

Schottky Barrier Rectifier

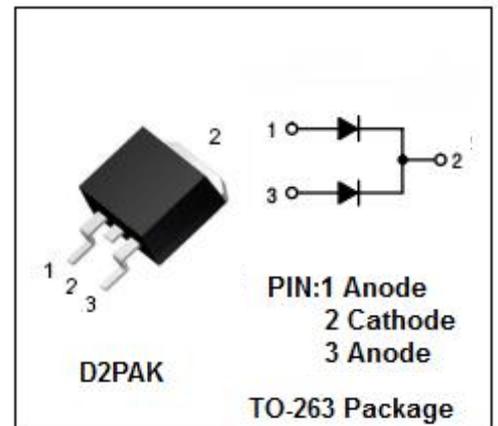
SBR30E45CTB

FEATURES

- Metal silicon junction, majority carrier conduction
- Low leakage current, low power loss, high efficiency
- Dual rectifier construction, positive center tap
- Guardring for overvoltage protection
- High surge current capability
- Low stored charge majority carrier conduction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

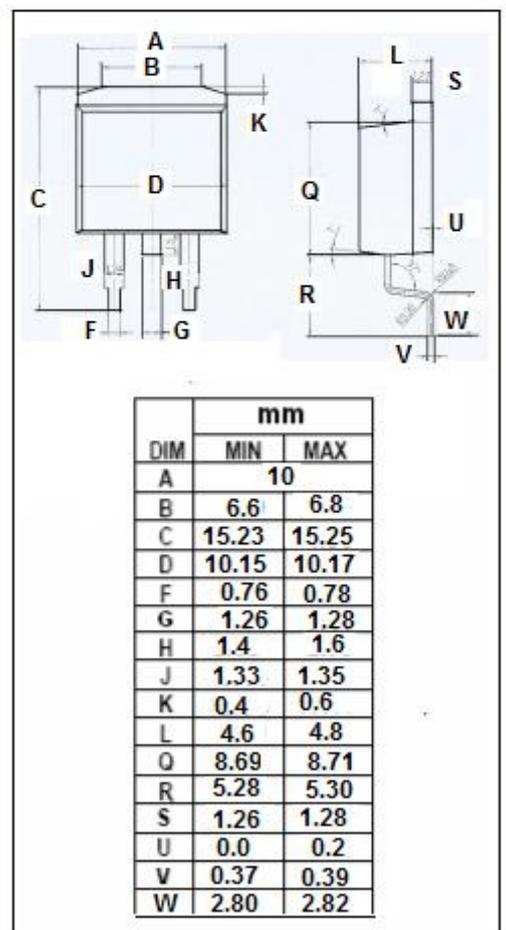
APPLICATIONS

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration



ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	45 31 45	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=120^{\circ}\text{C}$	30	A
I_{FSM}	Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions)	250	A
T_J	Junction Temperature	-65~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3.0	°C/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μs, Duty Cycle ≤ 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V _F	Maximum Instantaneous Forward Voltage	I _F = 15A ; T _C = 25°C I _F = 15A ; T _C = 125°C	0.55 0.52	V
I _R	Maximum Instantaneous Reverse Current	V _R = rated V _{RRM} ; T _C = 25°C V _R = rated V _{RRM} ; T _C = 125°C	0.48 100	mA

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