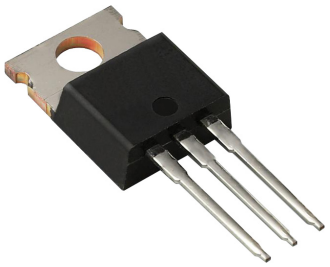
Ultra Fast Rectifiers

multicomp PRO

RoHS Compliant



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-0

Specifications

Reverse Voltage : 400 and 600 Volts
Forward Current : 16 Amperes

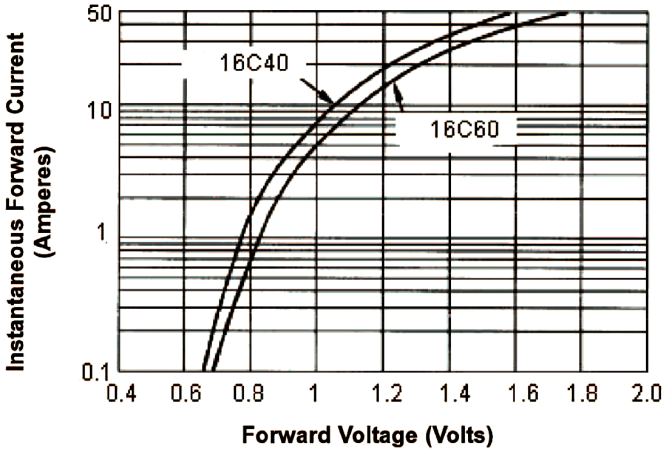
Maximum Ratings

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 Total Device (Rated V_R), T_C = 125°C	$I_{F(AV)}$	8 16		A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	16		
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-ware, single phase, 60Hz)	I_{FSM}	125		
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150		°C

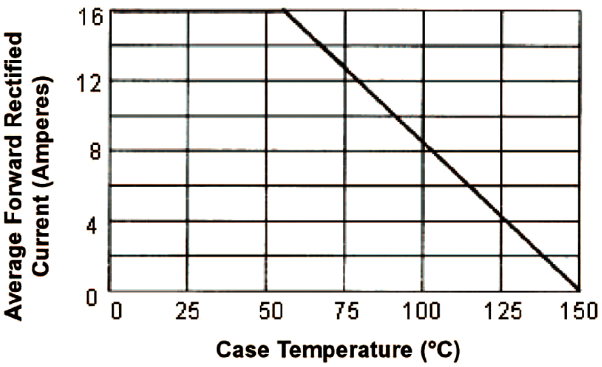
Electrical Characteristics

Characteristic	Symbol	MUR1640CT	MUR1660CT	Units
Maximum Instantaneous Forward Voltage (I_F = 8 Amperes T_C = 25°C) (I_F = 8 Amperes T_C = 125°C)	V_F	1.3 1.12	1.5 1.34	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25°C) (Rated DC Voltage, T_C = 125°C)	I_R	10 500		µA
Reverse Recovery Time (If = 0.5A, Ir = 1 Irr = 0.25A)	T_{RR}	50		ns
Typical Junction Capacitance (Reverse Voltage of 4 volts and f = 1MHz)	C_P	70		pF

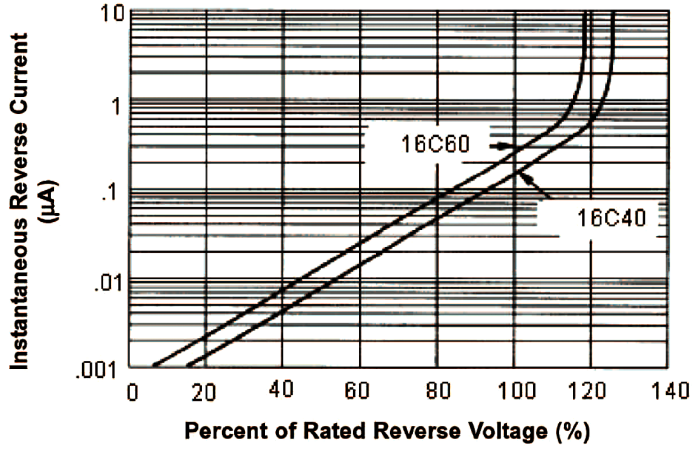
Typical Forward Characteristics



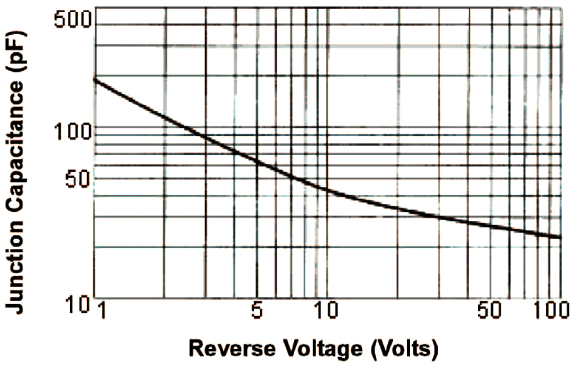
Forward Current Derating Curve



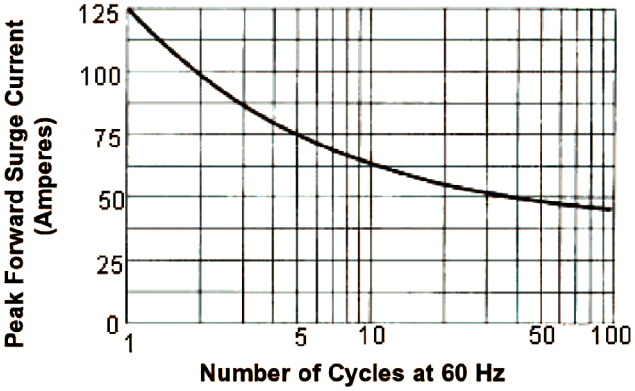
Typical Reverse Characteristics

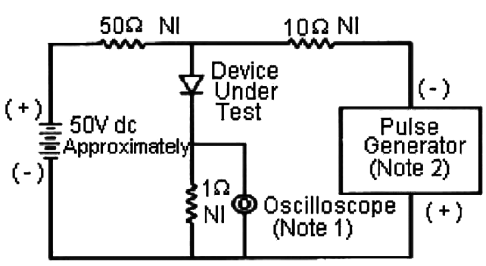


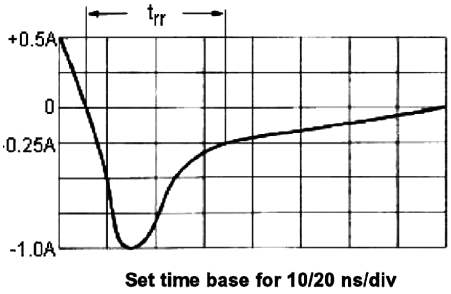
Typical Junction Capacitance



Peak Forward Surge Current







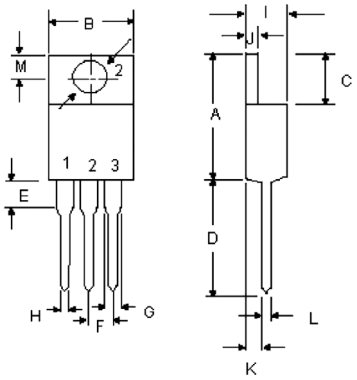
Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

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

Diagram

TO-220AB

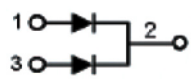


Dim.	Min.	Max.
A	14.68	15.32
B	9.78	10.42
c	6.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36

Dim.	Min.	Max.
H	0.72	0.96
I	4.22	4.98
J	1.14	1.36
K	2.2	2.97
L	0.33	0.55
M	2.48	2.98
O	3.7	3.9

Dimensions : Millimetres

Common Cathode



Part Number Table

Description	Part Number
Ultra Fast Rectifiers, 400V	MUR1640CT
Ultra Fast Rectifiers, 600V	MUR1660CT