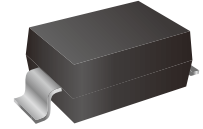


Surface Mount Schottky Barrier Rectifier

Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case:SMAW
- Terminal:Leads solderable per MIL-STD-750 Method 2026
- Polarity:Color band denotes cathode end
- Mounting Position:Any

Ordering Information

| Part Number | Shipping | Reel |
|---------------------|-------------------|-----------|
| LT22AW THRU LT220AW | 8000PCS Tape&Reel | 13 inches |

Maximum Ratings and Electrical Characteristics

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

| Parameter | Symbol | LT22AW | LT24AW | LT26AW | LT28AW | LT210AW | LT212AW | LT215AW | LT220AW | Unit |
|---|-----------------|-------------|--------|--------|----------|---------|---------|---------|---------|--------------------|
| | Marking | S22W | S24W | S26W | S28W | S210W | S212W | S215W | S220W | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 28 | 42 | 56 | 70 | 84 | 105 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum instantaneous forward voltage at 2A | V_F | 0.55 | 0.55 | 0.7 | 0.85 | 0.85 | 0.85 | 0.95 | 0.95 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 2 | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 50 | | | | | | | | A |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 0.5 5 | | | 0.3 3 | | | | | mA |
| Typical Junction Capacitance (Note1) | C_J | 220 | | | 80 | | | | | pF |
| Typical thermal resistance (Note2) | $R_{\theta JA}$ | 80 | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +125 | | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | | $^\circ\text{C}$ |

Note:(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C.
 (2) P.C.B. mounted with 2.0" x 2.0" (5cm x 5cm) copper pad areas.



Ratings and Characteristics Curves

FIG.1 FORWARD CURRENT DERATING CURVE

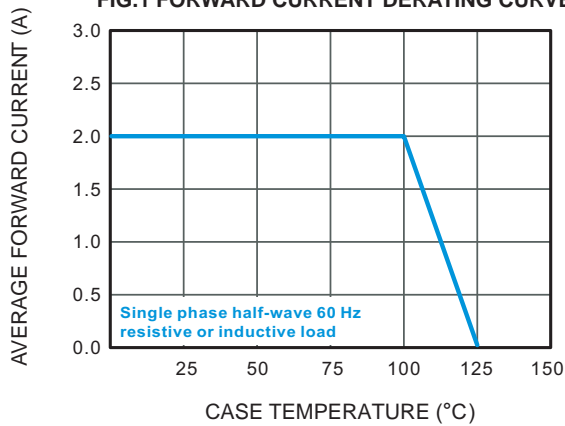


FIG.2 TYPICAL REVERSE CHARACTERISTICS

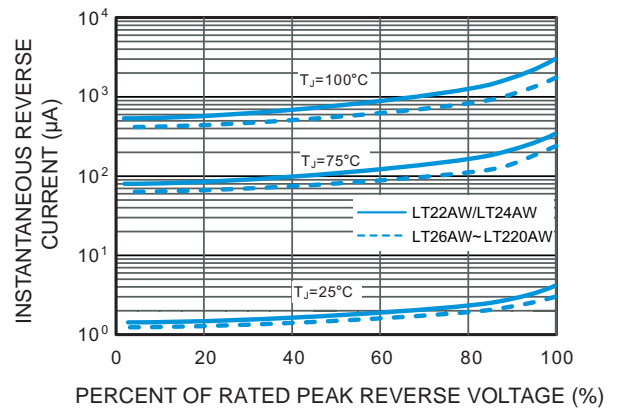


FIG.3 TYPICAL FORWARD CHARACTERISTICS

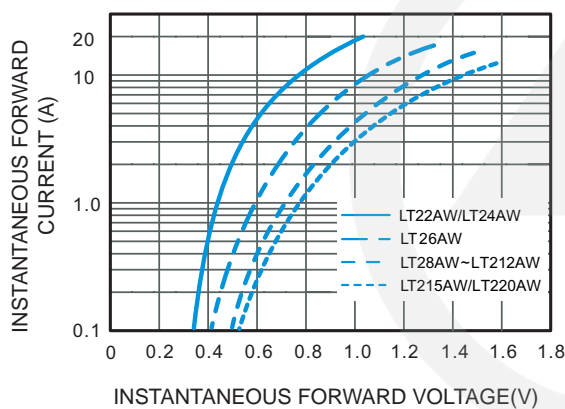


FIG.4 TYPICAL JUNCTION CAPACITANCE

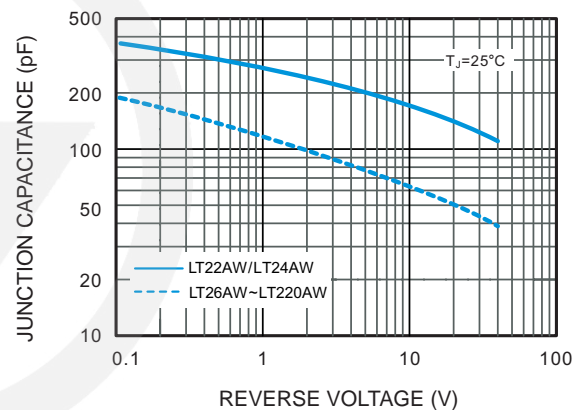


FIG.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

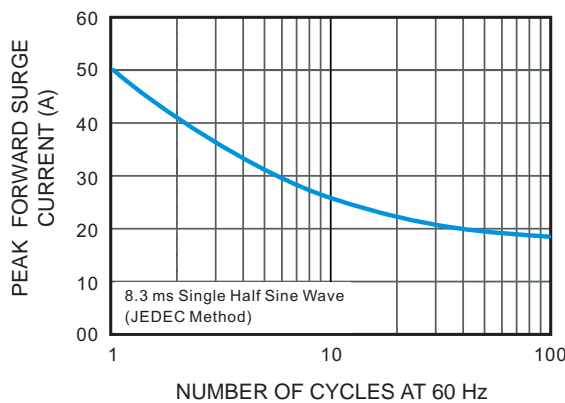
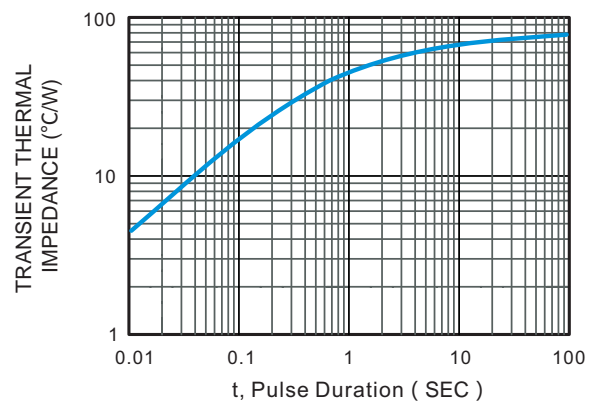
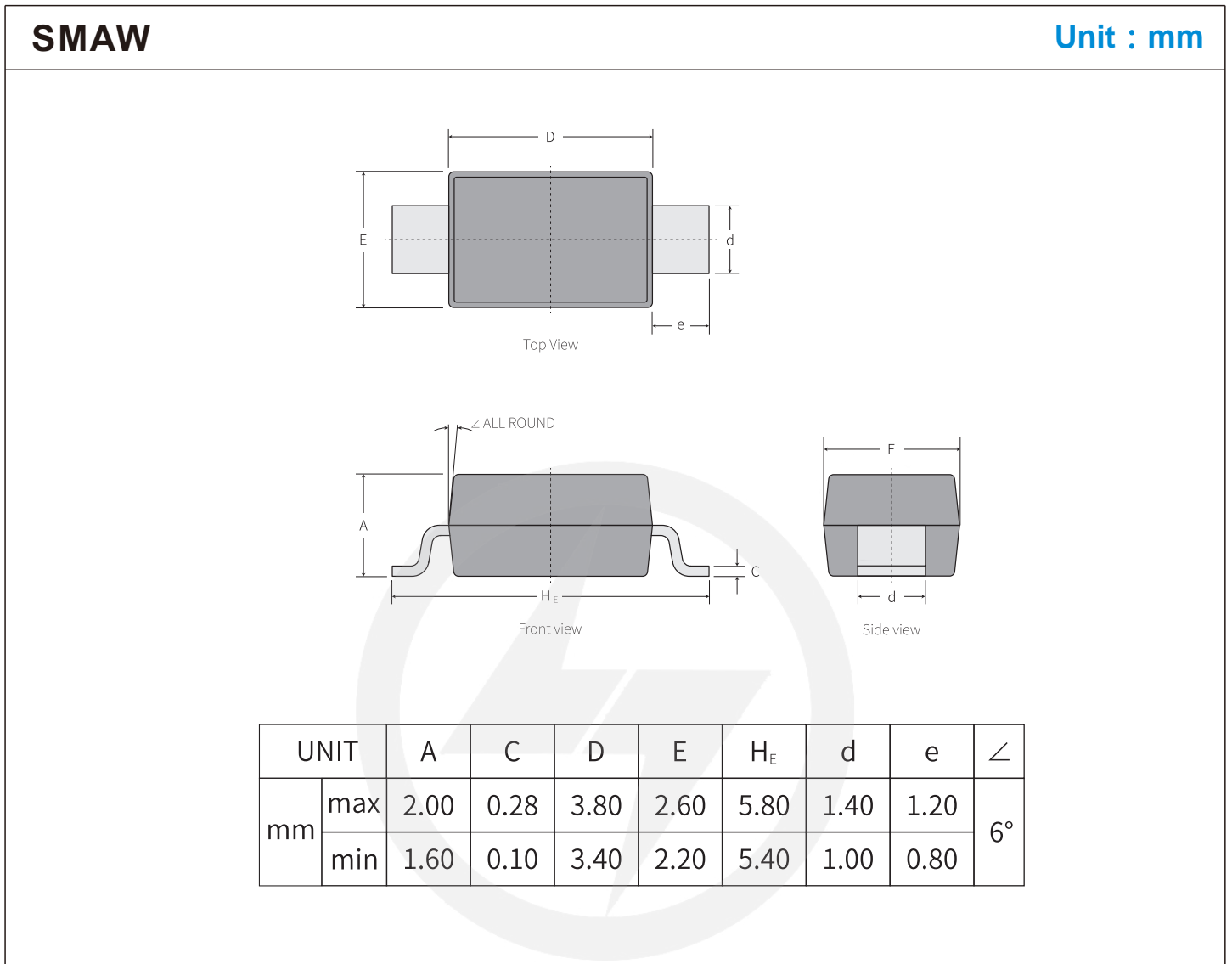


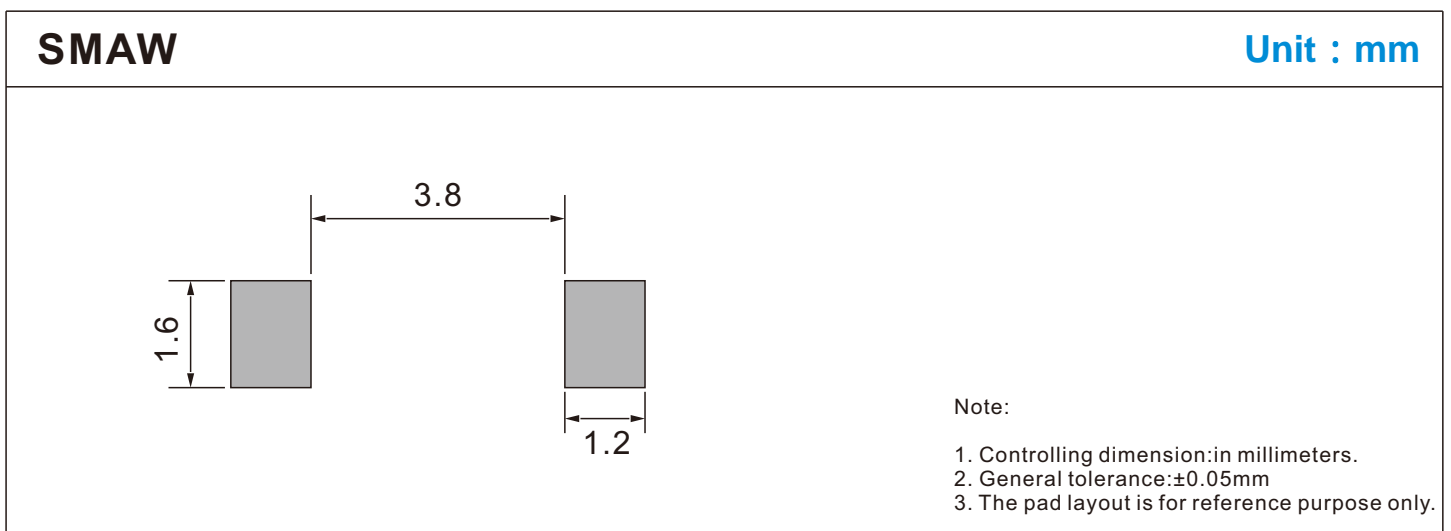
FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE



Package Outline

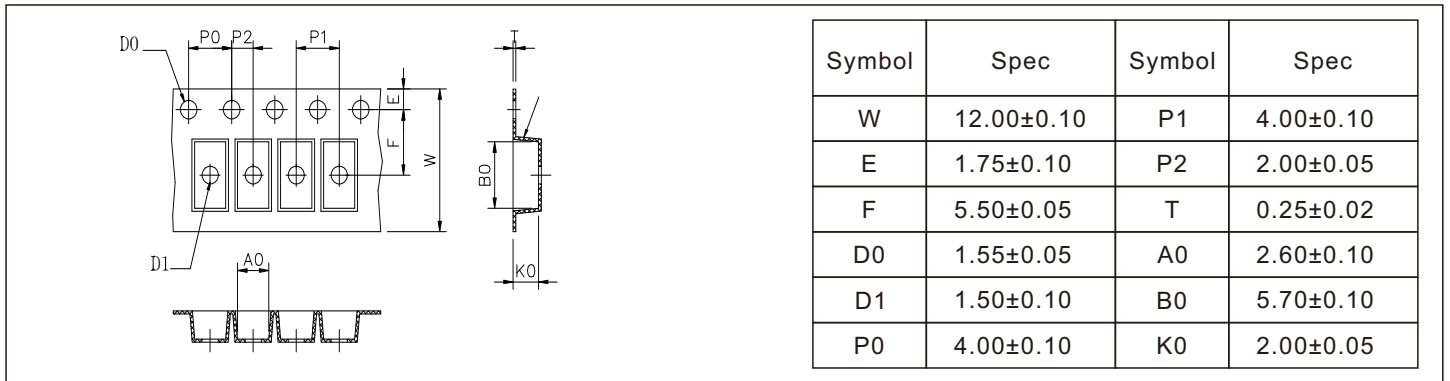


Suggested Pad Layout



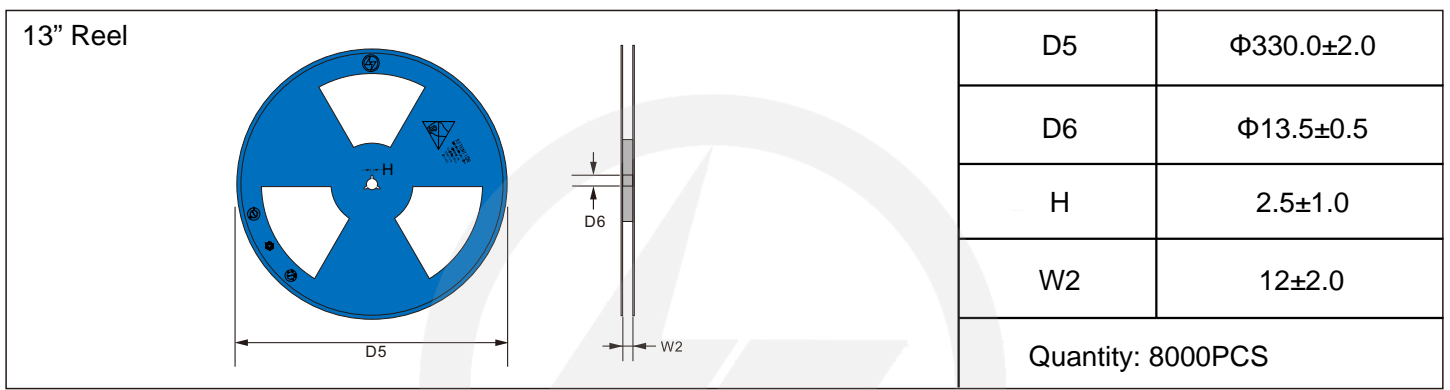
Carrier Tape Dimensions

Unit : mm

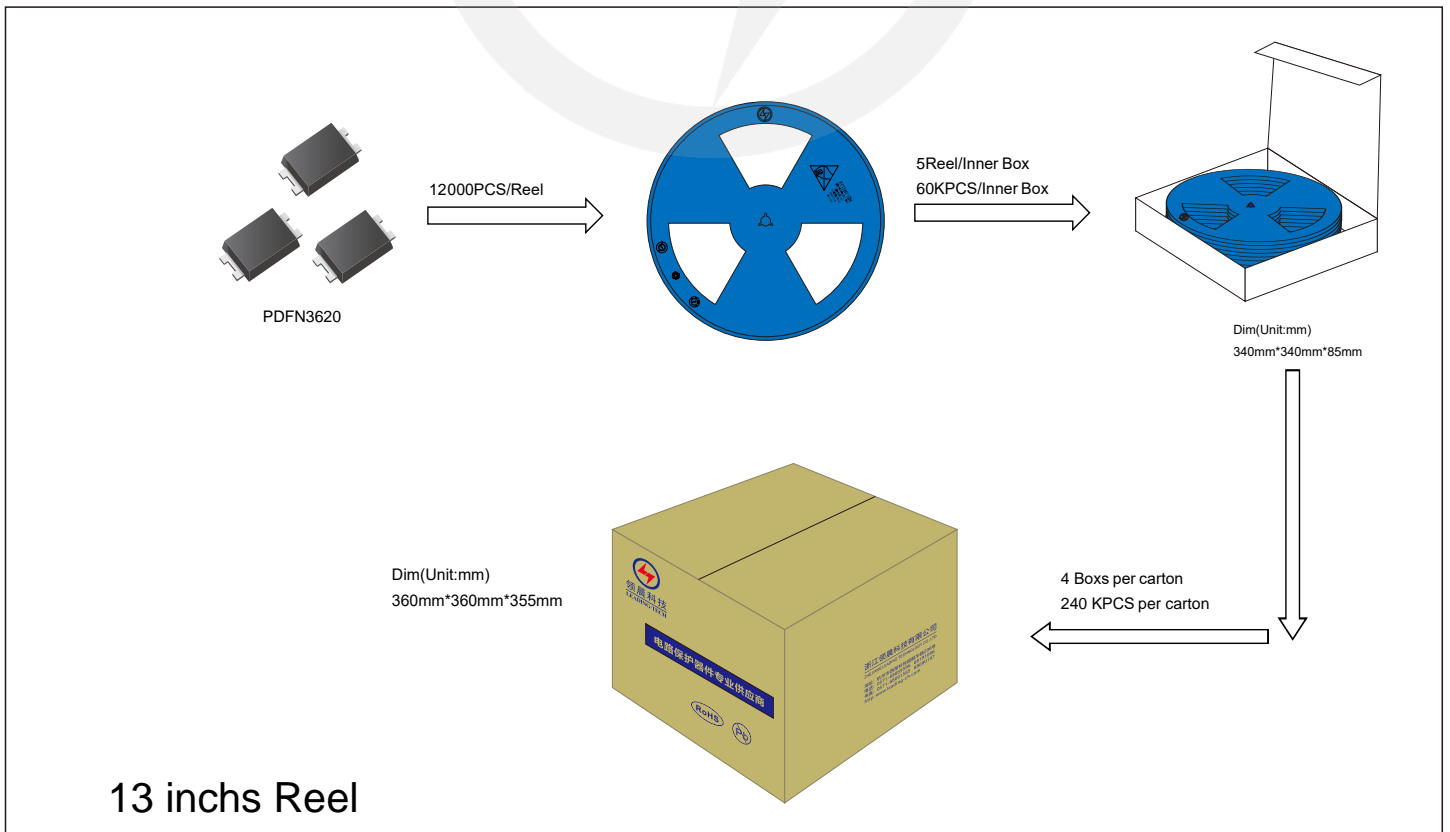


Reel Dimensions

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 | 2023.11.30 | 2023.11.30 | 1.0 | New File | / | Ding | |
| 02 | 2025.06.30 | 2025.06.30 | 1.1 | Update packaging information | / | Ding | |