



YENYO

# SF10C01C THRU SF10C06C

Glass Passivated Super Fast Recovery Rectifier

## Features

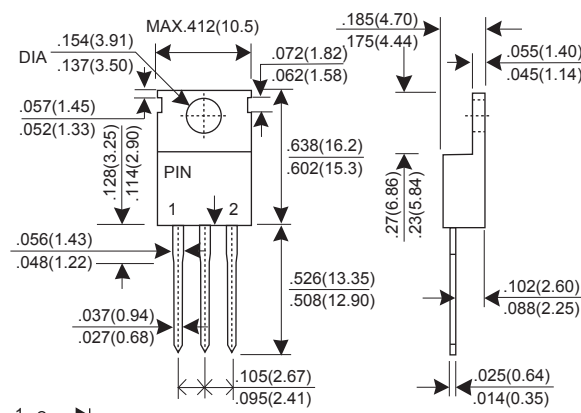
- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

## Mechanical Data

- ★ Case: Molded plastic TO-220AB
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: Color band denotes cathode
- ★ Mounting position: Any
- ★ Weight: 2.07 grams

**Voltage Range 50 to 600 V**  
**Current 10.0 Ampere**

### TO-220AB



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| PARAMTER                                                                                          | SYMBOL   | SF<br>10C01C | SF<br>10C02C | SF<br>10C03C | SF<br>10C04C | SF<br>10C05C | SF<br>10C06C | UNIT     |
|---------------------------------------------------------------------------------------------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                            | VRRM     | 50           | 100          | 200          | 300          | 400          | 600          | V        |
| Maximum RMS Voltage                                                                               | VRMS     | 35           | 70           | 140          | 210          | 280          | 420          | V        |
| Maximum DC Blocking Voltage                                                                       | VDC      | 50           | 100          | 200          | 300          | 400          | 600          | V        |
| Maximum Average Forward Rectified Current Tc=100°C                                                | IF(AV)   | 10.0         |              |              |              |              |              | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 100          |              |              |              |              |              | A        |
| Maximum Instantaneous Forward Voltage @ 5.0 A                                                     | VF       | 0.95         |              |              | 1.3          |              | 1.7          | V        |
| Maximum DC Reverse Current @TJ=25°C<br>At Rated DC Blocking Voltage @TJ=125°C                     | IR       | 10.0<br>250  |              |              |              |              |              | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                            | Trr      | 35           |              |              |              |              |              | nS       |
| Typical junction Capacitance (Note 2)                                                             | CJ       | 65           |              |              |              |              |              | pF       |
| Typical Thermal Resistance (Note 3)                                                               | RθJC     | 2.2          |              |              |              |              |              | °CW      |
| Operating Junction and Storage Temperature Range                                                  | TJ, TSTG | -55 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 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
 (3) Thermal Resistance junction to case.

# RATINGS AND CHARACTERISTIC CURVES SF10C01C THRU SF10C06C

FIG.1 - FORWARD CURRENT DERATING CURVE

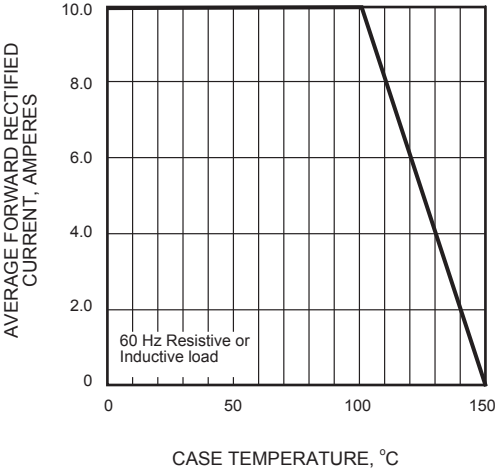


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

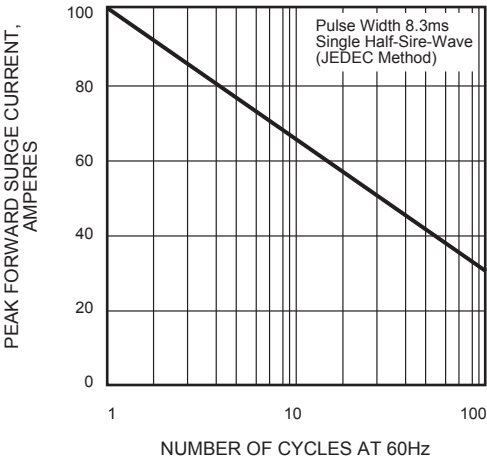


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

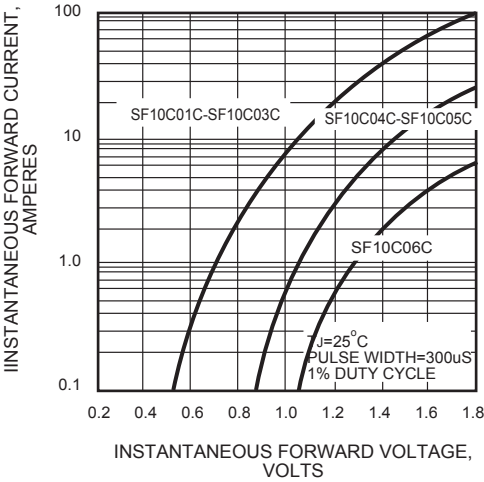


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

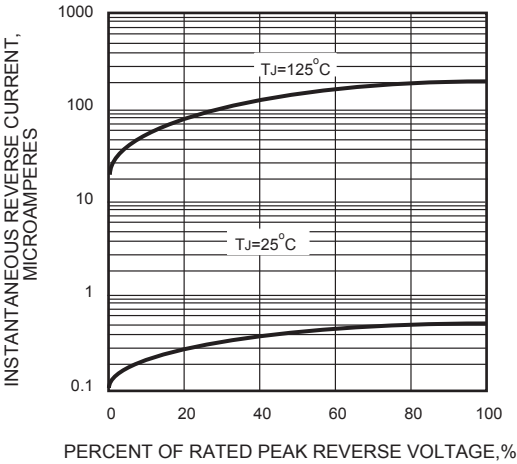


FIG.5 - TYPICAL JUNCTION CAPACITANCE

