

# MUR1020CT/MUR1020FCT

Ultrafast Recovery Rectifiers  
 Reverse Voltage 200V Forward Current 10A

## Features

- FRED (Planar) wafer construction
- Ultrafast recovery time
- Low forward voltage drop, low power loss
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



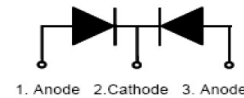
**MUR1020CT**  
 Package: TO-220-AB



**MUR1020FCT**  
 Package: ITO-220-AB

## Mechanical Data

- Case: Epoxy, molded
- Weight: 1.9grams (approximately)
- Finish: all external surfaces corrosion resistant and terminal leads readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10 sec
- 50 units per plastic tube



**Schematic Diagram**

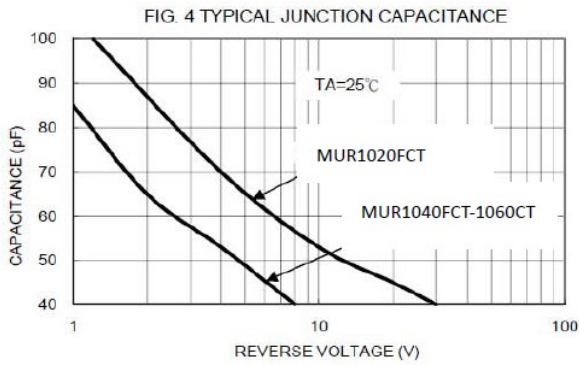
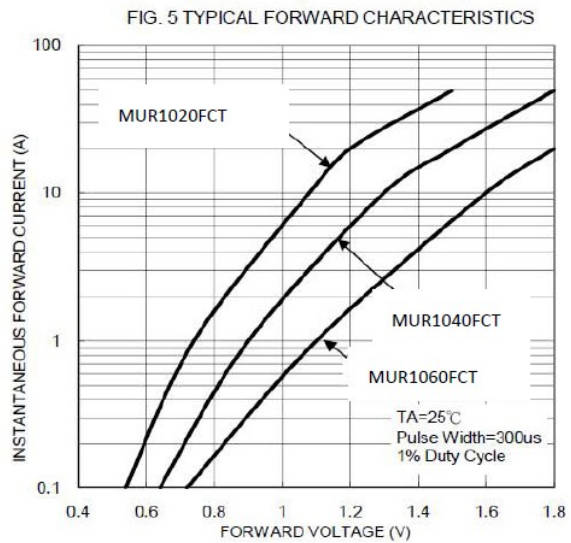
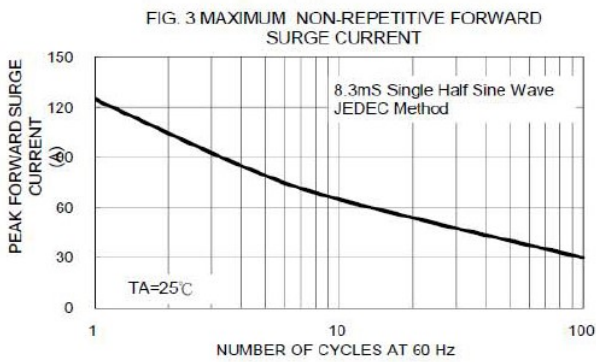
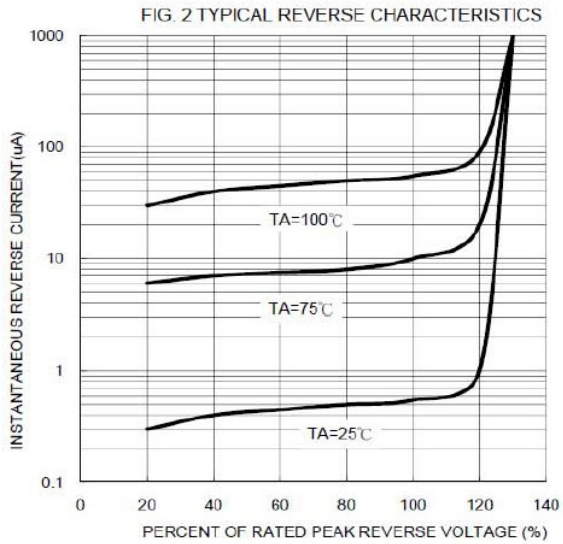
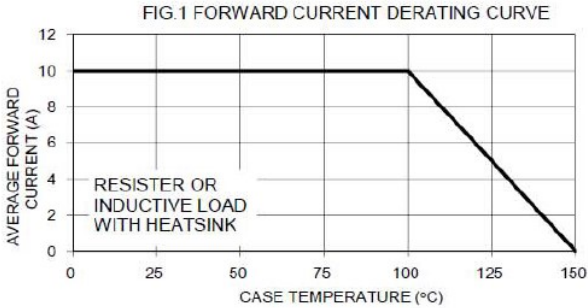
## Maximum Ratings & Electrical Characteristics

(T<sub>A</sub>=25°C unless otherwise noted)

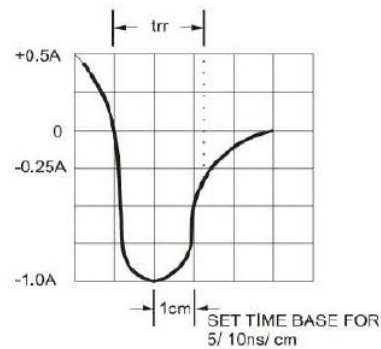
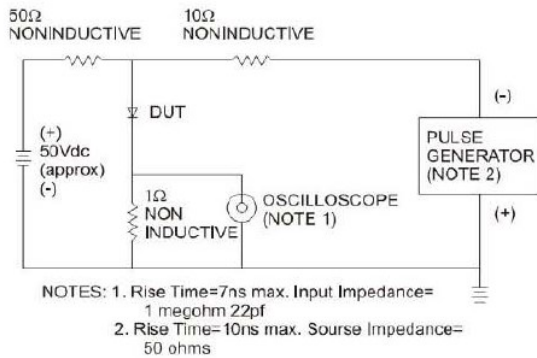
Parameter	Test Conditions	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	200	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	200	V
Maximum DC Blocking Voltage		V <sub>DC</sub>	200	V
Maximum Average Forward Rectified Current @ T <sub>c</sub> =105°C		I <sub>F(AV)</sub>	10	A
Total Device Per Diode			5	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode		I <sub>FSM</sub>	120	A
Voltage Rate of Change (rated V <sub>R</sub> )		Dv/dt	10000	V/μs
Operating Junction Temperature Range		T <sub>J</sub>	- 55 to +150	°C
Storage Temperature Range		T <sub>STG</sub>	- 55 to +150	°C
Maximum Reverse Recover Time (I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rec</sub> =0.25A)		T <sub>rr</sub>	35	ns
Maximum Instantaneous Forward Voltage per Leg	I <sub>F</sub> =5A T <sub>C</sub> =25°C	V <sub>F</sub>	1.02	V
	I <sub>F</sub> =5A T <sub>C</sub> =125°C	V <sub>F</sub>	0.92	V
Maximum Reverse Current per Leg at Working Peak Reverse Voltage	T <sub>J</sub> =25°C	I <sub>R</sub>	10	μA
	T <sub>J</sub> =100°C	I <sub>R</sub>	500	μA
<b>Thermal Characteristics T<sub>A</sub>=25°C unless otherwise noted</b>				
Symbol	Parameter	Typ.(MUR1020CT)	Typ.(MUR1020FCT)	Unit
R <sub>θJC</sub>	Thermal Resistance, Junction to Case per Leg	2.0	4.0	°C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient per Leg	62.5	62.5	°C/W

**Note:** Pulse test:300us pulse width, duty cycle=2%

## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)



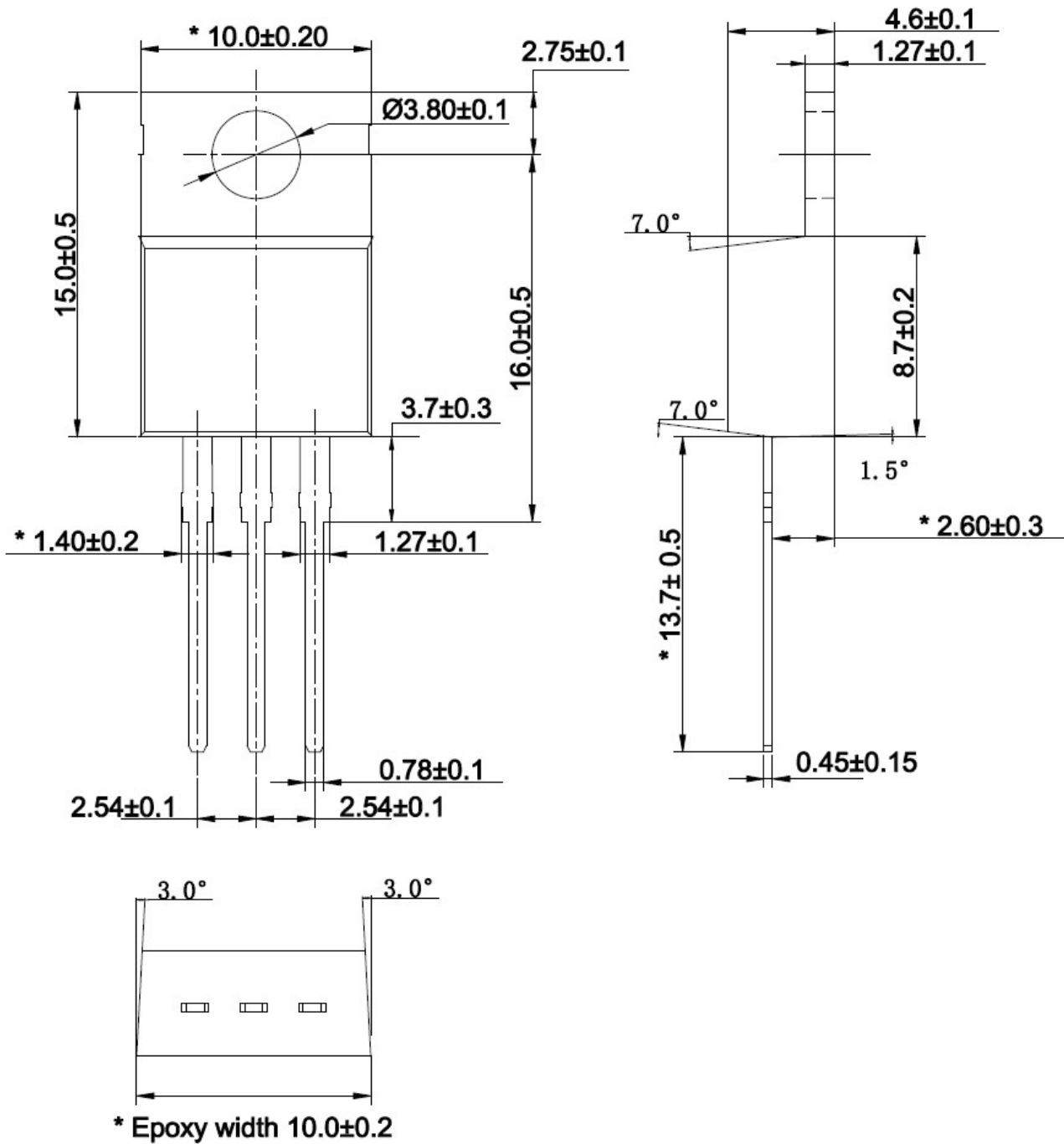
**FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



**Package Outline Dimensions**

in millimeters

**TO-220-AB**



## Package Outline Dimensions

in millimeters

ITO-220-AB

