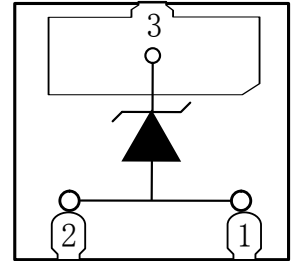


EOS/ESD Protection Diode in DFN-2020-3L

Features

- 5000 Watts peak pulse power ($t_p = 8/20\mu s$)
- DFN-2020-3L package
- Unidirectional configurations
- Low clamping voltage
- Low leakage current
- Medium capacitance ($C_j = 1700pF$ 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) 240A (8/20 μs)



Mechanical Data

- **Case:** DFN-2020-3L (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

- Power lines
- USB Vbus Industrial Electronics
- Industrial Electronics
- Microcontroller Input Protection
- Computer & Consumer Electronics
- Automotive and Telecommunication

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

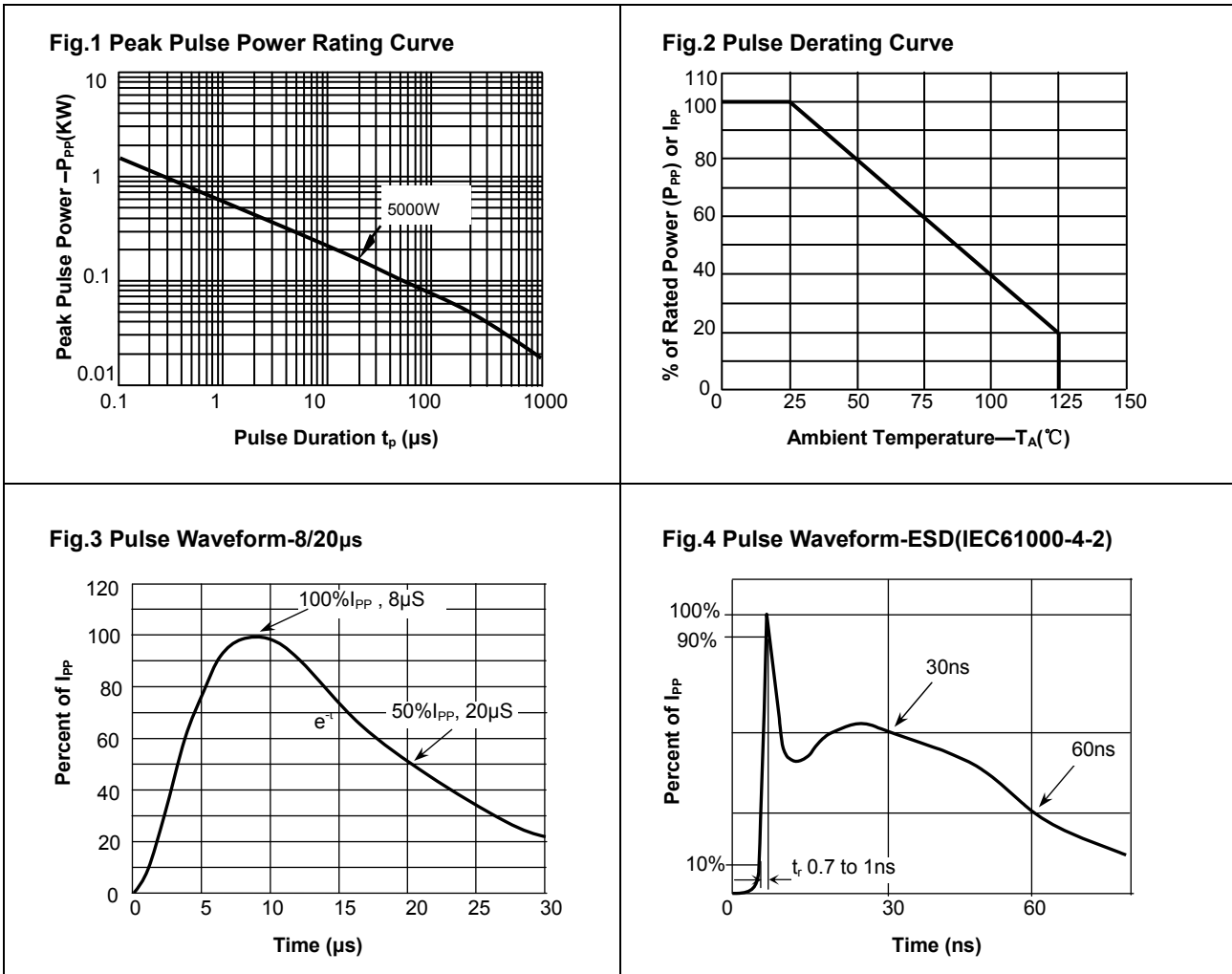
| Parameter | Symbol | Value | Unit |
|---|-----------|-------------|------|
| Peak Pulse Power ($T_P = 8/20\mu s$) | P_{PP} | 5000 | W |
| ESD contact/air discharge (IEC-61000-4-2) | V_{ESD} | 30/30 | kV |
| Peak Pulse Current ($T_P = 8/20\mu s$) | I_{PP} | 240 | A |
| Junction Temperature | T_J | -55 to +125 | °C |
| Storage temperature | T_{STG} | -55 to +150 | °C |

Electrical Characteristics

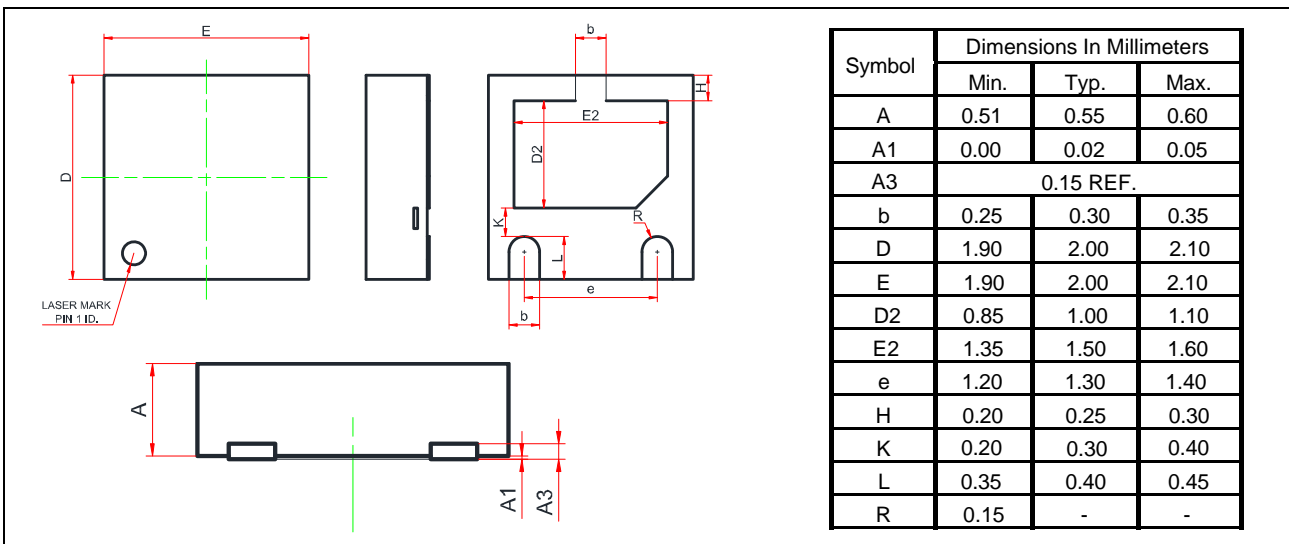
($T_A = 25$ °C unless otherwise specified)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|----------------------------------|-----------|----------------------|-----|------|------|---------|
| Reverse stand-off Voltage | V_{RWM} | | | | 7.5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T = 1mA$ | | 9 | | V |
| Reverse Leakage Current | I_R | $V_R = 7V$ | | | 1 | μA |
| Clamping Voltage (IEC 61000-4-5) | V_C | $I_{PP} = 50A$ | | | 12.5 | V |
| Clamping Voltage (IEC 61000-4-5) | V_C | $I_{PP} = 100A$ | | | 15.5 | V |
| Clamping Voltage (IEC 61000-4-5) | V_C | $I_{PP} = 240A$ | | | 23 | V |
| Junction Capacitance | C_J | $V_R = 0V, f = 1MHz$ | | 1700 | | pF |

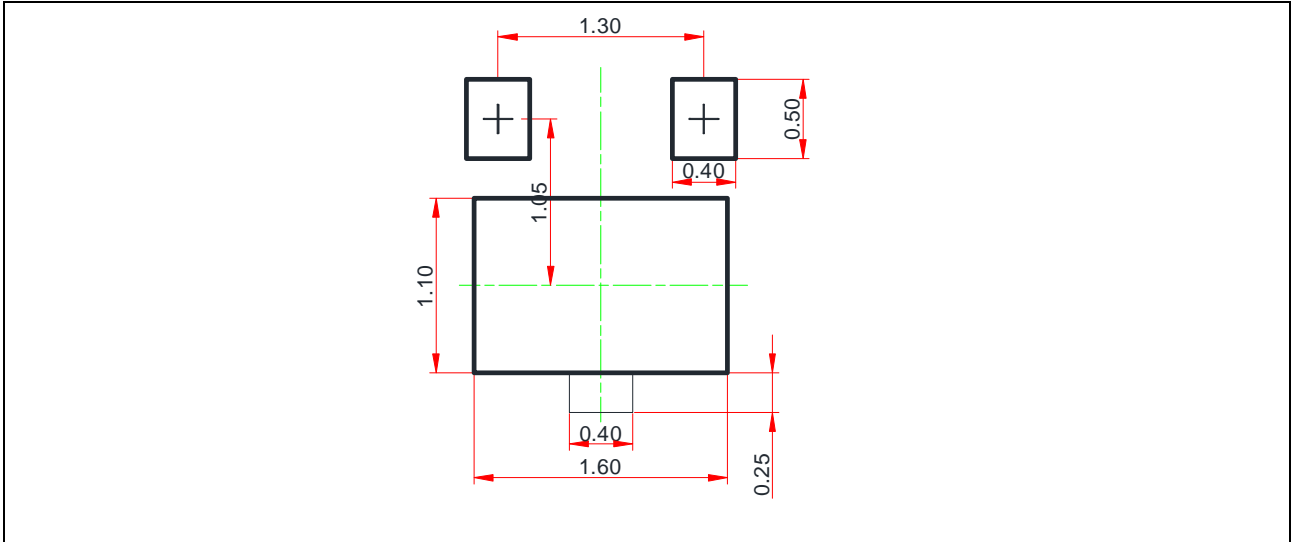
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



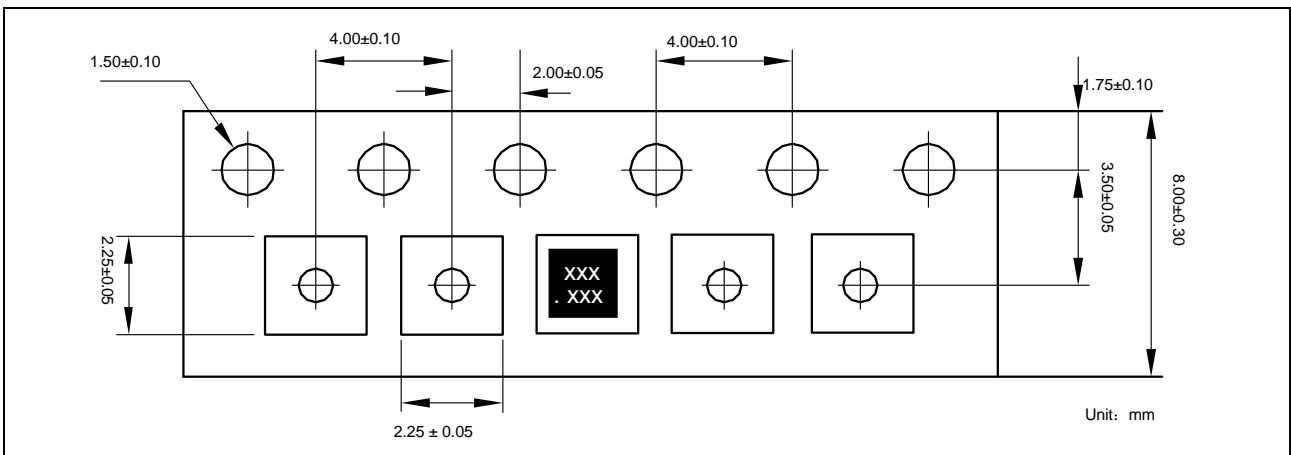
Package Dimensions



PAD Dimensions



Package information



Ordering information

| Order code | Marking | Package | Packaging option | Base quantity | Packaging specification |
|---------------|---------|------------|------------------|----------------|-------------------------|
| CESD2020HC7VU | T07 | DFN2020-3L | Tape and reel | 3000pcs / reel | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|---------|
| 5-Jul.-2021 | 2.0 | Update |

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