

DATA SHEET

METAL FILM RESISTORS

General Purpose

MFR Series

$\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$, $\pm 5\%$

1/6W to 3W

RoHS compliant & Halogen Free





APPLICATIONS

- All general purpose applications
- Power applications

FEATURES

- AEC-Q200 qualified
- Wide resistance range
- PPAP ready (MFR-25/MFR50S/MFR-50)
- High stability
- RoHS compliant & halogen-free

ORDERING INFORMATION

Part number of the general purpose metal film resistor are identified by the series, power rating, tolerance, packing, temperature coefficient, forming and resistance value.

PART NUMBER

<u>MFR</u> (1)	<u>200</u> (2)	<u>F</u> (3)	<u>T</u> (4)	<u>F</u> (5)	<u>73-</u> (6)	<u>100R</u> (7)
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(1) SERIES

MFR Series

(2) POWER RATING

-12 = 1/6W	-50 = 1/2W	200 = 2W
25S = 1/4W	100 = 1W	3WS = 3W
-25 = 1/4W	2WS = 2W	1WS = 1W
50S = 1/2W		

(3) TOLERANCE

D = $\pm 0.5\%$	F = $\pm 1\%$	G = $\pm 2\%$
J = $\pm 5\%$		

(4) PACKAGING

R = Reel Pack	T = Box Pack	B = Bulk
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(5) TEMPERATURE COEFFICIENT OF RESISTANCE

E= ± 50 ppm/ $^{\circ}$ C	F= ± 100 ppm/ $^{\circ}$ C	- = Based on spec
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(6) FORMING

26- = 26mm	F = F Type
52- = 52.4mm	FK = FK Type
73- = 73mm	FFK = F-form Kink
M = M-Type Forming	FKK = FKK Type
MB = M-form W/fla	MT = MT Type Forming
52A=52.4mm, ψd 0.4 \pm 0.02mm	FT = FT Type Forming
52B=52.4mm, ψd 0.45 \pm 0.02mm	PN = PANAsert
52C=52.4mm, ψd 0.5 \pm 0.02mm	AV = AVIsert
52G=52.4mm, ψd \geq 0.6mm	FB= FB- Type (for -25&50S)
52H=52.4mm , non-painting on soldering spots	

Note: 26mm, 52.4mm and 73mm represent dimension A of the axial type, please refer to the category of AXIAL/REEL TAPE SPECIFICATION for the detail.

(7) RESISTANCE VALUE

E24 & E96 & E192 Series

Example:

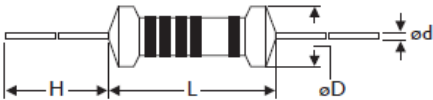
100R = 100 Ω , 10K = 10,000 Ω , 1M = 1,000,000 Ω

DIMENSIONS

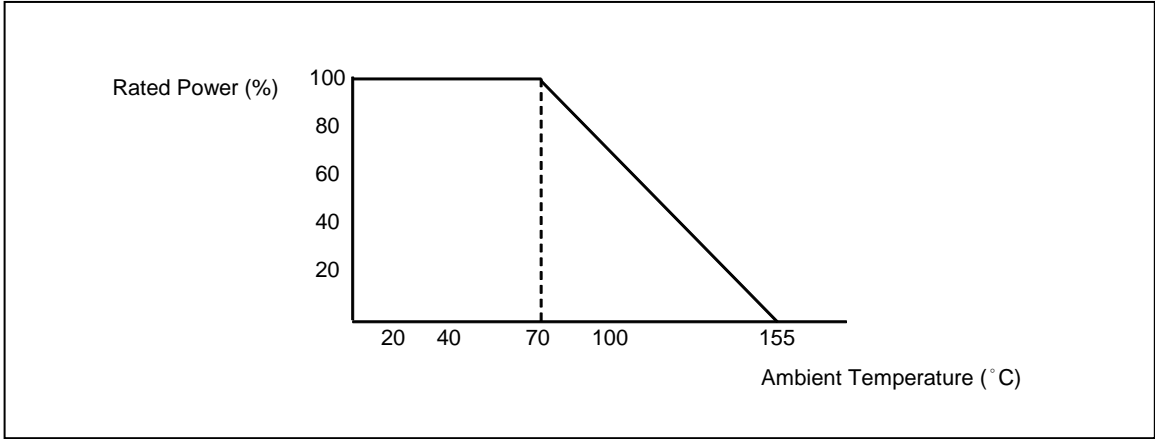
Unit: mm

	Normal	Miniature	L	ψD	H	ψd
MFR-12	MFR25S	3.4 ± 0.3	1.9 ± 0.2	28 ± 2.0	0.45 ± 0.05	
MFR-25	MFR50S	6.3 ± 0.5	2.4 ± 0.2	28 ± 2.0	0.55 ± 0.05	
MFR-50	MFR1WS	9.0 ± 0.5	3.3 ± 0.3	26 ± 2.0	0.55 ± 0.05	
MFR100	MFR2WS	11.5 ± 1.0	4.5 ± 0.5	35 ± 2.0	0.8 ± 0.05	
MFR200	MFR3WS	15.5 ± 1.0	5.0 ± 0.5	33 ± 2.0	0.8 ± 0.05	

The diagram shows a side view of a cylindrical component. It has a central section with a series of vertical lines, possibly representing a threaded section or a specific material. Dimension lines indicate the following: H is the total length of the component; L is the length of the central section; ψD is the outer diameter of the central section; and ψd is the outer diameter of the end section.



DERATING CURVE



ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	MFR-12	MFR25S	MFR-25	MFR50S	MFR-50	MFR1WS	MFR100	MFR2WS MFR200	MFR3WS
Power Rating at 70 °C	1/6W	1/4W	1/4W	1/2W	1/2W	1W	1W	2W	3W
Maximum Working Voltage	200V	200V	250V	300V	350V	400V	500V	500V	500V
Maximum Overload Voltage	400V	400V	500V	600V	700V	800V	1000V	1000V	1000V
Voltage Proof on Insulation	300V	400V	500V	500V	500V	700V	1000V	1000V	1000V
Resistance Range	1Ω ~ 4M7Ω for E24 & E96 series value								
Operating Temp. Range	- 55°C to +155°C								
Temperature Coefficient	±50ppm/°C , ±100ppm/°C								

Note: For resistance value out of above range is by request.