

METAL FILM RESISTORS ULTRA MINI

How To Order:

Series: MFU

Part No.

MFU

10

F

2K3

T

S1

<u>MFU</u>	<u>10</u>	<u>F</u>	<u>2K3</u>	<u>T</u> <u>S1</u>
Series Metal Film Resistor Ultra Mini	Wattage MF10=0.4W MF20=0.5W MF30=0.6W MF01=1W MF02=1.8W MF03=3W	Tolerance F=1% J=5%	Value 1R=1 ohm 2.3R=2R3 1K=1000 ohm 2.3K=2K3 2.3M=2M3	Packing T=Taped B=Bulk

(S1 means special spec. Standard goods is without it.)

Description: METAL FILM RESISTOR ULTRA MINI 0.4W 1% 2K3

Note:

MFU10=0.4W, MFU20=0.5W, MFU30=0.6W, MFU01=1W, MFU02=1.8W, MFU03=3W

The normal packing of METAL FILM RESISTOR ULTRA MINI is Tape & Box.

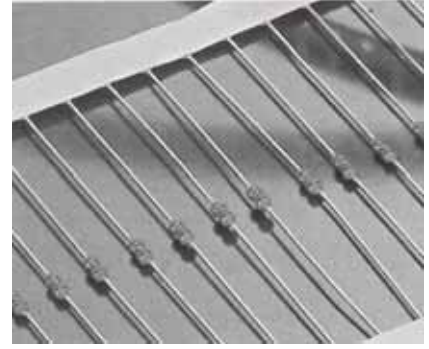
The standard value of 5% is 0 ohm, 1 ohm~10 Meg.

The standard value for 1% is 10 ohm~1 Meg.

METAL FILM RESISTORS ULTRA MINI

MFU Series

0.4 W, 0.5 W, 0.6 W, 1 W, 1.8 W, 3 W
MFU-10, MFU-20, MFU-30, MFU-01, MFU-02, MFU-03



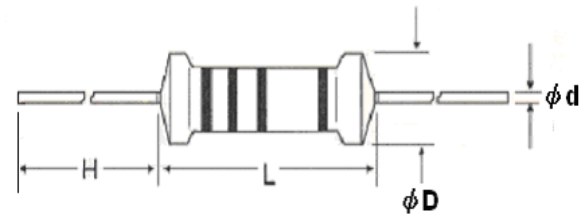
INTRODUCTION

The MFU Series flame-proof type miniature Metal Film Resistors are manufactured by vacuum deposit metal film on high thermal conductivity and specific gravity Rosenthal ceramic or same grade Japanese rods. The both ends of ceramic are coated with precision mixed metals that help to prevent against noise, and to provide low TCR and low Tol precision resistors the can meet the MIL and JIS requirement.

Utilizing a 95~98% of Al ceramic cores and combined a special cutting technology inside, this resulting superior resistors give excellent heat dissipation, stable performance and significantly up-grade the power rating. These specially designed resistors are widely used by the industries of communication devices, meters, high-class audio equipments and precision military defending facilities as well.

FEATURES

- Resistance Tolerance: $\pm 1\%$, $\pm 2\%$, $\pm 5\%$.
- Excellent long-term stability.
- High power-to-size ratio for significant space saving.
- Variety of packing: bulk, strip pack, 26mm and 52mm tape and reel, cut and form.



STYLE	DIMENSION(mm)				POWER RATING (Watt)	VALUE RANGE
	L	ØD	H	Ød		
MFU-10	3.3±0.4	1.8±0.3	28±2	0.5±0.05	0.4W	10Ω~1M
MFU-20	6.3±0.5	2.3±0.3	28±2	0.6±0.05	0.5W	10Ω~1M
MFU-30	6.3±0.5	2.3±0.3	28±2	0.6±0.05	0.6W	10Ω~1M
MFU-01	6.3±0.5	2.3±0.3	28±2	0.6±0.05	1W	10Ω~1M
MFU-02	9±0.5	3.2±0.5	26±2	0.6±0.05	1.8W	10Ω~1M
MFU-03	15.5±1.0	5.0±0.5	32±2	0.8±0.05	3W	10Ω~1M

METAL FILM RESISTORS ULTRA MINI

ELECTRICAL CHARACTERISTICS

STYLE	MFU-10	MFU-20	MFU-30	MFU-01	MFU-02	MFU-03
Power Rating 70°C	0.4W	0.5W	0.6W	1W	1.8W	3W
Operating Temp. Range	-55°C~±155°C					
Max. Working Voltage	200V	250V	250V	250V	350V	500V
Max. Overload Voltage	400V	500V	500V	500V	700V	1000V
Dielectric Withstanding Voltage(AC)	300V	500V	500V	500V	700V	1000V
Max. Intermittence Overload Voltage	250V	300V	300V	300V	500V	1000V
Value Range ±1%, ±5%	10Ω ~ 1MΩ					
Temp. Coefficient (by Type)	±50ppm, ±100ppm					

The listed resistance range for standard resistance, below or over this resistance is on request.

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD	APPRAISE
Short Time Overload	JIS-C-5202 5.5: 2.5 times RCWV for 5 seconds	±(0.25%+0.05Ω)
Dielectric Withstanding V.	JIS-C-5202 5.7: in V-Block for 60 seconds	By Type
Temperature Coefficient	JIS-C-5202 5.2: -55°C~+155°C	By Type
Insulation Resistance	JIS-C-5202 5.6: in V-Block	1000 MΩ
Solderability	JIS-C-5202 6.5: 245°C for 5±0.5 seconds	95% min. Coverage
Resistance to Solvent	JIS-C-5202 6.9: Trichroethance for 1 min. With ultrasonic.	No deterioration
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 time RCWV 10000 cycles (1sec.on, 25 sec. off)	±(0.5%+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, 0.5hrs. Off)	±(0.5%+0.05Ω)
Load Life	JIS-C-5202 7.10: 70°C at RCWV for 1000hrs (1.5hrs.On, 0.5hrs. off)	±(0.5%+0.05Ω)
Temperature Cycling	JIS-C-5202 7.4: 65°C~room temp~150°C~room temp. For 5 cycle	±(0.25%+0.05Ω)
Soldering Heat	JIS-C-5202 6.4: 35±10°C for 3±0.5 seconds	±(0.25%+0.05Ω)

* Rated continuous Working Voltage (RCWV) = $\sqrt{\text{power rating} \times \text{resistance value}}$

MFU Series

FIG.1 DERATING CURVE

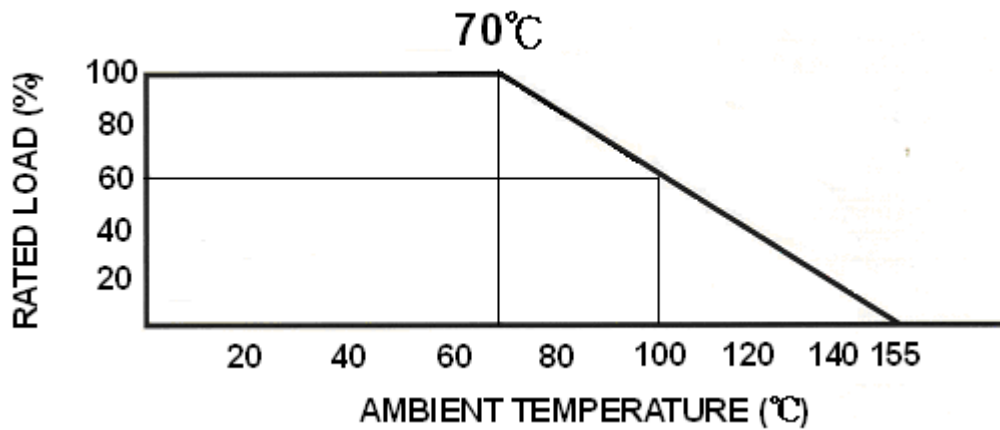


FIG.2 HOT-SPOT TEMPERATURE

