



## Ultra-Fast Recovery Diodes 60A 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, RoHS-compliant

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

**Polarity:** As marked

### Maximum Ratings (T<sub>j</sub>=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR6030PTS
Device marking code			MUR6030PTS
Repetitive Peak Reverse Voltage	VRRM	V	300
Average Rectified Output Current @60Hz 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	IFSM	A	350
Current Squared Time @1ms t 8.3ms T <sub>j</sub> =25	I <sup>2</sup> t	A <sup>2</sup> s	373
Storage Temperature	T <sub>stg</sub>		-55 ~ +175
Junction Temperature	T <sub>j</sub>		-55 ~ +175
Typical Junction capacitance @4V,1MHz	C <sub>j</sub>	pF	260

# MUR6030PTS

## Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	$V_{FM}$	V	$I_{FM}=30.0A @ T_j=25$	-	1.18	1.40
			$I_{FM}=30.0A @ T_j=125$		0.98	1.20
DC reverse current at rated DC blocking voltage per diode	$I_{RRM1}$	uA	$V_{RM}=V_{RRM}$ $T_j=25$	-	-	60
	$I_{RRM2}$		$V_{RM}=V_{RRM}$ $T_j=150$	-	-	600
Reverse Recovery Time	$T_{rr}$	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25$	-	29	40
			$T_j=25$	-	40	-
			$T_j=125$	-	52	-

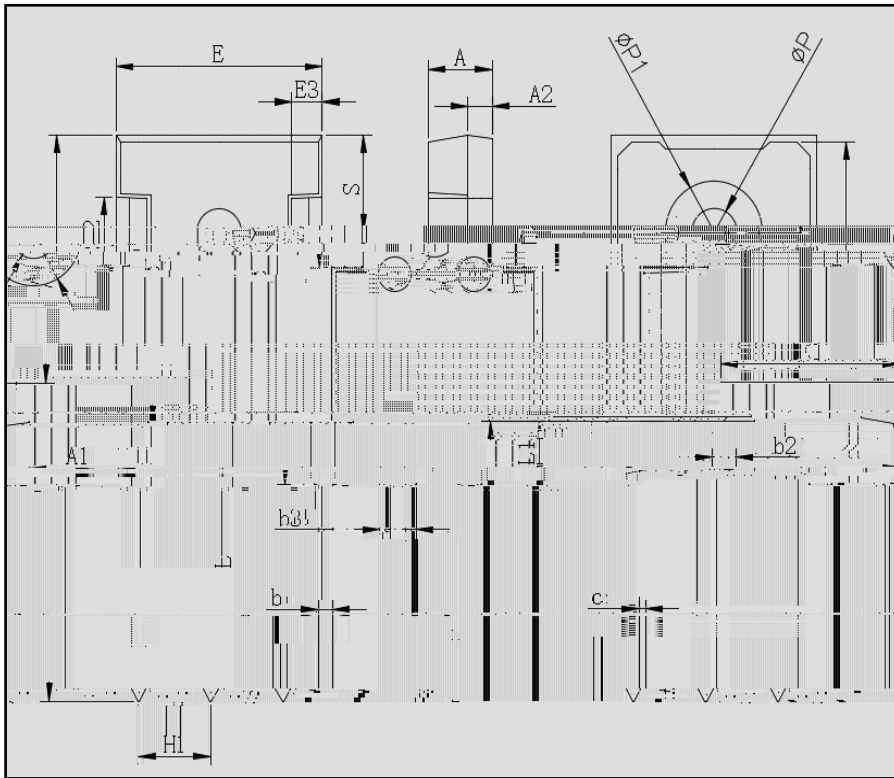
$I_F=30A$   
 $di/dt=-200A/us$   
 $V_{RM}=200V$





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## 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
P	3.40	3.80
P1	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20

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