

This document is generated in response to the queries asked in the e-mail from Compliance Certification Services titled "Kyocera Wireless Corp, FCC ID: OVFKWC-KX5, Assessment NO.: AN05T4754, Notice#1". The queries asked in the e-mail received by Lin Lu on 10th of May 2005 are listed below followed by the responses for each of the questions.

Subject: Kyocera Wireless Corp, FCC ID: OVFKWC-KX5, Assessment NO.: AN05T4754, Notice#1
Date: Tue, 10 May 2005 13:51:37 -0700
From: "Mike Kuo" <MKUO@ccsemc.com>
To: <cli@kyocera-wireless.com>, <llu@kyocera-wireless.com>
Cc: "Fernando Calimbahin" <fcalimba@kyocera-wireless.com>

Hi Lin :

Please address the following issues:

Question #1 On page 20/21/24-27/34/35/38/39 of radiated emission test report, there are several peak readings are over the average limits. Please provide average readings to demonstrate compliance.

Question #2: 1900 CDMA body worn SAR plots with multiple hot spots, please provide secondary hot spot readings per OET 65C requirements.

Question #3: Please confirm that by removing the battery, the FCC ID label can be visible by the user manual without using a tool.

Question #4: The RF conducted output power listed in section 4 of operation description, the output power listed is much higher than the measured RF conducted output power and the output power used in the SAR evaluation. In addition, in the tune up procedures does not specify the factory rated output power. Please explain the differences in term of RF conducted output power.

Question #5: In the request for confidentiality letter, SAR test report, SAR test plots , Part 22.24 test report and radiated test report are requested as short term confidential document. It is FCC policy that all test reports have to be available at the time of certification for public disclosure. Only user manual, test setup photos, external photos and internal photos can be granted as short term confidential document. Please review your request letter and move any sensitive photos from the test reports.

FYI: Please enlarge/ increase resolution on your SAR plots. It is very difficult to view all the detail information on the SAR plots.

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

Mike Kuo
Compliance Certification Services
561F Monterey Road
Morgan Hill CA 95037
Tel: (408)463-0885 x: 105
Fax: (408)463-0888
<http://www.ccsemc.com>

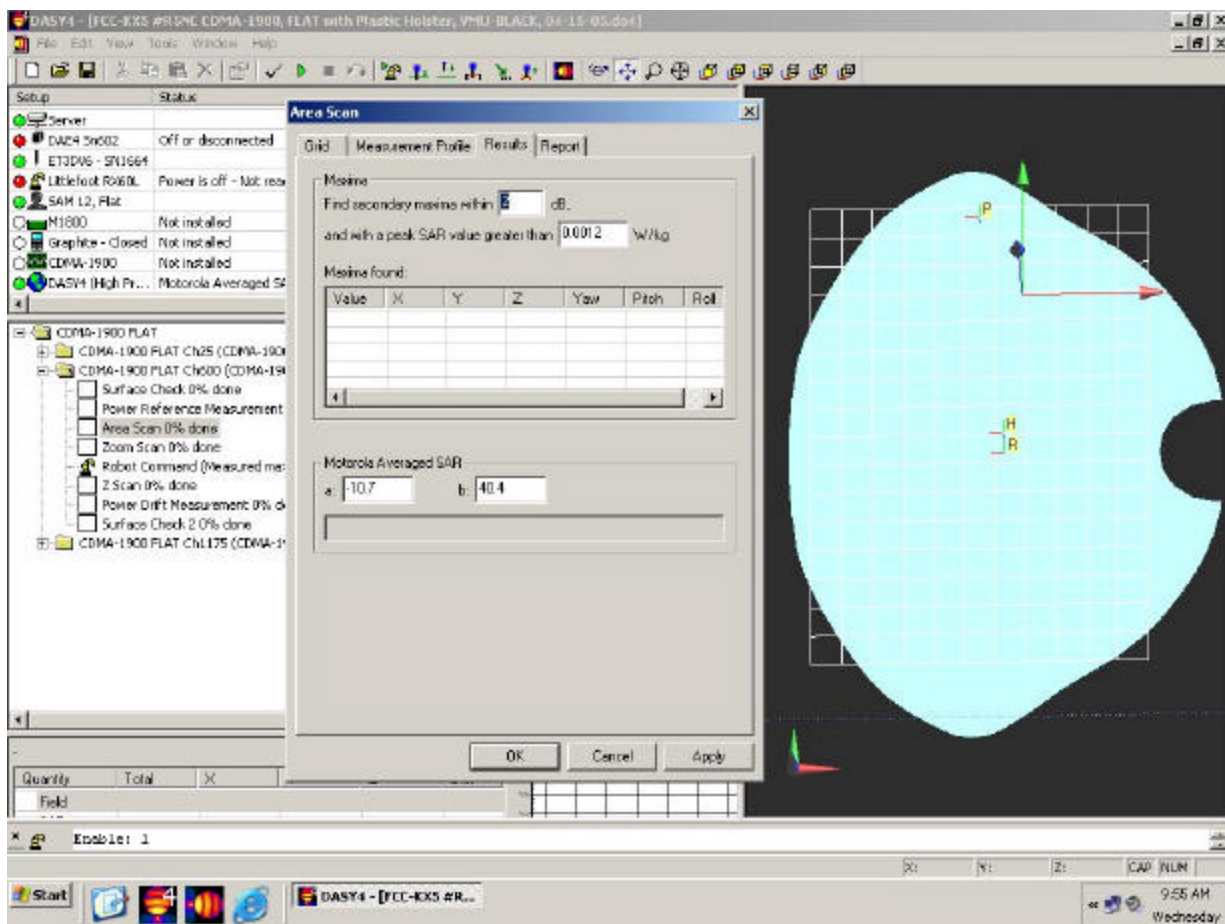
Question #1: On page 20/21/24-27/34/35/38/39 of radiated emission test report, there are several peak readings are over the average limits. Please provide average readings to demonstrate compliance.

In the radiated emissions tests conducted by Nemko USA, Inc (San Diego, USA.), the peak readings reported on pages 20/21/24-27/34/35/38/39 in the original document were noise floor measurements and no signal was observed at those frequencies. The radiated emissions report has been updated by Nemko USA with these changes and is sent as a separate attachment along with this response for your review.

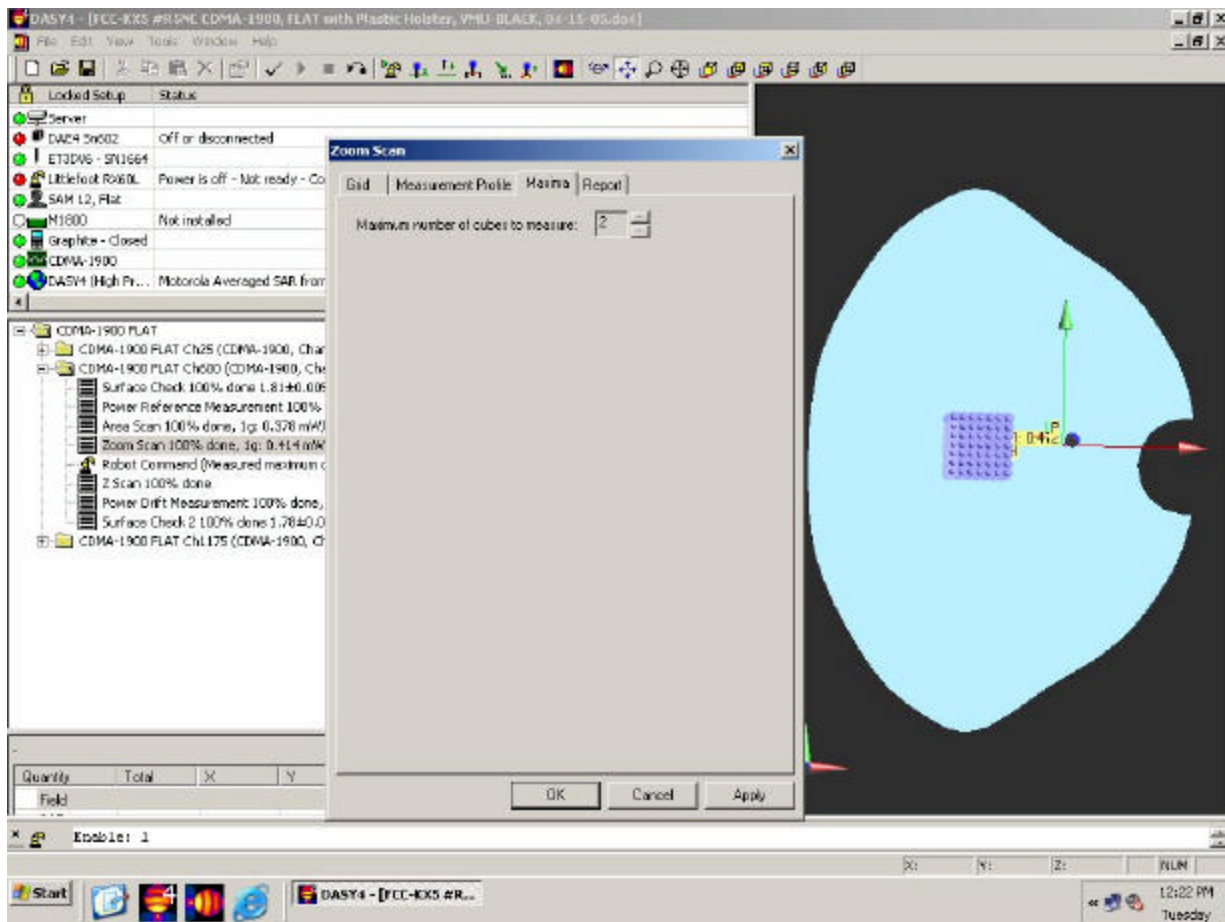
Question #2: 1900 CDMA body worn SAR plots with multiple hot spots, please provide secondary hot spot readings per OET 65C requirements.

Based on OET 65C, all peaks within 2.0 dB of the highest peak identified by the interpolated data should be evaluated with a fine resolution volume scan to determine the highest one-gram average SAR. Therefore, the DASY 4 program was configured in such a way that all peaks within 2.0 dB of the highest peak, if there was, will be automatically evaluated. The configuration of DASY 4 program is shown below.

⇒ **Area scan job** - when an area scan measured all reachable points, it computed all of the field maxima found in the scan area, within a range of 2dB as specified in OET 65C, (see below for the config.). For the cases that multiple maximums were detected, the number of zoom scan could be increased accordingly.



⇒ **Zoom scan** – in a zoom scan, the maximum number of cubes to measure was set to 2 due to two peaks appearance on the preceding area scans in this application, (see below for the config.). If two peaks were within 2dB of the highest one, two zoom scans could perform to provide the evaluations with a fine resolution volume scan to determine the one-gram average SAR for both peaks.



Per the request, all of the SAR tests included in the original submittal were checked. In all of cases, the secondary peak was less than the primary peak by more than 2 dB, and the software only did one cube scan for the primary peak evaluation.

To prove that the secondary peak is indeed lower by more than 2 dB, we increased the range to 3 dB so that the DAISY 4 program picks up the secondary hot spot as an example. The results of this case are listed in the table below, which clearly shows that the difference is $10 \cdot \log(0.39/0.222) = 2.45$ dB. The SAR plots and the relevant equipment validations are shown in the following pages.

Note the dipole and probe used in the measurement were the same as what were used for the original submittal, therefore all of the manufacture info has been included in the original files.

CDMA 1900 BODY		Channel:			600	
		Frequency (MHz):			1880	
		Conducted Power (dBm):			22.14	
Configuration	Accessories	Test Position	Flip Position	Phone Position	SAR, 1g (W/kg)	
					Primary Peak	Secondary Peak
KX5-5C1 w/ standard battery	Kyocera Holster: (CV90-G2598-01)	Flat	Closed	Face Down	0.390	0.222

Since the secondary peak is lower than the primary peak by more than 2 dB in this application, the rest of secondary peak values for other cases are not reported in the response.

Date/Time: 05/17/05 08:52:03

Test Laboratory: Kyocera

KX5-5C1 #R5NC CDMA-1900 ch600, Flat with Plastic Holster, 05-17-05

Communication System: CDMA-1900, Frequency: 1880 MHz, Duty Cycle: 1:1

Medium: M1800, Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.72, 4.72, 4.72), Calibrated: 9/2/2004

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

CDMA-1900 FLAT Ch600/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.1 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.581 W/kg

SAR(1 g) = 0.390 mW/g; SAR(10 g) = 0.253 mW/g

Maximum value of SAR (measured) = 0.420 mW/g

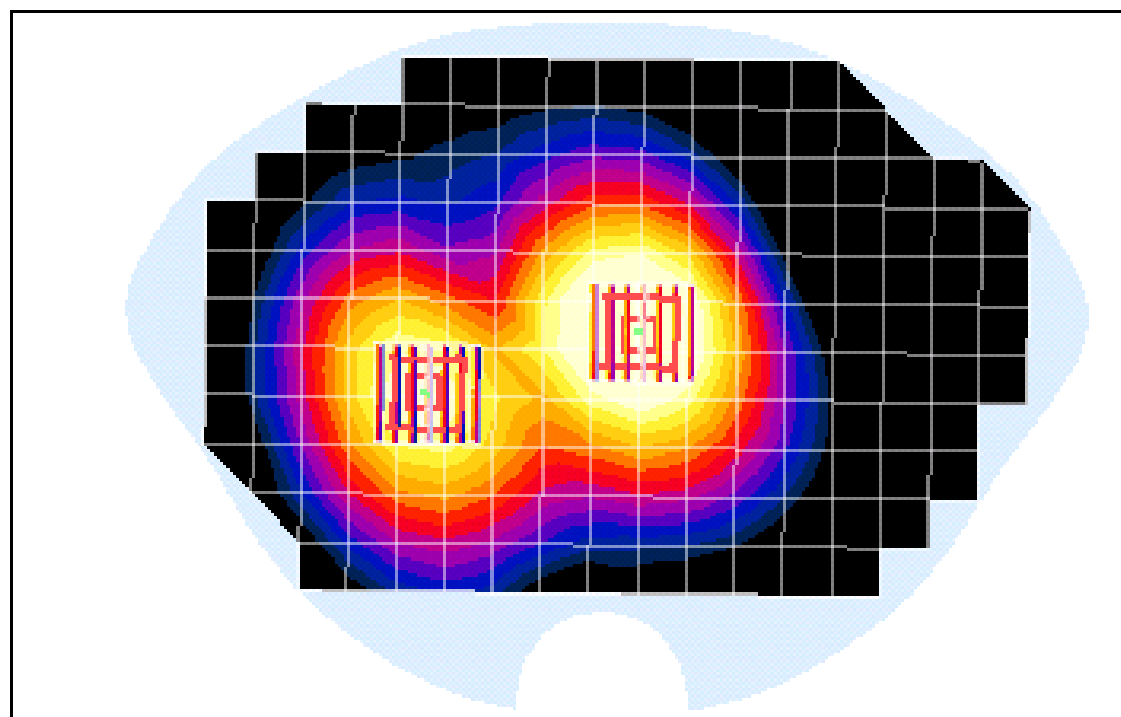
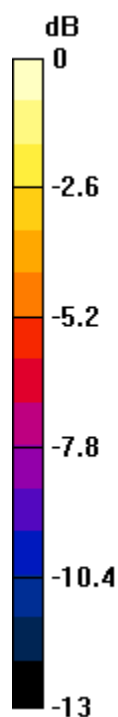
CDMA-1900 FLAT Ch600/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.1 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.326 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.147 mW/g

Maximum value of SAR (measured) = 0.238 mW/g



0 dB = 0.238mW/g

Date/Time: 05/17/05 01:06:19

Test Laboratory: Kyocera

1900MHz Validation, Probe 1664, DAE 602, Dipole #5d005, 05-17-05

Communication System: CW 1900, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1800, Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.43, 5.43, 5.43), Calibrated: 9/2/2004

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

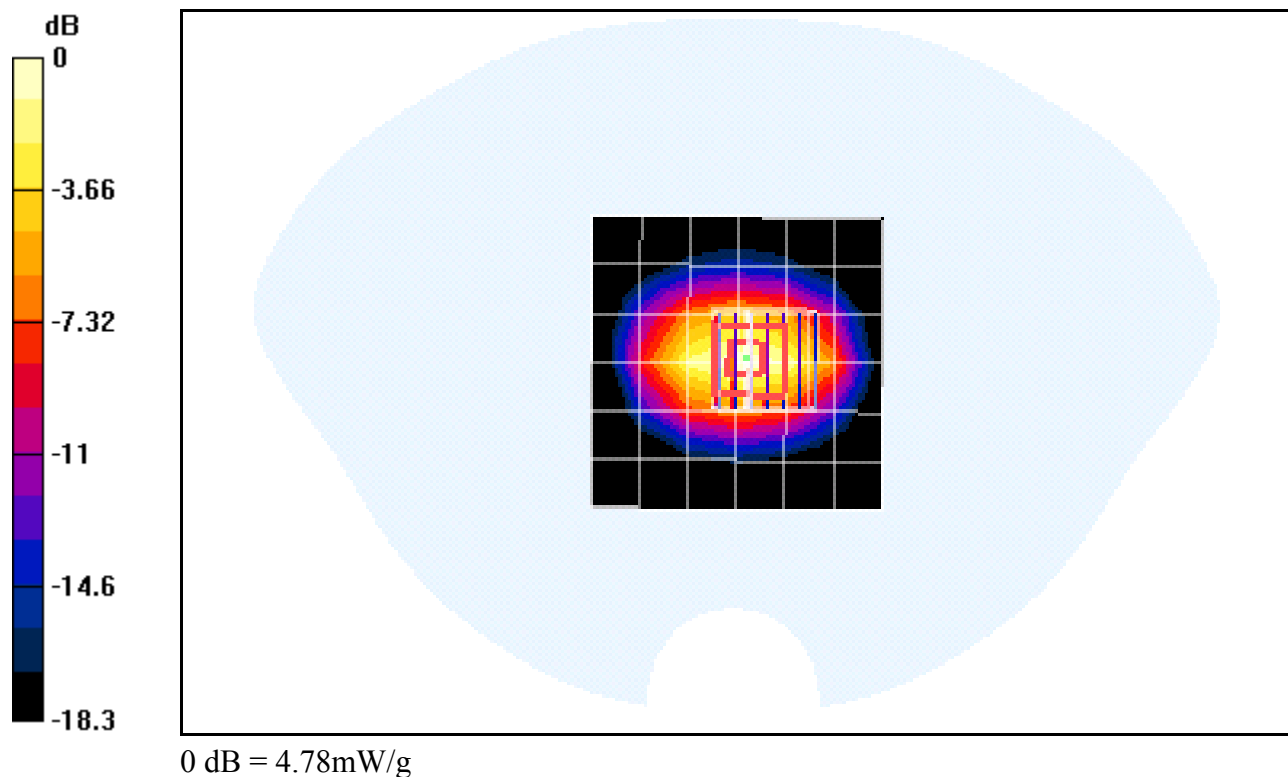
Reference Value = 61 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 7.47 W/kg

SAR(1 g) = 4.21 mW/g; SAR(10 g) = 2.21 mW/g

Info: [Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 4.78 mW/g



Question #3: Please confirm that by removing the battery, the FCC ID label can be visible by the user manual without using a tool.

The following pictures clearly depict that the user can see the FCC ID Label without the aid of any tool upon removing the battery.





Question #4: The RF conducted output power listed in section 4 of operation description, the output power listed is much higher than the measured RF conducted output power and the output power used in the SAR evaluation. In addition, in the tune up procedures does not specify the factory rated output power. Please explain the differences in term of RF conducted output power.

Section 4 lists the power consumption of the final stage RF amplifier over normal operation, which is the power consumed from the lithium ion rechargeable battery. In order to calculate the RF conducted output power from these values, we have to take into account all of the losses encountered before it is delivered to the antenna port of the handset. The losses include the efficiency of the RF amplifier ($\sim 45\%$), insertion loss in the diplexor, insertion loss in the duplexer, and also the path loss to the antenna port where the RF conducted power is measured.

The factory rated output power for each mode are 25.3dBm in FM, 25.3dBm in CDMA 800MHz and 23.3dBm in PCS while a phone is in open position, 23.7dBm in FM, 23.7dBm in CDMA 800MHz and 22dBm in PCS while a phone is in closed position.

Question #5: In the request for confidentiality letter, SAR test report, SAR test plots, Part 22.24 test report and radiated test report are requested as short term confidential document. It is FCC policy that all test reports have to be available at the time of certification for public disclosure. Only user manual, test setup photos, external photos and internal photos can be granted as short term confidential document. Please review your request letter and move any sensitive photos from the test reports.

The request for confidentiality letter has been corrected. Only the user manual, internal and external photos were listed for short-term confidentiality. Please find the new request for confidentiality letter sent as a separate attachment along with this document.