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 and 8 channel in small form-factor TDFN or UDFN package with 0.5mm pad pitch
- RoHS Compliant in Lead-Free Versions

Applications:

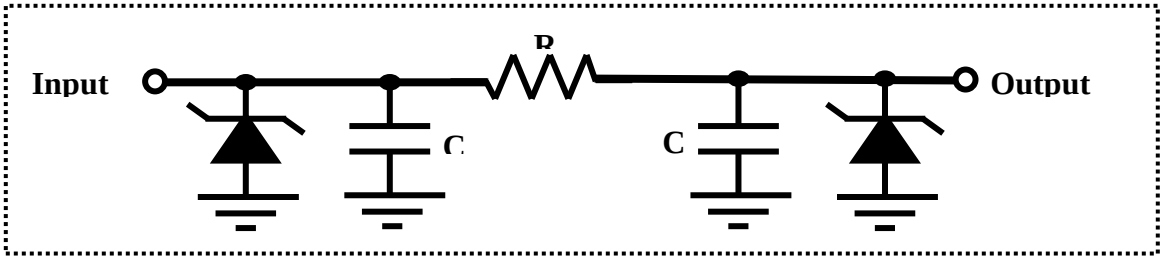
- Wireless handsets
- PDA
- MP3 Players
- PC & Notebooks
- Smart Cards
- LCD and Camera data lines.

Product Description

The XEMF4500-xxxxR Array is a pi-style Capacitor-Resistor-Capacitor EMI/RFI Filter with integrated Diodes for electrostatic discharge (ESD) protection. Housed in miniature UDFN or TDFN packages, this product is available in 4, 6 or 8 channel filters. This device has a cut-off frequency of 200MHz and can be used in applications with data rates up to 80Mbps.

Such devices are particularly well-suited for portable electronics (e.g. wireless handsets, PDAs, notebook computers) because of their small package and easy- to-use pin assignments. In particular, the XEMF4500 series of products is ideal for EMI filtering and protecting data and control lines for the I/O data ports, LCD display and camera interface in mobile handsets.

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%
XEMF4500-xxxxR	6 Volts	7 Volts	0.1 uA	0.8 Volts	-25dB	200 MHz	100-ohms	8.5-pF

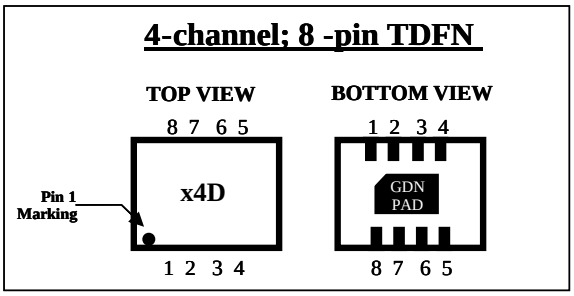
DEVICE CHARACTERISTICS

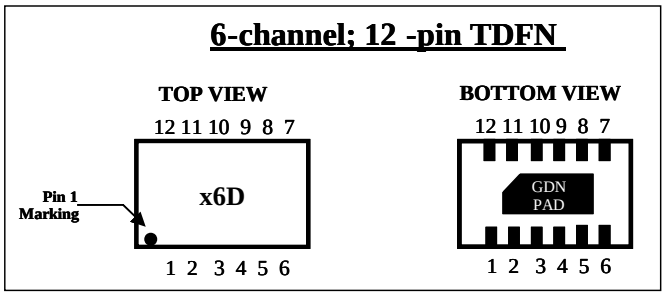
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified		
PARAMETER	VALUE	UNITS
Operating Temperature	-40°C to 85°C	°C
Storage Temperature	-55°C to 150°C	°C
Soldering Temperature for 10 seconds	265	°C

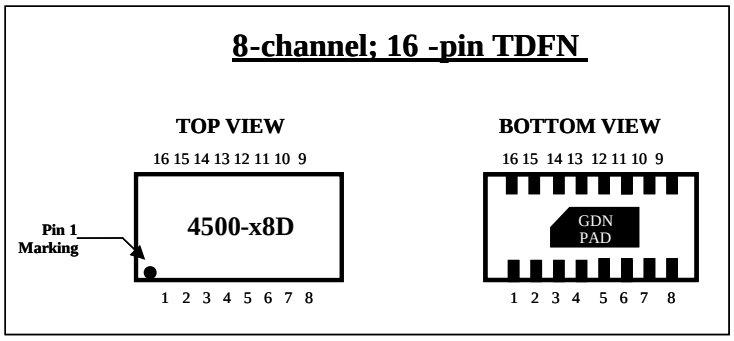
Package options:

SiliconApps Part Number	XEMF4500-04D4R	XEMF4500-04U4R	XEMF4500-06D4R	XEMF4500-06U4R	XEMF4500-08D4R	EMF4500-08U4R
Package Type	TDFN-8 (0.4mm)	UDFN-8 (0.4mm)	TDFN-12 (0.4mm)	UDFN-12 (0.4mm)	TDFN-16 (0.4mm)	UDFN-16 (0.4mm)

Package marking examples:







Typical Insertion Loss vs. Frequency Curve: