

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

PARAMETER	SYMBOL	UNIT	MUR1660F
Device marking code			MUR1660F
Repetitive Peak Reverse Voltage	V_{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T_c (FIG.1)	I_O	A	16
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^{\circ}\text{C}$	I_{FSM}	A	150
Current Squared Time @1ms \leq t \leq 8.3ms $T_j=25^{\circ}\text{C}$,	I^2t	A ² s	93
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	98

■ **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	$I_{FM}=16.0\text{A}$ @ $T_j=25^{\circ}\text{C}$	-	1.45	1.6
			$I_{FM}=16.0\text{A}$ @ $T_j=150^{\circ}\text{C}$	-	1.25	-
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}		$V_{RM}=V_{RRM}$ $T_j=150^{\circ}\text{C}$	-	30	200
Reverse Recovery Time	T_{RR}	ns	$I_F=0.5\text{A}$ $I_{RM}=1\text{A}$ $I_{RR}=0.25\text{A}$ $T_j=25^{\circ}\text{C}$	-	26	35
Peak recovery current	I_{RRM}	A	$T_j=25^{\circ}\text{C}$	-	4.5	-
			$T_j=125^{\circ}\text{C}$	-	9.5	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25^{\circ}\text{C}$	-	240	-
			$T_j=125^{\circ}\text{C}$	-	1000	-

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

PARAMETER		SYMBOL	UNIT	MUR1660F
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C}/\text{W}$	4.0
	Between junction and Air	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	50

■ **PACKAGING INFORMATION**

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1660F	Approximate 1.6	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o - T_c Curve

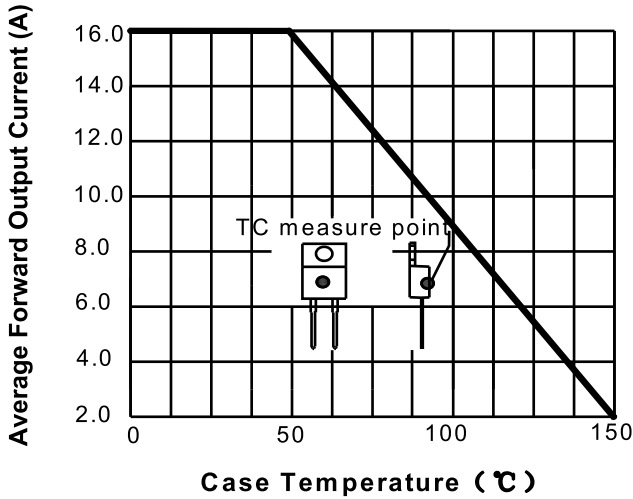


FIG2: Surge Forward Current Capability

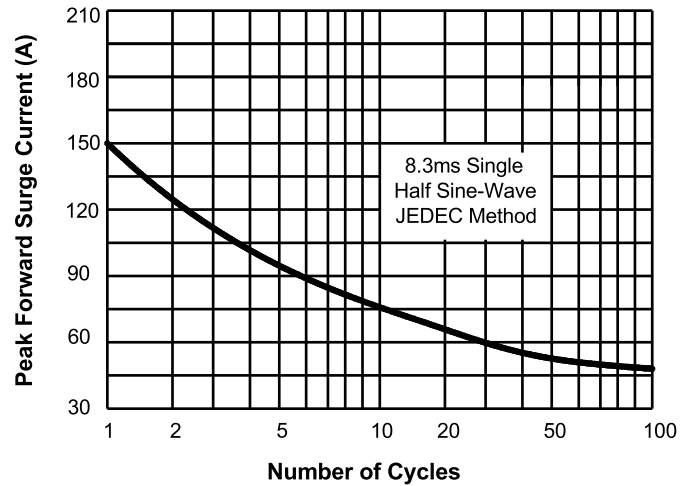


FIG3: Forward Voltage

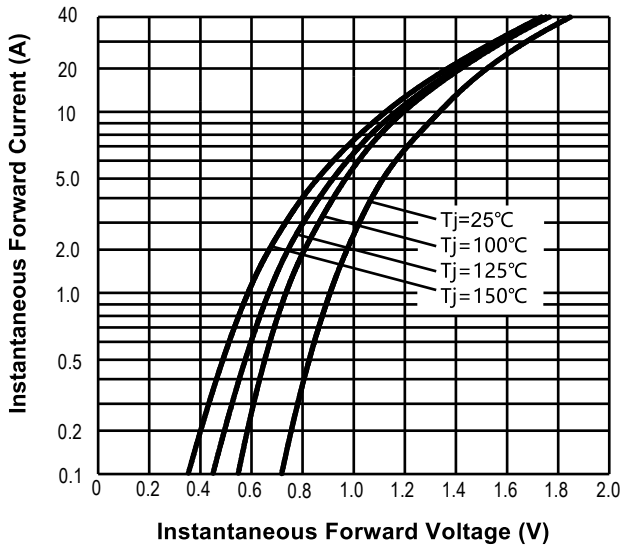


FIG4: Instantaneous Reverse Characteristics

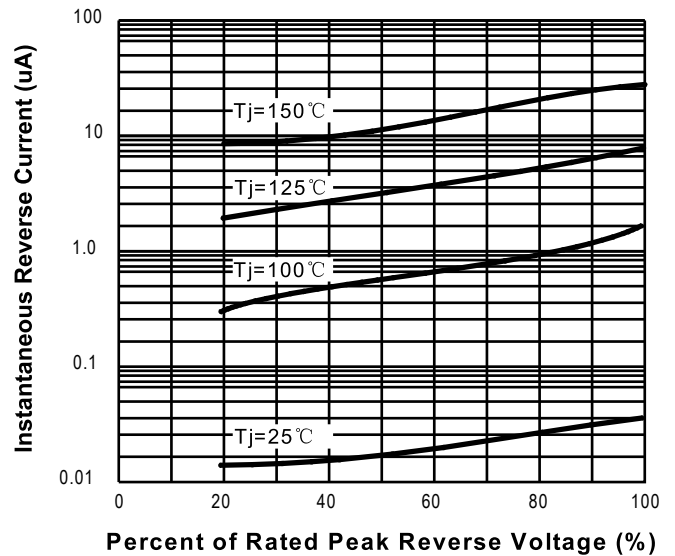
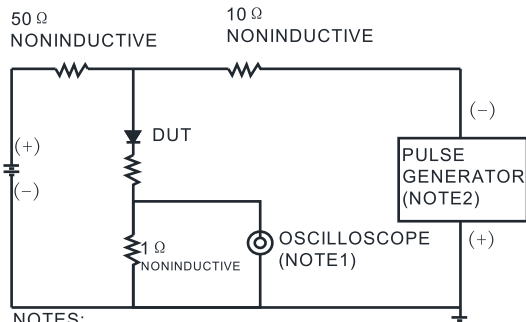
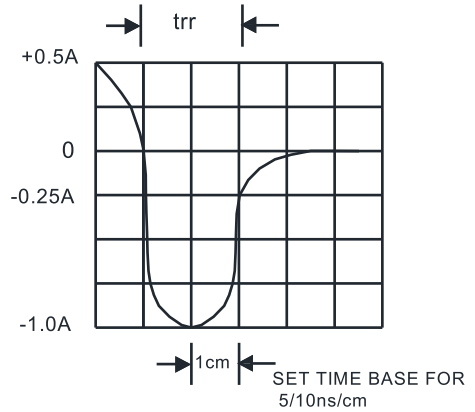


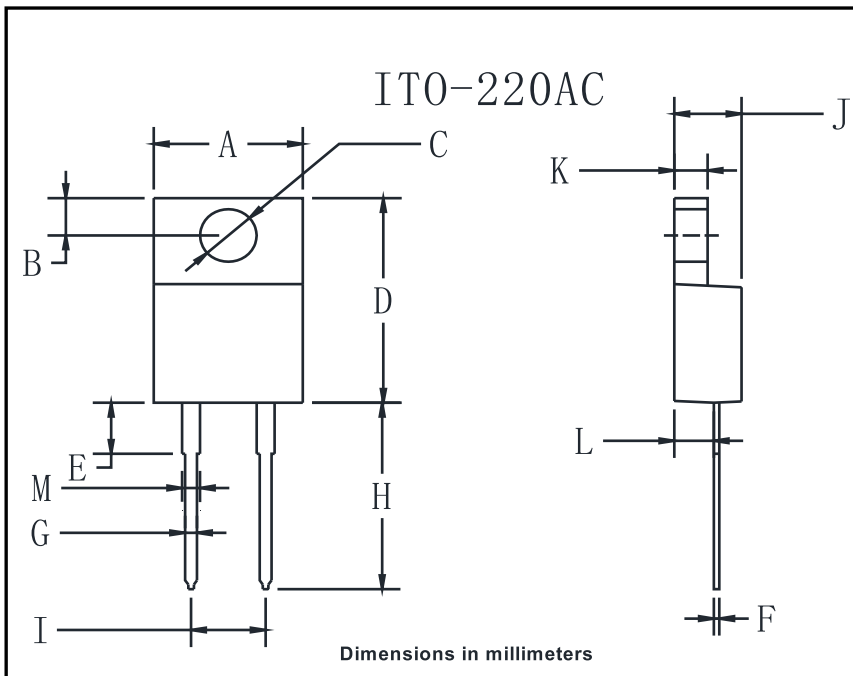
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



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



■ **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