

## SF161 THRU SF167

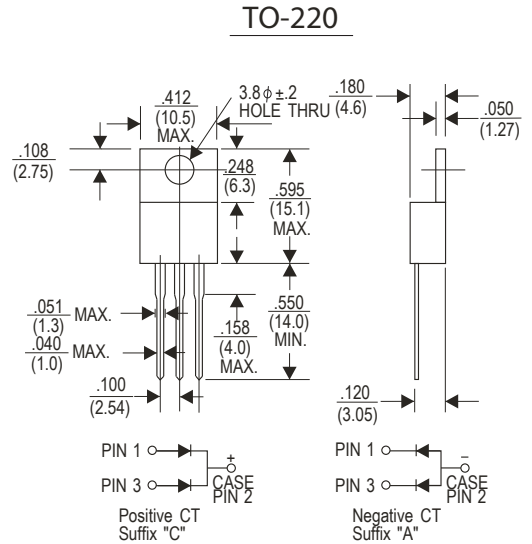
CURRENT 16.0 Amperes  
VOLTAGE 50 to 600 Volts

### Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Super fast recovery time
- Good for use in switching mode circuits
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0

### Mechanical Data

- Case : JEDEC TO-220 molded plastic body
- Terminals : Lead solderable per MIL-STD-750, method 2026
- Polarity : As marked
- Mounting Position : Any
- Weight : 0.08 ounce, 2.24 gram



### Maximum Ratings And Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	SF161	SF162	SF163	SF164	SF165	SF166	SF167	Units
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	Volts
Maximum average forward rectified current at T <sub>C</sub> =100 °C	I <sub>(AV)</sub>	16.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	80							Amps
Maximum instantaneous forward voltage at 8.0A	V <sub>F</sub>	0.975				1.30		1.70	Volts
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25 °C	10							μA
	T <sub>A</sub> =100 °C	400							
Maximum reverse recovery time (Note 1)	T <sub>rr</sub>	35							ns
Typical junction capacitance (Note 2)	C <sub>J</sub>	80				60			pF
Typical thermal resistance (Note 3)	R <sub>θJC</sub>	2.5							°C/W
Operating junction and storage temperature range	T <sub>J</sub>	-55 to +150							°C
	T <sub>STG</sub>	-55 to +150							

#### Notes:

- (1) Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A.
- (2) Measured at 1MHz and applied reverse voltage of 4.0 Volts.
- (3) Thermal resistance from junction to case mounting on heatsink.

## RATINGS AND CHARACTERISTIC CURVES SF161 THRU SF167

FIG . 1 -REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

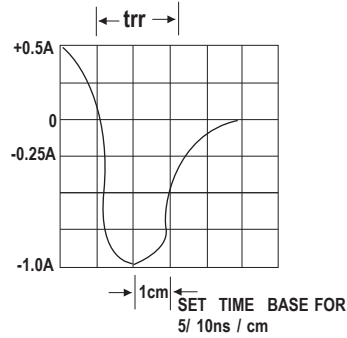
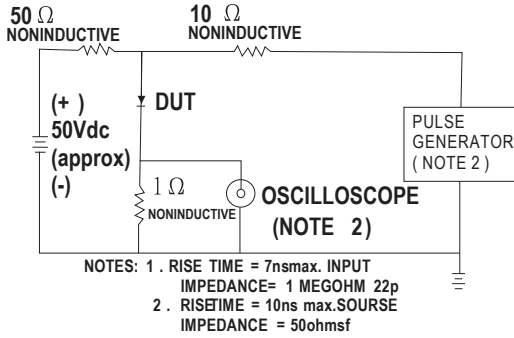


FIG . 3 -TYPICAL REVERSE CHARACTERISTICS

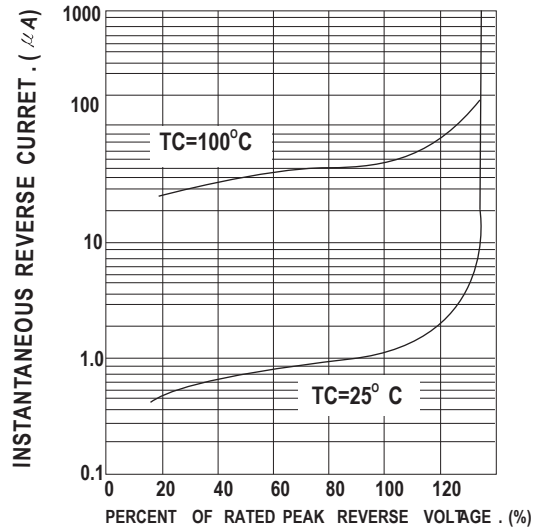


FIG . 2 -MAXIMUM AVERAGE FORWARD CURRENT DERATING

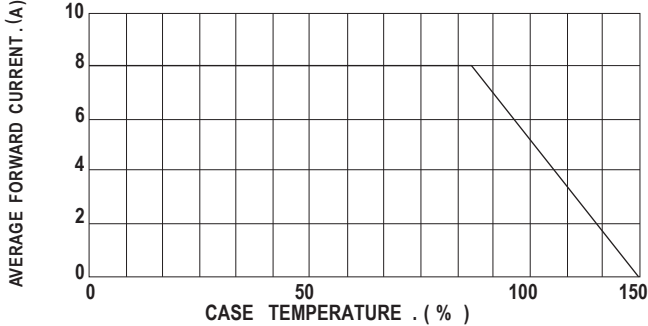


FIG . 4 -MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

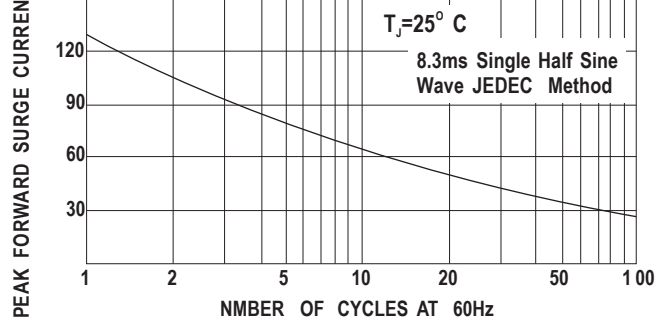


FIG . 5 -TYPICAL JUNCTION CAPACITANCE

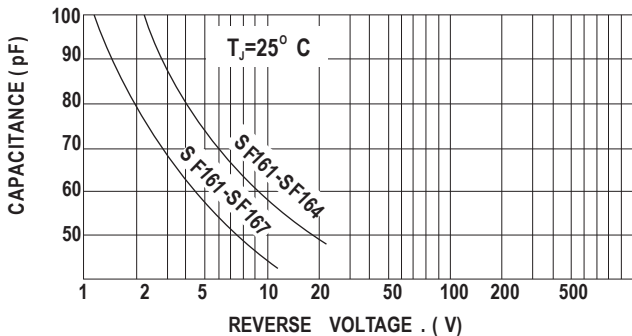


FIG . 6 -TYPICAL FORWARD CHARACTERISTICS

