

Ultrafast Rectifier - 30Amp 600Volt

Features

- Epoxy Meets UL 94V-0
- High Voltage Capability
- Low Leakage Current
- High Temperature Glass Passivated Junction
- Pb-Free Packages is Available

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.9 grams(Approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260 °C Max for 10 Seconds

Maximum ratings

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	VRRM	600	V
Average Rectified Forward Current Total Device(Rated VR), Tc = 150 °C	IF(AV)	15 30	A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20kHz), Tc = 150 °C	IFM	30	A
Nonrepetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60Hz)	IFSM	150	A
Operating Junction Temperature and Storage Temperature Range	TJ, Tstg	-65 to +175	°C

Electrical characteristics

Rating	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage (Note 1) IF = 15A, TC = 150 °C IF = 15A, TC = 25 °C	VF	1.15 1.3	V
Maximum Instantaneous Reverse Current (Note 1) Rated DC Voltage, TJ = 150 °C Rated DC Voltage, TJ = 25 °C	IR	1000 10	µA
Maximum Reverse Recovery Time IF = 1.0A, di/dt = 50A/µs	trr	50	ns
Maximum Thermal Resistance, Junction-to-Case	ReJC	1.5	°C/W

Note: 1.Pulse Test : Pulse Width = 300µs, Duty Cycle ≅ 2.0%

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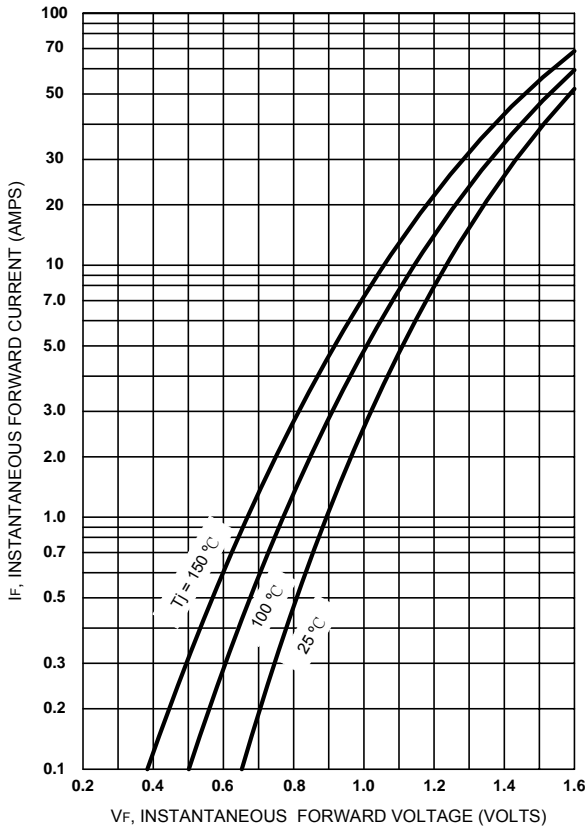


Figure 1. Typical Forward Voltage

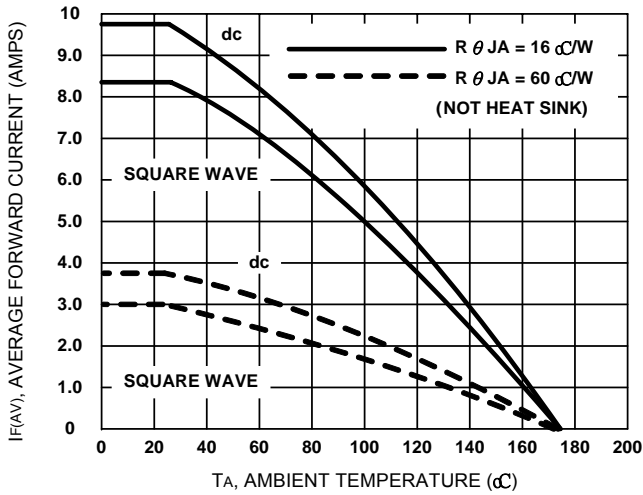


Figure 4. Current Derating, Ambient

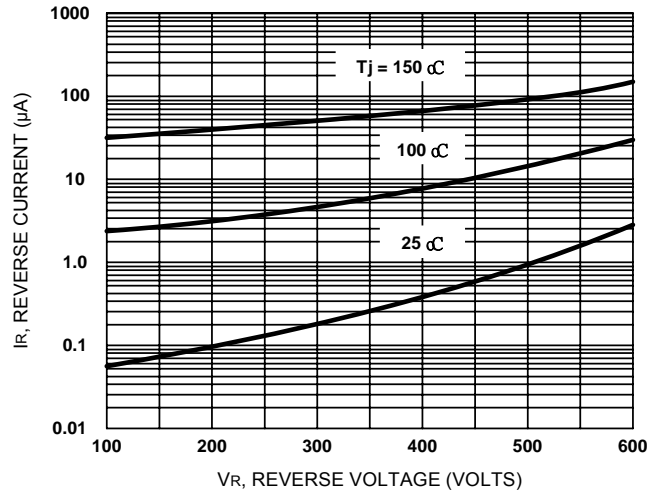


Figure 2. Typical Reverse Current

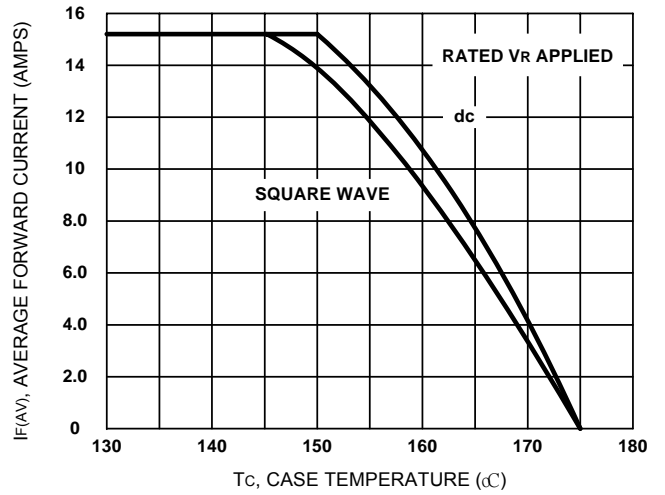


Figure 3. Current Derating, Case

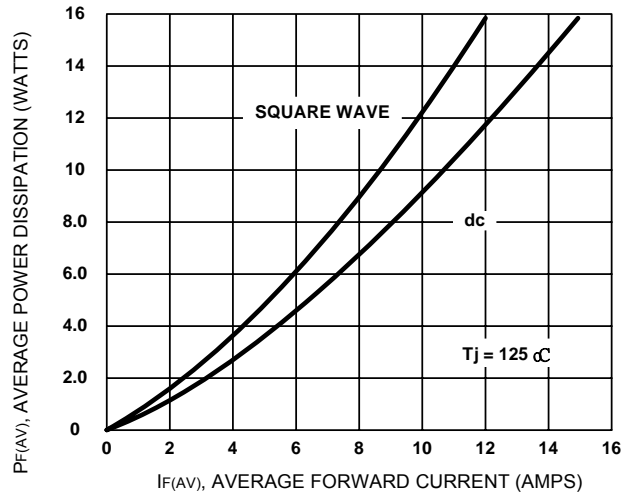


Figure 5. Power Dissipation

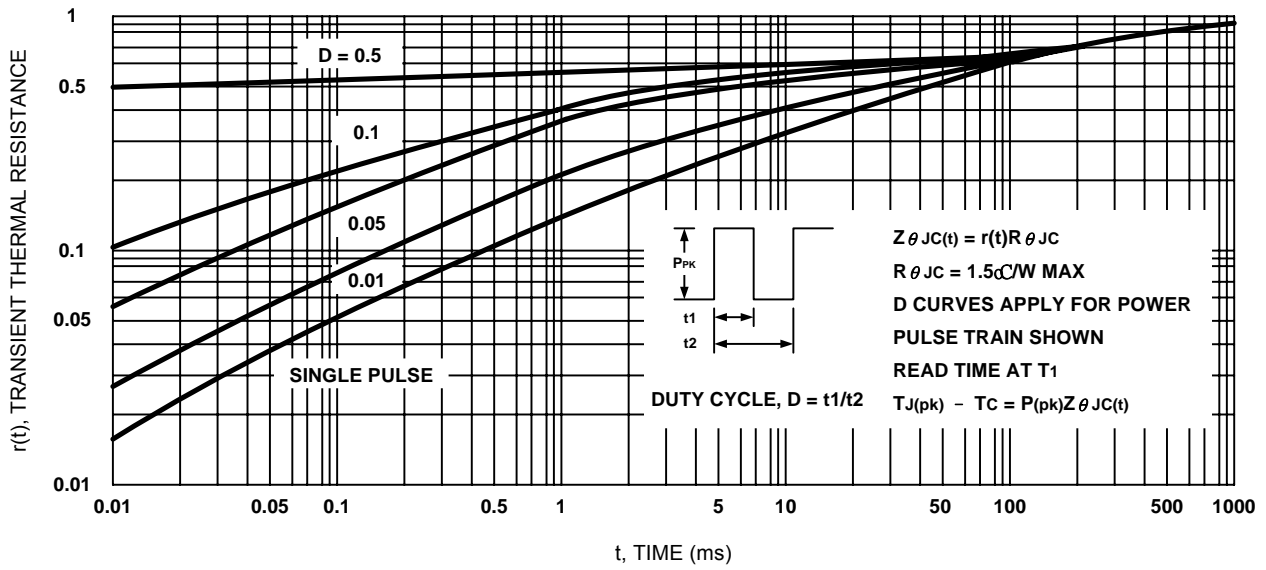


Figure 6. Thermal Response

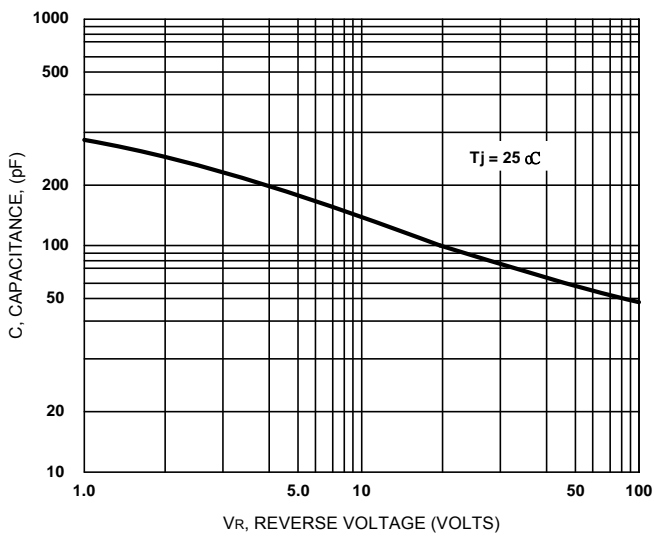
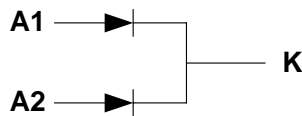
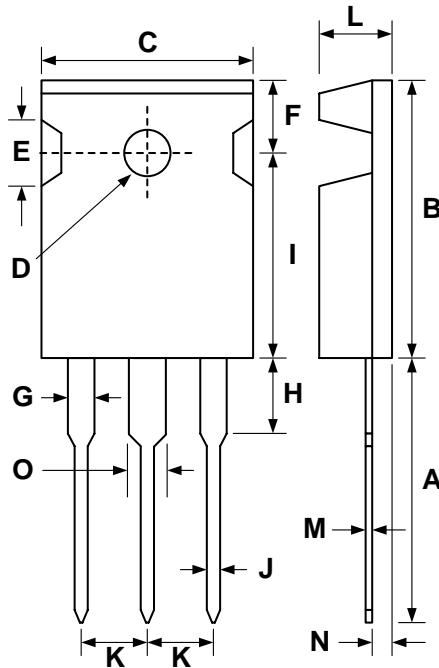


Figure 7. Typical Capacitance

TO-247AD PACKAGE



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.748	.826	19.00	21.00	
B	.787	.866	20.00	22.00	
C	.598	.638	15.20	16.20	
D	.132	.150	3.35	3.80	
E	.217	.242	5.50	6.15	
F	.209	.232	5.30	5.90	
G	.077	.087	1.95	2.20	
H	.161	.177	4.10	4.50	
I	.551	.610	14.00	15.50	
J	.045	.055	1.15	1.40	
K	.197	.219	5.00	5.55	
L	.189	.205	4.80	5.20	
M	.024	.031	0.60	0.80	
N	.086	.095	2.20	2.40	
O	.116	.128	2.95	3.25	