

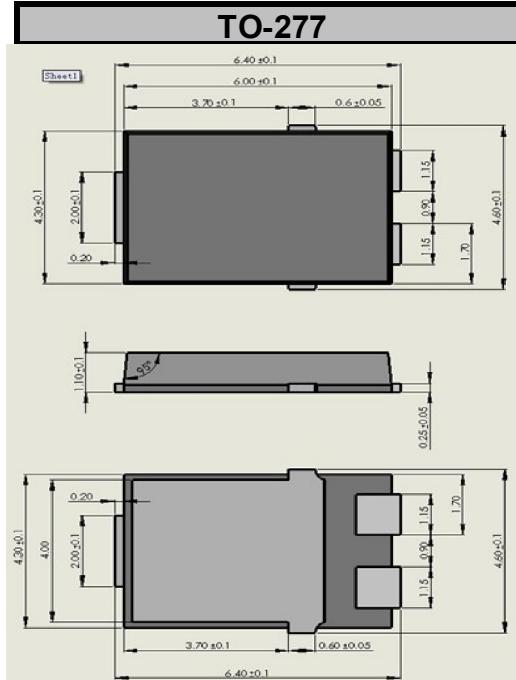
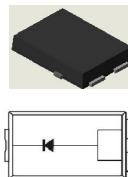
SB1045S SCHOTTKY BARRIER RECTIFIER

FEATURES

- Ideal for Automated Placement
- Very low profile-typical high of 1.10mm
- Low Power Losses,High Efficiency Operation
- Guardring for overvoltage protection
- Low Thermal Resistance Package
- High Operating Junction Temperature
- Plastic Case Material has UL Flammability Classification Rating 94V-O

MECHANICAL DATA

- Case: TO-277 molded Plastic
- Terminals:Solderable per MIL-STD-750,Method 2026
- Marking:SB1045
- Weight:0.092 grams(approx)
- Lead Free:For RoHS/Lead Free Version,
Green molding compound as per IEC61249 Std



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

Characteristic	Symbol	VALUE			Unit	
Maximum repetitive peak reverse voltage	V_{RRM}	45			V	
Maximum RMS voltage	V_{RMS}	32			V	
Maximum DC blocking voltage	V_R	45			V	
Maximum average forward rectified current	$I_{F(AV)}$	10			A	
Peak forward surge current:8.3ms single half sine-wave superimposed on rated load	I_{Fsm}	150			A	
PARAMETER	Symbol	TEST CONDITIONS	MIN.	TYP.	MAX.	
Breakdown voltage	V_{BR}	$I_F=0.5\text{mA}$ $T_A=25^\circ\text{C}$	45	—	—	V
Instantaneous forward voltage	V_F	$I_F=2\text{A}$ $T_A=25^\circ\text{C}$	—	0.38	—	V
		$I_F=5\text{A}$ $T_A=25^\circ\text{C}$	—	0.42	—	V
		—	—	0.48	0.55	V
		$I_F=2\text{A}$ $T_A=125^\circ\text{C}$	—	0.28	—	V
Reverse current	I_R	$VR=36\text{V}$ $T_A=25^\circ\text{C}$	—	60	—	uA
		$VR=45\text{V}$ $T_A=25^\circ\text{C}$	—	0.10	0.20	mA
		$VR=45\text{V}$ $T_A=125^\circ\text{C}$	—	32	—	mA
Typical Thermal Resistance(Note1)	$R_{\theta JL}$	4 60			°C/W	
Operating temperature range	T_J	−40 to +150			°C	
Storage temperature range	T_{STG}	−40 to +150			°C	

Note: (1) Mounted on 30mm X 30mm pad areas aluminum PCB

(3).Pulse test:300us pulse width,1% duty cycle

(2)Free air,mounted on recommended copper pad area

(4).Pulse test:Pulse width ≤40ms

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RATING AND CHARACTERISTIC CURVES

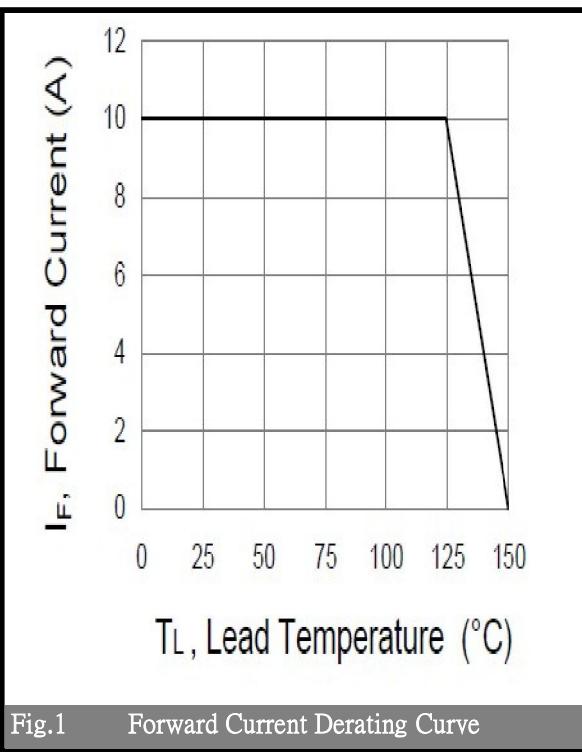


Fig.1 Forward Current Derating Curve

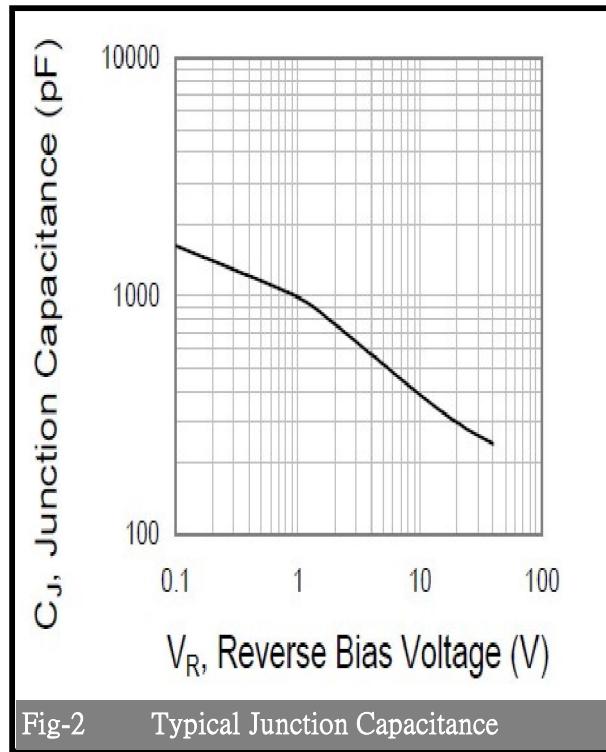


Fig.2 Typical Junction Capacitance

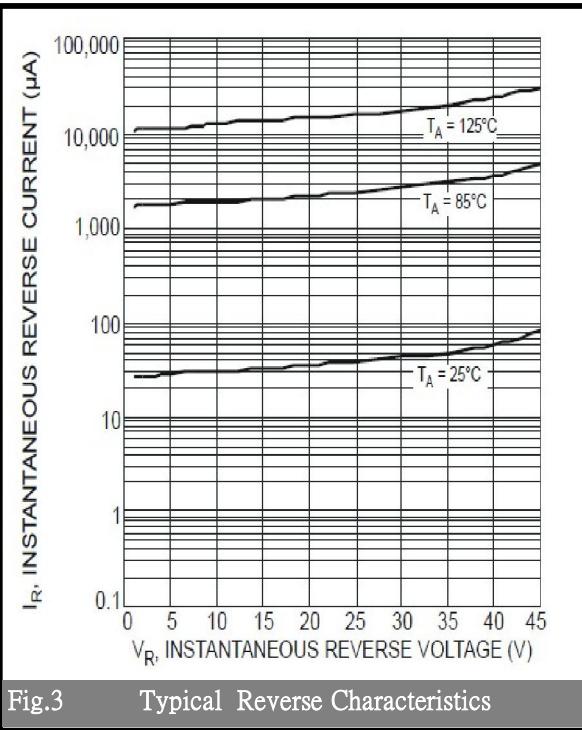


Fig.3 Typical Reverse Characteristics

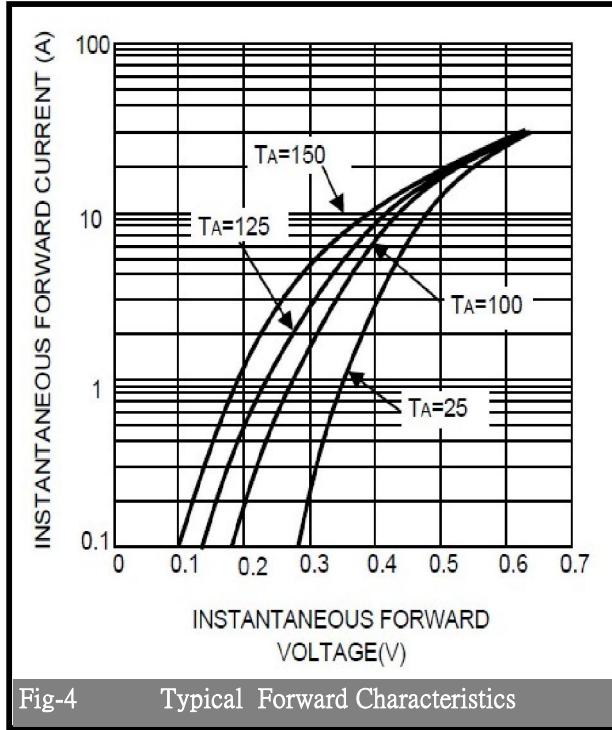


Fig.4 Typical Forward Characteristics