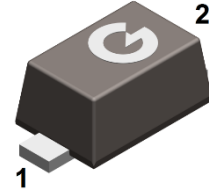


Features

- 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 clamping voltage
- Low leakage current
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

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
TGESD3V3S1B5	SOD-523	3000 pcs / Tape & Reel	RH

Maximum Ratings (@ $T_A = 25^\circ C$ 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
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	50	W
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Operating Temperature	T_J	$-55 \sim +150$	$^\circ C$
Storage Temperature	T_{STG}	$-55 \sim +150$	$^\circ C$

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}		-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	3.8	-	6.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 5\text{A}$, ($t_p = 8/20\mu\text{s}$)	-	7	15	V
Diode Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	11	13	pF

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

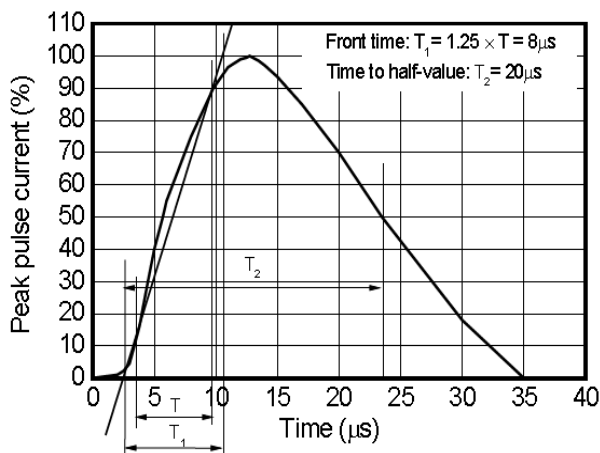


Fig. 1 8/20 μs waveform per IEC61000-4-5

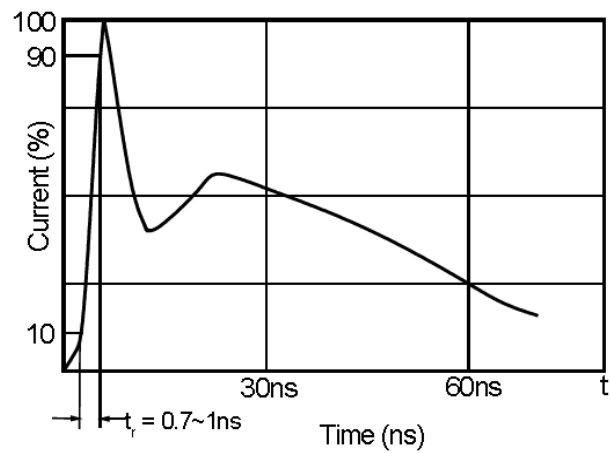


Fig. 2 ESD pulse waveform according to IEC61000-4-2

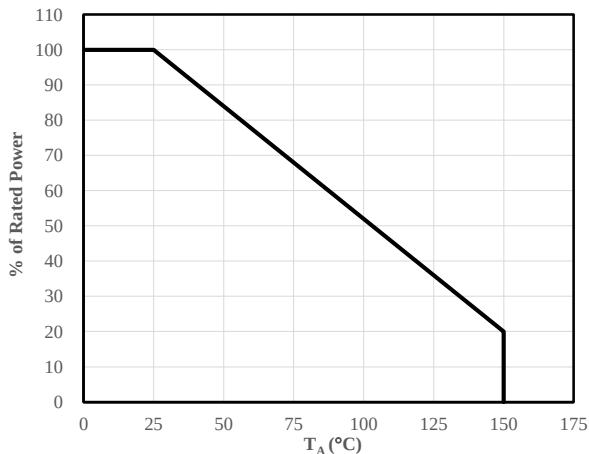


Fig. 3 Power Derating Curve

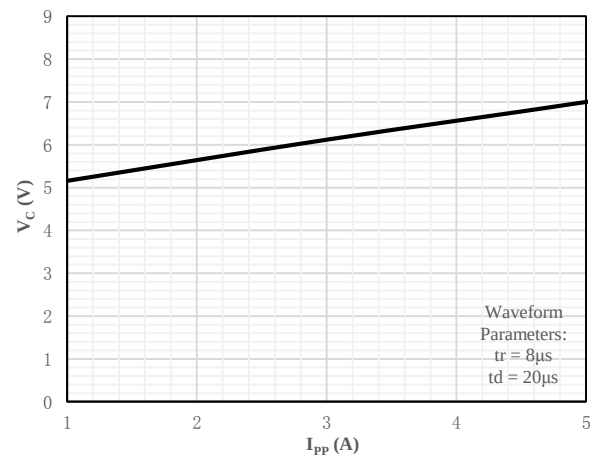
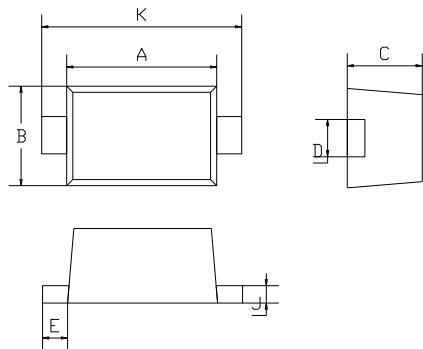


Fig. 4 Clamping Voltage vs. Peak Pulse Current

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

