

■ 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1040FCT
Device marking code			MUR1040FCT
Repetitive Peak Reverse Voltage	V _{RRM}	V	400
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°C	I _{FSM}	A	50
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	10
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150
Junction capacitance @4V,1MHz	C _j	pF	50

■ ELECTRICAL CHARACTERISTICS (T_a=25°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°C	-	1.15	1.25
			I _{FM} =5.0A @T _j =150°C	-	0.9	1
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	uA	V _{RM} =V _{RRM} T _j =25°C	-	-	5
	I _{RRM2}		V _{RM} =V _{RRM} T _j =150°C	-	25	50
Reverse Recovery Time	T _{rr}	ns	I _E =0.5A I _{RM} =1A I _{RR} =0.25A T _j =25°C	-	25	35
Peak recovery current	I _{RRM}	A	T _j =25°C	-	3.49	-
			T _j =125°C	I _E =5A di/dt=-200A/us V _{RM} =200V	-	5.71
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	-	55.22	-
			T _j =125°C	-	130	-

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

PARAMETER		SYMBOL	UNIT	MUR1040FCT
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
MUR1040FCT	Approximate 1.6	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o - T_c Curve

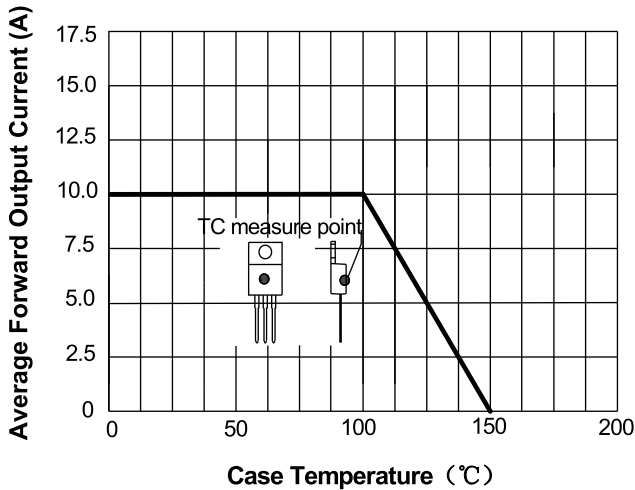


FIG2: Surge Forward Current Capability

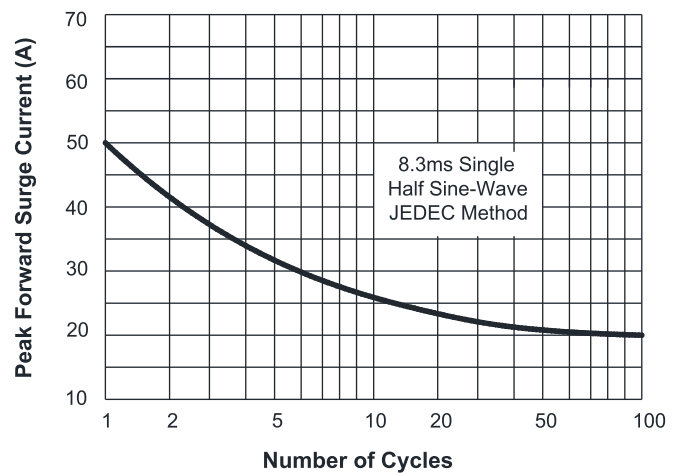


FIG3: Forward Voltage

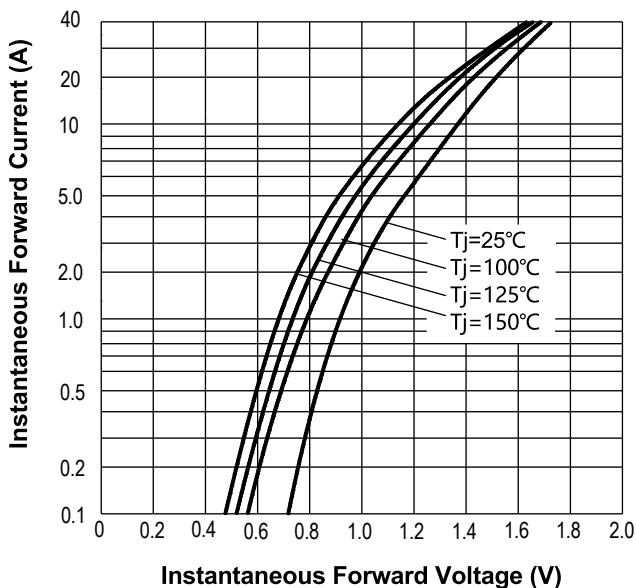


FIG4: Instantaneous Reverse Characteristics

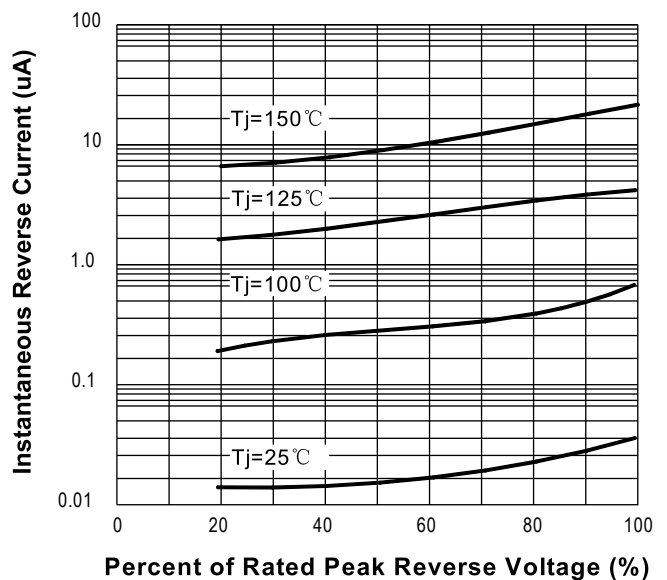
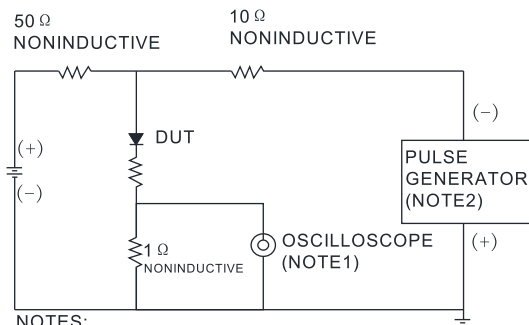
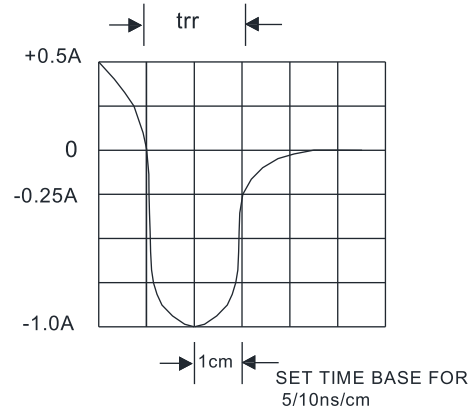


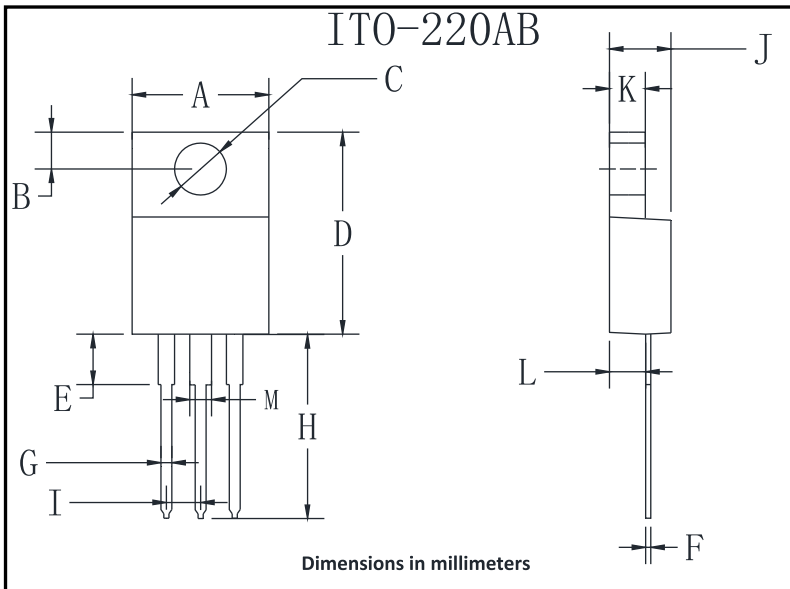
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



NOTES:
1. Rise Time=7ns max .Inpot Impedance=1M Ω 22pf
2. Rise Time=10ns max. Source Impedance=50 Ω



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