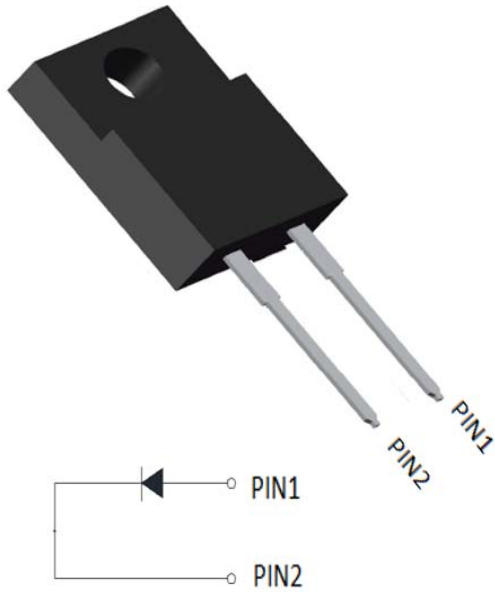


Ultra-Fast Recovery Rectifier Diodes



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:** 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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1020F	MUR1040F	MUR1060F
Device marking code			MUR1020F	MUR1040F	MUR1060F
Repetitive Peak Reverse Voltage	VRRM	V	200	400	600
Average Rectified Output Current @60Hz half sine-wave, R-load, T _c (FIG.1)	I _o	A	10		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	125		
Current Squared Time @1ms≤t<8.3ms T _j =25°C	I ² t	A ² s	65		
Storage Temperature	T _{stg}	°C	-55 ~ +150		
Junction Temperature	T _j	°C	-55 ~ +150		

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

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}	μA	V _{RM} =V _{RRM} T _a =25°C	10		
	I _{RRM2}		V _{RM} =V _{RRM} T _a =125°C	500		
Reverse Recovery Time	T _{rr}	ns	I _F =0.5A I _{RM} =1A I _{RR} =0.25A	50		

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR1020F	MUR1040F	MUR1060F
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	2.5	



MUR1020F THRU MUR1060F

Ordering Information (Example)

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

Characteristics (Typical)

FIG1: I_o - T_c Curve

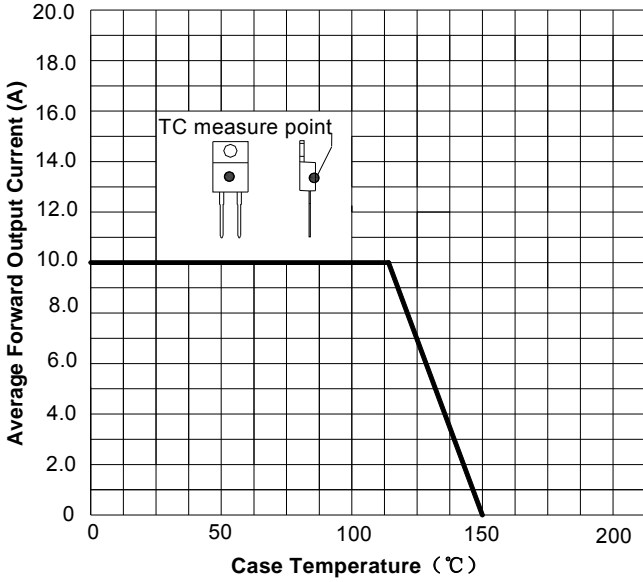


FIG2: Surge Forward Current Capability

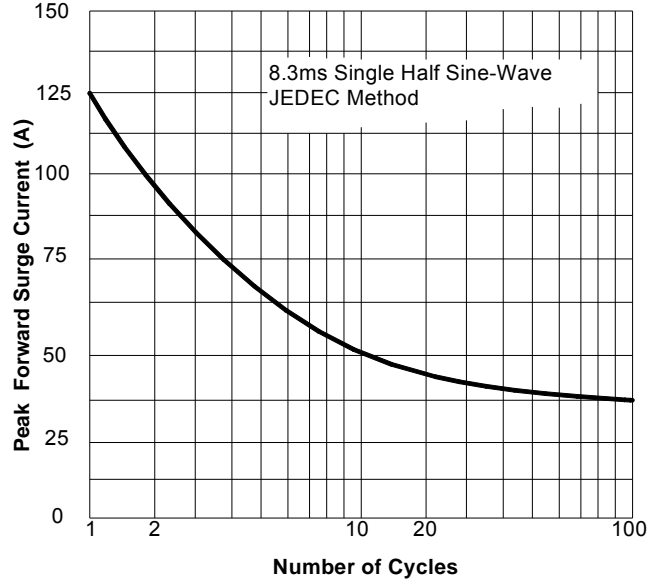


FIG3: Forward Voltage

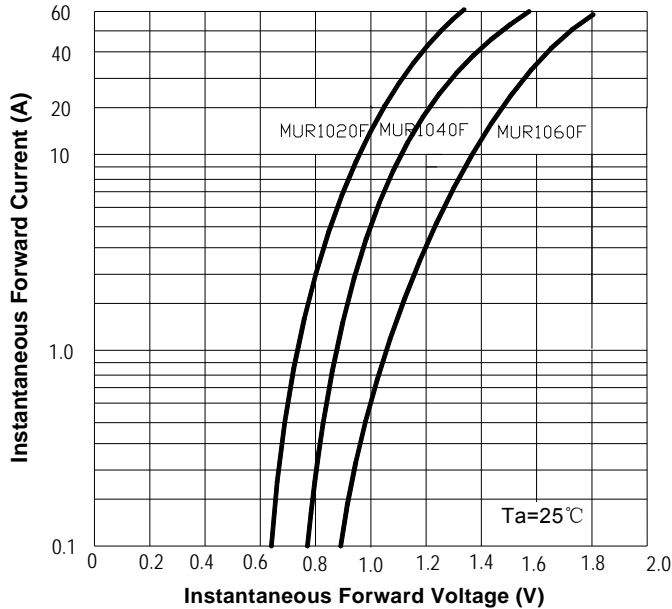
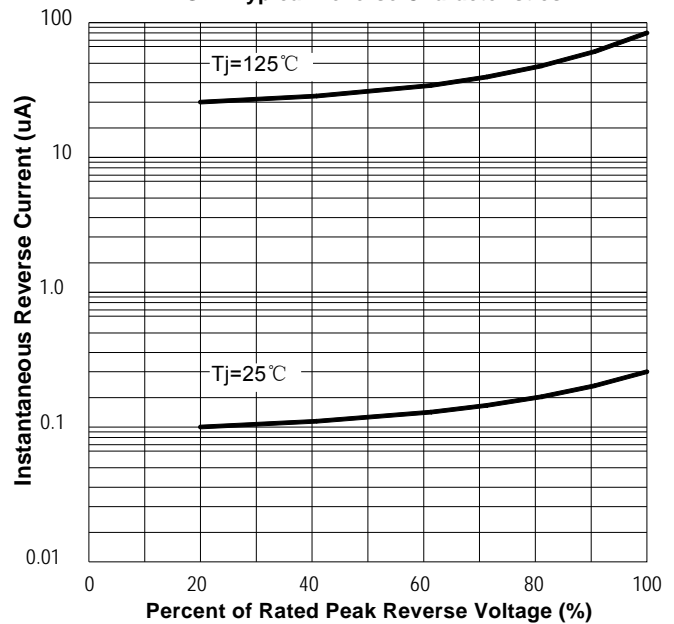


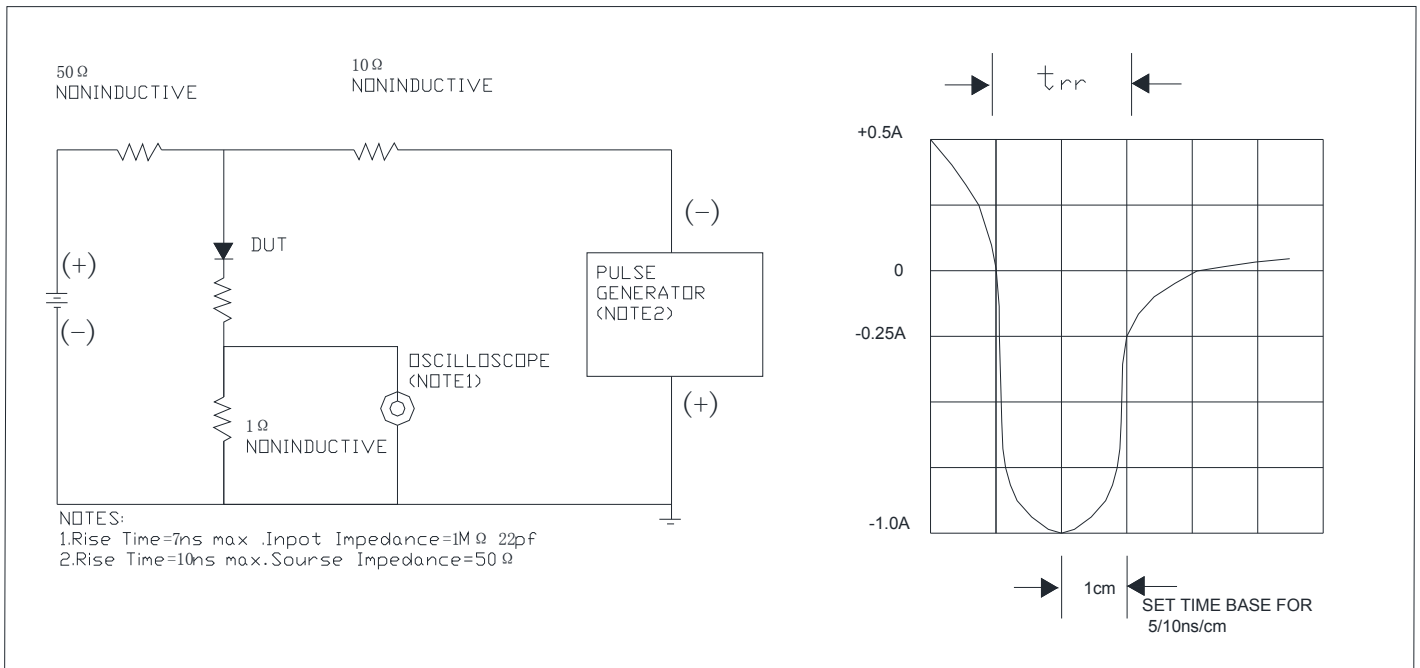
FIG4: Typical Reverse Characteristics



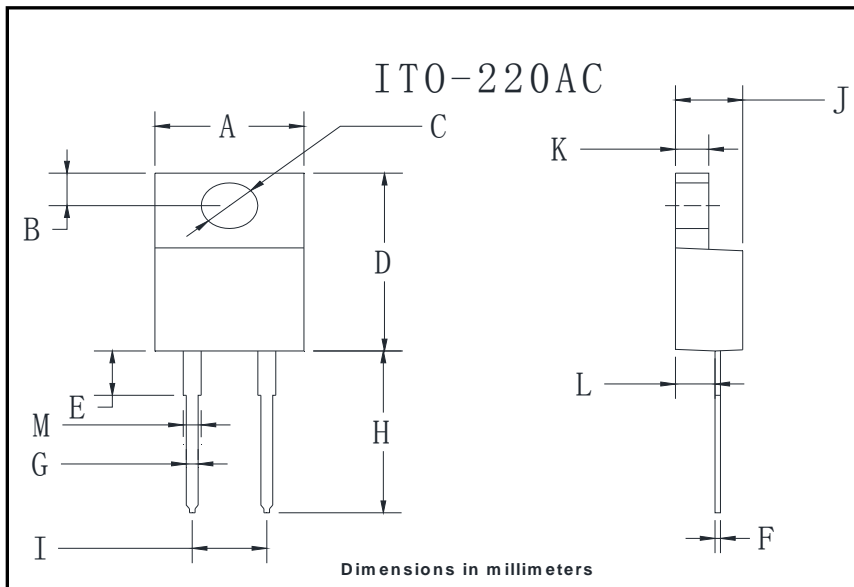


MUR1020F THRU MUR1060F

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



MUR1020F THRU MUR1060F

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