

MUR10005CT
MUR10010CT
MUR10015CT
MUR10020CT

MUR10020CT is a
 Motorola Preferred Device

Advance Information

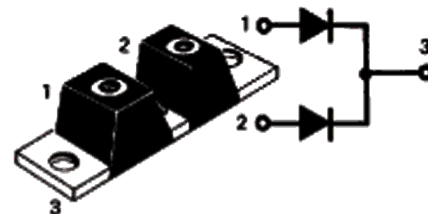
**ULTRAFAST
 SWITCHMODE POWER RECTIFIERS**

... designed for use in switching power supplies, inverters, and as free wheeling diodes. These state-of-the-art devices have the following features:

- Dual Diode Construction
- Low Leakage Current
- Low Forward Voltage
- 175°C Operating Junction Temperature
- Labor Saving POWERTAP Package

**ULTRAFAST
 RECTIFIERS**

**100 AMPERES
 50 TO 200 VOLTS**



CASE 357C-03

Terminal Penetration: 0.280 max
 Terminal Torque: 25-40 in-lb max
 Mounting Torque —
 Outside Holes:* 30-40 in-lb max
 *Center Hole Must be
 Torqued First: 8-10 in-lb max

MAXIMUM RATINGS

Rating	Symbol	MUR				Unit
		10005CT	10010CT	10015CT	10020CT	
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	150	200	Volts
Working Peak Reverse Voltage	V _{RWM}					
DC Blocking Voltage	V _R					
Average Rectified Forward Current, (Rated V _R), T _C = 140°C	I _{F(AV)}					Amps
Per Device			100			
Per Leg			50			
Peak Repetitive Forward Current, Per Leg, (Rated V _R , Square Wave, 20 kHz), T _C = 140°C	I _{FRM}		100			Amps
Nonrepetitive Peak Surge Current Per Leg (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I _{FSM}		400			Amps
Operating Junction and Storage Temperature	T _J , T _{stg}		-65 to +175			°C

THERMAL CHARACTERISTICS PER LEG

Rating	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	1.0	°C/W

ELECTRICAL CHARACTERISTICS PER LEG

Instantaneous Forward Voltage (1) (I _F = 50 Amp, T _C = 25°C)	v _F	1.10	Volts
Instantaneous Reverse Current (1) (Rated dc Voltage, T _C = 125°C) (Rated dc Voltage, T _C = 25°C)	i _R	250 25	μA
Maximum Reverse Recovery Time (I _F = 1.0 Amps, di/dt = 50 Amps/μs)	t _{rr}	50	ns

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

This document contains information on a new product. Specifications and information herein are subject to change without notice.

MUR1005CT, MUR10010CT, MUR10015CT, MUR10020CT

FIGURE 1 — FORWARD VOLTAGE

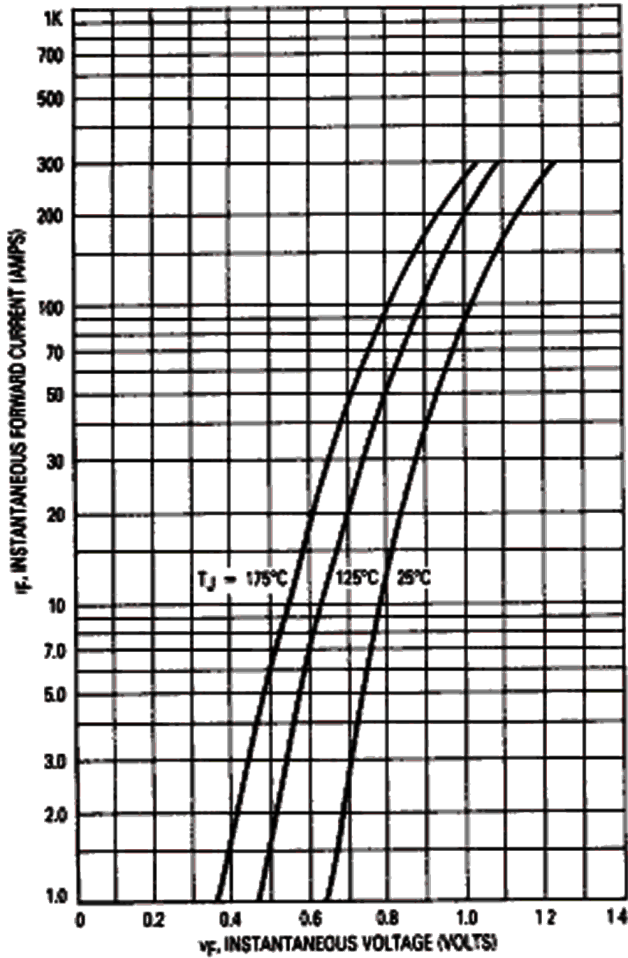
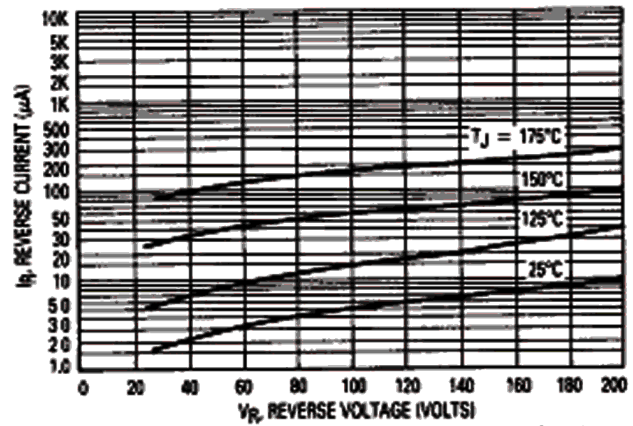


FIGURE 2 — TYPICAL REVERSE CURRENT*



*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 (PER LEG)

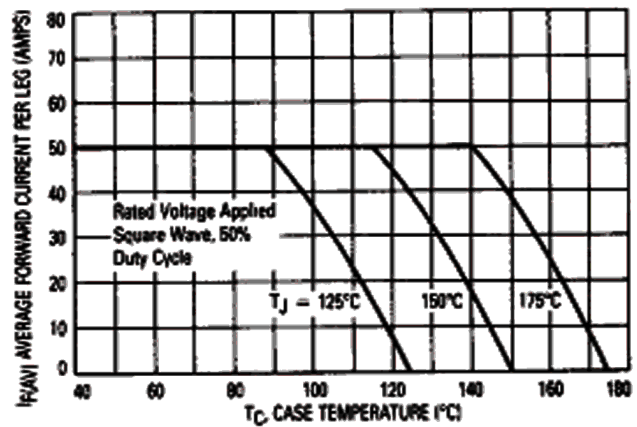


FIGURE 4 — POWER DISSIPATION (PER LEG)

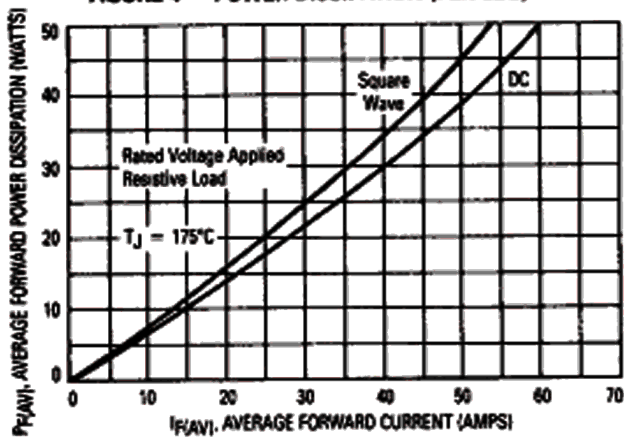


FIGURE 5 — CAPACITANCE (PER LEG)

