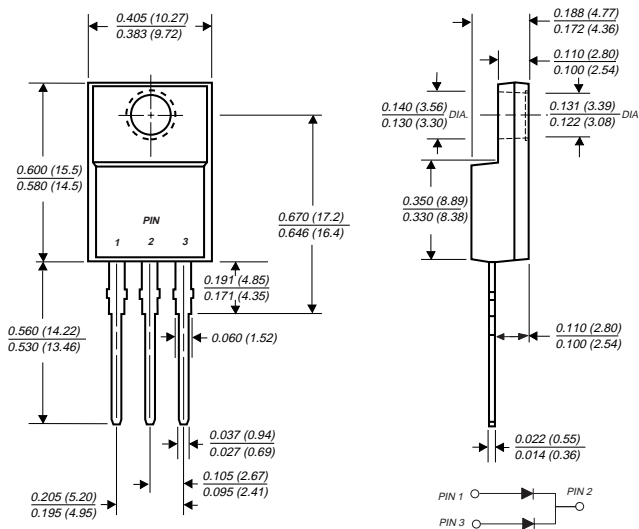


UGF10FCT AND UGF10GCT

ULTRAFAST SOFT RECOVERY RECTIFIER

Reverse Voltage - 300 to 400 Volts Forward Current - 10.0 Amperes

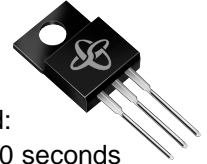
ITO-220AB



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for free wheeling 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-220AB 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	UGF10FCT	UGF10GCT	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 $T_C=100^\circ\text{C}$	$I_{(AV)}$	10		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I_{FSM}	60A		Amps
Maximum instantaneous forward voltage per leg $I_F=5A$	V_F	$T_J=25^\circ\text{C}$ 1.30 $T_J=150^\circ\text{C}$ 1.05		Volts
Maximum reverse leakage current at working peak reverse voltage	I_R	$T_J=25^\circ\text{C}$ 10 $T_J=100^\circ\text{C}$ 200		μA
Maximum reverse recovery time per leg at $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$	t_{rr}	35		ns
Maximum Reverse recovery time per leg at $I_F=1.0A$, $di/dt=100A/\mu\text{s}$, $V_R=30V$, $I_{rr}=0.1 I_{RM}$	t_{rr}	50		ns
Maximum reverse recovery current per leg at $I_F=5A$, $di/dt=50A/\mu\text{s}$, $V_R=30V$	I_{RM}	3.0		Amps
Maximum stored charge per leg $I_F=2A$, $di/dt=20A/\mu\text{s}$, $V_R=30V$, $I_{rr}=0.1 I_{RM}$	Q_{rr}	50		nC
Typical thermal resistance from junction to case per leg	$R_{\theta JC}$	6.0		$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +150		$^\circ\text{C}$

RATINGS AND CHARACTERISTIC CURVES UGF10FCT AND UGF10GCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

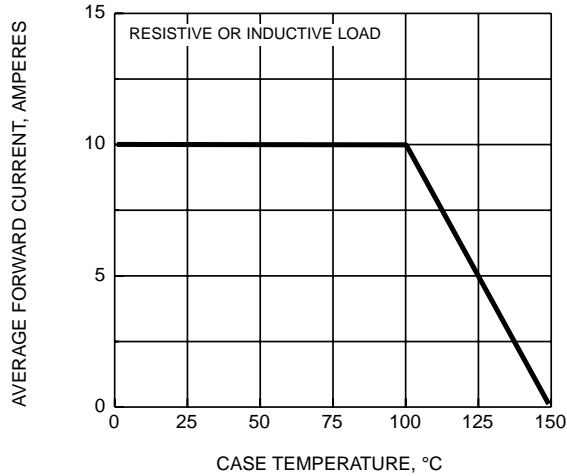


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

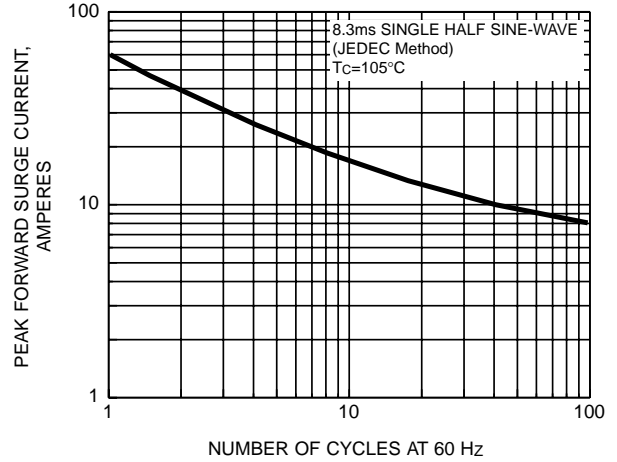


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

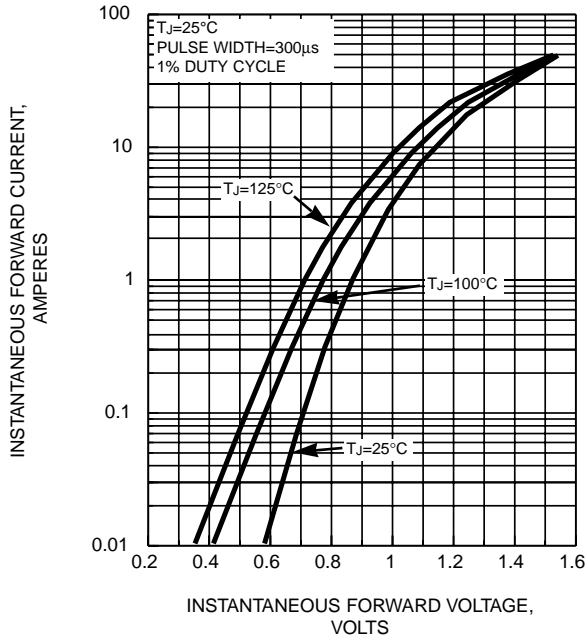


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

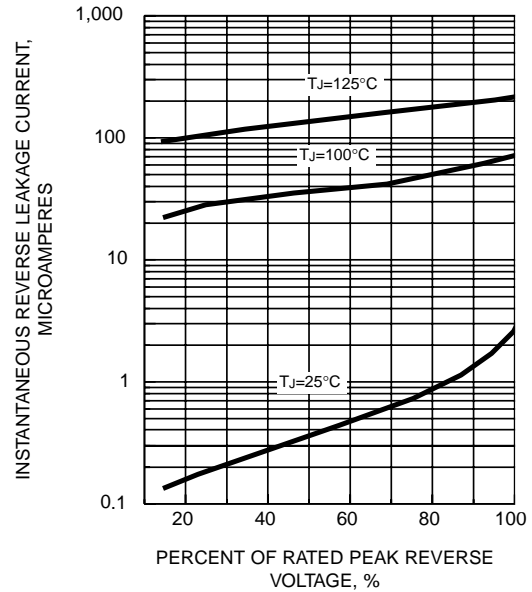


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

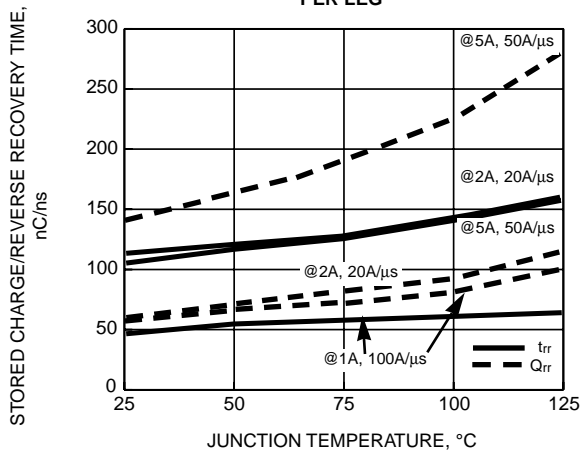


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

