

GSE033LD4DNF

ESD Protection Diode

Product Description

It is designed to protect sensitive electronics from damage or latch up due to ESD, lightning, and other voltage induced transient events.

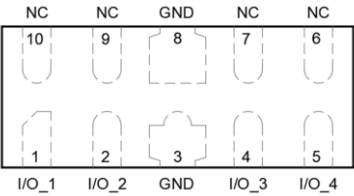
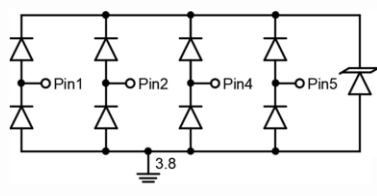
Features

- Up to 4 I/O Lines Protection
- Low Leakage Current: nA Level
- Low Capacitance: 0.34pF Max.
- IEC61000-4-2(ESD) $\pm 25\text{kV}$ (Air)
- IEC61000-4-2(ESD) $\pm 20\text{kV}$ (Contact)
- IEC61000-4-5(Lighting) 3A (8/20 μs)

Mechanical Data


- DFN2510-10L Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

DFN2510-10L			Equivalent Circuit		
					
Pin	Symbol	Description	Pin	Symbol	Description
1	I/O_1	ESD protected IO	2	I/O_2	ESD protected IO
4	I/O_3	ESD protected IO	5	I/O_4	ESD protected IO
3,8	GND	Ground	6,7,9,10	NC	Not Connection

Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE033LD4DNF	DFN2510-10L	332P	3,000PCS
GSE033LD4DNF			
- Product Code: GSE033LD4	- Package Code: DN for DFN2510-10L	- Green Level: F for RoHS Compliant and Halogen Free	

Marking Information		
	- Product Code: 332P - Dot denotes Pin 1	

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

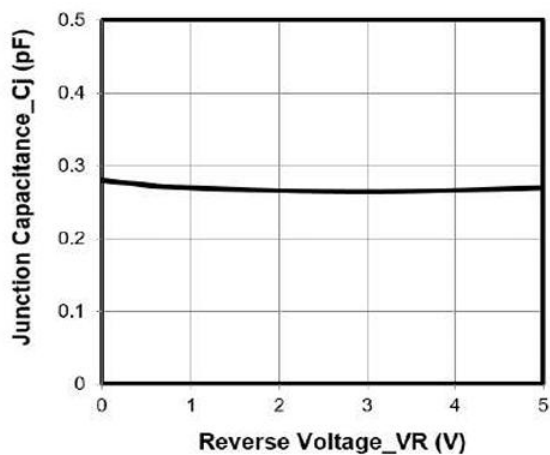
Symbol	Parameter	Typical	Unit
P _{PP}	Peak Pulse Power (t _p =8/20μs)	40	W
I _{PP}	Peak Pulse Current (t _p =8/20μs)	3	A
V _{ESD}	ESD Per IEC61000-4-2 (Air)	±25	KV
	ESD Per IEC61000-4-2 (Contact)	±20	KV
T _J	Operating Junction Temperature Range	-55 to +125	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

Note: Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

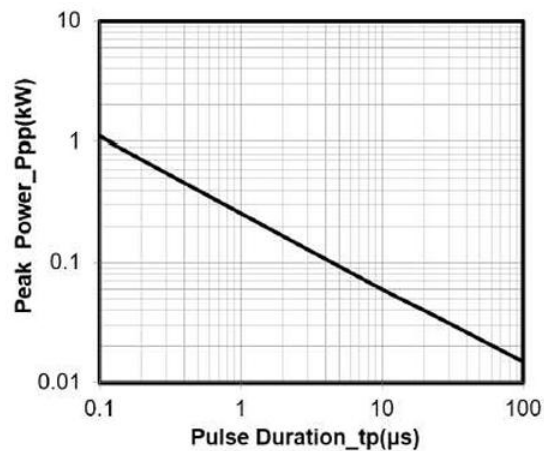
Electrical Characteristics (T_A=25°C, for any I/O pin to ground unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	-			3.3	V
V _{BR}	Reverse Breakdown Voltage	I _R =1mA	5.5		7.5	V
I _R	Reverse Leakage Current	V _{RWM} =3.3V			0.5	μA
V _C	Clamping Voltage	I _{PP} =1A (8/20μs)			9	V
		I _{PP} =3A (8/20μs)			13	V
C _J	Junction Capacitance	V _R =1.5V, f=1MHz			0.34	pF

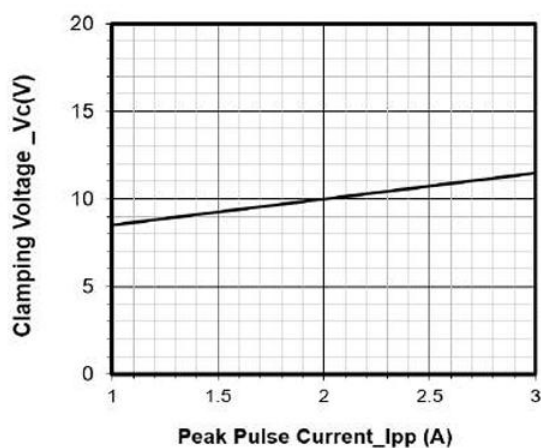
Typical Characteristics (T_A=25°C unless otherwise specified)



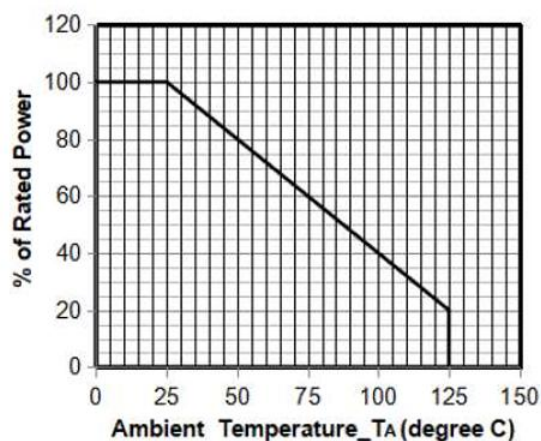
Junction Capacitance vs. Reverse Voltage



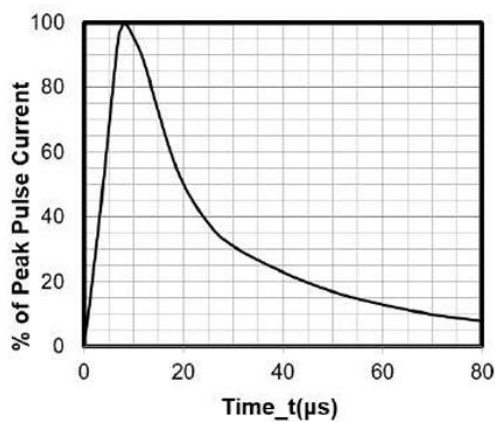
Peak Pulse Power vs. Pulse Time



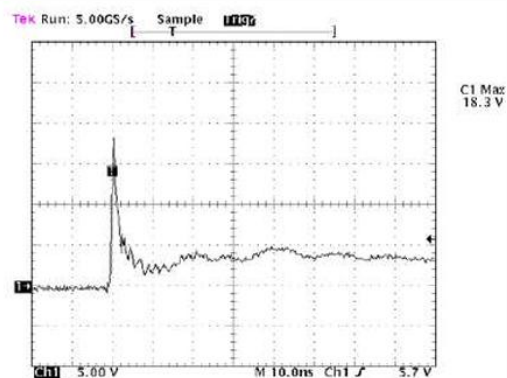
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

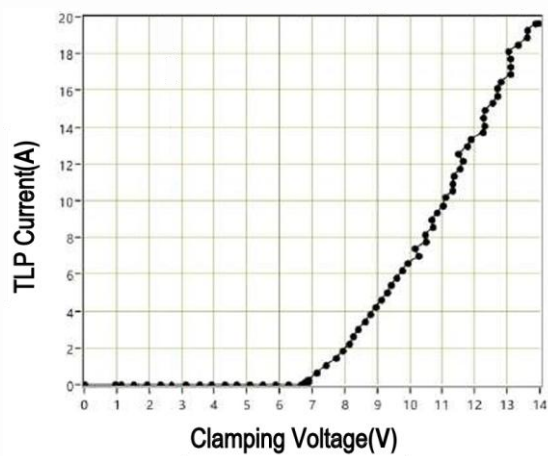


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

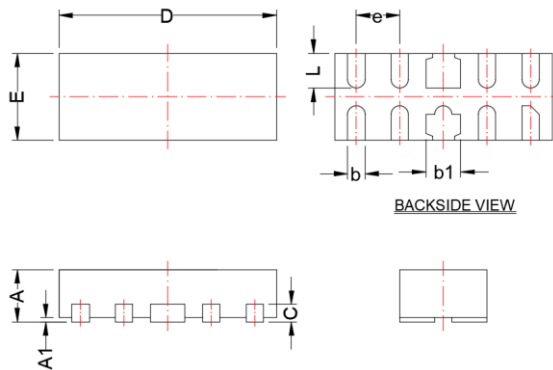
Typical Characteristics (Continued)



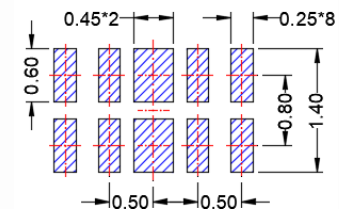
TLP Curve

DFN2510-10L

Package Dimension



Recommended Land Pattern



Dimensions				
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.45	0.65	0.018	0.026
A1	0.00	0.05	0.000	0.002
C	0.10	0.20	0.004	0.008
b	0.20	0.30	0.008	0.012
b1	0.35	0.45	0.014	0.018
D	2.45	2.55	0.096	0.100
E	0.95	1.05	0.037	0.041
e	0.50 BSC		0.020 BSC	
L	0.35	0.45	0.014	0.018





NOTE:



Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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