

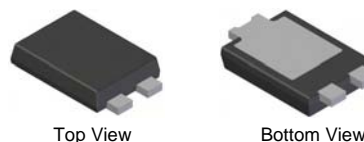
SB1045L-SB10200L



10.0A SUPER BARRIER RECTIFIER

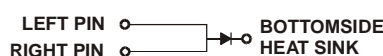
Features

- Schottky Barrier Chip
- Bypass Diodes for Solar Panels
- High Junction Temperature
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability



Mechanical Data

- Case: TO-277B Molded Plastic "Green" Molding Compound
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version



Note: Pins Left & Right must be electrically connected at the printed circuit board.

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbol	SB 1045L	SB 1050L	SB 1060L	SB 1080L	SB 10100L	SB 10150L	SB 10200L	Unit	
Peak Repetitive Reverse Voltage	V _{RRM}									
Working Peak Reverse Voltage	V _{RWM}	45	50	60	80	100	150	200	V	
DC blocking voltage	V _{DC}									
RMS Rectified Voltage	V _{R(RMS)}	32	35	42	56	70	105	140	V	
Average Rectified Output Current (Note1)	I _O	10							A	
Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load (JEDEC Method) (Note2)	I _{FSM}	150							A	
I ² t Rating for Fusing (t < 8.3ms)	I ² t	93.4							A ² s	
Forward Voltage Drop T _A = 25 °C @ I _F = 10A	V _{FM}	0.50		0.55		0.75		0.90	V	
Peak Reverse Current T _A = 25 °C At Rated DC Blocking Voltage T _A = 100 °C	I _R	0.3							15	mA
Typical Thermal Resistance Junction to Ambient	R _{θJA} R _{θJL}	80							10	°C/W
Operating junction temperature range	T _J	-55 to +150							°C	
storage temperature range	T _{STG}	-55 to +150							°C	

Note: 1. Valid Provided that are kept at ambient temperature at a distance of 9.5mm from the case.

2. Fr-4pcb. 2oz. Copper, minimum recommend pad layout .18.8mm×14.4. Anode pad dimensions 5.6mm×14.4mm.

FIG.1 - FORWARD CURRENT DERATING CURVE

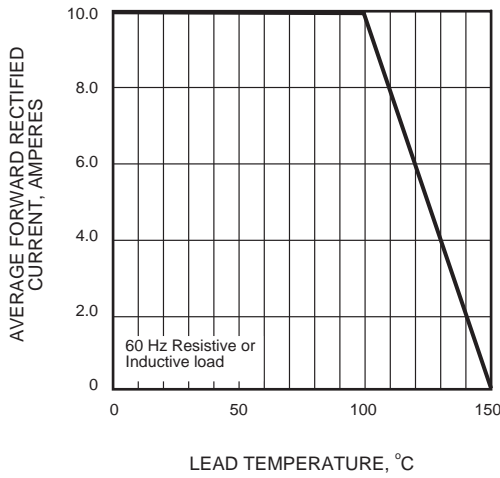


FIG.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

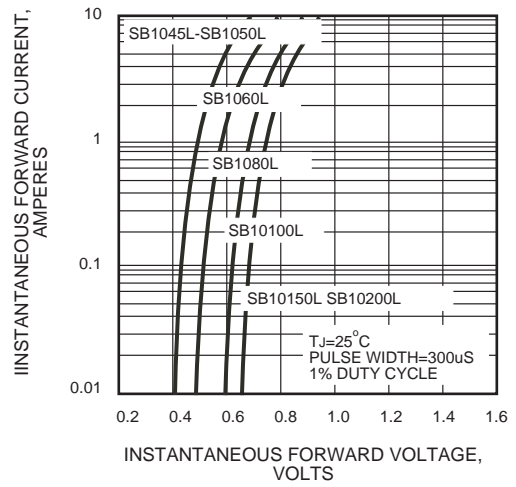


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

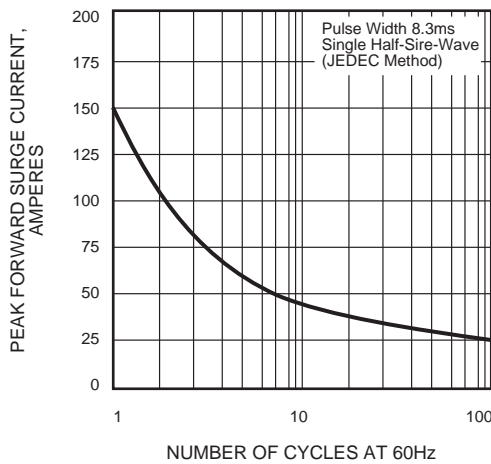


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

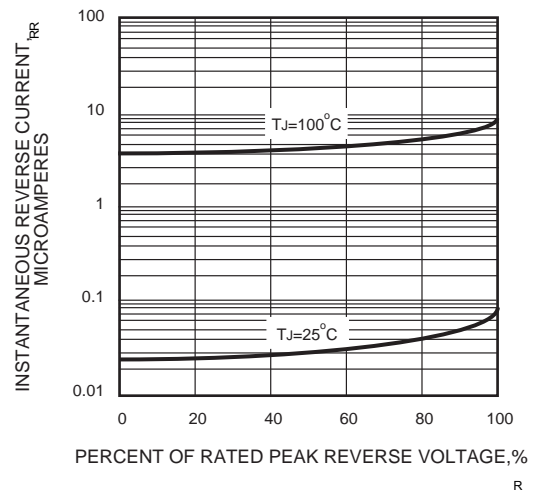
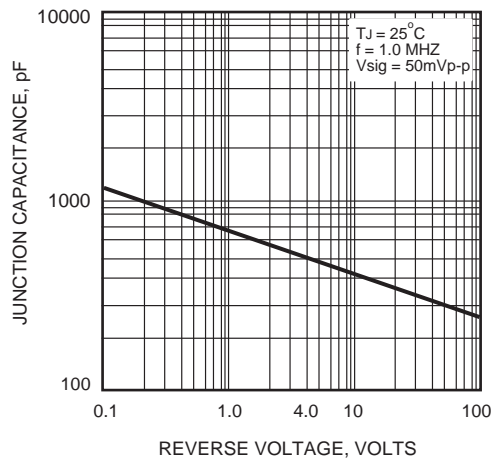


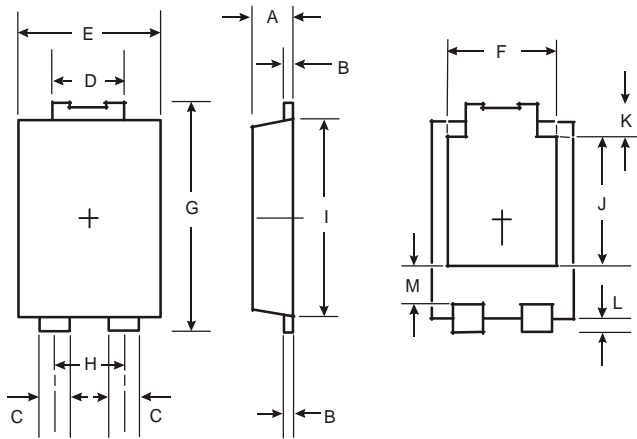
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Ordering Information

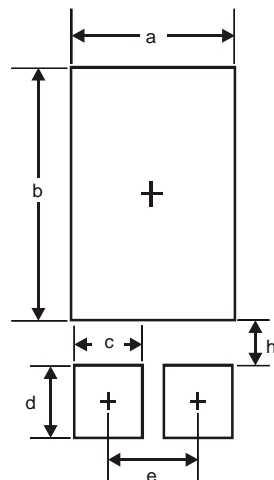
Part Number	Case	Packaging
SB10**L	TO-277B	5000/Tape & Reel

Outline Dimensions



TO-277B		
Dim	Min	Max
A	1.05	1.15
B	0.33	0.43
C	0.80	0.99
D	1.70	1.88
E	3.90	4.05
F	3.054 Typ	
G	6.40	6.60
H	1.84 Typ	
I	5.30	5.45
J	3.549 Typ	
K	0.75	0.95
L	0.50	0.65
M	1.10	1.41
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
a	3.360
b	4.860
c	1.390
d	1.400
e	1.840
h	0.852