MultiPoint
A Rhein Tech EMC Regulatory Update

Issue 15 / May 2004

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. Thus, we hope you find our updates valuable, and welcome your calls and or emails if you have any special needs or questions. Please call at 703-689-0368 or email us at mailto:multipoint@rheintech.com

Also, please see our website at www.rheintech.com for MultiPoint archives, facility virtual tour, and other helpful information.

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Composite Device Grant: one section issued by the FCC and the other section issued by a TCB:

Question:

We have a 2.4/5 GHz DTS/5 GHz UNII portable composite device that we would like to certify. We have been told that TCBs cannot certify the entire device; please explain.

Response:

UNII portables have almost always been processed by the Commission and not a TCB because of the 5 GHz SAR requirement. The Commission has granted both sections of most or all of the aforementioned devices that are composite 2.4 GHz DTS/5.8 GHz DTS and 5 GHz UNII portables, except for maybe one or two with very low power and prior review by the FCC that may have been approved by TCBs. The Commission does allow TCBs to grant the 2.4 GHz DTS portion of a composite device, but the TCB must coordinate the grant of the DTS portion

with the Commission grant of the UNII portion of a composite device. There was a time when both sections of a composite device had to be granted at the same time. That procedure was eliminated when the Commission no longer accepted applications for personal computers and personal computer peripherals. TCBs are allowed to process one section of a composite device while the other section is processed by the Commission.

However, the FCC does not want one section granted too far in advance of the second section. This would tempt the Grantee to begin marketing the composite device with only one section of it approved. If one section was granted by a TCB and the second section was dismissed or denied by the Commission and it had already been marketed, it would create a problem for the Grantee. Recently, there was an instance whereby the Commission dismissed the DTS portion of a device because it was granted by a TCB 30 days before the Commission started reviewing the UNII section of the composite device. The Commission's opinion is that a 30-day lead-time for the initial grant is too long. A TCB should grant their section of a composite device as soon as possible **after** the Commission's section is posted on the FCC's website as granted.

Antenna Placement of Modular Transmitters:

Question:

Our local test lab determined that our mini-PCI card, with an extender is non-compliant with FCC 15.247 limits by testing the device with the antenna in a vertical position. However, our device is passing when the antenna is placed flat on the test table. It is our opinion that ANSI 63.4 set-up requires the device be placed flat on the test table. Please explain if this is correct.

Response:

Radiated EMC test setup for mini-PCI card on extender-card with monopole diversity-antenna system (Part 15 modular stand-alone setup) antenna positioning in test setup should represent typical final product configuration. The Commission no longer accepts antennas laid flat on the test table; the antennas should be supported in a vertical position, e.g., using foamed-polystyrene blocks. Your local test lab is using the correct test setup configuration for the antennas in accordance with recent training notes by FCC engineer Mr. Joe Dichoso, dated February 4th, 2004.

Two FCC Identifiers for 900 MHz base & 2.4 GHz handset cordless telephones:

Question:

We have a cordless phone that operates in two different frequency bands, 2.4 GHz and 5.8 GHz, and now requires FCC certification under one FCC identifier. Will the Commission allow both transmitters under one identifier?

Response:

The FCC requires a cordless telephone that operates on two different frequency bands to be approved under two separate FCC ID numbers, one for the base and one for the handset. The reasons behind this are as follows:

1. This type of device is not a composite device. A composite device is two different devices in one enclosure or separate enclosures connected by wire or cable, such as a receiver and transmitter. The base and handset of a cordless telephone are two different enclosures not that they are not connected by a wire or cable. One cannot treat them as a composite device.

2. Section 15.214(a) of the Rules states a single application form may be filed for a cordless telephone system. However, this rule was written when cordless telephones operated at 46 or 49 MHz (under Section 15.233 of the FCC Rules) and both transmitters were identical. It is logical to not require a separate FCC ID number for a base and handset transmitter if both transmitters are identical. As cordless telephones systems evolved, the FCC expected that they would extended this rule to cover cordless telephones that operated at 902-928 MHz (under Section 15.249 of the Rules), 902-928 MHz (under Section 15.247), and 2402-2483 MHz (under Section 15.247). But, the stipulations for applying Section 15.214(a) to these devices were as follows: (1) the system had to be a cordless telephone system, and (2) that the base and handset transmitters had to be identical (i.e., operate in the same frequency band). Clearly, the cordless telephone system that is described in the aforementioned question does not do this; therefore, it should be approved as two separate devices under different FCC ID numbers.

If any equipment exists similar to the one described above, it may have been granted by the Commission in error. However, the Commission on numerous other occasions has required other companies to obtain separate FCC ID numbers for a base and handset cordless telephone transmitter that did not operate in the same frequency band.

FCC DoC for Modules:

Question:

Is a receiver subject to DoC rules? We have an 802.11g modular device that requires FCC authorization. Normally, we file a DoC for the receiver section of an assembled product. I was recently told that if the product is a module and one requires modular approval, then DoC is not required for the receiver section. Furthermore, the DoC mark "FCC" is not required to be placed on the label. Is this correct?

Response:

FCC rules and regulation Section 15.101(b) states that receivers that tune from 30-960 MHz are subject to authorization. A receiver that tunes at 5 GHz is not subject to DoC authorization. However, please keep in mind that if the module

can be connected to a computer, then the computer peripheral portion must be DoC authorized or Certified.

Worldwide updates:

FCC Update

THE FCC BEGINS RULEMAKING PROPOSING TO ALLOW WIRELESS BROADBAND OPERATIONS IN THE 3650-3700 MHZ BAND

On April 15, 2004, the FCC issued a Notice of Proposed Rulemaking to allow unlicensed devices to operate in all, or part, of the 3650 MHz band at higher power levels than usually permitted for unlicensed services. This effort should enhance the utility of unlicensed devices and services in rural areas. These devices also would be subject to smart (or cognitive) requirements and other safeguards designed to prevent interference to the licensed FSS earth stations. Fixed unlicensed devices, for example, would be subject to a professional installation requirement and would be prohibited from being located with a defined protection zone surrounding each FSS earth station. Non-fixed, unlicensed devices would be subject to "listen-before-talk" requirements that would detect the presence of any FSS earth station in the vicinity, and make an appropriate decision of whether to transmit and to make appropriate adjustments to the transmit power. Unlicensed devices would also be required to emit a standardized identification signal which would possibly provide contact information/ location in order for easy identification of possible sources, if interference arises. As with other unlicensed devices, these devices would not be allowed to cause interference to licensed services and would have to accept interference.

The Notice also requests comment on other options, including licensed use of the band by fixed and mobile services, or segmenting the 3650 MHz band to provide for a combination of unlicensed and licensed terrestrial services. ET Docket Nos. 04-151, 02-380, and 98-237
http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-100A1.doc

EU Update

ON MAY 1, 2004, TEN NEW MEMBERS, EIGHT OF THEM FORMERLY UNDER COMMUNIST RULE, JOINED THE EU. The new member states include Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. The additions bring the EU's population to 450 million, making it the world's largest trading block. The EU began with six member states, becoming nine in 1973 with the arrival of the UK, Ireland and Denmark. Greece followed in 1981, and Portugal and Spain in 1986. Austria, Sweden and Finland made in 15 in 1995.

The enlargement of the EU to include the Eastern European countries listed above will present a range of opportunities for manufacturers of radio and

telecommunications equipment. For the regulatory community the enlargement of the Union will enable manufacturers to broaden their target markets. Manufacturers will be able to design their equipment to one set of standards, apply the relevant European Annex, and roll their products out in 25 countries reducing costs and time to market.

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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.

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A special thank you to those who have recommended and contributed articles to our newsletter. Please continue to forward new and interesting material to our attention. multipoint@rheintech.com