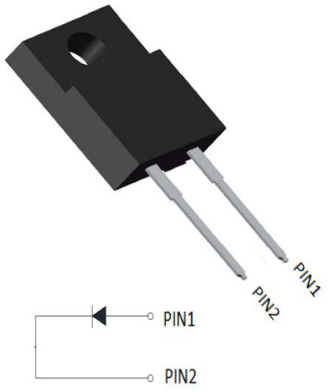
Ultra-Fast Recovery Rectifier Diodes
MUR1020F Through MUR1060F



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 FEATURES

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

MECHANICAL DATA

- **Package**: ITO-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 (Ta=25°C Unless Otherwise organized)

PARAMETER	SYMBOL	UNIT	MUR1020F	MUR1040F	MUR1060F
Device marking code			MUR1020F	MUR1040F	MUR1060F
Repetitive Peak Reverse Voltage	V_{RRM}	V	200	400	600
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc (FIG.1)	I_o	A	10		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T_a=25℃	I_{FSM}	A	125		
Current Squared Time @1ms≤t<8.3ms Tj=25℃	I^2t	A^2s	65		
Storage Temperature	Tstg	℃	-55 ~ +150		
Junction Temperature	Tj	℃	-55 ~ +150		

MAXIMUM RATINGS (Ta=25°C Unless Otherwise organized)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MUR1020F	MUR1040F	MUR1060F
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=10.0A	0.975	1.3	1.5
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	V_{RM}=V_{RRM} T_a=25℃	10		
	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		

THERMAL CHARACTERISTICS (Ta=25°C Unless Otherwise organized)

PARAMETER		SYMBOL	UNIT	MUR1020F	MUR1040F	MUR1060F
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	2.5		

■ PACKAGING INFORMATION

PREFERED P/N			UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1020F	MUR1040F	MUR1060F	Approximate 1.39	50	1000	5000	Tube

■ CHARACTERISTICS (Typical)

FIG2:Surge Forward Current Capability

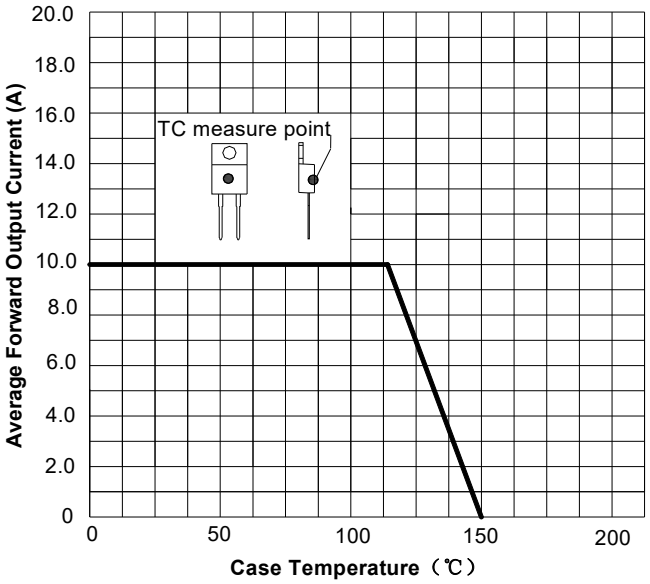


FIG2:Surge Forward Current Capability

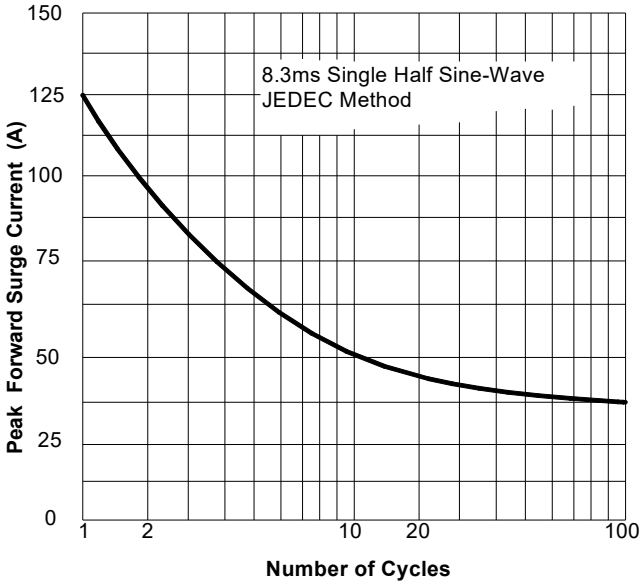


FIG3: Forward Voltage

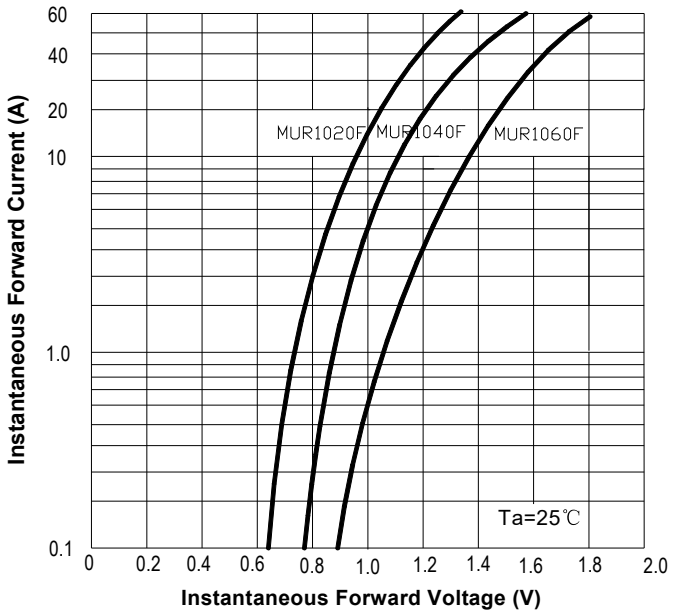


FIG4: Typical Reverse Characteristics

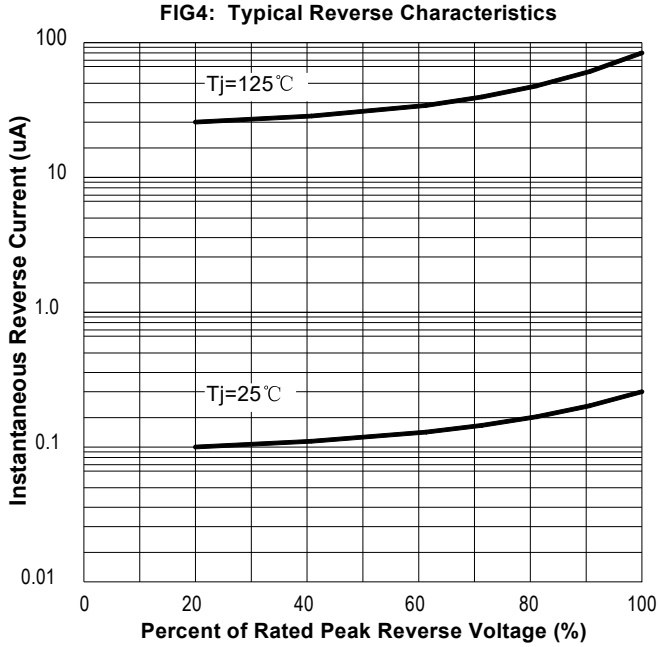
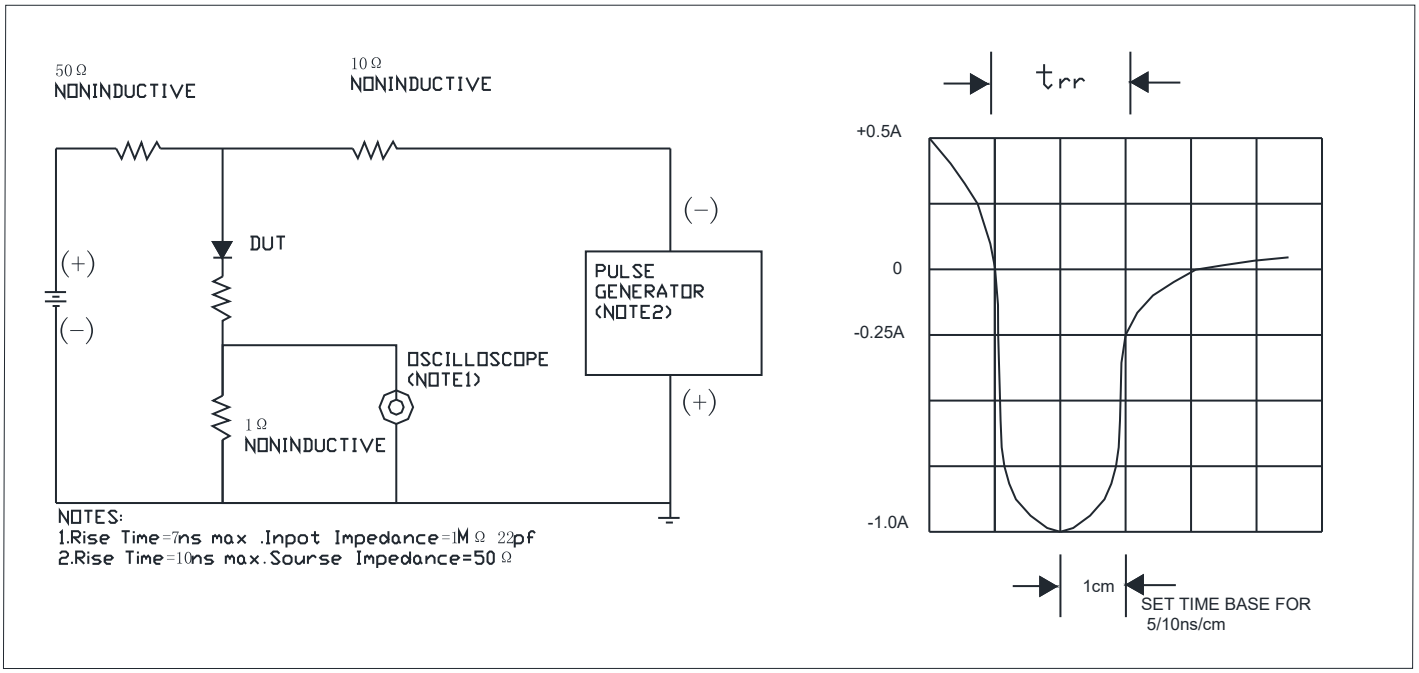
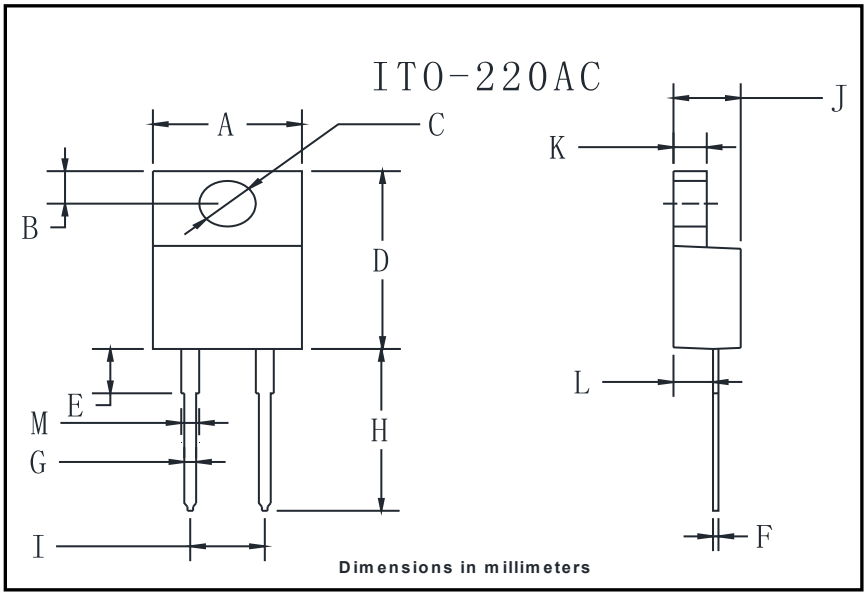


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



■ OUTLINE DIMENSIONS



ITO-220AC		
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	0.9
H	12.7	14.2
I	3.6	5.9
J	3.9	5.1
K	2.1	3.56
L	2.1	3.2
M	1.0	1.8