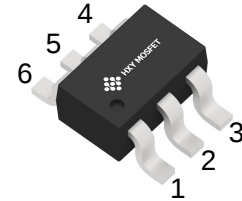


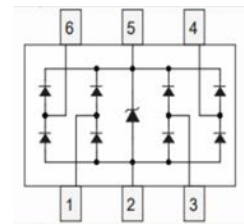


Discription

The NUP4202W1T2G 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

- ★ 5 channels of ESD protection
- ★ Provides ESD protection to IEC61000-4-2 level 4
 - >15kV air discharge
 - >8kV contact discharge
- ★ Low clamping voltage
- ★ Low operating voltage
- ★ Improved zener structure
- ★ Optimized package for easy high speed data lines PCB layout
- ★ RoHS compliant

Ordering Information

Product ID	Pack	Qty(PCS)
NUP4202W1T2G	SOT-363	3000

Absolute Ratings(T_{amb} = 25°C)

Characteristics	Symbol	Ratings	Unit
Peak Pulse Power(8/20μs)	P _{PP}	70	W
Peak Pulse Current(8/20μs)	I _{PP}	4	A
ESD per IEC 61000-4-2(Air)	V _{ESD1}	±20kV	kV
ESD per IEC 61000-4-2(Contact)	V _{ESD2}	±20kV	kV
Operating Temperature Range	T _{opr}	-55 ~ +125	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C



Electrical Characteristics (T_{amb}=25°C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage				5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	6.0			V
I _R	Reverse Leakage Current	V _{RWM} = 5.0V			3	uA
V _C	Clamping Voltage	I _{PP} = 4A, t _p = 8/20μs			18	V
C _J	Junction Capacitance	V _R = 0V, f = 1MHz		0.25	0.40	pF

Typical Characteristics

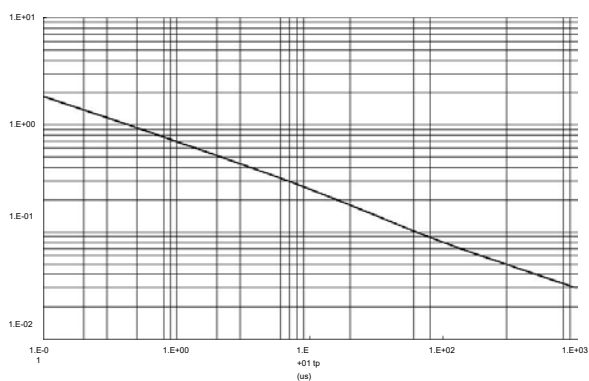


Figure 1. Peak Pulse Power Derating

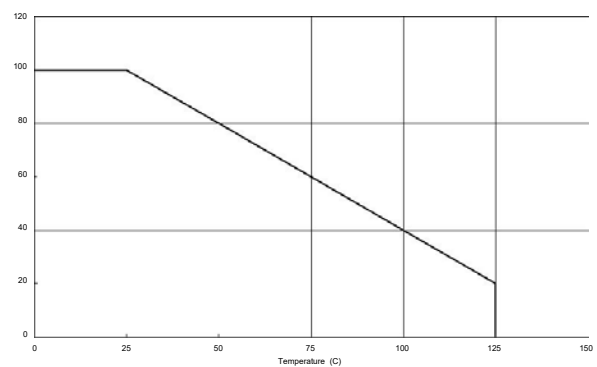


Figure 2. Peak Pulse Power Derating vs Temperature

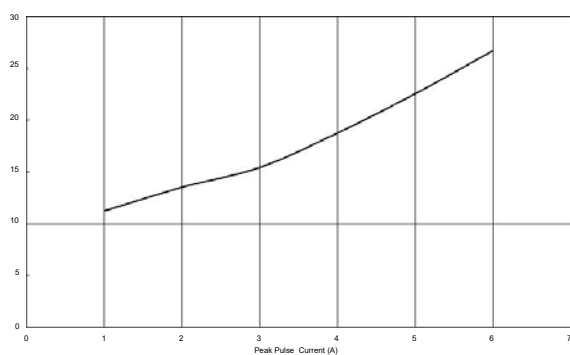


Figure 3. Peak Pulse Current vs Clamping Voltage

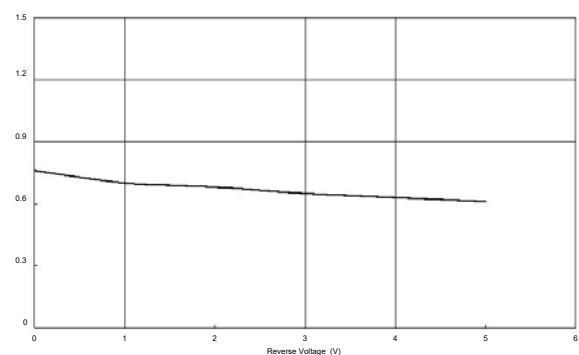
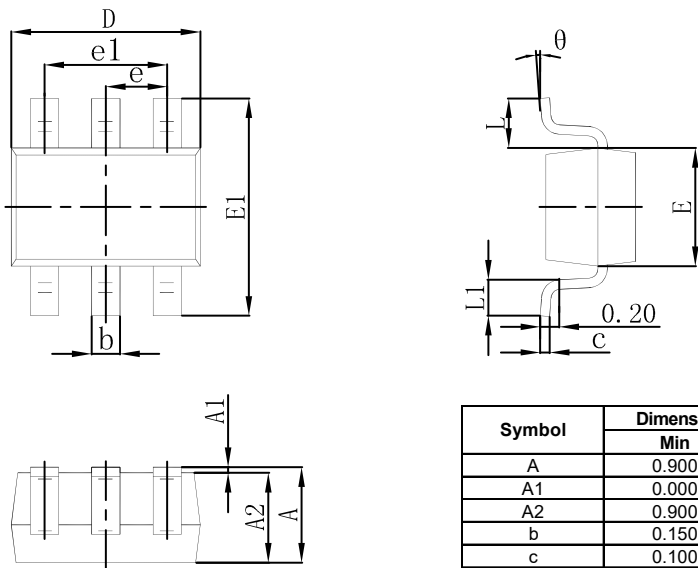


Figure 4. Reverse Voltage vs Capacitance

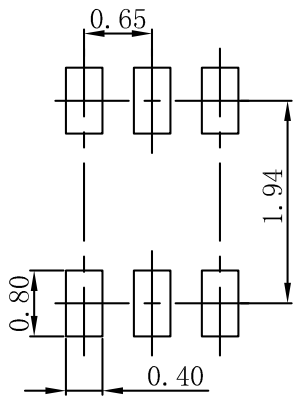


SOT-363 Package Outline Dimensions



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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