

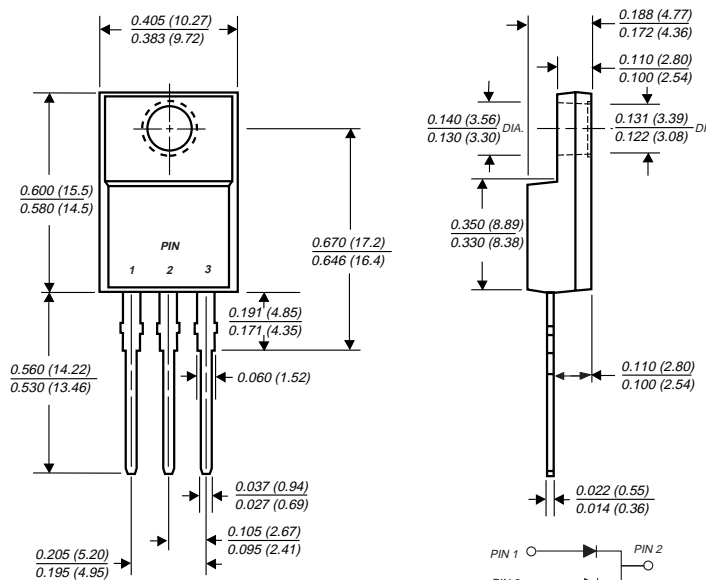
# UGF10ACT THRU UGF10DCT

## ULTRAFAST SOFT RECOVERY RECTIFIER

Reverse Voltage - 50 to 200 Volts

Forward Current - 10.0 Amperes

### ITO-220AB



### 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/10 seconds at terminals
- ♦ Glass passivated chip junction



### MECHANICAL DATA

**Case:** JEDEC ITO-220AB molded plastic body

**Terminals:** Plated leads, solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Mounting Torque:** 5 in. - lbs. max.

**Weight:** 0.08 ounce, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UGF10ACT	UGF10BCT	UGF10CCT	UGF10DCT	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	Volts
Working peak reverse voltage	$V_{RWM}$	50	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	Volts
Maximum DC blocking voltage	$V_{DC}$	100	100	200	200	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	$I_{FSM}$	60				Amps
Maximum instantaneous forward voltage per leg at $I_F=10\text{A}$ , $T_J=25^\circ\text{C}$ $I_F=5\text{A}$ , $T_J=25^\circ\text{C}$ $I_F=5\text{A}$ , $T_J=150^\circ\text{C}$	$V_F$	1.25 1.10 0.895				Volts
Maximum reverse leakage current per leg at working peak reverse voltage $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	$I_R$	10 200				$\mu\text{A}$
Maximum reverse recovery time per leg at $I_F=1.0\text{A}$ , $di/dt=100\text{A}/\mu\text{s}$ , $V_R=30\text{V}$ , $I_{rr}=0.1 I_{RM}$	$t_{rr}$	25				ns
Maximum reverse recovery time per leg at $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$	$t_{rr}$	25 15				ns
Maximum reverse recovery current per leg at $I_F=5\text{A}$ , $di/dt=50\text{A}/\mu\text{s}$ , $V_R=30\text{V}$	$I_{RM}$	0.7				Amps
Maximum stored charge per leg $I_F=2\text{A}$ , $di/dt=20\text{A}/\mu\text{s}$ , $V_R=30\text{V}$ , $I_{rr}=0.1 I_{RM}$	$Q_{rr}$	5.5 4.5				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				$^\circ\text{C}$

**NOTICE:** Advanced product information is subject to change without notice

# RATINGS AND CHARACTERISTIC CURVES UGF10ACT THRU UGF10DCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

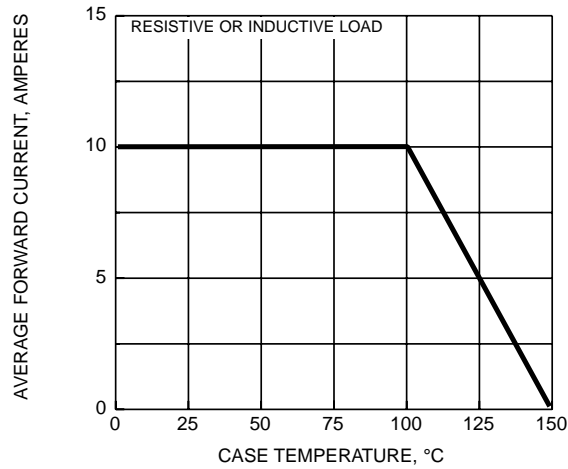


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

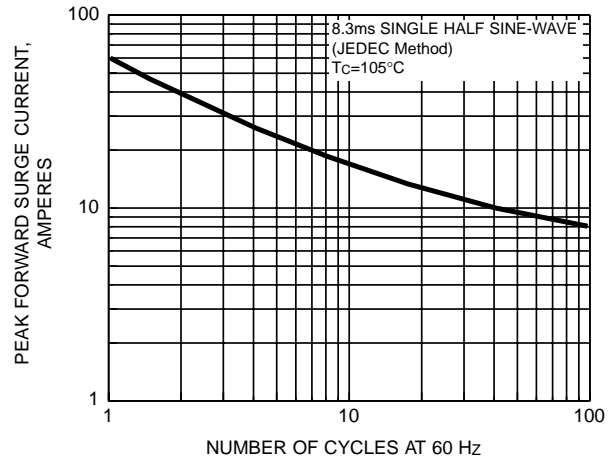


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

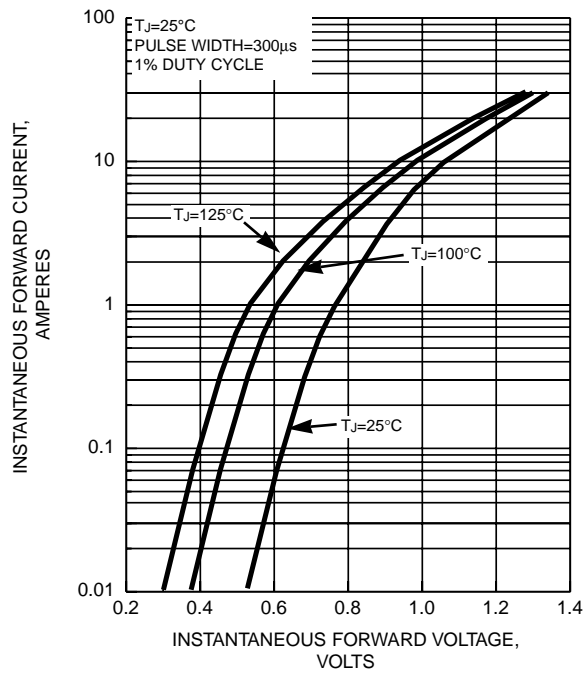


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

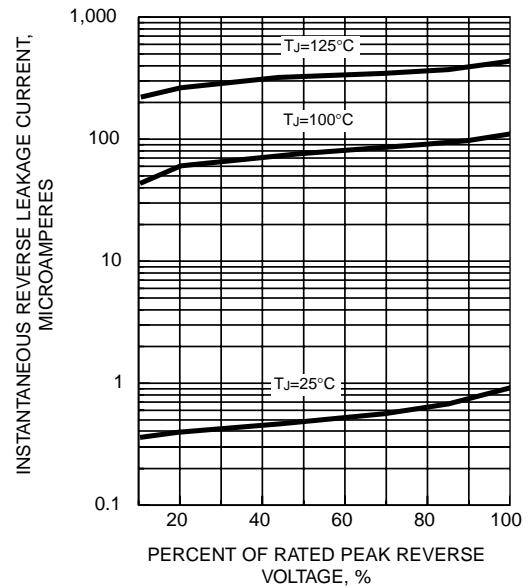


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

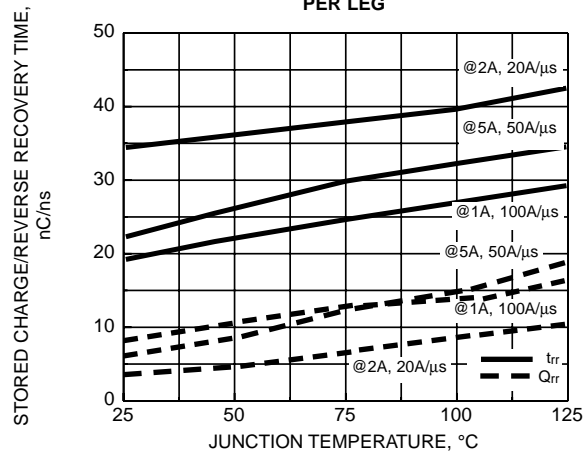


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

