

Features

- 4 Uni-directional Channels ESD protection
- Typically Used at High Speed Ports
- Low operating voltage: 5V
- Low Channel Input Capacitance of 0.4pF
Typical for I/Os (Typ)
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- Totally Lead-Free & Fully RoHS Compliant
- Halogen and Antimony Free. "Green" Device

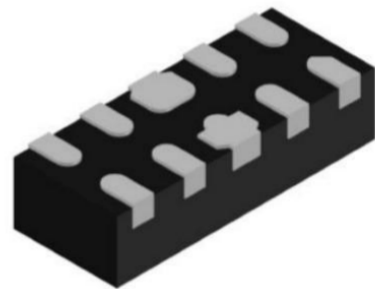
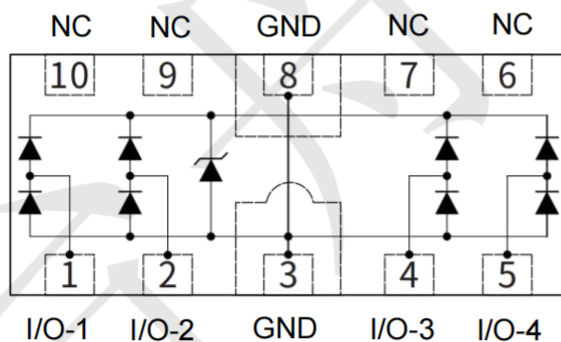
Mechanical Characteristics

- 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

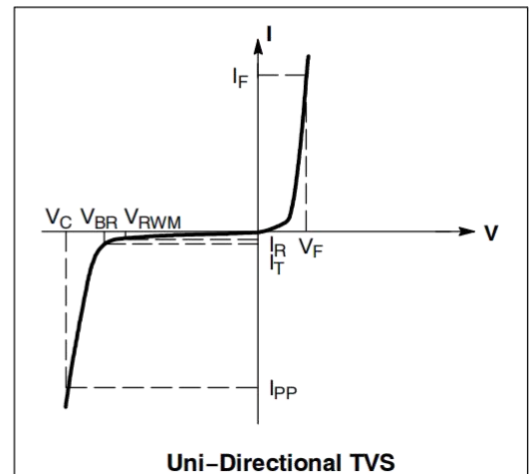
Absolute Maximum Ratings($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppp	84	W
IEC 61000-4-2 Spec Current at 60 ns (A)	Ipp	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	± 30 ± 30	KV
Operating Temperature Range	TJ	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM	--	--	5	V	
Breakdown Voltage	VBR	6	--	9.5	V	$I_T = 1\text{mA}$
Reverse Leakage Current	IR	--	--	0.1	μA	$VRWM=5\text{V}$
Clamping Voltage	VC	--	5.5	7	V	$I_{pp}=1\text{A}(8 \times 20\mu\text{s pulse})$
Clamping Voltage	VC	--	8.5	10.5	V	$I_{pp}=8\text{A}(8 \times 20\mu\text{s pulse})$
Junction Capacitance	CJ	--	0.4	0.65	pF	$VR = 0\text{V}$, $f = 1\text{MHz}$, Any I/O pin to GND
Junction Capacitance	CJ	--	0.2	--	pF	$VR = 0\text{V}$, $f = 1\text{MHz}$, 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 $f = 1.0\text{MHz}$



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

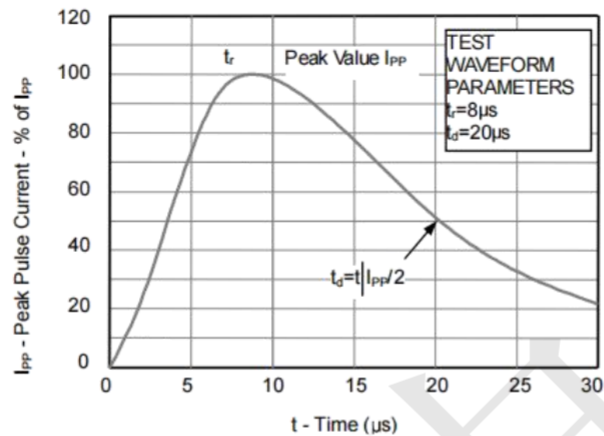


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

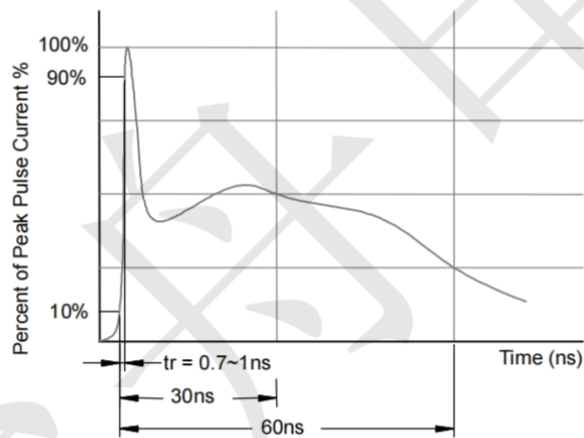
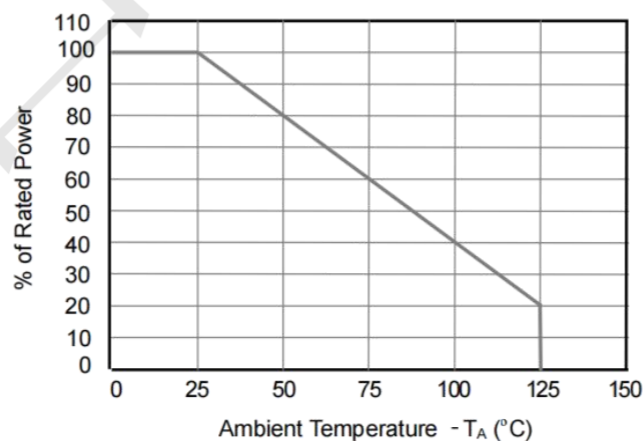
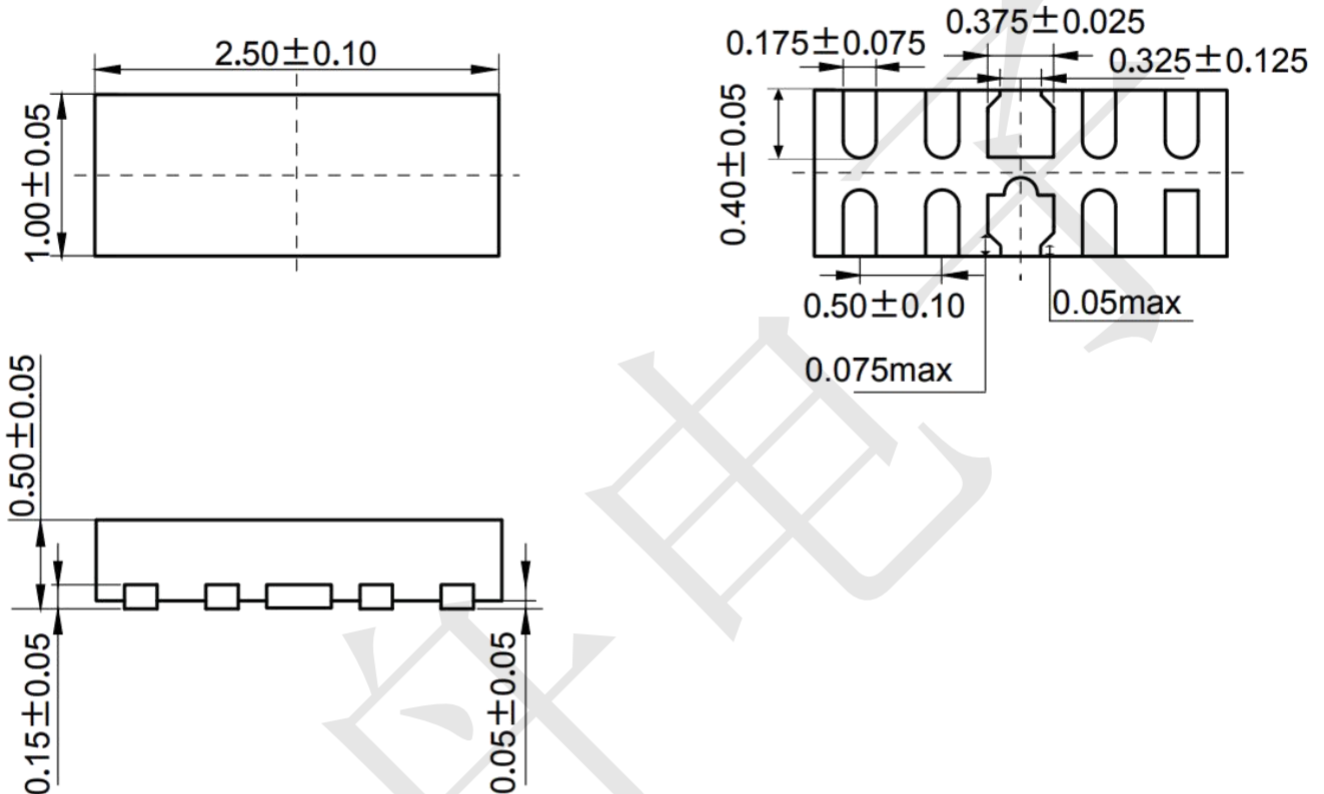


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

DFN2510-10



Mounting Pad Layout (unit: mm)

