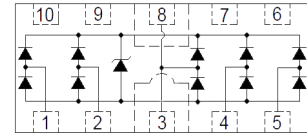
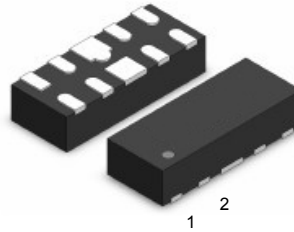


Ultra Low Capacitance ESD TVS Array in DFN2510

Features

- 20Watts peak pulse power ($T_P = 8/20\mu s$)
- DFN2510 Package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (0.2pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
 - IEC 61000-4-2 $\pm 8KV$ contact $\pm 15KV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 4A (8/20 μs)



Mechanical Data

- **Case:** DFN2510 (plastic package).
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- USB 3.1, USB 3.0, MHL
- HDMI 2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

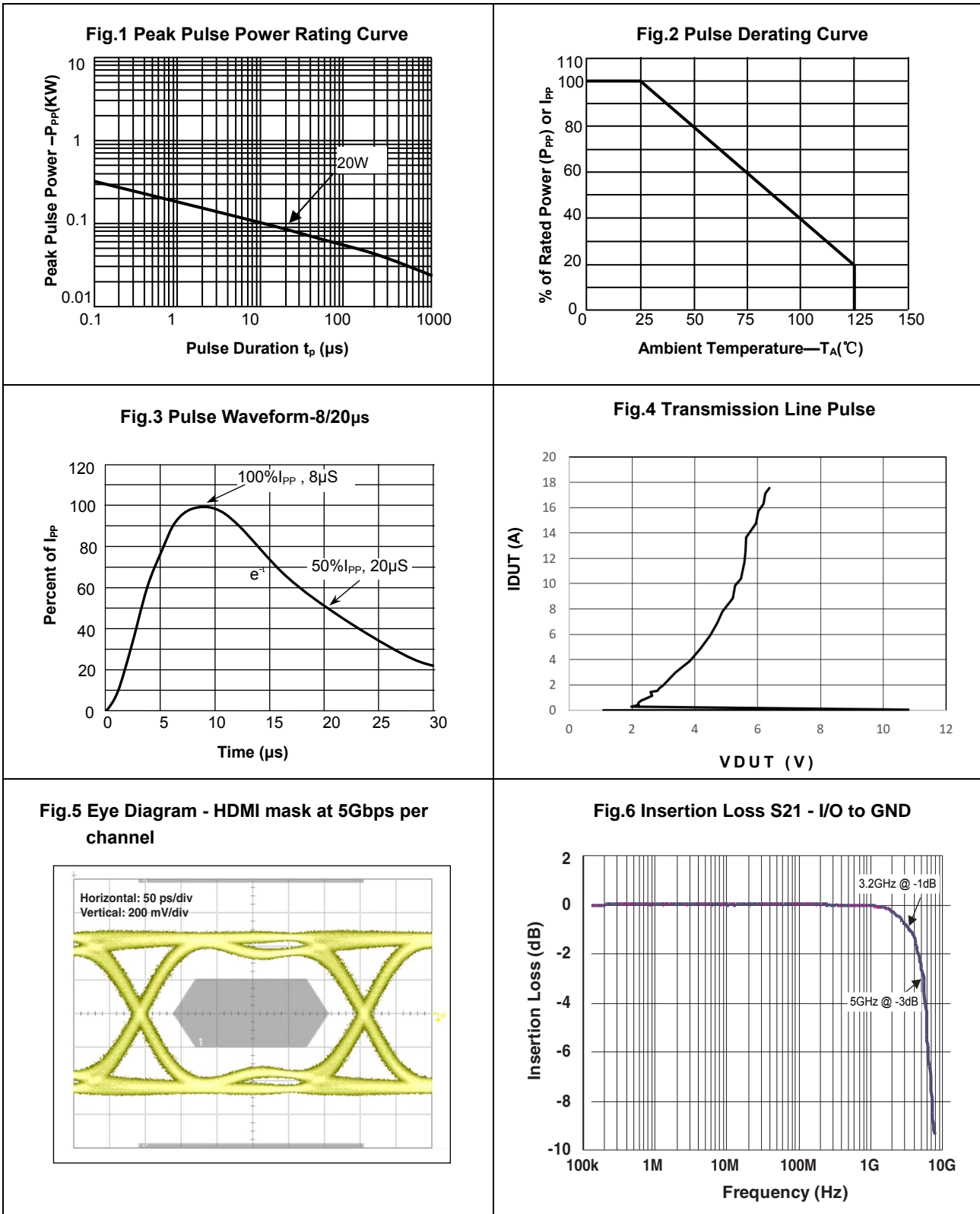
| Parameter | Symbol | Value | Unit |
|---|-----------|-------------|------|
| Peak Pulse Power ($T_P=8/20\mu s$) | P_{PP} | 20 | W |
| ESD contact/air discharge (IEC-61000-4-2) | V_{ESD} | 8/15 | kV |
| Peak Pulse Current ($T_P = 8/20\mu s$) | I_{PP} | 4.0 | A |
| Junction Temperature | T_J | -55 to +125 | °C |
| Storage temperature | T_{STG} | -55 to +150 | °C |

Electrical Characteristics

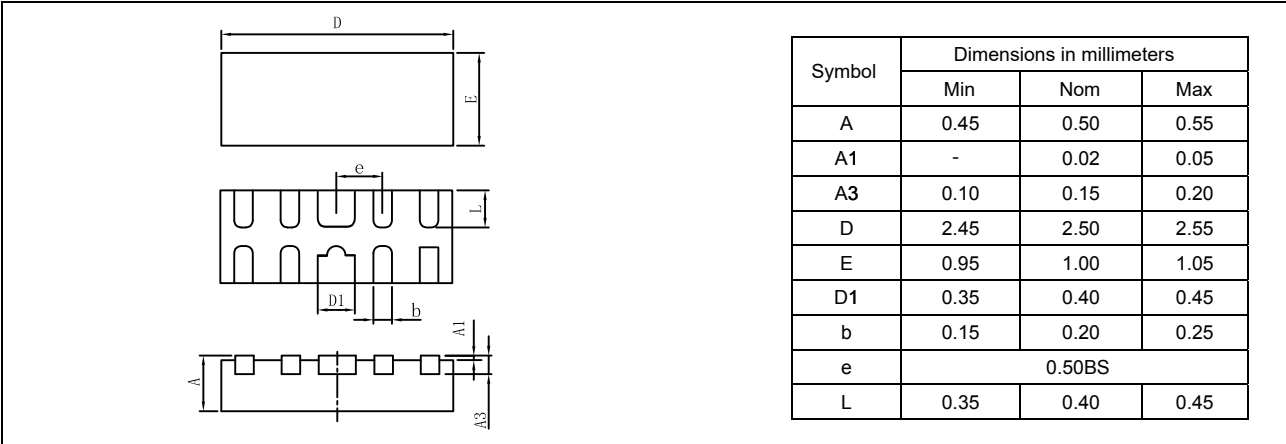
($T_A = 25\text{ °C}$ unless otherwise specified)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|---------------------------|-----------|------------------------------|-----|------|-----|----------|
| Reverse stand-off Voltage | V_{RWM} | | | | 3.3 | V |
| Holding Voltage | V_H | $I_T=I_H$ | 2.5 | | | V |
| Holding Current | I_H | | 30 | | | mA |
| Reverse Leakage Current | I_R | $V_{RWM}=3.3V$ | | | 0.5 | μA |
| Clamping Voltage | V_C | $I_{PP}=4A, T_P=8/20\mu s$ | | 5.0 | | V |
| Clamping Voltage(TLP) | V_C | $I_{PP}=16A, T_P=100ns$ | | 6.0 | | V |
| Dynamic Resistance | R_{dyn} | | | 0.2 | | Ω |
| Junction Capacitance | C_J | $V_R=0V, f=1MHz, I/O$ to I/O | | 0.20 | | pF |
| | C_J | $V_R=0V, f=1MHz, I/O$ to GND | | 0.40 | | pF |

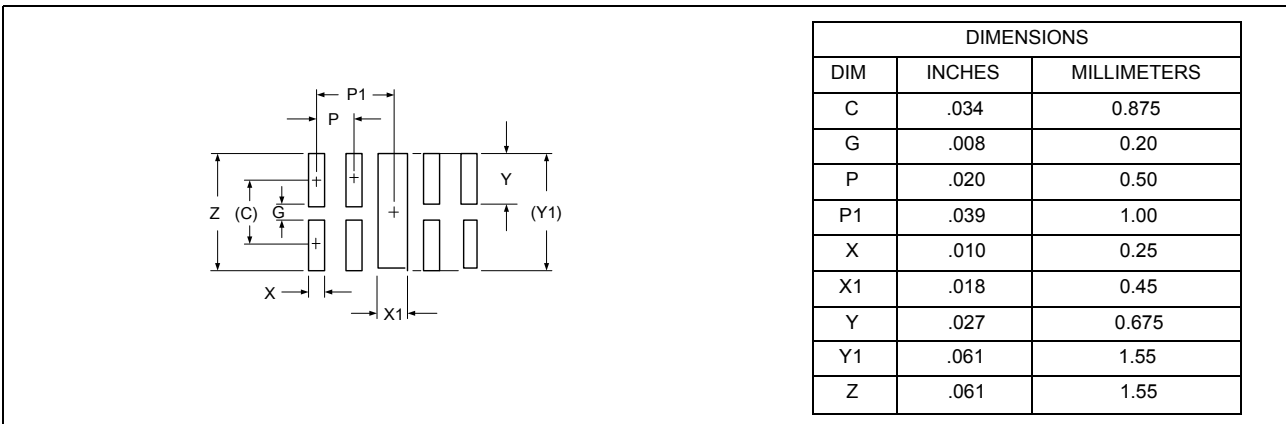
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



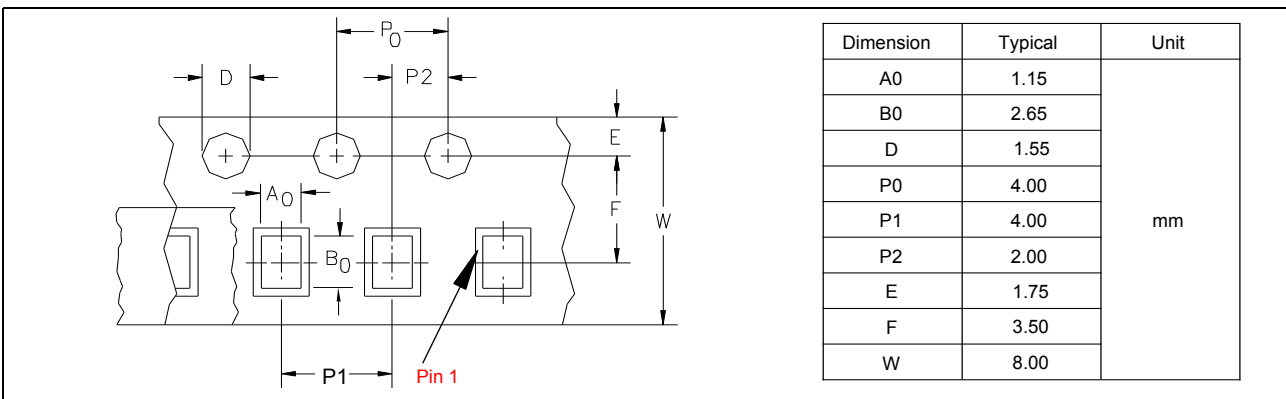
Package Dimensions



Pad Dimensions



Package Information



Ordering information

| Order code | Marking | Package | Packaging option | Base quantity | Packaging specification |
|------------------|---------|---------|------------------|----------------|-------------------------|
| CESD2510UC3V3USH | 33U | DFN2510 | Tape and reel | 3000pcs / reel | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|---------|
| 5-Jul.-2021 | 3.0 | Update |

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