

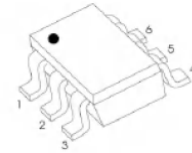


### Discription

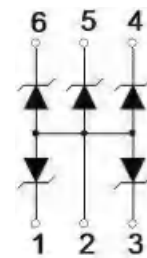
The HCEST363NC5VU is a 5-channel ultra low capacitance rail clamp ESD protection diodes array. Each channel consists of a pair of ESD diodes that steer positive or negative ESD current to either the positive or negative rail. A zener diode is integrated in to the array between the positive and negative supply rails. In the typical applications, the negative rail pin (assigned as GND) is connected with system ground. The Positive ESD current is steered to the ground through an ESD diode and Zener diode and the positive ESD voltage is clamped to the zener voltage.

### Features

- ★ Uni-directional ESD protection of 5 lines
- ★ IEC 61000-4-2 Level 4 ESD protection
- ★ Low reverse stand-off voltage: 5V
- ★ Low reverse clamping voltage
- ★ Low leakage current
- ★ Fast response time
- ★ Small package saves board space
- ★ RoHS compliant



SOT-363



Circuit Diagram

### Ordering information

Product ID	Pack	Qty(PCS)
HCEST363NC5VU	SOT-363	3000

### Absolute Ratings(Tamb = 25°C)

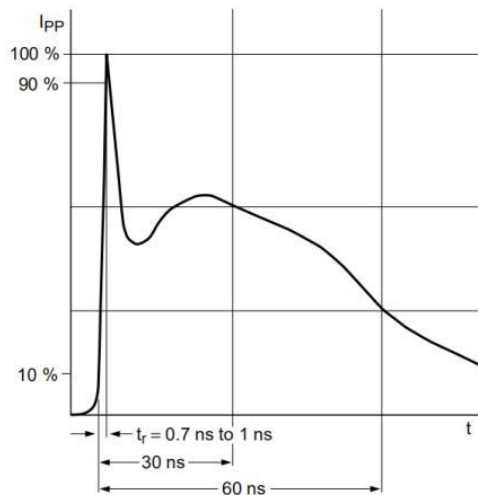
Parameter	Symbol	Value	Unit
Peak Pulse Power(Tp=8/20μs)	P <sub>PPM</sub>	60	W
Rated PeakPulse Current(Tp=8/20μs)	I <sub>PPM</sub>	5	A
ESD voltage IEC61000-4-2(airdischarge)	V <sub>ESD</sub>	20	kV
ESD voltage IEC61000-4-2(contactdischarge)	V <sub>ESD</sub>	15	kV
Maximum lead temperature for soldering during 10s	T <sub>L</sub>	260	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C
Operating Temperature Range	T <sub>OP</sub>	-40 to +125	°C



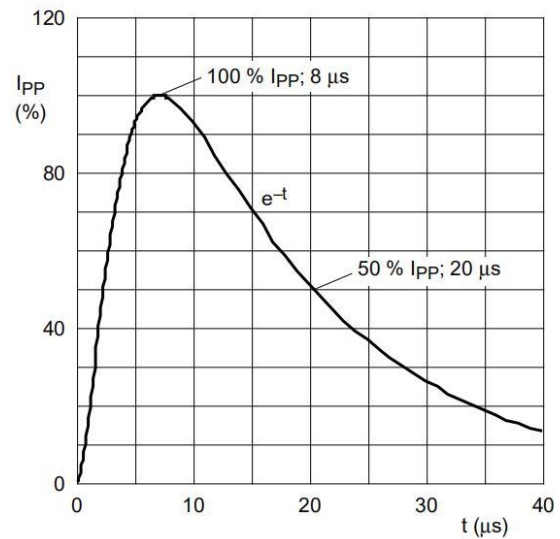
### Electrical Characteristics (T<sub>amb</sub>=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V <sub>RWM</sub>			5.0	V	
Breakdown Voltage	V <sub>BR</sub>	6.0		7.5	V	I <sub>T</sub> =1mA
Leakage Current I <sub>Leak</sub>	I <sub>R</sub>			100	nA	V <sub>RWM</sub> =5V
Clamping Voltage	V <sub>C</sub>			9.0	V	I <sub>PP</sub> =1A, T <sub>p</sub> =8/20μs
Clamping Voltage	V <sub>C</sub>			12.0	V	I <sub>PP</sub> =5A, T <sub>p</sub> =8/20μs
Junction Capacitance	C <sub>j</sub>		30	35	pF	V <sub>R</sub> =0V, f=1MHz

### Typical Characteristics



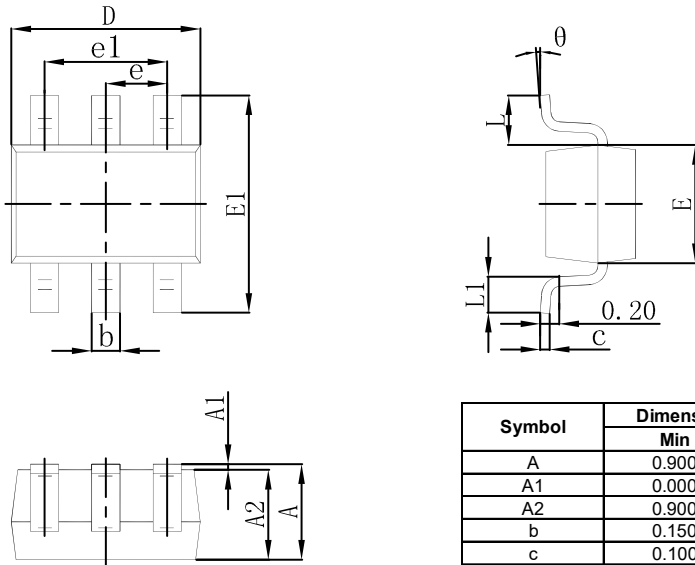
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform( 8/20μs pulse)

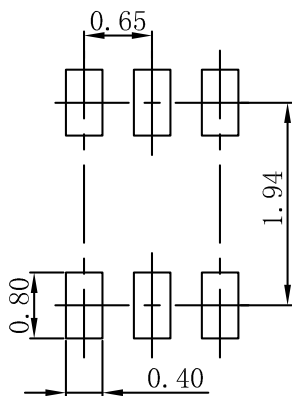


### SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

### SOT-363 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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