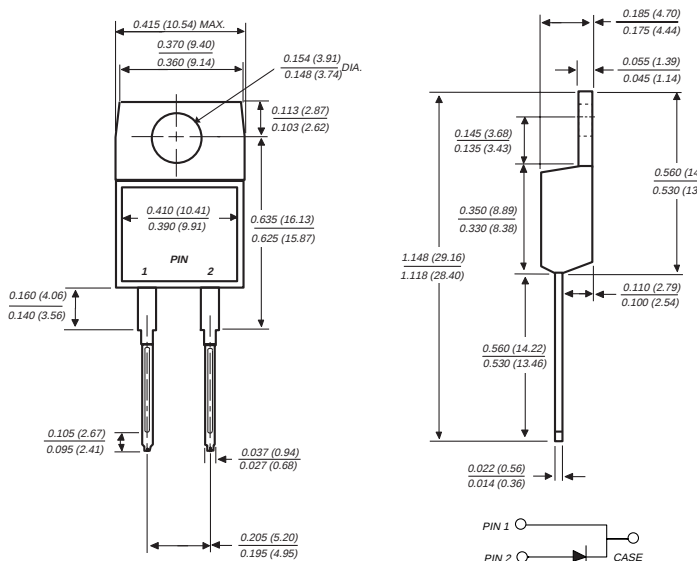


UG8HT AND UG8JT

ULTRAFAST SOFT RECOVERY RECTIFIER

Reverse Voltage - 500 to 600 Volts Forward Current - 8.0 Amperes

TO-220AC



Dimensions 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 guaranteed: 250°C/10 seconds at terminals



MECHANICAL DATA

Case: JEDEC TO-220AC 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

Mounting Torque: 5 in. - lbs. max.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UG8HT	UG8JT	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 _J =25°C T _J =100°C T _J =125°C	I _R	30 800 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}	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 _{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 UG8HT AND UG8JT

FIG. 1 - FORWARD CURRENT DERATING CURVE

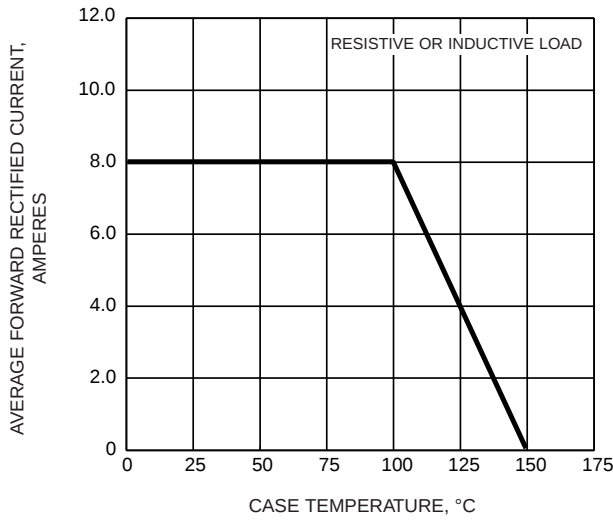


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

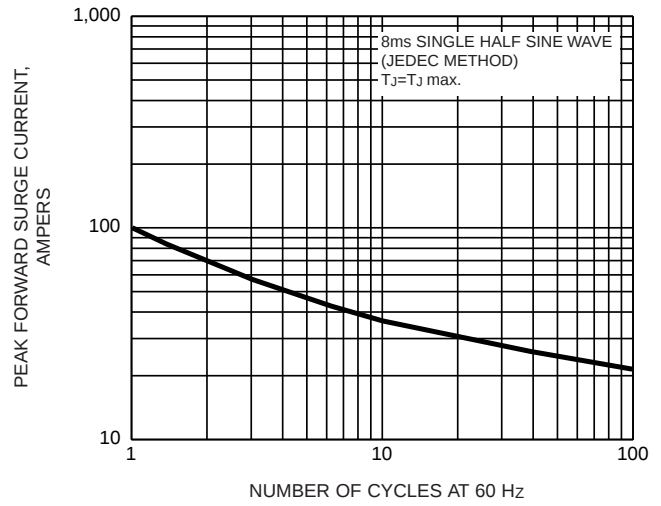


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

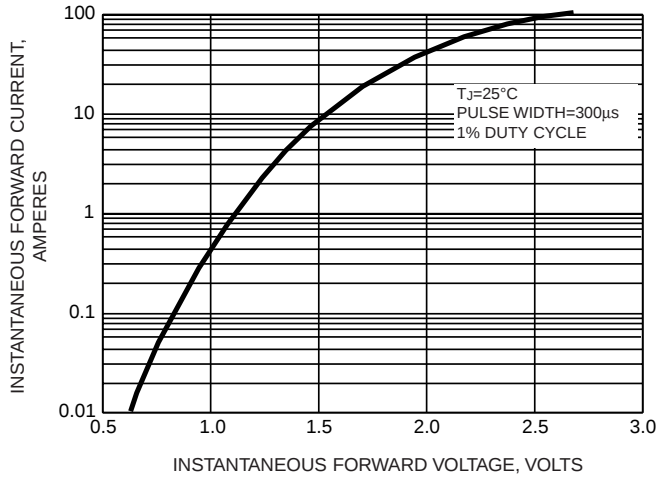


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

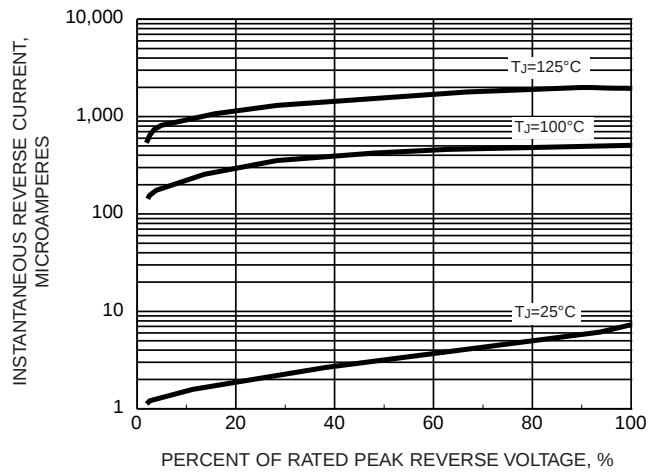


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

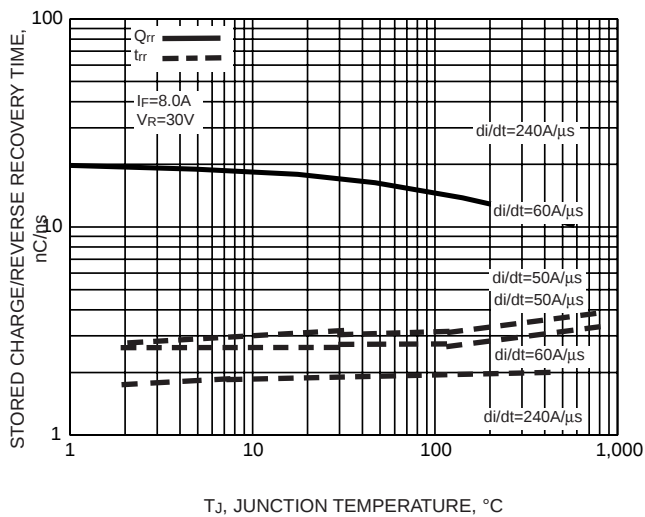


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

