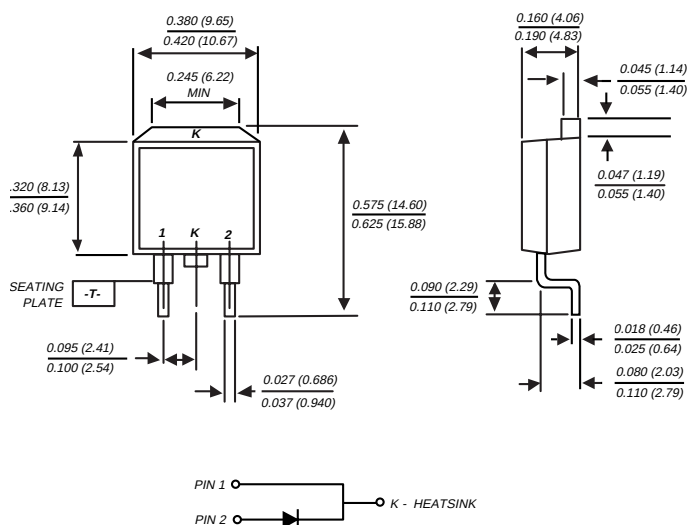


UGB8FT AND UGB8GT

ULTRAFAST SOFT RECOVERY RECTIFIER

Reverse Voltage - 400 Volts Forward Current - 8.0 Amperes

TO-263AA



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



MECHANICAL DATA

Case: JEDEC TO-263AA 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 _{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°C	I <sub(av)< sub=""></sub(av)<>	8.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100.0		Amps
Maximum instantaneous forward voltage at I _F = 8A (NOTE 1) T _J =25°C T _J =150°C	V _F	1.30 1.00		Volts
Maximum reverse leakage current at working peak reverse voltage T _C =25°C T _C =100°C	I _R	10 350		μA
Reverse recovery time at I _F =1.0A, di/dt=100A/μs, V _R =30V, I _{rr} =0.1 I _{RM}	t _{rr}	50		ns
Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	35		ns
Maximum reverse recovery current at I _F =10A, di/dt=50A/μs, V _R =30V T _C =100°C	I _{RM}	5.5		Amps
Maximum stored charge I _F =2A, di/dt=20A/μs, V _R =30V, I _{rr} =0.1 I _{RM}	Q _{rr}	55		nC
Typical thermal resistance from junction to case	R _{θJC}	2.2		°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-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

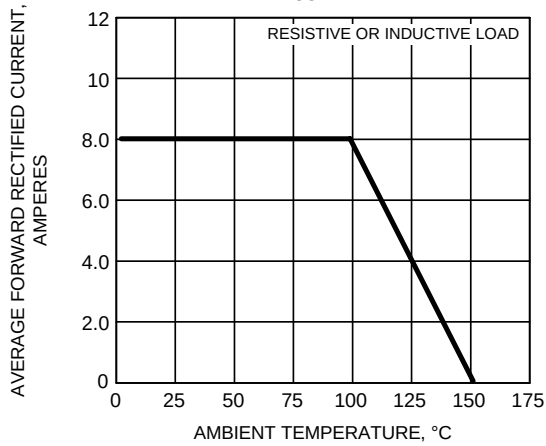


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

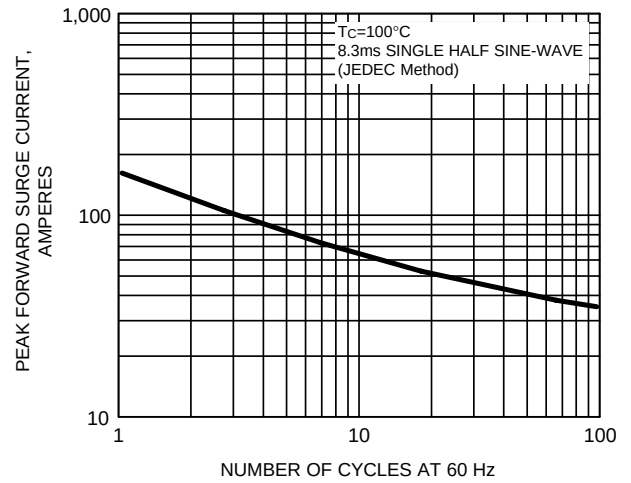


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

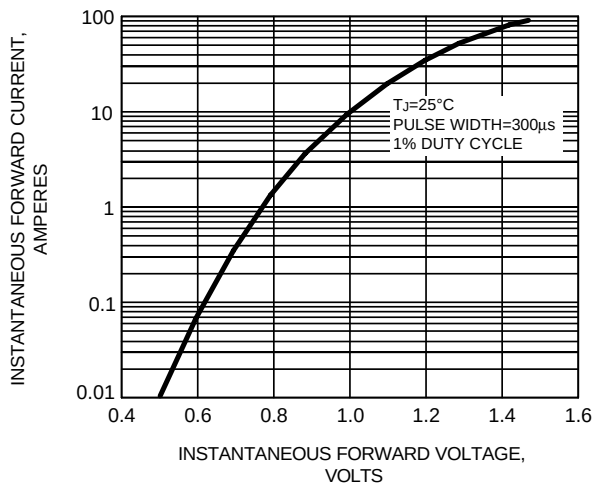


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

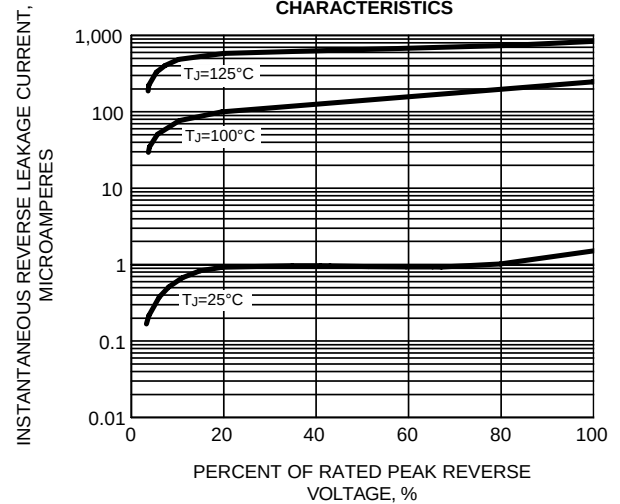


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

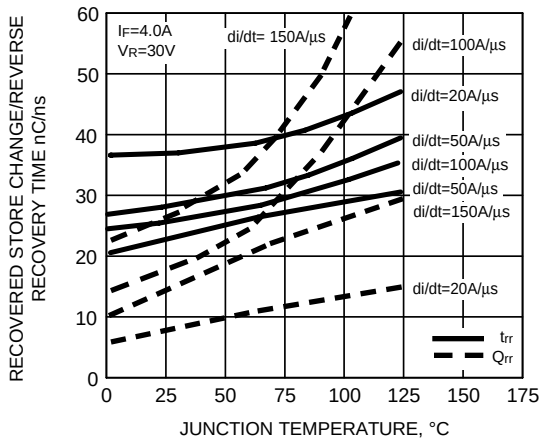


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

