

BL50A0600 Electromagnetic compatibility in Power Electronics / P. SILVENTOINEN

The use of literature and calculator is not allowed. The use of a dictionary is allowed.

Exam, 20.10.2008

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1. Describe the mechanisms that cause electromagnetic emissions in power electronic devices. At what frequency ranges the emissions typically appear?
2. What is the difference between common mode and differential mode noise? What kind of filtering can be used to prevent those emissions for example in the mains port of the device?
3. What does the grounding mean especially at EMI point of view?
4. What are bearing currents? Explain the mechanisms that cause the bearing currents in power electronic.