

3 Channel Headset EMI Filter with ESD Protection

Features

- Functionally and pin compatible with California Micro Device's CSPEMI205
- *OptiGuard*[™] coated for improved reliability at assembly
- Three channels of EMI filtering, two for earpiece speakers and one for a microphone
- Pi-style EMI filters in a capacitor-resistor-capacitor (C-R-C) network
- Greater than 30dB relative attenuation in the 800-2700MHz range
- ± 8 kV ESD protection on each channel (IEC 61000-4-2 Level 4, contact discharge)
- ± 15 kV ESD protection on each channel (HBM)
- 8-bump, 1.41mm X 1.43mm footprint
- Chip Scale Package (CSP)
- CSP features extremely low parasitic inductance for optimum filter performance
- Lead-free version available

Applications

- EMI filtering and ESD protection for headset microphone and speaker
- Cellular / Mobile Phones
- Notebooks and Personal Computers
- Handheld PCs / PDAs / Tablets
- Wireless Handsets
- Digital Camcorders

Product Description

The CM1415 is a low-pass filter array integrating three pi-style filters (C-R-C) that reduce EMI/RFI emissions while at the same time providing ESD protection. This device is custom-designed to interface with the headset port on a cellular telephone, and contains two different filter values. Each high quality filter provides more than 30dB attenuation in the 800-2700 MHz range. These pi-style filters support bidirectional filtering, controlling EMI both to and from the microphone and speaker elements. They also support bipolar signals, enabling audio signals to pass through without distortion.

In addition, the CM1415 provides a very high level of protection for sensitive electronic components that may be subject to electrostatic discharge (ESD). The input pins safely dissipate ESD strikes of ± 8 kV, the maximum requirement of the IEC 61000-4-2 international standard. Using the MIL-STD-883 (Method 3015) specification for Human Body Model (HBM) ESD, the device provides protection for contact discharges to greater than ± 15 kV.

The CM1415 is particularly well suited for portable electronics (e.g., cellular telephones, PDAs, notebook computers) because of its small package format and low weight.

The CM1415 incorporates *OptiGuard*[™] coating which results in improved reliability at assembly. The CM1415 is available in a space-saving, low-profile Chip Scale Package with optional lead-free finishing.

Electrical Schematic



