

■ **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-220AB  
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** ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1060FCT
Device marking code			MUR1060FCT
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, $T_a=25^\circ\text{C}$	$I_{FSM}$	A	50
Current Squared Time @1ms $\leq t \leq$ 8.3ms $T_j=25^\circ\text{C}$ ,	$I^2t$	A <sup>2</sup> s	10
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-55 ~ +150
Junction Temperature	$T_j$	$^\circ\text{C}$	-55 ~ +150
Junction capacitance @4V,1MHz	$C_j$	pF	20

■ **ELECTRICAL CHARACTERISTICS** ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	$V_{FM}$	V	$I_{FM}=5.0A$ @ $T_j=25^\circ\text{C}$	-	1.45	1.6
			$I_{FM}=5.0A$ @ $T_j=150^\circ\text{C}$	-	1.15	1.3
DC reverse current at rated DC blocking voltage per diode	$I_{RRM1}$	uA	$V_{RM}=V_{RRM}$ $T_j=25^\circ\text{C}$	-	-	10
	$I_{RRM2}$		$V_{RM}=V_{RRM}$ $T_j=150^\circ\text{C}$	-	35	200
Reverse Recovery Time	$T_{rr}$	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25^\circ\text{C}$	-	25	35
Peak recovery current	$I_{RRM}$	A	$T_j=25^\circ\text{C}$	-	3.06	-
			$T_j=125^\circ\text{C}$	-	5.07	-
Reverse recovery charge	$Q_{rr}$	nC	$T_j=25^\circ\text{C}$	-	78.88	-
			$T_j=125^\circ\text{C}$	-	280	-

■ **THERMAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR1060FCT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	4.0
Thermal Resistance	Between junction and Air	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	50

■ **PACKAGING INFORMATION**

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1060FCT	Approximate 1.6	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

FIG1:  $I_o - T_c$  Curve

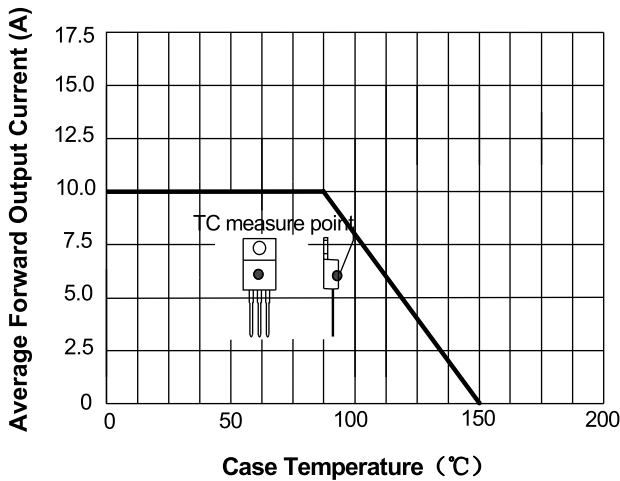


FIG2: Surge Forward Current Capability

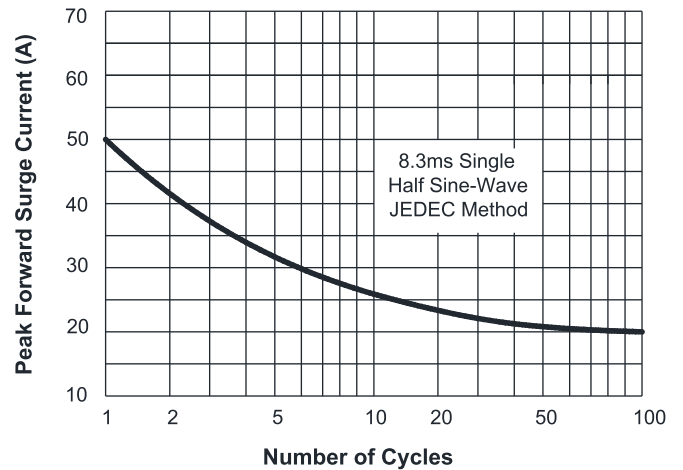


FIG3: Forward Voltage

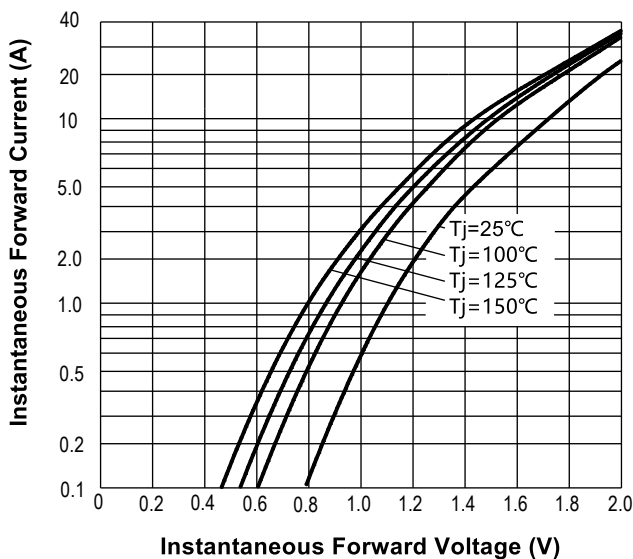
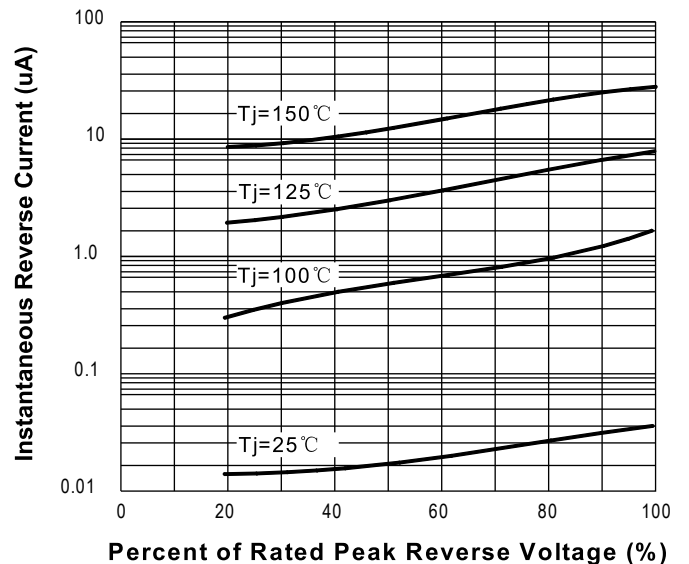
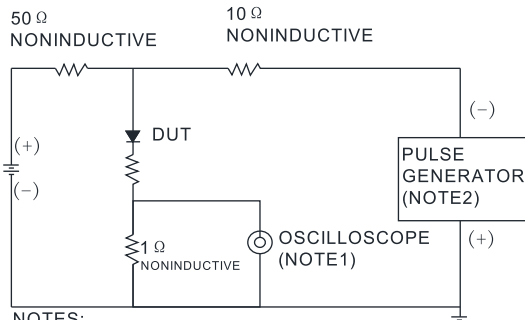


FIG4: Instantaneous Reverse Characteristics

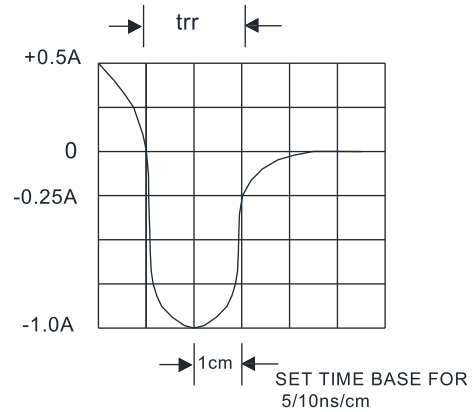


**FIG.5: Diagram of circuit and Testing wave form of reverse recovery time**

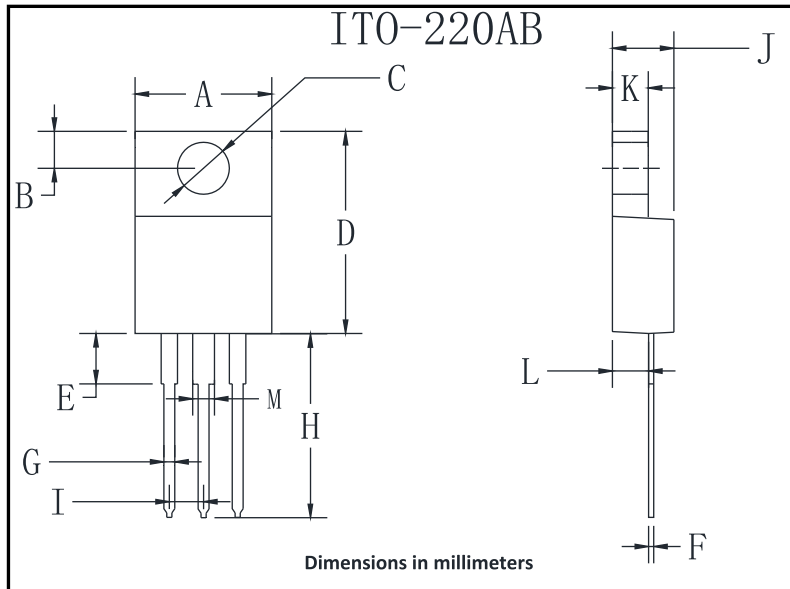


NOTES:

1. Rise Time=7ns max .Inpot Impedance=1M $\Omega$  22pf
2. Rise Time=10ns max.Source Impedance=50 $\Omega$



**OUTLINE DIMENSIONS**



ITO-220AB		
Dim	Min	Max
A	9.8	10.2
B	2.25	2.75
C	2.95	3.45
D	14.75	15.25
E	3.05	3.95
F	0.45	0.75
G	0.45	0.75
H	13.4	14.2
I	2.35	2.75
J	4.3	4.8
K	2.58	2.82
L	2.58	2.82
M	1.47	1.77