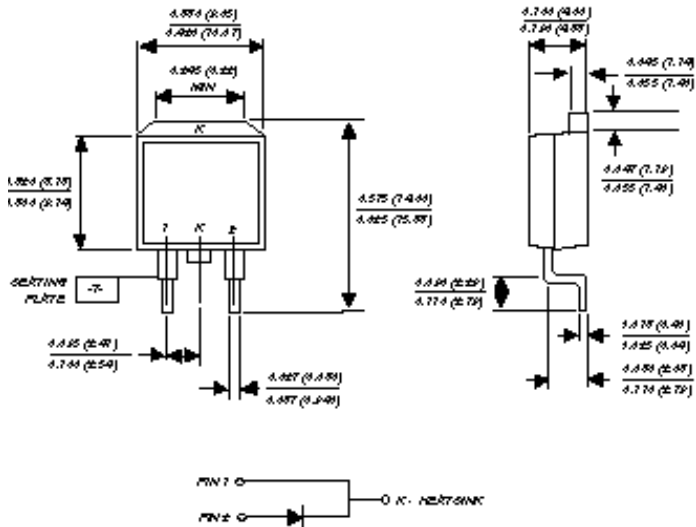


UGB8HT AND UGB8JT

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	VRRM	500	600	Volts
Working peak reverse voltage	VRWM	400	480	Volts
Maximum RMS voltage	VRMS	350	420	Volts
Maximum DC blocking voltage	VDC	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)	IFSM	100.0		Amps
Maximum instantaneous forward voltage at I _F = 8A (NOTE 1)	V _F	T _J =25°C	1.75	Volts
		T _J =125°C	1.50	
Maximum reverse leakage current at working peak reverse voltage	I _R	T _C =25°C	30.0	μA
		T _C =100°C	800.0	μA
		T _C =125°C	4.0	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}	t _{rr}	Maximum	50	ns
		Typical	35	
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	I _{RM}	T _C =125°C	5.5	Amps
Typical reverse recovery current at I _F =8.0A, di/dt=240A/μs, V _R =400V		T _C =125°C	10.0	Amps
Peak forward recovery time at I _F =8A, di/dt=64A/μs measured at 1.1 V _F	t _{fr}	Maximum	500	ns
		Typical	250	
Typical thermal resistance from junction to case	R _{θJC}	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

RATINGS AND CHARACTERISTIC CURVES UGB8HT AND UGB8JT

FIG. 1 - FORWARD CURRENT DERATIVE CURVE

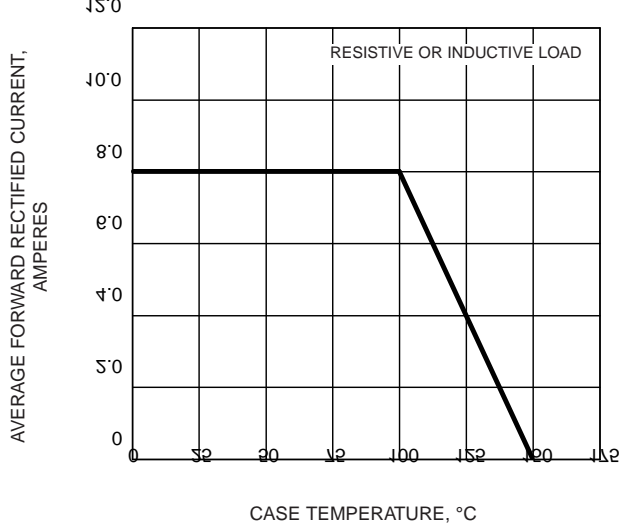


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

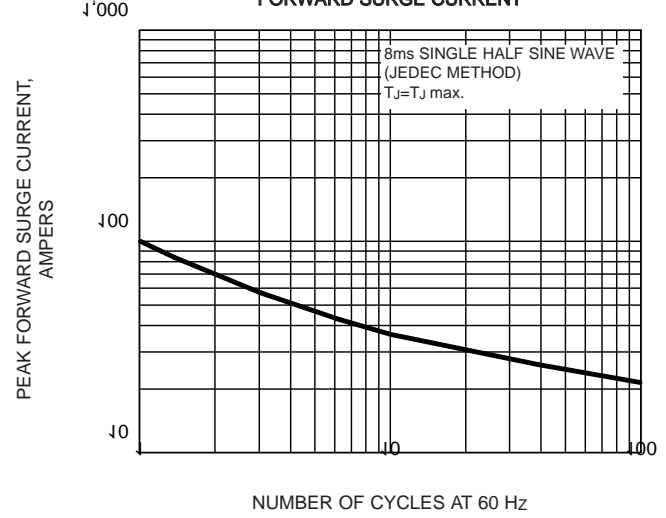


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

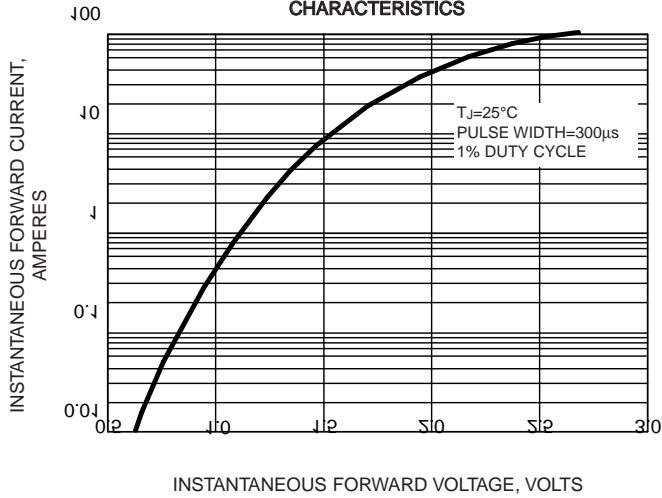


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

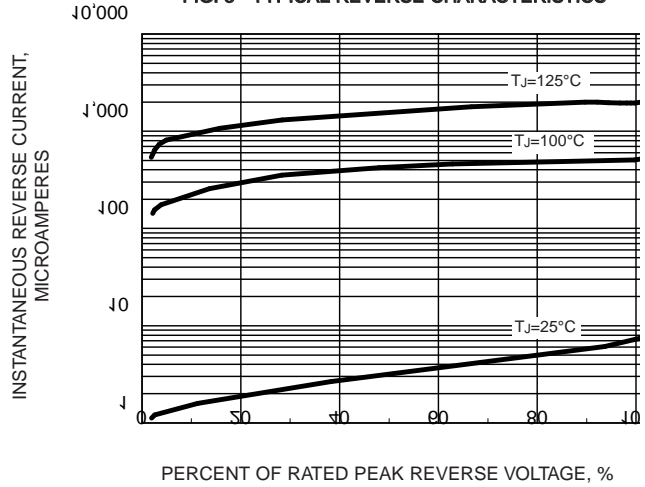


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

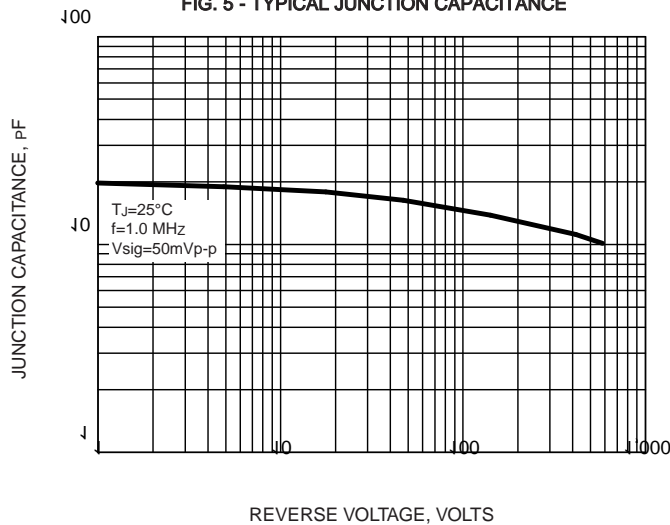


FIG. 6 - REVERSE SWITCHING CHARACTERISTICS

