SEMICONDUCTOR

SS22S THRU SS220S

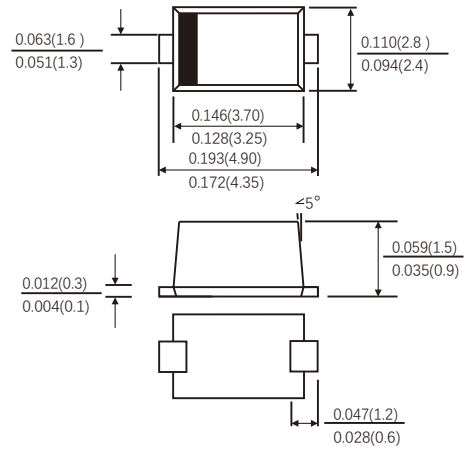
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts
Forward Current - 2.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Built-in strain relief
- For surface mounted applications
- Low profile package
- 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



Dimensions in inches and (millimeters)

MECHANICAL DATA

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

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	SS22S	SS23S	SS24S	SS26S	SS210S	SS215S	SS220S	Units
Maximum repetitive peak reverse voltage		V_{RRM}	20	30	40	60	100	150	200	Volts
Maximum RMS voltage		V_{RMS}	14	21	28	42	71	105	140	Volts
Maximum DC blocking voltage		V_{DC}	20	30	40	60	100	150	200	Volts
Maximum average forward rectified current		$I_{F(AV)}$	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	50.0							Amps
Maximum instantaneous forward voltage at 2.0 A(Note 1)		V_F	0.55			0.70	0.85	0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	TJ=25°C	I_R	100				20			μA
	TJ=100°C		5.0				-			mA
	TJ=125°C		-				3.0			
Typical thermal resistance(Note 2)		$R_{\theta JA}$ $R_{\theta JM}$	150 17							°C/W
Operating junction temperature range		T_J	-55 to+150							°C
Storage temperature range		T_{STG}	-55 to+150							°C

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

2.The heat generated must be less than the thermal conductivity from junction-to-ambient: $dP_D/dT_J < 1/R_{\theta JA}$

$R_{\theta JA}$(Junction-Ambiwent) to follow JEDEC51-2A, device mounted on FR4 PCB, 2 oz., standard footprint

$R_{\theta JM}$ (Junction-to Mount) to follow JEDEC51-14 transient dual interface test method (TDIM)

FIG.1-FORWARD CURRENT DERATING CURVE

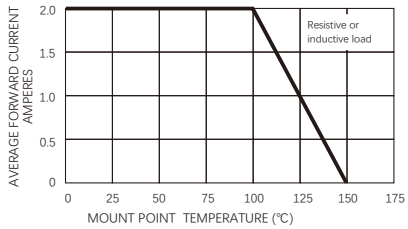


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

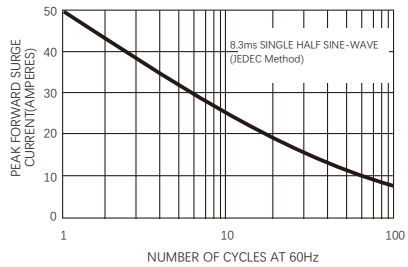


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

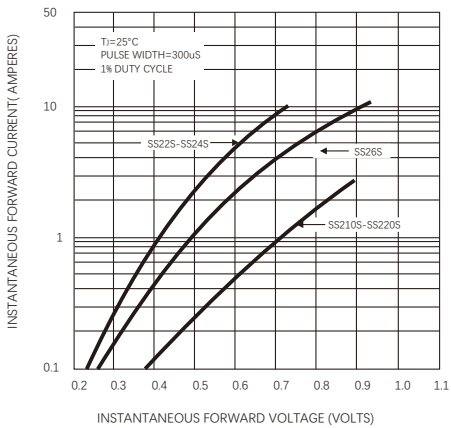


FIG.4-TYPICAL REVERSE CHARACTERISTICS

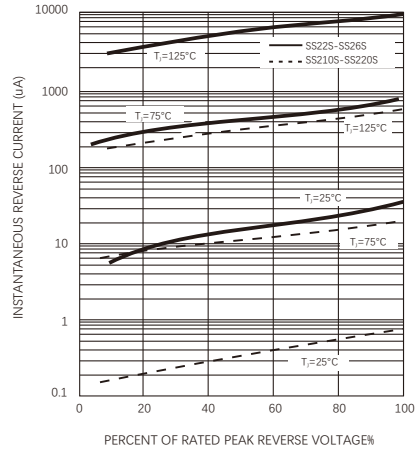
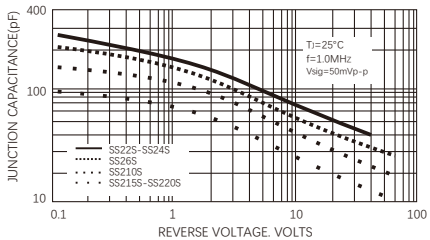
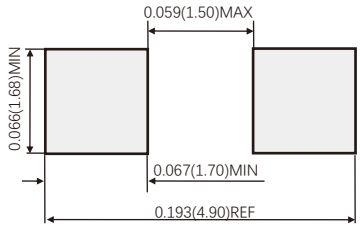


FIG.5-TYPICAL JUNCTION CAPACITANCE



Suggested PAD Layout



Dimensions in inches and (millimeters)

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