SEMICONDUCTOR

SS12S THRU SS120S

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts
Forward Current - 1.0Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

SMAF

MECHANICAL DATA

- Case: SMAF molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameters		Symbols	SS12S	SS13S	SS14S	SS16S	SS110S	SS115S	SS120S	Units
Maximum repetitive peak reverse voltage		VRRM	20	30	40	60	100	150	200	Volts
Maximum RMS voltage		VRMS	14	21	28	42	71	105	140	Volts
Maximum DC blocking voltage		VDC	20	30	40	60	100	150	200	Volts
Maximum average forward rectified current (See Fig. 1)		I(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	40.0							Amps
Maximum instantaneous forward voltage at1.0 A(note 1)		VF	0.55			0.75	0.85	0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T_J=25°C	IR	100				20			μA
	T_J=100°C		5.0				-			mA
	T_J=125°C		-				3.0			
Typical thermal resistance (Note 2)	Junction-Abient	RθJA	150							°C/W
	Junction-Mount	RθJM	15							
Operating junction temperature range		TJ	-55 to+150							°C
Storage temperature range		TSTG	-55 to+150							°C

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle
2.Thermal resistance junction-to-ambient to follow JEDEC51-2A, device mounted on FR4 PCB, 2 oz., standard footprint
Thermal resistance junction-to-mount to follow JEDEC51-14 transient dual interface test method (TDIM)

FIG.1-FORWARD CURRENT DERATING CURVE

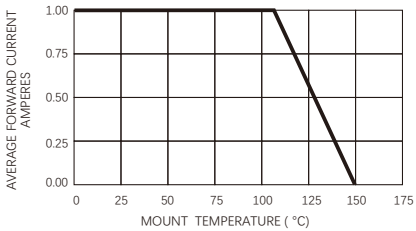


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

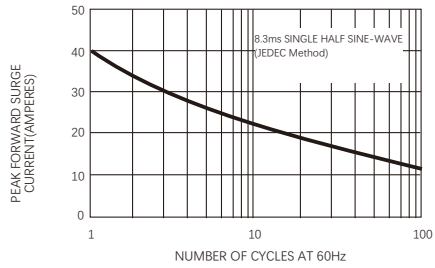


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

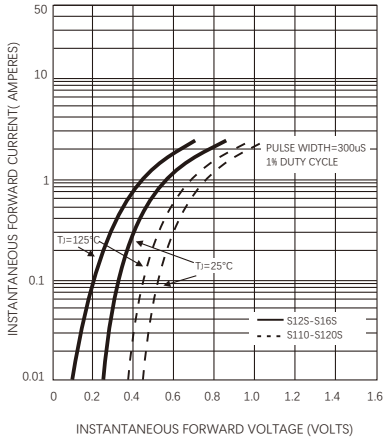


FIG.4-TYPICAL REVERSE CHARACTERISTICS

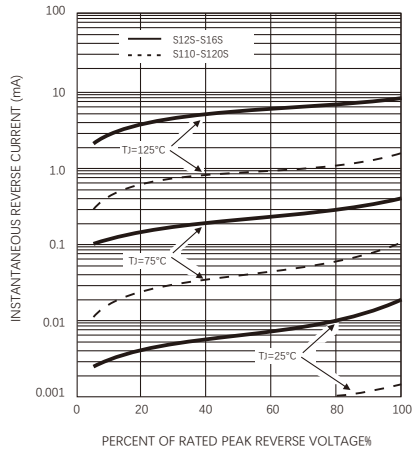
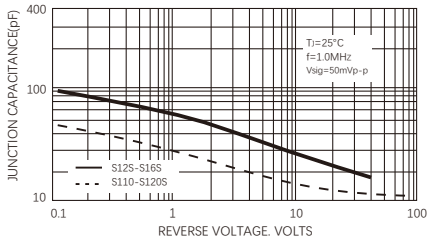
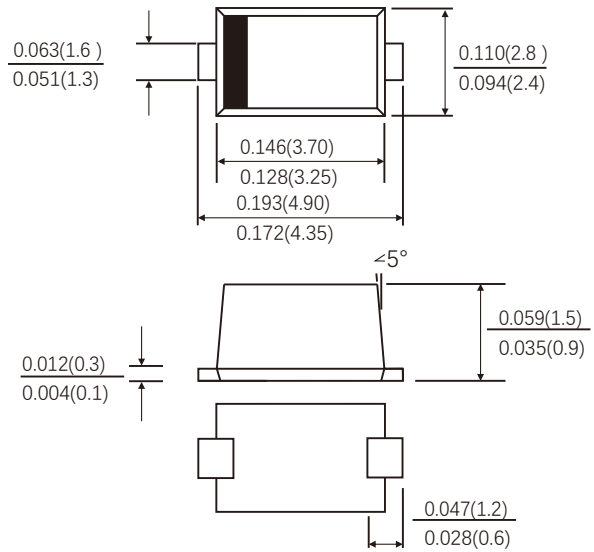


FIG.5-TYPICAL JUNCTION CAPACITANCE

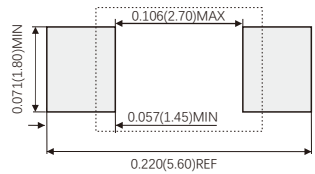


PACKAGE OUTLINE DIMENSIONS

SMAF



Suggested PAD Layout



(设计者可参考推荐值根据焊接工艺
要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

Dimensions in inches and (millimeters)

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