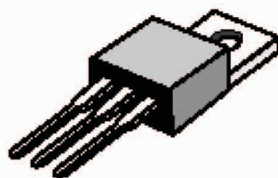


Ultra Fast Rectifiers



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

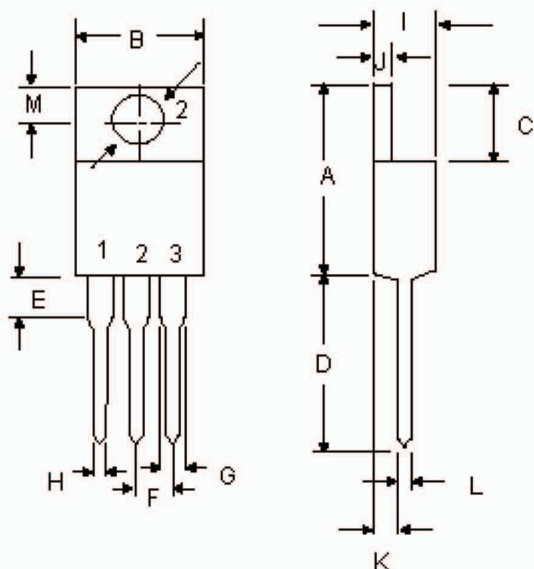
Switch mode Dual Ultrafast Power Rectifiers



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 50 nanosecond recovery time.
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-O.

16 Amperes
400-600 Volts
TO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	6.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.36
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90

Dimensions : Millimetres



Common Cathode

Part Number Table

Description	Part Number
Ultra Fast Rectifiers	MUR1640CT
Ultra Fast Rectifiers	MUR1660CT

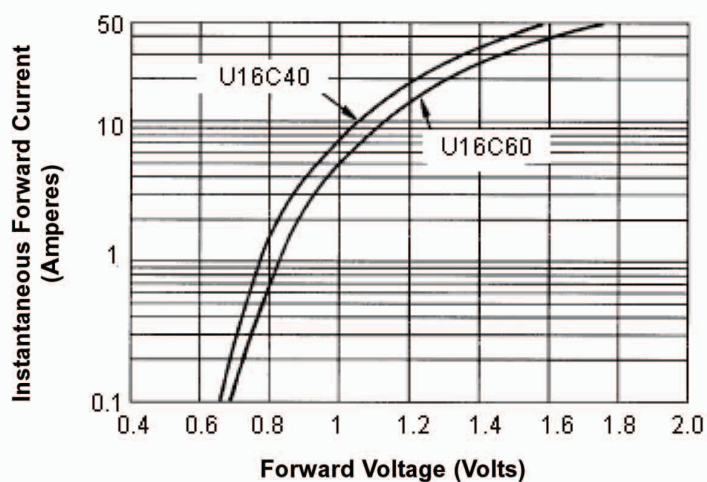
Maximum Ratings

Characteristic	Symbol	MUR1640CT	MUR1660CT	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	400	600	V
RMS Reverse Voltage	V_R (RMS)	280	420	
Average Rectifier Forward Current Per Leg $T_C = 125^{\circ}C$ Per Total Device	I_F (AV)	8.0 16		A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_C = 125^{\circ}C$)	I_{FM}	16		
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	125		
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150		$^{\circ}C$

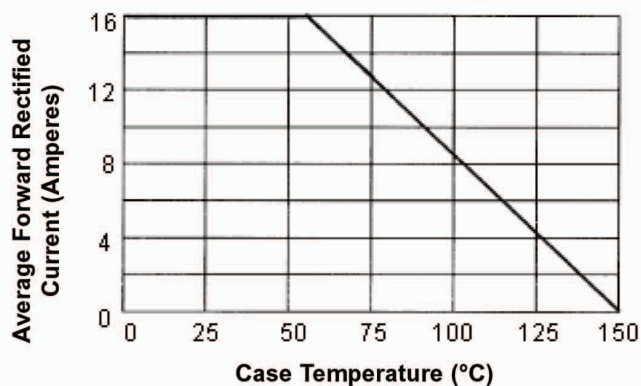
Electrical Characteristics

Characteristic	Symbol	MUR1640CT	MUR1660CT	Units
Maximum Instantaneous Forward Voltage ($I_F = 8.0$ Amperes $T_C = 25^\circ C$) ($I_F = 8.0$ Amperes $T_C = 100^\circ C$)	V_F	1.30 1.12	1.50 1.34	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$) (Rated DC Voltage, $T_C = 125^\circ C$)	I_R	10 500		μA
Reverse Recovery Time ($I_F = 0.5A$, $I_R = 1.0$ $I_{rr} = 0.25A$)	T_{rr}	50		ns
Typical Junction Capacitance (Reverse Voltage of 4 volts and $f = 1$ MHz)	C_P	70		pF

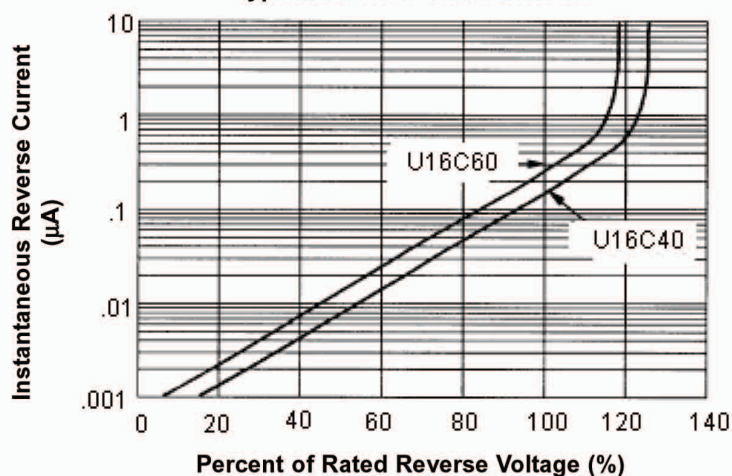
Typical Forward Characteristics



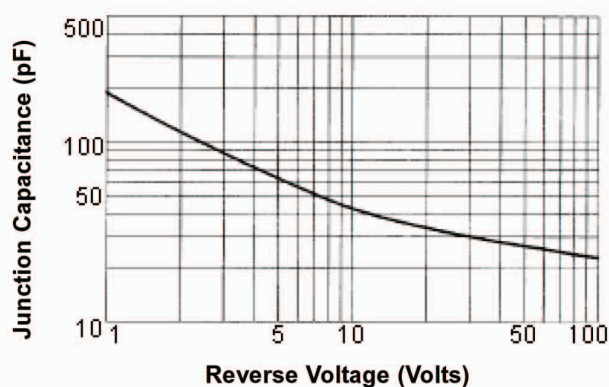
Forward Current Derating Curve



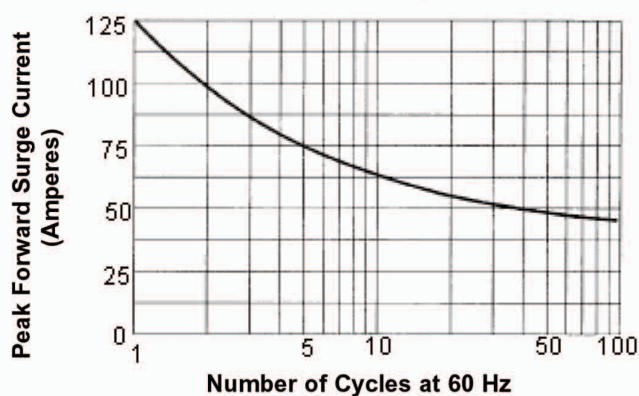
Typical Reverse Characteristics

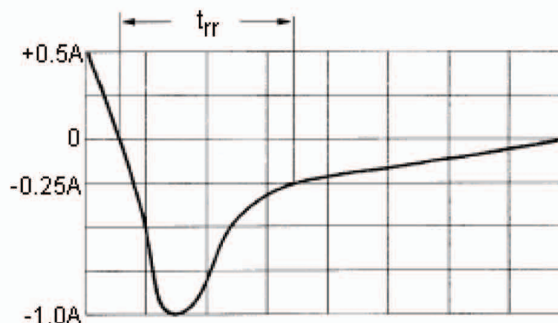
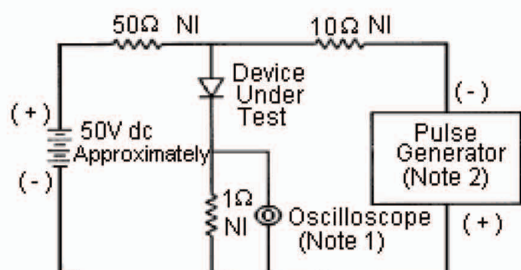


Typical Junction Capacitance



Peak Forward Surge Current





Set time base for 10/20 ns/div

Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

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

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