SEMICONDUCTOR

SS510-V

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

RoHS REACH IATF16949

AEC-Q101 Qualified

DO-214AC(SMA)

MECHANICAL DATA

- Case: JEDEC SMA(DO-214AC) 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

Marking:

JF:Logo
xxxx:Date code
SS510-V:Type

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)	$I_{F(AV)}$	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	℃

Electrical Characteristcs (Ta=25℃ Unless Otherwise Noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	T_J=25℃	I_F=1.0A	V_F 1)	0.55	-	V
		I_F=5.0A		0.75	0.82	
	T_J=125℃	I_F=1.0A		0.44	-	
		I_F=5.0A		0.60	-	
Reverse current	T_J=25℃	V_R=100V	I_R 2)	-	5.0	μA
	T_J=100℃			-	0.3	mA
	T_J=125℃			-	1.5	
Typical junction capacitance	4V,1MHz		C_J	190		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS

Parameter	Symbol	SS510-V	Unit
Typical thermal resistance 3)	$R_{\theta JA}$	88.0	℃/W
	$R_{\theta JL}$	28.0	

3.P.C.B. mounted with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

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)
SS510-V-SMA	T/R	Φ330	5000	330×35×333	2	364×364×360	8

RATINGS AND CHARACTERISTIC OF SS510-V

Fig.1-Forward Current Derating Curve

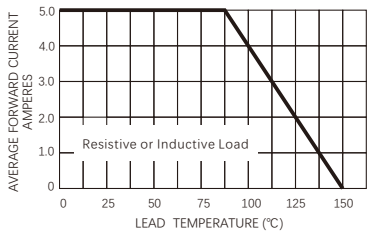


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

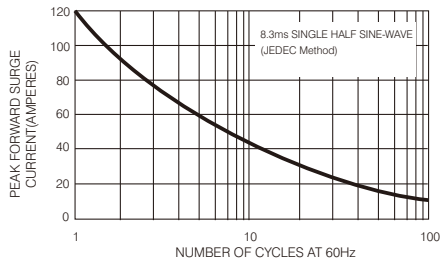


Fig.3-Typical Instantaneous Forward Characteristics

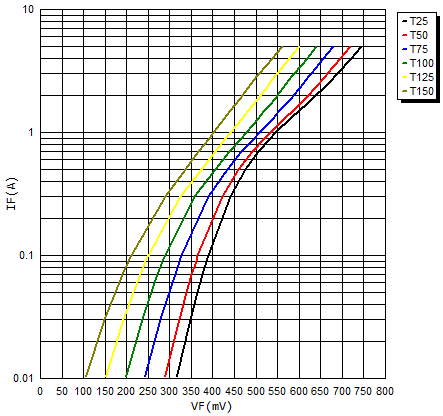


Fig.4-Typical Reverse Characteristics

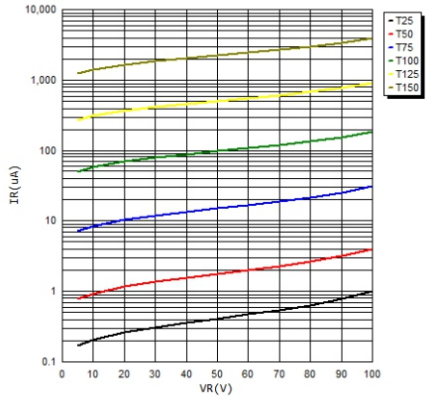
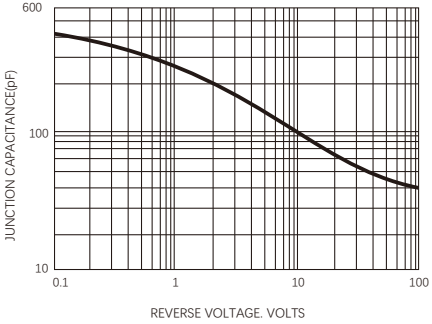
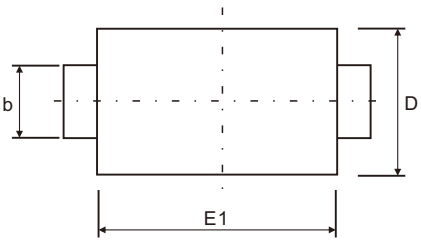
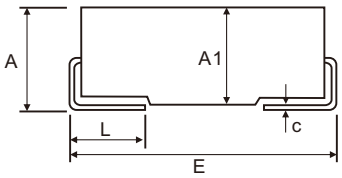


FIG.5-TYPICAL JUNCTION CAPACITANCE



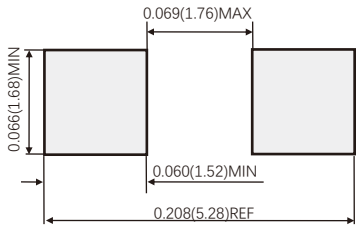
SMA(DO-214AC)





Sym	Value(milimeters)		
	Min	Typ	Max
A	1.90	-	2.29
A1	1.83	-	2.16
b	1.25	-	1.65
c	0.15	-	0.31
D	2.40	-	2.80
E	4.70	-	5.28
E1	3.99	-	4.70
L	0.76	-	1.52

Suggested PAD Layout



Dimensions in inches and (millimeters)

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