

## S1A~S1M

### SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 1000 Volt **CURRENT** 1 Ampere

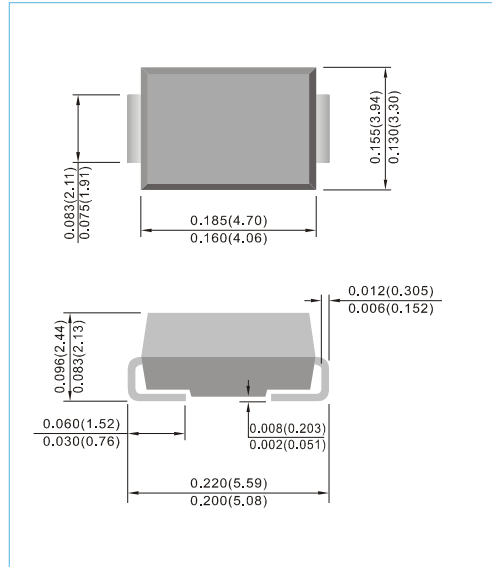
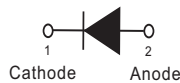
**SMB / DO-214AA** Unit : inch(mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Glass passivated junction
- Complete device submersible temperature of 260°C for 10 seconds in solder bath
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.003 ounces, 0.092 grams



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase , half wave ,60Hz, resistive or inductive load.  
For capacitive load , derate current by 20%.

PARAMETER	SYMBOL	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Current at $T_L=100^{\circ}\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum Forward Voltage at 1A	$V_F$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}\text{C}$ $T_J=125^{\circ}\text{C}$	$I_R$	1 50							$\mu\text{A}$
Typical Junction Capacitance (Notes 1)	$C_J$	12							pF
Typical Junction Resistance (Notes 2)	$R_{\theta JL}$	30							$^{\circ}\text{C} / \text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^{\circ}\text{C}$

#### NOTES:

1. Measured at 1 Mhz and Applied  $V_r = 4$  volts.
2. 8mm<sup>2</sup> (0.013 mm thick) land areas.

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### RATING AND CHARACTERISTIC CURVES

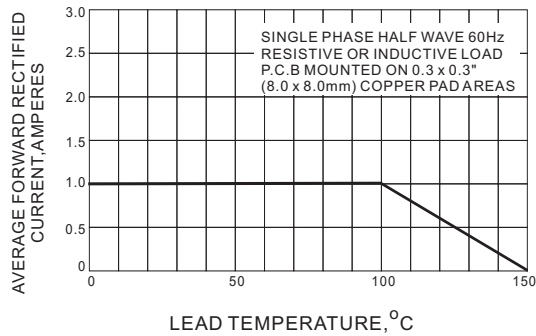


Fig.1 FORWARD CURRENT DERATING CURVE

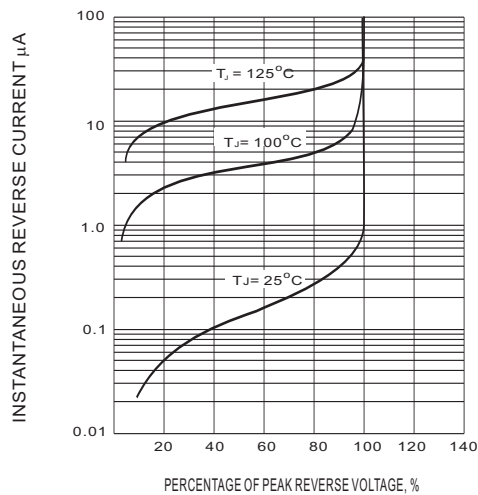


Fig.3-TYPICAL REVERSE CHARACTERISTIC

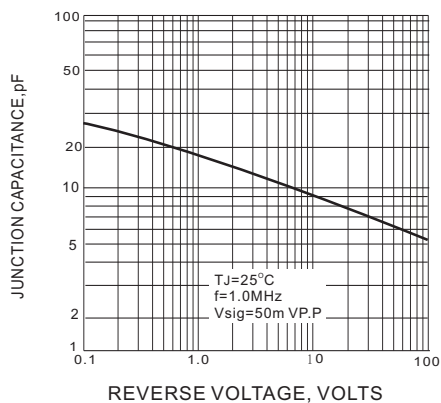


Fig.5 TYPICAL JUNCTION CAPACITANCE

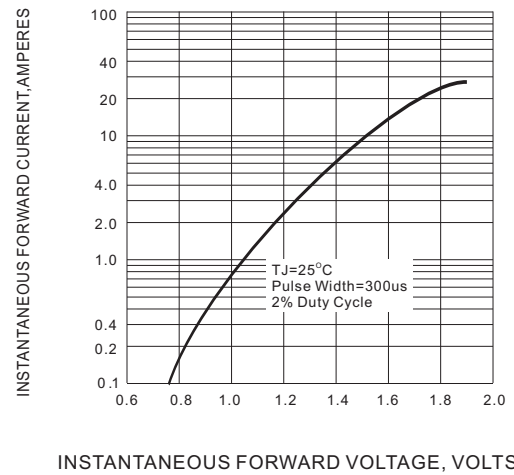


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

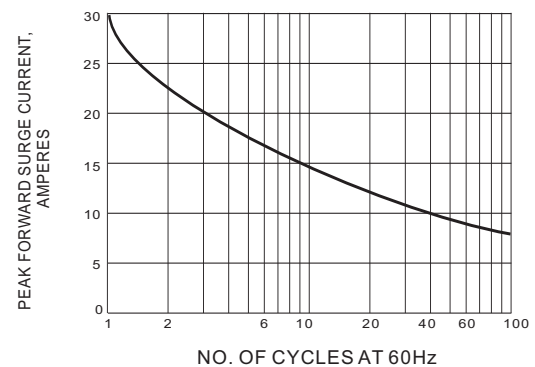


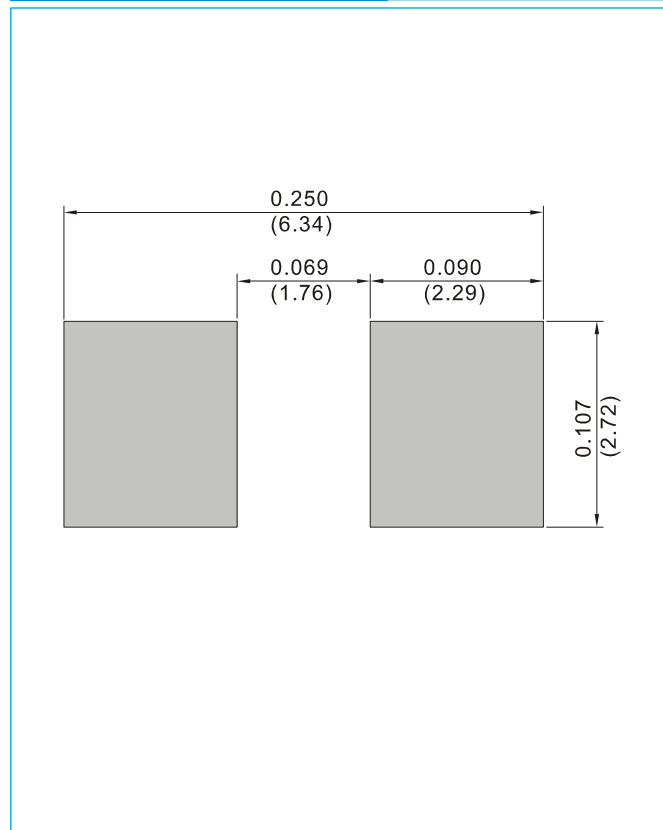
Fig.4 MAXIMUM NON REPETITIVE PEAK SURGE CURRENT

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### MOUNTING PAD LAYOUT

**SMB / DO-214AA**

Unit : inch(mm)



### ORDER INFORMATION

- Packing information

T/R - 3K per 13" plastic Reel

T/R - 0.8K per 7" plastic Reel

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### Part No\_packing code\_Version

S1A\_R1\_00001

S1A\_R2\_00001

For example :

RB500V-40\_R2\_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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