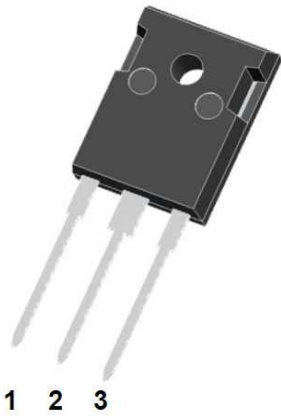


## Ultra-Fast Recovery Rectifier Diodes



### Features

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- 2000V Insulating capability
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max.7s, per JESD 22-B106

### Typical Applications

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

### Mechanical Data

- **Package:** TO-247AB  
Inner-Insulated Instructure  
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<sub>j</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURIL6060PS
Device marking code			MURIL6060PS
Repetitive Peak Reverse Voltage	VRRM	V	600
Average Rectified Output Current @60Hz half sine-wave, R-load, T <sub>c</sub> (FIG.1)	I <sub>o</sub>	A	60
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>j</sub> =25°C	IFSM	A	310
Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C	I <sup>2</sup> t	A <sup>2</sup> s.	398
Single Pulse Avalanche Energy @ T <sub>p</sub> =40uS, T <sub>j</sub> =25°C,L=15mH	EAS	mJ	750
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +175
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C <sub>j</sub>	pF	410



# MURIL6060PS

## ■Electrical Characteristics (T<sub>j</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =60.0A T <sub>j</sub> =25°C	-	1.65	1.80
DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	uA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>j</sub> =25°C	-	-	5.0
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> T <sub>j</sub> =125°C	-	-	200
Reverse Recovery Time	T <sub>rr</sub>	ns	I <sub>F</sub> =0.5A I <sub>RM</sub> =1A I <sub>RR</sub> =0.25A T <sub>j</sub> =25°C	-	60	75
			T <sub>j</sub> =25°C	-	80	-
			T <sub>j</sub> =125°C	-	150	-
Peak recovery current	I <sub>RRM</sub>	A	T <sub>j</sub> =25°C	-	6.80	-
			T <sub>j</sub> =125°C	-	18.35	-
Reverse recovery charge	Q <sub>rr</sub>	nC	T <sub>j</sub> =25°C	-	280	-
			T <sub>j</sub> =125°C	-	1360	-

## ■Thermal Characteristics (T<sub>j</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURIL6060PS
Thermal Resistance	Between junction and case	R <sub>θJ-C</sub>	°CW	1.0

## ■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURIL6060PS	Approximate 6.0	30	360	1800	Tube

## ■Characteristics (Typical)

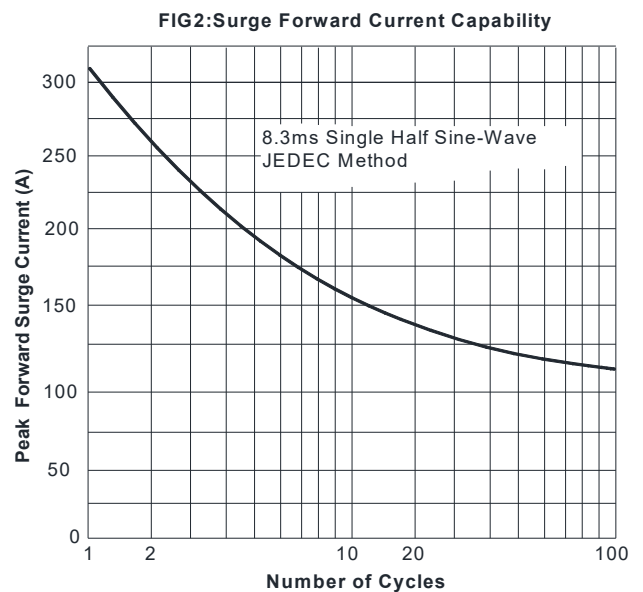
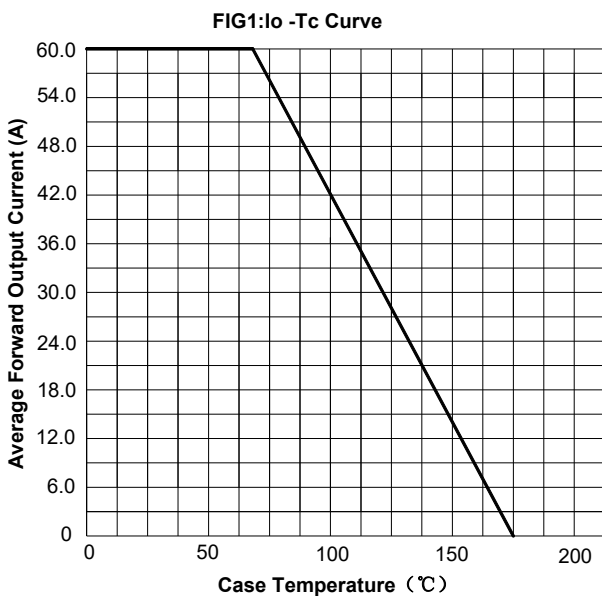


FIG3: Forward Voltage

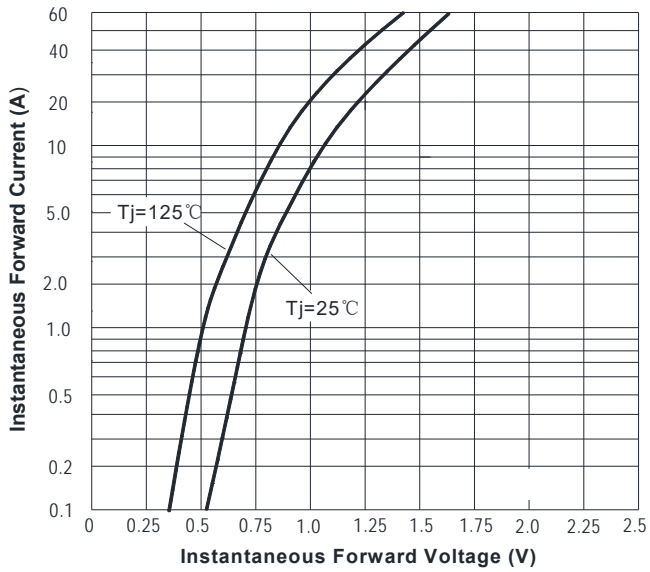


FIG4: Typical Reverse Characteristics

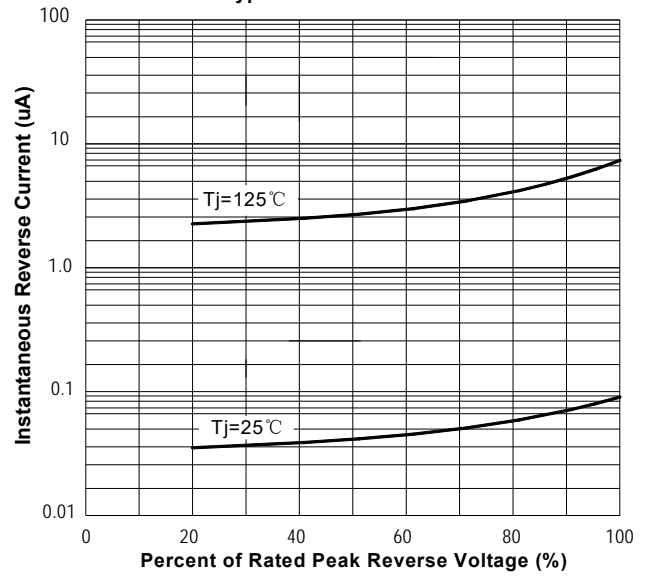
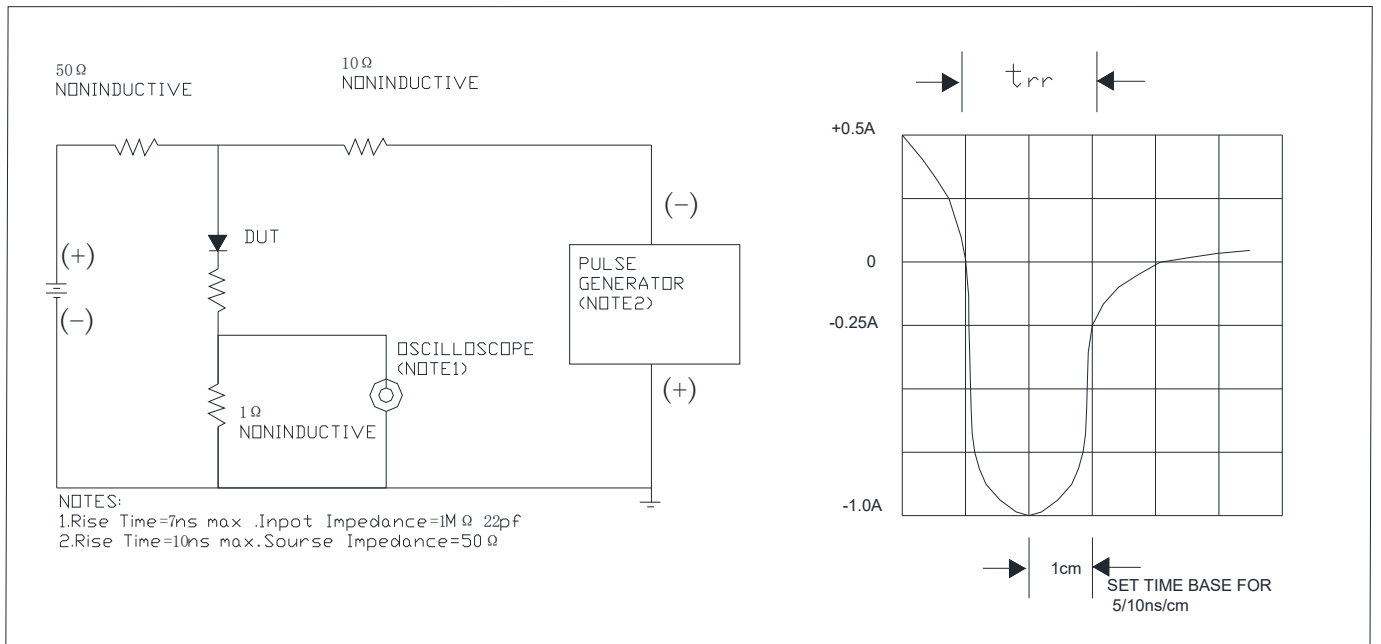


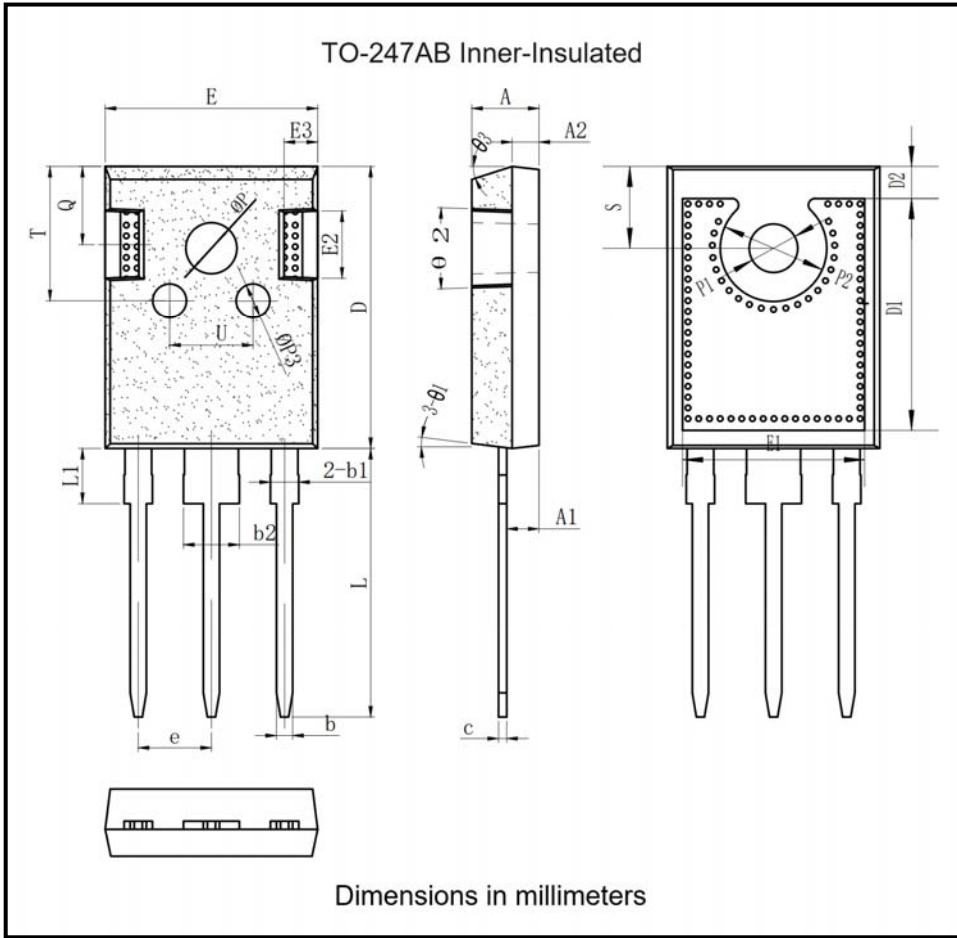
FIG.5 Diagram of circuit and Testing wave form of reverse recovery time





# MURIL6060PS

## ■ Outline Dimensions



TO-247AB Inner-Insulated		
Dim	Min	Max
A	4.90	5.10
A1	2.31	2.51
A2	1.90	2.10
b	1.15	1.25
b1	1.95	2.25
b2	10.78	10.98
C	0.55	0.65
D	20.90	21.30
D1	17.10	17.50
D2	2.25	2.55
E	15.70	15.90
E1	13.38	13.68
E2	4.90	5.10
E3	2.40	2.60
e	5.40	5.48
L	19.80	20.15
L1	-	4.30
ΦP	3.60	3.80
ΦP1	3.45	3.65
ΦP2	7.75	8.05
ΦP3	2.40	2.60
Q	5.60	6.00
S	6.05	6.25
T	9.80	10.20
U	6.00	6.40
θ1	7°BSC	
θ2	3°BSC	
θ3	15°BSC	



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