GSE120BB1D3F

ESD Protection Diode

Product Description

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

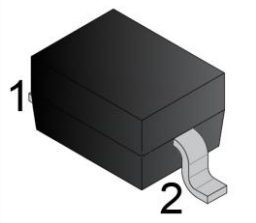
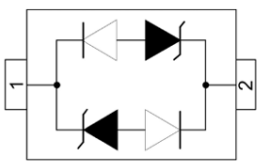
Features

- Operating Voltage: 12V
- IEC61000-4-2(ESD) ±30kV (Air)
- IEC61000-4-2(ESD) ±30kV (Contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns).
- IEC61000-4-5 (Lightning) 12A (8/20μs).

Mechanical Data

- SOD-323. Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

SOD-323	Equivalent Circuit
	

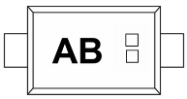
Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE120BB1D3F	SOD-323	AB □	3,000PCS

GSE120BB1D3F

- **Product Code:** GSE120BB1
- **Package Code:** **D3** for SOD-323
- **Green Level:** **F** for RoHS Compliant and Halogen Free

Marking Information



- **Product Code:** AB
- **GS Code:** □ □

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

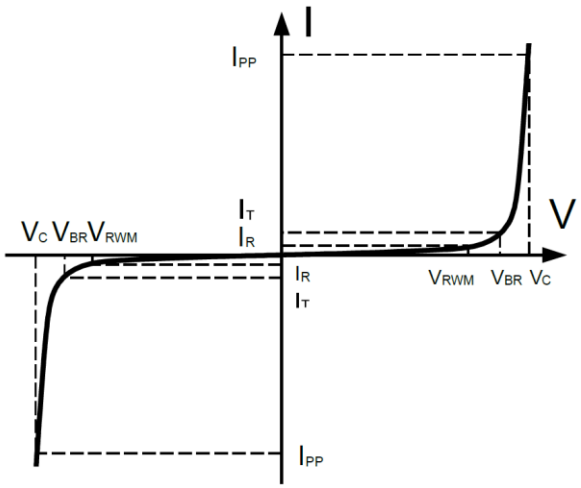
Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (t_P=8/20μs)	350	W
I_{PP}	Peak Pulse Current (t_P=8/20μs)	12	A
V_{ESD}	ESD Per IEC61000-4-2 (Air)	±30	KV
	ESD Per IEC61000-4-2 (Contact)	±30	KV
T_J	Operating Junction Temperature Range	-55 to +125	ºC
T_{STG}	Storage Temperature Range	-55 to +150	ºC

Electrical Characteristics (T_A=25ºC unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Voltage	-			12	V
V_{BR}	Breakdown Voltage	I_T = 1mA	13.3			V
I_R	Reverse Leakage Current	V_{RWM}=12V			1	μA
V_C	Clamping Voltage	I_{PP}=1A (8/20μs)			19	V
		I_{PP}=12A (8/20μs)			28.6	V
C_J	Junction Capacitance	V_R=0V, f=1MHz		0.8		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
I_T	Test Current



Typical Characteristics (T_A=25℃ unless otherwise specified)

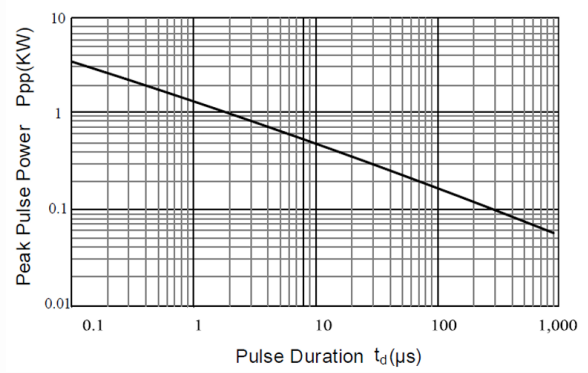


Fig 1. Peak Pulse Power vs. Pulse Time

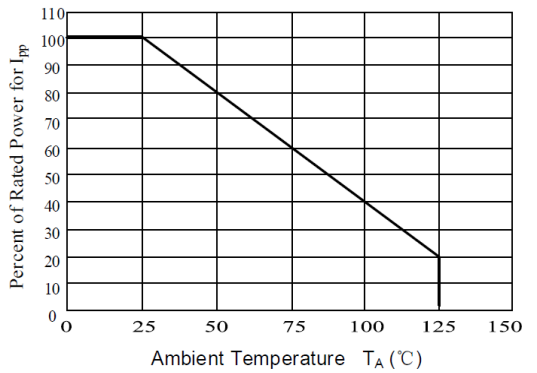


Fig 2. Power Derating Curve

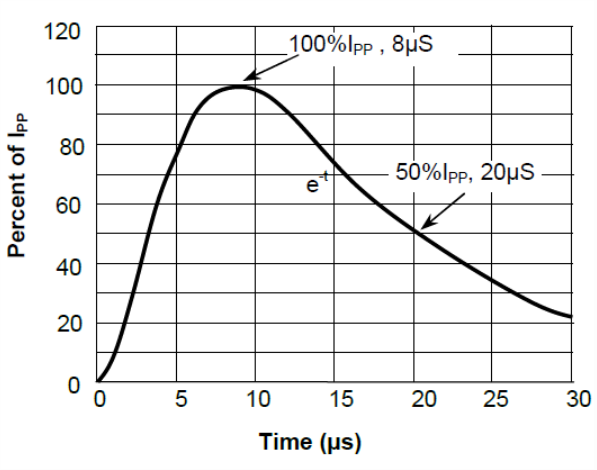


Fig 3. 8 X 20μs Pulse Waveform

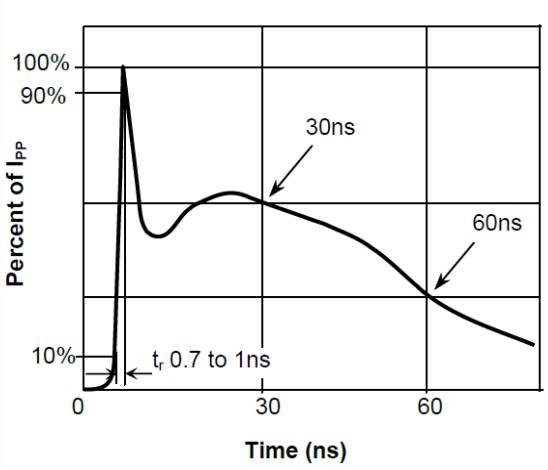
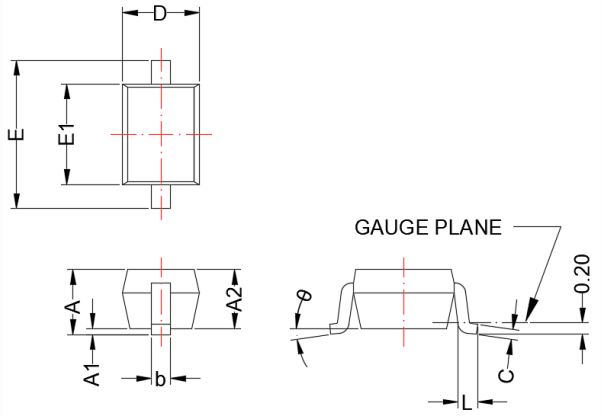


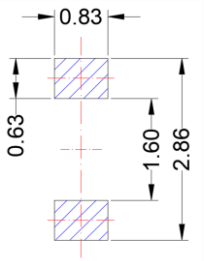
Fig 4. ESD(IEC61000-4-2) Pulse Waveform

SOD-323

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	**Millimeters**		**Inches**	
	MIN	**MAX**	**MIN**	**MAX**
A	---	1.16	---	0.046
A1	0.00	0.14	0.000	0.006
A2	0.80	---	0.031	---
b	0.25	0.40	0.010	0.016
C	0.08	0.25	0.003	0.010
D	1.15	1.40	0.045	0.055
E	2.30	2.80	0.091	0.110
E1	1.40	1.80	0.055	0.071
L	0.08	---	0.003	---
θ	0°	8°	0°	8°

NOTE:

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

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