

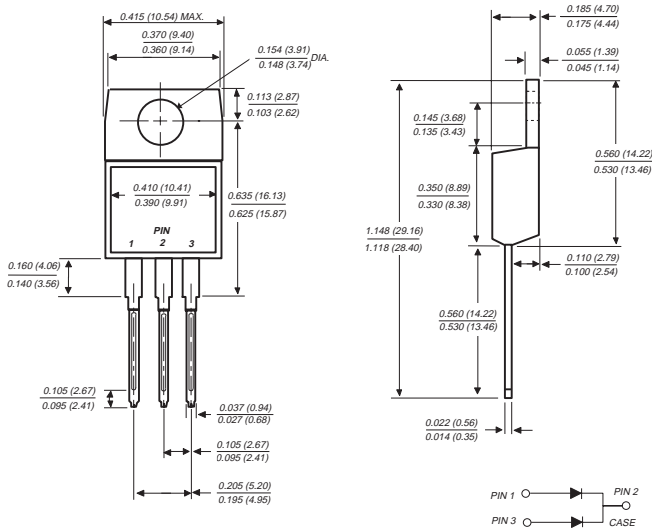
UG18ACT THRU UG18DCT

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts

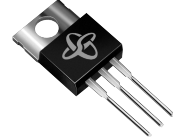
Forward Current - 18.0 Amperes

TO-220AB



FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- ◆ Ultrafast 25 nanosecond reverse recovery times
- ◆ Soft recovery characteristics
- ◆ Excellent high temperature switching
- ◆ Glass passivated junctions
- ◆ High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) case for 10 seconds



MECHANICAL DATA

Case: JEDEC TO-220AB molded plastic body over passivated chips

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lbs. max.

Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UG18ACT	UG18BCT	UG18CCT	UG18DCT	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	Volts
Maximum average forward rectified current at T _C =105°C	I _(AV)	18.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg at T _C =105°C	I _{FSM}	175.0				Amps
Maximum instantaneous forward voltage per leg at 9.0A 20A 5.0A, T _J =100°C	V _F	1.10 1.20 0.95				Volts
Maximum DC reverse current at rated DC blocking voltage per leg T _A =25°C T _A =100°C	I _R	10.0 300.0				μA
Maximum reverse recovery time per leg (NOTE 1)	t _{rr}	20.0				ns
Maximum reverse recovery time per leg T _J =25°C (NOTE 2) T _J =100°C	t _{rr}	30.0 50.0				ns
Maximum recovered stored charge per leg T _J =25°C (NOTE 2) T _J =100°C	Q _{rr}	20.0 45.0				nC
Typical junction capacitance per leg (NOTE 3)	C _J	30.0				pF
Typical thermal resistance per leg (NOTE 4)	R _{θJC}	4.0				°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150				°C

NOTES: (1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) t_{rr} and Q_{rr} measured at: I_F=9.0A, V_R=30V, di/dt=50A/μs, I_{rr}=10% I_{RM}

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(4) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES UG18ACT THRU UG18DCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

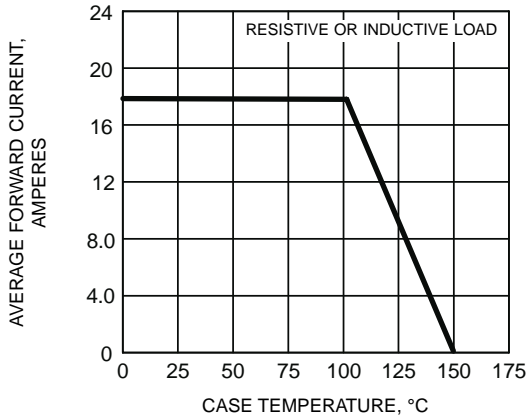


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

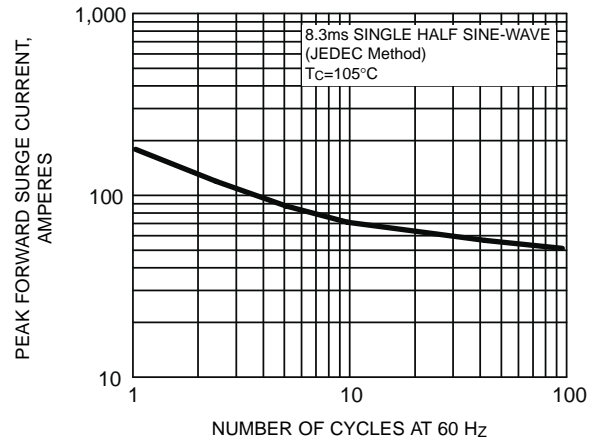


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

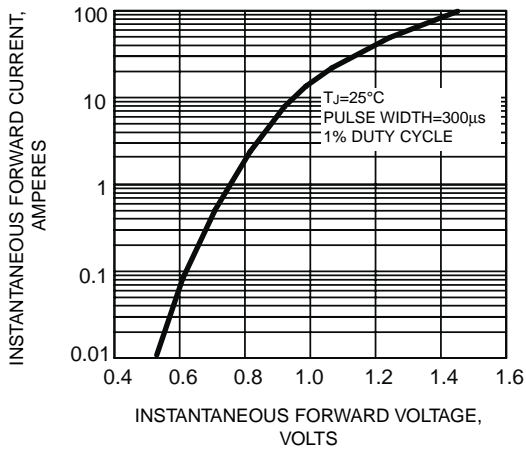


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

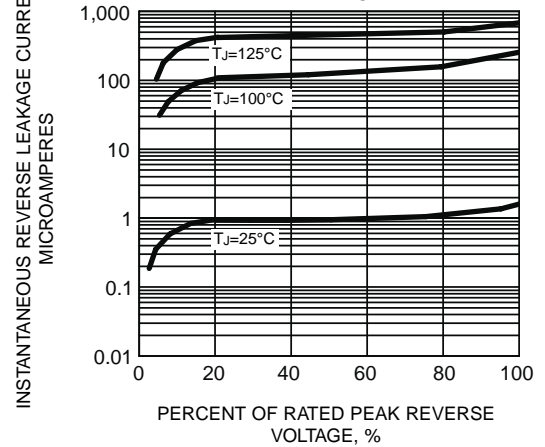


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

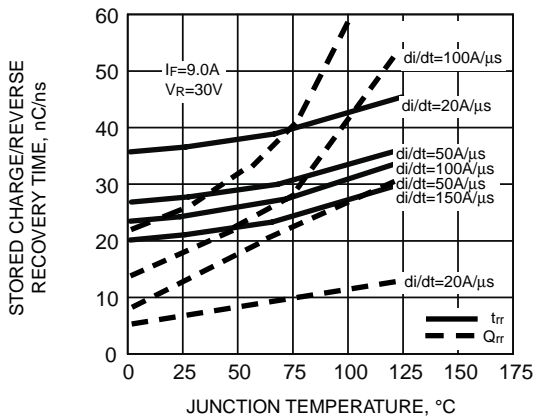


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

