

Metal film resistors

Order code	Manufacturer code	Description
62-7950	FMF-100F-470K-T	470K 1W METAL FILM RESISTOR (RC)
62-7954	FMF-100F-1M-T	1M 1W METAL FILM RESISTOR (RC)
62-7942	FMF-100F-100K-T	100K 1W METAL FILM RESISTOR (RC)
62-7944	FMF-100F-150K-T	150K 1W METAL FILM RESISTOR (RC)
62-7946	FMF-100F-220K-T	220K 1W METAL FILM RESISTOR (RC)
62-7930	FMF-100F-4K7-T	4K7 1W METAL FILM RESISTOR (RC)
62-7934	FMF-100F-15K-T	15K 1W METAL FILM RESISTOR (RC)
62-7938	FMF-100F-47K-T	47K 1W METAL FILM RESISTOR (RC)
62-7924	FMF-100F-1K5-T	1K5 1W METAL FILM RESISTOR (RC)
62-7926	FMF-100F-2K2-T	2K2 1W METAL FILM RESISTOR (RC)
62-7928	FMF-100F-3K3-T	3K3 1W METAL FILM RESISTOR (RC)
62-7894	FMF-100F-3R3-T	3R3 1W METAL FILM RESISTOR (RC)
62-7957	FMF-100F-2R7-T	2R7 1W METAL FILM RESISTOR (RC)
62-7898	FMF-100F-10R-T	10R 1W METAL FILM RESISTOR (RC)
62-7956	FMF-100F-1R8-T	1R8 1W METAL FILM RESISTOR (RC)
62-7892	FMF-100F-2R2-T	2R2 1W METAL FILM RESISTOR (RC)
62-7900	FMF-100F-15R-T	15R 1W METAL FILM RESISTOR (RC)
62-7940	FMF-100F-68K-T	68K 1W METAL FILM RESISTOR (RC)
62-7902	FMF-100F-22R-T	22R 1W METAL FILM RESISTOR (RC)
62-7912	FMF-100F-150R-T	150R 1W METAL FILM RESISTOR (RC)
62-7958	FMF-100F-3R9-T	3R9 1W METAL FILM RESISTOR (RC)
62-7960	FMF-100F-6R8-T	6R8 1W METAL FILM RESISTOR (RC)
62-7918	FMF-100F-470R-T	470R 1W METAL FILM RESISTOR (RC)
62-7932	FMF-100F-10K-T	10K 1W METAL FILM RESISTOR (RC)
62-7936	FMF-100F-22K-T	22K 1W METAL FILM RESISTOR (RC)
62-7952	FMF-100F-680K-T	680K 1W METAL FILM RESISTOR (RC)
62-7922	FMF-100F-1K-T	1K 1W METAL FILM RESISTOR (RC)
62-7961	FMF-100F-8R2-T	8R2 1W METAL FILM RESISTOR (RC)
62-7914	FMF-100F-220R-T	220R 1W METAL FILM RESISTOR (RC)
62-7904	FMF-100F-33R-T	33R 1W METAL FILM RESISTOR (RC)
62-7906	FMF-100F-47R-T	47R 1W METAL FILM RESISTOR (RC)
62-7916	FMF-100F-330R-T	330R 1W METAL FILM RESISTOR (RC)
62-7955	FMF-100F-1R5-T	1R5 1W METAL FILM RESISTOR (RC)
62-7896	FMF-100F-4R7-T	4R7 1W METAL FILM RESISTOR (RC)
62-7959	FMF-100F-5R6-T	5R6 1W METAL FILM RESISTOR (RC)
62-7920	FMF-100F-680R-T	680R 1W METAL FILM RESISTOR (RC)
62-7948	FMF-100F-330K-T	330K 1W METAL FILM RESISTOR (RC)
62-7962	FMF-100F-1R2-T	1R2 1W METAL FILM RESISTOR (RC)
62-7910	FMF-100F-100R-T	100R 1W METAL FILM RESISTOR (RC)
62-7890	FMF-100F-1R-T	1R 1W METAL FILM RESISTOR (RC)
62-7908	FMF-100F-68R-T	68R 1W METAL FILM RESISTOR (RC)

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The enclosed information is believed to be correct, Information may change without notice due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 20/02/2007



MR100 1W 1%
Metal Film Fixed Resistors
Flame-proof Coating Type



1. INTRODUCTION

This series of flame-proof type Metal Film Resistors are manufactured by vacuum deposit metal film on high thermal conductivity ceramic rods, and are coated with layers of gray color flame-proof lacquer. These flame-proof metal film resistors are designed to replace the metal oxide resistors and low power wire wound resistors, where flame-proof and small size is needed.

2. ELECTRICAL CHARACTERISTICS

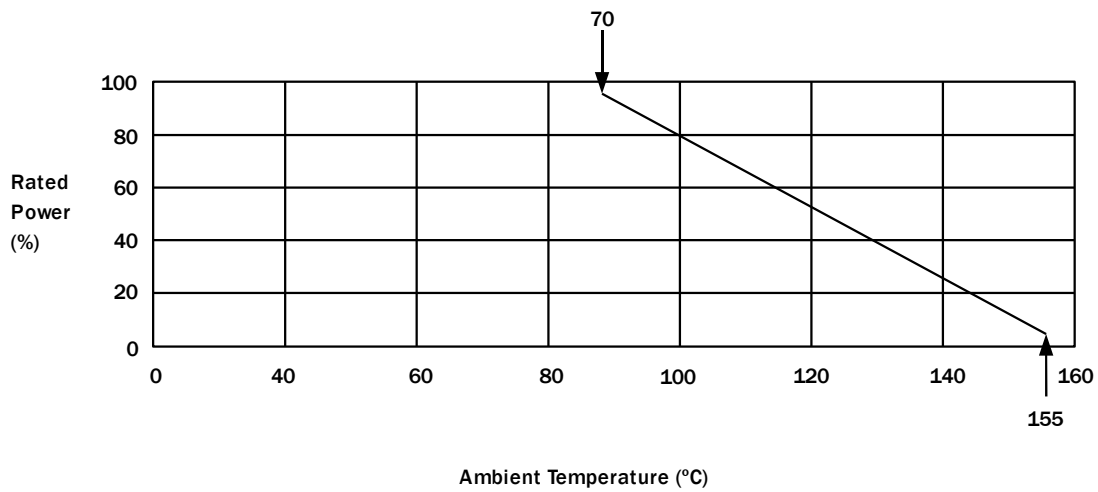
Power rating @ 70°C	1W
Operating temperature range	-55°C to +155°C
Maximum working voltage	500V
Maximum overload voltage	1000V
Dielectric withstanding voltage	1000V



3. POWER RATING

Power derating

The rated power at the temperature in excess of 70°C shall be derated in accordance with the graph below.



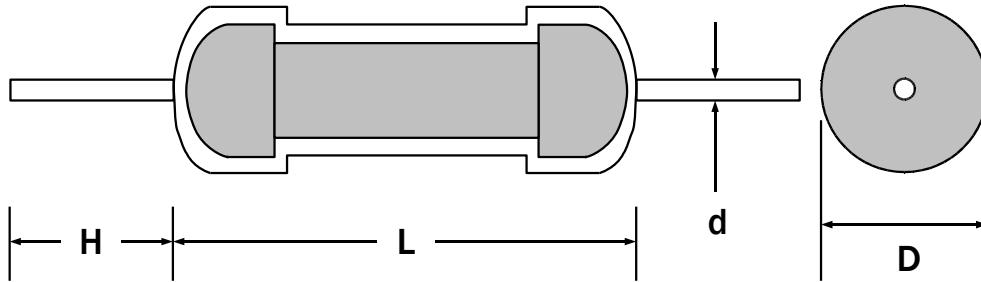
Rated voltage

The DC or AC (rms) continuous working voltage corresponding to the rated power is determined by the following formula:

$$E = \sqrt{R \times P}$$

- Where E: Continuous rated DC or AC (rms) working voltage (V)
P: Rated power (W)
R: Resistance value (Ω)

4. DIMENSIONS



Dimension	Value
L	11 ±1.0
D	4.5 ±0.5
H	35 ±3
d	0.8 ±0.1

mm



5. CHARACTERISTICS

Short time overload

Test method: 2.5x RCWV for 5s
Acceptance standard: $\pm (0.5\% + 0.05\Omega)$

Insulation resistance

Test method: In V-Block
Acceptance standard $>1000M\Omega$

Solderability

Test method: 260° for 5s ± 0.5
Acceptance standard 95% minimum coverage

Resistance to solvent

Test method: Trichloroethane for 1 mins. with ultrasonic
Acceptance standard No deterioration of coatings and markings

Terminal strength

Test method: Direct load for 10s in the direction of the terminal leads
Acceptance standard $\geq 2.5\text{kg}$ (24.5N)

Pulse overload

Test method: 4x RCWV 10,000 cycles (1s on, 25s off)
Acceptance standard $\pm (2\% + 0.05\Omega)$

Load life in humidity

Test method: 40°C $\pm 2^\circ\text{C}$ 90 to 95% RH at RCWV for 1000 hours (1.5hr. on, 0.5hr. off)
Acceptance standard $\pm (1.5\% + 0.05\Omega)$



5. CHARACTERISTICS (continued)

Load life

Test method: 70°C at RCWV for 1000 hr. (1.5hr. on, 0.5hr. off)

Acceptance standard: $\pm (1\% + 0.05\Omega)$

Temperature cycling

Test method: -65°C → room temp. → 150°C → room temp. for 5 cycles

Acceptance standard $\pm (0.5\% + 0.05\Omega)$

Resistance to soldering heat

Test method: 350°C $\pm 10^\circ\text{C}$ for 3s $\pm 0.5\text{s}$

Acceptance standard $\pm (0.5\% + 0.05\Omega)$

Rated Continuous Working Voltage (RCWV) =

$$\sqrt{\text{power rating} \times \text{resistance value}}$$