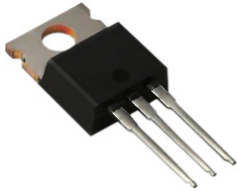


# Ultra Fast Rectifier



## Features:

- Fred chip construction
- Soft recovery characteristics
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability
- Plastic material has UL flammability classification 94V-0

## Mechanical Data:

Case	: TO-220AB, molded plastic
Terminals	: Pure tin plated, lead solderable per MIL-STD-750, method 2026
Polarity	: As marked on the body
Weight	: 1.9 grams (approx)
Mounting Position	: Any
Reverse Voltage	: 400 to 600 Volts
Forward Current	: 16 Amperes

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	MUR1640CT	MUR1660CT	Unit
Max. Recurrent Peak Reverse Voltage	$V_{RRM}$	400	600	V
Max. RMS Voltage	$V_{RMS}$	400	420	
Max. DC Blocking Voltage	$V_{DC}$	280	600	
Max. Average Forward Rectified Current	$I_{F(AV)}$	16		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	$I_{FSM}$	150		
Max. Forward Voltage at 8A per leg	$V_F$	1.3	1.5	V
Max. DC Reverse Current $T_J = 25^\circ\text{C}$ Rated DC Blocking Voltage $T_J = 125^\circ\text{C}$	$I_R$	10 250		mA
Typical Thermal Resistance	$R_{\theta JC}$	2		$^\circ\text{C}/\text{W}$
Max. Reverse Recovery Time ( $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$ )	$T_{RR}$	50		
Operating Temperature Range	$T_J$	-55 to +150		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$			

## Notes:

1. Mounted on 14mm × 14mm pad areas, 1oz. FR4 P.C.B.
2. Free air, mounted on recommended copper pad area.
3. Pulse test: 300µs pulse width, 1% duty cycle.
4. Pulse test: Pulse width ≤ 40ms
5. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG. 1 - FORWARD CURRENT DERATING CURVE

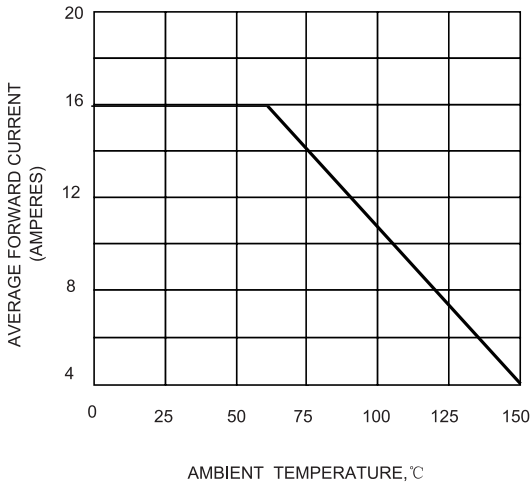


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

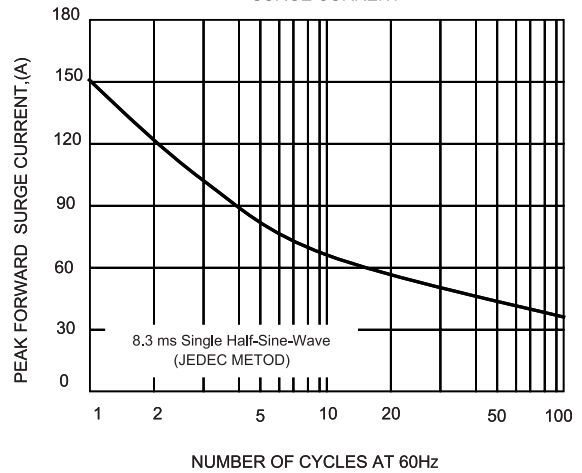


FIG.3-TYPICAL FORWARD CHARACTERISTICS

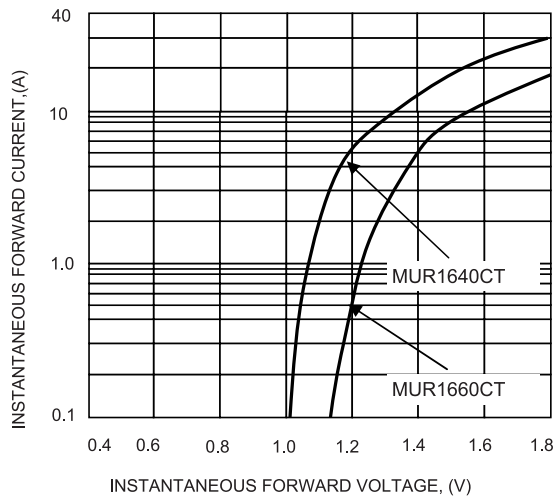
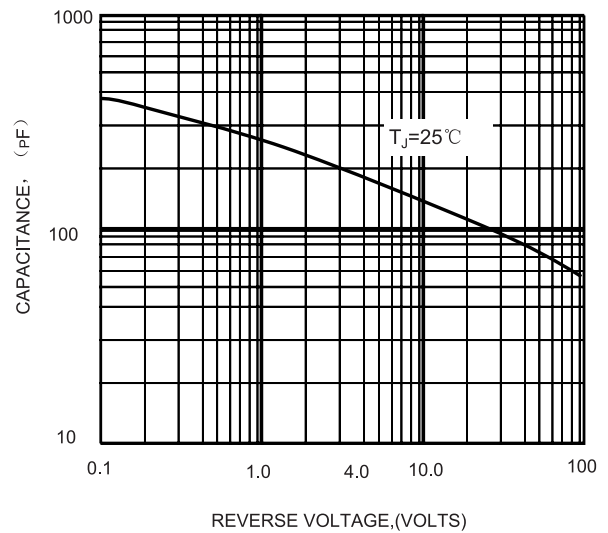


FIG.4-TYPICAL JUNCTION CAPACITANCE

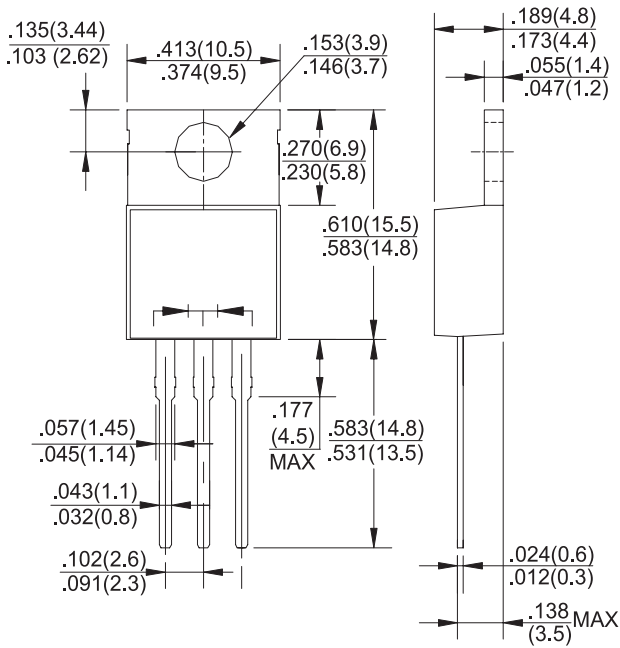


# Ultra Fast Rectifier



## Dimensions:

### TO-220AB



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Ultra Fast Rectifiers	MUR1640CT
	MUR1660CT

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