

FAST RECOVERY**GLASS PASSIVATED RECTIFIER****VOLTAGE RANGE 50 to 800 Volts CURRENT 8.0 Amperes****FEATURES**

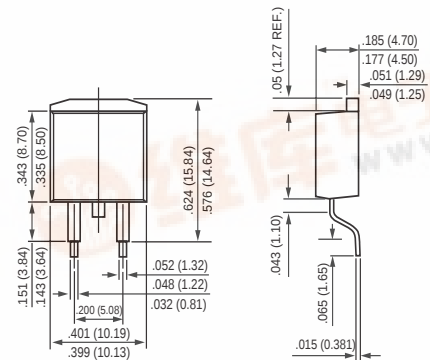
- * Fast switching
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: D2PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.2 grams
- * Polarity: As marking

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%.

**D2PAK**

Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	FR801S	FR802S	FR803S	FR804S	FR805S	FR806S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current at $T_c = 75^\circ\text{C}$	I_o	8.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200						Amps
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	3						$^\circ\text{C/W}$
Typical Junction Capacitance (Note 2)	C_J	50						pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150						$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	FR801S	FR802S	FR803S	FR804S	FR805S	FR806S	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V_F	1.3						Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$	I_R	10						μAmps
Maximum Full Load Reverse Current Average, Full Cycle at $T_c = 100^\circ\text{C}$		150						μAmps
Maximum Reverse Recovery Time (Note 1)	t_{rr}	150				250	500	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

RATING AND CHARACTERISTIC CURVES (FR801S THRU FR806S)

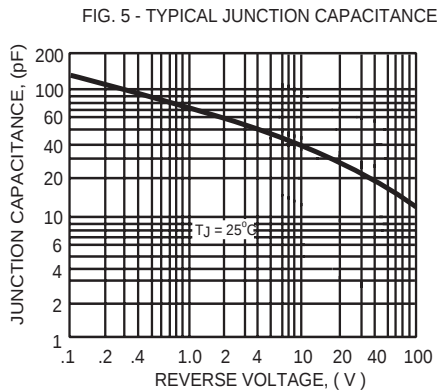
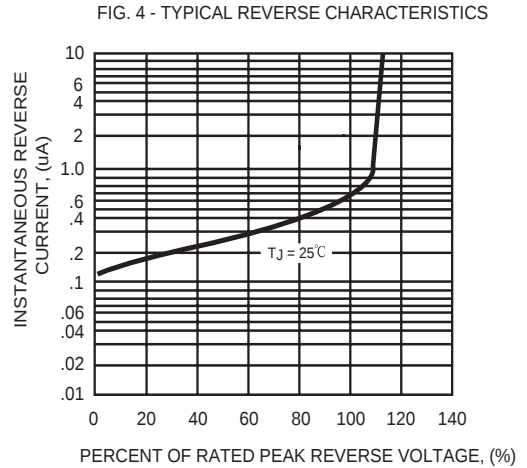
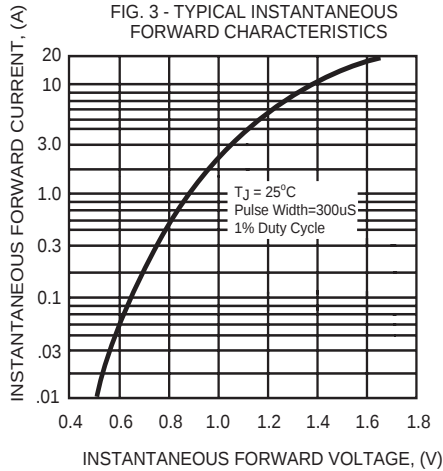
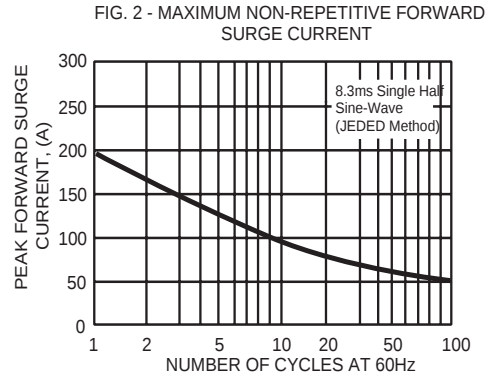
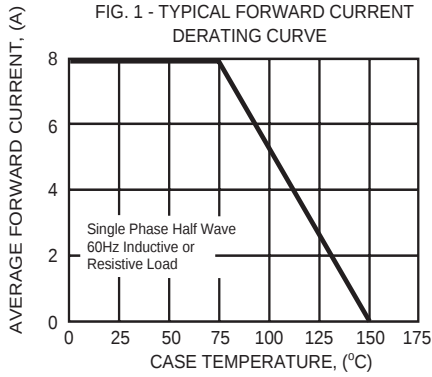


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

