GSE050LB1N1F

ESD Protection Diodes

Product Description

100W Peak Pulse Power (8/20μs).
5V Working Voltage.

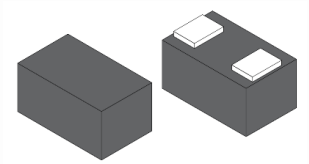
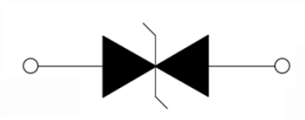
Features

- Extremely Low Capacitance 0.5pF (Max)
- Bidirectional Protection
- IEC61000-4-2 (ESD) ±25kV (Air), ±22kV (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 4A (8/20μs)

Mechanical Data

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

Package and Pin Assignment

DFN1006-2L	Equivalent Circuit
	

Ordering and Marking Information

Ordering Information			
Part Number	**Package**	**Marking Code**	**Quantity/Reel**
GSE050LB1N1F	DFN1006-2L	5BU or 21	10000 PCS

- **Product Code:**
  GSE
- **Voltage Code:**
  050 is 5V of V_{RWM} Voltage.
- **Type1 Code:**
  L for Type of Rating.
- **Type2 Code:**
  B for Bidirectional
  1 for Single Channel
- **Package Code:**
  N1 for DFN1006-2L Package
- **Green Level:**
  F for RoHS Compliant and Halogen Free

Marking Information
5BU or 21 - **Product Code:** 5BU or 21

Absolute Maximum Ratings

(T_A=25ºC Unless otherwise noted)

Symbol	Parameter	Typical	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs Waveform)	100	W
I_{PP}	Peak Pulse Current (tp=8/20μs Waveform)	4	A
V_{ESD}	Maximum Air Discharge Voltage per IEC61000-4-2	±25	KV
	Maximum Contact Discharge Voltage per IEC61000-4-2	±22	KV
T_{OP}	Operating Junction Temperature Range	-55 to +125	ºC
T_{STG}	Storage Temperature Range	-55 to +150	ºC

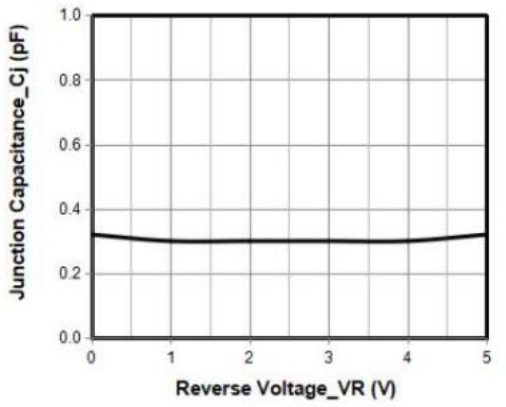
NOTE:
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

Electrical Characteristics

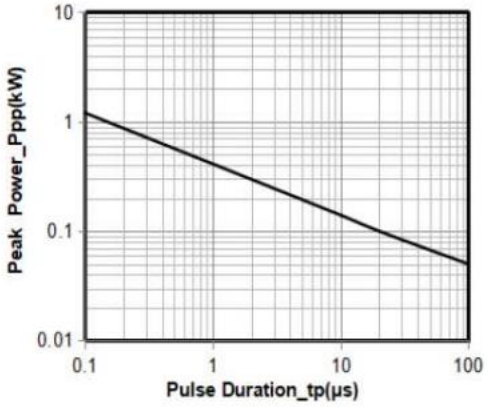
(T_A=25ºC Unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Stand-Off Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	6.5			V
I_R	Reverse Leakage Current	V_{RWM} = 5V			0.2	uA
V_C	Clamping Voltage	I_{PP} =1A, tp=8/20us			12	V
V_C	Clamping Voltage	I_{PP} =4A, tp=8/20us			25	V
C_J	Junction Capacitance	V_R=0V,f=1MHz		0.3	0.5	pF

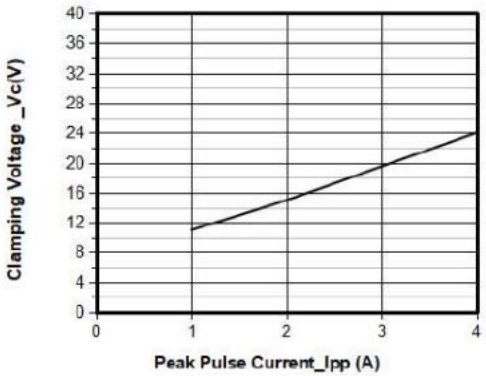
Typical Characteristics



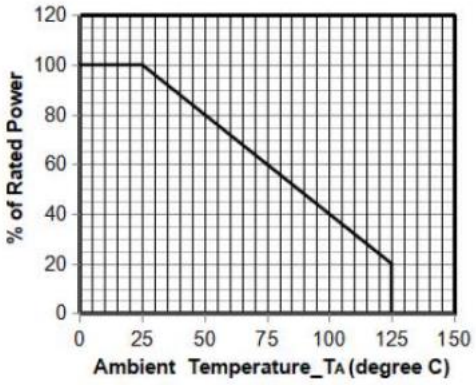
Junction Capacitance vs. Reverse Voltage



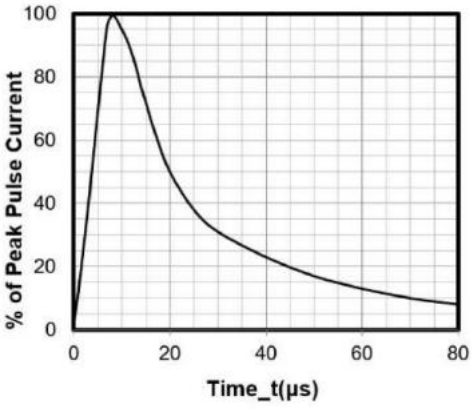
Peak Pulse Power vs. Pulse Time



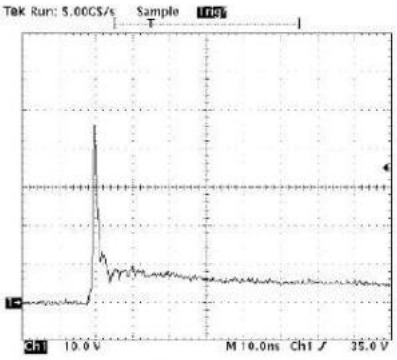
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform



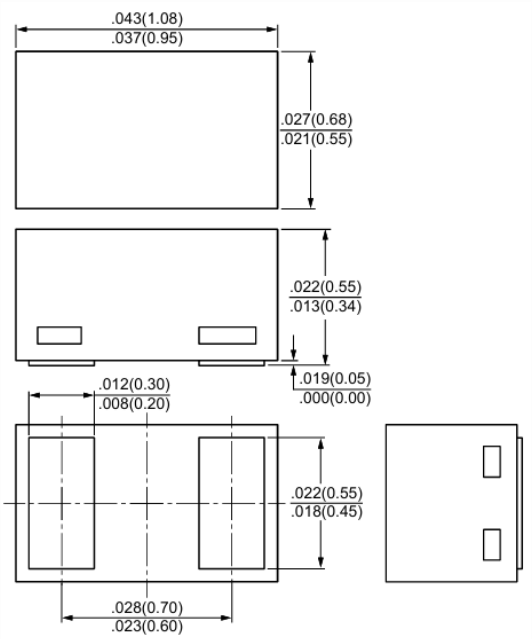
Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

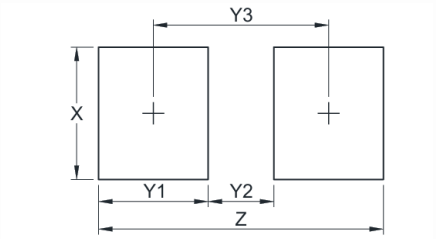
DFN1006-2L

Package Dimension



Dimensions in inches and (millimeters)

Recommended Land Pattern



Package Type	X	Y1	Y2	Y3	Z
DFN1006-2	0.60	0.50	0.30	0.80	1.30

Unit: mm

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