

Main Idea !!!



- **Diagnosing conducted EMI noise mode**

Two conducted noise modes :

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

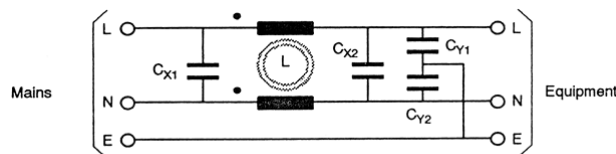
Dealt with separately in EMI filter design

- **Methods:**

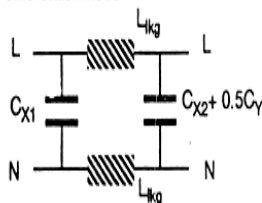
- ⊗ Differential mode rejection network
- ⊗ Current probe
- ⊗ Noise separator

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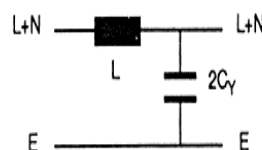
A basic of EMI filter diagram



Equivalent circuit for differential mode

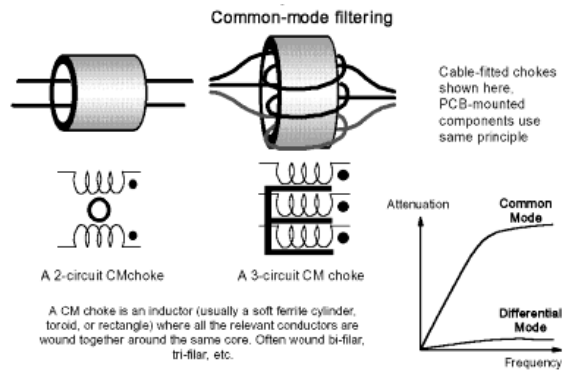


Equivalent circuit for common mode



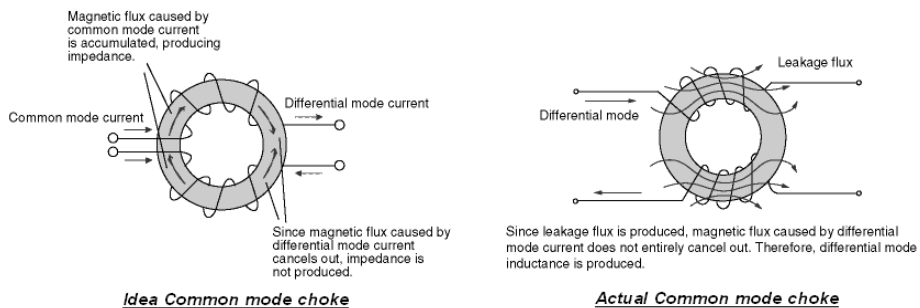
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Common mode choke



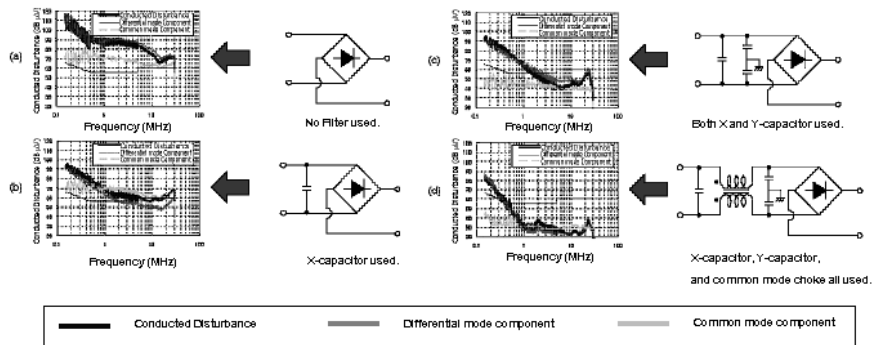
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Effect of the filter elements on Common and Differential mode currents



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Separation of the conducted Emissions into Common and Differential mode currents



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Higher performance mains EMI filters

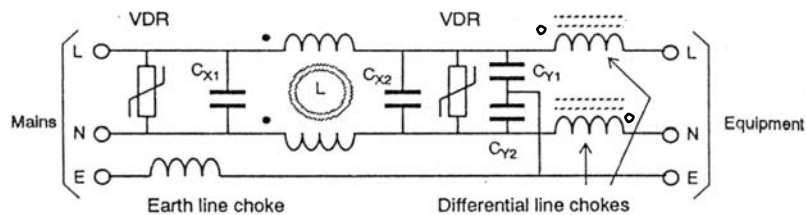


Figure 7.24 Higher performance mains filter

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