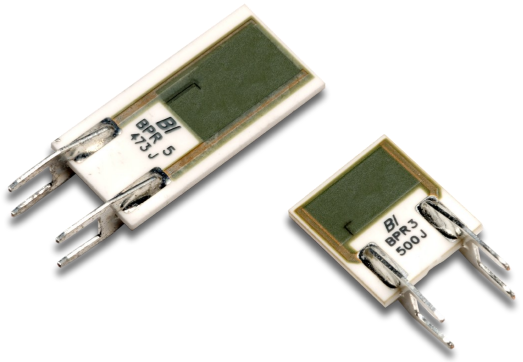
Planar High Power, Shock / Vibration Proof Resistors

BPR Series



Features:

- Ratings 3W to 50W
- Non-inductive planar package
- High power density
- Thin package for high density PCB installation
- Power dissipated above the board
- Superior vibration durability

All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

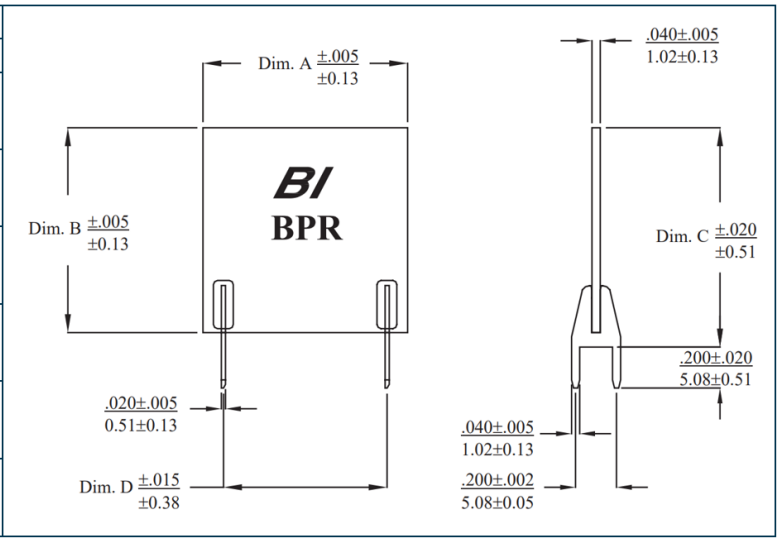
Electrical Data

		BPR3	BPR5	BPR7	BPR10	BPR30	BPR50
Power rating at rated temperature	W	3	5	7	10	30	50
Rated temperature	°C	70			50		25
Limiting element voltage	V	300Vrms or 500Vdc					
Resistance range [1]	Ω	R10 to 200K					1R0 to 1K0
Resistance tolerance [1]	%	1, 2, 5					
TCR (-55 to +155°C)	ppm/°C	>1R0: ±100					
Ambient temperature range	°C	-55 to +155					
Dielectric withstand	V	5000					
Standard values [1]		E24 or decade multiples of 5 preferred					

Note 1. Contact factory for custom products, and non-standard values and tolerances.

Physical Data

Dimensions in inches / mm and weight in g					
	A	B	C	D	Wt. nom.
BPR3	0.5 12.7	0.6 15.24	0.67 17.02	0.3 7.62	1.3
BPR5	0.5 12.7	1 25.4	1.07 27.18	0.3 7.62	1.7
BPR7	1 25.4	0.75 19.05	0.82 20.82	0.8 20.32	2.4
BPR10	1 25.4	1 25.4	1.07 27.18	0.8 20.32	3.0
BPR30	2.1 53.34	1.4 35.56	1.47 37.34	1.9 48.26	7.9
BPR50	2.1 53.34	2 50.8	2.07 52.58	1.9 48.26	11.1



Construction

A thick film resistor is printed and fired onto a 96% alumina ceramic substrate, to which terminations are fitted.

Terminations

A matt tin plated (100% Sn) copper alloy vibration resistant leadframe is used.

Marking

BPR resistors are marked with product brand (BI), type, value code and tolerance code. The marking is resistant to all normal industrial cleaning solvents suitable for printed circuits.

General Note
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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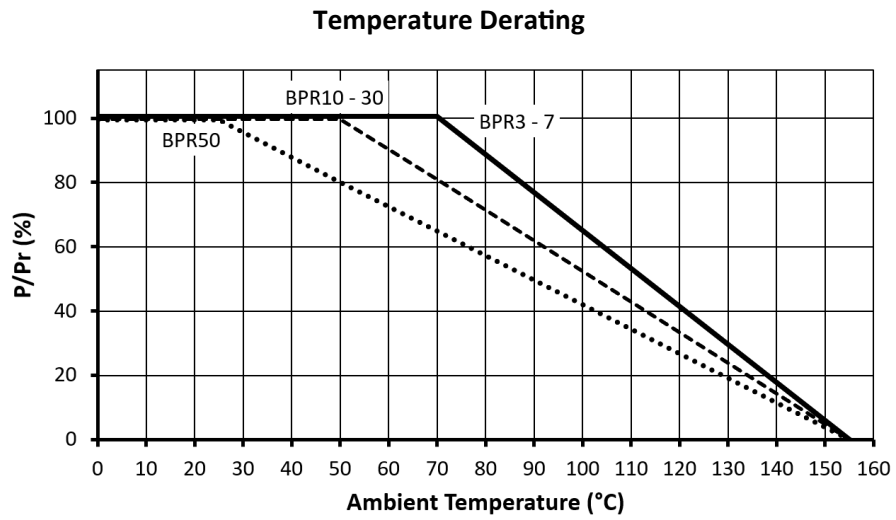
Performance Data

Test	Method		Maximum
Load at rated power	Cyclic load, 1000 hours at rated temperature	±ΔR%	2
Humidity	85°C, 85%RH, 1000 hours, dc bias, 0.1W	±ΔR%	0.5
Temperature cycle	-55 to +155°C, 30 minutes dwell, 5 cycles	±ΔR%	0.5
Vibration	20g, 10 to 2000Hz	±ΔR%	0.25
Mechanical shock	100g	±ΔR%	0.25
Resistance to solder heat	250 ±5°C for 10s	±ΔR%	0.25
Solderability	230 ±5°C for 5s		>95% coverage
Insulation resistance		MΩ	>1000

Thermal Data



Ordering Procedure

Example: BPR10470F (BPR10, 47 ohms ±1%, Pb-free)

B	P	R	1	0	4	7	0			F
1					2					3

1 Type	2 Value	3 Tolerance	Termination & Packing	
BPR3	E24 = 2 digits + multiplier	F = ±1%	Pb-free, tray packed	
BPR5	xRx for values 1R0 to <10R	G = ±2%	BPR3 – BPR30	50/tray
BPR7	0Rxxx for values <1R0	J = ±5%	BPR50	10/tray
BPR10				
BPR30				
BPR50				

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