

## Chris Harvey

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**From:** Jo, Jenny (Gunpo) [Jenny.Jo@sgs.com]  
**Sent:** Wednesday, May 20, 2009 2:28 AM  
**To:** Chris Harvey; chris.harvey@ccsemc.com  
**Subject:** RE: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1  
**Attachments:** Revised test report (Radio,SAR).zip

Hi, Chris

I am sending revised Radio test report and SAR report.  
Revision history is as below.

- Radio report

=> Changed the Bluetooth module FCC ID on the report.

- SAR report

1. FCC ID Label for BT

=> Changed the BT module information. Please see page 4 (WWAN Report).

2. The SAR reports for WWAN and WLAN transmitters do not address the co-location with the other 2 transmitters installed in this device.

Please update the SAR reports accordingly.

=> Please see page 18~19 (WWAN Report) and page 15~16 (WLAN Report)

3. The WLAN SAR report does not contain a photograph showing the location of the transmit antennas in relation to the body/phantom or to the other transmit antennas (including Bluetooth). The WWAN SAR report has an antenna location photo but does not indicate the antenna to antenna or antenna to body separation distances, and does not indicate the location of the Bluetooth antenna. Please update the SAR reports accordingly.

=> Please see page 18~19 (WWAN Report) and page 15~16 (WLAN Report)

Please review and let me know if you have any inquiry.

Thanks and regards,

Jenny Jo / Á¶ÀùÈ

SGS Testing Korea Co., Ltd.

6/12/2009

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

From: Jo, Jenny (Gunpo)

Sent: Wednesday, May 20, 2009 3:10 PM

To: 'Chris Harvey'; chris.harvey@ccsemc.com

Subject: RE: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

Dear Chris

Please be informed of that I've submitted application for BT portion. (Assessment No. AN09T9220)

Please find attached module test report. (BT/WLAN/WWAN)

I will send you revised Radio test report and SAR report in the following email.

Thanks and regards,

Jenny Jo / Á¶ÀùÈ

SGS Testing Korea Co., Ltd.

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey

Sent: Saturday, May 16, 2009 12:21 AM

To: Jo, Jenny (Gunpo); chris.harvey@ccsemc.com

Cc: lucy.tsai@ccsemc.com; Kim, Raymond (Gunpo); Ham, Denny (Gunpo); Ko, Duke (Gunpo); Jeong, Fred (Gunpo); Kim, Leo (Gunpo); Jeong, Feel (Gunpo)

Subject: RE: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

Jenny, you should not need to submit a new test report, but you must submit the original Modular Approval test report in this Bluetooth application as part of your new FCC ID.

I am submitting an FCC KDB request for Permit But Ask, which will cover the HSUPA request and the LCD smaller than 12" request.

Best regards,

6/12/2009

Chris Harvey

charvey@ieee.org

410-750-0860

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

From: Jo, Jenny (Gunpo) [mailto:Jenny.Jo@sgs.com]

Sent: Friday, May 15, 2009 2:10 AM

To: Chris Harvey; chris.harvey@ccsemc.com

Cc: lucy.tsai@ccsemc.com; Kim, Raymond (Gunpo); Ham, Denny (Gunpo); Ko, Duke (Gunpo); Jeong, Fred (Gunpo); Kim, Leo (Gunpo); Jeong, Feel (Gunpo)

Subject: RE: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

Dear Chris

Thank you for your kind advice.

As for the BT portion, I would like to make it more clear.

I understand that we need to submit additional application for BT portion, but do we need to submit another test report for Bluetooth portion?

As I explained, the antenna of BT transmitter is PCB type and it's located at more than 5 cm from the other antennas. (refer to the attached antenna location information.)

Attachment is RF Exposure exhibit which was revised according to your advice.

Thank you again and looking forward to your reply.

regards,

Jenny Jo / Á¶ÀùÈ

SGS Testing Korea Co., Ltd.

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey

Sent: Wednesday, May 13, 2009 7:34 PM

To: Jo, Jenny (Gunpo); chris.harvey@ccsemc.com

Cc: lucy.tsai@ccsemc.com; Kim, Raymond (Gunpo); Ham, Denny (Gunpo); Ko, Duke (Gunpo); Jeong, Fred (Gunpo); Kim, Leo (Gunpo); Jeong, Feel (Gunpo)

Subject: RE: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

6/12/2009

Jenny, thank you for your quick response. I will review the additional information soon.

As for the Bluetooth, If you want the LG FCC ID: BEJ9QK-LGX12 to cover the BT transmitter portion like it will cover the WLAN and WWAN transmitters, then there will need to be another application submitted to include the BT transmitter.

If you are using the previous Bluetooth Modular Approval for FCC ID: RUJ-QBT400UB, then the only thing you need to do is to address the co-location in the other WLAN and WWAN applications, which may be as simple as showing that the power is very low and the antenna is separated by more than 5cm which will not require stand-alone SAR or simultaneous SAR.

I will contact people within CCS to obtain the WLAN and WWAN module exhibits.

For Q7-8, I understand that the WLAN and WWAN modules are already Certified, but you have submitted applications for a new a FCC ID to cover these Notebook computer with these transmitters. Because you have chosen to file new applications and not use the Modular approval for those modules, ALL exhibits for those transmitter modules must be submitted for these new FCC ID applications. If the testing performed for the original modules is still valid for these new applications, then please submit the original test reports of the modules to be included in these new applications, which should address the conducted emission requirements in these applications.

Also, the RF Exposure exhibit (attached) includes a statement which will cause confusion at the FCC. Please revise this exhibit to remove this paragraph:

" The patch to correct the unexpectedly high power in HSUPA mode is available and will be implemented this year in firmware release R2A. Test results confirm that the power level is then reduced as expected in MPR implementation."

Please let me know if I am not being clear or you need any additional information.

Best regards,

Chris Harvey

charvey@ieee.org

410-750-0860

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

From: Jo, Jenny (Gunpo) [mailto:Jenny.Jo@sgs.com]

Sent: Wednesday, May 13, 2009 3:18 AM

To: chris.harvey@ccsemc.com

Cc: lucy.tsai@ccsemc.com; Kim, Raymond (Gunpo); Ham, Denny (Gunpo); Ko, Duke (Gunpo); Jeong, Fred (Gunpo); Kim, Leo (Gunpo); Jeong, Feel (Gunpo)

Subject: RE: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

6/12/2009

Dear Chris

Thank you for your email.

I have some comments as below,

Q1. This application was submitted to have a separate FCC ID Number for this notebook computer. As for the all exhibits required for WLAN and WWAN transmitter, those were sent to CCS directly from the module manufacturer when we proceeded LGX11 project. (LGX12 has same modules with LGX11 except BT module) I guess you already have them. For the BT module, we will send you Block diagram and schematic as soon as we get it.

For the Bluetooth label, the correct FCC ID is RUJ-QBT400UB. We will correct unmatched information on the test report.

Q.2. As for the Bluetooth portion, I submitted 2 applications for WLAN and WCDMA because BT module includes its own antenna therefore the performance is not influential with the Notebook PC allowing that the module is built into the notebook PC. Please consider this and let us know whether we still need to submit another filing.

Q.3~5. We are still investigating. Will update you.

Q.6. Please find attached external photos.

Q.7~8. As you know, both WLAN module and WWAN module are already FCC certified.

So I would like to make sure that we still need to do the conducted RF test. Your favorable advice would be appreciated.

Q.9. For the revised label, it will be sent to you soon. The client is working on that.

Many thanks,

Jenny Jo / 吳靜怡

SGS Testing Korea Co., Ltd.

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

From: Lucy Tsai [mailto:lucy.tsai@cssemc.com]

Sent: Tuesday, May 12, 2009 7:50 PM

To: Jo, Jenny (Gunpo)

Subject: FW: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

FYI

6/12/2009

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

From: Chris Harvey

Sent: Tuesday, May 12, 2009 3:49 AM

To: denny.ham@sgs.com

Cc: Chris Harvey; Lucy Tsai

Subject: LG Electronics Inc., FCC ID: BEJ9QK-LGX12, Assessment NO.: AN09T9151 & AN09T9152, Notice#1

Dear Denny Ham,

You are listed as the Technical Contact for the above referenced TCB application. The following items need to be resolved before the review can be continued:

1. This application seems to have been filed for a new FCC ID Number of a digital device (notebook computer) containing 3 different co-located transmitters; however, the labeling of this device seems to indicate that the transmitters are all separately approved as modules.
  - a. If you are relying on the modular approval of the previously approved transmitter modules, and there have been no changes to modules or antennas, then there should be no new FCC ID Number for LG Electronics and the only thing that needs to be done is to perform a Class II Permissive Change to one of the modules to address the RF Exposure (SAR) issues (please note that this device has HSUPA operation and thus requires FCC Permit But Ask submission).
  - b. If you wish to have a separate FCC ID Number for this notebook computer then all exhibits required for each transmitter (Block diagrams and Schematics) must be included in the respective applications (please see FCC KDB# 169429 for reference).

Please note that the label, WWAN SAR report, WWAN and WLAN test report exhibits indicate FCC ID:'s WLAN TX2-RTL8187SE, WWAN VV7-MBMF3507G-2 and Bluetooth I4L-MS6837D1, but the internal photos show Bluetooth FCC ID: RUJ-QBT400UB. Modular approvals may allow the replacement of modules using Class II Permissive Changes, but having a single FCC ID for the notebook computer with 3 transmitters installed will only allow the marketing of that one configuration. Also, please note that the label indicates that the installed modules are 'optional' which implies that

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the configuration may change.

2. The label, manual and photos seem to indicate that this notebook PC has a Bluetooth Transmitter installed, but this transmitter has not been addressed in the RF or RF Exposure issues. If this device is not relying on the previous Bluetooth Modular approval for Bluetooth, then please submit another application for the FHSS Bluetooth transmitter operating in the 2402-2480MHz band (typically equipment class DSS) and include the Bluetooth transmitter in the RF exposure evaluations of the other 2 transmitter applications.

3. The LCD screen is 10.1 inches, according to the manual. The FCC SAR procedure for Laptops only applies to computers that have 12 inch or larger screens. Please indicate which FCC procedure you have used for determining test setups or provide the FCC KDB request documentation indicating FCC guidance for the SAR test and update the SAR reports accordingly.

4. The SAR reports for WLAN and WLAN transmitters do not address the co-location with the other 2 transmitters installed in this device. Please update the SAR reports accordingly.

5. The WLAN SAR report does not contain a photograph showing the location of the transmit antennas in relation to the body/phantom or to the other transmit antennas (including Bluetooth). The WWAN SAR report has an antenna location photo but does not indicate the antenna to antenna or antenna to body separation distances, and does not indicate the location of the Bluetooth antenna. Please update the SAR reports accordingly.

6. Please provide external photograph exhibit of this EUT.

7. The WLAN RF test report only documents peak power, transmitter spurious emissions and AC Conducted emissions. An application for a new FCC ID of a WLAN transmitter must completely document the compliance with all FCC requirements (FCC 15.247?). This new FCC ID can not reply on the previously approved modular approval.

8. The WWAN RF test report only documents Radiated RF Power and spurious emissions. An application for a new FCC ID of a WWAN transmitter must completely document the compliance with all FCC requirements (FCC 22H and 24E?). This new FCC ID can not rely on the previously approved modular approval.

9. FCC 15.19 requires that the 2-part statement be located on the product for a device that is sufficiently large. The statement has been placed in the manual but not located on the product. Please amend the label exhibit to include the required wording from FCC 15.19.

Please note that the FCC requires a Permit But Ask (PBA) filing for the HSUPA operation of the WWAN module. This process is likely to require additional time for processing.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

Best regards,

Chris Harvey

Charvey-tcb@ccsemc.com

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