



1. Features

- Ultra-Low capacitance:0.5pF(typ.)
- Reverse stand-off voltage:5V
- IEC 61000-4-2 (Air): ±20KV
IEC 61000-4-2 (Contact): ±15KV

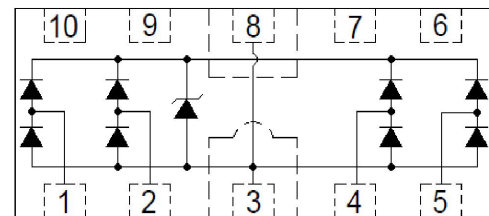
2. Pin Description



3. Applications

- USB 3.0, USB 2.0
- HDMI 1.3/1.4, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

4. Schematic Diagram



Top View

5. Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
RCLAMP0524P	DFN2510	2.50x1.00x0.50	7" T&R	3,000

6. Limiting Values($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	±15	kV
		IEC 61000-4-2; Air Discharge	-	±20	kV
I_{PPM}	Rated Peak Pulse Current	$t_p = 8/20\ \mu\text{s}$	-	5	A
T_A	Ambient Temperature Range	-	-55	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-	-55	150	$^\circ\text{C}$



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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Working Voltage	T _A = 25 °C	-	-	5	V
V _{BR}	Breakdown Voltage	I _R = 1 mA; T _A = 25 °C	6	-	-	V
I _R	Reverse Leakage Current	V _{RWM} = 5V; T _A = 25 °C	-	-	1	μA
V _C	Clamping Voltage	I _{PP} =1A, t _p =8/20μs, Any I/O to GND , Positive	-	8.5	12	V
		I _{PP} =5A, t _p =8/20μs, Any I/O to GND , Positive	-	12	16	V
C _L	Junction Capacitance	V _R = 0V, f = 1 MHz, I/O to I/O	-	0.3	0.4	pF
		V _R = 0V, f = 1 MHz, I/O to GND	-	0.5	0.8	pF

8. Typical Characteristics

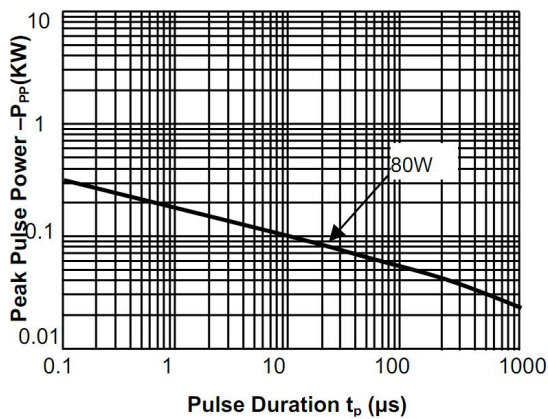


Fig.1 Peak Pulse Power Rating Curve

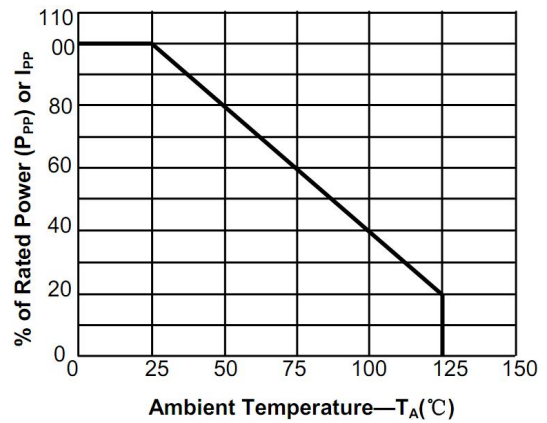


Fig.2 Pulse Derating Curve

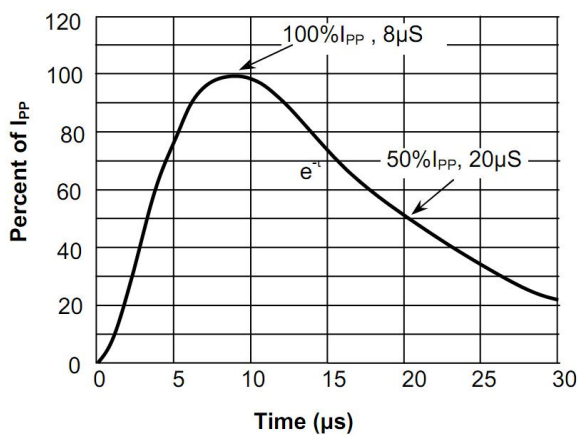


Fig.3 Pulse Waveform-8/20μs

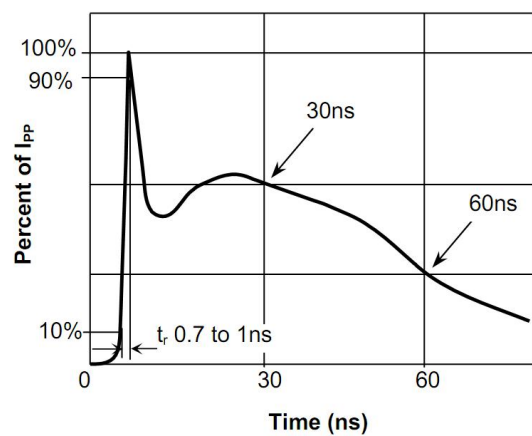
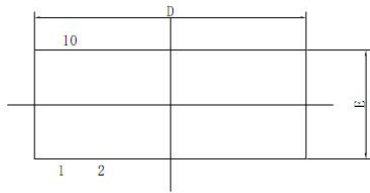
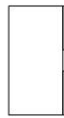


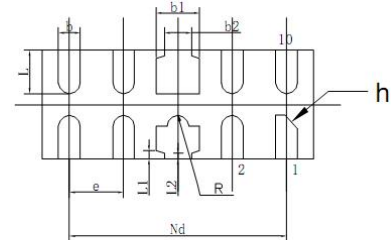
Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

**9. Package Dimension****DFN2510 Package Outline**

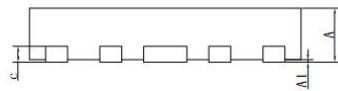
Top View



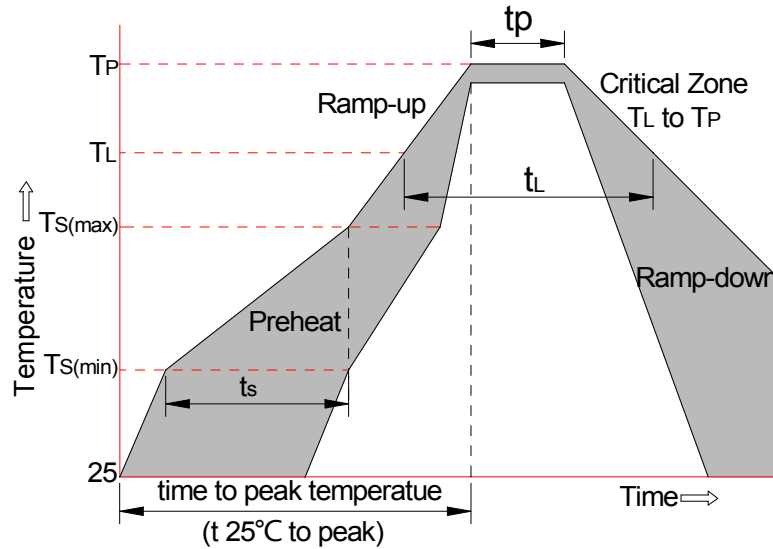
Side View



Bottom View



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.50	0.55
A1	-	0.02	0.05
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
b2	0.20	0.25	0.30
c	0.10	0.15	0.20
D	2.45	2.50	2.55
e	0.50BSC		
Nd	2.00 BSC		
E	0.95	1.00	1.05
L	0.35	0.40	0.45
L1	0.075 REF		
L2	0.05 REF		
h	0.08	0.12	0.15
R	0.05	0.10	0.15

**10. Soldering Parameters**

Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C



11. Contact Information

Online product information is available at www.wdsemi.com

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Please e-mail us at: sales1@wdsemi.com

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