Features:

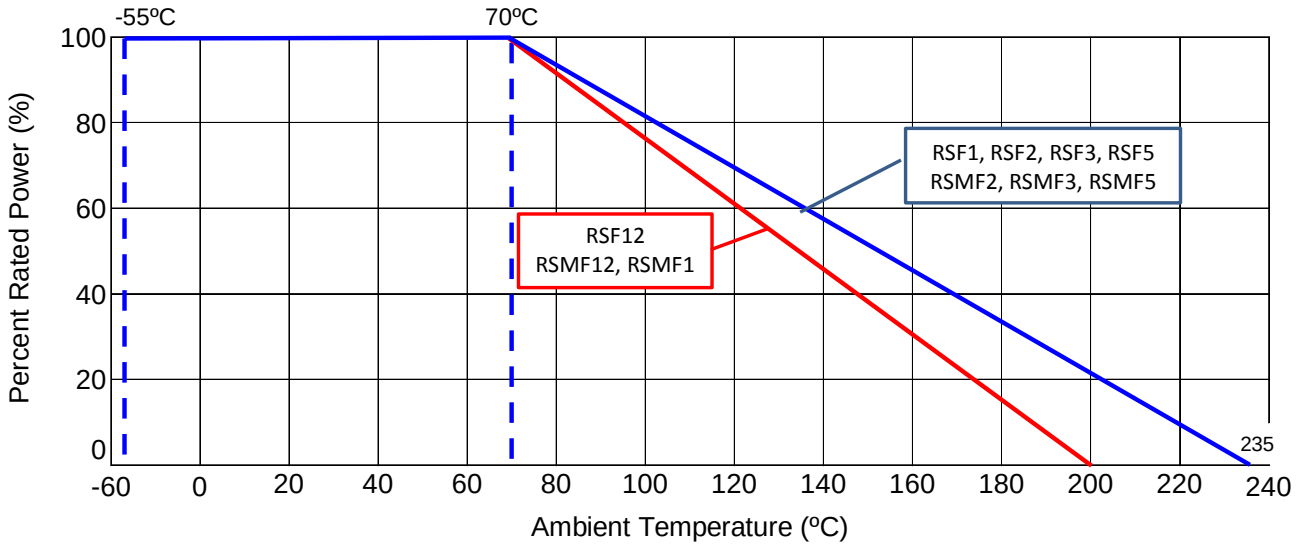
- Lower-cost alternative to carbon comps and wirewounds
- Coating meets UL 94V-0
- Meets solvent test of Mil Standard 202, Method 215
- Cut and formed product is available on select sizes; contact factory for details
- Higher or lower resistance values may be possible; contact factory
- Flameproof
- RoHS compliant, lead free and halogen free

Electrical Specifications

Type / Code	Power Rating (Watts) @ 70ºC	Maximum Working Voltage (1)	Maximum Overload Voltage	Dielectric Withstanding Voltage	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance		
						1%	2%	5%
RSF12	0.5W	250V	400V	350V	±200 ppm/ºC	0.1 - 150K	0.1 - 75K	0.1 - 1M
RSF1	1W	350V	600V	600V	±200 ppm/ºC	0.1 - 100K		0.1 - 1M
RSF2	2W	350V	600V	600V	±200 ppm/ºC	0.1 - 120K		0.1 - 1M
RSF3	3W	800V	1,000V	750V	±200 ppm/ºC	0.1 - 470K	0.1 - 560K	0.1 - 1M
RSF5	5W	1,000V	1,000V	750V	±200 ppm/ºC	0.1 - 470K	0.1 - 560K	0.1 - 1M
RSMF12	0.5W	250V	400V	350V	±200 ppm/ºC	0.1 - 46.4K	0.1 - 47K	0.1 - 470K
RSMF1	1W	350V	600V	500V	±200 ppm/ºC	0.1 - 75K		0.1 - 470K
RSMF2	2W	350V	600V	500V	±200 ppm/ºC	0.1 - 100K		0.1 - 470K
RSMF3	3W	500V	800V	600V	±200 ppm/ºC	0.1 - 118K	0.1 - 120K	0.1 - 470K
RSMF5	5W	1,000V	1,000V	750V	±200 ppm/ºC	0.1 - 470K	0.1 - 560K	0.1 - 1M

(1) Lesser of √PR or maximum working voltage

Power Derating Curve:

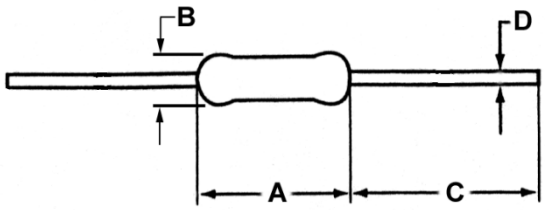


Performance Characteristics

Test	Test Method	Test Specification	Typical Results
Insulation Resistance	JIS C5201-1, IEC60115-1, 4.6	≥ 1GΩ	≥ 1GΩ
Voltage Proof	JIS C5201-1, IEC60115-1, 4.7	≤ ± (0.5% + 0.05Ω) No mechanical damage.	<± 0.25%
Short Time Overload	JIS C5201-1, IEC60115-1, 4.13	≤ ± (0.75% + 0.05Ω)	<± 0.1%
Resistance to Solder Heat	JIS C5201-1, IEC60115-1, 4.18	≤ ± (2.0% + 0.05Ω)	<± 1.0%
Endurance at 70°C	JIS C5201-1, IEC60115-1, 4.25.1	≤± (5.0% + 0.05Ω)	<± 2.0%
Robustness of Terminations	JIS C5201-1, IEC60115-1, 4.16	≤ ± (1.0% + 0.05Ω)	<± 0.10%
Damp Heat (Steady state)	JIS C5201-1, IEC60115-1, 4.24	≤± (5% + 0.05Ω)	<± 1.5%
Rapid Change of Temperature	JIS C5201-1, IEC60115-1, 4.19	≤± (1% + 0.05Ω)	<± 0.2%
Resistance to Solvents	JIS C5201-1, IEC60115-1, 4.29	No damage to component or removal of marking.	Pass
Intermittent Overload	JIS C5201-1, IEC60115-1, 4.39	≤± (2% + 0.05Ω)	<± 0.3%
Accidental Overload (Flame resistance)	JIS C5201-1, IEC60115-1, 4.26	No flaming of gauze.	Pass

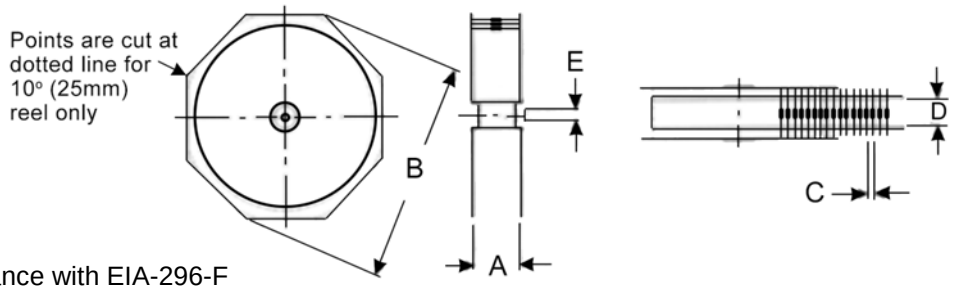
Operating Temperature Range: -55ºC to +200ºC (RSF12, RSMF12, RSMF1)
-55ºC to +235ºC (All others)

Mechanical Specifications



Type / Code	A Body Length	B Body Diameter	C Lead Length (Bulk)	D Lead Diameter	Lead-Tape Specification	Unit
RSF12	0.35 ± 0.04 9.00 ± 1.00	0.13 ± 0.03 3.20 ± 0.80	1.10 ± 0.12 28.00 ± 3.00	0.03 ± 0.003 0.70 ± 0.08	0.250 6.35	inches mm
RSF1	0.43 ± 0.06 11.00 ± 1.50	0.18 ± 0.04 4.50 ± 1.00	1.10 ± 0.20 28.00 ± 5.00	0.03 ± 0.002 0.80 ± 0.05	0.250 6.35	inches mm
RSF2	0.59 ± 0.06 15.00 ± 1.50	0.22 ± 0.04 5.50 ± 1.00	1.18 ± 0.20 30.00 ± 5.00	0.03 ± 0.004 0.75 ± 0.10	0.250 6.35	inches mm
RSF3	0.69 ± 0.04 17.50 ± 1.00	0.24 ± 0.02 6.00 ± 0.50	1.38 ± 0.12 35.00 ± 3.00	0.03 ± 0.002 0.80 ± 0.05	0.250 6.35	inches mm
RSF5	0.96 ± 0.04 24.50 ± 1.00	0.31 ± 0.02 8.00 ± 0.50	1.38 ± 0.12 35.00 ± 3.00	0.03 ± 0.002 0.80 ± 0.05	0.250 6.35	inches mm
RSMF12	0.24 ± 0.03 6.00 ± 0.80	0.09 ± 0.01 2.30 ± 0.30	1.10 ± 0.12 28.00 ± 3.00	0.02 ± 0.003 0.55 ± 0.07	0.250 6.35	inches mm
RSMF1	0.35 ± 0.04 9.00 ± 1.00	0.13 ± 0.03 3.20 ± 0.80	1.10 ± 0.12 28.00 ± 3.00	0.03 ± 0.003 0.70 ± 0.08	0.250 6.35	inches mm
RSMF2	0.43 ± 0.06 11.00 ± 1.50	0.18 ± 0.04 4.50 ± 1.00	1.18 ± 0.20 30.00 ± 5.00	0.03 ± 0.002 0.80 ± 0.05	0.250 6.35	inches mm
RSMF3	0.59 ± 0.06 15.00 ± 1.50	0.22 ± 0.04 5.50 ± 1.00	1.18 ± 0.20 30.00 ± 5.00	0.03 ± 0.004 0.75 ± 0.10	0.250 6.35	inches mm
RSMF5	0.69 ± 0.04 17.50 ± 1.00	0.24 ± 0.02 6.00 ± 0.50	1.38 ± 0.08 35.00 ± 2.00	0.03 ± 0.002 0.80 ± 0.05	0.250 6.35	inches mm

Packaging Specifications



Reeled in accordance with EIA-296-F

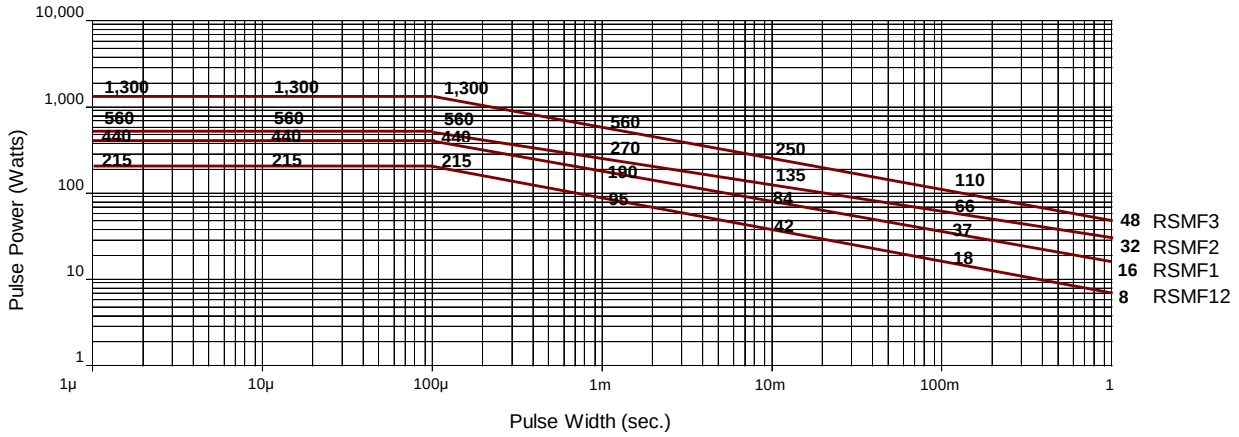
Series	Code	A max(1)	B max	C	D(2)	Tape	Unit
RSF	12	2.736 69.50	13.504 343.00	0.197 ± 0.020 5.00 ± 0.50	2.063 ± 0.079 52.40 ± 2.00	0.250 6.35	inches mm
	1	2.815 71.50	13.504 343.00	0.197 ± 0.020 5.00 ± 0.50	2.063 ± 0.079 52.40 ± 2.00	0.250 6.35	inches mm
	2	3.524 89.50	13.504 343.00	0.394 ± 0.020 10.00 ± 0.50	2.500 ± 0.079 63.50 ± 2.00	0.250 6.35	inches mm
	3	3.740 95.00	12.008 305.00	0.394 ± 0.020 10.00 ± 0.50	2.874 ± 0.079 73.00 ± 2.00	0.250 6.35	inches mm
	5	4.331 110.00	12.008 305.00	0.394 ± 0.020 10.00 ± 0.50	3.465 ± 0.079 88.00 ± 2.00	0.250 6.35	inches mm
RSMF	12	2.618 66.50	13.504 343.00	0.197 ± 0.020 5.00 ± 0.50	2.063 ± 0.079 52.40 ± 2.00	0.250 6.35	inches mm
	1	2.736 69.50	13.504 343.00	0.197 ± 0.020 5.00 ± 0.50	2.063 ± 0.079 52.40 ± 2.00	0.250 6.35	inches mm
	2	2.815 71.50	13.504 343.00	0.197 ± 0.020 5.00 ± 0.50	2.063 ± 0.079 52.40 ± 2.00	0.250 6.35	inches mm
	3	3.524 89.50	13.504 343.00	0.394 ± 0.020 10.00 ± 0.50	2.500 ± 0.079 63.50 ± 2.00	0.250 6.35	inches mm
	5	3.740 95.00	12.008 305.00	0.394 ± 0.020 10.00 ± 0.50	2.874 ± 0.079 73.00 ± 2.00	0.250 6.35	inches mm

Dimension "E": This is a non-critical dimension that does not have a tolerance in the standard.
Range of diameters is from 0.547 inches (13.90 mm) to 1.500 inches (38.10 mm).

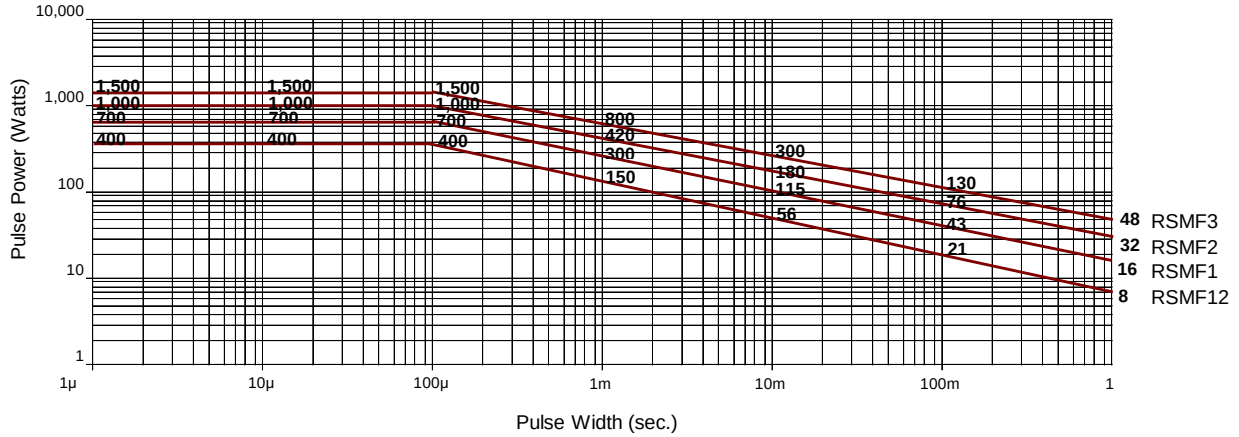
(1) Reference value only. The "A" dimension shall be governed by the overall length of the taped component.
The distance between flanges shall be 0.059 inches (1.50 mm) to 0.315 (8.00 mm) greater than the overall component.

(2) The given dimension "D" expresses the standard width spacing. A 26mm narrow spacing is available as option "N" packaging code.

Pulse Limiting Power (one pulse) / RSMF Series ≤ 5Ω



Pulse Limiting Power (one pulse) / RSMF Series ≥ 5Ω



RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 2). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament.

RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
RSF	General Purpose Metal Oxide Leaded Resistor	Axial	YES	99.3/0.7 Sn/Cu 100% Matte Sn	Apr-05 (Japan) Jan-04 (Taiwan, China)	05/14 04/01
RSMF	Mini-Metal Oxide Leaded Resistor	Axial	YES	99.3/0.7 Sn/Cu 100% Matte Sn	Apr-05 (Japan) Jan-04 (Taiwan, China)	05/14 04/01

"Conflict Metals" Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the Eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

1	2	3	4	5	6	7	8	9	10	11
R	**S**	**F**	**1**	**2**	**J**	**T**	**R**	**4**	**7**	**0**

Product Series	
RSF	Metal Oxide
RSMF	Mini
PRSF(1)	Panasert
PRSM(1)	Panasert Mini

Size	Power
12	0.5W
1	1W
2	2W
3	3W
5	5W

Tolerance		
Code	Tol	Value
F	1%	E96
G	2%	E24
J	5%	

Packaging			
Code	Description	Size	Quantity
T	Tape and Reel	RSMF12, PRSM12	5,000
		RSF12, RSF1 RSMF1, RSMF2	2,500
		PRSF1, PRSM2	2,000
		RSF2, RSMF3	1,000
		RSF3, RSMF5	1,000
T	Tape and Reel	RSF5	500
A	Ammo	RSMF12	5,000
		RSF12; RSMF1, PRSM12	2,000
		RSF1, RSF2, RSMF2, PRSF1, PRSM2, RSMF3	1,000
		RSF3, RSF5, RSMF5	500
B	Bulk	All Sizes	1,000

Resistance Value
Four characters with the multiplier used as the decimal holder.
0.22 ohm = R220 33.2 ohm = 33R2 10.2 Kohm = 10K2 1 Mohm = 1M00

(1) For packaging information, see Radial Leaded Packaging Spec page