MUR1605CTR
MUR1610CTR
MUR1615CTR
MUR1620CTR

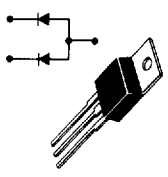
MUR1620CTR is a Motorola Preferred Device

Switchmode
Dual Ultrafast Power Rectifiers

. . . 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. These state-of-the-art devices have the following 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 UL94, V_O @ 1/8"
- Complement to MUR1605CT Series of Common Cathode Devices

ULTRAFAST RECTIFIERS
16 AMPERES
50–200 VOLTS



CASE 221A-06
TO-220AB

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MAXIMUM RATINGS (Per Leg)

Rating	Symbol	MUR 1605CTR	MUR 1610CTR	MUR 1615CTR	MUR 1620CTR	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	Volts
Average Rectified Forward Current, (Rated V_R), T_C = 160°C Per Leg Per Total Device	$I_{F(AV)}$		8.0 16			Amps
Peak Repetitive Surge Current, Per Diode (Rated V_R, Square Wave, 20 kHz), T_C = 140°C	I_{FM}		16			Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}		100			Amps
Operating Junction Temperature and Storage Temperature	T_J, T_{stg}		−65 to +175			°C

THERMAL CHARACTERISTICS (Per Leg)

Thermal Resistance — Junction to Case	$R_{\theta JC}$	2.0	°C/W

ELECTRICAL CHARACTERISTICS (Per Leg)

Maximum Instantaneous Forward Voltage (1) (i_F = 8.0 Amp, T_C = 25°C) (i_F = 8.0 Amp, T_C = 150°C)	v_F	1.2 1.1	Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, T_C = 25°C) (Rated dc Voltage, T_C = 150°C)	i_R	5 0 500	μA
Maximum Reverse Recovery Time (I_F = 1.0 Amp, di/dt = 50 Amp/μs) (I_F = 0.5 Amp, di/dt = 100 Amp/μs)	t_{rr}	85 35	ns

(1) Pulse Test Pulse Width - 5 0 ms, Duty Cycle 10%
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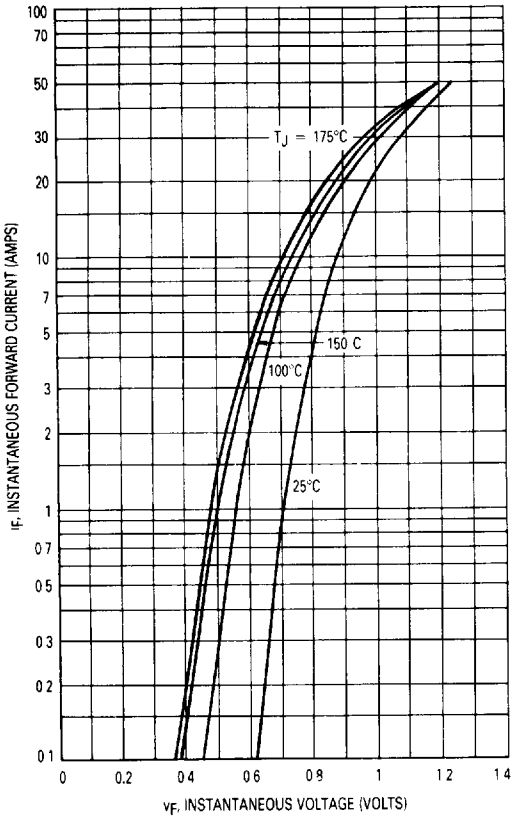

Figure 1. Typical Forward Voltage (Per Leg)

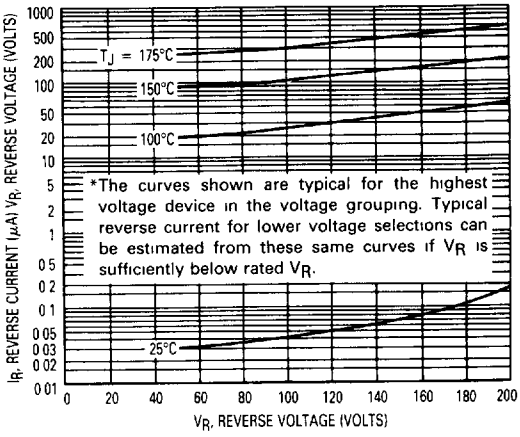

Figure 2. Typical Reverse Current* (Per Leg)

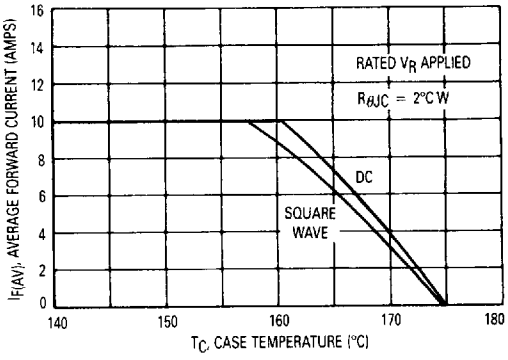

Figure 3. Current Derating, Case (Per Leg)

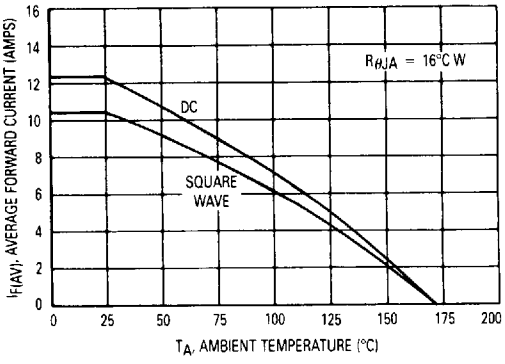

Figure 4. Current Derating, Ambient (Per Leg)

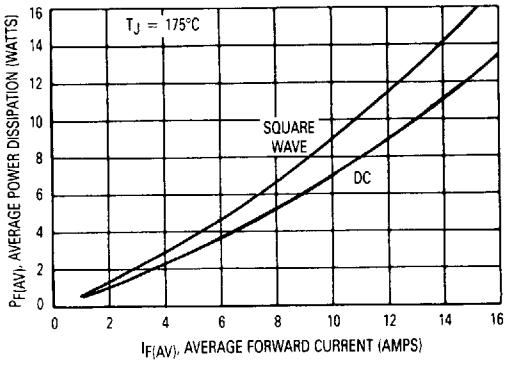

Figure 5. Power Dissipation (Per Leg)

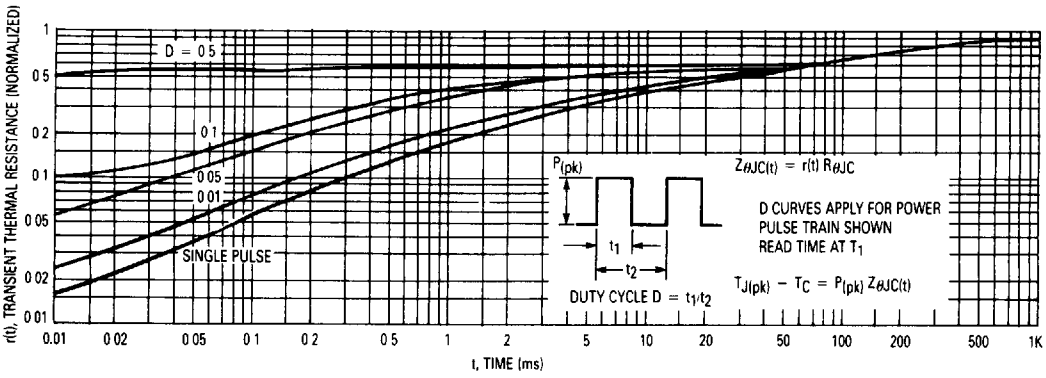

Figure 6. Thermal Response

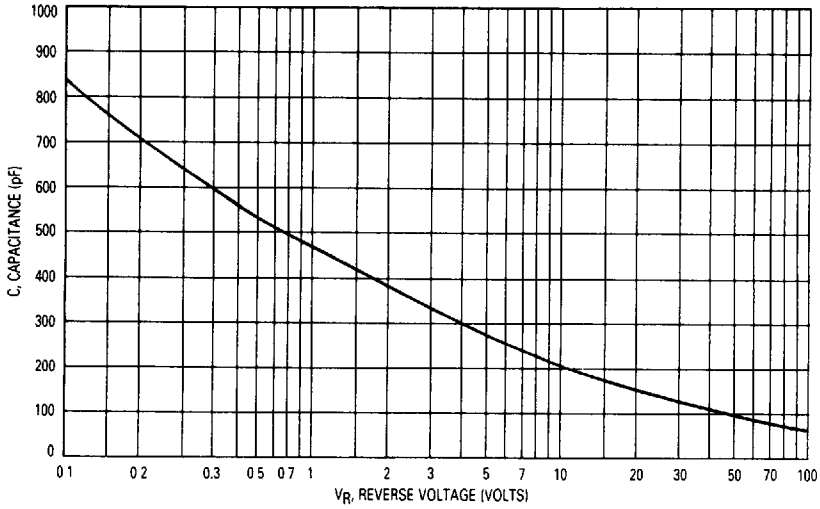

Figure 7. Typical Capacitance (Per Leg)