

APPLICATION

- I/O ESD protection for mobile handsets, notebook, PDAs, etc.
- EMI filtering for data ports in cell phones, PDAs, notebook computers
- EMI filtering for LCD, camera and chip-to-chip data lines

FEATURES

- EMI/RFI filtering
- ESD Protection to IEC 61000-4-2 Level 4
- Low insertion loss
- Good attenuation of high frequency signals
- Low clamping voltage
- Low operating and leakage current
- Six elements in one package

DESCRIPTION

PF2015UDF12 is an EMI filter array with electrostatic discharge (ESD) protection, which integrates six pi filters (C-R-C). These parts include ESD protection diodes on every pin, providing a very high level of protection for sensitive electronic components that may be subjected to electrostatic discharge.

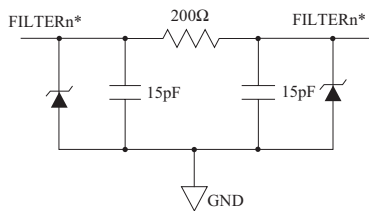
The PF2015UDF12 provides the recommended line termination while implementing a low pass filter to limit EMI levels and providing ESD protection which exceeds IEC 61000-4-2 level 4 standard. The UDFN package is a very effective PCB space occupation and a very thin package (0.4mm Pitch, 0.5mm height)

MAXIMUM RATING (Ta=25 °C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------|-----------|-----------|------|
| DC Power Per Resistor | P_R | 100 | mW |
| Power Dissipation | $*P_D$ | 600 | |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55 ~ 150 | °C |

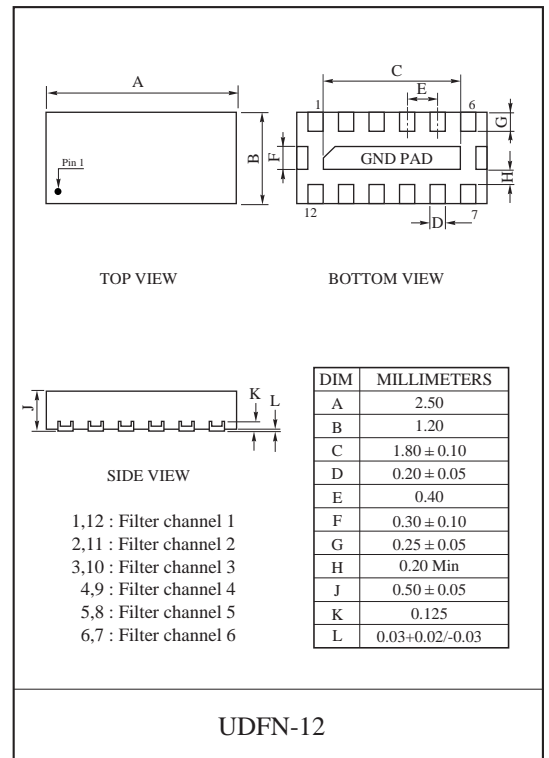
* Total Package Power Dissipation

EQUIVALENT CIRCUIT

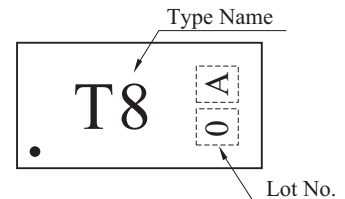


ELECTRICAL CHARACTERISTICS (Ta=25 °C)

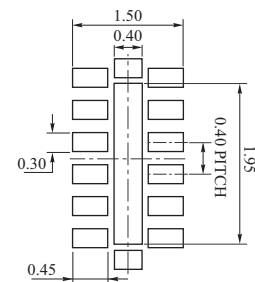
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---------------------------|-------------|--|------|------|------|------|
| Reverse Stand-Off Voltage | V_{RWM} | - | - | - | 5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_L=1mA$ | 6 | - | - | V |
| Reverse Leakage Current | I_R | $V_{RWM}=3.3V$ | - | - | 1.0 | μA |
| Cutoff Frequency | f_{c-3dB} | $V_{Line}=0V, Z_{SOURCE}=50, Z_{LOAD}=50$ | - | 100 | - | MHz |
| Channel Resistance | R_{LINE} | Between Input and Output | 160 | 200 | 240 | |
| Line Capacitance | C_{LINE} | $V_{Line}=0V$ DC, 1MHz, Between I/O Pins and GND | 36 | 45 | 54 | pF |
| | | $V_{Line}=2.5V$, 1MHz, Between I/O Pins and GND | 24 | 30 | 36 | |



MARKING

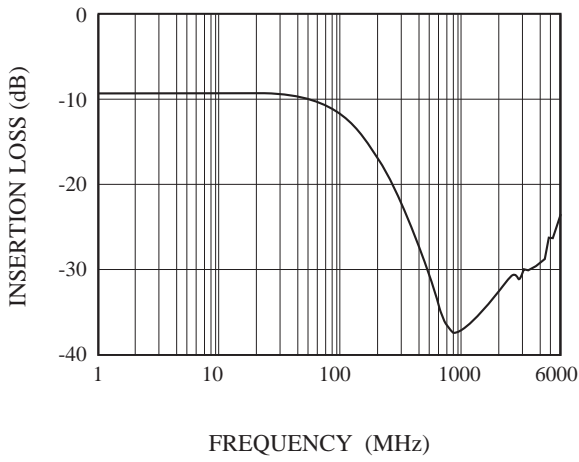


RECOMMENDED FOOTPRINT (dimensions in mm)

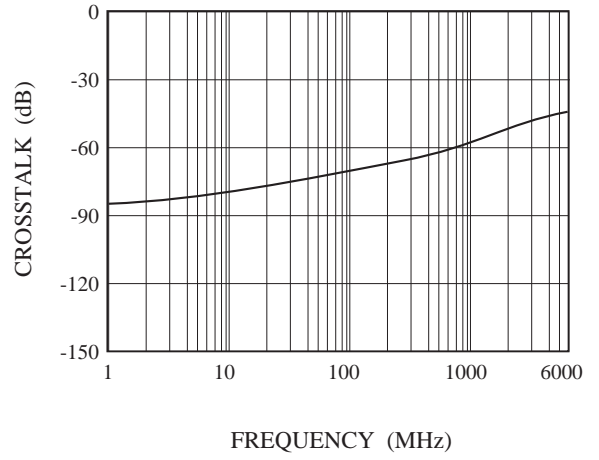


PF2015UDF12

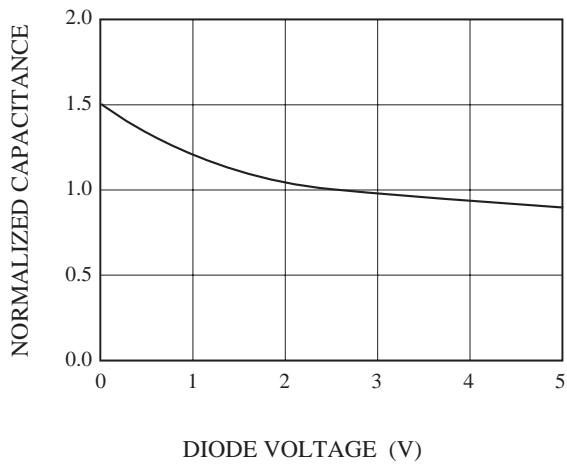
S_{21} - FREQUENCY



ANALOG CROSSTALK



DIODE CAPACITANCE vs. INPUT VOLTAGE



R_{Line} - TEMPERATURE

