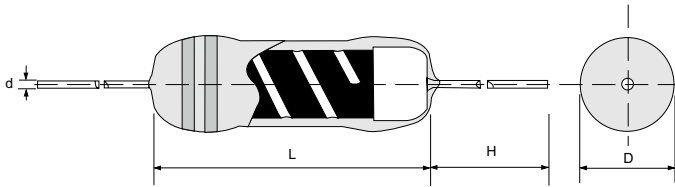


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## Specifications Per

- IEC 60115-1
- MIL R-10509

## Features

- Conformal multi-layer coating
- Color code per MIL & EIA standards
- Special tin-plated electrolytic copper lead wire
- 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
MP16	3.2 ± 1.0	1.9 ± 0.2	28 ± 3.0	0.45 ± 0.02	145 Grams
MP25	6.5 ± 1.0	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 Grams
MP51	9.0 ± 1.0	3.2 ± 0.2	26 ± 3.0	0.60 ± 0.03	340 Grams

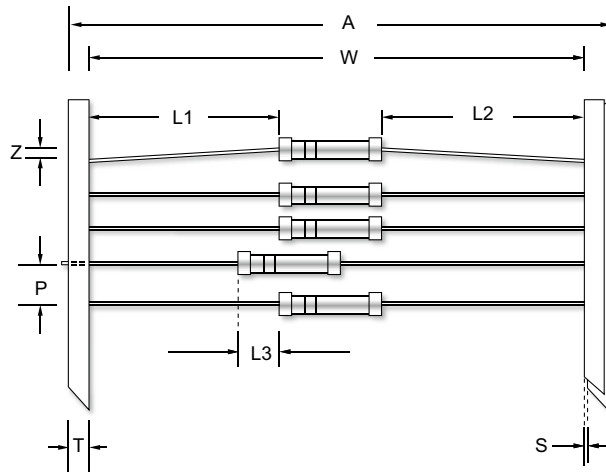
## GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Overload Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
MP16	1/6W	150V	300V	10Ω	500KΩ	±0.5%	E-24/E-192
						±0.25%	
						±0.1%	
						±0.05%	
MP25	1/4W	250V	500V	10Ω	1MΩ	±0.5%	E-24/E-192
						±0.25%	
						±0.1%	
						±0.05%	
MP51	1/2W	350V	700V	10Ω	1MΩ	±0.5%	E-24/E-192
						±0.25%	
						±0.1%	
						±0.05%	

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

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## ■ TAPING SPECIFICATIONS



Unit (mm)

Type	A (Max.)	L1-L2 (Max.)	L3 (Max.)	P ±0.5	S (Max.)	T ±0.5	W ±1.5	Z (Max.)
MP16	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
MP25	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
MP51	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2

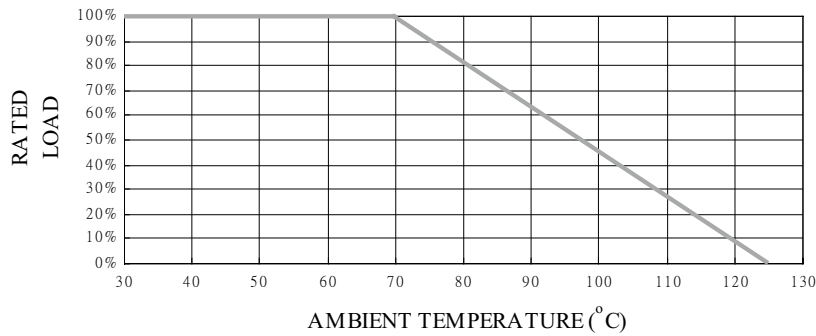
Type	Packing Type	MP16	MP25	MP51
Minimum Packing QTY (pcs)	Ammo pack	5000	5000	2000

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## POWER DERATING CURVE



## PART NUMBER

Example: MP25B49K9TKQTB5K0

MP25	B	49K9	TKQ	TB5K0
Type	Tolerance*	Resistance	TCR*	Packaging
	B (0.1%) C (0.25%) D (0.5%)	49.9KΩ <b>4-character code</b> containing - 3 significant digits 1 letter multiplier  <b>OHM MULTIPLIER</b> R = 1 K = 10 <sup>3</sup> M = 10 <sup>6</sup> G = 10 <sup>9</sup>	25ppm <b>3-character code</b>  TKN = ± 10 ppm TKP = ± 15 ppm TKQ = ± 25 ppm TKR = ± 50 ppm	<b>5-character code</b>  TB = Tape Box  (pieces per box) <u>MP16/MP25</u> 5K0 = 5,000  <u>MP51</u> 2K0 = 2,000

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

## TECHNICAL SPECIFICATIONS

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	MP16 MP25 MP51	300 500 700
Temperature Coefficient, PPM / °C*	±50, ±25, ±15, ±10	
Operating Temperature Range, °C	-55~+125	
Insulation Resistance, MΩ	10 <sup>4</sup>	

\* 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	<b>IEC 60115-1 4.13</b> 5 seconds 2.5x rated voltage (not over max. overload voltage)	±0.15%
Load Life In Humidity	<b>IEC 60115-1 4.24</b> 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±0.75%
Load Life 1,000 hours	<b>IEC 60115-1 4.25.1</b> Rated load (not over max. working voltage) with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±0.5%
Resistance To Soldering Heat	<b>IEC 60115-1 4.18.2</b> Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±0.15%
Solderability	<b>IEC 60115-1 4.17.2</b> Solder area covered after (235±3)°C/(2±0.2) seconds with flux applied	95% Min.
Vibration	<b>IEC 60115-1 4.22</b> Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	±0.1%
Thermal Endurance	<b>IEC 60115-1 4.25.3</b> 1000 hours at 125°C without load	±0.15%
Thermal Shock	<b>IEC 60115-1 4.19</b> -55°C 30minutes, +125°C 30minutes, 5 cycles	±0.15%