METAL FILM FIXED RESISTORS FLAMEPROOF

FMF-FMFS

LEADFREE
RoHS Compliant

FMF, FMFS

Introduction

Megastar-Ohm's FMF and FMFS series are non-flammable high performance metal film fixed resistors. By applying selected flame-overload burning-resisting resin on our regular metal film fixed resistors, those resistors improve the safeness of various kinds of electronic devices and instruments and having excellent electrical performance.

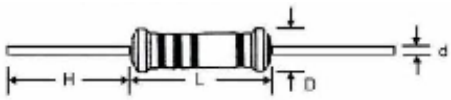
The FMF and FMFS flameproof metal film resistor are designed to replace the metal oxide resistors and low power wire-wound resistors when flameproof and small size is required.

Features

1.Flameproof: UL94V-0
2. Power rating: 1/4W, 1/2W, 1W, 2W, 3W
3. Resistance tolerance: ±1%, ±2%, ±5%
4. TCR: ±25ppm, ±50ppm, ±100ppm(standard)

Dimensions and Structure

Type		L	D	d	H (Min)	Units
FMFS-1/4	FMF-1/8	3.7 ± 0.4	1.7 ± 0.2	0.45 ± 0.05	25	mm
FMFS-1/2	FMF-1/4	6.5 ± 0.5	2.3 ± 0.2	0.50 ± 0.05	25	mm
FMFS-1	FMF-1/2	9.0 ± 1.0	3.5 ± 0.5	0.55 ± 0.05	25	mm
FMFS-2	FMF-1	12.0 ± 1.0	4.5 ± 0.5	0.73 ± 0.05	25	mm
FMFS-3	FMF-2	16.0 ± 1.0	5.0 ± 0.5	0.75 ± 0.05	25	mm



Electrical Specifications

Style	Power Rating (W)	Maxi. Working Voltage	Max. Overload Voltage
FMF-1/8	0.125	200	400
FMFS-1/4	0.25		
FMF-1/4	0.25	250	500
FMFS-1/2	0.50		
FMF-1/2	0.50	350	700
FMFS-1	1.0		
FMF-1	1.0		
FMFS-2	2.0		
FMF-2	2.0		
FMFS-3	3.0		

Part Numbering System

FMF — 1/4 5% 2R2 TR ____

Type
FMF
FMFS

Code	Power Rating
1/8	0.125W
1/4	0.25W
1/2	0.50W
1	1.0W
2	2.0W
3	3.0W

Code	Tolrance
1%	±1%
2%	±2%
5%	±5%

Code	Nominal Resistance
2R2	2.2 Ohms
22R	22 Ohms
2K2	2.2 x 10^3 Ohms
22K	22 x 10^3 Ohms
22M	22 x 10^6 Ohms

Code	Packaging
B	Bulk
TR	Tape & Reel
TB	Tape & Box
PATR	Avisert T/R
PNTR	Panasert T/R

Code	TCR
Nil	100ppm
50	50ppm
25	25ppm

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Characteristics

Requirements	Characteristics	Test Method
Non-Combustability	Flame Resistance. Not burns continuously for more than 5 seconds. Overload burning resistance. Not fume under the overload of less than 5 time of rated power. The volume of fumes emitted under the overload of more than 5 time of rated power is less than of stilled fumes emitted by one cigarette. During the test the height of fumes does not over 3mm and the burning does not continue for more than 3 seconds.	MIL-STD-02 Method 111 JIS C 5202 7.12 EIAJ-RC 2658 5.1
		(All resistance measurememts should be perfomed after stabilization or conditioning periods)
DC Resistance	Within specified tolerance	MIL-STD-202 Method 303
Temperature Coefficient	As buyer requested ± 25PPM˚C, ±50PPM, ± 100PPM˚C	MIL-STD-202 Method 304
Dielectric Strength	No flashover or damage	MIL-STD-202 Method 301 1/8W,1/6W 300V 1 minute 1/4W 500V 1 minute 1/2W 700V 1 minute 1W, 2W 750V 1 minute
Insulation Resistance	At least 1,000MΩ	MIL-STD-202 Method 302 100V 1 minute
Terminal Strength	Lead is not break or loose	MIL-STD-202 Method 211
Resistance to Soldering Heat	ΔR within ±(0.25%+0.05Ω)	MIL-STD-202 Method 210 350˚C, 3 ± 0.05 sec.
Solderability	At least 95% coverage	MIL-STD-202 Method 218 260˚C, 5 sec.
Termal Shock	ΔR within ±(0.5%+0.05Ω)	MIL-STD-202 Method 107 - 55˚C, 3 + 155˚C, 5 cycles
Short Time Overload	ΔR within ±(0.5%+0.05Ω)	MIL-R-10509 Para 4,6,6 2.5 times rated working voltage, 5 seconds
Humidity	ΔR within ±(1%+0.05Ω) No mechanical damage	MIL-STD-202 Method 103 40˚C, RH95% 1000 hours
Low Temperature Operation	ΔR within ±(0.5%+0.05Ω)	MIL-R-10509 Para 4,6,5 Rated working voltage, at-65˚C 45 minutes.
Load Life	ΔR within ±(1%+0.05Ω)	MIL-STD-202 Method108 Rated working voltage 1 1/2hours on, 1/2 hours off for total 1000 hours
Resistance to Solvent	Color bands legible No mechanical damage	MIL-STD-202 Method 215

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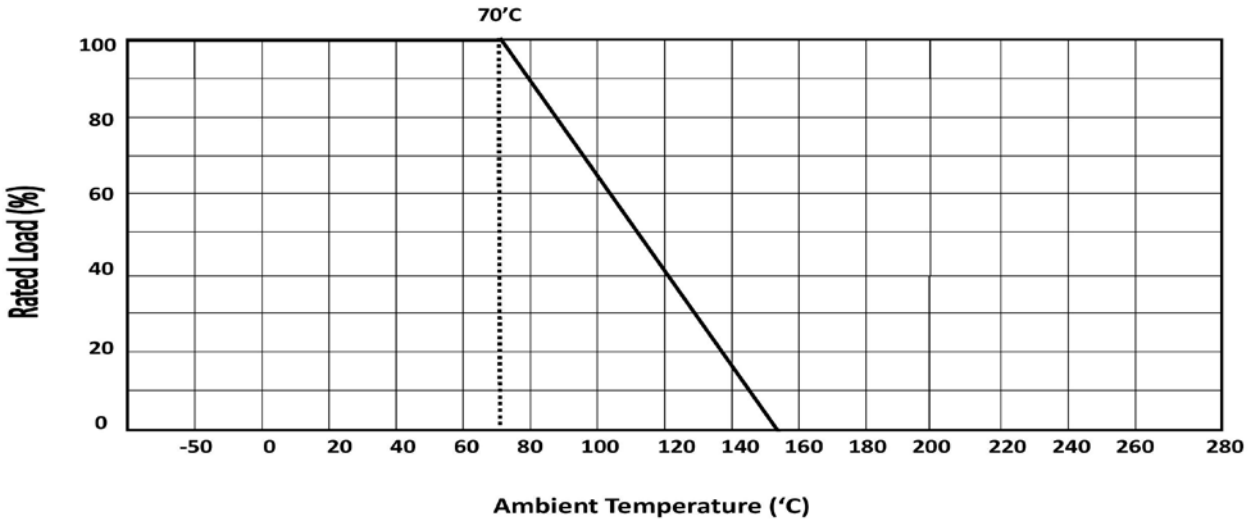
Derating Curve



Current Noise