

Chris Harvey

From: country@atl-lab.com.tw
Sent: Tuesday, March 17, 2009 10:44 PM
To: country@atl-lab.com.tw
Cc: Chris Harvey; charvey-tcb@ccsemc.com; Chris Harvey; chris.harvey@ccsemc.com; egg@atl-lab.com.tw; joyce@atl-lab.com.tw; lucy.tsai@ccsemc.com; 'Mike Kuo'
Subject: RE: Inventec Corporation, FCC ID: DGIMINERVA3107, Assessment NO.: AN09T8849, Notice#2a
Attachments: Flat_GSM 850 GPRS CH190_3Down2Up_Horizontal Down_5mm_with USB Cable.pdf; 450824 D01 SAR Probe Cal and Val Meas v01r01 Published on Jan 10 2007.pdf; Probe Calibrated 03182009.pdf

Dear Chris:

I am sorry for lose your [SAR Probe Calibrations question](#)

At 300 MHz to 3 GHz, measurements should be within ± 100 MHz of the probe calibration frequency. Measurements exceeding 50% of these intervals, ± 25 MHz < 300 MHz and ± 50 MHz ~ 300 MHz, should follow these *additional steps*.

(1) When the actual tissue dielectric parameters used for probe calibration are available, the differences for ϵ' and ϵ'' between probe calibration and routine measurements should each be ~ 5% while also satisfying the required ± 5 % tolerances in target dielectric parameters.

(2) 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' and higher than the target ϵ'' 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' and -5% tolerances in ϵ'' , computed according to valid SAR sensitivity data, to reduce SAR underestimation and maintain conservativeness.

The SAR probe was calibrated at 900 MHz and at 1810 MHz for tests at 824 MHz and 1910 MHz, which are both greater than 50 MHz from the calibration frequency. The FCC requires that additional steps be followed to ensure that SAR underestimations are minimized. Please follow the additional steps from the FCC KDB #450824.

ATL : The uncertain factor already be included in the uncertain estimation of the calibration report. And the uncertain data of Probe also will be estimated in SAR measurement.

Please see attached file (detail description) for your reference

Best Regards
Country Huang

country/ATL
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2009/03/18 ä,šå? 08:05

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3/18/2009

egg/ATL@ATL
RE: Inventec Corporation, FCC ID:
DGIMINERVA3107, Assessment NO.:
AN09T8849, Notice#2a

Dear Chris:

You are welcome ~ Thank your help for the application
Let you have some trouble and confuse because the SAR test result was too low to believe
We will add the class 10 SAR test result and upload SAR test report today.
We do not have the class 10 testing result on original report because we use conducted power
table to check the worst case mode (Class 8)
Let me explain : [their SAR measurements are almost 3 times the levels of you](#)
The CCS test result was class 10 Mode but ATL's test result was class 8 Mode
By the way, the our measurement result for GPRS class 8 is 0.167mW/g. Please see
attached for your reference.

Let me say " Thank your help" again.

Country Huang
Best Regards

"Chris Harvey" <charvey@ieee.org>
Chris Harvey
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2009/03/18 12:19

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RE: Inventec Corporation, FCC ID:
DGIMINERVA3107, Assessment NO.:
AN09T8849, Notice#2a

Country, I have been working on trying to confirm acceptance of the application. CCS Fremont California has received the sample and performed some tests. They find that the device complies with the limits, but their SAR measurements are almost 3 times the levels of yours. One possible explanation for this is something that the FCC has addressed in KDB# 450824, for SAR Probe Calibrations.
Page 3 of this document states:

At 300 MHz to 3 GHz, measurements should be within ± 100 MHz of the probe calibration frequency.
Measurements exceeding 50% of these intervals, ± 25 MHz < 300 MHz and ± 50 MHz ~ 300 MHz, should follow

3/18/2009

these *additional steps*.

(1) When the actual tissue dielectric parameters used for probe calibration are available, the differences for ϵ' and ϵ'' between probe calibration and routine measurements should each be $\sim 5\%$ while also satisfying the required $\pm 5\%$ tolerances in target dielectric parameters.

(2) 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' and higher than the target ϵ'' 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' and -5% tolerances in ϵ'' , computed according to valid SAR sensitivity data, to reduce SAR underestimation and maintain conservativeness.

The SAR probe was calibrated at 900 MHz and at 1810 MHz for tests at 824 MHz and 1910 MHz, which are both greater than 50 MHz from the calibration frequency. The FCC requires that additional steps be followed to ensure that SAR underestimations are minimized. Please follow the additional steps from the FCC KDB #450824.

Also, this device is capable of operation in GPRS Class 10 mode with 2 Transmit slots (declaration provided indicates that the GPRS Class 12 has been permanently disabled by software). The test documentation provided only documents GPRS Class 8, with one Transmit slot. In order to approve the Grant with GPRS Class 10 capability the test reports must document the measurements in GPRS Class 10 mode of operation.

Best regards,

Chris Harvey
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From: country@atl-lab.com.tw [mailto:country@atl-lab.com.tw]
Sent: Tuesday, March 03, 2009 8:17 PM
To: charvey-tcb@ccsemc.com
Cc: chris.harvey@ccsemc.com; lucy.tsai@ccsemc.com
Subject: RE : Inventec Corporation, FCC ID: DGIMINERVA3107, Assessment NO.: AN09T8849, Notice#2

Dear Charvey:

Thank for your information and help.
After we confirmed and re-test, the conducted power of the EUT can conform to the power table.
However, the SAR value didn't change and still can keep the permission process.
Meanwhile, because the case is very urgent, and customer agree to Call sample by CCS if you need.
If you have any other problem, please feel free to contact with us.

Best regards
Country Huang

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2009/03/02 09:33

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ä,»æ—“ Inventec Corporation, FCC ID: DGIMINERVA3107, Assessment
NO.: AN09T8849, Notice#2

Dear Country Huang,

Thank you for your reply.

The SAR report still has very low SAR values for a USB Dongle transmitter with higher power. Your explanation still does not explain why the SAR is so low. It appears that the transmitter was not operating at full power for the SAR test. Also, the USB Dongle policy for FCC requires a 0.5cm separation, but you have several measurements at 1.0cm and 1.5cm (10mm and 15mm).

You are correct that the USB Tip measurement is not necessary, but this measurement was included in your original SAR report which is why I mentioned it in my earlier email.

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

3/18/2009