

- Features:
- Fuses quickly under continuous overload of 15X rated power or greater
  - High performance for low cost
  - High power to size ratio
  - High temperature silicone coating
  - RoHS compliant / lead-free
  - Bulk packaging available – contact Stackpole for package quantities

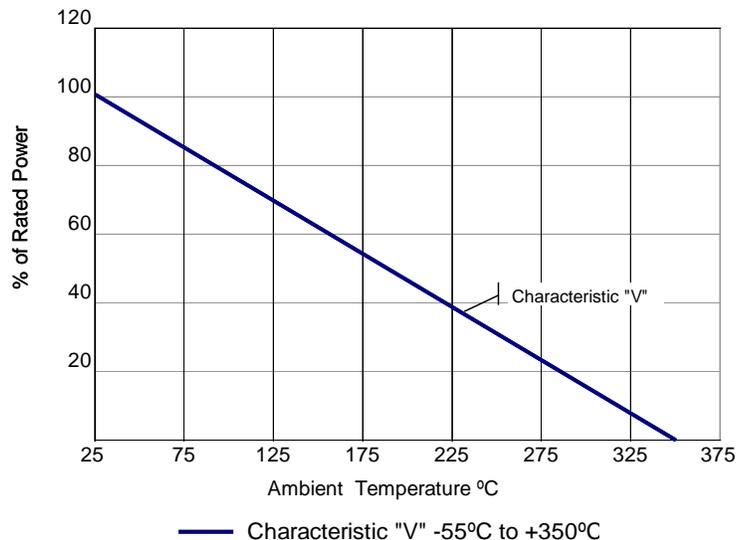


Electrical Specifications					
Type / Code	Dielectric Strength (V)	Power Rating (Watts) @ 25°C	Power Rating (Watts) @ 70°C	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance
					5%
WWF12	500V	0.6W	0.5W	±20ppm/°C	10 - 2K
WWF1	500V	1.2W	1.1W		10 - 3K
WWF1A	500V	1.5W	1.3W		10 - 7K
WWF2	1000V	2.5W	2.1W		10 - 10K
WWF2A	1000V	3.0W	2.6W		10 - 15K
WWF3	1000V	3.7W	3.2W		10 - 22K
WWF3A	1000V	4.0W	3.4W		10 - 30K
WWF4	1000V	5.0W	4.3W		10 - 40K
WWF5	1000V	6.0W	5.1W		10 - 50K
WWF7	1000V	8.5W	7.2W		10 - 70K
WWF7B	1000V	9.0W	7.7W		10 - 100K
WWF10	1000V	13W	11W		10 - 150K

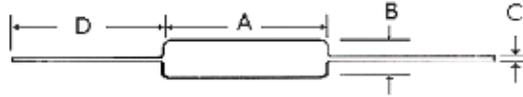
Performance Characteristics	
Test	Test Specification
Fuse Test @ 220 Vac (1)	Typically fuses in less than 1 second
Moisture Resistance	1% max
Load Life	1%
Temperature Cycling	0.5%
Short Time Overload	1%

Note (1): Valid only if resistance value is low enough that the test voltage causes overload of 15X rated power or more.

**Power Derating Curve:**



**Mechanical Specifications**

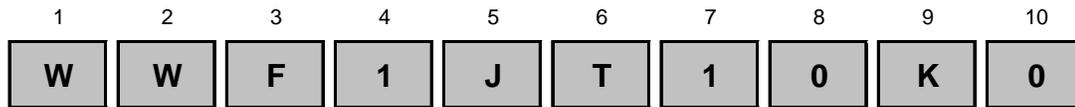


Type / Code	A	B	C	D (Bulk) <sup>(1)</sup>	Unit
WWF12	0.312 ± 0.062	0.110 ± 0.031	0.025 ± 0.002	1.500 typ.	inches
	7.92 ± 1.57	2.79 ± 0.79	0.62 ± 0.05	38.10 typ.	mm
WWF1	0.375 ± 0.062	0.110 ± 0.031	0.025 ± 0.002	1.500 typ.	inches
	9.53 ± 1.57	2.79 ± 0.79	0.64 ± 0.05	38.10 typ.	mm
WWF1A	0.420 ± 0.062	0.110 ± 0.031	0.025 ± 0.002	1.500 typ.	inches
	10.67 ± 1.57	2.79 ± 0.79	0.64 ± 0.05	38.10 typ.	mm
WWF2	0.370 ± 0.062	0.156 ± 0.031	0.032 ± 0.002	1.500 typ.	inches
	9.40 ± 1.57	3.96 ± 0.79	0.81 ± 0.05	38.10 typ.	mm
WWF2A	0.550 ± 0.062	0.156 ± 0.031	0.032 ± 0.002	1.500 typ.	inches
	13.97 ± 1.57	3.96 ± 0.79	0.81 ± 0.05	38.10 typ.	mm
WWF3	0.560 ± 0.062	0.187 ± 0.031	0.032 ± 0.002	1.500 typ.	inches
	14.22 ± 1.57	4.75 ± 0.79	0.81 ± 0.05	38.10 typ.	mm
WWF3A	0.500 ± 0.062	0.218 ± 0.031	0.032 ± 0.002	1.500 typ.	inches
	12.70 ± 1.57	5.54 ± 0.79	0.81 ± 0.05	38.10 typ.	mm
WWF4	0.700 ± 0.062	0.270 ± 0.031	0.036 ± 0.002	1.500 typ.	inches
	17.78 ± 1.57	6.86 ± 0.79	0.91 ± 0.05	38.10 typ.	mm
WWF5	0.875 ± 0.062	0.312 ± 0.031	0.036 ± 0.002	1.500 typ.	inches
	22.23 ± 1.57	7.92 ± 0.79	0.91 ± 0.05	38.10 typ.	mm
WWF7	1.000 ± 0.062	0.312 ± 0.031	0.036 ± 0.002	1.500 typ.	inches
	25.40 ± 1.57	7.92 ± 0.79	0.91 ± 0.05	38.10 typ.	mm
WWF7B	1.200 ± 0.062	0.312 ± 0.031	0.036 ± 0.002	1.500 typ.	inches
	30.48 ± 1.57	7.92 ± 0.79	0.91 ± 0.05	38.10 typ.	mm
WWF10	1.780 ± 0.062	0.375 ± 0.031	0.036 ± 0.002 <sup>(2)</sup>	1.500 typ.	inches
	45.21 ± 1.57	9.53 ± 0.79	0.91 ± 0.05 <sup>(2)</sup>	38.10 typ.	mm

(1) See "Resistor Packaging Specification Document" for lead length dimension for tape and reel packaged product

(2) Available in 0.040" (1.02 mm)

**How to Order**



Product Series		Size Code	Power @ 25°C	Power @ 70°C	Tolerance		Packaging			Resistance Value
WWF	General Purpose Fusing Wirewound				Code	Tol	Code	Description	Size	Quantity
		12	0.6W	0.5W	J	5%	T	11" reel tape	WWF12, WWF1, WWF1A	2,500
		1	1.2W	1.1W					WWF2, WWF2A, WWF3, WWF4	2,000
		1A	1.5W	1.3W					WWF3A	750
		2	2.5W	2.1W					WWF5, WWF7, WWF7B	50
		2A	3W	2.6W					WWF10	250
		3	3.7W	3.2W						
		3A	4W	3.4W						
		4	5W	4.3W						
		5	6W	5.1W						
		7	8.5W	7.2W						
		7B	9W	7.7W						
		10	13W	11W						

Four characters with the multiplier used as the decimal holder.  
10 ohm - 10R0  
2 Kohm = 2K00  
100 Kohm = 100K

## 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)
WWF	General Purpose and Precision Fusing Wirewound Resistor	Axial	YES	100% Matte Sn	Always	Always

## “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 Easter 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.