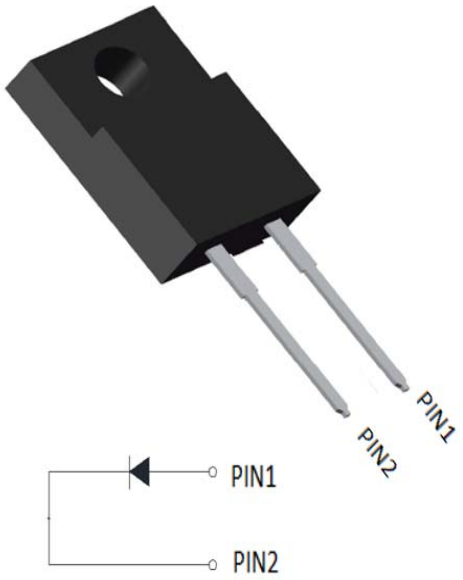
Ultra-Fast Recovery Diodes 12A FRED Pt



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_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1260FL
Device marking code			MUR1260FL
Repetitive Peak Reverse Voltage	V_{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T_C(FIG.1)	I_O	A	12
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T_a=25℃	I_{FSM}	A	150
Current Squared Time @1ms≤t≤8.3ms Tj=25℃,	I^2t	A^2s	93
Storage Temperature	Tstg	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150
Junction capacitance @4V,1MHz	Cj	pF	92

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	IFM=12.0A @Tj=25℃		-	1.75	2.6
			IFM=12.0A @Tj=150℃		-	1.3	-
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	VRM=VRRM Tj=25℃		-	-	10
	I_{RRM2}		VRM=VRRM Tj=150℃		-	30	200
Reverse Recovery Time	T_{rr}	ns	IF=0.5A IRM=1A IRR=0.25A Tj=25℃		-	20	25
Peak recovery current	I_{RRM}	A	Tj=25℃	IF=12A di/dt=-200A/us VRM=200V	-	2.32	-
			Tj=125℃		-	5.3	-
Reverse recovery charge	Q_{rr}	nC	Tj=25℃		-	44.27	-
			Tj=125℃		-	230.04	-

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MUR1260FL
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	4.0
Thermal Resistance	Between junction and Air	$R_{\theta J-A}$	℃/W	50

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1260FL	Approximate 1.6	50	1000	5000	Tube

■Characteristics (Typical)

FIG1:Io -Tc Curve

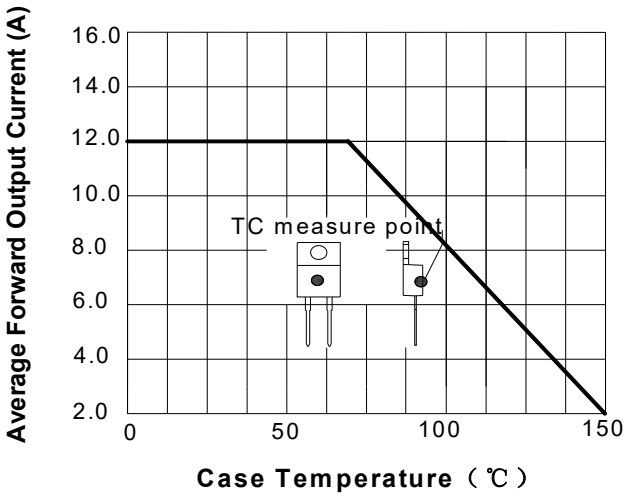


FIG2:Surge Forward Current Capability

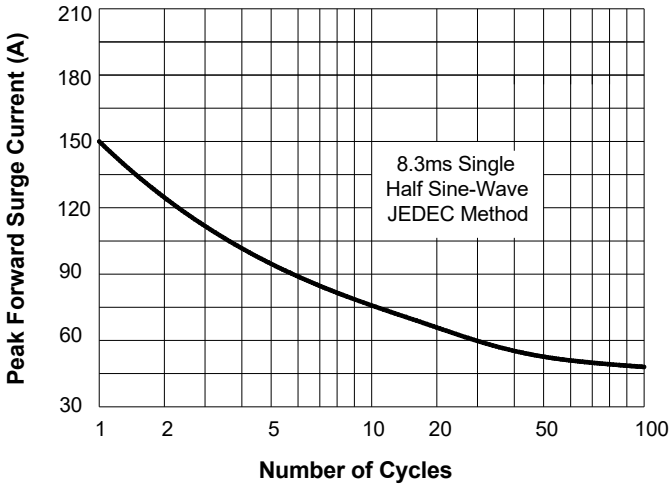


FIG3: Forward Voltage

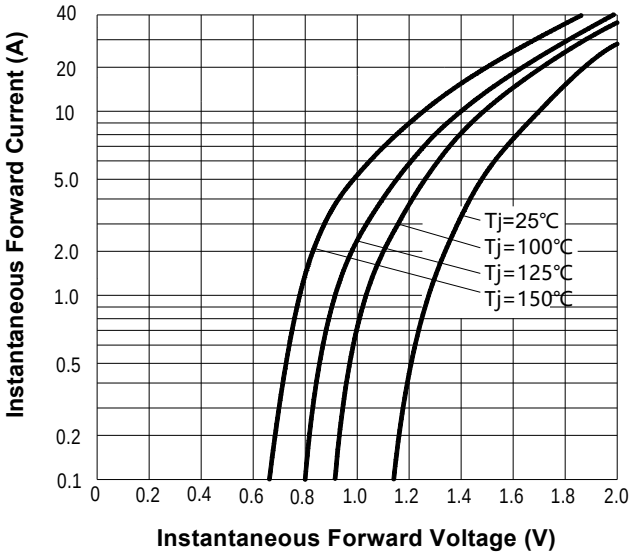


FIG.4: Instantaneous Reverse Characteristics

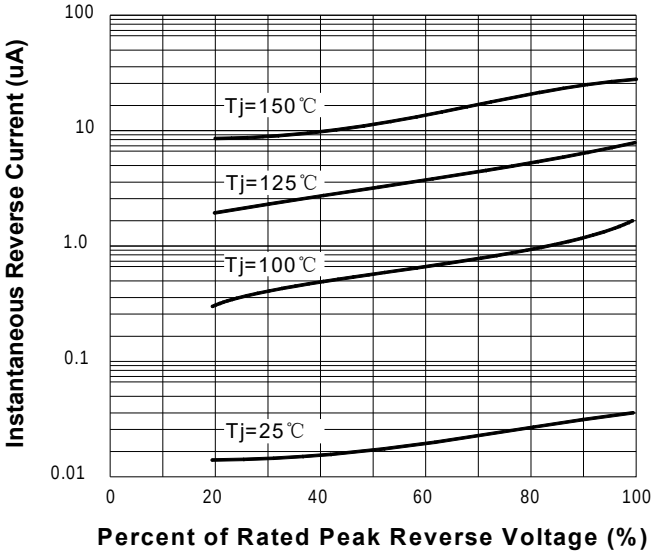
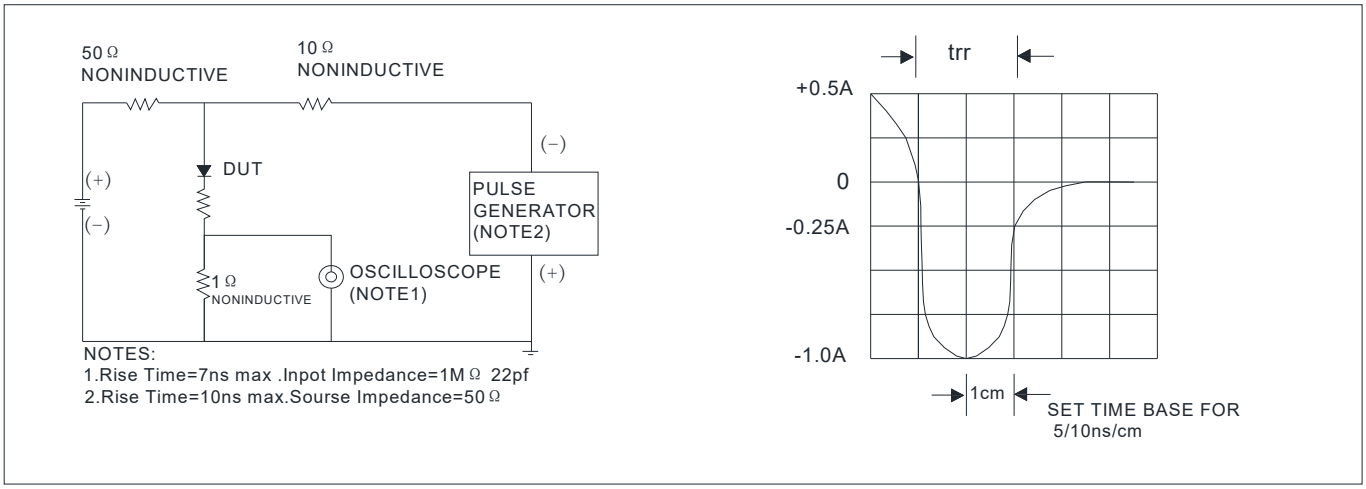
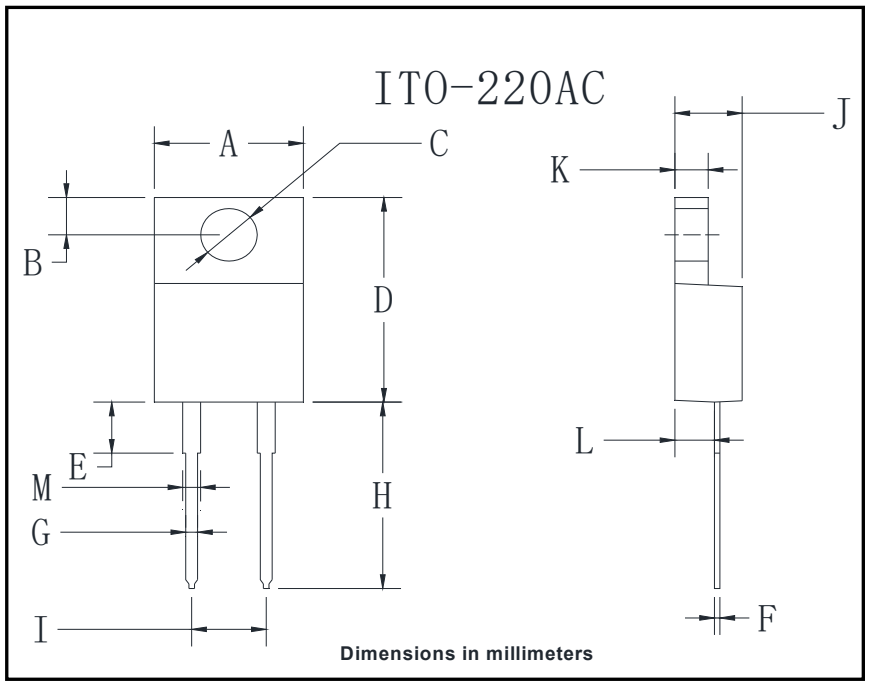


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Outline Dimensions



ITO-220AC		
Dim	Min	Max
A	9.7	10.7
B	2.15	3.25
C	2.6	3.8
D	14.4	15.9
E	3.1	4.5
F	0.4	0.8
G	0.4	0.9
H	12.7	14.2
I	3.6	5.9
J	3.9	5.1
K	2.1	3.56
L	2.1	3.2
M	1.0	1.8

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