

Main Idea !!!



- **Diagnosing conducted EMI noise mode**

Two conducted noise modes :

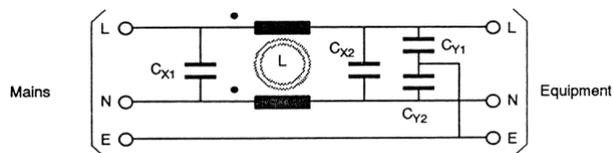
Differential Mode (DM) and Common Mode (CM),

Dealt with separately in EMI filter design

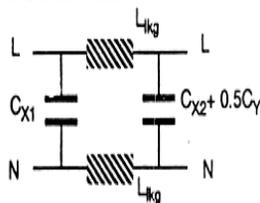
- **Methods:**

- ⊗ Differential mode rejection network
- ⊗ Current probe
- ⊗ Noise separator

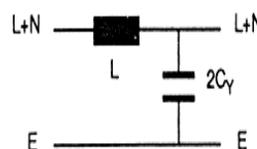
A basic of EMI filter diagram



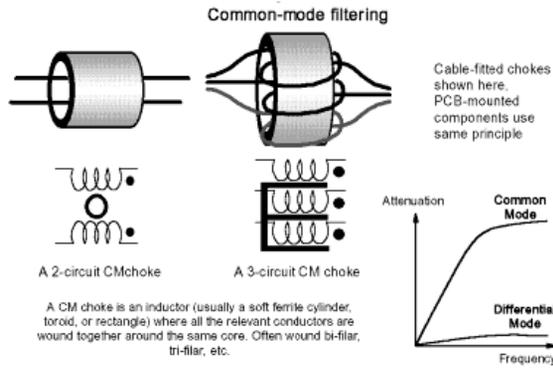
Equivalent circuit for differential mode



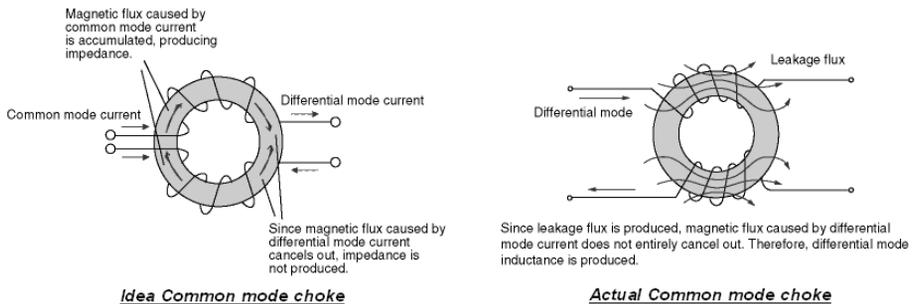
Equivalent circuit for common mode



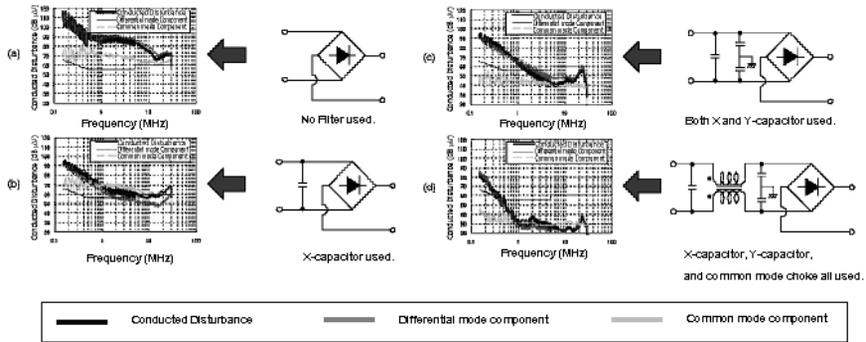
Common mode choke



Effect of the filter elements on Common and Differential mode currents



Separation of the conducted Emissions into Common and Differential mode currents



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Higher performance mains EMI filters

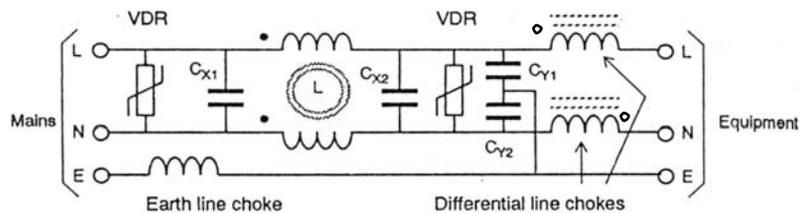


Figure 7.24 Higher performance mains filter

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