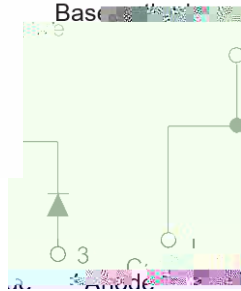


## Ultra-Fast Recovery Rectifier Diodes



### 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, RoHS-compliant

**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

**Polarity:** As marked

### Maximum Ratings ( $T_j=25$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURL6060P
Device marking code			MURL6060P
Repetitive Peak Reverse Voltage	VRRM	V	600
Average Rectified Output Current @60Hz half sine-wave, R-load, $T_c$ (FIG.1)	$I_o$	A	60 840

Single Pulse Avalanche Energy @ $T_p=40\mu s$ , $T_j=25$ , $L=15mH$	EAS	mJ	550
Storage Temperature	$T_{stg}$		-55 ~ +175
Junction Temperature	$T_j$		-55 ~ +175
Typical Junction capacitance @4V,1MHz	$C_j$	pF	197



# MURL6060P

## Electrical Characteristics $T_j=25$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max	
instantaneous forward voltage drop per diode	VFM	V	$I_{FM}=60.0A$ $T_j=25$	-	1.35	1.80	
DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	uA	$V_{RM}=V_{RRM}$ $T_j=25$	-	-	5.0	
	I <sub>RRM2</sub>		$V_{RM}=V_{RRM}$ $T_j=125$	-	-	200	
Reverse Recovery Time	T <sub>rr</sub>	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25$	-	60	75	
			$T_j=25$	-	99.85	-	
			$T_j=125$	-	166.77	-	
Peak recovery current	I <sub>RRM</sub>	A	$T_j=25$	- $I_F=30A$ $di/dt=-200A/us$ $V_{RM}=400V$	-	7.55	-
			$T_j=125$		-	16.75	-
Reverse recovery charge	Q <sub>rr</sub>	nC	$T_j=25$	-	375.85	-	
			$T_j=125$	-	1350	-	

## Thermal Characteristics $T_j=25$ Unless otherwise specified

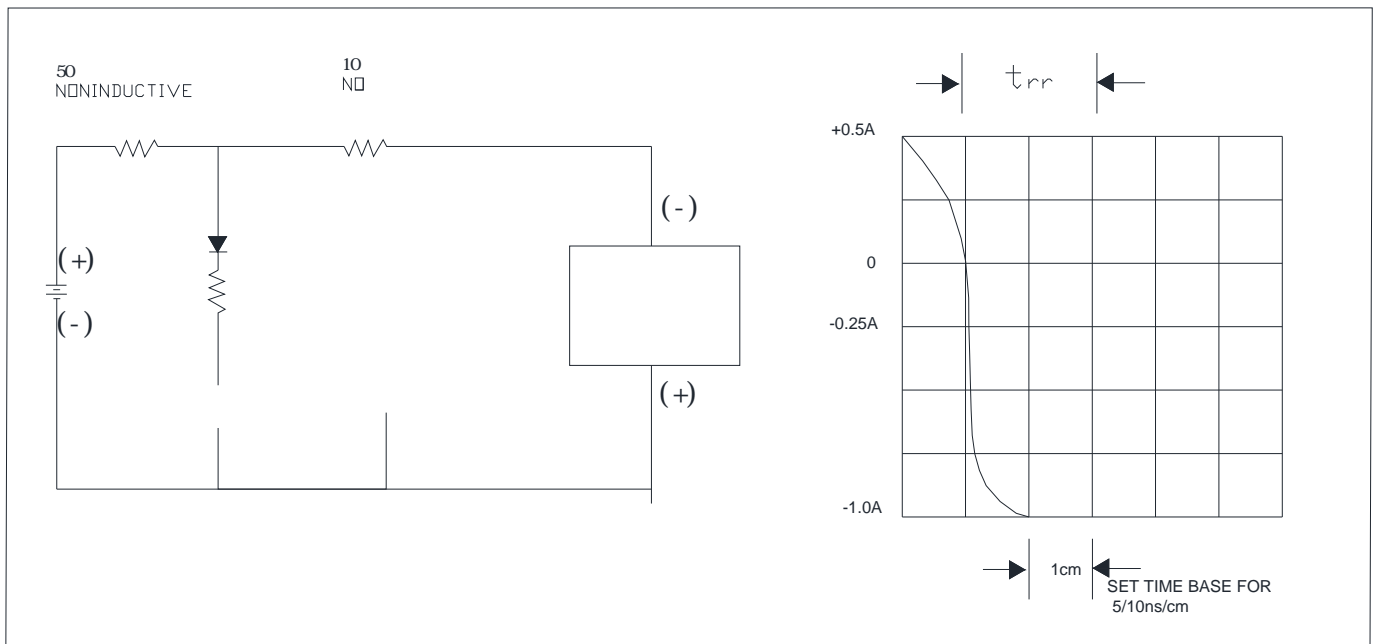
PARAMETER	SYMBOL	UNIT	MURL6060P
Thermal Resistance Between junction and case	$R_{j-c}$	$^{\circ}W$	1.0

## Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURL6060P	Approximate 6.0	30	360	1800	Tube

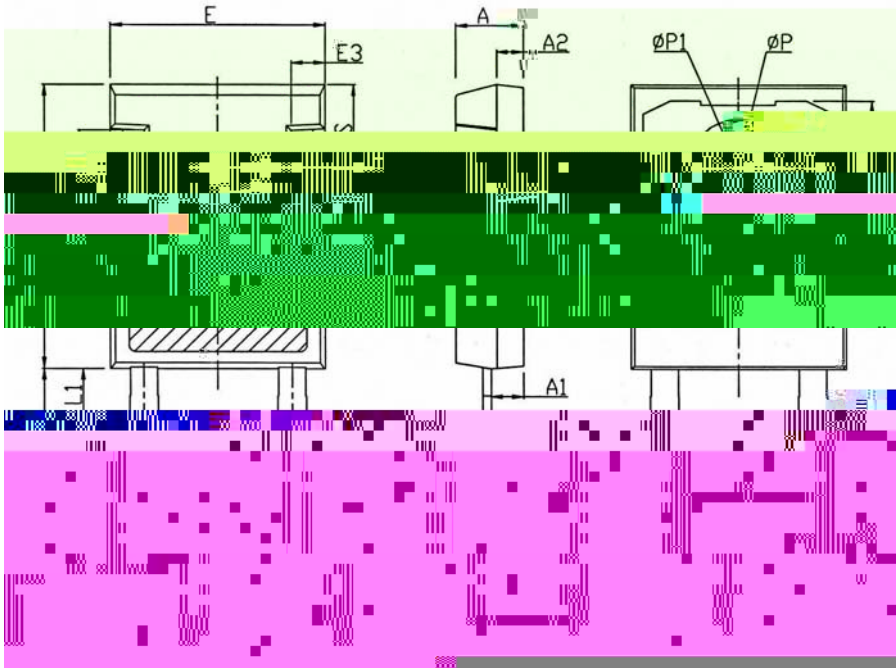
## Characteristics (Typical)

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



## Disclaimer

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