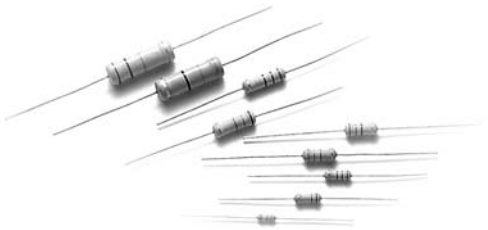
Metal Oxide Film Resistors

FLAME-PROOF TYPE

Normal & Miniature Style [RSF Series]



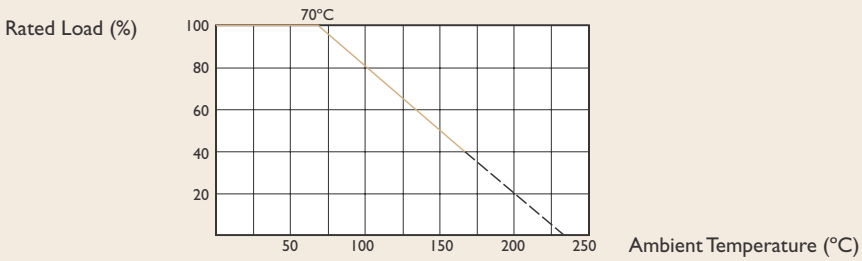
FEATURES

- Low Cost, Prompt Delivery
- High Power-to-Size Ratio for Significant Space Savings
- Flameproof Silicone Coating (UL94V-0)
- High Surge/Overload Capability
- Non-Inductive Design
- Wide Resistance Range: 1Ω~1MΩ
- Resistance ToLerance: ±5%

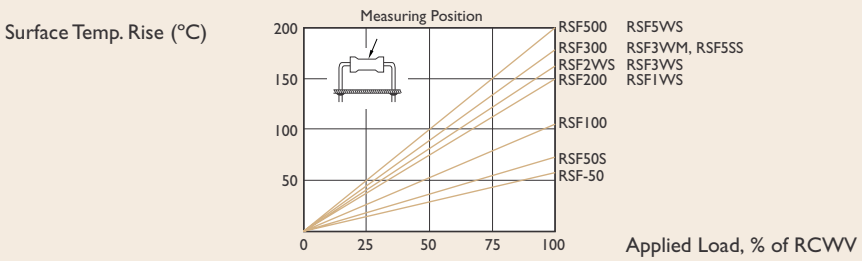
INTRODUCTION

These Metal Oxide Resistors offer excellent performance in applications where stability and uniformity of characteristics are desired. They provide lower cost alternatives to Carbon Composition Resistors and General Purpose Metal Films. Metal Oxides also can replace many low power General Purpose wirewound applications, saving both money and time, with shorter delivery cycles.
The normal style & the miniature style of RSF series are coated with layers of gray and pink colors flame-proof lacquer respectively.

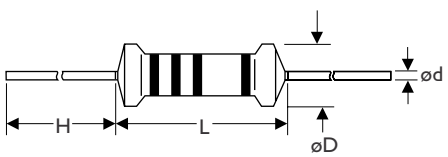
DERATING CURVE



HOT-SPOT TEMPERATURE



DIMENSIONS



Unit : mm

STYLE		DIMENSION			
Normal	**Miniature**	**L**	**øD**	**H**	**ød**
RSF-25	RSF50S	6.3±0.5	2.4±0.2	28±2.0	0.6±0.05
RSF-50	RSF1WS	9.0±0.5	3.3±0.3	26±2.0	0.6±0.05
RSF100	RSF2WS	11.5±1.0	4.5±0.5	35±2.0	0.8±0.05
RSF200	RSF3WS	15.5±1.0	5.0±0.5	33±2.0	0.8±0.05
RSF5SS	RSF3WM	17.5±1.0	6.5±1.0	32±2.0	0.8±0.05
RSF300	RSF5WS	24.5±1.0	8.5±1.0	38±2.0	0.8±0.05
RSF500	–	24.5±1.0	8.5±1.0	38±2.0	0.8±0.05

* RSF1WS (MB Type) ød0.8±0.05

Note :

ELECTRICAL CHARACTERISTICS

STYLE	RSF-25	RSF50S	RSF-50	RSF1WS	RSF100	RSF2WS	RSF200	RSF3WS/ RSF3WM	RSF300	RSF5SS/ RSF5WS	RSF500
Power Rating at 70°C	1/4W	1/2W		1W		2W		3W		5W	
Operating Temp. Range	-55°C to +155°C										
Maximum Working Voltage	200V	250V	250V	300V	350V	350V	350V	350V/450V	500V	500V/500V	750V
Maximum Overload Voltage	300V	400V	400V	500V	600V	600V	600V	600V/700V	800V	800V/800V	1000V
Dielectric Withstanding Voltage	250V	350V	350V	400V	500V	500V	500V	500V/600V	700V	700V/750V	750V
Value Range ±5%	1Ω~1MΩ										
Temperature Coefficient	±300ppm/°C										

* Standard resistance is 1Ω~1MΩ, below or over this resistance on request.

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	JIS-C-5202 5.5	2.5 Times RCWV for 5 Seconds	±(1%+0.05Ω)
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Seconds	by Type
Temperature Coefficient of Resistance	JIS-C-5202 5.2	-55°C to +155°C	±300ppm/°C
Insulation Resistance	JIS-C-5202 5.6	in V-Block	>1000MΩ
Solderability	JIS-C-5202 6.5	235±5°C for 5±0.5 Seconds	95% Min. Coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for 1 Min. with Ultrasonic	No Deterioration of Coatings and Markings
Terminal Strength	Direct Load for 10 Sec. in The Direction of The Terminal Leads		≥2.5kg (24.5N)
Pulse Overload	JIS-C-5202 5.8	4 Times RCWV 10000 Cycles (1 Sec. on , 25 Sec. off)	±(2%+0.05Ω)
Load Life in Humidity	JIS-C-5202 7.9	40±2°C, 90~95% RH at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	±(5%+0.05Ω)
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	±(5%+0.05Ω)
Temperature Cycling	JIS-C-5202 7.4	-55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles	±(1%+0.05Ω)
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C±10°C for 3±0.5 Seconds	±(1%+0.05Ω)

* Rated Continuous Working Voltage (RCWV)= $\sqrt{\text{Power Rating x Resistance Value}}$