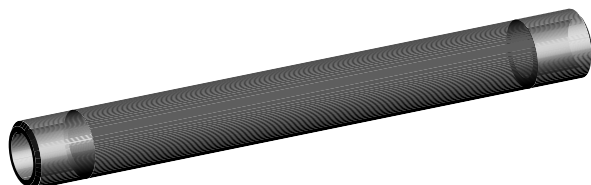


Carbon Film Resistors, Special Purpose, High Frequency Load (Tubes)



FEATURES

- High stability and excellent high frequency characteristics
- Particularly suited for high frequency applications involving high power, high accuracy RF measurements
- Carbon film construction
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

High frequency wattmeters for output measurement in radio, TV and radar transmitters, dielectric heating and similar RF generating equipment. Ideal for use as non-reactive radio frequency terminations. Special high power designs with internal water cooling are available. Contact factory.

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING (WATTAGE FREE AIR) $P_{25^{\circ}\text{C}}$ W	RESISTANCE RANGE Ω	TOLERANCE $\pm \%$	TEMPERATURE COEFFICIENT $\pm \text{ppm}/^{\circ}\text{C}$	LINEARITY TOLERANCE $\pm \%$
SPW236	SPW-236	120	50 (standard) Other values available on special order.	2, 5	200 (average) 250 (maximum)	10
SPW227	SPW-227	55		2, 5		10
SPW210	SPW-210	40		2, 5		10
SPW214	SPW-214	10		2, 5		10
SPW212	SPW-212	2		2, 5		10

COOLING

Approximate increase in wattage when forced air cooling is employed is 3 times wattages shown and for liquid cooling (with heat exchanger) is 60 times wattages shown. The limiting factor insofar as the resistor is concerned is the film temperature. This should not exceed $+ 200^{\circ}\text{C}$ and for maximum stability should not exceed $+ 150^{\circ}\text{C}$.

MECHANICAL SPECIFICATIONS

Identification	Type designation resistance value, tolerance and code date of manufacture are printed on each unit.
Terminations	All types electroplated copper except SPW-212. The SPW-212 has silver coated termination bands.

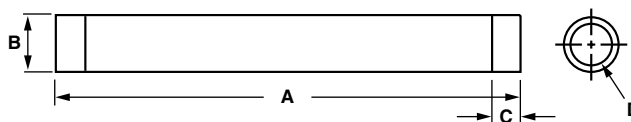
GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: SPW21050R00JSL (preferred part numbering format)

S	P	W	2	1	0	5	0	R	0	0	J	S	L			
GLOBAL MODEL (see Standard Electrical Specification table)			RESISTANCE VALUE R = Ω 25R00 = 25 Ω 600R0 = 600 Ω			TOLERANCE CODE G = ± 2 % J = ± 5 % K = ± 10 %			PACKAGING SL = Custom package			SPECIAL Blank = Standard (Dash Number) (up to 3 digits) From 1 to 999 as applicable				

Historical Part Number: SPW-210 50 5 % (will continue to be accepted)

SPW-210	50	5 %	S51
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

DIMENSIONS in inches (millimeters)


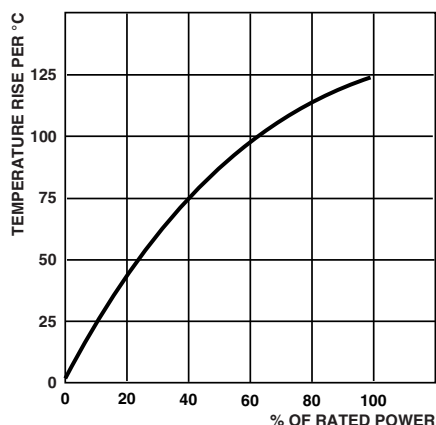
GLOBAL MODEL	A	B	C (O.D.) ⁽²⁾	D (I.D.)
SPW236	18.0 ± 0.062 (457.20 ± 1.57)	1.75 ± 0.025 (44.45 ± 0.64)	1.0 ± 0.063 (25.40 ± 1.60)	1.25 ± 0.025 (31.75 ± 0.64)
SPW227	12.0 ± 0.062 (304.80 ± 1.57)	1.125 ± 0.025 (28.58 ± 0.64)	0.500 ± 0.032 (12.70 ± 0.81)	0.875 ± 0.020 (22.23 ± 0.51)
SPW210	12.0 ± 0.062 (304.80 ± 1.57)	0.875 ± 0.010 (22.23 ± 0.25)	0.625 ± 0.032 (15.88 ± 0.81)	0.625 ± 0.020 (15.88 ± 0.51)
SPW214	5.0 ± 0.032 (127.0 ± 0.81)	0.562 ± 0.006 (14.27 ± 0.15)	0.500 ± 0.032 (12.70 ± 0.81)	0.375 ± 0.013 (9.53 ± 0.33)
SPW212 ⁽¹⁾	2.0 ± 0.062 (50.80 ± 1.57)	0.250 ± 0.006 (6.35 ± 0.15)	0.250 ± 0.032 (6.35 ± 0.81)	Solid rod

Notes

- Wattage ratings do not allow for mounting hardware.
- ⁽¹⁾ Representative types only. Consult factory for special requirements.
- ⁽²⁾ C dimension may be varied on special order.

LOAD TEMPERATURE RISE

(Operation in Free Air)


MARKING

- Dale
- Model
- Value
- Tolerance
- Date code



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.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. 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.