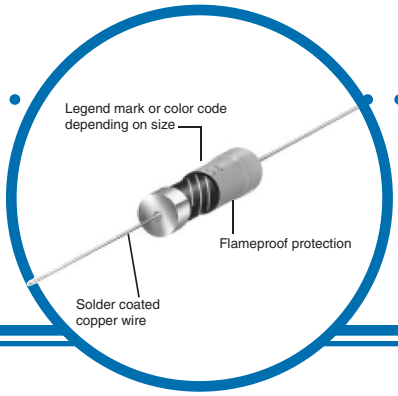
Power Metal Film Resistor

TT electronics

MF-S Series

- Flameproof protection
- Small size for power rating
- Range of 4 sizes: 0.5 watt to 3 watt at 70°C



Electrical Data

IRC Type	Power Rating @ 70°C (watts)	Resistance Range (ohms)	Limiting Element Voltage (volts)	TCR (ppm/°C)	Isolation Voltage (volts)	Resistance Tolerance (%)	Standard Values	Thermal Impedance (°C/watt)	Operating Temperature Range (°C)
MF1/2S	0.5	0.1 - 1M	350	150	500	≤1Ω: 5, 10 >1Ω: 1, 2, 5	E24 Preferred	140	-55 to 235
MF1S	1.0							110	
MF2S	2.0	0.1 - 470K		<1Ω: 350 ≥10Ω: 150				80	
MF3S	3.0				700			60	

Environmental Data

Characteristic	Maximum
Loaded at Rated Power: 1000 hrs at 70°C	5
Shelf Life: 12 months at room temperature	1
Derating from Rated Power at 70°C	zero at 155°C
Climatic	1
Climatic Category	40/125/56
Temperature Rapid Change	0..5
Resistance to Solder heat	0.5

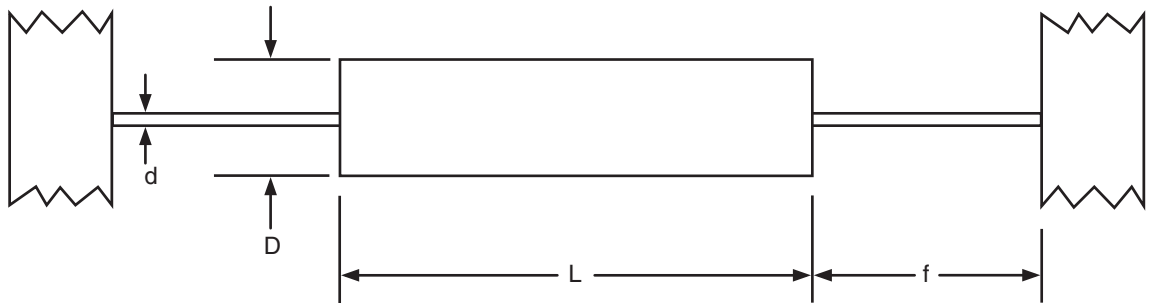
General Note
IRC reserves the right to make changes in product specification without notice or liability.
All information is subject to IRC's own data and is considered accurate at time of going to print.

Wire and Film Technologies Division • 4222 South Staples Street • Corpus Christi Texas 78411 USA
Telephone: 361 992 7900 • Facsimile: 361 992 3377 • Website: www.irctt.com

IRC
A subsidiary of
TT electronics plc

Power Metal Film Resistor

Physical Data



Dimensions (Inches and (mm)) & Weight (g)							
IRC Type	**L max**	**D max**	**f min**	**d nom**	**PCB Mounting Centers**	**Min Bend Radius**	**Wt. nom**
MF1/2S	0.244 (6.2)	0.090 (2.3)	0.039 (21.0)	0.024 (0.6)	0.402 (10.2)	0.024 (0.6)	0.3
MF1S	0.354 (9.0)	0.134 (3.4)	0.772 (19.6)	0.031 (0.8)	0.500 (12.7)	0.047 (1.2)	0.5
MF2S	0.492 (12.5)	0.165 (4.2)	0.700 (17.8)	0.031 (0.8)	0.724 (18.4)	0.047 (1.2)	0.9
MF3S	0.571 (14.5)	0.201 (5.1)	0.937 (23.8)	0.031 (0.8)	0.799 (20.3)	0.047 (1.2)	1.1

Construction
The resistance element is a precisely controlled thin film of metal alloy on a high purity ceramic core, protected by a cement coating applied so that terminations remain completely clear.

This permits a well defined body length, (clean lead to clean lead dimension L).

Terminations

Material Solder-coated copper wire.

Strength The terminations meet the requirements of IEC 68.2.21

Solderability The terminations meet the requirements of IEC 115-1, Clause 4.17.3.2

Marking
MF Series resistors are color coded with 4 bands. IEC 62 colors are used.

Solvent Resistance
The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.

Flammability
The resistors will not burn or emit incandescant particles under any condition of applied temperature or power overload.

Power Metal Film Resistor

Application Notes

1. If the resistors are to dissipate full rate power, it is recommended that the terminations should not be soldered closer than 4mm from the body.

2. Due to operating temperature limitations imposed by some pcb materials, derating may be necessary. An estimate of the temperature rise to be expected can be calculated using the thermal impedance figures given under Electrical Data.

3. Lead formed resistors can also be supplied. Standard options of Lancet, Radial, and Goalpost forming are shown in lead Form Information section.

Ordering Data

Sample Part No. MF2S | 6802 | J | R

IRC Type
MF1/2S, MF1S, MF2S, MF3S

Value
(Use IEC 62 code)

Tolerance
(Use IEC 62 code)
J = 5%, K = 10%

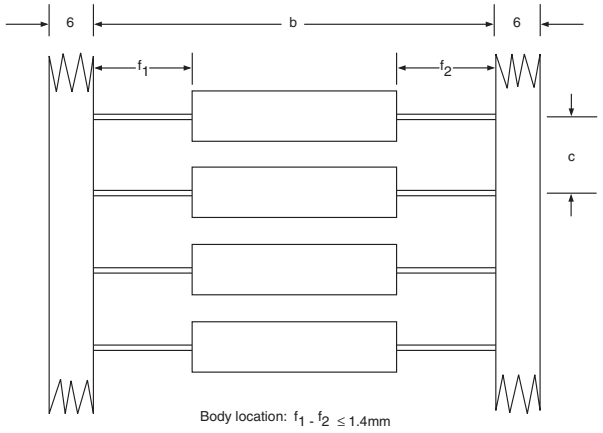
Packaging Details
R = Reel, A = Ammo

Type	Code	MF1/2S	MF1S	MF2S	MF3S
MF1/2S	**R**	5000	2500	2500	1000
MF1S	**A**	5000	2500	2500	N/A
MF2S	**A**	2000	1000	1000	N/A

Packaging

The preferred method of packaging is taped and ammo packed. See figure 1 for critical dimensions.

Alternative packaging is available by special request.



Type	b	c
MF1/2S	52	5
MF1S	52	5
MF2S	52	5
MF3S	67	10