

MFM series Metal Film MELF Resistors

◆ Features

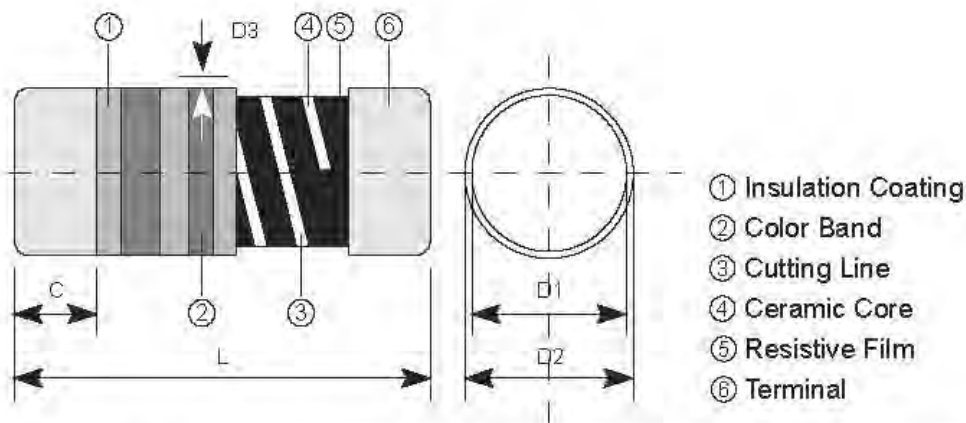
- » Excellent heat dissipation
- » Low noise characteristics
- » Free direction for mounting due to cylindrical design
- » Lead (Pb)-free and RoHS compliant



◆ Application

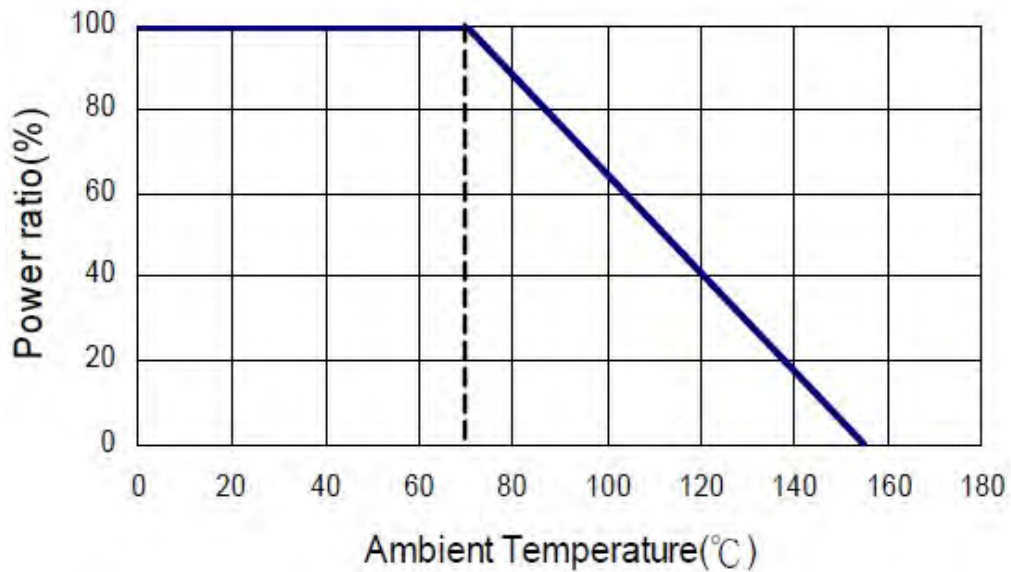
- » Telecommunication
- » Medical Equipment
- » Industrial Control Systems

◆ Dimension



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

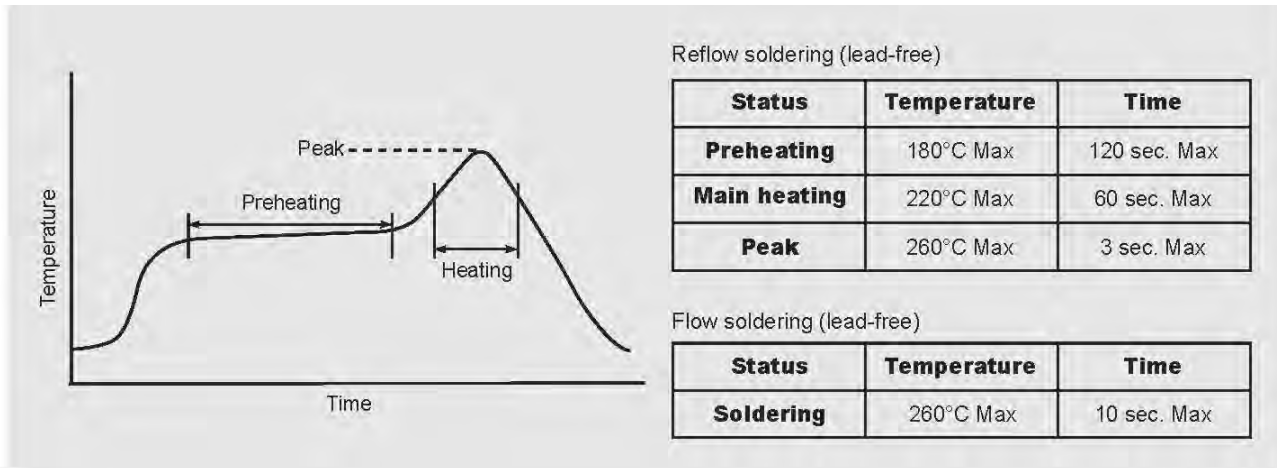
◆ Derating Curve



◆ Part Number

MFM	B	25S	F	C2	R	-	1K
Type MFM	Size A=0102 B=0204 C=0207 C=0309	Watt 1/8WS = 12S 1/4WS = 25S 1/4W=25 1/2W=50 1/2WS=50S 1W=100	Tolerance F = ± 1% G = ± 2% J = ± 5%	TCR Value C1=100ppm C2=50ppm C3=25ppm C4=15ppm	Packing R = Taping Reel B = Bulk		R value 1KΩ = 1K 100Ω = 100R

◆ Recommended soldering conditions



◆ Specification

Size	Power rating at 70°C	Resistance					Operating Temp. Range	Max. Working Voltage	Max. Overload Voltage	TCR (PPM/°C)
		±0.1%	±0.25%	±0.5%	±1%	±5%				
0102	0.125W (1/8WS)	100Ω-56K	100Ω-100K	100Ω-1M	0.22Ω-2M	-55°C to +155°C	150V	300V	±15 ±25 ±50 ±100	
0204	0.25W (1/4WS)	100Ω-56K	100Ω-100K	10Ω-1M	0.5Ω-2M		200V	400V	±15 ±25 ±50 ±100	
0207	0.25W (1/4W)	100Ω-100K	100Ω-100K	10Ω-1M	0.22Ω-5M		200V	400V	±15 ±25 ±50 ±100	
	0.5W (1/2WS)	100Ω-100K	10Ω-560K	10Ω-1M	0.22Ω-5M		300V	600V	±50 ±100	
0309	1W	100Ω-100K	10Ω-560K	10Ω-1M	0.5Ω-5M		400V	700V	±50 ±100	
	0.5W	--	--	10Ω-1M	0.1Ω-1M	350V	700V	±50		
	1W	---	---	10Ω-1M	0.1Ω-1M	500V	1000V	±100		

Operating Voltage= $\sqrt{P \cdot R}$ or Max. operating voltage listed above, whichever is lower.

Overload Voltage= $2.5 \cdot \sqrt{P \cdot R}$ or Max. overload voltage listed above, whichever is lower.

Faithfullink is capable of manufacturing the optional spec based on customer's requirement.

◆ Environmental Characteristics

Item	Characteristics	Test Method
1. Temp. Coefficient 溫度係數	$\pm 50\text{ppm}/^{\circ}\text{C}$	JIS-C-5202; 5.2
2. Short time overload 短時間過負載	$\pm(2\%+0.05\Omega)$	JIS-C-5202; 5.5
3. Pulse overload 斷續過負載	$\pm(2\%+0.05\Omega)$	JIS-C-5202; 5.8
4. Temperature cycling 溫度週率	$\pm(0.5\%+0.05\Omega)$	JIS-C-5202; 7.4
5. Load Life 壽命負載	$\pm(1\%+0.05\Omega)$	JIS-C-5202; 7.10
6. Resistance to soldering heat ° 焊接耐熱性	$\pm(0.5\%+0.05\Omega)$	JIS-C-5202; 6.4
7. Solderability 焊接性	90% Coverage/Min	JIS-C-5202; 6.5
8. Non-Combustibility 不燃性	No evidence of flaming	UL-94 ; V-0

◆ Packing

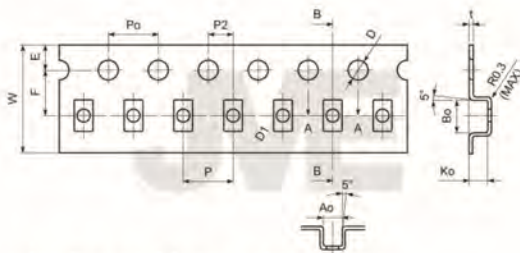
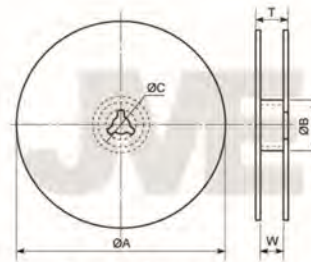
Size code	Tape/Reel Q'ty (pcs)			Bulk Q'ty (pcs)	Weight (g)	
	Reel	Case	Carton	Bag	Reel/pc	Net/Kpcs
A (0102)	3,000	15,000	180,000	5,000	-	-
B (0204)	3,000	15,000	180,000	5,000	390.5	18
C (0207)	2,000	8,000	96,000	5,000	383.5	155
D (0309)	2,500	2,500	15,000	5,000	2,505	160

▼ Embossed tapping dimension

Type	W	P	E	F	D	D ₁	P ₀	P ₂	A ₀	B ₀	K ₀	t
0102	8±0.1	4±0.1	1.75±0.1	3.5±0.05	1.5±0.1	1.0±0.1	4±0.1	2±0.1	1.6±0.1	3.70±0.1	1.65±0.1	0.22±0.05
0204	8±0.1	4±0.1	1.75±0.1	3.5±0.05	1.5±0.1	1.0±0.1	4±0.1	2±0.1	1.6±0.1	3.70±0.1	1.65±0.1	0.22±0.05
0207	12±0.1	4±0.1	1.75±0.1	5.5±0.05	1.5±0.1	1.5±0.1	4±0.1	2±0.1	2.4±0.1	6.05±0.1	2.50±0.1	0.30±0.05
0309	16±0.1	8±0.1	1.75±0.1	7.5±0.10	1.5±0.1	1.5±0.1	4±0.1	2±0.1	3.5±0.1	8.85±0.1	3.50±0.1	0.35±0.05

▼ Tape/Reel dimension

Type	ØA	ØB	ØC	W	T
0102	178±1	60.0±0.5	13.0±0.2	9.0±0.5	12.0±0.15
0204	178±1	60.0±0.5	13.0±0.2	9.0±0.5	12.0±0.15
0207	178±1	60.0±0.5	13.0±0.5	13.2±0.5	16.0±0.20
0309	330±1	100±1.0	13.0±0.5	17.0±0.5	21.5±0.20


▲ Embossed tapping dimension

▲ Tape/Reel dimension