



# S2A~S2M

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 1000 Volt **CURRENT** 2 Ampere

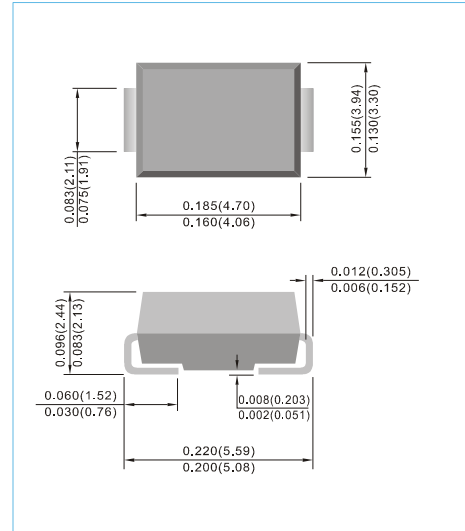
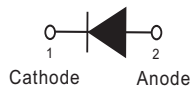
**SMB / DO-214AA** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Glass passivated junction
- 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          | S2A         | S2B | S2D | S2G | S2J | S2K | S2M  | 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   | $I_{F(AV)}$     | 2           |     |     |     |     |     |      | A               |
| Peak Forward Surge Current : 8.3ms Single Half Sine-Wave Superimposed On Rated Load             | $I_{FSM}$       | 60          |     |     |     |     |     |      | A               |
| Peak Forward Surge Current : Square Wave, t=1ms, Non-Repetitive 1 Cycle Peak Value              | $I_{FSM}$       | 130         |     |     |     |     |     |      | A               |
| Maximum Forward Voltage at 2A   | $V_F$           | 1.1         |     |     |     |     |     |      | V               |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$<br>$T_J=125^{\circ}C$ | $I_R$           | 1<br>125    |     |     |     |     |     |      | $\mu A$         |
| Maximum Junction Capacitance (Note 1)   | $C_J$           | 30          |     |     |     |     |     |      | pF              |
| Typical Junction Resistance (Note 2)  | $R_{\theta JL}$ | 16          |     |     |     |     |     |      | $^{\circ}C / W$ |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$  | -55 to +150 |     |     |     |     |     |      | $^{\circ}C$     |

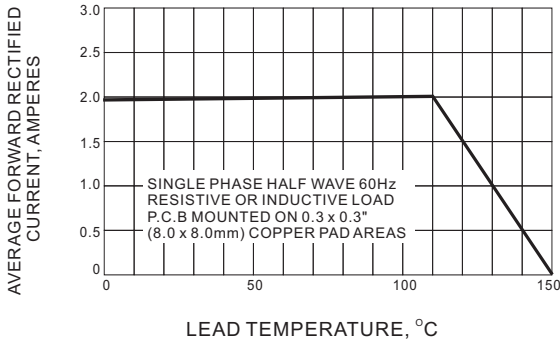
### NOTES :

1. Measured at 1MHZ and applied  $V_R=4$  volts.  
2.8 x 8mm<sup>2</sup> pads.

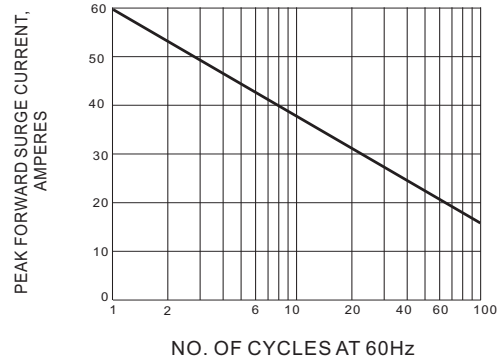


# S2A~S2M

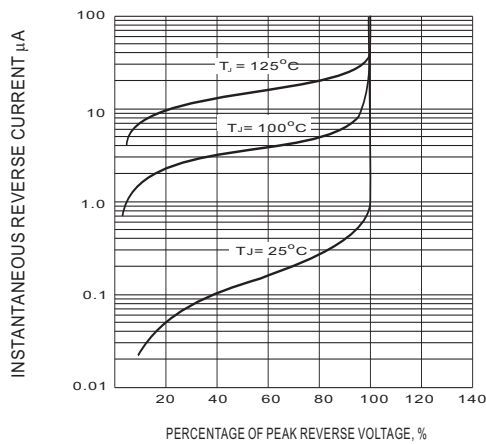
## RATING AND CHARACTERISTIC CURVES



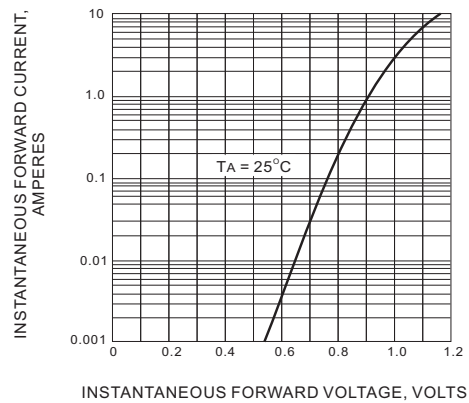
**Fig.1 FORWARD CURRENT DERATING CURVE**



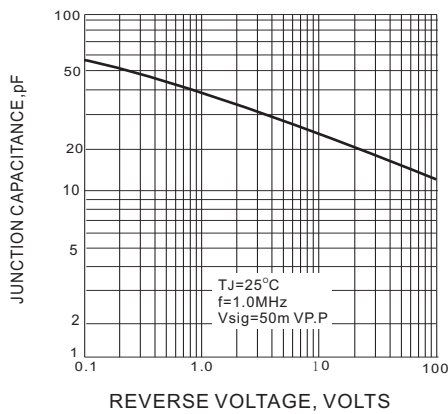
**Fig.2 MAXIMUM NON REPETITIVE PEAK SURGE CURRENT**



**Fig.3 TYPICAL REVERSE CHARACTERISTIC**



**FIG.2 TYPICAL FORWARD CHARACTERISTICS**



**Fig.5 TYPICAL JUNCTION CAPACITANCE**

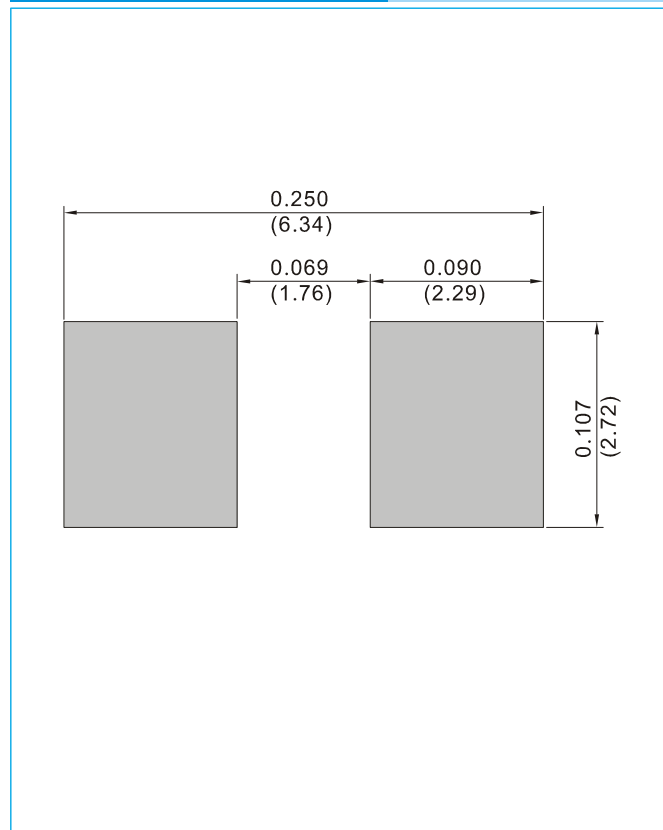


## S2A~S2M

### 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



## S2A~S2M

### Part No\_packing code\_Version

S2A\_R1\_00001

S2A\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



| 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)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                 | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>               | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                           |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                           |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                           |                      |                                       |



## S2A~S2M

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.