

GSE050HU1NLF

ESD Protection Diode

Product Description

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

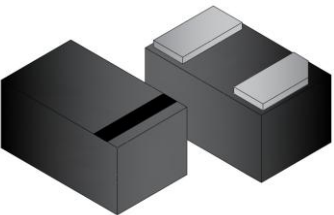
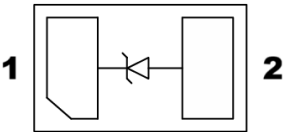
Features

- Operating Voltage: 5V.
- Unidirectional Configurations
- IEC61000-4-2(ESD) $\pm 30\text{kV}$ (Air)
- IEC61000-4-2(ESD) $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Lighting) 125A (8/20 μs)

Mechanical Data

- DFN1610-2L Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

DFN1610-2L			Equivalent Circuit		
			 Bottom View		
Pin	Symbol	Description	Pin	Symbol	Description
1	K	Cathode	2	A	Anode

Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE050HU1NLF	DFN1610-2L	91	3,000PCS
GSE050HU1NLF - Product Code: GSE050HU1 - Package Code: NL for DFN1610-2L - Green Level: F for RoHS Compliant and Halogen Free			
Marking Information			
		- Product Code: 91 Bar denotes Cathode	

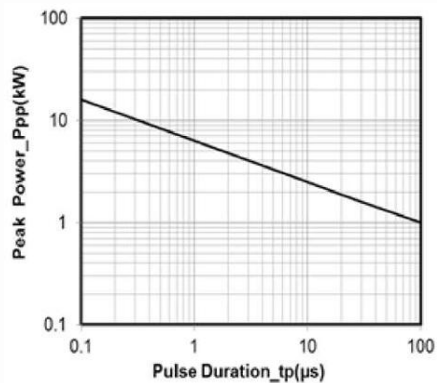
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
P _{PP}	Peak Pulse Power (t _p =8/20μs)	1875	W
I _{PP}	Peak Pulse Current (t _p =8/20μs)	125	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 +125	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	-			5	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	6			V
I _R	Reverse Leakage Current	V _{RWM} =5V			1	μA
V _C	Clamping Voltage	I _{PP} =10A (8/20μs)			9	V
		I _{PP} =125A (8/20μs)			15	
C _J	Junction Capacitance	V _R =0V, f=1MHz			650	pF

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



Junction Capacitance vs. Reverse Voltage

Fig 1. Peak Pulse Power vs. Pulse Time

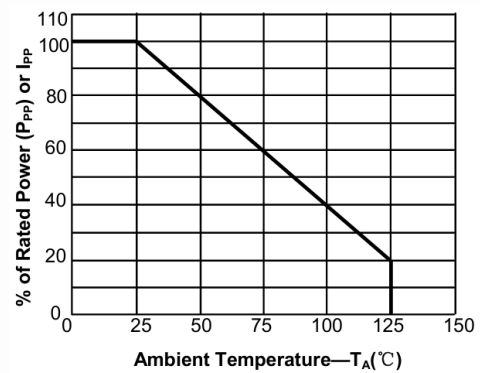


Fig 2. Power Derating Curve

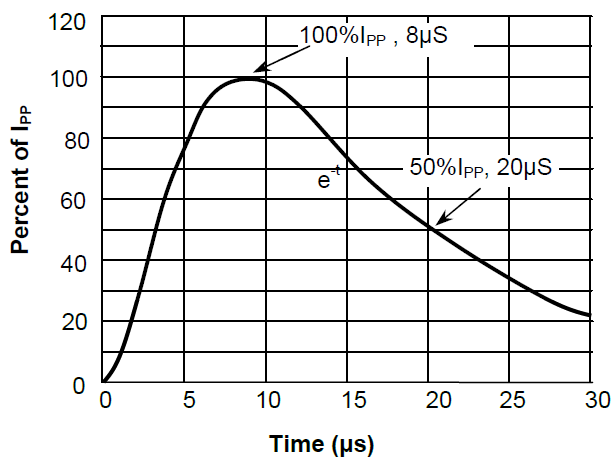


Fig 3. 8 X 20μs Pulse Waveform

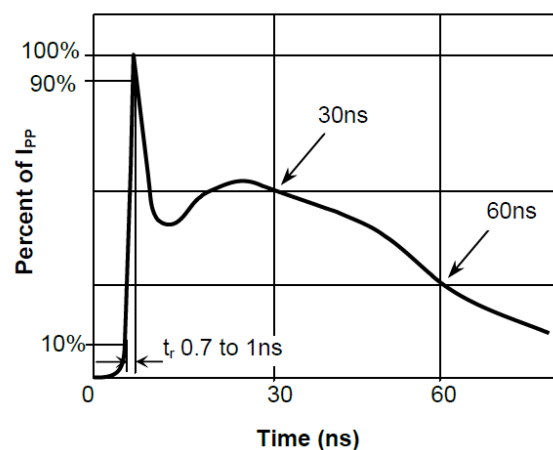
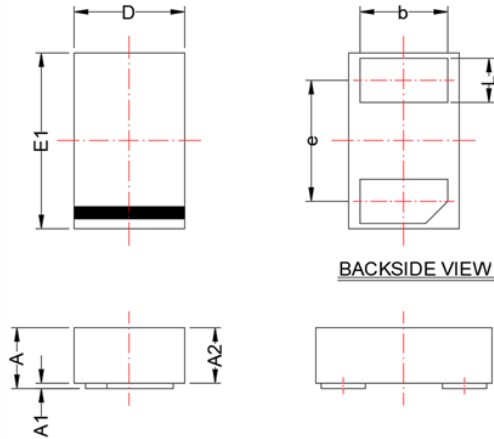


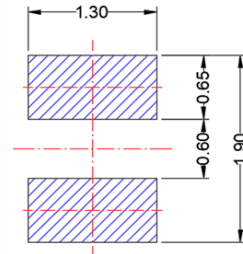
Fig 4. ESD(IEC61000-4-2) Pulse Waveform

DFN1610-2L

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
b	0.75	0.85	0.030	0.033
D	0.95	1.05	0.037	0.041
E1	1.55	1.65	0.061	0.065
e	1.10 BSC		0.043 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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