

GSE033MB1N1F

ESD Protection Diode

Product Description

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

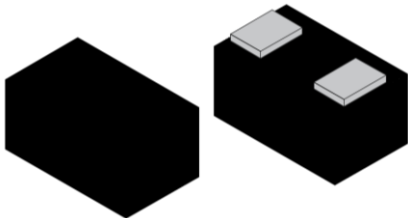
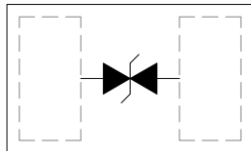
Features

- Capacitance 0.6pF typical
- Operating Voltage: 3.3V
- 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 (Lighting) 12A (8/20 μs)

Mechanical Data

- DFN1006-2L Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

DFN1006-2L	Equivalent Circuit
	

Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE033MB1N1F	DFN1006-2L	AS	10,000PCS
GSE033MB1N1F - Product Code: GSE033MB1 - Package Code: N1 for DFN1006-2L - Green Level: F for RoHS Compliant and Halogen Free			
Marking Information			
AS		- Product Code: AS	

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

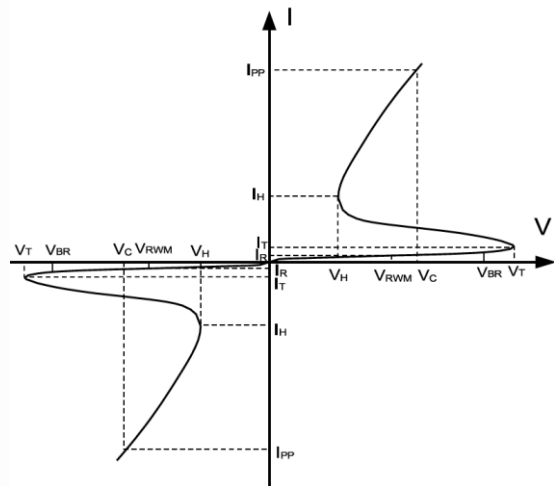
Symbol	Parameter	Value	Unit
P _{PK}	Peak Pulse Power (t _p =8/20μs)	72	W
I _{PP}	Peak Pulse Current (t _p =8/20μs)	12	A
V _{ESD}	ESD Per IEC61000-4-2 (Air)	±30	KV
	ESD Per IEC61000-4-2 (Contact)	±30	KV
T _J	Operating Junction Temperature Range	-55 to +125	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _L	Lead Soldering Temperature	260 (10 sec.)	°C

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	-			3.3	V
V _{BR}	Reverse Breakdown Voltage	I _T =2μA	3.5			V
V _H	Holding Voltage	I _H = 50mA	0.8			V
I _R	Reverse Leakage Current	V _{RWM} =3.3V			0.2	μA
V _C	Clamping Voltage	I _{PP} =1A (8/20μs)		4		V
		I _{PP} =12A (8/20μs)		6		V
C _J	Junction Capacitance	V _R =0V, f=1MHz		0.6		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
V _T	Test Voltage
I _T	Test Current
V _H	Holding Voltage
I _H	Holding Current



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

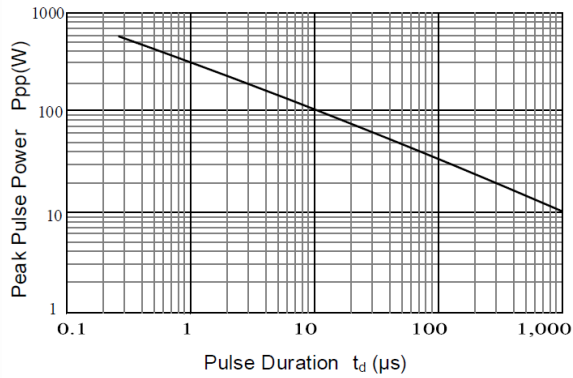


Fig 1. Peak Pulse Power vs. Pulse Time

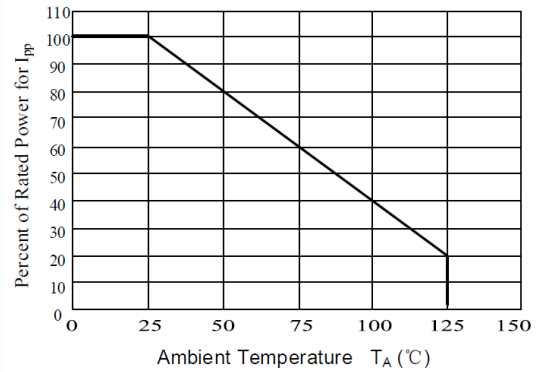


Fig 2. Power Derating Curve

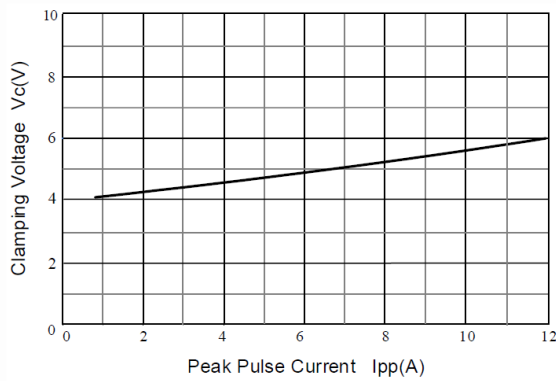


Fig 3. Clamping Voltage vs. Peak Pulse Current

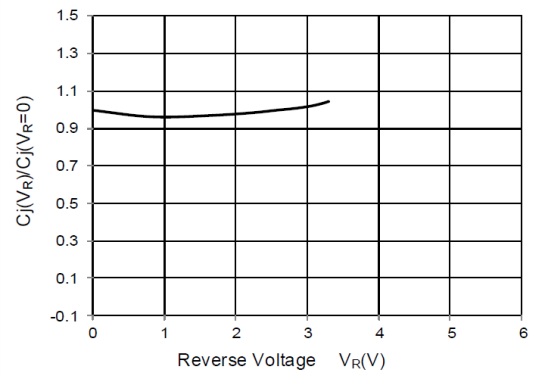


Fig 4. Junction Capacitance vs. Reverse Voltage

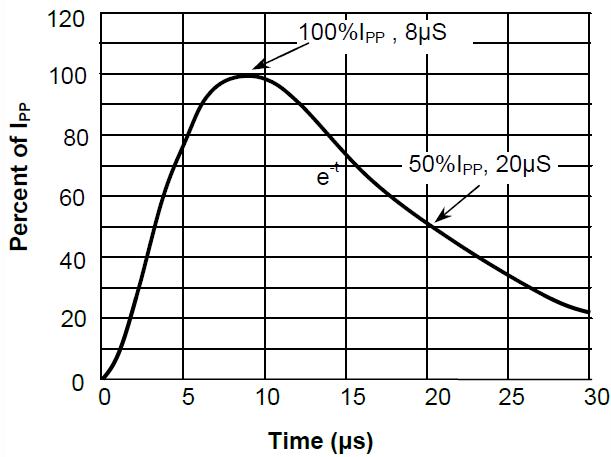


Fig 5. 8 X 20 μs Pulse Waveform

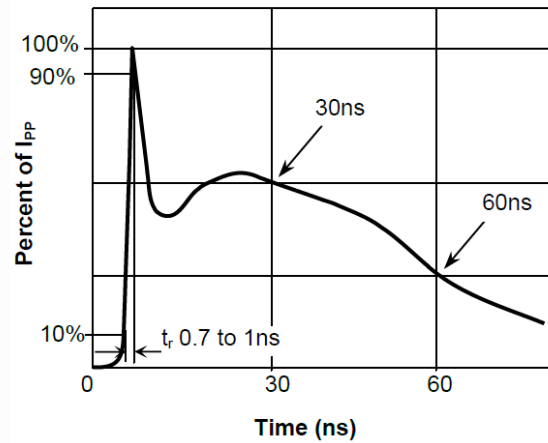
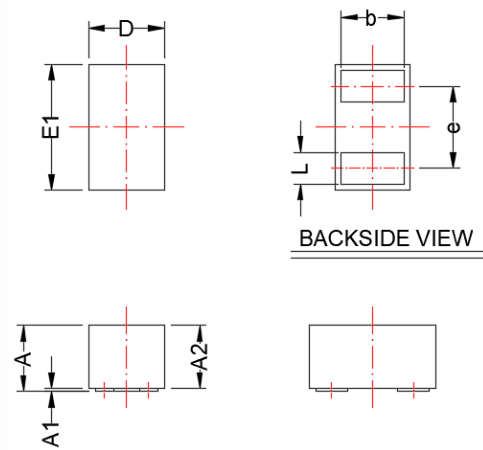


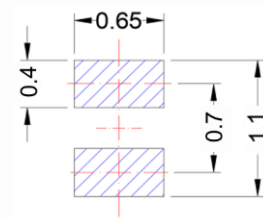
Fig 6. ESD(IEC61000-4-2) Pulse Waveform

DFN1006-2L

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.40	0.60	0.016	0.024
A1	0.00	0.05	0.000	0.002
A2	0.35	0.60	0.014	0.024
b	0.45	0.55	0.018	0.022
D	0.55	0.65	0.022	0.026
E1	0.95	1.05	0.037	0.041
e	0.65 BSC		0.026 BSC	
L	0.20	0.35	0.008	0.014

NOTE:

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

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