

Specifications Per

- IEC 60115-1
- MIL-R-10509

Features

- Higher working voltage with improved reliability
- Proprietary conductive film
- Especially suitable for SMPS & lighting devices
- Low-cost alternative to metal-glazed resistors
- Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency

DIMENSIONS

Type	Body Length (L, mm)	Body Diameter (D, mm)	Lead Wire Length (H, mm)	Lead Wire Diameter (d, mm)	Net Weight Per 1000Pcs
MVR20	3.20 ± 1.0	1.9 ± 0.2	28 ± 3.0	0.45 ± 0.03	145 Grams
MVR25	6.50 ± 1.0	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 Grams
MVR51	9.00 ± 1.0	3.2 ± 0.2	26 ± 3.0	0.60 ± 0.03	340 Grams
MVR100	11.0 ± 1.0	4.5 ± 0.5	26 ± 3.0	0.70 ± 0.03	600 Grams
MVR200	15.5 ± 1.0	5.5 ± 0.5	26 ± 3.0	0.80 ± 0.03	1200 Grams

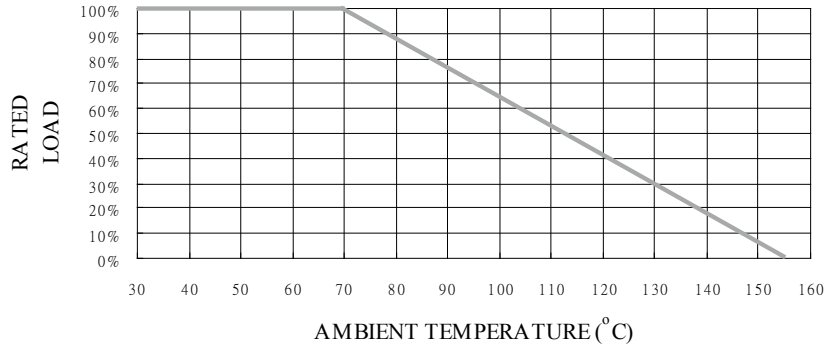
GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Overload Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
MVR20	1/4W	550V DC 400V RMS	1.1KV DC 800V RMS	47KΩ	33MΩ	±0.1%~ 5%	E-192/E-24
MVR25	1/4W	1.1KV DC 800V RMS	2.2KV DC 1.6KV RMS	47KΩ	33MΩ	±0.1%~ 5%	E-192/E-24
MVR51	1/2W	2.3KV DC 1.6KV RMS	4.6KV DC 3.2KV RMS	47KΩ	68MΩ	±0.1%~ 5%	E-192/E-24
MVR100	1W	4KV DC 2.8KV RMS	8KV DC 5.6KV RMS	47KΩ	100MΩ	±0.1%~ 5%	E-192/E-24
MVR200	2W	7KV DC 5KV RMS	14KV DC 10KV RMS	47KΩ	100MΩ	±0.1%~ 5%	E-192/E-24

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

Quality • Reliability
Cost-Down via Innovation

■ POWER DERATING CURVE



■ PART NUMBER

Example: MVR100J470KTKZTB1K0

MVR100	J	470K	TKZ	TB1K0
Type	Tolerance*	Resistance	TCR	Packaging
	B (0.1%) C (0.25%) D (0.5%) F (1%) J (5%)	470KΩ 4-character code containing - 3 significant digits 1 letter multiplier <u>OHM MULTIPLIER</u> R = 1 K = 10 ³ M = 10 ⁶ G = 10 ⁹	3-character code TKZ = Default Product Temperature Coefficient. Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.**	5-character code TB = Tape Box (pieces per box) <u>MVR20/MVR25</u> 5K0 = 5,000 <u>MVR51</u> 2K0 = 2,000 <u>MVR100</u> 1K0 = 1,000 <u>MVR200</u> 500 = 500

* Listed values may not be applicable to all product types or to all resistance values. Please check with us before placing order.

** For the availabilities of non-default temperature coefficient, please check with us. Reference for TCR letter codes can be found in section (4) of Part Number Construction in the Appendices.

TECHNICAL SPECIFICATIONS

Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	MVR20: 300 MVR25: 500 MVR51: 700 MVR100/MVR200: 1000
Temperature Coefficient, PPM / °C*	±100, ±200, ±400, ±800
Operating Temperature Range, °C	-55 ~ +155
Insulation Resistance, MΩ	>10 ⁴

* Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).

PERFORMANCE SPECIFICATIONS

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%
Load Life In Humidity	IEC 60115-1 4.24 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±3%
Load Life	IEC 60115-1 4.25.1 Rated load (not over max. working voltage) 1,000 hours with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±3%
Resistance To Soldering Heat	IEC 60115-1 4.18.2 Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±1%
Solderability	IEC 60115-1 4.17.2 Solder area covered after (235±3)°C/(2±0.2) seconds with flux applied	95% min.coverage
Vibration	IEC 60115-1 4.22 Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	±0.5%
Thermal Endurance	IEC 60115-1 4.25.3 1000 hours at 155°C without load	±5%
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +155°C 30minutes, 5 cycles	±2%