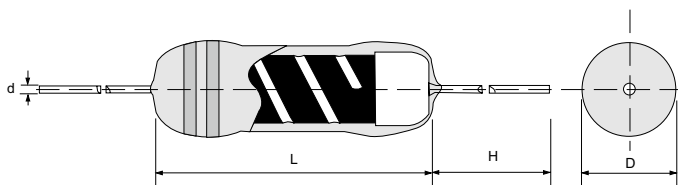# JEPSUN

PSR
Power Sink Resistor

Quality • Reliability
Cost-Down via Innovation

Specifications Per

• IEC 60115-4

• MIL-11804

Features

• Designed to replace cement resistors

• Reduces assembly cost with feasibility auto insertion

• Enhanced conductive film absorbs pulse noise

• Superior-grade ceramic core dissipates heat efficiently

• Flameproof multi-layer coating equivalent to UL 94 V-0

• Flameproof feature equivalent to overload test UL 1412

• Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency
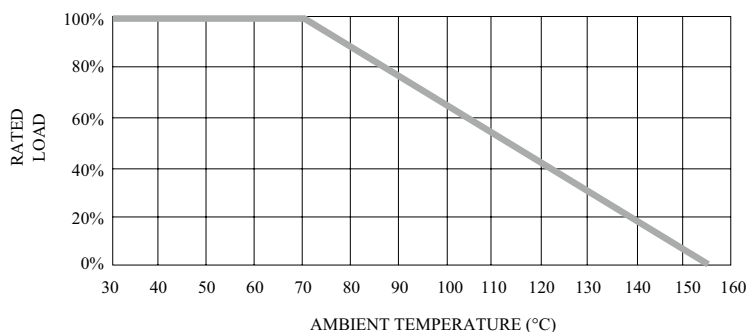
DIMENSIONS

Type	Body Length (L, mm)	Body Diameter (D, mm)	Lead Wire Length (H, mm)	Lead Wire Diameter (d, mm)	Net Weight Per 1000 Pcs
PSR650	24.0 ± 1.0	8.0 ± 0.5	30 ± 3.0	0.8 ± 0.03	3700 Grams

GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Overload Voltage	Maximum Rermissible Surge Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
PSR650	6W	550V	1100V	20KV	1Ω	4.7MΩ	±5%	E-24

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

POWER DERATING CURVE

RATED LOAD (%) vs AMBIENT TEMPERATURE (°C)

Revision: 31-OCT-2018

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■ PART NUMBER

Example: PSR650J10K0TKZTB400

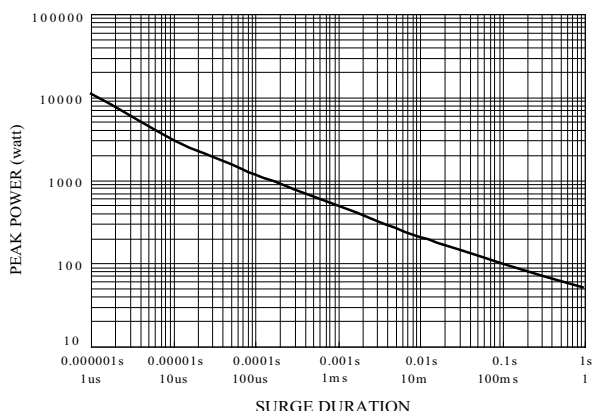| PSR650	J	10K0	TKZ	TB400
Type	Tolerance	Resistance	TCR	Packaging
	J (5%)	10KΩ **4-character code** containing - 3 significant digits 1 letter multiplier <u>OHM MULTIPLIER</u> R = 1 K = 10^3 M = 10^6 G = 10^9	**3-character code** TKZ = Default Product Temperature Coefficient. Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.*	**5-character code** TB = Tape Box (pieces per box) <u>PSR650</u> 400 = 400

* 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 SUMMARY

Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	1000
Temperature Coefficient, PPM / °C*	±750, ±1200
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).

■ SINGLE SURGE PERFORMANCE

PEAK POWER (watt)

SURGE DURATION

■ SURGE POWER DERATING CURVE

Papplicable-Prated / P_{surge}

Surge Duration / Surge OFF time

Notes:

• SINGLE SURGE PERFORMANCE graph is good for NON REPETITIVE applications operating in an ambient temperature of 70°C or less. For temperatures above 70°C, the graph power must be derated further linearly down to zero at 155°C.

• To determine applicable surge power in continuous-surge applications:
1. Identify allowable duration and peak power P_{surge} of single surge;
2. Determine ratio of surge duration/surge OFF time in application;
3. Calculate $P_{applicable}$ backwardly according to Y-axis of SURGE POWER DERATING CURVE.

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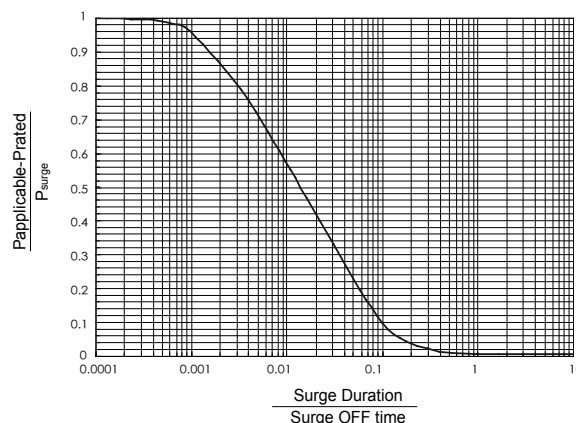
◼ PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits	
Short Time Over Load	**IEC 60115-1 4.13** 5 seconds 2.5x rated voltage (not over 2X max. working voltage)	±2%	
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	±5%	
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	±5%	
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.	±1%	
Thermal Endurance	**IEC 60115-1 4.25.3** 1000 hours at 155°C without load	±2%	
Thermal Shock	**IEC 60115-1 4.19** -55°C 30minutes, +155°C 30minutes, 5 cycles	±2%	
Surge Test	Surge voltage $= \sqrt{(1200 \times P \times R)}$ DC P is power rating, R is resistance value, surge voltage is not more than listed at right. Surge spec = 1.2/50µs Period = 1 sec Number of surges = 50	20KV	5%

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