



# F1T1 THRU F1T7

## 1.0 AMP. Fast Recovery Rectifiers

Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

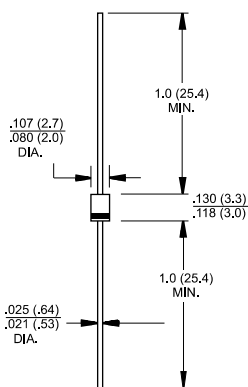
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.20 gram

### TS-1



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number                                                                                               | F1T1        | F1T2 | F1T3 | F1T4 | F1T5 | F1T6 | F1T7 | 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 @ T <sub>A</sub> = 55°C             | 1.0         |      |      |      |      |      |      | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated Load<br>(JEDEC method ) | 30          |      |      |      |      |      |      | A        |
| Maximum Instantaneous Forward Voltage<br>@ 1.0A                                                           | 1.2         |      |      |      |      |      |      | V        |
| Maximum DC Reverse Current @ T <sub>A</sub> =25°C<br>at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C | 5.0<br>100  |      |      |      |      |      |      | uA<br>uA |
| Maximum Reverse Recovery Time ( Note 1 )                                                                  | 150         |      |      |      | 250  | 500  |      | nS       |
| Typical Junction Capacitance ( Note 2 )                                                                   | 15          |      |      |      |      |      |      | pF       |
| Operating Temperature Range T <sub>J</sub>                                                                | -65 to +125 |      |      |      |      |      |      | °C       |
| Storage Temperature Range T <sub>STG</sub>                                                                | -65 to +150 |      |      |      |      |      |      | °C       |

Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

## RATINGS AND CHARACTERISTIC CURVES (F1T1 THRU F1T7)

FIG.1- MAXIMUM TYPICAL FORWARD CURRENT DERATING CURVE

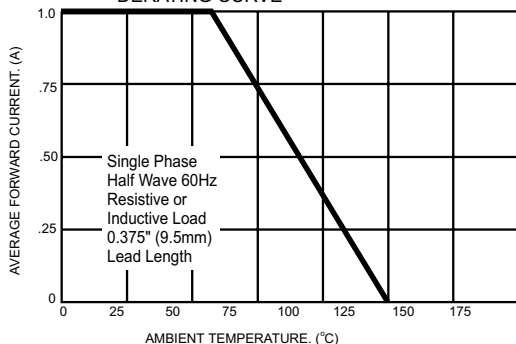


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

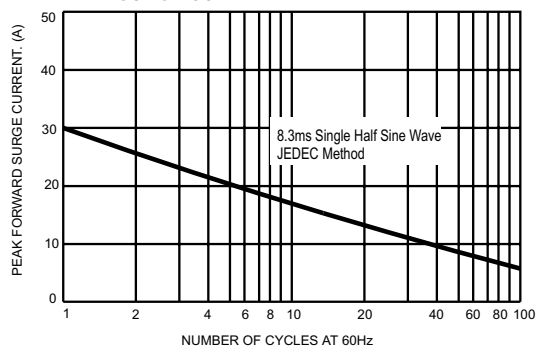


FIG.3- TYPICAL FORWARD CHARACTERISTICS

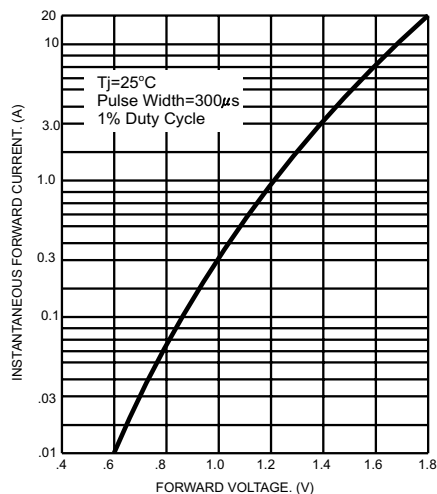


FIG.4- TYPICAL JUNCTION CAPACITANCE

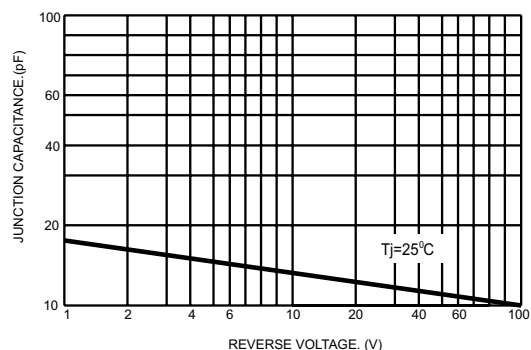


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

