

# RS1AWG SERIES

## SURFACE MOUNT FAST RECOVERY RECTIFIER

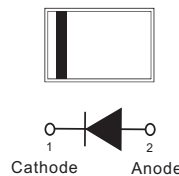
**VOLTAGE** 50 to 1000 Volts **CURRENT** 1 Amperes

### 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-O
- Glass passivated junction
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

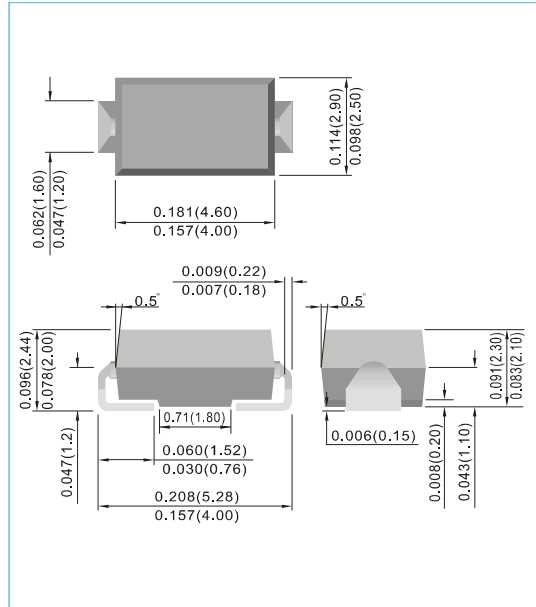
### MECHANICAL DATA

- Case: SMA(W) 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: 0.002 ounce, 0.064 gram



### SMA(W)

Unit : inch(mm)



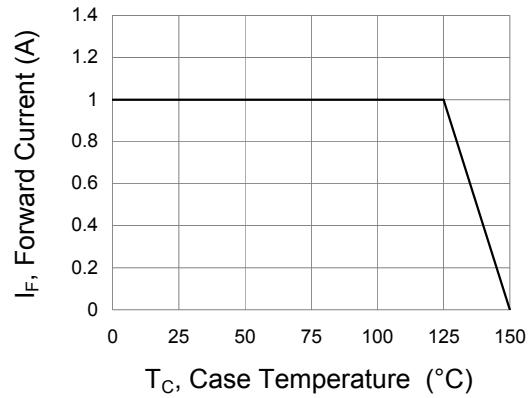
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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%.

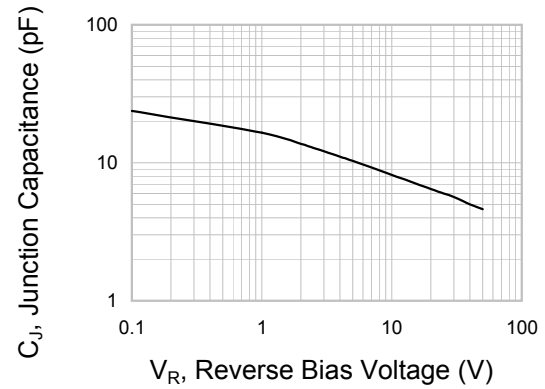
| PARAMETER  | SYMBOL                               | RS1AWG      | RS1BWG | RS1DWG | RS1GWG | RS1JWG | RS1KWG | RS1MWG | UNITS  |
|--|--------------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>                     | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V      |
| Maximum RMS Voltage  | V <sub>RMS</sub>                     | 35          | 70     | 140    | 280    | 420    | 560    | 800    | V      |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                      | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V      |
| Maximum Average Rectified Current  | I <sub>F(AV)</sub>                   | 1           |        |        |        |        |        |        | A      |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                     | 30          |        |        |        |        |        |        | A      |
| Maximum Forward Voltage at 1A  | V <sub>F</sub>                       | 1.3         |        |        |        |        |        |        | V      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage  | I <sub>R</sub>                       | 5           |        |        |        |        |        |        | μA     |
| Maximum Junction Capacitance (V <sub>R</sub> =4V,f=1MHz)   | C <sub>J</sub>                       | 15          |        |        |        |        |        |        | pF     |
| Typical Junction Resistance (Note 1)<br>(Note 2)   | R <sub>θJA</sub><br>R <sub>θJL</sub> | 150<br>35   |        |        |        |        |        |        | °C / W |
| Maximum Reverse Recovery Time (Note 3)   | t <sub>rr</sub>                      | 150         |        |        |        |        | 250    | 500    | ns     |
| Operating Junction and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub>    | -55 to +150 |        |        |        |        |        |        | °C     |

NOTES:1. Mounted on an FR4 PCB, single-sided copper, mini pad.  
2. Mounted on an FR4 PCB, single-sided copper, with 76.2 x 114.3mm copper pad area.  
3. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ ,  $t_{rr}=0.25A$ .

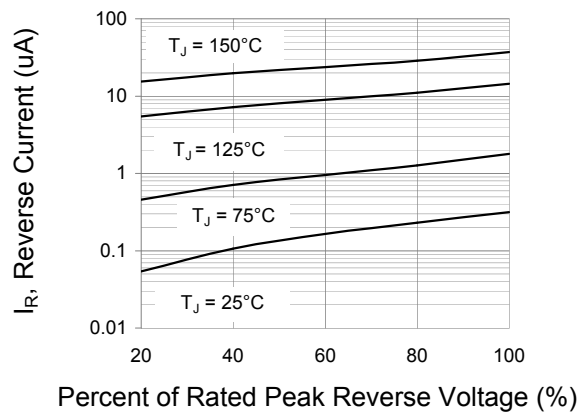
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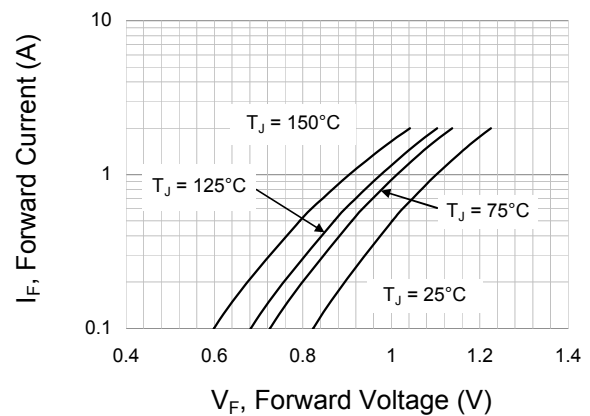
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



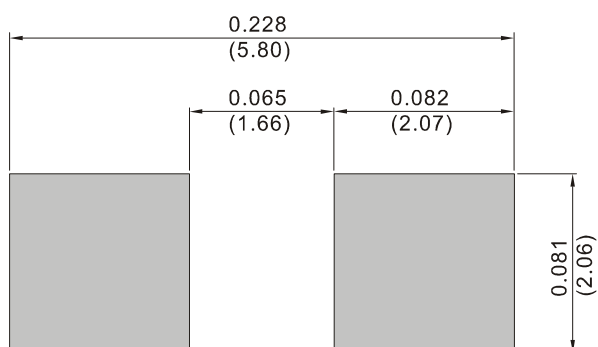
**Fig.4 Typical Forward Characteristics**

## RS1AWG SERIES

### MOUNTING PAD LAYOUT

**SMA(W)**

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8K per 7" plastic Reel

## RS1AWG SERIES

### Part No\_packing code\_Version

RS1AWG\_R1\_00001

RS1AWG\_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>             |                           |                      |                                       |



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