



**FCC CFR47 PART 22 SUBPART H  
PART 24 SUBPART E AND PART 27 SUBPART K  
CERTIFICATION TEST REPORT  
FOR  
TRI-BAND CDMA PHONE**

**MODEL NUMBER: K33BIC-03**

**FCC ID: OVF- K33BIC03**

**REPORT NUMBER: 08U12167-1**

**ISSUE DATE: OCTOBER 13, 2008**

*Prepared for*

**KYOCERA WIRELESS CORP.  
10300 CAMPUS POINT DRIVE  
SAN DIEGO, CA 92121, U.S.A.**

*Prepared by*

**COMPLIANCE CERTIFICATION SERVICES  
47173 BENICIA STREET  
FREMONT, CA 94538, U.S.A.  
TEL: (510) 771-1000  
FAX: (510) 661-0888**



**NVLAP LAB CODE 200065-0**

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	10/13/08	Initial Issue	T. Chan



# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** KYOCERA WIRELESS CORP.  
10300 CAMPUS POINT DRIVE  
SAN DIEGO, CA 92121, USA

**EUT DESCRIPTION:** TRI-BAND CDMA PHONE

**MODEL:** K33BIC-03

**SERIAL NUMBER:** FFSI0000001711

**DATE TESTED:** OCTOBER 10 -12, 2008

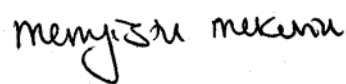
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22 SUBPART H	PASS (Radiated Only)
FCC PART 24 SUBPART E	PASS (Radiated Only)
FCC PART 27 SUBPART K	PASS (Radiated Only)

Compliance Certification Services, Inc. (CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All expressions of Pass/Fail in this report are opinions expressed by CCS based on interpretations of the test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



THU CHAN  
EMC SUPERVISOR  
COMPLIANCE CERTIFICATION SERVICES

MENGISTU MEKURIA  
EMC ENGINEER  
COMPLIANCE CERTIFICATION SERVICES

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603C (2004), FCC CFR 47 Part 2, FCC CFR 47 Part 22H, 24E, and 27K.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Radiated Emission, Above 2000 MHz	+/- 4.3 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a Tri-band CDMA Phone that manufactured by Kyocera Wireless Corporations

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum ERP & EIRP output powers as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low CH - 824.70	CDMA2000	22.6	182.0
Mid CH - 836.52		22.1	162.2
High CH - 848.31		22.8	190.5

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1851.25	CDMA2000	24.8	302.0
Mid CH - 1880.00		24.4	275.4
High CH - 1908.75		24.5	281.8

1710 to 1755 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1711.25	AWS	23.3	213.8
MID-Ch- 1733.00		24.0	251.2
High CH - 1753.75		23.1	204.2

### 5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

### 5.4. WORST-CASE CONFIGURATION AND MODE

The worst-position was the EUT with highest emissions. To determine the worst-case, the EUT was investigated for X, Y, and Z-Positions, and the worst position among X, Y, and Z with battery charger. After the investigations, the worst-position to be an X-position without Battery Charger for AWS and PCS bands, and the worst Z-position with Battery Charger for Cell band.

#### PROCEDURE USED TO ESTABLISH TEST SIGNAL

##### **3G-CDMA2000 1xRTT**

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
CDMA2000 Mobil Test	B.10.11, L

##### 1xRTT

- Call Setup > Shift & Preset
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > RC3 (Fwd3, Rvs3)
- FCH Service Option (SO) Setup > 55
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps  
> R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Cell Info > Cell Parameters > System ID (SID) > 6503  
> Network ID (NID) > 0

Once "Active Cell" show "Connected " then change "Rvs Power Ctrl" from "Active bits" to "**All Up bits**" to get the maximum power.

Worst-case Measurement Result @ Low, Middle and High Channel

Worst-case Measurement Result for Low, Middle and High Channel under Radio Configuration RC3 and Service Option 55.

## 5.5. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Kyocera	TXTVL10127	834S-002	DoC

### I/O CABLES

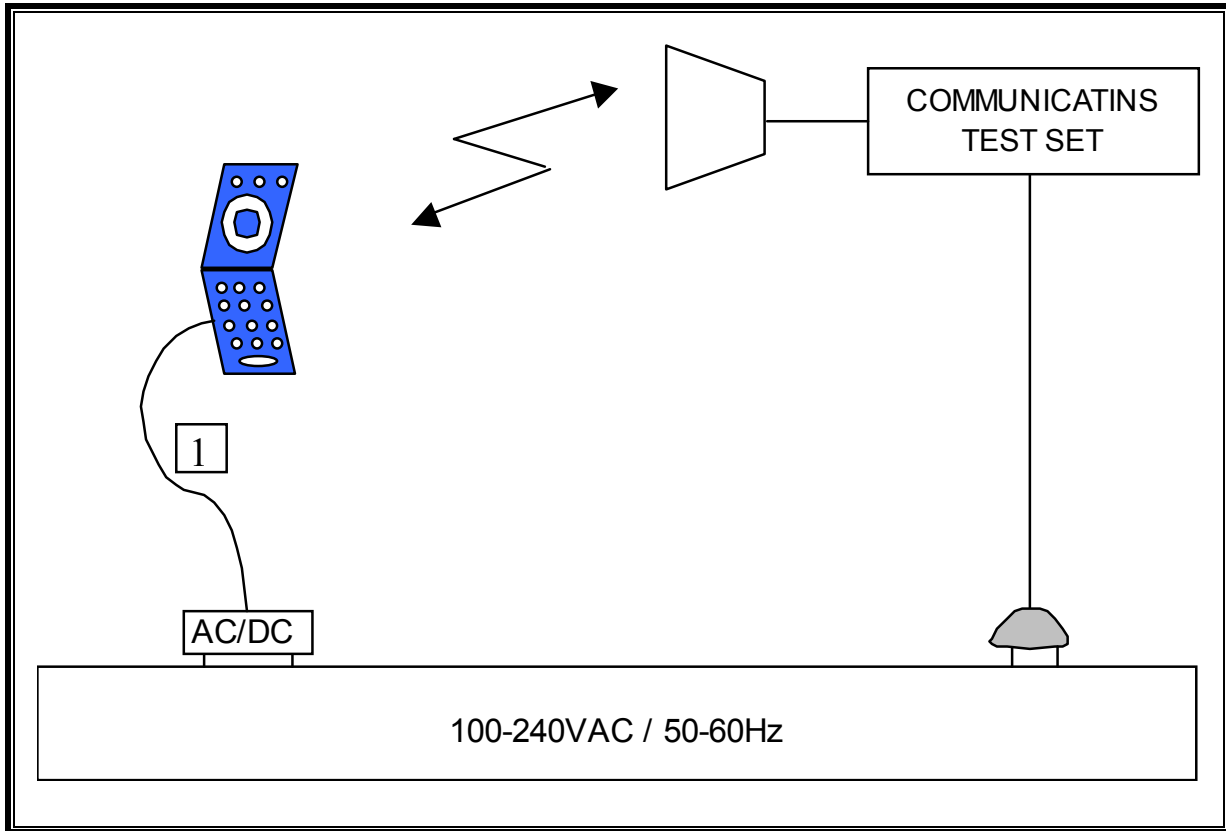
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Mini-USB	Un-Shielded	2.0 m	N/A

### TEST SETUP

The EUT is a CDMA phone and is tested as a standalone configuration. Communications Test Set is used to link the device under test.



**SETUP DIAGRAM FOR TESTS**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	08/05/09
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	02/11/09
Antenna, Horn, 18 GHz	EMCO	3115	C00783	04/22/09
Antenna, Horn, 18 GHz	EMCO	3115	C00872	04/22/09
Dipole	Speag	D900V2	NA	11/16/08
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Signal Generator	R & S	SMP04	C00953	02/16/09
Communications Test Set	R & S	CMU200	C001131	04/16/09
Communications Test Set	Agilent / HP	E5515C	C01086	06/16/09
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	03/03/09
Peak Power Meter	Agilent / HP	E4416A	C00963	12/04/09
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/07/09

## **7. LIMITS AND RESULTS**

### **7.1. RADIATED OUTPUT POWER**

#### **LIMITS**

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50 (d) (2) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band are limited to a peak EIRP of 1 watt.

#### **TEST PROCEDURE**

ANSI / TIA / EIA 603 Clause 2.2.17

#### **RESULTS**

**CELL OUTPUT POWER (ERP)**

High Frequency Substitution Measurement									
Compliance Certification Services, Fremont 5m Chamber A									
Company:		KYOCERA WIRELESS							
Project #:		08U12167							
Date:		10/10/2008							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT ALONE							
Mode:		TX CELL BAND CDMA							
<b>Test Equipment:</b>									
Receiving: Sunol T130, and 5m Chamber N-type Cable (Setup this one for testing EUT)									
Substitution: Dipole S/N: 00022117, and 6ft SMA Cable Warehouse S/N: 187208002.									
f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.70	98.9	V	23.1	0.5	0.0	22.6	38.5	-15.9	
824.70	91.8	H	14.8	0.5	0.0	14.3	38.5	-24.2	
836.52	99.0	V	22.7	0.6	0.0	22.1	38.5	-16.3	
836.52	91.6	H	14.9	0.6	0.0	14.3	38.5	-24.1	
848.31	100.0	V	23.5	0.7	0.0	22.8	38.5	-15.7	
848.31	92.1	H	15.4	0.7	0.0	14.7	38.5	-23.8	
Rev. 1.24.7									

**PCS OUTPUT POWER (EIRP)**

High Frequency Fundamental Measurement									
Compliance Certification Services, Fremont 5m Chamber A									
Company:		KYOCERA WIRELESS							
Project #:		08U12167							
Date:		10/12/2008							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT ALONE							
Mode:		TX PCS BAND CDMA							
<u>Test Equipment:</u>									
Receiving: Horn T60, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T73 Substitution, 6ft SMA Cable Warehouse									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
1.851	80.7	V	8.9	0.7	9.1	17.2	33.0	-15.8	
1.851	88.8	H	16.4	0.7	9.1	24.8	33.0	-8.2	
1.880	82.0	V	10.0	0.7	9.1	18.3	33.0	-14.7	
1.880	88.5	H	16.1	0.7	9.1	24.4	33.0	-8.6	
1.909	80.6	V	8.5	0.7	9.1	16.8	33.0	-16.2	
1.909	88.1	H	16.1	0.7	9.1	24.5	33.0	-8.5	
Rev. 1.24.7									

**AWS OUTPUT POWER (EIRP)**

High Frequency Fundamental Measurement									
Compliance Certification Services, Chamber A									
Company:		KYOCERA WIRELESS							
Project #:		08U12167							
Date:		10/10/2008							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT ALONE							
Mode:		TX AWS BAND CDMA							
<b>Test Equipment:</b>									
Receiving: Horn T60, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T 73 Substitution, 6ft SMA Cable Warehouse									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
1.711	80.8	V	7.5	0.7	9.1	15.9	30.0	-14.1	
1.711	88.7	H	15.0	0.7	9.1	23.3	30.0	-6.7	
1.733	81.5	V	8.2	0.7	9.1	16.5	30.0	-13.5	
1.733	88.9	H	15.6	0.7	9.1	24.0	30.0	-6.0	
1.754	81.5	V	8.0	0.7	9.1	16.4	30.0	-13.6	
1.754	88.4	H	14.7	0.7	9.1	23.1	30.0	-6.9	
Rev. 1.24.7									

## 7.2. FIELD STRENGTH OF SPURIOUS RADIATION

### LIMIT

§22.917 (e) and §24.238(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

§24.238 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

§27.53 (g) For operations in the 1710–1755MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10} (P)$  dB.

### TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 22.917 (b), FCC 24.238 (b), & FCC 27.53 (g)(1)(2)(3)

### RESULTS

**CELL SPURIOUS & HARMONIC (ERP)**

**High Frequency Substitution Measurement**  
 Compliance Certification Services, Fremont 5m A-Chamber

Company: KYOCERA WIRELESS  
 Project #: 08U12167  
 Date: 10/12/2008  
 Test Engineer: MENGISTU MEKURIA  
 Configuration: EUT ALONE  
 Mode: TX CELL BAND CDMA

**Test Equipment:**

EMCO Horn 1-18GHz  
T60; S/N: 2238 @3m

Horn > 18GHz

Limit  
FCC 22

High Pass Filter

Hi Frequency Cables

(2 ft)

(2~3 ft)

(4~6 ft)

(12 ft)

Pre-amplifier 1-26GHz  
T144 Miteq 3008A0

Pre-amplifier 26-40GHz

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
<b>Low Ch. (824.7 MHz)</b>										
1.649	75.2	V	-31.9	3.8	7.1	4.9	-30.8	-13.0	-17.8	
2.474	61.5	V	-42.7	4.9	9.3	7.1	-40.5	-13.0	-27.5	
3.299	52.2	V	-48.3	5.6	9.4	7.3	-46.6	-13.0	-33.6	
4.948	49.4	V	-46.9	7.0	11.0	8.8	-45.1	-13.0	-32.1	
5.773	42.7	V	-50.9	7.5	11.4	9.2	-49.2	-13.0	-36.2	
1.649	68.2	H	-38.2	3.8	7.1	4.9	-37.1	-13.0	-24.1	
2.474	65.4	H	-38.7	4.9	9.3	7.1	-36.4	-13.0	-23.4	
3.299	52.7	H	-47.7	5.6	9.4	7.3	-46.0	-13.0	-33.0	
4.948	46.9	H	-49.1	7.0	11.0	8.8	-47.3	-13.0	-34.3	
5.773	40.3	H	-52.3	7.5	11.4	9.2	-50.5	-13.0	-37.5	
<b>Mid Ch. (836.52 MHz)</b>										
1.670	71.3	V	-35.7	3.9	7.1	5.0	-34.6	-13.0	-21.6	
2.506	53.8	V	-50.3	4.9	9.3	7.1	-48.1	-13.0	-35.1	
3.346	50.7	V	-49.6	5.6	9.5	7.3	-47.9	-13.0	-34.9	
5.019	48.3	V	-46.6	7.1	11.0	8.9	-44.8	-13.0	-31.8	
5.857	44.2	V	-49.4	7.5	11.5	9.4	-47.6	-13.0	-34.6	
1.670	62.5	H	-43.8	3.9	7.1	5.0	-42.7	-13.0	-29.7	
2.506	56.2	H	-47.7	4.9	9.3	7.1	-45.5	-13.0	-32.5	
3.346	50.2	H	-49.9	5.6	9.5	7.3	-48.2	-13.0	-35.2	
5.019	47.3	H	-46.6	7.1	11.0	8.9	-44.8	-13.0	-31.8	
5.857	40.9	H	-51.7	7.5	11.5	9.4	-49.9	-13.0	-36.9	
<b>Hi Ch. (848.31 MHz)</b>										
1.697	72.1	V	-34.8	3.9	7.2	5.1	-33.6	-13.0	-20.6	
2.545	52.9	V	-51.0	4.9	9.3	7.1	-48.8	-13.0	-35.8	
3.393	49.2	V	-50.9	5.7	9.5	7.3	-49.2	-13.0	-36.2	
5.090	48.1	V	-46.4	7.1	11.0	8.9	-44.7	-13.0	-31.7	
5.938	42.9	V	-50.7	7.6	11.6	9.5	-48.8	-13.0	-35.8	
1.697	65.4	H	-40.8	3.9	7.2	5.1	-39.7	-13.0	-26.7	
2.545	53.8	H	-49.9	4.9	9.3	7.1	-47.7	-13.0	-34.7	
3.393	49.8	H	-50.2	5.7	9.5	7.3	-48.5	-13.0	-35.5	
5.090	47.8	H	-45.8	7.1	11.0	8.9	-44.0	-13.0	-31.0	
5.938	40.8	H	-51.8	7.6	11.6	9.5	-49.9	-13.0	-36.9	

Rev. 412.7



**PCS Spurious & Harmonic (EIRP)**

**High Frequency Substitution Measurement**  
 Compliance Certification Services, Fremont 5m A-Chamber

Company: KYOCERA WIRELESS  
 Project #: 08U12167  
 Date: 10/12/2008  
 Test Engineer: MENGISTU MEKURIA  
 Configuration: EUT ALONE  
 Mode: TX PCS BAND CDMA

**Test Equipment:**

EMCO Horn 1-18GHz  
T60; S/N: 2238 @3m

Horn > 18GHz

Limit  
FCC 24

High Pass Filter

Hi Frequency Cables

(2 ft)

(2~3 ft)

(4~6 ft)

(12 ft)

Pre-amplifier 1-26GHz  
T144 Miteq 3008A01

Pre-amplifier 26-40GHz

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
<b>Low Ch. (1851.25 MHz)</b>										
3.703	49.3	V	-49.6	5.9	9.7	7.5	-45.9	-13.0	-32.9	
5.554	41.5	V	-51.9	7.4	11.0	8.9	-48.3	-13.0	-35.3	
3.703	50.7	H	-48.1	5.9	9.7	7.5	-44.3	-13.0	-31.3	
5.554	42.4	H	-50.0	7.4	11.0	8.9	-46.3	-13.0	-33.3	
<b>Mid Ch. (1880 MHz)</b>										
3.760	49.5	V	-49.1	6.0	9.7	7.5	-45.4	-13.0	-32.4	
5.640	41.6	V	-51.9	7.4	11.2	9.0	-48.2	-13.0	-35.2	
3.760	49.3	H	-49.2	6.0	9.7	7.5	-45.5	-13.0	-32.5	
5.640	42.6	H	-49.9	7.4	11.2	9.0	-46.2	-13.0	-33.2	
<b>Hi Ch. (1908.75 MHz)</b>										
3.818	47.8	V	-50.6	6.0	9.7	7.6	-46.9	-13.0	-33.9	
5.726	41.0	V	-52.6	7.5	11.3	9.2	-48.8	-13.0	-35.8	
3.818	48.9	H	-49.4	6.0	9.7	7.6	-45.7	-13.0	-32.7	
5.726	42.1	H	-50.5	7.5	11.3	9.2	-46.6	-13.0	-33.6	

Rev. 4.12.7

**AWS Spurious & Harmonic (EIRP)**

**High Frequency Substitution Measurement**  
 Compliance Certification Services, Fremont 5m A-Chamber

Company: KYOCERA WIRELESS  
 Project #: 08U12167  
 Date: 10/12/2008  
 Test Engineer: MENGISTU MEKURIA  
 Configuration: EUT ALONE  
 Mode: TX AWS BAND CDMA

**Test Equipment:**

EMCO Horn 1-18GHz  
T60; S/N: 2238 @3m

Horn > 18GHz

Limit  
FCC 24

High Pass Filter

Hi Frequency Cables  
 (2 ft)    (2 ~ 3 ft)    (4 ~ 6 ft)    (12 ft)

Pre-amplifier 1-26GHz  
T144 Miteq 3008A01

Pre-amplifier 26-40GHz

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
<b>Low Ch. (1711.25 MHz)</b>										
3.423	48.0	V	-52.0	5.7	9.5	7.4	-48.2	-13.0	-35.2	
5.134	41.6	V	-52.8	7.2	11.0	8.9	-49.0	-13.0	-36.0	
3.423	48.9	H	-51.0	5.7	9.5	7.4	-47.2	-13.0	-34.2	
5.134	41.8	H	-51.7	7.2	11.0	8.9	-47.8	-13.0	-34.8	
<b>Mid Ch. (1733 MHz)</b>										
3.465	49.3	V	-50.6	5.7	9.5	7.4	-46.8	-13.0	-33.8	
5.198	41.6	V	-52.5	7.2	11.0	8.9	-48.8	-13.0	-35.8	
3.465	49.4	H	-50.3	5.7	9.5	7.4	-46.5	-13.0	-33.5	
5.198	42.1	H	-51.0	7.2	11.0	8.9	-47.3	-13.0	-34.3	
<b>Hi Ch. (1753.75 MHz)</b>										
3.508	49.3	V	-50.4	5.8	9.6	7.4	-46.6	-13.0	-33.6	
5.261	41.9	V	-52.0	7.3	11.0	8.8	-48.3	-13.0	-35.3	
3.508	48.7	H	-50.9	5.8	9.6	7.4	-47.1	-13.0	-34.1	
5.261	41.4	H	-51.6	7.3	11.0	8.8	-47.8	-13.0	-34.8	

Rev. 4.12.7