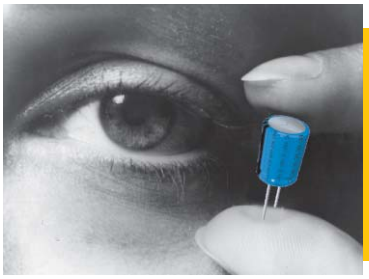


Metal Film Fixed Resistors
Type RMF Series

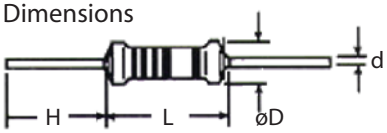
Δ Features

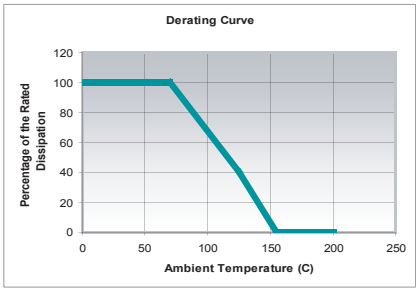
- High aluminum content base material
- Vacuum sputtered by Ni-Cr alloy
- Excellent heat and wet proof special resin for protective coating
- Stable and uniform properties, excellent performance in open air

Δ Applications

- Suitable for products for high reliability.
- High-precision medical, telecom and consumer electronic equipment

Dimensions





Δ Resistance Range

STYLE	POWER RATING (W)	TOLERANCE	TC±25PPM/ºC	TC±100PPM/ºC TC±50PPM/ºC
MF-16	1/8 W	±1%	10Ω ~ 1MΩ	0.1Ω ~ 10MΩ
		±0.5%	100Ω ~ 1MΩ	1Ω ~ 10MΩ
		±0.25%	51.1Ω ~ 470KΩ	51.1Ω ~ 470KΩ
		±0.1%	51.1Ω ~ 470KΩ	51.1Ω ~ 470KΩ
MF-25	1/4 W	±1%	10Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.5%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.25%	10Ω ~ 470KΩ	10Ω ~ 470KΩ
		±0.1%	10Ω ~ 470KΩ	10Ω ~ 470KΩ
MF-50	1/2 W	±1%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.5%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.25%	10Ω ~ 470KΩ	10Ω ~ 470KΩ
		±0.1%	10Ω ~ 470KΩ	10Ω ~ 470KΩ
MF-100	1 W	±1%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.5%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.25%	1Ω ~ 1MΩ	10Ω ~ 470KΩ
		±0.1%	1Ω ~ 1MΩ	10Ω ~ 470KΩ
MF-200	2 W	±1%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.5%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.25%	1Ω ~ 1MΩ	10Ω ~ 470KΩ
		±0.1%	1Ω ~ 1MΩ	10Ω ~ 470KΩ
MF-300	3 W	±1%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.5%	0.1Ω ~ 10MΩ	0.1Ω ~ 10MΩ
		±0.25%	1Ω ~ 1MΩ	1Ω ~ 470KΩ
		±0.1%	1Ω ~ 1MΩ	1Ω ~ 470KΩ

Δ Dimensions (mm)

Type	Power Rating (W)	L±0.5	D±0.5	H (Min)	D±0.03	Max. Working V.	Max. Overload V.
RMF-16	1/8W	3.7	1.8	27	0.46	200V	300V
RMF-25	1/4W	6.5	2.5	27	0.58	250V	500V
RMF-50	1/2W	9	3.7	25	0.68	400V	700V
RMF-100	1W	11	4.5	33	0.8	500V	1000V
RMF-200	2W	16	5	33	0.8	750V	1000V
RMF-300	3W	17	6	30	0.8	750V	1000V

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Fax: (888)820-8884 email: sales@libertycomponents.com website: www.libertycomponents.com

Miniature Size Metal Film Fixed Resistors
Type RMF Series

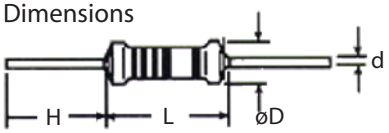
Δ Features

- Miniature size for saving PCB assembly
- Vacuum sputtering metal film on high aluminum ceramic rods
- Superior electrical performance, cost comparable to conventional sizes
- Standard tolerance ± 1% (2%, 5% Available)

Δ Applications

- Suitable for products for high reliability.
- High-precision medical, telecom and consumer electronic equipment

Dimensions



All Liberty Resistors uses the highest quality tin coated copper leads. The leads are rated at the below MAXIMUM soldering temperature and soldering time.

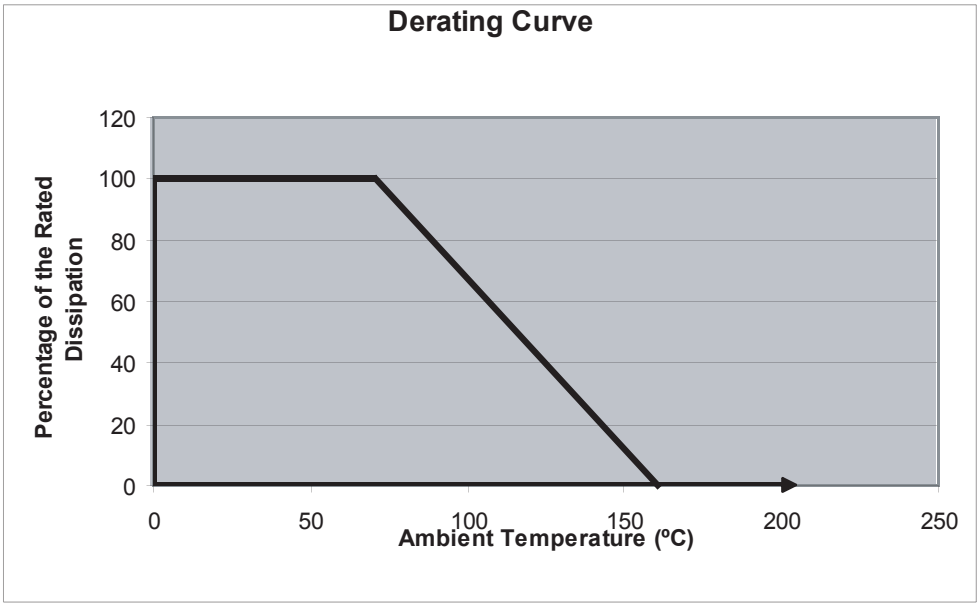
MAXIMUM soldering temperature/time
350°C 3sec
235°C 2min

Δ Dimensions (mm)

Type	Power Rating (W)	Small Type	L±0.5	D±0.5	H(Min)	D±0.3	Max. Working V.	Max. Overload V.
RMF-20	1/4W	1/4WS	3.7	1.8	27	0.46	200V	300V
RMF-52	1/2W	1/2WS	6.5	2.5	25	0.58	250V	500V
RMF-101	1W	1WS	9.0	3.7	25	0.68	400V	700V
RMF-201	2W	2WS	11.0	4.5	30	0.80	500V	1000V
RMF-301	3W	3WS	16.0	5.0	30	0.80	750V	1000V
RMF-501	5W	5WS	17.0	6.0	30	0.80	750V	1000V

- Max working voltage determined by E = PR, E should not exceed value listed in column above.

Δ Derating Curve



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Metal Film Fixed Resistors
Type RMF Series

Δ Characteristics

Requirements	Characteristics	Remarks
Temperature Coefficient	±50ppm	10 -6/K MIL-STD-202 Method 304
Thermal Resistance	140 K/W	
Life Stability at 70°C at 1000Hr Max Resistance Change	0.5%	K Most Umax 1.5 Hr On 0.5 Hr Off
Dielectric Withstanding Voltage	300 Vrms for MF25S	
	500 Vrms for MF50S	
Insulation Resistance	>1000 MΩ	100VDC
Damp Heat Steady State	±0.5%	56 days at 40°C and 93% Relative Humidity at a Voltage of 0.1 Times Rated Voltage, Max 16 volts
Short Time Overload	ΔR ±0.25%	2.5 Times Rated Voltage at Most 2 Times Limiting Element Voltage (UMax)
Moisture Resistance	± 0.5%	
Resistance to Soldering Heat	± 0.25%	350 ± 5°C to 6mm Distance from the resistance body in 3 secs.
Temperature Cycling	± 0.5%	-65°C to +155°C
Low Temperature Operation	± 0.25%	High Frequency 10-500Hz
Vibration	± 0.25%	-65°C
Current Noise	Up to 1MΩ ≤0.5 μV/V	-5dB
Solderability	>95% Coverage	Dipping in 235-5dBC Solder Bath for 2.5 secs.
Resistance to Solvents	No Failure to Top Coating and Color Code	

Δ Part Numbering

RMF	25	TR	1000	F
Series Code	Power Rating 16 = 1/8W 25 = 1/4W 51 = 1/2W 100 = 1W 200 = 2W 300 = 3W 500 = 5W	Packaging TR = Tape Reel	Resistance Code D500 = 0.500Ω 1D00 = 1.00Ω 10D0 = 10.0Ω 1000 = 100Ω 1001 = 1000Ω 1002 = 10000Ω 1003 = 100000Ω 1004 = 1000000Ω	Tolerance: F = ±1% D = ±0.5% CC = ±0.25% BB = ±0.1%

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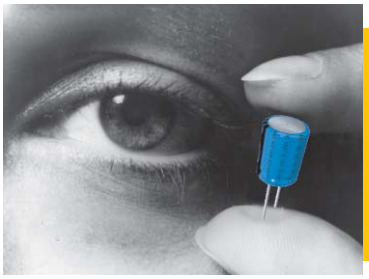

Miniature Metal Film Fixed Resistors
Type RMF Series

Δ Characteristics

Requirements	Characteristics	Remarks
Temperature Coefficient	±50ppm	10 -6/K MIL-STD-202 Method 304
Thermal Resistance	140 K/W	
Life Stability at 70°C at 1000Hr Max	0.5%	K Most Umax 1.5 Hr On
Resistance Change		0.5 Hr Off
Dielectric Withstanding Voltage	300 Vrms for MF25S	
	500 Vrms for MF50S	
Insulation Resistance	>1000 MΩ	100VDC
Damp Heat Steady State	±0.5%	56 days at 40°C and 93% Relative Humidity at a Voltage of 0.1 Times Rated Voltage, Max 16 volts
Short Time Overload	ΔR ±0.25%	2.5 Times Rated Voltage at Most 2 Times Limiting Element Voltage (UMax)
Moisture Resistance	± 0.5%	
Resistance to Soldering Heat	± 0.25%	350 ± 5°C to 6mm Distance from the resistance body in 3 secs.
Temperature Cycling	± 0.5%	-65°C to +155°C
Low Temperature Operation	± 0.25%	High Frequency 10-500Hz
Vibration	± 0.25%	-65°C
Current Noise	Up to 1MΩ ≤0.5 μV/V	-5dB
Solderability	>95% Coverage	Dipping in 235-5dBC Solder Bath for 2.5 secs.
Resistance to Solvents	No Failure to Top Coating and Color Code	

Δ Part Numbering

RMF	20	TR	1000	F
Series Code	Power Rating 20 = 1/4WS 52 = 1/2WS 101 = 1WS 201 = 2WS 301 = 3WS 501 = 5WS	Packaging TR = Tape Reel	Resistance Code D500 = 0.500Ω 1D00 = 1.00Ω 10D0 = 10.0Ω 1000 = 100Ω 1001 = 1000Ω 1002 = 10000Ω 1003 = 100000Ω 1004 = 1000000Ω	Tolerance: F = ±1% D = ±0.5% CC = ±0.25% BB = ±0.1%

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