

INTRODUCTION

The FM series flameproof type Metal Film Resistors are manufactured by vacuum deposition of multiple layers of metal film on high thermal conductive ceramic rods and are coated with layers of flameproof lacquer. These resistors meet overload tests in accordance with UL-1412 specification. (UL - 1412 is the standard for fusing resistors and temperature - limited resistors without producing a fire hazard) These FM flameproof metal film resistors are designed to replace the metal oxide resistors and low power wirewound resistors.

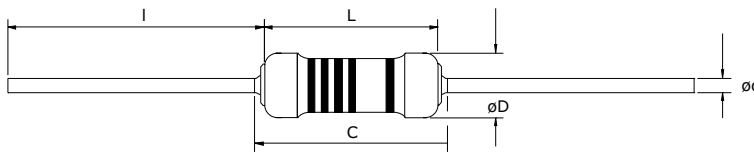
FEATURES

- Flame proof coating meeting UL - 1412 specification.
- Wide Resistance Range.
- Low Temperature Coefficient Resistance.
- Tight Tolerance.
- Precision Performance Characteristics.
- Lead Free

RATINGS

Type	FM 50	FM55	FM55SS	FM60	FM60SS	FM65	FM70
Rated Power at 70°C	1/6W	1/4W	0.4W	1/2W	0.6W	1W	2W
Operating Temp Range	-55°C to +155°C						
Derating to 0 load at							
Maximum Working Voltage	200V	250V	200V	350V	250V	500V	500V
Maximum Overload Voltage	400V	500V	400V	700V	500V	700V	1000V
Resistance Range	10Ω-1MΩ						
1% E-96, E-24							
5%, E-24	50ppm/°C						
Temperature Coefficient							

DIMENSIONS

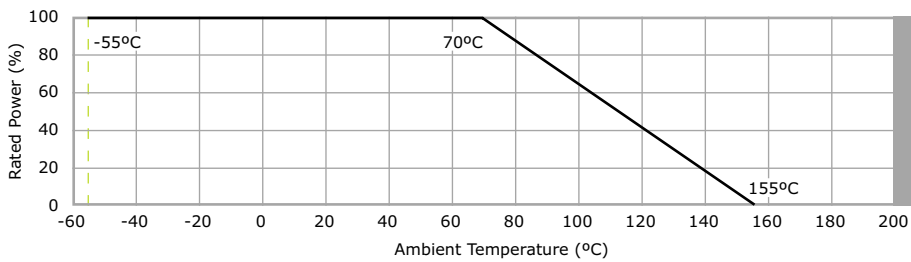


Type	DIMENSIONS (Millimeters)				
	L	C	D	l	d
FM50/FM55SS	3.30±0.4	4.1 Max	1.70±0.2	28.0±3.0	0.45±0.05
FM55/FM60SS	6.35±0.5	7.1 Max	2.30±0.3	28.0±3.0	0.60±0.05
FM60	9.00±0.5	11.8 Max	3.20±0.5	28.0±3.0	0.60±0.05
FM65	12.00±1.0	15.0 Max	4.50±0.5	35.0±3.0	0.80±0.05
FM70	16.00±1.0	22.0 Max	5.00±0.5	35.0±3.0	0.80±0.05

PERFORMANCE CHARACTERISTICS

Performance Test	Test Method	Specification
DC Resistance	MIL-STD-202F, Method 303	± 1%, ± 2%, ± 5% Tolerance
Resistance Temperature Coefficient	MIL-STD-202F, Method 304	± 50ppm/°C
Short Time Overload	MIL-R-55342E, Sect. 4.7.5	± (0.5% + 0.05Ω) No Mechanical Damage
Dielectric Withstanding Voltage	MIL-STD-202F, Method 301	± (0.5% + 0.05Ω)
Insulation Resistance	MIL-STD-202F, Method 302	>10 ³ MΩ
Current Noise	MIL-STD-202F, Method 308	<0.3μ v/v
Solderability	MIL-STD-202F, Method 208	>95% coverage
Resistance to Soldering Heat	MIL-R-55342E, Sect. 4.7.7	± (0.5% + 0.05Ω)
Robustness of electrode (Terminal Strength)	MIL-STD-202F, Method 211	± (0.5% + 0.05Ω) No Mechanical Damage
Resistance to Solvents	MIL-STD-202F, Method 215	No Damage to lacquer & colour coding
Moisture Resistance	MIL-STD-202F, Method 106	± (1.0% + 0.05Ω)
Temperature Cycling	MIL-STD-883F, Method 1010.7	± (0.5% + 0.05Ω)
Low Temperature Operation	MIL-R-55342E, Sect. 4.7.4	± (0.5% + 0.05Ω)
High Temperature Exposure	MIL-R-55342E, Sect. 4.7.6	± (1.0% + 0.1Ω)
Flameproof	MIL-STD-202F, Method 107	No evidence of flame
Loadlife	MIL-STD-202F, Method 108	± (2.0% + 0.1Ω)

DERATING CURVE



ORDERING CODE

FM XXXX - XXXX X - X X

Resistor	Size	Nominal Resistance		Resistance Tolerance	Packaging	Quantity
Flame Proof Metal Film	50	Resistors	3-Digit	E24 Series 2.2Ω=2R2 100Ω=101	F=± 1% G=± 2% J=± 5%	A=Ammo (52MM) S=Spool (52MM) M=Ammo (26MM) R=Spool (26MM) N=Ammo (73MM) Q=Spool (73MM)
	55SS		4-Digit	E96 Series 10.2Ω=10R2 10KΩ=1002		
	55					
	60SS					
	60					
	65					
	70					

