



Film Capacitors

Application note for X1/X2 EMI capacitors

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Application note for X1/X2 EMI capacitors

Application note for capacitors used in powerlines

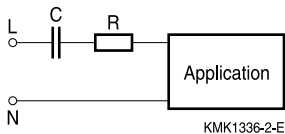
Application note for capacitors used in series or in parallel to the powerline

In series with the powerline (i.e. capacitive power supply)

Typical Applications:

- Power meters
- ECUs for white goods and household appliances
- Different sensor applications
- Severe ambient conditions

Basic circuit



Required features

- High capacitance stability over the lifetime
- Narrow tolerances for a controlled current supply

Recommended EPCOS product series

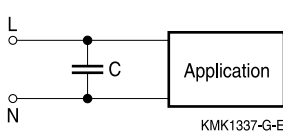
- B3293* (305 V AC) heavy duty series, also with EN approval for X2 (UL Q1/2010)
- B3265* MKP series standard MKP capacitor without safety approvals
- B3267*L MKP series standard MKP capacitor without safety approvals

In parallel with the powerline

Typical Applications:

Standard X2 are used parallel over the mains for reducing electromagnetic interferences coming from the grid.

Basic circuit



Required features

- Standard safety approvals (ENEC, UL, CSA, CQC)
- High pulse load capability
- Withstand surge voltages

Recommended EPCOS product series

- B3292*C/D (305 V AC) standard series, approved as X2
- B3292*E/F (305 V AC) miniaturized series (> 2.2 μ F), approved as X2
- B3291* (330 V AC), approved as X1

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