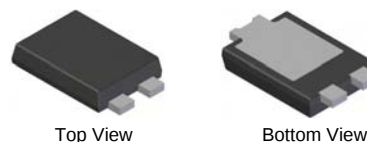


10A SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Schottky Barrier Chip
- Bypass Diodes for Solar Panels
- High Junction Temperture
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Foward 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: SB10100L
- 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	SB10100L	Unit
Peak Repetitive Reverse Voltage	V _{RRM}		
Working Peak Reverse Voltage	V _{RWM}	100	V
DC blocking voltage	V _{DC}		
RMS Rectified Voltage	V _{R(RMS)}	70	V
Average Rectified Output Current (Note1)	I _O	10	A
Non-Repetitive Peak Forward Surge8.3ms 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 @IF=10A	V _{FM}	0.75	V
Peak Reverse Curent T _A =25 °C	I _R	0.3	mA
At Rated DC Blocking Voltage T _A =100 °C		15	
Typical Thermal Resistance	R _{θJA}	80	°C /W
Junctionto Ambient	R _{θJL}	10	
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

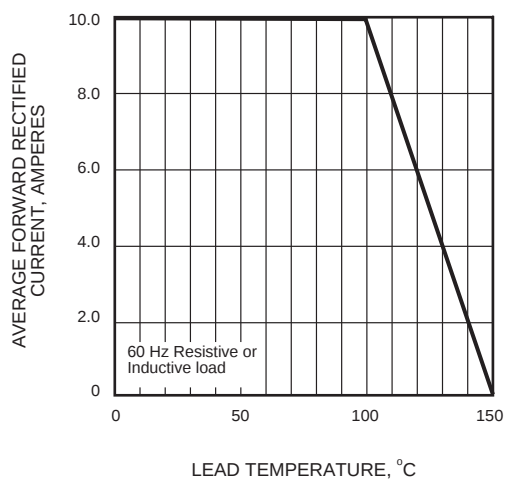


FIG.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

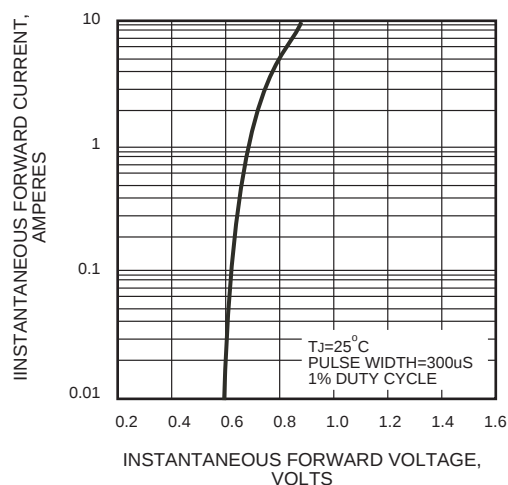


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

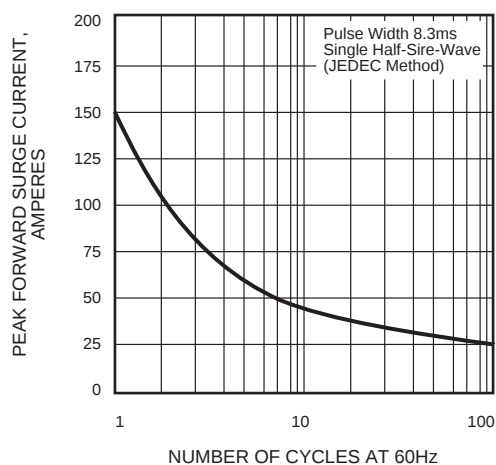


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

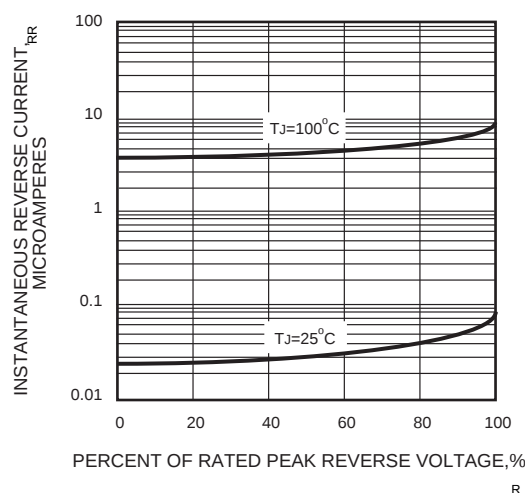
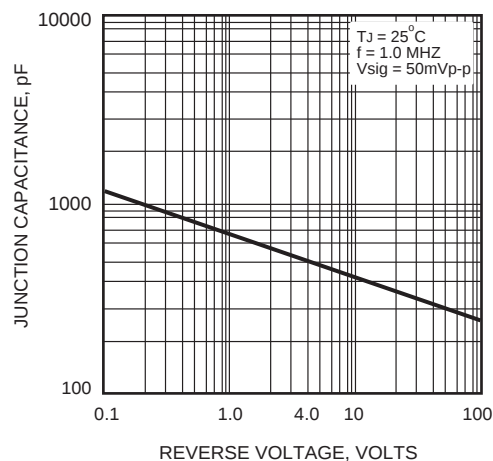
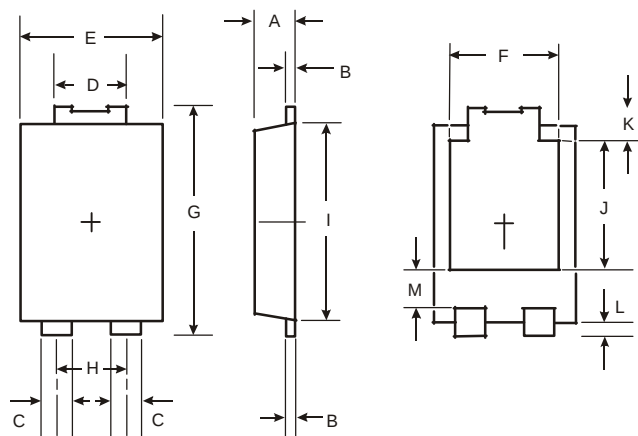


FIG.5 - TYPICAL JUNCTION CAPACITANCE

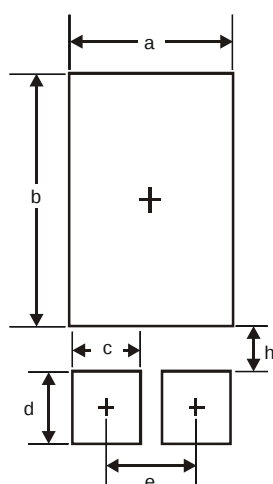


Outline Dimensions



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