

Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): $\pm 20\text{kV}$ (air), $\pm 15\text{kV}$ (contact)
- Low reverse stand-off voltage: 5V
- Very low leakage current
- Low diode capacitance: $C_J = 0.50\text{ pF}$
- 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
GESD5V0X1D5	SOD-523	3000pcs / Tape & Reel	AE

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air) *1	$V_{\text{ESD-A}}$	± 20	kV
IEC 61000-4-2; ESD (Contact) *1	$V_{\text{ESD-C}}$	± 15	kV
JESD22-A114-B; ESD (Human Body) *1	$V_{\text{ESD-HB}}$	± 10	kV
JESD22-A114-B; ESD (Machine) *1	$V_{\text{ESD-M}}$	± 0.4	kV
Peak Pulse Power ($t_p = 8/20\mu\text{s}$) *2	P_{PP}	60	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$) *2	I_{PP}	4	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125	$^\circ\text{C}$

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	μA
Clamping Voltage ^{*2}	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	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	0.5	1	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 μs exponential decay waveform according to IEC61000-4-5

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

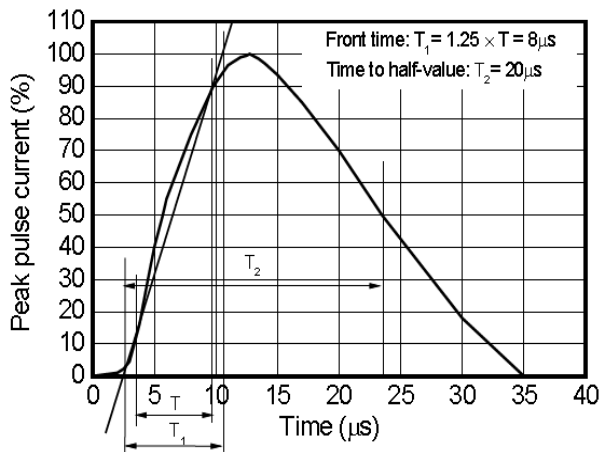


Fig 1 8/20 μs waveform per IEC61000-4-5

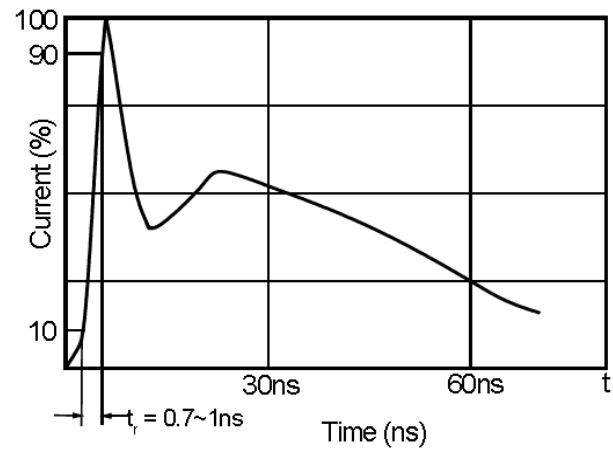


Fig 2 ESD pulse waveform according to IEC61000-4-2

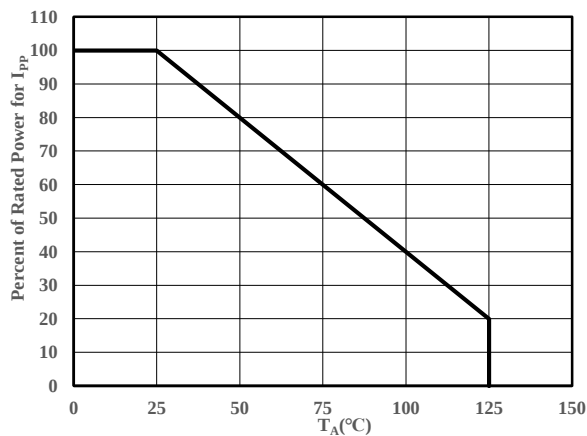
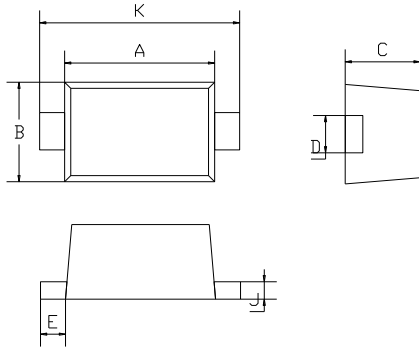


Fig 3 Power Derating Curve

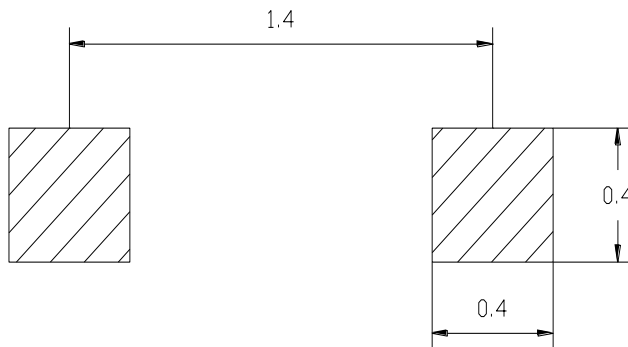
Package Outline Dimensions (Unit: mm)



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



IMPORTANT NOTICE

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.