

### Features

- 4 Bi-directional Channels ESD protection
- Typically Used at High Speed Ports
- Low operating voltage: 60V
- Low Channel Input Capacitance of 15pF  
Typical for I/Os (Typ)
- -IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 8\text{kV}$   
Contact discharge:  $\pm 8\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- Totally Lead-Free & Fully RoHS Compliant
- Halogen and Antimony Free. "Green" Device

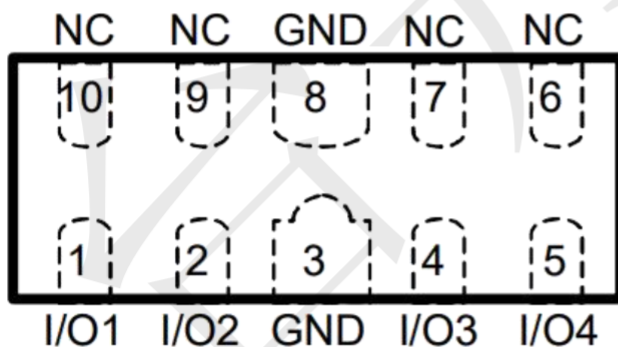
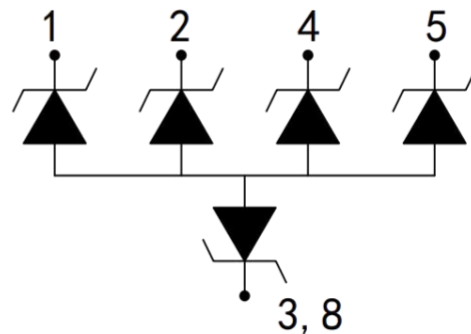
### Mechanical Characteristics

- Package: DFN2510-10L
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

### Applications

- Set-top boxes
- LCD televisions
- VBus protections
- Typically used at chip-on-glass (COG) panels

### Dimensions and Pin Configuration



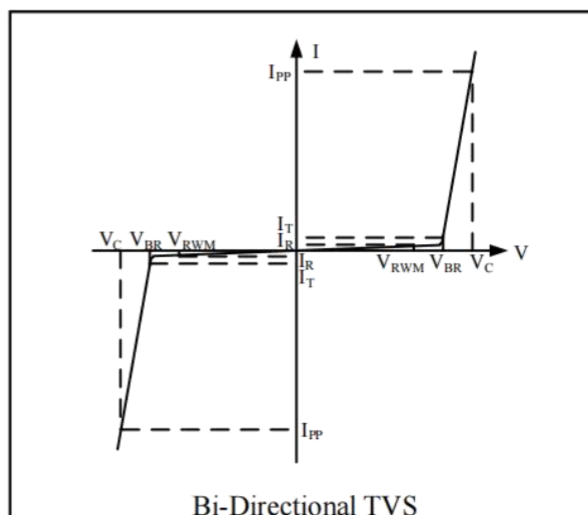
### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter                                                      | Symbol | Value       | Unit |
|----------------------------------------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)                                      | Ppp    | 200         | W    |
| IEC 61000-4-2 Spec Current at 60 ns (A)                        | Ipp    | 2           | A    |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | VESD   | ±8<br>±8    | KV   |
| Operating Temperature Range                                    | TJ     | -55 to +125 | °C   |
| Storage Temperature Range                                      | Tstg   | -55 to +150 | °C   |

### Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter               | Symbol | Min | Typ | Max | Unit | Test Condition                            |
|-------------------------|--------|-----|-----|-----|------|-------------------------------------------|
| Reverse Working Voltage | VRWM   | --  | --  | 60  | V    |                                           |
| Breakdown Voltage       | VBR    | 65  | --  | 85  | V    | IT= 1mA                                   |
| Reverse Leakage Current | IR     | --  | --  | 100 | nA   | VRWM=60V                                  |
| Clamping Voltage        | VC     | --  | 90  | --  | V    | Ipp=1A(8x 20us pulse)                     |
| Clamping Voltage        | VC     | --  | --  | 100 | V    | Ipp=2A(8x 20us pulse)                     |
| Junction Capacitance    | CJ     | --  | --  | 15  | pF   | VR = 0V, f = 1MHz,<br>Any I/O pin to GND  |
| Junction Capacitance    | CJ     | --  | 8   | --  | pF   | VR = 0V, f = 1MHz,<br>Between any I/O pin |

| Symbol | Parameter                          |
|--------|------------------------------------|
| VRWM   | Nominal Reverse Working Voltage    |
| IR     | Reverse Leakage Current @ VRWM     |
| VBR    | Reverse Breakdown Voltage @ IT     |
| IT     | Test Current for Reverse Breakdown |
| VC     | Clamping Voltage @ Ipp             |
| Ipp    | Maximum Peak Pulse Current         |
| CESD   | Parasitic Capacitance              |
| VR     | Reverse Voltage                    |
| f      | Small Signal Frequency             |



### Characteristic Curves

**Fig1. 8/20 $\mu$ s Pulse Waveform**

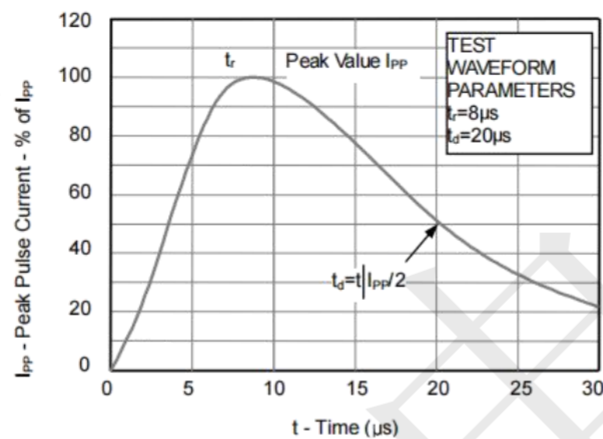


**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**

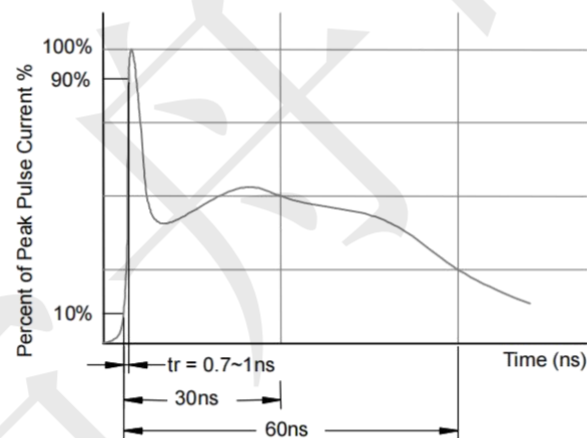
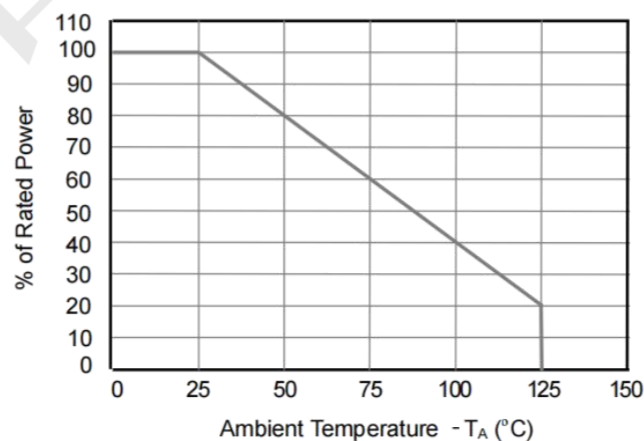
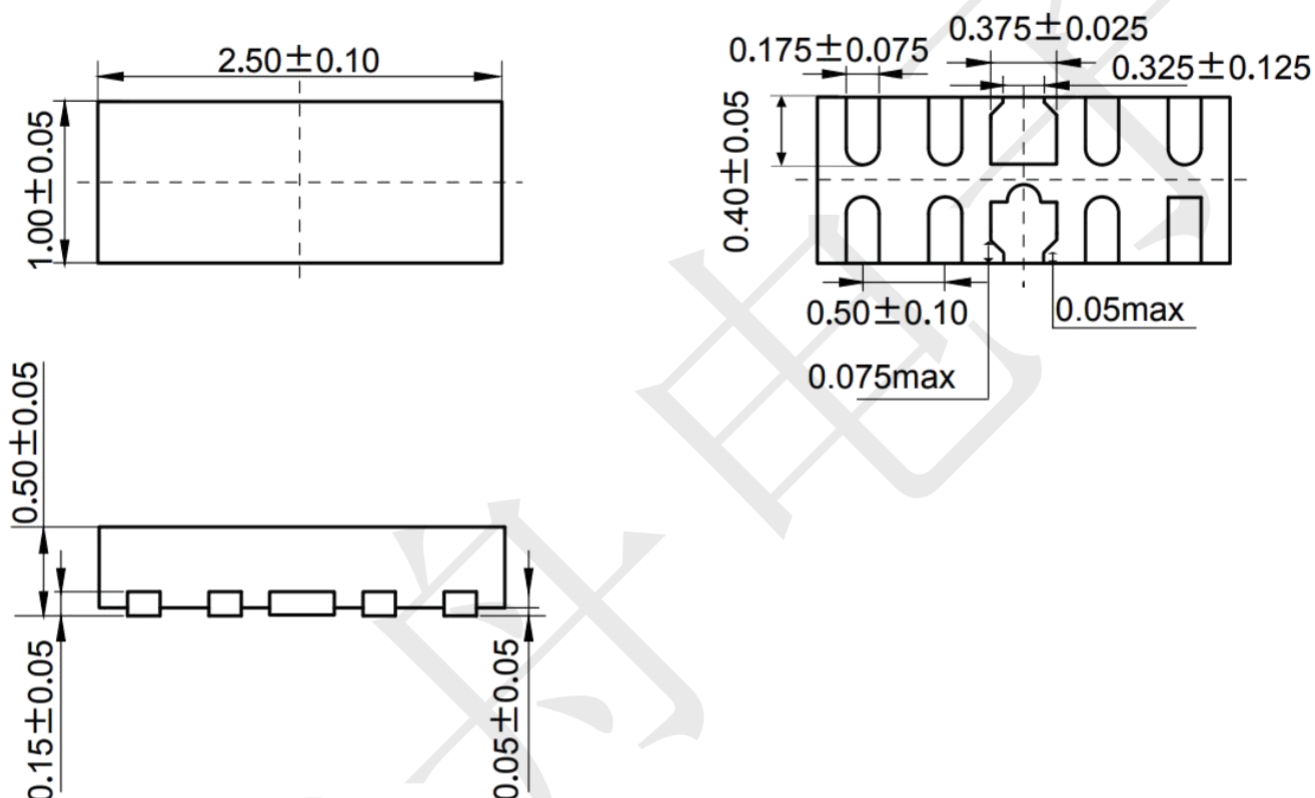


**Fig3. Power Derating Curve**



**Package Outline Dimensions (unit: mm)**

**DFN2510-10L**



**Mounting Pad Layout (unit: mm)**

