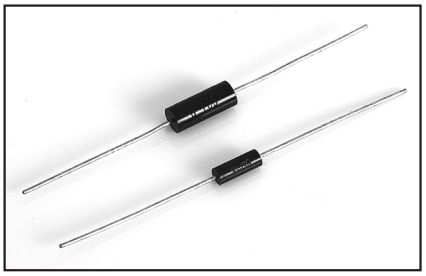
High Precision Metal Film Leaded Resistors

- Very tight tolerance down to ± 0.02%
- Extremely low TCR down to ±5 ppm/℃
- High precision
- Excellent stability
- Precision equipment
- Measurement equipment



GENERAL SPECIFICATIONS

Model	Power Rating at 70℃	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range ±0.02%	Resistance Range ±0.05%	Resistance Range ±0.1%	TCR [ppm/℃]
MFD0727	1/4W	-55℃ ~ +125℃	250V	500V		10Ω-500KΩ		±5
						10Ω-1MΩ		±10, ±15, ±25
MFD1040	1/2W		300V	600V		10Ω-500KΩ		±5
						10Ω-1MΩ		±10, ±15, ±25

* Operating Voltage = √ (P*R)

CHARACTERISTICS

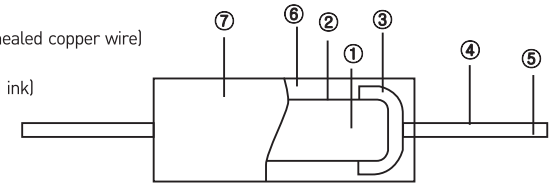
Values in [ ] mean change in Ω after test

Temperature Coefficient	As Spec.	Resistance value at room temperature and room temperature +60℃
Short Time Overload	±[0.05%+0.05Ω]	RCWV*2.5 or maximum overload voltage for 5 seconds
Insulation Resistance	> 1000MΩ	Apply 500VDC for 1 minute
Load Life	±[0.2%+0.05Ω]	70±2℃, maximum working voltage for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"
Moisture Load Life	±[0.2%+0.05Ω]	40±2℃, 90~95% RH, maximum working voltage for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"
Solderability	95% coverage minimum	245±5℃ for 5 seconds
Resistance to Soldering Heat	±[0.05%+0.01Ω]	350±10℃ for 3seconds or 260±5℃ for 10 seconds
Terminal Strength	Tensile: ≥2.5kg	Tensile strength: for 10 sec.; Torsional Strength: Rotated through 360°, 5 rotations
Pulse Overload	±[0.1%+0.1Ω]	4 times RCWV for 10000 cycles with 1second "ON" and 25seconds "OFF"
Temperature Cycle	±[0.05%+0.05Ω]	-25℃(30minutes) / +85℃(30minutes), 5 cycles
Resistance to Solvent	No deterioration of coatings and markings	Trichroethane for 3 minutes with ultrasonic

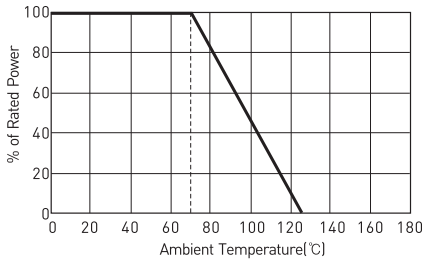
* Reference Standards: MIL-STD-202, JIS-C 5201-1 / * Storage Temperature: 25±3℃; Humidity < 80%RH

DIMENSIONS [mm]

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)



DERATING CURVE



Model	L	D	H	D	Weight(g) (1000pcs)	Packaging Ammo [pcs]
MFD0727	7.0±0.3	2.7±0.4	26±3	0.6±0.05	230	2,000
MFD1040	10.2±0.3	4.0±0.4	25±3	0.6±0.05	430	1,000

ORDERING PROCEDURE EXAMPLE

Ordering Example	Model	TCR	Resistance	Tolerance	Code
MFD0727 S0100AA	MFD0727	S [±5 ppm/℃]	10Ω	A [±0.05%]	A (Ammo)
MFD1040 B1004BB	MFD1040	B [±10 ppm/℃]	1MΩ	B [±0.1%]	B (Bulk)

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