



SEMICONDUCTOR

# DATA SHEET

## SF1001FCT~SF1007FCT

### VOLTAGE RANGE

50 to 600 Volts

10.0 Amperes



### FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Good for switching mode application
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

### MECHANICAL DATA

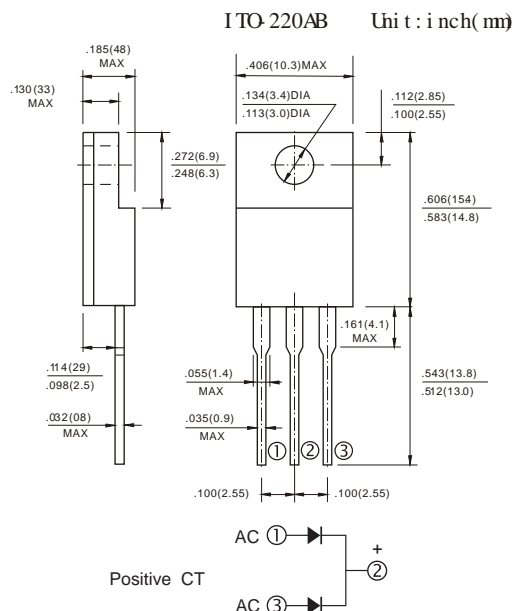
- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202, method 208 guranteed
- Polarity: As Marked
- Mounting position: Any
- Weight: 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess otherwies specified.

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

For capacitive load, derate current by 20%.



| TYPE NUMBER   | SF1001FCT | SF1002FCT | SF1003FCT | SF1004FCT | SF1005FCT | SF1006FCT | SF1007FCT | UNITS |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| Maximum Recurrent Peak Reverse Voltage  | 50        | 100       | 150       | 200       | 300       | 400       | 600       | V     |
| Maximum RMS Voltage   | 35        | 70        | 105       | 140       | 210       | 280       | 420       | V     |
| Maximum DC Blocking Voltage   | 50        | 100       | 150       | 200       | 300       | 400       | 600       | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Tc=100°C                   | 10.0      |           |           |           |           |           |           | A     |
| Peak Forward Surge Current , 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 150       |           |           |           |           |           |           | A     |
| Maximum Instantaneous Forward Voltage at 5.0A   | 0.95      |           |           |           | 1.30      |           | 1.70      | V     |
| Maximum DC Reverse Current Tc=25°C  | 10        |           |           |           |           |           |           | uA    |
| at Rated DC Blocking Voltage Tc=100°C   | 500       |           |           |           |           |           |           | uA    |
| Maximum Reverse Recovery Time (Note 1)  | 35        |           |           |           | 50        |           |           | nS    |
| Typical Junction Capacitance (Note 2)   | 50        |           |           |           |           |           |           | pF    |
| Operating and Storage Temperature Range TJ, TSTG  | -55 +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.

# RATINGS AND CHARACTERISTIC CURVES

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### RATING AND CHARACTERISTIC CURVES

