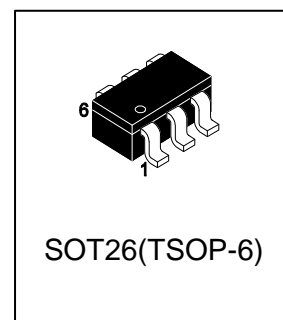


4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

DESCRIPTIONS

The LSRV04W-4AT1G is a 4-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. The LSRV04W-4AT1G is idea to protect high speed data lines. Three package type is provided for easy PCB layout.

LSRV04W-4AT1G



FEATURES

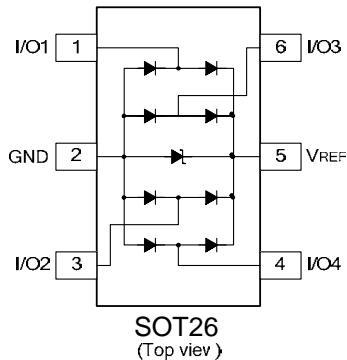
- * 4 channels of ESD protection;
- * Provides ESD protection to IEC61000-4-2 level 4
 - ± 30 kV air discharge
 - ± 30 kV contact discharge;
- * Channel I/O to GND capacitance: 1.5pF(Max)
- * Channel I/O to I/O capacitance: 0.8pF(Max)
- * Low clamping voltage;
- * Low operating voltage;
- * Improved zener structure;
- * Optimized package for easy high speed data lines PCB layout;
- * RoHS compliant.

APPLICATIONS

- * HDMI / DVI ports;
- * Display Port interface;
- * 10M / 100M / 1G Ethernet;
- * USB 2.0 interface;
- * VGA interface
- * Set-top box;
- * Flat panel Monitors / TVs;
- * PC / Note book

ORDERING INFORMATION

Part No.	Marking	Material	Shipping
LSRV04W-4AT1G	24G	Halogen Free	3000/Tape&Reel

PIN CONFIGURATION

ABSOLUTE MAXIMUM RATINGS

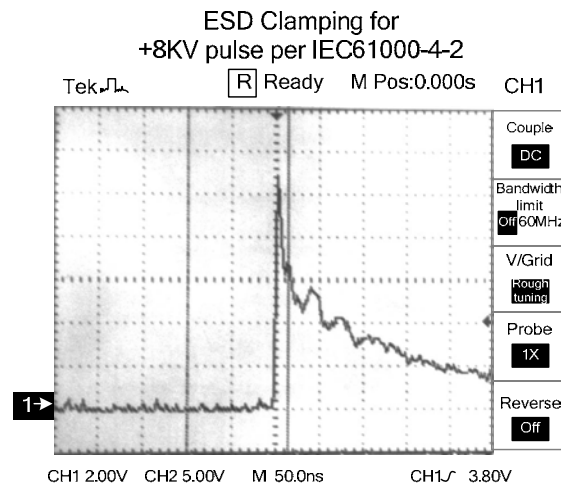
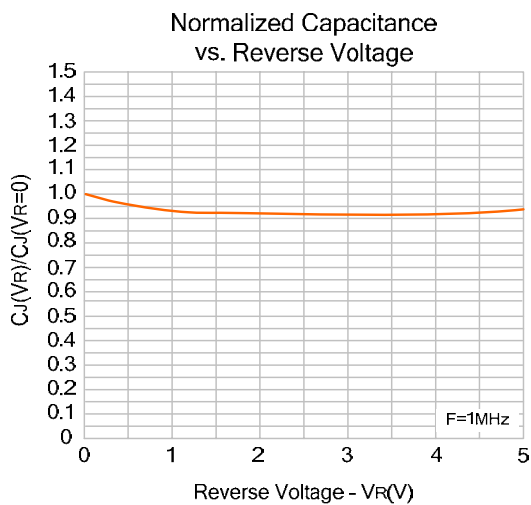
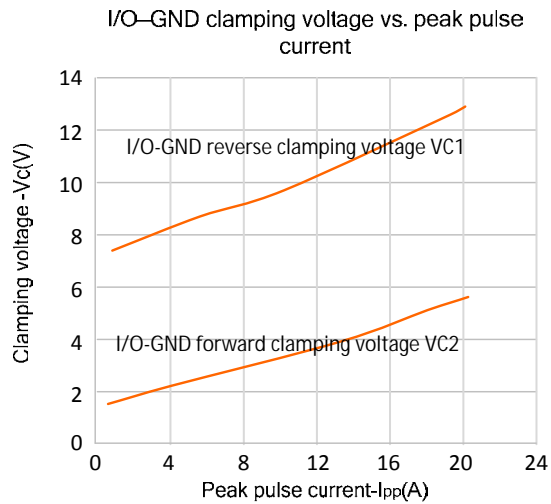
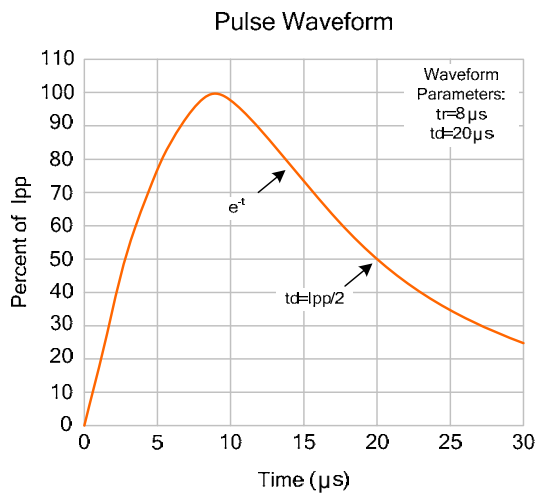
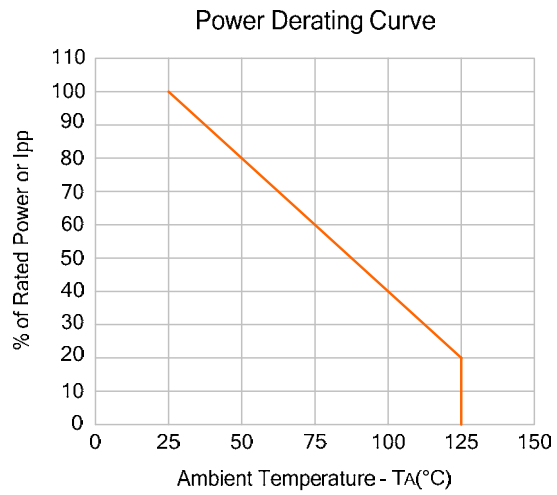
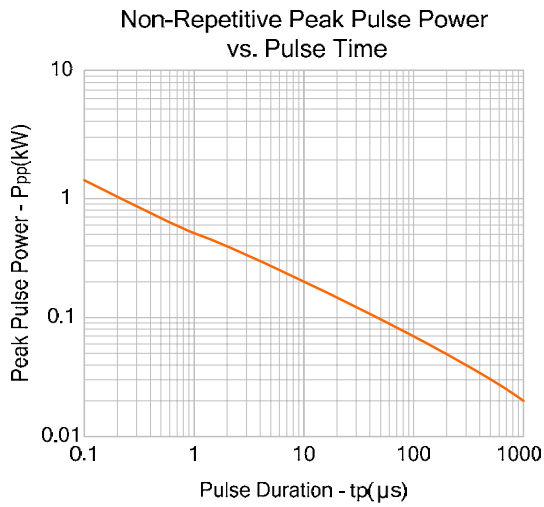
Characteristics	Symbol	Ratings	Unit
Peak Pulse Current(8/20 μ s for any I/O-to-GND)	I_{PP}	20	A
ESD per IEC 61000-4-2(Air)	V_{ESD1}	± 30	kV
ESD per IEC 61000-4-2(Contact)	V_{ESD2}	± 30	kV
Operating Temperature Range	T_{opr}	-55 ~ +125	$^{\circ}C$
Junction and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}C$

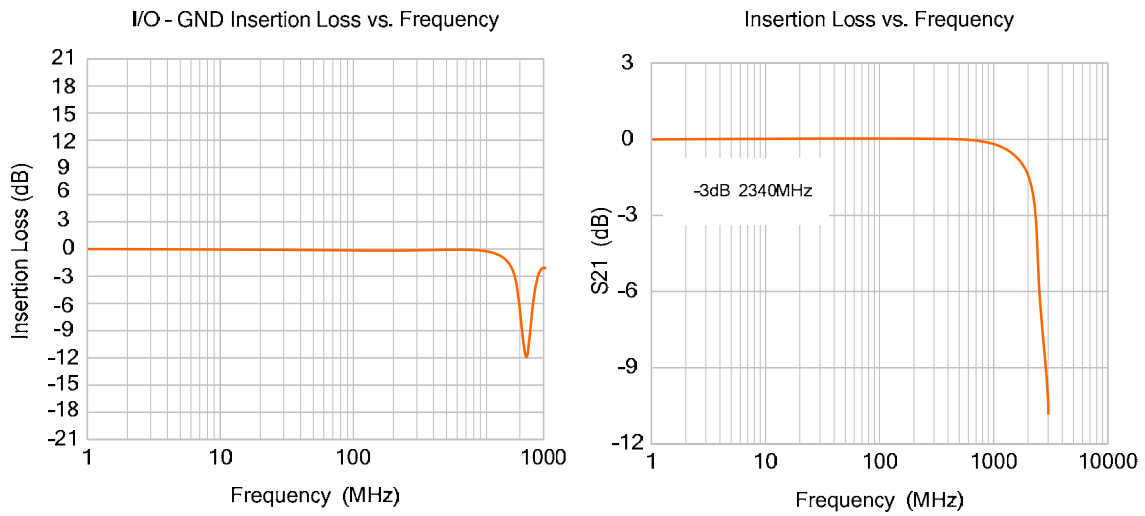
ELECTRICAL CHARACTERISTICS($T_{amb}=25^{\circ}C$)

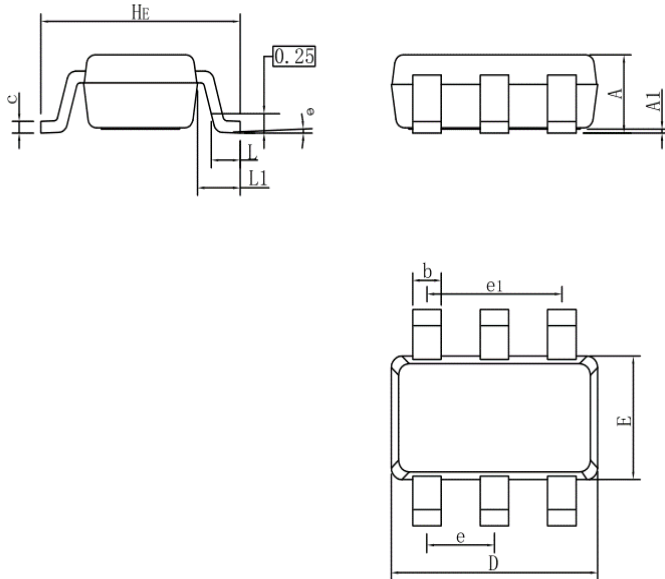
Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND			3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_t=1mA$; Any I/O pin to GND	5.6			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V, T=25^{\circ}C$; Any I/O pin to GND			1	μA
Positive Clamping Voltage	V_{C1}	$I_{PP}=1A, t_p=8/20\mu s$; Positive pulse; Any I/O pin to GND		8.5	12.0	V
Positive Clamping Voltage	V_{C1}	$I_{PP}=20A, t_p=8/20\mu s$; Positive pulse; Any I/O pin to GND		13	16	V
Negative Clamping Voltage	V_{C2}	$I_{PP}=1A, t_p=8/20\mu s$; Negative pulse; Any I/O pin to GND		1.8		V
Negative Clamping Voltage	V_{C2}	$I_{PP}=20A, t_p=8/20\mu s$; Negative pulse; Any I/O pin to GND		6	8	V
Junction Capacitance Between Channel	C_{J1}	$V_R=0V, f=1MHz$; Between I/O pins		0.8	1.0	pF
Junction Capacitance Between I/O And GND	C_{J2}	$V_R=0V, f=1MHz$; Any I/O pin to GND		1.5	2.0	pF

LSRV04W-4AT1G

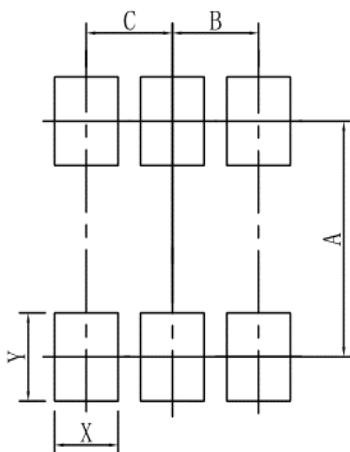
TYPICAL ELECTRICAL CHARACTERISTICS CURVE



LSRV04W-4AT1G**TYPICAL ELECTRICAL CHARACTERISTICS CURVE**

LSRV04W-4AT1G
OUTLINE AND DIMENSIONS


SOT26			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.30	0.40	0.50
c	0.10	0.17	0.20
D	2.80	2.90	3.00
E	1.50	1.60	1.70
e	0.85	0.95	1.05
e1	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.60REF		
HE	2.60	2.80	3.00
θ	0°	-	10°

SOLDERING FOOTPRINT


SOT26	
DIM	(mm)
X	0.70
Y	0.90
A	2.40
B	0.95
C	0.95

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