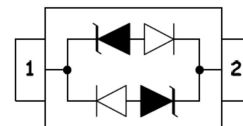


Bidirectional TVS Diode



SOD-323



Features

- Peak Pulse Power (8/20us) : 350W
- Transient protection for high-speed data lines
- IEC 61000-4-2 (ESD) : $\pm 30\text{kV}$ (air)
- IEC 61000-4-2 (ESD) : $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- Protects One Power or I/O Port
- Low Clamping Voltage
- Low Leakage Current
- Response time is $< 1\text{ ns}$

Application

- Cellular Handsets and Accessories
- Microprocessor Based Equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- USB Interface

Ordering Information

Part No.	Remark	Package	Packing
SDxxCL-C	Halogen Free	SOD-323	3000 / Tape & Reel

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test conditions	Limit	Unit
ESD Rating per IEC 61000-4-2	V_{ESD}	Contact	± 30	kV
		Air	± 30	
Peak Pulse Power	P_{PP}	$t_p = 8/20\text{ }\mu\text{s}$	350	W
Operating temperature range	T_J		$-55 \sim +150$	$^\circ\text{C}$
Storage temperature range	T_{STG}		$-55 \sim +150$	$^\circ\text{C}$

Electrical Characteristics Per Line ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part No.	Marking Code	V_{RWM}	V_{BR}	V_C	$V_C @ I_{\text{PP}}$				I_R	C_J
		Max	@ $I_T=1\text{mA}$	@ 1A	Max	I_{PP}	Max	I_{PP}	Max	Typ
		(V)	Min (V)	Max (V)	(V)	(A)	(V)	(A)	(μA)	(pF)
SD03CL-C	CC	3	4	7.5	13.9	8	20	20	5	0.8
SD05CL-C	AC	5	6	9.8	18.3	8	20	18	1	0.8
SD08CL-C	BC	8	8.5	13.4	18.5	8	24	18	1	0.8
SD12CL-C	DC	12	13.3	19	24	6	28.6	12	1	0.8
SD15CL-C	EC	15	16.7	24	29	5	31.8	10	1	0.8
SD18CL-C	FC	18	20	35	45	5	53	7	1	0.8
SD20CL-C	GC	20	22	38	45	4	55	7	1	0.8
SD24CL-C	HC	24	26.7	43	45	3	56	6	1	0.8
SD36CL-C	IC	36	40	60	65	2	75	4.5	1	0.8

Bidirectional TVS Diode

Rating and Characteristics Curves

Fig 1 8/20μs Waveform per IEC61000-4-5

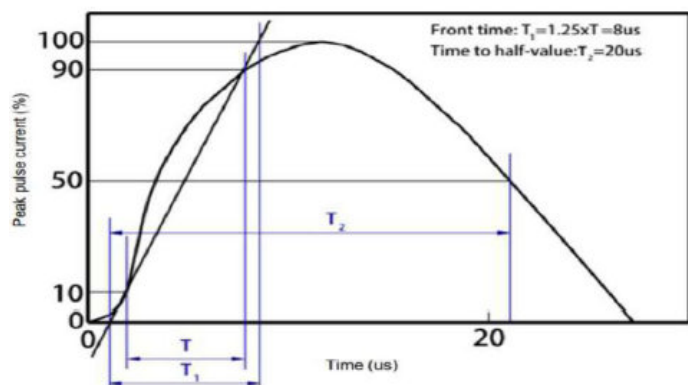


Fig 2 Contact Discharge Current Waveform per IEC61000-4-2

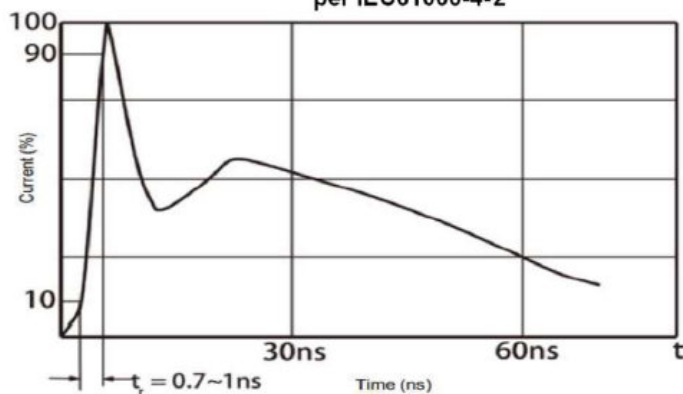


Fig 3 Voltage vs Capacitance

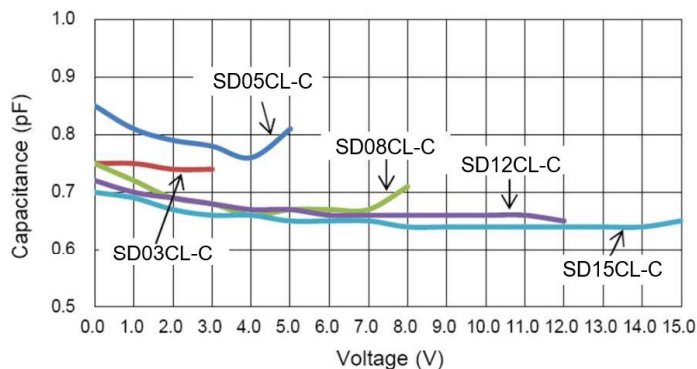


Fig 4 Voltage vs Capacitance

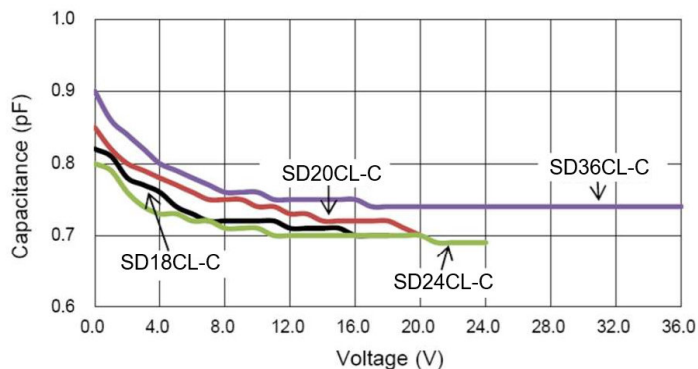


Fig 5 Clamping Voltage vs Peak Pulse Current

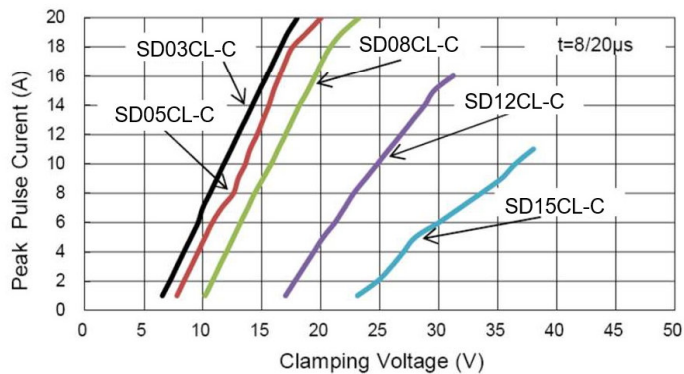
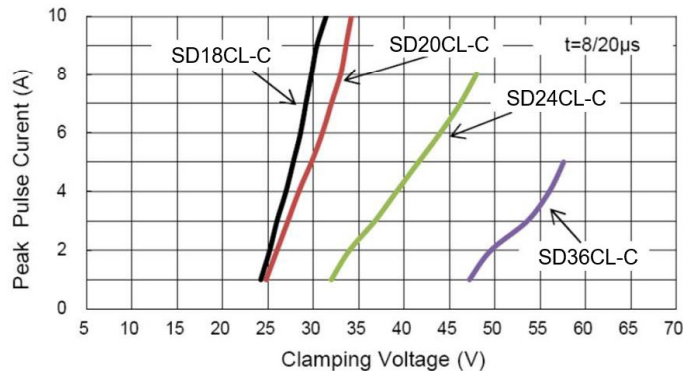
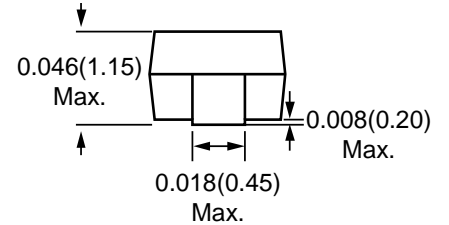
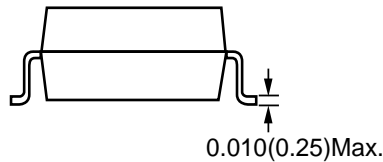
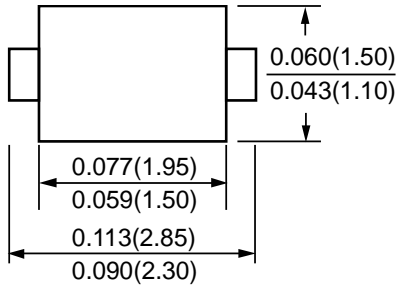


Fig 6 Clamping Voltage vs Peak Pulse Current



Bidirectional TVS Diode

Package Outline Dimensions

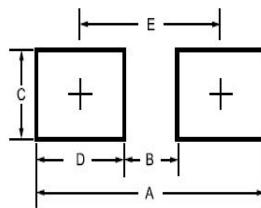


SOD-323

Dimensions in inches and (millimeters)

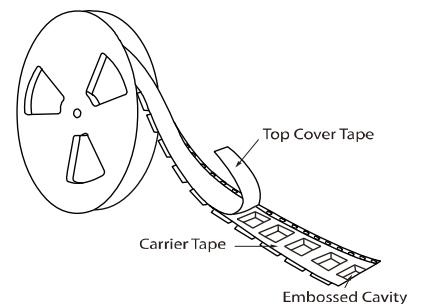
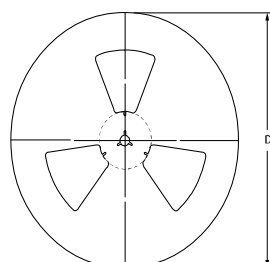
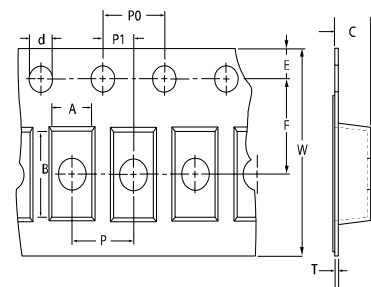
Suggested Pad Layout

Dimension	Outline	SOD-323 (mm)
A		3.00
B		1.60
C		0.83
D		0.70
E		2.30



Tape & Reel Specification

Item	Symbol	SOD-323 (mm)
Carrier width	A	1.44 ± 0.15
Carrier length	B	3.3 (max)
Carrier depth	C	1.17 ± 0.18
Sprocket hole	d	1.55 ± 0.1
Reel outside diameter	D	180 (max)
Reel inner diameter	D1	49 (min)
Feed hole width	D0	13 ± 0.25
Sprocket hole position	E	1.75 ± 0.1
Punch hole position	F	3.5 ± 0.1
Punch hole pitch	P	4.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Embossment center	P1	2.0 ± 0.1
Overall tape thickness	T	0.6 (max)
Tape width	W	8.00 ± 0.3



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