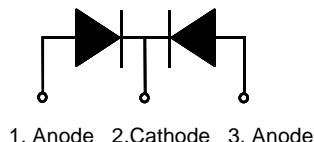
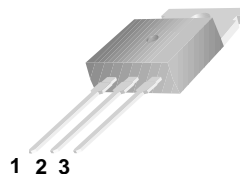




MUR1010CT - 60CT

Features

- High Surge Capability
- Low Forward Voltage Drop
- High Current Capability
- Super Fast Switching Speed For High Efficiency



TO-220

MAXIMUM RATINGS MUR1010CT, MUR1015CT, MUR1020CT, MUR1040CT, MUR1060CT

Rating	Symbol	MUR10					Unit
		10CT	15CT	20CT	40CT	60CT	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	150	200	400	600	V
Average Rectified Forward Current Total Device, (Rated V_R), $T_C = 150^\circ\text{C}$	$I_{F(AV)}$ Per Leg Total Device	5.0 10					A
Peak Rectified Forward Current (Rated V_R , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$	I_{FM} Per Diode Leg	10					A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	100					A
Operating Junction Temperature and Storage Temperature	T_J, T_{stg}	-65 to +175					$^\circ\text{C}$

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS (Per Diode Leg)

Parameter	Symbol	Value		Unit
Maximum Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.0	2.0	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS (Per Diode Leg)

Characteristic	Symbol	1020	1040	1060	Unit
Maximum Instantaneous Forward Voltage (Note 1) ($I_F = 8.0\text{ A}$, $T_C = 150^\circ\text{C}$) ($I_F = 8.0\text{ A}$, $T_C = 25^\circ\text{C}$)	V_F	0.895 0.975	1.20 1.50	1.50 1.80	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_C = 150^\circ\text{C}$) (Rated DC Voltage, $T_C = 25^\circ\text{C}$)	I_R	250 5.0	500 10		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

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

Typical Characteristics

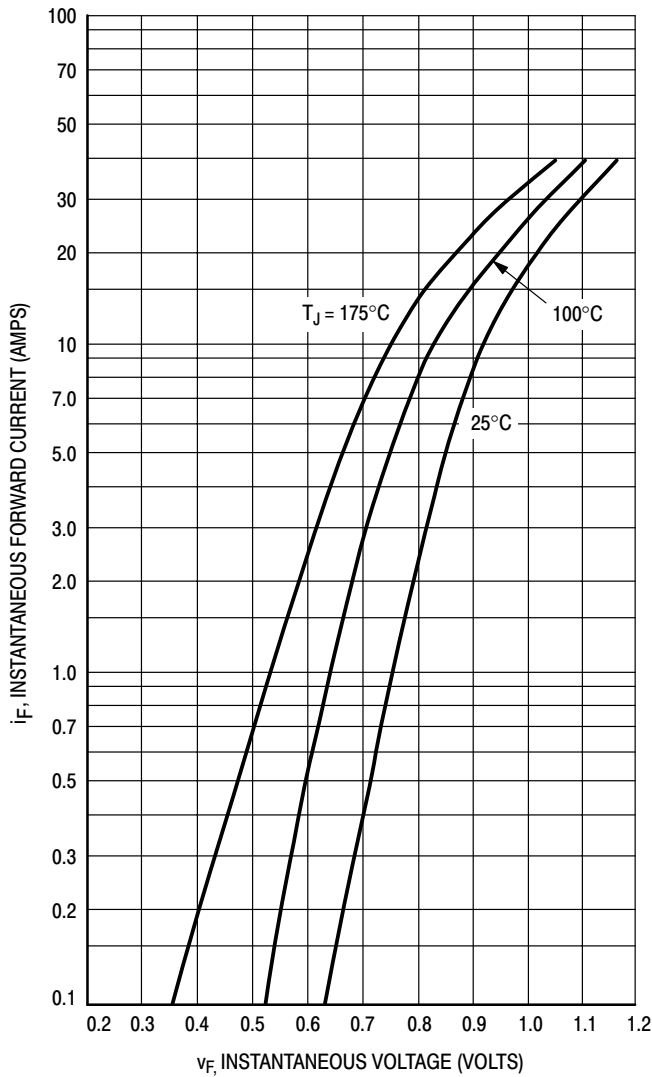


Figure 1. Typical Forward Voltage, Per Leg

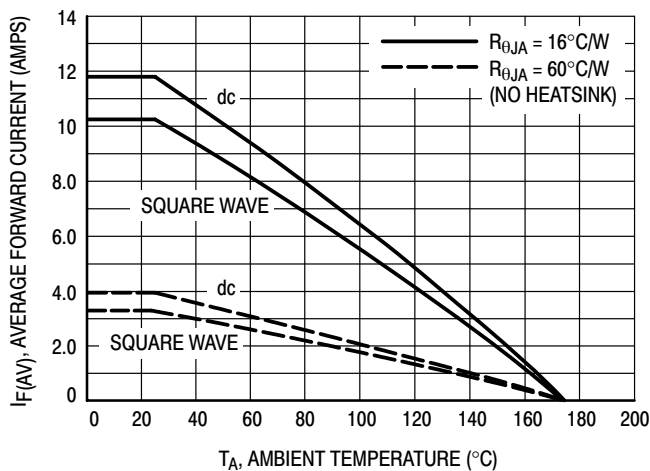


Figure 4. Current Derating, Ambient, Per Leg

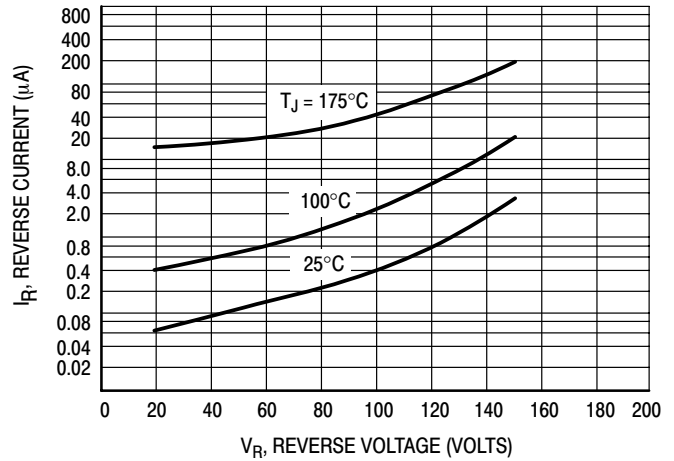


Figure 2. Typical Reverse Current, Per Leg*

* 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 .

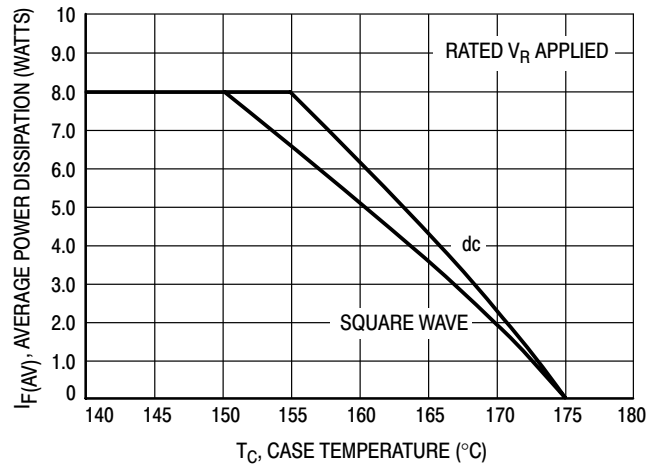


Figure 3. Current Derating, Case, Per Leg

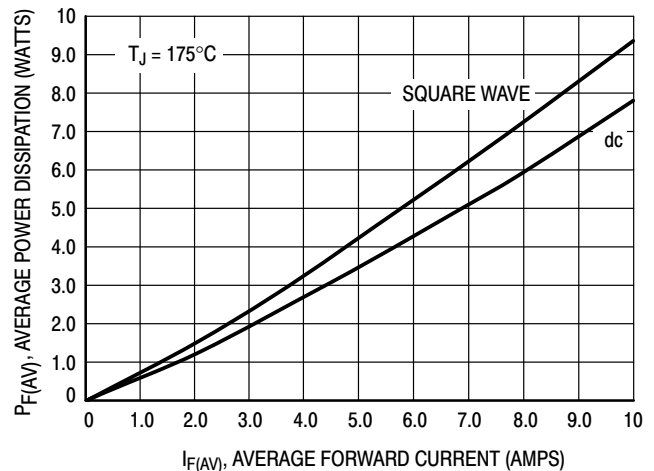


Figure 5. Power Dissipation, Per Leg