

## Packaged EMI Filter with ESD Protection Diode

**Features**

- Low pass EMI filters with excellent attenuation at high frequencies
- ESD protection at 15KV per IEC61000
- Offered in 4, 6 or 8 channels in small form-factor TDFN package with 0.5mm and 0.4mm pad pitch
- RoHS Compliant in Lead-Free Versions

**Applications**

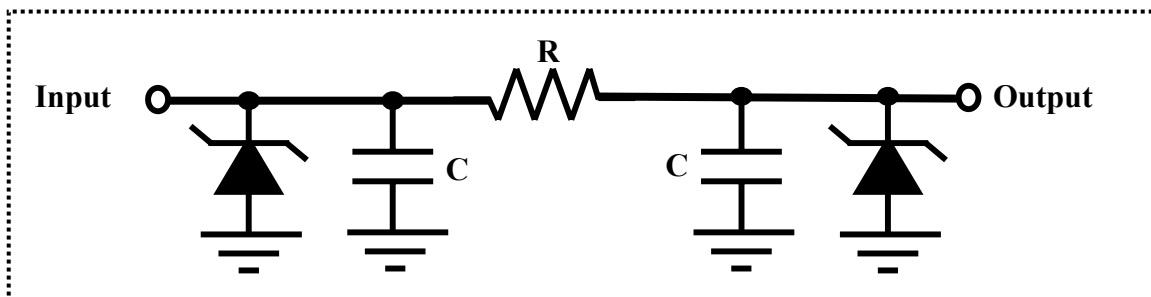
- Cellular Handsets
- PDA
- MP3 Players
- PC & Notebooks
- Smart Cards
- Digital Cameras

**Product Description**

The EMF1100 Array is a pi-style Capacitor-Resistor-Capacitor EMI/RFI Filter with integrated Diodes for electrostatic discharge (ESD) protection. Housed in miniature TDFN Packages this product is available in 4, 6 & 8 channels filters. This device has a cut-off frequency of 200MHz and can be used in applications with data rates up to 80Mbps.

TDFN packages come in 8-lead (4-channel), 12-lead (6-channel) and 16-lead (8-channel); and are available both in 0.4mm and 0.5mm pad pitch. The 0.4mm pitch package provides a 40% PCB space savings compared to the 0.5mm format.

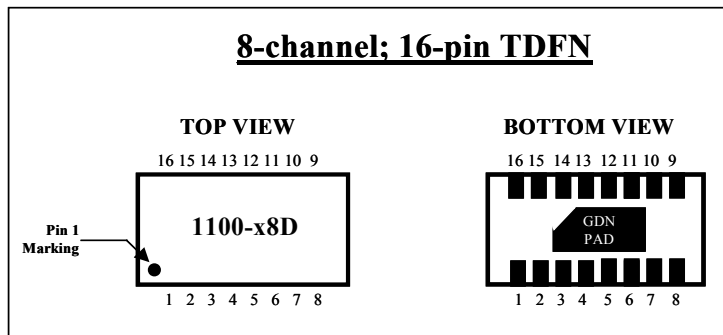
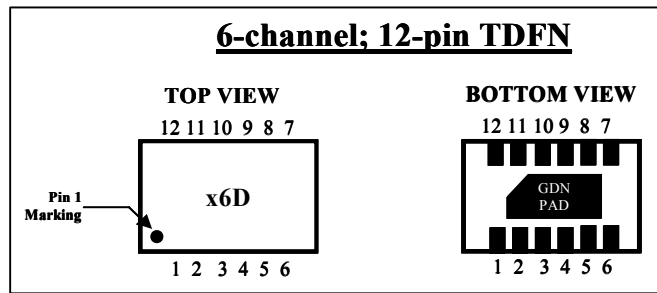
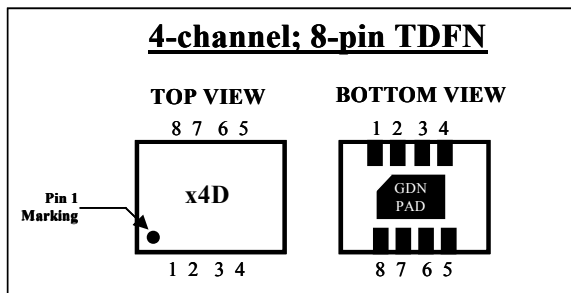
### Schematic for Each Line



| 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% |
| EMF1100-04D   | 6 Volts                 | 7 Volts                   | 0.1 uA                          | 0.8 Volts               | -25dB                                  | 200 MHz                                 | 100-ohms            | 8.5-pF               |
| EMF1100-06D   | 6 Volts                 | 7 Volts                   | 0.1 uA                          | 0.8 Volts               | -25dB                                  | 200 MHz                                 | 100-ohms            | 8.5-pF               |
| EMF1100-08D   | 6 Volts                 | 7 Volts                   | 0.1 uA                          | 0.8 Volts               | -25dB                                  | 200 MHz                                 | 100-ohms            | 8.5-pF               |

| Ordering Part Number and Package Options |                    |                      |                     |
|--|--------------------|----------------------|---------------------|
| PART NUMBER                              | NUMBER OF CHANNELS | PACKAGE; PAD PITCH   | DEVICE MARKING CODE |
| EMF1100-04D4R                            | 4                  | TDFN-8; 0.4mm; RoHS  | E4D                 |
| EMF1100-04D5R                            | 4                  | TDFN-8; 0.5mm; RoHS  | F4D                 |
| EMF1100-06D4R                            | 6                  | TDFN-12; 0.4mm; RoHS | E6D                 |
| EMF1100-06D5R                            | 6                  | TDFN-12; 0.5mm; RoHS | F6D                 |
| EMF1100-08D4R                            | 8                  | TDFN-16; 0.4mm; RoHS | 1100-E8D            |
| EMF1100-08D5R                            | 8                  | TDFN-16; 0.5mm; RoHS | 1100-08D            |

### Number of Channels/Package Options



## DEVICE CHARACTERISTICS

| MAXIMUM RATINGS @ 25°C Unless Otherwise Specified |                |       |
|---|----------------|-------|
| PARAMETER   | VALUE          | UNITS |
| Operating Temperature                             | -40°C to 85°C  | °C    |
| Storage Temperature                               | -55°C to 150°C | °C    |
| Soldering Temperature for 10 seconds              | 265            | °C    |