

Changes in EMC standards are important not only for new developments

Throughout the last months some standards for electromagnetic compatibility have been changed. Actually these changes do not just affect on new developments but also on products that continue to be distributed beyond the transitional period.

The transitional period for the validity of EN 301 489-1 v 1.6.1 expires on January 31, 2010. From that moment the application of EN 301 489-1 v 1.8.1 will be mandatory. This concerns all telecommunication devices with radio interface. Any device that is to be distributed after January 31, 2010 has to comply with the requirements of EN 301 489-1 v.1.8.1. To prove the conformity with the new version for an already qualified product a few delta tests will normally be sufficient. Based on the previous version, EN 301 489-1 v. 1.6.1, on which basis probably more than 90% of the products have been brought on the current market, the tests are limited to:

- **Chapter 9.2**
Radio frequency electromagnetic field:
For this requirement a supplementary test from 2.000 MHz - 2.700 MHz is necessary.
- **Chapter 9.7**
Voltage dips and interruptions:
The test cycles have changed, so that the test is repeated with new parameters (if applicable at all).
- **Chapter 8.2**
Enclosure of ancillary equipment measured on a stand alone basis:
The emission tests on ancillary equipment have to be extended up to 6 GHz. In many cases this frequency range has already been covered while investigating the radio parameters, so that this test may even be omitted.

	latest Version	still valid	invalid from	invalid version
EN 55011	EN 55011:2007+A2:2007	EN 55011:2007 EN 55011:1998+A1:1999+A2:2002	01.11.2009 01.11.2009	EN 55011:1998+A1:1999 or before
EN 55022	EN55022:2006+A1:2007	EN55022:1998+A1:2000+A2:2003 EN55022:1998+A1:2000 EN55022:1998 EN55022:2006	01.10.2009 01.10.2009 01.10.2009 01.10.2010	EN 55022:1994+ A1:1995+ A2:1997 or before
EN55024	EN55024:1998+A1:2001+A2:2003	/		EN55024:1998+A1:2001 or before
EN 55013	EN55013:2001+A1:2003+A2:2006	/		EN55013:2001+A1:2003 or before
EN 55020	EN55020:2007	EN 55020:2002+A1:2003+A2:2005	01.12.2009	EN 55020:2002+A1:2003 or before
EN 61000-6-1	EN61000-6-1:2007	EN61000-6-1:2001	01.12.2009	EN 50082-1:1997 or before
EN 61000-6-2	EN61000-6-2:2005	/		EN61000-6-2:2001 or before
EN 61000-6-3	EN61000-6-3:2007	EN61000-6-3:2001+A11:2004	01.12.2009	EN61000-6-3:2001 or before
EN 61000-6-4	EN61000-6-4:2007	EN61000-6-4:2001	01.12.2009	EN 50081-2:1993 or before
EN 301489-1	EN 301489-1 v 1.8.1	EN 301489-1 v 1.6.1	31.01.2010	EN 301489-1 v 1.5.1 or before
EN 301489-3	EN 301489-3 v 1.4.1	/		EN 301489-3 v 1.3.1 or before
EN 301489-4	EN 301489-4 v 1.3.1	/		EN 301489-4 v 1.2.1 or before
EN 301489-5	EN 301489-5 v 1.3.1	/		EN 301489-5 v 1.2.1 or before
EN 301489-6	EN 301489-6 v 1.2.1	/		EN 301489-6 v 1.1.1 or before
EN 301489-7	EN 301489-7 v 1.3.1	/		EN 301489-7 v 1.2.1 or before
EN 301489-9	EN 301489-9 v 1.4.1	EN 301489-9 v 1.3.1	31.08.2009	EN 301489-9 v 1.2.1 or before
EN 301489-17	EN 301489-17 v 1.3.2	EN 301489-17 v 1.2.1	31.07.2010	EN 301489-17 v 1.1.1 or before
EN 301489-24	EN 301489-24 v 1.4.1	/		EN 301489-24 v 1.3.1 or before
EN 60601-1-2	EN 60601-1-2:2007	EN 60601-1-2:2001+A1:2006	not yet defined	EN 60601-1-2:2001 or before

The table above shows a summary of the latest version of the harmonised standards from the Official Journal of the European Communities (marked in green colour). The versions marked in yellow are still valid, please note the expiration date. Versions which are no longer harmonised are shown in red. Devices with tests reports on these versions must no longer be marketed. If you do not find the standard concerning your product, please contact us!



CONSULTING-Package

In order to emerge strengthened from the financial crisis soon you do not want to waste much time on thinking about successfully released products and their conformity to the new standards? Therefore we offer our CETECOM-Consulting Package that makes proving the compliance with the requirements a piece of cake:

Our Consulting Package for you:

- Applicability assessment concerning the standard changes (based on your test reports or the declaration of conformity).
- Consulting concerning the compliance strategy and planning of the test procedure.
- Performing the tests.
- Test report (e.g. as an independent test report or as a supplement to existing test reports).

...and to keep your budget predictable, the applicability assessment, the consulting concerning your compliance strategy as well as the planning of the necessary test procedure are free of charge to you. If tests are necessary you will receive an appropriate fixed price offer. In our experience, the necessary tests costs vary between 500 and 1500 € for most of the devices concerned.

... and the best: If testing is not required the applicability assessment stays also free of charge to you.

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A1:2007 / EN 55022:2006

From October 1, 2010 the application of A1:2007 to EN 55022:2006 will also be mandatory. This concerns the other telecommunication devices even those without integrated radio interface. From October 2010 according to chapter 6.2 "Limits above 1 GHz" the emission tests on such devices also have to be accomplished up to 6 GHz depending on the highest internally used frequency. A special measuring environment complying with CISPR 16-1-4, para. 8 (Site VSWR) is necessary to



carry out the emission tests above 1 GHz. You will find further information in our CETECOM-Newsletter 2/2008, where we already went into details for this fact. We are performing the emission tests in our semi-anechoic chamber (see photo). So we not only meet the requirements of CISPR 16-1-4, but we also measure at an actual distance of 10m under extremely low noise conditions which no other measurement resource is able to provide.



SchUTSEV replaces the german standard NB 30

The regulation for the purposes of „protecting radio transmitters and receivers which are operated for security reasons and public telecommunication networks from interference (SchUTSEV)“ specifies special limits for emissions from wired telecommunication systems and networks within some defined frequency ranges. On May 18, 2009 the SchUTSEV was published in the Federal Law Information Part 1 No 26. It replaces the existing regulation NB 30 and it commits the providers of wired telecommunication networks in particular to meet special limits in order to guarantee an undisturbed function of

radio transmitters and receivers which are run for security reasons. Preventive verification of the compliance with these limits by the Federal Network Agency makes measurements on systems and networks in this particular area so important. CETECOM ICT already offers you the measurements according to BNetzA 413 MV 05 to prove the radiation limits from wired telecommunication installations and networks in the frequency range from 9 kHz to 3 GHz. You can find the limits for the interference field strength of wired telecommunication systems and networks in the table below.

Frequency range (in MHz)	Limit for the interference field strength (peak value 3 metres apart) in dB [µV/m])	Measurement bandwidth
0,009 - 0,15	40 - 20*log (f/MHz)	200 Hz
0,15 - 1	40 - 20*log (f/MHz)	9 kHz
1 - 30	40 - 8,8*log (f/MHz)	9 kHz
30 - 1000	18 bzw.27	120 kHz
1000 - 3000	40	1 MHz

! Within the protectable frequency ranges undesirable spurious emissions of wired telecommunications systems and networks must not exceed the limits for the interference field strength (see table). The interference field strengths are determined according to the measuring standard BNetzA 413 MV 05.

In the context of its modernisation in May one of our anechoic chambers has been prepared for the future. The use of new future-oriented amplifiers allows an exposure up to 6 GHz instead of 2,7 GHz so far. If desired we can perform these measurements immediately. This requirement is not mandatory right now but very likely the basic standard EN 61000-4-3 will require this measurement in the near future. Don't hesitate to ask us!

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