Metal Film Resistors, Hermetically-Sealed, Precision, Industrial



FEATURES

- Hermetic glass enclosure is impervious to harmful environments
- Inert gas filled
- Low noise (- 40 dB)
- Low TCR (down to 15 ppm/°C)

MECHANICAL SPECIFICATIONS

Termination: Vishay Angstrohm GSR resistors use gold-plated nickel leads, which are both solderable and weldable (hot solder dip is available as an option).

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING		MAXIMUM WORKING VOLTAGE (1)	TEMPERATURE COEFFICIENT	TOLERANCE	RESISTANCE RANGE
	$P_{70\,°C}$ W	$P_{125\,°C}$ W	V	± ppm/°C	± %	Ω
GSR55	0.125	0.10	200	15, 25, 50	0.05, 0.1, 0.5, 1	10 to 2.5M
GSR57	0.25	0.125	250	15, 25, 50	0.05, 0.1, 0.5, 1	10 to 1M
GSR60	0.25	0.125	250	15, 25, 50	0.05, 0.1, 0.5, 1	10 to 3M
GSR65	0.50	0.25	300	15, 25, 50	0.05, 0.1, 0.5, 1	10 to 10M
GSR70	0.75	0.50	350	15, 25, 50	0.05, 0.1, 0.5, 1	10 to 10M
GSR75	2.0	1.0	750	15, 25, 50	0.05, 0.1, 0.5, 1	10 to 5M

Note

(1) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: GSR55E49R900BMR (preferred part number format)

G	S	R	5	5	E	4	9	R	9	0	0	B	M	R			

GLOBAL MODEL	TEMPERATURE COEFFICIENT	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING	SPECIAL
(see Standard Electrical Specifications table)	**X** = 15 ppm **E** = 25 ppm **H** = 50 ppm	**R** = Ω **K** = kΩ **M** = MΩ **10R000** = 10 Ω **49R900** = 49.9 Ω **680K00** = 680 kΩ **1M0000** = 1.0 MΩ	**A** = ± 0.05 % **B** = ± 0.1 % **D** = ± 0.5 % **F** = ± 1.0 %	**MR** = Foil bag (55, 57, 60) **MS** = Foil bag (65, 70, 75) **CS** = Reel (55, 57, 60) **CT** = Reel (65, 70, 75)	Blank = Standard (Dash Number) (up to 3 digits) From **1 to 999** as applicable

Historical Part Numbering: GSR55E49R9B (will continue to be accepted)

GSR55	E	49R9	B
HISTORICAL MODEL	TEMPERATURE COEFFICIENT	RESISTANCE VALUE	TOLERANCE CODE

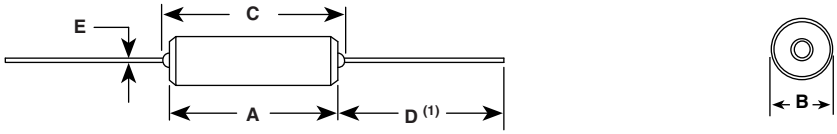
Note

- For additional information on packaging, refer to the Through-Hole Resistor Packaging document (www.vishay.com/doc?31544).

For technical questions, contact: fff2aresistors@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

DIMENSIONS in inches (millimeters)

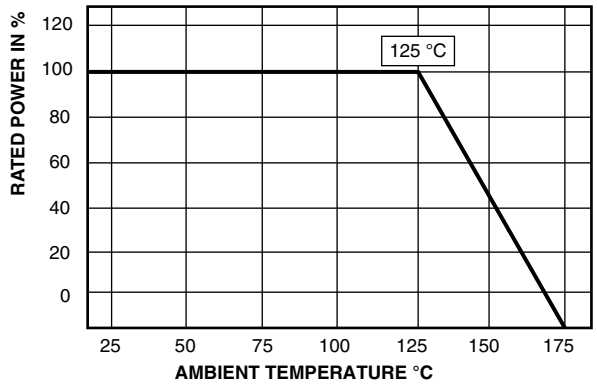


MODEL	A LENGTH	B DIAMETER	C CL TO CL (MAX.)	D LENGTH ± 0.125 (± 3.18)	E DIAMETER ± 0.002 (± 0.051)	D APPROX. WEIGHT (G)
GSR55	0.280 ± 0.020 (7.11 ± 0.51)	0.110 ± 0.020 (2.79 ± 0.51)	0.379 (9.63)	1.50 (38.10)	0.025 (0.635)	0.337
GSR57	0.310 ± 0.025 (7.87 ± 0.64)	0.150 ± 0.020 (3.81 ± 0.51)	0.467 (11.86)	1.50 (38.10)	0.025 (0.635)	0.405
GSR60	0.425 ± 0.030 (10.80 ± 0.76)	0.150 ± 0.020 (3.81 ± 0.51)	0.530 (13.46)	1.50 (38.10)	0.025 (0.635)	0.450
GSR65	0.640 ± 0.040 (16.26 ± 1.02)	0.240 ± 0.025 (6.10 ± 0.64)	0.780 (19.81)	1.50 (38.10)	0.025 (0.635)	1.300
GSR70	0.640 ± 0.040 (16.26 ± 1.02)	0.240 ± 0.025 (6.10 ± 0.64)	0.780 (19.81)	1.50 (38.10)	0.032 (0.813)	1.440
GSR75	1.062 ± 0.062 (26.98 ± 1.58)	0.250 ± 0.025 (6.35 ± 0.64)	1.186 (30.12)	1.50 (38.10)	0.032 (0.813)	2.500

Note

(1) Lead length for product in foil bag pack. For product supplied in tape and reel, the actual lead length would be based on the body size, tape spacing and lead trim.

POWER DERATING



MARKING

Temperature coefficient: H = 50 ppm, E = 25 ppm, X = 15 ppm
Tolerance: F = 1 %, D = 0.5 %, B = 0.1 %, A = 0.05 %

GSR55, GSR57, GSR60, GSR65, GSR70, GSR75: (4 lines)

GSR-55	Style and size
24.9 Ω	Value
FE	Tolerance and TC
1143A	4-digit date code and production lot code

For technical questions, contact: fff2aresistors@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

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.

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.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.