

SB1045DAT

SCHOTTKY BARRIER RECTIFIER

Forward Current-10A

Reverse Voltage-45V

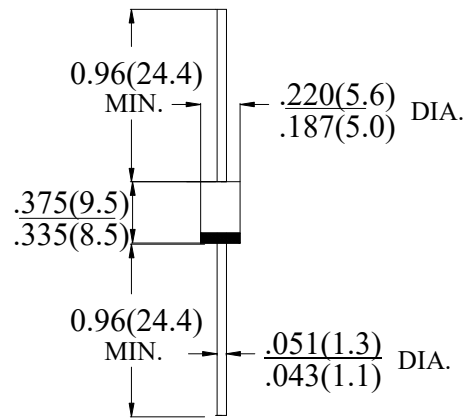
FEATURE

- ◆ High current capability
- ◆ Low forward voltage drop
- ◆ Low power loss, high efficiency
- ◆ High surge capability
- ◆ High temperature soldering guaranteed
260°C /10sec/0.375" lead length at 5 lbs tension

MECHANICAL DATA

- ◆ Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- ◆ Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- ◆ Polarity: color band denotes cathode
- ◆ Mounting position: any

DO-27/DO-201AD



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $T_A=25^{\circ}\text{C}$ unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Parameter		Symbol	SB1045DAT	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	45	V
Maximum RMS Voltage		V_{RMS}	31.5	V
Maximum DC blocking Voltage		V_{DC}	45	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_L=90^{\circ}\text{C}$		$I_{F(AV)}$	10.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	150.0	A
Maximum Instantaneous Forward Voltage at 2.0A DC	$T_A=25^{\circ}\text{C}$	V_F	0.33	V
	$T_A=100^{\circ}\text{C}$		0.27	
Maximum Instantaneous Forward Voltage at 10.0A DC	$T_A=25^{\circ}\text{C}$		0.45	
	$T_A=100^{\circ}\text{C}$		0.42	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^{\circ}\text{C}$	I_R	0.2	mA
	$T_A=100^{\circ}\text{C}$		10.0	
Typical Junction Capacitance(Note1)		C_J	600	pF
Typical Thermal Resistance(Note2)		$R_{\theta JA}$	40	$^{\circ}\text{C/W}$
Storage Temperature		T_{STG}	-55 to +150	$^{\circ}\text{C}$
Operating Junction Temperature		T_J	-55 to +150	$^{\circ}\text{C}$

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc

2. Thermal Resistance from Junction to Ambient at 0.375"(9.5mm) lead length, vertical P.C. Board Mounted

Dated: 06/2016

Rev:1.0

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

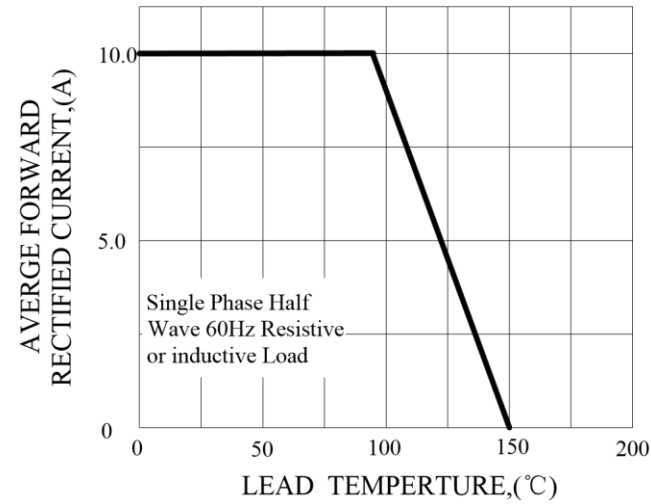


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

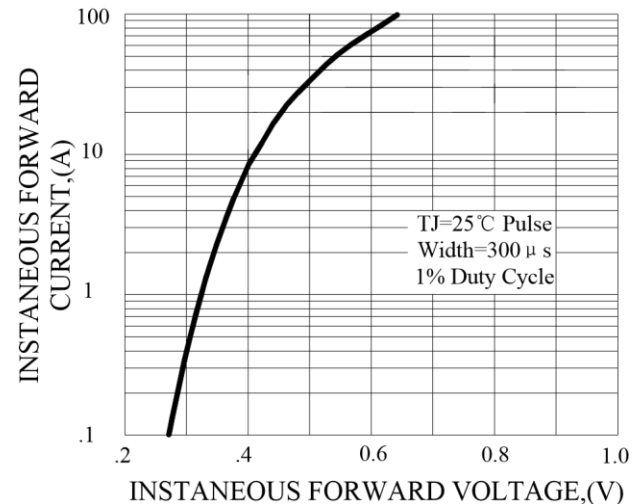


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

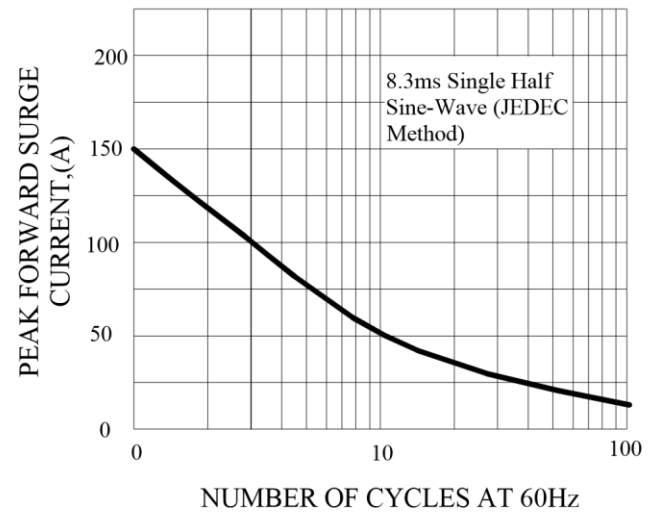


FIG.4-TYPICAL REVERSE CHARACTERISTICS

