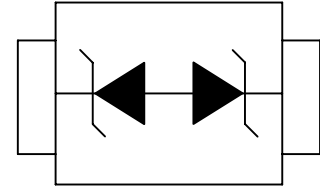


Description

SDD32C36L01 is designed to protect low voltage sensitive components from ESD and transient voltage events.

It is designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge(ESD), electrical fast transients(EFT), and cable discharge events(CDE).



Features

- IEC61000-4-2 ESD 15KV Air, 8KV contact compliance
- Protects bi-directional line
- Peak power dissipation of 320W under 8/20μs waveform
- Working voltage: 36V
- Low leakage current
- Low clamping voltage
- Solder reflow temperature: Pure Tin-Sn, 260~270°C

Applications

- Cellular handsets & Accessories
- Cordless phones
- Personal digital assistants (PDAs)
- Notebooks & Handhelds
- Portable instrumentation
- Digital cameras
- Peripherals
- MP3 players

Maximum Ratings

| Rating | Symbol | Value | Unit |
|---------------------------------------|-----------------------------------|----------|------|
| Peak pulse power (tp=8/20μs waveform) | P _{PP} | 320 | W |
| ESD voltage (Contact discharge) | V _{ESD} | ±8 | kV |
| ESD voltage (Air discharge) | | ±15 | |
| Storage & operating temperature range | T _{STG} , T _J | -55~+150 | °C |

Electrical Characteristics (T_J=25°C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--------------------------------|------------------|----------------------|------|------|------|------|
| Reverse stand-off voltage | V _{RWM} | | | | 36 | V |
| Reverse breakdown voltage | V _{BR} | I _{BR} =1mA | 40 | | | V |
| Reverse leakage current | I _R | V _R =36V | | | 1 | μA |
| Clamping voltage (tp=8/20μs) | V _C | I _{PP} =1A | | | 58 | V |
| Clamping voltage (tp=8/20μs) | V _C | I _{PP} =3A | | | 75 | V |
| Off state junction capacitance | C _J | 0Vdc,f=1MHz | | 70 | | pF |

Typical Characteristics Curves

Figure 1. Power Derating Curve

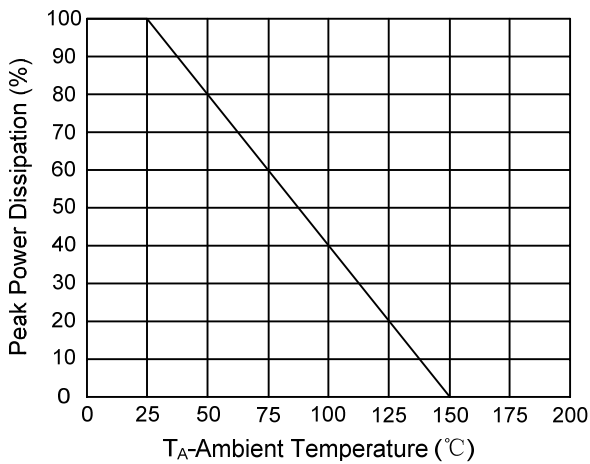


Figure 2. Pulse Waveform

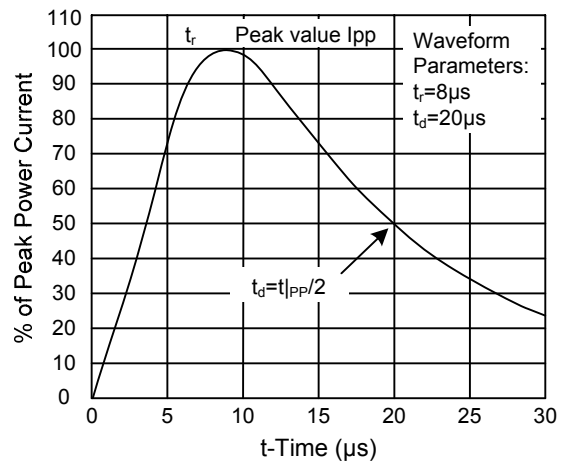
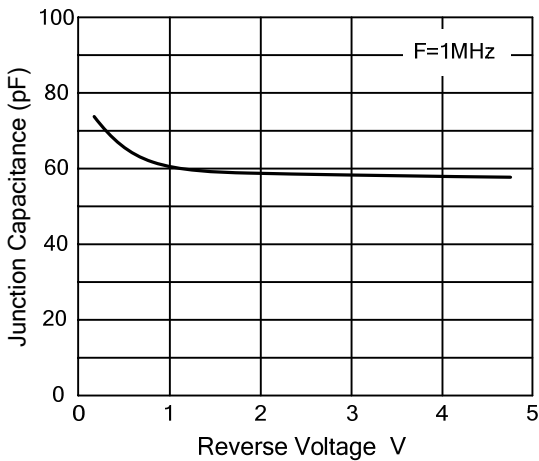
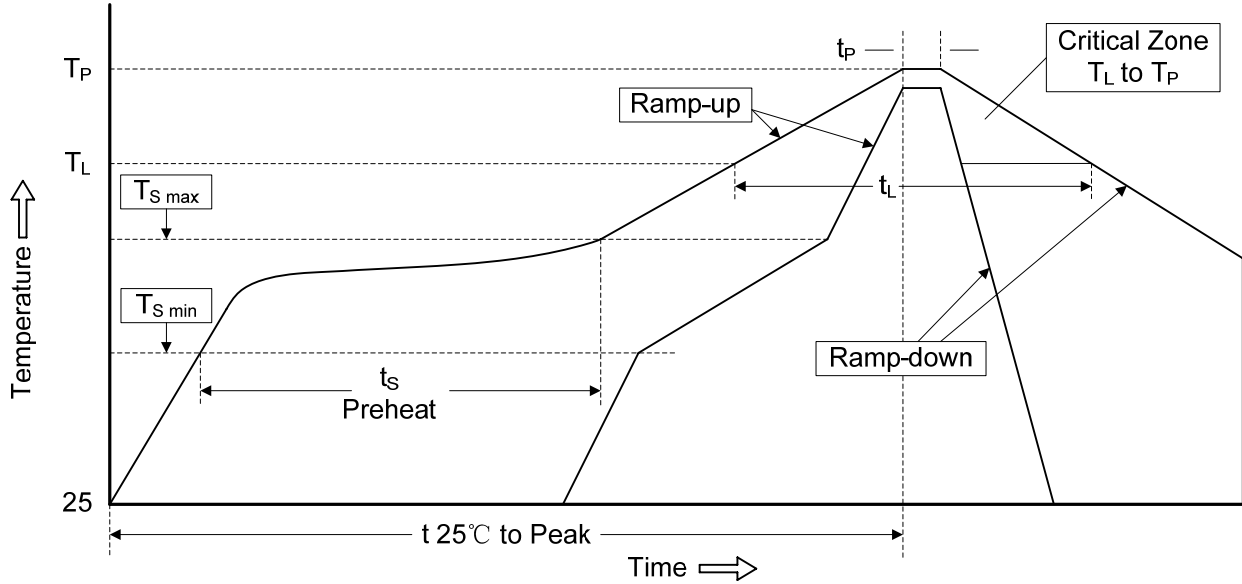


Figure 3. Capacitance vs. Reverse Voltage



Recommended Soldering Conditions

Reflow Soldering



Recommended Condition

| Profile Feature | Pb-Free Assembly |
|---|----------------------------------|
| Average ramp-up rate (T_L to T_P) | 3°C/second max. |
| Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s) | 150°C 200°C 60-180 seconds |
| $T_{S\ max}$ to T_L -Ramp-up Rate | 3°C/second max. |
| Time maintained above: -Temperature (T_L) -Time (t_L) | 217°C 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. |

Marking

Ordering information

| Order code | Package | Base qty | Delivery mode |
|-----------------|---------|----------|---------------|
| UMW SDD32C36L01 | SOD-323 | 3000 | Tape and reel |

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