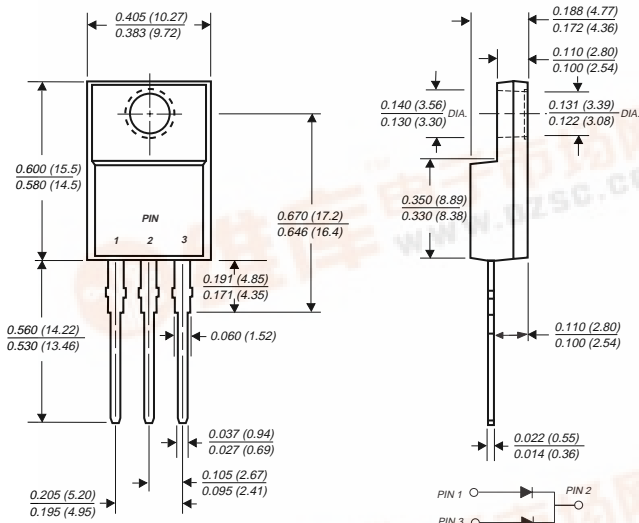


# UGF10FCT AND UGF10GCT

## ULTRAFAST SOFT RECOVERY RECTIFIER

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

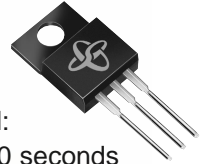
### ITO-220AB



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 <sub>RRM</sub>	300	400	Volts
Working peak reverse voltage	V <sub>RWM</sub>	225	300	Volts
Maximum RMS voltage	V <sub>RMS</sub>	210	280	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	300	400	Volts
Maximum average forward rectified current at T <sub>C</sub> =100°C	I <sub>(AV)</sub>	10		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I <sub>FSM</sub>	60A		Amps
Maximum instantaneous forward voltage per leg I <sub>F</sub> = 5A	V <sub>F</sub>	1.30 1.05		Volts
Maximum reverse leakage current at working peak reverse voltage	I <sub>R</sub>	10 200		μA
Maximum reverse recovery time per leg at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	35		ns
Maximum Reverse recovery time per leg at I <sub>F</sub> =1.0A, di/dt=100A/μs, V <sub>R</sub> =30V, I <sub>rr</sub> =0.1 I <sub>RM</sub>	t <sub>rr</sub>	50		ns
Maximum reverse recovery current per leg at I <sub>F</sub> =5A, di/dt=50A/μs, V <sub>R</sub> =30V	I <sub>RM</sub>	3.0		Amps
Maximum stored charge per leg I <sub>F</sub> =2A, di/dt=20A/μs, V <sub>R</sub> =30V, I <sub>rr</sub> =0.1 I <sub>RM</sub>	Q <sub>rr</sub>	50		nC
Typical thermal resistance from junction to case per leg	R <sub>θJC</sub>	6.0		°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-40 to +150		°C

# RATINGS AND CHARACTERISTIC CURVES UGF10FCT AND UGF10GCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

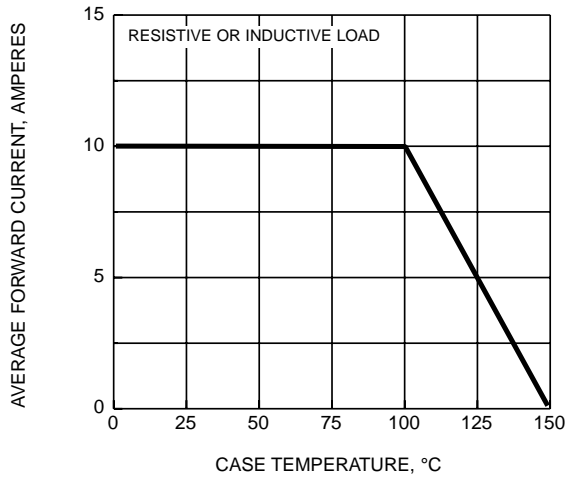


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

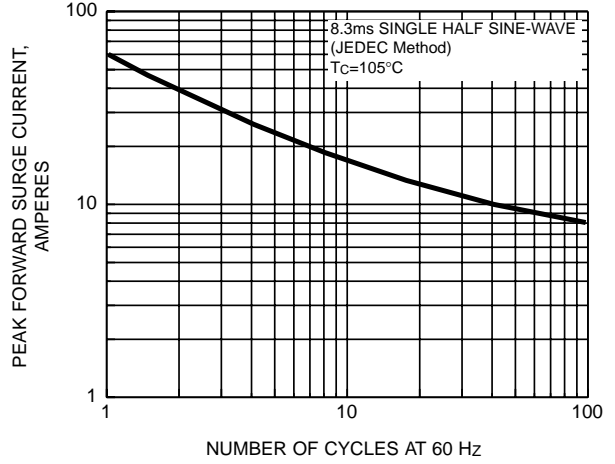


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

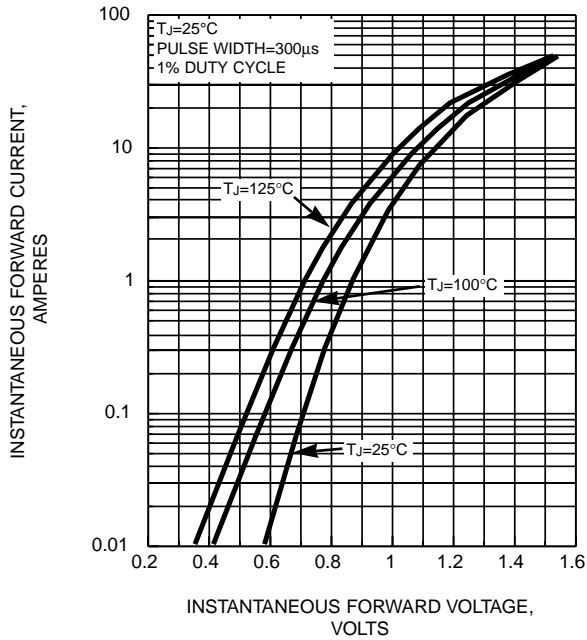


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

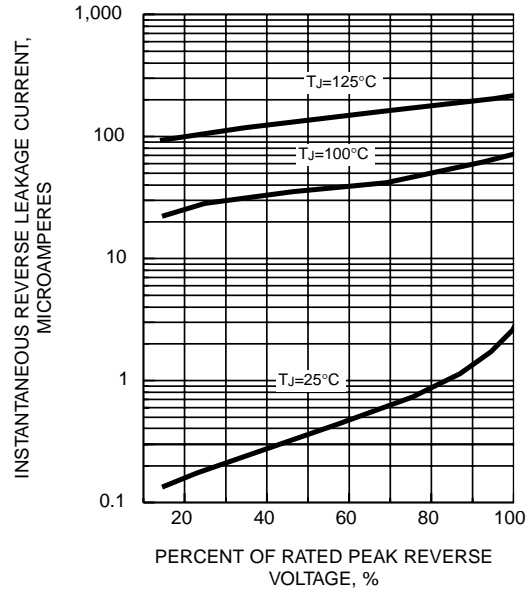


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

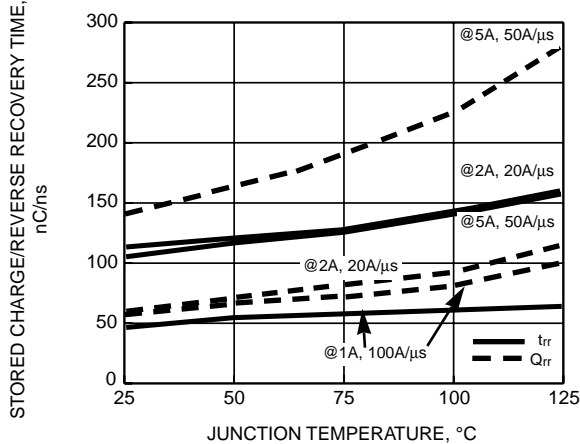


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

