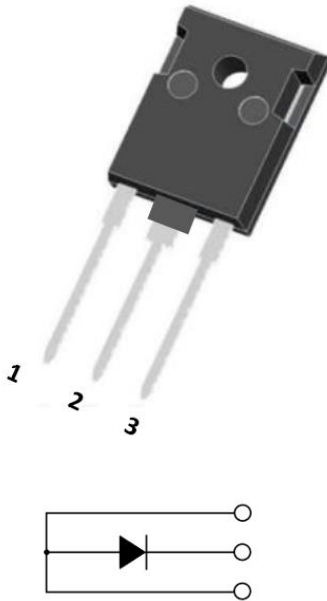


Ultra-Fast Recovery Rectifier Diodes



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 ($T_j=25^\circ\text{C}$ 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_c (FIG.1)	I_o	A	60
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_j=25^\circ\text{C}$	I_{FSM}	A	310
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$	I^2t	A^2s .	405
Single Pulse Avalanche Energy @ $T_p=40\mu\text{s}$, $T_j=25^\circ\text{C}$, $L=15\text{mH}$	EAS	mJ	630
Storage Temperature	T_{stg}	$^\circ\text{C}$	-55 ~ +175
Junction Temperature	T_j	$^\circ\text{C}$	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C_j	pF	410



MURIL6060PS

■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} =60.0A T _j =25°C	-	1.67	1.80
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	μA	V _{RM} =V _{RRM} T _j =25°C	-	-	5.0
	I _{RRM2}		V _{RM} =V _{RRM} T _j =125°C	-	-	200
Reverse Recovery Time	T _{rr}	ns	I _F =0.5A I _{RM} =1A I _{RR} =0.25A T _j =25°C	-	60	75
			T _j =25°C	-	80	-
			T _j =125°C	-	150	-
Peak recovery current	I _{RRM}	A	T _j =25°C	-	7	-
			T _j =125°C	-	18	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	-	275	-
			T _j =125°C	-	1360	-

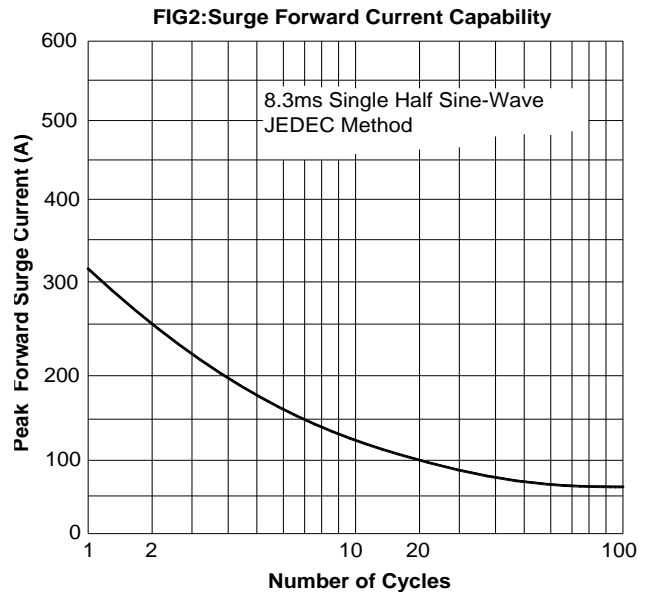
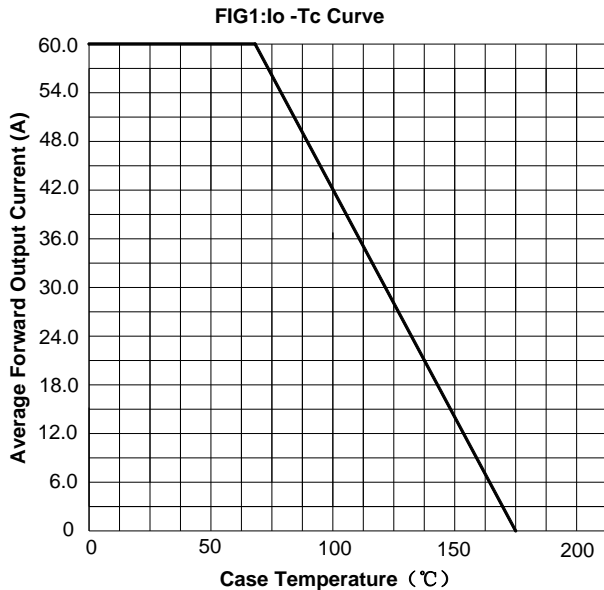
■Thermal Characteristics (T_j=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURIL6060PS
Thermal Resistance	Between junction and case	R _{θJ-C}	°CW	1.0

■Ordering Information (Example)

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

■Characteristics (Typical)





MURIL6060PS

FIG3: Forward Voltage

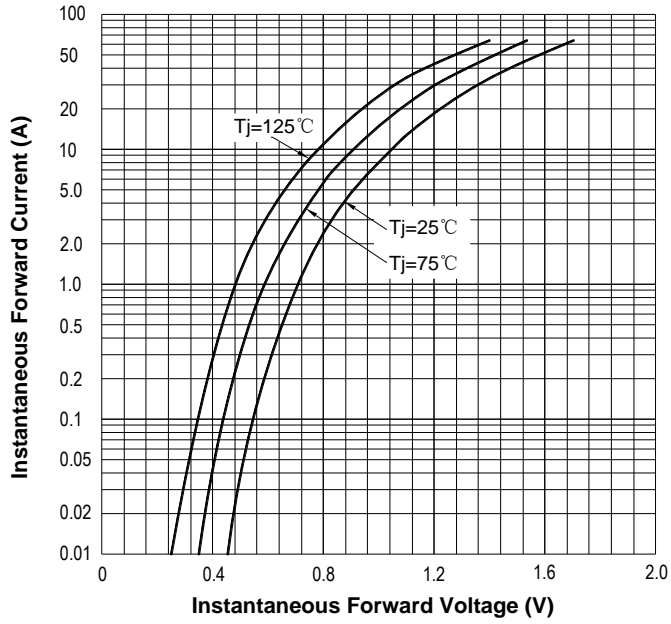


FIG.4: Typical Reverse Characteristics

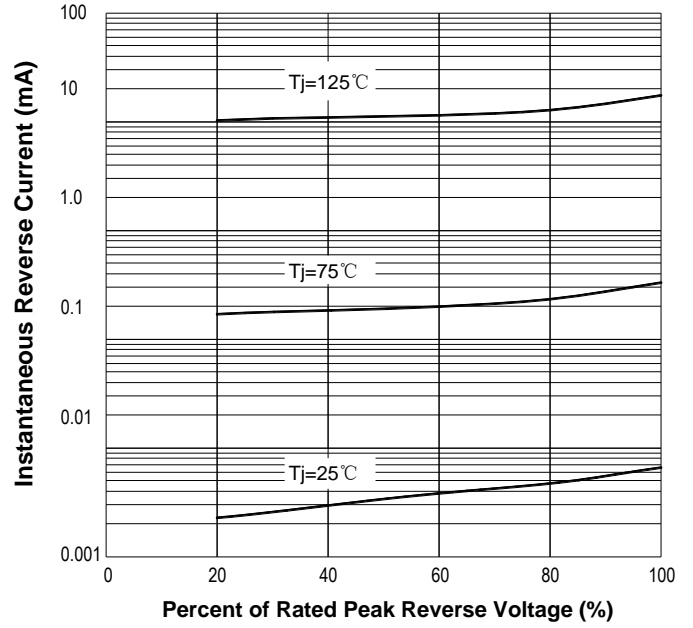
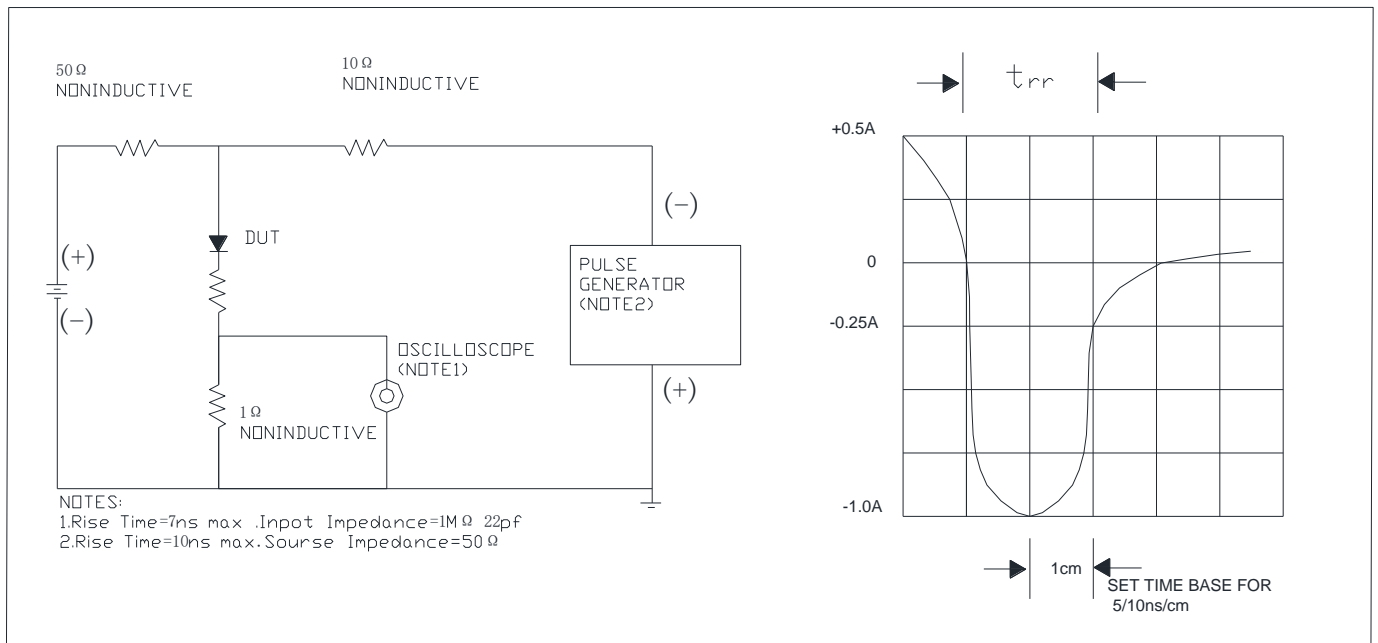


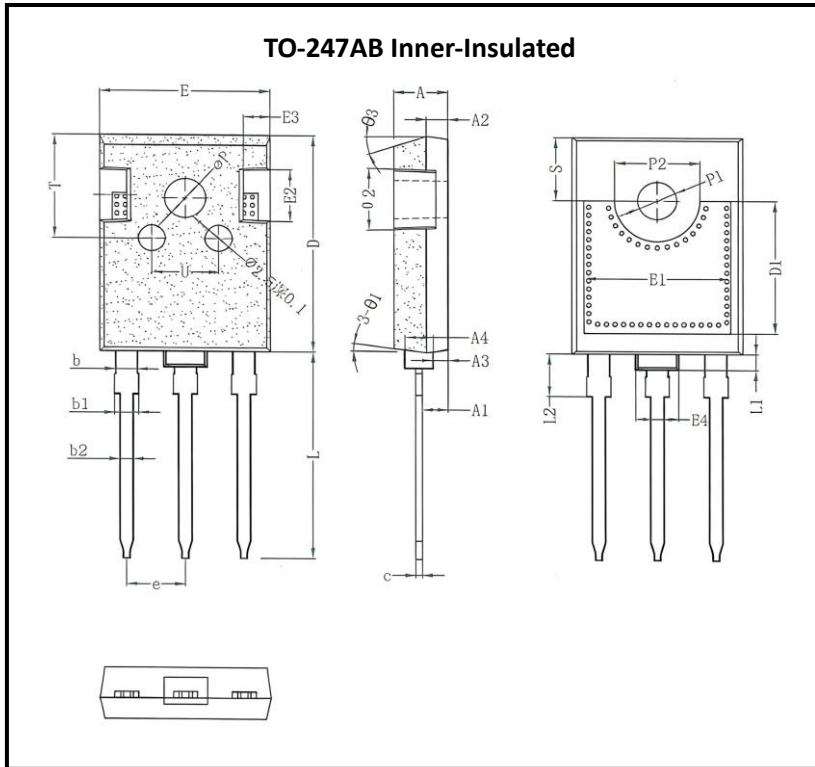
FIG.5 Diagram of circuit and Testing wave form of reverse recovery time





MURIL6060PS

■Outline Dimensions



TO-247AB Inner-Insulated			
Dim	Min	NOM	Max
*A	4.90	5.00	5.10
*A1	2.31	2.41	2.51
A2	1.90	2.00	2.10
*A3	1.30	1.40	1.50
A4	2.50	2.60	2.70
b	1.95	2.00	2.05
*b1	2.00	2.15	2.30
*b2	1.15	1.20	1.25
*C	0.55	0.60	0.65
*D	20.90	21.00	21.10
D1	12.40	12.60	12.80
*E	15.70	15.80	15.90
E1	13.10	13.30	13.50
E2	4.80	4.90	5.00
E3	2.40	2.50	2.60
*E4	3.90	4.00	4.10
*L	19.80	19.98	20.15
*L1	1.40	1.50	1.60
L2	3.90	4.10	4.30
ΦP	3.60	3.70	3.80
ΦP1	3.45	3.55	3.65
P2	8.00	8.20	8.40
*S	6.05	6.15	6.25
T	9.80	10.00	10.20
U	6.00	6.20	6.40
e	5.40	5.44	5.48
θ1	5°	7°	9°
θ2	1°	3°	5°
θ3	13°	15°	17°



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