



Test Report

FCC Part 15.247

Industry Canada RSS210

DTS Devices Operating in range 2400-2483.5MHz

Model #: PCG-1P2L

**SONY Corporation
1-7-1 Konan, Minato-ku,
Tokyo, 108-0075
Japan**

**FCC ID: AK8PCG1P2L
IC ID: 409B-PCG1P2L**

**TEST REPORT #: EMC_SONYE_025_08001_15_247_PCG1P2L
DATE: 2008-10-24**



**Bluetooth Qualification
Test Facility
(BQTF)**



**FCC listed:
A2LA
accredited**

**IC recognized #
3462B**

CETECOM Inc.

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Board of Directors: Dr. Harald Ansorge, Dr. Klaus Matkey, Hans Peter May

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1 Assessment

The following is in compliance with the applicable criteria specified in FCC rules Part 15.247 of the Code of Federal Regulations.

| Company | Description | Model # |
|------------------|-------------|----------|
| SONY Corporation | Notebook PC | PCG-1P2L |

This report is reviewed by:

Lothar Schmidt
 (Director Regulatory and
 Antenna Services)

2008-10-24 EMC & Radio

| Date | Section | Name | Signature |
|------|---------|------|-----------|
|------|---------|------|-----------|

This report is prepared by:

Peter Mu
 (EMC Project Engineer)

2008-10-24 EMC & Radio

| Date | Section | Name | Signature |
|------|---------|------|-----------|
|------|---------|------|-----------|

The test results of this test report relate exclusively to the test item specified in Identification of the Equipment under Test. The CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM Inc USA.

2 Administrative Data**2.1 Identification of the Testing Laboratory Issuing the EMC Test Report**

| | |
|-------------------------------|---|
| Company Name: | CETECOM Inc. |
| Department: | EMC |
| Address: | 411 Dixon Landing Road Milpitas, CA 95035 U.S.A. |
| Telephone: | +1 (408) 586 6200 |
| Fax: | +1 (408) 586 6299 |
| Responsible Test Lab Manager: | Lothar Schmidt |
| Responsible Project Leader: | Peter Mu |
| Date of test: | 2008-10-17 to 2008-10-22 |

2.2 Identification of the Client

| APPLICANT | |
|---------------------------------|--|
| Applicant (Company Name) | SONY Corporation |
| Street Address | 1-7-1 Konan, Minato-ku, |
| City/Zip Code | Tokyo, 108-0075 |
| Country | Japan |
| Contact Person | Michio Kobayashi |
| Telephone | +81-263-72-5696 |
| Fax | +81-263-72-9755 |
| e-mail | <u>Michio.Kobayashi@jp.sony.com</u> |

2.3 Identification of the Manufacturer

| MANUFACTURER (If different from Applicant) | |
|---|--|
| Applicant (Firm Name): | Sony EMCS Corporation |
| Contact Person: | Michio Kobayashi |
| Telephone: | +81-263-72-5696 |
| Fax: | +81-263-72-9755 |
| Address Line 1: | 5432 Toyoshima, |
| City: | Azumino-shi, Nagano |
| Postal Code: | 399-8282, |
| Country: | Japan |
| e-mail: | <u>Michio.Kobayashi@jp.sony.com</u> |

3 Equipment under Test (EUT)

3.1 Specification of the Equipment under Test

| EUT | |
|--|---------------------|
| Marketing Name of EUT (if not same as Model No.): | PCG-1P2L |
| Description: | Notebook PC |
| Model No: | PCG-1P2L |
| FCC ID: | AK8PCG1P2L |
| IC ID: | 409B-PCG1P2L |

| | |
|------------------------|--|
| Frequency Range: | 2400-2483.5MHz Channel 1, 6, 11 for 802.11b/g and 802.11n HT20 mode Channel 2, 6, 10 for 802.11n HT40 mode |
| Type(s) of Modulation: | OFDM |
| Antenna Type: | Monopole Peak Gain 2400-2483.5MHz: 2.90dBi. |
| Max Output Power: | Sub-band 1, 2400-2483.5MHz 802.11b: Radiated: 25.68dBm (370mW) EIRP Conducted: 22.78dBm (190mW) Sub-band 1, 2400-2483.5MHz 802.11g: Radiated: 28.87dBm (771mW) EIRP Conducted: 25.97dBm (395mW) Sub-band 1, 2400-2483.5MHz 802.11n HT20: Radiated: 28.15dBm (653mW) EIRP Conducted: 25.25dBm (335mW) Sub-band 1, 2400-2483.5MHz 802.11n HT40: Radiated: 28.96dBm (787mW) EIRP Conducted: 26.06dBm (404mW) |

3.2 Identification of the Equipment under Test (EUT)

| EUT # | TYPE | MANF. | MODEL | SERIAL # |
|-------|------|------------------|----------|----------|
| 1 | EUT | SONY Corporation | PCG-1P2L | FCC1 |

3.3 Identification of Accessory equipment

| AE # | TYPE | MANF. | MODEL | SERIAL # |
|------|---------------|------------------|------------|----------|
| 1 | AC/DC ADAPTER | SONY Corporation | VGP-AC20V2 | 0000241 |

4 Subject Of Investigation

All testing was performed on the product referred to in Section 3 as EUT. EUT operates in the band 2400-2483.5MHz in legacy 802.11b/g and 802,11n mode.

The objective of the measurements done by Cetecom Inc. was to measure the performance of the EUT operating under all operating modes as specified by Sony per requirements listed in FCC rules Part 15.247 of Title 47 of the Code of Federal Regulations. The maximization of portable equipment is conducted in accordance with ANSI C63.4

5 Radiated Measurements

5.1 Maximum Peak Output Power § 15.247 (b)(1) (Radiated)

5.1.1 Limits

FCC15.247 (b) (1): 4W (36dBm), with antenna gain < 6dBi.

RSS-210 A8.4 (4): 4W (36dBm)

EIRP is calculated as $EIRP = \text{Conducted Peak Power (dBm)} + \text{Peak Antenna Gain (dBi)}$

5.1.2 Results:

EIRP 802.11 a/b/g Mode:

| TEST CONDITIONS $T_{nom}(23)^{\circ}C, V_{nom}VDC$ | Channel Frequency | EIRP (dBm) | EIRP (mW) | Verdict |
|---|-------------------|------------|-----------|---------|
| Sub-band 1: 2400-2483.5MHz (802.11b) | 2412 | 22.97 | 198.15 | PASS |
| | 2437 | 25.68 | 369.83 | PASS |
| | 2462 | 20.90 | 123.03 | PASS |
| Sub-band 1: 2400-2483.5MHz (802.11g) | 2412 | 24.90 | 309.03 | PASS |
| | 2437 | 28.87 | 770.90 | PASS |
| | 2462 | 22.62 | 182.81 | PASS |

EIRP 802.11n HT20 MODE:

| TEST CONDITIONS $T_{nom}(23)^{\circ}C, V_{nom}VDC$ | Channel Frequency | EIRP (dBm) | EIRP (mW) | Verdict |
|---|-------------------|------------|-----------|---------|
| Sub-band 1: 2400-2483.5MHz | 2412 | 23.40 | 218.78 | PASS |
| | 2437 | 28.15 | 653.13 | PASS |
| | 2462 | 22.49 | 177.42 | PASS |

EIRP 802.11n HT40 MODE:

| TEST CONDITIONS $T_{nom}(23)^{\circ}C, V_{nom}VDC$ | Channel Frequency | EIRP (dBm) | EIRP (mW) | Margin (mW) |
|---|-------------------|------------|-----------|-------------|
| Sub-band 1: 2400-2483.5MHz | 2422 | 22.32 | 170.61 | PASS |
| | 2437 | 28.96 | 787.05 | PASS |
| | 2452 | 22.44 | 175.39 | PASS |

5.2 Restricted Band Edge Compliance §15.247/15.205

5.2.1 Limits

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|----------------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110 | 16.42 - 16.423 | 399.9 - 410 | 4.5 - 5.15 |
| ¹ 0.495 - 0.505 | 16.69475 - 16.69525 | 608 - 614 | 5.35 - 5.46 |
| 2.1735 - 2.1905 | 16.80425 - 16.80475 | 960 - 1240 | 7.25 - 7.75 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1300 - 1427 | 8.025 - 8.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 1435 - 1626.5 | 9.0 - 9.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 1645.5 - 1646.5 | 9.3 - 9.5 |
| 6.215 - 6.218 | 74.8 - 75.2 | 1660 - 1710 | 10.6 - 12.7 |
| 6.26775 - 6.26825 | 108 - 121.94 | 1718.8 - 1722.2 | 13.25 - 13.4 |
| 6.31175 - 6.31225 | 123 - 138 | 2200 - 2300 | 14.47 - 14.5 |
| 8.291 - 8.294 | 149.9 - 150.05 | 2310 - 2390 | 15.35 - 16.2 |
| 8.362 - 8.366 | 156.52475 - 156.52525 | 2483.5 - 2500 | 17.7 - 21.4 |
| 8.37625 - 8.38675 | 156.7 - 156.9 | 2690 - 2900 | 22.01 - 23.12 |
| 8.41425 - 8.41475 | 162.0125 - 167.17 | 3260 - 3267 | 23.6 - 24.0 |
| 12.29 - 12.293 | 167.72 - 173.2 | 3332 - 3339 | 31.2 - 31.8 |
| 12.51975 - 12.52025 | 240 - 285 | 3345.8 - 3358 | 36.43 - 36.5 |
| 12.57675 - 12.57725 | 322 - 335.4 | 3600 - 4400 | (²) |
| 13.36 - 13.41 | | | |

***PEAK LIMIT= 74dBuV/m**

***AVG. LIMIT= 54dBuV/m**

Notes:

1. Radiated emissions are maximized by rotating the EUT 360° at 0.5 meter height increments between 1 and 4 meters.
2. Measurements were performed with the EUT in X, Y and Z orientations with the measurement antenna in both horizontal and vertical polarity. The plots below show the results of the worst case orientation and polarity.

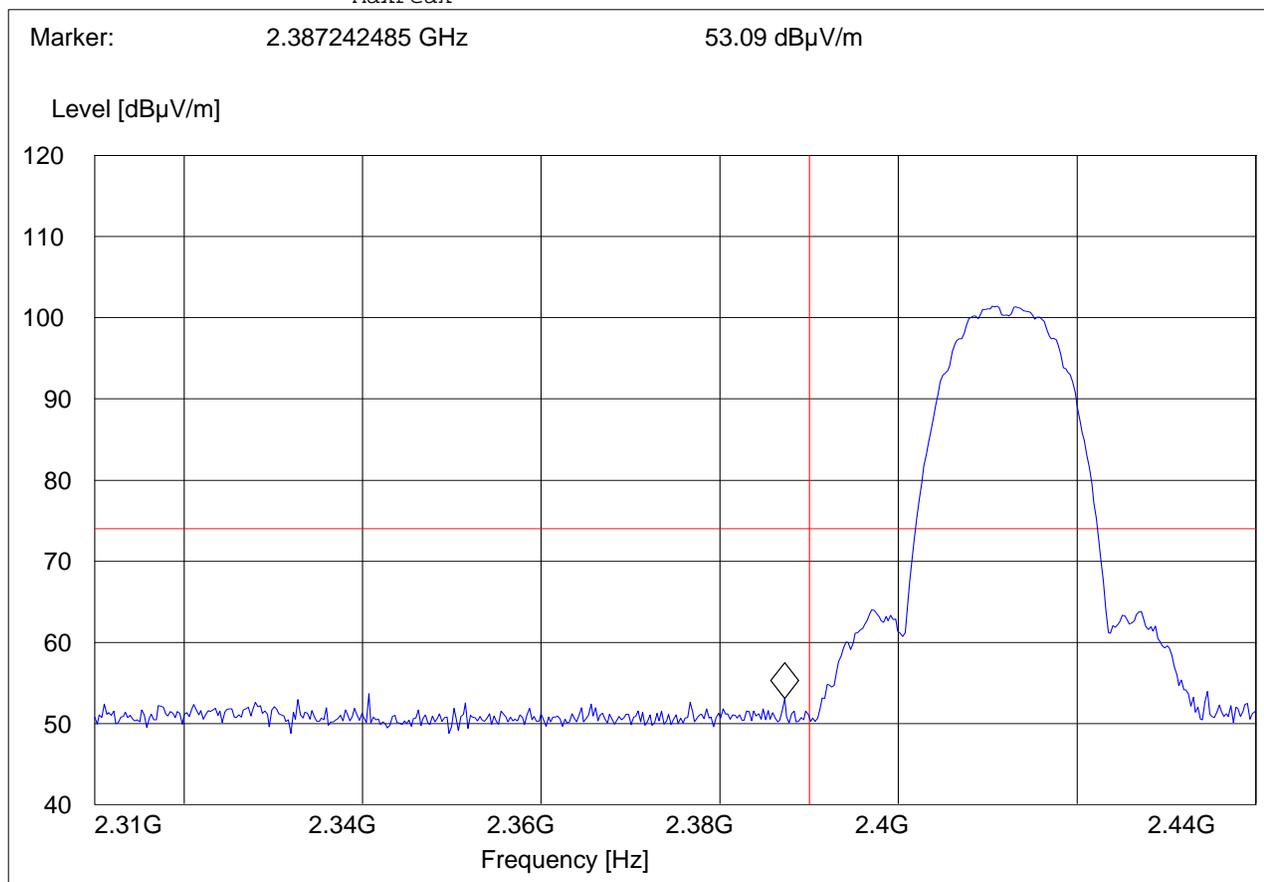
5.2.2 Sub-band 1 802.11b MODE

Lower band edge PEAK

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11b; Ch 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

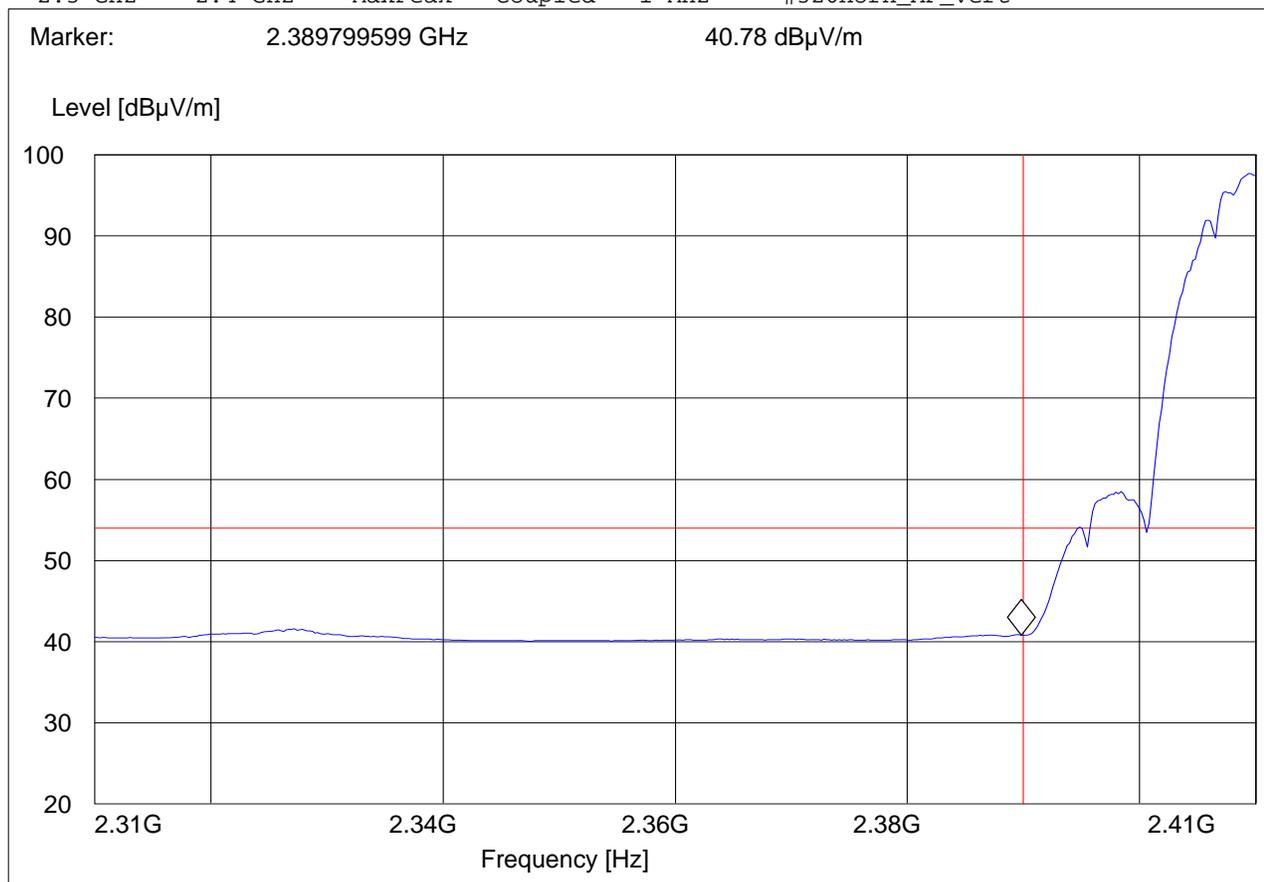


Lower band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11b; Ch 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

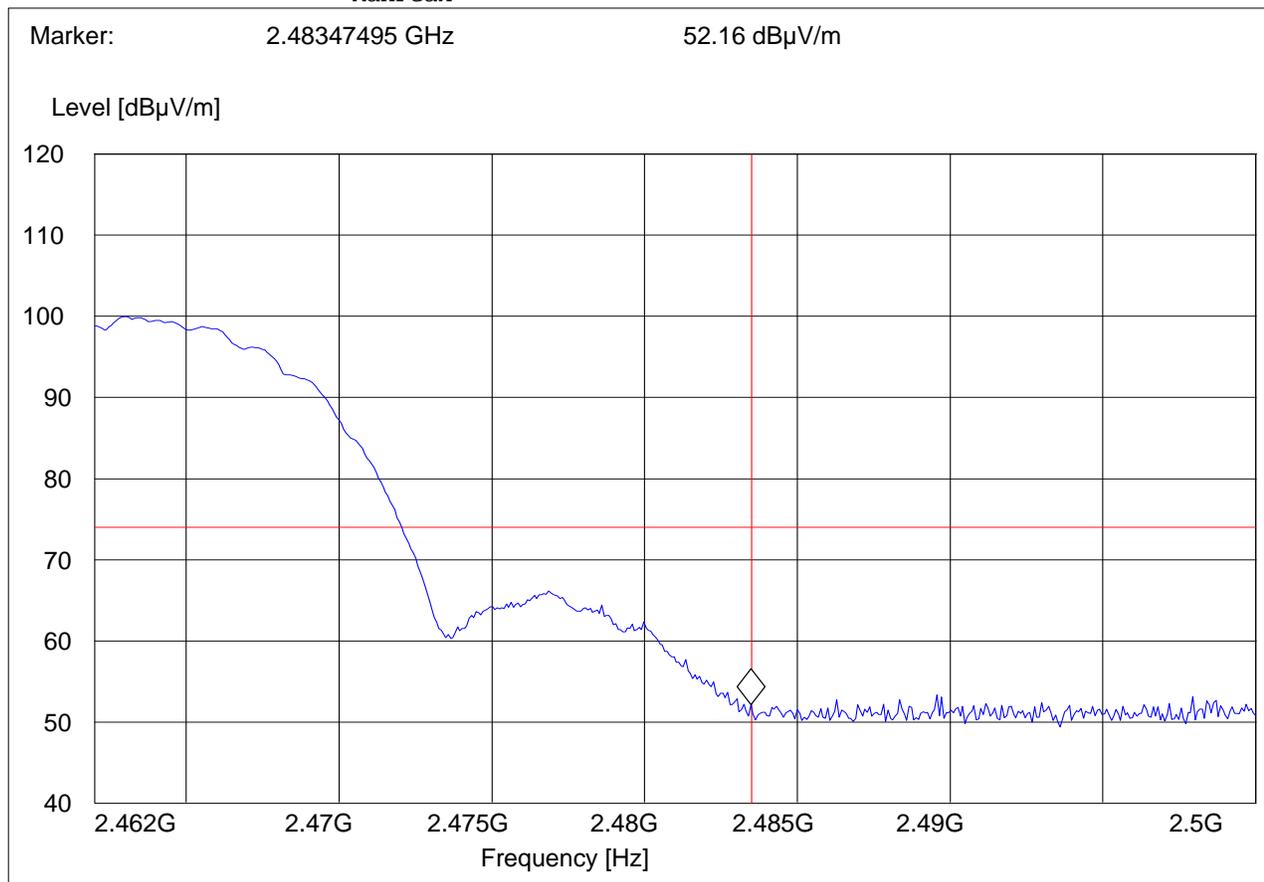


High band edge PEAK

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11b; Ch 11
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |
| | | MaxPeak | | | |



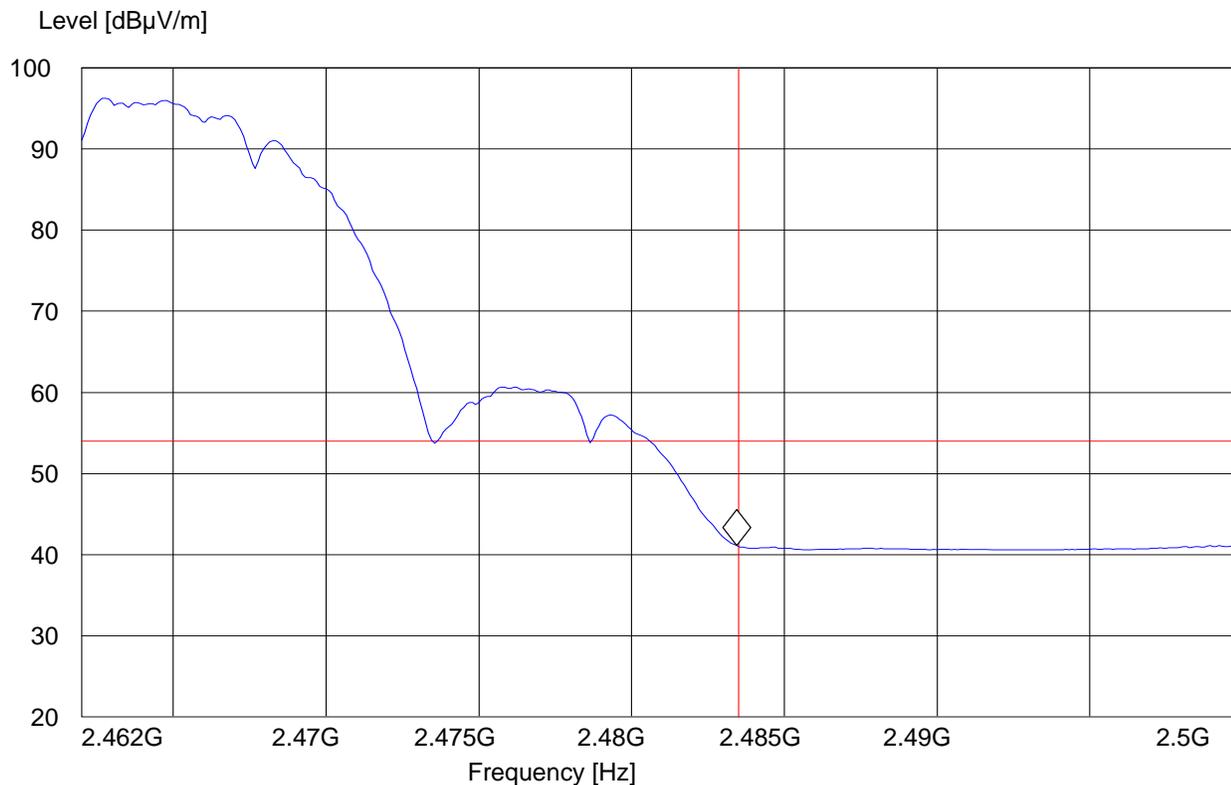
High band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11b; Ch 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_horz |

Marker: 2.483450902 GHz 41.11 dB μ V/m



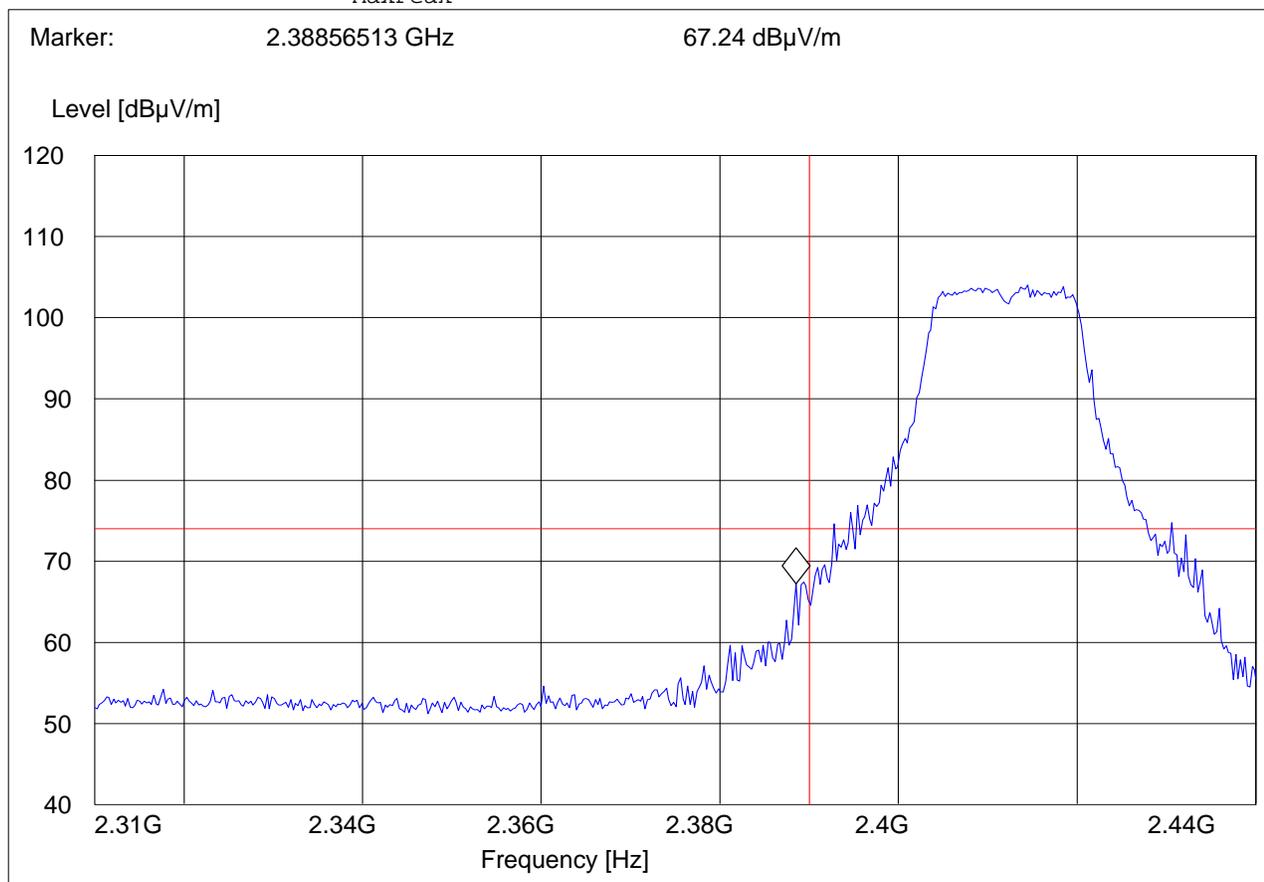
5.2.3 Sub-band 1 802.11g MODE

Lower band edge PEAK

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11g; Ch 1
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

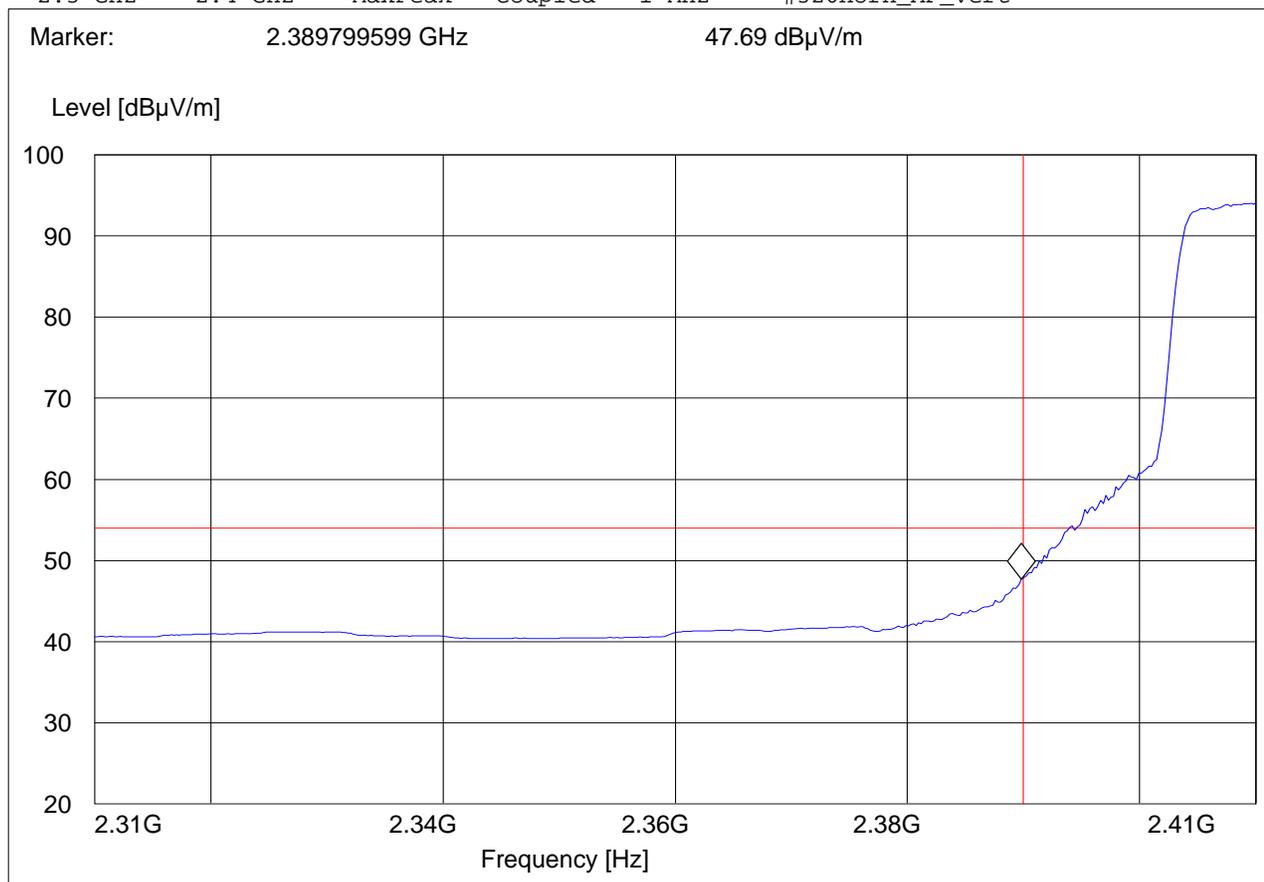


Lower band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

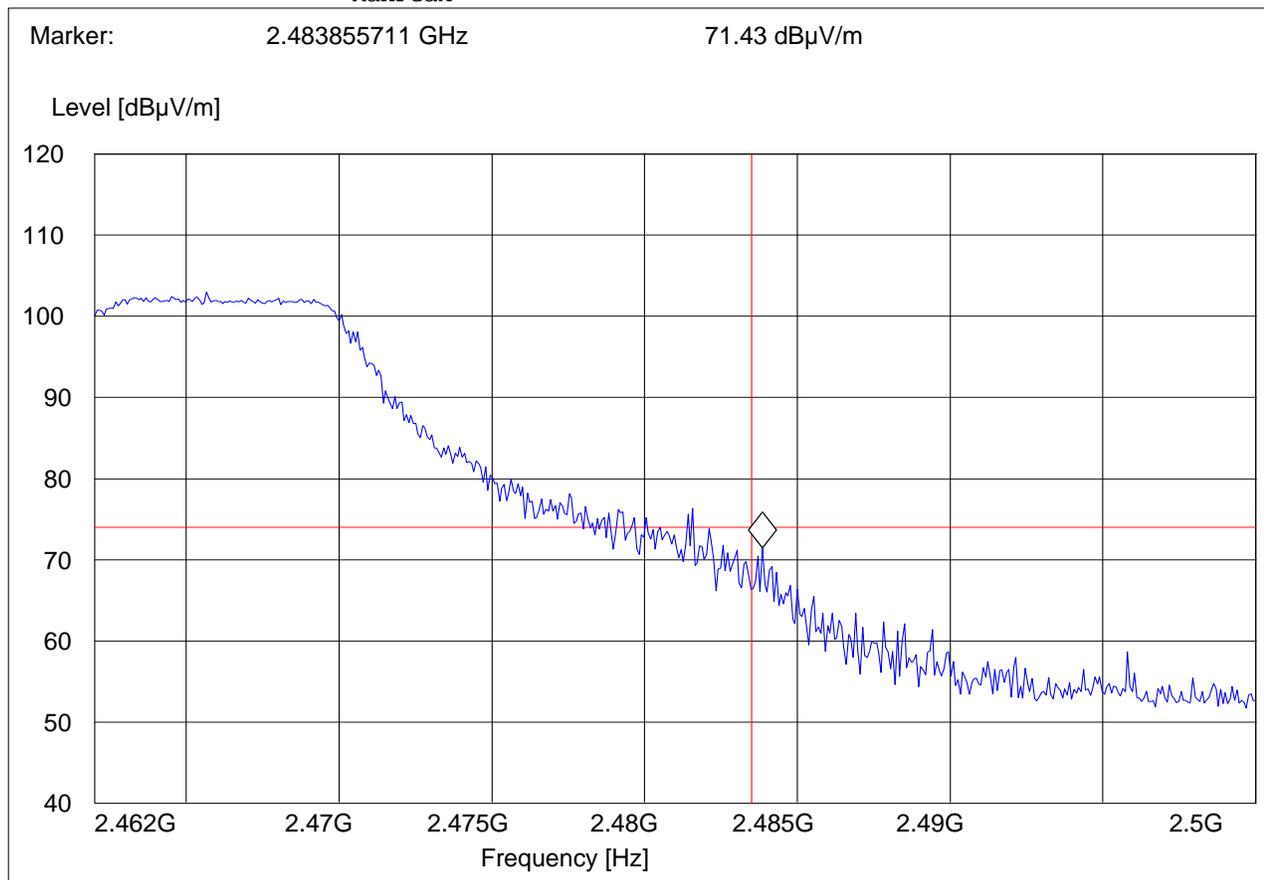


High band edge PEAK

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11g; Ch 11
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |
| | | MaxPeak | | | |



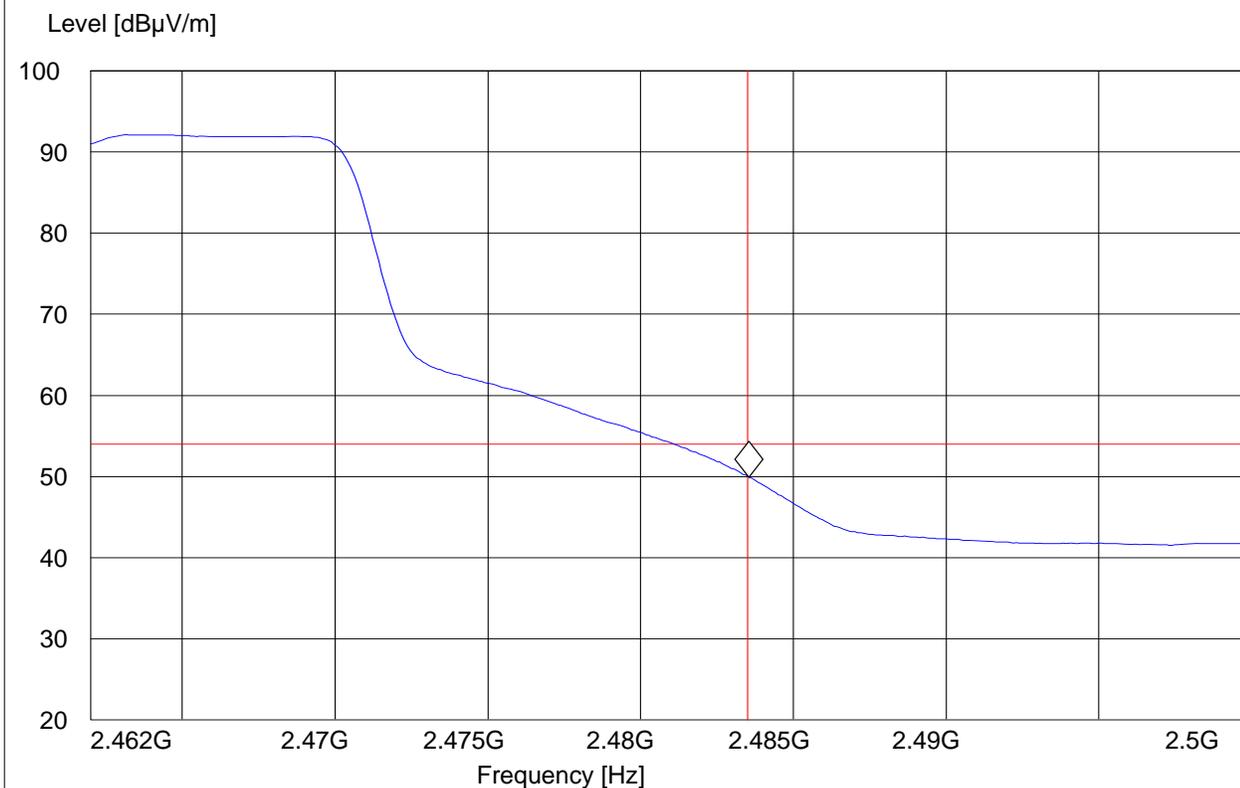
High band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_horz |

Marker: 2.483547094 GHz 49.92 dB μ V/m



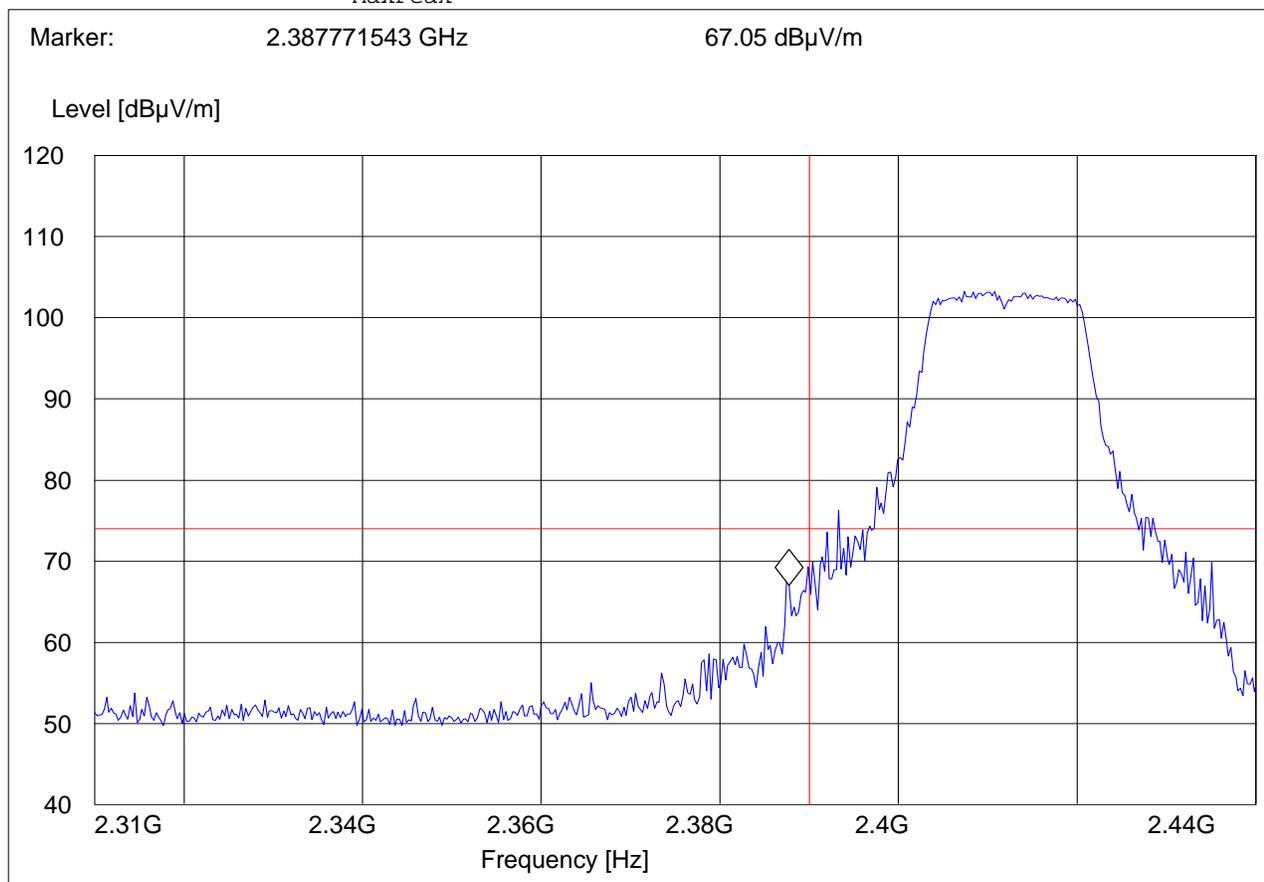
5.2.4 Sub-band 1 802.11n HT20 MODE

Lower band edge PEAK

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; Ch 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|--------------------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

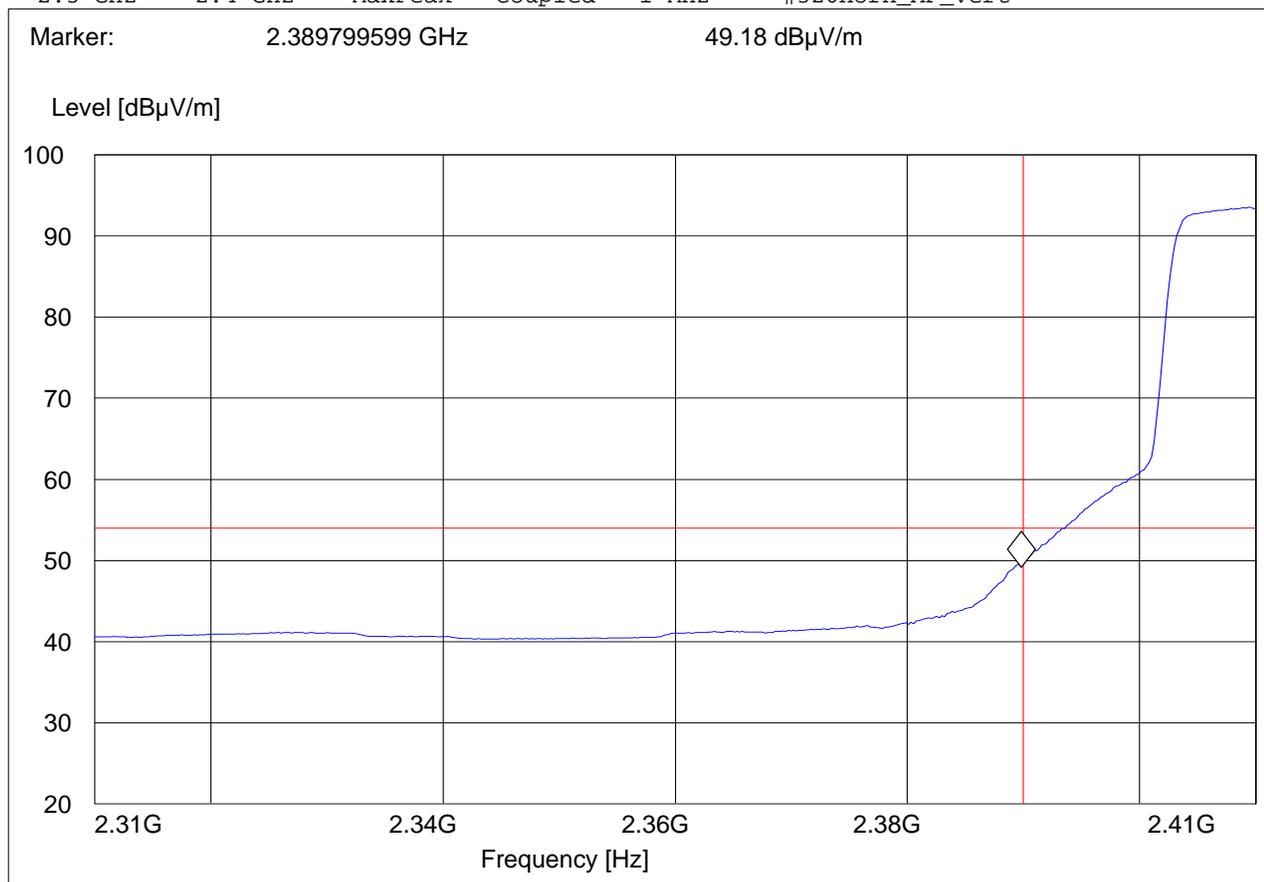


Lower band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; Ch 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

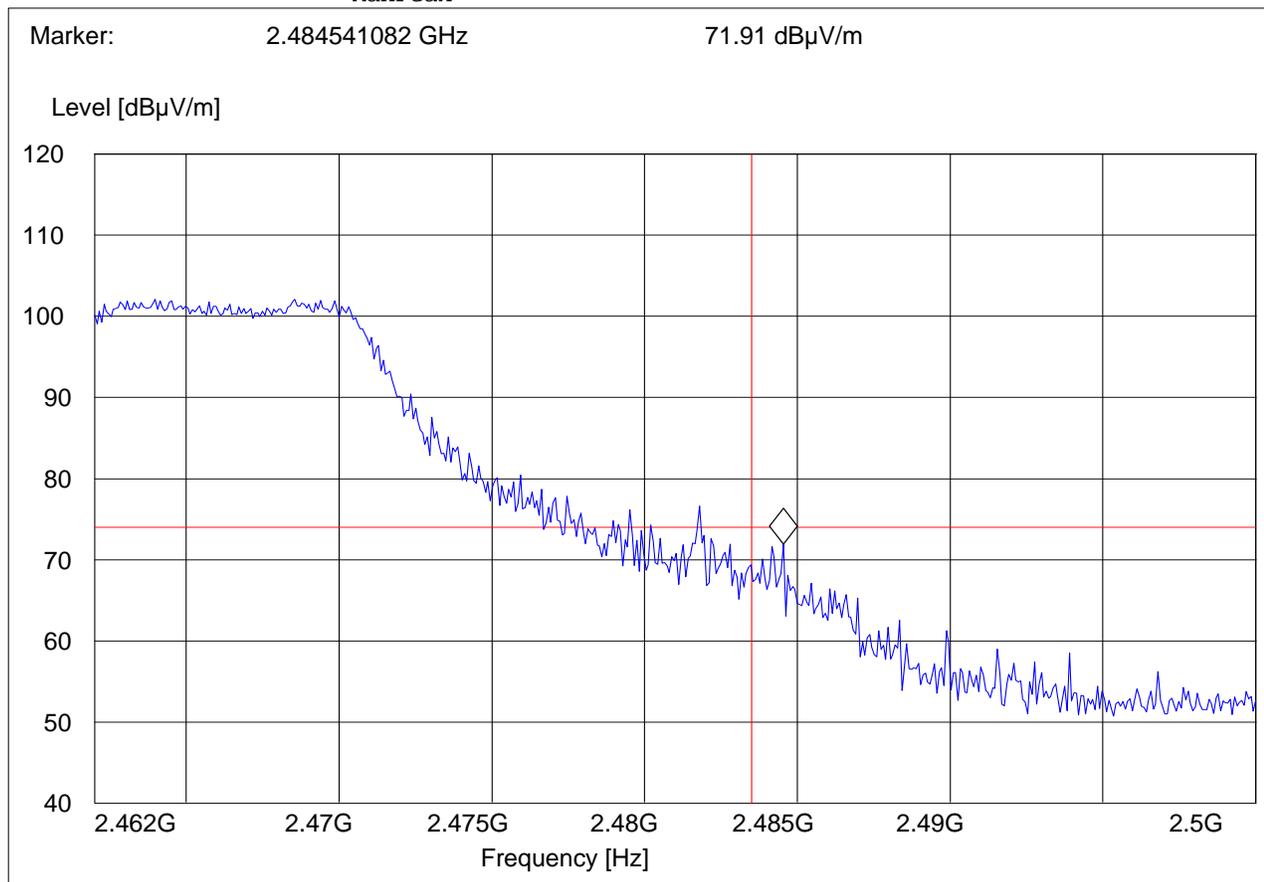


High band edge PEAK

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n20; Ch 11
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |
| | | MaxPeak | | | |



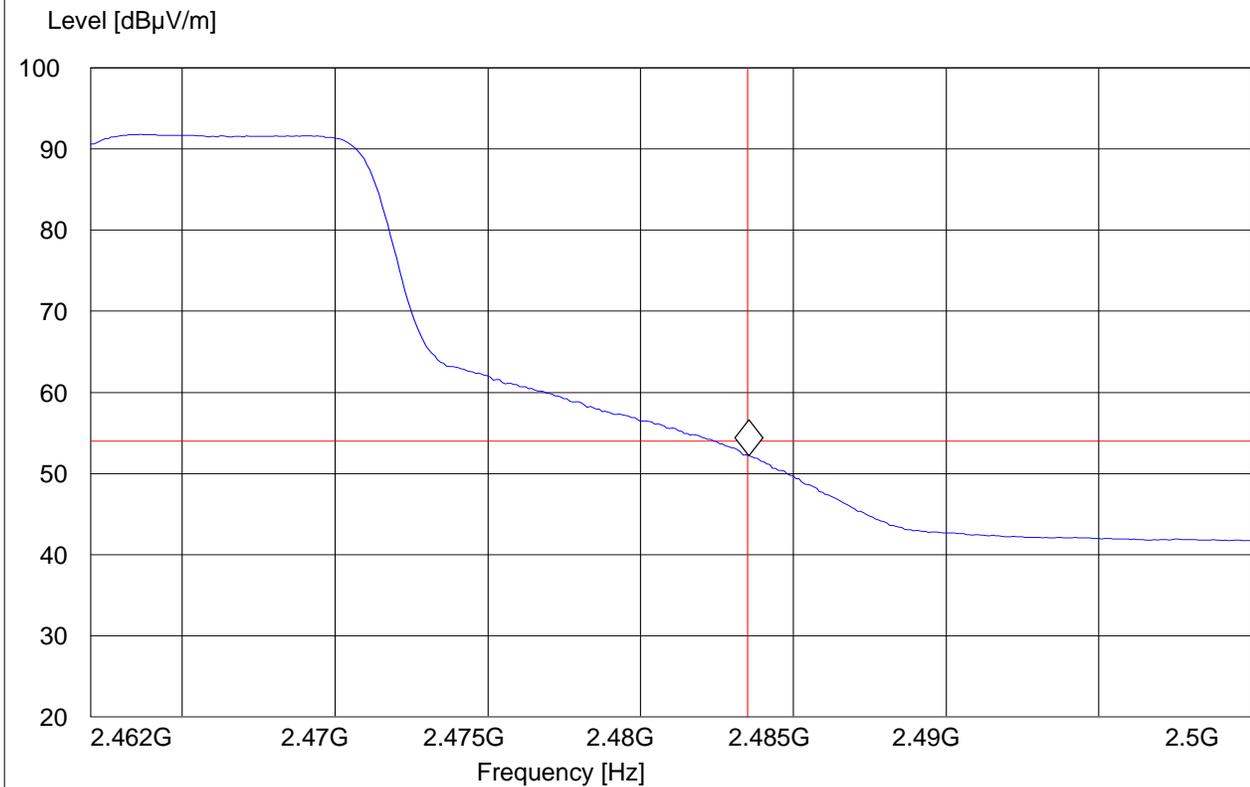
High band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; Ch 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_horz |

Marker: 2.483547094 GHz 52.21 dB μ V/m



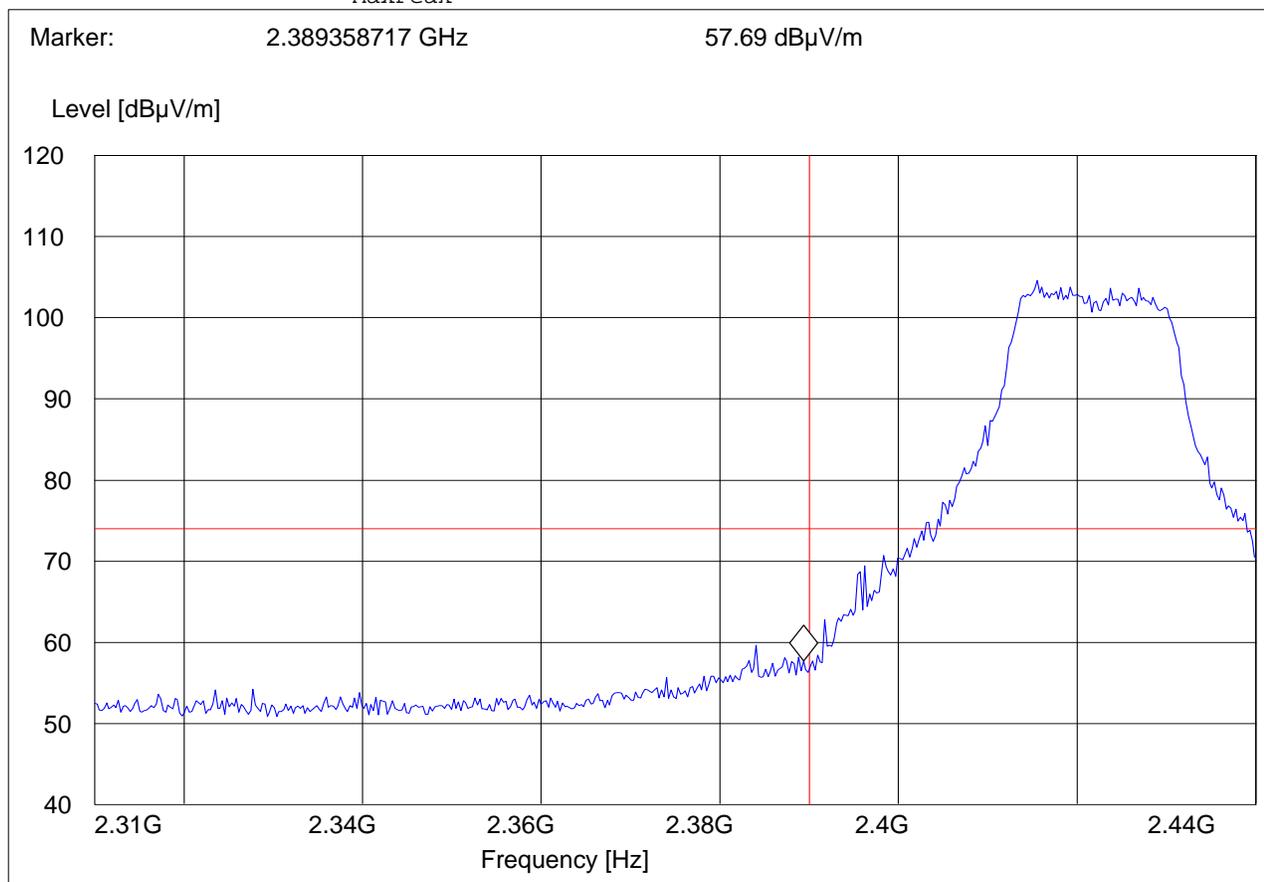
5.2.5 Sub-band 1 802.11n HT40 MODE

Lower band edge PEAK

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n40; Ch 1
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 LBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

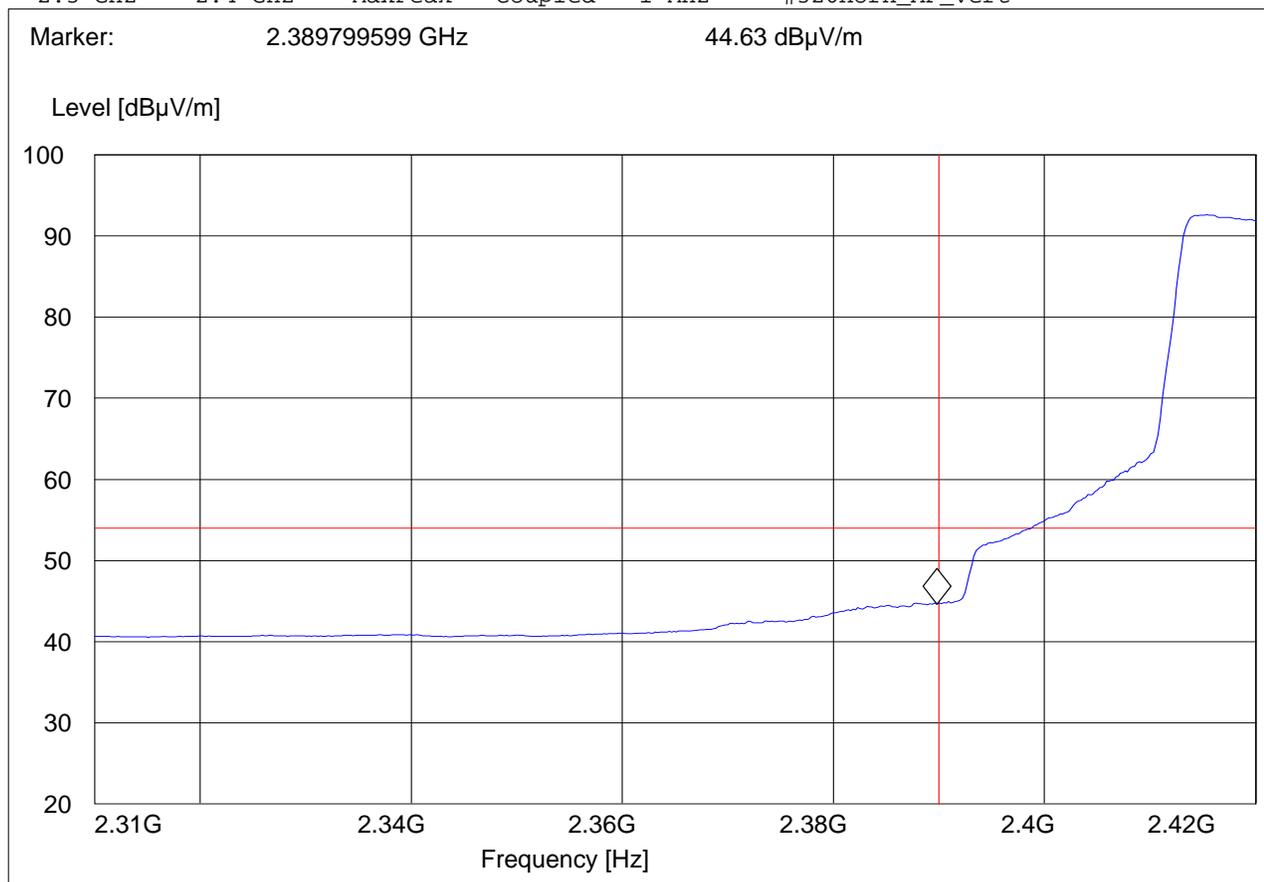


Lower band edge Average

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; Ch 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247 LBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.3 GHz | 2.4 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

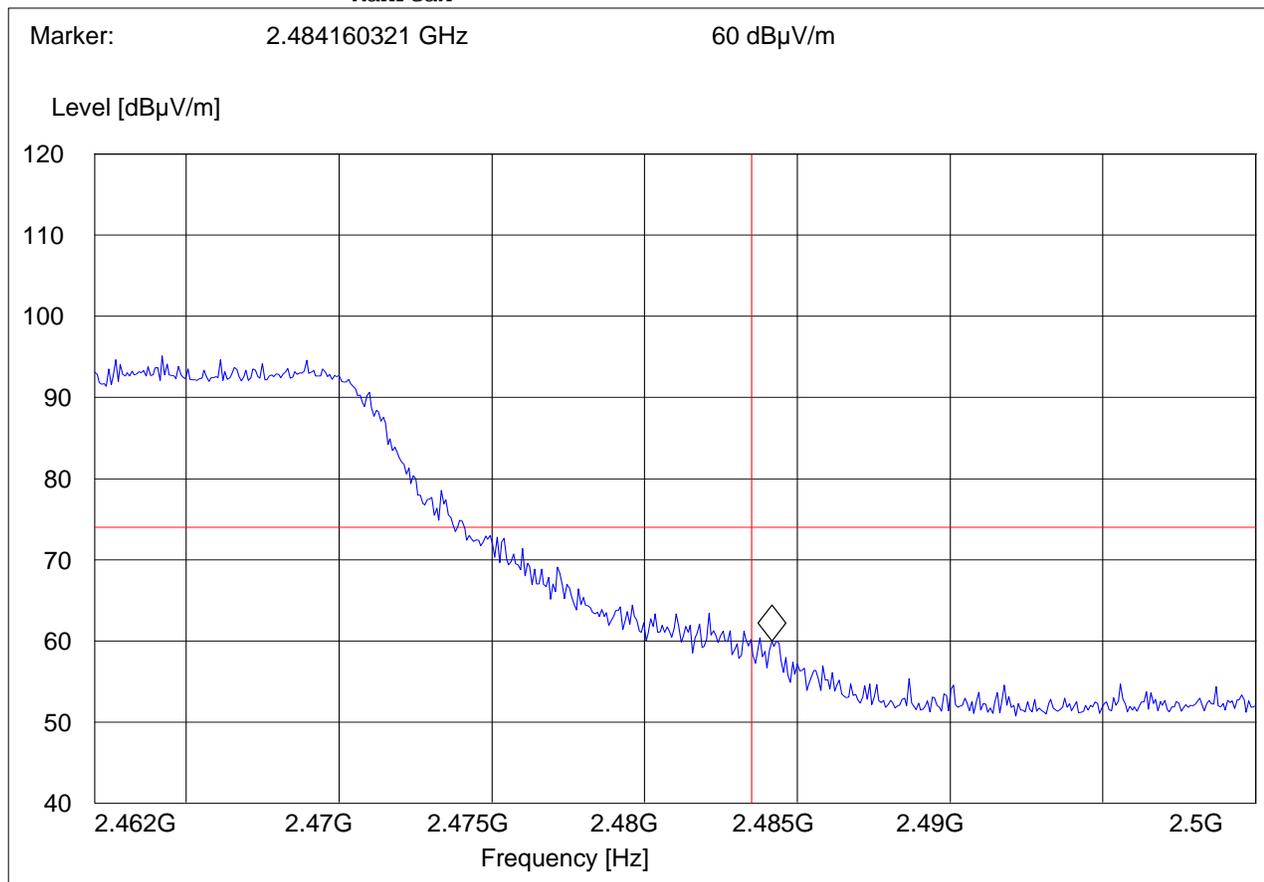


High band edge PEAK

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n40
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 HBE_PK"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |
| | | MaxPeak | | | |



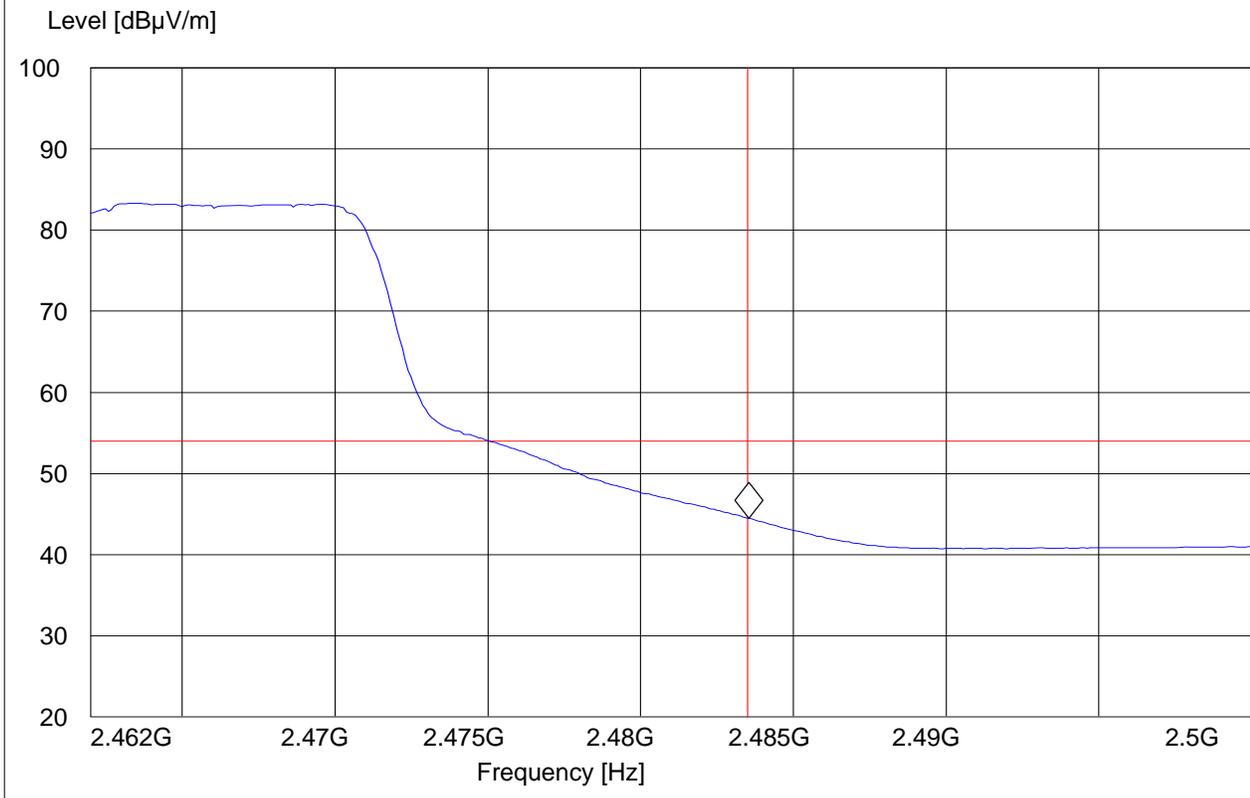
High band edge Average

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n40
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247 HBE_AVG"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 2.5 GHz | 2.5 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_horz |

Marker: 2.483547094 GHz 44.49 dBμV/m



5.3 Transmitter Spurious Emission § 15.247/15.205/15.209

5.3.1 Limits

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|---------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110 | 16.42 - 16.423 | 399.9 - 410 | 4.5 - 5.15 |
| 0.495 - 0.505 | 16.69475 - 16.69525 | 608 - 614 | 5.35 - 5.46 |
| 2.1735 - 2.1905 | 16.80425 - 16.80475 | 960 - 1240 | 7.25 - 7.75 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1300 - 1427 | 8.025 - 8.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 1435 - 1626.5 | 9.0 - 9.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 1645.5 - 1646.5 | 9.3 - 9.5 |
| 6.215 - 6.218 | 74.8 - 75.2 | 1660 - 1710 | 10.6 - 12.7 |
| 6.26775 - 6.26825 | 108 - 121.94 | 1718.8 - 1722.2 | 13.25 - 13.4 |
| 6.31175 - 6.31225 | 123 - 138 | 2200 - 2300 | 14.47 - 14.5 |
| 8.291 - 8.294 | 149.9 - 150.05 | 2310 - 2390 | 15.35 - 16.2 |
| 8.362 - 8.366 | 156.52475 - 156.52525 | 2483.5 - 2500 | 17.7 - 21.4 |
| 8.37625 - 8.38675 | 156.7 - 156.9 | 2690 - 2900 | 22.01 - 23.12 |
| 8.41425 - 8.41475 | 162.0125 - 167.17 | 3260 - 3267 | 23.6 - 24.0 |
| 12.29 - 12.293 | 167.72 - 173.2 | 3332 - 3339 | 31.2 - 31.8 |
| 12.51975 - 12.52025 | 240 - 285 | 3345.8 - 3358 | 36.43 - 36.5 |
| 12.57675 - 12.57725 | 322 - 335.4 | 3600 - 4400 | (²) |
| 13.36 - 13.41 | | | |

*PEAK LIMIT= 74dBuV/m

*AVG. LIMIT= 54dBuV/m

Notes:

1. The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3 and 25 GHz very short cable connections to the antenna was used to minimize the noise level.
2. All measurements are done in peak mode using an average limit, unless specified with the plots.
3. Radiated emissions are maximized by rotating the EUT 360° at 0.5 meter height increments between 1 and 4 meters.
4. Measurements were performed with the EUT in X, Y and Z orientations with the measurement antenna in both horizontal and vertical polarity. The plots below show the results of the worst case orientation and polarity

Results for the radiated measurements below 30MHz according § 15.33

| Frequency | Measured values | Remarks |
|--------------|---------------------------------------|---|
| 9KHz – 30MHz | No emissions found, caused by the EUT | This is valid for all the tested channels |

5.3.2 RESULTS Sub-band 1 802.11b/g MODE

Transmitter spurious emission for 802.11b/g mode is measured in 802.11g mode, which has higher radiated power, and verified in 802.11b mode. All emissions reported here are worse cases.

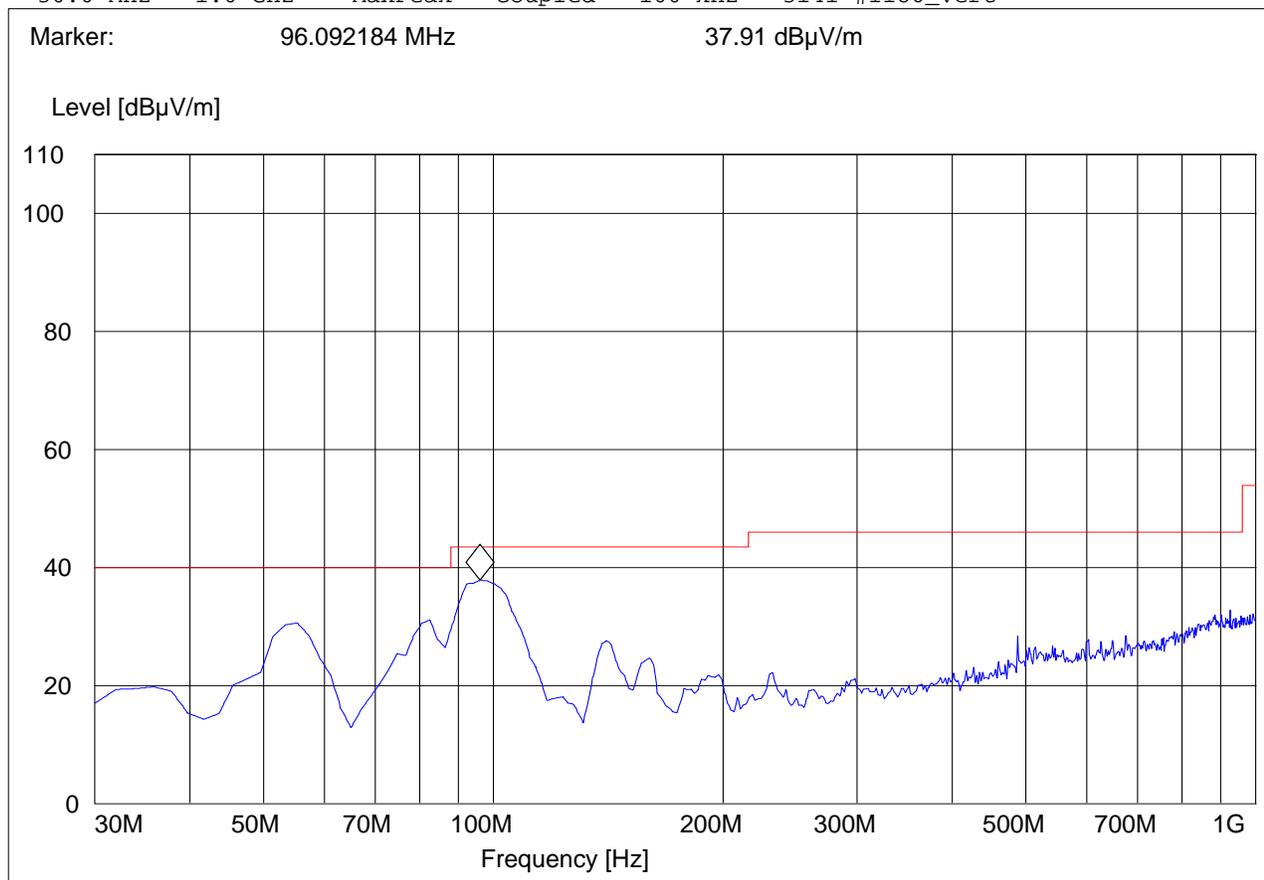
30MHz – 1GHz, Antenna: Vertical

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11g; Ch. 11
 ANT Orientation: V
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Ver"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Vert |



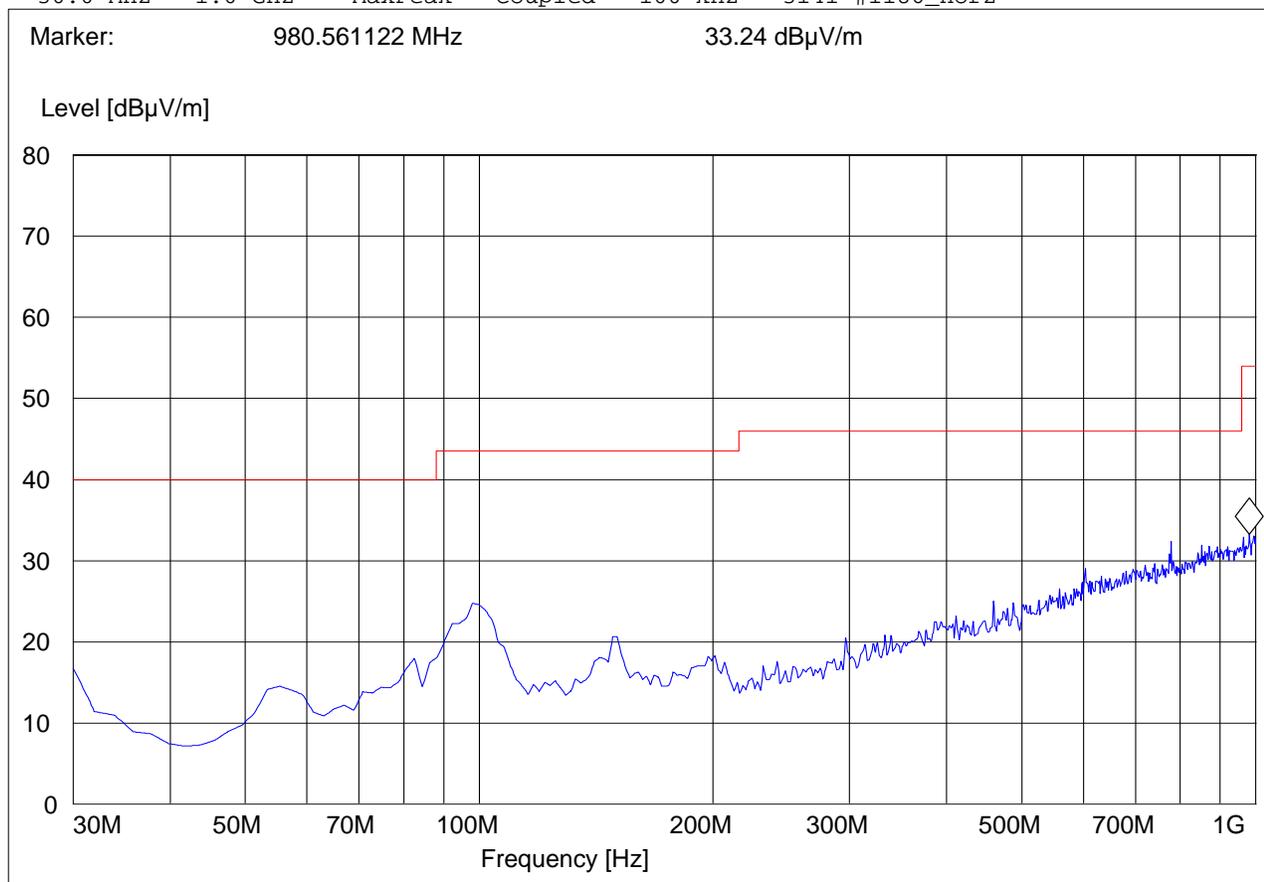
30MHz – 1GHz, Antenna: Horizontal

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11g; Ch. 11
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Horz"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Horz |



1-3GHz (2412MHz)

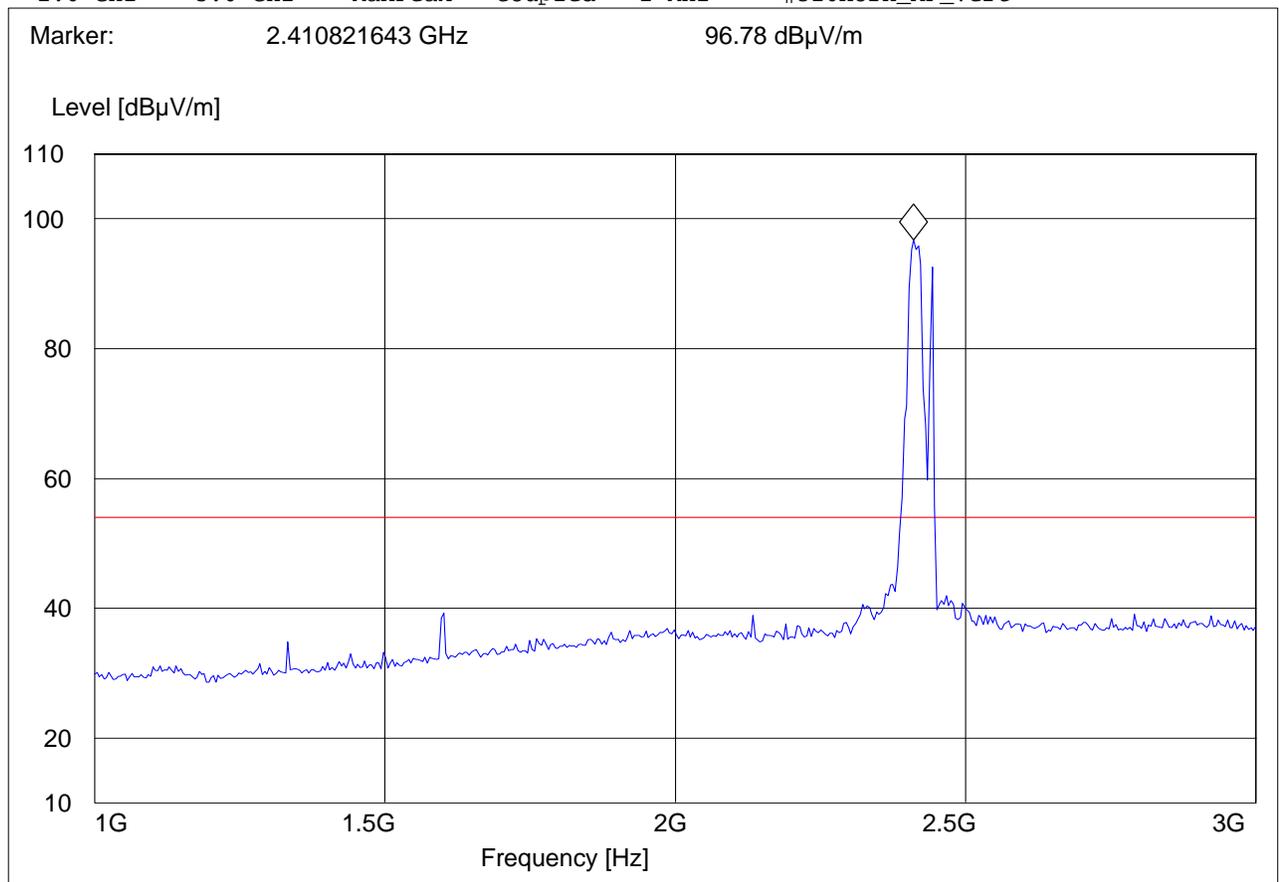
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



1-3GHz (2437MHz)

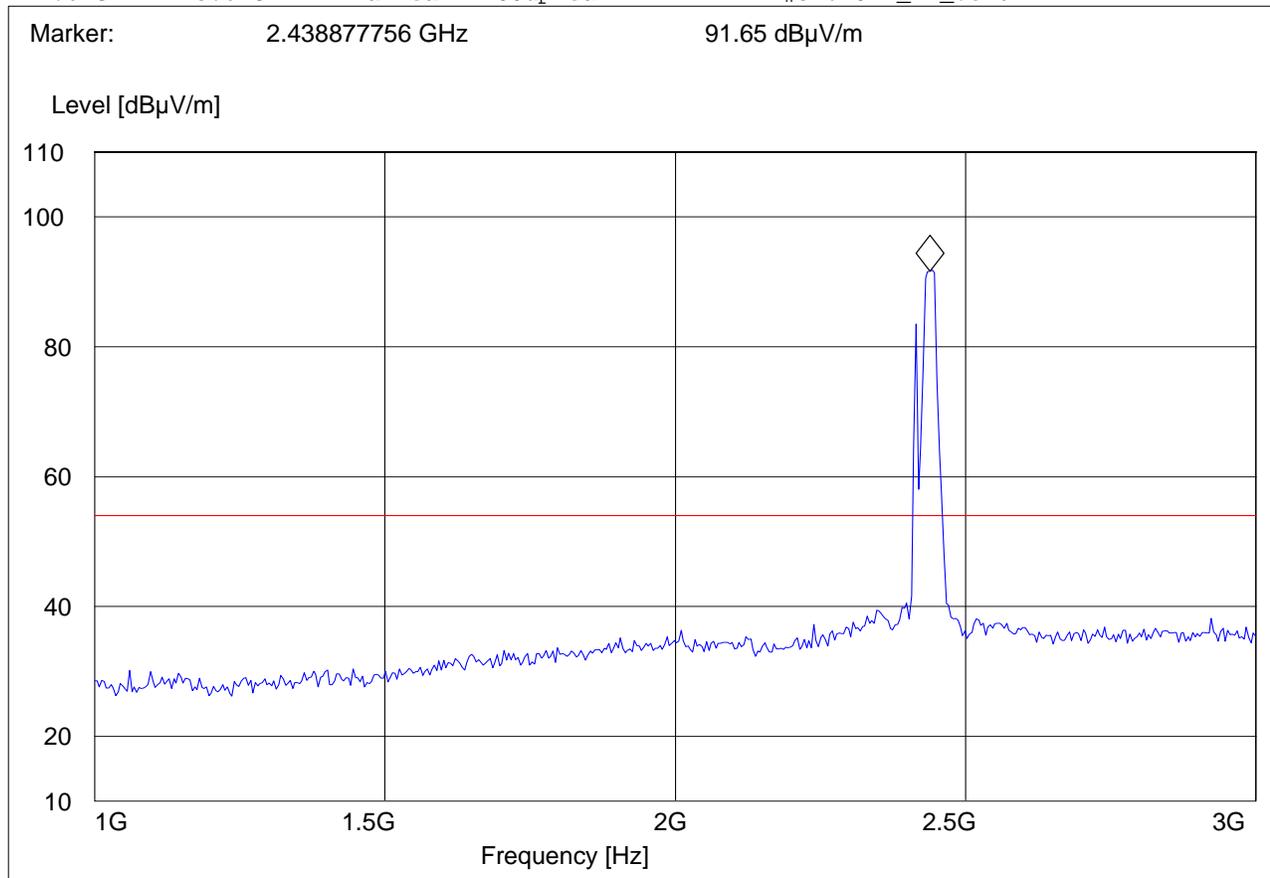
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; CH. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



1-3GHz (2462MHz)

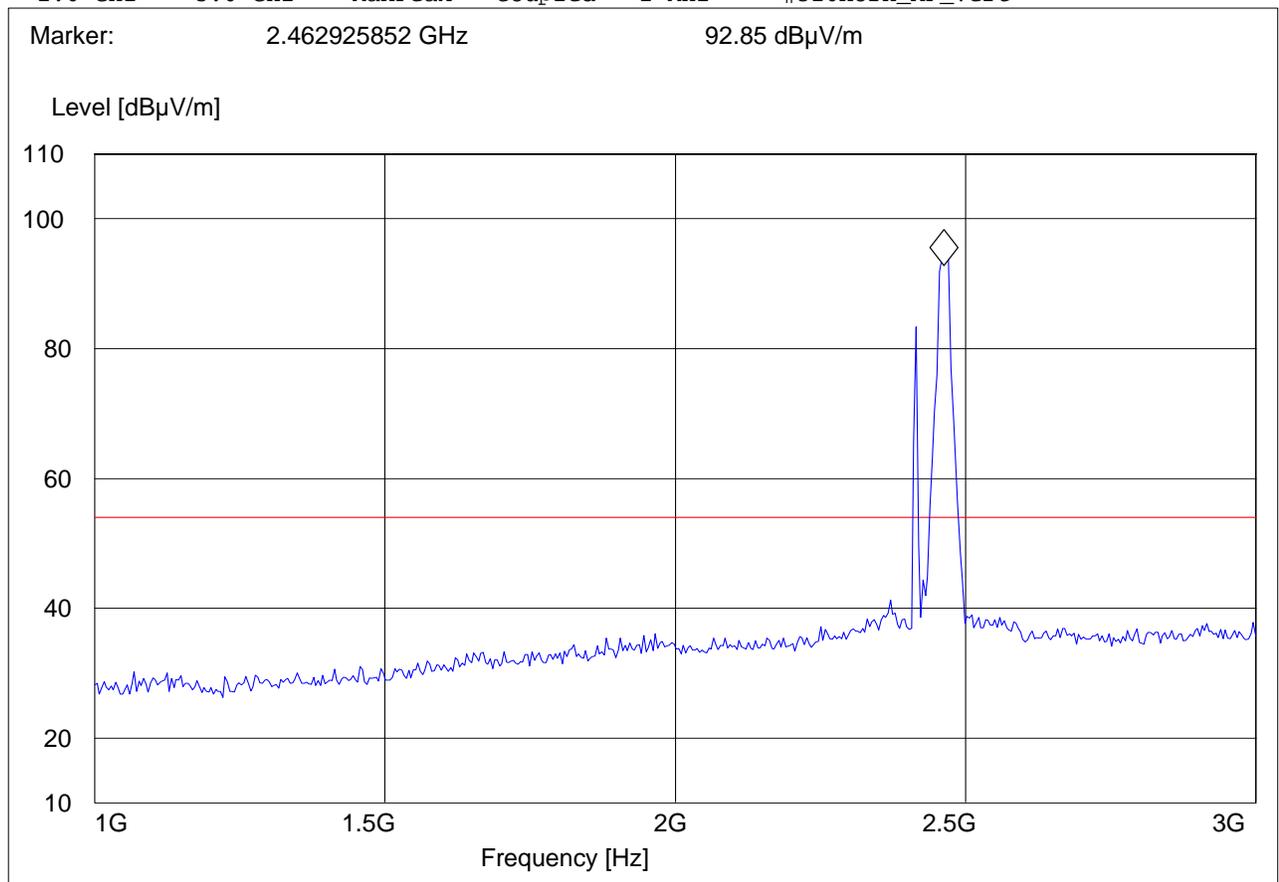
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; CH. 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



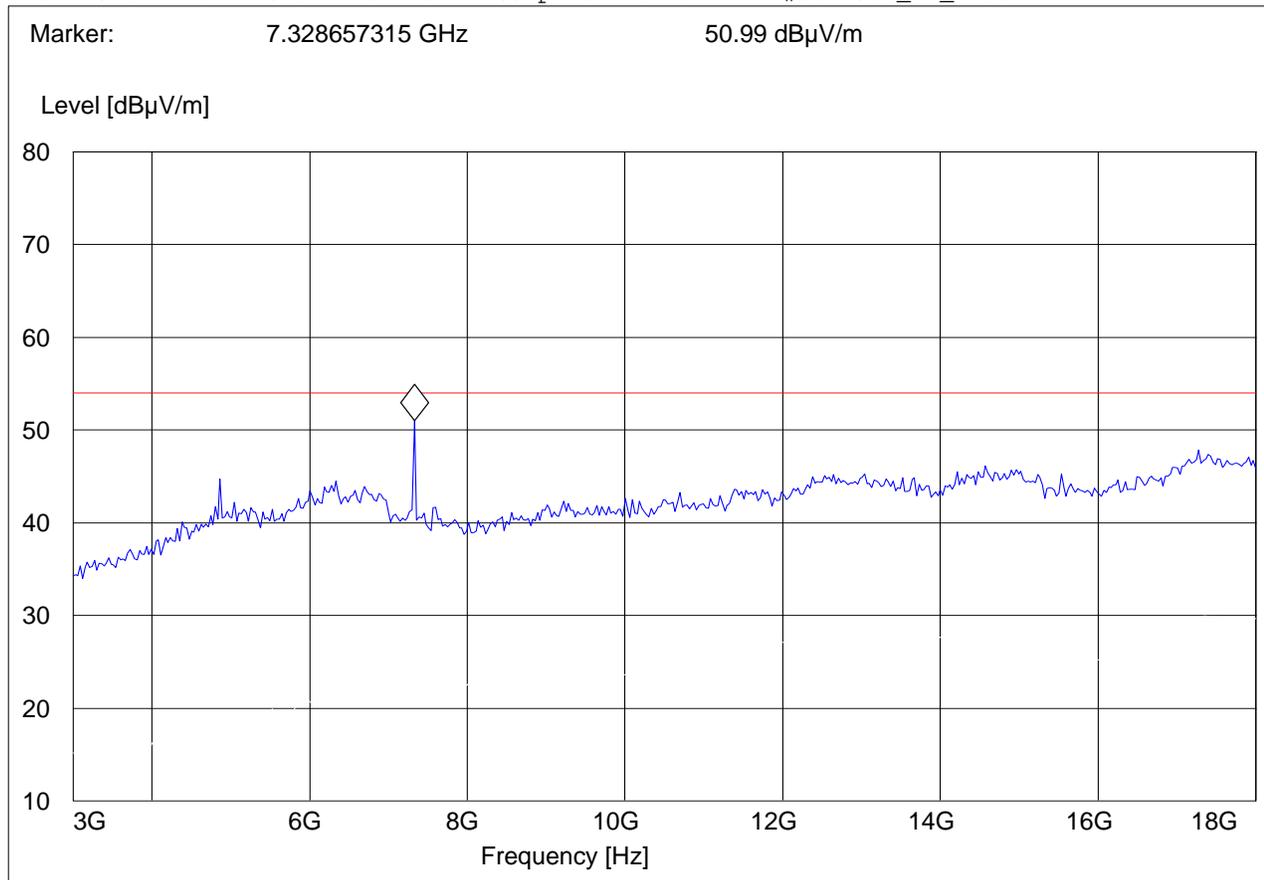
3-18GHz (2412MHz)

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



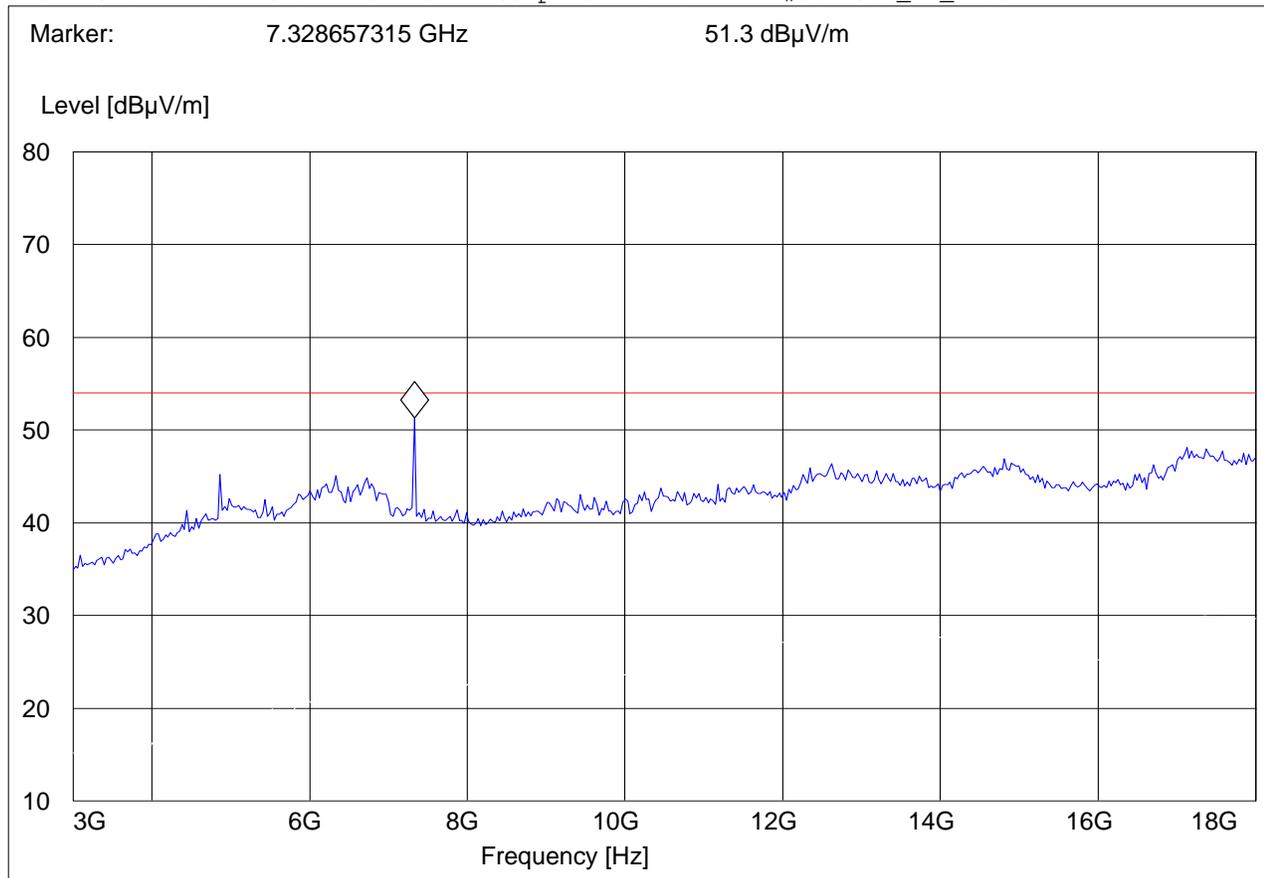
3-18GHz (2437MHz)

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



3-18GHz (2462MHz)

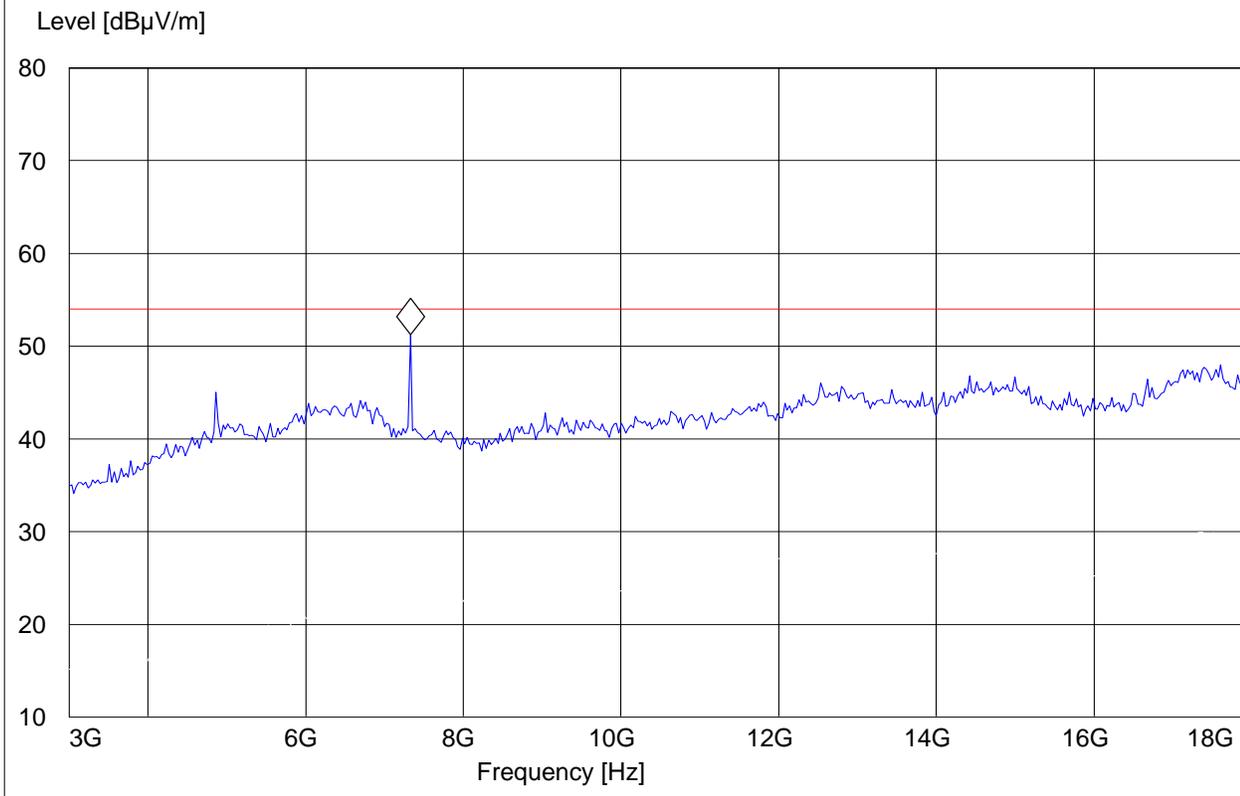
Note: Peak Reading vs. Average limit

EUT: IRX-4300-FC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch. 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

Marker: 7.328657315 GHz 51.24 dBµV/m



18-25GHz

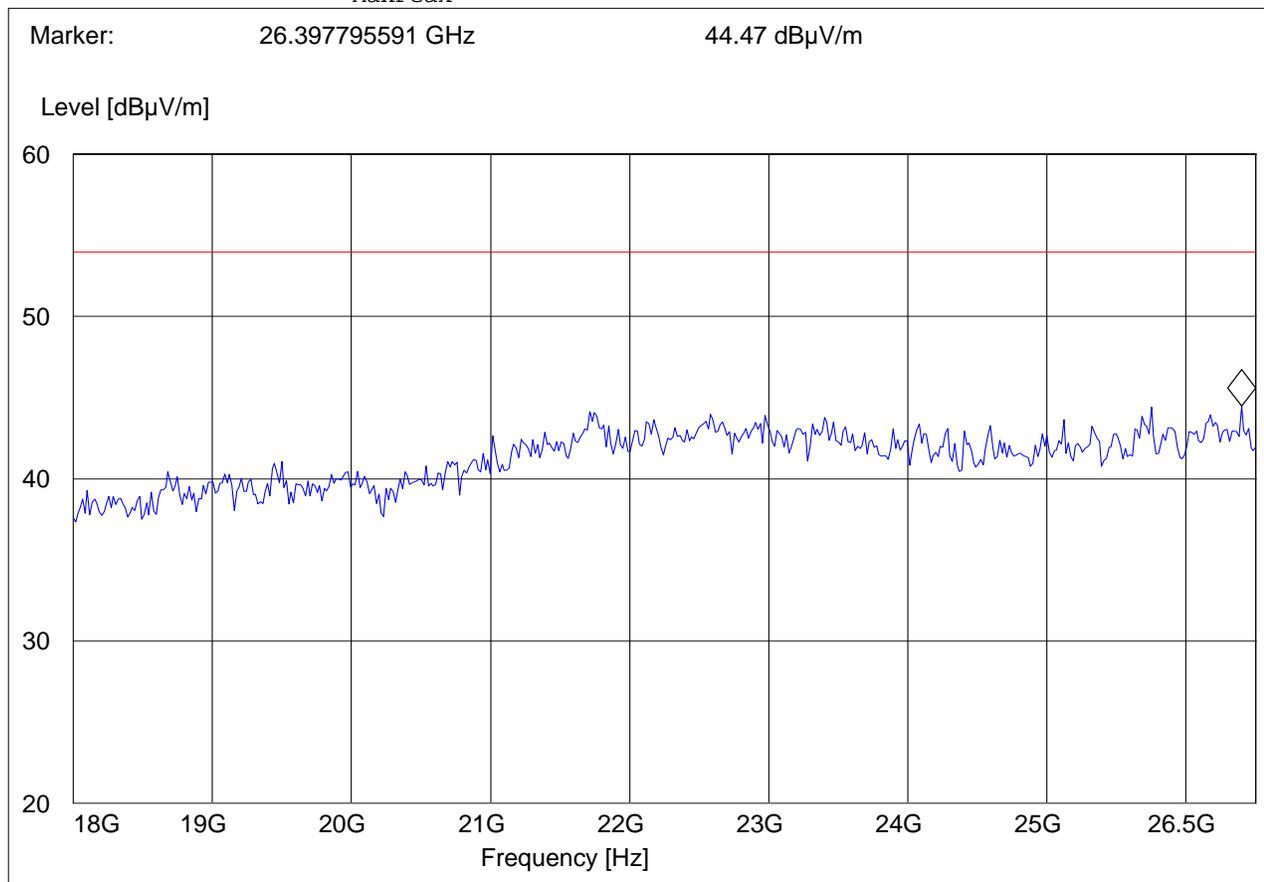
Note: This plot is valid for low, mid, high channels (worst-case plot).

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11g; Ch. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_18-26.5G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|--------------------|------------|-----------|--------------------|
| 18.0 GHz | 26.5 GHz | MaxPeak MaxPeak | Coupled | 100 kHz | Horn # 3116_18-40G |



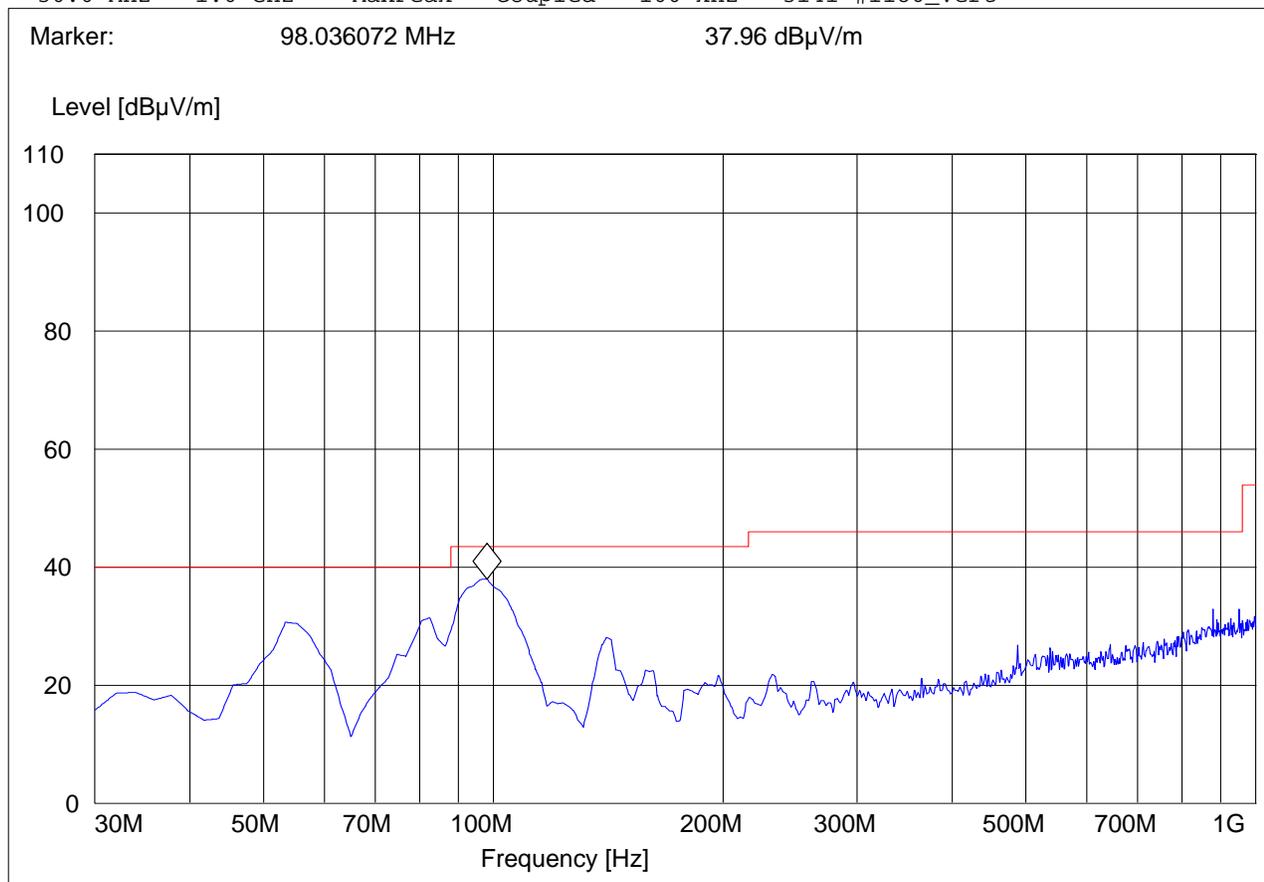
**5.3.3 RESULTS Sub-band 1 802.11n HT20 MODE
30MHz – 1GHz, Antenna: Vertical**

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n20; Ch. 11
 ANT Orientation: V
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Ver"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Vert |



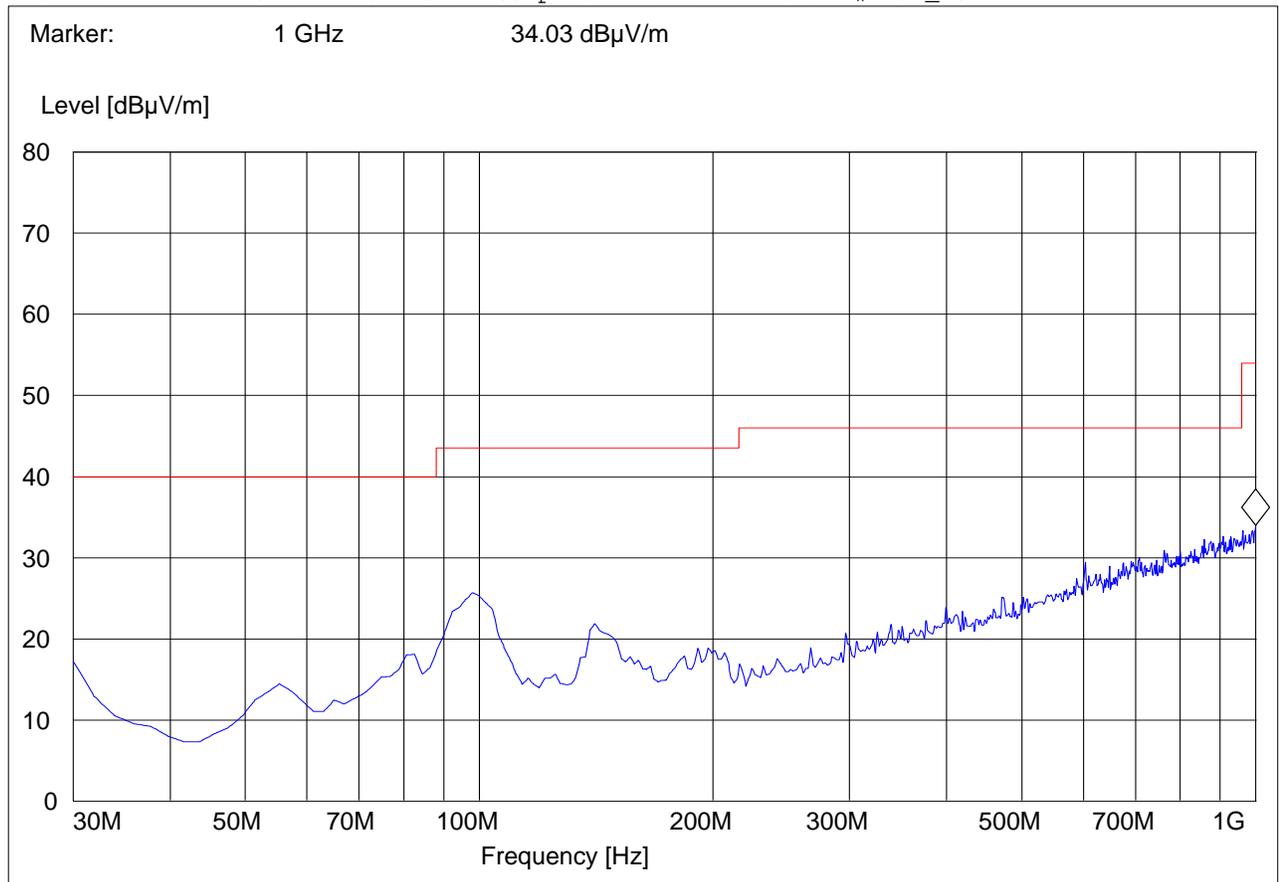
30MHz – 1GHz, Antenna: Horizontal

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Horz"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Horz |



1-3GHz (2412MHz)

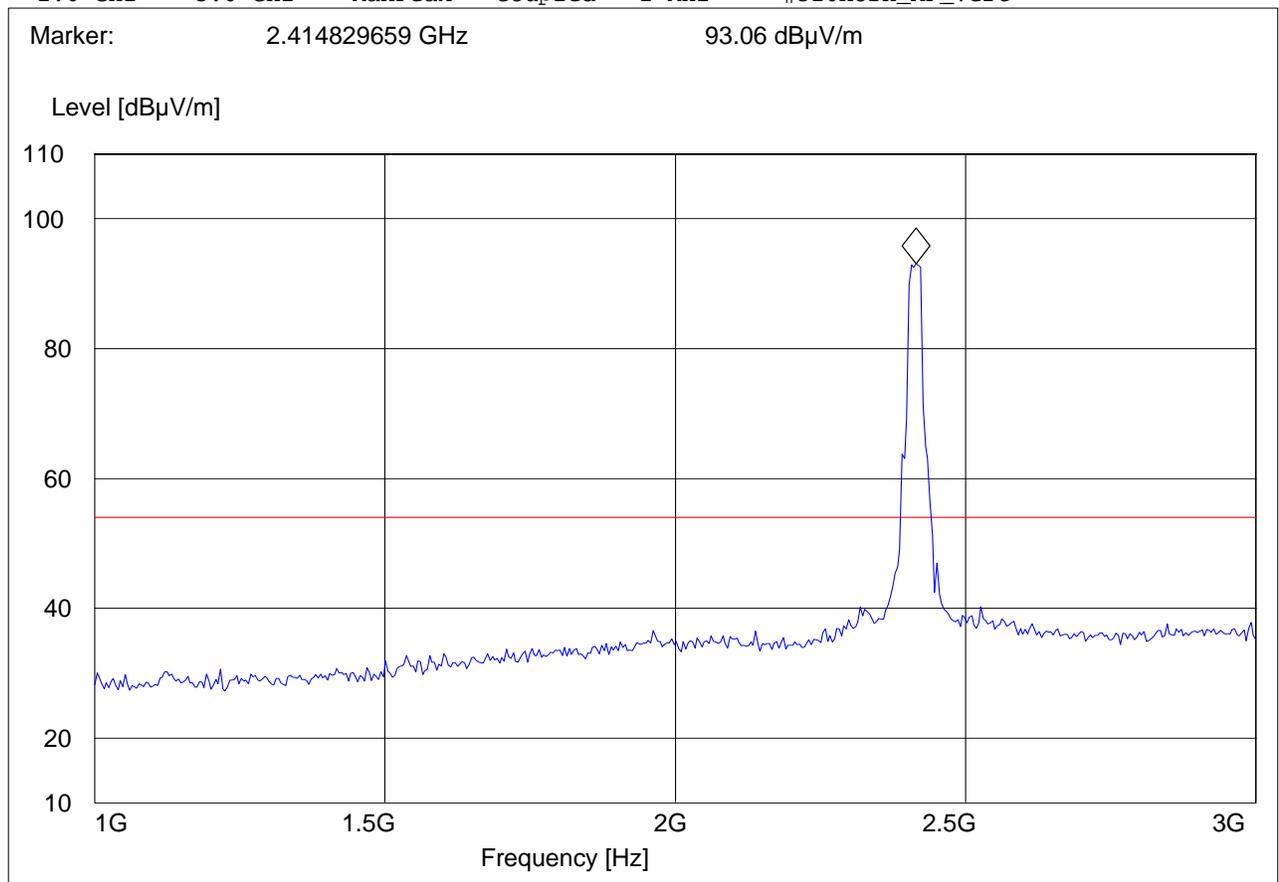
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



1-3GHz (2437MHz)

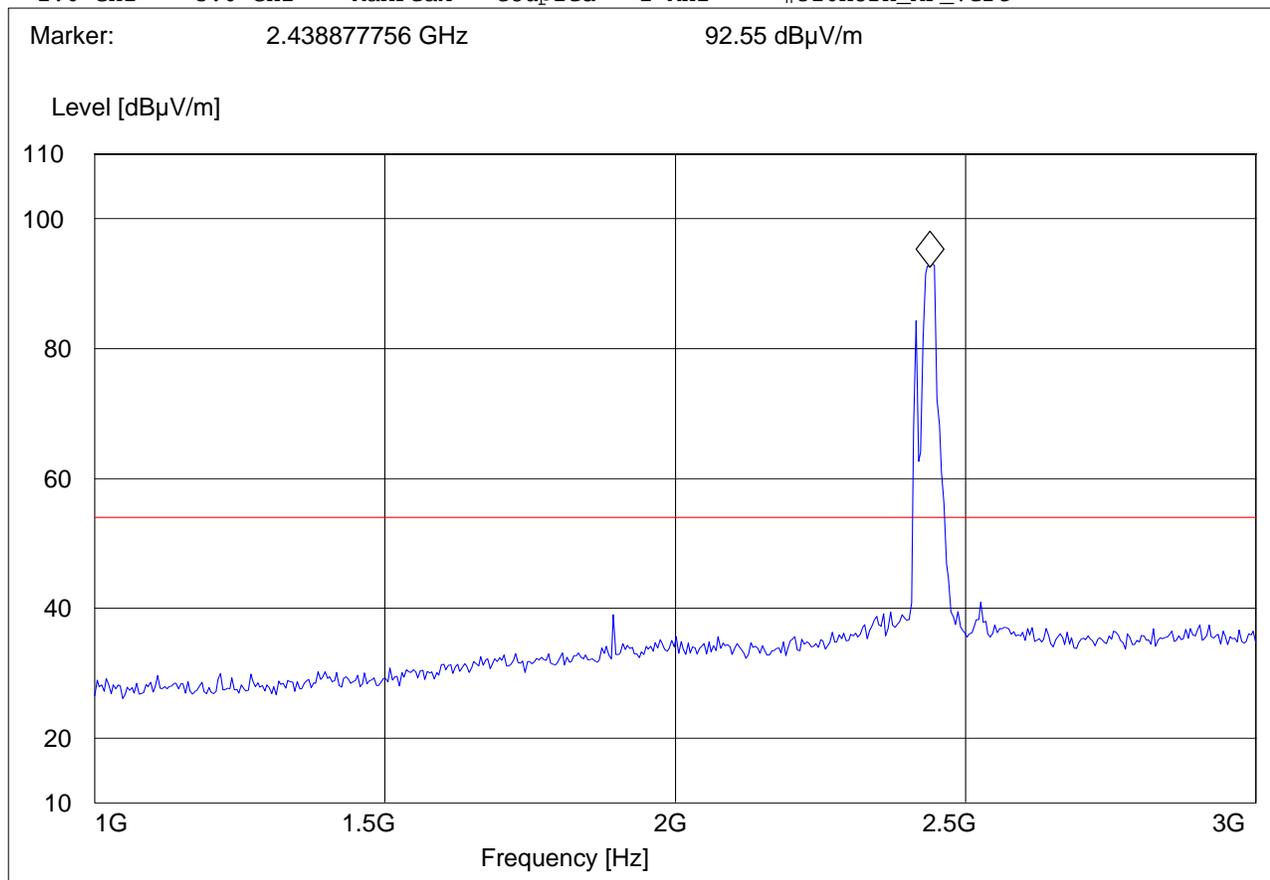
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



1-3GHz (2462MHz)

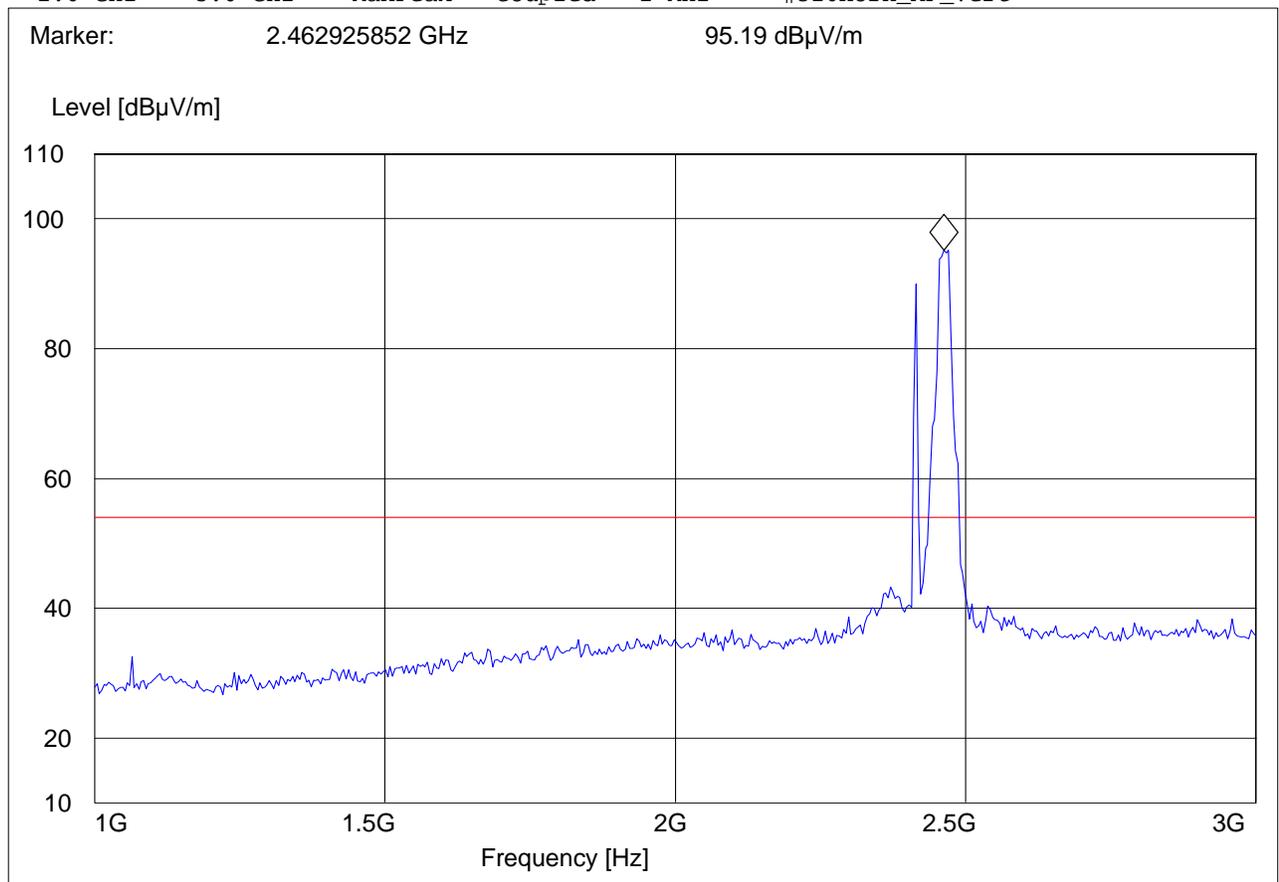
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



3-18GHz (2412MHz)

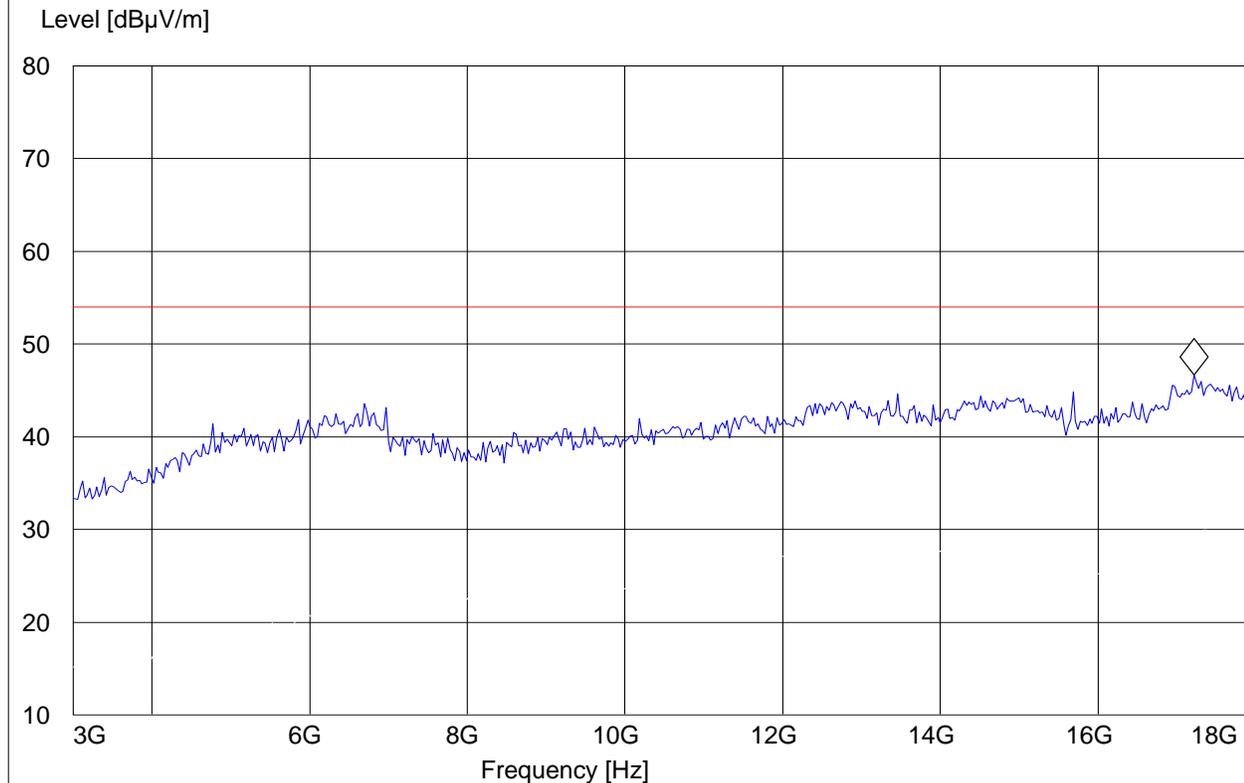
Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

Marker: 17.218436874 GHz 46.66 dBµV/m



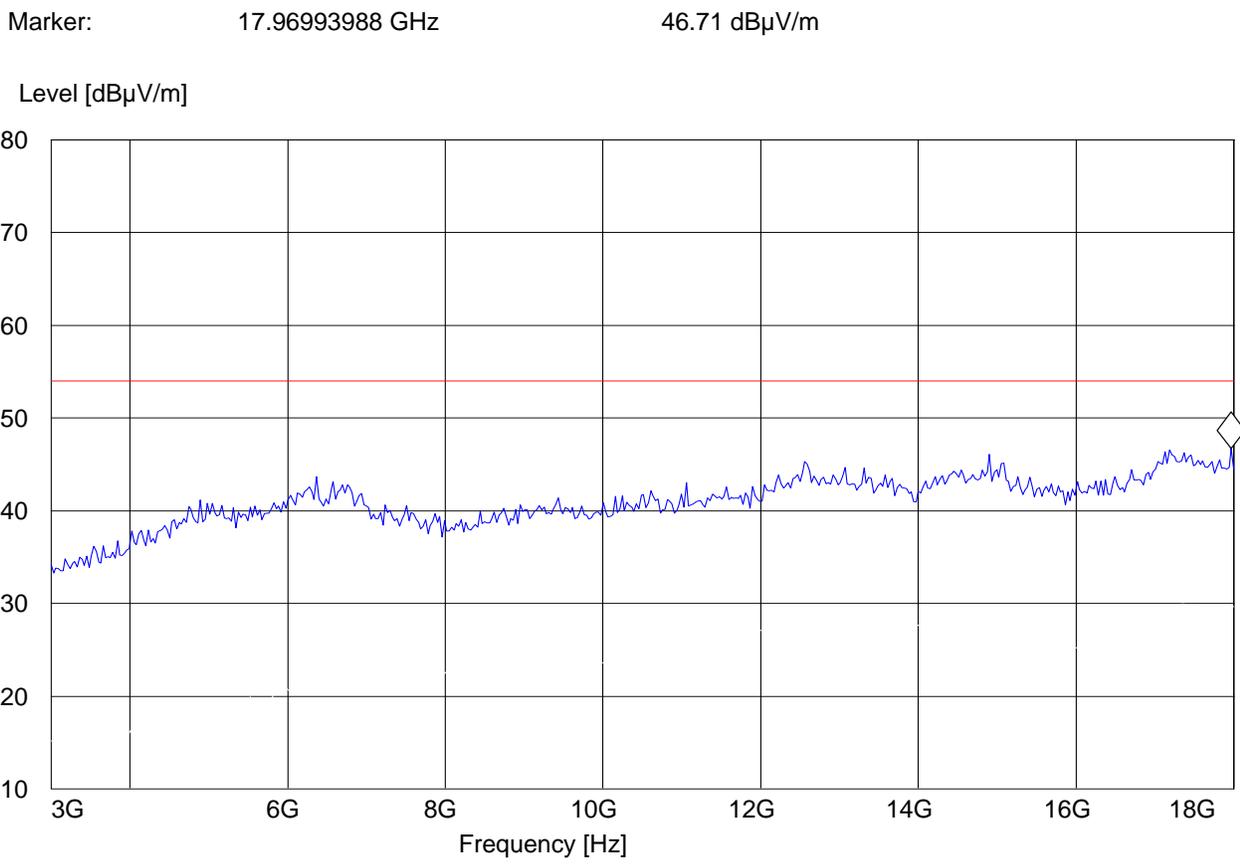
1-18GHz (2437MHz)

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



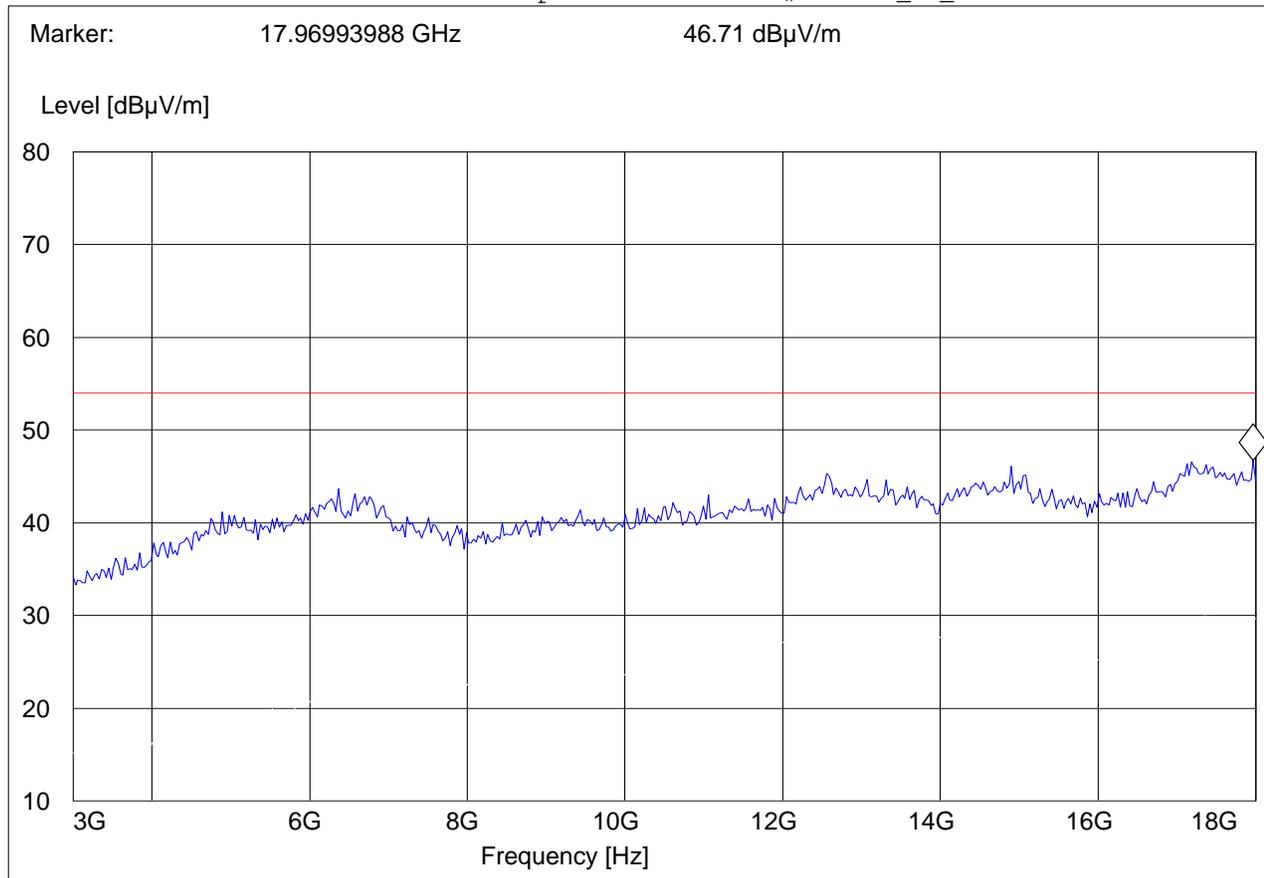
3-18GHz (2462MHz)

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 11
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



18-25GHz

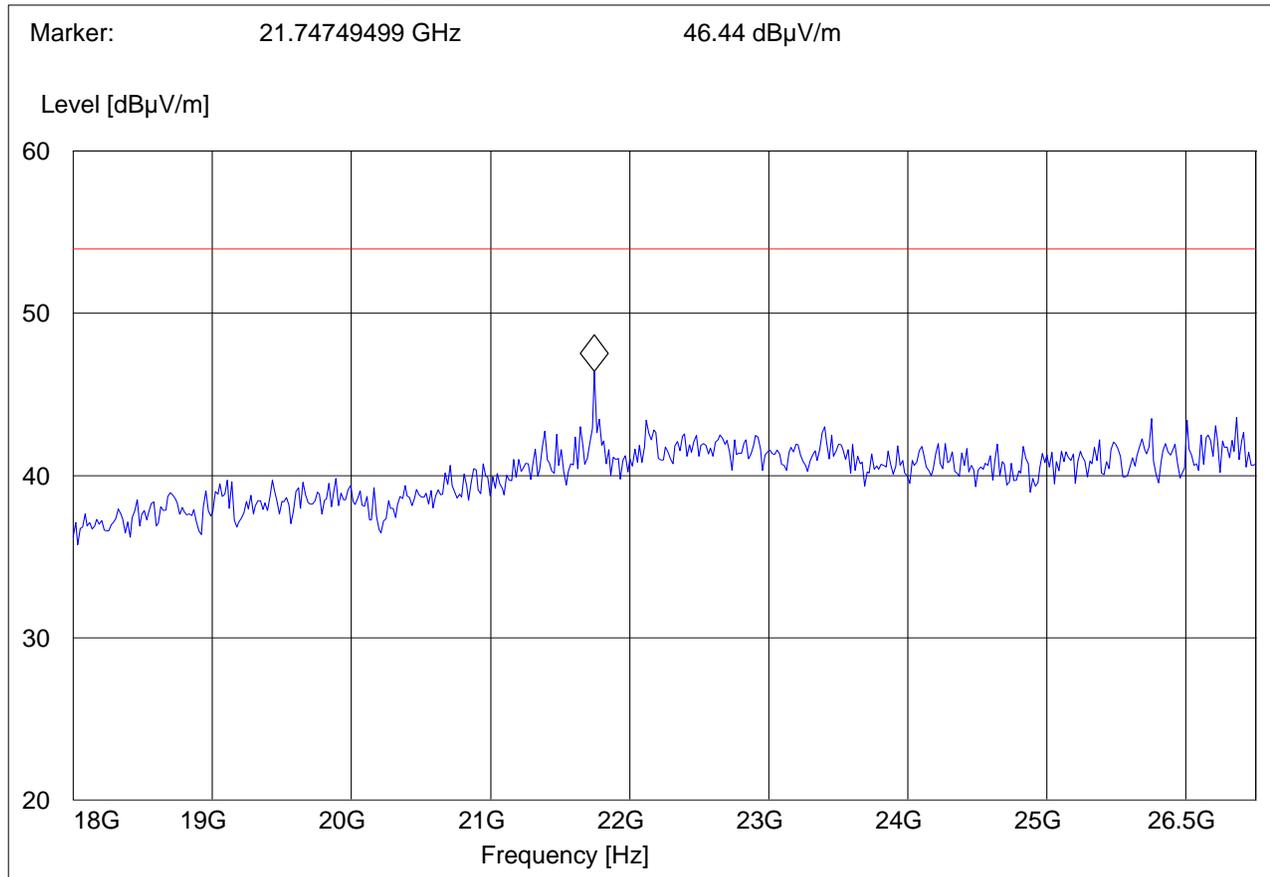
Note: This plot is valid for low, mid, high channels (worst-case plot).

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n20; CH. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_18-26.5G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|--------------------|------------|-----------|--------------------|
| 18.0 GHz | 26.5 GHz | MaxPeak MaxPeak | Coupled | 100 kHz | Horn # 3116_18-40G |



5.3.4 RESULTS Sub-band 1 802.11n HT40 MODE

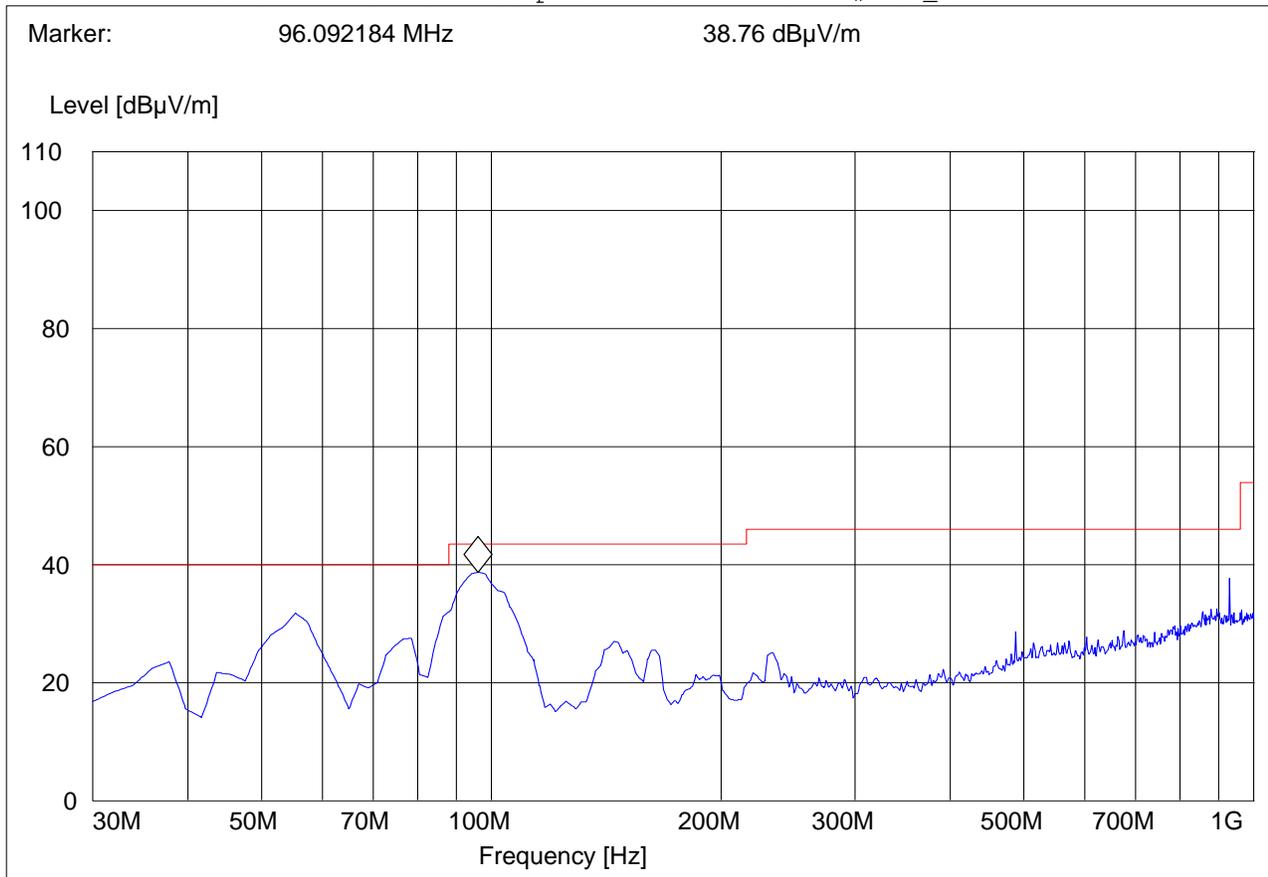
30MHz – 1GHz, Antenna: Vertical

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n40; Ch. 1
 ANT Orientation: V
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Ver"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Vert |



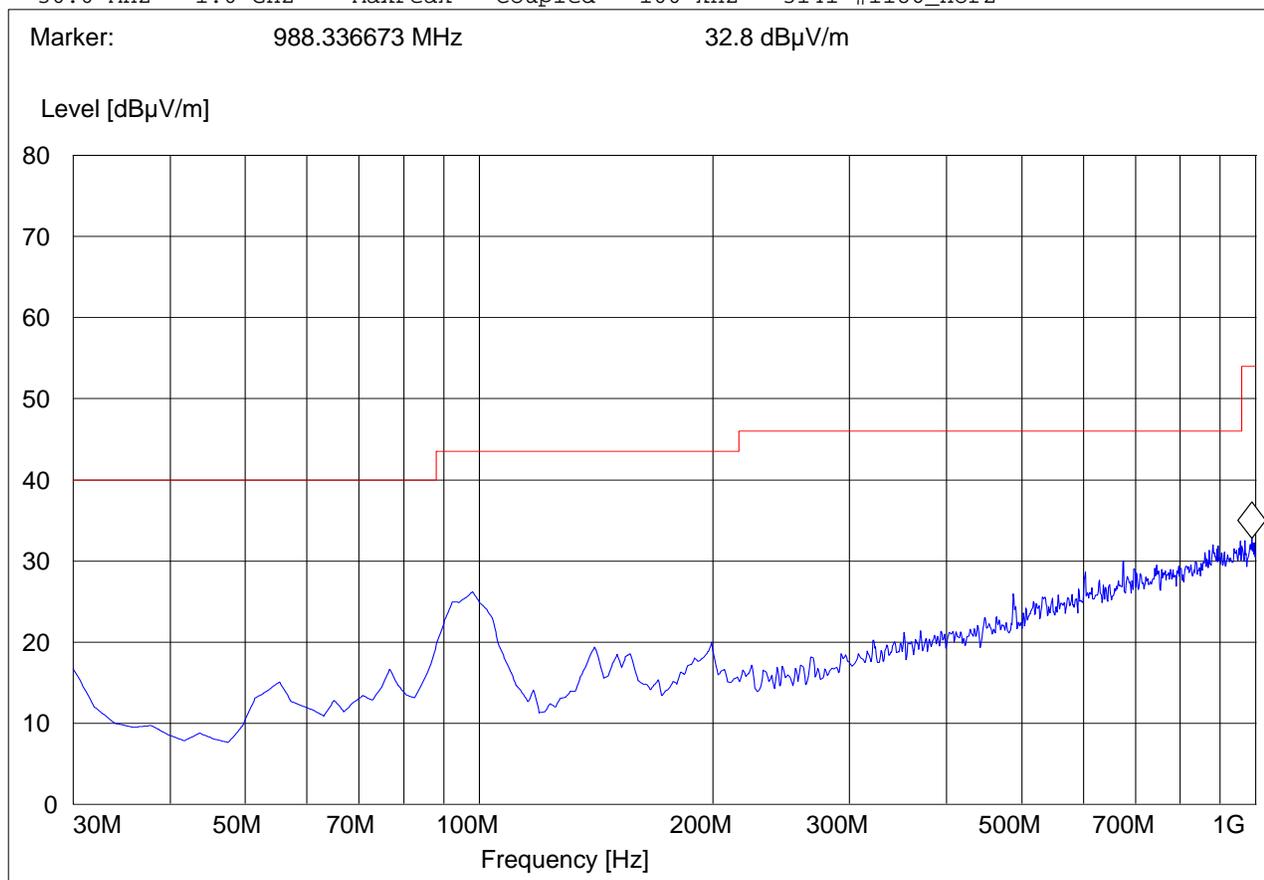
30MHz – 1GHz, Antenna: Horizontal

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; Ch. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Hor"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Horz |



1-3GHz (2422MHz)

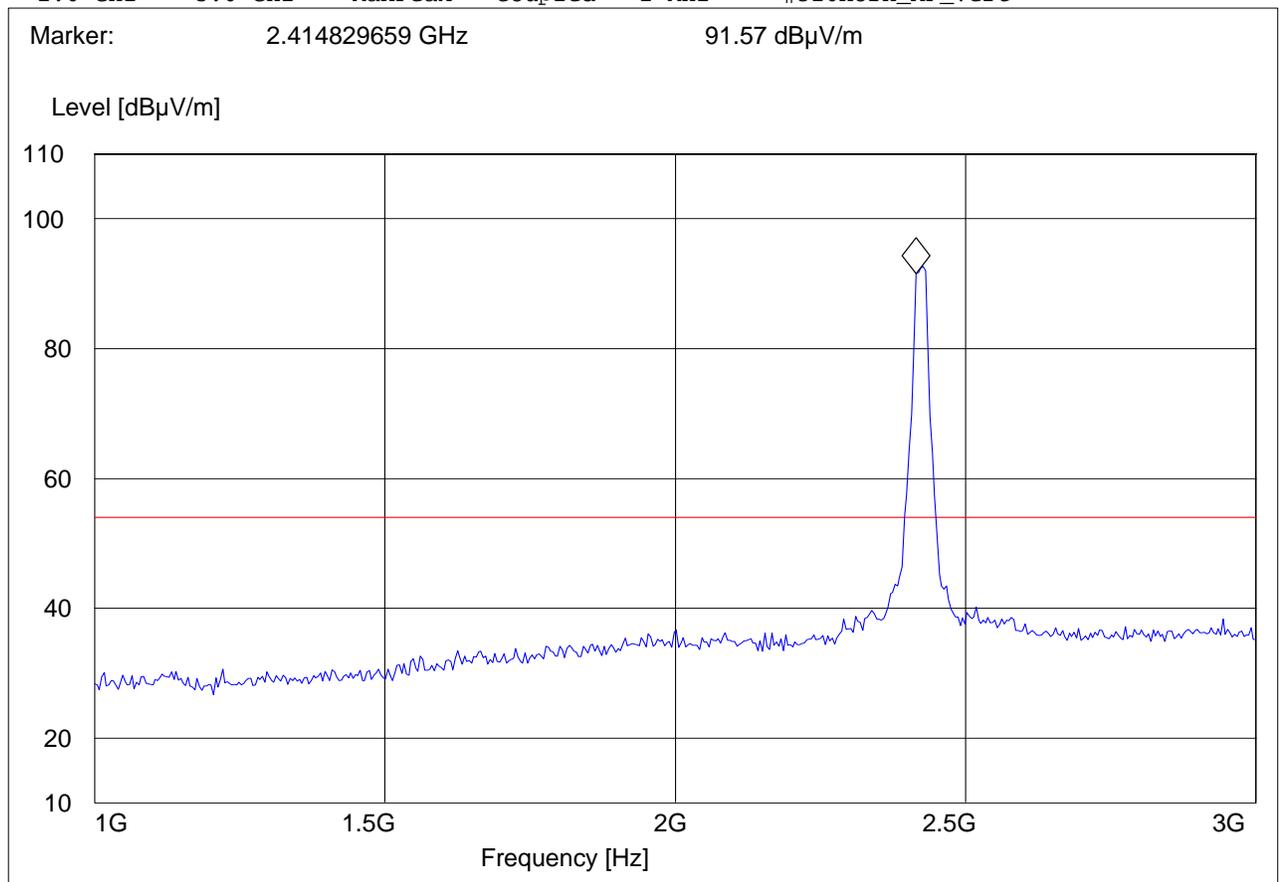
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; CH. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



1-3GHz (2437MHz)

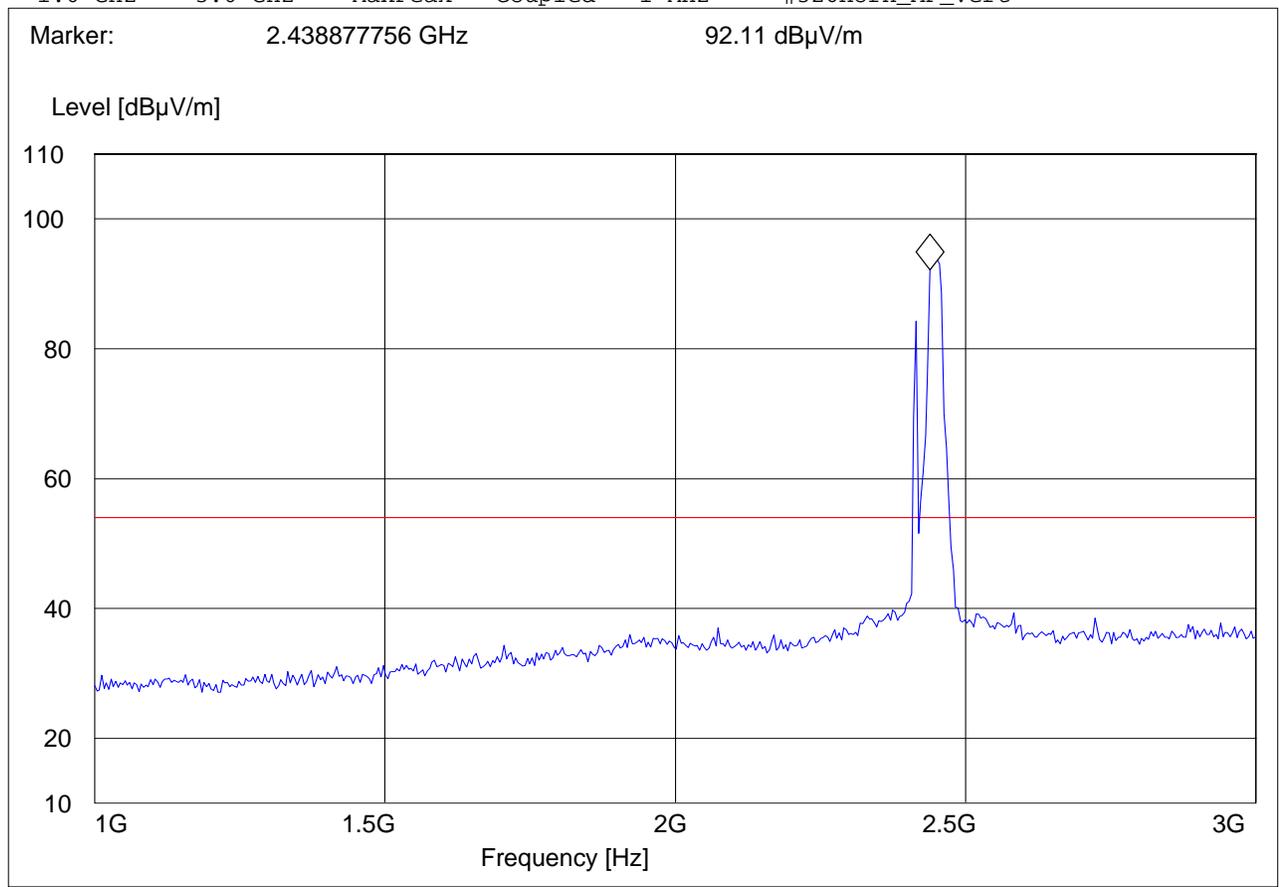
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; CH. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



1-3GHz (2452MHz)

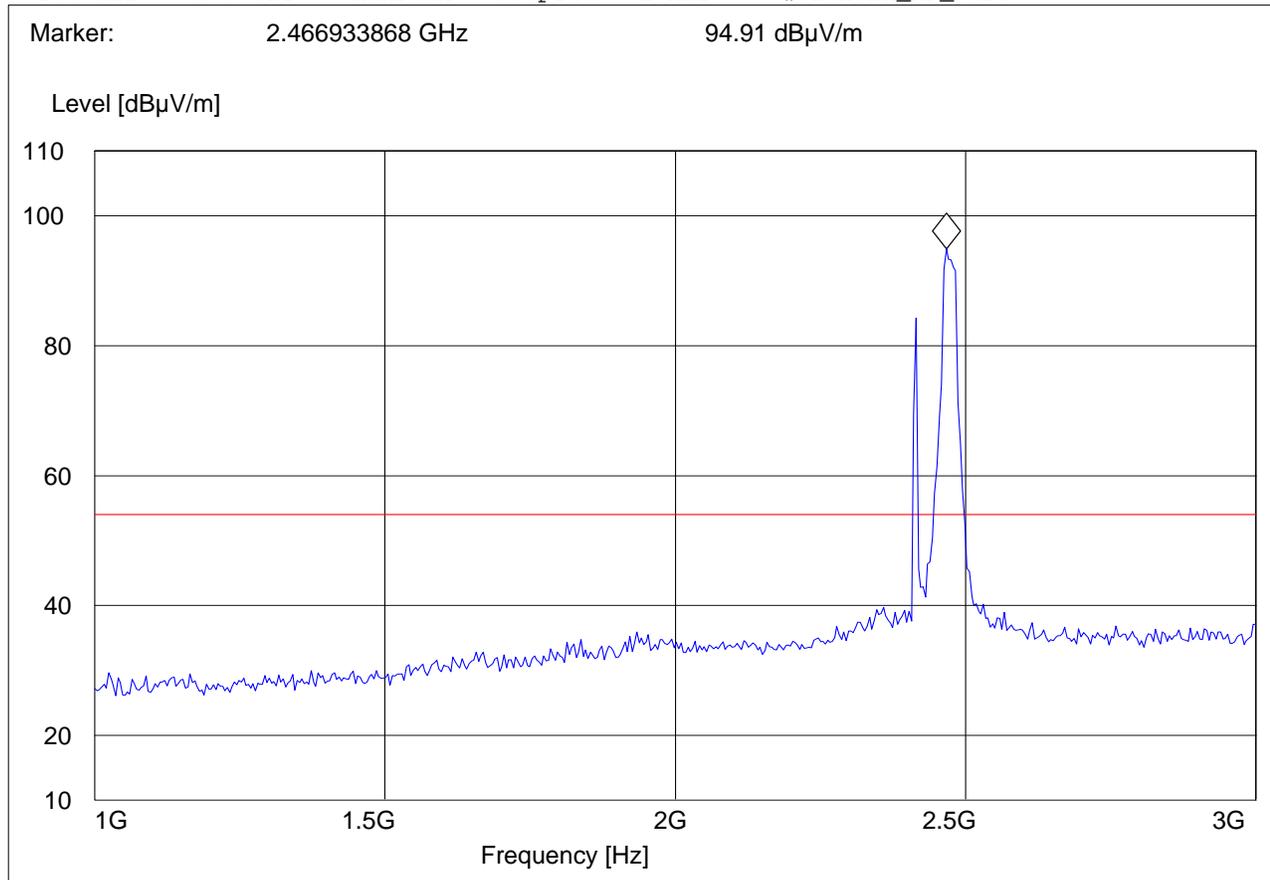
Note: The peak above the limit line is the carrier freq.

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; CH. 10
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_1-3G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 3.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



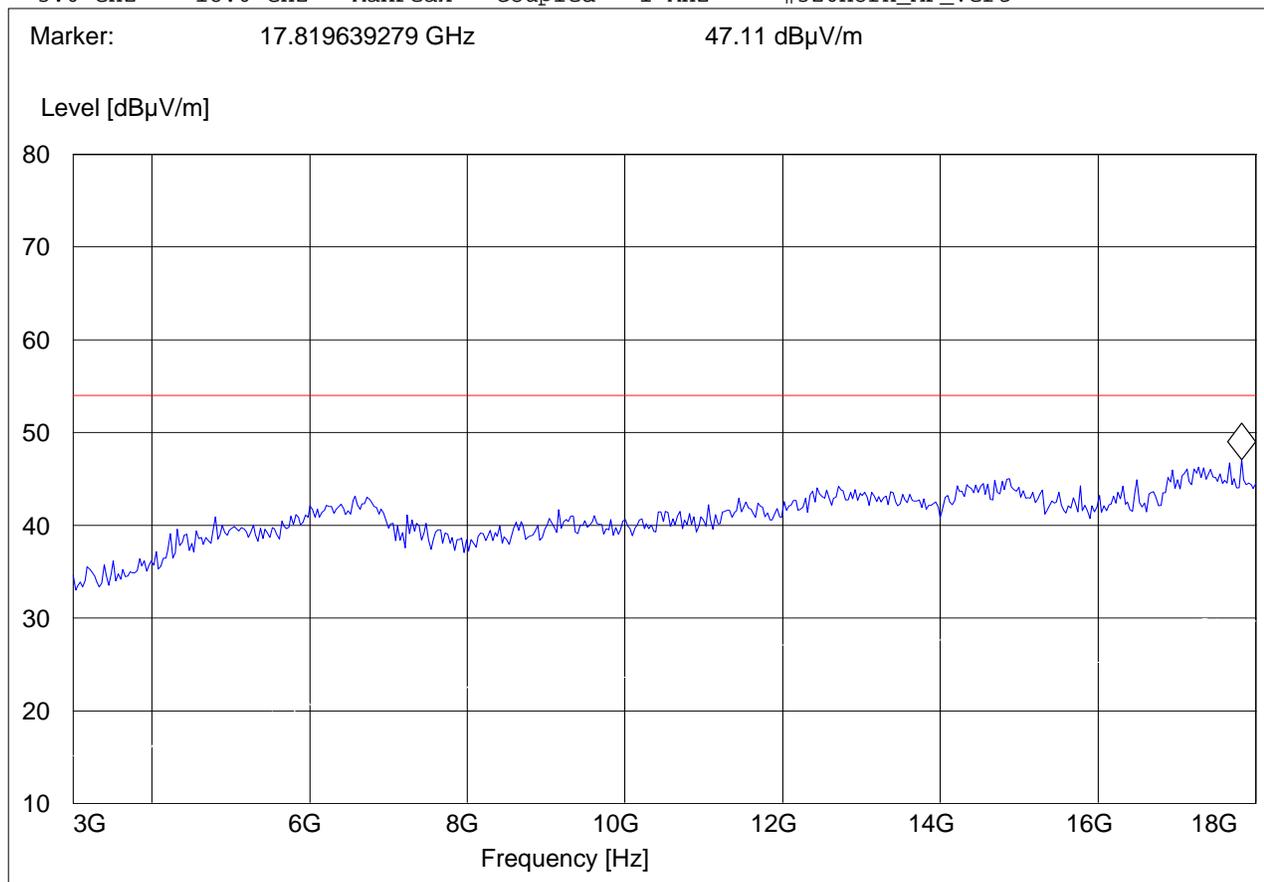
3-18GHz (2422MHz)

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; CH. 1
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |



3-18GHz (2437MHz)

Note: Peak Reading vs. Average limit

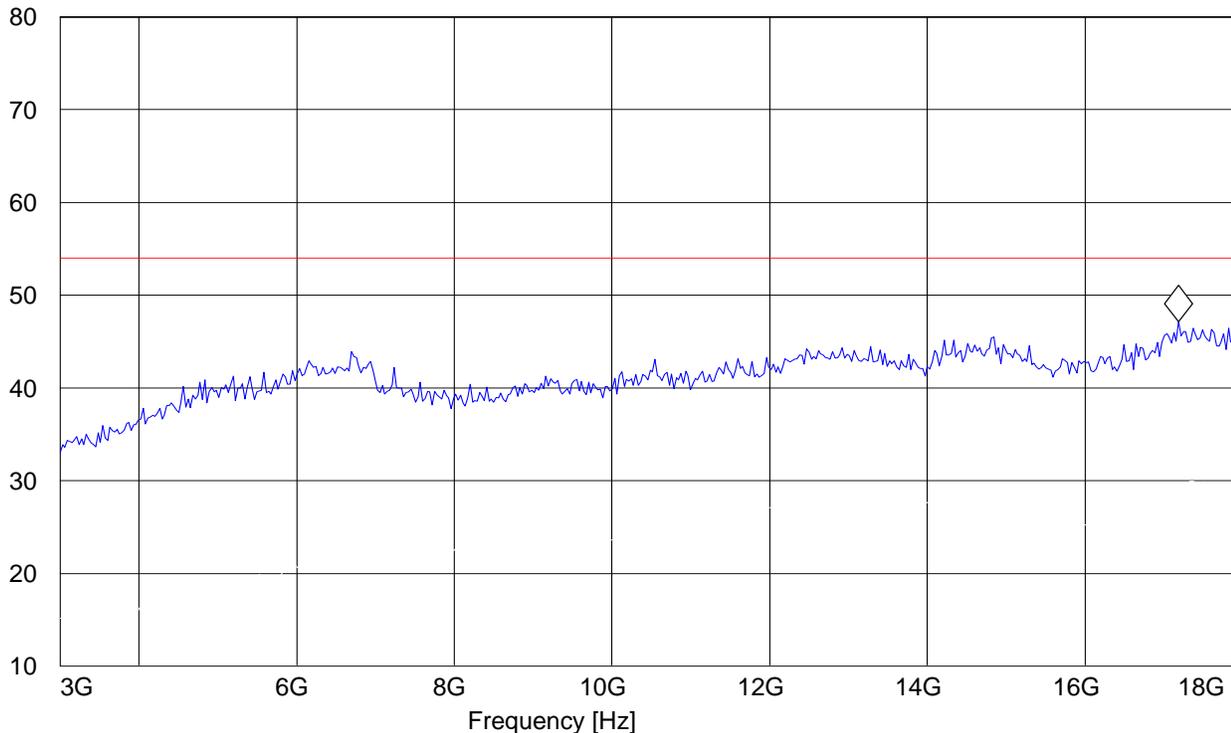
EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; CH. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

Marker: 17.188376754 GHz 47.16 dB μ V/m

Level [dB μ V/m]



3-18GHz (2452MHz)

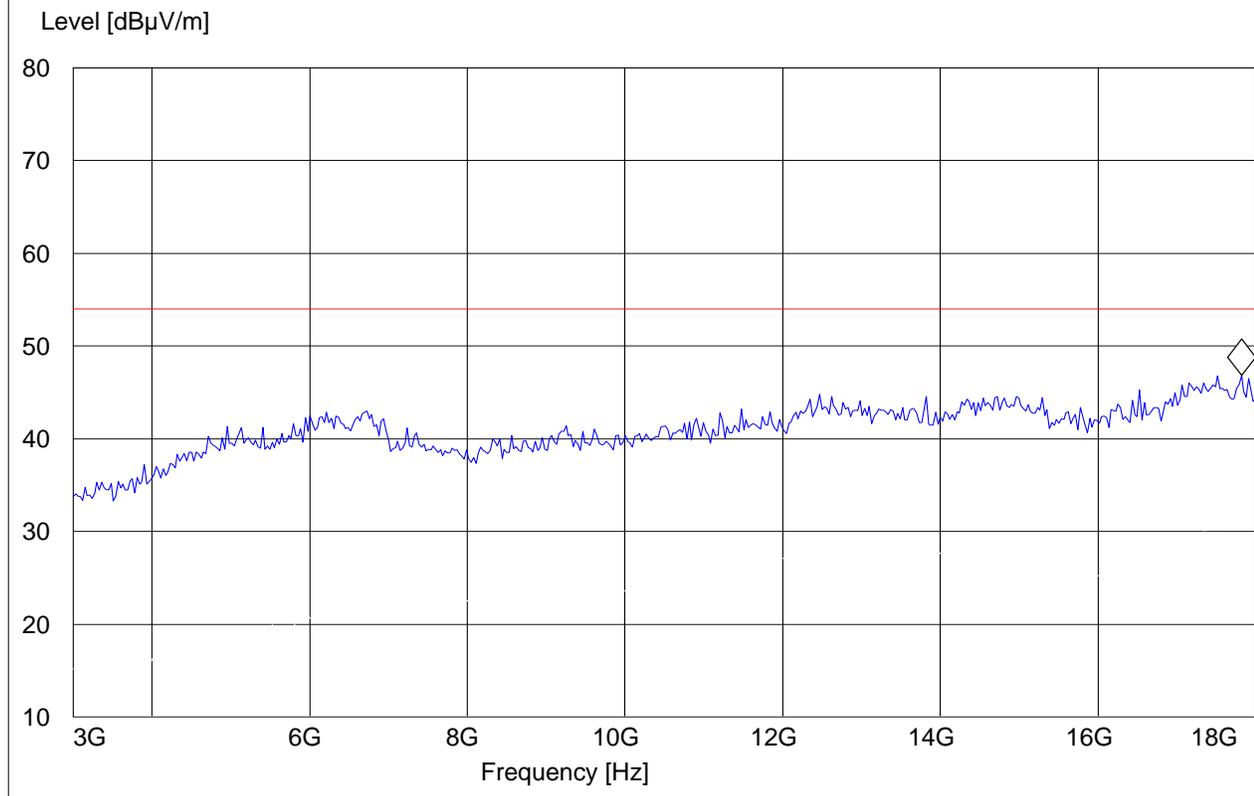
Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11n40; CH. 10
 ANT Orientation: H
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments: With 2.4 GHz notch filter

SWEEP TABLE: "FCC15.247_3-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 3.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_vert |

Marker: 17.819639279 GHz 46.87 dBµV/m



18-26.5GHz

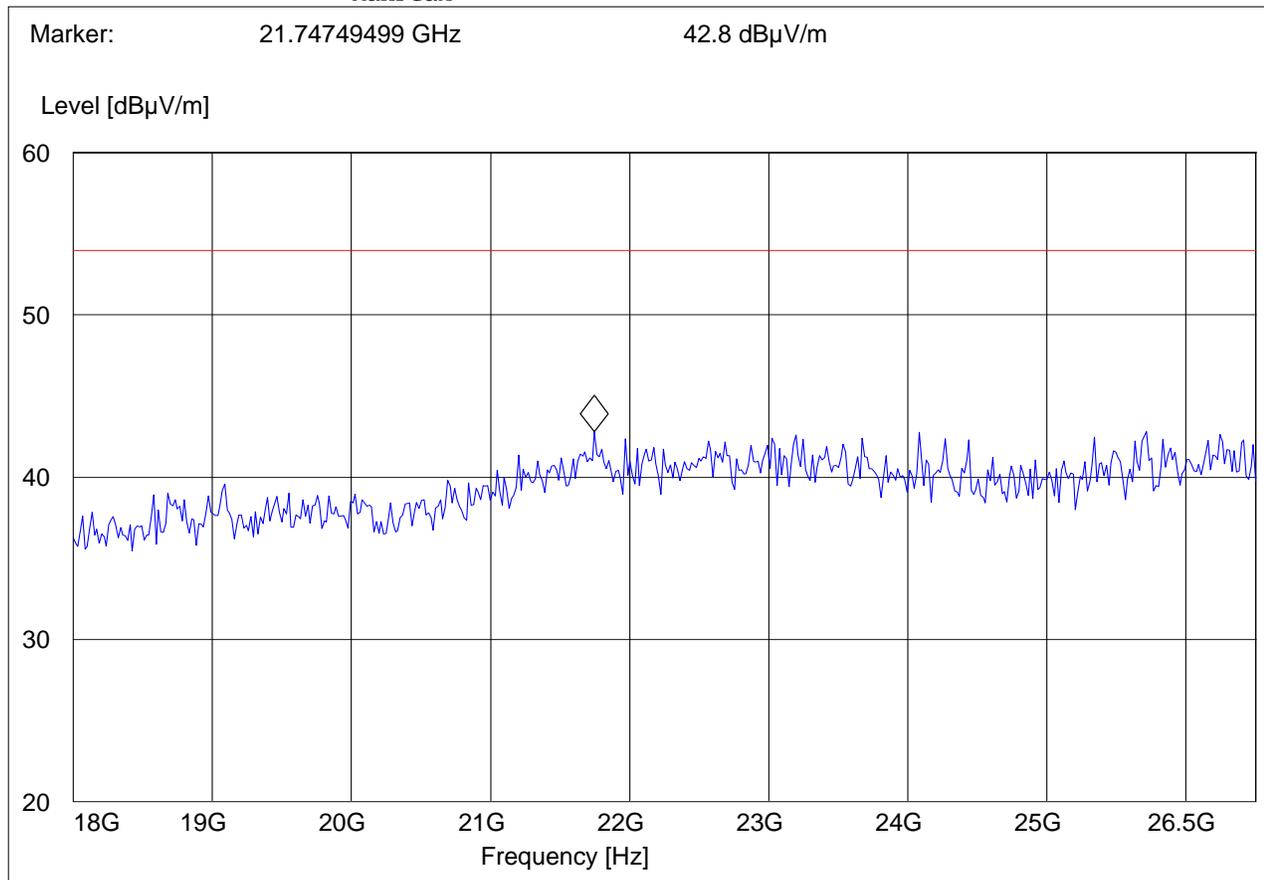
Note: This plot is valid for low, mid, high channels (worst-case plot)

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11n40; CH. 6
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_18-26.5G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|--------------------|
| 18.0 GHz | 26.5 GHz | MaxPeak | Coupled | 100 kHz | Horn # 3116_18-40G |
| | | MaxPeak | | | |



5.4 Receiver Spurious Emission § 15.209/RSS210

5.4.1 Limits

| Frequency (MHz) | Field strength ($\mu\text{V/m}$) | Measurement distance (m) |
|-----------------|------------------------------------|--------------------------|
| 0.009 - 0.490 | 2400/F (kHz) | 300 |
| 0.490 - 1.705 | 24000/F (kHz) | 30 |
| 1.705 - 30.0 | 30 | 30 |
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| above 960 | 500 | 3 |

NOTE:

1. The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3 and 25 GHz very short cable connections to the antenna was used to minimize the noise level.
2. All measurements are done in peak mode using an average limit unless specified with the plots.
3. There are no measurable emissions up to 18GHz in Rx mode.
4. Receiver spurious emissions reported here are the worse case emissions for all receiver modes and between two receiving chains.

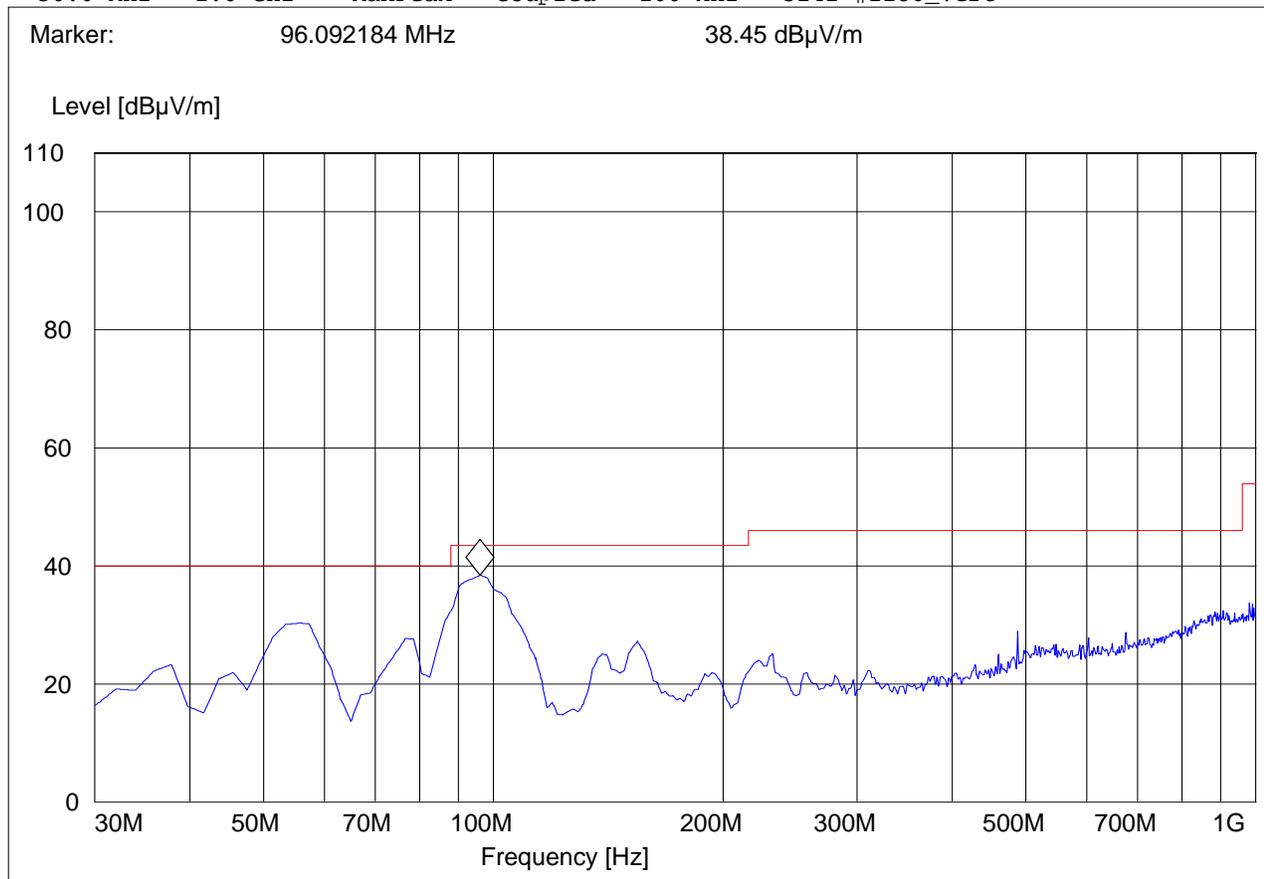
5.4.2 RESULTS Chain AB
30MHz – 1GHz, Antenna: Vertical

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
 Customer:: Sony Electronics
 Test Mode: 802.11 RX
 ANT Orientation: V
 EUT Orientation: H
 Test Engineer: Chris
 Voltage: AC
 Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Ver"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Vert |



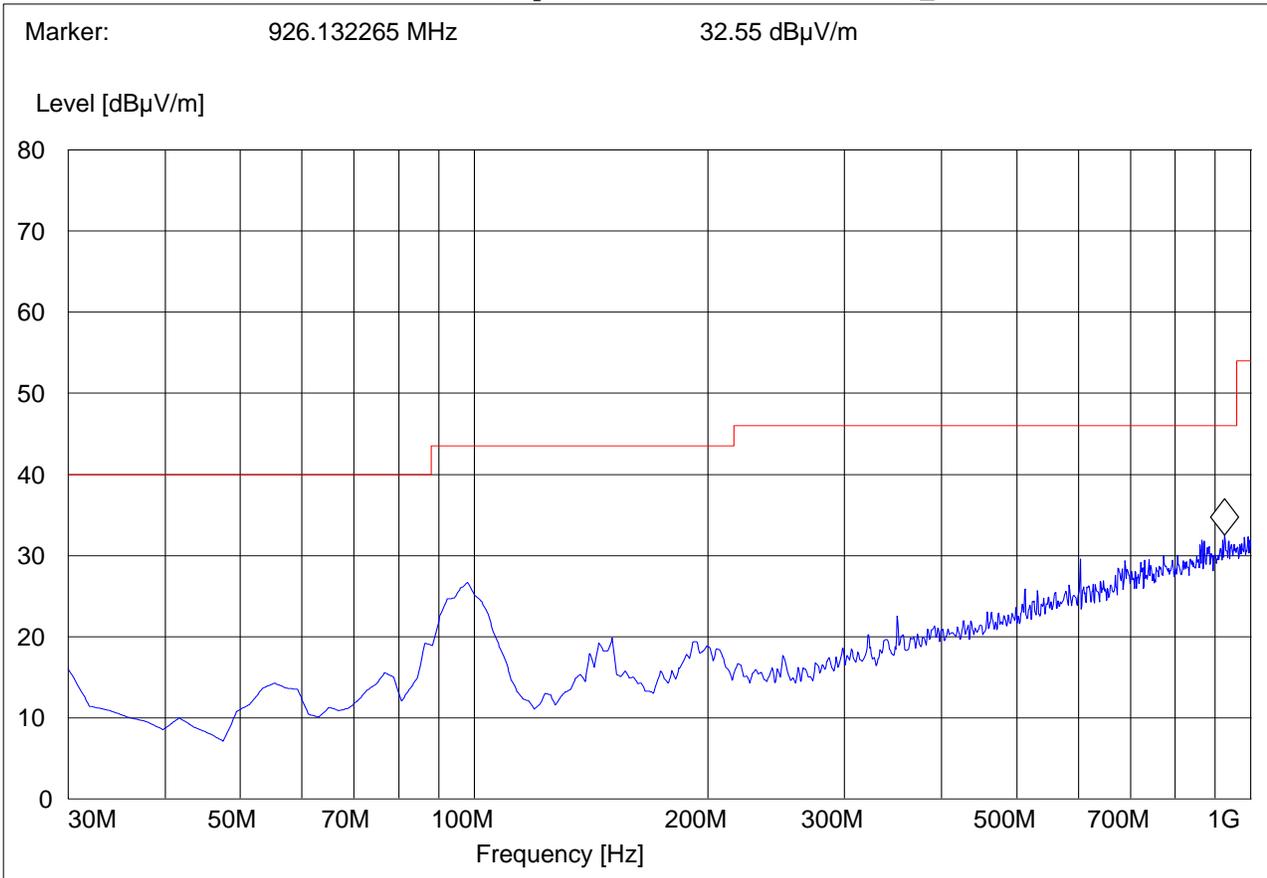
30MHz – 1GHz, Antenna: Horizontal

Note: This plot is valid for low, mid, high channels (worst-case plot).

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11 RX
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_30M-1G_Horz"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|-----------------|
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 100 kHz | 3141-#1186_Horz |



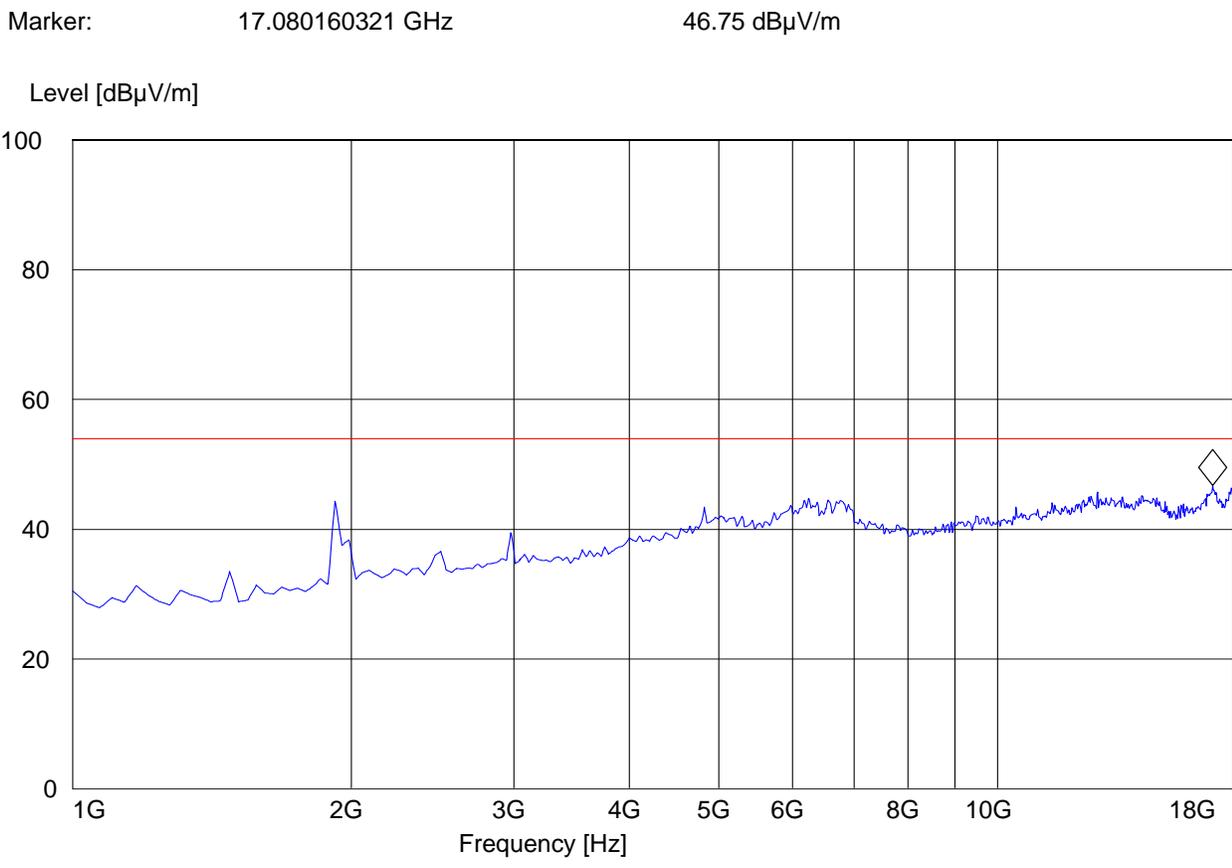
1-18GHz

Note: Peak Reading vs. Average limit

EUT / Description: IRX-4300-FCC1
Manufacturer: Sony
Operation Mode: 802.11b RX
ANT Orientation: : H
EUT Orientation:: H
Test Engineer: Chris
Voltage: AC Adapter
Comments::

SWEEP TABLE: "FCC15.247_1-18G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|------------------|
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | #326horn_AF_horz |



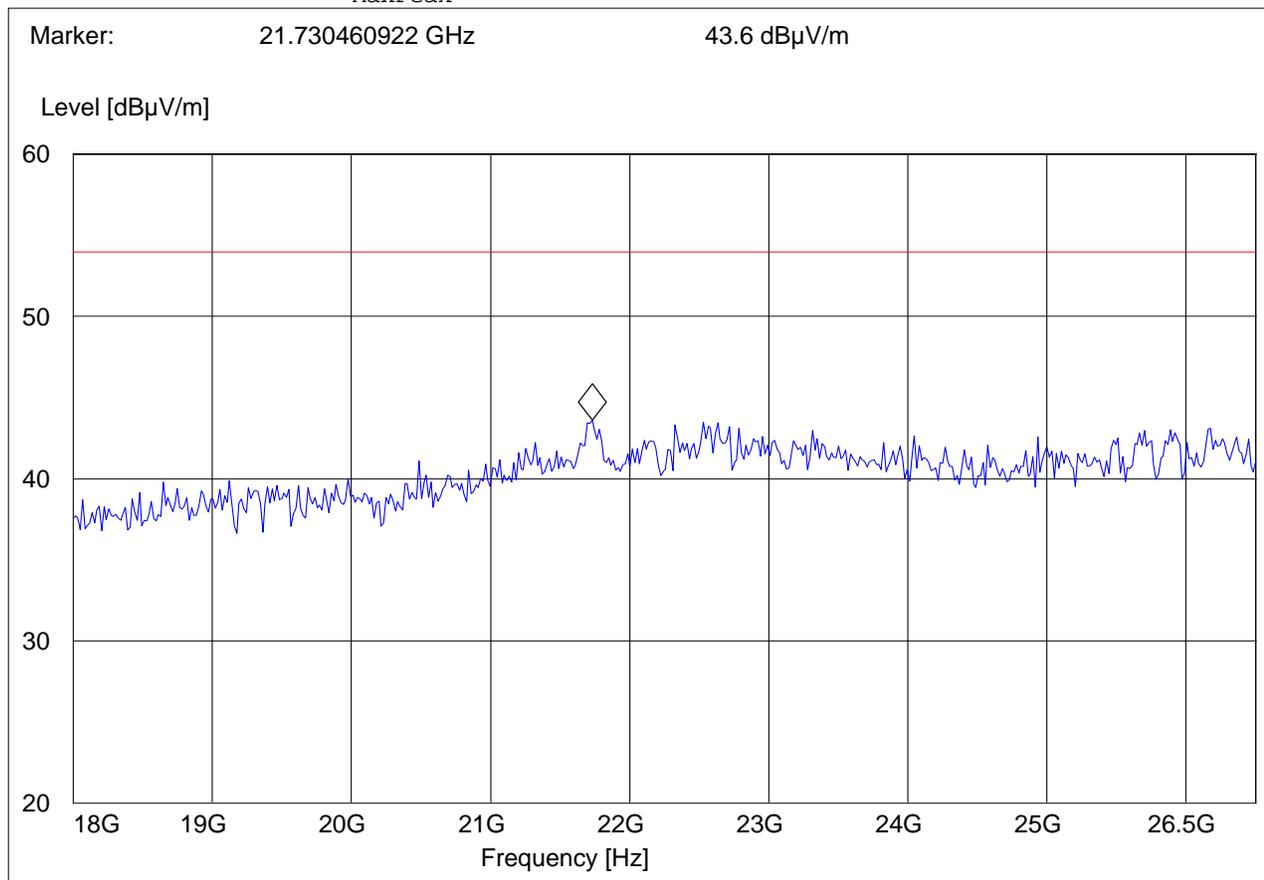
18-26.5GHz

Note: Peak Reading vs. Average limit

EUT: IRX-4300-FCC1
Customer:: Sony Electronics
Test Mode: 802.11 RX
ANT Orientation: H
EUT Orientation: H
Test Engineer: Chris
Voltage: AC
Comments:

SWEEP TABLE: "FCC15.247_18-26.5G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|--------------------|------------|-----------|--------------------|
| 18.0 GHz | 26.5 GHz | MaxPeak MaxPeak | Coupled | 100 kHz | Horn # 3116_18-40G |



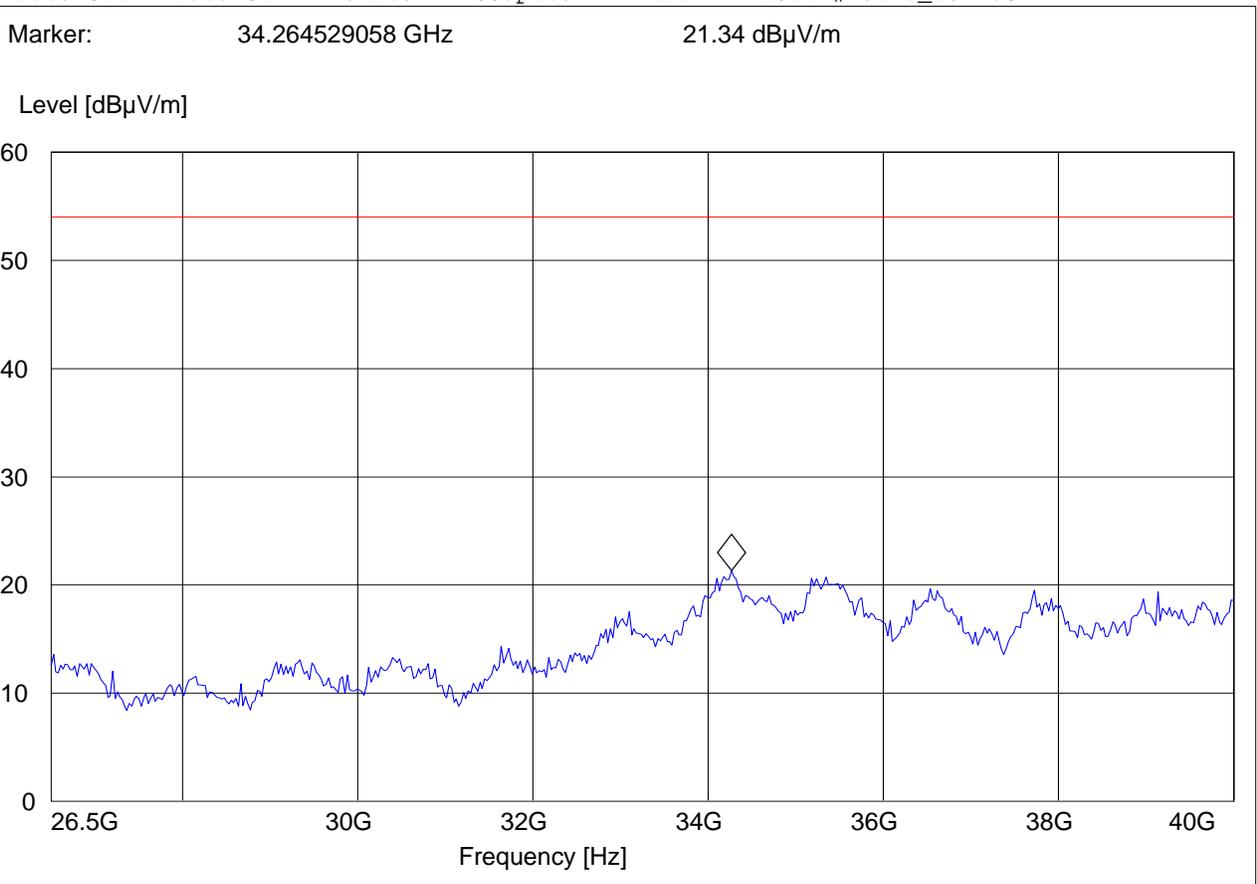
26.5-40GHz

Note: Peak Reading vs. Average limit

EUT / Description: IRX-4300-FCC1
 Customer: Sony Electronics
 Operation Mode: 802.11 RX
 ANT Orientation: : H
 EUT Orientation:: H
 Test Engineer: Chris
 Voltage: AC
 Comments::

SWEEP TABLE: "FCC15.247_26.5-40G"

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|-----------------|----------------|----------|------------|-----------|--------------------|
| 26.5 GHz | 40.0 GHz | MaxPeak | Coupled | 1 MHz | Horn # 3116_18-40G |



6 Conducted Measurements

6.1 6dB bandwidth and 99% bandwidth.

6.1.1 Limit

FCC15.247(a)(2) Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

RSS210 A8.2 (a): The minimum 6 dB bandwidth shall be at least 500 kHz.

6.1.2 Measurement Result:

Test Not conducted. The EUT integrates an FCC approved module. All conducted measurements are referenced from the original report for the module.

6.2 Conducted Power Measurement

6.2.1 Limit

FCC15.247 (b)(3): For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt

RSS210 A8.4(4): For systems employing digital modulation techniques operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz, the maximum peak conducted output power shall not exceed 1 W. Except as provided in Section A8.4(5), the e.i.r.p. shall not exceed 4 W.

6.2.2 Results

Test Not conducted. The EUT integrates an FCC approved module. All conducted measurements are referenced from the original report for the module.

6.3 Power Spectral Density

6.3.1 Limit

FCC 15.247 (e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

6.3.2 Results

Test Not conducted. The EUT integrates an FCC approved module. All conducted measurements are referenced from the original report for the module.

6.4 Conducted Spurious Emission

6.4.1 Limit

§15.247(d) & RSS-210 (A8.5): -30dBc

6.4.2 Results:

Test Not conducted. The EUT integrates an FCC approved module. All conducted measurements are referenced from the original report for the module.

6.5 AC POWER LINE CONDUCTED EMISSIONS § 15.107/207

6.5.1 LIMITS

Technical specification: 15.107 / 15.207 (Revised as of August 20, 2002)

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Limit

| Frequency of Emission (MHz) | Conducted Limit (dBμV) | |
|-----------------------------|------------------------|-----------|
| | Quasi-Peak | Average |
| 0.15 – 0.5 | 66 to 56* | 56 to 46* |
| 0.5 – 5 | 56 | 46 |
| 5 – 30 | 60 | 50 |

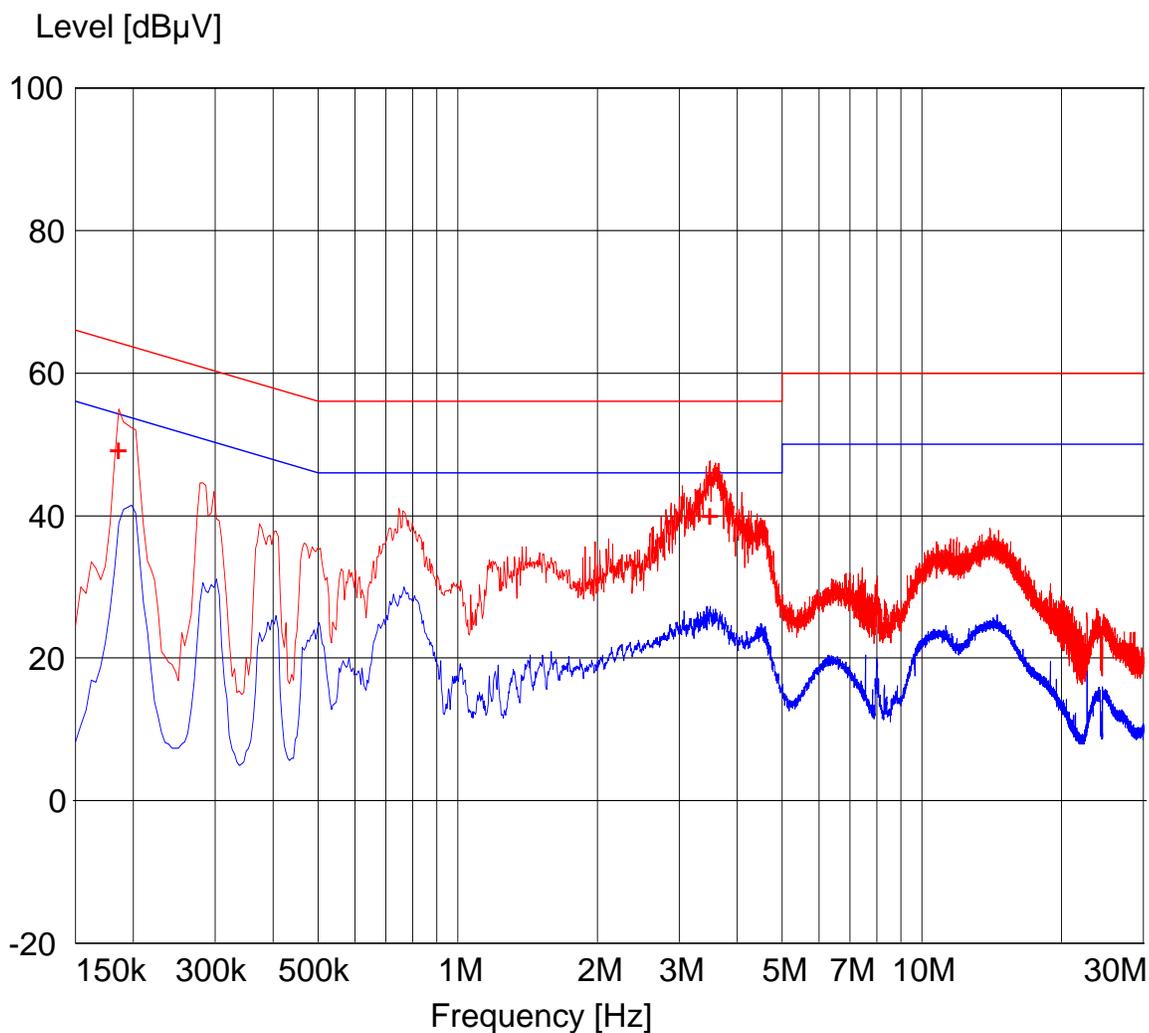
* Decreases with logarithm of the frequency

ANALYZER SETTINGS: RBW = 10KHz VBW = 10KHz

Note: AC Line Conducted Emission reported here are the worse cases among all operating modes.

6.5.2 RESULTS Sub-band 1 802.11g Line:

EUT: IRX-4300-FCC1
Manufacturer: Sony Electronics
Test Mode: 802.11g; Ch.6
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC
Comments: : Line



- + MES 55022 V AV QPk
- MES 55022 cond MaxPk
- MES 55022 cond Avg
- LIM EN 55022 V QP Voltage QP Limit
- LIM EN 55022 V AV Voltage AV Limit



MEASUREMENT RESULT: "55022 V AV QPk"

10/21/2008 2:42PM

| Frequency | Level | Transd | Limit | Margin | Line | PE | AUX STATE |
|-----------|-------|--------|-------|--------|------|-----|-----------|
| MHz | dBµV | dB | dBµV | dB | | | |
| 0.186000 | 49.40 | 0.1 | 64 | 14.8 | 1 | --- | OFF |
| 3.498000 | 40.30 | 0.3 | 56 | 15.7 | 1 | --- | OFF |

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

| Frequency | Level |
|-----------|-------|
| MHz | dBµV |
| 0.150000 | 56.00 |
| 0.500000 | 46.00 |
| 5.000000 | 46.00 |
| 5.000000 | 50.00 |
| 30.000000 | 50.00 |

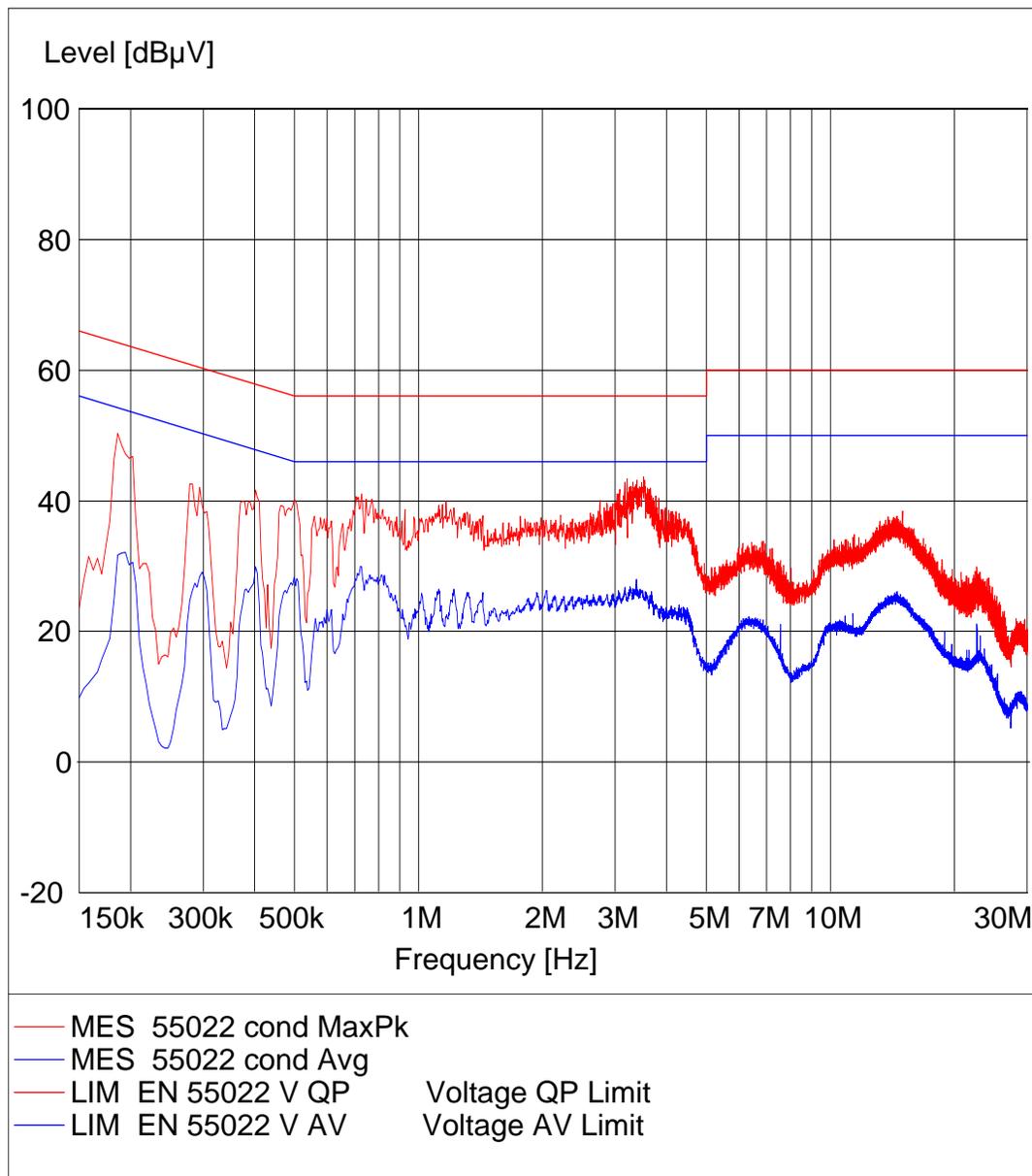
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

| Frequency | Level |
|-----------|-------|
| MHz | dBµV |
| 0.150000 | 66.00 |
| 0.500000 | 56.00 |
| 5.000000 | 56.00 |
| 5.000000 | 60.00 |
| 30.000000 | 60.00 |

6.5.3 RESULTS Sub-band 1 802.11g Neutral:

EUT: IRX-4300-FCC1
Manufacturer: Sony Electronics
Test Mode: 802.11g; Ch.6
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC
Comments: : NEUTRAL



LIMIT LINE: "EN 55022 V AV"

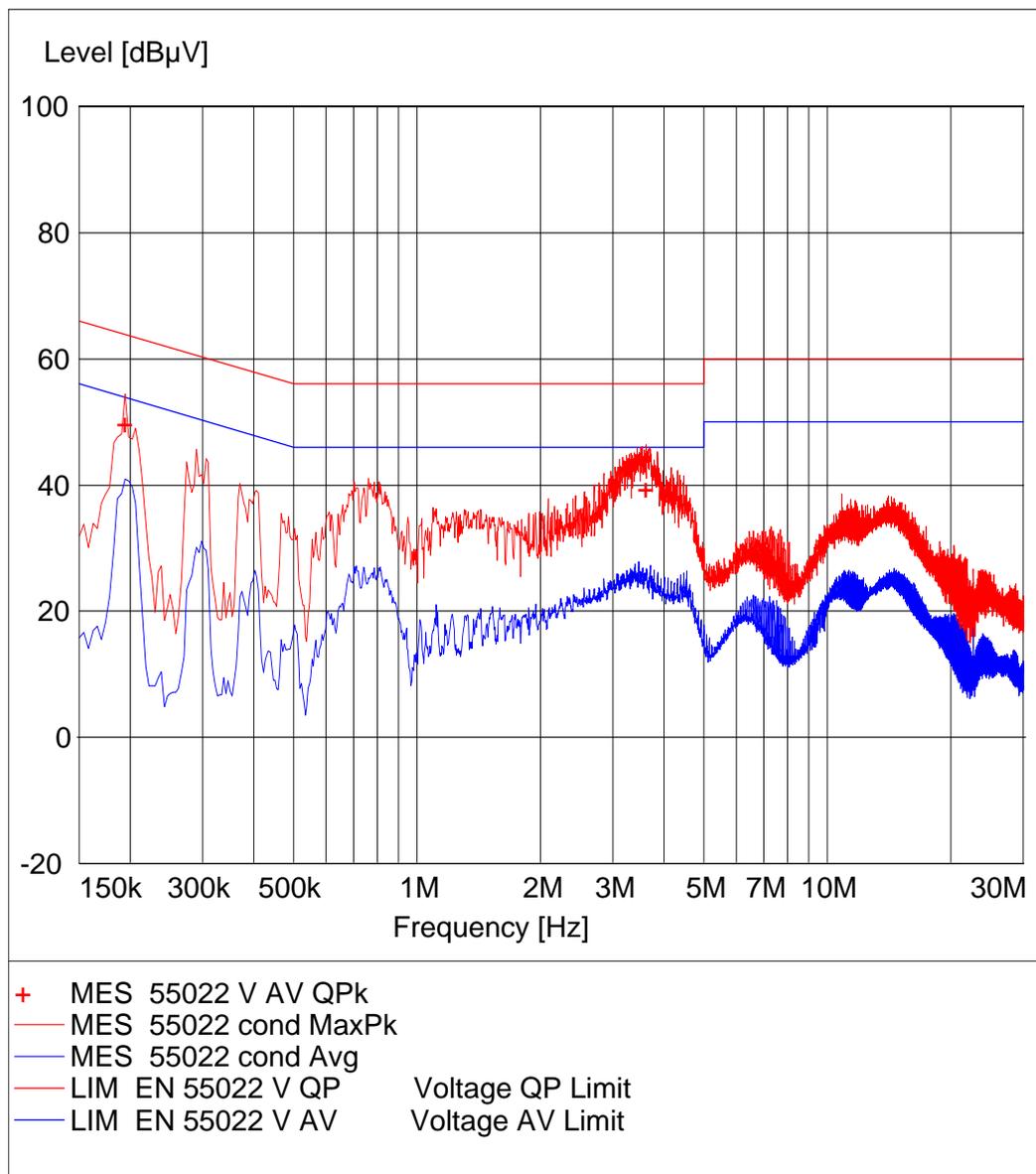
| Short Description: | | Voltage AV Limit |
|--------------------|-------|------------------|
| 4/27/1998 2:24PM | | |
| Frequency | Level | |
| | MHz | dBuV |
| 0.150000 | 56.00 | |
| 0.500000 | 46.00 | |
| 5.000000 | 46.00 | |
| 5.000000 | 50.00 | |
| 30.000000 | 50.00 | |

LIMIT LINE: "EN 55022 V QP"

| Short Description: | | Voltage QP Limit |
|--------------------|-------|------------------|
| 4/27/1998 2:24PM | | |
| Frequency | Level | |
| | MHz | dBuV |
| 0.150000 | 66.00 | |
| 0.500000 | 56.00 | |
| 5.000000 | 56.00 | |
| 5.000000 | 60.00 | |
| 30.000000 | 60.00 | |

6.5.4 RESULTS Sub-band 1 802.11n HT40 Line:

EUT: IRX-4300-FCC1
 Manufacturer: Sony Electronics
 Test Mode: 802.11n40; Ch.6
 ANT Orientation:: N/A
 EUT Orientation:: H
 Test Engineer:: Chris
 Power Supply: : AC
 Comments: : Line





MEASUREMENT RESULT: "55022 V AV QPk"

10/21/2008 2:50PM

| Frequency | Level | Transd | Limit | Margin | Line | PE | AUX STATE |
|-----------|-------|--------|-------|--------|------|-----|-----------|
| MHz | dBµV | dB | dBµV | dB | | | |
| 0.194000 | 49.80 | 0.1 | 64 | 14.1 | 1 | --- | OFF |
| 3.614000 | 39.50 | 0.3 | 56 | 16.5 | 1 | --- | OFF |

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit
4/27/1998 2:24PM

| Frequency | Level |
|-----------|-------|
| MHz | dBµV |
| 0.150000 | 56.00 |
| 0.500000 | 46.00 |
| 5.000000 | 46.00 |
| 5.000000 | 50.00 |
| 30.000000 | 50.00 |

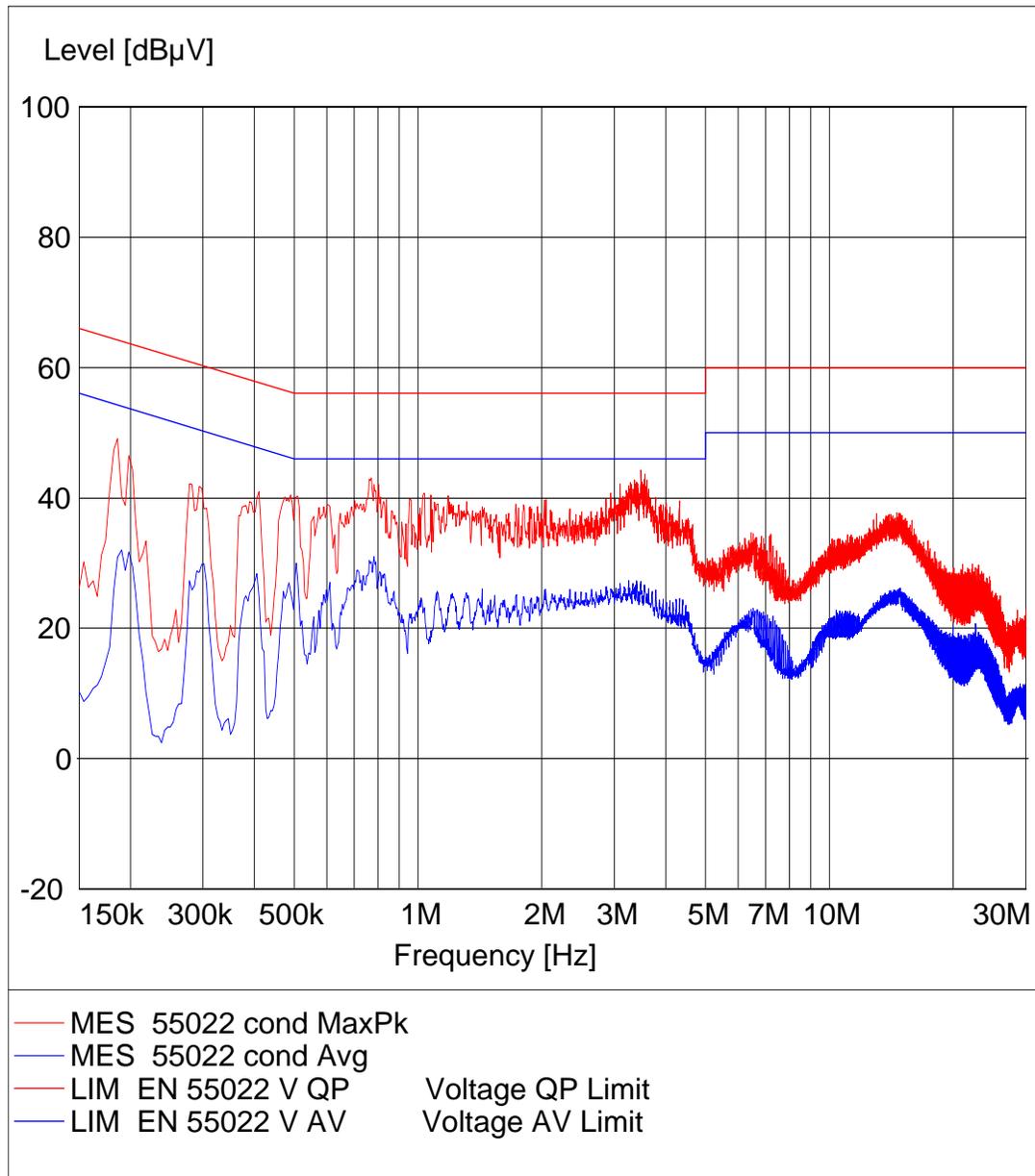
LIMIT LINE: "EN 55022 V QP"

Short Description: Voltage QP Limit
4/27/1998 2:24PM

| Frequency | Level |
|-----------|-------|
| MHz | dBµV |
| 0.150000 | 66.00 |
| 0.500000 | 56.00 |
| 5.000000 | 56.00 |
| 5.000000 | 60.00 |
| 30.000000 | 60.00 |

6.5.5 RESULTS Sub-band 1 802.11n HT40 Neutral:

EUT: IRX-4300-FCC1
Manufacturer: Sony Electronics
Test Mode: 802.11n40; Ch.6
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC
Comments: : Neutral



LIMIT LINE: "EN 55022 V AV"

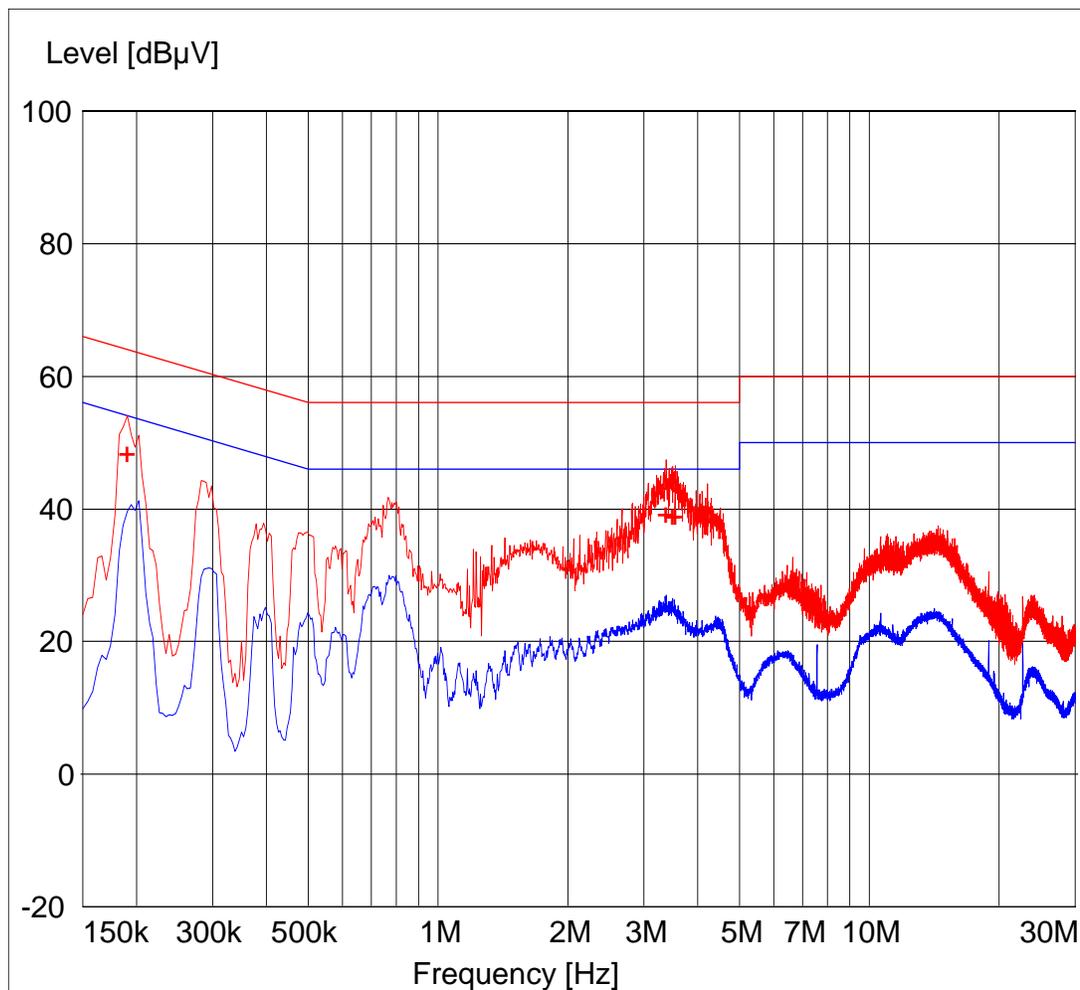
| Short Description: | | Voltage AV Limit |
|--------------------|-------|------------------|
| 4/27/1998 2:24PM | | |
| Frequency | Level | |
| | MHz | dBuV |
| 0.150000 | 56.00 | |
| 0.500000 | 46.00 | |
| 5.000000 | 46.00 | |
| 5.000000 | 50.00 | |
| 30.000000 | 50.00 | |

LIMIT LINE: "EN 55022 V QP"

| Short Description: | | Voltage QP Limit |
|--------------------|-------|------------------|
| 4/27/1998 2:24PM | | |
| Frequency | Level | |
| | MHz | dBuV |
| 0.150000 | 66.00 | |
| 0.500000 | 56.00 | |
| 5.000000 | 56.00 | |
| 5.000000 | 60.00 | |
| 30.000000 | 60.00 | |

6.5.6 RESULTS Receiver mode Line:

EUT: IRX-4300-FCC1
 Manufacturer: Sony Electronics
 Test Mode: 802.11 RX
 ANT Orientation:: N/A
 EUT Orientation:: H
 Test Engineer:: Chris
 Power Supply: : AC
 Comments: : Line



- + MES 55022 V AV QPk
- MES 55022 cond MaxPk
- MES 55022 cond Avg
- LIM EN 55022 V QP Voltage QP Limit
- LIM EN 55022 V AV Voltage AV Limit



MEASUREMENT RESULT: "55022 V AV QPk"

10/21/2008 3:04PM

| Frequency | Level | Transd | Limit | Margin | Line | PE | AUX STATE |
|-----------|-------|--------|-------|--------|------|-----|-----------|
| MHz | dBµV | dB | dBµV | dB | | | |
| 0.190000 | 48.50 | 0.1 | 64 | 15.5 | 1 | --- | OFF |
| 3.378000 | 39.40 | 0.2 | 56 | 16.6 | 1 | --- | OFF |
| 3.502000 | 39.10 | 0.3 | 56 | 16.9 | 1 | --- | OFF |
| 3.550000 | 39.00 | 0.3 | 56 | 17.0 | 1 | --- | OFF |

LIMIT LINE: "EN 55022 V AV"

Short Description: Voltage AV Limit

4/27/1998 2:24PM

| Frequency | Level |
|-----------|-------|
| MHz | dBµV |
| 0.150000 | 56.00 |
| 0.500000 | 46.00 |
| 5.000000 | 46.00 |
| 5.000000 | 50.00 |
| 30.000000 | 50.00 |

LIMIT LINE: "EN 55022 V QP"

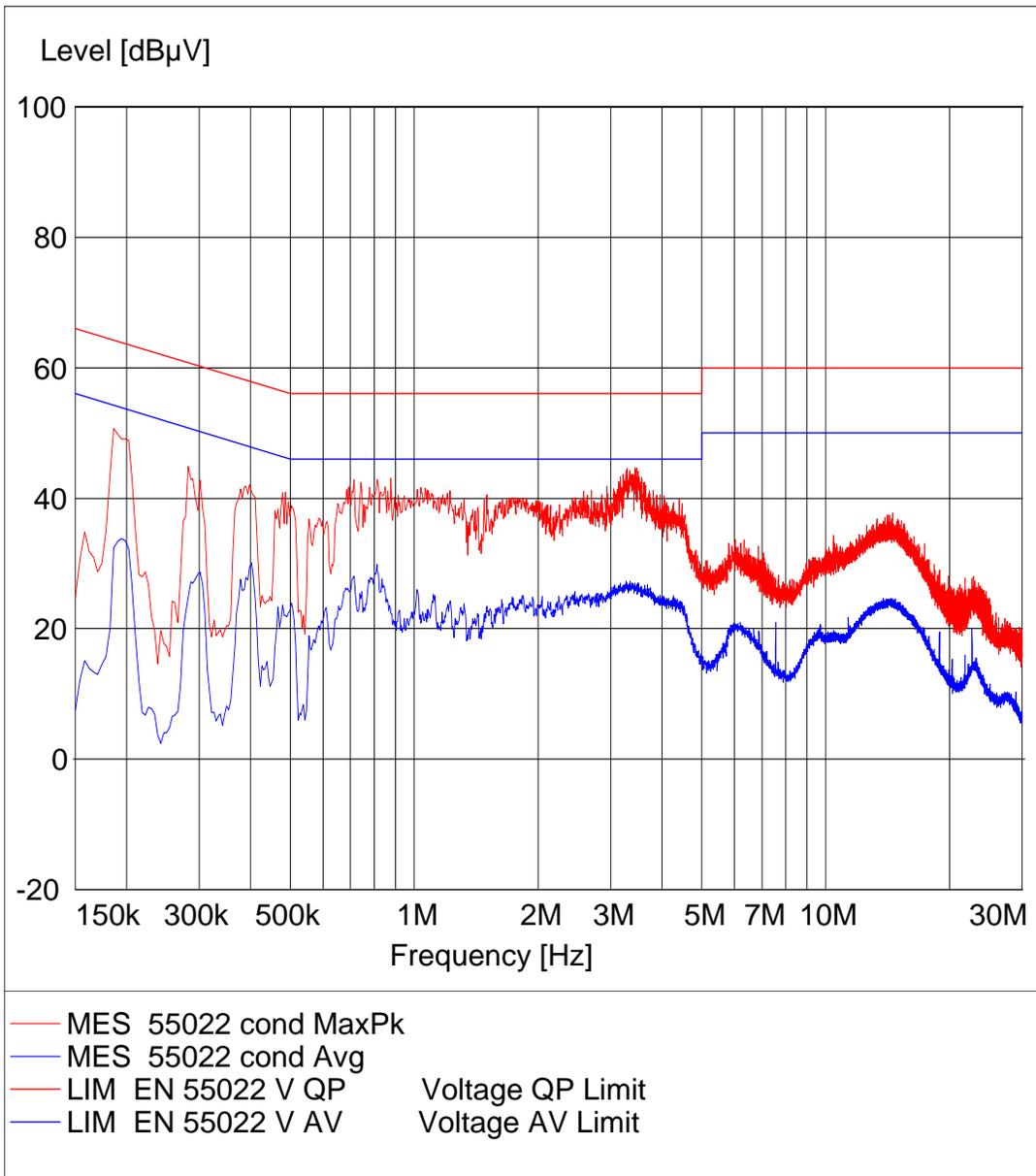
Short Description: Voltage QP Limit

4/27/1998 2:24PM

| Frequency | Level |
|-----------|-------|
| MHz | dBµV |
| 0.150000 | 66.00 |
| 0.500000 | 56.00 |
| 5.000000 | 56.00 |
| 5.000000 | 60.00 |
| 30.000000 | 60.00 |

6.5.7 RESULTS Receiver mode Neutral:

EUT: IRX-4300-FCC1
Manufacturer: Sony Electronics
Test Mode: 802.11 RX
ANT Orientation:: N/A
EUT Orientation:: H
Test Engineer:: Chris
Power Supply: : AC
Comments: : Neutral



LIMIT LINE: "EN 55022 V AV"

| Short Description: | | Voltage AV Limit |
|--------------------|-------|------------------|
| 4/27/1998 2:24PM | | |
| Frequency | Level | |
| | MHz | dBuV |
| 0.150000 | 56.00 | |
| 0.500000 | 46.00 | |
| 5.000000 | 46.00 | |
| 5.000000 | 50.00 | |
| 30.000000 | 50.00 | |

LIMIT LINE: "EN 55022 V QP"

| Short Description: | | Voltage QP Limit |
|--------------------|-------|------------------|
| 4/27/1998 2:24PM | | |
| Frequency | Level | |
| | MHz | dBuV |
| 0.150000 | 66.00 | |
| 0.500000 | 56.00 | |
| 5.000000 | 56.00 | |
| 5.000000 | 60.00 | |
| 30.000000 | 60.00 | |

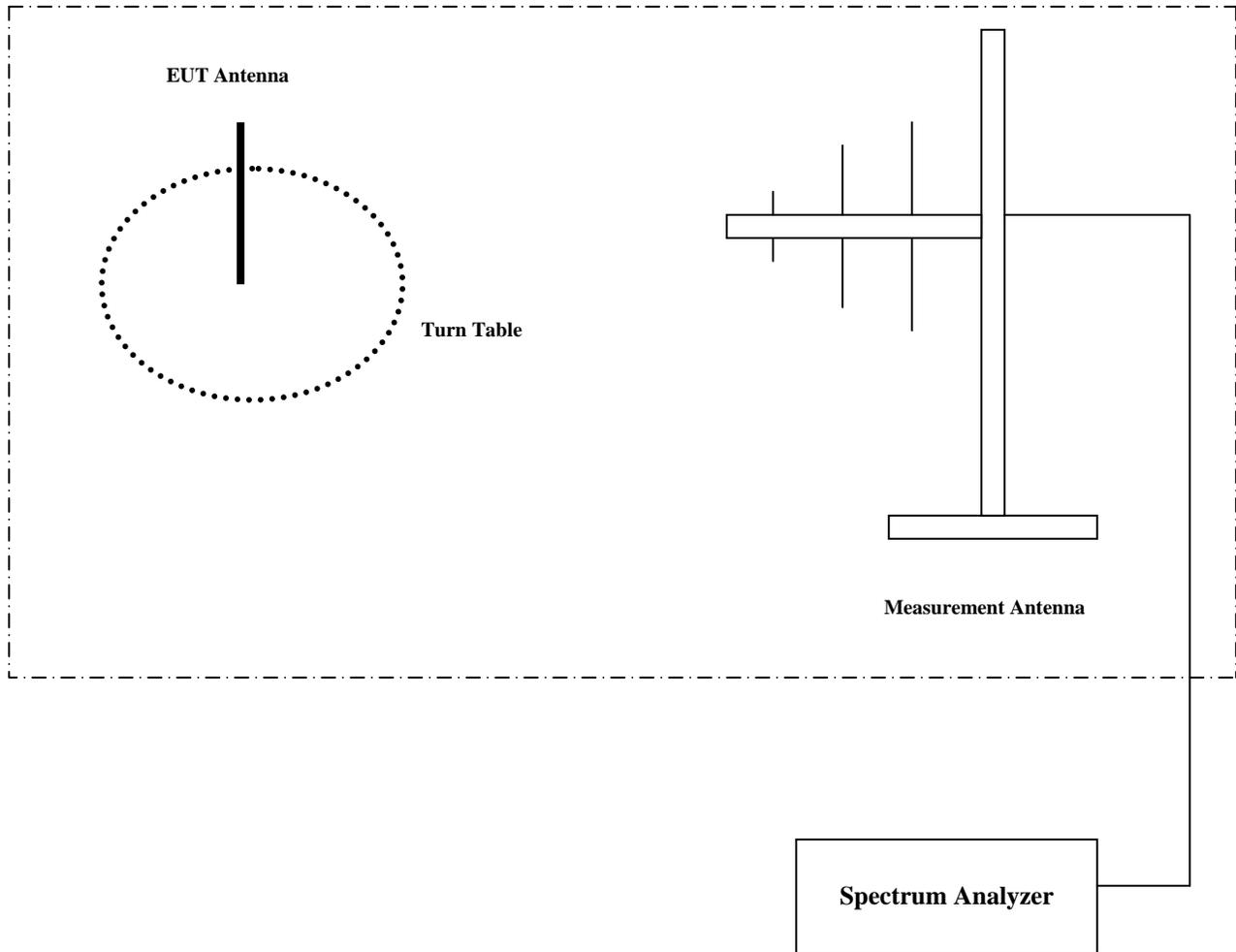
7 TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

| No | Instrument/Ancillary | Type | Manufacturer | Serial No. | Cal Due | Interval |
|----|------------------------------|--------------|-----------------|--------------|-------------|----------|
| 01 | Spectrum Analyzer | ESIB 40 | Rohde & Schwarz | 100107 | May 2009 | 1 year |
| 02 | Spectrum Analyzer | FSEM 30 | Rohde & Schwarz | 100017 | August 2009 | 1 year |
| 03 | Signal Generator | SMY02 | Rohde & Schwarz | 836878/011 | May 2009 | 1 year |
| 04 | Power-Meter | NRVD | Rohde & Schwarz | 0857.8008.02 | May 2009 | 1 year |
| 05 | Biconilog Antenna | 3141 | EMCO | 0005-1186 | June 2009 | 1 year |
| 06 | Horn Antenna (1-18GHz) | SAS-200/571 | AH Systems | 325 | June 2009 | 1 year |
| 07 | Horn Antenna (18-26.5GHz) | 3160-09 | EMCO | 1240 | June 2009 | 1 year |
| 08 | Power Splitter | 11667B | Hewlett Packard | 645348 | n/a | n/a |
| 09 | Climatic Chamber | VT4004 | Voltsch | G1115 | May 2009 | 1 year |
| 10 | High Pass Filter | 5HC2700 | Trilithic Inc. | 9926013 | n/a | n/a |
| 11 | High Pass Filter | 4HC1600 | Trilithic Inc. | 9922307 | n/a | n/a |
| 12 | Pre-Amplifier | JS4-00102600 | Miteq | 00616 | May 2009 | 1 year |
| 13 | Power Sensor | URV5-Z2 | Rohde & Schwarz | DE30807 | May 2009 | 1 year |
| 14 | Digital Radio Comm. Tester | CMD-55 | Rohde & Schwarz | 847958/008 | May 2009 | 1 year |
| 15 | Universal Radio Comm. Tester | CMU 200 | Rohde & Schwarz | 832221/06 | May 2009 | 1 year |
| 16 | LISN | ESH3-Z5 | Rohde & Schwarz | 836679/003 | May 2009 | 1 year |
| 17 | Loop Antenna | 6512 | EMCO | 00049838 | July 2009 | 2 years |

8 BLOCK DIAGRAMS

Radiated Testing

ANECHOIC CHAMBER



Test Report #: EMC_SONYE_025_08001_15_247_PCG1P2L



Date of Report: 2008-10-24

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9 Revision History

2008-10-24: First Issue