

### SWITCHMODE™ Power Rectifier

These state-of-the-art devices are designed for use in negative switching power supplies, inverters and as free wheeling diodes. Also, used in conjunction with common cathode dual Ultrafast Rectifiers, makes a single phase full-wave bridge.

#### Features

- Common Anode Dual Rectifier (8.0 A per Leg or 16 A per Package)
- Ultrafast 35 Nanosecond Reverse Recovery Times
- Exhibits Soft Recovery Characteristics
- High Temperature Glass Passivated Junction
- Low Leakage Specified @ 150°C Case Temperature
- Current Derating @ Both Case and Ambient Temperatures
- Epoxy Meets UL 94 V-0 @ 0.125 in
- Complement to MUR1620CT and MURB1620CT Common Cathode Device
- Pb-Free Packages are Available

#### Mechanical Characteristics:

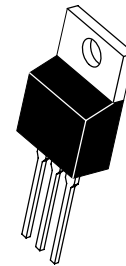
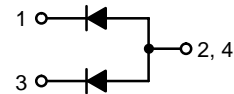
- Case: Epoxy, Molded
- Weight: MUR1620CTR: 1.9 Grams (Approximately)  
MURB1620CTR: 1.7 Grams (Approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes:  
260°C Max. for 10 Seconds

#### MAXIMUM RATINGS (Per Leg)

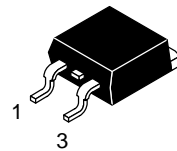
Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	200	V
Average Rectified Forward Voltage (Rated $V_R$ , $T_C = 160^\circ\text{C}$ ) Per Leg Per Total Device	$I_{F(AV)}$	8.0 16	A
Peak Repetitive Surge Current (Rated $V_R$ , Square Wave, 20 kHz, $T_C = 140^\circ\text{C}$ ) Per Diode	$I_{FM}$	16	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	$I_{FSM}$	100	A
Operating Junction and Storage Temperature Range	$T_J, T_{stg}$	-65 to +175	°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.

### ULTRAFAST RECTIFIER 16 AMPERES, 200 VOLTS



TO-220AB  
CASE 221A  
STYLE 7



4 D2PAK  
CASE 418B  
STYLE 5

THERMAL CHARACTERISTICS (Per Leg)

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

ELECTRICAL CHARACTERISTICS (Per Leg)

Rating	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage (Note 1) ( $i_F = 8.0$ Amps, $T_C = 25^{\circ}\text{C}$ ) ( $i_F = 8.0$ Amps, $T_C = 150^{\circ}\text{C}$ )	$V_F$	1.2 1.1	V
Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage, $T_C = 25^{\circ}\text{C}$ ) (Rated dc Voltage, $T_C = 150^{\circ}\text{C}$ )	$i_R$	5.0 500	$\mu\text{A}$
Maximum Reverse Recovery Time ( $I_F = 1.0$ Amp, $di/dt = 50$ Amps/ $\mu\text{s}$ ) ( $I_F = 0.5$ Amp, $di/dt = 100$ Amps/ $\mu\text{s}$ )	$t_{rr}$	85 35	ns

1. Pulse Test: Pulse Width = 5.0 ms, Duty Cycle  $\leq 10\%$ .

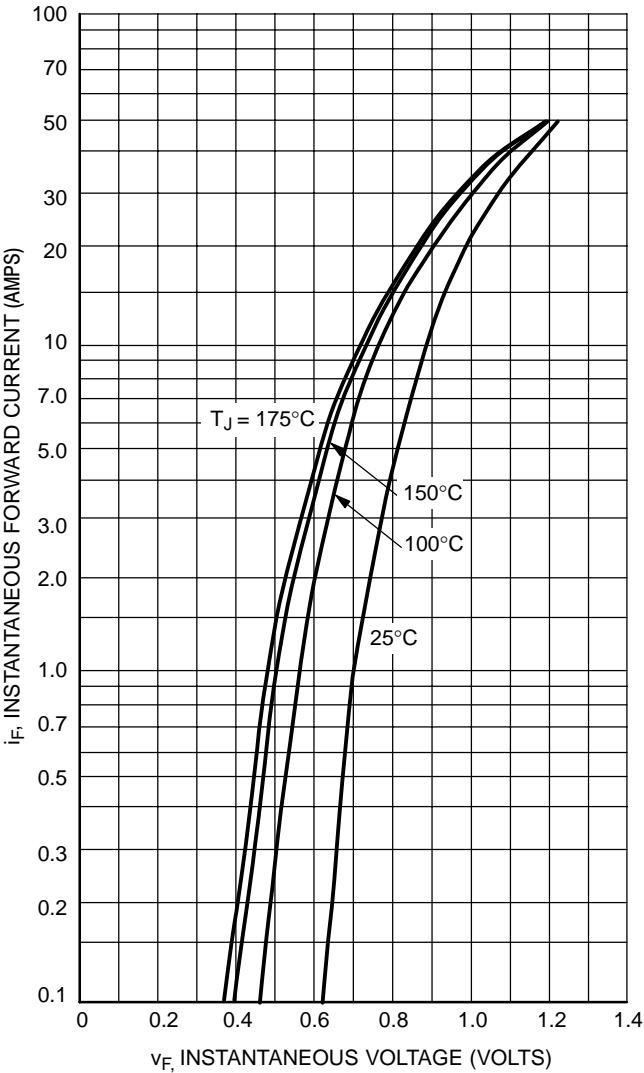


Figure 1. Typical Forward Voltage (Per Leg)

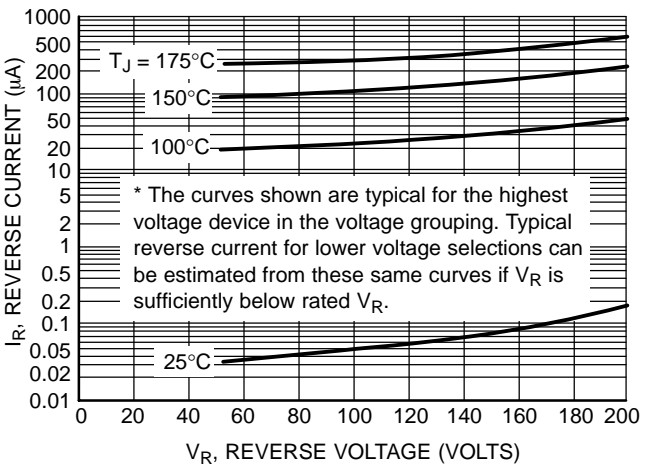


Figure 2. Typical Reverse Current\* (Per Leg)

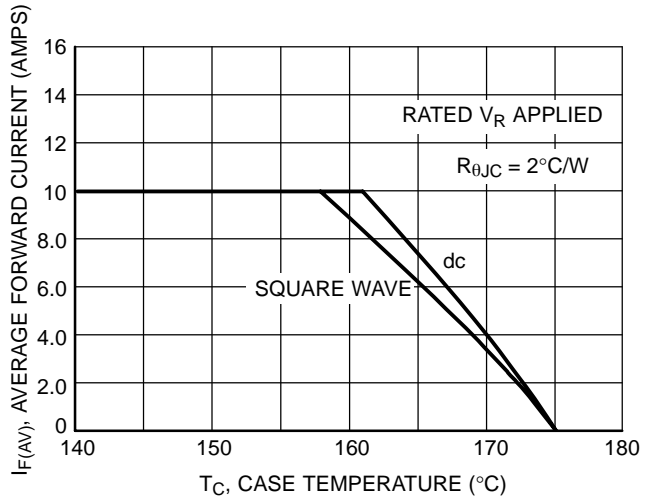


Figure 3. Current Derating, Case (Per Leg)

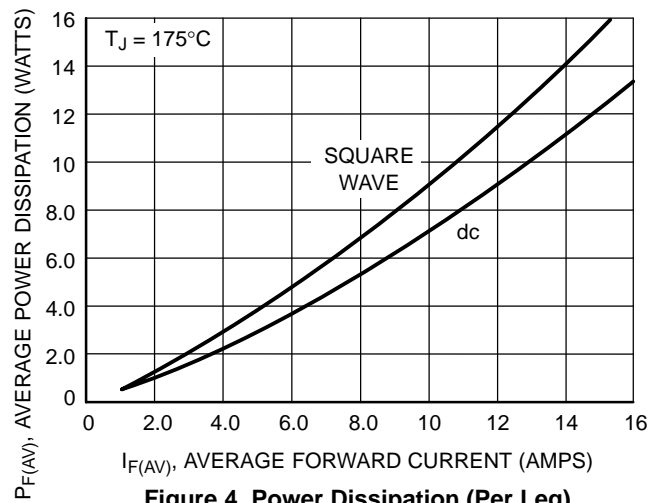


Figure 4. Power Dissipation (Per Leg)

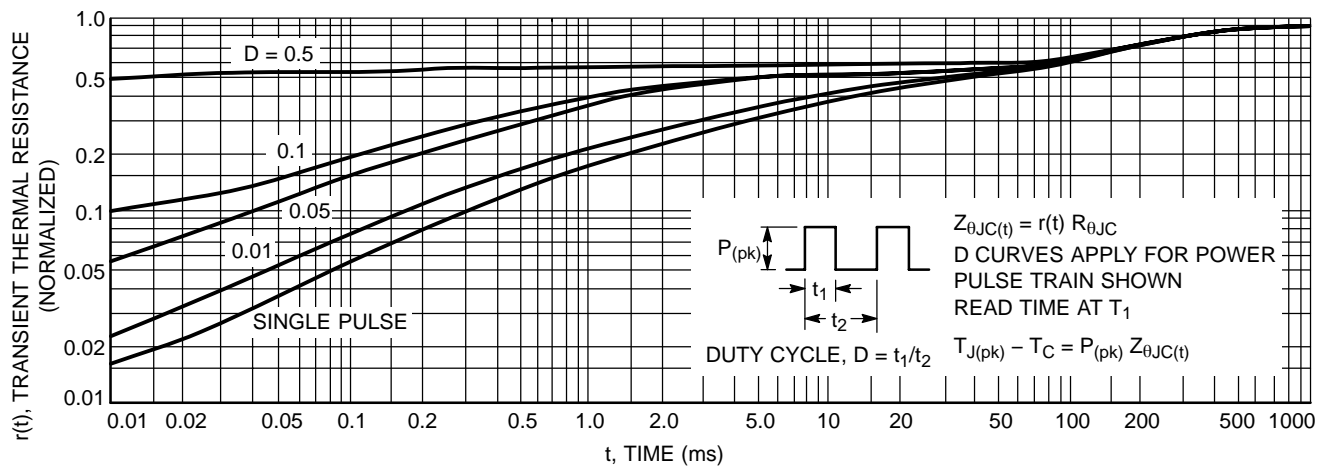


Figure 5. Thermal Response

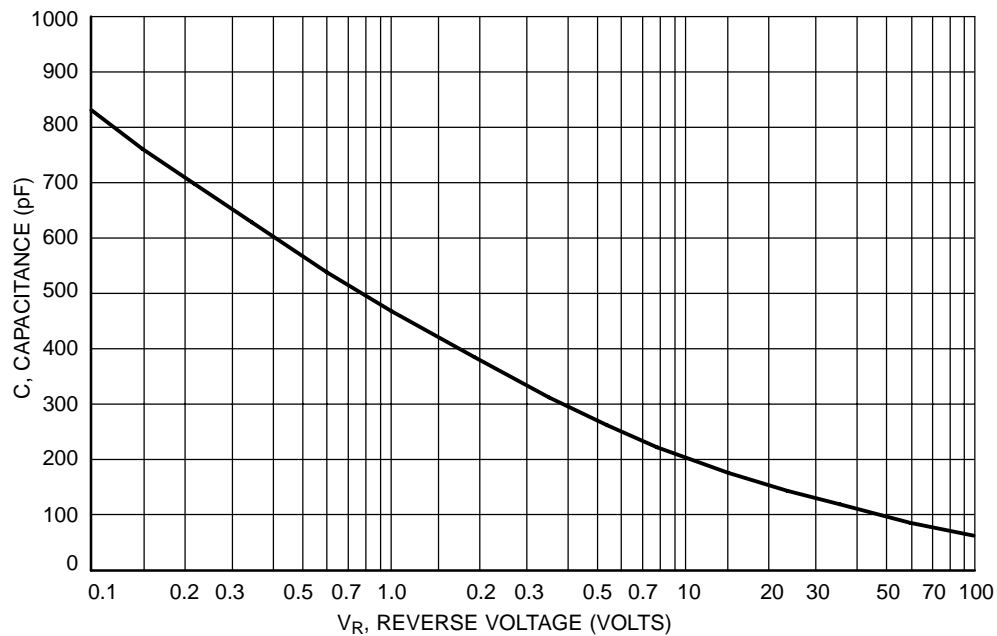


Figure 6. Typical Capacitance (Per Leg)