

FAST RECOVERY GLASS PASSIVATED RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 8.0 Amperes

FEATURES

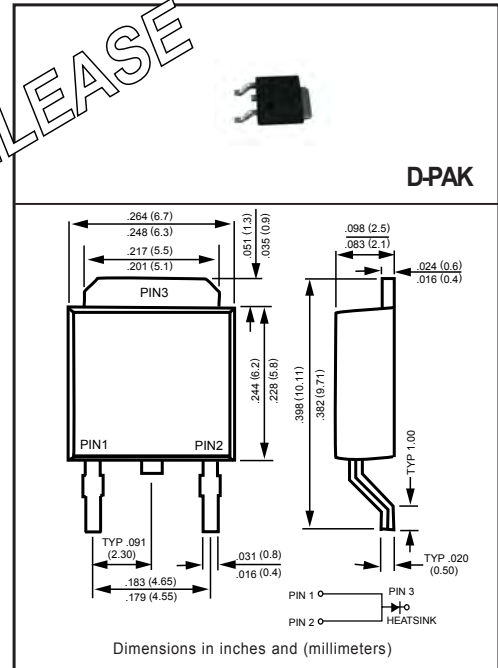
- * Fast switching
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: D-PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 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 (@ T_A=25 °C unless otherwise noted)

RATINGS	SYMBOL	FR801K	FR802K	FR803K	FR804K	FR805K	FR806K	FR807K	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _A = 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 1)	R _{θJC}	3							°C/W
	R _{θJA}	16							
Typical Junction Capacitance (Note 2)	C _J	50							pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS (@T_A=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	FR801K	FR802K	FR803K	FR804K	FR805K	FR806K	FR807K	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°C	I _R	2							uAmps
	@T _A = 100°C		150							
Maximum Reverse Recovery Time (Note 3)		t _{rr}	150				250	500		nSec

- NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.□
3. Test conditions: I_F= 0.5A, I_R= -0.1A, I_{RR}=-0.25A.
4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
5. Suffix "R" for Reverse Polarity.
6. Suffix "S" for D2-PAK Pkg.

RATING AND CHARACTERISTICS CURVES (FR801K THRU FR807K)

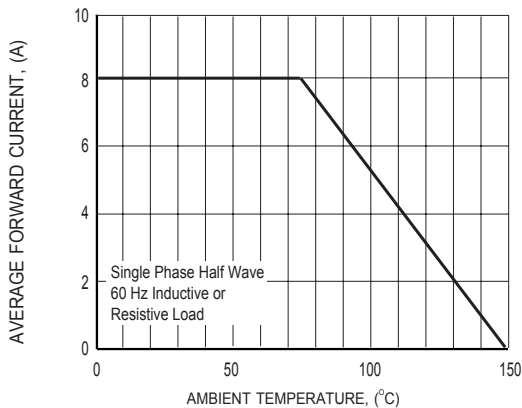


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

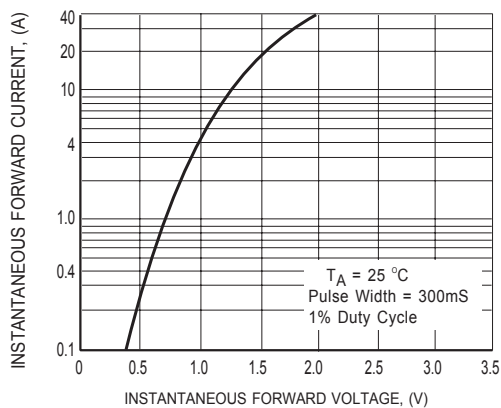


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

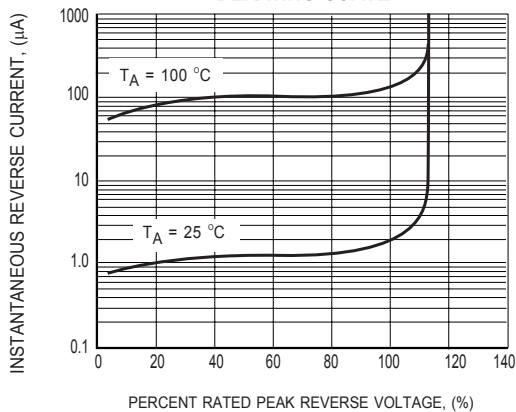


FIG.3 TYPICAL REVERSE CHARACTERISTICS

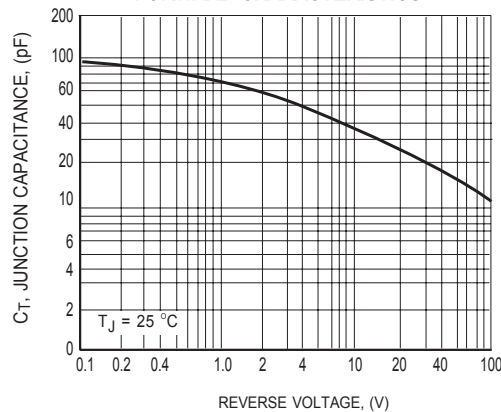


FIG.4 TYPICAL JUNCTION CAPACITANCE

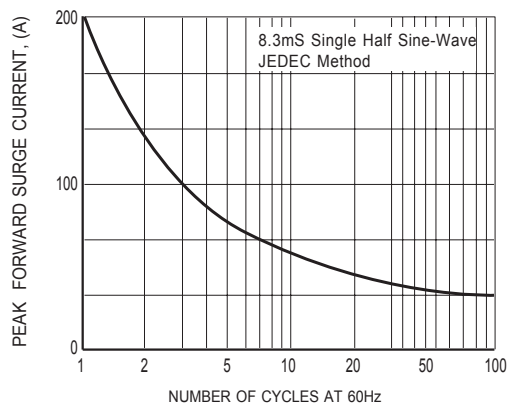


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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