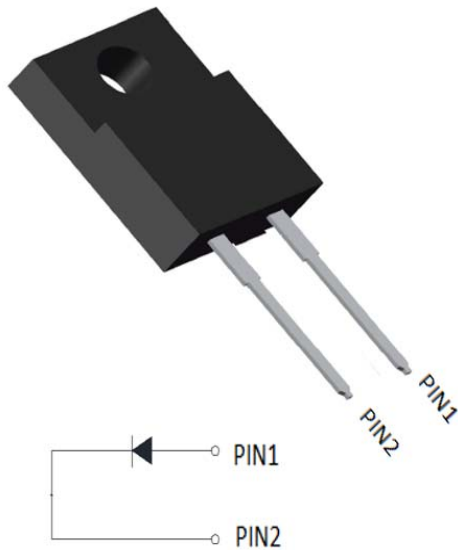


Ultra-Fast Recovery Diodes 30A FRED Pt



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

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_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURL3060F
Device marking code			MURL3060F
Repetitive Peak Reverse Voltage	V _{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	300
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	373
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Junction capacitance @4V,1MHz	C _j	pF	197



MURL3060F-B1-W5094HF

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=30.0A$ @ $T_J=25^{\circ}C$	-	1.25	1.80
			$I_{FM}=30.0A$ @ $T_J=125^{\circ}C$	-	1.11	1.50
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	$V_{RM}=V_{RRM}$ $T_J=25^{\circ}C$	-	-	5.0
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_J=125^{\circ}C$	-	80	200
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_J=25^{\circ}C$	-	40	75
			$T_J=25^{\circ}C$	-	100	-
			$T_J=125^{\circ}C$	-	157	-
Peak recovery current	I_{RRM}	A	$T_J=25^{\circ}C$	-	6.84	-
			$T_J=125^{\circ}C$	-	14.90	-
Reverse recovery charge	Q_{rr}	nC	$T_J=25^{\circ}C$	-	341	-
			$T_J=125^{\circ}C$	-	1172	-

■Thermal Characteristics ($T_J=25^{\circ}C$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURL3060F
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}C/W$	3.0

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURL3060	Approximate 1.88	50	1000	5000	Tube

■Characteristics (Typical)

FIG1: I_o - T_c Curve

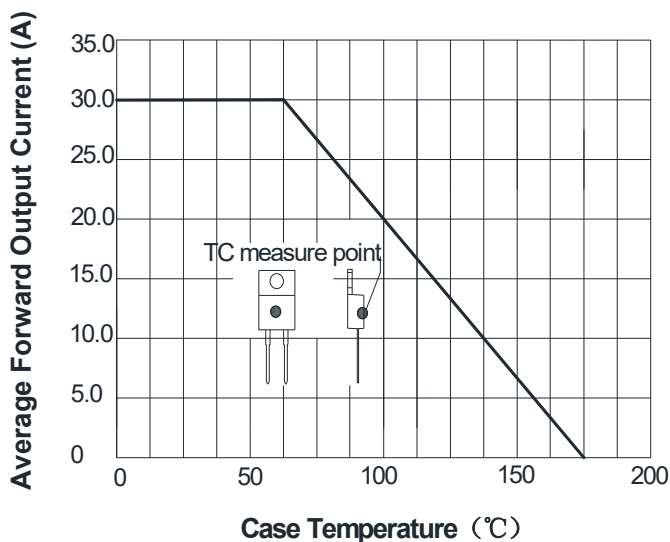
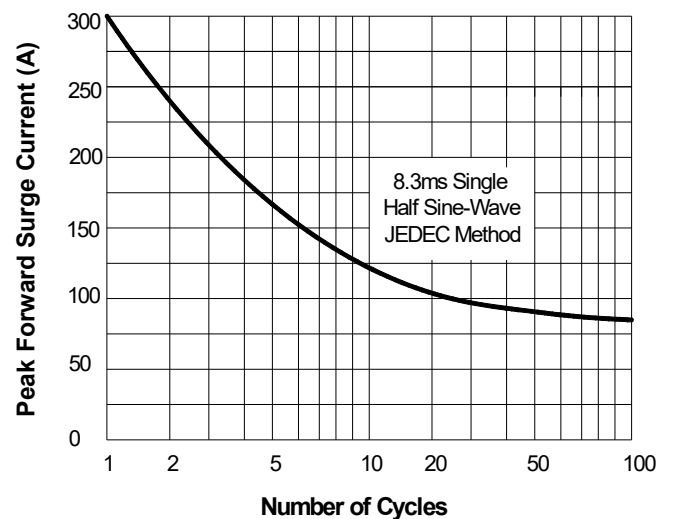


FIG2: Surge Forward Current Capability





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FIG3: Forward Voltage

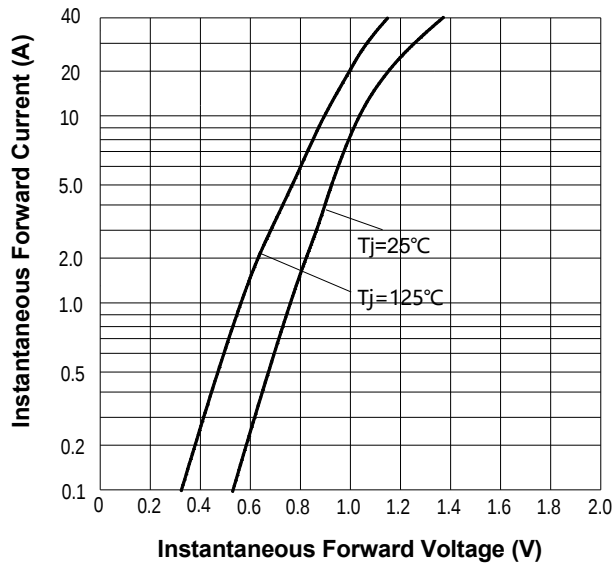


FIG.4: Instantaneous Reverse Characteristics

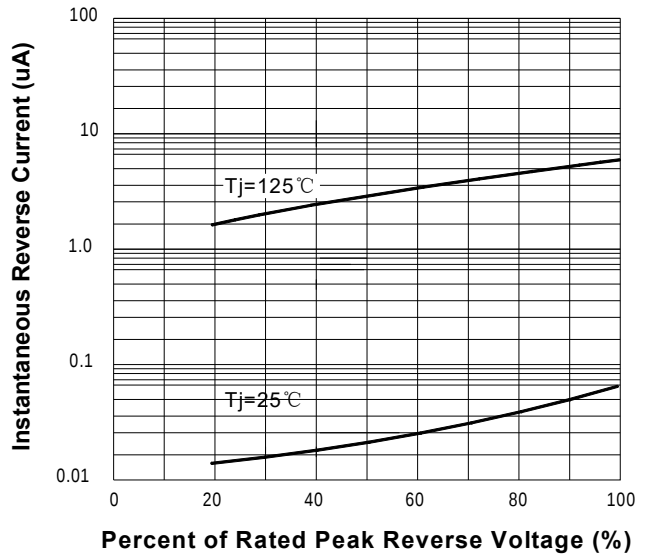
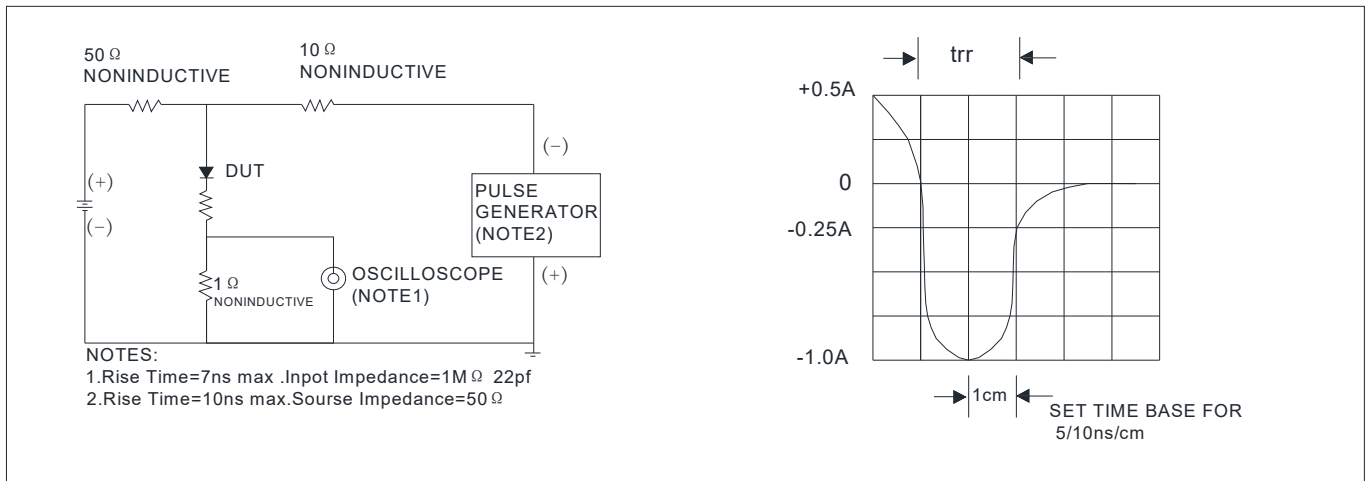


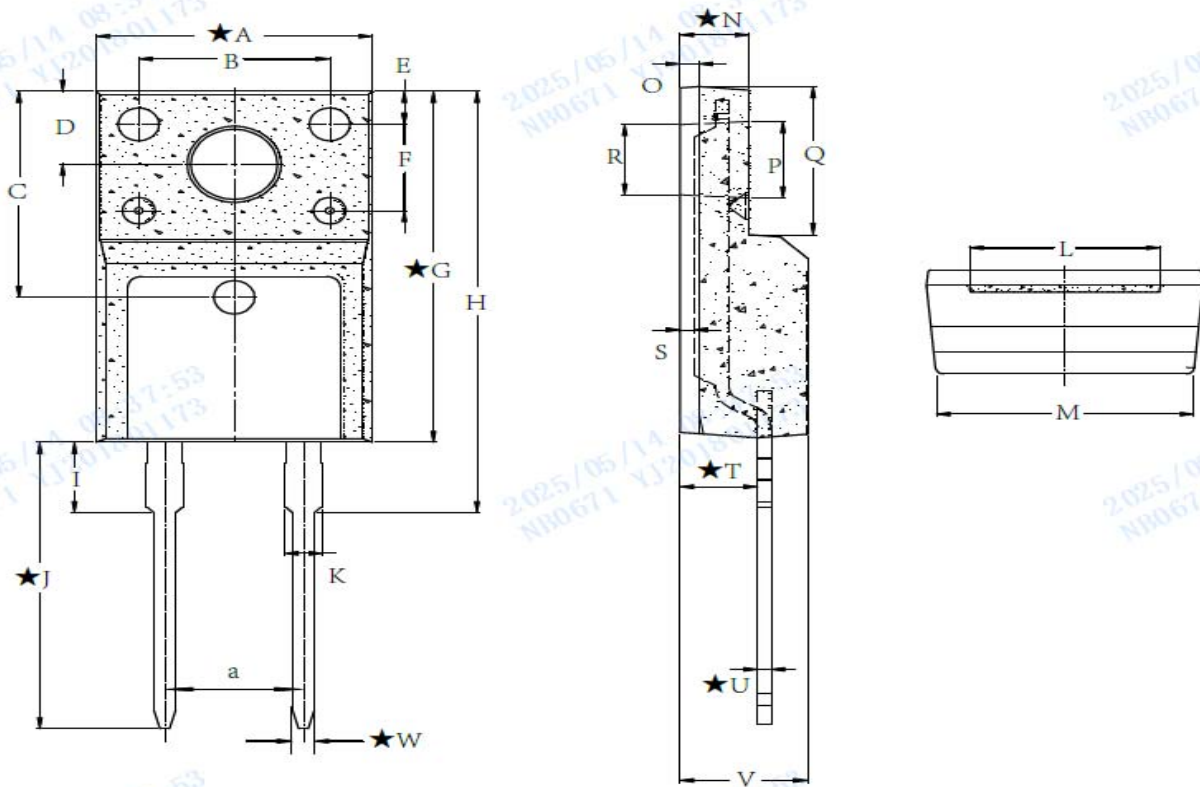
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





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■Outline Dimensions



SYMBOL	MIN	MAX
★A	10.03	10.23
B	6.9	7.1
C	9.21	9.41
D	3.2	3.4
E	1.4	1.6
F	3.8	4
★G	15.72	16.02
H	TYP19.05	
I	TYP3.18	
★J	12.65	13.25
K	1.3	1.5
L	6.5	7.5
M	9.23	9.63
★N	2.44	2.64
O	TYP0.7	
P	3.35	3.55
Q	6.58	6.78
R	3.08	3.28
S	TYP0.52	
★T	2.75	2.95
★U	0.4	0.6
V	4.5	4.9
★W	0.71	0.91
a	5.05	5.11

★为关键尺寸



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