



1. Features

- 2-pin lead-less package
- Junction capacitance (Max value: 100pF)
- Peak Pulse current (8/20μs) Max:25A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:3.3V
- RoHS Compliant

2. Mechanical Data

- Case:Molded Plastic,SOD323.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:03B
- Marking:marked on body.

SOD323



Bi-directional

3. Maximum Ratings

Electrical Characteristics Rating at 25℃ ambient temperature unless otherwise specified.

| Characteristic | Symbol | Value | Unit |
|---------------------------------------|------------------|----------|------|
| Peak Pulse Power (tp=8/20μs waveform) | P _{PP} | 375 | W |
| Peak Pulse Current (8/20μs) | I _{PP} | 25 | A |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ±30 | KV |
| ESD per IEC 61000-4-2 (Contact) | | ±30 | |
| Junction Temperature | T _j | -55~+125 | ℃ |
| Storage Temperature | T _{stg} | -55~+150 | ℃ |

4. Electrical Characteristics (T_A=25℃ unless otherwise noted)

| Characteristics | Symbol | Condition | Min | TYP | Max | Unit |
|---------------------------|------------------|--|-----|-----|-----|------|
| Reverse Working Voltage | V _{RWM} | | - | - | 3.3 | V |
| Reverse Breakdown Voltage | V _{BR} | I _R = 1mA | 5 | - | 8 | V |
| Reverse Leakage Current | I _R | V _R =3.3V | - | - | 0.5 | uA |
| Clamping voltage | V _C | I _{PP} = 1A,T _P =8/20us | - | - | 10 | V |
| Clamping voltage | V _C | I _{PP} = 25A,T _P =8/20us | - | - | 15 | V |
| Junction capacitance | C _J | V _R =0V,f =1MHz | - | - | 100 | pF |



5. Rating And Characteristic Curves

Fig.1 Power rating derating curve

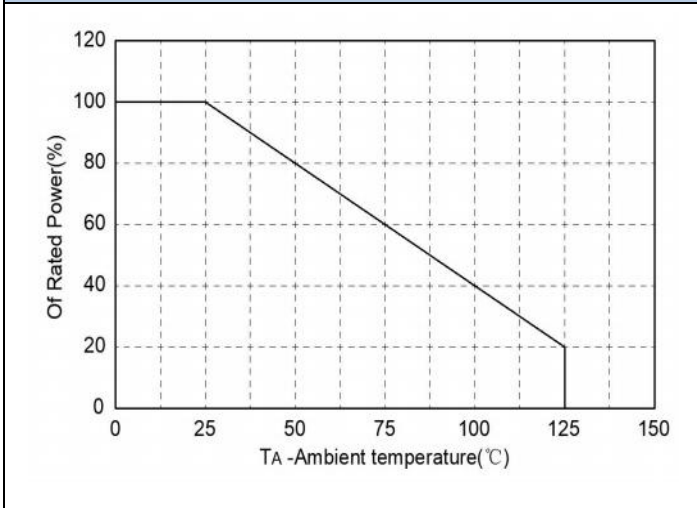


Fig.2 pulse Waveform

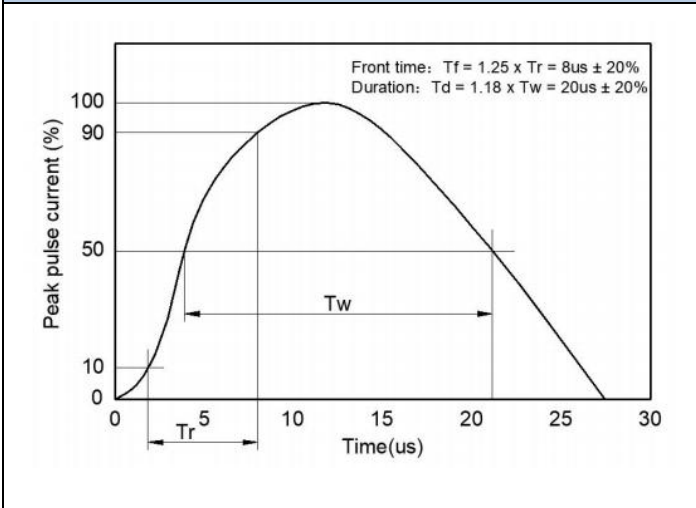


Fig.3 Capacitance between terminals characteristics

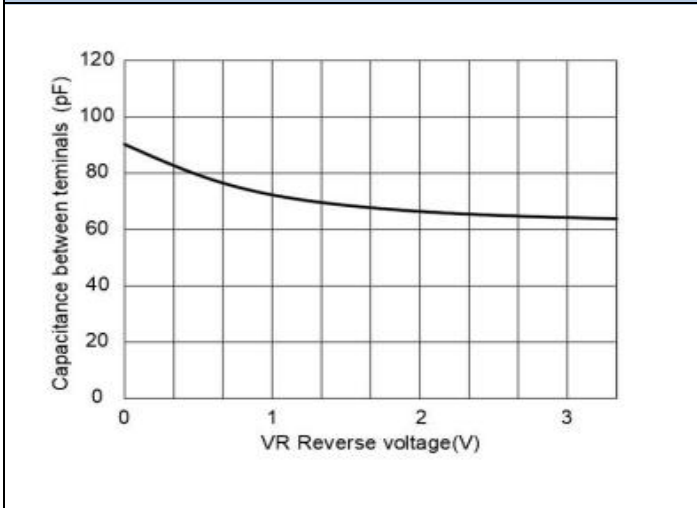
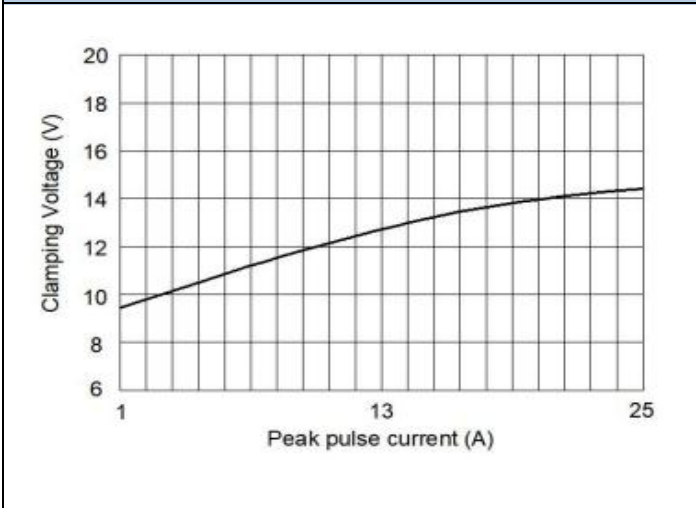
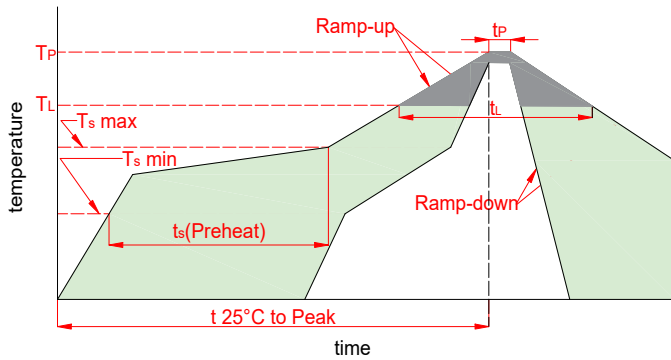


Fig.4 Clamping Voltage vs. Peak Pulse Current



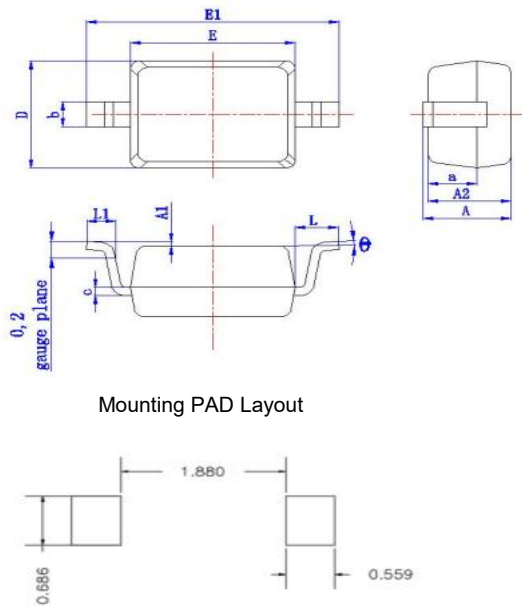


6. Soldering Parameters



| Reflow Condition | | Lead-free |
|--|---------------------------|------------------------|
| Pre Heat | Temp. min(T_s (min)) | 150℃ |
| | Temp. max(T_s (min)) | 200℃ |
| | Time(min to max)(t_s) | 60~120s |
| Aver. ramp up rate(Liquidus Temp.)(T_L)to peak | | 3℃/s max |
| T_s (max) to T_L -Ramp-up Rate | | 3℃/s max |
| Reflow | Temp.(T_L)(Liquidus) | 217℃ |
| | Temp.(t_L)(Liquidus) | 60~150s |
| Peak Temp.(T_P) | | 260 ^{+0/-5} ℃ |
| Time within actual peak Temp.(t_p) | | 30s max |
| Ramp-down Rate | | 6℃/s max |
| Time 25℃ to peak Tempe.(T_p) | | 8 minutes max |
| Do not exceed | | 260℃ |

7. Dimensions



| Symbol | Inches | | Millimeters | |
|--------|--------|-------|-------------|------|
| | Min | Max | Min | Max |
| A | 0.031 | 0.045 | 0.80 | 1.15 |
| A1 | 0.000 | 0.004 | 0.00 | 0.10 |
| A2 | 0.031 | 0.039 | 0.80 | 1.00 |
| a | 0.020 | | 0.50 | |
| D | 0.045 | 0.057 | 1.15 | 1.45 |
| E | 0.063 | 0.073 | 1.60 | 1.85 |
| E1 | 0.098 | 0.110 | 2.50 | 2.80 |
| b | 0.010 | 0.016 | 0.25 | 0.40 |
| c | 0.003 | 0.006 | 0.08 | 0.15 |
| L | 0.019 | | 0.48 | |
| L1 | 0.010 | 0.018 | 0.25 | 0.45 |
| θ | 0° | 8° | 0° | 8° |

8. Part Numbering System

Part Marking System

Cathode Band



9. Package Information

| Package | Part Number | Marking Code | Quantity(pcs) |
|---------|-----------------|--------------|---------------|
| SOD323 | ESDSHLC3V301D3B | 03B | 3000 |



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