



LGE

MUR1620CT/CTR

Ultra-Fast Recovery Diodes 16A Pt



Features

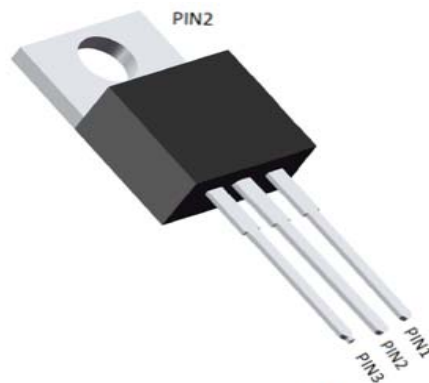
- Adopt FRD chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

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



MUR1620CT



MUR1620CTR

TYPE	V _{RSM} V	V _{RRM} V
MUR1620CT	200	200

■Maximum Ratings (T_j=25°C Unless otherwise specified)

Symbol	Test Conditions	Maximum Ratings	Unit
I _{FRMS} I _{FAVM}	T _C =150°C; rectangular, d=0.5	35 2 x 8	A
I _{FSM}	T _{VJ} =45°C; t _p =10ms (50Hz), sine	160	A
E _{AS}	T _{VJ} =25°C; non-repetitive; I _{AS} =2A; L=180uH	0.5	mJ
I _{AR}	V _A =1.5·V _R typ.; f=10kHz; repetitive	0.2	A
T _{VJ} T _{VJM} T _{stg}		-55...+175 175 -55...+150	°C
P _{tot}	T _C =25°C	60	W
M _d	mounting torque	0.4...0.6	Nm
Weight	typical	2	g

■Electrical Characteristics

Symbol	Test Conditions	Characteristic Values typ.	max.	Unit
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$		50	μA
V_F	$I_F=8\text{A}; T_{VJ}=25^{\circ}\text{C}$		1.05	V
R_{thJC} R_{thCH}		0.5	2.5	K/W
t_{rr}	$I_F=1\text{A}; -di/dt=50\text{A}/\mu\text{s}; V_R=30\text{V}; T_{VJ}=25^{\circ}\text{C}$	30	50	ns
I_{RM}	$V_R=100\text{V}; I_F=10\text{A}; -di_F/dt=100\text{A}/\mu\text{s}; T_{VJ}=100^{\circ}\text{C}$		4.1	A

■Thermal Characteristics ($T_j=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR1620CT/CTR
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C}/\text{W}$	2.0
Thermal Resistance	Between junction and Air	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	50

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1620CT/CTR	Approximate 1.88	50	1000	5000	Tube

■Characteristics (Typical)

FIG1: I_o - T_c Curve

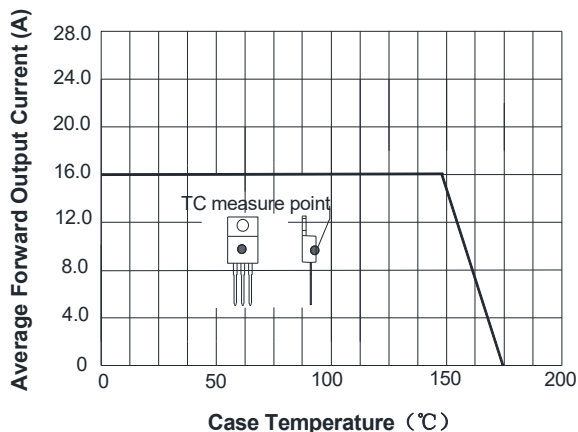


FIG2:Surge Forward Current Capability

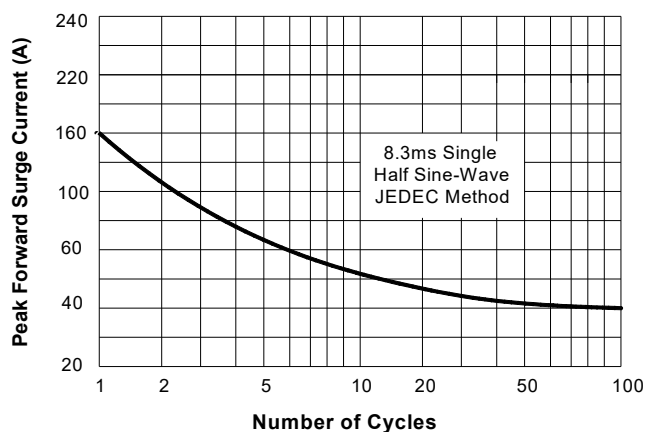


FIG3: Forward Voltage

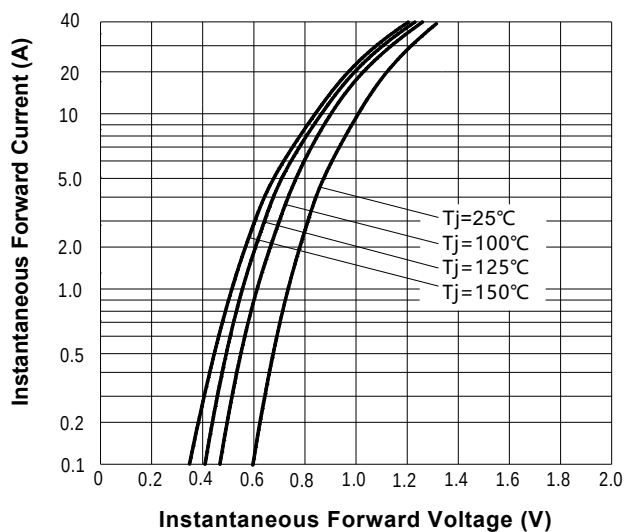


FIG.4: Instantaneous Reverse Characteristics

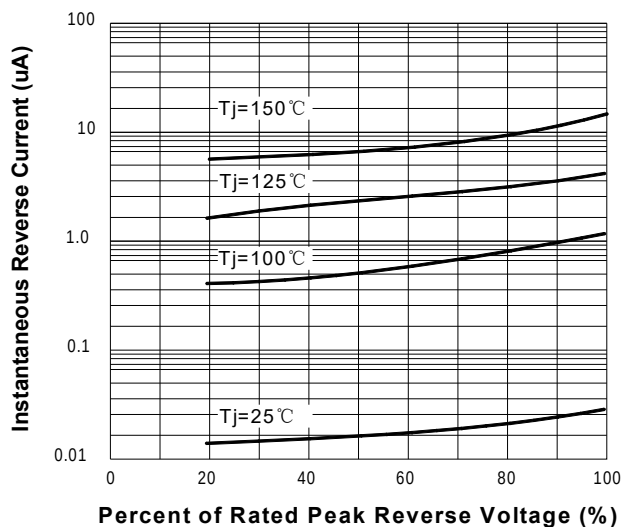
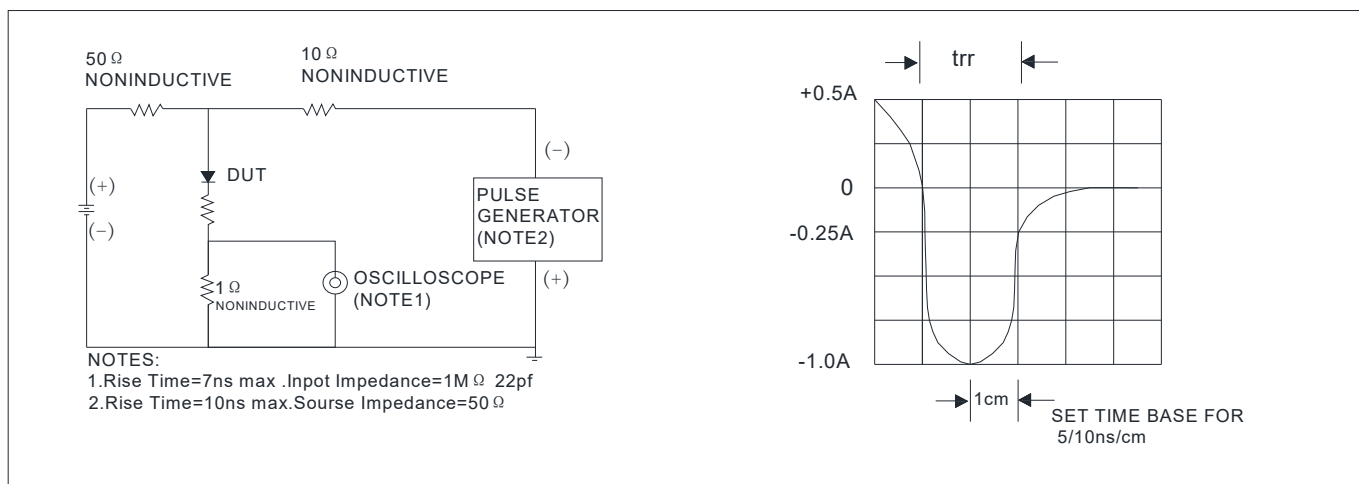
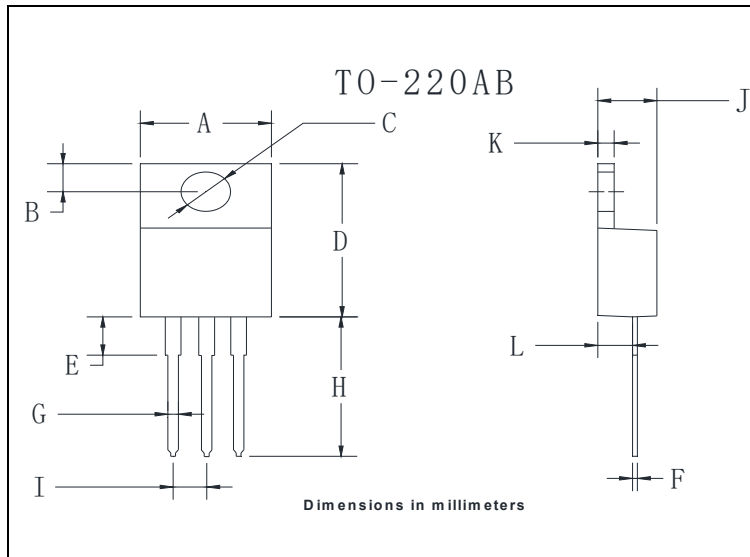


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Outline Dimensions



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

Package	Packing	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton Size L×W×H(mm)	Quantity(pcs/carton)
TO-220	50pcs/Tube	558×148×38	1000	565×225×175	5000