



Issue 13 / March 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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RF Conducted Power:

Question:

Our production line RF power test is via radio transceiver test sets (IFR/ HP/R & S) which are calibrated yearly and include the cables and take into account path losses. What is the tolerance "allowed" on the measurement of RF power output on production line test by the FCC?

Response:

The FCC's policy thus far allows RF Conducted power for both licensed and unlicensed radios to be +/- 1dB. Radiated power should be within 3 dB for Part 15 devices, but for licensed radios a tolerance of 5% is required if any Specific Absorption Rate (SAR) testing is involved.

Modular vs. Non-modular Approvals:

Question:

Please explain the FCC's requirement for modular to non-modular transmitters and from limited modular-to-modular transmitters and vice-versa for licensed and unlicensed transmitters.

Response:

A change from non-modular approval to modular approval requires a new FCC identifier. A change from modular approval to limited modular approval requires a new FCC identifier. Licensed modular transmitters requirements are similar. Watch out for undeclared and optional co-located transmitters such as Bluetooth devices.

Integral Antenna Rule:

Question:

What is acceptable and unacceptable for integral antennas under FCC Part 15.407 for UNII devices?

Response:

The integral antenna rule requires that the antenna is permanent or not removable.

The following are acceptable methods:

1. Antenna and/or antenna connectors are soldered together. Permanent Loctite or industrial strength epoxy can be used.
2. A locking connector that cannot be removed, even with a special tool, is used. The antenna must be locked prior to shipment.
3. An antenna and/or connectors inside of a non-accessible housing (there is no need for the user to ever open the case). Assume that users will open desktop computers; therefore, desktop computers would not be considered non-accessible housings.

There is an exception for a 5.15-5.25 GHz UNII mini-PCI card installed in notebook computers with built-in antennas. A bios locking feature satisfies the rule when an antenna with embedded code is used. The code ensures that the proper antenna is used.

Unacceptable methods are:

1. A unique connector is not sufficient.
2. Bios lock with external antenna. The antenna can still be removed and the Bios lock feature does not check whether the correct antenna is used.
3. A locking connector that can be removed with a special tool does not satisfy the requirement.
4. Heat shrinking antenna connection and/or User Warnings.

Co-located Devices:

Question:

When are transmitters co-located and can TCB's approve co-located devices?

Response:

Co-located approvals are allowed only for specific combinations and configurations, i.e., based on relative positions and spacing of antennas in a specific host device. Co-location is generally defined as simultaneously transmitting (co-transmitting or co-Tx) antennas within 20 cm of each other. TCBs can approve co-located mobile devices, including the following co-located portable device configurations under the FCC's July 2002 TCB Exclusion List.

1. FCC's July 2002 TCB Exclusion List (II) e): for example cell phones containing Bluetooth devices with Power<5mW.
2. FCC's July 2002 TCB Exclusion List (II) f): final product with multiple transmitters within the same frequency band, when SAR evaluation is required (the sum of powers above threshold is the determining factor), e.g., laptop with Bluetooth and 802.11g.
3. FCC's July 2002 TCB Exclusion List (II) h): low power modules and transmitters (sum of powers below threshold is the determining factor).
4. When SAR evaluation is not required.

Worldwide updates:

USA / Europe Update

THE EU AND US SIGN MUTUAL RECOGNITION AGREEMENT ON MARINE EQUIPMENT

On February 27th 2004, the European Union and United States signed a mutual recognition agreement (MRA) on marine equipment. The EU-US MRA is intended to facilitate transatlantic trade in marine equipment and will allow designated products, which comply with EU requirements, to be accepted for sale in the US without any additional testing or certification and vice-versa. The agreement covers 30 types of marine equipment ranging from life saving equipment (distress signals, rigid life rafts), fire protection equipment (flame retardant materials) and navigational equipment (GPS equipment, echo-sounding equipment). It is anticipated the agreement will save manufacturers the time and expense of redundant product testing for the EU market.

The agreement also may also expand the product scope in the future based on the results of international regulatory cooperation.

http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/04/278|0|RAPID&lg=EN&display=

Canada Update

CHANGES TO INDUSTRY CANADA APPLICATION FEE STRUCTURE

Industry Canada has recently proposed an update to the current fee structure for telecommunications and radio apparatus-related services charged by Industry Canada's Certification and Engineering Bureau (CEB). The major changes to the fee structure include the introduction of a single assessment fee; a new technical expertise fee to replace the testing and reassessment fees; a new registration fee for terminal equipment; and a new listing fee for radio equipment. The label and certification fees will be repealed. The fee setting authority will be moved from the *Financial Administration Act* (FAA) to the *Department of Industry Act* (DIA). The changes proposed in the consultation paper are aligned with global trends and the objectives of smart regulations, which aim at streamlining and reducing the regulatory burden for the industry.

[http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/vwapj/consultation-new-fee-e.pdf/\\$FILE/consultation-new-fee-e.pdf](http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/vwapj/consultation-new-fee-e.pdf/$FILE/consultation-new-fee-e.pdf)

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