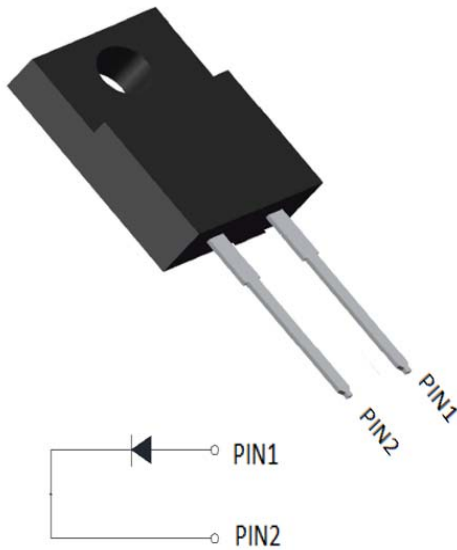


Ultra-Fast Recovery Diodes 10A FRED



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_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURL1060F
Device marking code			MURL1060F
Repetitive Peak Reverse Voltage	VRRM	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	100
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	41
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	115
Mounting torque @recommend torque: 5kg·cm	Tor	kg·cm	8



MURL1060F

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max	
Instantaneous forward voltage drop per diode	V_{FM}	V	IFM=10.0A @Tj=25°C	-	1.15	1.3	
			IFM=10.0A @Tj=150°C	-	-	1.1	
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	VRM=VRRM Tj=25°C	-	-	5.0	
	I_{RRM2}		VRM=VRRM Tj=150°C	-	25	200	
Reverse Recovery Time	Trr	ns	IF=0.5A IRM=1A IRR=0.25A Tj=25°C	-	42	75	
			Tj=25°C	-	160	-	
			Tj=125°C	-	250	-	
Peak recovery current	I_{RRM}	A	Tj=25°C	IF=10A di/dt=-200A/us VRM=200V	-	6.5	-
			Tj=125°C		-	10.0	-
Reverse recovery charge	Qrr	nC	Tj=25°C		-	565	-
			Tj=125°C		-	1250	-

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

PARAMETER		SYMBOL	UNIT	MURL1060F
Thermal Resistance	Between junction and case	RθJ-C	°CW	4.0
Thermal Resistance	Between junction and Air	RθJ-A	°CW	50

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURL1060F	Approximate 1.6	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

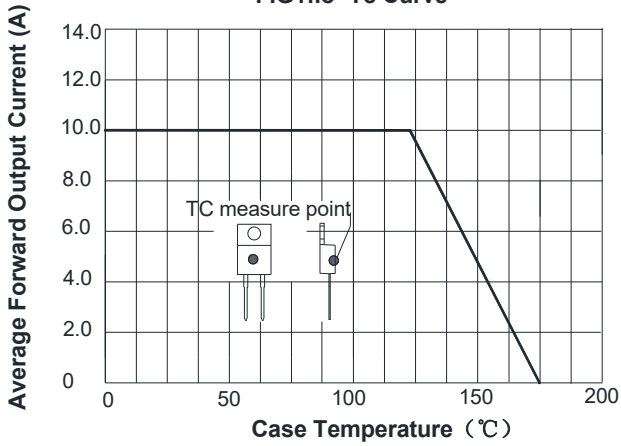


FIG2: Surge Forward Current Capability

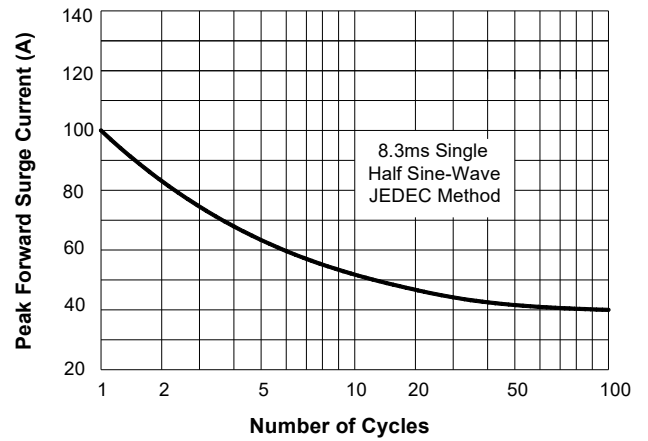


FIG3: Forward Voltage

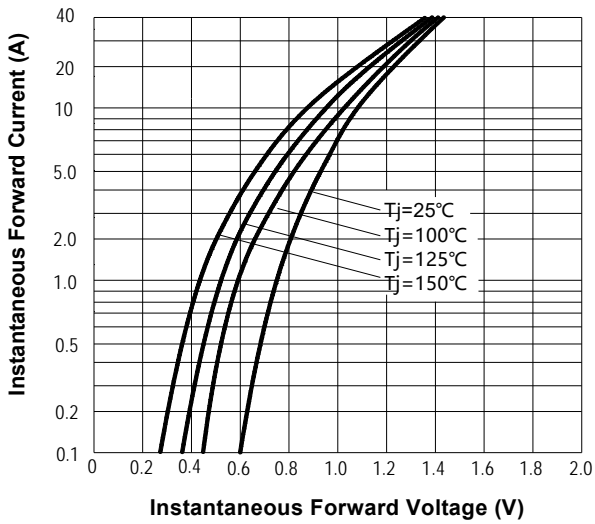


FIG4: Instantaneous Reverse Characteristics

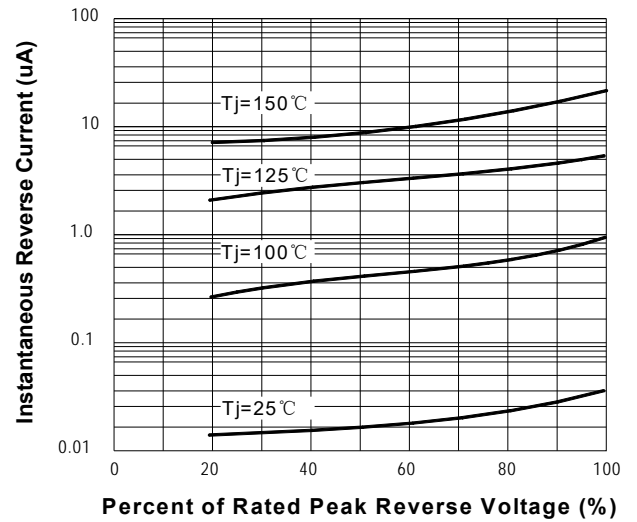
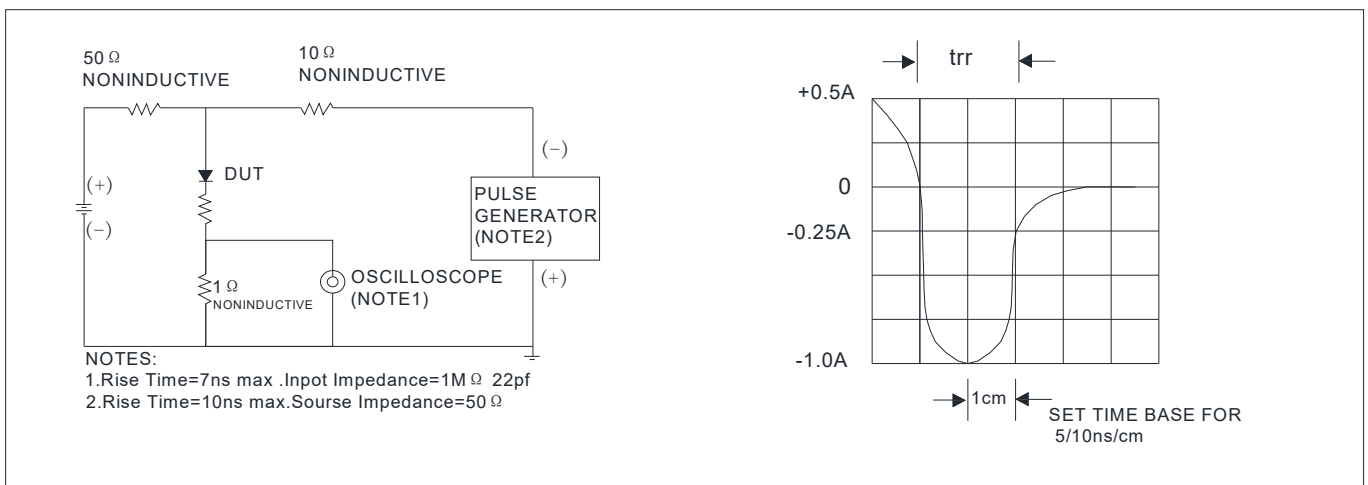


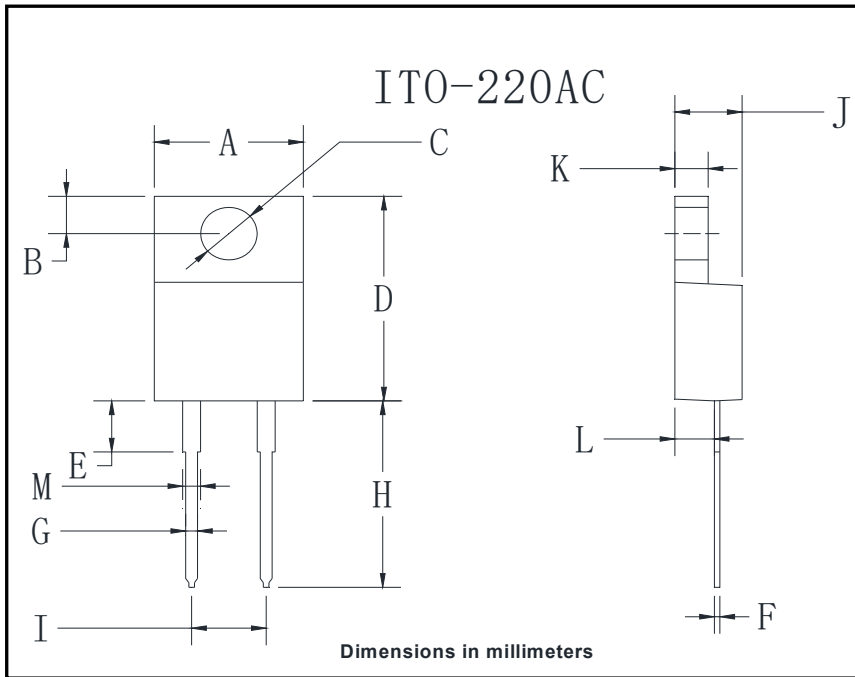
FIG5: Diagram of circuit and Testing wave form of reverse recovery time





MURL1060F

■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



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