

ESD Protection Diode Array

4-Line Uni-directional TVS Diode

Features

- ◇ 50 W (8/20 μ s) Peak Pulse Power
- ◇ Low Capacitance ESD Protection
- ◇ Flow Through DFN2.5x1.0-10L Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free)
- ◇ Protect Four High Speed Data Lines
- ◇ Meet IEC61000-4-2 Level 4:

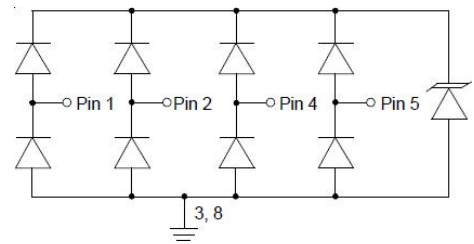
Contact Discharge > 20kV

Air Discharge > 25kV

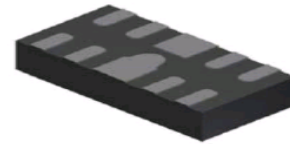
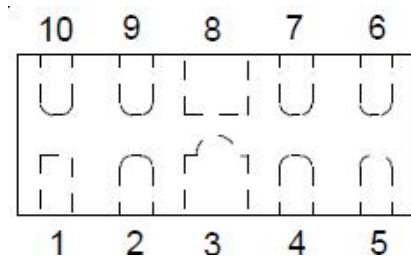
Applications

- ◇ PCI Express
- ◇ MDDI Ports
- ◇ eSATA Interfaces
- ◇ Display Port Interface
- ◇ Digital Visual Interface (DVI)
- ◇ High Definition Multi-Media Interface (HDMI)

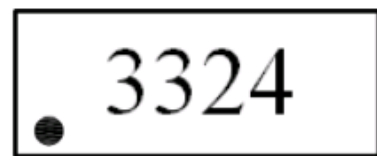
Circuit Diagram



PIN Diagram



Marking Diagram



Ordering information

Device	Package	Reel Size	Qty / Reel
RLDSON10Q034LV	DFN2.5-10-10L	7 inch	3000

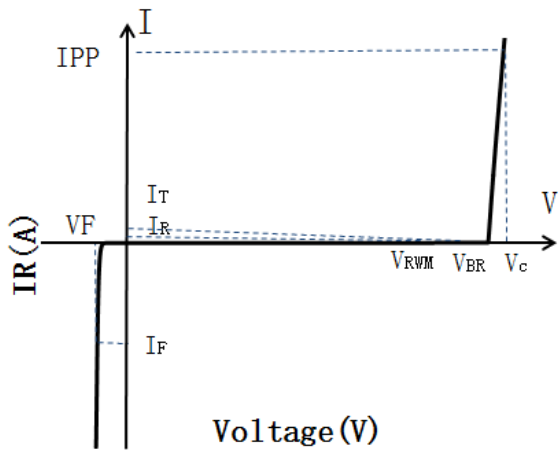
Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	50	W
IPP	Peak Pulse Current	4.5	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	20	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	25	kV
TJ	Junction Temperature	-55 to +125	°C
TSTG	Storage Temperature	-55 to +150	°C

ESD Protection Diode Array

Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C

Portion Electronics Parameter

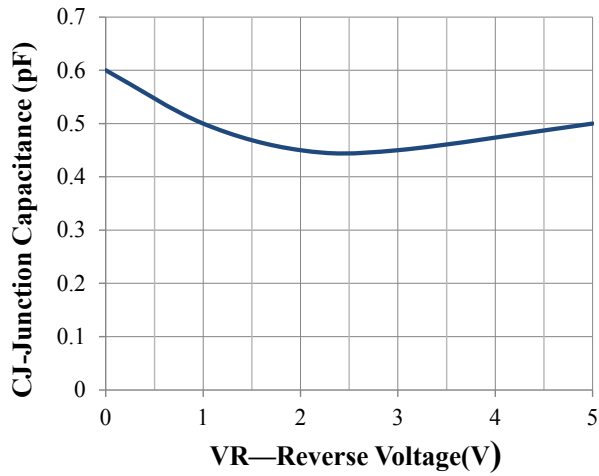


Electrical Characteristics (Ta = 25℃)

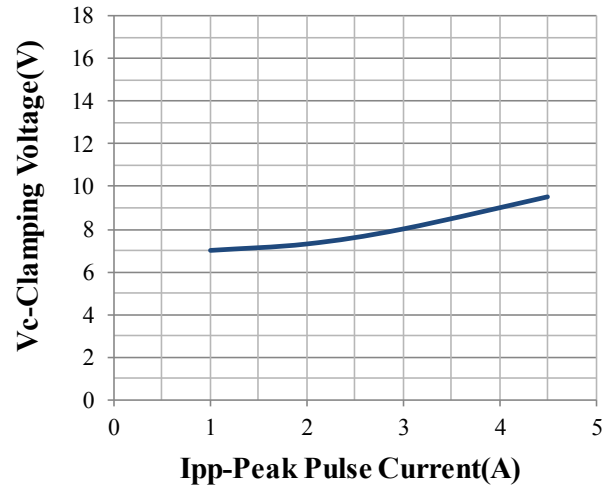
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Peak Voltage				3.3	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$	4	5.2	6.5	V
I_R	Reverse Leakage Current	$V_{RWM} = 3.3V$			0.1	μA
V_C	Clamping Voltage	$I_{PP} = 4.5A (8/20\mu s)$			11	V
C_J	Capacitance	$V_R = 0V, f = 1MHz$ Between I/O pins		0.3	0.4	pF
C_J	Capacitance	$V_R = 0V, f = 1MHz$ Any I/O pin to ground		0.6	0.7	pF

ESD Protection Diode Array

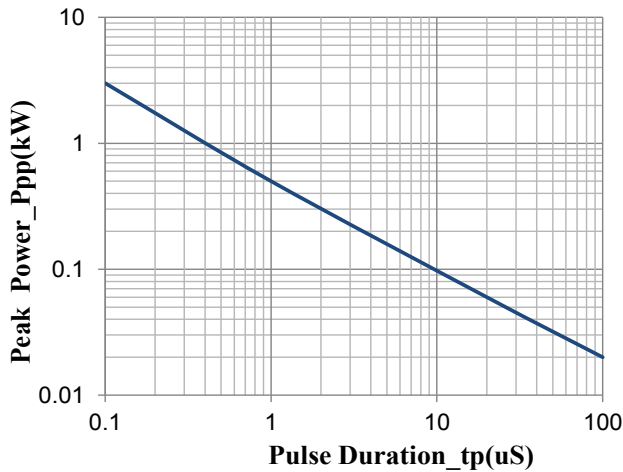
Typical Performance Curves



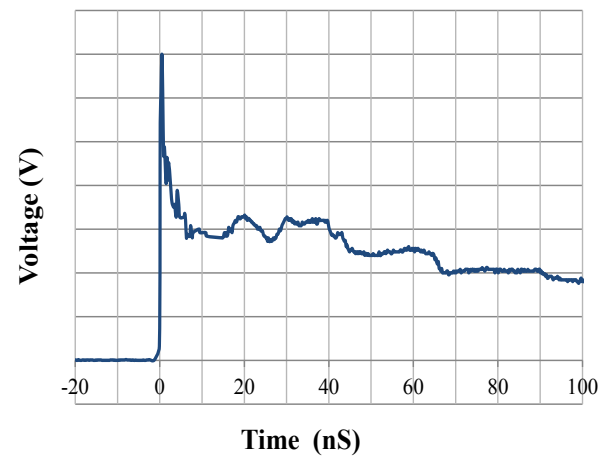
Junction Capacitance vs. Reverse Voltage



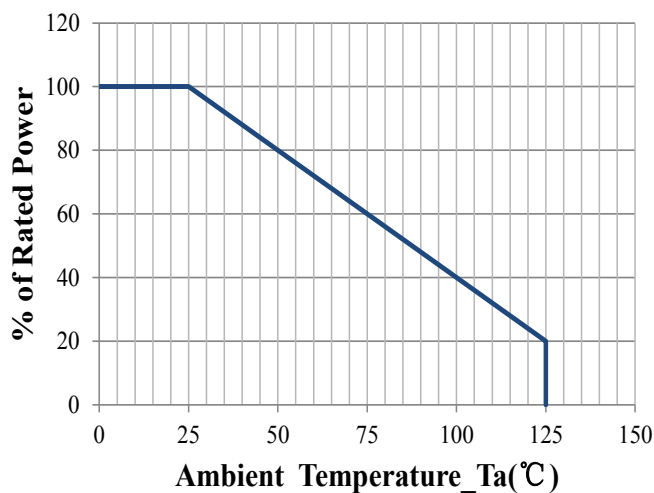
Clamping Voltage vs. Peak Pulse Current



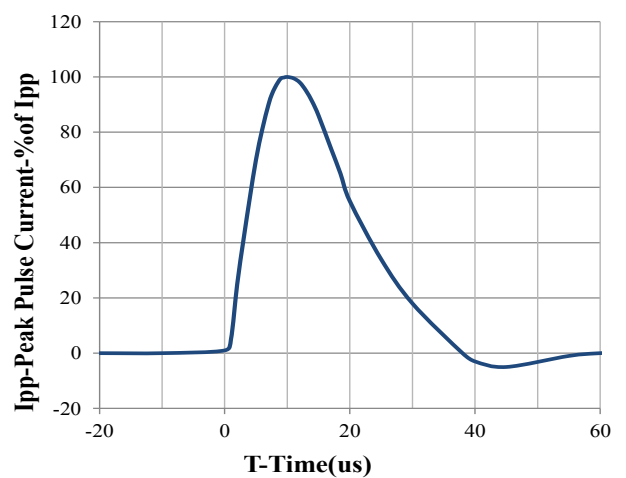
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



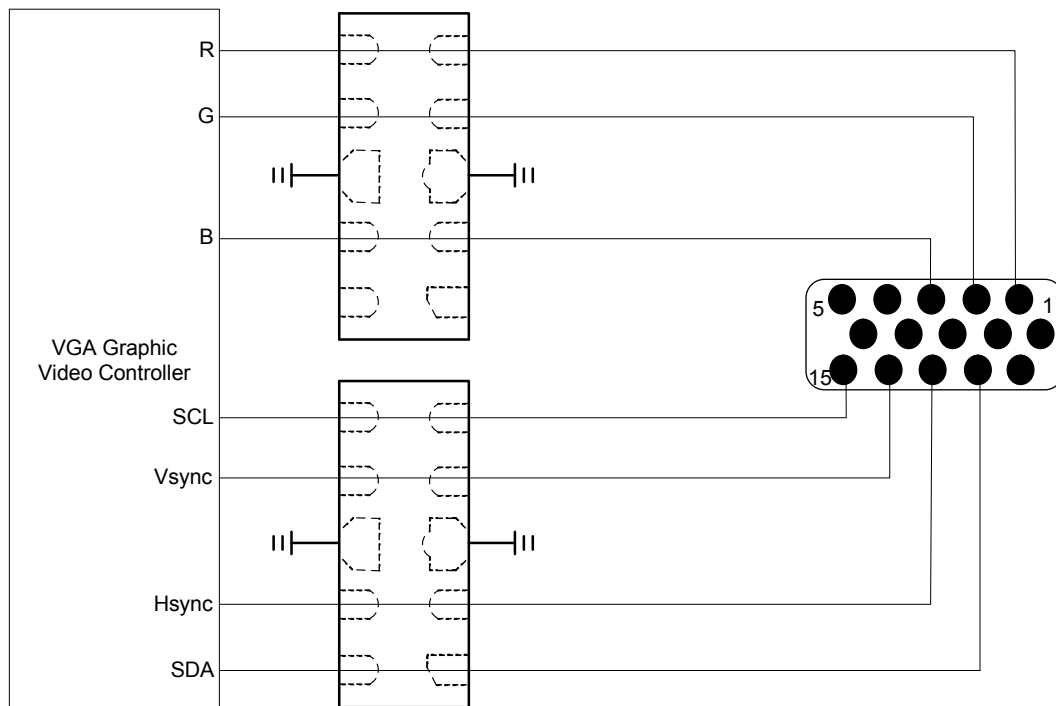
Power Derating Curve



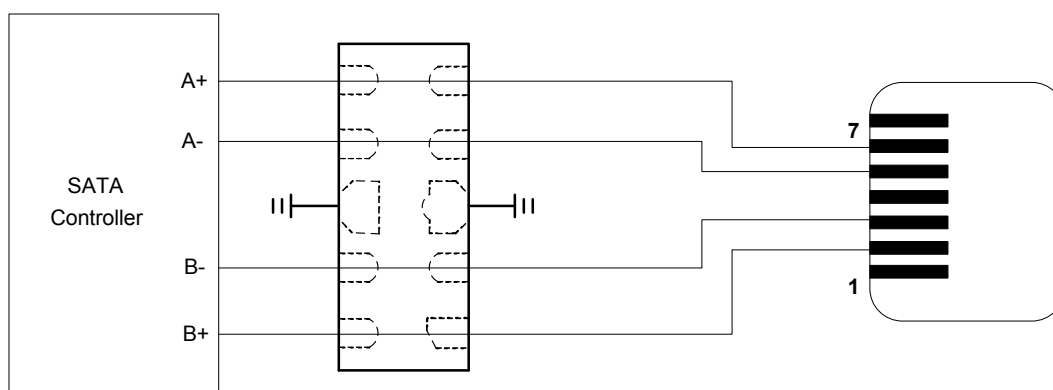
8 X 20us Pulse Waveform

ESD Protection Diode Array

PESD3324P on VGA Port Application

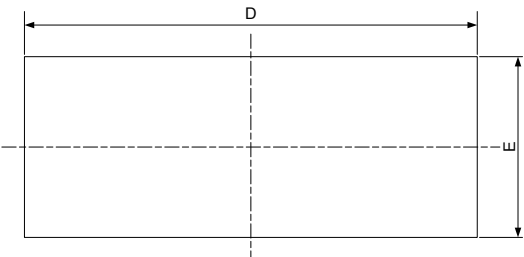


PESD3324P on eSATA Port Application

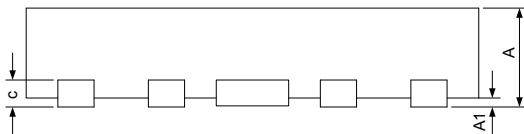


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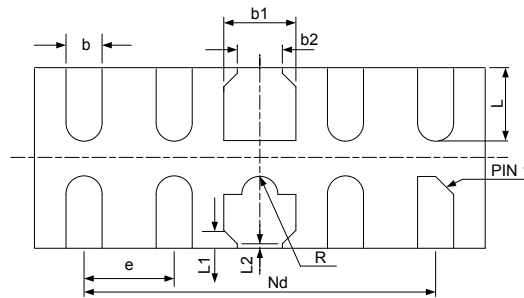
DFN2510-10 Package Outline Drawing



TOP VIEW



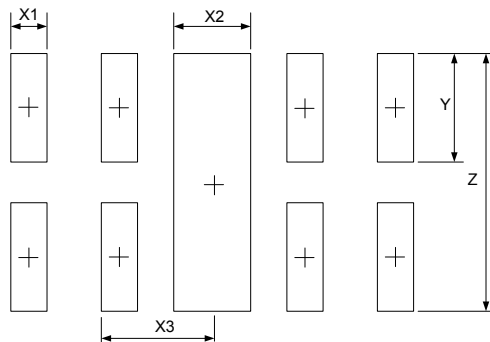
SIDE VIEW



BOTTOM VIEW

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

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	0.200	0.008
X2	0.400	0.016
X3	0.500	0.020
Y	0.600	0.024
Z	1.400	0.056