

**FAST RECOVERY**

**GLASS PASSIVATED RECTIFIER**

**VOLTAGE RANGE 50 to 800 Volts CURRENT 8.0 Amperes**

**FEATURES**

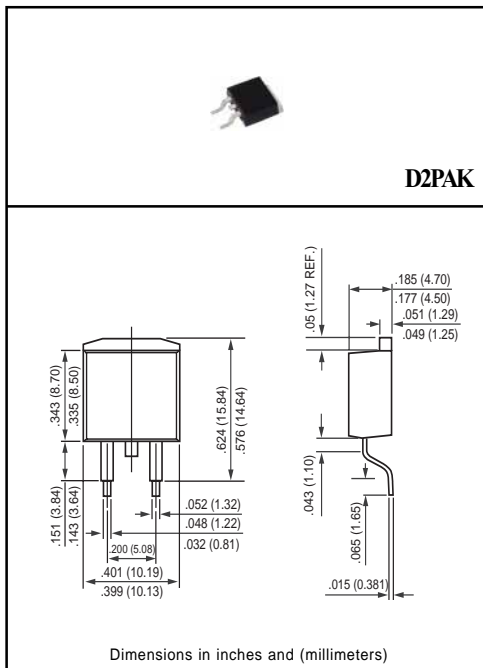
- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* High reliability

**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)

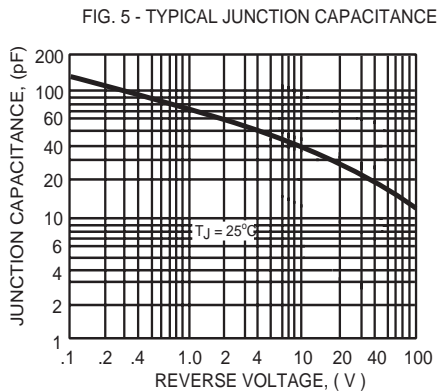
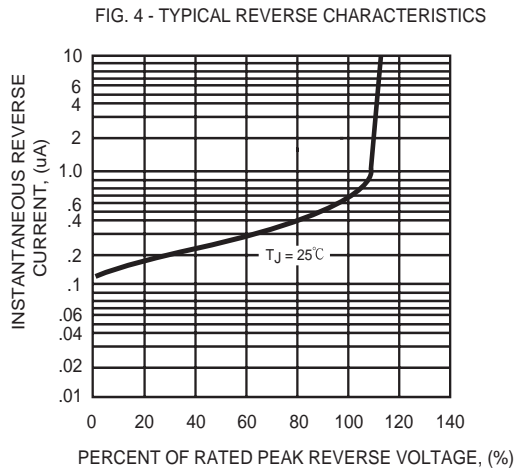
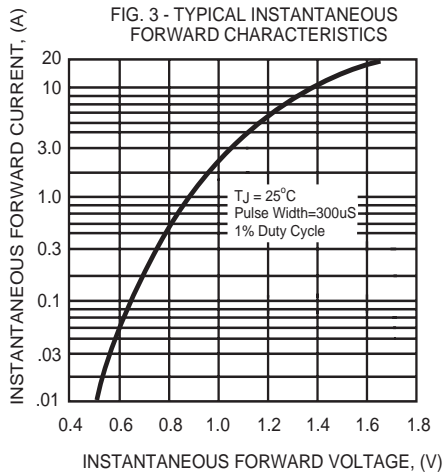
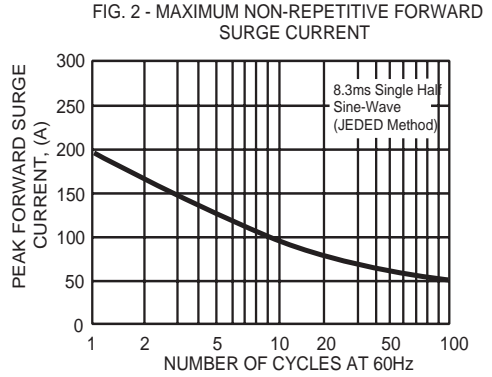
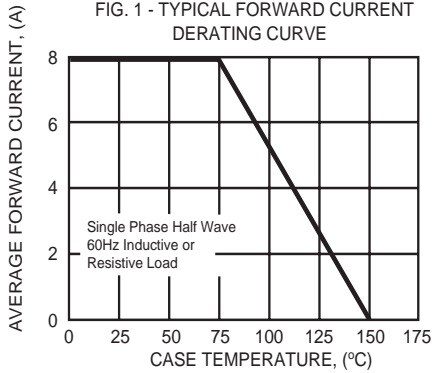
RATINGS	SYMBOL	FR801S	FR802S	FR803S	FR804S	FR805S	FR806S	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	Vdc	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current at Tc = 75°C	Io	8.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	200						Amps
Typical Thermal Resistance (Note 3)	R θ JC	3						°C/W
Typical Junction Capacitance (Note 2)	CJ	50						pF
Operating and Storage Temperature Range	TJ, TSTG	-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	VF	1.3						Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	IR	10						uAmps
Maximum Full Load Reverse Current Average, Full Cycle at Tc = 100°C		150						uAmps
Maximum Reverse Recovery Time (Note 1)	trr	150			250	500	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. 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**

