

Features

- 4-Uni-directional Channels ESD protection
- Typically Used at High Speed Ports
- Low operating voltage: 3.3 V
- Low Channel Input Capacitance of 0.4pF
Typical for I/Os (Typ)
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 20\text{kV}$
Contact discharge: $\pm 20\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- Totally Lead-Free & Fully RoHS Compliant
- Halogen and Antimony Free. "Green" Device

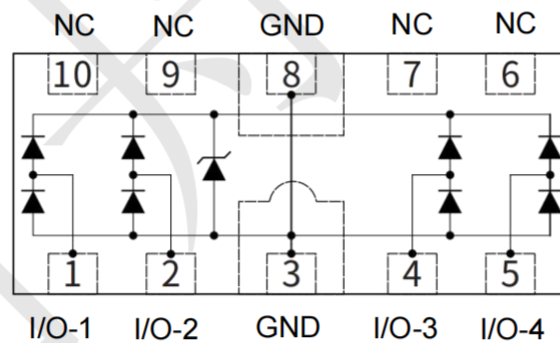
Mechanical Characteristics

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

Applications

- USB 3.1 & 3.2 and MDDI ports
- PCI express and Serial SATA
- Ports Notebook Computers
- Tablets

Dimensions and Pin Configuration



DFN2510-10

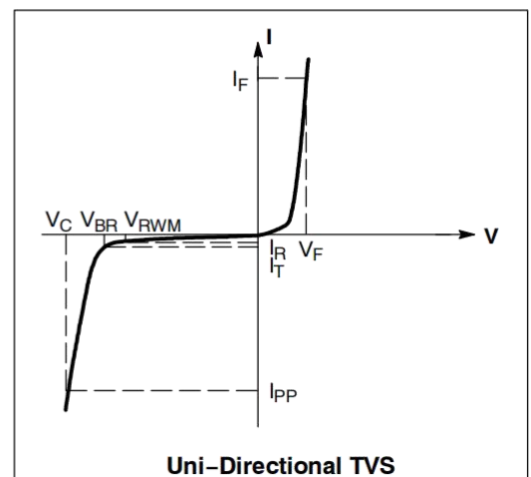
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	80	W
IEC 61000-4-2 Spec Current at 60 ns (A)	I _{pp}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±20 ±20	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}	--	--	3.3	V	
Breakdown Voltage	V _{BR}	6	--	9.5	V	I _T = 1mA
Reverse Leakage Current	I _R	--	--	0.1	μA	V _{RWM} = 3.3V
Clamping Voltage	V _C	--	5.5	7	V	I _{pp} = 1A (8x 20μs pulse)
Clamping Voltage	V _C	--	8.5	10.5	V	I _{pp} = 8A (8x 20μs pulse)
Junction Capacitance	C _J	--	0.4	0.65	pF	V _R = 0V, f = 1MHz, Any I/O pin to GND
Junction Capacitance	C _J	--	0.2	--	pF	V _R = 0V, f = 1MHz, Between any I/O pin

Symbol	Parameter
I _{pp}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{pp}
V _{RWM}	Working Peak Reverse Voltage
I _R	Maximum Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _F	Forward Current
V _F	Forward Voltage @ I _F
P _{pk}	Peak Power Dissipation
C	Capacitance @ V _R = 0 and f = 1.0 MHz



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

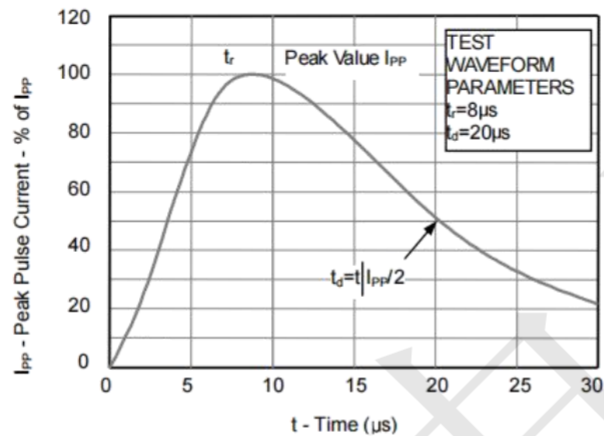


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

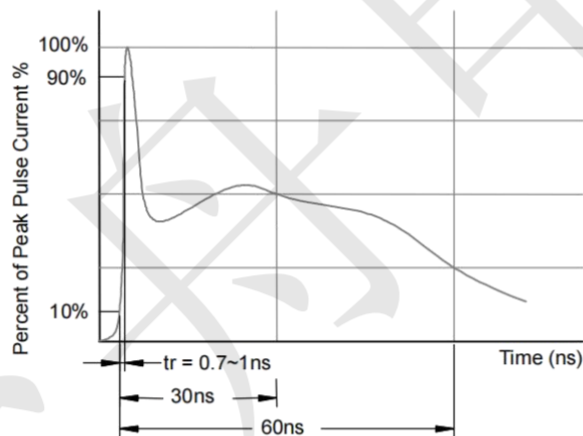
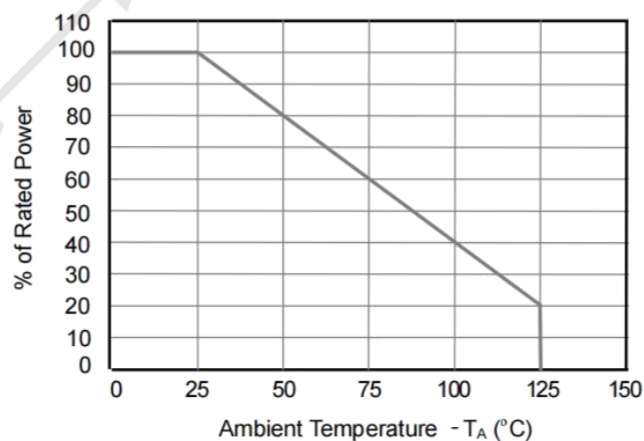
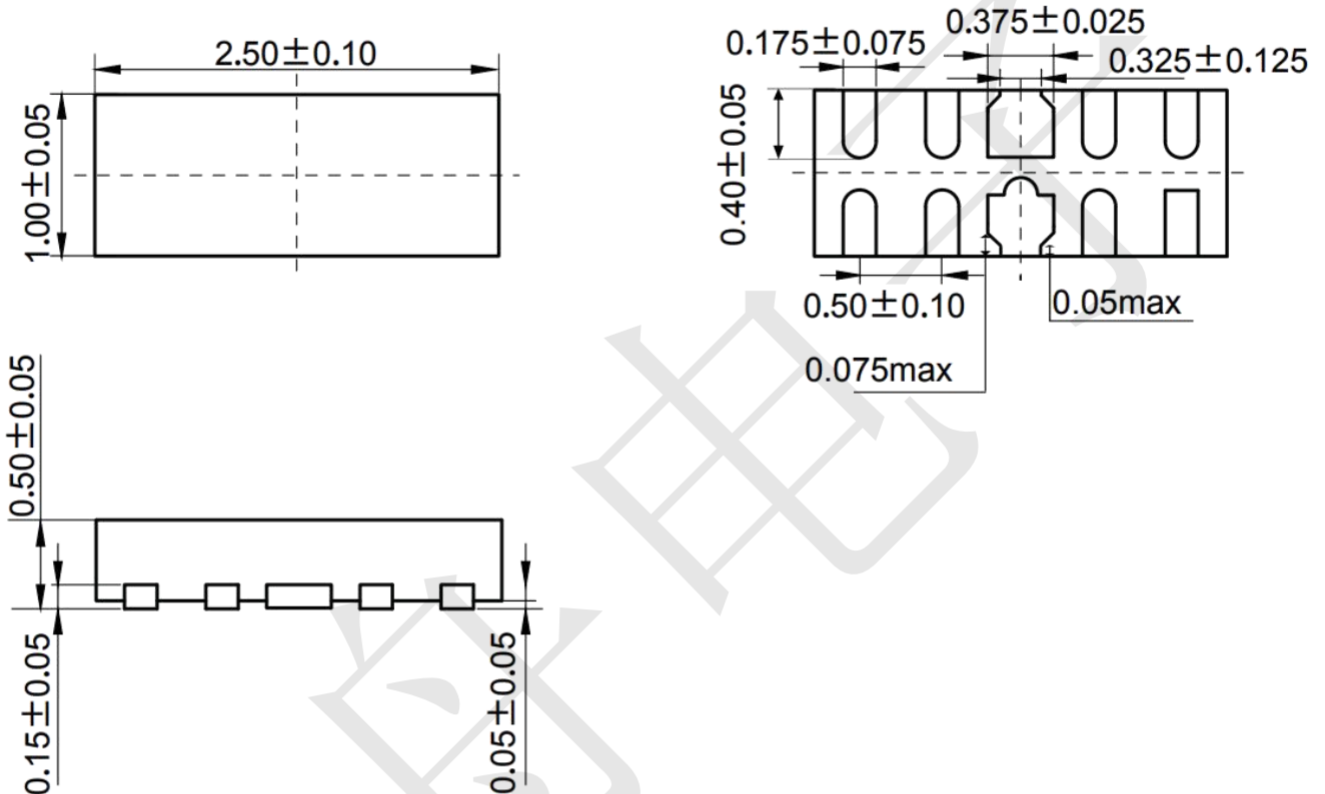


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

DFN2510-10



Mounting Pad Layout (unit: mm)

