





1-Line Bidirectional ESD Protection Diode

SOD523

Schematic & Pin configuration

Simplified outline	Graphic symbol
	

General description

The ESD5Z7.0C 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

- Reverse stand-off voltage: 7.0V Max
- Low leakage current: nA Level
- Low Clamping Voltage: $V_c \leq 17 \text{ V}@9\text{A}(8/20\mu\text{s})$
- Response time is typically $< 1 \text{ ns}$
- IEC61000-4-2 Level 4 ESD Protection

Application information

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

Ordering information

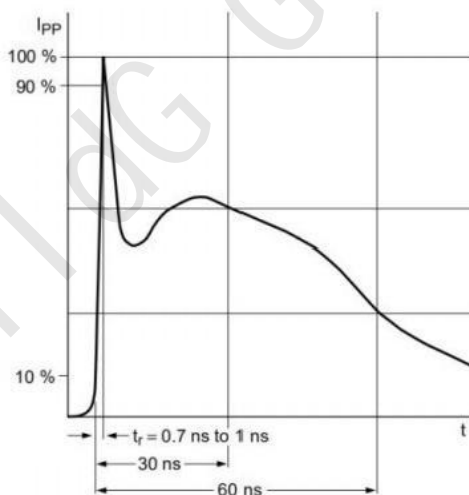
Device	Package	Packaging	Reel Size
ESD5Z7.0C	SOD523	3000/Tape & Reel	7 inch

Maximum Ratings (Top=25°C, unless otherwise specified)

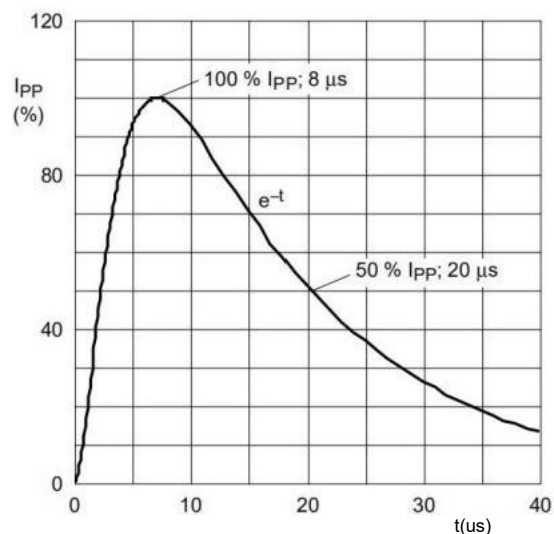
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20 μ s)	PpPM	150	W
Peak Pulse Current (tp=8/20 μ s)	IpPM	9	A
Maximum lead temperature for soldering during 10s	Tl	260	°C
Storage Temperature Range	Tstg	-55 to +150	°C
Operating Temperature Range	Top	-40 to +125	°C
Maximum junction temperature	Tj	150	°C
ESD voltage IEC 61000-4-2 (air discharge)	VESD	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	VESD	30	kV

Electrical Characteristics (Top=25°C, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	VRwM			7.0	V	
Breakdown Voltage	VBR	9.0		11	V	Ir=1mA
Leakage Current ILeak	Ir			100	nA	VRwM=7V
Clamping Voltage	Vc		16	17	V	pp=9A, Tp=8/20 μ s
Junction Capacitance	Cj		8	10	pF	VR=0V, f=1MHz



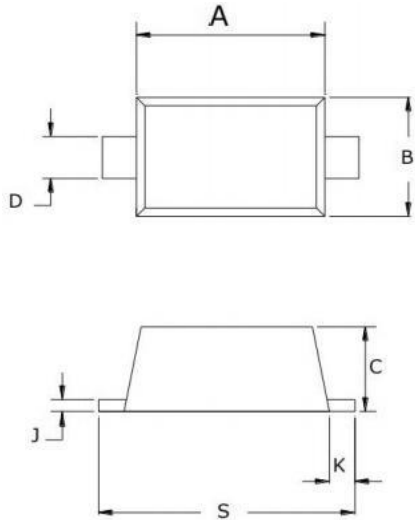
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

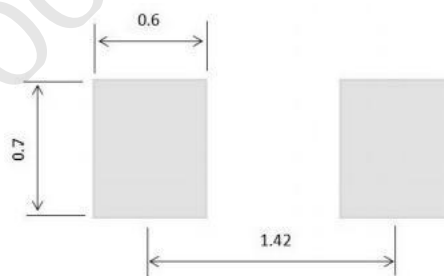
Package Outline Dimensions

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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