

### Features

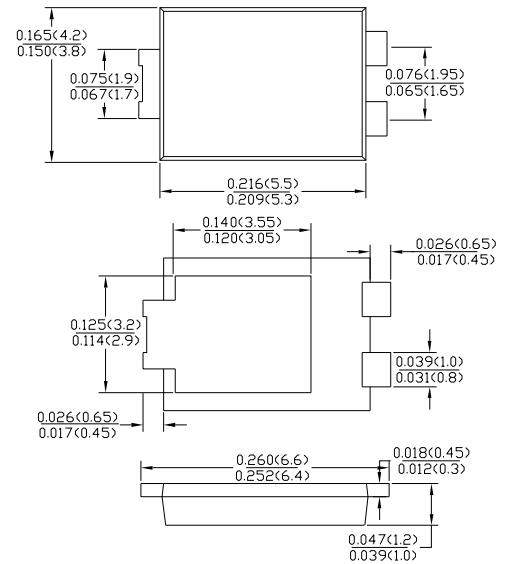
- Bypass Diodes for Solar Panels
- Maximum Junction Temperature 200°C
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability

### Mechanical Data

- Case: TO-277 Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.093 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version



### TO-277



Dimensions inches and (millimeters)

### Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	SB1045L	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	45	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	32	V
Average Rectified Output Current (Note 1)	$I_O$	10.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150	A
Forward Voltage Drop @ $I_F = 10A, T_j = 25^\circ\text{C}$	$V_{FM}$	0.53	V
Peak Reverse Current @ $V_F = 45V, T_j = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $V_F = 45V, T_j = 100^\circ\text{C}$	$I_{RM}$	0.3 15	mA
Typical Thermal Resistance Junction to Ambient (Note 2) (Note 3)	$R_{\theta JA}$	73 31	$^\circ\text{C/W}$
Operating Temperature Range @ $V_R \leq 80\% V_{RRM}$ DC Forward Mode	$T_j$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

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

2. FR-4 PCB, 2oz. Copper, minimum recommended pad layout .

3. Polyimide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.

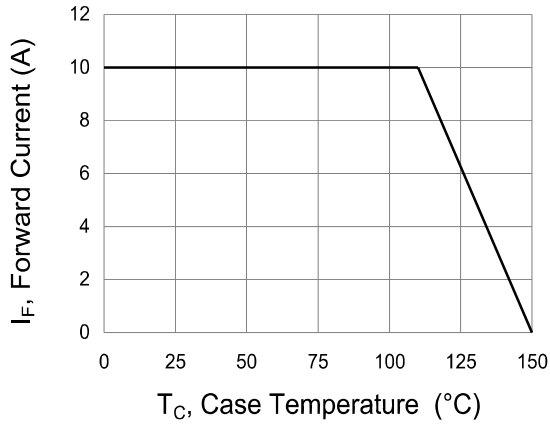


Fig. 1 Forward Power Dissipation

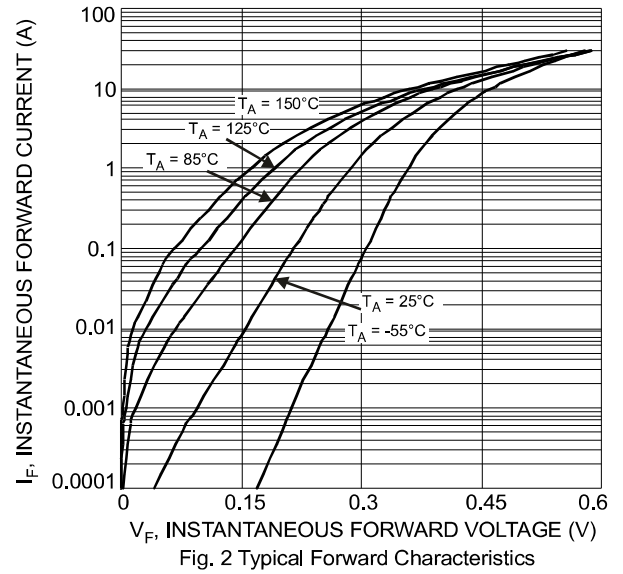


Fig. 2 Typical Forward Characteristics

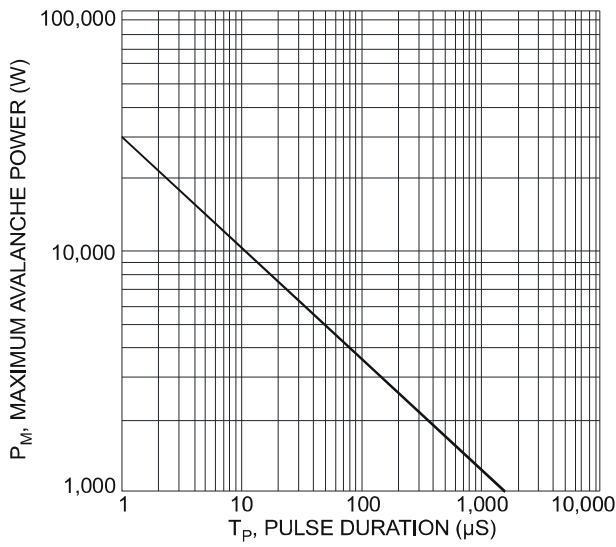


Fig. 4 Maximum Avalanche Power