



# RS2AF SERIES

## SURFACE MOUNT FAST RECOVERY RECTIFIER

**VOLTAGE** 50 to 600 Volt **CURRENT** 2 Ampere

**SMAF**

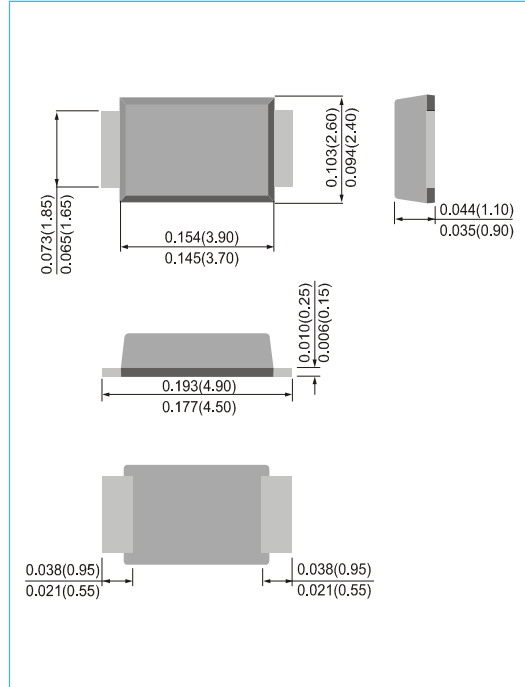
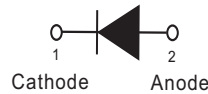
Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- Ultra Thin Profile Package for Space Constrained Utilization
- Package suitable for Automated Handling
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SMAF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0011 ounce, 0.0328 grams
- Polarity: Color band denotes cathode end



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

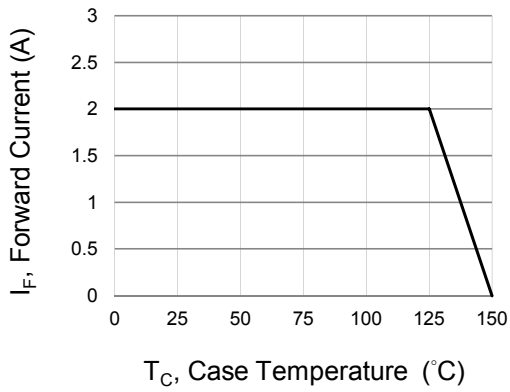
| PARAMETER   | SYMBOL                               | RS2AF       | RS2BF | RS2DF | RS2GF | RS2JF | UNITS |                             |
|---|--------------------------------------|-------------|-------|-------|-------|-------|-------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                            | 50          | 100   | 200   | 400   | 600   | V     |                             |
| Maximum RMS Voltage   | $V_{RMS}$                            | 35          | 70    | 140   | 280   | 420   | V     |                             |
| Maximum DC Blocking Voltage   | $V_{DC}$                             | 50          | 100   | 200   | 400   | 600   | V     |                             |
| Maximum Average Forward Rectified Current   | $I_{F(AV)}$                          | 2           |       |       |       |       |       | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$                            | 50          |       |       |       |       |       | A                           |
| Maximum Forward Voltage at 2A   | $V_F$                                | 1.3         |       |       |       |       |       | V                           |
| Maximum DC Reverse Current $T_J=25^\circ\text{C}$                                   | $I_R$                                | 1           |       |       |       |       |       | $\mu\text{A}$               |
| Typical Junction Capacitance ( $V_R=4\text{V}$ $f=1\text{MHz}$ )                    | $C_J$                                | 24          |       |       |       | 14    |       | pF                          |
| Typical Thermal Resistance (Note 1)<br>(Note 2)                                     | $R_{\theta J L}$<br>$R_{\theta J A}$ | 22<br>150   |       |       |       |       |       | $^\circ\text{C} / \text{W}$ |
| Maximum Reverse Recovery Time   | $T_{rr}$                             | 150         |       |       |       | 250   |       | nS                          |
| Operating Junction and Storage Temperature Range                                    | $T_J, T_{STG}$                       | -55 to +150 |       |       |       |       |       | $^\circ\text{C}$            |

NOTES : 1. Mounted on an FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.  
2. Mounted on an FR4 PCB, single-sided copper, mini pad.

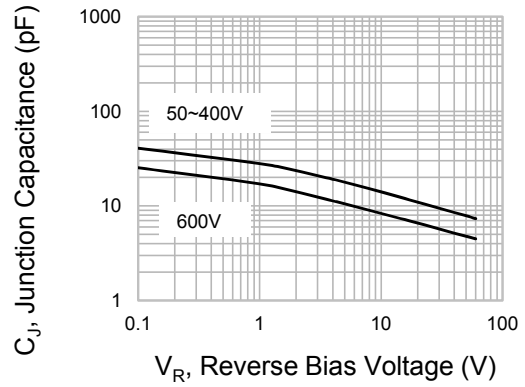


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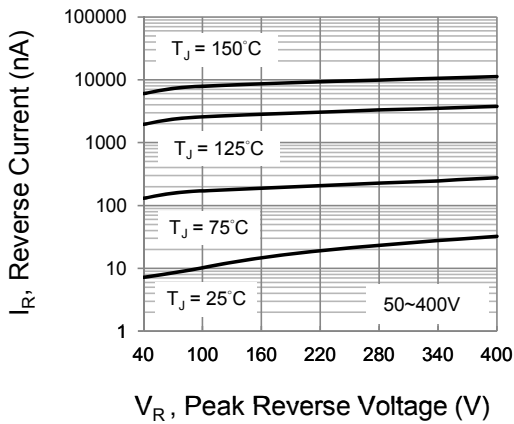
## RATING AND CHARACTERISTIC CURVES



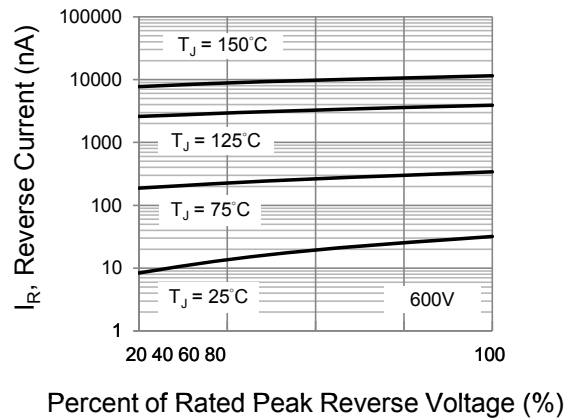
**Fig.1 Forward Current Derating Curve**



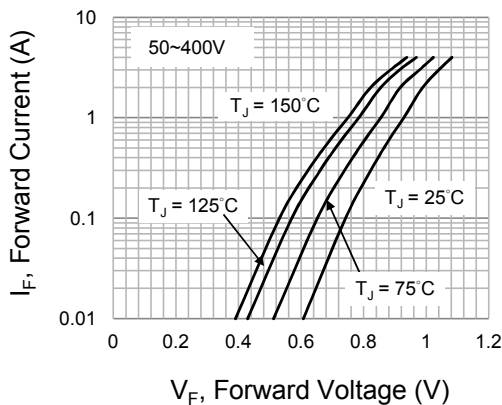
**Fig.2 Typical Junction Capacitance**



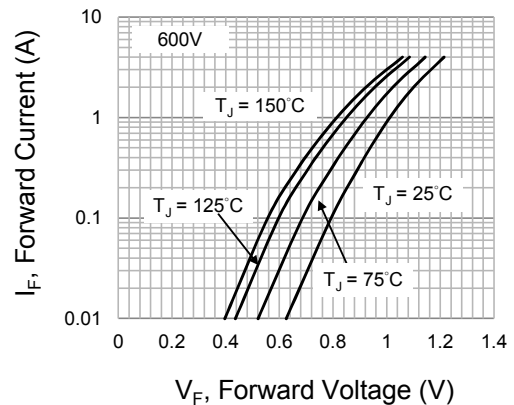
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Forward Characteristics**

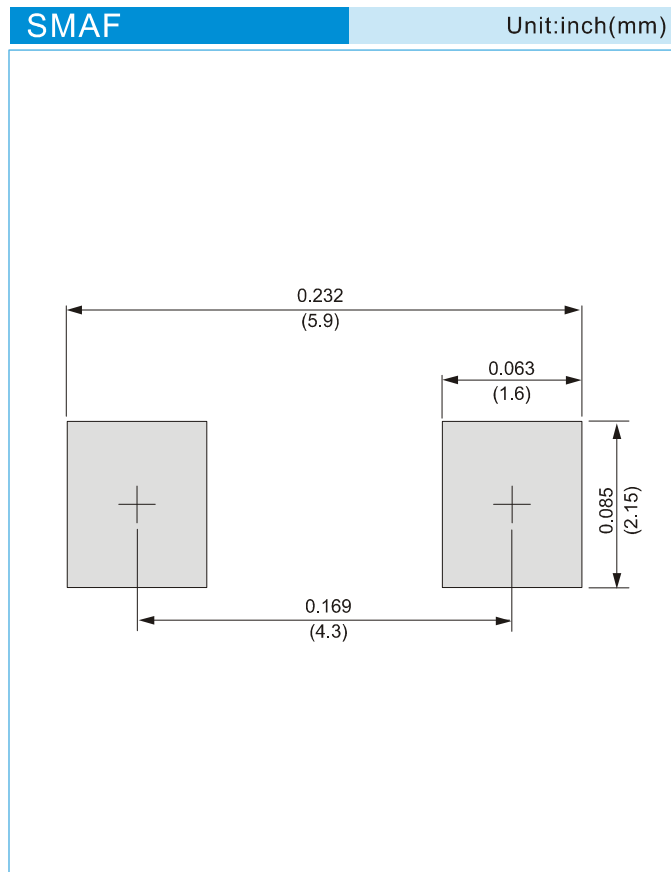


**Fig.6 Typical Forward Characteristics**



## RS2AF SERIES

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



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### Part No\_packing code\_Version

RS2AF\_R1\_00001

RS2AF\_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)        | 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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