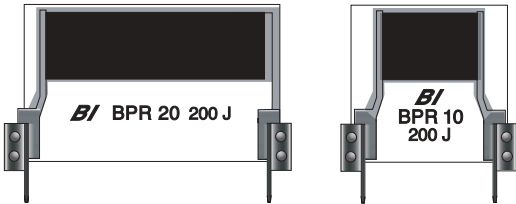


MODEL BPR SERIES

Noninductive Planar Shock / Vibration Proof Thick Film, High Power Resistor Network

PRELIMINARY DATA SHEET



STANDARD TYPES

BPR 3	3 Watts
BPR 5	5 Watts
BPR 7	7.5 Watts
BPR 10	10 Watts
BPR 20	20 Watts
BPR 30	30 Watts
BPR 40	40 Watts
BPR 50	50 Watts

FEATURES

- High power density
- Power is dissipated above circuit board
- Low temperature solder
- Nonflammable
- Noninductive planar
- Ideal for high shock and vibration environments

APPLICATIONS

- Inrush current suppression and limiters
- Switching power supplies
- Snubber circuits

Specifications subject to change without notice.
Consult factory for custom products, nonstandard values and tolerances.
Last update: 6/24/2002.

ELECTRICAL

Resistance Range, Ohms	1 to 200K
Resistance Tolerances	±5% Optional: ±1%, ±2%
Operating Temperature Range	-55°C to +155°C
Temperature Coefficient of Resistance, Maximum	±100ppm/°C
Power Ratings, Watts	3W, 5W, 7.5W, 10W, 20W, 30W, 40W, 50W at 70°C
Operating Voltage, Maximum	500 Vdc or $\sqrt{PR}$, whichever is less
Peak Current	15 x rated current up to 8 ms ($\Delta R \pm 0.5\%$)
Dielectric Strength	750 V

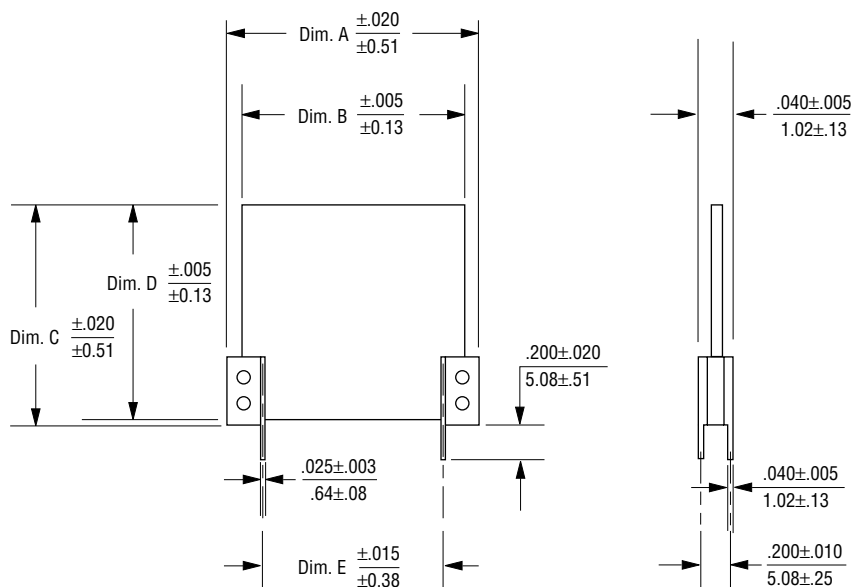
MECHANICAL

Lead Material	Solder Tinned phosphor bronze
Substrate Material	96% Alumina
Resistor Material	Ruthenium Oxide

ENVIRONMENTAL (PER MIL-R-83401)

Thermal Shock	ΔR 0.50%
Terminal Strength	ΔR 0.25%
Short Time Overload, Maximum	2 x rated voltage for 5 seconds, ΔR 0.25%
Moisture Resistance	ΔR 0.50%
Mechanical Shock	100G's, ΔR 0.25%
Vibration	20G's, 10 Hz to 2 kHz, ΔR 0.25%
Low Temperature Storage	ΔR 0.25%
High Temperature Exposure	ΔR 0.25%
Load Life, 1,000 Hours	ΔR 2.00%
Resistance to Solder Heat	ΔR 0.25%
Dielectric Withstanding Voltage, Minimum	1,000 Vdc
Marking Permanency	MIL-STD-202, Method 215
Lead Solderability	MIL-STD-202, Method 208
Flammability	UL 94V-0 Rated
Storage	-55°C to +155°C

OUTLINE DIMENSIONS (Inch/mm)

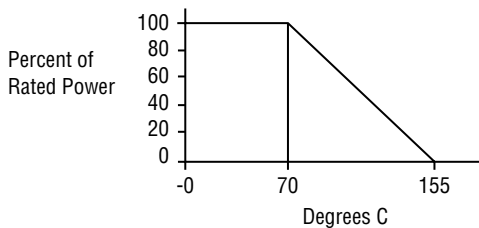


Model	BPR 3	BPR 5	BPR 7	BPR 10	BPR 20	BPR 30	BPR 40	BPR 50
Dim. A	<u>0.65</u>	<u>0.65</u>	<u>1.15</u>	<u>1.15</u>	<u>2.15</u>	<u>2.25</u>	<u>2.25</u>	<u>2.25</u>
	16.51	16.51	29.21	29.21	54.61	57.15	57.15	57.15
Dim. B	<u>0.50</u>	<u>0.50</u>	<u>1.00</u>	<u>1.00</u>	<u>2.00</u>	<u>2.10</u>	<u>2.10</u>	<u>2.10</u>
	12.70	12.70	25.40	25.40	50.80	53.34	53.34	53.34
Dim. C	<u>0.67</u>	<u>1.07</u>	<u>0.82</u>	<u>1.07</u>	<u>1.07</u>	<u>1.47</u>	<u>1.97</u>	<u>2.27</u>
	17.02	27.18	20.82	27.18	27.18	37.34	50.04	57.66
Dim. D	<u>0.60</u>	<u>1.00</u>	<u>0.75</u>	<u>1.00</u>	<u>1.00</u>	<u>1.40</u>	<u>1.90</u>	<u>2.20</u>
	15.24	25.40	19.05	25.40	25.40	35.56	48.26	55.88
Dim. E	<u>0.30</u>	<u>0.30</u>	<u>0.80</u>	<u>0.80</u>	<u>1.80</u>	<u>1.90</u>	<u>1.90</u>	<u>1.90</u>
	7.62	7.62	20.32	20.32	45.72	48.26	48.26	48.26

STANDARD RESISTANCE VALUES (OHMS)

Value	1	2	5	10	20	50	100	200	500	1K	2K	5K	10K	20K	50K	100K	200K
Code	1R0	2R0	5R0	100	200	500	101	201	501	102	202	502	103	203	503	104	204

POWER DERATING CURVE



PACKAGING

Standard: 50 per tray (BPR 3, BPR 5, BPR 7, BPR 10)
20 per tray (BPR 20, BPR 30, BPR 40, BPR 50)

ORDERING INFORMATION

BPR 20 103 J

Model Series ————

Power Rating: ————

- 3 = 3 Watts
- 5 = 5 Watts
- 7 = 7.5 Watts
- 10 = 10 Watts
- 20 = 20 Watts
- 30 = 30 Watts
- 40 = 40 Watts
- 50 = 50 Watts

Tolerance Code:

- F = 1% Tol.
- G = 2% Tol.
- J = 5% Tol. (Standard)

Resistance Code:

- First 2 digits are significant.
- Last digit denotes number of trailing zeros.
- In values <10Ω "R" denotes decimal point.