



**FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 7**

CERTIFICATION TEST REPORT

FOR

UMTS PHONE WITH 802.11B/G AND BLUETOOTH

MODEL NUMBER: P102UNA

**FCC ID: O8F-ROAU
IC: 3905A-ROAU**

REPORT NUMBER: 10U13380-1, Revision B

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Prepared for
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Revision History

Rev.	Issue Date	Revisions	Revised By
---	09/15/10	Initial Issue	T. Chan
A	10/05/10	Added Maximum Output Power Table	A. Zaffar
B	10/13/10	Added WiFi conducted portion	Tom Chen

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: PALM
950 MAUDE AVENUE
SUNNYVALE, CA 94085, U.S.A.

EUT DESCRIPTION: UMTS PHONE WITH 802.11B/G AND BLUETOOTH

MODEL: P102UNA

SERIAL NUMBER: RDV2N1234

DATE TESTED: SEPTEMBER 10-15, 2010

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 7 Annex 8	Pass
INDUSTRY CANADA RSS-GEN Issue 2	Pass

Compliance Certification Services (UL 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 UL 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 UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:



THU CHAN
ENGINEERING MANAGER
UL CCS

Tested By:



TOM CHEN
EMC ENGINEER
UL CCS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

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

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/Standards/scopes/2000650.htm>.

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:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

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 UMTS phone with 802.11bg and BT 2.1, EDR Phone.

GENERAL INFORMATION

Power Requirements	100-240 VAC / 50-60 Hz
List of frequencies generated or used by the EUT	1GHz

ACCESSORIES

The EUT was constructed and using the following accessories:

Accessories Description	Manufacture r/Trademark	Part Number
AC Power Adapter source #1 Input Rating: 100–240 Vac, 50/60Hz, 0.2A Output Rating: 5Vdc, 1000mA	Palm	157-10124-00
Inductive Charging Dock Input Rating: 5Vdc, 1000mA	Palm	157-10123-00
Battery source Type: Rechargeable Li-ion Polymer Rating: 3.7Vdc, 1150mAh (minimum)	Palm	157-10119-00
Wired Stereo Headset	Palm	180-10632-00
USB cable	Palm	180-10647-00
Inductive Back Cover (black color)	Palm	180-10704-00

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	b	14.54	28.44
2412 - 2462	g	17.50	56.23
2402 - 2480	GFSK	0.76	1.19
2402 - 2480	8PSK	0.28	1.07

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PCB integrated antenna, with a maximum gain of -0.5 dBi. 802.11bg and Bluetooth transmitters share a common antenna.

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was Build 10, HW Rev. dvt1, BT MAC: 00:1D:FE:66:6F:E3.; WiFi Mac: 00:1D:FE:C3:ED:7C

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power.

All final tests in the 802.11b Mode (Legacy) were made at 1 Mb/s.

All final tests in the 802.11g mode were made at 6 Mb/s.

All final tests in the GFSK mode were made at 1 Mb/s.

All final tests in the 8PSK mode were made at 3 Mb/s.

Co-located tests between WLAN and Bluetooth modes were running simultaneously at worst case.

For the fundamental investigation, since the EUT is a portable device that has three orientations; therefore X, Y and Z orientations have been investigated, also with AC/DC adapter, and inductive charging dock position, and the worst case was found to be at X orientation with AC/DC adapter.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adaptor	PALM	157-10124-00	N/A	DOC
Inductive Charger	PALM	157-10123-00	N/A	DOC
Earphone	PALM	180-10632-00	N/A	DOC

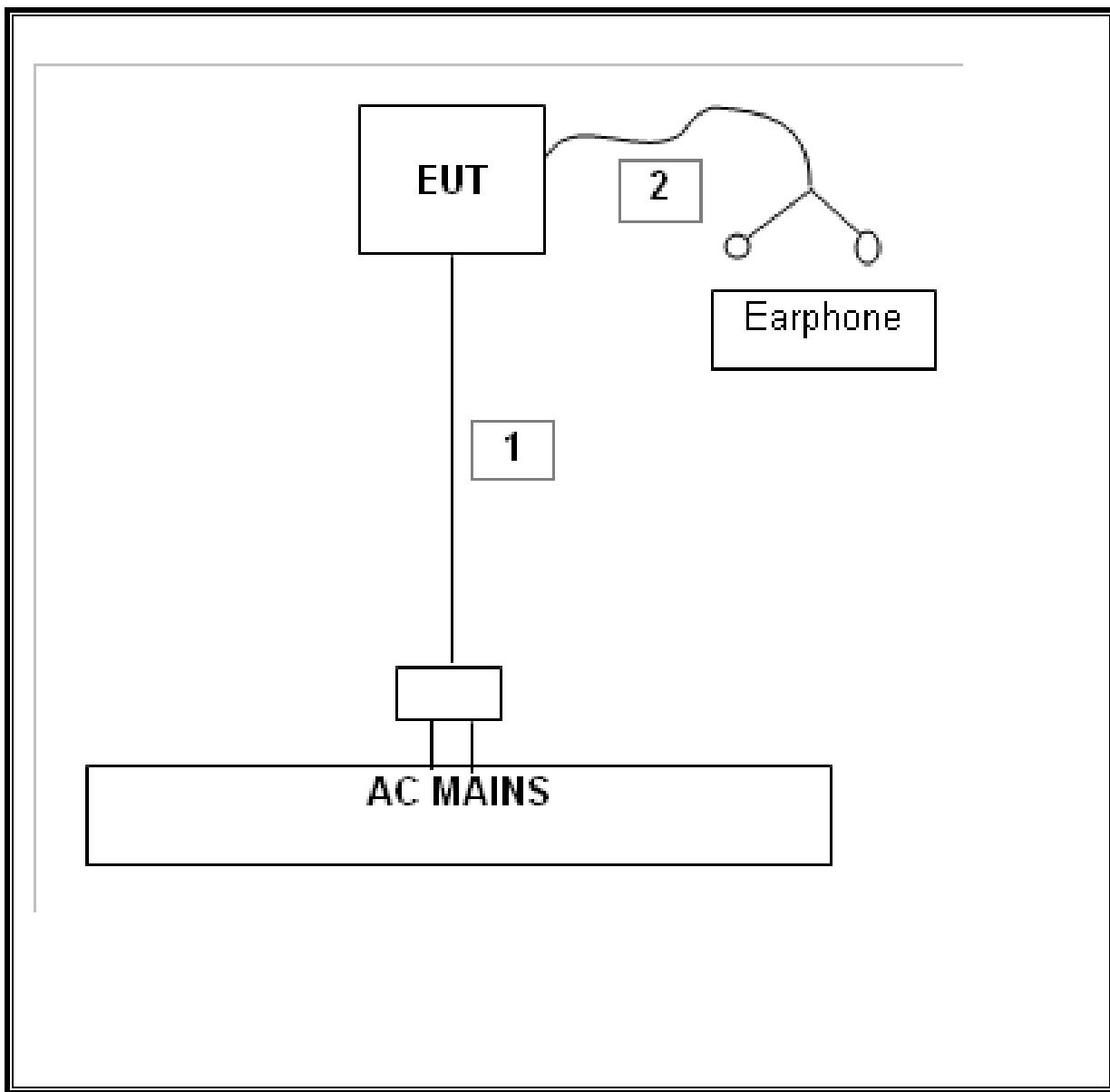
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	USB	Un-shielded	1.5m	N/A
2	Ear phone	1	jack	Un-shielded	1.2m	N/A

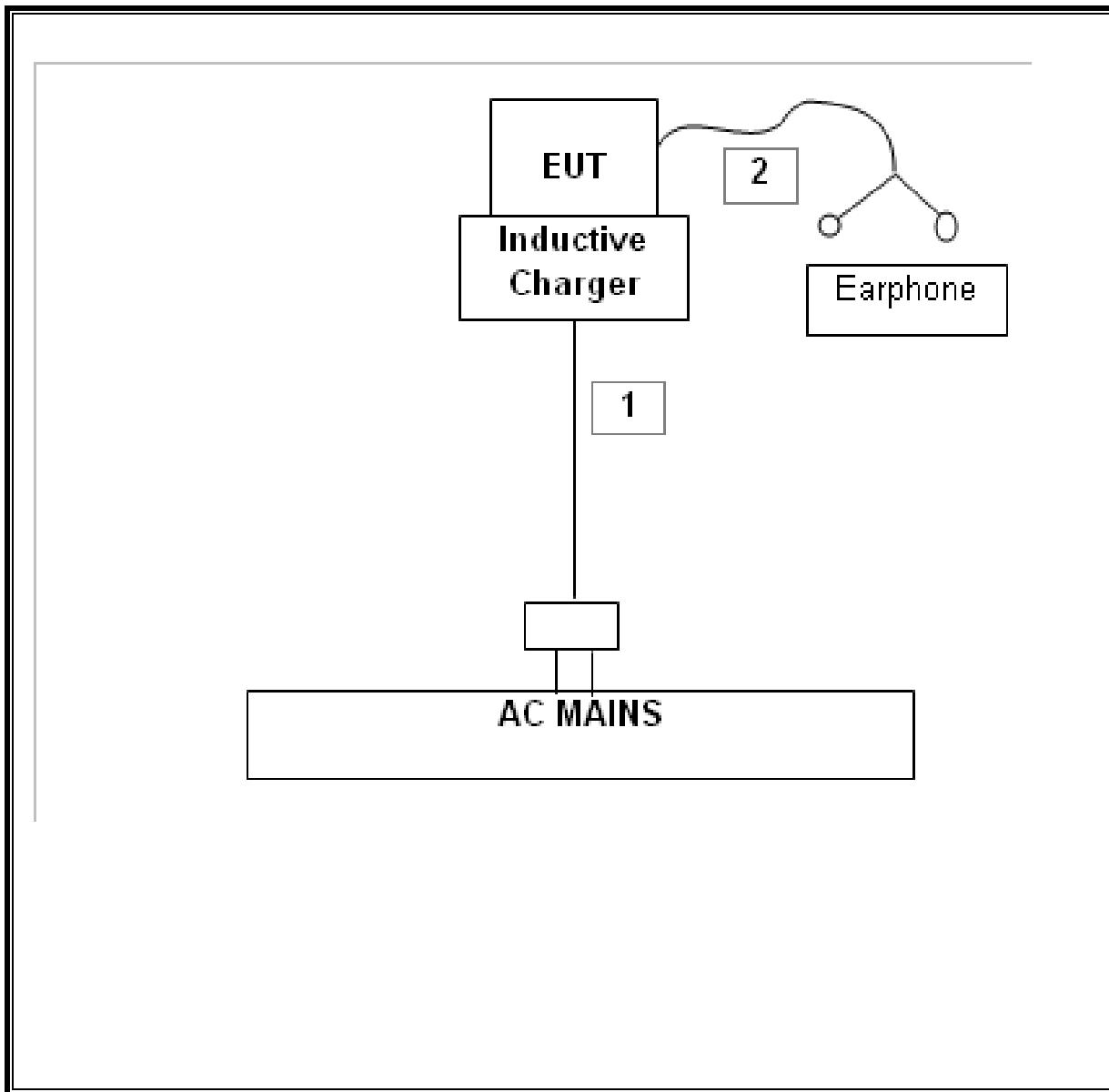
TEST SETUP

The EUT is installed in a host device during the tests. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



SETUP DIAGRAM FOR EUT WITH INDUCTIVE CHARGING DOCK



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
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	05/06/11
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	11/06/10
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	08/04/11
Antenna, Horn, 18 GHz	EMCO	3115	C00783	07/29/11
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	08/18/11
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00778	07/06/11
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/14/11
Reject Filter, 2.4-2.5 GHz	Micro-Tronics	BRM50702	N02685	CNR

7. ANTENNA PORT TEST RESULTS

7.1. 802.11b MODE IN THE 2.4 GHz BAND

7.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

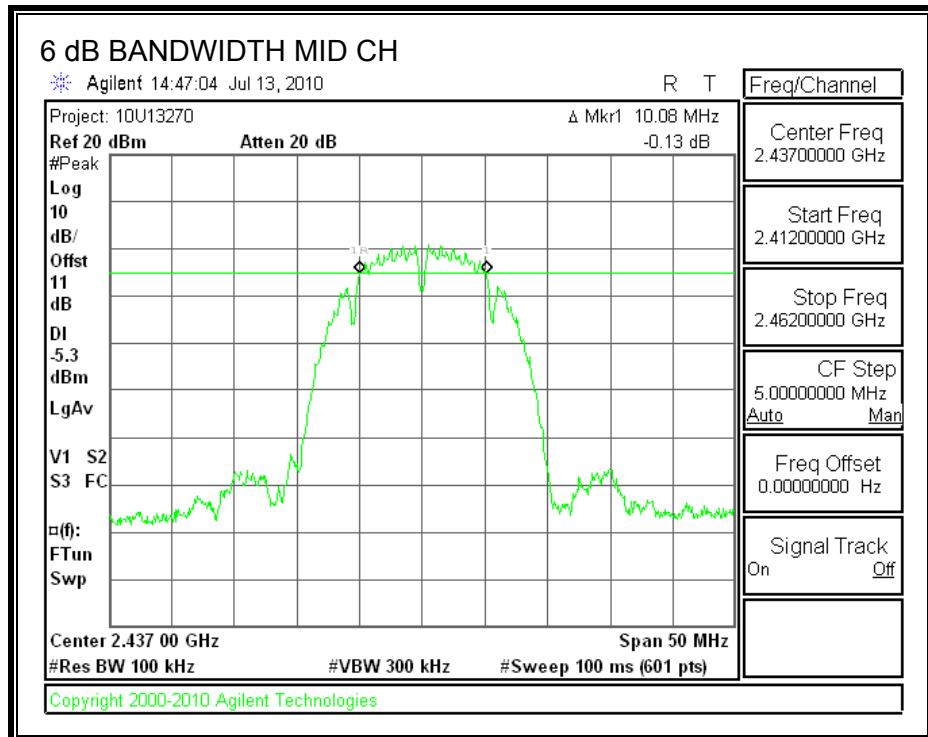
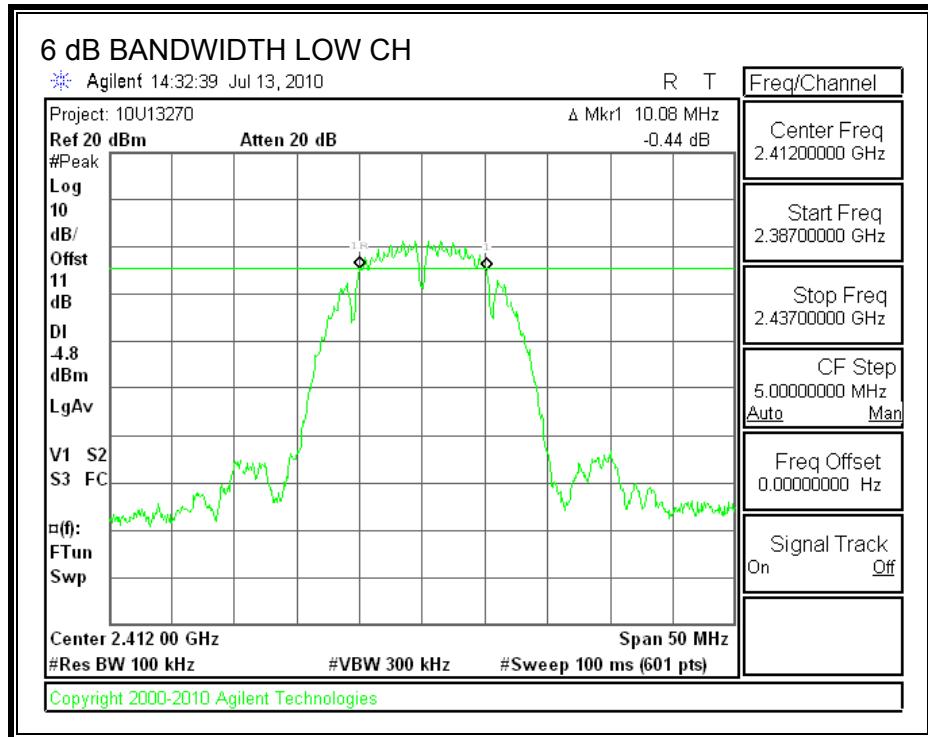
TEST PROCEDURE

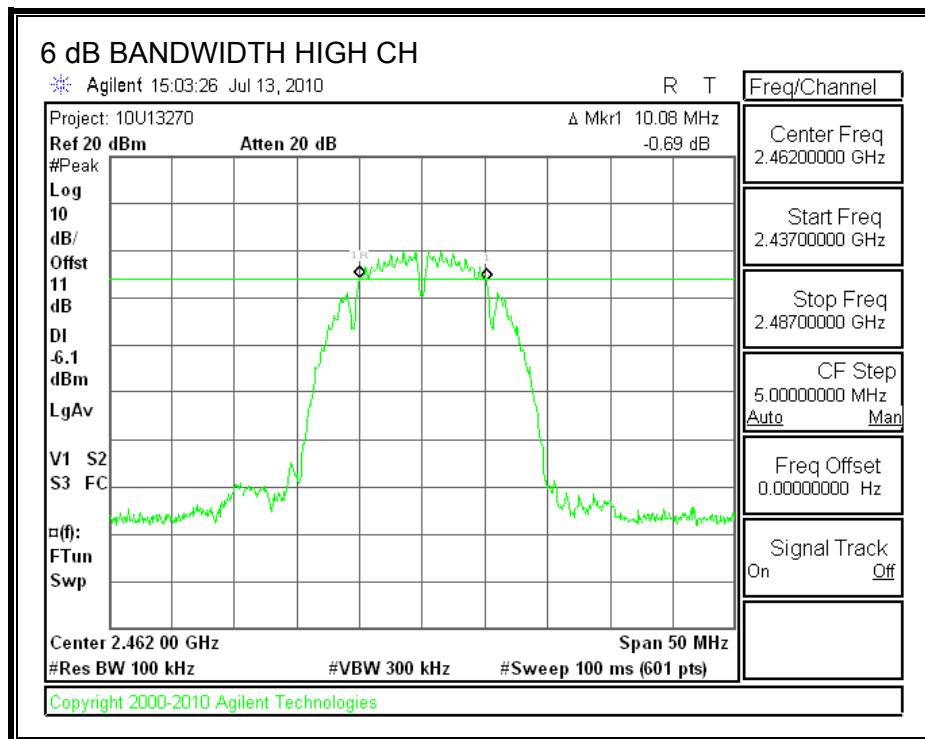
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	10.08	0.5
Middle	2437	10.08	0.5
High	2462	10.08	0.5

6 dB BANDWIDTH





7.1.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

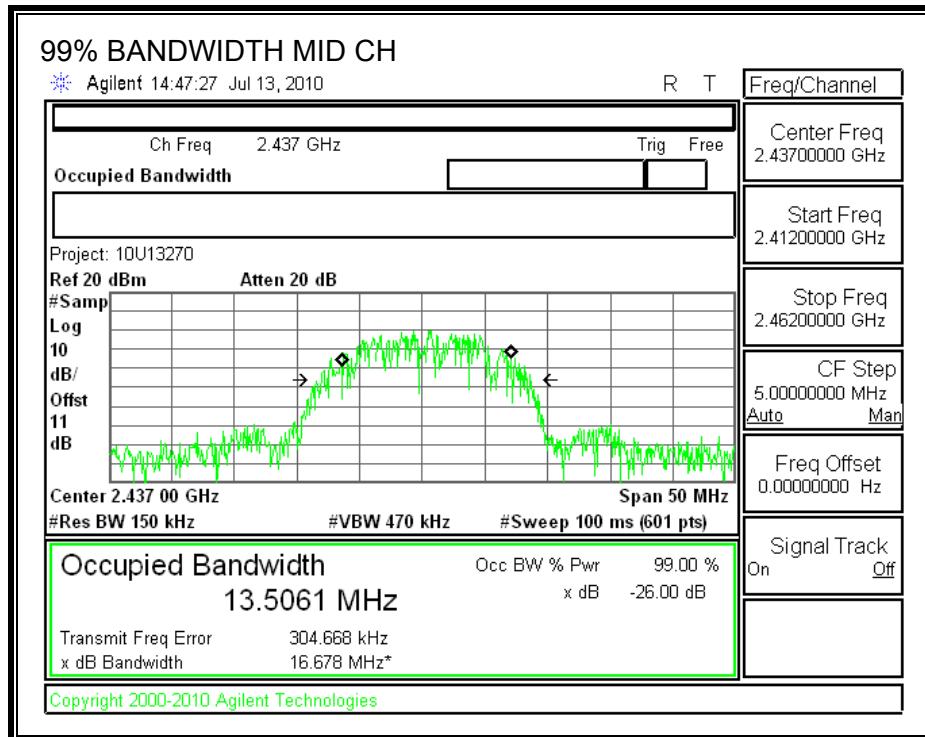
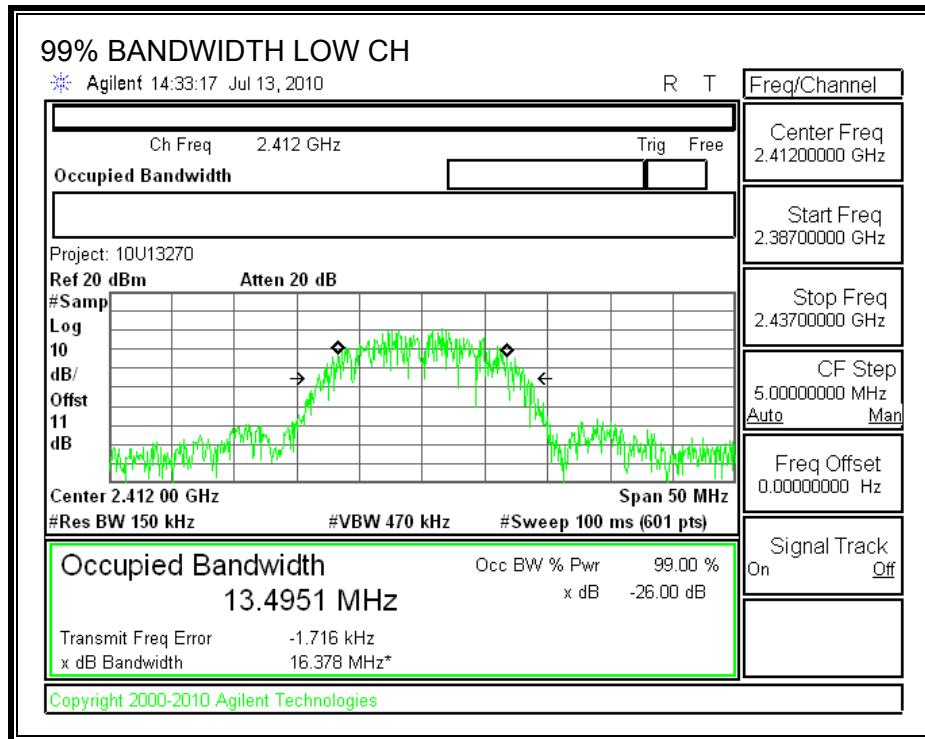
TEST PROCEDURE

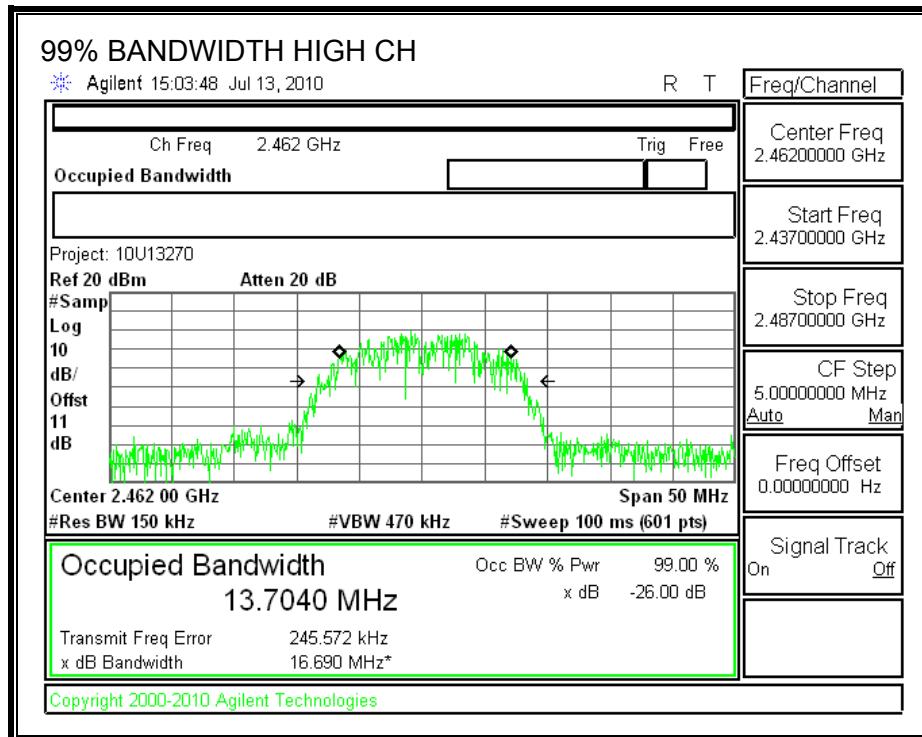
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	13.495
Middle	2437	13.506
High	2462	13.704

99% BANDWIDTH





7.1.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10.3dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	14.39
Middle	2437	14.54
High	2462	14.43

7.1.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10.3dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	11.80
Middle	2437	11.90
High	2462	11.80

7.1.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

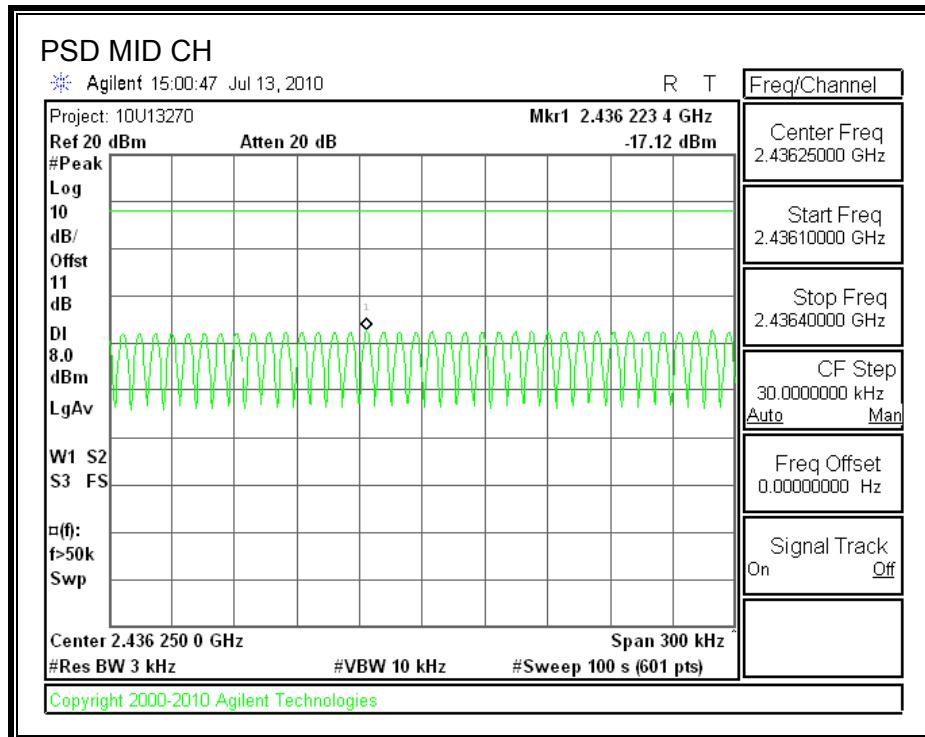
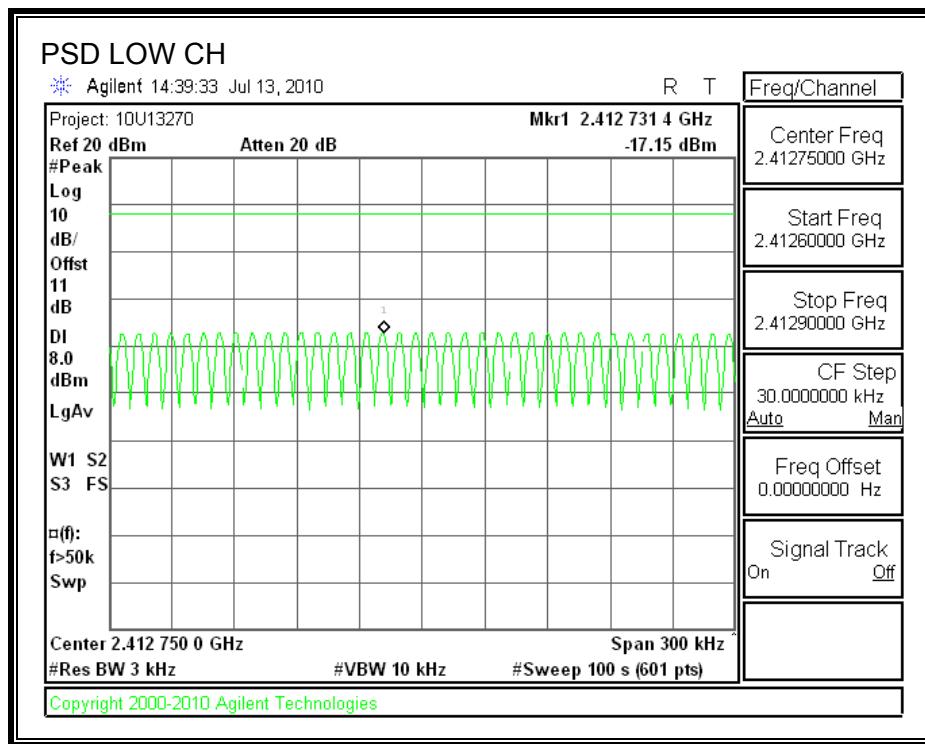
TEST PROCEDURE

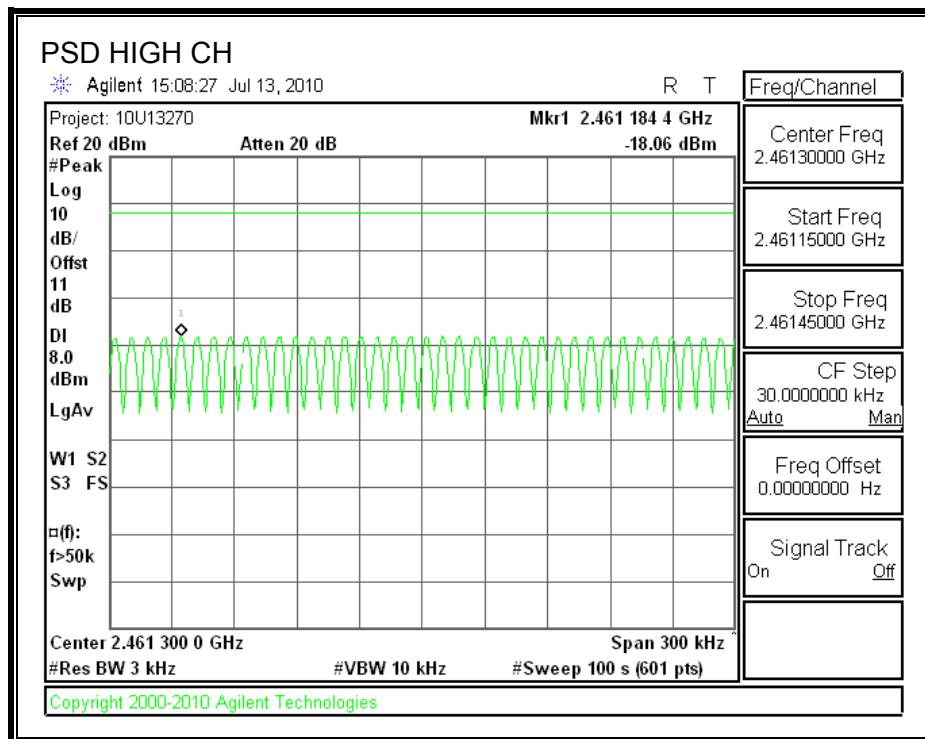
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-17.15	8	-25.15
Middle	2437	-17.12	8	-25.12
High	2462	-18.06	8	-26.06

POWER SPECTRAL DENSITY





7.1.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

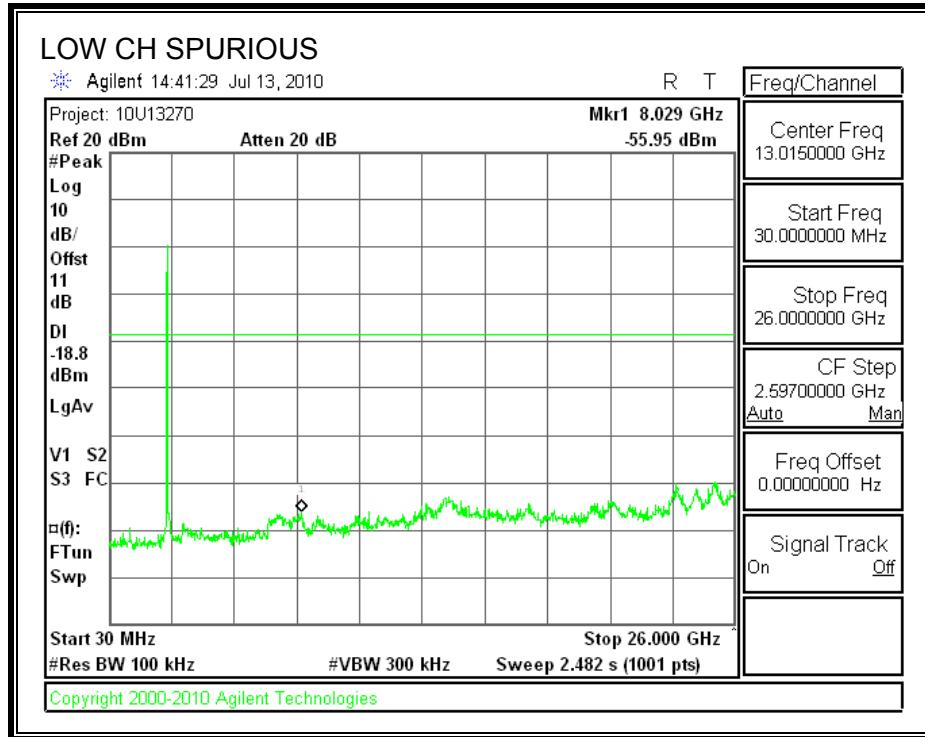
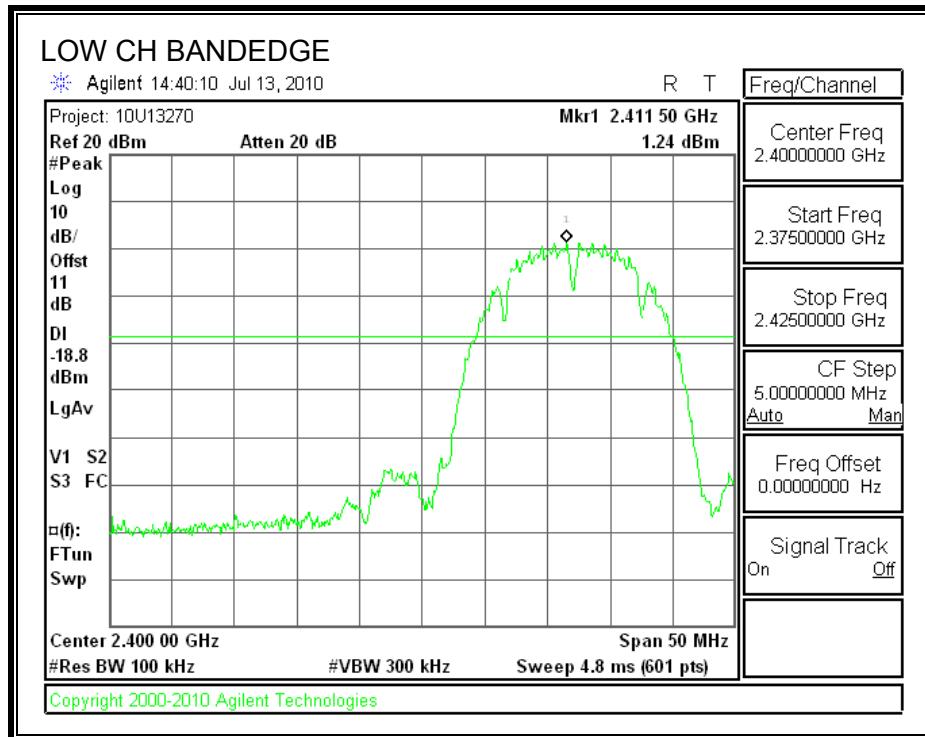
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

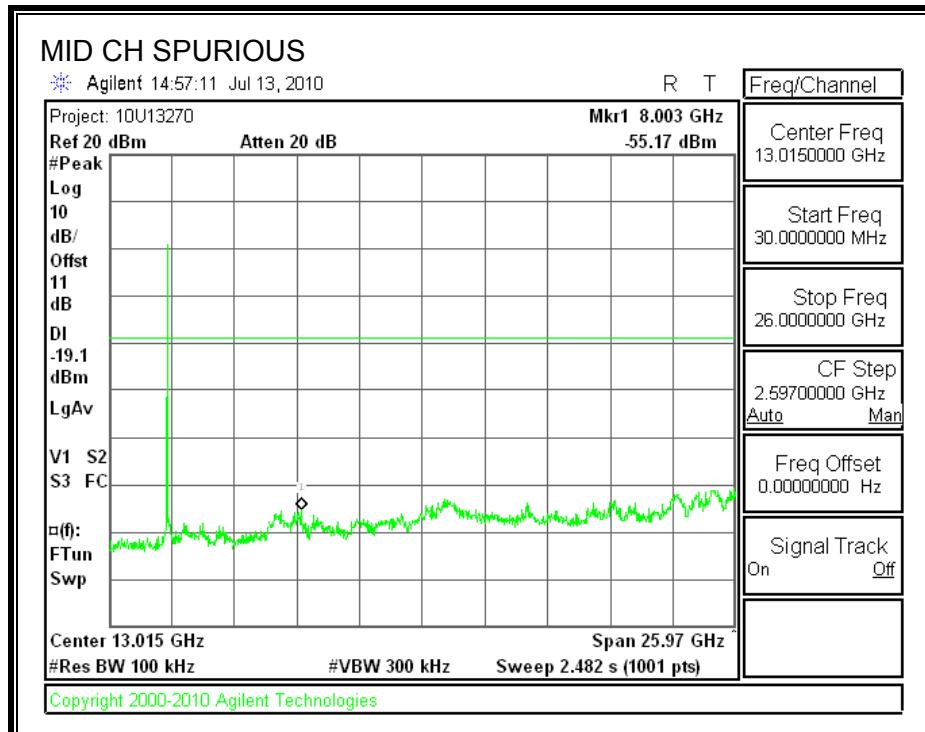
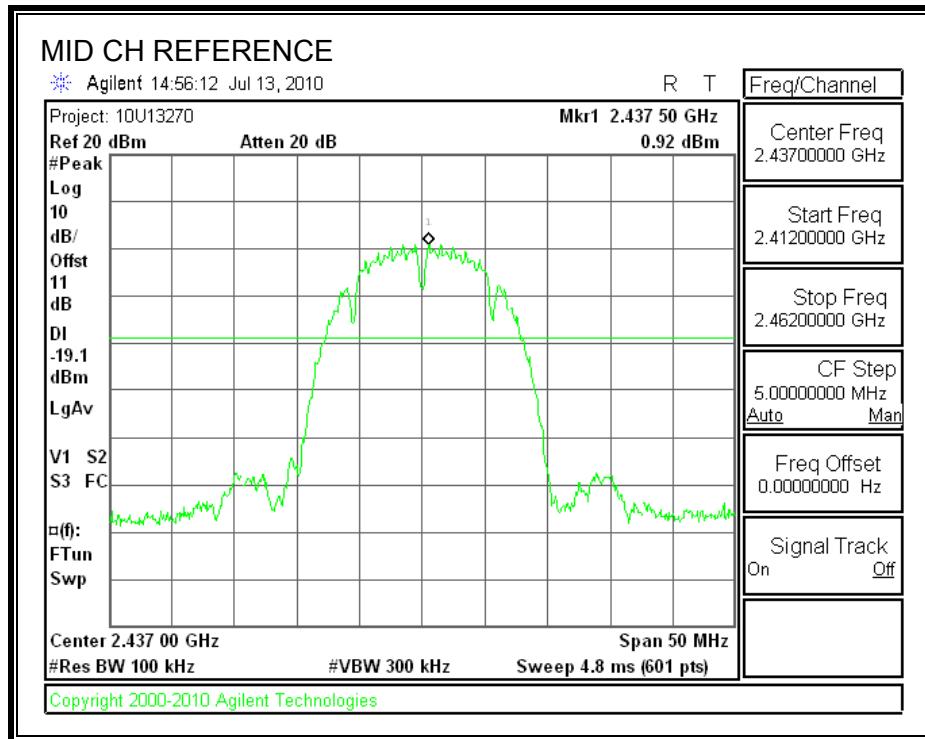
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

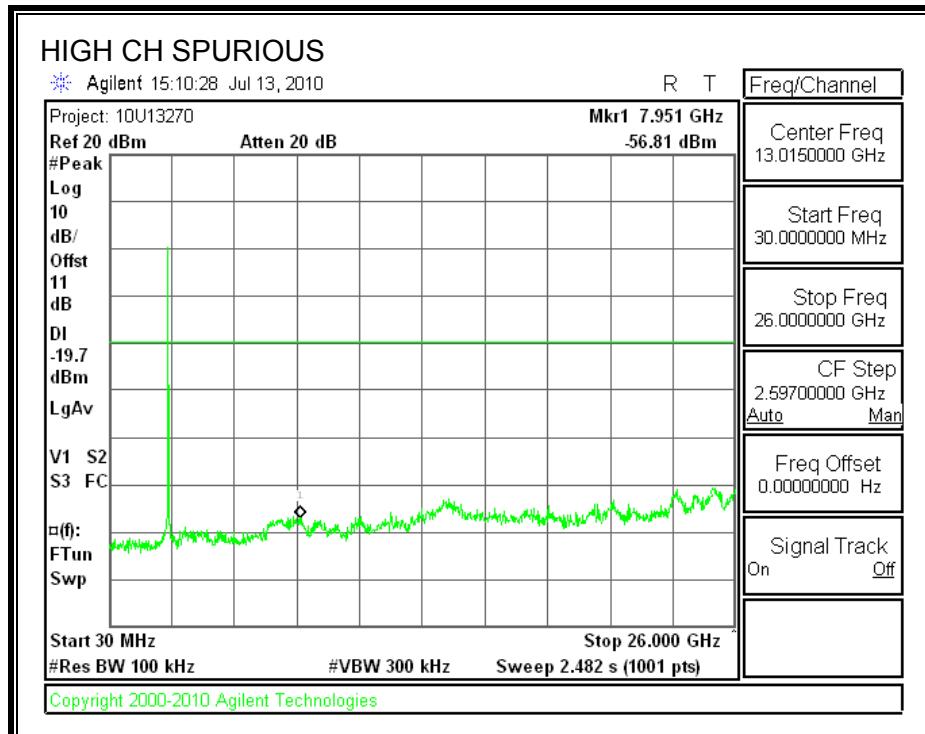
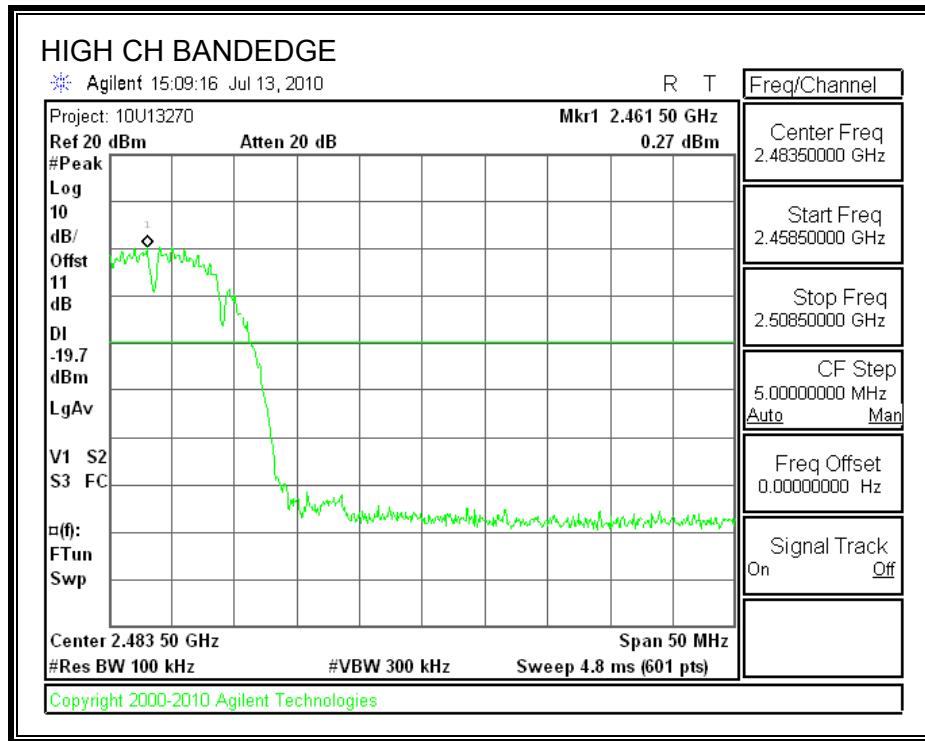
SPURIOUS EMISSIONS, LOW CHANNEL



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



7.2. 802.11g MODE IN THE 2.4 GHz BAND

7.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

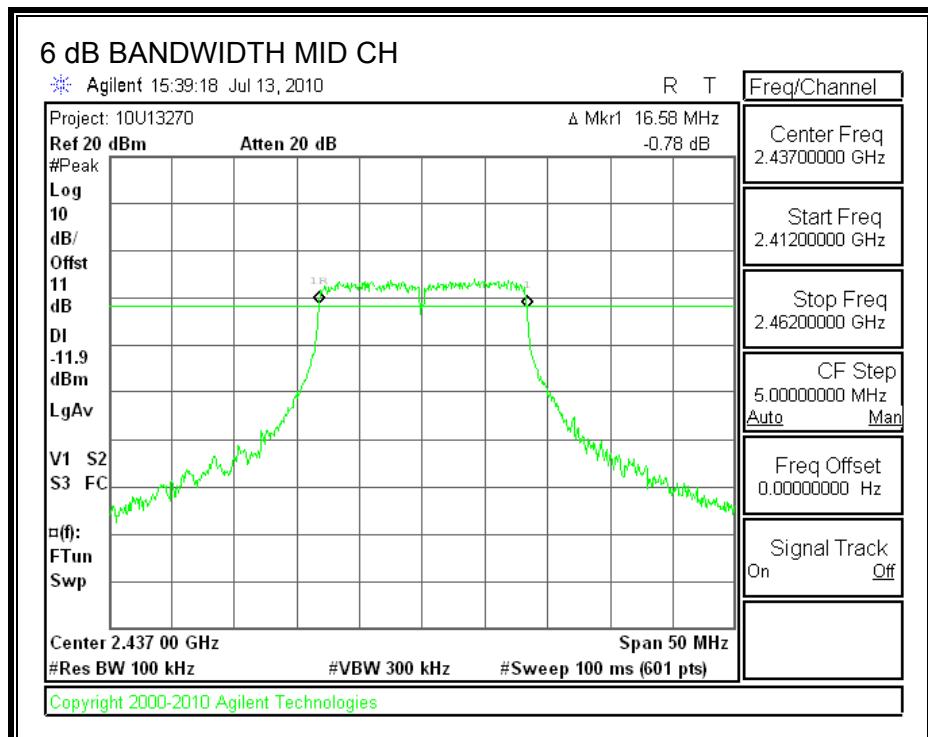
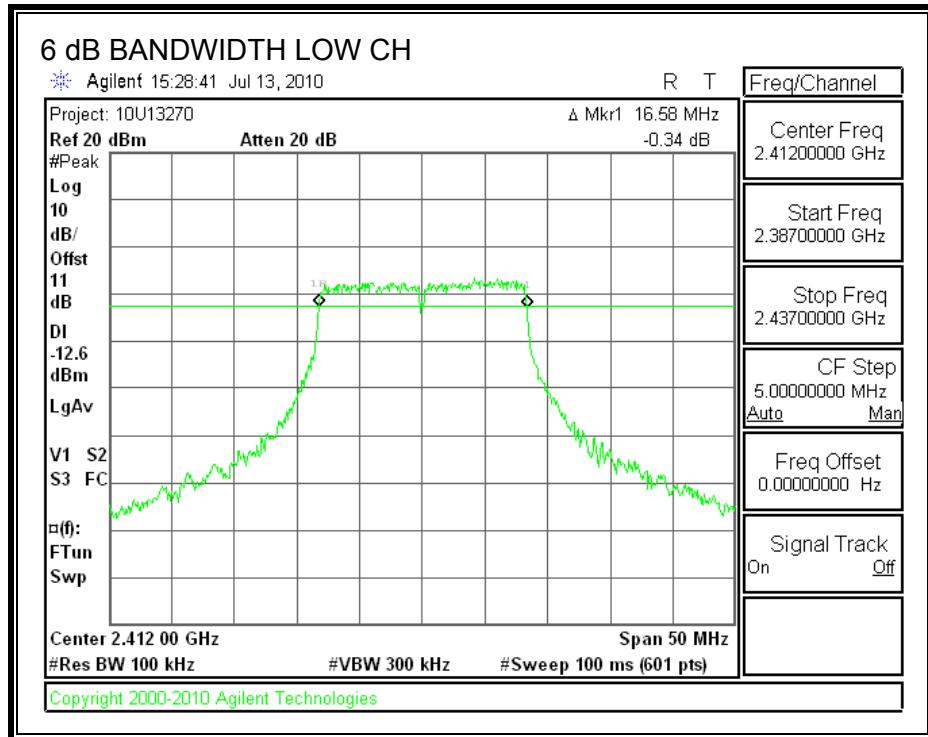
TEST PROCEDURE

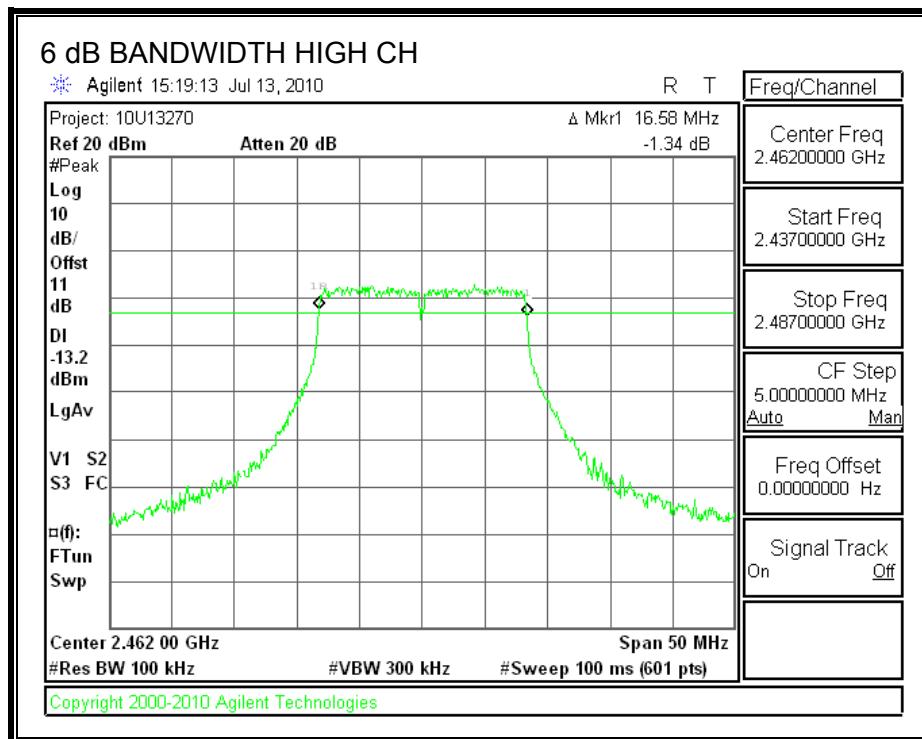
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.58	0.5
Middle	2437	16.58	0.5
High	2462	16.58	0.5

6 dB BANDWIDTH





7.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

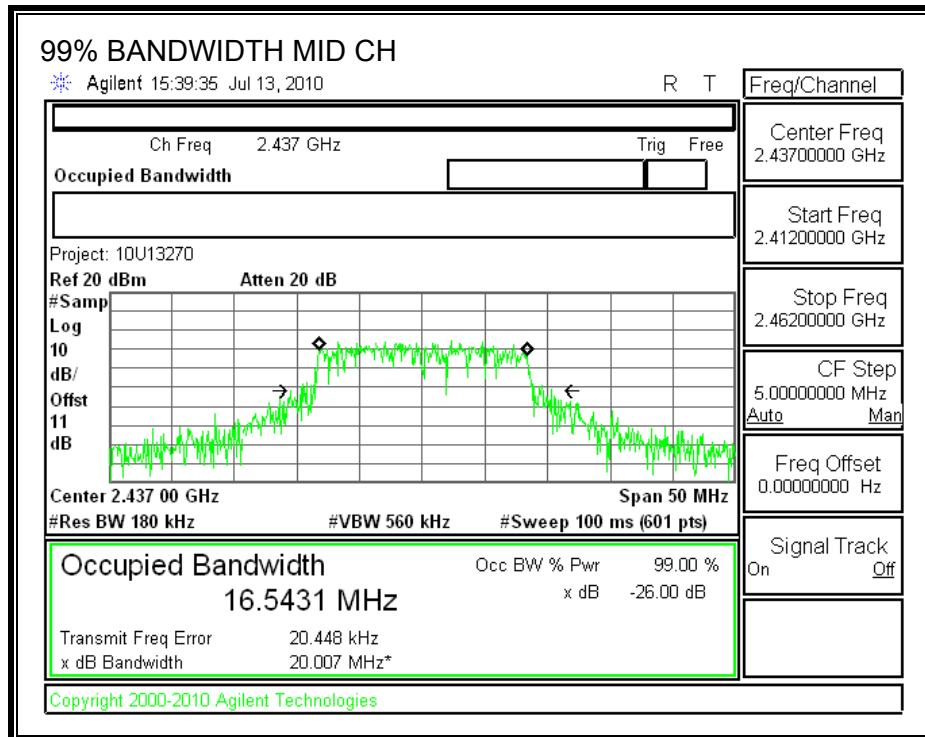
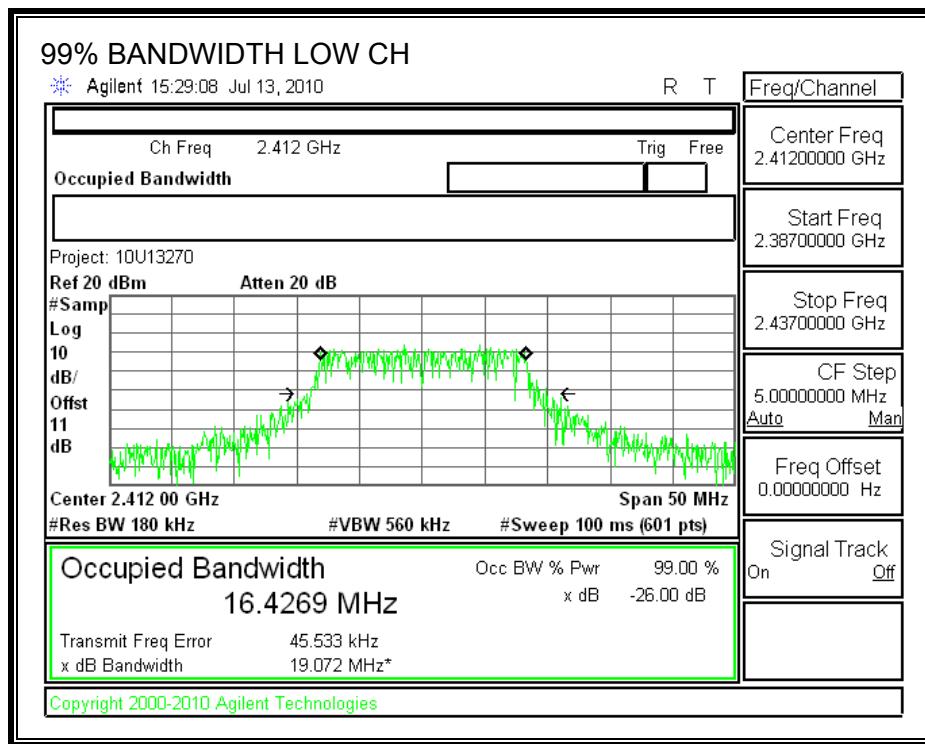
TEST PROCEDURE

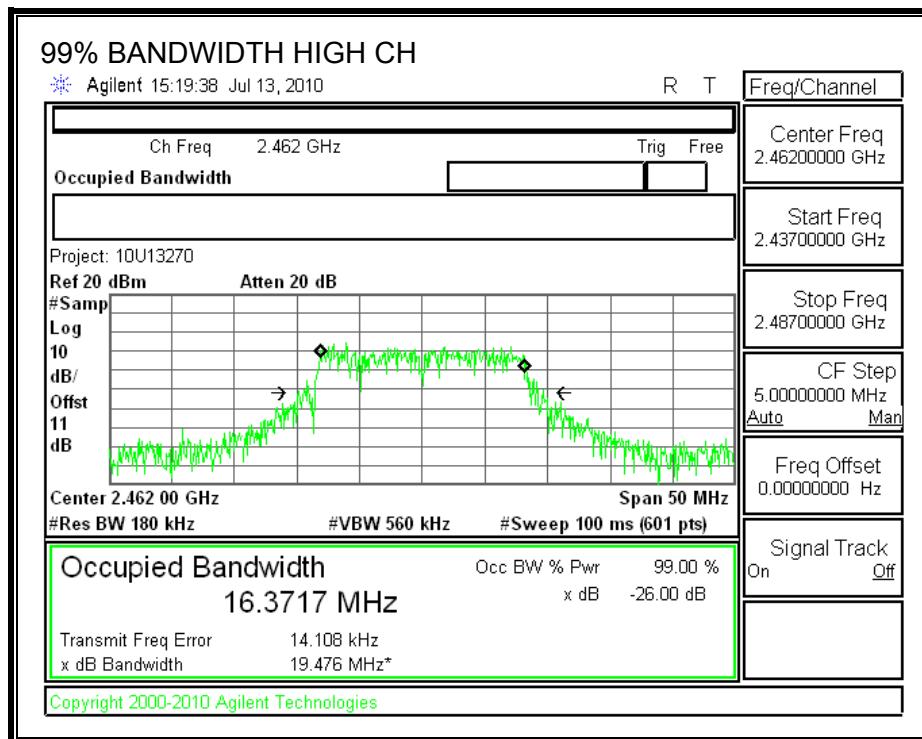
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.427
Middle	2437	16.543
High	2462	16.372

99% BANDWIDTH





7.2.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	16.76
Middle	2437	17.50
High	2462	17.43

7.2.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.80
Middle	2437	10.10
High	2462	10.10

7.2.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

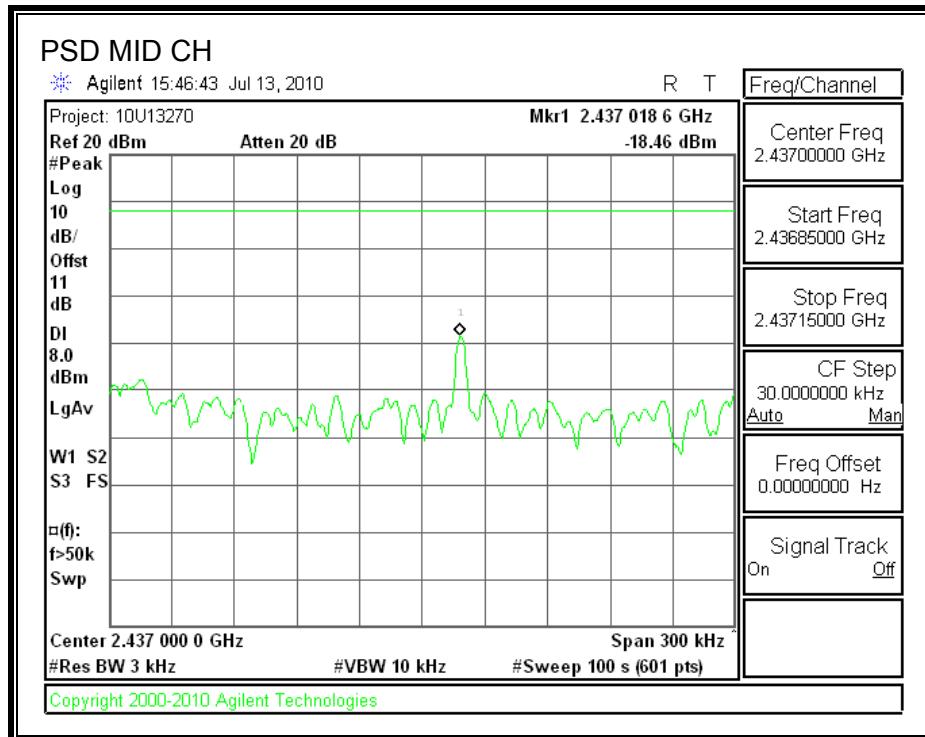
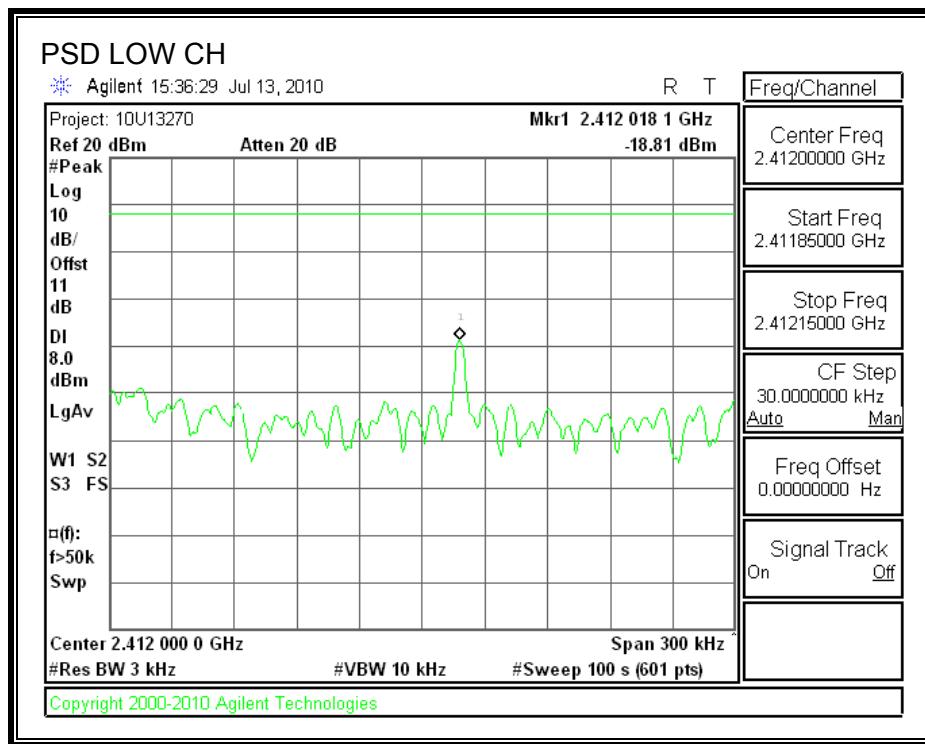
TEST PROCEDURE

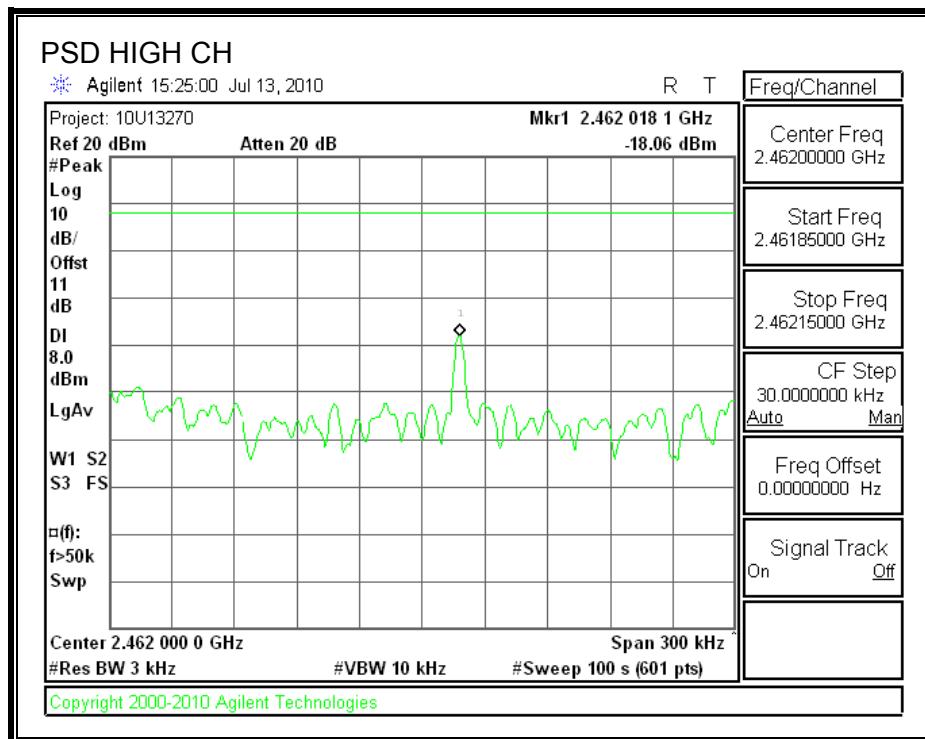
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-18.81	8	-26.81
Middle	2437	-18.46	8	-26.46
High	2462	-18.06	8	-26.06

POWER SPECTRAL DENSITY





7.2.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

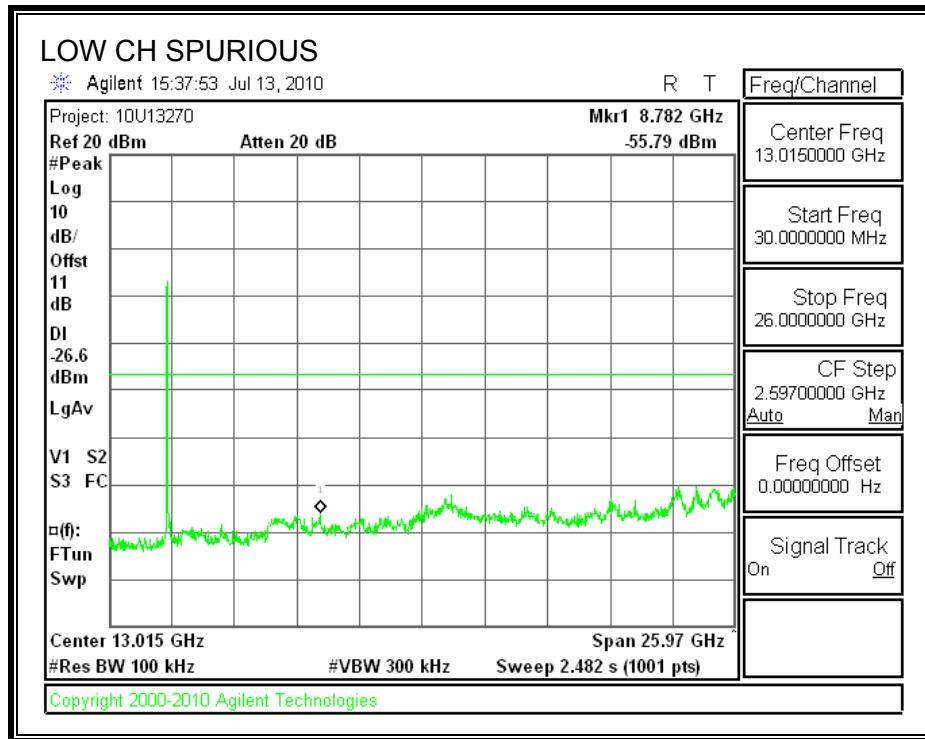
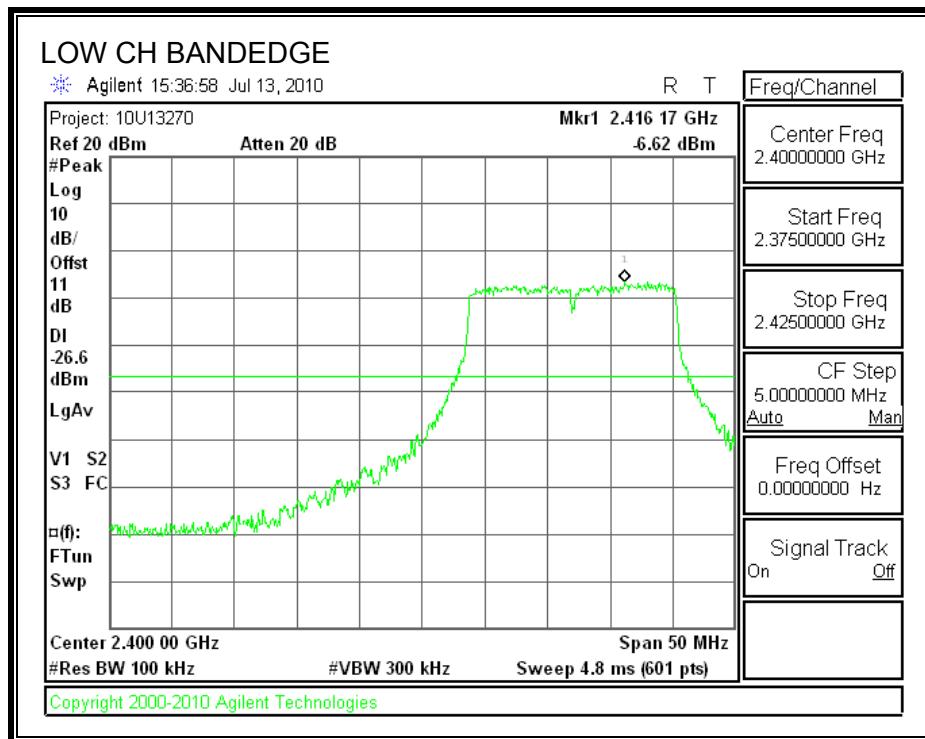
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

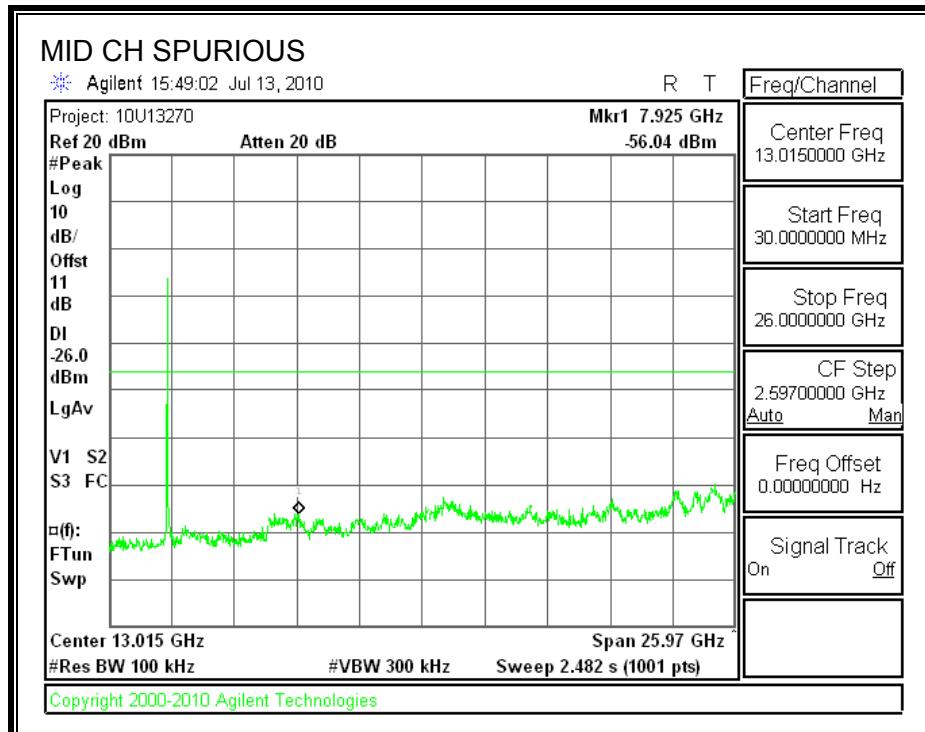
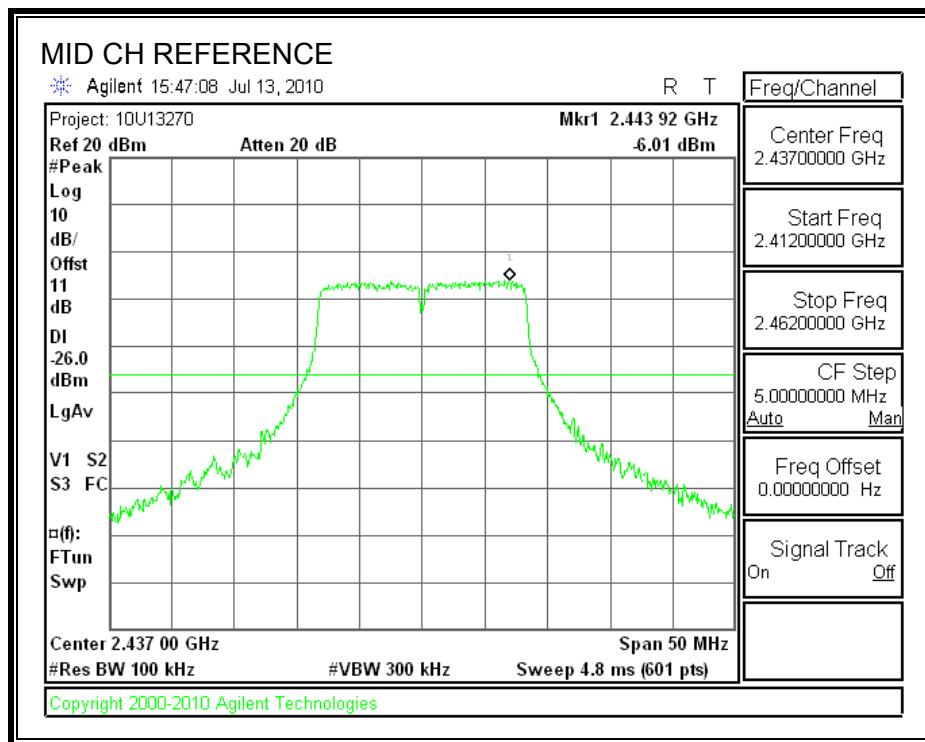
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

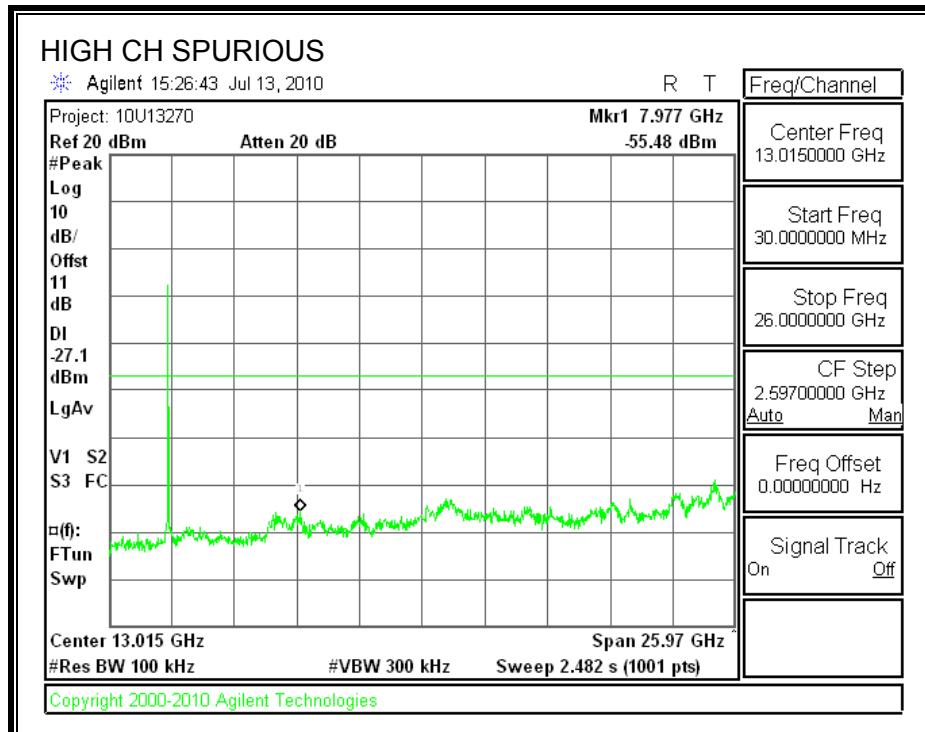
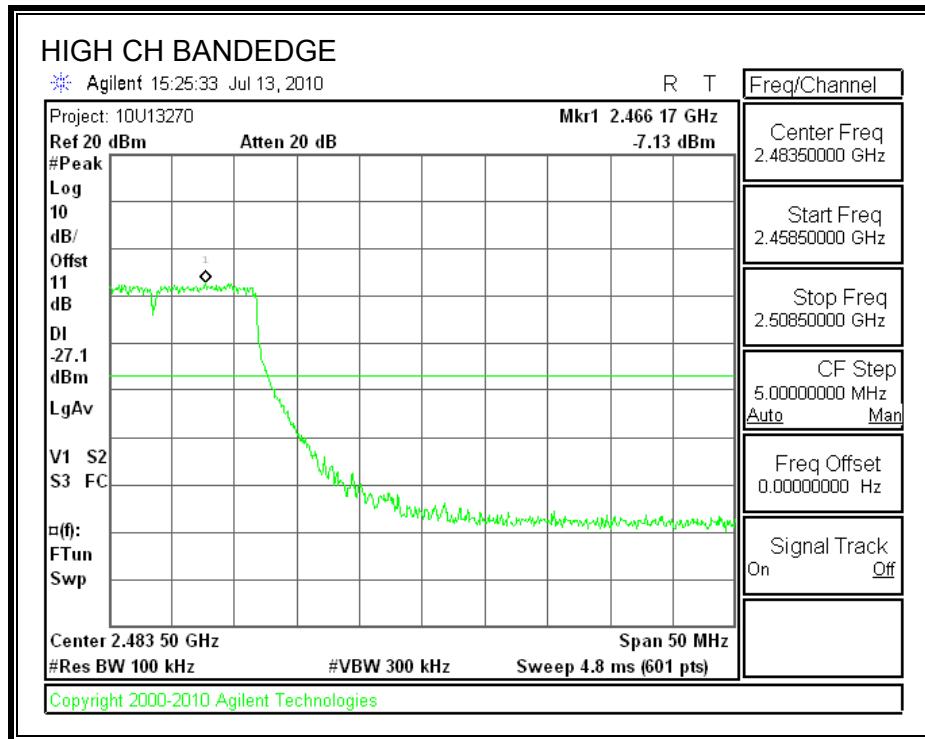
SPURIOUS EMISSIONS, LOW CHANNEL



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



7.3. BLUETOOTH GFSK MODE IN THE 2.4 GHz BAND

7.3.1. AVERAGE TIME OF OCCUPANCY

LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

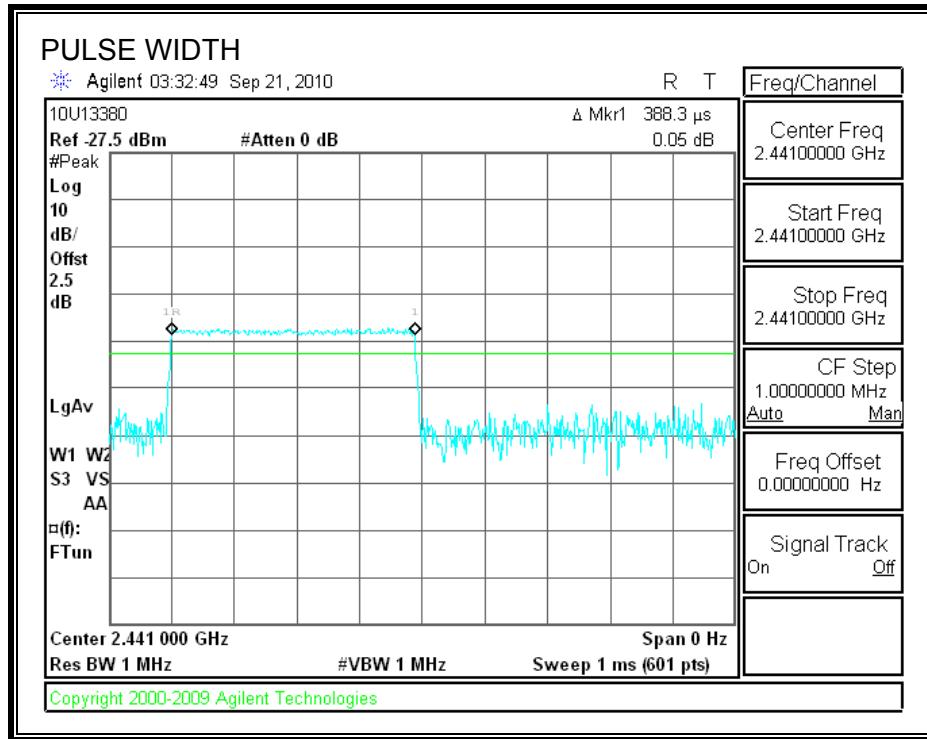
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

RESULTS

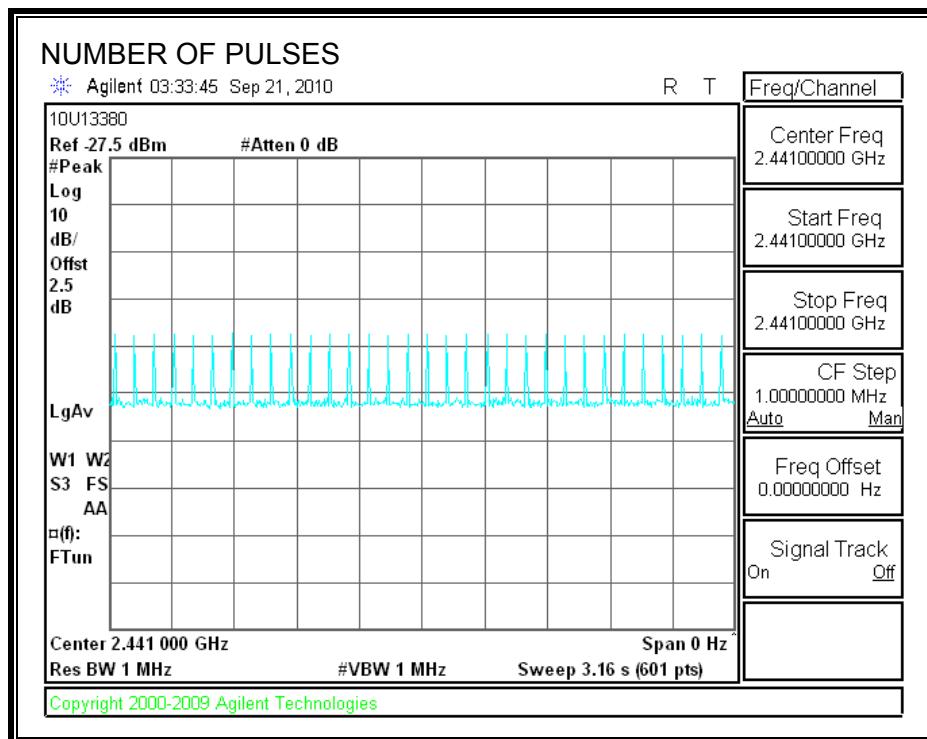
GFSK Mode

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of (sec)	Limit (sec)	Margin (sec)
DH1	0.388	32	0.124	0.4	0.276
DH3	1.655	16	0.265	0.4	0.135
DH5	2.867	10	0.287	0.4	0.113

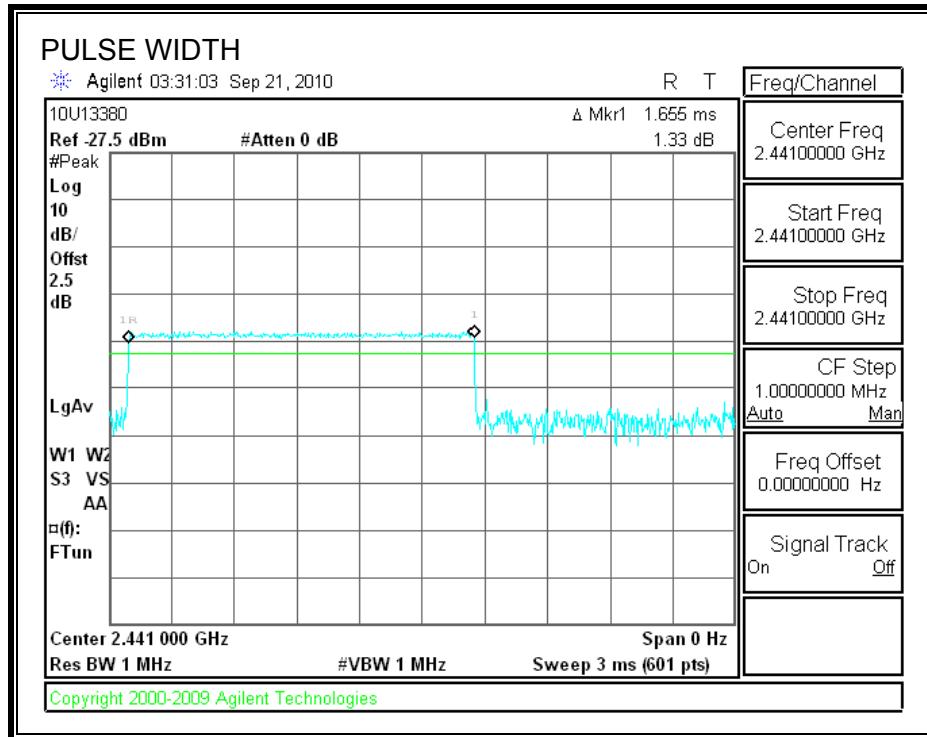
DH1 PULSE WIDTH



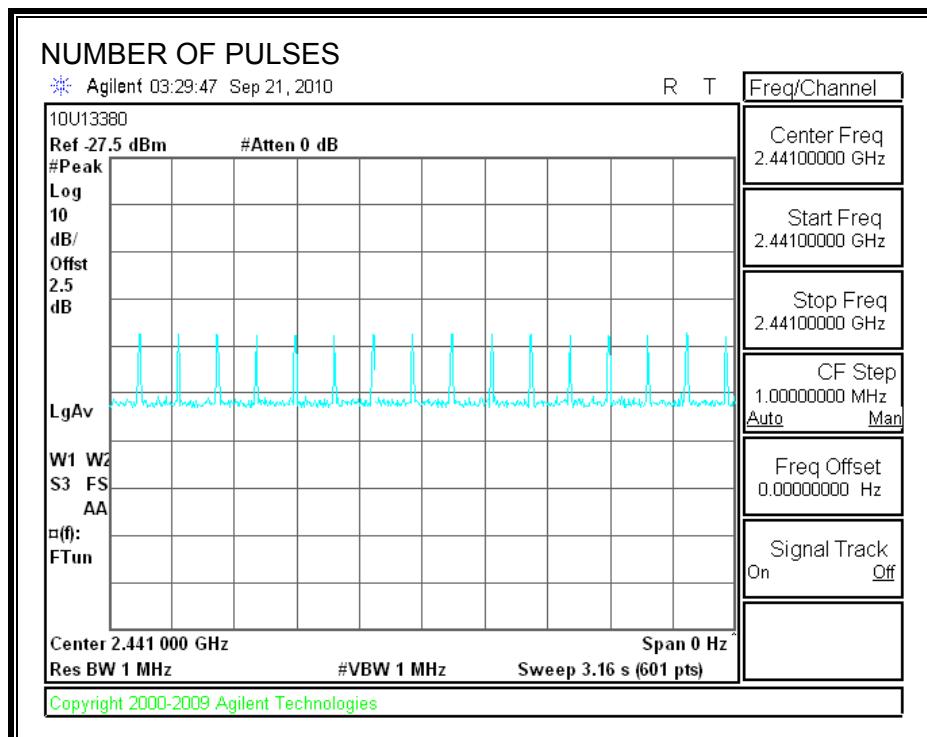
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



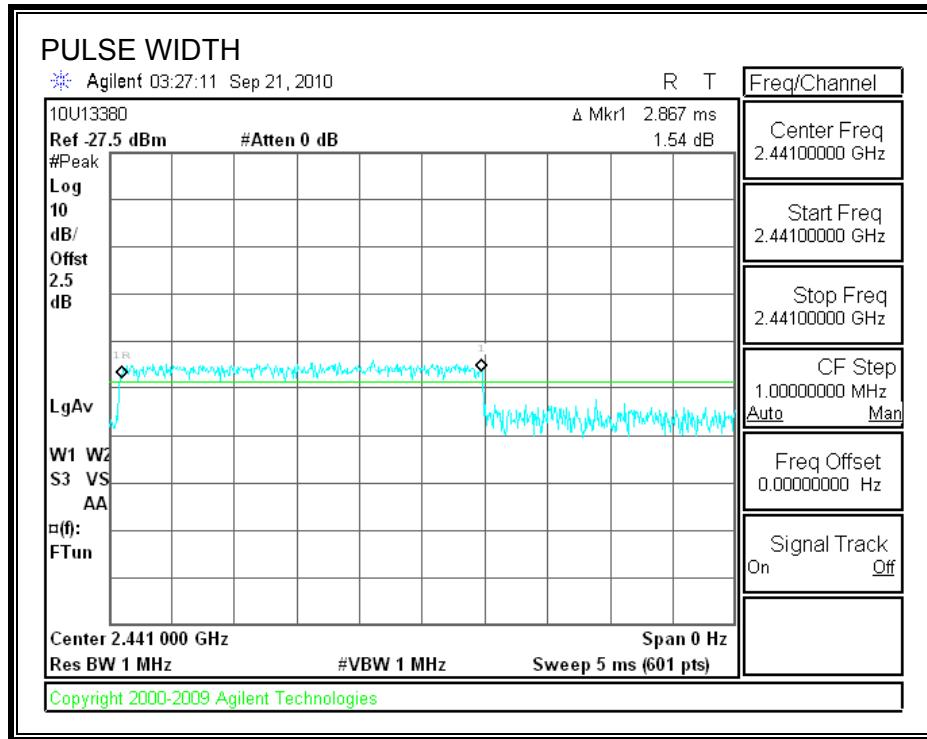
DH3 PULSE WIDTH



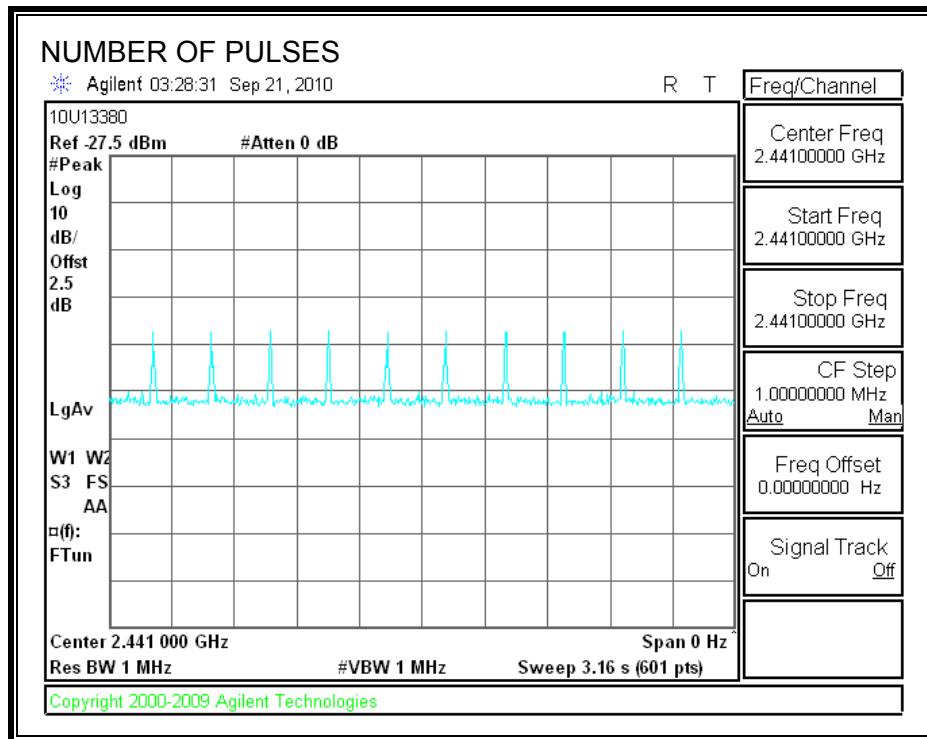
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



DH5 PULSE WIDTH



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



7.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

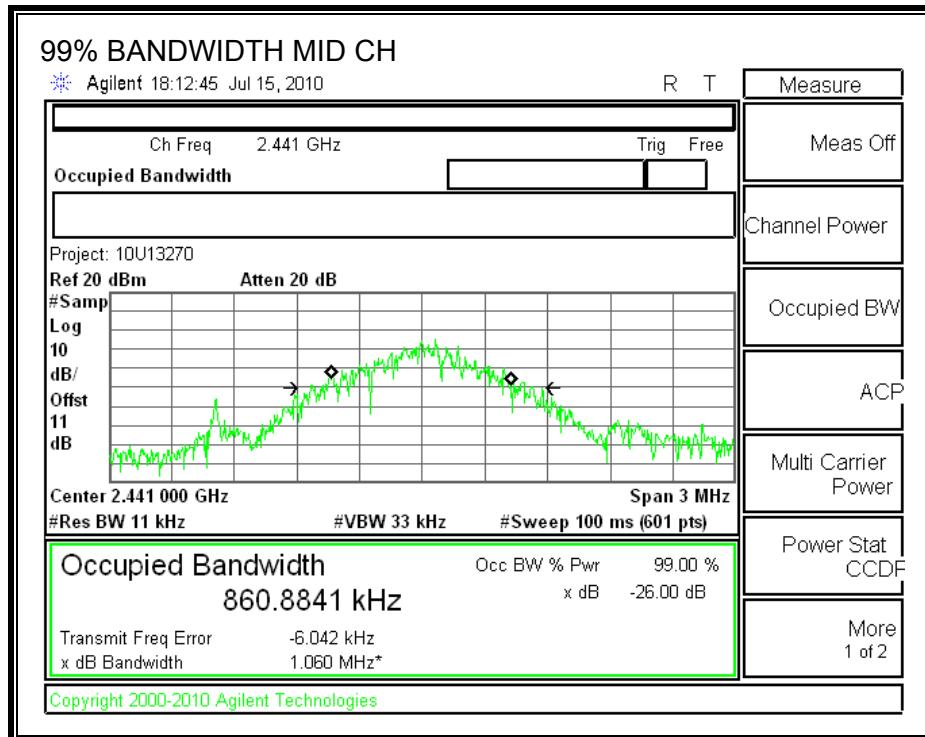
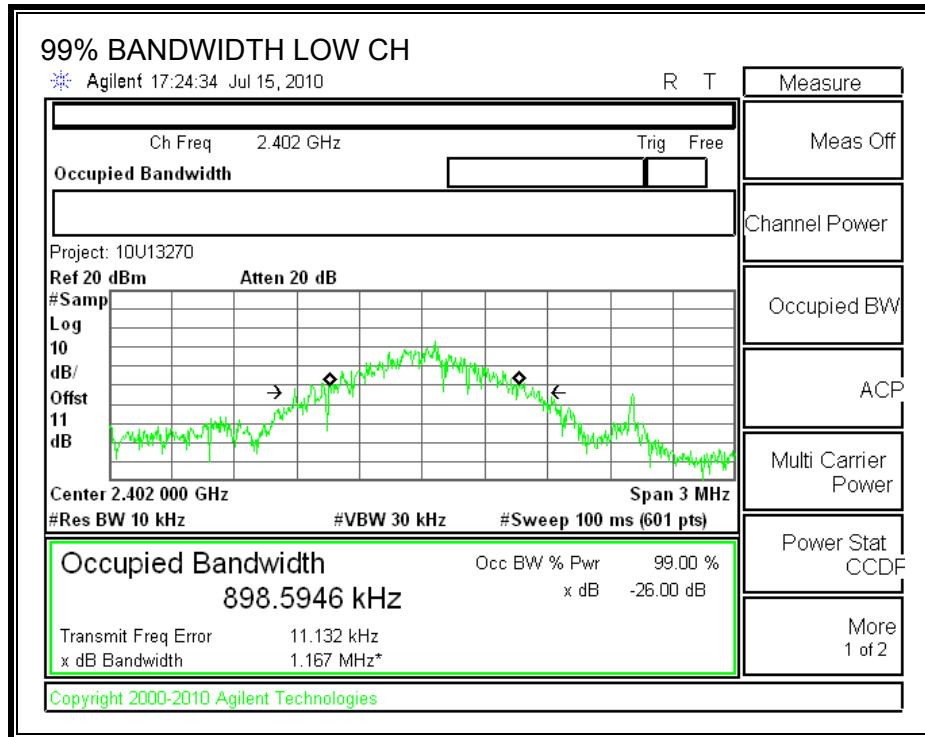
TEST PROCEDURE

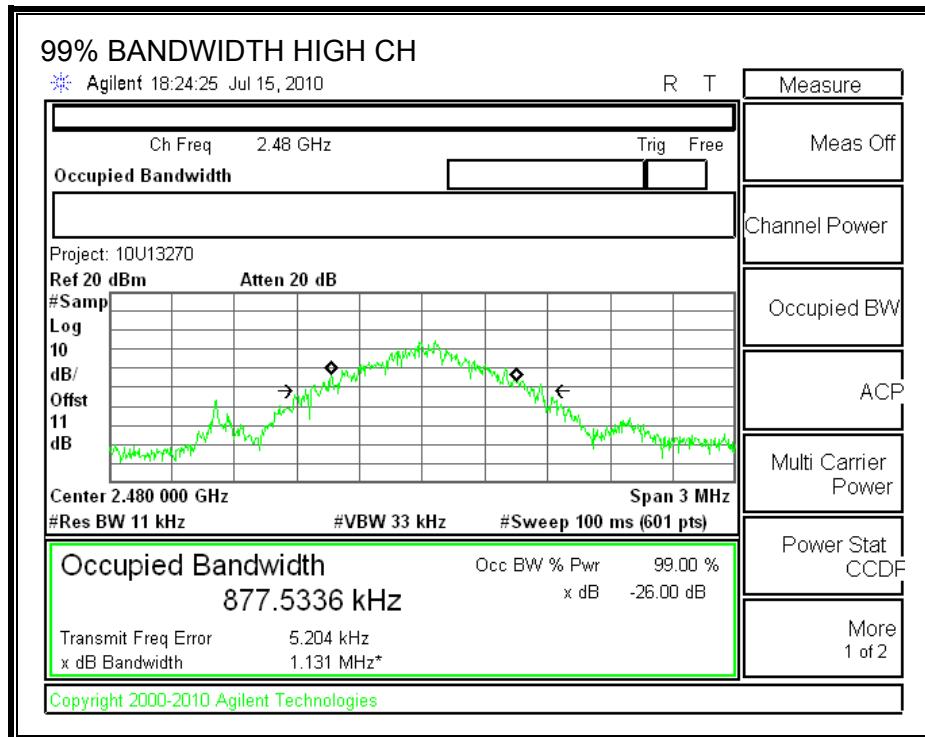
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	0.899
Middle	2441	0.861
High	2480	0.878

99% BANDWIDTH





7.3.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

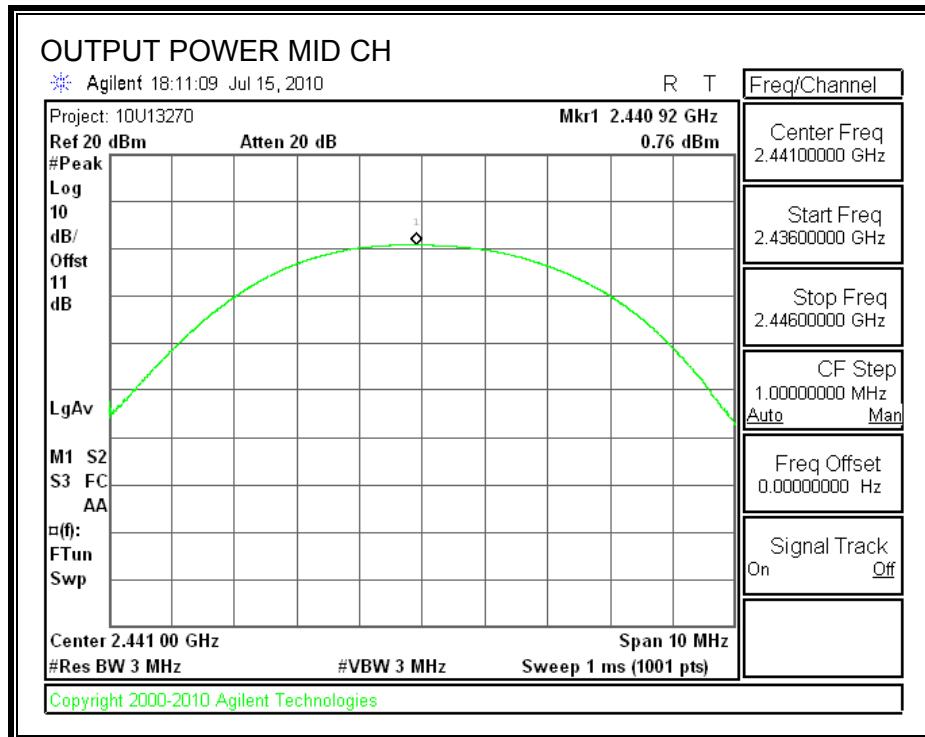
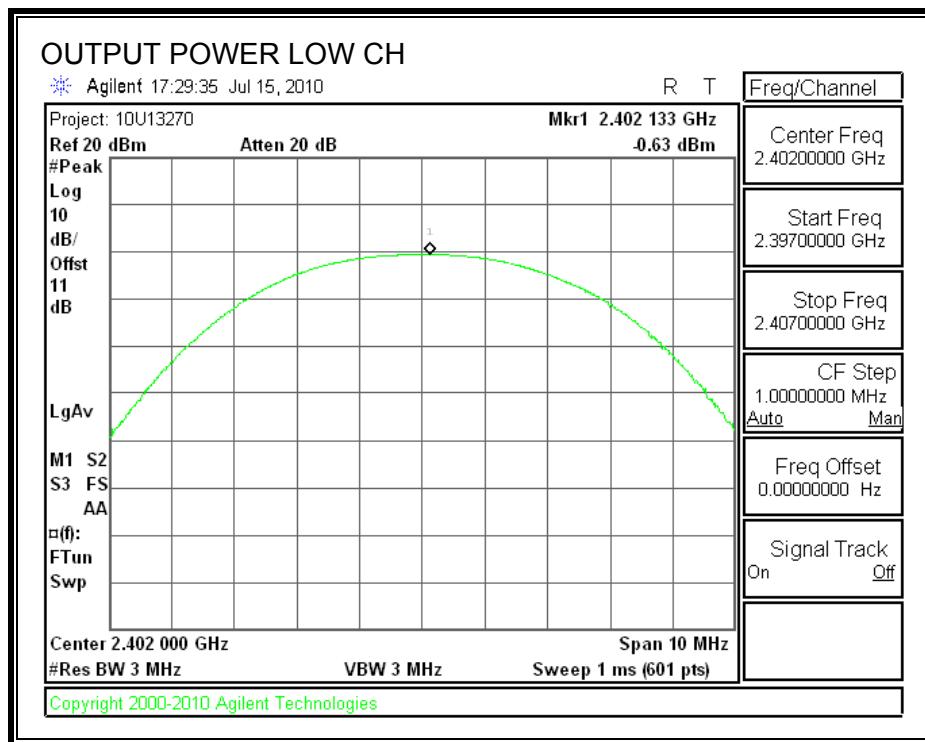
TEST PROCEDURE

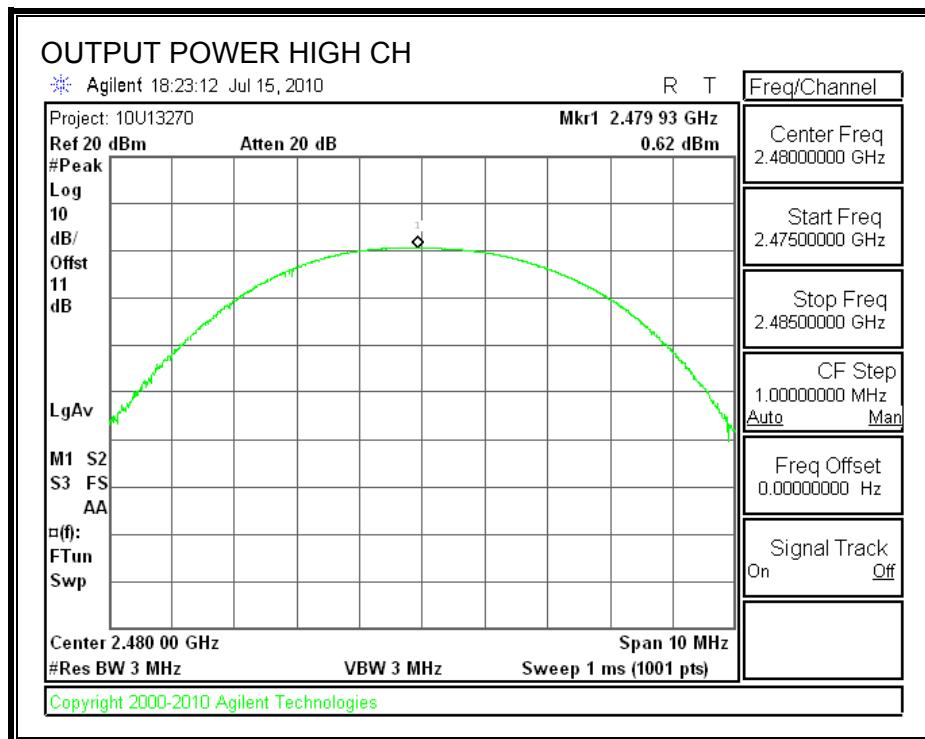
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

RESULTS

Channel	Frequency (MHz)	Spectrum Analyzer Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-0.63	30	-30.63
Middle	2441	0.76	30	-29.24
High	2480	0.62	30	-29.38

OUTPUT POWER





7.3.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter with gate control.

RESULTS

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2402	-0.71
Middle	2441	0.04
High	2480	0.04

7.3.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

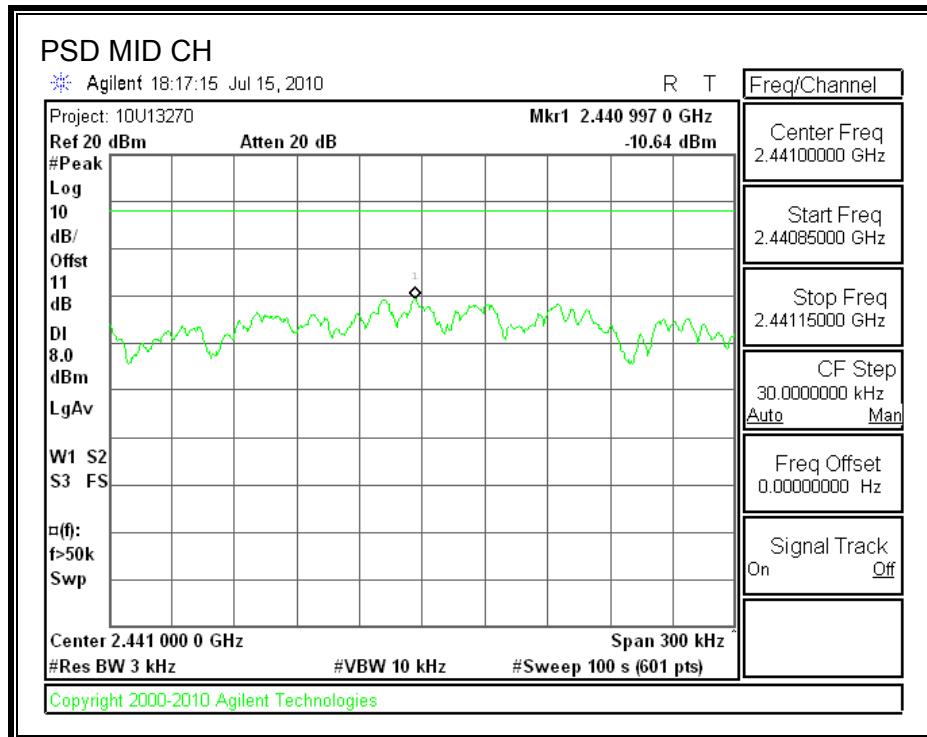
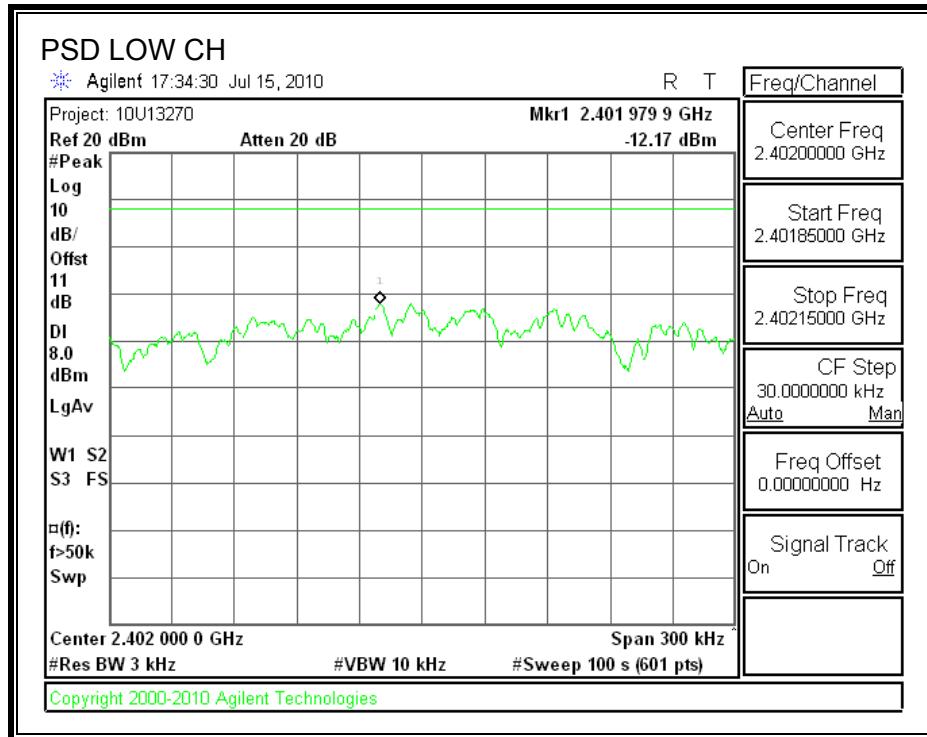
TEST PROCEDURE

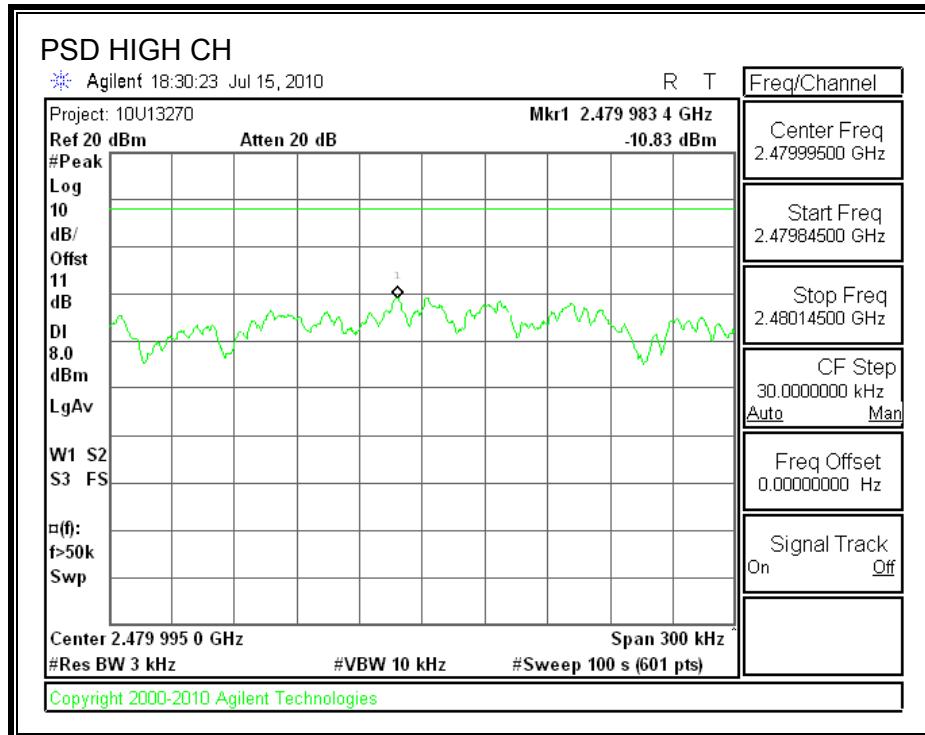
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-12.17	8	-20.17
Middle	2441	-10.64	8	-18.64
High	2480	-10.83	8	-18.83

POWER SPECTRAL DENSITY





7.3.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

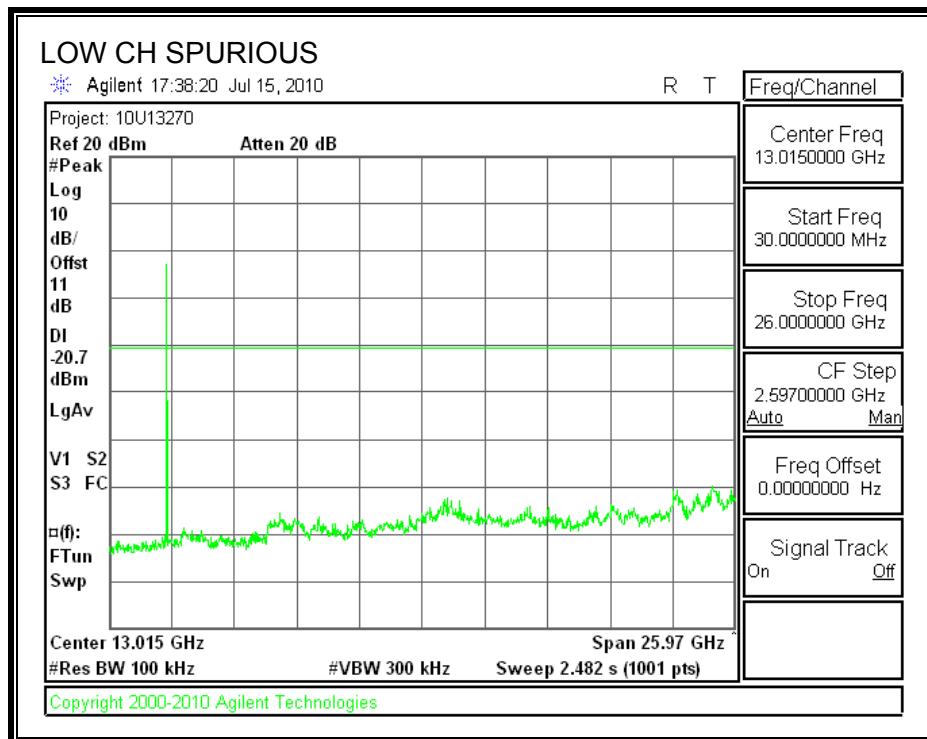
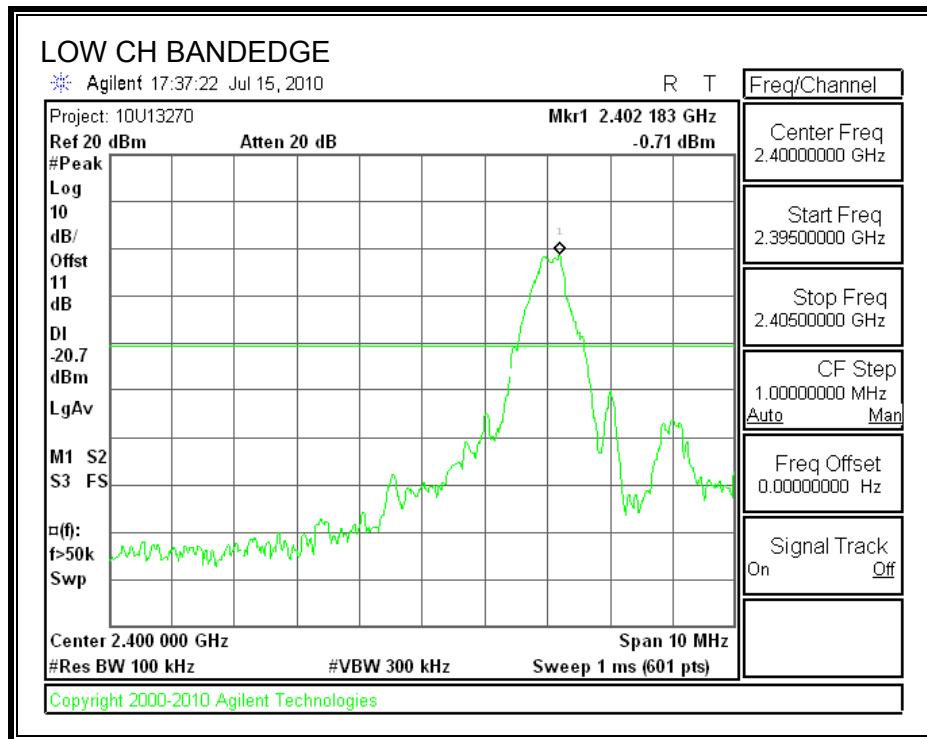
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

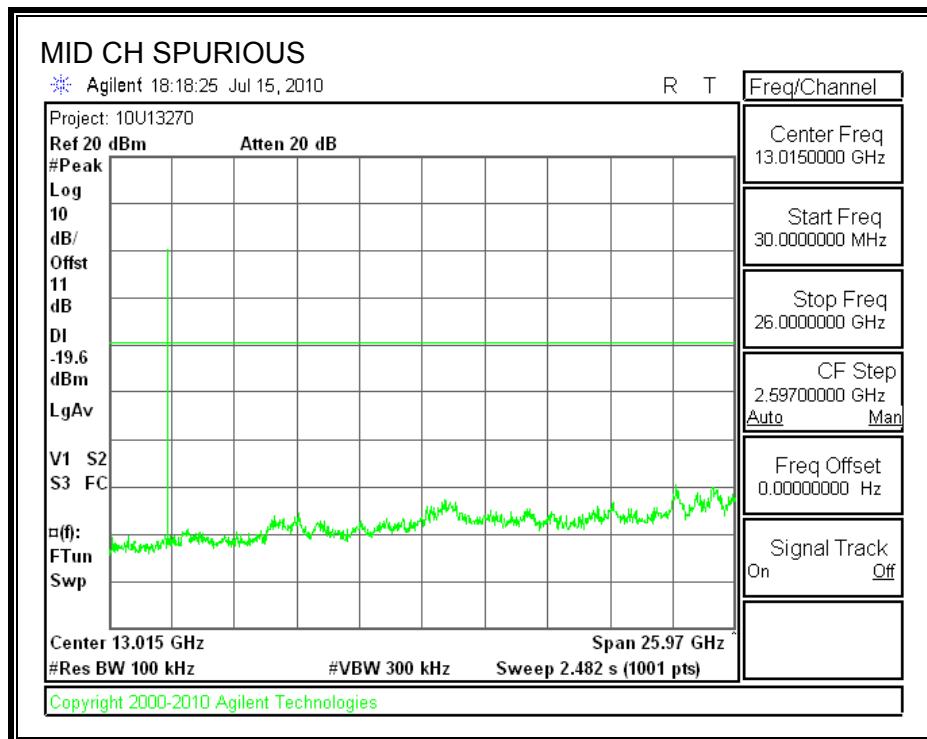
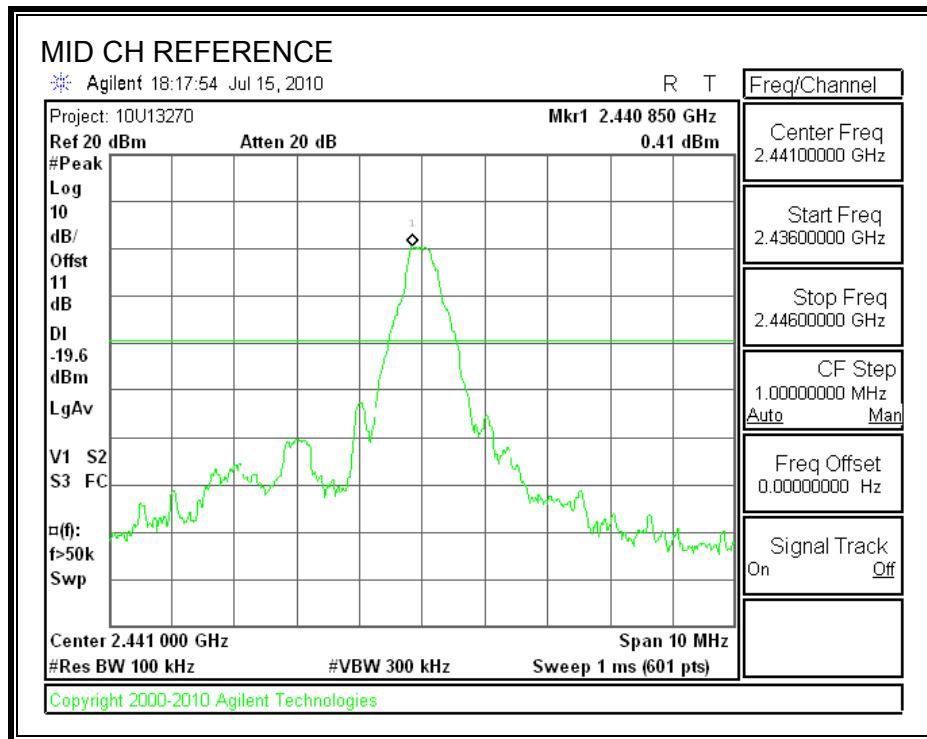
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

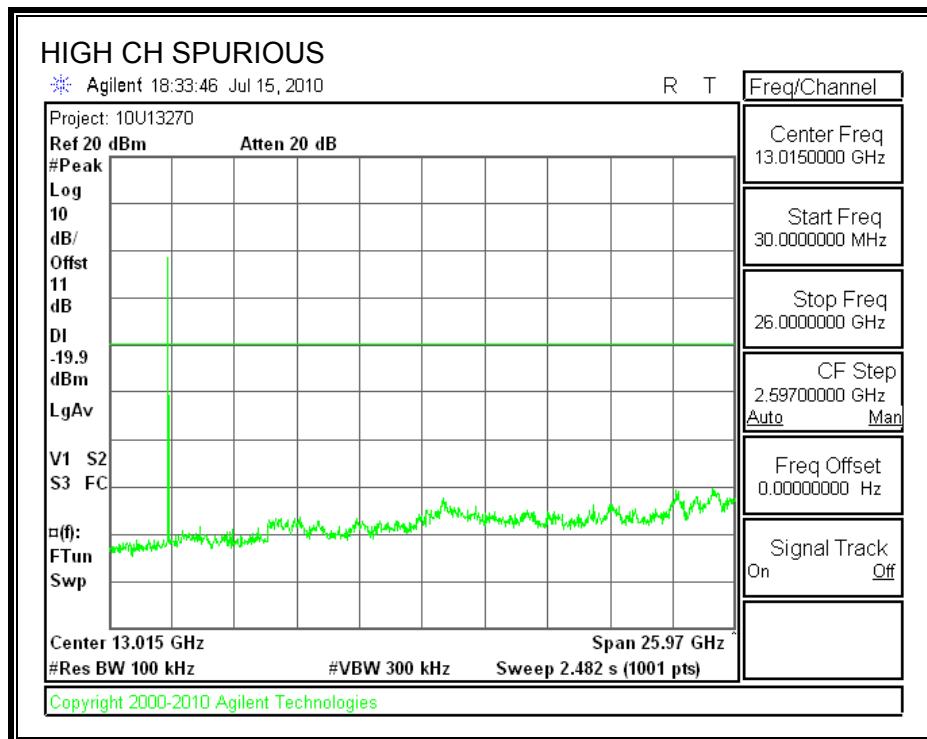
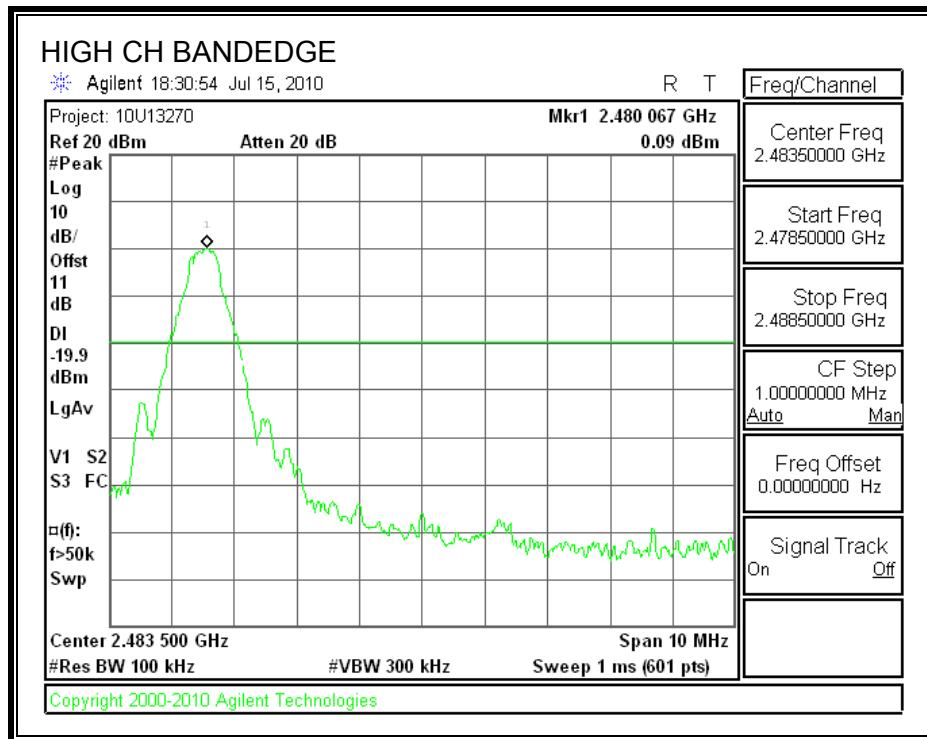
SPURIOUS EMISSIONS, LOW CHANNEL



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



7.4. BLUETOOTH 8PSK MODE IN THE 2.4 GHz BAND

7.4.1. AVERAGE TIME OF OCCUPANCY

LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

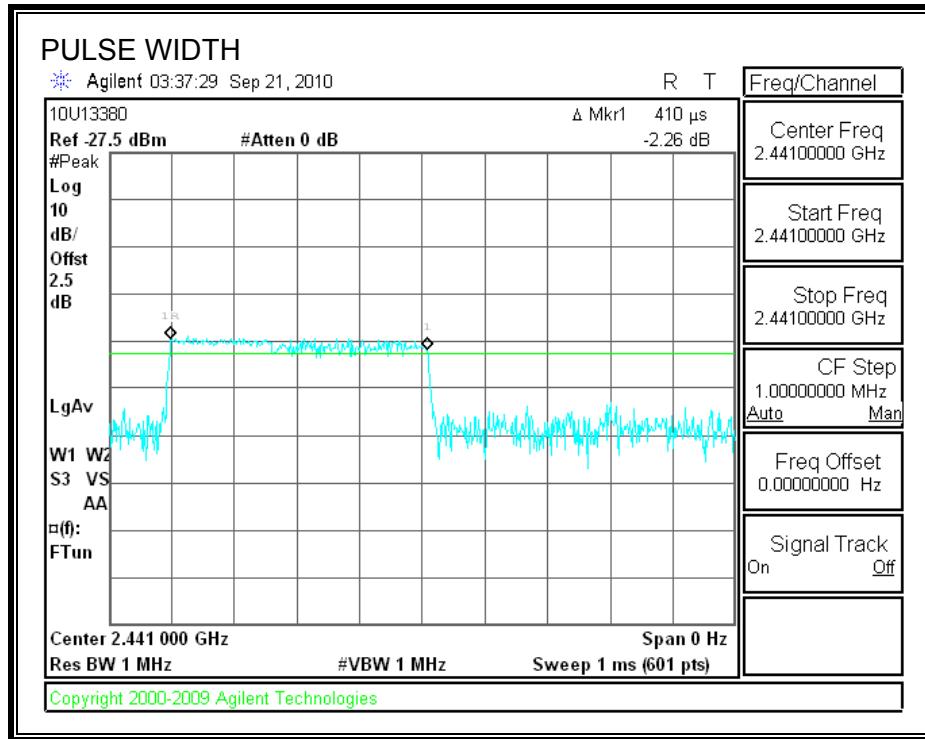
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

RESULTS

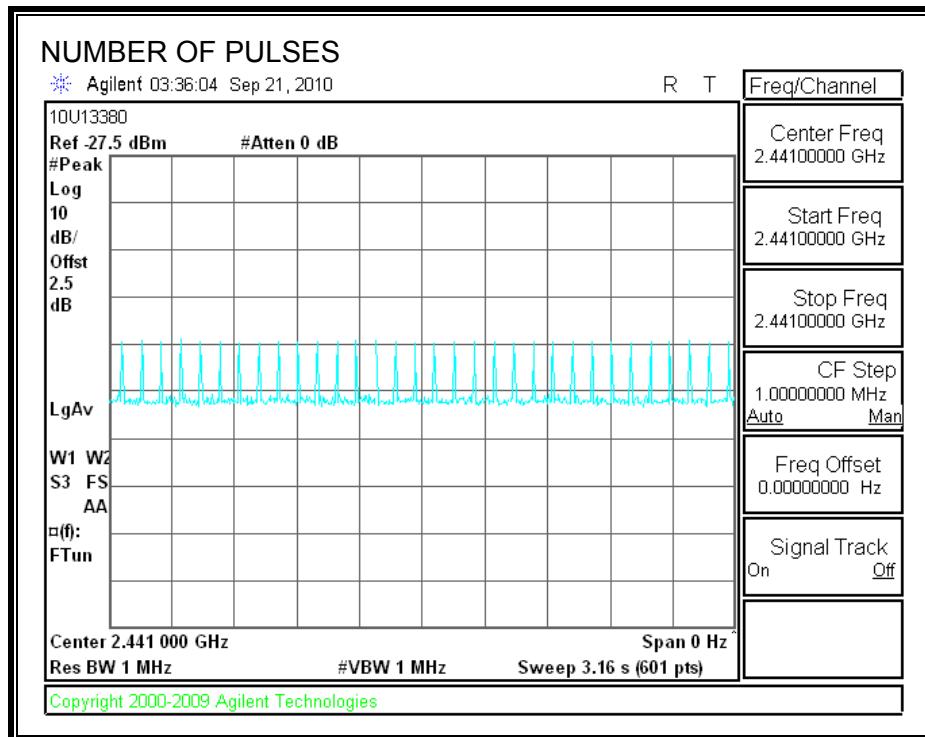
8PSK

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of (sec)	Limit (sec)	Margin (sec)
DH1	0.410	32	0.131	0.4	0.269
DH3	1.650	16	0.264	0.4	0.136
DH5	2.908	11	0.320	0.4	0.080

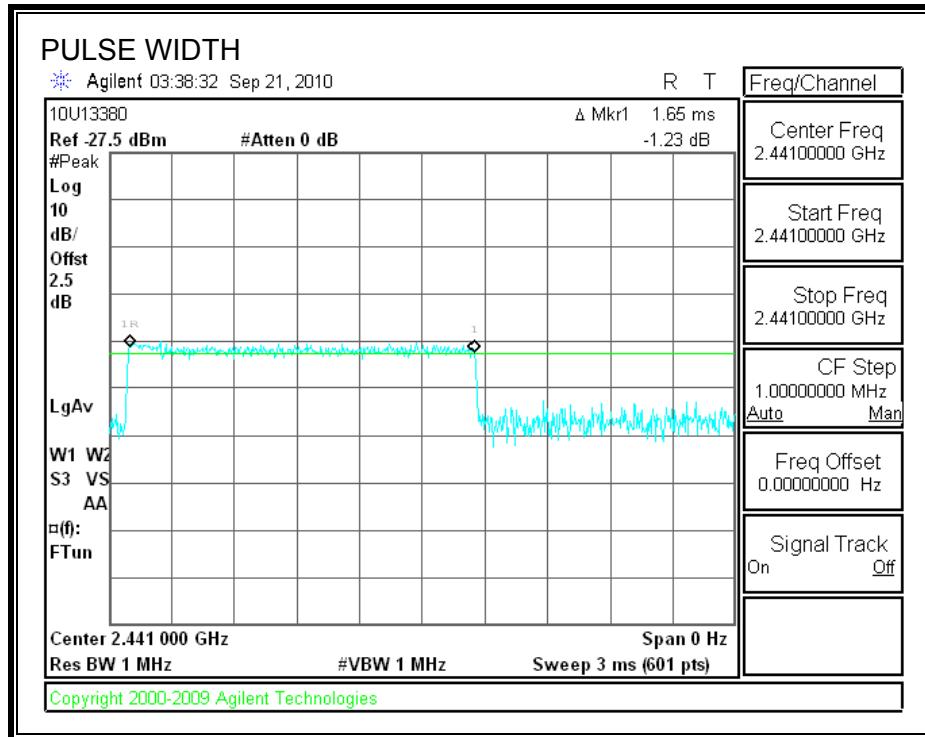
DH1 PULSE WIDTH



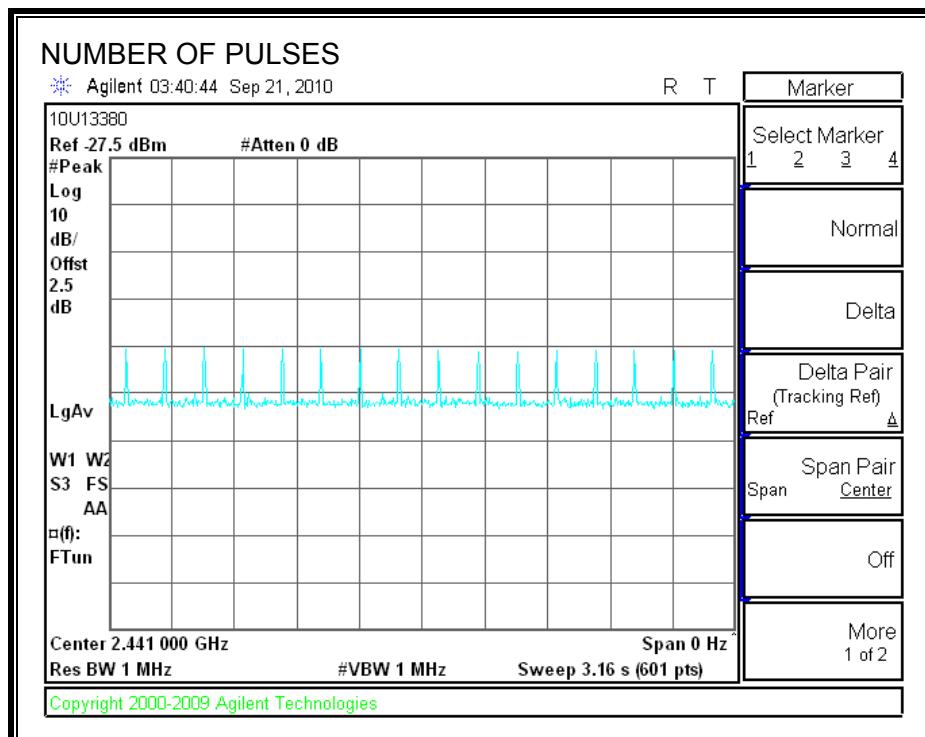
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



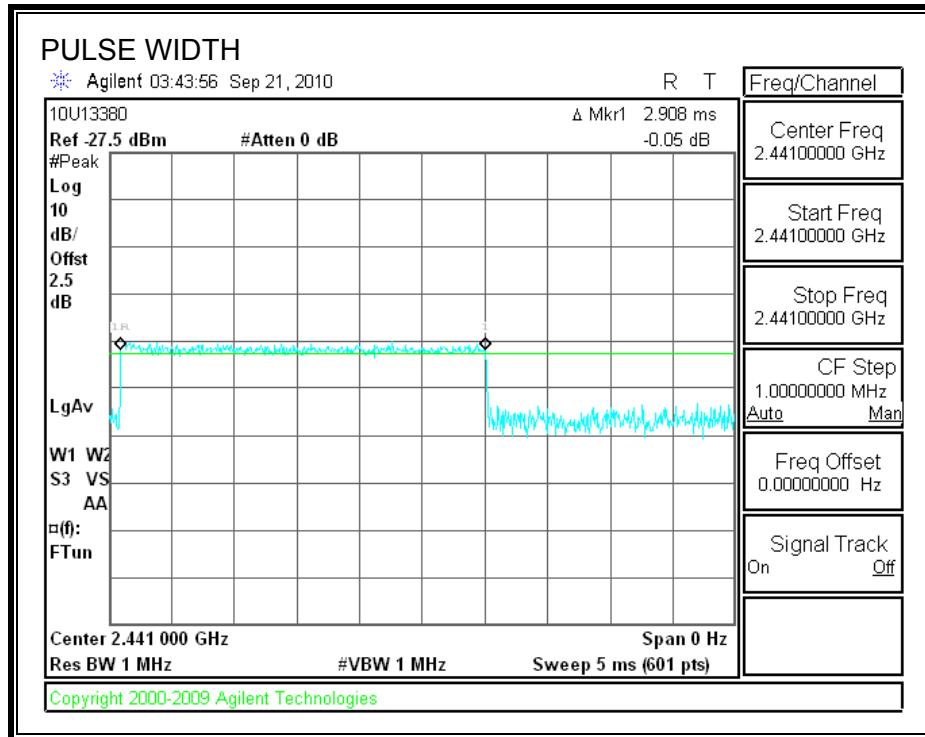
DH3 PULSE WIDTH



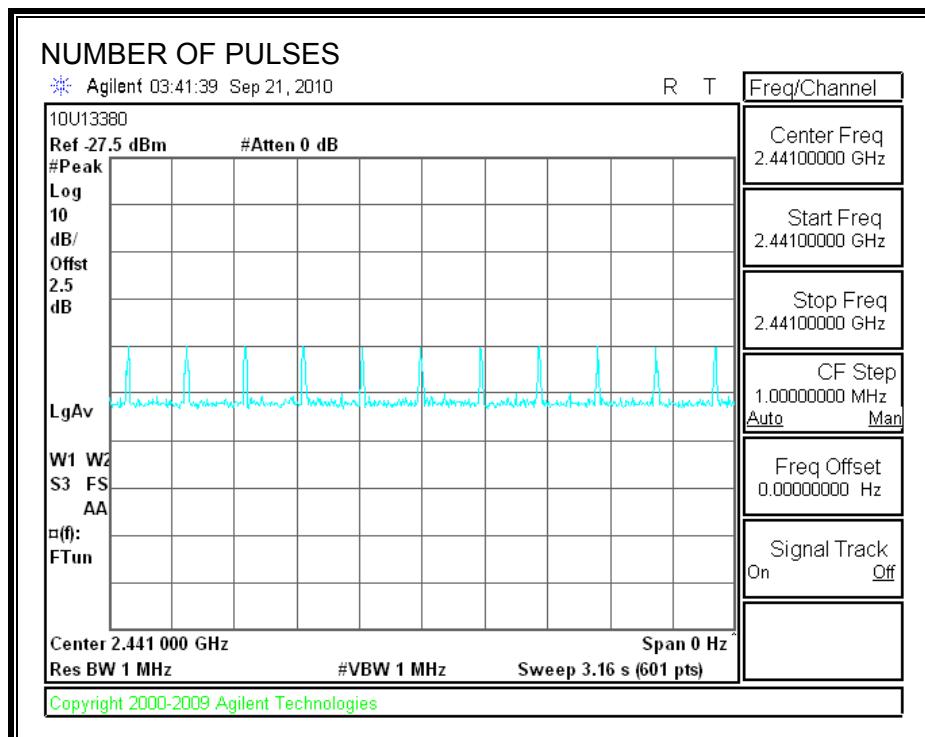
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



DH5 PULSE WIDTH



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



7.4.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

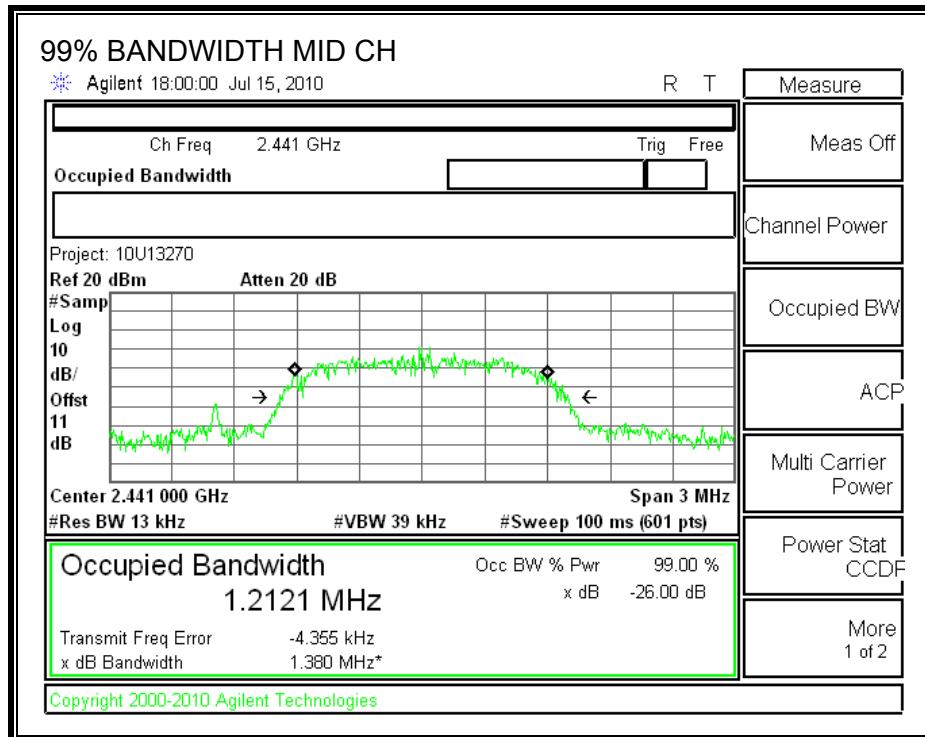
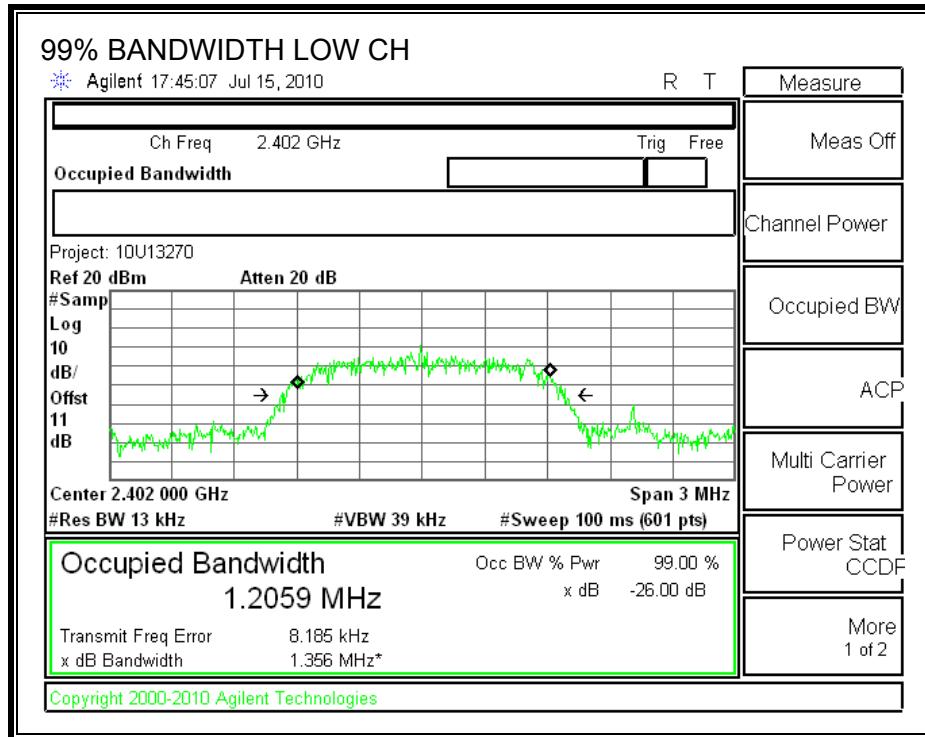
TEST PROCEDURE

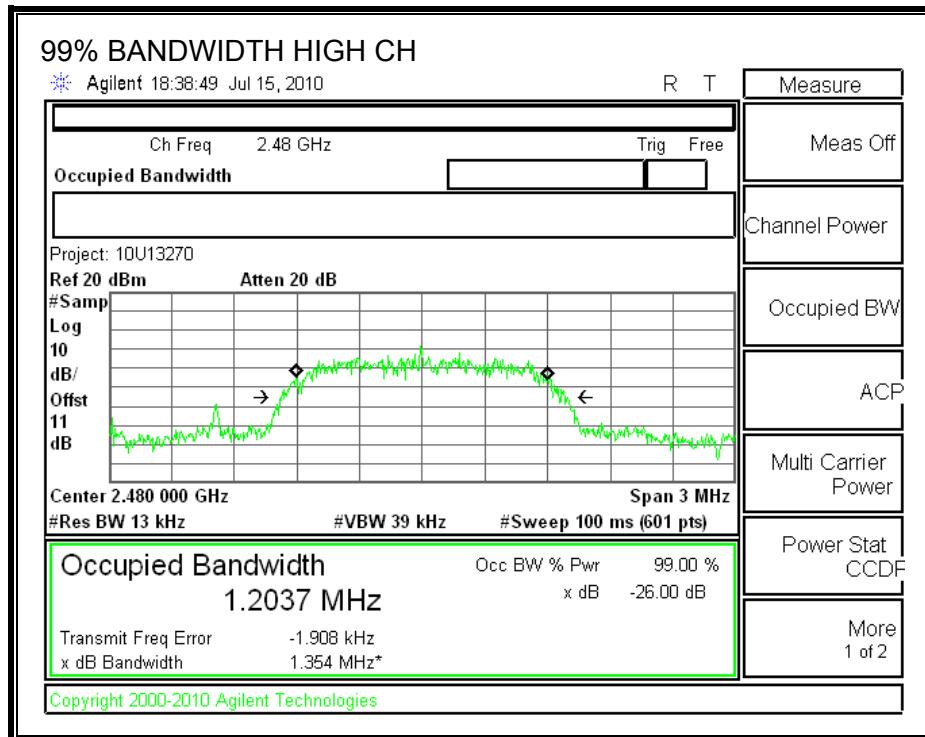
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.206
Middle	2441	1.212
High	2480	1.204

99% BANDWIDTH





7.4.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

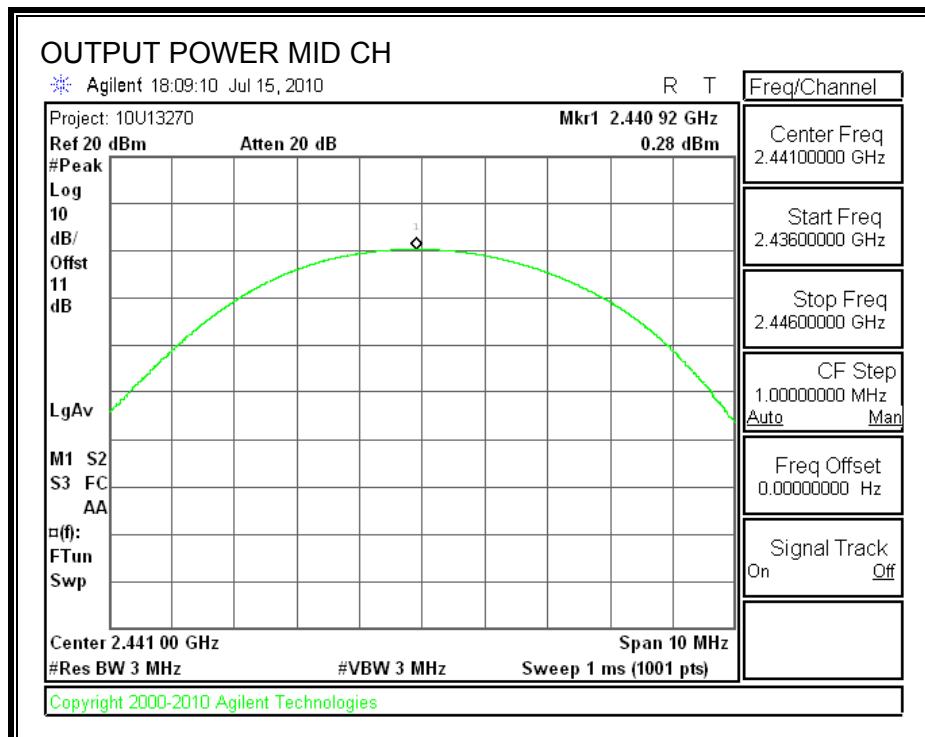
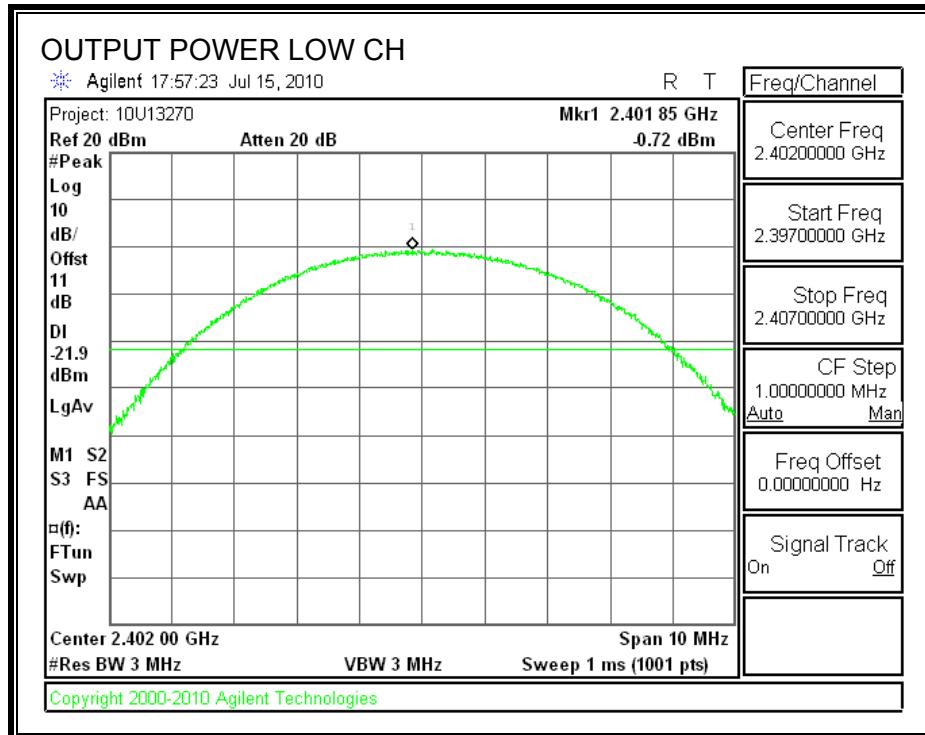
TEST PROCEDURE

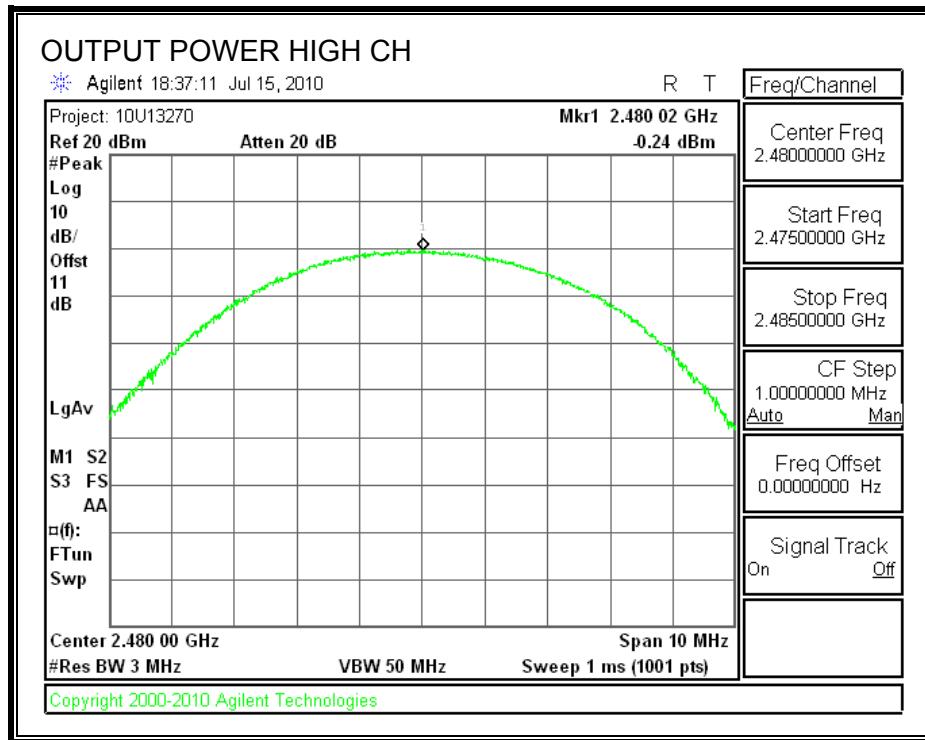
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

RESULTS

Channel	Frequency (MHz)	Spectrum Analyzer Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-0.72	21	-21.72
Middle	2441	0.28	21	-20.72
High	2480	-0.24	21	-21.24

OUTPUT POWER





7.4.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter with gate control.

RESULTS

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2402	-2.00
Middle	2441	-1.99
High	2480	-2.37

7.4.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

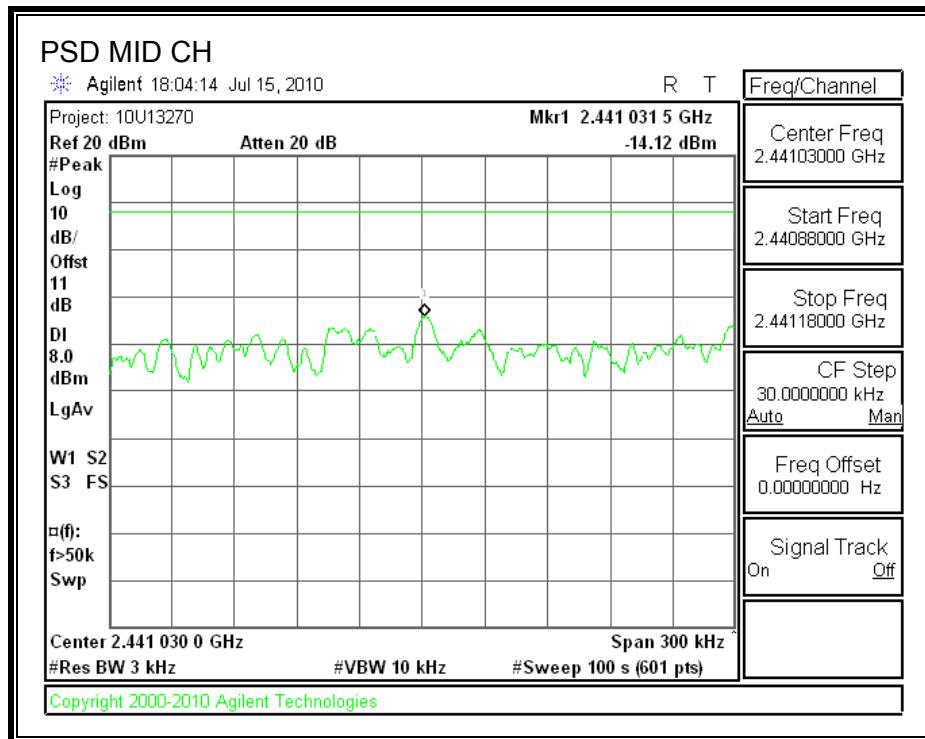
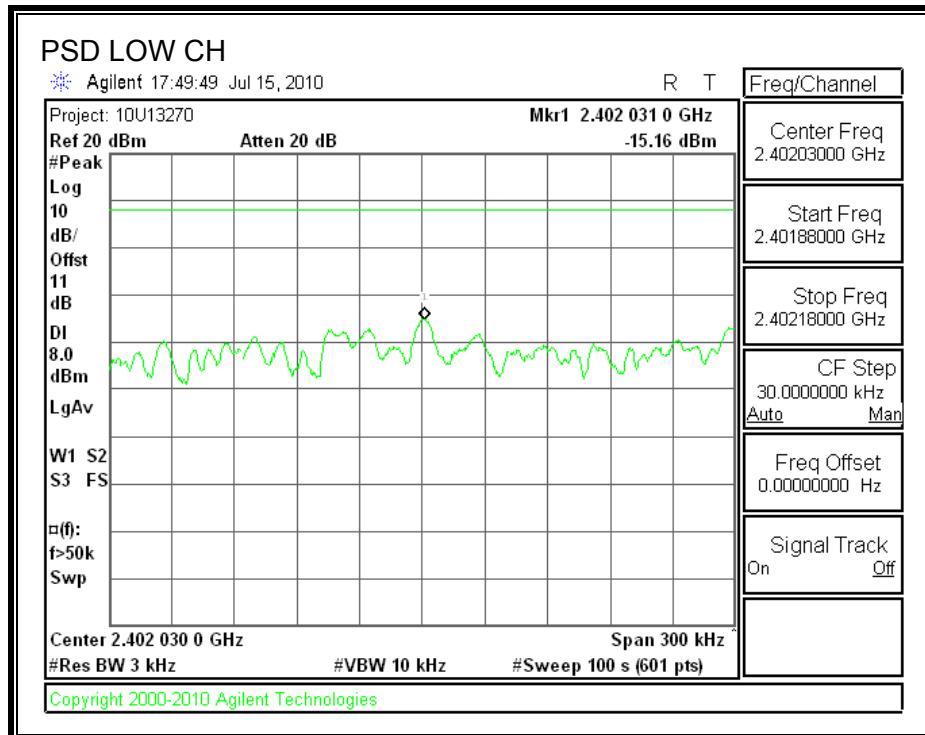
TEST PROCEDURE

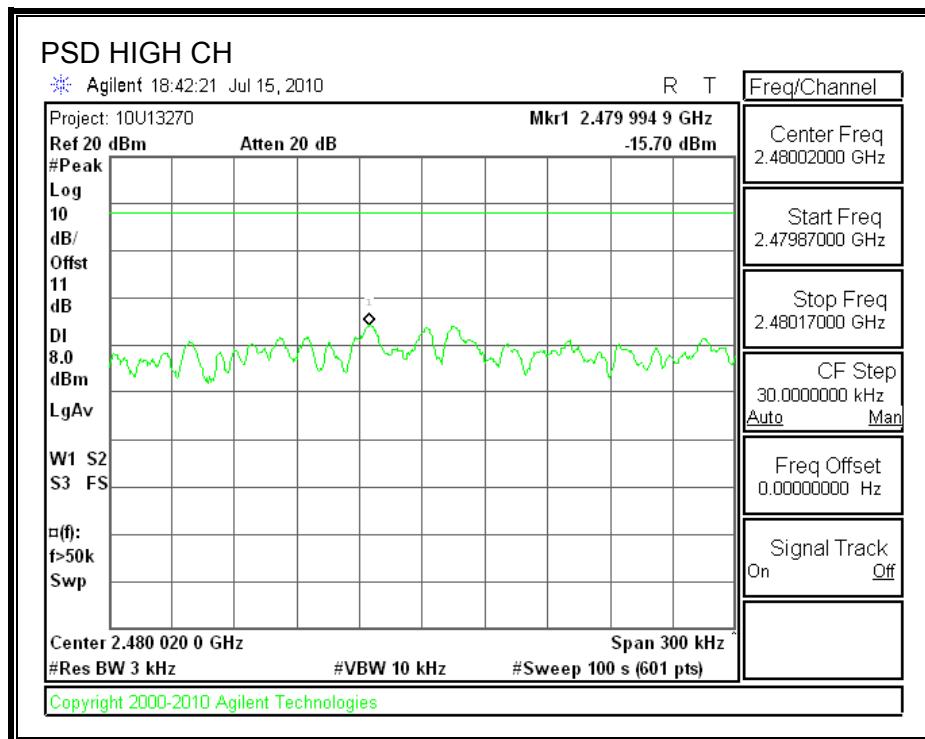
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-15.16	8	-23.16
Middle	2441	-14.12	8	-22.12
High	2480	-15.70	8	-23.70

POWER SPECTRAL DENSITY





7.4.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

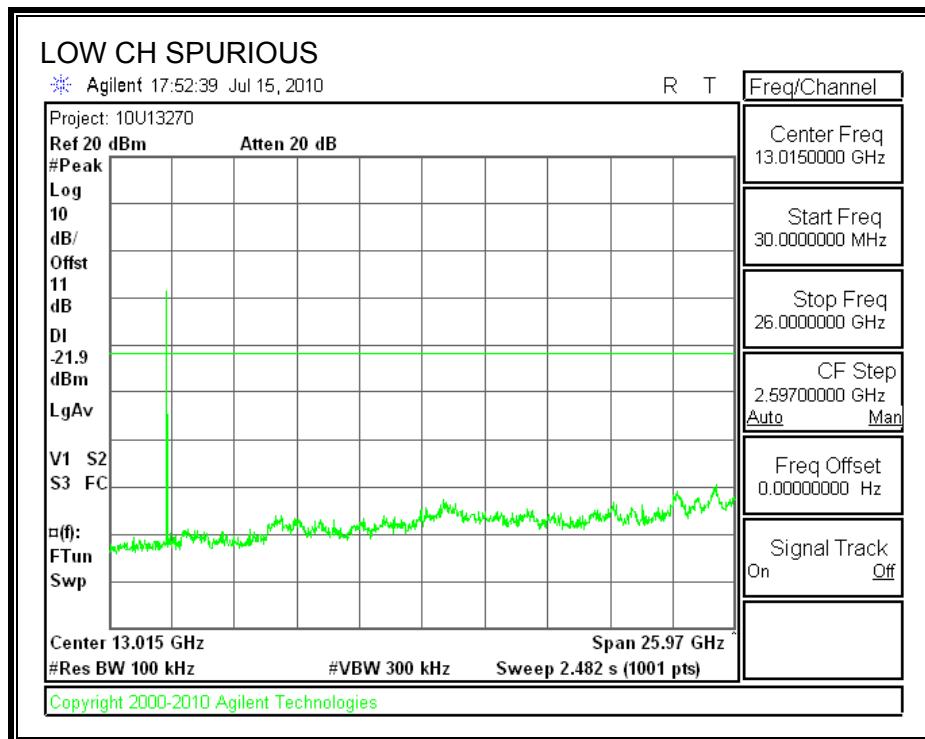
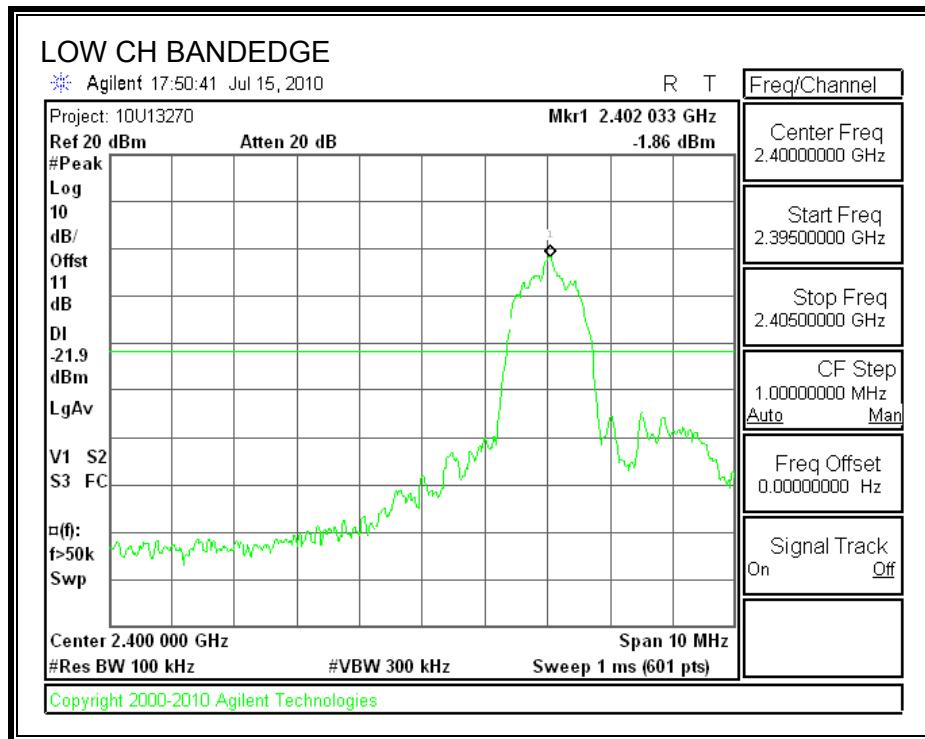
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

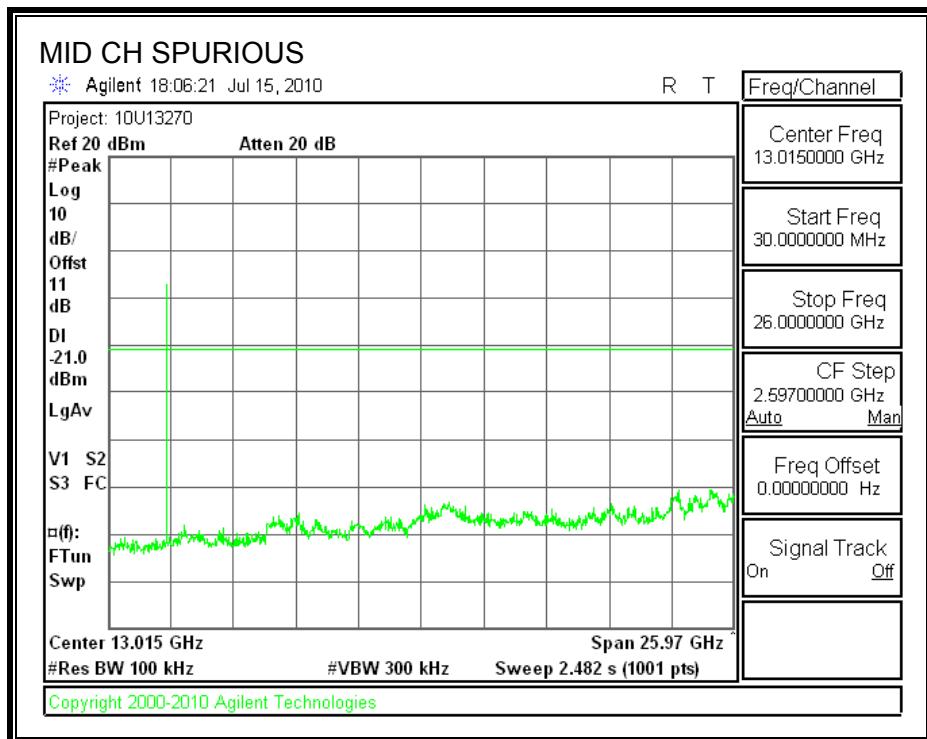
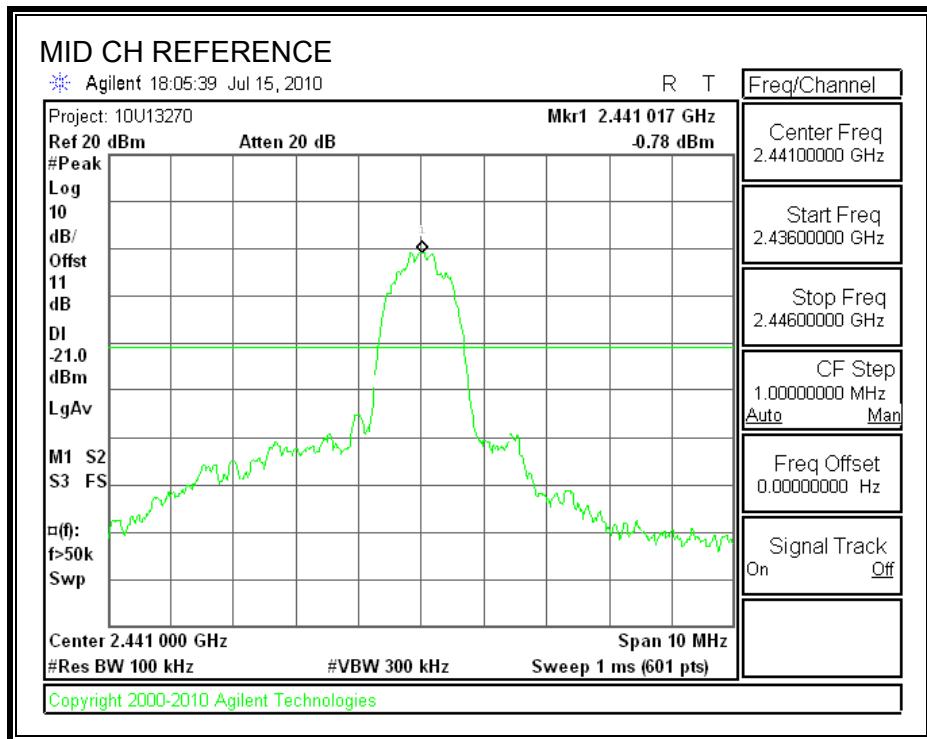
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

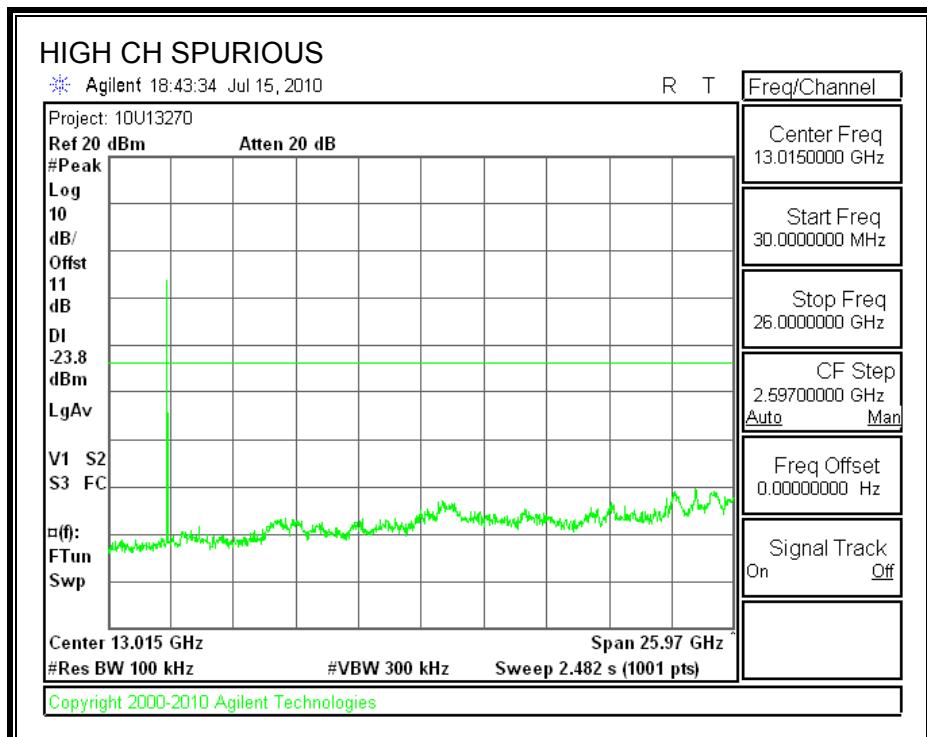
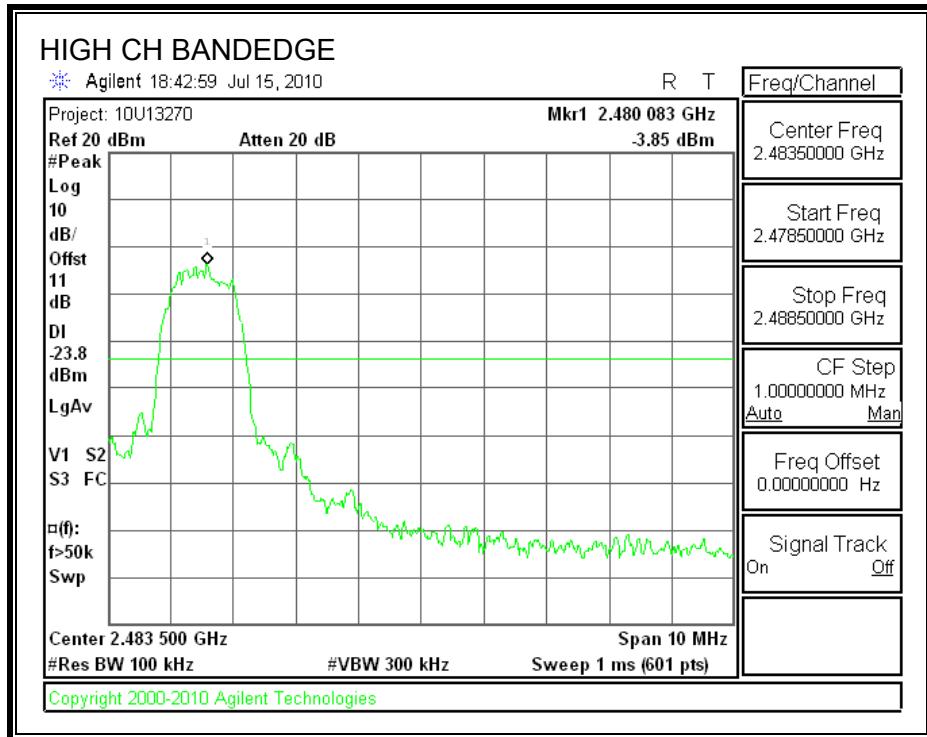
SPURIOUS EMISSIONS, LOW CHANNEL



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

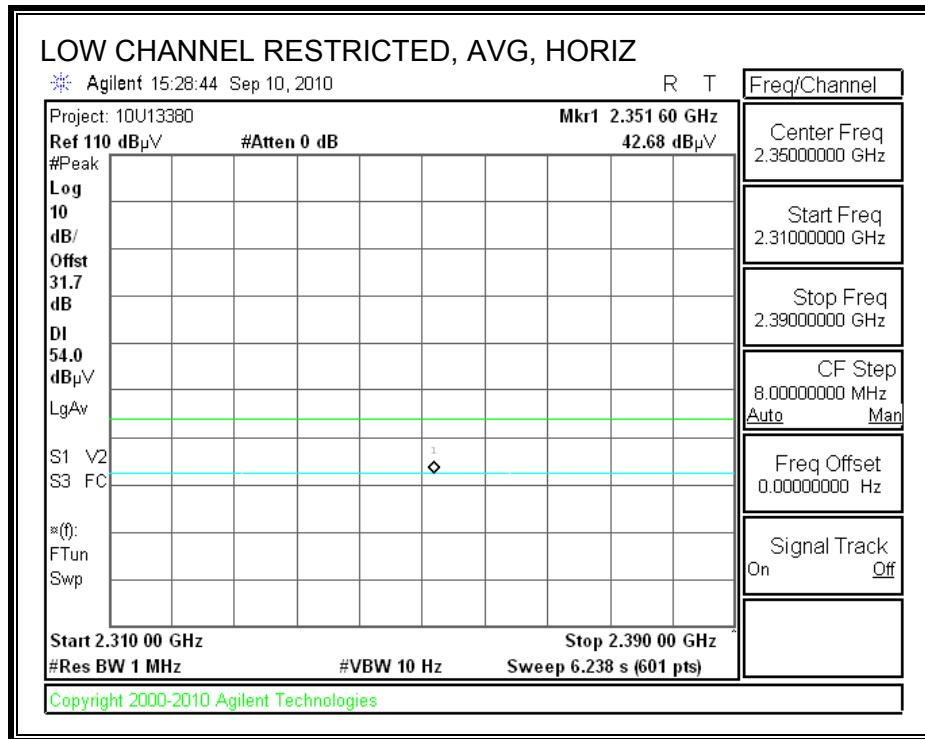
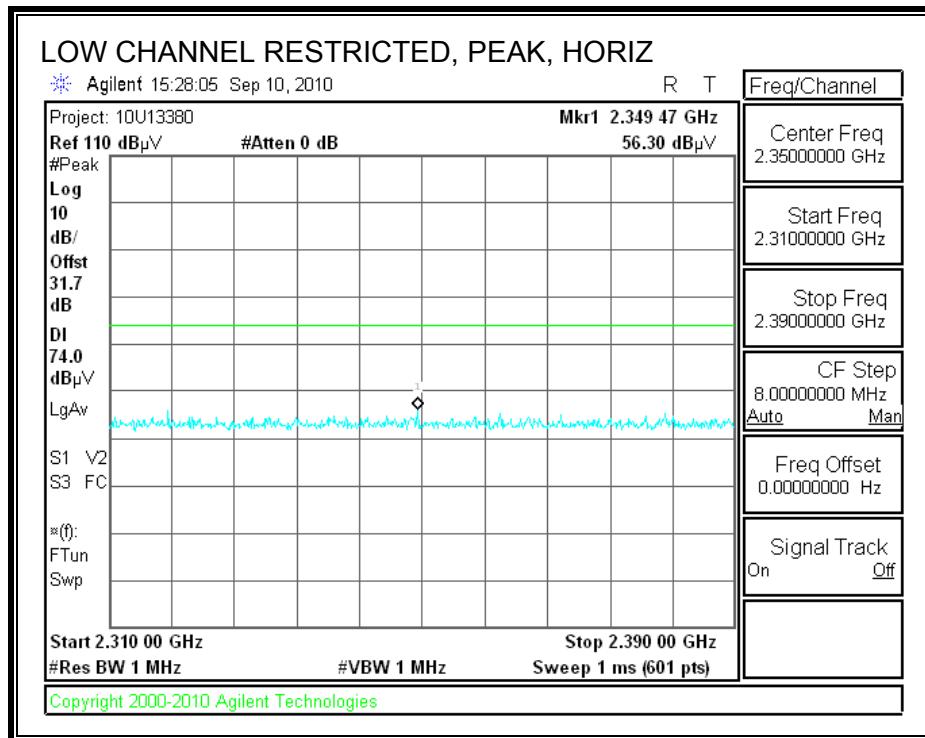
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

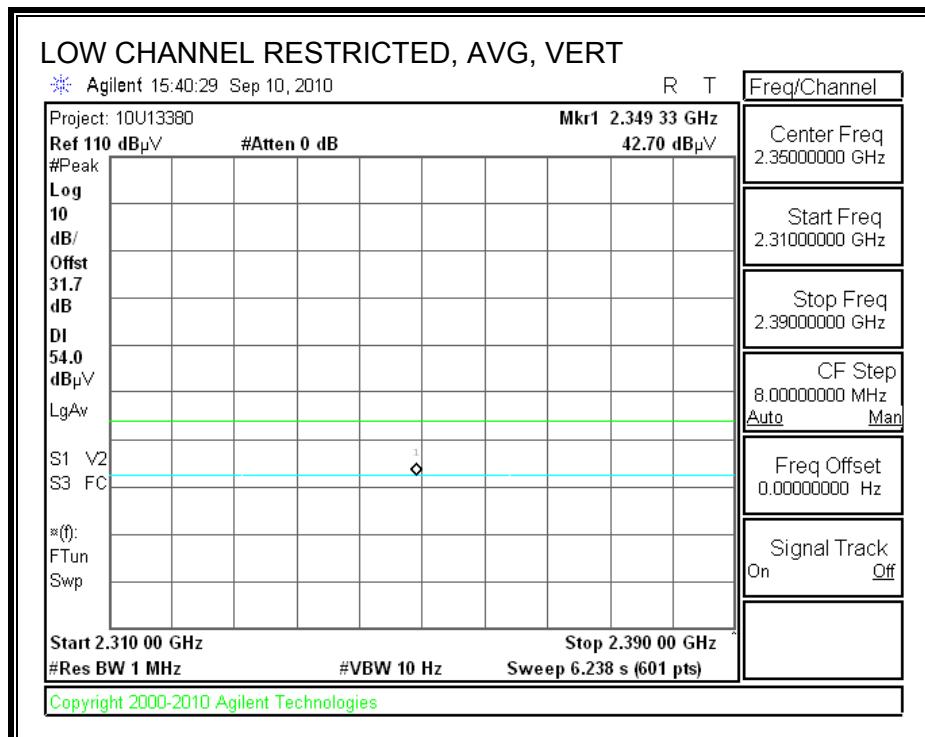
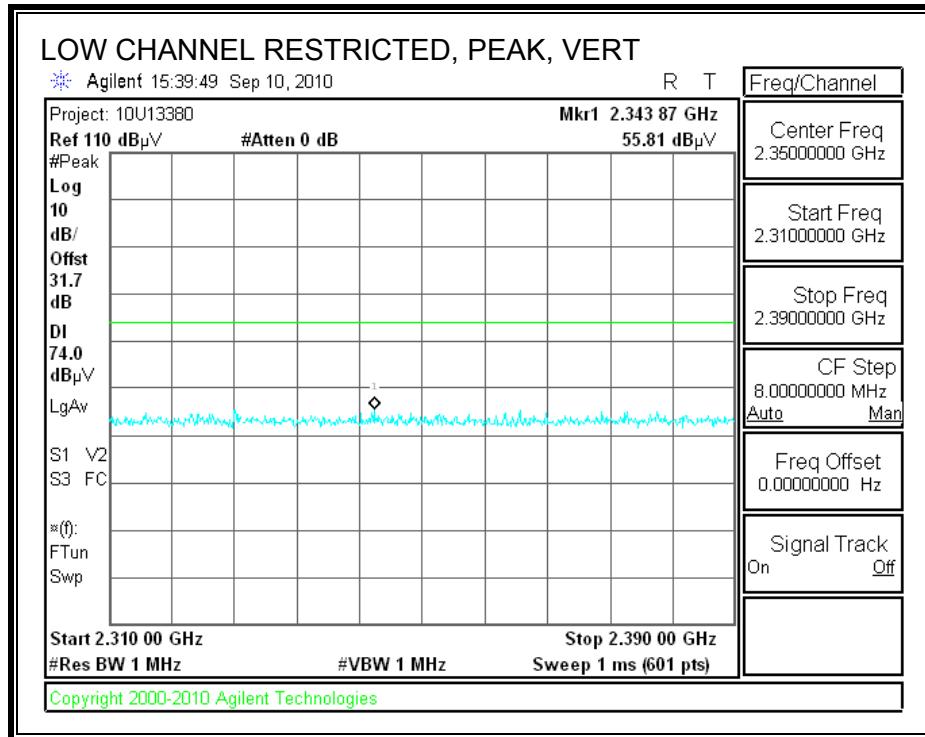
8.2. TRANSMITTER ABOVE 1 GHz, EUT WITH INDUCTIVE BACKCOVER

8.2.1. 802.11b MODE

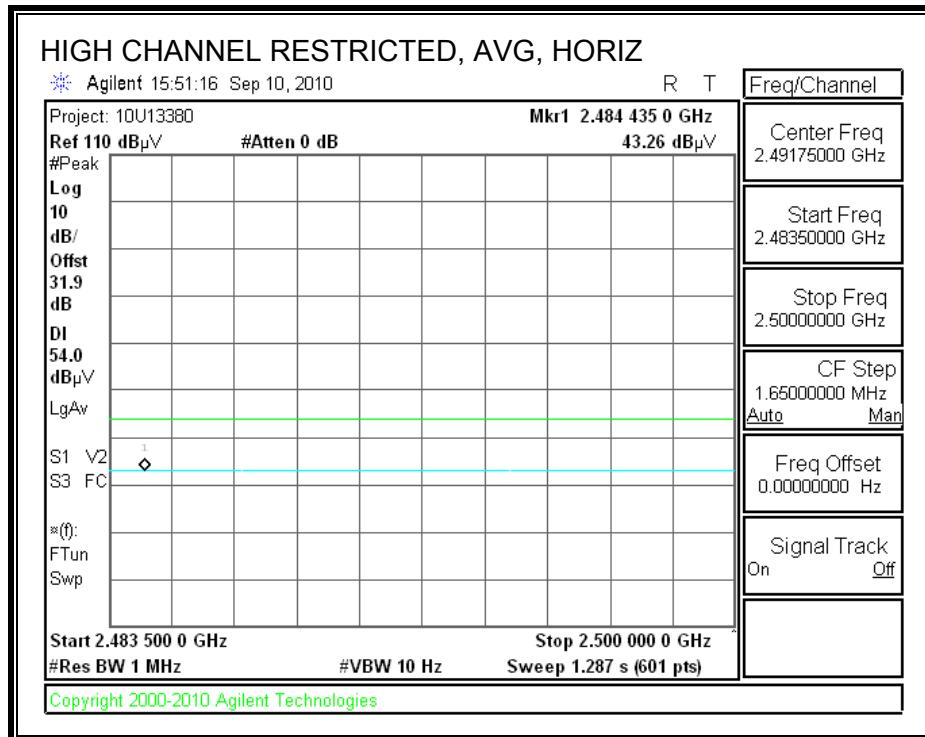
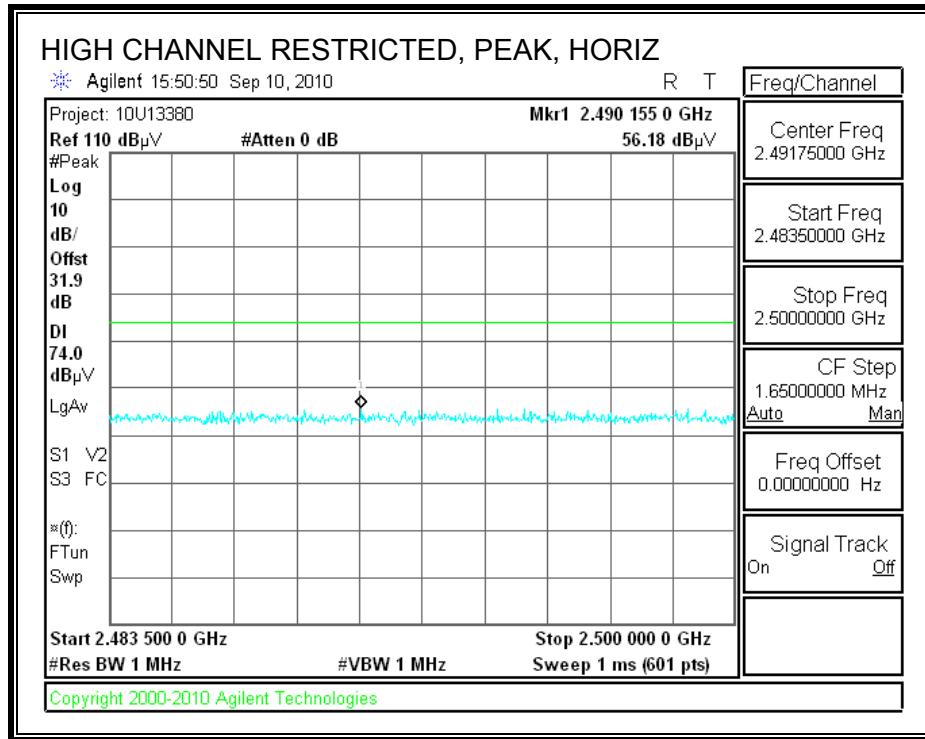
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



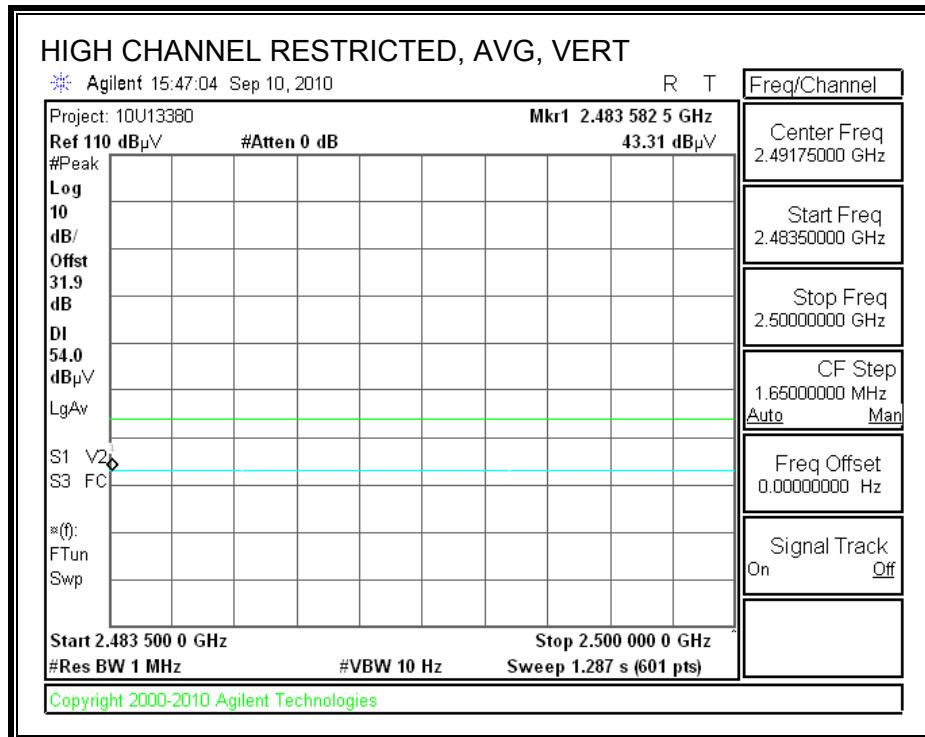
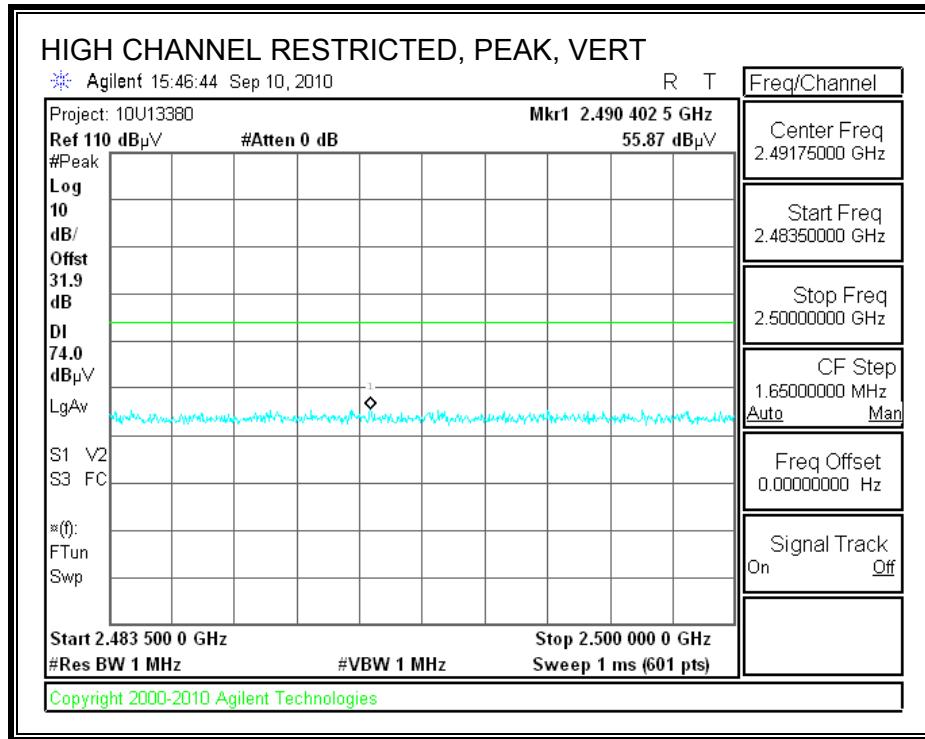
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE BACKCOVER

HARMONICS AND SPURIOUS EMISSIONS

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

Test Engr: Tom Chen
Date: 09/13/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: 802.11b, TX mode

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2412MHz Low CH													
4.824	3.0	38.8	33.0	5.8	-36.5	0.0	0.0	41.2	74.0	-32.8	H	P	
4.824	3.0	26.3	33.0	5.8	-36.5	0.0	0.0	28.7	54.0	-25.3	H	A	
4.824	3.0	40.0	33.0	5.8	-36.5	0.0	0.0	42.4	74.0	-31.6	V	P	
4.824	3.0	26.3	33.0	5.8	-36.5	0.0	0.0	28.6	54.0	-25.4	V	A	
2437MHz Mid CH													
4.874	3.0	38.0	33.1	5.8	-36.5	0.0	0.0	40.5	74.0	-33.5	V	P	
4.874	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.1	54.0	-25.9	V	A	
7.311	3.0	38.2	35.3	7.3	-36.2	0.0	0.0	44.5	74.0	-29.5	V	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2437MHz Mid CH													
4.874	3.0	39.1	33.1	5.8	-36.5	0.0	0.0	41.5	74.0	-32.5	H	P	
4.874	3.0	25.7	33.1	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	H	A	
7.311	3.0	38.2	35.3	7.3	-36.2	0.0	0.0	44.5	74.0	-29.5	H	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.8	54.0	-22.2	H	A	
2462MHz High CH													
4.924	3.0	38.1	33.1	5.9	-36.5	0.0	0.0	40.7	74.0	-33.3	V	P	
4.924	3.0	26.2	33.1	5.9	-36.5	0.0	0.0	28.8	54.0	-25.2	V	A	
7.386	3.0	37.3	35.4	7.3	-36.2	0.0	0.0	43.8	74.0	-30.2	V	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2462MHz High CH													
4.924	3.0	38.9	33.1	5.9	-36.5	0.0	0.0	41.4	74.0	-32.6	H	P	
4.924	3.0	26.1	33.1	5.9	-36.5	0.0	0.0	28.7	54.0	-25.3	H	A	
7.386	3.0	37.5	35.4	7.3	-36.2	0.0	0.0	44.0	74.0	-30.0	H	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	

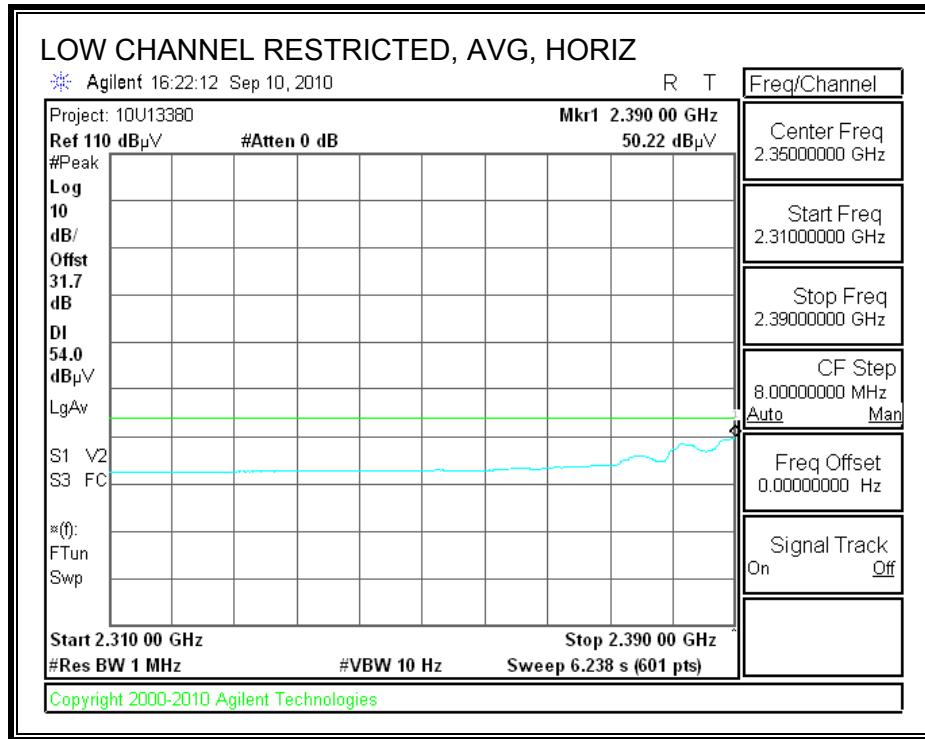
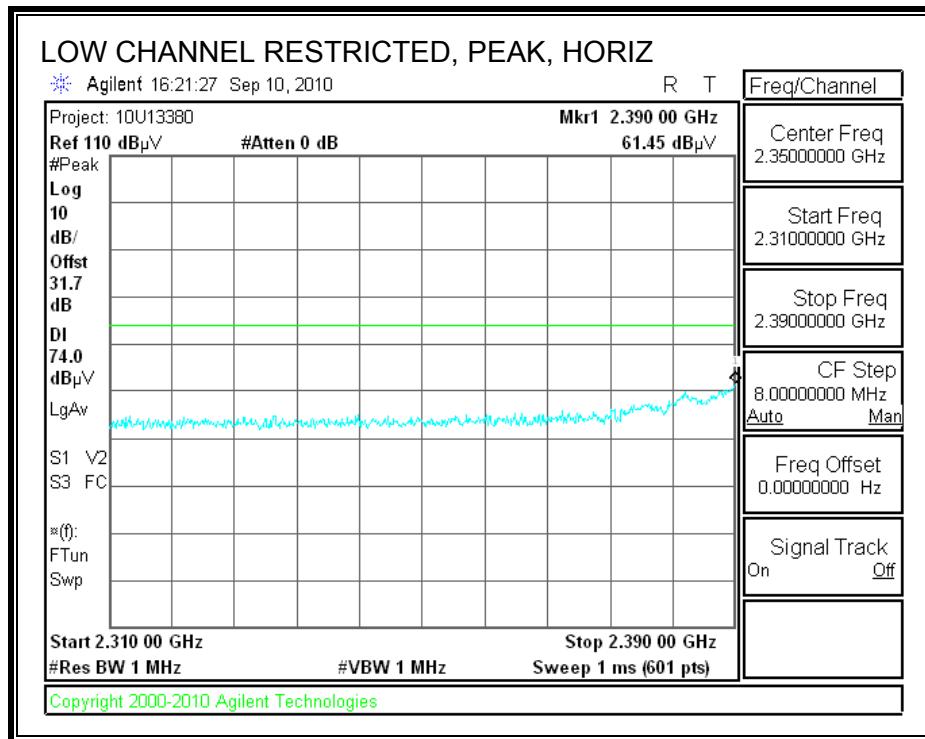
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

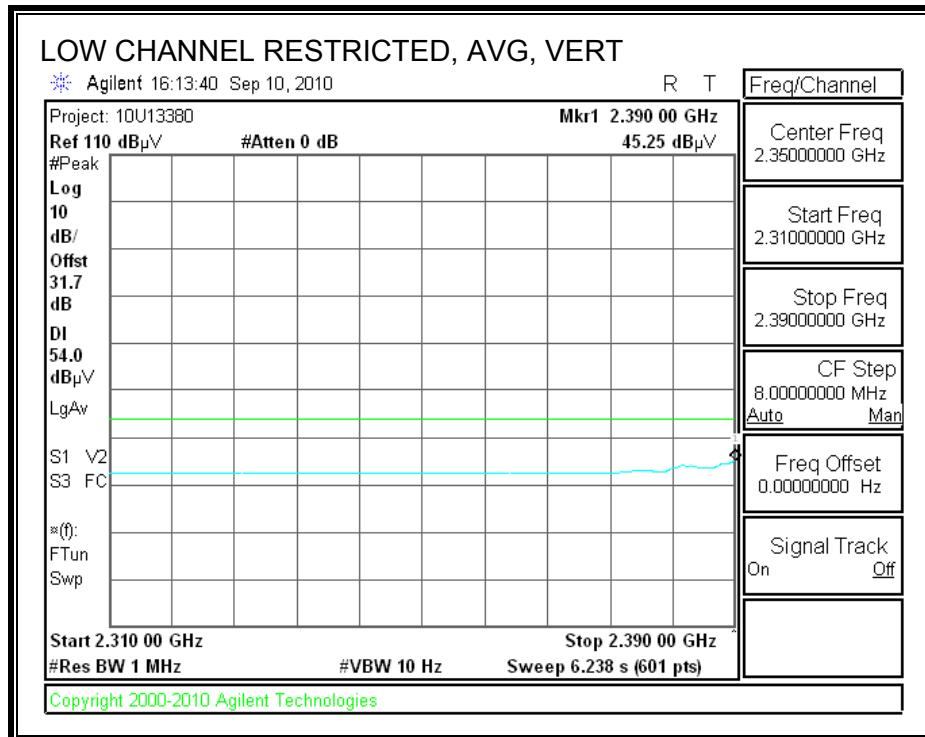
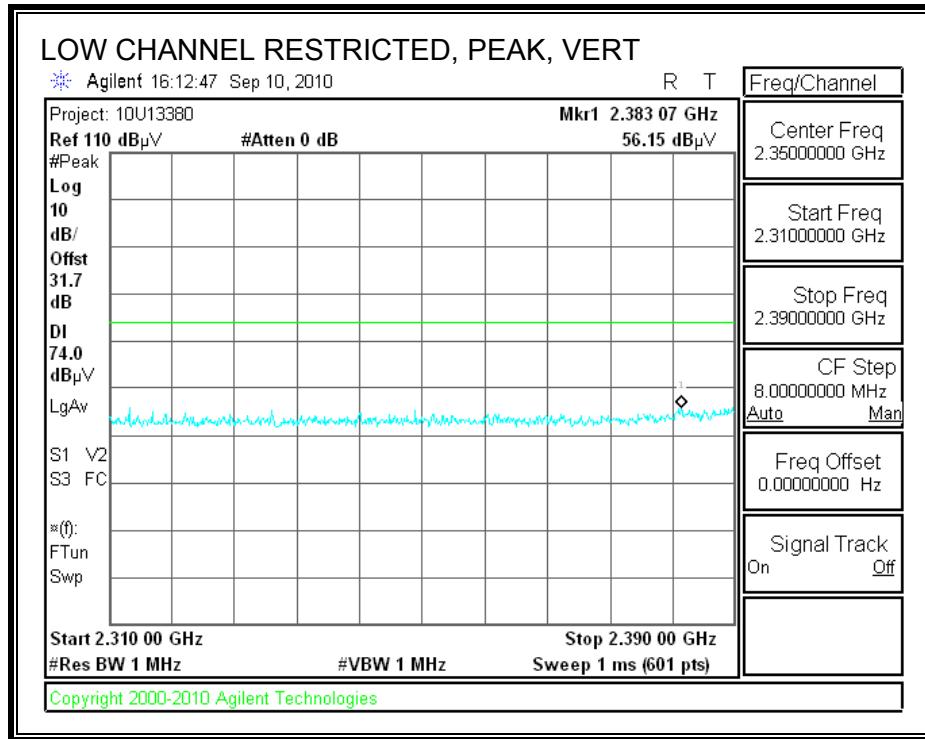
8.2.2. 802.11g MODE

EUT WITH INDUCTIVE BACKCOVER

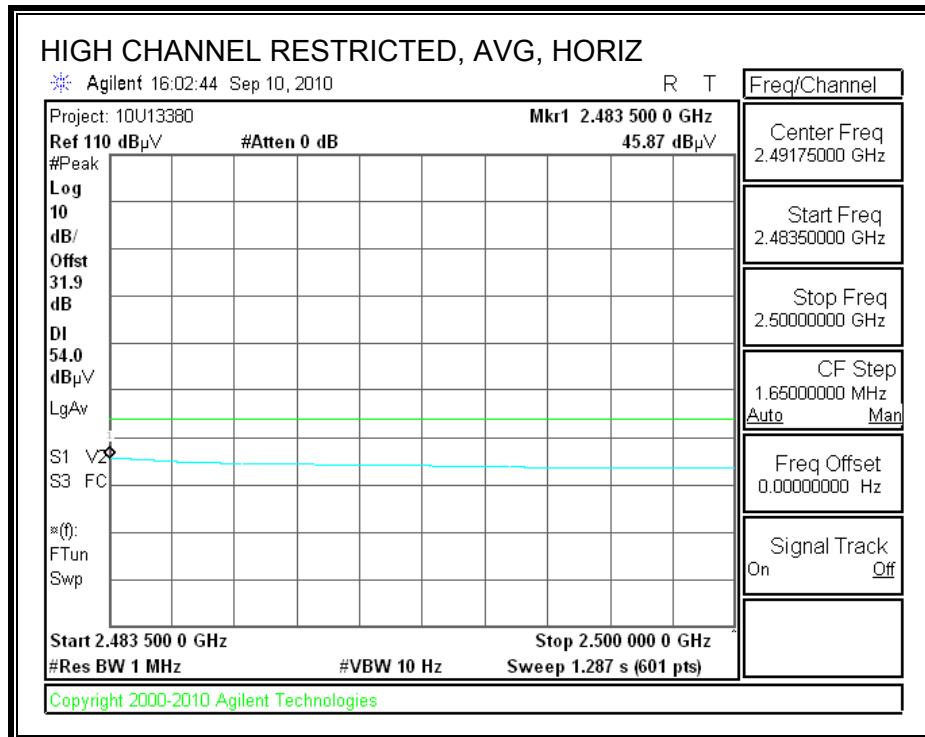
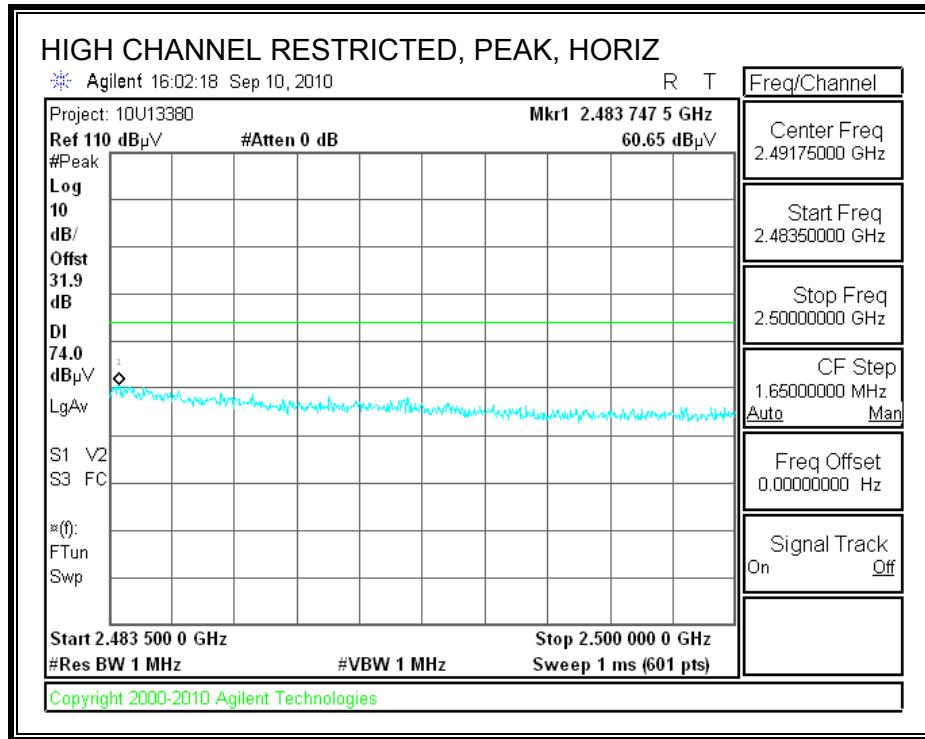
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



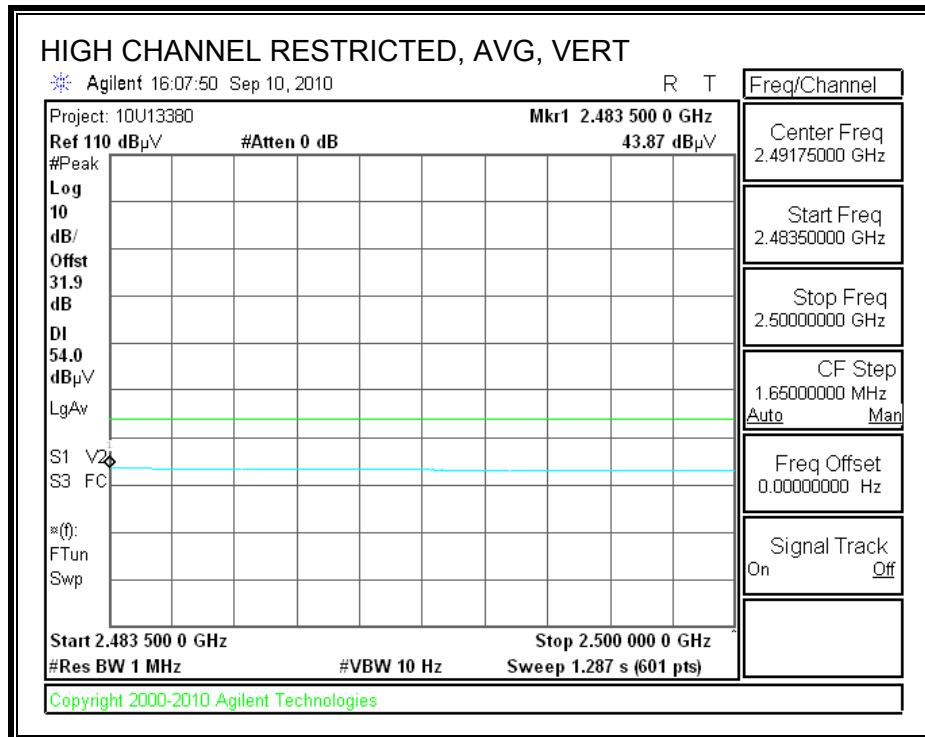
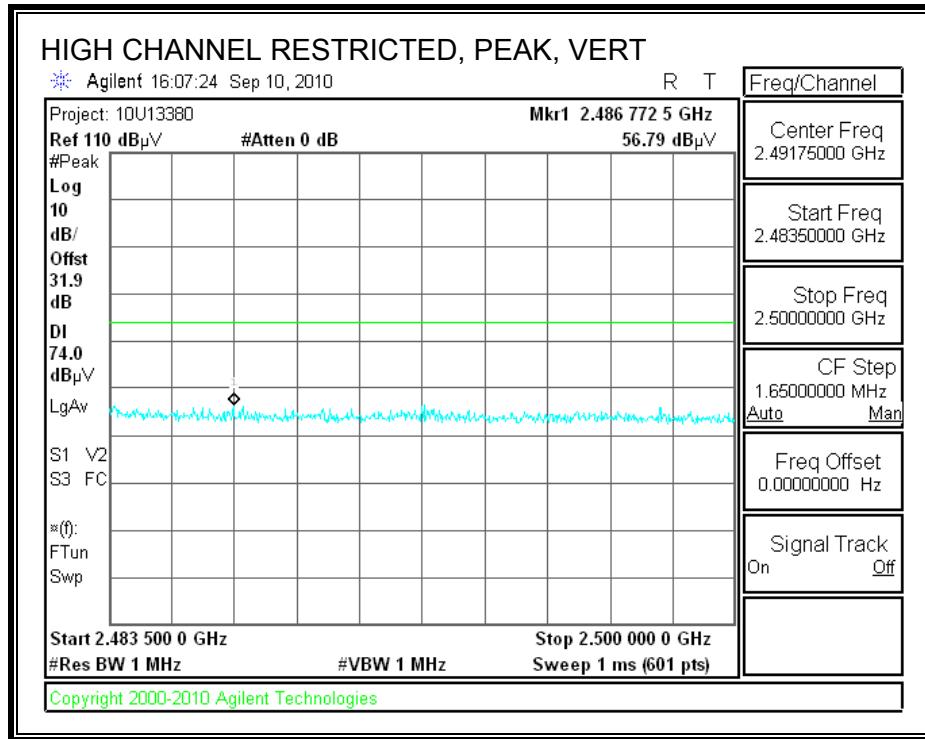
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE BACKCOVER

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/13/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: 802.11g, TX mode

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant Pol. V/H	Det. P/A/QP	Notes
2412MHz Low CH													
4.824	3.0	38.8	33.0	5.8	-36.5	0.0	0.0	41.1	74.0	-32.9	H	P	
4.824	3.0	26.1	33.0	5.8	-36.5	0.0	0.0	28.5	54.0	-25.5	H	A	
7.236	3.0	37.7	35.2	7.2	-36.2	0.0	0.0	43.9	74.0	-30.1	H	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	H	A	
2412MHz Mid CH													
4.824	3.0	38.4	33.0	5.8	-36.5	0.0	0.0	40.8	74.0	-33.2	V	P	
4.824	3.0	26.1	33.0	5.8	-36.5	0.0	0.0	28.5	54.0	-25.5	V	A	
7.236	3.0	37.7	35.2	7.2	-36.2	0.0	0.0	43.9	74.0	-30.1	V	P	
7.236	3.0	25.0	35.2	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	V	A	
2437MHz Mid CH													
4.874	3.0	37.9	33.1	5.8	-36.5	0.0	0.0	40.4	74.0	-33.6	V	P	
4.874	3.0	25.5	33.1	5.8	-36.5	0.0	0.0	28.0	54.0	-26.0	V	A	
7.311	3.0	38.3	35.3	7.3	-36.2	0.0	0.0	44.7	74.0	-29.3	V	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2437MHz High CH													
4.874	3.0	37.9	33.1	5.8	-36.5	0.0	0.0	40.4	74.0	-33.6	H	P	
4.874	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.0	54.0	-26.0	H	A	
7.311	3.0	38.4	35.3	7.3	-36.2	0.0	0.0	44.7	74.0	-29.3	H	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2462 MHz High CH													
4.924	3.0	38.2	33.1	5.9	-36.5	0.0	0.0	40.8	74.0	-33.3	H	P	
4.924	3.0	26.0	33.1	5.9	-36.5	0.0	0.0	28.5	54.0	-25.5	H	A	
7.386	3.0	38.0	35.4	7.3	-36.2	0.0	0.0	44.5	74.0	-29.5	H	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2462 MHz High CH													
4.924	3.0	38.4	33.1	5.9	-36.5	0.0	0.0	40.9	74.0	-33.1	V	P	
4.924	3.0	26.0	33.1	5.9	-36.5	0.0	0.0	28.5	54.0	-25.5	V	A	
7.386	3.0	37.3	35.4	7.3	-36.2	0.0	0.0	43.8	74.0	-30.2	V	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	

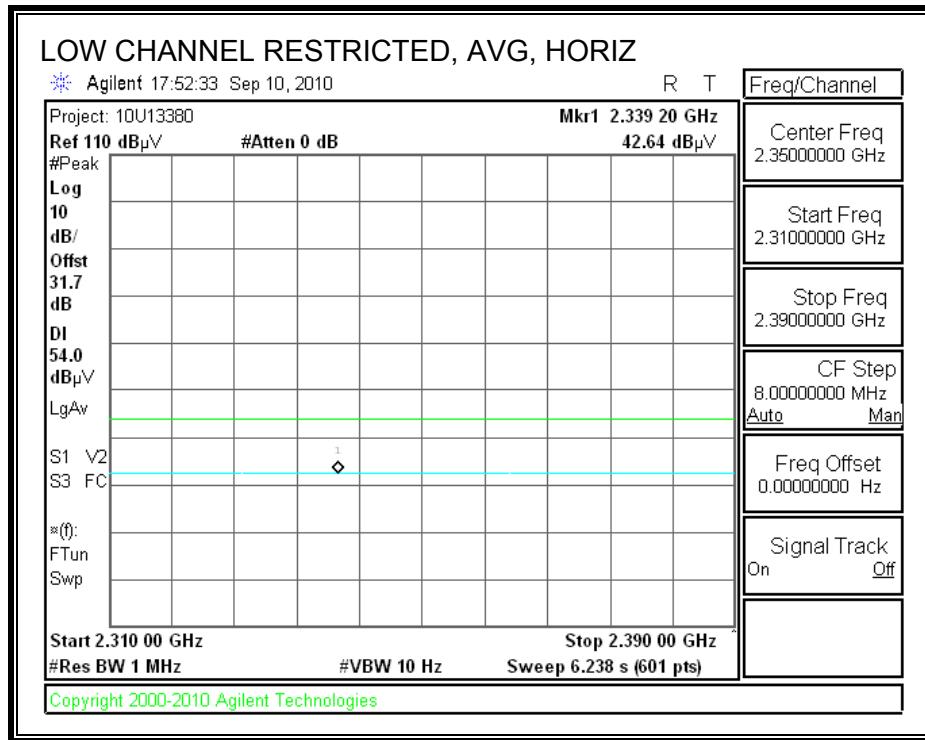
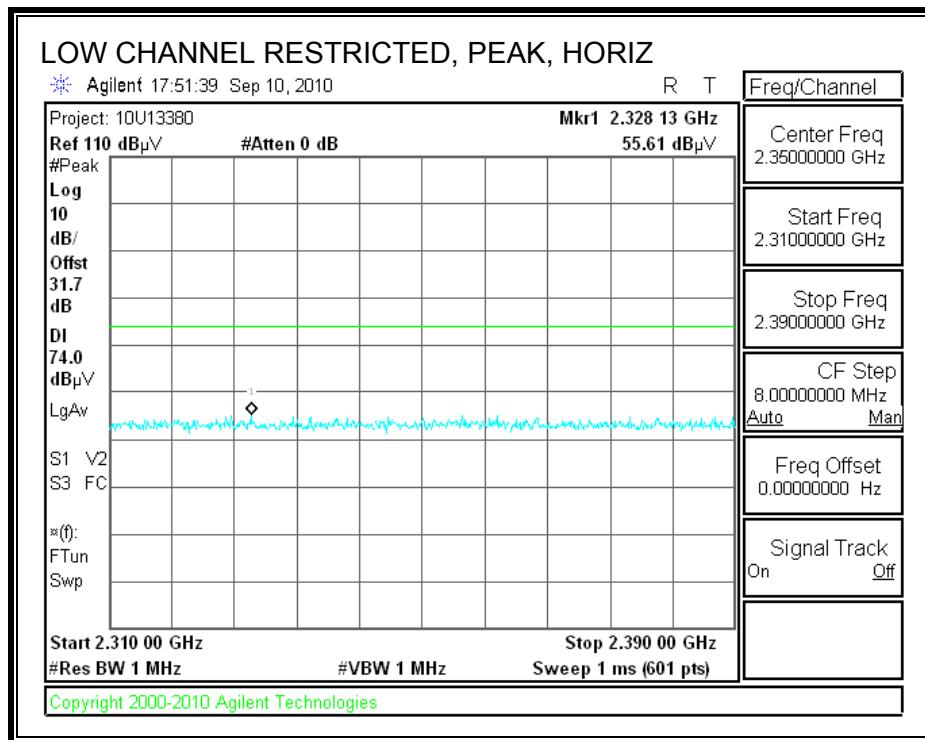
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

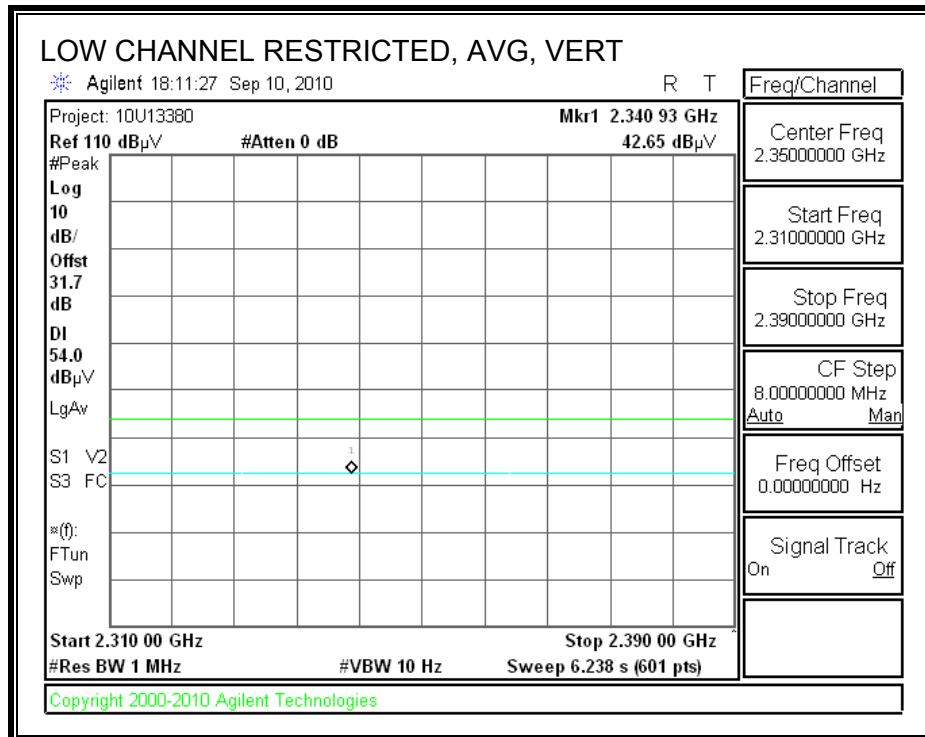
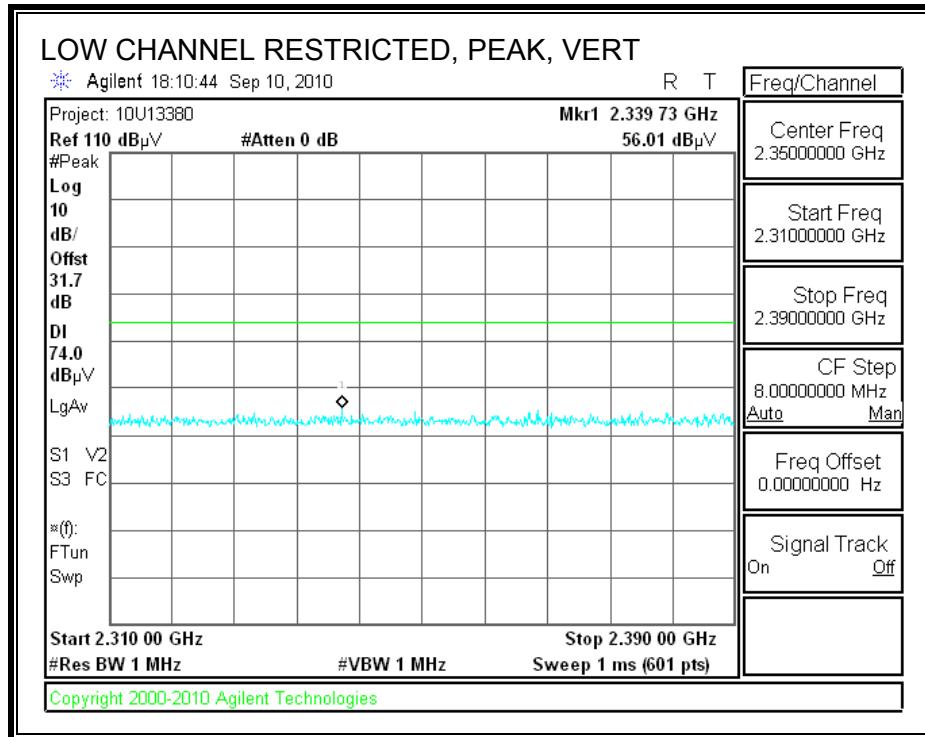
8.2.3. BLUETOOTH GFSK MODE

EUT WITH INDUCTIVE BACKCOVER

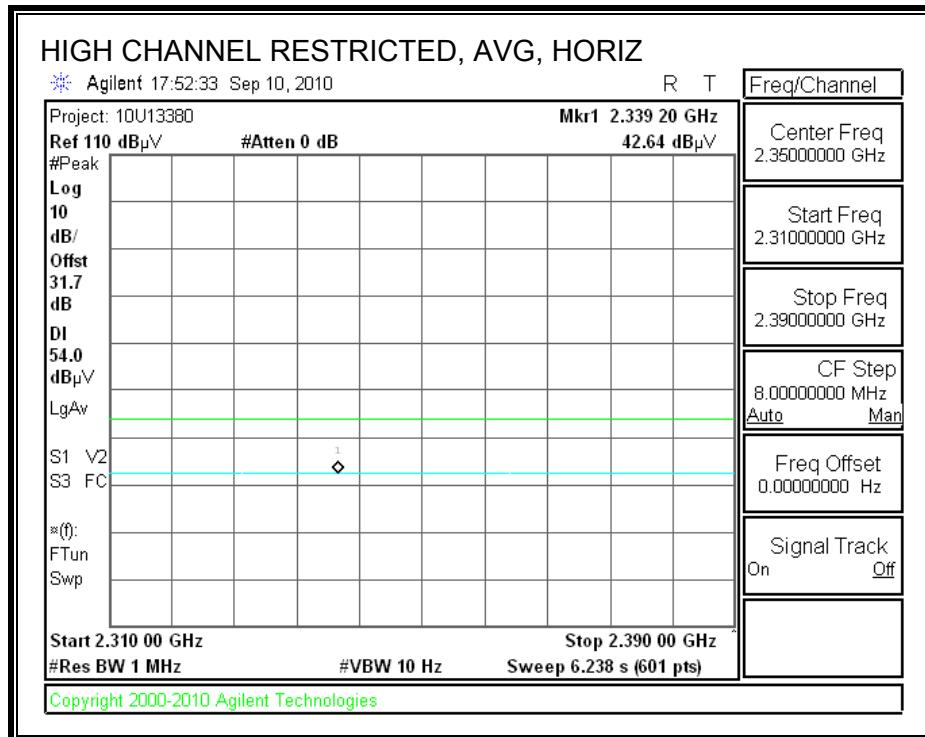
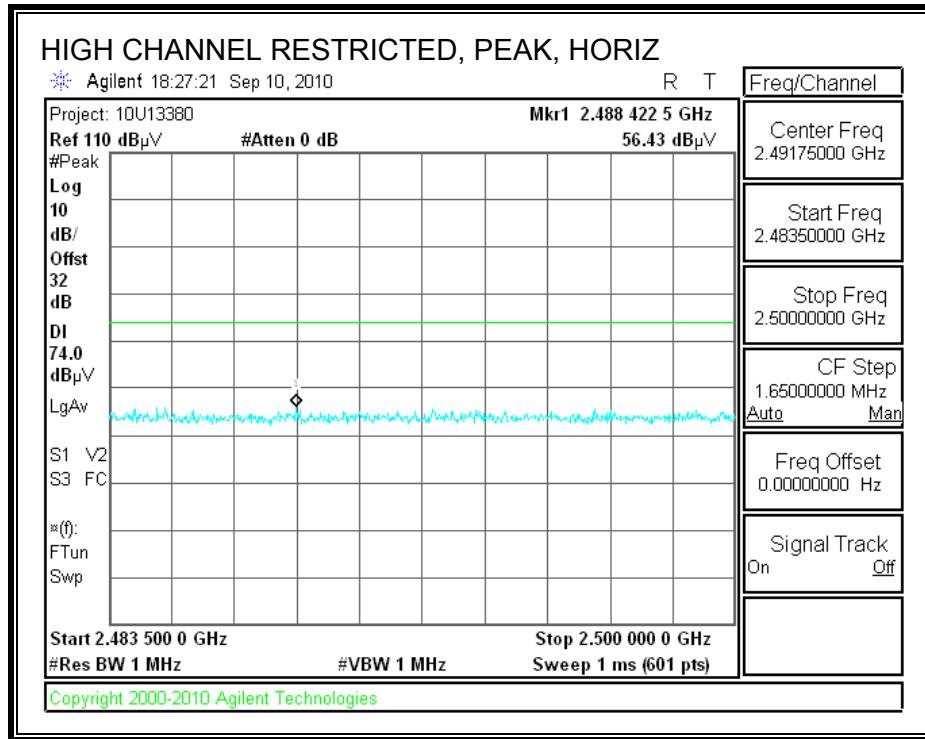
RESTRICTED BANEDGE (LOW CHANNEL, HORIZONTAL)



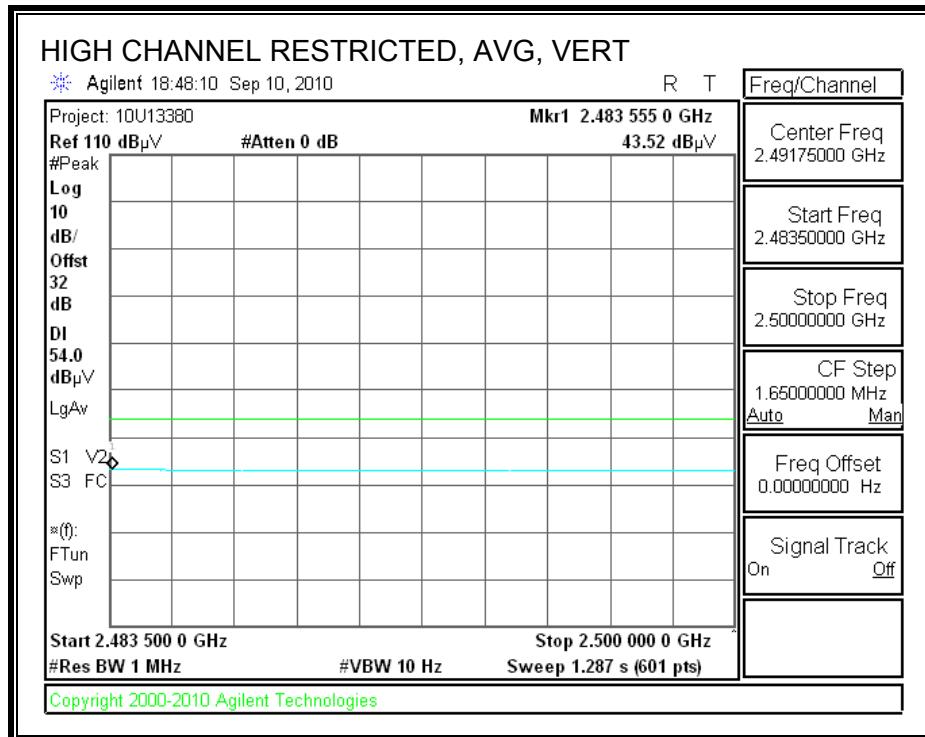
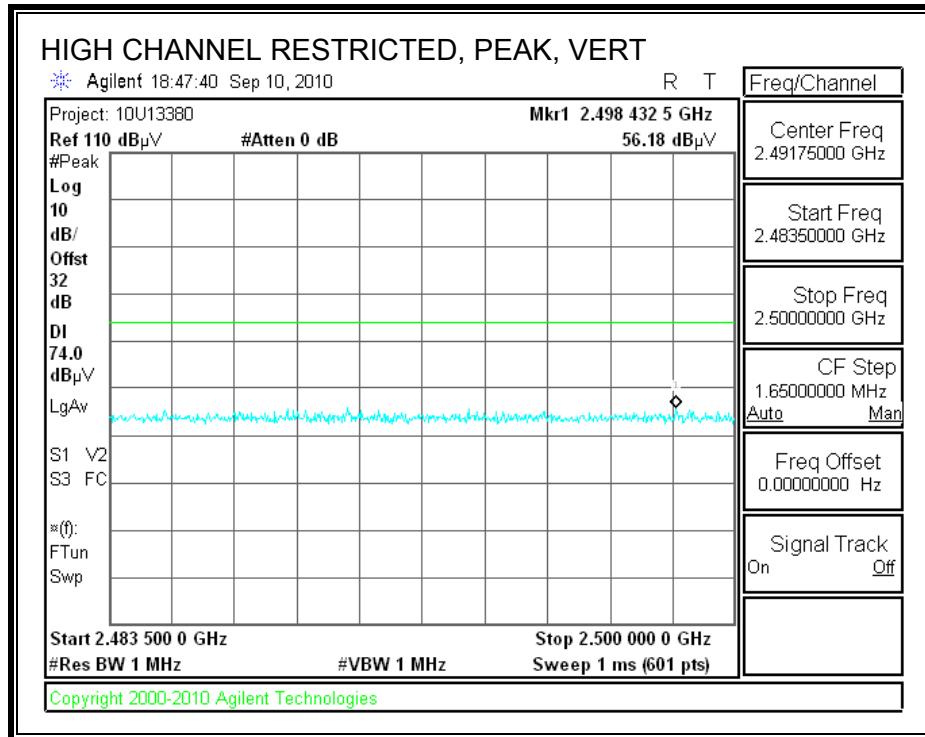
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE BACKCOVER

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber													
Test Engr:		Tom Chen											
Date:	09/13/10	Project #:	10U13380	Company:	Palm	Test Target:	FCC Class B	Mode Oper:	BT GFSK, TX mode				
f	Measurement Frequency	Amp	Preamp Gain							Average Field Strength Limit			
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters							Peak Field Strength Limit			
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m							Margin vs. Average Limit			
AF	Antenna Factor	Peak	Calculated Peak Field Strength							Margin vs. Peak Limit			
CL	Cable Loss	HPF	High Pass Filter										
f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2402 MHz Low CH													
4.804	3.0	38.0	33.0	5.8	-36.5	0.0	0.0	40.3	74.0	-33.7	V	P	
4.804	3.0	26.3	33.0	5.8	-36.5	0.0	0.0	28.6	54.0	-25.4	V	A	
7.206	3.0	37.8	35.1	7.2	-36.2	0.0	0.0	43.9	74.0	-30.1	V	P	
7.206	3.0	25.3	35.1	7.2	-36.2	0.0	0.0	31.4	54.0	-22.6	V	A	
2402 MHz Low CH													
4.804	3.0	38.4	33.0	5.8	-36.5	0.0	0.0	40.8	74.0	-33.2	H	P	
4.804	3.0	26.3	33.0	5.8	-36.5	0.0	0.0	28.6	54.0	-25.4	H	A	
7.206	3.0	38.0	35.1	7.2	-36.2	0.0	0.0	44.1	74.0	-29.9	H	P	
7.206	3.0	25.3	35.1	7.2	-36.2	0.0	0.0	31.4	54.0	-22.6	H	A	
2441 MHz Mid CH													
4.882	3.0	38.9	33.1	5.8	-36.5	0.0	0.0	41.4	74.0	-32.6	V	P	
4.882	3.0	26.0	33.1	5.8	-36.5	0.0	0.0	28.5	54.0	-25.5	V	A	
7.323	3.0	38.2	35.3	7.3	-36.2	0.0	0.0	44.6	74.0	-29.4	V	P	
7.323	3.0	25.5	35.3	7.3	-36.2	0.0	0.0	31.8	54.0	-22.2	V	A	
2441 MHz Mid CH													
4.882	3.0	38.6	33.1	5.8	-36.5	0.0	0.0	41.1	74.0	-32.9	H	P	
4.882	3.0	26.1	33.1	5.8	-36.5	0.0	0.0	28.5	54.0	-25.5	H	A	
7.323	3.0	37.7	35.3	7.3	-36.2	0.0	0.0	44.1	74.0	-29.9	H	P	
7.323	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.8	54.0	-22.2	H	A	
2480 MHz High CH													
4.960	3.0	38.1	33.2	5.9	-36.5	0.0	0.0	40.7	74.0	-33.3	V	P	
4.960	3.0	25.3	33.2	5.9	-36.5	0.0	0.0	27.9	54.0	-26.1	V	A	
7.440	3.0	36.4	35.5	7.3	-36.2	0.0	0.0	43.1	74.0	-30.9	V	P	
7.440	3.0	24.8	35.5	7.3	-36.2	0.0	0.0	31.4	54.0	-22.6	V	A	
2480 MHz High CH													
4.960	3.0	37.8	33.2	5.9	-36.5	0.0	0.0	40.4	74.0	-33.6	H	P	
4.960	3.0	25.2	33.2	5.9	-36.5	0.0	0.0	27.8	54.0	-26.2	H	A	
7.440	3.0	37.0	35.5	7.3	-36.2	0.0	0.0	43.6	74.0	-30.4	H	P	
7.440	3.0	24.8	35.5	7.3	-36.2	0.0	0.0	31.4	54.0	-22.6	H	A	

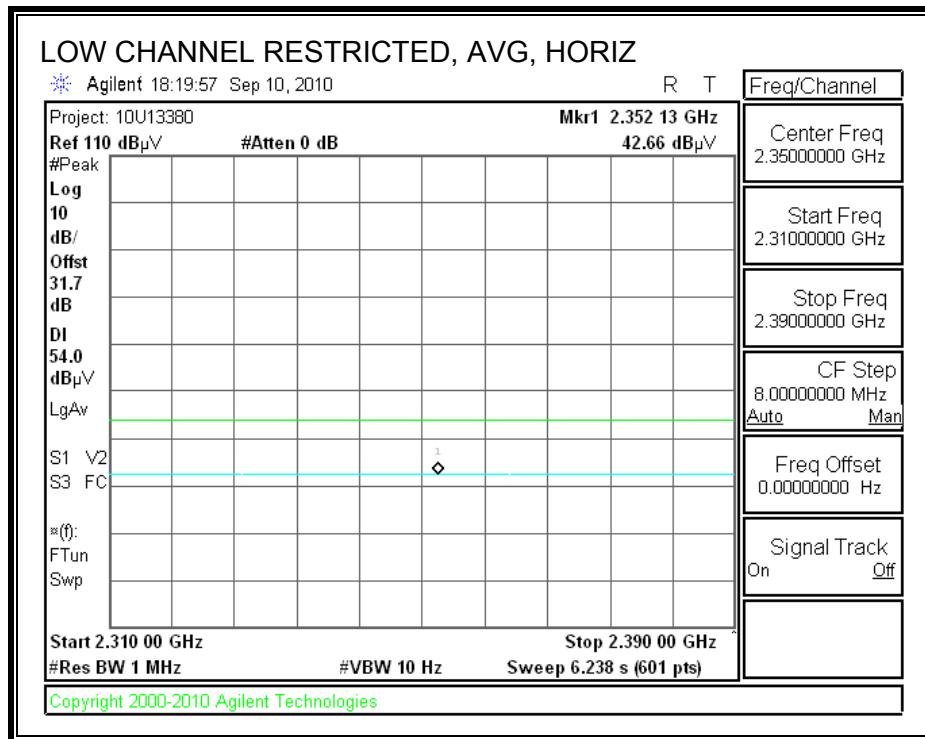
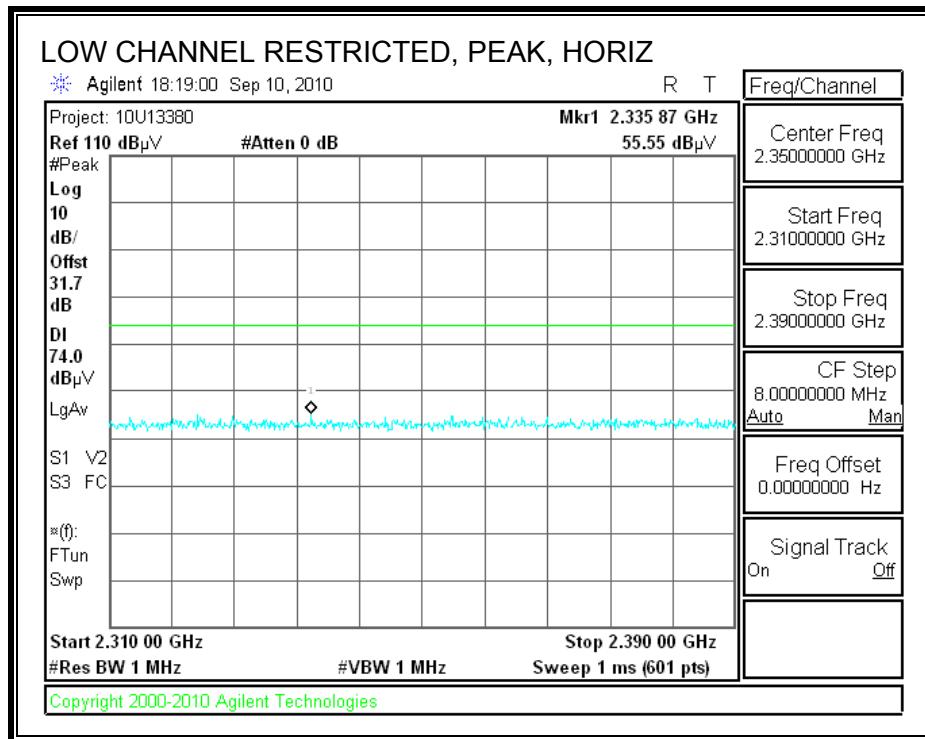
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

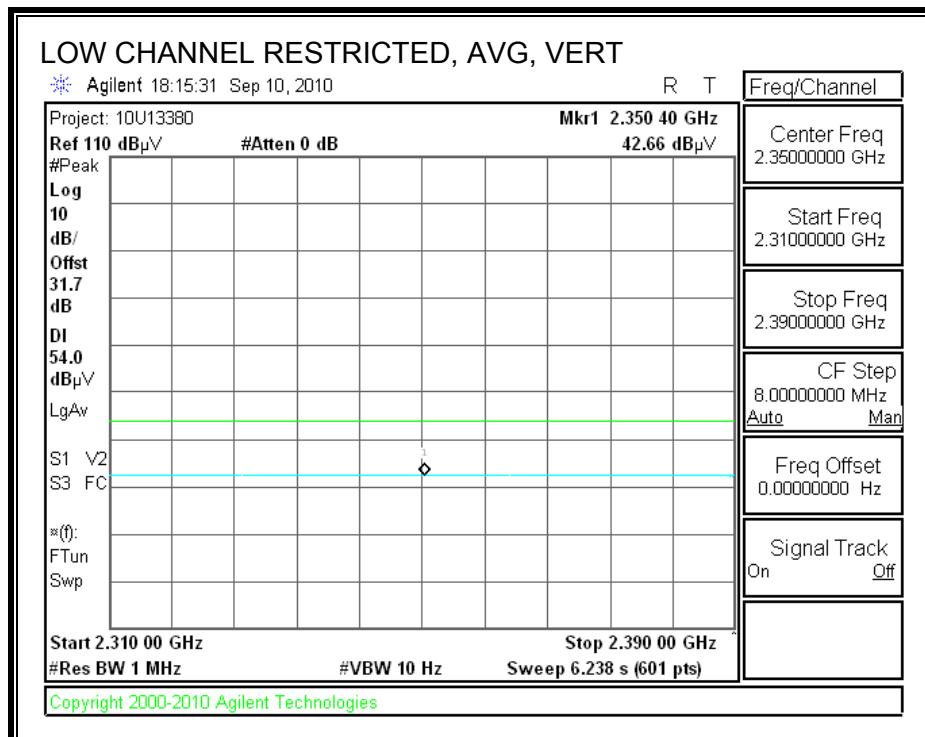
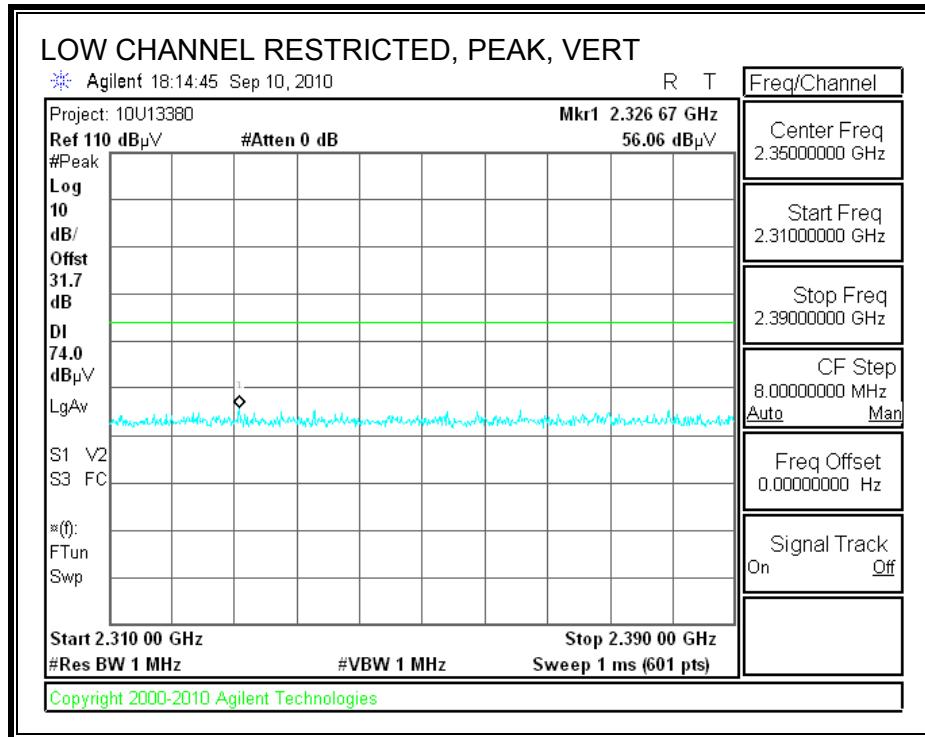
8.2.4. BLUETOOTH 8PSK MODE

EUT WITH INDUCTIVE BACKCOVER

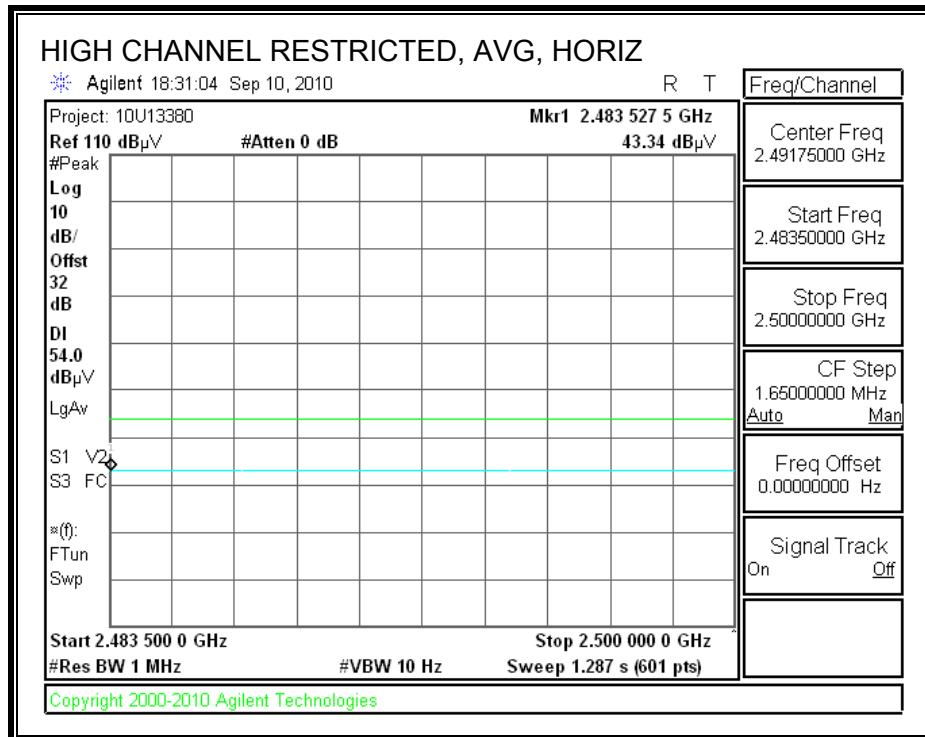
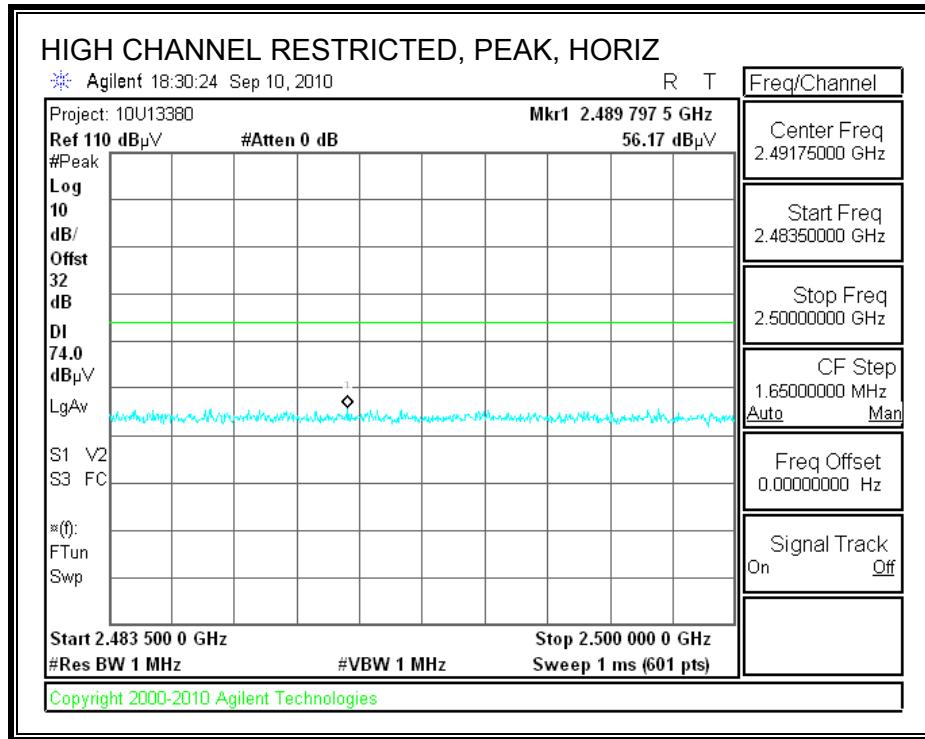
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



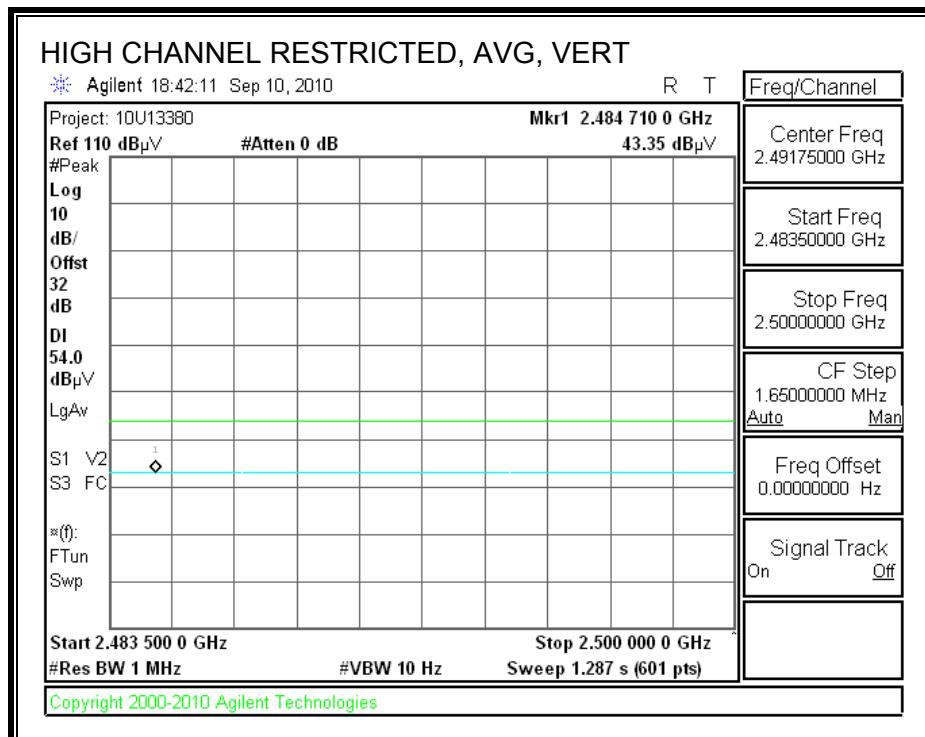
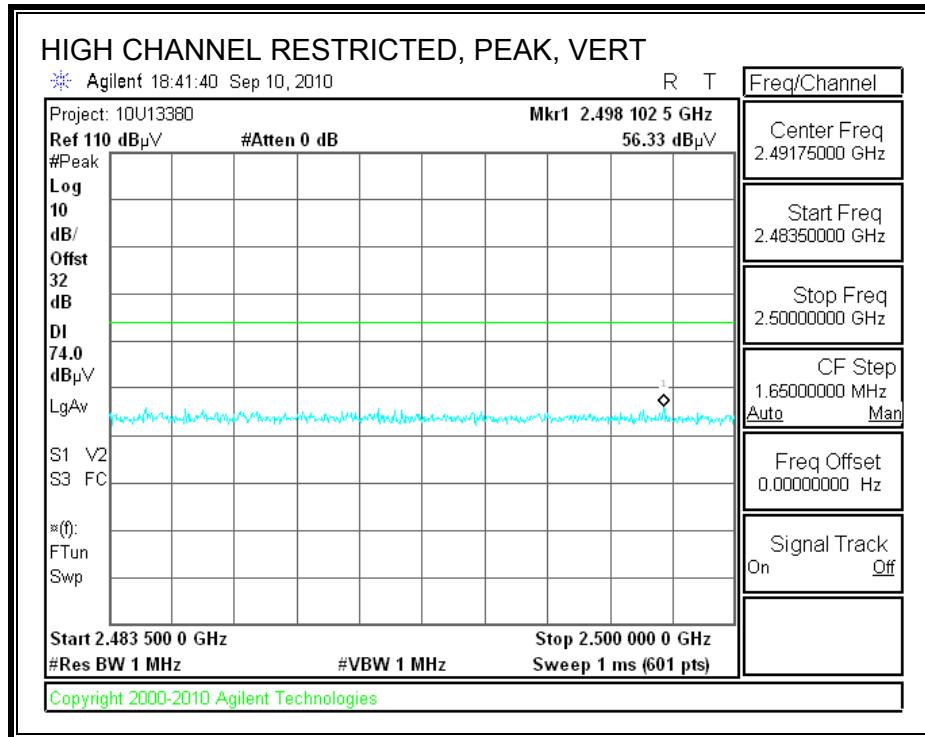
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE BACKCOVER

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber													
Test Engr:	Tom Chen												
Date:	09/15/10												
Project #:	10U13380												
Company:	Palm												
Test Target:	FCC Class B												
Mode Oper:	BT 8PSK, TX mode												
f	Measurement Frequency	Amp	Preamp Gain										Average Field Strength Limit
Dist	Distance to Antenna	D	Corr	Distance Correct to 3 meters									Peak Field Strength Limit
Read	Analyzer Reading	Avg		Average Field Strength @ 3 m									Margin vs. Average Limit
AF	Antenna Factor	Peak		Calculated Peak Field Strength									Margin vs. Peak Limit
CL	Cable Loss	HPF		High Pass Filter									
f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2402 MHz Low CH													
4.804	3.0	38.3	33.0	5.8	-36.5	0.0	0.0	40.6	74.0	-33.4	H	P	
4.804	3.0	26.0	33.0	5.8	-36.5	0.0	0.0	28.4	54.0	-25.6	H	A	
7.206	3.0	37.3	35.1	7.2	-36.2	0.0	0.0	43.4	74.0	-30.6	H	P	
7.206	3.0	25.3	35.1	7.2	-36.2	0.0	0.0	31.4	54.0	-22.6	H	A	
2402 MHz Low CH													
4.804	3.0	38.0	33.0	5.8	-36.5	0.0	0.0	40.3	74.0	-33.7	V	P	
4.804	3.0	25.8	33.0	5.8	-36.5	0.0	0.0	28.1	54.0	-25.9	V	A	
7.206	3.0	37.7	35.1	7.2	-36.2	0.0	0.0	43.8	74.0	-30.2	V	P	
7.206	3.0	25.3	35.1	7.2	-36.2	0.0	0.0	31.4	54.0	-22.6	V	A	
2441 MHz Mid CH													
4.882	3.0	38.0	33.1	5.8	-36.5	0.0	0.0	40.5	74.0	-33.5	V	P	
4.882	3.0	25.7	33.1	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	V	A	
7.323	3.0	37.2	35.3	7.3	-36.2	0.0	0.0	43.6	74.0	-30.4	V	P	
7.323	3.0	25.3	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2441 MHz Mid CH													
4.882	3.0	37.4	33.1	5.8	-36.5	0.0	0.0	39.9	74.0	-34.1	H	P	
4.882	3.0	25.4	33.1	5.8	-36.5	0.0	0.0	27.9	54.0	-26.1	H	A	
7.323	3.0	37.7	35.3	7.3	-36.2	0.0	0.0	44.1	74.0	-29.9	H	P	
7.323	3.0	25.3	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2480MHz High CH													
4.960	3.0	37.5	33.2	5.9	-36.5	0.0	0.0	40.1	74.0	-33.9	V	P	
4.960	3.0	25.2	33.2	5.9	-36.5	0.0	0.0	27.9	54.0	-26.1	V	A	
7.440	3.0	37.5	35.5	7.3	-36.2	0.0	0.0	44.2	74.0	-29.8	V	P	
7.440	3.0	24.9	35.5	7.3	-36.2	0.0	0.0	31.5	54.0	-22.5	V	A	
2480MHz High CH													
4.960	3.0	37.6	33.2	5.9	-36.5	0.0	0.0	40.3	74.0	-33.7	H	P	
4.960	3.0	25.3	33.2	5.9	-36.5	0.0	0.0	27.9	54.0	-26.1	H	A	
7.440	3.0	37.8	35.5	7.3	-36.2	0.0	0.0	44.5	74.0	-29.5	H	P	
7.440	3.0	24.8	35.5	7.3	-36.2	0.0	0.0	31.5	54.0	-22.5	H	A	

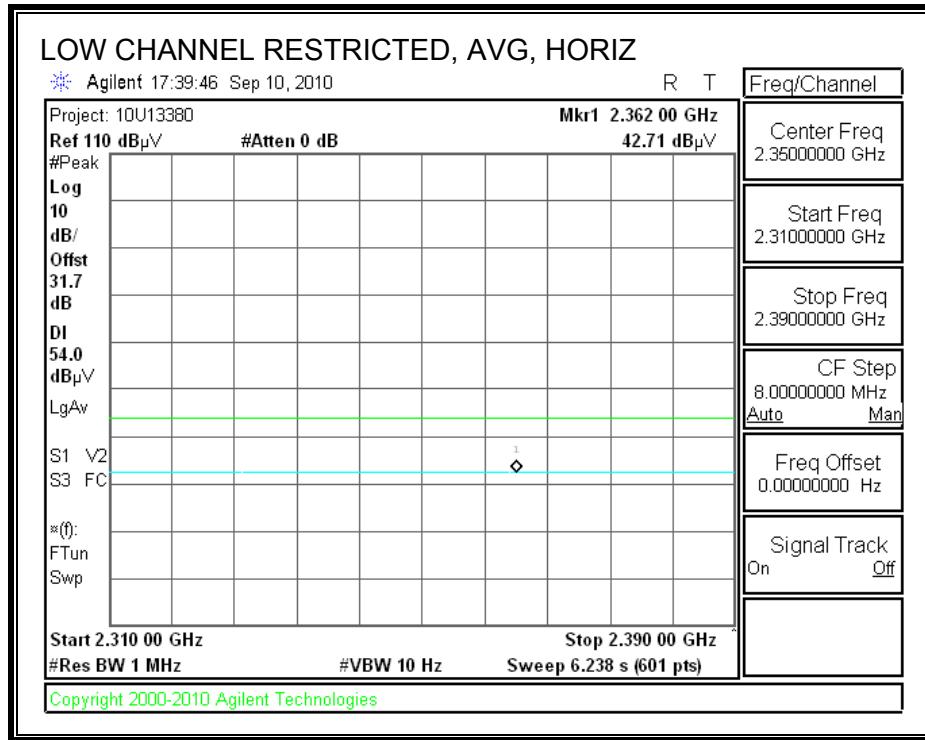
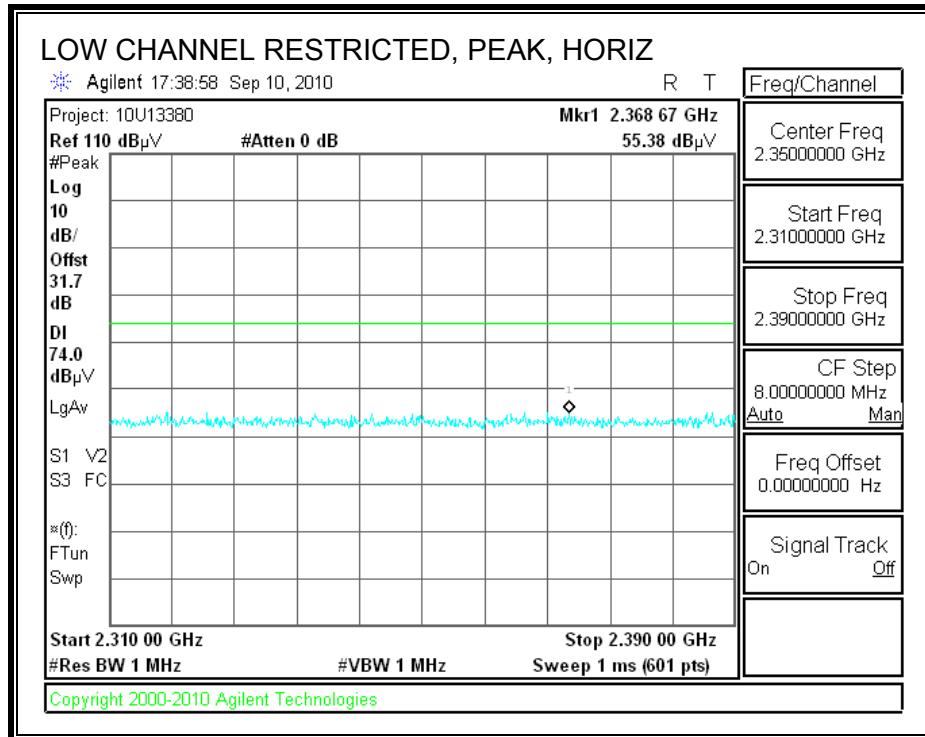
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

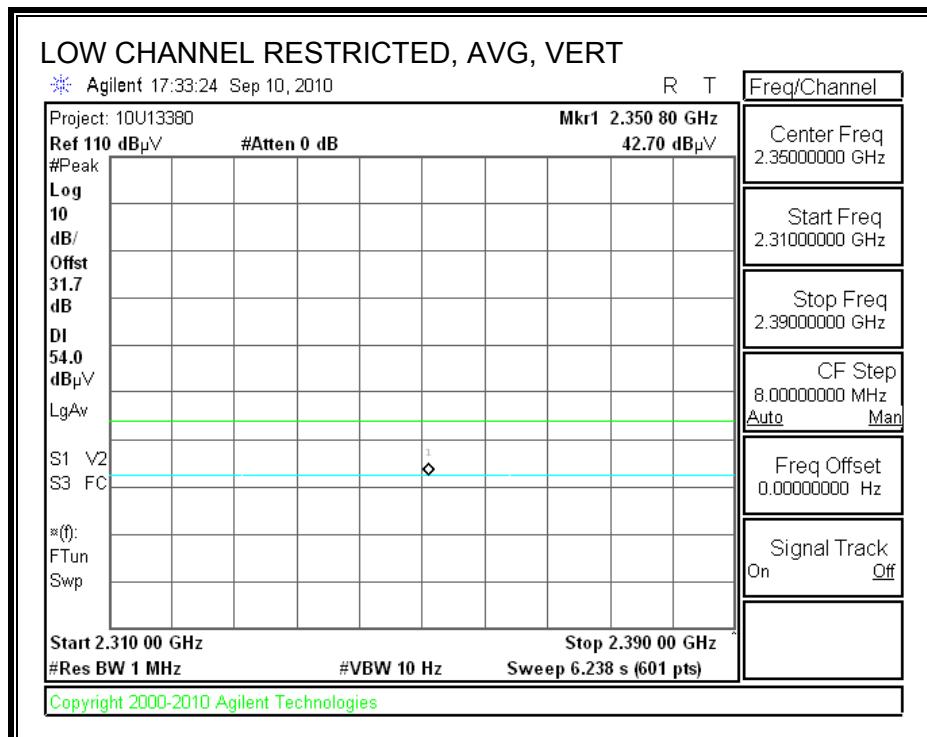
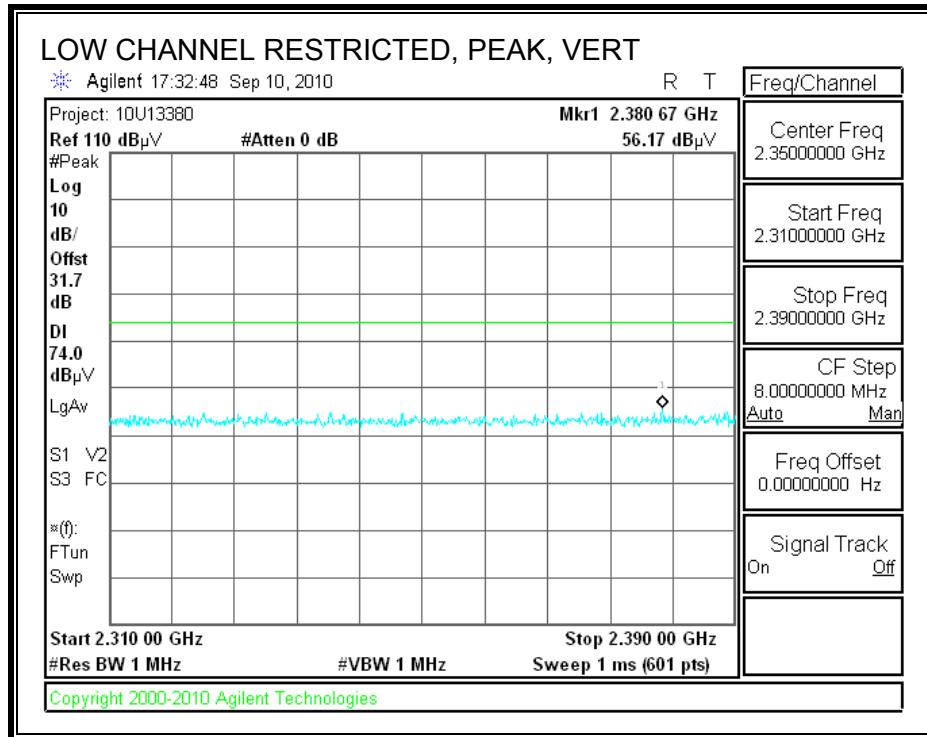
8.3. TRANSMITTER ABOVE 1 GHz, EUT WITH CHARGING DOCK

8.3.1. 802.11b MODE

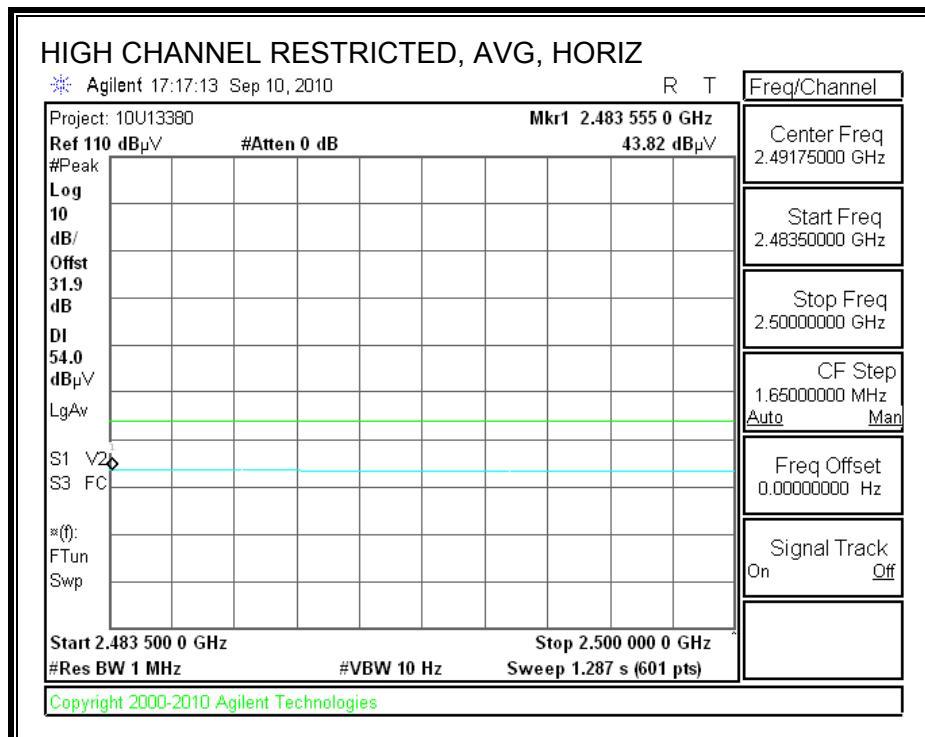
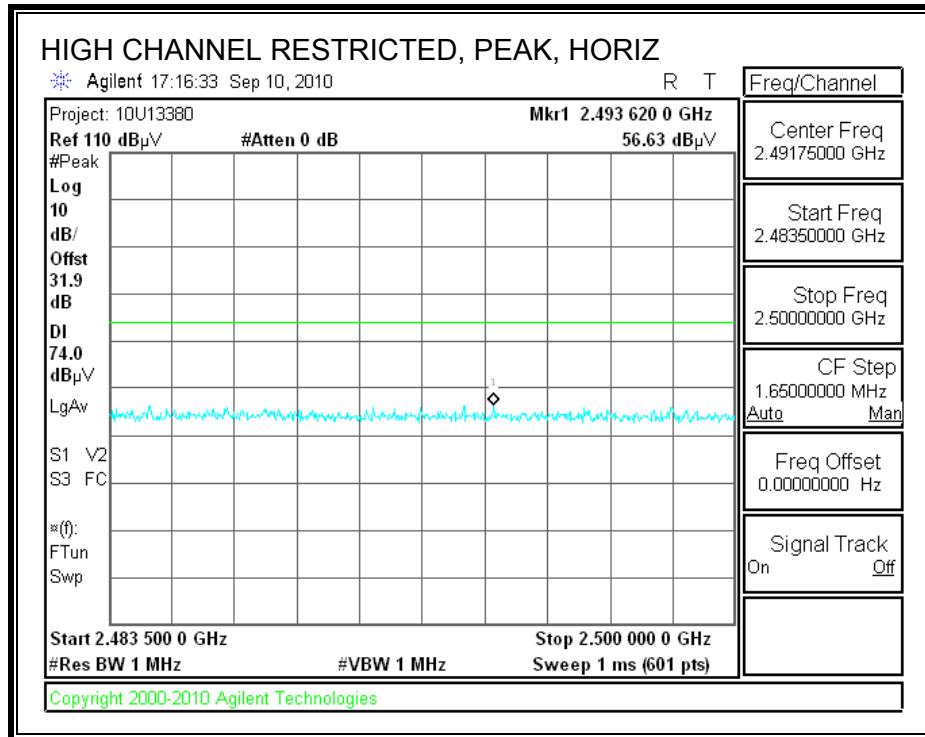
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



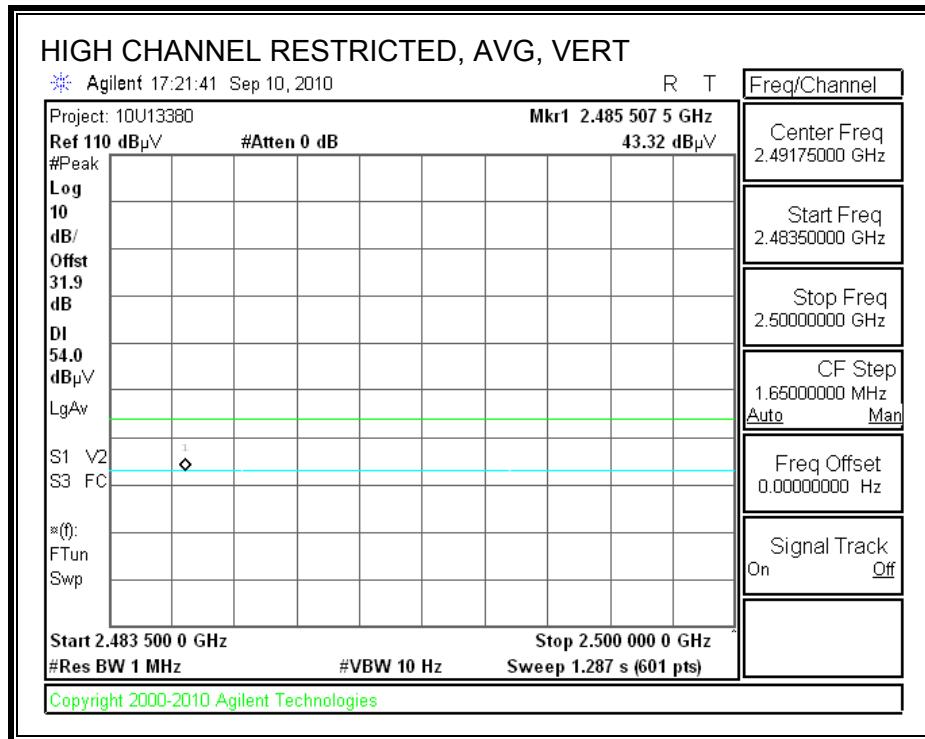
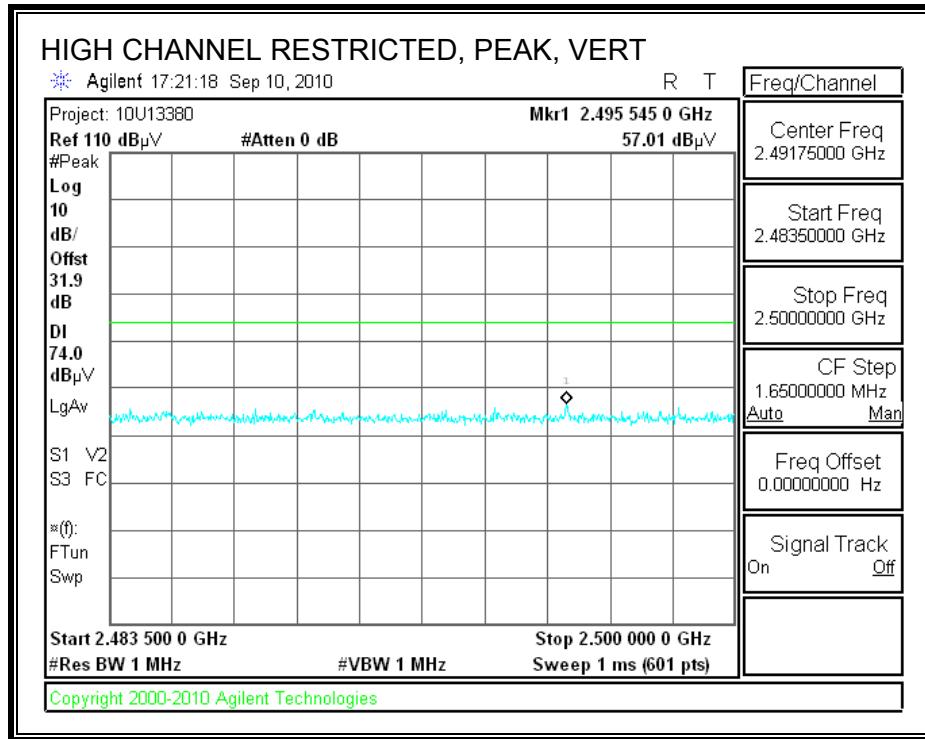
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE CHARGING DOCK

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/13/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: 802.11b, TX mode, with Dock charger

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2412 MHz Low CH													
4.824	3.0	38.5	33.0	5.8	-36.5	0.0	0.0	40.9	74.0	-33.1	H	P	
4.824	3.0	27.0	33.0	5.8	-36.5	0.0	0.0	29.3	54.0	-24.7	H	A	
7.236	3.0	37.7	35.2	7.2	-36.2	0.0	0.0	43.9	74.0	-30.1	H	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	H	A	
2412 MHz Low CH													
4.824	3.0	38.3	33.0	5.8	-36.5	0.0	0.0	40.7	74.0	-33.3	V	P	
4.824	3.0	27.0	33.0	5.8	-36.5	0.0	0.0	29.4	54.0	-24.6	V	A	
7.236	3.0	37.4	35.2	7.2	-36.2	0.0	0.0	43.6	74.0	-30.4	V	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	V	A	
2437 MHz Mid CH													
4.874	3.0	37.7	33.1	5.8	-36.5	0.0	0.0	40.2	74.0	-33.8	V	P	
4.874	3.0	25.7	33.1	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	V	A	
7.311	3.0	38.0	35.3	7.3	-36.2	0.0	0.0	44.3	74.0	-29.7	V	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2437 MHz Mid CH													
4.874	3.0	38.4	33.1	5.8	-36.5	0.0	0.0	40.8	74.0	-33.2	H	P	
4.874	3.0	26.8	33.1	5.8	-36.5	0.0	0.0	29.2	54.0	-24.8	H	A	
7.311	3.0	38.0	35.3	7.3	-36.2	0.0	0.0	44.3	74.0	-29.7	H	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2462 MHz High CH													
4.924	3.0	38.1	33.1	5.9	-36.5	0.0	0.0	40.6	74.0	-33.4	H	P	
4.924	3.0	26.0	33.1	5.9	-36.5	0.0	0.0	28.6	54.0	-25.4	H	A	
7.386	3.0	37.6	35.4	7.3	-36.2	0.0	0.0	44.1	74.0	-29.9	H	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2462 MHz High CH													
4.924	3.0	38.2	33.1	5.9	-36.5	0.0	0.0	40.7	74.0	-33.3	V	P	
4.924	3.0	26.0	33.1	5.9	-36.5	0.0	0.0	28.6	54.0	-25.4	V	A	
7.386	3.0	37.4	35.4	7.3	-36.2	0.0	0.0	43.9	74.0	-30.1	V	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	

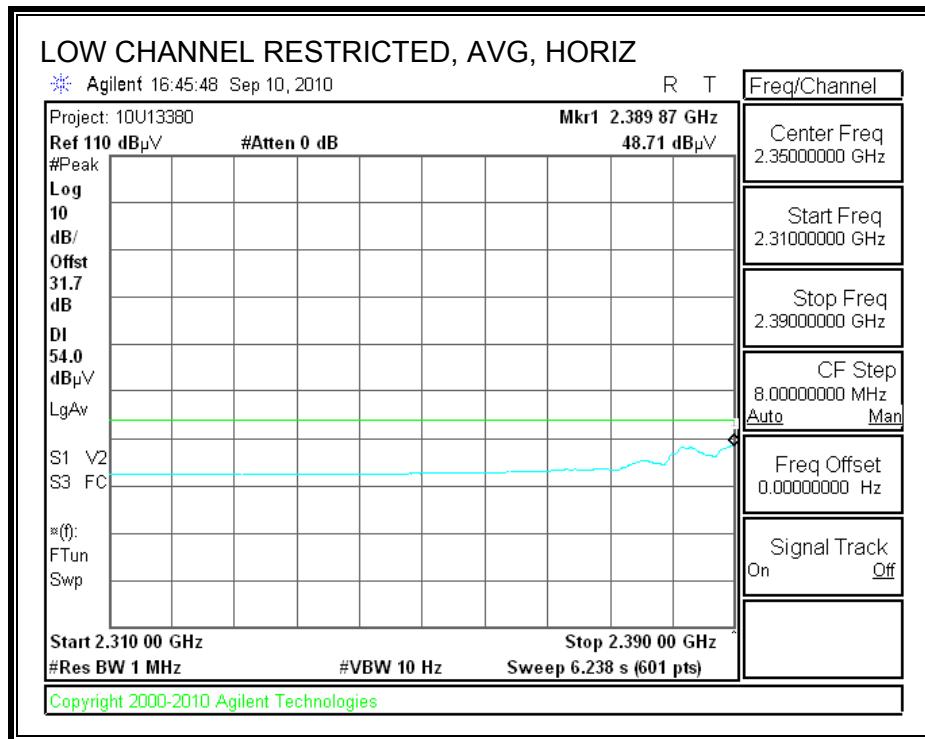
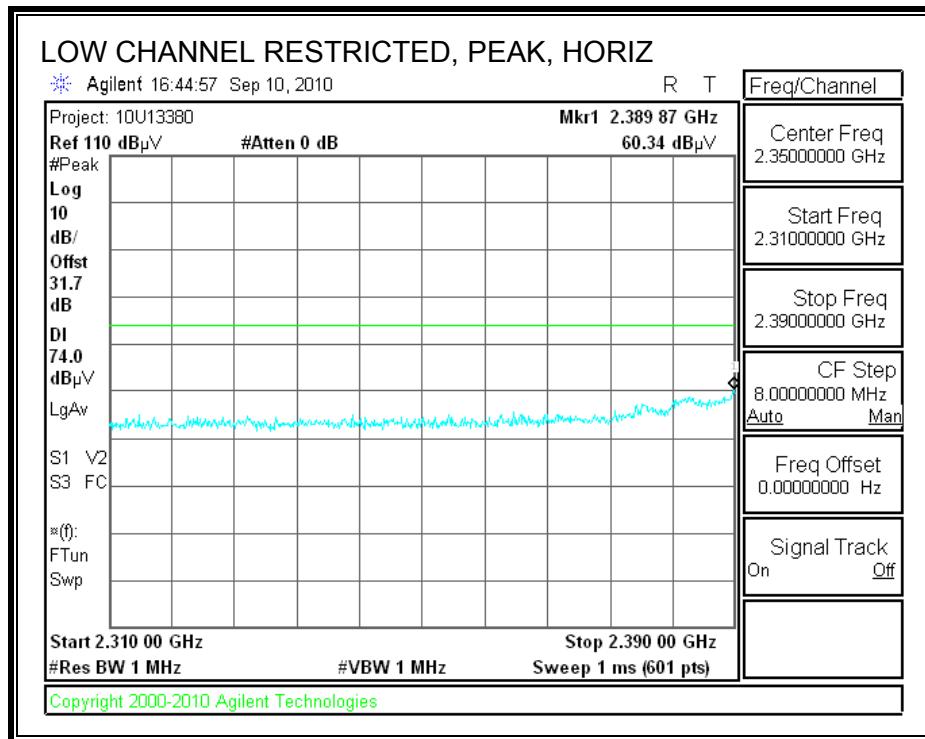
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

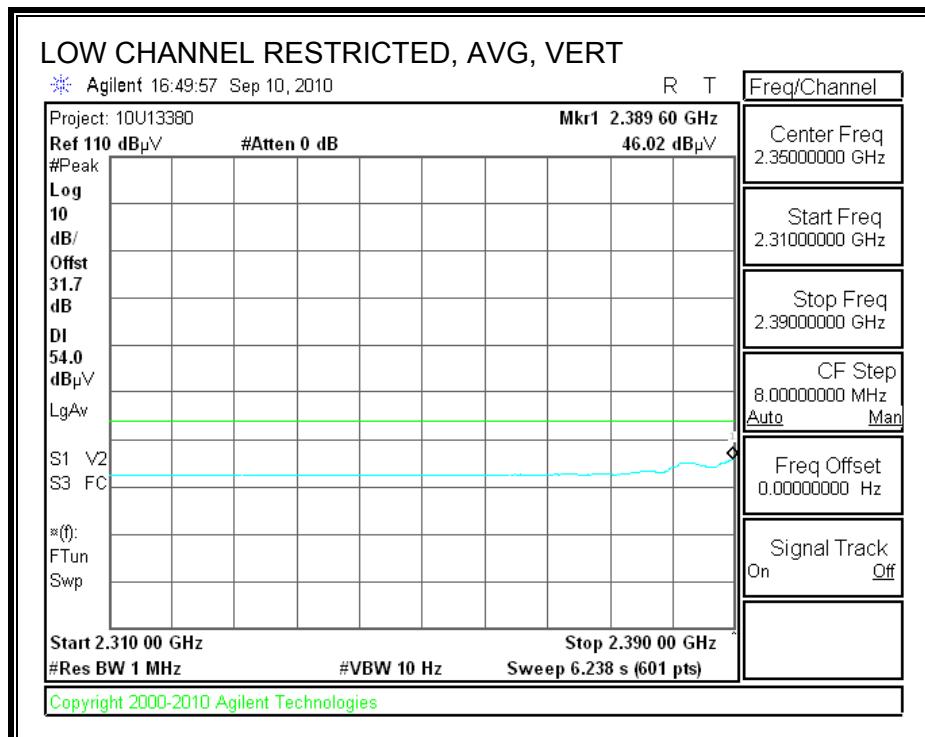
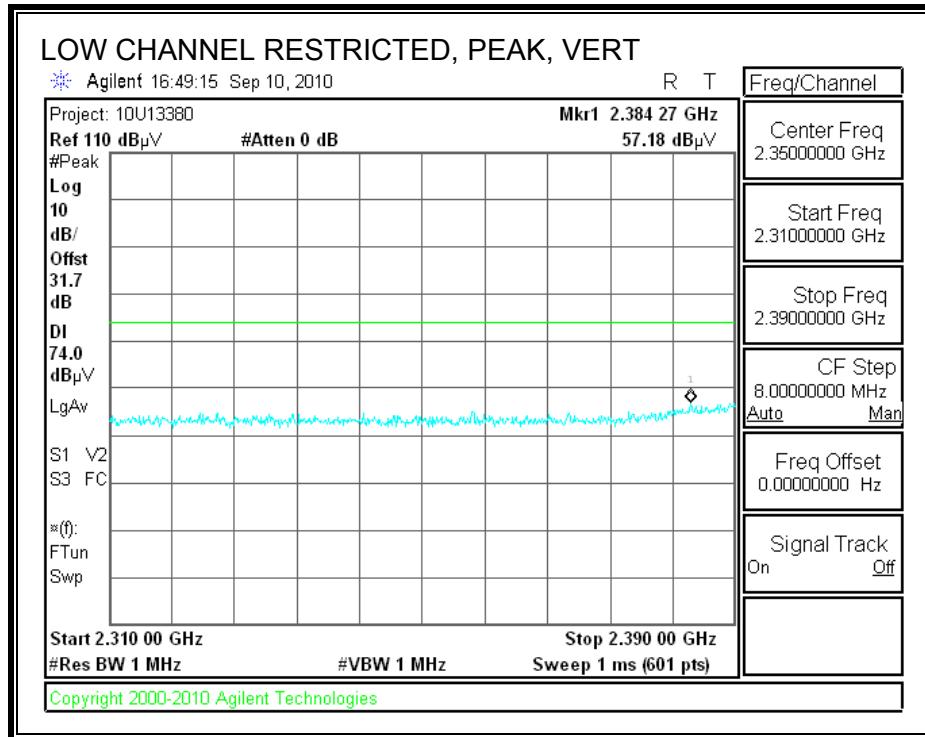
8.3.2. 802.11g MODE

EUT WITH INDUCTIVE CHARGING DOCK

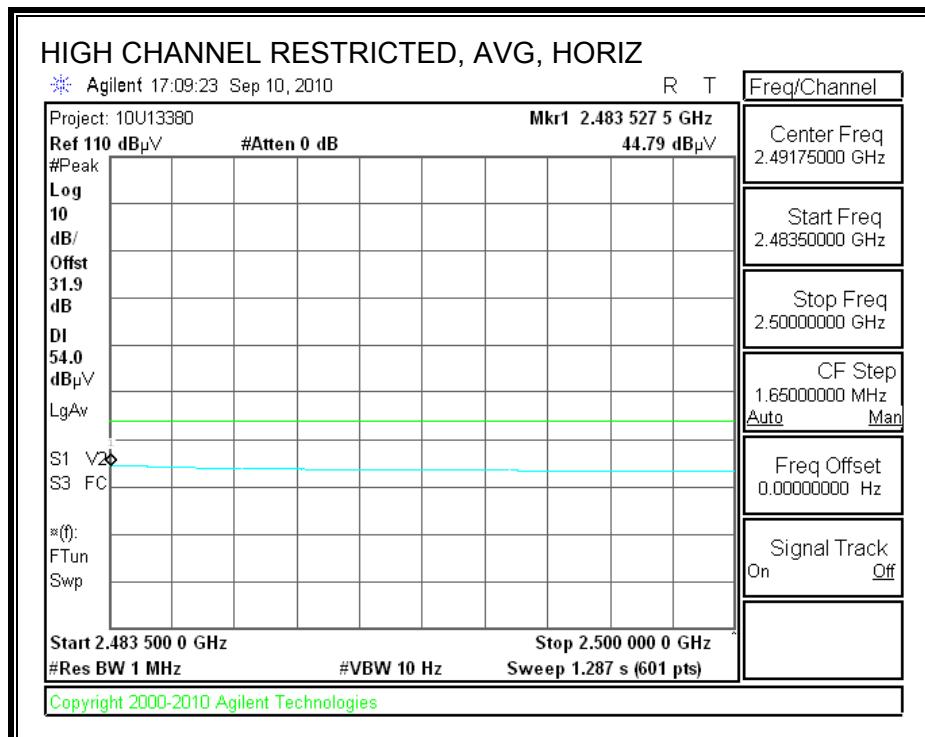
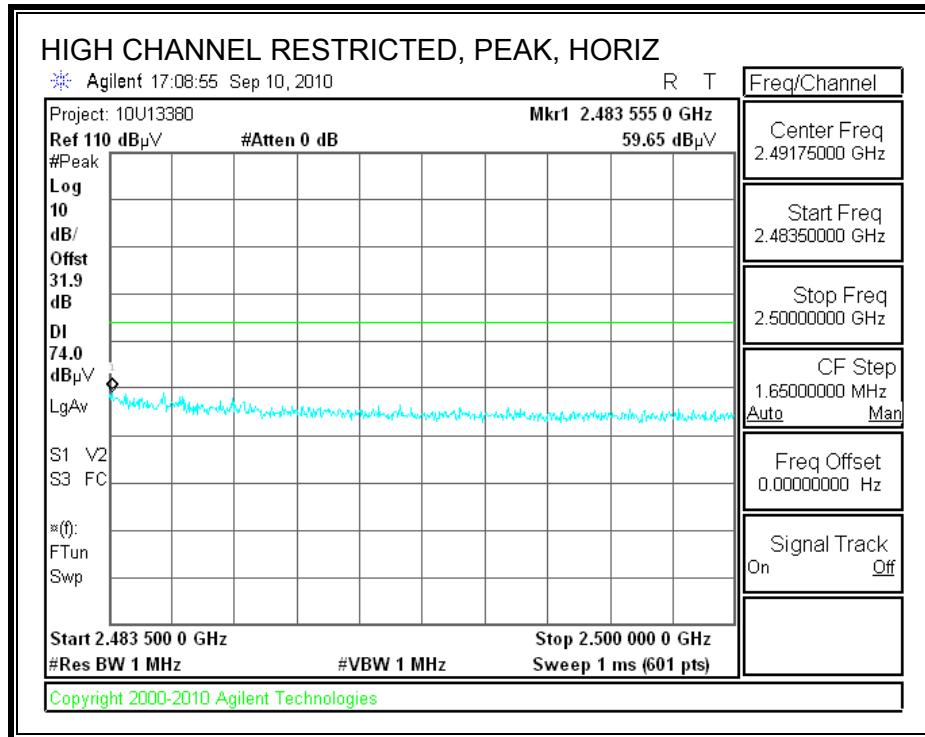
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



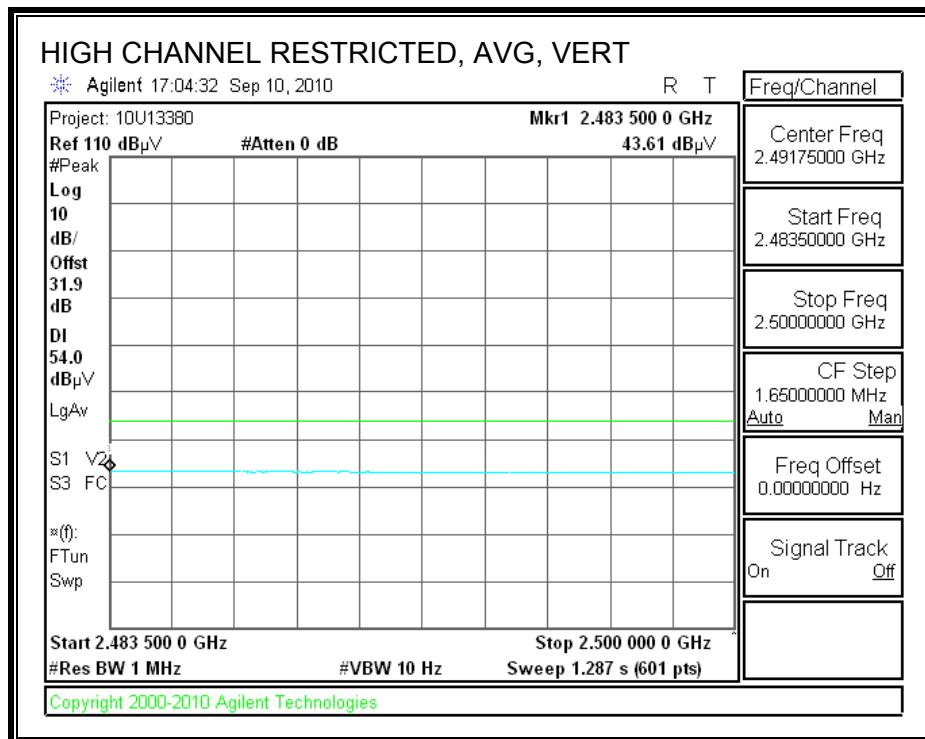
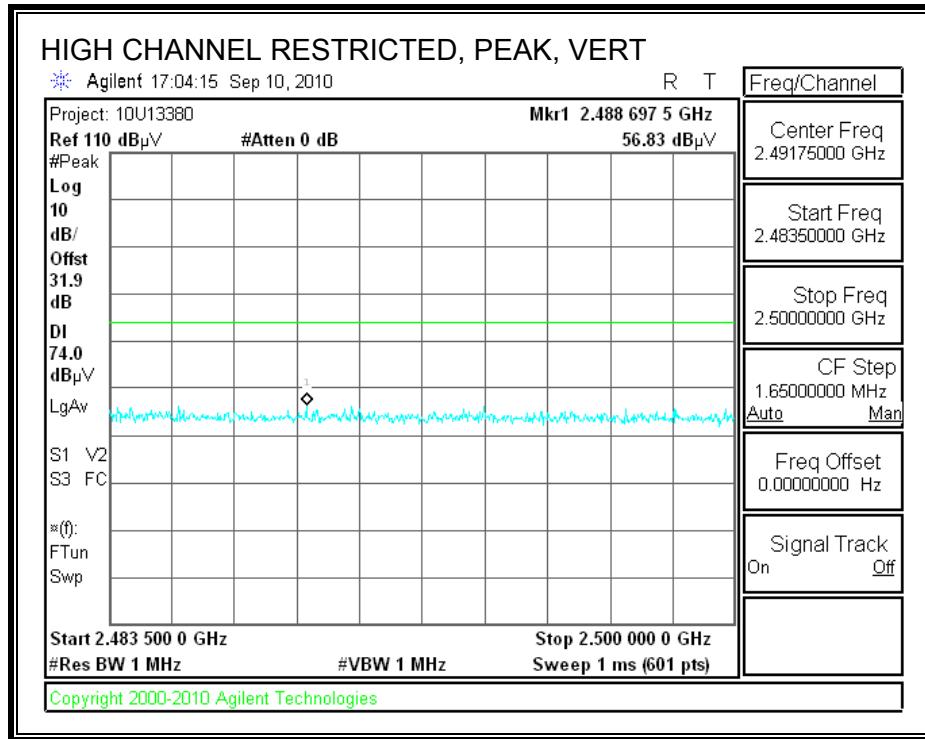
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE CHARGING DOCK

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/13/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: 802.11g, TX mode, with Dock charger

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant Pol. V/H	Det. P/A/QP	Notes
2412 MHz Low CH													
4.824	3.0	39.0	33.0	5.8	-36.5	0.0	0.0	41.4	74.0	-32.6	H	P	
4.824	3.0	27.5	33.0	5.8	-36.5	0.0	0.0	29.9	54.0	-24.1	H	A	
7.236	3.0	37.1	35.2	7.2	-36.2	0.0	0.0	43.3	74.0	-30.7	H	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	H	A	
2412 MHz Low CH													
4.824	3.0	39.4	33.0	5.8	-36.5	0.0	0.0	41.8	74.0	-32.2	V	P	
4.824	3.0	27.9	33.0	5.8	-36.5	0.0	0.0	30.3	54.0	-23.7	V	A	
7.236	3.0	37.4	35.2	7.2	-36.2	0.0	0.0	43.6	74.0	-30.4	V	P	
7.236	3.0	25.0	35.2	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	V	A	
2437 MHz Mid CH													
4.874	3.0	37.6	33.1	5.8	-36.5	0.0	0.0	40.0	74.0	-34.0	H	P	
4.874	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.1	54.0	-25.9	H	A	
7.311	3.0	37.8	35.3	7.3	-36.2	0.0	0.0	44.1	74.0	-29.9	H	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2437 MHz Mid CH													
4.874	3.0	37.8	33.1	5.8	-36.5	0.0	0.0	40.2	74.0	-33.8	V	P	
4.874	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.0	54.0	-26.0	V	A	
7.311	3.0	37.8	35.3	7.3	-36.2	0.0	0.0	44.2	74.0	-29.8	V	P	
7.311	3.0	25.3	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2462 MHz High CH													
4.924	3.0	38.3	33.1	5.9	-36.5	0.0	0.0	40.9	74.0	-33.1	V	P	
4.924	3.0	26.0	33.1	5.9	-36.5	0.0	0.0	28.6	54.0	-25.4	V	A	
7.386	3.0	37.1	35.4	7.3	-36.2	0.0	0.0	43.6	74.0	-30.4	V	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2462 MHz High CH													
4.924	3.0	38.7	33.1	5.9	-36.5	0.0	0.0	41.3	74.0	-32.7	H	P	
4.924	3.0	26.2	33.1	5.9	-36.5	0.0	0.0	28.8	54.0	-25.2	H	A	
7.386	3.0	37.7	35.4	7.3	-36.2	0.0	0.0	44.2	74.0	-29.8	H	P	
7.386	3.0	25.2	35.4	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	

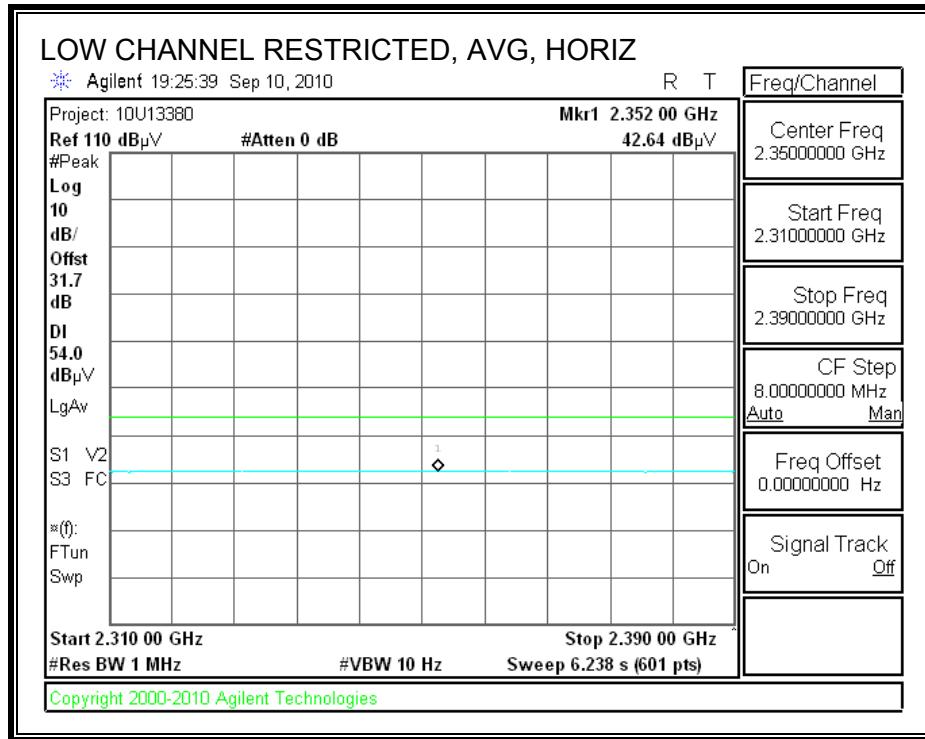
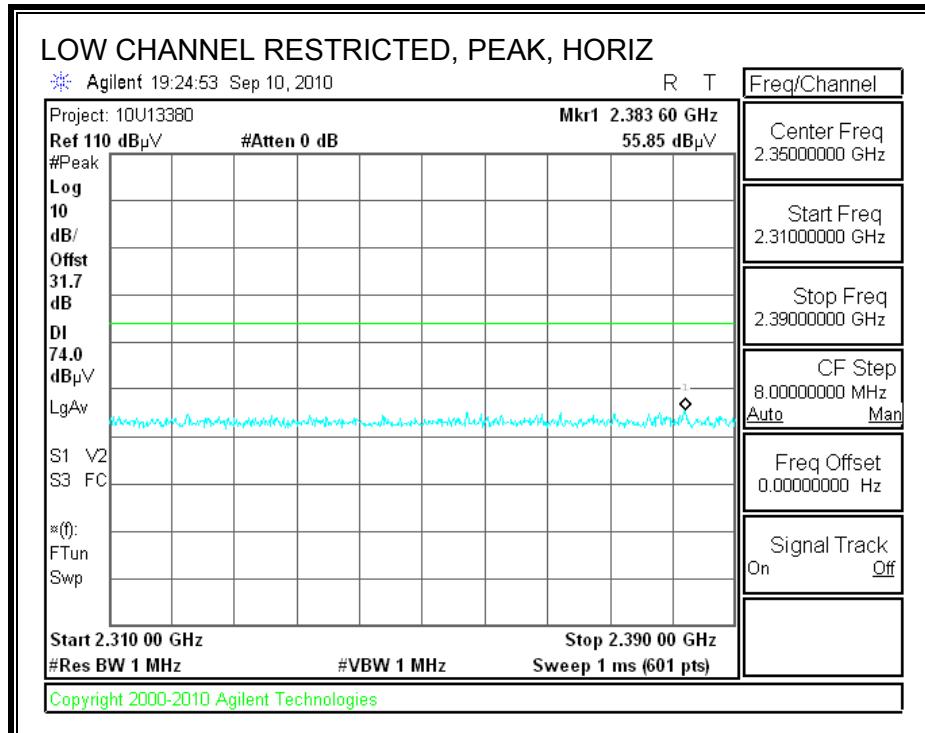
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

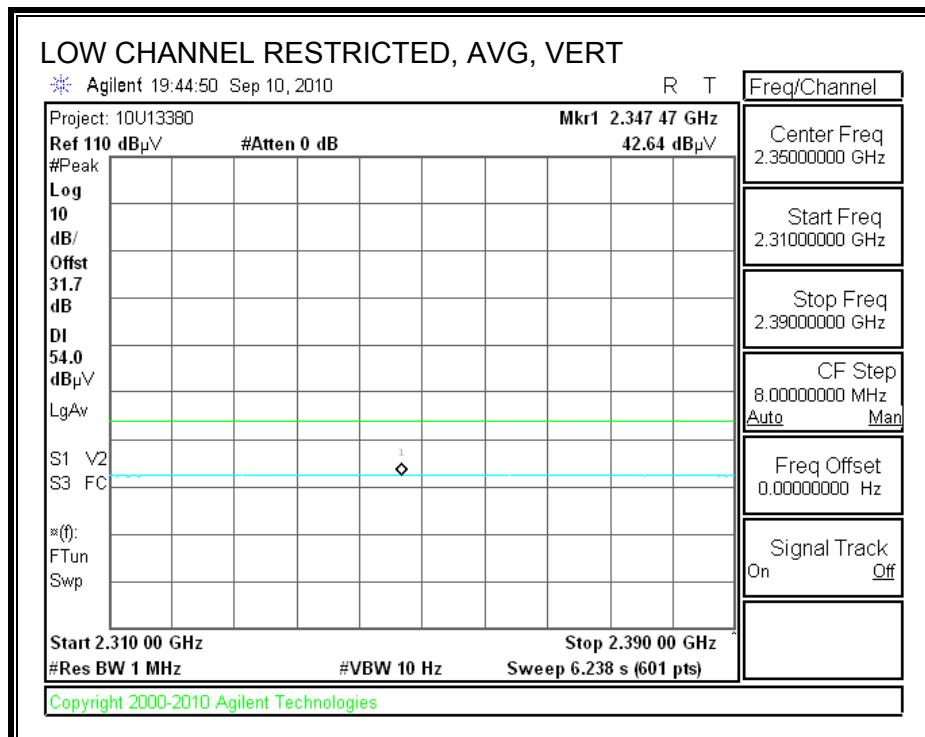
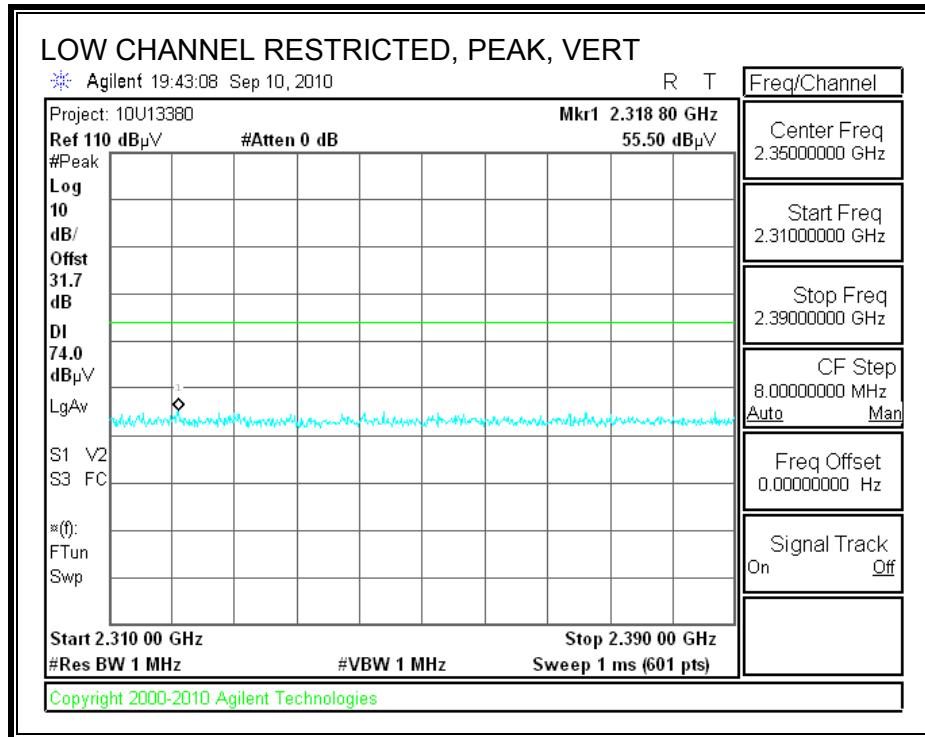
8.3.3. BLUETOOTH GFSK MODE

EUT WITH INDUCTIVE CHARGING DOCK

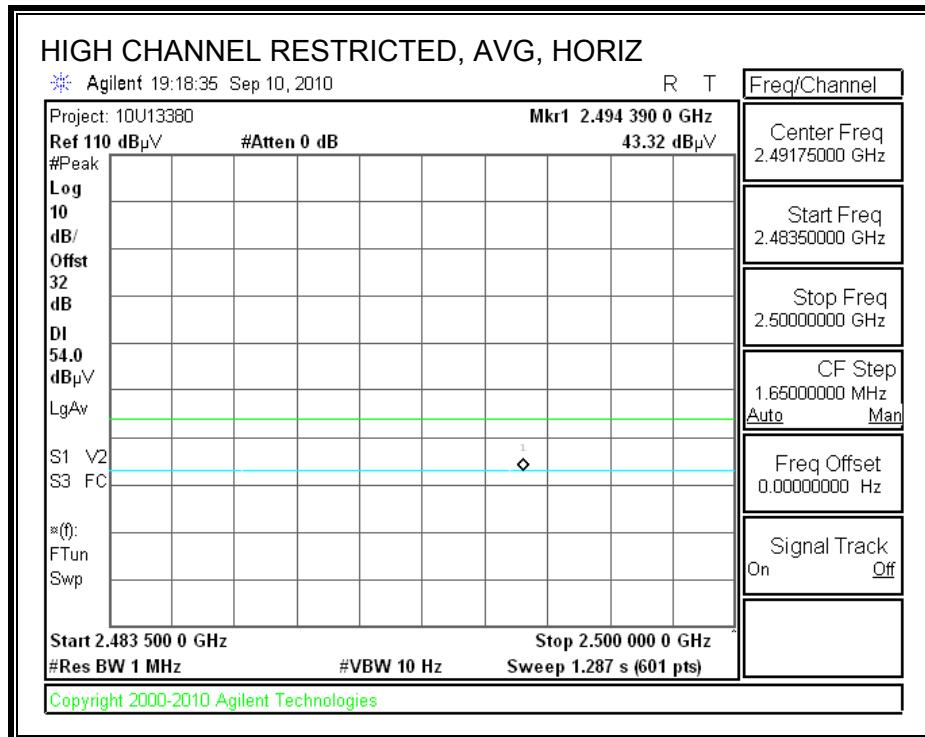
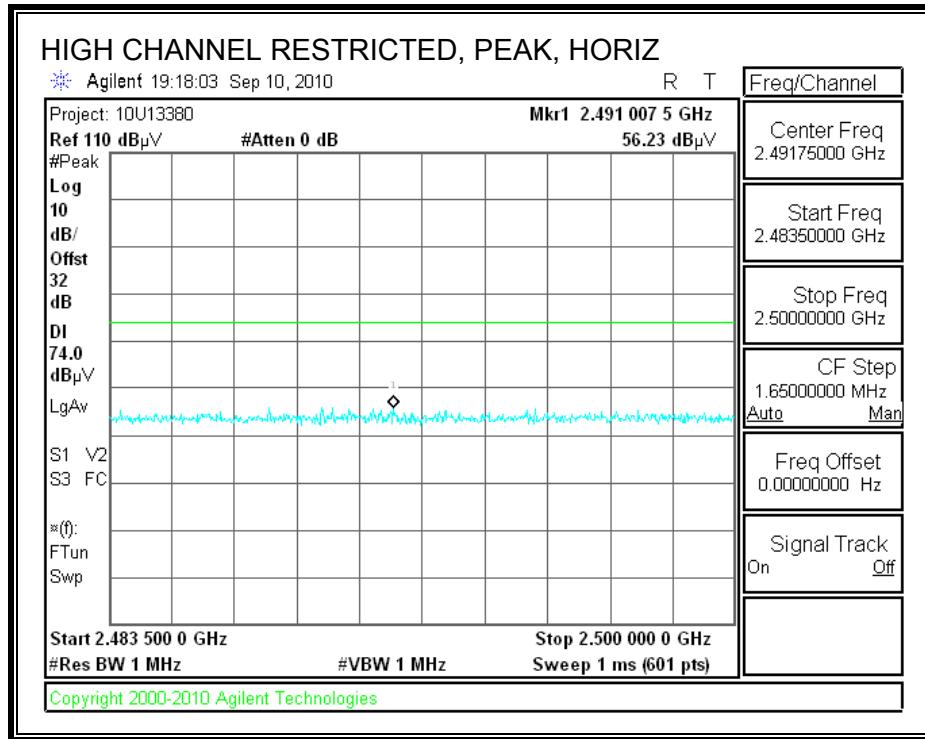
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



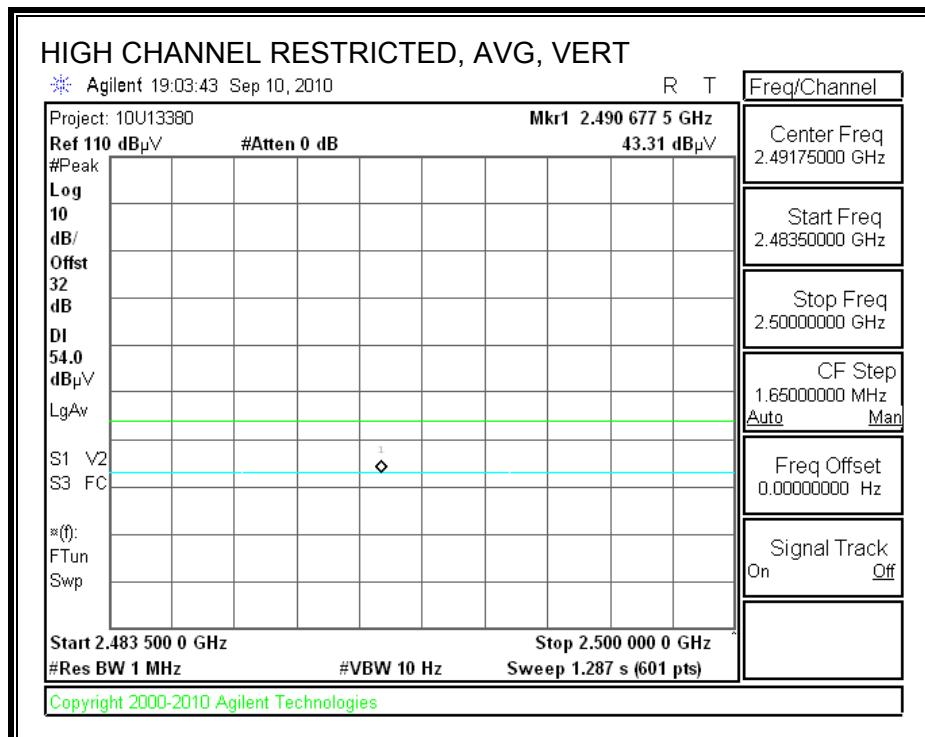
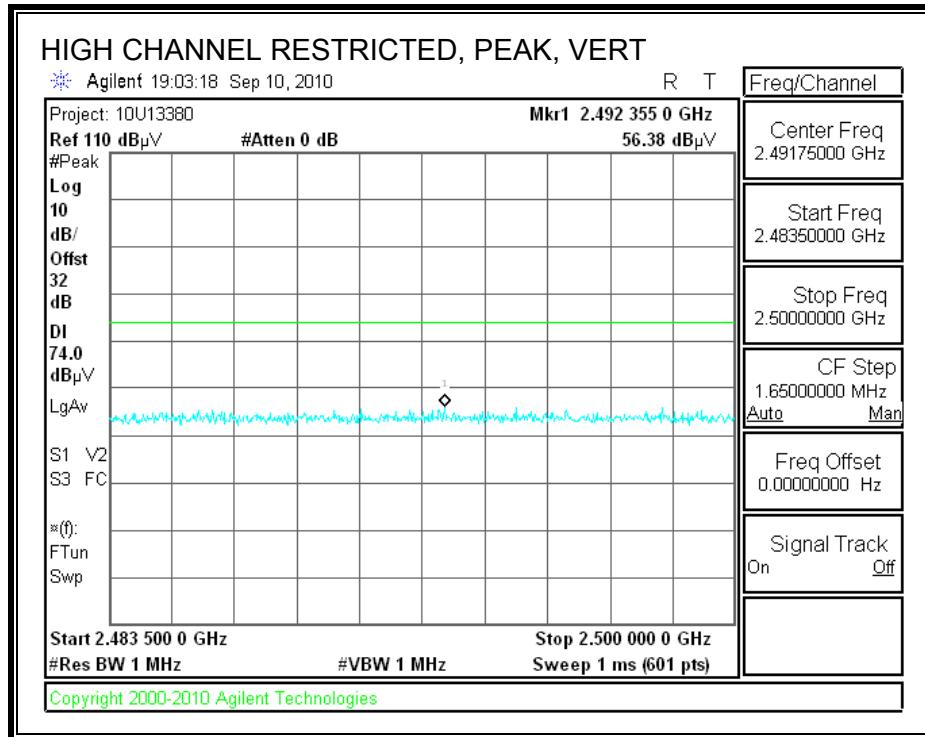
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE CHARGING DOCK

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/14/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: BT GFSK, TX mode, with Dock charger

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2402 MHz Low CH													
4.804	3.0	37.8	33.0	5.8	-36.5	0.0	0.0	40.1	74.0	-33.9	V	P	
4.804	3.0	25.8	33.0	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	V	A	
7.206	3.0	37.3	35.1	7.2	-36.2	0.0	0.0	43.4	74.0	-30.6	V	P	
7.206	3.0	25.0	35.1	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	V	A	
2402 MHz Low CH													
4.804	3.0	38.2	33.0	5.8	-36.5	0.0	0.0	40.5	74.0	-33.5	H	P	
4.804	3.0	25.9	33.0	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	H	A	
7.206	3.0	37.5	35.1	7.2	-36.2	0.0	0.0	43.6	74.0	-30.4	H	P	
7.206	3.0	25.0	35.1	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	H	A	
2441 MHz Mid CH													
4.882	3.0	38.7	33.1	5.8	-36.5	0.0	0.0	41.2	74.0	-32.8	V	P	
4.882	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.1	54.0	-25.9	V	A	
7.323	3.0	37.8	35.3	7.3	-36.2	0.0	0.0	44.2	74.0	-29.8	V	P	
7.323	3.0	25.2	35.3	7.3	-36.2	0.0	0.0	31.6	54.0	-22.4	V	A	
2441 MHz Mid CH													
4.882	3.0	38.4	33.1	5.8	-36.5	0.0	0.0	40.9	74.0	-33.1	H	P	
4.882	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.1	54.0	-25.9	H	A	
7.323	3.0	37.3	35.3	7.3	-36.2	0.0	0.0	43.7	74.0	-30.3	H	P	
7.323	3.0	25.2	35.3	7.3	-36.2	0.0	0.0	31.6	54.0	-22.4	H	A	
2480 MHz High CH													
4.960	3.0	37.6	33.2	5.9	-36.5	0.0	0.0	40.2	74.0	-33.8	H	P	
4.960	3.0	25.3	33.2	5.9	-36.5	0.0	0.0	27.9	54.0	-26.1	H	A	
7.440	3.0	37.1	35.5	7.3	-36.2	0.0	0.0	43.7	74.0	-30.3	H	P	
7.440	3.0	24.7	35.5	7.3	-36.2	0.0	0.0	31.4	54.0	-22.6	H	A	
2480 MHz High CH													
4.960	3.0	37.4	33.2	5.9	-36.5	0.0	0.0	40.0	74.0	-34.0	V	P	
4.960	3.0	25.4	33.2	5.9	-36.5	0.0	0.0	28.0	54.0	-26.0	V	A	
7.440	3.0	36.9	35.5	7.3	-36.2	0.0	0.0	43.5	74.0	-30.5	V	P	
7.440	3.0	24.8	35.5	7.3	-36.2	0.0	0.0	31.4	54.0	-22.6	V	A	

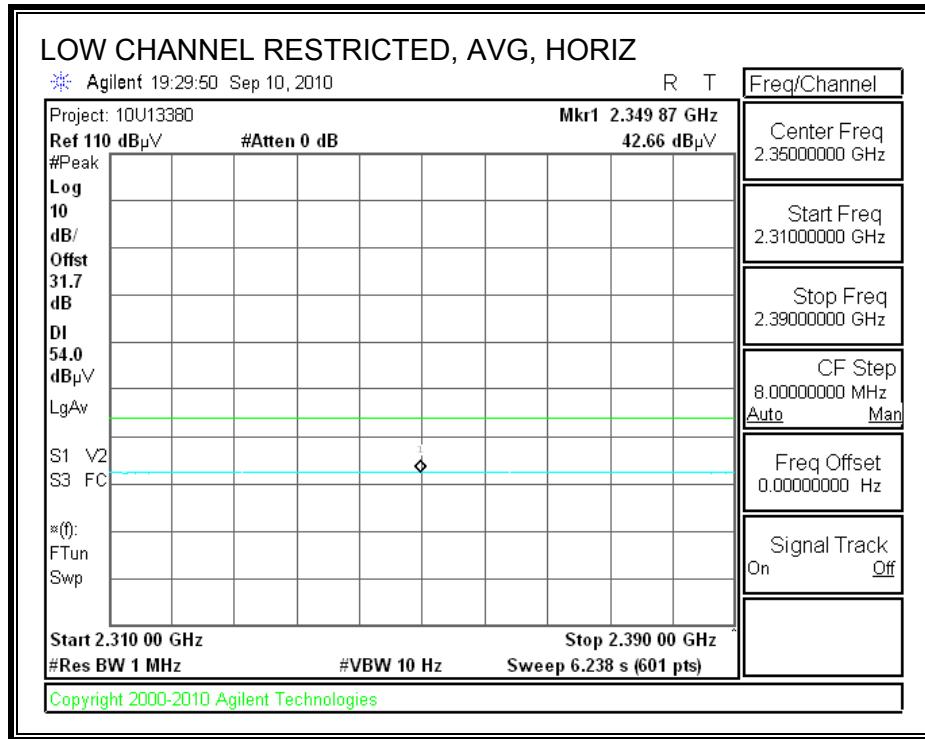
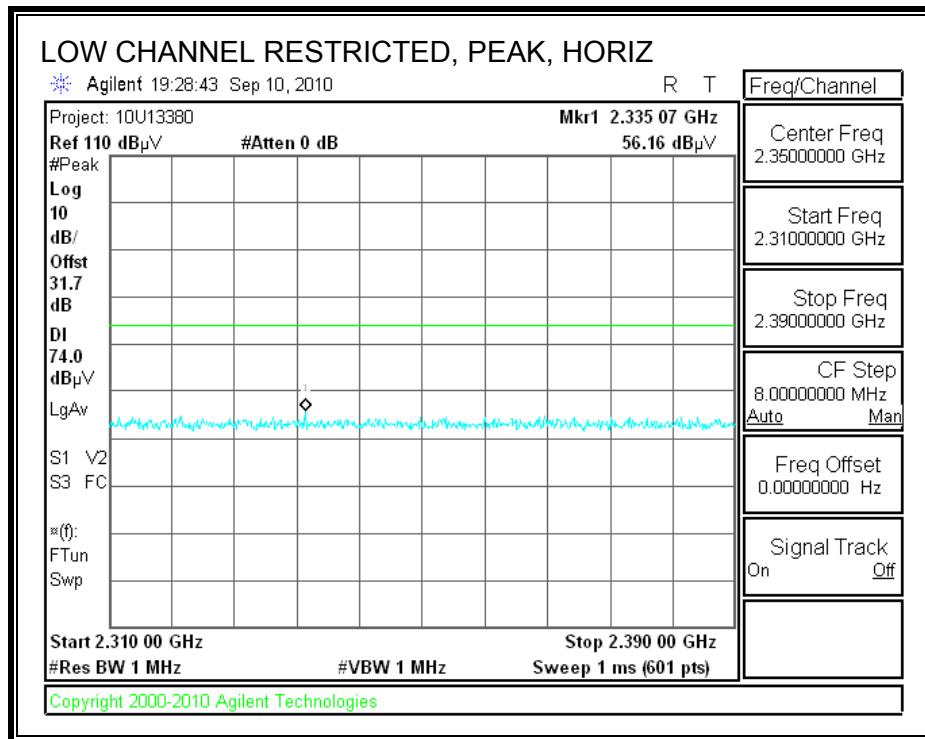
Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

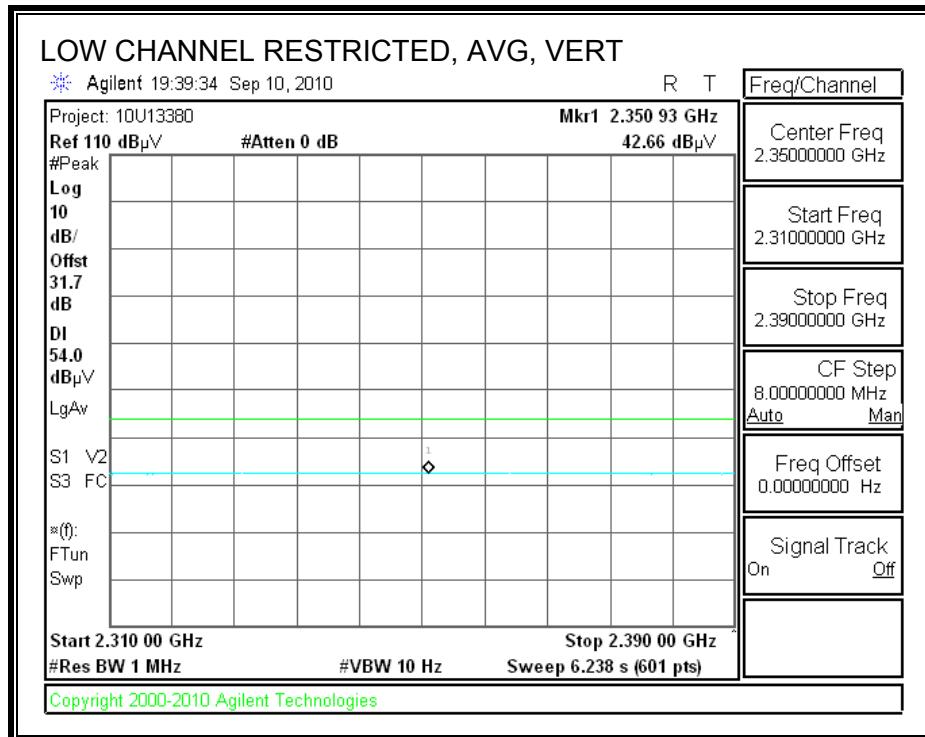
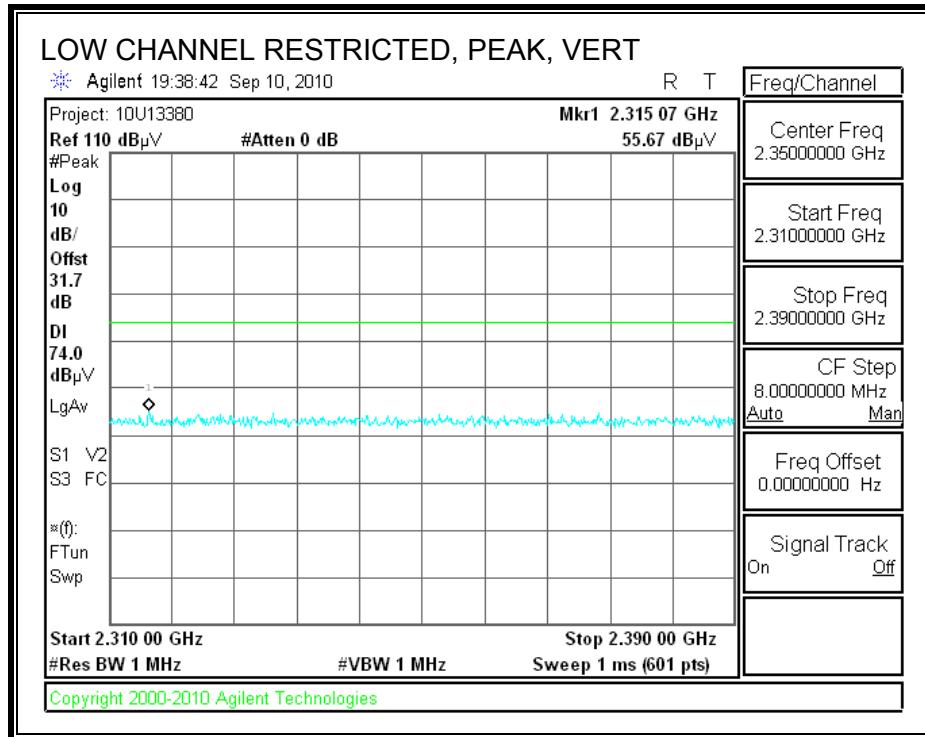
8.3.4. BLUETOOTH 8PSK MODE

EUT WITH INDUCTIVE CHARGING DOCK

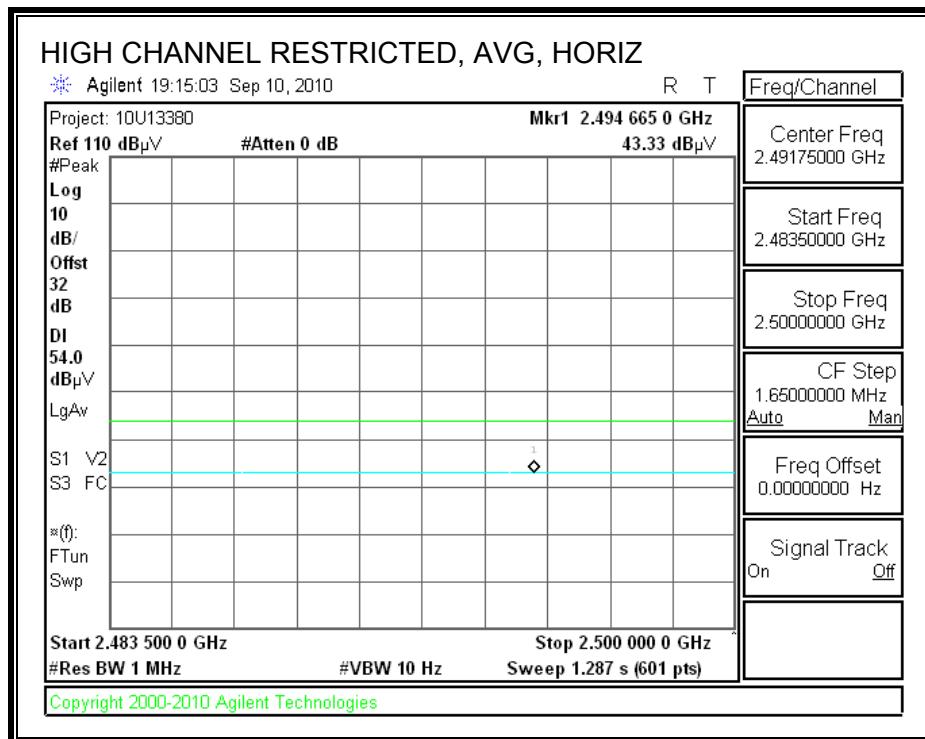
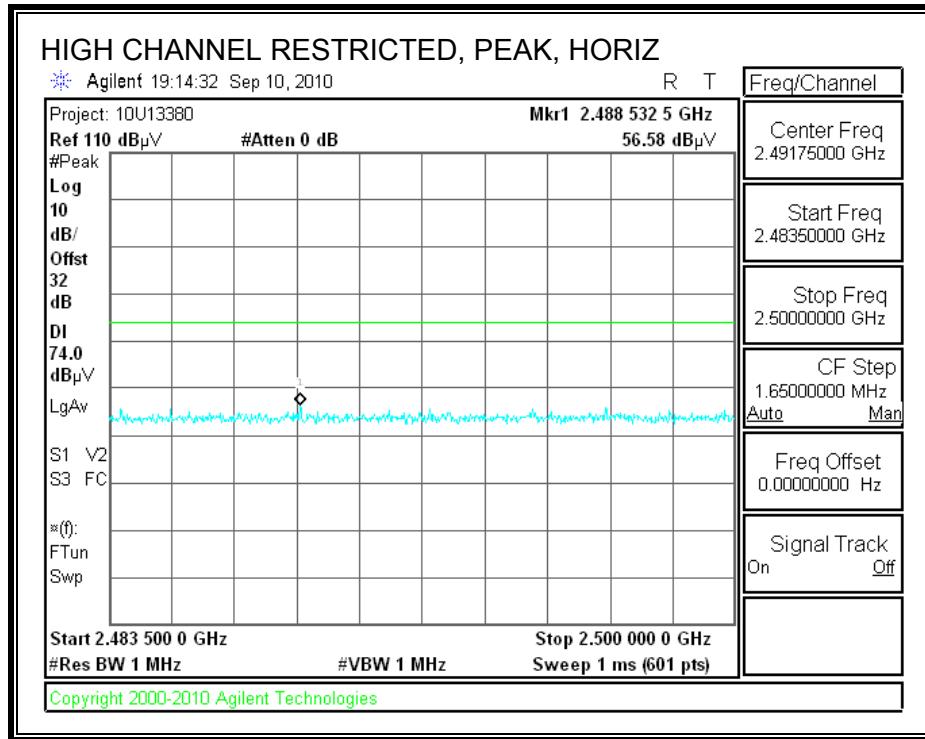
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



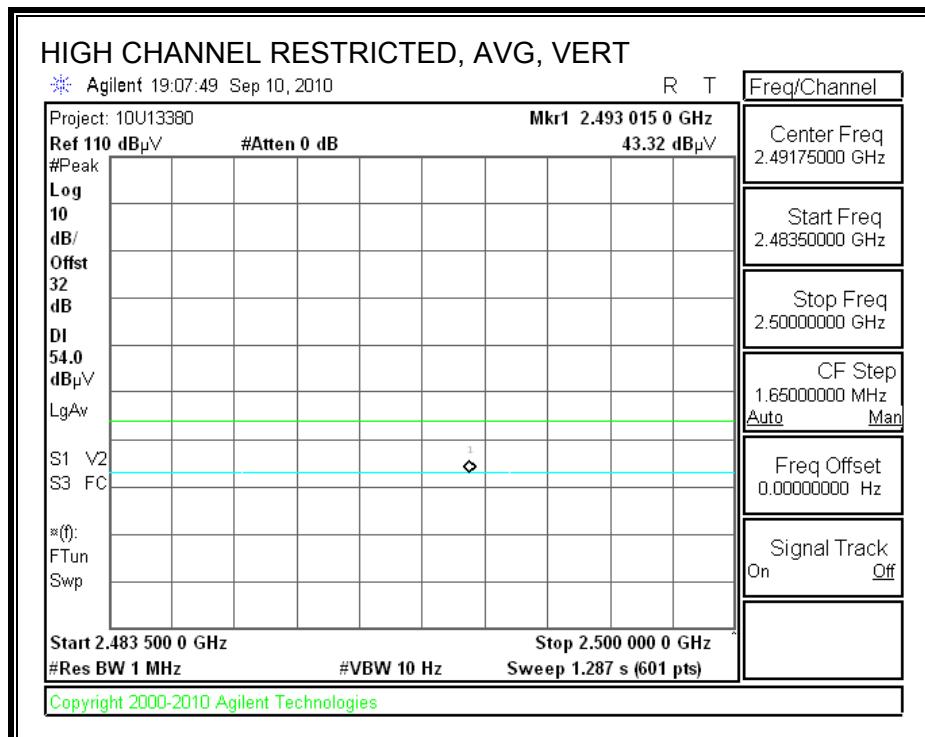
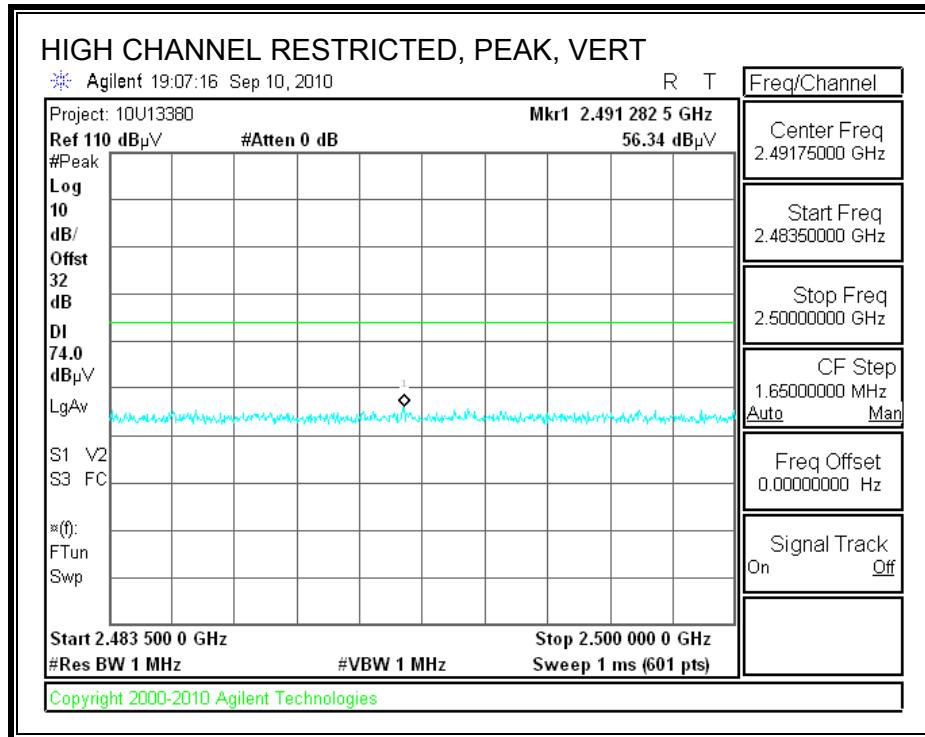
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



EUT WITH INDUCTIVE CHARGING DOCK

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/15/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: BT 8PSK, TX mode, with Dock charger

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

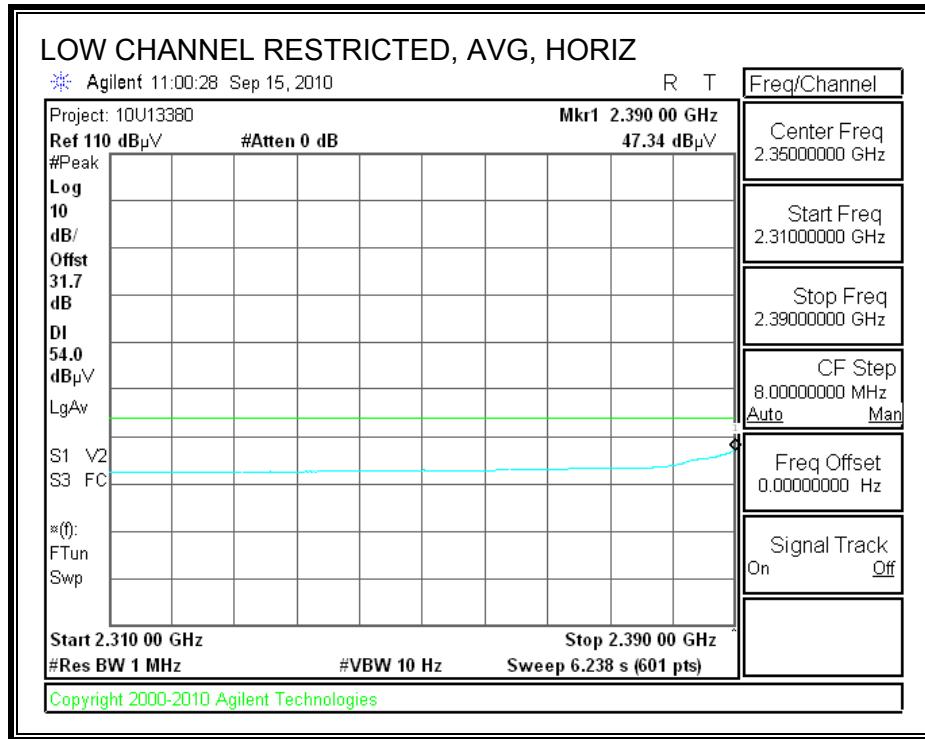
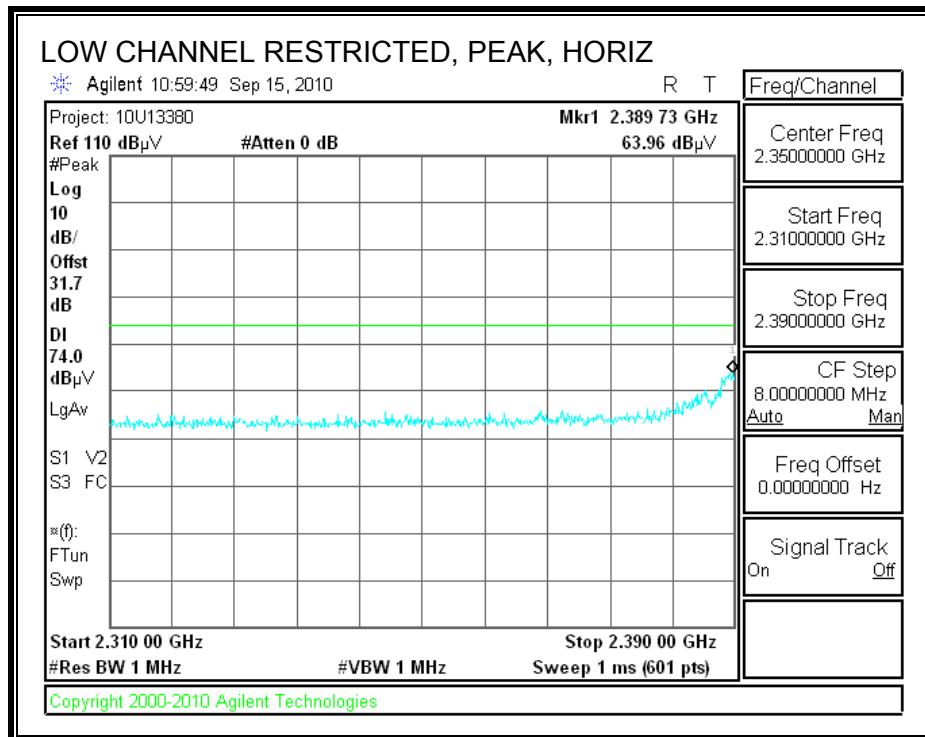
f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2402 MHz Low CH													
4.804	3.0	38.4	33.0	5.8	-36.5	0.0	0.0	40.8	74.0	-33.2	H	P	
4.804	3.0	25.9	33.0	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	H	A	
7.206	3.0	37.4	35.1	7.2	-36.2	0.0	0.0	43.6	74.0	-30.4	H	P	
7.206	3.0	25.1	35.1	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	H	A	
2402 MHz Low CH													
4.804	3.0	38.1	33.0	5.8	-36.5	0.0	0.0	40.4	74.0	-33.6	V	P	
4.804	3.0	25.9	33.0	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	V	A	
7.206	3.0	37.7	35.1	7.2	-36.2	0.0	0.0	43.9	74.0	-30.1	V	P	
7.206	3.0	25.1	35.1	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	V	A	
2441 MHz Mid CH													
4.882	3.0	38.2	33.1	5.8	-36.5	0.0	0.0	40.7	74.0	-33.3	V	P	
4.882	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.0	54.0	-26.0	V	A	
7.323	3.0	37.3	35.3	7.3	-36.2	0.0	0.0	43.7	74.0	-30.3	V	P	
7.323	3.0	25.2	35.3	7.3	-36.2	0.0	0.0	31.5	54.0	-22.5	V	A	
2441 MHz Mid CH													
4.882	3.0	37.5	33.1	5.8	-36.5	0.0	0.0	40.0	74.0	-34.0	H	P	
4.882	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.0	54.0	-26.0	H	A	
7.323	3.0	37.8	35.3	7.3	-36.2	0.0	0.0	44.1	74.0	-29.9	H	P	
7.323	3.0	25.2	35.3	7.3	-36.2	0.0	0.0	31.6	54.0	-22.4	H	A	
2480 MHz High CH													
4.960	3.0	37.4	33.2	5.9	-36.5	0.0	0.0	40.1	74.0	-33.9	H	P	
4.960	3.0	25.3	33.2	5.9	-36.5	0.0	0.0	27.9	54.0	-26.1	H	A	
7.440	3.0	37.7	35.5	7.3	-36.2	0.0	0.0	44.3	74.0	-29.7	H	P	
7.440	3.0	24.7	35.5	7.3	-36.2	0.0	0.0	31.3	54.0	-22.7	H	A	
2480MHz High CH													
4.960	3.0	37.2	33.2	5.9	-36.5	0.0	0.0	39.8	74.0	-34.2	V	P	
4.960	3.0	25.4	33.2	5.9	-36.5	0.0	0.0	28.0	54.0	-26.0	V	A	
7.440	3.0	37.9	35.5	7.3	-36.2	0.0	0.0	44.5	74.0	-29.5	V	P	
7.440	3.0	25.0	35.5	7.3	-36.2	0.0	0.0	31.6	54.0	-22.4	V	A	

Rev. 4.1.2.7

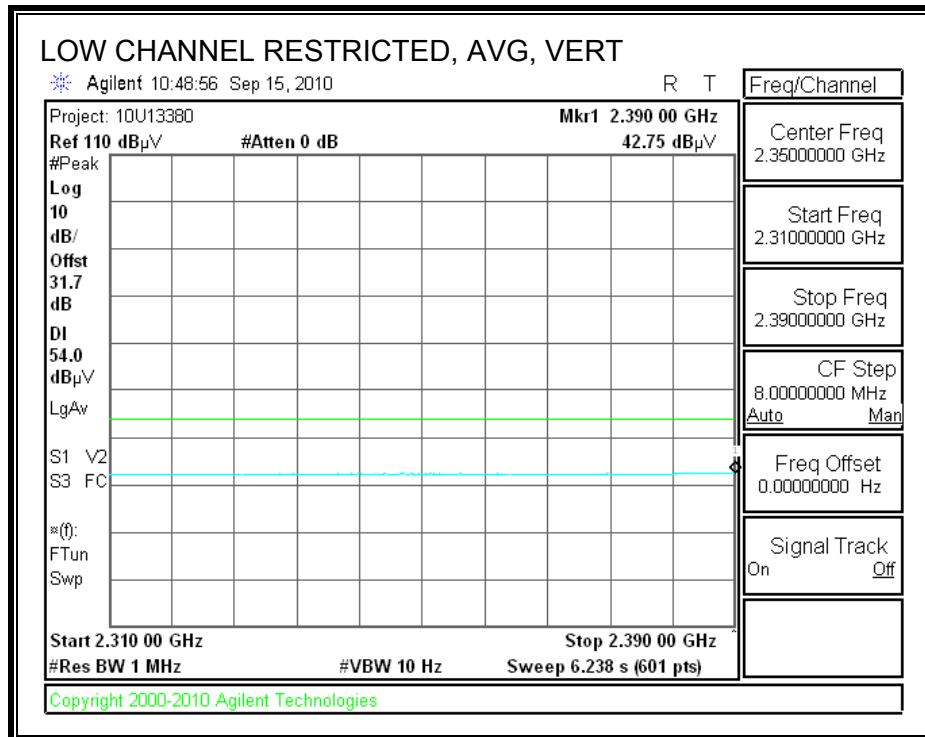
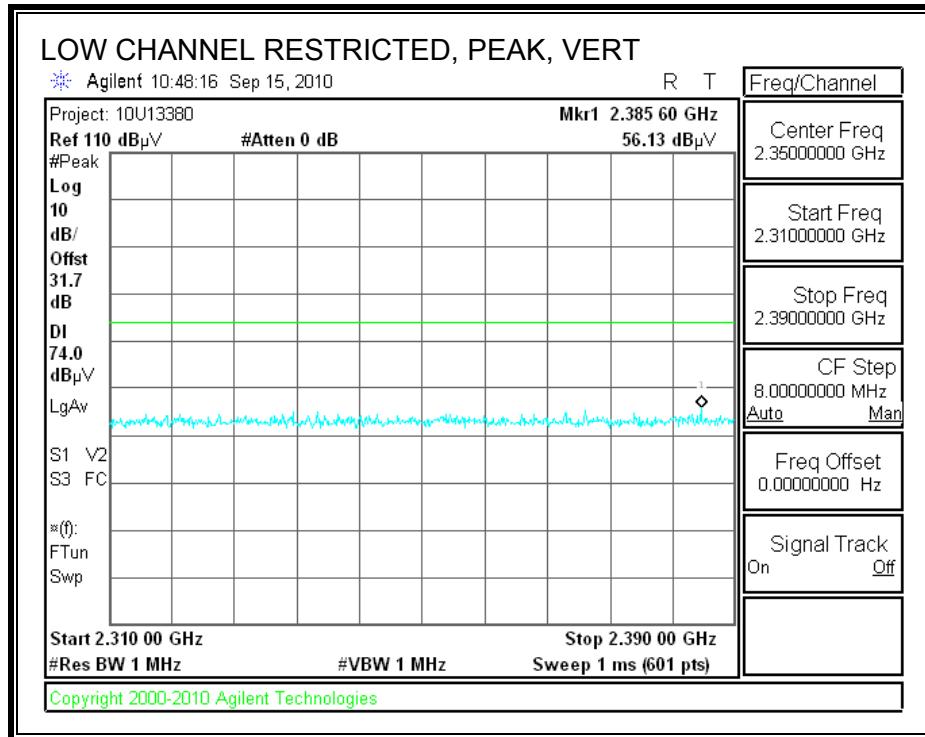
Note: No other emissions were detected above the system noise floor.

8.4. CO-LOCATED TRANSMITTER RADIATED EMISSIONS (WORST CASE POSITION, WLAN G-MODE WITH BLUETOOTH 8PSK MODULATION)

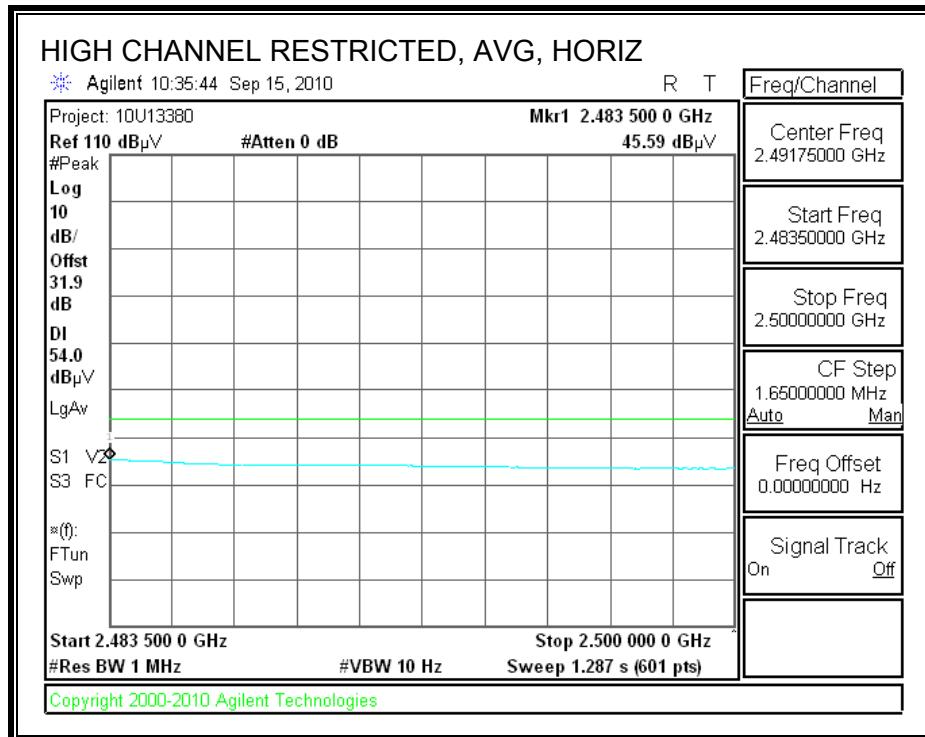
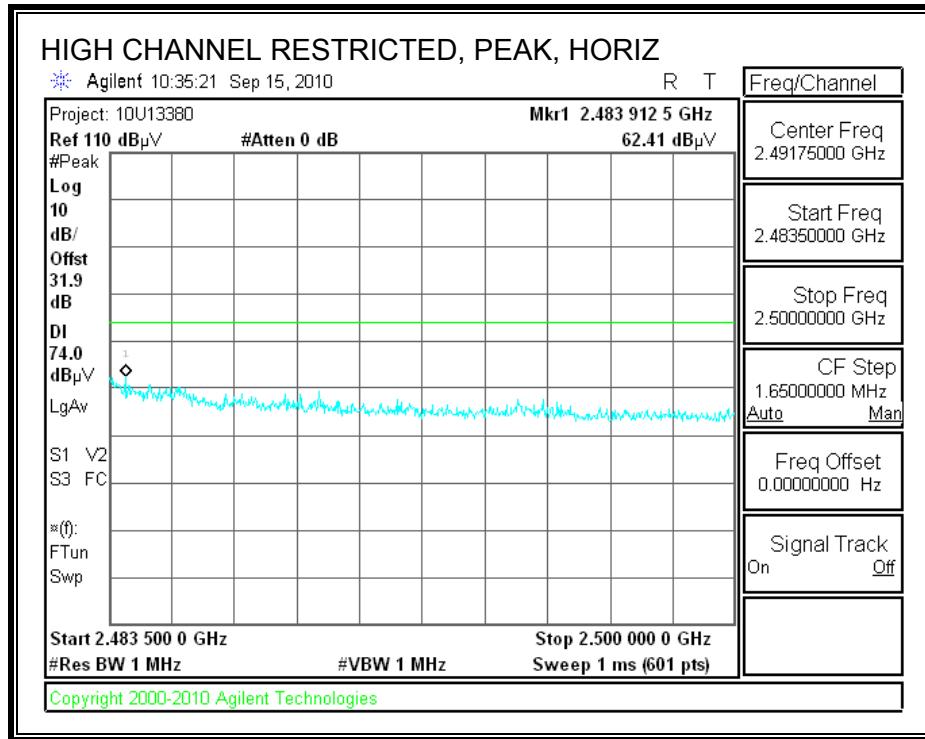
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



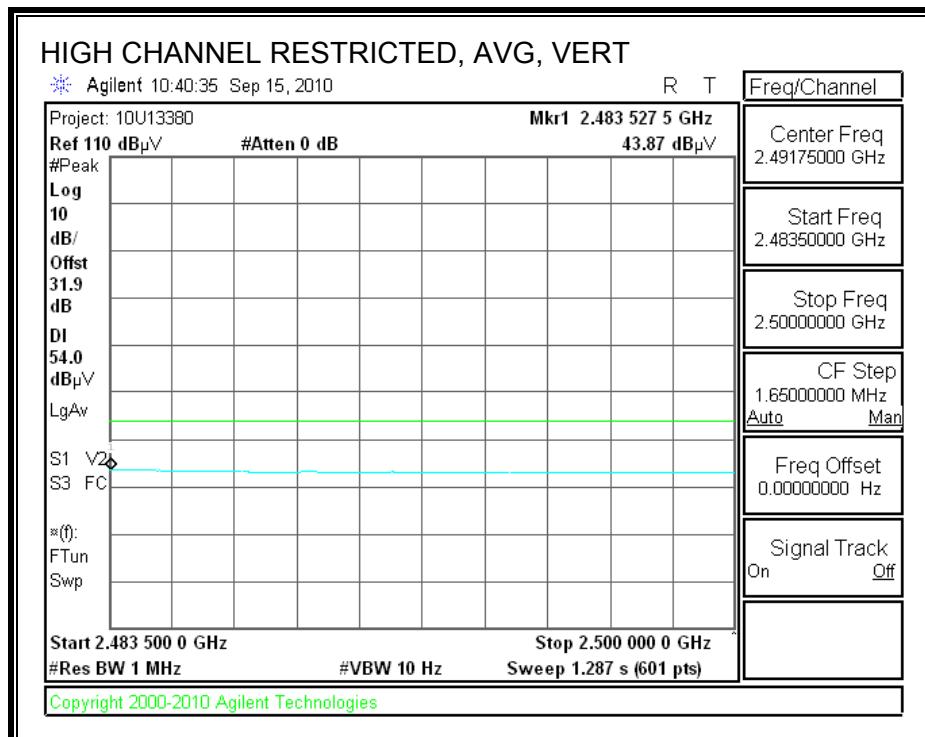
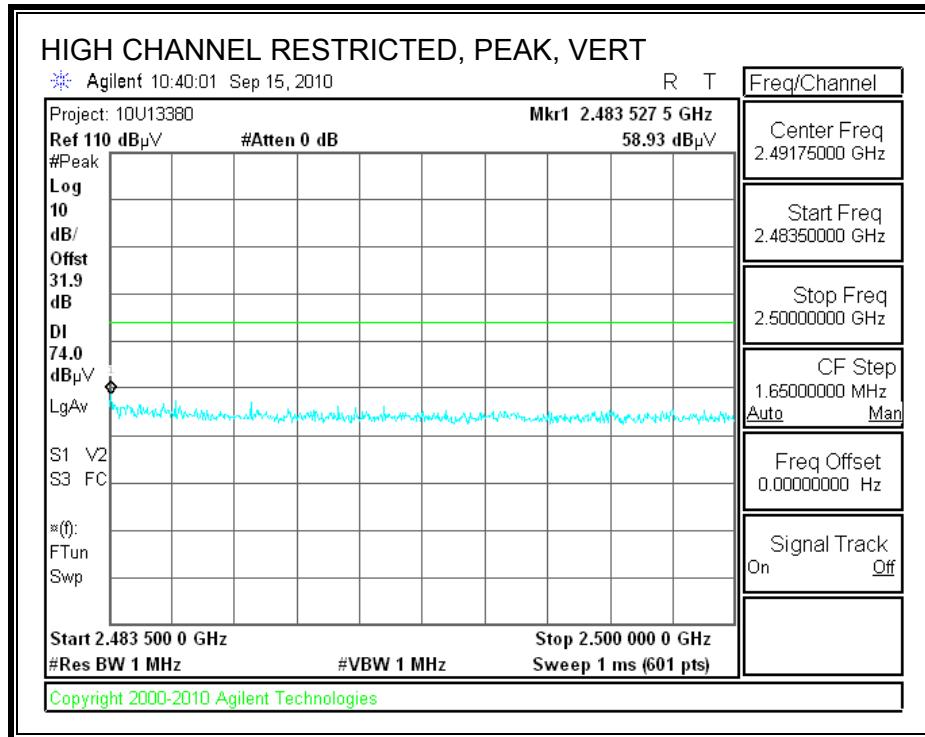
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/15/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: WLAN, BT 8PSK, TX mode

f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

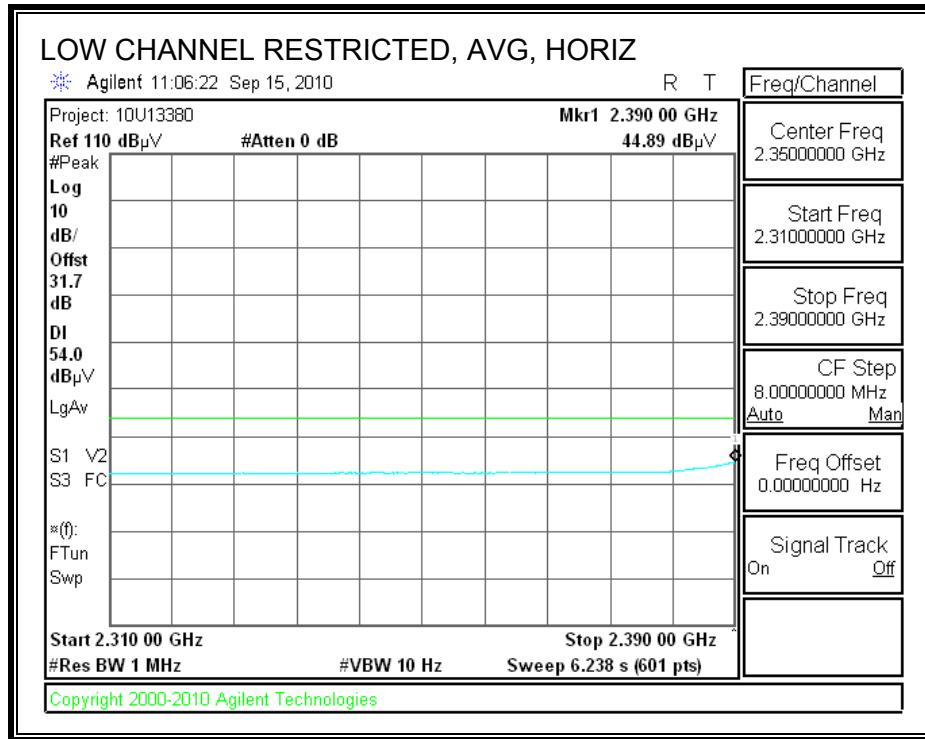
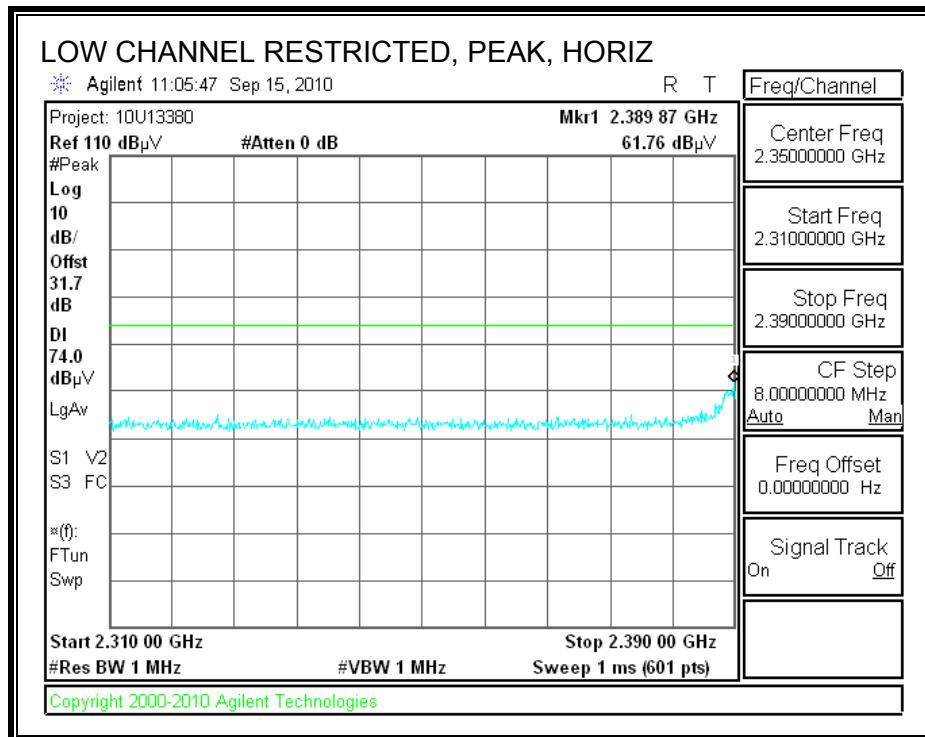
f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2412 MHz Low CH													
4.824	3.0	38.5	33.0	5.8	-36.5	0.0	0.0	40.9	74.0	-33.1	V	P	
4.824	3.0	26.2	33.0	5.8	-36.5	0.0	0.0	28.6	54.0	-25.4	V	A	
7.236	3.0	37.5	35.2	7.2	-36.2	0.0	0.0	43.7	74.0	-30.3	V	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	V	A	
2412 MHz Mid CH													
4.824	3.0	38.9	33.0	5.8	-36.5	0.0	0.0	41.2	74.0	-32.8	H	P	
4.824	3.0	26.2	33.0	5.8	-36.5	0.0	0.0	28.6	54.0	-25.4	H	A	
7.236	3.0	38.1	35.2	7.2	-36.2	0.0	0.0	44.3	74.0	-29.7	H	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	H	A	
2437 MHz Mid CH													
4.874	3.0	38.3	33.1	5.8	-36.5	0.0	0.0	40.7	74.0	-33.3	V	P	
4.874	3.0	25.8	33.1	5.8	-36.5	0.0	0.0	28.2	54.0	-25.8	V	A	
7.311	3.0	38.2	35.3	7.3	-36.2	0.0	0.0	44.6	74.0	-29.4	V	P	
7.311	3.0	25.6	35.3	7.3	-36.2	0.0	0.0	31.9	54.0	-22.1	V	A	
2437 MHz High CH													
4.874	3.0	38.8	33.1	5.8	-36.5	0.0	0.0	41.2	74.0	-32.8	H	P	
4.874	3.0	25.8	33.1	5.8	-36.5	0.0	0.0	28.3	54.0	-25.7	H	A	
7.311	3.0	37.5	35.3	7.3	-36.2	0.0	0.0	43.8	74.0	-30.2	H	P	
7.311	3.0	25.6	35.3	7.3	-36.2	0.0	0.0	32.0	54.0	-22.0	H	A	
2462MHz High CH													
4.924	3.0	39.2	33.1	5.9	-36.5	0.0	0.0	41.8	74.0	-32.2	H	P	
4.924	3.0	26.4	33.1	5.9	-36.5	0.0	0.0	28.9	54.0	-25.1	H	A	
7.386	3.0	37.8	35.4	7.3	-36.2	0.0	0.0	44.3	74.0	-29.7	H	P	
7.386	3.0	25.6	35.4	7.3	-36.2	0.0	0.0	32.1	54.0	-21.9	H	A	
2462MHz High CH													
4.924	3.0	38.9	33.1	5.9	-36.5	0.0	0.0	41.4	74.0	-32.6	V	P	
4.924	3.0	26.3	33.1	5.9	-36.5	0.0	0.0	28.9	54.0	-25.1	V	A	
7.386	3.0	38.1	35.4	7.3	-36.2	0.0	0.0	44.6	74.0	-29.4	V	P	
7.386	3.0	25.6	35.4	7.3	-36.2	0.0	0.0	32.1	54.0	-21.9	V	A	

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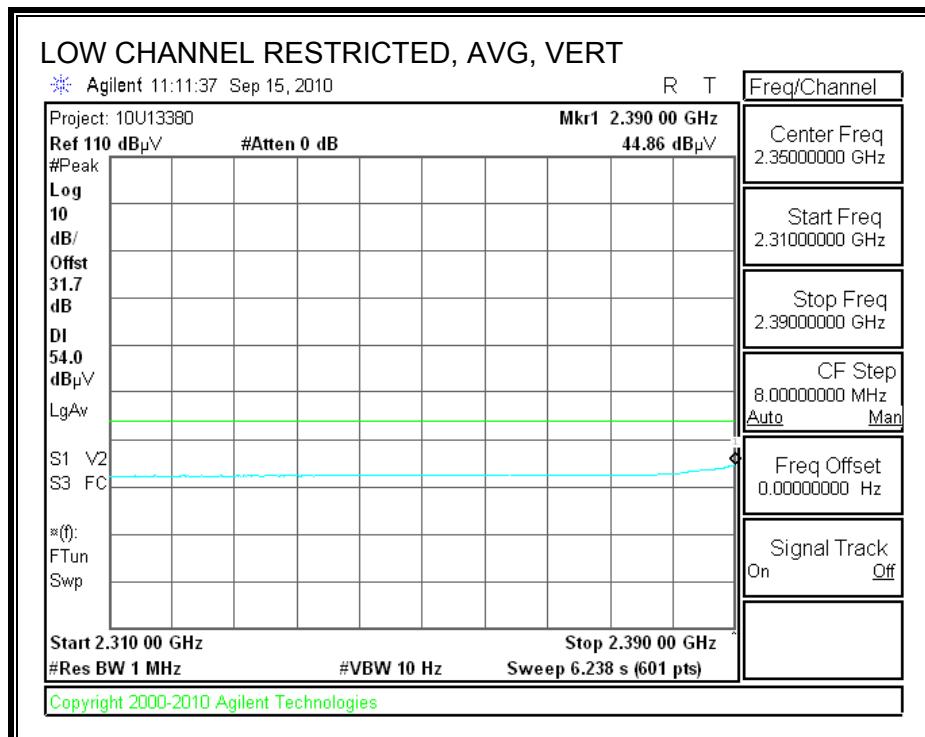
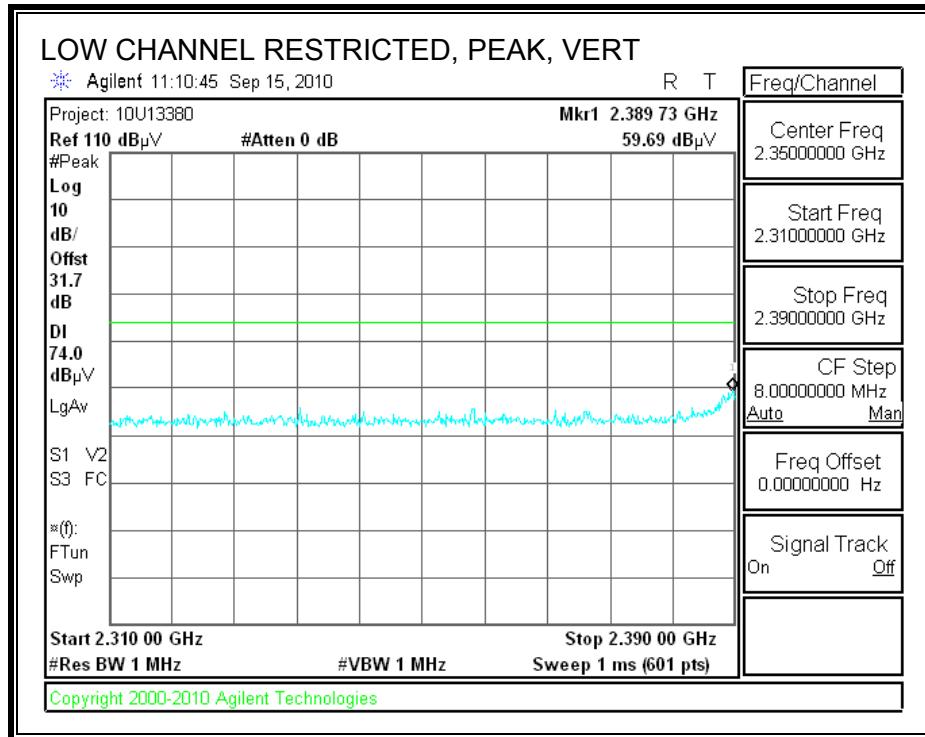
Note: No other emissions were detected above the system noise floor.

8.5. CO-LOCATED TRANSMITTER RADIATED EMISSIONS EUT WITH CHARGING DOCK (WLAN G-MODE WITH BLUETOOTH 8PSK MODULATION)

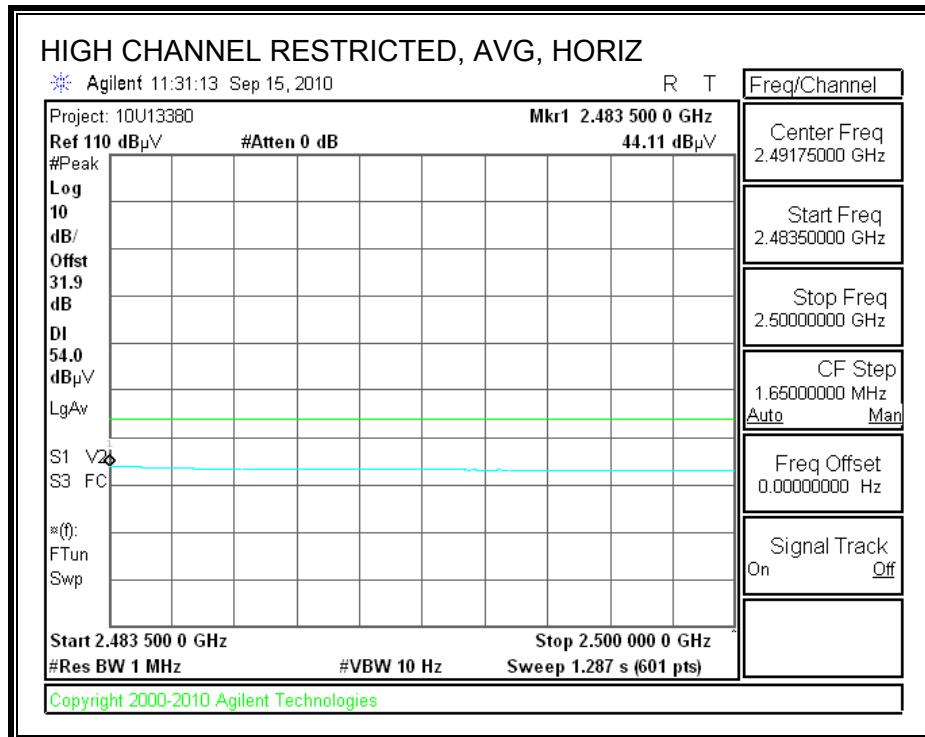
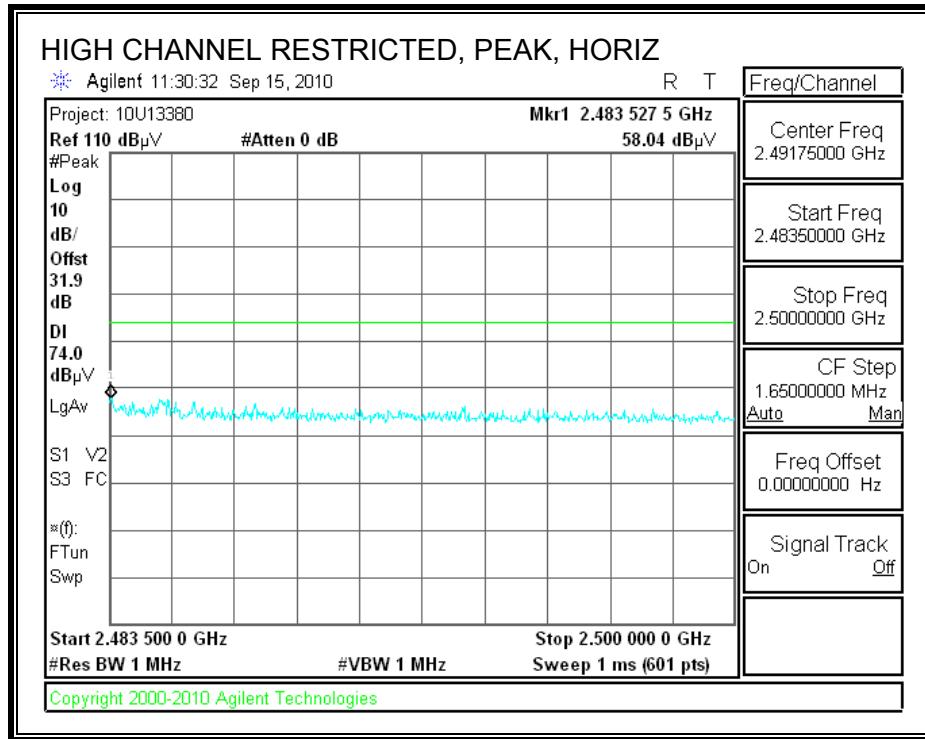
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



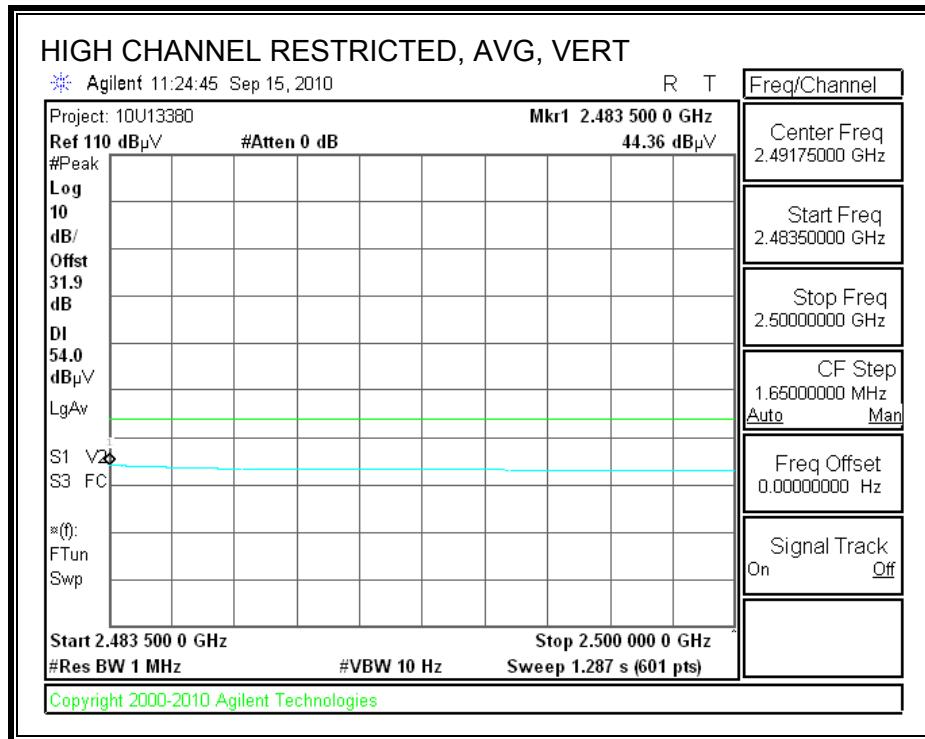
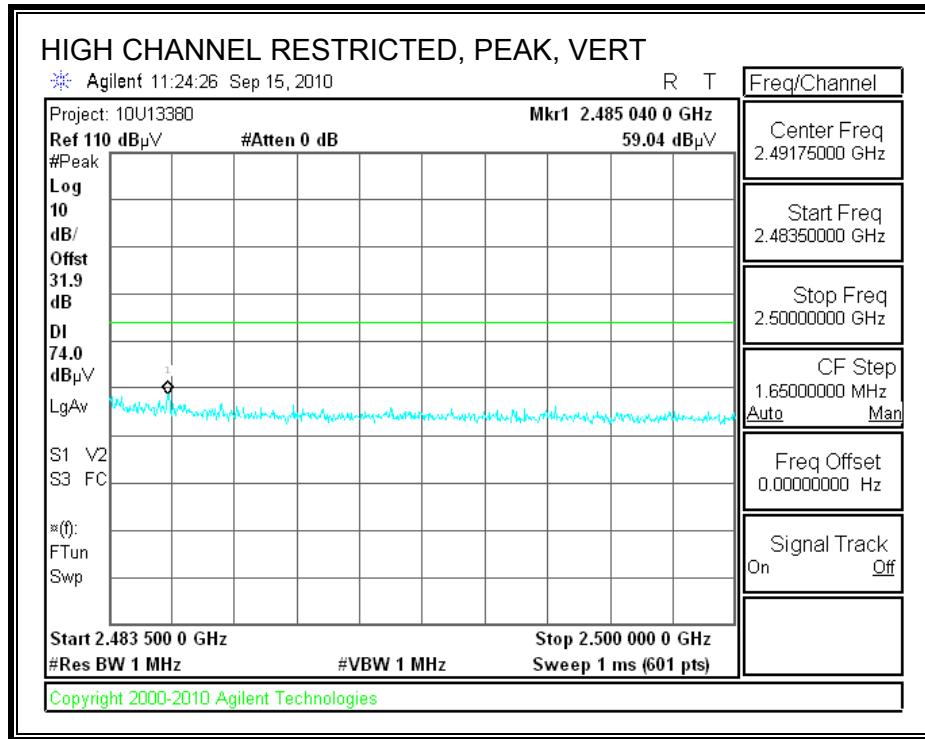
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/15/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: WLAN, BT 8PSK, TX mode

f	Measurement Frequency	Amp	Preamp Gain					Average Field Strength Limit			
Dist	Distance to Antenna	D	Corr	Distance Correct to 3 meters				Peak Field Strength Limit			
Read	Analyzer Reading	Avg		Average Field Strength @ 3 m				Margin vs. Average Limit			
AF	Antenna Factor	Peak		Calculated Peak Field Strength				Margin vs. Peak Limit			
CL	Cable Loss	HPF		High Pass Filter							

f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
2412 MHz Low CH													
4.824	3.0	38.3	33.0	5.8	-36.5	0.0	0.0	40.6	74.0	-33.4	H	P	
4.824	3.0	26.2	33.0	5.8	-36.5	0.0	0.0	28.5	54.0	-25.5	H	A	
7.236	3.0	37.6	35.2	7.2	-36.2	0.0	0.0	43.8	74.0	-30.2	H	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.2	54.0	-22.8	H	A	
2412 MHz Mid CH													
4.824	3.0	38.7	33.0	5.8	-36.5	0.0	0.0	41.1	74.0	-32.9	V	P	
4.824	3.0	26.2	33.0	5.8	-36.5	0.0	0.0	28.5	54.0	-25.5	V	A	
7.236	3.0	38.5	35.2	7.2	-36.2	0.0	0.0	44.7	74.0	-29.3	V	P	
7.236	3.0	25.1	35.2	7.2	-36.2	0.0	0.0	31.3	54.0	-22.7	V	A	
2437 MHz Mid CH													
4.874	3.0	38.0	33.1	5.8	-36.5	0.0	0.0	40.5	74.0	-33.5	V	P	
4.874	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.0	54.0	-26.0	V	A	
7.311	3.0	38.1	35.3	7.3	-36.2	0.0	0.0	44.4	74.0	-29.6	V	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	V	A	
2437 MHz Mid CH													
4.874	3.0	38.6	33.1	5.8	-36.5	0.0	0.0	41.0	74.0	-33.0	H	P	
4.874	3.0	25.6	33.1	5.8	-36.5	0.0	0.0	28.1	54.0	-25.9	H	A	
7.311	3.0	37.4	35.3	7.3	-36.2	0.0	0.0	43.7	74.0	-30.3	H	P	
7.311	3.0	25.4	35.3	7.3	-36.2	0.0	0.0	31.7	54.0	-22.3	H	A	
2462MHz High CH													
4.924	3.0	39.0	33.1	5.9	-36.5	0.0	0.0	41.6	74.0	-32.4	H	P	
4.924	3.0	26.1	33.1	5.9	-36.5	0.0	0.0	28.7	54.0	-25.3	H	A	
7.386	3.0	37.7	35.4	7.3	-36.2	0.0	0.0	44.2	74.0	-29.8	H	P	
7.386	3.0	25.4	35.4	7.3	-36.2	0.0	0.0	31.9	54.0	-22.1	H	A	
2462MHz High CH													
4.924	3.0	38.7	33.1	5.9	-36.5	0.0	0.0	41.2	74.0	-32.8	V	P	
4.924	3.0	26.1	33.1	5.9	-36.5	0.0	0.0	28.7	54.0	-25.3	V	A	
7.386	3.0	37.9	35.4	7.3	-36.2	0.0	0.0	44.4	74.0	-29.6	V	P	
7.386	3.0	25.3	35.4	7.3	-36.2	0.0	0.0	31.8	54.0	-22.2	V	A	

Rev. 4.1.2.7

Note: No other emissions were detected above the system noise floor.

8.6. RECEIVER ABOVE 1 GHz

8.6.1. RECEIVER ABOVE 1 GHz FOR WLAN (WORST CASE)

High Frequency Measurement															
Compliance Certification Services, Fremont 5m Chamber															
Company:	Palm														
Project #:	10U13380														
Date:	9/16/2010														
Test Engineer:	Tom Chen														
Configuration:	EUT with Inductive Charger														
Mode:	WLAN, RX mode														
<u>Test Equipment:</u>															
Horn 1-18GHz			Pre-amplifier 1-26GHz			Pre-amplifier 26-40GHz			Horn > 18GHz			Limit			
T73; S/N: 6717 @3m	T144 Miteq 3008A00931													RX RSS 210	
Hi Frequency Cables															
3' cable 22807700			12' cable 22807600			20' cable 22807500			HPF			Reject Filter			Peak Measurements RBW=VBW=1MHz
3' cable 22807700	12' cable 22807600	20' cable 22807500												Average Measurements RBW=1MHz ; VBW=10Hz	
f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
1.024	3.0	48.8	38.5	23.9	2.4	-39.5	0.0	0.0	35.7	25.3	74	54	-38.3	-28.7	V
1.544	3.0	47.4	37.2	25.7	3.0	-38.7	0.0	0.0	37.4	27.1	74	54	-36.6	-26.9	V
2.440	3.0	46.1	35.9	28.3	3.9	-37.5	0.0	0.0	40.8	30.6	74	54	-33.2	-23.4	V
2.676	3.0	44.9	34.6	29.0	4.1	-37.4	0.0	0.0	40.6	30.2	74	54	-33.4	-23.8	V
1.048	3.0	48.0	39.0	24.0	2.4	-39.4	0.0	0.0	35.0	26.0	74	54	-39.0	-28.0	H
1.540	3.0	47.2	37.7	25.7	3.0	-38.7	0.0	0.0	37.1	27.6	74	54	-36.9	-26.4	H
2.440	3.0	47.3	38.3	28.3	3.9	-37.5	0.0	0.0	42.0	33.0	74	54	-32.0	-21.0	H

Rev. 07.22.09

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

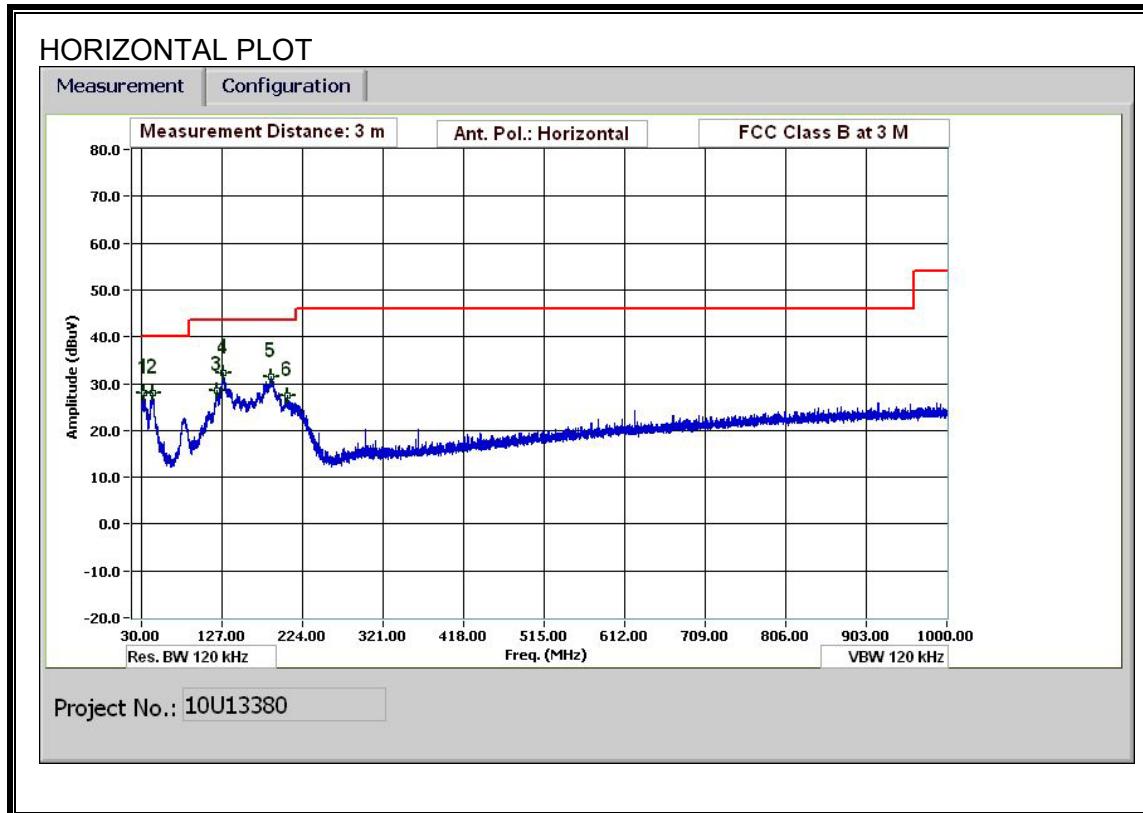
8.6.2. RECEIVER ABOVE 1 GHz FOR BLUETOOTH (WORST CASE)

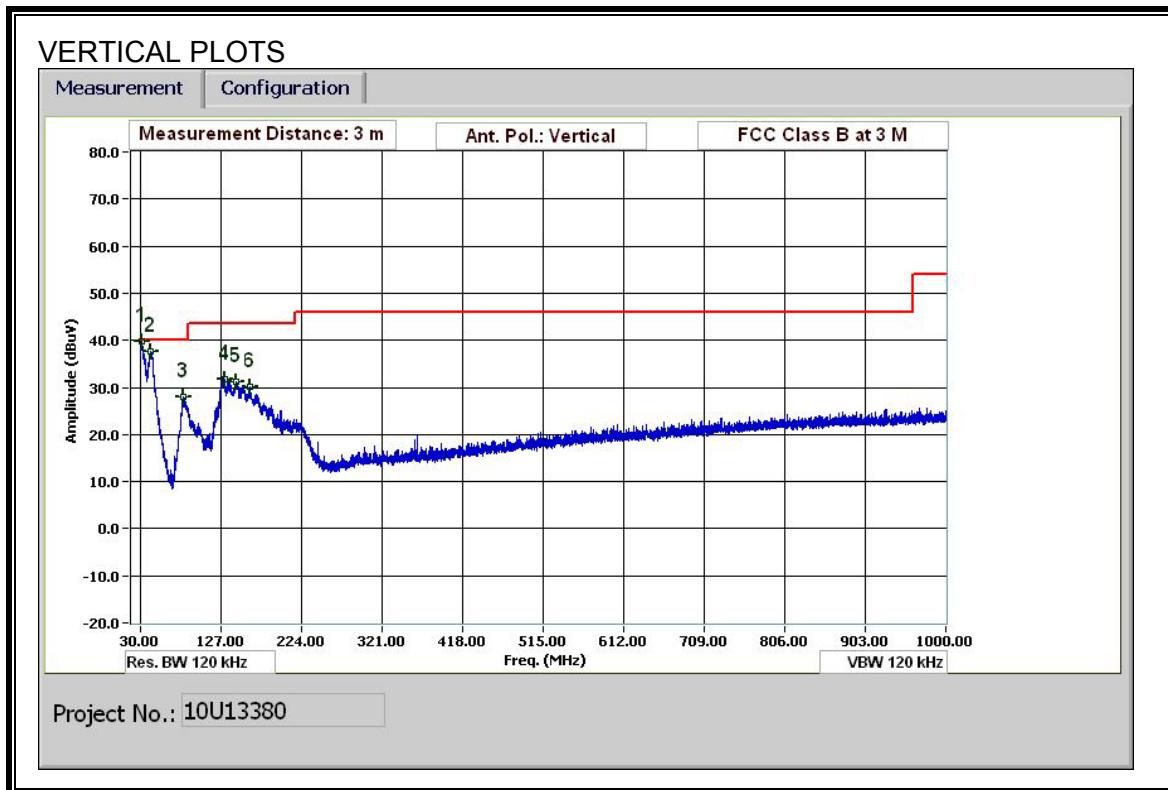
High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber															
Company:	Palm														
Project #:	10U13380														
Date:	9/16/2010														
Test Engineer:	Tom Chen														
Configuration:	EUT with Inductive Charger														
Mode:	Bluetooth, RX mode														
<u>Test Equipment:</u>															
Horn 1-18GHz		Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz		Horn > 18GHz		Limit							
T73; S/N: 6717 @3m		T144 Miteq 3008A00931						RX RSS 210							
Hi Frequency Cables															
3' cable 22807700		12' cable 22807600		20' cable 22807500		HPF		Reject Filter		Peak Measurements RBW=VBW=1MHz					
3' cable 22807700		12' cable 22807600		20' cable 22807500						Average Measurements RBW=1MHz; VBW=10Hz					
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
1.024	3.0	49.1	39.1	23.9	2.4	-39.5	0.0	0.0	36.0	26.0	74	54	-38.0	-28.0	V
1.544	3.0	47.8	37.8	25.7	3.0	-38.7	0.0	0.0	37.7	27.8	74	54	-36.3	-26.2	V
2.440	3.0	46.5	36.5	28.3	3.9	-37.5	0.0	0.0	41.2	31.2	74	54	-32.8	-22.8	V
2.676	3.0	45.2	35.2	29.0	4.1	-37.4	0.0	0.0	40.9	30.9	74	54	-33.1	-23.1	V
1.048	3.0	48.3	39.6	24.0	2.4	-39.4	0.0	0.0	35.3	26.6	74	54	-38.7	-27.4	H
1.540	3.0	47.5	38.3	25.7	3.0	-38.7	0.0	0.0	37.5	28.2	74	54	-36.5	-25.8	H
2.440	3.0	47.6	38.9	28.3	3.9	-37.5	0.0	0.0	42.3	33.6	74	54	-31.7	-20.4	H
Rev. 07.22.09															
f	Measurement Frequency			Amp	Preamp Gain						Avg Lim	Average Field Strength Limit			
Dist	Distance to Antenna			D Corr	Distance Correct to 3 meters						Pk Lim	Peak Field Strength Limit			
Read	Analyzer Reading			Avg	Average Field Strength @ 3 m						Avg Mar	Margin vs. Average Limit			
AF	Antenna Factor			Peak	Calculated Peak Field Strength						Pk Mar	Margin vs. Peak Limit			
CL	Cable Loss			HPF											

8.7. WORST-CASE BELOW 1 GHz

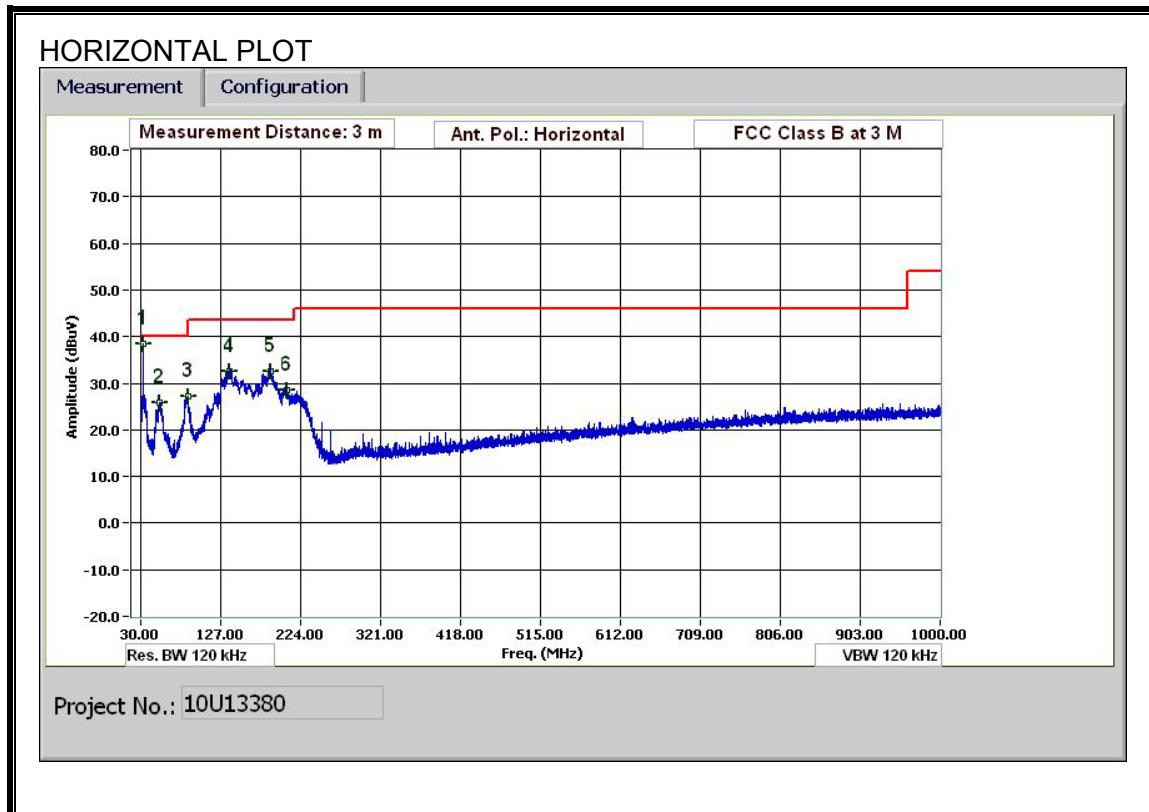
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

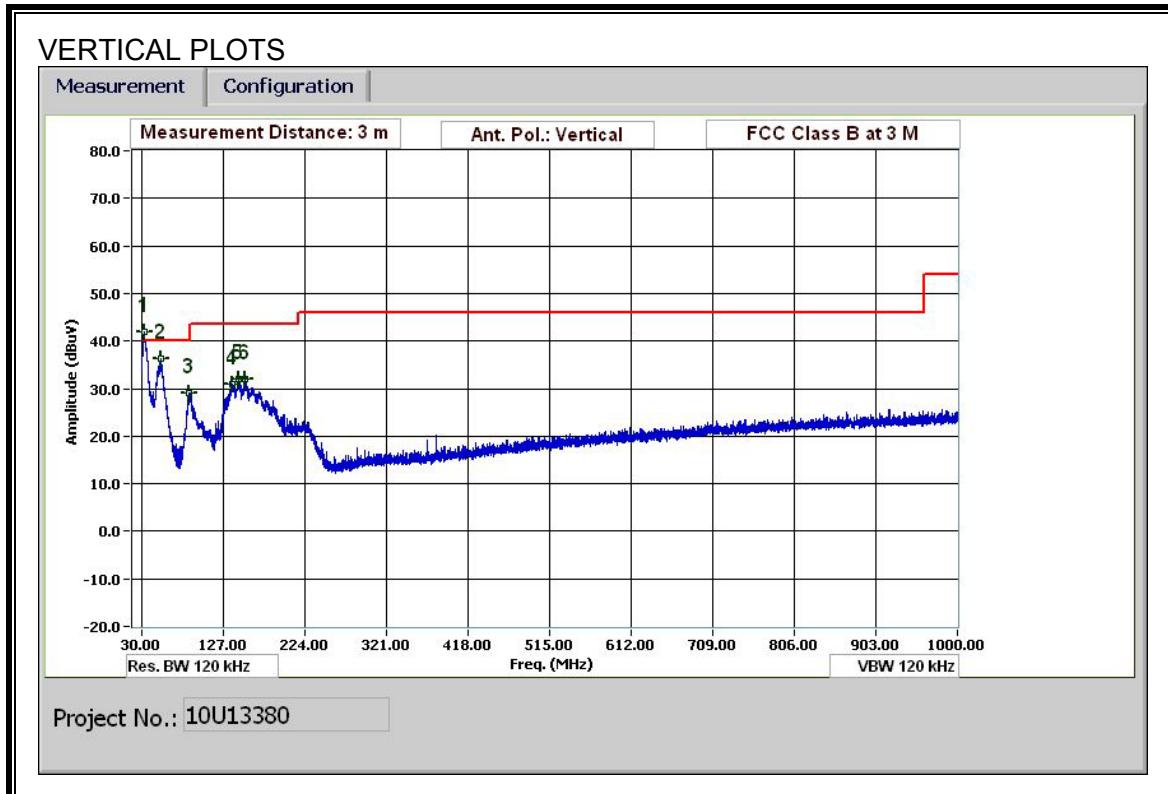
EUT WITH AC/DC ADAPTER





EUT WITH INDUCTIVE CHARGER





HORIZONTAL AND VERTICAL DATA

30-1000MHz Frequency Measurement

Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen
Date: 09/15/10
Project #: 10U13380
Company: Palm
Test Target: FCC Class B
Mode Oper: TX mode, worst case

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Pad dB	Corr. dBuVm	Limit dBuVm	Margin dB	Ant Pol V/H	Det P/A/QP	Notes
Horizontal with Dock Charger													
33.72	3.0	42.7	18.5	0.5	28.4	0.0	0.0	33.3	40.0	-6.7	H	QP	
53.401	3.0	45.2	8.2	0.6	28.4	0.0	0.0	25.7	40.0	-14.3	H	P	
87.242	3.0	47.1	7.5	0.8	28.3	0.0	0.0	27.1	40.0	-12.9	H	P	
137.644	3.0	46.3	13.3	1.1	28.3	0.0	0.0	32.5	43.5	-11.0	H	P	
187.566	3.0	48.3	11.3	1.2	28.2	0.0	0.0	32.5	43.5	-11.0	H	P	
207.367	3.0	43.6	12.0	1.3	28.2	0.0	0.0	28.6	43.5	-14.9	H	P	
Vertical with Dock Charger													
32.52	3.0	44.7	19.0	0.5	28.4	0.0	0.0	35.9	40.0	-4.1	V	QP	
53.401	3.0	52.5	8.2	0.6	28.4	0.0	0.0	33.0	40.0	-7.0	V	QP	
85.562	3.0	49.2	7.4	0.8	28.3	0.0	0.0	29.1	40.0	-10.9	V	P	
137.644	3.0	44.7	13.3	1.1	28.3	0.0	0.0	30.8	43.5	-12.7	V	P	
145.925	3.0	46.3	12.9	1.1	28.3	0.0	0.0	32.0	43.5	-11.5	V	P	
153.485	3.0	46.9	12.3	1.1	28.3	0.0	0.0	32.0	43.5	-11.5	V	P	
Horizontal with AC charger													
33.12	3.0	37.0	18.7	0.5	28.4	0.0	0.0	27.9	40.0	-12.1	H	P	
43.321	3.0	44.0	11.8	0.6	28.4	0.0	0.0	28.0	40.0	-12.0	H	P	
121.324	3.0	42.1	13.7	1.0	28.3	0.0	0.0	28.5	43.5	-15.0	H	P	
128.764	3.0	45.9	13.6	1.1	28.3	0.0	0.0	32.2	43.5	-11.3	H	P	
186.126	3.0	47.2	11.3	1.2	28.2	0.0	0.0	31.4	43.5	-12.1	H	P	
206.527	3.0	42.4	12.0	1.3	28.2	0.0	0.0	27.4	43.5	-16.1	H	P	
Vertical with AC charger													
31.8	3.0	43.2	19.3	0.5	28.4	0.0	0.0	34.6	40.0	-5.4	V	QP	
42.361	3.0	49.8	12.4	0.6	28.4	0.0	0.0	34.5	40.0	-5.5	V	QP	
81.962	3.0	48.2	7.4	0.8	28.3	0.0	0.0	28.0	40.0	-12.0	V	P	
131.524	3.0	45.4	13.5	1.1	28.3	0.0	0.0	31.7	43.5	-11.8	V	P	
144.965	3.0	45.4	12.9	1.1	28.3	0.0	0.0	31.1	43.5	-12.4	V	P	
161.285	3.0	45.7	11.6	1.1	28.2	0.0	0.0	30.2	43.5	-13.3	V	P	

Rev. 1.27.09

Note: No other emissions were detected above the system noise floor.

8.8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

ANSI C63.4

RESULTS

EUT WITH AC/DC ADAPTER

6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq. (MHz)	Reading			Closs (dB)	Limit QP	EN_B AV	Margin		Remark
	PK (dBuV)	QP (dBuV)	AV (dBuV)				QP (dB)	AV (dB)	
0.15	65.51	54.20	42.85	0.00	65.89	55.89	-11.69	-13.04	L1
0.22	60.75	53.21	43.02	0.00	62.82	52.82	-9.61	-9.80	L1
0.54	53.99	44.90	32.06	0.00	56.00	46.00	-11.10	-13.94	L1
0.45	54.31	50.30	38.31	0.00	56.89	46.89	-6.59	-8.58	L2
0.52	55.39	51.30	38.37	0.00	56.00	46.00	-4.70	-7.63	L2
0.67	55.39	49.50	37.86	0.00	56.00	46.00	-6.50	-8.14	L2
6 Worst Data									

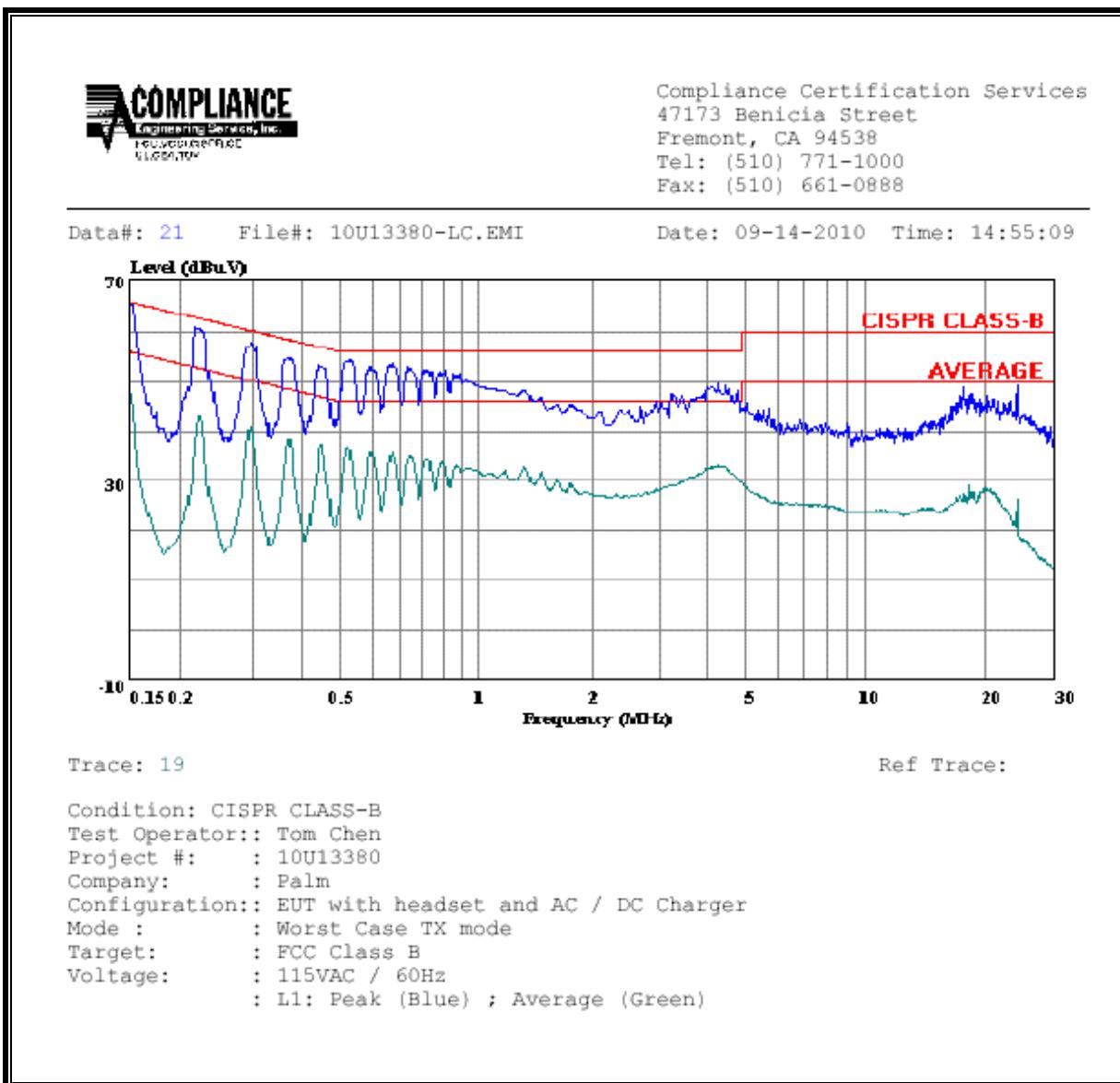
EUT WITH INDUCTIVE CHARGING DOCK

6 WORST EMISSIONS

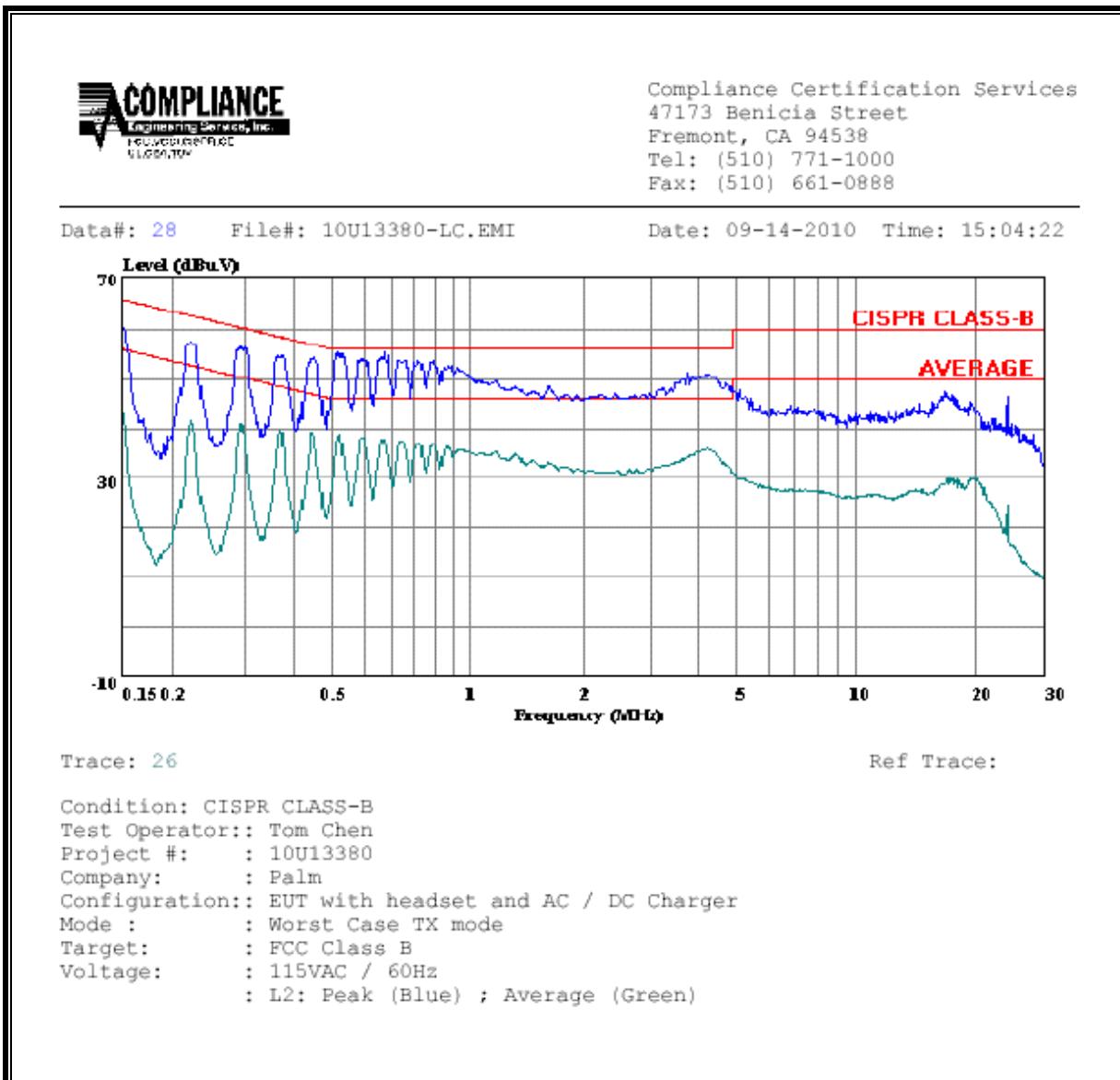
CONDUCTED EMISSIONS DATA (115VAC 60Hz)										
Freq. (MHz)	Reading			Closs (dB)	Limit	EN_B		Margin		Remark
	PK (dBuV)	QP (dBuV)	AV (dBuV)			QP	AV	QP (dB)	AV (dB)	
0.15	65.51	60.23	42.85	0.00	65.89	55.89	-5.66	-13.04	L1	
0.23	58.16	--	18.47	0.00	62.52	52.52	-4.36	-34.05	L1	
0.30	55.54	--	14.78	0.00	60.33	50.33	-4.79	-35.55	L1	
0.30	55.00	--	14.04	0.00	60.35	50.35	-5.35	-36.31	L2	
0.46	54.46	51.36	14.18	0.00	56.77	46.77	-5.41	-32.59	L2	
0.61	52.26	50.41	20.36	0.00	56.00	46.00	-5.59	-25.64	L2	
6 Worst Data										

EUT WITH AC/DC ADAPTER

LINE 1 RESULTS

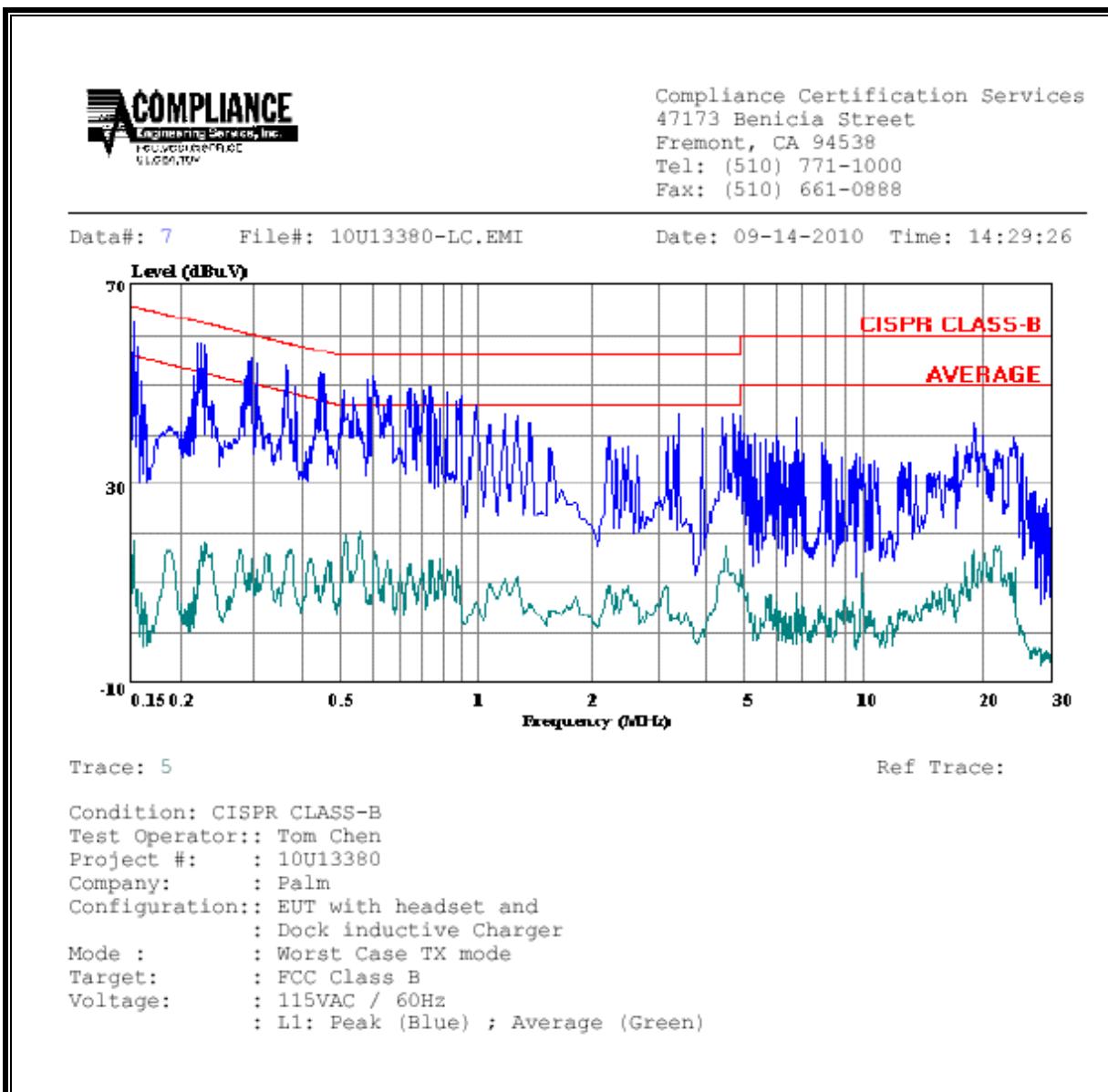


LINE 2 RESULTS



EUT WITH INDUCTIVE CHARGING DOCK

LINE 1 RESULTS



LINE 2 RESULTS

