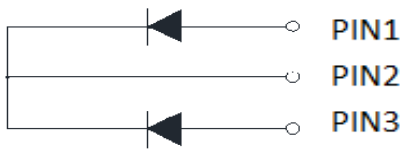
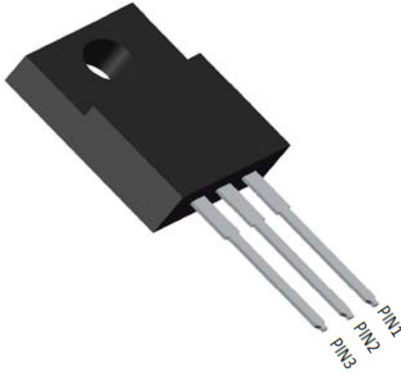


## Ultra-Fast Recovery Rectifier Diodes



### Features

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Adopt GPP chip
- Passivation for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** 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<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1680FCT-B1-0000S
Device Marking Code			MUR1680FCT
Repetitive Peak Reverse Voltage	VRRM	V	800
Average Rectified Output Current @60Hz half sine-wave, R-load, T <sub>c</sub> (FIG.1)	I <sub>o</sub>	A	16
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C	IFSM	A	100
Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	41
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MUR1680FCT-B1-0000S
Maximum instantaneous forward voltage drop per diode	VFM	V	I <sub>FM</sub> =8.0A	1.7
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	μA	VRM=VRRM T <sub>a</sub> =25°C	10
	I <sub>RRM2</sub>		VRM=VRRM T <sub>a</sub> =125°C	500
Reverse Recovery Time	T <sub>rr</sub>	ns	I <sub>F</sub> =0.5A I <sub>RM</sub> =1A I <sub>RR</sub> =0.25A	75

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

PARAMETER	SYMBOL	UNIT	MUR1680FCT-B1-0000S
Thermal Resistance Between junction and case	R <sub>θJ-C</sub>	°C/W	2.5



# MUR1680FCT-B1-0000S

## Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1680FCT-B1-0000S	Approximate 1.47	50	1000	5000	Tube

## Characteristics (Typical)

FIG1:  $I_o$  - $T_c$  Curve

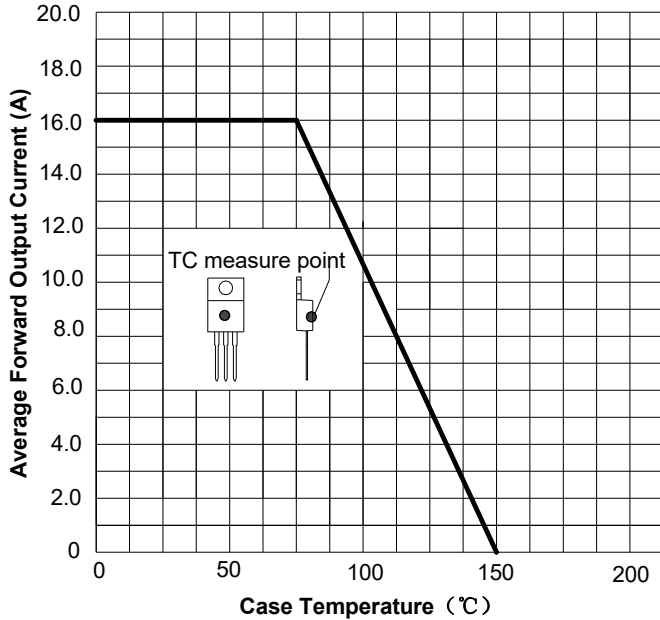


FIG2: Surge Forward Current Capability

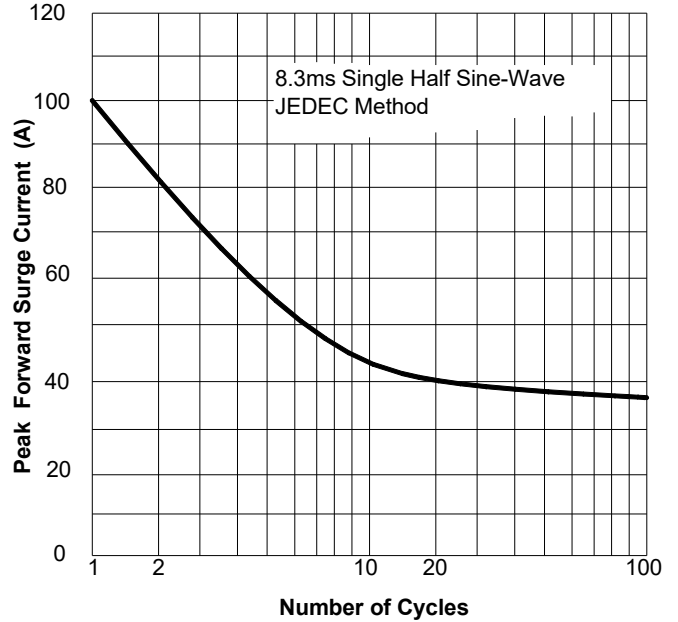


FIG3: Forward Voltage

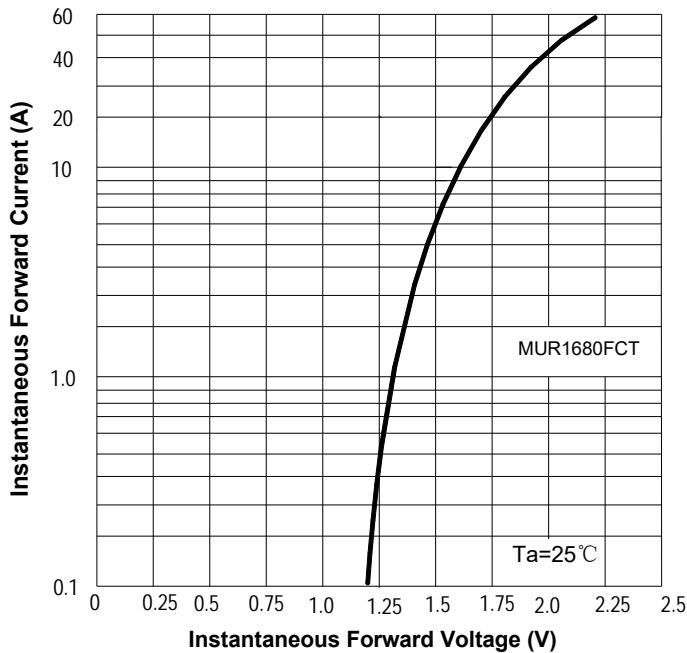
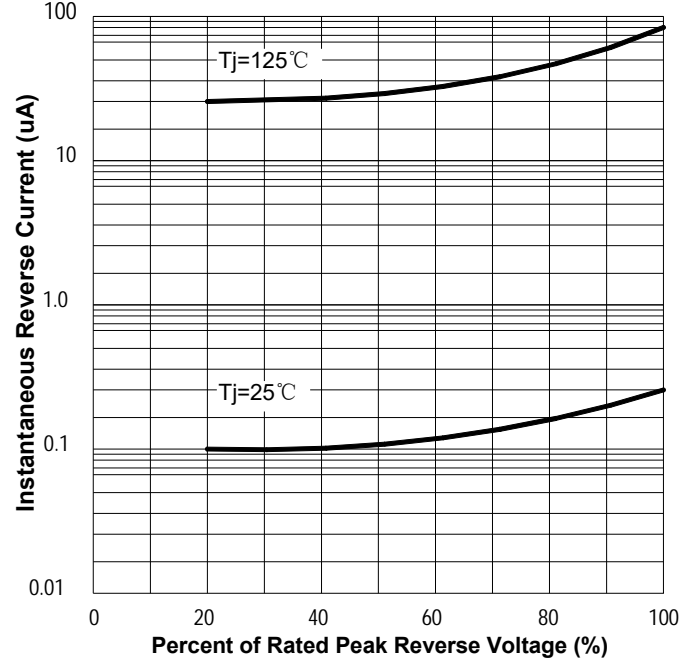
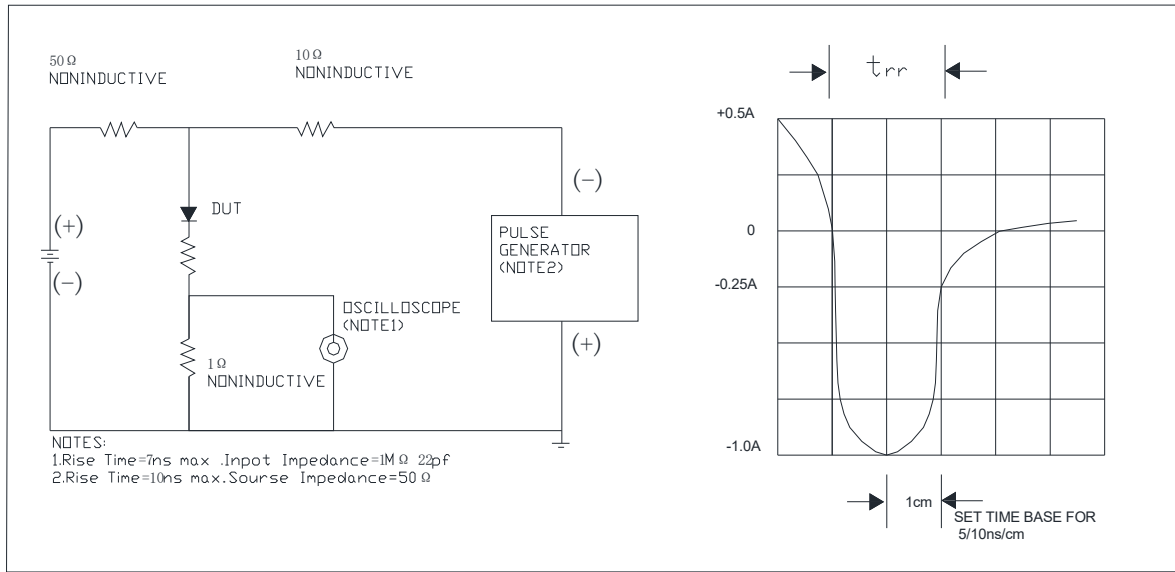


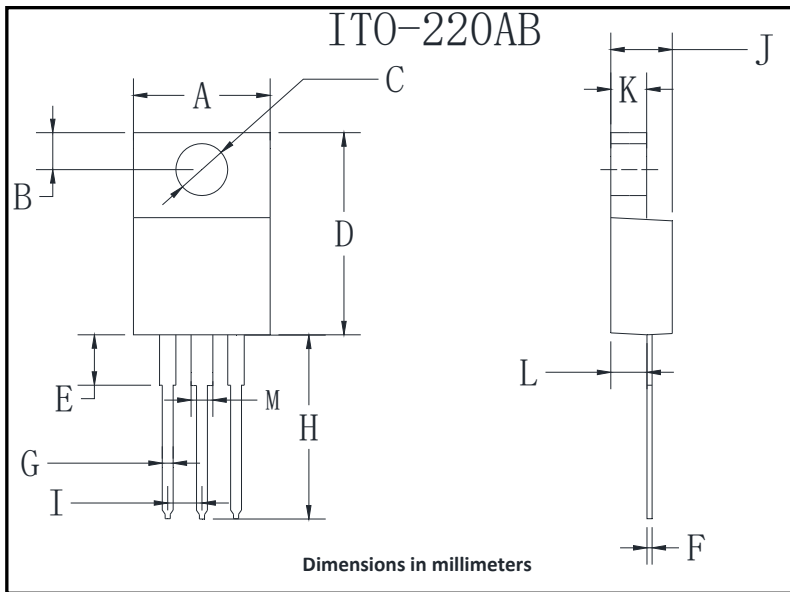
FIG4: Typical Reverse Characteristics



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



## Outline Dimensions



ITO-220AB		
Dim	Min	Max
A	9.7	10.7
B	2.15	3.25
C	2.6	3.8
D	14.4	15.9
E	3.1	4.5
F	0.4	0.8
G	0.4	0.8
H	12.7	14.2
I	1.80	2.95
J	3.9	5.1
K	2.1	3.56
L	2.1	3.2
M	1.4	1.8



## MUR1680FCT-B1-0000S

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