

BDP45S45DT1

Trench MOS Barrier Schottky Diodes

45V, 45A



Description

BDP45S45DT1A utilizes Bestirpower's advanced silicon carbide diode technology. This technology combines the benefits of excellent low forward voltage and robustness. Consequently, the family is suitable for application requiring high power efficiency

Benefits

- High-speed switching
- Low heat dissipation requirements
- Reduce size and cost of the system
- High-reliability

Applications

- Schottky rectifier
- UPS
- Data Center
- SMPS

Features

V_{RRM}	I_F	V_F
45 V	45 A	0.5 V

- Trench MOS schottky technology
- Low forward voltage drop
- Low leakage current
- Low power loss and high efficiency
- Halogen-free / RoHS compliant



Absolute Maximum Ratings ($T_C = 25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		45	V
V_{DC}	Maximum DC blocking voltage		45	V
I_F	Maximum average forward rectified current 0.375"(9.5mm) lead length		45	A
$I_{F,SM}$	Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)		500	A
V_F	Maximum instantaneous forward voltage at 45.0 A		0.5	V
I_R	Maximum instantaneous reverse current at rated DC blocking voltage	$T_C = 25^{\circ}\text{C}$	24.3	μA
T_J, T_{STG}	Operating Junction and Storage Temperature		-55 to +175	$^{\circ}\text{C}$

Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case, Typ.	1.0	$^{\circ}\text{C/W}$

Typical Performance Characteristics

FIG.1-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

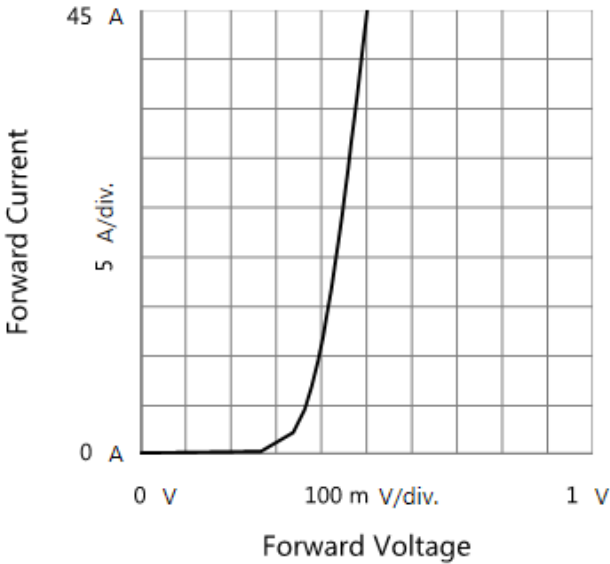
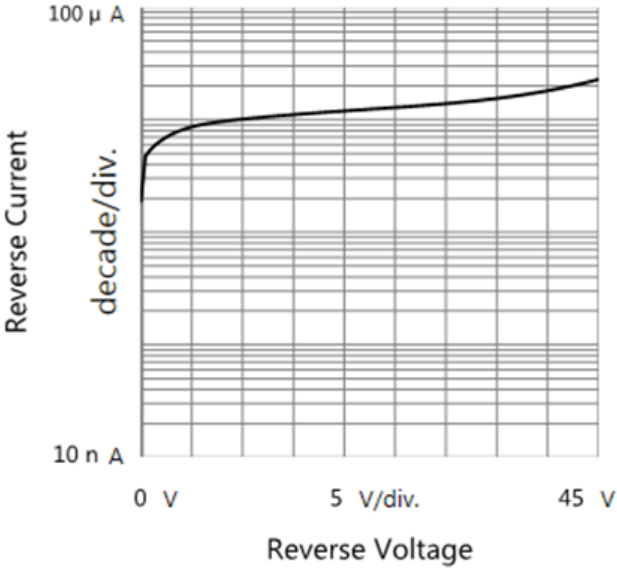
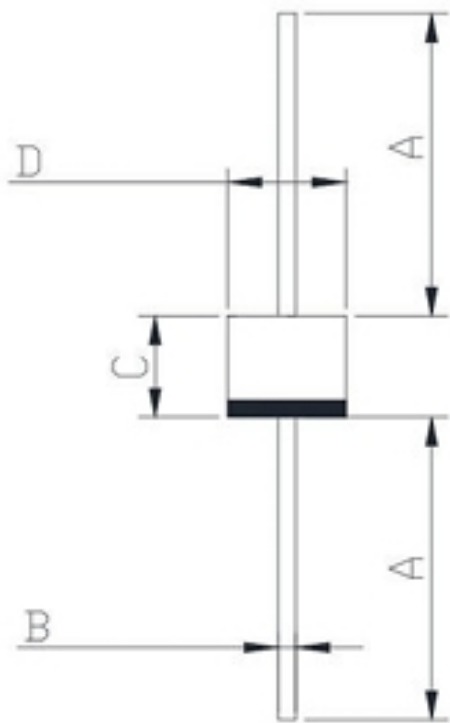


FIG.2-TYPICAL REVERSE CHARACTERISTICS



Package Outlines

R6



P600		
Dim	Min	Max
A	8.7	9.0
B	1.9	2.1
C	8.6	8.9
D	8.6	8.9

Dimensions in millimeters

Package Marking and Ordering Information

Part Number	Top Marking	Package	Packing Method	Quantity
BDP45S45DT1	BDP45S45DT1	R6	BOX	200 units

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