

PRODUCT BULLETIN

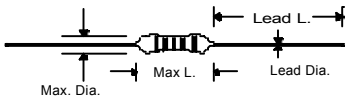


MF-SERIES

GENERAL PURPOSE METAL FILM RESISTORS

WILLOW TECHNOLOGIES LTD.
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- Small Size
- Low Cost
- 0.5%, 1.0%, 5.0% Resistance Tolerance
- 100, 50 & 25 PPM Temperature Coefficient
- Conformal Coating
- Color Band Marking
- Tape & Reel Packaging



Dimensional Correlation

in.	mm
.004	.01
.017	.45
.022	.56
.0236	.60
.025	.63
.031	.80
.059	1.50
.091	2.30
.138	3.50
.146	3.70
.177	4.50
.217	5.50
.256	6.50
.354	9.00
.472	12.0
.630	16.0
.984	25.0

Dimensions In Inches

Type	Max. L.	Max. Dia.	Lead Dia.	Lead L.
MF-12	.146 ±.016	.059 ±.008	.017 ±.002	.984
MF-25	.256 ±.020	.091 ±.008	.0236 ±.0004*	.984
MF-50	.354 ±.039	.138 ±.020	.0236 ±.0004*	.984
MF-100	.472 ±.039	.177 ±.020	.031 ±.002	.984
MF-200	.630 ±.039	.217 ±.020	.031 ±.002	.984

* MF-25 & MF-50 ARE ALSO AVAILABLE WITH .022 IN. DIAMETER LEADS

Specifications

Type	Power Rating at 70°C	T100 & TC50 Range (Ohms)	TC25 Range (Ohms)	Voltage Max. Working	Voltage Max. Overload
MF-12	1/8 W	51.1 511	100 100	200 V	400 V
MF-25	1/4 W	5.11 2.4	5.11 511	250 V	500 V
MF-50	1/2 W	5.11 2.4	5.11 1	350 V	700 V
MF-100	1 W	5.11 2.4	5.11 1	500 V	1000 V
MF-200	2 W	5.11 5.11	5.11 1	500 V	1000 V

LEAD TAPE PACKAGING PER EIA RS-296

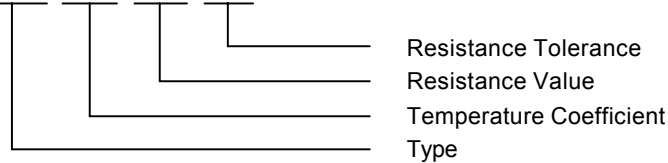
Available Resistance Values

- 0.5% = E192
- 1% = E96
- 5% = E24 & E48

How to Order

Sample Part Number

MF-25 T100 100K 1%



DEDICATION TO EXCELLENCE

Characteristic	Specification	Test Method
		(All resistance measurements should be performed after stabilization or conditioning periods.)
DC RESISTANCE	Within specified tolerance.	MIL-STD-202 Method 303
TEMPERATURE COEFFICIENT	As buyer requested $\pm 25\text{PPM}/^\circ\text{C}$ $\pm 100\text{PPM}/^\circ\text{C}$ $\pm 50\text{PPM}/^\circ\text{C}$ $\pm 200\text{PPM}/^\circ\text{C}$	MIL-STD-202 Method 304
DIELECTRIC STRENGTH	No flashover or damage	MIL-STD-202 Method 301 1/8W 300V 1 minute 1/4W 500V 1 minute 1/2W 700V 1 minute 1, 2W 750V 1 minute
INSULATION RESISTANCE	At least 1000M Ω	MIL-STD-202 Method 302 100V 1 minute
CURRENT NOISE TEST	5.11 Ω to 9.99 Ω less than 0.05 $\mu\text{V}/\text{V}$ 10 Ω to 9.99K Ω less then 0.1 $\mu\text{V}/\text{V}$ 10K Ω to 1M Ω less then 0.2 $\mu\text{V}/\text{V}$	MIL-STD-202 Method 308
VIBRATION	ΔR within $\pm(0.25\% + 0.05\Omega)$	MIL-STD-202 Method 201 10~ Hz X.Y.Z. 3 directions 2 hours each.
TERMINAL STRENGTH	No broken or loosened terminals.	MIL-STD-202 Method 211
RESISTANCE TO SOLDERING HEAT	ΔR within $\pm(0.25\% + 0.05\Omega)$	MIL-STD-202 Method 210 350 $^\circ\text{C}$, 3 ± 0.05 seconds
SOLDERABILITY	At least 95% coverage	MIL-STD-202 Method 208 230 $^\circ\text{C}$, 5 seconds
THERMAL SHOCK	ΔR within $\pm(0.5\% + 0.05\Omega)$	MIL-STD-202 Method 107 -55 $^\circ\text{C}$, +155 $^\circ\text{C}$ 5 cycles
SHORT TIME OVERLOAD	ΔR within $\pm(0.05\% + 0.05\Omega)$	MIL-R-10509 Para, 4.6.6 2.5 times rated working voltage, 5 seconds
HUMIDITY	ΔR within $\pm(1\% + 0.05\Omega)$ NO mechanical damage	MIL-STD-202 Method 103 40 $^\circ\text{C}$, RH 95% 500
LOW TEMPERATURE OPERATION	ΔR within $\pm(0.5\% + 0.05\Omega)$	MIL-R-10509 Para 4.6.5 Rated working voltage, @ -65 $^\circ\text{C}$ 45 minutes.
LOAD LIFE	ΔR within $\pm(1\% + 0.05\Omega)$	MIL-STD-202 Method 108 Rated working Voltage 1 1/2 hours on. 1/2 hour off for total 1000 hours
RESISTANCE TO SOLVENT	Color bands legible. No mechanical damage.	MIL-STD-202 Method 215

CURRENT NOISE

