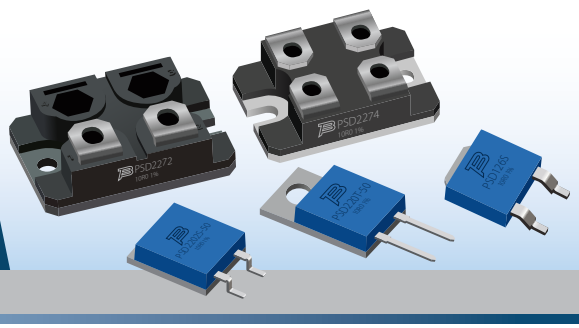
BOURNS®

Riedon™ PSD Series High Power Thick Film Resistors by Bourns



NEW PRODUCT BRIEF

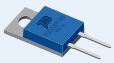
INTRODUCTION

Bourns is pleased to announce the expansion of its high-power resistor portfolio with the introduction of the Riedon™ PSD126, PSD220S, PSD220T-50, PSD2272 and PSD2274 Series High Power Thick Film Resistors by Bourns. Available in TO-126, TO-220, TO-227, and SMD DPAK packages, these four series are engineered for high-power density applications requiring excellent pulse handling capability and enhanced circuit stability. With power ratings from 25 W to 200 W, the PSD Series thick film resistors help design engineers achieve reliable performance and measurement accuracy in demanding operating environments.

These series offer a broad resistance range from 20 mΩ to 100 kΩ and Temperature Coefficients Of Resistance (TCR) from ±50 ppm/°C to ±600 ppm/°C, depending on the model and resistance value. These options provide flexibility to meet specific requirements for power dissipation, precision, and thermal performance. To further support diverse system needs, Bourns offers customization options for these resistor series, enabling customers to specify resistance values, TCR ranges, power ratings, and mounting configurations tailored to their applications. This flexibility allows engineers to achieve an optimal balance of performance, size, and thermal management in their circuit designs.

Target customers include power system and design engineers developing solutions in industrial automation, renewable energy, motor drives, power supplies, rectifiers, snubber circuits, and test and measurement instrumentation. These applications require resistors that can withstand high power and pulse energy while maintaining long-term stability for safe, efficient, and reliable system operation. By combining wide resistance ranges, customizable performance options, and rugged thermal characteristics, these thick film resistors deliver the features and reliability needed to meet growing demands of next-generation high-reliability, high-power electronic designs.

ELECTRICAL CHARACTERISTICS

Series	Photo	Power Rating (W)	Resistance Range (Ω)	Temperature Coefficient of Resistance (TCR)	Thermal Resistance (K/W)
PSD126		25	0.025 to 10k	±100 – ± 500 ppm/°C	6.0
PSD220S		Heat Sink: 30 to 50	0.02 to 15k	±50 – ± 600 ppm/°C	2.1 to 3.5
PSD220T-50		Heat Sink: 50	0.02 to 100k	±50 – ± 600 ppm/°C	2.1
PSD2272		Heat Sink: 100 to 200	0.05 to 5M	±50 – ± 300 ppm/°C	0.35 to 0.7
PSD2274		Heat Sink: 100 to 200	0.05 to 5M	±50 – ± 300 ppm/°C	0.35 to 0.7

For full characteristics, see data sheets

FEATURES

- High power rating from 25 W to 200 W
- Tolerance: ±1 % to ±10 %
- TCR: ±50 ppm/°C to ±600 ppm/°C
- Compatible with most types of soldering processes
- RoHS compliant*

BENEFITS

- High power capability supports dependable performance in critical power systems
- Low inductance minimizes parasitic effects for stable, precise circuit operation
- Broad soldering compatibility simplifies manufacturing and assembly

APPLICATIONS

- Power supplies
- Motor drives
- Test and measurement
- Rectifiers
- Capacitor discharging
- Snubber circuits
- Current limiting
- Heaters

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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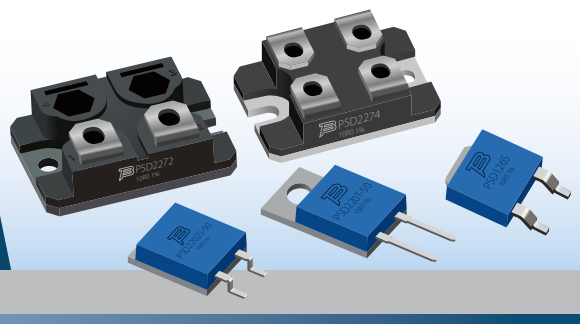
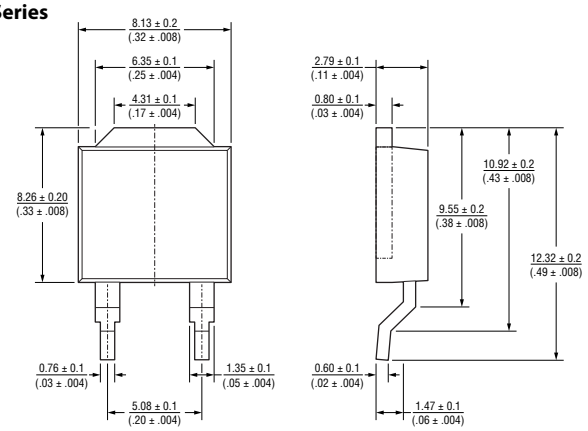


NEW PRODUCT BRIEF

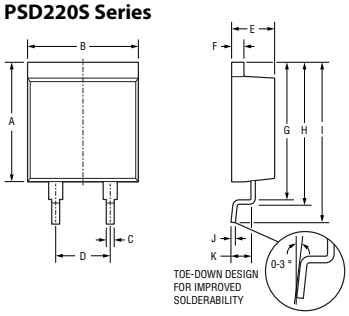
PRODUCT DIMENSIONS

PSD126 Series



DIMENSIONS: MM (INCHES)

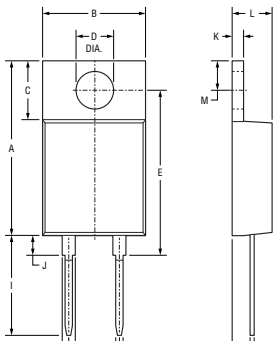
PSD220S Series



Dimensions			
A	12.50 ± 0.2 (.49 ± .008)	G	14.50 ± 0.2 (.57 ± .008)
B	10.16 ± 0.2 (.40 ± .008)	H	14.90 ± 0.2 (.59 ± .008)
C	0.76 ± 0.1 (.03 ± .004)	I	17.12 ± 0.2 (.67 ± .008)
D	5.08 ± 0.1 (.20 ± .004)	J	0.40 ± 0.1 (.02 ± .004)
E	4.00 ± 0.1 (.16 ± .004)	K	1.85 ± 0.1 (.07 ± .004)
F	1.20 ± 0.1 (.05 ± .004)		

DIMENSIONS: MM (INCHES)

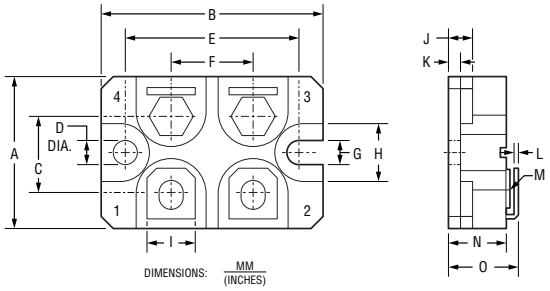
PSD220T Series



Dimensions			
A	17.30 ± 0.2 (.68 ± .008)	I	13.80 ± 0.2 (.54 ± .008)
B	10.16 ± 0.2 (.40 ± .008)	J	2.00 ± 0.1 (.08 ± .004)
C	6.00 ± 0.1 (.24 ± .004)	K	1.20 ± 0.1 (.05 ± .004)
D DIA.	3.7 ± 0.1 (.146 ± .004)	L	4.00 ± 0.1 (.16 ± .004)
E	16.40 ± 0.2 (.65 ± .008)	M	2.9 ± 0.1 (.11 ± .004)
F	5.08 ± 0.1 (.20 ± .004)	N	0.40 ± 0.1 (.02 ± .004)
G	0.76 ± 0.1 (.03 ± .004)	O	1.85 ± 0.1 (.07 ± .004)
H	1.30 ± 0.1 (.05 ± .004)		

DIMENSIONS: MM (INCHES)

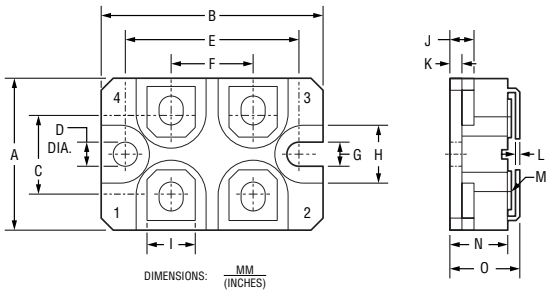
PSD2272 Series



DIMENSIONS: MM (INCHES)

Dimensions			
A	26.00 ± 0.5 (1.02 ± .020)	I	8 ± 0.2 (.31 ± .008)
B	38.00 ± 0.5 (1.50 ± .020)	J	4 ± 0.2 (.16 ± .008)
C	12.7 ± 0.2 (.50 ± .008)	K	2 ± 0.2 (.08 ± .008)
D	4 ± 0.2 (.16 ± .008)	L	0.8 ± 0.1 (.03 ± .004)
E	30 ± 0.2 (1.18 ± .008)	M	M4
F	15 ± 0.2 (.59 ± .008)	N	10 ± 0.2 (.39 ± .008)
G	4.1 ± 0.2 (.16 ± .008)	O	11.9 ± 0.2 (.47 ± .008)
H	10 ± 0.2 (.39 ± .008)		

PSD2274 Series



DIMENSIONS: MM (INCHES)

Dimensions			
A	26.00 ± 0.5 (1.02 ± .020)	I	8 ± 0.2 (.31 ± .008)
B	38.00 ± 0.5 (1.50 ± .020)	J	4 ± 0.2 (.16 ± .008)
C	12.7 ± 0.2 (.50 ± .008)	K	2 ± 0.2 (.08 ± .008)
D	4 ± 0.2 (.16 ± .008)	L	0.8 ± 0.1 (.03 ± .004)
E	30 ± 0.2 (1.18 ± .008)	M	M4
F	15 ± 0.2 (.59 ± .008)	N	10 ± 0.2 (.39 ± .008)
G	4.1 ± 0.2 (.16 ± .008)	O	11.9 ± 0.2 (.47 ± .008)
H	10 ± 0.2 (.39 ± .008)		