



## Features

- Average Forward Current:  $I_{F(AV)}=1A$
- Polarity: Color band denotes cathode



SMAF

## Package Marking and Ordering Information

| Product ID          | Pack | Marking | Qty(PCS) |
|---------------------|------|---------|----------|
| RS1AF-T<br>~RS1MF-T | SMAF | RS1xF   | 10000    |

x :From A-M



## Maximum Ratings (Ta=25°C unless otherwise noted)

Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Type Number                                                                                           | RS1AF      | RS1BF | RS1DF | RS1GF | RS1JF | RS1KF | RS1MF | Units |
|-------------------------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100   | 200   | 400   | 600   | 800   | 1000  | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70    | 140   | 280   | 420   | 560   | 700   | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100   | 200   | 400   | 600   | 800   | 1000  | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=55°C                      | 1.0        |       |       |       |       |       |       | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 30         |       |       |       |       |       |       | A     |
| Maximum Instantaneous Forward Voltage at 1.0A                                                         | 1.3        |       |       |       |       |       |       | V     |
| Maximum DC Reverse Current Ta=25°C                                                                    | 5.0        |       |       |       |       |       |       | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                                 | 100        |       |       |       |       |       |       | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 150        |       |       |       | 250   | 500   |       | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 15         |       |       |       |       |       |       | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +150 |       |       |       |       |       |       | °C    |

### NOTES:

1. Reverse Recovery Time test condition:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $IRR=0.25A$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



## Typical Characteristics

FIG.1-TYPICAL FORWARD CHARACTERISTICS

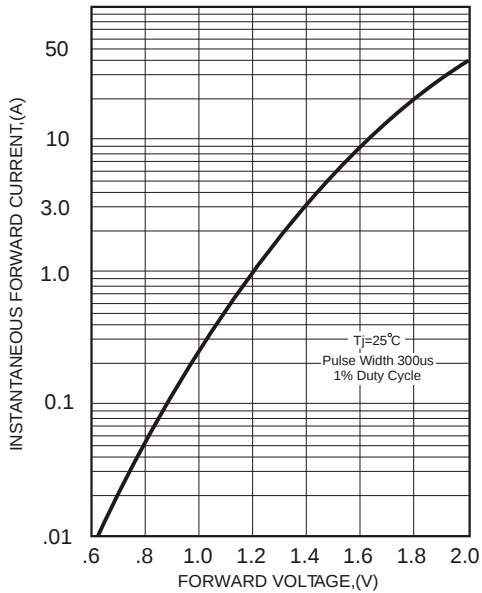


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

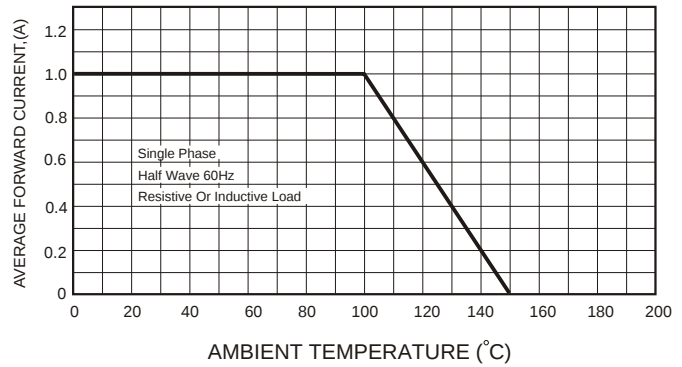


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

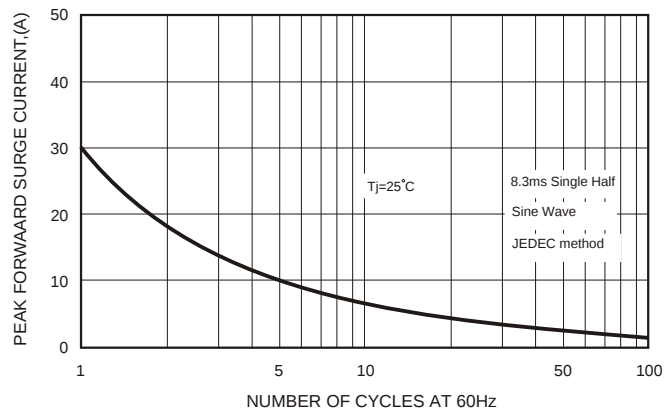
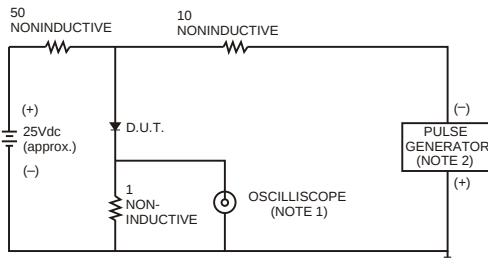


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

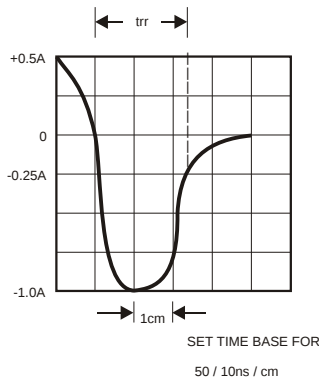
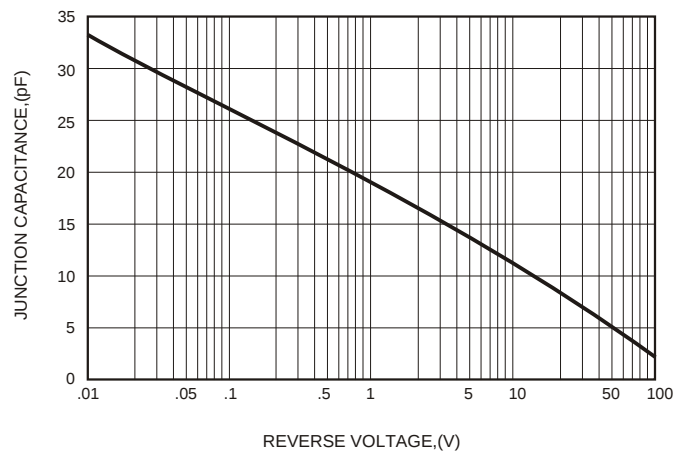


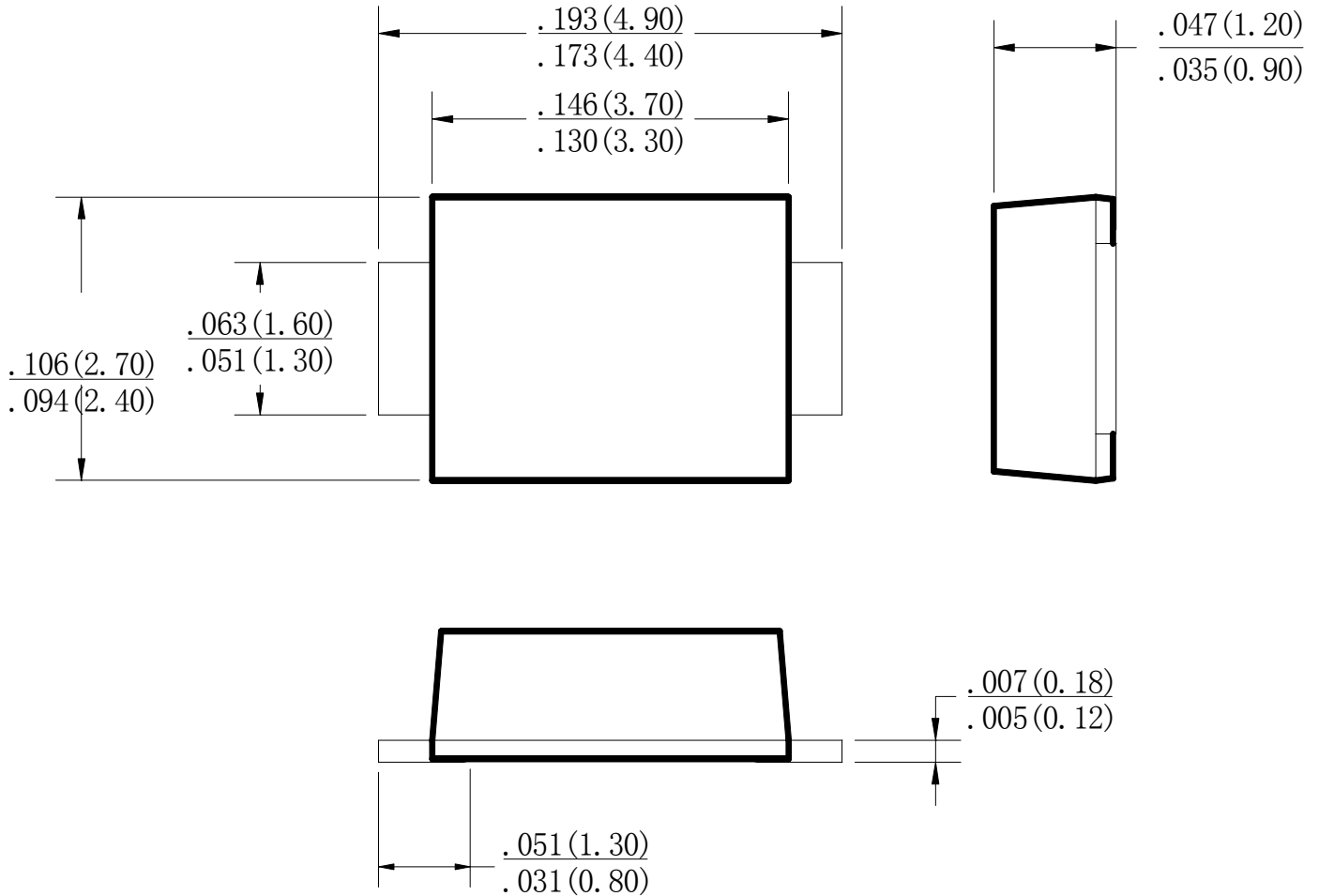
FIG.5-TYPICAL JUNCTION CAPACITANCE





## Package Outline Dimensions

### SMAF



Dimensions in inches and (millimeters)



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