



Issue 23 / January 2005

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 at 703-689-0368 or send email to multipoint@rheintech.com.

See our website at www.rheintech.com for MultiPoint archives, a [facility virtual tour](#), and other helpful information.

Contents

- [FCC Part 15.407 DFS and TPC Requirements](#)
- [TCB Review of Devices Utilizing the 2500 to 2686 MHz Spectrum](#)
- [FCC Guidance Regarding Tablet PCs](#)
- [Small Changes to a Composite Device and Filing Requirements](#)
- [Worldwide Updates](#)
- [Contact Information](#)

FCC Part 15.407 DFS and TPC Requirements:

Question:

What is the latest news from the Commission regarding Dynamic Frequency Selection (DFS) and Transmitter Power Control (TPC) requirements for Part 15.407? Is it likely that the "old" DFS rules will continue past February 2005? If so, when will the Commission officially announce it?

Response:

The Commission has indicated that the National Telecommunication and Information Administration (NTIA) has tentatively scheduled DFS testing in January and February. It appears that the DFS and TPC test procedures will not be available until after the results are in. The Commission may issue a statement similar to a Public Notice extending the effective date for the DFS and TPC requirements. It is difficult to predict when the Commission may issue a statement but the aforementioned testing and coordination with respect to DFS and TPC are all occurring at very high levels in Government. MultiPoint will monitor this development and inform our clients immediately when this information is available.

TCB Review of Devices Utilizing the 2500 to 2686 MHz Spectrum:

Question:

The Commission has approved new rules for Multipoint Distribution Service (MDS), Multichannel Multipoint Distribution Service (MMDS), and Instructional Television Fixed Service (ITFS) devices operating in the 2500-2686 MHz spectrum and covered under Parts 21 and 74. These new rules are to be published in Part 27 of the Commission's rules. MMDS and ITFS become Broadband Radio Service (BRS) and Educational Broadband Service (EBS) while the current Parts 21 and 74 will become invalid. Within the new Part 27 rules for the 2500-2686 MHz frequency bands, the Commission has defined specific rules for mobile categories that did not explicitly exist in the old rules. Once the new rules are published in the Federal Register and they become "legal", can a TCB issue a grant for these new rules (portable, mobile or fixed) or does the Commission need to review new applications for a period of time before allowing TCBs to certify them?

Response:

Since the 2500-2686 MDS equipment has only been moved to Part 27, the Commission does not consider it to be new technology, thus a TCB may review and issue a grant if the TCB is accredited to do so.

FCC Guidance Regarding Tablet PCs:

Question:

We have a Tablet PC device which resembles an LCD panel. The Tablet PC contains an 802.11g transmitter card and GPRS/CDMA transmitter card. Both cards are plug-in cards, but the Tablet PC manufacturer has two sources for the 802.11g cards. My questions are as follows:

- 1) Can we use one FCC ID to cover the Tablet PC and the two selections on the 802.11g card?
- 2) The Tablet PC looks like an LCD panel; it can be carried in your hands but not in your pocket because of the size, and simultaneous transmission of data is also possible with both transmitters. In this case, is SAR testing required?
- 3) How can we perform inter-modulation testing?

Response:

1) Unless the two cards you proposed are identical in components, layout, schematics, etc., then they are not considered electrically identical and must be certified under two separate FCC ID's (assuming the device is approved as a system). Depending on your requirements, it may be desirable to approve the cards as a module instead and cover the co-location aspect in the Tablet PC approval.

2) For SAR, please note the following from the Commission OET Laboratory Division, dated March 18, 2004, for Mobile and Portable Device RF Exposure Equipment Authorization Procedures (IDB RFx) as guidance for performing SAR on Tablet PCs: http://hraunfoss.fcc.gov/eas_public/LSI_GET/60.

- a. Tablet PC screen sizes must range between 8-14" and weigh in the range of 2-8 lbs.
- b. In general, consumer Tablet PCs are expected to have a lap-held use position.

- c. Smaller devices may qualify for handheld-only operations, but filing must include strong justification for such. The Commission should be contacted for guidance if needed.

In general, consumer tablet PCs are expected to have a lap-held use position per FCC RF procedure IDB RFx section 7) d) ii). Furthermore, section 7) a) of the IDB RFx procedure states the following: *undefined or unclear device usage positions, where existing or standardized test procedures are not applicable, SAR should be evaluated according to the normal operating configurations which are intended for the device.*

3) With respect to inter-modulation testing, the lab is expected to investigate various configurations to obtain worse case inter-modulation results. The report needs to provide only the worse case inter-modulation results, but the exact rationale for selection of channels/combinations must be documented in the test report.

Small Changes to a Composite Device and Filing Requirements:

Question:

Our device, similar to an advanced cell phone, was approved as a composite device under the following conditions:

- 1) An approval as a Part 22/24 device.
- 2) An approval as a 15.247 Bluetooth device.
- 3) An approval as a PC Peripheral device.

We plan to make small changes that may require retesting of the PC peripheral portion (i.e. changing the size of built in memory or similar types of changes). We have confirmed that these changes do not affect the radio portion of the device. Can we optionally perform a Declaration of Conformity (DoC) on the PC peripheral portion if the main label is redone to include the DoC label and the manual to include the information from section 2.1077 of the FCC rules and regulations?

Response:

In order to have the peripheral portion authorized under DoC, you must file for a change of FCC ID per Section 2.933 to cover condition one and two described in your question. After authorization has been issued, condition one and two must carry the new FCC ID label and the peripheral will carry the DoC label.

Worldwide updates:

US Update

COMMISSION CLARIFIES EQUIPMENT AUTHORIZATION POLICY FOR BROADBAND EMISSION MEASUREMENTS

On 12/17/04, the Commission released a public notice with the intent of clarifying equipment authorization policy for broadband emission measurements. The Commission has become concerned that some test laboratories and manufacturers are not calculating and applying, if required, a potentially important correction factor when taking broadband emissions measurements for low power communication devices.

Under FCC Rule Part 15, there is a provision for the operation of low power communication devices without an individual license (e.g., intrusion detectors, pulsed water tank level gauges, etc.), subject to certain requirements. Some of these devices use extremely narrow pulses to generate wideband emissions, which are measured with a receiver or spectrum analyzer to determine compliance with the rules. A number of factors such as resolution bandwidth, pulse-width, and others, may cause the spectrum analyzer to not always display the true peak value of the measured emission. This effect, known as "pulse desensitization," relates to the capabilities of the measuring instrument. For the measurement and reporting of the true peak of pulsed emissions, it may be necessary to apply a "pulse desensitization correction factor" (PDCF) to the measured value, pursuant to 47 CFR 15.35(a). The Commission requests that test reports show the true peak level of the emission when the limit is specified in terms of a peak emission, which may necessitate the use of a PDCF. (Note: PDCF is not required when measuring Ultra-Wide Band (UWB) systems because the FCC Rules specify a different measurement procedure for determining compliance with the UWB Rules.) Information about pulse desensitization is available in Spectrum and Network Measurements by Robert A. Witte and the Hewlett Packard Application Note, 150-2, entitled: "Spectral Analysis – Pulse RF." Additionally, the Accredited Standards Committee on Electromagnetic Compatibility, C63, is planning to include information about the application of PDCF in a future edition of ANSI C63.4, and in the meantime, questions about this public notice may be addressed to the Commission.

http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-04-3946A1.doc

UPCOMING WORKSHOPS:

- **New FCC Rules for the UPCS Band (Unlicensed Personal Communications Services) Compliance Testing Requirements per ANSI C63.17 & The DECT Standards**, presented by NARTE & ANSI ASC C63 on 25-26 January 2005 in Columbia, MD:
<https://www.securecms.com/UPCS/>
- **The World of EMC Standards - Present and Future**, presented by NARTE & ANSI ASC C63 on 27-28 January 2005 in Columbia, MD:
<https://www.securecms.com/EMC/>

Australian Update

ACA TO RELEASE NEW RADIO FREQUENCY SPECTRUM PLAN

On 1/1/2005, the ACA enacted the 2005 Australian Radiofrequency Spectrum Plan which allows greater sharing of spectrum among users. The new plan divides the spectrum into frequency bands and also provides radio communication users with information about the types of services allocated to each band. The services that will benefit from the new plan include amateur, radiolocation, aeronautical radio navigation and aeronautical mobile services, and radio local area networks in the 5 GHz band. The plan will also provide increased spectrum for many services including the mobile and mobile satellite services, space research services, radio navigation satellite services and Earth exploration services. The plan is based on the spectrum arrangements developed by the International Telecommunication Union (ITU) to incorporate changes made to international frequency allocations at the 2003 ITU World Radio communication Conference. Copies of the 2005 Australian Radio

Frequency Spectrum Plan and information about the changes will be available on the ACA website from 4 January 2005.

http://internet.aca.gov.au/ACAINTER.1180178:STANDARD:1859930572:pp=DIR1_128,pc=PC_2840

European Update

NEW DIRECTIVE MAKES LIFE OF MANUFACTURERS OF ELECTRONIC DEVICES EASIER

A revised directive on electromagnetic compatibility (EMC) has been published in the Official Journal aimed at simplifying regulatory procedures and reducing costs for manufacturers, while increasing information and documentation on products for authorities. The revised directive abolishes two cumbersome conformity assessment procedures for producers which required the mandatory involvement of an independent inspection and verification body, thus reducing costs. Manufacturers will be solely responsible for establishing the conformity of their products and for the "CE" marking. The directive will come into force in the Member States within the next three years.

Apart from the simplified conformity procedures, the main elements of the revised directive are as follows:

- Stricter requirements concerning information and documentation.
- Special regime for fixed installations.
- Compliance with new-approach concepts.

More details can be found at the following website:

http://europa.eu.int/comm/enterprise/electr_equipment/emc/

Canadian Update

PRODUCTION OF INDUSTRY CANADA LABELS WILL CEASE ON DECEMBER 31, 2004

Industry Canada will cease production of labels as of December 31, 2004. This impacts Technical Acceptance Certificate (TAC) holders, laboratories, and individuals and companies which purchase Industry Canada (IC) labels from Industry Canada. TAC holders will be able to continue utilizing their stock of IC labels after December 31, 2004 and when their supplies of IC labels are exhausted, TAC holders will have to follow the self-marking procedure titled "Self-Marking of the Certification/Registration Number on Terminal Equipment Application Procedure and Agreement" which is available at:

<http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/en/sf05572e.html>.

TAPAC Bulletin 2004-02 :

<http://www.scc.ca/forum98/tapac/dispatch.cgi/bulletin/docProfile/100099/d20040913192334/No/t100099.htm>

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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), ACA (Australia), and other international standards.

[Back to top](#)

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