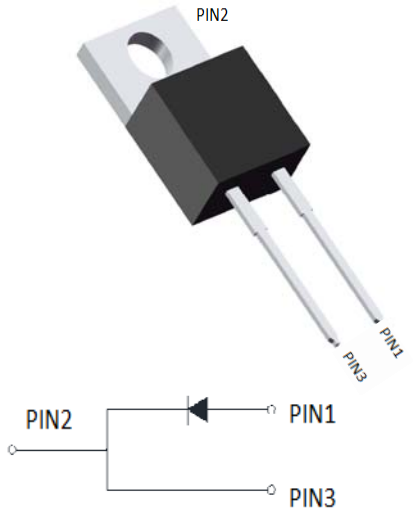
Ultra-Fast Recovery Rectifier Diodes



Features

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- 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
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: As marked

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR840
Device marking code			MUR840
Repetitive Peak Reverse Voltage	V_{RRM}	V	400
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc(FIG.1)	I_o	A	8
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25℃	I_{FSM}	A	100
Current Squared Time @1ms≤t≤8.3ms Tj=25℃,	I^2t	A^2s	41
Storage Temperature	T_{stg}	℃	-55 ~ +150
Junction Temperature	T_j	℃	-55 ~ +150

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MUR840
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=8.0A	1.5
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	$V_{RM}=V_{RRM}$ T_a=25℃	5
	I_{RRM2}		$V_{RM}=V_{RRM}$ T_a=125℃	500
Reverse Recovery Time	Trr	ns	I_F=0.5A I_{RM}=1A I_{RR}=0.25A	50
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	55

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

PARAMETER		SYMBOL	UNIT	MUR840
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	2.0

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR840	Approximate 1.84	50	1000	5000	Tube

■Characteristics (Typical)

FIG1:Io -Tc Curve

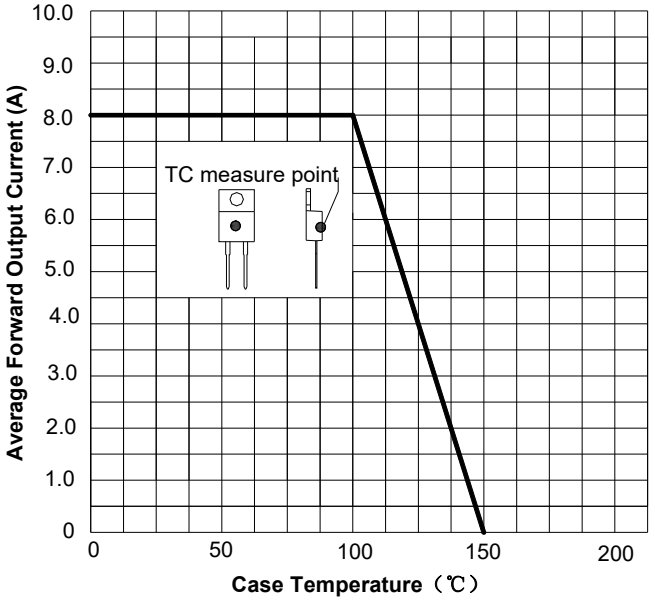


FIG2:Surge Forward Current Capability

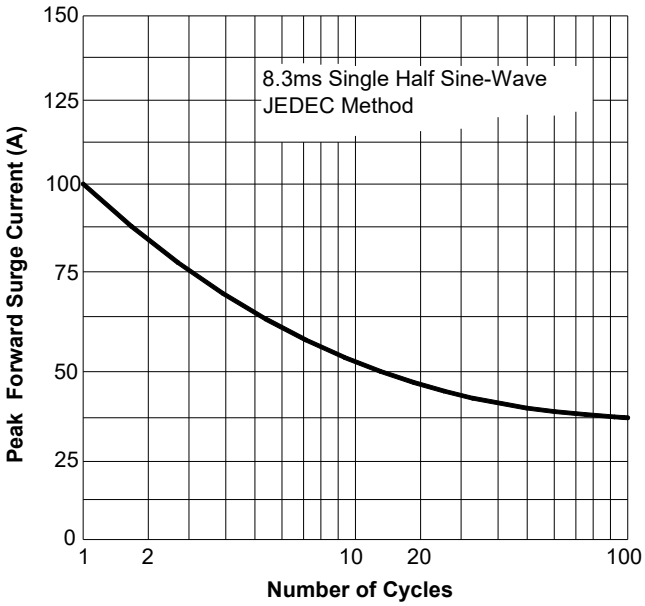


FIG3: Forward Voltage

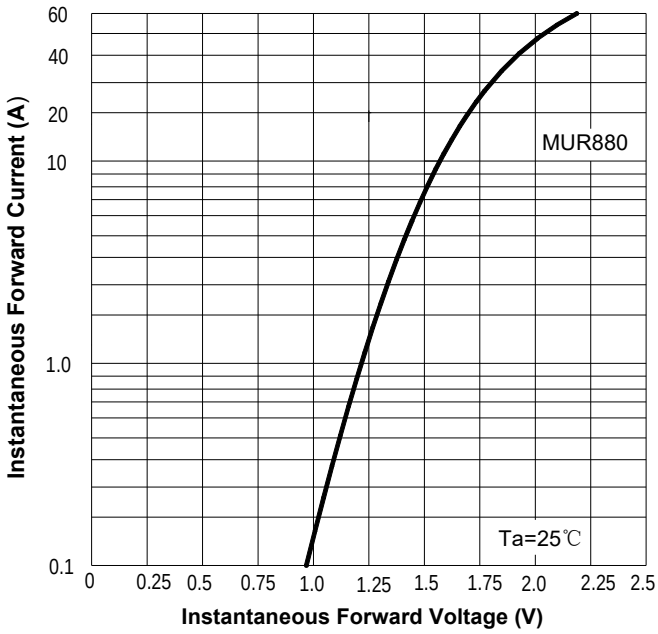


FIG4: Typical Reverse Characteristics

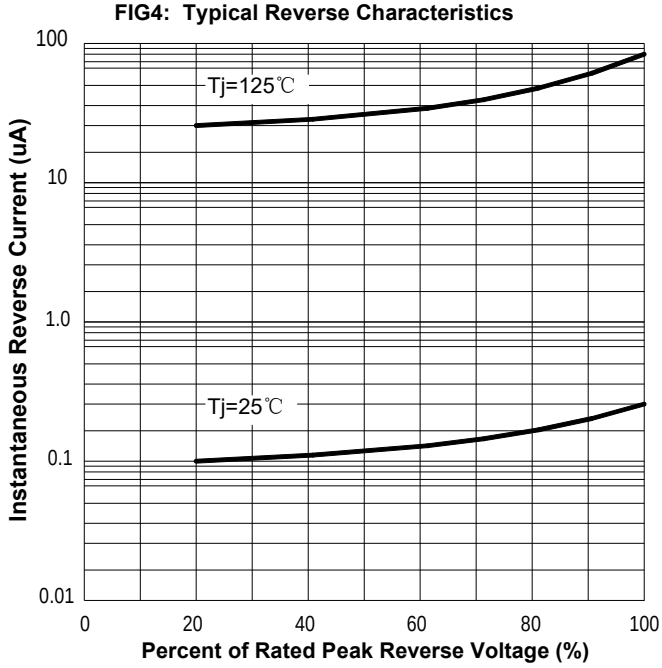
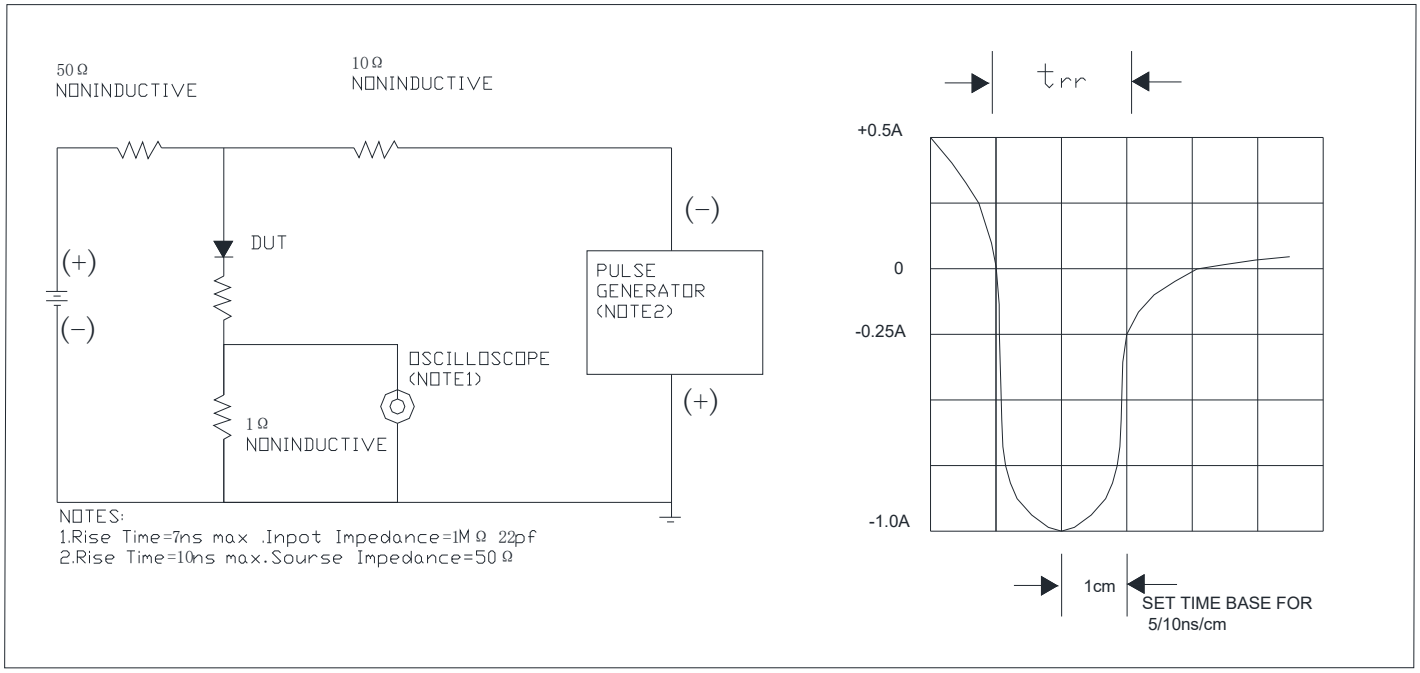
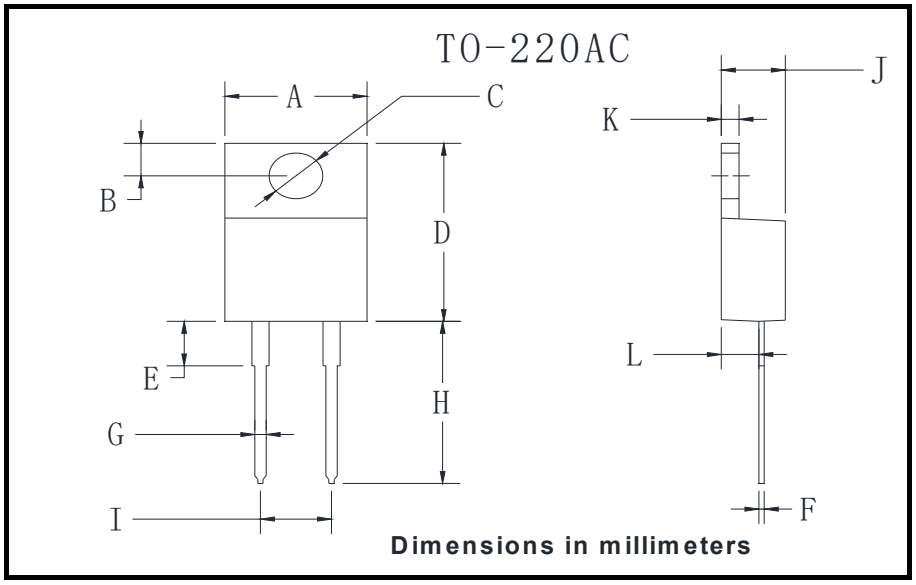


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



■Outline Dimensions



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

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