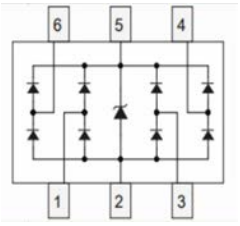
Discription

The HDVIULC64SC6 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.

SOT23-6L



Circuit Diagram

Features

★ 5 channels of ESD protection;
★ Provides ESD protection to IEC61000-4-2 level 4
- ±27kV air discharge
- ±15kV contact discharge;
★ Channel I/O to GND capacitance: 0.4pF(Max)
★ Channel I/O to I/O capac itance: 0.8pF(Max)
★ Low clamping voltage;
★ Low operating voltage;
★ Improved zener structure;
★ Optimized package for easy high speed data lines PCB layout;
★ RoHS compliant.

Orderingin formation

Product ID	Pack	Qty(PCS)
HDVIULC64SC6	SOT23-6L	3000

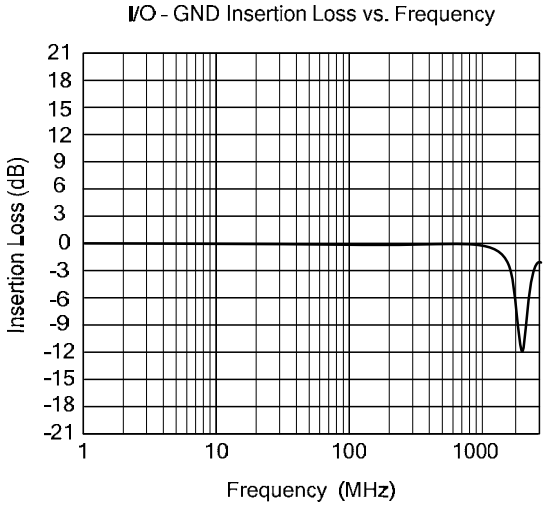
Absolute Ratings(Tamb = 25°C)

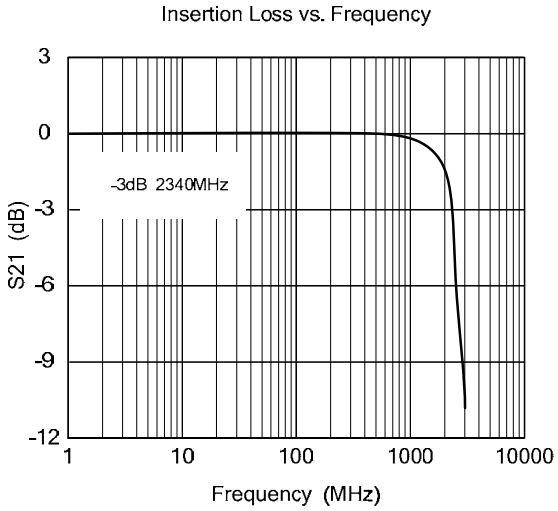
Characteristics	Symbol	Ratings	Unit
Peak Pulse Power(8/20μs)	P_{PP}	55	W
Peak Pulse Current(8/20μs)	I_{PP}	4	A
ESD per IEC 61000-4-2(Air)	V_{ESD1}	±20kV	kV
ESD per IEC 61000-4-2(Contact)	V_{ESD2}	±15kV	kV
Operating Temperature Range	Topr	-55 ~ +125	°C
Storage Temperature Range	Tstg	-55 ~ +150	°C

Electrical Characteristics

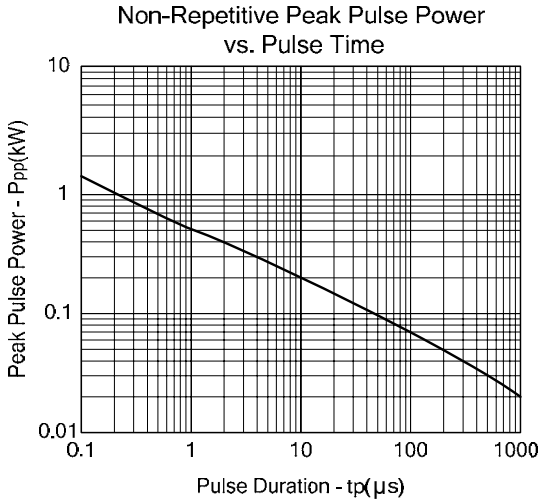
Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND			5	V
Reverse Breakdown Voltage	V_{BR}	I_t=1mA; Any I/O pin to GND	6			V
Reverse Leakage Current	I_R	V_{RWM} =5V, T=25°C; Any I/O pin to GND			1	μA
Positive Clamping Voltage	V_{C1}	I_{PP}=4A, t_P=8/20μs; Positive pulse; Any I/O pin to GND		8.5	12.0	V
Negative Clamping Voltage	V_{C2}	I_{PP}=4A, t_P=8/20μs; Negative pulse; Any I/O pin to GND		1.8		V
Junction Capacitance Between Channel	C_{J1}	V_R=0V, f=1MHz; Between I/O pins		0.3	0.4	pF
Junction Capacitance Between I/O And GND	C_{J2}	V_R=0V, f=1MHz; Any I/O pin to GND		0.6	0.8	pF

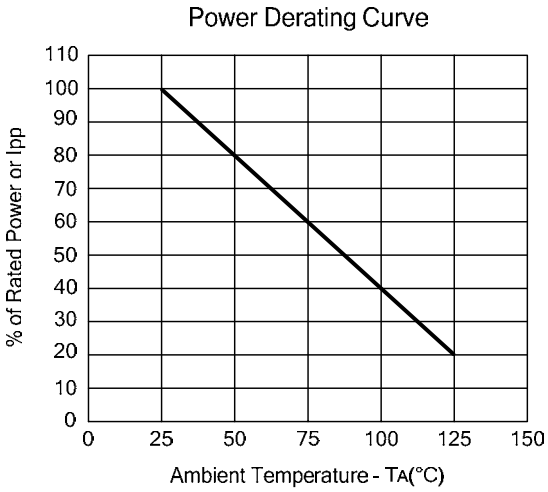
Typical Characteristics

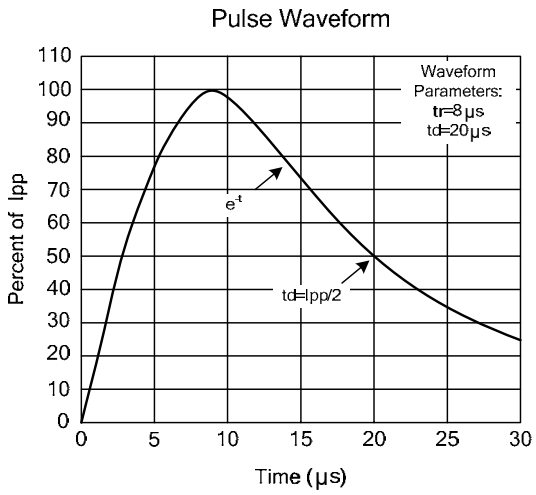


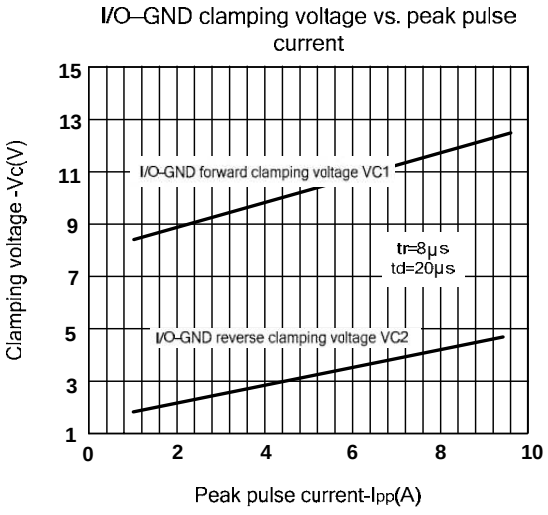


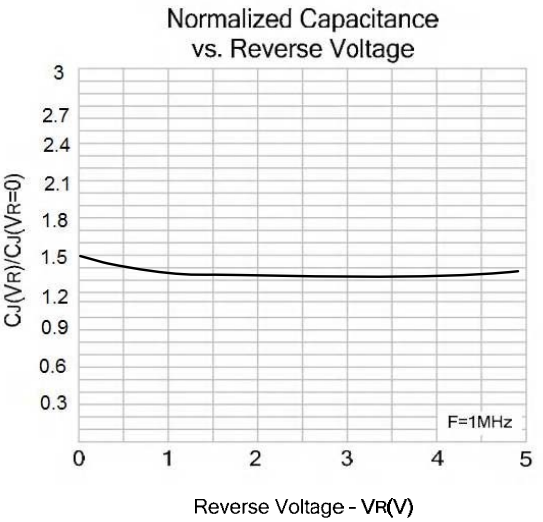
TYPICAL ELECTRICAL CHARACTERISTICS CURVE



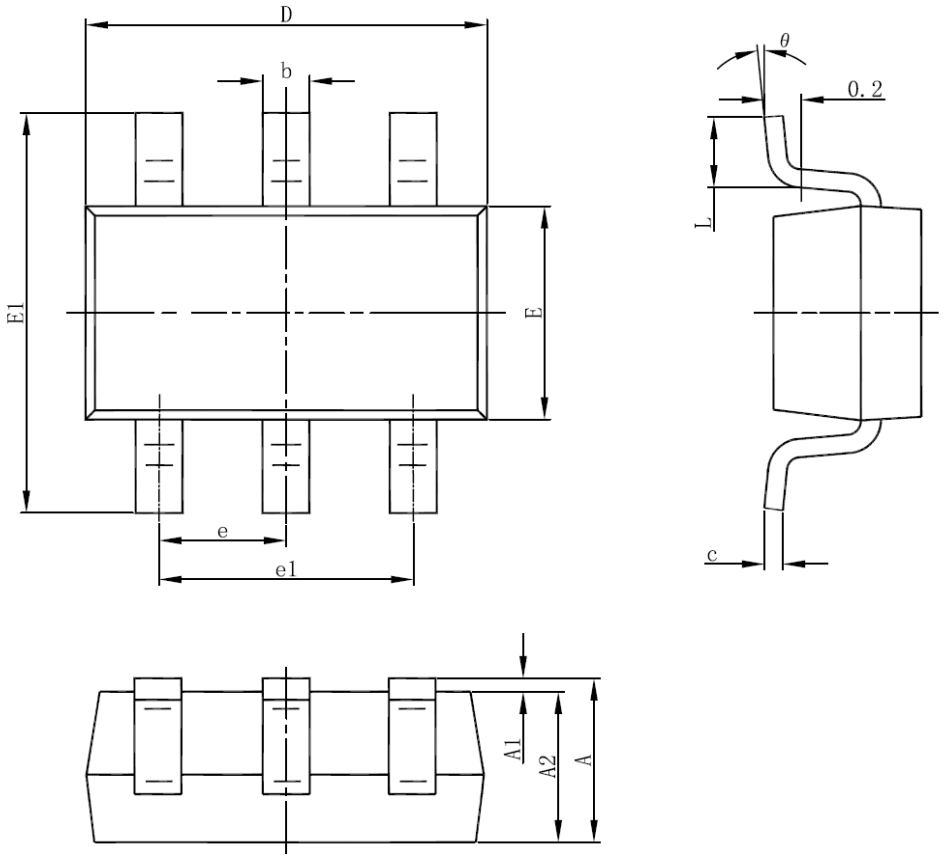








SOT23-6L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

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