

Features

- 4 Bi-directional Channels ESD protection
- Typically Used at High Speed Ports
- Low operating voltage: 5 V
- Low Channel Input Capacitance of 0.3pF(Typ)
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

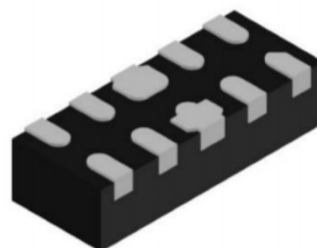
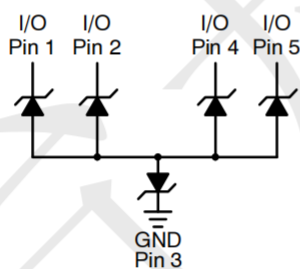
Mechanical Characteristics

- Package: DFN2510-10L
- 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



DFN2510-10L

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

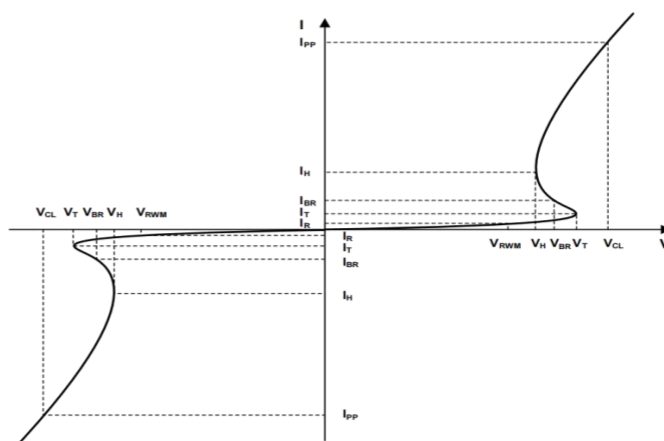
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	55	W
IEC 61000-4-2 Spec Current at 60 ns (A)	I _{pp}	5.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}	--	--	5	V	
Breakdown Voltage	V _{BR}	5.8	--	9.5	V	I _T = 1mA
Reverse Leakage Current	I _R	--	--	200	nA	V _{RWM} = 5V
Clamping Voltage	V _C	--	5.8	7.5	V	I _{pp} = 1A (8x 20us pulse)
Clamping Voltage	V _C	--	8.0	10	V	I _{pp} = 6 A (8x 20us pulse)
Junction Capacitance	C _J	--	0.3	0.4	pF	V _R = 0V, f = 1MHz, Any vO pin to GND
Junction Capacitance	C _J	--	0.15	--	pF	V _R = 0V, f = 1MHz, Between any I/O pin

Electrical Characteristics

Symbol	Parameter
V _{BR}	Reverse Breakdown Voltage
I _{BR}	Reverse Breakdown Current
V _{RWM}	Reverse Stand-off Voltage
I _R	Reverse Leakage Current
V _H	Holding Voltage
I _H	Holding Current
V _T	Trigger Voltage
I _T	Trigger Current
I _{PP}	Peak Pulse Current
V _{CL}	Clamping Voltage



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

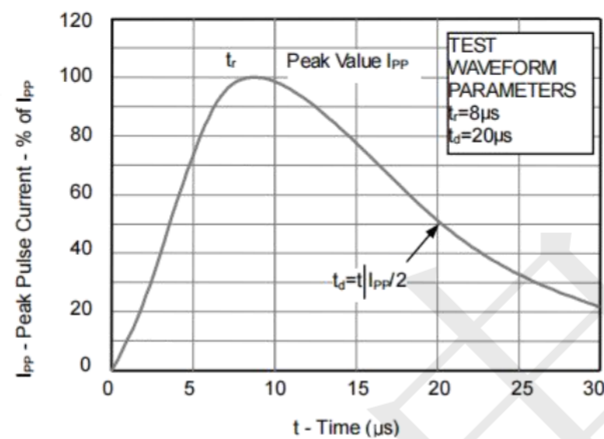


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

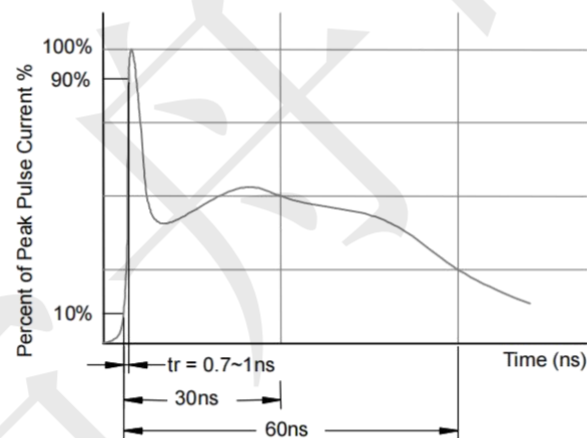
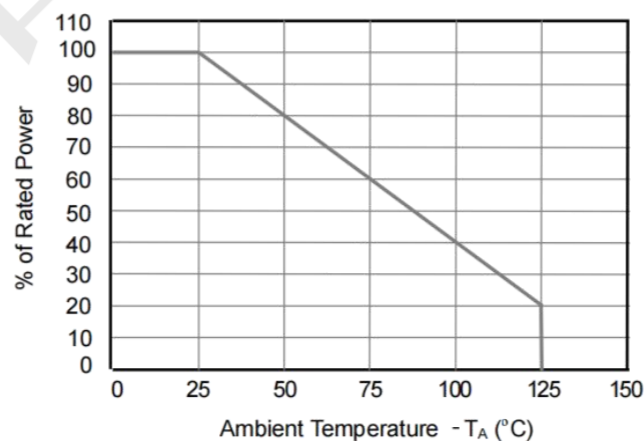
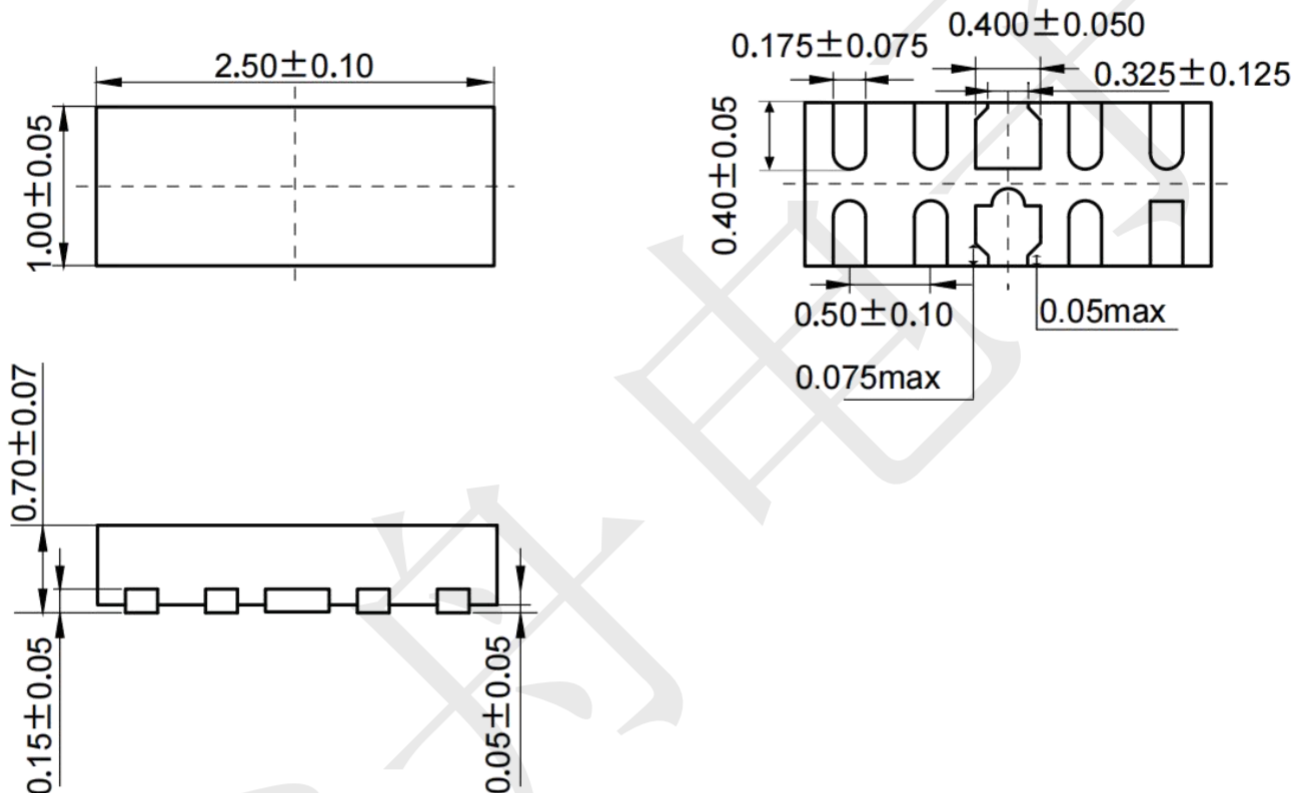


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

DFN2510-10L



Mounting Pad Layout (unit: mm)

