

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 8.0 Amperes

FEATURES

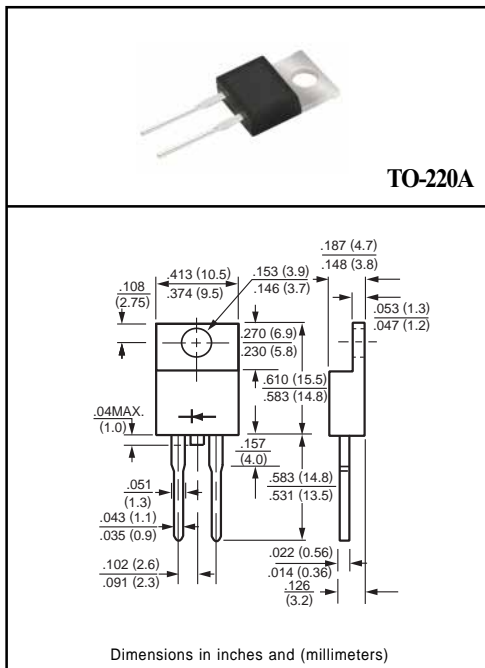
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

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%.



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	SF81	SF82	SF83	SF84	SF85	SF86	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	Vbc	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current at Tc = 100°C	IO	8.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	125						Amps
Typical Thermal Resistance	RθJC	3						°C/W
Typical Junction Capacitance (Note 2)	CJ	50			30			pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 150						°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SF81	SF82	SF83	SF84	SF85	SF86	UNITS	
Maximum Instantaneous Forward Voltage at 8.0A DC	VF	1.0				1.35			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	10			500				uAmps
Maximum Reverse Recovery Time (Note 1)	trr	35			50				nSec

NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Suffix "R" for Reverse Polarity.

RATING AND CHARACTERISTIC CURVES (SF81 THRU SF86)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

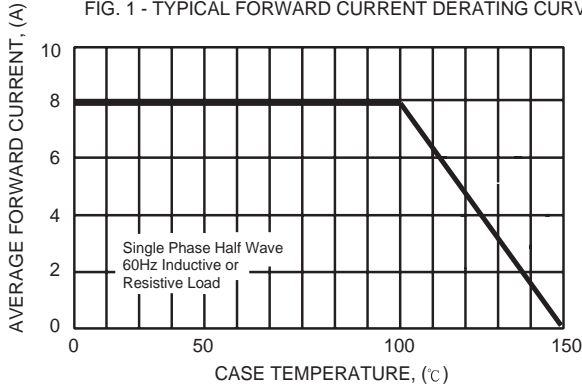


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

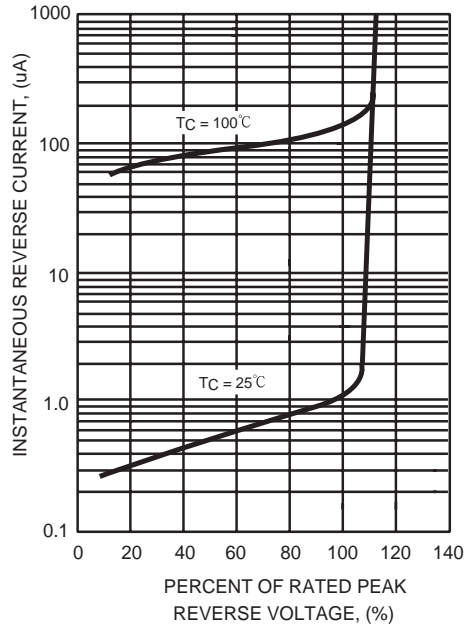


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

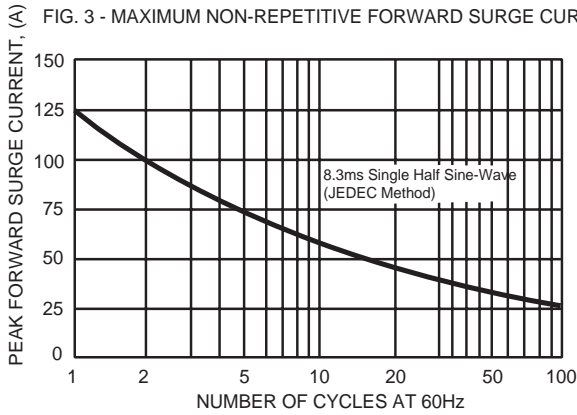


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

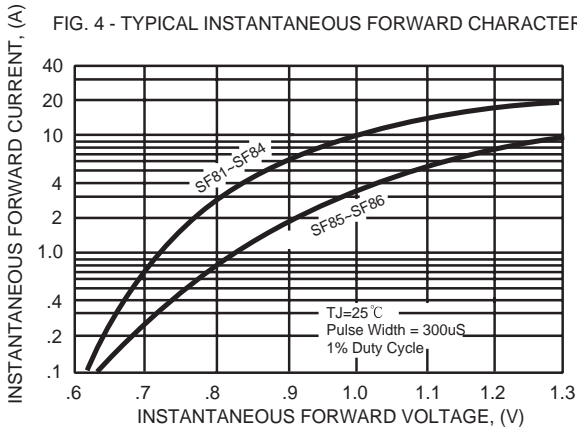


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

