GSE033LB1D5F

ESD Protection Diode

Product Description

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

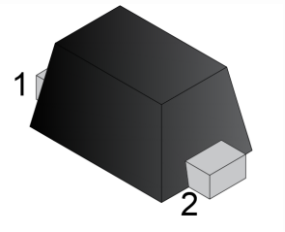
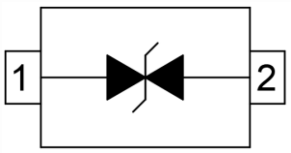
Features

- Operating Voltage: 3.3V.
- IEC61000-4-2(ESD) ±30kV (Air)
- IEC61000-4-2(ESD) ±30kV (Contact)
- IEC61000-4-5(Lighting) 8A (8/20μs)

Mechanical Data

- SOD-523 Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

SOD-523	Equivalent Circuit
	

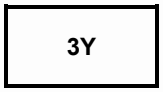
Ordering and Marking Information

GS P/N	Package	Marking	Quantity / Reel
GSE033LB1D3F	SOD-523	3Y	3,000PCS

GSE033LB1D3F

- **Product Code:** GSE033LB1
- **Package Code:** **D5** for SOD-523
- **Green Level:** **F** for RoHS Compliant and Halogen Free

Marking Information



- **Product Code:** 3Y

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

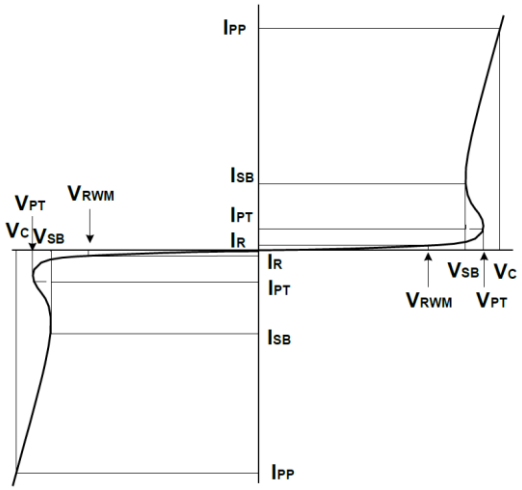
Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (t_P=8/20μs)	80	W
I_{PP}	Peak Pulse Current (t_P=8/20μs)	8	A
V_{ESD}	ESD Per IEC61000-4-2 (Air)	±30	KV
	ESD Per IEC61000-4-2 (Contact)	±30	KV
T_J	Operating Junction Temperature Range	-55 to +125	ºC
T_{STG}	Storage Temperature Range	-55 to +150	ºC

Electrical Characteristics (T_A=25ºC unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Voltage	-			3.3	V
V_{PT}	Punch-Through Voltage	I_{PT} = 2μA	3.8			V
V_{SB}	Snap-Back Voltage	I_{SB} = 50mA	3.5			V
I_R	Reverse Leakage Current	V_{RWM}=3.3V			0.2	μA
V_C	Clamping Voltage	I_{PP}=1A (8/20μs)			6.0	V
		I_{PP}=5A (8/20μs)			8.0	V
		I_{PP}=8A (8/20μs)			10	V
C_J	Junction Capacitance	V_R=0V, f=1MHz		12.5	20	pF

Electrical Parameters

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{PT}	Punch-through Breakdown Voltage @ I_{PT}
V_{SB}	Snap-Back Voltage @ I_{SB}
I_{SB}	Snap-Back Current
I_{PT}	Test Current



Typical Characteristics (T_A=25℃ unless otherwise specified)

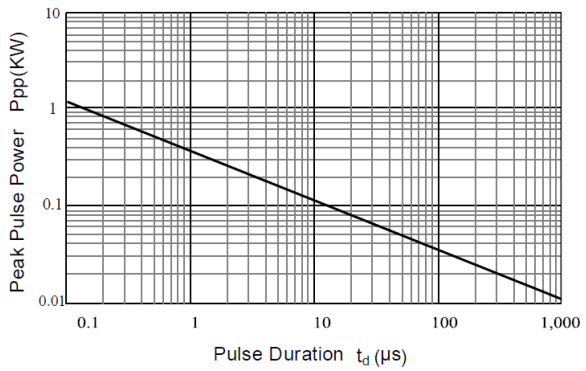


Fig 1. Peak Pulse Power vs. Pulse Time

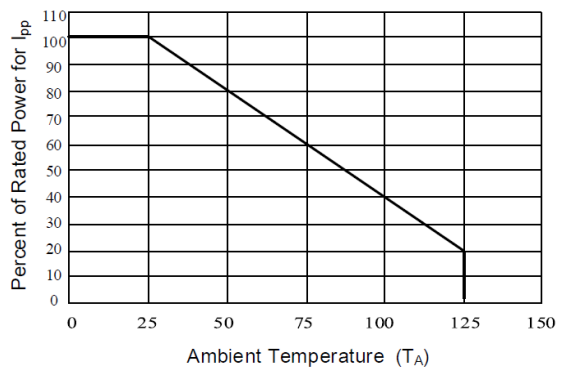


Fig 2. Power Derating Curve

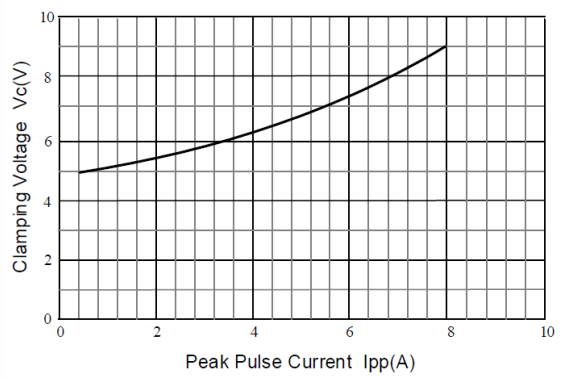


Fig 3. Clamping Voltage vs. Peak Pulse Current

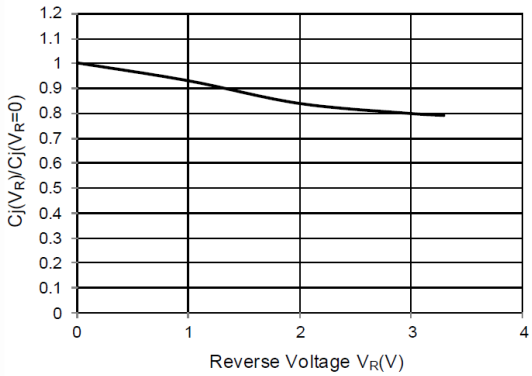


Fig 4. Junction Capacitance vs. Reverse Voltage

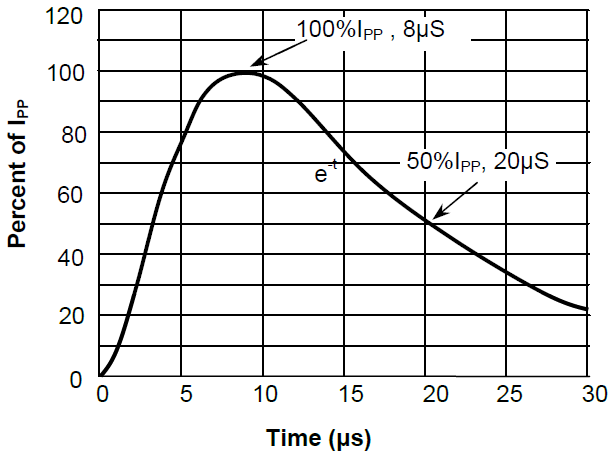


Fig 5. 8 X 20μs Pulse Waveform

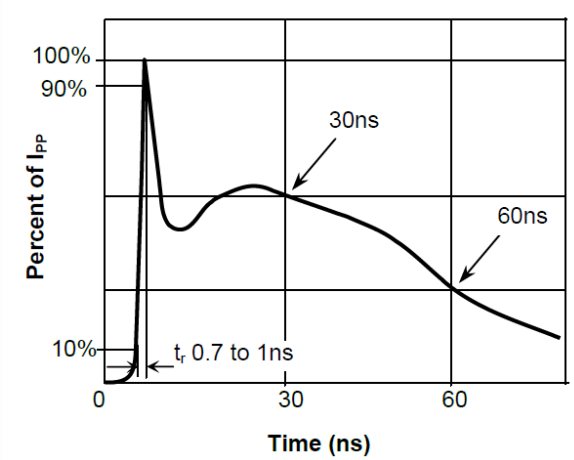
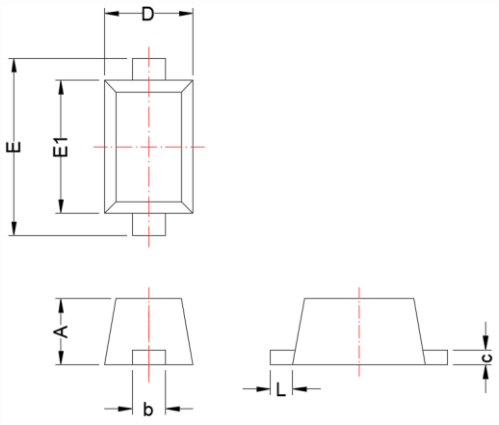


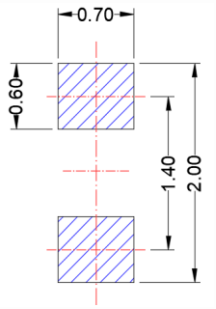
Fig 6. ESD(IEC61000-4-2) Pulse Waveform

SOD-523

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.50	0.77	0.020	0.030
b	0.25	0.40	0.010	0.016
c	0.07	0.20	0.003	0.008
D	0.70	0.90	0.028	0.035
E	1.50	1.70	0.059	0.067
E1	1.10	1.30	0.043	0.051
L	0.20 REF.		0.008 REF	

NOTE:

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

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