

- 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 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)

TYPE	V _{RSM} V	V _{RRM} V
MUR1020CT	200	200
MUR1020FCT	200	200

Symbol	Test Conditions	Maximum Ratings	Unit
I _{FRMS} I _{FAVM}	T _C =150°C; rectangular, d=0.5	25 2 x 5	A
I _{FSM}	T _{VJ} =45°C; t _p =10ms (50Hz), sine	100	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

Symbol	Test Conditions	Characteristic Values typ.	max.	Unit
I _R	T _{VJ} =25°C; V _R =V _{RRM}		5.0	uA
V _F	I _F =5A; T _{VJ} =25°C		1.00	V
R _{thJC} R _{thCH}		0.5	2.5	K/W
t _{rr}	I _F =1A; -di/dt=50A/us; V _R =30V; T _{VJ} =25°C	30	35	ns
I _{RM}	V _R =100V; I _F =10A; -diF/dt=100A/us; T _{VJ} =100°C		4.1	A

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

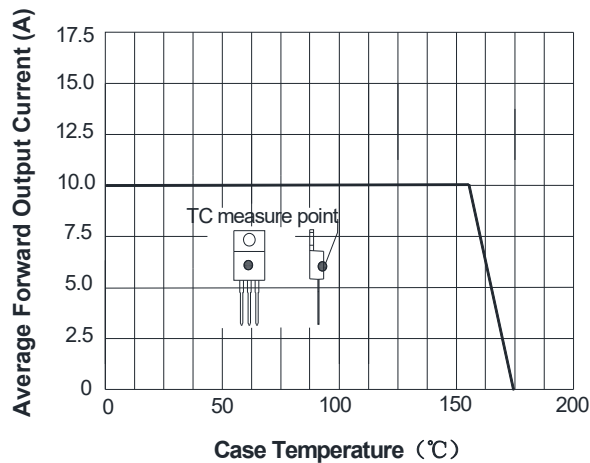


FIG2: Surge Forward Current Capability

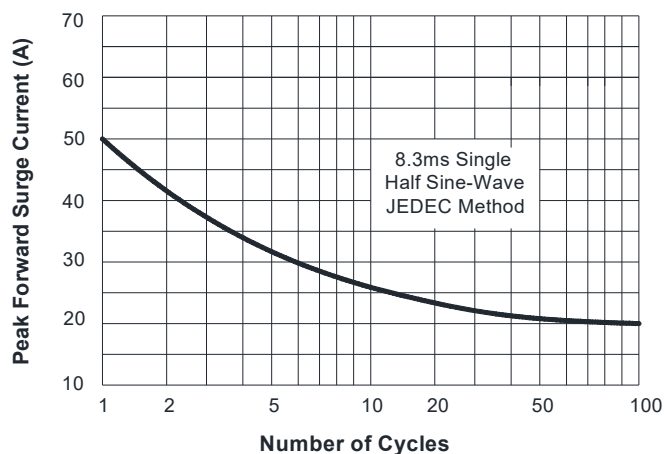


FIG3: Forward Voltage

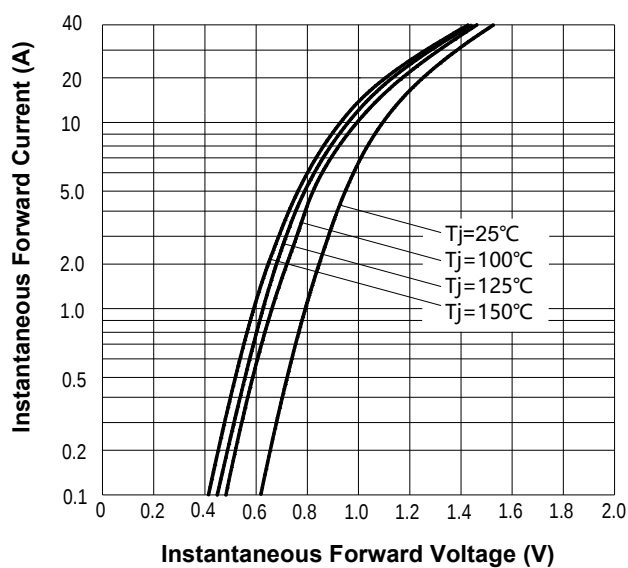


FIG4: Instantaneous Reverse Characteristics

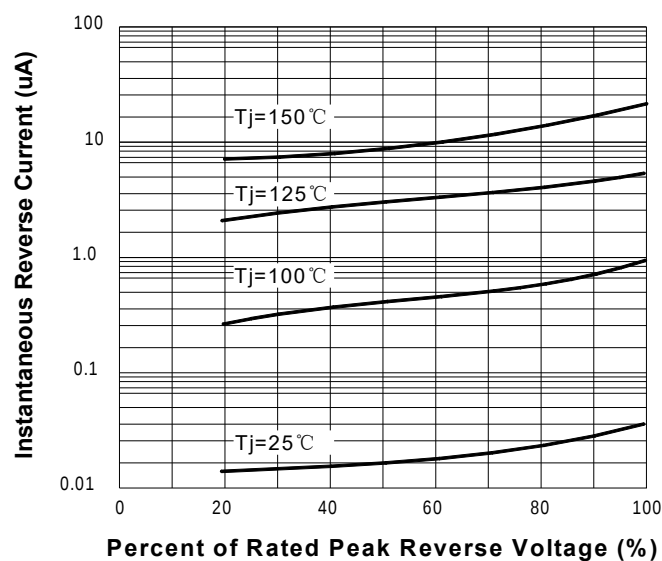
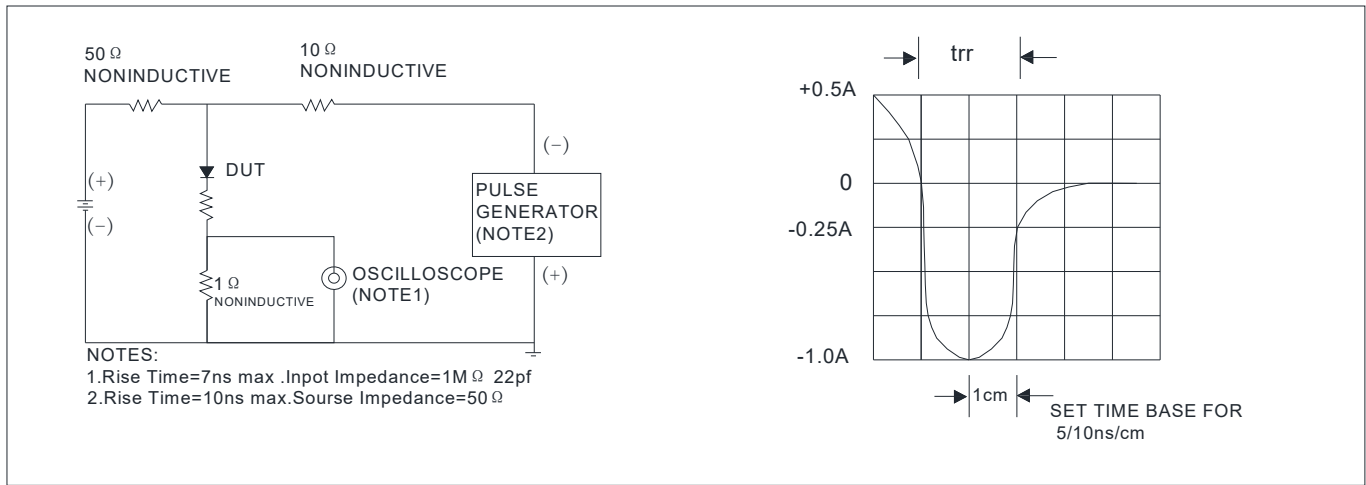


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



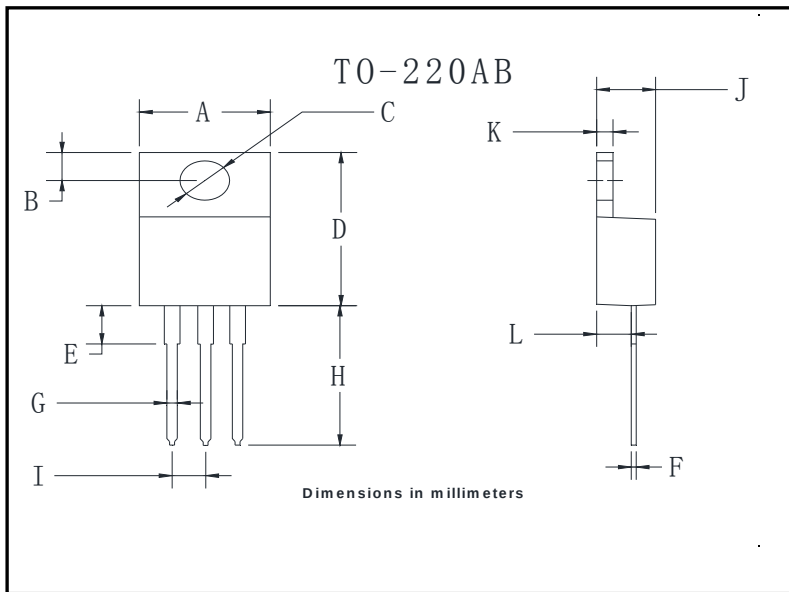
■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR1020CT/MUR1020FCT
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	4.0
	Between junction and Air	R _{θJ-A}	°C/W	50

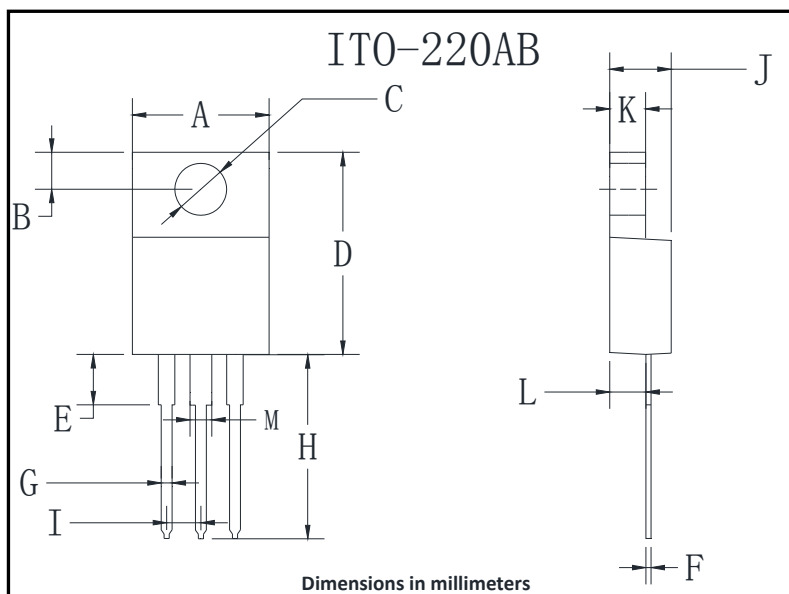
■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1020CT/MUR1020FCT	Approximate 1.6	50	1000	5000	Tube

■Outline Dimensions



TO-220AB		
Dim	Min	Max
A	9.5	10.9
B	2.22	3.27
C	3.34	4.31
D	14.5	15.5
E	3.16	4.46
F	0.28	0.64
G	0.68	0.94
H	13.06	14.62
I	2.01	3.07
J	4.04	5.1
K	1.14	1.4
L	2.14	3.19



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

Packge	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
ITO-220	50pcs/Tube	558×148×38	1000	565×225×170	5000