



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

## F1 THRU F7 1.0 AMP SURFACE MOUNT FAST RECOVERY RECTIFIERS



### FEATURES

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

### MECHANICAL DATA

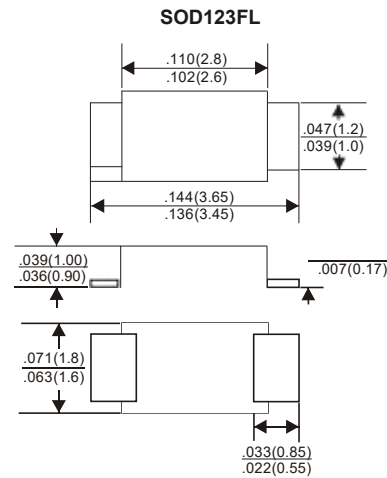
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 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  | F1       | F2  | F3  | F4  | F5  | F6  | F7   | 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  |          |     |     |     |     |     |      |       |
| at Ta=25 C   | 1.0      |     |     |     |     |     |      | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave 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      |     |     |     |     |     |      | A     |
| at Rated DC Blocking Voltage Ta=100 C  | 100      |     |     |     |     |     |      | A     |
| Maximum Reverse Recovery Time (Note 1)   | 150      |     | 250 |     | 500 |     |      | nS    |
| Typical Junction Capacitance (Note 2)  | 15       |     |     |     |     |     |      | pF    |
| Typical Thermal Resistance R JA (Note 3)   | 80       |     |     |     |     |     |      | C/W   |
| Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>                          | -65—+150 |     |     |     |     |     |      | C     |
| Marking Code   |          |     |     |     |     |     |      |       |

#### 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 (F1 THRU F7)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

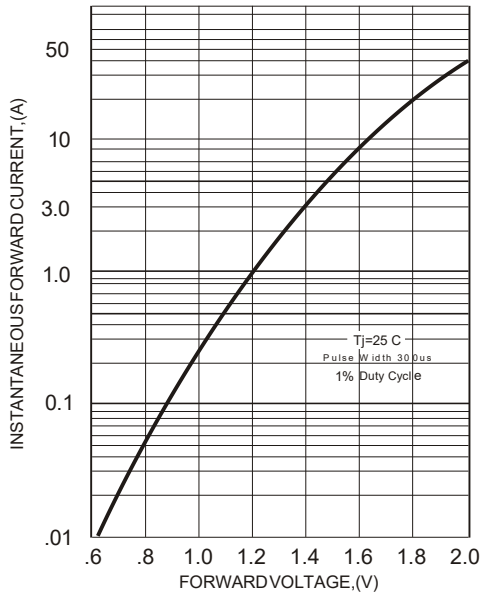


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

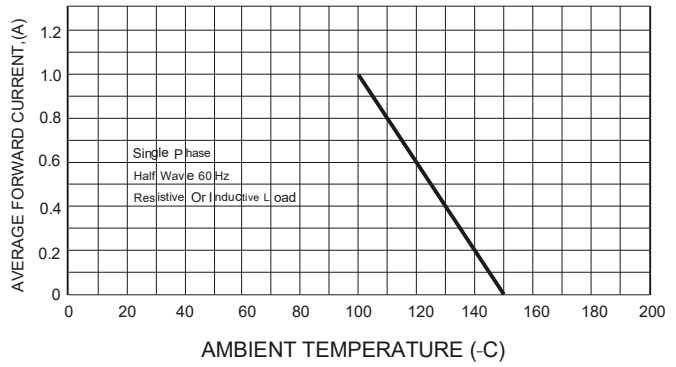
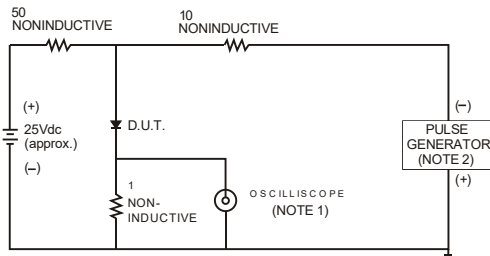


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

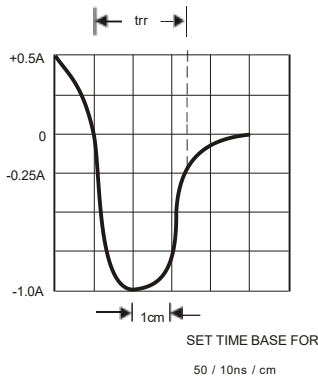


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

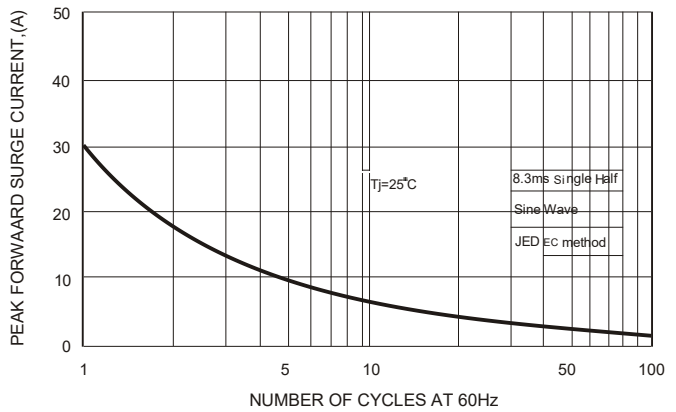
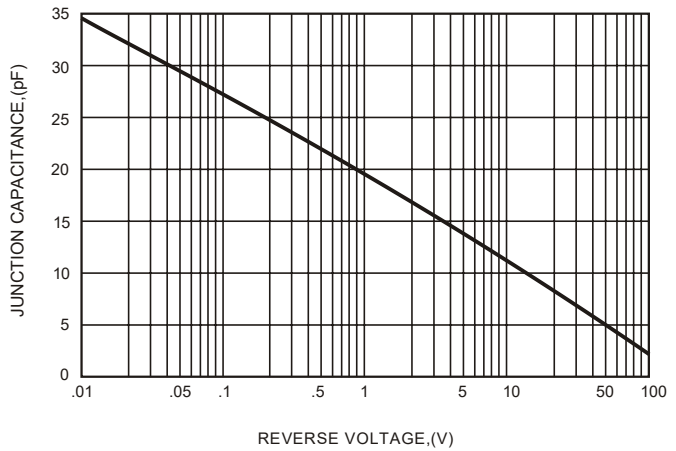


FIG.5-TYPICAL JUNCTION CAPACITANCE



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