



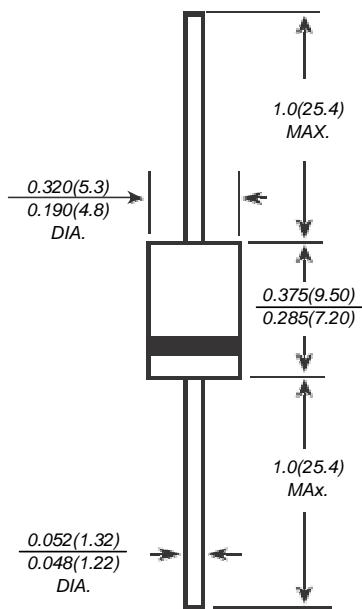
SB1045L

PRIMARY SPECIFICATION

Low-VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45 Volts Forward Current - 10.0 Ampere

DO-201AD



FEATURES

- Ultra Low Forward Voltage Drop
- High forward surge current capability
- Excellent High Temperature Stability
- Lead Free Finish, RoHS compliant^(Note1)
- Selectively Rated for 200°C Maximum Junction Temperature for High Thermal Reliability
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs . (2.3kg)tension
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case: JEDEC DO-201AD, Molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750 • Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 1.12 gram

MAXIMUM RATINGS AND THERMAL 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	VALUE	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	45	Volts
DC Blocking Voltage	V_{RM}		
RMS Reverse Voltage	$V_{R(RMS)}$	32	Volts
Average Rectified Forward Current	$I_{F(AV)}$	10	Amp
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	200	Amps
Maximum Thermal Resistance	$R_{\theta JA}$	54	°C/W
Thermal Resistance Junction to Ambient ^(Note2)	$R_{\theta JL}$	18	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +175	°C

ELECTRICAL CHARACTERISTICS

• $\text{@ } T_A = 25^\circ\text{C}$ unless otherwise specified

PARAMETER	SYMBOLS	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage ^(Note3)	$V_{(BR)R}$	45	-	-	Volts	$I_R=0.5\text{mA}$
Maximum Forward Voltage at 10.0A	V_F	-	-	0.43	Volts	$I_F=8\text{A}, T_J=25^\circ\text{C}$
		-	0.42	0.49		$I_F=10\text{A}, T_J=25^\circ\text{C}$
		-	0.37	0.42		$I_F=10\text{A}, T_J=125^\circ\text{C}$
Maximum DC Reverse Current	I_R	-	0.05	0.5	mA	$V_R=45\text{V}, T_J=25^\circ\text{C}$
		-	-	15		$V_R=45\text{V}, T_J=100^\circ\text{C}$
		-	27	75		$V_R=45\text{V}, T_J=150^\circ\text{C}$

Note: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.

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

3. Short duration pulse test used to minimize self-heating effect.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- Typical Forward Characteristics

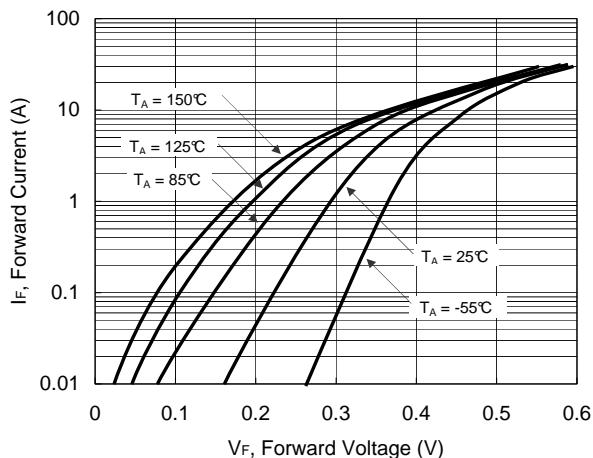


FIG. 2-Typical Reverse Characteristics

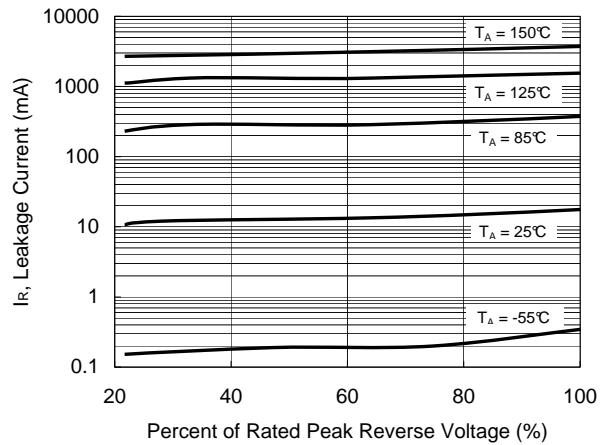


FIG. 3 Junction Capacitance vs. Reverse Voltage

