RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

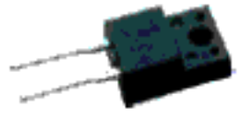
IFR801 THRU IFR807

FAST RECOVERY
GLASS PASSIVATED RECTIFIER

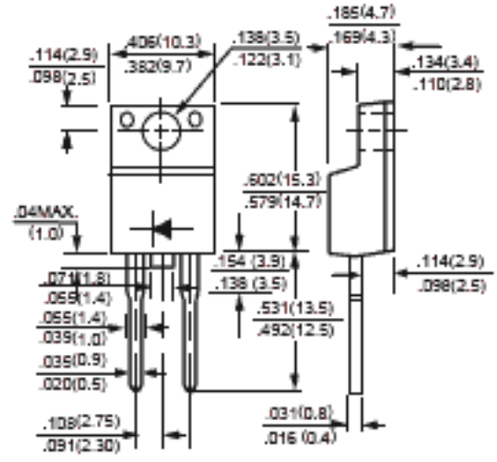
VOLTAGE RANGE 50 to 1000 Volts CURRENT 8.0 Amperes

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

MECHANICAL DATA
* Case: ITO-220A molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 2.24 grams
* Polarity: As marking



ITO-220A



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 (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	IFR801	IFR802	IFR803	IFR804	IFR805	IFR806	IFR807	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 Tc = 75°C	Io	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 3)	$R\theta_{JC}$	3							°C/W
Typical Junction Capacitance (Note 2)	C_J	50							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS	SYMBOL	IFR801	IFR802	IFR803	IFR804	IFR805	IFR806	IFR807	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	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: I_F = 0.5A, I_R = -1.0A, I_{RR} = -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.

2003-1

RATING AND CHARACTERISTIC CURVES (IFR801 THRU IFR807)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

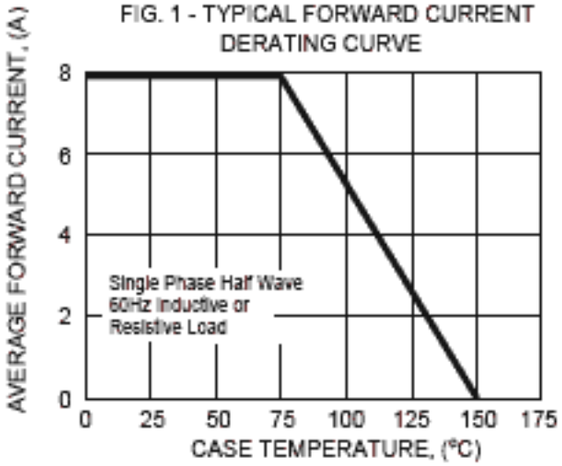


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

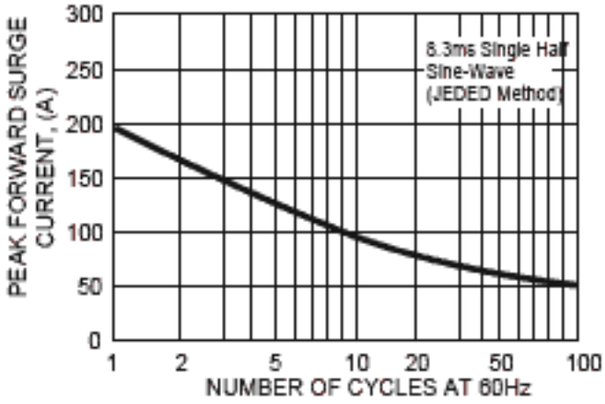


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

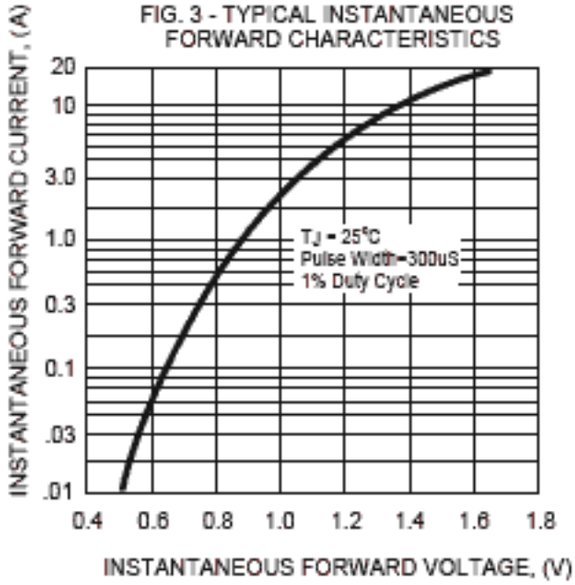


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

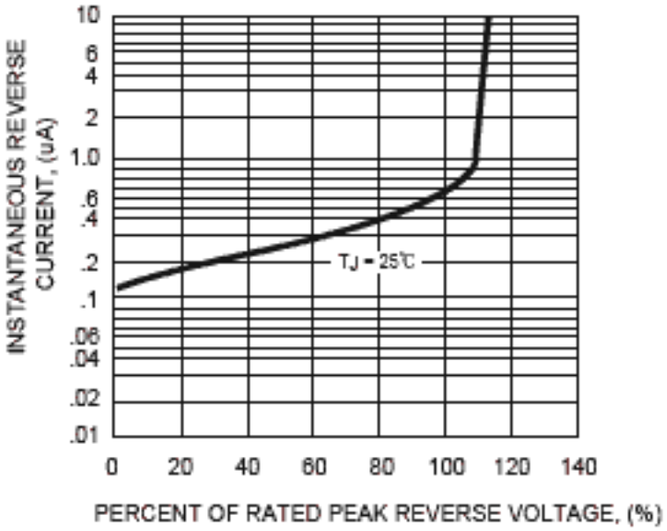


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

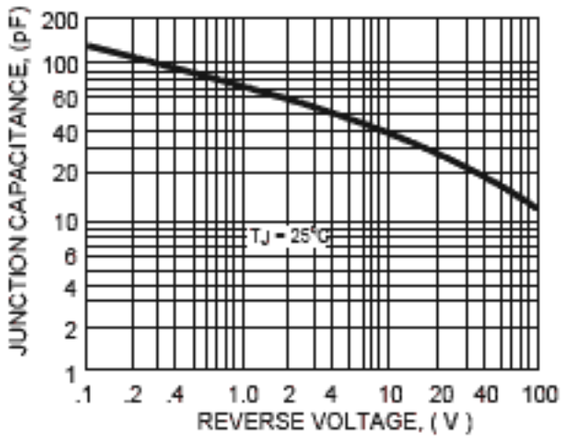


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

