Bi-directional TVS Diode
GESD3V3B5

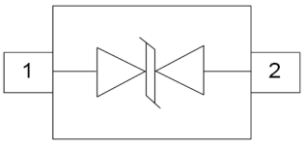
Features

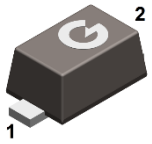
- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD): ±30 kV (air), ±30 kV (contact)
- Working voltage: V_{RWM} = 3.3V
- Low reverse clamping voltage

HF

Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208





SOD-523

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
GESD3V3B5	SOD-523	3000 pcs / Tape & Reel	N3

Maximum Ratings (@ T_A = 25℃ 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
Peak Pulse Power (t_p = 8/20μs)	P_{PP}	270	W
Peak Pulse Current (t_p = 8/20μs)	I_{PP}	18	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	250	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	170	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	180	°C/W
Junction Temperature	T_J	-40 ~ +150	°C
Storage Temperature Range	T_{STG}	-40 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch^2 FR-4 board with 2OZ copper

Electrical Characteristics (@ T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	3.3	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 5mA	4	-	6	V
Reverse Leakage Current	I_R	V_{RWM} = 3.3V	-	-	1	uA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	7	V
		I_{PP} = 18A, tp = 8/20μs	-	-	15	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	-	50	pF

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

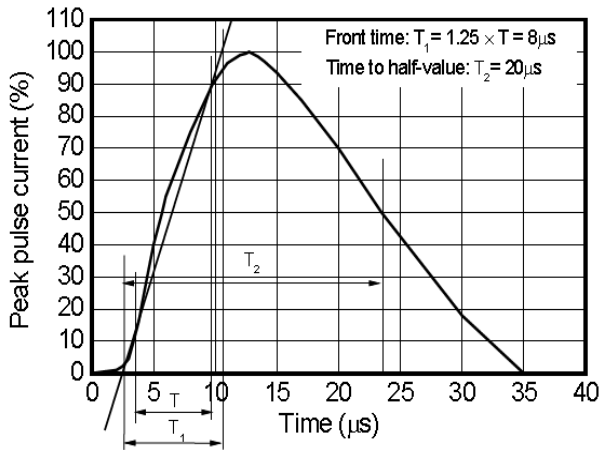


Fig 1 8/2 0μs waveform per IEC61000-4-5

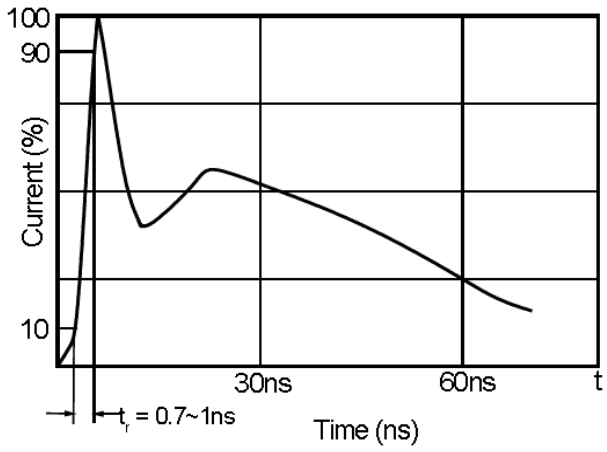


Fig 2 ESD pulse waveform according to IEC61000-4-2

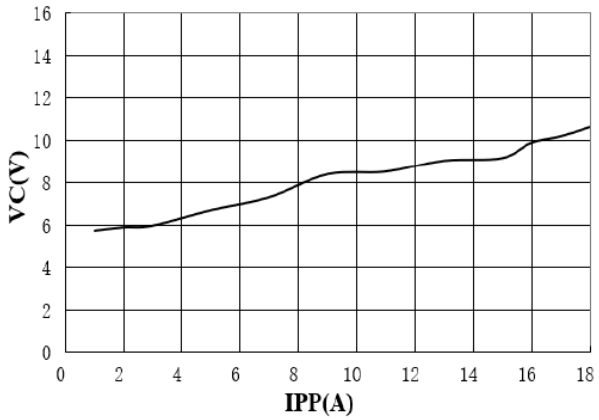
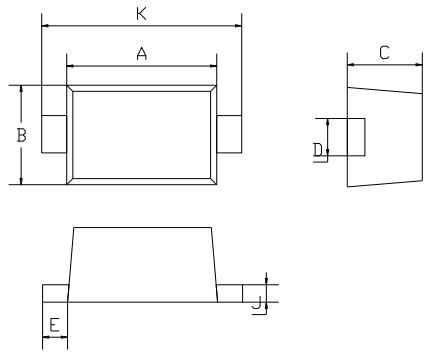


Fig 3 Clamping Voltage vs. Peak Pulse Current

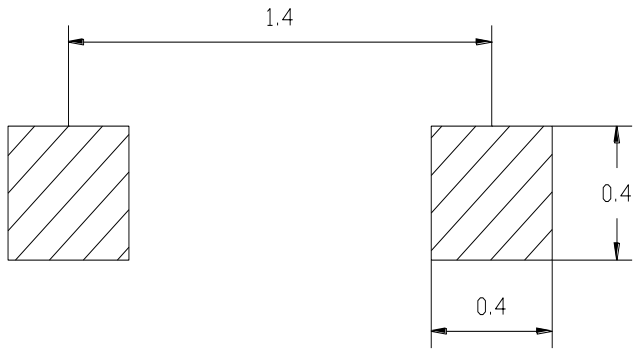
Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	**Min.**	**Max.**
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Package Outline Dimensions (Unit: mm)

SOD-523



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