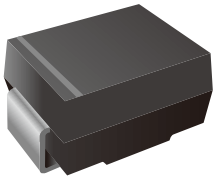
# LTE2AB THRU LTE2JB

## Surface Mount Superfast Recovery Rectifier

## Features



- Super fast switching for high efficiency
- Glass passivated chip junction
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives

## Mechanical Data

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes cathode end
- Approx. Weight: 100mg
- MSL1

## Ordering Information

| Part Number | Shipping | Reel |
|---|---|---|
| LTE2AB THRU LTE2JB-TR3 | 3000PCS Tape&Reel | 13 inchs |

## Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Parameter | Symbol | LTE2AB | LTE2BB | LTE2CB | LTE2DB | LTE2EB | LTE2GB | LTE2JB | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum average forward rectified current at $T_L$=75℃ | $I_{(AV)}$ | 2.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 50.0 | | | | | | | A |
| Rating for fusing(t<8.3ms) | $I^2t$ | 10.0 | | | | | | | $A^2sec$ |
| Maximum instantaneous forward voltage at 2.0A | $V_F$ | 0.95 | | | | 1.25 | | 1.7 | V |
| Maximum DC reverse current $T_A$=25℃<br>at rated DC blocking voltage $T_A$=100℃ | $I_R$ | 5.0<br>100.0 | | | | | | | μA |
| Maximum reverse recovery time (NOTE 1) | $t_{rr}$ | 35 | | | | | | | ns |
| Typical junction capacitance (NOTE 2) | $C_J$ | 30.0 | | | | 20.0 | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 75 | | | | | | | °C/W |
| Operating junction and storage temperature range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °C |

Note: 1.Reverse recovery condition IF=0.5A,IR=1.0A,Irr=0.25A
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3.P.C.B. mounted with 0.27”x0.27”(7.0 mm x 7.0 mm) copper pad areas

## Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

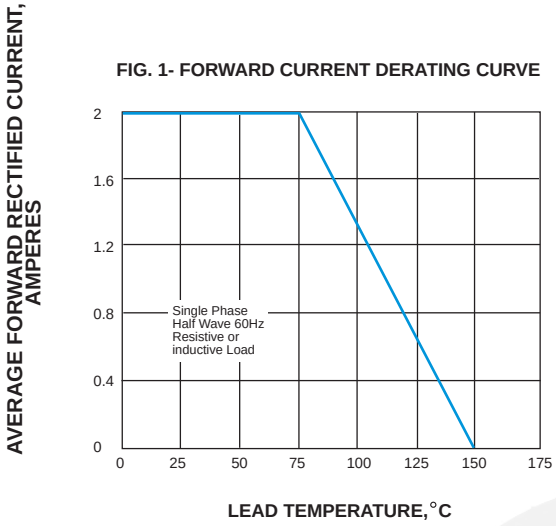



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

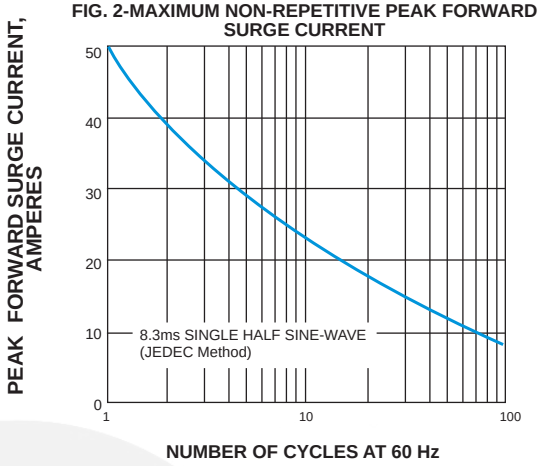



FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

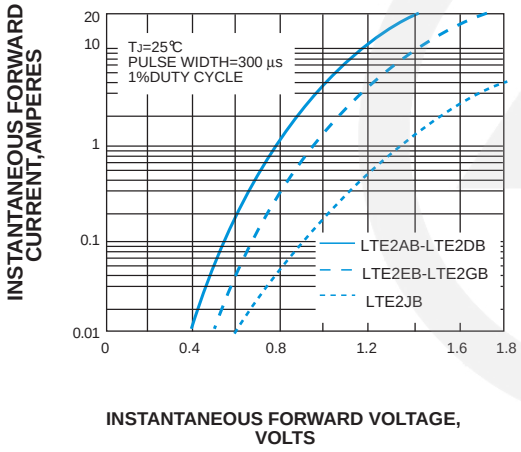



FIG. 4-TYPICAL REVERSE CHARACTERISTICS

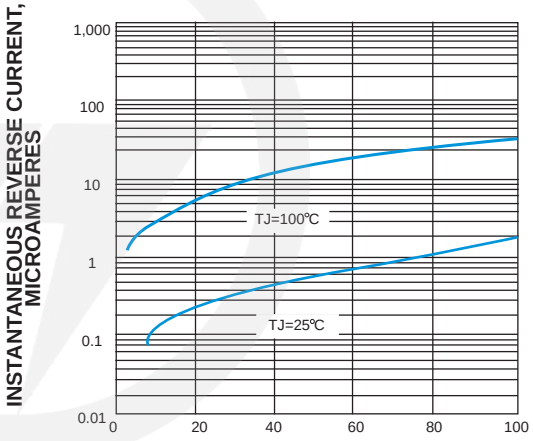



FIG. 5-TYPICAL JUNCTION CAPACITANCE

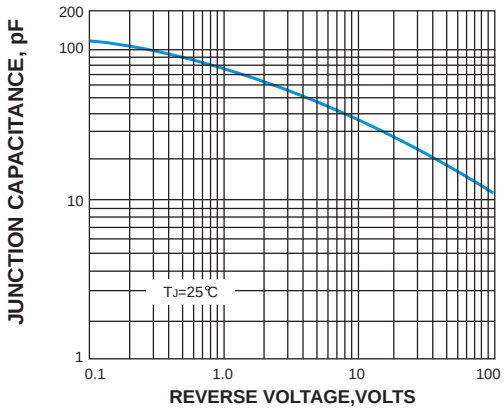
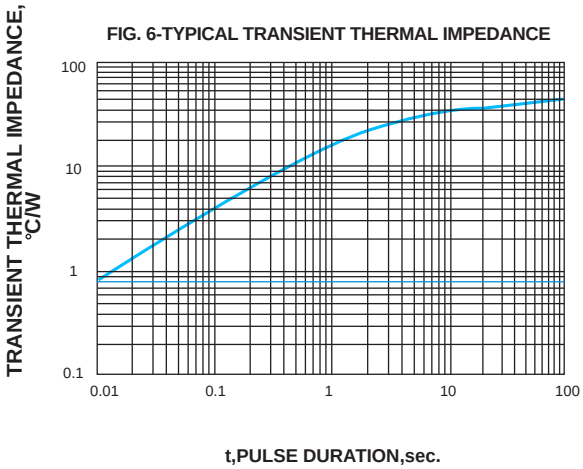
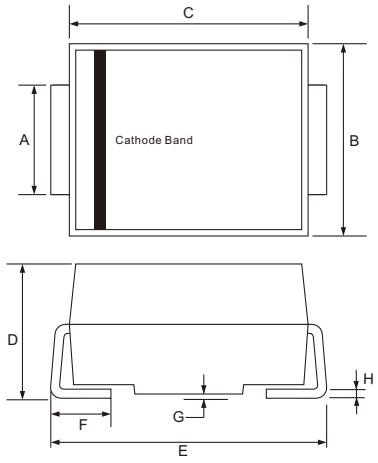



FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



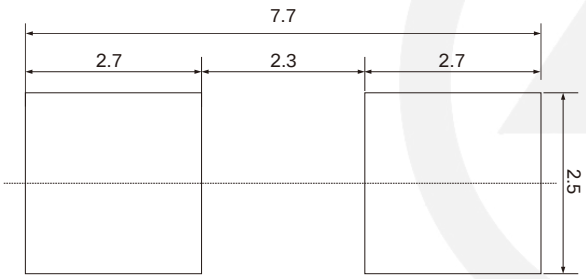
## SMB Package Outline




Unit : mm

| SYMBOL | DIMENSIONS | |
|---|---|---|
| | MIN. | MAX. |
| A | 1.90 | 2.20 |
| B | 3.30 | 3.94 |
| C | 4.05 | 4.75 |
| D | 2.13 | 2.65 |
| E | 5.08 | 5.59 |
| F | 0.76 | 1.52 |
| G | 0.203 TYP. | |
| H | 0.15 | 0.31 |

## SMB Suggested Pad Layout




Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm
3.The pad layout is for reference purpose only.

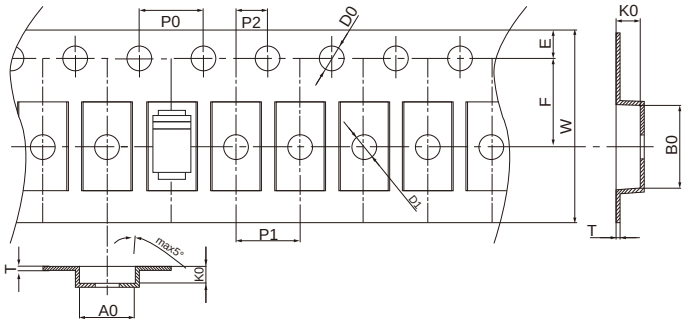
### Marking

| Type number | Marking code |
|---|---|
| LTE2AB | ES2A |
| LTE2BB | ES2B |
| LTE2CB | ES2C |
| LTE2DB | ES2D |
| LTE2EB | ES2E |
| LTE2GB | ES2G |
| LTE2JB | ES2J |

# LTE2AB THRU LTE2JB

## Carrier Tape Dimensions

Unit：mm

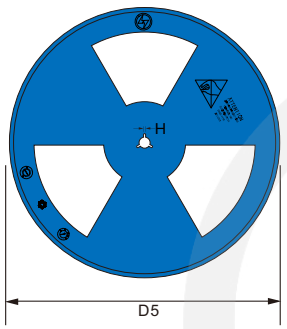


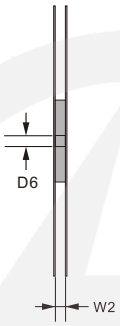

| Symbol | Spec | Symbol | Spec |
|---|---|---|---|
| A0 | 3.80±0.10 | D0 | 1.55±0.05 |
| B0 | 5.45±0.10 | D1 | 1.55±0.05 |
| K0 | 2.50±0.10 | T | 0.25±0.05 |
| P0 | 4.00±0.10 | E | 1.75±0.10 |
| P1 | 8.00±0.10 | F | 5.50±0.05 |
| P2 | 2.00±0.10 | W | 12.0 $^{+0.3}_{-0.1}$ |

## Reel Dimensions

Unit：mm

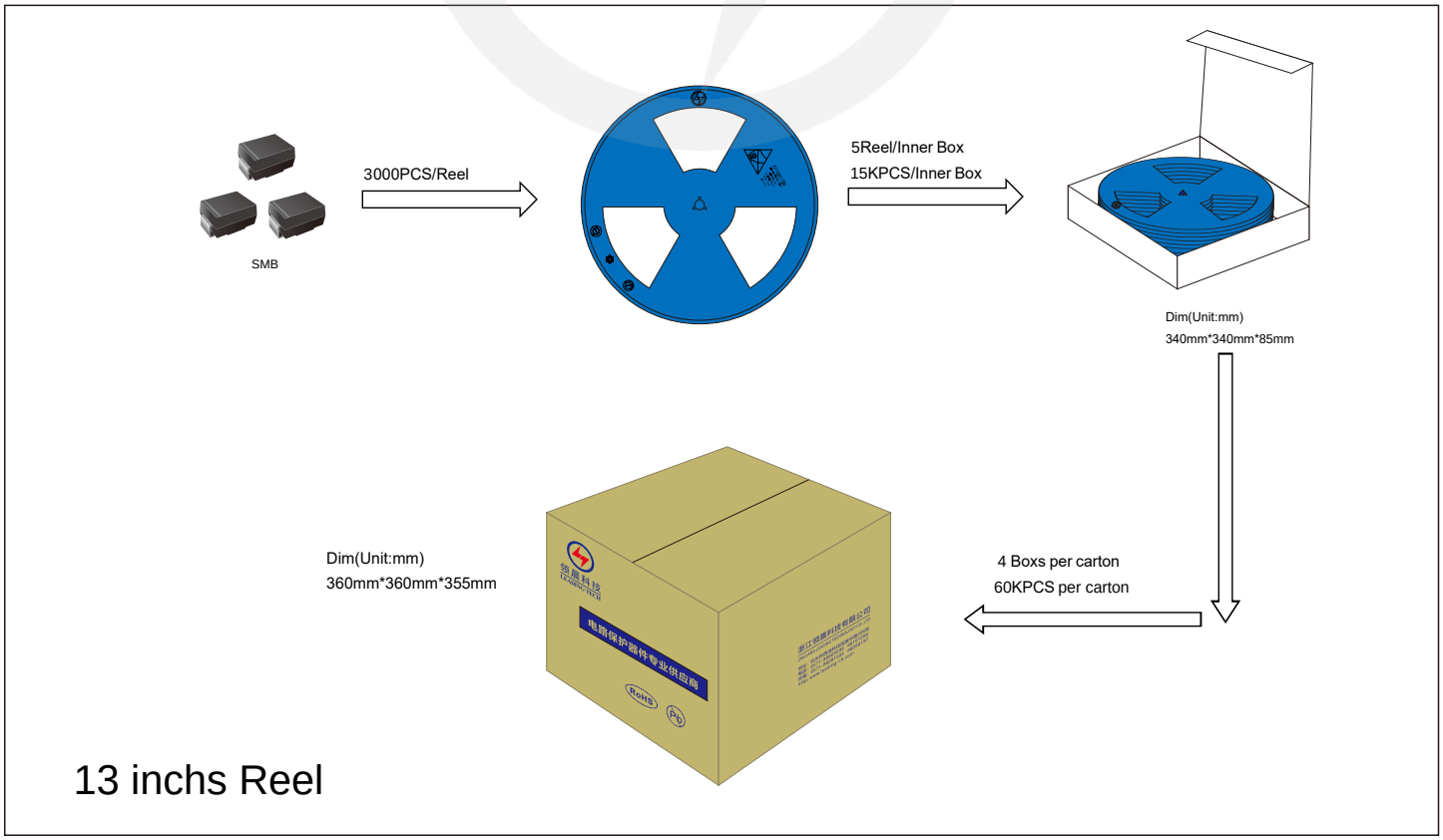
13” Reel



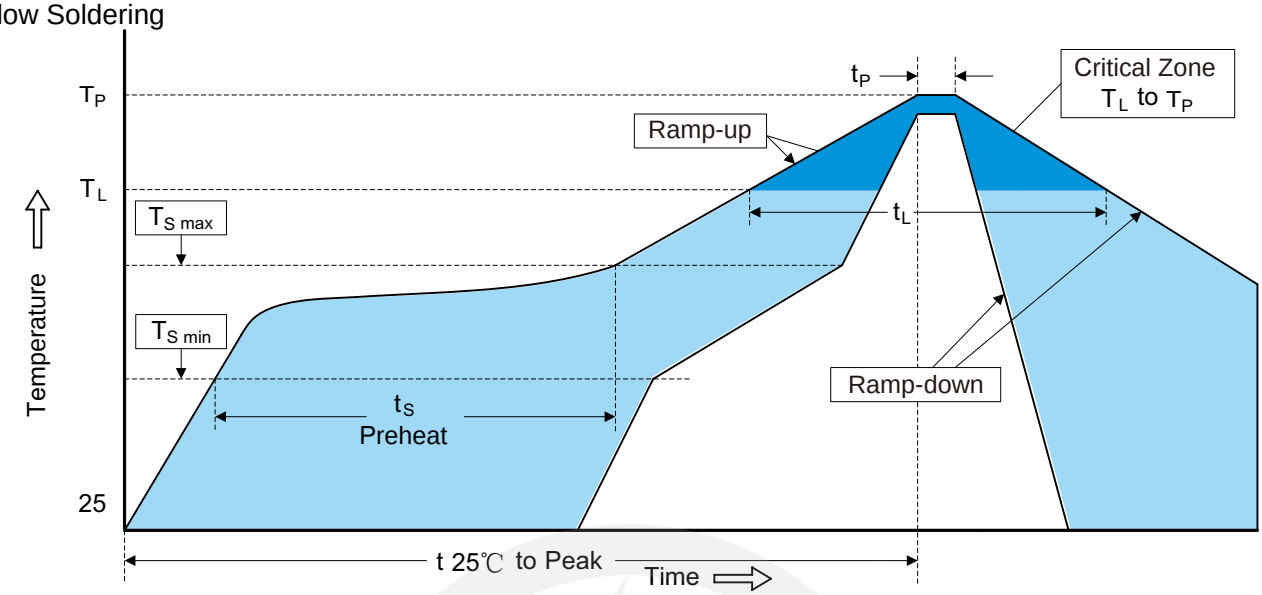

| | |
|---|---|
| D5 | Φ330.0±2.0 |
| D6 | Φ13.5±0.5 |
| H | 2.5±1.0 |
| W2 | 12±2.0 |
| Quantity: 3000PCS | |

## Packaging



## Recommended Soldering Conditions

Reflow Soldering




Recommended Conditions

| Profile Feature | Pb-Free Assembly |
|---|---|
| Average ramp-up rate ($T_L$ to $T_P$) | 3℃/second max. |
| Preheat<br>-Temperature Min ($T_{S\ min}$)<br>-Temperature Max ($T_{S\ max}$)<br>-Time (min to max) ( $t_S$) | <br>150℃<br>200℃<br>60-180 seconds |
| $T_{S\ max}$ to $T_L$<br>-Ramp-up Rate | <br>3℃/second max. |
| Time maintained above:<br>-Temperature ($T_L$)<br>-Time ($t_L$) | <br>217℃<br>60-150 seconds |
| Peak Temperature ($T_P$) | 260℃ |
| Time within 5℃ of actual Peak Temperature ($t_P$) | 20-40 seconds |
| Ramp-down Rate | 6℃/second max. |
| Time 25℃ to Peak Temperature | 8 minutes max. |

## Important Notice and Disclaimer

Leading-Tech reverses the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design,purchase or use.

Leading-Tech makes no warranty,representation or guarantee regarding the suitability of its products for any particular purpose,not does Leading-Tech assume any liability for application assistance or customer product design.

Leading-Tech does not warrant or accept any liability with products which are purchase or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Leading-Tech.

Leading-Tech products are not authorized for use as critical components in life support devices or systems without express written approval of Leading-tech.

## Version Update Information

| Series NO. | Enactment/Revision Date | Effective Date | Version | Revision Content | Revision Reason | Revision Person | Note |
|---|---|---|---|---|---|---|---|
| 01 | 2024.5.18 | 2024.5.18 | 3.0 | New file | / | Ding | |
| 02 | 2025.06.17 | 2025.06.17 | 3.1 | Update packaging information | / | Ding | |
| 03 | 2025.08.27 | 2025.08.27 | 3.2 | Add weight information | / | Ding | |
| 04 | 2025.11.05 | 2025.11.05 | 3.3 | Add moisture sensitivity level | / | Ding | |