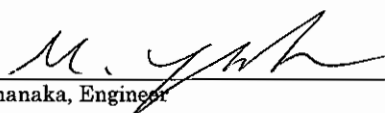


**MEASUREMENT/TECHNICAL REPORT**  
**FCC Part 15 Subpart C**Issued: January 15<sup>th</sup>, 2008

|                                    |                                                                               |
|------------------------------------|-------------------------------------------------------------------------------|
| Name and Address of the Applicant: | Sony Corporation<br>4-14-1 Asahi-cho, Atsugi-shi, Kanagawa-ken 243-0014 Japan |
| Test Item:                         | Remote Commander                                                              |
| Identification:                    | PCS-RF1                                                                       |
| Serial No.:                        | 51                                                                            |
| FCC ID:                            | ---                                                                           |
| Sample Receipt Date:               | December 19, 2007                                                             |
| Test Specification:                | FCC Part 15 Subpart C, 15.247                                                 |
| Date of Testing:                   | December 23 <sup>rd</sup> - 27 <sup>th</sup> , 2007                           |
| Test Result:                       | PASS                                                                          |

|                     |                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Report Prepared by: | Cosmos Corporation<br>2-3571 Ohnogi, Watarai-cho, Watarai-gun, Mie, Japan 516-2102<br>Phone: +81-596-63-0707 Fax: +81-596-63-0777 |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|

|              |                                                                                                                            |                                         |
|--------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Tested by:   | <br>M. Yamanaka, Engineer               | January 15 <sup>th</sup> , 2008<br>Date |
| Reviewed by: | <br>Y. Kawahara, Deputy General Manager | January 15 <sup>th</sup> , 2008<br>Date |

## Notes:

1. This report should not be reproduced except in full, without the written approval of Cosmos Corporation.
2. All measurement data contained in this report may have uncertainty. A judgment for the limitation should be taken into the count.
3. The report in this report apply only to the sample tested.

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## 1. Description of Equipment Under Test

## 1.1 Product Description

|                                     |                                                                                                                                                                                      |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer                        | : Sony Corporation                                                                                                                                                                   |
| Model (referred to as the EUT)      | : PCS-RF1                                                                                                                                                                            |
| Nominal Voltage                     | : DC3V                                                                                                                                                                               |
| Type of Modulation                  | : O-QPSK                                                                                                                                                                             |
| Mode of Operation                   | : <input type="checkbox"/> duplex <input checked="" type="checkbox"/> 1/2 duplex <input type="checkbox"/> simplex <input type="checkbox"/> other                                     |
| The type of the equipment           | : <input checked="" type="checkbox"/> Stand-alone <input type="checkbox"/> Combined Equipment<br><input type="checkbox"/> Plug -In Card <input type="checkbox"/> Other (Module Unit) |
| The type of the antenna             | : <input checked="" type="checkbox"/> Integral <input type="checkbox"/> external <input type="checkbox"/> Other                                                                      |
| The type of power source            | : <input type="checkbox"/> AC mains <input type="checkbox"/> Dedicated AC adapter (            V)<br><input type="checkbox"/> DC Voltage <input checked="" type="checkbox"/> Battery |
| The type of battery (if applicable) | : n/a                                                                                                                                                                                |
| Type of Operation                   | : <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Burst <input type="checkbox"/> Intermittent                                                                |
| Stand by Mode                       | : <input checked="" type="checkbox"/> Available <input type="checkbox"/> N/A                                                                                                         |
| Intended functions                  | : REMOTE COMMANDER                                                                                                                                                                   |
| The bandwidth of the IF filters     | : n/a                                                                                                                                                                                |
| Method of Communication Link        | : no communication link                                                                                                                                                              |
| The operating frequency band        | : 2405-2480 MHz                                                                                                                                                                      |
| The thermal limitation              | : 0    - + 50                                                                                                                                                                        |

## 1.2 Antenna Description

| No. | Type Name | Gain  | Antenna Type    | Remarks |
|-----|-----------|-------|-----------------|---------|
| 1   | N/A       | 0 dBi | Printed Antenna | ---     |

## 2. General Information

### 2.1 Test Methodology

All measurement subject to the present report was carried out according to the procedures in ANSI C63.4: 2003.

### 2.2 Test Facility

All measurement was performed in the following facility;

#### **Cosmos Corporation EMC Lab. Ohnogi**

(2-3571 Ohaza-iwatachi, Ohnogi, Watarai-cho, Watarai-gun, Mie-ken 516-2102, Japan) The test firm has been filed since November 2, 2004 under CFR 47 Part.2.948.

### 2.3 Traceability

The calibration of measurement equipment used in the test subject to the present report is designed and operated to ensure that the measurement is traceable to national standards of measurement or equivalent abroad.

## 3. Summary of Test Results

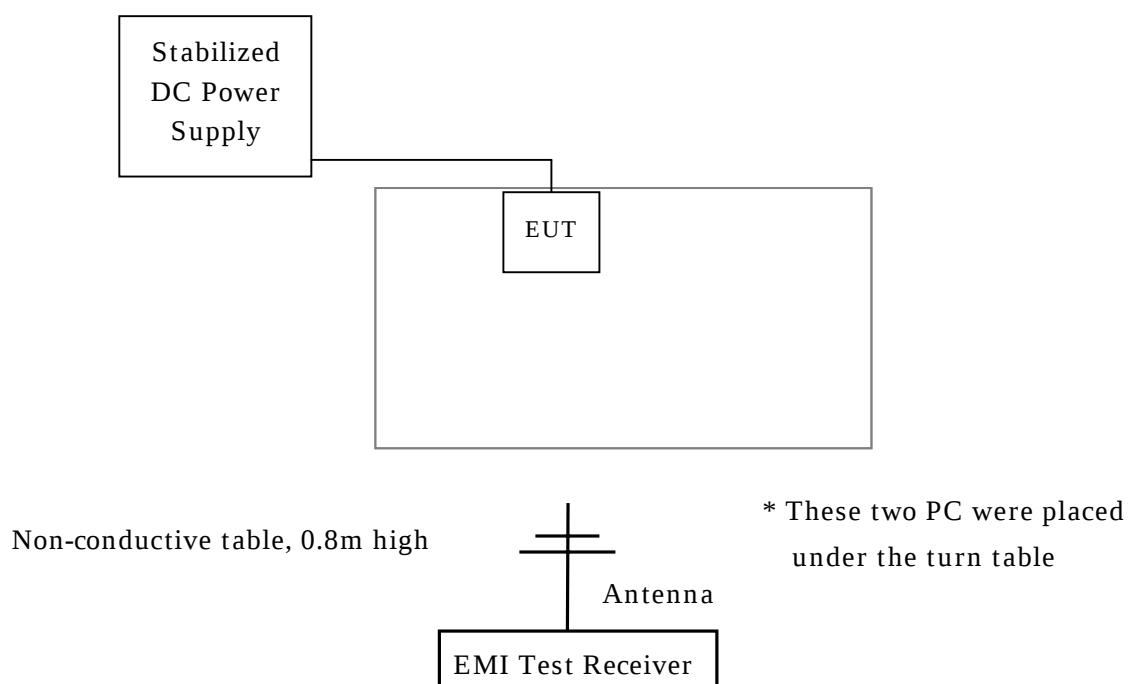
| Section       | Test Item                                                    | Limit                         | Result |
|---------------|--------------------------------------------------------------|-------------------------------|--------|
| 15. 207       | AC Power Conducted Emission                                  | See 5.1.2                     | N/A    |
| 15. 247(a)(2) | Spectrum Bandwidth of Direct Sequence Spread Spectrum System | Min. 500kHz                   | Pass   |
| 15. 247(b)    | Maximum Peak Output Power                                    | Max. 30dBm                    | Pass   |
| 15. 247(c)    | Transmitter Radiated Emissions                               | 20dB less than the peak value | Pass   |
| 15. 247(d)    | Power Spectrum Density                                       | Max. 8dBm                     | Pass   |
| 15. 247(c)    | Band Edge Measurement                                        | See 5.7.2                     | Pass   |

## 4. Test Configuration

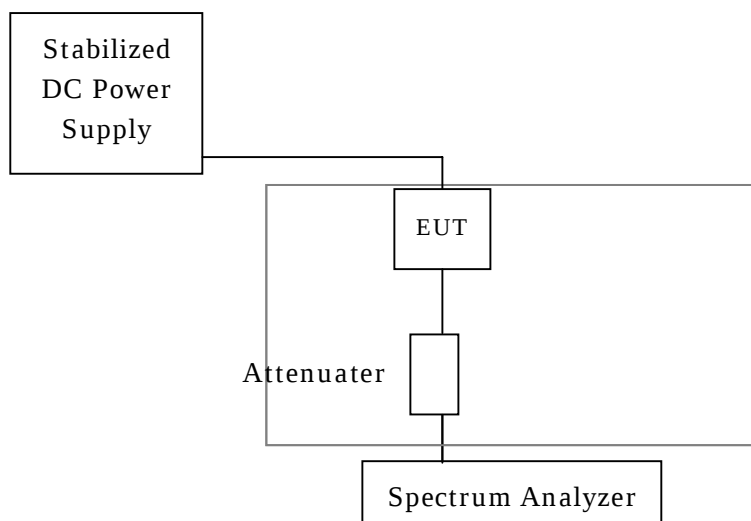
### 4.1 15. 207 AC Power Conducted Emission in Shield Room

This test item is not applicable.

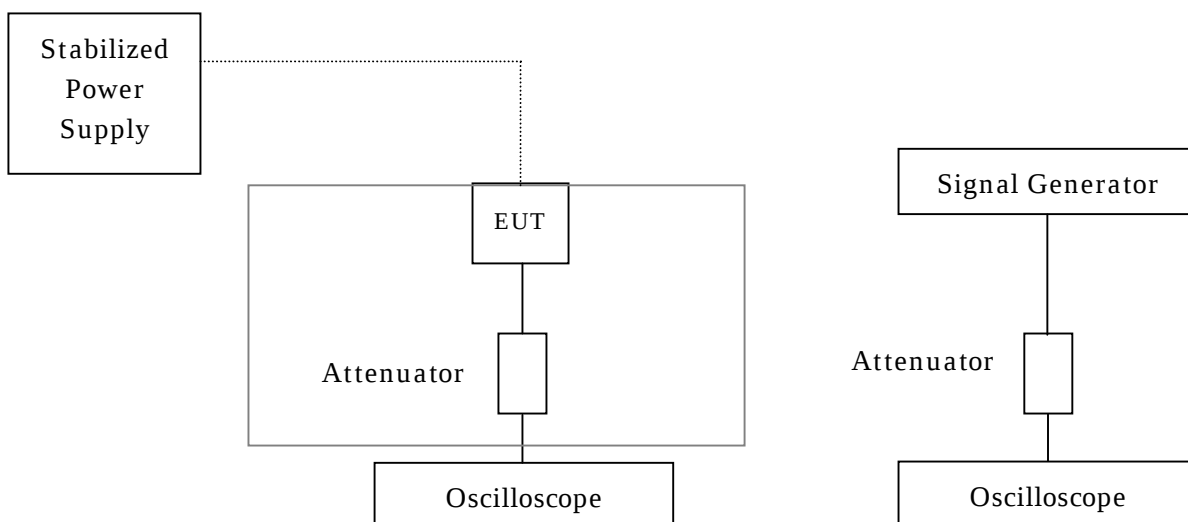
### 4.2 15. 247(c) Transmitter Radiated Emissions and Band Edge (Radiated) in 3m Anechoic Chamber



## 4.3 All Other Test Items (Except Maximum Peak Output Power)



## 4.4 Maximum Peak Output Power



## 4.5 Test Mode

In all test configurations above, EUT makes continuous RF transmitting with maximum power.

All conducted measurement is performed with an external stabilized power supply voltage varied between 85% and 115% of the nominal rated supply voltage in accordance with the section 15.31 (e) of the part.

## 5. Measurement Result

### 5.1 15. 247(a)(2) Spectrum Bandwidth of Direct Sequence Spread Spectrum System

#### 5.1.1 Setting Remarks

- The both side of 6dB down value from peak power are measured by using delta-maker function of the spectrum analyzer.
- The spectrum analyzer is set-up as following;

|   |                      |            |
|---|----------------------|------------|
| ✓ | Frequency Span       | : 10 MHz   |
| ✓ | Resolution bandwidth | : 100 kHz  |
| ✓ | Video bandwidth      | : 300 kHz  |
| ✓ | Sweep                | : 1sec     |
| ✓ | Detector function    | : Peak     |
| ✓ | Trace Mode           | : Max Hold |

- See test configuration figure 4.1.

#### 5.1.2 Minimum Standard

(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.

#### 5.1.3 Result

**EUT complies with the requirement.**

Uncertainty of measurement result:  $\pm 0.8$  dB

Temperature, Humidity : 20°C, 41 %

#### 5.1.4 Measured Data

| Frequency (MHz) | Measured Bandwidth (MHz) | Limit (MHz) |
|-----------------|--------------------------|-------------|
| 2405 (11ch)     | 1.62                     | > 0.5       |
| 2440 (18ch)     | 1.62                     | > 0.5       |
| 2480 (26ch)     | 1.63                     | > 0.5       |

2405MHz (11ch)



2440 MHz (18ch)



2480 MHz (26ch)



## 5.2 15. 247(b) Maximum Peak Output Power

### 5.2.1 Setting Remarks

- See test configuration figure 4.4.
- The maximum peak output power is measured as following;
  1. The diode detector is inserted between EUT and the oscilloscope.
  2. The oscilloscope is used to read the peak response of the detector.
  3. Replaced EUT by the signal generator (SG).
  4. Adjusted the frequency of SG to the fundamental frequency.
  5. Adjusted the amplitude of SG to be the same peak recorded in 2.
- The oscilloscope is set-up as following;

|                       |               |
|-----------------------|---------------|
| ✓ Voltage level range | : 10 mV / Div |
| ✓ Sampling time       | : 1.00GS / s  |
| ✓ Function            | : Peak search |

### 5.2.2 Minimum Standard

The maximum peak output power shall not exceed 1 watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 5.2.3 Result

**EUT complies with the requirement.**

Uncertainty of measurement result:  $\pm 0.5$  dB

Temperature, Humidity : 21°C, 39%

## 5.2.4 Measured Data

(Normal Rated Voltage, 3 VDC)

| Frequency<br>(MHz) | Peak Power<br>(dBm) | Limit (dBm) | Margin (dB) |
|--------------------|---------------------|-------------|-------------|
| 2405 (11ch)        | -4.98               | 30          | 34.98       |
| 2440 (18ch)        | -4.88               | 30          | 34.88       |
| 2480 (26ch)        | -4.6                | 30          | 34.6        |

(High-varied voltage, 3.45 VDC)

| Frequency<br>(MHz) | Peak Power<br>(dBm) | Limit (dBm) | Margin (dB) |
|--------------------|---------------------|-------------|-------------|
| 2405 (11ch)        | -4.98               | 30          | 34.98       |
| 2440 (18ch)        | -4.88               | 30          | 34.88       |
| 2480 (26ch)        | -4.6                | 30          | 34.6        |

(Low-varied voltage, 2.55 VDC)

| Frequency<br>(MHz) | Peak Power<br>(dBm) | Limit (dBm) | Margin (dB) |
|--------------------|---------------------|-------------|-------------|
| 2405 (11ch)        | -4.96               | 30          | 34.96       |
| 2440 (18ch)        | -4.88               | 30          | 34.88       |
| 2480 (26ch)        | -4.6                | 30          | 34.6        |

### 5.3 15. 247(c) Transmitter Spurious Emissions (Conducted)

#### 5.3.1 Setting Remarks

- EUT directly connects to the spectrum analyzer via calibrated coaxial cable and 10 dB attenuator.
- The Spectrums are scanned from the lowest generated frequency of EUT up to the 10th harmonics by using the spectrum analyzer.
- The spectrum analyzer is set-up as following;
  - ✓ Resolution bandwidth : 100 kHz
  - ✓ Video bandwidth : 100 kHz
  - ✓ Sweep : Auto
  - ✓ Detector function : Peak
  - ✓ Trace Mode : Max Hold
- See test configuration figure 4.3.

#### 5.3.2 Minimum Standard

(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 Section 15.209(a) is not required.

#### 5.3.3 Result

**EUT complies with the requirement.**

Uncertainty of measurement result:  $\pm 0.8$  dB

Temperature, Humidity : 22°C, 39%

## 5.3.4 Measured Data (No emission exceeding the 20dB limit was found)

2405MHz (11ch)



2440 MHz (18ch)



2480 MHz (26ch)



## 5.4 15. 247(c) Transmitter Radiated Emissions (Radiated)

### 5.4.1 Setting Remarks

- The data lists in “5.5.4 Measured Data “ list the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections), the corrected reading, plus the limit.
- In the frequency range between 30MHz to 25 GHz (as 10<sup>th</sup> harmonics), the Electric Field Strength is measured in accordance with ANSI C63.4: 2003 and CISPR22: 1997.
- The test setup is made in accordance with ANSI C63.4: 2003.
- The antenna is measured at 1-4m height.
- The EUT is placed on the non-conductive table in the center of turntable. The height of this table is 0.8m.
- The measurement is carried out with both horizontal and vertical antenna polarization.
- The highest radiation from the equipment is recorded.
- By varying the configuration of the test sample and the cable routing, it is attempted to maximize the emission.
- The test receiver with Quasi Peak and Average detector is in compliance with CISPR 16-1:1993.
- The spectrum analyzer is set-up as following;

(Frequency range : 30 - 1000 MHz)

- ✓ Resolution bandwidth : 100 kHz
- ✓ Video bandwidth : 300 kHz
- ✓ Detector function : Peak
- ✓ Trace Mode : Max Hold

(Frequency range : Above 1000 MHz)

- ✓ Resolution bandwidth : 1 MHz
- ✓ Video bandwidth : 1 MHz
- ✓ Detector function : Peak
- ✓ Trace Mode : Max Hold

- EMI Test Receiver analyzer is set-up as following;
  - ✓ IF bandwidth : 120 kHz (Quasi-Peak Detector)
  - ✓ IF bandwidth : 1 MHz (Average Detector)
- Radiated emission tests were done using fully charged battery installed in the EUT.
- See test configuration figure 4.2.

#### 5.4.2 Minimum Standard

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

#### 5.4.3 Result

**EUT complies with the requirement.**

Uncertainty of measurement result:  $\pm 3.28$  dB

Temperature, Humidity : Refer to each data table

## 5.4.4 Measured Data

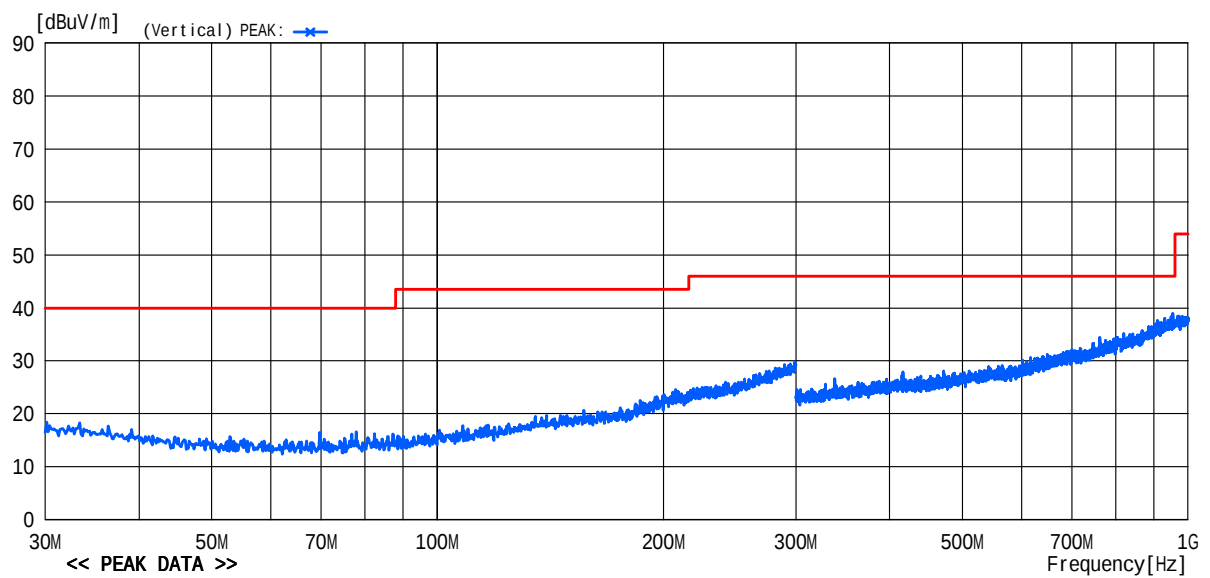
30MHz to 1GHz, CH 11 Angle 1

Model Name : PCS-RF1  
Serial No. : 51  
Operator : M.Yamanaka  
Power Supply : 3V

Job No : CJ07-067088E  
Temp./Humi. : 16 /50%  
Condition : CH11 (2405MHz)  
Remark : Angle 1

Memo : RBW:30M ~ 1GHz(120kHz)

LIMIT : FCC 15.209 3m



| No | Freq. | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment |
|----|-------|---------|--------|----------|----------|--------|-------|--------|-------|------|---------|
|    | [MHz] | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |         |
|    |       |         |        |          |          |        |       |        |       |      |         |

30MHz to 1GHz, CH 18 Angle 1

Model Name : PCS-RF1

Serial No. : 51

Operator : M.Yamanaka

Power Supply : 3V

Memo : RBW:30M ~ 1GHz(120kHz)

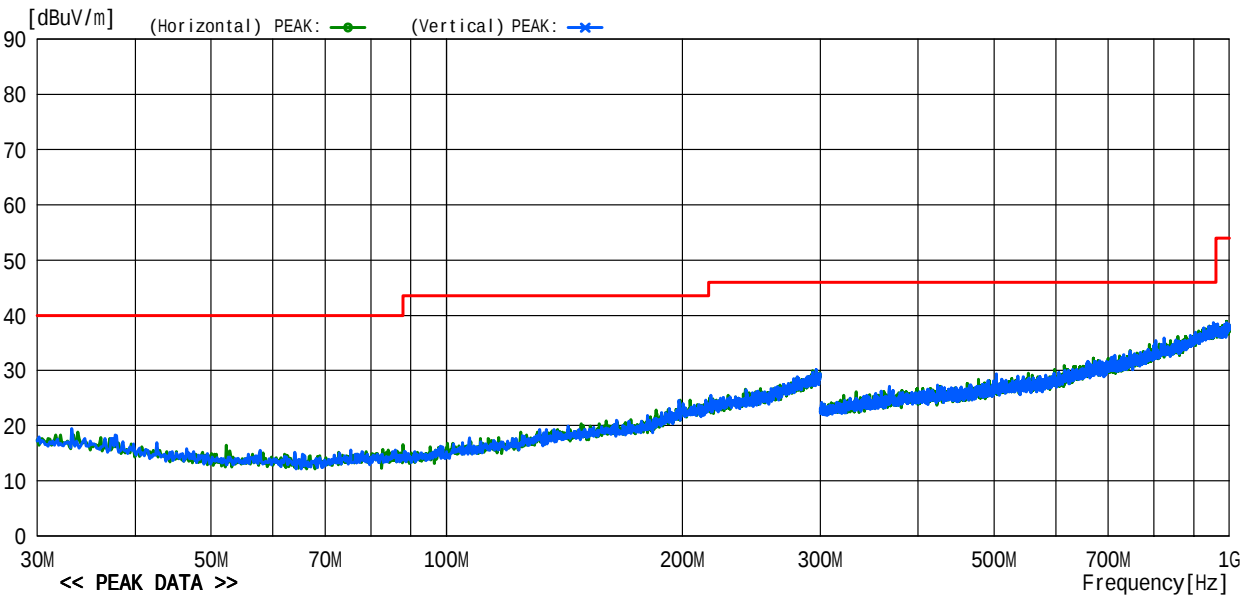
Job No : CJ07-067088E

Temp./Humi. : 20 /42%

Condition : CH18 (2440MHz)

Remark : Angle 1

LIMIT : FCC 15.209 3m



| No | Freq. | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment |
|----|-------|---------|--------|----------|----------|--------|-------|--------|-------|------|---------|
|    | [MHz] | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |         |
|    |       |         |        |          |          |        |       |        |       |      |         |

30MHz to 1GHz, CH 26 Angle 1

Model Name : PCS-RF1

Serial No. : 51

Operator : M.Yamanaka

Power Supply : 3V

Memo : RBW:30M ~ 1GHz(120kHz)

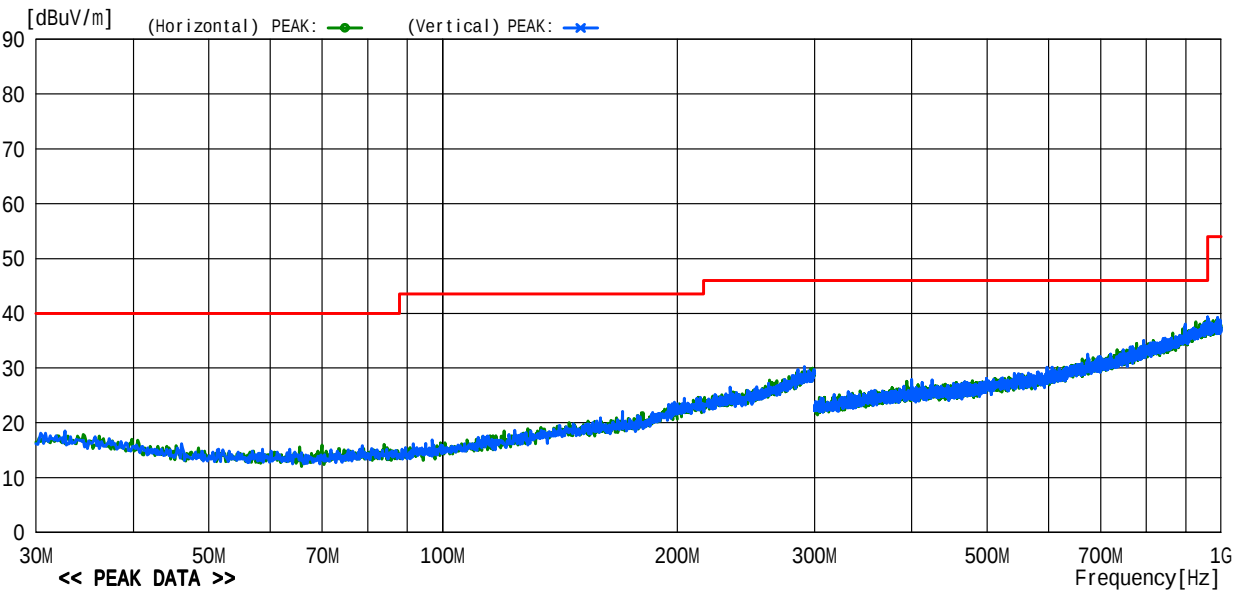
Job No : CJ07-067088E

Temp./Humi. : 20 /41%

Condition : CH26 (2480MHz)

Remark : Angle 1

LIMIT : FCC 15.209 3m



| No | Freq. | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment |
|----|-------|---------|--------|----------|----------|--------|-------|--------|-------|------|---------|
|    | [MHz] | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |         |
|    |       |         |        |          |          |        |       |        |       |      |         |

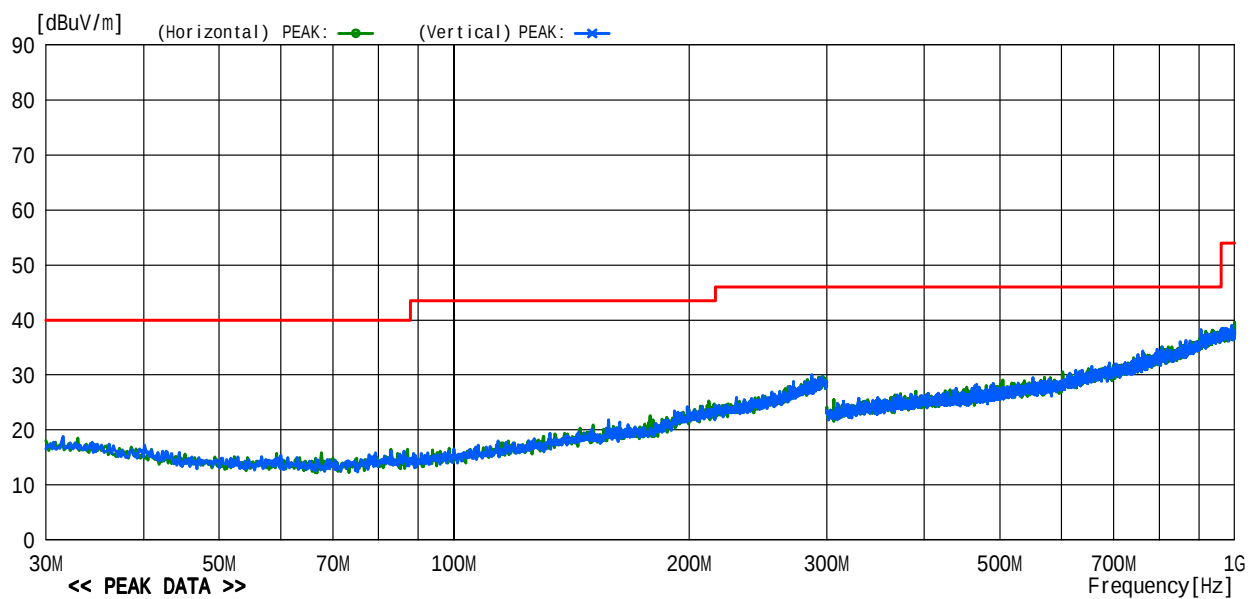
## 30MHz to 1GHz, CH 11 Angle 2

Model Name : PCS-RF1  
Serial No. : 51  
Operator : M.Yamanaka  
Power Supply : 3V

Job No : CJ07-067088E  
Temp./Humi. : 20 / 35%  
Condition : CH11 (2405MHz)  
Remark : Angle 2

Memo : RBW:30M ~ 1GHz(120kHz)

LIMIT : FCC 15.209 3m



| No | Freq. | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment |
|----|-------|---------|--------|----------|----------|--------|-------|--------|-------|------|---------|
|    | [MHz] | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |         |
|    |       |         |        |          |          |        |       |        |       |      |         |

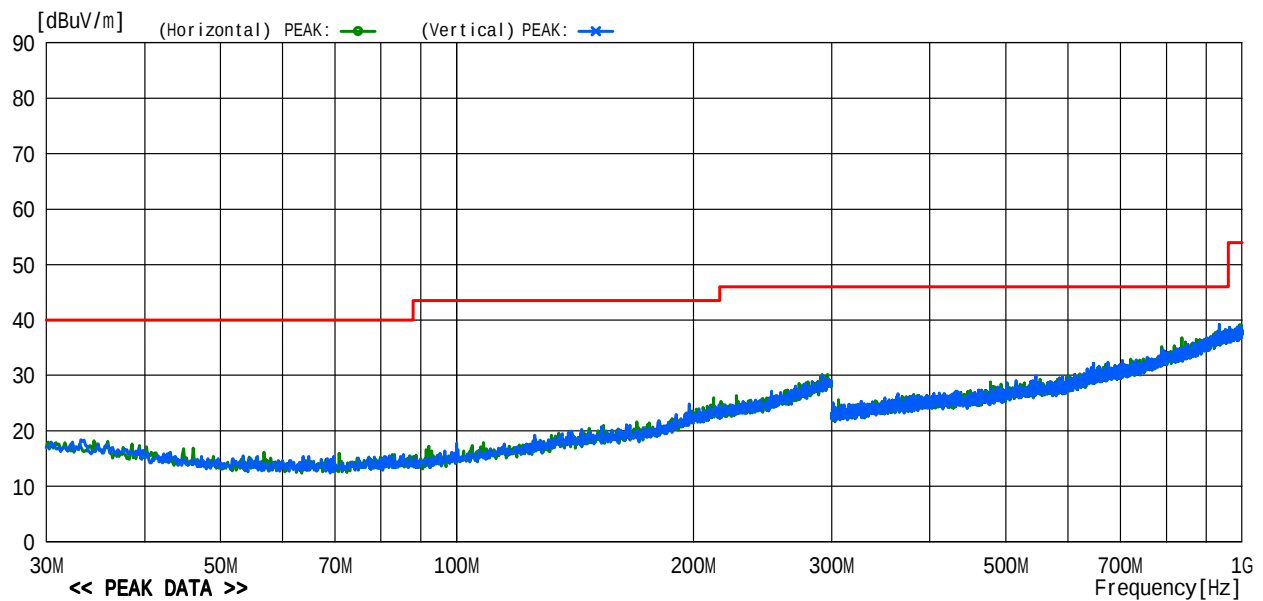
## 30MHz to 1GHz, CH 11 Angle 3

Model Name : PCS-RF1  
Serial No. : 51  
Operator : M.Yamanaka  
Power Supply : 3V

Job No : CJ07-067088E  
Temp./Humi. : 23 / 33%  
Condition : CH11 (2405MHz)  
Remark : Angle 3

Memo : RBW:30M ~ 1GHz(120kHz)

LIMIT : FCC 15.209 3m



| No | Freq. | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment |
|----|-------|---------|--------|----------|----------|--------|-------|--------|-------|------|---------|
|    | [MHz] | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |         |
|    |       |         |        |          |          |        |       |        |       |      |         |

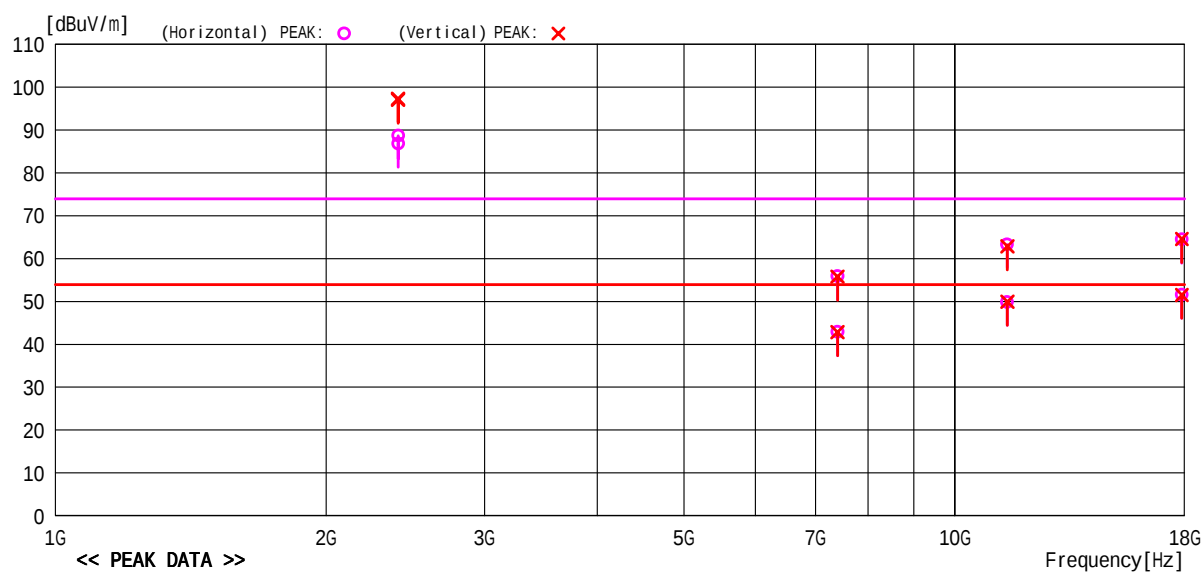
## 1GHz to 18GHz, CH11 Angle 1

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : 3V

Job No. : CJ07-067088E  
 Temp/Humi : 21 /37%  
 Condition : CH11 (2405MHz)  
 Remark : Angle 1

Memo : RBW:1GHz ~ (1MHz)

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pol.  | Height | Angle | Ant  | Comment                  |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|--------------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                          |
| 1  | 2404.991 | 90.5    | -1.7   | 88.8     | 54.0     | -34.8  | Hori. | 100    | 264   | HRN  | PK Fundamental Frequency |
| 2  | 2404.991 | 88.6    | -1.7   | 86.9     | 54.0     | -32.9  | Hori. | 100    | 264   | HRN  | AV Fundamental Frequency |
| 3  | 7400.800 | 44.1    | 11.8   | 55.9     | 54.0     | -1.9   | Hori. | 100    | 358   | HRN  | PK                       |
| 4  | 7400.800 | 31.1    | 11.8   | 42.9     | 54.0     | 11.1   | Hori. | 100    | 358   | HRN  | AV                       |
| 5  | 1435.370 | 45.0    | 18.3   | 63.3     | 54.0     | -9.3   | Hori. | 100    | 9     | HRN  | PK Freq:11435.370MHz     |
| 6  | 1435.370 | 31.6    | 18.3   | 49.9     | 54.0     | 4.1    | Hori. | 100    | 9     | HRN  | AV Freq:11435.370MHz     |
| 7  | 7872.780 | 44.1    | 20.3   | 64.4     | 54.0     | -10.4  | Hori. | 100    | 358   | HRN  | PK Freq:17872.780MHz     |
| 8  | 7872.780 | 31.3    | 20.3   | 51.6     | 54.0     | 2.4    | Hori. | 100    | 358   | HRN  | AV Freq:17872.780MHz     |
| 9  | 2405.050 | 99.1    | -1.7   | 97.4     | 54.0     | -43.4  | Vert. | 100    | 282   | HRN  | PK Fundamental Frequency |
| 10 | 2405.050 | 98.7    | -1.7   | 97.0     | 54.0     | -43.0  | Vert. | 100    | 282   | HRN  | AV Fundamental Frequency |
| 11 | 7400.800 | 44.0    | 11.8   | 55.8     | 54.0     | -1.8   | Vert. | 100    | 1     | HRN  | PK                       |
| 12 | 7400.800 | 31.1    | 11.8   | 42.9     | 54.0     | 11.1   | Vert. | 100    | 1     | HRN  | AV                       |
| 13 | 1435.370 | 44.5    | 18.3   | 62.8     | 54.0     | -8.8   | Vert. | 100    | 135   | HRN  | PK Freq:11435.370MHz     |
| 14 | 1435.370 | 31.6    | 18.3   | 49.9     | 54.0     | 4.1    | Vert. | 100    | 135   | HRN  | AV Freq:11435.370MHz     |
| 15 | 7872.780 | 44.2    | 20.3   | 64.5     | 54.0     | -10.5  | Vert. | 100    | 7     | HRN  | PK Freq:17872.780MHz     |
| 16 | 7872.780 | 31.3    | 20.3   | 51.6     | 54.0     | 2.4    | Vert. | 100    | 7     | HRN  | AV Freq:17872.780MHz     |

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Note: Except for measured point, AV was within a limit.

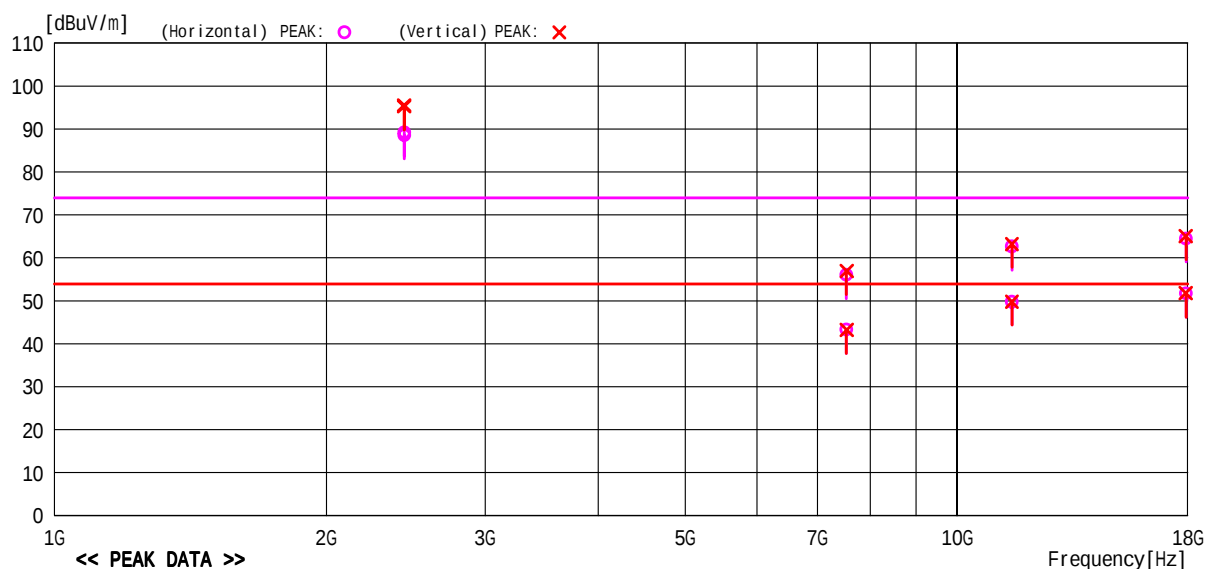
## 1GHz to 18GHz, CH18 Angle 1

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : 3V

Job No. : CJ07-067088E  
 Temp/Humi : 21 /37%  
 Condition : CH18 (2440MHz)  
 Remark : Angle 1

Memo : RBW:1GHz ~ (1MHz)

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment                  |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|--------------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                          |
| 1  | 2440.015 | 90.8    | -1.6   | 89.2     | 54.0     | -35.2  | Hori. | 100    | 264   | HRN  | PK Fundamental Frequency |
| 2  | 2440.015 | 90.1    | -1.6   | 88.5     | 54.0     | -34.5  | Hori. | 100    | 264   | HRN  | AV Fundamental Frequency |
| 3  | 7541.080 | 44.1    | 11.9   | 56.0     | 54.0     | -2.0   | Hori. | 100    | 322   | HRN  | PK                       |
| 4  | 7541.080 | 31.4    | 11.9   | 43.3     | 54.0     | 10.7   | Hori. | 100    | 322   | HRN  | AV                       |
| 5  | 1495.470 | 44.2    | 18.4   | 62.6     | 54.0     | -8.6   | Hori. | 100    | 1     | HRN  | PK Freq:11495.470MHz     |
| 6  | 1495.470 | 31.4    | 18.4   | 49.8     | 54.0     | 4.2    | Hori. | 100    | 1     | HRN  | AV Freq:11495.470MHz     |
| 7  | 7920.860 | 44.2    | 20.3   | 64.5     | 54.0     | -10.5  | Hori. | 100    | 358   | HRN  | PK Freq:17920.860MHz     |
| 8  | 7920.860 | 31.4    | 20.3   | 51.7     | 54.0     | 2.3    | Hori. | 100    | 358   | HRN  | AV Freq:17920.860MHz     |
| 9  | 2440.015 | 97.2    | -1.6   | 95.6     | 54.0     | -41.6  | Vert. | 100    | 266   | HRN  | PK Fundamental Frequency |
| 10 | 2440.015 | 96.9    | -1.6   | 95.3     | 54.0     | -41.3  | Vert. | 100    | 266   | HRN  | AV Fundamental Frequency |
| 11 | 7541.080 | 45.0    | 11.9   | 56.9     | 54.0     | -2.9   | Vert. | 100    | 339   | HRN  | PK                       |
| 12 | 7541.080 | 31.4    | 11.9   | 43.3     | 54.0     | 10.7   | Vert. | 100    | 339   | HRN  | AV                       |
| 13 | 1495.470 | 44.8    | 18.4   | 63.2     | 54.0     | -9.2   | Vert. | 100    | 350   | HRN  | PK Freq:11495.470MHz     |
| 14 | 1495.470 | 31.4    | 18.4   | 49.8     | 54.0     | 4.2    | Vert. | 100    | 350   | HRN  | AV Freq:11495.470MHz     |
| 15 | 7920.860 | 44.8    | 20.3   | 65.1     | 54.0     | -11.1  | Vert. | 100    | 358   | HRN  | PK Freq:17920.860MHz     |
| 16 | 7920.860 | 31.4    | 20.3   | 51.7     | 54.0     | 2.3    | Vert. | 100    | 358   | HRN  | AV Freq:17920.860MHz     |

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Note: Except for measured point, AV was within a limit.

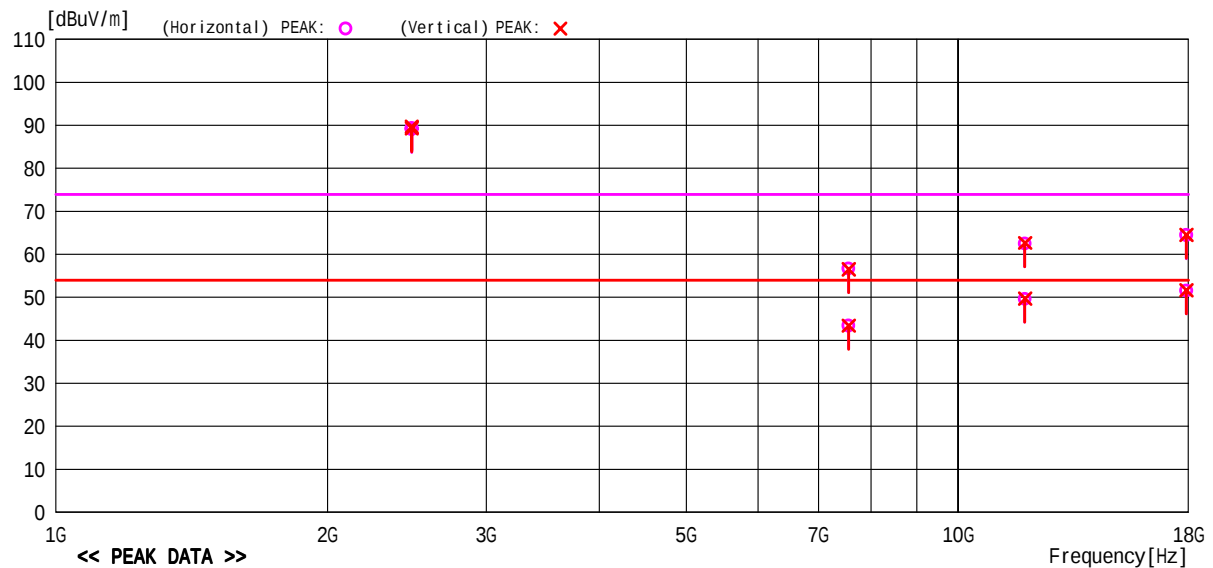
## 1GHz to 18GHz, CH26 Angle 1

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : 3V

Job No. : CJ07-067088E  
 Temp/Humi : 21 /37%  
 Condition : CH26 (2480MHz)  
 Remark : Angle 1

Memo : RBW:1GHz ~ (1MHz)

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment                  |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|--------------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                          |
| 1  | 2479.995 | 91.0    | -1.6   | 89.4     | 54.0     | -35.4  | Hori. | 100    | 34    | HRN  | PK Fundamental Frequency |
| 2  | 2479.995 | 90.7    | -1.6   | 89.1     | 54.0     | -35.1  | Hori. | 100    | 34    | HRN  | AV Fundamental Frequency |
| 3  | 7561.120 | 44.8    | 11.9   | 56.7     | 54.0     | -2.7   | Hori. | 100    | 112   | HRN  | PK                       |
| 4  | 7561.120 | 31.6    | 11.9   | 43.5     | 54.0     | 10.6   | Hori. | 100    | 112   | HRN  | AV                       |
| 5  | 1856.070 | 44.1    | 18.4   | 62.5     | 54.0     | -8.5   | Hori. | 100    | 220   | HRN  | PK 11856.070MHz          |
| 6  | 1856.070 | 31.3    | 18.4   | 49.7     | 54.0     | 4.3    | Hori. | 100    | 220   | HRN  | AV 11856.070MHz          |
| 7  | 7908.840 | 44.1    | 20.3   | 64.4     | 54.0     | -10.4  | Hori. | 100    | 358   | HRN  | PK 17908.840MHz          |
| 8  | 7908.840 | 31.3    | 20.3   | 51.6     | 54.0     | 2.4    | Hori. | 100    | 358   | HRN  | AV 17908.840MHz          |
| 9  | 2479.995 | 90.9    | -1.6   | 89.3     | 54.0     | -35.3  | Vert. | 125    | 31    | HRN  | AV Fundamental Frequency |
| 10 | 2479.995 | 91.3    | -1.6   | 89.7     | 54.0     | -35.7  | Vert. | 125    | 31    | HRN  | PK Fundamental Frequency |
| 11 | 7561.120 | 44.7    | 11.9   | 56.6     | 54.0     | -2.6   | Vert. | 100    | 1     | HRN  | PK                       |
| 12 | 7561.120 | 31.5    | 11.9   | 43.4     | 54.0     | 10.6   | Vert. | 100    | 1     | HRN  | AV                       |
| 13 | 1856.070 | 44.2    | 18.4   | 62.6     | 54.0     | -8.6   | Vert. | 100    | 297   | HRN  | PK 11856.070MHz          |
| 14 | 1856.070 | 31.2    | 18.4   | 49.6     | 54.0     | 4.4    | Vert. | 100    | 297   | HRN  | AV 11856.070MHz          |
| 15 | 7908.840 | 44.2    | 20.3   | 64.5     | 54.0     | -10.5  | Vert. | 100    | 101   | HRN  | PK 17908.840MHz          |
| 16 | 7908.840 | 31.3    | 20.3   | 51.6     | 54.0     | 2.4    | Vert. | 100    | 101   | HRN  | AV 17908.840MHz          |

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Note: Except for measured point, AV was within a limit.

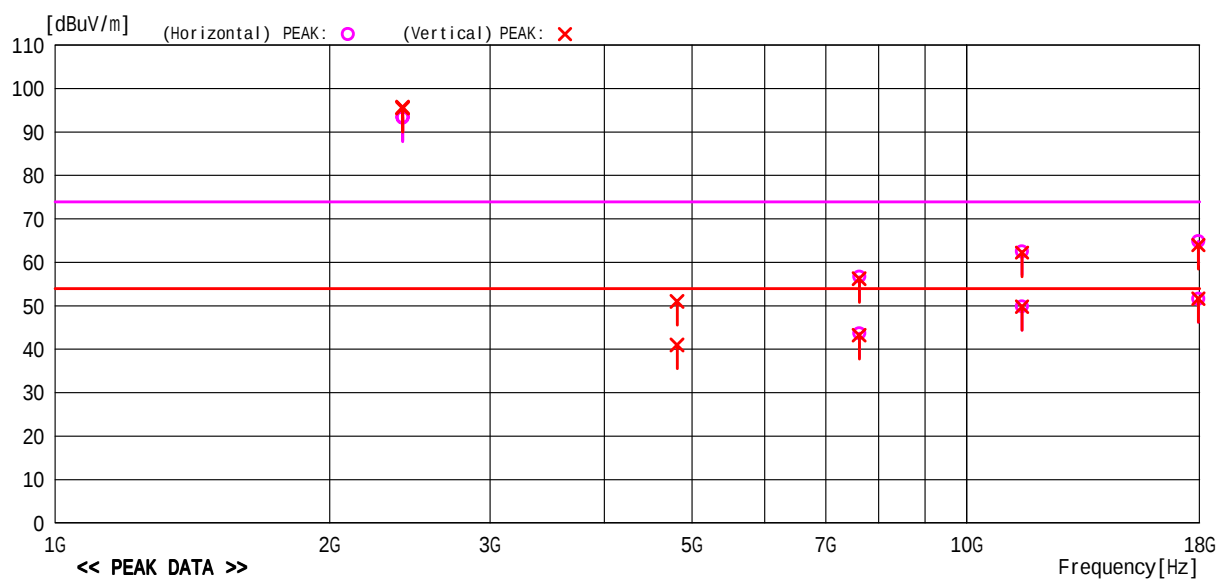
## 1GHz to 18GHz, CH11 Angle 2

Model Name : PCS-RF1  
Serial No. : 51  
Operator : M.Yamanaka  
Power Supply : 3V

Job No. : CJ07-067088E  
Temp/Humi : 21 /34%  
Condition : CH11 (2405MHz)  
Remark : Angle 2

Memo : RBW:1GHz ~ (1MHz)

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pol.  | Height | Angle | Ant  | Comment                  |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|--------------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                          |
| 1  | 2404.985 | 95.2    | -1.7   | 93.5     | 54.0     | -39.5  | Hori. | 158    | 34    | HRN  | PK Fundamental Frequency |
| 2  | 2404.985 | 94.9    | -1.7   | 93.2     | 54.0     | -39.2  | Hori. | 158    | 34    | HRN  | AV Fundamental Frequency |
| 3  | 7621.240 | 44.8    | 11.9   | 56.7     | 54.0     | -2.7   | Hori. | 100    | 136   | HRN  | PK                       |
| 4  | 7621.240 | 31.8    | 11.9   | 43.7     | 54.0     | 10.3   | Hori. | 100    | 136   | HRN  | AV                       |
| 5  | 1495.470 | 44.1    | 18.4   | 62.5     | 54.0     | -8.5   | Hori. | 100    | 1     | HRN  | PK Freq:11495.470MHz     |
| 6  | 1495.470 | 31.4    | 18.4   | 49.8     | 54.0     | 4.2    | Hori. | 100    | 1     | HRN  | AV Freq:11495.470MHz     |
| 7  | 7944.900 | 44.5    | 20.4   | 64.9     | 54.0     | -10.9  | Hori. | 100    | 358   | HRN  | PK Freq:17944.900MHz     |
| 8  | 7944.900 | 31.2    | 20.4   | 51.6     | 54.0     | 2.4    | Hori. | 100    | 358   | HRN  | AV Freq:17944.900MHz     |
| 9  | 2404.991 | 97.4    | -1.7   | 95.7     | 54.0     | -41.7  | Vert. | 108    | 276   | HRN  | PK Fundamental Frequency |
| 10 | 2404.991 | 97.2    | -1.7   | 95.5     | 54.0     | -41.5  | Vert. | 108    | 276   | HRN  | AV Fundamental Frequency |
| 11 | 4811.616 | 46.2    | 4.8    | 51.0     | 54.0     | 3.0    | Vert. | 100    | 359   | HRN  | Peak (Limit=74dBuV/m)    |
| 12 | 4811.616 | 36.2    | 4.8    | 41.0     | 54.0     | 13.0   | Vert. | 100    | 359   | HRN  | Average                  |
| 13 | 7621.240 | 44.4    | 11.9   | 56.3     | 54.0     | -2.3   | Vert. | 100    | 135   | HRN  | PK                       |
| 14 | 7621.240 | 31.4    | 11.9   | 43.3     | 54.0     | 10.7   | Vert. | 100    | 135   | HRN  | AV                       |
| 15 | 1495.470 | 43.8    | 18.4   | 62.2     | 54.0     | -8.2   | Vert. | 100    | 293   | HRN  | PK Freq:11495.470MHz     |
| 16 | 1495.470 | 31.4    | 18.4   | 49.8     | 54.0     | 4.2    | Vert. | 100    | 293   | HRN  | AV Freq:11495.470MHz     |
| 17 | 7944.900 | 43.6    | 20.4   | 64.0     | 54.0     | -10.0  | Vert. | 100    | 358   | HRN  | PK Freq:17944.900MHz     |
| 18 | 7944.900 | 31.2    | 20.4   | 51.6     | 54.0     | 2.4    | Vert. | 100    | 358   | HRN  | AV Freq:17944.900MHz     |

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Note: Except for measured point, AV was within a limit.

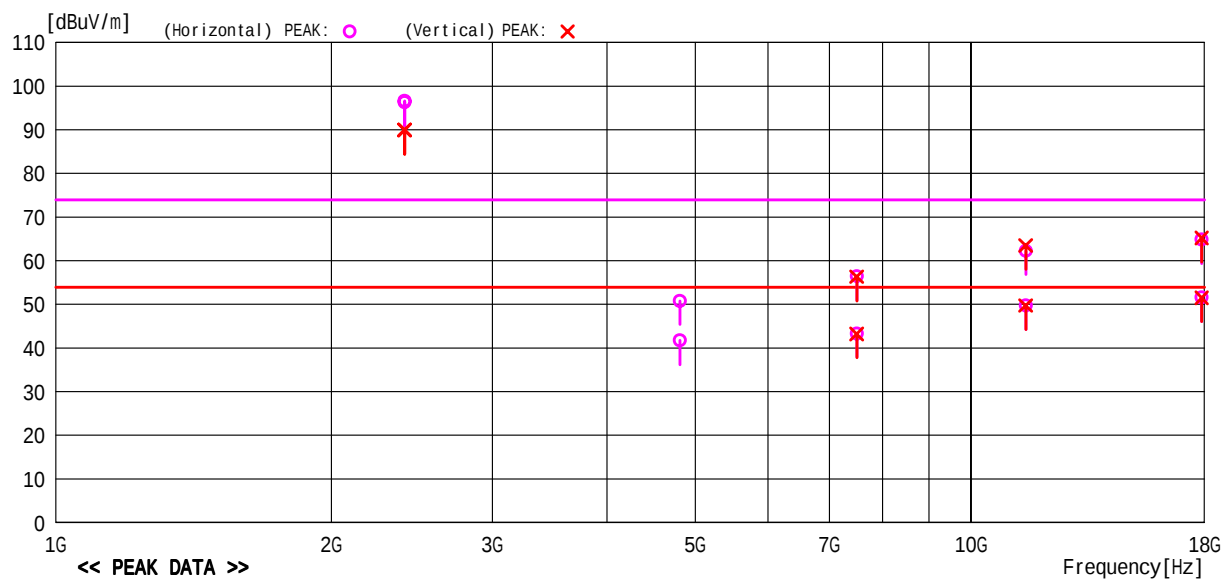
## 1GHz to 18GHz, CH11 Angle 3

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : 3V

Job No. : CJ07-067088E  
 Temp/Humi : 23 /33%  
 Condition : CH11 (2405MHz)  
 Remark : Angle 3

Memo : RBW:1GHz ~ (1MHz)

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment                  |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|--------------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                          |
| 1  | 2405.025 | 98.2    | -1.7   | 96.5     | 54.0     | -42.5  | Hori. | 138    | 64    | HRN  | PK Fundamental Frequency |
| 2  | 2405.025 | 98.0    | -1.7   | 96.3     | 54.0     | -42.3  | Hori. | 138    | 64    | HRN  | AV Fundamental Frequency |
| 3  | 4809.166 | 46.1    | 4.8    | 50.9     | 54.0     | 3.2    | Hori. | 100    | 359   | HRN  | Peak (Limit = 74 dBuV/m) |
| 4  | 4809.166 | 36.9    | 4.8    | 41.7     | 54.0     | 12.3   | Hori. | 100    | 359   | HRN  | Average                  |
| 5  | 7501.000 | 44.5    | 11.9   | 56.4     | 54.0     | -2.4   | Hori. | 100    | 338   | HRN  | PK                       |
| 6  | 7501.000 | 31.4    | 11.9   | 43.3     | 54.0     | 10.7   | Hori. | 100    | 338   | HRN  | AV                       |
| 7  | 1471.430 | 44.0    | 18.3   | 62.3     | 54.0     | -8.3   | Hori. | 100    | 145   | HRN  | PK Freq:11471.430MHz     |
| 8  | 1471.430 | 31.4    | 18.3   | 49.7     | 54.0     | 4.3    | Hori. | 100    | 145   | HRN  | AV Freq:11471.430MHz     |
| 9  | 7872.780 | 44.5    | 20.3   | 64.8     | 54.0     | -10.8  | Hori. | 100    | 358   | HRN  | PK Freq:17872.780MHz     |
| 10 | 7872.780 | 31.2    | 20.3   | 51.5     | 54.0     | 2.5    | Hori. | 100    | 358   | HRN  | AV Freq:17872.780MHz     |
| 11 | 2405.005 | 91.7    | -1.7   | 90.0     | 54.0     | -36.0  | Vert. | 100    | 26    | HRN  | PK Fundamental Frequency |
| 12 | 2405.005 | 91.6    | -1.7   | 89.9     | 54.0     | -35.9  | Vert. | 100    | 26    | HRN  | AV Fundamental Frequency |
| 13 | 7501.000 | 44.4    | 11.9   | 56.3     | 54.0     | -2.3   | Vert. | 100    | 141   | HRN  | PK                       |
| 14 | 7501.000 | 31.3    | 11.9   | 43.2     | 54.0     | 10.8   | Vert. | 100    | 141   | HRN  | AV                       |
| 15 | 1471.430 | 45.2    | 18.3   | 63.5     | 54.0     | -9.5   | Vert. | 100    | 333   | HRN  | PK Freq:11471.430MHz     |
| 16 | 1471.430 | 31.4    | 18.3   | 49.7     | 54.0     | 4.3    | Vert. | 100    | 333   | HRN  | AV Freq:11471.430MHz     |
| 17 | 7872.780 | 44.9    | 20.3   | 65.2     | 54.0     | -11.2  | Vert. | 100    | 0     | HRN  | PK Freq:17872.780MHz     |
| 18 | 7872.780 | 31.2    | 20.3   | 51.5     | 54.0     | 2.5    | Vert. | 100    | 0     | HRN  | AV Freq:17872.780MHz     |

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Note: Except for measured point, AV was within a limit.

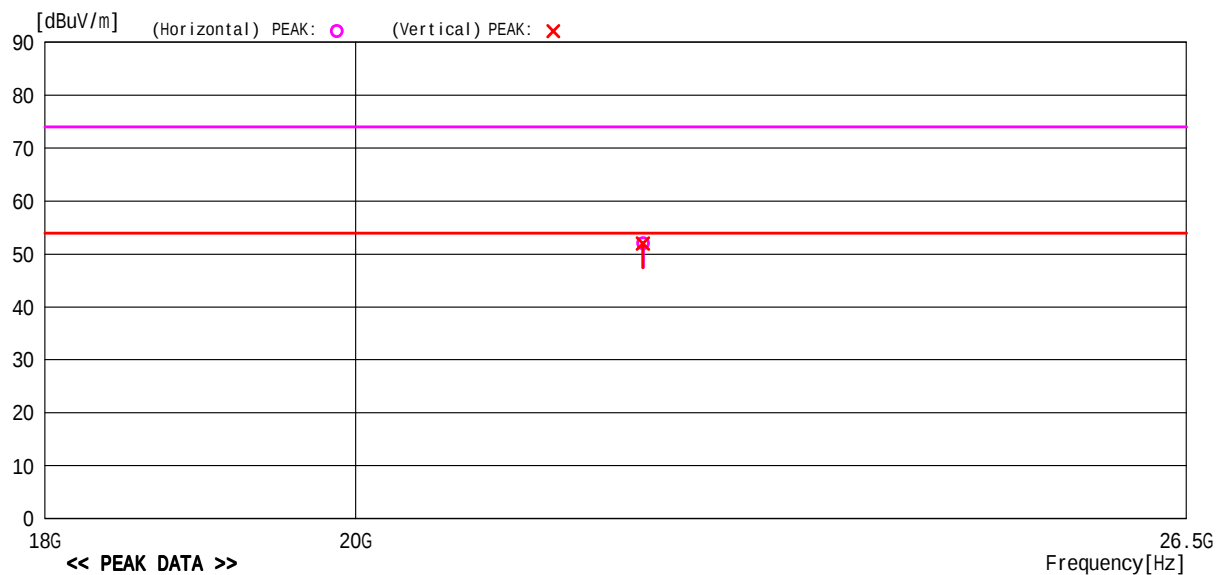
## 18GHz to 26.5GHz, CH11 Angle 1

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : DC 1.5V x 2 (Battery)

Job No : CJ07-067088E  
 Temp/Humi : 22 ,41%  
 Condition : CH:11(2405MHz)  
 Remark : Angle1

Memo : RBW:1MHz(1G ~ )

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pol.  | Height | Angle | Ant  | Comment              |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|----------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                      |
| 1  | 2044.110 | 30.5    | 21.5   | 52.0     | 54.0     | 2.0    | Hori. | 100    | 156   | HRN  | AV Freq:22044.110MHz |
| 2  | 2043.020 | 30.4    | 21.5   | 51.9     | 54.0     | 2.1    | Vert. | 100    | 60    | HRN  | AV Freq:22043.020MHz |

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Note: Except for measured point, AV was within a limit.

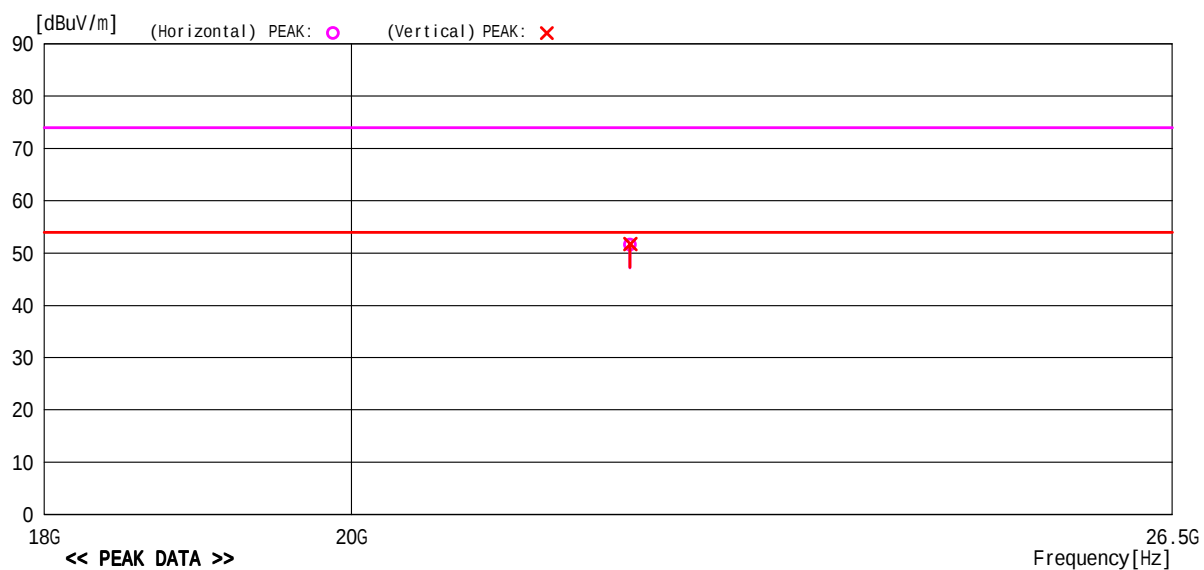
## 18GHz to 26.5GHz, CH18 Angle 1

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : DC 1.5V x 2 (Battery)

Job No : CJ07-067088E  
 Temp/Humi : 22 ,41%  
 Condition : CH:18(2440MHz)  
 Remark : Angle1

Memo : RBW:1MHz(1G ~ )

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pola. | Height | Angle | Ant  | Comment              |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|----------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                      |
| 1  | 2004.060 | 30.2    | 21.4   | 51.6     | 54.0     | 2.4    | Hori. | 100    | 123   | HRN  | AV Freq:22004.060MHz |
| 2  | 2004.850 | 30.3    | 21.4   | 51.7     | 54.0     | 2.3    | Vert. | 100    | 167   | HRN  | AV Freq:22004.850MHz |

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Note: Except for measured point, AV was within a limit.

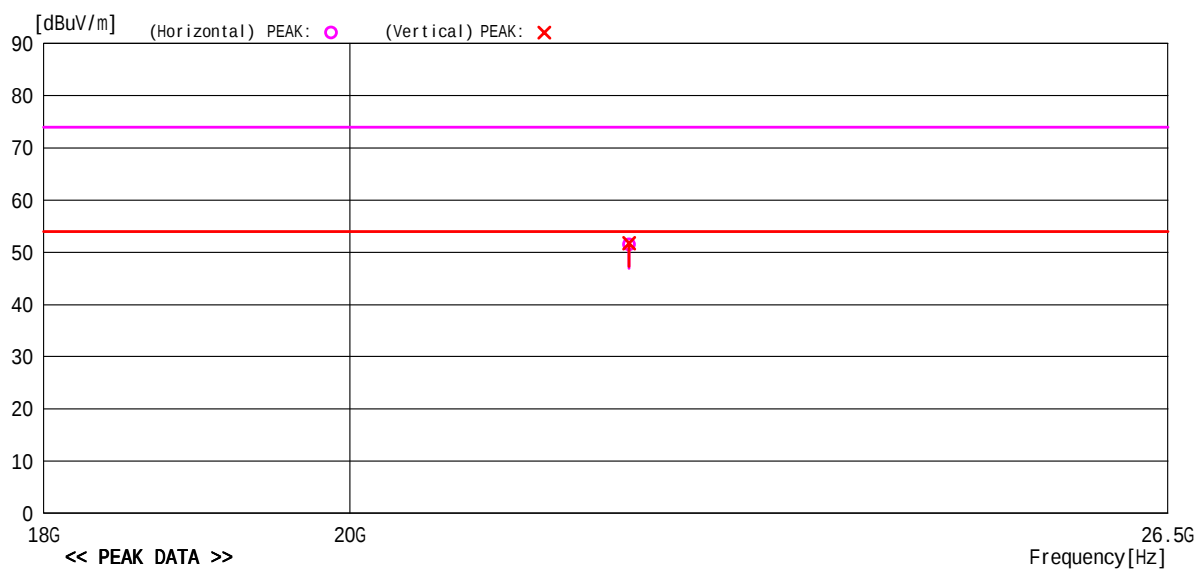
## 18GHz to 26.5GHz, CH26 Angle 1

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : DC 1.5V x 2 (Battery)

Job No : CJ07-067088E  
 Temp/Humi : 22 , 41%  
 Condition : CH:26(2480MHz)  
 Remark : Angle1

Memo : RBW:1MHz(1G ~ )

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pol.  | Height | Angle | Ant  | Comment              |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|----------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                      |
| 1  | 2016.240 | 30.0    | 21.4   | 51.4     | 54.0     | 2.6    | Hori. | 100    | 221   | HRN  | AV Freq:22016.240MHz |
| 2  | 2015.900 | 30.3    | 21.4   | 51.7     | 54.0     | 2.3    | Vert. | 100    | 358   | HRN  | AV Freq:22015.900MHz |

-TEPT0-DV/Ver 1.80.0020

Note: Except for measured point, AV was within a limit.

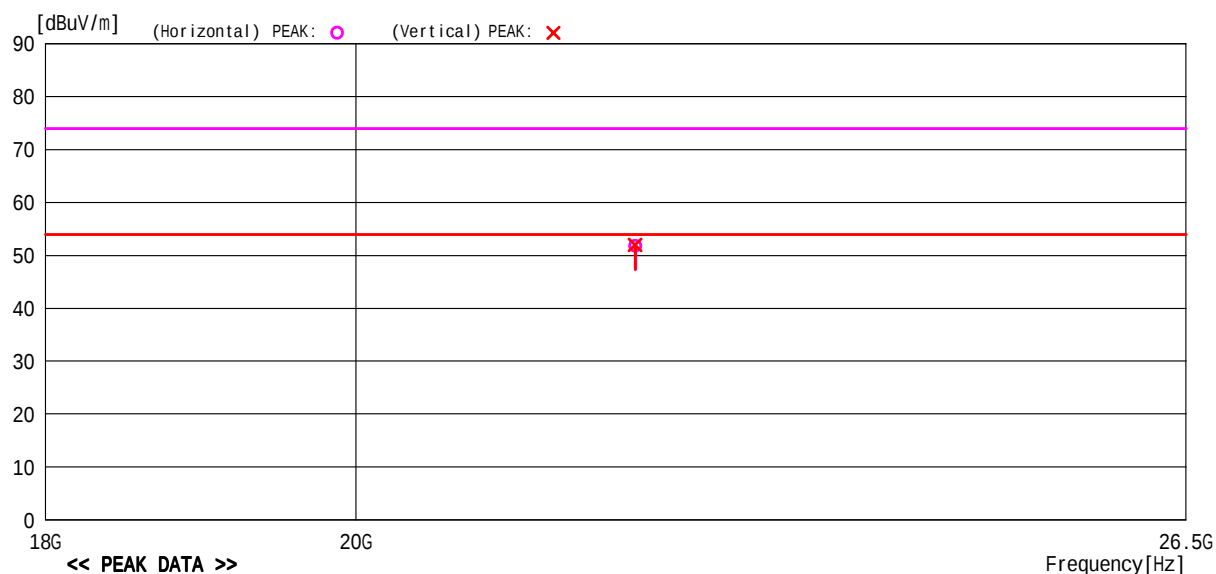
## 18GHz to 26.5GHz, CH11 Angle 2

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : DC 1.5V x 2 (Battery)

Job No : CJ07-067088E  
 Temp/Humi : 22 , 41%  
 Condition : CH:11(2405MHz)  
 Remark : Angle2

Memo : RBW:1MHz(1G ~ )

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pol.  | Height | Angle | Ant  | Comment              |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|----------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                      |
| 1  | 1984.950 | 30.4    | 21.4   | 51.8     | 54.0     | 2.2    | Hori. | 100    | 165   | HRN  | AV Freq:21984.950MHz |
| 2  | 1985.690 | 30.5    | 21.4   | 51.9     | 54.0     | 2.1    | Vert. | 100    | 58    | HRN  | AV Freq:21985.690MHz |

-TEPTO-DV/Ver 1.80.0020

Note: Except for measured point, AV was within a limit.

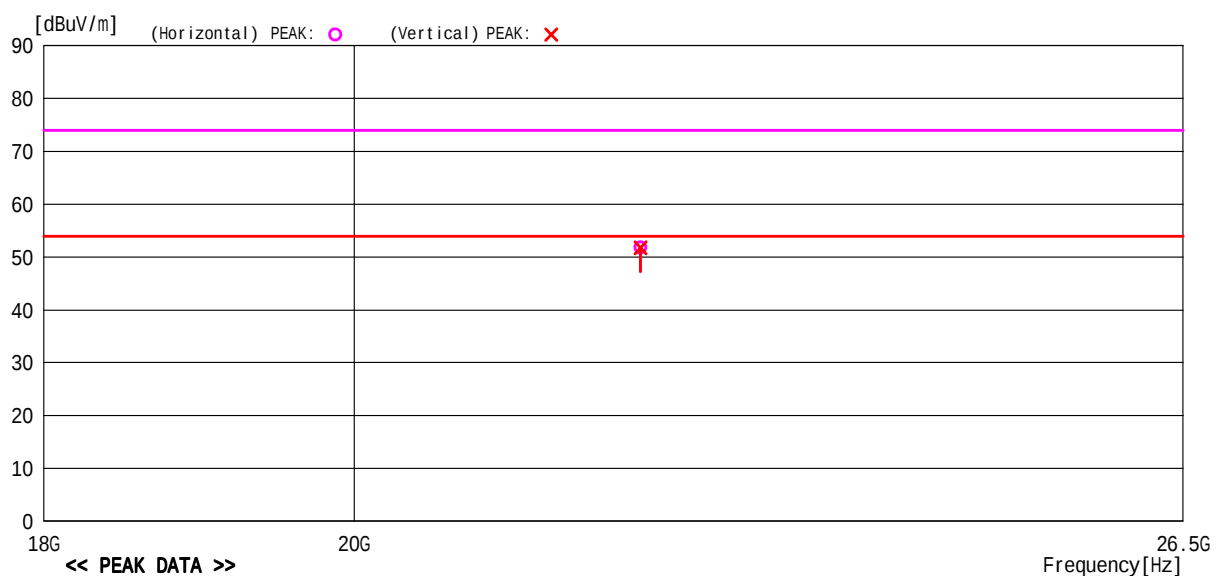
## 18GHz to 26.5GHz, CH11 Angle 3

Model Name : PCS-RF1  
 Serial No. : 51  
 Operator : M.Yamanaka  
 Power Supply : DC 1.5V x 2 (Battery)

Job No : CJ07-067088E  
 Temp/Humi : 22 , 41%  
 Condition : CH:11(2405MHz)  
 Remark : Angle3

Memo : RBW:1MHz(1G ~ )

LIMIT : FCC Subpart C 15.209 (3m) 1G-26.5GHz(AV)  
 FCC Subpart C 15.209 (3m) 1G-26.5GHz(PK)



| No | Freq.    | Reading | C.Fac  | Result   | Limit    | Margin | Pol.  | Height | Angle | Ant  | Comment              |
|----|----------|---------|--------|----------|----------|--------|-------|--------|-------|------|----------------------|
|    | [MHz]    | [dBuV]  | [dB/m] | [dBuV/m] | [dBuV/m] | [dB]   | [H/V] | [cm]   | [deg] | Type |                      |
| 1  | 2040.160 | 30.3    | 21.5   | 51.8     | 54.0     | 2.2    | Hori. | 100    | 123   | HRN  | AV Freq:22040.160MHz |
| 2  | 2041.650 | 30.2    | 21.5   | 51.7     | 54.0     | 2.3    | Vert. | 100    | 36    | HRN  | AV Freq:22041.650MHz |

-TEPT0-DV/Ver 1.80.0020

Note: Except for measured point, AV was within a limit.

## 5.5 15. 247(d) Power Spectrum Density

### 5.5.1 Setting Remarks

- EUT directly connects to the spectrum analyzer via calibrated coaxial cable and 10 dB attenuator.
- The loss of the coaxial cable is maximum 1 dB.
- The peak output power is determined by using the marker-data function of spectrum analyzer.
- The spectrum analyzer is set-up as following;

|                        |            |
|------------------------|------------|
| ✓ Frequency Span       | : 1.5 MHz  |
| ✓ Resolution bandwidth | : 3 kHz    |
| ✓ Video bandwidth      | : 3 MHz    |
| ✓ Sweep                | : 500sec   |
| ✓ Detector function    | : Peak     |
| ✓ Trace Mode           | : Max Hold |
- See test configuration figure 4.3.

### 5.5.2 Minimum Standard

(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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 5.5.3 Result

**EUT complies with the requirement.**

Uncertainty of measurement result:  $\pm 0.8$  dB

Temperature, Humidity : 23°C, 38%

## 5.5.4 Measured Data

| Frequency (MHz) | Correction Factor (dB) | Reading (dBm) | Peak Power (dBm) | Limit (dBm) | Margin (dB) |
|-----------------|------------------------|---------------|------------------|-------------|-------------|
| 2405 (11ch)     | 0.34                   | -20.5         | -20.16           | 8           | 28.16       |
| 2440 (18ch)     | 0.34                   | -20           | -19.66           | 8           | 27.66       |
| 2480 (26ch)     | 0.34                   | -19.9         | -19.56           | 8           | 27.56       |

\* Correction Factor = Cable Loss (dB) + External Attenuator (dB)

2405 MHz (11ch)



2440 MHz (18ch)



2480 MHz (26ch)



**5.6 15. 247(c) Band Edge Measurement****5.6.1 Setting Remarks**

- EUT directly connects to the spectrum analyzer via calibrated coaxial cable and 10 dB attenuator.
- The loss of the coaxial cable is maximum 1 dB.
- The emission at the band edge is measured by using the marker function of spectrum analyzer.
- The peak of the in-band emission is measured by using the marker to peak function of spectrum analyzer.
- This measurement is repeated in both side of the spectrum.
- The spectrum analyzer is set-up as following;

|                        |                                          |
|------------------------|------------------------------------------|
| ✓ Frequency Span       | : 30MHz                                  |
| ✓ Resolution bandwidth | : 100 kHz, 300kHz (1% of frequency span) |
| ✓ Video bandwidth      | : > RBW                                  |
| ✓ Sweep                | : Auto                                   |
| ✓ Detector function    | : Peak                                   |
| ✓ Trace Mode           | : Max Hold                               |

- Where bandedge spectrum is too rough to find precise edge point, larger RBW i.e. 1MHz, 3MHz shall be applied as severer condition.
- See test configuration figure 4.3.

**5.6.2 Minimum Standard**

In any 100kHz bandwidth outside the frequency band in which the transmitter is operating, emissions shall be at least 20 dB below the fundamental emission or shall not exceed the following field strength limits. Emissions falling in the restricted bands of 15.205 shall not exceed the following field strength limits:

| Frequency of Emission (MHz)    | Limit of the band edge spurious emission (dBμV) |         |
|--------------------------------|-------------------------------------------------|---------|
| Below 2,390.0<br>Above 2,483.5 | Peak                                            | Average |
|                                | 74                                              | 54      |

**5.6.3 Result**

**EUT complies with the requirement.**

Uncertainty of measurement result:  $\pm 2.6$  dB

Temperature, Humidity : 21°C, 37%

## 5.6.4 Measured Data

The band edge emissions are calculated as following;

## Angle1

Lower frequency 2405 MHz

|                  | Level<br>(dBuV/m) |
|------------------|-------------------|
| P <sub>max</sub> | 99.05             |
| P <sub>av</sub>  | 98.73             |
| P <sub>dev</sub> | 51.21             |

Higher frequency 2480 MHz

|                  | Level<br>(dBuV/m) |
|------------------|-------------------|
| P <sub>max</sub> | 91.25             |
| P <sub>av</sub>  | 90.92             |
| P <sub>dev</sub> | 40.44             |

|                 | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|-----------------|-------------------|-------------------|----------------|
| E <sub>be</sub> | 47.84             | 74.00             | 26.16          |
| E <sub>av</sub> | 47.52             | 54.00             | 6.48           |

|                 | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|-----------------|-------------------|-------------------|----------------|
| E <sub>be</sub> | 50.81             | 74.00             | 23.19          |
| E <sub>av</sub> | 50.48             | 54.00             | 3.52           |

## Angle2

Lower frequency 2405 MHz

|                  | Level<br>(dBuV/m) |
|------------------|-------------------|
| P <sub>max</sub> | 97.38             |
| P <sub>av</sub>  | 97.21             |
| P <sub>dev</sub> | 47.26             |

Higher frequency 2480 MHz

|                  | Level<br>(dBuV/m) |
|------------------|-------------------|
| P <sub>max</sub> | 98.16             |
| P <sub>av</sub>  | 93.80             |
| P <sub>dev</sub> | 40.96             |

|                 | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|-----------------|-------------------|-------------------|----------------|
| E <sub>be</sub> | 50.12             | 74.00             | 23.88          |
| E <sub>av</sub> | 49.95             | 54.00             | 4.05           |

|                 | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|-----------------|-------------------|-------------------|----------------|
| E <sub>be</sub> | 57.20             | 74.00             | 16.80          |
| E <sub>av</sub> | 52.84             | 54.00             | 1.16           |

## Angle3

Lower frequency 2405 MHz

|                  | Level<br>(dBuV/m) |
|------------------|-------------------|
| P <sub>max</sub> | 98.24             |
| P <sub>av</sub>  | 98.02             |
| P <sub>dev</sub> | 48.13             |

Higher frequency 2480 MHz

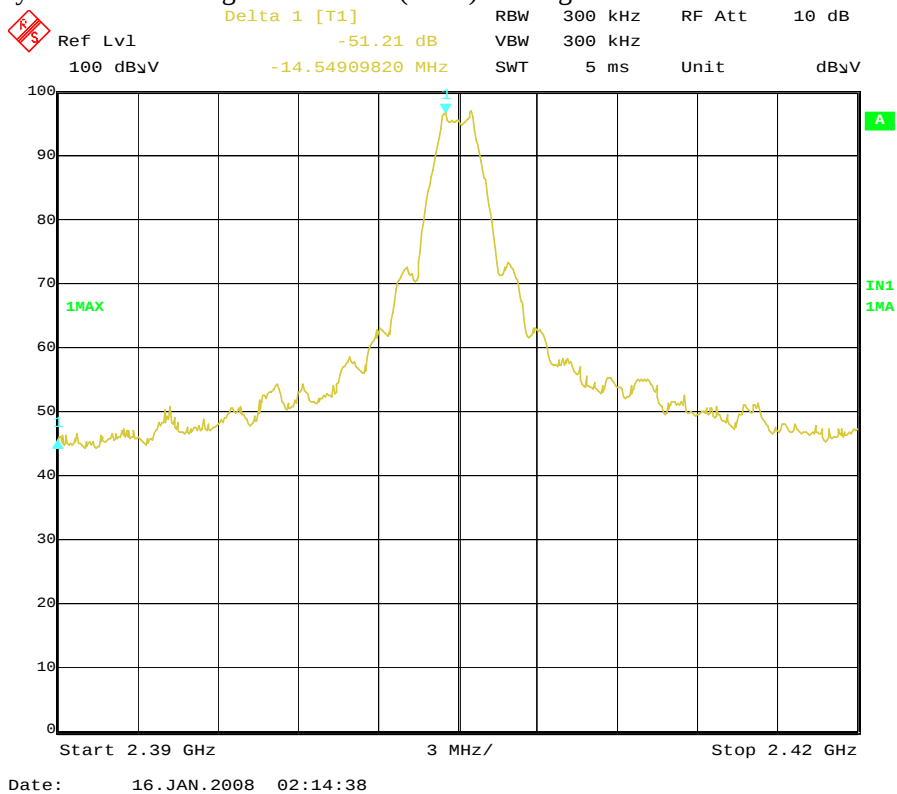
|                  | Level<br>(dBuV/m) |
|------------------|-------------------|
| P <sub>max</sub> | 100.68            |
| P <sub>av</sub>  | 94.30             |
| P <sub>dev</sub> | 41.24             |

|                 | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|-----------------|-------------------|-------------------|----------------|
| E <sub>be</sub> | 50.11             | 74.00             | 23.89          |
| E <sub>av</sub> | 49.89             | 54.00             | 4.11           |

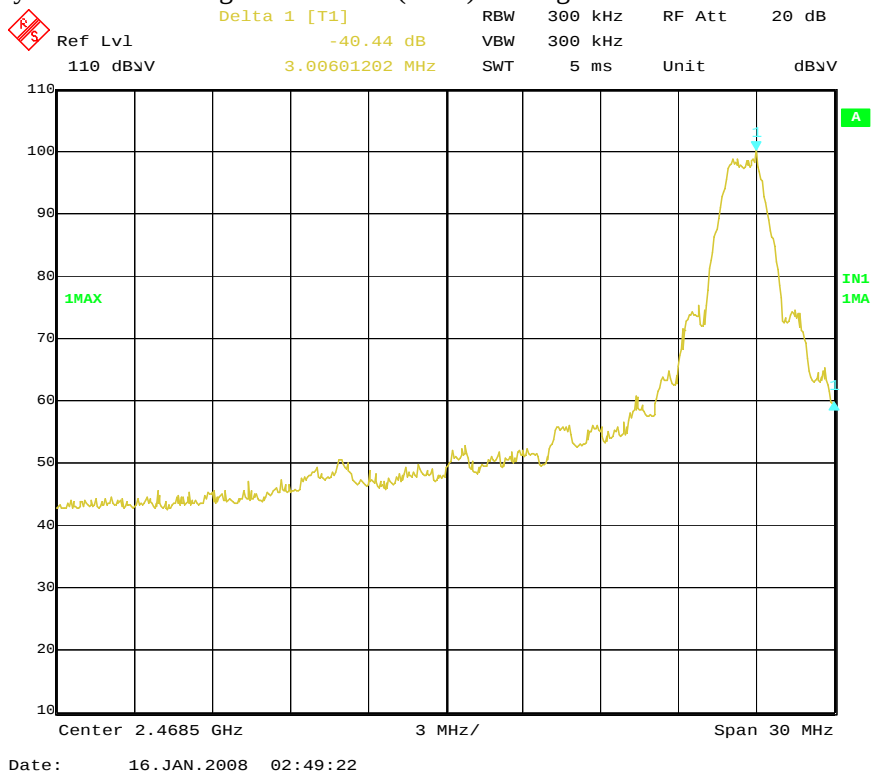
|                 | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|-----------------|-------------------|-------------------|----------------|
| E <sub>be</sub> | 59.44             | 74.00             | 14.56          |
| E <sub>av</sub> | 53.06             | 54.00             | 0.94           |

P<sub>max</sub> : Maximum peak power of the fundamental.  
P<sub>dev</sub> : The amplitude delta between the peak power and the band edge emission.  
E<sub>be</sub> : Band edge emission.  
E<sub>av</sub> : Average of the band edge emission.

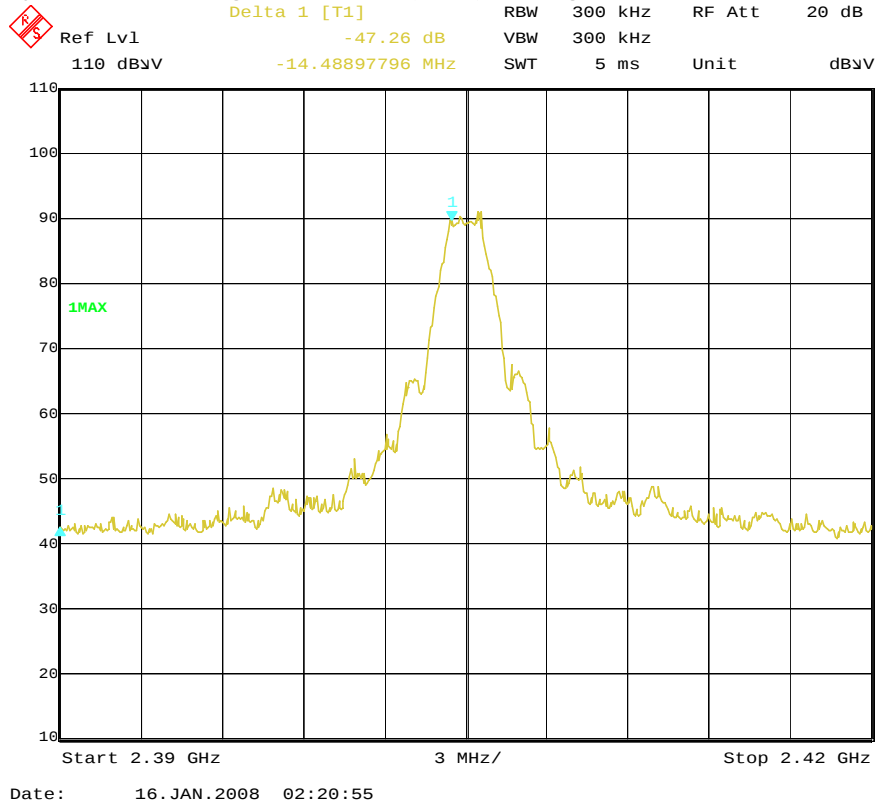
Lower frequency of the band edge 2405 MHz (11ch) < Angle1 >



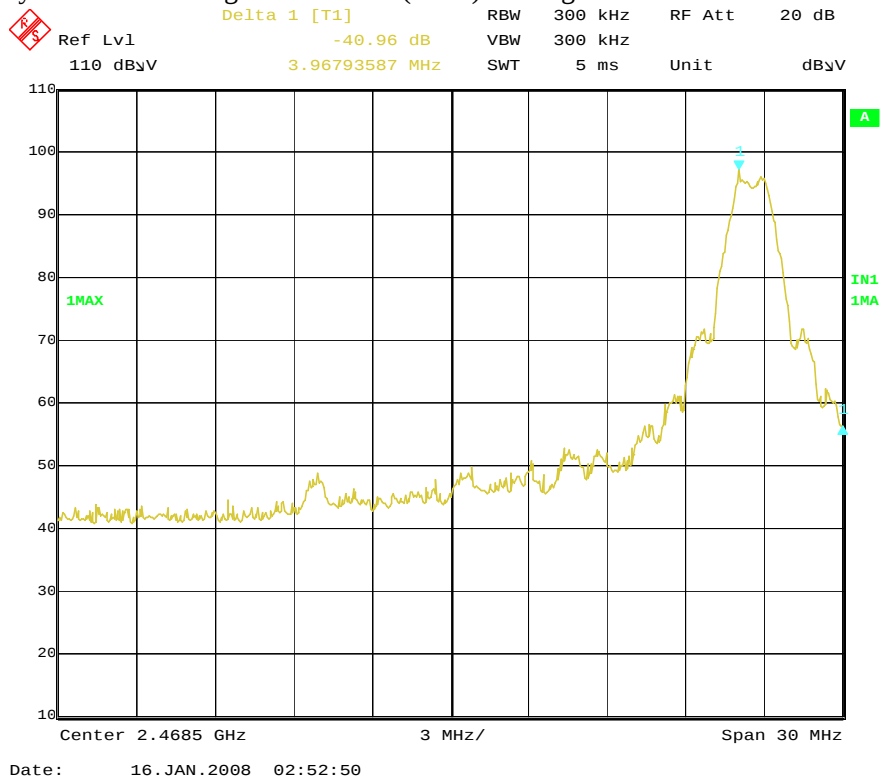
## Higher frequency of the band edge 2480 MHz (26ch) &lt; Angle1 &gt;



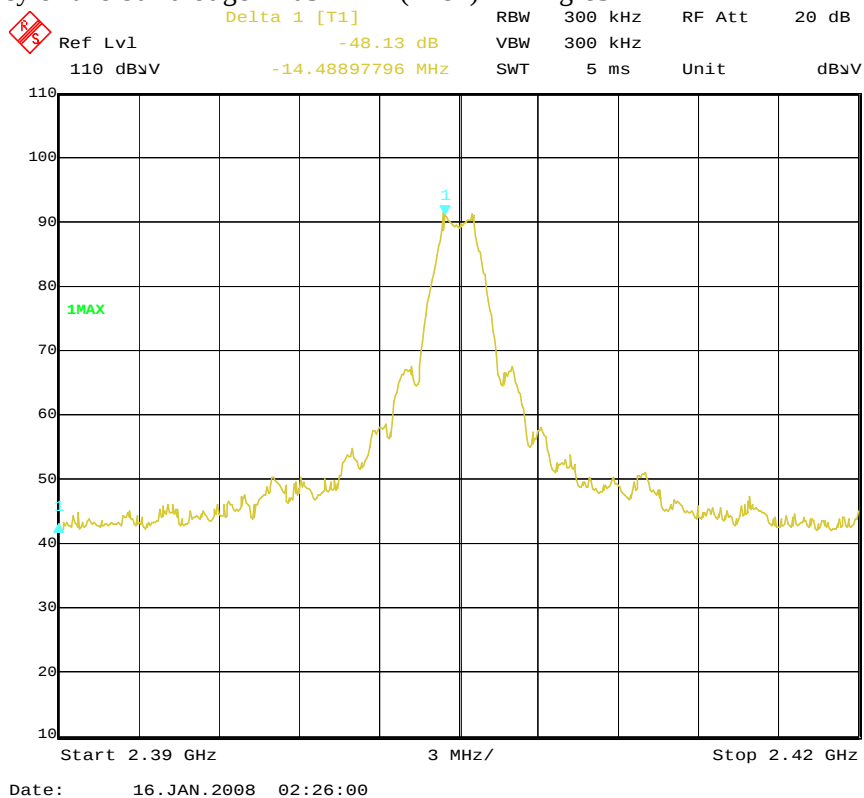
## Lower frequency of the band edge 2405 MHz (11ch) &lt; Angle2 &gt;



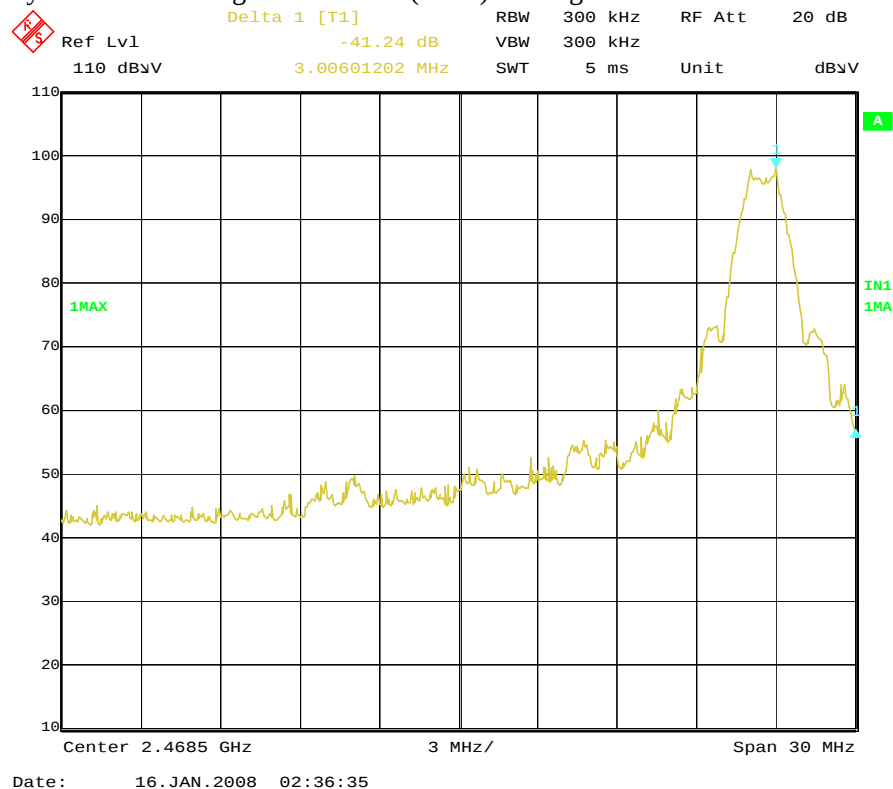
## Higher frequency of the band edge 2480 MHz (26ch) &lt; Angle2 &gt;



## Lower frequency of the band edge 2405 MHz (11ch) &lt; Angle3 &gt;

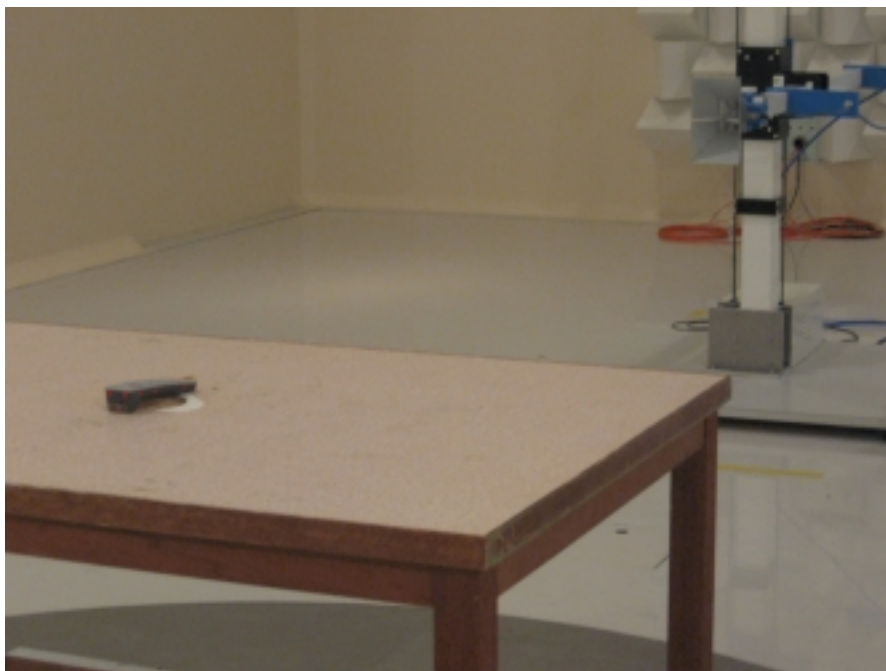
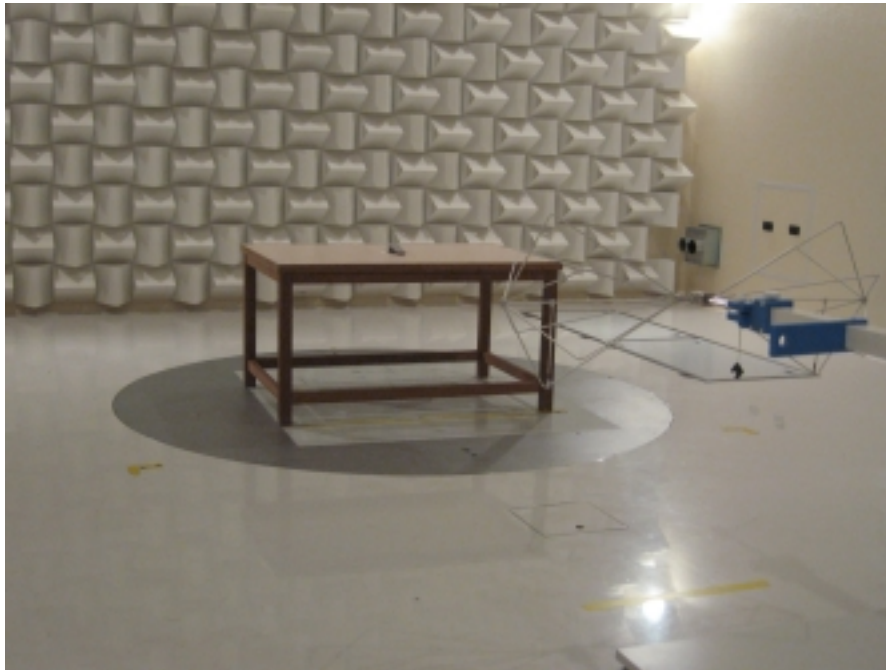


## Higher frequency of the band edge 2480 MHz (26ch) &lt; Angle3 &gt;

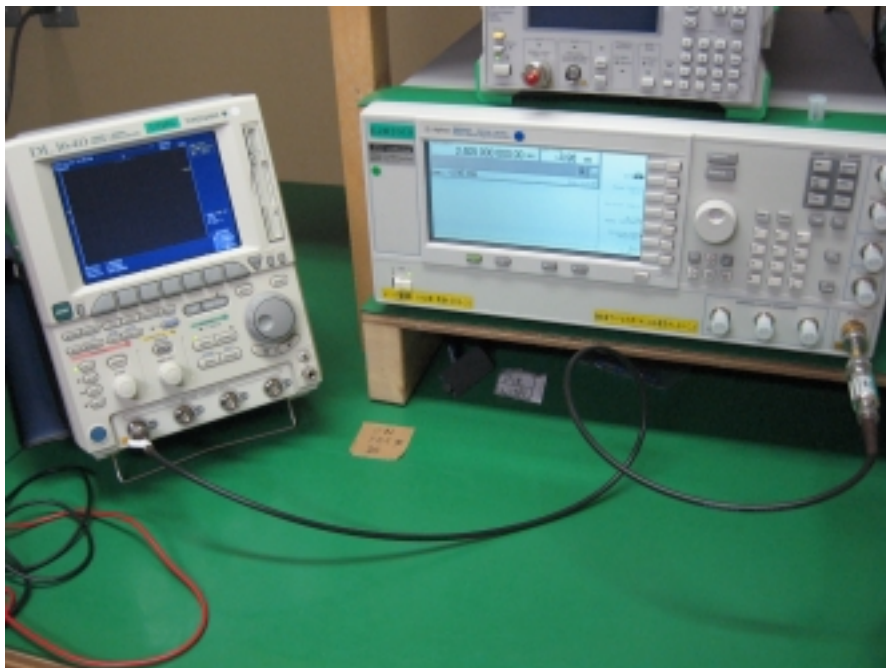


## 6. Photos

### 6.1 Setup Photo (Radiated Emission)



## 6.2 Setup Photo (All Other Test Items)



**7. List of Test Measurement Instruments****7.1 Radiated Emission Measurement**

| <b>Instruments</b>                             | <b>Manufacturer</b> | <b>Model / Type</b>                  | <b>Serial No.</b> | <b>Calibration Date<br/>Next Calibration</b> |
|------------------------------------------------|---------------------|--------------------------------------|-------------------|----------------------------------------------|
| EMI Test Receiver                              | ROHDE &<br>SCHWARZ  | ESIB40                               | 100211            | April, 2007<br>April, 2008                   |
| Biconical Antenna<br>(30 to 300MHz)            | SCHWARZBECK         | VHBB9124(Balun)<br>BBA9106(Elements) | 311               | September, 2007<br>September, 2008           |
| Log.-Periodic<br>Antenna<br>(300 MHz to 1 GHz) | SCHWARZBECK         | UHALP 9108 A                         | 645               | September, 2007<br>September, 2008           |
| Horn Antenna                                   | SCHWARZBECK         | BBHA 9120 D                          | 446               | September, 2007<br>September, 2008           |
| Horn Antenna                                   | ETS LINDGREN        | 3160-08                              | 00033778          | September, 2007<br>September, 2008           |
| Horn Antenna                                   | ETS LINDGREN        | 3160-09                              | 00034723          | September, 2007<br>September, 2008           |

**7.2 Conducted Radio Measurement**

| <b>Instruments</b> | <b>Manufacturer</b>   | <b>Model / Type</b> | <b>Serial No.</b> | <b>Calibration Date<br/>Next Calibration</b> |
|--------------------|-----------------------|---------------------|-------------------|----------------------------------------------|
| DC Power Source    | Diamond Antenna       | GSV3000             | 01101481          | ---                                          |
| Spectrum Analyzer  | Anritsu               | MS2687B             | 620016270<br>6    | April, 2007<br>April, 2008                   |
| Signal Generator   | Agilent<br>Technology | E8254A              | US411401<br>86    | June, 2007<br>June, 2008                     |
| Oscilloscope       | Tektronix             | TDS794D             | B031832           | June, 2007<br>June, 2008                     |
| Diode Detector     | Agilent<br>Technology | 423B                | MY422418<br>36    | March, 2007<br>March, 2008                   |