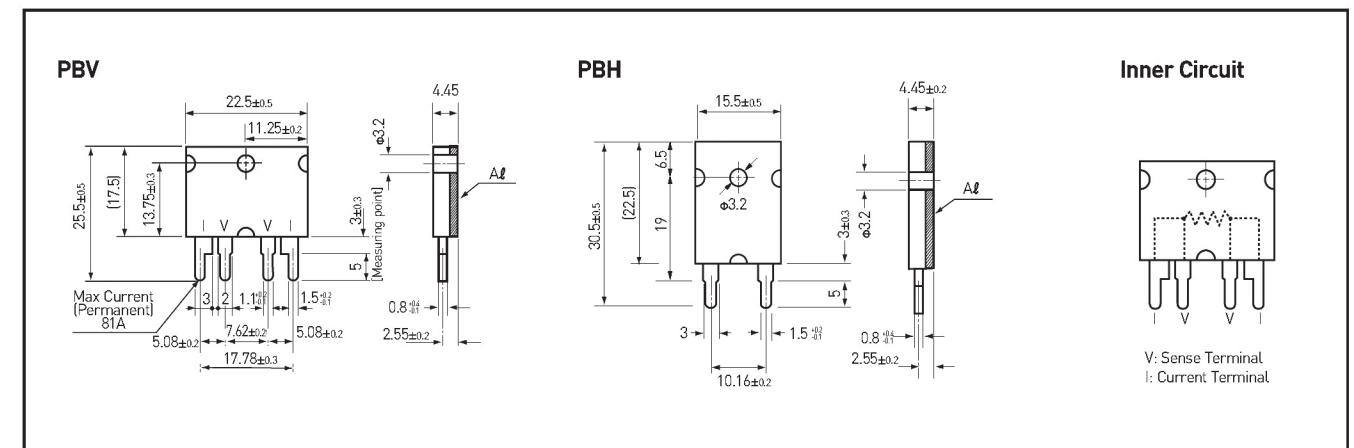
Model	Wattage Rating		Resistance Range[Ω]	Resistance Tolerance(%)	Terminal	Operating Temp.	Temp Coefficient (20℃~60℃)	Terminal Resistance To Base Plate	Weight [g]
	With Heat Sink	In Free Air							
PBV	10W	3W	0.5m~1	D [±0.5] F [±1] J [±5]	4	-55℃~-+125℃	±30ppm/℃ (R > 10mΩ)	3℃/W (6℃/W for R < 2mΩ)	5
PBH	10W	3W	0.002~10		2		±50ppm/℃ (R > 10mΩ)	4℃/W	3

*1) Restriction on Temp. of Resistance Element: 125 °C Max.  **CAUTION**

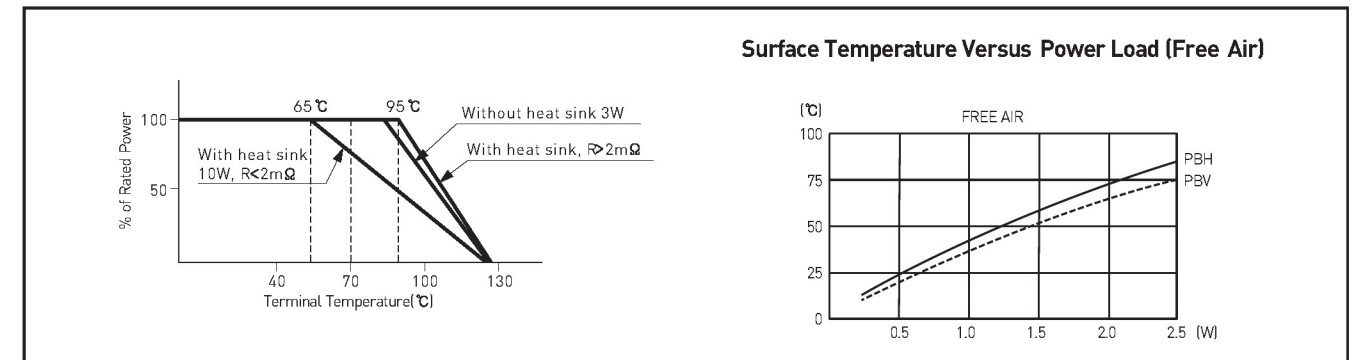
■ CHARACTERISTICS

TEST	LIMIT	TYPICAL	CONDITION
Insulation Resistance	100M Ω minimum	10G Ω	DC 100V
Dielectric Withstanding Voltage	$\pm 0.02\%$ maximum	0	AC 300V 1minute
Over Load	$\pm 0.1\%$ maximum	$\pm 0.01\%$	2.5 x Power rating 5sec.
Moisture Resistance	$\pm 0.1\%$	$\pm 0.02\%$	90~98%RH, +25℃, +65℃, -10℃ 10Cycles (10days)
Thermal Shock	$\pm 0.1\%$ maximum	$\pm 0.02\%$	-65℃ 30minutes +125℃ 30minutes 25Cycles
Shock	$\pm 0.2\%$	$\pm 0.01\%$	50g's 11ms
Vibration High Frequency	$\pm 0.2\%$	$\pm 0.01\%$	Peak 15g, 10~2000Hz 12cycles 12hours
Storage Life at Elevated Temp	$\pm 0.3\%$	$\pm 0.02\%$ ~0.05%	70℃ 2000hours
Thermal EMF	-2 μ V/℃ maximum	-0.05 μ V/℃	0℃~100℃
Frequency Characteristic	< 50 nH	4nH	Inductance(PBV 3.3m Ω)
Resistance to Solvents	No Damage	No Damage	IPA 3minute
Solderability	> 95% Coverage	$\geq 99\%$	245℃ 5sec.
Resistance to Soldering Heat	$\pm 0.02\%$ maximum	0	350℃ 3sec.
Terminal Strength	$\pm 0.02\%$ maximum	0	50N 5~10sec.
Load Life	$\pm 0.2\%$ (PBV), $\pm 0.5\%$ (PBH)	$\pm 0.02\%$ ~0.05%	Power rating 1.5 hours on, 0.5 hours off, 2000 hours

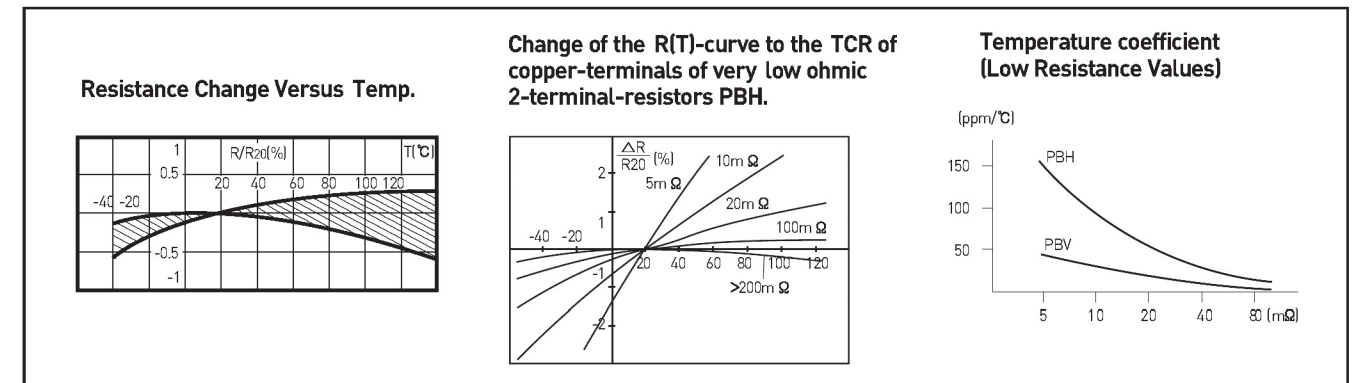
■ DIMENSIONS (mm)



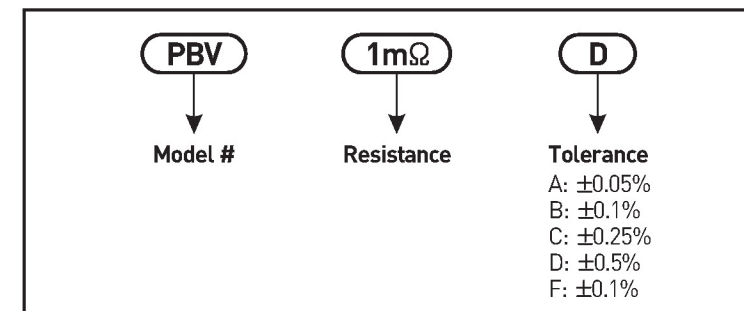
■ SURFACE TEMPERATURE INCREASE VS POWER LOAD



■ CHARACTERISTIC CURVES



■ ORDERING PROCEDURE EXAMPLE



■ STANDARD RESISTANCES(STOCK)

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): ±0.5%