

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
- For Part Number MUR1540, marking is "U15A40"

## Specifications

Reverse Voltage : 400 and 600 Volts

Forward Current : 30 Amperes

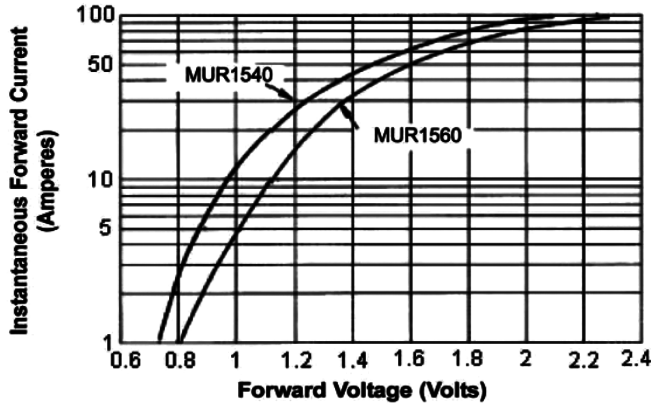
## Maximum Ratings

Characteristic	Symbol	MUR1540	MUR1560	Units
Peak Repetitive Reverse Voltage	VRRM			V
Working Peak Reverse Voltage	VRWM	400	600	
DC Blocking Voltage	VR			
RMS Reverse Voltage	VR(RMS)	280	420	
Average Rectifier Forward Current	IF(AV)	15		A
Peak Repetitive Forward Current (Rate VR, Square Wave, 20kHz)	IFM	20		
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	IFSM	225		
Operating and Storage Junction Temperature Range	TJ, TSTG	-65 to +150		°C

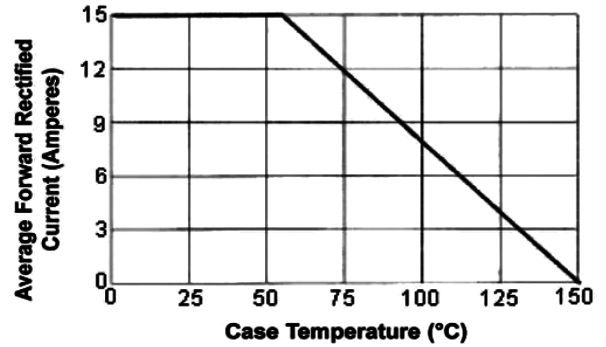
## Electrical Characteristics

Characteristic	Symbol	MUR1540	MUR1560	Units
Maximum Instantaneous Forward Voltage (IF = 15 Amperes Tc = 25°C) (IF = 15 Amperes Tc = 125°C)	VF	1.3 1.16	1.5 1.37	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, Tc = 25°C) (Rated DC Voltage, Tc = 125°C)	IR	10 700		mA
Reverse Recovery Time (IF = 0.5A, IR = 1A, IRR = 0.25A)	TRR	50		ns
Typical Junction Capacitance (Reverse Voltage of 4 Volts and f = 1MHz)	CP	150	120	pF

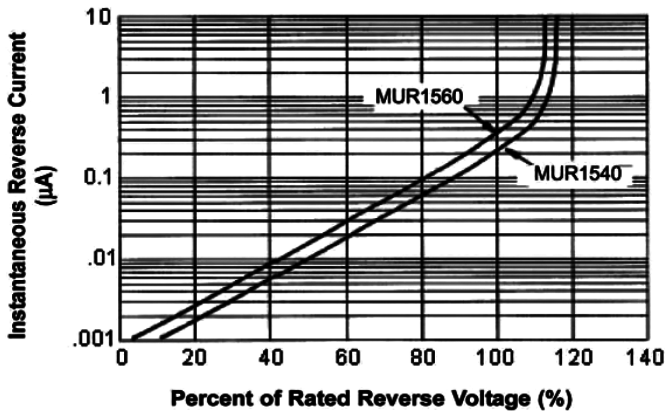
**Typical Forward Characteristics**



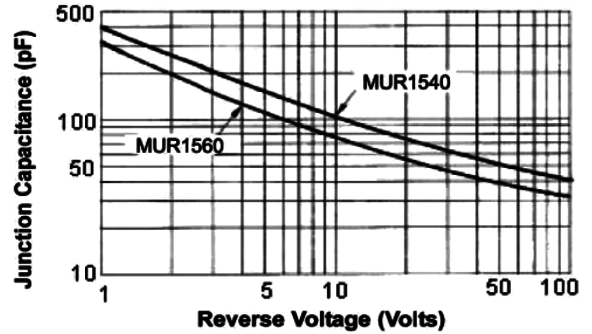
**Forward Current Derating Curve**



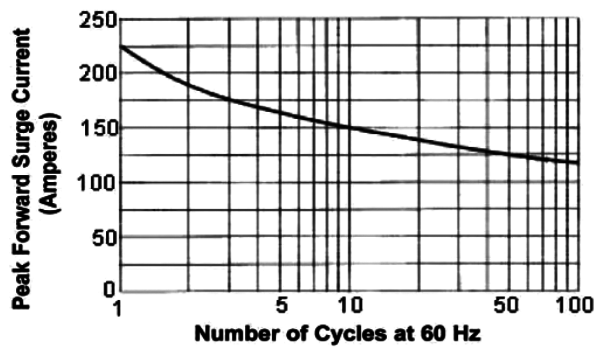
**Typical Reverse Characteristics**

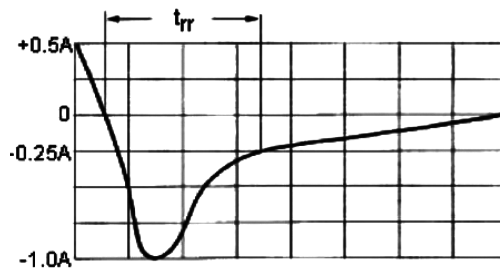
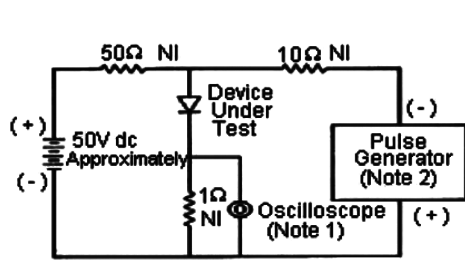


**Typical Junction Capacitance**



**Peak Forward Surge Current**





Set time base for 10/20 ns/div

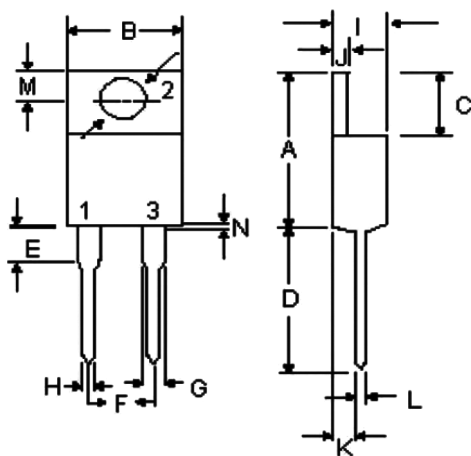
### Reverse Recovery Time Characteristic and Test Circuit Diagram

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

### Common Cathode



Dimensions : Millimetres

### Part Number Table

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

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