

Features

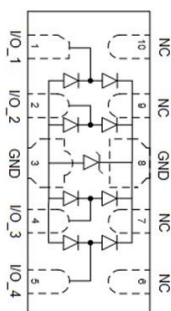
80 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
 Protects two or four I/O lines
 Low capacitance: 0.35 pF typical (I/O to I/O)
 Low operating voltage: 5V
 RoHS Compliant
 IEC61000-4-2 (ESD) $\pm 25kV$ (air), $\pm 20kV$ (contact)
 IEC61000-4-4 (EFT) 40A (5/50ns)
 IEC61000-4-5 (Lightning) 4A (8/20 μs)

Mechanical Characteristics

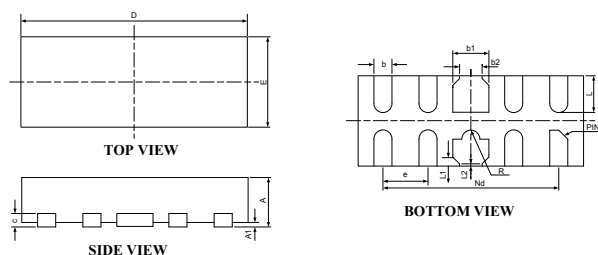
Package: DFN2510-10 (2.5 $\times$ 1.0 $\times$ 0.5mm)
 Ultra low leakage: nA level
 Case Material: "Green" Molding Compound.
 UL Flammability Classification Rating 94V-0
 Moisture Sensitivity: Level 3 per J-STD-020
 Terminal Connections: See Diagram Below

Applications

High Definition Multimedia Interface (HDMI)
 Digital Visual Interface (DVI)
 Unified Display Interface (UDI)
 MDDI Ports
 PCI Express
 Serial ATA



DFN2510 - 10



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.15	0.20	0.25	0.006	0.008	0.010
b1	0.35	0.40	0.45	0.014	0.016	0.018
b2	0.20	0.25	0.30	0.008	0.010	0.012
c	0.10	0.15	0.20	0.004	0.006	0.008
D	2.45	2.50	2.55	0.098	0.100	0.102
e	0.50BSC			0.020BSC		
Nd	2.00BSC			0.080BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
L1	0.075REF			0.003REF		
L2	0.050REF			0.002REF		
h	0.08	0.12	0.15	0.003	0.005	0.006
R	0.05	0.10	0.15	0.002	0.004	0.006

Dimensions in inches and (millimeters)

Ordering information

Device	MARKING
RCLAMP0524P	0524P

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	80	W
Peak Pulse Current (8/20 μs)	IPP	4	A
ESD per IEC 61000-4-2 (Air)	VESD	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 20	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

RCLAMP0524P

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	Any I/O pin to ground
Breakdown Voltage	VBR	6		9	V	IT = 1mA, any I/O pin to ground
Reverse Leakage Current	IR			0.2	μA	VRWM = 5V, any I/O pin to ground
Clamping Voltage	VC			9	V	I _{PP} = 1A (8 x 20μs pulse), any I/O pin to ground
Clamping Voltage	VC			20	V	I _{PP} = 4A (8 x 20μs pulse), any I/O pin to ground
Junction Capacitance	CJ		0.35		pF	VR = 0V, f = 1MHz, between I/O pins
Junction Capacitance	CJ		0.6	0.8	pF	VR = 0V, f = 1MHz, any I/O pin to ground

RATING AND CHARACTERISTIC CURVES (RCLAMP0524P)

Fig1. 8/20 μ s Pulse Waveform

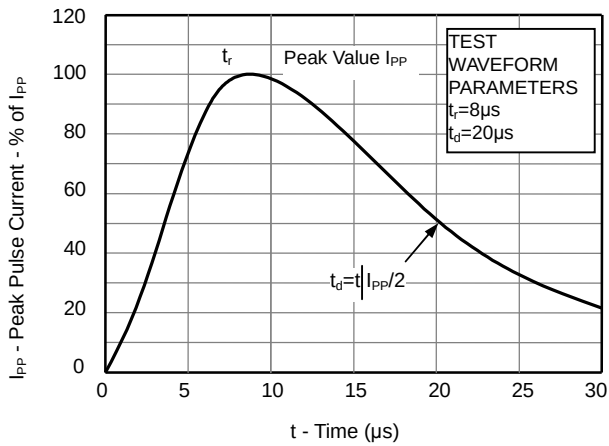


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

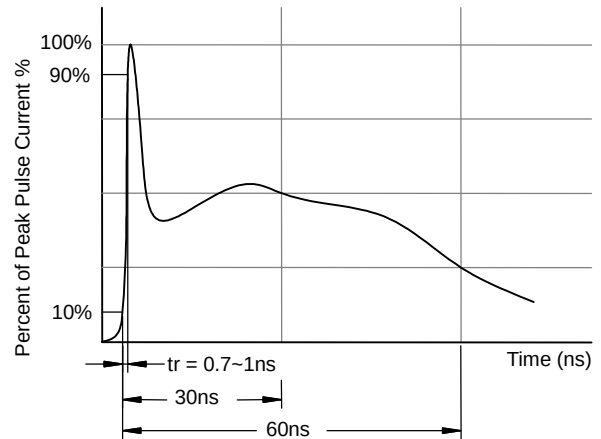
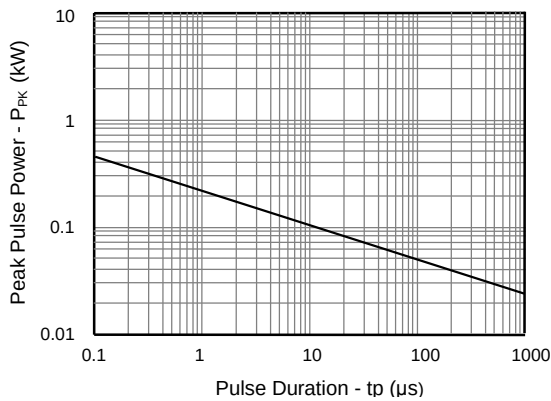
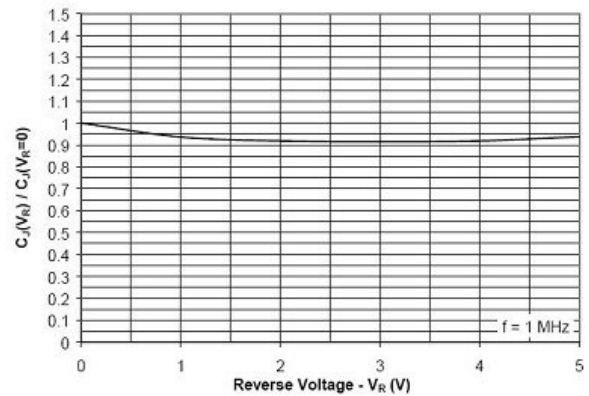


Fig3. Non - Repetitive Peak Pulse Power vs. Pulse Time



Normalized Capacitance vs. Reverse Voltage



Application Information

ESD protection for HDMI port

