

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 400 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

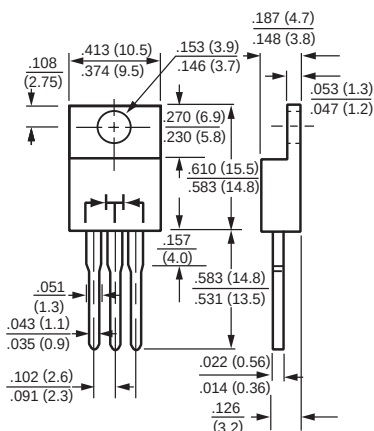
- * Case: TO-220A molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.24 grams

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



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

RATINGS	SYMBOL	SF161A	SF162A	SF163A	SF164A	SF165A	SF166A	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current at T _C = 125°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 _{θJC}	3						°C/W
Typical Junction Capacitance (Note 2)	C _J	50				30		pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 150						°C

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

CHARACTERISTICS		SYMBOL	SF161A	SF162A	SF163A	SF164A	SF165A	SF166A	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC		V _F	1.0				1.35		Volts
Maximum DC Reverse Current	@T _C = 25°C	I _R	10						uAmps
at Rated DC Blocking Voltage	@T _C = 100°C		500						
Maximum Reverse Recovery Time (Note 1)		trr	35				50		nSec

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

RATING AND CHARACTERISTIC CURVES (SF161A THRU SF166A)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

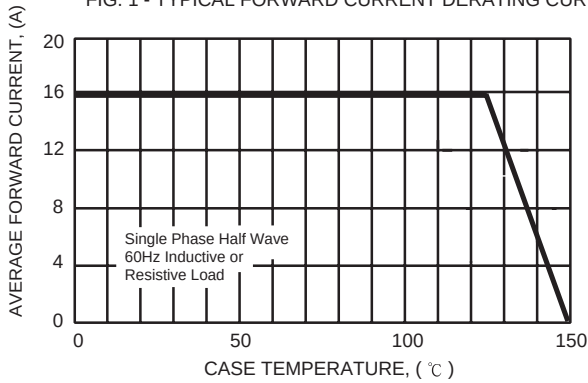


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

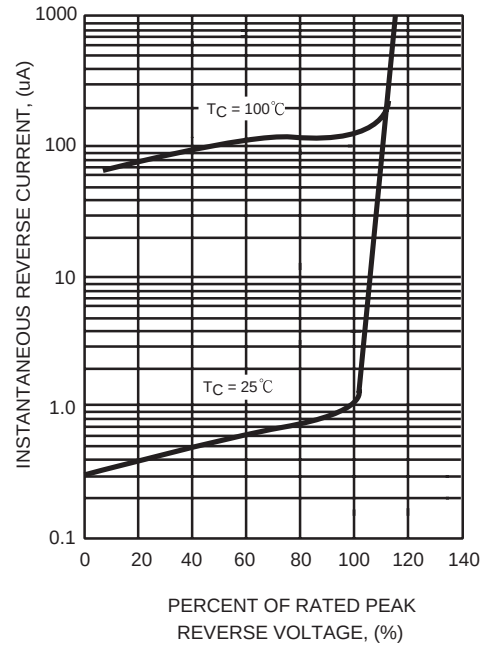


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

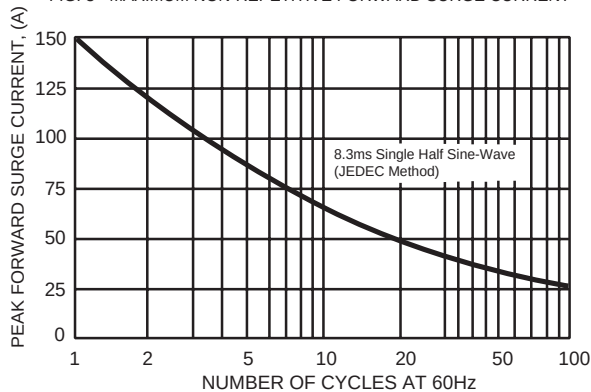


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

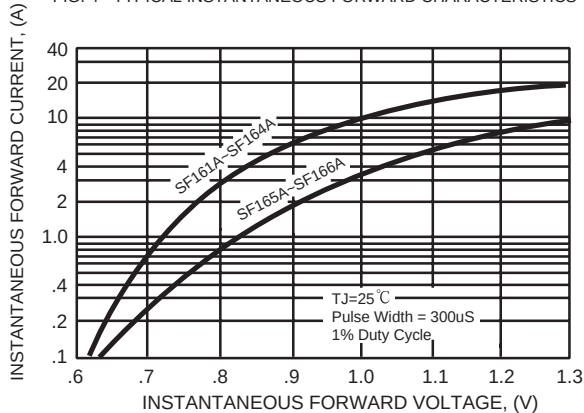
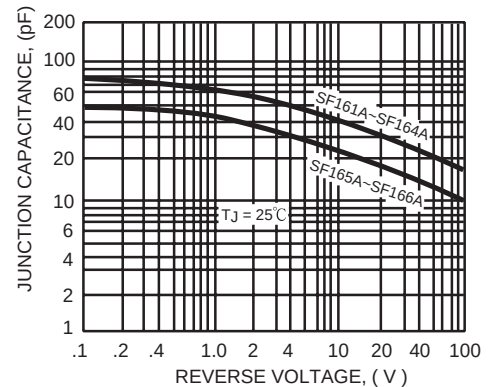


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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