

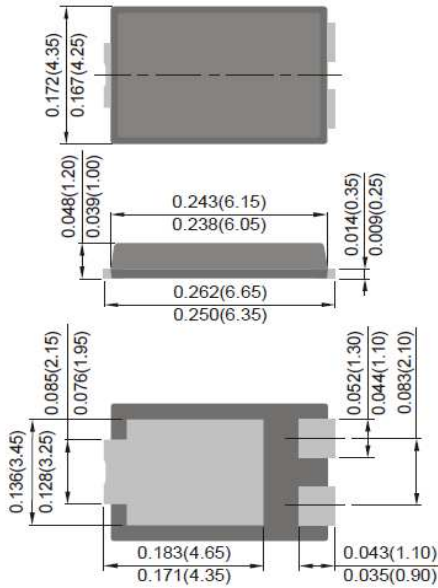


# SB1045LT

## Low-VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45 Volts Forward Current - 10 Ampere

### TO-277



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Ideal for automated placement
- ◆ Low forward voltage drop, low power losses
- ◆ High efficiency Operation
- ◆ Lead free in comply with EU RoHS 2002/95/EC directives.
- ◆ Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

**Case:** JEDEC TO-277, Molded Plastic.

**Terminals:** Solderable per MIL-STD-750 · Method 2026

**Approx. Weight:** 0.0037 ounces, 0.1073 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

PARAMETER	SYMBOLS	SB1045LT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	Volts
Maximum RMS voltage	$V_{RMS}$	32	Volts
Minimum DC Breakdown Voltage	$V_{DC}$	45	Volts
Average Rectified current	$I_{(AV)}$	10	Amp
Non-repetitive Peak Forward Surge Current at $t=8.3ms$ , Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	275	Amps
Instantaneous forward voltage	$V_F$	at $I_{F(TYP)}=3A$ at $I_{F(TYP)}=5A$ $T_J = 25^\circ C$ at $I_{F(TYP)}=10A$	0.34 0.38 0.44
		at $I_{F(TYP)}=3A$ at $I_{F(TYP)}=5A$ $T_J=125^\circ C$ at $I_{F(TYP)}=10A$	0.27 0.32 0.41
Reverse Current	$I_R$	at $V_R=36V$ $T_J=25^\circ C$ (TYP)	32
		at $VR=45V$ $T_J=25^\circ C$ (MAX)	0.25
		at $VR=45V$ $T_J=125^\circ C$ (TYP)	8.6
Typical Thermal Resistance (note.1)	$R_{\theta JA}$	60	$^\circ C/W$
	$R_{\theta JC}$	8	
Operating Junction Temperature and Storage Temperature Range	$T_J, T_{STG}$	-55 ~ +150	$^\circ C$

**Note:** Mounted on 50cm<sup>2</sup> FR-4 PCB.



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## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

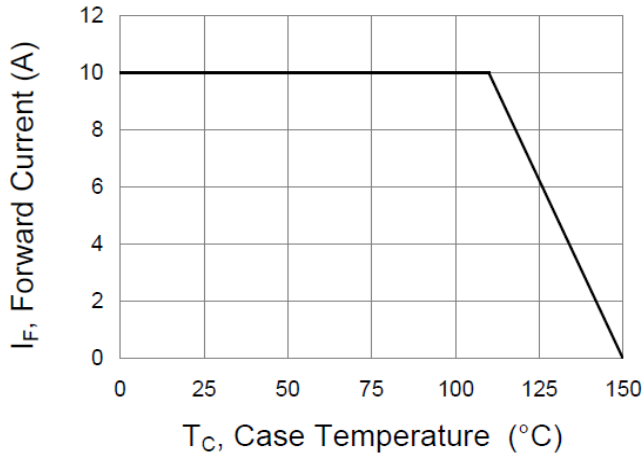


Fig.2 Typical Junction Capacitance

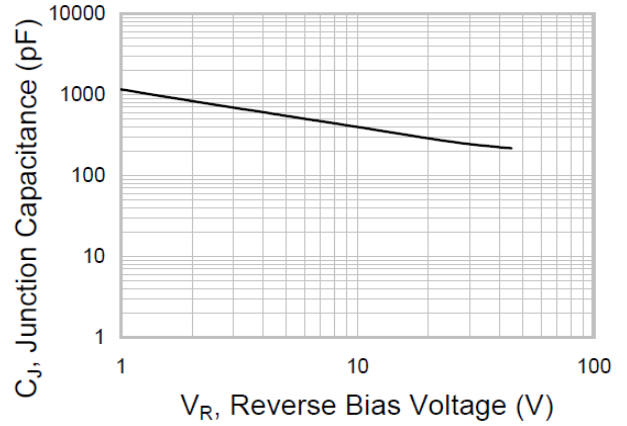


Fig.3 Typical Reverse Characteristics

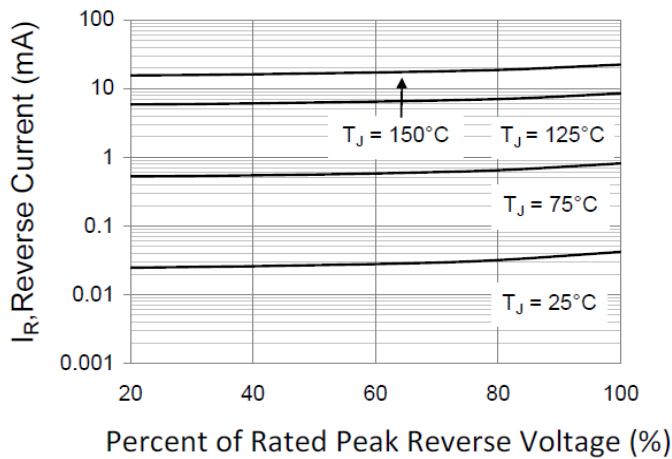
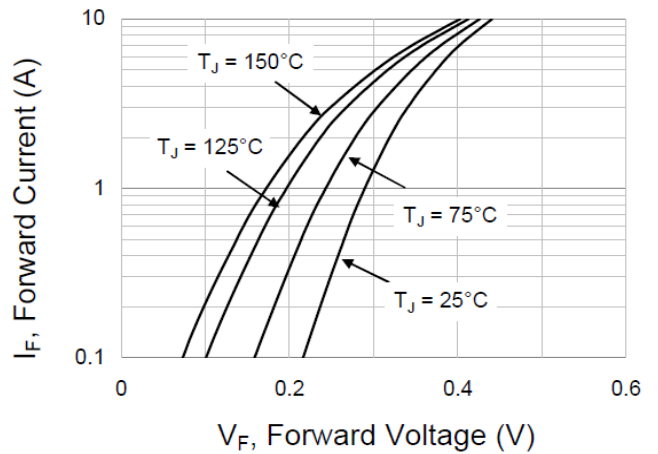


Fig.4 Typical Forward Characteristics



## MOUNTING PAD LAYOUT

