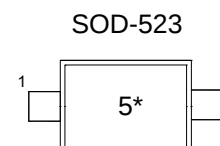
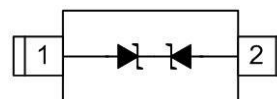


DESCRIPTIONS

The ESD523NC5VB is a Bi-directional transient voltage suppressing diodes to protect one power line, or one control line, or one low speed data line from overvoltage hazard of Electrostatic Discharge(ESD), Electrical Fast Transients(EFT) and Lightning.



PIN Diagram



FEATURES

- * Bi-directional TVS;
- * Provides ESD protection to IEC61000-4-2 level 4
 - ±15kV air discharge;
 - ±15kV contact discharge;
- * Ultra-small body with SOD-523 package;
- * Fast response speed <1 ns;
- * Low clamping voltage;
- * Low operating voltage;
- * RoHS compliant.

APPLICATIONS

- * Computer Interfaces Protection;
- * Microprocessors Protection;
- * Control Signal Lines Protection;
- * Serial and Parallel Ports Protection;
- * power lines on PCB Protection
- * Latchup Protection;

ABSOLUTE MAXIMUM RATINGS

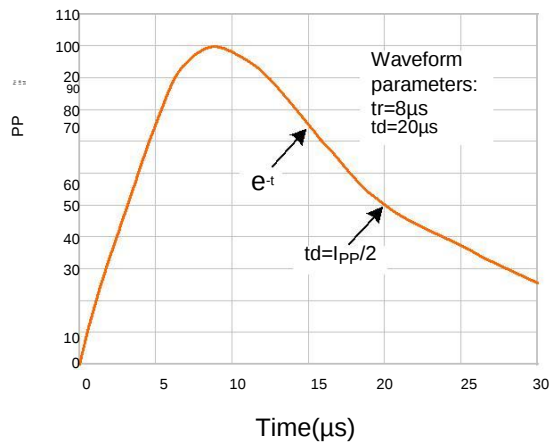
Characteristics	Symbol	Rating	Unit
Peak Pulse Current($t_p=8/20\mu s$)	I_{PP}	6	A
Operating Supply Voltage(pin-1,-2 to pin-3)	V_{DC}	6	V
ESD per IEC61000-4-2(Air)	V_{ESD-1}	±15	KV
ESD per IEC61000-4-2(Contact)		±8	
Lead Soldering Temperature	T_{SOL}	260(10sec.)	°C
Operating Temperature Range	T_{OP}	-55 ~ +125	°C
Storage Temperature Range	T_{STO}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$)

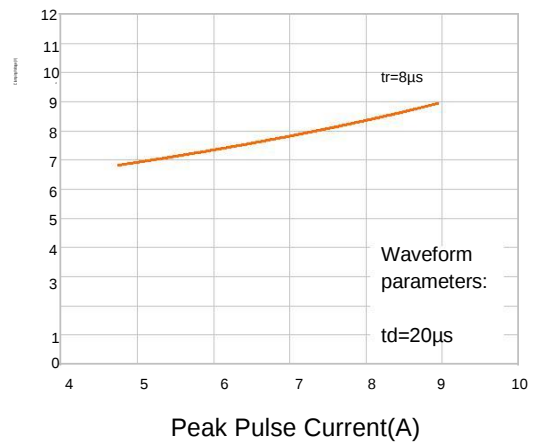
Characteristics	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	$T=25^{\circ}\text{C}$	--	--	5	V
Reverse Leakage Current	I_{Leak}	$V_{RWM}=5\text{V}, T=25^{\circ}\text{C}$	--	--	2.5	μA
Reverse Breakdown Voltage	V_{BV}	$I_{BV}=1\text{mA}, T=25^{\circ}\text{C}$	6.1	--	9	V
Clamping Voltage	V_{CL}	$I_{PP}=5\text{A}, t_P=8/20\mu\text{s}, T=25^{\circ}\text{C}$	--	7	8	V
Clamping Voltage	V_{CL}	$I_{PP}=6.0\text{A}, t_P=8/20\mu\text{s}, T=25^{\circ}\text{C}$	--	9	12	V
ESD Holding Voltage	V_{hold}	IEC 61000-4-2 6KV, $T=25^{\circ}\text{C}$, Contact mode	--	10.5	--	--
Capacitance	C_N	$V_R=0\text{V}, f=1\text{MHz}, T=25^{\circ}\text{C}$	--	13.5	15	pF

TYPICAL ELECTRICAL CHARACTERISTICS CURVE

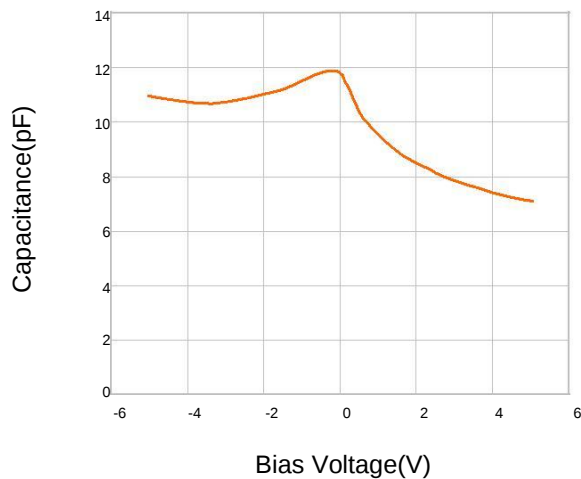
Pulse Waveform



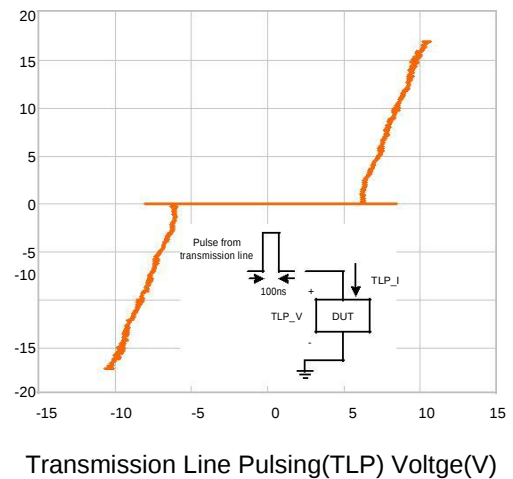
Clamping Voltage vs. Peak Pulse Current



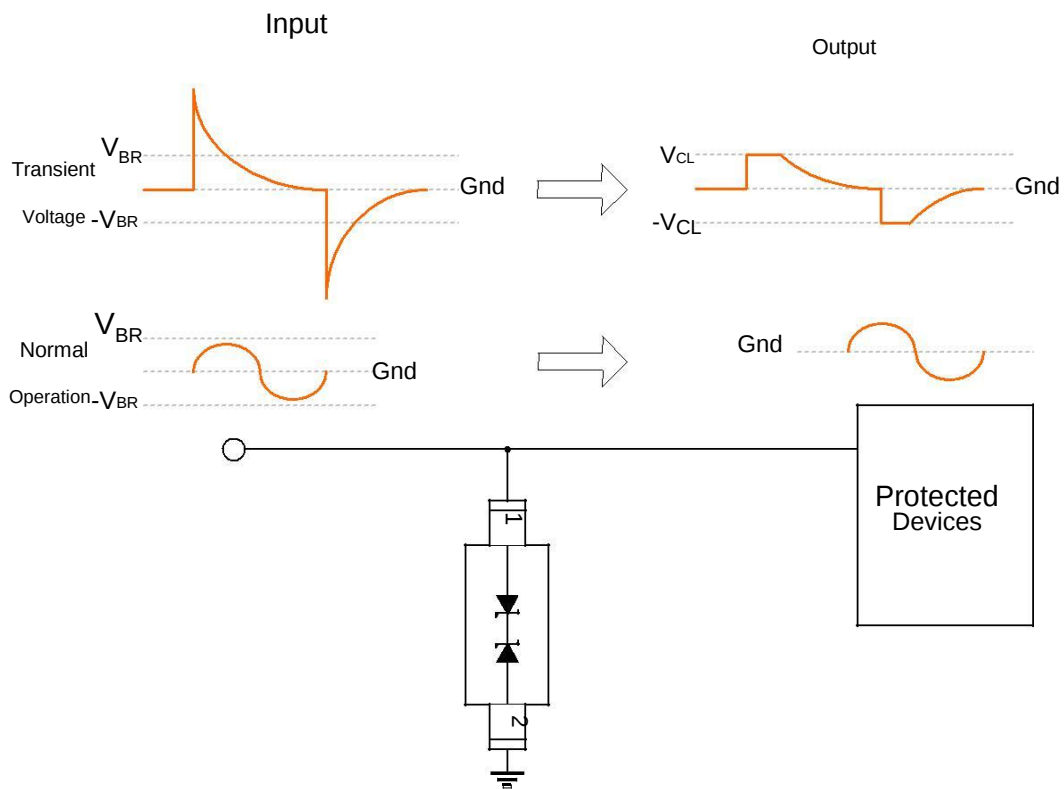
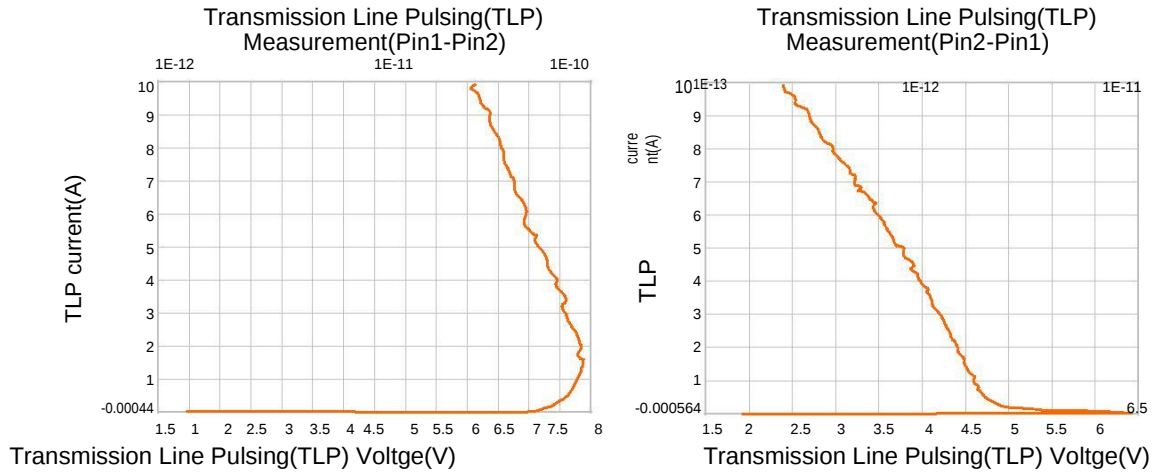
Typical Variation C_{IN} vs. V_{IN}



Transmission Line Pulsing(TLP) Measurement

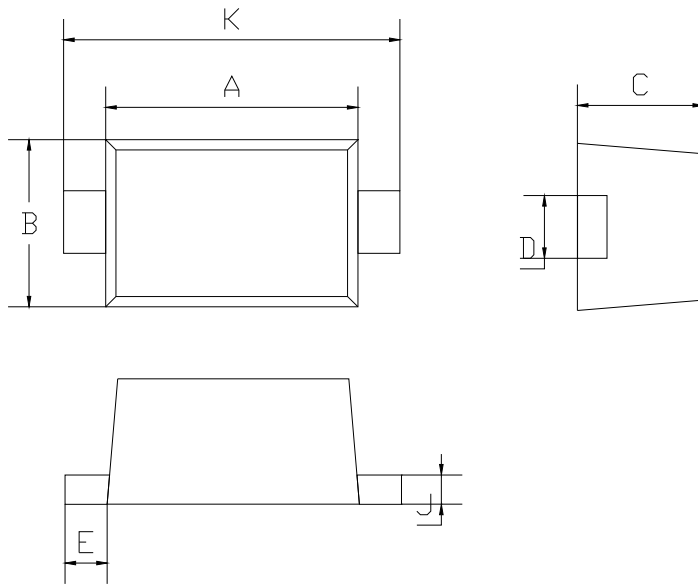


TYPICAL ELECTRICAL CHARACTERISTICS CURVE(continued)



Plastic surface mounted package

SOD-523



SOD-523		
Dim	Min	Max
A	1.1	1.3
B	0.7	0.9
C	0.5	0.7
D	0.3 Typical	
E	0.15	0.25
J	0.1 Typical	
K	1.5	1.7
All Dimensions in mm		

SOLDERING FOOTPRINT

