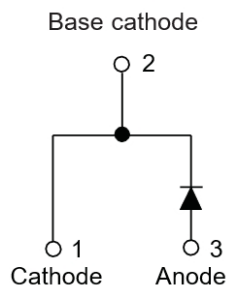


Ultra-Fast Recovery Rectifier Diodes



Features

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

Typical Applications

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

Mechanical Data

- **Package:** TO-247AC
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	MUR6060PL
Device marking code			MUR6060PL
Repetitive Peak Reverse Voltage	V _{RRM}	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°C	I _{FSM}	A	500
Current Squared Time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s.	1037
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	200

MUR6060PL

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=60.0A$ $T_j=25^{\circ}C$	-	1.90	2.5
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}		$V_{RM}=V_{RRM}$ $T_j=125^{\circ}C$	-	-	200
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25^{\circ}C$	-	35	50
Reverse Recovery Time	T_{rr}	ns	$T_j=25^{\circ}C$	-	45	-
			$T_j=125^{\circ}C$	-	56	-
Peak recovery current	I_{RRM}	A	$T_j=25^{\circ}C$	-	12.45	-
			$T_j=125^{\circ}C$	-	28.25	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25^{\circ}C$	-	246	-
			$T_j=125^{\circ}C$	-	1075	-

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

PARAMETER		SYMBOL	UNIT	MUR6060PL
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}C/W$	0.4
	Between junction and Air	$R_{\theta J-A}$	$^{\circ}C/W$	45

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR6060PL	Approximate 6.0	30	360	1800	Tube

■Characteristics (Typical)

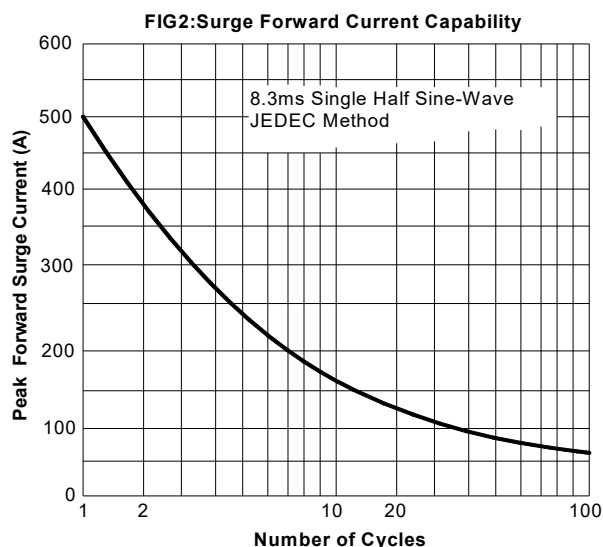
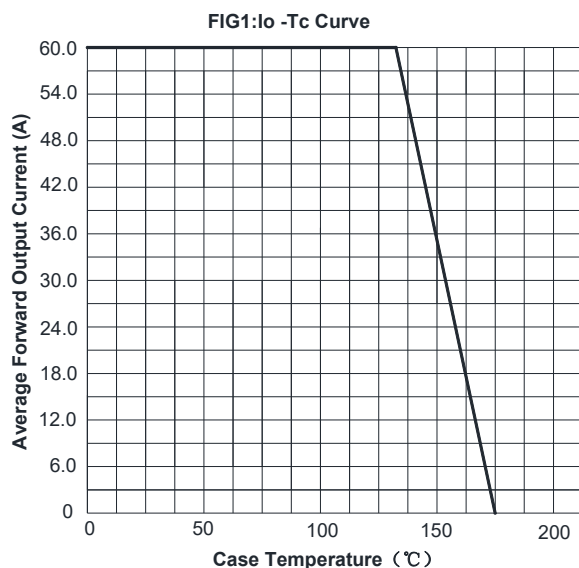


FIG3: Forward Voltage

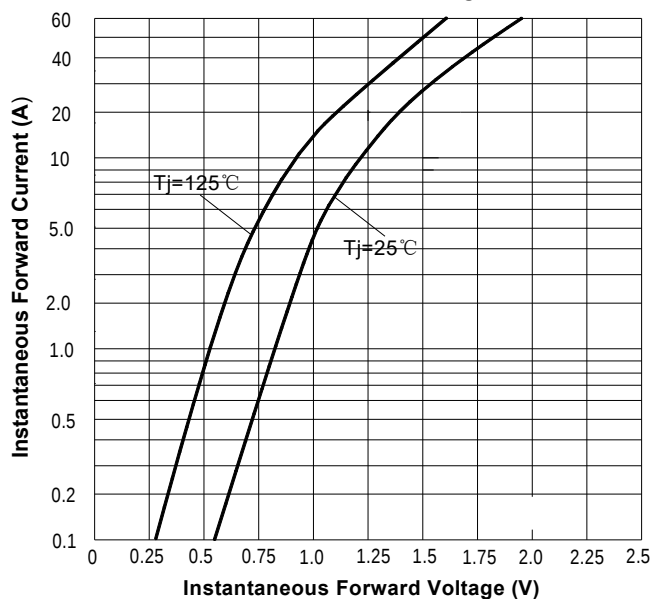


FIG4: Typical Reverse Characteristics

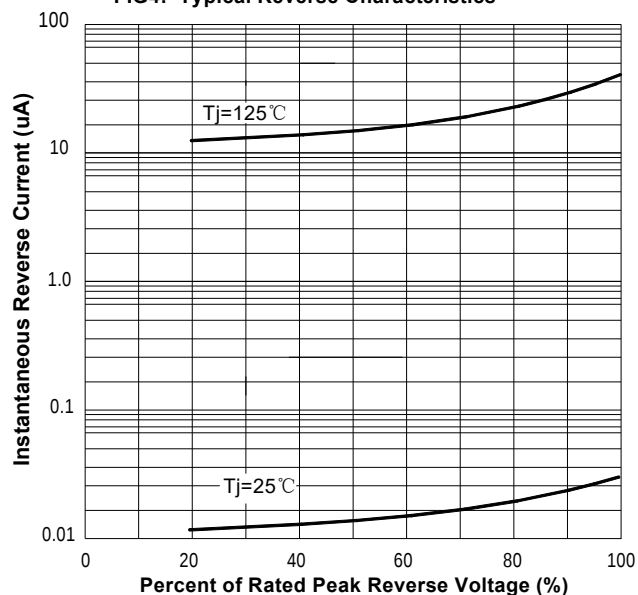
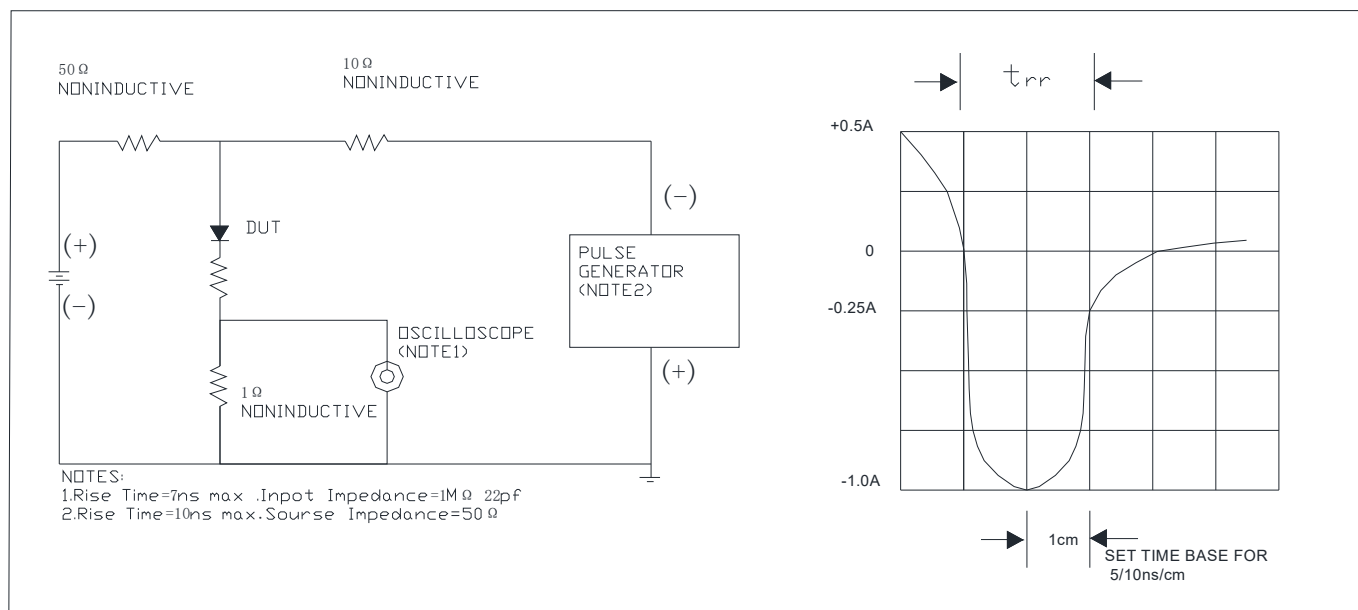
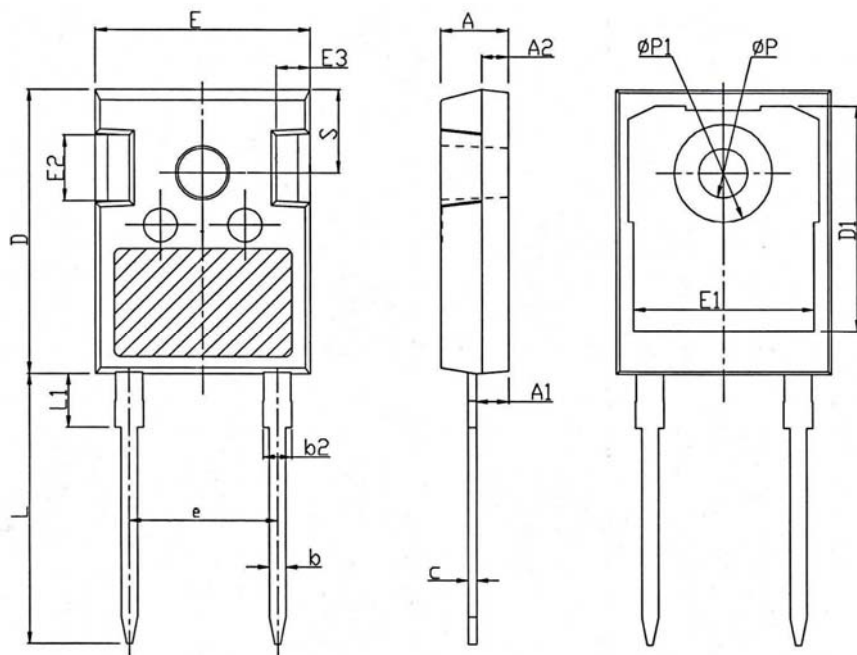


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



■Outline Dimensions



TO-247AC		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.11	1.36
b2	1.91	2.21
c	0.51	0.75
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.00	13.60
E2	4.80	5.20
E3	2.30	2.70
e	10.88BSC	
L	19.62	20.22
L1	-	4.30
φ P	3.40	3.80
φ P1	-	7.30
S	6.15BSC	

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