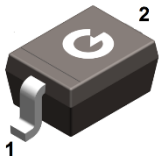
Uni-directional ESD Diode
GESD3V3D3

Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD): ±30 kV (air), ±30 kV (contact)
- Working voltage: V_{RWM} = 3.3V
- Low leakage current
- Low clamping voltage
- RoHS compliant with Halogen-free

HF



SOD-323

Mechanical Data

- Case: SOD-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
GESD3V3D3	SOD-323	3000 pcs / Tape & Reel	N1

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	±30	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	±30	kV
Reverse Working Voltage	V_{RWM}	3.3	V
Peak Pulse Power (t_p = 8/20μs)	P_{PP}	330	W
Peak Pulse Current (t_p = 8/20μs)	I_{PP}	18	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_{BR}	Reverse Breakdown Voltage	I_T = 5mA	5.2	-	6	V
I_R	Reverse Leakage Current	V_{RWM} = 3.3V	-	-	2	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs	-	-	7	V
		I_{PP} = 18A, t_p = 8/20μs	-	-	20	V
C_J	Junction Capacitance	V_R = 0V, f = 1.0MHz	-	-	300	pF

Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)

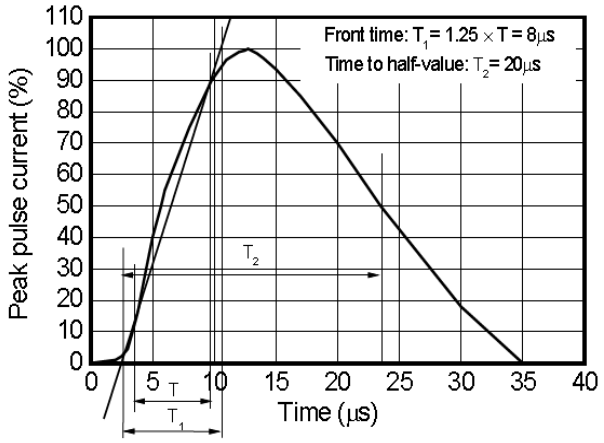


Fig 1 8/2 0μs waveform per IEC61000-4-5

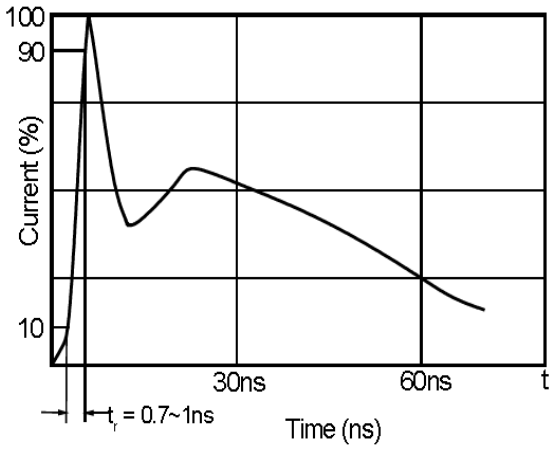


Fig 2 ESD pulse waveform according to IEC61000-4-2

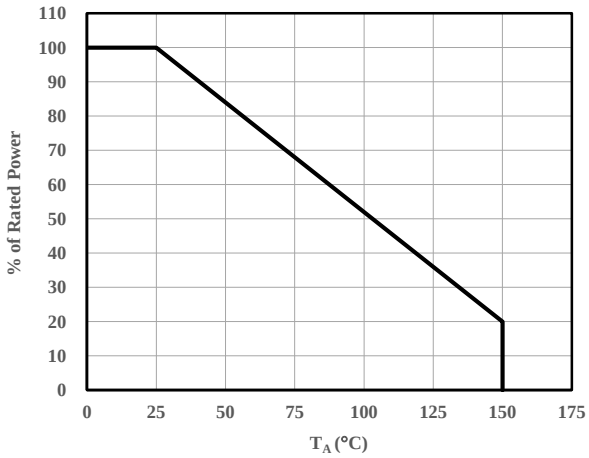


Fig 3 Power Derating Curve

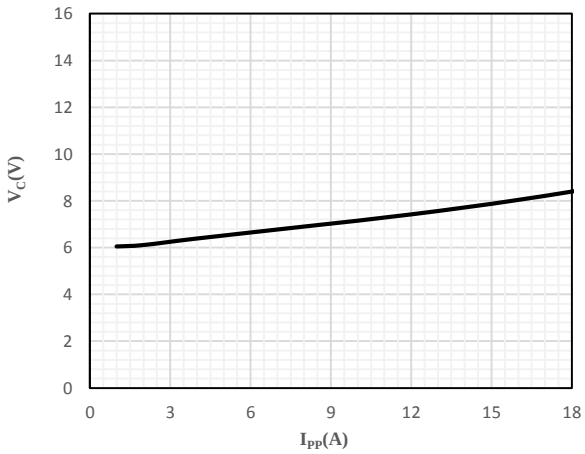


Fig 4 Clamping Voltage vs. Peak Pulse Current

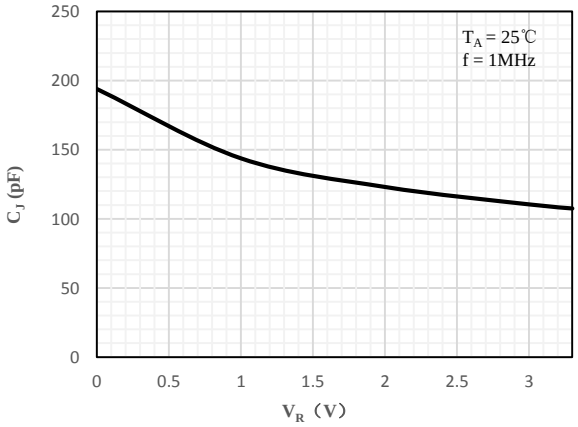
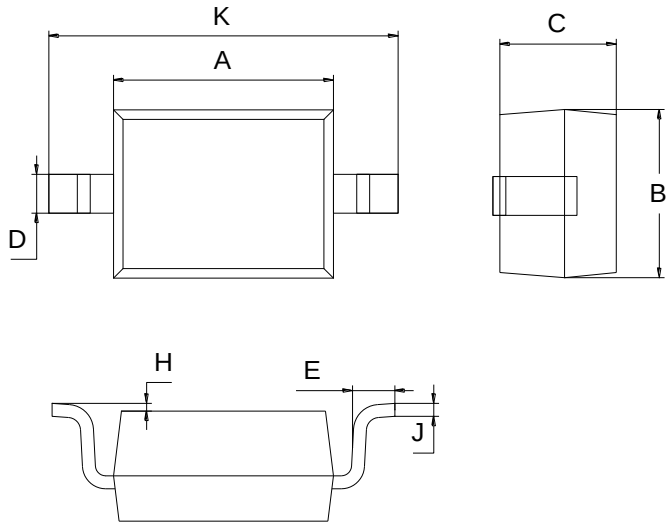


Fig 5 Junction Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	**Min.**	**Max.**
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (Unit: mm)

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