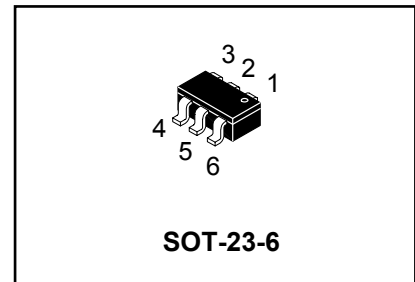




4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

DESCRIPTIONS

The SESD099-04AT1 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 SESD099-04AT1 is ideal to protect high speed data lines. Three package type is provided for easy PCB layout.



FEATURES

- * 4 channels of ESD protection;
- * Provides ESD protection to IEC61000-4-2 level 4
 - ±15kV air discharge
 - ±8kV contact discharge;
- * Channel I/O to GND capacitance: 0.9pF(Max)
- * Channel I/O to I/O capacitance: 0.45pF(Max)
- * Low clamping voltage;
- * Low operating voltage;
- * Improved zener structure;
- * Optimized package for easy high speed data lines PCB layout;
- * RoHS compliant.
- * **Pb-Free package is available**
 - RoHS product for packing code suffix "G"
 - Halogen free product for packing code suffix "H"

APPLICATIONS

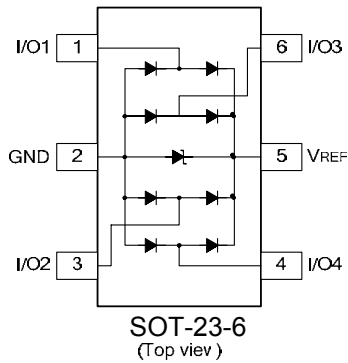
- * HDMI / DVI ports;
- * Display Port interface;
- * 10M / 100M / 1G Ethernet;
- * USB 2.0 interface;
- * VGA interface
- * Set-top box;
- * Flat panel Monitors / TVs;
- * PC / Note book

ORDERING INFORMATION

Part No.	Package	Marking	Material	Shipping
SESD099-04AT1	SOT-23-6	C96	Halogen	3000Tape&Reel

4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

PIN CONFIGURATION



ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Ratings	Unit
Peak Pulse Power(8/20 μ s)	P _{PP}	150	W
Peak Pulse Current(8/20 μ s)	I _{PP}	5	A
ESD per IEC 61000-4-2(Air)	V _{ESD1}	\pm 15kV	kV
ESD per IEC 61000-4-2(Contact)	V _{ESD2}	\pm 8kV	kV
Operating Temperature Range	T _{opr}	-55 ~ +125	$^{\circ}$ C
Storage Temperature Range	T _{stg}	-55 ~ +150	$^{\circ}$ C

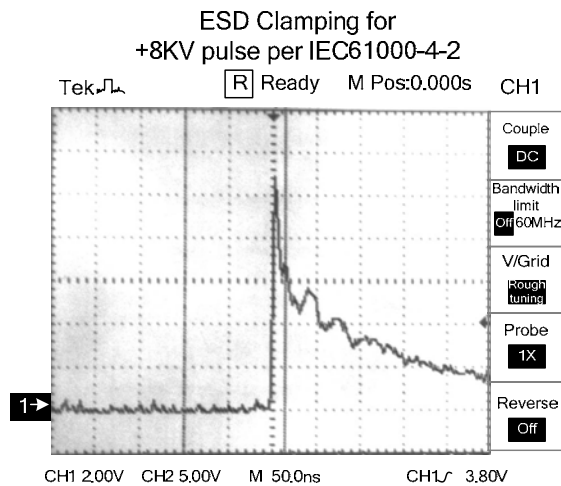
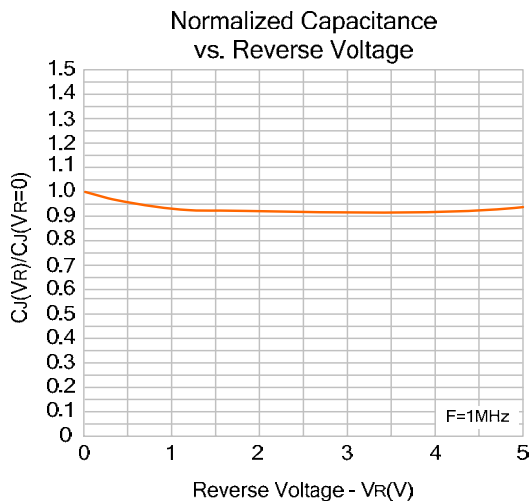
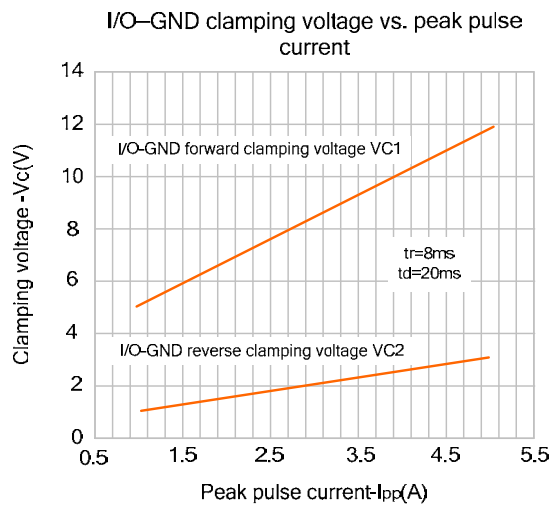
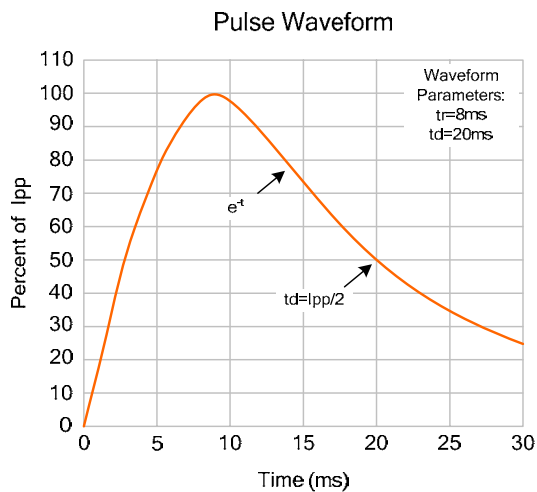
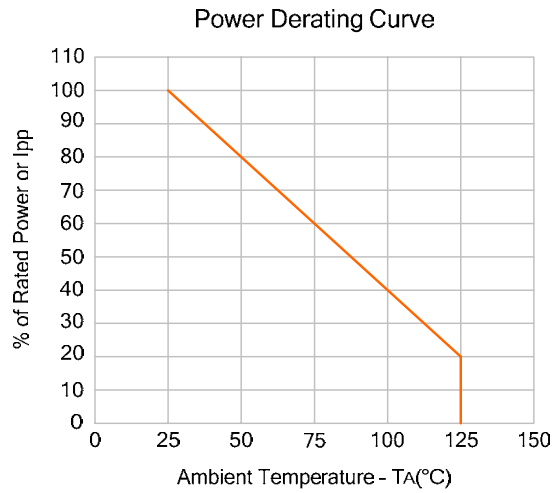
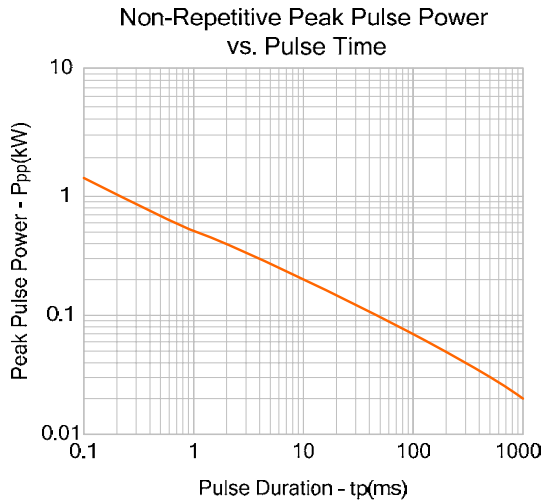
ELECTRICAL CHARACTERISTICS(T_{amb}=25 $^{\circ}$ C)

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V _{RWM}	Any I/O pin to GND			5	V
Reverse Breakdown Voltage	V _{BR}	$t = 1\text{mA}$; Any I/O pin to GND	6			V
Reverse Leakage Current	I _R	V _{RWM} =5V, T=25 $^{\circ}$ C; Any I/O pin to GND			1	μ A
Positive Clamping Voltage	V _{C1}	I _{PP} =1A, t _p =8/20Ms; Positive pulse; Any I/O pin to GND		8.5	12.0	V
Negative Clamping Voltage	V _{C2}	I _{PP} =1A, t _p =8/20 μ S; 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		0.35	0.45	pF
Junction Capacitance Between I/O And GND	C _{J2}	V _R =0V, f=1MHz; Any I/O pin to GND			0.9	pF



4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

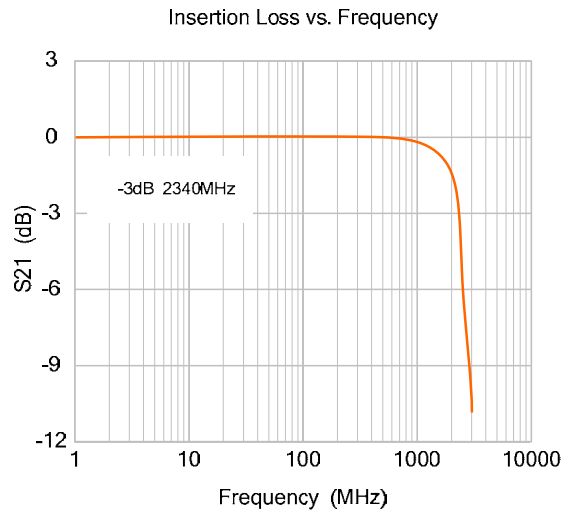
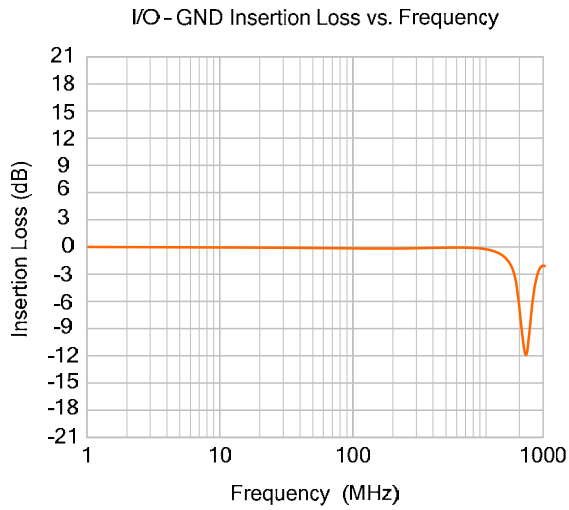
TYPICAL ELECTRICAL CHARACTERISTICS CURVE



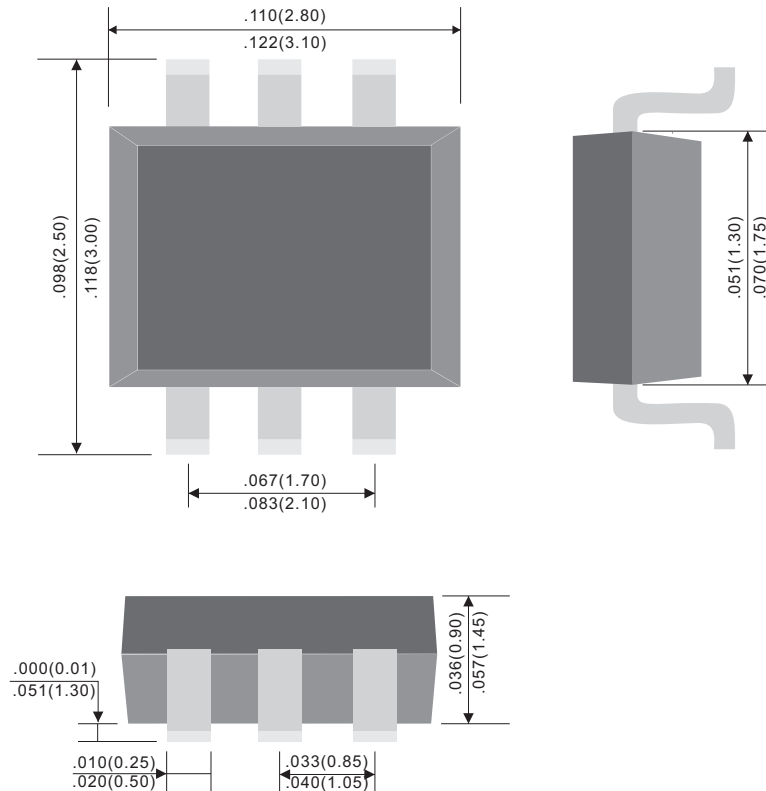


4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

TYPICAL ELECTRICAL CHARACTERISTICS CURVE



SOT-23-6



Dimensions in inches and (millimeters)