

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 600 Volts CURRENT 8.0 Amperes

FEATURES

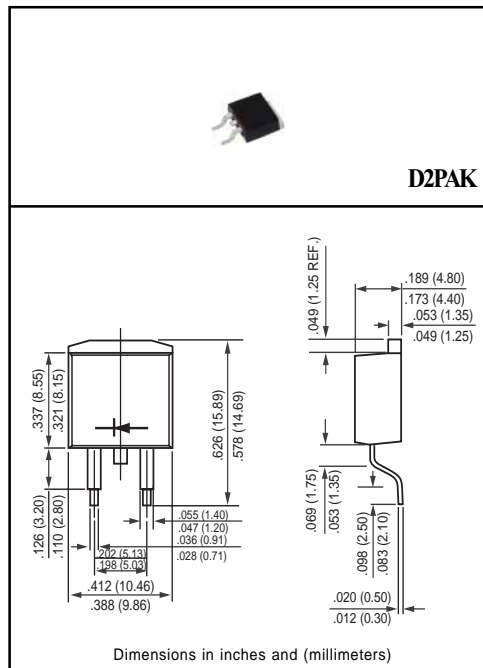
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: D2PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.2 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	SF81S	SF82S	SF83S	SF84S	SF85S	SF86S	SF87S	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 = 100°C	I _O	8.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125							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}	-55 to +150							°C

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

CHARACTERISTICS	SYMBOL	SF81S	SF82S	SF83S	SF84S	SF85S	SF86S	SF87S	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 = 0.5A, I_R = -1.0A, I_{RR} = -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 (SF81S THRU SF87S)

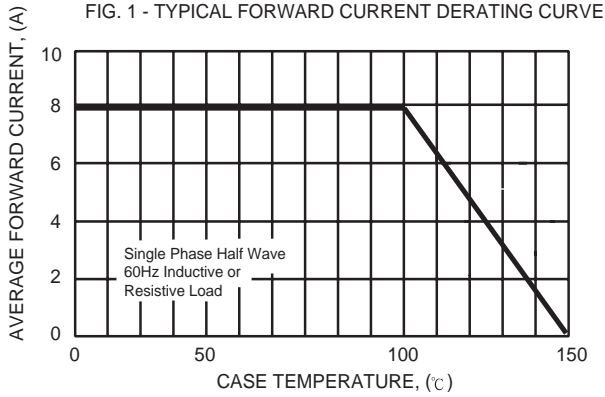


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

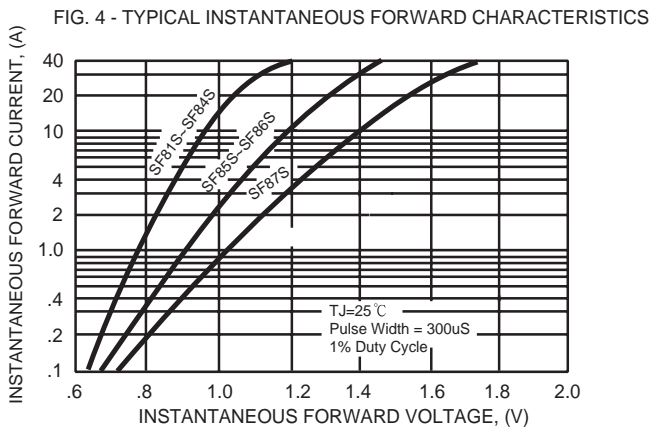
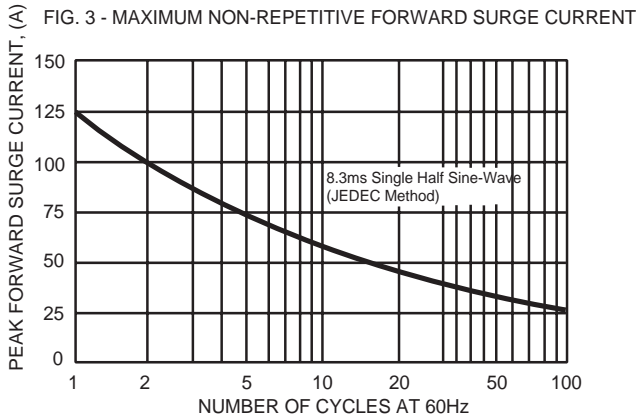
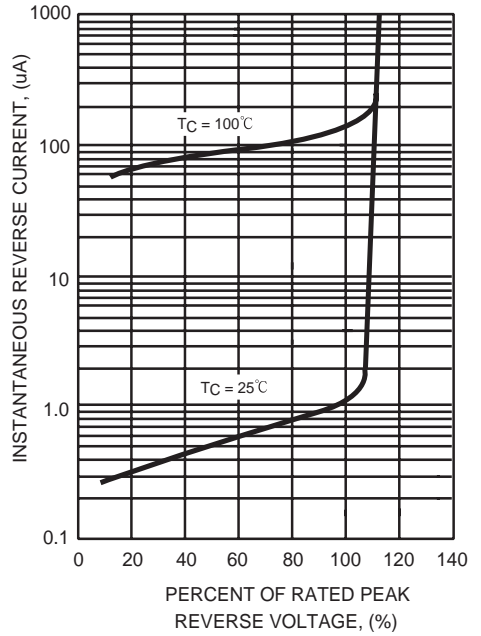


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

