Abstract:
Measurement systems, that allow to measure within short measurement time electromagnetic interference (EMI), will reduce the costs for compliance tests. A time-domain EMI (TDEMI) measurement system can reduce the measurement time by several orders of magnitude. In order to have the permission to use a time-domain EMI measurement system for compliance measurements it has to fulfill the CISPR 16-1 (1999) completely. In the following the requirements given by CISPR 16-1 are applied to the TDEMI measurement system. The characteristics of the TDEMI measurement system are compared with the rules of CISPR 16-1. A multiresolution TDEMI (MRTDEMI) measurement system that uses several analog-to-digital converters (ADCs) is presented. With such a system the signal-to-noise ratio (SNR) is enhanced. Measurements have been carried out in the frequency range 30 MHz - 1 GHz. It is shown, that almost all requirements are fulfill led by the MRTDEMI measurement system.

Stichworte:
- analog-to-digital converters
- analogue-digital conversion
- CISPR 16-1
- compliance tests
- electromagnetic interference
- EMI measurement system
- multiresolution time domain
- signal-to-noise ratio
- SNR
- time-domain analysis

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