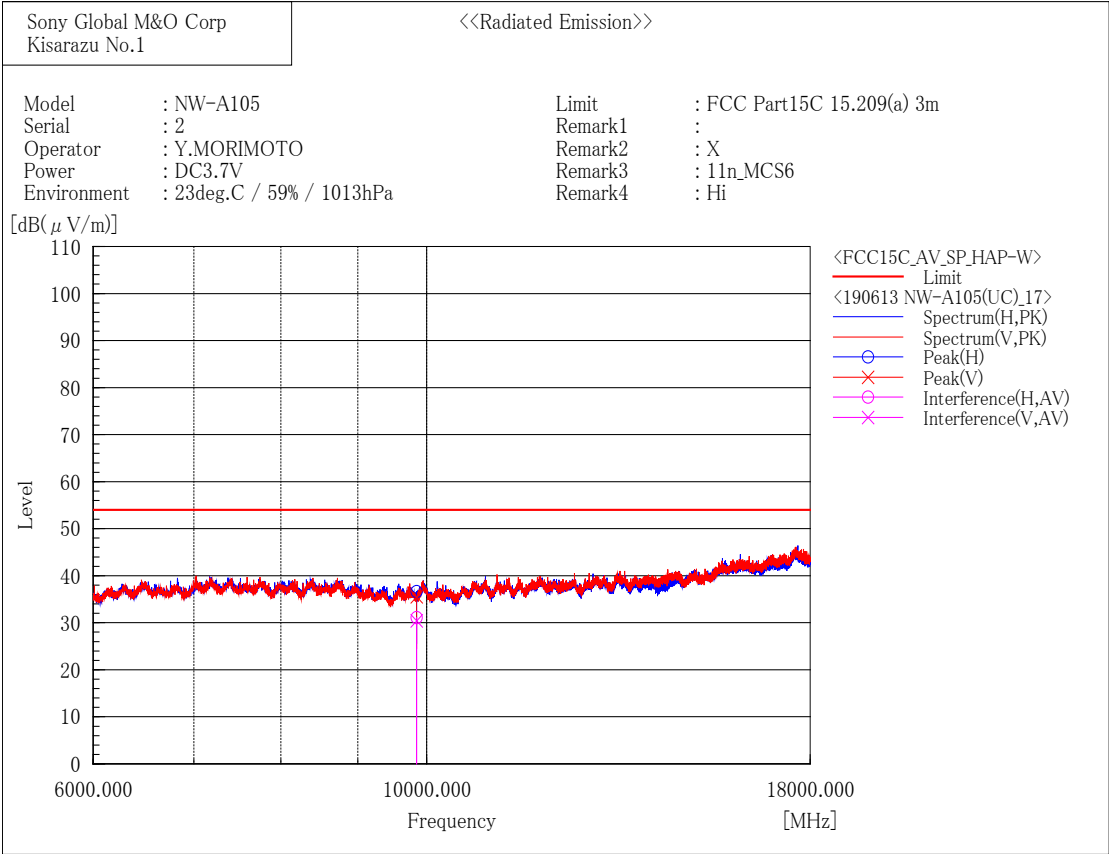


[ 802.11n (HT20)/ 2462 MHz ]



Final Result

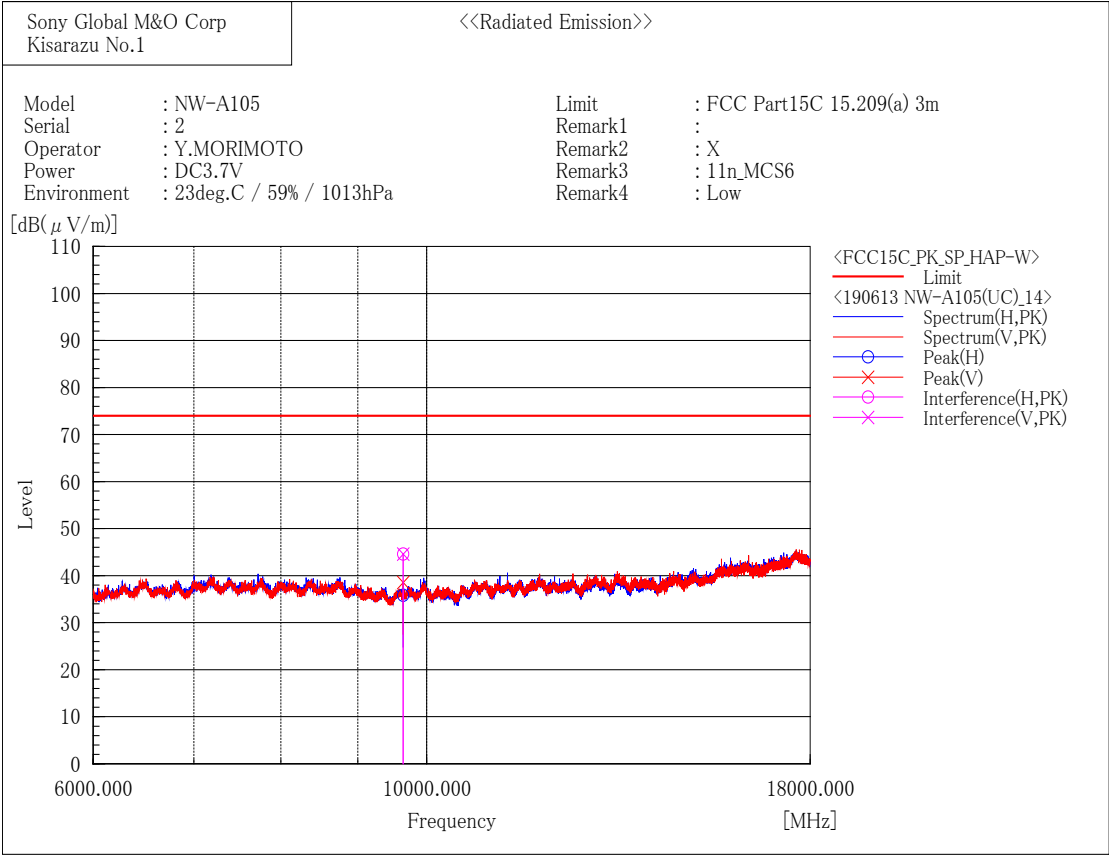
--- Horizontal Polarization (AV)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c. f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|----------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 9848.000        | 36.2             | -5.1           | 31.1              | 54.0             | 22.9        | 100.0       | 100.1     |

--- Vertical Polarization (AV)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c. f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|----------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 9848.000        | 35.5             | -5.1           | 30.4              | 54.0             | 23.6        | 387.3       | 3.9       |

[ 802.11n (HT20)/ 2412 MHz ]



Final Result

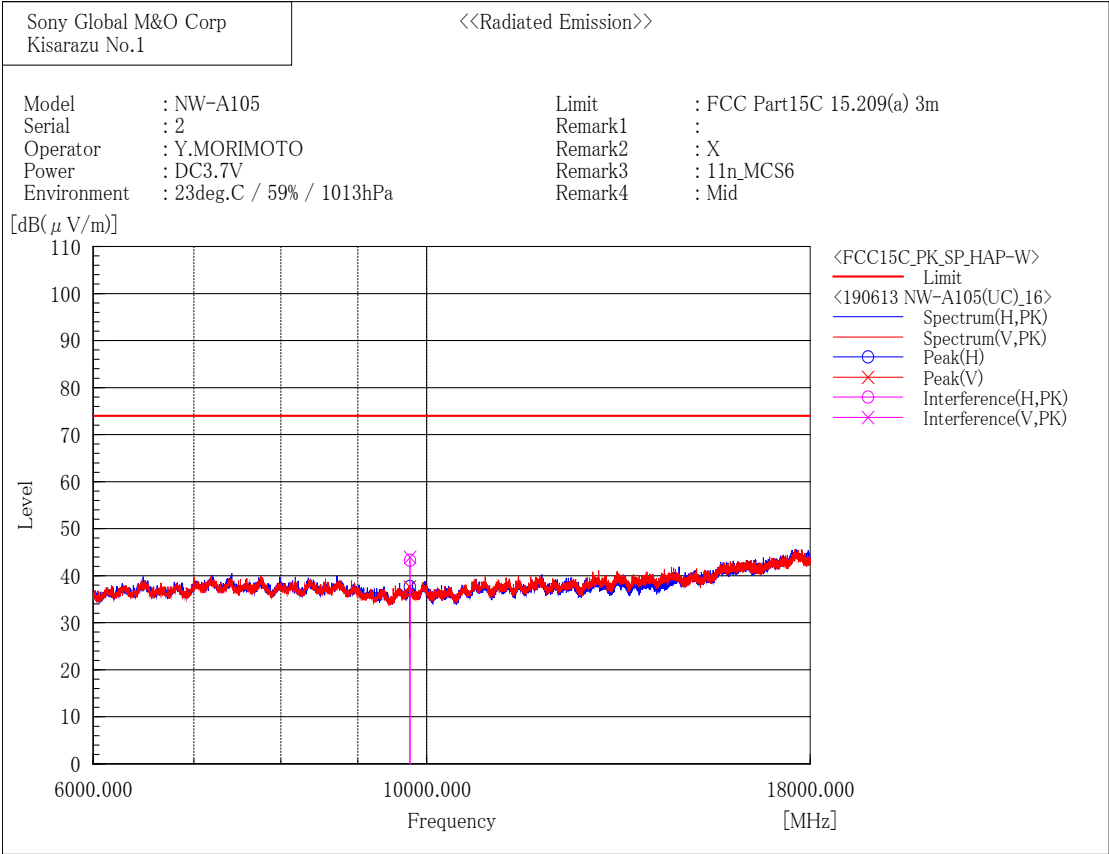
--- Horizontal Polarization (PK)---

| No. | Frequency<br>[MHz] | Reading<br>[dB(μV)] | c.f<br>[dB(1/m)] | Result<br>[dB(μV/m)] | Limit<br>[dB(μV/m)] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] |
|-----|--------------------|---------------------|------------------|----------------------|---------------------|----------------|----------------|--------------|
| 1   | 9648.000           | 50.4                | -5.8             | 44.6                 | 74.0                | 29.4           | 113.9          | 110.5        |

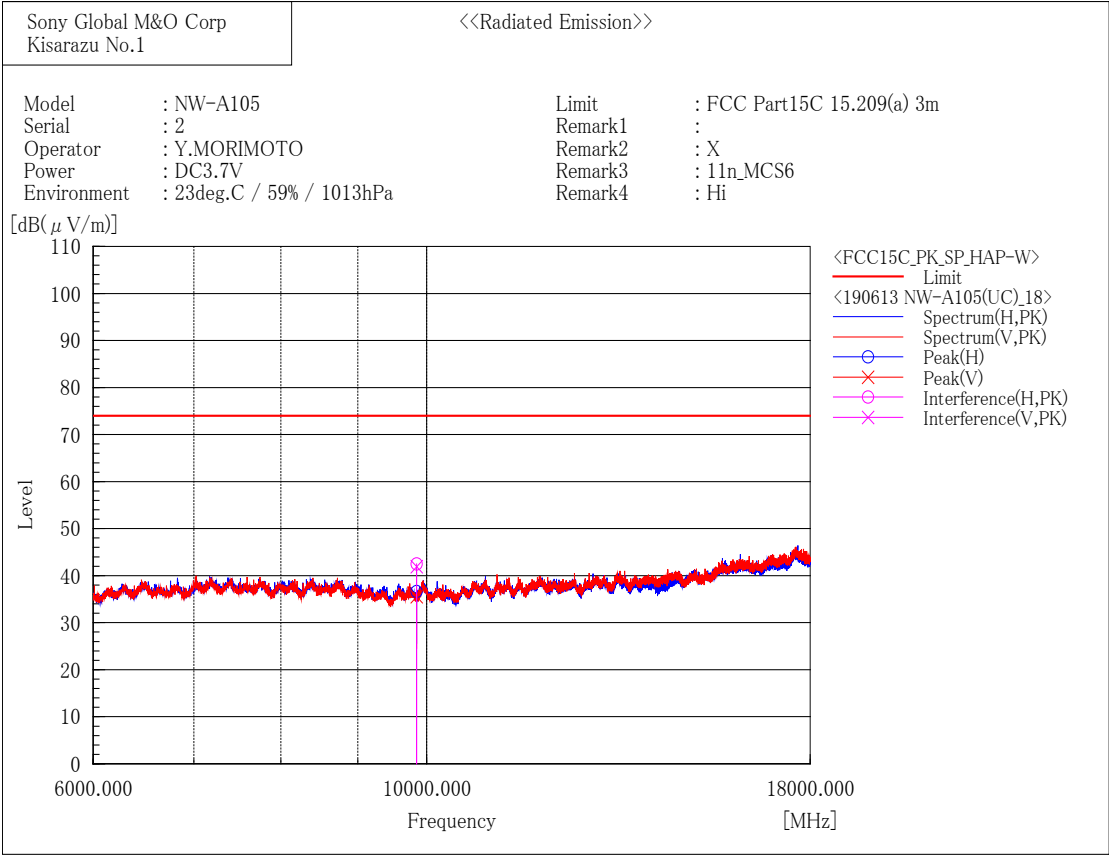
--- Vertical Polarization (PK)---

| No. | Frequency<br>[MHz] | Reading<br>[dB(μV)] | c.f<br>[dB(1/m)] | Result<br>[dB(μV/m)] | Limit<br>[dB(μV/m)] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] |
|-----|--------------------|---------------------|------------------|----------------------|---------------------|----------------|----------------|--------------|
| 1   | 9648.000           | 50.4                | -5.8             | 44.6                 | 74.0                | 29.4           | 100.0          | 9.0          |

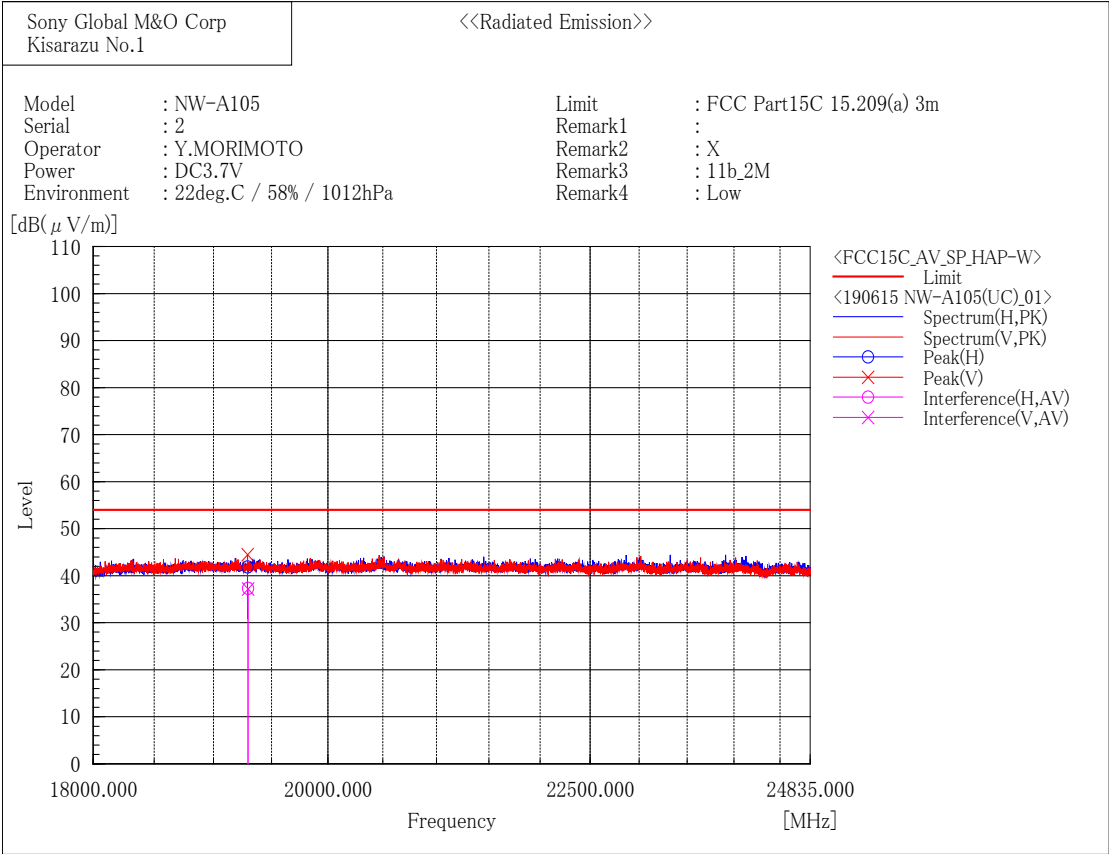
[ 802.11n (HT20)/ 2437 MHz ]



[ 802.11n (HT20)/ 2462 MHz ]



18 GHz to 26.5 GHz  
[ 802.11b/ 2412 MHz ]



Final Result

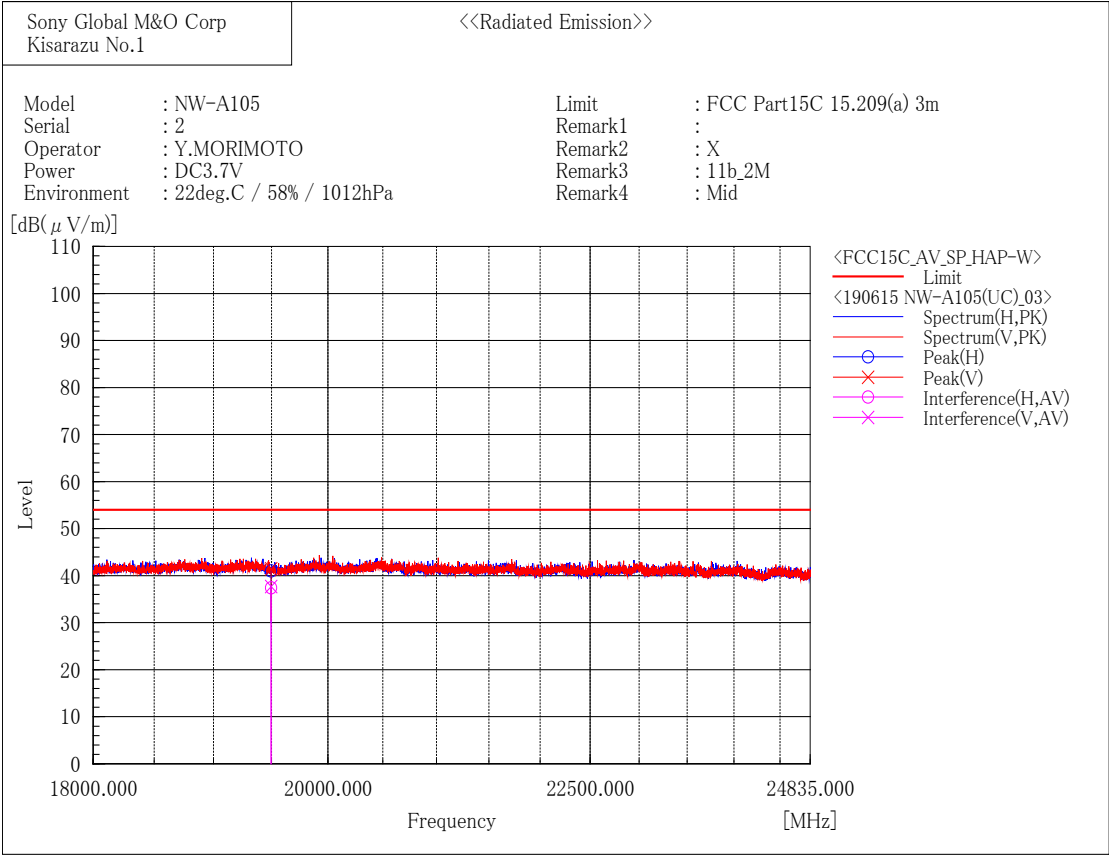
--- Horizontal Polarization (AV)---

| No. | Frequency<br>[MHz] | Reading<br>[dB(μV)] | c.f<br>[dB(1/m)] | Result<br>[dB(μV/m)] | Limit<br>[dB(μV/m)] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] |
|-----|--------------------|---------------------|------------------|----------------------|---------------------|----------------|----------------|--------------|
| 1   | 19296.000          | 45.8                | -8.5             | 37.3                 | 54.0                | 16.7           | 118.7          | 116.9        |

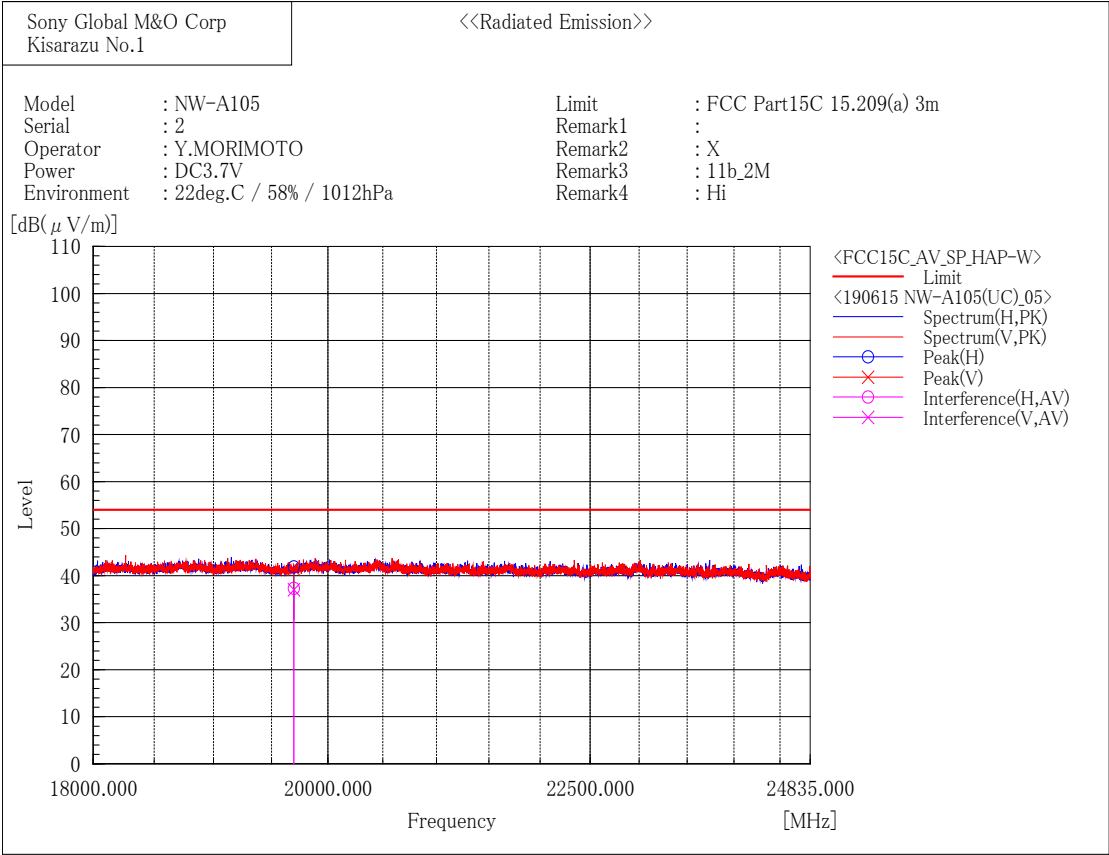
--- Vertical Polarization (AV)---

| No. | Frequency<br>[MHz] | Reading<br>[dB(μV)] | c.f<br>[dB(1/m)] | Result<br>[dB(μV/m)] | Limit<br>[dB(μV/m)] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] |
|-----|--------------------|---------------------|------------------|----------------------|---------------------|----------------|----------------|--------------|
| 1   | 19296.000          | 45.7                | -8.5             | 37.2                 | 54.0                | 16.8           | 117.9          | 25.5         |

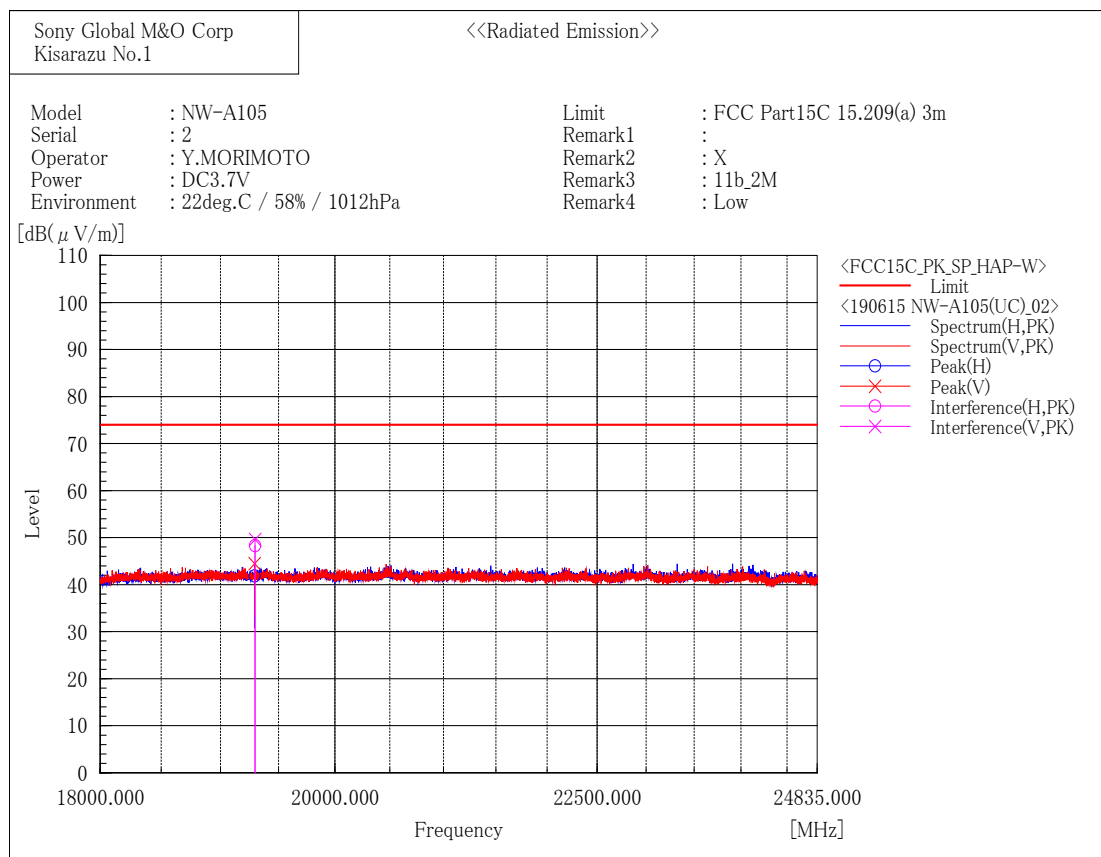
[ 802.11b/ 2437 MHz ]



[ 802.11b/ 2462 MHz ]



[ 802.11b/ 2412 MHz ]



## Final Result

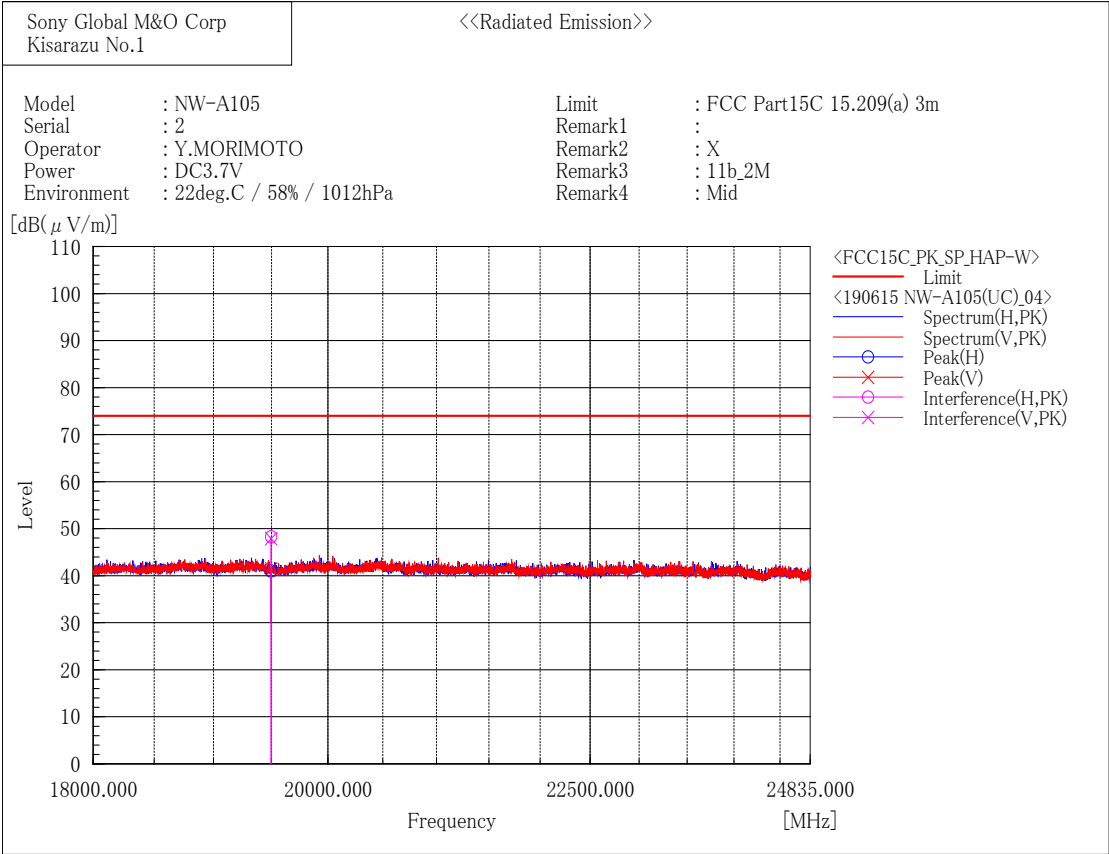
## --- Horizontal Polarization (PK)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c.f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|---------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 19296.000       | 56.8             | -8.5          | 48.3              | 74.0             | 25.7        | 118.7       | 116.9     |

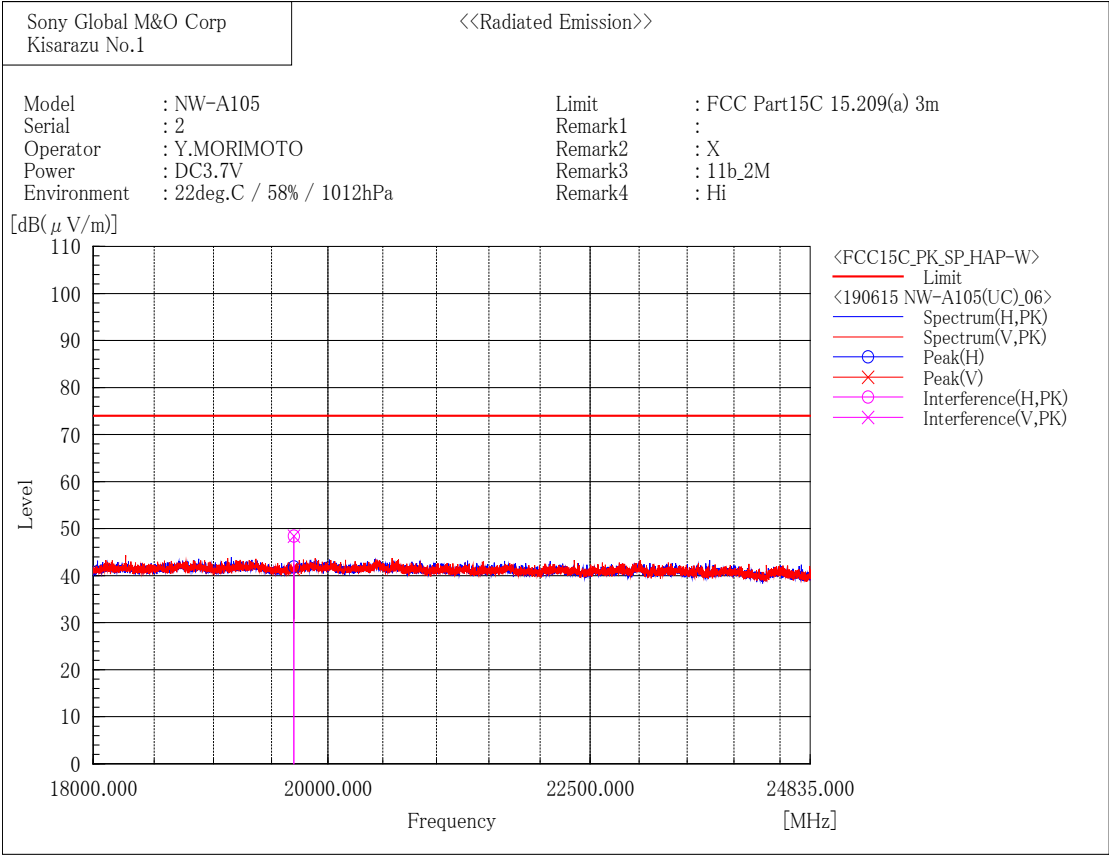
## --- Vertical Polarization (PK)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c.f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|---------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 19296.000       | 58.1             | -8.5          | 49.6              | 74.0             | 24.4        | 117.9       | 27.6      |

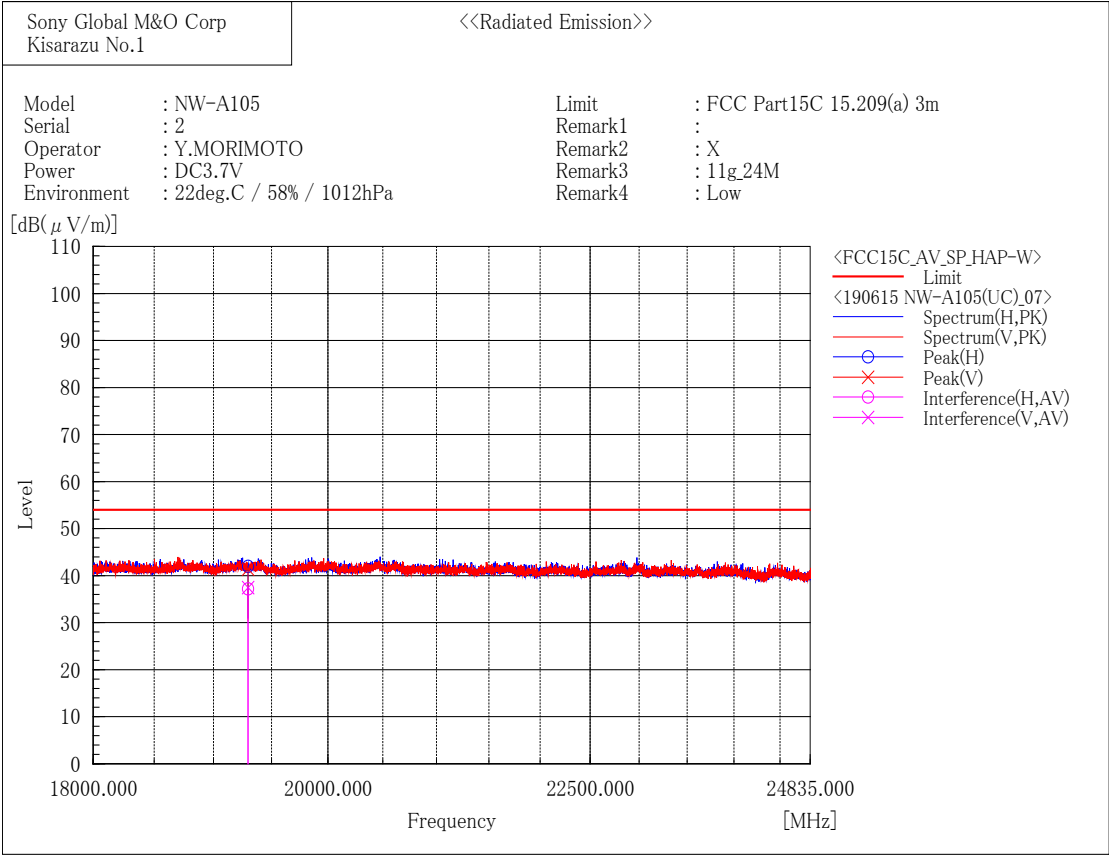
[ 802.11b/ 2437 MHz ]



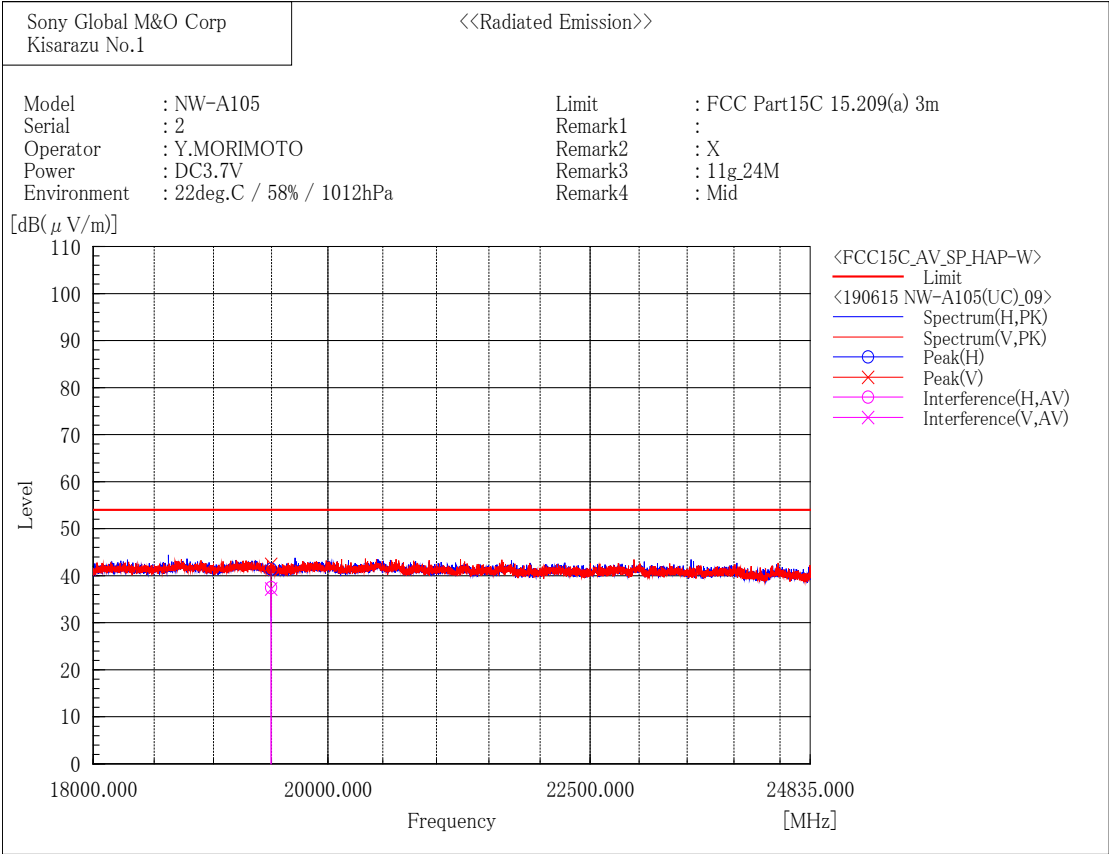
[ 802.11b/ 2462 MHz ]



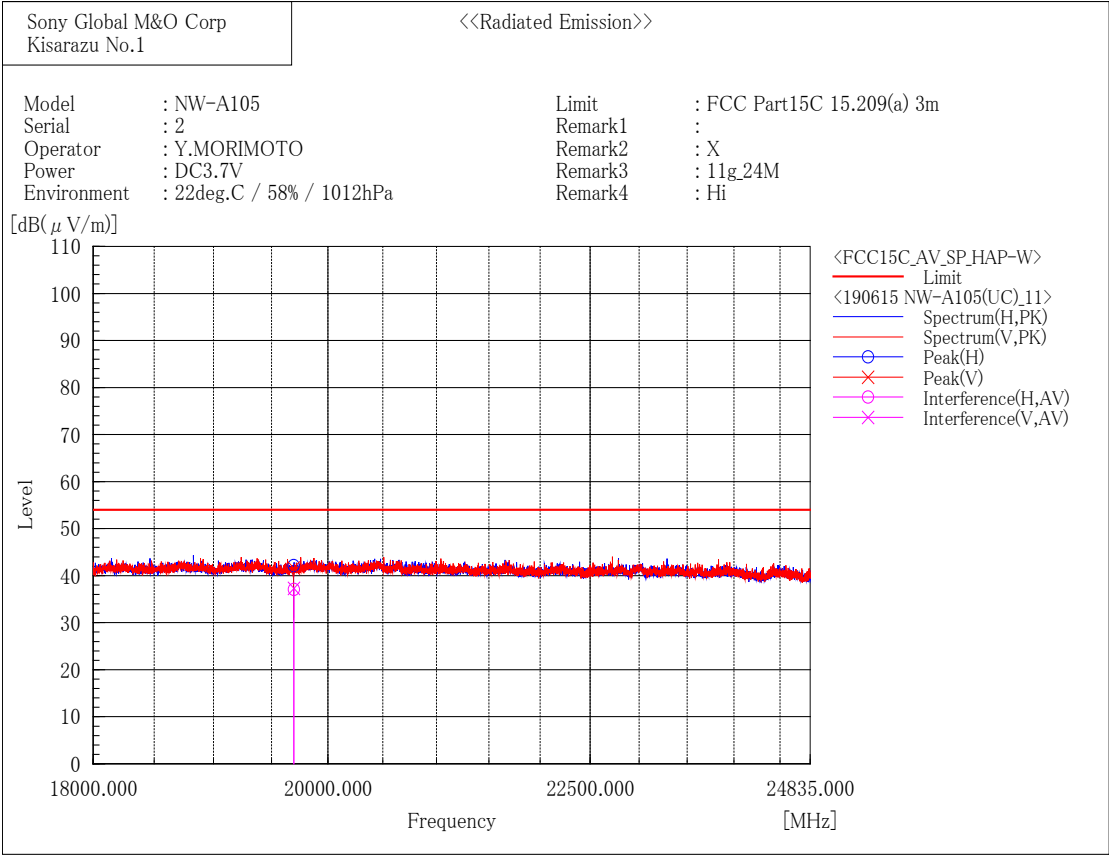
[ 802.11g/ 2412 MHz ]



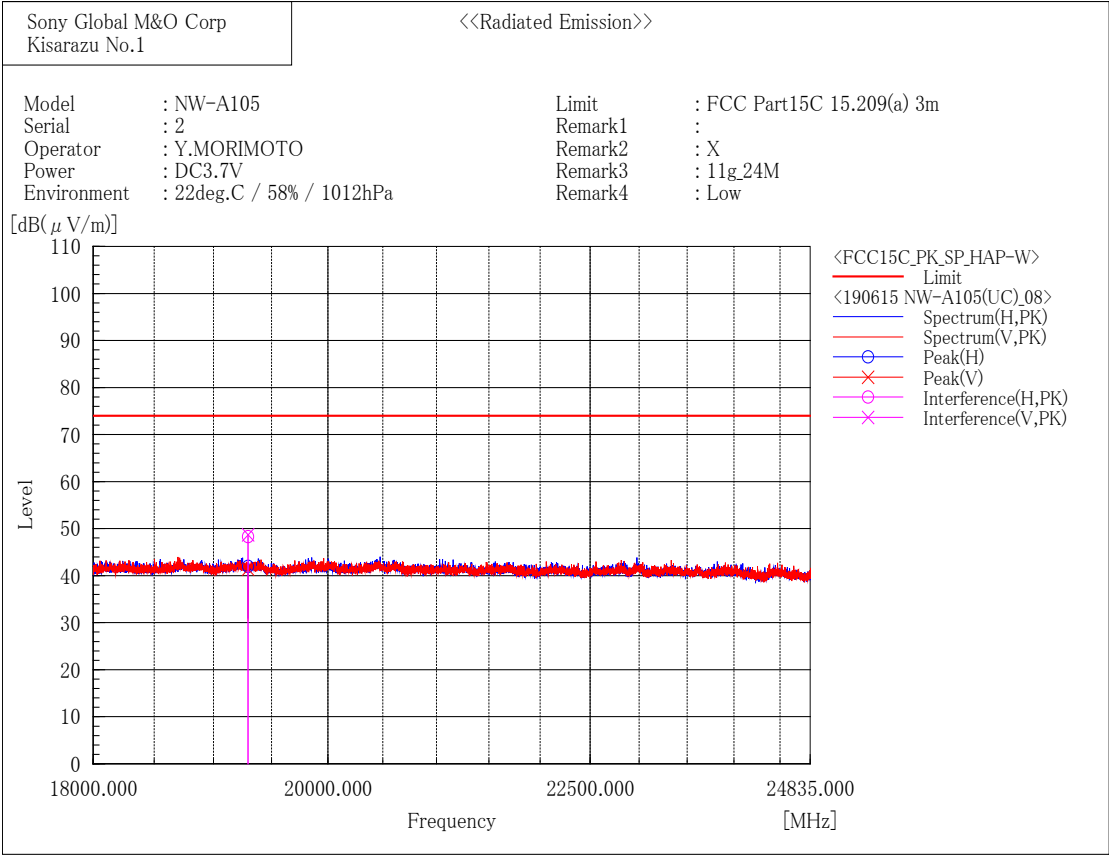
[ 802.11g/ 2437 MHz ]



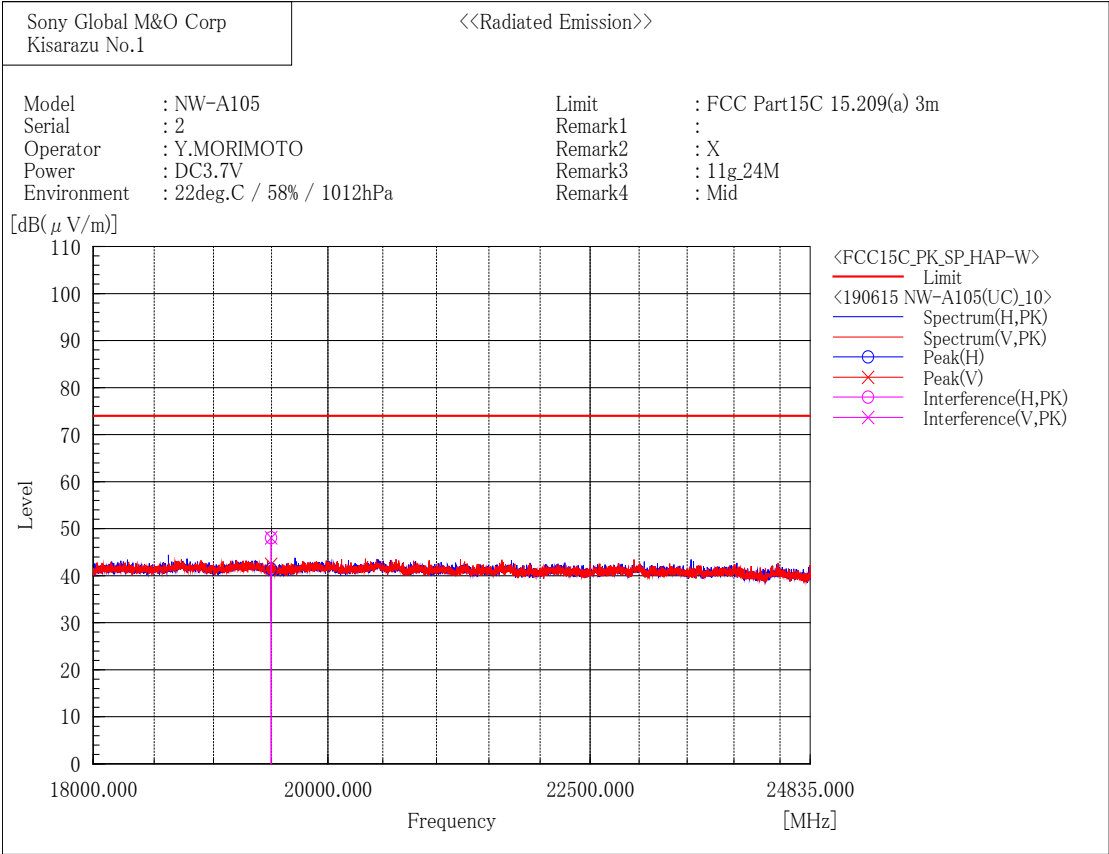
[ 802.11g/ 2462 MHz ]



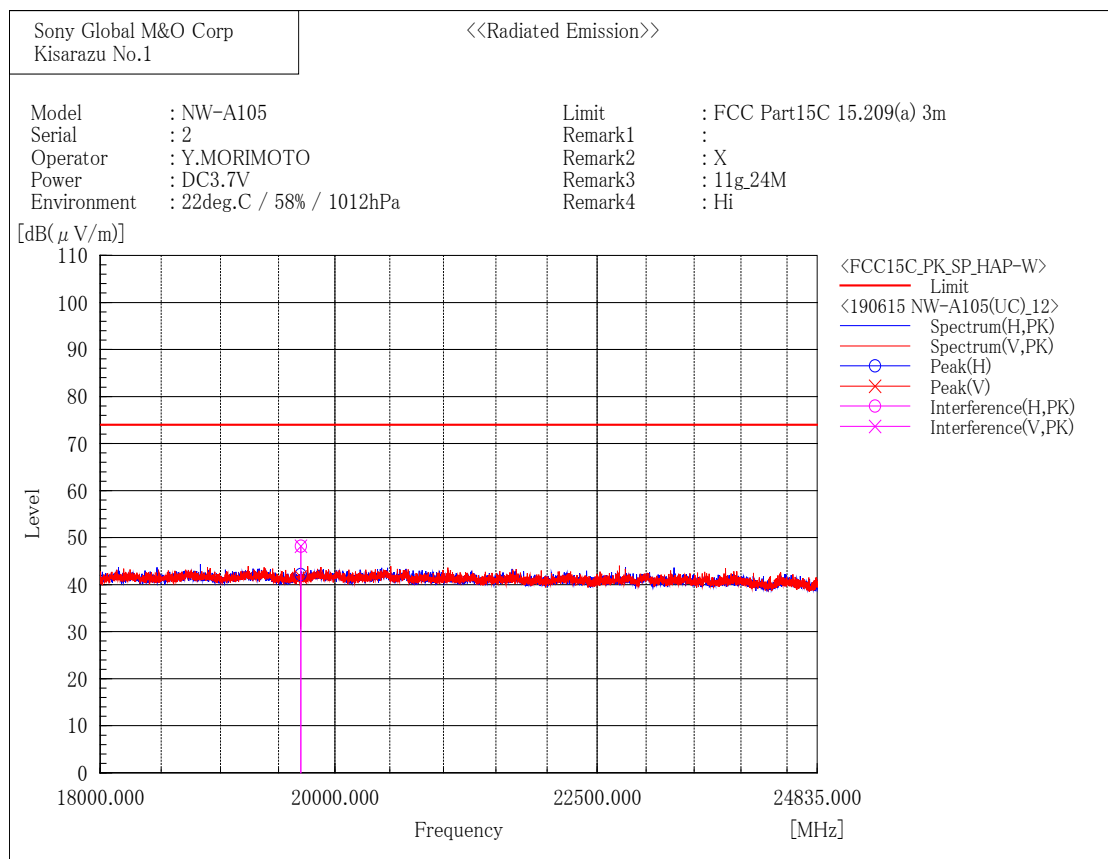
[ 802.11g/ 2412 MHz ]



[ 802.11g/ 2437 MHz ]



[ 802.11g/ 2462 MHz ]



## Final Result

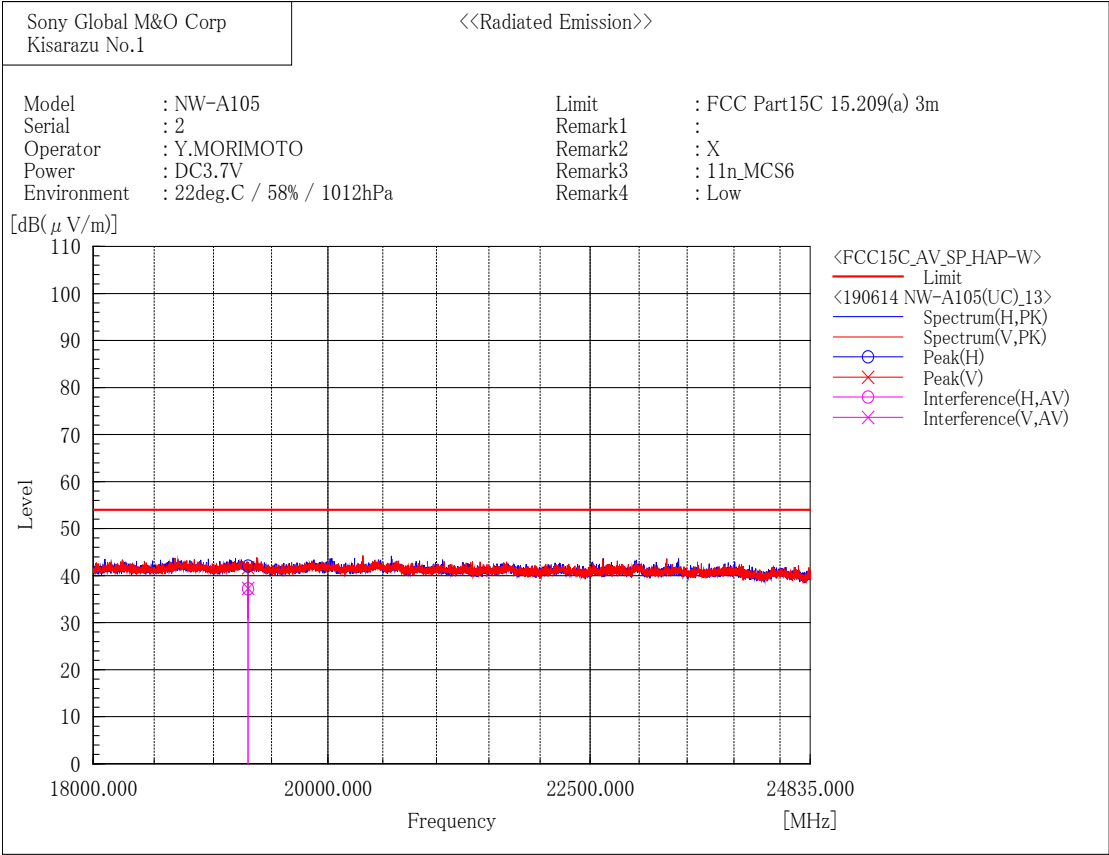
## --- Horizontal Polarization (PK)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c.f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|---------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 19696.000       | 56.7             | -8.5          | 48.2              | 74.0             | 25.8        | 273.1       | 0.3       |

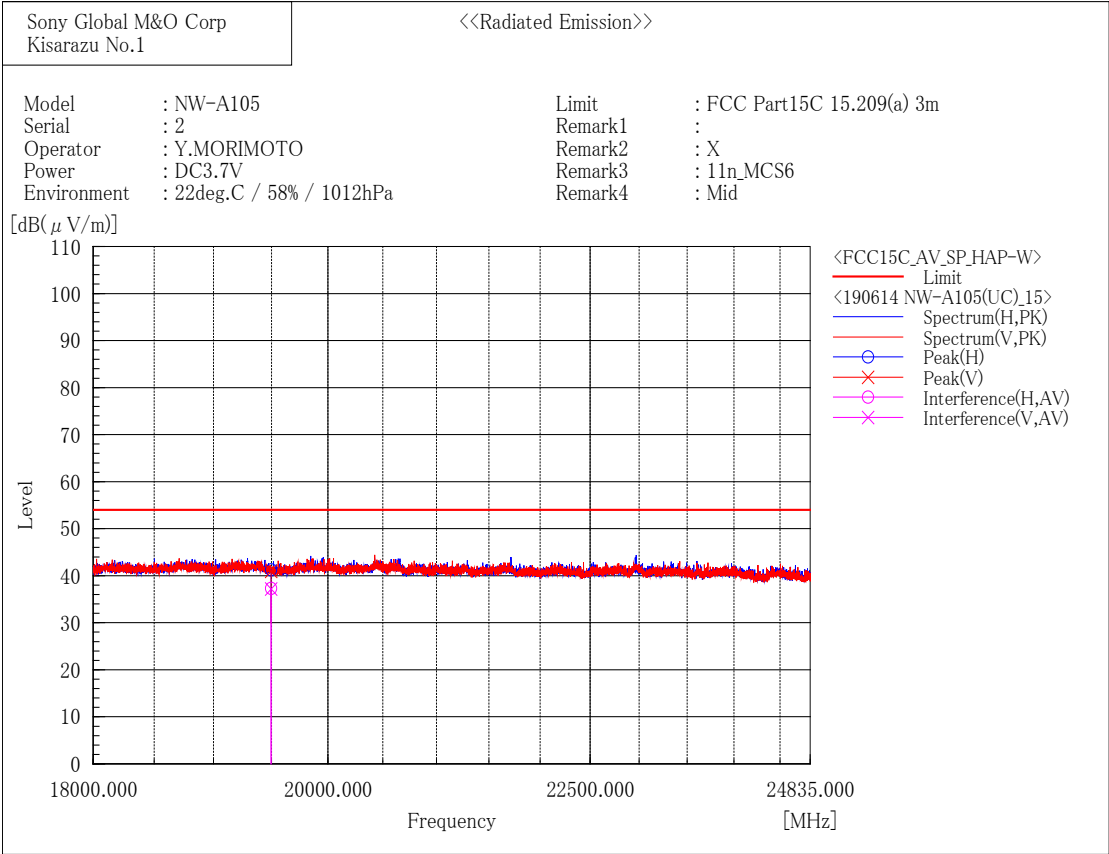
## --- Vertical Polarization (PK)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c.f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|---------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 19696.000       | 56.7             | -8.5          | 48.2              | 74.0             | 25.8        | 204.8       | 305.1     |

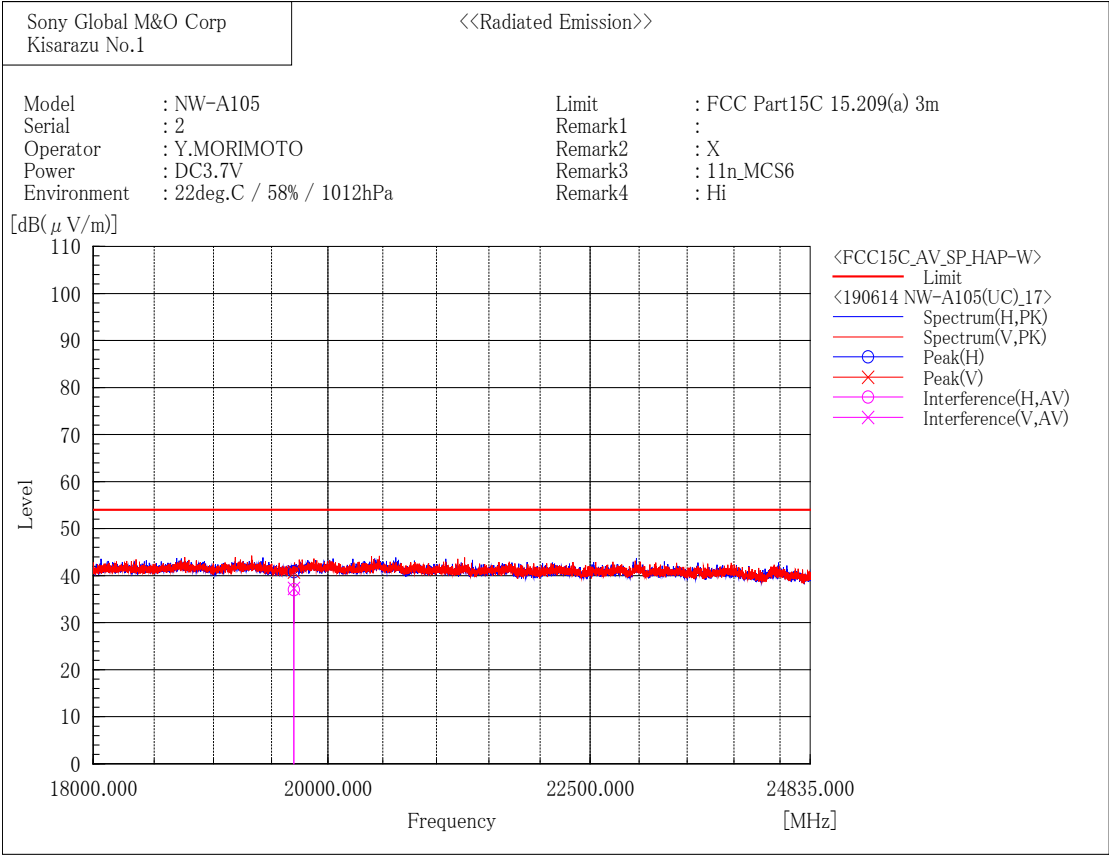
[ 802.11n (HT20)/ 2412 MHz ]



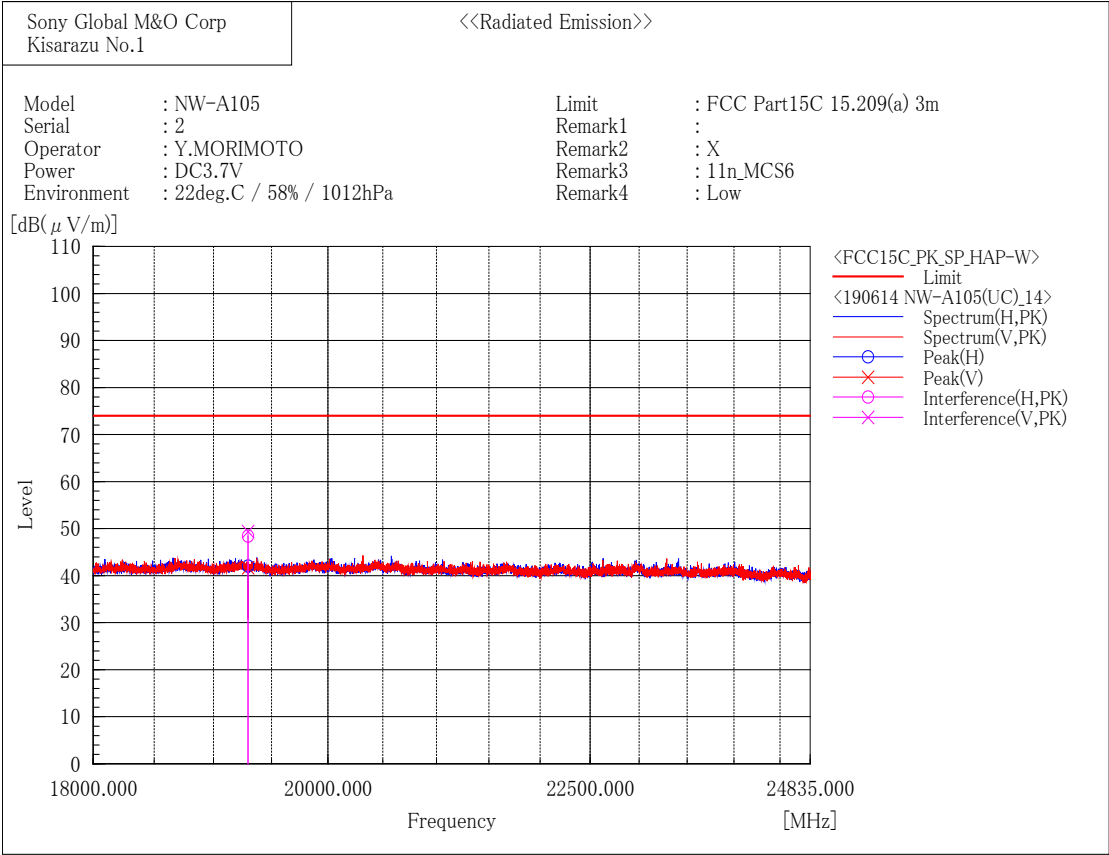
[ 802.11n (HT20)/ 2437 MHz ]



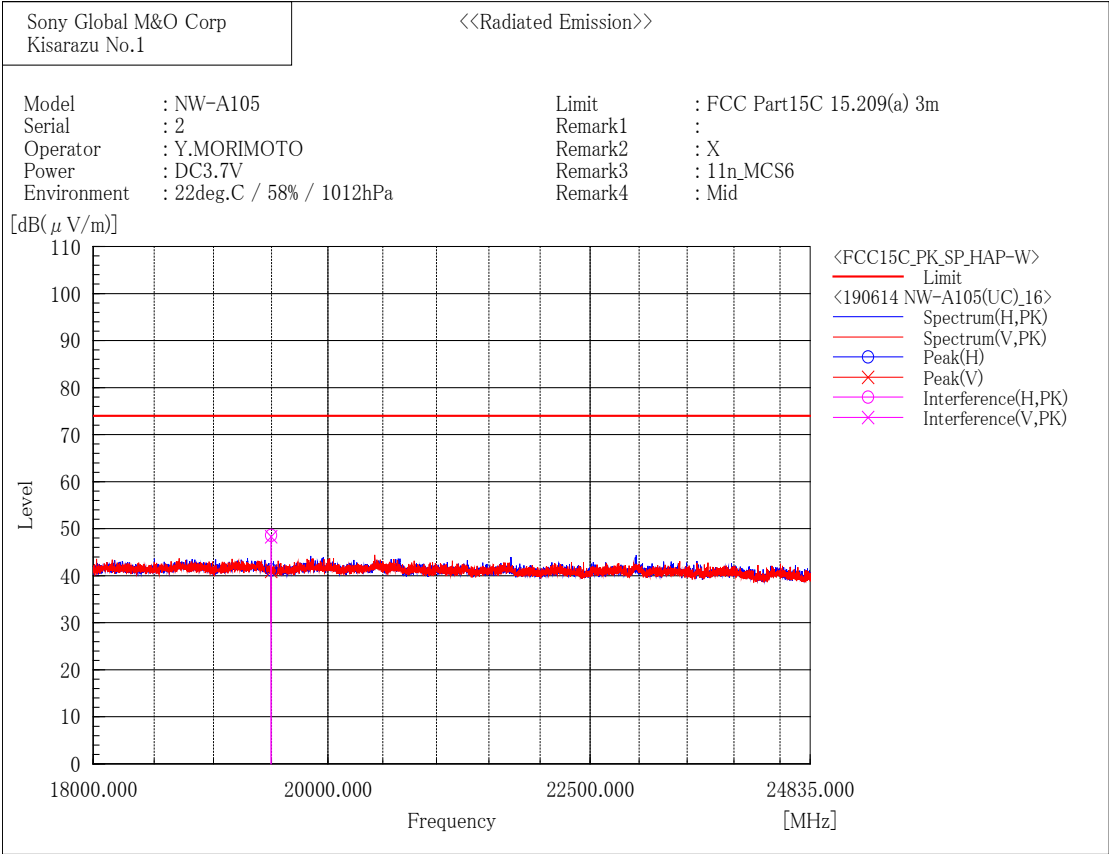
[ 802.11n (HT20)/ 2462 MHz ]



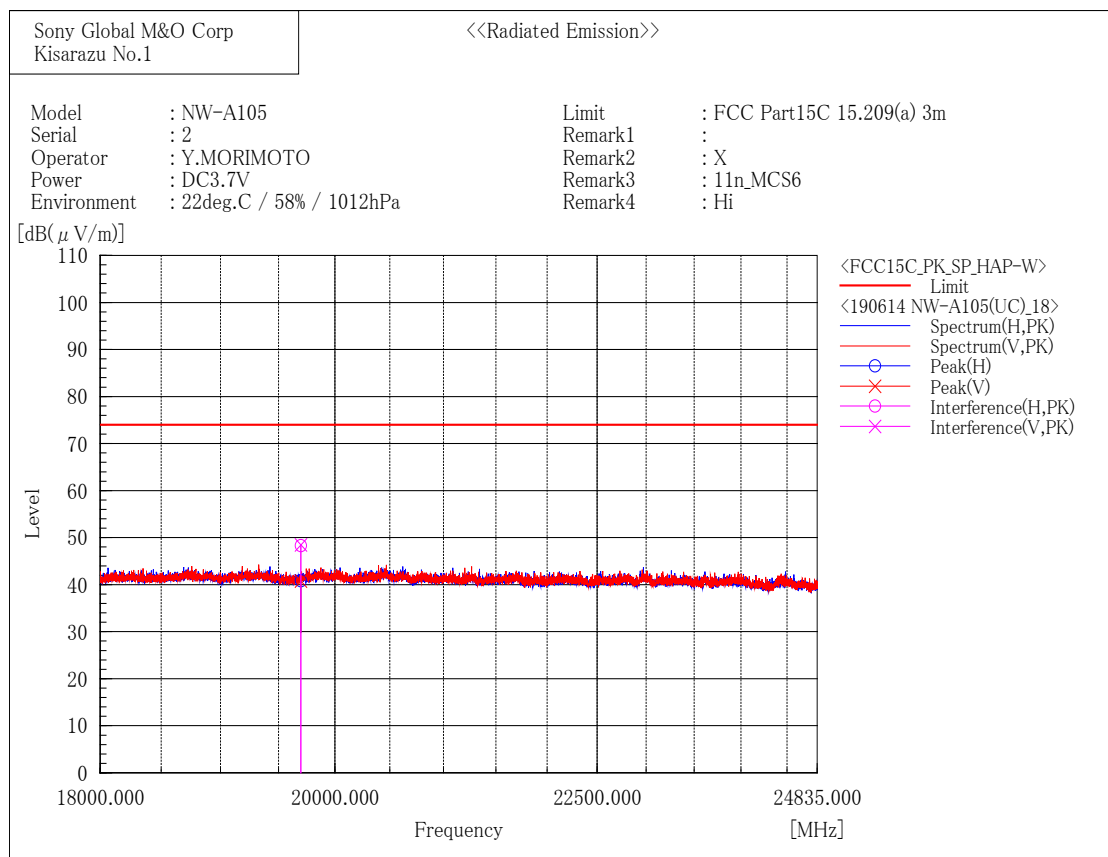
[ 802.11n (HT20)/ 2412 MHz ]



[ 802.11n (HT20)/ 2437 MHz ]



[ 802.11n (HT20)/ 2462 MHz ]



## Final Result

## --- Horizontal Polarization (PK)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c.f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|---------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 19696.000       | 56.8             | -8.5          | 48.3              | 74.0             | 25.7        | 394.9       | 52.9      |

## --- Vertical Polarization (PK)---

| No. | Frequency [MHz] | Reading [dB(μV)] | c.f [dB(1/m)] | Result [dB(μV/m)] | Limit [dB(μV/m)] | Margin [dB] | Height [cm] | Angle [°] |
|-----|-----------------|------------------|---------------|-------------------|------------------|-------------|-------------|-----------|
| 1   | 19696.000       | 57.0             | -8.5          | 48.5              | 74.0             | 25.5        | 230.9       | 355.0     |

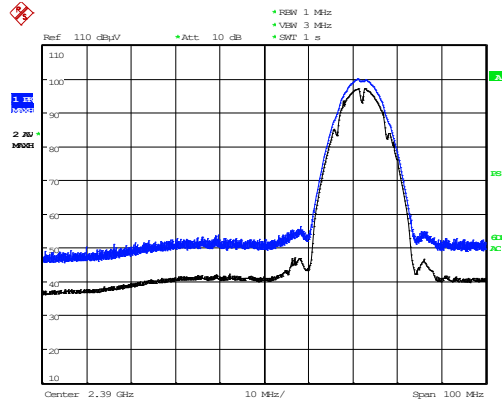
2.4 GHz Restricted-Band Edge (Plot data)

These plot data show peak (trace blue) and average (trace black) spectrum for worst case emissions in the restricted-band edges. (Restricted band edges: below 2390 MHz and above 2483.5 MHz)

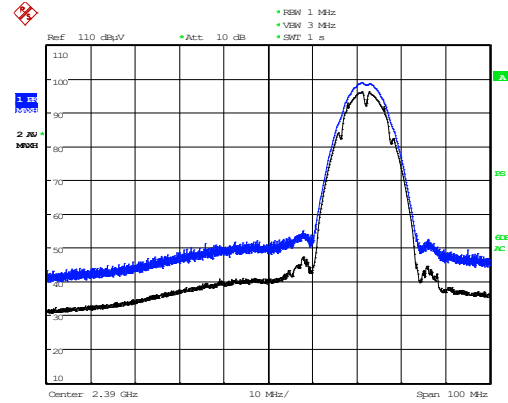
The result of the final radiated spurious emissions measurement refers in previous pages.

[ 802.11b/ 2412 MHz ]

Horizontal

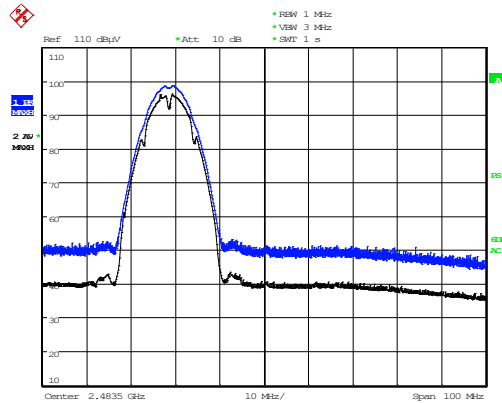


Vertical

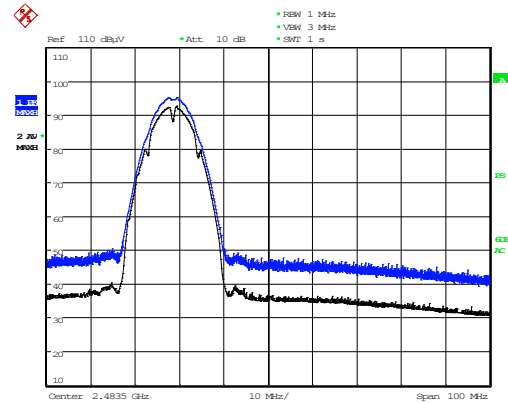


[ 802.11b/ 2462 MHz ]

Horizontal

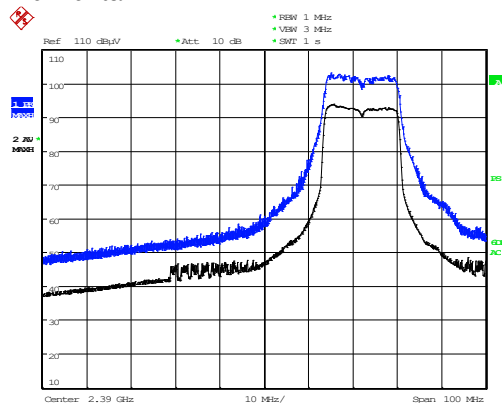


Vertical

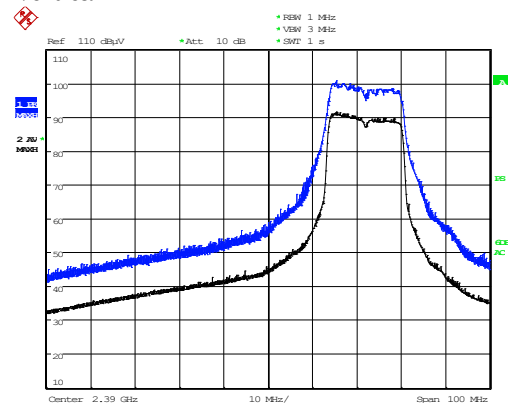


[ 802.11g/ 2412 MHz ]

Horizontal

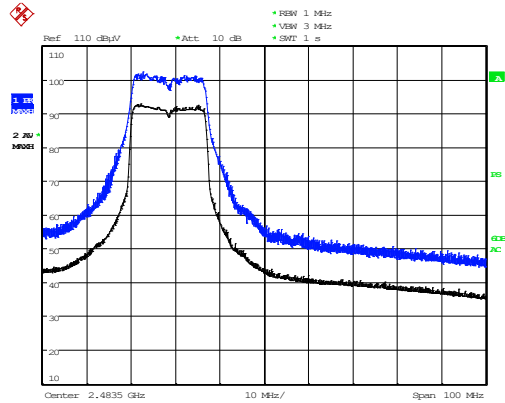


Vertical



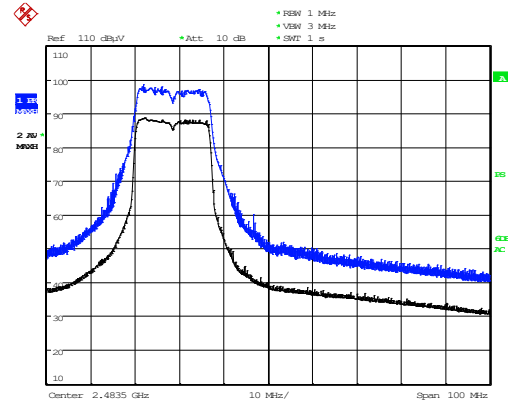
[ 802.11g/ 2462 MHz ]

Horizontal



Date: 13.JUN.2019 14:12:54

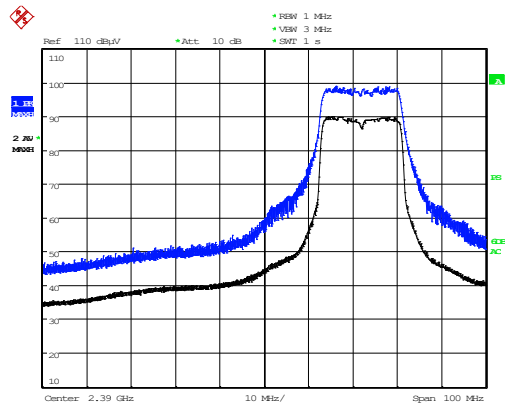
Vertical



Date: 13.JUN.2019 14:22:41

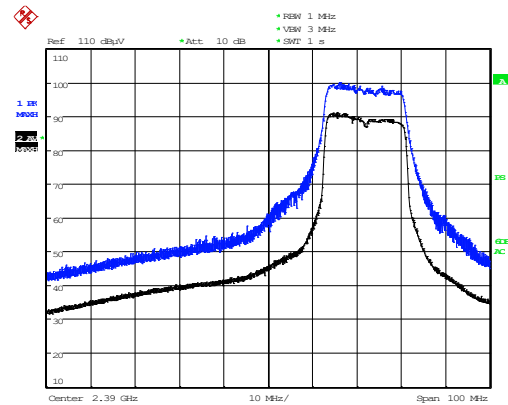
[ 802.11n (HT20)/ 2412 MHz ]

Horizontal



Date: 13.JUN.2019 21:53:53

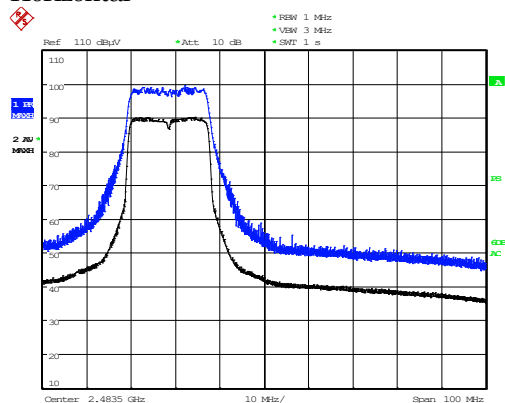
Vertical



Date: 13.JUN.2019 21:52:31

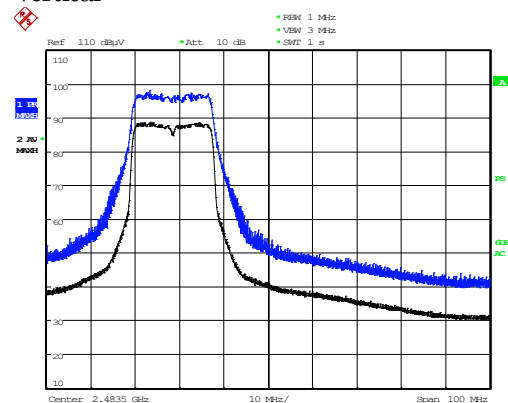
[ 802.11n (HT20)/ 2462 MHz ]

Horizontal



Date: 14.JUN.2019 00:49:40

Vertical



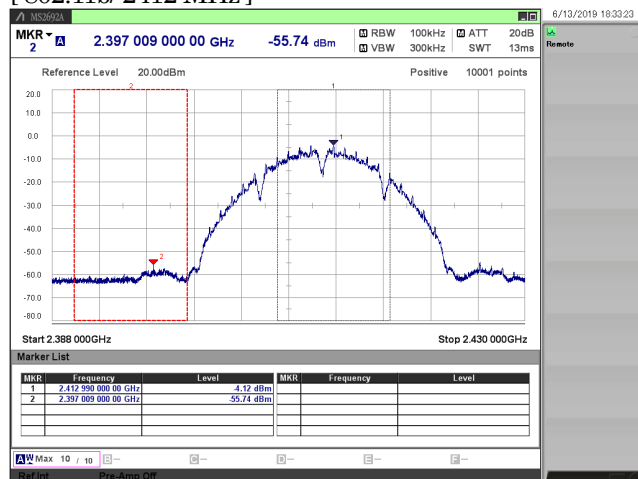
Date: 14.JUN.2019 00:51:16

### 3.6. Conducted Spurious Emissions for Band Edge

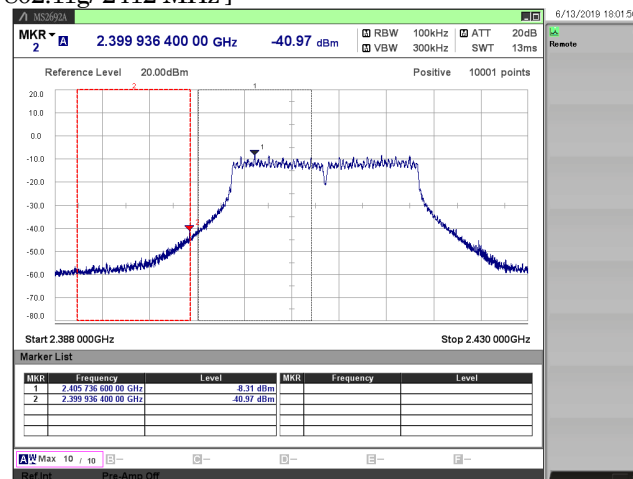
- 1) Ambient temperature : 21.3 deg.C
- 2) Relative humidity : 52.8 %
- 3) Date of measurement : June 13, 2019
- 4) Measured by : H.WAKI
- 5) Operating mode : Transmitting mode

| Mode       | Rate [Mbps] | Channel [MHz] | Frequency [MHz] | Reading(PK) [dBm] | C.F. [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|------------|-------------|---------------|-----------------|-------------------|-----------|--------------|-------------|-------------|
| 11b        | 2           | 2412          | 2412.99         | -4.12             | 10.86     | 6.74         | -           | -           |
|            |             |               | 2397.01         | -55.74            | 10.86     | -44.88       | -13.26      | 31.62       |
| 11g        | 24          | 2412          | 2405.74         | -8.31             | 10.86     | 2.55         | -           | -           |
|            |             |               | 2399.94         | -40.97            | 10.86     | -30.11       | -17.45      | 12.66       |
| 11n (HT20) | MCS6        | 2412          | 2405.74         | -8.36             | 10.86     | 2.50         | -           | -           |
|            |             |               | 2399.90         | -41.52            | 10.86     | -30.66       | -17.50      | 13.16       |

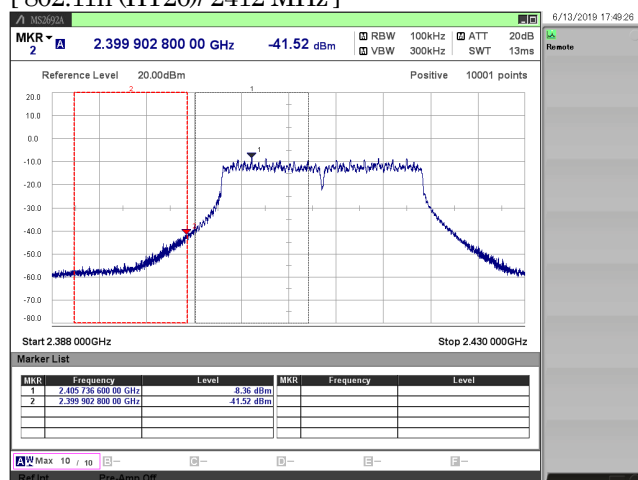
[ 802.11b/ 2412 MHz ]



[ 802.11g/ 2412 MHz ]



[ 802.11n (HT20)/ 2412 MHz ]



## 4. Method of Calculation

### 4.1. AC Power-line Conducted Emissions

Method of calculation : Software  
Software Name : EP5/ CE  
Software Version : Ver5.0.0

Test Result [ dBuV ] = Meter Reading [ dBuV ] + C.F. [ dB ]

Note (a) Meter Reading : Reading of the EMI test receiver.  
(b) C.F. : System Loss + Correction Factor of LISN

### 4.2. Maximum Conducted Output Power

Method of calculation : Software  
Software Name : SW-0302  
Software Version : Ver.4

Test Result (PK) [ dBm ] = Meter Reading [ dBm ] + C.F. [ dB ]

Note (a) Meter Reading : Reading of the power meter  
(b) C.F. : System Cable Loss + EUT Cable Loss

### 4.3. Power Spectral Density

Method of calculation : Software  
Software Name : SW-0302  
Software Version : Ver.4

Test Result [ dBm ] = Meter Reading [ dBm ] + C.F. [ dB ]

Note (a) Meter Reading : Reading of the spectrum analyzer  
(b) C.F. : System Cable Loss + EUT Cable Loss

#### 4.4. Radiated Spurious Emissions

Method of calculation : Software  
Software Name : V-Scan  
Software Version : Ver.4.0.30

Test Result [ dBuV/ m ] = Meter Reading [ dBuV ] + C.F. [ dB/ m ]

Note (a) Meter Reading : Reading of the EMI test receiver or the spectrum analyzer.  
(b) C.F. : ☒ Antenna Factor (including Balun Loss) + System GainLoss  
: ☐ Antenna Factor (including Balun Loss) + System GainLoss + 20 log (3 m/ 10 m)

#### 4.5. Conducted Spurious Emissions for Band Edge

Method of calculation : Software  
Software Name : SW-0302  
Software Version : Ver.4

Test Result [ dBm ] = Meter Reading [ dBm ] + C.F. [ dB ]

Note (a) Meter Reading : Reading of the spectrum analyzer.  
(b) C.F. : System Cable Loss + EUT Cable Loss

## 5. List of Test Equipment

All test results are traceable to the national and/ or international standards.

### 5.1. AC Power-line Conducted Emissions

|   | Ctrl.# | Equipment                  | Model No. | Serial No.   | Manufacturer     | Cal.Interval | Last Cal. |
|---|--------|----------------------------|-----------|--------------|------------------|--------------|-----------|
| x | CS0015 | EMC-CE Cable System 1      | -         | -            | -                | 12 months    | 18.11.04  |
| x | M0663  | 6dB Attenuator             | 6806.01A  | -            | HUBER+SUHNER     | 12 months    | 18.11.04  |
| x | M0569  | HIGH FREQUENCY FUSE        | MP612A    | -            | Anritsu          | 12 months    | 18.11.04  |
| x | M0130  | RF Selector                | NS4902SR  | 109001       | Toyo Corporation | 12 months    | 18.11.04  |
| x | M0605  | LISNAMN                    | ENV216    | 101305       | Rohde & Schwarz  | 12 months    | 18.10.01  |
| x | M5062  | Scientific Ambient Monitor | 0560 6220 | 39515563/802 | testo            | 12 months    | 18.07.17  |
| x | M0515  | EMI Receiver               | ESCI      | 100606       | Rohde & Schwarz  | 12 months    | 18.10.01  |
| x | M5080  | Temperature Meter          | 608-H2    | 41476135     | testo            | 12 months    | 18.10.18  |

### 5.2. Antenna-port Conducted Measurements

|   | Ctrl.# | Equipment         | Model No.    | Serial No. | Manufacturer          | Cal.Interval | Last Cal. |
|---|--------|-------------------|--------------|------------|-----------------------|--------------|-----------|
| - | W0140  | Spectrum Analyzer | FSU26        | 200717     | Rohde & Schwarz       | 12 months    | 18.09.01  |
| x | W0101  | Signal Analyzer   | MS2692A      | 6201338955 | Anritsu               | 12 months    | 19.05.09  |
| x | W0110  | 10dB Attenuator   | 6610-SK-50-1 | 0002       | Huber + Suhner        | 12 months    | 18.09.01  |
| - | W0100  | Spectrum Analyzer | MS2692A      | 6201338954 | Anritsu               | 12 months    | 19.05.09  |
| x | W0006  | Power Meter       | N1911A       | MY50000295 | Keysight Technologies | 12 months    | 18.10.06  |
| x | W0007  | Power Sensor      | N1922A       | MY50180022 | Keysight Technologies | 12 months    | 18.10.06  |
| x | W0029  | 10dB Attenuator   | 8493C        | 76549      | Keysight Technologies | 12 months    | 18.09.01  |
| - | WC0002 | RF Cable          | SUCOFLEX 102 | 34124/2    | HUBER + SUHNER        | 12 months    | 18.09.01  |
| - | WC0003 | RF Cable          | SUCOFLEX 102 | 34127/2    | HUBER + SUHNER        | 12 months    | 18.09.01  |
| x | WC0004 | RF Cable          | SUCOFLEX 102 | 34288/2    | HUBER + SUHNER        | 12 months    | 18.09.01  |
| - | WC0005 | RF Cable          | SUCOFLEX 102 | 34287/2    | HUBER + SUHNER        | 12 months    | 18.09.01  |
| - | WC0006 | RF Cable          | SUCOFLEX 102 | 34289/2    | HUBER + SUHNER        | 12 months    | 18.09.01  |
| - | WC0007 | RF Cable          | SUCOFLEX 102 | 34286/2    | HUBER + SUHNER        | 12 months    | 18.09.01  |
| x | M0720  | Thermometer       | TH-321       | 140036     | AS ONE                | 12 months    | 18.07.20  |

### 5.3. Radiated Spurious Emissions

|   | Ctrl.#      | Equipment                  | Model No.   | Serial No.   | Manufacturer         | Cal.Interval | Last Cal. |
|---|-------------|----------------------------|-------------|--------------|----------------------|--------------|-----------|
| x | M0486       | EMI Receiver               | ESU40       | 100050       | Rohde & Schwarz      | 12 months    | 18.10.01  |
| x | M0686       | EMI Receiver               | N9038A      | MY52260113   | Agilent Technologies | 12 months    | 18.11.13  |
| x | A0073       | Loop Antenna               | HFH2-Z2     | 100171       | Rohde & Schwarz      | 12 months    | 18.12.10  |
| x | A0089       | Biconical Antenna          | BBA9106     | VHA91032835  | Schwarzbeck          | 12 months    | 18.12.03  |
| x | A0088       | Log periodic Antenna       | UHALP9108A1 | 0649         | Schwarzbeck          | 12 months    | 18.12.03  |
| x | A0064       | Horn Antenna               | BBHA9120D   | 746          | Schwarzbeck          | 12 months    | 18.11.04  |
| x | A0078       | Horn Antenna               | HAP06-18W   | 00000070     | Toyo Corporation     | 12 months    | 18.11.04  |
| - | A0058       | Horn Antenna               | HAP18-26W   | 00000016     | Toyo Corporation     | 12 months    | 18.12.01  |
| x | RA5002      | Horn Antenna               | HAP18-26W   | 00000011     | Toyo Corporation     | 12 months    | 19.05.14  |
| x | CS0017      | N-RE Cable System 1        | -           | -            | -                    | 12 months    | 18.11.04  |
| x | CS0018      | N-RE Cable System 2        | -           | -            | -                    | 12 months    | 18.11.04  |
| x | CS0045      | N-3m EMF Cable System      | -           | -            | -                    | 12 months    | 18.11.04  |
| x | CS0074/0075 | N-RE Cable SYSTEM 4        | -           | -            | -                    | 12 months    | 18.11.04  |
| x | M0126       | Step Attenuator            | 8494H       | 3837M01144   | Agilent Technologies | 12 months    | 18.11.04  |
| x | M0752       | Pre Amplifier              | 310N        | 320621       | SONOMA INSTRUMENT    | 12 months    | 18.11.04  |
| x | M0128       | 3dB Attenuator             | 8491A       | 53541        | Agilent Technologies | 12 months    | 18.11.04  |
| x | M0609       | 3dB Attenuator             | 8491B       | MY39265960   | Agilent Technologies | 12 months    | 18.11.04  |
| x | M0737       | GHz Filter Box             | FB-G1       | 001          | Sony EMCS            | 12 months    | 18.11.04  |
| x | M5079       | Temperature Meter          | 608-H2      | 41475953     | testo                | 12 months    | 18.10.18  |
| x | M5062       | Scientific Ambient Monitor | 0560 6220   | 39515563/802 | testo                | 12 months    | 18.07.17  |

About calibration interval

Valid until the end of the month listed in "Cal. Int." column.