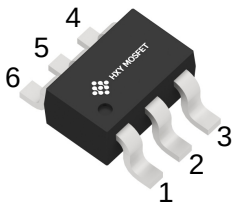
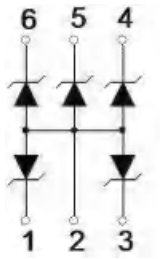
Discription

The HESDNC5VU4FI-A 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.



SOT-363



Circuit Diagram

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

Ordering Information

Product ID	Pack	Qty(PCS)
HESDNC5VU4FI-A	SOT-363	3000

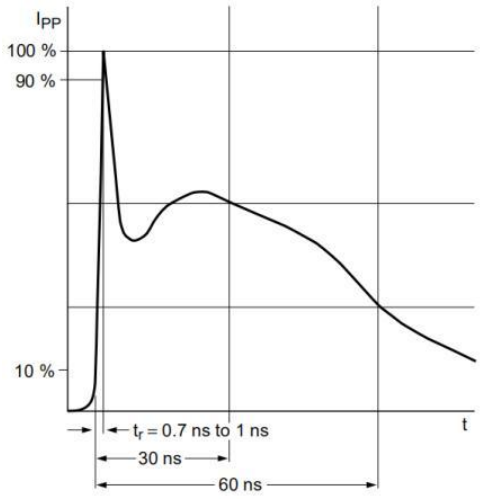
Absolute Ratings (T_{amb}=25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (Tp = 8/20μs)	P_{PPM}	60	W
Rated Peak Pulse Current (Tp = 8/20μs)	I_{PPM}	5	A
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	20	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	15	kV
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

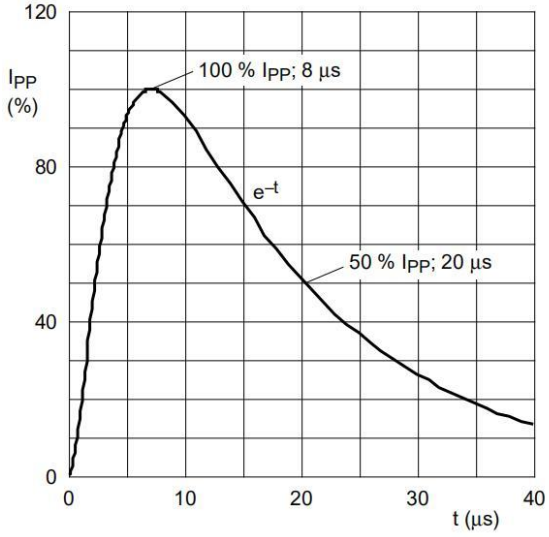
Electrical Characteristics (Tamb=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	6.0	--	7.5	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	100	nA	V_{RWM}=5V
Clamping Voltage	V_C	--	--	9.0	V	I_{PP}=1A,Tp=8/20μs
Clamping Voltage	V_C	--	--	12.0	V	I_{PP}=5A,Tp=8/20μs
Junction Capacitance	C_j	--	30	35	pF	V_R=0V, f=1MHz

TYPICAL ELECTRICAL CHARACTERISTICS CURVE

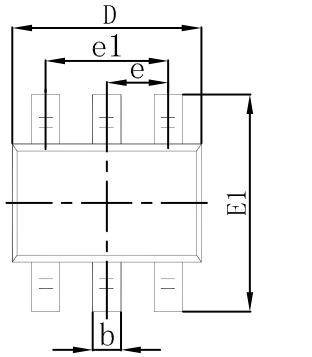


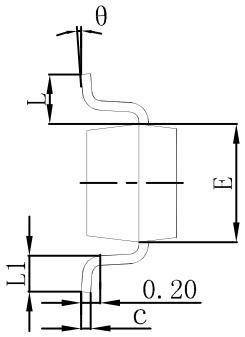
IEC61000−4−2 Waveform

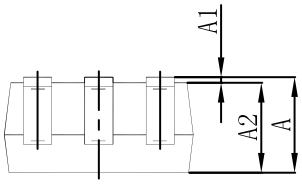


IEC 61000-4-5 Waveform(8/20μs pulse)

SOT-363 Package Outline Dimensions

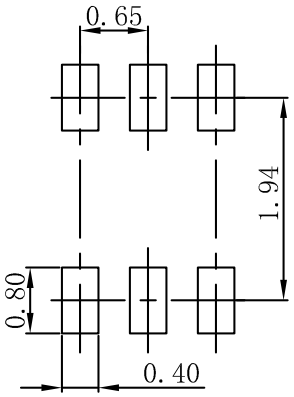






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 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
θ	0°	8°	0°	8°

SOT-363 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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