SEMICONDUCTOR

SS1010B-V

AUTOMOTIVESCHOTTKY BARRIER RECTIFIER

Reverse Voltage-100Volts
Forward Current-10.0Amperes

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

Pb RoHS COMPLIANT

RoHS REACH IATF16949认证

AEC-Q101 Qualified

SMB(DO-214AA)

Marking:

JF:Logo
xxxx:Date code
SS1010B-V:Type

MECHANICAL DATA

- Case: JEDEC SMB molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Marking:SS1010B

TYPICAL APPLICATIONS

For use in low voltage,high frequency inverter,DC/DC converters, free wheeling,and polarity protection applications

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current	$I_{F(AV)}$	10.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	150	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	I_F=10A	TJ=25℃	VF 1)	0.79	0.85	V
		TJ=125℃		0.64	-	
	I_F=5A	TJ= 25℃		0.72	-	
		TJ=125℃		0.57	-	
Reverse Current	TJ=25℃	VR=100V	IR 2)	-	5	μA
	TJ=125℃			-	5	mA
Typical Junction Capacitance	4V,1MHz		CJ	237		pF

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

2.Pulse test: pulse width≤ 40ms

THERMAL CHARACTERISTCS

Parameter	Symbol	SMB	Unit
Typical thermal resistance 3)	RθJA	70.0	℃/W
	RθJL	20.0	

3. Unit mounted on PC board with 5.0mm×5.0 mm (0.013 mm thick) copper pads as heat sink, (dPtot/dtj) < ($1/R_{\theta JA}$) is thermal runaway condition for a diode

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)	Quantity (K/carton)
SS1010B-V-SMB	T/R	Φ330	3000	330×333×39	2	370×370×360	8	48

RATINGS AND CHARACTERISTICS OF SS1010B-V

Fig.1-Forward Current Derating Curve

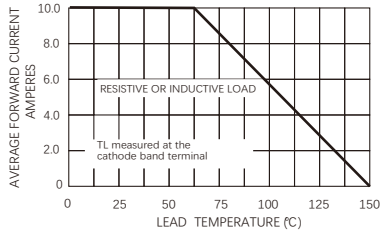


Fig.2-maximum Non-repetitive Peak Forward Surge Current

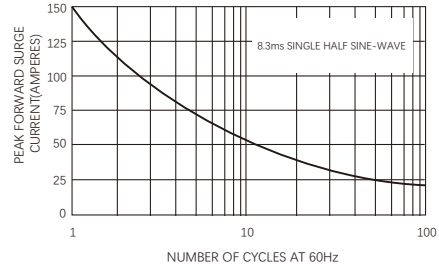


Fig.3-Typical Instantaneous Forward Characteristics

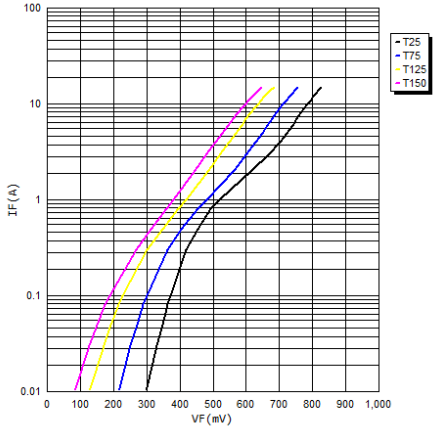


Fig.4-Typical Reverse Characteristics

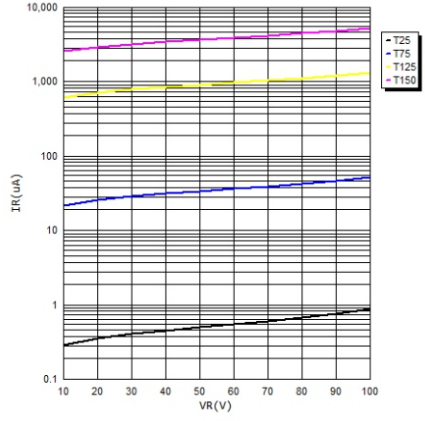
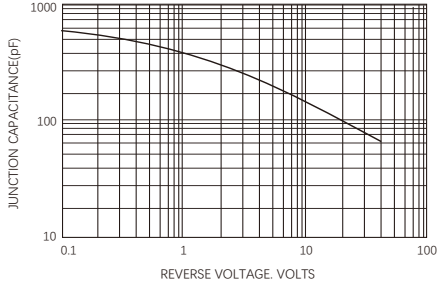
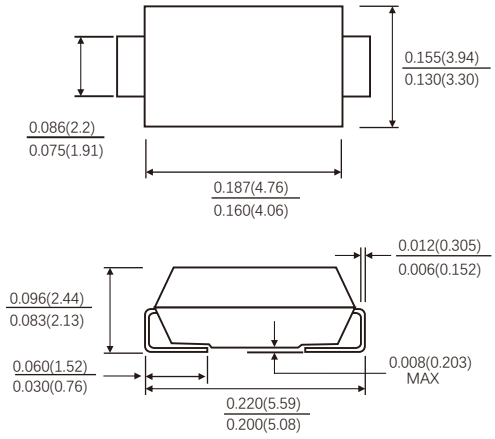


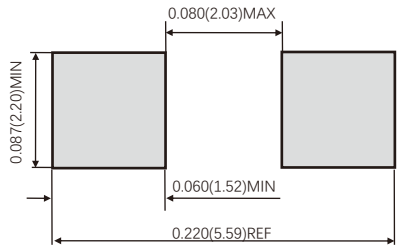
Fig.5-Typical Junction Capacitance



SMB(DO-214AA)



Suggested PAD Layout



Dimensions in inches and (millimeters)

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