



General description

The SD08CS 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

- Bidirectional ESD protection of one line
- Reverse stand-off voltage: 8.0V Max
- Low leakage current: nA Level
- Response time is typically < 1 ns
- Low clamping voltage: V_C 15 V @ $I_{PP} = 20$ A (TYP)
- ESD Protection: 30kV(air)/ 30kV(contact) (IEC61000-4-2)
- RoHS compliant

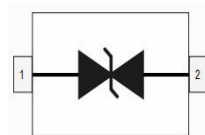
Application information

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks,Desktops,and Servers

Ordering information

Par Number	Package	Packaging	Reel Size
SD08CS	SOD323	3000/Tape & Reel	7 inch

Schematic & Pin configuration

Simplified outline	Graphic symbol
	

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

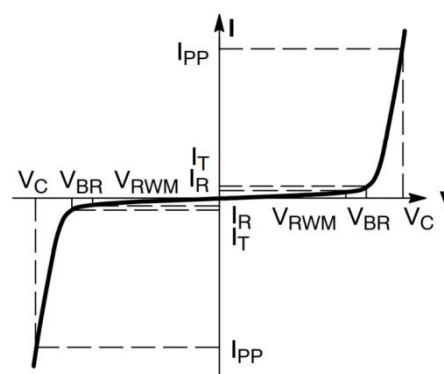
Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PPM}	320	W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PPM}	20	A
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV
Maximum lead temperature for soldering during 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	$^{\circ}\text{C}$

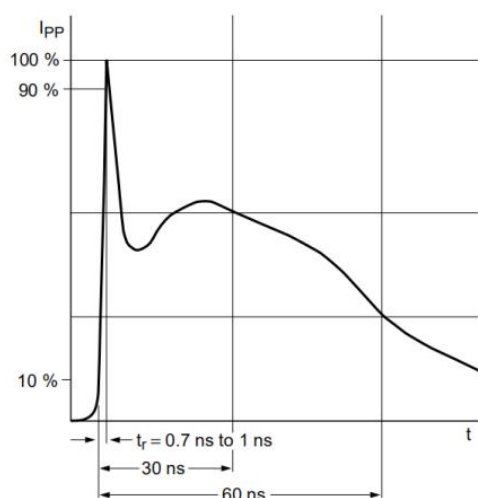
Electrical Characteristics ($T_{OP} = 25^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	8.0	V	
Breakdown Voltage	V_{BR}	8.5	--	9.5	V	$I_T = 1\text{mA}$
Leakage Current I_{Leak}	I_R	--	--	100	nA	$V_{RWM} = 8.0\text{V}$
Clamping Voltage	V_C	--	9.0	--	V	$I_{PP} = 1.0\text{A}$, $T_p = 8/20\mu\text{s}$
Clamping Voltage	V_C	--	15	16	V	$I_{PP} = 20\text{A}$, $T_p = 8/20\mu\text{s}$
Junction Capacitance	C_J	--	16	18	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

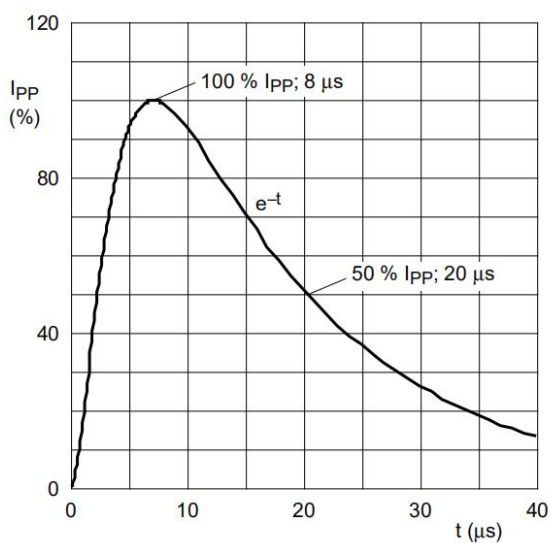
Portion Electronics Parameter

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	VBR Breakdown Voltage @ I_T





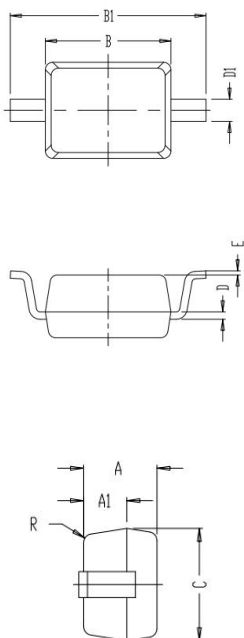
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

Package Outline Dimensions

SOD323



SYMBOL	Dimensions In Millimet	
	MIN	MAX
A	0.700	0.900
A1	0.450	0.600
B	1.600	1.800
B1	2.500	2.750
C	1.200	1.400
D	0.080	0.150
D1	0.250	0.350
E	0.000	0.100
R	0.010	0.060