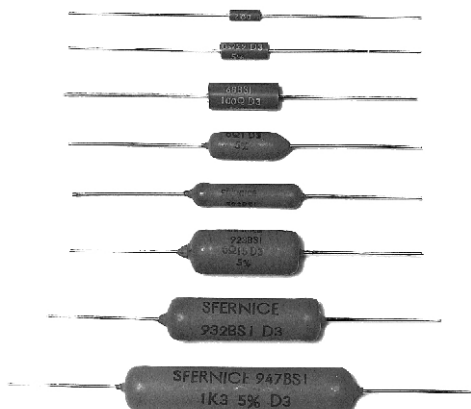


Molded and Insulated Wirewound Power Resistors Axial Leads

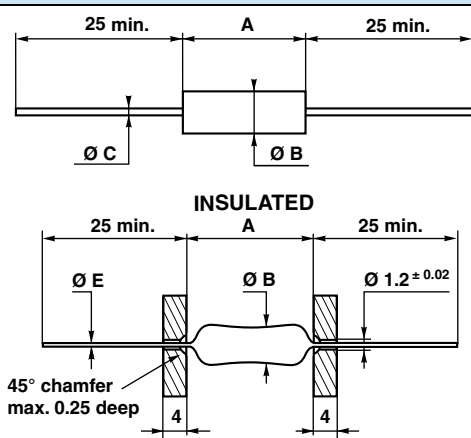


FEATURES

- 1 W to 10 W
- Excellent stability = Typical drift $\pm 1\%$ after 2000 h
- High power = Up to 10 W (25 °C)
- Low ohmic values = $0.01\ \Omega$ available
- Electrical insulation
- Climatic protection
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

DIMENSIONS in millimeters



MOLDED	PROTECTION			
SERIES AND STYLE	A	Ø B	Ø C ± 0.1	WEIGHT (g)
58BSI	6.5 ± 0.2	2.4 ± 0.1	0.6	0.3
63BSI	10 ± 0.2	3.7 ± 0.1		0.45
68BSI	15 ± 0.5	5.6 ± 0.2	0.8	1.3
INSULATED	PROTECTION			
516BSI	17 ± 2	5.5 ± 1	0.8	1.6
523BSI	24 ± 2	5.5 ± 1		2.5
923BSI	26 ± 2	10 ± 1.5		6
932BSI	34 ± 3	10 ± 1.5		7.5
947BSI	51 ± 3	10 ± 1.5		10

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER $P_{25^\circ\text{C}}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE $\pm \%$	TEMPERATURE COEFFICIENT $\pm \text{ppm}/^\circ\text{C}$
58BSI	058	0.1 to 2K	1	50	0.5, 1, 2, 5	100, 300
63BSI	063	0.025 to 4K	2	120	0.5, 1, 2, 5	100, 300
68BSI	068	0.01 to 15K	3	200	0.5, 1, 2, 5	100, 300
516BSI	516	0.01 to 20K	4	200	0.5, 1, 2, 5	100, 300
523BSI	523	0.015 to 40K	5	250	0.5, 1, 2, 5	100, 300
923BSI	923	0.02 to 60K	6	300	0.5, 1, 2, 5	100, 300
932BSI	932	0.035 to 100K	8	500	0.5, 1, 2, 5	100, 300
947BSI	947	0.06 to 150K	10	750	0.5, 1, 2, 5	100, 300

TECHNICAL SPECIFICATIONS

VISHAY SFERNICE SERIES			58BSI	63BSI	68BSI	516BSI	523BSI	923BSI	932BSI	947BSI
Ohmic Range in Relation to	$\pm 100 \text{ ppm}/^{\circ}\text{C}$	$\pm 0.5 \%$ $\pm 5 \%$	0.1 Ω 2 k Ω	0.1 Ω 4 k Ω	0.1 Ω 15 k Ω	0.1 Ω 20 k Ω	0.1 Ω 40 k Ω	0.1 Ω 60 k Ω	0.1 Ω 100 k Ω	0.1 Ω 150 k Ω
Temperature Coefficient	$\pm 300 \text{ ppm}/^{\circ}\text{C}$	$\pm 1 \%$ $\pm 5 \%$	-	0.025 Ω < 0.1 Ω	0.01 Ω < 0.1 Ω	0.01 Ω < 0.1 Ω	0.015 Ω < 0.1 Ω	0.02 Ω < 0.1 Ω	0.035 Ω < 0.1 Ω	0.06 Ω < 0.1 Ω

**MECHANICAL SPECIFICATIONS**

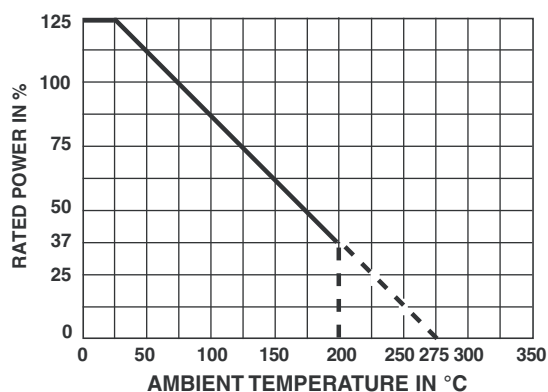
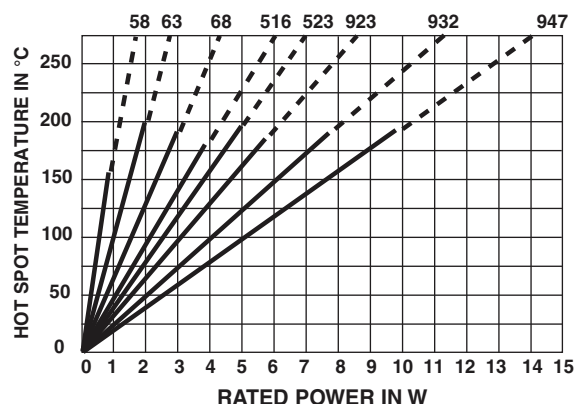
Mechanical Protection	Molded or painted (insulated)
Resistive Element	CuNi or CrNi
Substrate	Alumina
Connections	Sn/Ag/Cu 99/0.3/0.7

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	- 55 °C to + 275 °C
Climatic Category	55/200/56

PERFORMANCE

TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES AND DRIFTS
Dielectric Strength	IEC 60115-1 1000 V _{RMS} for 923 to 947 500 V _{RMS} for 58 to 523	± (0.1 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)
Short Time Overload	IEC 60115-1 5 P _r /5 s for P _r < 5 W 10 P _r /5 s for P _r ≥ 5 W	± (0.2 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)
Endurance	IEC 60115-1 90'/30' P _r at 25 °C, 2000 h	± (1 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)
Endurance at High Temperature	250 h at 275 °C	± (0.5 % + 0.05 Ω)	± (0.3 % + 0.05 Ω)
Thermal Shock	Load at 100 % P _r followed by cold temp. exposure at - 55 °C	± (0.2 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)
Climatic Sequence	IEC 60115-1 - 55 °C/+ 200 °C 5 cycles	± (0.5 % + 0.05 Ω) Insulation resistance ≥ 100 MΩ	± (0.3 % + 0.05 Ω) Insulation resistance > 10 GΩ
Damp Heat, Steady State	IEC 60115-1/IEC 60068-2-78 56 days, 40 °C, 93 % RH	± (0.5 % + 0.05 Ω) Insulation resistance ≥ 100 MΩ	± (0.3 % + 0.05 Ω) Insulation resistance > 10 GΩ
Moisture Resistance	MIL-STD-202 method 106	± (0.2 % + 0.05 Ω) Insulation resistance ≥ 100 MΩ	± (13 % + 0.05 Ω) Insulation resistance > 10 GΩ
Shock	MIL-STD-202 100 g method 205 - test C	± (0.1 % + 0.05 Ω)	± (0.05 % + 0.05 Ω)
Vibration	MIL-STD-202 method 204 - Test D: 20 g 10Hz/2000 Hz	± (0.1 % + 0.05 Ω)	± (0.05 % + 0.05 Ω)

POWER RATING**TEMPERATURE RISE****MARKING**

GEKA trademark, model, style, nominal resistance (in Ω), tolerance (in %), manufacturing date.
Because of lack of space, small styles are marked with ohmic value (in Ω), and tolerance (in %) only.



ORDERING INFORMATION

BSI	63	U22	2 %	± 100 ppm/°C	TR300	e1
MODEL	STYLE	OHMIC VALUE	TOLERANCE	TEMPERATURE COEFFICIENT	PACKAGING	LEAD (Pb)-FREE

GLOBAL PART NUMBER INFORMATION

B	S	I	0	6	3	2	R	8	7	0	F	R	2	2	
GLOBAL MODEL	SIZE	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL										
BSI	058 063 068 516 523 923 932 947	The first digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. 2R870 = 2.87 Ω 1R200 = 1.2 Ω 10020 = 10 000 Ω R3300 = 0.33 Ω ...	D = 0.5 % F = 1 % G = 2 % J = 5 %	Size 058: R26 = Reel (5000 pieces) Size 063: R22 = Reel (3000 pieces) Size 68, 516, 523: R17 = Reel (1250 pieces) Size 923, 932, 947: B19 = Box (30 pieces) Other packaging existing	As applicable Ex = AD7										



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