

### ■ FEATURES

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring 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:** TO-220AC  
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	MUR1640	MUR1660
Device Marking Code			MUR1640	MUR1660
Repetitive Peak Reverse Voltage	VRRM	V	400	600
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	150	
Current Squared Time @1ms≤t<8.3ms T <sub>j</sub> =25°C	I <sup>2</sup> t	A <sup>2</sup> s	94	
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	MUR1640	MUR1660
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	IFM=16.0A	1.3	1.5
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	uA	V <sub>RM</sub> =VRRM T <sub>a</sub> =25°C	10	
	I <sub>RRM2</sub>		V <sub>RM</sub> =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	50	

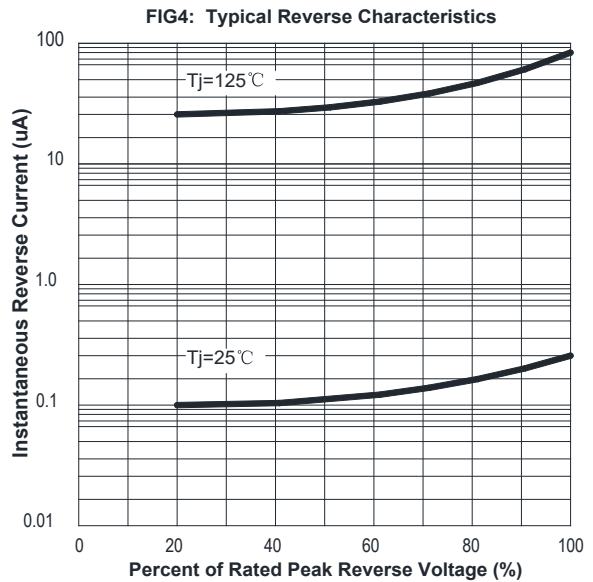
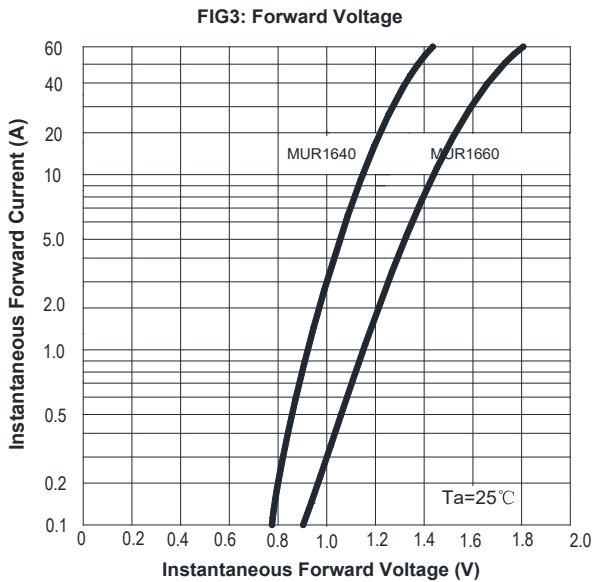
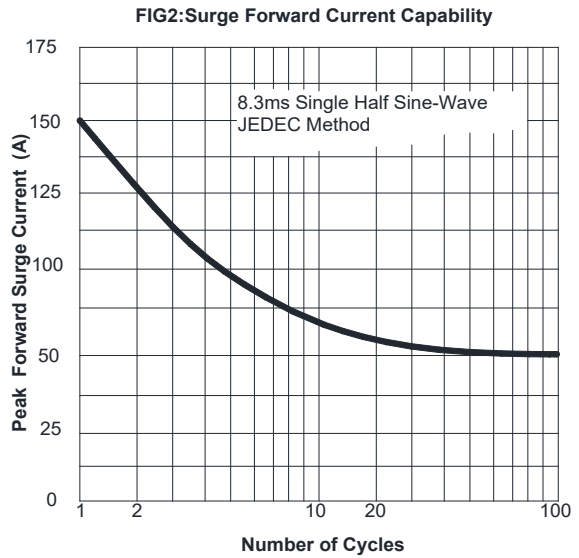
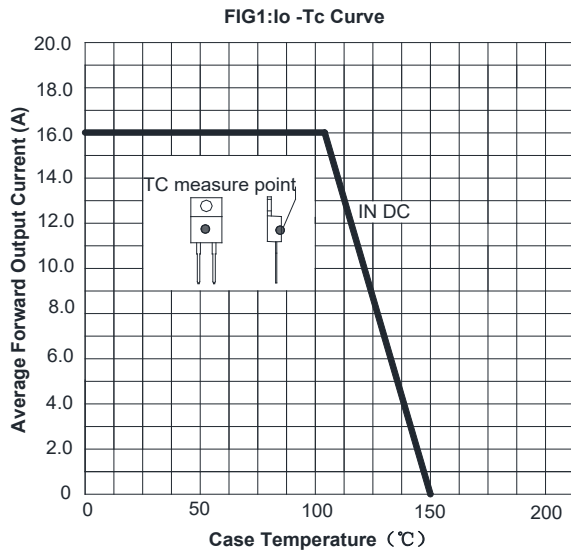
### ■ THERMAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1640	MUR1660
Thermal Resistance Between junction and case	R <sub>θJ-C</sub>	°C/W	2.0	

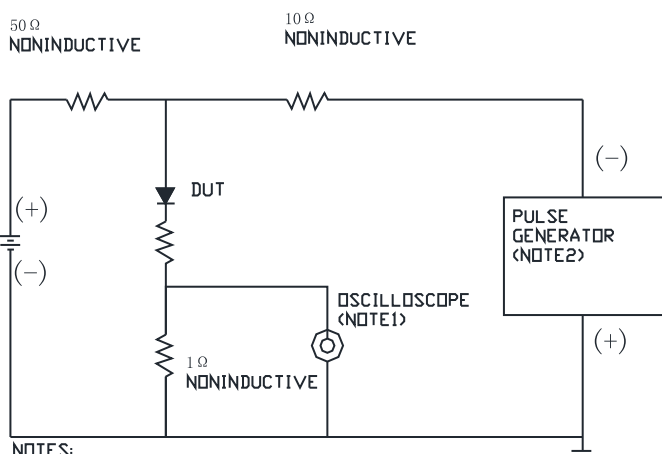
### ■ PACKAGING INFORMATION

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1640 MUR1660	Approximate 1.87	50	1000	5000	Tube

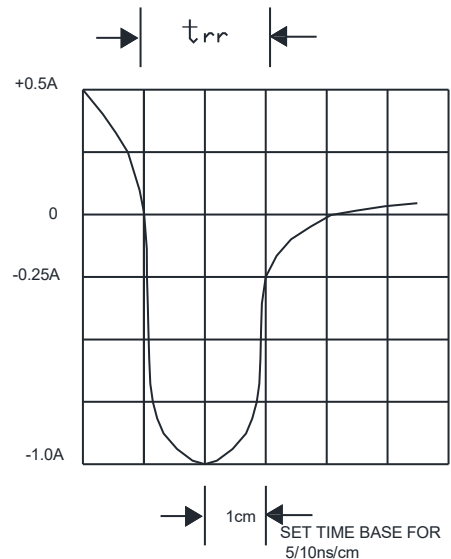
### CHARACTERISTICS (TYPICAL)



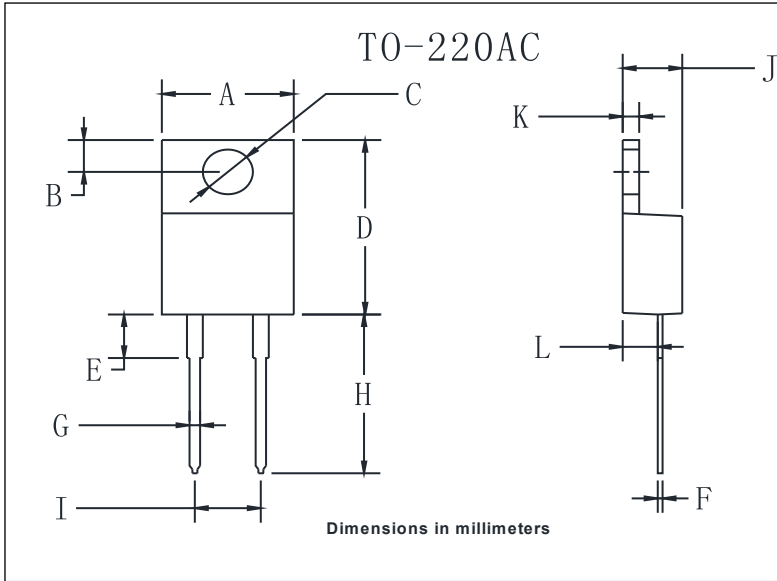
**FIG.5 Diagram of circuit and Testing wave form of reverse recovery time**



NOTES:  
 1. Rise Time = 7ns max. Input Impedance = 1MΩ 22pf  
 2. Rise Time = 10ns max. Source Impedance = 50Ω



■ **OUTLINE DIMENSIONS**



TO-220AC		
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	4.55	5.60
J	4.04	5.1
K	1.14	1.4
L	2.14	3.19