Subject: Re: TCB Qestions
Date: Wed, 29 Nov 2000 11:55:23 -0800
From: "Rita Cai" <ritac@baclcorp.com>
To: "Roger J. Midgley" <rjm@cclab.com>

----- Original Message -----
From: Roger J. Midgley <rjm@cclab.com>
To: <ritac@baclcorp.com>
Sent: Thursday, November 16, 2000 10:22 AM
Subject: TCB Qestions

Roger,

Thank you for the following message. My reply is in teal green color.

Rita:

Enclosed below are some questions regarding the applications CCL is
reviewing for TCB certification on two cordless telephones:

1. The test setup block diagrams show that the handset and base station
were tested separately; however, the test setup photos show both the
base and handset on the table. Please resubmit photos that show each on
the table separately.

Please see the attached files.

2. The test procedure for the peak output power and the power spectral
density indicates that an Attenuator and cable were used during the
testing, but the plots for these test does not show how the loss of the
Attenuator and cable were accounted for. Please indicate how the loss
was accounted for on the plots submitted.

We use HP internal attenuation and it was showed on the plot. The RF cable
was very short and the loss was less than 0.5dB.

3. The RBW for the bandwidth test should be performed with a RBW of 100
kHz not the 1 MHz that was submitted. This test will not need to be
repeated because it is clear that even with a RBW of 100 kHz the device
will still meet the > 500 kHz requirement; however, in the future please
perform with a RBW of 100 kHz.

In the future, we will perform the test using a RBW of 100KHz.

4. Please re-measure and submit data for the bandedge compliance and
conducted spurious emissions using a RBW of 100 kHz as per section
15.247 (c).

When we did the test, we used 1MHz for RBW and VBW, and this data would be
more stricted than 100MHz for RBW and VBW. Even with this setup, the data
has
a lot of margin and it met the respective requirements. However, later we
will use
100MHz in our future tests.

5. Please indicate what RBW and VBW settings were used for both Peak and
Average measurements of Radiated spurious emissions that fall within the
restricted bands of 15.205. Also there was not and data submitted for
the 5th, 8th and 9th harmonics that fall within the restricted bands, if
there were was not any emissions detected please submit the noise floor

reading of the spectrum analyzer to ensure that the noise floor of the measurement equipment capable of measurements below the specified limit. Above 1GHz, we used 1MHz for RBW and VBW (peak) while below 1GHz, we used 100KHz for RBW and VBW.

The noise floor reading of the spectrum analyzer is 20dBuV for the 5th, 8th and 9th harmonics.

6. The frequency range that is listed in section 3.6.0 indicates "30 MHz - 90000 MHz" I believe this should be 9000 MHz.

The typo has already been modified and the updated will be sent to you in the form of PDF.

7. The data sheet for radiated spurious emissions indicates that the amplifier gain is 20 dB, and the amplifier that is listed in the test equipment used on page 4 of the report is a HP 8447E power amplifier. The specification for the HP 8447E is a 22 dB gain and a frequency range of 0.01 MHz - 1300 MHz, if this is was the amplifier used for these measurements it should not be used above 1300 MHz. Please indicate what pre-amplifier was used for the radiated emissions above 1 GHz. Please note that depending on what pre-amplifier you use the gain can vary depending on the frequency and is not always a flat gain across the frequency of operation. For instance the HP 8449B pre-amplifier that we use for measurements between 1 GHz to 26.5 GHz indicates that the typical gain is 30 dB; however, the measured gain is anywhere from 32.5 dB to 38.2 dB.

The amplifier which we used was HP8349B and the specification is 20dB gain from
2GHz to 20GHz. And also TEC, PA-102 amplifier covered from 1GHz to 2GHz. The gain is 20dB flat.

8. Please submit a block diagram for both the handset and base station.

Please see the attached files.

9. Please indicate how the antenna connectors comply with section 15.203.

The attenna was soldered in the main board and used a screw to screw in so that users
can not change the attenna by themselves.

10. Please indicate how the device complies with the RF Exposure of section 15.247 (b)(4).

Per FCC OET Bulletin 65 Supplement C, Evaluation Compliance with FCC Guidelines for Human Exposuer to Radiofrequency Electromagnetic Fields, Page 22
this device has output power less than 10dBuV which means less than 0.3W at 915MHz
by the guidelines, it met the RF exposure limits and the manufacturer does not mean to
put the special instruction or warning statement in the user manual.

11. Please submit a Theory of Operation that describes how the device operates to determine if it operates as a Direct Sequence Spread Spectrum device.

You could find the Theory of Operation in the user manual.

12. There was not a request for confidentiality filed with this
application as per section 0.459. If this is not requested then all of
the exhibits will become public access once they are uploaded to the FCC
website. The following exhibits can be held confidential, Exhibit 4
(block diagram), Exhibit 5 (schematics) and Exhibit 12 (Theory of
Operation). The fee for the request for confidentiality is $140.00 and
we must have any official request from the applicant. I have enclosed a
sample request for confidentially that can be used, this must be on the
applicants letterhead and signed.

We do not require confidentiality for our application.
--
Please let me know if I can be of further assistance

We appreciated your help very much.

Have a nice day.

Rita
Phone (408)732-9162x30
Roger J. Midgley
Communication Certification Laboratory
1940 W. Alexander Street
Salt Lake City, UT 84119

Phone (801) 972-6146 ext 1243
Fax (801) 972-8432
e-mail rjm@cclab.com

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radiation setup for handset of GT-8320C- rear view.jpg	
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radiation setup for handset of GT-8320C- Front view.jpg

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Encoding: base64

conduction setup for base of GT-8310C-front view.jpg

Name: conduction setup for base of GT-8310C-front view.jpg
Type: JPEG Image (image/jpeg)
Encoding: base64

8310C_Handset_Block.pdf

Name: 8310C_Handset_Block.pdf
Type: Portable Document Format (application/pdf)
Encoding: base64

8310C_Base_Block.pdf

Name: 8310C_Base_Block.pdf
Type: Portable Document Format (application/pdf)
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8320C_Handset_Block.pdf

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Type: Portable Document Format (application/pdf)
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8320C_Base_Block.pdf

Name: 8320C_Base_Block.pdf
Type: Portable Document Format (application/pdf)
Encoding: base64

Subject: Re: TCB Questions
Date: Wed, 6 Dec 2000 15:25:01 -0800
From: "John Chan" <johnc@baclcorp.com>
Organization: BACL
To: "Roger J. Midgley" <rjm@cclab.com>

Hi Roger;
I like to response your questions as the following:
1) Please refer to the manual for the red portions.
2) Antenna gain is zero for both handset and base.
3) The manufactuer will provide a label stated that "Privacy of
communications may not be ensured when using this phone". Also, please refer
to the attached files for the digital security code requirements of 15.214d.

Best Regards;

John

----- Original Message -----
From: "Roger J. Midgley" <rjm@cclab.com>
To: "John Chan" <johnc@baclcorp.com>
Cc: "Rita Cai" <ritac@baclcorp.com>
Sent: Wednesday, December 06, 2000 11:01 AM
Subject: TCB Questions

> John:
>
> Upon further review the follow information will need to be supplied in
> order to certify this unit.
>
> 1. The RF Exposure statement that is in the users manual states the
> device operates as a low power (<10 dB), this does not indicated a unit
> such as 10 dBuV, etc. This statement would be better if the output
> power is stated in mW instead of dBuV. The end user would not know what
> dBuV actually means. Also the level stated should be the EIRP
> measurement and not the ERP measurement.
> 2. Please provide the antenna gain of both the handset and base station
> antennas.
> 3. Since this is a cordless telephone that connected to the public
> switched telephone network it must comply with the requirement of
> Section 15.214. Under this section both the handset and base station
> must be labeled with the same ID number, and the label must contain the
> following statement "Privacy of communications may not be ensured when
> using this phone". The phone must also meet the digital security code
> requirements of 15.214 (d).
>
> --
> Please let me know if I can be of further assistance
>
> Roger J. Midgley
> Communication Certification Laboratory
> 1940 W. Alexander Street
> Salt Lake City, UT 84119
>
> Phone (801) 972-6146 ext 1243
> Fax (801) 972-8432
> e-mail rjm@cclab.com
>
>

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                         Encoding: base64


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