SEMICONDUCTOR

SS345LBT

LOW VF SCHOTTKY BARRIER RECTIFIER

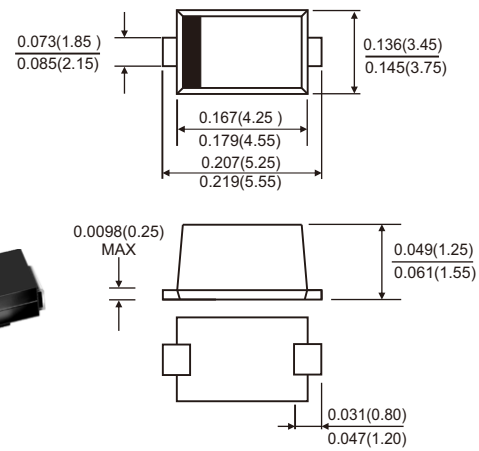
Reverse Voltage - 45 Volts
Forward Current - 3.0Amperes

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

Pb
RoHS
COMPLIANT

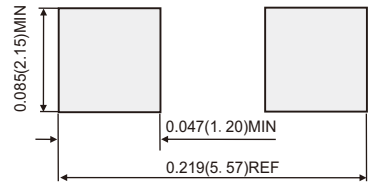
SMBFL



MECHANICAL DATA

- Case: SMBFL molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end

Suggested PAD Layout



Dimensions in inches and (millimeters)

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	SS345LBT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum average forward rectified current	$I_{F(AV)}$	3.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	80	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

RATINGS AND CHARACTERISTIC OF SS345LBT

ELECTRICAL CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	I_F=3.0A	T_A=25℃	V_F 1)	0. 43	0. 47	V
		T_A=100℃		0. 38	-	
		T_A=125℃		0. 36	-	
Reverse current	V_R=45V	T_A=25℃	I_R 2)	50	200	μA
		T_A=100℃		5	-	mA
		T_A=125℃		15	-	
Typical junction capacitance	4V, 1MHz		C_J	200		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	SS345LBT	Unit
Typical thermal resistance	$R_{\theta JA}$ 3)	90	℃/W
	$R_{\theta JL}$ 4)	30	

3.Free air,mounted on recommended PCB ,2 oz.pad area

4.The heat generated must be less than thermal conductivity from junction to ambient:dPD/dtJ＜1/$R_{\theta JA}$

RATINGS AND CHARACTERISTIC OF SS345LBT

FIG.1-FORWARD CURRENT DERATING CURVE

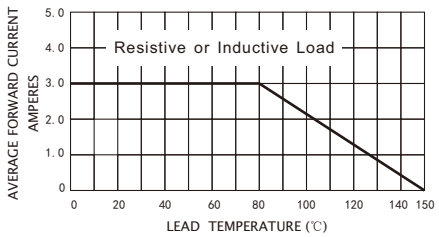


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

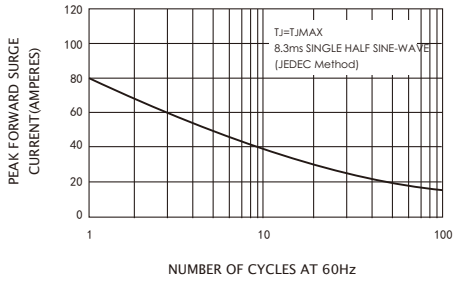


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

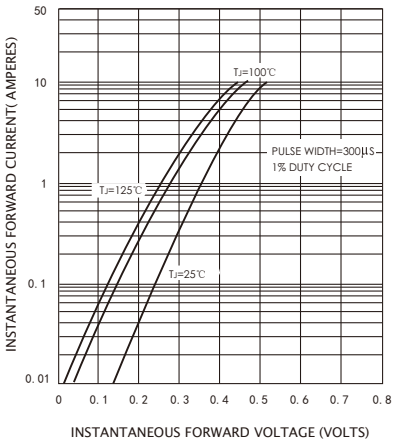


FIG.4-TYPICAL REVERSE CHARACTERISTICS

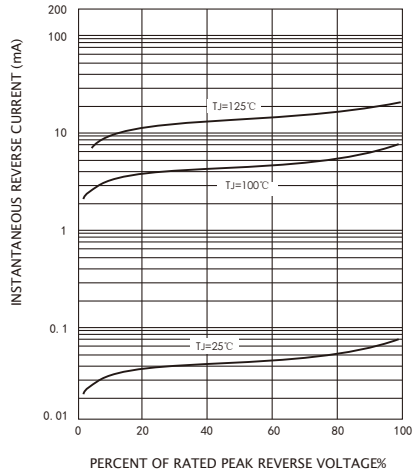


FIG.5-TYPICAL JUNCTION CAPACITANCE