# FCC CFR47 PART 15 SUBPART C

# CERTIFICATION TEST REPORT

# FOR

# GSM/WCDMA/LTE PHONE WITH BT + DTS WLAN b/g/n & NFC

**MODEL NUMBER: LGK371, K371, LG-K371**

**FCC ID: ZNFK371**

**REPORT NUMBER: 16I22670-E4V3**

**ISSUE DATE: 2/24/2016**

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NVLAP LAB CODE 200065-0

## Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V1 | 2/16/2016 | Initial issue | D. CORONIA |
| V2 | 2/22/2016 | Updated Section 9.4.3 | D. CORONIA |
| V3 | 2/24/2016 | Updated Section 10 | D. CORONIA |


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# 1. ATTESTATION OF TEST RESULTS

| | |
|---|---|
| **COMPANY NAME:** | LG ELECTRONICS MOBILECOMM U.S.A., INC. |
| **EUT DESCRIPTION:** | GSM/WCDMA/LTE PHONE WITH BT + DTS WLAN b/g/n & NFC |
| **MODEL:** | LGK371, K371, LG-K371 |
| **SERIAL NUMBER:** | 512CYFT000387, 512CJZ000388, 510CYPY001168, 510CYHE001169, 510CYCV001171, 510CYYQ001170 |
| **DATE TESTED:** | NOVEMBER 25, 2015 - JANUARY 26, 2016 |

| APPLICABLE STANDARDS | |
|---|---|
| **STANDARD** | **TEST RESULTS** |
| CFR 47 Part 15 Subpart C | Pass |

UL Verification Services Inc. 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 Verification Services Inc. 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 Verification Services Inc. and all revisions are duly noted in the revision section. Any alteration of this document not carried out by UL Verification Services Inc. 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.

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# 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 C63.10-2013.

# 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 47173 Benicia Street | 47266 Benicia Street |
|---|---|
| ☐ Chamber A | ☐ Chamber D |
| ☒ Chamber B | ☐ Chamber E |
| ☐ Chamber C | ☐ Chamber F |
| | ☐ Chamber G |
| | ☐ Chamber H |

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

# 4. CALIBRATION AND UNCERTAINTY

## 4.1. MEASURING INSTRUMENT CALIBRATION

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

## 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m


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## 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, 9KHz to 30 MHz | 2.14 dB |
| Radiated Disturbance, 30 to 1000 MHz | 4.98 dB |
| Radiated Disturbance,1000 to 6000 MHz | 3.86 dB |
| Radiated Disturbance,6000 to 18000 MHz | 4.23 dB |
| Radiated Disturbance,18000 to 26000 MHz | 5.30 dB |
| Radiated Disturbance,26000 to 40000 MHz | 5.23 dB |

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


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# 5. EQUIPMENT UNDER TEST

## 5.1. DESCRIPTION OF EUT

The EUT is a GSM/CDMA/LTE PHONE WITH BT & DTS WLAN b/g/n & NFC

## 5.1. MAXIMUM OUTPUT POWER

| Frequency Range (MHz) | Mode | Output Power (dBm) | Output Power (mW) |
|---|---|---|---|
| 2412 - 2462 | 802.11b | 15.8 | 38.02 |
| 2412 - 2462 | 802.11g | 12.8 | 19.05 |
| 2412 - 2462 | 802.11n HT20 | 10.6 | 11.48 |

## 5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a SUS antenna, with a maximum gain of 0.39 dBi.

## 5.3. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit on the channel with higher output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0


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## 5.4. DESCRIPTION OF TEST SETUP

**SUPPORT EQUIPMENT**

| Support Equipment List | | | | |
|---|---|---|---|---|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| AC Adapter | LG | MCS-02WRE | N/A | N/A |
| Earphone | LG | N/A | N/A | N/A |

**I/O CABLES**

| I/O Cable List | | | | | | |
|---|---|---|---|---|---|---|
| Cable No | Port | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | DC Power | 1 | Mini-USB | Shielded | 1.2m | N/A |
| 2 | Audio | 1 | Mini-Jack | Unshielded | 1m | N/A |

**TEST SETUP**

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.


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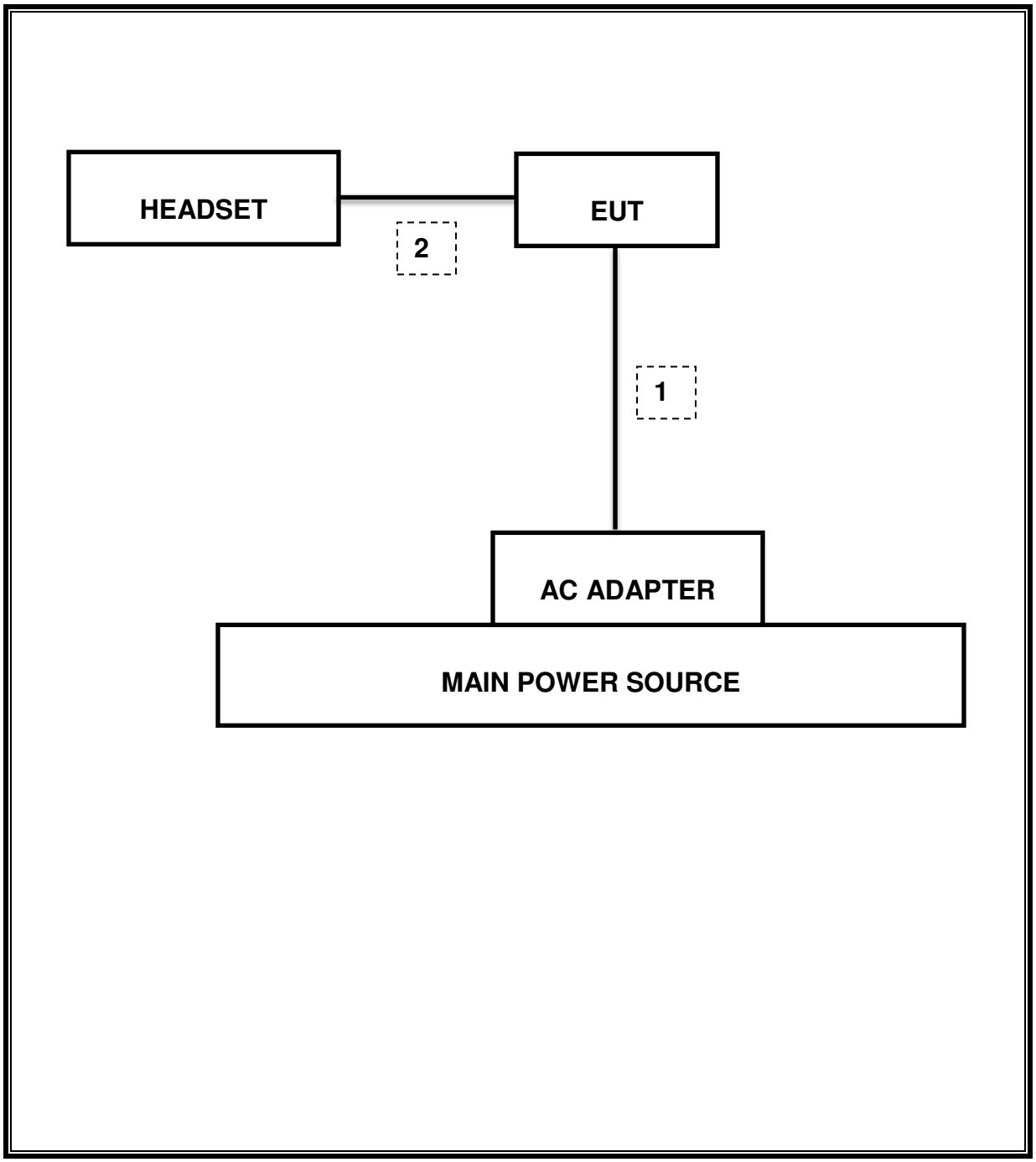
**SETUP DIAGRAM FOR TESTS**





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# 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** | **T Number** | **Cal Due** |
| Antenna, Biconolog, 30MHz-1 GHz | Sunol Sciences | JB1 | 130 | 09/01/16 |
| Antenna, Biconolog, 30MHz-1 GHz | Sunol Sciences | JB1 | 477 | 06/10/16 |
| Antenna, Horn, 18GHz | EMCO | 3115 | 59 | 11/18/16 |
| Antenna, Horn, 18GHz | ETS Lindgren | 3117 | 345 | 03/03/16 |
| Antenna, Horn, 18GHz | ETS Lindgren | 3117 | 136 | 03/03/16 |
| Antenna, Horn, 18GHz | ETS Lindgren | 3117 | 863 | 04/10/16 |
| Antenna, Horn, 26.5 GHz | ARA | MWH-1826/B | 447 | 05/12/16 |
| RF Preamplifier, 1GHz - 18GHz | Miteq | NSP4000-SP2 | 88 | 04/07/16 |
| RF Preamplifier, 1GHz - 26.5GHz | HP | 8449B | 404 | 06/29/16 |
| Spectrum Analyzer, 44 GHz | Agilent / HP | E4446A | 123 | 10/22/16 |
| Spectrum Analyzer, PXA, 3 Hz to 44 GHz | Keysight | N9030A | 906 | 03/03/16 |
| Spectrum Analyzer, PXA, 3 Hz to 44 GHz | Keysight | N9030A | 907 | 06/11/16 |
| EMI Test Receiver, 9 KHz to 7 GHz | Rohde & Schwarz | ECSI7 | 284 | 09/10/16 |
| Peak Power Meter | Agilent / HP | N1914A | 254 | 06/08/16 |
| Peak / Average Power Sensor | Keysight | E9327A | 117 | 03/09/16 |
| LISN, 30 MHz | Solar | 8012-50-R-24-BNC | 28 | 7/28/2016 |
| Reject Filter, 2.4GHz | Micro-Tronics | BRM50702 | 160 | CNR |
| Low Pass Filter 5GHz | Micro-Tronics | LPS17541 | 417 | 05/04/16 |
| High Pass Filter 6GHz | Micro-Tronics | HPS17542 | 893 | 04/25/16 |
| High Pass Filter 3GHz | Micro-Tronics | HPS17543 | 898 | 04/25/16 |

| Test Software List | | | |
|---|---|---|---|
| **Description** | **Manufacturer** | **Model** | **Version** |
| Radiated Software | UL | UL EMC | Ver 9.5, June 24, 2015 |
| Conducted Software | UL | UL EMC | Ver 9.5, May 26, 2015 |
| CLT Software | UL | UL RF | Ver 1.0, Feb 2, 2015 |
| Antenna Port Software | UL | UL RF | Ver 3.7, Nov 12, 2015 |


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# 7. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 558074 D01 v03r04, Section 6.0.

6 dB BW: KDB 558074 D01 v03r04, Section 8.1.

99% BW: ANSI C63.10-2013, Section 6.9.3.

Output Power: KDB 558074 D01 v03r04, Section 9.2.3.2.

Power Spectral Density: KDB 558074 D01 v03r04, Section 10.5

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r04, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r04, Section 12.1.

AC Power Line Conducted Emissions: ANSI C63.10-2013 Section 6.2.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

Band edge emissions within Restricted Bands are measured using RMS with duty cycle factor offset method.


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# 8. SUMMARY TABLE

| FCC Part Section | RSS Section(s) | Test Description | Test Limit | Test Condition | Test Result |
|---|---|---|---|---|---|
| 15.247 (a)(2) | RSS-247 5.2.1 | Occupied Band width (6dB) | >500KHz | Conducted | Pass |
| 2.1051, 15.247 (d) | RSS-247 5.5 | Band Edge / Conducted Spurious Emission | -20dBc | | Pass |
| 15.247 | RSS-247 5.4.4 | TX conducted output power | <30dBm | | Pass |
| 15.247 | RSS-247 5.2.2 | PSD | <8dBm | | Pass |
| 15.207 (a) | RSS-GEN 8.8 | AC Power Line conducted emissions | Section 10 | Radiated | Pass |
| 15.205, 15.209 | RSS-GEN 8.9/7 | Radiated Spurious Emission | < 54dBuV/m | | Pass |


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# 9. ANTENNA PORT TEST RESULTS

## 9.1. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

**LIMITS**

None; for reporting purposes only.

**PROCEDURE**

KDB558074 Zero-Span Spectrum Analyzer Method.

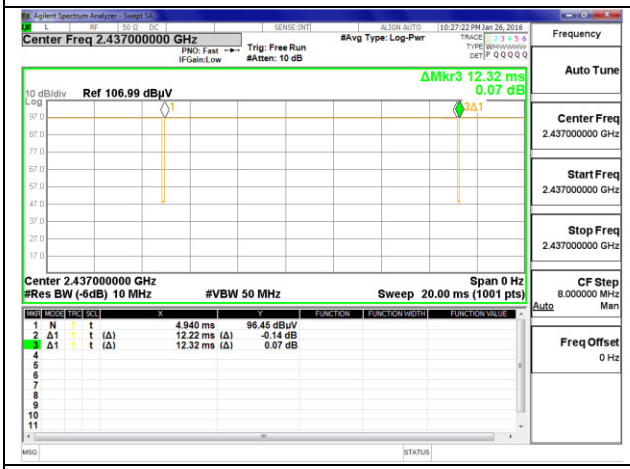
### 9.1.1. ON TIME AND DUTY CYCLE RESULTS

ON TIME AND DUTY CYCLE RESULTS

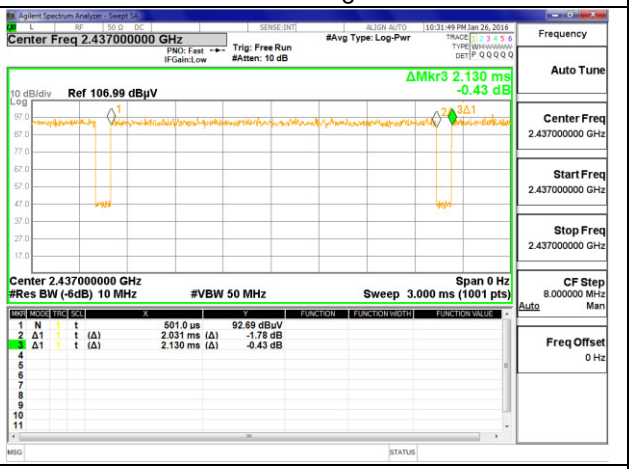
| | B (msec) | (msec) | x (linear) | Cycle (%) | Correction Factor (dB) | Minimum VBW (kHz) |
|---|---|---|---|---|---|---|
| 802.11b | 12.22 | 12.32 | 0.992 | 99.2% | 0.00 | 0.010 |
| 802.11g | 2.03 | 2.13 | 0.954 | 95.4% | 0.21 | 0.492 |
| 802.11n | 1.88 | 1.98 | 0.948 | 94.8% | 0.23 | 0.533 |

DUTY CYCLE PLOTS

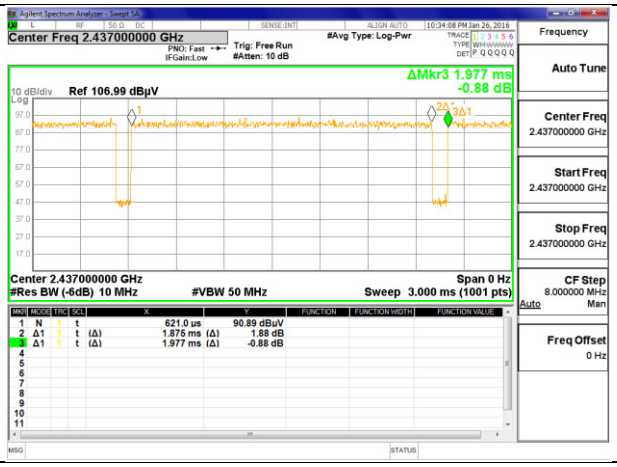
802.11b




802.11g




802.11n





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## 9.2. 6 dB BANDWIDTH

**LIMITS**

FCC §15.247 (a) (2)

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

**TEST PROCEDURE**

Reference to KDB 558074 D01 DTS Meas Guidance v03r04: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

**RESULTS**


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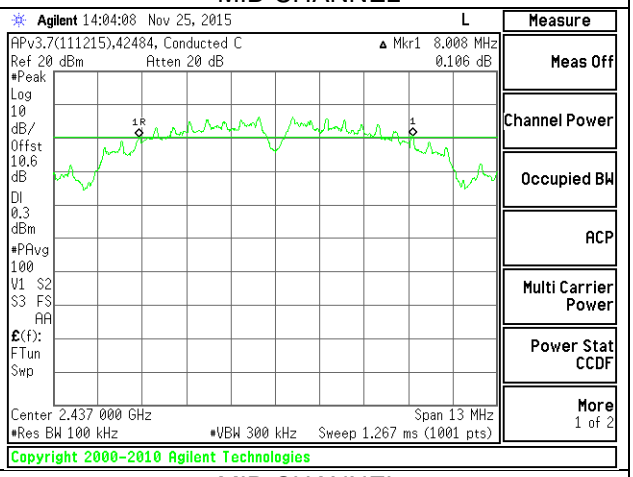
## 9.2.1. 6 dB BANDWIDTH MID CH PLOTS AND TABLE

802.11b TEST RESULT TABLE

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) |
|---|---|---|
| Low | 2412 | 7.572 |
| Middle | 2437 | 8.008 |
| High | 2462 | 7.536 |

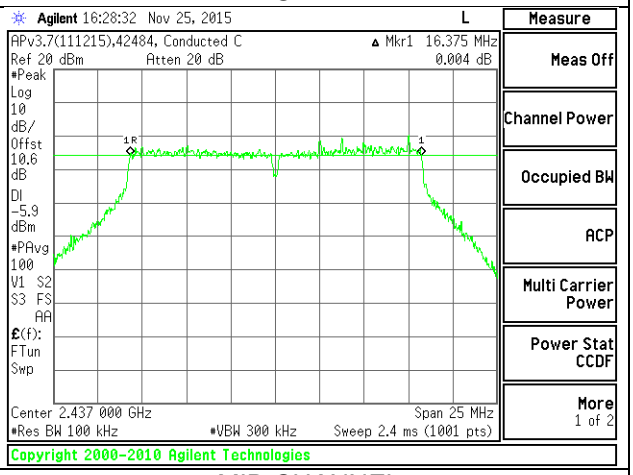
MID CHANNEL




802.11g TEST RESULT TABLE

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) |
|---|---|---|
| Low | 2412 | 16.400 |
| Middle | 2437 | 16.375 |
| High | 2462 | 16.350 |

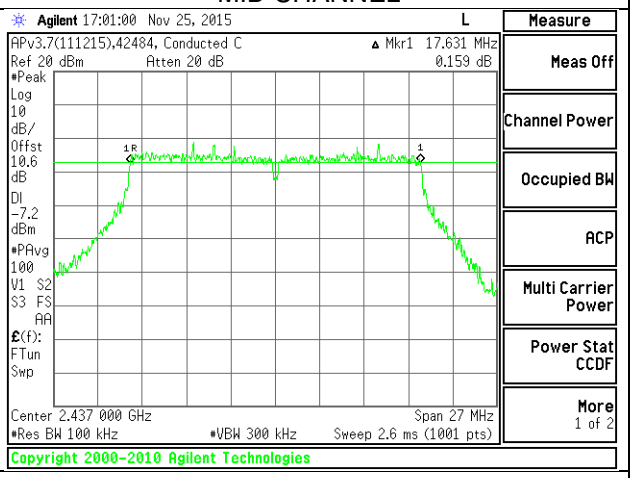
MID CHANNEL




802.11n HT20 TEST RESULT TABLE

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) |
|---|---|---|
| Low | 2412 | 17.290 |
| Middle | 2437 | 17.631 |
| High | 2462 | 17.316 |

MID CHANNEL

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## 9.3. 99% BANDWIDTH

**LIMITS**

None; for reporting purposes only.

**RESULTS**


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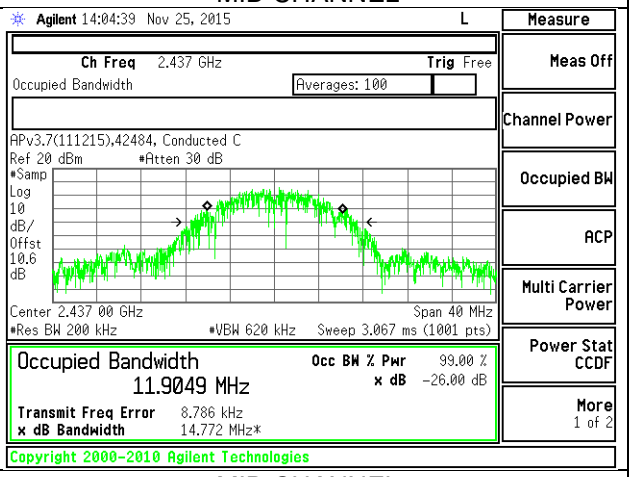
## 9.3.1. 99% BANDWIDTH MID CH PLOTS AND TABLE

802.11b TEST RESULT TABLE

| Channel | Frequency (MHz) | 99% Bandwidth (MHz) |
|---|---|---|
| Low | 2412 | 12.155 |
| Middle | 2437 | 11.905 |
| High | 2462 | 12.027 |

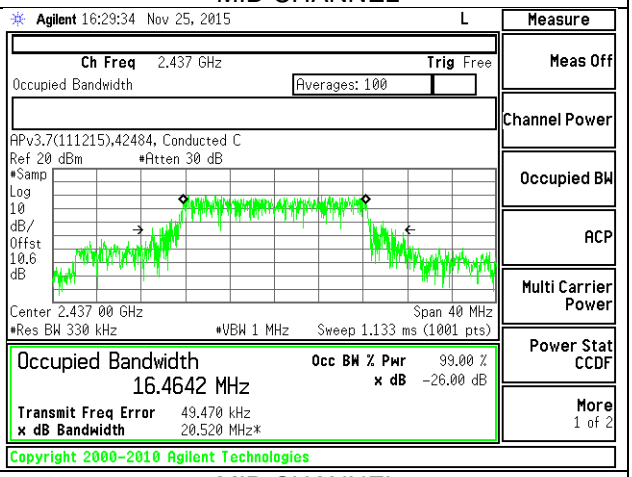
MID CHANNEL




802.11g TEST RESULT TABLE

| Channel | Frequency (MHz) | 99% Bandwidth (MHz) |
|---|---|---|
| Low | 2412 | 16.391 |
| Middle | 2437 | 16.464 |
| High | 2462 | 16.293 |

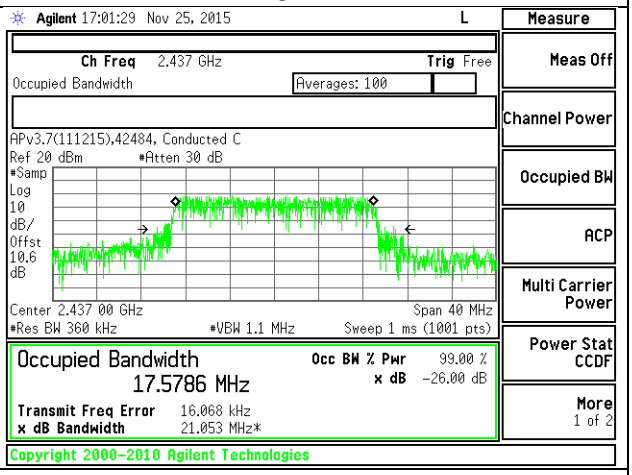
MID CHANNEL




802.11n HT20 TEST RESULT TABLE

| Channel | Frequency (MHz) | 99% Bandwidth (MHz) |
|---|---|---|
| Low | 2412 | 17.665 |
| Middle | 2437 | 17.579 |
| High | 2462 | 17.452 |

MID CHANNEL

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## 9.4. OUTPUT POWER

**LIMITS**

FCC §15.247

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

**DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

**RESULTS**


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### 9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

**Limits**

| Channel | Frequency (MHz) | Directional Gain (dBi) | FCC Power Limit (dBm) | IC Power Limit (dBm) | IC EIRP Limit (dBm) | Max Power (dBm) |
|---|---|---|---|---|---|---|
| Low | 2412 | 0.39 | 30.00 | 30 | 36 | 30.00 |
| Mid | 2437 | 0.39 | 30.00 | 30 | 36 | 30.00 |
| High | 2462 | 0.39 | 30.00 | 30 | 36 | 30.00 |

**Results**

| Channel | Frequency (MHz) | Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|
| Low | 2412 | 15.10 | 15.10 | 30.00 | -14.90 |
| Mid | 2437 | 14.90 | 14.90 | 30.00 | -15.10 |
| High | 2462 | 15.80 | 15.80 | 30.00 | -14.20 |

**Note:** the power readings above are measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.


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### 9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

**Limits**

| Channel | Frequency (MHz) | Directional Gain (dBi) | FCC Power Limit (dBm) | IC Power Limit (dBm) | IC EIRP Limit (dBm) | Max Power (dBm) |
|---|---|---|---|---|---|---|
| Low | 2412 | 0.39 | 30.00 | 30 | 36 | 30.00 |
| Mid | 2437 | 0.39 | 30.00 | 30 | 36 | 30.00 |
| High | 2462 | 0.39 | 30.00 | 30 | 36 | 30.00 |

**Results**

| Channel | Frequency (MHz) | Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|
| Low | 2412 | 11.4 | 11.40 | 30.00 | -18.60 |
| Mid | 2437 | 12.6 | 12.60 | 30.00 | -17.40 |
| High | 2462 | 12.3 | 12.30 | 30.00 | -17.70 |

**Note:** the power readings above are measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.


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### 9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

**Limits**

| Channel | Frequency (MHz) | Directional Gain (dBi) | FCC Power Limit (dBm) | IC Power Limit (dBm) | IC EIRP Limit (dBm) | Max Power (dBm) |
|---|---|---|---|---|---|---|
| Low | 2412 | 0.39 | 30.00 | 30 | 36 | 30.00 |
| Mid | 2437 | 0.39 | 30.00 | 30 | 36 | 30.00 |
| High | 2462 | 0.39 | 30.00 | 30 | 36 | 30.00 |

**Results**

| Channel | Frequency (MHz) | Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|
| Low | 2412 | 10.50 | 10.50 | 30.00 | -19.50 |
| Mid | 2437 | 10.00 | 10.00 | 30.00 | -20.00 |
| High | 2462 | 10.60 | 10.60 | 30.00 | -19.40 |

**Note:** the power readings above are measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.


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## 9.5. PSD

**LIMITS**

FCC §15.247

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.

**RESULTS**


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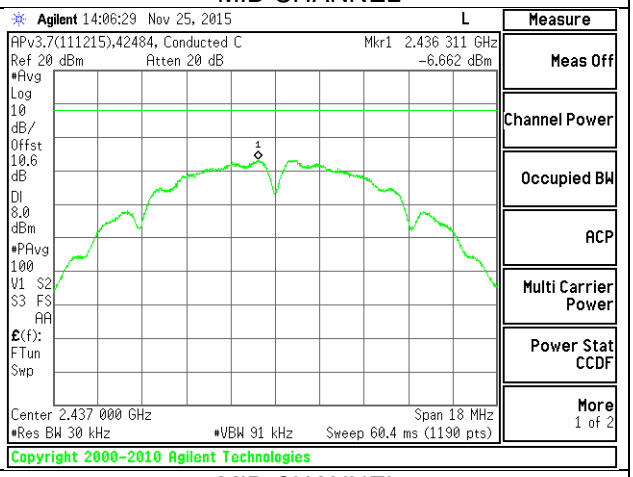
## 9.5.1. POWER SPECTRAQL DENSITY PLOTS AND TABLE

802.11b TEST RESULT TABLE

| Channel | Frequency (MHz) | PSD (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low | 2412 | -7.451 | 8 | -15.451 |
| Middle | 2437 | -6.662 | 8 | -14.662 |
| High | 2462 | -6.392 | 8 | -14.392 |

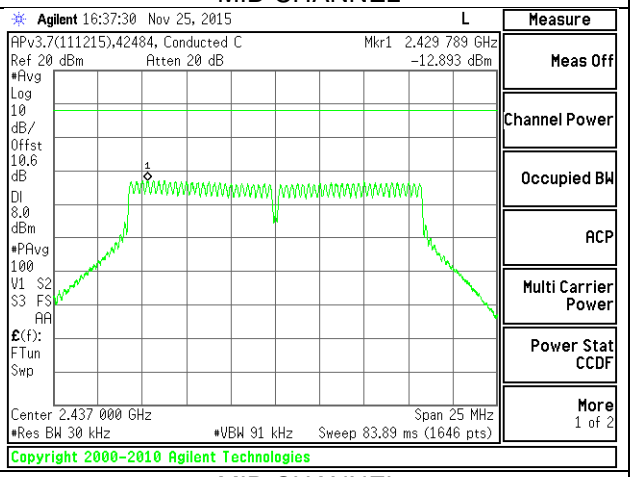
MID CHANNEL




802.11g TEST RESULT TABLE

| Channel | Frequency (MHz) | PSD (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low | 2412 | -12.286 | 8 | -20.286 |
| Middle | 2437 | -12.893 | 8 | -20.893 |
| High | 2462 | -11.861 | 8 | -19.861 |

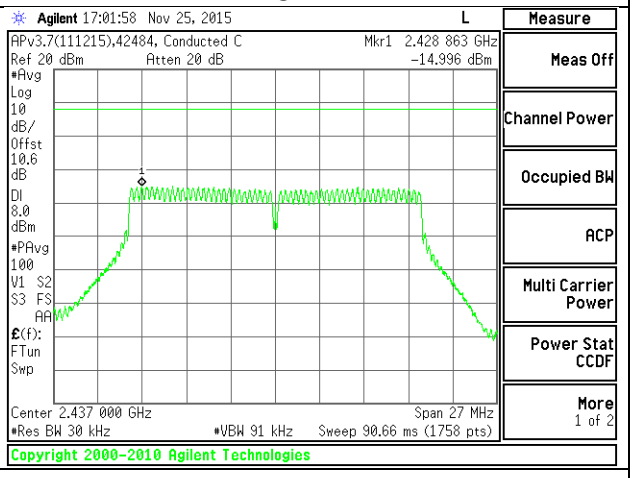
MID CHANNEL




802.11n HT20 TEST RESULT TABLE

| Channel | Frequency (MHz) | PSD (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low | 2412 | -14.651 | 8 | -22.651 |
| Middle | 2437 | -14.996 | 8 | -22.996 |
| High | 2462 | -14.162 | 8 | -22.162 |

MID CHANNEL




NOTE: --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## 9.6. OUT-OF-BAND EMISSIONS

**LIMITS**

FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

**TEST PROCEDURE**

The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

**RESULTS**


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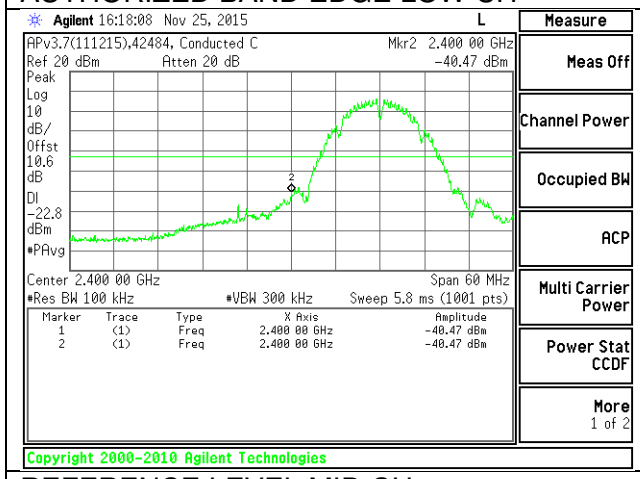
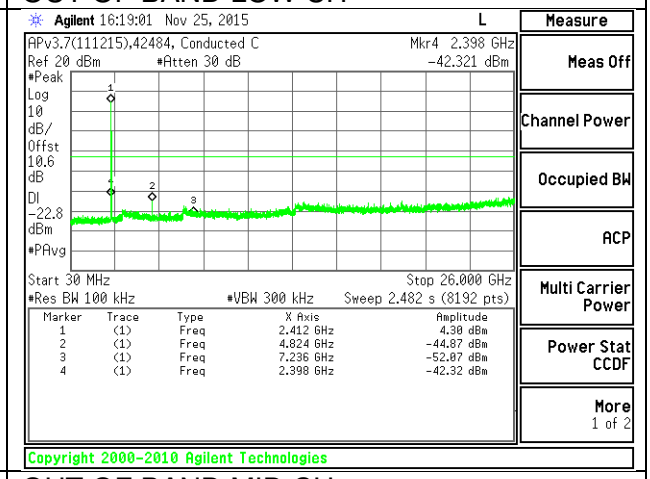
### 9.6.1. 802.11b MODE IN THE 2.4 GHz BAND

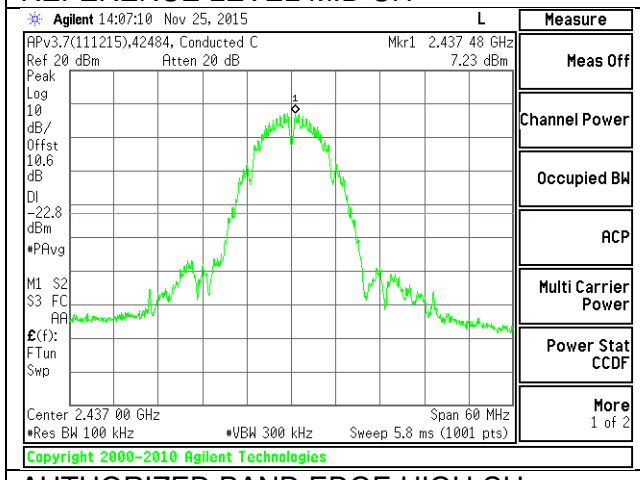
AUTHORIZED BAND EDGE LOW CH



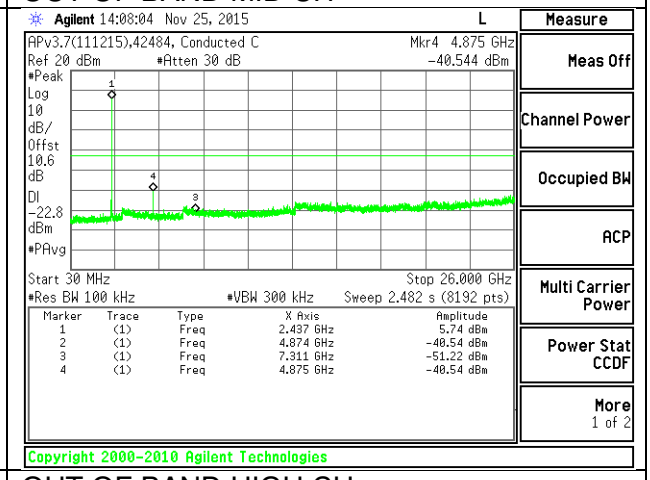

OUT OF BAND LOW CH



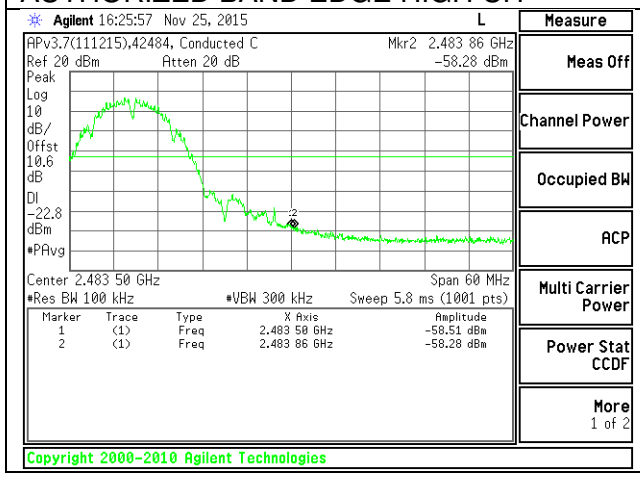

REFERENCE LEVEL MID CH



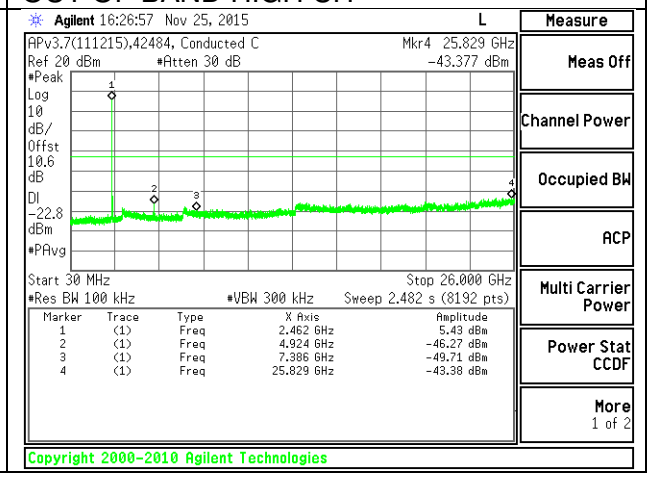

OUT OF BAND MID CH




AUTHORIZED BAND EDGE HIGH CH




OUT OF BAND HIGH CH





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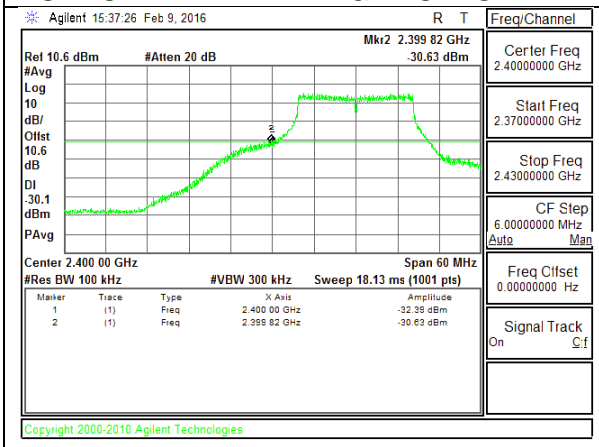
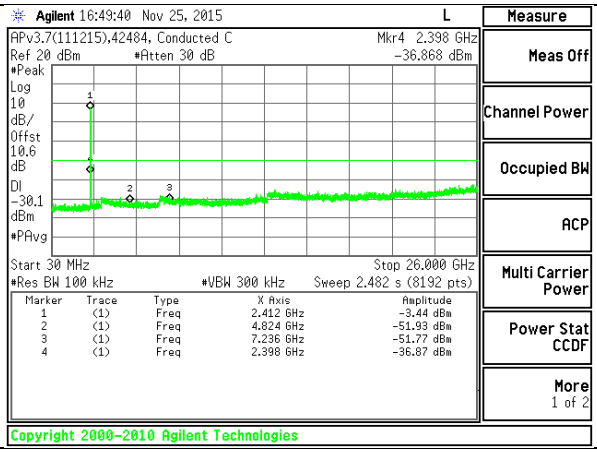
## 9.6.2. 802.11g MODE IN THE 2.4 GHz BAND

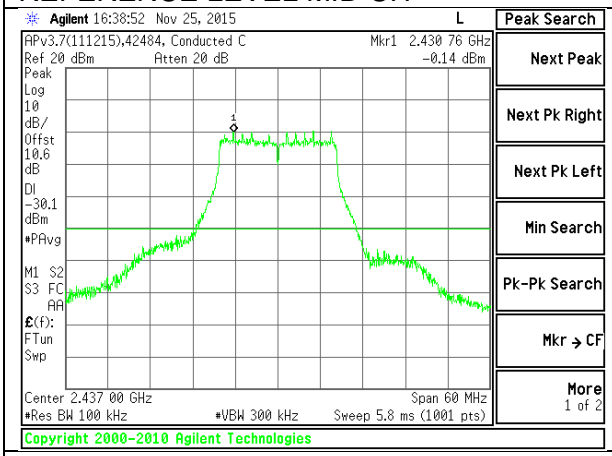
AUTHORIZED BAND EDGE LOW CH



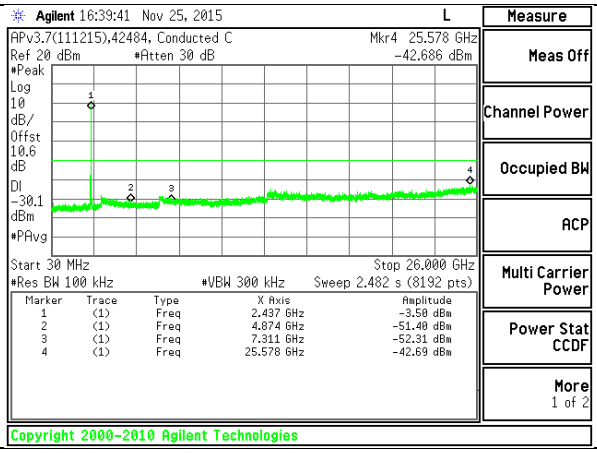

OUT OF BAND LOW CH



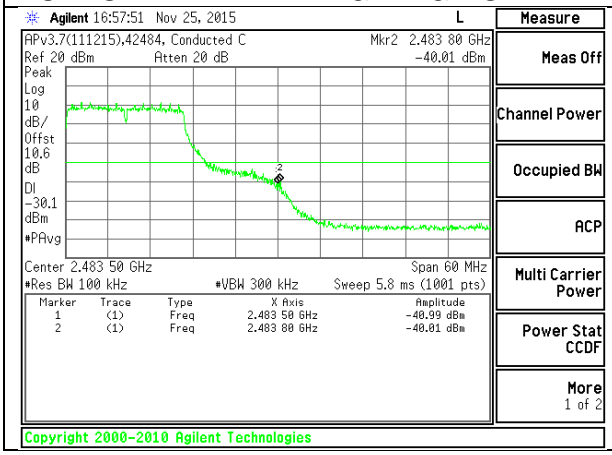

REFERENCE LEVEL MID CH



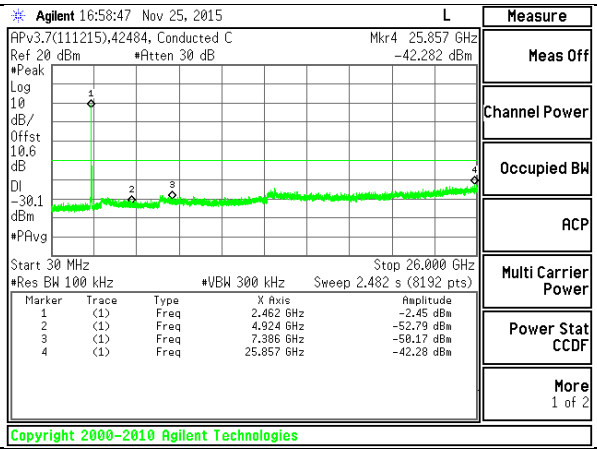

OUT OF BAND MID CH




AUTHORIZED BAND EDGE HIGH CH




OUT OF BAND HIGH CH





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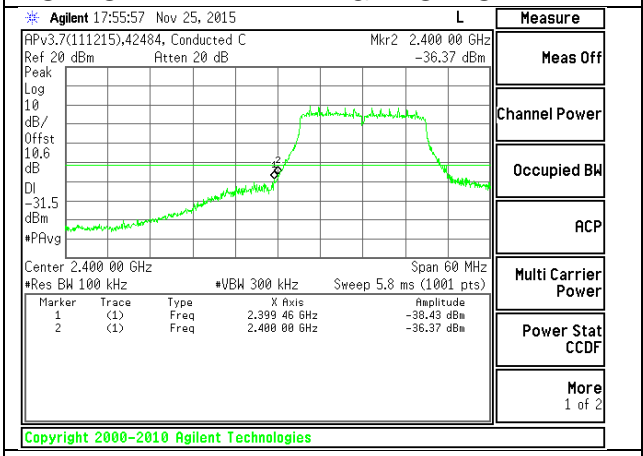
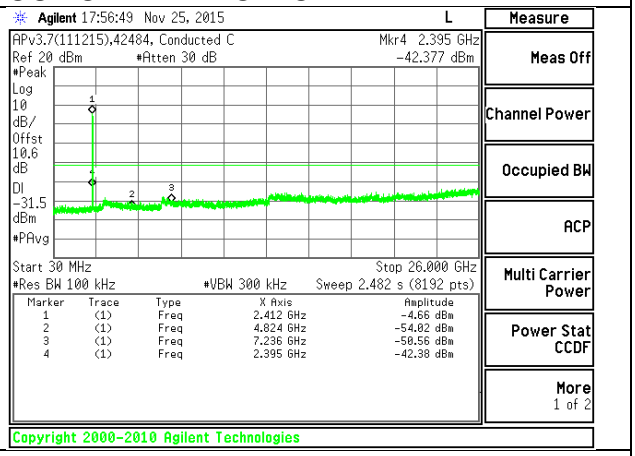
## 9.6.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

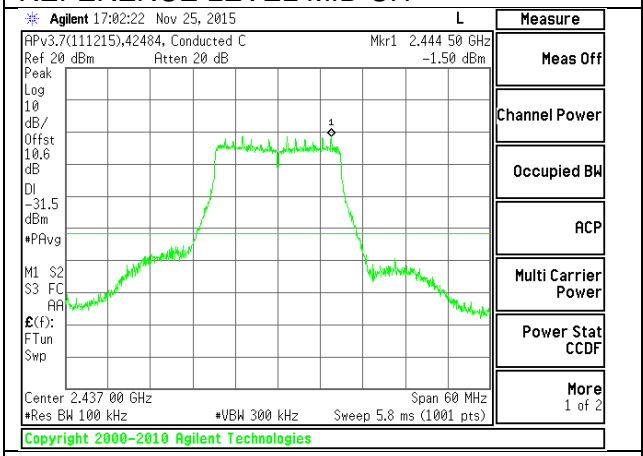
AUTHORIZED BAND EDGE LOW CH



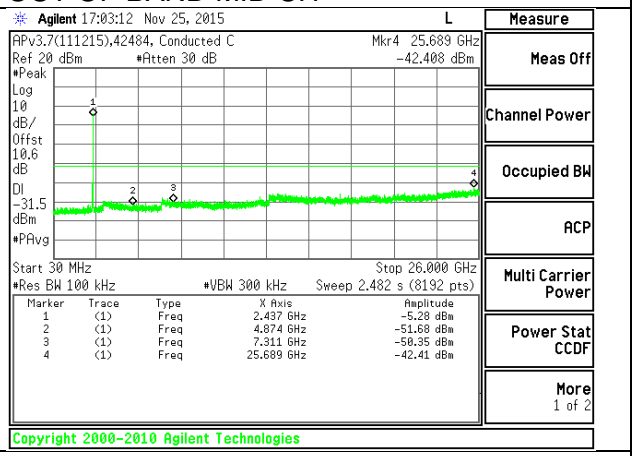

OUT OF BAND LOW CH



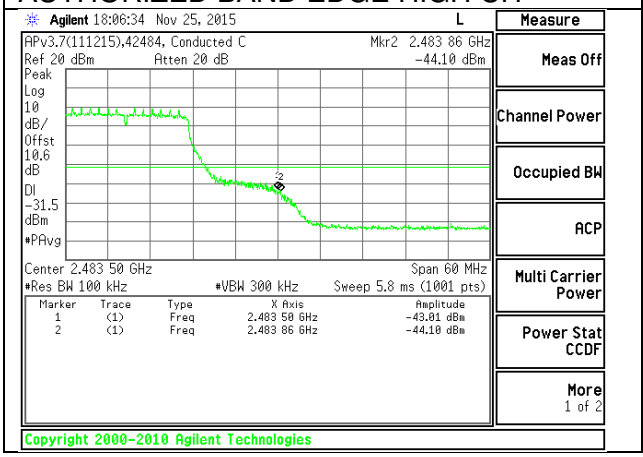

REFERENCE LEVEL MID CH



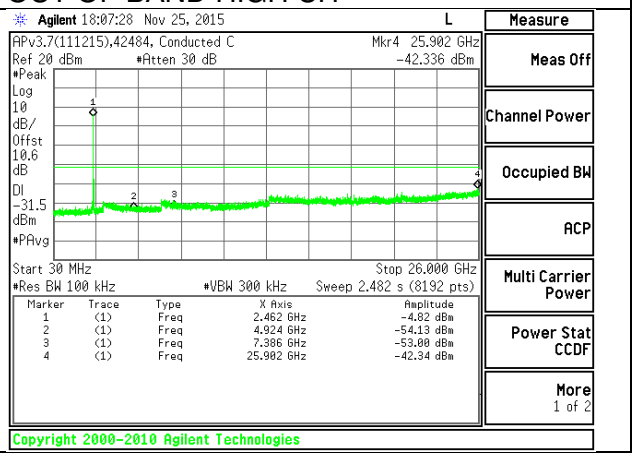

OUT OF BAND MID CH




AUTHORIZED BAND EDGE HIGH CH




OUT OF BAND HIGH CH





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# 10. RADIATED TEST RESULTS

**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 for below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. 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 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor = 10 log (1/x).

The spectrum from 30 MHz to 26 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.


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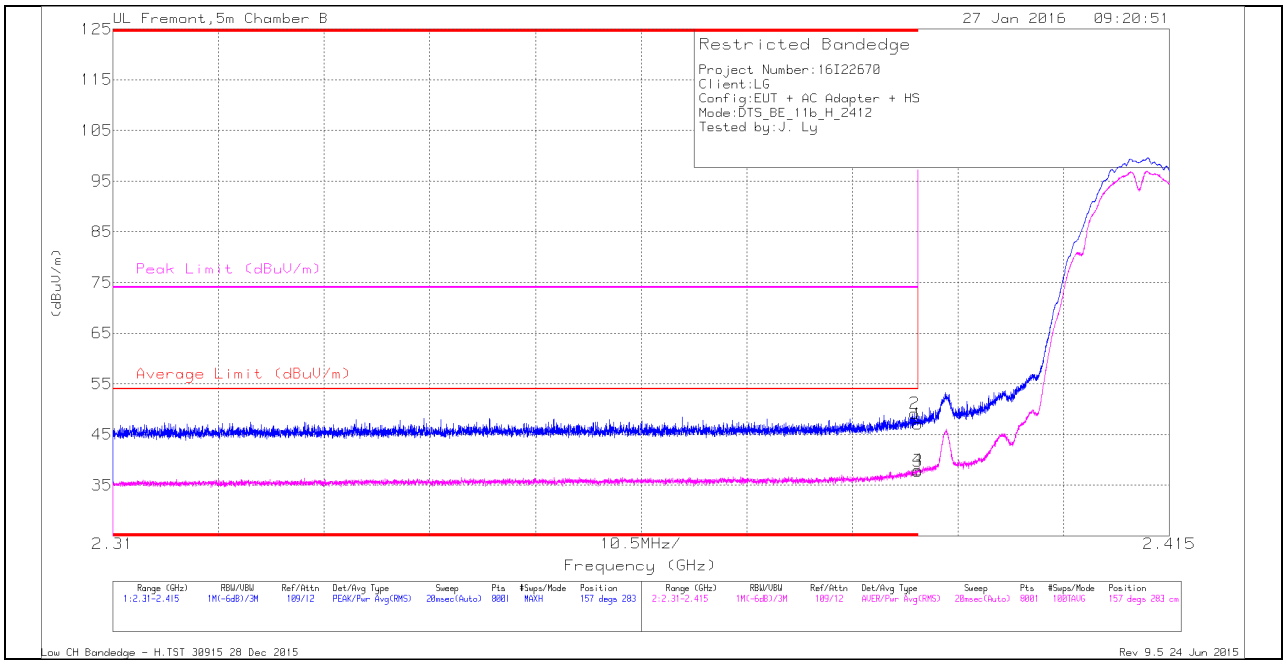
# 10.1. TRANSMITTER ABOVE 1 GHz

## 10.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

## RESTRICTED BANDEDGE (LOW CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT




### HORIZONTAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.39 | 36.99 | Pk | 32 | -21.9 | 0 | 47.09 | - | - | 74 | -26.91 | 157 | 283 | H |
| 2 | * 2.39 | 39.06 | Pk | 32 | -21.9 | 0 | 49.16 | - | - | 74 | -24.84 | 157 | 283 | H |
| 3 | * 2.39 | 27.71 | RMS | 32 | -21.9 | 0 | 37.81 | 54 | -16.19 | - | - | 157 | 283 | H |
| 4 | * 2.39 | 27.86 | RMS | 32 | -21.9 | 0 | 37.96 | 54 | -16.04 | - | - | 157 | 283 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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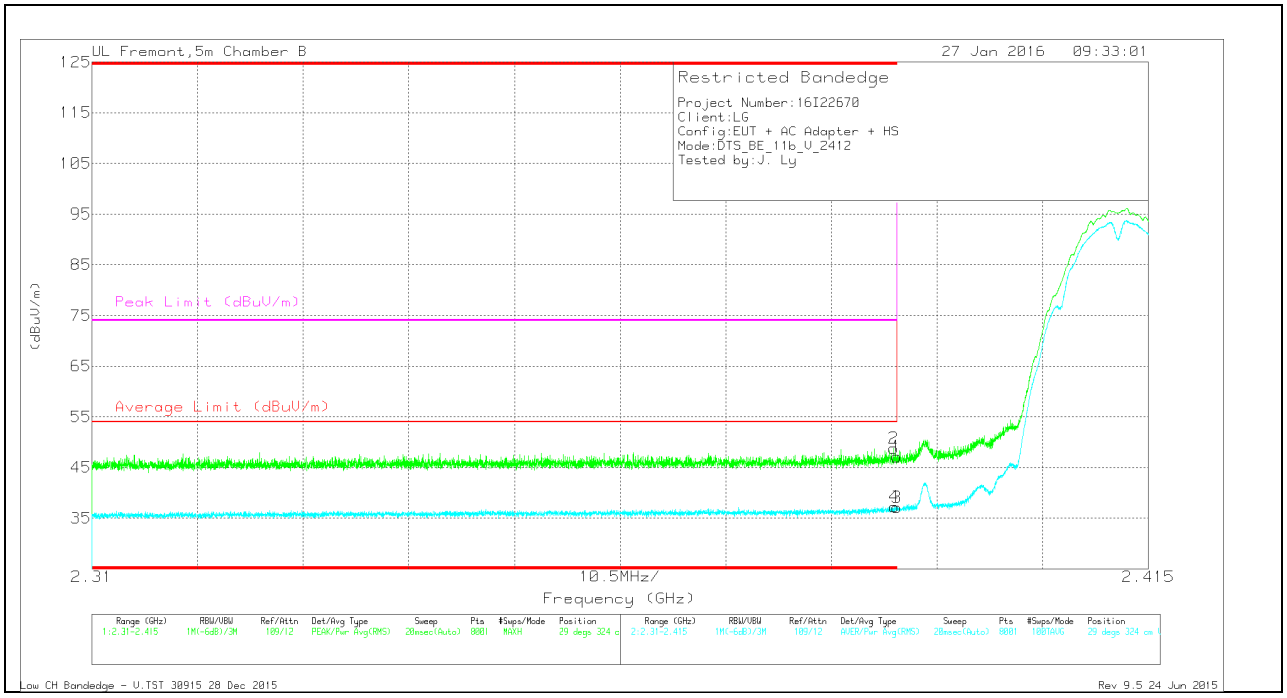
## VERTICAL PEAK AND AVERAGE PLOT




## VERTICAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.39 | 37.03 | Pk | 32 | -21.9 | 0 | 47.13 | - | - | 74 | -26.87 | 29 | 324 | V |
| 2 | * 2.39 | 38.75 | Pk | 32 | -21.9 | 0 | 48.85 | - | - | 74 | -25.15 | 29 | 324 | V |
| 3 | * 2.39 | 26.99 | RMS | 32 | -21.9 | 0 | 37.09 | 54 | -16.91 | - | - | 29 | 324 | V |
| 4 | * 2.39 | 27.19 | RMS | 32 | -21.9 | 0 | 37.29 | 54 | -16.71 | - | - | 29 | 324 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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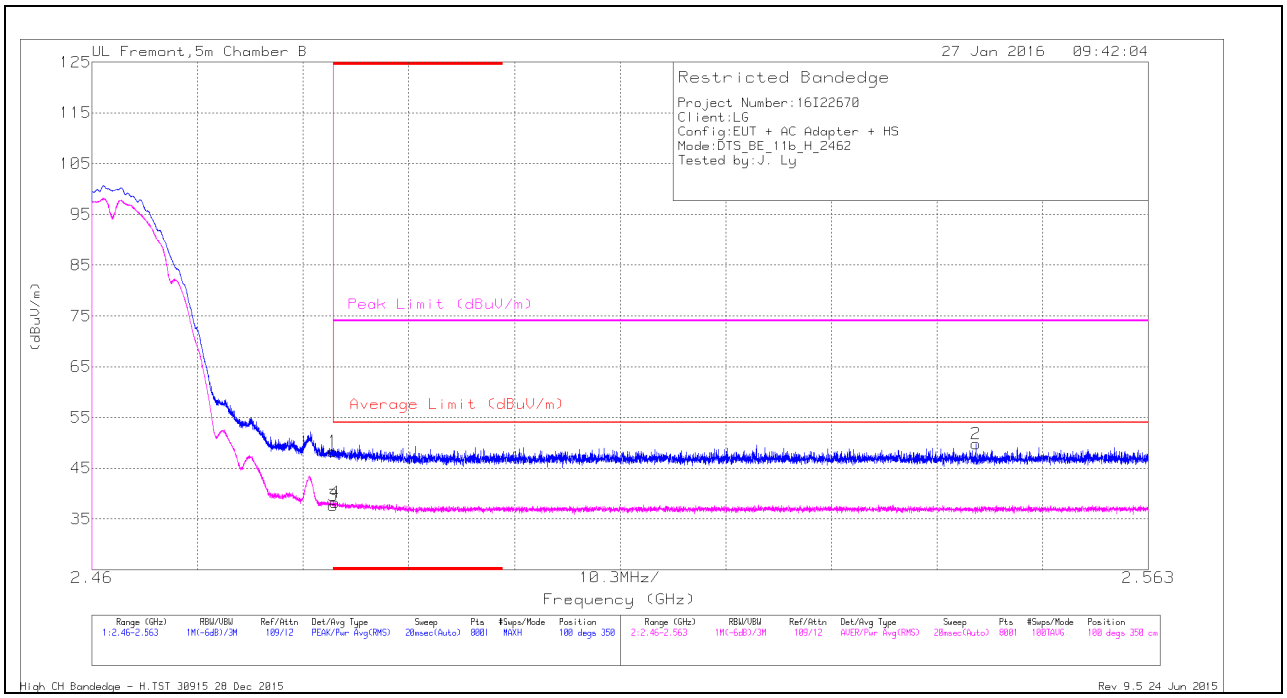
# AUTHORIZED BANDEDGE (HIGH CHANNEL)

## HORIZONTAL PEAK AND AVERAGE PLOT




## HORIZONTAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.484 | 37.57 | Pk | 32.5 | -21.8 | 0 | 48.27 | - | - | 74 | -25.73 | 100 | 350 | H |
| 3 | * 2.484 | 26.91 | RMS | 32.5 | -21.8 | 0 | 37.61 | 54 | -16.39 | - | - | 100 | 350 | H |
| 4 | * 2.484 | 27.55 | RMS | 32.5 | -21.8 | 0 | 38.25 | 54 | -15.75 | - | - | 100 | 350 | H |
| 2 | 2.546 | 39.12 | Pk | 32.6 | -21.9 | 0 | 49.82 | - | - | 74 | -24.18 | 100 | 350 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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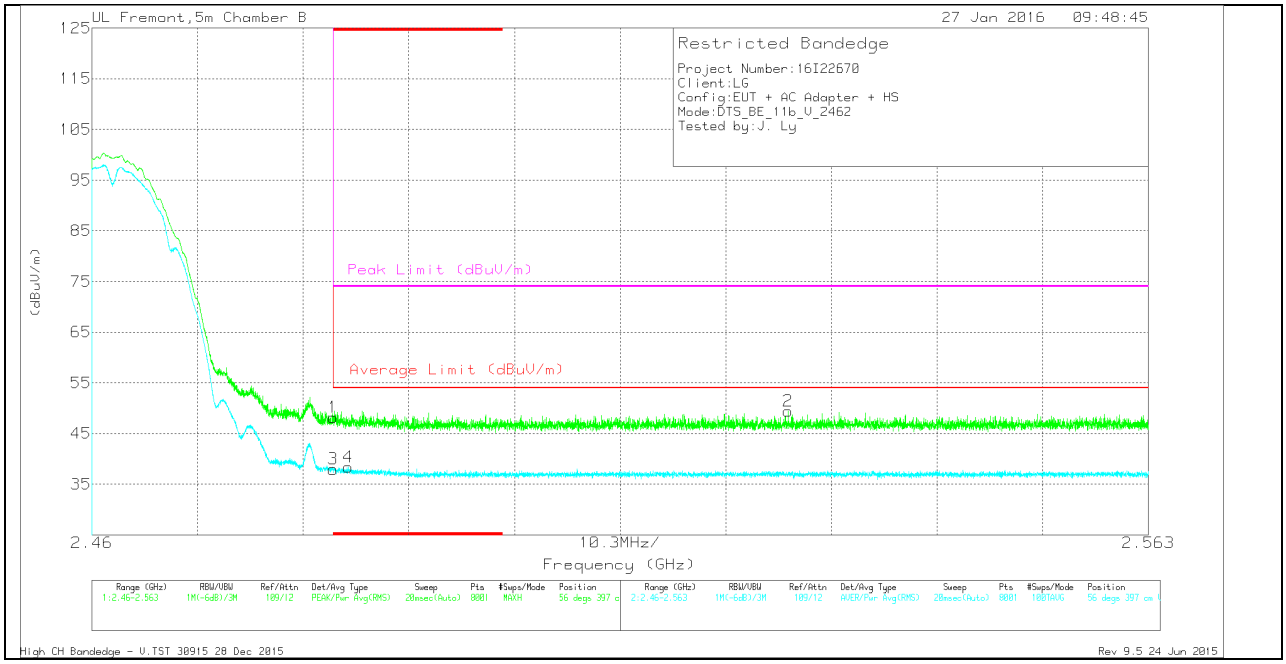
## VERTICAL PEAK AND AVERAGE PLOT




## VERTICAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Flt r/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.484 | 37.43 | Pk | 32.5 | -21.8 | 0 | 48.13 | - | - | 74 | -25.87 | 56 | 397 | V |
| 3 | * 2.484 | 27.24 | RMS | 32.5 | -21.8 | 0 | 37.94 | 54 | -16.06 | - | - | 56 | 397 | V |
| 4 | * 2.485 | 27.75 | RMS | 32.5 | -21.9 | 0 | 38.35 | 54 | -15.65 | - | - | 56 | 397 | V |
| 2 | 2.528 | 38.67 | Pk | 32.6 | -21.8 | 0 | 49.47 | - | - | 74 | -24.53 | 56 | 397 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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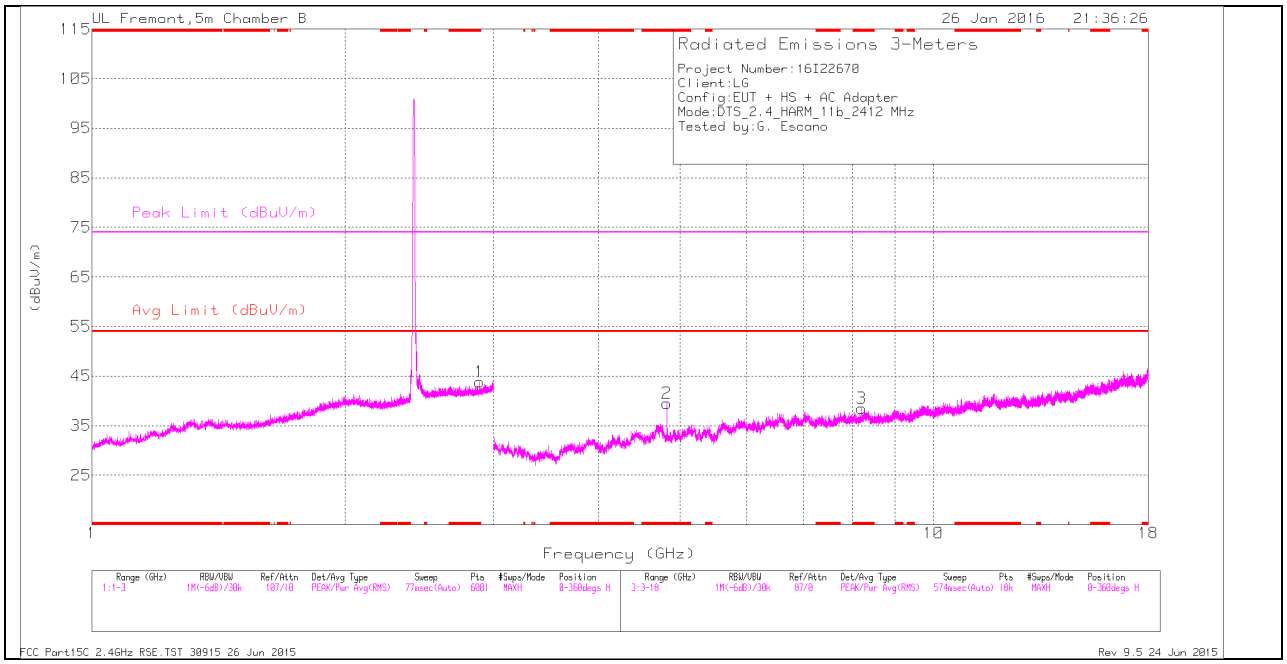
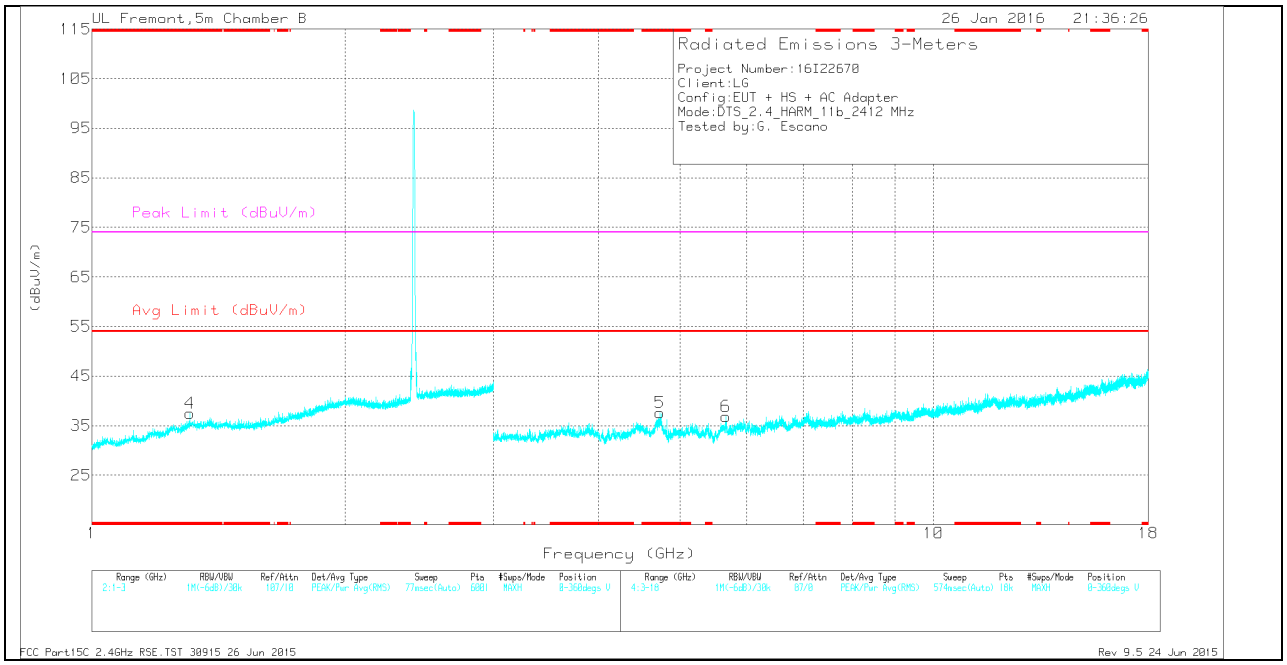
# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL HORIZONTAL




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

## LOW CHANNEL VERTICAL




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## LOW CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.886 | 32.07 | Pk | 32.6 | -20.9 | 0 | 43.77 | - | - | 74 | -30.23 | 0-360 | 101 | H |
| 4 | * 1.307 | 30.53 | Pk | 29.4 | -22.5 | 0 | 37.43 | - | - | 74 | -36.57 | 0-360 | 199 | V |
| 2 | * 4.824 | 36.75 | Pk | 34.3 | -31.6 | 0 | 39.45 | - | - | 74 | -34.55 | 0-360 | 199 | H |
| 3 | * 8.212 | 31.63 | Pk | 35.7 | -28.8 | 0 | 38.53 | - | - | 74 | -35.47 | 0-360 | 101 | H |
| 5 | * 4.73 | 33.95 | Pk | 34.3 | -30.7 | 0 | 37.55 | - | - | 74 | -36.45 | 0-360 | 101 | V |
| 6 | 5.666 | 32.91 | Pk | 34.9 | -31 | 0 | 36.81 | - | - | - | - | 0-360 | 199 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 2.885 | 38.25 | PK2 | 32.6 | -20.9 | 0 | 49.95 | - | - | 74 | -24.05 | 246 | 115 | H |
| * 2.886 | 26.07 | MAv1 | 32.6 | -20.9 | 0 | 37.77 | 54 | -16.23 | - | - | 246 | 115 | H |
| * 1.307 | 38.28 | PK2 | 29.4 | -22.5 | 0 | 45.18 | - | - | 74 | -28.82 | 327 | 199 | V |
| * 1.307 | 25.21 | MAv1 | 29.4 | -22.5 | 0 | 32.11 | 54 | -21.89 | - | - | 327 | 199 | V |
| * 4.824 | 42.23 | PK2 | 34.3 | -31.6 | 0 | 44.93 | - | - | 74 | -29.07 | 184 | 349 | H |
| * 4.824 | 34.86 | MAv1 | 34.3 | -31.6 | 0 | 37.56 | 54 | -16.44 | - | - | 184 | 349 | H |
| * 8.213 | 38.11 | PK2 | 35.7 | -28.8 | 0 | 45.01 | - | - | 74 | -28.99 | 144 | 102 | H |
| * 8.213 | 26.72 | MAv1 | 35.7 | -28.8 | 0 | 33.62 | 54 | -20.38 | - | - | 144 | 102 | H |
| * 4.729 | 42.2 | PK2 | 34.3 | -30.7 | 0 | 45.8 | - | - | 74 | -28.2 | 64 | 102 | V |
| * 4.73 | 30.11 | MAv1 | 34.3 | -30.7 | 0 | 33.71 | 54 | -20.29 | - | - | 64 | 102 | V |
| 5.666 | 40.38 | PK2 | 34.9 | -31 | 0 | 44.28 | - | - | 74 | -29.72 | 198 | 198 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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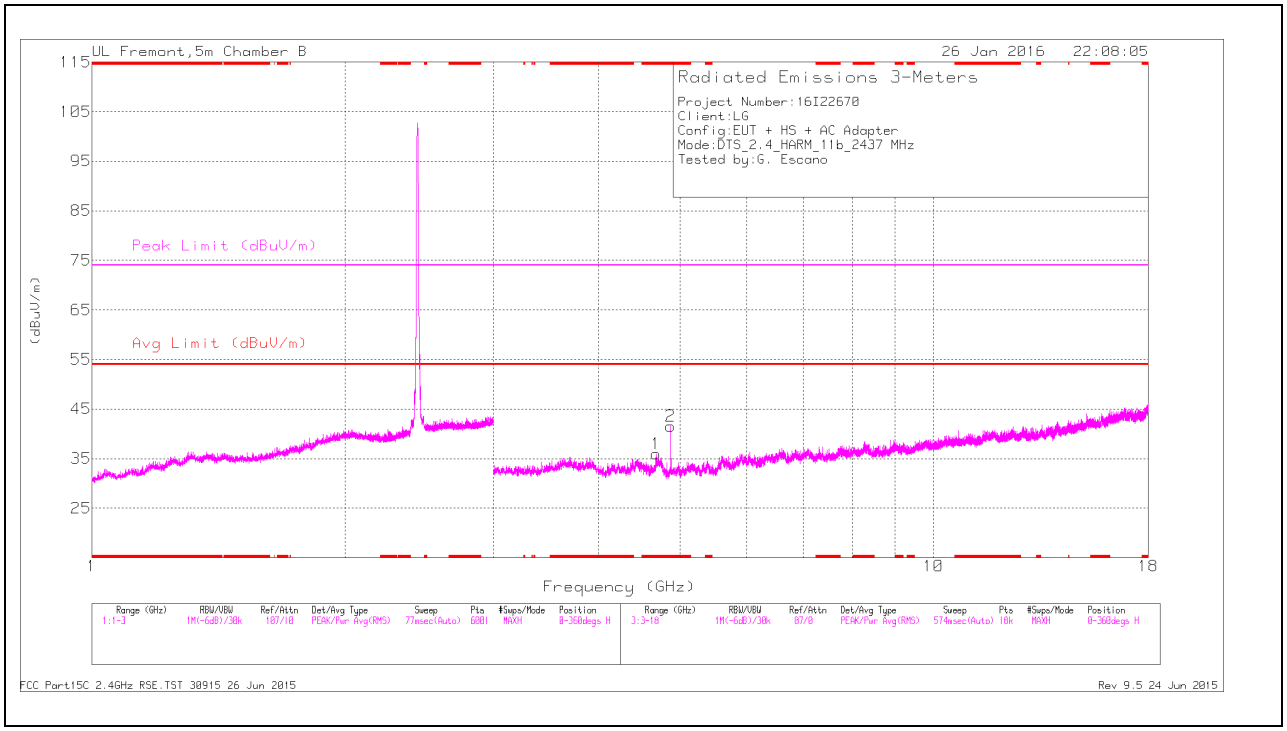
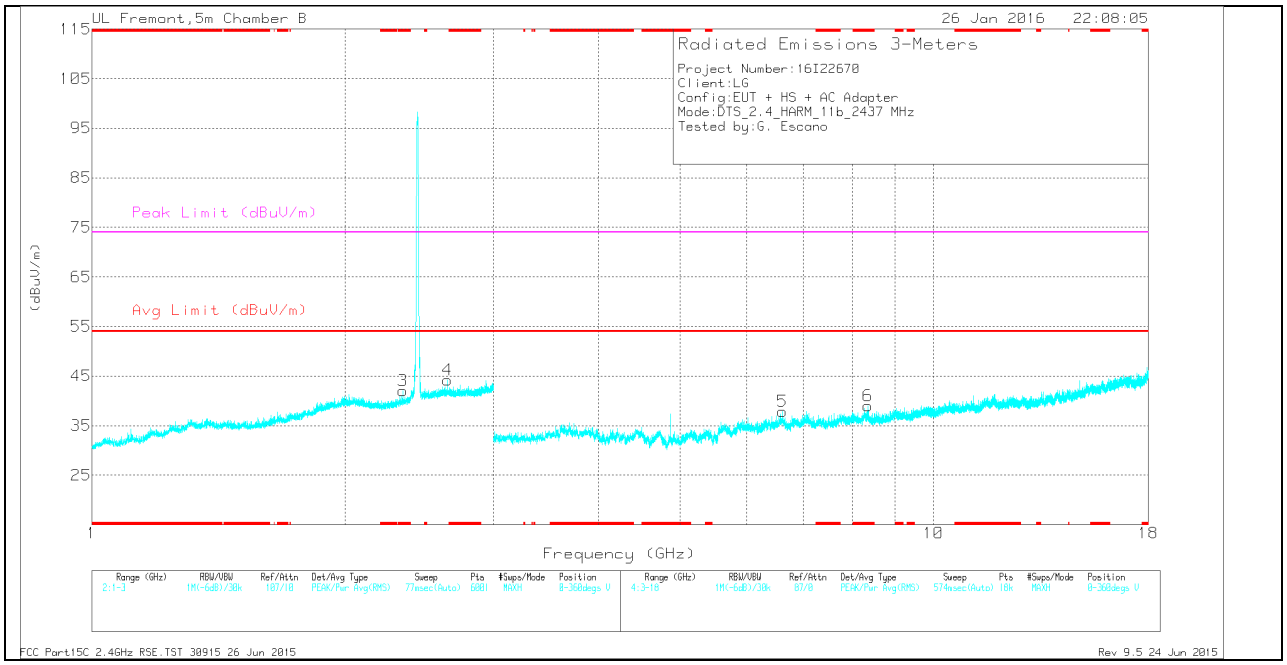
**MID CHANNEL HORIZONTAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## MID CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | * 2.342 | 32.3 | Pk | 31.8 | -22 | 0 | 42.1 | - | - | 74 | -31.9 | 0-360 | 199 | V |
| 1 | * 4.686 | 33.52 | Pk | 34.2 | -31.8 | 0 | 35.92 | - | - | 74 | -38.08 | 0-360 | 101 | H |
| 2 | * 4.874 | 39.76 | Pk | 34.2 | -32.4 | 0 | 41.56 | - | - | 74 | -32.44 | 0-360 | 101 | H |
| 6 | * 8.351 | 30.49 | Pk | 35.7 | -27.2 | 0 | 38.99 | - | - | 74 | -35.01 | 0-360 | 101 | V |
| 4 | 2.644 | 33.23 | Pk | 32.7 | -21.7 | 0 | 44.23 | - | - | - | - | 0-360 | 199 | V |
| 5 | 6.616 | 32.66 | Pk | 35.9 | -30.7 | 0 | 37.86 | - | - | - | - | 0-360 | 101 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 2.342 | 37.68 | PK2 | 31.8 | -21.9 | 0 | 47.58 | - | - | 74 | -26.42 | 321 | 199 | V |
| * 2.343 | 26.23 | MAv1 | 31.8 | -22 | 0 | 36.03 | 54 | -17.97 | - | - | 321 | 199 | V |
| * 4.685 | 40.59 | PK2 | 34.2 | -31.8 | 0 | 42.99 | - | - | 74 | -31.01 | 316 | 102 | H |
| * 4.685 | 28.26 | MAv1 | 34.2 | -31.8 | 0 | 30.66 | 54 | -23.34 | - | - | 316 | 102 | H |
| * 4.874 | 44.61 | PK2 | 34.2 | -32.4 | 0 | 46.41 | - | - | 74 | -27.59 | 92 | 300 | H |
| * 4.874 | 37.82 | MAv1 | 34.2 | -32.4 | 0 | 39.62 | 54 | -14.38 | - | - | 92 | 300 | H |
| * 8.352 | 37.29 | PK2 | 35.7 | -27.2 | 0 | 45.79 | - | - | 74 | -28.21 | 71 | 102 | V |
| * 8.352 | 25.91 | MAv1 | 35.7 | -27.2 | 0 | 34.41 | 54 | -19.59 | - | - | 71 | 102 | V |
| 2.645 | 38.31 | PK2 | 32.7 | -21.7 | 0 | 49.31 | - | - | 74 | -24.69 | 271 | 199 | V |
| 6.615 | 38.23 | PK2 | 36 | -30.7 | 0 | 43.53 | - | - | 74 | -30.47 | 15 | 102 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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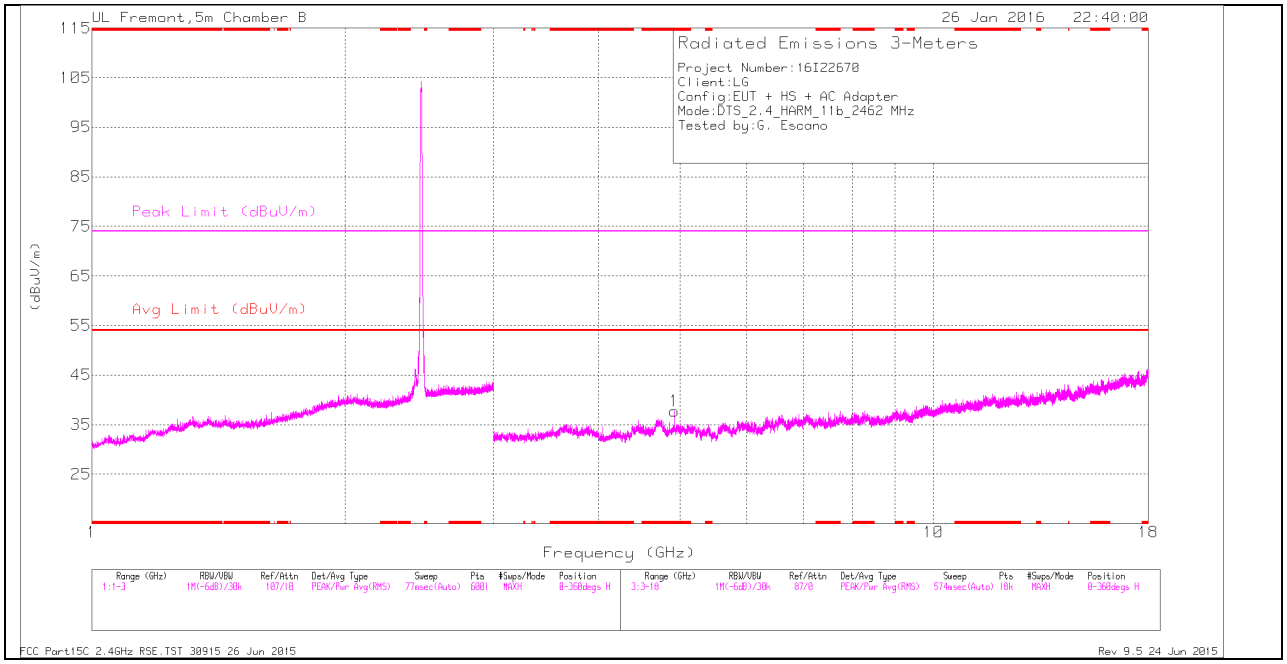
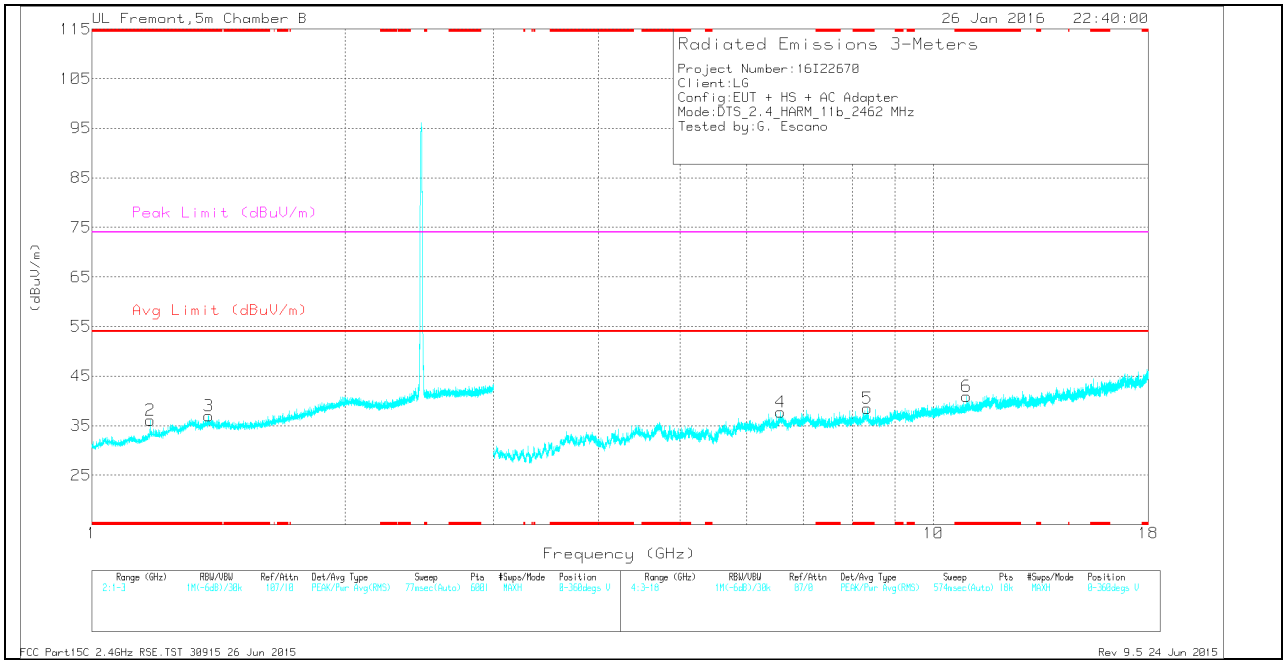
**HIGH CHANNEL HORIZONTAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## HIGH CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | * 1.174 | 30.98 | Pk | 28.3 | -23.2 | 0 | 36.08 | - | - | 74 | -37.92 | 0-360 | 199 | V |
| 3 | * 1.376 | 29.91 | Pk | 29.4 | -22.3 | 0 | 37.01 | - | - | 74 | -36.99 | 0-360 | 199 | V |
| 1 | * 4.924 | 36.15 | Pk | 34.1 | -32.5 | 0 | 37.75 | - | - | 74 | -36.25 | 0-360 | 101 | H |
| 5 | * 8.343 | 30.05 | Pk | 35.7 | -27.3 | 0 | 38.45 | - | - | 74 | -35.55 | 0-360 | 102 | V |
| 6 | * 10.952 | 28.03 | Pk | 37.7 | -24.8 | 0 | 40.93 | - | - | 74 | -33.07 | 0-360 | 199 | V |
| 4 | 6.586 | 32.29 | Pk | 35.9 | -30.5 | 0 | 37.69 | - | - | - | - | 0-360 | 102 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 1.174 | 37.06 | PK2 | 28.3 | -23.2 | 0 | 42.16 | - | - | 74 | -31.84 | 105 | 199 | V |
| * 1.174 | 25.5 | MAv1 | 28.3 | -23.2 | 0 | 30.6 | 54 | -23.4 | - | - | 105 | 199 | V |
| * 1.375 | 37.1 | PK2 | 29.4 | -22.3 | 0 | 44.2 | - | - | 74 | -29.8 | 61 | 199 | V |
| * 1.376 | 25.57 | MAv1 | 29.4 | -22.3 | 0 | 32.67 | 54 | -21.33 | - | - | 61 | 199 | V |
| * 4.924 | 44.84 | PK2 | 34.1 | -32.5 | 0 | 46.44 | - | - | 74 | -27.56 | 126 | 222 | H |
| * 4.924 | 34.63 | MAv1 | 34.1 | -32.5 | 0 | 36.23 | 54 | -17.77 | - | - | 126 | 222 | H |
| * 8.343 | 38.9 | PK2 | 35.7 | -27.3 | 0 | 47.3 | - | - | 74 | -26.7 | 189 | 103 | V |
| * 8.343 | 26.18 | MAv1 | 35.7 | -27.3 | 0 | 34.58 | 54 | -19.42 | - | - | 189 | 103 | V |
| * 10.951 | 35.17 | PK2 | 37.7 | -24.8 | 0 | 48.07 | - | - | 74 | -25.93 | 301 | 198 | V |
| * 10.953 | 23.65 | MAv1 | 37.7 | -24.8 | 0 | 36.55 | 54 | -17.45 | - | - | 301 | 198 | V |
| 6.588 | 40.08 | PK2 | 36 | -30.5 | 0 | 45.58 | - | - | 74 | -28.42 | 102 | 103 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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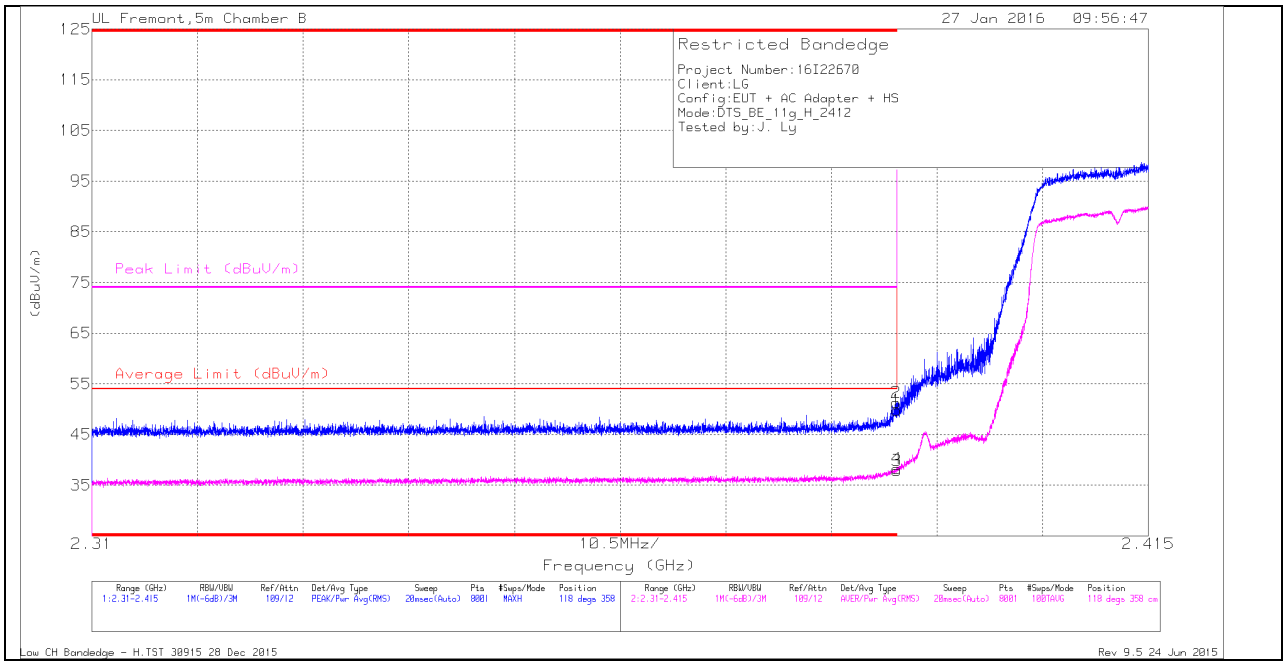
## 10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

## RESTRICTED BANDEDGE (LOW CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT




### HORIZONTAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.39 | 39.69 | Pk | 32 | -21.9 | 0 | 49.79 | - | - | 74 | -24.21 | 118 | 358 | H |
| 2 | * 2.39 | 41.18 | Pk | 32 | -21.9 | 0 | 51.28 | - | - | 74 | -22.72 | 118 | 358 | H |
| 3 | * 2.39 | 27.57 | RMS | 32 | -21.9 | .21 | 37.88 | 54 | -16.12 | - | - | 118 | 358 | H |
| 4 | * 2.39 | 27.94 | RMS | 32 | -21.9 | .21 | 38.25 | 54 | -15.75 | - | - | 118 | 358 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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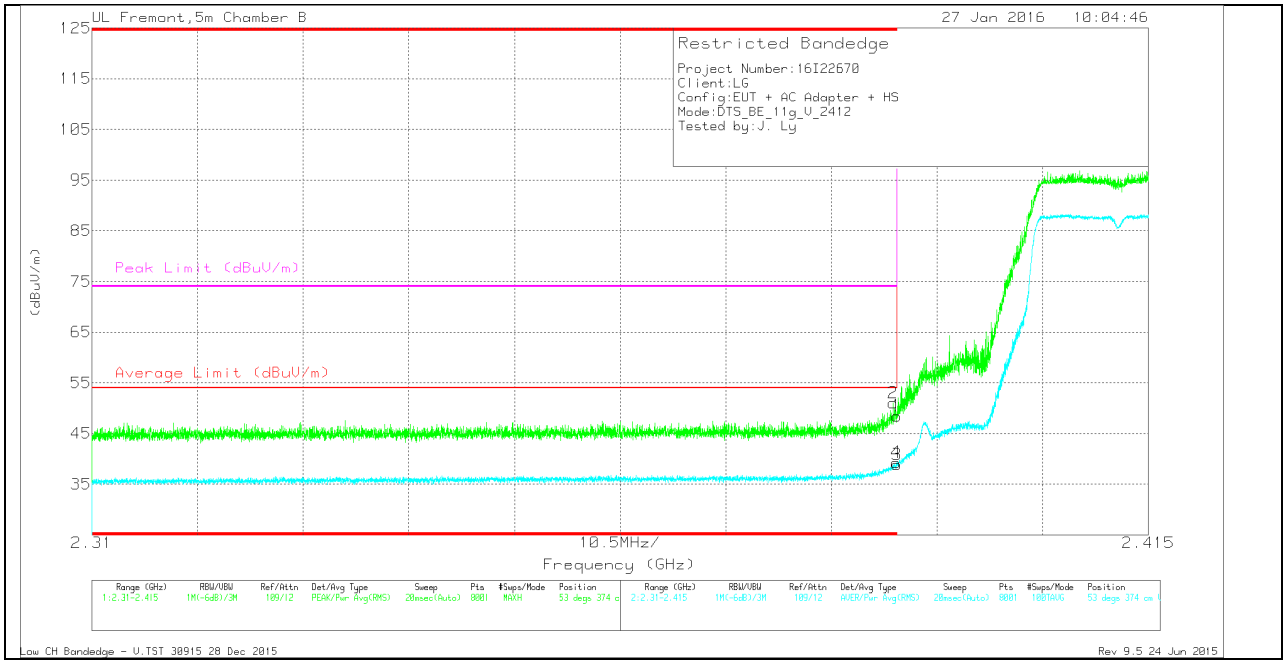
## VERTICAL PEAK AND AVERAGE PLOT




## VERTICAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.39 | 38.39 | Pk | 32 | -21.9 | 0 | 48.49 | - | - | 74 | -25.51 | 53 | 374 | V |
| 2 | * 2.39 | 40.9 | Pk | 32 | -21.9 | 0 | 51 | - | - | 74 | -23 | 53 | 374 | V |
| 3 | * 2.39 | 28.51 | RMS | 32 | -21.9 | .21 | 38.82 | 54 | -15.18 | - | - | 53 | 374 | V |
| 4 | * 2.39 | 28.99 | RMS | 32 | -21.9 | .21 | 39.3 | 54 | -14.7 | - | - | 53 | 374 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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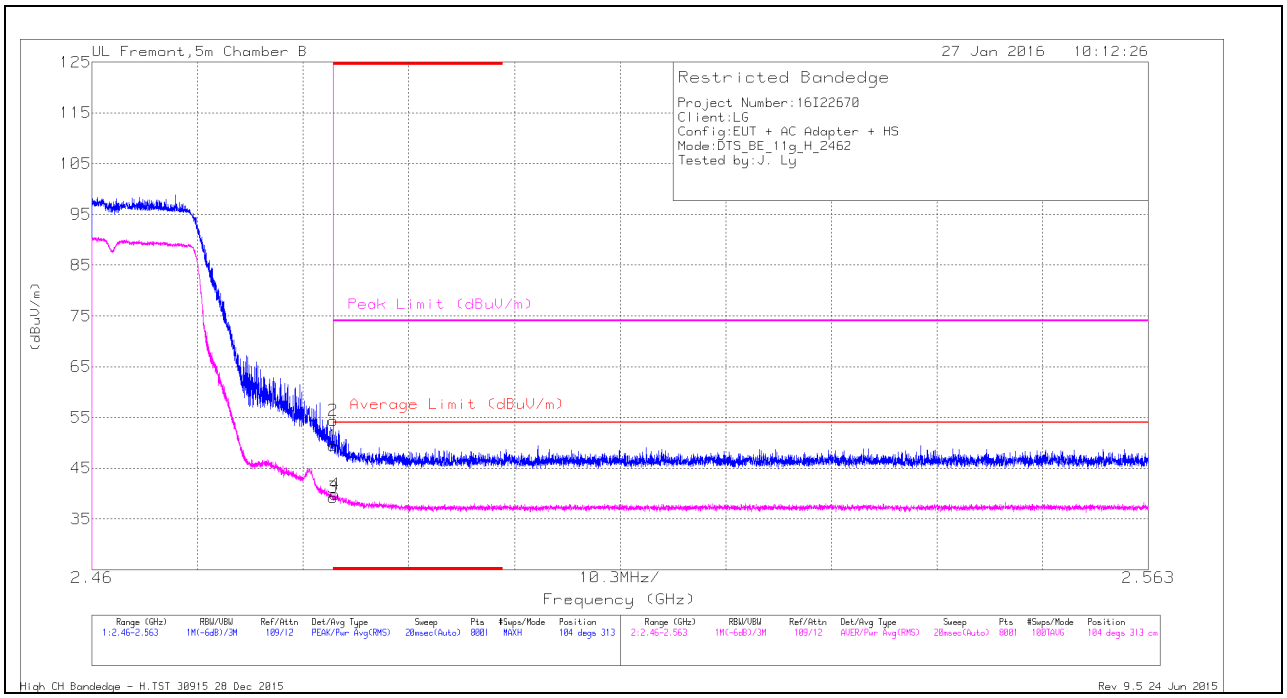
# AUTHORIZED BANDEDGE (HIGH CHANNEL)

## HORIZONTAL PEAK AND AVERAGE PLOT




## HORIZONTAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.484 | 38.69 | Pk | 32.5 | -21.8 | 0 | 49.39 | - | - | 74 | -24.61 | 104 | 313 | H |
| 2 | * 2.484 | 43.64 | Pk | 32.5 | -21.8 | 0 | 54.34 | - | - | 74 | -19.66 | 104 | 313 | H |
| 3 | * 2.484 | 28.37 | RMS | 32.5 | -21.8 | .21 | 39.28 | 54 | -14.72 | - | - | 104 | 313 | H |
| 4 | * 2.484 | 28.99 | RMS | 32.5 | -21.8 | .21 | 39.9 | 54 | -14.1 | - | - | 104 | 313 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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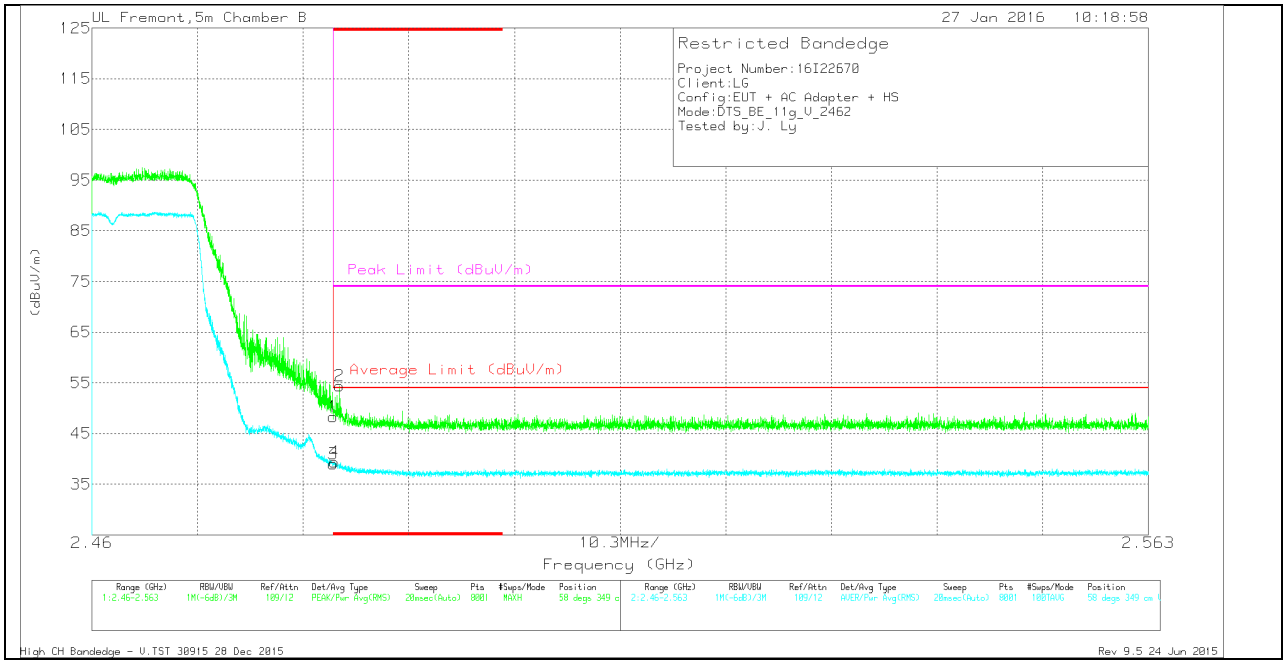
## VERTICAL PEAK AND AVERAGE PLOT




## VERTICAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Flt r/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.484 | 37.65 | Pk | 32.5 | -21.8 | 0 | 48.35 | - | - | 74 | -25.65 | 58 | 349 | V |
| 2 | * 2.484 | 43.65 | Pk | 32.5 | -21.8 | 0 | 54.35 | - | - | 74 | -19.65 | 58 | 349 | V |
| 3 | * 2.484 | 28.04 | RMS | 32.5 | -21.8 | .21 | 38.95 | 54 | -15.05 | - | - | 58 | 349 | V |
| 4 | * 2.484 | 28.51 | RMS | 32.5 | -21.8 | .21 | 39.42 | 54 | -14.58 | - | - | 58 | 349 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

RMS - RMS detection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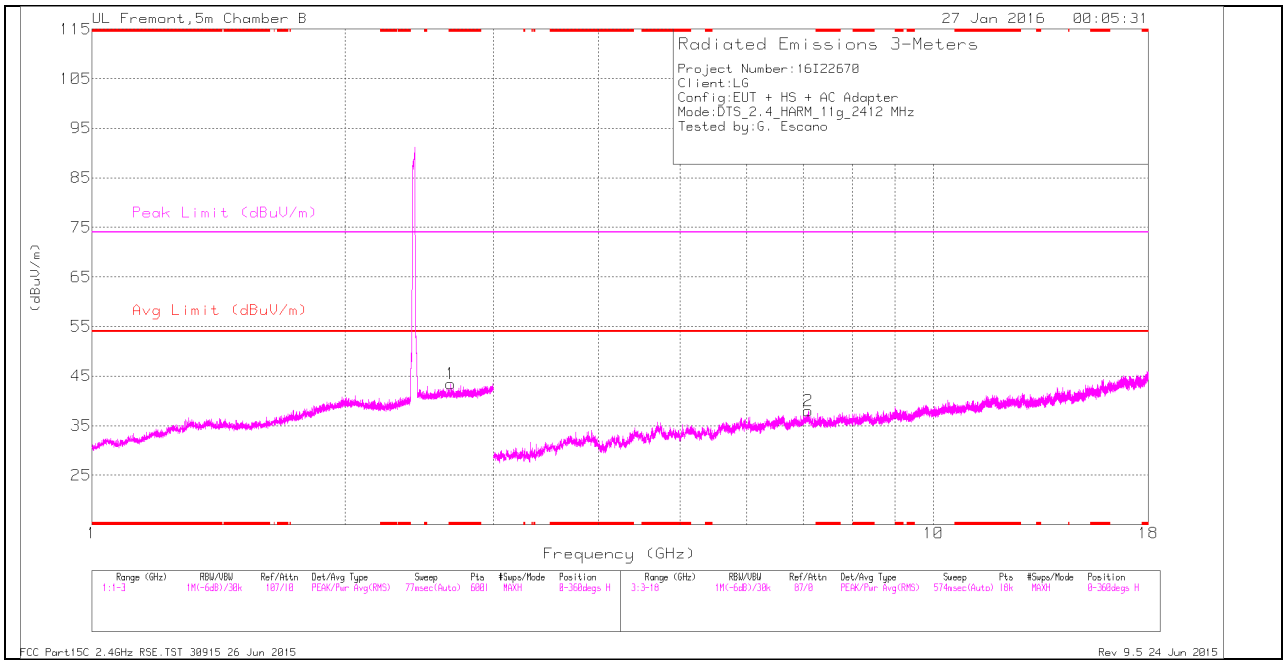
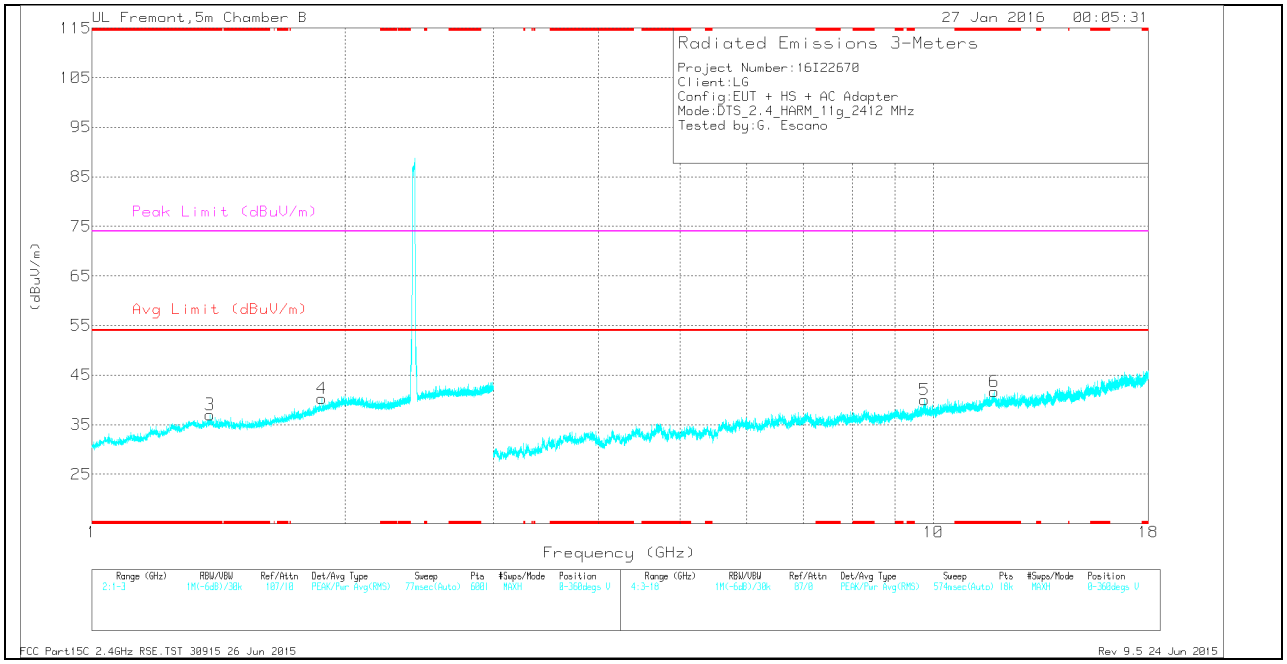
# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL HORIZONTAL




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

## LOW CHANNEL VERTICAL




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## LOW CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.669 | 32.32 | Pk | 32.7 | -21.6 | 0 | 43.42 | - | - | 74 | -30.58 | 0-360 | 199 | H |
| 3 | * 1.381 | 29.93 | Pk | 29.4 | -22.3 | 0 | 37.03 | - | - | 74 | -36.97 | 0-360 | 199 | V |
| 6 | * 11.8 | 27.35 | Pk | 38.6 | -24.3 | 0 | 41.65 | - | - | 74 | -32.35 | 0-360 | 199 | V |
| 4 | 1.877 | 30.35 | Pk | 31.6 | -21.7 | 0 | 40.25 | - | - | - | - | 0-360 | 101 | V |
| 2 | 7.104 | 31.59 | Pk | 35.6 | -29.2 | 0 | 37.99 | - | - | - | - | 0-360 | 199 | H |
| 5 | 9.756 | 29.36 | Pk | 36.9 | -26.2 | 0 | 40.06 | - | - | - | - | 0-360 | 199 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 2.669 | 38.11 | PK2 | 32.7 | -21.6 | 0 | 49.21 | - | - | 74 | -24.79 | 295 | 198 | H |
| * 2.669 | 26.68 | MAv1 | 32.7 | -21.6 | 0.21 | 37.99 | 54 | -16.01 | - | - | 295 | 198 | H |
| * 1.381 | 37.75 | PK2 | 29.4 | -22.3 | 0 | 44.85 | - | - | 74 | -29.15 | 243 | 198 | V |
| * 1.38 | 25.46 | MAv1 | 29.4 | -22.3 | 0.21 | 32.77 | 54 | -21.23 | - | - | 243 | 198 | V |
| * 11.799 | 35.02 | PK2 | 38.6 | -24.3 | 0 | 49.32 | - | - | 74 | -24.68 | 112 | 198 | V |
| * 11.799 | 23.59 | MAv1 | 38.6 | -24.3 | 0.21 | 38.1 | 54 | -5.9 | - | - | 112 | 198 | V |
| 1.876 | 36.85 | PK2 | 31.5 | -21.7 | 0 | 46.65 | - | - | 74 | -27.35 | 185 | 102 | V |
| 7.106 | 38.91 | PK2 | 35.6 | -29.2 | 0 | 45.31 | - | - | 74 | -28.69 | 122 | 198 | H |
| 9.757 | 35.59 | PK2 | 36.9 | -26.2 | 0 | 46.29 | - | - | 74 | -27.71 | 71 | 198 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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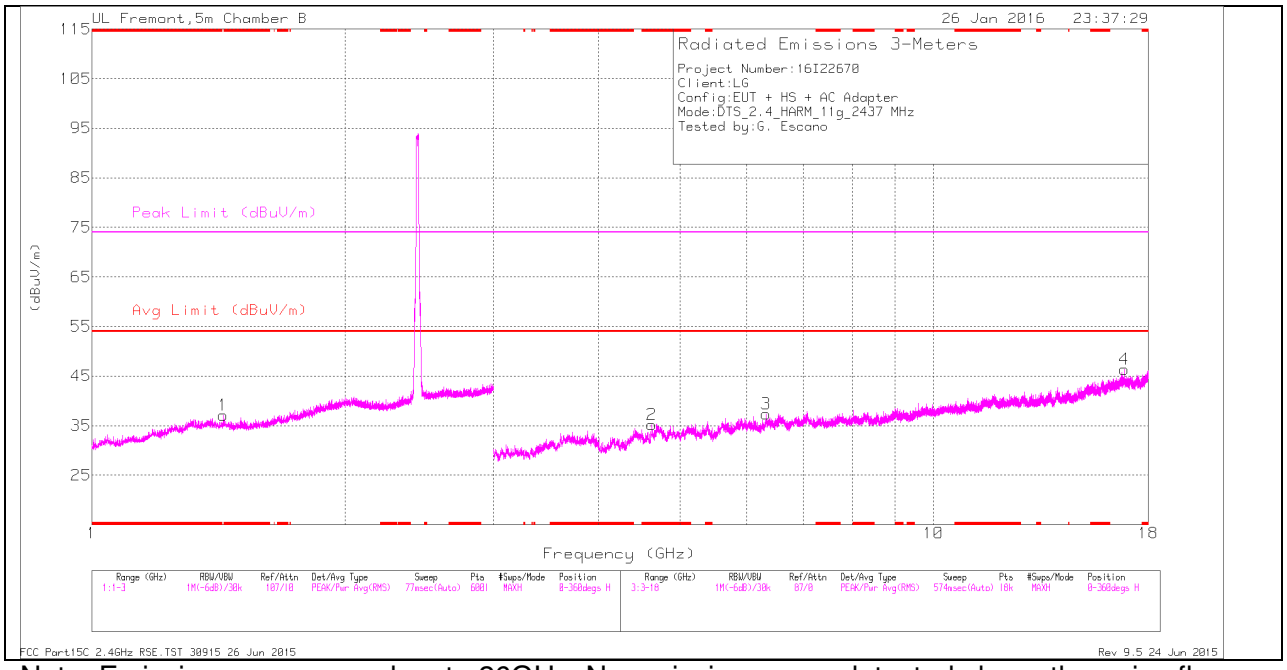
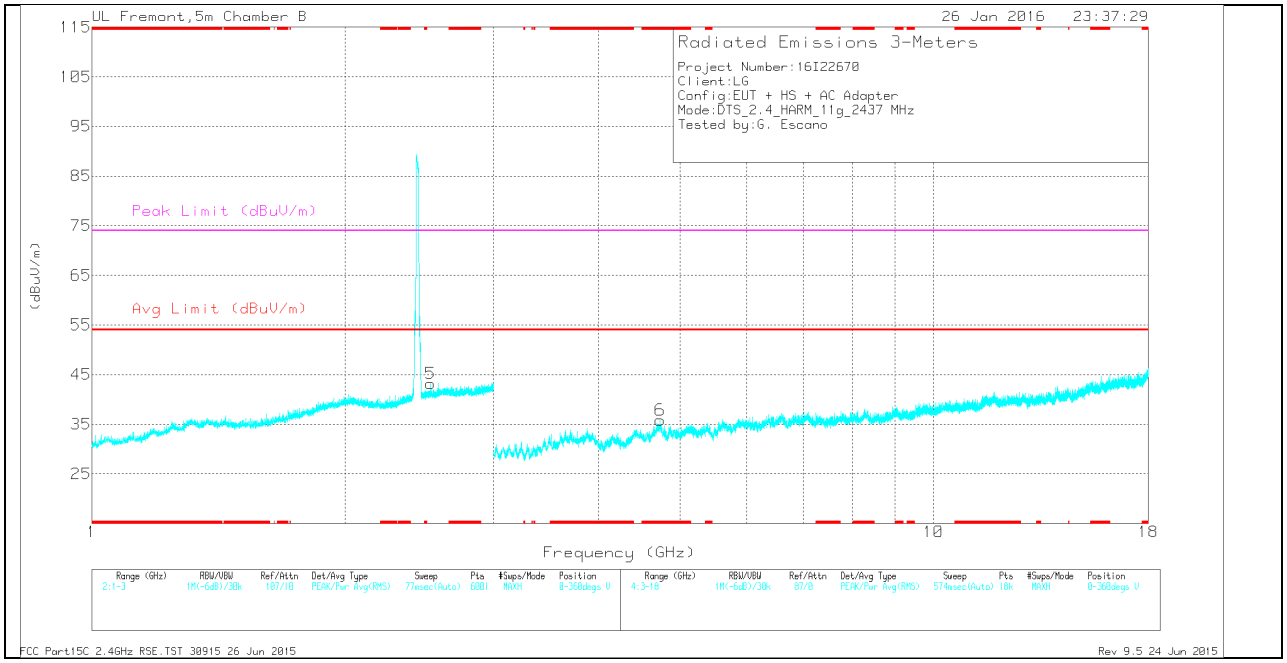
**MID CHANNEL HORIZONTAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## MID CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | * 4.624 | 33.85 | Pk | 34.1 | -32.7 | 0 | 35.25 | - | - | 74 | -38.75 | 0-360 | 199 | H |
| 6 | * 4.735 | 32.26 | Pk | 34.3 | -30.7 | 0 | 35.86 | - | - | 74 | -38.14 | 0-360 | 199 | V |
| 1 | 1.431 | 30.08 | Pk | 29.1 | -22.1 | 0 | 37.08 | - | - | - | - | 0-360 | 199 | H |
| 5 | 2.528 | 32.39 | Pk | 32.6 | -21.8 | 0 | 43.19 | - | - | - | - | 0-360 | 199 | V |
| 3 | 6.322 | 32.98 | Pk | 35.6 | -31.2 | 0 | 37.38 | - | - | - | - | 0-360 | 101 | H |
| 4 | 16.853 | 25.11 | Pk | 41.8 | -20.6 | 0 | 46.31 | - | - | - | - | 0-360 | 101 | H |

* - indicates frequency 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 4.624 | 41.5 | PK2 | 34.1 | -32.7 | 0 | 42.9 | - | - | 74 | -31.1 | 185 | 146 | H |
| * 4.625 | 30.19 | MAv1 | 34.1 | -32.7 | 0.21 | 31.80 | 54 | -22.20 | - | - | 185 | 146 | H |
| * 4.735 | 40.94 | PK2 | 34.3 | -30.7 | 0 | 44.54 | - | - | 74 | -29.46 | 289 | 199 | V |
| * 4.736 | 29.08 | MAv1 | 34.3 | -30.7 | 0.21 | 32.89 | 54 | -21.11 | - | - | 289 | 199 | V |
| 1.429 | 37.3 | PK2 | 29.1 | -22.2 | 0 | 44.2 | - | - | 74 | -29.8 | 39 | 198 | H |
| 2.528 | 38.19 | PK2 | 32.6 | -21.8 | 0 | 48.99 | - | - | 74 | -25.01 | 105 | 198 | V |
| 6.322 | 40.06 | PK2 | 35.6 | -31.2 | 0 | 44.46 | - | - | 74 | -29.54 | 205 | 102 | H |
| 16.852 | 31.96 | PK2 | 41.8 | -20.6 | 0 | 53.16 | - | - | 74 | -20.84 | 315 | 102 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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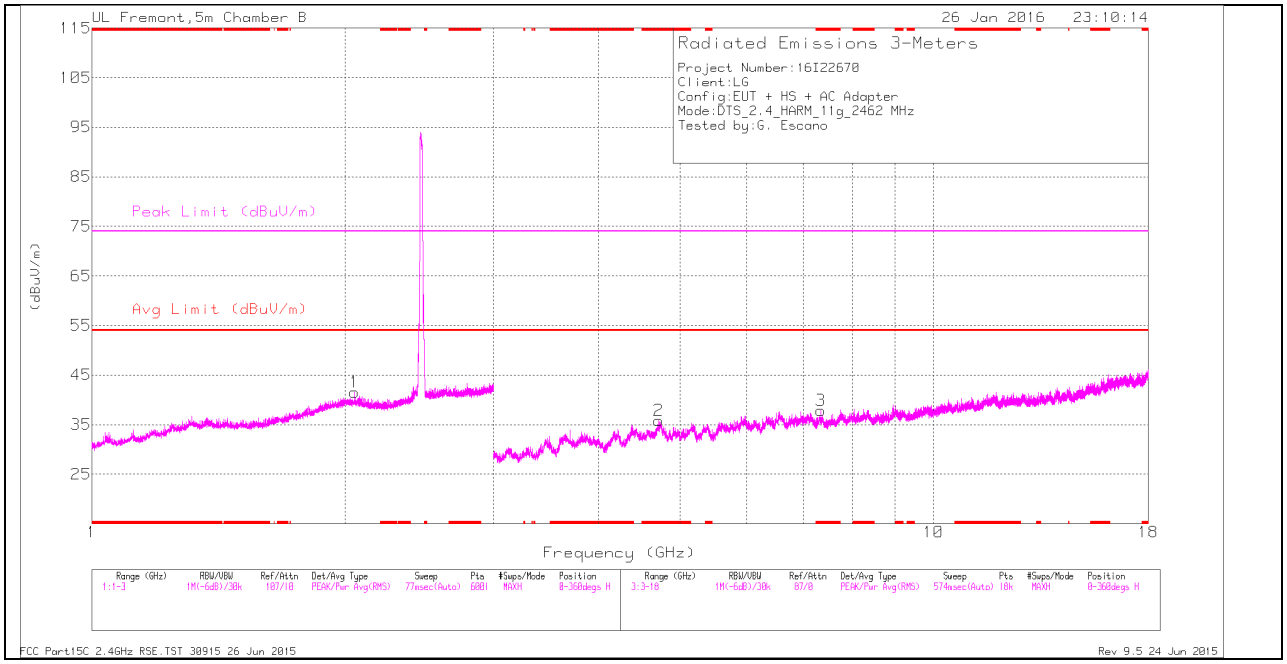
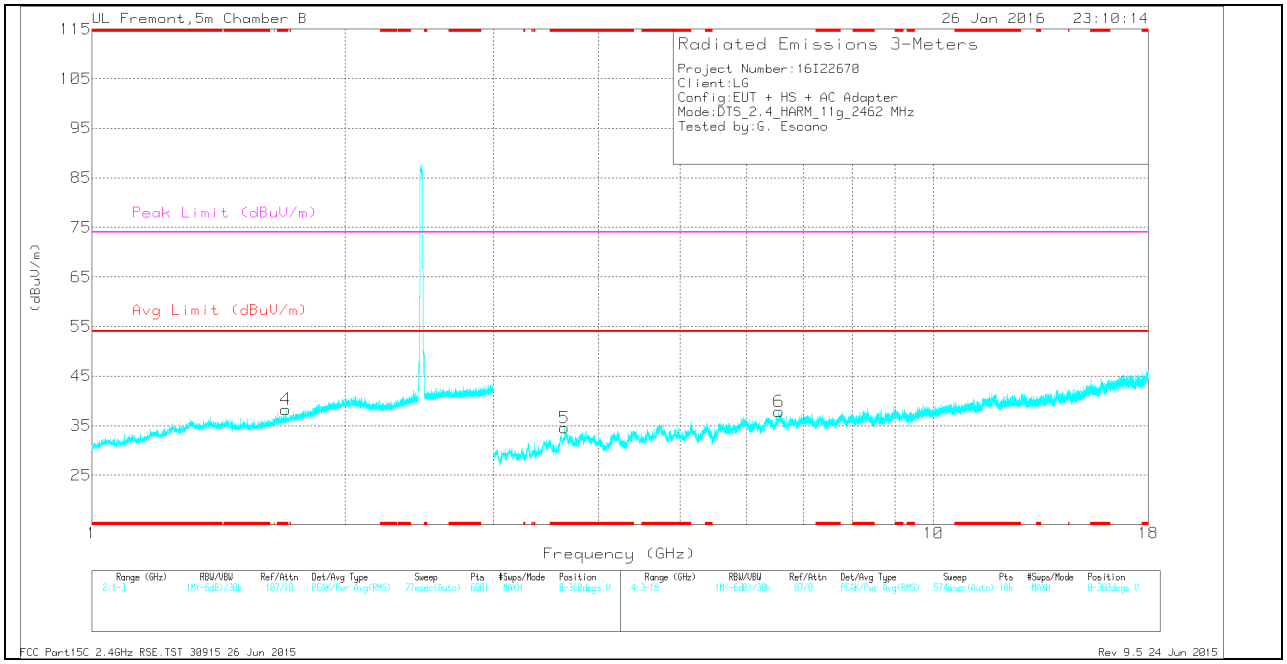
**HIGH CHANNEL HORIZONTAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## HIGH CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | * 1.699 | 30.4 | Pk | 29.8 | -21.9 | 0 | 38.3 | - | - | 74 | -35.7 | 0-360 | 101 | V |
| 2 | * 4.718 | 32.66 | Pk | 34.2 | -31 | 0 | 35.86 | - | - | 74 | -38.14 | 0-360 | 101 | H |
| 3 | * 7.349 | 32.13 | Pk | 35.3 | -29.6 | 0 | 37.83 | - | - | 74 | -36.17 | 0-360 | 200 | H |
| 5 | * 3.644 | 33.48 | Pk | 33.7 | -32.6 | 0 | 34.58 | - | - | 74 | -39.42 | 0-360 | 102 | V |
| 1 | 2.053 | 31.02 | Pk | 32.1 | -21.6 | 0 | 41.52 | - | - | - | - | 0-360 | 200 | H |
| 6 | 6.553 | 32.35 | Pk | 35.9 | -30.4 | 0 | 37.85 | - | - | - | - | 0-360 | 200 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 1.699 | 37.02 | PK2 | 29.8 | -21.9 | 0 | 44.92 | - | - | 74 | -29.08 | 155 | 102 | V |
| * 1.699 | 25.15 | MAv1 | 29.8 | -21.9 | 0.21 | 33.26 | 54 | -20.74 | - | - | 155 | 102 | V |
| * 4.718 | 39.97 | PK2 | 34.2 | -31 | 0 | 43.17 | - | - | 74 | -30.83 | 112 | 124 | H |
| * 4.719 | 28.24 | MAv1 | 34.3 | -31 | 0.21 | 31.75 | 54 | -22.25 | - | - | 112 | 124 | H |
| * 7.349 | 38.92 | PK2 | 35.3 | -29.6 | 0 | 44.62 | - | - | 74 | -29.38 | 85 | 199 | H |
| * 7.349 | 27.55 | MAv1 | 35.3 | -29.6 | 0.21 | 33.46 | 54 | -20.54 | - | - | 85 | 199 | H |
| * 3.645 | 40.38 | PK2 | 33.7 | -32.6 | 0 | 41.48 | - | - | 74 | -32.52 | 134 | 103 | V |
| * 3.645 | 28.65 | MAv1 | 33.7 | -32.6 | 0.21 | 29.96 | 54 | -24.04 | - | - | 134 | 103 | V |
| 2.051 | 38.05 | PK2 | 32.1 | -21.7 | 0 | 48.45 | - | - | 74 | -25.55 | 323 | 199 | H |
| 6.555 | 39.37 | PK2 | 35.9 | -30.4 | 0 | 44.87 | - | - | 74 | -29.13 | 29 | 199 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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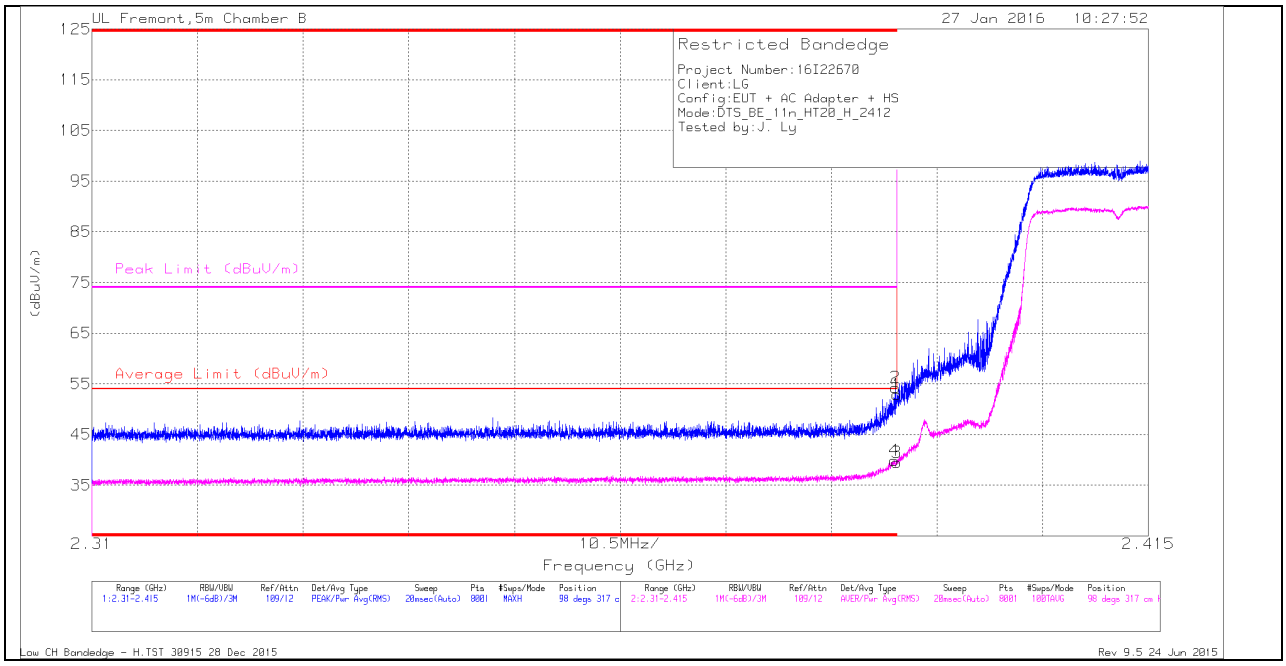
## 10.1.3. TX ABOVE 1 GHz 802.11n MODE IN THE 2.4 GHz BAND

## RESTRICTED BANDEDGE (LOW CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT




### HORIZONTAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.39 | 42.75 | Pk | 32 | -21.9 | 0 | 52.85 | - | - | 74 | -21.15 | 98 | 317 | H |
| 2 | * 2.39 | 44.18 | Pk | 32 | -21.9 | 0 | 54.28 | - | - | 74 | -19.72 | 98 | 317 | H |
| 3 | * 2.39 | 29.18 | RMS | 32 | -21.9 | .23 | 39.51 | 54 | -14.49 | - | - | 98 | 317 | H |
| 4 | * 2.39 | 29.55 | RMS | 32 | -21.9 | .23 | 39.88 | 54 | -14.12 | - | - | 98 | 317 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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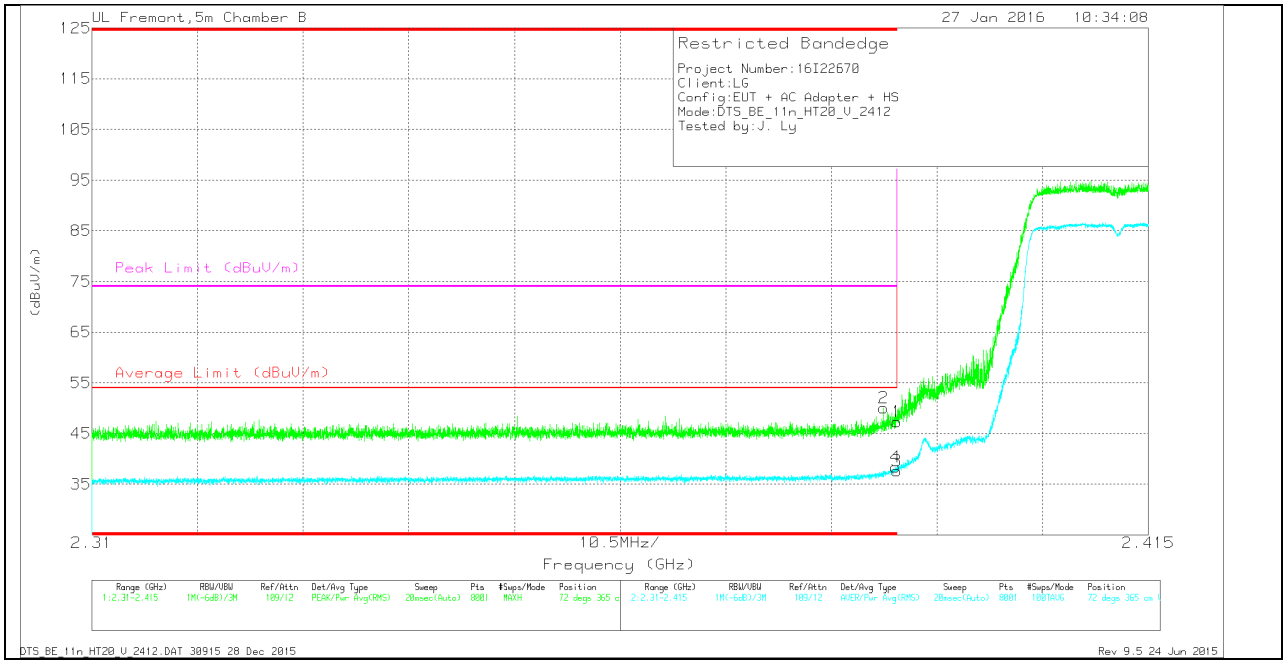
## VERTICAL PEAK AND AVERAGE PLOT




## VERTICAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | * 2.389 | 39.93 | Pk | 32 | -21.9 | 0 | 50.03 | - | - | 74 | -23.97 | 72 | 365 | V |
| 1 | * 2.39 | 37.23 | Pk | 32 | -21.9 | 0 | 47.33 | - | - | 74 | -26.67 | 72 | 365 | V |
| 3 | * 2.39 | 27.29 | RMS | 32 | -21.9 | .23 | 37.62 | 54 | -16.38 | - | - | 72 | 365 | V |
| 4 | * 2.39 | 28.02 | RMS | 32 | -21.9 | .23 | 38.35 | 54 | -15.65 | - | - | 72 | 365 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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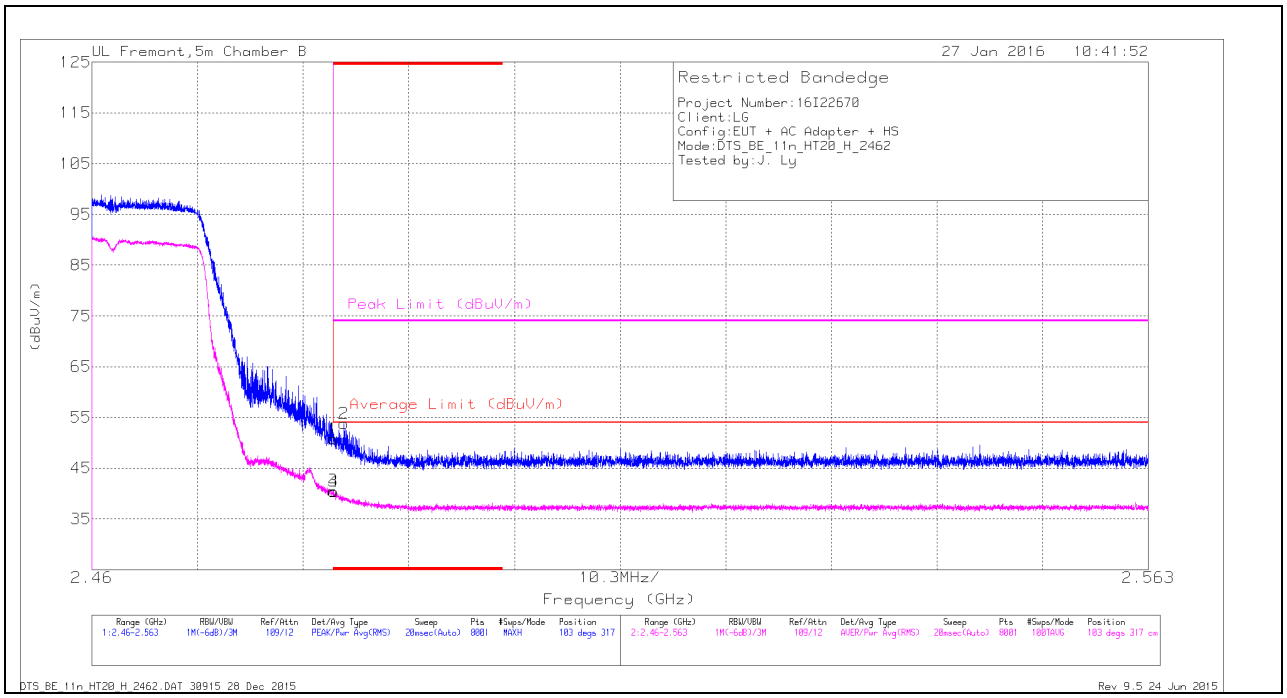
## AUTHORIZED BANDEDGE (HIGH CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT




### HORIZONTAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.484 | 40.08 | Pk | 32.5 | -21.8 | 0 | 50.78 | - | - | 74 | -23.22 | 103 | 317 | H |
| 2 | * 2.485 | 43.18 | Pk | 32.5 | -21.9 | 0 | 53.78 | - | - | 74 | -20.22 | 103 | 317 | H |
| 3 | * 2.484 | 29.61 | RMS | 32.5 | -21.8 | .23 | 40.54 | 54 | -13.46 | - | - | 103 | 317 | H |
| 4 | * 2.484 | 29.48 | RMS | 32.5 | -21.8 | .23 | 40.41 | 54 | -13.59 | - | - | 103 | 317 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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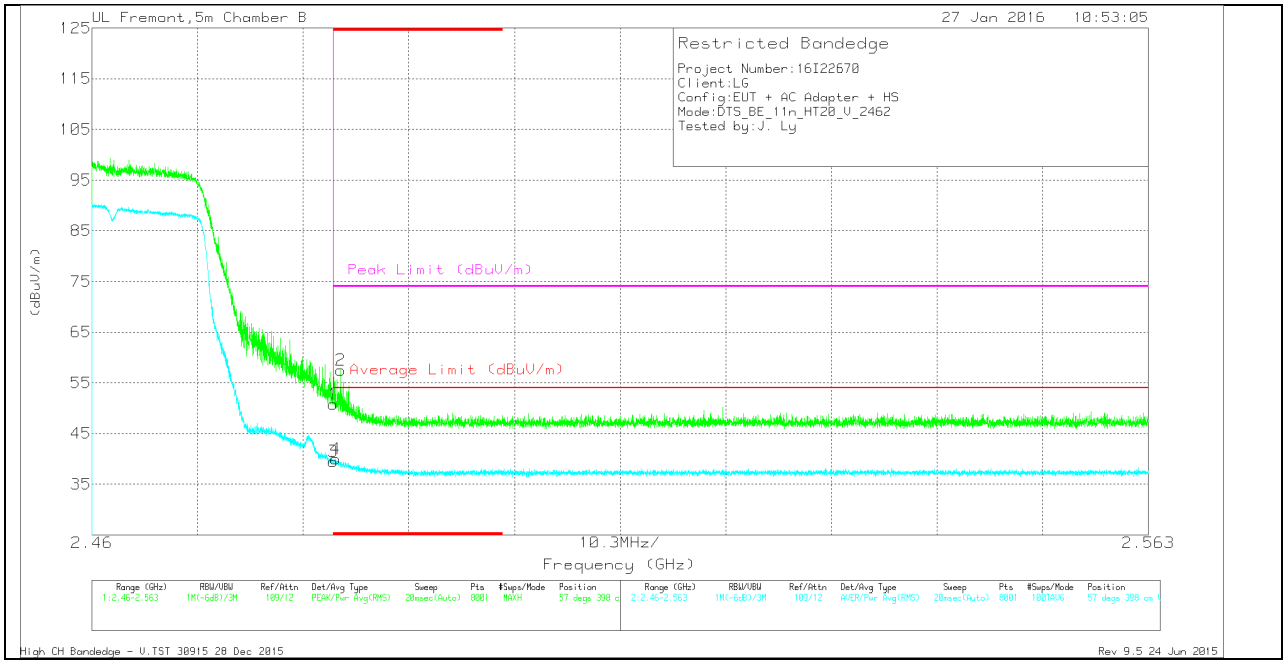
## VERTICAL PEAK AND AVERAGE PLOT




## VERTICAL DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 2.484 | 40.14 | Pk | 32.5 | -21.8 | 0 | 50.84 | - | - | 74 | -23.16 | 57 | 398 | V |
| 2 | * 2.484 | 46.86 | Pk | 32.5 | -21.9 | 0 | 57.46 | - | - | 74 | -16.54 | 57 | 398 | V |
| 3 | * 2.484 | 28.6 | RMS | 32.5 | -21.8 | .23 | 39.53 | 54 | -14.47 | - | - | 57 | 398 | V |
| 4 | * 2.484 | 29 | RMS | 32.5 | -21.8 | .23 | 39.93 | 54 | -14.07 | - | - | 57 | 398 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection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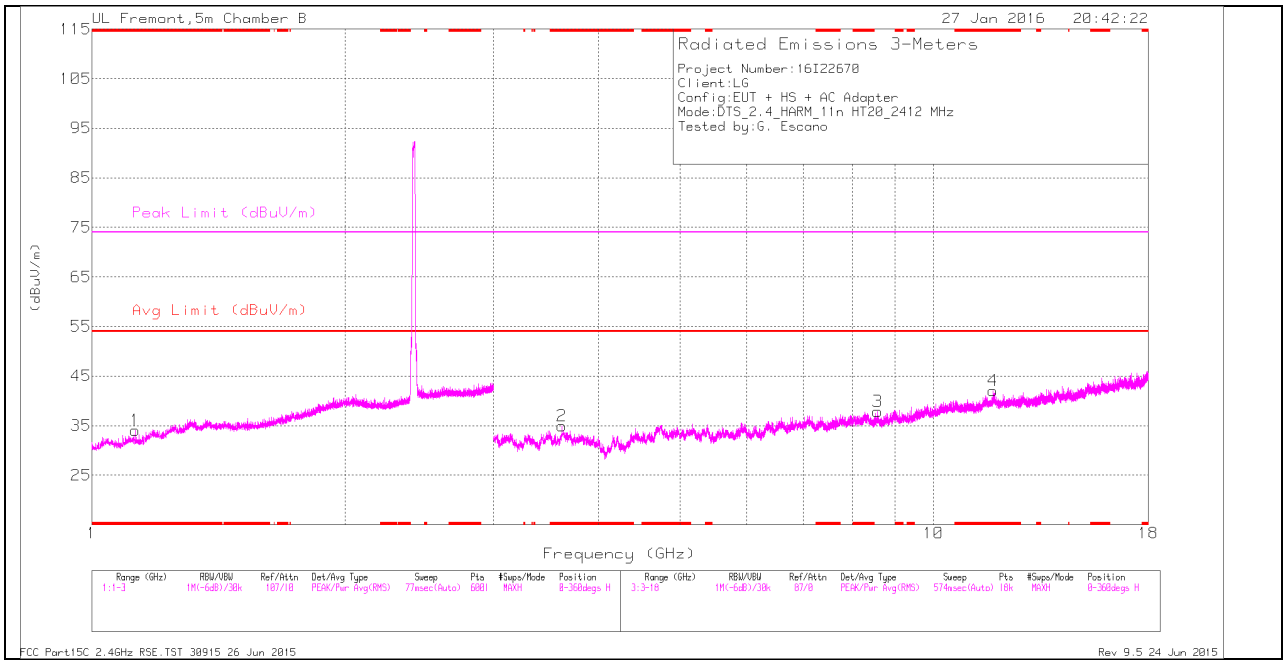
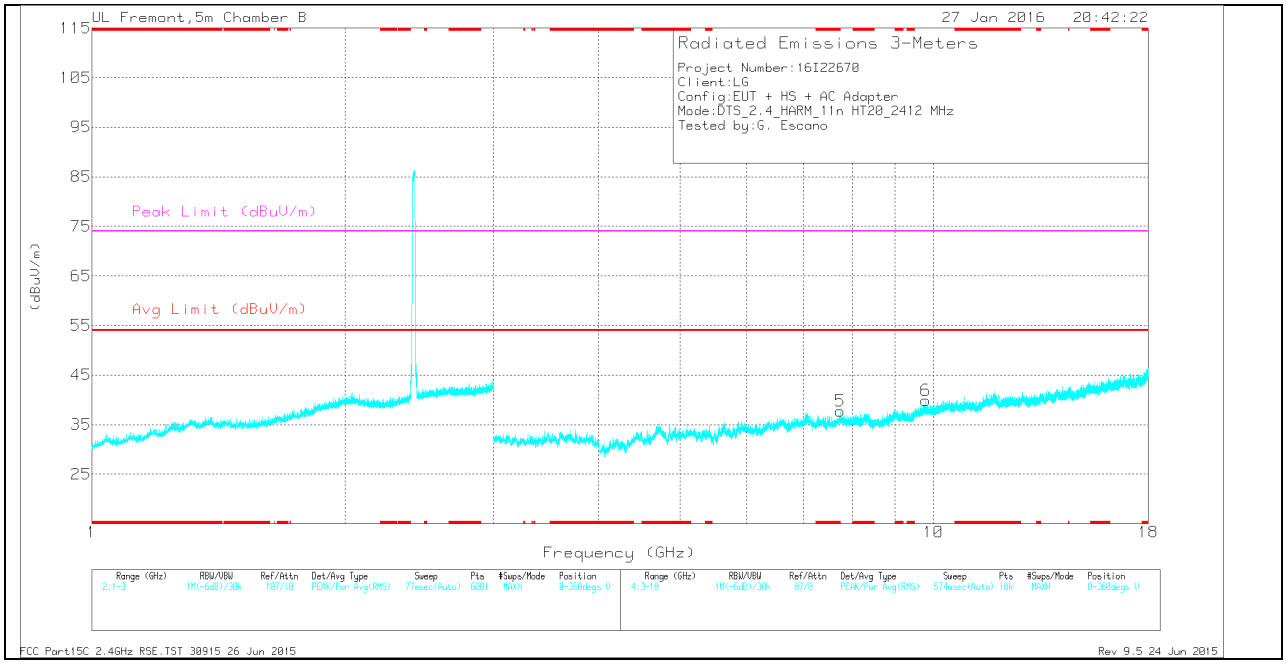
# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL HORIZONTAL




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

## LOW CHANNEL VERTICAL




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## LOW CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * 1.126 | 29.77 | Pk | 27.8 | -23.5 | 0 | 34.07 | - | - | 74 | -39.93 | 0-360 | 199 | H |
| 2 | * 3.619 | 34 | Pk | 33.8 | -32.9 | 0 | 34.9 | - | - | 74 | -39.1 | 0-360 | 199 | H |
| 4 | * 11.765 | 27.89 | Pk | 38.6 | -24.5 | 0 | 41.99 | - | - | 74 | -32.01 | 0-360 | 101 | H |
| 5 | 7.752 | 30.56 | Pk | 35.5 | -28.3 | 0 | 37.76 | - | - | - | - | 0-360 | 200 | V |
| 3 | 8.584 | 29.76 | Pk | 35.7 | -27.6 | 0 | 37.86 | - | - | - | - | 0-360 | 101 | H |
| 6 | 9.794 | 28.98 | Pk | 37 | -26.1 | 0 | 39.88 | - | - | - | - | 0-360 | 101 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 1.126 | 36.84 | PK2 | 27.8 | -23.5 | 0 | 41.14 | - | - | 74 | -32.86 | 312 | 198 | H |
| * 1.126 | 25.14 | MAv1 | 27.8 | -23.5 | 0.23 | 29.67 | 54 | -24.33 | - | - | 312 | 198 | H |
| * 3.62 | 41.24 | PK2 | 33.8 | -32.9 | 0 | 42.14 | - | - | 74 | -31.86 | 281 | 198 | H |
| * 3.62 | 29.42 | MAv1 | 33.8 | -32.9 | 0.23 | 30.55 | 54 | -23.45 | - | - | 281 | 198 | H |
| * 11.766 | 34.9 | PK2 | 38.6 | -24.5 | 0 | 49 | - | - | 74 | -25 | 255 | 103 | H |
| * 11.764 | 23.3 | MAv1 | 38.6 | -24.5 | 0.23 | 37.63 | 54 | -16.37 | - | - | 255 | 103 | H |
| 7.753 | 37.97 | PK2 | 35.5 | -28.3 | 0 | 45.17 | - | - | 74 | -28.83 | 165 | 199 | V |
| 8.583 | 36.64 | PK2 | 35.7 | -27.7 | 0 | 44.64 | - | - | 74 | -29.36 | 205 | 103 | H |
| 9.793 | 35.53 | PK2 | 37 | -26 | 0 | 46.53 | - | - | 74 | -27.47 | 69 | 103 | V |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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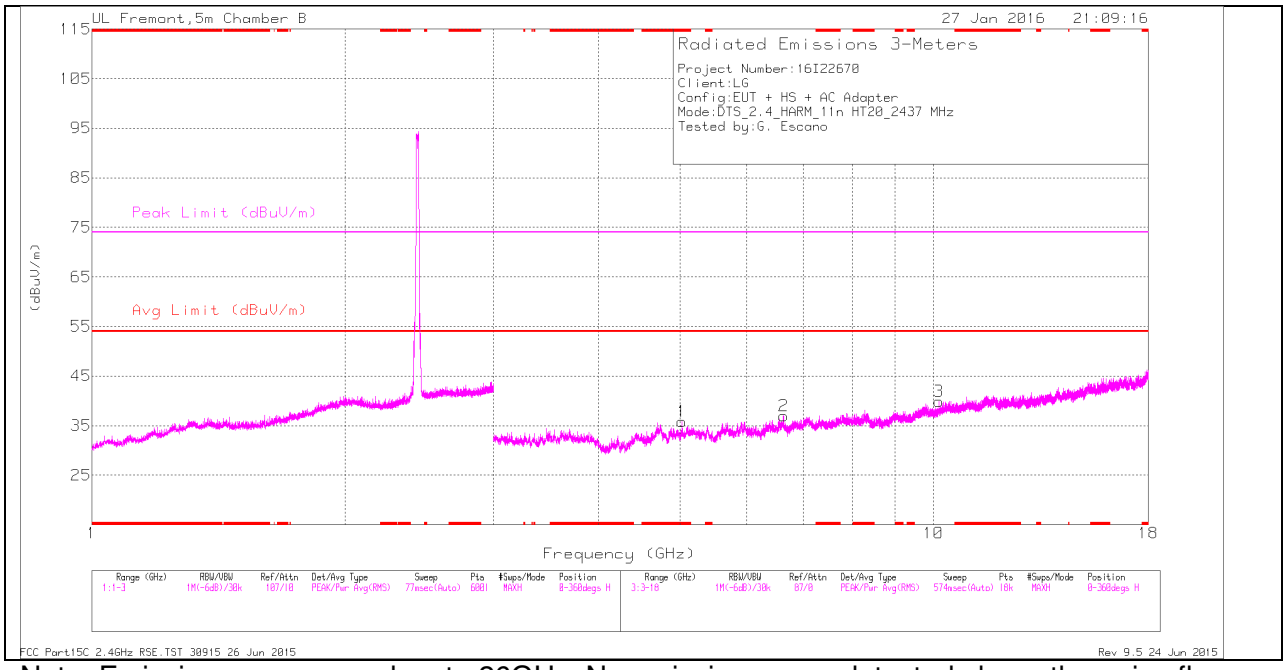
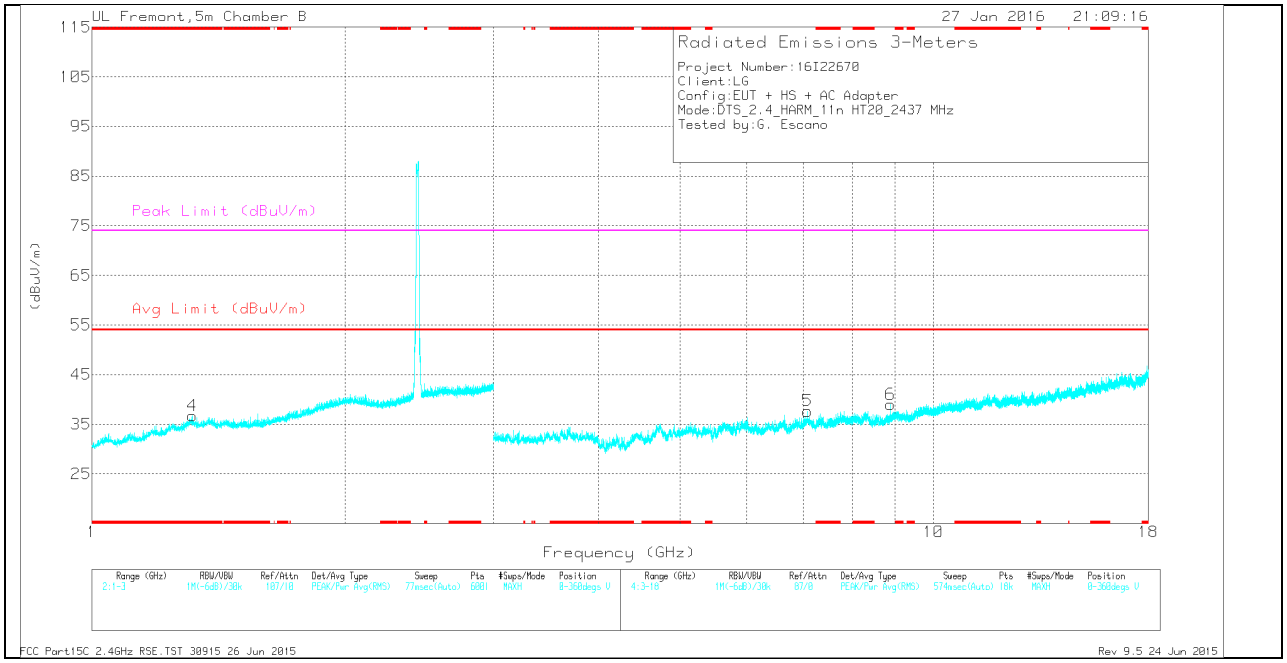
**MID CHANNEL HORIZONTAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## MID CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | * 1.317 | 29.87 | Pk | 29.4 | -22.5 | 0 | 36.77 | - | - | 74 | -37.23 | 0-360 | 199 | V |
| 1 | * 5.024 | 32.53 | Pk | 34 | -30.7 | 0 | 35.83 | - | - | 74 | -38.17 | 0-360 | 101 | H |
| 2 | 6.637 | 31.76 | Pk | 35.9 | -30.7 | 0 | 36.96 | - | - | - | - | 0-360 | 101 | H |
| 5 | 7.091 | 31.57 | Pk | 35.7 | -29.6 | 0 | 37.67 | - | - | - | - | 0-360 | 101 | V |
| 6 | 8.897 | 30.2 | Pk | 35.9 | -27.1 | 0 | 39 | - | - | - | - | 0-360 | 101 | V |
| 3 | 10.147 | 28.48 | Pk | 37.3 | -25.9 | 0 | 39.88 | - | - | - | - | 0-360 | 101 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 1.318 | 37.46 | PK2 | 29.4 | -22.5 | 0 | 44.36 | - | - | 74 | -29.64 | 155 | 198 | V |
| * 1.316 | 25.8 | MAv1 | 29.4 | -22.5 | 0.23 | 32.93 | 54 | -21.07 | - | - | 155 | 198 | V |
| * 5.024 | 39.39 | PK2 | 34 | -30.7 | 0 | 42.69 | - | - | 74 | -31.31 | 105 | 102 | H |
| * 5.025 | 27.4 | MAv1 | 34 | -30.7 | 0.23 | 30.93 | 54 | -23.07 | - | - | 105 | 102 | H |
| 6.638 | 39.03 | PK2 | 35.9 | -30.8 | 0 | 44.13 | - | - | 74 | -29.87 | 182 | 102 | H |
| 7.091 | 38.33 | PK2 | 35.7 | -29.6 | 0 | 44.43 | - | - | 74 | -29.57 | 315 | 102 | V |
| 8.895 | 36.58 | PK2 | 35.9 | -27.1 | 0 | 45.38 | - | - | 74 | -28.62 | 231 | 102 | V |
| 10.145 | 35.23 | PK2 | 37.3 | -25.9 | 0 | 46.63 | - | - | 74 | -27.37 | 264 | 102 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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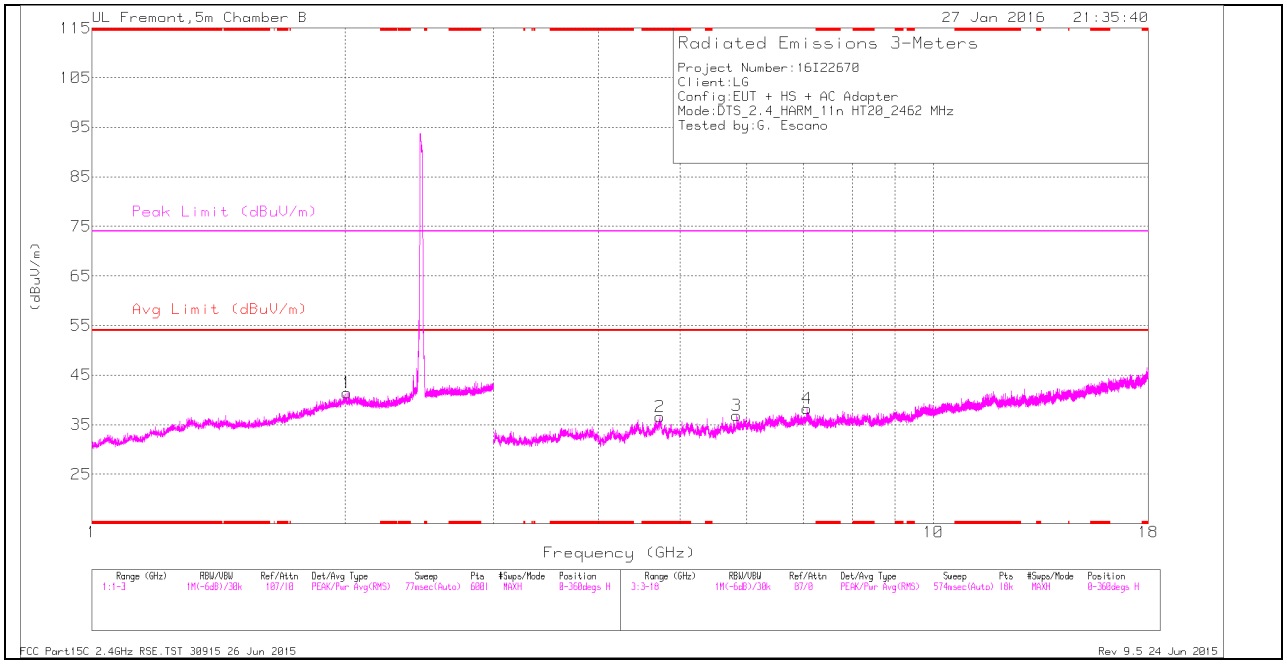
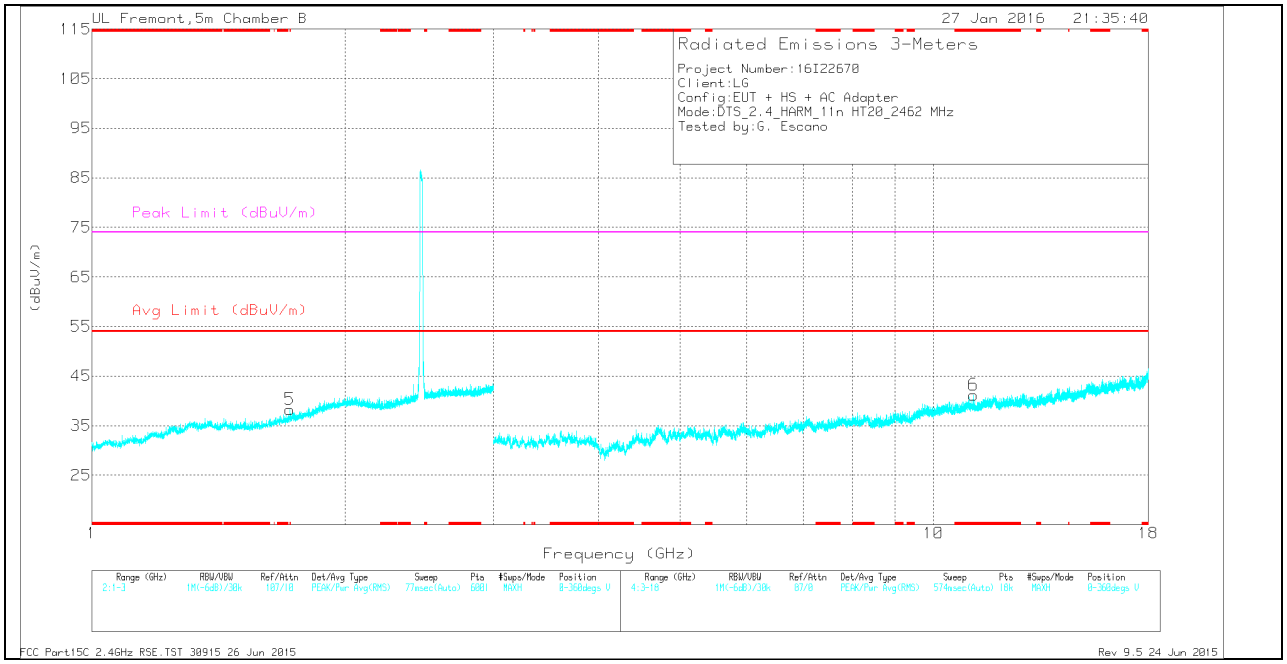
**HIGH CHANNEL HORIZONTAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**




Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.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## HIGH CHANNEL DATA

### Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/Fltr /Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | * 1.719 | 30.2 | Pk | 29.9 | -21.8 | 0 | 38.3 | - | - | 74 | -35.7 | 0-360 | 199 | V |
| 2 | * 4.73 | 33.02 | Pk | 34.3 | -30.7 | 0 | 36.62 | - | - | 74 | -37.38 | 0-360 | 101 | H |
| 6 | * 11.151 | 28.42 | Pk | 37.8 | -25 | 0 | 41.22 | - | - | 74 | -32.78 | 0-360 | 200 | V |
| 1 | 2.008 | 30.8 | Pk | 32.3 | -21.7 | 0 | 41.4 | - | - | - | - | 0-360 | 102 | H |
| 3 | 5.832 | 33.3 | Pk | 35.3 | -31.7 | 0 | 36.9 | - | - | - | - | 0-360 | 101 | H |
| 4 | 7.076 | 32.3 | Pk | 35.7 | -29.8 | 0 | 38.2 | - | - | - | - | 0-360 | 200 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector

### Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF T345 (dB/m) | Amp/Cbl/ Fltr/Pad (dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 1.719 | 37.66 | PK2 | 29.9 | -21.8 | 0 | 45.76 | - | - | 74 | -28.24 | 205 | 199 | V |
| * 1.719 | 25.43 | MAv1 | 29.9 | -21.8 | 0.23 | 33.76 | 54 | -20.24 | - | - | 205 | 199 | V |
| * 4.73 | 41.28 | PK2 | 34.3 | -30.7 | 0 | 44.88 | - | - | 74 | -29.12 | 269 | 102 | H |
| * 4.729 | 29.44 | MAv1 | 34.3 | -30.7 | 0.23 | 33.27 | 54 | -20.73 | - | - | 269 | 102 | H |
| * 11.152 | 35.61 | PK2 | 37.8 | -25 | 0 | 48.41 | - | - | 74 | -25.59 | 321 | 199 | V |
| * 11.151 | 24 | MAv1 | 37.8 | -25 | 0.23 | 37.03 | 54 | -16.97 | - | - | 321 | 199 | V |
| 2.007 | 37.05 | PK2 | 32.3 | -21.7 | 0 | 47.65 | - | - | 74 | -26.35 | 261 | 155 | H |
| 5.833 | 39.39 | PK2 | 35.3 | -31.7 | 0 | 42.99 | - | - | 74 | -31.01 | 171 | 102 | H |
| 7.078 | 38.85 | PK2 | 35.7 | -29.8 | 0 | 44.75 | - | - | 74 | -29.25 | 235 | 199 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average


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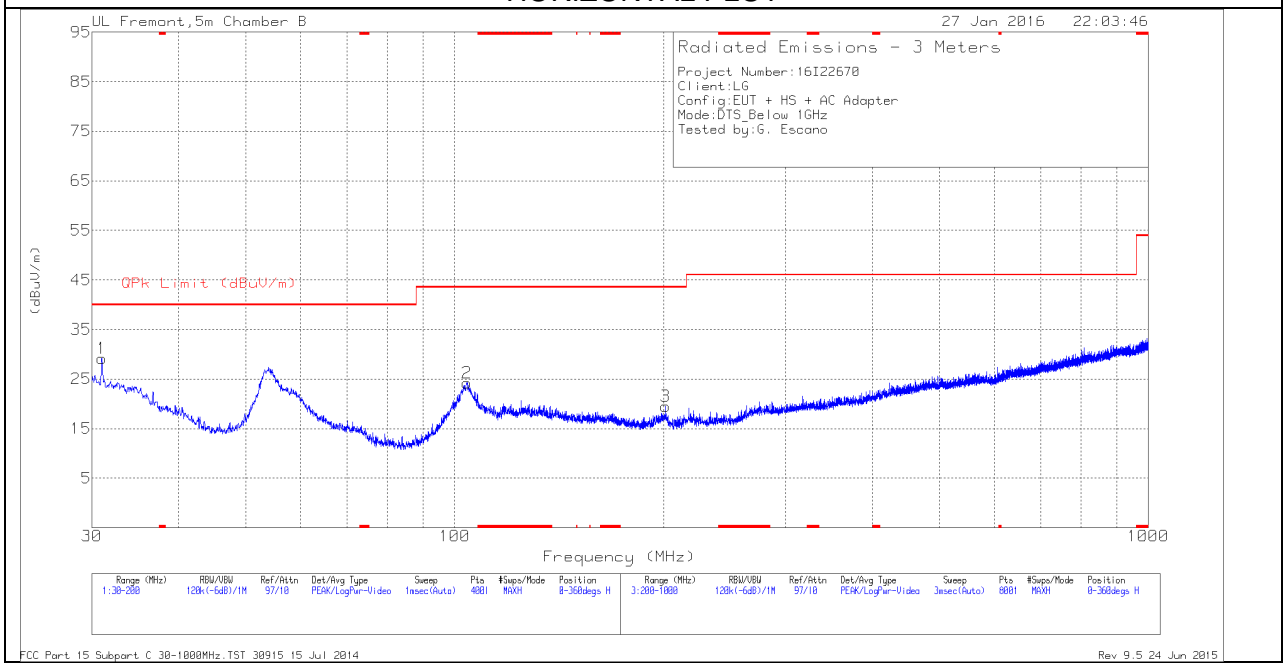
# 11. WORST-CASE BELOW 1 GHz

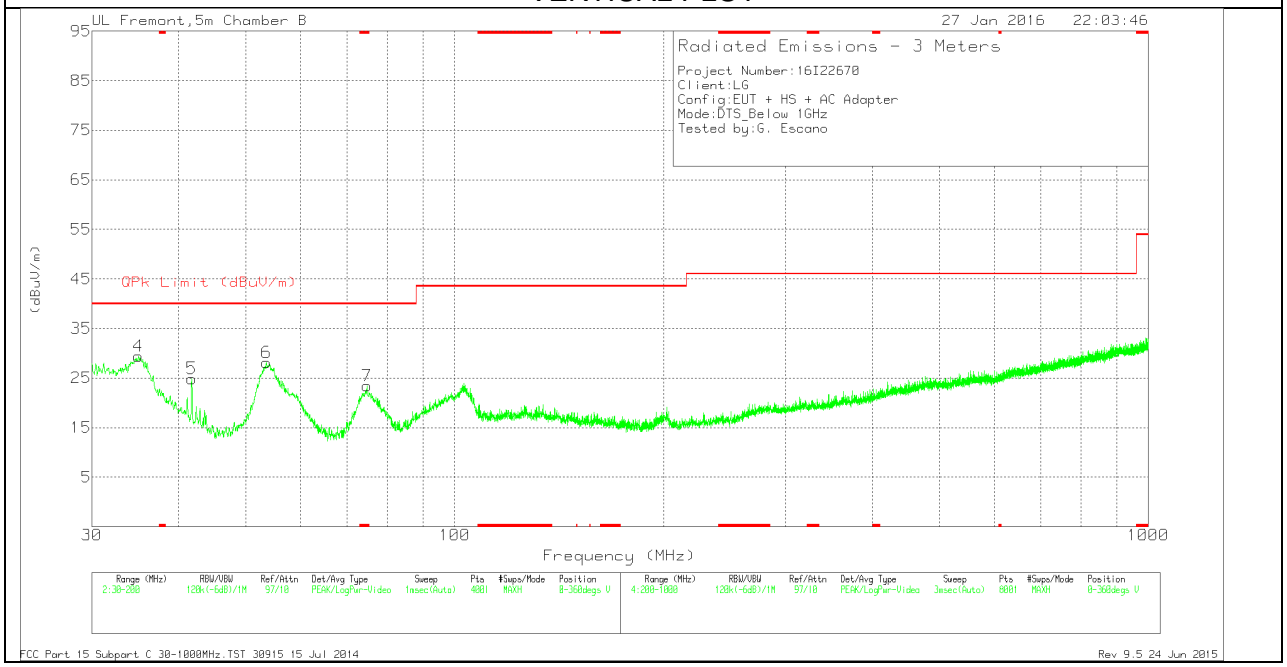
## SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT




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

VERTICAL PLOT





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**Below 1G Data**

Trace Markers

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T130 (dB/m) | Amp/Cbl (dB) | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.02 | 33.62 | Pk | 24.4 | -28.9 | 29.12 | 40 | -10.88 | 0-360 | 101 | H |
| 4 | 35.015 | 36.58 | Pk | 21.6 | -28.8 | 29.38 | 40 | -10.62 | 0-360 | 101 | V |
| 5 | 41.7725 | 37 | Pk | 16.6 | -28.7 | 24.9 | 40 | -15.1 | 0-360 | 101 | V |
| 6 | 53.545 | 45.78 | Pk | 11 | -28.6 | 28.18 | 40 | -11.82 | 0-360 | 101 | V |
| 7 | 74.71 | 39.91 | Pk | 11.9 | -28.4 | 23.41 | 40 | -16.59 | 0-360 | 101 | V |
| 2 | 104.29 | 36.66 | Pk | 15.6 | -28 | 24.26 | 43.52 | -19.26 | 0-360 | 299 | H |
| 3 | 201.6 | 30.69 | Pk | 15.9 | -27.1 | 19.49 | 43.52 | -24.03 | 0-360 | 101 | H |

* - indicates frequency in 47 CFR §15.205/IC RSS-Gen §8.10 Restricted Band

Pk - Peak detector


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# 12. 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**

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

**RESULTS**


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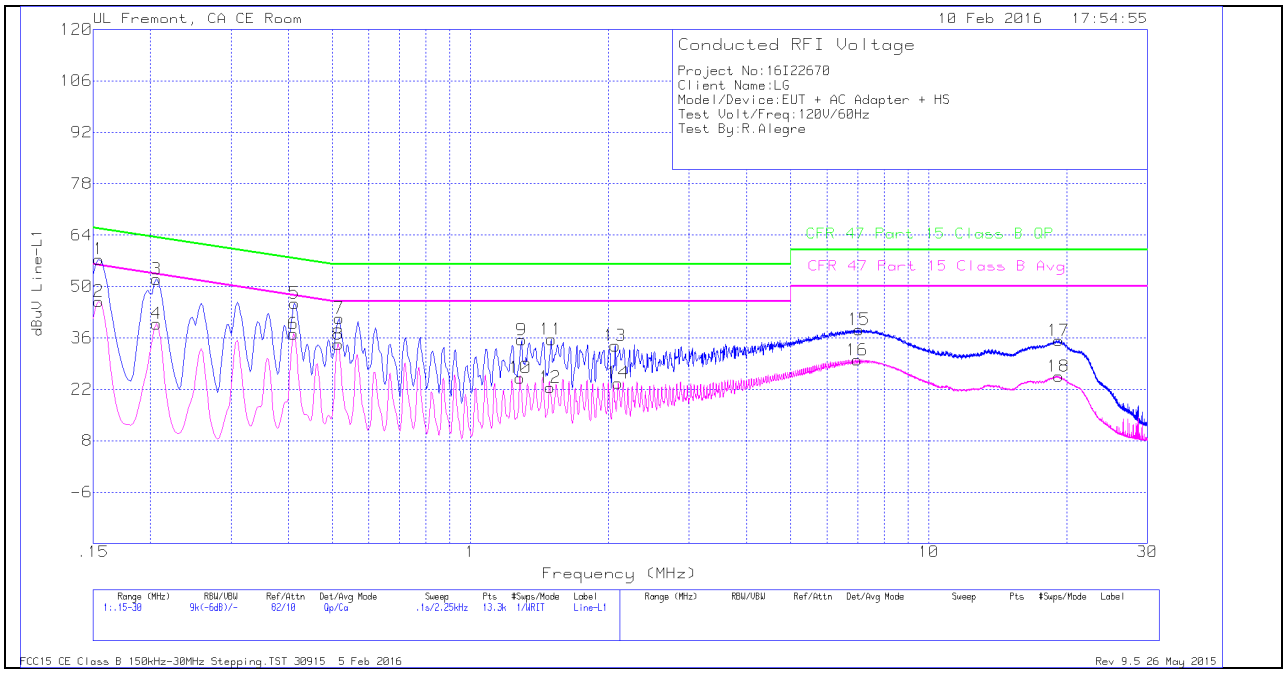
## 6 WORST EMISSIONS

### LINE 1 PLOT





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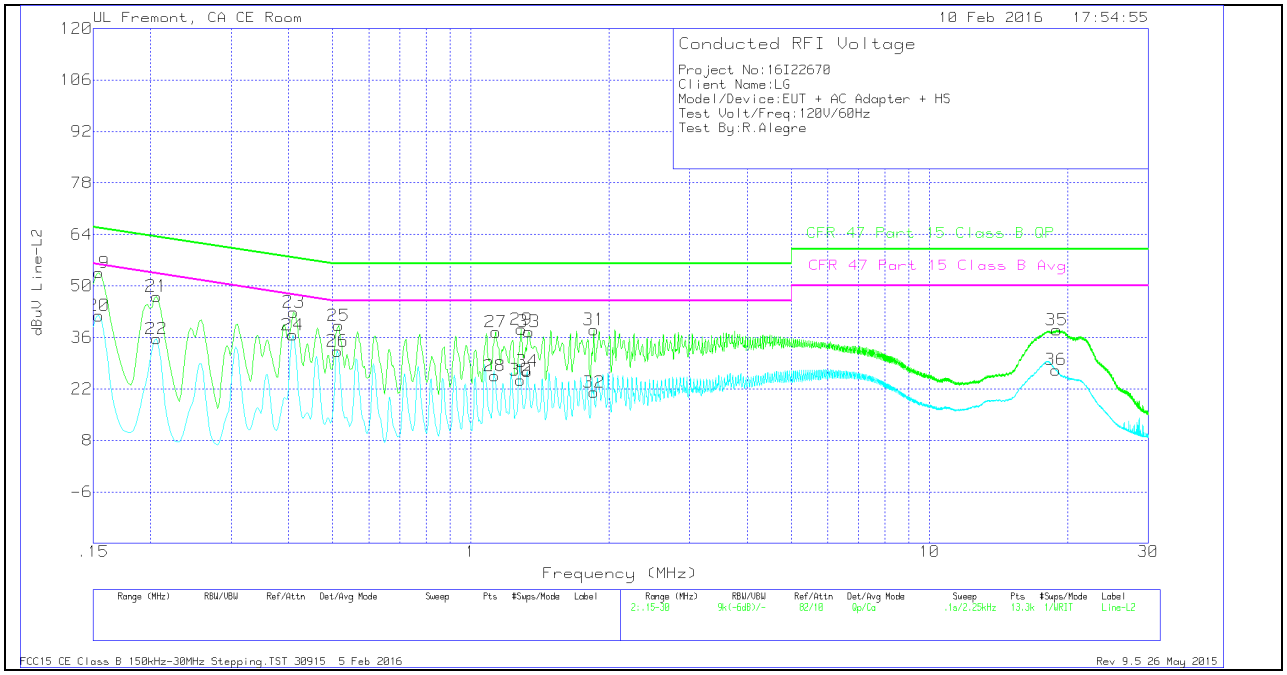
## LINE 2 PLOT





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## LINE 1 & LINE 2 RESULTS

Trace Markers

Range 1: Line-L1 .15 - 30MHz

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | T1310 IL L1 | LC Cables 1&3 | 10dB Pad | Corrected Reading dBuV | CFR 47 Part 15 Class B QP | QP Margin (dB) | CFR 47 Part 15 Class B Avg | Av(CISPR) Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .1545 | 47.44 | Qp | 0 | 0 | 10 | 57.44 | 65.75 | -8.31 | - | - |
| 2 | .1545 | 35.94 | Ca | 0 | 0 | 10 | 45.94 | - | - | 55.75 | -9.81 |
| 3 | .20625 | 41.99 | Qp | 0 | 0 | 10 | 51.99 | 63.35 | -11.36 | - | - |
| 4 | .20625 | 29.85 | Ca | 0 | 0 | 10 | 39.85 | - | - | 53.35 | -13.5 |
| 5 | .41325 | 35.45 | Qp | 0 | 0 | 10 | 45.45 | 57.58 | -12.13 | - | - |
| 6 | .411 | 27.13 | Ca | 0 | 0 | 10 | 37.13 | - | - | 47.63 | -10.5 |
| 7 | .51675 | 31.35 | Qp | 0 | 0 | 10 | 41.35 | 56 | -14.65 | - | - |
| 8 | .5145 | 24.28 | Ca | 0 | 0 | 10 | 34.28 | - | - | 46 | -11.72 |
| 9 | 1.293 | 25.38 | Qp | 0 | .1 | 10 | 35.48 | 56 | -20.52 | - | - |
| 10 | 1.284 | 15.01 | Ca | 0 | .1 | 10 | 25.11 | - | - | 46 | -20.89 |
| 11 | 1.5 | 25.48 | Qp | 0 | .1 | 10 | 35.58 | 56 | -20.42 | - | - |
| 12 | 1.491 | 12.39 | Ca | 0 | .1 | 10 | 22.49 | - | - | 46 | -23.51 |
| 13 | 2.06925 | 23.78 | Qp | 0 | .1 | 10 | 33.88 | 56 | -22.12 | - | - |
| 14 | 2.10075 | 13.63 | Ca | 0 | .1 | 10 | 23.73 | - | - | 46 | -22.27 |
| 15 | 7.0485 | 28.16 | Qp | 0 | .1 | 10 | 38.26 | 60 | -21.74 | - | - |
| 16 | 6.97875 | 19.87 | Ca | 0 | .1 | 10 | 29.97 | - | - | 50 | -20.03 |
| 17 | 19.20075 | 25.11 | Qp | 0 | .2 | 10 | 35.31 | 60 | -24.69 | - | - |
| 18 | 19.1985 | 15.32 | Ca | 0 | .2 | 10 | 25.52 | - | - | 50 | -24.48 |

Qp - Quasi-Peak detector

Ca - CISPR average detection

Range 2: Line-L2 .15 - 30MHz

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | T1310 IL L2 | LC Cables 2&3 | 10dB Pad | Corrected Reading dBuV | CFR 47 Part 15 Class B QP | QP Margin (dB) | CFR 47 Part 15 Class B Avg | Av(CISPR) Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | .1545 | 43.59 | Qp | 0 | 0 | 10 | 53.59 | 65.75 | -12.16 | - | - |
| 20 | .1545 | 31.9 | Ca | 0 | 0 | 10 | 41.9 | - | - | 55.75 | -13.85 |
| 21 | .20625 | 37.16 | Qp | 0 | 0 | 10 | 47.16 | 63.35 | -16.19 | - | - |
| 22 | .20625 | 25.6 | Ca | 0 | 0 | 10 | 35.6 | - | - | 53.35 | -17.75 |
| 23 | .411 | 32.87 | Qp | 0 | 0 | 10 | 42.87 | 57.63 | -14.76 | - | - |
| 24 | .40875 | 26.68 | Ca | 0 | 0 | 10 | 36.68 | - | - | 47.67 | -10.99 |
| 25 | .5145 | 29.25 | Qp | 0 | 0 | 10 | 39.25 | 56 | -16.75 | - | - |
| 26 | .51225 | 22.27 | Ca | 0 | 0 | 10 | 32.27 | - | - | 46 | -13.73 |
| 27 | 1.13325 | 27.35 | Qp | 0 | .1 | 10 | 37.45 | 56 | -18.55 | - | - |
| 28 | 1.1265 | 15.42 | Ca | 0 | .1 | 10 | 25.52 | - | - | 46 | -20.48 |
| 29 | 1.2885 | 28.12 | Qp | 0 | .1 | 10 | 38.22 | 56 | -17.78 | - | - |
| 30 | 1.284 | 14.3 | Ca | 0 | .1 | 10 | 24.4 | - | - | 46 | -21.6 |
| 31 | 1.8555 | 27.97 | Qp | 0 | .1 | 10 | 38.07 | 56 | -17.93 | - | - |
| 32 | 1.8555 | 11.01 | Ca | 0 | .1 | 10 | 21.11 | - | - | 46 | -24.89 |
| 33 | 1.338 | 27.45 | Qp | 0 | .1 | 10 | 37.55 | 56 | -18.45 | - | - |
| 34 | 1.32675 | 16.69 | Ca | 0 | .1 | 10 | 26.79 | - | - | 46 | -19.21 |
| 35 | 18.94875 | 27.82 | Qp | 0 | .2 | 10 | 38.02 | 60 | -21.98 | - | - |
| 36 | 18.87225 | 16.97 | Ca | 0 | .2 | 10 | 27.17 | - | - | 50 | -22.83 |

Qp - Quasi-Peak detector

Ca - CISPR average detection


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