HESDNC24VU1EL-B
ESD PROTECTION DIODE

Discription

The HESDNC24VU1EL-B 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 unidirectional line in applications where arrays are not practical.



SOD-323



Circuit Diagram

Features

- ★ Small Body Outline Dimensions
- ★ 250 Watts peak pulse power (tp = 8/20μs)
- ★ Transient protection for data lines to
  IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 24A (8/20μs)
- ★ Small package for use in portable electronics
- ★ Suitable replacement for MLV's in ESD protection applications
- ★ Protects one I/O or power line
- ★ Low clamping voltage
- ★ Working voltages: 24V
- ★ Low leakage current
- ★ Solid-state silicon-avalanche technology
- ★ We declare that the material of product compliance with RoHS requirements.
- ★ S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

Ordering information

Product ID	Pack	Qty(PCS)
HESDNC24VU1EL-B	SOD-323	3000

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PK}	Peak Pulse Power (t_p = 8/20μs)	250	W
V_{ESD}	ESD Voltage(HBM Waveform per IEC 61000-4-2)	30	kV
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Maximum junction temperature	-55 to +125	°C

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

Device	V_{RWM} (V)	I_R(uA) @ V_{RWM}=5V	V_{BR} (V)@ I_t=1mA	V_C (V) @ I_{PP}=5A t_p=8/20μs	I_{PP} (A) t_p=8/20μs	C (pF)
	Max	Max	Min	Max	Max	Typ
HESDNC24VU1EL-A	24.0	1.0	26	50	5	20

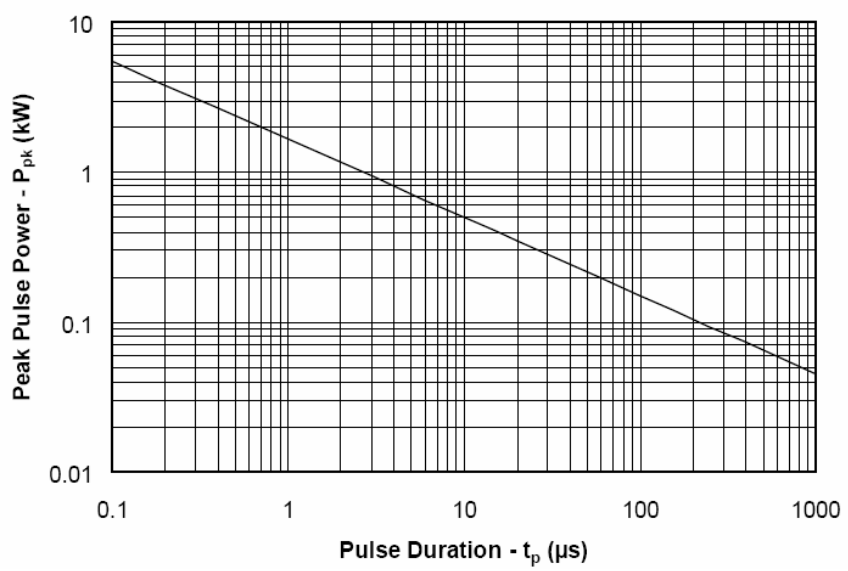


Fig.1 Non-Repetitive Peak Pulse Power vs. Pulse Time

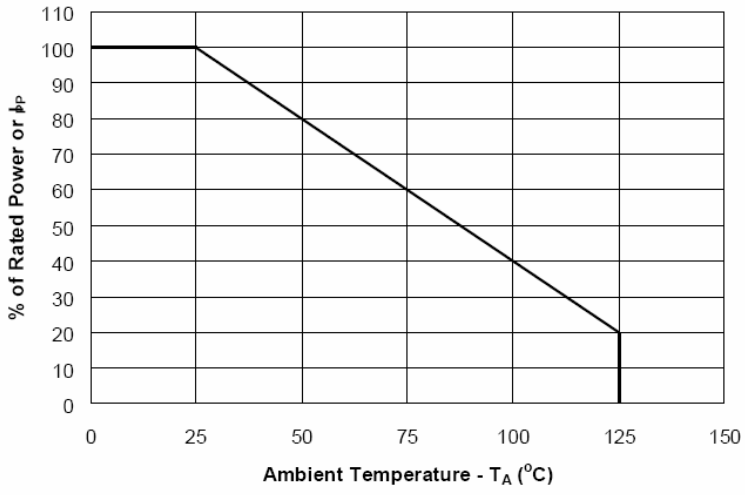


Fig.2 Power Derating Curve

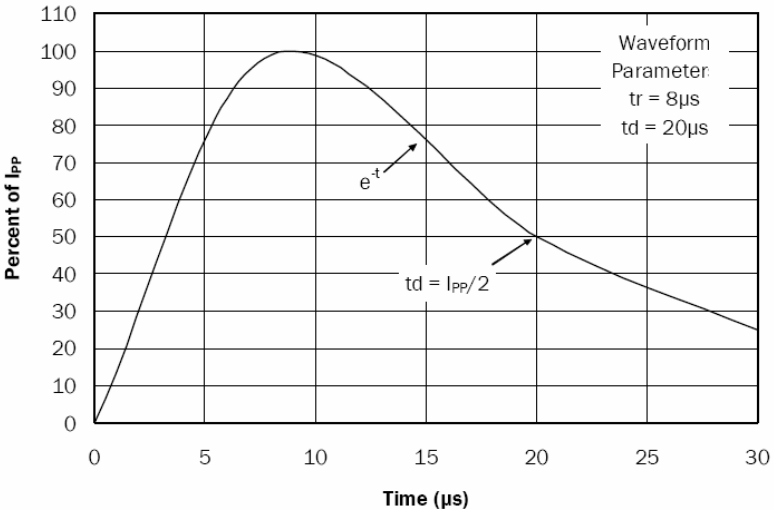
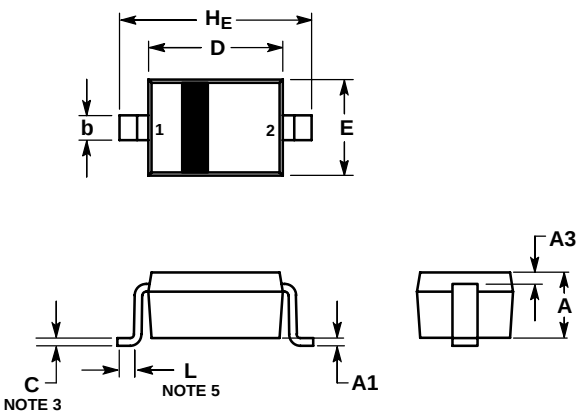


Fig.3 Waveform

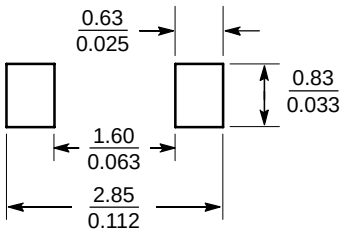
SOD−323



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

SOLDERING FOOTPRINT*



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