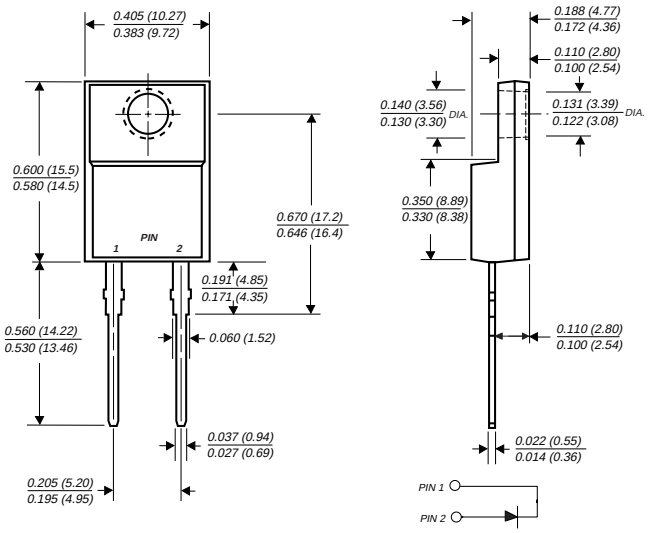
UGF8FT AND UGF8GT

ULTRAFAST SOFT RECOVERY RECTIFIER

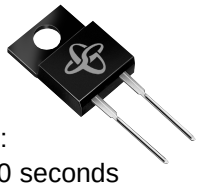
***Reverse Voltage** - 300 to 400 Volts **Forward Current** - 8.0 Amperes*

ITO-220AC



Dimensions in inches and (millimeters)

FEATURES



- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for freewheeling diode power factor correction applications
- Soft recovery characteristics
- Excellent high temperature switching
- Optimized to reduce switching losses
- High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds
- Glass passivated chip junction

MECHANICAL DATA

Case: ITO-220AC molded plastic body
Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.08 ounce, 2.24 grams
Mounting Torque: 5 in. - lbs. max.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

		SYMBOLS	UGF8FT	UGF8GT	UNITS
Maximum repetitive peak reverse voltage		V_{RRM}	300	400	Volts
Working peak reverse voltage		V_{RWM}	225	300	Volts
Maximum RMS voltage		V_{RMS}	210	280	Volts
Maximum DC blocking voltage		V_{DC}	300	400	Volts
Maximum average forward rectified current at T_C=100°C		$I_{(AV)}$	8.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	100.0		Amps
Maximum instantaneous forward voltage at I_F= 8A (NOTE 1)	T_J=25°C T_J=150°C	V_F	1.30 1.00		Volts
Maximum reverse leakage current at working peak reverse voltage	T_J=25°C T_J=100°C	I_R	10 350		µA
Reverse recovery time at I_F=1.0A, di/dt=100A/µs, V_R=30V, I_{rr}=0.1 I_{RM}	Maximum	t_{rr}	50		ns
Maximum reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A		t_{rr}	35		ns
Maximum reverse recovery current at I_F=10A, di/dt=50A/µs,V_R=30V	T_C=100°C	I_{RM}	5.5		Amps
Maximum stored charge I_F=2A, di/dt=20A/µs, V_R=30V, I_{rr}=0.1 I_{RM}		Q_{rr}	55		nC
Typical thermal resistance from junction to case		$R_{\Theta JC}$	5.0		°C/W
Operating junction and storage temperature range		T_J, T_{STG}	-40 to+150		°C

NOTE:
(1) Pulse test: 300µs pulse width, 1% duty cycle

NOTICE: Advanced product information is subject to change without notice

GENERAL SEMICONDUCTOR®

RATINGS AND CHARACTERISTIC CURVES UGF8FT AND UGF8GT

FIG. 1 -FORWARD CURRENT DERATING CURVE

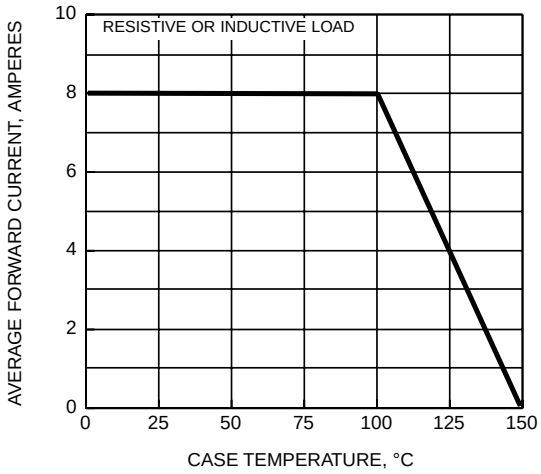


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

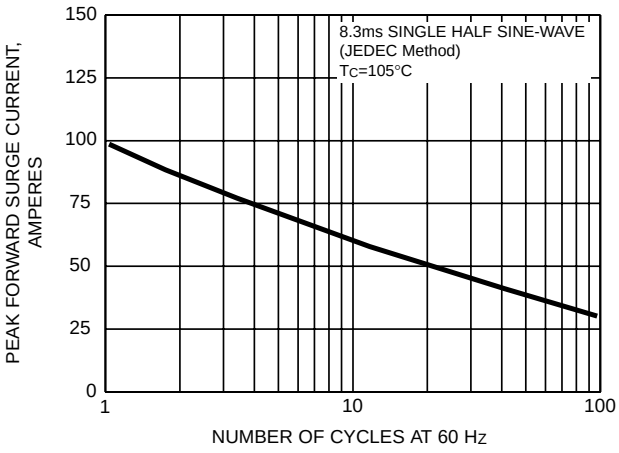


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

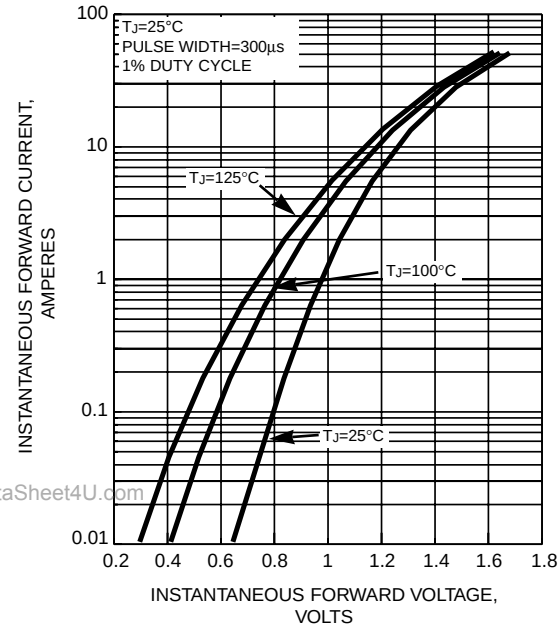


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

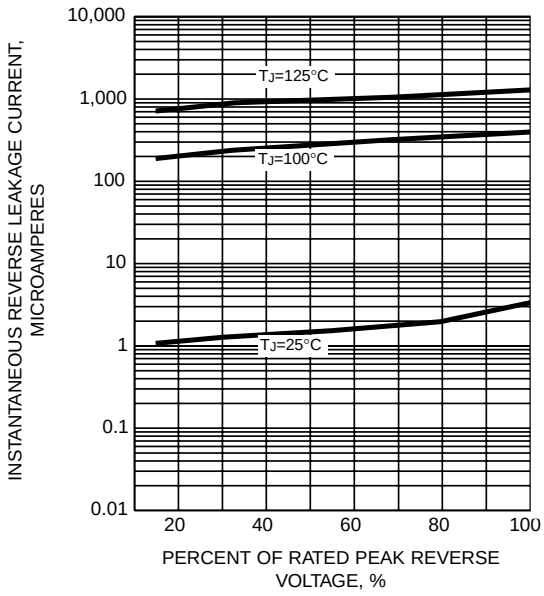


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

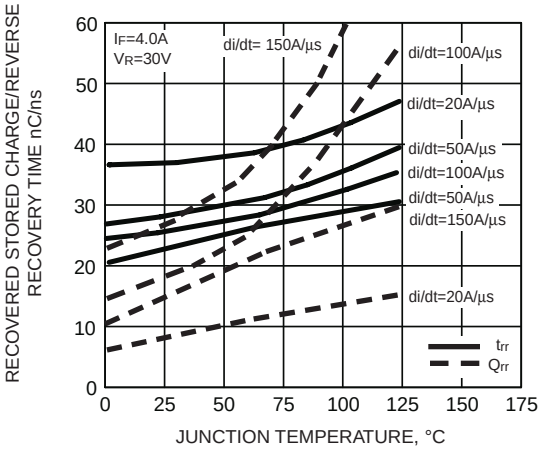
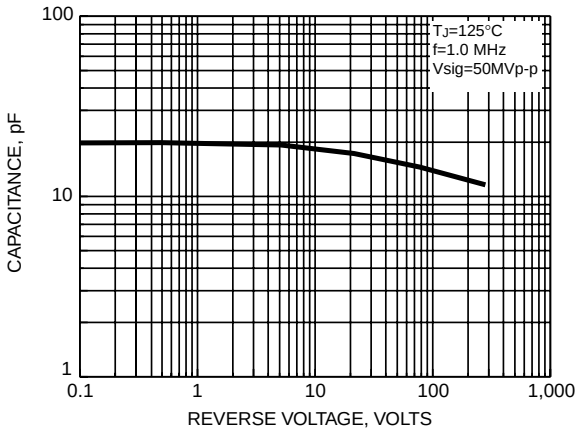


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



GENERAL SEMICONDUCTOR®