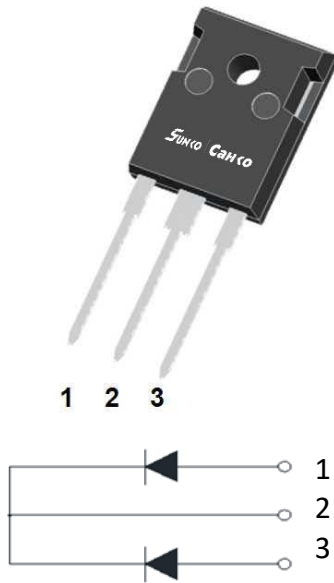


Ultra-Fast Recovery Diodes 15A*2 FRED



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:** TO-247AB
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 (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR3060PT
Device marking code			MUR3060PT
Repetitive Peak Reverse Voltage	VRRM	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	IFSM	A	150
Current Squared Time @ 1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	93
Single Pulse Avalanche Energy @ T _p =40uS, T _j =25°C,L=15mH	EAS	mJ	140
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	98

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max	
Instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =15.0A @ T _j =25°C	-	1.45	1.6	
			I _{FM} =15.0A @ T _j =150°C	-	1.25	1.4	
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	uA	V _{RM} =V _{RRM} T _j =25°C	-	-	5.0	
	I _{RRM2}		V _{RM} =V _{RRM} T _j =150°C	-	30	200	
Reverse Recovery Time	T _{RR}	ns	I _F =0.5A I _{RM} =1A I _{RR} =0.25A T _j =25°C	-	26	35	
			T _j =25°C	-	115	-	
			T _j =125°C	-	200	-	
Peak recovery current	I _{RRM}	A	I _F =15A di/dt=-200A/us V _{RM} =200V	T _j =25°C	-	5.0	-
				T _j =125°C	-	10.5	-
Reverse recovery charge	Q _{rr}	nC	I _F =15A di/dt=-200A/us V _{RM} =200V	T _j =25°C	-	285	-
				T _j =125°C	-	1000	-

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

PARAMETER		SYMBOL	UNIT	MUR3060PT
Thermal Resistance	Between junction and case	R _{θJ-C}	°CW	1.0
	Between junction and Air	R _{θJ-A}	°CW	50

■ Characteristics(Typical)

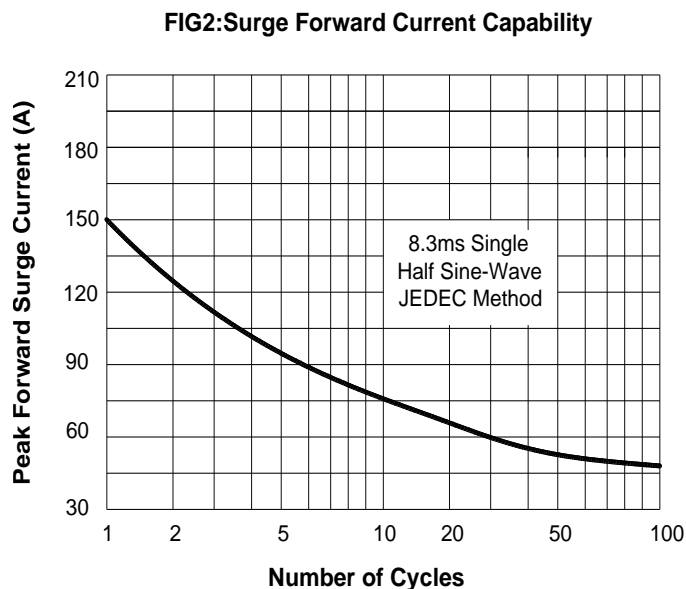
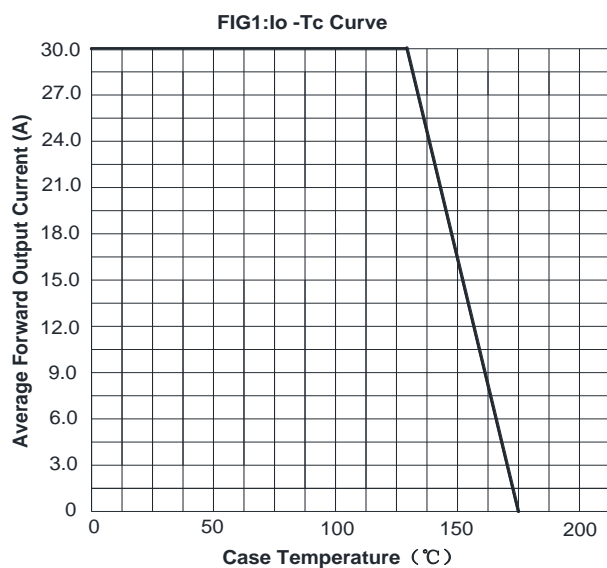


FIG3: Forward Voltage

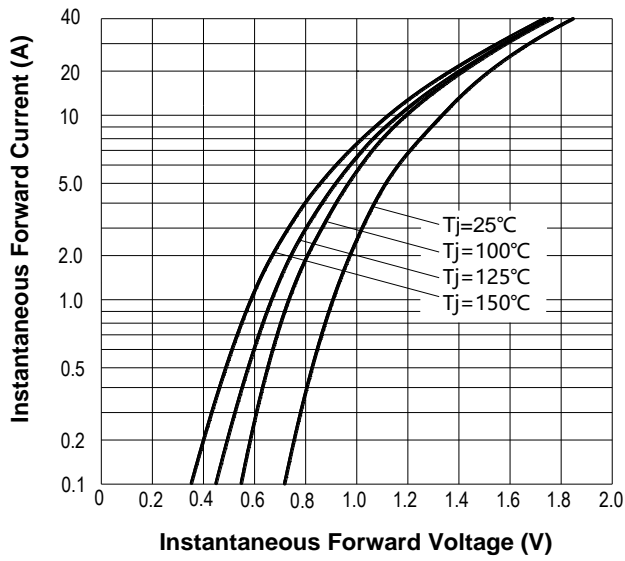


FIG.4: Instantaneous Reverse Characteristics

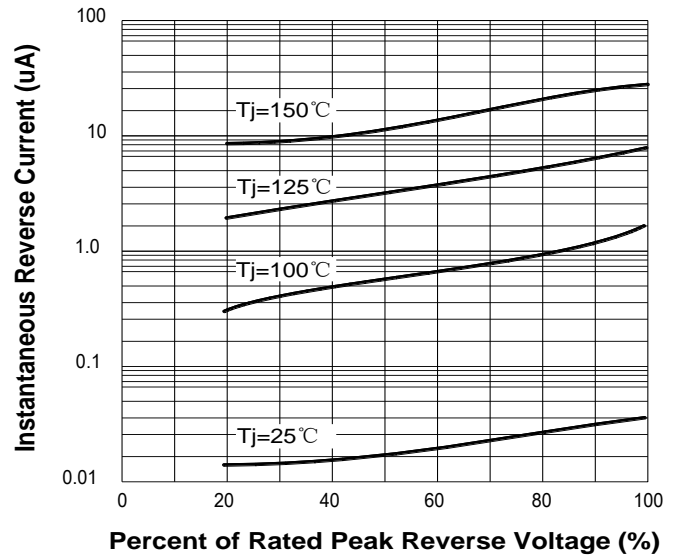
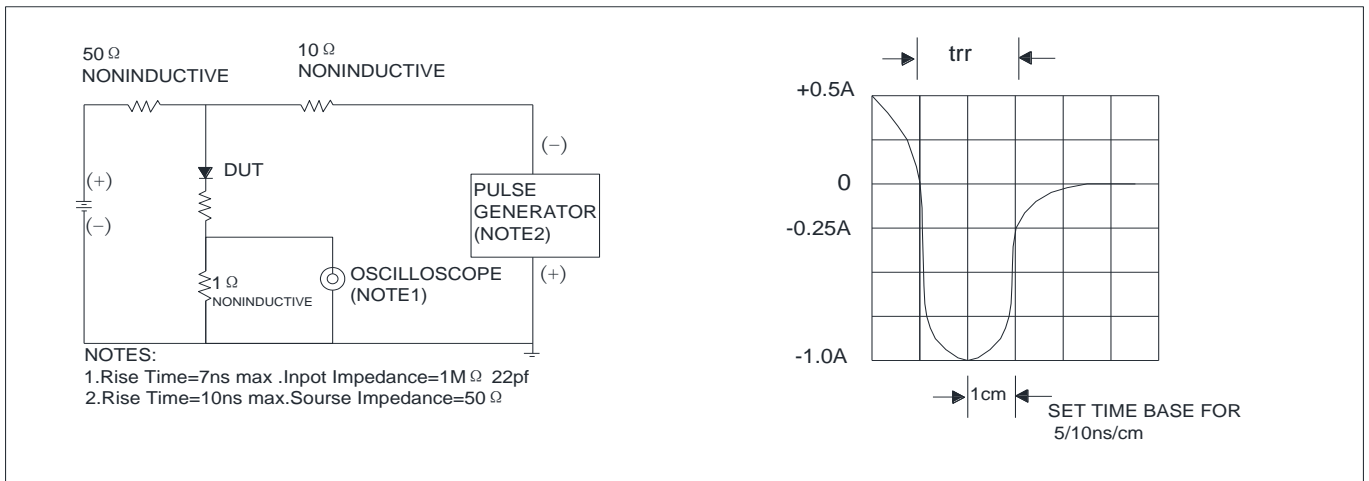
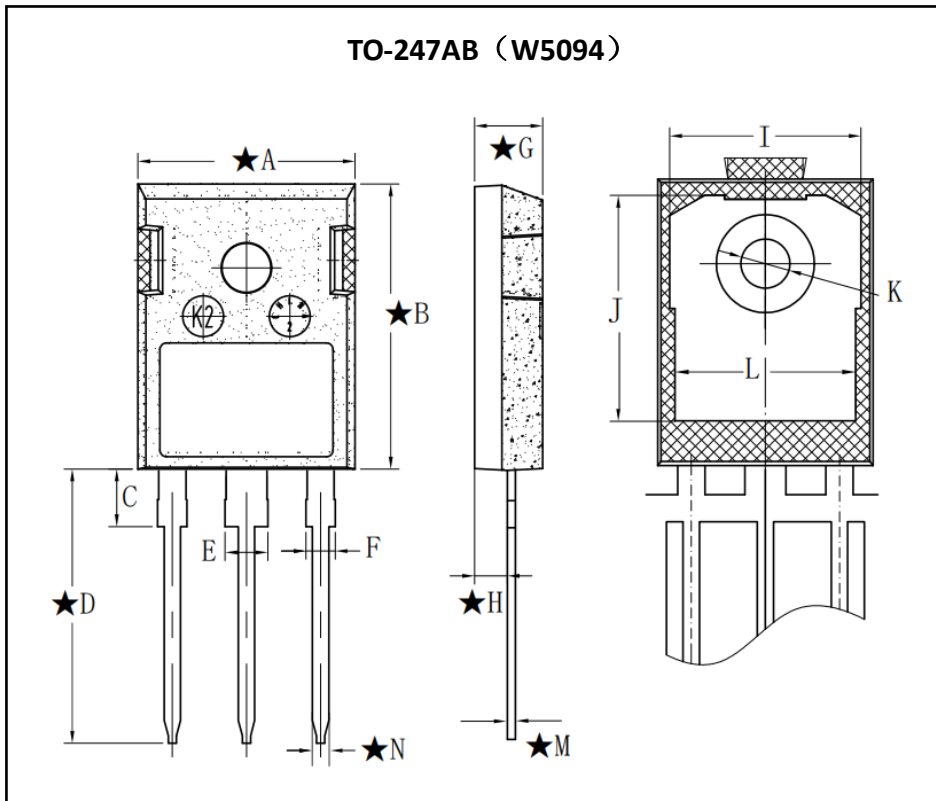


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



TO-247AB		
Dim	Min	Max
A	15.72	16.12
B	20.7	21.1
C	4.02	4.42
D	19.9	20.3
E	3.0	3.3
F	2.0	2.3
G	4.8	5.2
H	2.3	2.5
I	TYP 14.02	
J	TYP 16.55	
K	3.5	3.7
L	TYP 13.26	
M	0.58	0.62
N	1.15	1.25

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