



# MUR1620CT THRU MUR1660CT

## 16.0 AMPS. Switchmode Power Rectifiers



Voltage Range  
200 to 600 Volts  
Current  
16.0 Ampere

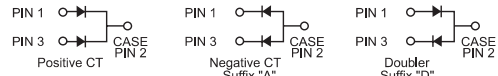
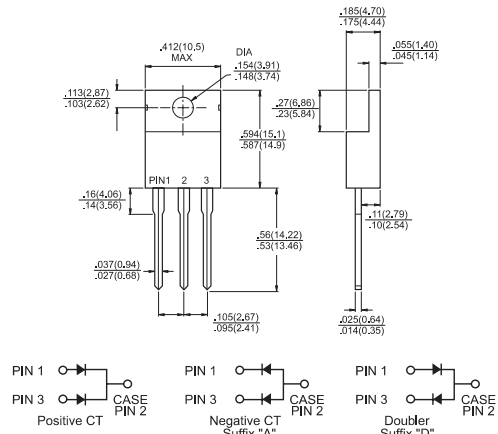
### Features

- ✦ Ultrafast 35 and 60 Nanosecond Recovery times
- ✦ 175°C Operating Junction Temperature
- ✦ Popular TO-220 Package
- ✦ Epoxy meets UL94, V<sub>O</sub> @ 1/8"
- ✦ High temperature glass passivated junction
- ✦ High voltage capability to 600 volts
- ✦ Low leakage specified @ 150°C case temperature
- ✦ Current derating @ both case and ambient temperatures

### Mechanical Data

- ✦ Case: Epoxy, molded
- ✦ 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: 1.9 grams (approximately)

### TO-220



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS

Type Number	Symbol	MUR 1620CT	MUR 1640CT	MUR 1660CT	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>				
Working Peak Reverse Voltage	V <sub>RWM</sub>	200	400	600	V
DC Blocking Voltage	V <sub>R</sub>				
Average Rectified Forward Current Per Leg	I <sub>F(AV)</sub>		8.0		A
Total Device, (Rated V <sub>R</sub> ), T <sub>C</sub> =150°C			16		
Peak Rectified Forward Current (Rated V <sub>R</sub> , Square Wave, 20 KHz), T <sub>C</sub> =150°C	I <sub>FM</sub>		16		A
Per Diode Leg					
Nonrepetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I <sub>FSM</sub>		100		A
Operating Junction Temperature and Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>		-65 to +175		°C

### THERMAL CHARACTERISTICS, PER DIODE LEG

Maximum Thermal Resistance, Junction to Case	R <sub>θJC</sub>	3.0	2.0	°C/W
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### ELECTRICAL CHARACTERISTICS, PER DIODE LEG

Maximum Instantaneous Forward Voltage (Note 1) ( I <sub>F</sub> =8.0 Amps, T <sub>C</sub> =25°C ) ( I <sub>F</sub> =8.0 Amps, T <sub>C</sub> =150°C )	V <sub>F</sub>	0.975 0.895	1.30 1.300	1.50 1.20	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @ T <sub>A</sub> =25°C @ T <sub>A</sub> =125°C	I <sub>R</sub>	5.0 250	10 500	uA uA	
Maximum Reverse Recovery Time (I <sub>F</sub> =0.5 Amp, I <sub>R</sub> =1.0 Amp, I <sub>REC</sub> =0.25 Amp)	T <sub>rr</sub>	25	50	nS	

Note: 1. Pulse Test: Pulse Width = 300 us, Duty Cycle ≤ 2.0%.

## RATINGS AND CHARACTERISTIC CURVES (MUR1620CT THRU MUR1660CT)

FIG.1- CURRENT DERATING, CASE, PER LEG

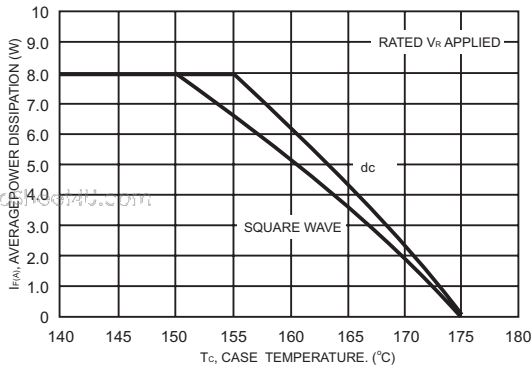
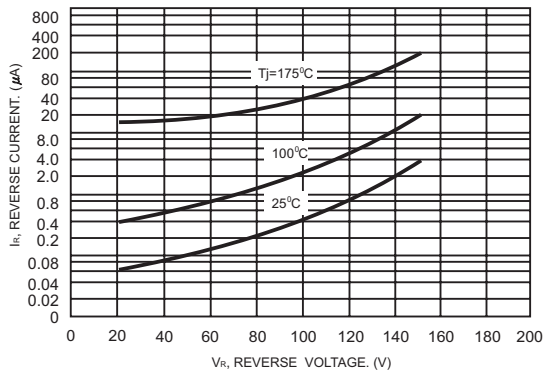


FIG.2- TYPICAL REVERSE CURRENT, PER LEG



\*The curves shown are typical for highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if V<sub>r</sub> is sufficiently below rated V<sub>r</sub>.

FIG.4- TYPICAL CAPACITANCE, PER LEG

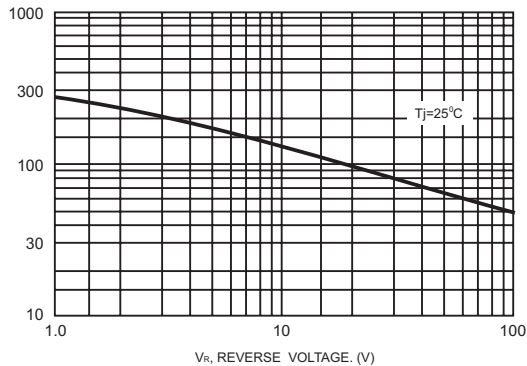


FIG.3- TYPICAL FORWARD VOLTAGE, PER LEG

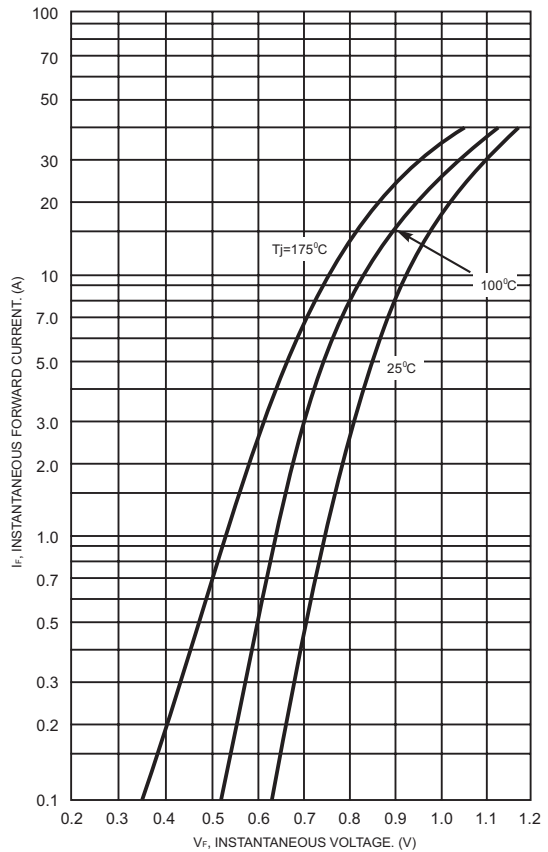


FIG.5- CURRENT DERATING, AMBIENT, PER LEG

