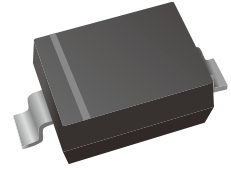


Surface Mount Schottky Barrier Diode

Features

- Guard ring protection
- Low forward voltage drop
- For use in low voltage, high frequency inverters
- High surge current capability
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 4.6mg

Ordering Information

| Part Number | Marking | Shipping | Reel |
|---------------|---------|--------------------|-----------|
| LT16WS - TR3 | SM | 3000PCS Tape&Reel | 7 inches |
| LT16WS - TR12 | SM | 12000PCS Tape&Reel | 13 inches |

Maximum Ratings and Electiral characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | LT16WS | Units |
|---|-----------------|---------------|-------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 60 | V |
| Maximum RMS voltage | V_{RMS} | 42 | V |
| Maximum DC blocking voltage | V_{DC} | 60 | V |
| Continuous forward current | I_F | 1 | A |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 0.1 @VR=60V | mA |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 10 | A |
| Maximum Instantaneous Forward Voltage | V_F | 0.7 @ IF=1.0A | V |
| Total power dissipation | P_{tot} | 250 | mW |
| Thermal Resistance, Junction to Ambient Air | $R_{\theta JA}$ | 400 | °C/W |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature | T_{stg} | -55 to +150 | °C |



Characteristics Curves

Fig.1 Power Derating Curve

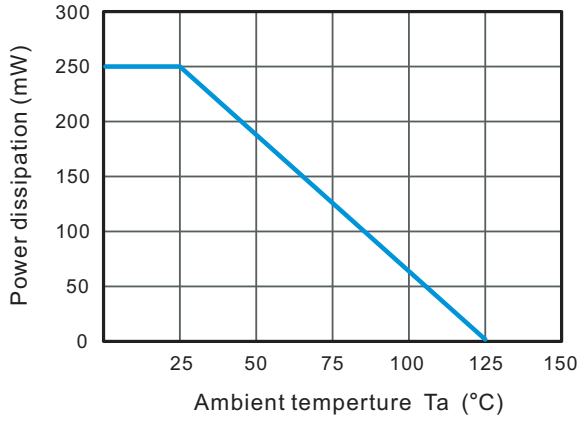


Fig.2 Typical Reverse Characteristics

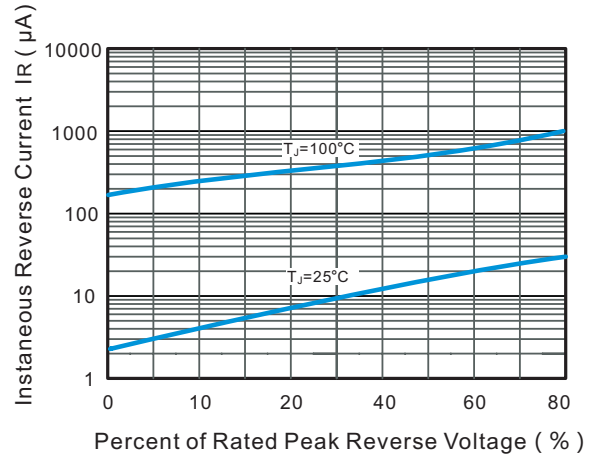


Fig.3 Typical Forward Voltage

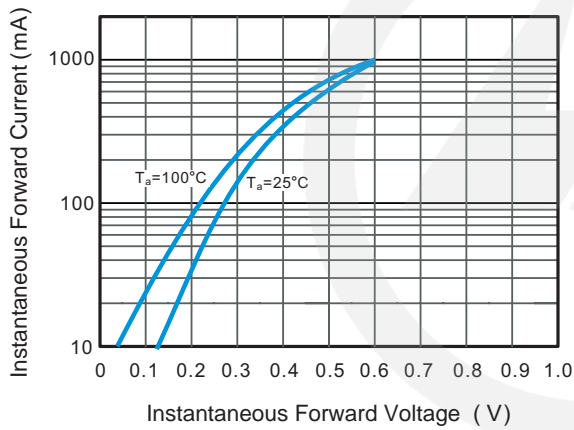


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

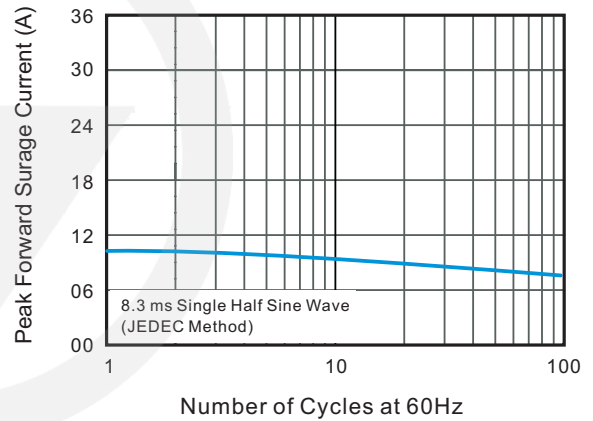
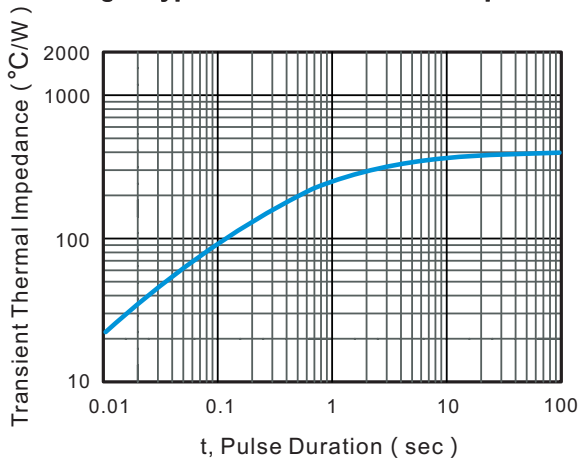
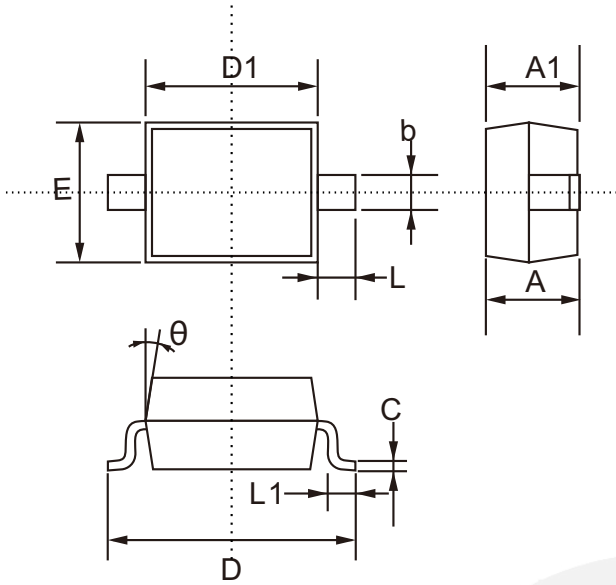


Fig.5 Typical Transient Thermal Impedance



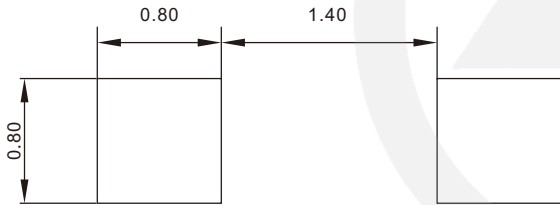
SOD-323 Package Outline

Unit: mm



| SYMBOL | DIMENSIONS | |
|----------|------------|-------|
| | MIN. | MAX. |
| A | 0.800 | 1.100 |
| A1 | 0.800 | 0.900 |
| b | 0.250 | 0.400 |
| C | 0.080 | 0.177 |
| D | 2.300 | 2.800 |
| D1 | 1.400 | 1.800 |
| E | 1.150 | 1.400 |
| L | 0.475 TYP. | |
| θ | 8° | |

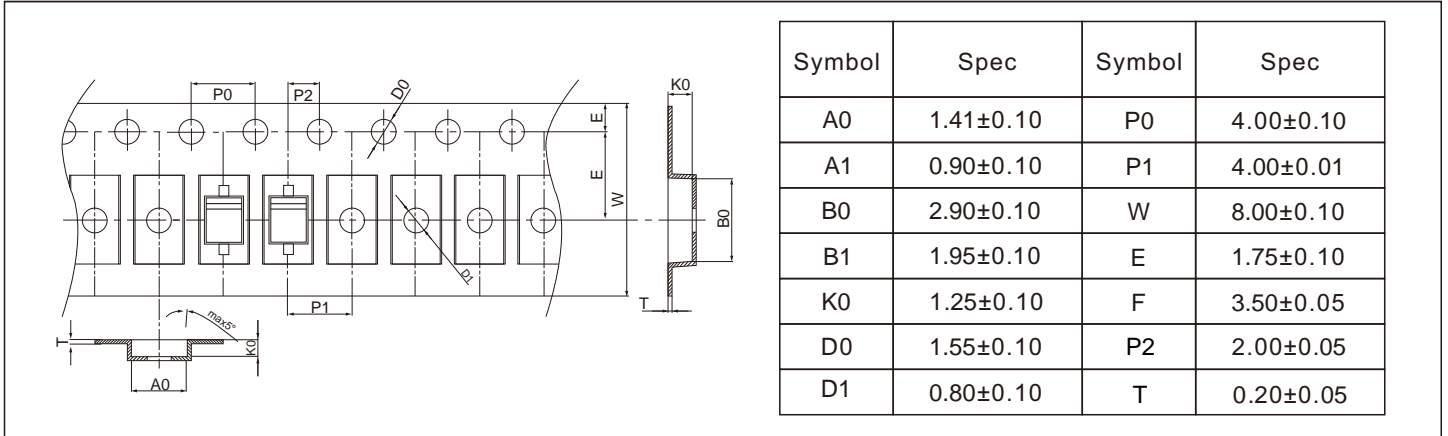
SOD-323 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

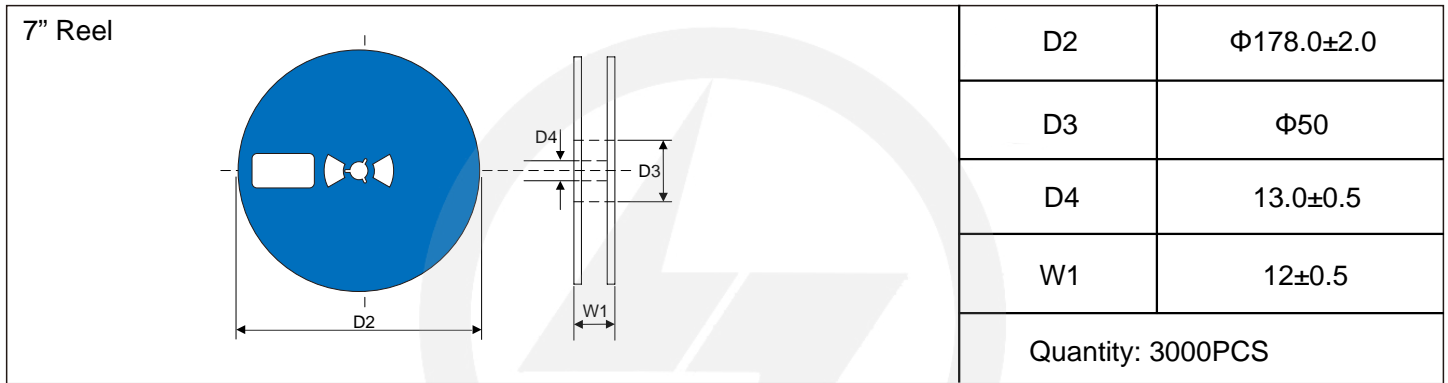
Carrier Tape Dimensions

Unit : mm



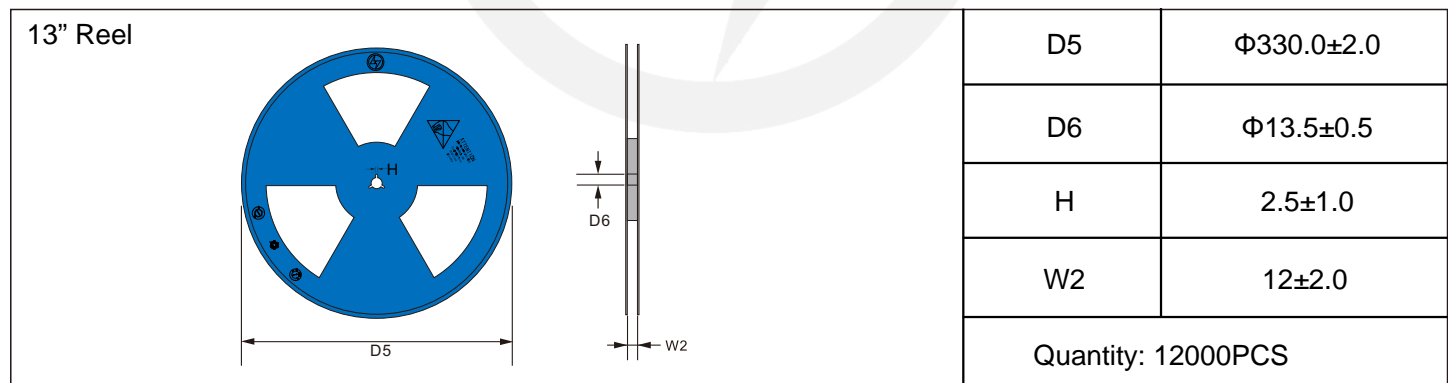
Reel Dimensions

Unit : mm

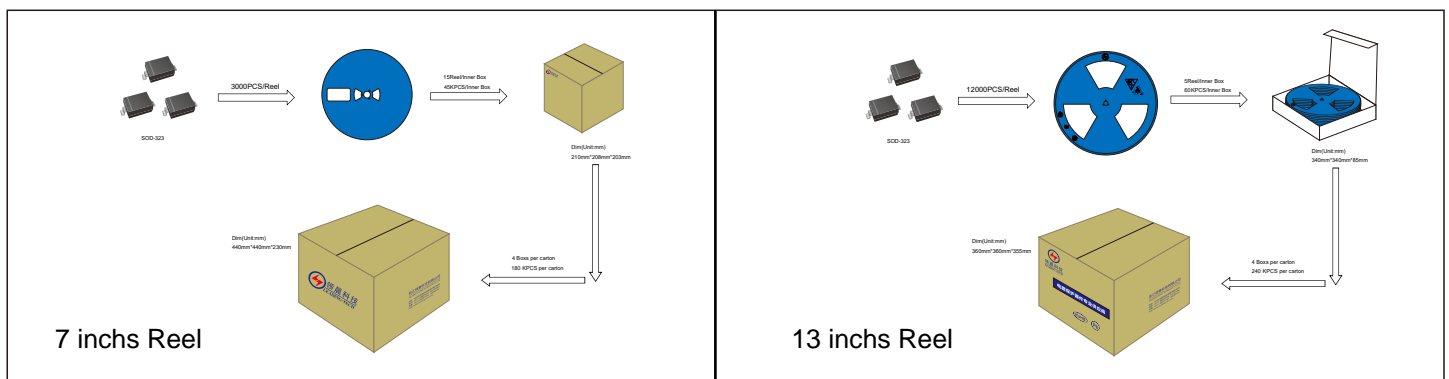


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

| Profile Feature | Pb-Free Assembly |
|--|------------------|
| Average ramp-up rate (T _L to T _P) | 3°C/second max. |
| Preheat | |
| -Temperature Min (T _{S min}) | 150°C |
| -Temperature Max (T _{S max}) | 200°C |
| -Time (min to max) (t _s) | 60-180 seconds |
| T _{S max} to T _L | |
| -Ramp-up Rate | 3°C/second max. |
| Time maintained above: | |
| -Temperature (T _L) | 217°C |
| -Time (t _L) | 60-150 seconds |
| Peak Temperature (T _P) | 260°C |
| Time within 5°C of actual Peak Temperature (t _p) | 20-40 seconds |
| Ramp-down Rate | 6°C/second max. |
| Time 25°C to Peak Temperature | 8 minutes max. |

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Version Update Information

| Series NO. | Enactment/Revision Date | Effective Date | Version | Revision Content | Revision Reason | Revision Person | Note |
|------------|-------------------------|----------------|---------|------------------|-----------------|-----------------|------|
| 01 | 2025.05.24 | 2025.05.24 | 3.0 | New file | / | Ding | |