

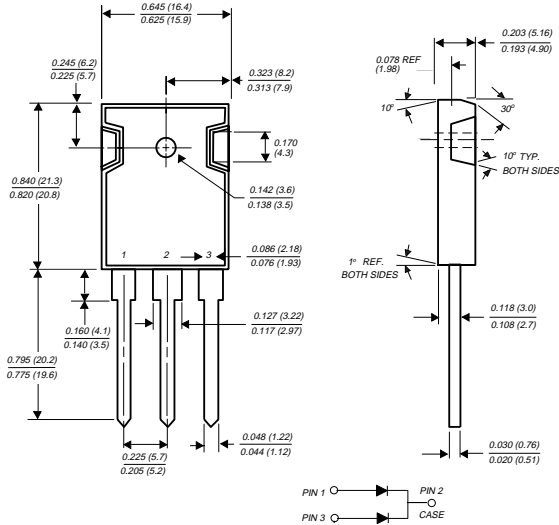
UG30APT THRU UG30DPT

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts

Forward Current - 30.0 Amperes

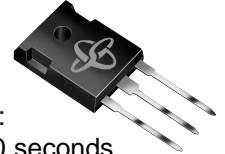
TO-247AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diodes
- ◆ Ultrafast, 15 nanosecond typical recovery time
- ◆ Low leakage current
- ◆ Glass passivated chip junctions
- ◆ Soft recovery characteristics
- ◆ Excellent high temperature switching
- ◆ High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds



MECHANICAL DATA

Case: JEDEC TO-247AD molded plastic body over passivated chips

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

Polarity: As marked

Mounting Position: Any

Weight: 2.2 ounces, 6.3 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UG30APT	UG30BPT	UG30CPT	UG30DPT	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 =120°C	I _(AV)	30.0				Amps
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T _C =120°C	I _{FSM}	300.0				Amps
Maximum instantaneous forward voltage per leg at 15A 30A 10A T _J =100°C	V _F	1.0 1.15 0.85				Volts
Maximum DC reverse current at rated DC blocking voltage per leg T _A =25°C T _A =100°C	I _R	5.0 800.0				μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	20.0				ns
Maximum reverse recovery time (NOTE 2)	T _J = 25°C T _J =100°C t _{rr}	35.0 50.0				ns
Maximum recovered stored charge (NOTE 2)	T _J =25°C T _J =100°C Q _{rr}	22.0 50.0				nC
Typical junction capacitance (NOTE 3)	C _J	70.0				pF
Typical thermal resistance (NOTE 4)	R _{θJC}	2.0				°C/W
Operating 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=15A V_R=30V, di/dt=50 A/μs, I_{RR}=10% I_{RM} for measurement of t_{rr}
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (4) Thermal resistance from junction to case per leg mounted on heatsink

RATINGS AND CHARACTERISTIC CURVES UG30APT THRU UG30DPT

FIG. 1 - FORWARD CURRENT DERATING CURVE

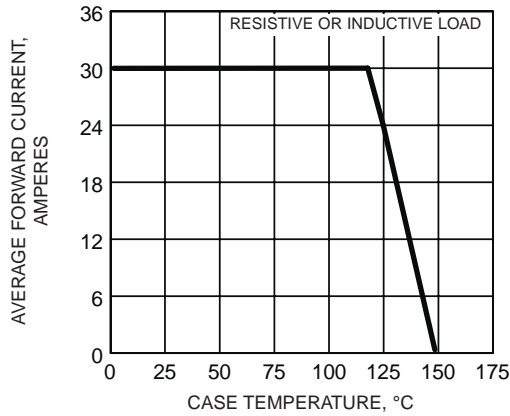


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

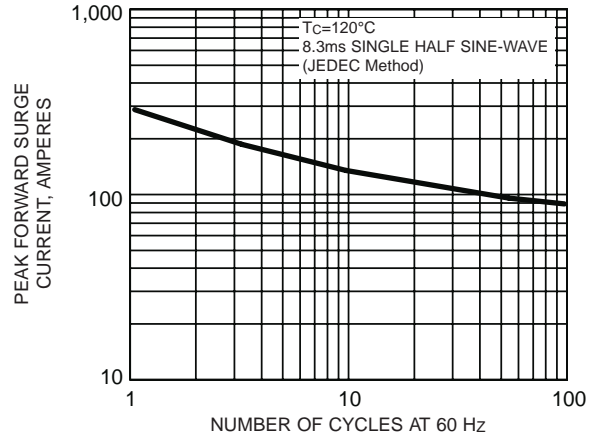


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

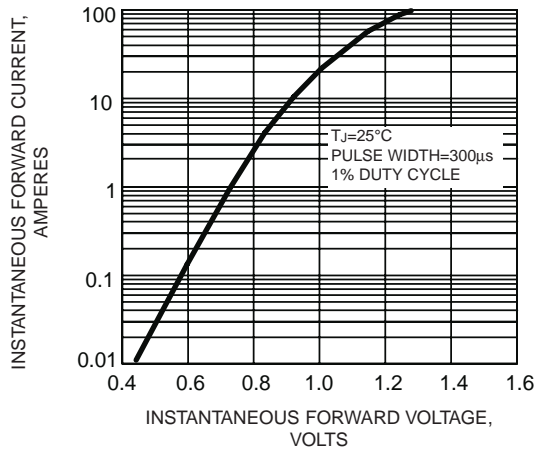


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

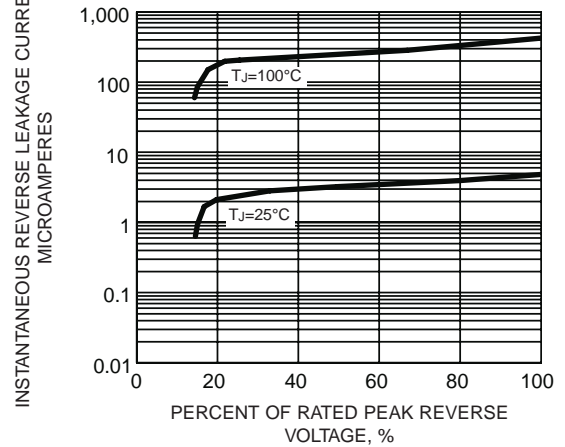


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

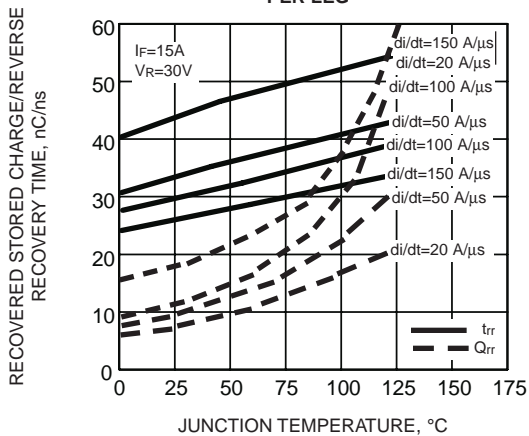


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

