

# Glass Passivated Super Fast Recovery Rectifier

## SF20C01C-G THRU SF20C06C-G

Voltage Range 50 to 600 V

Current 20.0 Ampere

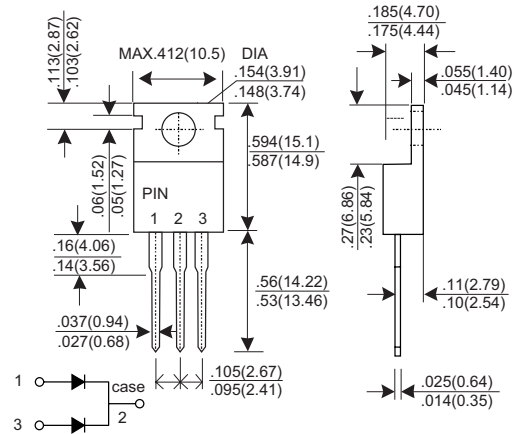
### Features

- \* 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: 2.24 grams

### TO-220AB



## 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%.

	SYMBOL	SF 20C01C -G	SF 20C02C -G	SF 20C03C -G	SF 20C04C -G	SF 20C05C -G	SF 20C06C -G	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	V
Maximum Average Forward Rectified Current T <sub>c</sub> =125°C	I <sub>F(AV)</sub>	20.0						A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200			175			A
Maximum Instantaneous Forward Voltage @ 10.0 A	V <sub>F</sub>	0.975			1.3		1.5	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C	I <sub>R</sub>	10.0			250			uA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	35			50			nS
Typical junction Capacitance (Note 2)	C <sub>J</sub>	120			70			pF
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-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.

## RATINGS AND CHARACTERISTIC CURVES SF20C01C-G THRU SF20C06C-G

FIG.1 - FORWARD CURRENT DERATING CURVE

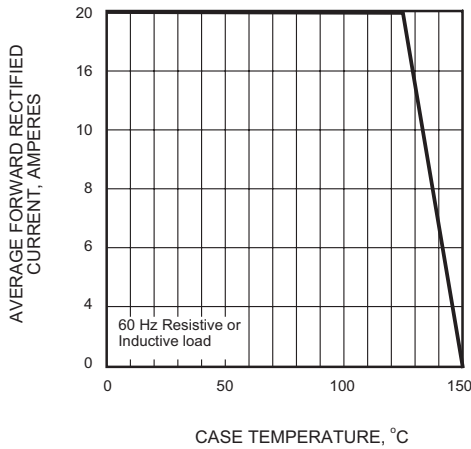


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

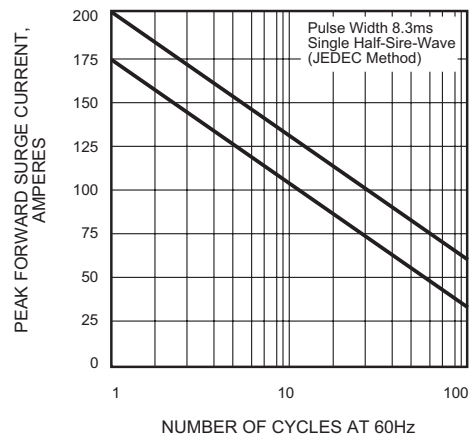


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

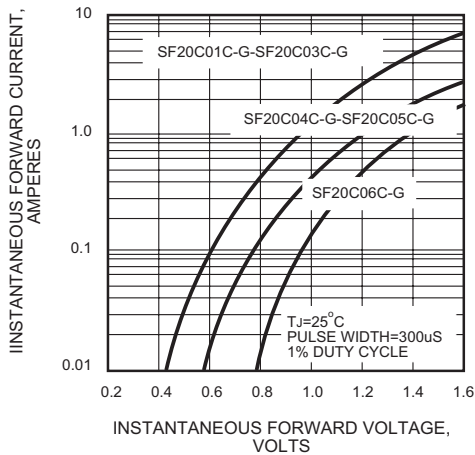


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

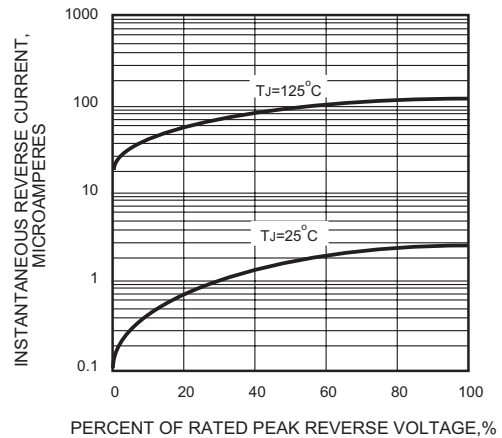


FIG.5 - TYPICAL JUNCTION CAPACITANCE

