



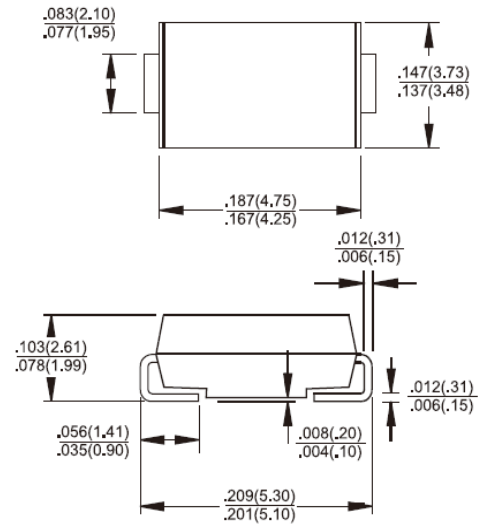
## RS2A - RS2M

### 2.0 AMP. Surface Mount Fast Recovery Rectifiers

#### SMB/DO-214AA

### Features

- ✧ For surface mounted application
- ✧ Glass passivated junction chip
- ✧ Built-in strain relief, ideal for automated placement
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ Fast switching for high efficiency
- ✧ High temperature soldering: 260°C / 10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



### Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, Lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.093 grams

### Dimensions in inches and (millimeters)

#### Marking Diagram



- RS2X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

### Maximum Ratings and Electrical Characteristics

Rating 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%

| Type Number  | Symbol                             | RS 2A         | RS 2B | RS 2D | RS 2G | RS 2J | RS 2K | RS 2M | Unit               |
|--|------------------------------------|---------------|-------|-------|-------|-------|-------|-------|--------------------|
| Maximum Repetitive 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 Rectified Current @ $T_L=100^\circ\text{C}$                                | $I_{F(AV)}$                        | 2             |       |       |       |       |       |       | A                  |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$                          | 50            |       |       |       |       |       |       | A                  |
| Maximum Instantaneous Forward Voltage (Note 1) @ 2 A   | $V_F$                              | 1.3           |       |       |       |       |       |       | V                  |
| Maximum Reverse Current @ Rated VR $T_A=25^\circ\text{C}$<br>$T_A=125^\circ\text{C}$               | $I_R$                              | 5<br>50       |       |       |       |       |       |       | $\mu\text{A}$      |
| Maximum Reverse Recovery Time (Note 2)   | $T_{rr}$                           | 150           |       |       | 250   | 500   |       | nS    |                    |
| Typical Junction Capacitance (Note 3)  | $C_j$                              | 50            |       |       |       |       |       |       | pF                 |
| Typical Thermal Resistance   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 55<br>18      |       |       |       |       |       |       | $^\circ\text{C/W}$ |
| Operating Temperature Range  | $T_J$                              | - 55 to + 150 |       |       |       |       |       |       | $^\circ\text{C}$   |
| Storage Temperature Range  | $T_{STG}$                          | - 55 to + 150 |       |       |       |       |       |       | $^\circ\text{C}$   |

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (RS2A THRU RS2M)

FIG.1 FORWARD CURRENT DERATING CURVE

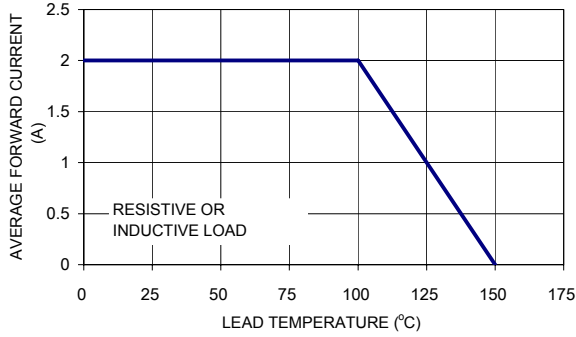


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

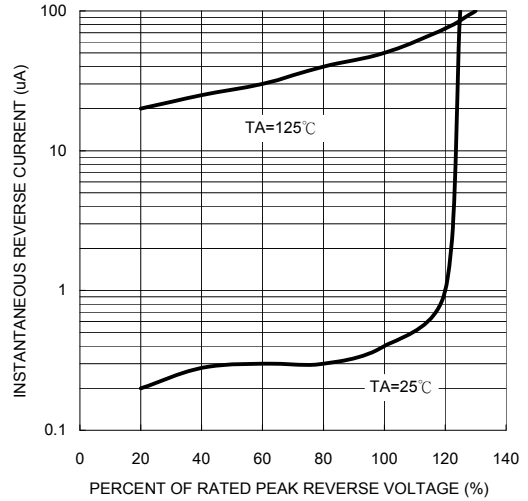


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

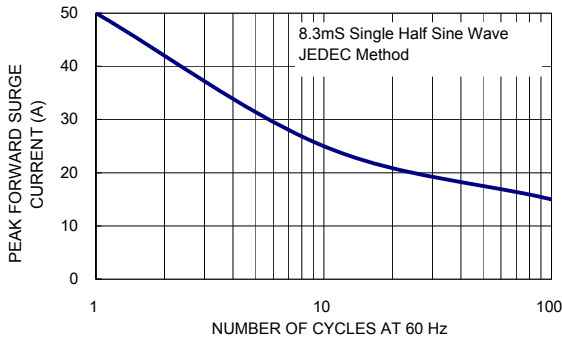


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

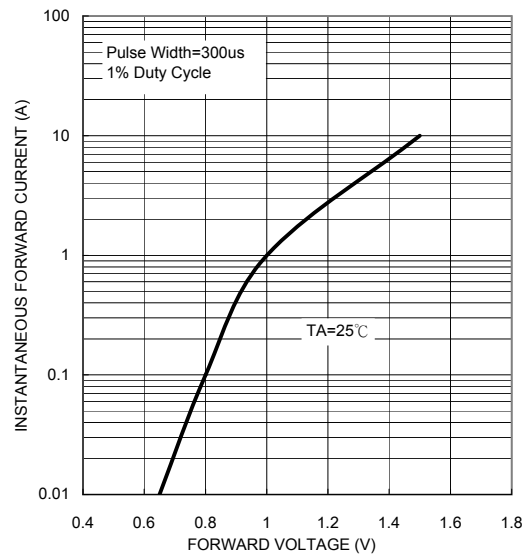


FIG. 4 TYPICAL JUNCTION CAPACITANCE

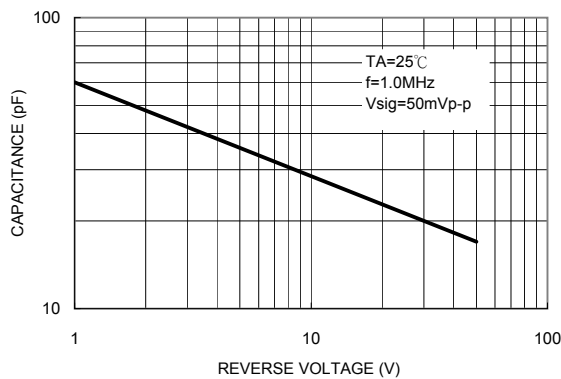


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

