SB580L

LOW VF SCHOTTKY BARRIER RECTIFIER

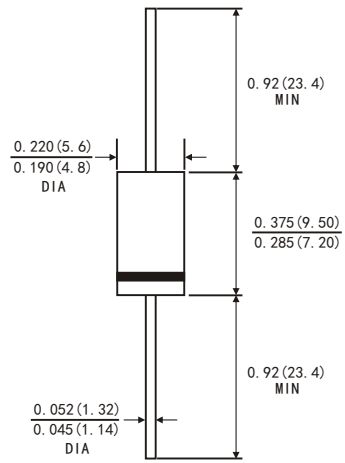
Reverse Voltage - 80 Volts
Forward Current - 5.0Amperes

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

Pb RoHS COMPLIANT

DO-201AD



Dimensions in inches and (millimetrers)

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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	5.0A
V_{RRM}	80V
I_{FSM}	120A
V_F at I_F=5.0A,125℃	0.50V
T_{JMAX}	150℃

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	SB580L	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	80	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	120	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

RATINGS AND CHARACTERISTIC OF SB580L

ELECTRICAL CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	I_F=5.0A	T_A=25℃	V_F 1)	0.54	0.58	V
		T_A=100℃		0.52	–	
		T_A=125℃		0.50	–	
	I_F=2.0A	T_A=25℃		0.45	–	
		T_A=100℃		0.38	–	
		T_A=125℃		0.35	–	
Reverse current	V_R=80V	T_A=25℃	I_R 2)	20	50	μA
		T_A=100℃		1.7	–	mA
		T_A=125℃		6.5	–	
Typical junction capacitance	4V,1MHz		C_J	340		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Symbol	SB580L	Unit
Typical thermal resistance 3)	$R_{\theta JA}$	25.0	℃/W
	$R_{\theta JL}$	8.0	

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

RATINGS AND CHARACTERISTIC OF SB580L

FIG.1-FORWARD CURRENT DERATING CURVE

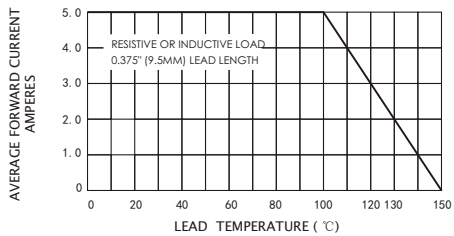


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

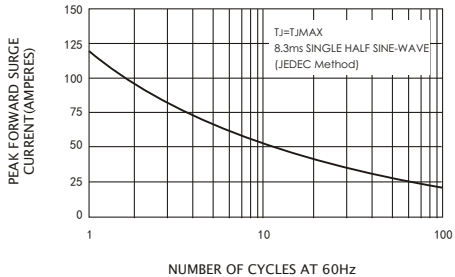


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

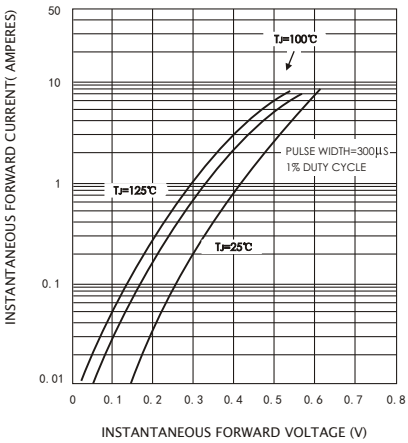


FIG.4-TYPICAL REVERSE CHARACTERISTICS

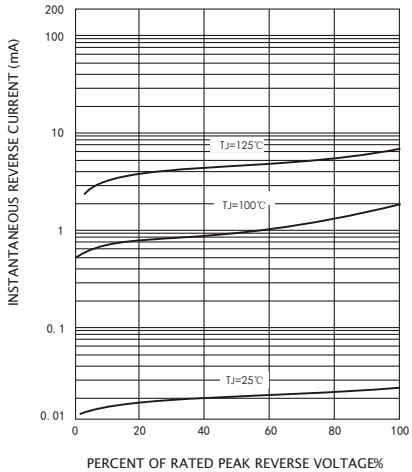


FIG.5-TYPICAL JUNCTION CAPACITANCE