

Ultra Fast Rectifiers



Designed for use in switching power supplies inverters and as free wheeling diodes. These state-of-the-art devices have the following features:

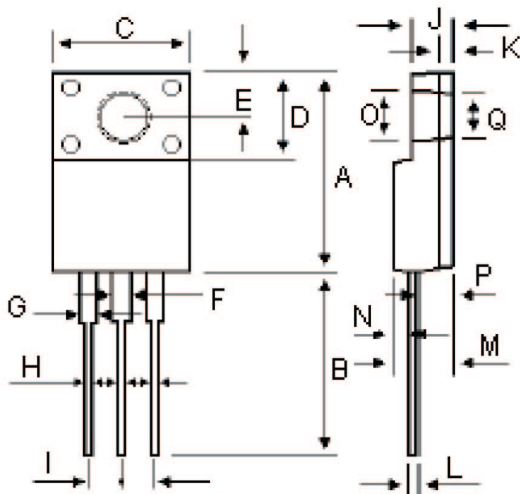
Switch mode Full Plastic Dual Schottky Barrier Power Rectifiers



Features:

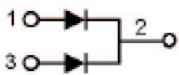
- High surge capacity.
- Low power loss, high efficiency.
- Glass passivated chip junctions.
- 150°C operating junction temperature.
- Low stored charge majority carrier conduction.
- Low forward voltage, high current capability.
- High-switching speed 35 nanosecond recovery time.
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-O.

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
Ultra Fast Rectifiers	MURF1620CT

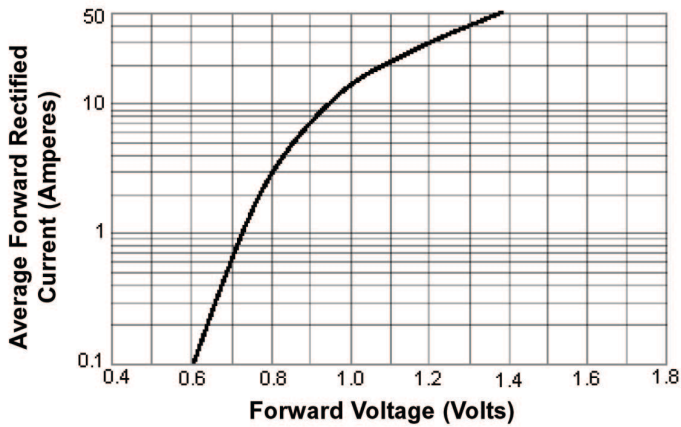
Maximum Ratings

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 , $T_C = 55^\circ\text{C}$)	$I_{F(AV)}$	8.0 16	
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_C = 125^\circ\text{C}$)	I_{FM}	16	A
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	$^\circ\text{C}$

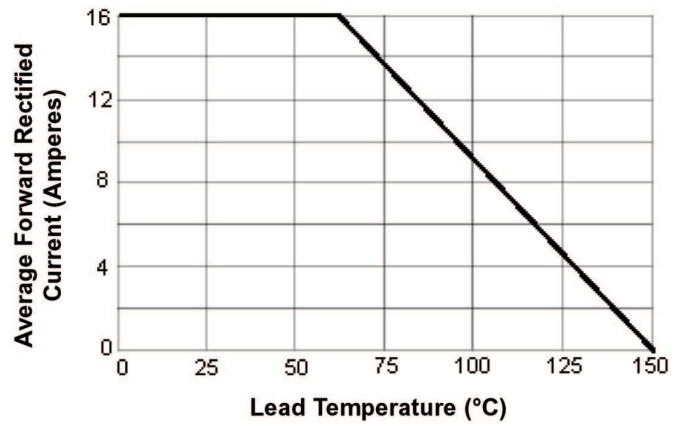
Electrical Characteristics

Characteristic	Symbol	MURF1620	Units
Maximum Instantaneous Forward Voltage ($I_F = 8.0$ Amperes $T_C = 25^\circ\text{C}$) ($I_F = 8.0$ Amperes $T_C = 125^\circ\text{C}$)	V_F	0.975 0.850	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	10.0 200	μA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1.0$ $I_{rr} = 0.25\text{A}$)	T_{rr}	35	ns
Typical Junction Capacitance (Reverse Voltage of 4 volts and $f = 1$ MHz)	C_P	120	pF

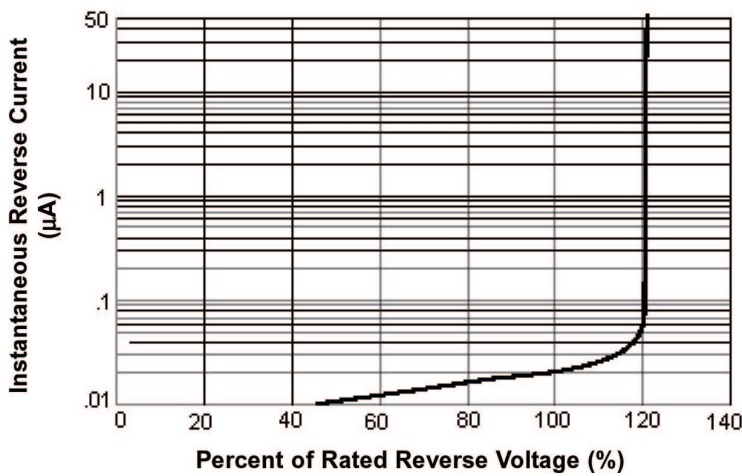
Typical Forward Characteristics



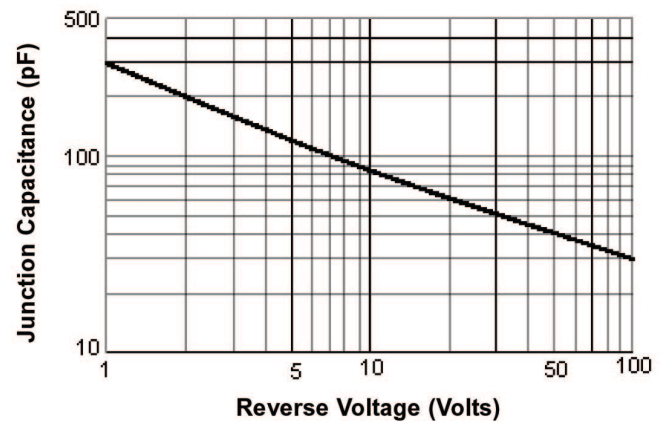
Forward Current Derating Curve



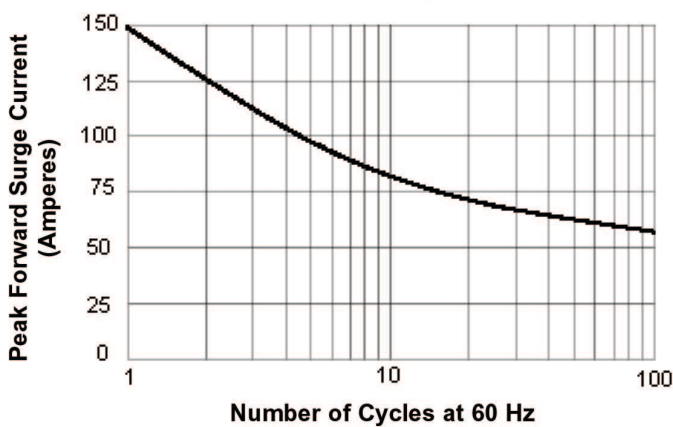
Typical Reverse Characteristics

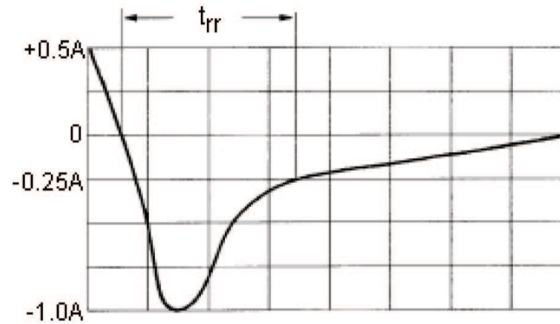
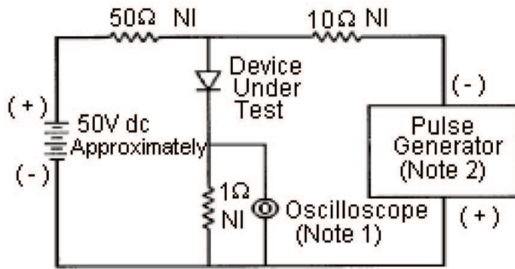


Typical Junction Capacitance



Peak Forward Surge Current





Set time base for 10/20 ns/cm

Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

1. Rise Time = 7 ns maximum input impedance = 1M Ω , 22pF.
2. Rise Time = 10 ns maximum input impedance = 50 Ω .

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