www.vishay.com

Vishay Sfernice

## **Molded Wirewound Power Resistors Axial Leads**



### **FEATURES**

• 2 W

- Excellent stability = typical drift  $\pm$  1 % after 2000 h
- Low ohmic values = 0.025  $\Omega$  available
- Electrical insulation
- Climatic protection
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

DIMENSIONS in millimeters							
25  min. A $25  min.0  C$ $0  B$							
MODEL		PROT	ECTION				
MODEL	Α	Ø B	Ø C ± 0.1	WEIGHT (g)			
63BSI	10 ± 0.2	3.7 ± 0.1	0.6	0.45			

STANDARD ELECTRICAL SPECIFICATIONS							
MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER P <sub>25 °C</sub> W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C	
63BSI	063	0.025 to 4K	2	120	0.5, 1, 2, 5	100, 300	

TECHNICAL SPECIFICATIONS					
VISHAY SFERNICE SERIES			63BSI		
Ohmic range in relation to	± 100 ppm/°C	± 0.5 % ± 5 %	0.1 Ω 4 kΩ		
Temperature coefficient	± 300 ppm/°C	± 1 % ± 5 %	0.025 Ω < 0.1 Ω		

MECHANICAL SPECIFICATIONS				
Mechanical Protection	Molded			
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			

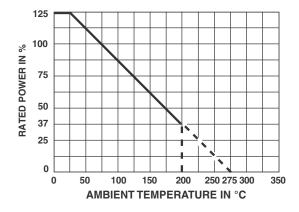




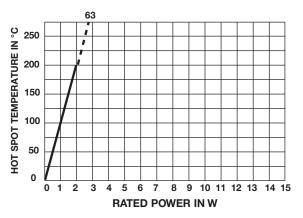
## Vishay Sfernice

PERFORMANCE						
TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES AND DRIFTS			
Dielectric Strength	IEC 60115-1 1000 V <sub>RMS</sub> for 923 to 947 500 V <sub>RMS</sub> for 58 to 523	± (0.1 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)			
Short Time Overload	IEC 60115-1 5 $P_n$ / 5 s for $P_r$ < 5 W 10 $P_n$ / 5 s for $P_r$ ≥ 5 W	$5 P_n / 5 s$ for $P_r < 5 W$ ± (0.2 % + 0.05 Ω)				
Endurance	IEC 60115-1 90' / 30' <i>P</i> <sub>r</sub> 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 % <i>P</i> <sub>r</sub> followed by cold temp. exposure at -55 °C	± (0.2 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)			
Climatic Sequence	IEC 60115-1 -55 ℃ / +200 ℃ 5 cycles	$\pm$ (0.5 % + 0.05 Ω) Insulation resistance $\ge$ 100 MΩ	$\pm$ (0.3 % + 0.05 $\Omega$ ) Insulation resistance > 10 G $\Omega$			
Damp Heat, Steady State IEC 60115-1 / IEC 6006 56 days, 40 °C, 93 %		$\pm$ (0.5 % + 0.05 Ω) Insulation resistance $\ge$ 100 MΩ	$\pm$ (0.3 % + 0.05 $\Omega$ ) Insulation resistance > 10 G $\Omega$			
Moisture Resistance MIL-STD-202 method 106		$\pm$ (0.2 % + 0.05 $\Omega$ ) Insulation resistance $\geq$ 100 M $\Omega$	$\pm$ (13 % + 0.05 $\Omega$ ) Insulation resistance > 10 G $\Omega$			
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: 2 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  $\Omega$ ), tolerance (in %), manufacturing date. Because of lack of space, small styles are marked with ohmic value (in  $\Omega$ ), 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		

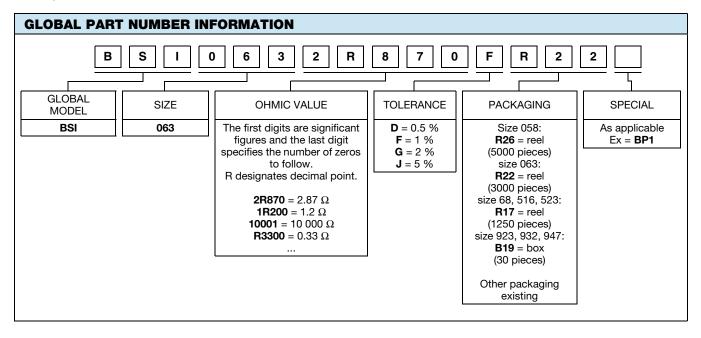
Revison: 15-Dec-2023

2



Vishay Sfernice

**BSI** 





Vishay

# Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

© 2024 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED

Revision: 01-Jan-2024