

### Features

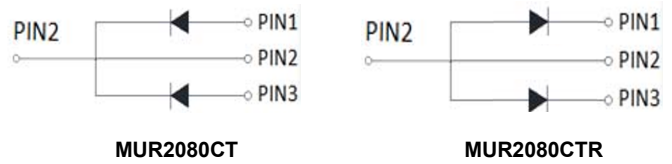
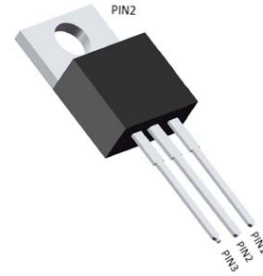
- Adopt FRD chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

### 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 (Ta=25°C Unless otherwise specified)

TYPE	V <sub>RSM</sub> V	V <sub>RRM</sub> V
MUR2080CT	800	800
MUR2080CTR	800	800

Symbol	Characteristics	Maximum Ratings	Unit
I <sub(av)< sub=""></sub(av)<>	Maximum Average Forward Rectified Current @T <sub>C</sub> =95°C	20	A
I <sub>FSM</sub>	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	200	A
V <sub>F</sub>	Maximum Forward Voltage At Pulse Width=300us 2% Duty Cycle I <sub>F</sub> =10A @T <sub>J</sub> =25°C I <sub>F</sub> =10A @T <sub>J</sub> =125°C	1.75 1.55	V
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	3 100	uA
C <sub>J</sub>	Typical Junction Capacitance Per Element (Note 1)	150	pF
T <sub>RR</sub>	Maximum Reverse Recovery Time (Note 2)	50	ns
R <sub>θJC</sub>	Typical Thermal Resistance (Note 3)	1.5	°C/W
T <sub>J</sub> , T <sub>STG</sub>	Operating And Storage Temperature Range	-55 to +175	°C

NOTES: 1. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.  
2. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.  
3. Thermal Resistance Junction To Case.

## ■ Characteristics (Typical)

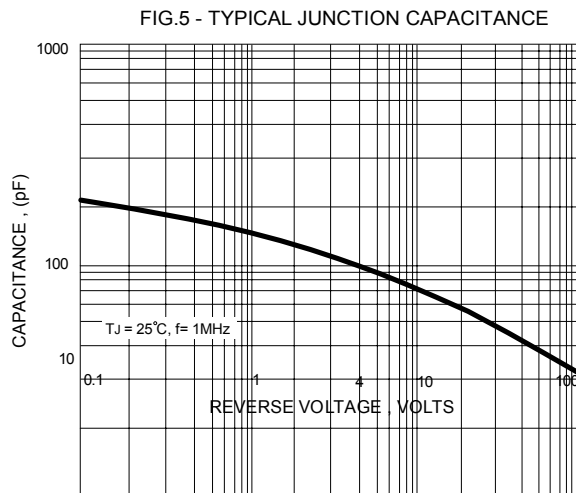
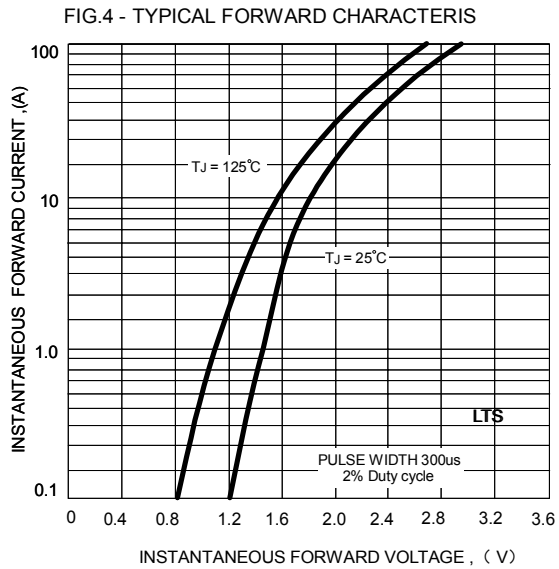
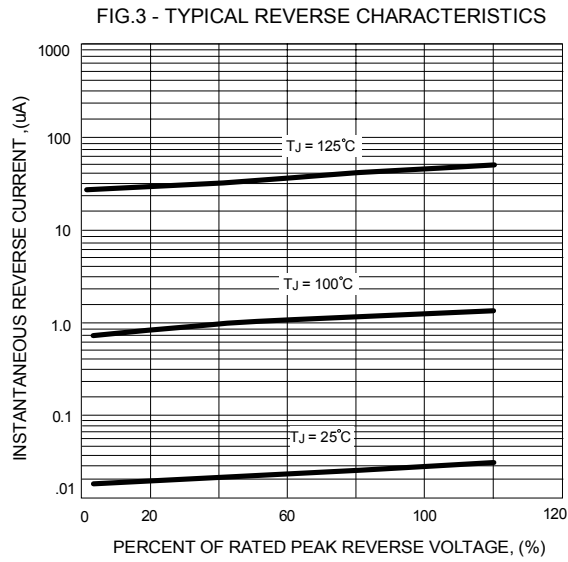
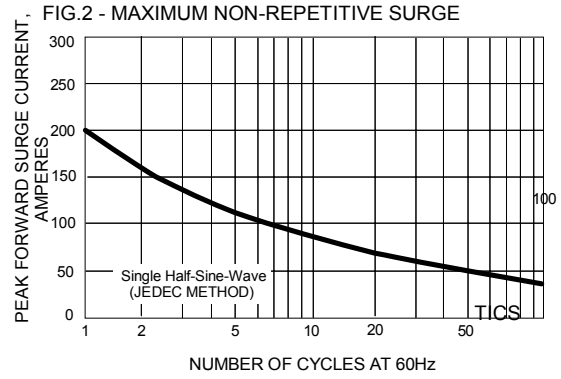
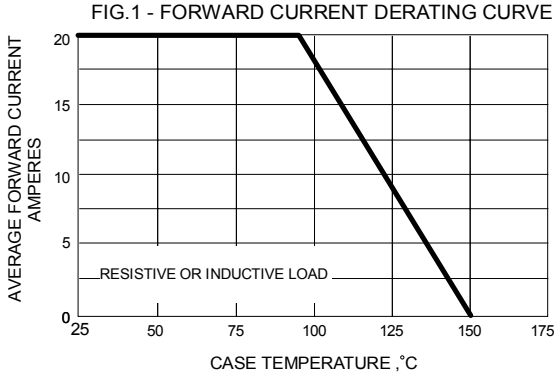
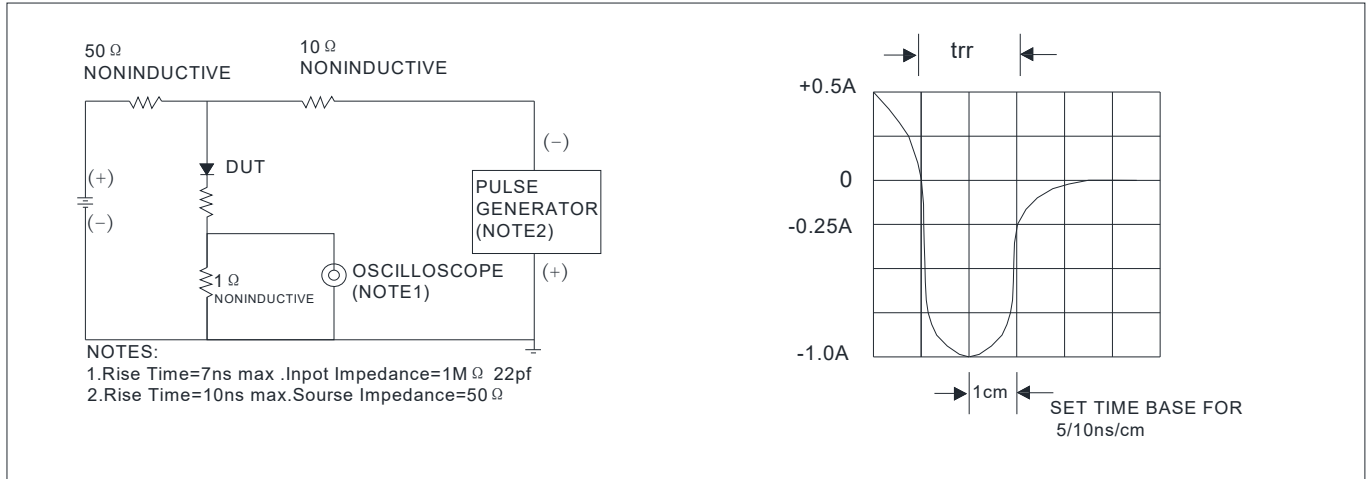


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



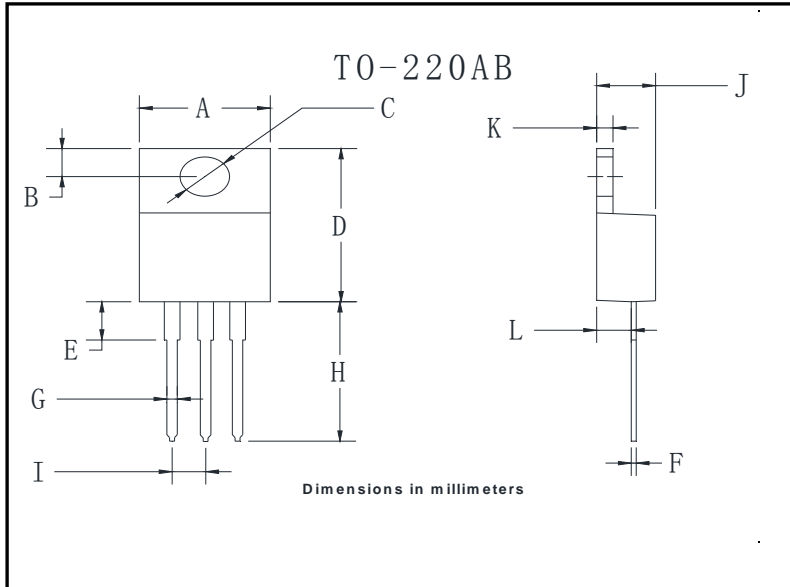
### ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR2080CT/MUR2080CTR
Thermal Resistance	Between junction and case	R <sub>θJ-C</sub>	°C/W	4.0
	Between junction and Air	R <sub>θJ-A</sub>	°C/W	50

### ■ Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR2080CT/MUR2080CTR	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

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