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

MODEL NUMBER: K33Bi-04

FCC ID: OVF- K33BI04

REPORT NUMBER: 08U12064-1

ISSUE DATE: OCTOBER 01, 2008

Prepared for

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

Prepared by

COMPLIANCE CERTIFICATION SERVICES
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	10/01/08	Initial Issue	T. Chan

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: TRI-BAND CDMA PHONE WITH BLUETOOTH

MODEL: K33Bi-04

SERIAL NUMBER: FFSI0000007060

DATE TESTED: SEPTEMBER 7 AND 30, 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)

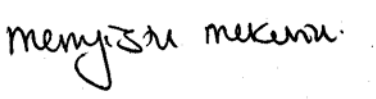
Compliance Certification Services, Inc. (CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All expressions of Pass/Fail in this report are opinions expressed by CCS based on interpretations of the test results. The test results show that the equipment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

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

Tested By:



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 Bluetooth featured 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	30.0	1000.0
Mid CH - 836.52		30.0	1000.0
High CH - 848.31		29.7	933.3

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1851.25	CDMA2000	25.9	389.0
Mid CH - 1880.00		27.8	602.6
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	22.6	182.0
MID-Ch- 1733.00		23.1	204.2
High CH - 1753.75		23.5	223.9

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 was turned out to be an X-position without Battery Charger, Z-position without Battery Charger, and Z-position without Battery Charger for Cell, AWS, and PCS bands respectively.

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.

Application	Rev, License
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) > 4395
  > 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	TXTVL10128	812S-002	DoC

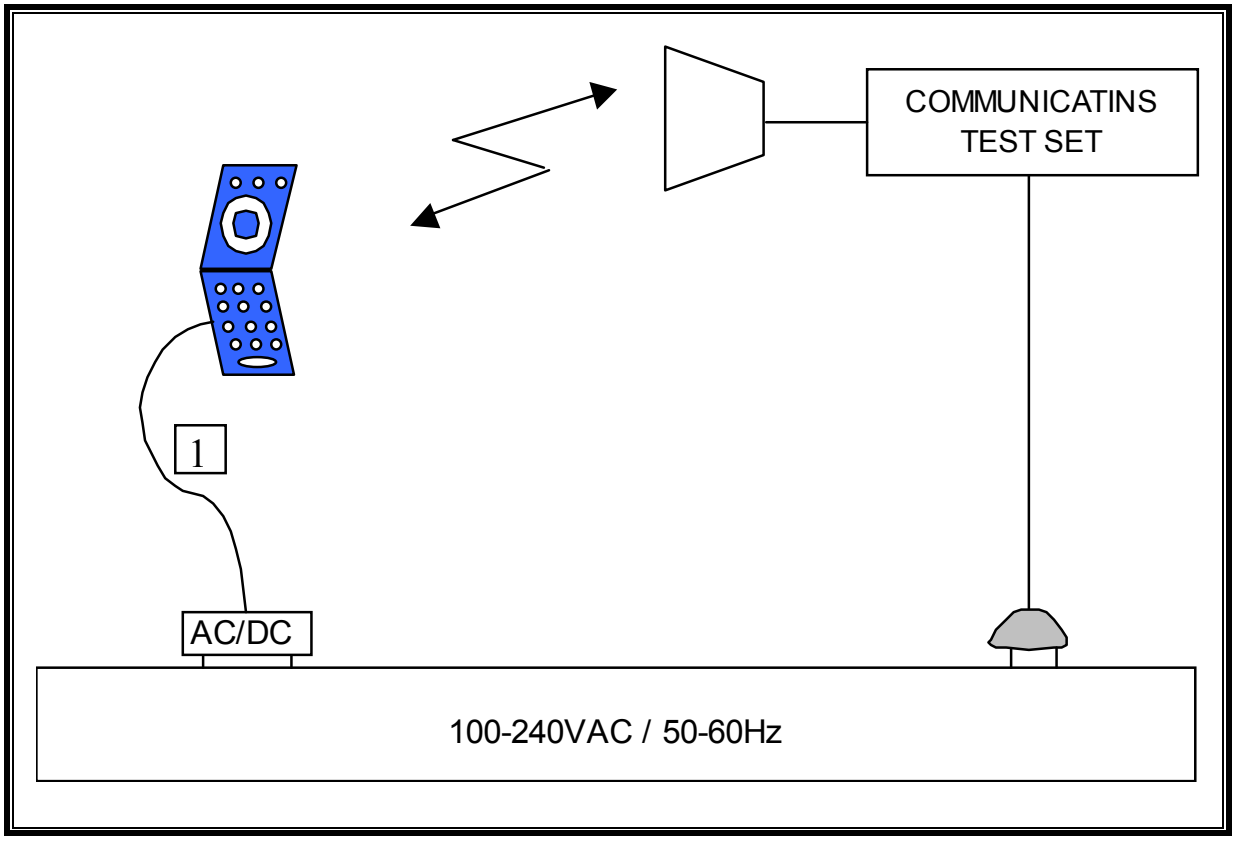
I/O CABLES

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. TES T 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	ETS	3117	C01005	04/22/09
Horn	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	C01069	10/08/09
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	03/03/09

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 #: 08U12964
Date: 9/7/2008
Test Engineer: MENGISTU MEKURIA
Configuration: EUT ALONE
Mode: TX CELL CDMA MODE

Test Equipment:
Receiving: Sunol T130, and 5m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, and 4ft 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	96.8	V	22.3	0.5	0.0	21.8	38.5	-16.6	
824.70	106.7	H	30.5	0.5	0.0	30.0	38.5	-8.5	
836.50	97.3	V	22.5	0.6	0.0	21.9	38.5	-16.6	
836.50	106.2	H	30.6	0.6	0.0	30.0	38.5	-8.4	
848.30	96.6	V	22.5	0.7	0.0	21.8	38.5	-16.6	
848.30	106.2	H	30.4	0.7	0.0	29.7	38.5	-8.7	

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PCS OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Fremont 5m Chamber A

Company: KYOCERA WIRELESS
Project #: 08U12964
Date: 9/30/2008
Test Engineer: MENGISTU MEKURIA
Configuration: EUT ALONE
Mode: TX PCS CDMA MODE

Test Equipment:
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
1.850	90.2	V	18.3	0.7	8.3	25.9	33.0	-7.1	
1.850	87.3	H	15.0	0.7	8.3	22.5	33.0	-10.5	
1.880	91.4	V	19.4	0.7	9.1	27.8	33.0	-5.2	
1.880	86.3	H	13.9	0.7	9.1	22.2	33.0	-10.8	
1.910	88.9	V	16.8	0.7	8.4	24.5	33.0	-8.5	
1.910	85.0	H	13.0	0.7	8.4	20.6	33.0	-12.4	

Rev. 1.24.7

AWS OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Chamber A

Company: KYOCERA WIRELESS
Project #: 08U12964
Date: 9/30/2008
Test Engineer: MENGISTU MEKURIA
Configuration: EUT ALONE
Mode: TX AWS CDMA MODE

Test Equipment:
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
1.711	86.3	V	14.3	0.7	9.1	22.6	30.0	-7.4	
1.711	84.7	H	12.2	0.7	9.1	20.6	30.0	-9.4	
1.733	88.0	V	14.7	0.7	9.1	23.1	30.0	-6.9	
1.733	85.6	H	12.3	0.7	9.1	20.7	30.0	-9.3	
1.754	88.7	V	15.1	0.7	9.1	23.5	30.0	-6.5	
1.754	85.5	H	11.8	0.7	9.1	20.2	30.0	-9.8	

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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 log10 (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 B-Chamber

Company: KYOCERA WIRELESS
Project #: 08U12964
Date: 9/30/2008
Test Engineer: MENGISTU MEKURIA
Configuration: EUT ALONE
Mode: TX CELL CDMA MODE

Test Equipment:

EMCO Horn 1-18 GHz: T60; S/N: 2238 @3m
Horn > 18 GHz:
Limit: FCC 22
High Pass Filter: ☑
Hi Frequency Cables: ☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)
Pre-amplifer 1-26 GHz: T144 Miteq 3008A00
Pre-amplifer 26-40 GHz:

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
LOW CH. (824.7MHz)										
1.649	66.3	H	-40.1	3.8	7.1	4.9	-39.0	-13.0	-26.0	
2.473	63.6	H	-40.5	4.9	9.3	7.1	-38.2	-13.0	-25.2	
3.298	58.4	H	-42.0	5.6	9.4	7.3	-40.2	-13.0	-27.2	
1.649	63.7	V	-43.3	3.8	7.1	4.9	-42.3	-13.0	-29.3	
2.473	61.8	V	-42.5	4.9	9.3	7.1	-40.3	-13.0	-27.3	
3.298	59.8	V	-40.7	5.6	9.4	7.3	-38.9	-13.0	-25.9	
MID CH.(836.5MHz)										
1.673	64.5	H	-41.8	3.9	7.2	5.0	-40.7	-13.0	-27.7	
2.510	61.5	H	-42.4	4.9	9.3	7.1	-40.2	-13.0	-27.2	
3.346	55.0	H	-45.1	5.6	9.5	7.3	-43.4	-13.0	-30.4	
1.673	63.8	V	-43.2	3.9	7.2	5.0	-42.1	-13.0	-29.1	
2.510	58.4	V	-45.7	4.9	9.3	7.1	-43.5	-13.0	-30.5	
3.346	58.3	V	-41.9	5.6	9.5	7.3	-40.2	-13.0	-27.2	
HI CH. (848.3MHz)										
1.698	64.1	H	-42.1	3.9	7.2	5.1	-40.9	-13.0	-27.9	
2.546	60.0	H	-43.6	4.9	9.3	7.1	-41.5	-13.0	-28.5	
3.395	54.8	H	-45.1	5.7	9.5	7.3	-43.4	-13.0	-30.4	
1.698	63.6	V	-43.3	3.9	7.2	5.1	-42.1	-13.0	-29.1	
2.546	56.5	V	-47.4	4.9	9.3	7.1	-45.2	-13.0	-32.2	
3.395	59.4	V	-40.7	5.7	9.5	7.3	-39.0	-13.0	-26.0	

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PCS Spurious & Harmonic (EIRP)

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

Company:	KYOCERA WIRELESS
Project #:	08U12964
Date:	9/30/2008
Test Engineer:	MENGISTU MEKURIA
Configuration:	EUT ALONE
Mode:	TX PCS CDMA MODE

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-amplifer 1-26GHz: T144 Miteq 3008A0(
Pre-amplifer 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
LOW CH. (1851.25 MHz)										
3.703	57.1	H	-41.7	5.9	9.7	7.5	-38.0	-13.0	-25.0	
5.554	43.2	H	-49.1	7.4	11.0	8.9	-45.5	-13.0	-32.5	
3.703	59.8	V	-39.1	5.9	9.7	7.5	-35.4	-13.0	-22.4	
5.554	43.8	V	-49.6	7.4	11.0	8.9	-46.0	-13.0	-33.0	
MID CH. (1880.00 MHz)										
3.760	50.7	H	-47.9	6.0	9.7	7.5	-44.2	-13.0	-31.2	
5.640	43.3	H	-49.2	7.4	11.2	9.0	-45.5	-13.0	-32.5	
3.760	51.7	V	-46.9	6.0	9.7	7.5	-43.2	-13.0	-30.2	
5.640	43.5	V	-50.0	7.4	11.2	9.0	-46.2	-13.0	-33.2	
HI CH. (1908.75 MHz)										
3.818	48.9	H	-49.4	6.0	9.7	7.6	-45.7	-13.0	-32.7	
5.726	44.0	H	-48.6	7.5	11.3	9.2	-44.8	-13.0	-31.8	
3.818	51.5	V	-47.0	6.0	9.7	7.6	-43.3	-13.0	-30.3	
5.726	44.4	V	-49.2	7.5	11.3	9.2	-45.4	-13.0	-32.4	

Rev. 4.12.7

AWS Spurious & Harmonic (EIRP)

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

Company:	KYOCERA WIRELESS
Project #:	08U12964
Date:	9/30/2008
Test Engineer:	MENGISTU MEKURIA
Configuration:	EUT ALONE
Mode:	TX AWS CDMA MODE

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-amplifer 1-26GHz: T144 Miteq 3008A0(
Pre-amplifer 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
LOW CH. (1711.25 MHz)										
3.422	51.1	H	-48.8	5.7	9.5	7.4	-45.0	-13.0	-32.0	
5.133	43.6	H	-49.8	7.2	11.0	8.9	-46.0	-13.0	-33.0	
3.422	52.6	V	-47.4	5.7	9.5	7.4	-43.6	-13.0	-30.6	
5.133	44.0	V	-50.4	7.2	11.0	8.9	-46.5	-13.0	-33.5	
MID CH. (1732.5 MHz)										
3.465	49.8	H	-49.9	5.7	9.5	7.4	-46.1	-13.0	-33.1	
5.198	43.1	H	-50.0	7.2	11.0	8.9	-46.2	-13.0	-33.2	
3.465	50.8	V	-49.1	5.7	9.5	7.4	-45.3	-13.0	-32.3	
5.198	43.8	V	-50.3	7.2	11.0	8.9	-46.5	-13.0	-33.5	
HI CH. (1753.75 MHz)										
3.508	50.1	H	-49.5	5.8	9.6	7.4	-45.7	-13.0	-32.7	
5.261	43.6	H	-49.4	7.3	11.0	8.8	-45.6	-13.0	-32.6	
3.508	52.1	V	-47.6	5.8	9.6	7.4	-43.8	-13.0	-30.8	
5.261	42.9	V	-51.1	7.3	11.0	8.8	-47.3	-13.0	-34.3	

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