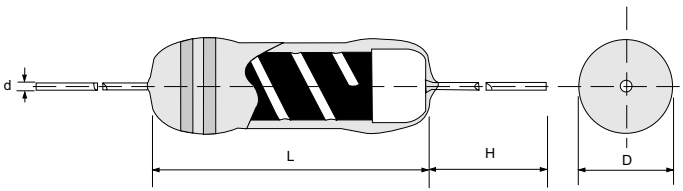


# PWR Power Metal Film Resistor

Quality • Reliability  
Cost-Down via Innovation

PWR



## 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 1000 Pcs
PWR01	6.50 ± 1.0	2.4 ± 0.2	26 ± 3.0	0.60 ± 0.02	220 Grams
PWR02	11.0 ± 1.0	4.0 ± 0.5	28 ± 3.0	0.80 ± 0.03	220 Grams

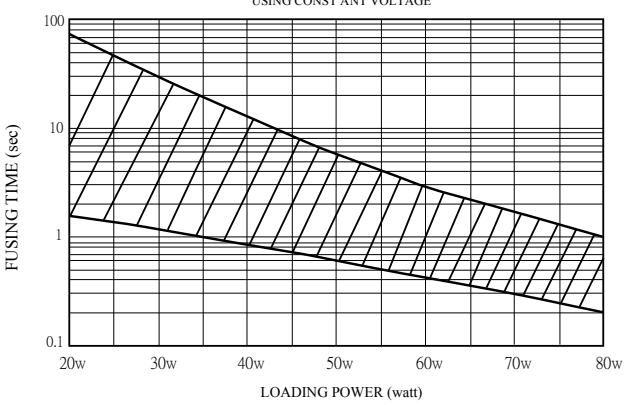
## GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Overload Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
PWR01	0.6W	350V	500V	0.22Ω	0.91Ω	±5%	E-24
	1W	350V	500V	1Ω	1MΩ	±1%~±5%	E-96/E-24
PWR02	1.2W	500V	700V	0.33Ω	0.91Ω	±5%	E-24
	2W	500V	700V	1Ω	1MΩ	±1%~±5%	E-96/E-24

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

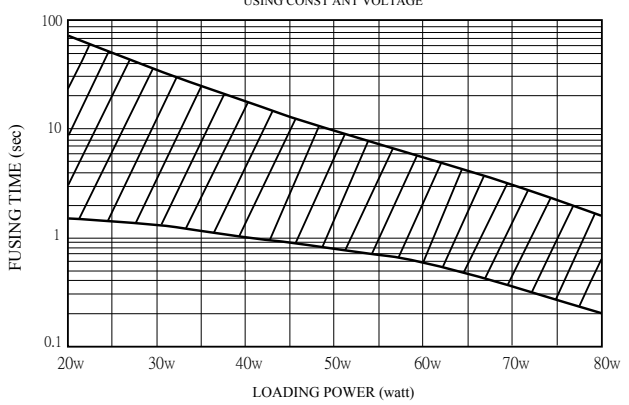
### PWR01

FUSING CHARACTERISTICS  
USING CONSTANT VOLTAGE



### PWR02

FUSING CHARACTERISTICS  
USING CONSTANT VOLTAGE



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## ■ PART NUMBER

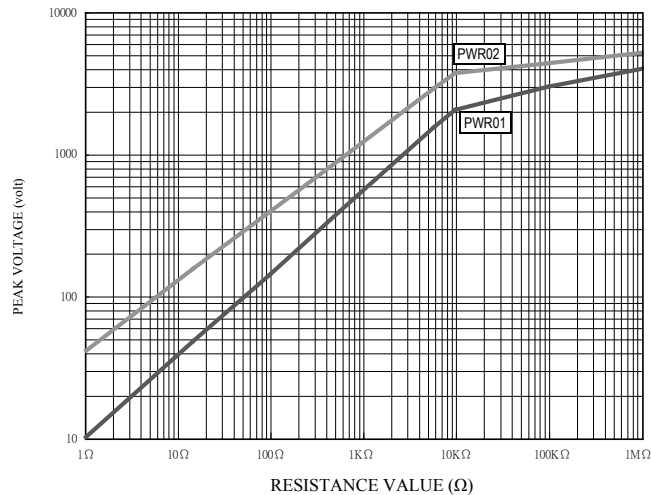
Example: PWR01J10K0TKZTB2K0

<b>PWR01</b>	<b>J</b>	<b>10K0</b>	<b>TKZ</b>	<b>TB2K0</b>
Type	Tolerance	Resistance	TCR	Packaging
	J (5%)	10KΩ <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>	<b>3-character code</b>  TKZ = Default Product Temperature Coefficient.  Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.*	<b>5-character code</b>  TB = Tape Box  (pieces per box) PWR01 2K0 = 2,000  PWR02 1K0 = 1,000

\* 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.

## ■ SURGE PERFORMANCE

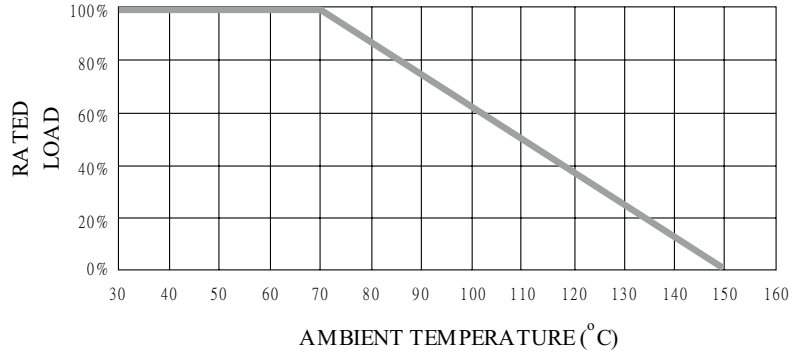
1.2/50us PEAK PULSE  
5 pulses at 12-sec interval for 0.5% permanent change



Quality • Reliability  
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## ■ POWER DERATING CURVE



## ■ TECHNICAL SUMMARY

Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	500
Temperature Coefficient, PPM / °C*	±250
Operating Temperature Range, °C	-55 ~ +150
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)	±3%
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	±5%
Load Life	<b>IEC 60115-1 4.25.1</b> Rated load (not over max. working voltage) 1,000 hours with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±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	±1%
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.coverage
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 1.52mm and 10 to 2,000 Hz.	±0.5%
Thermal Endurance	<b>IEC 60115-1 4.25.3</b> 1000 hours at 150°C without load	±3%
Thermal Shock	<b>IEC 60115-1 4.19</b> -55°C 30minutes, +150°C 30minutes, 5 cycles	±3%