SEMICONDUCTOR

SS510LC

LOW VF SCHOTTKY BARRIER RECTIFIER

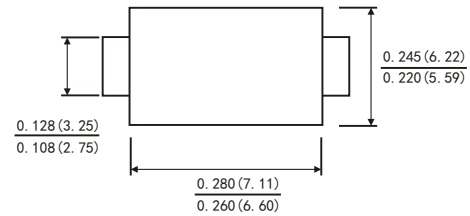
Reverse Voltage - 100 Volts
Forward Current - 5.0Amperes

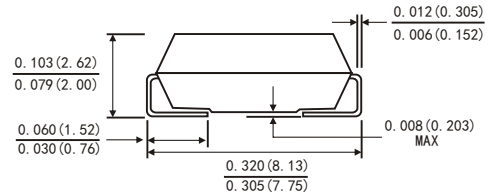
FEATURES

- 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

RoHS COMPLIANT

SMC(DO-214AB)

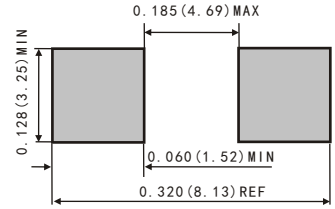




MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003ounce, 0.093 gram

Suggested PAD Layout



TYPICAL APPLICATIONS

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

Dimensions in inches and (millimetrers)

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	SS510LC	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (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 SS510LC

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. 60	0. 65	V
		T_A=100℃		0. 57	–	
		T_A=125℃		0. 55	–	
Reverse current	V_R=100V	T_A=25℃	I_R 2)	10	50	μA
		T_A=100℃		1.7	5	mA
		T_A=125℃		6	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 CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Symbol	SS510LC	Unit
Typical thermal resistance 3)	$R_{\theta JA}$	55.0	℃/W
	$R_{\theta JL}$	17.0	

3. Unit mounted on PC board with 5.0mm×5. 0 mm (0.013 mm thick) copper pads as heat sink

AVAILABAL PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
SS510LC-SMC	T/R	Φ300	3000	340×340×50	2	370×370×370	6

RATINGS AND CHARACTERISTIC OF SS510LC

FIG.1-FORWARD CURRENT DERATING CURVE

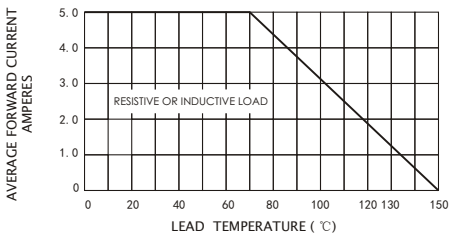


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

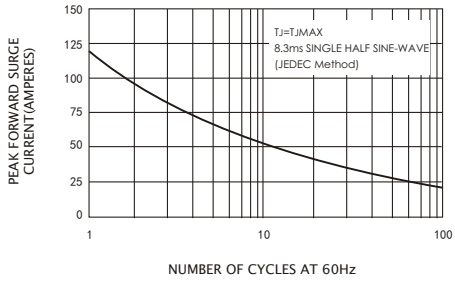


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

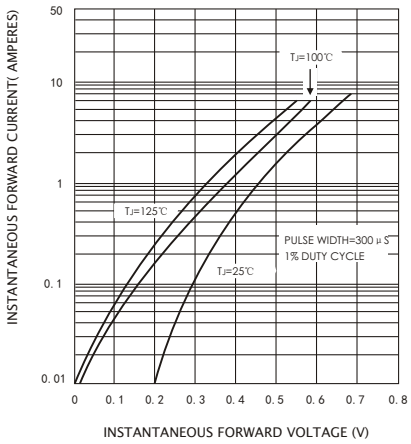


FIG.4-TYPICAL REVERSE CHARACTERISTICS

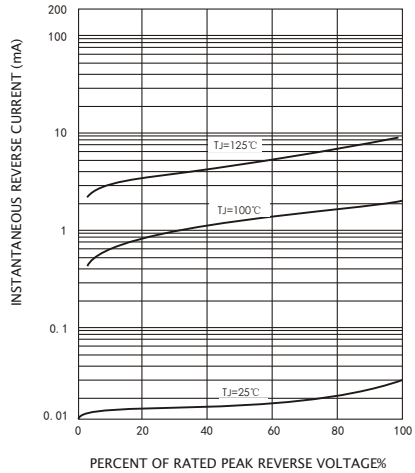


FIG.5-TYPICAL JUNCTION CAPACITANCE