



# F1A THRU F1M ACE MOUNT FAST RECOVERY RECTIFIERS

## FEATURES

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

## MECHANICAL DATA

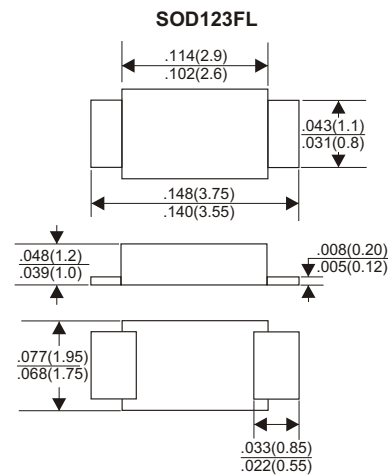
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

1.0 Ampere



Dimensions in inches and (millimeters)

## 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                                                                                           | F1A        | F1B | F1D | F1G | F1J | F1K | F1M  | 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>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)                                                                | 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 TJ, TSTG                                                      | -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 (F1A THRU F1M)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

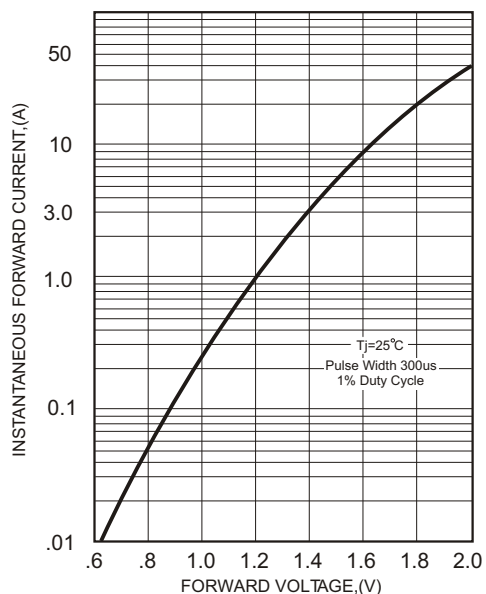


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

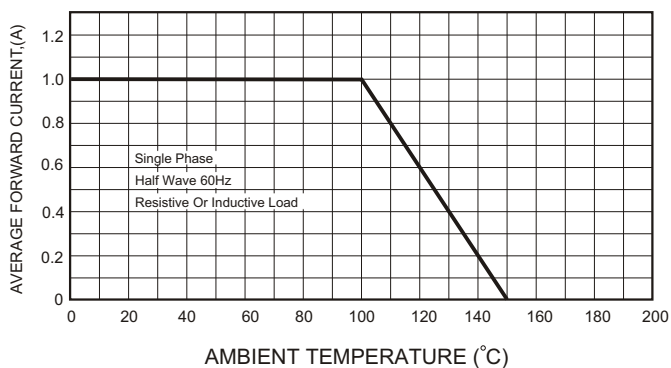
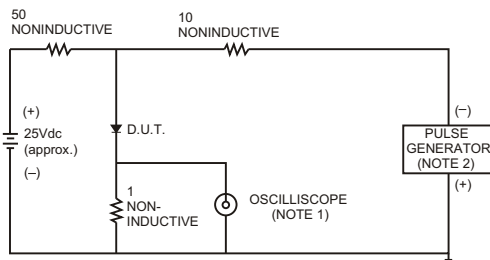


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

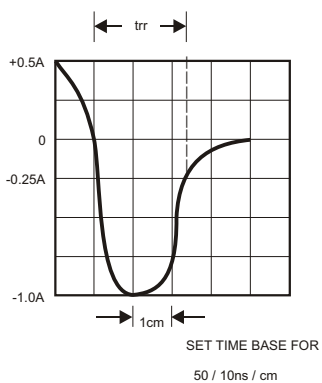


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

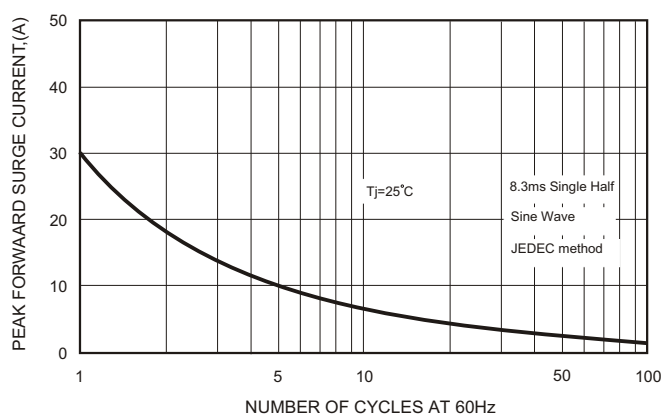


FIG.5-TYPICAL JUNCTION CAPACITANCE

