

GLASS PASSIVATED SUPER FAST RECTIFIER
VOLTAGE RANGE 50 to 600 Volts CURRENT 16 Amperes
FEATURES

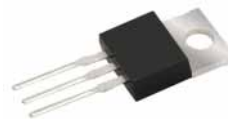
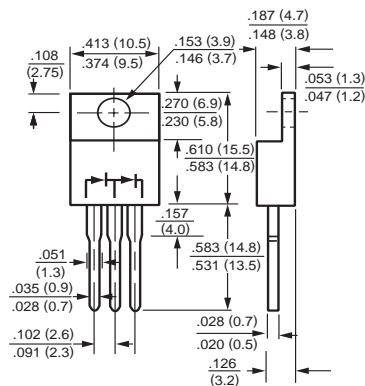
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: TO-220 molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.


TO-220


Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	SF161D	SF162D	SF163D	SF164D	SF165D	SF166D	SF167D	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at $T_C = 125^\circ\text{C}$	I_O	16.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							Amps
Typical Thermal Resistance	$R_{\theta JC}$	3							$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	C_J	50			30				pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	SF161D	SF162D	SF163D	SF164D	SF165D	SF166D	SF167D	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V_F	1.0			1.35		1.70		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	10			500				uAmps
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35			50				nSec

NOTES : 1. Test Conditions: $I_F = 0.5\text{A}$, $I_R = -1.0\text{A}$, $I_{RR} = -0.25\text{A}$
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Suffix "C" =Common Cathode.

2003-1

RATING AND CHARACTERISTIC CURVES (SF161D THRU SF167D)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

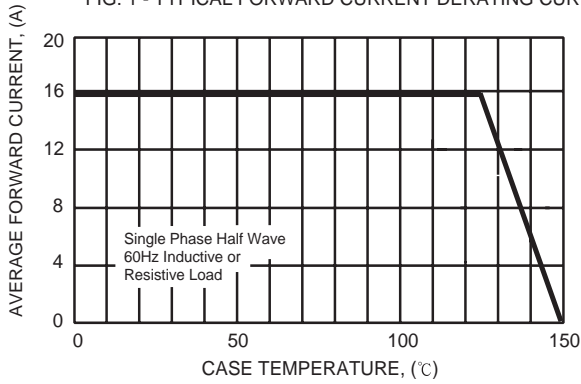


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

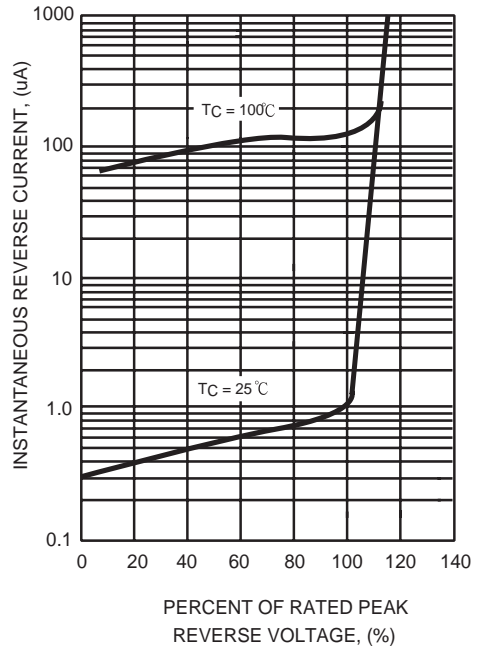


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

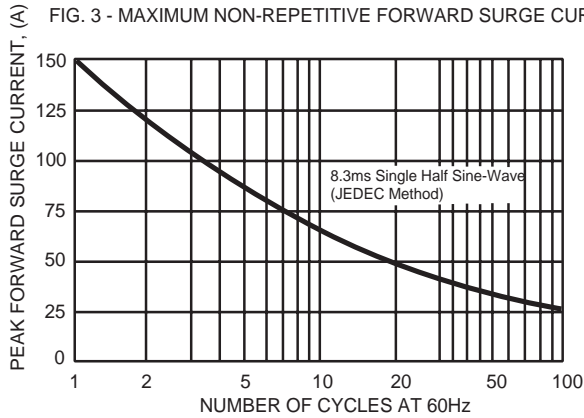


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

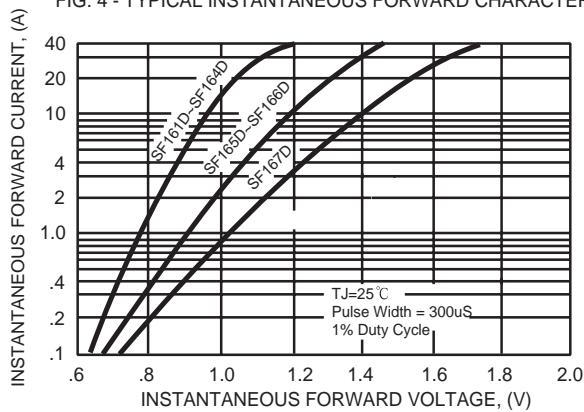


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

