



**FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8**

CERTIFICATION TEST REPORT

FOR

900 MHZ CORDLESS BASE UNIT

MODEL NUMBER: C052-XD AND C054-XD

**FCC ID: AL8-C05XXD
IC: 457A-C05XXD**

REPORT NUMBER: 12U14646- 3

ISSUE DATE: NOVEMBER 15, 2012

Prepared for
**PLANTRONICS
345 ENCINAL STREET
SANTA CRUZ, CA 95060, U.S.A.**

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NVLAP LAB CODE 200065-0

Revision History

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|-------------|-------------------|------------------|-------------------|
| -- | 11/15/12 | Initial Issue | Tim Lee |

TABLE OF CONTENTS

| | |
|--|-----------|
| 1. ATTESTATION OF TEST RESULTS | 4 |
| 2. TEST METHODOLOGY | 6 |
| 3. FACILITIES AND ACCREDITATION | 6 |
| 4. CALIBRATION AND UNCERTAINTY | 6 |
| 5. EQUIPMENT UNDER TEST | 7 |
| 5.1. DESCRIPTION OF EUT | 7 |
| 5.2. MANUFACTURER'S DESCRIPTION OF MODEL DIFFERENCES | 7 |
| 5.3. MAXIMUM OUTPUT POWER..... | 7 |
| 5.4. DESCRIPTION OF AVAILABLE ANTENNAS | 7 |
| 5.5. SOFTWARE AND FIRMWARE..... | 7 |
| 5.6. DESCRIPTION OF TEST SETUP..... | 7 |
| 5.7. DETAILS OF TESTED SYSTEM | 9 |
| 5.8. TEST AND MEASUREMENT EQUIPMENT..... | 10 |
| 6. ANTENNA PORT TEST RESULTS | 11 |
| 6.1.1. 6 dB BANDWIDTH..... | 11 |
| 6.1.2. 99% BANDWIDTH..... | 14 |
| 6.1.3. OUTPUT POWER | 17 |
| 6.1.4. AVERAGE POWER | 20 |
| 6.1.5. POWER SPECTRAL DENSITY | 21 |
| 6.1.6. CONDUCTED SPURIOUS EMISSIONS..... | 24 |
| 7. RADIATED TEST RESULTS..... | 28 |
| 7.1. LIMITS AND PROCEDURE..... | 28 |
| 7.2. TRANSMITTER BELOW 1 GHz..... | 29 |
| 7.2.1. BANDEDGE FOR C052 BASE | 29 |
| 7.2.1. HARMONICS AND SPURIOUS ENISSION FOR C052 BASE | 32 |
| 7.2.1. BANDEDGE FOR C054 BASE | 42 |
| 7.2.1. HARMONICS AND SPURIOUS ENISSION | 45 |
| 7.3. TRANSMITTER ABOVE 1 GHz..... | 55 |
| 7.3.1. HARMONIC AND SPURIOUS ABOVE 1 GHz FOR C052 BASE | 55 |
| 7.3.2. HARMONIC AND SPURIOUS ABOVE 1 GHz FOR C054 BASE | 56 |
| 8. AC POWER LINE CONDUCTED EMISSIONS..... | 57 |
| 9. SETUP PHOTOS..... | 64 |

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: PLANTRONICS
345 ENCINAL STREET
SANTA CRUZ, CA 95060, U.S.A.

EUT DESCRIPTION: 902-928 MHZ TRANSCEIVER

MODEL: C052-XD and C054-XD

SERIAL NUMBER: For Radiated Units **C052XD:** **C054XD:**
Low ch S/N 02014 S/N 02010
Mid Ch S/N: M002 S/N M006
High ch S/N: 02012 S/N 02008

For Conducted Units: Low channel S/N 043E01E5A
Mid channel S/N 043E020CD
High Channel S/N043E01E5F

DATE TESTED: October 5 – November 14, 2012

| APPLICABLE STANDARDS | |
|---|--------------|
| STANDARD | TEST RESULTS |
| CFR 47 Part 15 Subpart C | Pass |
| INDUSTRY CANADA RSS-210 Issue 8 Annex 8 | Pass |
| INDUSTRY CANADA RSS-GEN Issue 3 | Pass |

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:

Tested By:



TIM LEE
WiSE PROJECT MANAGER
UL CCS

THANH NGUYEN
EMC ENGINEER
UL CCS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2009, RSS-GEN Issue 3, and RSS-210 Issue 8.

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://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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 900 MHz Cordless Base Units.

5.2. MANUFACTURER'S DESCRIPTION OF MODEL DIFFERENCES

C052-XD has plastic housing to cradle WH500-XD headset, C054-XD has plastic housing to cradle WH300-XD and WH350-XD headsets. The internal transmitter is identical to both models. Only the external housing is different. Therefore, only one set of conducted data was taken which is represented of both models. Radiated data was taken for both models.

5.3. MAXIMUM OUTPUT POWER

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

| Frequency Range (MHz) | Output Power (dBm) | Output Power (mW) |
|--------------------------|-----------------------|----------------------|
| 902.85 - 927.125 | 13.79 | 23.93 |

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a monopole antennas with maximum peak gains of -.5 dBi .

5.5. SOFTWARE AND FIRMWARE

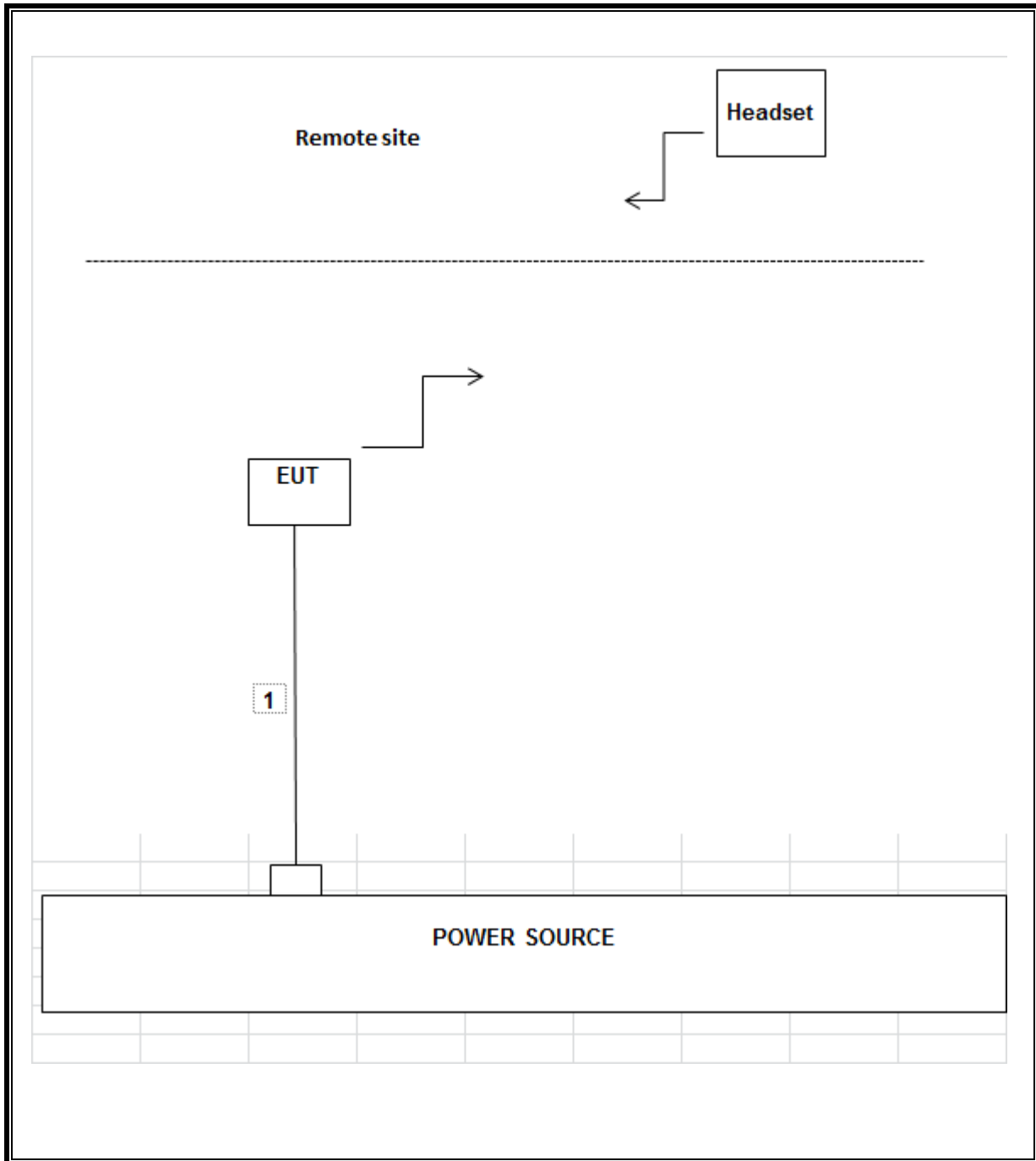
The EUT's firmware installed during testing was VB1.

5.6. DESCRIPTION OF TEST SETUP

TEST SETUP

The EUT is the standalone unit, setup wireless link to the remote headset.

SETUP DIAGRAM FOR TESTS



5.7. DETAILS OF TESTED SYSTEM

SUPPORT EQUIPMENT & PERIPHERALS

| PERIPHERAL SUPPORT EQUIPMENT LIST | | | | |
|-----------------------------------|--------------|---------------|------|--------|
| Description | Manufacturer | Model | S/N | FCC ID |
| AC Adapter | Plantronics | SSA-5W 090050 | 2112 | DoC |

I/O CABLES

| I/O CABLE LIST | | | | | | |
|----------------|------|------------------------|----------------|------------|------------------|---------|
| Cable No. | Port | No. of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | DC | 1 | DC Plug in | Unshielded | 2.5m | N/A |

5.8. 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 |
| Antenna, Bilog, 2 GHz | Sunol Sciences | JB1 | C01016 | 01/26/13 |
| Preamplifier, 26.5 GHz | Agilent / HP | 8449B | C01052 | 10/14/13 |
| Spectrum Analyzer, 26.5 GHz | Agilent / HP | E4440A | C01178 | 08/31/13 |
| Antenna, Horn, 18 GHz | EMCO | 3115 | C00945 | 10/20/13 |
| LISN, 30 MHz | FCC | LISN-50/250-25-2 | N02625 | 08/06/13 |
| EMI Test Receiver, 30 MHz | R & S | ESHS 20 | N02396 | 05/06/13 |
| Hi pass Filter, 1.5GHz | Micro-Tronics | BRC13192 | N02683 | CNR |
| Peak Power Meter | Agilent / HP | E4416A | C00963 | 12/13/13 |
| Peak Power Sensor | Agilent / HP | 57318 | C01202 | 02/23/13 |

6. ANTENNA PORT TEST RESULTS

6.1.1. 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.

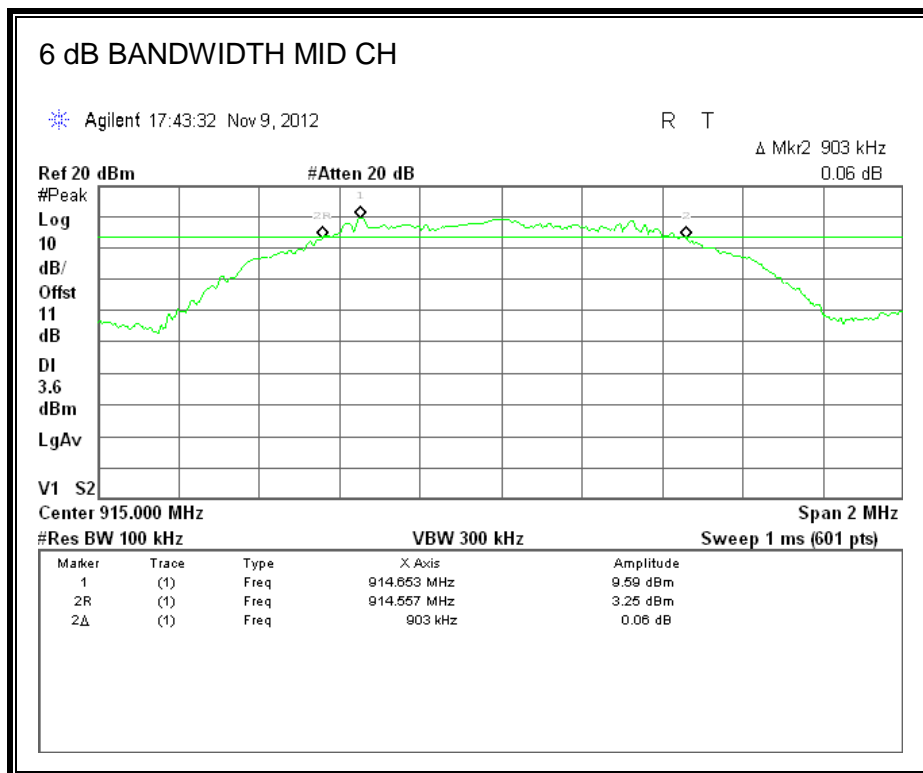
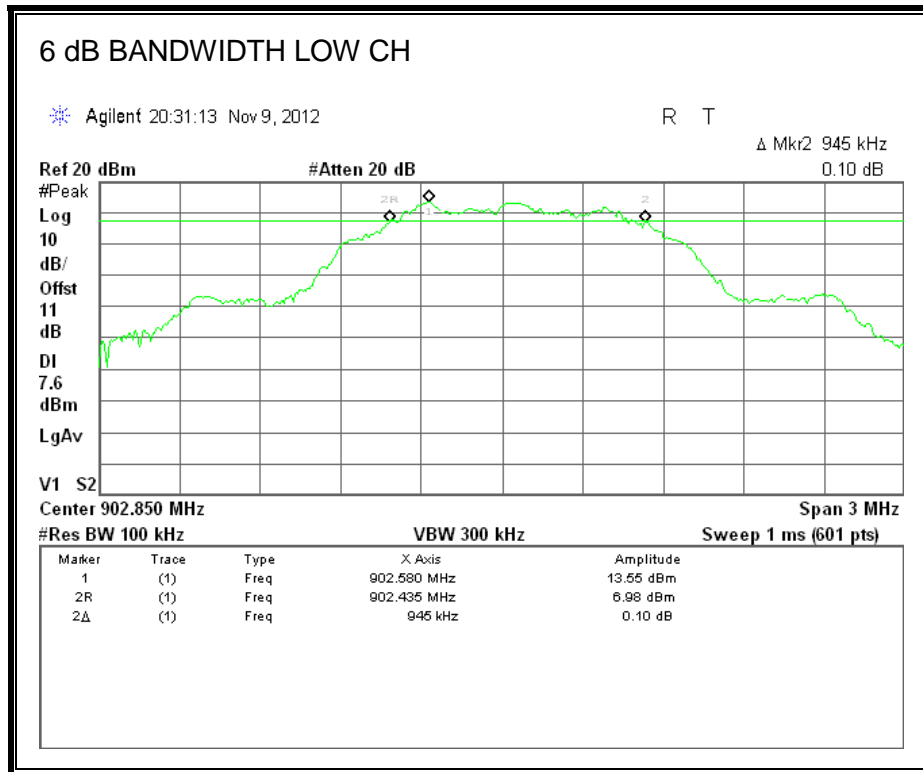
TEST PROCEDURE

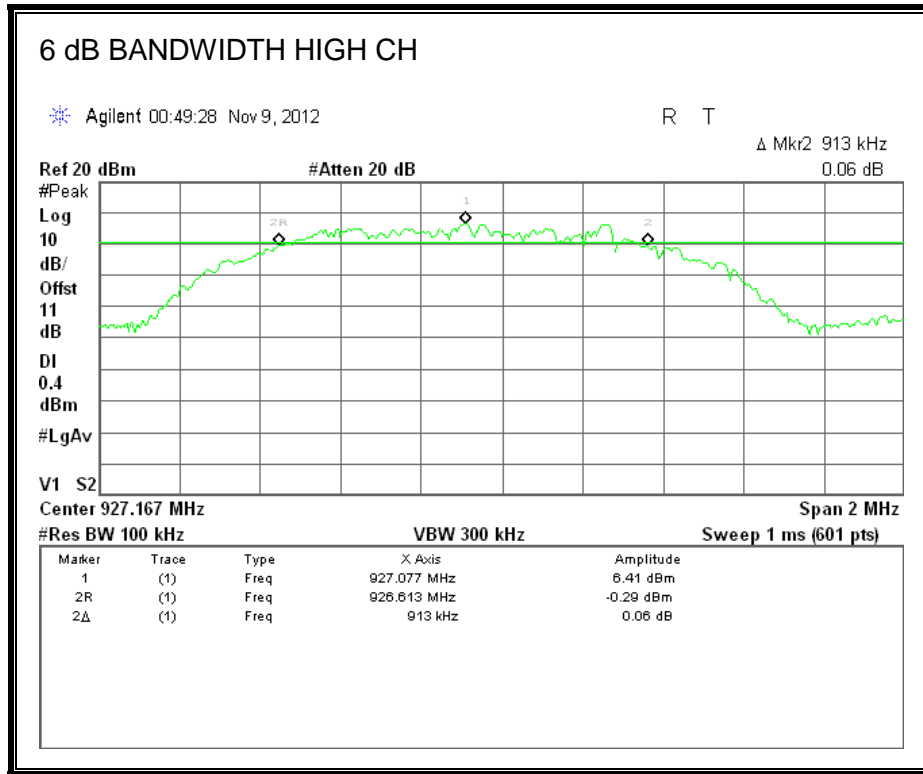
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

| Channel | Frequency (MHz) | 6 dB Bandwidth (KHz) | Minimum Limit (MHz) |
|---------|-----------------|----------------------|---------------------|
| Low | 902.850 | 945.000 | 0.5 |
| Middle | 915.000 | 903.000 | 0.5 |
| High | 927.125 | 913.000 | 0.5 |

6 dB BANDWIDTH





6.1.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

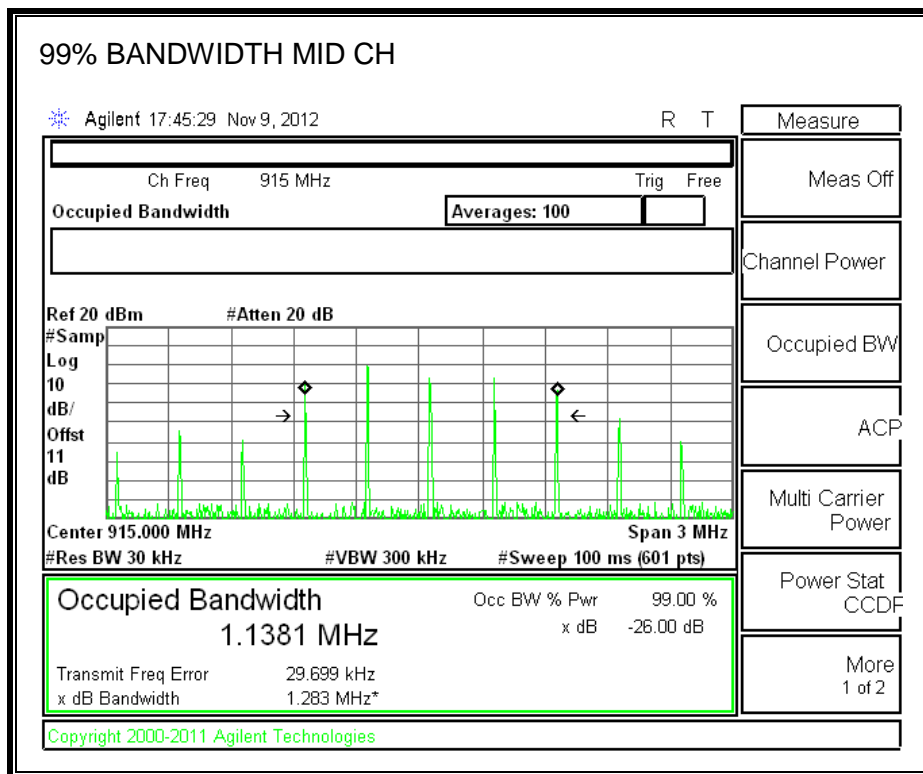
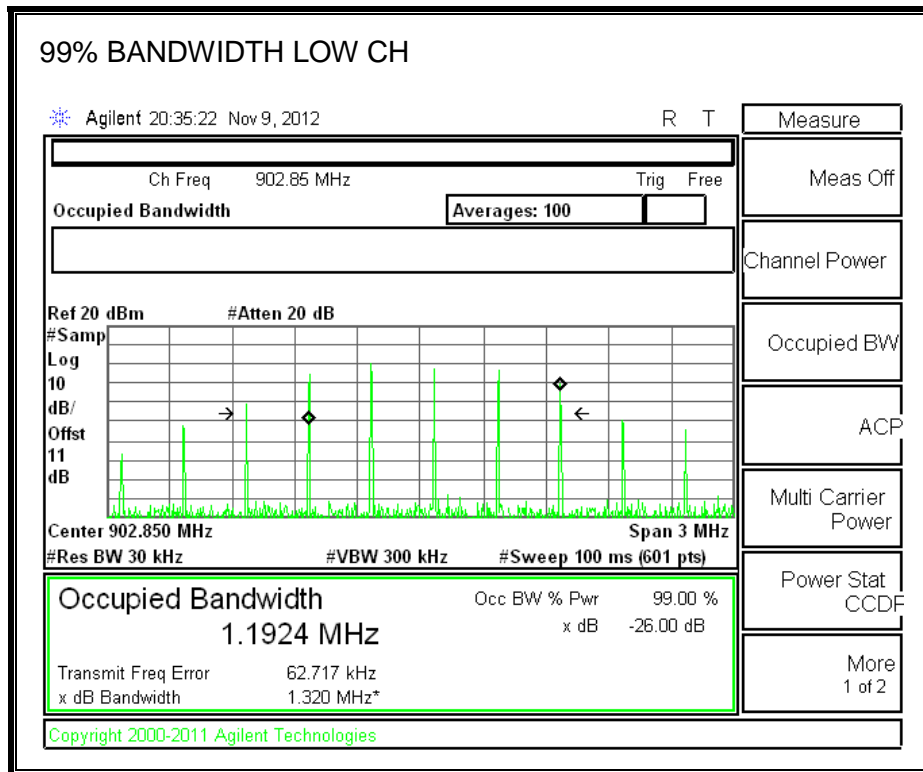
TEST PROCEDURE

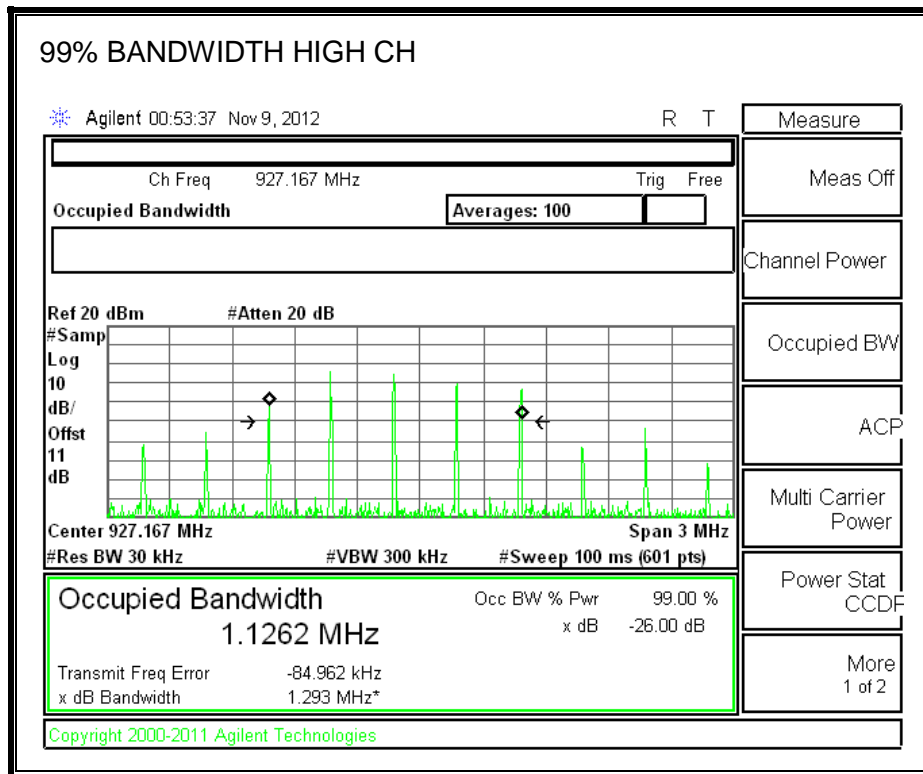
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

| Channel | Frequency (MHz) | 99% Bandwidth (KHz) |
|---------|--------------------|------------------------|
| Low | 902.850 | 1192.4 |
| Middle | 915.000 | 1138.1 |
| High | 927.125 | 1126.2 |

99% BANDWIDTH





6.1.3. OUTPUT POWER

LIMIT

§15.247 (b) (1)

RSS-210 Issue 7 Clause A8.4

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

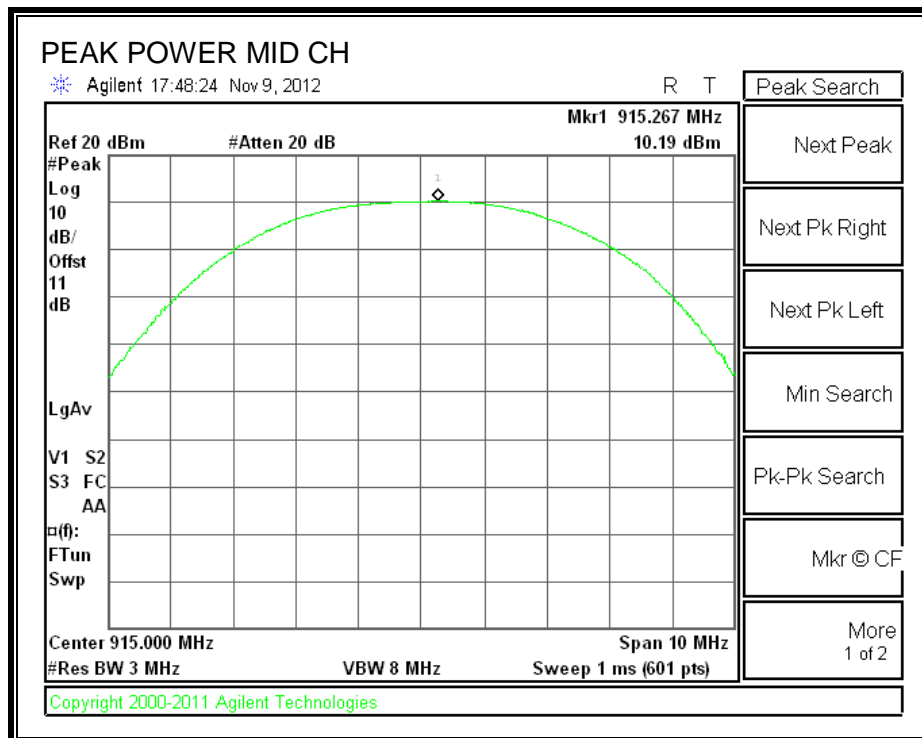
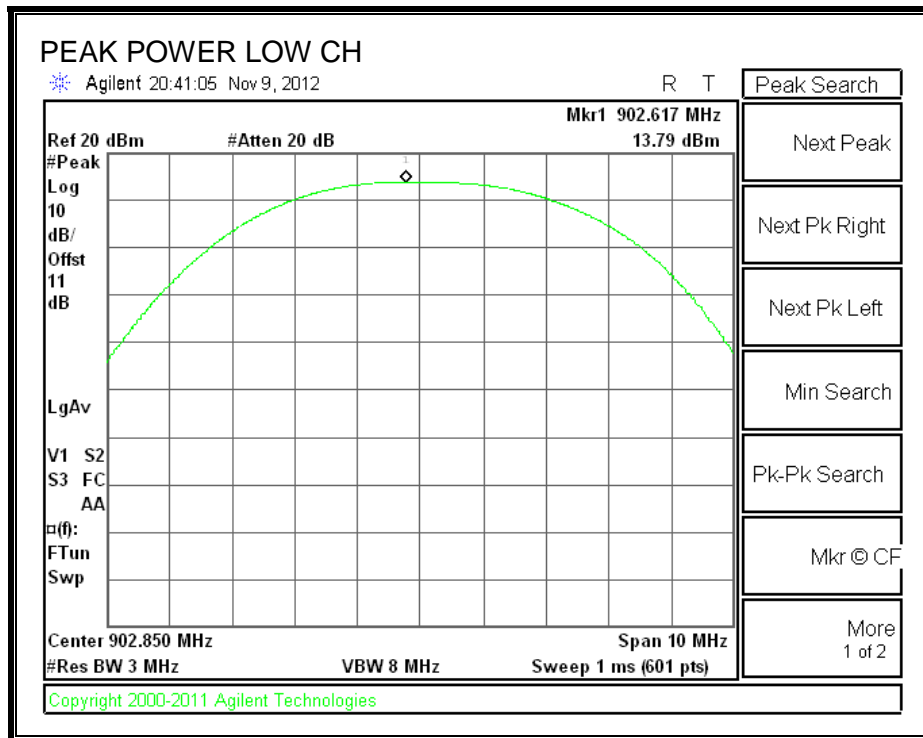
TEST PROCEDURE

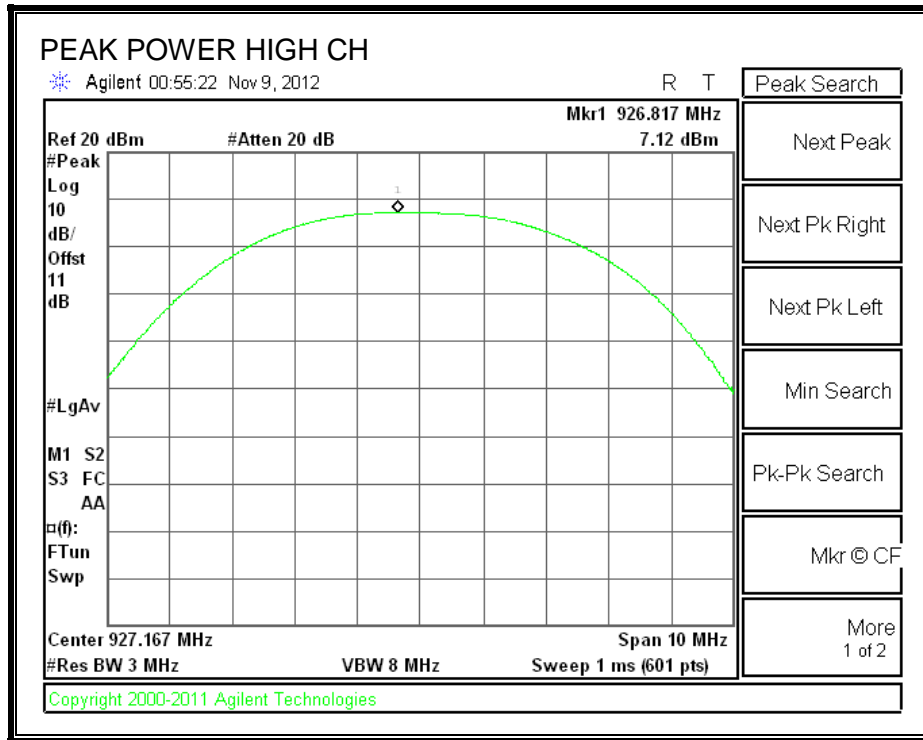
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

RESULTS

| Channel | Frequency (MHz) | Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---------|-----------------|--------------------|-------------|-------------|
| Low | 902.85 | 13.79 | 30 | -16.21 |
| Middle | 915 | 10.19 | 30 | -19.81 |
| High | 927.125 | 7.12 | 30 | -22.88 |

OUTPUT POWER





6.1.4. AVERAGE POWER

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1dB cable) was entered as an offset in the power meter to allow for direct reading of power.

| Channel | Frequency (MHz) | Average Power (dBm) |
|---------|-----------------|---------------------|
| Low | 902.85 | 1.17 |
| Middle | 915 | 0.08 |
| High | 927.125 | -2.30 |

6.1.5. 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

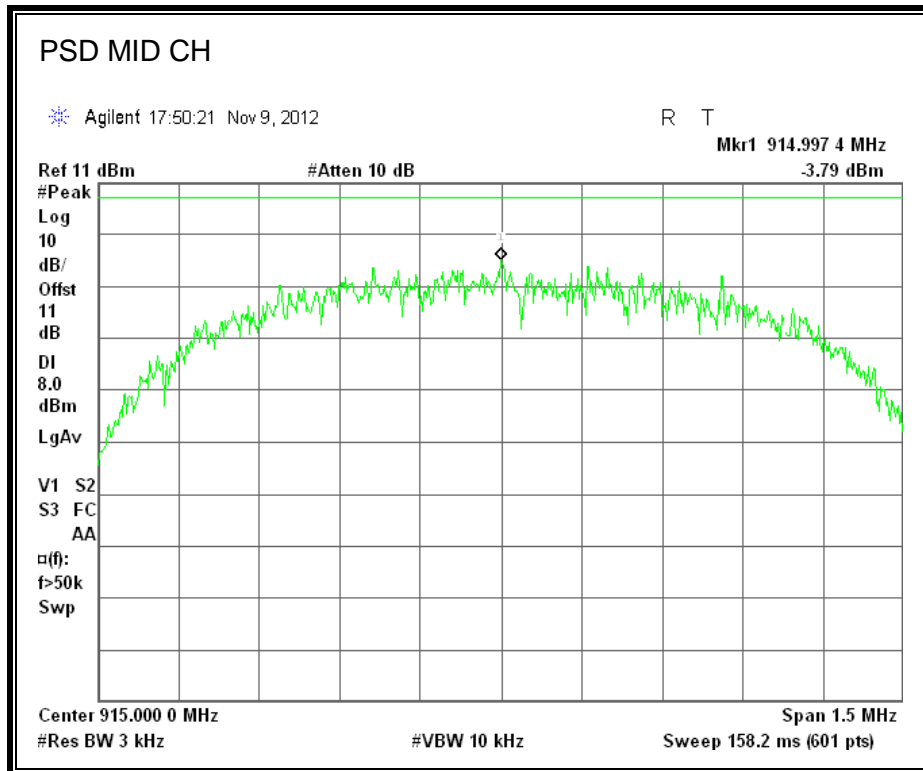
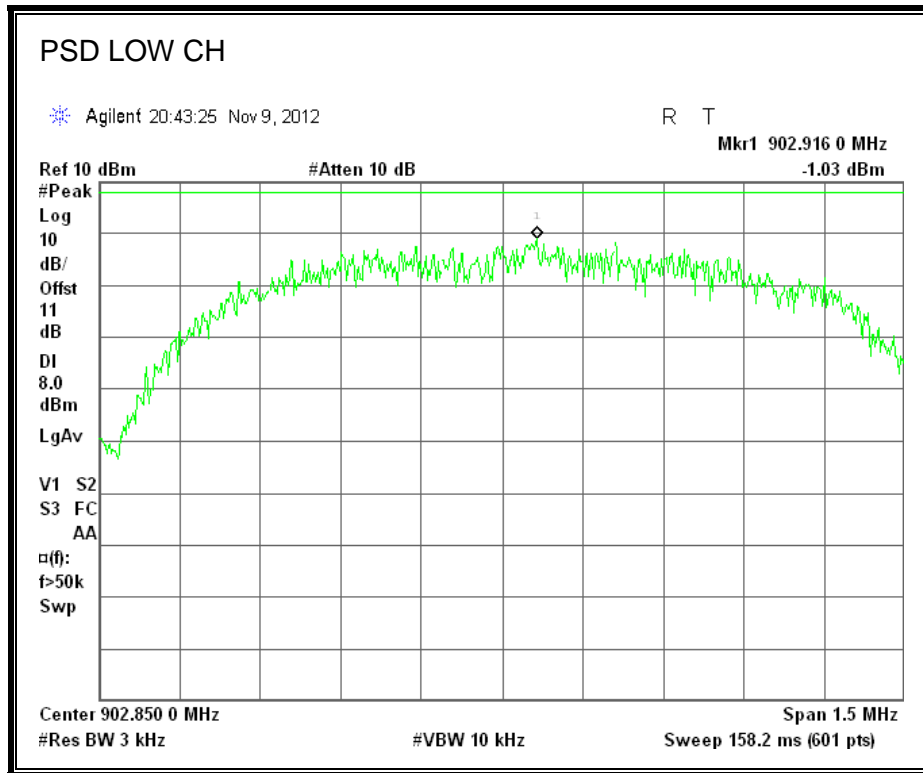
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

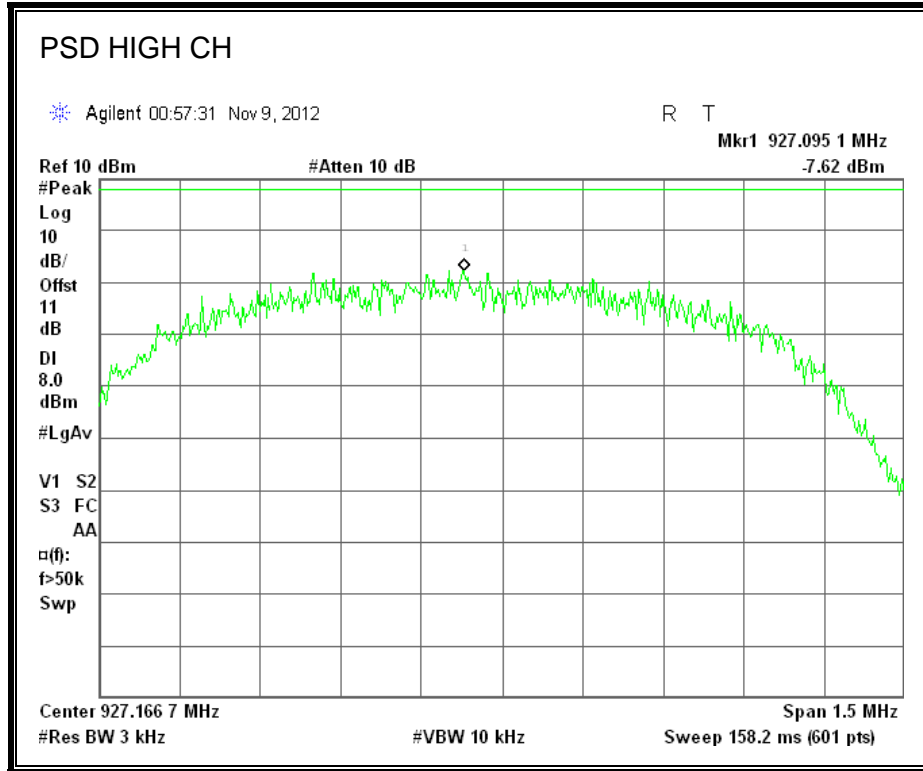
The spectrum from 30 MHz to 10 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

| Channel | Frequency (MHz) | PPSD (dBm) | Limit (dBm) | Margin (dB) |
|---------|-----------------|------------|-------------|-------------|
| Low | 902.850 | -1.03 | 8 | -9.03 |
| Middle | 915.000 | -3.79 | 8 | -11.79 |
| High | 927.125 | -7.62 | 8 | -15.62 |

POWER SPECTRAL DENSITY





6.1.6. 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.

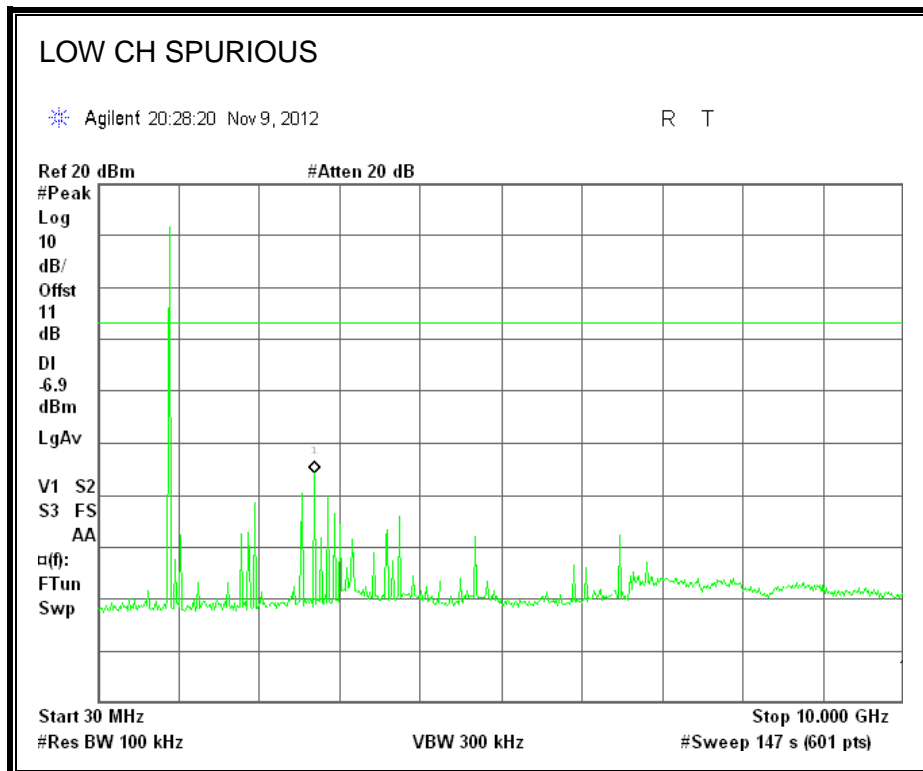
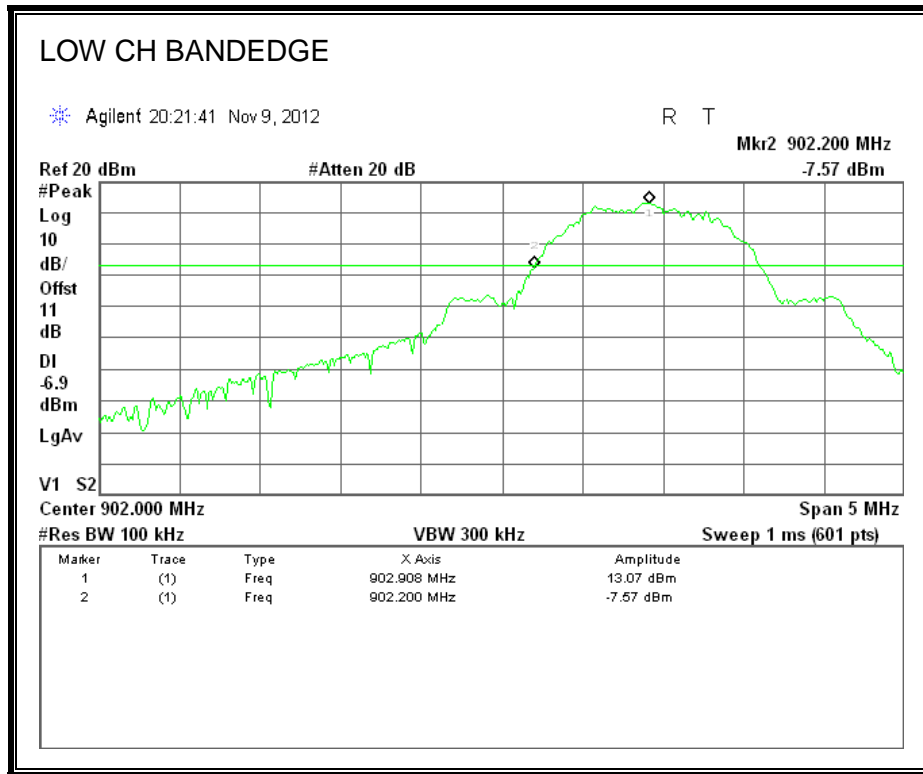
TEST PROCEDURE

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.

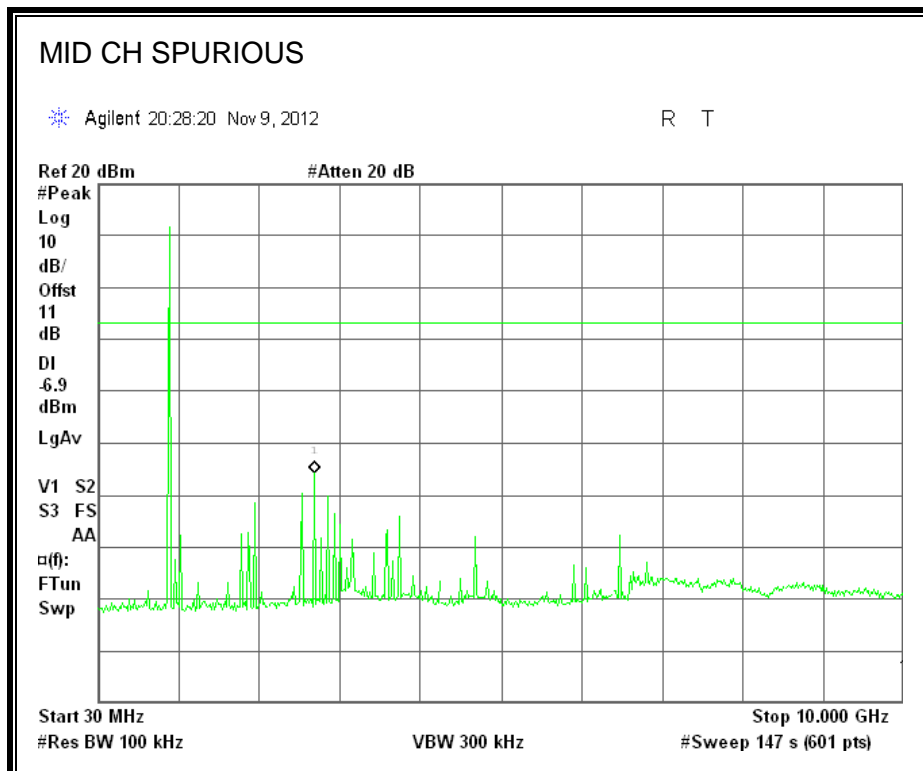
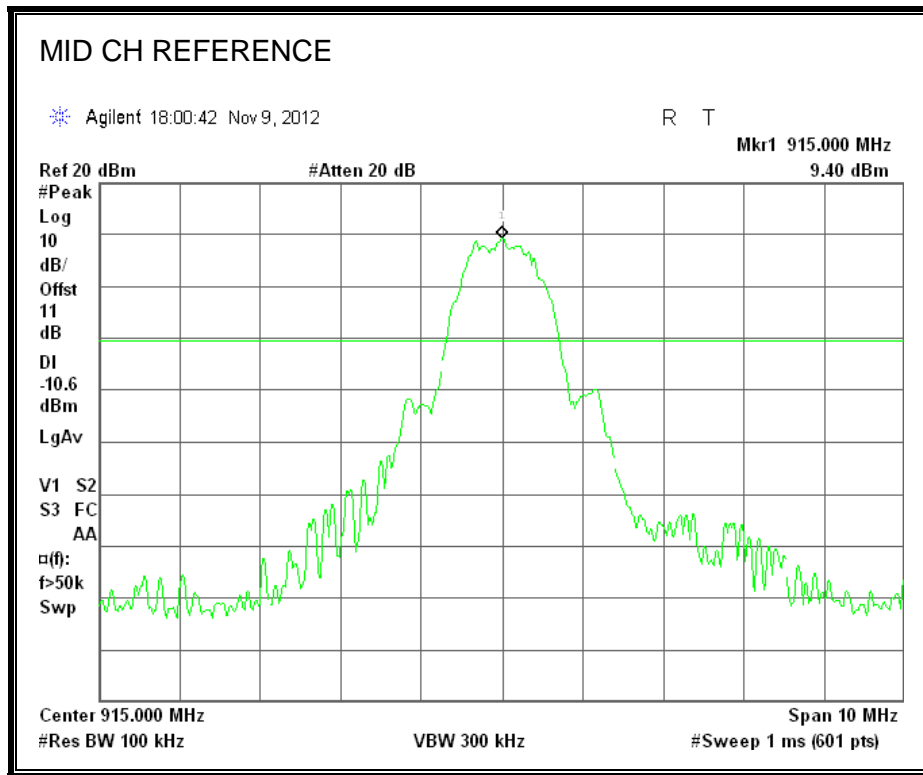
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

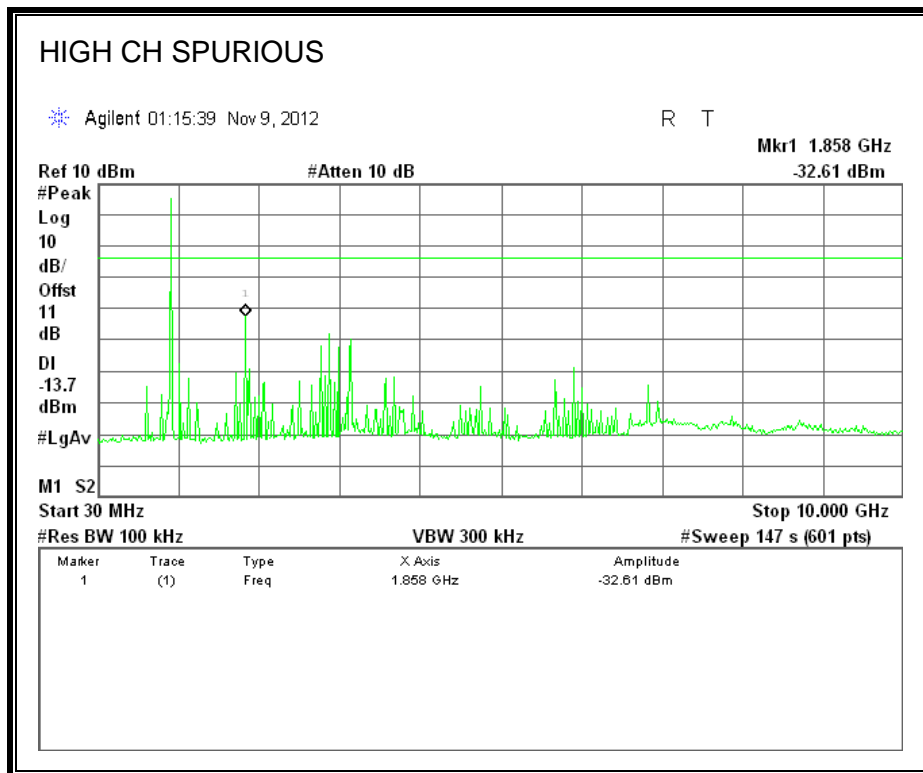
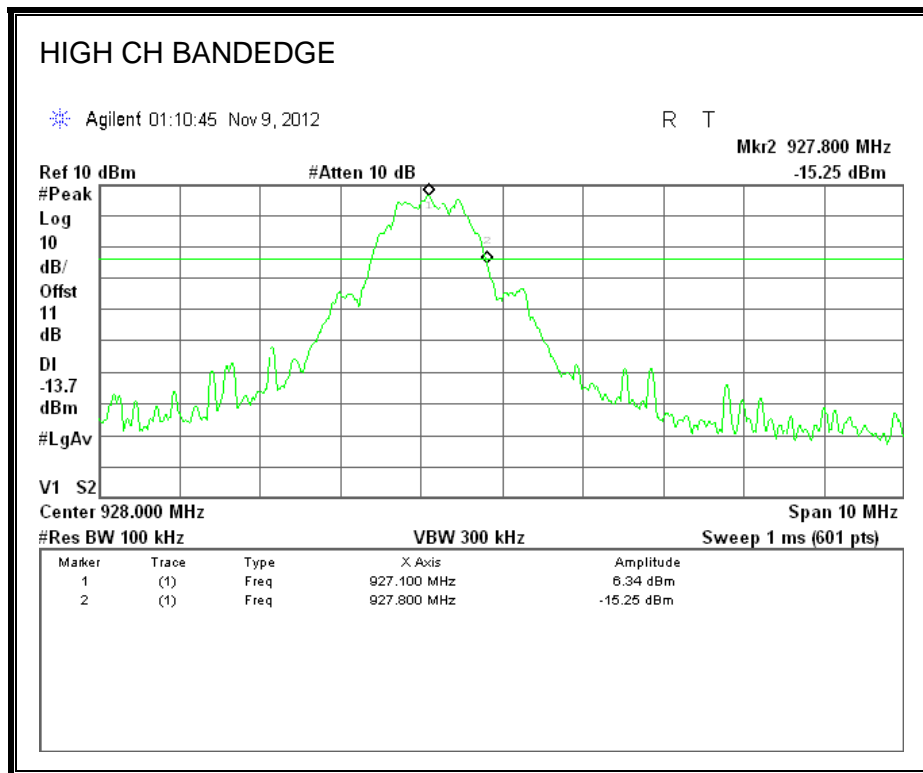
SPURIOUS EMISSIONS, LOW CHANNEL



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



7. RADIATED TEST RESULTS

7.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

| 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.

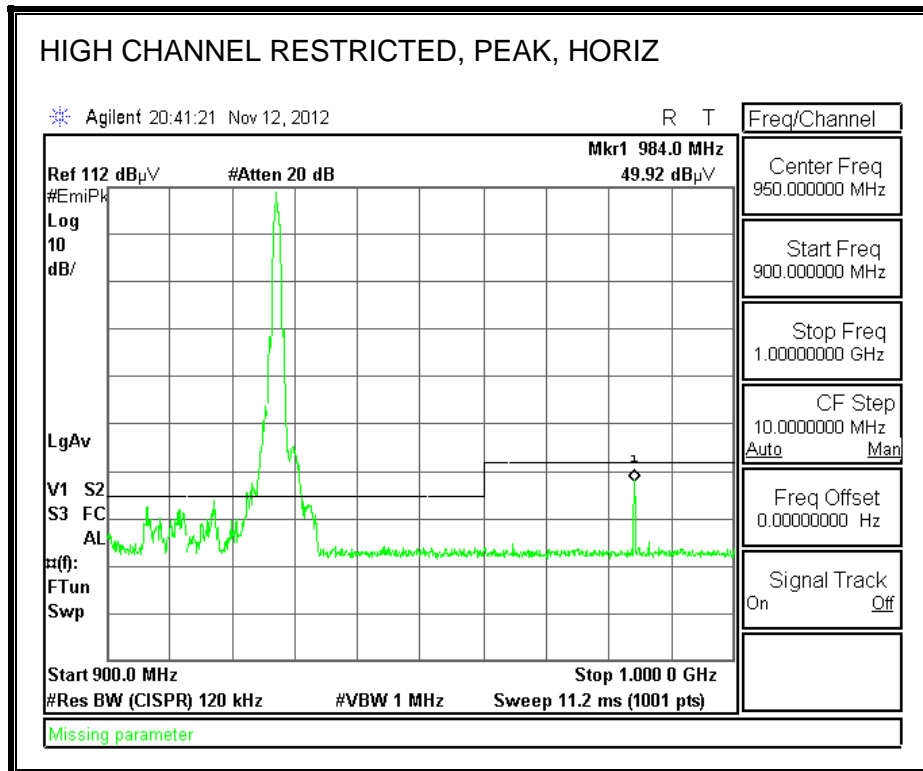
The spectrum from 30 MHz to 10 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 900 MHz band.

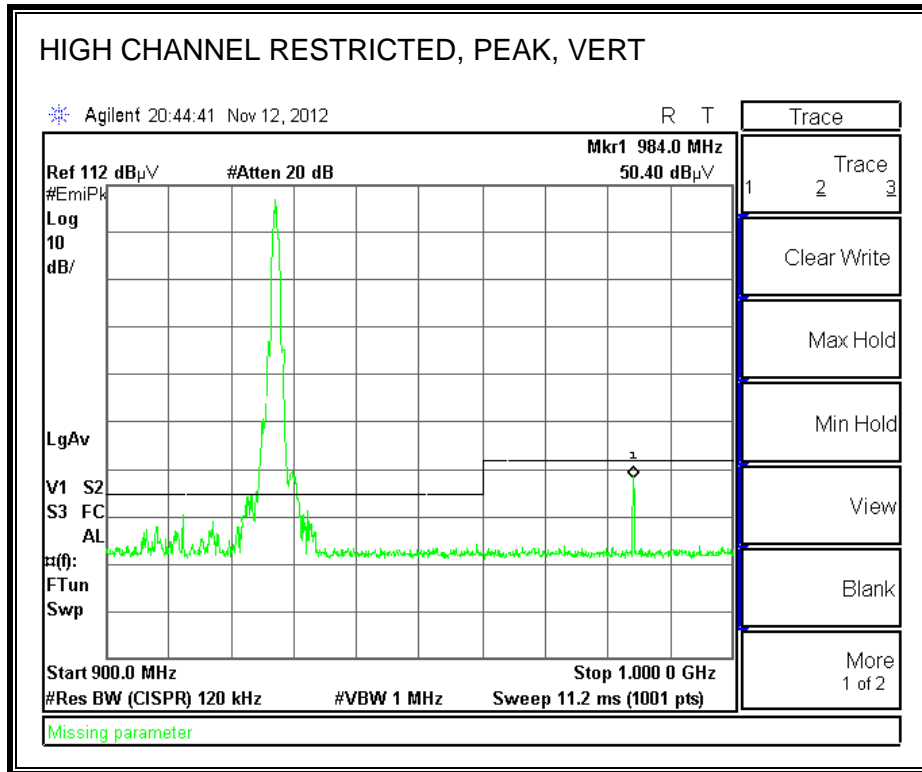
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

7.2. TRANSMITTER BELOW 1 GHz

7.2.1. BANDEDGE FOR C052 BASE

RESTRICTED BANDEDGE (HIGH CHANNEL)



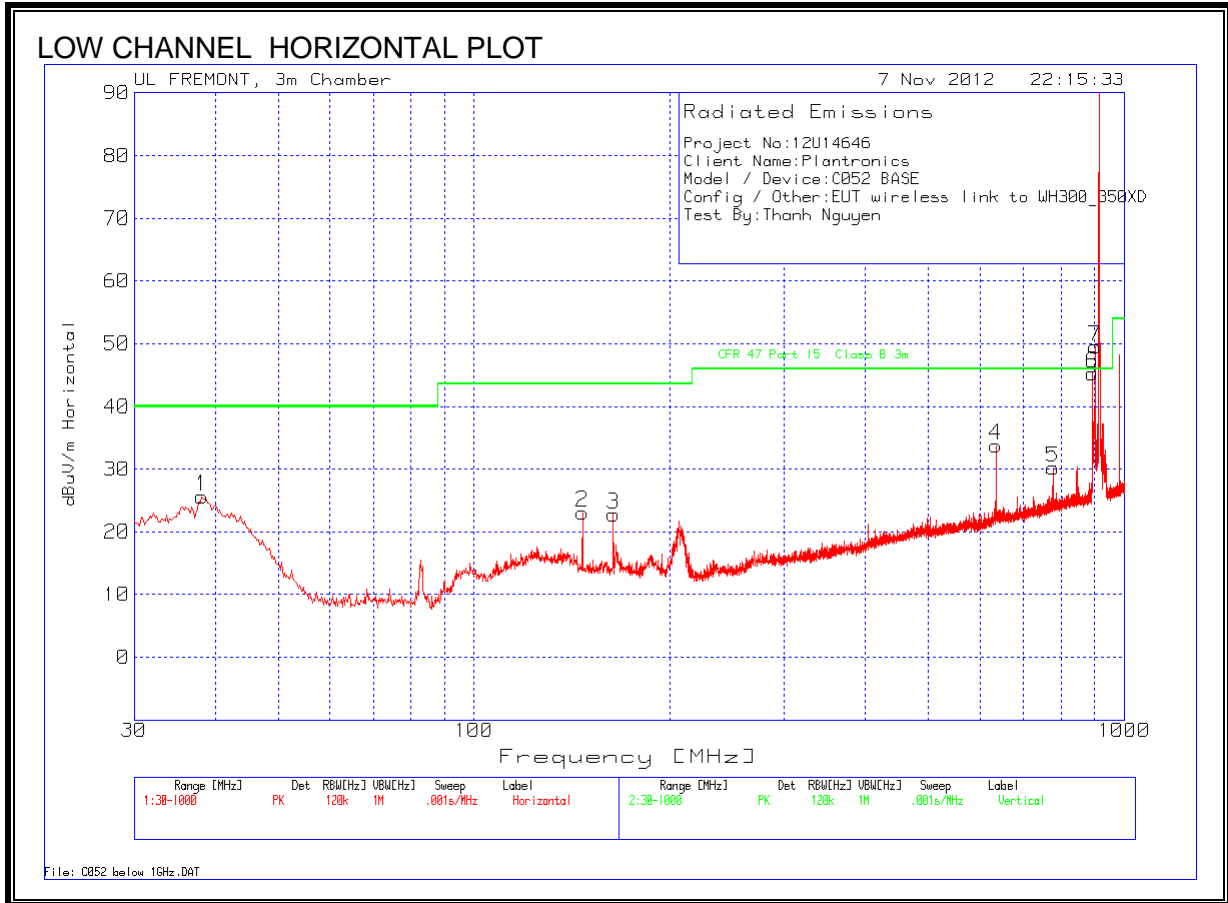


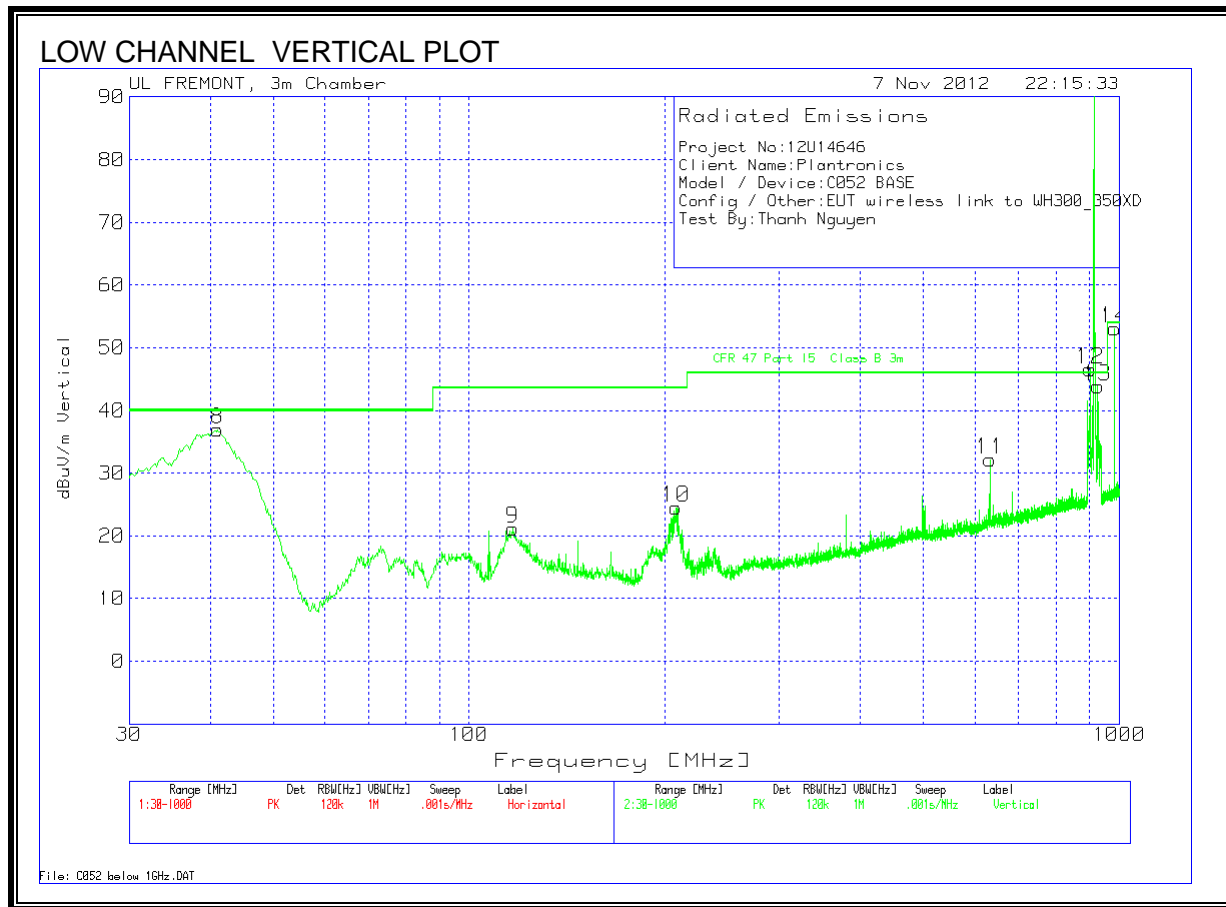
HIGH CHANNEL RESTRICTED (VERTICAL AND HORIZONTAL DATA)

| Project No:12U14646 | | | | | | | | | | |
|---|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|----------------|-------------|----------|
| Client Name:Plantronics | | | | | | | | | | |
| Model / Device:C052 BASE | | | | | | | | | | |
| Config / Other:EUT wireless link to WH300_350XD | | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified [dB] | Antenna T185 [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Azimuth [Degs] | Height [cm] | Polarity |
| 893.4494 | 35.71 | QP | -24 | 22.1 | 33.81 | 46 | -12.19 | 28 | 286 | Horz |
| 902.4485 | 38.28 | QP | -24.1 | 22.2 | 36.38 | 46 | -9.62 | 116 | 277 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Test Frequency | Meter Read | Detector | 25MHz-1GHz Chambr 3m Amplified [dB] | Antenna T185 [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Azimuth [Degs] | Height [cm] | Polarity |
| 902.1928 | 36.06 | QP | -24.1 | 22.2 | 34.16 | 46 | -11.84 | 180 | 129 | Vert |
| 926.9315 | 34.87 | QP | -23.9 | 22.3 | 33.27 | 46 | -12.73 | 281 | 176 | Vert |
| 984.0743 | 44.57 | QP | -23.4 | 23 | 44.17 | 54 | -9.83 | 293 | 130 | Vert |

7.2.1. HARMONICS AND SPURIOUS EMISSION FOR C052 BASE

LOW CHANNEL EMISSIONS





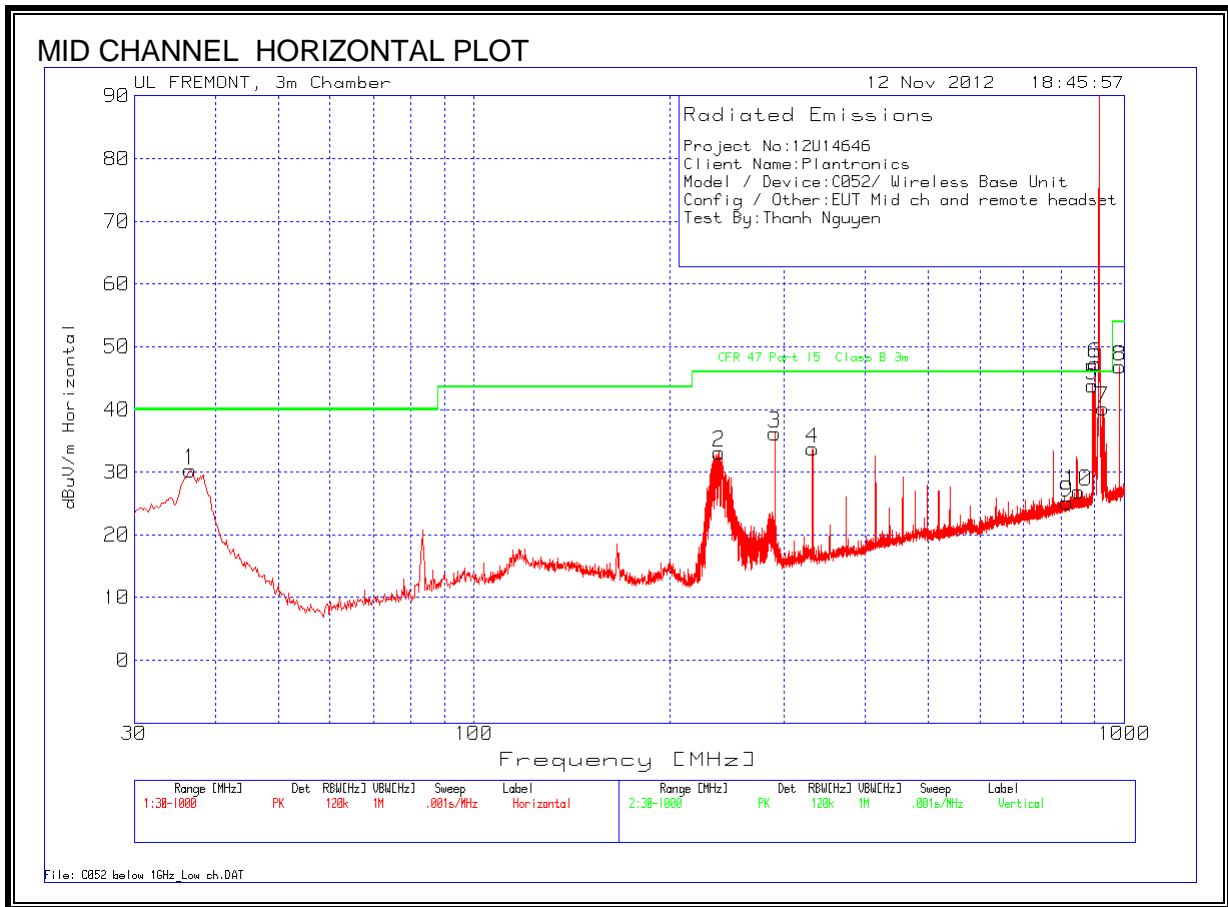
LOW CHANNEL VERTICAL AND HORIZONTAL DATA:

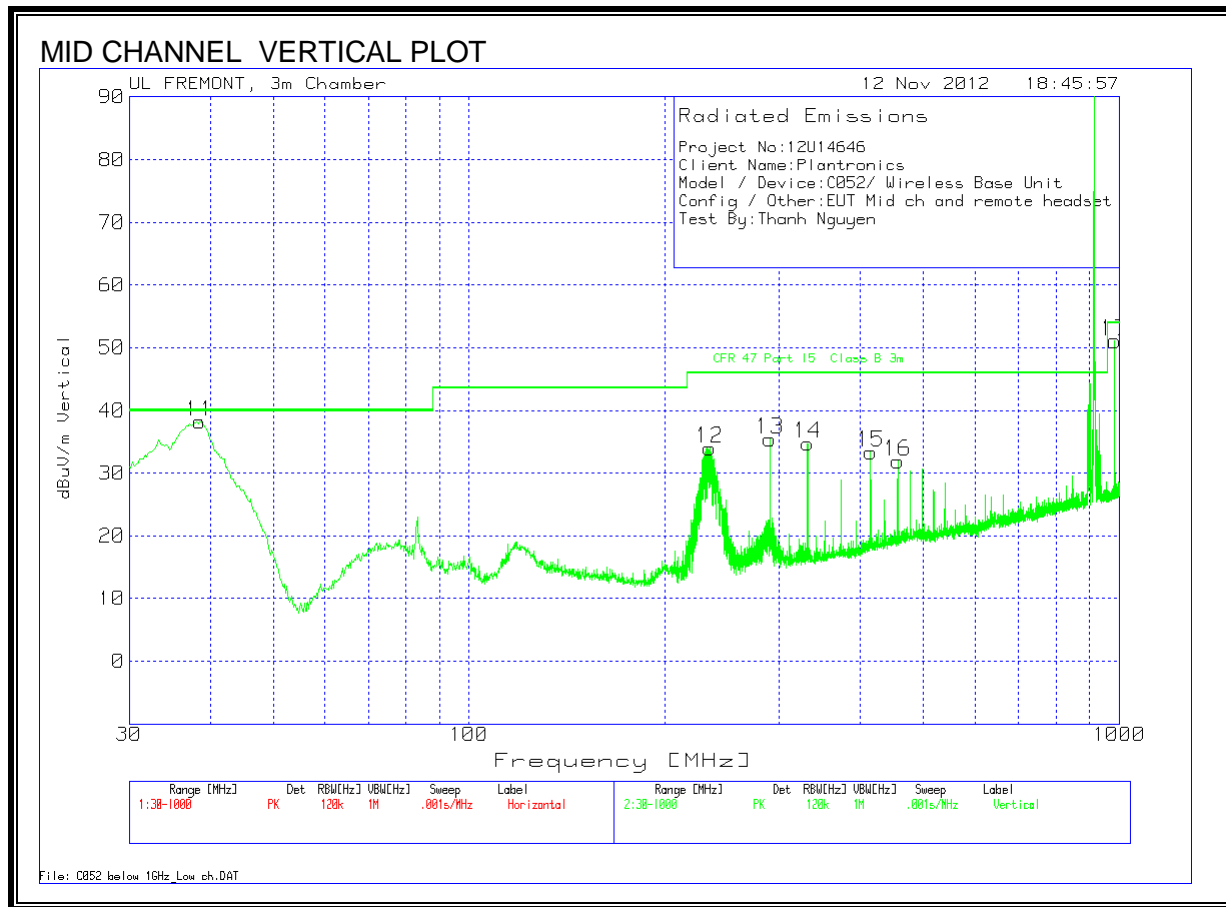
| Project No:12U14646 | | | | | | | | | | |
|--|----------------|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|-------------|----------|
| Client Name:Plantronics | | | | | | | | | | |
| Model / Device:C052 BASE | | | | | | | | | | |
| Config / Other:EUT wireless link to WH300_350XD | | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 1 | 38.1415 | 37.82 | PK | -27.4 | 15.2 | 25.62 | 40 | -14.38 | 301 | Horz |
| 2 | 146.8885 | 36.96 | PK | -26.4 | 12.5 | 23.06 | 43.5 | -20.44 | 301 | Horz |
| 3 | 163.753 | 37.11 | PK | -26.2 | 11.9 | 22.81 | 43.5 | -20.69 | 201 | Horz |
| 4 | 635.1839 | 39.67 | PK | -25.5 | 19.6 | 33.77 | 46 | -12.23 | 301 | Horz |
| 5 | 777.8537 | 33.83 | PK | -24.7 | 21.1 | 30.23 | 46 | -15.77 | 100 | Horz |
| 6 | 893.5791 | 47.21 | PK | -24 | 22.1 | 45.31 | 46 | -0.69 | 100 | Horz |
| 7 | 902.496 | 51.42 | PK | -24.1 | 22.2 | 49.52 | 46 | 3.52 | 100 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 8 | 41.0492 | 51.47 | PK | -27.4 | 12.9 | 36.97 | 40 | -3.03 | 100 | Vert |
| 9 | 116.8425 | 34.27 | PK | -26.6 | 13.5 | 21.17 | 43.5 | -22.33 | 100 | Vert |
| 10 | 208.1435 | 39.61 | PK | -25.8 | 10.7 | 24.51 | 43.5 | -18.99 | 100 | Vert |
| 11 | 633.0516 | 38.17 | PK | -25.5 | 19.5 | 32.17 | 46 | -13.83 | 100 | Vert |
| 12 | 902.6898 | 48.37 | PK | -24.1 | 22.3 | 46.57 | 46 | 0.57 | 100 | Vert |
| 13 | 926.7266 | 45.44 | PK | -23.9 | 22.3 | 43.84 | 46 | -2.16 | 100 | Vert |
| 14 | 984.1047 | 53.48 | PK | -23.4 | 23 | 53.08 | 54 | -0.92 | 100 | Vert |

Quasi-Peak data

| Project No:12U14646 | | | | | | | | | | |
|---|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|----------------|-------------|----------|
| Client Name:Plantronics | | | | | | | | | | |
| Model / Device:C052 BASE | | | | | | | | | | |
| Config / Other:EUT wireless link to WH300_350XD | | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified [dB] | Antenna T185 [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Azimuth [Degs] | Height [cm] | Polarity |
| 893.4494 | 35.71 | QP | -24 | 22.1 | 33.81 | 46 | -12.19 | 28 | 286 | Horz |
| 902.4485 | 38.28 | QP | -24.1 | 22.2 | 36.38 | 46 | -9.62 | 116 | 277 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Test Frequency | Meter Read | Detector | 25MHz-1G | Antenna T | dBuV/m | CFR 47 Pa | Margin | Azimuth [| Height [cm] | Polarity |
| 40.6988 | 47.48 | QP | -27.4 | 13.2 | 33.28 | 40 | -6.72 | 318 | 116 | Vert |
| 902.1928 | 36.06 | QP | -24.1 | 22.2 | 34.16 | 46 | -11.84 | 180 | 129 | Vert |
| 926.9315 | 34.87 | QP | -23.9 | 22.3 | 33.27 | 46 | -12.73 | 281 | 176 | Vert |
| 984.0743 | 44.57 | QP | -23.4 | 23 | 44.17 | 54 | -9.83 | 293 | 130 | Vert |

MID CHANNEL EMISSIONS

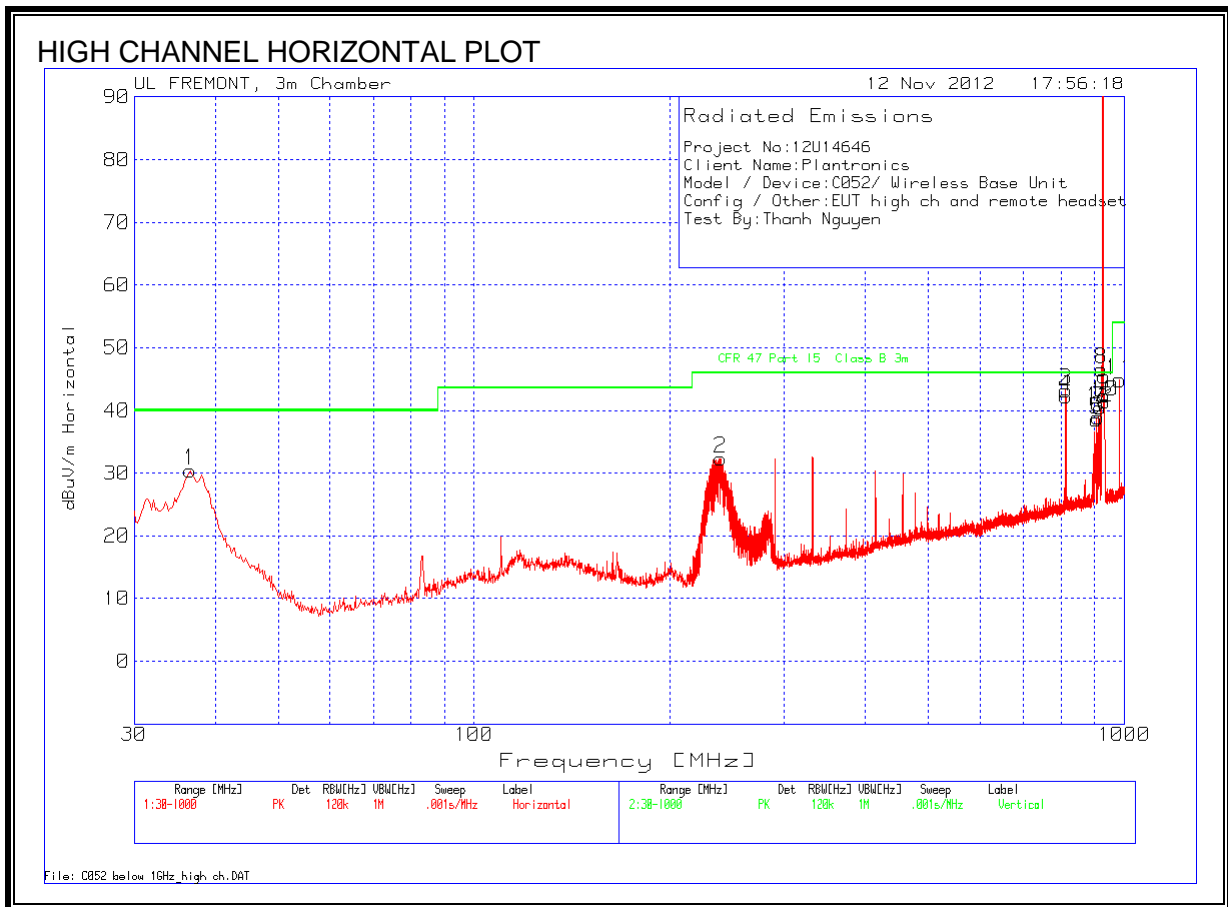


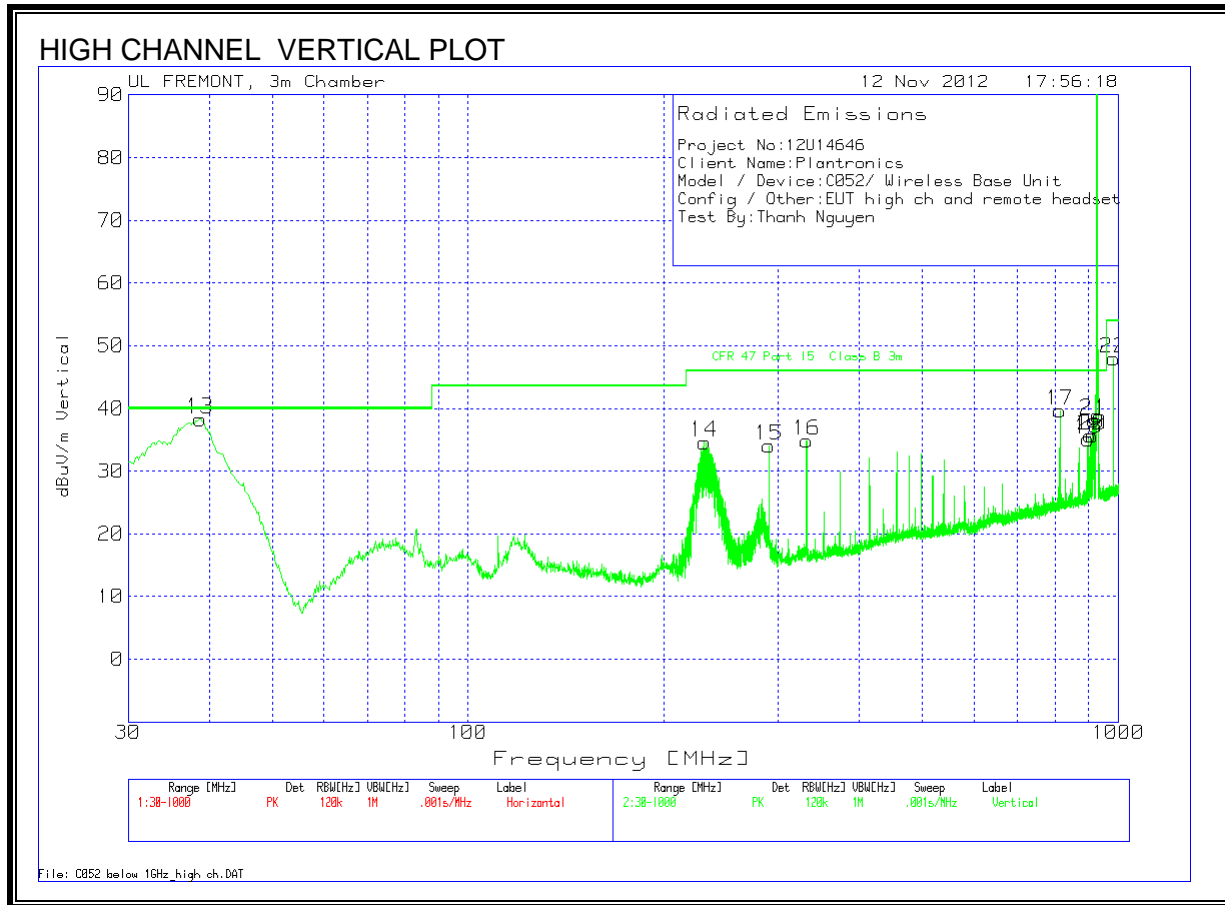


MID CHANNEL VERTICAL AND HORIZONTAL DATA:

| Project No:12U14646 | | | | | | | | | | |
|--|----------------|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|-------------|----------|
| Client Name:Plantronics | | | | | | | | | | |
| Model / Device:C052/ Wireless Base Unit | | | | | | | | | | |
| Config / Other:EUT Mid ch and remote headset | | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 1 | 36.5907 | 41.4 | PK | -27.4 | 16.3 | 30.3 | 40 | -9.7 | 400 | Horz |
| 2 | 238.1894 | 47.14 | PK | -25.5 | 11.5 | 33.14 | 46 | -12.86 | 99 | Horz |
| 3 | 290.3337 | 48.11 | PK | -25.2 | 13.3 | 36.21 | 46 | -9.79 | 99 | Horz |
| 4 | 331.8165 | 45.12 | PK | -25.3 | 13.9 | 33.72 | 46 | -12.28 | 99 | Horz |
| 5 | 893.773 | 45.77 | PK | -24 | 22.1 | 43.87 | 46 | -2.13 | 99 | Horz |
| 6 | 902.3022 | 42.13 | QP | -24.1 | 22.2 | 40.23 | 46 | -5.77 | 301 | Horz |
| 7 | 927.502 | 41.66 | PK | -23.9 | 22.4 | 40.16 | 46 | -5.84 | 301 | Horz |
| 8 | 984.1047 | 47.2 | PK | -23.4 | 23 | 46.8 | 54 | -7.2 | 400 | Horz |
| 9 | 815.6535 | 28.19 | PK | -24.5 | 21.5 | 25.19 | 46 | -20.81 | 400 | Horz |
| 10 | 850.3517 | 29.46 | PK | -24.3 | 21.8 | 26.96 | 46 | -19.04 | 99 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 11 | 38.5292 | 50.7 | PK | -27.4 | 14.9 | 38.2 | 40 | -1.8 | 100 | Vert |
| 12 | 234.5064 | 48.15 | PK | -25.5 | 11.3 | 33.95 | 46 | -12.05 | 100 | Vert |
| 13 | 290.3337 | 47.31 | PK | -25.2 | 13.3 | 35.41 | 46 | -10.59 | 201 | Vert |
| 14 | 331.8165 | 46.13 | PK | -25.3 | 13.9 | 34.73 | 46 | -11.27 | 201 | Vert |
| 15 | 414.5883 | 42.92 | PK | -25.7 | 16.1 | 33.32 | 46 | -12.68 | 100 | Vert |
| 16 | 456.265 | 40.87 | PK | -25.9 | 16.9 | 31.87 | 46 | -14.13 | 100 | Vert |
| 17 | 984.1047 | 51.5 | PK | -23.4 | 23 | 51.1 | 54 | -2.9 | 100 | Vert |

HIGH CHANNEL EMISSIONS



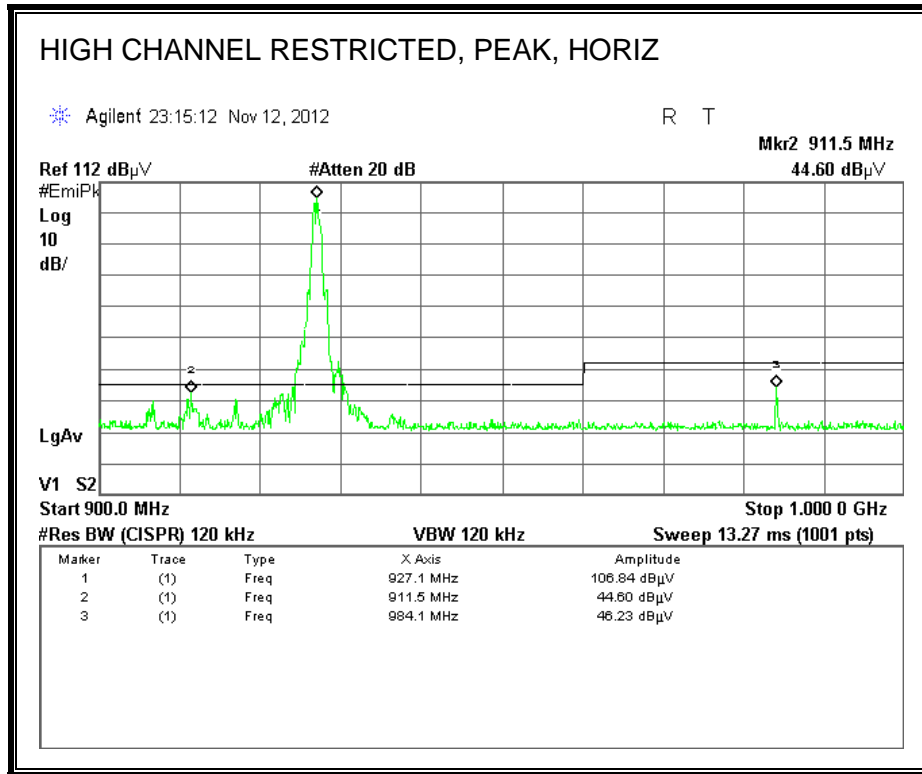


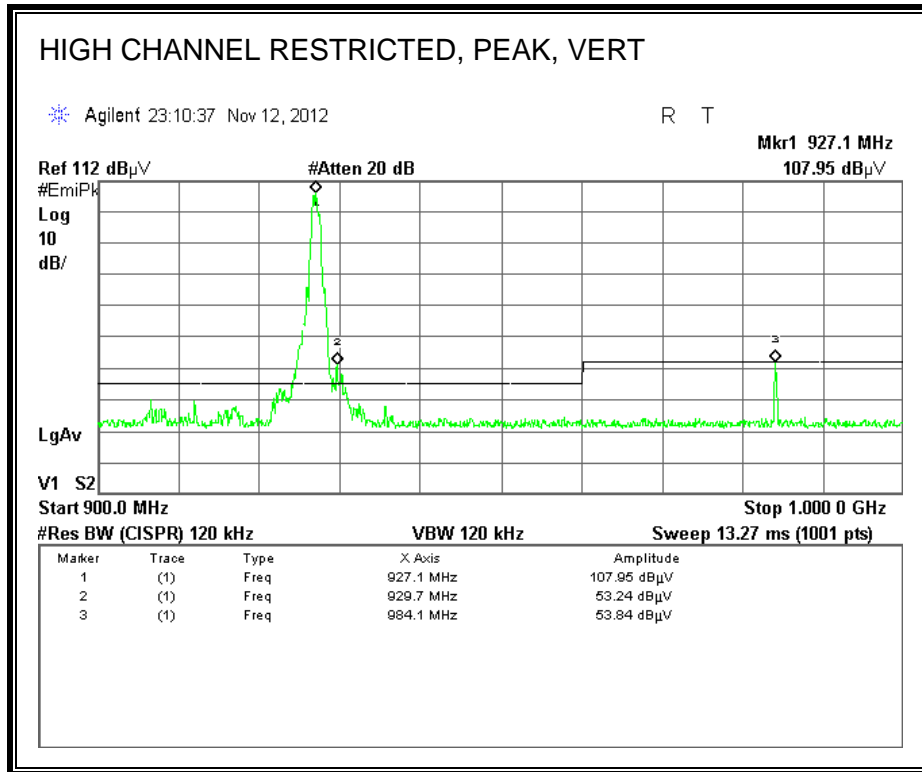
HIGH CHANNEL VERTICAL AND HORIZONTAL DATA:

| Project No:12U14646 | | | | | | | | | | |
|---|----------------|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|-------------|----------|
| Client Name:Plantronics | | | | | | | | | | |
| Model / Device:C052/ Wireless Base Unit | | | | | | | | | | |
| Config / Other:EUT high ch and remote headset | | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 1 | 36.5907 | 41.51 | PK | -27.4 | 16.3 | 30.41 | 40 | -9.59 | 400 | Horz |
| 2 | 239.5464 | 46.23 | PK | -25.5 | 11.6 | 32.33 | 46 | -13.67 | 99 | Horz |
| 3 | 812.3581 | 46.35 | PK | -24.5 | 21.4 | 43.25 | 46 | -2.75 | 201 | Horz |
| 4 | 813.9089 | 45.24 | PK | -24.5 | 21.5 | 42.24 | 46 | -3.76 | 201 | Horz |
| 5 | 906.4698 | 40.29 | PK | -24 | 22.3 | 38.59 | 46 | -7.41 | 201 | Horz |
| 6 | 911.9944 | 40.41 | PK | -23.9 | 22.4 | 38.91 | 46 | -7.09 | 201 | Horz |
| 7 | 917.2282 | 41.95 | PK | -23.9 | 22.4 | 40.45 | 46 | -5.55 | 301 | Horz |
| 8 | 922.6559 | 40.19 | QP | -23.9 | 22.3 | 38.59 | 46 | -7.41 | 301 | Horz |
| 9 | 931.5727 | 43.74 | PK | -23.8 | 22.4 | 42.34 | 46 | -3.66 | 99 | Horz |
| 10 | 932.542 | 42.7 | PK | -23.8 | 22.5 | 41.4 | 46 | -4.6 | 301 | Horz |
| 11 | 984.1047 | 45.26 | PK | -23.4 | 23 | 44.86 | 54 | -9.14 | 201 | Horz |
| 12 | 917.2282 | 41.95 | PK | -23.9 | 22.4 | 40.45 | 46 | -5.55 | 301 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 13 | 38.723 | 50.96 | PK | -27.4 | 14.7 | 38.26 | 40 | -1.74 | 100 | Vert |
| 14 | 230.8233 | 49.13 | PK | -25.6 | 11.1 | 34.63 | 46 | -11.37 | 201 | Vert |
| 15 | 290.3337 | 45.94 | PK | -25.2 | 13.3 | 34.04 | 46 | -11.96 | 100 | Vert |
| 16 | 331.7196 | 46.25 | PK | -25.3 | 13.9 | 34.85 | 46 | -11.15 | 100 | Vert |
| 17 | 813.3273 | 42.75 | PK | -24.5 | 21.4 | 39.65 | 46 | -6.35 | 100 | Vert |
| 18 | 899.3945 | 36.92 | PK | -24 | 22.2 | 35.12 | 46 | -10.88 | 100 | Vert |
| 19 | 905.7914 | 37.39 | PK | -24 | 22.3 | 35.69 | 46 | -10.31 | 201 | Vert |
| 20 | 912.3821 | 37.12 | PK | -23.9 | 22.4 | 35.62 | 46 | -10.38 | 100 | Vert |
| 21 | 917.2282 | 39.62 | PK | -23.9 | 22.4 | 38.12 | 46 | -7.88 | 100 | Vert |
| 22 | 984.1047 | 48.34 | PK | -23.4 | 23 | 47.94 | 54 | -6.06 | 100 | Vert |

7.2.1. BANDEDGE FOR C054 BASE

RESTRICTED BANDEDGE (HIGH CHANNEL)



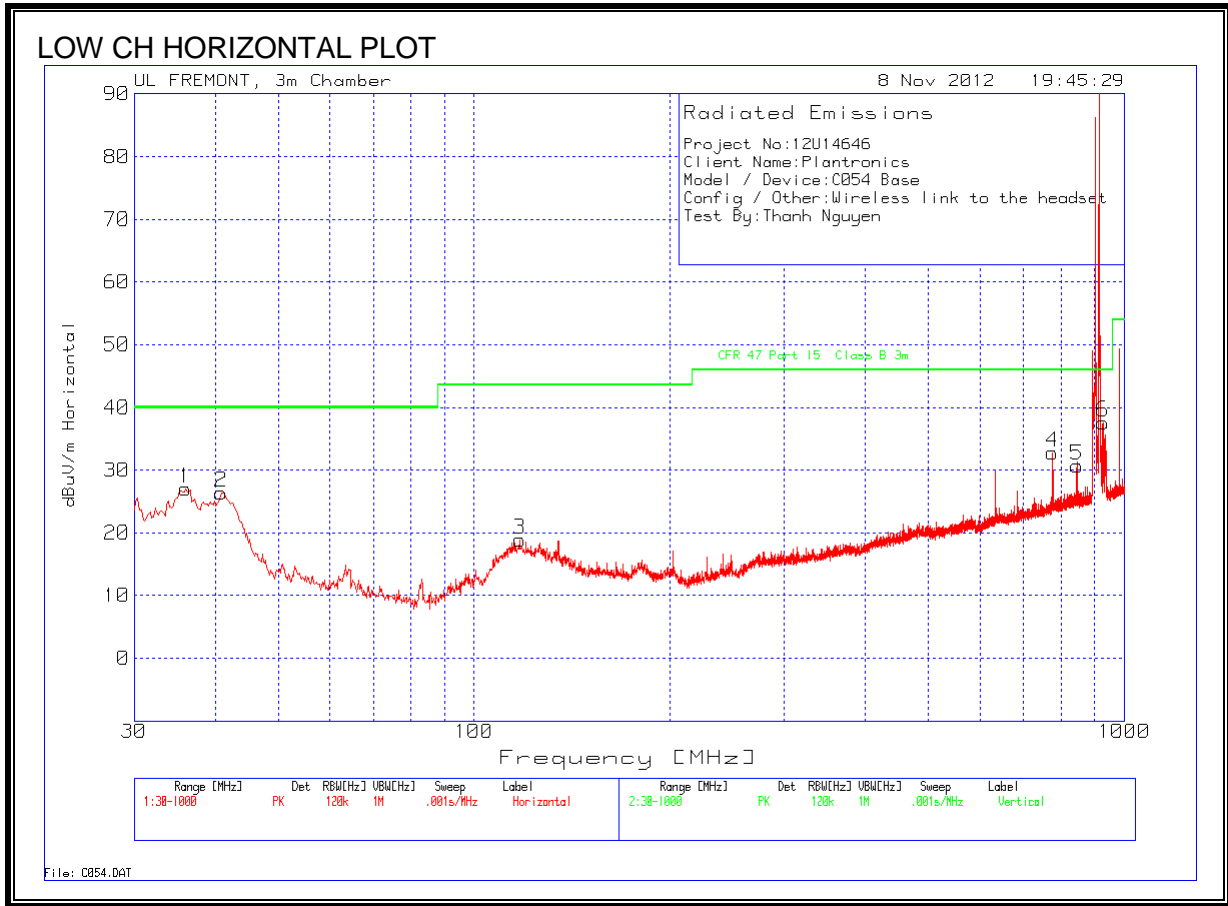


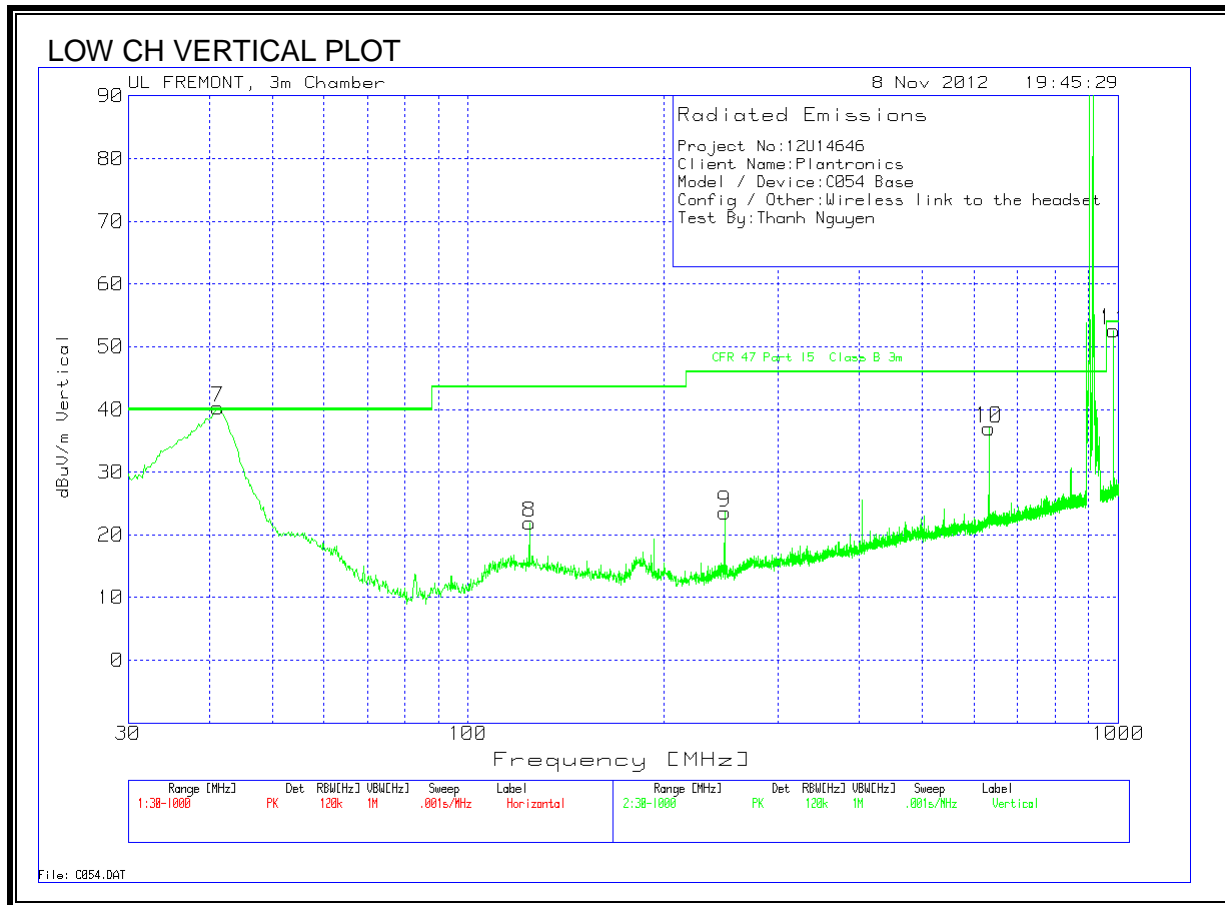
HIGH CHANNEL RESTRICTED (VERTICAL QP DATA)

| Vertical 30 - 1000MHz | | | | | | | | | | |
|-----------------------|----------------|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|-------------|----------|
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 11 | 984.1047 | 53 | PK | -23.4 | 23 | 52.6 | 54 | -1.4 | 99 | Vert |
| | 984.0633 | 51.92 | QP | -23.4 | 23 | 51.52 | 54 | -2.48 | 103 | Vert |

7.2.1. HARMONICS AND SPURIOUS EMISSION

LOW CHANNEL EMISSIONS

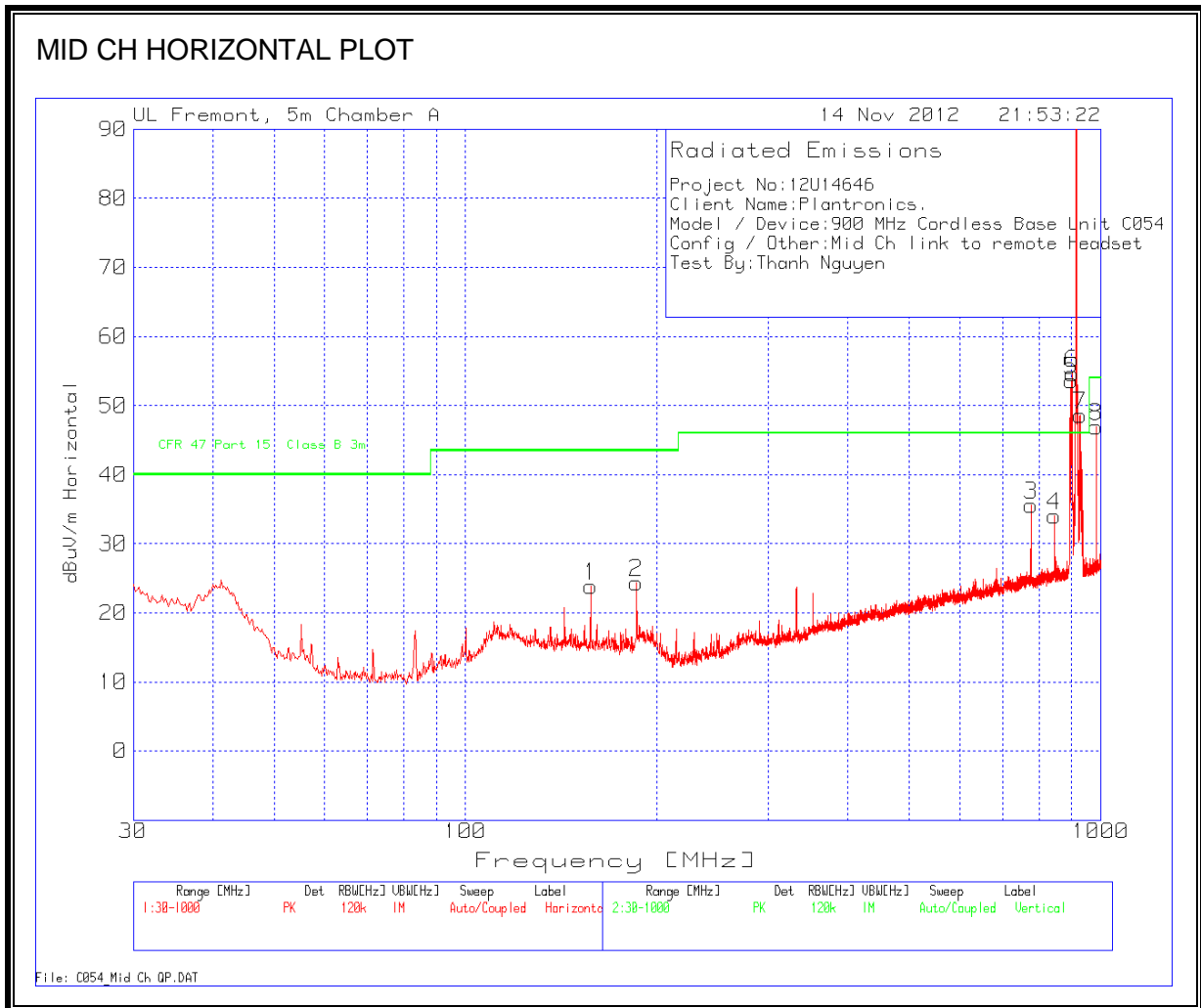


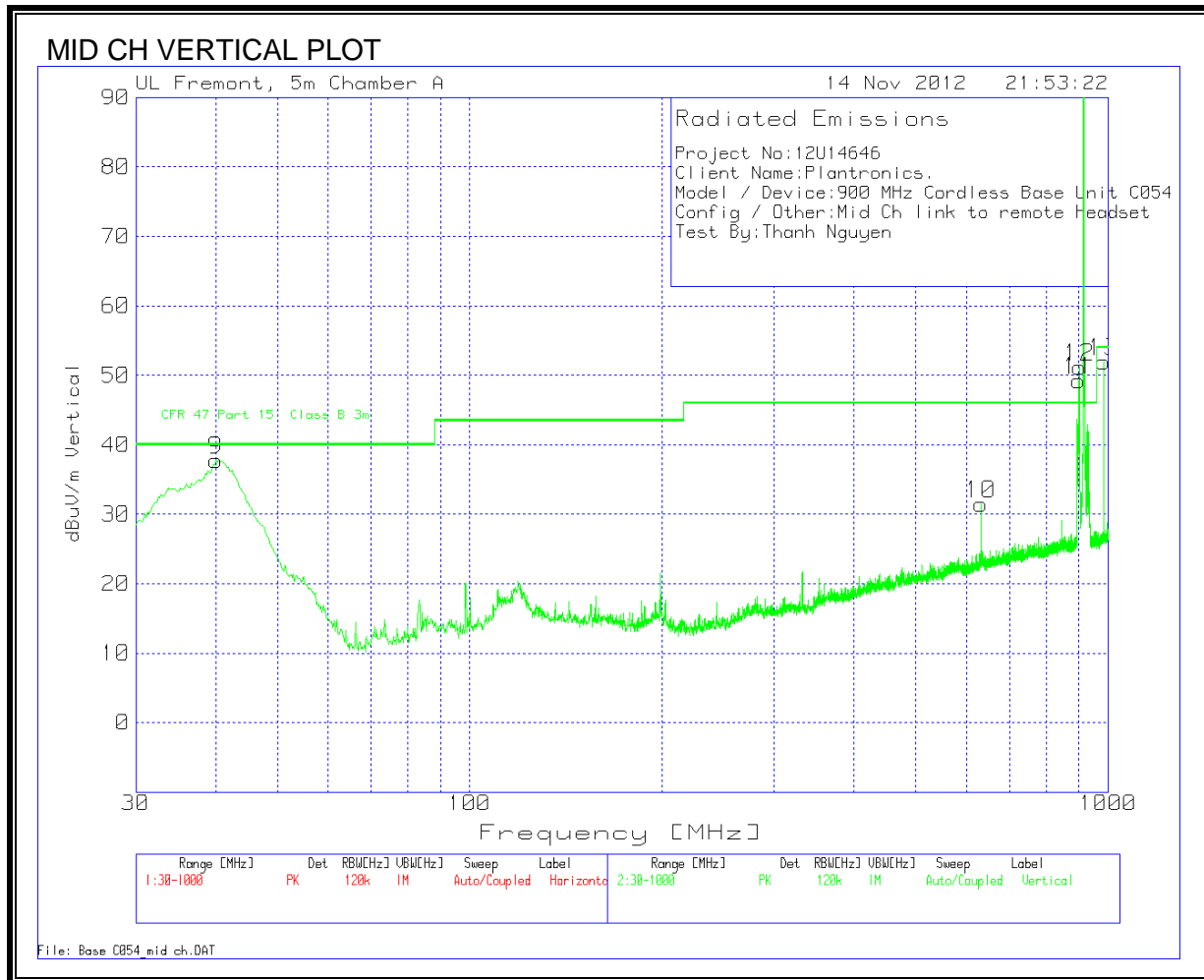


VERTICAL AND HORIZONTAL DATA: LOW CHANNEL

| Project No: 12U14646 | | | | | | | | | | |
|---|----------------|---------------|----------|-------------------------------------|-------------------|--------|---------------------------|--------|-------------|----------|
| Client Name: Plantronics | | | | | | | | | | |
| Model / Device: C054 Base | | | | | | | | | | |
| Config / Other: Wireless link to the headset | | | | | | | | | | |
| Test By: Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 1 | 36.0092 | 37.64 | PK | -27.4 | 16.8 | 27.04 | 40 | -12.96 | 400 | Horz |
| 2 | 40.8553 | 40.78 | PK | -27.4 | 13 | 26.38 | 40 | -13.62 | 101 | Horz |
| 3 | 117.6179 | 31.85 | PK | -26.6 | 13.6 | 18.85 | 43.5 | -24.65 | 201 | Horz |
| 4 | 775.7214 | 36.58 | PK | -24.8 | 21 | 32.78 | 46 | -13.22 | 101 | Horz |
| 5 | 846.6687 | 33.28 | PK | -24.3 | 21.7 | 30.68 | 46 | -15.32 | 101 | Horz |
| 6 | 927.8897 | 39.09 | PK | -23.9 | 22.4 | 37.59 | 46 | -8.41 | 101 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Marker No. | Test Frequency | Meter Reading | Detector | 25MHz-1GHz Chambr 3m Amplified (dB) | Antenna T185 (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 7 | 41.243 | 54.89 | PK | -27.4 | 12.8 | 40.29 | 40 | 0.29 | 99 | Vert |
| 7 | 41.493 | 51.23 | QP | -27.4 | 12.7 | 36.53 | 40 | -3.47 | 104 | Vert |
| 8 | 124.4025 | 34.43 | PK | -26.5 | 14 | 21.93 | 43.5 | -21.57 | 301 | Vert |
| 9 | 248.0755 | 37.36 | PK | -25.4 | 11.6 | 23.56 | 46 | -22.44 | 99 | Vert |
| 10 | 633.0516 | 43.01 | PK | -25.5 | 19.5 | 37.01 | 46 | -8.99 | 99 | Vert |
| 11 | 984.1047 | 53 | PK | -23.4 | 23 | 52.6 | 54 | -1.4 | 99 | Vert |
| | 984.0633 | 51.92 | QP | -23.4 | 23 | 51.52 | 54 | -2.48 | 103 | Vert |

MID CHANNEL EMISSIONS:





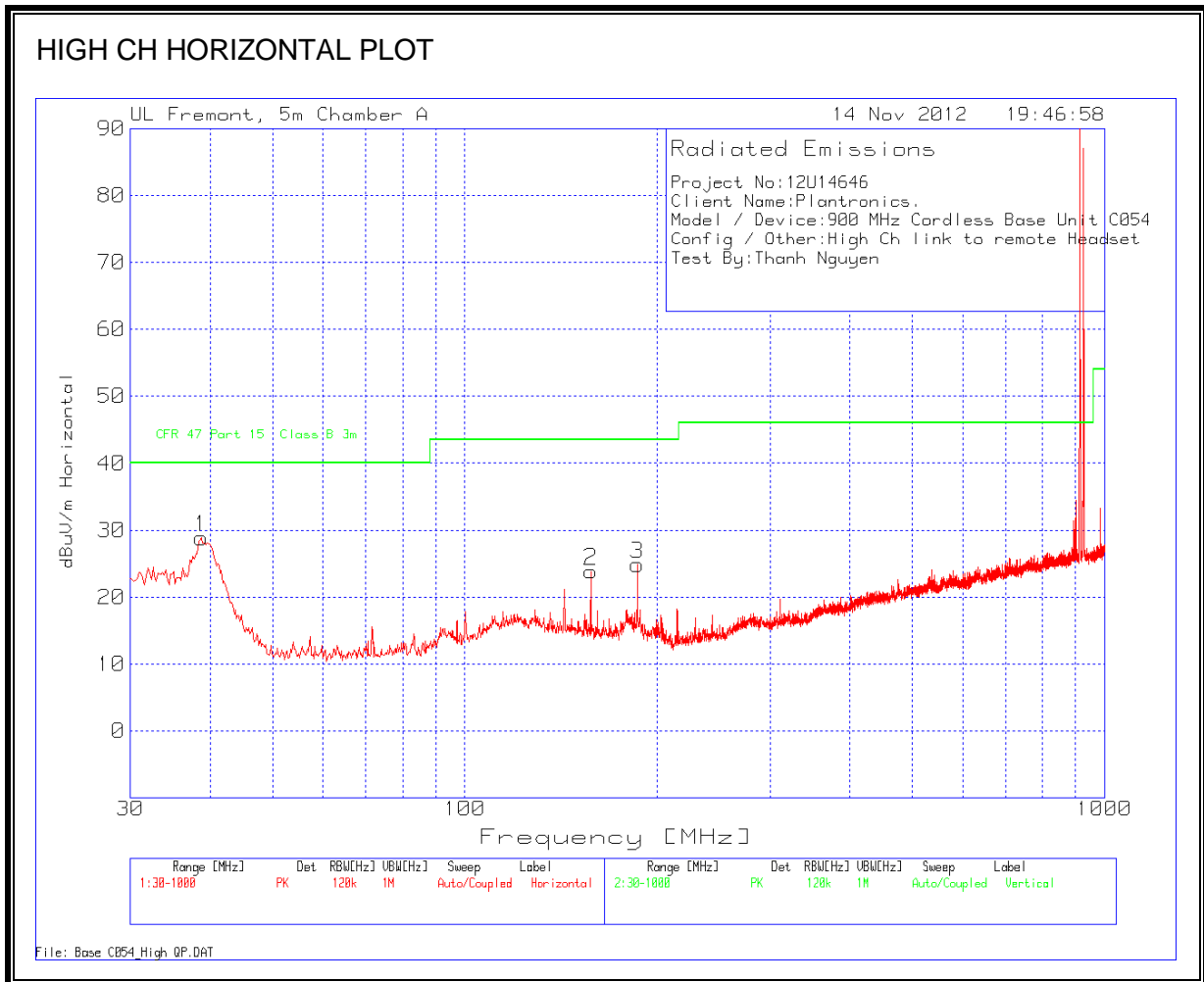
VERTICAL AND HORIZONTAL DATA: MID CHANNEL

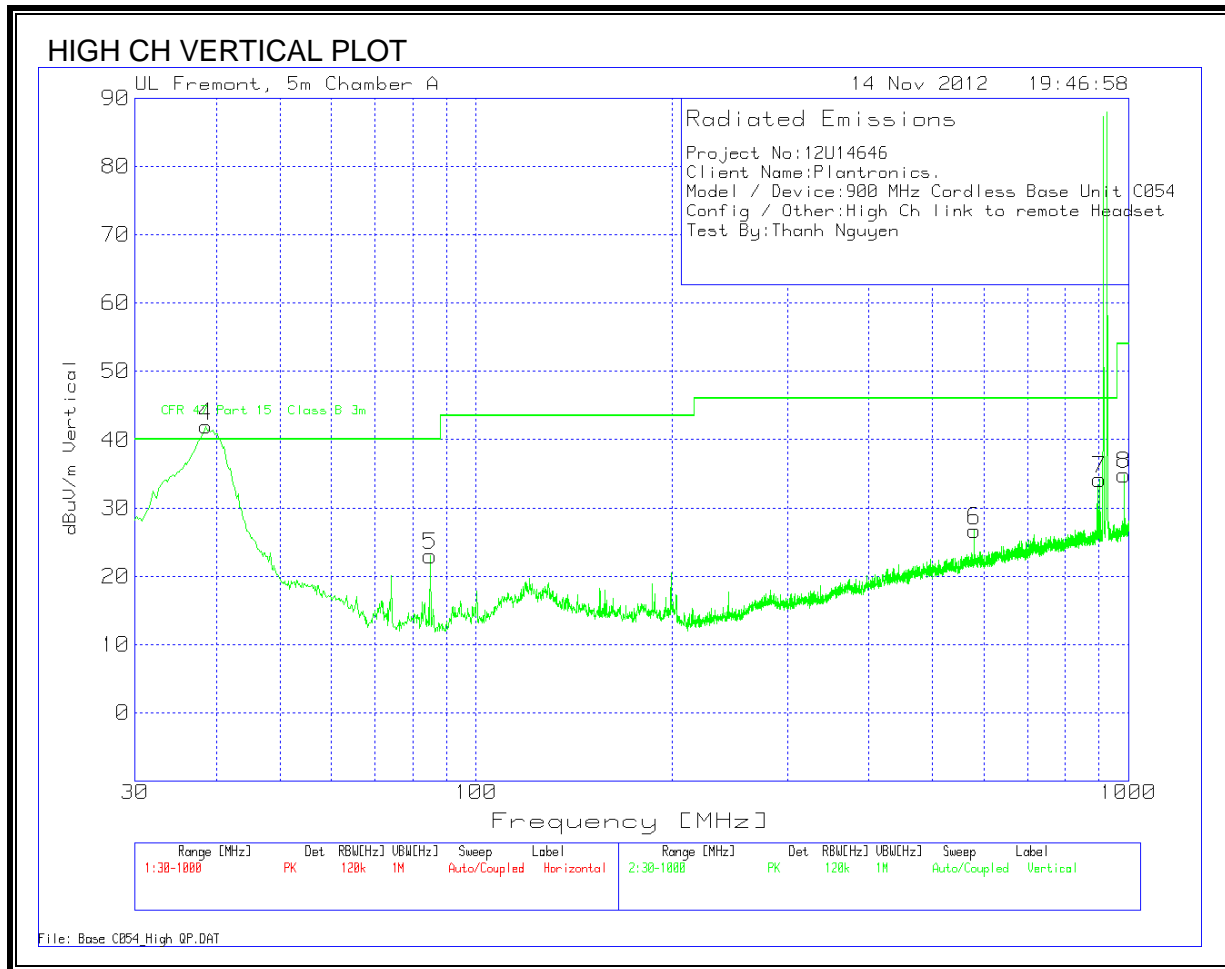
| Project No:12U14646 | | | | | | | | | |
|---|---------------|----------|--------------------------------------|---------------------------|--------|---------------------------|--------|-------------|----------|
| Client Name:Plantronics. | | | | | | | | | |
| Model / Device:900 MHz Cordless Base Unit C054 | | | | | | | | | |
| Config / Other:Mid Ch link to remote Headset | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplifie d.TX (dB) | T243 Sunol Bilog.TXT (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 157.3561 | 38.41 | PK | -26.5 | 12 | 23.91 | 43.5 | -19.59 | 100 | Horz |
| 186.0452 | 39.55 | PK | -26.4 | 11.2 | 24.35 | 43.5 | -19.15 | 100 | Horz |
| 776.8845 | 38.11 | PK | -23.4 | 20.9 | 35.61 | 46 | -10.39 | 100 | Horz |
| 846.0871 | 35.73 | PK | -23.2 | 21.5 | 34.03 | 46 | -11.97 | 100 | Horz |
| 898.2314 | 54.78 | PK | -23.3 | 22.2 | 53.68 | 46 | 7.68 | 100 | Horz |
| 902.1083 | 55.83 | PK | -23.4 | 22.2 | 54.63 | 46 | 8.63 | 100 | Horz |
| 927.1143 | 49.58 | PK | -23.3 | 22.3 | 48.58 | 46 | 2.58 | 100 | Horz |
| 984.1047 | 47.35 | PK | -23.2 | 22.8 | 46.95 | 54 | -7.05 | 100 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplifie d.TX (dB) | T243 Sunol Bilog.TXT (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 40.0799 | 51.19 | PK | -27.3 | 13.9 | 37.79 | 40 | -2.21 | 100 | Vert |
| 632.8577 | 35.61 | PK | -23.7 | 19.5 | 31.41 | 46 | -14.59 | 100 | Vert |
| 897.8437 | 50.35 | PK | -23.3 | 22.2 | 49.25 | 46 | 3.25 | 100 | Vert |
| 902.3022 | 52.35 | PK | -23.4 | 22.2 | 51.15 | 46 | 5.15 | 200 | Vert |
| 984.1047 | 52.34 | PK | -23.2 | 22.8 | 51.94 | 54 | -2.06 | 100 | Vert |

MID CHANNEL QUASI-PEAK DATA

| Project No:12U14646 | | | | | | | | | | |
|--|---------------|----------|--------------------------------------|---------------------------|--------|---------------------------|--------|----------------|-------------|----------|
| Client Name:Plantronics. | | | | | | | | | | |
| Model / Device:900 MHz Cordless Base Unit C054 | | | | | | | | | | |
| Config / Other:Mid Ch link to remote Headset | | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplifie d.TX [dB] | T243 Sunol Bilog.TXT [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Azimuth [Degs] | Height [cm] | Polarity |
| 897.9866 | 38.81 | QP | -23.3 | 22.2 | 37.71 | 46 | -8.29 | 155 | 107 | Horz |
| 902.6704 | 46.64 | QP | -23.4 | 22.1 | 45.34 | 46 | -0.66 | 155 | 107 | Horz |
| 926.7427 | 30.88 | QP | -23.3 | 22.3 | 29.88 | 46 | -16.12 | 159 | 284 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplifie d.TX [dB] | T243 Sunol Bilog.TXT [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Azimuth [Degs] | Height [cm] | Polarity |
| 902.5189 | 40.63 | QP | -23.4 | 22.1 | 39.33 | 46 | -6.67 | 47 | 153 | Vert |
| 984.1302 | 40.77 | QP | -23.2 | 22.8 | 40.37 | 54 | -13.63 | 47 | 153 | Vert |
| 40.6586 | 47.52 | QP | -27.3 | 13.5 | 33.72 | 40 | -6.28 | 277 | 108 | Vert |

HIGH CHANNEL EMISSIONS:





VERTICAL AND HORIZONTAL DATA: HIGH CHANNEL

| Project No:12U14646 | | | | | | | | | |
|---|---------------|----------|-------------------------------------|---------------------------|--------|---------------------------|--------|-------------|----------|
| Client Name:Plantronics. | | | | | | | | | |
| Model / Device:900 MHz Cordless Base Unit C054 | | | | | | | | | |
| Config / Other:High Ch link to remote Headset | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | |
| Horizontal 30 - 1000MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplified TX (dB) | T243 Sunol Bilog.TXT (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 38.723 | 41.41 | PK | -27.4 | 14.9 | 28.91 | 40 | -11.09 | 400 | Horz |
| 157.3561 | 38.38 | PK | -26.5 | 12 | 23.88 | 43.5 | -19.62 | 100 | Horz |
| 186.0452 | 40.07 | PK | -26.4 | 11.2 | 24.87 | 43.5 | -18.63 | 100 | Horz |
| Vertical 30 - 1000MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplified TX (dB) | T243 Sunol Bilog.TXT (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 38.5292 | 54.39 | PK | -27.4 | 15 | 41.99 | 40 | 1.99 | 100 | Vert |
| 38.529 | 47.53 | QP | -27.4 | 13.3 | 33.43 | 40 | -6.57 | 319 | Vert |
| 40.9292 | 47.53 | QP | -27.4 | 13.3 | 33.43 | 40 | -6.57 | 319 | Vert |
| 85.052 | 42.85 | PK | -27.1 | 7.3 | 23.05 | 40 | -16.95 | 100 | Vert |
| 580.5196 | 32.29 | PK | -24.2 | 18.6 | 26.69 | 46 | -19.31 | 100 | Vert |
| 902.1083 | 35.42 | PK | -23.4 | 22.2 | 34.22 | 46 | -11.78 | 400 | Vert |
| 984.1047 | 35.29 | PK | -23.2 | 22.8 | 34.89 | 54 | -19.11 | 100 | Vert |

7.3. TRANSMITTER ABOVE 1 GHz

7.3.1. HARMONIC AND SPURIOUS ABOVE 1 GHz FOR C052 BASE

High Frequency Measurement
 Compliance Certification Services, Fremont 3m Chamber

Company: Plantronics
 Project #: 12U14646
 Date: 11/7/2012
 Test Engineer: Thanh Nguyen
 Configuration: EUT Base C52 and the remote Headset 300_350XD
 Mode: Wireless linkto the remote headset.

Test Equipment:

| | | | | |
|--------------------|----------------------|-----------------------|--------------|------------|
| Horn 1-18GHz | Pre-amplifer 1-26GHz | Pre-amplifer 26-40GHz | Horn > 18GHz | Limit |
| T60; S/N: 2238 @3m | T34 HP 8449B | | | FCC 15.209 |

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 | | R_001 | 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) |
|--|-------------|-----------------|-------------------|------------|----------|-----------|--------------|------------|----------------|---------------|------------------|-------------------|--------------|---------------|----------------|
| Low ch 902.85MHz | | | | | | | | | | | | | | | |
| 2.709 | 3.0 | 64.40 | 28.30 | 29.4 | 5.0 | -35.6 | 0.0 | 0.0 | 63.2 | 27.1 | 74 | 54 | -10.8 | -26.9 | V |
| 3.612 | 3.0 | 47.20 | 25.50 | 31.7 | 6.0 | -34.8 | 0.0 | 0.0 | 50.1 | 28.4 | 74 | 54 | -23.9 | -25.6 | V |
| 2.709 | 3.0 | 60.60 | 28.10 | 29.4 | 5.0 | -35.6 | 0.0 | 0.0 | 59.4 | 26.9 | 74 | 54 | -14.6 | -27.1 | H |
| Mid ch 915MHz | | | | | | | | | | | | | | | |
| 1.830 | 3.0 | 58.89 | 31.54 | 27.5 | 4.0 | -36.6 | 0.0 | 0.0 | 53.8 | 26.5 | 74 | 54 | -20.2 | -27.5 | V |
| 2.745 | 3.0 | 57.62 | 30.23 | 29.5 | 5.0 | -35.6 | 0.0 | 0.0 | 56.6 | 29.2 | 74 | 54 | -17.4 | -24.8 | V |
| 3.660 | 3.0 | 42.37 | 29.45 | 31.8 | 6.0 | -34.8 | 0.0 | 0.0 | 45.4 | 32.5 | 74 | 54 | -28.6 | -21.5 | V |
| 1.830 | 3.0 | 58.86 | 31.30 | 27.5 | 4.0 | -36.6 | 0.0 | 0.0 | 53.8 | 26.2 | 74 | 54 | -20.2 | -27.8 | H |
| 2.745 | 3.0 | 58.22 | 30.21 | 29.5 | 5.0 | -35.6 | 0.0 | 0.0 | 57.2 | 29.2 | 74 | 54 | -16.8 | -24.8 | H |
| 3.660 | 3.0 | 42.05 | 28.04 | 31.8 | 6.0 | -34.8 | 0.0 | 0.0 | 45.1 | 31.1 | 74 | 54 | -28.9 | -22.9 | H |
| High ch 927.075MHz | | | | | | | | | | | | | | | |
| 2.781 | 3.0 | 44.20 | 27.30 | 29.6 | 5.1 | -35.6 | 0.0 | 0.0 | 43.3 | 26.4 | 74 | 54 | -30.7 | -27.6 | V |
| 2.781 | 3.0 | 41.80 | 26.40 | 29.6 | 5.1 | -35.6 | 0.0 | 0.0 | 40.9 | 25.5 | 74 | 54 | -33.1 | -28.5 | H |
| No other emissions were detected above the system noise floor. | | | | | | | | | | | | | | | |

Rev. 11.10.11

| | | | | | |
|------|-----------------------|--------|--------------------------------|---------|------------------------------|
| 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 | | |

7.3.2. HARMONIC AND SPURIOUS ABOVE 1 GHz FOR C054 BASE

High Frequency Measurement
 Compliance Certification Services, Fremont 3m Chamber

Company: Plantronics
 Project #: 12U14646
 Date: 11/7/2012
 Test Engineer: Thanh Nguyen
 Configuration: EUT Base C54 and the remote Headset500_XD
 Mode: Wireless link to the headset

Test Equipment:

| | | | | |
|--------------------|-----------------------|------------------------|--------------|------------|
| Horn 1-18GHz | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz | Limit |
| T60; S/N: 2238 @3m | T34 HP 8449B | | | FCC 15.209 |

Hi Frequency Cables

| | | | | | |
|-------------------|--------------------|--------------------|-----|---------------|--|
| 3' cable 22807700 | 12' cable 22807600 | 20' cable 22807500 | HPF | Reject Filter | |
| 3' cable 22807700 | 12' cable 22807600 | 20' cable 22807500 | | R_001 | Peak Measurements RBW=VBW=1MHz 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 | Filtr dB | Peak dBuV/m | Avg dBuV/m | Pk Lim dBuV/m | Avg Lim dBuV/m | Pk Mar dB | Avg Mar dB | Notes (V/H) |
|--|-----------------------|--------------|--------------------------------|---------|------------------------------|--------|-----------|----------|-------------|------------|---------------|----------------|-----------|------------|-------------|
| Low Ch 902.85MHz | | | | | | | | | | | | | | | |
| 1.806 | 3.0 | 45.7 | 32.5 | 27.4 | 4.0 | -36.6 | 0.0 | 0.0 | 40.4 | 27.2 | 74 | 54 | -33.6 | -26.8 | V |
| 2.708 | 3.0 | 47.9 | 31.5 | 29.4 | 5.0 | -35.6 | 0.0 | 0.0 | 46.7 | 30.3 | 74 | 54 | -27.3 | -23.7 | V |
| 3.611 | 3.0 | 45.7 | 30.3 | 31.7 | 6.0 | -34.8 | 0.0 | 0.0 | 48.6 | 33.1 | 74 | 54 | -25.4 | -20.9 | V |
| 1.806 | 3.0 | 44.8 | 30.6 | 27.4 | 4.0 | -36.6 | 0.0 | 0.0 | 39.6 | 25.3 | 74 | 54 | -34.4 | -28.7 | H |
| 2.708 | 3.0 | 46.0 | 30.2 | 29.4 | 5.0 | -35.6 | 0.0 | 0.0 | 44.8 | 29.0 | 74 | 54 | -29.2 | -25.0 | H |
| 3.611 | 3.0 | 43.4 | 29.5 | 31.7 | 6.0 | -34.8 | 0.0 | 0.0 | 46.2 | 32.3 | 74 | 54 | -27.8 | -21.7 | H |
| Mid ch 915MHz | | | | | | | | | | | | | | | |
| 1.830 | 3.0 | 60.52 | 31.54 | 27.5 | 4.0 | -36.6 | 0.0 | 0.0 | 55.4 | 26.5 | 74 | 54 | -18.6 | -27.5 | V |
| 2.745 | 3.0 | 56.30 | 30.14 | 29.5 | 5.0 | -35.6 | 0.0 | 0.0 | 55.3 | 29.1 | 74 | 54 | -18.7 | -24.9 | V |
| 3.660 | 3.0 | 42.84 | 28.15 | 31.8 | 6.0 | -34.8 | 0.0 | 0.0 | 45.9 | 31.2 | 74 | 54 | -28.1 | -22.8 | V |
| 1.830 | 3.0 | 53.59 | 30.71 | 27.5 | 4.0 | -36.6 | 0.0 | 0.0 | 48.5 | 25.6 | 74 | 54 | -25.5 | -28.4 | H |
| 2.745 | 3.0 | 54.61 | 28.89 | 29.5 | 5.0 | -35.6 | 0.0 | 0.0 | 53.6 | 27.9 | 74 | 54 | -20.4 | -26.1 | H |
| 3.660 | 3.0 | 42.62 | 28.04 | 31.8 | 6.0 | -34.8 | 0.0 | 0.0 | 45.7 | 31.1 | 74 | 54 | -28.3 | -22.9 | H |
| High Ch 927.25MHz | | | | | | | | | | | | | | | |
| 1.857 | 3.0 | 53.8 | 31.8 | 27.6 | 4.0 | -36.5 | 0.0 | 0.0 | 48.9 | 26.9 | 74 | 54 | -25.1 | -27.1 | V |
| 2.781 | 3.0 | 45.4 | 30.2 | 29.6 | 5.1 | -35.6 | 0.0 | 0.0 | 44.6 | 29.4 | 74 | 54 | -29.4 | -24.6 | V |
| 3.708 | 3.0 | 40.8 | 28.8 | 31.9 | 6.1 | -34.7 | 0.0 | 0.0 | 44.1 | 32.1 | 74 | 54 | -29.9 | -21.9 | V |
| 1.857 | 3.0 | 45.0 | 30.9 | 27.6 | 4.0 | -36.5 | 0.0 | 0.0 | 40.1 | 26.0 | 74 | 54 | -33.9 | -28.0 | H |
| 2.781 | 3.0 | 43.3 | 30.2 | 29.6 | 5.1 | -35.6 | 0.0 | 0.0 | 42.5 | 29.3 | 74 | 54 | -31.5 | -24.7 | H |
| 3.708 | 3.0 | 41.7 | 28.7 | 31.9 | 6.1 | -34.7 | 0.0 | 0.0 | 44.9 | 31.9 | 74 | 54 | -29.1 | -22.1 | H |
| No other emissions were detected above 4th harmonic. | | | | | | | | | | | | | | | |
| Rev. 11.10.11 | | | | | | | | | | | | | | | |
| 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. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

| 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

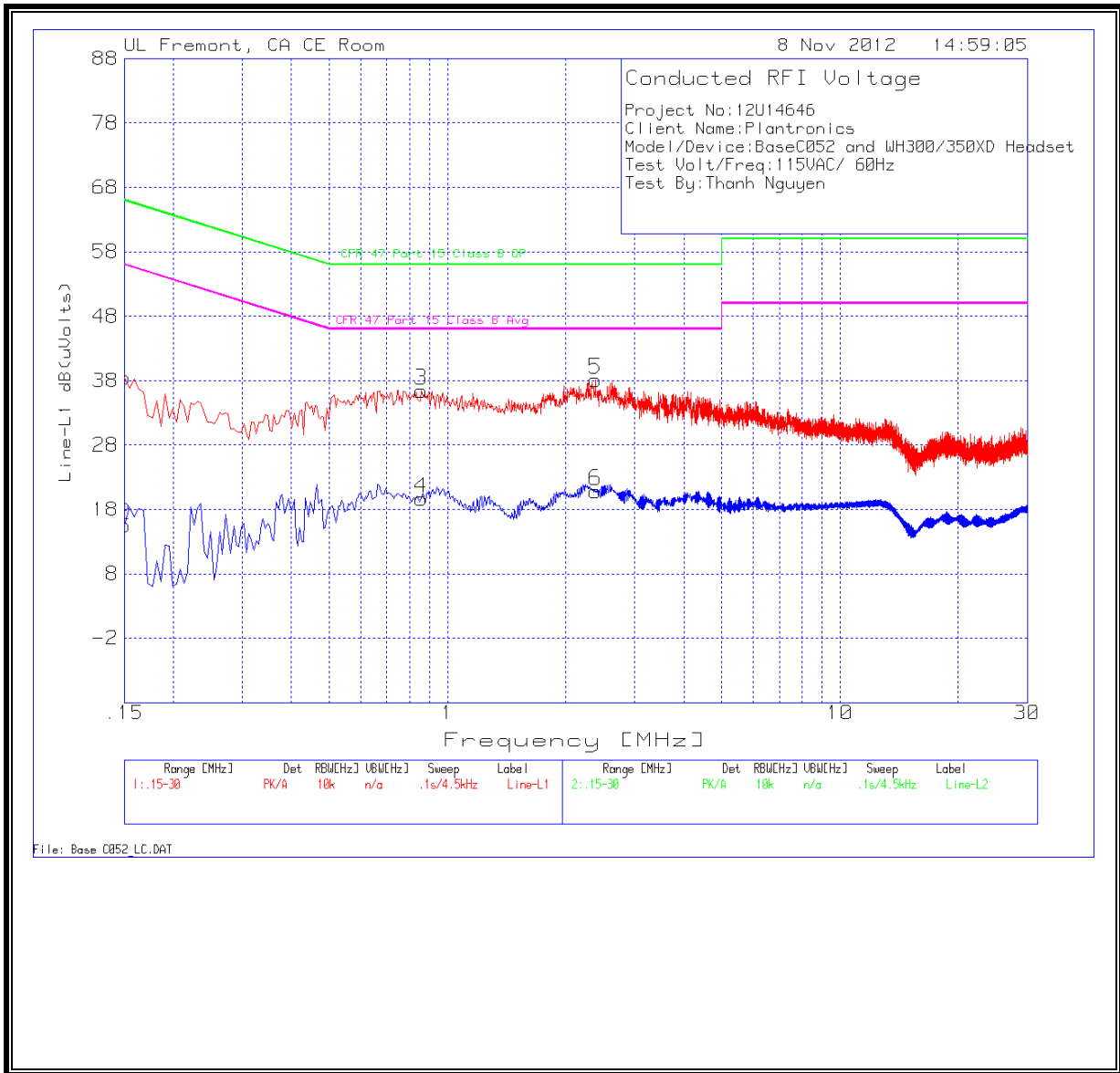
RESULTS

6 WORST EMISSIONS (WORST CASE)

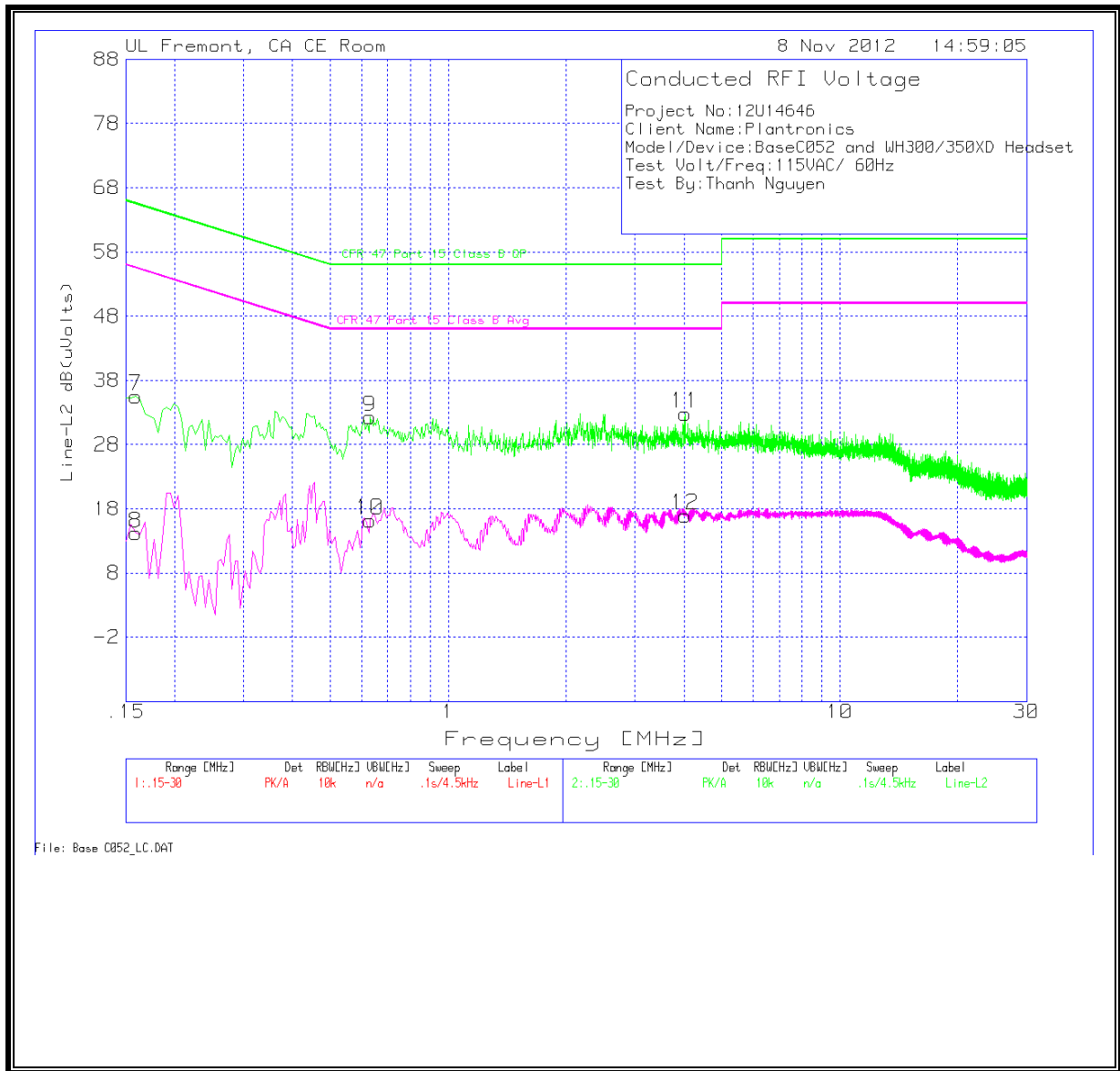
Model C052 BASE:

| Project No:12U14646 | | | | | | | | | |
|---|---------------|----------|--------------------|------------------------|------------|---------------------------|--------|----------------------------|--------|
| Client Name:Plantronics | | | | | | | | | |
| Model/Device:BaseC052 and WH300/350XD Headset | | | | | | | | | |
| Test Volt/Freq:115VAC/ 60Hz | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | |
| Line-L1 .15 - 30MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | T24 IL L1.TXT (dB) | LC Cables 1&3.TXT (dB) | dB(uVolts) | CFR 47 Part 15 Class B QP | Margin | CFR 47 Part 15 Class B Avg | Margin |
| 0.15 | 38.43 | PK | 0.1 | 0 | 38.53 | 66 | -27.47 | - | - |
| 0.15 | 15.42 | Av | 0.1 | 0 | 15.52 | - | - | 56 | -40.48 |
| 0.8565 | 36.34 | PK | 0.1 | 0 | 36.44 | 56 | -19.56 | - | - |
| 0.8565 | 19.51 | Av | 0.1 | 0 | 19.61 | - | - | 46 | -26.39 |
| 2.382 | 37.9 | PK | 0.1 | 0.1 | 38.1 | 56 | -17.9 | - | - |
| 2.382 | 20.59 | Av | 0.1 | 0.1 | 20.79 | - | - | 46 | -25.21 |
| Line-L2 .15 - 30MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | T24 IL L1.TXT (dB) | LC Cables 1&3.TXT (dB) | dB(uVolts) | CFR 47 Part 15 Class B QP | Margin | CFR 47 Part 15 Class B Avg | Margin |
| 0.159 | 35.44 | PK | 0.1 | 0 | 35.54 | 65.5 | -29.96 | - | - |
| 0.159 | 14.09 | Av | 0.1 | 0 | 14.19 | - | - | 55.5 | -41.31 |
| 0.6315 | 32.14 | PK | 0.1 | 0 | 32.24 | 56 | -23.76 | - | - |
| 0.6315 | 16.04 | Av | 0.1 | 0 | 16.14 | - | - | 46 | -29.86 |
| 4.0245 | 32.6 | PK | 0.1 | 0.1 | 32.8 | 56 | -23.2 | - | - |
| 4.0245 | 16.8 | Av | 0.1 | 0.1 | 17 | - | - | 46 | -29 |

LINE 1 RESULTS



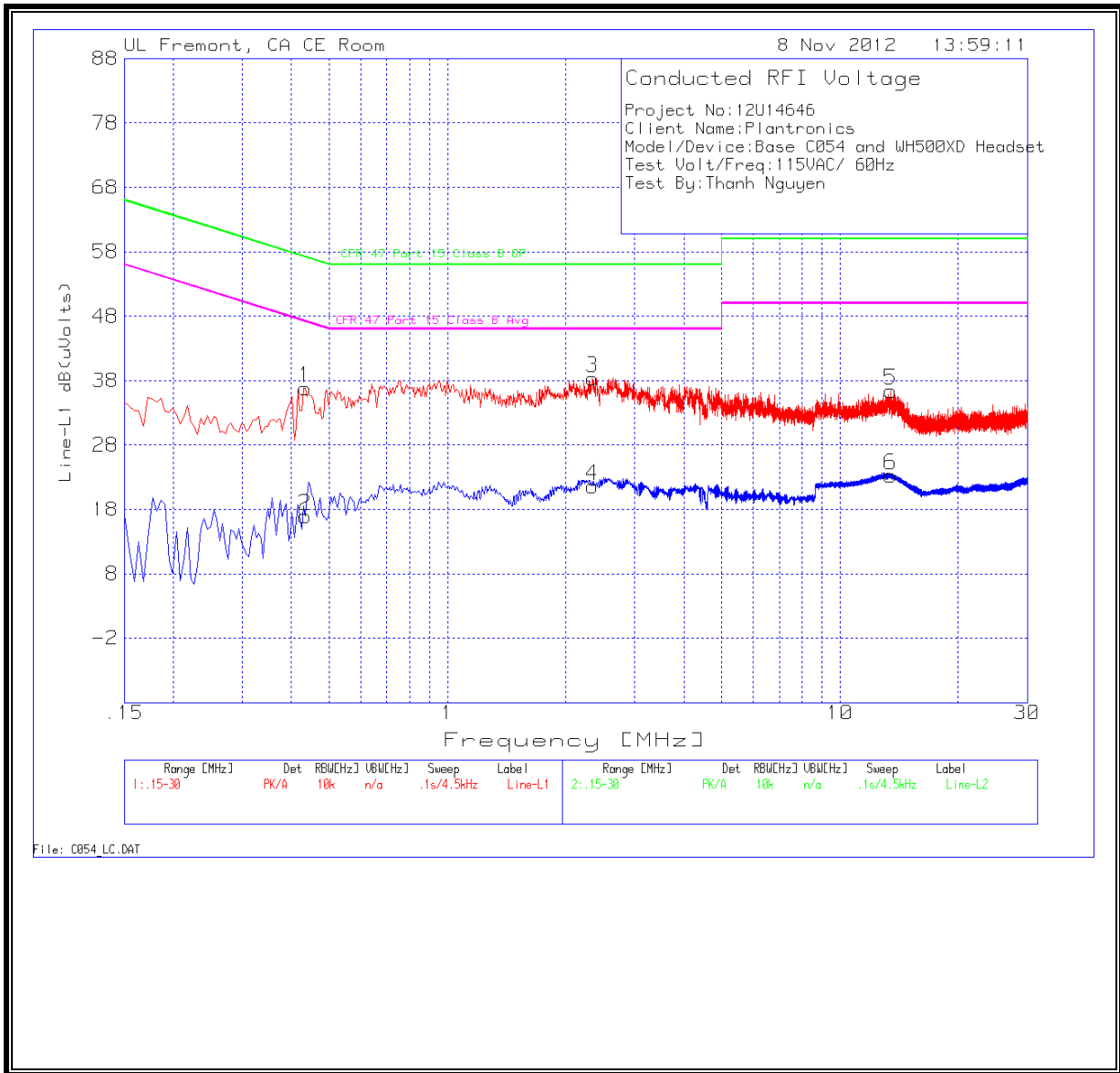
LINE 2 RESULTS



MODEL C054 BASE:

| Project No:12U14646 | | | | | | | | | |
|---|---------------|----------|--------------------|------------------------|----------|---------------------------|--------|----------------------------|--------|
| Client Name:Plantronics | | | | | | | | | |
| Model/Device:Base C054 and WH500XD Headset | | | | | | | | | |
| Test Volt/Freq:115VAC/ 60Hz | | | | | | | | | |
| Test By:Thanh Nguyen | | | | | | | | | |
| Line-L1 .15 - 30MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | T24 IL L1.TXT (dB) | LC Cables 1&3.TXT (dB) | dB(uV s) | CFR 47 Part 15 Class B QP | Margin | CFR 47 Part 15 Class B Avg | Margin |
| 0.4335 | 36.74 | PK | 0.1 | 0 | 36.84 | 57.2 | -20.36 | - | - |
| 0.4335 | 16.84 | Av | 0.1 | 0 | 16.94 | - | - | 47.2 | -30.26 |
| 2.3415 | 38.12 | PK | 0.1 | 0.1 | 38.32 | 56 | -17.68 | - | - |
| 2.3415 | 21.35 | Av | 0.1 | 0.1 | 21.55 | - | - | 46 | -24.45 |
| 13.47 | 36.02 | PK | 0.2 | 0.2 | 36.42 | 60 | -23.58 | - | - |
| 13.47 | 22.93 | Av | 0.2 | 0.2 | 23.33 | - | - | 50 | -26.67 |
| Line-L2 .15 - 30MHz | | | | | | | | | |
| Test Frequency | Meter Reading | Detector | T24 IL L1.TXT (dB) | LC Cables 1&3.TXT (dB) | dB(uV s) | CFR 47 Part 15 Class B QP | Margin | CFR 47 Part 15 Class B Avg | Margin |
| 0.555 | 34.9 | PK | 0.1 | 0 | 35 | 56 | -21 | - | - |
| 0.555 | 16.25 | Av | 0.1 | 0 | 16.35 | - | - | 46 | -29.65 |
| 2.2155 | 36.77 | PK | 0.1 | 0.1 | 36.97 | 56 | -19.03 | - | - |
| 2.2155 | 19.77 | Av | 0.1 | 0.1 | 19.97 | - | - | 46 | -26.03 |
| 6.378 | 35.52 | PK | 0.1 | 0.1 | 35.72 | 60 | -24.28 | - | - |
| 6.378 | 20.11 | Av | 0.1 | 0.1 | 20.31 | - | - | 50 | -29.69 |

LINE 1 RESULTS



LINE 2 RESULTS

