



Features

- 600 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 36 V
- Low Leakage Current
- AEC-Q101 Qualified



IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 8kV$ (air), $\pm 8kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (8/20 μs)

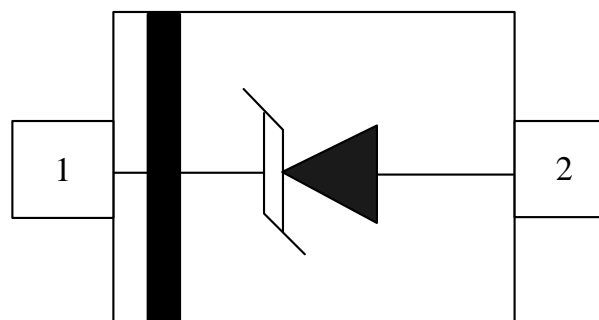
Mechanical Characteristics

- SOD-523 package
- Marking : Marking Code
- Packaging : Tape and Reel
- RoHS Compliant

Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

Schematic & PIN Configuration

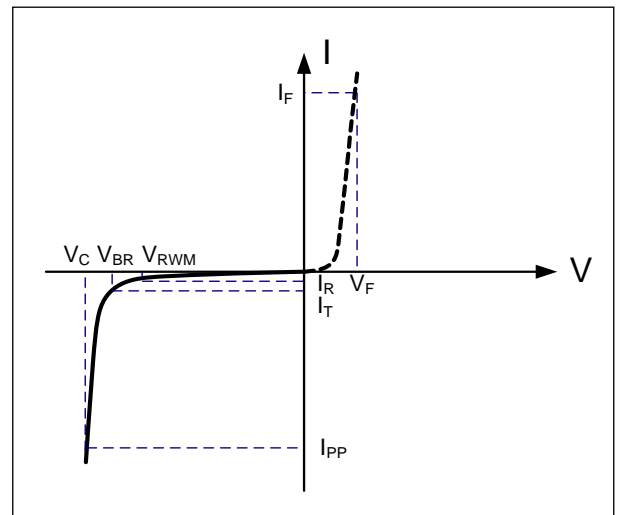


SOD-523 (Top View)

| Absolute Maximum Rating | | | |
|------------------------------------------|-----------|--------------|-------|
| Rating | Symbol | Value | Units |
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 600 | Watts |
| Peak Pulse Current ($t_p = 8/20\mu s$) | I_{PP} | 5 | A |
| Operating Temperature | T_J | -55 to + 125 | °C |
| Storage Temperature | T_{STG} | -55 to +150 | °C |

Electrical Parameters (T=25°C)

| Symbol | Parameter |
|-----------|-------------------------------------|
| I_{PP} | Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| V_{RWM} | Reverse Stand-Off Voltage |
| I_R | Reverse Leakage Current @ V_{RWM} |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |
| I_F | Forward Current |
| V_F | Forward Voltage @ I_F |



Electrical Characteristics

| DW36D5-AT-E | | | | | | |
|----------------------------|-----------|------------|---------|---------|---------|-------|
| Parameter | Symbol | Conditions | Minimum | Typical | Maximum | Units |
| Reverse Stand-Off Voltage | V_{RWM} | | | | 600V | V |
| Reverse Leakage Current | I_R | V_{RWM} | 1μA | | 10μA | μA |
| Breakdown Voltage | V_{BR} | I_T | | | 600V | V |
| Clamping Voltage | V_C | I_{PP} | 50V | | 60V | V |
| Forward Voltage | V_F | I_F | | 60V | 70V | V |
| Reverse Peak Pulse Current | I_{PP} | V_{RWM} | | | 5A | A |

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

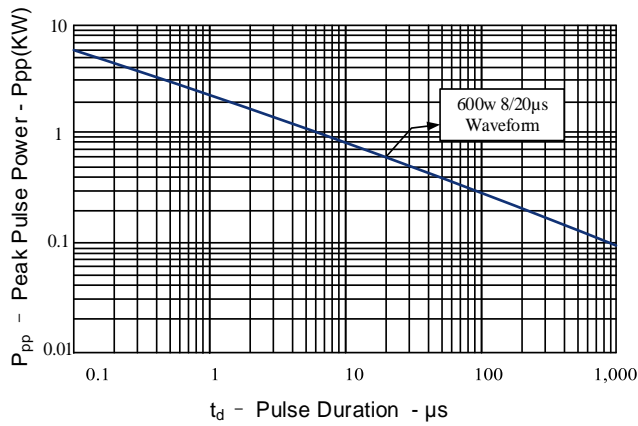


Figure 2: Power Derating Curve

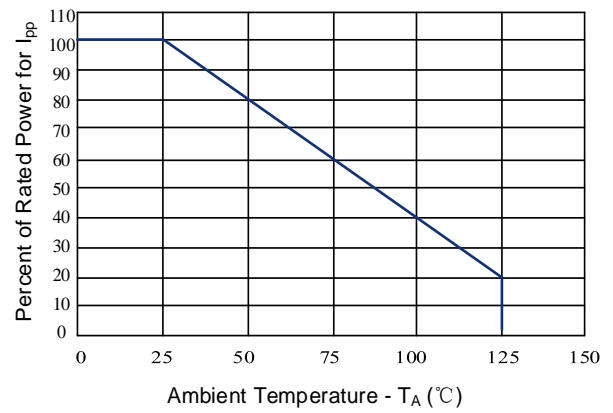


Figure 3: Clamping Voltage vs. Peak Pulse Current

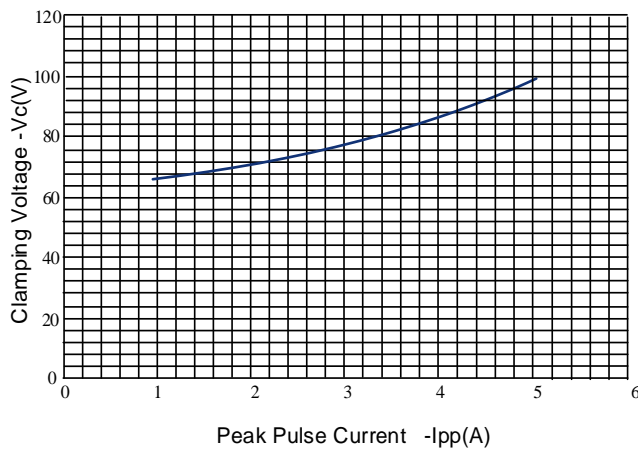


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

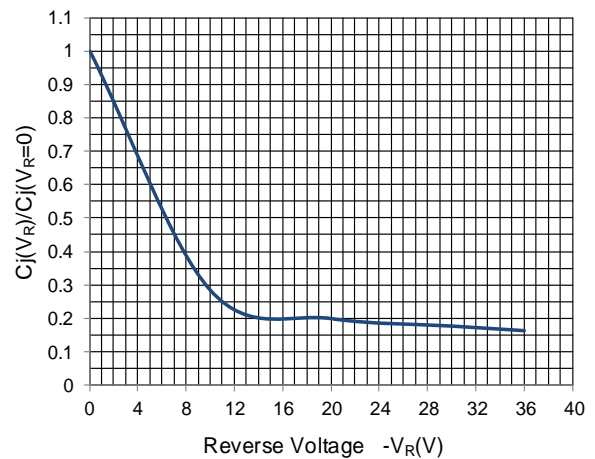
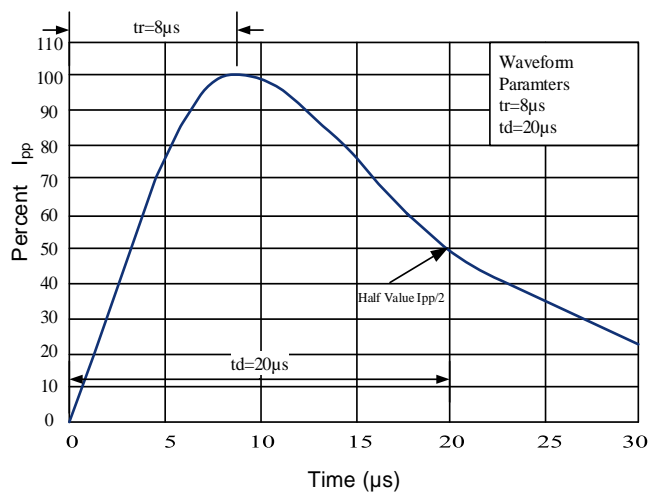


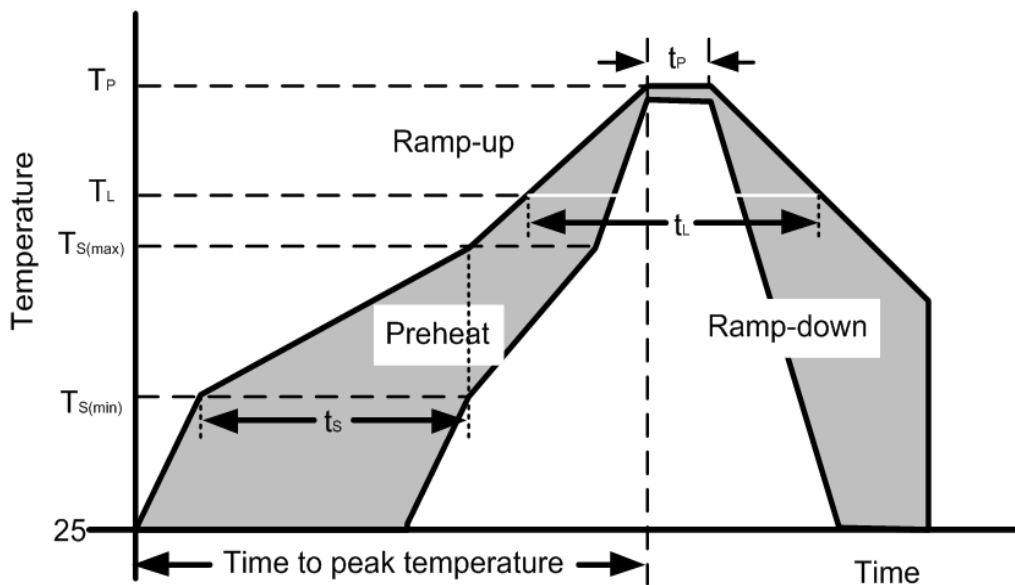
Figure 5: 8/20 μ s Pulse Waveform



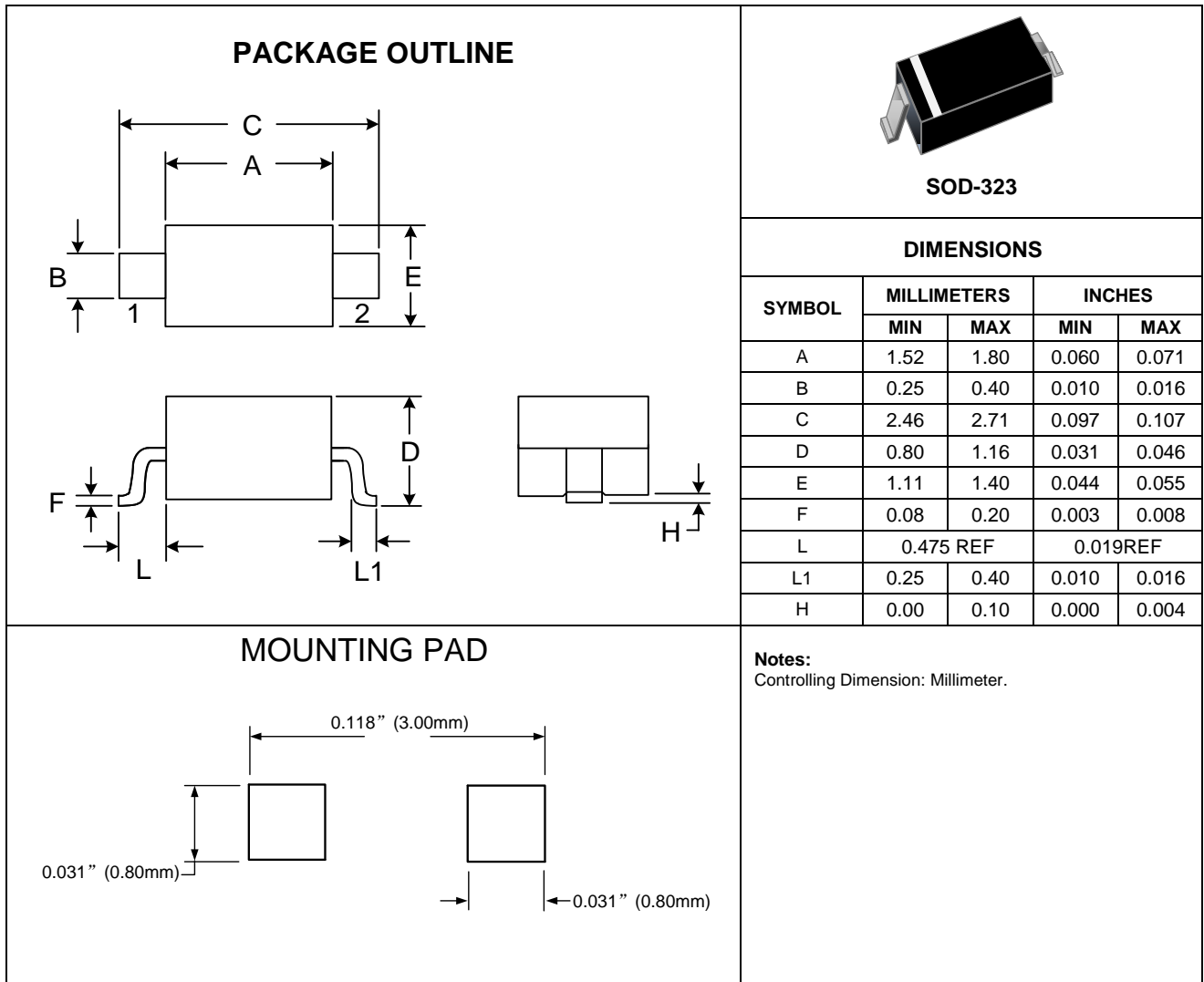


Soldering Parameters


| Reflow Condition | | Pb – Free assembly |
|--------------------------------------------------------|----------------------------------|--------------------|
| Pre Heat | Temperature Min ($T_{S(min)}$) | 150°C |
| | Temperature Max ($T_{S(max)}$) | 200°C |
| | Time (min to max) (t_s) | 60 – 190 secs |
| Average ramp up rate (Liquidus Temp) (T_L) to peak | | 5°C/second max |
| $T_{S(max)}$ to T_L —Ramp-up Rate | | 5°C/second max |
| Reflow | Temperature (T_L) (Liquidus) | 217°C |
| | Temperature (t_L) | 60 – 150 seconds |
| Peak Temperature (T_P) | | 260+0/-5 °C |
| Time within actual peak Temperature (t_p) | | 20 – 40 seconds |
| Ramp-down Rate | | 5°C/second max |
| Time 25°C to peak Temperature (T_P) | | 8 minutes Max. |
| Do not exceed | | 280°C |



Outline Drawing – SOD-323



Marking Codes

| Part Number | Marking Code |
|-------------|-------------------------------------------------------------------------------------|
| DW36D5-AT-E |  |

Package Information

Qty: 5k/Reel