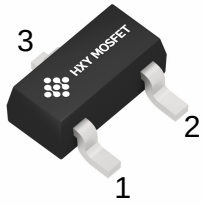
Discription

The HESDNC15VB2I-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.

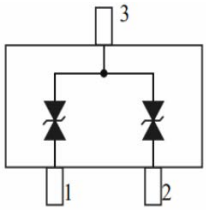
It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.



SOT-23

Features

★ Bi-directional ESD protection of 2 lines
★ IReverse stand-off voltage: 15.0V Max
★ Low clamping voltage
★ Low leakage current: nA Level
★ Response time is typically
★ ESD Protection: 30kV(air)/ 30kV(contact)(IEC61000-4-2)



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
HESDNC15VB2I-A	SOT-23	3000

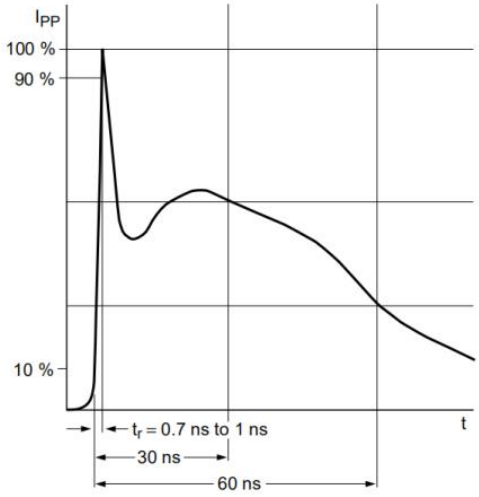
Absolute Ratings (T_{amb}=25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P_{PPM}	500	W
Peak Pulse Current(tp = 8/20μs)	I_{PPM}	15	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
Maximum junction temperature	T_j	150	°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

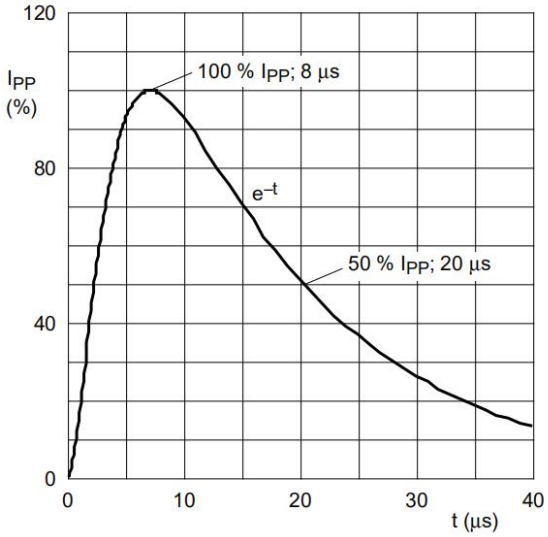
Electerical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	15.0	V	
Breakdown Voltage	V_{BR}	16.5	18.5	20.0	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	100	nA	V_{RWM}=15V
Clamping Voltage	V_C	--	30.0	33.0	V	I_{PP}=15A,Tp=8/20μs
Junction Capacitance	C_J	--	32	45	pF	V_R=0V, f=1MHz (Pin 1 or 2 to 3)

Typical Characteristics

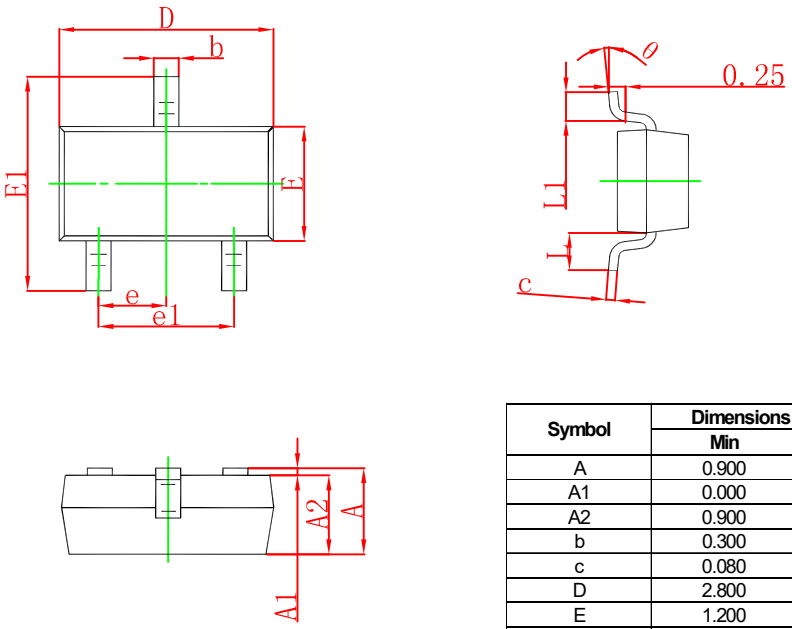


IEC61000−4−2 Waveform



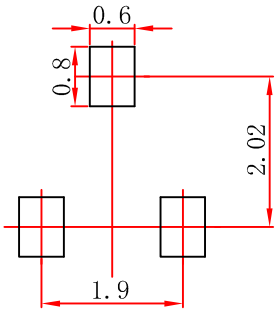
IEC 61000-4-5 Waveform(8/20μs pulse)

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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