

GSE120LB1N1F

ESD Protection Diode

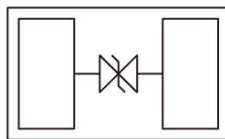
Product Description

It is designed to protect sensitive electronics from damage or latch up due to ESD, lightning, and other voltage induced transient events.

Features

- Bidirectional Device
- Peak Pulse Power : 80W (8/20μs)
- Operating Voltage : 12.0V
- Low Leakage Current: nA Level
- Low Capacitance: 0.5pF Max
- IEC61000-4-2(ESD) ±25kV (air)
- IEC61000-4-2(ESD) ±20kV (contact)
- IEC61000-4-5(Lighting) 2.5A (8/20μs)
- RoHS Compliant

Package & Device Schematic



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Applications

- High Speed Line: USB1.0/2.0, VGA, DVI, SDI
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

Ordering Information & Marking Code

Part Number	Package	Quantity	Marking Code
GSE120LB1N1F	DFN1006-2	10KPCS	R12

R12

R12 = Product Code

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Absolute Maximum Ratings

(T_A=25°C unless otherwise specified)

Symbol	Parameter	Typical	Unit
P _{PP}	Peak Pulse Power (t _p =8/20μs)	80	W
I _{PP}	Peak Pulse Current (t _p =8/20μs)	2.5	A
V _{ESD}	ESD Per IEC61000-4-2 (Air)	±25	KV
	ESD Per IEC61000-4-2 (Contact)	±20	KV
T _J	Operating Junction Temperature Range	-55 to +125	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

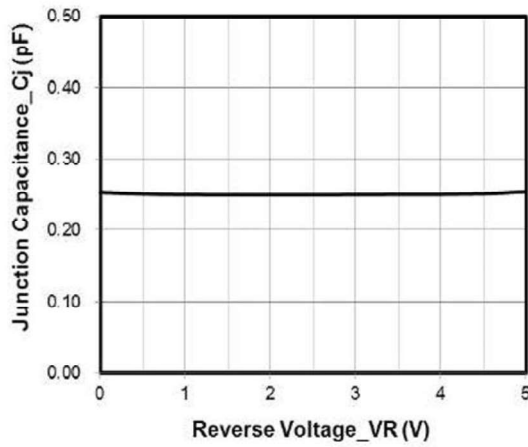
Note : Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may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

Electrical Characteristics

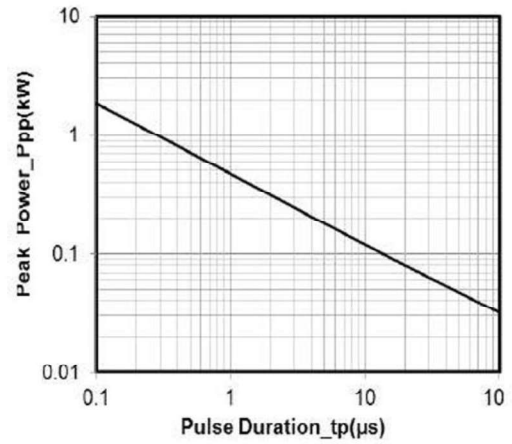
(T_A=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	-			12.0	V
V _{BR}	Reverse Breakdown Voltage	I _R =1mA	13.5			V
I _R	Reverse Leakage Current	V _{RWM} =12V			0.2	μA
V _C	Clamping Voltage	I _{PP} =1A (8/20μs)			22	V
		I _{PP} =2.5A (8/20μs)			32	V
C _J	Junction Capacitance	V _R =0V, f=1MHz			0.5	pF

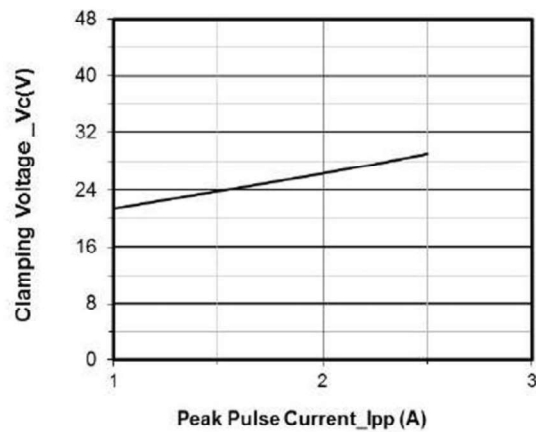
Typical Characteristics (TA=25°C unless otherwise specified)



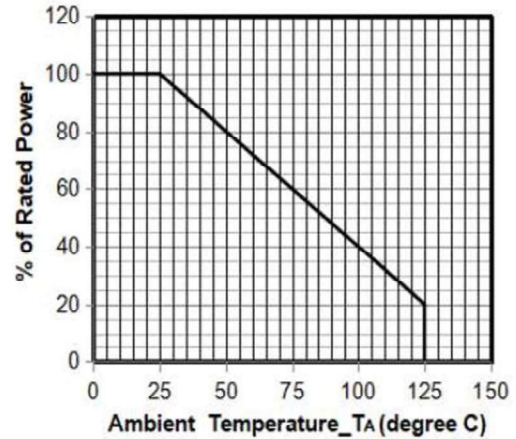
Junction Capacitance vs. Reverse Voltage



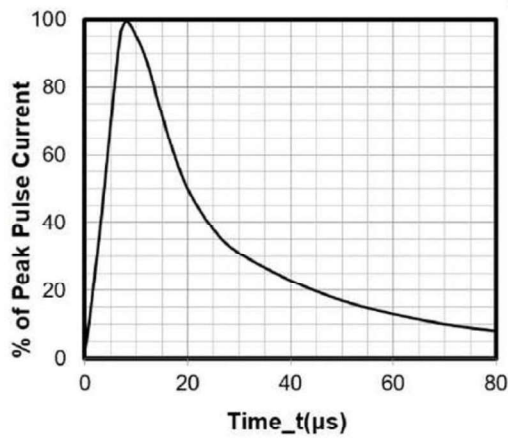
Peak Pulse Power vs. Pulse Time



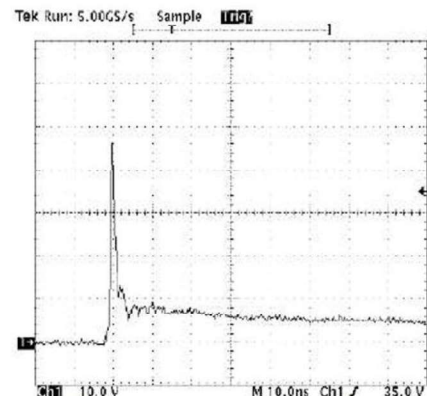
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform



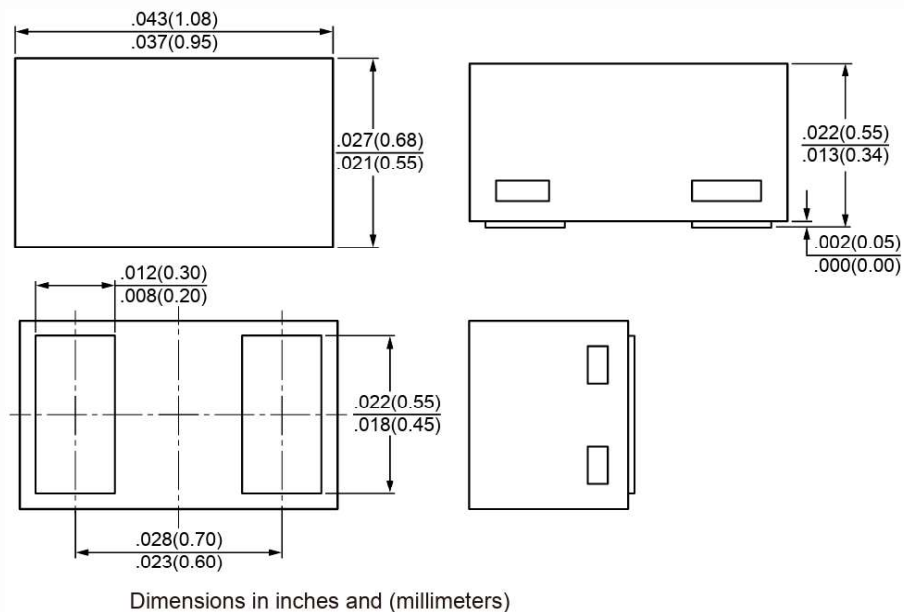
Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

Package Dimension





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