

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 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1060F
Device marking code			MUR1060F
Repetitive Peak Reverse Voltage	V _{RRM}	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 _a =25	I _{FSM}	A	120
Current Squared Time @1ms t 8.3ms T _j =25	I ² t	A ² s	60
Storage Temperature	T _{stg}		



MUR1060F

Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max	
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=10.0A$ @ $T_j=25$	-	1.45	1.6	
			$I_{FM}=10.0A$ @ $T_j=150$		1.15	1.3	
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	$V_{RM}=V_{RRM}$ $T_j=25$	-	-	5.0	
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_j=150$	-	15	200	
Reverse Recovery Time	T_{RR}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25$	-	25	35	
			$T_j=25$	-	90	-	
			$T_j=125$	-	150		
Peak recovery current	I_{RRM}	A	$T_j=25$	$I_F=10A$ $di/dt=-200A/us$ $V_{RM}=200V$	-	4.3	-
			$T_j=125$		-	7.0	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25$		-	200	-
			$T_j=125$		-	550	-

Thermal Characteristics $T_j=25$ Unless otherwise specified

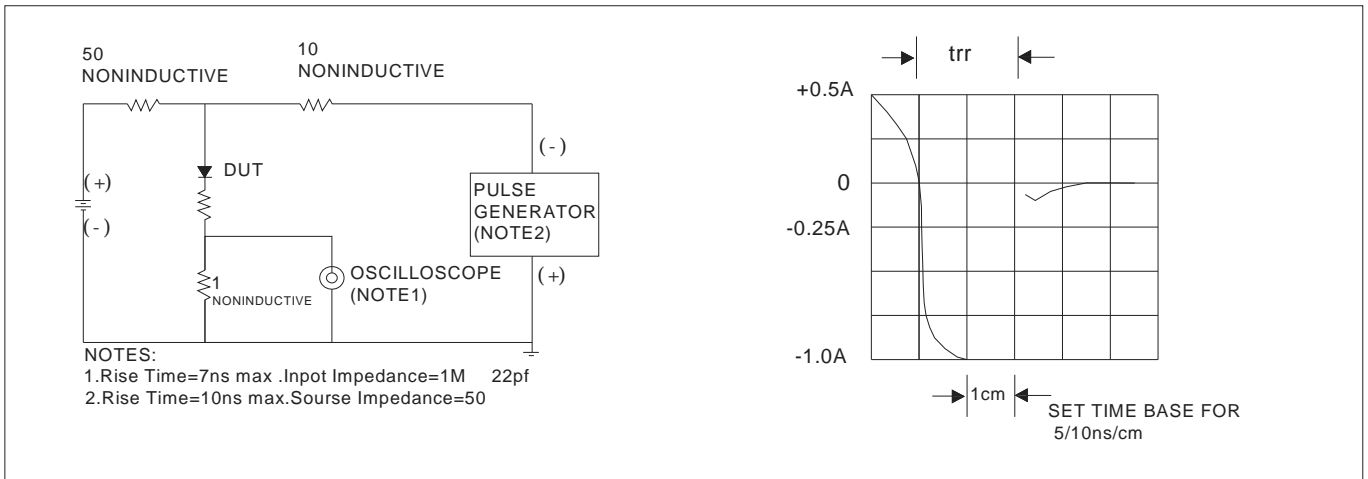
PARAMETER		SYMBOL	UNIT	MUR1060F
Thermal Resistance	Between junction and case	R_{J-C}	/W	4.0
	Between junction and Air	R_{J-A}	/W	50

Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	

Characteristics (Typical)

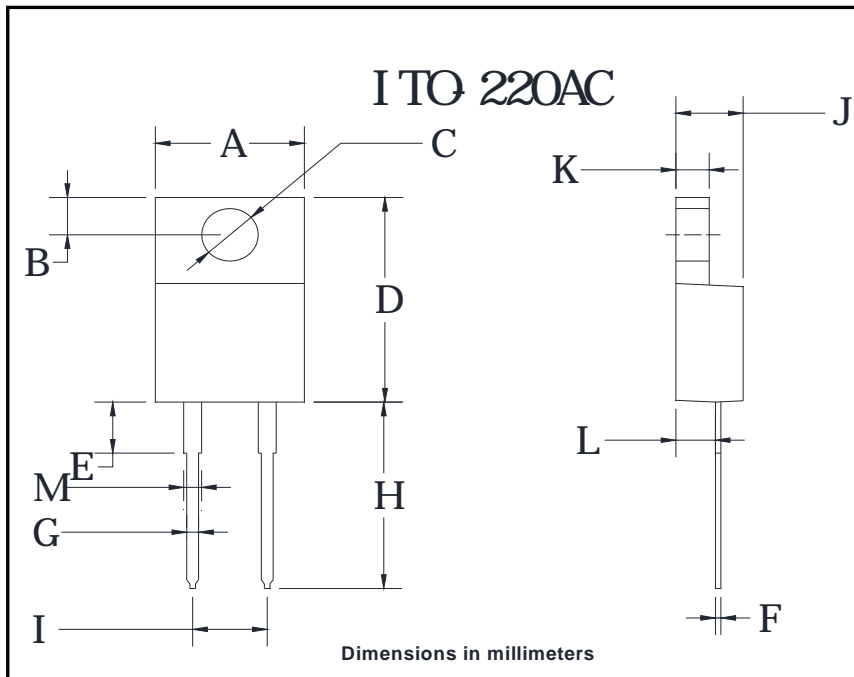
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





MUR1060F

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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