

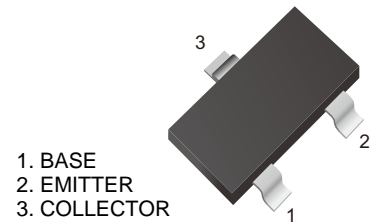
Switching Diodes

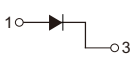



Features

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: SOT-23
- Approx. Weight: 8.1mg



| LTAS21 | LTAS21A | LTAS21C | LTAS21S |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |
| MARKING:JS | MARKING:JS2 | MARKING:JS3 | MARKING:JS4 |

Ordering Information

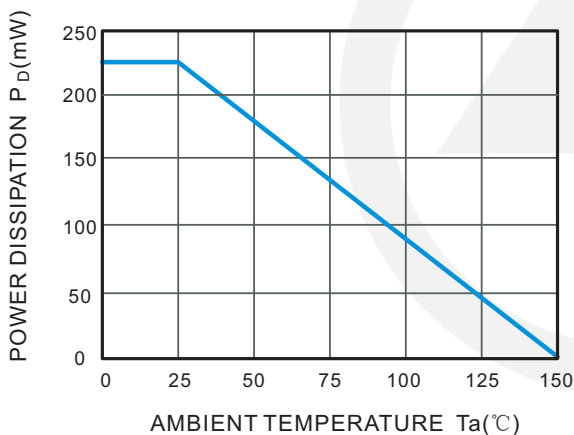
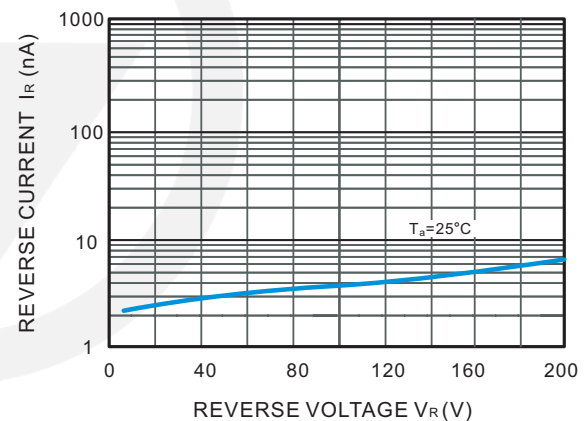
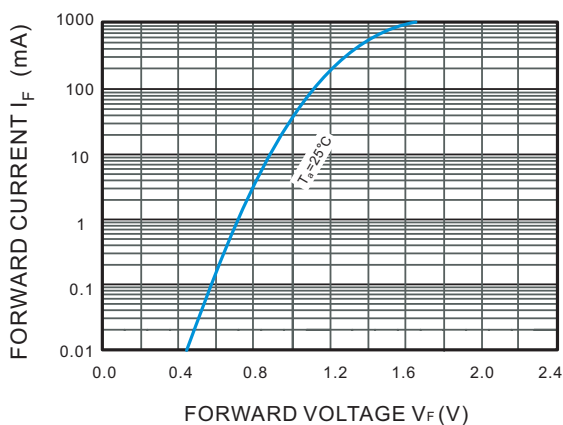
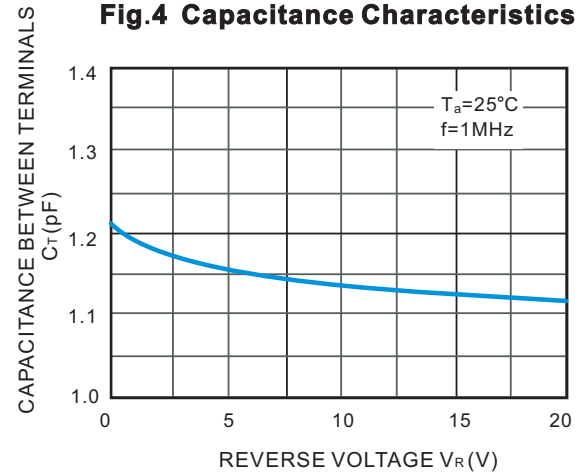
| Part Number | Shipping | Reel |
|-------------------|--------------------|-----------|
| LTAS21/A/C/S-TR3 | 3000PCS Tape&Reel | 7 inches |
| LTAS21/A/C/S-TR12 | 12000PCS Tape&Reel | 13 inches |

Maximum Ratings($T_a=25$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|-------------------------------------------------------|------------|-------------|---------------|
| Repetitive peak reverse voltage | V_{RRM} | 250 | V |
| Working peak reverse voltage | V_{RWM} | | |
| DC blocking voltage | V_R | | |
| Forward continuous current | I_{FM} | 400 | mA |
| Average rectified output current | I_O | 200 | mA |
| Non-Repetitive Peak Forward Surge Current @ $t=8.3ms$ | I_{FSM} | 2.5 | A |
| Repetitive peak forward surge current | I_{FRM} | 625 | mA |
| Power dissipation | P_D | 225 | mW |
| Thermal resistance junction to ambient | R_{thJA} | 555 | $^{\circ}C/W$ |
| Junction temperature | T_J | 150 | $^{\circ}C$ |
| Storage temperature range | T_{STG} | -55 to +150 | $^{\circ}C$ |

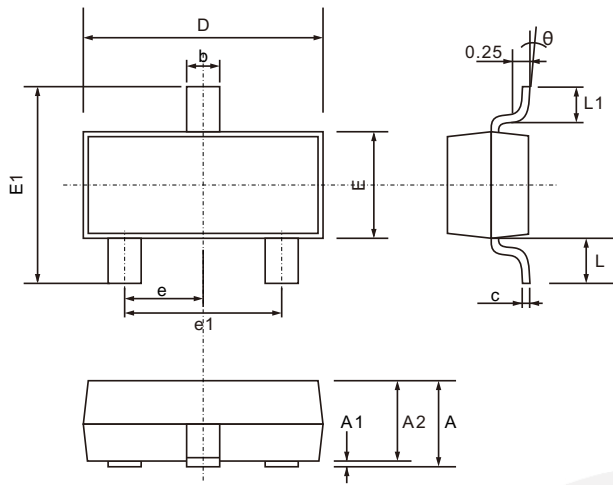
Electrical Characteristics ($T_a=25$ unless otherwise Specified)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|---------------------------------|----------|-----------------------------------------------------------|-----|--------------|---------|
| Reverse breakdown voltage | V_{BR} | $I_R=100\mu A$ | 250 | | V |
| Reverse voltage leakage current | I_R | $V_R=200V$ | | 0.1 | μA |
| Forward voltage | V_F | $I_F=100mA$ $I_F=200mA$ | | 1000 1250 | mV |
| Diode capacitance | C_D | $V_R=0V, f=1MHz$ | | 5 | pF |
| Reveres recovery time | t_{rr} | $I_F=I_R=30mA,$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | 50 | ns |

Characteristics Curves
Fig.1 Power Derating Curve

Fig.2 Reverse Characteristics

Fig.3 Forward Characteristics

Fig.4 Capacitance Characteristics


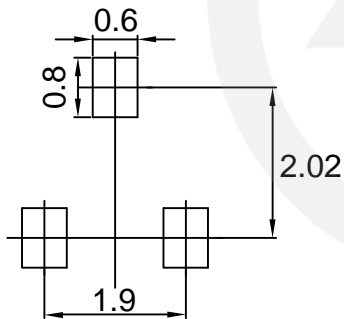
SOT-23 Package Outline

Unit: mm



| SYMBOL | DIMENSIONS | |
|--------|------------|-------|
| | MIN. | MAX. |
| A | 0.900 | 1.200 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.200 |
| D | 2.700 | 3.100 |
| E | 1.200 | 1.400 |
| E1 | 2.200 | 2.600 |
| e | 0.950 TYP. | |
| e1 | 1.750 | 2.050 |
| L | 0.550 TYP. | |
| L1 | 0.300 | 0.500 |
| θ | 0° | 8° |

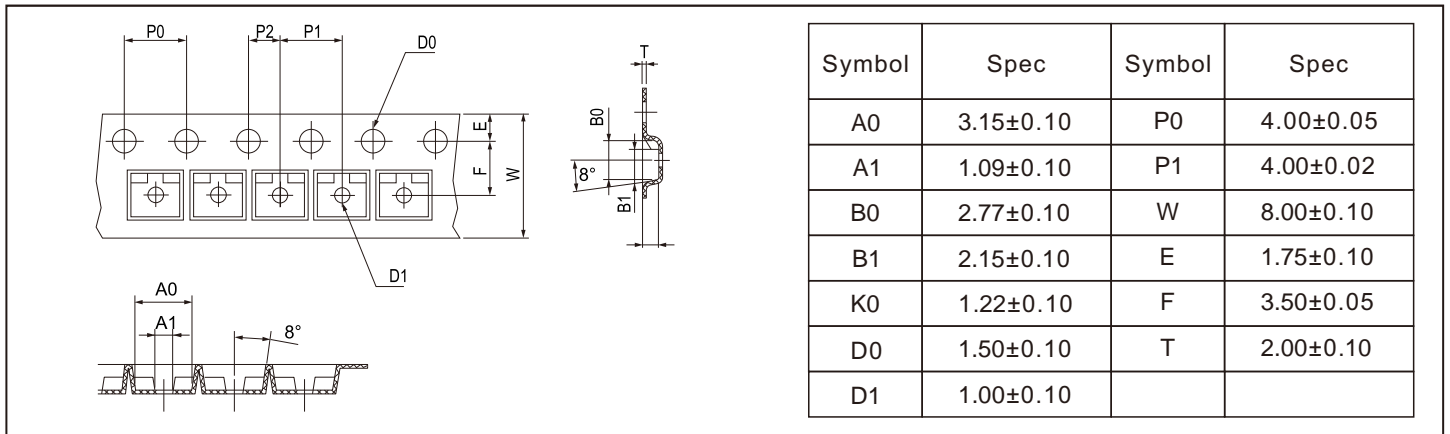
SOT-23 Suggested Pad Layout



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

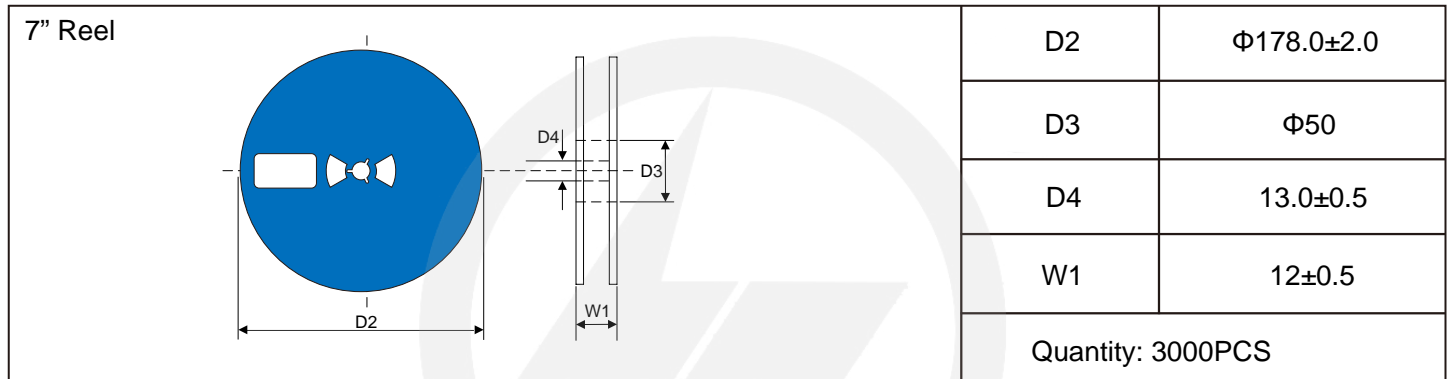
Carrier Tape Dimensions

Unit : mm



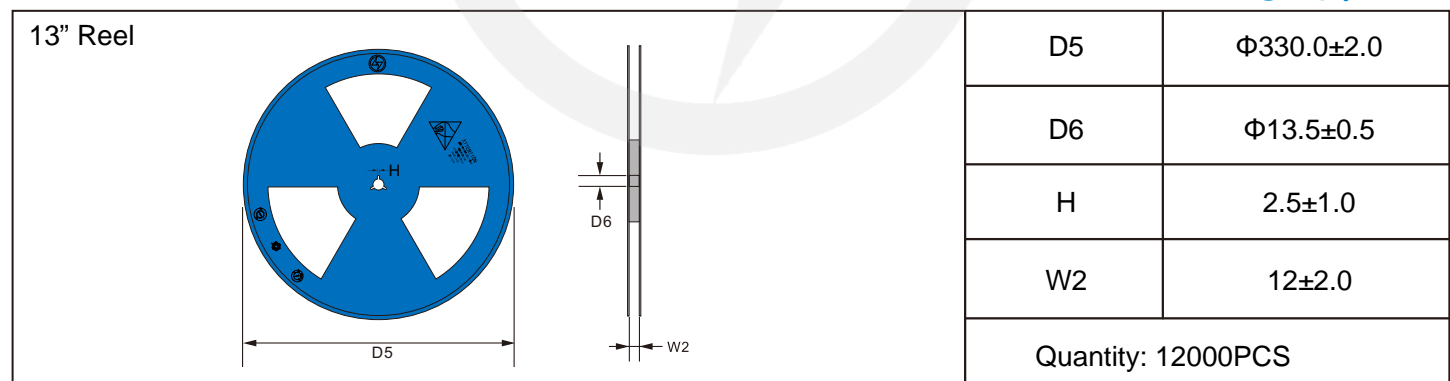
Reel Dimensions

Unit : mm

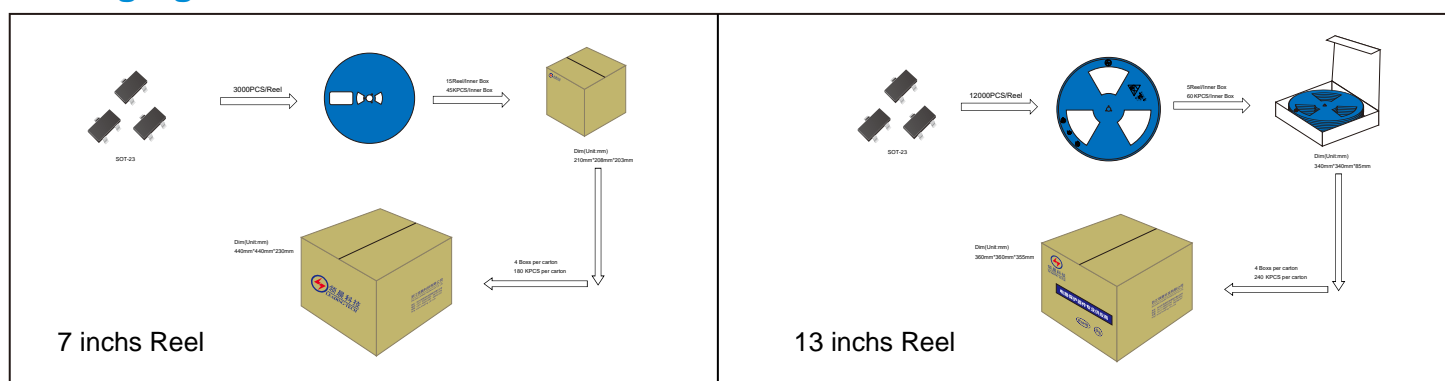


Reel Dimensions

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 | 2025.06.30 | 2025.06.30 | 3.0 | New file | / | Ding | |
| 02 | 2026.03.04 | 2026.03.04 | 3.1 | Package outline E1(max)=2.6mm | / | Ding | |