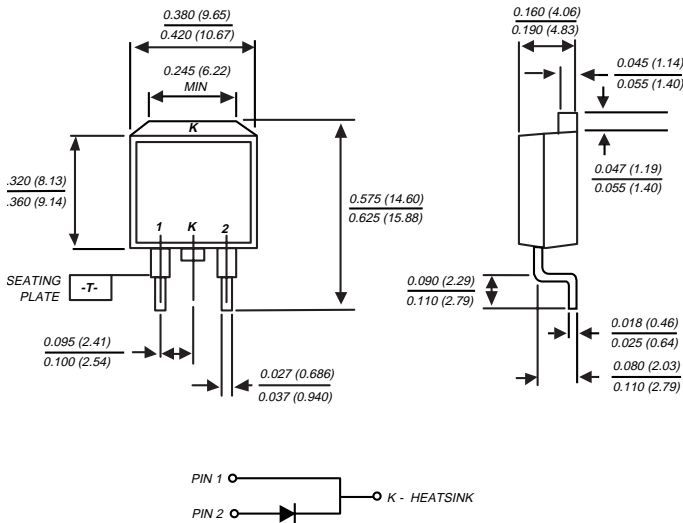


# UGB8FT AND UGB8GT

## ULTRAFAST SOFT RECOVERY RECTIFIER

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

### TO-263AB



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



### 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

**Weight:** 0.08 ounce, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

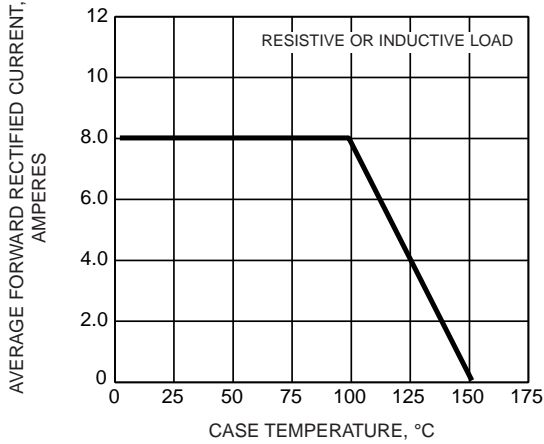
	SYMBOLS	UGB8FT	UGB8GT	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	300	400	Volts
Working peak reverse voltage	V <sub>RWM</sub>	225	300	Volts
Maximum RMS voltage	V <sub>RMS</sub>	210	280	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	300	400	Volts
Maximum average forward rectified current at T <sub>C</sub> =100°C	I <sub>(AV)</sub>	8.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100.0		Amps
Maximum instantaneous forward voltage at I <sub>F</sub> = 8A (NOTE 1)	V <sub>F</sub>	T <sub>J</sub> =25°C	1.30	Volts
		T <sub>J</sub> =150°C	1.00	
Maximum reverse leakage current at working peak reverse voltage	I <sub>R</sub>	T <sub>C</sub> =25°C	10	μA
		T <sub>C</sub> =100°C	350	
Reverse recovery time 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 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 at I <sub>F</sub> =10A, di/dt=50A/μs, V <sub>R</sub> =30V	I <sub>RM</sub>	5.5		Amps
Maximum stored charge 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>	55		nC
Typical thermal resistance from junction to case	R <sub>θJC</sub>	2.2		°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

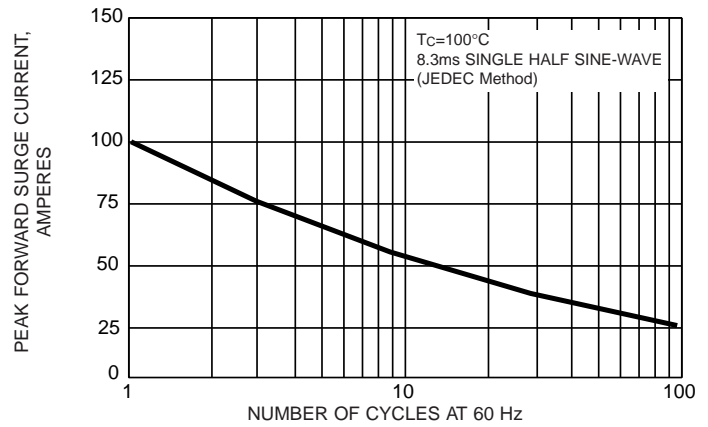
**NOTICE:** Advanced product information is subject to change without notice

# RATINGS AND CHARACTERISTIC CURVES UGB8FT AND UGB8GT

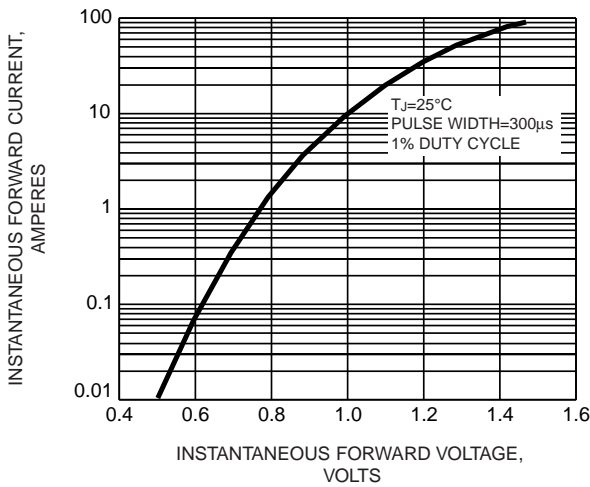
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



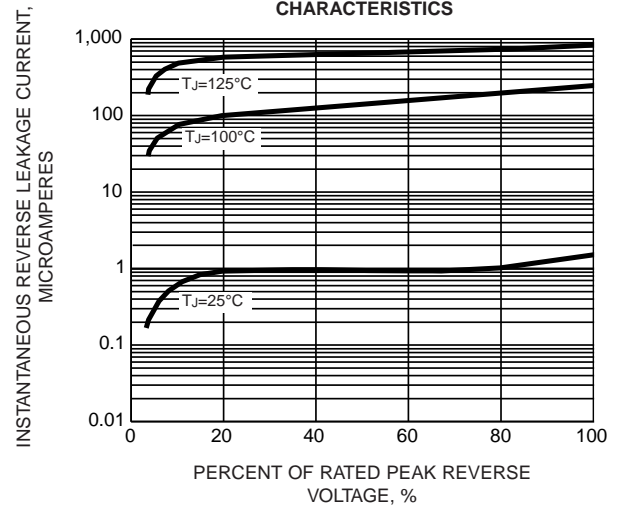
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



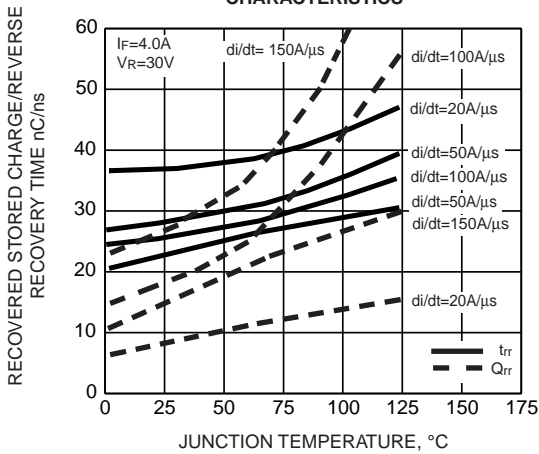
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - REVERSE SWITCHING CHARACTERISTICS**



**FIG. 6 - TYPICAL JUNCTION CAPACITANCE**

