

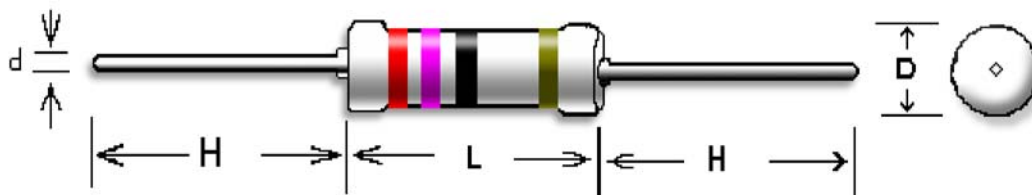
MSD- Pulse Safety Resistor

Specifications Per

- IEC-115-4
- MIL-11804
- DIN-44603

Features

- Special composite film on high grade ceramic substrate
- Flameproof coating meets UL-94V-0 and overload test UL-1412
- Excellent anti-surge capability
- Absorbs pulse from city power line, direct crossing or inductive coupling
- Protects electric equipment or parts from accidental shock
- Able to replace wire-wound resistor with lower cost



Dimensions:

Type	Body (mm) Length (L)	Body (mm) Diameter (D)	Lead Wire(mm) Length (H)	Lead Wire (mm) Diameter (d)	Net Weight Per 1000 Pcs
MSD25	6.2±1.0	2.6±0.2	26±3.0	0.6±0.03	300 Grams
MSD050	8.8±1.0	3.3±0.3	28±3.0	0.6±0.03	340 Grams
MSD100	10.5±1.0	4.0±0.5	28±3.0	0.7±0.03	500 Grams
MSD200	13.5±1.0	5.0±0.5	30±3.0	0.8±0.03	1050 Grams
MSD300	15.5±1.0	5.5±0.5	30±3.0	0.8±0.03	1200 Grams
MSD400	19.0±1.0	6.0±0.5	30±3.0	0.8±0.03	1600 Grams
MSD500	19.0±1.0	8.0±0.5	30±3.0	0.8±0.03	3100 Grams
MSD600	24.0±1.0	8.0±0.5	30±3.0	0.8±0.03	3700 Grams

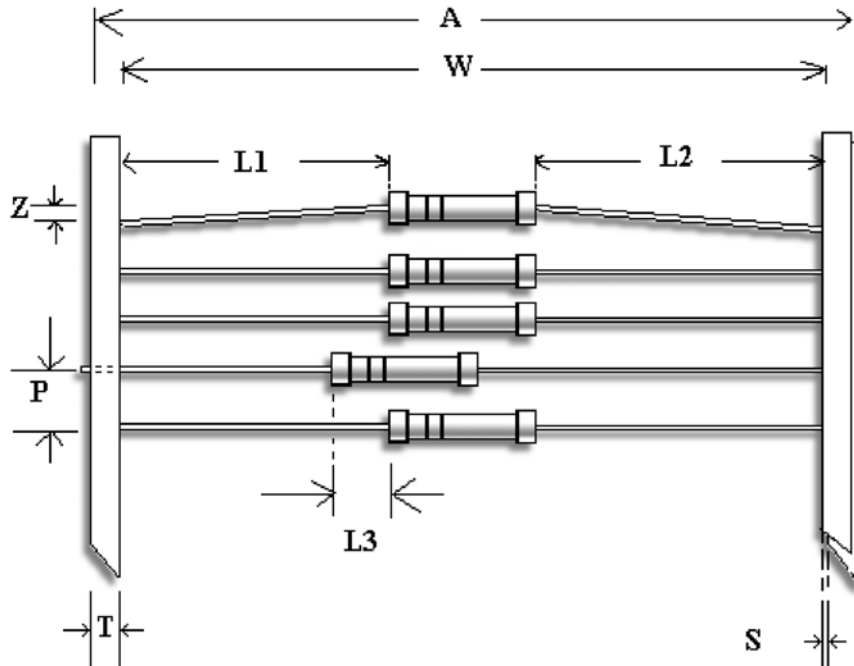
Specifications:

Type	Power Rating At 70°C	Max. Working Voltage	Max. Overload Voltage	Min. Resistance	Max. Resistance	Resistance Tolerance	Standard Resistance Values
MSD25	0.25W	250V	500V	0.1Ω	1M	±5%	E-24
MSD050	0.5W	350V	500V	0.1Ω	120K	±0.1~5%	E-24/96
MSD100	1W	350V	600V	0.1Ω	120K	±0.1~5%	E-24/96
MSD200	2W	350V	600V	0.1Ω	150K	±0.1~5%	E-24/96
MSD300	3W	350V	700V	0.1Ω	150K	±0.1~5%	E-24/96
MSD400	4W	450V	700V	0.1Ω	180K	±0.1~5%	E-24/96
MSD500	5W	500V	800V	0.1Ω	200K	±0.1~5%	E-24/96
MSD600	6W	500V	1000V	0.1Ω	220K	±0.1~5%	E-24/96

Special sizes, values, and specifications not listed available on special order.

MSD- Pulse Safety Resistor

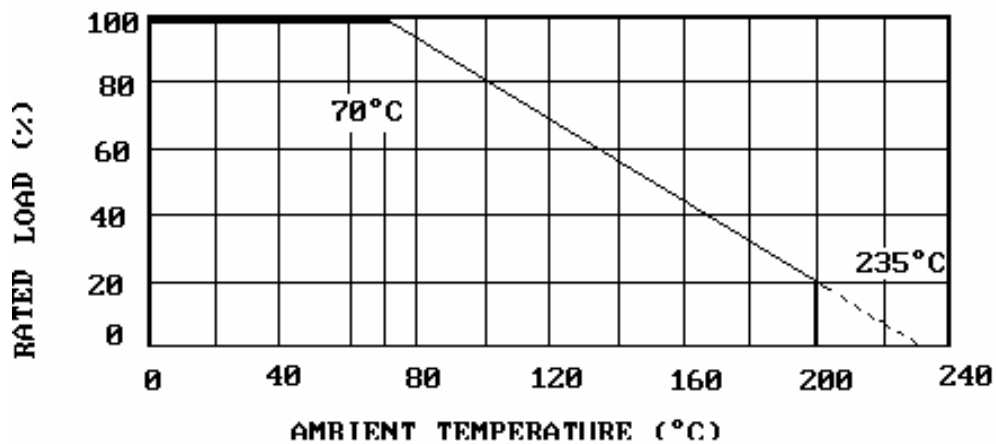
Taping Specification:



Unit (mm)

Type No.	A (Max.)	L1-L2 (Max.)	L3 (Max.)	P ±0.5	S (Max.)	T ±0.5	W ±1.5	Z (Max.)
MSD25	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
MSD050	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
MSD100	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
MSD200	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
MSD300	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
MSD400	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
MSD500	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
MSD600	97	±1.5	1.0	10.0	0.8	6.0	83.0	1.2

POWER DERATING CURVE



Jul. 02, 2004

MSD- Pulse Safety Resistor

Performance Specifications:

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	0.25W:	250
	0.5W:	350
	1W to 2W:	600
	3W to 6W:	1000
Temperature Coefficient, PPM / °C	±20~300 (Typical 300)	
Operating Temperature Range, °C	-55~+200	
Insulation Resistance, MΩ	10 ⁴	
Voltage Coefficient, PPM / V	25	

Performance Specifications

Test Characteristics	Test Conditions	Limits
Short Time Over Load	IEC 60115-1 4.13 5 seconds 2.5x rated voltage (not over max. overload voltage)	±(1%+0.05R)
Load Life In Humidity	IEC 60115-1 4.24 56 days at 40°C and 93% relative humidity	±5%
Load Life 1,000 hours	IEC 60115-1 4.25.1 Rated load 1.5 hours ON, 0.5 hours OFF, at 70°C	±5%
Resistance To Soldering Heat	IEC 60115-1 4.18 10 seconds at 260°C solder bath temperature	±(1%+0.05R)
Solderability	MIL-STD-202 Method 208 Solder area covered after 230±5°C/5±0.5 seconds w/ flux applied	90% Min.
Vibration	MIL-STD-202 Method 204 Six hours in each parallel and axial direction w/ a simple harmonic motion having an amplitude of 1.52mm and 10 to 20,000 Hz.	±(1%+0.05R)
Terminal Endurance	IEC 60115-1 4.25.3 1000 hours at 155°C without load	±(1%+0.05R)
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +155°C 30minutes, 5 cycles	0.25W ±(2%+0.05R)
		0.5~6W ±(1%+0.05R)

Ordering Information

Type	Tolerance	Resistance Value	Packaging	Special Request (Optional)
MSD100 MSD200	J (5%), F (1%) D (0.5%), B (0.1%)	10K	TB (Tape/Box) TR (Tape/Reel)	LV (Low value) TK50 (T.C. 50ppm)

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