GSE033MB1N1F

ESD Protection Diode

Product Description

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

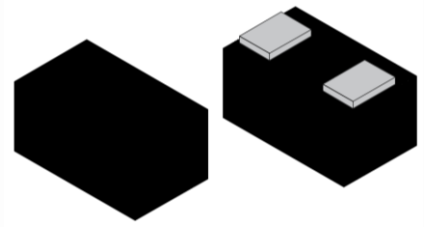
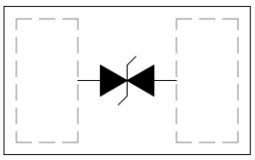
Features

- Capacitance 0.6pF typical
- Operating Voltage: 3.3V
- IEC61000-4-2 (ESD) ±30kV (Air)
- IEC61000-4-2 (ESD) ±30kV (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns).
- IEC61000-4-5 (Lighting) 12A (8/20μs)

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

- **Product Code:** AS

Absolute Maximum Ratings (T_A=25ºC unless otherwise specified)

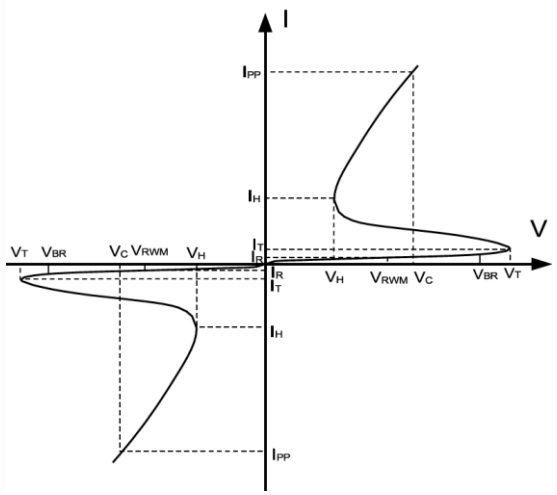
Symbol	Parameter	Value	Unit
P_{PK}	Peak Pulse Power (t_P=8/20μs)	72	W
I_{PP}	Peak Pulse Current (t_P=8/20μs)	12	A
V_{ESD}	ESD Per IEC61000-4-2 (Air)	±30	KV
	ESD Per IEC61000-4-2 (Contact)	±30	KV
T_J	Operating Junction Temperature Range	-55 to +125	ºC
T_{STG}	Storage Temperature Range	-55 to +150	ºC
T_L	Lead Soldering Temperature	260 (10 sec.)	ºC

Electrical Characteristics (T_A=25ºC 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℃ unless otherwise specified)

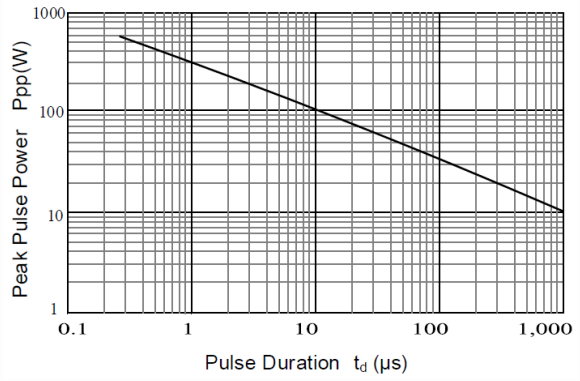


Fig 1. Peak Pulse Power vs. Pulse Time

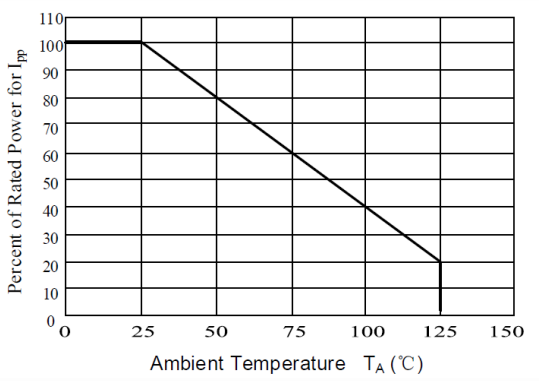


Fig 2. Power Derating Curve

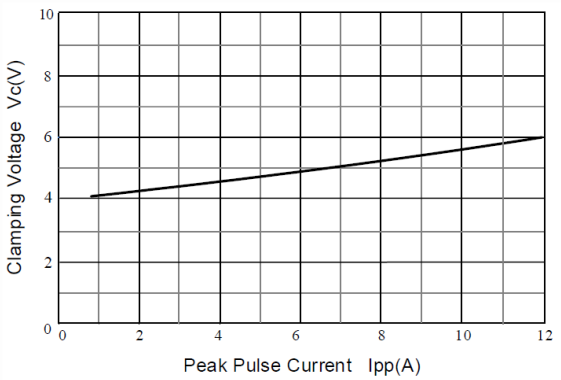


Fig 3. Clamping Voltage vs. Peak Pulse Current

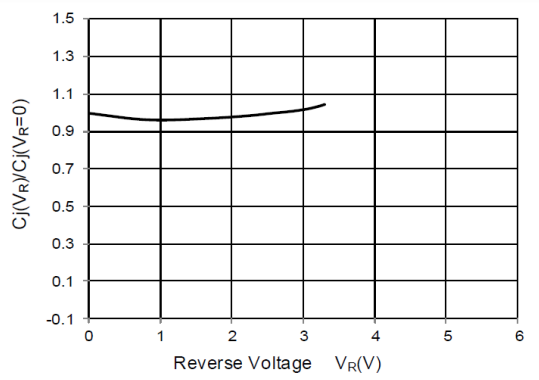


Fig 4. Junction Capacitance vs. Reverse Voltage

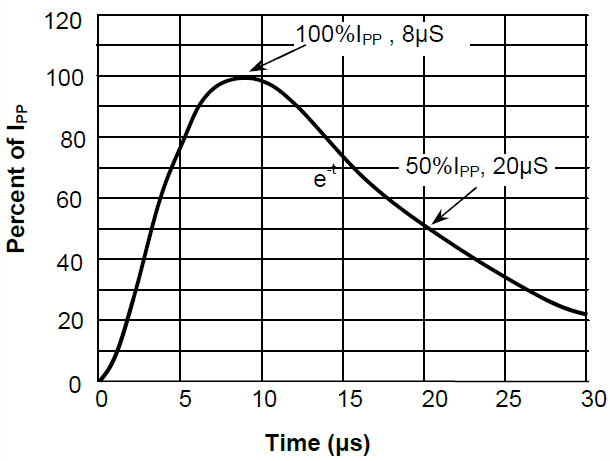


Fig 5. 8 X 20μs Pulse Waveform

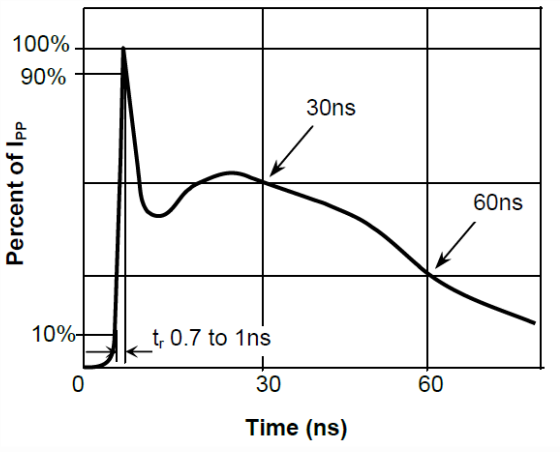
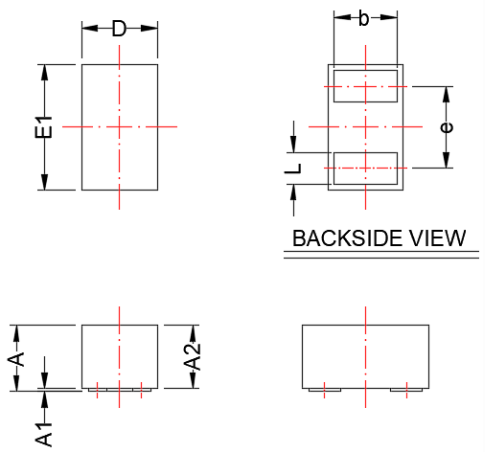


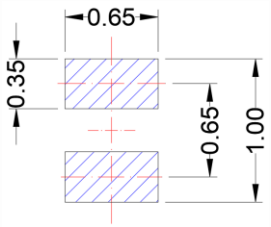
Fig 6. ESD(IEC61000-4-2) Pulse Waveform

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	0.2	0.3	0.008	0.012

NOTE:

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

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