RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

FR801K THRU FR807K

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

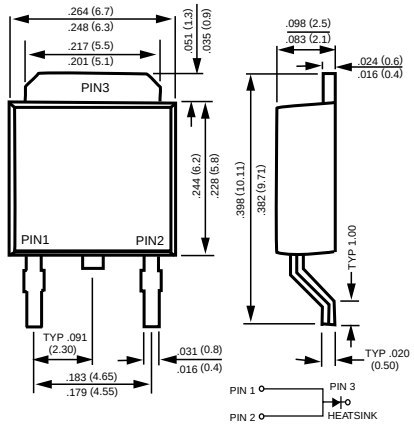
MECHANICAL DATA

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

D-PAK



Dimensions in inches and (millimeters)

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 Current Squared Time	I^2t	165.9							A^2/S
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. " ROHS compliant"
5. Suffix "R" for Reverse Polarity.
6. Suffix "S" for D2-PAK Pkg.
7. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2021-08
REV:A

RATING AND CHARACTERISTICS CURVES (FR801K THRU FR807K)

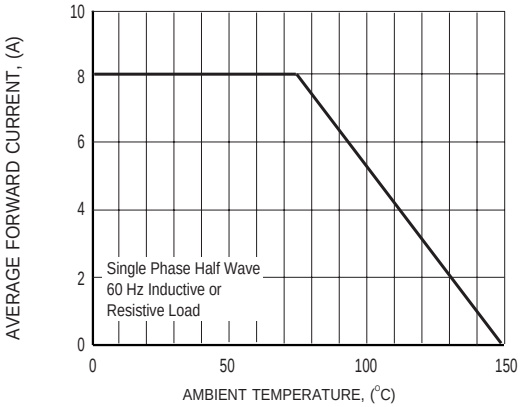


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

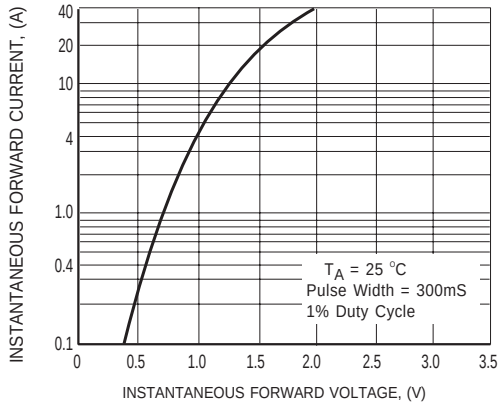


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

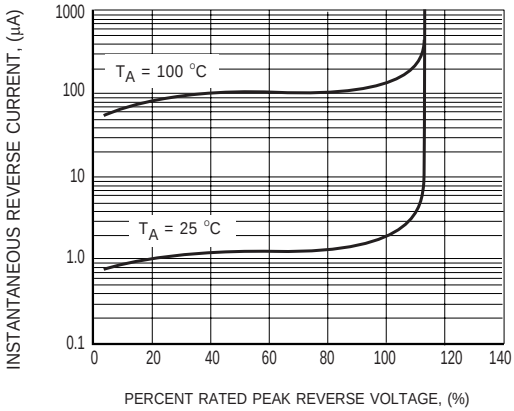


FIG.3 TYPICAL REVERSE CHARACTERISTICS

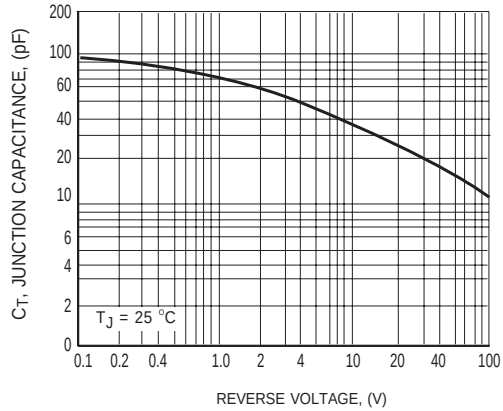


FIG.4 TYPICAL JUNCTION CAPACITANCE

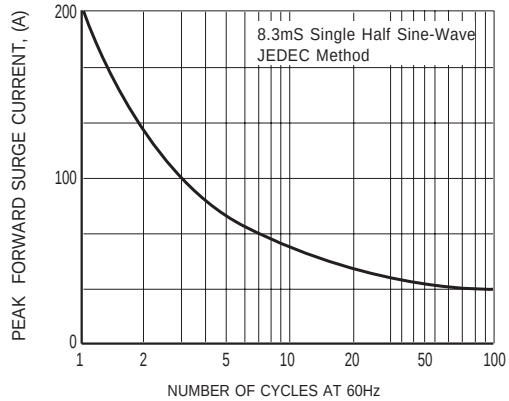
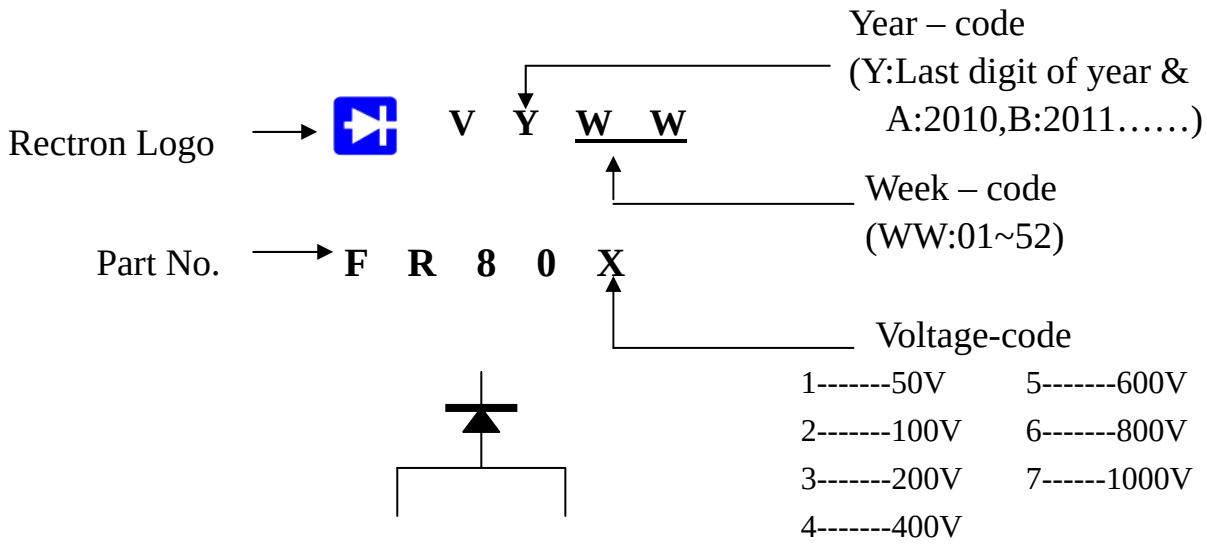


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DPAK	-W/-C	2,500	2,500	338*338*40	360*355*360	20,000	---

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