

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

### MECHANICAL DATA

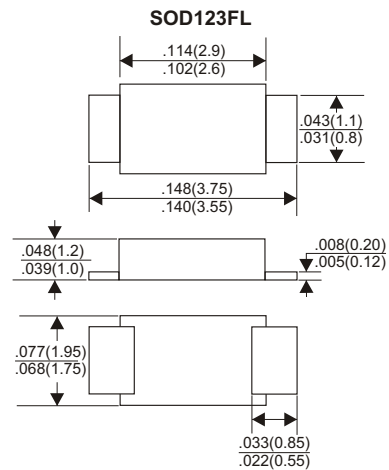
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

1000 Volts

### CURRENT

1.0 Ampere



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER                                                                                           | SOD1F7     | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 1000       | V     |
| Maximum RMS Voltage                                                                                   | 700        | V     |
| Maximum DC Blocking Voltage                                                                           | 1000       | V     |
| Maximum Average Forward Rectified Current<br>at Ta=25°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)                                                                | 500        | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 15         | pF    |
| Typical Thermal Resistance R JA (Note 3)                                                              | 80         | °C/W  |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +150 | °C    |

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Thermal Resistance from Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES (SOD1F7)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

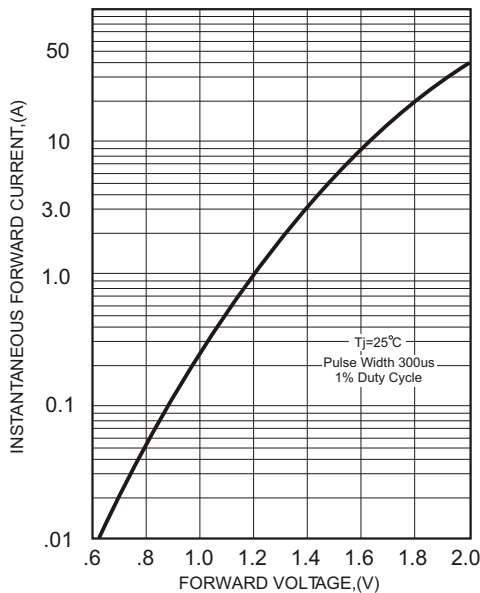


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

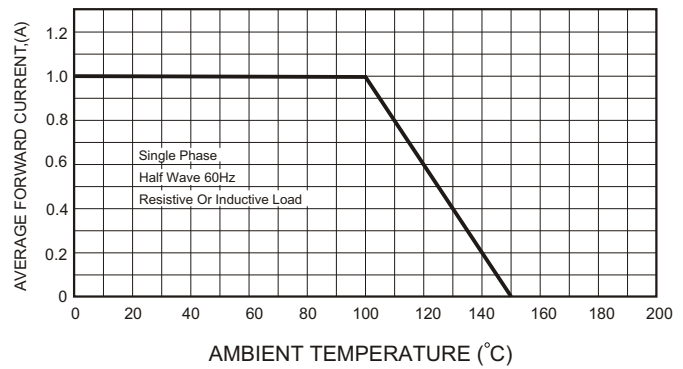
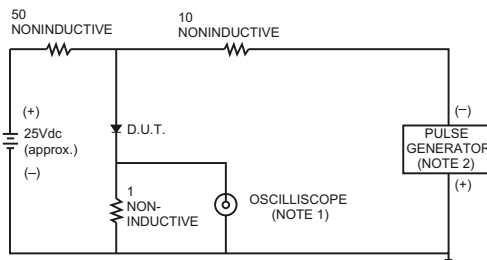


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

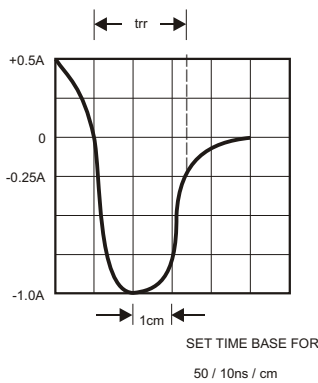


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

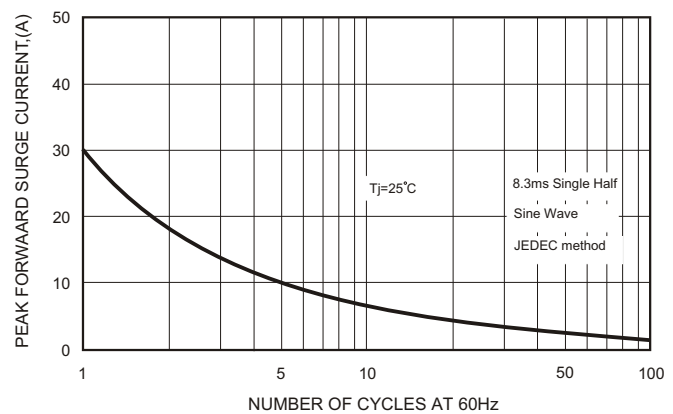


FIG.5-TYPICAL JUNCTION CAPACITANCE

