

MUR2010CT-MUR2060CT

20A Super Fast Recovery

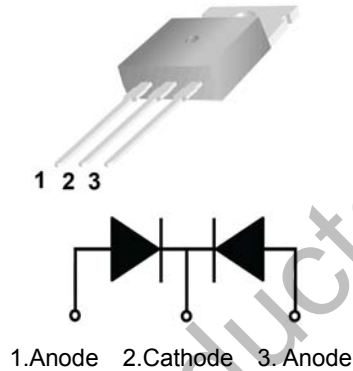


MUR2010CT-MUR2060CT

Features:

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

TO-220



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

Parameter	Symbol	MUR 2010 CT	MUR 2015 CT	MUR 2020 CT	MUR 2040 CT	MUR 2060 CT	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	400	600	V
Working Peak Reverse Voltage	V_{RWM}	100	150	200	400	600	V
DC Blocking Voltage	$V_{R(DC)}$	100	150	200	400	600	V
Average Rectified Forward Current Total Device, (Rated V_R), $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	10 20					A
Peak Rectified Forward Current Per Diode Leg (Rated V_R , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$	I_{FM}	20					A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half wave, single phase, 60 Hz)	I_{FSM}	120					A
Operating Junction Temperature and Storage Temperature	T_J, T_{stg}	-65 to +175					°C
Maximum Thermal Resistance, Junction-to-Case (Per Leg)	$R_{\theta JC}$	3.0			2.0		°C/W

ELECTRICAL CHARACTERISTICS (Per Diode Leg)

Parameter	Symbol	MUR 2010 CT	MUR 2015 CT	MUR 2020 CT	MUR 2040 CT	MUR 2060 CT	Unit
Forward Voltage (Note 1) ($I_F = 10\text{ A}$, $T_C = 25^\circ\text{C}$) ($I_F = 10\text{ A}$, $T_C = 150^\circ\text{C}$)	V_F		0.975 0.895		1.50 1.20	1.80 1.50	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 150^\circ\text{C}$)	I_R		5 250		10 500		μA
Maximum Reverse Recovery Time ($I_F = 1.0\text{ A}$, $di/dt = 50\text{ A}/\mu\text{s}$) ($I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{REC} = 0.25\text{ A}$)	T_{RR}		35 25		35 30		ns

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

Typical Characteristics

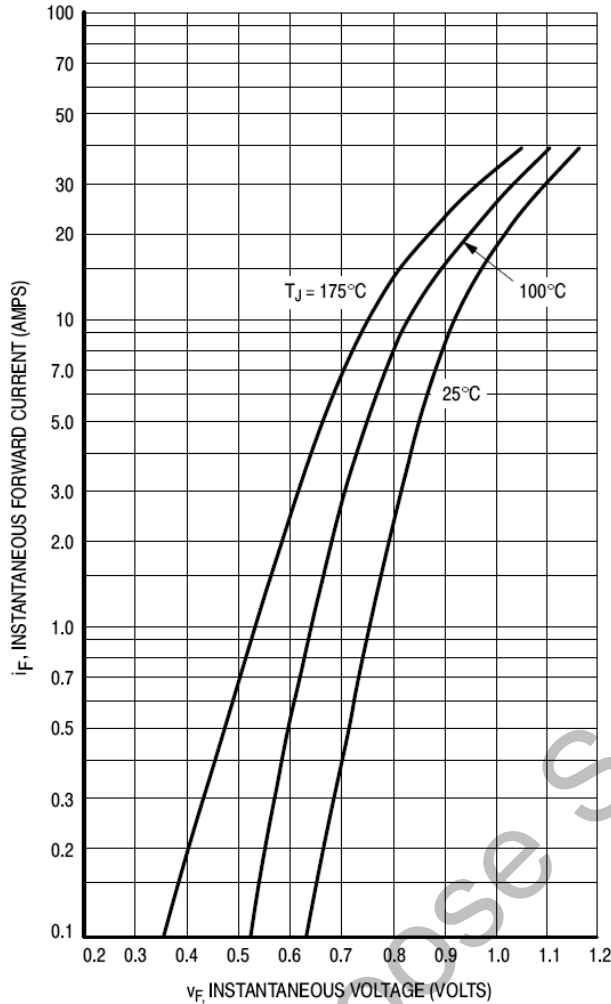


Figure 1. Typical Forward Voltage, Per Leg

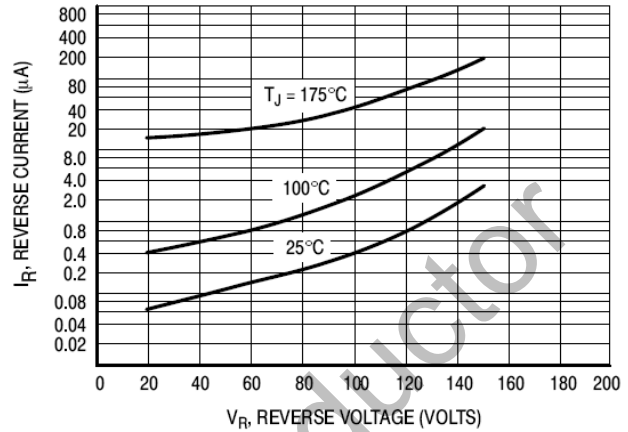


Figure 2. Typical Reverse Current, Per Leg*

* 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 .

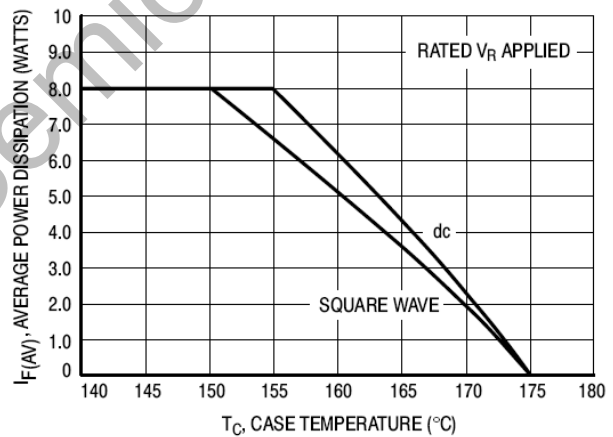


Figure 3. Current Derating, Case, Per Leg

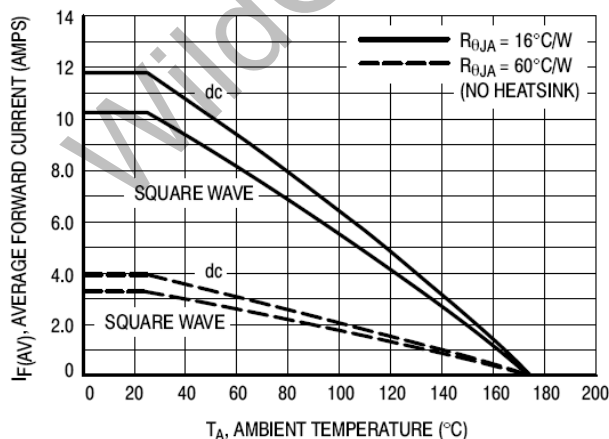


Figure 4. Current Derating, Ambient, Per Leg

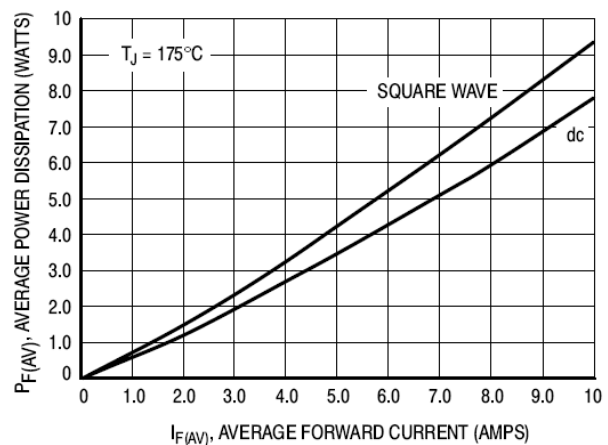


Figure 5. Power Dissipation, Per Leg

Unit: mm

