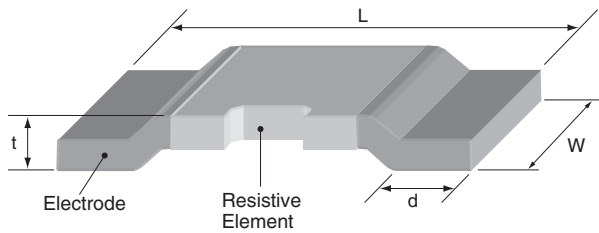


## features

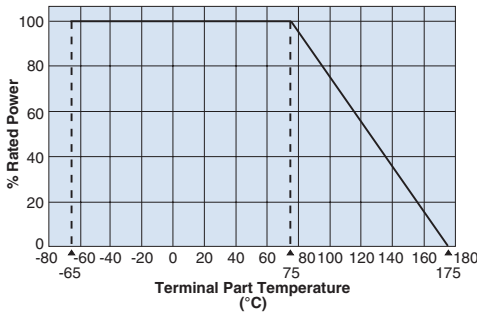
- Ultra low resistance, suitable for large current sensing
- Automatic mounting machines are applicable
- Suitable for reflow soldering (Not suitable for flow soldering)
- Products meet EU RoHS requirements
- AEC-Q200 qualified

## dimensions and construction



Type (Inch Size Code)	Resist. (Ω)	Dimensions inches (mm)			
		L	W	d	t
PSJ2 (3920)	0.2m	.394±.010 (10.0±0.25)	.205±.010 (5.2±0.25)	.079±.010 (2.0±0.25)	.078±.008 (1.98±0.2)
	0.5m				.05±.008 (1.27±0.2)
	1m				.035±.008 (0.89±0.2)
	2m				.046±.008 (1.17±0.2)
	3m				.037±.008 (0.95±0.2)
	4m				.033±.008 (0.84±0.2)
PSL2 (2512)	NEW 0.2m	.248±.006 (6.3±0.15)	.124±.006 (3.15±0.15)	.045±.006 (1.15±0.15)	.055±.006 (1.40±0.15)
	0.3m				.052±.006 (1.32±0.15)
	0.5m				.044±.006 (1.12±0.15)

## Derating Curve



For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve.

Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

## ordering information

<b>PS</b>	<b>J</b>	<b>2</b>	<b>N</b>	<b>TEB</b>	<b>L500</b>	<b>F</b>
Type	Power Rating	Termination Number	Termination Material	Packaging	Nominal Resistance	Tolerance
	J: 0.2m: 12W 0.5m: 10W 1m: 8W 2m: 6W 3m: 5W 4m: 5W  New L: 0.2m: 9W 0.3m: 8W 0.5m: 8W		N: No surface treatment	TEB: 8mm pitch plastic embossed	4 digits: all values less than 100mΩ are expressed in mΩ with "L" as decimal Ex: 0.5mΩ - L500 1mΩ = 1L00	F: ±1%

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

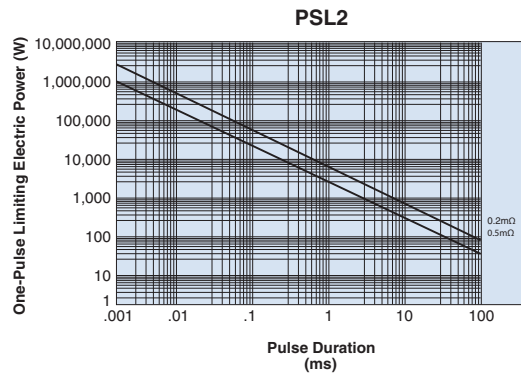
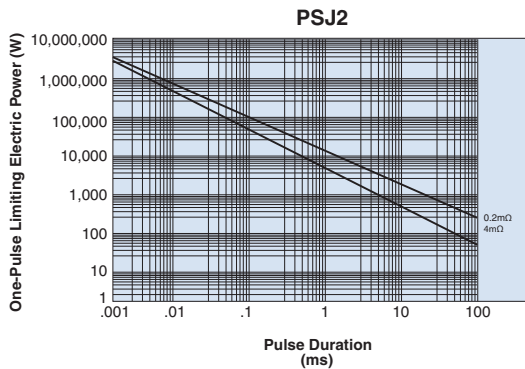
11/11/19

## applications and ratings

Part Designation	Power Rating (Current Rating)	T.C.R. (ppm/°C) Max.	Resistance Range	Resistance Tolerance	Rated Terminal Part Temperature	Operating Temperature Range
PSJ2	12W (244A)	±200	0.2mΩ	F: ±1%	75°C	-65°C to +175°C
	10W (141A)	±100	0.5mΩ			
	8W (89A)	±75	1mΩ			
	6W (54A)	±75	2mΩ			
	5W (41A)	±50	3mΩ			
	5W (35A)	±50	4mΩ			
PSL2	NEW 9W (212A)	250±100	0.2mΩ	F: ±1%	75°C	-65°C to +175°C
	8W (163A)	±175	0.3mΩ			
	8W (126A)	±115	0.5mΩ			

## environmental applications

### One-Pulse Limiting Electric Power



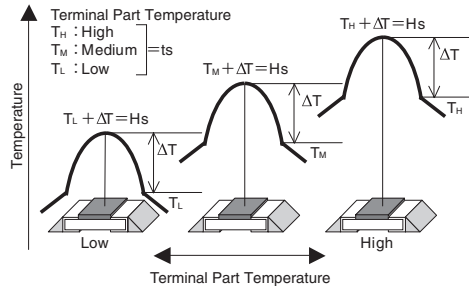
The maximum applicable voltage is equal to the max. overload voltage. Please ask us about the resistance characteristic of continuous applied pulse. The pulse endurance values are not assured values, so be sure to check the products on actual equipment when you use them.

### Thermal Resistance

Type	Resistance ( )	Rth (°C/W)
PSJ2	0.2m	4
	4m	27
PSL2	0.2m	3.2
	0.5m	6.7

$$R_{th} = (H_s - t_s) / \text{Power}$$

Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions. Please refer to us before use.



The temperature of the resistor will increase the same  $\Delta T$  from the standard terminal part temperature regardless of the ambient temperature when the same power is applied. This is because there is hardly any heat dissipation from the resistor surface to the ambient air.

### Performance Characteristics

Parameter	Requirement $\Delta R \pm \%$		Test Method
	Limit	Typical	
T.C.R.	Within specified T.C.R.	—	+25°C/+125°C
Overload (Short time)	±0.5%	±0.1%	PSJ (0.2m): 36W for 5 seconds; PSJ (0.5m): 30W for 5 seconds; PSJ (1m): 20W for 5 seconds; PSJ (2m): 18W for 5 seconds; PSJ (3m): 12.5W for 5 seconds; PSJ (4m): 10W for 5 seconds; PSL (0.2m): 27W for 5 seconds; PSL (0.3m, 0.5m): 24W for 5 seconds
Resistance to Solder Heat	±0.5%	±0.1%	260°C ± 5°C, 15 seconds ± 1 second
Rapid Change of Temperature	±0.5%	±0.1%	-55°C (30 minutes), +150°C (30 minutes), 1,000 cycles
Moisture Resistance	±0.5%	±0.05%	85°C ± 3°C, 85% ± 3°C RH, 1000 hours, 10% Bias
Endurance at 75°C and Less of Terminal Part Temperature	±1.0%	±0.3%	Terminal part temperature: 75°C ± 3°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Low Temperature Exposure	±0.5%	±0.02%	-65°C, 1000 hours
High Temperature Exposure	±1%	±0.5%	+175°C, 1,000 hours

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