HESDNC1524B1EL-A

ESD PROTECTION DIODE

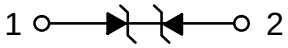
Discription

The HESDNC1524B1EL-A protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.
It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.

SOD-323

Features

★ Max. peak pulse power: P_{PP} = 188W @ t_p = 8/20us
★ Low clamping voltage: V_{CL} = 25 V @ I_{PP} =5A
★ Ultra low leakage current: I_{RM} < 10 nA
★ ESD protection of up to 23 kV
★ IEC 61000-4-2, level 4 (ESD)
★ IEC 61000-4-5 (surge); IPP = 5 A @ t_p = 8/20us



Circuit Diagram

Orderingin formation

Product ID	Pack	Qty(PCS)
HESDNC1524B1EL-A	SOD-323	3000

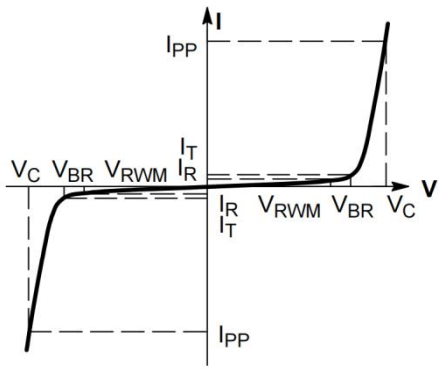
Absolute Ratings(Tamb = 25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μS)	P_{Pk}	188	W
Peak Pulse Current(tp = 8/20μS)	I_{PP}	5	A
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	25	KV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	23	KV
Storage Temperature Range	T_{stg}	-55 to +150	°C
Operating Temperature Range	T_{OP}	-40 to +85	°C

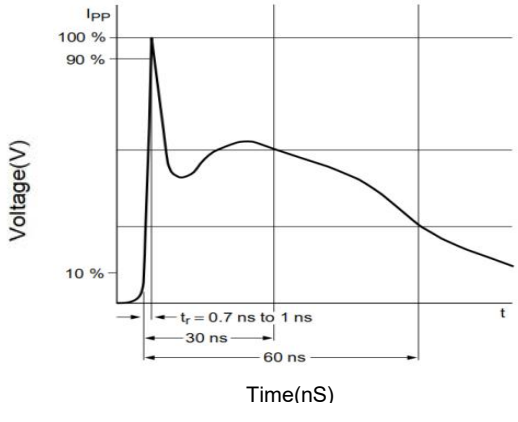
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	15	V	Pin1 To Pin2
		--	--	24	V	Pin2 To Pin1
Breakdown Voltage	V_{BR}	17.5	18.5	19.5	V	Pin1 To Pin2,I_T=1mA
		26.5	28.2	29.5	V	Pin2 To Pin1,I_T=1mA
Leakage Current ILeak	I_R	--	--	50	nA	Pin1 To Pin2,V_R=15V
		--	--	50	nA	Pin2 To Pin1,V_R=24V
Clamping Voltage	V_C	--	25	27	V	Pin1 To Pin2, I_{PP}=5A,T_p=8/20μs
Clamping Voltage	V_C	--	45	47	V	Pin2 To Pin1, I_{PP}=4A,T_p=8/20μs
Junction Capacitance	C_J	--	10	15	pF	VR=0V, f=1MHz

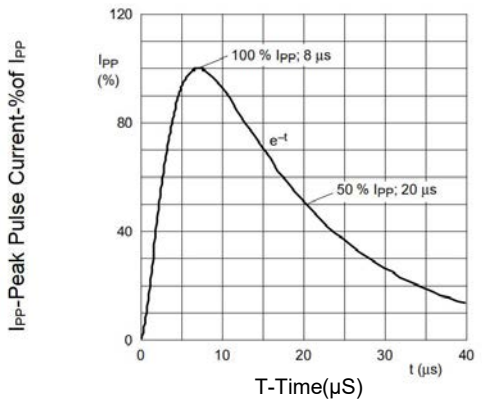
Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}



Typical Characteristics

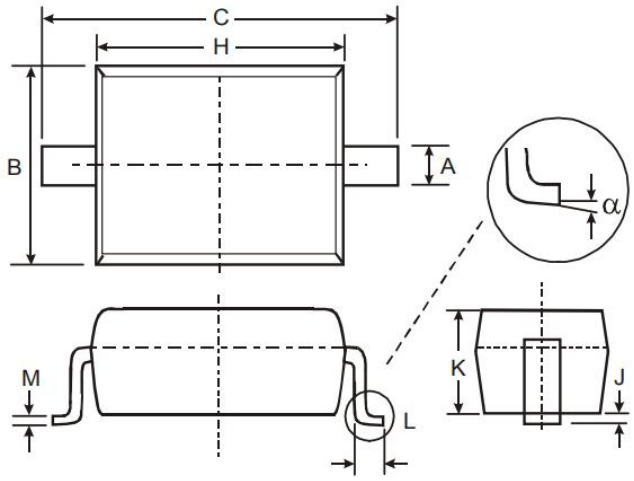


IEC61000−4−2 Pulse Waveform



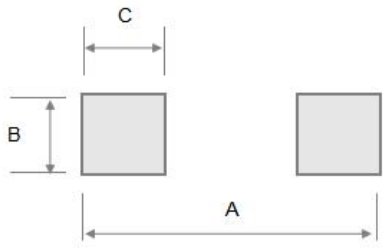
IEC61000−4−5 8X20μs Pulse Waveform

OUTLINE AND DIMENSIONS



SYMBOL	DIMENSIONS	
	MIN	MAX
A	0.25	0.40
B	1.20	1.40
C	2.35	2.75
H	1.50	1.80
J	0.01	0.15
K	0.75	1.05
L	0.20	0.40
M	0.08	0.25
α	0°	8°

SOLDERING FOOTPRINT



SYMBOL	DIMENSIONS
A	3.20
B	0.80
C	0.80

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