

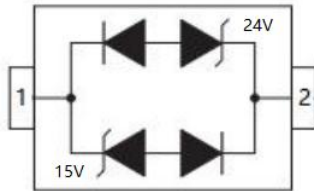
## SD1524LCC TVS Array



### Features

- ESD protection of one automotive LIN bus line
- Asymmetrical diode configuration ensures an optimized Electromagnetical Immunity of a LIN Electronic Control Unit (ECU)
- Due to the integrated diode structure only one very small SOD323 package is needed
- ESD protection of up to 23 kV
- IEC 61000-4-2, level 4 (ESD)
- IEC 61000-4-5 (surge); IPP = 3 A at tp = 8/20µs
- Terminals finish: 100% Pure Tin
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Schematic & Pin Configuration



Pin	Description
1	cathode 1 (15 V)
2	cathode 2 (24 V)

### Mechanical Characteristics

- Case: SOD-323, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208

### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20 µs)	P <sub>pp</sub>	160	W
Peak Pulse Current (tp=8/20 µs)	I <sub>pp</sub>	3	A
Operating Storage Temperature Range	T <sub>STG</sub>	-65 to 150	°C
Operating Junction Temperature	T <sub>J</sub>	150	°C

**Electrical Characteristics@T<sub>A</sub>=25°C unless otherwise specified**

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Breakdown Voltage*	V <sub>BR</sub>	I <sub>R</sub> =5mA, SD1524LCC(15V) SD1524LCC(24V)	17.1 25.4	18.9 27.8	20.3 30.3	V
Reverse Standoff Voltage*	V <sub>RWM</sub>	SD1524LCC(15V) SD1524LCC(24V)	-	-	15.0 24.0	V
Reverse Leakage Current*	I <sub>RM</sub>	V <sub>R</sub> =15V, SD1524LCC(15V) V <sub>R</sub> =24V, SD1524LCC(24V)	-	-	50 50	nA
Clamp Voltage SD1524LCC(15V)	V <sub>C</sub>	I <sub>pp</sub> =1A t <sub>p</sub> =8/20μs	-	-	25	V
		I <sub>pp</sub> =5A t <sub>p</sub> =8/20μs	-	-	44	V
Clamp Voltage SD1524LCC(24V)	V <sub>C</sub>	I <sub>pp</sub> =1A t <sub>p</sub> =8/20μs	-	-	40	V
		I <sub>pp</sub> =3A t <sub>p</sub> =8/20μs	-	-	70	V
Diode Capacitance	C <sub>D</sub>	Reverse Bias=0V, f = 1 MHz	-	-	17	pF

\* Pulse width < 300 μs, duty cycle < 2%

**Ratings and Characteristics Curves**

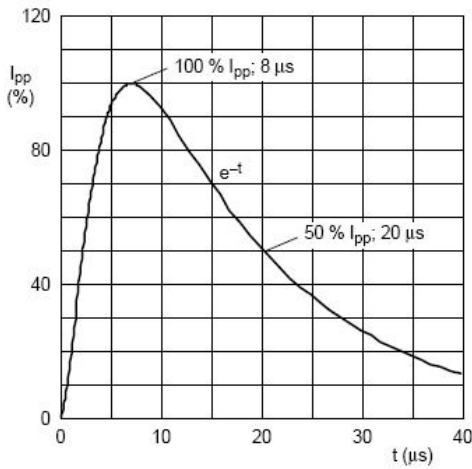


Fig 1. 8/20 μs pulse waveform according to IEC 61000-4-5.

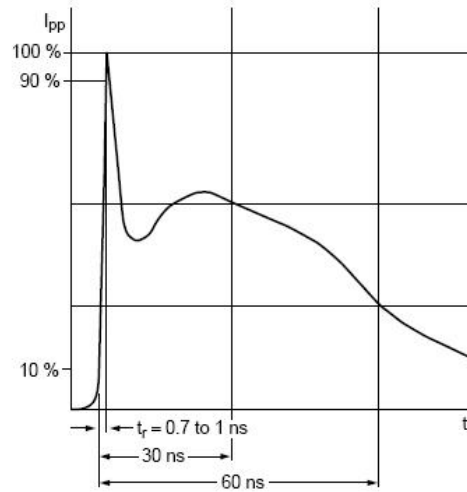
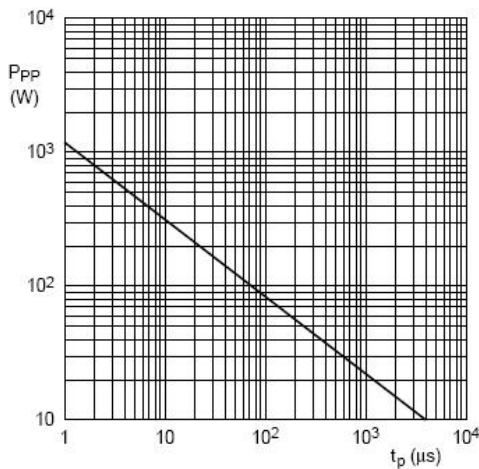


Fig 2. ElectroStatic Discharge (ESD) pulse waveform according to IEC 61000-4-2.



$T_{amb} = 25\text{ }^{\circ}\text{C}$ .  
 $t_p = 8/20\text{ }\mu\text{s}$  exponentially decaying waveform; see Figure 1.

Fig 3. Peak pulse power dissipation as a function of pulse time; typical values.

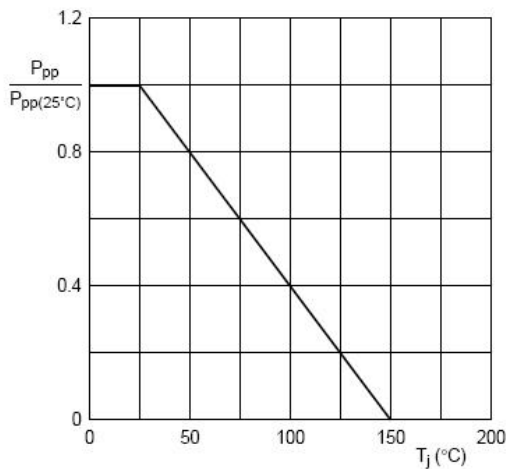


Fig 4. Relative variation of peak pulse power as a function of junction temperature; typical values.

**Ordering Information**

Device	Package	Shipping
SD1524LCC	SOD-323(Pb-Free)	3000pcs / reel
SD1524LCCTR	SOD-323(Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

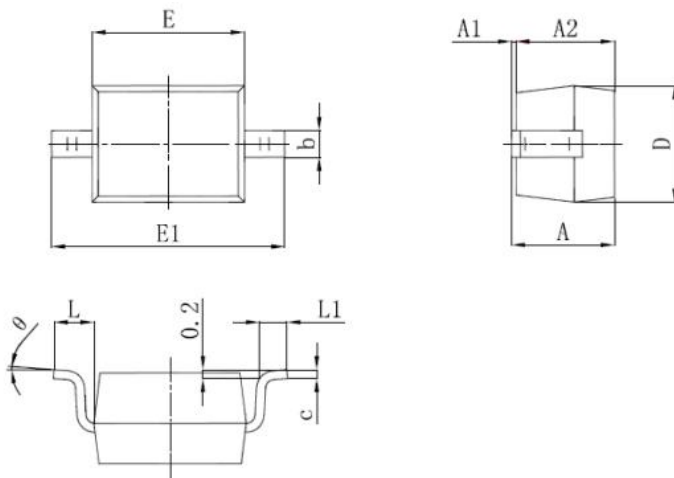
**Marking Diagram**



Where AM is SD1524LCC

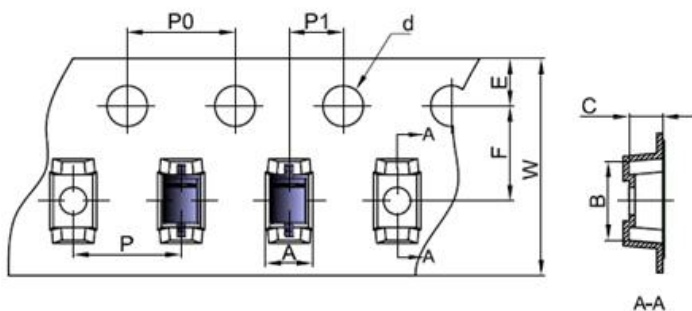
AM = Marking code

**Mechanical Dimensions SOD-323**



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	-	1.000	-	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.700	0.098	0.106
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

**Carrier Tape Specification SOD-323**



SYMB OL	Millimeters	
	Min.	Max.
B	2.85	2.95
C	1.20	1.30
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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