SEMICONDUCTOR

SS110S-V

AUTOMOTIVE SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 100 Volts
Forward Current - 1.0Amperes

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 2015/863/EU
- AEC-Q101 qualified and PPAP capable

RoHS REACH IATF16949认证

AEC-Q101 Qualified

SMAF

Mechanical Data

- Case: SMAF 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

Maximum Ratings

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	30	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

Electrical Characteristcs (Ta=25℃ Unless Otherwise Noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous Forward Voltage	IF= 0.5A	TA=25℃	V_F 1)	0.70		V
		TA=100℃		0.60	-	
		TA=125℃		0.56		
	IF=1.0A	TA=25℃		0.78	0.82	
		TA=100℃		0.68	-	
		TA=125℃		0.64		
Reverse Current	V_R =100V	TA=25℃	I_R 2)	-	5	μA
		TA=100℃		-	0.2	mA
		TA=125℃		-	1.0	
Typical Junction Capacitance	4V,1MHz		C_J	33		pF

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

2.Pulse test: pulse width≤40ms

Thermal Characteristcs

Parameter	Symbol	SMAF	Unit
Typical thermal resistance	$R_{\theta JA}$ 3) 4)	150	℃/W
	$R_{\theta JM}$	15	

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

4.Thermal resistance junction-to-ambient to follow JEDEC51-2A, device mounted on FR4 PCB, 2 oz., standard footprint

5.Thermal resistance junction-to-mount to follow JEDEC51-14 transient dual interface test method (TDIM)

Availabale 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)
SS110S-V-SMAF	T/R	Φ178	3000	180×73×180	2	380×380×200	10

Fig.1-Forward Current Derating Curve

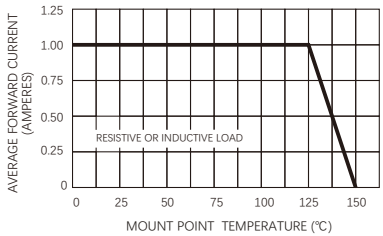


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

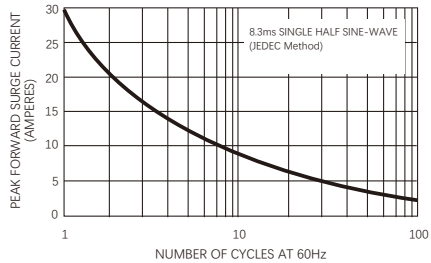


Fig.3-Typical Instantaneous Forward Characteristics

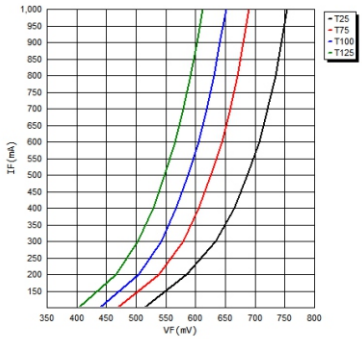


Fig.4-Typical Reverse Characteristics

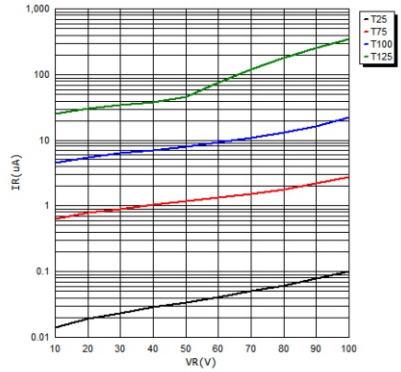
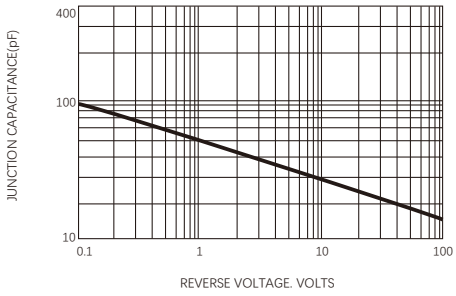
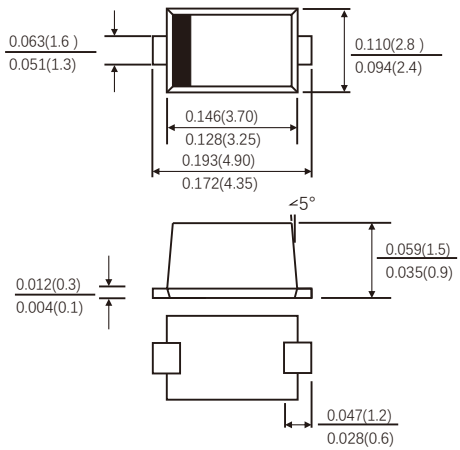


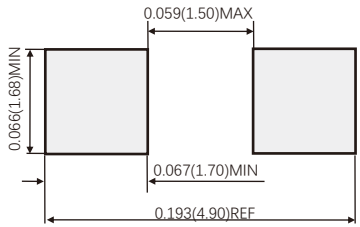
FIG.5-TYPICAL JUNCTION CAPACITANCE



SMAF

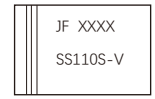


Suggested PAD Layout



Dimensions in inches and (millimeters)

Marking



Marking:

JF:Logo
xxxx:Tracing code
SS110S-V: Type

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