

# DIGITRON SEMICONDUCTORS

MUR1605CTR-MUR1620CTR

16A SCHOTTKY RECTIFIER

## MAXIMUM RATINGS

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	V
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				$^\circ\text{C/W}$

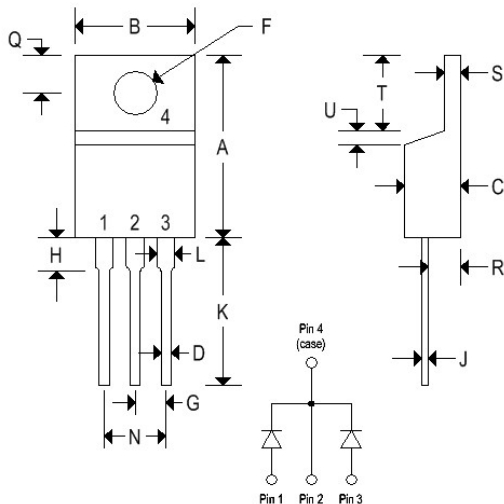
## ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise noted)

Parameter	Symbol	MUR				Unit
		1605CTR	1610CTR	1615CTR	1620CTR	
Maximum instantaneous forward voltage <sup>(1)</sup> ( $I_F = 8.0\text{A}, T_C = 25^\circ\text{C}$ ) ( $I_F = 8.0\text{A}, T_C = 150^\circ\text{C}$ )	$V_F$		1.2 1.1			V
Maximum instantaneous reverse current <sup>(1)</sup> (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 ( $I_F = 1.0\text{A}, di/dt = 50\text{A}/\mu\text{s}$ ) ( $I_F = 0.5\text{A}, di/dt = 100\text{A}/\mu\text{s}$ )	$t_{rr}$		85 35			ns

Note 1: Pulse test: Pulse width = 5.0ms, duty cycle = 10%.

## MECHANICAL CHARACTERISTICS

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

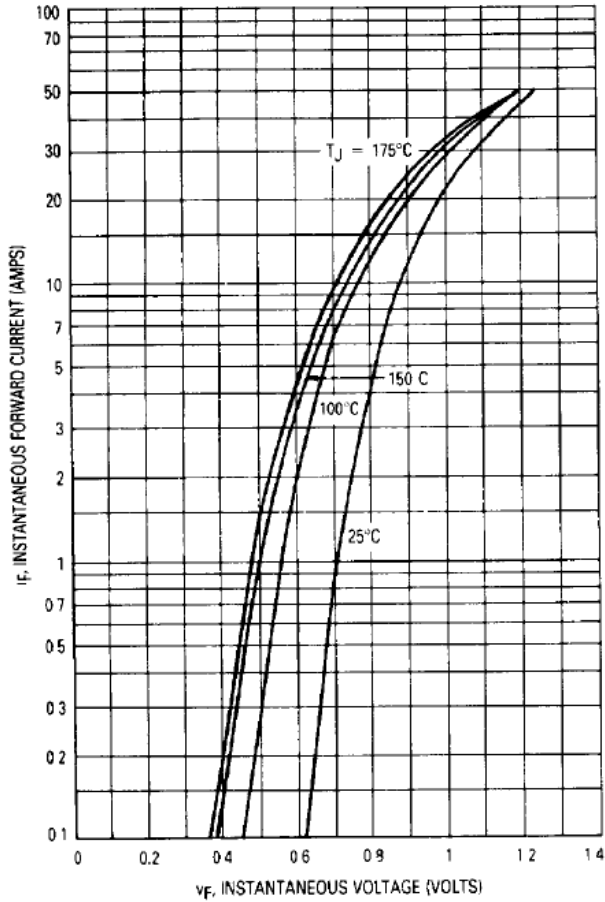


	TO-220AB			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.570	0.620	14.480	15.750
B	0.380	0.405	9.660	10.280
C	0.160	0.190	4.070	4.820
D	0.025	0.035	0.640	0.880
F	0.142	0.147	3.610	3.730
G	0.095	0.105	2.420	2.660
H	0.110	0.155	2.800	3.930
J	0.018	0.025	0.460	0.640
K	0.500	0.562	12.700	14.270
L	0.045	0.060	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

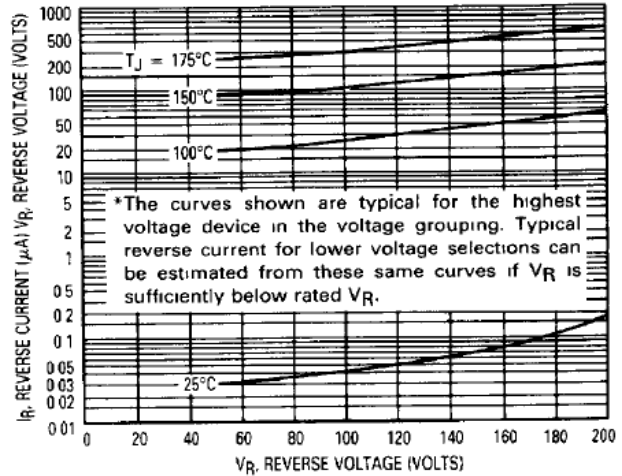
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## MUR1605CTR-MUR1620CTR 16A SCHOTTKY RECTIFIER

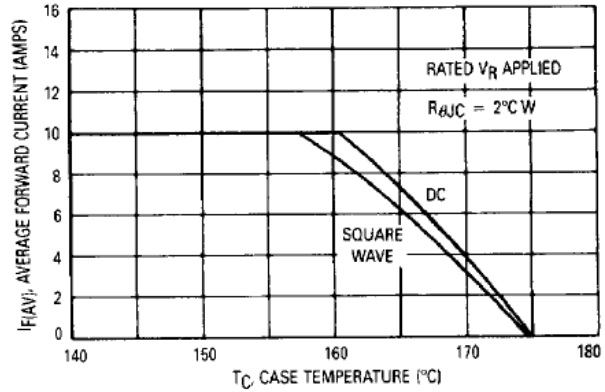
Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).  
 Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.



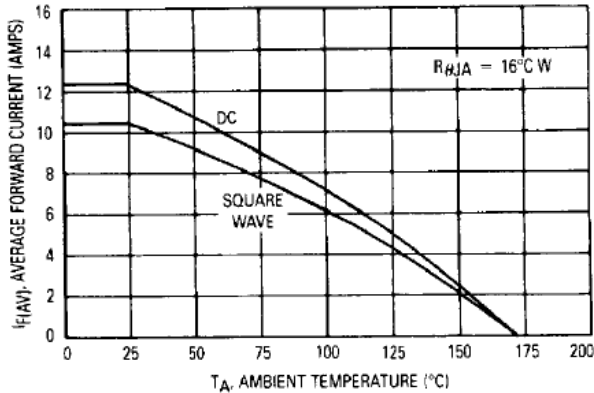
**Figure 1. Typical Forward Voltage (Per Leg)**



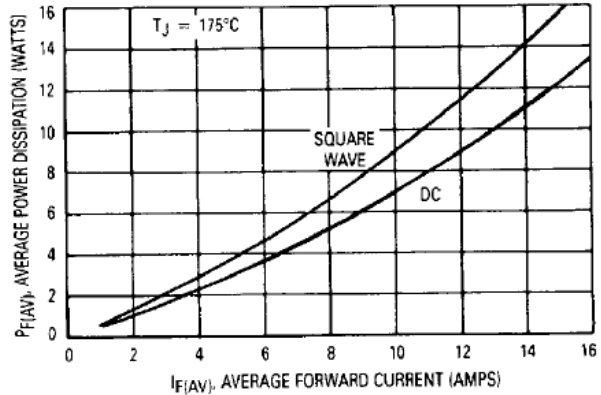
**Figure 2. Typical Reverse Current\* (Per Leg)**



**Figure 3. Current Derating, Case (Per Leg)**



**Figure 4. Current Derating, Ambient (Per Leg)**



**Figure 5. Power Dissipation (Per Leg)**

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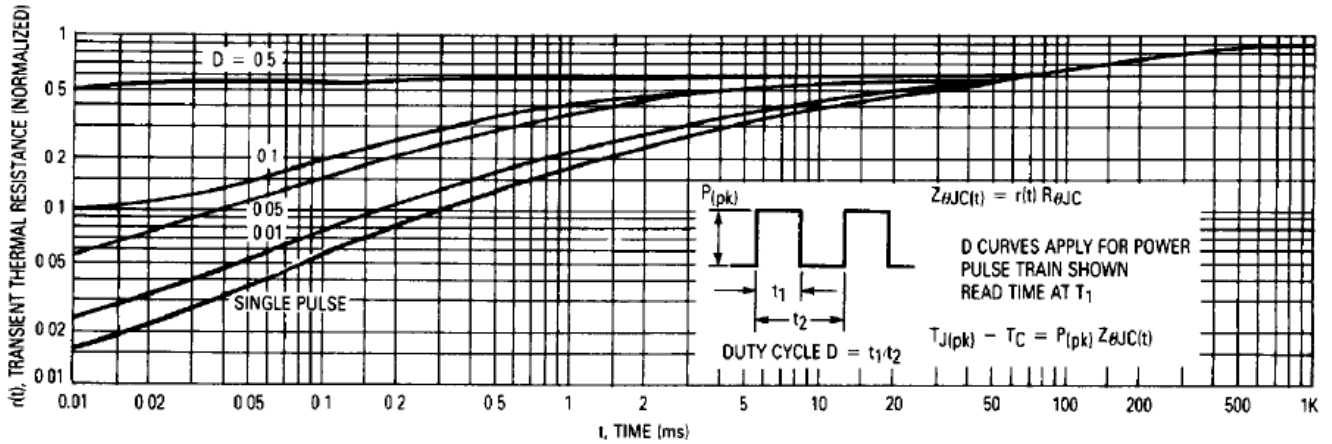


Figure 6. Thermal Response

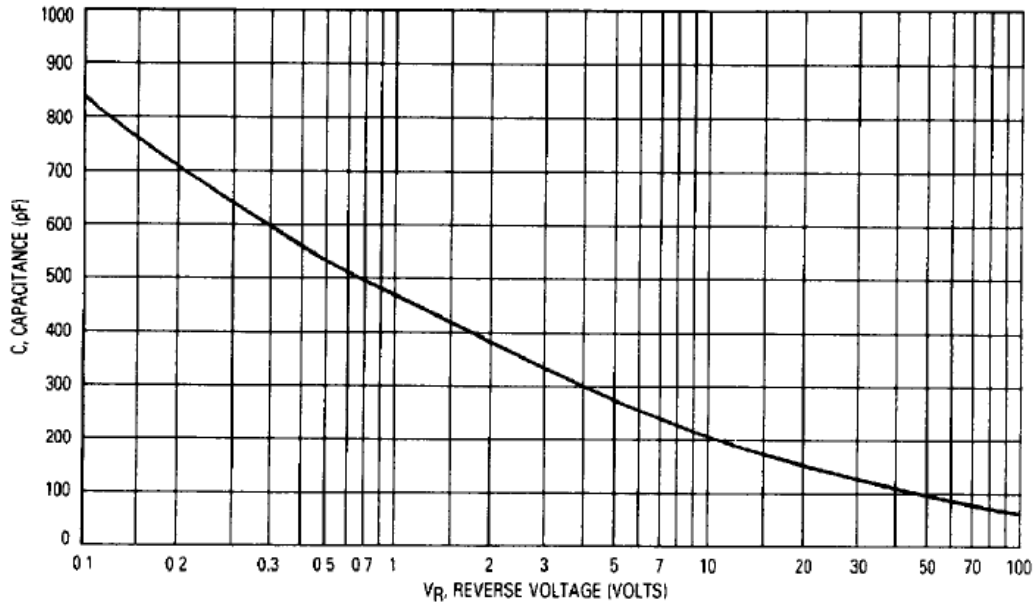


Figure 7. Typical Capacitance (Per Leg)