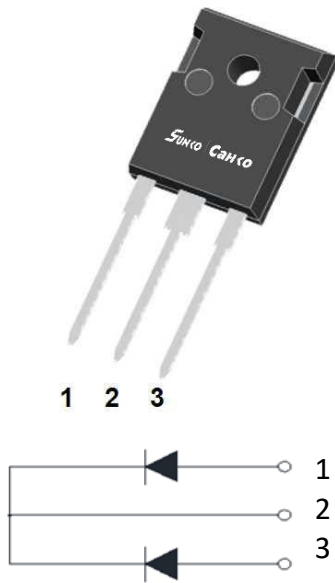


Ultra-Fast Recovery Diodes 15A*2 FRED



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	MUR3060PTL
Device marking code			MUR3060PTL
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	150
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	93
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	77

MUR3060PTL

■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	-	2.10	2.80
			I _{FM} =15.0A @ T _j =150°C	-	1.51	-
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	uA	V _{RM} =V _{RRM} T _j =25°C	-	-	10
	I _{RRM2}		V _{RM} =V _{RRM} T _j =150°C	-	35	200
Reverse Recovery Time	T _{RR}	ns	I _F =0.5A I _{RM} =1A I _{RR} =0.25A T _j =25°C	-	18	25
			T _j =25°C	-	51	-
			T _j =125°C	-	80	-
Peak recovery current	I _{RRM}	A	T _j =25°C	-	2.78	-
			T _j =125°C	-	6.98	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	-	71	-
			T _j =125°C	-	281	-

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

PARAMETER		SYMBOL	UNIT	MUR3060PTL
Thermal Resistance	Between junction and case	R _{θJ-C}	°CW	1.0
	Between junction and Air	R _{θJ-A}	°CW	37

■ Characteristics(Typical)

FIG1:Io -Tc Curve

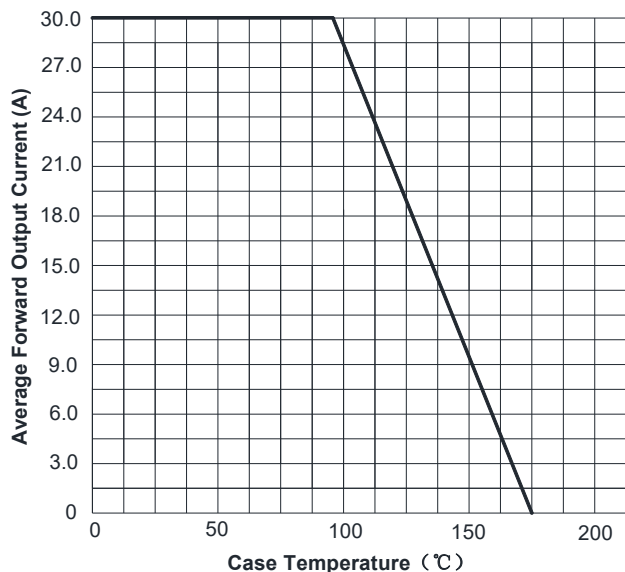


FIG2: Surge Forward Current Capability

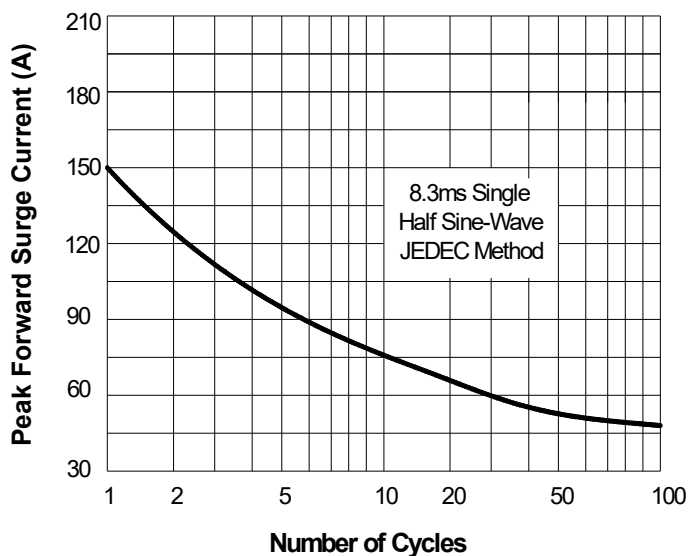


FIG3: Forward Voltage

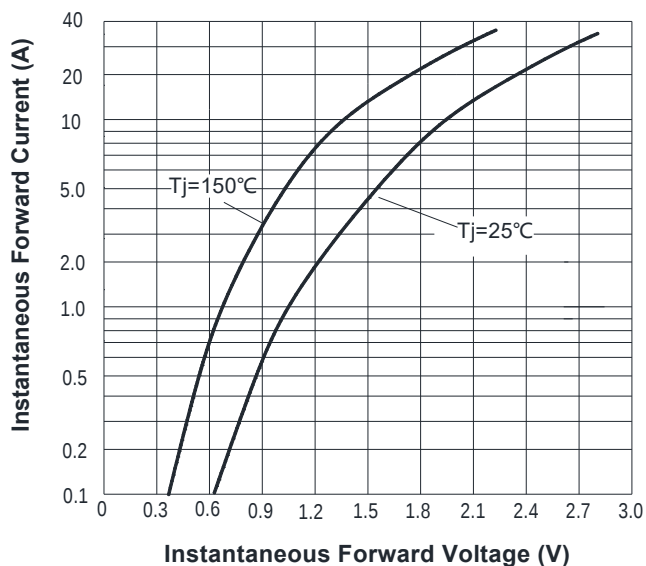


FIG4: Instantaneous Reverse Characteristics

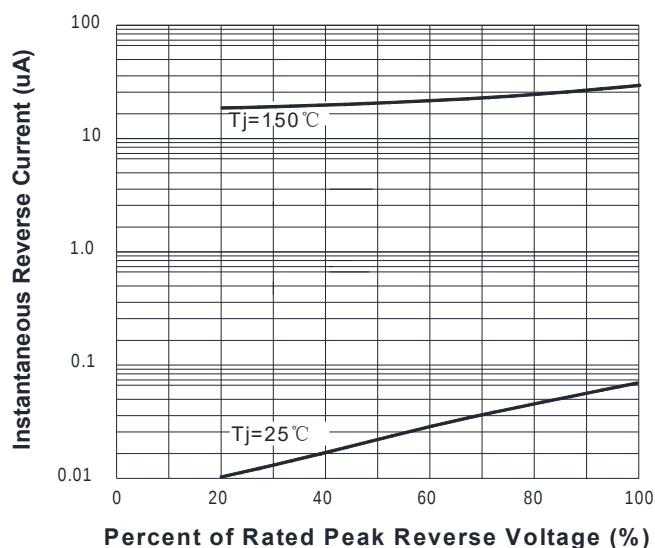
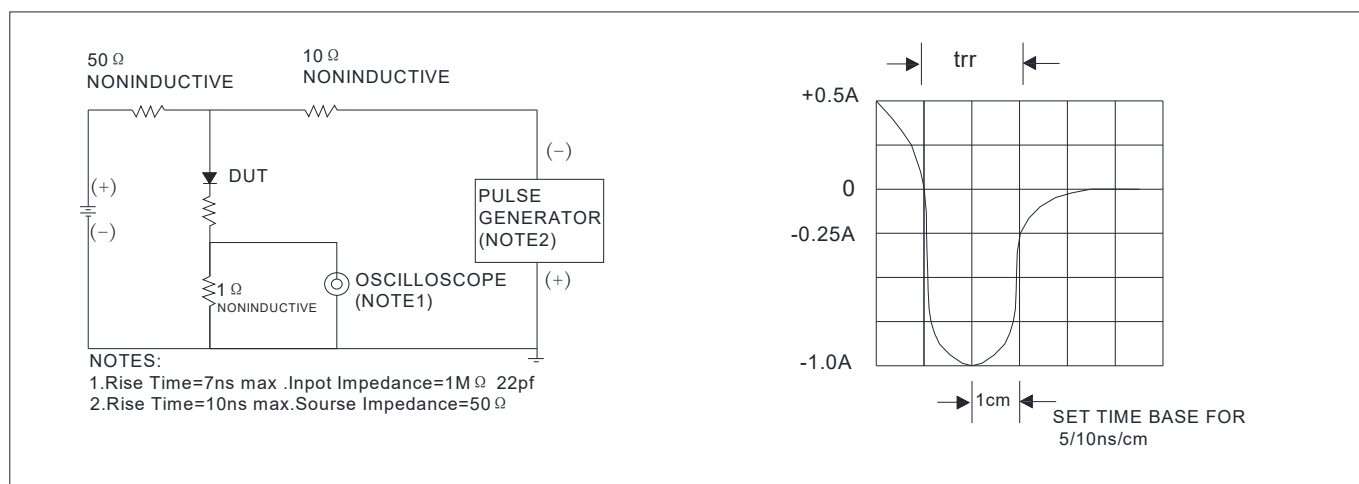
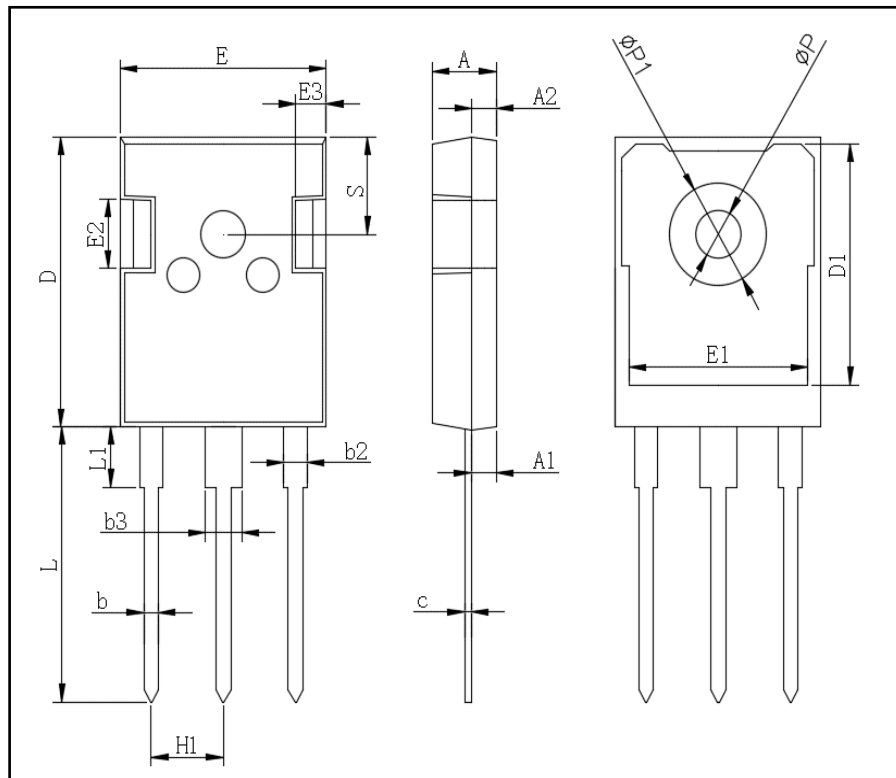


FIG5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



TO-247AB		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.0	1.4
b2	1.91	2.21
C	0.5	0.7
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.0	13.6
E2	4.80	5.20
E3	2.30	2.70
L	19.62	20.22
L1	-	4.30
ΦP	3.40	3.80
ΦP1	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20

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