

GSE120LB1N6F

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: 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) 8A (8/20 μs).

Mechanical Data

- DFN0603-2L. Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

DFN0603-2L	Equivalent Circuit
	

Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE120LB1N6F	DFN0603-2L	M	10,000PCS
GSE120LB1N6F			
- Product Code: GSE120LB1	- Package Code: N6 for DFN0603-2L	- Green Level: F for RoHS Compliant and Halogen Free	
Marking Information			
	- Product Code: M		

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

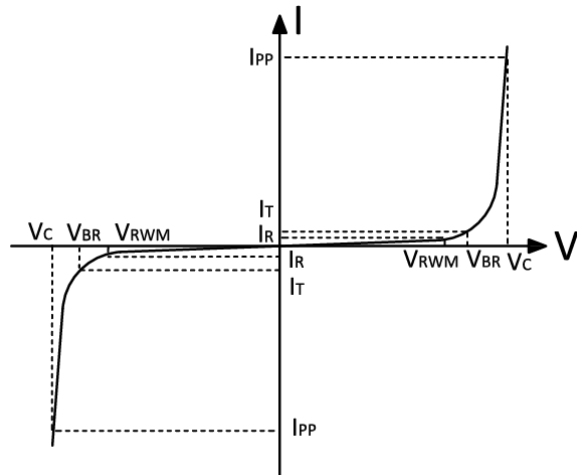
Symbol	Parameter	Value	Unit
P _{PP}	Peak Pulse Power (t _p =8/20μs)	200	W
I _{PP}	Peak Pulse Current (t _p =8/20μs)	8	A
V _{ESD}	ESD Per IEC61000-4-2 (Air)	±30	KV
	ESD Per IEC61000-4-2 (Contact)	±30	KV
T _J	Operating Junction Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +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	13.3			V
I _R	Reverse Leakage Current	V _R =12V			0.5	μA
V _C	Clamping Voltage	I _{PP} =8A (8/20μs)		20	25	V
C _J	Junction Capacitance	V _R =0V, f=1MHz		10	15	pF

Electrical Parameters

Symbol	Parameter
I _{PP}	Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Reverse Stand-Off 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)

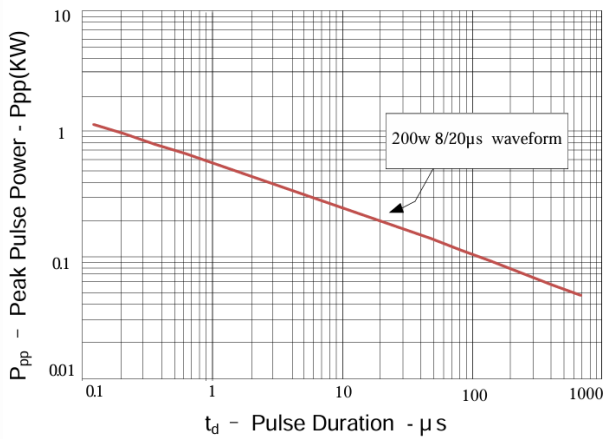


FIG 1. Peak Pulse Power vs. Pulse Time

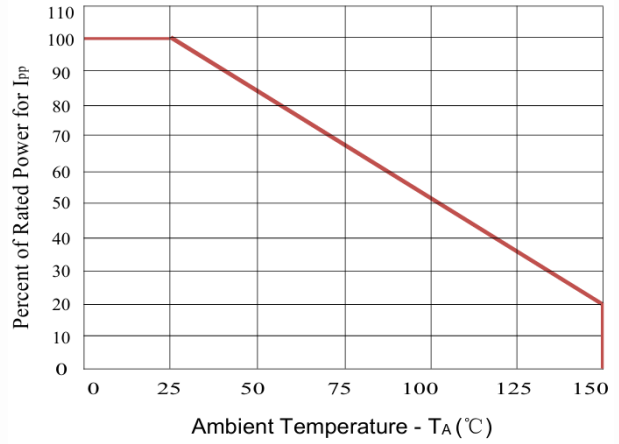


FIG 2. Power Derating Curve

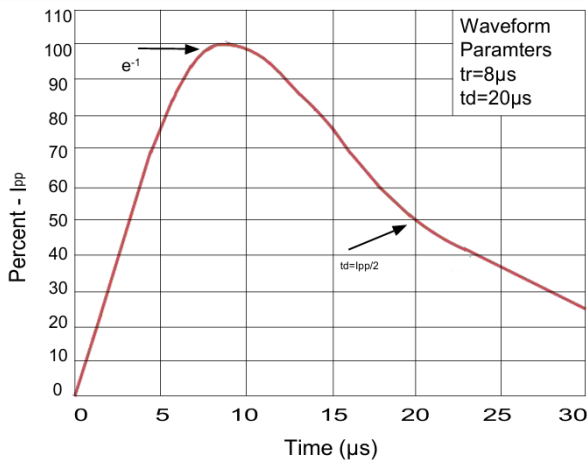


FIG 3. Pulse Waveform - 8/20µs

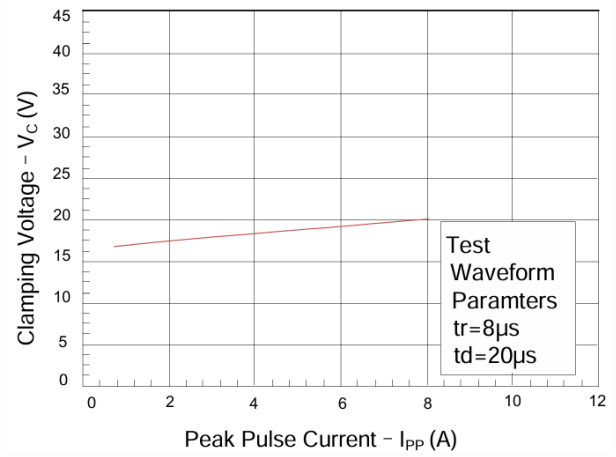
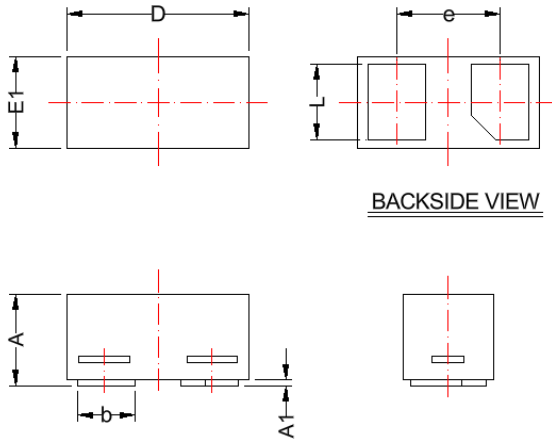


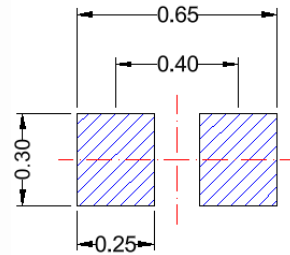
FIG 4. Clamping Voltage vs. I_{PP}

DFN0603-2L

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.28	0.32	0.011	0.013
A1	0.00	0.05	0.000	0.002
b	0.14	0.24	0.006	0.009
D	0.55	0.65	0.022	0.026
E1	0.25	0.35	0.010	0.014
e	0.34 BSC		0.013 BSC	
L	0.20	0.30	0.008	0.012





NOTE:



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

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