

MODEL BHP
Noninductive Planar
Low Cost, 20 Watt
TO 220 Package
Thick Film Resistor

PRELIMINARY DATA



APPLICATIONS

- Switching power supplies
- Snubber circuits
- Inrush current suppression
- Pre-loads

FEATURES AND BENEFITS

- High power density
- Power is dissipated above circuit board
- Low temperature solder
- Nonflammable
- Non-inductive planar

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	20 Watts (With 5.8°C/W External Heat Sink) 2 Watts (In Air)
Operating Voltage, Maximum	250 Vdc
Peak Current	15 x rated current up to 8 ms ($\Delta R \pm 0.5\%$)
Dielectric Strength	750 V

Specifications subject to change without notice.

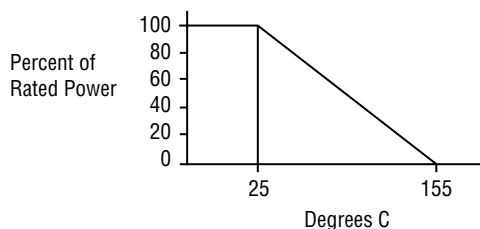
MECHANICAL

Lead Material	Solder Tinned Copper Alloy
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	2 x rated power, 5 seconds, ΔR 0.50%
Moisture Resistance	ΔR 0.50%
Mechanical Shock	30G's, ΔR 0.25%
Vibration	10G's, 10 to 500 Hz 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

POWER DERATING CURVE



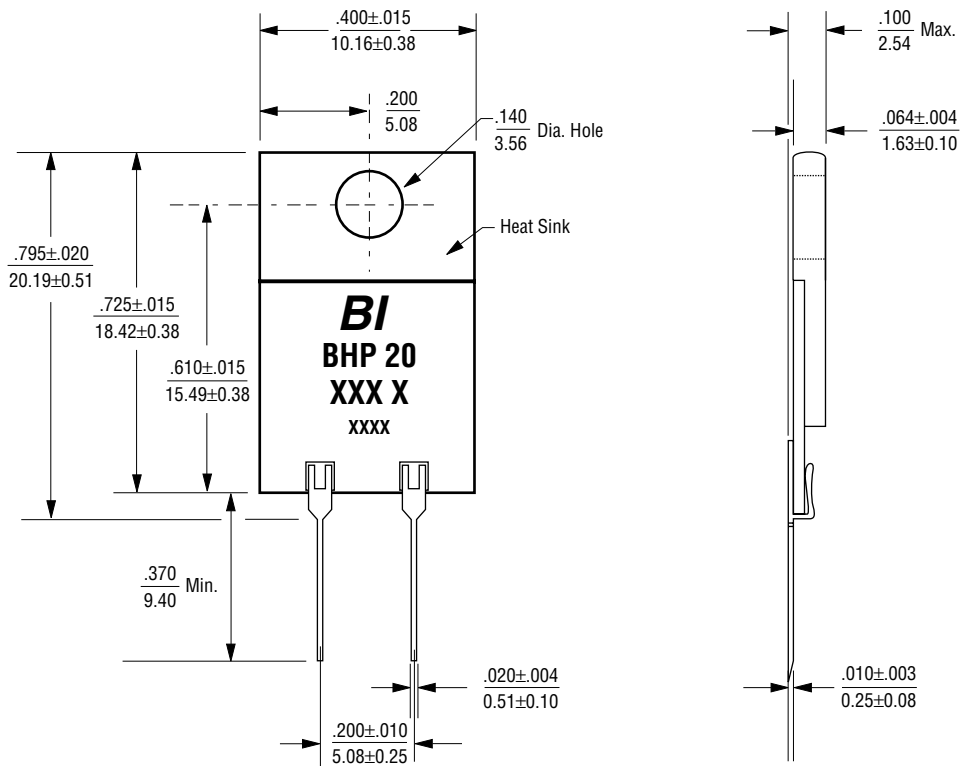
STANDARD RESISTANCE VALUES (OHMS)

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

PACKAGING

Standard: 50 per tray

OUTLINE DIMENSIONS (Inch/mm)



ORDERING INFORMATION

Model **BHP 20 103 J**

Power Rating

Resistance Code:

1 Ohm = 1R0
 2 Ohms = 2R0
 5 Ohms = 5R0
 ≥ 10 Ohm: First 2 digits are significant.
 Last digit denotes number of trailing zeros.

Tolerance Code:
 F = 1% Tol.
 G = 2% Tol.
 J = 5% Tol.