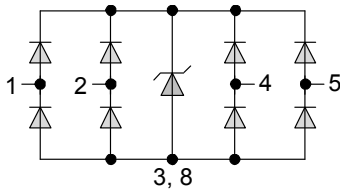
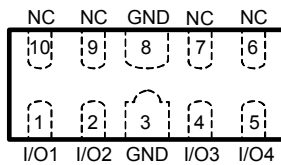
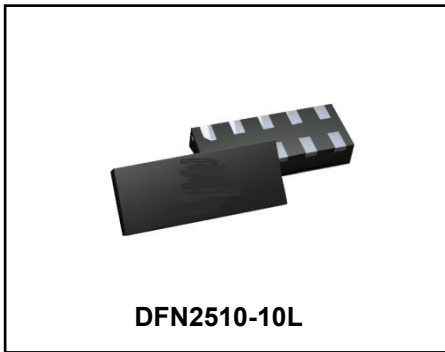


## 4-Lines, Uni-directional, Ultra-low Capacitance Transient Voltage Suppressors



### Features

- Protects 4 I/O Lines
- Low Working Voltage: 5 V
- Low Clamping Voltage
- Low Capacitance: 0.3pF (I/O to I/O)
- Response time is typically < 1 ns
- IEC61000-4-2 (ESD) ±20 kV (air), ±15 kV (contact)
- IEC61000-4-5 (Surge) 4 A (I/O to GND)
- Pb-Free, RoHS compliant

### Applications

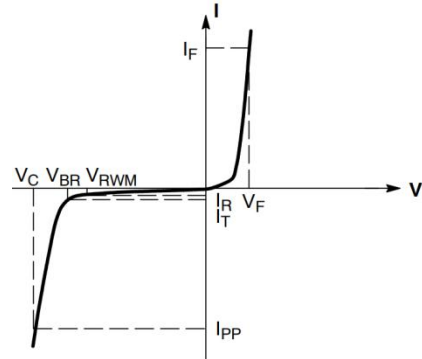
- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- DisplayPort™ Interface
- MDDI Ports
- PCI Express
- SATA and eSATA Interface
- USB3.0 and USB2.0 up to 480Mb/s
- IEEE1394 up to 3.2 Gb/s
- Ethernet port: 10/100/1000 Mb/s

### Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Peak pulse power ( $t_p = 8/20\mu s$ )	$P_{pk}$	52	W
Peak pulse current ( $t_p = 8/20\mu s$ )	$I_{pp}$	4	A
ESD according to IEC61000-4-2 air discharge	$V_{ESD}$	±20	kV
ESD according to IEC61000-4-2 contact discharge		±15	
Junction temperature	$T_J$	125	°C
Operating temperature	$T_{OP}$	-40~85	°C
Lead temperature	$T_L$	260	°C
Storage temperature	$T_{STG}$	-55~150	°C

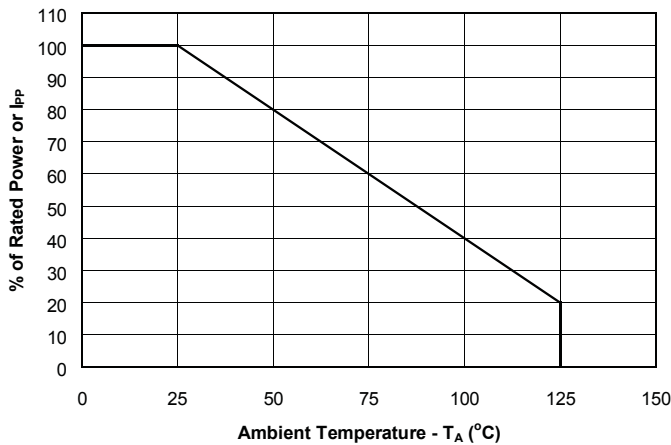
Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)

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	Max. Capacitance @ $V_R = 0$ and $f = 1.0$ MHz

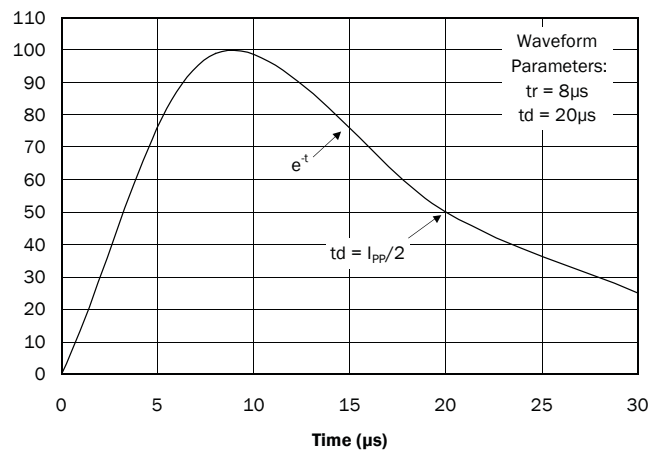


Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	$V_{RWM}$	--	--	5	V	
Breakdown Voltage	$V_{BR}$	6.5	--	8.5	V	$I_T=1\text{mA}$
Leakage Current $I_{Leak}$	$I_R$	--	--	100	nA	$V_{RWM}=5\text{V}$
Clamping Voltage (I/O-GND)	$V_C$	--	--	13	V	$I_{PP}=4\text{A}, T_p=8/20\mu\text{s}$
Junction Capacitance (I/O to GND)	$C_J$	--	--	0.7	pF	$V_R=0\text{V}, f=1\text{MHz}$
Junction Capacitance (I/O to I/O)	$C_J$	--	0.3	0.4	pF	$V_R=0\text{V}, f=1\text{MHz}$

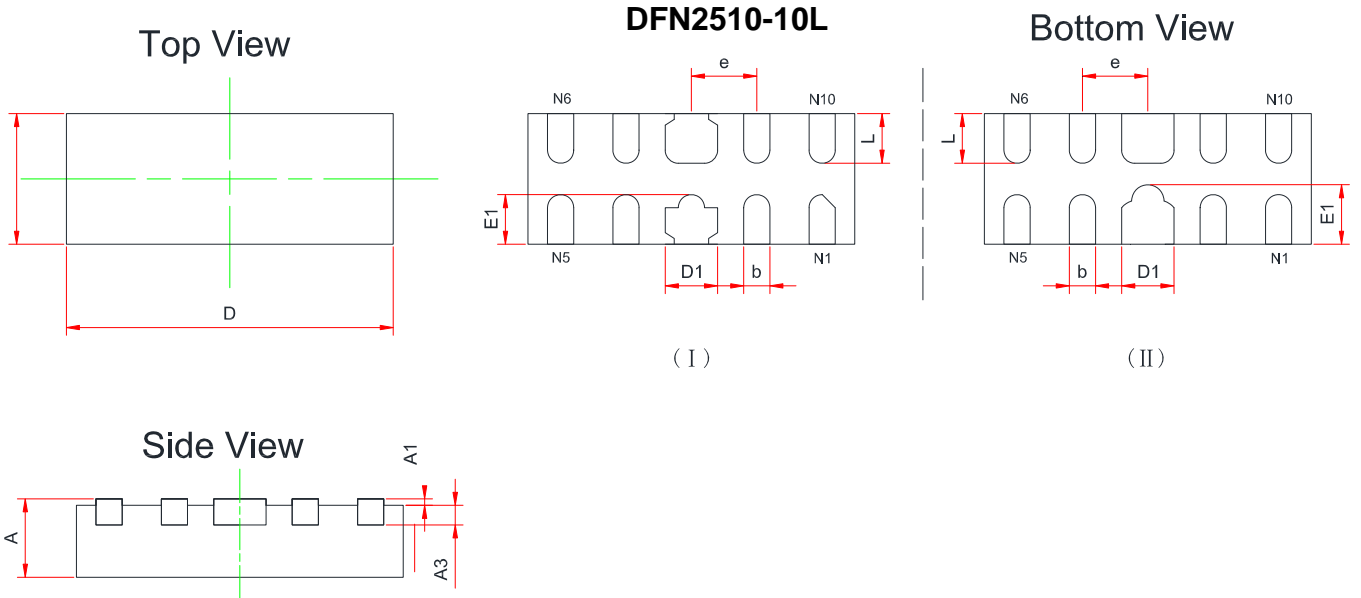


Power Derating Curve



Pulse Waveform

**PACKAGE OUTLINE DIMENSIONS**



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.500	0.575	0.650
A1	0.000	-	0.050
A3	0.150 Ref.		
D	2.400	2.500	2.600
E	0.900	1.000	1.100
D1	0.300	0.400	0.500
E1	0.300	0.455	0.610
b	0.130	0.190	0.250
e	0.500 BSC		
L	0.280	0.390	0.500

**Recommended land pattern (Unit: mm)**

