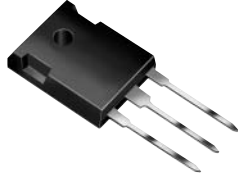


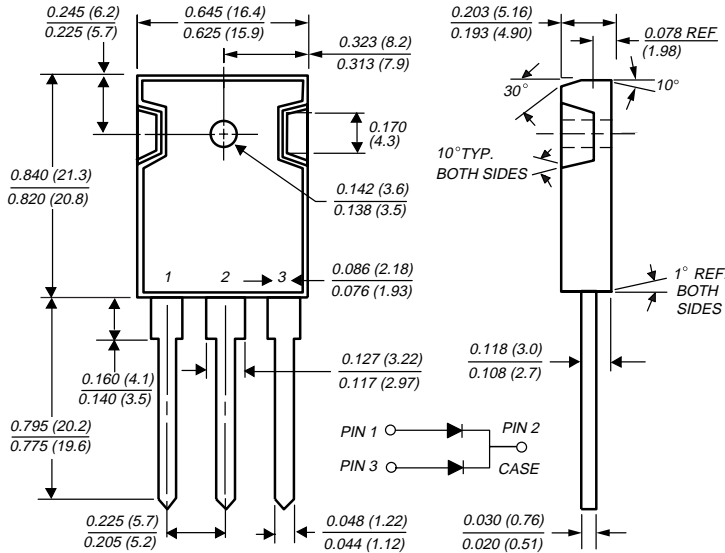


Dual Ultrafast Plastic Rectifier

Reverse Voltage 50 to 200V
Forward Current 30A



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
- Soft recovery characteristics
- Excellent high temperature switching

Mechanical Data

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

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

High temperature soldering guaranteed:
250°C, 0.16" (4.06mm) from case for 10 seconds

Polarity: As marked

Mounting Position: Any

Weight: 2.2 oz., 6.3 g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	UG30APT	UG30BPT	UG30CPT	UG30DPT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Maximum average forward rectified current at T _C =120°C	I _{F(AV)}	30				A
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				A
Typical thermal resistance ⁽¹⁾	R _{θJC}	2.0				°C/W
Operating and storage temperature range	T _J , T _{STG}	-65 to +150				°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage per leg at 15A 30A 10A T _J =100°C	V _F	1.0 1.15 0.85			V
Maximum DC reverse current at rated DC blocking voltage per leg T _A =25°C T _A =100°C	I _R	15 800			μA
Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	20			ns
Maximum reverse recovery time at I _F =15A, V _R =30V, di/dt=50 A/μs, I _{RR} =10% I _{RM} T _J = 25°C T _J =100°C	t _{rr}	35 50			ns
Maximum recovered stored charge I _F =15A, V _R =30V, di/dt=50 A/μs, I _{RR} =10% I _{RM} T _J =25°C T _J =100°C	Q _{rr}	22 50			nC
Typical junction capacitance at 4.0V, 1MHz	C _J	70			pF

Note: (1) Thermal resistance from junction to case per leg mounted on heatsink

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Maximum Forward Current Derating Curve

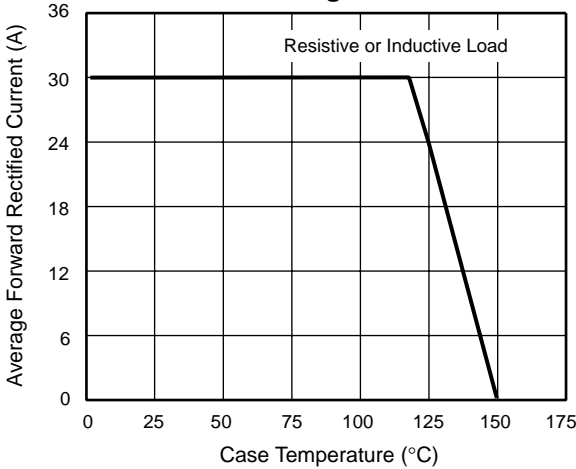


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

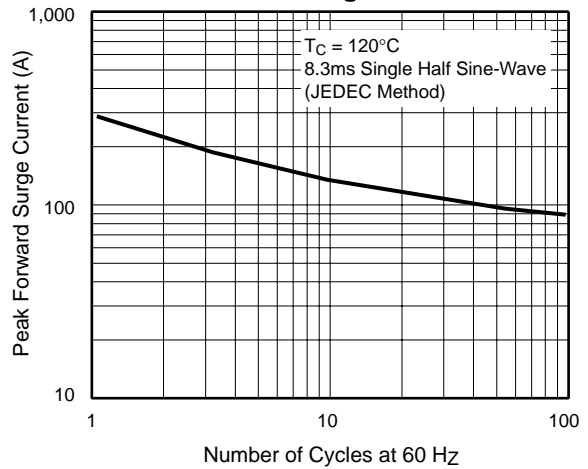


Fig. 3 – Typical Instantaneous Forward Characteristics

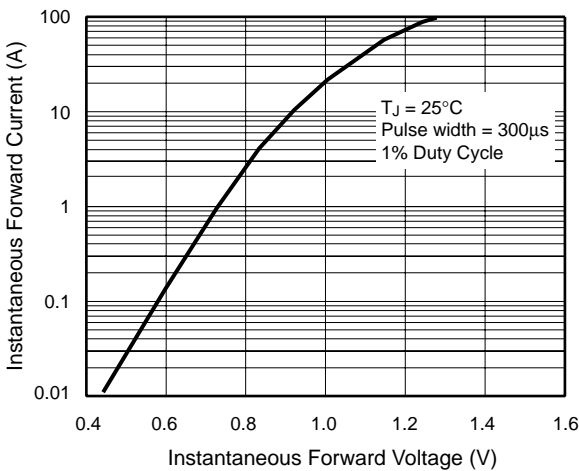


Fig. 4 – Typical Reverse Leakage Characteristics

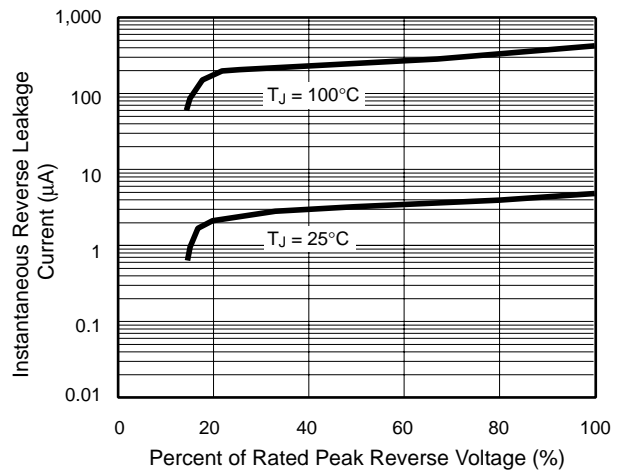


Fig. 5 – Reverse Switching Characteristics Per Leg

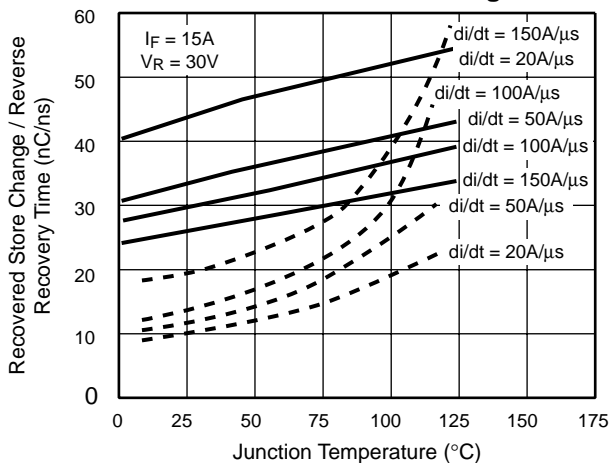


Fig. 6 – Typical Junction Capacitance

