

# UGB10FCT AND UGB10GCT

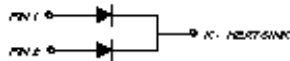
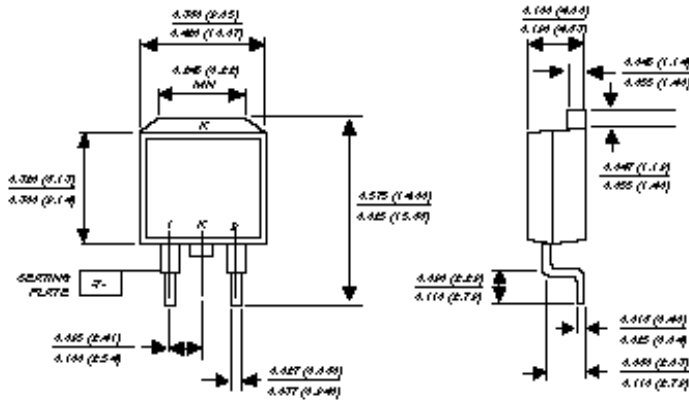
## ULTRAFAST SOFT RECOVERY RECTIFIER

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

### TO-263AB

### 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 in accordance with CECC 802 / Reflow guaranteed
- ◆ Glass passivated chip junction



Dimensions in inches and (millimeters)

### MECHANICAL DATA

**Case:** JEDEC TO-263AB 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	UGB10FCT	UGB10GCT	UNITS
Maximum repetitive peak reverse voltage	VRRM	300	400	Volts
Working peak reverse voltage	VRWM	225	300	Volts
Maximum RMS voltage	VRMS	210	280	Volts
Maximum DC blocking voltage	VDC	300	400	Volts
Maximum average forward rectified current at T <sub>C</sub> =100°C	I(AV)	10		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	IFSM	60A		Amps
Maximum instantaneous forward voltage per leg I <sub>F</sub> = 5A	T <sub>J</sub> =25°C T <sub>J</sub> =150°C V <sub>F</sub>	1.30 1.05		Volts
Maximum reverse leakage current at working peak reverse voltage	T <sub>J</sub> =25°C T <sub>J</sub> =100°C I <sub>R</sub>	10 200		μA
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 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 current per leg at I <sub>F</sub> =5A, di/dt=50A/μs, V <sub>R</sub> =30V	T <sub>C</sub> =100°C 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>	4.5		°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-40 to +150		°C

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

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

# RATINGS AND CHARACTERISTIC CURVES UGB10FCT AND UGB10GCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

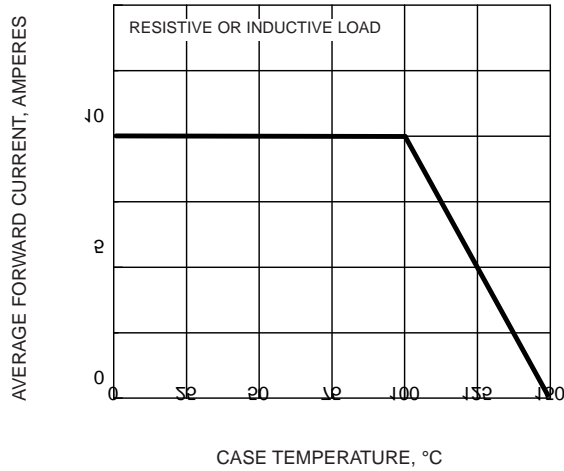


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

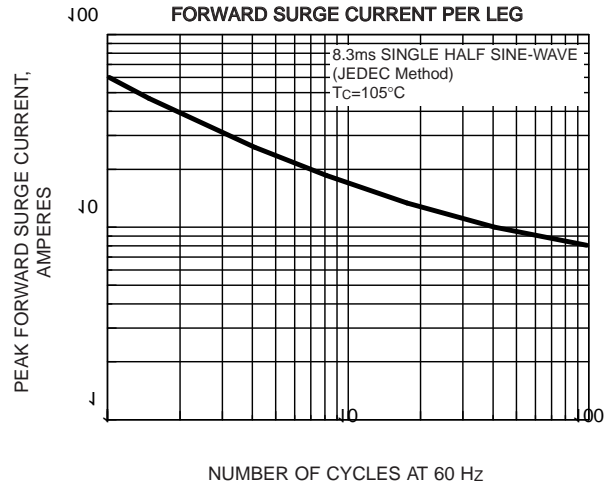


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

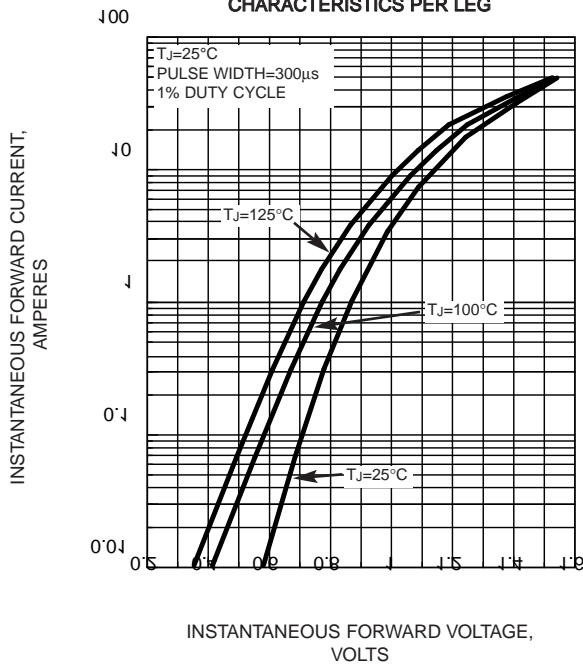


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

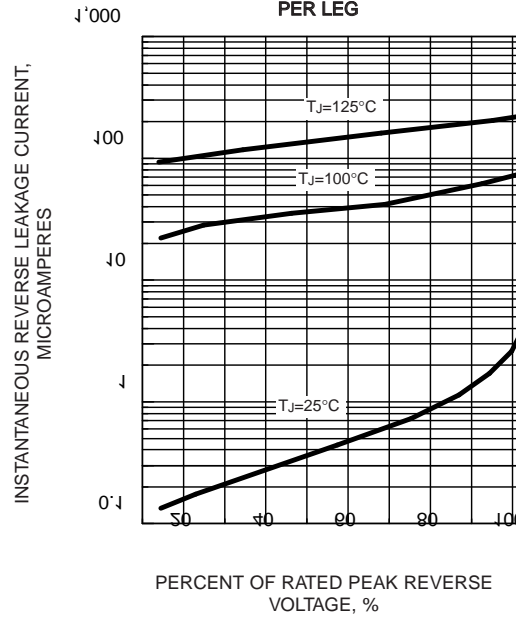


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

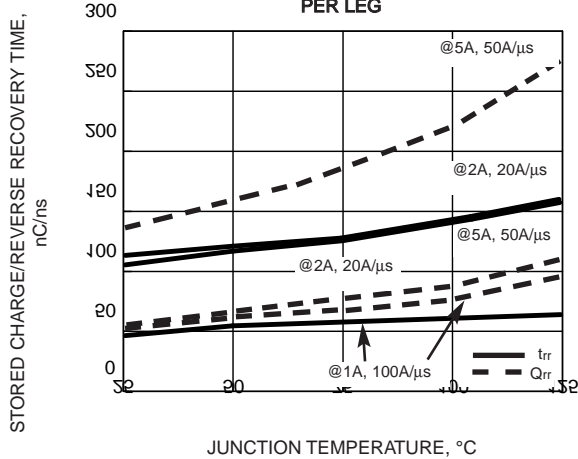


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

