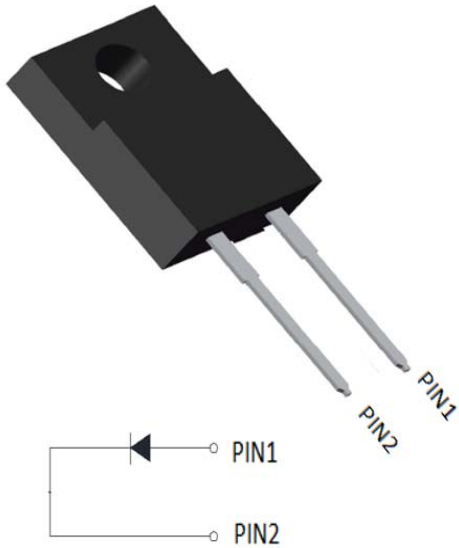


## Ultra-Fast Recovery Diodes 8A FRED Pt



### Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** ITO-220AC  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR860FL
Device marking code			MUR860FL
Repetitive Peak Reverse Voltage	VRRM	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>c</sub> (FIG.1)	I <sub>O</sub>	A	8
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	50
Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C,	I <sup>2</sup> t	A <sup>2</sup> s	12.5
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150
Junction capacitance @4V,1MHz	C <sub>j</sub>	pF	42



# MUR860FL

## ■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	$V_{FM}$	V	IFM=8.0A @Tj=25°C	-	2.15	3.0
			IFM=8.0A @Tj=150°C			2.0
DC reverse current at rated DC blocking voltage per diode	$I_{RRM1}$	uA	VRM=VRRM Tj=25°C	-	-	10
	$I_{RRM2}$		VRM=VRRM Tj=150°C	-	25	50
Reverse Recovery Time	$T_{rr}$	ns	IF=0.5A IRM=1A IRR=0.25A Tj=25°C	-	17	25
Peak recovery current	$I_{RRM}$	A	Tj=25°C	-	59.68	-
			Tj=125°C	-	100.29	-
Reverse recovery charge	$Q_{rr}$	nC	Tj=25°C	-	71.18	-
			Tj=125°C	-	219.81	-

## ■Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR860FL
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	°C/W	4.0
Thermal Resistance	Between junction and Air	$R_{\theta J-A}$	°C/W	50

## ■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR860FL	Approximate 1.6	50	1000	5000	Tube

## ■Characteristics (Typical)

FIG1:Io -Tc Curve

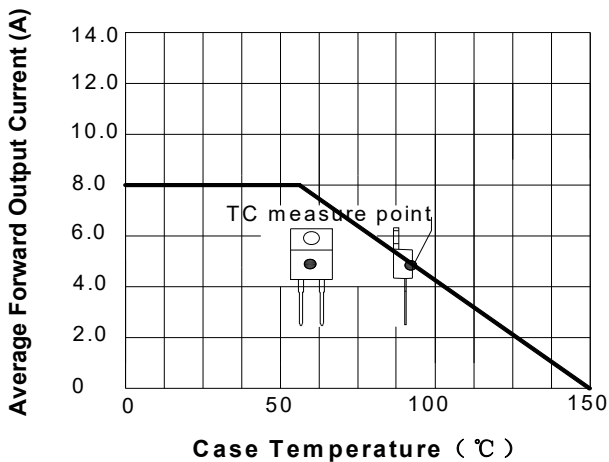
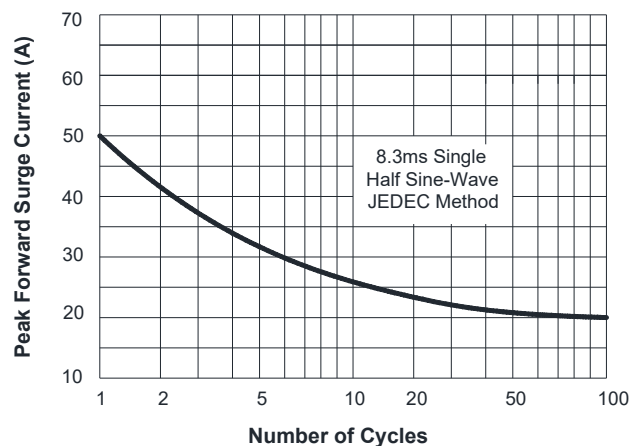
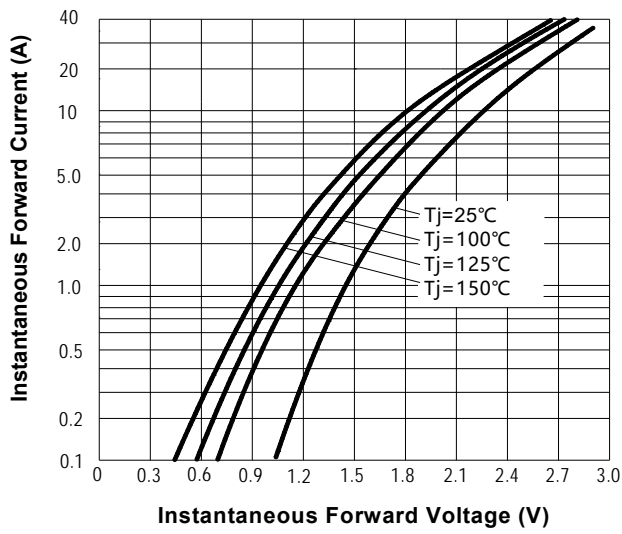


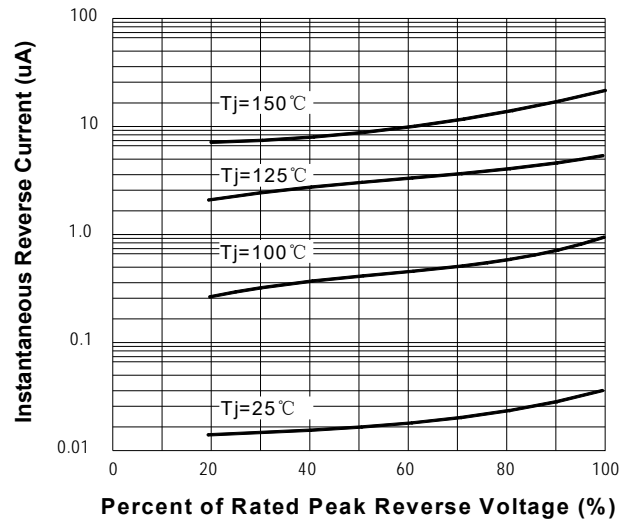
FIG2:Surge Forward Current Capability



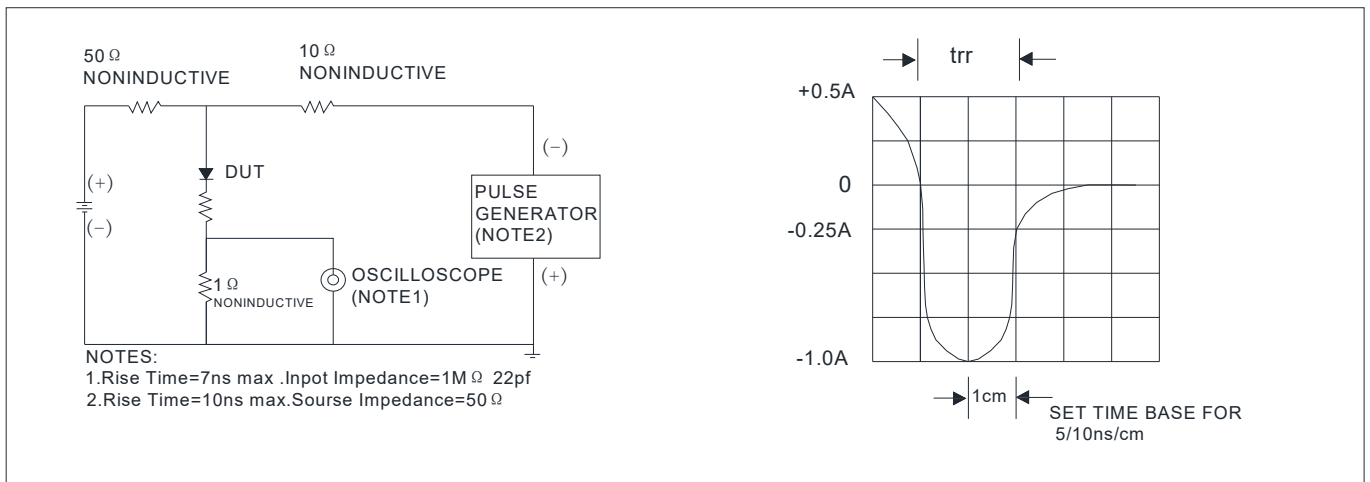
**FIG3: Forward Voltage**



**FIG.4: Instantaneous Reverse Characteristics**



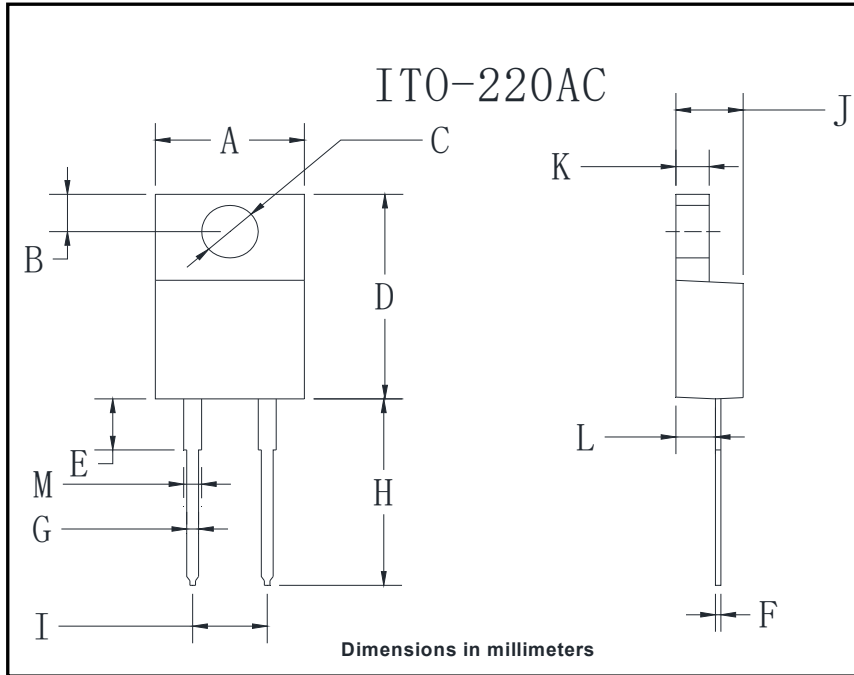
**FIG.5: Diagram of circuit and Testing wave form of reverse recovery time**





# MUR860FL

## ■Outline Dimensions



ITO-220AC		
Dim	Min	Max
A	9.8	10.2
B	2.25	2.75
C	2.95	3.45
D	14.75	15.25
E	3.5	4.1
F	0.45	0.75
G	0.45	0.75
H	13.35	14.15
I	4.97	5.23
J	4.3	4.8
K	2.5	2.74
L	2.58	2.82
M	1.03	1.43



# MUR860FL

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