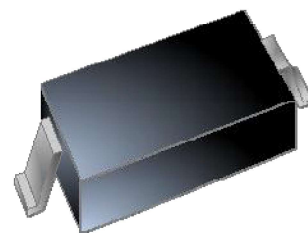


FEATURES

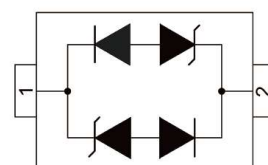
- ✧ 350 watts peak pulse power per line ($t_p=8/20\mu s$)
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages: 3.3V
- ✧ Low leakage current
- ✧ RoHS compliant



SOD-323

MAIN APPLICATIONS

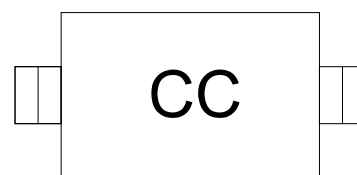
- ✧ Cell phone handsets and accessories
- ✧ Microprocessor based equipment
- ✧ Personal digital assistants (PDA's)
- ✧ Notebooks, desktops, and servers
- ✧ Portable instrumentation
- ✧ Peripherals
- ✧ USB interface



PIN Configuration

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- ✧ IEC61000-4-5 (lightning) 20A (8/20us)



Marking Code

MECHANICAL CHARACTERISTICS

- ✧ SOD-323 package
- ✧ Molding compound flammability rating: UL 94V-0
- ✧ Weight 5 milligrams (approximate)
- ✧ Quantity per reel: 3,000pcs
- ✧ Lead finish: lead free
- ✧ Marking code:CC

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------|------------------|--------------------|
| Peak pulse power dissipation on 8/20 μs waveform | P_{PP} | 350 | W |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V_{ESD} | +/- 30 +/- 30 | kV |
| Lead soldering temperature | T_L | 260 (10 sec.) | $^{\circ}\text{C}$ |
| Operating junction temperature range | T_J | -55 to +125 | $^{\circ}\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---------------------------|-----------|---|-----|-----|------|---------------|
| Reverse working voltage | V_{RWM} | | | | 3.3 | V |
| Reverse breakdown voltage | V_{BR} | $I_T = 1\text{mA}$ | 4.2 | | 5.7 | V |
| Reverse leakage current | I_R | $V_{RWM} = 3.3\text{V}$ | | | 1 | μA |
| Clamping voltage | V_C | $I_{PP}=1\text{A}$, $t_p = 8/20\mu\text{s}$ | | | 9.0 | V |
| | | $I_{PP}=20\text{A}$, $t_p = 8/20\mu\text{s}$ | | | 17.5 | V |
| Junction capacitance | C_J | $V_{RWM} = 0\text{V}$, $f = 1\text{MHz}$ | | 0.7 | | pF |

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

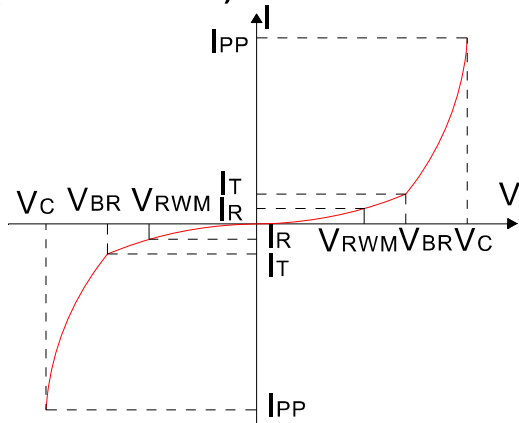


FIG.2: Pulse waveform (8/20 μs)

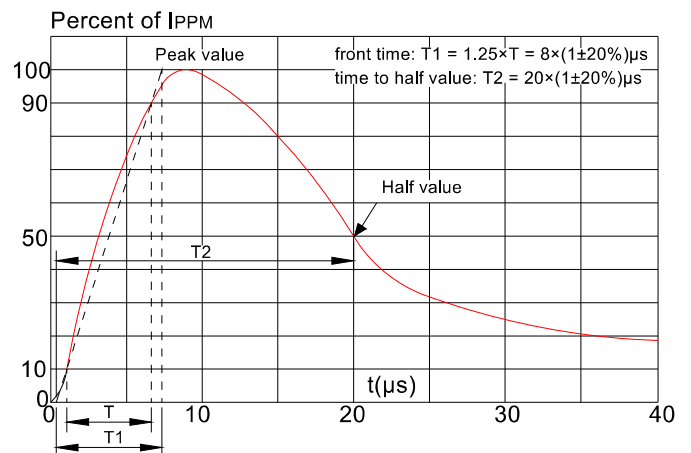


FIG.3: Pulse derating curve

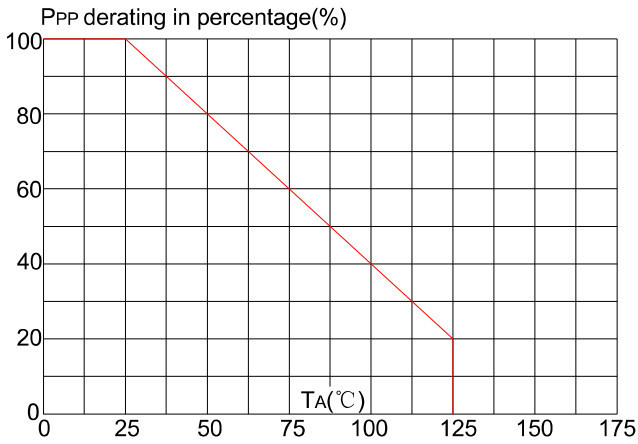
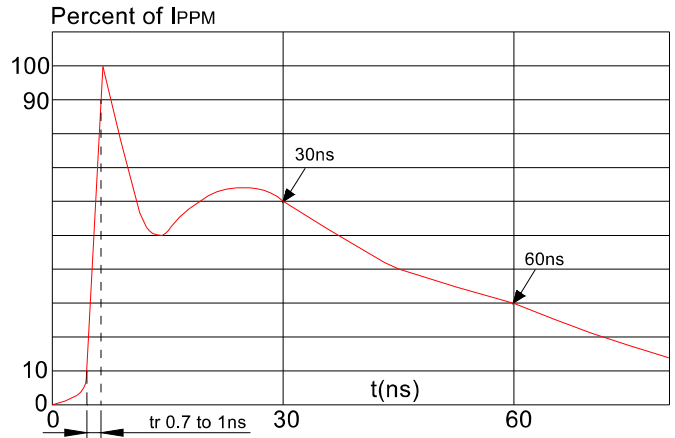
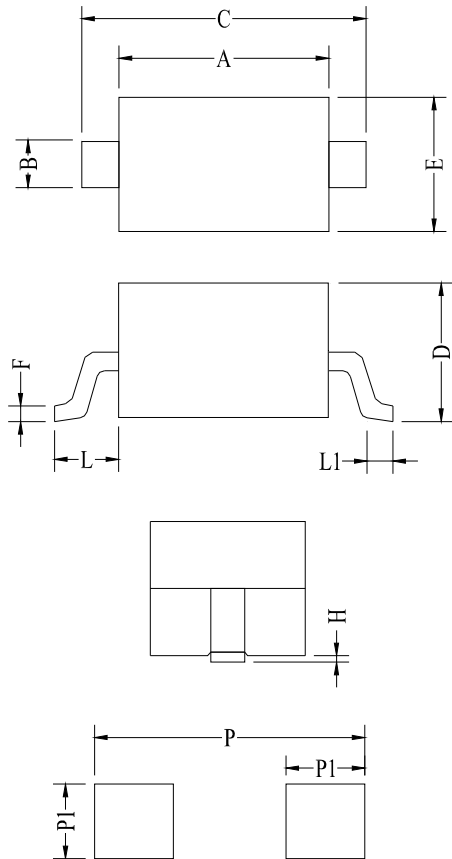


FIG.4: ESD clamping (8KV contact)



PACKAGE MECHANICAL DATA



Land Pattern

| Symbol | Millimeter | | Inches | |
|--------|------------|------|----------|-------|
| | Min | Max | Min | Max |
| A | 1.60 | 1.80 | 0.063 | 0.071 |
| B | 0.25 | 0.35 | 0.010 | 0.014 |
| C | 2.50 | 2.70 | 0.098 | 0.106 |
| D | 0.00 | 1.00 | 0.000 | 0.039 |
| E | 1.20 | 1.40 | 0.047 | 0.055 |
| F | 0.08 | 0.15 | 0.003 | 0.006 |
| L | 0.475REF | | 0.019REF | |
| L1 | 0.25 | 0.40 | 0.010 | 0.016 |
| H | 0.00 | 0.10 | 0.000 | 0.004 |
| P | 3.00 | | 0.118 | |
| P1 | 0.80 | | 0.031 | |