

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°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003ounce, 0.093 gram

TYPICAL APPLICATIONS

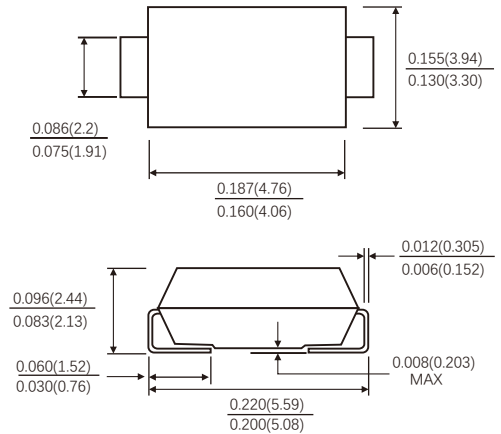
For use in low voltage,high frequency inverter,DC/DC converters, free wheeling,and polarity protection applications

MAXIMUM RATINGS

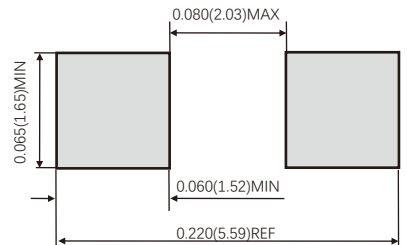
(Ratings at 25°C ambient temperature unless otherwise)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	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	°C
Storage temperature range	T_{stg}	-55 to +150	°C

SMB(DO-214AA)



Suggested PAD Layout



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous Forward Voltage	T _A =25°C	I _F =1A	V _F ¹⁾	0.64	-	V
		I _F =5A		0.76	-	
		I _F =10A		0.82	0.90	
	T _A =125°C	I _F =1A		0.48	-	
		I _F =5A		0.61	-	
		I _F =10A		0.68	-	
Reverse Current	T _A =25°C	V _R =200V	I _R ²⁾	-	5	μA
	T _A =125°C			-	2.5	mA
Typical Junction Capacitance	4V, 1MHz		C _J	150		pF

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

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMB	Unit
Typical thermal resistance ³⁾	R _{θJA}	70.0	°C/W
	R _{θJL}	15.0	

3. Unit mounted on PC board with 5.0mm×5.0 mm (0.013 mm thick) copper pads as heat sink

AVAILABLE 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)
SS1020B-SMB	T/R	Φ300	3000	340×340×40	2	370×370×370	8

Fig.1-Forward Current Derating Curve

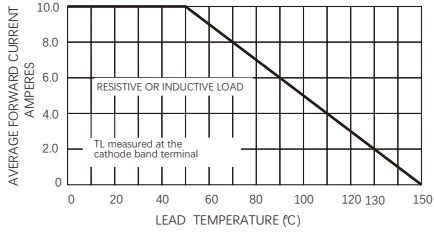


Fig.2-maximum Non-repetitive Peak Forward Surge Current

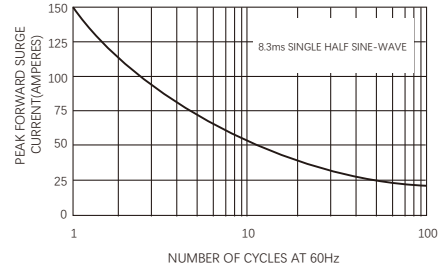


Fig.3-Typical Instantaneous Forward Characteristics

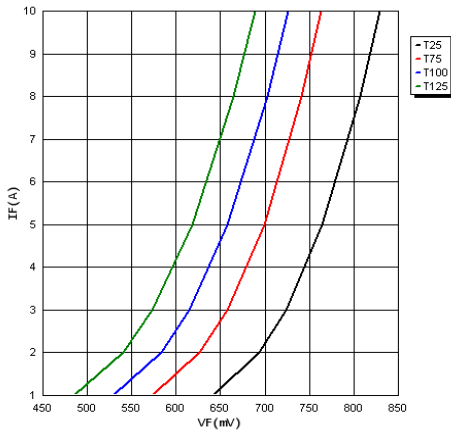


Fig.4-Typical Reverse Characteristics

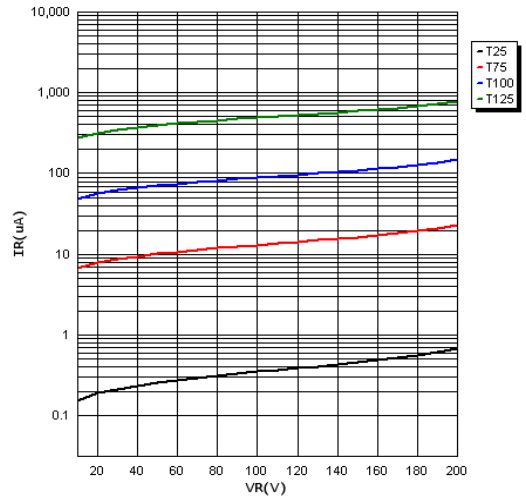
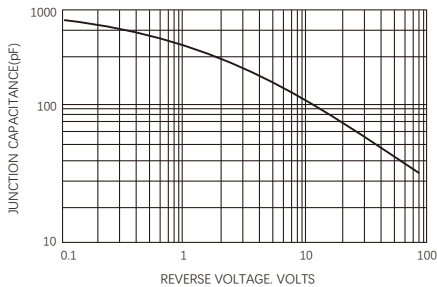


Fig.5-Typical Junction Capacitance



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