

GSE120HU1NDF

ESD Protection Diode

Product Description

It is designed to protect sensitive electronics from damage due to electrostatic discharge (ESD) and other transient events.

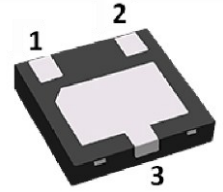
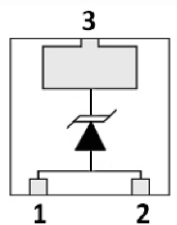
Features

- Reverse Working Voltage: 12V
- IEC61000-4-2(ESD) $\pm 30\text{KV}$ (Air)
- IEC61000-4-2(ESD) $\pm 30\text{KV}$ (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns).
- IEC61000-4-5 (Lightning) 190A (8/20 μs).

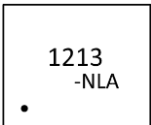
Mechanical Data

- DFN2x2-3L. Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

DFN2X2-3L	Equivalent Circuit
	

Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE120HU1NDF	DFN2X2-3L	1213 -NLA	3,000 PCS
GSE120HU1NDF - Product Code: GSE120HU1 - Package Code: ND for DFN2X2-3L - Green Level: F for RoHS Compliant and Halogen Free			
Marking Information			
		- Product Code: 1213 -NLA - The • denotes Pin 1	

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

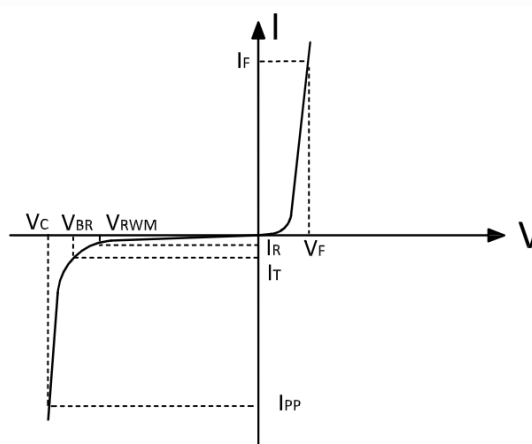
Symbol	Parameter	Value	Unit
P _{PP}	Peak Pulse Power (t _p =8/20μs)	5320	W
I _{PP}	Peak Pulse Current (t _p =8/20μs)	190	A
V _{ESD}	ESD Per IEC61000-4-2 (Air)	±30	KV
	ESD Per IEC61000-4-2 (Contact)	±30	KV
T _J	Operating Junction Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _L	Lead Soldering Temperature (10 seconds)	260	°C

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	-			12	V
V _{BR}	Breakdown Voltage	I _T = 1mA	13			V
I _R	Reverse Leakage Current	V _{RWM} =15V			1	μA
V _C	Clamping Voltage	I _{PP} =190A (8/20μs)		25	28	V
C _J	Junction Capacitance	V _R =0V, f=1MHz		1450	1600	pF

Electrical Parameters

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



Typical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

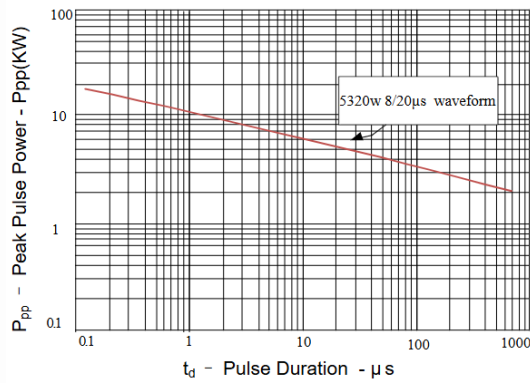


Fig 1. Peak Pulse Power vs. Pulse Time

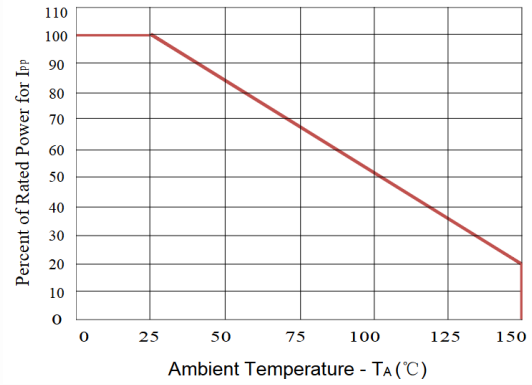


Fig 2. Power Derating Curve

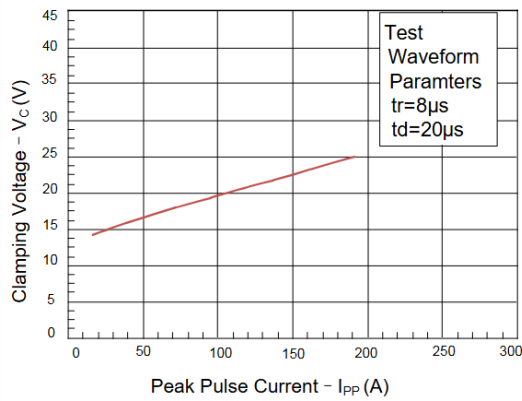


Fig 3. V_C vs. I_{PP} (8 X 20 μs Pulse)

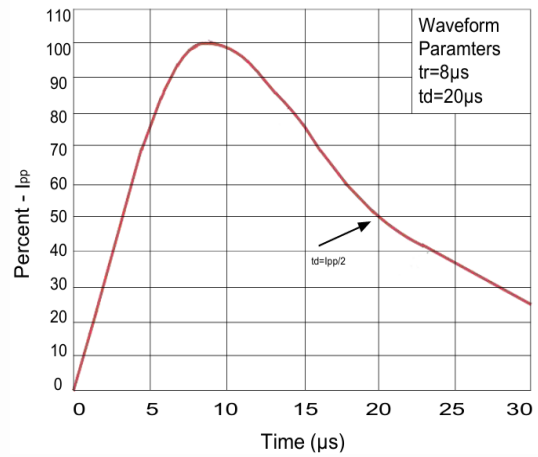
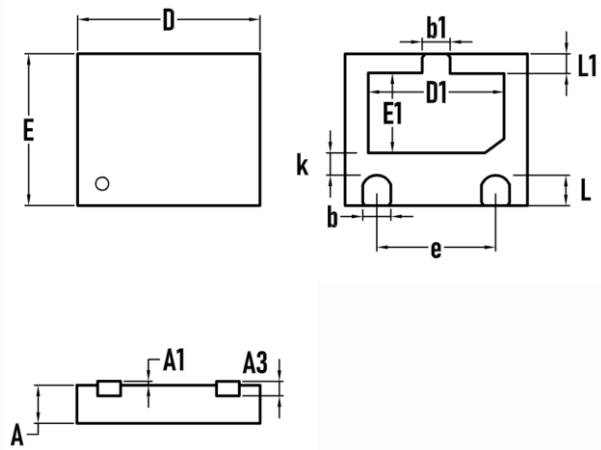


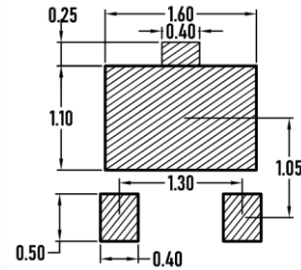
Fig 4. 8 X 20 μs Pulse Waveform

DFN2X2-3L

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.45	0.55	0.018	0.022
A1	0.00	0.05	0.000	0.002
A3	0.17	0.23	0.007	0.009
D	1.95	2.05	0.077	0.081
E	1.95	2.05	0.077	0.081
D1	1.45	1.55	0.057	0.061
E1	1.00	1.10	0.039	0.043
b	0.25	0.35	0.010	0.014
b1	0.25	0.35	0.010	0.014
k	0.25	-	0.010	-
e	1.30BSC		0.051BSC	
L	0.35	0.45	0.014	0.018
L1	0.2	0.3	0.008	0.012

NOTE:

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

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