6 and 8-Channel Low Capacitance ESD Arrays

Product Description

The CM1216 family of diode arrays provide sESD protection for electronic components or sub-systems requiring minimal capacitive

PACKAGE / PINOUT DIAGRAMS

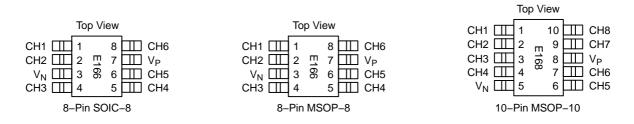


Table 1. PIN DESCRIPTIONS

Pin Name	MSOP-8	SOIC-8	MSOP-10	Туре	Description
	Pin No.	Pin No.	Pin No.		
CH1	1	1	1	I/O	ESD Channel
CH2	2	2	2	I/O	ESD Channel
CH3	4	4	3	I/O	ESD Channel
CH4	5	5	4	I/O	ESD Channel
V _N	3	3	5	GND	Negative voltage supply rail
CH5	6	6	6	I/O	ESD Channel
CH6	8	8	7	I/O	ESD Channel
VP	7	7	8	PWR	Positive voltage supply rail
CH7	-	_	9	I/O	ESD Channel
CH8	_	_	10	I/O	ESD Channel

SPECIFICATIONS

emperature Rang. 2 580378.2614e2 r9T8 0 0 8 172.7433 447.533824(N)1029S 1 D Ch277433 447.533822 r9T29S 1 D Cha4nel

Table 4. ELECTRICAL OPERATING CHARACTERISTICS

APPLICATION INFORMATION

Design Considerations

In order to realize the maximum protection against ESD pulses, care must be taken in the PCB layout to minimize parasitic series inductances on the Supply/Ground rails as well as the signal trace segment between the signal input (typically a connector) and the ESD protection device. Refer to Application of Positive ESD Pulse between Input Channel and Ground, which illustrates an example of a positive ESD pulse striking an input channel. The parasitic series inductance back to the power supply is represented by L_1 and L_2 . The voltage V_{CL} on the line being protected is:

$V_{CL} = Fwd \text{ voltage drop of } D_1 + V_{SUPPLY} + L_1 \text{ x } d(I_{ESD}) / dt + L_2 \text{ x } d(I_{ESD}) / dt$

where I_{ESD} is the ESD current pulse, and V_{SUPPLY} is the positive supply voltage.

An ESD current pulse can rise from zero to its peak value in a very short time. As an example, a level 4 contact discharge per the IEC61000–4–2 standard results in a current pulse that rises from zero to 30 Amps in 1 ns. Here $d(I_{ESD})/dt$ can be approximated by $\Delta I_{ESD}/\Delta t$, or 30/(1x10

PACKAGE DIMENSIONS

SOIC-8 EP CASE 751AC-01 ISSUE B

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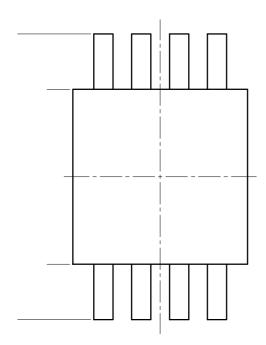
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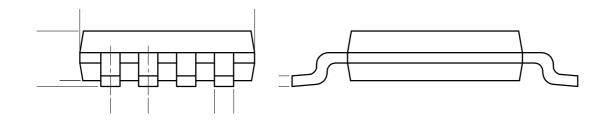


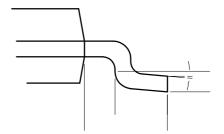
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PACKAGE DIMENSIONS

MSOP 8, 3x3 CASE 846AD-01 ISSUE O







PACKAGE DIMENSIONS

MSOP 10, 3x3 CASE 846AE-01 ISSUE O

