

MFD

Metal Film Leaded Resistor

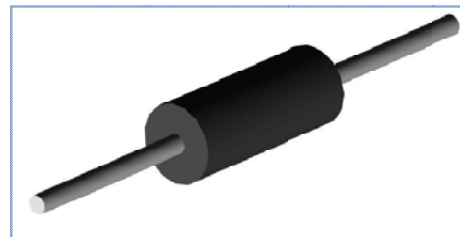
RoHS
COMPLIANT

■ Features

- Very tight tolerance down to $\pm 0.02\%$
- Extremely low TCR down to $\pm 5\text{ppm}/^\circ\text{C}$
- High precision
- Excellent stability

■ Applications

- Precision Equipment, Measurement Equipment



■ GENERAL SPECIFICATIONS

Model	Power Rating at 70	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range[Ω]			TCR (ppm/ $^\circ\text{C}$)
					$\pm 0.02\%$	$\pm 0.05\%$	$\pm 0.1\%$	
0727	1/4W	-55 ~ +155 $^\circ\text{C}$	250V	500V	10 Ω -500K Ω 10 Ω -1M Ω			± 5
1040	1/2W		300V	600V				± 10
								± 15
								± 25

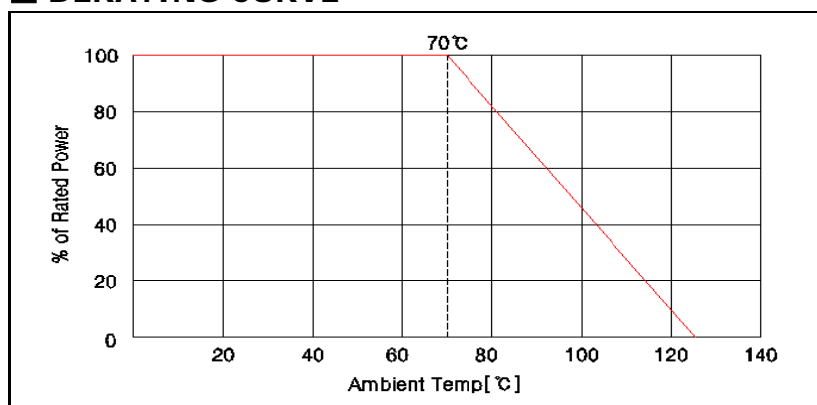
■ CHARACTERISTICS

Temp. Coefficient of Resistance	As Spec.	Resistance value at room temp. and room temp. +60 $^\circ\text{C}$
Short Time Overload	$\pm[0.15\%+0.05\Omega]$	RCWV*2.5 or Max. overload voltage for 5 sec.
Insulation Resistance	> 1000M Ω	Apply 500VDC for 1 minute
Endurance	$\pm[0.5\%+0.05\Omega]$	70 $\pm 2^\circ\text{C}$, Max. working voltage for 1000hours with 1.5hours "ON" and 0.5hours "OFF"
Damp Heat with Load	$\pm[0.5\%+0.05\Omega]$	40 $\pm 2^\circ\text{C}$, 90~95% R.H. Max. working voltage for 1000hours With 1.5hours "ON" and 0.5hours "OFF"
Solerability	95% min. coverage	245 $\pm 5^\circ\text{C}$ for 3sec.
Resistance to Soldering Heat	$\pm[0.1\%+0.01\Omega]$	350 $\pm 10^\circ\text{C}$ for 3sec. After test leave for 3hours
Terminal Strength	Tensile: $\geq 2.5\text{kg}$	Tensile strength: for 10sec. Torsional strength: Rotated through 360 $^\circ$, 5 rotations
Pulse Overload	$\pm[0.1\%+0.01\Omega]$	4 times RCWV for 10000 cycles with 1sec. "ON" and 25 sec. "OFF"
Temperature Cycle	$\pm[0.5\%+0.05\Omega]$	Low side: -55 $^\circ\text{C}/30\text{min.}$, Room temp.: 10 to 15min. High side side: 85 $^\circ\text{C}/30\text{min.}$, 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 $\pm 3^\circ\text{C}$; Humidity < 80%RH

■ DERATING CURVE



ORDERING PROCEDURE EXAMPLE

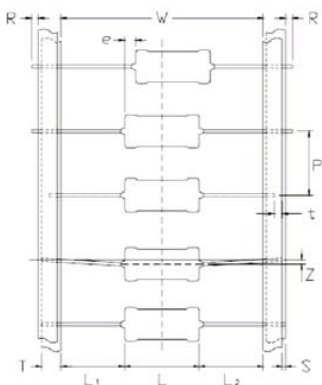
MFD	0727	B	A	C	V	1001
Model #	Dimensions (L×D)	Resistance Tolerance	Packing	TCR	Power Rating	Resistance
	0727: 7.0×2.7 1040: 10.2×4.0	Q: ±0.02% A: ±0.05% B: ±0.1%	A: Ammo B: Bulk	S: ±5 B: ±10 N: ±15 C: ±25	U: 1/2W V: 1/4W	0100: 10Ω 2201: 2200Ω 1002: 10000Ω 1001: 1KΩ 1004: 1MΩ

DIMENSIONS

Unit : 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)	
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

Taping/Packing Specifications



Unit : mm

Model	Packing Methods									
	L	W	P	L1-L2 Max.	T	Z Max.	R Max.	t Max.	e Max.	S Max.
0727	7±0.3	52±1	5±0.3	1.0	6±0.5	0.8	0	2.5	0.5	0.5
1040	10.2±0.3									

Ammo Packing

Unit : mm

	Model	Ammo Packing			
		A	B	C	Qty
	0727				2,000
	1040	79	53	258	1,000