CM1225

4-Channel Low Capacitance ESD Protection Arrays

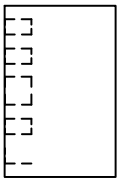
Product Description

The CM1225 diode array has been designed to provide ESD protection for electronic components or subsystems requiring minimal capacitive loading. This device is ideal for protecting systems with high data and clock rates or for circuits requiring low capacitive loading. Each ESD channel consists of a pair of diodes in series which steer the positive or negative ESD current pulse to the ground pins (V_N). A Zener diode is embedded between the positive terminal of the diode pair to the ground. This eliminates the need for an external

Table 1. PIN DESCRIPTIONS

4−Channel, 10−Lead uUDFN−10 Package			
Pin	**Name**	**Type**	**Description**

PACKAGE / PINOUT DIAGRAMS



PERFORMANCE INFORMATION

Input Channel Capacitance Performance Curves

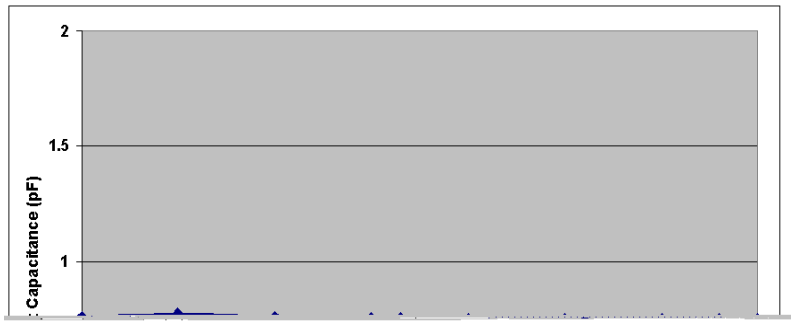


Figure 1. Typical Variation of C_{IN} vs. V_{IN}
(f = 1 Mhz, V_N = 0 V, T = 25°C)

PERFORMANCE INFORMATION (Cont'd)

Typical Filter Performance (nominal conditions unless specified otherwise, 50 Ohm Environment)

Figure 2. Insertion Loss (S21) vs. Frequency (0 V DC Bias)

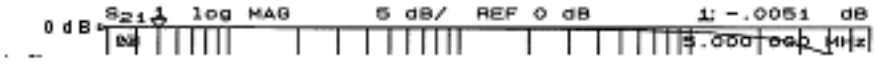


Figure 3. Insertion Loss (S21) vs. Frequency (2.5 V DC Bias)

APPLICATION INFORMATION

Design Considerations

As a general rule, the CM1225 ESD protection array should be located as close as possible to the point of entry of expected electrostatic discharges. Use minimum PCB trace lengths to ground planes and between the signal input and the ESD devices.

Additional Information

See also ON Semiconductor Application Note “Design Considerations for ESD Protection”.

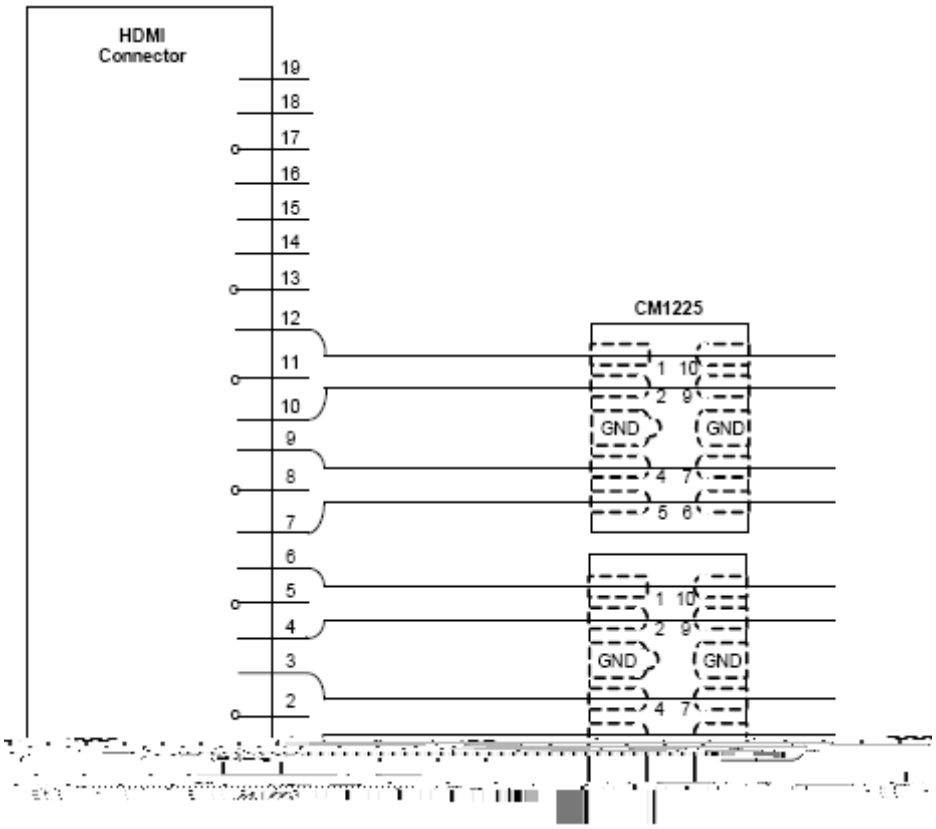


Figure 4. Typical HDMI ESD Protection with CM1225 Connection

APPLICATION INFORMATION (Cont'd)

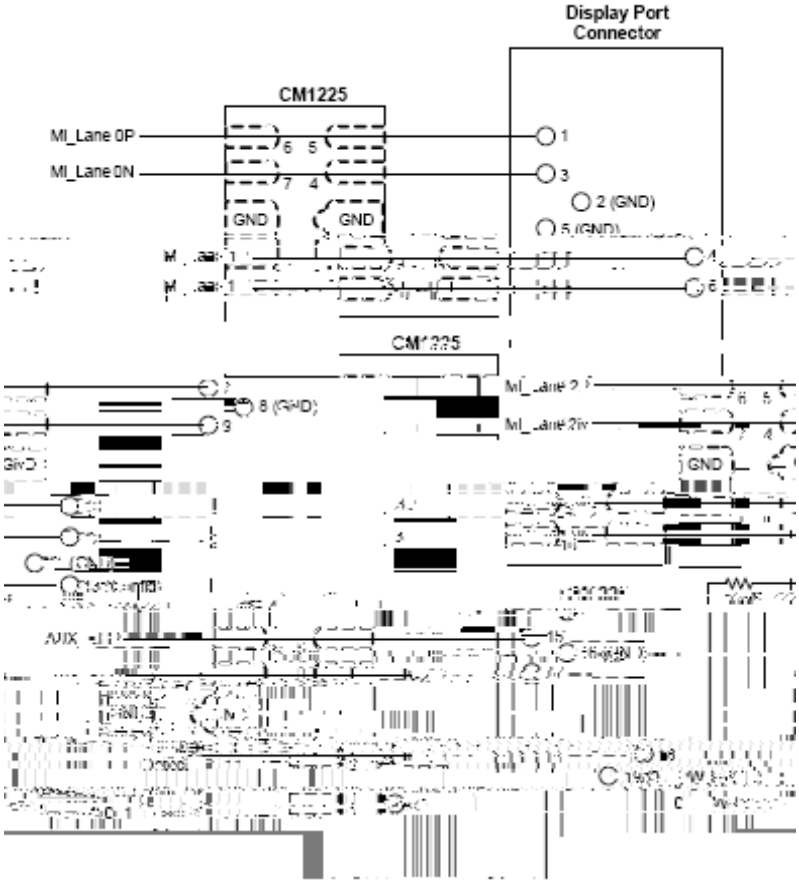
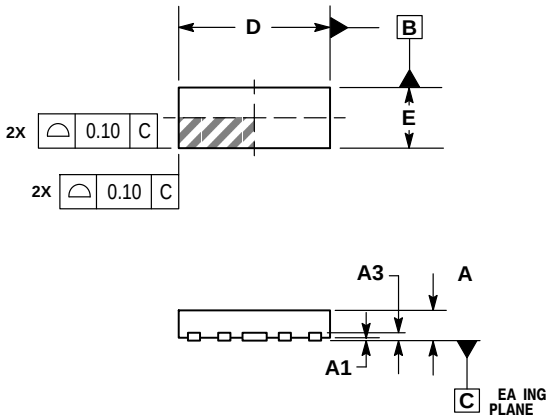


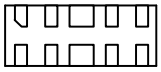
Figure 5. Display Port ESD Protection with CM1225 Connection

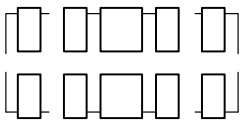
UDFN10 2.5x1, 0.5P
CASE 517BB
ISSUE O

DATE 17 NOV 2009

SCALE 4:1







NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b APPLIES TO PLATED TERMINAL AND IS MEASURED BETWEEN 0.15 AND 0.30mm FROM TERMINAL.

DIM		

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DESCRIPTION:	**UDFN10 2.5X1, 0.5P**		**PAGE 1 OF 1**