

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

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.

BHV Series

Mechanical

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

Outline Dimensions (mm)

<div><div>BHVXXRF / PF</div><div></div></div>	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)				

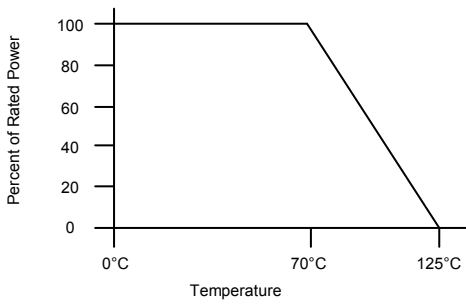
<div><div>BHVXXRW / PW</div><div></div></div>	MODEL	VOLTAGE MAX	A	B	C
	BHV10RW/PW	10kV	24.2	20.32	10.16 MAX.
	BHV15RW/PW	15kV	29.3	25.40	12.70 MAX.
	BHV20RW/PW	20kV	37.6	33.02	15.24 MAX.
	BHV30RW/PW	30kV	59.7	50.80	15.24 MAX.
	(Higher Ratings Available on Request)				

<div><div>BHVXXRS</div><div></div></div>	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

Power (watts) Dissipation @ 70°C

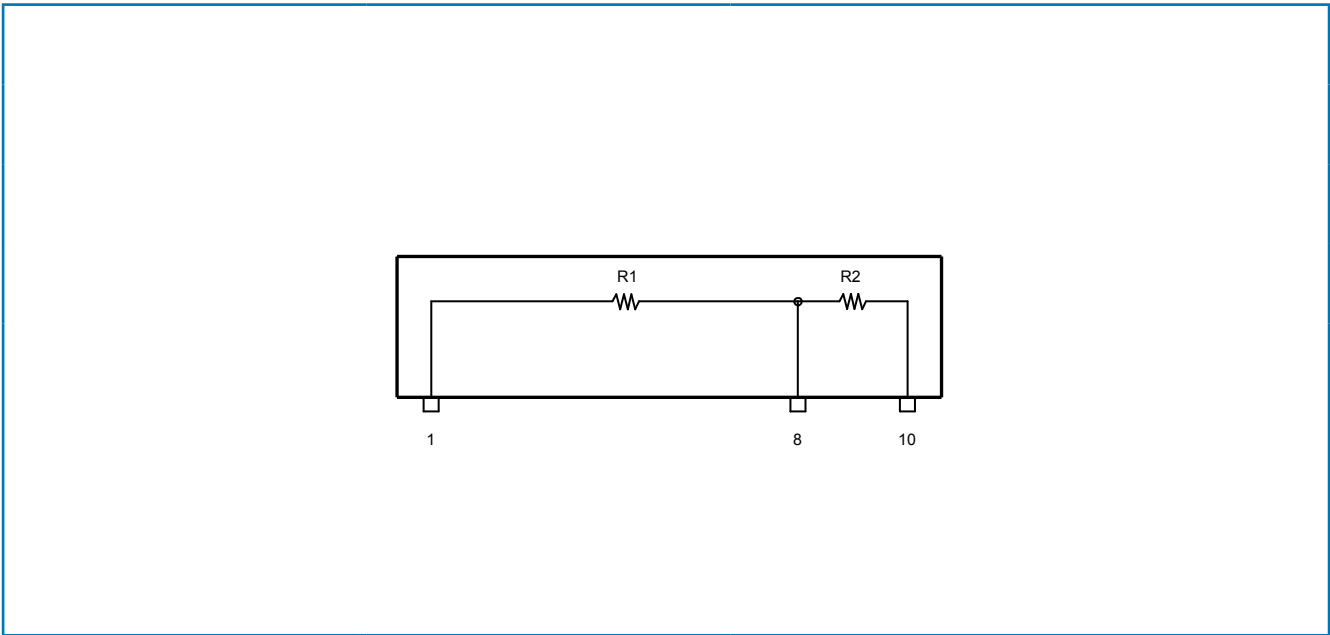
Power Derating Curve

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

BHV - Precision Divider

1) $R1+R2 = 1\text{ G Ohm } \pm 5\%$ (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°C to +50°C)
5) Ratio $TCR = 50\text{ppm}/^{\circ}\text{C}$ Max
6) $VCR = 2\text{ppm}/\text{V}$ Max
7) Max Operating Voltage = 2kV Max (over 1G Ohm)

Schematic



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	Styles RF	Epoxy
Substrate		Alumina
Resistor		Cermet

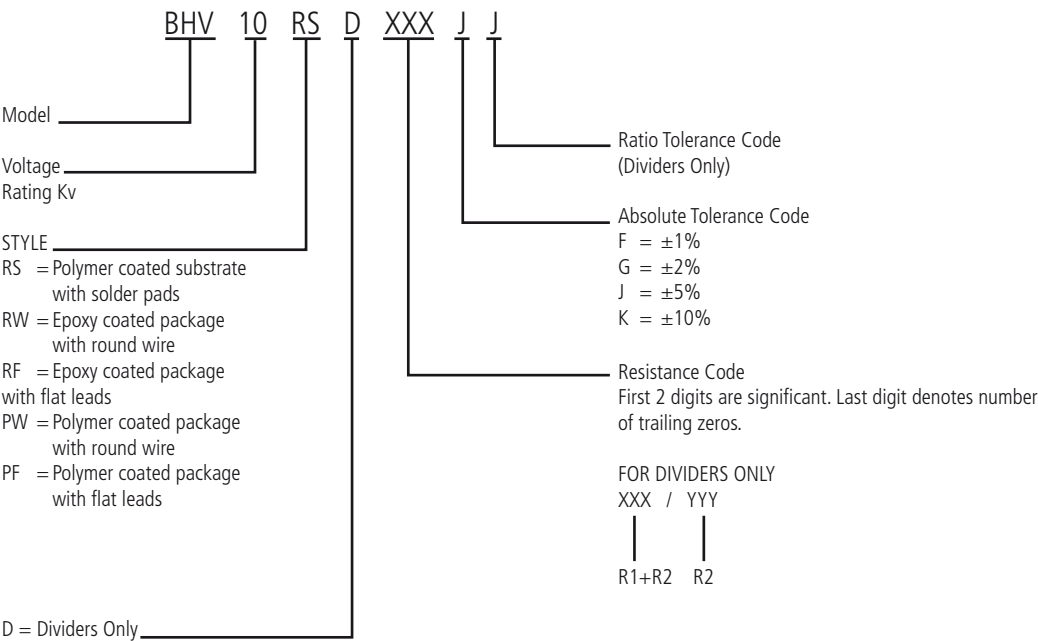
Outline Dimensions (Mm)

BHVXXRF / PF	MODEL	VOLTAGE MAX	A	B	C	D
	BHV2RF/PF	2kV	25.40	17.78	5.08	9.65 MAX.
BHVXXRS	MODEL	VOLTAGE MAX	A	B	C	D
	BHV2RS	2kV	24.77	17.78	5.08	7.14 MAX.

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Ordering Information



Packaging

Standard: Box Capacity 100 units