

Mike Kuo

To: Generic Office of Engineering Technology

Subject: RE: Request for additional information

- 1) SPEAG dipole and probe spacing were used but C63.19 target values were used. Please justify mixed methods. Please demonstrate that the Speag and C63.19 dipoles are the same design.

ANS: Revised target values form C63.19 to SPEAG's target values. Pls see revised HAC report page 9 of 23.

- 2) Please provide probe modulation factor for 80% AM and compare to expected.

ANS: Re-evaluated probe modulation factor. Pls see revised HAC report pages 11 of 23 and 12 of 23.

- 3) Directional coupler was not used for probe modulation factor. Please clarify how power was measured to account for mismatch. Also, more details about power measurement should be provided. How was peak power established? 0 span analyzer plots would be sufficient.

ANS:

- a. Pls see enclosed of the procedure named "Evaluation Procedure for Unknown PMF factor" for detail and also see revised report pages 11 of 23 and 12 of 23.
- b. Pls see revised report pages from 12 of 23 to 14 of 23.
- 4) This phone has IS-2000 capability. Please provide full details. According to TCB policy TCBs should seek FCC advise prior to granting new technology. Please detail all operational and "radio configurations" this device may use. Please assure that all modes are tested accordingly.

ANS: KX1 operates in the CDMA mode specified in IS-2000.2 standard, release 0. It supports CDMA MS Protocol revision 6, radio configuration 1 and 3. For RC 1, the creation of s(t) (signal) nets an identical waveform to the waveform created in the legacy IS-95B system / standard. Thus, backwards compatibility is insured. For RC 3, s(t) differs in a manner as described in the Exhibit 1, section 9.2. However, even though the composite waveform differs, the resultant is still based upon Spreading Rate 1 using the direct-sequence CDMA technique as defined in IS-2000.2, release 0. Thus the 3dB bandwidth is still 1.25MHz, and all of the channels share the same CDMA frequency assignment, as in the legacy 95B system. In other words, forRC3, SR1 in IS-2000, the frequency response is identical to the legacy IS-95 B system standard. Therefore, configuring KX1 in RC3 is a valid test condition for HAC measurement.

- 5) Please retest worst configuration and include probe azimuth rotation at the final measurement location.

ANS: Pls see attachments 2-1_HAC_E-Scan test data and 2-1_HAC_H-Scan test data.

- 6) Please provide contour plots without data cut in excluded blocks.

ANS: Pls see attachments 2-1_HAC_E-Scan test data and 2-1_HAC_H-Scan test data.

- 7) Please explain any differences in power from the original filing SAR and EMC reports.

ANS: Pls see table below:

| Operation mode | Frequency (MHz) | Output Power (dBm) | | |
|----------------|-----------------|--------------------|-------|-------|
| | | EMC | SAR | HAC |
| CDMA cell band | 824.70 | 25.02 | 25.09 | 25.09 |
| | 836.49 | 25.01 | 25.08 | 25.12 |
| | 848.31 | 25.05 | 25.10 | 25.10 |
| CDMA PCS band | 1851.25 | 23.17 | 23.10 | 23.80 |
| | 1880.00 | 23.13 | 23.15 | 23.16 |
| | 1908.75 | 23.12 | 23.13 | 23.50 |

- 8) Please clarify if this device has cdma2000 operation as user manual suggests. Filings should be clear about transmitter setup & operation capabilities to ensure devices are configured properly according to communication protocol and operating requirements to obtain valid HAC results. All modes must be tested.

Supporting info should include but may not be limited to:

- a) CDMA MS Protocol Revision number.
- b) Applicability of test codes to simulate the required test conditions, as defined in 3GPP2, TIA, and other standards.
- c) Base station simulator and test device configuration info and procedures used to maximize output in all applicable modes, including code domain channels, power & relative gain levels.
- d) Identify CDMA Radio Configurations, Service Options, multiplex options, voice/data, code channel combinations and options used for the SAR tests.
- e) Because of the different RC's, SO's, data rates, channel combinations and modulations, filing should include justifications on the selection of applicable configurations to establish and maintain maximum output to demonstrate SAR compliance for other configurations that are not tested.
- f) Please include a discussion of vocoder rates.

ANS: All CDMA measurements were made by linking to an Agilent 8960 Series 10 E5515C. The Wireless Communications Test Set was set as follows to establish maximum power from the EUT:

| Call Parms | Cell band | |
|-------------------------|-----------------|-----------------|
| | US Cellular | US PCS |
| Operation mode | Active Cell | Active Cell |
| Protocol Rev | 6 (IS-2000-0) | 6 (IS-2000-0) |
| Radio Config (RC) | (Fwd3, Rvs3) | (Fwd3, Rvs3) |
| FCH Service Option (SO) | SO55 (Loopback) | SO55 (Loopback) |
| Rvs Power Ctrl | All Up Bits | All Up Bits |
| Power Ctrl Size | 1.0 dBm | 1.0 dBm |
| Traffic Dada Rate | Full | Full |
| Rcvr Power Ctrl | Manual | Manual |
| Meas Frequency | Auto | Auto |
| Voice SO Mode | Voice Echo | Voice Echo |
| Echo Delay | Medium | Medium |

- 9) Please clarify how CF and PMF usage are consistent in the filing. Generally, for PMF use the measurement system must be identical.

ANS: Re-measured and revised report.

Best Regards

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

From: Generic Office of Engineering Technology [<mailto:oetech@fccsun27w.fcc.gov>]
 Sent: Wednesday, October 12, 2005 12:33 PM
 To: Mike Kuo
 Subject: Request for additional information

12/7/2005

To: Mike Kuo
From: Martin Perrine
Martin.Perrine@fcc.gov
FCC Equipment Authorization Branch

Re: FCC ID: OVFKWC-KX1

Applicant: Kyocera Wireless Corp.
Correspondence Reference Number: 23699
731 Confirmation Number: TC387062
Date of Original Email: 10/12/2005

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- 5) Please retest worst configuration and include probe azimuth rotation at the final measurement location.
- 6) Please provide contour plots without data cut in excluded blocks.
- 7) Please explain any differences in power from the original filing SAR and EMC reports.
- 8) Please clarify if this device has cdma2000 operation as user manual suggests. Filings should be clear about transmitter setup & operation capabilities to ensure devices are configured properly according to communication protocol and operating requirements to obtain valid HAC results. All modes must be tested.

Supporting info should include but may not be limited to:

- a) CDMA MS Protocol Revision number.
- b) Applicability of test codes to simulate the required test conditions, as defined in 3GPP2, TIA, and other standards.
- c) Base station simulator and test device configuration info and procedures used to maximize output in all applicable modes, including code domain channels, power & relative gain levels.
- d) Identify CDMA Radio Configurations, Service Options, multiplex options, voice/data, code channel combinations and options used for the SAR tests.
- e) Because of the different RC's, SO's, data rates, channel combinations and modulations, filing should include justifications on the selection of applicable configurations to establish and maintain maximum output to demonstrate SAR compliance for other configurations that are not tested.
- F) Please include a discussion of vocoder rates.
- 9) Please clarify how CF and PMF usage are consistent in the filing. Generally, for PMF use the measurement system must be identical.

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 pursuant to Section 2.917(c).

DO NOT Reply to this email by using the Reply button. In order for your response to be processed expeditiously, you must upload your response via the Internet at www.fcc.gov, E-Filing, OET TCB Electronic Filing, TCB Login. If the response is submitted through Add Attachments, a message which informs the processing staff that a new exhibit has been submitted must also be submitted via Submit Correspondence. 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.

12/7/2005