

GLASS PASSIVATED SILICON RECTIFIER

VOLTAGE RANGE 50 to 800 Volts CURRENT 16 Amperes

FEATURES

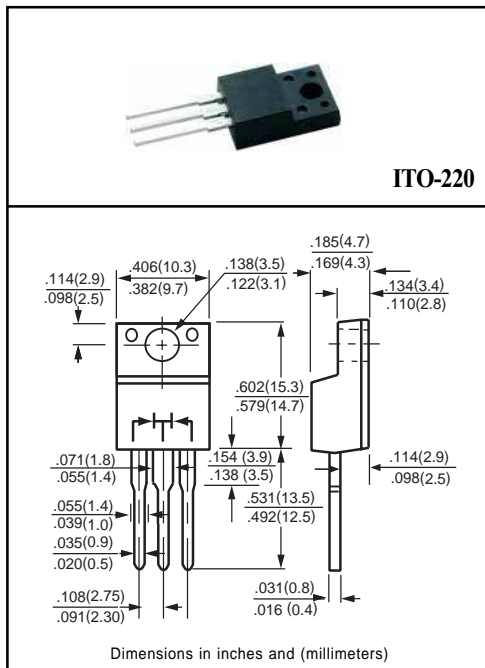
- * Low power loss, high efficiency
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: ITO-220 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 marked

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 TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	IRL1601C	IRL1602C	IRL1603C	IRL1604C	IRL1605C	IRL1606C	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	Vdc	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current TC = 100°C (Note 1)	Io	16.0						Amps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	200						Amps
Typical Thermal Resistance	RθJC	3.0						°C/W
Typical Junction Capacitance (Note 2)	CJ	40						pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150						°C

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

CHARACTERISTICS	SYMBOL	IRL1601C	IRL1602C	IRL1603C	IRL1604C	IRL1605C	IRL1606C	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	VF	1.1						Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@Tc = 25°C	10						uAmps
	@Tc = 100°C	100						

NOTES : 1. Case Temperature Measured at Metal Tab.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Suffix " A " = Common Anode.

RATING AND CHARACTERISTIC CURVES (IRL1601C THRU IRL1606C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

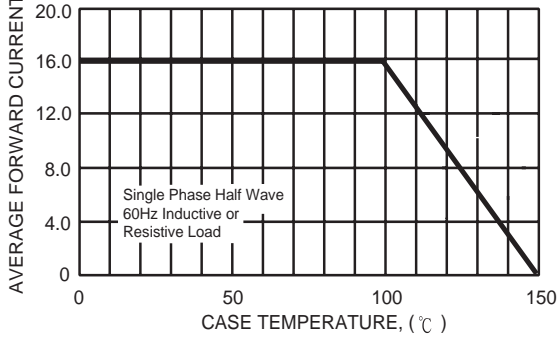


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

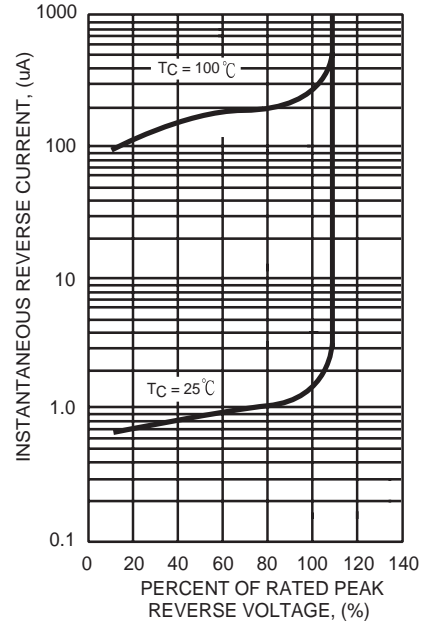


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

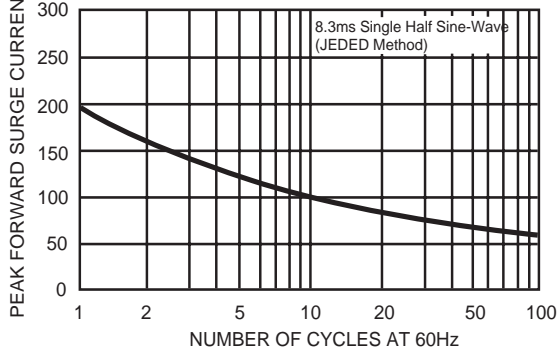


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

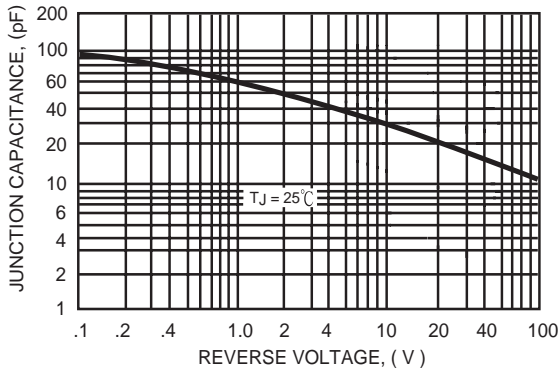


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

