

### 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

### Ordering Information (example)

| Part No. | Package | Packing       | Packing code | Packing code (Green) |
|----------|---------|---------------|--------------|----------------------|
| RS2A     | SMB     | 850 / 7" REEL | R5           | R5G                  |

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter  | 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  | $I_{F(AV)}$                        | 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 $T_A=25\text{ }^\circ\text{C}$<br>$T_A=125\text{ }^\circ\text{C}$ | $I_R$                              | 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)

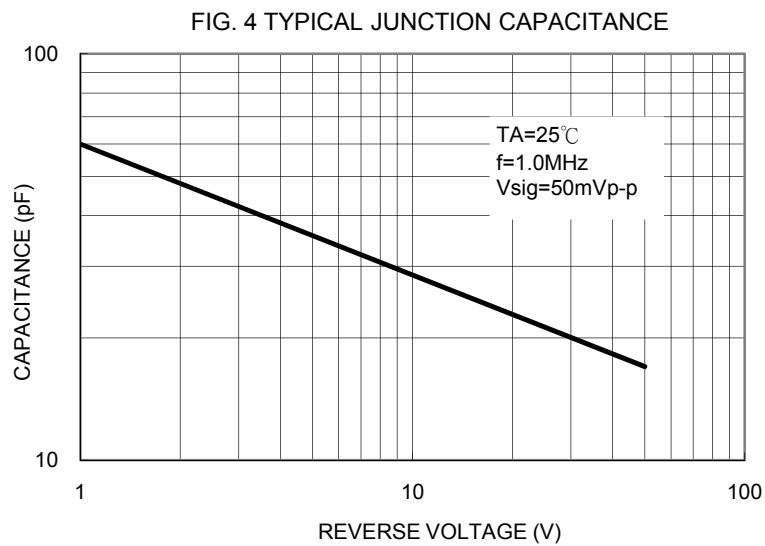
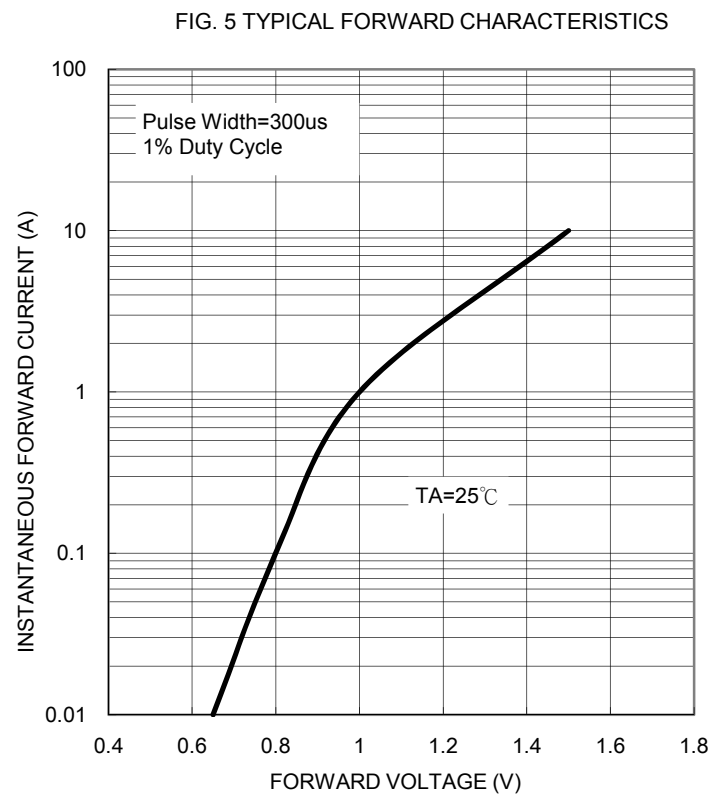
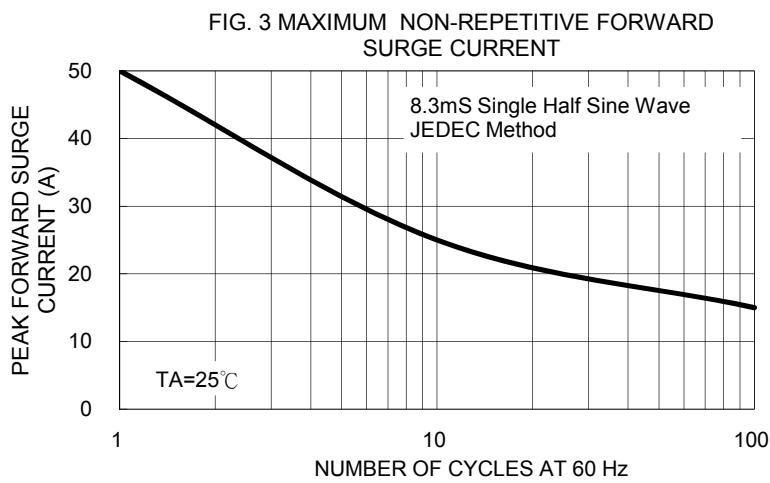
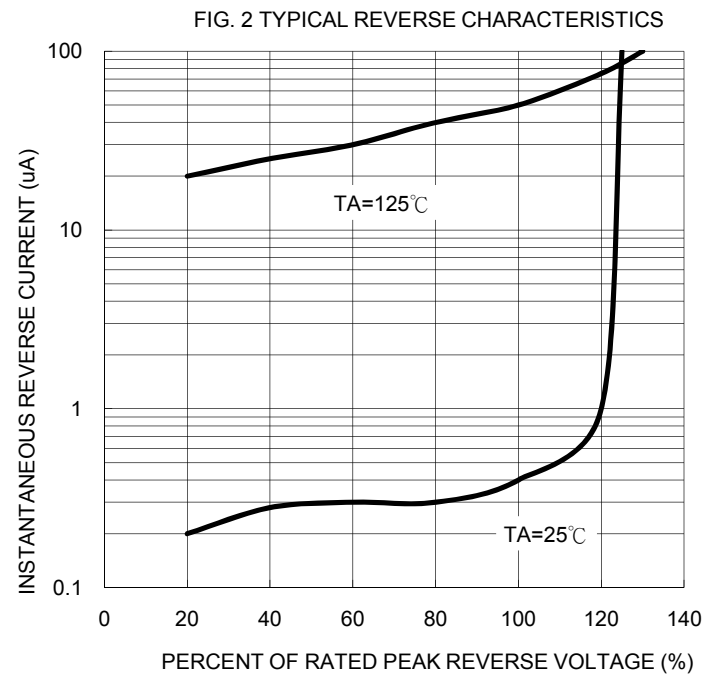
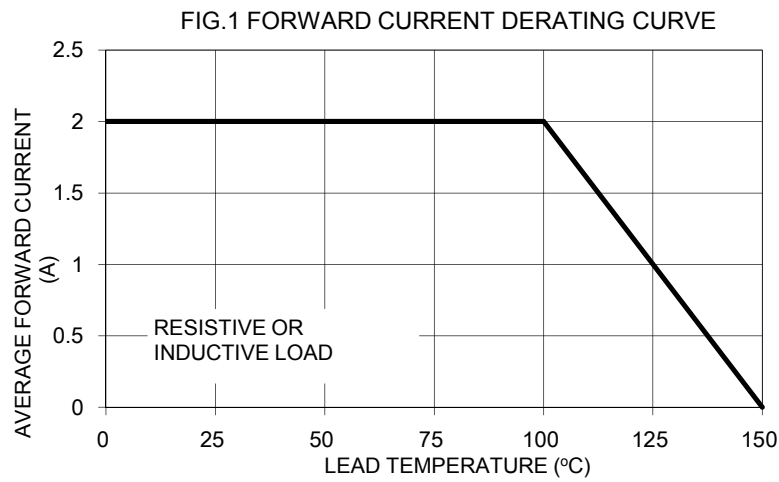
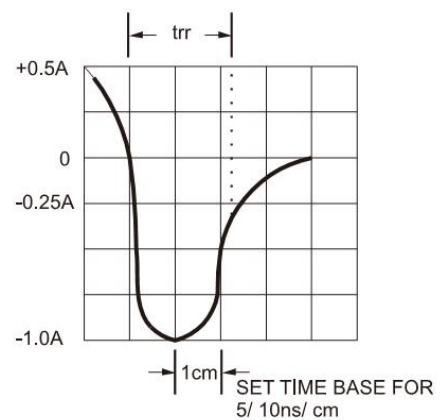
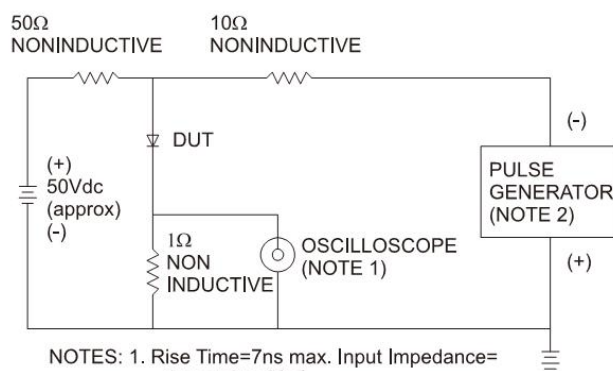


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

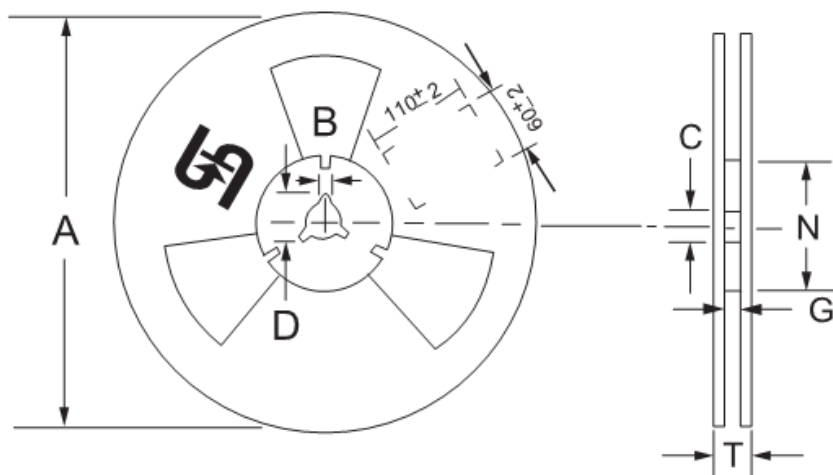
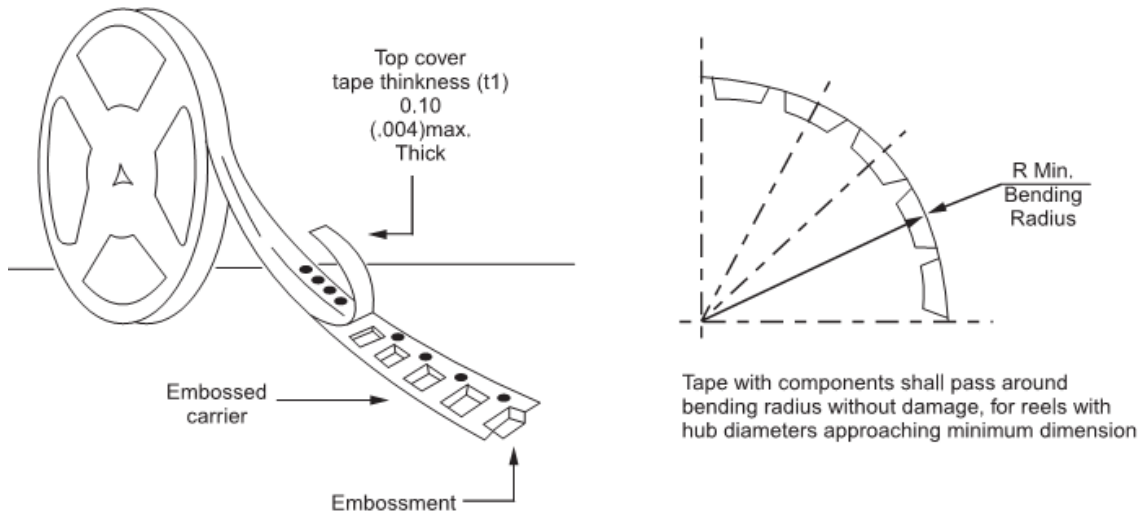


**Ordering information**

| Part No.       | Package | Packing               | Packing code | Packing code (Green) |
|----------------|---------|-----------------------|--------------|----------------------|
| RS2x<br>(Note) | SMB     | 850 / 7" REEL         | R5           | R5G                  |
|                | SMB     | 3K / 13" REEL         | R4           | R4G                  |
|                | SMB     | 3K / 13" Plastic REEL | M4           | M4G                  |

Note: "x" is Device Code from "A" thru "M".

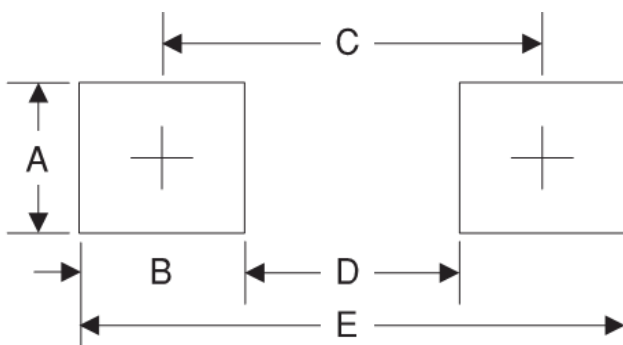
**Tape & Reel specification**



| Reel Size | Tape Size | A    | B    | C         | D    | N    | G       | T    |
|-----------|-----------|------|------|-----------|------|------|---------|------|
|           |           | ±2.0 | ±0.4 | +0.5;-0.2 | min  | ±1.0 | +0.8;-0 | max  |
| 7"        | 12mm      | 178  | 1.9  | 13        | 21   | 62   | 12.2    | 14.6 |
| Reel Size | Tape Size | A    | B    | C         | D    | N    | G       | T    |
|           |           | max  | ±0.5 | ±0.5      | min  | ±0.5 | +2.0;-0 | max  |
| 13"       | 12mm      | 330  | 2    | 13        | 20.2 | 75   | 12.4    | 18.4 |

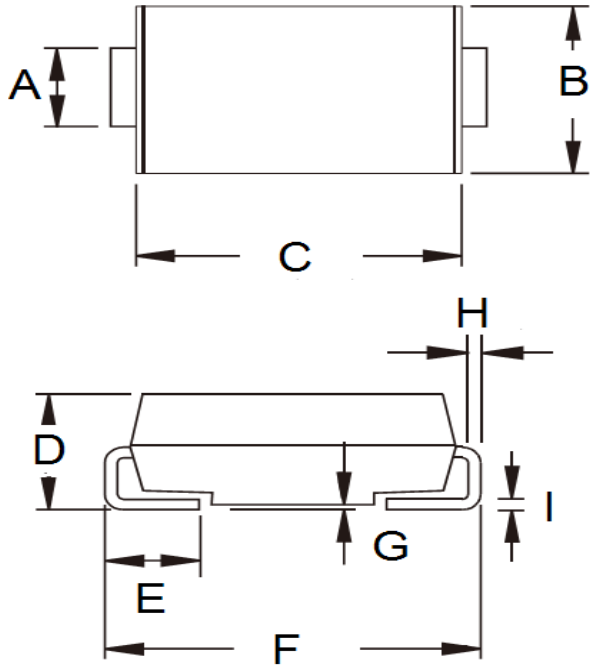
Unit (mm)

**Suggested PAD Layout**



| Symbol | Unit(mm) |
|--------|----------|
| A      | 2.3      |
| B      | 2.5      |
| C      | 4.3      |
| D      | 1.8      |
| E      | 6.7      |

**Dimensions**



| DIM. | Unit(mm) |      | Unit(inch) |       |
|------|----------|------|------------|-------|
|      | Min      | Max  | Min        | Max   |
| A    | 1.95     | 2.10 | 0.077      | 0.083 |
| B    | 3.48     | 3.73 | 0.137      | 0.147 |
| C    | 4.25     | 4.75 | 0.167      | 0.187 |
| D    | 1.99     | 2.61 | 0.078      | 0.103 |
| E    | 0.90     | 1.41 | 0.035      | 0.056 |
| F    | 5.10     | 5.30 | 0.201      | 0.209 |
| G    | 0.10     | 0.20 | 0.004      | 0.008 |
| H    | 0.15     | 0.31 | 0.006      | 0.012 |
| I    | 0.15     | 0.31 | 0.006      | 0.012 |

**Marking Diagram**



- P/N = Specific Device Code
- G = Green Compound
- YW = Date Code
- F = Factory Code