

LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45 Volts

Forward Current - 10.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU and WEEE 2012/19/EU

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: 0.041ounce, 1.15 grams

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

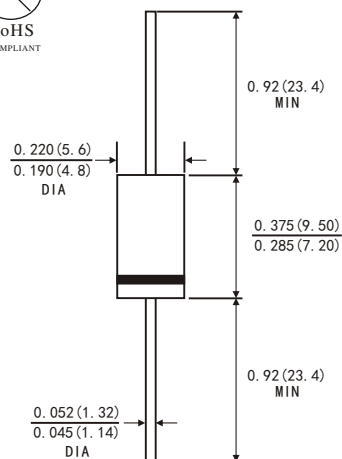
MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	SB1045L	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45V	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_F(AV)$	10.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	150	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃



DO-201AD



Dimensions in inches and (millimeters)

PRIMARY CHARACTERISTICS	
$I_F(AV)$	10.0A
V_{RRM}	45V
I_{FSM}	150A
V_F at $I_F=10.0A$	0.4V
T_{JMAX}	150℃

RATINGS AND CHARACTERISTIC OF SB1045L

ELECTRICAL CHARACTERISTCS (TA=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	IF= 10. 0A	TA=25°C	VF 1)	0. 43	0. 45	V
		TA=100°C		0. 37	0. 39	
		TA=125°C		0. 35	0. 37	
Reverse current	VR= 45V	TA=25°C	IR 2)	100	200	μA
		TA=100°C		8	15	mA
		TA=125°C		20	50	
Typical junction capacitance	4V, 1MHz		CJ	570		pF

Notes: 1.Pulse test: 300 μ s pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS (TA=25°C Unless otherwise noted)

Parameter	Symbol	SB1045L	Unit
Typical thermal resistance 3)	RθJA	25.0	°C/W
	RθJL	8.0	

3.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

RATINGS AND CHARACTERISTIC OF SB1045L

FIG.1-FORWARD CURRENT DERATING CURVE

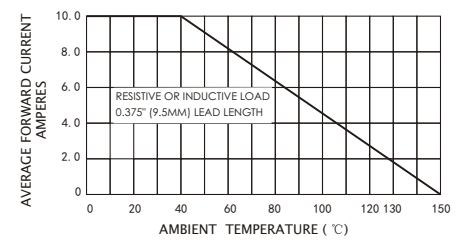


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

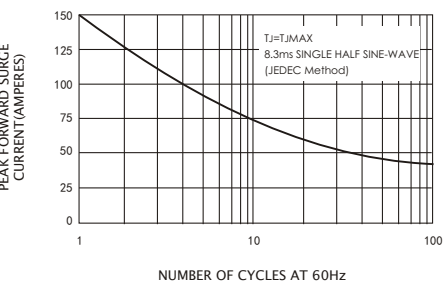


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

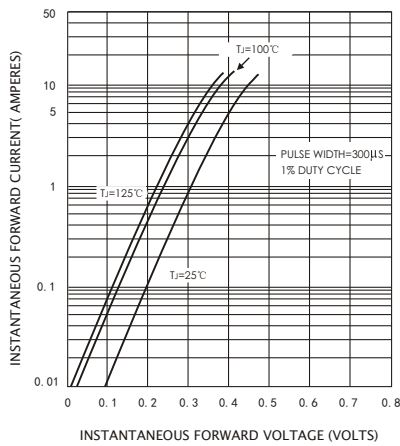


FIG.4-TYPICAL REVERSE CHARACTERISTICS

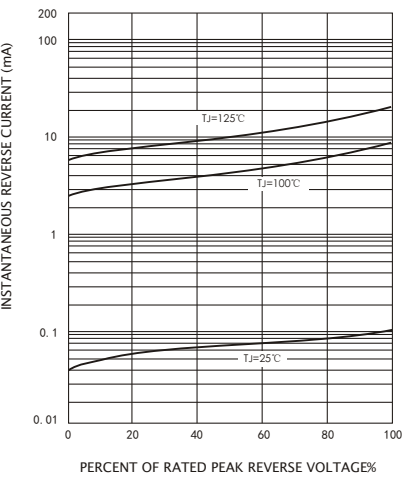


FIG.5-TYPICAL JUNCTION CAPACITANCE

