



Discription

The HESDUC5VB1EL-C 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

- ★ Ultra Low Capacitance 0.6 pF(Typ)
- ★ 300W peak pulse power (8/20uS)
- ★ Working Voltage 5V
- ★ Low leakage current nA Level
- ★ Complies with following standards
 - IEC 61000-4-2(ESD) immunity test :
 - Air discharge : ±30KV
 - Contact discharge : ±30KV
 - IEC61000-4-5 (Lightning) 10A (8/20uS)
- ★ RoHS compliant



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
HESDUC5VB1EL-C	SOD-323	3000

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20 μ s)	160	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to +155	°C
T _{op}	Operating Temperature Range	-40 to +125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 30 ± 30 KV



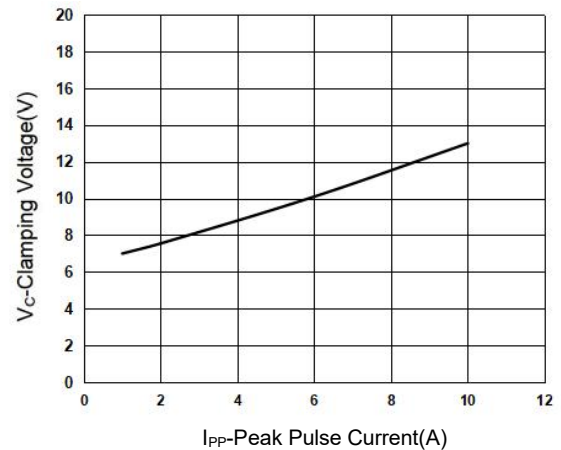
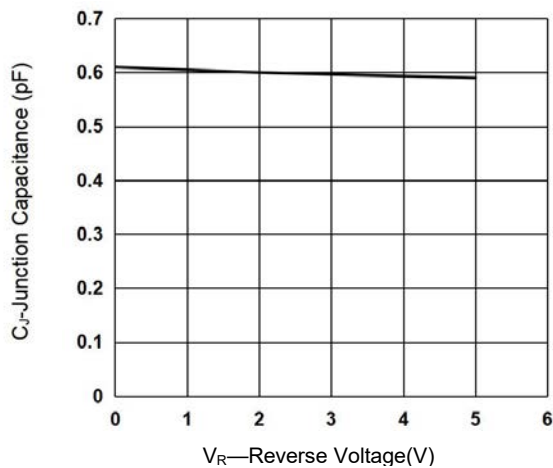
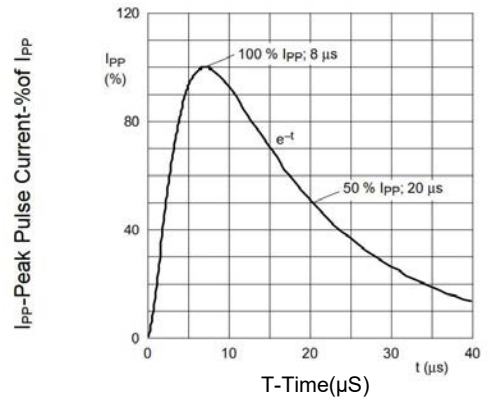
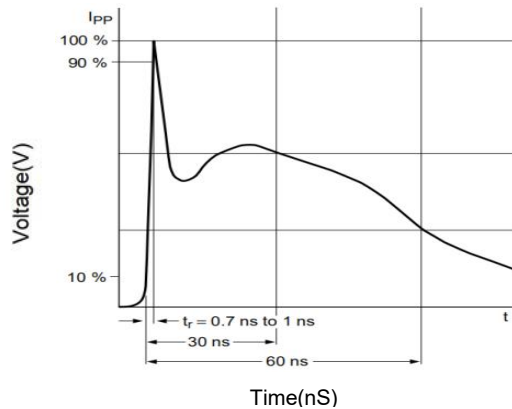
Electrical Characteristics

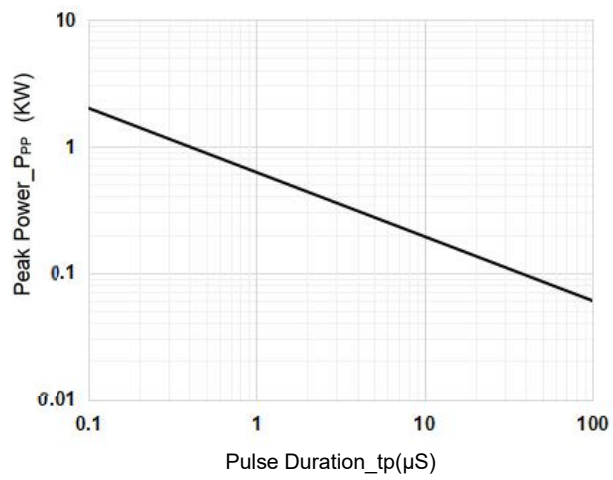
Ratings at 25°C ambient temperature unless otherwise specified.

Device	V_{RWM} (V)	I_R (μ A) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ $I_{PP}=10A$	V_C (V) @ $I_{PP}=10A$	I_{PP} (A)	P_{PK} (W)	C (pF)
	Max	Max	Min	mA	Typ	Max	Max	Max	Typ
HESDUC5VB1EL-C	5.0	0.1	6.1	1	14	16	10	160	0.6

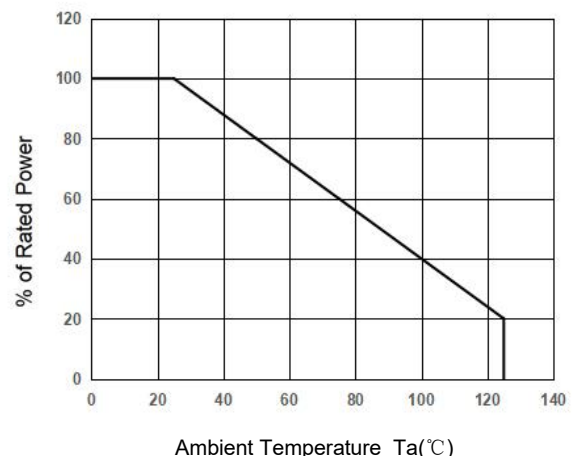
1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25°C.

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)





Peak Pulse Power vs. Pulse Time



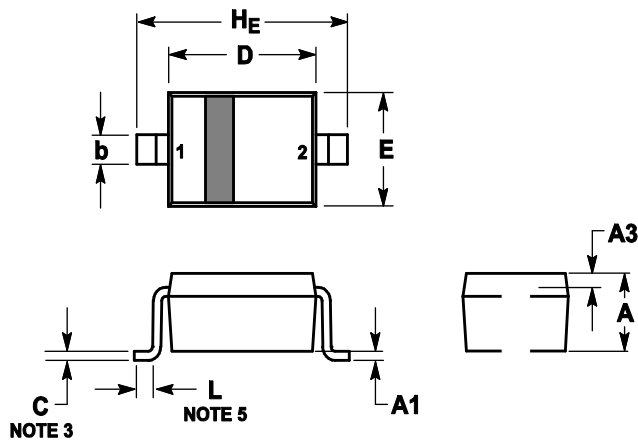
Power Derating Curve



Outline And Dimensions

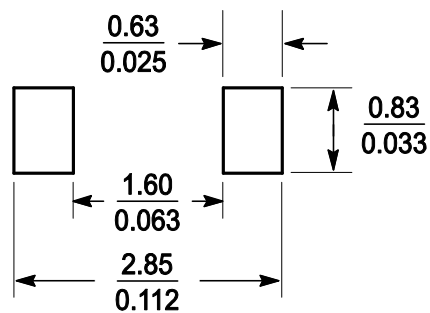
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.8	0.9	1	0.031	0.035	0.04
A1	0	0.05	0.1	0	0.002	0.004
A3	0.15REF			0.006REF		
b	0.25	0.32	0.4	0.01	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.6	1.7	1.8	0.062	0.066	0.07
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H _E	2.3	2.5	2.7	0.09	0.098	0.105

Soldering Footprint





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