

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: $\pm 18\text{kV}$
Contact discharge: $\pm 12\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- Totally Lead-Free & Fully RoHS Compliant
- Halogen and Antimony Free. "Green" Device

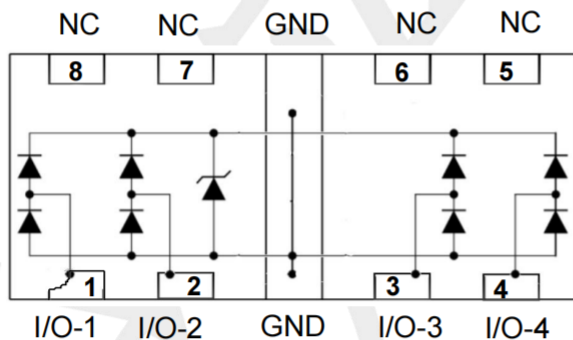
Mechanical Characteristics

- Package: DFN2010-8
- 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
- HDMI

Dimensions and Pin Configuration



DFN2010-8

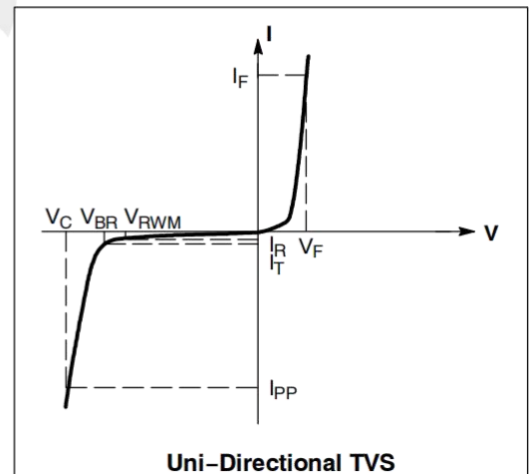
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	70	W
IEC 61000-4-2 Spec Current at 60 ns (A)	Ipp	4.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±18 ±12	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	--	--	5	V	
Breakdown Voltage	VBR	6	--	11	V	IT= 1mA
Reverse Leakage Current	IR	--	--	0.1	uA	VRWM=5V
Clamping Voltage	VC	--	--	12	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC	--	--	15	V	Ipp=4.5A(8x 20us pulse)
Junction Capacitance	CJ	--	0.4	0.65	pF	VR = 0V, f = 1MHz, Any I/O pin to GND
Junction Capacitance	CJ	--	0.2	--	pF	VR = 0V, f = 1MHz, Between any I/O pin

Symbol	Parameter
Ipp	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ Ipp
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IF	Forward Current
VF	Forward Voltage @ IF
Ppk	Peak Power Dissipation
C	Capacitance @ VR = 0 and f = 1.0 MHz



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

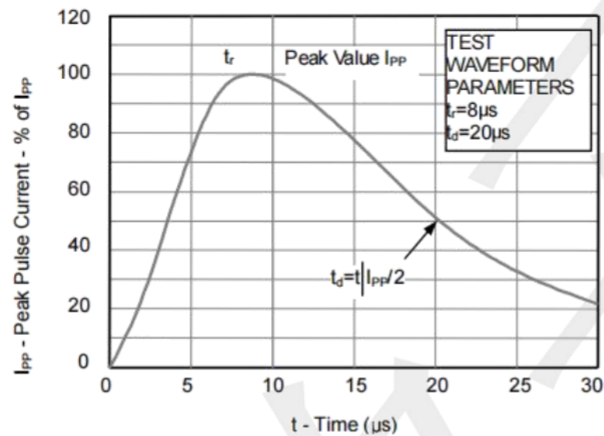


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

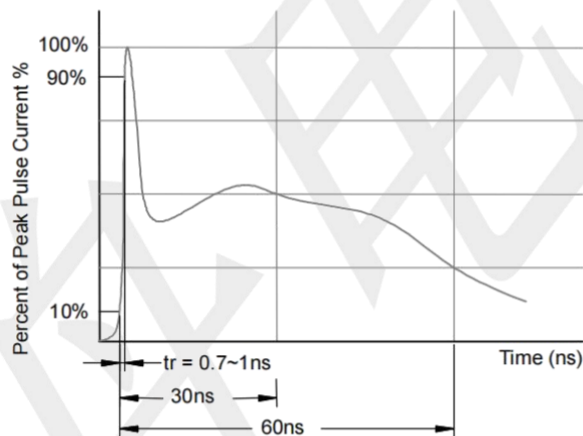
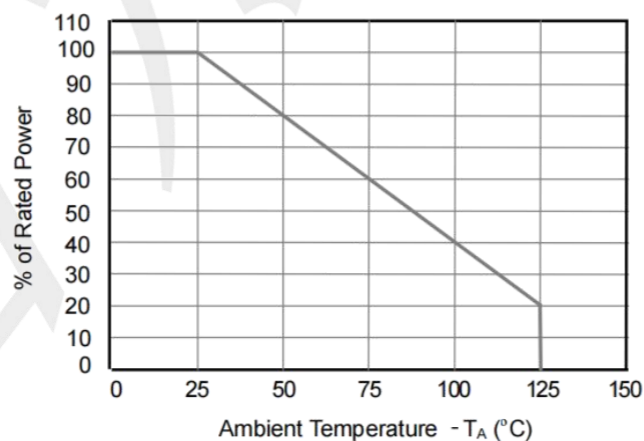
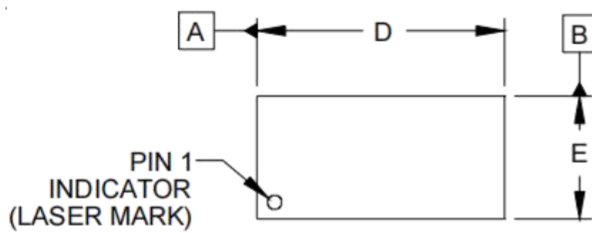


Fig3. Power Derating Curve

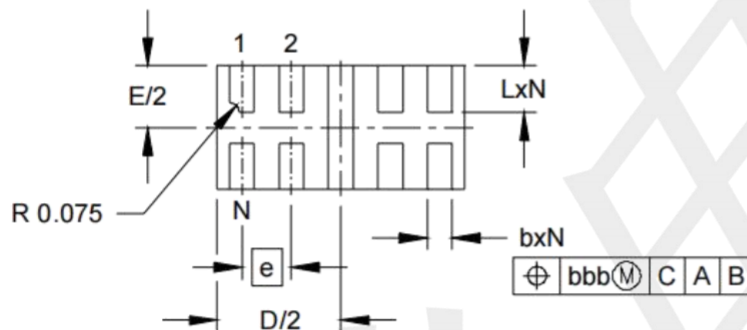


Package Outline Dimensions (unit: mm)

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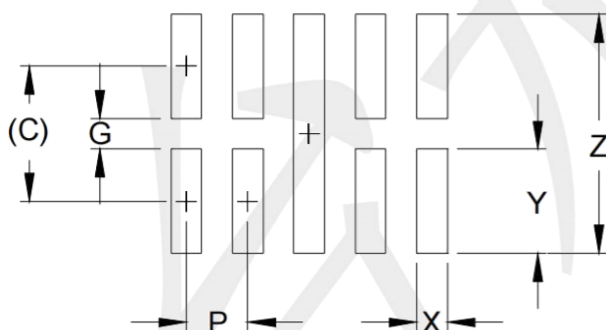
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.015	.016	.017	0.37	0.40	0.43
A1	0.00	.001	.002	0.00	0.02	0.05
A2		(.005)			(0.13)	
b	.006	.008	.010	0.15	0.20	0.25
D	.077	.079	.082	1.95	2.00	2.08
E	.037	.039	.043	0.95	1.00	1.08
e	.016 BSC			0.40 BSC		
L	.013	.015	.017	0.32	0.38	0.43
N	8			8		
aaa	.003			0.08		
bbb	.004			0.10		



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

Mounting Pad Layout (unit: mm)



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.035)	(0.88)
G	.008	0.21
P	.016	0.40
X	.008	0.20
Y	.026	0.67
Z	.061	1.55