

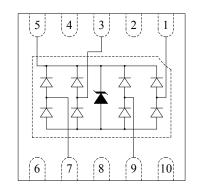
Low Capacitance ESD TVS Array in DFN2626

Features

■ Transient protection for high-speed data lines

IEC 61000-4-2 (ESD) ±30kV (Air) ±30kV (Contact) IEC 61000-4-4 (EFT) 40A (5/50 ns) IEC 61000-4-5 (Surge) 25A (8/20μs)

- Package optimized for high-speed lines
- Provides protection for two line pairs
- Low capacitance: 3.8pF @ 0V (Typical)
- Low leakage current: 0.1µA @ V_{RWM} (Typical)
- Low operating and clamping voltage
- Each I/O pin can withstand over 1000 ESD
- strikes for ±8kV contact discharge

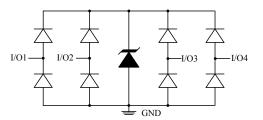


Mechanical Data

■ Case: DFN2626 (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

- 10/100/1000M Ethernet Ports
- WAN/LAN Equipment
- Desktops, Servers and Notebooks
- Cellular Phones
- Switching Systems
- Audio/Video Inputs

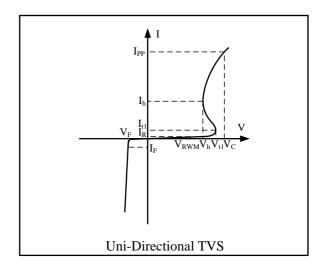
Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter | Symbol | Value | Unit |
|---|------------------|-------------|------------|
| Peak Pulse Power (T _P =8/20µS) | P _{PP} | 450 | W |
| ESD contact/air discharge (IEC-61000-4-2) | V _{ESD} | 30/30 | kV |
| Peak Pulse Current (t₂ = 8/20μS) | I _{PP} | 25 | А |
| Junction Temperature | TJ | -55 to +125 | $^{\circ}$ |
| Storage temperature | T _{STG} | -55 to +150 | $^{\circ}$ |



| Symbol | Parameter | | |
|---------------------------------|---|--|--|
| V_{RWM} | Nominal Reverse Working Voltage | | |
| I_R | Reverse Leakage Current @ V _{RWM} | | |
| V _{t1} Trigger Voltage | | | |
| I_{t1} | I _{t1} Trigger Current @ V _{t1} | | |
| V_h | V _h Holding Voltage | | |
| I_h | Holding Current @ V _h | | |
| $V_{\rm C}$ | Clamping Voltage @ I _{PP} | | |
| I_{PP} | Maximum Peak Pulse Current | | |
| C_{ESD} | Parasitic Capacitance | | |



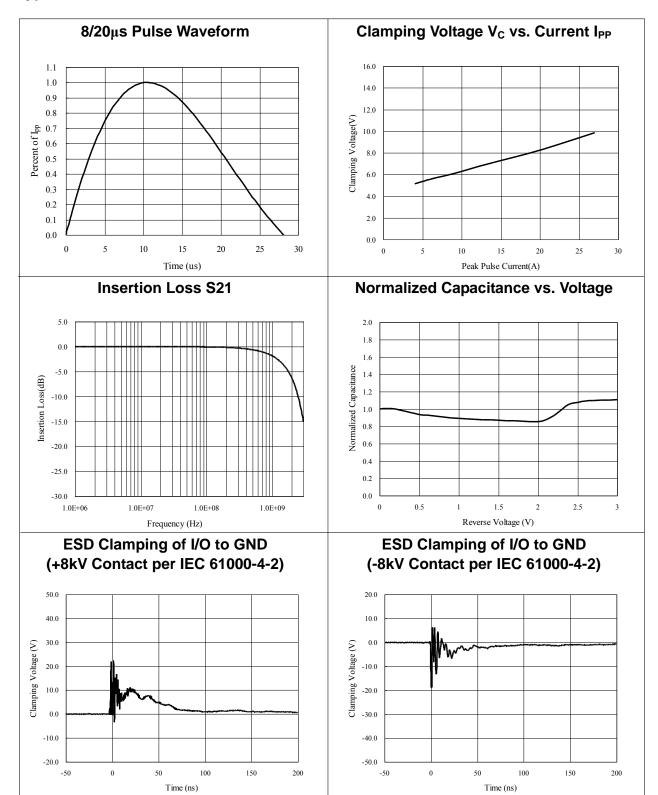
Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

| Symbol | Test Condition Minimo | | Typical | Maximum | Units |
|-------------|---|-----|---------|---------|-------|
| V_{RWM} | | | | 3.3 | V |
| I_R | $V_{RWM} = 3.3V, T = 25^{\circ}C$ | | 0.1 | 1.0 | μΑ |
| V_{t1} | $I_{t1} = 1 \mu A$ | 3.5 | 4.2 | 5.0 | V |
| V_h | $I_h = 1 \text{mA}$ | 3.3 | | 4.5 | V |
| $V_{\rm C}$ | $I_{PP} = 1A$, $t_p = 8/20 \mu s$ (Each Line) | | | 5.5 | V |
| $V_{\rm C}$ | $I_{PP} = 10A$, $t_p = 8/20\mu s$ (Each Line) | | | 8.5 | V |
| $V_{\rm C}$ | $I_{PP} = 25A, t_p = 8/20 \mu s$ (Each Line) | | | 16.0 | V |
| C_{ESD} | Between I/O Pins and Ground $V_R = 0V$, $f = 1MHz$ | | 3.8 | 5.0 | pF |
| C_{ESD} | Between I/O Pins $V_R = 0V$, $f = 1MHz$ | | 2.0 | 2.5 | pF |

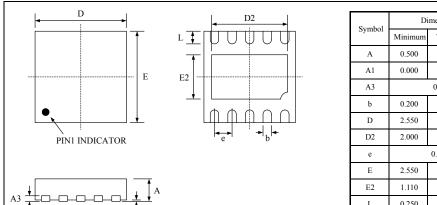


Typical Characteristics ($T_{amb} = 25 \, ^{\circ}\text{C}$ unless otherwise specified)



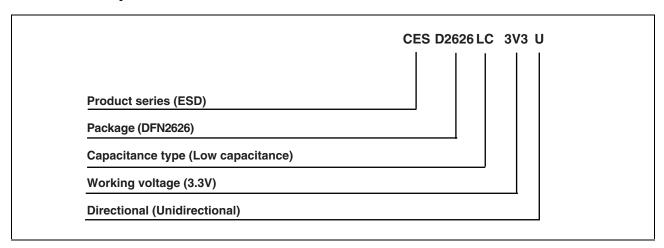


Package Dimensions

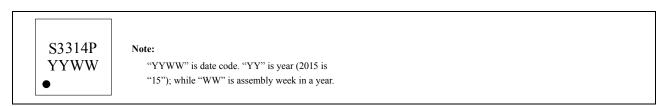


| Symbol | Di | mensions (r | nm) | Dimensions (Inches) | | | |
|--------|-----------|-------------|---------|---------------------|-----------|---------|--|
| Symbol | Minimum | Typical | Maximum | Minimum | Typical | Maximum | |
| A | 0.500 | 0.550 | 0.600 | 0.020 | 0.022 | 0.024 | |
| A1 | 0.000 | _ | 0.050 | 0.000 | _ | 0.002 | |
| A3 | 0.15 REF | | | | 0.006 REF | | |
| b | 0.200 | 0.250 | 0.300 | 0.008 | 0.010 | 0.012 | |
| D | 2.550 | 2.600 | 2.650 | 0.100 | 0.102 | 0.104 | |
| D2 | 2.000 | 2.150 | 2.250 | 0.079 | 0.085 | 0.089 | |
| e | 0.500 BSC | | | | 0.020 BSC | | |
| E | 2.550 | 2.600 | 2.650 | 0.100 | 0.102 | 0.104 | |
| E2 | 1.110 | 1.260 | 1.360 | 0.044 | 0.050 | 0.054 | |
| L | 0.250 | 0.350 | 0.450 | 0.010 | 0.014 | 0.018 | |

Part number system



Marking



Ordering inormation

| Order code | Package | Packaging option | Base quantity | Packaging specification |
|----------------|---------|------------------|----------------|-------------------------|
| CESD2626LC3V3U | DFN2626 | Tape and reel | 3000pcs / reel | EIA STD RS-481 |

Reision history

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



CESD2626LC3V3U

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