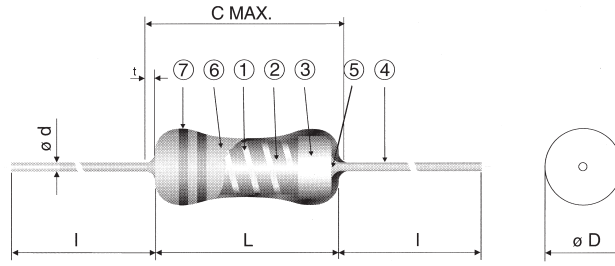
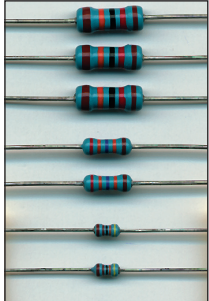


**METAL FILM  
STANDARD  
MF • MFP**



**STRUCTURE**

- 1 Ceramic core
- 2 Trimmed metal film
- 3 Steel cap (Cu, Sn plated)
- 4 Lead wire
- 5 Welding joint
- 6 Epoxy resin overcoating
- 7 Marking



**IDENTIFICATION**

PRODUCT CODE	COATING COLOR	MARKING
MF	Light Grey	Color Code
MFP	Light Blue	(R-value and tolerance)

All these products have Pb-free terminations and meet EU-RoHS and China-RoHS requirements

**TYPE DESIGNATION (HOW TO ORDER)**

MF	1/4	D	C	T52	A	1002	F
PRODUCT CODE	POWER RATING	T.C.R.	TERMINATION SURFACE MATERIAL	TAPING & FORMING	PACKAGING	NOMINAL RESISTANCE	RESISTANCE TOLERANCE
MFS, MF, MFP	Unit: Watt	E: ±25ppm/K C: ±50ppm/K D: ±100ppm/K L: ±200ppm/K	C: SnCu		A: Ammo R: Reel	B, C, D, F: 4 digits G: 3 digits	B, C, D, F, G

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS

**FEATURES**

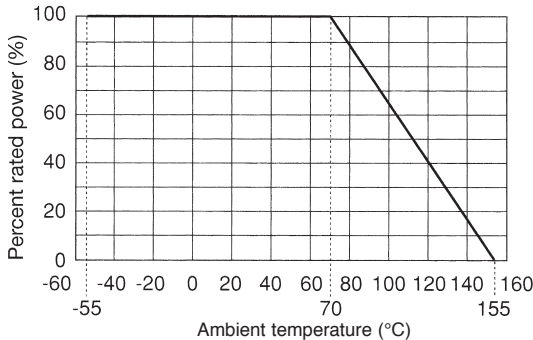
- High precision and low T.C.R. metal film resistor
- Automatic insertion is applicable
- Various formings are available
- Excellent long term stability
- MFP = Flame retardant coating
- MFS = Reduced size
- Meets or exceeds IEC 60115-1, JIS C 5201-1, EIAJ RC-2137 (MF-series)
- Rated ambient temperature: +70°C
- Operating temperature range: -55°C ... +155°C

**DIMENSIONS (mm)**

TYPE	L	C Max.	ø D	ø d (nom.)	l*
MFS 1/4	3.2 ± 0.2	3.4	1.7 <sup>+0.2</sup> <sub>-0.1</sub>	0.45	30 ± 3
MF 1/4	6.3 ± 0.5	7.1	2.3 ± 0.3	0.60	
MFP 1/4	6.5 ± 0.5				11.1
MF 1/2	9.0 ± 1.0	12	3.5 ± 0.5		
MFP 1/2	9.5 ± 1.0			18.3	5.5 ± 0.5
MF 1	15.5 ± 1.0				

\* Lead length changes depending on taping and forming type

**DERATING CURVE**



**RATING**

DIN SIZE	TYPE	T.C.R. (ppm/K)	POWER RATING*	MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	DIELECTRIC WITH-STANDING VOLTAGE	RESISTANCE RANGE				
							E24 • E96	E24 • E96	E24 • E192	E24 • E96	E24
							B (±0.1%)	C (±0.25%)	D (±0.5%)	F (±1%)	G (±2%)
0204	MFS 1/4 C C	C (± 50)	0.25 W	250 V	500 V	300 V	-	-	49.9Ω...562kΩ	10Ω...1MΩ	-
	MFS 1/4 D C	D (± 100)									
0207	MF 1/4 E C	E (± 25)				500 V	30.1Ω...750kΩ	30.1Ω...1MΩ	30.1Ω...1MΩ	30.1Ω...1MΩ	-
	MF 1/4 C C	C (± 50)				500 V	-	-	10Ω...2.21MΩ	10Ω...2.21MΩ	-
	MF 1/4 D C	D (± 100)				500 V	-	-	-	1.0Ω...10Ω	0.51Ω...10Ω
0411	MF 1/4 L C	L (± 200)				700 V	47.5Ω...1MΩ	47.5Ω...1.5MΩ	47.5Ω...2MΩ	47.5Ω...2MΩ	-
	MF 1/2 C C	C (± 50)	0.5 W	350 V	700 V	700 V	-	-	10Ω...5.05MΩ	10Ω...4.99MΩ	-
	MF 1/2 D C	D (± 100)									
	MF 1/2 L C	L (± 200)				700 V	-	-	1.0Ω...10Ω	0.51Ω...10Ω	
0617	MF 1 E C	E (± 25)	1W				47.5Ω...2MΩ	47.5Ω...2.49MΩ	47.5Ω...4.64MΩ	47.5Ω...5.11MΩ	-
0207	MFP 1/4 D C	D (± 100)	0.25 W	158 V	395 V	500 V	-	-	-	10Ω...100kΩ*	-
0411	MFP 1/2 D C	D (± 100)	0.5 W	223 V	557 V	500 V	-	-	-	-	-

\* For resistors operated in ambient temperature over +70°C, power rating shall be derated like shown in above „DERATING CURVE“

\*\* Please refer to „SNF“-series for other ohmic values.

Rated voltage = √ Power rating x resistance value or max. working voltage, whichever is lower.

Contact our sales representatives before you use our products for applications including automobiles, medical equipment and aerospace equipment. Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order or use.