



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_j=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 _c (FIG.1) | I _O | A | 60 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25 | IFSM | A | 350 |
| Current Squared Time @1ms t 8.3ms T _j =25 | I ² t | A ² s | 373 |
| Storage Temperature | T _{stg} | | -55 ~ +175 |
| Junction Temperature | T _j | | -55 ~ +175 |
| Typical Junction capacitance @4V,1MHz | C _j | pF | 260 |

MUR6030PTS

Electrical Characteristics

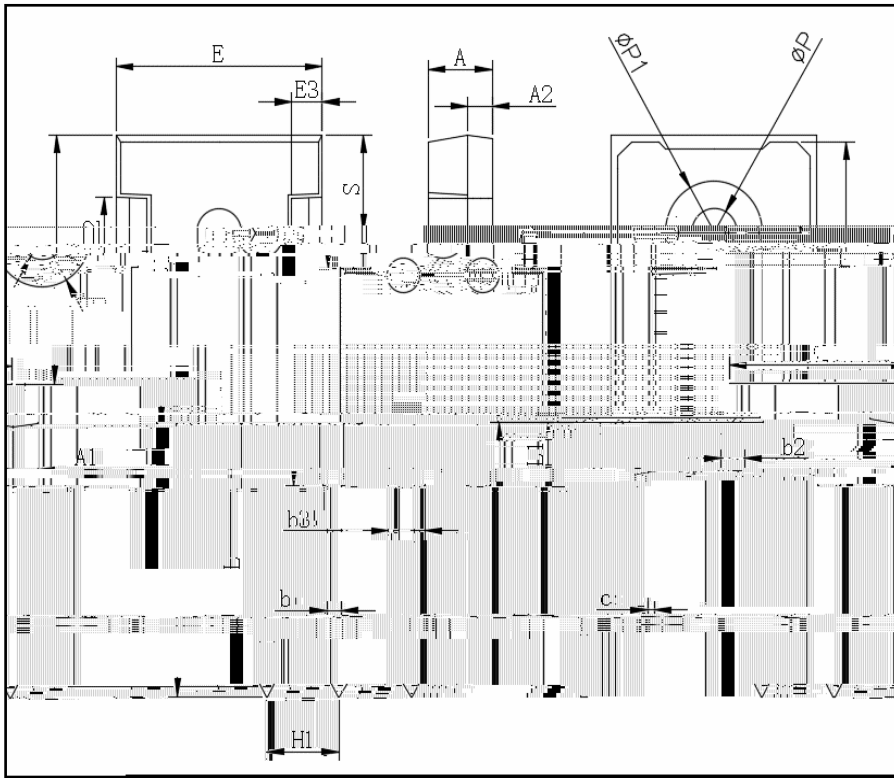
| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | Min | Typ | Max |
|---|------------|------|---|-----|------|------|
| Instantaneous forward voltage drop per diode | V_{FM} | V | $I_{FM}=30.0A @ T_j=25$ | - | 1.18 | 1.40 |
| | | | $I_{FM}=30.0A @ T_j=125$ | | 0.98 | 1.20 |
| DC reverse current at rated 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 | - |
| | | | $T_i=125$ | - | 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 |

MUR6030PTS

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