1-Line Bidirectional ESD Protection Diode

General description

The SD08C-SL 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 < 16 V @ I_{PP} = 35 A
- ESD Protection: 30kV(air)/ 30kV(contact) (IEC61000-4-2)
- RoHS compliant

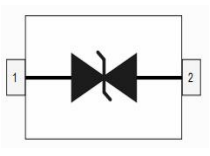
Application information

- 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
SD08C-SL	SOD323	3000/Tape & Reel	7 inch

Schematic & Pin configuration

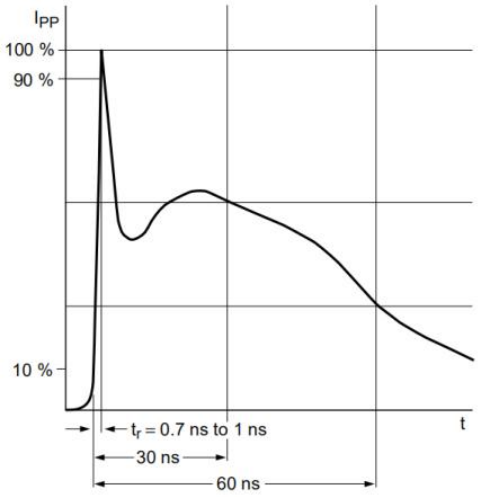
Simplified outline	Graphic symbol
	

Maximum Ratings (T_{OP} = 25 °C, unless otherwise specified)

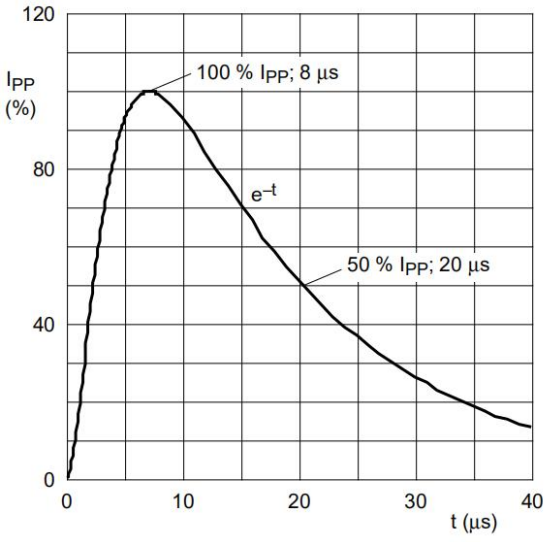
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20 μ s)	P_{PPM}	560	W
Peak Pulse Current(tp = 8/20 μ s)	I_{PPM}	35	A
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV
Maximum lead temperature for soldering during 10s	T_L	260	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Operating Temperature Range	T_{OP}	-40 to +125	°C

Electrical Characteristics (T_{OP} = 25 °C, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	8.0	V	
Breakdown Voltage	V_{BR}	9.2	--	11.0	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	100	nA	V_{RWM}=8.0V
Clamping Voltage	V_C	--	15	16	V	I_{PP}=35A,Tp=8/20μs
Junction Capacitance	C_J	--	33	40	pF	V_R=0V, f=1MHz



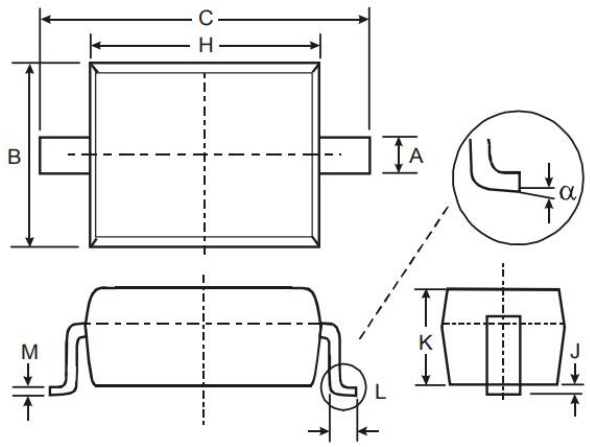
IEC61000−4−2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

Package Outline Dimensions

SOD323



SYMBOL	MILLIMETERS	
	MIN	MAX
A	0.25	0.35
B	1.20	1.40
C	2.40	2.70
H	1.60	1.80
J	0.01	0.15
K	0.70	0.90
L	0.20	0.40
M	0.08	0.15
α	0°	8°

Soldering Footprint (mm)