

Product Summary

The GESDY3V3AG1 provides a typical line to line capacitance of 0.08pF between I/O pins and low insertion loss up to 3GHz providing greater signal integrity making it ideally suited for HDMI applications, such as Digital TVs, DVD players, Computing, set-top boxes and MDDI applications in mobile computing devices.

It has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD(electrostatic discharge), CDE (Cable Discharge Events),and EFT (electrical fast transients).

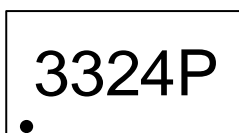
Feature

- Low reverse stand-off voltage: 3.3V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

Application

- USB 2.0/3.0/3.1
- HDMI 1.3/1.4/2.0
- Computers and peripherals
- Portable electronics
- High speed data lines
- Audio and video equipment
- Cellular handsets and accessories
- Other electronics equipment communication systems

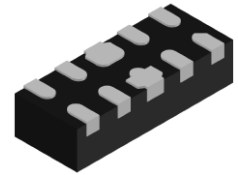
Marking:



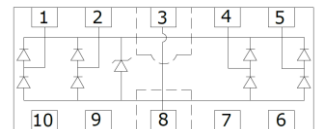
Front Side

3324P=Device Code

DFN2510-10L



Schematic diagram



Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	$V_{\text{ESD}}^{1)}$	± 17	kV
IEC 61000-4-2 ESD Voltage		± 8	
Peak Pulse Power	$P_{\text{pp}}^{2)}$	17.5	W
Peak Pulse Current	$I_{\text{pp}}^{2)}$	5	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	$^{\circ}\text{C}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55~ +150	$^{\circ}\text{C}$

- 1) Device stressed with ten non-repetitive ESD pulses.
- 2) Non-repetitive current pulse $8/20\mu\text{s}$ exponential decay waveform according to IEC61000-4-5.

ESD standards compliance

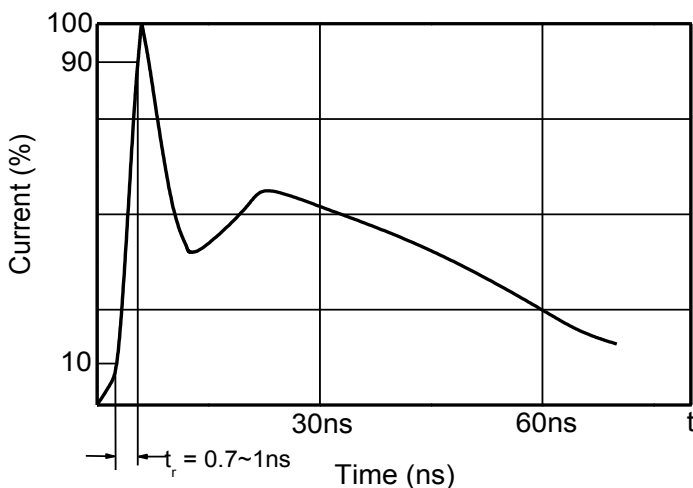
IEC61000-4-2 Standard

Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

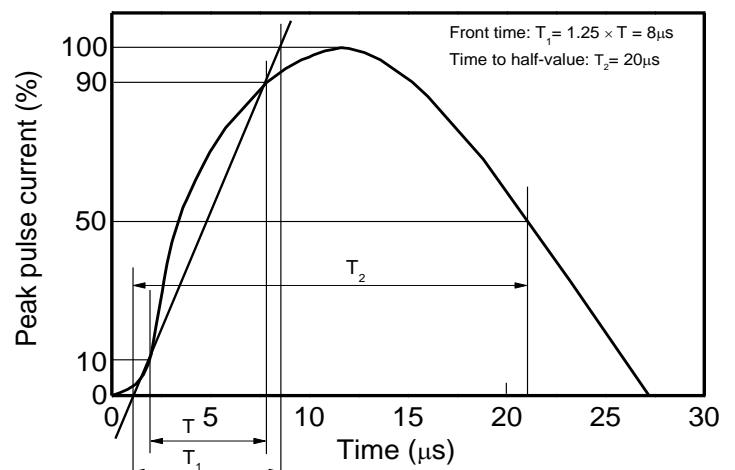
JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999

Contact discharge current waveform per IEC61000-4-2

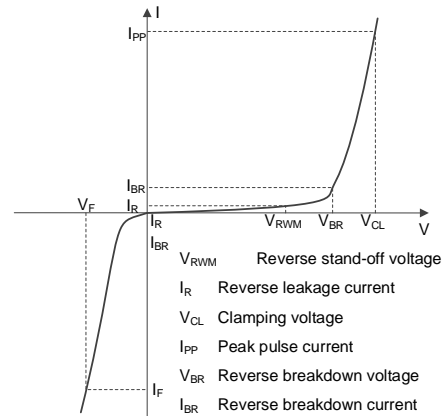


8/20 μs waveform per IEC61000-4-5



Electrical Parameter

Symbol	Parameter
V _C	Clamping Voltage @ I _{PP}
I _{PP}	Peak Pulse Current
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _R	Reverse Leakage Current @ V _{RWM}
V _{RWM}	Reverse Standoff Voltage



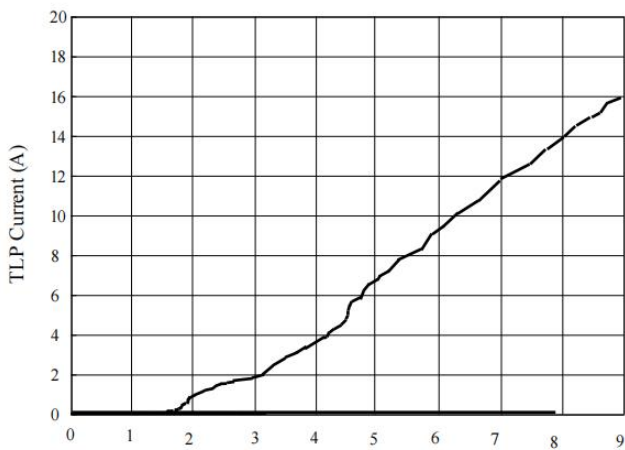
V-I characteristics for a Uni-directional TVS

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

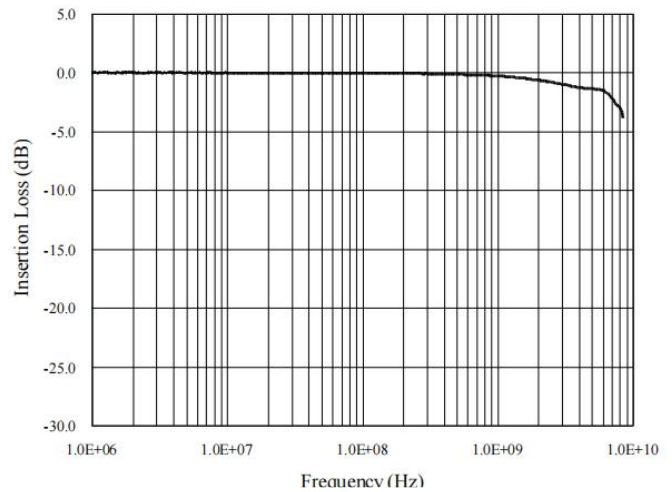
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Standoff Voltage	V _{RWM} ¹⁾	Any I/O to Ground			3.3	V
Reverse Leakage Current	I _R	V _{RWM} =3.3V		0.01	0.1	uA
Forward Voltage	V _F	I _F =15mA		0.85	1.2	V
Breakdown Voltage	V _{BR}	I _T =100uA	3.4			V
Hold Current Voltage	V _H	I _H =50mA	1.7			V
Clamping Voltage	V _C	I _{PP} =5A, t _p =8/20us		3.5		V
		I _{PP} =8A, t _p =100ns ¹⁾		5.5		V
		I _{PP} =16A, t _p =100ns ¹⁾		9		V
Dynamic Resistance	R _{dyn}	Positive transient(TLP)		0.3		Ω
		Negative transient(TLP)				
Junction Capacitance ²⁾	C _{IN}	V _{IN} =0V, f=1MHz, I/O to I/O		0.55	0.65	pF
		V _{IN} =0V, f=1MHz, I/O to GND		0.2	0.3	

- 1) Measurements performed using a 100ns Transmission Line Pulse(TLP) system.
- 2) Junction capacitance is measured in V_R=0V, F=1MHz.

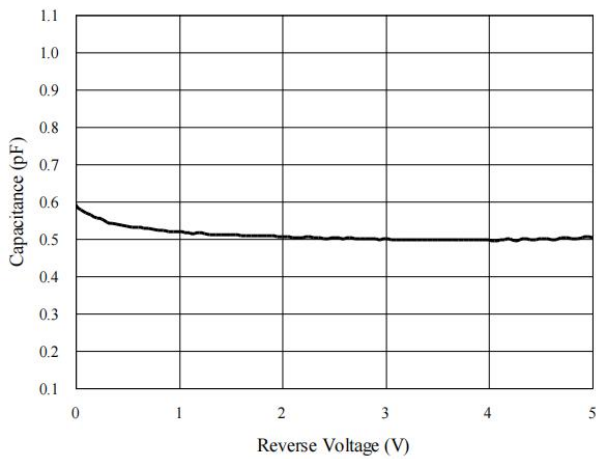
Typical Characteristics



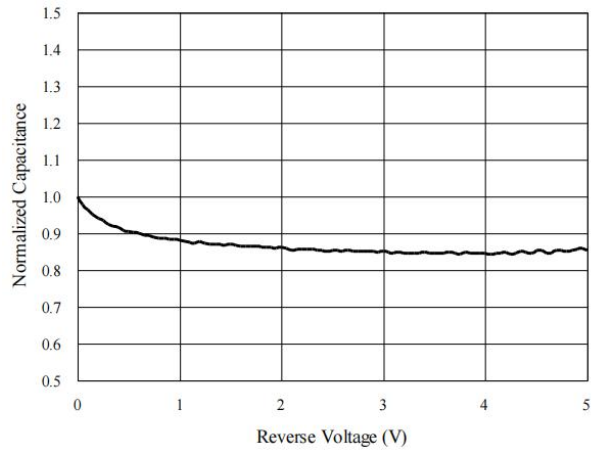
TLP Measurement of I/O to GND



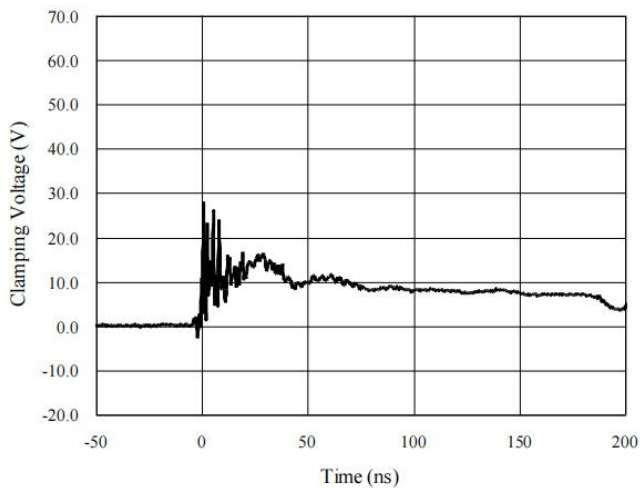
Insertion Loss S21 of I/O to GND



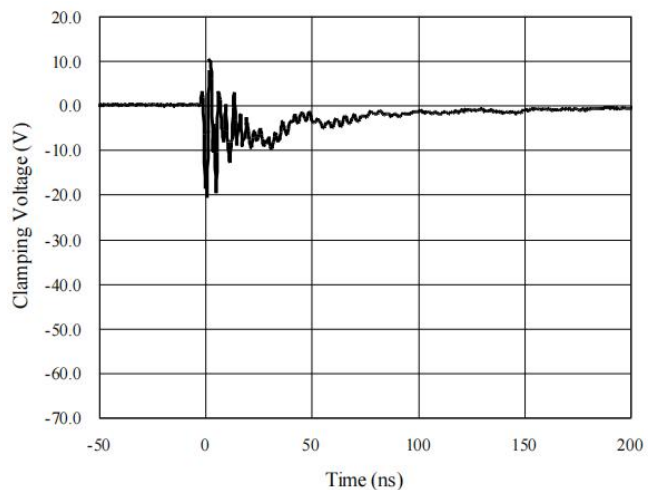
Capacitance vs. Reverse Voltage



Normalized Capacitance vs. Reverse Voltage

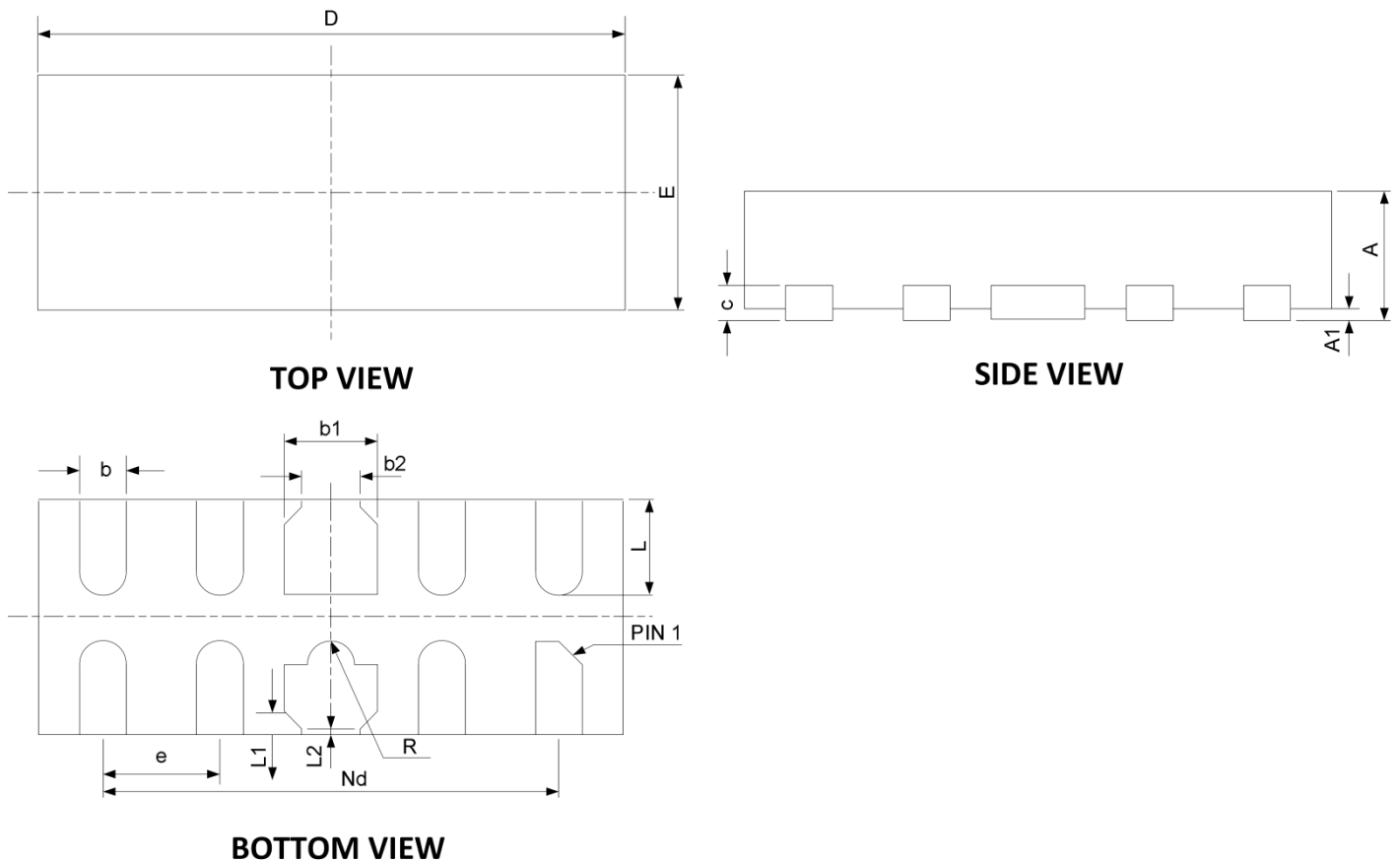


ESD Clamping of I/O to GND
(+8kV Contact per IEC 61000-4-2)



ESD Clamping of I/O to GND
(-8kV Contact per IEC 61000-4-2)

DFN2510-10L Package Outline Dimensions



SYM	MILLIMETERS		
	MIN	NOM	MAX
A	0.45	0.55	0.65
A1	0.05REF		
b	0.15	0.2	0.25
b1	0.3	0.4	0.5
b2	0.2REF		
c	0.1	0.15	0.2
D	2.42	2.5	2.58
e	0.50RER		
Nd	2.00BSC		
E	0.92	1	1.08
L	0.30	0.4	0.45
L1	0.075REF		
L2	0.050REF		
h	0.08	0.12	0.15
R	0.05	0.1	0.15

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)