

General description

These surge protection diodes are designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

Features and benefits

- Unidirectional ESD protection of one line
- Reverse stand-off voltage: 5.0V Max
- Low leakage current: nA Level
- Response time is typically < 1 ns
- Low clamping voltage: $V_C < 15\text{ V @ IPP} = 28\text{ A}$
- ESD Protection: 30kV(air)/ 30kV(contact) (IEC61000-4-2)
- RoHS compliant



SOD323

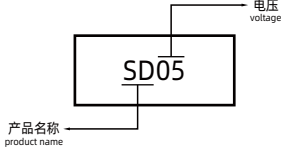
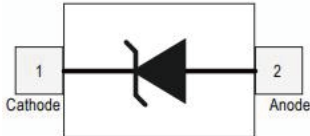
Application information

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

Ordering information

Device	Package	Reel Size	Qty(PCS)
SD05	SOD323	7 Inch	3000

Ordering information

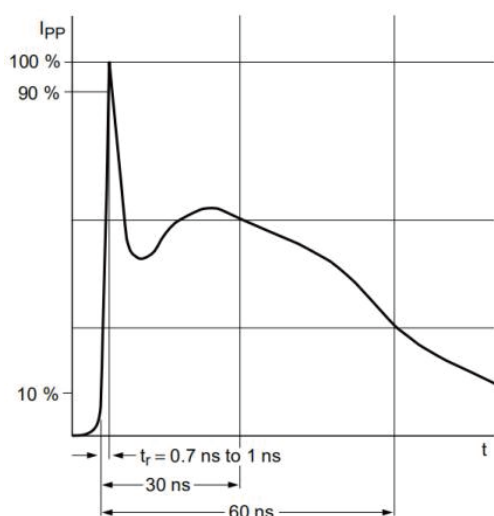
Marking	Naming rule	Graphic symbol
ZA		

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

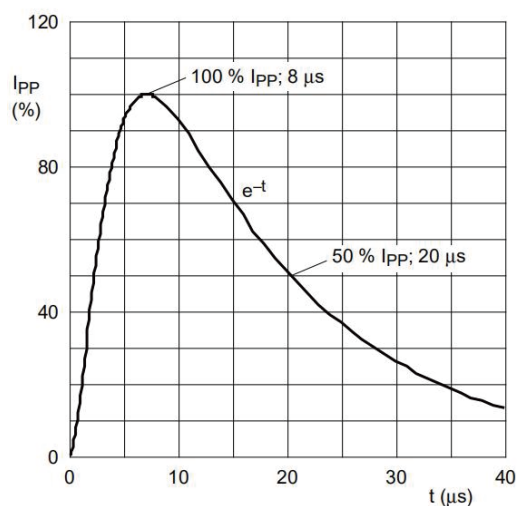
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P _{PPM}	420	W
Peak Pulse Current(tp = 8/20μs)	I _{PPM}	28	A
Maximum lead temperature for soldering during 10s	T _L	260	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C
Operating Temperature Range	T _{OP}	-40 to +125	°C
ESD voltage IEC 61000-4-2 (air discharge)	V _{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V _{ESD}	30	kV

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

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V _{RWM}	--	--	5.0	V	
Breakdown Voltage	V _{BR}	6.5	--	8.0	V	I _T =1mA
Leakage Current I _{Leak}	I _R	--	--	500	nA	V _{RWM} =5V
Clamping Voltage	V _C	--	--	9.0	V	I _{PP} =1A, T _p =8/20μs
		--	--	15.0		I _{PP} =28A, T _p =8/20μs
Dynamic Resistance	R _{DYN}	--	0.2	--	Ω	T _{LP} =0.2/100ns
Junction Capacitance	C _J	--	170	200	pF	V _R =0V, f=1MHz



IEC61000-4-2 Waveform

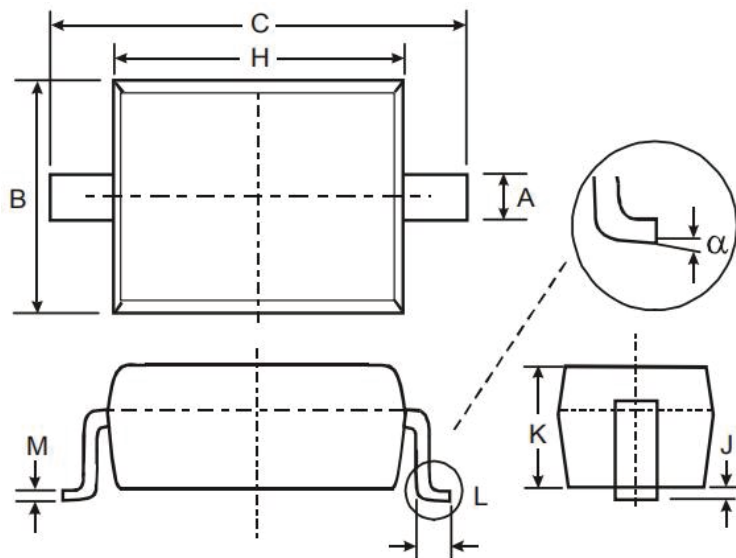


IEC 61000-4-5 Waveform(8/20μs pulse)



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	0.80	1.00
L	0.20	0.40
M	0.08	0.15
α	0°	8°

Soldering Footprint (mm)

