

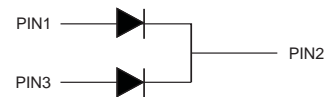
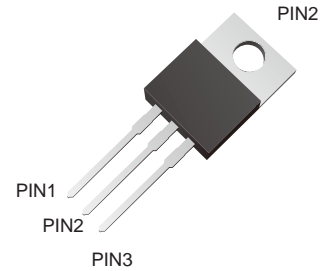
Fast Recovery Epi Diodes

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
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical data

- Case: TO-220AB
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”



Ordering Information

| Part Number | Shipping | Packing Type |
|----------------------------|------------|--------------|
| LTMU2020CD THRU LTMU2060CD | 50PCS/Tube | Tube |

Maximum Ratings and Electrical Characteristics

Ratings At 25°C Ambient Temperature Unless Otherwise Specified

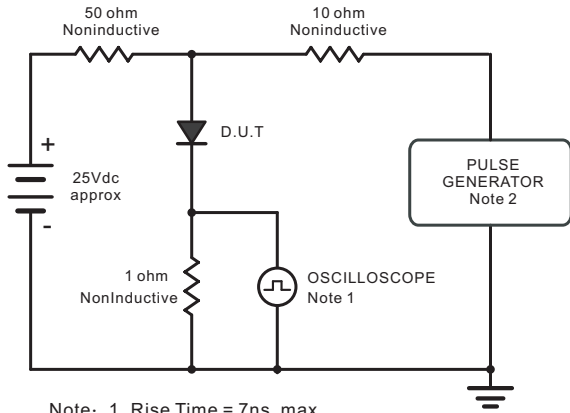
| Characteristics | Symble | LTMU2020CD | LTMU2040CD | LTMU2060CD | Unit |
|--|-----------------|------------|------------|------------|---------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 200 | 400 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current Per leg Per device | $I_{F(AV)}$ | | 10 20 | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg) | I_{FSM} | | 150 | | A |
| Max Instantaneous Forward Voltage at 10 A (Per leg) | V_F | 1.0 | 1.3 | 1.6 | V |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$ | I_R | | 10 500 | | μA |
| Maximum Reverse Recovery Time ⁽¹⁾ | t_{rr} | | 35 | | ns |
| Typical Thermal Resistance | $R_{\theta JC}$ | | 2.2 | | $^\circ\text{C}/\text{W}$ |
| Operating Junction Temperature Range | T_j | | -55 ~ +150 | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | | -55 ~ +150 | | $^\circ\text{C}$ |

Note (1) Reverse recovery test conditions $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$



Characteristics Curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

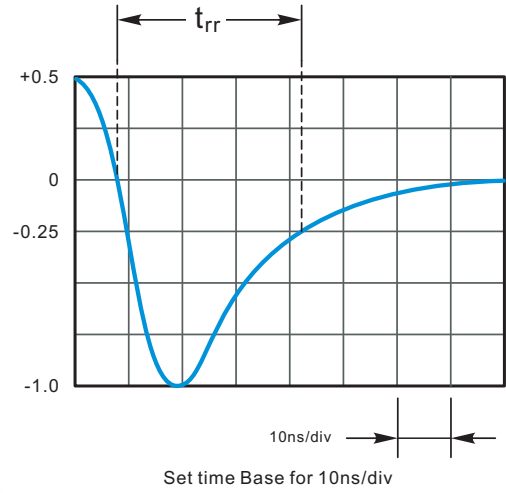


Fig.2 Forward Current Derating Curve

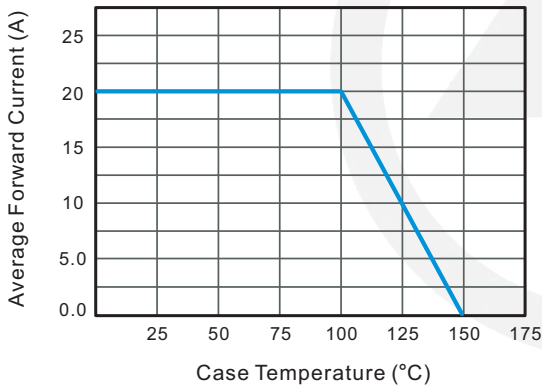


Fig.3 Typical Instantaneous Reverse Characteristics

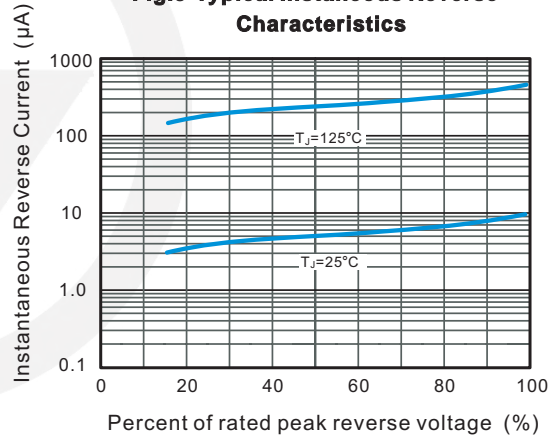


Fig.4 Typical Forward Characteristic

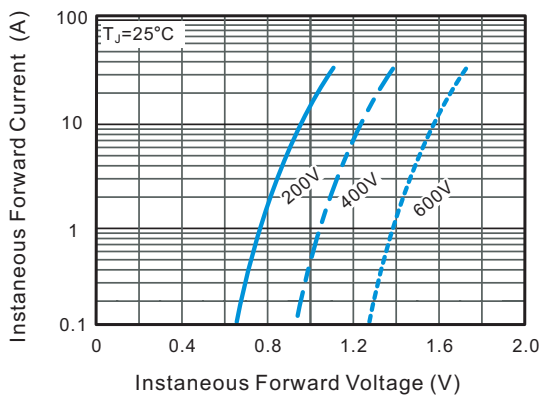
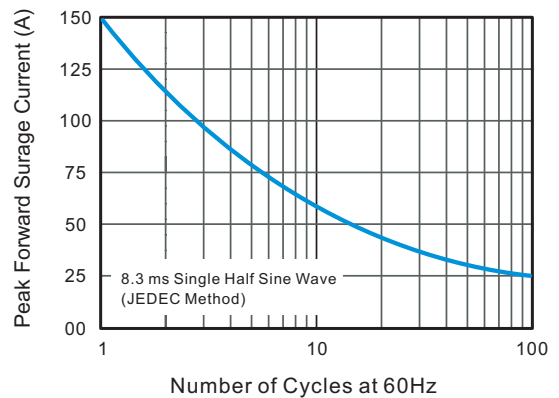
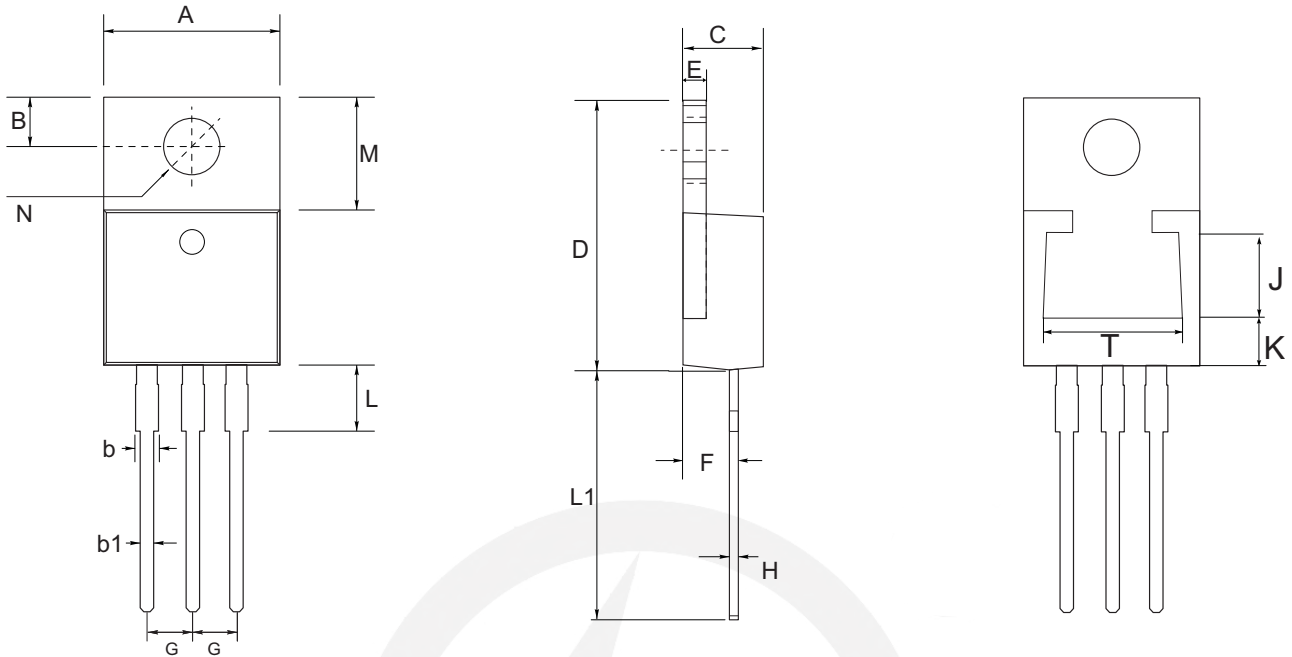


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





TO-220AB Package Outline



| Unit | A | B | b | b1 | C | D | E | F | G | H | L | L1 | M | N | J | T | K | |
|------|-----|-------|------|------|------|------|------|------|------|-----------------|------|-----|-------|----------------|----------------|--------------|--------------|--------------|
| mm | max | 10.45 | 2.94 | 1.77 | 0.94 | 4.76 | 16.0 | 1.40 | 3.37 | 2.54 TYPICAL | 0.64 | 4.2 | 14.79 | 6.6 TYPICAL | 3.8 TYPICAL | 4.65 Typ. | 7.70 Typ. | 3.22 Typ. |
| | min | 9.85 | 2.54 | 1.14 | 0.62 | 4.42 | 14.6 | 1.14 | 2.77 | | 0.35 | 2.8 | 13.08 | | | | | |

Marking

| Type number | Marking code |
|-------------|-------------------------|
| LTMU2020CD | LTMU2020CD or MUR2020CD |
| LTMU2040CD | LTMU2040CD or MUR2040CD |
| LTMU2060CD | LTMU2060CD or MUR2060CD |

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Version Update Information

| Series NO. | Enactment/Revision Date | Effective Date | Version | Revision content | Revision Reason | Revision Person | Note |
|------------|-------------------------|----------------|---------|------------------|-----------------|-----------------|------|
| 01 | 2024.9.17 | 2024.9.17 | 3.0 | New File | / | Ding | |