

## Type BDS100 Series

### Key Features

- 100W in a 9.5cm<sup>2</sup> footprint
  - Gives an impressive power density of 10.5W/cm<sup>2</sup>
- Virtually inductance-free
  - Inductance < 40nH
- Wide resistance range: 0.47Ω to 1MΩ
  - Coupled with 1% tolerance gives ultimate design flexibility
- Multiple terminal configurations and multi-resistor packages
  - The space saving solution
- Partial discharge <10pC at 2kV
  - Guaranteeing quality, reliability and long life

### Applications

- Snubbing (Low inductance)
- Balancing Resistor (Multi-resistor package)
- Filter (Low inductance)
- High Voltage
- High Frequency



With less than 40nH inductance and a 100Watt power rating in an easy-mounting 38mm x 25mm Isotop case, the BDS100 offers high power density over a wide range of ohmic values (R47 – 1MΩ) and benefits from 10 years experience in the field. Available in 6 resistor configurations with 2 or 4 easy to connect terminals, the resistors are made from quality materials for optimum reliability and stability with very low partial discharge.

TE Connectivity can test resistors to conform to relevant customer specifications, and will advise on the use of resistors for pulse energy and high voltage applications (HV designs available). Resistors with alternative terminations or flying leads are available, and custom designs are welcome. This product is available via distribution.

### Characteristics -Electrical

<b>Resistance Range:</b>	R47 - 1MΩ	
<b>Resistance Tolerance:</b>	± 10%, 5% (Tighter by discussion)	
<b>TCR:</b>	R<1Ω	± 250ppm/°C
	R>1Ω	± 150ppm/°C
<b>Rated Power:</b>	Heatsink: 115°C / 100°C / 60°C	25W / 50W / 100W
<b>Capacitance:</b>	Parallel	15pF
		To Earth 40pF
<b>Series Inductance:</b>	40nH (Maximum)	
<b>Limiting Element Voltage:</b>	(100W or Less)	500Vdc/ac rms
<b>Isolating Voltage:</b>	(Terminal to Heatsink)	2.5kVac rms
<b>Single Shot Voltage:</b>	1.5/50ms	4kV
<b>Insulation Resistance:</b>	(at 500V dc)	>100GΩ
<b>Partial Discharge:</b>	at 2kV	<10pC
<b>Heat Dissipation:</b>	Although the use of proprietary heat sinks with lower thermal resistance is acceptable, up rating is not recommended. The use of proprietary heat sink compound to improve thermal conductivity is essential.	

### Characteristics - Environmental

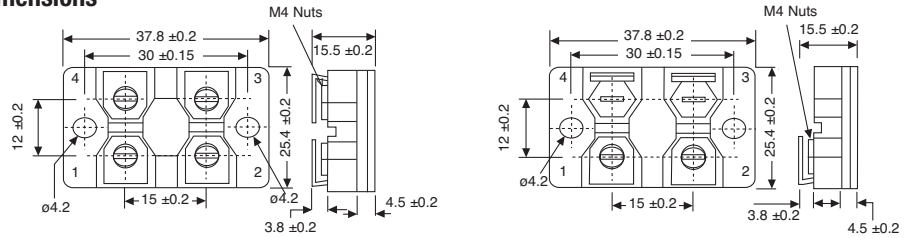
<b>Endurance (Rated Power):</b>	2000cyc. at P <sub>Rated</sub>	ΔR 0.25% Typ
<b>Humidity Load Life:</b>	56 Days, 40°C, 95% RH	ΔR 0.25% Typ (I.R.>10GΩ)
<b>Temperature Cycling:</b>	-55°C to +125°C, 5cycles	ΔR 0.25% Typ
<b>Operating Storage Temp:</b>	-55°C to +125°C	
<b>Short Term Overload:</b>	3 x P <sub>Rated</sub> (10s)	ΔR 0.25% Typ
<b>Vibration:</b>	10/500Hz	ΔR 0.25% Typ
<b>Bump:</b>	40g 4000 bumps	ΔR 0.25% Typ

## Type BDS100 Series

### Characteristics - Mechanical

<b>Terminal Size:</b>	M4
<b>Terminal Torque (max.):</b>	1.3Nm
<b>Creepage Distance:</b>	10mm
<b>Clearance:</b>	Terminal to Heatsink Terminal to Terminal
	10mm 3mm
<b>Heatsink Surface Finish:</b>	R <sup>a</sup>
	< 6μm
<b>Heatsink Flatness:</b>	0.05mm
<b>Weight:</b>	35g

### Dimensions

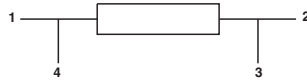


### Terminal Circuit Type

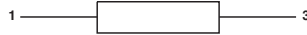
A (Standard)



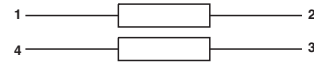
B (Voltage Sense)



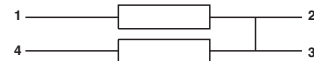
C (Special)



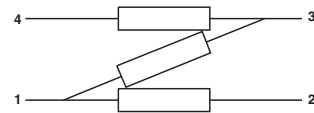
D (Isolated)



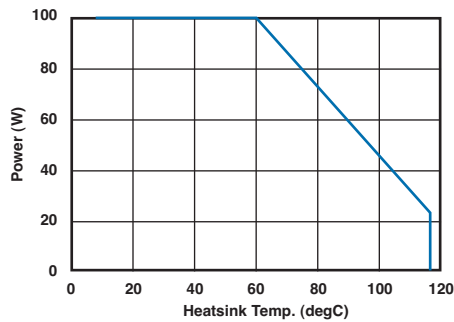
E (Network Tapped)



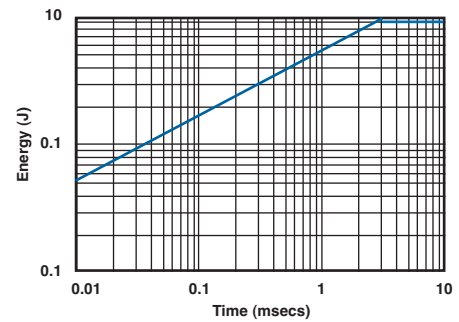
F (Network 3 Res.)



### Derating Curve



### Pulse Energy



### How to Order

BDS 2	A	100	1K0	J
<b>Common Part</b>	<b>Circuit Type</b>	<b>Power Dissipation</b>	<b>Resistance Value</b>	<b>Tolerance</b>
BDS 2 (2 Terminal) BDS 4 (4 Terminal)	A: Standard B-F: See above	100 - 100 Watts at 70°C	0.6Ω (600mΩ) R60 1Ω (1000mΩ) 1R0 1KΩ (1000Ω) 1K0 1MΩ (1000000Ω) 1M0	F - 1% J - 5% K - 10%

TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks.

Other logos, product and Company names mentioned herein may be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this datasheet, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this datasheet are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.