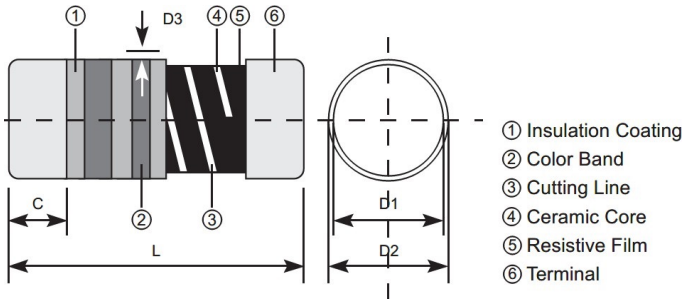
■ Features

* Excellent heat dissipation
* Low noise characteristics
* Force fitted steel caps, tin plated on nickel barrier
* Excellent overall stability, most advanced thin film technology
* Free direction for mounting due to cylindrical design
* Lead (Pb)-free and RoHS compliant

■ Applications

* Automotive
* Industrial Control Systems
* Telecommunication Equipment
* Medical Equipment
* Lighting Ballast
* Electronic Energy Meter

■ Construction



■ Reference Standards

* JIS C 5201
* IEC 60115-1

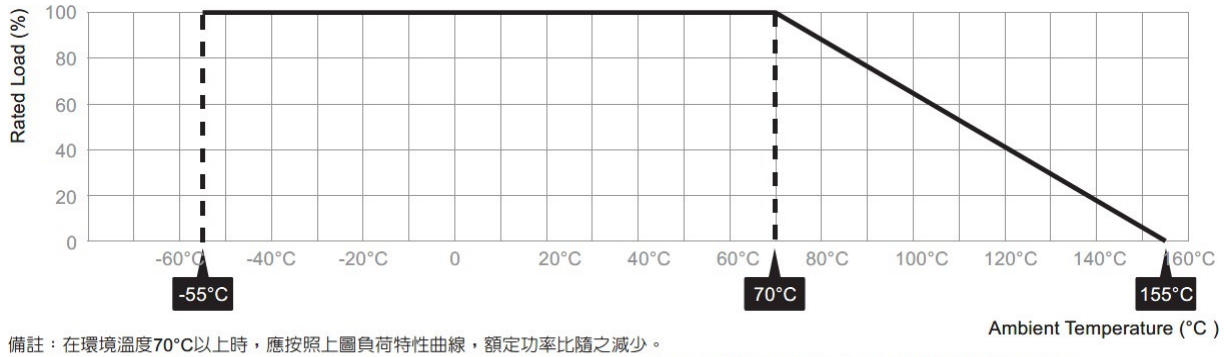
Style	Dimension (mm)				
	L	D1	D2 Max	D3 Max	C Min
A (0102)	2.0±0.1	1.25±0.05	1.35	0.07	0.30
B (0204)	3.5±0.2	1.40±0.15	1.55	0.10	0.50
C (0207)	5.9±0.2	2.20±0.20	2.40	0.15	1.00
D (0309)	8.5±0.2	3.20±0.20	3.40	0.30	1.50

■ Ordering Code

M F M	B	2 5 S	F	C 2	R	-	1 0 0 K

Series Code	Size Code	Power Rating	Resistance Tolerance	Temperature Coefficient	Packaking Code	Special Code	Resistance Value
MFM	A=0102 B=0204 C=0207 D=0309	-16 = 0.125W 25S = 0.25WS 50S = 0.5WS -50 = 0.5W	F = ±1% G = ±2% J = ±5%	C1 = ±100ppm/°C C2 = ±50ppm/°C C3 = ±25ppm/°C	R = Tape/Reel B = Bulk	-= Base on Spec.	100R=100 10K10,000 4M7=4,700,000

■ Derating Curve



備註：在環境溫度70°C以上時，應按照上圖負荷特性曲線，額定功率比隨之減少。
Note：for resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the above curve.

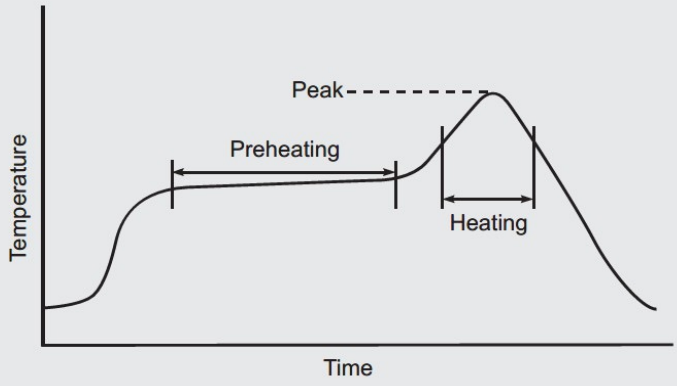
■ Ratings

Series	MFMA-16	MFMB25S	MFMC50S	MFMD-50
Size Code	0102	0204	0207	0309
Rated dissipation, P_{70}	0.125W	0.25W	0.5W	0.5W
Resistance range	100Ω~100KΩ	1Ω~4M7Ω	1Ω~4M7Ω	1Ω~4M7Ω
Resistance tolerance	±1% ; ±2% ; ±5%			
Significant figure	E-24 and E-96 series value			
Temperature coefficient	±25ppm/°C ; ±50ppm/°C ; ±100ppm/°C			
Operation temp. range	-55°C ~ +155°C			
Max. working voltage	150V	200V	250V	350V
Max. overload voltage	300V	400V	500V	700V

■ Performance

Test Items	Requirements	Test Methods
Resistance	Within specified tolerance	25°C
T.C.R	Within specified T.C.R	+25°C/-55°C and +25°C/+125°C
Solderability	95% Min. coverage	235°C±5°C, 3±0.5 sec.
Resistance to soldering heat	±(0.5%+0.05Ω)	260°C±5°C, 10±1 sec. (for lead-free soldering)
Operating temperature range	By type	-55°C to +155°C
Short time overload	±(0.5%+0.05Ω)	Rated voltage × 2.5 for 5 sec.
Humidity resistance	±(1%+0.05Ω)	40°C±2°C, 90%~95% RH,1,000h 1.5hr ON / 0.5hr OFF cycles
Endurance at 70°C (Load life test)	±(3%+0.05Ω)	70°C±2°C, 1,000h 1.5hr ON/0.5hr OFF cycles

■ Recommended soldering conditions



Reflow soldering (lead-free)

Status	Temperature	Time
Preheating	180°C Max	120 sec. Max
Main heating	220°C Max	60 sec. Max
Peak	260°C Max	3 sec. Max

Flow soldering (lead-free)

Status	Temperature	Time
Soldering	260°C Max	10 sec. Max

■ Cautions

* Storage condition

It is desirable that the resistors are stored in the ambient temperature from -5°C to +40°C and relative humidity under 55%~75%.
High humidity, dust, harmful gas, for example hydrogen chloride and sulfuric gas should be avoided.

Please do not store the resistors for a long time, use the resistors within a year after the delivery is recommended.