SB20U150SL

TO-277B 20A/150V Low VF Schottky Rectifier

FEATURES

- ✧High current capability, low forward voltage
- ✧Excellent high temperature stability
- ✧Low power loss, and high efficiency
- ✧High forward surge capability
- ✧RoHS compliant, and Halogen free

MACHANICAL DATA

- ✧Case: TO-277B small outline plastic package
- ✧Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ✧Molding Compound Flammability Rating:UL94-0
- ✧High temperature soldering guaranteed: 260°C /10second
- ✧Packed with FRP substrate and epoxy underfilled

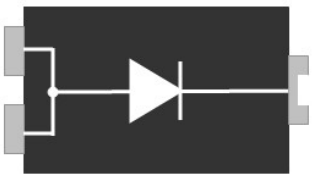
ORDERING INFORMATION

- ✧ Device:SB20U150SL
- ✧ Package: TO-277B
- ✧ Material: Halogen free
- ✧ Packing: Tape & 13'' Reel
- ✧ Quantity per reel: 5,000pcs

APPLICATIONS

- ✧Switching mode power supply applications
- ✧Portable equipment battery applications
- ✧High frequency rectification
- ✧DC/DC converter
- ✧Designed as bypass diodes for solar panels

PIN CONFIGURATION



PACKAGE OUTLINE



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ABSOLUTE MAXIMUM RATING (Tamb=25℃, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{RRM} V_{RWM} V_{5DC}	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC blocking voltage	150	V
$V_{R(RMS)}$	RMS Rectified Voltage	105	V
$I_{F(AV)}$	Average Forward Current	20	A
I_{FSM}	Peak Forward Surge Current, 8.3ms single half sine-wave	250	A
$R_{\theta JA}$ $R_{\theta JL}$	Typical Thermal Resistance Junctionto Ambient	70 6	℃/W
T_J & T_{STG}	Junction and Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃, unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_F	Forward Voltage	I_F = 20A @ 25°C		0.80	0.88	V
I_R	Reverse Leakage Current	@ 25°C		10	150	μA
		@ 125°C		2.0	25	mA

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ELECTRICAL CHARACTERISTICS CURVE

Fig. 1 - Forward Characteristics

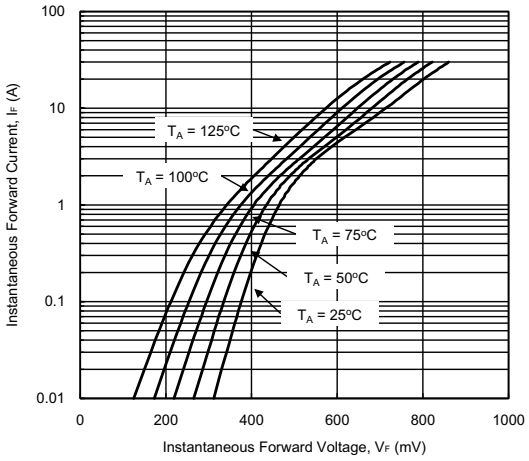


Fig. 2 - Reverse Characteristics

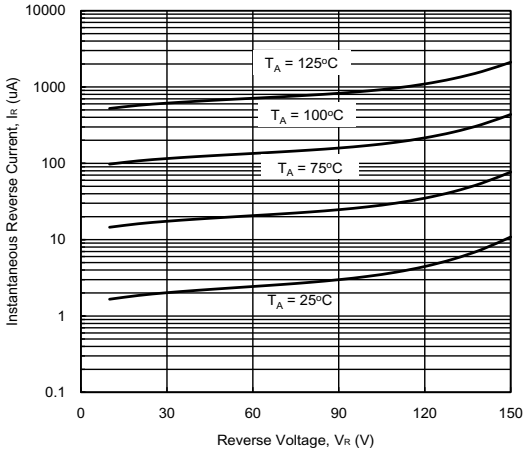


Fig. 3 - Forward Power Dissipation

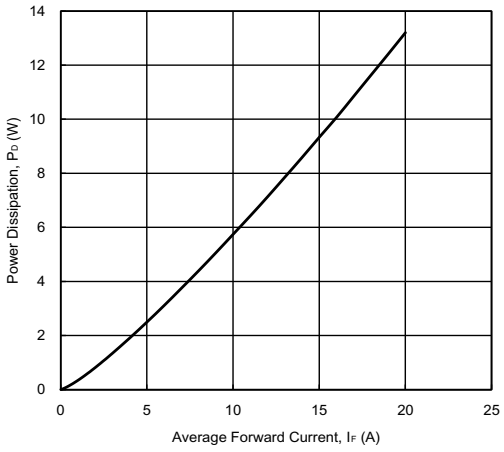


Fig. 4 - Forward Current Derating Curve

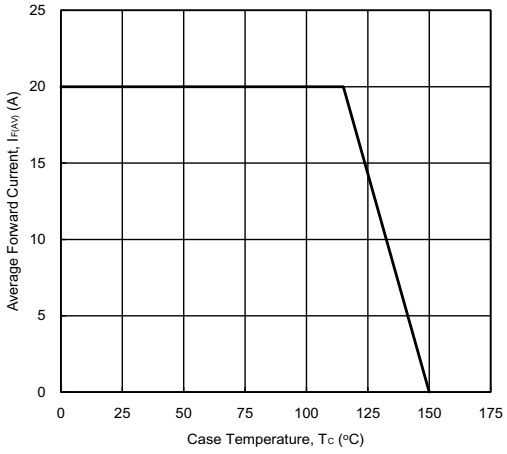
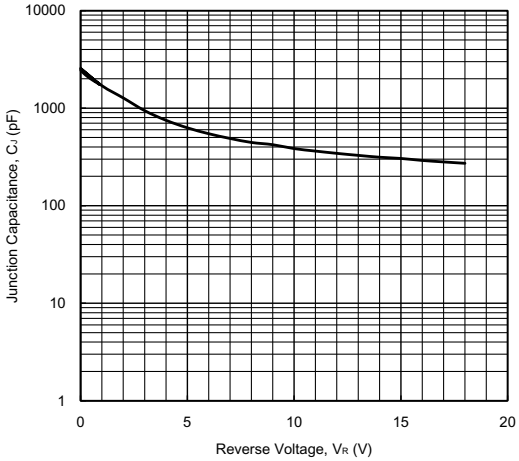
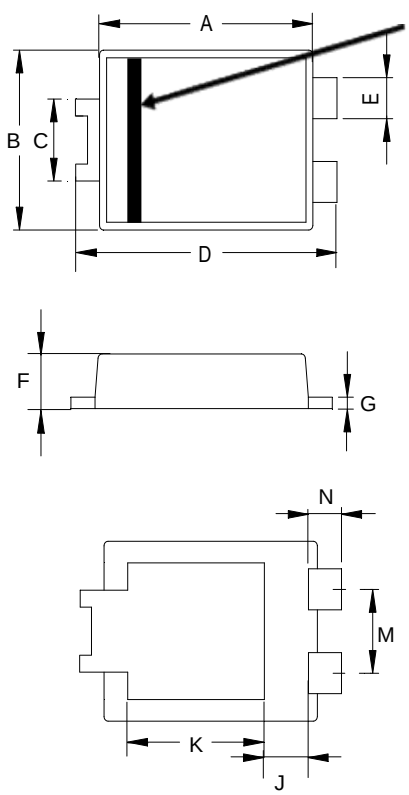


Fig. 5 - Junction Capacitance



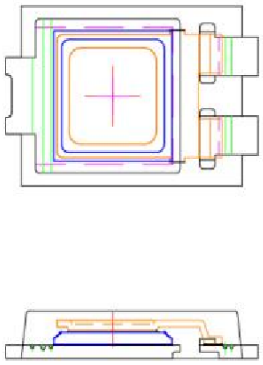
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TO-277B PACKAGE OUTLINE DIMENSIONS



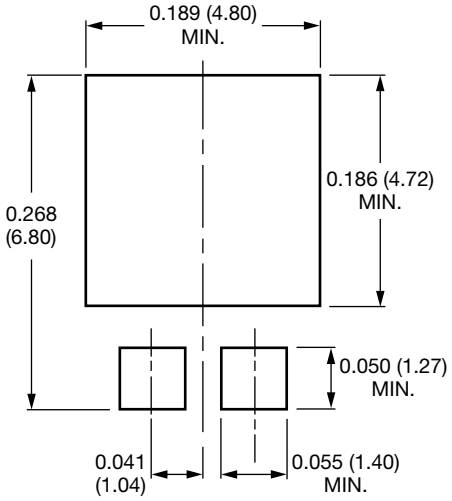
Cathode Band

(for uni-directional products only)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.220	0.228	5.600	5.800
B	0.161	0.169	4.100	4.300
C	0.067	0.075	1.700	1.900
D	0.252	0.260	6.400	6.600
E	0.031	0.039	0.800	1.000
F	0.041	0.047	1.050	1.200
G	0.010	0.016	0.250	0.400
J	0.043	0.055	1.100	1.400
K	0.128	0.152	3.250	3.850
M	0.067	0.079	1.700	2.000
N	0.033	0.043	0.850	1.100

Dimensions in inches and (millimeters)



Soldering footprint Unit (mm)

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG
TO-277B	5000/REEL	80000	41X38X36	12.00