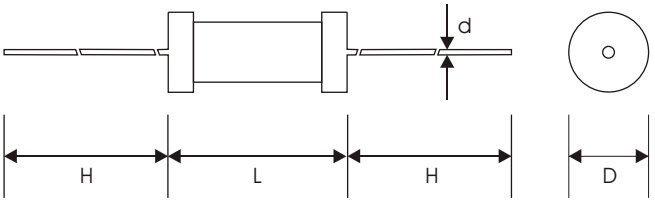
MF METAL FILM FIXED RESISTOR

MF Series

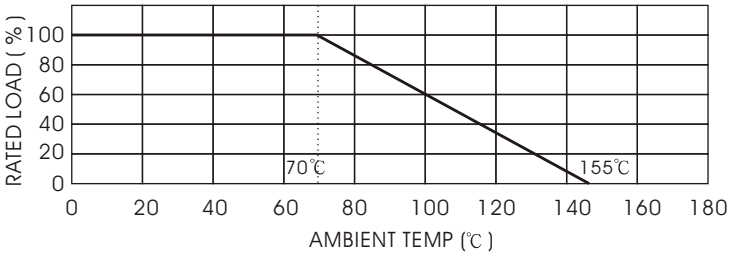
INTRODUCTION :

- ◆ Minitature, Replacements for composition, carbon film and wire wound resistors.
- ◆ High stability, accuracy and reliability.
- ◆ Low current noise.
- ◆ Low temperature coefficient 25 ppm, 1000 ppm.
- ◆ Meets requirements of MIL-R-22684B, 10509F, 39017C, DIN-44061
- ◆ Low cost..

OUTLINE DRAWING



DERATING CURVE



SPECIFICATIONS

STYLE	MIL STYLE	DIMENSION (mm)				POWER RATING (W)		MAX WORKING VOLTAGE		MAX OVERLOAD VOLTAGE	
		L	D	H	d	70℃	125℃	70℃	125℃	70℃	125℃
MF-1/6	RN-50	3.2 ± 0.2	1.8 ± 0.2	28 ± 2.0	0.48	0.166	0.05	200	150	400	300
MF-1/4	RN-55	6.5 ± 0.5	2.3 ± 0.3	28 ± 2.0	0.60	0.25	0.1	250	200	500	400
MF-1/2	RN-60	9.0 ± 0.5	3.2 ± 0.5	28 ± 2.0	0.60	0.5	0.125	350	250	700	500
MF-1W	RN-65	12 ± 1.0	4.5 ± 0.5	35 ± 3.0	0.80	1	0.25	500	300	1000	600
MF-2W	RN-70	16 ± 1.0	5.0 ± 0.5	35 ± 3.0	0.80	2	0.5	500	350	1000	700

RESISTANCE RANGE

STYLE	MIL STYLE	TOLERANCE	TC±15 PPM 25 PPM	TC± 50 PPM	TC ± 100 PPM	REMARK
MF-12	RN-50	± 1%	100Ω ~ 100KΩ	51.1Ω ~ 200KΩ	51.1Ω ~ 511KΩ	* Standard resistance is 10Ω~ 1 MΩ. below or over this resistance on request
		± 0.5%	100Ω ~ 100KΩ	51.1Ω ~ 200KΩ	51.1Ω ~ 511KΩ	
		± 0.25%	100Ω ~ 100KΩ	51.1Ω ~ 200KΩ	51.1Ω ~ 511KΩ	
MF-25	RN-55	± 1%	51.1Ω ~ 511KΩ	10Ω ~ 1 MΩ	51.1Ω ~ 2.4MΩ	
		± 0.5%	51.1Ω ~ 511KΩ	10Ω ~ 1 MΩ	51.1Ω ~ 2.4MΩ	
		± 0.25%	100Ω ~ 330KΩ	51.1Ω ~ 330KΩ		
		± 0.1%	100Ω ~ 100KΩ	100Ω ~ 100KΩ		
MF-50	RN-60	± 1%	51.1Ω ~ 1 MΩ	10Ω ~ 2.2MΩ	51.1Ω ~ 2.4MΩ	
		± 0.5%	51.1Ω ~ 1 MΩ	10Ω ~ 1 MΩ	51.1Ω ~ 2.4MΩ	
		± 0.25%	100Ω ~ 511MΩ	51.1Ω ~ 511KΩ		
		± 0.1%	100Ω ~ 330KΩ	100Ω ~ 330KΩ		
MF-100	RN-65	± 1%	51.1Ω ~ 1MΩ	51.1Ω ~ 1MΩ	51.1Ω ~ 2.4MΩ	
		± 0.5%	51.1Ω ~ 1MΩ	51.1Ω ~ 1MΩ	51.1Ω ~ 2.4MΩ	
		± 0.25%	100Ω ~ 511KΩ	51.1Ω~ 511KΩ		
		± 0.1%	100Ω ~ 330KΩ	100Ω ~ 330KΩ		
MF-200	RN-70	± 1%	51.1Ω~ 1 MΩ	10Ω~ 2.2MΩ	51.1Ω ~ 5.11MΩ	
		± 0.5%	51.1Ω~ 1 MΩ	10Ω ~ 1 MΩ	51.1Ω ~ 5.11MΩ	
		± 0.25%	100Ω~ 511MΩ	51.1Ω ~ 511KΩ		
		± 0.1%	100Ω~ 330KΩ	100Ω ~ 330KΩ		

TEST	MF Series % Change In Resistance (△R)					Mil-R-22684 Style RL Requirement	Mil-R-10509 Chart C, E Requirement
	MF-12	MF-25	MF-50	MF-100	MF-200		
Temperature Cycling, -60℃ to + 150℃ (%)	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	≦ 1.00	≦ 0.25
Low Temperature Operation, -65℃ (%)	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	≦ 0.50	≦ 0.25
Short Time Overload (%)	± 0.25	± 0.20	± 0.20	± 0.25	± 0.20	≦ 0.50	≦ 0.25
Terminal Strength, 5 lb. pull (%)	± 0.20	± 0.20	± 0.20	± 0.15	± 0.15	≦ 0.50	≦ 0.20
Resistance to Soldering heat, + 350℃ (%)	± 0.10	± 0.10	± 0.10	± 0.10	± 0.10	≦ 0.50	≦ 0.10
Moisture Resistance, Mil Std 202 (%)	± 0.50	± 0.50	± 0.50	± 0.50	± 0.50	≦ 1.50	≦ 0.50
Life 1000 hrs. (Rated Power) (%)	± 0.50	± 0.50	± 0.50	± 0.50	± 0.50	≦ 2.00	≦ 0.50
Shock, 50 G, 11 ms. (%)	± 0.25	± 0.20	± 0.20	± 0.15	± 0.15	≦ 0.50	≦ 0.25
Vibration-High Frequency, 10-2000 Hz (%)	± 0.25	± 0.20	± 0.20	± 0.20	± 0.20	≦ 0.50	≦ 0.25
Insulation Resistance	≧ 10^{10}Ω	≧ 10^{10}Ω	≧ 10^{10}Ω	≧ 10^{10}Ω	≧ 10^{10}Ω	≧ 10^{10}Ω	≧ 10^{10}Ω
Failure-Rate	< 10^{-8}/h	< 10^{-8}/h	< 10^{-8}/h	< 10^{-8}/h	< 10^{-8}/h	< 10^{-8}/h	