Tel: 82-32-817-4325
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Resistors And
Resistive Applications

MFD
METAL FILM LEADED RESISTOR

RoHS COMPLIANT

Features
- Very tight tolerance down to +-0.02%
- Extremely low TCR down to +-5ppm/C
- High precision
- Excellent stability

Applications
- Precision Equipment
- Measurement Equipment

GENERAL SPECIFICATIONS AND DIMENSIONS

Model	Power Rating at 70C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range[Ω]			TCR (ppm/C)
					±0.02%	±0.05%	±0.1%	
0727	1/4W	-55 to +155C	250V	500V	10Ω-500KΩ 10Ω-1MΩ			±5 ±10 ±15 ±25
1040	1/2W		300V	600V				

CHARACTERISTICS

Values in [ ] mean charge in Ω after test

Temp. Coefficient of Resistance	As Spec.	Resistance value at room temp. and room temp. +60C
Short Time Overload	±[0.5%+0.05Ω]	RCWV*2.5 or Max. overload voltage for 5 sec.
Insulation Resistance		Apply 500VDC for 1 minute, 1000MΩ
Endurance Data	±[0.5%+0.05Ω]	70±2C, Max. working voltage for 1000hours with 1.5hours "ON" and 0.5hours "OFF"
Damp Heat with Load	±[0.5%+0.05Ω]	40±2C, 90-95% R.H. Max. working voltage for 1000hours With 1.5hours "ON" and 0.5hours "OFF"
Soldering Ability	95% min. coverage	245±5C for 3sec.
Resistance to Soldering Heat	±[0.1%+0.01Ω]	350±10C for 3sec. After test leave for 3hours
Terminal Strength	Tensile: ≥2.5kg	Tensile strength: for 10sec. Torsional strength: Rotated through 360°, 5 rotations
Pulse Overload	±[0.5%+0.01Ω]	4 times RCWV for 10000 cycles with 1sec. "ON" and 25 sec. "OFF"
Temperature Cycle	±[0.5%+0.05Ω]	Low side: -55C/30min., Room temp.: 10 to 15min. High side side: 85C/30min., Room temp.: 10 to 15min.5 cycles
Resistance to Solvent	No deterioration of coatings and markings	Trichroethane for 3 min. with ultrasonic

*Reference Standard: MIL-STD-202, JIS-C 5201-1
*Storage Temperature: 25±3C; Humidity < 80%RH

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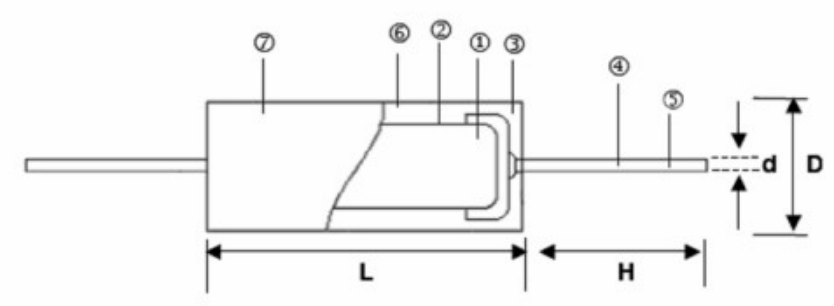
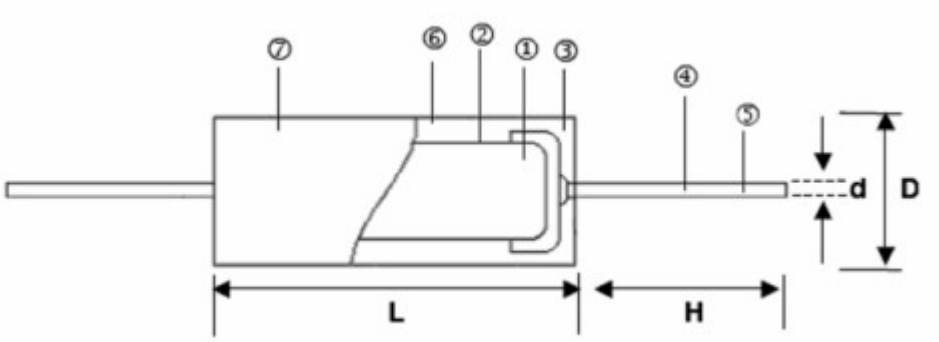
STRUCTURE



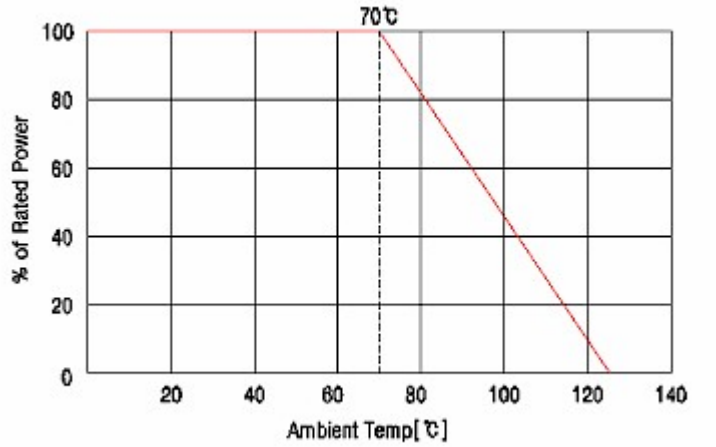
1 Ceramic Core(Alumina ceramic)
2 Resistor Element(Nickel alloy)
3 Terminal(Tinned iron cap)
4 Connection
5 Lead Wire(Tinned annealed copper wire)
6 Molding(Expose)
7 Marking(Expose based ink)

DIMENSIONS



Model	L	D	H	d	Weight(g) (1000pcs)
MFD0727	7.0±0.3	2.7±0.4	26±3	0.6±0.05	230
MFD1040	10.2±0.3	4.0±0.4	25±3	0.6±0.05	430

DERATING CURVE



ORDERING PROCEDURE EXAMPLE

MFD — Model #

0727 — Dimensions (L×D)
0727: 7.0×2.7
1040: 10.2×4.0

B — Resistance Tolerance
Q: ±0.02%
A:±0.05%
B: ±0.1%

A — Packing
A: Ammo
B: Bulk

C — TCR
S: ±5
B: ±10
N: ±15
C: ±25

V — Power Rating
U: 1/2W
V: 1/4W

1001 — Resistance
0100: 10Ω
2201: 2200Ω
1002: 10000Ω
1001: 1KΩ
1004: 1MΩ

