



### Discription

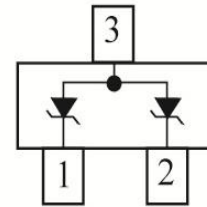
The HCEST23UC5VU protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD. It gives designer the flexibility to protect 2 unidirectional line in applications where arrays are not practical.



SOT-23

### Features

- ★ We declare that the material of product compliance with RoHS requirements and Halogen Free.
- ★ 2 unidirectionaltransilfunctions
- ★ Low leakage current:IR max< 20 μA at VRM
- ★ 300W peak pulse power(8/20μs)
- ★ Transient protection for data lines as per
- ★ IEC61000-4-2(ESD) 15KV(air) 8KV(contact)
- ★ IEC61000-4-5(Lightning) see IPPM below



Circuit Diagram

### Orderingin formation

Product ID	Pack	Qty(PCS)
HCEST23UC5VU	SOT-23	3000

### Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20μs)	100	W
T <sub>L</sub>	Maximum lead temperature for soldering during 10s	260	°C
T <sub>stg</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>op</sub>	Operating Temperature Range	-40 to +125	°C
T <sub>j</sub>	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	±15 ±8 KV



**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified. VF = 0.9V at IF = 10mA

Device	V <sub>RWM</sub> (V)	I <sub>R</sub> (uA) @ V <sub>RWM</sub>	V <sub>BR</sub> (V)@ I <sub>T</sub> (Note 1)	I <sub>T</sub>	V <sub>C</sub> (V) @ Max I <sub>PP</sub> *	I <sub>PP</sub> (A)*	C (pF)
	Max	Max	Min	mA	Max	Max	Typ
HCEST23UC5VU	5	0.5	6	1	25	4	0.5

1. V<sub>BR</sub> is measured with a pluse test current I<sub>T</sub> at an ambient temperature of 25°C.

**Typical Characteristics**

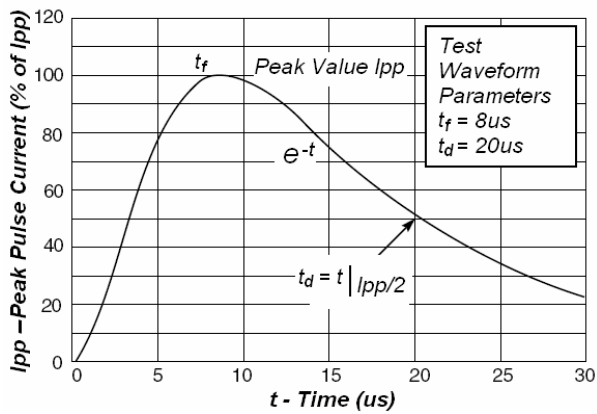


Fig 1. Pulse Waveform

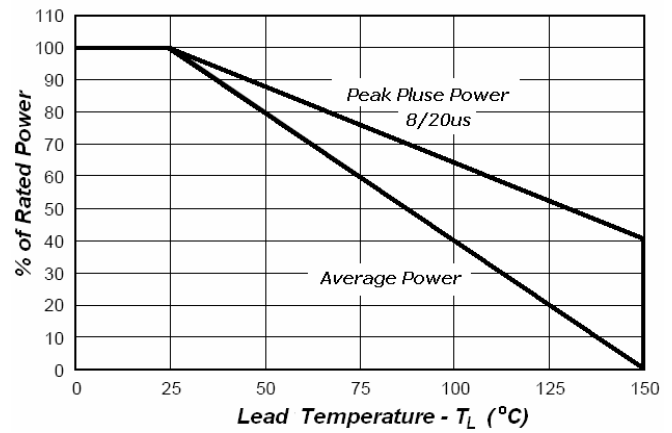
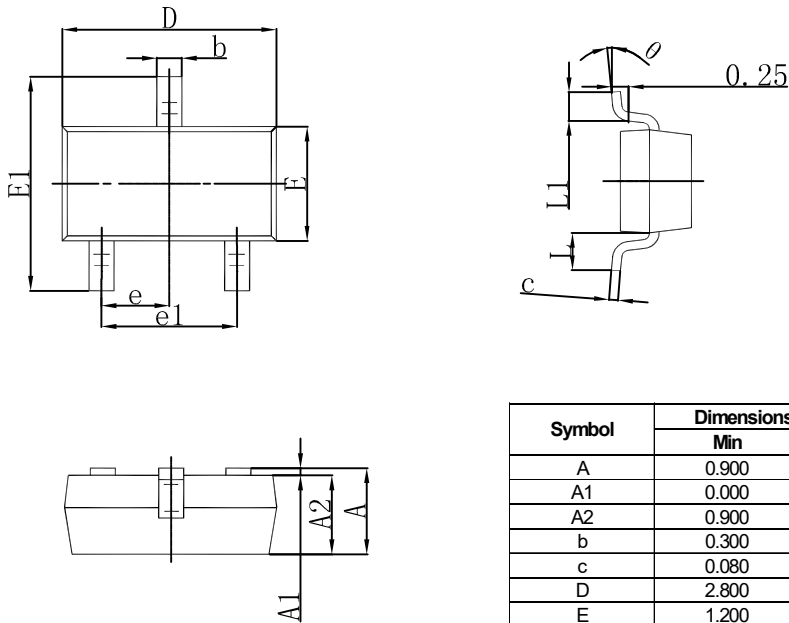


Fig 2. Power Derating

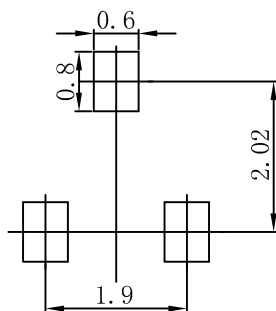


### SOT-23 Package Outline Dimensions



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:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.



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