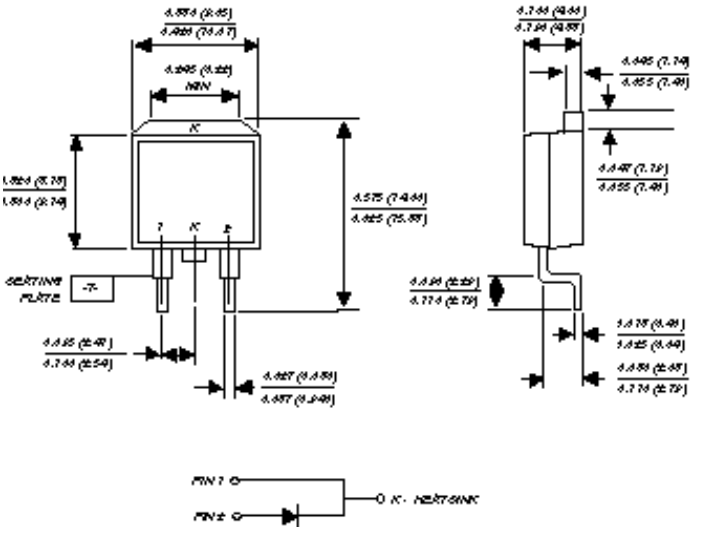
UGB8HT AND UGB8JT

ULTRAFAST SOFT RECOVERY RECTIFIER

***Reverse Voltage** - 500 to 600 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
- Planar technology
- Optimized to reduce switching losses
- High temperature soldering in accordance with CECC 802 / Reflow guaranteed

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	UGB8HT	UGB8JT	UNITS
Maximum repetitive peak reverse voltage		V_{RRM}	500	600	Volts
Working peak reverse voltage		V_{RWM}	400	480	Volts
Maximum RMS voltage		V_{RMS}	350	420	Volts
Maximum DC blocking voltage		V_{DC}	500	600	Volts
Maximum average forward rectified current at T_C=100°C		$I_{(AV)}$	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=125°C	V_F	1.75 1.50		Volts
Maximum reverse leakage current at working peak reverse voltage	T_C=25°C T_C=100°C T_C=125°C	I_R	30.0 800.0 4.0		µA µA mA
Maximum reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A		t_{rr}	25		ns
Reverse recovery time at I_F=1.0A, di/dt=50A/µs, V_R=30V, I_{rr}=0.1 I_{RM}	Maximum Typical	t_{rr}	50 35		ns
Typical softness factor (t_b/t_a) I_F=8.0A, di/dt=240A/µs, V_R=400V I_{rr}=0.1 I_{RM}		S	1.0		-
Maximum reverse recovery current at I_F=8.0A, di/dt=64A/µs,V_R=400V	T_C=125°C	I_{RM}	5.5		Amps
Typical reverse recovery current at I_F=8.0A, di/dt=240A/µs, V_R=400V	T_C=125°C	I_{RM}	10.0		Amps
Peak forward recovery time at I_F=8A, di/dt=64A/µs measured at 1.1 V_F	Maximum Typical	t_{fr}	500 250		ns
Typical thermal resistance from junction to case		$R_{\Theta JC}$	2.2		°C/W
Operating junction and storage temperature range		T_J, T_{STG}	-55 to+150		°C

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

NOTICE: Advanced product information is subject to change without notice

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RATINGS AND CHARACTERISTIC CURVES UGB8HT AND UGB8JT

FIG. 1 - FORWARD CURRENT DERATIVE CURVE

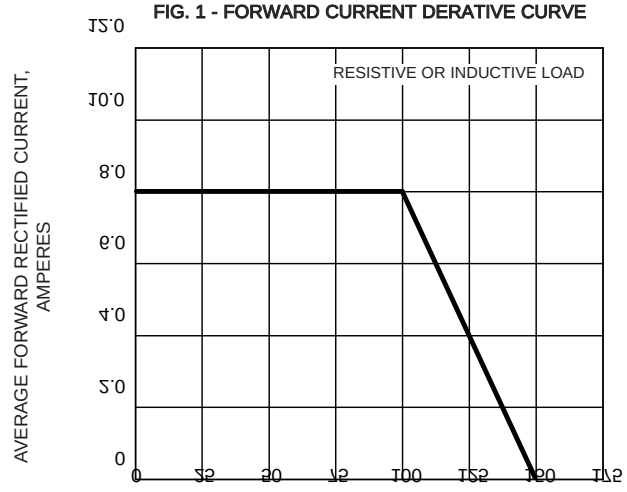


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

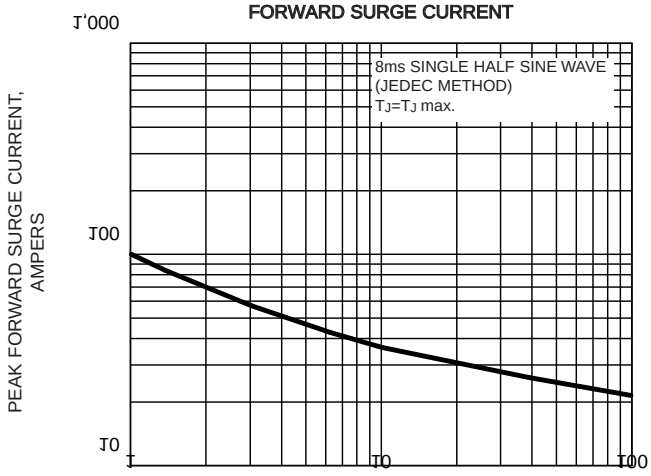


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

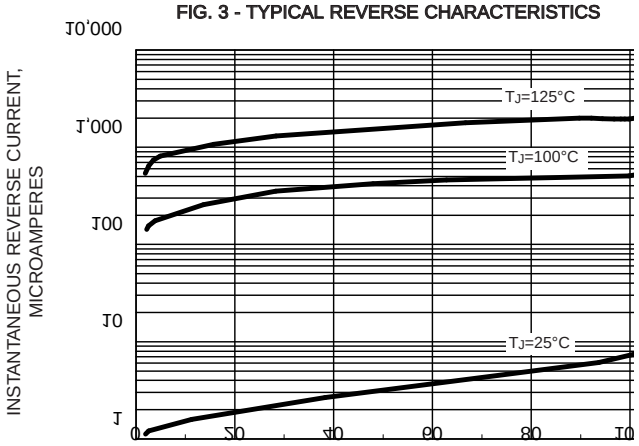


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

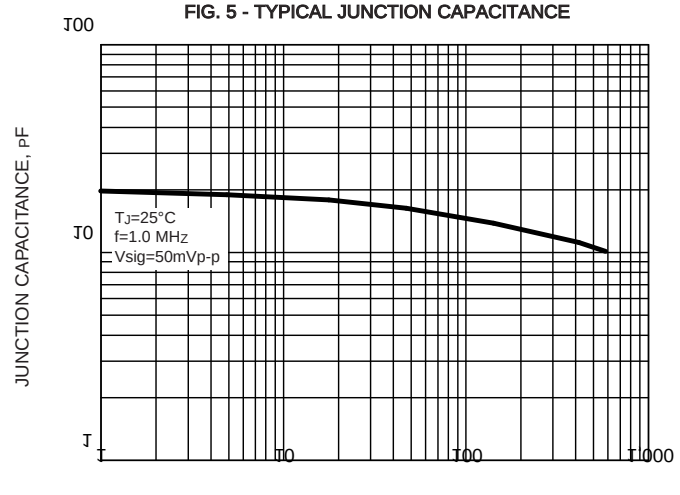
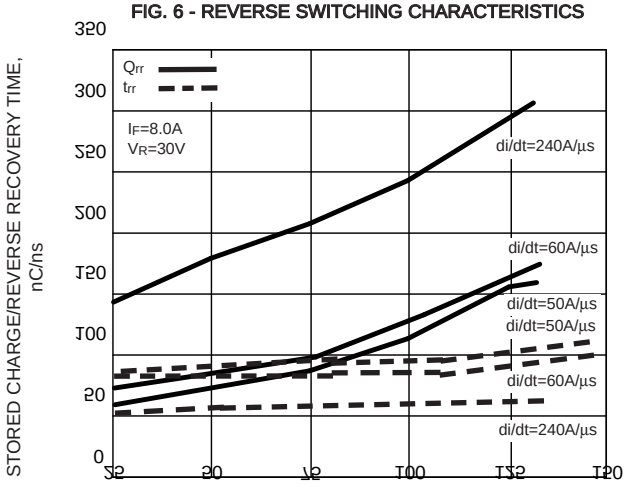


FIG. 6 - REVERSE SWITCHING CHARACTERISTICS



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