

Features

- Ultra low capacitance: 0.35pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 25\text{kV}$
 - Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-5 (Lightning) 4A (8/20 μs)

Mechanical Characteristics

- Package: SOD-523(0603)
- Lead Finish: NiPdAu
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020



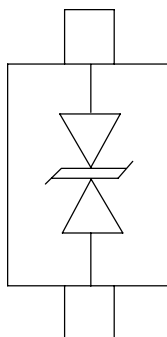
Applications

- Smart phones
- Display Ports
- MDDI Ports
- USB Ports
- Digital Video Interface (DVI)

Ordering Information

Part Number	Qty per Reel	Reel Size
ESD5V0B03-523	3000	7"

Dimensions and Pin Configuration



Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	80	W
Peak Pulse Current (8/20μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air)	VESD	±25	kV
ESD per IEC 61000-4-2 (Contact)		±20	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				5.0	V
Breakdown Voltage	V _{BR}	I _T = 1mA	6.0	7.5	8.5	V
Reverse Leakage Current	I _R	V _{RWM} = 5.0V			200	nA
Clamping Voltage	V _C	I _{PP} = 1A (8 x 20μs pulse)			12	V
Clamping Voltage	V _C	I _{PP} = 4A (8 x 20μs pulse)			20	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		0.35	0.4	pF

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

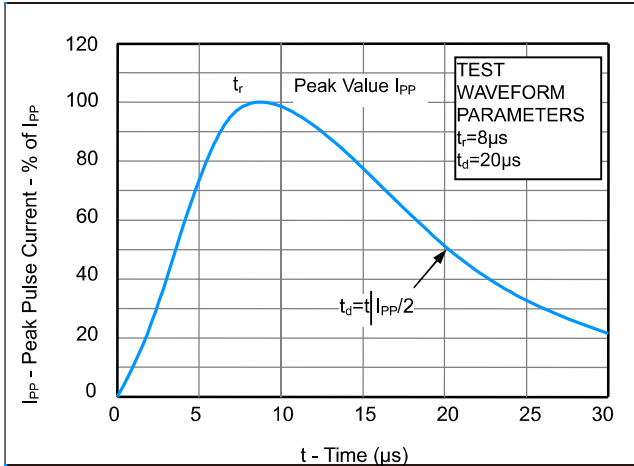


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

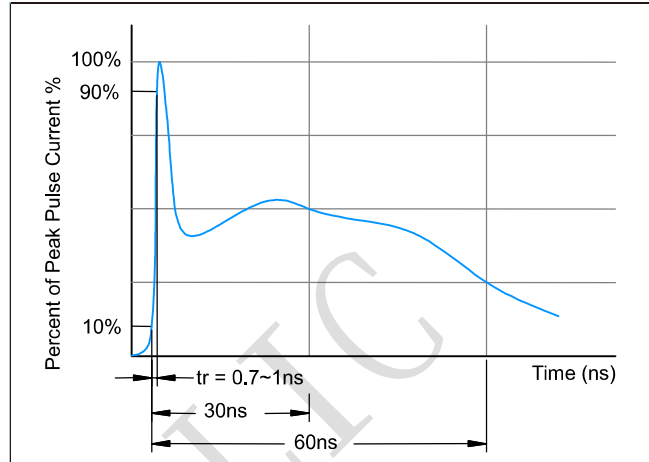


Fig3. Power Derating Curve

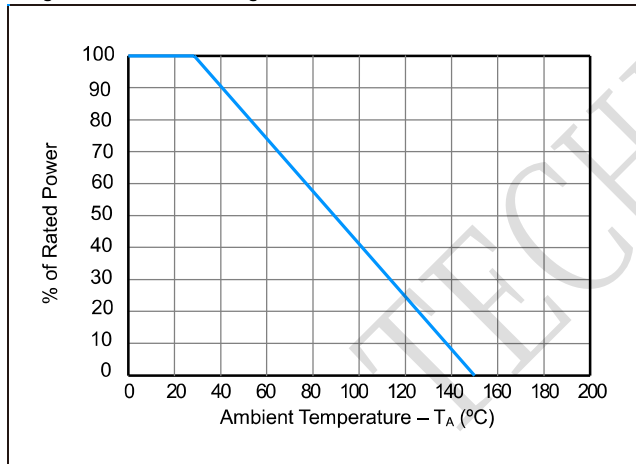
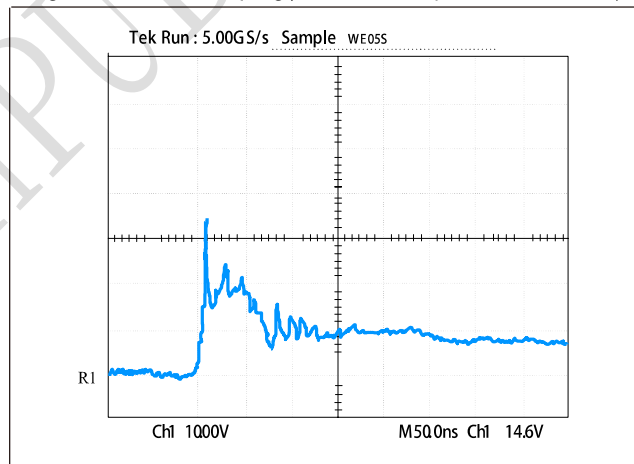
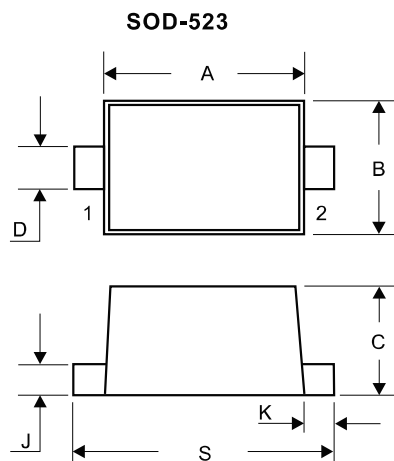


Figure 4: ESD Clamping(8kV Contact per IEC 61000-4-2)



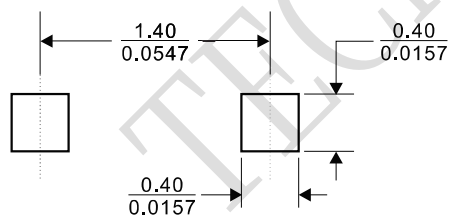
Outline Drawing - SOD-523 (0603)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	1.10	1.30	0.043	0.051
B	0.70	0.90	0.028	0.035
C	0.50	0.70	0.020	0.028
D	0.25	0.35	0.010	0.014
J	0.07	0.20	0.0028	0.0079
K	0.15	0.25	0.006	0.010
S	1.50	1.70	0.059	0.067

Land Pattern - SOD-523 (0603)

Recommended Mounting Pad Layout



Dimensions in ($\frac{\text{millimeters}}{\text{inches}}$)