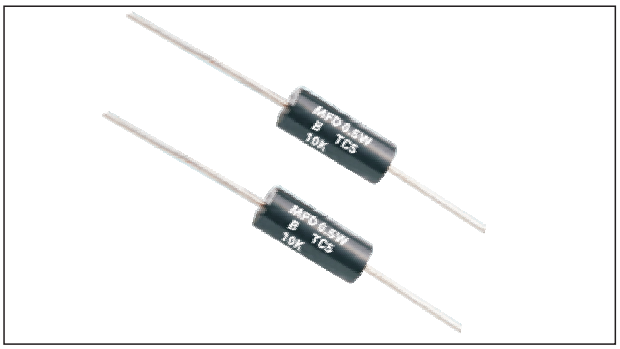
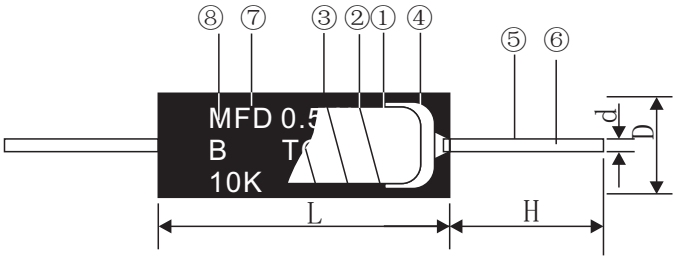
MFD Metal Film Resistors



Features

Ⅰ Power Rating:0.125W-1W
Ⅱ Precision tolerance tight to 0.02%
Ⅲ Precision metal film ,excellent stability and reliability
Ⅳ Superior electrical TCR performance narrowed to 5PPM/℃
Ⅴ lead (Pb)-free and RoHS compliant ,Covers all genral type resistors

Constructions



①	Ceramic Core(Alumina ceramic)
②	Trimming line
③	Resistor Element(Nickel alloy)
④	Terminal(Tinned iron cap)
⑤	Connection
⑥	Lead Wire(Tinned annealed copper wire)
⑦	Molding (Expoxy)
⑧	Laser Marking

Applications

Ⅰ Medical electronics.
Ⅱ Telecom.
Ⅲ Measuring and calibration equipment.
Ⅳ Precision instruments avionics.

Dimensions

Type	Power (W)	Dimensions(mm)			
		L 0.3	D 0.4	H 3	d 0.05
MFD0419	1/8W	4.4	1.9	25	0.45
MFD0727	1/4W	7.0	2.7	25	0.6
MFD1040	1/2W	10.2	4.0	25	0.6
MFD1551	3/4W	15.5	5.1	25	0.6
MFD1865	1W	18.2	6.5	30	0.6

Ordering Information

Example:

MFD	1/8	B	C8	10R0
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	TCR	Resistance

(1)Type: MFD SERIES

(2)Power Rating: 1/8=1/8W、1/4=1/4W、1/2=1/2W、3/4=3/4W、1=1W

(3)Tolerance: P= 0.02%、W= 0.05%、B= 0.1%、D= 0.5%、F= 1%

(4)TCR:C8= 3ppm/℃; C7= 5ppm/℃;C6= 10ppm/℃;C5= 15ppm/℃;C3= 25ppm/℃;

(5)Resistance Value:10R0=10R、R10=0.1Ω、47R0=47Ω

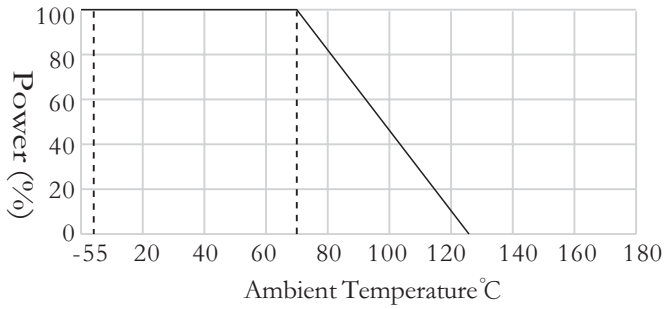
Reference Standards

JIS C 5201-1

Applications And Ratings

Type	Power Rating(W)		Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range			TCR (PPM/℃)
	at 70℃	at 125℃				±0.02%	±0.05%	±0.1%	
MFD0419	1/8W	1/20W	-55~+125℃	200V	300V	10Ω~500KΩ			±5
MFD0727	1/4W	1/10W		250V	500V	10Ω~1MΩ			±10
MFD1040	1/2W	1/8W		300V	600V	10Ω~1MΩ			±15
MFD1551	3/4W	1/4W		350V	700V	10Ω~1MΩ			±25
MFD1865	1W	1/2W		400V	800V	10Ω~1MΩ			

Derating Curve



Performance Characteristics

Item	Requirement	Test Method(JIS C 5201-1)
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	-55℃~+125℃, 25℃ is the reference temperature
Short Time Overload	±(0.15%+0.05Ω)	RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	>1000MΩ	Apply 500VDC for 1 minute
Endurance	±(0.5%+0.05Ω)	70±2℃,Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	±(0.5%+0.05Ω)	40±2℃, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Solderability	95% min. coverage	245±5℃ for 5 seconds
Resistance to Soldering Heat	±(0.1%+0.01Ω)	350±10℃ for 3 seconds after test leave for 3 hours
Terminal Strength	Tensile:≦2.5kg	Tensile strength:for 10sec Torsional strength: Rotated through 360,5 rotatons
Pulse Overload	±(0.1%+0.01Ω)	4 times RCWV for 1000 cycles with 1 second"ON" and 25 seconds"OFF"
Temperature Cycle	±(0.5%+0.05Ω)	Low side:-55℃/30min, room temp:10 to 15min High side:85℃/30min, room temp:10 to 15min 5 cycles
Resistance to Solvent	No deterioration of coatings and markings	Trichloroethane for 3 min, with ultrasonic