

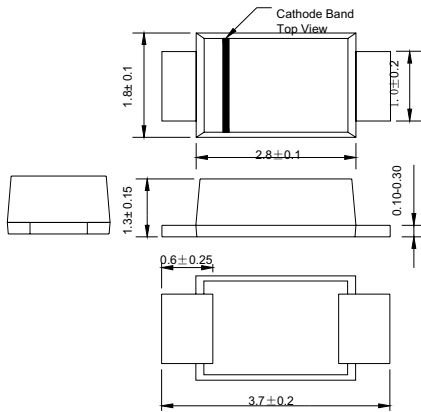


# FFM101 THRU FFM107

## SUFACE MOUNT FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0Ampere

### SOD-123FL



Dimensions in millimeters

### FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mouted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375"(9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC SOD-123FL molded plastic body over passivated chip  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.0007 ounce, 0.02 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

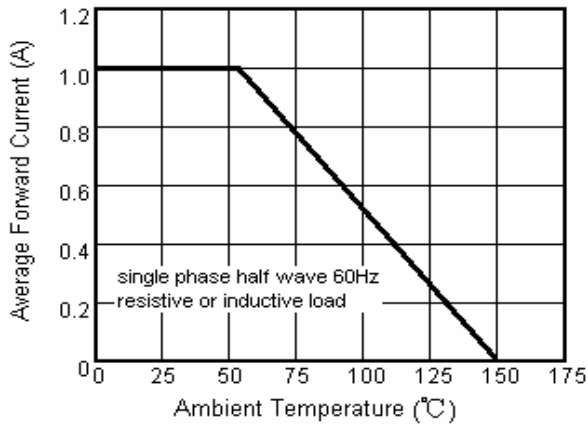
Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

|   | SYMBOLS        | FFM101<br>F1 | FFM102<br>F2 | FFM103<br>F3 | FFM104<br>F4 | FFM105<br>F5 | FFM106<br>F6 | FFM107<br>F7 | UNITS            |
|---|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$      | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | VOLTS            |
| Maximum RMS voltage   | $V_{RMS}$      | 35           | 70           | 140          | 280          | 420          | 560          | 700          | VOLTS            |
| Maximum DC blocking voltage   | $V_{DC}$       | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | VOLTS            |
| Maximum average forward rectified current at $T_A=65^\circ\text{C}$ (NOTE 1)  | $I_{(AV)}$     | 1.0          |              |              |              |              |              |              | Amp              |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method) $T_L=25^\circ\text{C}$ | $I_{FSM}$      | 25.0         |              |              |              |              |              |              | Amps             |
| Maximum instantaneous forward voltage at 1.0A   | $V_F$          | 1.3          |              |              |              |              |              |              | Volts            |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=125^\circ\text{C}$                     | $I_R$          | 5.0<br>50.0  |              |              |              |              |              |              | $\mu\text{A}$    |
| Maximum reverse recovery time (NOTE 2)  | $t_{rr}$       | 150          |              |              |              | 250          | 500          |              | ns               |
| Typical junction capacitance (NOTE 3)   | $C_J$          | 15           |              |              |              |              |              |              | pF               |
| Operating junction and storage temperature range  | $T_J, T_{STG}$ | -55 to +150  |              |              |              |              |              |              | $^\circ\text{C}$ |

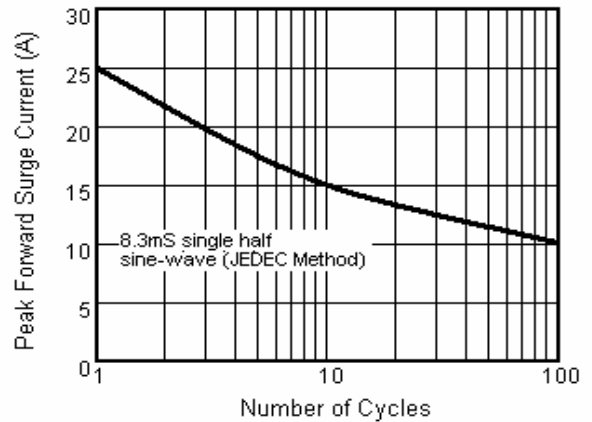
- Note:** 1. Averaged over any 20ms period.  
 2. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .  
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATINGS AND CHARACTERISTIC CURVES FFM101 THRU FFM107

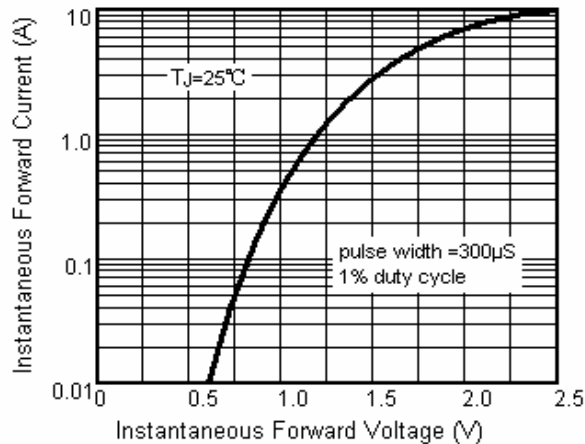
**Fig.1 Forward Current Derating Curve**



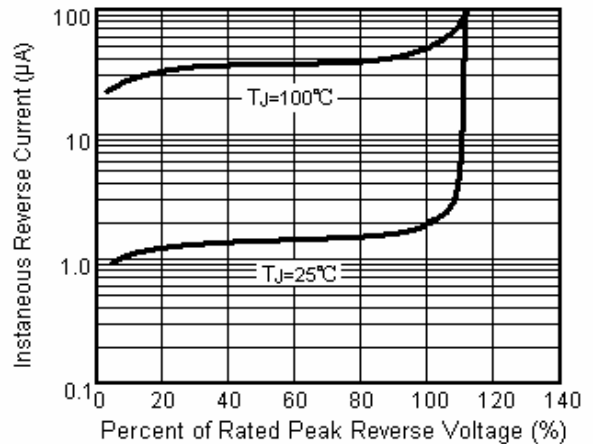
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Junction Capacitance**

