

FR80X SERIES

GLASS PASSIVATED FAST RECOVERY RECTIFIER

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FR801 THRU FR807

GLASS PASSIVATED FAST RECOVERY RECTIFIER



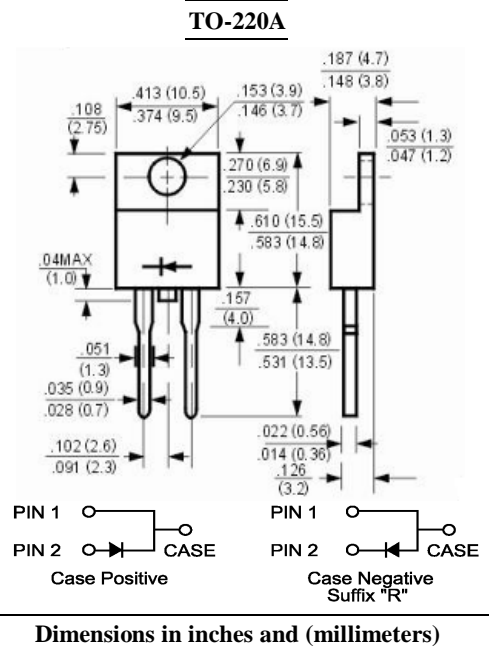
REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 8.0 AMPERE

FEATURES

- Low forward voltage drop
- High current capability
- High capability
- High surge current capability

MECHANICAL DATA

Case: Molded plastic, TO-220A
 Epoxy: UL 94V-O rate flame retardant
 Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
 Polarity: As marked
 Mounting position: Any
 Weight: 0.08ounce, 2.24gram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

	Symbols	FR801	FR802	FR803	FR804	FR805	FR806	FR807	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 $T_C=100^\circ\text{C}$	$I_{(AV)}$	8.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							Amp
Maximum Forward Voltage at 8.0A DC and 25°C	V_F	1.3							Volts
Maximum Reverse Current at $T_C=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_C=125^\circ\text{C}$	I_R	5.0 100							uAmp
Typical Junction Capacitance (Note 1)	C_J	60							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	3							°C/W
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150			250		500		nS
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							°C

NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance from Junction to Case, Single Side Cooled.
- 3- Reverse Recovery Test Conditions: $I_F=.5A$, $I_R=1A$, $I_{RR}=.25A$.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

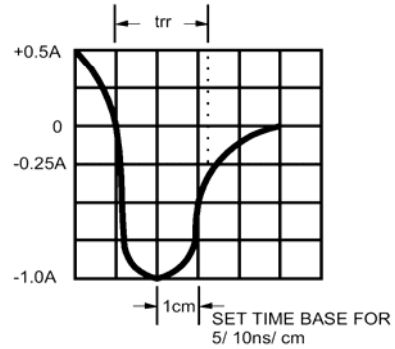
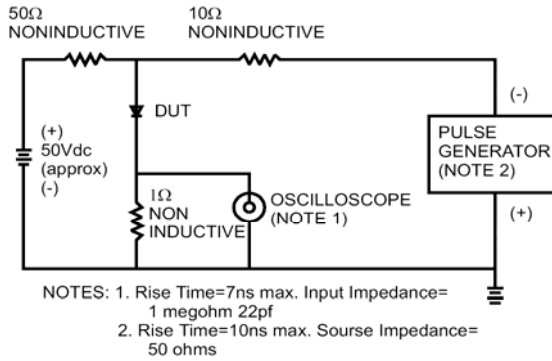


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

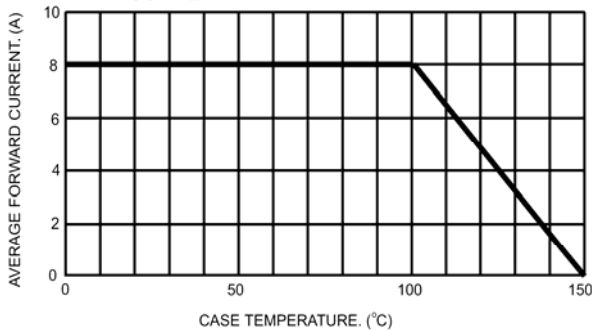


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

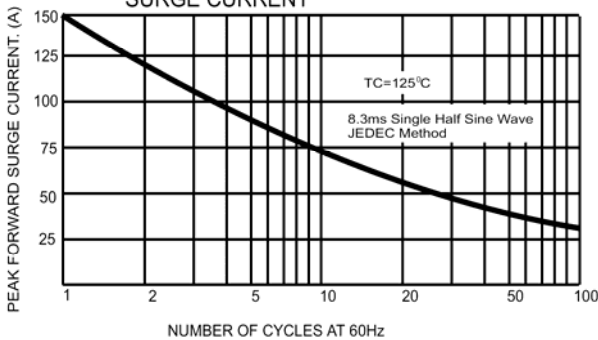


FIG.4- TYPICAL JUNCTION CAPACITANCE

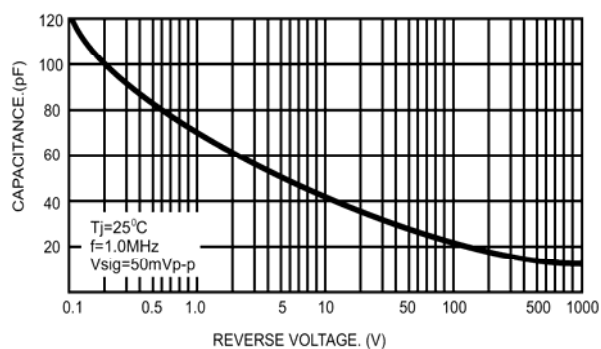


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

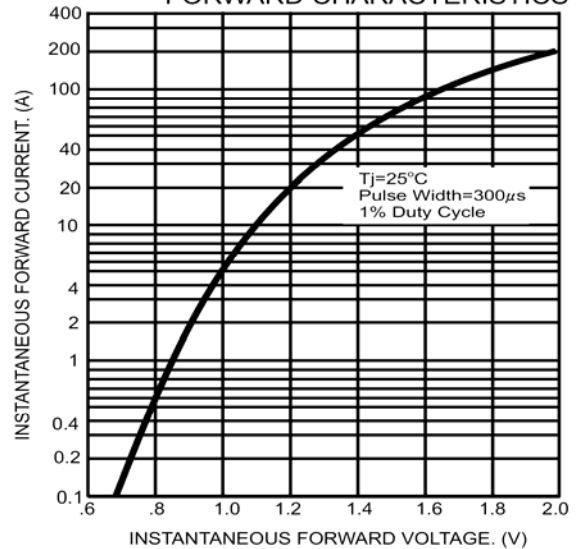


FIG.6- TYPICAL REVERSE CHARACTERISTICS

