

Low-Capacitance ESD Protection Diode Arrays *For AC Signals*

Features:

- Small packages save board space
- Protects single and dual I/O lines
- ESD protection to over **8kV contact discharge** per IEC-61000
- Low capacitance: **<1pF**
- Ideal for bipolar (AC) signals
- Can handle multiple ESD strikes
- Full RoHS compliance

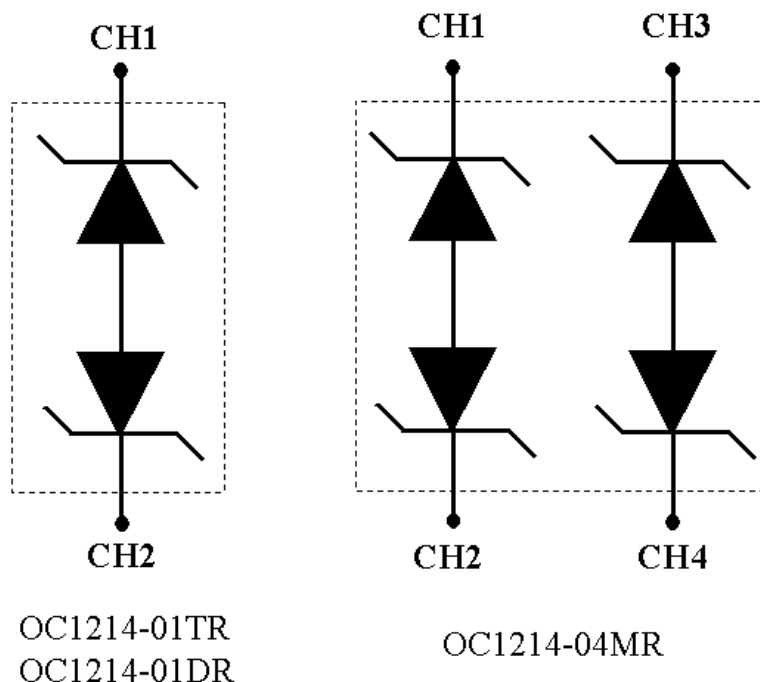
Applications:

- Gbit Ethernet Port Protection
- Antenna Protection
- RF Switch & Amplifier Protection
- IEEE1394 Port Protection

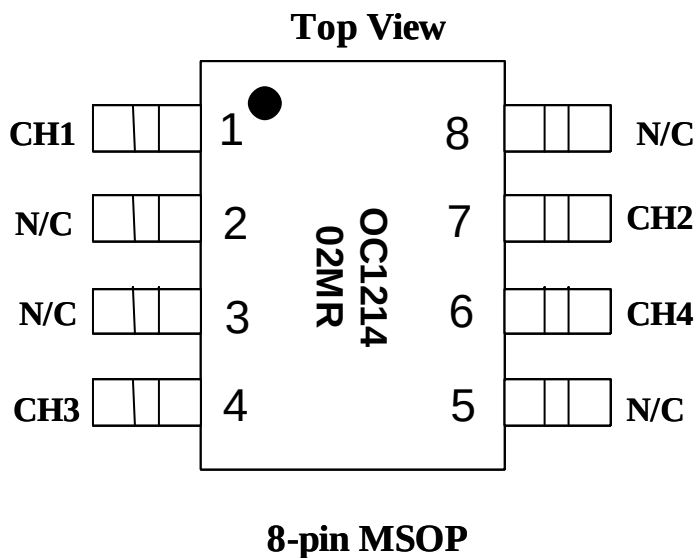
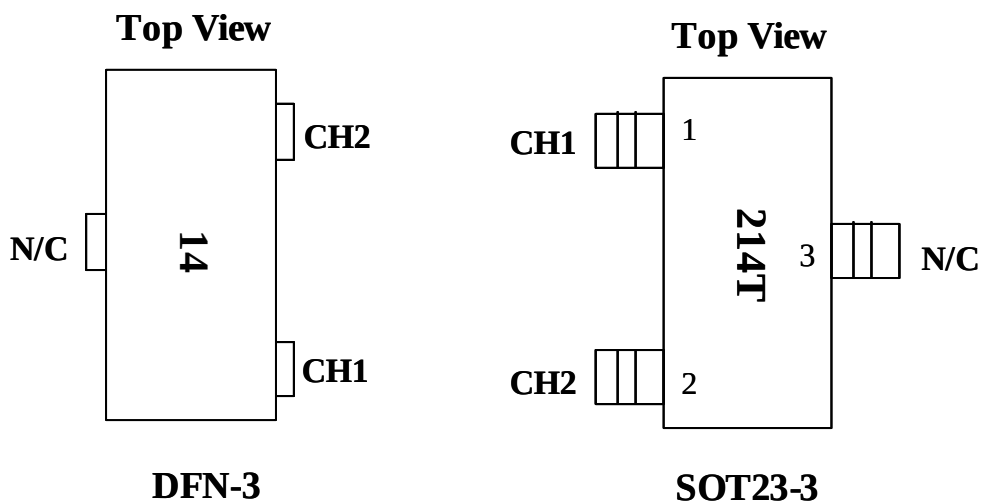
Product Description

The OC1214 provides a high level of protection for sensitive parts that may be subjected to over-voltage caused by electrostatic discharge (ESD). Key attribute is the low-capacitance of 1pF which is ideally suited for high-speed data ports. Thus device is used to protect bipolar signal lines. The –01 protects single channel and is ideal for Antenna circuit protection and the –02 protects dual channels such as Gigabit Ethernet and ADSL. Package options are 3-pin DFN, SOT23 and 8-pin MSOP. These devices are available in RoHS compliant lead-free finish.

ELECTRICAL SCHEMATIC



PACKAGE OPTIONS & PINOUT



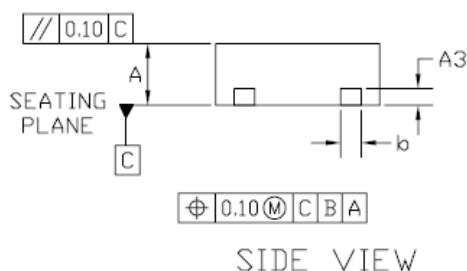
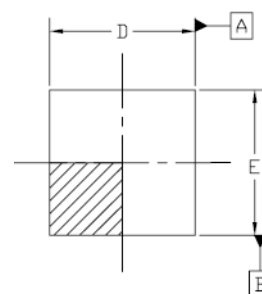
ELECTRICAL OPERATING CHARACTERISTICS				
Electrical Specifications	MIN	TYP	MAX	UNITS
DC Voltage between channel pins		7		V
Standoff Voltage @ 10uA		±7		V
Leakage current at $V_P=5V$, 25°C	-	±0.1	±1	uA
Signal Clamp Voltage at 25°C @ 10mA		10		V
ESD Protection Contact discharge per IEC 61000-4-2 standard	± 8	-	-	kV
Dynamic Resistance		0.9		Ohms
Input Capacitance(@; $V_P = 3.3V$; $V_{Channel} = 1.65V$; frequency = 1MHz)	0.5	0.8	1	pF
Temperature Range:				
Operating	-40	-	85	°C
Storage	-55		150	°C

Pins	Package	Standard Finish		Lead-Free Finish	
		Ordering Part Number	Part Marking	Ordering Part Number	Part Marking
3	DFN	OC1214-01D	14	OC1214-01DR	4R
3	SOT23	OC1214-01T	214T	OC1214-01TR	14TR
8	MSOP	OC1214-02M	OC1214-02M	OC1214-02MR	OC1214-02MR

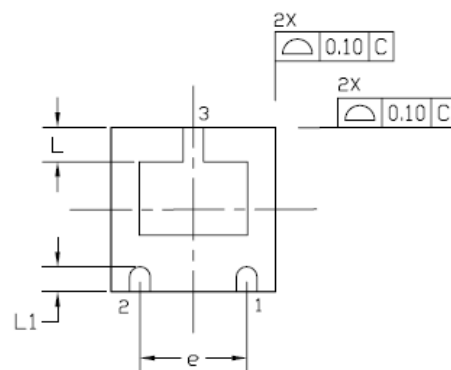
DNF 3 Pin Package Drawings

Package Dimensions						
Dimensions	Millimeters (mm)			Inches (")		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.85	0.90	0.95	0.033	0.035	0.037
A3	0.0203 BSC			0.008 BSC		
B	0.20	0.25	0.30	0.008	0.010	0.012
D	1.90	2.00	2.10	0.075	0.079	0.083
D2	1.20	1.32	1.40	0.047	0.052	0.055
E	1.90	2.00	2.10	0.075	0.079	0.083
E2	0.80	0.89	1.00	0.032	0.035	0.039
E	1.30 BSC			0.050 BSC		
L	0.25	0.30	0.35	0.010	0.012	0.014
L1	0.35	0.42	0.45	0.014	0.016	0.018

TOP VIEW



BOTTOM VIEW



RF Switch & Amplifier ESD Protection Application Schematic (OC1214-01)

