

**VOLTAGE RANGE: 45V**  
**CURRENT: 10 A**

### Features

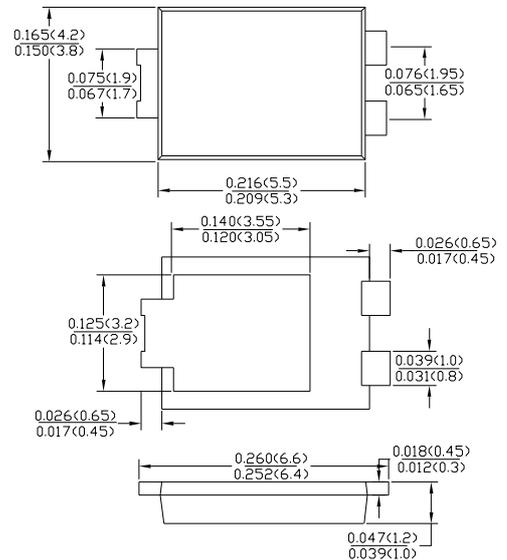
- Bypass Diodes for Solar Panels
- Maximum Junction Temperature 200°C
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability

### Mechanical Data

- Case: TO-277 Molded Plastic "Green" Molding Compound
- 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



### T0-277



### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	SB1045L	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	45	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	32	V
Average Rectified Output Current (Note 1)	I <sub>O</sub>	10.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150	A
Forward Voltage Drop @I <sub>F</sub> = 10A, T <sub>j</sub> = 25°C	V <sub>FM</sub>	0.53	V
Peak Reverse Current At Rated DC Blocking Voltage @V <sub>F</sub> = 45V, T <sub>j</sub> = 25°C @V <sub>F</sub> = 45V, T <sub>j</sub> = 100°C	I <sub>RM</sub>	0.3 15	mA
Typical Thermal Resistance Junction to Ambient (Note 2) (Note 3)	R <sub>θJA</sub>	73 31	°C/W
Operating Temperature Range @V <sub>R</sub> ≤ 80% V <sub>RRM</sub> DC Forward Mode	T <sub>j</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +1	°C

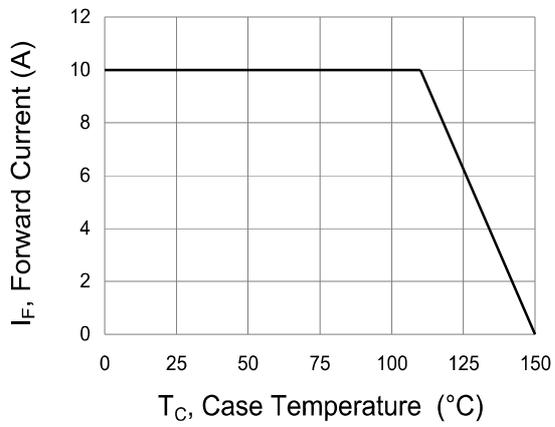


Fig. 1 Forward Power Dissipation

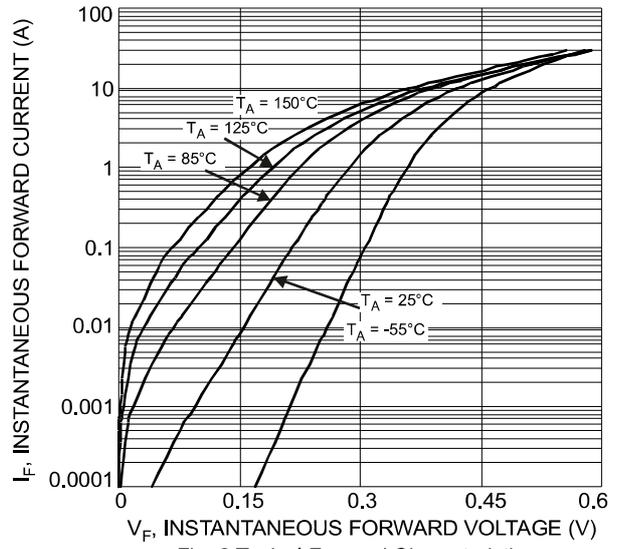


Fig. 2 Typical Forward Characteristics

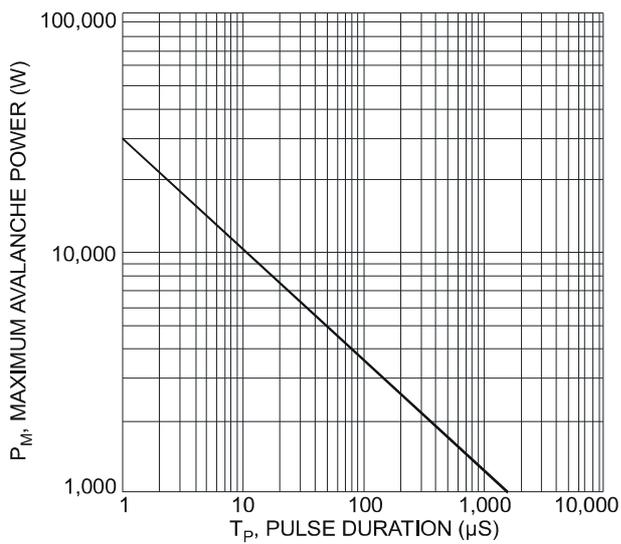


Fig. 3 Maximum Avalanche Power