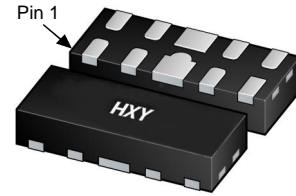




Discription

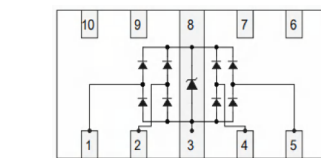
The ESD5304D is a 4-channel ultra low capacitance rail clam ESD protection diodes array . Each channel consists of a pair of diodes that steer positive or negative ESD current to either the positive or negative rail . A zener diode is integrated in to the array between the positive and negative supply 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.



DFN-2510

Features

- Solid-state silicon-avalanche technology
- Low operating and clamping voltage
- Up to four I/O Lines of Protection
- Ultra low capacitance: 0.5pF typical(I/O to I/O)
- Low Leakage
- Low operating voltage:5V
- Flow-Through design



Pin 1
Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
ESD5304D	DFN-2510	3000

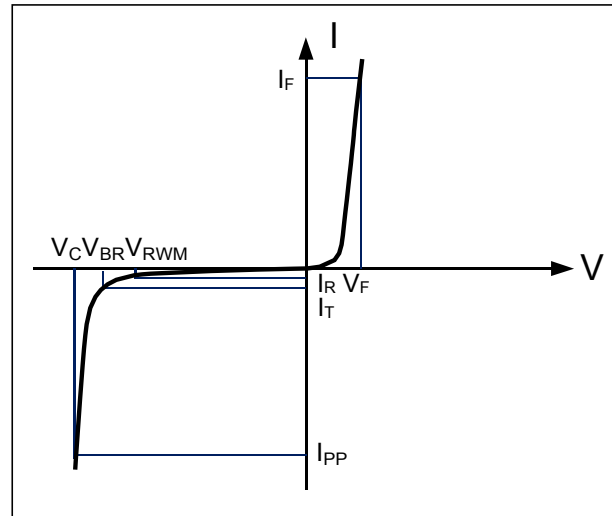
Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20μs)	150	W
I _{PP}	Peak Pulse Current(8/20us)	5	A
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to +150	°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	±17 ±12 KV



Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



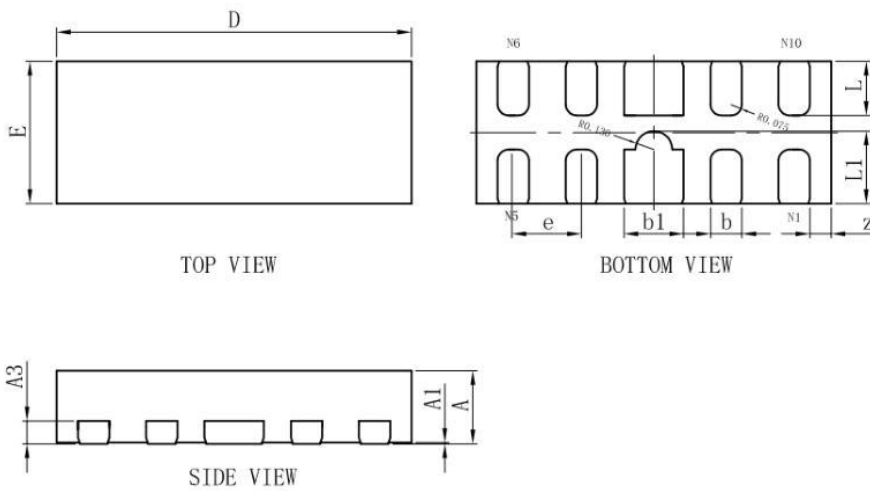
Electrical Characteristics

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}	Any I/O pin to ground			5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$ Any I/O pin to ground	6.0			V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$, $T=25^\circ\text{C}$ Any I/O pin to ground			1	μA
Clamping Voltage	V_C	$I_{pp}=5\text{A}$, $t_p=8/20\mu\text{s}$ Any I/O pin to ground			15	V
Junction Capacitance	C_j	$V_R = 0\text{V}$, $f = 1\text{MHz}$ I/O pin to GND			0.8	pF
		$V_R = 0\text{V}$, $f = 1\text{MHz}$ Between I/O pins		0.3		pF



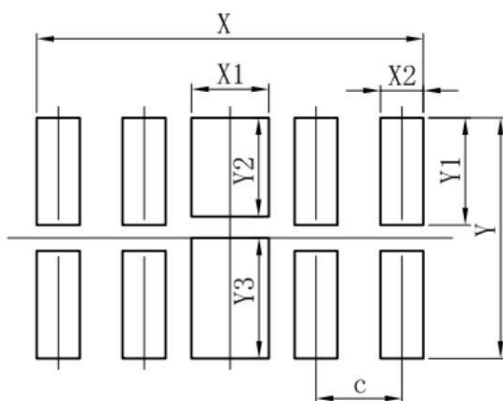
Package Outline Dimension

DFN2510



DFN2510			
Dim	Min	Typ	Max
A	0.48	0.53	0.58
A1	0	0.02	0.05
A3	-	0.152	-
b	0.17	0.22	0.27
b1	0.37	0.42	0.47
D	2.45	2.50	2.55
e	0.45	0.50	0.55
E	0.95	1.00	1.05
L	0.33	0.38	0.43
L1	0.46	0.51	0.56
z	0.10	0.15	0.20
All Dimensions in mm			

Suggested Pad layout



DFN2510	mm
c	0.5
X	2.25
X1	0.45
X2	0.25
Y	1.4
Y1	0.625
Y2	0.575
Y3	0.7



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