MultiPoint
A Rhein Tech EMC Regulatory Update

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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.

Contents FCC Test Lab

FCC Filing and "Plug and Play" Installation:

Question:

If the FCC filing indicates a system uses a PCMCIA card to be installed in a notebook computer and the equipment operational description states "This kit offers true "Plug and Play" installation," can we qualify for professional installation with a "Plug and Play" PCMCIA card in a notebook?

Response:

To qualify for professional installation, the applicant must clearly explain why the hardware cannot simply be purchased and installed by the average (technically inclined) person. The applicant should confirm and provide strong justification when applying for Professional installation to the following:

1) Marketing; the equipment cannot be sold retail, to the general public or by mail order. It must be sold to dealers.

2) The equipment requires professional installation;
   a) Installation of the equipment must be controlled.
   b) Installation must be performed by licensed professionals (EUT sold to dealer who hires installers)
   c) Installation of the equipment requires special training (special programming, access to keypad, field strength measurements made)
   d) What is unique, sophisticated, complex, or specialized about the equipment that requires it to be installed by a professional installer?
   e) What is the intended application? The intended use is generally not for the general public. It is generally for industry/commercial use.

FCC's Rules About End User Antenna Installation:

Question:

We are examining a Class II Permissive Change (PC) on the FCC's public application website for a particular FCC ID laptop computer filed by a manufacturer. The original Grant indicates "The WLAN device and antenna(s) must be installed by the OEM." Reviewing subsequent Class II PC filings also included the prohibition that end users were not to be given instructions on how to install or uninstall the device. However, the most recent Class II PC user's manual instructs end user on how to perform an installation, and at the same time advises end user that regulatory concerns prohibit the use of these instructions. What is the FCC's interpretation in instructing end users to install antennas?

Response:

The only time the FCC would allow end users to install an antenna under the described scenario is when an antenna and/or connector is already installed inside of a non-accessible housing and there is no need for the user to ever open the case. Desktop computers would not be considered non-accessible housings since the end user has access by opening the chassis. If a BIOS lock antenna function for a laptop computer is implemented and the antenna has a coded identifier, the FCC may allow a Permissive Change. Original grants sometimes do not have firm functions such as BIOS lock capability with coded antenna identifier and thus end user installation is not allowed.

Class II Permissive Change for UNII Devices:

Question:

We previously certified a UNII device for the frequency bands 5.15-5.35 GHz and 5.725–5.825 GHz. Now we would like to enable the firmware on the device to include the new 5.470–5.725 band with dynamic frequency selection (DFS) and transmitter power control (TPC) described in the Report & Order in FCC 03-287 (ET Docket No. 03-122). There are no hardware changes on the device, but a firmware option enables the change. This UNII device will be used as a mobile device only. Can we file this change as a Class II permissive change?

Response:
Yes, this change can be made as a Class II permissive change provided the additional band is added by only a software change and no component changes or hardware modifications to the original device. In addition, this software change must be made by the Grantee (responsible party) or another party under the Grantee's control. If the software changes can be made by the end user or some party not under the control of the Grantee, the device must be re-certified as a Software Defined Radio under a separate FCC ID from the original device. Also, test data showing compliance with the new DFS and TPC requirements must be submitted for all applicable bands in the Class II permissive change application. Currently, a Class II permissive change application or a new Certification for a UNII device under the new DFS and TPC requirements described in the Report & Order in FCC 03-287 (ET Docket No. 03-122) cannot be authorized by a TCB. SDR devices also cannot be authorized by a TCB. These devices are considered new technologies.

SAR Test Procedures and Positions for Portable Transmitters:

Question:
What are the FCC SAR test procedures and positions for portable transmitters - notebook (laptop) computers, PDAs, smart-phones, etc.?

Response:
For 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 - applicants are encouraged to contact the FCC Lab for additional guidance on new product configurations and technologies. SAR data voluntarily submitted for additional positions which are applicable for a product is considered and reviewed during equipment certification. Additional tests may be requested by the FCC for other applicable device usage positions that have potential to exceed SAR limits

Standardized SAR test procedures include the following:
For notebooks with antennas or integral-antenna transmitters in the keyboard section: (1) SAR is tested for a lap-held position with the bottom of the computer in direct contact against a flat phantom (2) SAR test for antennas in side/edge of the keyboard section with side/edge spaced at 1.5 cm or less from a flat phantom is not required; SAR data for this position submitted voluntarily is considered and reviewed during equipment certification.

Tablet (notepad) computers are tested in a lap-held position with the bottom of the computer in direct contact against a flat phantom.

For notebooks with antennas in the display section: (1) Antennas installed in the lid (display) of a notebook which provides at least 20 cm separation from the user with the lid open (e.g., at top of display section) are evaluated according to mobile RF exposure requirements of sec. 2.1091; additional antennas if any in

the keyboard section are tested with the applicable procedures above (2) SAR data for a lap-held position is not required for antennas located in the display section of a notebook operating with lid closed; SAR data for lap-held or underarm (like a book) lid-closed positions when voluntarily submitted is considered and reviewed during equipment certification.

PDAs are generally approved as hand-held and hand-operated only portable devices which operate at 20 cm from a person's body; some PDAs may have body-worn operating configurations which are tested using applicable Supplement C procedures; SAR data for PDA used in lap-held position is not required, but when voluntarily submitted is considered and reviewed during equipment certification.

SAR data is requested for cellphones designed to be used with a headset while worn next to the body using a neck-strap or lanyard; device should be tested with front and back sides in contact with a flat phantom.

Worldwide updates:

Russia Update

THE EU AND US SIGN MUTUAL RECOGNITION AGREEMENT ON MARINE EQUIPMENT

On January 1, 2004, new Russian telecommunication legislation came into force. The specific goal was to complete legal framework for the rapidly developing telecommunications industry and stimulate investment in the telecommunications sector. The law requires most telecommunication equipment to be certified, however a list of specific equipment subject to mandatory certification is yet to be established. It should be noted that accredited certification institutions will be required to perform the certification but there is not yet an accreditation procedure. The law also provides that some telecommunication equipment is not subject to mandatory certification and voluntary certification conducted by a manufacturer itself will suffice (if confirmed by a declaration of compliance). We will keep you updated was we find out more information regarding this subject.
http://www.law-now.com/

Canada Update

INDUSTRY CANADA TO ALLOW PREVIOUSLY RESTRICTED GMRS RADIOS

On March 19,2004, Industry Canada announced its intention and process to permit the operation of General Mobile Radio Service (GMRS) radios in Canada as early as September 2004. The radios would be allowed on a license-exempt basis in a designated set of frequencies in the frequency range 462/467 MHz. Additionally, the Department has established a process to notify and deal with incumbent land mobile licensees in the frequencies designated for GMRS before these radios can be certified for sale in Canada.
http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/vwapj/sp462-467e.pdf/$FILE/sp462-467e.pdf

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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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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