

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 : 30 Amperes

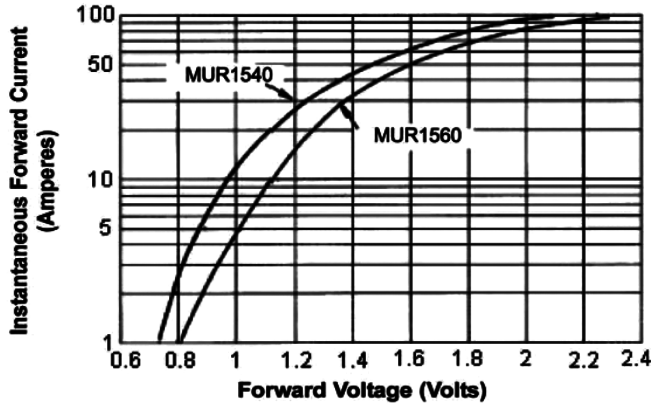
Maximum Ratings

Characteristic	Symbol	MUR1540	MUR1560	Units
Peak Repetitive Reverse Voltage	V_{RRM}			V
Working Peak Reverse Voltage	V_{RWM}	400	600	
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	280	420	
Average Rectifier Forward Current	$I_{F(AV)}$	15		A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	20		
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	225		
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150		°C

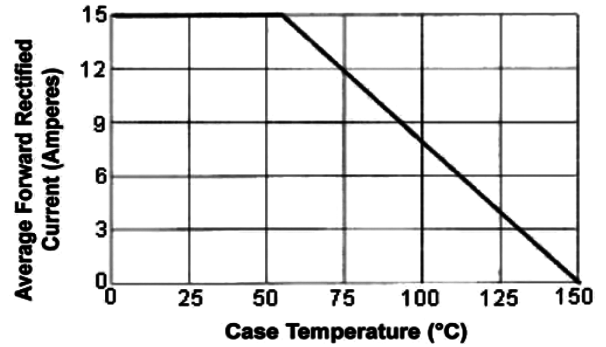
Electrical Characteristics

Characteristic	Symbol	MUR1540	MUR1560	Units
Maximum Instantaneous Forward Voltage ($I_F = 15$ Amperes $T_C = 25^\circ\text{C}$) ($I_F = 15$ Amperes $T_C = 125^\circ\text{C}$)	V_F	1.3 1.16	1.5 1.37	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	10 700		mA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$)	T_{RR}	50		ns
Typical Junction Capacitance (Reverse Voltage of 4 Volts and $f = 1\text{MHz}$)	C_P	150	120	pF

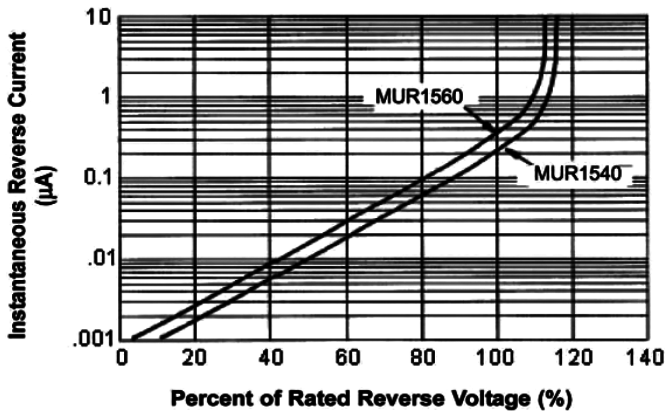
Typical Forward Characteristics



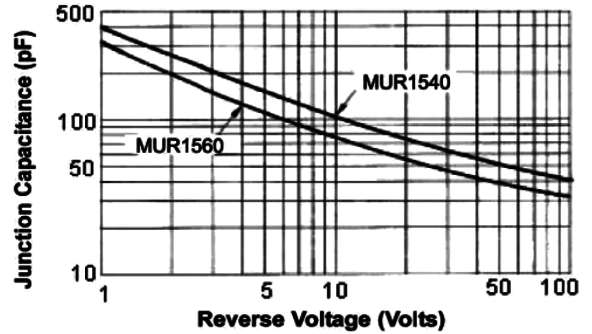
Forward Current Derating Curve



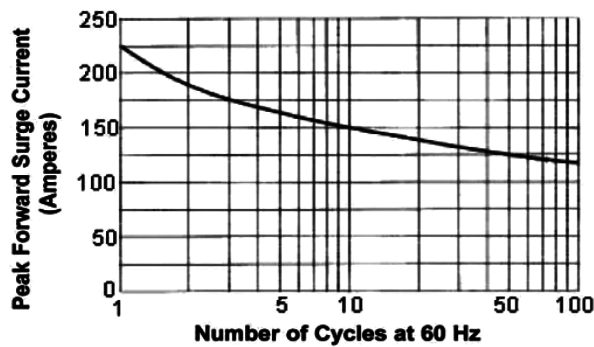
Typical Reverse Characteristics

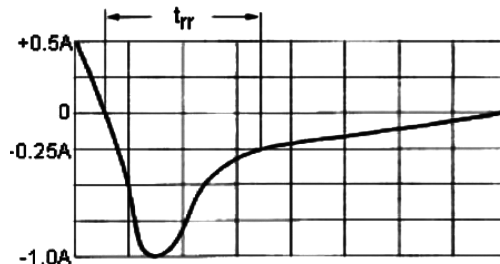
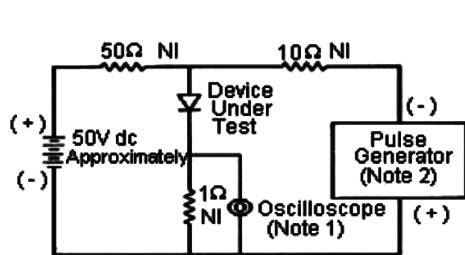


Typical Junction Capacitance



Peak Forward Surge Current





Set time base for 10/20 ns/div

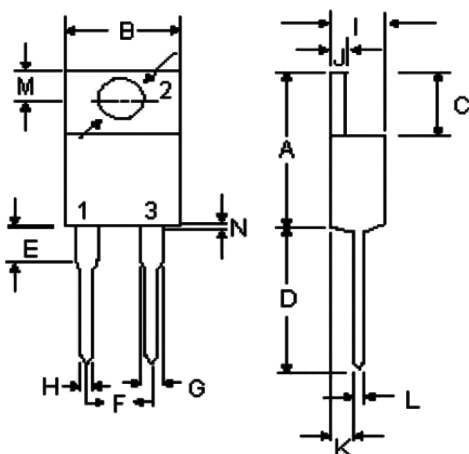
Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

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

Diagram

TO-220A



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	4.83	5.33
G	1.12	1.36
H	0.72	0.96

Dim.	Min.	Max.
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
N	-	1
O	3.7	3.9

Dimensions : Millimetres

Common Cathode



Part Number Table

Description	Part Number
Ultra Fast Rectifiers, 400V	MUR1540
Ultra Fast Rectifiers, 600V	MUR1560

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