


# MURF1610CT – MURF1660CT

## 16 Amps Super Fast Recovery


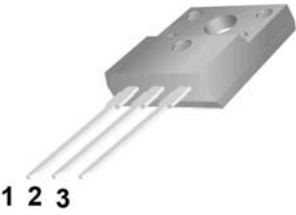
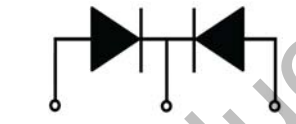


**MURF1610CT – MURF1660CT**

**Features:**

- High surge capacity
- Low Forward Voltage Drop.
- High Current Capability.
- Super Fast Switching Speed For High Efficiency

TO-220F

1. Anode 2. Cathode 3. Anode

### Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	MUR F1610 CT	MUR F1615 CT	MUR F1620 CT	MUR F1640 CT	MUR F1660 CT	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	150	200	400	600	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	150	200	400	600	V
DC Blocking Voltage	V <sub>R(DC)</sub>	100	150	200	400	600	V
Average Rectified Forward Current Per Leg Total Device, (Rated V <sub>R</sub> ), T <sub>C</sub> = 150°C	I <sub>F(AV)</sub>	8 16					A
Peak Rectified Forward Current Per Diode Leg (Rated V <sub>R</sub> , Square Wave, 20 kHz), T <sub>C</sub> = 150°C	I <sub>FM</sub>	16					A
Nonrepetitive Peak Surge Current(Surge applied at rated load conditions half wave, 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
Maximum Thermal Resistance, Junction-to-Case(Per Leg)	R <sub>θJC</sub>	3.0			2.0		°C/W

### ELECTRICAL CHARACTERISTICS (Per Diode Leg)

Parameter	Symbol	MUR F1610 CT	MUR F1615 CT	MUR F1620 CT	MUR F1640 CT	MUR F1660 CT	Unit
Forward Voltage (Note 1) (I <sub>F</sub> = 8 A, T <sub>C</sub> = 25°C) (I <sub>F</sub> = 8 A, T <sub>C</sub> = 150°C)	V <sub>F</sub>	0.975 0.895			1.50 1.20	1.80 1.50	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, T <sub>C</sub> = 25°C) (Rated DC Voltage, T <sub>C</sub> = 150°C)	I <sub>R</sub>	5 250			10 500		μA
Maximum Reverse Recovery Time (I <sub>F</sub> = 1.0 A, di/dt = 50 A/μs) (I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>REC</sub> = 0.25 A)	T <sub>RR</sub>	35 25			35 30		ns

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

Typical Characteristics

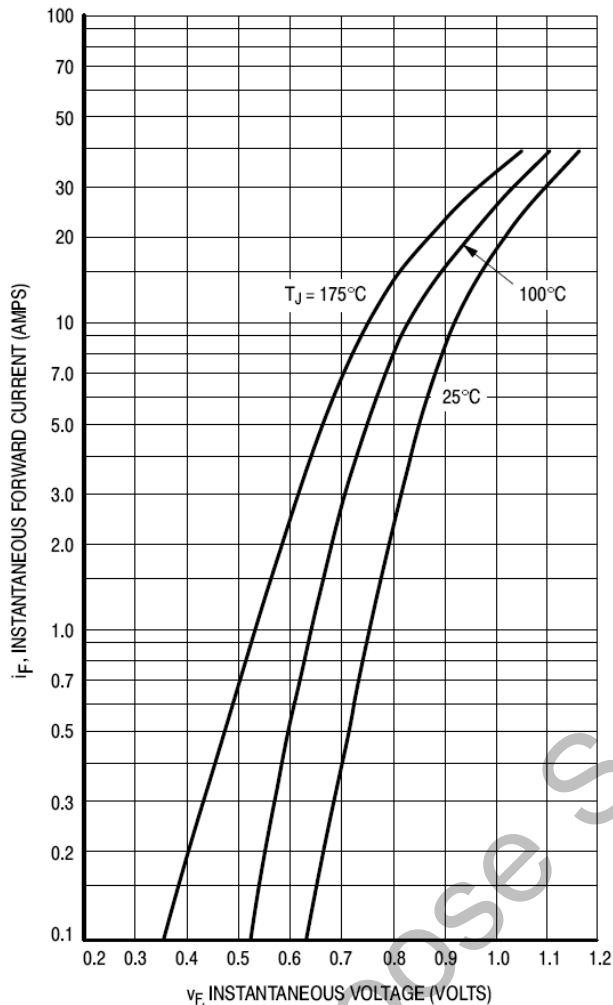


Figure 1. Typical Forward Voltage, Per Leg

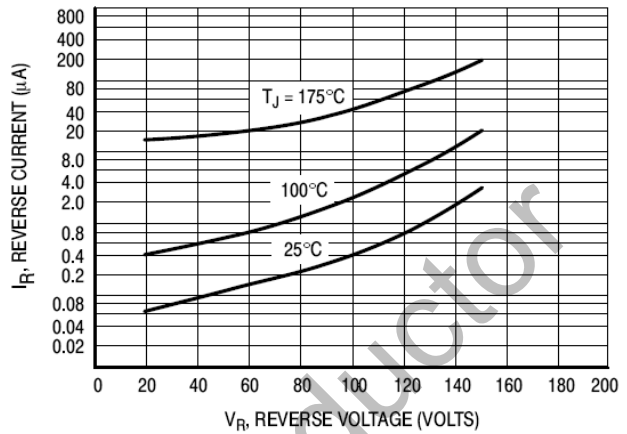


Figure 2. Typical Reverse Current, Per Leg\*

\* The curves shown are typical for the 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  $V_R$ .

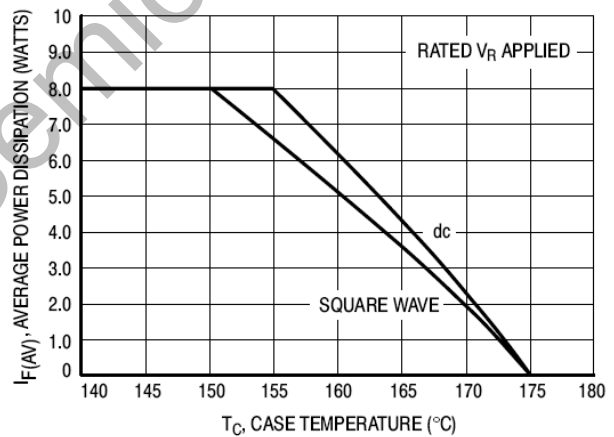


Figure 3. Current Derating, Case, Per Leg

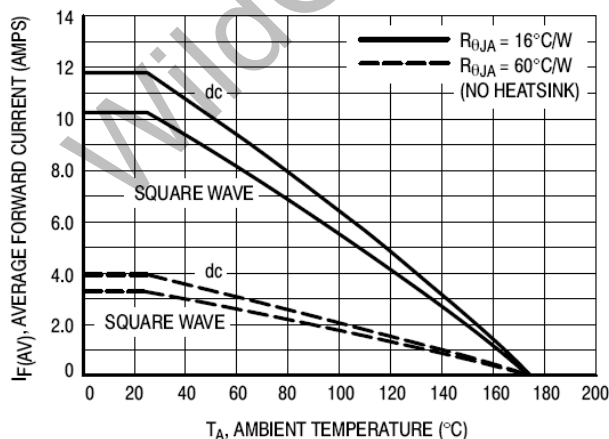


Figure 4. Current Derating, Ambient, Per Leg

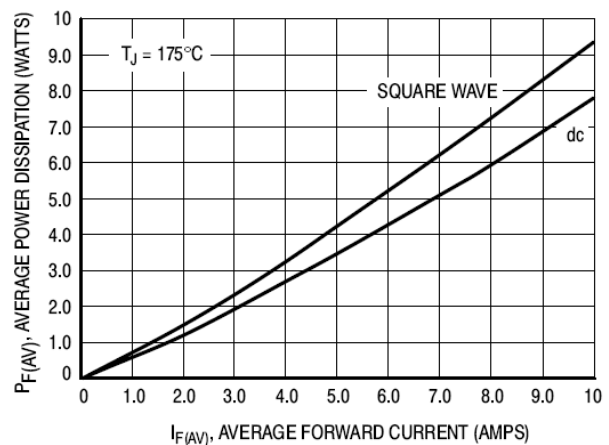


Figure 5. Power Dissipation, Per Leg

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Package Dimension

TO-220F

Unit: mm

