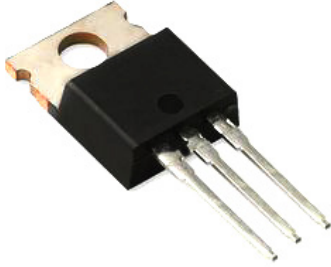


Ultra Fast Rectifier



Features:

- High surge capacity
- Low power loss, high efficiency
- Glass passivated chip junctions
- 150°C operation junction temperature
- Low stored charge majority carrier conduction
- Low forward voltage, high current capability
- High-switching speed 35 nanosecond recovery time
- Plastic material used carries underwriters laboratory

Maximum Ratings:

Characteristic	Symbol	MURF1620	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	
Average Rectifier Forward Current Total Device (Rated V_R), $T_c = 55^\circ\text{C}$	$I_{F(AV)}$	8 16	A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_c = 125^\circ\text{C}$)	I_{FM}	16	
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase 60HZ)	I_{FSM}	150	
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics:

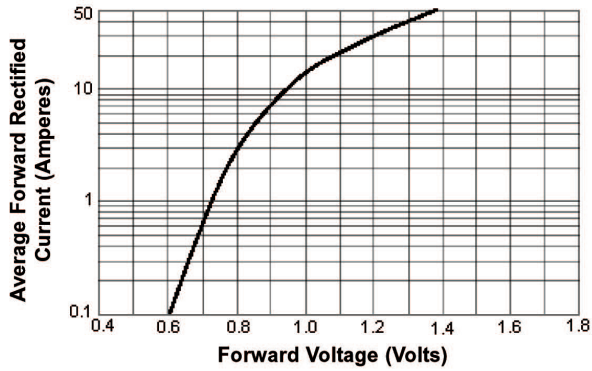
Characteristic	Symbol	MURF1620	Units
Maximum Instantaneous Forward Voltage ($I_F = 8$ Amperes $T_c = 25^\circ\text{C}$) ($I_F = 8$ Amperes $T_c = 125^\circ\text{C}$)	V_F	0.975 0.85	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_c = 25^\circ\text{C}$) (Rated DC Voltage, $T_c = 125^\circ\text{C}$)	I_R	10 200	μA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1$, $I_{RR} = 0.25\text{A}$)	T_{RR}	35	ns
Typical Junction Capacitance (Reverse Voltage of 4 Volts and $f = 1\text{MHz}$)	C_P	120	pF



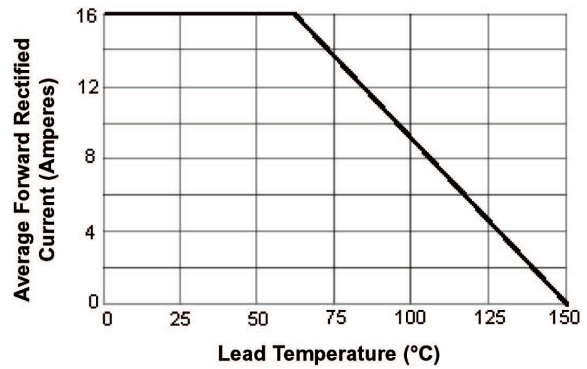
Ultra Fast Rectifier



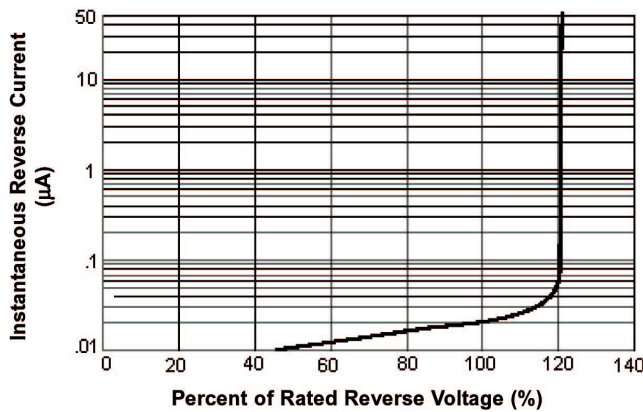
Typical Forward Characteristics



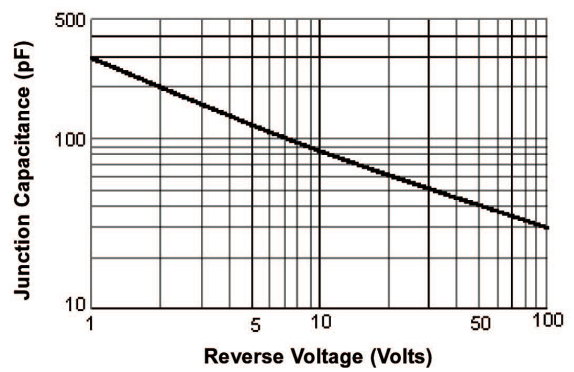
Forward Current Derating Curve



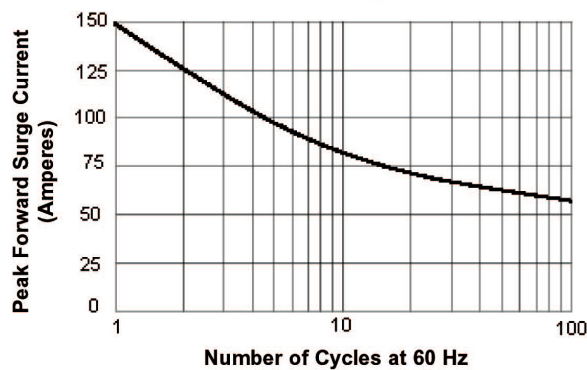
Typical Reverse Characteristics



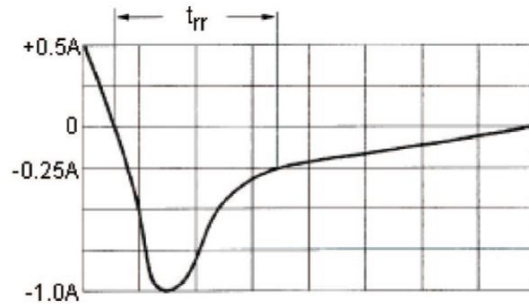
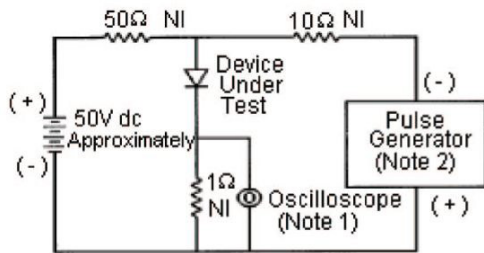
Typical Junction Capacitance



Peak Forward Surge Current



Ultra Fast Rectifier



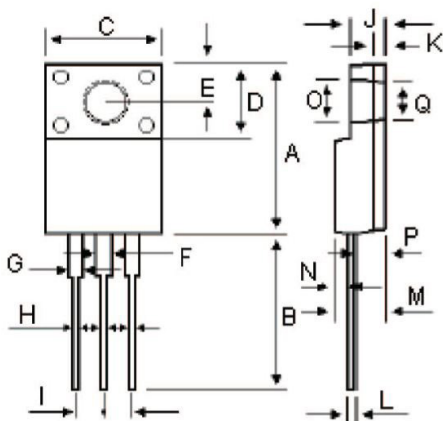
Set time base for 10/20 ns/cm

Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

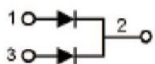
1. Rise Time = 7ns max. input Impedance = 1MΩ, 22pF
2. Rise Time = 10ns max. input Impedance = 50Ω

**16 Amperes
200 Volts
ITO-220AB**



DIM	MILLIMETERS	
	MIN	MAX
A	15.05	15.15
B	13.35	13.45
C	10.00	10.10
D	6.55	6.65
E	2.65	2.75
F	1.55	1.65
G	1.15	1.25
H	0.55	0.65
I	2.50	2.60
J	3.00	3.20
K	1.10	1.20
L	0.55	0.65
M	4.40	4.60
N	1.15	1.25
P	2.65	2.75
O	3.35	3.45
Q	3.15	3.25

Dimensions : Millimetres



Common Cathode

Part Number Table

Description	Part Number
Diode, Dual REC, 16A, 200V, TO-220AB	MURF1620CT

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