

# DIGITRON SEMICONDUCTORS

MURH805CT-MURH860CT

8A ULTRA FAST RECOVERY RECTIFIER

## MAXIMUM RATINGS

Rating	Symbol	MURH					Unit
		805CT	810CT	820CT	840CT	860CT	
Peak repetitive reverse voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	
DC blocking voltage	$V_R$	50	100	200	400	600	
Average forward current (Rated $V_R$ )	$I_{F(AV)}$	8 @ $T_C = 120^\circ\text{C}$					A
Peak forward surge current (8.3ms, half sine)	$I_{FSM}$	65					A
Operating and storage junction temperature range	$T_J, T_{stg}$	-55 to +150					$^\circ\text{C}$

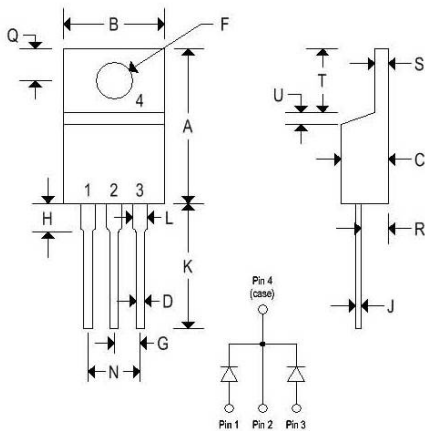
## ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise noted)

Parameter	Symbol	MURH					Unit
		805CT	810CT	820CT	840CT	860CT	
Maximum instantaneous forward voltage <sup>(1)</sup> ( $I_F = 4\text{A}, T_J = 25^\circ\text{C}$ )	$V_F$	2.2				2.8	V
Maximum DC reverse current <sup>(1)</sup> (Rated dc voltage, $T_J = 25^\circ\text{C}$ ) (Rated dc voltage, $T_J = 100^\circ\text{C}$ )	$I_R$	10 800					$\mu\text{A}$
Maximum reverse recovery time ( $I_F = 1\text{A}, di/dt = 50\text{A}/\mu\text{s}$ )	$t_{rr}$	35			50		ns

Note 1: Pulse test: Pulse width = 300 $\mu\text{s}$ , duty cycle = 2.0%.

## 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	9.680	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

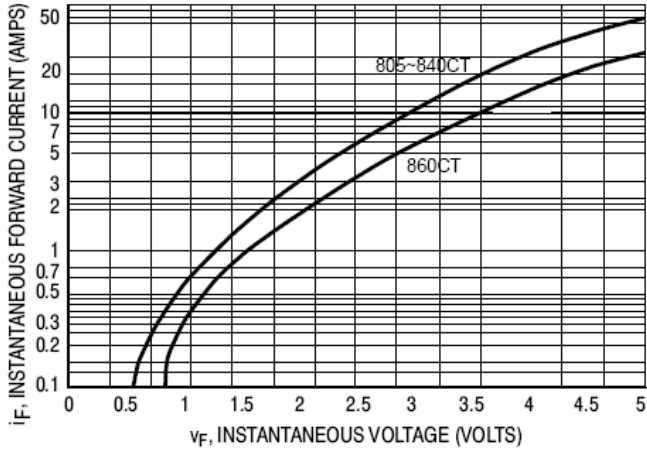
Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

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Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics

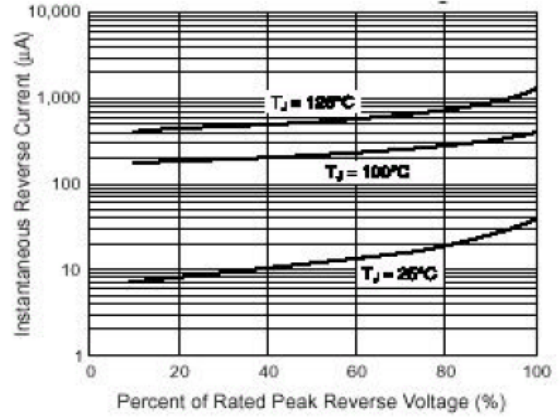
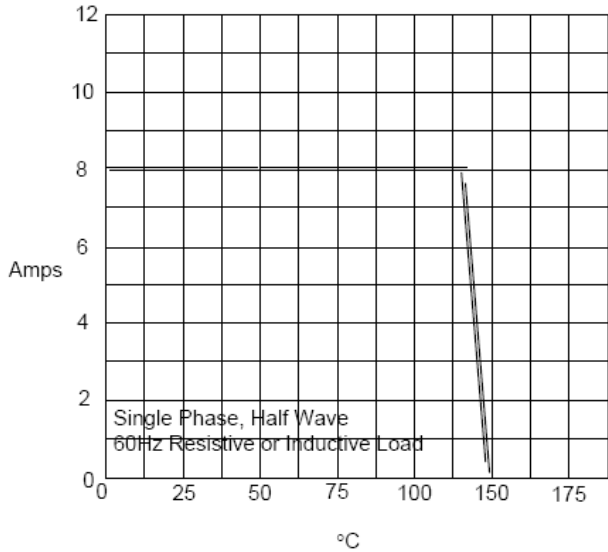
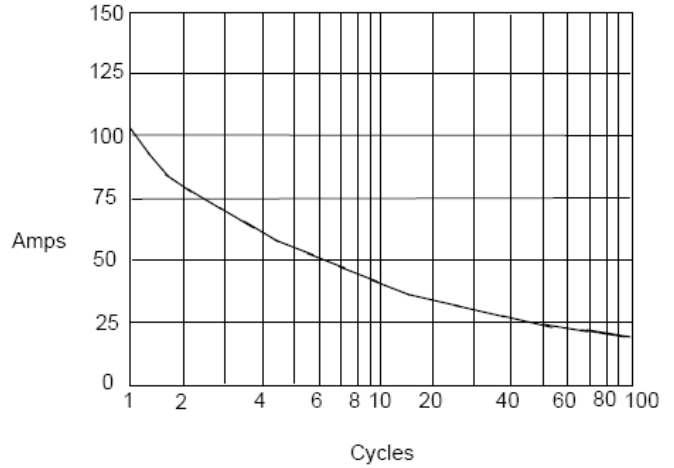


Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature -  $^\circ C$

Figure 4  
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles