SEMICONDUCTOR

SS510L

LOW VF SCHOTTKY BARRIER RECTIFIER

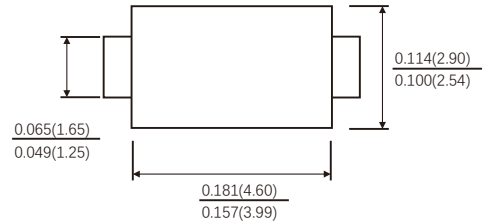
Reverse Voltage - 100 Volts
Forward Current - 5.0Amperes

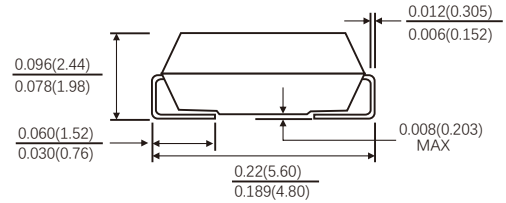
FEATURES

- 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

Pb RoHS COMPLIANT

SMA(DO-214AC)

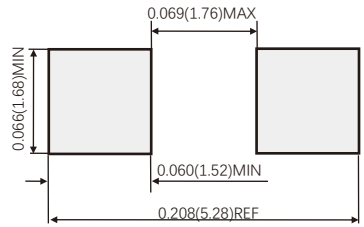




MECHANICAL DATA

- 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

Suggested PAD Layout



Dimensions in inches and (millimetrers)

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}	80	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	TJ=25℃	IF=1.0A	VF 1)	0.44	-	V
		IF=3.0A		0.55	-	
		IF=5.0A		0.65	0.70	
	TJ=125℃	IF=1.0A		0.34	-	
		IF=3.0A		0.50	-	
		IF=5.0A		0.60	-	
Reverse current	VR=100V	TJ=25℃	IR 2)	10	50	μA
		TJ=100℃		-	5.0	mA
		TJ=125℃		-	20.0	
Typical junction capacitance	4V,1MHz		CJ	370		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS

Parameter	Symbol	SMA	Unit
Typical thermal resistance 3)	RθJA	88.0	℃/W
	RθJL	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)
SS510L-SMA	T/R	Φ330	5000	330×35×333	2	364×364×360	8

RATINGS AND CHARACTERISTIC OF SS510L

FIG.1-FORWARD CURRENT DERATING CURVE

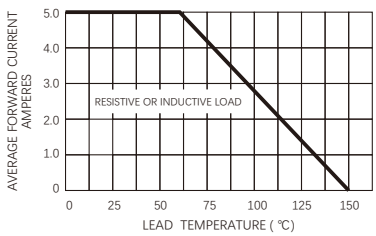


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

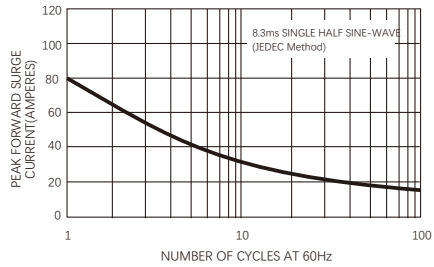


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

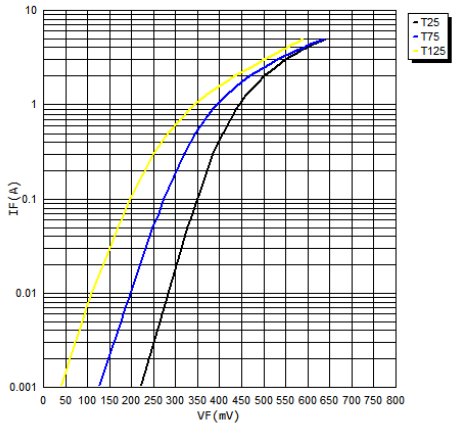


FIG.4-TYPICAL REVERSE CHARACTERISTICS

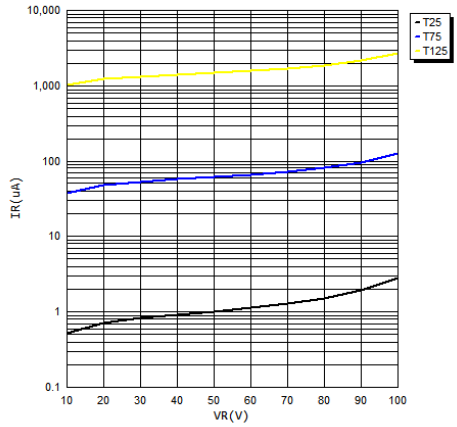
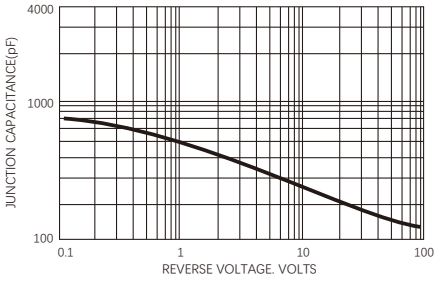


FIG.5-TYPICAL JUNCTION CAPACITANCE



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