

Ultrafast Rectifier - 16Amp 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	V _{RRM}	600	V
Average Rectified Forward Current Total Device(Rated V _R), T _C = 150 °C	I _{F(AV)}	8 16	A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20kHz), T _C = 150 °C	I _{FM}	16	A
Nonrepetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60Hz)	I _{FSM}	100	A
Operating Junction Temperature and Storage Temperature Range	T _J , T _{stg}	-65 to +175	°C

Electrical characteristics

Rating	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage (Note 1) I _F = 8.0A, T _C = 150 °C I _F = 8.0A, T _C = 25 °C	V _F	1.2 1.5	V
Maximum Instantaneous Reverse Current (Note 1) Rated DC Voltage, T _J = 150 °C Rated DC Voltage, T _J = 25 °C	I _R	500 10	μA
Maximum Reverse Recovery Time I _F = 1.0A, di/dt = 50A/μs I _F = 0.5A, I _R = 1.0A, I _{REC} = 0.25A	t _{rr}	60 50	ns
Maximum Thermal Resistance, Junction-to-Case	R _{θJC}	2.0	°C/W

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

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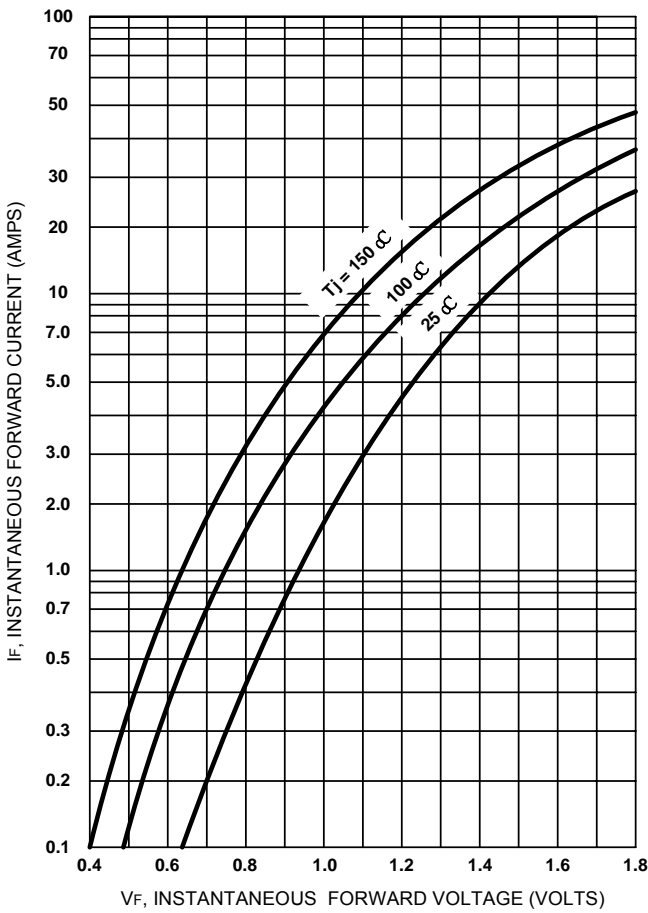


Figure 1. Typical Forward Voltage

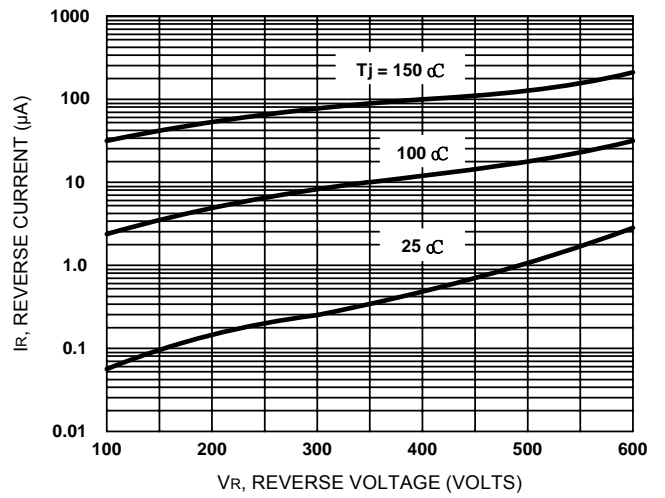


Figure 2. Typical Reverse Current

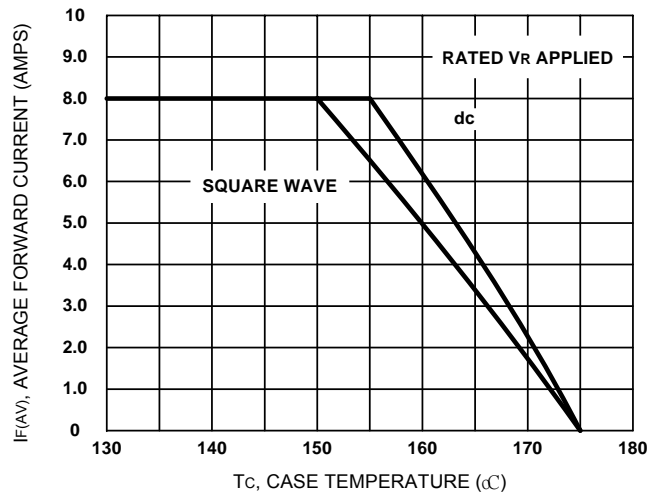


Figure 3. Current Derating, Case

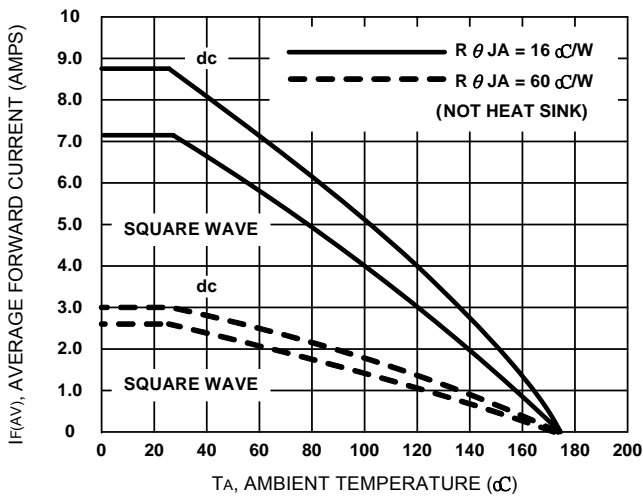


Figure 4. Current Derating, Ambient

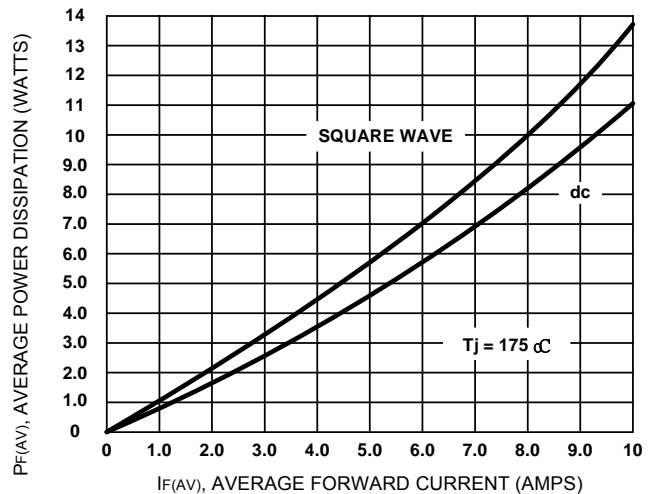


Figure 5. Power Dissipation

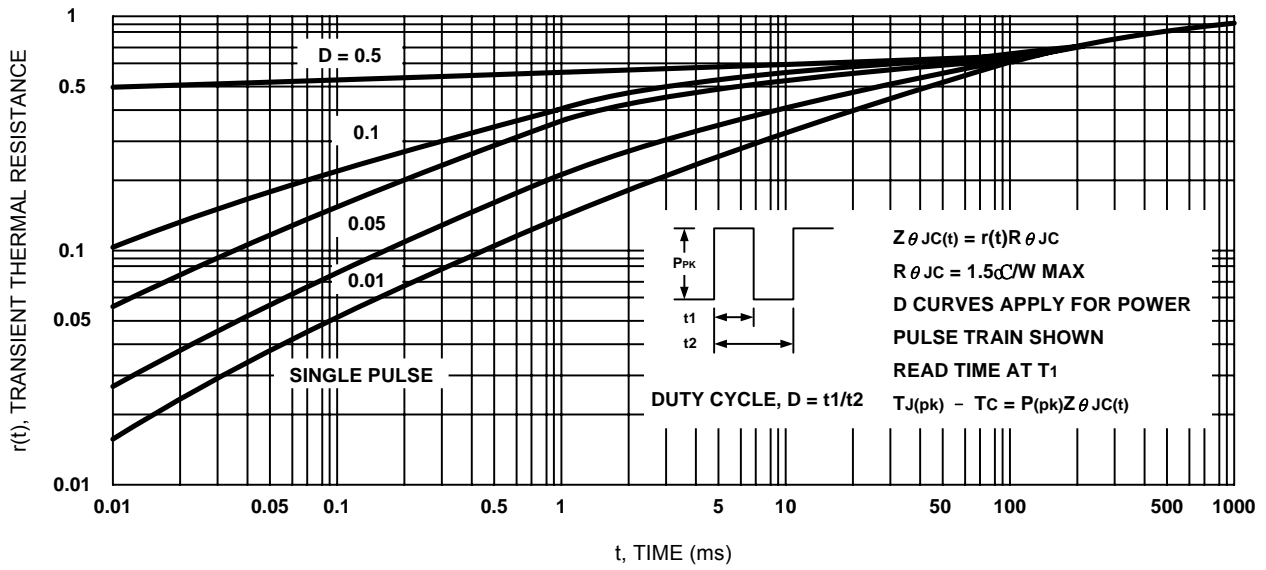


Figure 6. Thermal Response

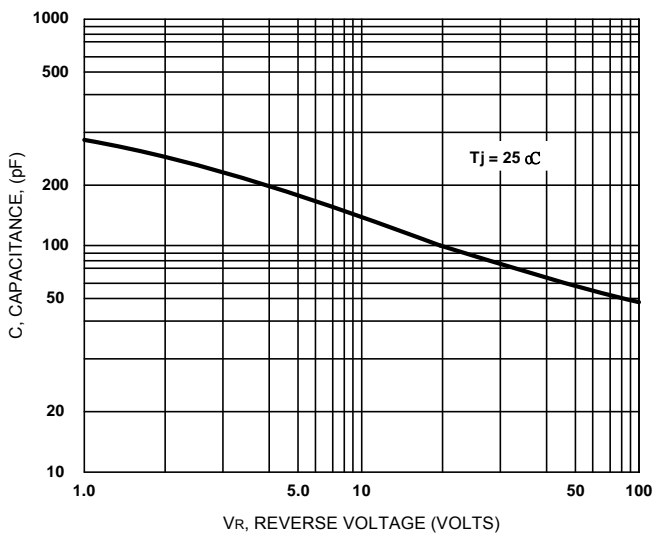
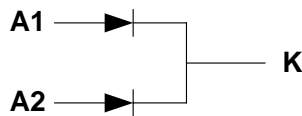
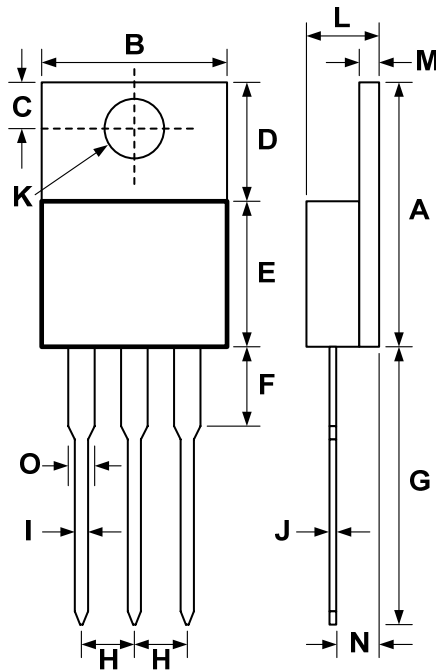


Figure 7. Typical Capacitance

TO-220AB PACKAGE



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.579	.602	14.70	15.30	
B	.392	.411	9.95	10.45	
C	.104	.116	2.65	2.95	
D	.248	.264	6.30	6.70	
E	.325	.344	8.25	8.75	
F	.126	.138	3.20	3.50	
G	.524	.547	13.30	13.90	
H	.096	.108	2.45	2.75	
I	.030	.035	0.75	0.90	
J	.013	.020	0.35	0.50	
K	.146	.157	3.70	4.00	
L	.171	.187	4.35	4.75	
M	.049	.057	1.25	1.45	
N	.102	.114	2.60	2.90	
O	.047	.055	1.20	1.40	