Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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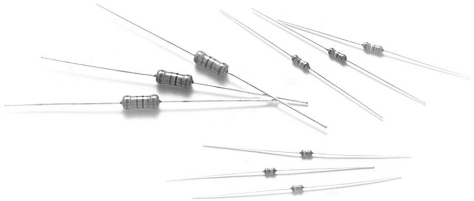
Metal Film Resistors

Biased Humidity Type

Normal & Miniature Style [MFN Series]

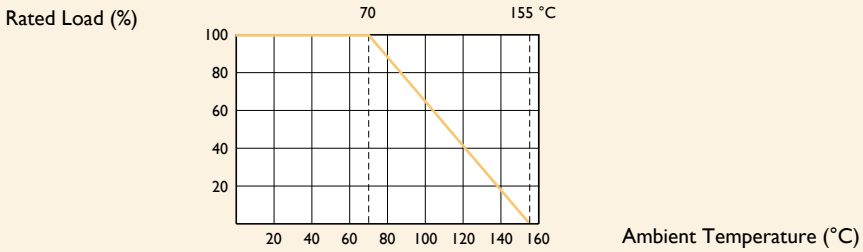


FEATURES

Power Rating	1/6W, 1/4W, 1/2W, 1W, 2W, 3W
Resistance Tolerance	±0.5%, ±1%
T.C.R.	±15ppm/°C, ±25ppm/°C, ±50ppm/°C, ±100ppm/°C

DERATING CURVE

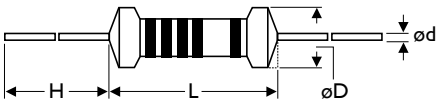
For resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve below.



INTRODUCTION

The MFN Series Metal Film Biased Humidity Resistors are manufactured using a vacuum sputtering system to deposit multiple layers of mixed metal alloys and passivative materials onto a carefully treated high grade ceramic substrate. After a helical groove has been cut in the resistive layer, tinned connecting leads of electrolytic copper are welded to the end-caps. The resistors are coated with a specialized blue lacquer. Its processes and controls ensure the product is impervious to moisture.

DIMENSIONS



Unit: mm

STYLE		DIMENSION			
Normal	**Miniature**	**L**	**øD**	**H**	**ød**
MFN-12	MFN25S	3.4±0.3	1.9±0.2	28±2.0	0.45±0.05
MFN-25	MFN50S	6.3±0.5	2.4±0.2	28±2.0	0.55±0.05
MFN-50	MFN1WS	9.0±0.5	3.3±0.3	26±2.0	0.55±0.05
MFN100	MFN2WS	11.5±1.0	4.5±0.5	35±2.0	0.8±0.05
MFN200	MFN3WS	15.5±1.0	5.0±0.5	33±2.0	0.8±0.05

Note:

ELECTRICAL CHARACTERISTICS

STYLE	MFN-12	MFN25S	MFN-25	MFN50S	MFN-50	MFN1WS	MFN100	MFN2WS	MFN200	MFN3WS
Power Rating at 70°C	1/6W	1/4W		1/2W		1W		2W		3W
Maximum Working Voltage	200V		250V	300V	350V	400V	500V			
Maximum Overload Voltage	400V		500V	600V	700V	800V	1,000V			
Voltage Proof	300V	400V	500V			700V	1,000V			
Resistance Range	1 Ω - 10M Ω & 0 Ω for E24 & E96 series value									
Operating Temp. Range	-55°C to +155°C									
Temperature Coefficient	±15ppm/°C, ±25ppm/°C, ±50ppm/°C, ±100ppm/°C									

Note: Special value is available on request

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	IEC 60115-1 4.13	2.5 times RCWV for 5 Sec.	±0.25%+0.05 Ω
Voltage Proof	IEC 60115-1 4.7	in V-block for 60 Sec., test voltage by type	No breakdown or flashover
Temperature Coefficient	IEC 60115-1 4.8	-55°C to +155°C	By type
Insulation Resistance	IEC 60115-1 4.6	in V-block for 60 Sec.	>10,000M
Solderability	IEC 60115-1 4.17	235±5°C for 3±0.5 Sec.	95% Min. coverage
Solvent Resistance of Marking	IEC 60115-1 4.30	IPA for 5±0.5 Min. with ultrasonic	No deterioration of coatings and markings
Robustness of Terminations	IEC 60115-1 4.16	Direct load for 10 Sec. in the direction of the terminal leads	≥2.5kg (24.5N)
Periodic-pulse Overload	IEC 60115-1 4.39	4 times RCWV 10,000 cycles (1 Sec. on, 25 Sec. off)	±1.0%+0.05 Ω
Damp Heat Steady State	IEC 60115-1 4.24	40±2°C, 90-95% RH for 56 days, loaded with 0.1 times RCWV	±1.5%+0.05 Ω
Endurance at 70°C	IEC 60115-1 4.25	70±2°C at RCWV for 1,000 Hr. (1.5 Hr. on, 0.5 Hr. off)	±1.5%+0.05 Ω
Temperature Cycling	IEC 60115-1 4.19	-55°C ⇨ Room Temp. ⇨ +155°C ⇨ Room Temp. (5 cycles)	±0.75%+0.05 Ω
Resistance to Soldering Heat	IEC 60115-1 4.18	260±3°C for 10±1 Sec., immersed to a point 3±0.5mm from the body	±0.25%+0.05 Ω

Note: Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$