

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:** TO-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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1620CT
Device marking code			MUR1620CT
Repetitive Peak Reverse Voltage	VRRM	V	200
Average Rectified Output Current @60Hz sine wave, R-load, Tc(FIG.1)	IO	A	16
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25°C	IFSM	A	100
Current Squared Time @1ms≤t≤8.3ms Tj=25°C.	I ² t	A ² s	41
Storage Temperature	Tstg	°C	-55 ~ +150
Junction Temperature	Tj	°C	-55 ~ +150
Junction capacitance @4V,1MHz	Cj	pF	70

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V _{FM}	V	IFM=8.0A @ Tj=25°C	-	0.95	1
			IFM=8.0A @ Tj=150°C	-	0.78	0.9
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	uA	VRM=VRRM Tj=25°C	-	-	5
	I _{RRM2}		VRM=VRRM Tj=150°C	-	20	50
Reverse Recovery Time	T _{rr}	ns	IF=0.5A I _{RM} =1A I _{RR} =0.25A Tj=25°C	-	25	35
Peak recovery current	I _{RRM}	A	Tj=25°C	-	3.73	-
			Tj=125°C	-	6.61	-
Reverse recovery charge	Q _{rr}	nC	Tj=25°C	-	42.7	-
			Tj=125°C	-	120	-

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

PARAMETER		SYMBOL	UNIT	MUR1620CT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^\circ\text{C/W}$	2.0
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
MUR1620CT	Approximate 1.88	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

FIG1: $I_o - T_c$ Curve

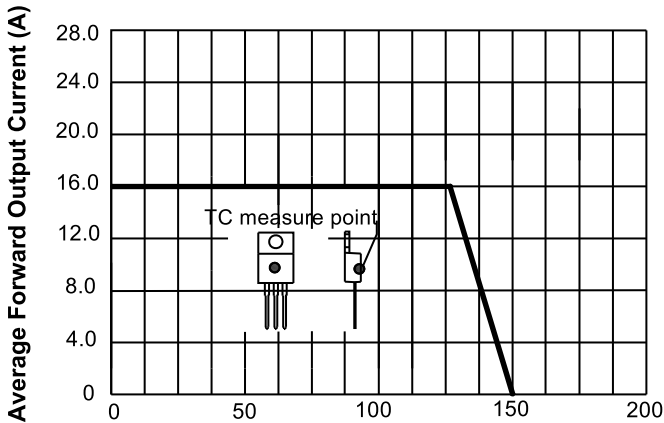


FIG2: Surge Forward Current Capability

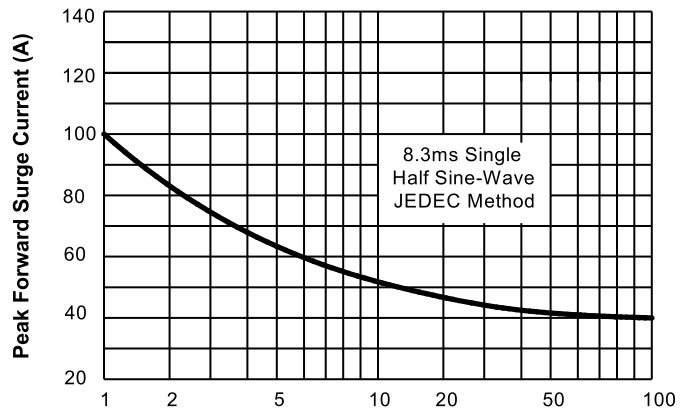


FIG3: Forward Voltage

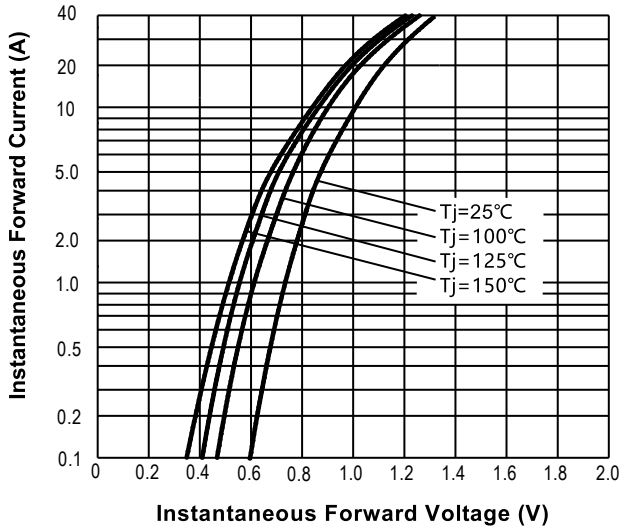


FIG4: Instantaneous Reverse Characteristics

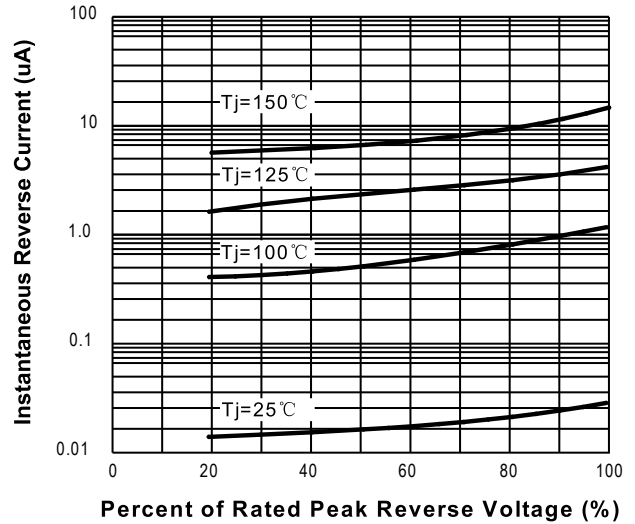
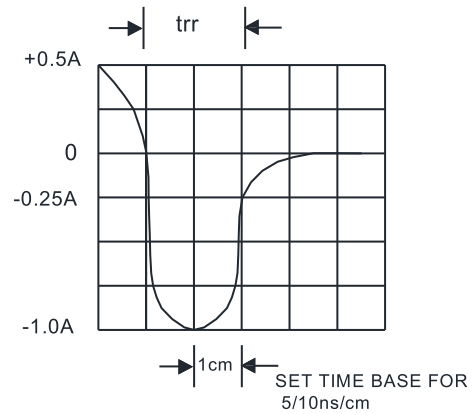
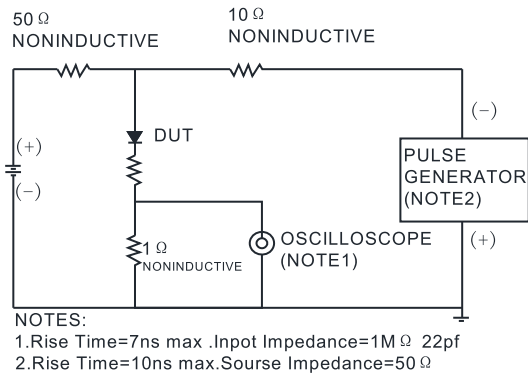
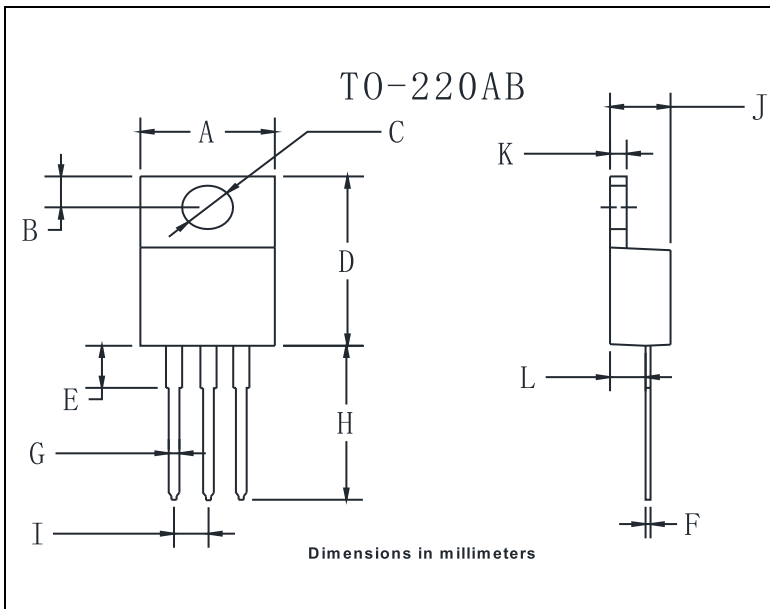


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ **OUTLINE DIMENSIONS**



TO-220AB		
Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.8	4.0
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.4	13.9
I	2.35	2.65
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79