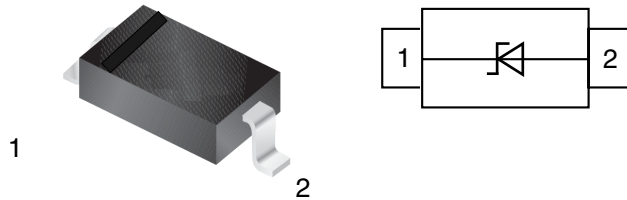


ESD/Surge Protection Diode in SOD-323

Features

- 1800Watts peak pulse power ($t_p = 8/20\mu s$)
- SOD-323 package
- Unidirectional configurations
- Low clamping voltage
- Low leakage current
- High capacitance ($C_j=560pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 70A (8/20 μs)



Mechanical Data

- **Case:** SOD-323 (plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Computers and peripherals
- Communication systems
- Notebook
- Power Line
- Power management
- USB Vbus

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

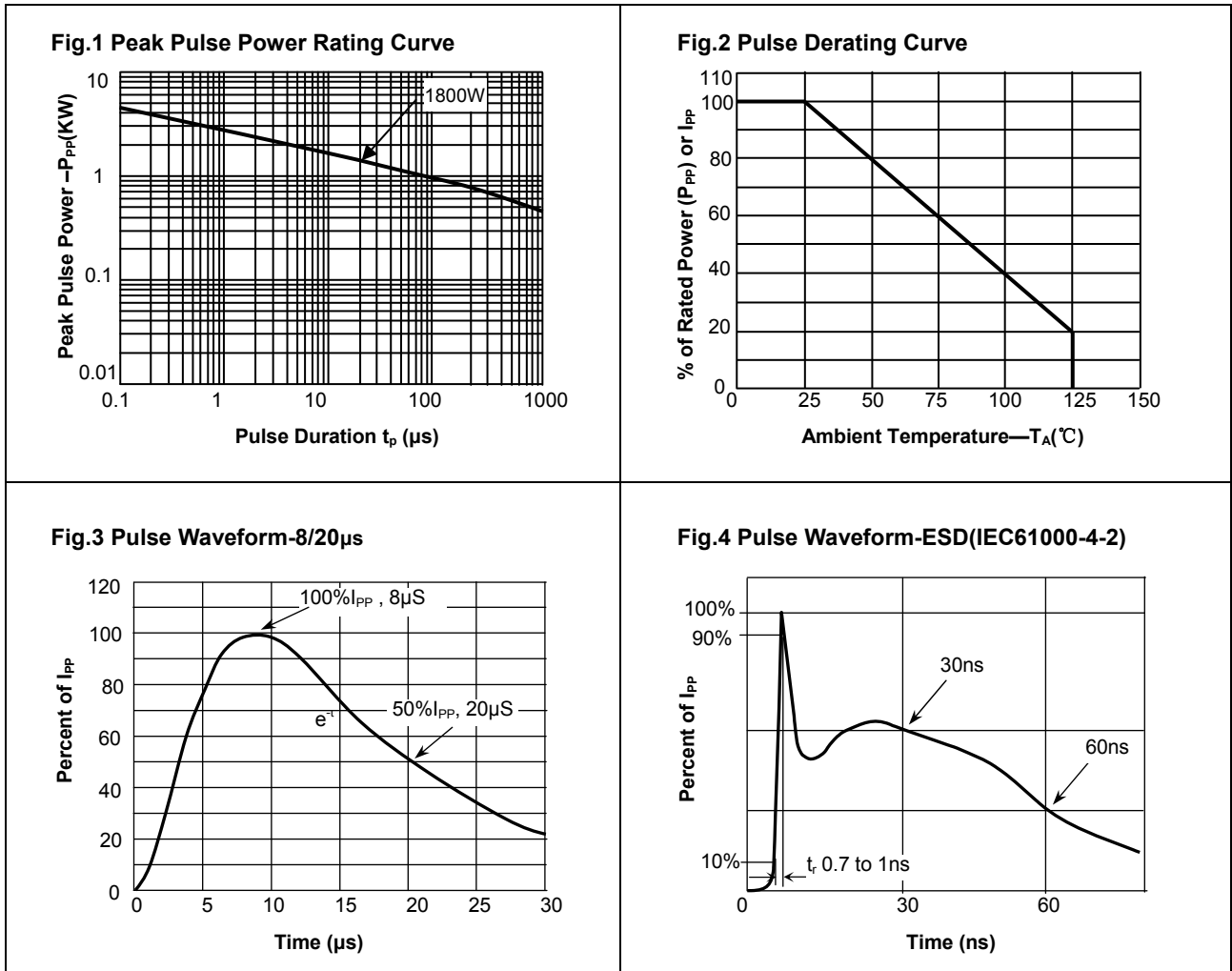
| Parameter | Symbol | Value | Unit |
|---|-----------|-------------|------|
| Peak Pulse Power ($T_p=8/20\mu s$) | P_{PP} | 1800 | W |
| ESD contact/air discharge (IEC-61000-4-2) | V_{ESD} | 30/30 | kV |
| Peak Pulse Current ($t_p = 8/20\mu s$) | I_{PP} | 70 | A |
| Junction Temperature | T_J | -55 to +125 | °C |
| Storage temperature | T_{STG} | -55 to +125 | °C |

Electrical Characteristics

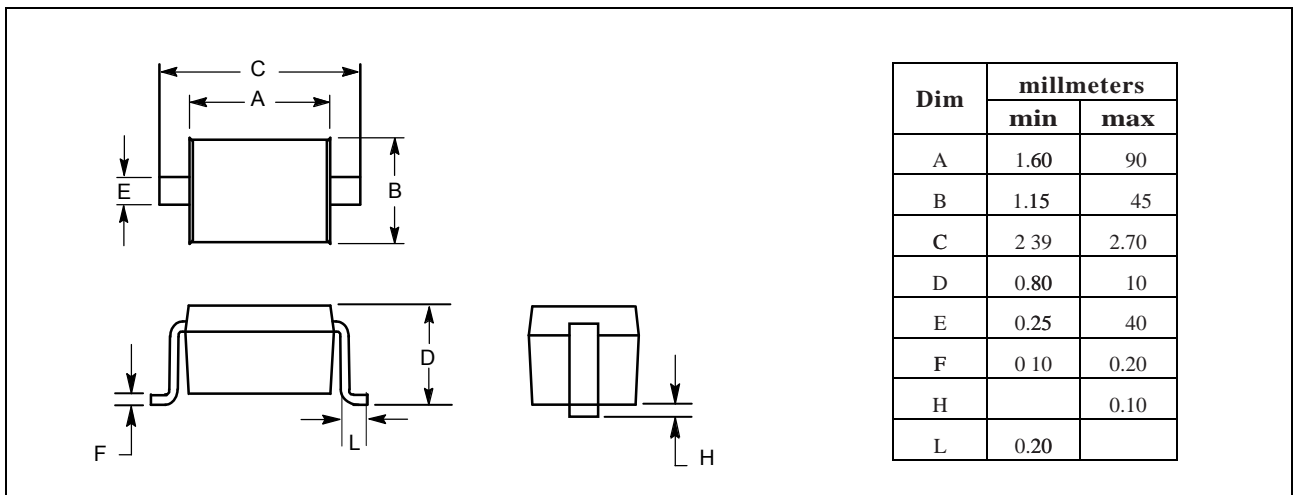
($T_A = 25$ °C unless otherwise specified)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|----------------------------------|-----------|------------------|-----|-----|-----|---------|
| Reverse stand-off Voltage | V_{RWM} | | | | 4.5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1mA$ | 5.0 | 6.2 | 6.5 | V |
| Reverse Leakage Current | I_R | $V_R=4.5V$ | | | 1 | μA |
| Clamping Voltage (IEC 61000-4-5) | V_C | $I_{PP}=70A$ | | 23 | 25 | V |
| Junction Capacitance | C_J | $V_R=0V, f=1MHz$ | | 560 | 620 | pF |

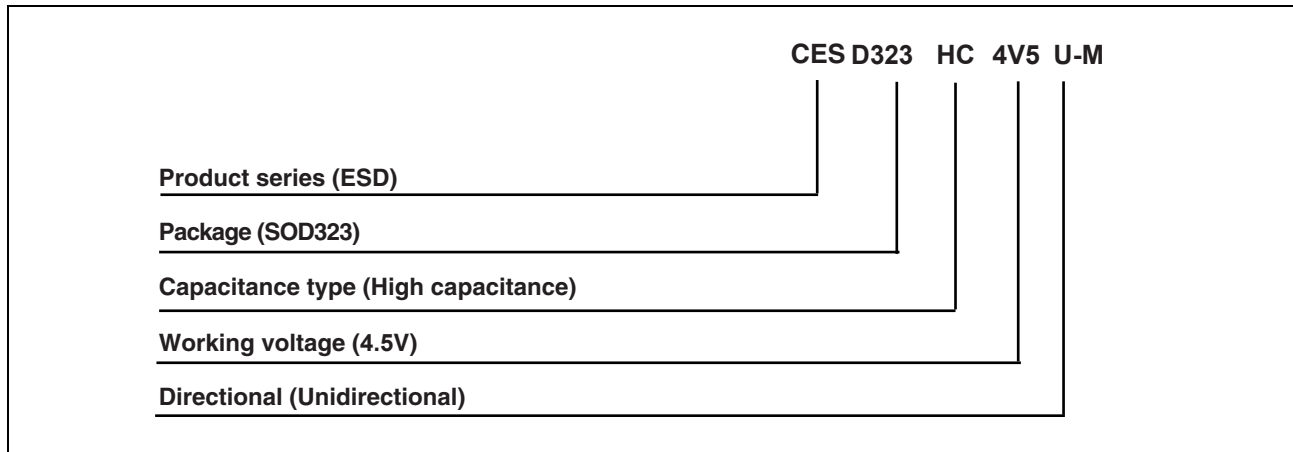
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



Package Dimensions



Part number system



Marking



Ordering information

| Order code | Package | Packaging option | Base quantity | Packaging specification |
|-----------------|---------|------------------|----------------|-------------------------|
| CESD323HC4V5U-M | SOD-323 | Tape and reel | 2500pcs / reel | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|-----------------|
| 23-May-2012 | 1.0 | Initial release |

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