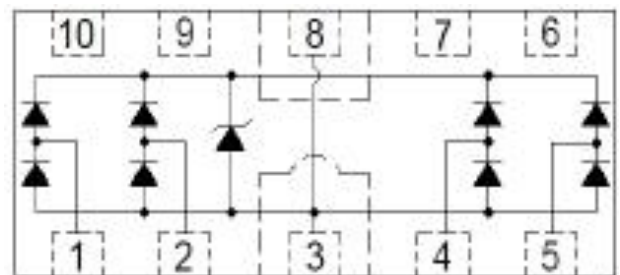


## Features

- 180Watts peak pulse power ( $t_p = 8/20 \mu s$ )
- DFN2510 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance (0.2pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:  
IEC 61000-4-2  $\pm 25KV$  contact  $\pm 25KV$  air  
IEC 61000-4-4 (EFT) 40A (5/50ns)  
IEC 61000-4-5 (Lightning) 7A (8/20 $\mu s$ )
- RoHS compliant



Schematic Diagram



## Application

- USB 3.0, USB 2.0, MHL
- HDMI 2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

## Absolute Maximum Ratings

( $T_A = 25^\circ C$ , Unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_P = 8/20\mu S$ )	$P_{PP}$	180	W
Peak Pulse Current ( $t_p = 8/20\mu S$ )	$I_{PP}$	7	A
Junction Temperature	$T_J$	-55 to +125	$^\circ C$
Storage temperature	$T_{STG}$	-55 to +150	$^\circ C$

## Electrical Characteristics

(TA=25°C, Unless otherwise specified.)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V <sub>RWM</sub>				5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6	6.8	8.5	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V		0.01	1	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, T <sub>P</sub> =8/20μS		8	9.5	V
		I <sub>PP</sub> =5A, T <sub>P</sub> =8/20μS		12	20	V
		I <sub>PP</sub> =7A, T <sub>P</sub> =8/20μS		15	26	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz, I/O to I/O		0.2	0.4	pF
	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz, I/O to GND		0.4	0.8	pF

## Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

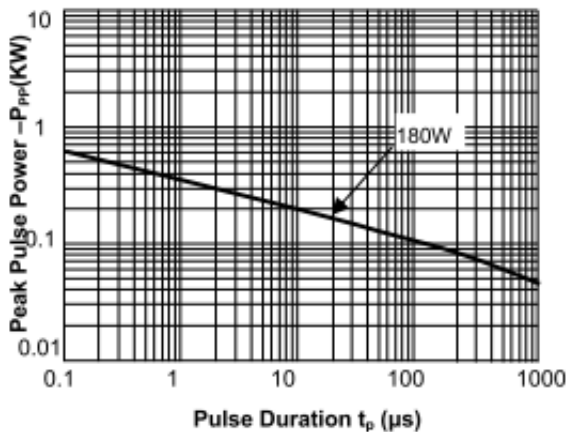


Fig.3 Pulse Waveform-8/20μs

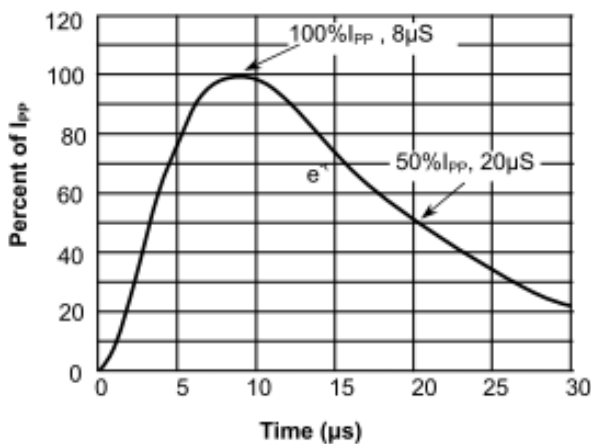


Fig.2 Pulse Derating Curve

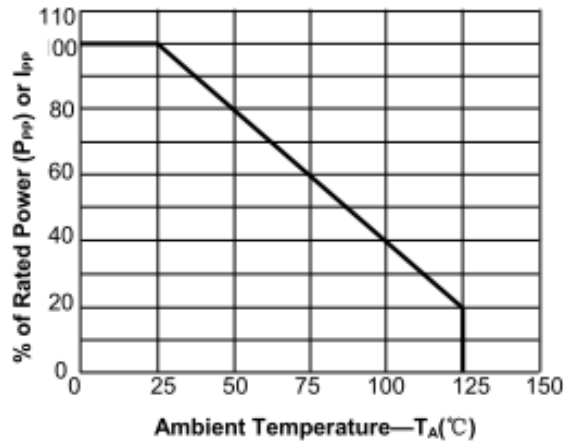
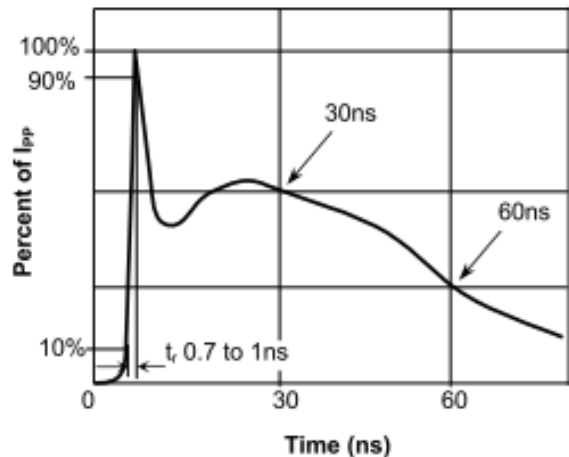
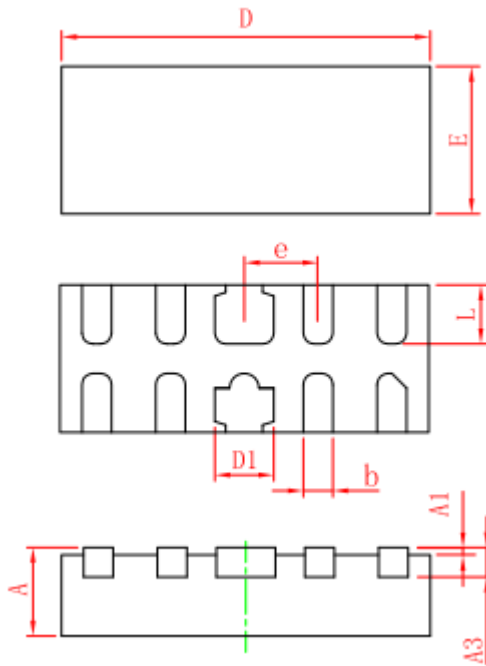


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



Product Dimension



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.50	0.55
A1	-	0.02	0.05
A3	0.10	0.15	0.20
D	2.45	2.50	2.55
E	0.95	1.00	1.05
D1	0.35	0.40	0.45
b	0.15	0.20	0.25
e	0.50BSC		
L	0.35	0.40	0.45

Order Information

Device	Package	Carrier	Quantity	HSF Status
ECSD5VD2510-10U	DFN2510	Tape & Reel	3000pcs / Reel	RoHS compliant