FR801K THRU FR807K

FAST RECOVERY GLASS PASSIVATED RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 8.0 Amperes

NEW RELEASE

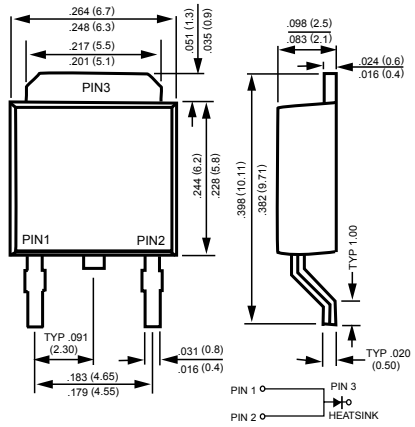
FEATURES

* 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-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 0.33 grams

D-PAK



Dimensions in inches and (millimeters)

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 (@ TA=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)	$R_{\theta JC}$	3							°C/W
	$R_{\theta JA}$	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)		trr	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.

2006-12

RATING AND CHARACTERISTICS CURVES (FR801K THRU FR807K)

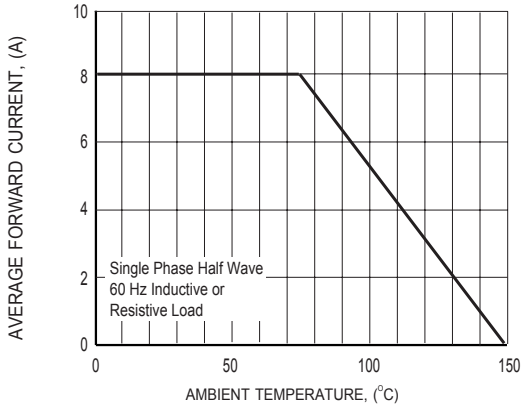


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

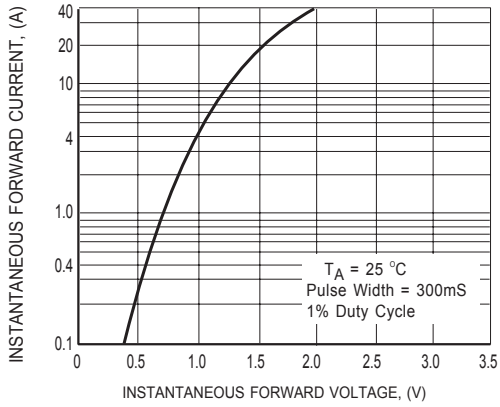


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

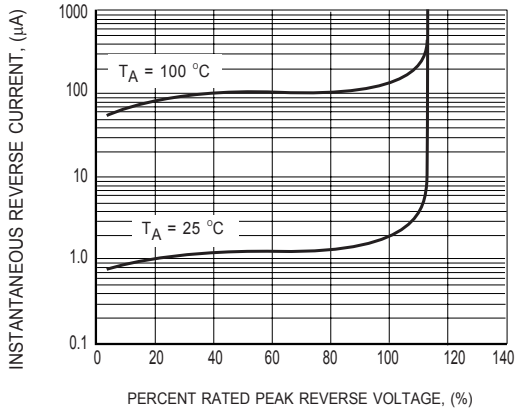


FIG.3 TYPICAL REVERSE CHARACTERISTICS

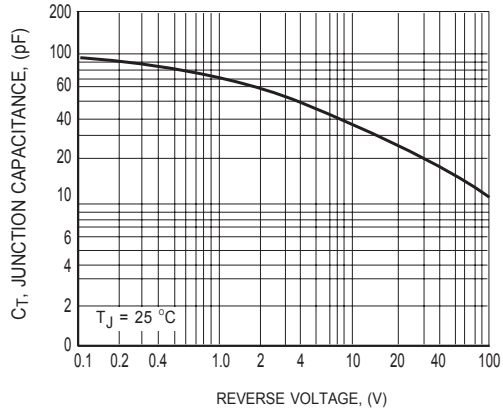


FIG.4 TYPICAL JUNCTION CAPACITANCE

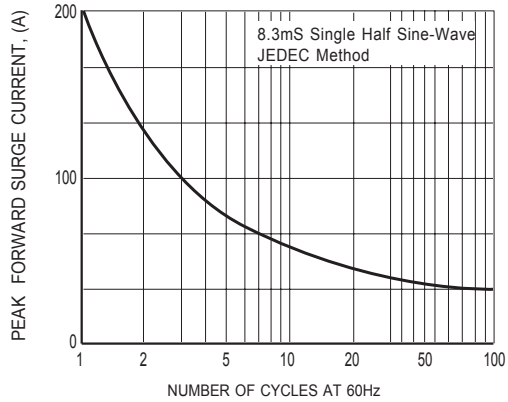


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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