

MUR1605CTR-MUR1620CTR

16 AMP ULTRA FAST RECTIFIER

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	MUR1605CTR	MUR1610CTR	MUR1615CTR	MUR1620CTR	Unit
Peak repetitive reverse voltage	V_{RRM}					
Working peak reverse voltage	V_{RWM}	50	100	150	200	V
DC blocking voltage	V_R					
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	16.0 @ $T_c = 160^\circ\text{C}$				A
Peak repetitive surge current (Rated V_R) square wave, 20kHz	I_{FM}	16 @ $T_c = 140^\circ\text{C}$				A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	100				A
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +175				$^\circ\text{C}$
Thermal resistance Junction to case	$R_{\theta JC}$	2.0				$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

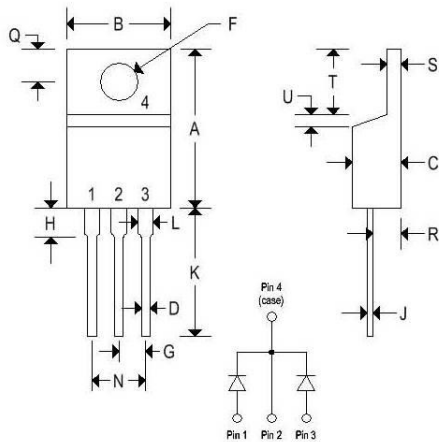
Parameter	Symbol	MUR1605CTR	MUR1610CTR	MUR1615CTR	MUR1620CTR	Unit
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 8.0\text{A}, T_c = 25^\circ\text{C}$) ($I_F = 8.0\text{A}, T_c = 150^\circ\text{C}$)	V_F		1.2			V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_c = 25^\circ\text{C}$) (Rated dc voltage, $T_c = 150^\circ\text{C}$)	I_R		5.0			μA
Maximum reverse recovery time ($I_F = 1.0\text{A}, di/dt = 50\text{A}/\mu\text{s}$) ($I_F = 0.5\text{A}, di/dt = 100\text{A}/\mu\text{s}$)	t_{rr}		85			ns
			35			

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MECHANICAL CHARACTERISTICS

Case	TO-220AB
Marking	Alpha-numeric
Pin out	See below



	TO-220AB			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.570	0.620	14.480	15.750
B	0.380	0.405	9.660	10.280
C	0.160	0.190	4.070	4.820
D	0.025	0.035	0.640	0.880
F	0.142	0.147	3.610	3.730
G	0.095	0.105	2.420	2.660
H	0.110	0.155	2.800	3.930
J	0.018	0.025	0.460	0.640
K	0.500	0.562	12.700	14.270
L	0.045	0.060	1.150	1.520
N	0.190	0.210	4.830	5.330
Q	0.100	0.120	2.540	3.040
R	0.080	0.110	2.040	2.790
S	0.045	0.055	1.150	1.390
T	0.235	0.255	5.970	6.470
U	-	0.050	-	1.270

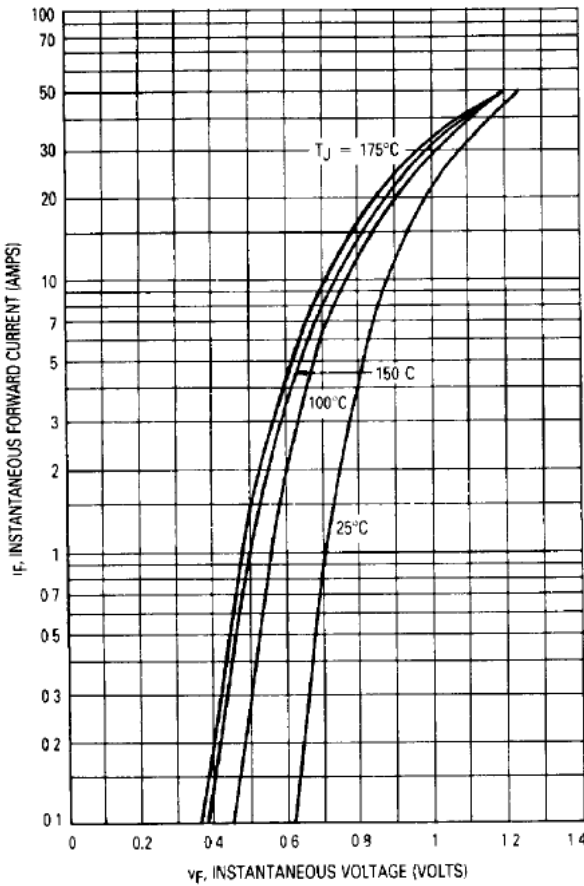


Figure 1. Typical Forward Voltage (Per Leg)

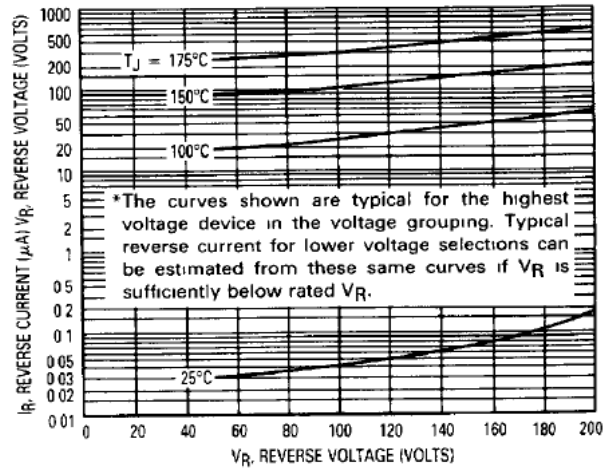


Figure 2. Typical Reverse Current* (Per Leg)

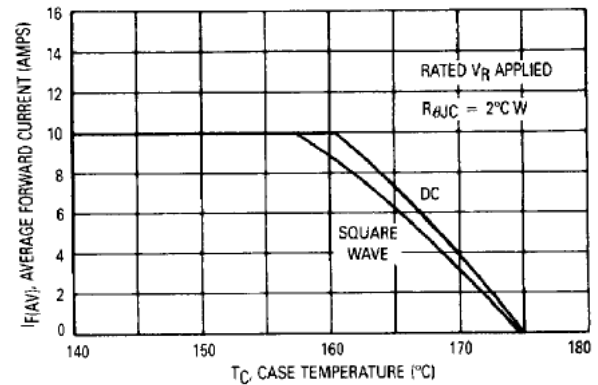


Figure 3. Current Derating, Case (Per Leg)

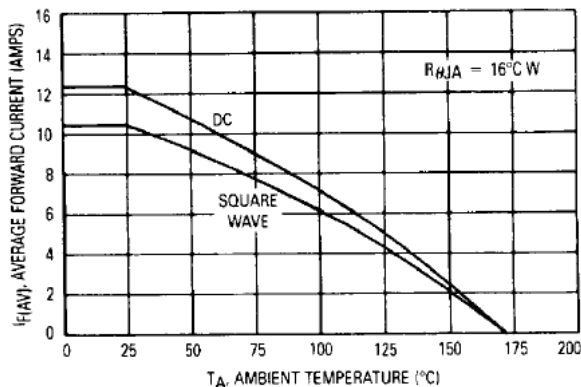


Figure 4. Current Derating, Ambient (Per Leg)

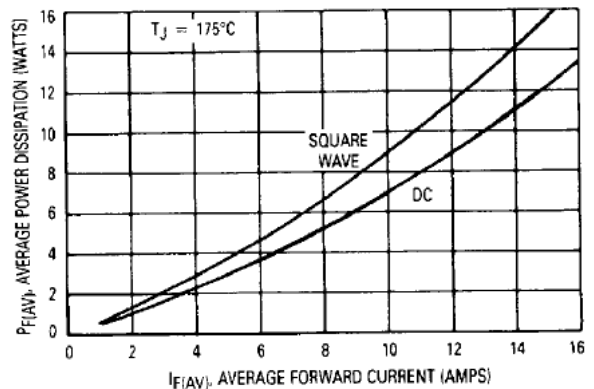


Figure 5. Power Dissipation (Per Leg)

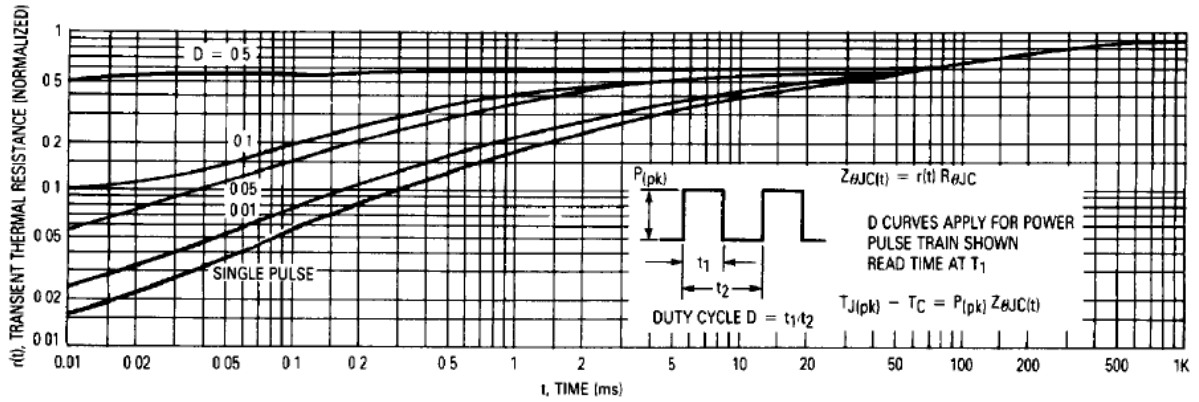


Figure 6. Thermal Response

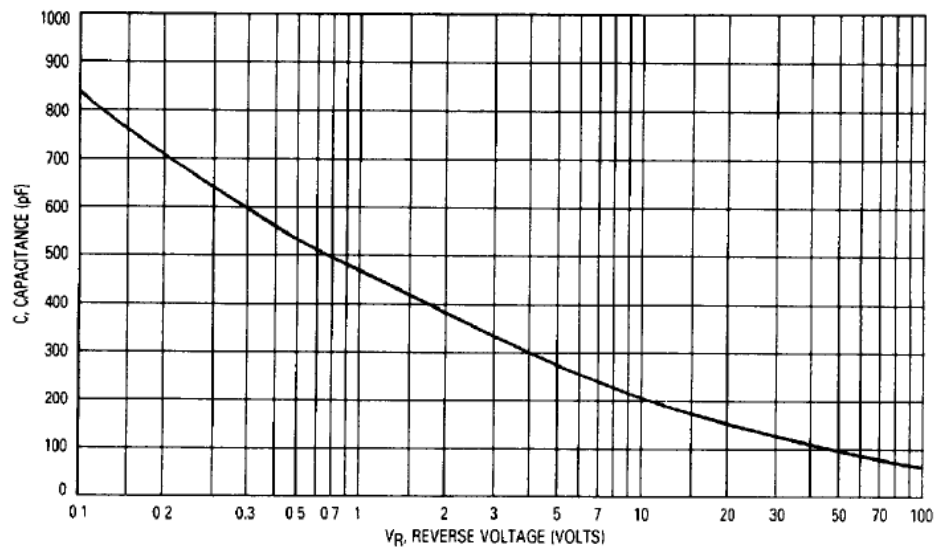


Figure 7. Typical Capacitance (Per Leg)