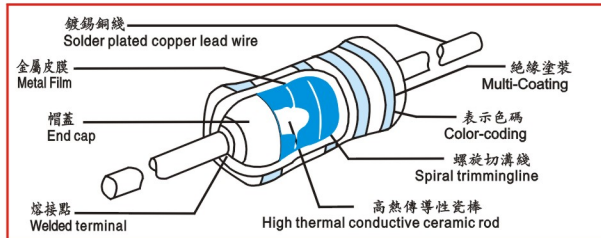


#### 製品介紹 INTRODUCTION

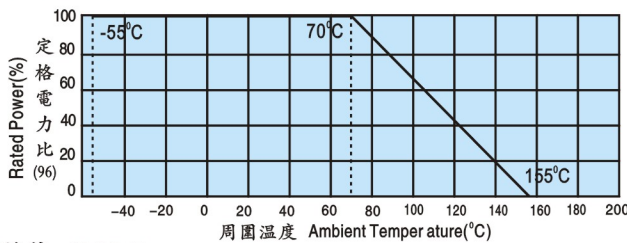
MF 金屬皮膜電阻器屬於高性能之精密電阻器，適用於精密電子回路。

MF, Metal film resistor, is a precise and functional resistor. It is suitable for applications on precise electronic circuits.

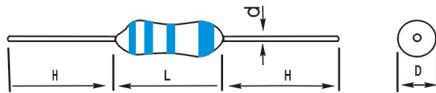
#### 構造 CONSTRUCTION



#### 負荷輕減曲線 DERATING CURVE



#### 形狀 STYLE



#### 尺寸 DIMENSIONS

形名	尺寸 Dimensions (mm)				額定功率 Power Rating	最高工作電壓 Max Working Voltage	最高過負荷電壓 Max Overload Voltage	耐電壓 Dielectric Withstanding Voltage	電阻值範圍 Resistance Range	
	TYPE	L	D	d						H
普通型 Normal size	MF1/6W	3.2±0.2	1.8±0.2	0.40±0.02	25±3	0.16W	200V	400V	300V	0.1Ω~22M
	MF1/4W	6.5±0.5	2.3±0.3	0.43±0.02	25±3	0.25W	250V	500V	500V	0.1Ω~22M
	MF1/2W	9.0±1.0	3.2±0.5	0.50±0.02	25±3	0.5W	350V	700V	500V	0.1Ω~22M
	MF1W	12.0±1.0	4.5±0.5	0.65±0.02	25±3	1W	400V	800V	500V	0.1Ω~22M
	MF2W	15.5±1.0	5.0±1.0	0.72±0.02	23±3	2W	500V	1000V	500V	0.1Ω~22M
	MF3W	17.5±1.0	6.0±1.0	0.72±0.02	27±3	3W	750V	1200V	600V	0.1Ω~22M
	MF5W	24.5±1.0	8.5±1.0	0.75±0.02	27±3	5W	900V	1400V	750V	0.1Ω~22M
小型化 Small size	MF1/4WS	3.2±0.2	1.8±0.2	0.40±0.02	25±3	0.25W	200V	400V	300V	0.1Ω~22M
	MF1/2WS	6.5±0.5	2.3±0.3	0.43±0.02	25±3	0.5W	250V	500V	500V	0.1Ω~22M
	MF1WS	9.0±1.0	3.2±0.5	0.50±0.02	25±3	1W	350V	700V	500V	0.1Ω~22M
	MF2WS	12.0±1.0	4.5±0.5	0.65±0.02	25±3	2W	400V	800V	700V	0.1Ω~22M
	MF3WS	15.5±1.0	5.0±1.0	0.72±0.02	23±3	3W	500V	1000V	700V	0.1Ω~22M
	MF5WS	17.0±1.0	6.0±1.0	0.72±0.02	27±3	5W	750V	1200V	700V	0.1Ω~22M
超小型化 Super Mini-Size	MF1/2W(SS)	3.2±0.2	1.8±0.2	0.40±0.02	25±3	0.5W	250V	500V	500V	0.1Ω~1M
	MF1W(SS)	6.5±0.5	2.3±0.32	0.43±0.02	25±3	1W	350V	700V	500V	0.1Ω~1M
	MF2W(SS)	9.0±1.0	3.2±0.5	0.50±0.02	25±3	2W	400V	800V	500V	0.1Ω~1M
	MF3W(SS)	12.0±1.0	4.5±0.5	0.65±0.02	25±3	3W	500V	1000V	500V	0.1Ω~1M
	MF5W(SS)	15.5±1.0	5.0±1.0	0.72±0.02	27±3	5W	750V	1200V	600V	0.1Ω~1M
	MF0.6W	6.5±0.5	2.3±0.3	0.43±0.02	25±3	0.6W	250V	500V	500V	0.1Ω~22M

NOTE: Specification can be constructed on request.

#### 特長 FEATURES

- 高安定性 High stability
- 低雜音・低溫度係數 Low noise. Low temp. coefficient
- 精密特性 Precision characteristics



#### 特性 CHARACTERISTICS

試驗項目 Test Items	規格值 Specified Value
溫度係數 Temp. coefficient of resistance	±50, ±100 PPM/°C
短時間過負荷 Short time overload	±(0.5%+0.05Ω)
耐電壓 Dielectric withstanding voltage	無損壞的異狀 No evidence of damage
絕緣抵抗 Insulation resistance	Over 10 <sup>10</sup> MΩ
端子強度 Terminal strength	無損壞的異狀 No evidence of damage
耐久性(耐濕負荷) Moisture load life	±(1.5%+0.05Ω)
耐久性(定格負荷)70°C Load life at 70°C	±(2%+0.05Ω)
溫度循環 Temperature cycling	±(1%+0.05Ω)
焊錫耐熱性 Resistance to soldering heat	±(0.5%+0.05Ω)
焊錫附著性 Resistance to soldering heat	Over 95%
耐溶劑性 Resistance to solvent	無損壞的異狀 No evidence of damage

TOL : ±0.02%、±0.05%、±0.1%、±0.25%、±0.5%、±1%、±5%

TC : ±5PPM、±10MMM、±15PPM、±25PPM、±50PPM

TYPE		MF1/8	MF1/4	MF 1/2	MF1W	MF2W	型 號	
MIL-R-10509F		RN50	RN55	RN60	RN65071	RN70	美國標準 MIL-R-10509F	
DIN-44061		0204	0207	0411	0617	0719	西德工業標準 DIN-44061	
POWER	70°C	0.125	0.250	0.500	0.75	1.00	70°C	額定功率 (W)
RATING	100°C	0.067	0.110	0.173	0.350	0.610	100°C	
(W)	125°C	0.050	0.100	0.125	0.250	0.500	1250C	
MAX.WORKING VOLTAGE(V)		200	250	300	350	400	最大工作電壓 (V)	

### STANDARD RESISTANCE RANGE (Ω)

标准组值范围

TYPE		MF1/8	MF1/4	MF1/2	MF1W	MF2W	型 號	
P(±0.02%)	from		5	5	10	10	由	(±0.02%)-P
	to		1M21	1M21	2M	2M	到	
W(±0.05%)	from	100	5	5	10	10	由	(±0.05%)-W
	to	100k	1M21	1M5	2M	2M	到	
B(±0.1%)	from	10	1	1	1	1	由	(±0.10%)-B
	to	500k	1M5	2M5	5M	10M	到	
C(±0.25%)	from	10	1	1	1	1	由	(±0.25%)-C
	to	600k	2M5	5M	10M	10M	到	
D(±0.50%)	from	10	1	1	1	1	由	(±0.50%)-D
	to	800k	5M	10M	10M	10M	到	
F(±1.00%)	from	10	1	1	1	1	由	(±1.00%)-F
	to	1M	10M	10M	10M	10M	到	
C7(±5ppm/°C)	from	10	10	10	10	10	由	(±5ppm/°C)-C7
	to	1M	1M	1M	1M	1M	到	
C6(±10ppm/°C)	from	100	10	10	10	10	由	(±10ppm/°C)-C6
	to	100k	1M5	1M5	1M5	1M5	到	
C5(±15ppm/°C)	from	100	5	5	5	5	由	(±15ppm/°C)-C5
	to	200k	1M5	1M5	1M5	1M5	到	
C3(±25ppm/°C)	from	10	5	5	5	5	由	(±25ppm/°C)-C3
	to	600k	2M5	2M5	2M5	2M5	到	
C2(±50ppm/°C)	from	10	5	5	5	5	由	(±50ppm/°C)-C2
	to	1M	10M	10M	10M	10M	到	

### 訂貨方式 HOW TO ORDER

MF	1/4W	T52	J	C2	10K																																																										
種類 Type	預定電力 Power Rating	形狀/包裝方式 Form/ Packaging	電阻值誤差率 Resistance Tolerance	TCR (ppm/°C)	公稱電阻值 Nominal Resistance																																																										
	<table border="1"> <tr><th>Nomal Size</th><th>Small Size</th></tr> <tr><td>1/6W</td><td>1/4WS</td></tr> <tr><td>1/4W</td><td>1/2WS</td></tr> <tr><td>1/2W</td><td>1WS</td></tr> <tr><td>1W</td><td>2WS</td></tr> <tr><td>2W</td><td>3WS</td></tr> </table>	Nomal Size	Small Size	1/6W	1/4WS	1/4W	1/2WS	1/2W	1WS	1W	2WS	2W	3WS	<table border="1"> <tr><th>B</th><td>Bulk (Straight)</td></tr> <tr><th>M</th><td>Bulk, M-Form series (Horizontal Forming)</td></tr> <tr><th>U</th><td>Buld,U-Form series (Vertical Forming)</td></tr> <tr><th>Txx</th><td>Boxed (26.52.63.73.83mm width taping)</td></tr> </table>	B	Bulk (Straight)	M	Bulk, M-Form series (Horizontal Forming)	U	Buld,U-Form series (Vertical Forming)	Txx	Boxed (26.52.63.73.83mm width taping)	<table border="1"> <tr><th>J</th><td>±5%</td></tr> <tr><th>F</th><td>±1%</td></tr> <tr><th>D</th><td>±0.5%</td></tr> <tr><th>C</th><td>±0.25%</td></tr> <tr><th>B</th><td>±0.1%</td></tr> <tr><th>W</th><td>±0.05%</td></tr> <tr><th>P</th><td>±0.02%</td></tr> </table>	J	±5%	F	±1%	D	±0.5%	C	±0.25%	B	±0.1%	W	±0.05%	P	±0.02%	<table border="1"> <tr><th>C7</th><td>±5</td></tr> <tr><th>C6</th><td>±10</td></tr> <tr><th>C5</th><td>±15</td></tr> <tr><th>C3</th><td>±25</td></tr> <tr><th>C2</th><td>±50</td></tr> <tr><th>C1</th><td>±100</td></tr> </table>	C7	±5	C6	±10	C5	±15	C3	±25	C2	±50	C1	±100	<table border="1"> <tr><th colspan="2">3-Digit: E-24, 12 Series</th></tr> <tr><td>e.g.</td><td>OR12 = 0.12Ω</td></tr> <tr><td></td><td>120R = 120Ω</td></tr> <tr><td></td><td>1K2 = 1.2KΩ</td></tr> <tr><td></td><td>12K = 12KΩ</td></tr> <tr><td></td><td>12M = 12MΩ</td></tr> </table>	3-Digit: E-24, 12 Series		e.g.	OR12 = 0.12Ω		120R = 120Ω		1K2 = 1.2KΩ		12K = 12KΩ		12M = 12MΩ
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