



8- channel LCD & Camera EMI Filter with ESD Protection Chip Scale Packaging (CSP)

**Features**

- Eight (8) Low pass EMI filters with excellent attenuation at high frequencies
- ESD protection at 15KV per IEC61000
- 20-bump CSP device (4.000mm x 1.458mm)
- Polymer back coating to improve mechanical strength
- RoHS Compliant in Lead-Free Versions
- Complies with the following standards:
  - IEC 61000-4-2 (ESD) Air-15kv, Contact-8kv
  - IEC 61000-4-4 (EFT) (5/50ns)
  - IEC 61000-4-5 (Surge) (8/20µs)

**Applications**

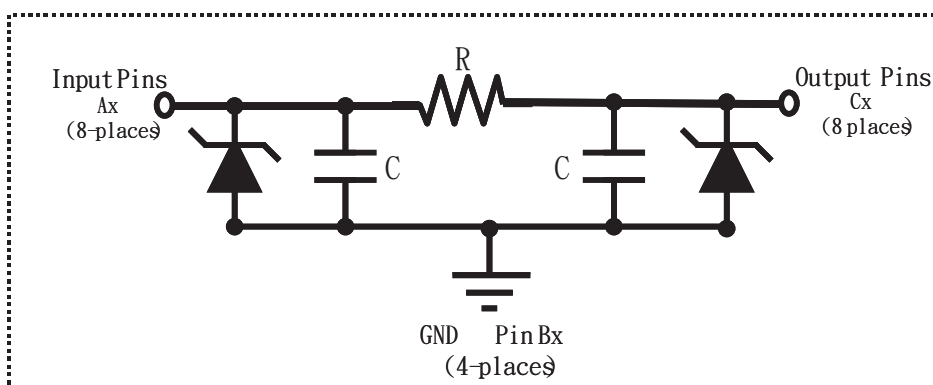
- Cellular Handsets
- PDA
- Mp3 Players
- PC & Notebooks
- Smart Cards
- Digital Cameras

**Product Description**

The UMD1442-08CP is an 8-channel pi-style Capacitor-Resistor-Capacitor EMI/RFI Filter with integrated Diodes for electrostatic discharge (ESD) protection. This device offers greater than 30dB attenuation in the 800MHz to 3GHz. The diodes provide a 15kV contact-discharge ESD protection per IEC-61000 specifications.

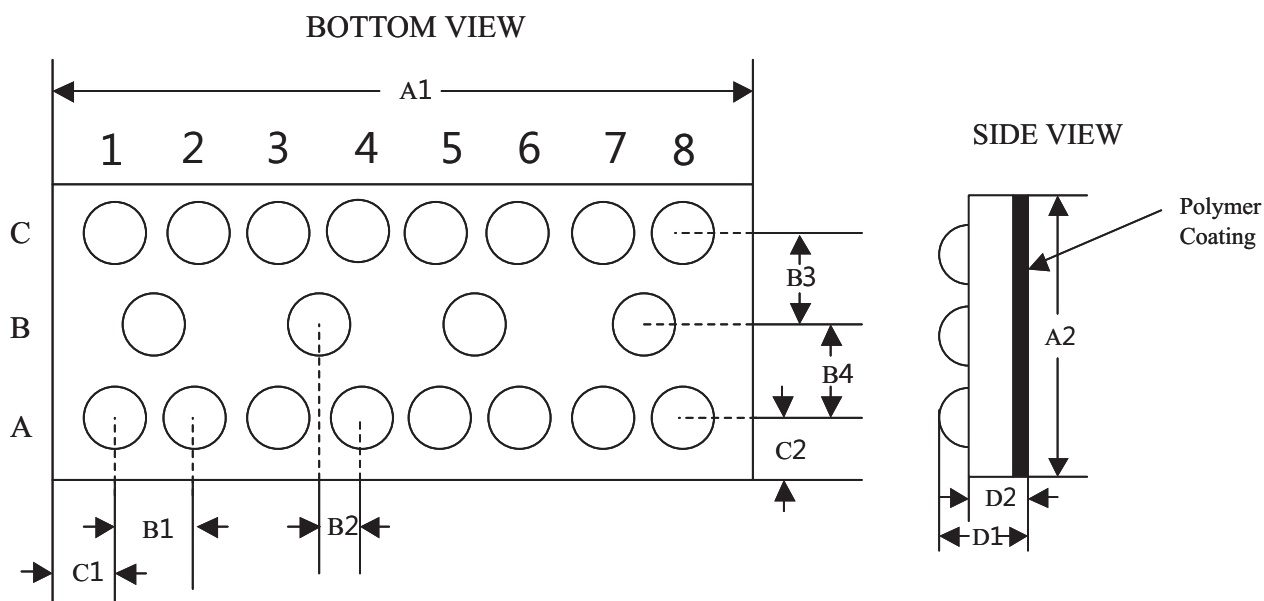
The device is built in a 20-bump CSP format with 0.5mm pitch and is ideal for portable electronic systems.

Schematic for Each Line



| ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified |                         |                           |                                 |                         |  |   |                     |                                |
|---|-------------------------|---------------------------|---------------------------------|-------------------------|--|---|---------------------|--------------------------------|
| PART NUMBER   | RATED STAND-OFF VOLTAGE | MINIMUM BREAKDOWN VOLTAGE | MAXIMUM REVERSE LEAKAGE CURRENT | TYPICAL FORWARD VOLTAGE | MINIMUM ATTENUATION @ 800 to 3,000 MHz | CUT-OFF FREQUENCY 50-OHMS SOURCE & LOAD | RESISTANCE R +/-20% | CAPACITANCE C +/-20% (at 2.5V) |
| UMD1442-08CP  | 6 Volts                 | 7 Volts                   | 0.2 uA                          | 0.8 Volts               | -30dB                                  | 120 MHz                                 | 100-ohms            | 15-pF                          |

### Mechanical Package Diagram



| Package Dimensions        |                  |       |       |            |        |        |
|---------------------------|------------------|-------|-------|------------|--------|--------|
| Dimensions                | Millimeters (mm) |       |       | Inches (") |        |        |
|                           | Min.             | Typ.  | Max.  | Min.       | Typ.   | Max.   |
| A1                        | 3.955            | 4.000 | 4.045 | 0.1557     | 0.1575 | 0.1493 |
| A2                        | 1.413            | 1.458 | 1.503 | 0.0556     | 0.0574 | 0.0592 |
| B1                        | 0.495            | 0.500 | 0.505 | 0.0195     | 0.0197 | 0.0199 |
| B2                        | 0.245            | 0.250 | 0.255 | 0.0096     | 0.0098 | 0.0100 |
| B3                        | 0.430            | 0.435 | 0.440 | 0.0169     | 0.0171 | 0.0173 |
| B4                        | 0.430            | 0.435 | 0.440 | 0.0169     | 0.0171 | 0.0173 |
| C1                        | 0.200            | 0.250 | 0.300 | 0.0079     | 0.0098 | 0.0118 |
| C2                        | 0.244            | 0.296 | 0.344 | 0.0096     | 0.0116 | 0.0135 |
| D1                        | 0.575            | 0.644 | 0.714 | 0.0226     | 0.0254 | 0.0281 |
| D2                        | 0.368            | 0.419 | 0.470 | 0.0145     | 0.0165 | 0.0185 |
| Parts/reel                | 3,500            |       |       |            |        |        |
| Controlling Dimension: mm |                  |       |       |            |        |        |