



# MUR1620CT THRU MUR1660CT

## 16.0 AMPS. Switchmode Power Rectifiers



Voltage Range  
200 to 600 Volts  
Current  
16.0 Ampere

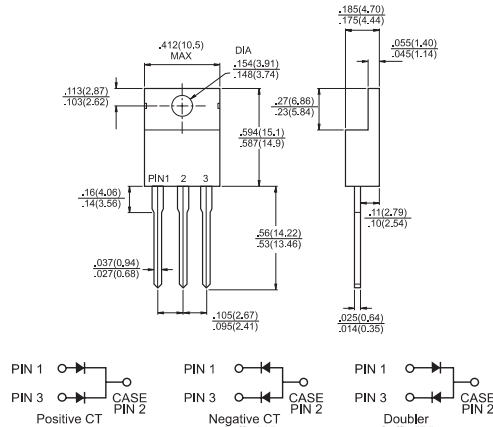
### Features

- ✦ Ultrafast 35 and 60 Nanosecond Recovery times
- ✦ 175°C Operating Junction Temperature
- ✦ Popular TO-220 Package
- ✦ Epoxy meets UL94, V<sub>0</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	$V_{RRM}$				
Working Peak Reverse Voltage	$V_{RWM}$	200	400	600	V
DC Blocking Voltage	$V_R$				
Average Rectified Forward Current Per Leg	$I_{F(AV)}$		8.0		Amps
Total Device, (Rated $V_R$ ), $T_c=150^\circ\text{C}$			16		
Peak Rectified Forward Current (Rated $V_R$ , Square Wave, 20 KHz), $T_c=150^\circ\text{C}$ Per Diode Leg	$I_{FM}$		16		Amps
Nonrepetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	$I_{FSM}$		100		Amps
Operating Junction Temperature and Storage Temperature	$T_J, T_{STG}$		-65 to + 175		°C

### THERMAL CHARACTERISTICS, PER DIODE LEG

Typical Thermal Resistance, Junction to Case, Mounted on 2" x 3" x 0.25 Al-Plate.	$R_{\theta_{JC}}$	3.0	2.0	°C/W
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### ELECTRICAL CHARACTERISTICS, PER DIODE LEG

Maximum Instantaneous Forward Voltage (Note 1) ( $I_F=8.0$ Amps, $T_c=25^\circ\text{C}$ ) ( $I_F=8.0$ Amps, $T_c=150^\circ\text{C}$ )	$V_F$	0.975 0.895	1.30 1.300	1.50 1.20	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	$I_R$	5.0 250	10 500	$\mu\text{A}$ $\mu\text{A}$	
Maximum Reverse Recovery Time ( $I_F=0.5$ Amp, $I_R=1.0$ Amp, $I_{RR}=0.25$ Amp)	$T_{rr}$	25	50	nS	

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



## RATINGS AND CHARACTERISTIC CURVES (MUR1620CT THRU MUR1660CT)

FIG.1- CURRENT DERATING, CASE, PER LEG

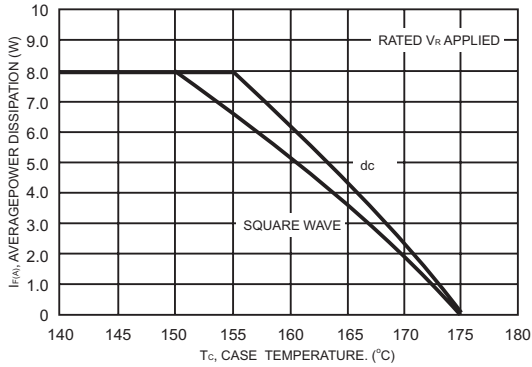


FIG.3- TYPICAL FORWARD VOLTAGE, PER LEG

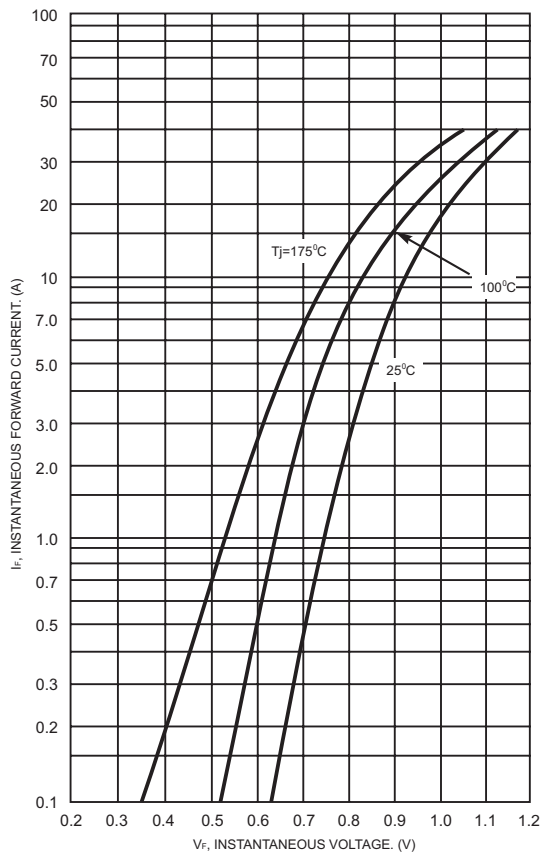
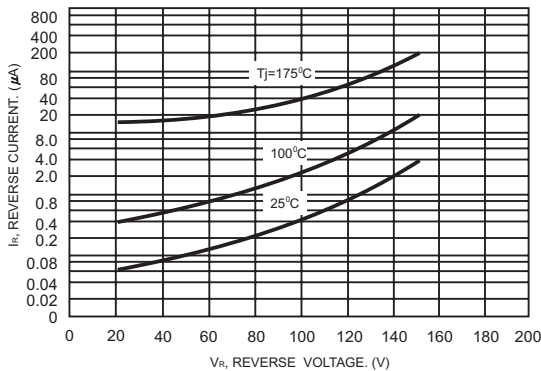


FIG.2- TYPICAL REVERSE CURRENT, PER LEG



\*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  $V_R$  is sufficiently below rated  $V_R$ .

FIG.4- TYPICAL CAPACITANCE, PER LEG

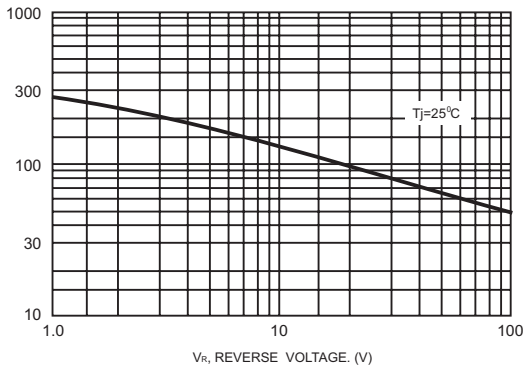


FIG.5- CURRENT DERATING, AMBIENT, PER LEG

