

# MODEL BHV SERIES

## BHV Series

- High Voltage / High Value / High Power
- Thick Film SIP, Pin, Wire & Solder Pad Connections
- Epoxy / Polymer Coated Resistors
- Precision Dividers
- RoHS Compliant



## ELECTRICAL

Resistance Range, Maximum	1G Ohm
Standard Tolerances	±1% (F Tol.), ±5% (J Tol.), ±10% (K Tol.)
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient of Resistance, Maximum	<100ppm/°C
Voltage Coefficient	<2ppm/V
Divider Ratio	1,000:1, Max.
Voltage Rating	Up to 50kV

(Power Rating - Up to 150W (in mineral oil))

## ENVIRONMENTAL (per MIL-PRF-83401)

Operating Temperature Range	-55°C to +125°C
Thermal Shock	ΔR 0.50%
Terminal Strength	ΔR 0.25%
Moisture Resistance	ΔR 0.50%
Mechanical Shock	ΔR 0.25%
Vibration	ΔR 0.25%
Low Temperature Storage	ΔR 0.25%
High Temperature Exposure	ΔR 0.25%
Load Life, 1000 Hours	ΔR 1.00%
Resistance to Solder Heat	ΔR 0.25%
Dielectric Withstanding Voltage	5000 V Minimum
Marking Permanency	MIL-STD-202, Method 215
Lead Solderability	MIL-STD-202, Method 208
Flammability	UL-94V-0 Rated
Storage Temperature Range	-55°C to +125°C

### General Note

BI Technologies reserves the right to make changes in product specification without notice or liability

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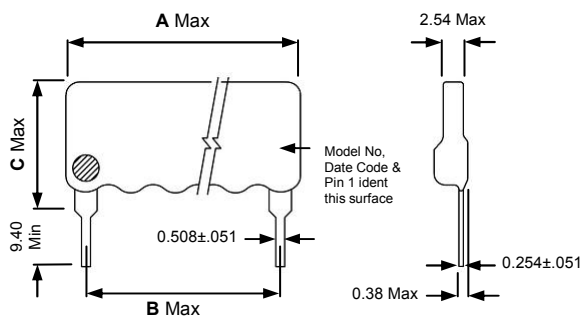
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## MECHANICAL

Cover Coat	Style RS, PW & PF:	Polymer Cover Coat
	Styles RF & RW:	Epoxy
Substrate		Alumina
Resistor		Cermet

## OUTLINE DIMENSIONS (mm)

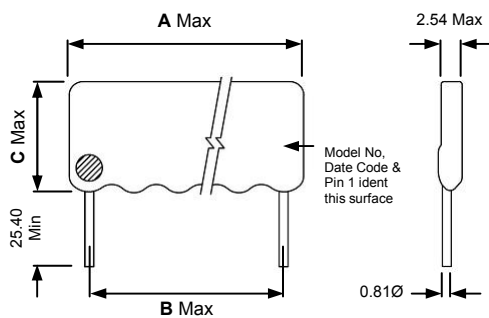
### BHVXXRF / PF



MODEL	VOLTAGE MAX	A	B	C
BHV10RF/PF	10kV	24.2	20.32	10.16 MAX.
BHV15RF/PF	15kV	29.3	25.40	12.70 MAX.
BHV20RF/PF	20kV	37.6	33.02	15.24 MAX.
BHV30RF/PF	30kV	59.7	50.80	15.24 MAX.

(Higher Ratings Available on Request)

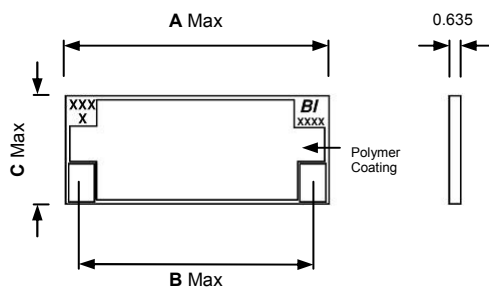
### BHVXXRW / PW



MODEL	VOLTAGE MAX	A	B	C
BHV10RW/PW	10kV	24.2	20.32	10.16 MAX.
BHV15RW/PW	15kV	29.3	25.40	12.70 MAX.
BHV20RW/PW	20kV	37.6	33.02	15.24 MAX.
BHV30RW/PW	30kV	59.7	50.80	15.24 MAX.

(Higher Ratings Available on Request)

### BHVXXRS



MODEL	VOLTAGE MAX	A	B	C
BHV10RS	10kV	22.86	20.32	7.62 MAX.
BHV15RS	15kV	27.94	25.40	10.16 MAX.
BHV20RS	20kV	36.32	33.02	12.70 MAX.
BHV30RS	30kV	58.42	50.80	12.70 MAX.

(Higher Ratings Available on Request)



Schematic - All Models

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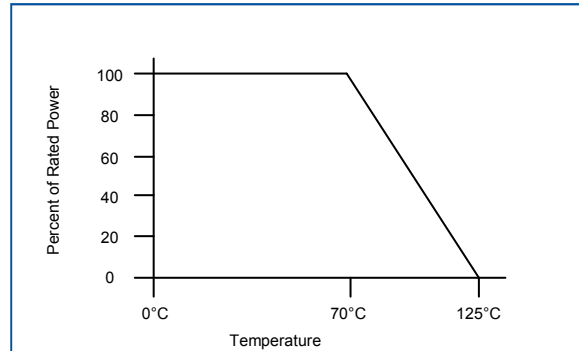
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## POWER (Watts) DISSIPATION @ 70°C

Model	Power (Max)
BHV 10	1.0
BHV 15	1.5
BHV 20	2.0
BHV 30	3.0

## POWER DERATING CURVE

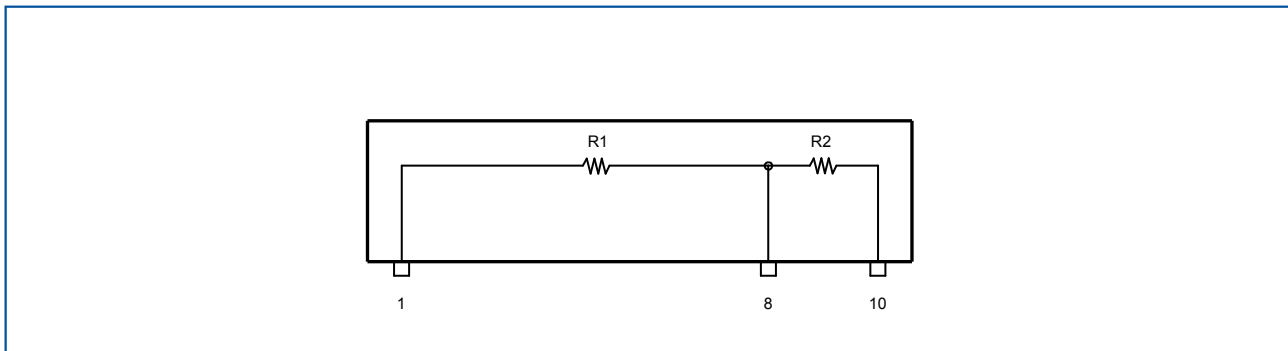


## BHV - PRECISION DIVIDER

### Specification Notes

- 1)  $R1+R2 = 1G \text{ Ohm } \pm 5\% \text{ (Max)}$
- 2) Typical Ratio -  $(R1+R2)/R2 = 1000, 500, 100$
- 3) Ratio Tolerance = 10%, 5%, 2%, 1%
- 4) TCR =  $<100\text{ppm}/^\circ\text{C Max (+5}^\circ\text{C to +50}^\circ\text{C)}$
- 5) Ratio TCR =  $50\text{ppm}/^\circ\text{C Max}$
- 6) VCR =  $2\text{ppm}/V \text{ Max}$
- 7) Max Operating Voltage =  $2\text{kV Max (over } 1G \text{ Ohm)}$
- 8) Pin Pitch 1 to 8 is  $0.7'' \text{ Nominal}$
- 9) Pin Pitch 8 to 10 is  $0.2'' \text{ Nominal}$
- 10) Pin Length =  $0.178'' \pm 0.018''$
- 11) Max Seated Height =  $0.380''$ , Max Length =  $1.000''$ ,  
Max Thickness =  $0.1''$

## SCHEMATIC

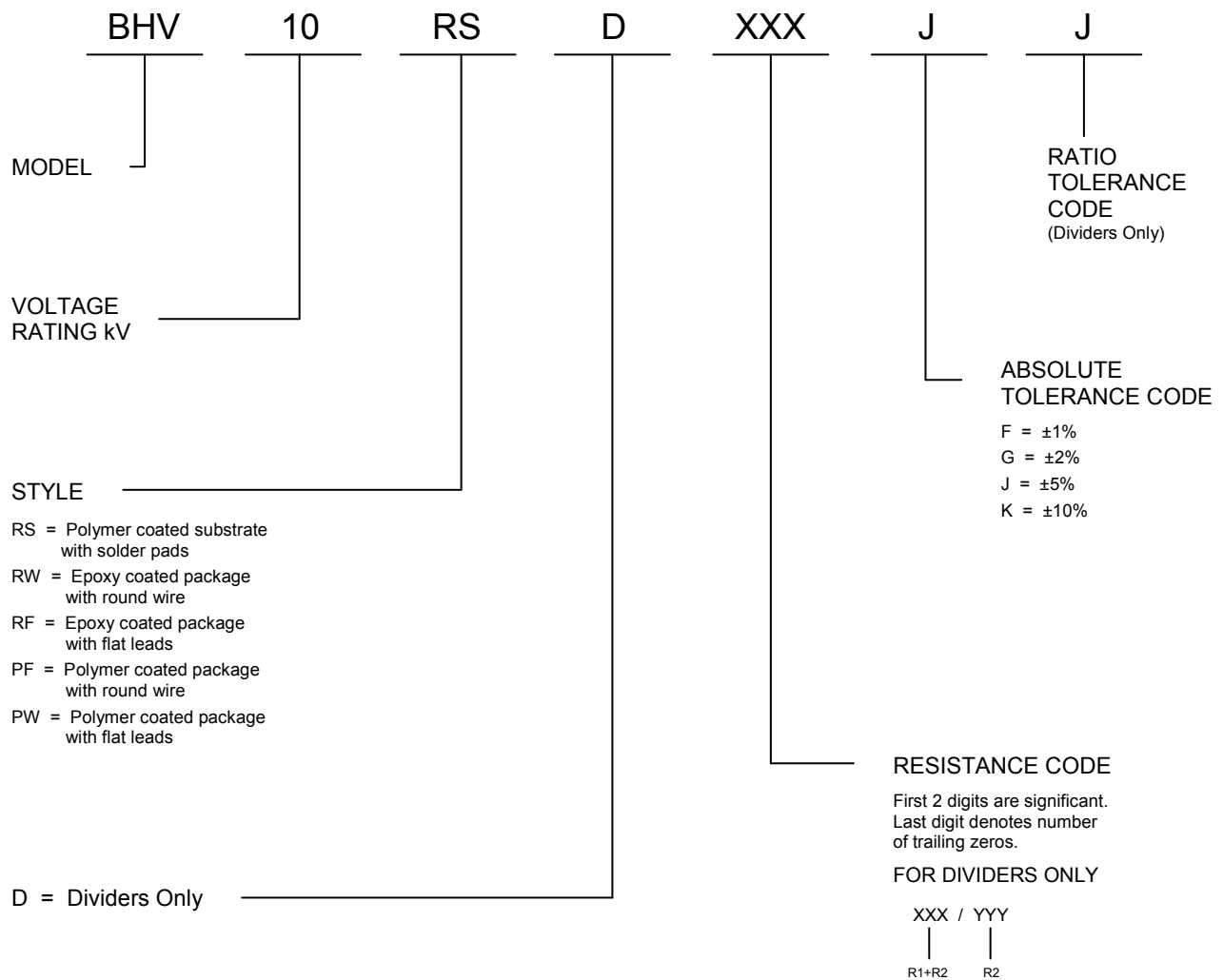


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# MODEL BHV SERIES

## ORDERING INFORMATION



### PACKAGING

Standard: Box Capacity 100 units

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