

Switchmode

Dual Ultrafast Power Rectifiers

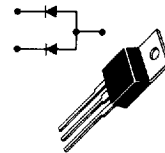
... designed for use in negative switching power supplies, inverters and as free wheeling diodes. Also, used in conjunction with common cathode dual Ultrafast Rectifiers, makes a single phase full-wave bridge. These state-of-the-art devices have the following features:

- 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, V₀ @ 1/8"
- Complement to MUR1605CT Series of Common Cathode Devices

MUR1605CTR
MUR1610CTR
MUR1615CTR
MUR1620CTR

MUR1620CTR is a
 Motorola Preferred Device

ULTRAFAST RECTIFIERS
16 AMPERES
50-200 VOLTS



CASE 221A-06
 TO-220AB

MAXIMUM RATINGS (Per Leg)

Rating	Symbol	MUR				Unit
		1605CTR	1610CTR	1615CTR	1620CTR	
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 _{θJC}	2.0	°C/W
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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	50 500	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%
 Switchmode is a trademark of Motorola Inc

MUR1605CTR, MUR1610CTR, MUR1615CTR, MUR1620CTR

MOTOROLA SC (DIODES/OPTO) 64E D 6367255 0086497 9T1 MOT7

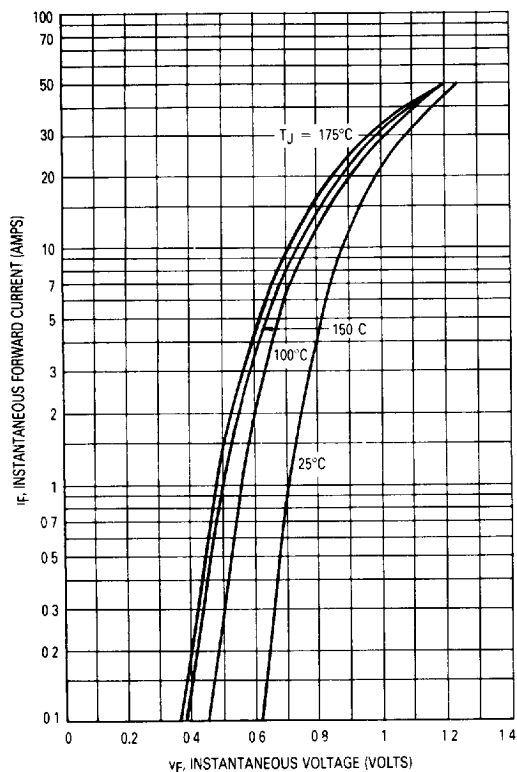


Figure 1. Typical Forward Voltage (Per Leg)

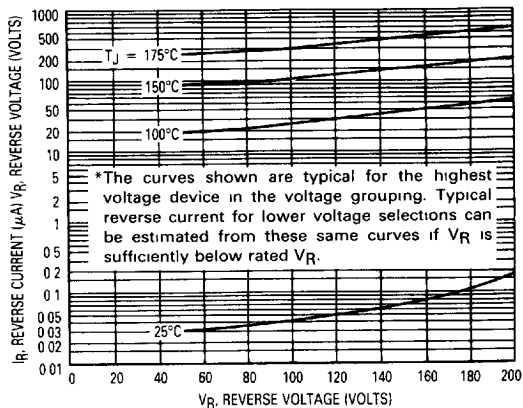


Figure 2. Typical Reverse Current* (Per Leg)

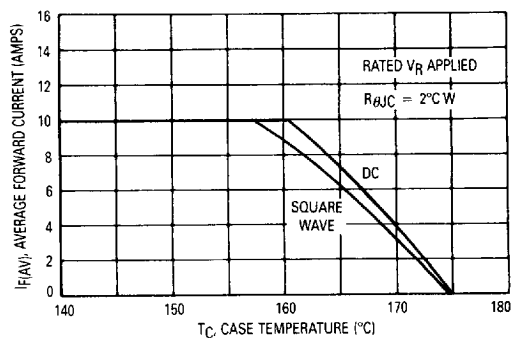


Figure 3. Current Derating, Case (Per Leg)

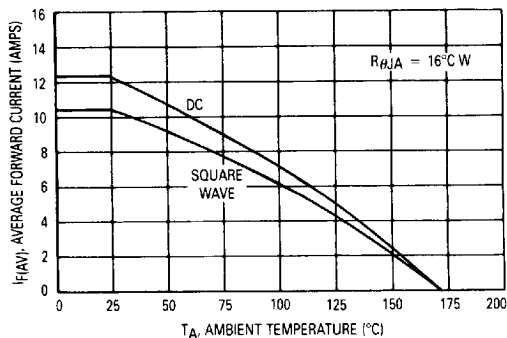


Figure 4. Current Derating, Ambient (Per Leg)

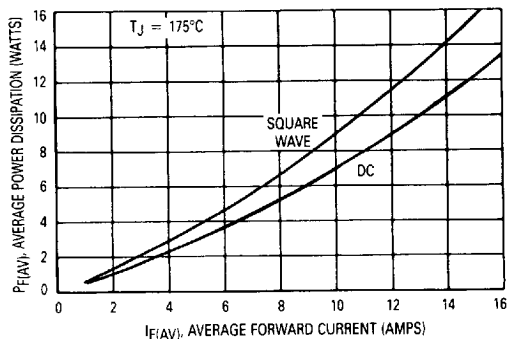


Figure 5. Power Dissipation (Per Leg)

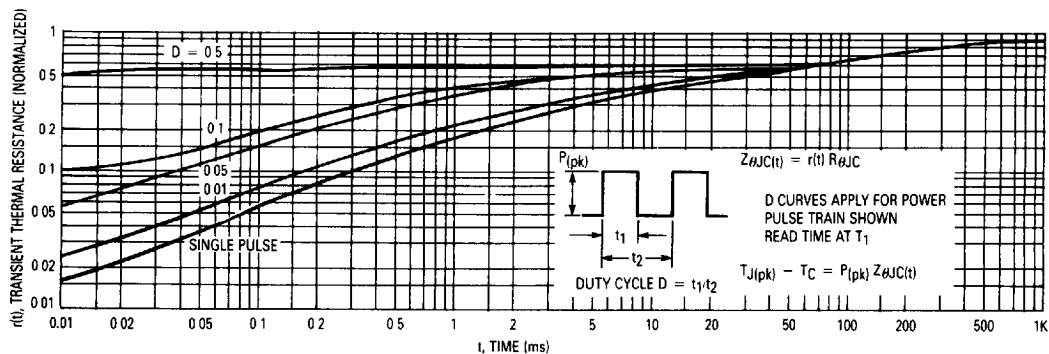


Figure 6. Thermal Response

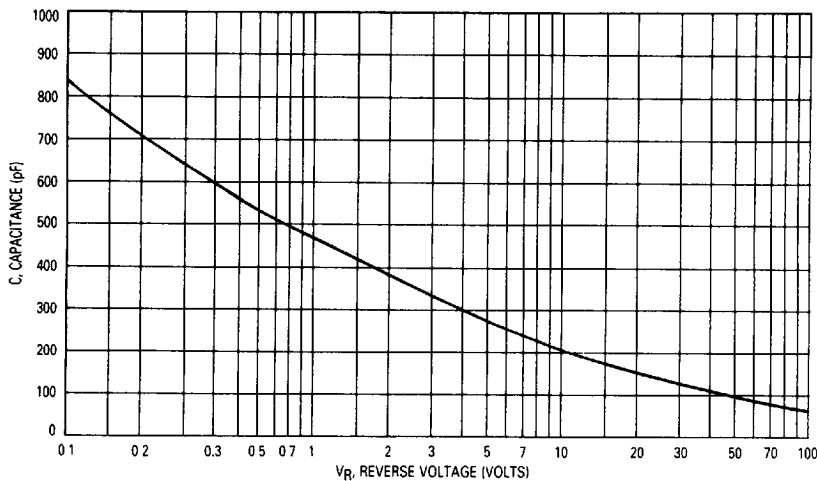


Figure 7. Typical Capacitance (Per Leg)