

Product Overview

CM1224: Low Capacitance ESD Protection Arrays

For complete documentation, see the data sheet.

The CM1224 family of diode arrays has been designed to provide ESD protection for electronic components or subsystems requiring minimal capacitive loading. These devices are 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 either the positive (VP) or negative (VN) supply rail. A Zener diode is embedded between VP and VN, offering two advantages. First, it protects the VCC rail against ESD strikes, and second, it eliminates the need for a bypass capacitor that would otherwise be needed for absorbing positive ESD strikes to ground. The CM1224 protects against ESD pulses up to ±8kV per the IEC 61000-4-2 standard. These devices are particularly well-suited for protecting systems using high-speed ports such as USB 2.0, IEEE1394 (Firewire®, iLink™), Serial ATA, DVI, HDMI and corresponding ports in removable storage, digital camcorders, as well as DVD-RW drives and other applications where extremely low loading capacitance with ESD protection are required. The CM1224 family of devices has lead-free finishing in a small package footprint.

Features

- Two or four channels of ESD protection up to 8kV contact discharge
- General purpose high-speed data line ESD protection
- Low channel input capacitance of 0.7pF typical with Minimal capacitance change with temperature and voltage
- Channel input capacitance matching of 0.02pF typical is ideal for differential signals
- Zener diode protects supply rail and eliminates the need for external by-pass capacitors

End Products

Part Electrical Specifications											
Product	Compliance	Status	Interface	Number of Lines	Direction	C Max (pF)	$V_{(BR)}$ Min (V)	V_{RWM} Max (V)	I_R Max (μA)	P_{PK} Max (W)	Package Type
CM1224-04MR	Pb-free	Active	USB 2.0	4	Unidirectional	0.8	6	5.5	1	0.4	MSOP-10
	Halide free		DVI								
			HDMI 1.2								
CM1224-04SO	Pb-free	Active	USB 2.0	4	Unidirectional	0.8	6	5.5	1	0.225	SOT-23-6
	Halide free		HDMI 1.2								
			DVI								

For more information please contact your local sales support at www.onsemi.com.

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