

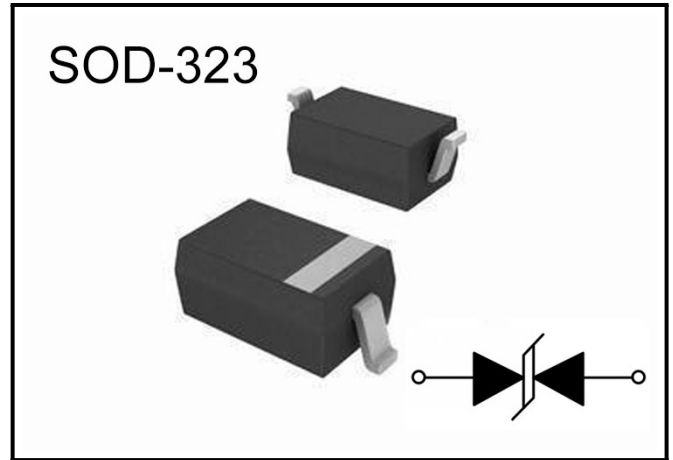
PESD1LIN

ESD Protection Diode

Features

- 350Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Reverse Voltage: 15V , 24V
- Low clamping Voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact ; $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10/7A (8/20 μs)

Package



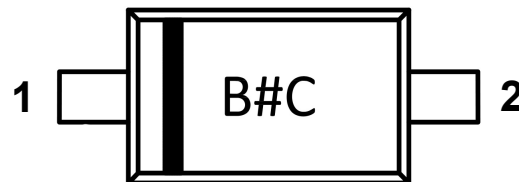
Applications

- Microprocessor based equipment
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- LIN-bus protection

Mechanical Characteristics

- SOD323 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
PESD1LIN	SOD-323	3k	Tape and reel

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Specifications are subject to change without notice.

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ESD Protection Diode

Absolute Maximum Rating

Rating	Symler	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	350	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	10/7	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	30	KV
ESD per IEC 61000-4-2 (Contact)		30	
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 150	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 150	$^{\circ}C$

Electrical Characteristics

PIN1 to PIN2						
Parameter	Symler	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}	—	—	—	15.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	16.7	—	—	V
Reverse Leakage Current	I_R	$V_{RWM} = 15V, T = 25^{\circ}C$	—	—	0.2	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$	—	—	10	A
Clamping Voltage	V_C	$I_{PP} = 10A, t_p = 8/20\mu s$	—	27	—	V
Junction Capacitance	C_j	$V_R = 0V, T = 25^{\circ}C, f = 1MHz$	—	35	40	pF

PIN2 to PIN1						
Parameter	Symler	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}	—	—	—	24.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	26.7	—	—	V
Reverse Leakage Current	I_R	$V_{RWM} = 24V, T = 25^{\circ}C$	—	—	0.2	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$	—	—	7	A
Clamping Voltage	V_C	$I_{PP} = 7A, t_p = 8/20\mu s$	—	40	45	V
Junction Capacitance	C_j	$V_R = 0V, T = 25^{\circ}C, f = 1MHz$	—	35	40	pF



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

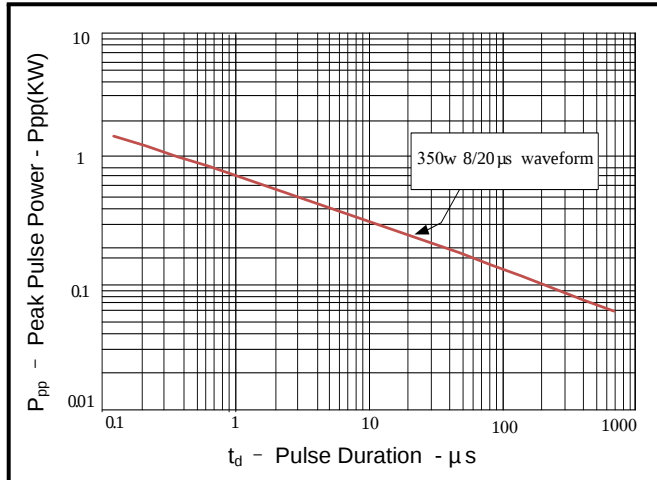


Figure 2: Power Derating Curve

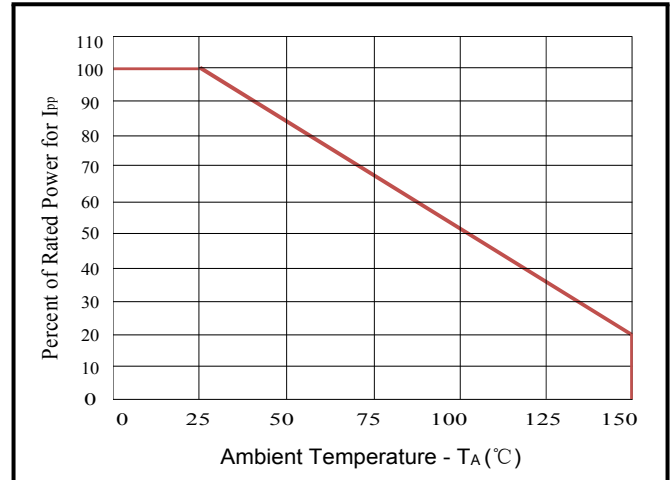


Figure 3: Pulse Waveform

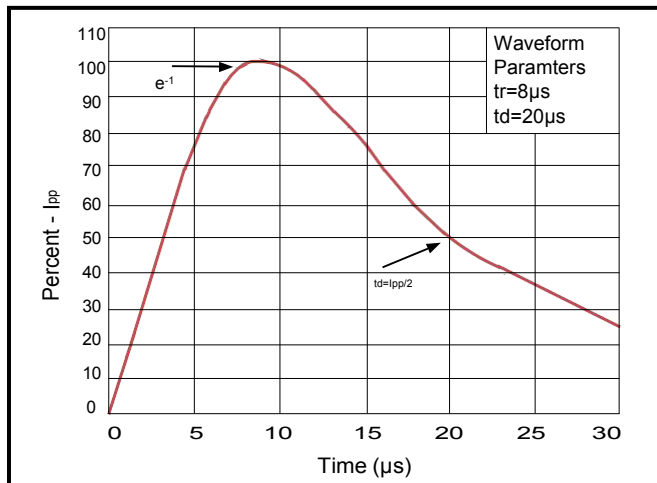
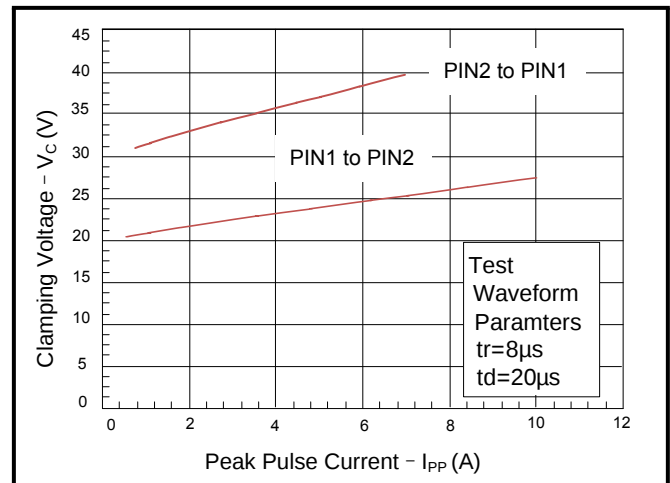


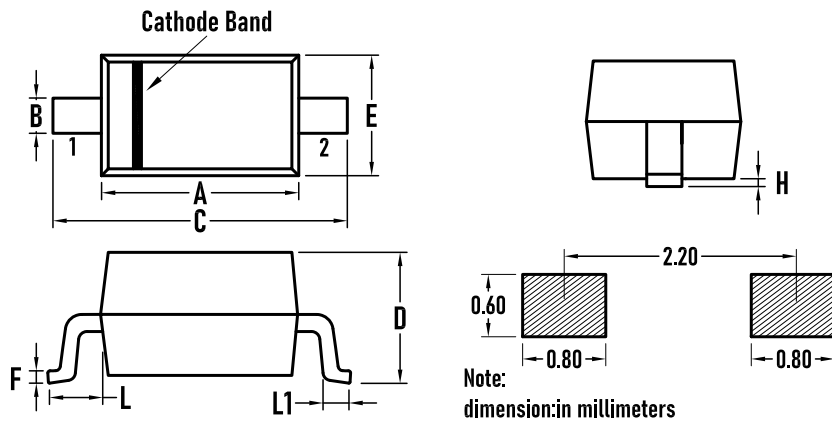
Figure 4: Clamping Voltage vs. Ipp



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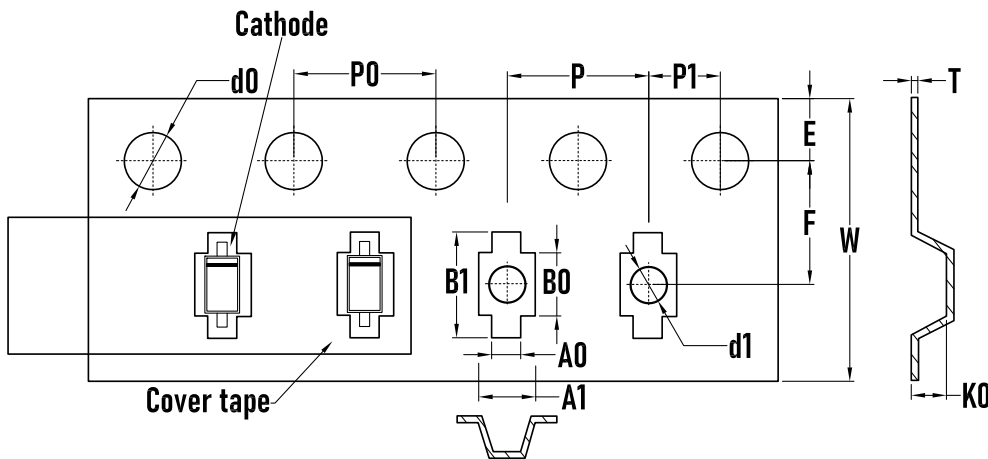
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Outline Drawing – SOD-323



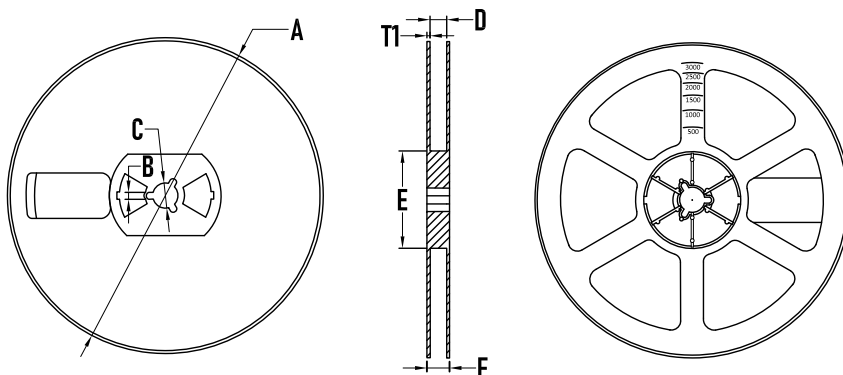
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.400	2.800	0.094	0.110
D	—	1.100	—	0.043
E	1.100	1.500	0.043	0.059
F	0.080	0.150	0.003	0.006
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Packaging Tape - SOD-323



SYMBOL	MILLIMETER
A0	0.80±0.10
A1	1.48±0.10
B0	1.80±0.10
B1	3.00±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.05±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.25 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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