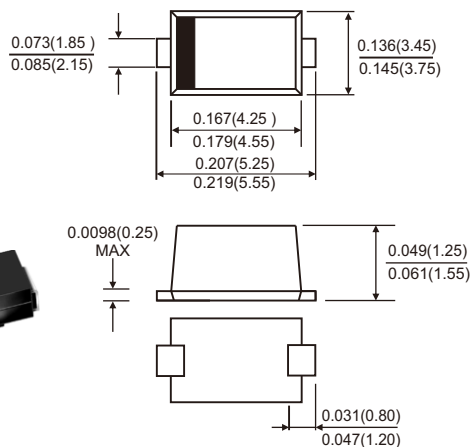


FEATURES

- 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 2015/863/EU



SMBFL



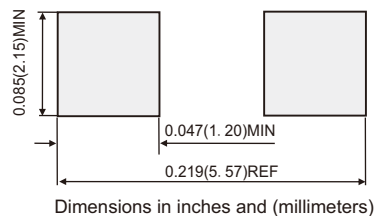
MECHANICAL DATA

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

TYPICAL APPLICATIONS

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

Suggested PAD Layout



MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40/45	V
Maximum average forward rectified current	$I_{F(AV)}$	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 SS54LBT\SS545LBT

ELECTRICAL CHARACTERISTICS (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⁾	0.45	0.48	V
		T _A =100℃		0.39	-	
		T _A =125℃		0.37	-	
Reverse current	V _R =40/45V	T _A =25℃	I _R ²⁾	60	200	μA
		T _A =100℃		5	-	mA
		T _A =125℃		20	-	
Typical junction capacitance	4V, 1MHz		C _J	370		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMBFL	Unit
Typical thermal resistance	R _{θJA} ³⁾	90	℃/W
	R _{θJL} 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_{θJA}

RATINGS AND CHARACTERISTIC OF SS54LBT\SS545LBT

FIG.1-FORWARD CURRENT DERATING CURVE

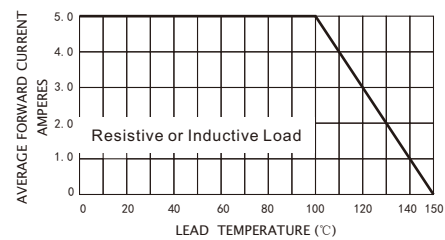


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

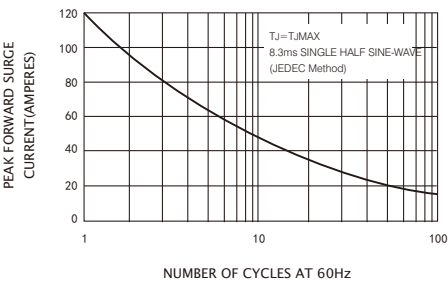


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

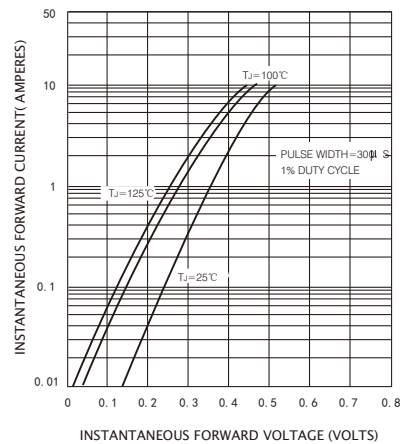


FIG.4-TYPICAL REVERSE CHARACTERISTICS

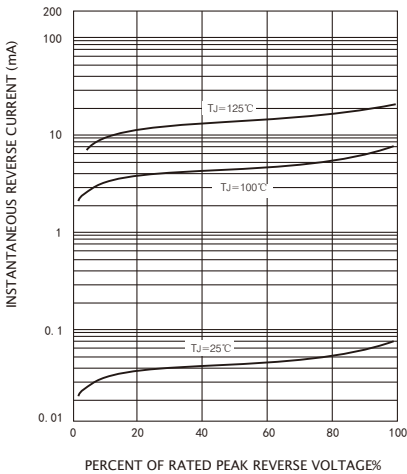


FIG.5-TYPICAL JUNCTION CAPACITANCE

