

1- Line Bidirectional ESD Protection Diode

General description

The PWESD-5VSDD is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time , make these parts ideal for ESD protection on designs where board space is at a premium

Features and benefits

- Low Capacitance: 10 pF(Typ)
- Reverse stand-off voltage: 5V Max
- Low leakage current: nA Level
- Low Clamping Voltage
- Response time is typically < 1 ns
- IEC61000–4–2 Level 4 ESD Protection



Application information

- Cell phones
- Audio equipment
- Portable devices
- Digital cameras
- Power supplies

Ordering information

Device	Package	Marking	Packaging
PWESD-5VSDD	SOD523	5C	3000/Tape & Reel

Schematic & Pin configuration

Simplified outline	Graphic symbol
	

Maximum Ratings

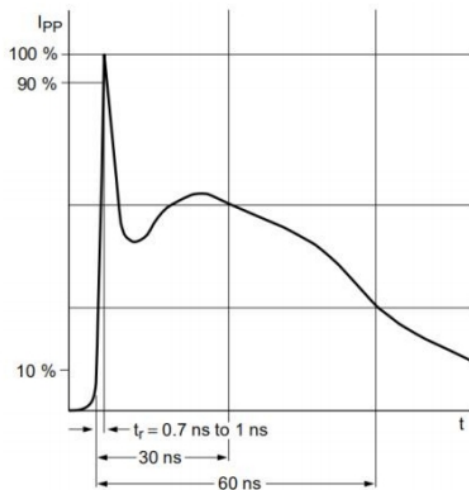
($T_{OP} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PPM}	48	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PPM}	6	A
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Operating Temperature Range	T_{OP}	-40 to +125	$^{\circ}\text{C}$
Maximum junction temperature	T_J	150	$^{\circ}\text{C}$
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV

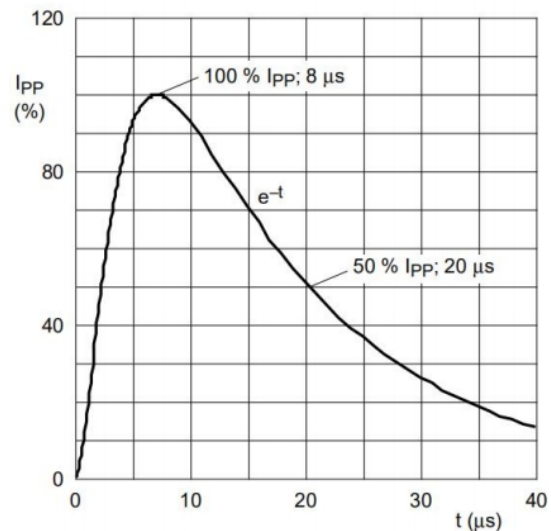
Electrical Characteristics

($T_{OP} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	5.8	--	7.2	V	$I_T=1\text{mA}$
Leakage Current I_{Leak}	I_R	--	--	100	nA	$V_{RWM}=5\text{V}$
Clamping Voltage	V_C	--	7.5	8.0	V	$I_{PP}=6\text{A}, T_p=8/20\mu\text{s}$
Junction Capacitance	C_J	--	10	12	pF	$V_R=0\text{V}, f=1\text{MHz}$



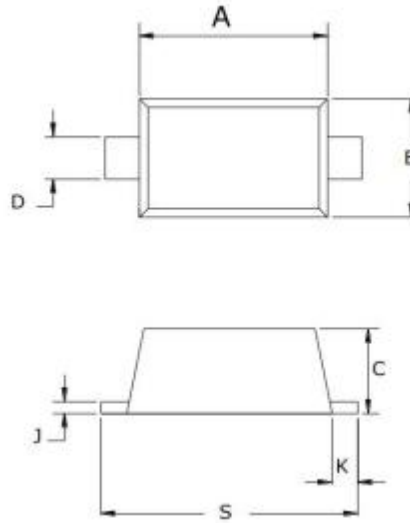
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20 μs pulse)

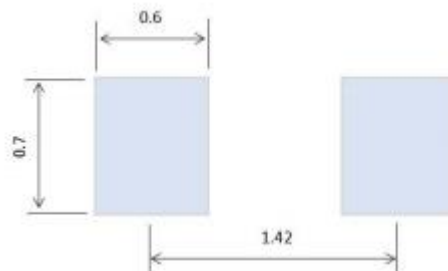
Package Outline Dimensions

SOD523



SYMBOL	Dimensions In Millimet	
	MIN	MAX
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
J	0.07	0.20
K	0.15	0.25
S	1.50	1.70

Soldering Footprint (mm)



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