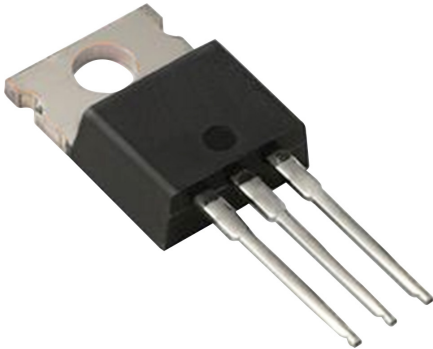


# Diode Ultra Fast



RoHS  
Compliant



## Features:

- Ultrafast 35 and 60 Nanosecond Recovery times
- 175°C operating Junction Temperature
- Popular TO-220 Package
- High temperature glass passivated junction
- High voltage capability to 600 volts
- Low leakage specified at 150°C case temperature
- Current derating at both case and ambient temperatures

## Specifications:

### Mechanical Data:

Case	: Epoxy, moulded
Terminal	: Pure tin plated, lead free
Lead Temperature for Soldering Purposes	: 260°C Max. for 10 seconds
Finish	: All external surfaces corrosion resistant and terminal leads are readily solderable
Shipped	: 50 units per plastic tube
Weight	: 1.9g (approximately)

## Maximum Ratings:

Parameter	Symbol	MUR1660CT	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	600	V
Average Rectified Forward Current Total Device, (Rated $V_R$ ), $T_C = 150^\circ\text{C}$ Total Device	$I_{F(AV)}$	8 16	Amps
Peak Rectified Forward Current Rated $V_R$ , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$ Per Diode Leg	$I_{FM}$	16	
Nonrepetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60Hz)	$I_{FSM}$	100	
Operating Junction Temperature and Storage Temperature	$T_J, T_{STG}$	-65 to + 175	$^\circ\text{C}$

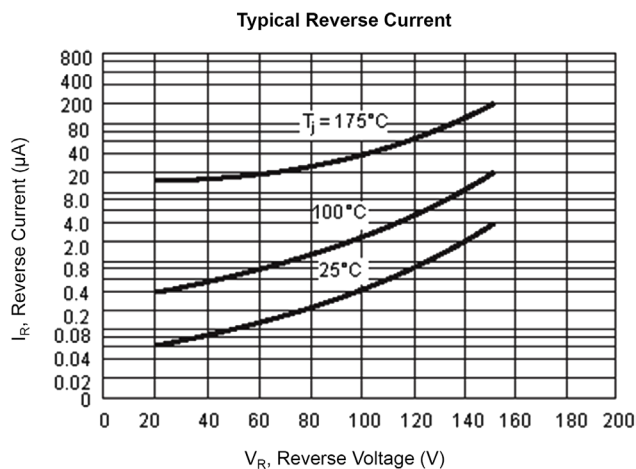
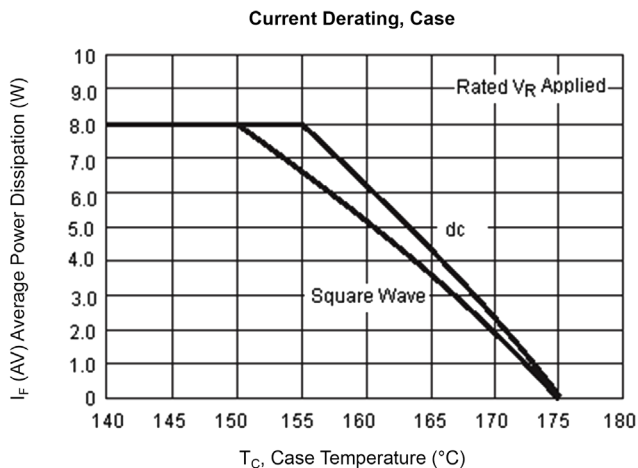
# Diode Ultra Fast



Parameter	Symbol	MUR1660CT	Units
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	2	$^{\circ}C/W$
Maximum Instantaneous Forward Voltage (Note 1) ( $I_F = 8.0$ Amps, $T_C = 25^{\circ}C$ ) ( $I_F = 8.0$ Amps, $T_C = 150^{\circ}C$ )	$V_F$	1.5 1.2	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage at $T_A = 25^{\circ}C$ at $T_A = 125^{\circ}C$	$I_R$	10 500	$\mu A$ $\mu A$
Maximum Reverse Recovery Time ( $I_F = 1.0$ Amp, $di/dt = 50$ Amps/ $\mu s$ ) ( $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, $I_{REC} = 0.25$ Amp)	$t_{rr}$	60 50	nS

**Note 1.** Pulse Test: Pulse Width = 300 $\mu s$ , Duty Cycle  $\leq 2.0\%$ .

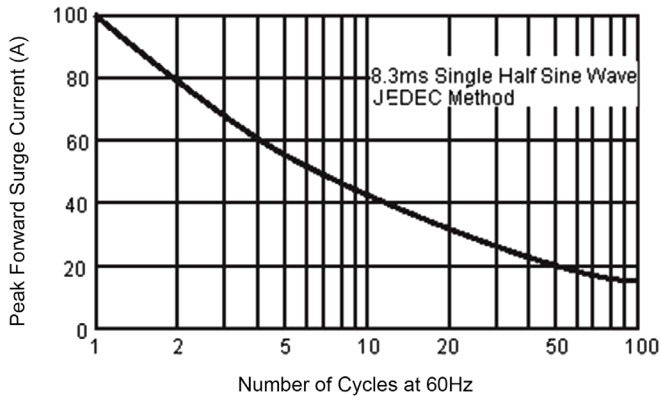
## Ratings and Characteristic Curves (MUR1660CT)



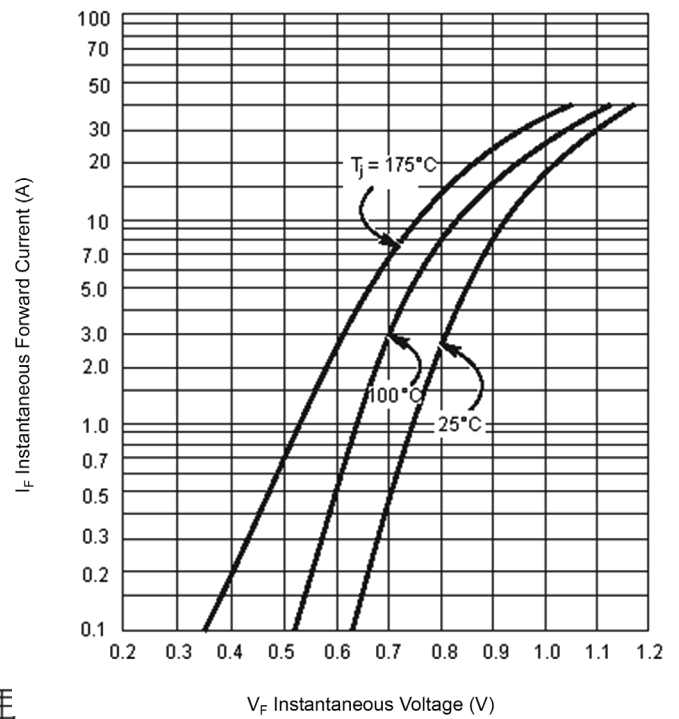
# Diode Ultra Fast



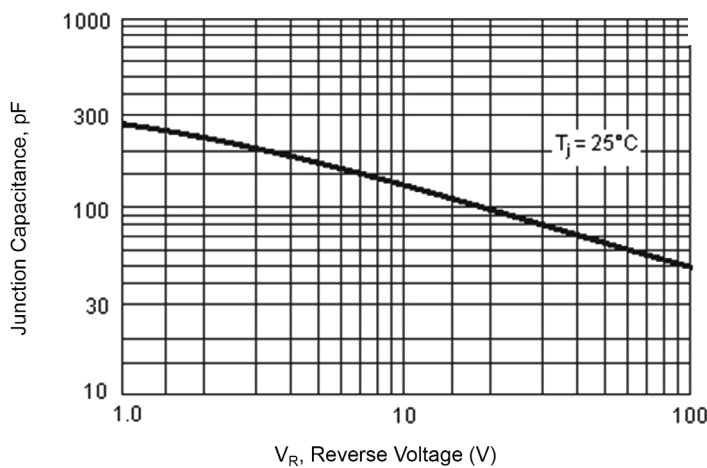
Maximum Non-Repetitive Peak Forward Surge Current



Typical Forward Voltage



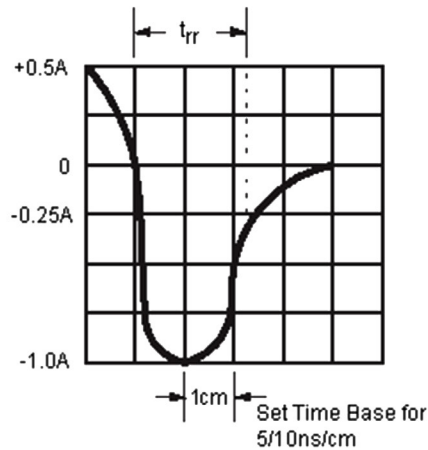
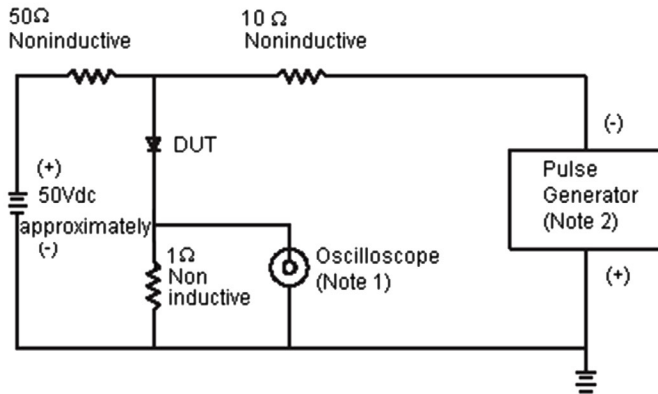
Typical Junction Capacitance



# Diode Ultra Fast



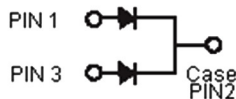
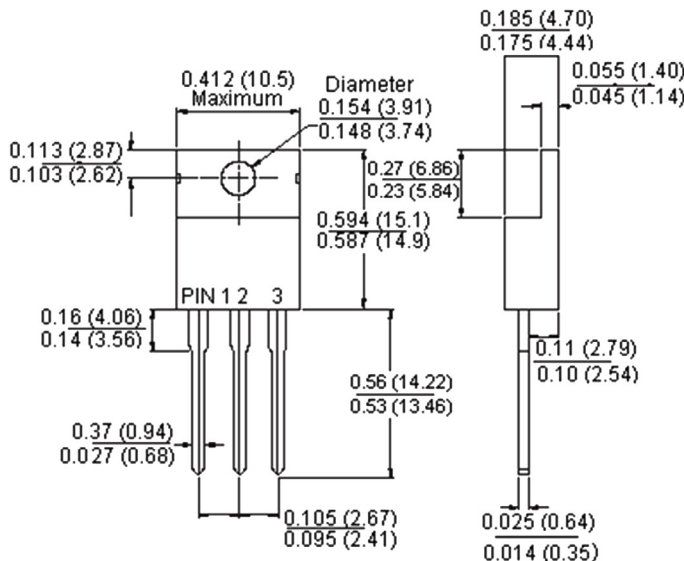
Reverse Recovery Time Characteristic and Test Circuit Diagram



**Note: 1.** Rise Time = 7ns Maximum. Input Impedance = 1MΩ 22pf

**Note: 2.** Rise Time = 10ns Maximum Source Impedance = 50Ω

## TO-220AB



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Diode, Ultra-Fast, 16A, 600V	MUR1660CT

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