

### 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
- Eight elements in one package

### DESCRIPTION

PF2015UDF16 is an EMI filter array with electrostatic discharge (ESD) protection, which integrates eight 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.

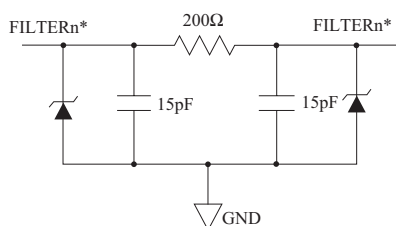
The PF2015UDF16 provides the recommended line termination while implementing a low pass filter to limit EMI levels and providing ESD protection which exceeds IEC 61000-4-2 level 4 standard. The UDFN package is a very effective PCB space occupation and a very thin package (0.4mm Pitch, 0.5mm height)

### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC        | SYMBOL    | RATING    | UNIT |
|-----------------------|-----------|-----------|------|
| DC Power Per Resistor | $P_R$     | 100       | mW   |
| Power Dissipation     | $*P_D$    | 800       |      |
| Junction Temperature  | $T_j$     | 150       | °C   |
| Storage Temperature   | $T_{stg}$ | -55 ~ 150 | °C   |

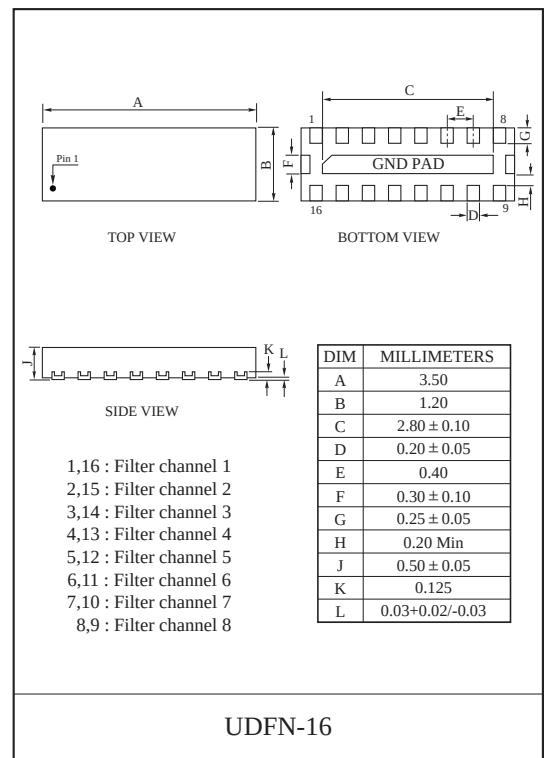
\* Total Package Power Dissipation

### EQUIVALENT CIRCUIT

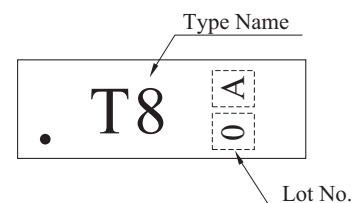


### ELECTRICAL CHARACTERISTICS (Ta=25°C)

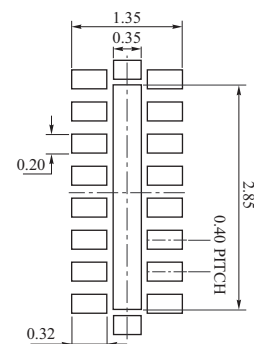
| CHARACTERISTIC            | SYMBOL      | TEST CONDITION                                              | MIN. | TYP. | MAX. | UNIT |
|---------------------------|-------------|-------------------------------------------------------------|------|------|------|------|
| Reverse Stand-Off Voltage | $V_{RWM}$   | -                                                           | -    | -    | 5    | V    |
| Reverse Breakdown Voltage | $V_{BR}$    | $I_t=1mA$                                                   | 6    | -    | -    | V    |
| Reverse Leakage Current   | $I_R$       | $V_{RWM}=3.3V$                                              | -    | -    | 1.0  | μA   |
| Cutoff Frequency          | $f_{c,3dB}$ | $V_{Line}=0V$ , $Z_{SOURCE}=50\Omega$ , $Z_{LOAD}=50\Omega$ | -    | 100  | -    | MHz  |
| Channel Resistance        | $R_{LINE}$  | Between Input and Output                                    | 160  | 200  | 240  | Ω    |
| 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   |      |



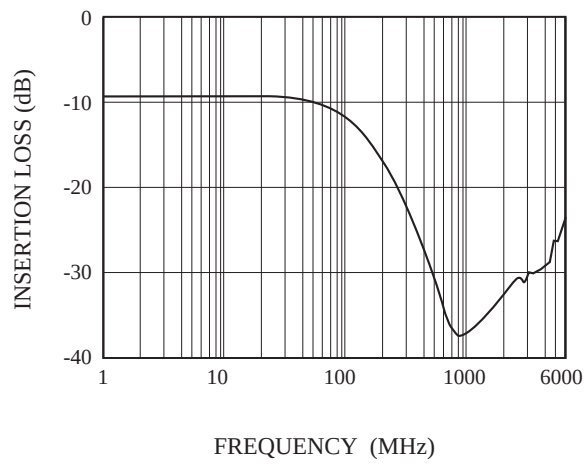
### MARKING



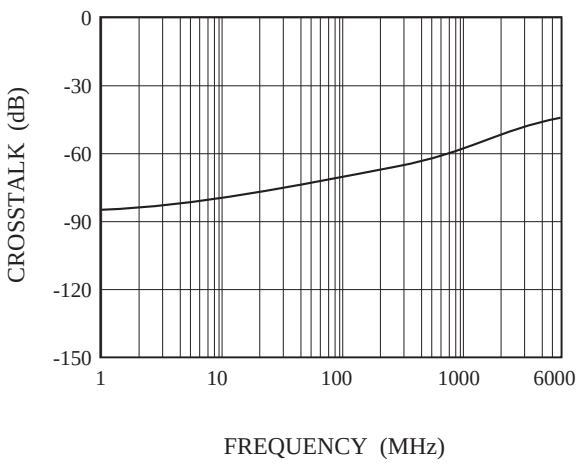
### RECOMMENDED FOOTPRINT (dimensions in mm)



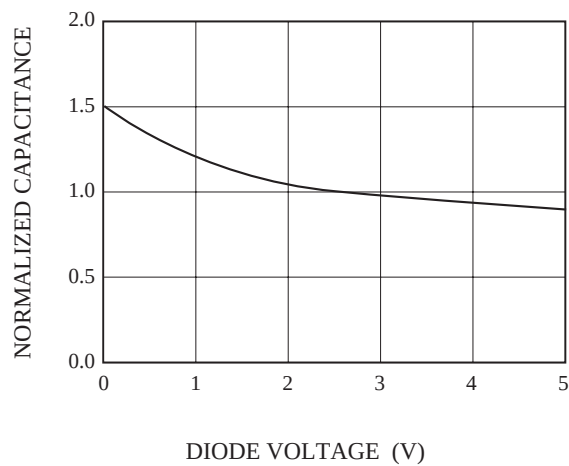
S<sub>21</sub> - FREQUENCY



ANALOG CROSSTALK



DIODE CAPACITANCE vs. INPUT VOLTAGE



R<sub>Line</sub> - TEMPERATURE

