

FAST RECOVERY

GLASS PASSIVATED RECTIFIER

VOLTAGE RANGE 50 to 800 Volts CURRENT 8.0 Amperes

FEATURES

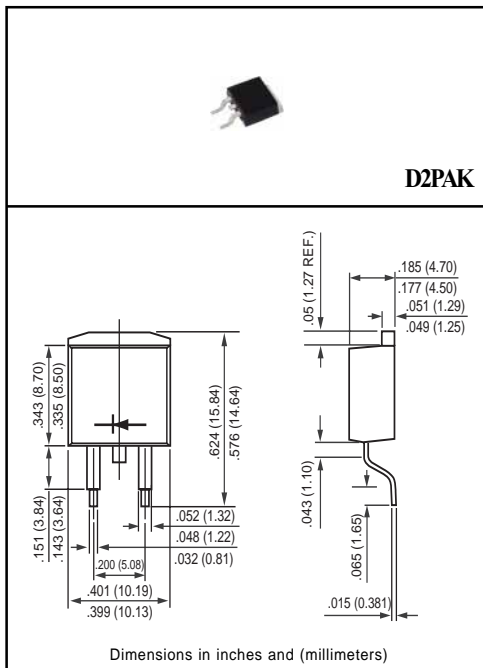
- * Fast switching
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: D2PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * 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%.



MAXIMUM RATINGS (At TA = 25°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°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 _{θJC}	3						°C/W
Typical Junction Capacitance (Note 2)	C _J	50						pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 150						°C

ELECTRICAL CHARACTERISTICS (At TA = 25°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 TA = 25°C	I _R	10						uAmps
Maximum Full Load Reverse Current Average, Full Cycle at T _c = 100°C		150						uAmps
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
 3. Thermal Resistance Junction to Case.
 4. Suffix "R" for Reverse Polarity.

RATING AND CHARACTERISTIC CURVES (FR801S THRU FR806S)

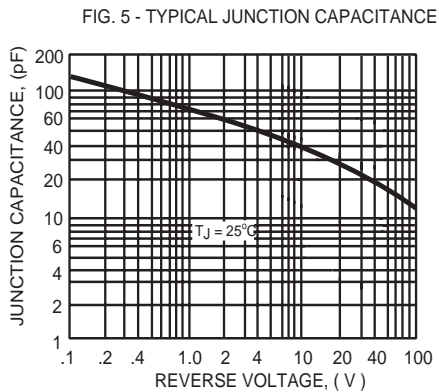
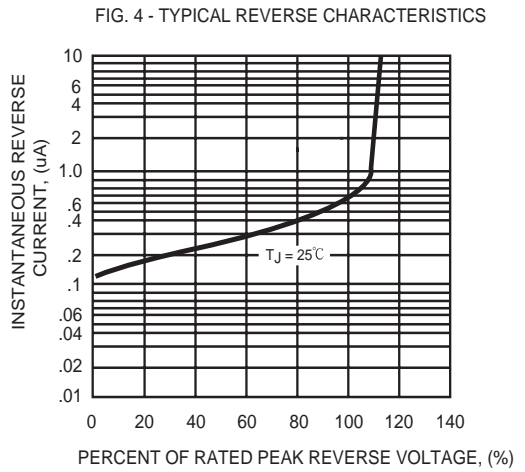
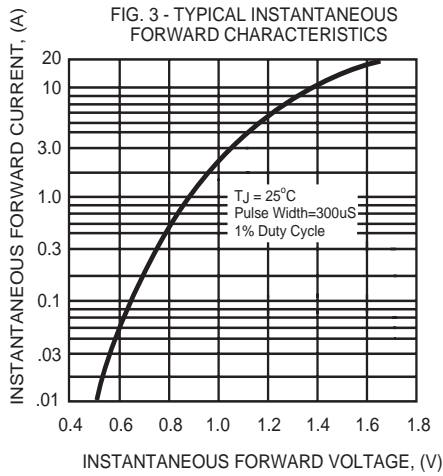
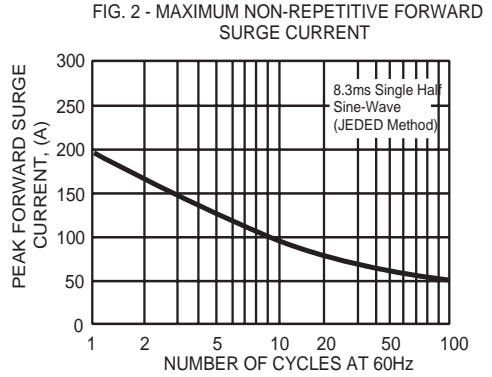
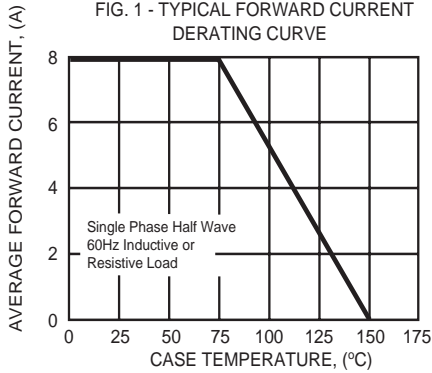


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

