

Chris Harvey

From: Claire Hoque [claire.hoque@ccsemc.com]
Sent: Wednesday, July 29, 2009 12:32 PM
To: Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: Q2: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Attachments: SAR_evaluation_on 835_1900_liquid_property.pdf



SAR_evaluation
_on 835_1900_li...

Hi Chris,

SGS was using the following method to answer Chris's feedback, attached pls find the doc.
2) You will have to recalculate SAR by hand. Some guidance for doing this can be found in the SAR Sensitivities chapter of the DASY manual (Chapter 21 for DASY4 and Chapter 18 of the DASY5 manual). Basically the calculation is as follows:

$$\text{Sensitivity} = (\text{dSAR}/\text{SAR}) / (\text{dx}/\text{x})$$

Where:

dSAR is change in SAR value

SAR is the SAR value measured

dx/x is the variation in percent of a given parameter (permittivity or conductivity) from target value

So as an example, let's say you measured 1 g SAR at 1900 MHz, and it was 1.00 mW/g. Now, given the following:

permittivity was 3% high

conductivity was 2% low

1 g SAR sensitivity of permittivity at 1900 MHz is -0.53 (from the sensitivity table in the manual)

1 g SAR sensitivity of conductivity at 1900 MHz is +0.51 (also from the table)

Solving the above equation for dSAR (change in SAR value), and expanding the equation to include both permittivity and conductivity:

$$\text{dSAR} = \text{SAR} * \{[\text{sensitivity}(\text{permittivity}) * (\text{dx}/\text{x}(\text{permittivity}))] + [\text{sensitivity}(\text{conductivity}) * (\text{dx}/\text{x}(\text{conductivity}))]\}$$

$$\text{dSAR} = (1 \text{ mW/g}) * [-0.53 * 3\%] + [0.51 * (-2\%)] \text{ dSAR} = -0.0261$$

So recalculated SAR is:

$$1.00 \text{ mW/g} - 0.0261 = 0.97 \text{ mW/g}$$

Thanks.

Claire

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

From: Claire Hoque

Sent: Wednesday, July 29, 2009 9:25 AM

To: 'Chris Harvey'; Chris Harvey; Chris Harvey -TCB

Cc: Tina Chu

Subject: RE: HP Module Authentication: answer: 09U12722 TCB questions:

Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Thanks, Chris!

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Wednesday, July 29, 2009 9:19 AM
To: Claire Hoque; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: RE: HP Module Authentication: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Thanks Claire. As soon as Q1 is resolved I can submit the PBA request.

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

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

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]
Sent: Wednesday, July 29, 2009 11:56 AM
To: Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: HP Module Authentication: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,

Here is HP Module Authentication for Q2, we are still working on Q1.
Thanks,

Claire

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Tuesday, July 28, 2009 5:53 AM
To: Claire Hoque; Tina Chu
Cc: Mike Kuo
Subject: RE: just received this file: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Claire, since this has gone back and forth a few times I wanted to let you know what is currently outstanding for this application:

1. SGS is still addressing the SAR liquid parameter analysis issue (PBA can be filed once that is received)
2. I still need the HP Module Authentication exhibit (for both TCB and IC application).

I still have not completed the review of the Collocated RF Analysis exhibit submitted yesterday, so I will review that today.

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]
Sent: Monday, July 27, 2009 1:07 PM
To: Chris Harvey; Tina Chu
Cc: Mike Kuo
Subject: RE: just received this file: answer: 09U12722 TCB questions:
Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404,
Notice#1

Thanks, Chris, we will inform client.

Hi Tina, pls ask client to address this issue.

Thanks,

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Monday, July 27, 2009 10:03 AM
To: Claire Hoque
Cc: Mike Kuo; Tina Chu
Subject: FW: just received this file: answer: 09U12722 TCB questions:
Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404,
Notice#1

Claire, I have looked into this exhibit. They have provided plots of the Permittivity and Conductivity limit, +5% and -5% and the measured values. According to the FCC requirements of KDB#450824:

"When nominal tissue dielectric parameters are specified in the probe calibration data, the tissue dielectric parameters measured for routine measurements should be less than the target ϵ_r and higher than the target s values to minimize SAR underestimations. Otherwise, a thorough analysis of the effective frequency interval supported by the probe calibration and dielectric medium should be included in the SAR report to substantiate the test results. Alternatively, the measured I-g SAR may be compensated with respect to +5% tolerances in ϵ_r and -5% tolerances in s , computed according to valid SAR sensitivity data, to reduce SAR underestimation and maintain conservativeness."

The plots submitted show that there are times when the measured Permittivity is above the 1528 limit and the Conductivity is less than the limit, even though the values are all within +/- 5% of the limit. The FCC requires a thorough analysis, which has not been submitted. Please address this discrepancy.

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

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

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]

Sent: Monday, July 27, 2009 12:09 PM
To: Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: just received this file: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,

We just received this file.

Thanks.

Regards,
Tina Chu
Account Executive
Compliance Certification Services
47173 Benicia Street, Fremont, CA 94538
Direct: 510-771-1108
Main: 510-771-1000
Fax: 510-661-0888
tina.chu@ccsemc.com

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

From: Claire Hoque
Sent: Monday, July 27, 2009 8:43 AM
To: Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: Collocated RF analysis: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,

Attached is the Collocated RF analysis for HP Prescott.
Haven't received any feedback regarding the medium target analysis from SGS as of this morning.

Thanks.

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Thursday, July 23, 2009 1:27 PM
To: Claire Hoque; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu; Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Claire, for question #1, they have the right idea, but this document they sent apparently has typos because everything is listed for 800-900 MHz (and they need to address 1850-1910 MHz also). Additionally, they should include some explanation of what the data represents and why it shows compliance with the requirements of the KDB #450824.

Best regards,

Chris Harvey

charvey@ieee.org
410-750-0860

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

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]
Sent: Thursday, July 23, 2009 4:15 PM
To: Chris Harvey; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu; Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,

Question#1, client sent us a separate doc. Pls advise if you can submit PBA now.

Question#2, pending

Question#3, user manual attached. The HP Module Authentication exhibits pending.

Thanks,

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey [mailto:charveyemc@gmail.com]On Behalf Of Chris Harvey
Sent: Thursday, July 23, 2009 4:55 AM
To: Claire Hoque; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu; Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Claire, the SAR report is not complete because of the issue raised in the following (item #1):

1. FCC KDB 450824, page 3, there are additional steps that should be performed when the SAR measurement frequency is >50MHz from the SAR probe calibration frequency. The body calibrations at 900MHz and 1810 MHz are >50MHz removed from the SAR measurement frequencies of 824MHz and 1910MHz. Please follow the guideline of this FCC KDB for the additional Measurement Uncertainty considerations.

I can not submit the SAR report for the PBA until this is addressed (it can be a supplement to the SAR report if they wish).

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

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

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]
Sent: Wednesday, July 22, 2009 7:11 PM
To: Chris Harvey; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu; Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,

The SAR report submitted is already final version, as for other WLAN

devices, client will provide a separate RF analysis report.

Since PBA is only about HSPA portion, do you also need RF analysis report to file this PBA?

Pls advise, thanks,

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Wednesday, July 22, 2009 12:17 PM
To: Claire Hoque; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu; Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Claire, since the SAR report must be submitted in the PBA filing, I MUST wait for the corrected SAR report before submitting the PBA request. The other documentation appears not to impact the PBA.

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]
Sent: Wednesday, July 22, 2009 2:58 PM
To: Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,
Pls see reply from client. Do you need these docs to file the PBA ?

1. FCC KDB 450824, page 3, there are additional steps that should be performed when the SAR measurement frequency is >50MHz from the SAR probe calibration frequency. The body calibrations at 900MHz and 1810 MHz are >50MHz removed from the SAR measurement frequencies of 824MHz and 1910MHz. Please follow the guideline of this FCC KDB for the additional Measurement Uncertainty considerations.

<answer> I will advise HP and the test lab of this and request the additional steps be taken. It may result in a report revision.

2. The SAR report submitted only lists one of the possible 4 WLAN devices which can be co-located with this device. Please include documentation for the other WLAN devices, or justify the selection of the one WLAN (FCC ID: QDS-BRCM1030) in the co-location evaluation section of the SAR report. Is there an additional RF Exposure evaluation exhibit that is being prepared that may address these questions?

<answer> The collocated RF analysis is pending. It is currently in review and I will forward once it has been published.

3. Please submit HP Module Authentication exhibits, which is listed in the Confidentiality request letter.

<answer> IThe Authentication documents are also pending. I will forward once published.

Should you have any further concerns, please let me know.

Thanks.
Claire

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

From: Chris Harvey [mailto:charveyemc@gmail.com]On Behalf Of Chris Harvey
Sent: Wednesday, July 22, 2009 10:29 AM
To: Tina Chu; Claire Hoque; Chris Harvey; Chris Harvey -TCB
Cc: Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1
Tina, the confidentiality request letter is for this application and therefore must address only exhibits included in this application, not previous applications. BTW, the Users manual is listed as Short-Term Confidential in this letter.

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

From: Tina Chu [mailto:tina.chu@CCSEMC.com]
Sent: Wednesday, July 22, 2009 12:29 PM
To: Claire Hoque; Chris Harvey; Chris Harvey; Chris Harvey -TCB
Cc: Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris
The confidentiality letter listed the antenna spec which is already uploaded, not the user manual. I will ask for the HP Module Authentication Documentation.

Tina

Should you have any further concerns, please let me know.

Thanks.
Regards,
Tina Chu
Account Executive
Compliance Certification Services
47173 Benicia Street, Fremont, CA 94538
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Main: 510-771-1000
Fax: 510-661-0888
tina.chu@ccsemc.com

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

From: Claire Hoque
Sent: Wednesday, July 22, 2009 9:16 AM
To: 'Chris Harvey'; Chris Harvey; Chris Harvey -TCB; Tina Chu
Cc: Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Thanks, Chris.

Hi Tina, pls address these 3 questions.

Thanks,

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Wednesday, July 22, 2009 8:59 AM
To: Claire Hoque; Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu; Mike Kuo
Subject: RE: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1
Claire, these exhibits helped TREMENDOUSLY. Now the application is much clearer. Some of this information should have been included in the application exhibits. I will include these KDB exhibits into this application upload since it is critical to the completeness of the application.

Please address the questions listed in Notice #2 sent yesterday (updated here):

Subject: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#2

Dear Claire and Thu, as I get deeper into the SAR report I have come across another issue:

1. FCC KDB 450824, page 3, there are additional steps that should be performed when the SAR measurement frequency is >50MHz from the SAR probe calibration frequency. The body calibrations at 900MHz and 1810 MHz are >50MHz removed from the SAR measurement frequencies of 824MHz and 1910MHz. Please follow the guideline of this FCC KDB for the additional Measurement Uncertainty considerations.
2. The SAR report submitted only lists one of the possible 4 WLAN devices which can be co-located with this device. Please include documentation for the other WLAN devices, or justify the selection of the one WLAN (FCC ID: QDS-BRCM1030) in the co-location evaluation section of the SAR report. Is there an additional RF Exposure evaluation exhibit that is being prepared that may address these questions?
3. Please submit the Users Manual and HP Module Authentication exhibits, which are listed in the Confidentiality request letter.

Best regards,

Chris Harvey
charvey@ieee.org
410-750-0860

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

From: Claire Hoque [mailto:claire.hoque@ccsemc.com]
Sent: Tuesday, July 21, 2009 5:30 PM
To: Chris Harvey; Chris Harvey -TCB
Cc: Tina Chu
Subject: answer: 09U12722 TCB questions: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Hi Chris,

Client just answered the two questions you sent us earlier, pls review first.

Thanks,

Claire Hoque
Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538, USA
Tel: (510) 771-1123
Fax: (510) 661-0888

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

From: Chris Harvey
Sent: Tuesday, July 21, 2009 6:20 AM
To: Thu Chan; Claire Hoque; Neena Jain
Cc: Chris Harvey
Subject: Qualcomm Incorporated, FCC ID: J9CGOBI2000-H, Assessment NO.: AN09T9404, Notice#1

Dear Claire and Thu,

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. The application exhibits show the placement of the antennas in this notebook but did not provide any distance measurements of the LCD screen size or the relative separation distances of antenna-to-antenna or antenna-to-body. Please provide this information. It appears that this LCD screen is smaller than the full-size 12-inch for the laptop policy of KDB# 616217. When this PBA is filed with the FCC, the FCC must review to determine if they will accept the use of the Laptop KDB.

[Client]Apologies, I thought I had provided you with the Antenna regulatory report (referenced in the Confidentiality Request) but apparently I forgot. I have attached it.

Regarding acceptability of using KDB 616217, we filed KDB 532335 for Prescott, originally under UNDP-1's FCC ID, but amended later to include Gobi2000. I have attached the KDB inquiry and response.
[Tina] I had the antenna regulatory report in the I drive, we should have it for TCB review.

2. The SAR report states that the WAN main antenna is >5cm from the WLAN Aux antenna, but the internal photo seems to show that the WLAN Main antenna is closer to the WAN Main antenna. Please confirm the separation of the closest simultaneous transmitting antennas.
[Client]In which photos does it appear to be less than 5 cm? I could not find any. Please see the Antenna Regulatory report; it indicates a WLAN-to-WWAN separation distance of 8.4 cm.

Please note that this application is required to be filed under the Permit-But-Ask policy of the FCC and may take additional time through this process.

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