MultiPoint
A Rhein Tech EMC Regulatory Update

September 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.

FCC Permit But Ask (PBA) Document

QUESTION: Periodically, the FCC publishes a document listing equipment that can and cannot be granted, devices required to have FCC permission prior to a TCB issuing a grant and the procedures to obtain permission. Can you provide the most recent copy of this document?

ANSWER: Document 388624 D01 Permit But Ask Versions 06, Revision 02 provides the current list and procedures for devices that require FCC permission in order for a TCB to issue a grant of equipment authorization.

In addition to other information, the document includes the following Permit but Ask Conditions:

a) EMC/Radio Parameters - Equipment authorization requests for devices for which acceptable test equipment or test procedures required to determine compliance have not been established for EMC or radio parameter measurements.

b) Evaluation of SAR - Equipment authorization requests for devices requiring SAR evaluation according to the following:

- 3GPP Release 6 or Higher Devices - devices operating with 3GPP Release 6 or higher.
- 3GPP2 EV-DV.
- Long Term Evolution (LTE) devices.
- 802.16e devices (e.g., WiMAX).
- 802.20 / iBurst / HC-SDMA.
- Non-standard or Irregular Phantoms - devices for which the phantoms and exposure configurations specified in IEEE Standard 1528-2003, OET Bulletin 65 Supplement C-0101 or the specific FCC test procedures do not apply. For example, when extremity SAR is required for hands, wrists, feet or ankles; where non-standard or irregular shaped phantoms may be necessary; or
- SAR Test Equipment - devices for which acceptable SAR test equipment required to determine compliance has not been established; or
- Test Procedure for SAR - devices for which an acceptable SAR test procedure has not been established.

c) Special circumstances - Devices for which the FCC has determined special circumstances exist that require additional FCC oversight provided through the PBA process are: Request for permanent confidentiality for exhibits, such as internal photos and users manual, which may be eligible for confidentiality with additional justification.

FCC Permissive Change Policies

QUESTION: From time to time, the FCC also publishes Permissive Changes Guidelines. Can you let me know when that document was most recently published and can you provide the link?

ANSWER: The latest Permissive Change Guide, 178919 D01 Permissive Change Policy Version 04, Revision 04, was published on August 6, 2009.

Permissive changes and policies addressed in the Permissive Changes Guideline document include:

- Antenna changes
- Printed Circuit Board (PCB) and Hardware changes
- Enclosure changes
- Software changes
- Miscellaneous changes

FCC Rules for DECT CAT-iq system

QUESTION: Our company is designing a DECT CAT-iq system (Cordless Advanced Technology-internet and quality). This system utilizes a technology that merges telephony and broadband Internet connectivity to create a fixed mobile convergence and one that defines five frequency bands divided into 12 time slots for each band, for a total of 60 duplex time/frequency windows. Can we apply the provisions of Section 15.323 (c) (5) if a connection uses an access channel with one or two time windows? Our particular case is when two time/frequency windows are used the system would still monitor 60 time/frequency windows.

ANSWER: A DECT CAT-iq system that has 60 duplex time and spectrum windows and complies with the provisions of Section 15.323 (c) (5) may allow an access channel to use one or two time and spectrum windows under the following conditions:

- The system must be capable of defining a minimum of 40 duplex access channels.
- Multiple time windows on the same frequency (with or without gaps between them) are permitted for a connection only if the monitored equivalent power levels of the multiple time windows determined for the emission bandwidth are the lowest power levels below a monitoring threshold of 50 dB above the thermal noise power. Time/frequency windows that are dedicated to a connection that always uses multiple time/frequency windows are counted as one channel.
- A DECT CAT-iq long-slot may be regarded as two time windows on the same frequency bonded together without any gap. In addition, the device must have monitored all access channels defined for its system within the last 10 seconds and must verify, within the 20 milliseconds (40 milliseconds for devices designed to use a 20 milliseconds frame period) immediately preceding the actual channel, access that the detected power of the selected time and spectrum windows is no higher than the previously detected value. The power measurement resolution for this comparison must be accurate to within 6 dB.
- No device or group of cooperating devices located within one meter of each other shall during any frame period occupy more than 6 MHz of aggregate bandwidth; alternatively, more than one third of the time and spectrum windows defined by the system.

Note 1: For example, a device that uses 40 duplex time/frequency windows and can define 40 duplex channels meets the 40-channel requirement. It is permissible to use multiple time windows on the same frequency with or without gaps between them for a connection. However, if 12 of the 40- time/frequency windows are dedicated to two time/frequency windows per connection, then the 12-time/frequency windows can only define 6 channels and the device is considered to only monitor 34 channels. Question: Can a DECT CAT-iq system that defines five frequency bands divided into 12 time slots for each band, for a total of 60 duplex time/frequency windows, apply the provisions of Section 15.323 (c) (5) if a connection uses an access channel with one or two time windows? For the case when two time/frequency windows are used the system would still monitor 60 time/frequency windows.

FCC Rules for Push to Talk Radio

QUESTION: Our firm manufactures Push To Talk radios (PTT) and we would like to know if the FCC will accept the use of a transmitter antenna sensing circuit instead of a unique antenna connector to satisfy the requirements of FCC Section 15.203. Can this circuit also be used to automatically adjust output power for different type antennas?

ANSWER: Yes, an antenna sensing system may be acceptable to meet the intent of FCC section 15.203 by ensuring that the subject transmitters will only operate when appropriate antennas are attached. Since the system is also designed to automatically adjust the output power for varying loads, it must be capable of accurately and reliably maintaining the output power level within prescribed limits for all normal environmental conditions and variations in antenna cable lengths and antenna gains.

When testing the referenced system in connection with an equipment authorization application, you must demonstrate compliance with all pertinent requirements under the following operating conditions: when the highest and lowest gain antennas are used and when the minimum and maximum recommended feed-line lengths are used.

INTERNATIONAL UPDATE

EU: NEW CENELEC STANDARDS RECENTLY RELEASED

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

- **EN 61000-4-14:1999/A2:2009** (8/21/2009) 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
- **EN 61000-4-34:2007/A1:2009** (8/21/2009) 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
- **EN 61000-4-13:2002/A1:2009** (8/21/2009) 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
- **EN 60079-10-2:2009** (8/31/2009) Explosive atmospheres -- Part 10-2: Classification of areas - Combustible dust atmospheres
- **EN 60079-0:2009** (8/31/2009) Explosive atmospheres -- Part 0: Equipment - General requirements
- **EN 61869-1:2009** (9/4/2009) Instrument transformers -- Part 1: General requirements
- **EN 62384:2006/A1:2009** (9/11/2009) DC or AC supplied electronic control gear for LED modules - Performance requirements
- **HD 60364-7-708:2009** (9/11/2009) Low- voltage electrical installations -- Part 7-708: Requirements for special installations or locations - Caravan parks, camping parks and similar locations
- **HD 60364-7-709:2009** (9/11/2009) Low- voltage electrical installations -- Part 7-709: Requirements for special installations or locations - Marinas and similar locations

See CENELEC 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 TS 102 706 V1.1.1** (August 2009) Environmental Engineering (EE) Energy Efficiency of Wireless Access Network Equipment
- **ETSI SR 002 787 V1.1.1** (August 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); Report for CESI-ETSI RFID PlugtestsTM event to investigate the interoperability of interrogators and tags manufactured by different vendors in a postal environment
- **ETSI EG 201 788 V2.1.1** (August 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); Guidance for drafting an ETSI System Reference document (SRdoc)
- **ETSI TR 102 626 V1.1.1** (August 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); System reference document; Citizens' Band Radio
- **ETSI TS 102 490 V1.5.1** (September 2009) Electromagnetic compatibility and Radio spectrum Matters (ERM); Peer-to-Peer Digital Private Mobile Radio using FDMA with a channel spacing of 6,25 kHz with e.r.p. of up to 500 mW

See new ETSI website 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 60318-1** (8/31/2009) Electroacoustics - Simulators of human head and ear - Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones
- **IEC 62577** (8/28/2009) Evaluation of human exposure to electromagnetic fields from a stand-alone broadcast transmitter (30 MHz - 40 GHz)
- **IEC 60335-2-42** (8/31/2009) Household and similar electrical appliances - Safety - Part 2-42: Particular requirements for commercial electric forced convection ovens, steam cookers and steam- convection ovens
- **ISO/IEC 15963** (8/31/2009) Information technology -- Radio frequency identification for item management -- Unique identification for RF tags
- **IEC 60601-2-13** (8/31/2009) Medical electrical equipment - Part 2-13: Particular requirements for the safety and essential performance of anaesthetic systems
- **IEC 61010-2-081** (8/31/2009) Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2- 081: Particular requirements for automatic and semi- automatic laboratory equipment for analysis and other purposes
- **IEC 61000-5-8** (8/31/2009) Electromagnetic compatibility (EMC) - Part 5-8: Installation and mitigation guidelines - HEMP protection methods for the distributed infrastructure
- **IEC 61000-4-8** (9/3/2009) Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
- **IEC 60947-4-1** (9/16/2009) Low- voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters

See IEC for additional information.

US: FCC OET SEEKS COMMENT ON ACCREDITATION BODIES AND ACLASS APPLICATION

On 9/14/2009, the FCC's OET division released ET Docket No. 09-161, seeking public comments on qualifying information for recognizing laboratory accreditation bodies and ACLASS application for recognition.

Currently, NVLAP and A2LA are recognized as accrediting bodies to perform accreditation of test laboratories under the FCC's rules. The OET may determine additional qualifying information is required in reviewing all applications for recognition as accreditation bodies and in periodically reviewing the continued qualifications of NVLAP and A2LA. The OET invites comments on (1) the minimum set of qualifying information that applicants should provide to be recognized as accreditation bodies of test laboratories under the FCC's rules, (2) any additional qualifying information that should be required and useful in assessing prospective laboratory accreditation bodies, and (3) suggestions for a streamlined set of requirements and procedure that would facilitate the recognition of future additional laboratory accreditation bodies.

On March 28, 2008, ACLASS Accreditation Services (ACLASS), filed a request with the OET to be recognized by the FCC as an accreditation body that performs accreditation of test laboratories under the FCC's rules. The OET invites comment on ACLASS's application and specifically request comment on the qualifications and capabilities of ACLASS to accredit test laboratories that perform testing for EMC, radio, and telecommunications requirements under the FCC's rules. Comments are requested no later than 10/14/2009. Link

VIETNAM : LABEL/LOGO CHANGE

Vietnam's Ministry of Information and Communications recently changed its label/logo requirement under Regulation #TT/06/ 2009/TT- BTTTT. The new label/logo should be applied to products approved from 6/1/09 forward. Products having a DoC or Type Approval certificate prior to 6/1/09 may still utilize the older logo but are encouraged to apply the new one.

The new label/logo applies to EMC DoC approvals as well as Type Approvals. For products falling under the DoC procedure, such as a laptop, desktop, server, PDA, the logo requires a "NAME" field which is the name of local representative. For products falling under the Type Approval procedure, such as a WLAN device, BT device, modem card, the logo requires the "NAME" field and a "CODE" field which is a number assigned by Vietnam's MIC. Link

EU: EN55022:1998 CESSATION OF PRESUMPTION POSTPONED UNTIL 10/1/2011

On 8/21/09, the EU published an update to the official journal postponing the cessation of presumption of conformity for EN55022:1998 with amendments A1 and A2. The new date is set at October 1, 2011. This means is that EN55022:1998 and it amendments are valid for another two years and that testing above 1 GHz will now be required in late 2011 instead of late 2010. With this extension, it is a possibility that the requirements for above 1 GHz testing and the site verification method can change significantly. Link

CANADA: SRSP-515 and RSS-127 RELEASED On 8/22/2009, Industry Canada released the following new standards:

- Standard Radio System Plan 515 (SRSP-515), Issue 1: Technical Requirements for Air-Ground Services in the Bands 849-851 MHz and 894-896 MHz, which sets out the minimum technical requirements for the efficient utilization of these bands;
- Radio Standards Specification 127 (RSS-127), Issue 1: Air-Ground Equipment Operating in the Bands 849-851 MHz and 894-896 MHz, which sets out certification requirements for transmitters and receivers in the bands 849-851 MHz and 894-896 MHz for air-ground communications.

CONTACT RHEIN TECH FOR YOUR INTERNATIONAL REGULATORY APPROVALS

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.

A special thank you to those who have recommended and contributed articles for our newsletter. Please continue to forward new and interesting material to our attention: multipoint@rheintech.com. We respect the privacy of our customers and colleagues. If you would like to cancel your MultiPoint updates, please follow the instructions at the end of this email. The information in the MultiPoint update is subject to change without notice.

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