
From: JayWoo Lee
Sent: Friday, January 14, 2011 4:52 AM
To: PCTEST TCB/CB
Subject: Re: RE: Follow-Up Questions Regarding FCC ID: A3LRMC30D1

Dear PC Test

I send F/U question answer.

1. Regarding your response to question #1, the revised block diagram now lists b/g/n modes, but still shows the RF section as a single block with no details (e.g., multiplication stages, filtering, etc.)- please submit a block diagram that provides these details of the RF section.

⇒ I send more detail files.

2. Section 6.3.3 of the SAR report states that a separation distance of 1.5 cm is used for body SAR tests, but the tests were actually performed with 0 cm spacing, to cover worst-case usage scenarios. Please revise Section 6.3.3 to reflect the actual test configuration used.

⇒ Please see the revised SAR report on page 15.

3. Note 1 on p. 41 of the SAR report references antenna-head positions, but this page contains body SAR data. Please revise the Note accordingly.

⇒ Please see the revised SAR report on the page 41.

4. Please justify the 802.11 modes and data rates used for SAR testing, making reference to the appropriate FCC procedures/KDB publications (for example, the references can be included in the Notes on pp. 25 and 41).

⇒ Please see the Notes on page 25 and 41 page of the revised SAR report.

The 802.11 modes and data rates used for SAR testing were justified in the test result table on page 25 and 41 page.

5. FYI: Pursuant to Section 8.3.6 of IEEE 1528, measured SAR dipole Validation values should be between 0.4 W/kg and 10 W/kg, so that they are within the range to be used in compliance tests. In the future, please be sure that this is the case.

⇒ Thanks for your information.

Jaywoo.Lee
Engineer
R&D Solution Group
VD Division,
Samsung Electronics

----- **Original Message** -----

Sender : PCTEST TCB/CB

Date : 2011-01-13 08:34 (GMT+09:00)

Title : RE: Follow-Up Questions Regarding FCC ID: A3LRMC30D1

Dear Mr. Lee,

Thank you for your email. Please see below for additional RT questions.

1. Regarding your response to question #1, the revised block diagram now lists b/g/n modes, but still shows the RF section as a single block with no details (e.g., multiplication stages, filtering, etc.)- please submit a block diagram that provides these details of the RF section.
2. Section 6.3.3 of the SAR report states that a separation distance of 1.5 cm is used for body SAR tests, but the tests were actually performed with 0 cm spacing, to cover worst-case usage scenarios. Please revise Section 6.3.3 to reflect the actual test configuration used.
3. Note 1 on p. 41 of the SAR report references antenna-head positions, but this page contains body SAR data. Please revise the Note accordingly.
4. Please justify the 802.11 modes and data rates used for SAR testing, making reference to the appropriate FCC procedures/KDB publications (for example, the references can be included in the Notes on pp. 25 and 41).

5. FYI: Pursuant to Section 8.3.6 of IEEE 1528, measured SAR dipole Validation values should be between 0.4 W/kg and 10 W/kg, so that they are within the range to be used in compliance tests. In the future, please be sure that this is the case.

The item indicated above must be submitted before processing can continue on the above referenced application.

Sincerely,

Gregory Czumak
Senior Certification Engineer
Quality Manager
PCTEST Engineering Laboratory, Inc.

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From: JayWoo Lee
Sent: Tuesday, January 11, 2011 3:45 AM
To: PCTEST TCB/CB
Subject: Re: Questions Regarding FCC ID: A3LRMC30D1

Dear PC Test

I send FCC ID : A3LRMC30D1 F/U question.

1. Please submit a block diagram that provides more detail regarding the transmitter's RF section. The block diagram submitted only shows 802.11n operation. Please be sure that the revised block diagram includes all modes of operation.

=> Attached

2. The RFX language on p. 35/36 of the User's Manual is for a phone. Please revise so that the language is appropriate for the EUT.

= > Attached revised User Manual. (page 27~28)

3. The Operational Description contains 2 power level tables, on pages 2 and 4, that do not match each other, nor do they match the actual measured output power levels listed on p. 27/62 of the DTS EMC test report. Please reconcile these tables with the measured levels.

→ Please see the revised operational description.(Power table corrected.)

4. Please revise the DTS EMC test report to indicate the data rate used to produce the test results for all tests performed. Please also justify the choice of particular data rate used for each test.

=> Please, see page 7 on the revised test report.

5. The DTS EMC test report is apparently missing pages 63-85. Please revise to include these pages, or else revise the numbering on the existing pages.

→ Please find the page 3 'table of contents'. The missing pages were separated from test report for the confidentiality.

The missing parts are labeling requirement, Test setup photo, External photo and Internal photo.

6. The peak power levels for 802.11b operation measured in the DTS EMC report (p. 27/62) are lower than the corresponding average output power levels listed in the SAR report (p. 18/72). Please explain how this can be.

→ There was mis-testing for peak power. Please see the page 27 on the revised report.

7. The peak 802.11g and n power levels listed in the DTS EMC report are only about 1 to 2 dB higher than the corresponding average power levels listed in the SAR report. Typically, 802.11g and n peak levels are at least 7 dB higher than the corresponding average levels. Please explain.

→ There was mis-testing for peak power. Please see the page 27 on the revised report.

8. Please confirm that the FCC has agreed that there are no other usage configurations for the EUT requiring SAR testing (e.g., edge testing), and that 1.5 cm is an acceptable separation distance for testing the EUT, given its intended applications. Please note that "body-worn" may not be a legitimate usage configuration for the EUT, since it is not a phone. Alternatively, you may provide body SAR data with 0 cm spacing, to cover all possible usage scenarios. If you choose not to do this, other test configurations and distances must be confirmed by the FCC. Please address.

→ Please see the revised SAR test report. As your recommendation, we have tested the body SAR with 0 cm spacing.

9. The FCC has stated that using a 1.5 cm separation distance for body SAR tests with the front of the EUT facing the phantom is not appropriate. Please either remove the front-of-EUT-facing phantom body SAR data, or else specify in the SAR report that the front-of-EUT-facing phantom body SAR data is to cover the situation where an accessory may position the EUT in this manner. Please note that the testing requirements of the previous question supersede these requirements.

→ Please see the revised SAR test report. As your recommend, we have tested the body SAR with 0 cm spacing.

10. The Target SAR levels listed in Table 11.2.1 of the SAR report do not match (25% of) the Target levels listed in the dipole calibration report. Please revise the Target levels and the deviation levels listed in Table 11.2.1.

→ Please see the page 22 on the revised SAR test report

11. Please revise the SAR report to include the ambient temperatures during testing.

→ Please see the page 25,41 on the revised SAR test report.

Jaywoo.Lee
Engineer
R&D Solution Group
VD Division,
Samsung Electronics

----- Original Message -----

Sender : PCTEST TCB/CB

Date : 2011-01-05 09:13 (GMT+09:00)

Title : Questions Regarding FCC ID: A3LRMC30D1

To: Mr. Jay Woo Lee / Samsung Electronics Co., Ltd.

From: Mr. Gregory Czumak / PCTEST TCB

RE: FCC ID: A3LRMC30D1

Applicant: Samsung Electronics Co., Ltd.

Correspondence Reference Number: A3L01473

Confirmation Number: 1Y1012211473

Date of Original Email: January 4, 2011

Subject: Request for additional information

In regards to your recent TCB application referenced above, we kindly request that you provide the following additional information.

1. Please submit a block diagram that provides more detail regarding the transmitter's RF section. The block diagram submitted only shows 802.11n operation. Please be sure that the revised block diagram includes all modes of operation.
2. The RFx language on p. 35/36 of the User's Manual is for a phone. Please revise so that the language is appropriate for the EUT.
3. The Operational Description contains 2 power level tables, on pages 2 and 4, that do not match each other, nor do they match the actual measured output power levels listed on p. 27/62 of the DTS EMC test report. Please reconcile these tables with the measured levels.
4. Please revise the DTS EMC test report to indicate the data rate used to produce the test results for all tests performed. Please also justify the choice of particular data rate used for each test.
5. The DTS EMC test report is apparently missing pages 63-85. Please revise to include these pages, or else revise the numbering on the existing pages.
6. The peak power levels for 802.11b operation measured in the DTS EMC report (p. 27/62) are lower than the corresponding average output power levels listed in the SAR report (p. 18/72). Please explain how this can be.
7. The peak 802.11g and n power levels listed in the DTS EMC report are only about 1 to 2 dB higher than the corresponding average power levels listed in the SAR report. Typically, 802.11g and n peak levels are at least

7 dB higher than the corresponding average levels. Please explain.

8. Please confirm that the FCC has agreed that there are no other usage configurations for the EUT requiring SAR testing (e.g., edge testing), and that 1.5 cm is an acceptable separation distance for testing the EUT, given its intended applications. Please note that "body-worn" may not be a legitimate usage configuration for the EUT, since it is not a phone. Alternatively, you may provide body SAR data with 0 cm spacing, to cover all possible usage scenarios. If you choose not to do this, other test configurations and distances must be confirmed by the FCC. Please address.
9. The FCC has stated that using a 1.5 cm separation distance for body SAR tests with the front of the EUT facing the phantom is not appropriate. Please either remove the front-of-EUT-facing phantom body SAR data, or else specify in the SAR report that the front-of-EUT-facing phantom body SAR data is to cover the situation where an accessory may position the EUT in this manner. Please note that the testing requirements of the previous question supersede these requirements.
10. The Target SAR levels listed in Table 11.2.1 of the SAR report do not match (25% of) the Target levels listed in the dipole calibration report. Please revise the Target levels and the deviation levels listed in Table 11.2.1.
11. Please revise the SAR report to include the ambient temperatures during testing.

The item indicated above must be submitted before processing can continue on the above referenced application.

Sincerely,

Gregory Czumak
Senior Certification Engineer
Quality Manager
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