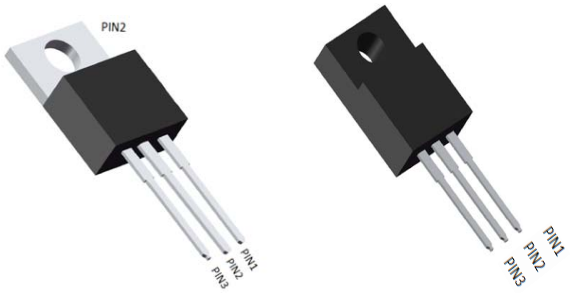
MUR2020CT/MUR2020FCT

Super-Fast Recovery Diodes 20A FRD Pt

RoHS COMPLIANT

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 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℃ Unless otherwise specified)

	V_{RSM} V	V_{RRM} V
MUR2020CT	200	200
MUR2020FCT	200	200

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS} I_{FAVM}	T_C=150°C; rectangular, d=0.5	38 2 x 10	A
I_{FSM}	T_{VJ}=45°C; t_p=10ms (50Hz), sine	200	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...+175	°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}		50	uA
V_F	I_F=8A; T_{VJ}=25°C	0.98	1.15	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; -di$_F$/dt=100A/us; T_{VJ}=100°C		4.1	A

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■Characteristics (Typical)

FIG1:Io -Tc Curve

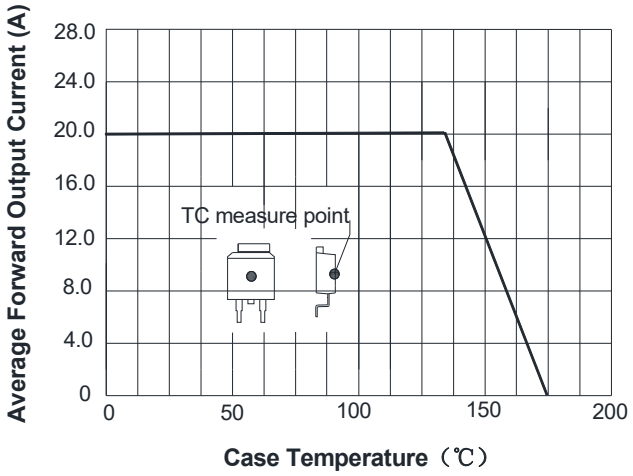


FIG2:Surge Forward Current Capability

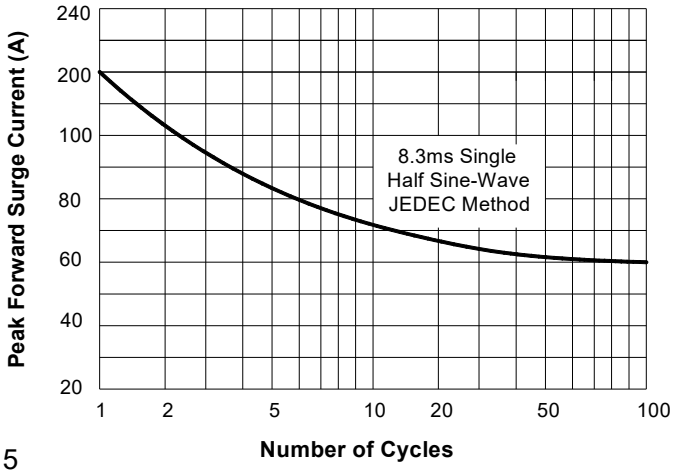


FIG3: Forward Voltage

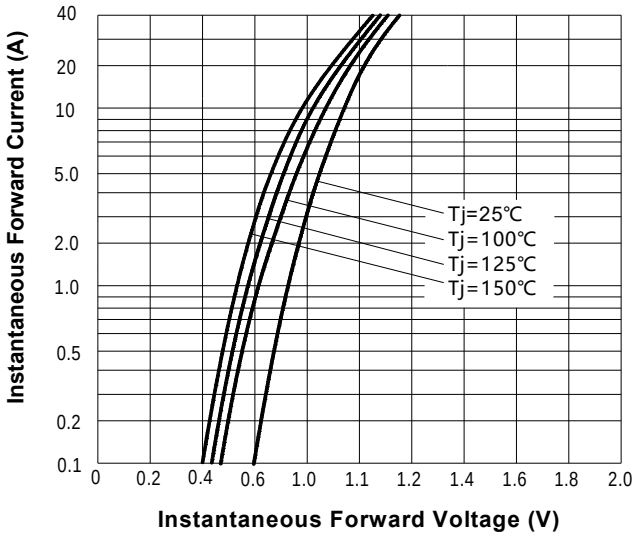
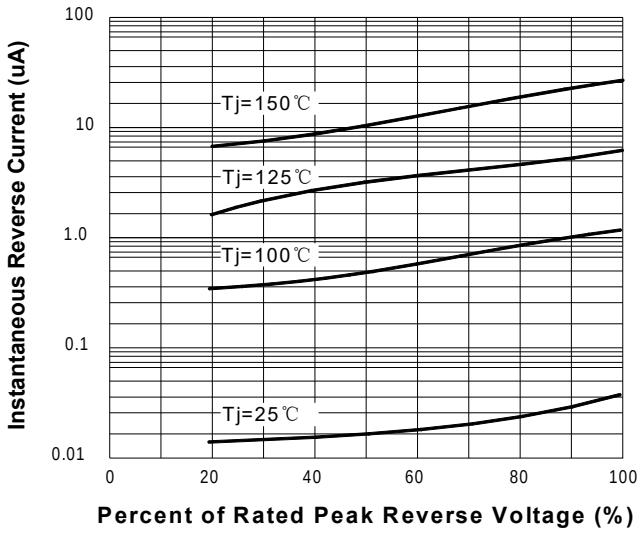
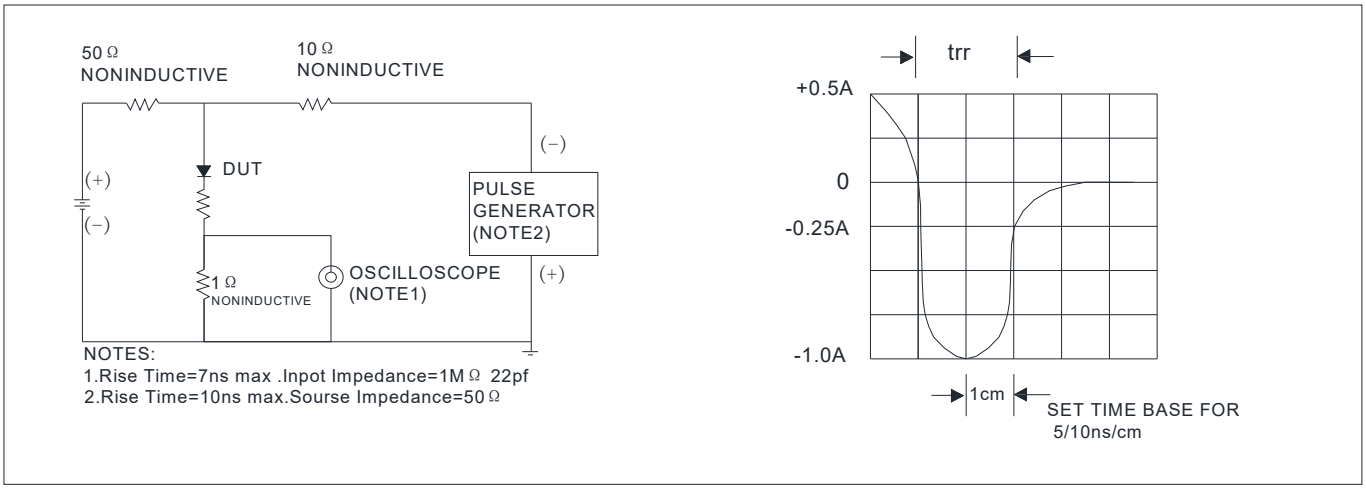


FIG.4: Instantaneous Reverse Characteristics



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



■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MUR2020CT/MUR2020FCT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	4.0
	Between junction and Air	$R_{\theta J-A}$	℃/W	50

■Ordering Information (Example)

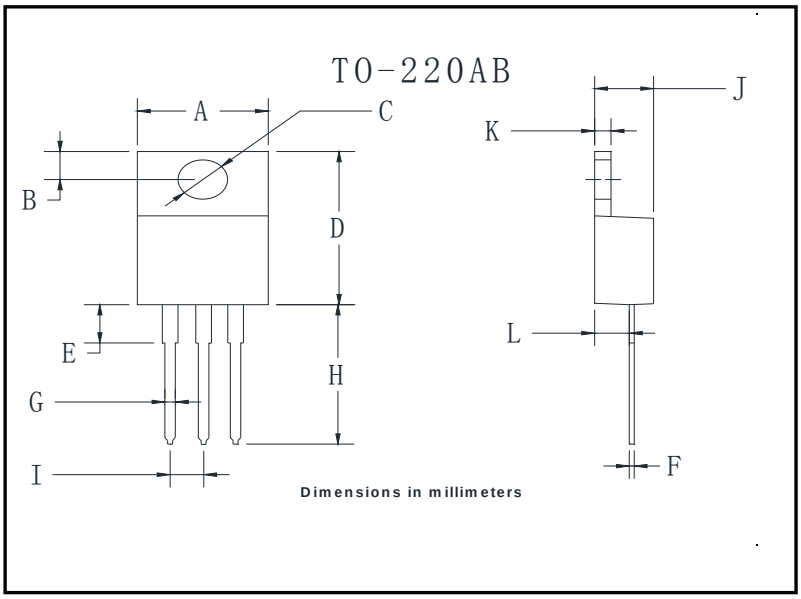
PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR2020CT/MUR2020FCT	Approximate 1.6	50	1000	5000	Tube

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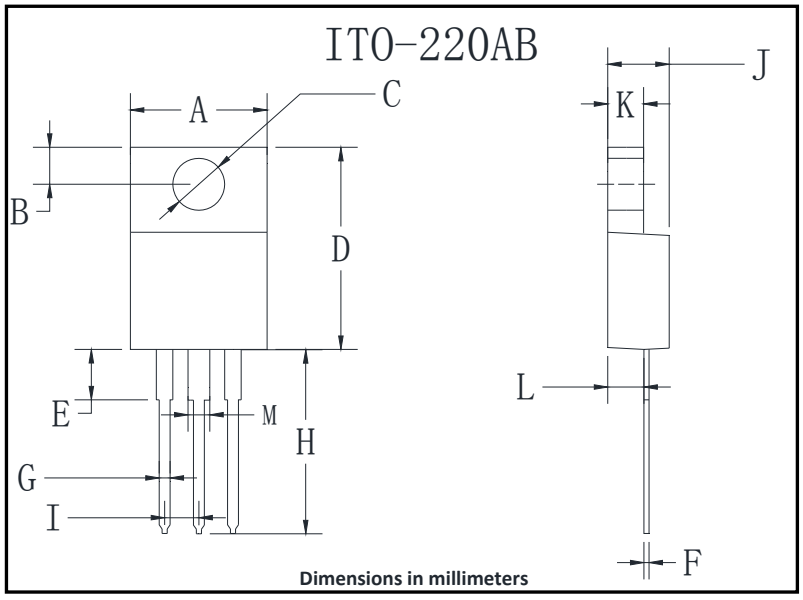
MUR2020CT/MUR2020FCT

RoHS COMPLIANT

■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

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