

## Descriptions

This is Ultrafast Recovery Diode in a TO-220AC Plastic Package

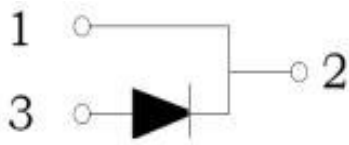
## Features

Ultrafast recovery time, popular TO-220AC package, low forward voltage, low leakage current, reverse voltage to 600V.

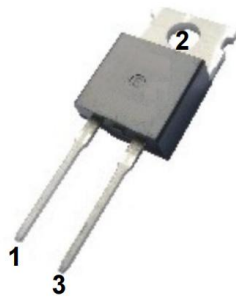
## Applications

These devices are intended for output rectifiers and flywheel diodes in a variety of high-frequency pulse-width modulated switching regulators. Their low stored charge and attendant fast reverse-recovery behavior minimize electrical noise generation and in many circuits markedly reduce the turn-on dissipation of associated power switching transistors

## Equivalent Circuit



## Pinning



PIN1、 2 : Cathode

PIN 3 : Anode

## Marking

See Marking Instructions

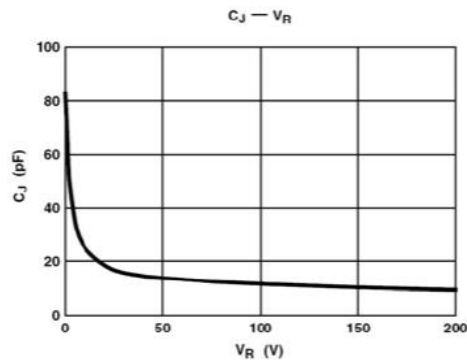
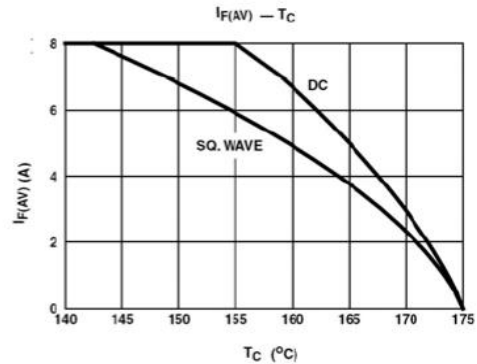
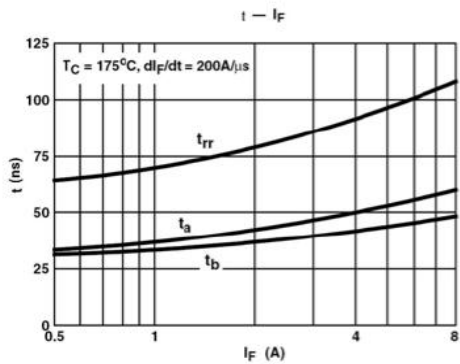
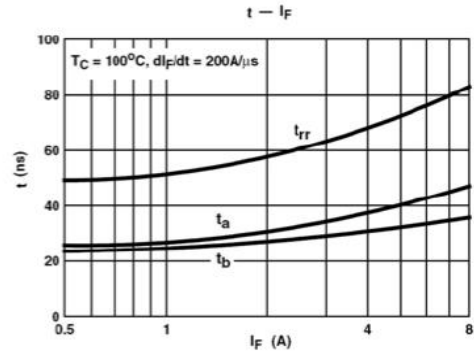
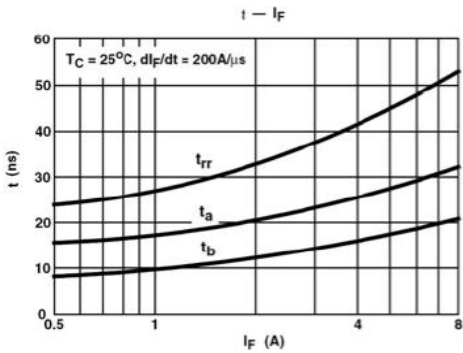
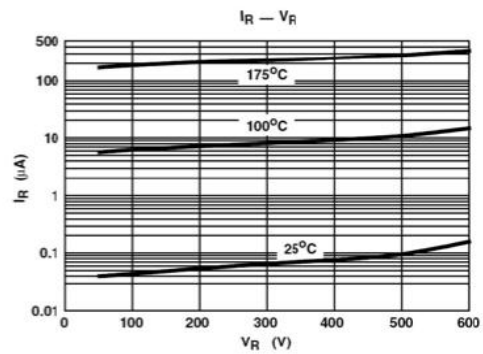
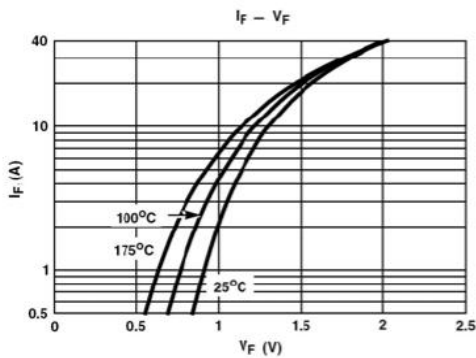
**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	600	V
Working Peak Reverse Voltage	$V_{RWM}$	600	V
DC Blocking Voltage	$V_R$	600	V
Average Forward Current	$I_F$	8	A
Non Repetitive Peak Surge Current	$I_{FRM}$	16	A
Peak forward surge current	$I_{FSM}$	100	A
Power Dissipation	$P_{C(T_C=25^\circ C)}$	75	W
Junction Temperature Range	$T_J$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

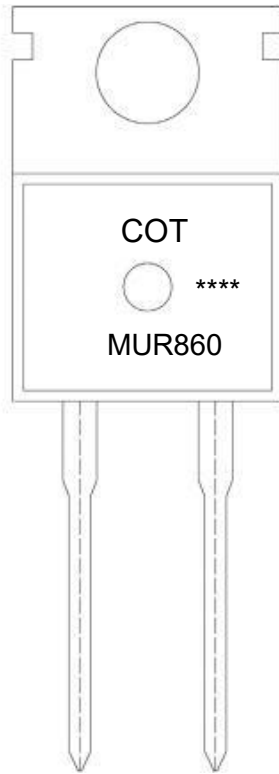
**Electrical Characteristics(Ta=25°C)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=8A$			1.5	V
		$I_F=8A$ $T_C=150^\circ C$			1.2	V
Instantaneous Reverse Current	$I_R$	$V_R=600V$			100	$\mu A$
		$V_R=600V$ $T_C=150^\circ C$			500	$\mu A$
Reverse Recovery Time	$t_{rr}$	$I_F=1A$ $dI_F/dt=200A/\mu S$			60	ns
		$I_F=8A$ $dI_F/dt=200A/\mu S$			70	ns
Time To Reach Peak Reverse forward current	$t_a$	$I_F=8A$ $dI_F/dt=200A/\mu S$		32		ns
Time From Peak IRM Projected zero crossing of IRM based on a straight line peak through 25%	$t_b$	$I_F=8A$ $dI_F/dt=200A/\mu S$		21		ns
Reverse Recovery charge	$Q_{RR}$	$I_F=8A$ $dI_F/dt=200A/\mu S$		195		nC
Junction Capacitance	$C_J$	$V_R=10V$ $I_F=0A$		25		pF

Electrical Characteristic Curve



**Marking Instructions**



Note:  
 COT: Company Code  
 MUR860 : Product Type.  
 \*\*\*\*: Lot No. Code, code change with Lot No.

**Packaging SPEC**

**BULK**

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-220/F/AC	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

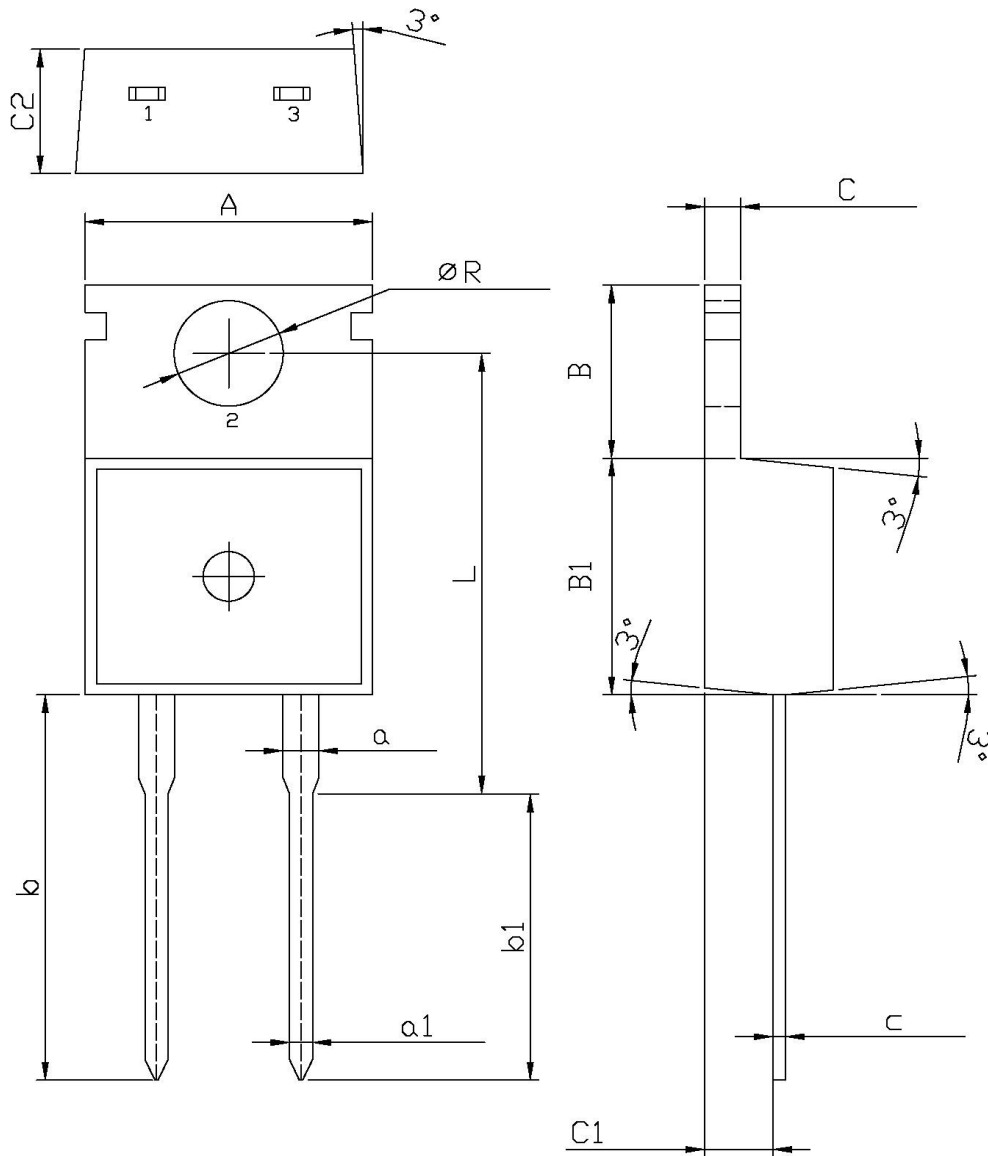
**TUBE**

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-220/F/AC	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

Package Dimensions

TO-220AC

Unit:mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	B	6.3	6.7
R	3.56	3.64	B1	9.0	9.4
L	15.7	16.1	C1	2.2	2.6
b	12.6	13.6	C	1.2	1.4
b1	9.6	10.6	c	0.4	0.6
a	1.22	1.32	C2	4.3	4.7
a1	0.7	0.9			