GSE070SB1N1F

ESD Protection Diode

Product Description

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

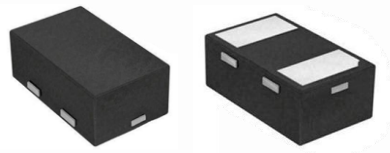
Features

- Peak Reverse Working Voltage: 7V.
- Bidirectional Configurations
- IEC61000-4-2(ESD) ±20kV (Air)
- IEC61000-4-2(ESD) ±20kV (Contact)
- IEC61000-4-4(EFT) 40A (5/50ns)
- IEC61000-4-5(Lighting) 3.5A (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
GSE070SB1N1F	DFN1006-2L	7S Y	10,000PCS

GSE070SB1N1F

- **Product Code:** GSE070SB1
- **Package Code:** **N1** for DFN1006-2L
- **Green Level:** **F** for RoHS Compliant and Halogen Free

Marking Information

- **Product Code:**
  7S
  Y

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

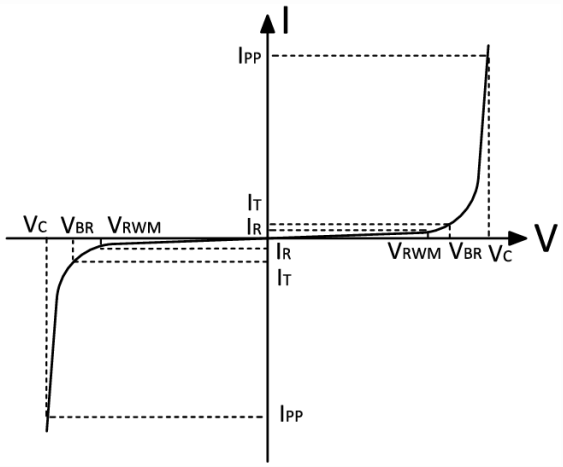
Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (t_P=8/20μs)	70	W
I_{PP}	Peak Pulse Current (t_P=8/20μs)	3.5	A
V_{ESD}	ESD Per IEC61000-4-2 (Air)	±20	KV
	ESD Per IEC61000-4-2 (Contact)	±20	KV
T_J	Operating Junction Temperature Range	-55 to +150	ºC
T_{STG}	Storage Temperature Range	-55 to +150	ºC
T_L	Lead Soldering Temperature (10s)	260	ºC

Electrical Characteristics (T_A=25ºC unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Voltage	-			7	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	7.5			V
I_R	Reverse Leakage Current	V_{RWM}=7V			0.5	μA
V_C	Clamping Voltage	I_{PP}=3.5A (8/20μs)		16	20	V
C_J	Junction Capacitance	V_R=0V, f=1MHz		0.4	0.5	pF

Electrical Parameters

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	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℃ unless otherwise specified)

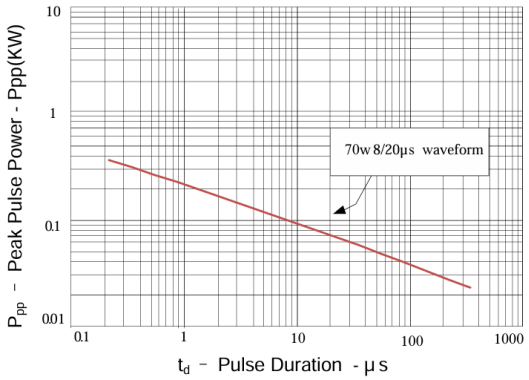


FIG 1. Peak Pulse Power vs. Pulse Time

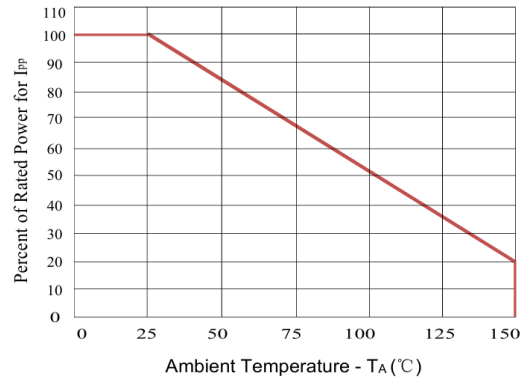


FIG 2. Power Derating Curve

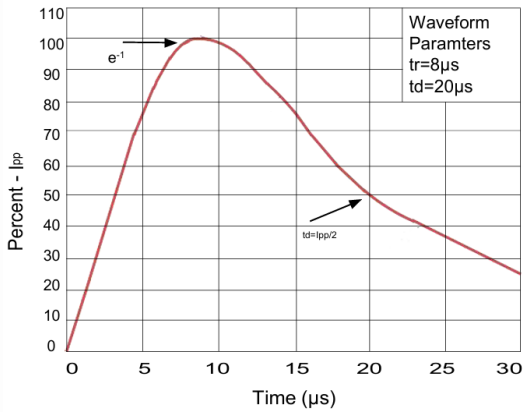


FIG 3. 8/20μs Pulse Waveform

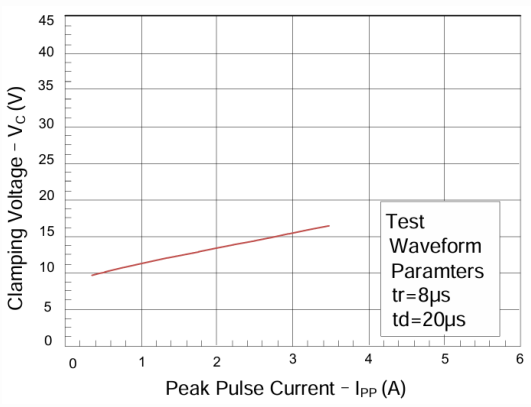
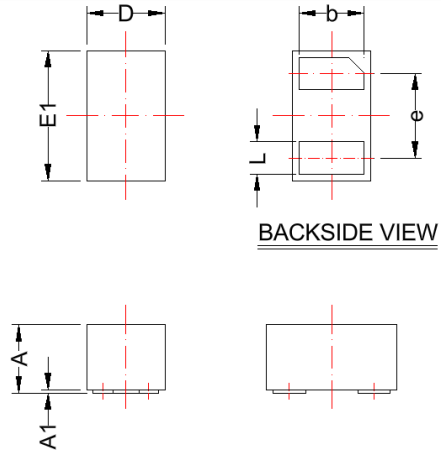


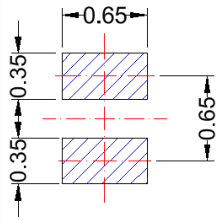
FIG 4. Clamping Voltage vs. I_{PP}

DFN1006-2L

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.45	0.60	0.018	0.024
A1	0.00	0.05	0.000	0.002
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	0.30	0.008	0.012

NOTE:

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

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