



May 2009

RF/EMC Regulatory Update

Dear Colleague,

We have provided typical questions and answers that represent in most cases technical opinions with justification in FCC and CE requirements. The particulars of the product for certification must be considered with respect to the applicability of these questions and answers. We hope you find our update valuable and welcome your feedback if you have any special needs or questions. Call us at 703-689-0368 for your testing requirements. You can view archived issues of MultiPoint at our [web site](#).

CE Mark and CCC Mark

QUESTION: We have tested our all our products for the CE mark and would now like the Chinese CCC mark. Is there any relation between having met the CE standards and the CCC mark? I am aware that many of the CCC tests are based on IEC standards.

ANSWER: The China Compulsory Certificate mark (CCC) is administered by the CNCA (Certification and Accreditation Administration). The China Quality Certification Centre (CQC) is designated by the CNCA to process CCC mark applications and define the products that need CCC. It has been in existence since May 1st, 2002.

CE reports or FCC reports cannot transfer into a CCC mark. In China, there are four major approvals now; the CCC mark is for EMC and safety. EMC testing must occur in China, typically referred to as "in-country" testing. Through the CB scheme, CB safety reports are acceptable. The main difference in the CB scheme safety report is that major components in a system, such as a power supply or monitor, must also be CCC Certified or must have the component evaluated separately by a CNCA designated test laboratory in China. This can be done by submitting an IEC CB Test Report with China deviations on the component or have the product tested in China.

You are correct that for many product categories, the Chinese (Guo Biao) GB standards are equivalent to their IEC equivalent standards. Unlike the CE mark, which is a self-declaration by the manufacturer, obtaining a CCC mark also involves an initial inspection at the factory and annual follow-up inspections. For RF devices, China requires radio type approval with "in-country testing." Overseas reports are unacceptable and testing and approvals are completed by SRMTC in Beijing. Network access approval for PSTN-terminal or public communication devices such as cell phones is required. China ROHS is also required for most electronic products.

FCC Labeling Requirements for Implantable Device

QUESTION: Our company manufactures a Part 15 device used for medical purposes and the device is implanted. How do we accommodate the FCC labeling requirement for such a device?

ANSWER: The labeling requirements for an implanted medical intentional radiator operating under Part 15 are contained in Section 2.925(e) and Section 15.19. The rules state that where a permanently attached label is not desirable or feasible, such as on an implanted device, then an alternative method may be used, if approved by the FCC.

The manufacturer may place the FCC ID on the PC board inside the case (even if it has to be in very small type) and in the instruction manual. The FCC ID is then in the manual and can also be found somewhere on the equipment in case the manual is not available.

FCC Rules for WMTS

QUESTION: Our company plans to design and market a spread spectrum transmitter operating under the Wireless Medical Telemetry Service (WMTS). What are the FCC rules for the certification of our transmitter?

ANSWER: Subpart H of Part 95 describes the requirements for spread spectrum transmitters operating in the Wireless Medical Telemetry Service. WMTS requires a capability to operate in one or more 1.5 MHz channel(s) as specified in Section 95.1115(d)(2) of the Rules. Spread Spectrum devices that operate in the WMTS bands under Part 95H require the 1.5 MHz channel mode in the event there are frequency coordination issues as specified in Section 95.1115(d)(4). The application should have test data for the 1.5 MHz channel mode. In addition, there should be two line items in the application (one for each mode) and grant conditions stating that there is a 1.5 MHz channel mode to support frequency coordination, if the spread spectrum mode causes frequency coordination issues.

FCC Interpretation of CFR 90-214

QUESTION: How does the FCC interpret transient frequency behavior in 47 CFR 90.214?

ANSWER: This requirement can be attributed to the FCC's response to interference from data modems operating in simplex mode. These modems were subject to turn-on transients when the data transceiver would switch from receiver to transmitter. This transient effect occurs when any transmitter reaches full power many milliseconds before the synthesizer locks on to the frequency. An emission is produced as the modem powers up, many megahertz before the frequency determining circuits lock on to the assigned frequency, quickly sweeping the carrier across the band. For voice-only products, this transient effect is not considered a big problem.

Turn-on transients from push-to-talk radios are tolerable and sometimes only produce an easily ignored pop on the afflicted channels. However, with the proliferation of data radios, transient effects are more critical. Disturbances to the spectrum cause increased bit error rates and error-correcting retransmissions. This problem has worsened due to faster and faster bit rates and the error corrections are that are now more prevalent.

The general technical requirements for transient frequency behavior for a transmitter operating in the Private Land Mobile Radio Service are contained in 47 CFR Subpart I of Part 90 of the FCC's rules. The requirements for transient frequency behavior are located in 47 CFR 90.214. All radio devices that operate in the frequency bands 150-174 MHz and 421-512 MHz must be tested and reported, but the time interval (T1 and T3) limits of 47 CFR 90.214 do not apply to devices with 6 W or less output power.

INTERNATIONAL UPDATE

EU: NEW CENELEC STANDARDS RECENTLY RELEASED

This is a shortened list of the CENELEC standards published during the past month:

- **EN 60068-2-27:2009** (5/7/2009) Environmental testing -- Part 2-27: Tests - Test Ea and guidance: Shock
- **EN 55014-1:2006/A1:2009** (5/7/2009) Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 1: Emission
- **EN 60745-2-1:2003/A1:2009** (5/13/2009) Hand-held motor-operated electric tools - Safety - Part 2-1: Particular requirements for drills and impact drills
- **EN 60598-1:2008/A11:2009** (5/14/2009) Luminaires -- Part 1: General requirements and tests
- **EN ISO/IEC 17030:2009** (5/20/2009) Conformity assessment - General requirements for third-party marks of conformity
- **EN 60601-2-2:2009** (5/20/2009) Medical electrical equipment -- Part 2-2: Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories

See [CENELEC](#) for additional information.

EU: NEW IEC STANDARDS RECENTLY RELEASED

This is a shortened list of the new IEC standards published during the past month:

- **IEC 62153-4-10** (5/13/2009) Metallic communication cable test methods - Part 4-10: Electromagnetic compatibility (EMC) - Shielded screening attenuation test method for measuring the screening effectiveness of feed-throughs and electromagnetic gaskets double coaxial method
- **IEC 61000-4-13-am1** (5/13/2009) Amendment 1 - Electromagnetic compatibility (EMC) - Part 4-13: Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests
- **IEC 61000-4-34-am1** (5/13/2009) Amendment 1 - Electromagnetic compatibility (EMC) - Part 4-34: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than 16 A per phase
- **IEC 61000-4-14-am2** (5/13/2009) Amendment 2 - Electromagnetic compatibility (EMC) - Part 4-14: Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase
- **IEC 62320-1** (5/27/2009) Maritime navigation and radiocommunication equipment and systems - Automatic identification system (AIS) - Part 1: AIS Base Stations - Minimum operational and performance requirements, methods of testing and required test results
- **CISPR 11** (5/28/2009) Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

See [IEC](#) for additional information.

EU: NEW ETSI STANDARDS RECENTLY RELEASED

This is a shortened list of the new ETSI standards published during the past month:

- [ETSI EN 301 489-4 V1.4.1](#) (May 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 4: Specific conditions for fixed radio links, Broadband Data Transmission System Base stations, ancillary equipment and services
- [ETSI EN 301 489-17 V2.1.1](#) (May 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems
- [ETSI EN 300 065-2 V1.2.1](#) (May 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX); Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE directive

- [ETSI EN 300 065-3 V1.2.1](#) (May 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX); Part 3: Harmonized EN covering the essential requirements of article 3.3 (e) of the R&TTE directive
- [ETSI TR 102 496 V2.1.1](#) (May 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference Document; Short Range Devices (SRD); Technical characteristics for Location tracking Applications for Emergency Services (LAES) in disaster situations operating within the frequency range from 3,4 GHz to 4,8 GHz
- [ETSI TR 102 834 V1.1.1](#) (May 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference Document; Technical Characteristics for airborne Ultra-WideBand (UWB) applications operating in the frequency bands from 3,1 GHz to 4,8 GHz and 6 GHz to 8,5 GHz

See new [ETSI website](#) for additional information.

US : CPS TRACKING LABEL REQUIREMENT

On August 14, 2009, under the US Consumer Product Safety Improvement Act of 2008 (CPSIA), a tracking label requirement will go into effect requiring children's products and their packaging must include permanent labels that identify the source, production date and batch information to enable efficient identification of recalled products. The requirement specifies the manufacturer of a children's product shall place permanent, distinguishing marks on the product and its packaging, to the extent practicable, that will enable (a) the manufacturer to ascertain the location and date of production of the product, cohort information (including the batch, run number, or other identifying characteristic), and any other information determined by the manufacturer to facilitate ascertaining the specific source of the product by reference to those marks; and (b) the ultimate purchaser to ascertain the manufacturer or private labeler, location and date of production of the product, and cohort information (including the batch, run number, or other identifying characteristic). [Link](#)

JAPAN: NEW VCCI LABEL REQUIREMENTS

As of April 1, 2009, Japan's VCCI became VCCI Council and has new labeling requirements for the VCCI Mark. The new labels may be downloaded from VCCI's website and it is suggested the new labels be used from April 1, 2009 forward. However, there is a one year grace period and the older VCCI labels are allowed to be used for all applications submitted on or before March 31, 2010. [Link](#)

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Rhein Tech Laboratories' worldwide homologation services offer the best strategy for gaining product approval in a large number of target countries. In addition, we reduce the number of emissions, immunity, and product safety tests required by defining the minimum subset of regulatory standards at the onset, thus reducing the time and cost to enter multiple target countries. We offer research and approvals in over 50 countries.

ABOUT US

RTL has provided EMC compliance engineering & testing services since 1988 and has a superior reputation with both the Federal Communications Commission and others in the industry. RTL provides testing services to meet the emissions, immunity, and safety requirements of the European EMC Directive and the EU R&TTE Directive, all FCC rules and regulations, VCCI (Japan), ACMA (Australia), and other international standards.

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email: multipoint@rheintech.com
phone: 703-689-0368
web: <http://www.rheintech.com>

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