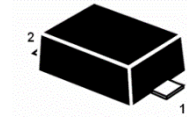
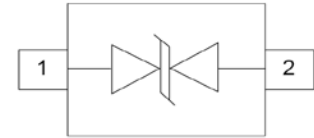


### Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD):  $\pm 20$ kV (air),  $\pm 15$  kV (contact)
- Low reverse stand-off voltage: 5V
- Very low leakage current
- Low diode capacitance
- ESD protection up to 10kV; IEC61000-4-2

HF



SOD-523

### 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

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
GESD5V0X1B5	SOD-523	3000pcs / Tape & Reel	BE

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air) *1	V <sub>ESD-A</sub>	$\pm 20$	kV
IEC 61000-4-2; ESD (Contact) *1	V <sub>ESD-C</sub>	$\pm 15$	kV
JESD22-A114-B; ESD (Human Body) *1	V <sub>ESD-HB</sub>	$\pm 10$	kV
JESD22-A114-B; ESD (Machine) *1	V <sub>ESD-M</sub>	$\pm 0.4$	kV
Peak Pulse Power (t <sub>p</sub> = 8/20 $\mu$ s) *2	P <sub>PP</sub>	60	W
Peak Pulse Current (t <sub>p</sub> = 8/20 $\mu$ s) *2	I <sub>PP</sub>	4	A

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +125	°C

### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	$V_{RWM}$		-	-	5	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 10\text{mA}$	6.2	-	9	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$	-	-	1	$\mu\text{A}$
Clamping Voltage <sup>~2</sup>	$V_C$	$I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$	-	-	10	V
		$I_{PP} = 4\text{A}$ , $t_p = 8/20\mu\text{s}$	-	13	15	
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$	-	0.3	0.5	pF

Notes:

1. Device stressed with ten non-repetitive ESD pulses, measured from pin 1 to pin 2
2. Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5

### Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

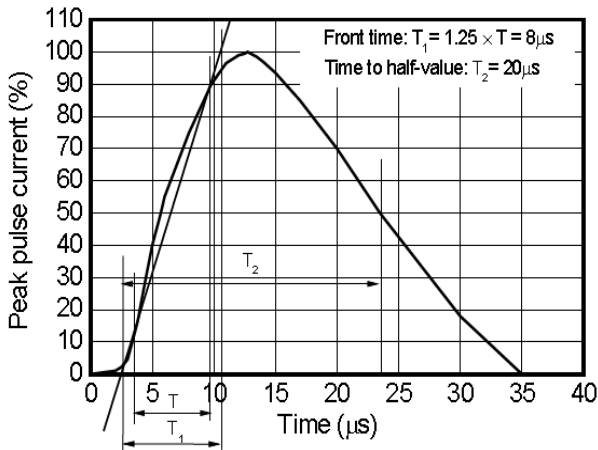


Fig 1 8/20  $\mu\text{s}$  waveform per IEC61000-4-5

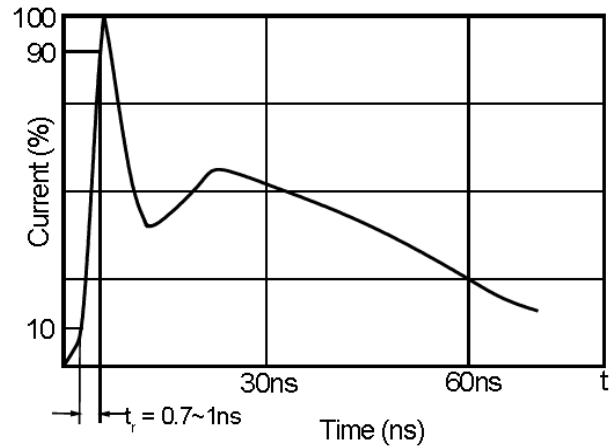


Fig 2 ESD pulse waveform according to IEC61000-4-2

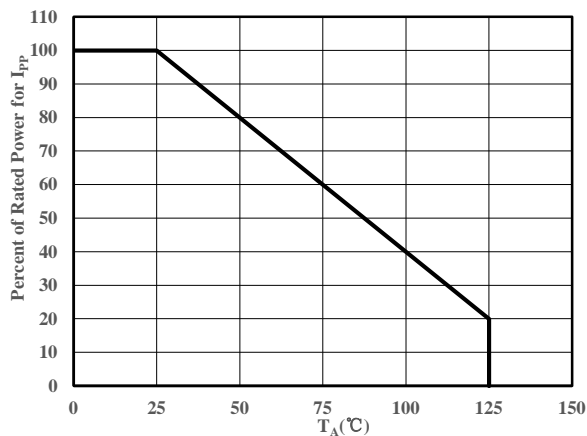
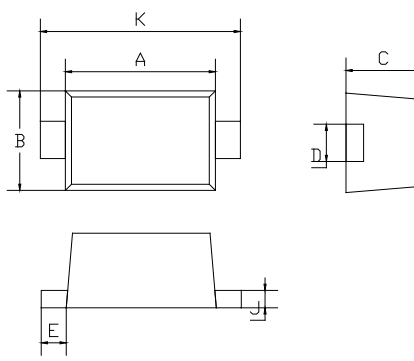


Fig 3 Power Derating Curve

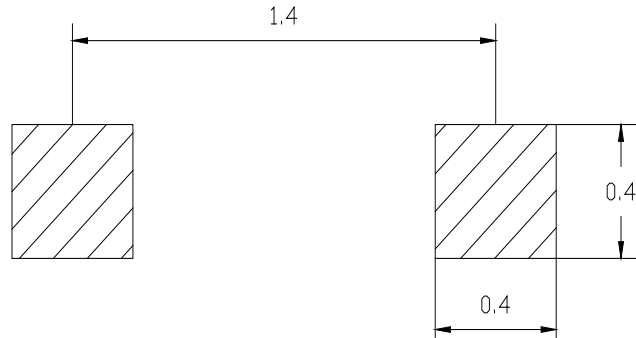
Package Outline Dimensions (Unit: mm)



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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