



RADIATED SPURIOUS EMISSIONS PORTIONS OF

FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E

CERTIFICATION TEST REPORT
FOR

DUAL-BAND 1xRTT CDMA PHONE WITH BLUETOOTH AND WIFI

FCC MODEL NUMBER: SCP- 8600

FCC ID: V65SCP-8600

REPORT NUMBER: 10U13193-1

ISSUE DATE: MAY 10, 2010

Prepared for

KYOCERA COMMUNICATIONS, INC
10300 CAMPUS POINT DRIVE
SAN DIEGO, CA 92121, U.S.A.

Prepared by

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NVLAP[®]

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Revision History

Rev.	Issue Date	Revisions	Revised By
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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: DUAL-BAND 1xRTT CDMA PHONE WITH BLUETOOTH AND WIFI

MODEL: SCP-8600

SERIAL NUMBER: A0000012FEED44

DATE TESTED: MAY 04 and 05, 2010

APPLICABLE STANDARDS		TEST RESULTS
STANDARD		
FCC PART 22H AND 24E		PASS (Radiated Portion)

Compliance Certification Services, Inc. (CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. 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 MANAGER
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-603-C, FCC CFR 47 Part 2, FCC CFR 47 Part 22, and FCC CFR Part 24.

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. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) +
Cable Loss (dB) – Preamp Gain (dB)

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 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 Dual-band CDMA Phone with Bluetooth and WiFi feature that manufactured by KYOCERA Communications, Inc.

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	29.2	831.8
Mid CH - 836.52		27.8	602.6
High CH - 848.31		26.5	446.7

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1851.25	CDMA2000	26.6	457.1
Mid CH - 1880.00		26.1	407.4
High CH - 1908.75		25.4	346.7

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 AC/DC adapter and Headset. After the investigations, the worst-position was turned out to be a Z-position without AC/DC adapter for Cell band and an X-position without AC/DC for PCS bands.

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) > 2
> Network ID (NID) > 65535

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

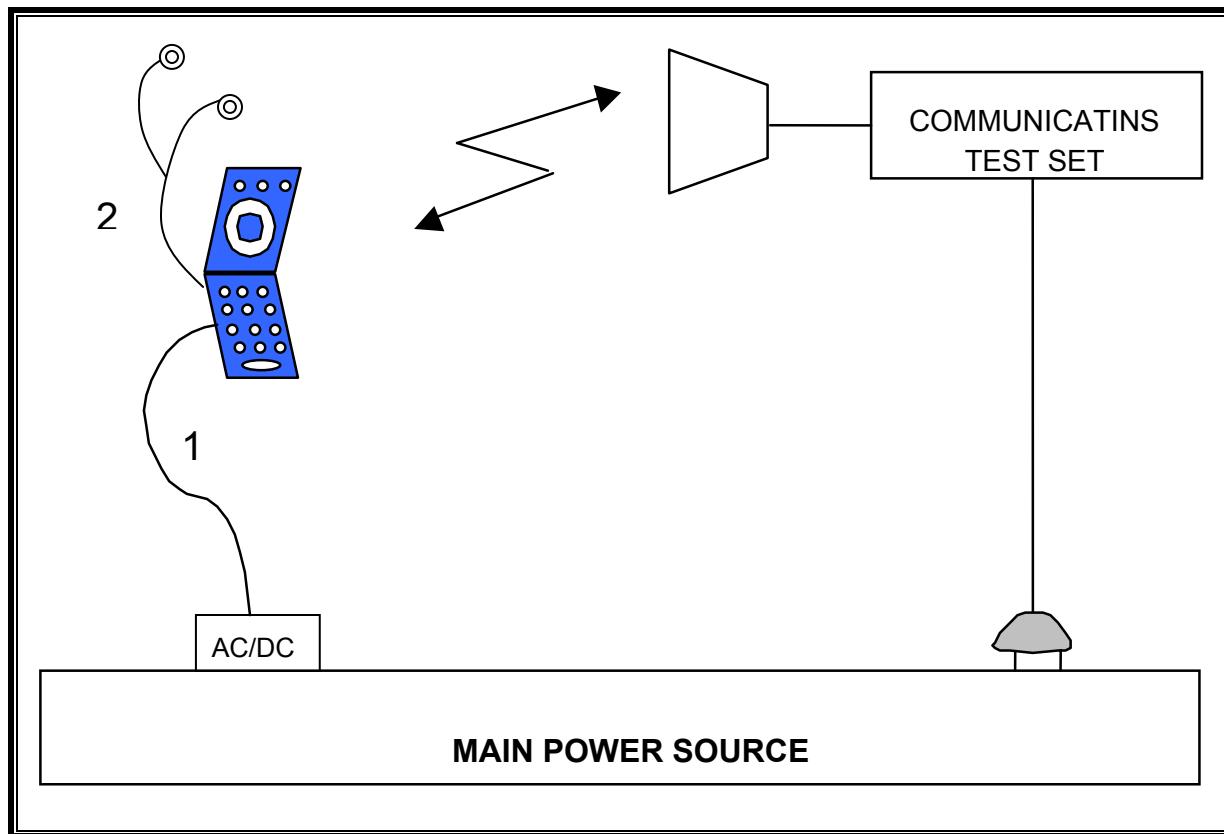
PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Sanyo	SCP-24ADT	0810B	N/A
Headset	N/A	N/A	N/A	N/A

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	1.0 m	N/A
2	Audio	1	Mini-Jack	Un-Shielded	1.0 m	Volume Control on the Wire

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	08/04/10
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/14/10
Antenna, Horn, 18 GHz	ETS	3117	C01022	07/29/10
Antenna, Horn, 18 GHz	EMCO	3115	C00945	07/29/10
Dipole	Speag	D900V2	NA	11/16/11
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	02/16/11
Communication Test Set	R & S	CMU 200	C01131	02/27/11
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	08/24/10

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) & RSS133 § 6.4 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.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17.

RESULTS

CELL OUTPUT POWER (ERP)

High Frequency Substitution Measurement Compliance Certification Services Chamber A														
Company:	KYOCERA WIRELESS													
Project #:	10U13193													
Date:	5/5/2010													
Test Engineer:	MENGISTU MEKURIA													
Configuration:	STAND-ALONE EUT													
Mode:	TX, CDMA CELL BAND													
Test Equipment:														
Receiving: Sunol T122, and 3m Chamber N-type Cable (Setup this one for testing EUT)														
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.														
f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes							
824.70	-5.6	V	34.8	29.2	38.5	-9.3								
824.70	-18.1	H	30.5	12.5	38.5	-26.0								
836.52	-5.3	V	33.1	27.8	38.5	-10.6								
836.52	-18.2	H	31.2	13.0	38.5	-25.5								
848.31	-5.6	V	32.1	26.5	38.5	-11.9								
848.31	-18.6	H	31.2	12.6	38.5	-25.9								

Rev. 1.24.7

PCS OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services Chamber A														
Company:	KYOCERA WIRELESS													
Project #:	10U13193													
Date:	5/4/2010													
Test Engineer:	MENGISTU MEKURIA													
Configuration:	STAND-ALONE EUT													
Mode:	TX, CDMA PCS BAND													
Test Equipment:														
Receiving: Horn T73, and Chamber A SMA Cables														
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse														
f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes							
1.851	-20.1	V	40.4	20.3	33.0	-12.7								
1.851	-13.1	H	39.7	26.6	33.0	-6.4								
1.880	-23.4	V	39.9	16.5	33.0	-16.5								
1.880	-14.0	H	40.1	26.1	33.0	-6.9								
1.909	-23.1	V	39.8	16.8	33.0	-16.2								
1.909	-14.8	H	40.2	25.4	33.0	-7.6								

Rev. 1.24.7

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (e) and §24.238 (a), RSS-132 § 4.5.1, & RSS-133 § 6.5.1 (a) (i) & (b): 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.

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)

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement										
Company:	KYOCERA WIRELESS									
Project #:	10U13193									
Date:	5/4/2010									
Test Engineer:	MENGISTU MEKURIA									
Configuration:	STAND-ALONE EUT									
Mode:	TX, CDMA CELL BAND									
Chamber	Pre-amplifier	Filter	Limit							
5m Chamber A	T144 8449B	Filter 1	FCC PART 22							
f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Channel (824.7 MHz)										
1.649	-22.4	H	3.0	36.6	38.2	1.0	-23.0	-13.0	-10.0	
2.474	-46.3	H	3.0	40.0	37.5	1.0	-42.8	-13.0	-29.8	
3.299	-45.0	H	3.0	43.9	37.1	1.0	-37.2	-13.0	-24.2	
4.124	-51.6	H	3.0	46.2	36.5	1.0	-40.9	-13.0	-27.9	
4.948	-65.0	H	3.0	48.6	36.3	1.0	-51.7	-13.0	-38.7	
1.649	-27.4	V	3.0	36.8	38.2	1.0	-27.7	-13.0	-14.7	
2.474	-50.3	V	3.0	41.7	37.5	1.0	-45.0	-13.0	-32.0	
3.299	-41.3	V	3.0	44.0	37.1	1.0	-33.5	-13.0	-20.5	
4.124	-48.8	V	3.0	45.9	36.5	1.0	-38.4	-13.0	-25.4	
4.948	-62.9	V	3.0	48.1	36.3	1.0	-50.1	-13.0	-37.1	
Mid Channel (836.52 MHz)										
1.673	-21.1	H	3.0	36.8	38.1	1.0	-21.4	-13.0	-8.4	
2.510	-40.8	H	3.0	40.1	37.5	1.0	-37.1	-13.0	-24.1	
3.346	-41.7	H	3.0	44.0	37.1	1.0	-33.8	-13.0	-20.8	
4.183	-44.9	H	3.0	46.4	36.5	1.0	-34.1	-13.0	-21.1	
5.019	-53.2	H	3.0	48.8	36.3	1.0	-39.6	-13.0	-26.6	
5.856	-58.0	H	3.0	50.5	36.3	1.0	-42.9	-13.0	-29.9	
6.692	-65.0	H	3.0	51.9	36.4	1.0	-48.6	-13.0	-35.6	
7.529	-65.6	H	3.0	53.1	36.6	1.0	-48.1	-13.0	-35.1	
8.365	-62.9	H	3.0	54.1	36.8	1.0	-44.5	-13.0	-31.5	
9.202	-58.5	H	3.0	55.2	37.0	1.0	-39.3	-13.0	-26.3	
1.673	-24.3	V	3.0	37.1	38.1	1.0	-24.3	-13.0	-11.3	
2.510	-45.0	V	3.0	41.8	37.5	1.0	-39.6	-13.0	-26.6	
3.346	-38.2	V	3.0	44.1	37.1	1.0	-30.2	-13.0	-17.2	
4.183	-43.1	V	3.0	46.1	36.5	1.0	-32.6	-13.0	-19.6	
5.019	-48.5	V	3.0	48.3	36.3	1.0	-35.5	-13.0	-22.5	
5.856	-54.9	V	3.0	49.7	36.3	1.0	-40.5	-13.0	-27.5	
6.692	-64.7	V	3.0	50.9	36.4	1.0	-49.2	-13.0	-36.2	
7.529	-62.1	V	3.0	52.0	36.6	1.0	-45.7	-13.0	-32.7	
8.365	-60.3	V	3.0	53.1	36.8	1.0	-43.0	-13.0	-30.0	
9.202	-57.6	V	3.0	54.2	37.0	1.0	-39.4	-13.0	-26.4	
Hi Channel (848.3 MHz)										
1.697	-28.3	H	3.0	37.0	38.1	1.0	-28.4	-13.0	-15.4	
2.545	-48.6	H	3.0	40.3	37.5	1.0	-44.7	-13.0	-31.7	
3.393	-48.7	H	3.0	44.1	37.1	1.0	-40.6	-13.0	-27.6	
4.242	-56.1	H	3.0	46.5	36.5	1.0	-45.0	-13.0	-32.0	
5.090	-63.2	H	3.0	49.0	36.3	1.0	-49.5	-13.0	-36.5	
1.697	-31.0	V	3.0	37.4	38.1	1.0	-30.8	-13.0	-17.8	
2.545	-48.4	V	3.0	42.0	37.5	1.0	-42.9	-13.0	-29.9	
3.393	-45.1	V	3.0	44.2	37.1	1.0	-36.9	-13.0	-23.9	
4.242	-51.8	V	3.0	46.2	36.5	1.0	-41.0	-13.0	-28.0	
5.090	-59.8	V	3.0	48.5	36.3	1.0	-46.6	-13.0	-33.6	
5.938	-63.0	V	3.0	49.8	36.3	1.0	-48.5	-13.0	-35.5	
Note: No other emissions were detected greater than -40 dBm to the limit										
Rev. 03.03.09										

PCS Spurious & Harmonic (EIRP)

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement										
Company:	KYOCERA WIRELESS									
Project #:	10U13193									
Date:	5/4/2010									
Test Engineer:	MENGISTU MEKURIA									
Configuration:	STAND-ALONE EUT									
Mode:	TX, CDMA PCS BAND									
Chamber	Pre-amplifier	Filter	Limit							
5m Chamber A	T144 8449B	Filter 1	FCC PART 24							
f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Channel (1851.25 MHz)										
3.703	-47.1	V	3.0	44.9	36.8	1.0	-38.0	-13.0	-25.0	
5.554	-41.2	V	3.0	49.3	36.3	1.0	-27.2	-13.0	-14.2	
7.405	-59.8	V	3.0	51.8	36.6	1.0	-43.6	-13.0	-30.6	
9.256	-50.0	V	3.0	54.2	37.0	1.0	-31.8	-13.0	-18.8	
11.108	-62.5	V	3.0	56.3	36.9	1.0	-42.0	-13.0	-29.0	
12.959	-53.2	V	3.0	58.2	36.0	1.0	-30.1	-13.0	-17.1	
14.810	-52.1	V	3.0	60.1	34.8	1.0	-25.9	-13.0	-12.9	
3.703	-48.9	H	3.0	45.0	36.8	1.0	-39.7	-13.0	-26.7	
5.554	-42.9	H	3.0	49.9	36.3	1.0	-28.3	-13.0	-15.3	
7.405	-64.6	H	3.0	52.9	36.6	1.0	-47.2	-13.0	-34.2	
9.256	-55.7	H	3.0	55.3	37.0	1.0	-36.5	-13.0	-23.5	
11.108	-67.8	H	3.0	55.9	36.9	1.0	-47.9	-13.0	-34.9	
12.959	-59.6	H	3.0	57.2	36.0	1.0	-37.4	-13.0	-24.4	
14.810	-60.4	H	3.0	60.4	34.8	1.0	-33.8	-13.0	-20.8	
Mid Channel (1880.00 MHz)										
3.760	-47.6	V	3.0	45.1	36.8	1.0	-38.3	-13.0	-25.3	
5.640	-41.0	V	3.0	49.4	36.3	1.0	-26.9	-13.0	-13.9	
7.520	-59.1	V	3.0	52.0	36.6	1.0	-42.7	-13.0	-29.7	
9.400	-51.2	V	3.0	54.4	37.0	1.0	-32.9	-13.0	-19.9	
11.280	-64.2	V	3.0	56.5	36.8	1.0	-43.6	-13.0	-30.6	
13.160	-53.4	V	3.0	58.4	35.9	1.0	-29.9	-13.0	-16.9	
15.040	-54.3	V	3.0	60.1	34.7	1.0	-27.8	-13.0	-14.8	
3.760	-49.5	H	3.0	45.2	36.8	1.0	-40.1	-13.0	-27.1	
5.640	-41.5	H	3.0	50.1	36.3	1.0	-26.7	-13.0	-13.7	
7.520	-65.9	H	3.0	53.1	36.6	1.0	-48.4	-13.0	-35.4	
9.400	-58.4	H	3.0	55.4	37.0	1.0	-39.0	-13.0	-26.0	
11.280	-65.8	H	3.0	55.8	36.8	1.0	-45.8	-13.0	-32.8	
13.160	-61.9	H	3.0	57.6	35.9	1.0	-39.3	-13.0	-26.3	
15.040	-63.2	H	3.0	60.7	34.7	1.0	-36.3	-13.0	-23.3	
Hi Channel (1908.75 MHz)										
3.818	-43.6	V	3.0	45.2	36.7	1.0	-34.1	-13.0	-21.1	
5.726	-40.6	V	3.0	49.5	36.3	1.0	-26.4	-13.0	-13.4	
7.635	-60.7	V	3.0	52.1	36.6	1.0	-44.2	-13.0	-31.2	
9.544	-51.3	V	3.0	54.6	37.1	1.0	-32.8	-13.0	-19.8	
11.453	-63.5	V	3.0	56.7	36.8	1.0	-42.7	-13.0	-29.7	
13.361	-55.8	V	3.0	58.6	35.8	1.0	-32.0	-13.0	-19.0	
15.270	-59.4	V	3.0	59.5	34.8	1.0	-33.7	-13.0	-20.7	
3.818	-45.6	H	3.0	45.3	36.7	1.0	-36.0	-13.0	-23.0	
5.726	-46.7	H	3.0	50.2	36.3	1.0	-31.8	-13.0	-18.8	
7.635	-65.0	H	3.0	53.2	36.6	1.0	-47.4	-13.0	-34.4	
9.544	-57.4	H	3.0	55.6	37.1	1.0	-37.9	-13.0	-24.9	
11.453	-66.5	H	3.0	55.7	36.8	1.0	-46.5	-13.0	-33.5	
13.361	-63.2	H	3.0	57.9	35.8	1.0	-40.1	-13.0	-27.1	
15.270	-65.8	H	3.0	60.1	34.8	1.0	-39.6	-13.0	-26.6	

Note: No other emissions were detected greater than -40 dBm to the limit

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