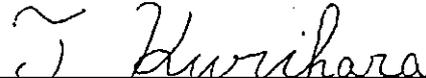


## RADIO TEST REPORT

Project No. : JB-Z0047-B  
Client : Sony Corporation  
Address : 1-7-1 Konan, Minato-ku Tokyo 108-0075, Japan  
Type of Equipment : Digital Media Player (for Bluetooth part)  
Model No. : NW-A27  
Serial No. : 3000131, 3000132, 3000133  
FCC ID : AK8NWA20  
IC : 409B-NWA20  
Regulation Applied : 47 CFR Part 15 Subpart C / RSS-Gen Issue 4 / RSS-210 Issue 8 + Amendment 1  
Final Judgment : Passed  
Sample Receipt : March 16, 2015  
Testing : March 17, 2015 - April 13, 2015  
Reported : May 1, 2015

Reported by :

Approved Signatory :



Takanori Oho  
Test Engineer  
EMC/ RF Test Laboratory Main Lab.  
Design Technology Division  
Sony EMCS Corporation

Teruki Kurihara  
Technical Manager  
EMC/ RF Test Laboratory Main Lab.  
Design Technology Division  
Sony EMCS Corporation

*Notice*

- \* *These test results relate only to the items (combination equipment, test configuration, operation condition etc.) tested.*
- \* *This report shall not be reproduced except in full, without written approval of the laboratory.*
- \* *This report must not be used by the client to claim product endorsement by A2LA or any agency of the U.S. Government.*
- \* *All test results are traceable to the national and / or international standards.*

*The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in Sony EMCS EMC/RF Test Laboratory.*



TESTING CERT #3203.01

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Note

- indicates that the listed condition, standard or equipment is applicable for this report.
- indicates that the listed condition, standard or equipment is not applicable for this report.

# 1. General Information

## 1.1. Description of Equipment Under Test (EUT)

### General specification

Test Sample Condition :  Prototype       Pre-production       Mass-production  
 Type of Equipment : Digital Media Player  
 Trade Name : SONY  
 Model No. : NW-A27  
 Serial No. : 3000131, 3000132, 3000133  
 Power Rating : DC 3.7V (The EUT was supplied with the power from built-in battery)  
 Clock Frequency in used : 533 MHz (\*Highest Frequency)

### Similar model(s) to be covered by this report

Model No. : NW-A25, NW-A26

\* The only difference between the models is the memory size as below and do not affect the Radio measurement.

Model No.	Memory Size	Note(s)
NW-A25	16 GB	Similar model
NW-A26	32 GB	Similar model
NW-A27	64 GB	EUT (representative)

### Radio specification

Function of the Equipment : Transceiver  
 Operating Frequency : 2402 - 2480MHz  
 Modulation Type : FHSS (GFSK,  $\pi/4$ DQPSK, 8DPSK)  
 Channel Spacing : 1MHz  
 Channel Bandwidth : 1MHz  
 Number of channels : 79  
 Antenna Type : Monopole chip antenna  
 Antenna connector Type : None  
 Antenna Gain : -5.5 dBi  
 Operating Temperature : +5 to +35 deg.C

## 1.2. Summary of Test Result

Test Item	Worst Margin	Measurement Detector	Test Frequency band	Results
AC Power-line Conducted Emissions	-	-	-	N/A *1
20dB Bandwidth	Refer to the test data	Peak	Carrier	Complied
Carrier Frequency Separation	Refer to the test data	Peak	Carrier	Complied
Number of Hopping Frequencies	Refer to the test data	Peak	Carrier	Complied
Time of Occupancy (Dwell Time)	Refer to the test data	Peak	Carrier	Complied
Maximum Peak Conducted Output Power	21.07 dB	Peak	Carrier	Complied
Radiated Spurious Emissions	6.3 dB (AV) 4804.002 MHz Horizontal	Below 1GHz: QP or Average Above 1GHz: Peak, Average	9 kHz - 25 GHz (excluding carrier and band edge)	Complied
Conducted Spurious Emissions for Band Edge *2	23.10 dB 2400.00 MHz	Peak	Carrier band edge	Complied

\*1: This item was not applied to the EUT since its transmission is stopped when the battery is being charged by the PC connected to AC Power-line.

\*2: Conducted Spurious Emission was tested for the only frequencies in the non-restricted carrier band edges, since the spurious emissions in other non-restricted band were complied with Radiated Spurious Emission measurement.

Test Item	Worst Margin	Measurement Detector	Test Frequency band	Results
99% Occupied Bandwidth	Refer to the test data	Peak	Carrier	Complied

## Other requirements

Part 15.31(e) Supply voltage requirement

: Complied (The EUT was tested with a new battery)

Part 15.203 / 212 Antenna requirement

: Complied (The EUT has an internal antenna which cannot be replaced by users)

1.3. Tested Methodology

Test Standard : 47 CFR Part15 Subpart C Section 15.207 / 15.247  
RSS-Gen Issue 4 / RSS-210 Issue 8 + Amendment 1  
Test Method : ANSI C63.4 - 2009 / ANSI C63.10 - 2013  
DA 00-705 (March 30, 2000)  
Test Distance for Radiated Spurious Emissions :  3 m  10m (9kHz - 30 MHz)  
 3 m  10m (30 - 1000 MHz)  
 3 m  10m (1 - 25 GHz)

1.4. Measurement Procedures

We performed the measurements in accordance with NV3-12, available upon the request.

- No deviation
- Deviation from the above procedure

In case any questions arise about test procedure, ANSI C 63.10:2013 is also referred.  
However, there are two deviations from ANSI C 63.10:2013. (ANSI C63.10:20013 is Non-accreditation)  
Measurement height is not 1.5m, but 0.8m and also SVSWR has been conducted up to 6 GHz.

The summary of the above procedure is mentioned below

20dB Bandwidth

1. Antenna-port of the EUT was connected to the spectrum analyzer.
2. For each EUT operation mode, the 20dB Bandwidth was measured with spectrum analyzer.  
Detector type : Peak  
RBW : 100kHz

99% Occupied Bandwidth

1. Antenna-port of the EUT was connected to the spectrum analyzer.
2. For each EUT operation mode, the 99% Occupied Bandwidth was measured with spectrum analyzer.  
Detector type : Peak  
RBW : 30kHz

Carrier Frequency Separation

1. Antenna-port of the EUT was connected to the spectrum analyzer.
2. For each EUT operation mode, the Carrier Frequency Separation was measured with spectrum analyzer.  
Detector type : Peak  
RBW : 100kHz

Number of Hopping Frequencies

1. Antenna-port of the EUT was connected to the spectrum analyzer.
2. For each EUT operation mode, the Number of Hopping Frequencies was measured with a spectrum analyzer.  
Detector type : Peak  
RBW : 510kHz

Time of Occupancy (Dwell Time)

1. Antenna-port of the EUT was connected to the spectrum analyzer.
2. For each EUT operation mode, the Time of Occupancy (Dwell Time) was measured with a spectrum analyzer.  
     Detector type   : Peak  
     RBW            : 1MHz

Maximum Peak Conducted Output Power

1. Antenna-port of the EUT was connected to the spectrum analyzer.
2. For each EUT operation mode, the Maximum Peak Conducted Output Power was measured with spectrum analyzer.  
     Detector type   : Peak  
     RBW            : 3MHz

Radiated Spurious Emissions

1. The non-conductive table (EUT table) made of ( FRP,  Styrene Foam,  other non-conductive material) was placed in the center of the turntable.
2. The dimensions of the EUT table were 0.8 m height, 2.0 m width and 1.0 m depth.
3. The EUT was placed on the center of the tabletop and its rear was flush with the rear of the table.
4. The test antenna was placed away from the EUT at 3m distance.
5. The limits were compensated the distance factor with follows:  
     9 kHz - 490 kHz [Limit at 3m]       = [Limit at 300m] + 40log (300[m] / 3[m])  
     490 kHz - 30 MHz [Limit at 3m]     = [Limit at 30m] + 40log (30[m] / 3[m])
6. Interconnecting cables that hang closer than 40 cm to the ground plane was folded back and forth forming a bundle 30 to 40 cm long, hanging approximately in the middle between the ground plane and the tabletop.
7. Find the worst arrangement of the EUT according to follows:
  - Connecting all peripherals and change the position of EUT, peripherals and cables.
  - Rotating the turntable and/or scanning the antenna.
  - On every condition, exploring the highest emissions with the spectrum analyzer. (9 kHz - 25 GHz, peak detector)

8. On the worst arrangement of the EUT found in above, choose the three highest harmonics or spurious emissions on the spectrum data. (\*excluding carrier band edges)

The final measurements of all test operating modes carried out on these emissions as follows:

The test antenna and the turntable were performed with follows:

	9kHz - 30MHz	30MHz - 1000MHz	above 1GHz
Antenna	Loop Antenna	Bi-conical Antenna, Log-periodic Antenna	Horn Antenna
Antenna scanning range	1m, Vertical, 360 degrees	1 - 4m, Horizontal and Vertical	1 - 4m *, Horizontal and Vertical
Turntable rotating range	360 degrees	360 degrees	360 degrees

\*: When the measurement frequencies above 1GHz, final measurements are performed keeping the antenna in the "cone of radiation" from EUT area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.

Instruments settings were carried out with follows;

	9 kHz - 90 kHz 110 kHz - 490 kHz	90 kHz- 110 kHz 490 kHz - 30 MHz	30 MHz - 1000 MHz	above 1GHz
Detector	peak / average	quasi-peak	quasi-peak	peak / average
RBW	200 Hz (6dB) or 9 kHz (6dB) *1	200 Hz (6dB) or 9 kHz (6dB) *1	120 kHz (6dB)	1 MHz (3dB)
VBW	N/A	N/A	N/A	3 MHz (for peak) 10 Hz (for average)
Instrument	EMI test receiver	EMI test receiver	EMI test receiver	Spectrum analyzer

\*1: When the measurement frequencies below 150 kHz, RBW: 200 Hz was used.

- If the final measurement result exceeded the limit(FCC 15.209(a)) in non-restricted band(excluding carrier band edges), the measurement is carried out additionally and compared with the limit (-20dBc) with follows;

Measurement points

- Fundamental Frequency
- Frequency that exceeded the limit in non-restricted band (excluding carrier band edges)

	9 kHz - 150 kHz	150 kHz - 30MHz	above 30MHz
Detector	peak	peak	peak
RBW	3 dB RBW: 300 Hz *	3 dB RBW: 10 kHz *	3 dB RBW: 100 kHz
Instrument	Spectrum analyzer	Spectrum analyzer	Spectrum analyzer

\*: Correction factor of RBW was compensated to a measurement result by the following formula.

$$C.F. \text{ of RBW [dB]} = 10 * \log (100\text{kHz} / \text{used RBW})$$

- Although these tests were performed other than open field area test site, adequate comparison measurements were confirmed against 30 m open field area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

#### Conducted Spurious Emissions for Band Edge

- Antenna-port of the EUT was connected to the spectrum analyzer.
- For each EUT operation mode, the Conducted Spurious Emissions for Band Edge was measured with a spectrum analyzer.
  - Detector type : Peak
  - RBW : 100kHz

1.5. Test Facility

Address of Test Facility

Test Facility Name : Sony EMCS EMC/ RF Test Laboratory Main Lab.  
 Address : Kisarazu Site 8-4 Shiomi Kisarazu-shi, Chiba, 292-0834 Japan  
 Phone : +81 438 37 2750

AC Power-line Conducted Emissions

Shielded Room  
 4th Site

Radiated Spurious Emission

Semi-Anechoic chamber  
 4th Site

Antenna-port Conducted Measurements \*

Shielded Room  
 4th Site SR1

\*Note: This item contains the following

- 20dB Bandwidth
- 99% Occupied Bandwidth
- Carrier Frequency Separation
- Number of Hopping Frequencies
- Time of Occupancy (Dwell Time)
- Maximum Peak Conducted Output Power
- Conducted Spurious Emissions and Band Edge Compliance

A2LA Accreditation for Test Facility

The above test facility has been fully reported to A2LA and accepted as follows:  
 Effective dates: 2013-09-30 through 2015-10-31

Canada Registered Test Site

IC Assigned Code: 409R-1

1.6. Uncertainty

Test Item	Frequency	4th Site SR1
Conducted Output Power, Conducted Spurious Emissions	below 6GHz	± 1.25 dB
	6 - 25GHz	± 1.75 dB

Test Item	Frequency	4th Site	
AC Power-line Conducted Emissions	150kHz - 30MHz	± 2.57 dB	
Radiated Emissions (EUT height 0.8m)	below 30 MHz	3m	± 2.60 dB
	30 - 300 MHz	3m	± 3.70 dB
	300 - 1000 MHz	3m	± 5.23 dB
	1 - 6 GHz	3m	± 5.15 dB
	6 - 18 GHz	3m	± 5.24 dB
	18 - 26.5 GHz	3m	± 4.33 dB

## 2. System Test Configuration

### 2.1. Validation

The system was configured for testing in a typical (as a customer would normally use it).  
The tests were conducted with the worst case modes as follows.

### 2.2. Test Operating Conditions

The tests have been carried out the following conditions.

Test Items	Operating Mode *1	Packet type *2,3	Test Channels
Carrier Frequency Separation, Number of Hopping Frequencies, Time of Occupancy (Dwell Time)	BDR	DH5	Hopping ON
	EDR	3DH5	
20dB Bandwidth, 99% Occupied Bandwidth, Maximum Peak Conducted Output Power, Radiated Spurious Emissions	BDR	DH5	2402MHz, 2441MHz, 2480MHz
	EDR	3DH5	
Conducted Spurious Emissions for Band Edge	BDR	DH5	2402MHz
	EDR	3DH5	

Note:

- \*1: Inquiry mode was not performed based on the result of pre-compliance testing.
- \*2: The worst packet type has been decided based on the result of maximum duty cycle and pre-compliance testing in the actual product specification.
- \*3: Packet type for EDR has been decided based on the result of Maximum Peak Conducted Output Power.

### 2.3. Special Accessories

Special accessories needed for connecting the EUT to achieve compliance:

Item	Manufacturer	Model No.	Serial No.	Remark
-	-	-	-	-

### 2.4. EUT Modifications

- No equipment modification to achieve compliance to the standard levels was done during the tests.
- Equipment was modified to achieve compliance to the standard level as below.

Responsible Party Signature

\_\_\_\_\_

Typed/ Print Name :  
Responsible Party :  
Position :  
Date :

## 2.5. Configuration of Tested System

### Radiated Spurious Emissions Measurement

The equipment under test (EUT) consists of:

Symbol	Item	Manufacturer	Model No.	FCC ID	Serial No.
A	Digital Media Player	SONY	NW-A27	AK8NWA20	3000132 3000133

The measurement was carried out with the following support equipment connected

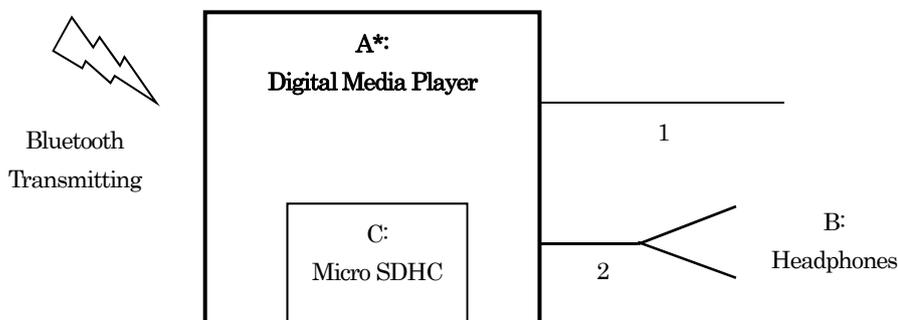
Symbol	Item	Manufacturer	Model No.	FCC ID	Serial No.
B	Headphones	SONY	MDR-NW750N	N/A	-
C	Micro SDHC	SONY	SR-32UYA	N/A	-

Type of Cable

Symbol	Description	Identification (Manufacturer etc.)	Shielded YES/NO	Ferrite Core	Bundled	Length (m)
1	USB Cable	WMC-NW20MU	YES	NO	Bundled	1.0
2	Headphones Cable	-	NO	NO	-	1.1

System configuration

\*: EUT



### Antenna-port Conducted Measurements

The equipment under test (EUT) consists of:

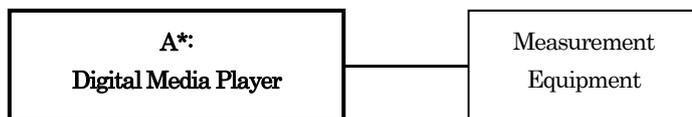
Symbol	Item	Manufacturer	Model No.	FCC ID	Serial No.
A	Digital Media Player	SONY	NW-A27	AK8NWA20	3000131

Type of Cable

Symbol	Description	Identification (Manufacturer etc.)	Shielded YES/NO	Ferrite Core	Bundled	Length (m)
-	-	-	-	-	-	-

System configuration

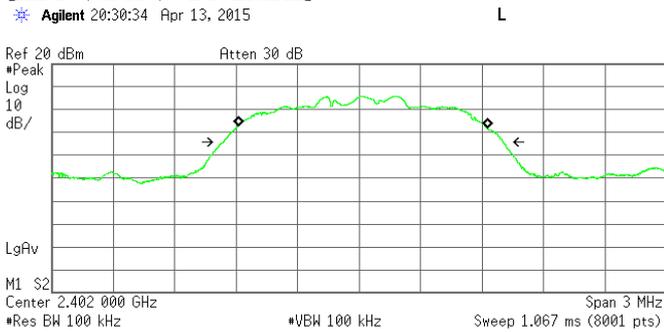
\*: EUT





[EDR (3DH5) / 2402MHz]

\* Agilent 20:30:34 Apr 13, 2015



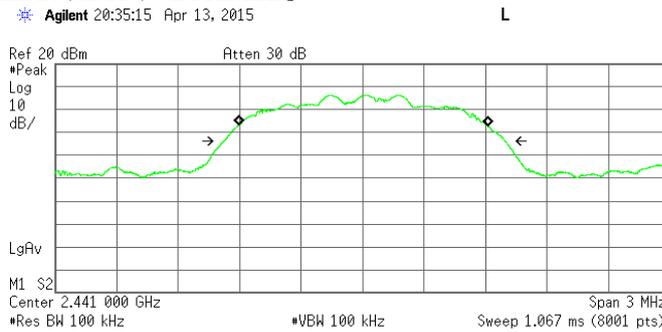
Center 2.402 000 GHz      Span 3 MHz  
 \*Res BW 100 kHz      \*VBW 100 kHz      Sweep 1.067 ms (8001 pts)

Occupied Bandwidth      Occ BN % Pwr      99.00 %  
 1.2161 MHz      x dB      -20.00 dB

Transmit Freq Error      18.551 kHz  
 x dB Bandwidth      1.365 MHz

[EDR (3DH5) / 2441MHz]

\* Agilent 20:35:15 Apr 13, 2015



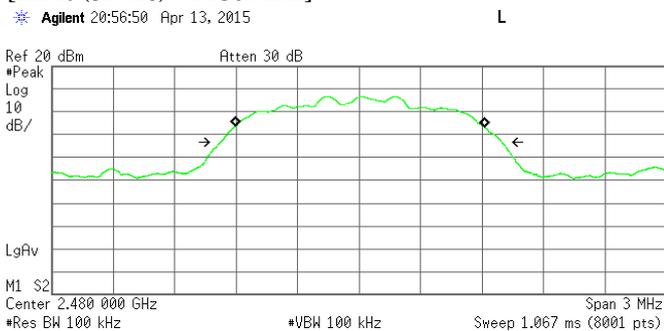
Center 2.441 000 GHz      Span 3 MHz  
 \*Res BW 100 kHz      \*VBW 100 kHz      Sweep 1.067 ms (8001 pts)

Occupied Bandwidth      Occ BN % Pwr      99.00 %  
 1.2156 MHz      x dB      -20.00 dB

Transmit Freq Error      5.762 kHz  
 x dB Bandwidth      1.373 MHz

[EDR (3DH5) / 2480MHz]

\* Agilent 20:56:50 Apr 13, 2015



Center 2.480 000 GHz      Span 3 MHz  
 \*Res BW 100 kHz      \*VBW 100 kHz      Sweep 1.067 ms (8001 pts)

Occupied Bandwidth      Occ BN % Pwr      99.00 %  
 1.2164 MHz      x dB      -20.00 dB

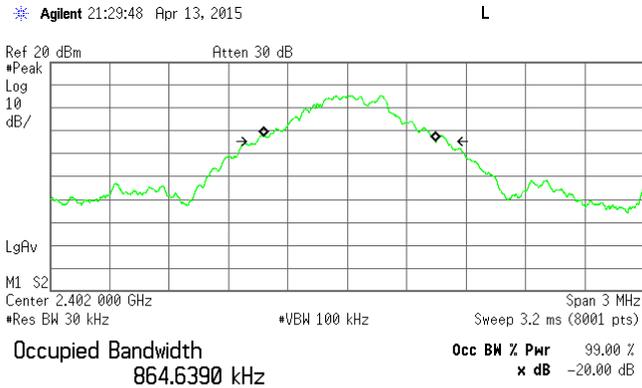
Transmit Freq Error      5.680 kHz  
 x dB Bandwidth      1.375 MHz

3.2. 99% Occupied Bandwidth

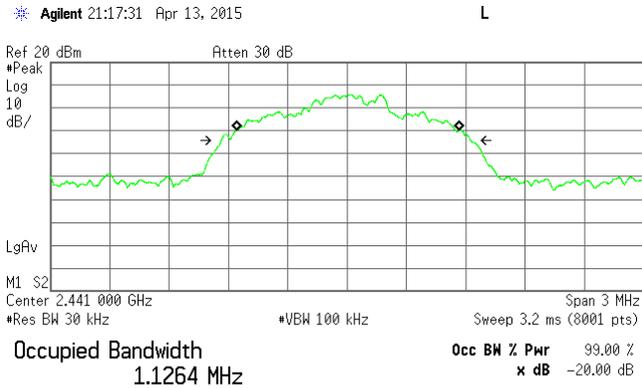
- 1) Ambient temperature : 25.8deg.C
- 2) Relative humidity : 41.5%
- 3) Date of measurement : April 13, 2015
- 4) Measured by : Y.AOYAMA
- 5) Operating mode : Transmitting mode

Mode	Channel [MHz]	Result [MHz]	Limit [MHz]
BDR	DH5	2402	0.865
		2441	1.126
		2480	0.860
EDR	3DH5	2402	1.174
		2441	1.180
		2480	1.183

[BDR (DH5) / 2402MHz]



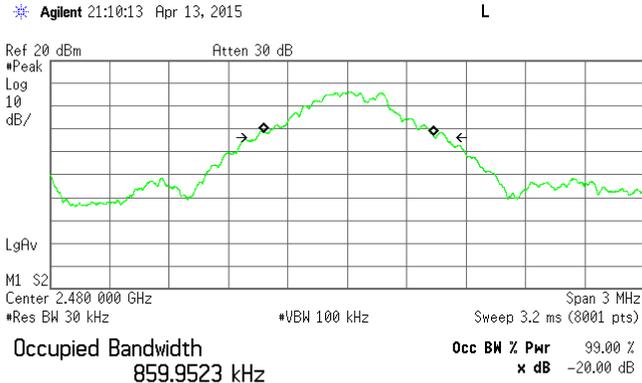
[BDR (DH5) / 2441MHz]



Transmit Freq Error 13.360 kHz  
 x dB Bandwidth 959.093 kHz

Transmit Freq Error 5.619 kHz  
 x dB Bandwidth 1.262 MHz

[BDR (DH5) / 2480MHz]

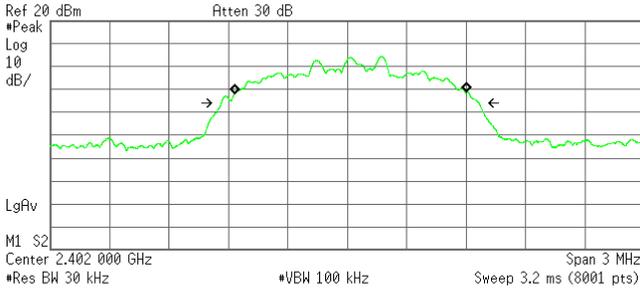


Transmit Freq Error 8.002 kHz  
 x dB Bandwidth 957.559 kHz

[EDR (3DH5) / 2402MHz]

Agilent 21:28:25 Apr 13, 2015

L



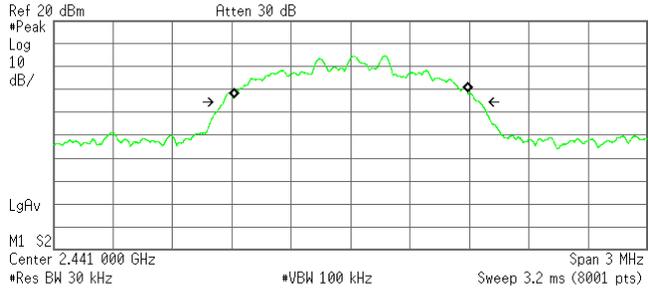
Occupied Bandwidth **1.1738 MHz**  
 Occ BN % Pwr **99.00 %**  
 x dB **-20.00 dB**

Transmit Freq Error **17.733 kHz**  
 x dB Bandwidth **1.298 MHz**

[EDR (3DH5) / 2441MHz]

Agilent 21:15:12 Apr 13, 2015

L



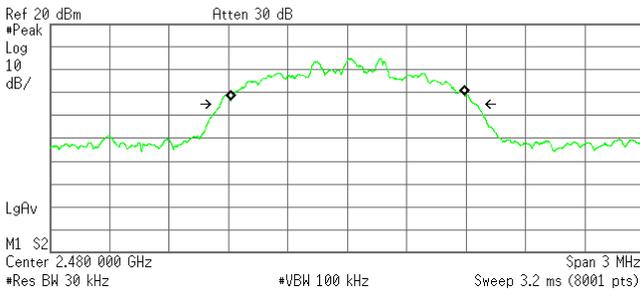
Occupied Bandwidth **1.1803 MHz**  
 Occ BN % Pwr **99.00 %**  
 x dB **-20.00 dB**

Transmit Freq Error **1.961 kHz**  
 x dB Bandwidth **1.288 MHz**

[EDR (3DH5) / 2480MHz]

Agilent 21:08:10 Apr 13, 2015

L



Occupied Bandwidth **1.1827 MHz**  
 Occ BN % Pwr **99.00 %**  
 x dB **-20.00 dB**

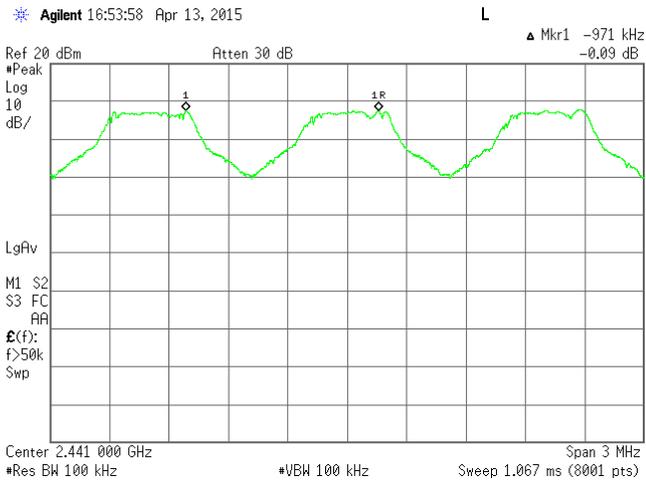
Transmit Freq Error **2.225 kHz**  
 x dB Bandwidth **1.286 MHz**

3.3. Carrier Frequency Separation

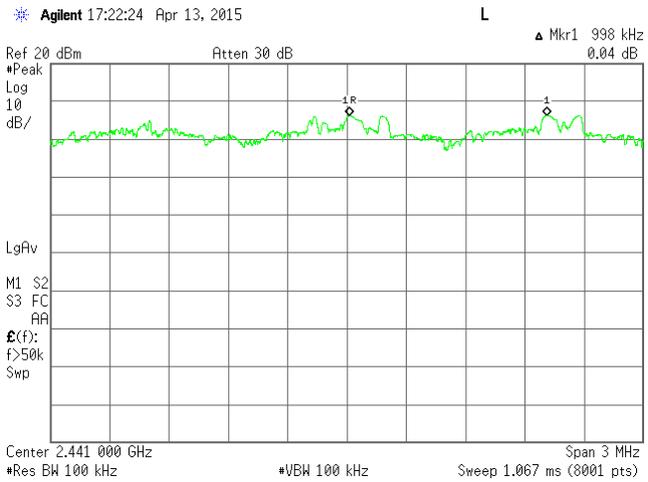
- 1) Ambient temperature : 25.8deg.C
- 2) Relative humidity : 41.5%
- 3) Date of measurement : April 13, 2015
- 4) Measured by : Y.AOYAMA
- 5) Operating mode : Transmitting mode

Mode		Reading [kHz]	Limit [kHz]
BDR	DH5	971.0	737.3
EDR	3DH5	998.0	916.7

[BDR (DH5)]



[EDR (3DH5)]

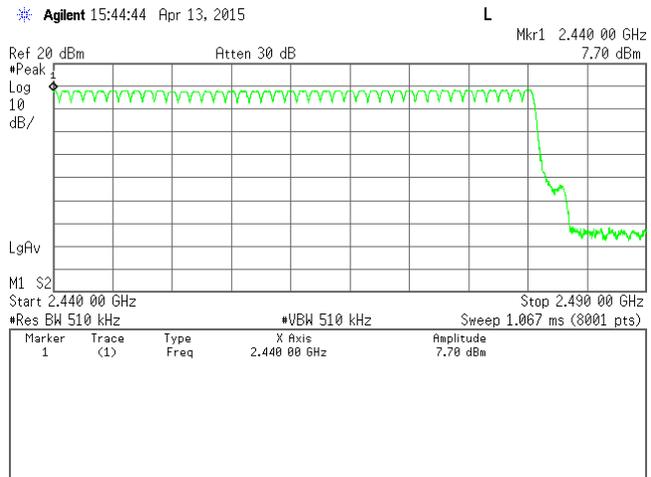
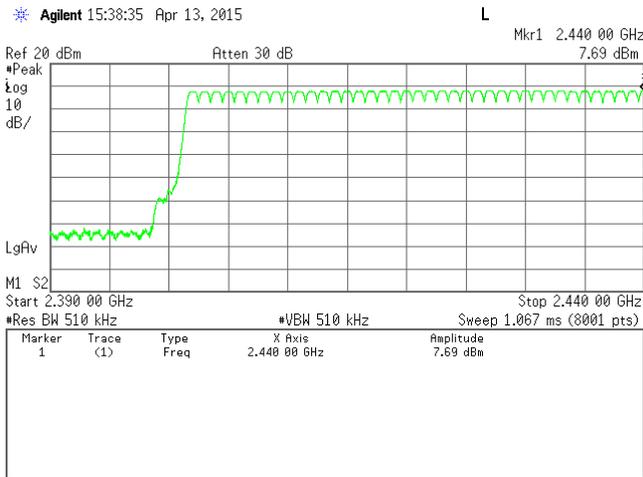


3.4. Number of Hopping Frequencies

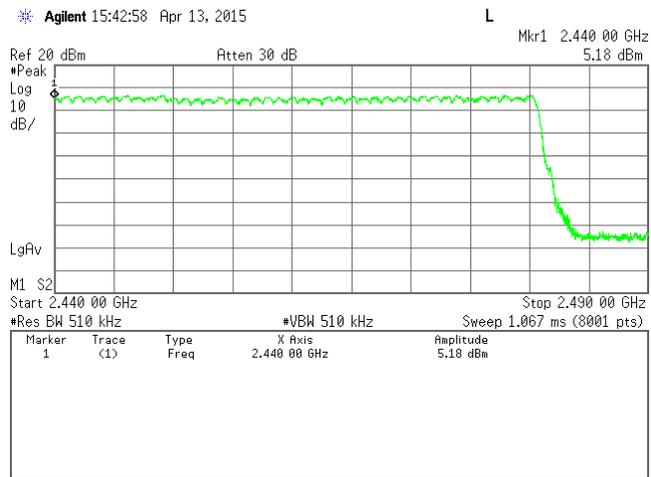
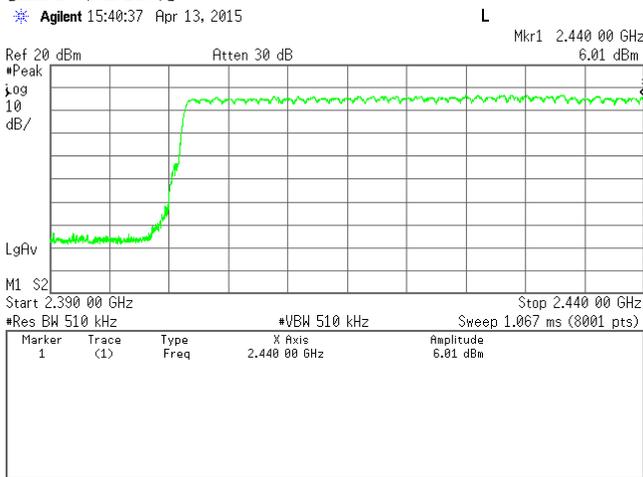
- 1) Ambient temperature : 25.8deg.C
- 2) Relative humidity : 41.5%
- 3) Date of measurement : April 13, 2015
- 4) Measured by : Y.AOYAMA
- 5) Operating mode : Transmitting mode

Mode		Number [channel]	Limit [channel]
BDR	DH5	79	15
EDR	3DH5	79	15

[BDR (DH5)]



[EDR (3DH5)]

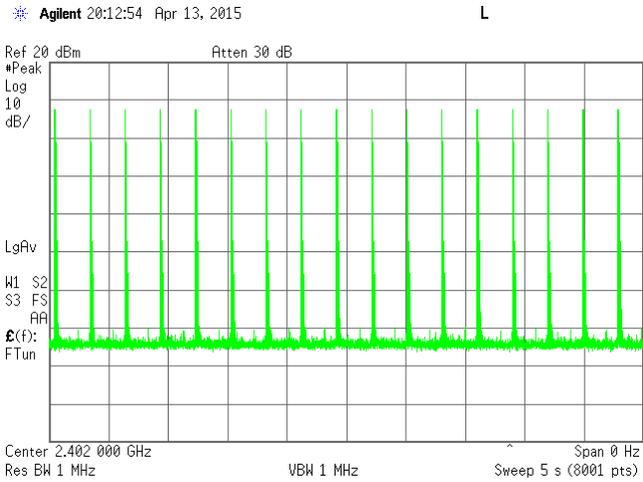
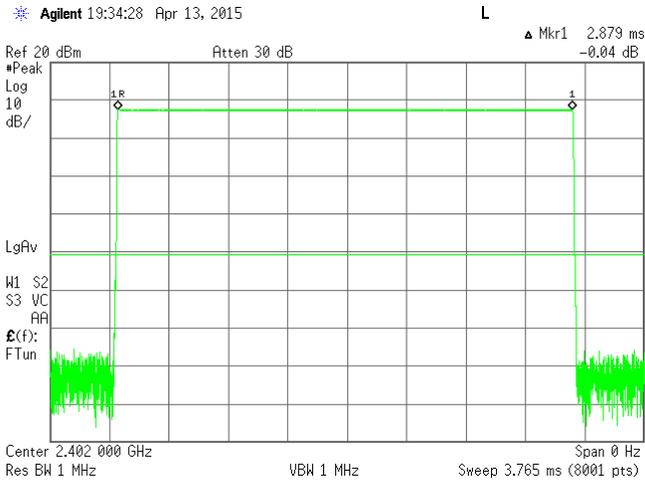


3.5. Time of Occupancy (Dwell Time)

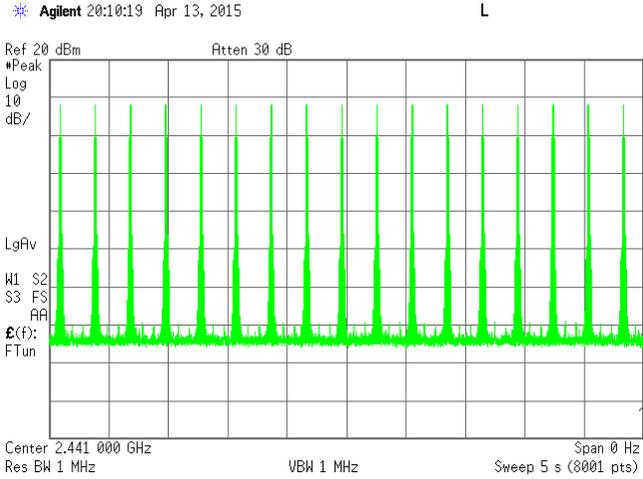
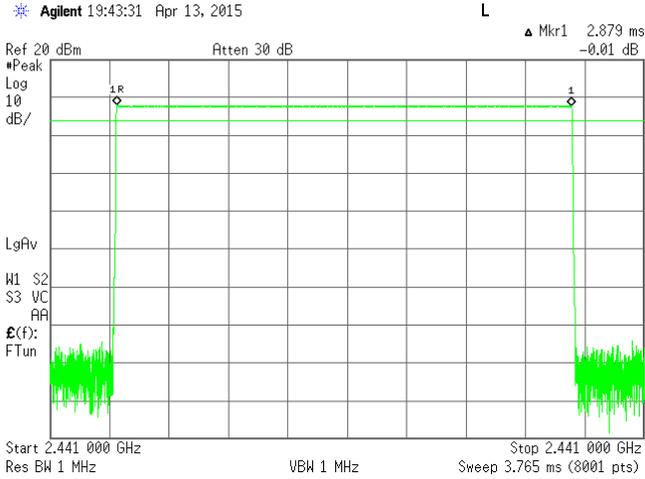
- 1) Ambient temperature : 25.8deg.C
- 2) Relative humidity : 41.5%
- 3) Date of measurement : April 13, 2015
- 4) Measured by : Y.AOYAMA
- 5) Operating mode : Transmitting mode

Mode	Channel [MHz]	Dwell Time [msec]	Cycle [time]	Result [msec]	Limit [msec]	
BDR	DH5	2402	2.88	17	309.3	400.0
		2441	2.88	17	309.3	400.0
		2480	2.88	17	309.2	400.0
EDR	3DH5	2402	2.89	17	310.7	400.0
		2441	2.89	17	310.6	400.0
		2480	2.89	17	310.6	400.0

[BDR (DH5) / 2402MHz]

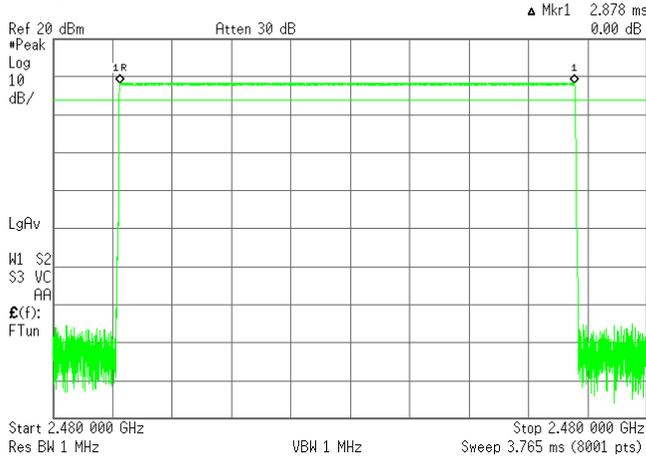


[BDR (DH5) / 2441MHz]

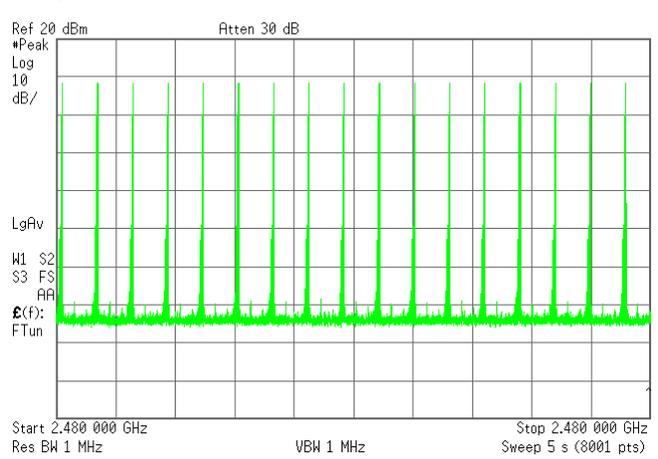


[BDR (DH5) / 2480MHz]

\* Agilent 19:45:33 Apr 13, 2015

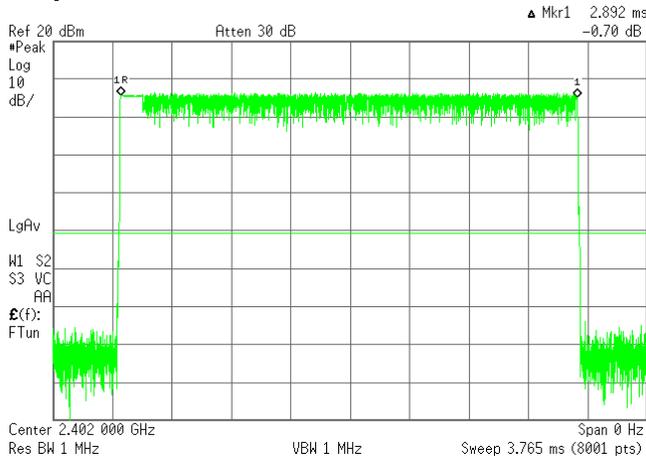


\* Agilent 20:07:24 Apr 13, 2015

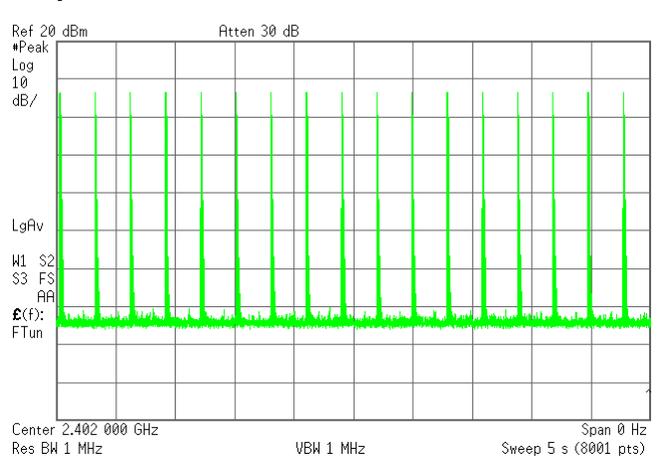


[EDR (3DH5) / 2402MHz]

\* Agilent 19:37:06 Apr 13, 2015

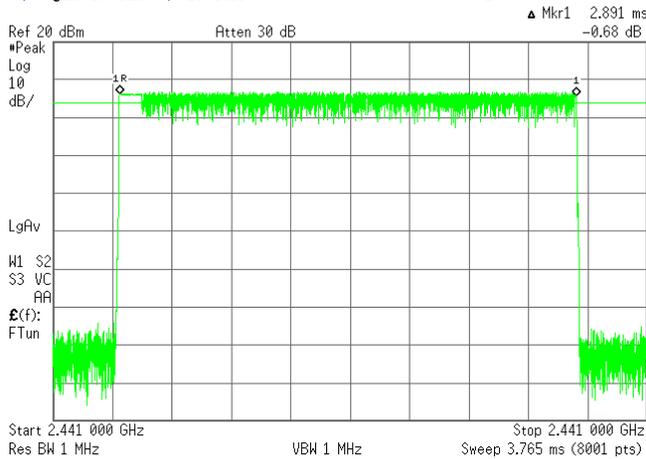


\* Agilent 20:12:00 Apr 13, 2015

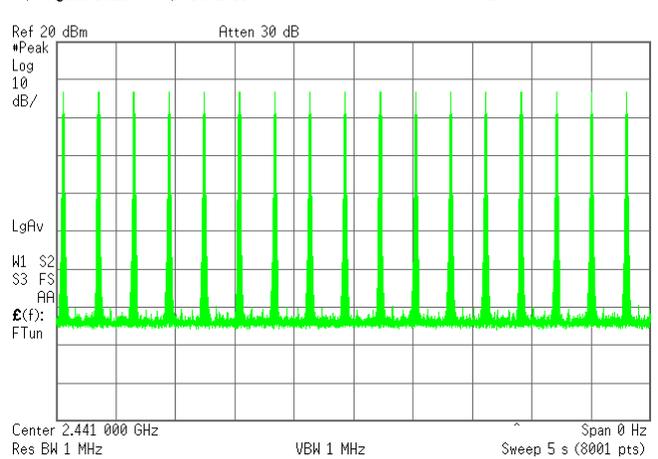


[EDR (3DH5) / 2441MHz]

\* Agilent 19:41:23 Apr 13, 2015



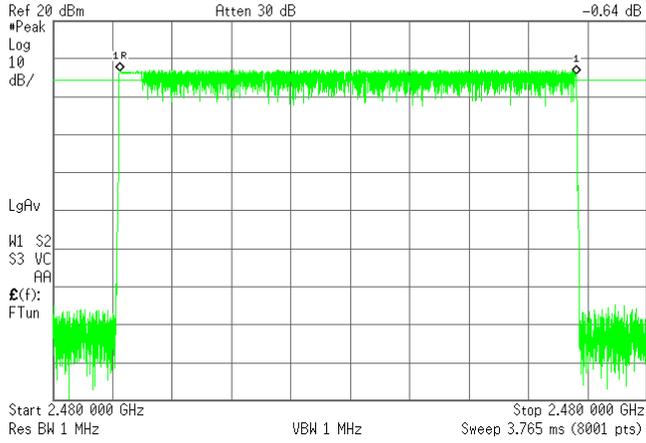
\* Agilent 20:11:09 Apr 13, 2015



[EDR (3DH5) / 2480MHz]

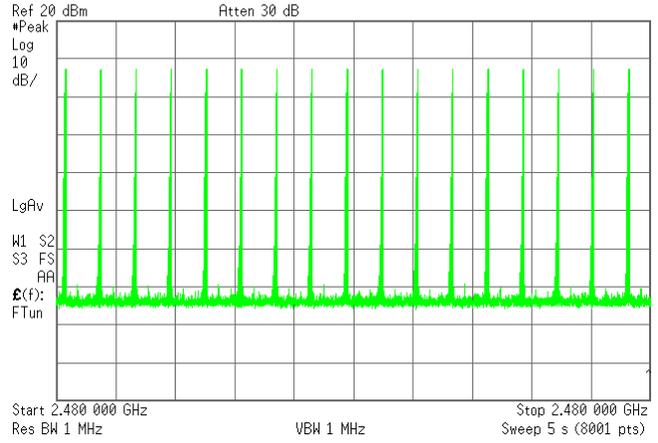
Agilent 19:47:06 Apr 13, 2015

L  
Mkr1 2.891 ms  
-0.64 dB



Agilent 20:06:44 Apr 13, 2015

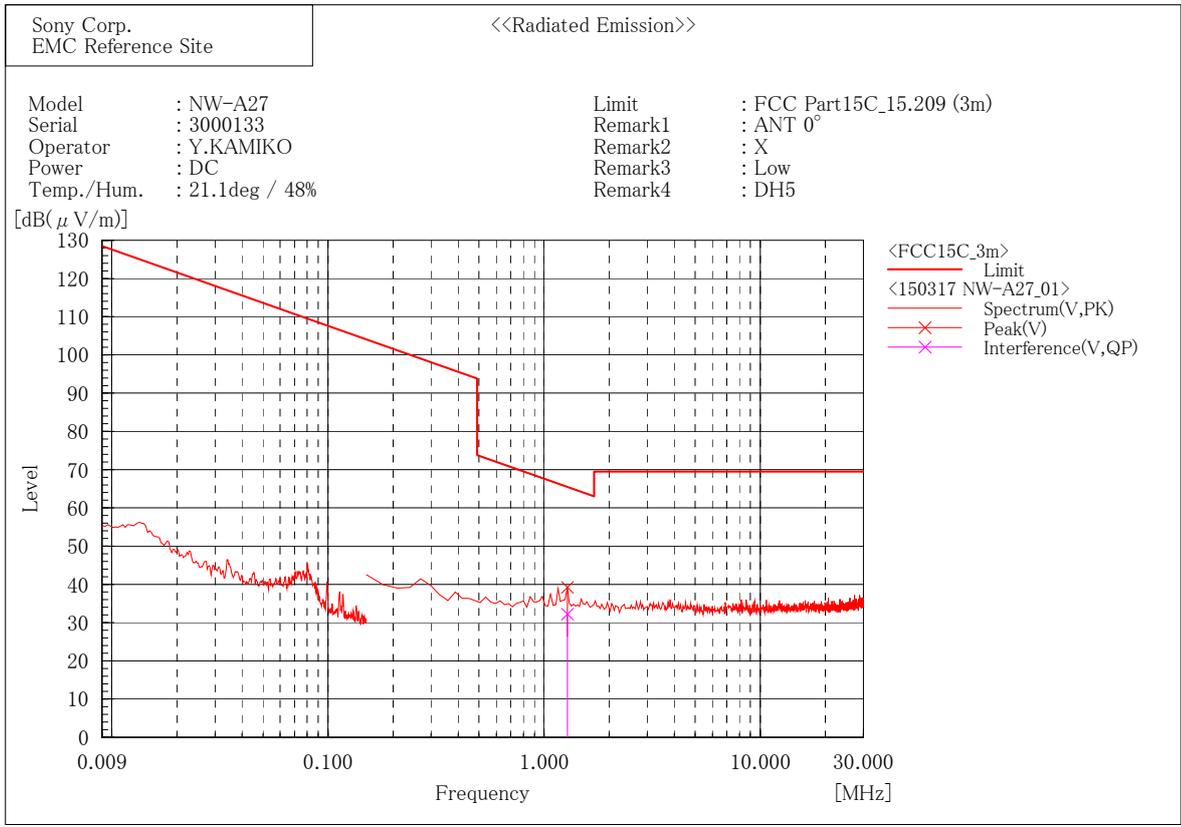
L





3.7. Radiated Spurious Emissions

9 kHz - 30 MHz  
 [BDR (DH5) / 2402MHz]

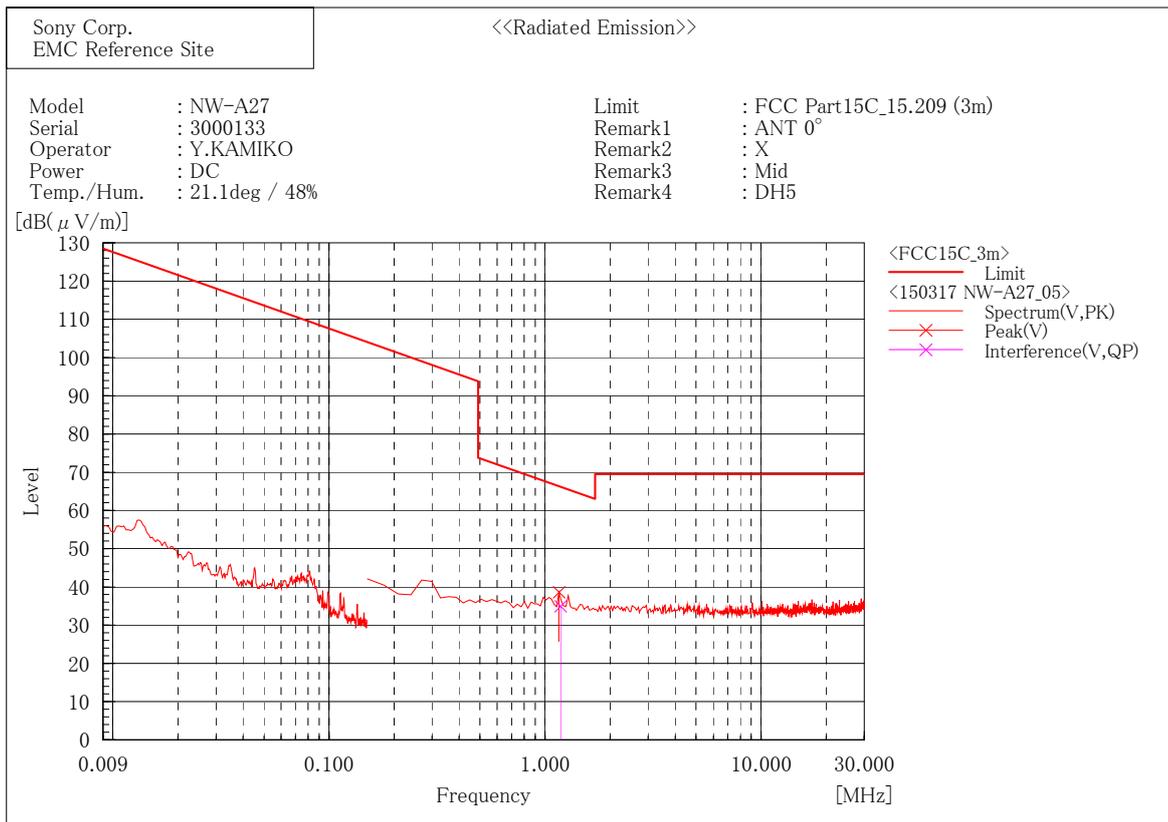


Final Result

--- Vertical Polarization (QP)---

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	1.279	12.6	19.6	32.2	65.5	33.3	100.0	357.1

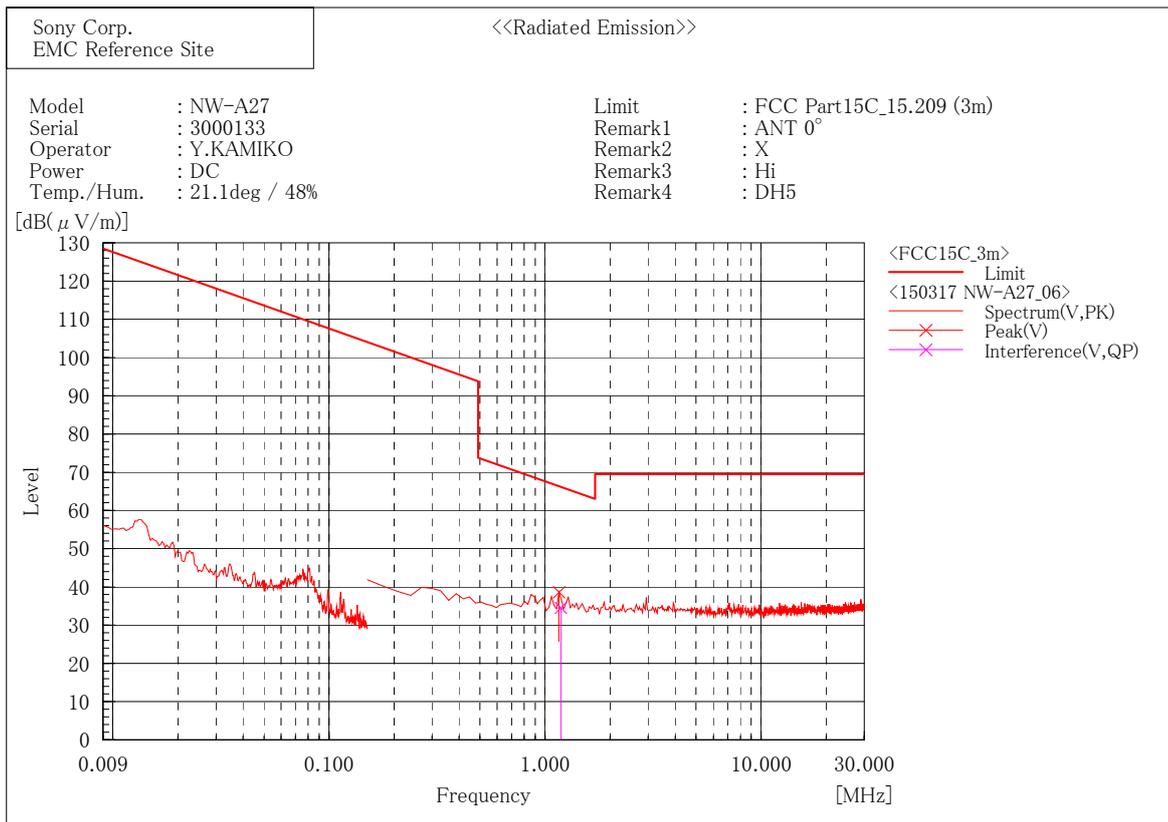
[BDR (DH5) / 2441MHz]



Final Result

--- Vertical Polarization (QP)---

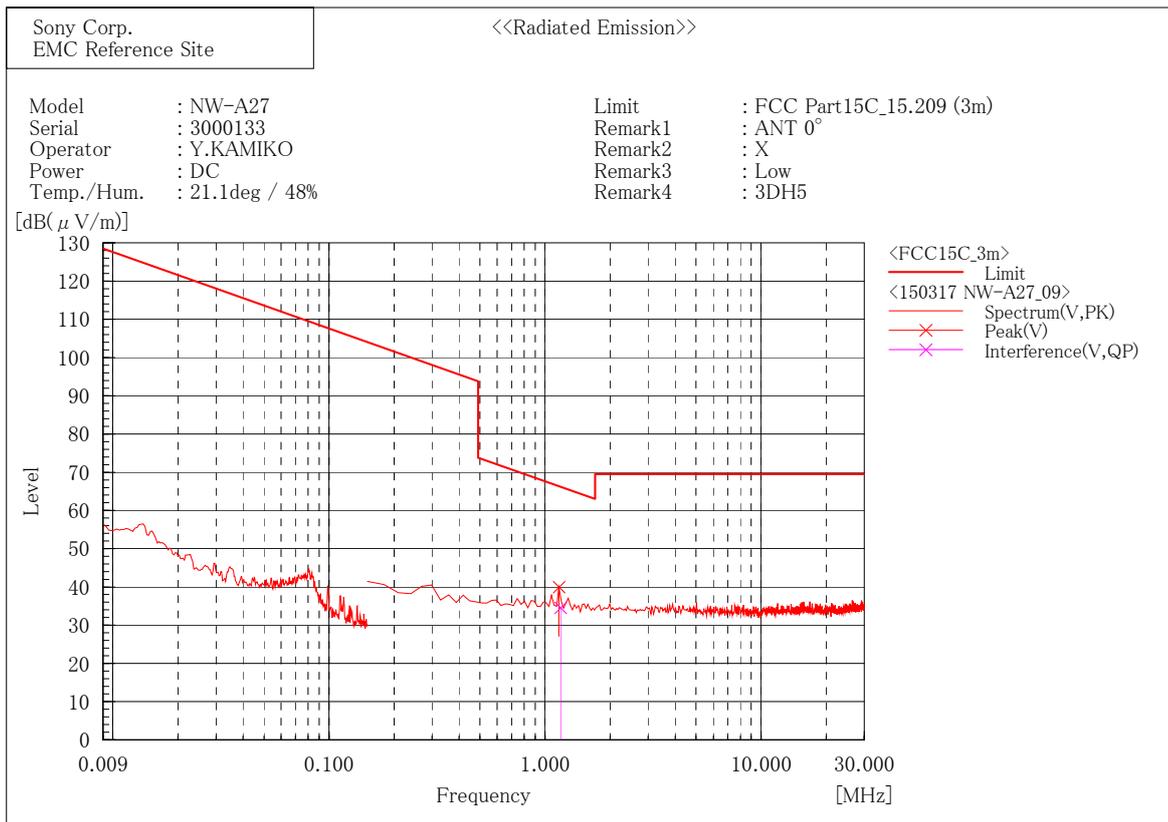
No.	Frequency [MHz]	Reading [dB(μV)]	c. f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	1.180	15.4	19.6	35.0	66.2	31.3	100.0	237.2



Final Result

--- Vertical Polarization (QP)---

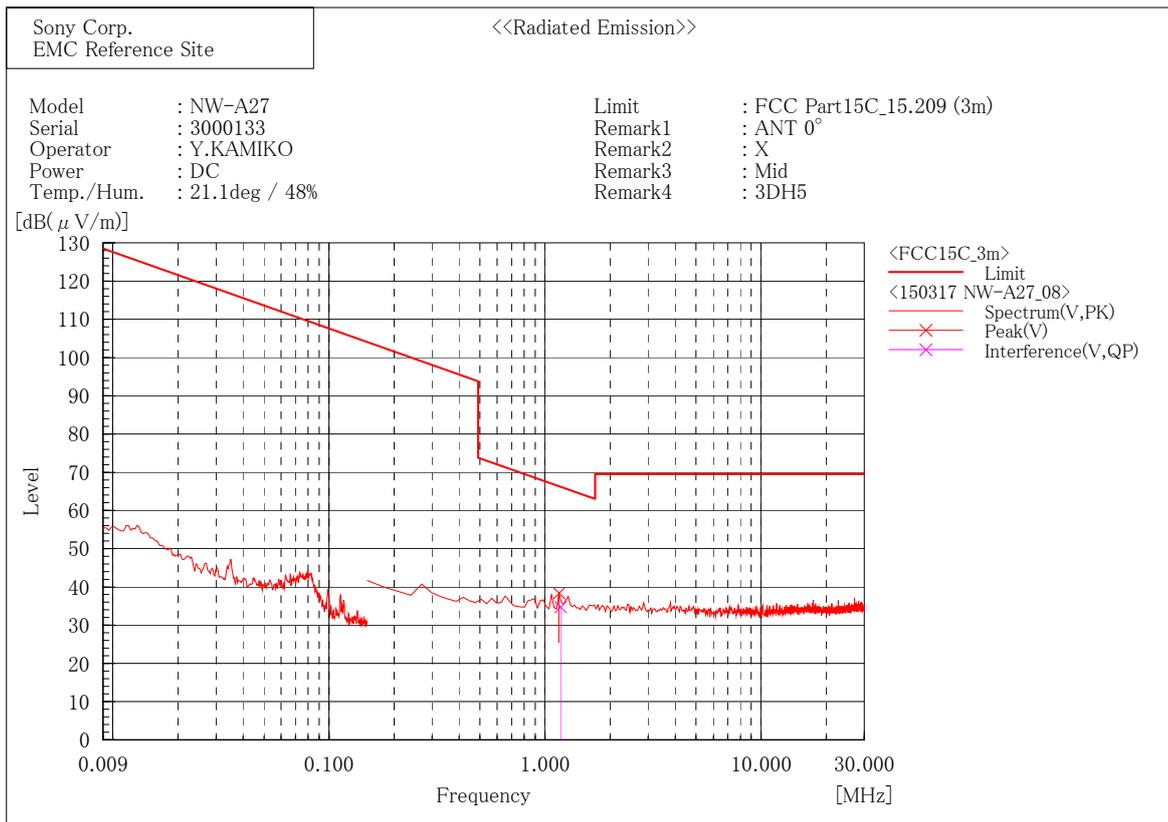
No.	Frequency [MHz]	Reading [dB(μV)]	c. f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	1.181	14.9	19.6	34.5	66.2	31.7	100.0	224.3



Final Result

--- Vertical Polarization (QP)---

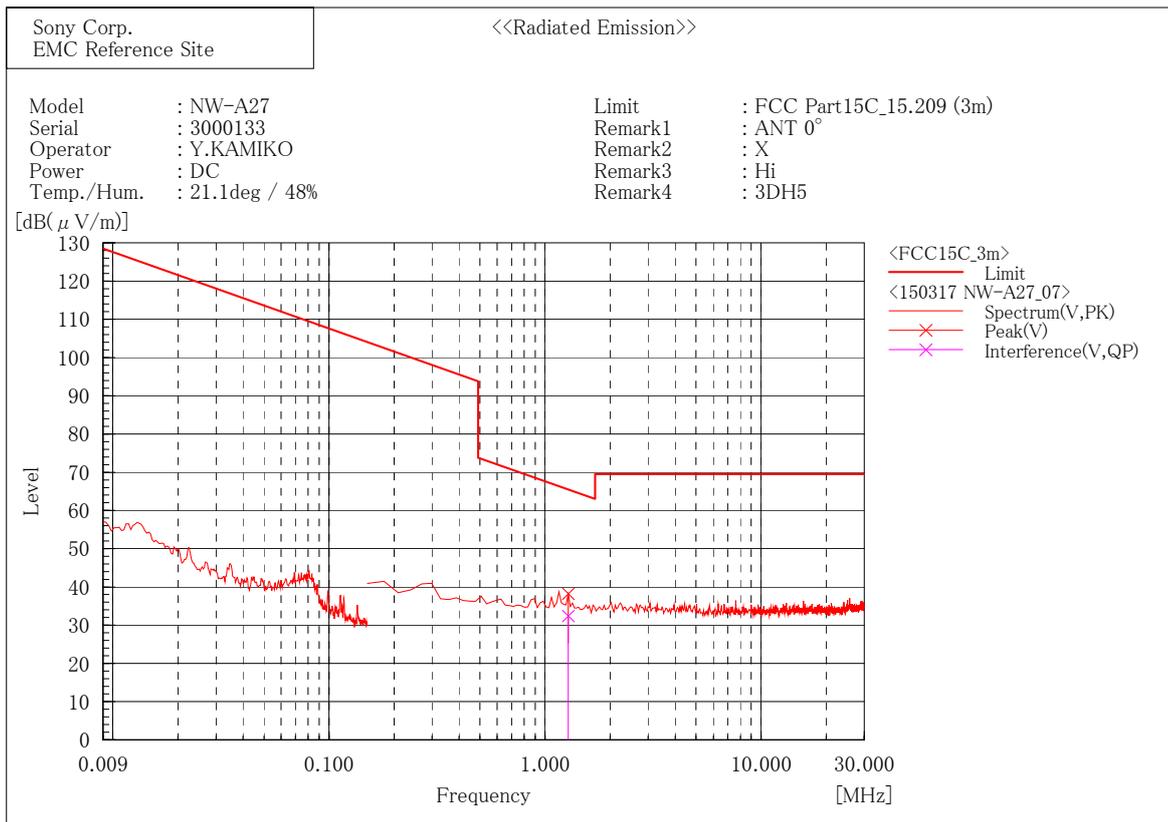
No.	Frequency [MHz]	Reading [dB(μV)]	c. f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	1.181	15.0	19.6	34.6	66.2	31.6	100.0	95.6



Final Result

--- Vertical Polarization (QP)---

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	1.180	15.1	19.6	34.7	66.2	31.5	100.0	342.5

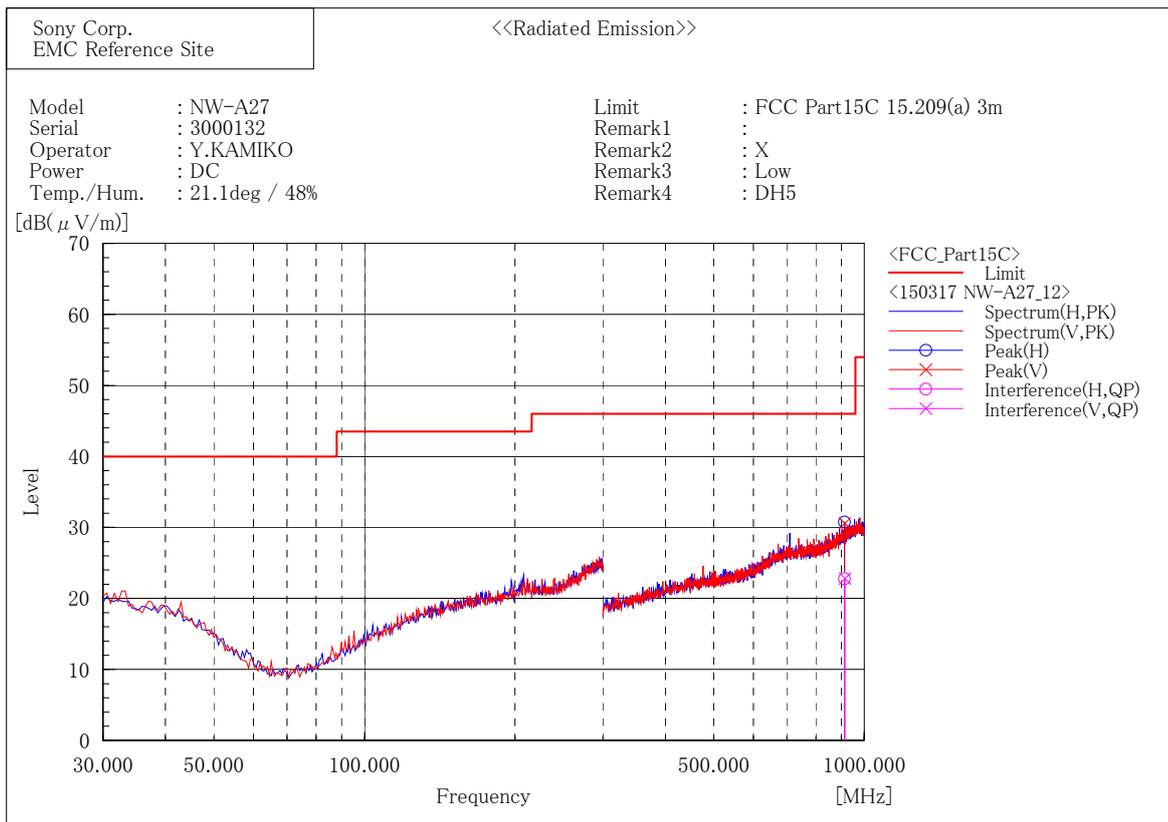


Final Result

--- Vertical Polarization (QP)---

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	1.280	12.8	19.6	32.4	65.5	33.1	100.0	249.8

30 MHz - 1000 MHz  
[BDR (DH5) / 2402MHz]



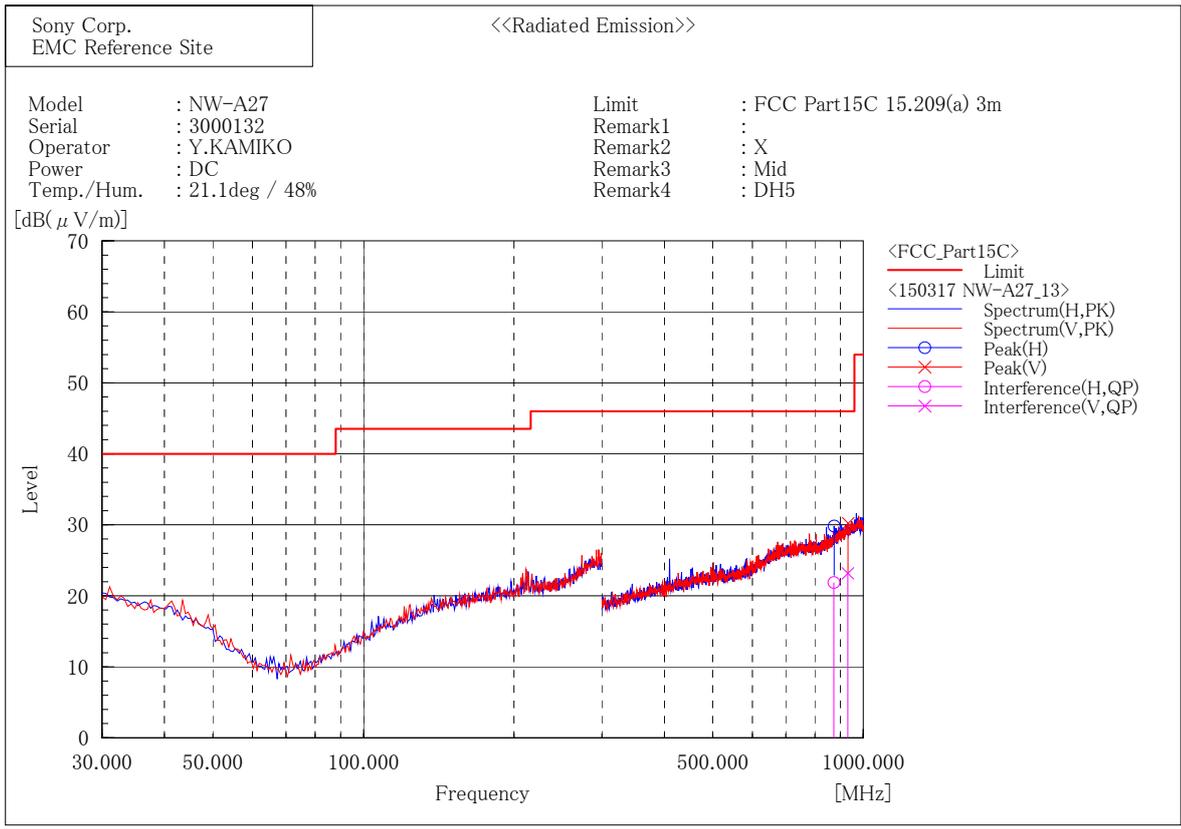
Final Result

--- Horizontal Polarization (QP)---

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	912.580	24.7	-1.9	22.8	46.0	23.2	277.2	81.2

--- Vertical Polarization (QP)---

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	915.060	24.6	-1.8	22.8	46.0	23.2	235.0	305.6



Final Result

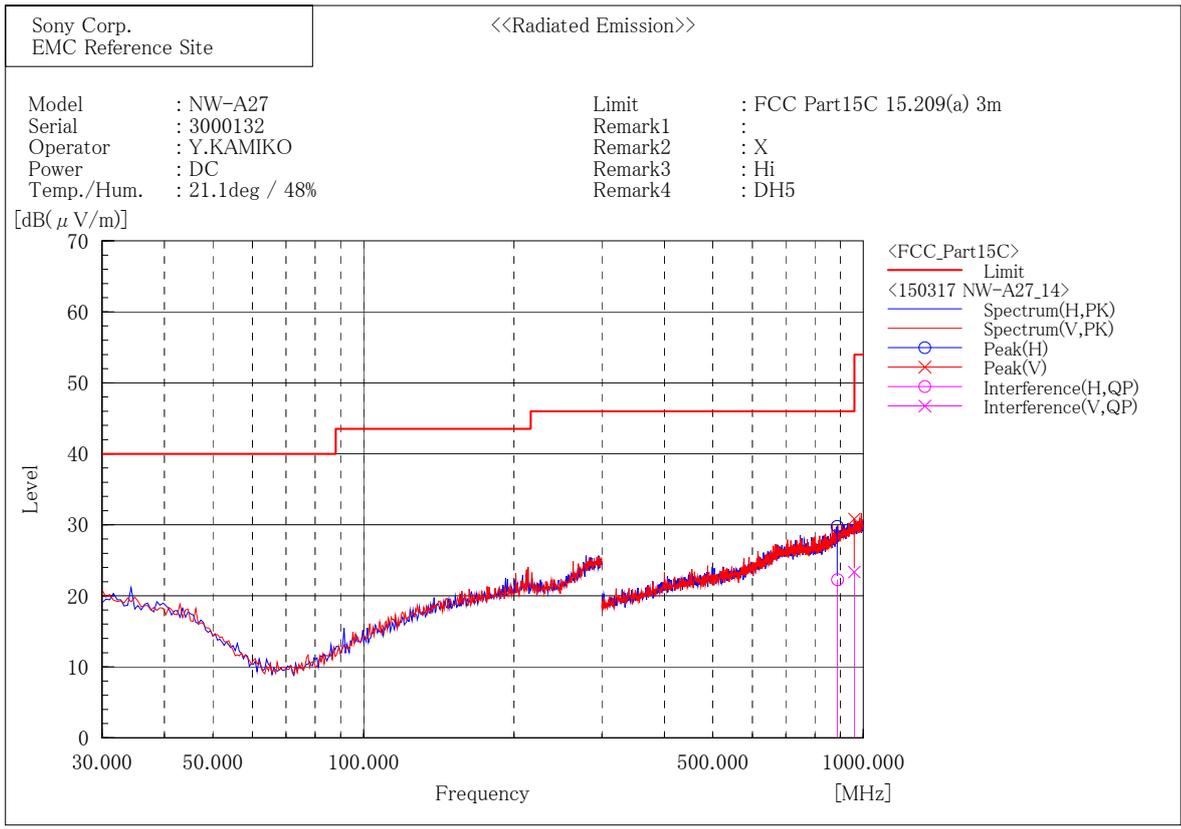
--- Horizontal Polarization (QP)---

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	873.500	24.8	-2.9	21.9	46.0	24.1	198.4	32.1

--- Vertical Polarization (QP)---

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	931.680	24.6	-1.4	23.2	46.0	22.8	209.0	187.5



Final Result

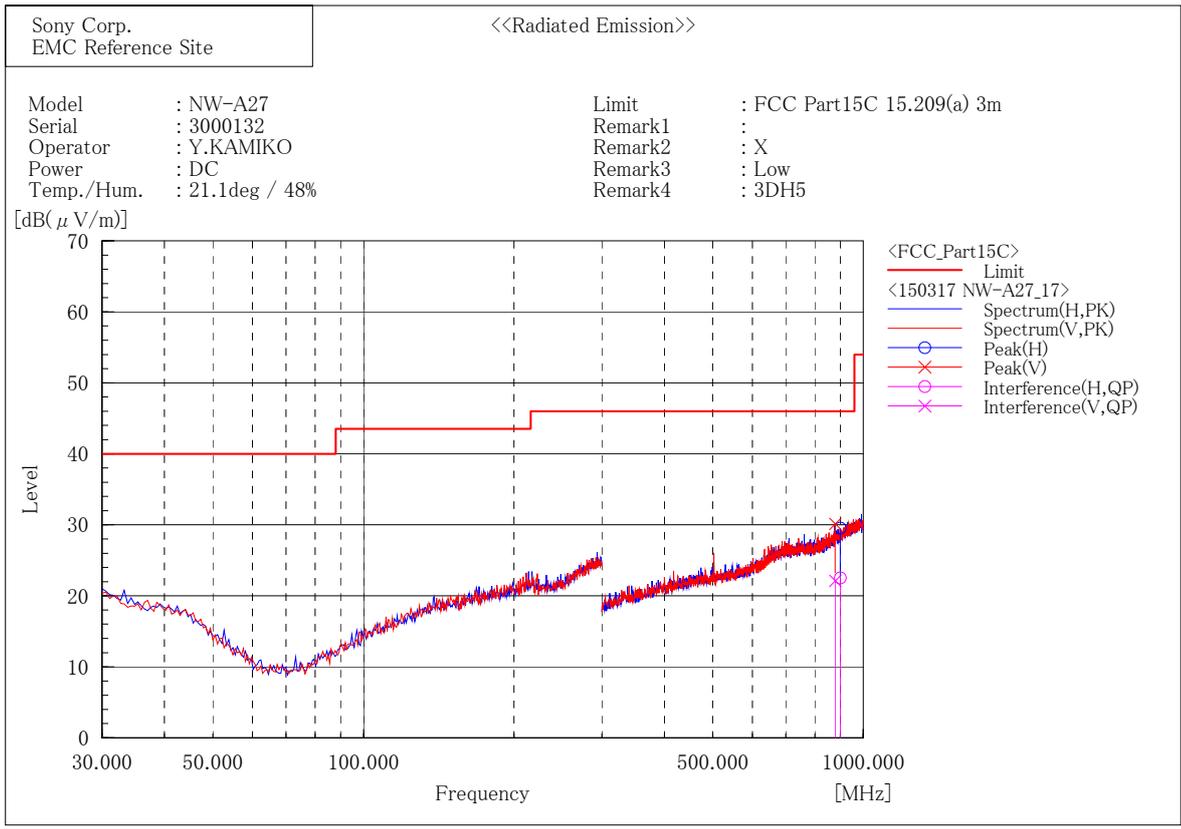
--- Horizontal Polarization (QP)---

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	888.500	24.8	-2.5	22.3	46.0	23.7	359.0	308.2

--- Vertical Polarization (QP)---

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	959.400	24.4	-1.0	23.4	46.0	22.6	225.0	79.3



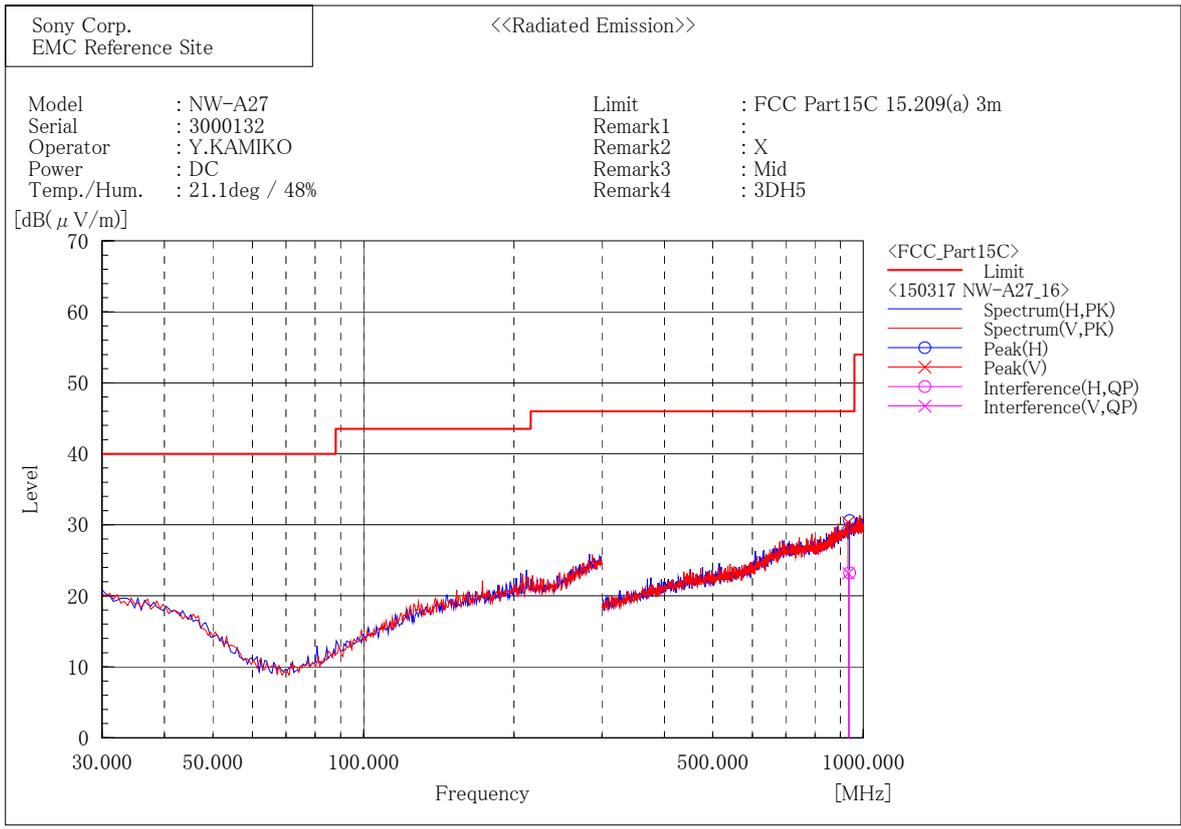
Final Result

--- Horizontal Polarization (QP)---

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	899.900	24.7	-2.2	22.5	46.0	23.5	277.6	322.2

--- Vertical Polarization (QP)---

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	878.620	24.8	-2.7	22.1	46.0	23.9	146.1	296.6



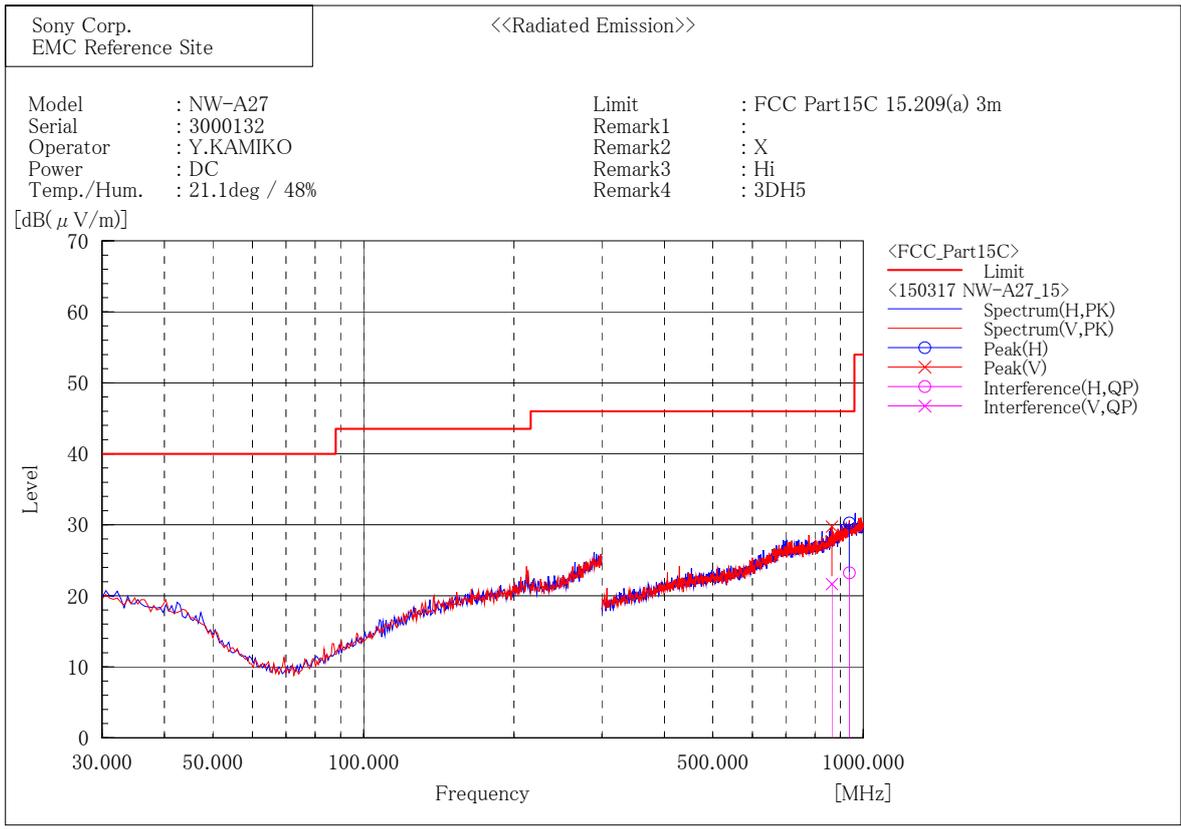
Final Result

--- Horizontal Polarization (QP)---

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	939.340	24.5	-1.3	23.2	46.0	22.8	100.0	84.5

--- Vertical Polarization (QP)---

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	933.700	24.6	-1.4	23.2	46.0	22.8	262.0	169.7



Final Result

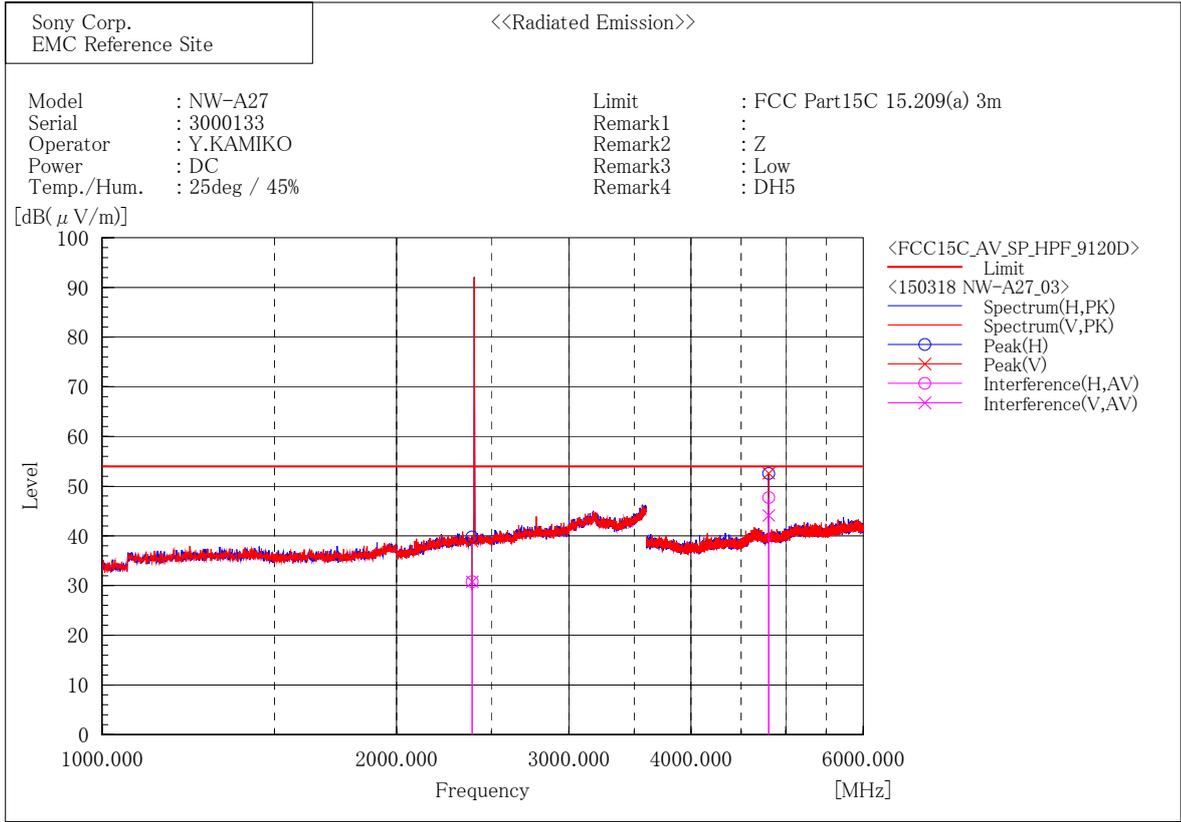
--- Horizontal Polarization (QP)---

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	937.700	24.5	-1.3	23.2	46.0	22.8	367.6	226.4

--- Vertical Polarization (QP)---

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	864.900	24.8	-3.1	21.7	46.0	24.3	365.7	183.6

1GHz - 6 GHz  
[BDR (DH5) / 2402MHz]



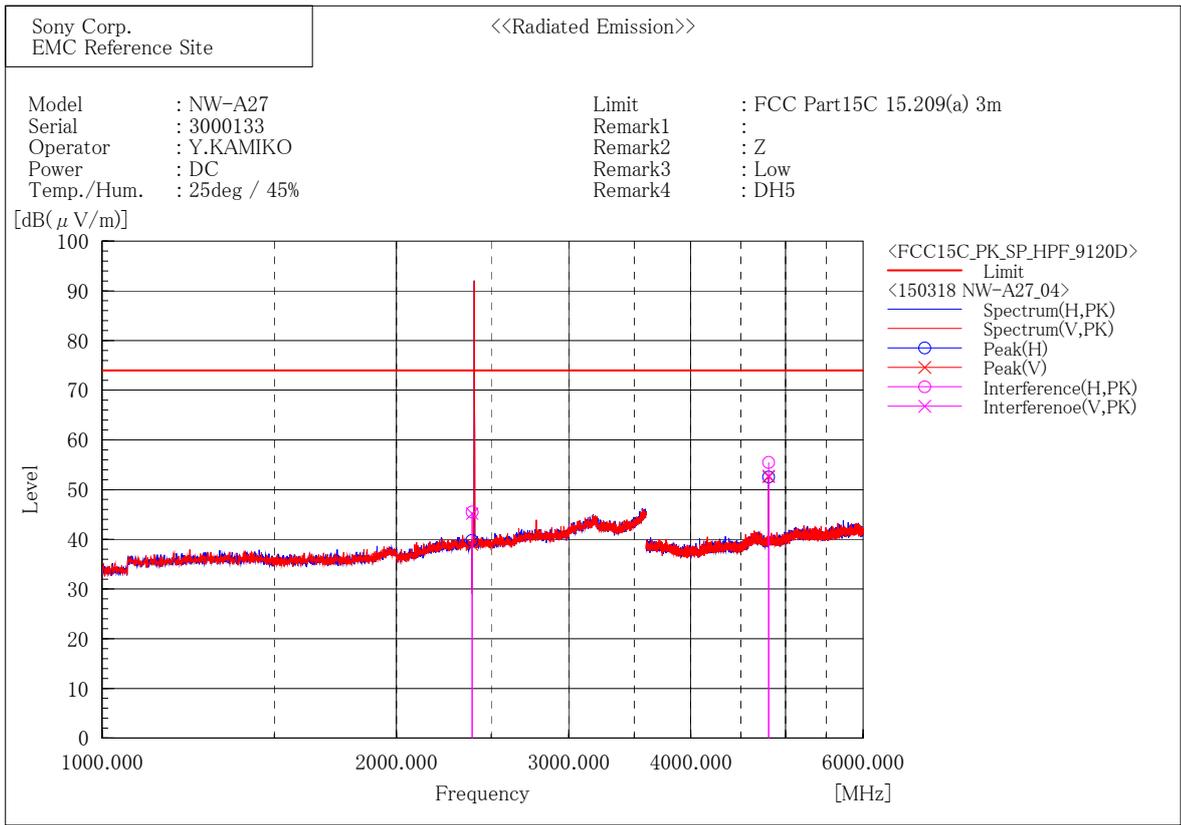
Final Result

--- 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	2390.000	31.9	-1.1	30.8	54.0	23.2	100.0	106.5
2	4804.002	42.8	4.9	47.7	54.0	6.3	148.3	156.1

--- 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	2390.000	31.9	-1.1	30.8	54.0	23.2	100.0	3.8
2	4804.035	39.2	4.9	44.1	54.0	9.9	100.0	173.8



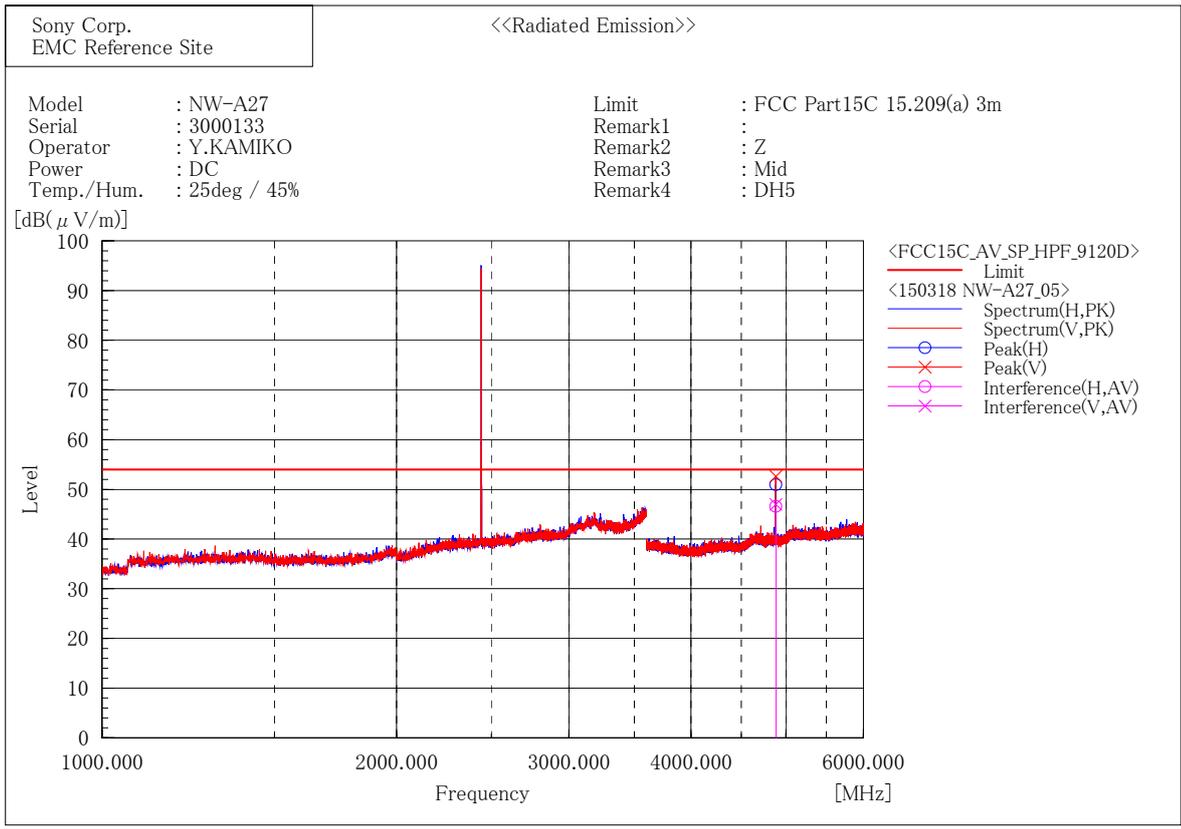
Final Result

--- 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	2390.000	46.6	-1.1	45.5	74.0	28.5	100.0	67.7
2	4803.568	50.6	4.9	55.5	74.0	18.5	146.5	155.8

--- 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	2390.000	46.3	-1.1	45.2	74.0	28.8	100.0	29.4
2	4803.662	47.9	4.9	52.8	74.0	21.2	100.0	175.5



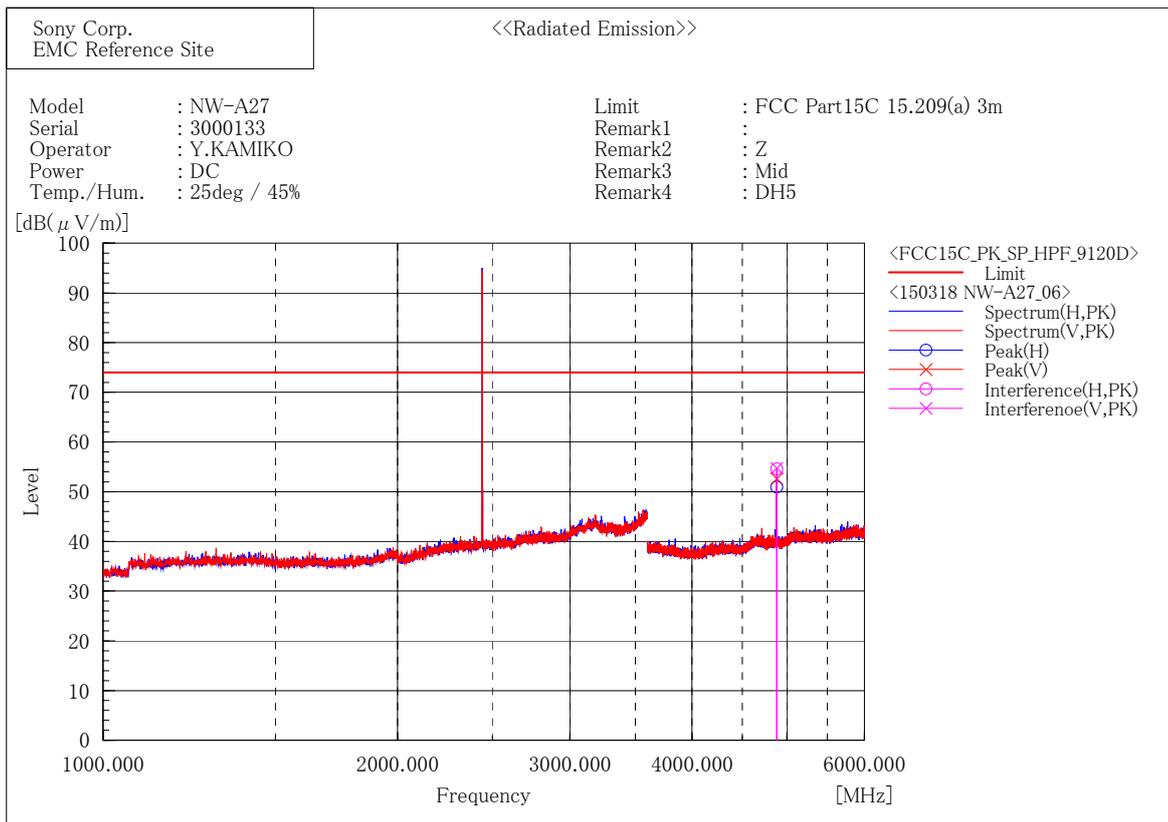
Final Result

--- 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	4881.987	41.6	5.0	46.6	54.0	7.4	160.6	152.8

--- 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	4882.011	42.0	5.0	47.0	54.0	7.0	240.3	34.4



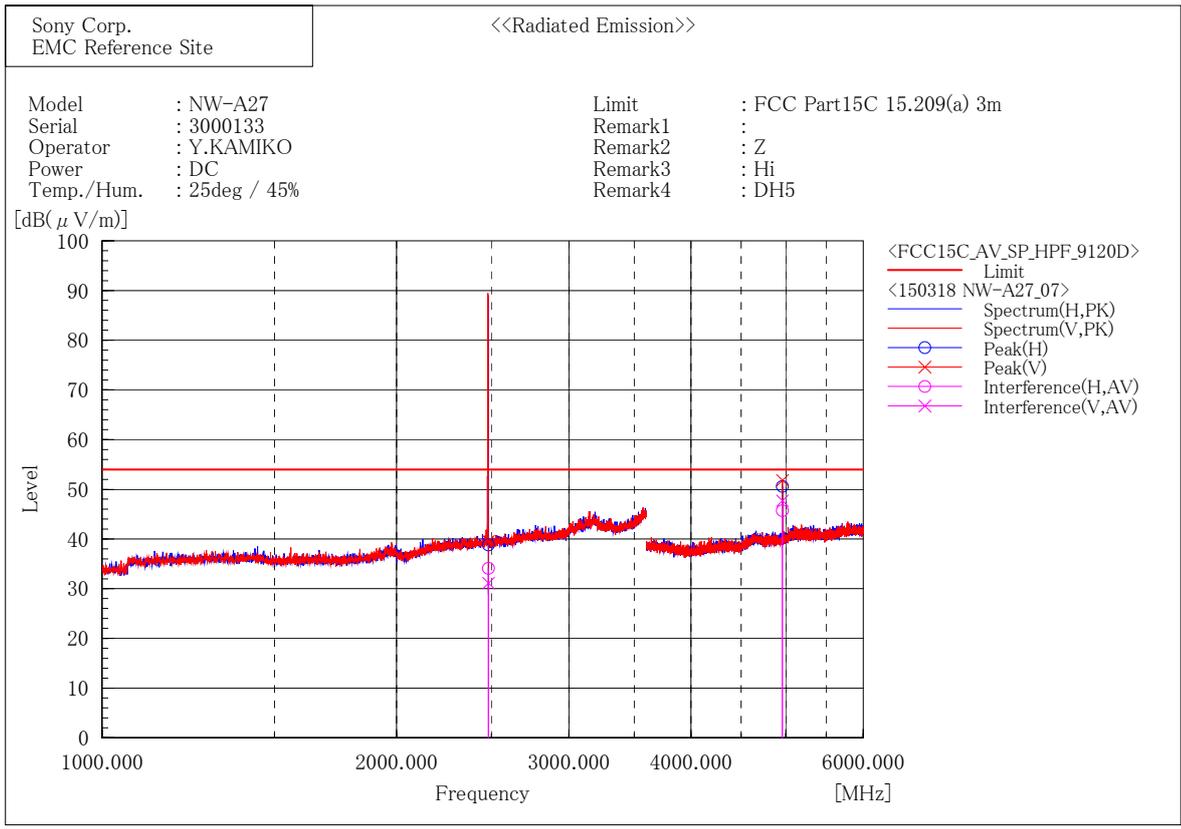
Final Result

--- 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	4881.900	49.6	5.0	54.6	74.0	19.4	161.7	156.4

--- 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	4882.273	49.8	5.0	54.8	74.0	19.2	241.0	34.4



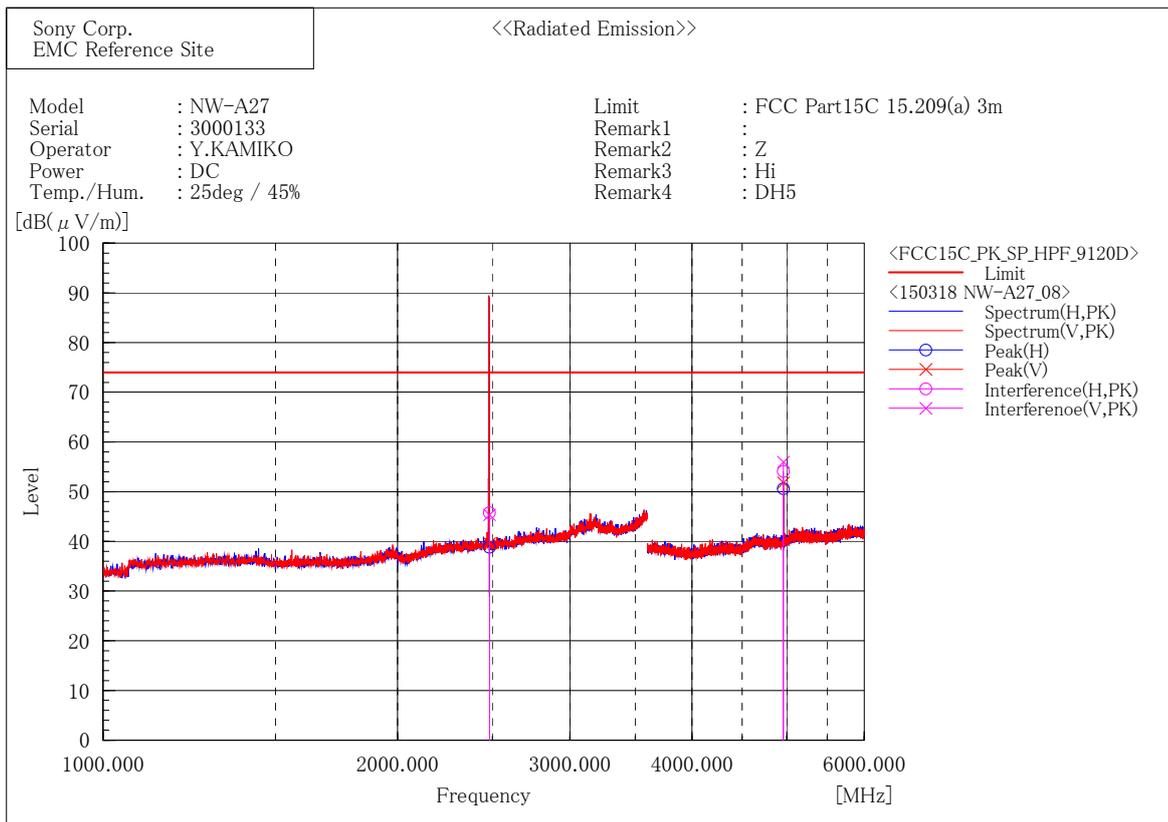
Final Result

--- 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	2483.500	35.0	-0.9	34.1	54.0	19.9	136.4	193.9
2	4960.005	40.6	5.1	45.7	54.0	8.3	409.0	158.9

--- 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	2483.500	32.0	-0.9	31.1	54.0	22.9	100.0	99.4
2	4960.029	42.6	5.1	47.7	54.0	6.3	241.0	3.8



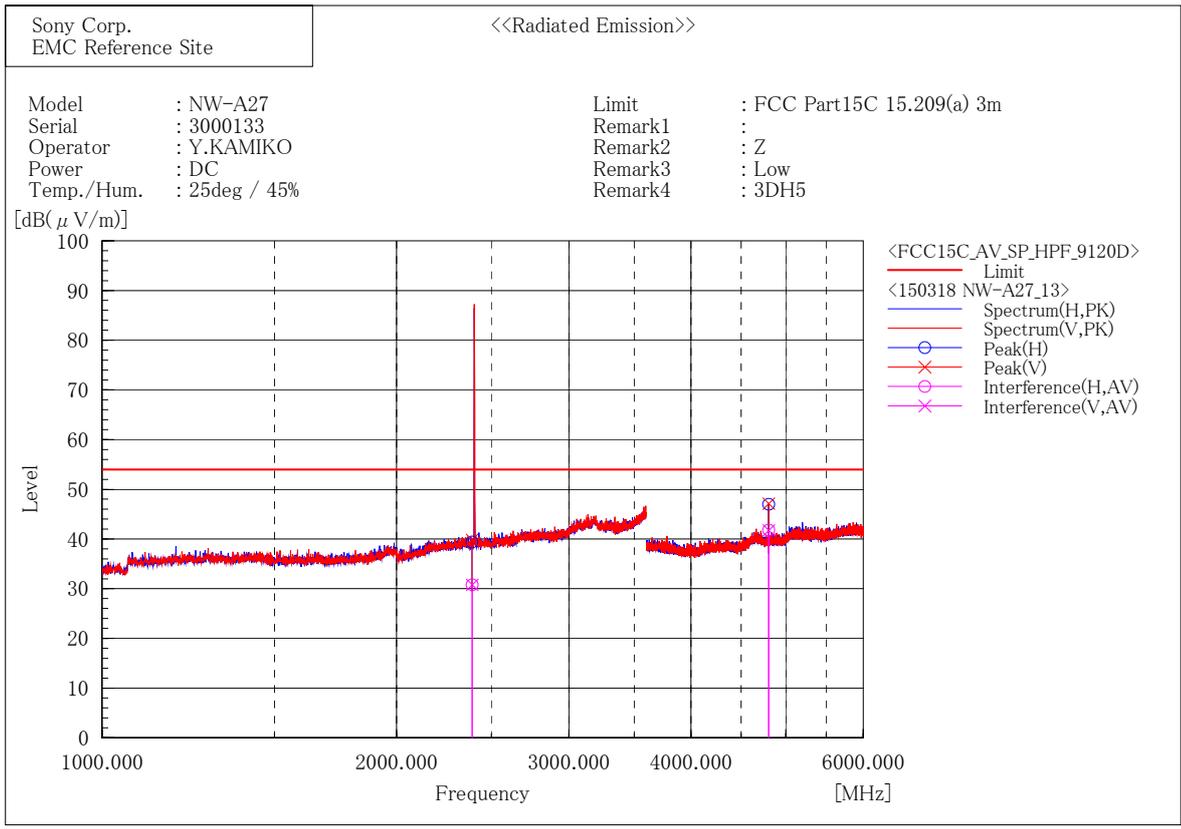
Final Result

--- 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	2483.500	46.7	-0.9	45.8	74.0	28.2	100.0	138.0
2	4959.641	49.0	5.1	54.1	74.0	19.9	414.0	151.3

--- 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	2483.500	46.3	-0.9	45.4	74.0	28.6	100.0	81.0
2	4959.672	50.9	5.1	56.0	74.0	18.0	221.1	9.8



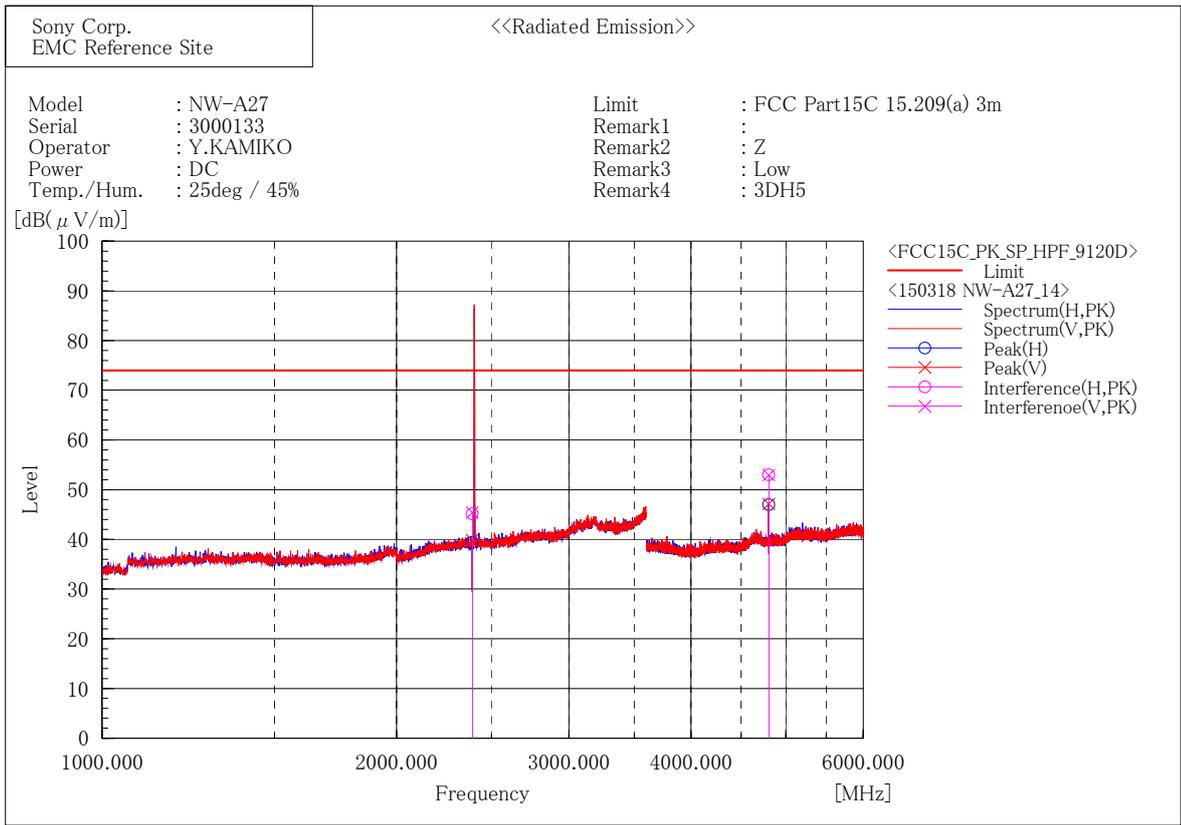
Final Result

--- 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	2390.000	31.9	-1.1	30.8	54.0	23.2	100.0	111.5
2	4804.015	36.9	4.9	41.8	54.0	12.2	100.0	165.1

--- 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	2390.000	31.9	-1.1	30.8	54.0	23.2	100.0	223.8
2	4804.031	36.9	4.9	41.8	54.0	12.2	431.0	79.8



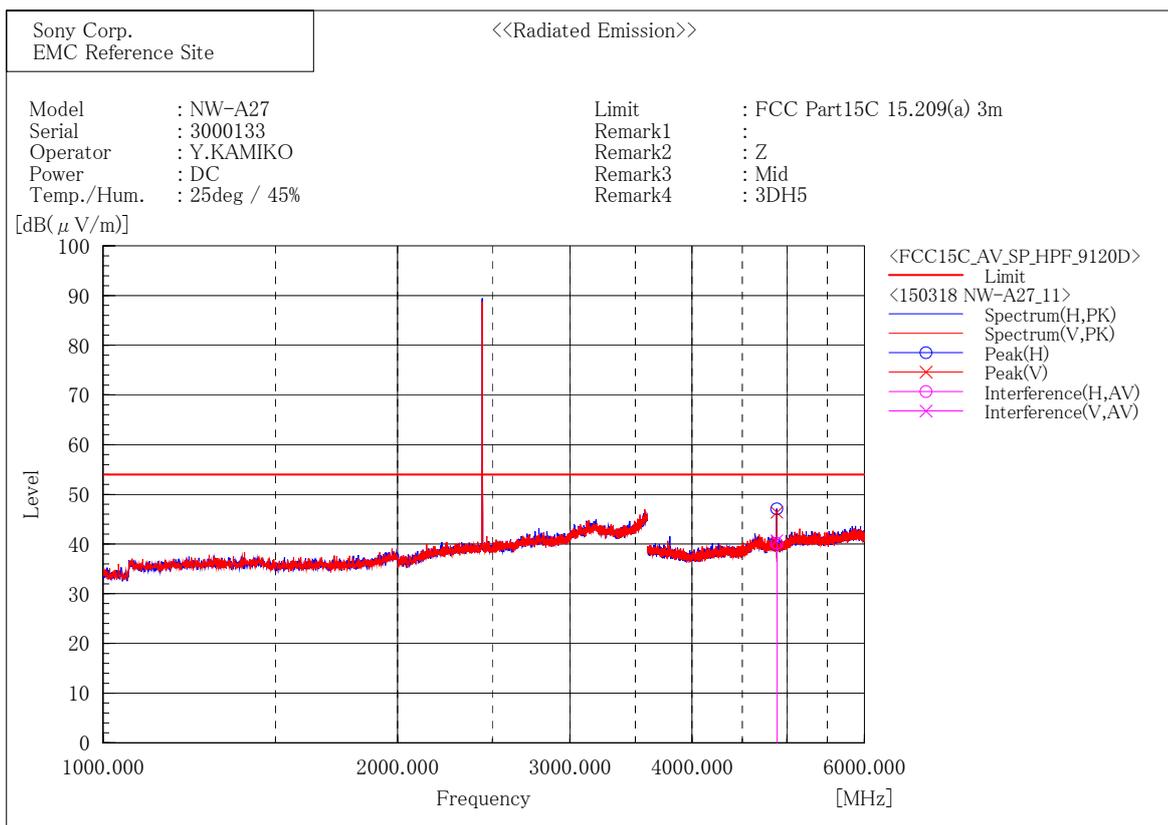
Final Result

--- 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	2390.000	46.2	-1.1	45.1	74.0	28.9	100.0	138.0
2	4804.352	48.1	4.9	53.0	74.0	21.0	100.0	165.2

--- 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	2390.000	46.5	-1.1	45.4	74.0	28.6	100.0	301.9
2	4803.992	48.1	4.9	53.0	74.0	21.0	431.0	81.1



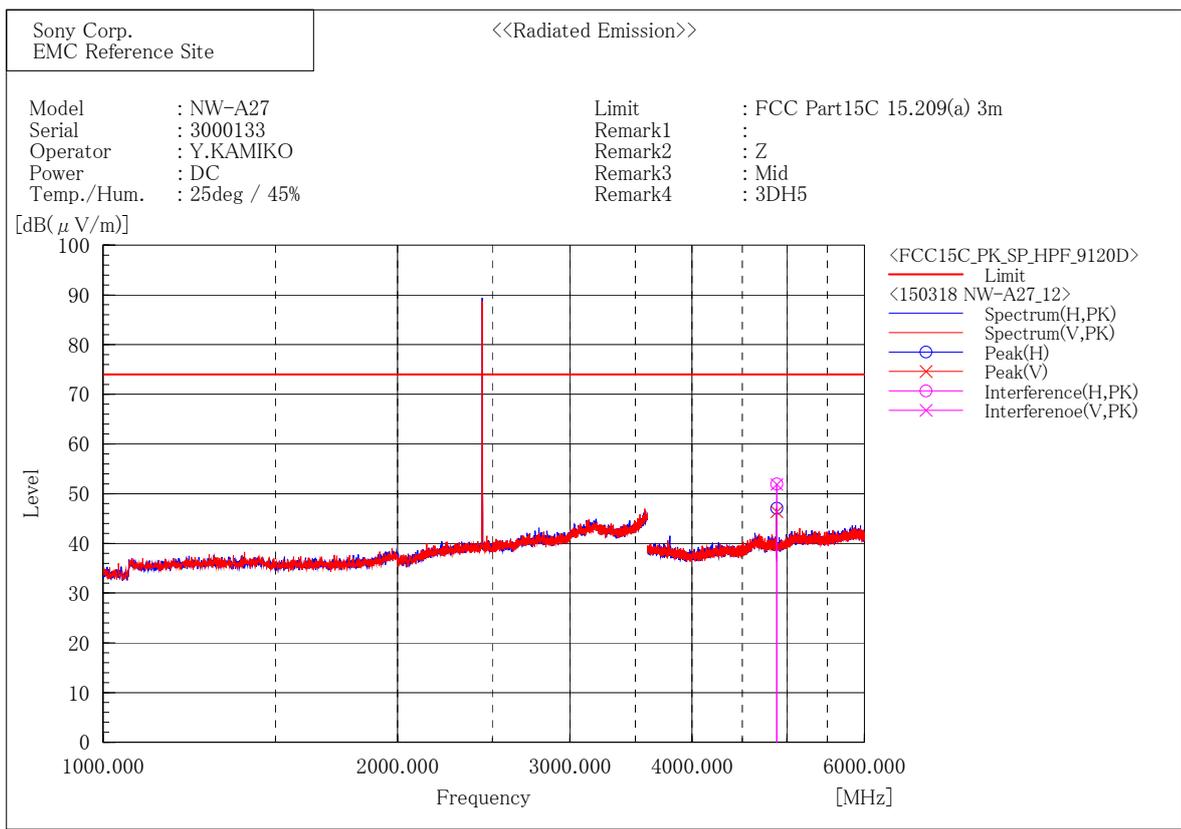
Final Result

--- 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	4881.979	35.2	5.0	40.2	54.0	13.8	112.3	169.5

--- 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	4881.984	35.7	5.0	40.7	54.0	13.3	240.0	42.5



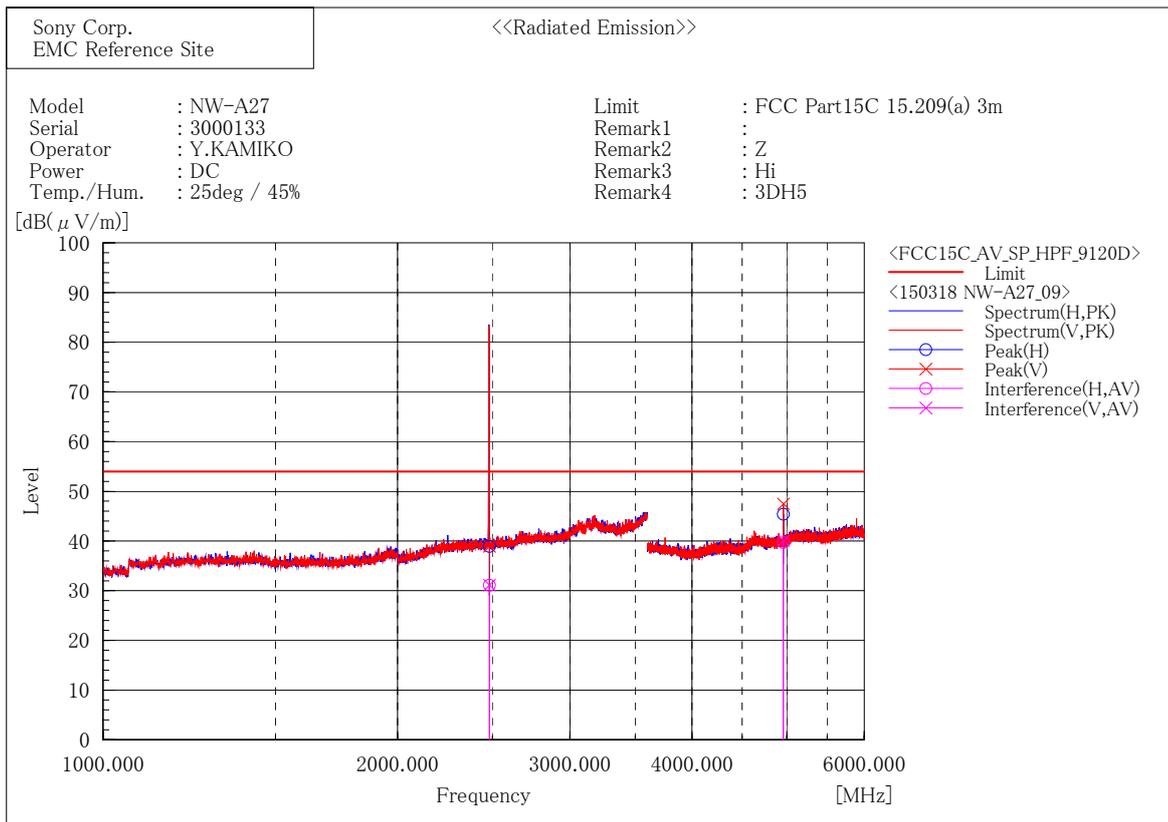
Final Result

--- 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	4881.558	47.0	5.0	52.0	74.0	22.0	116.0	154.9

--- 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	4882.184	46.9	5.0	51.9	74.0	22.1	238.2	40.0



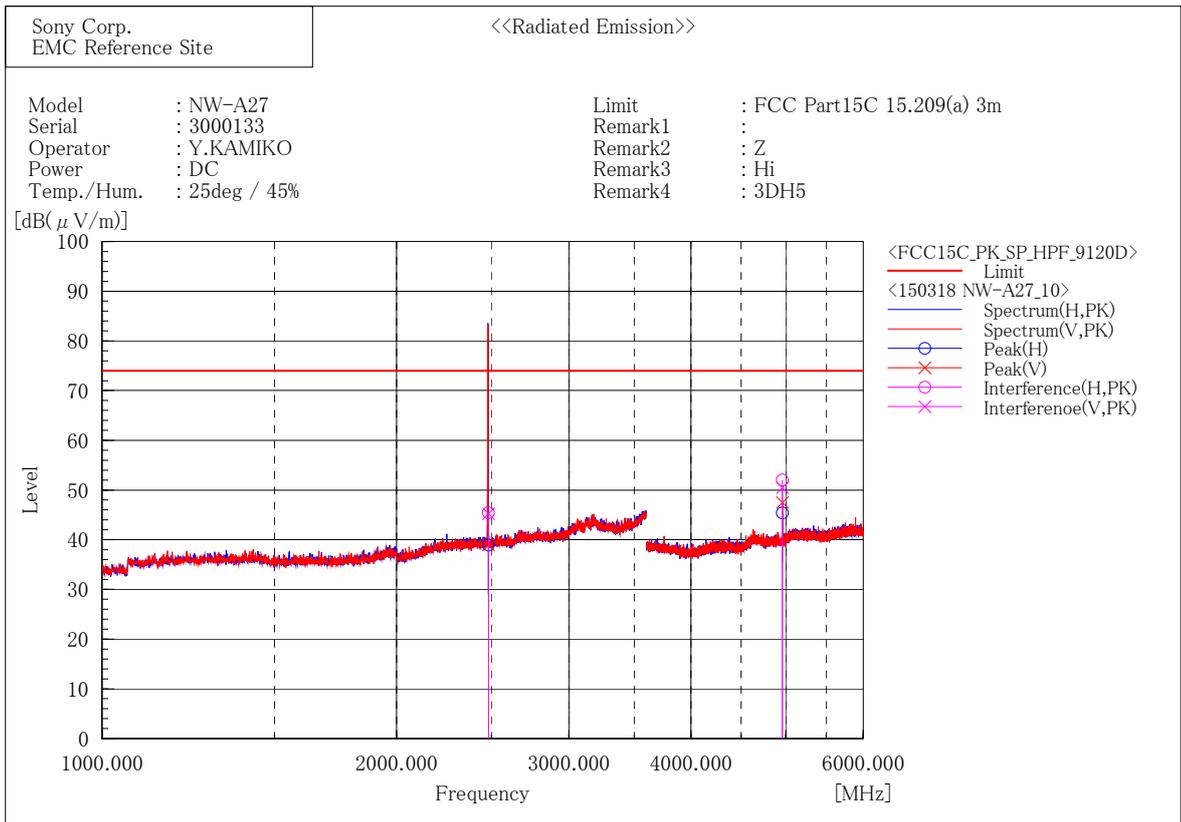
Final Result

--- 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	2483.500	32.0	-0.9	31.1	54.0	22.9	100.0	246.2
2	4959.983	34.6	5.1	39.7	54.0	14.3	154.1	156.8

--- 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	2483.500	32.0	-0.9	31.1	54.0	22.9	100.0	41.0
2	4959.967	35.0	5.1	40.1	54.0	13.9	118.4	180.9



Final Result

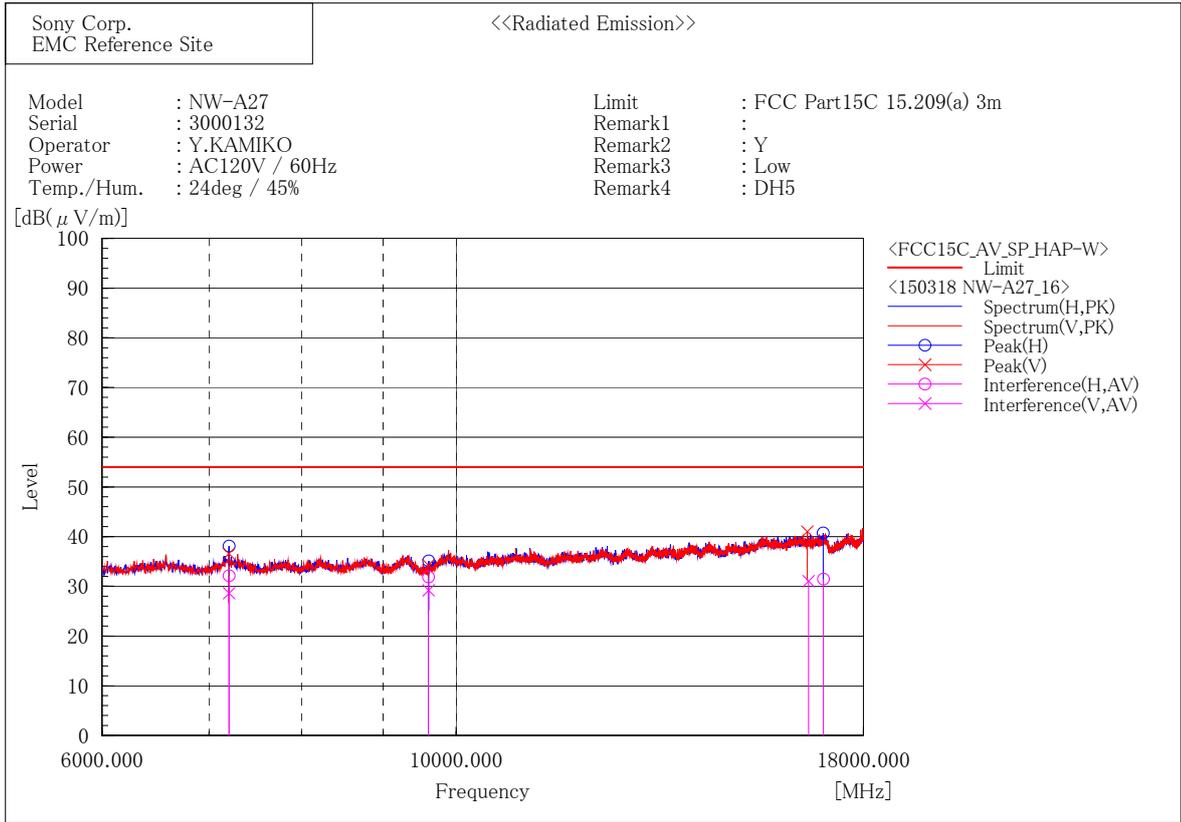
--- Horizontal Polarization (PK)---

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	2483.500	46.3	-0.9	45.4	74.0	28.6	100.0	54.4
2	4959.724	47.0	5.1	52.1	74.0	21.9	154.2	166.4

--- 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	2483.500	46.2	-0.9	45.3	74.0	28.7	100.0	352.2
2	4959.477	45.4	5.1	50.5	74.0	23.5	127.1	169.9

6 GHz - 18 GHz  
[BDR (DH5) / 2402MHz]



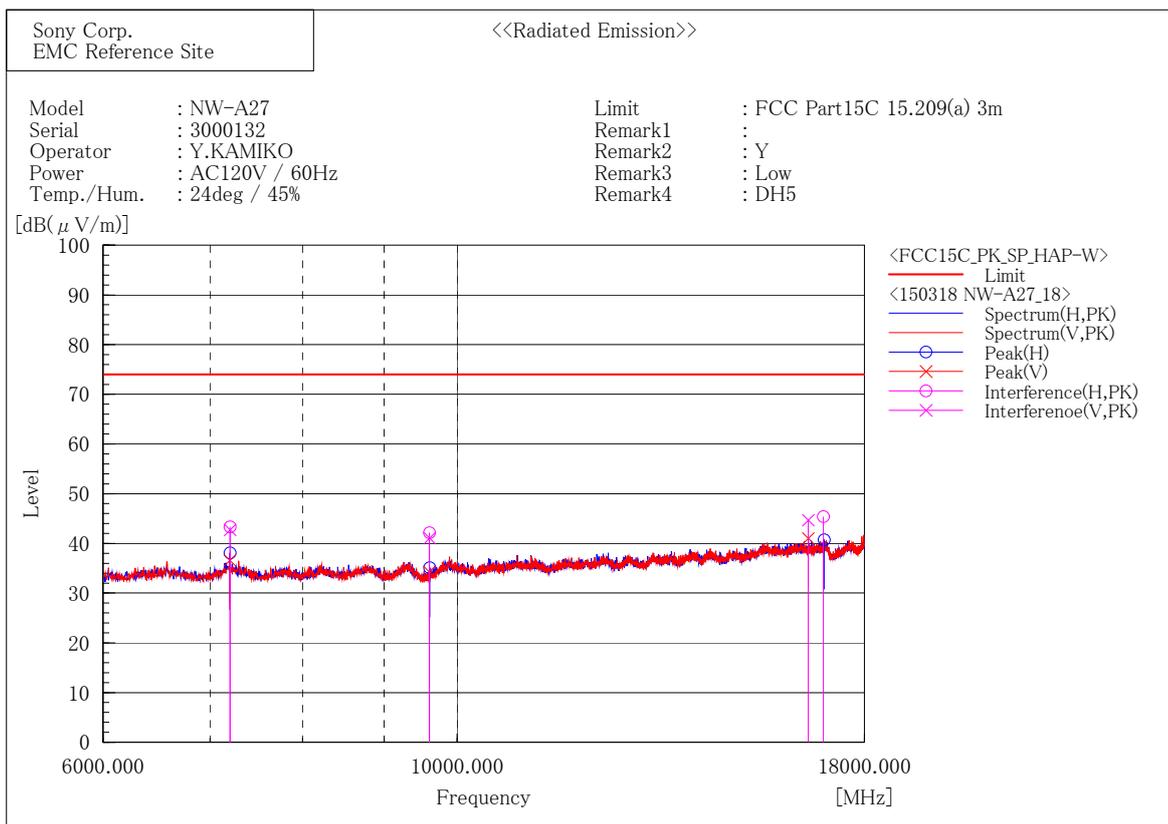
Final Result

--- 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	7206.077	41.7	-9.6	32.1	54.0	21.9	138.8	168.5
2	9610.076	39.2	-7.3	31.9	54.0	22.1	100.0	182.7
3	16993.968	34.4	-2.9	31.5	54.0	22.5	178.8	310.1

--- 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	7206.009	38.2	-9.6	28.6	54.0	25.4	205.5	160.7
2	9610.079	36.5	-7.3	29.2	54.0	24.8	343.8	140.1
3	16627.366	34.6	-3.5	31.1	54.0	22.9	157.3	154.7



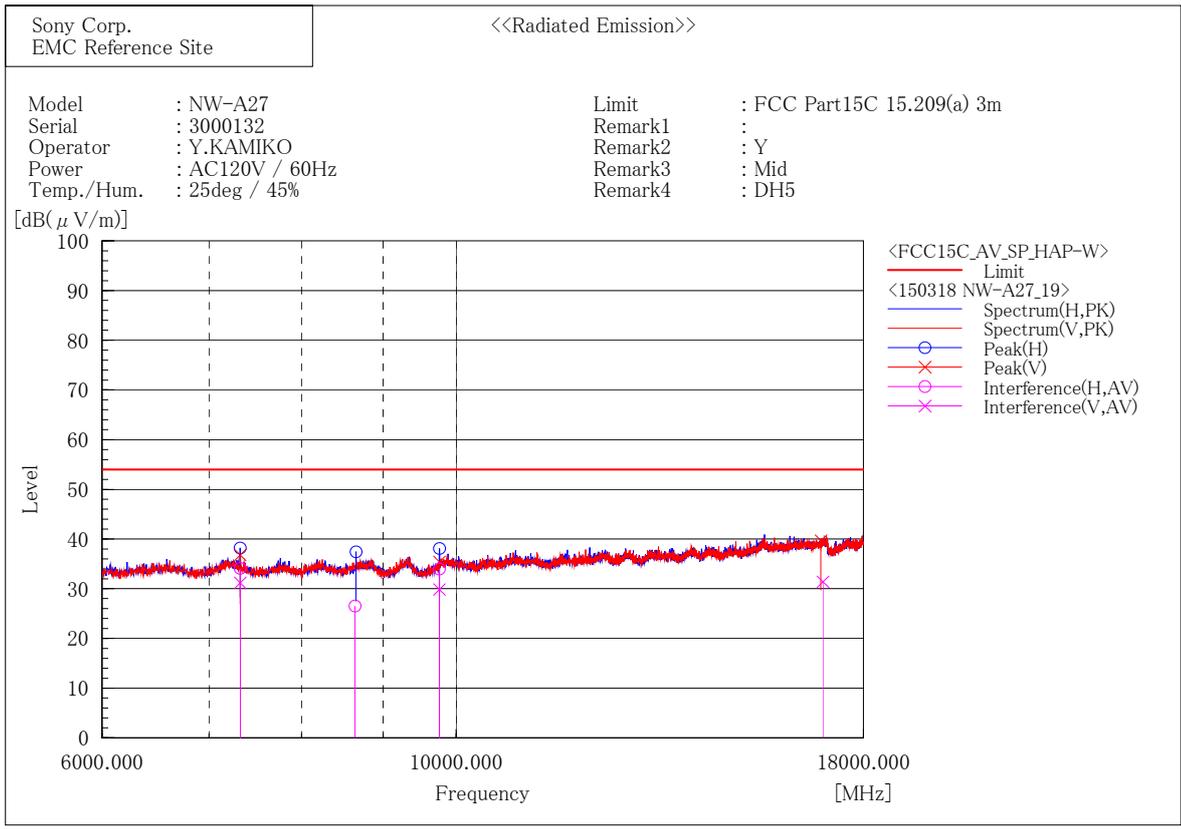
Final Result

--- 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	7206.387	52.9	-9.6	43.3	74.0	30.7	136.6	161.1
2	9609.912	49.5	-7.3	42.2	74.0	31.8	100.0	171.6
3	16964.896	48.3	-2.9	45.4	74.0	28.6	178.8	309.9

--- 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	7206.469	52.3	-9.6	42.7	74.0	31.3	198.6	177.3
2	9610.290	48.4	-7.3	41.1	74.0	32.9	343.7	141.0
3	16597.072	48.2	-3.5	44.7	74.0	29.3	157.3	154.5



Final Result

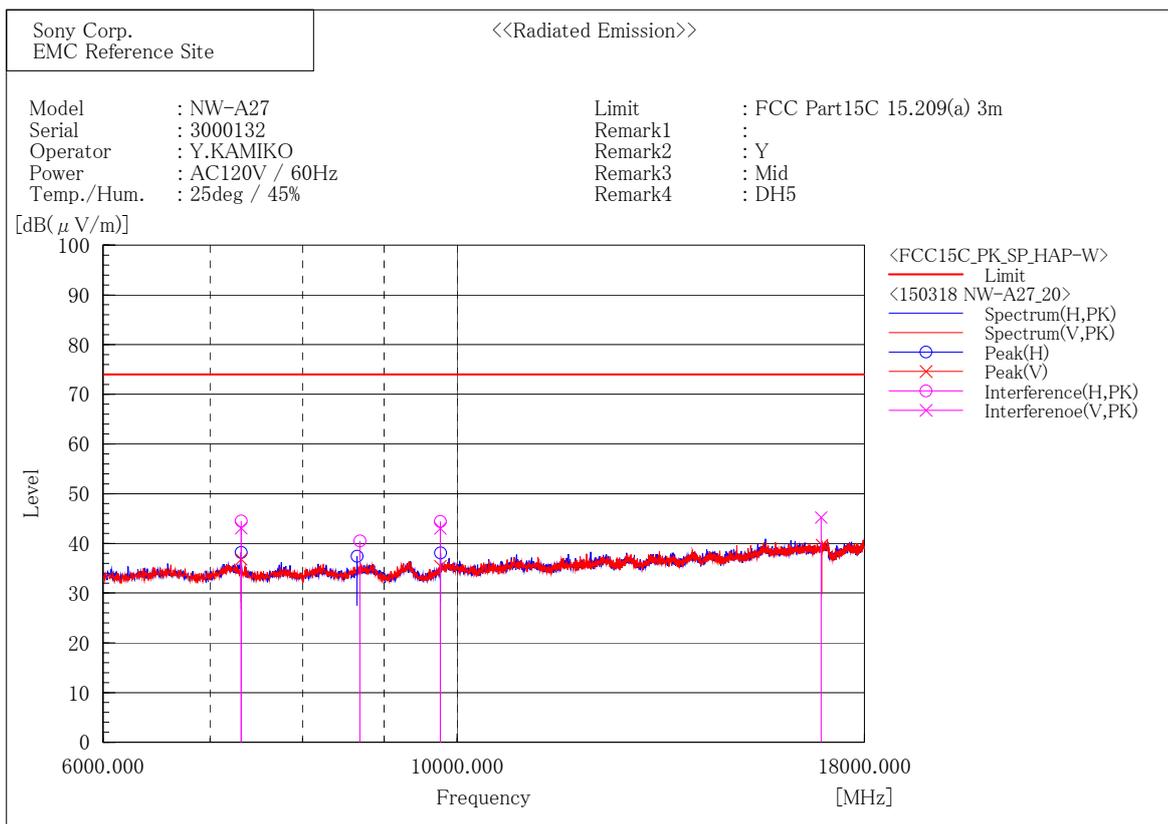
--- Horizontal Polarization (AV)---

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	7323.059	43.7	-9.6	34.1	54.0	19.9	295.1	135.0
2	8644.818	34.8	-8.3	26.5	54.0	27.5	166.0	206.2
3	9762.079	41.1	-7.1	34.0	54.0	20.0	101.7	186.4

--- 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	7323.053	40.8	-9.6	31.2	54.0	22.8	223.6	195.4
2	9762.071	36.9	-7.1	29.8	54.0	24.2	387.6	200.8
3	16978.954	34.3	-2.9	31.4	54.0	22.6	367.5	228.7



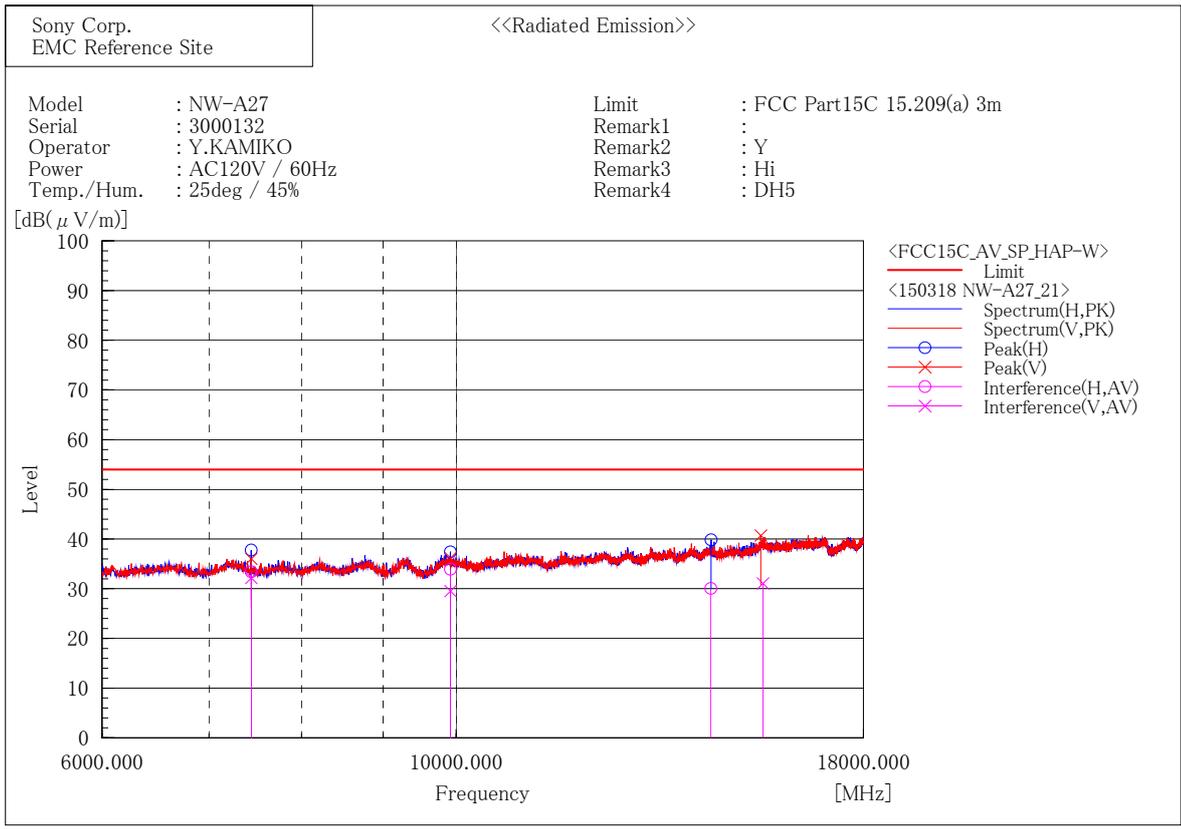
Final Result

--- 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	7323.348	54.1	-9.6	44.5	74.0	29.5	293.1	137.4
2	8690.783	48.8	-8.3	40.5	74.0	33.5	168.2	166.6
3	9761.972	51.5	-7.1	44.4	74.0	29.6	113.8	176.3

--- 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	7322.693	52.7	-9.6	43.1	74.0	30.9	227.4	177.8
2	9761.879	50.1	-7.1	43.0	74.0	31.0	386.4	201.3
3	16911.286	48.3	-3.0	45.3	74.0	28.7	367.5	228.7



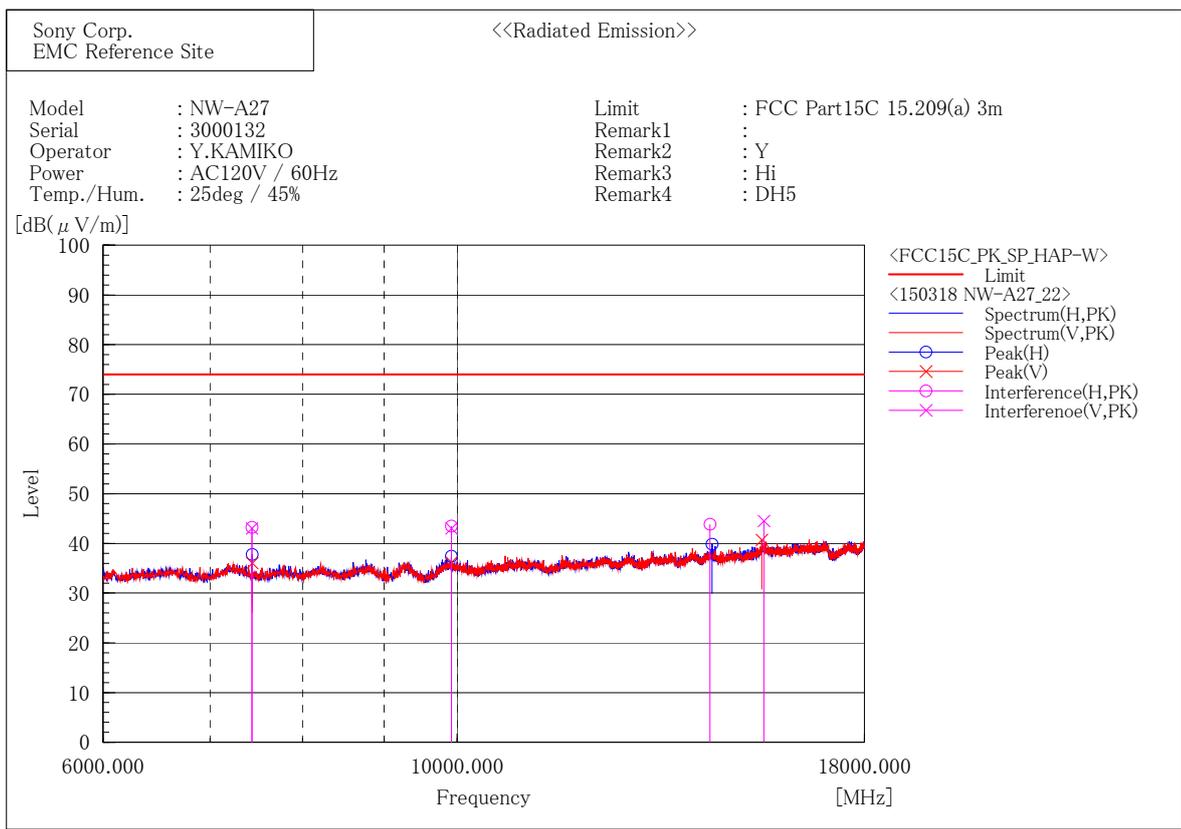
Final Result

--- 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	7440.064	43.0	-9.6	33.4	54.0	20.6	326.4	141.2
2	9918.078	40.5	-6.6	33.9	54.0	20.1	100.0	178.5
3	14442.239	35.3	-5.2	30.1	54.0	23.9	232.9	122.3

--- 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	7440.067	41.8	-9.6	32.2	54.0	21.8	273.0	184.1
2	9918.424	36.1	-6.6	29.5	54.0	24.5	130.9	165.2
3	15567.762	35.7	-4.6	31.1	54.0	22.9	318.0	160.0



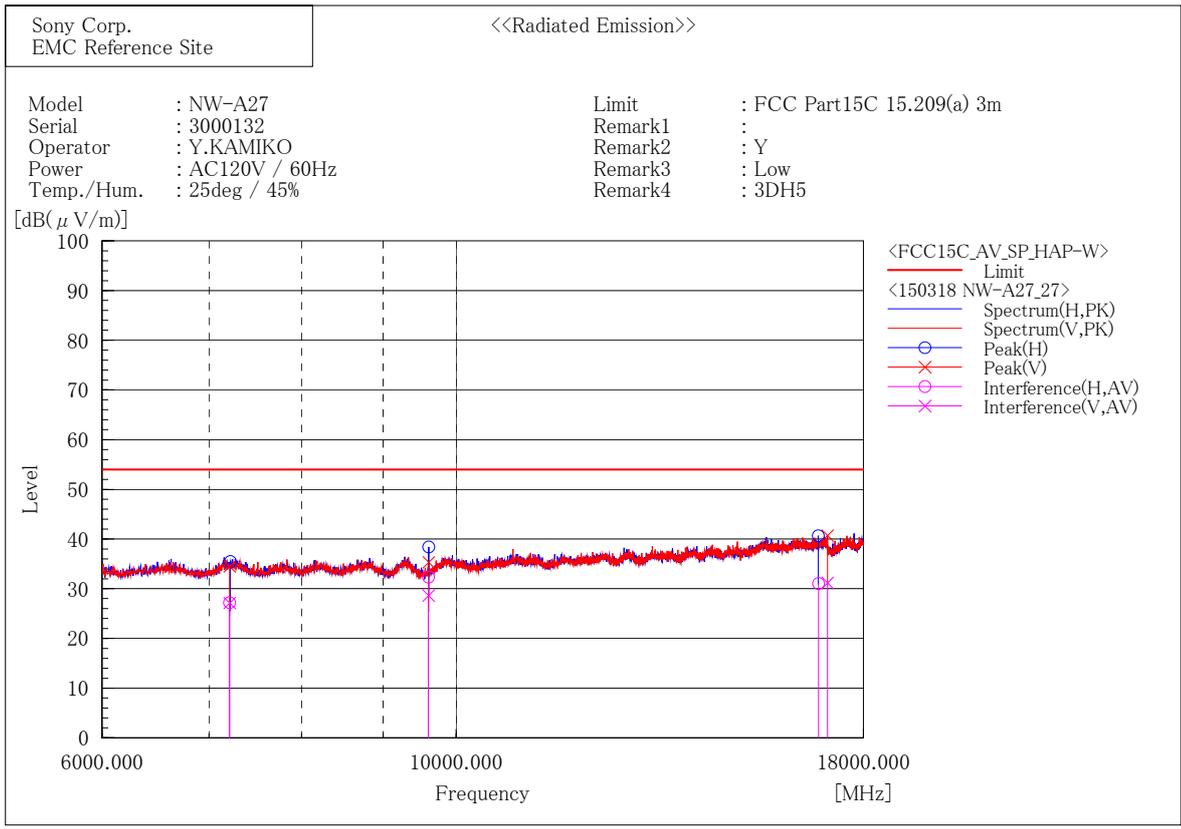
Final Result

--- 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	7439.659	52.9	-9.6	43.3	74.0	30.7	328.1	132.4
2	9917.967	50.1	-6.6	43.5	74.0	30.5	100.0	165.9
3	14408.872	49.0	-5.2	43.8	74.0	30.2	232.9	141.8

--- 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	7439.603	52.6	-9.6	43.0	74.0	31.0	275.5	175.5
2	9918.003	49.6	-6.6	43.0	74.0	31.0	140.1	162.7
3	15567.737	49.1	-4.6	44.5	74.0	29.5	318.0	160.0



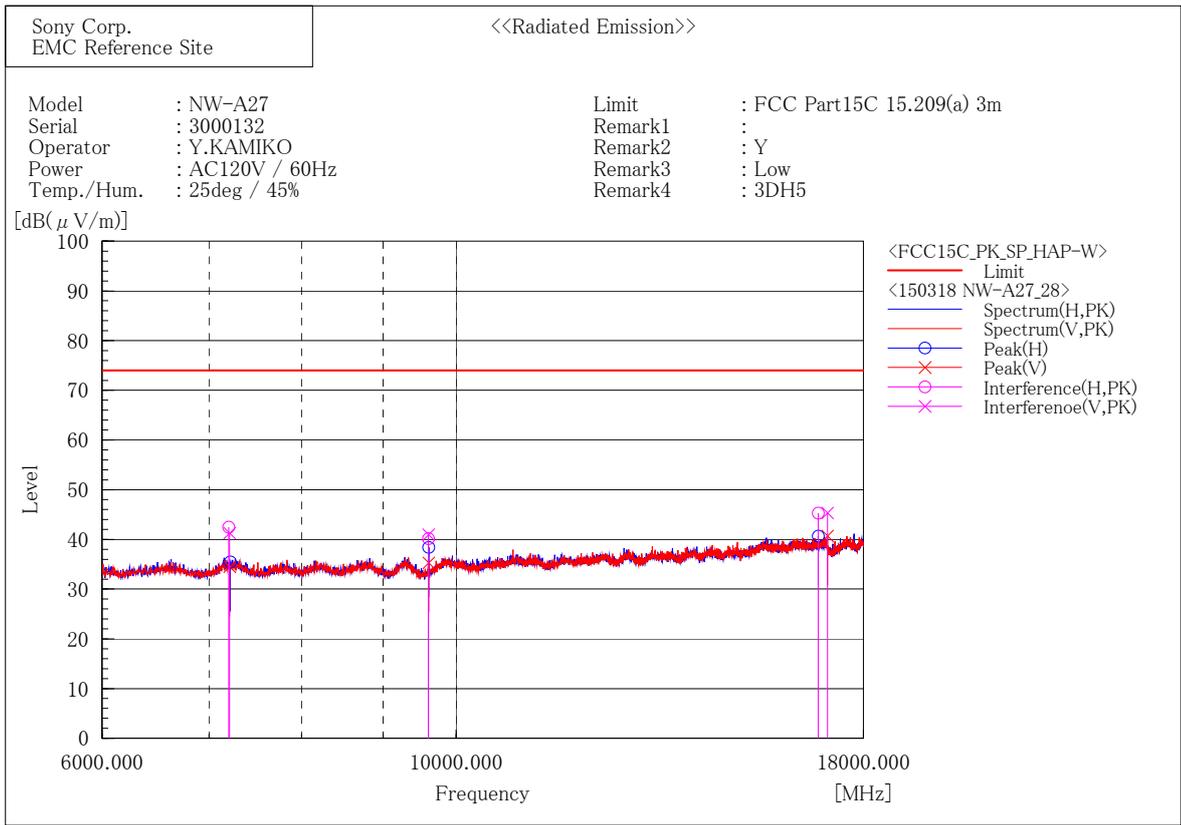
Final Result

--- 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	7212.560	36.8	-9.6	27.2	54.0	26.8	149.2	196.4
2	9610.068	39.7	-7.3	32.4	54.0	21.6	117.0	174.8
3	16870.960	34.2	-3.1	31.1	54.0	22.9	330.6	144.7

--- 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	7212.464	36.8	-9.6	27.2	54.0	26.8	170.4	167.0
2	9610.086	36.0	-7.3	28.7	54.0	25.3	341.0	147.9
3	17094.326	34.0	-2.8	31.2	54.0	22.8	356.6	183.1



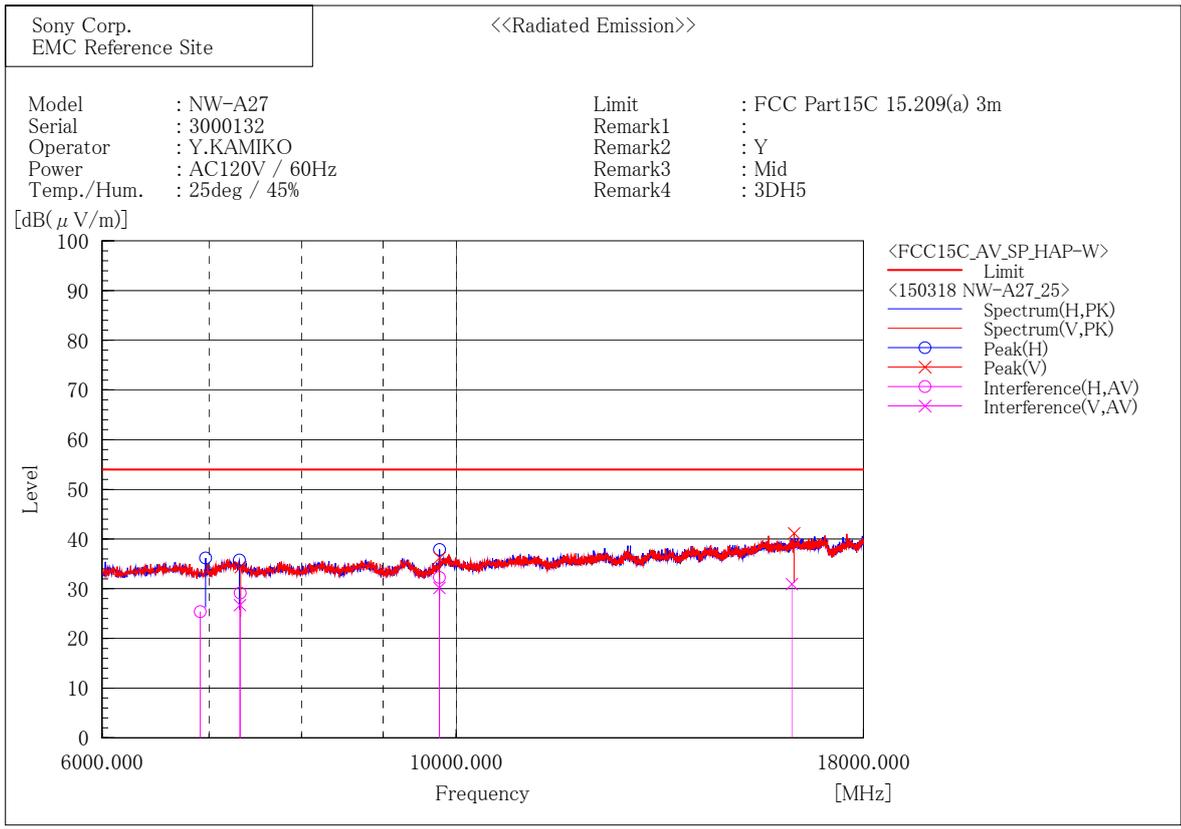
Final Result

--- 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	7205.611	52.0	-9.6	42.4	74.0	31.6	112.5	163.1
2	9610.045	47.5	-7.3	40.2	74.0	33.8	263.3	130.6
3	16865.622	48.4	-3.1	45.3	74.0	28.7	278.2	122.0

--- 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	7212.021	50.9	-9.6	41.3	74.0	32.7	174.1	150.2
2	9610.230	48.3	-7.3	41.0	74.0	33.0	326.0	140.7
3	17094.908	48.1	-2.8	45.3	74.0	28.7	356.7	185.6



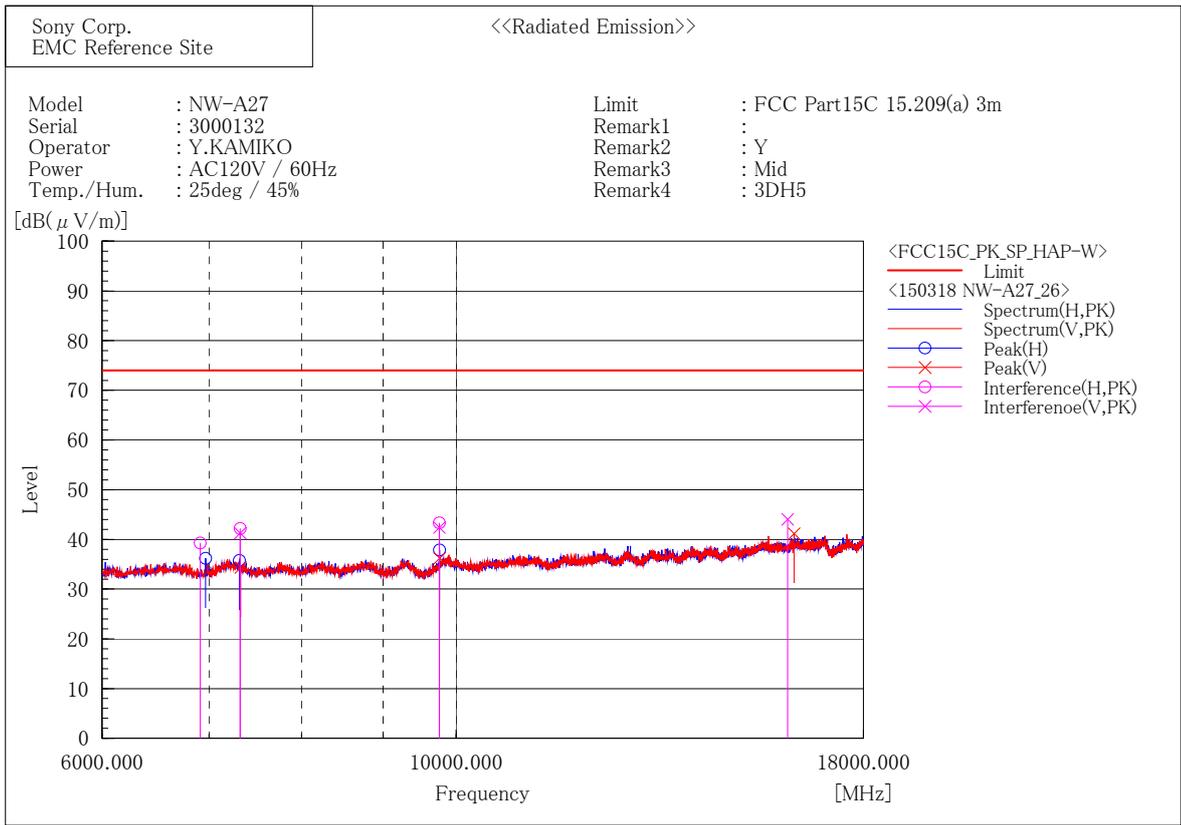
Final Result

--- 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	6913.107	35.6	-10.2	25.4	54.0	28.6	131.1	31.3
2	7323.027	38.8	-9.6	29.2	54.0	24.8	132.1	164.7
3	9762.065	39.4	-7.1	32.3	54.0	21.7	121.0	133.1

--- 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	7319.278	36.3	-9.6	26.7	54.0	27.3	360.5	183.8
2	9762.062	37.3	-7.1	30.2	54.0	23.8	390.0	283.1
3	16231.086	35.0	-4.1	30.9	54.0	23.1	111.5	316.2



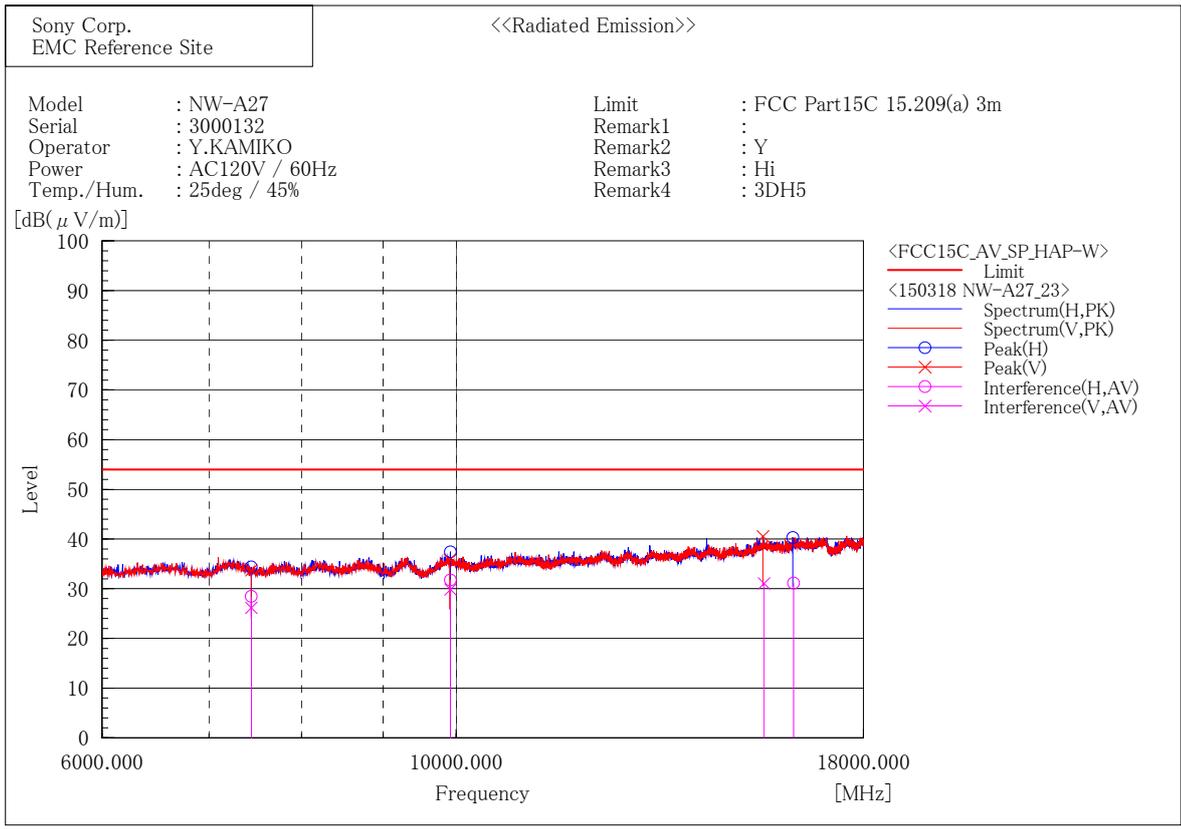
Final Result

--- 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	6914.167	49.5	-10.2	39.3	74.0	34.7	134.0	106.7
2	7322.551	51.8	-9.6	42.2	74.0	31.8	133.0	160.1
3	9762.025	50.4	-7.1	43.3	74.0	30.7	114.9	129.4

--- 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	7323.438	50.9	-9.6	41.3	74.0	32.7	354.5	168.9
2	9761.773	49.5	-7.1	42.4	74.0	31.6	388.3	280.7
3	16133.424	48.5	-4.4	44.1	74.0	29.9	122.0	352.3



Final Result

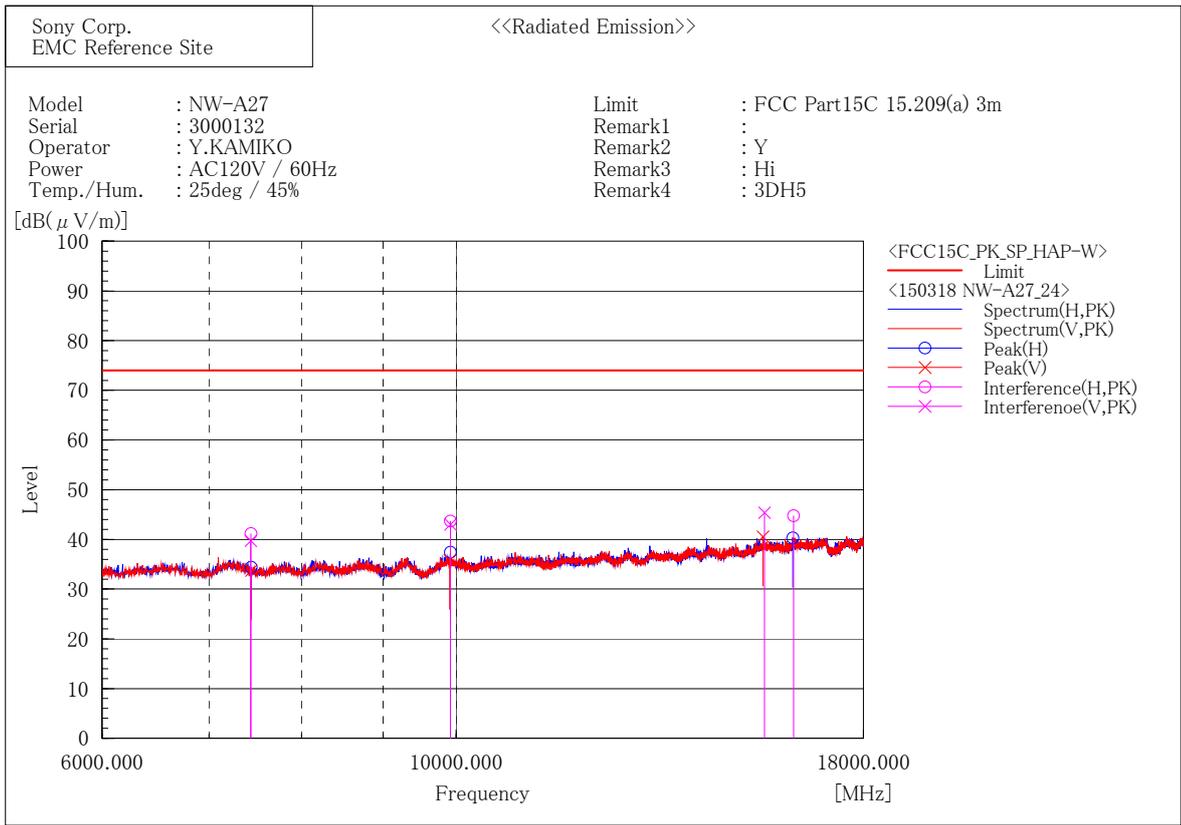
--- Horizontal Polarization (AV)---

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	7439.969	38.1	-9.6	28.5	54.0	25.5	306.9	135.4
2	9918.038	38.4	-6.6	31.8	54.0	22.2	166.6	152.6
3	16274.924	35.0	-3.9	31.1	54.0	22.9	313.2	3.8

--- 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	7439.923	35.8	-9.6	26.2	54.0	27.8	189.0	215.3
2	9918.083	36.5	-6.6	29.9	54.0	24.1	100.8	169.4
3	15596.530	35.7	-4.6	31.1	54.0	22.9	105.0	151.6



Final Result

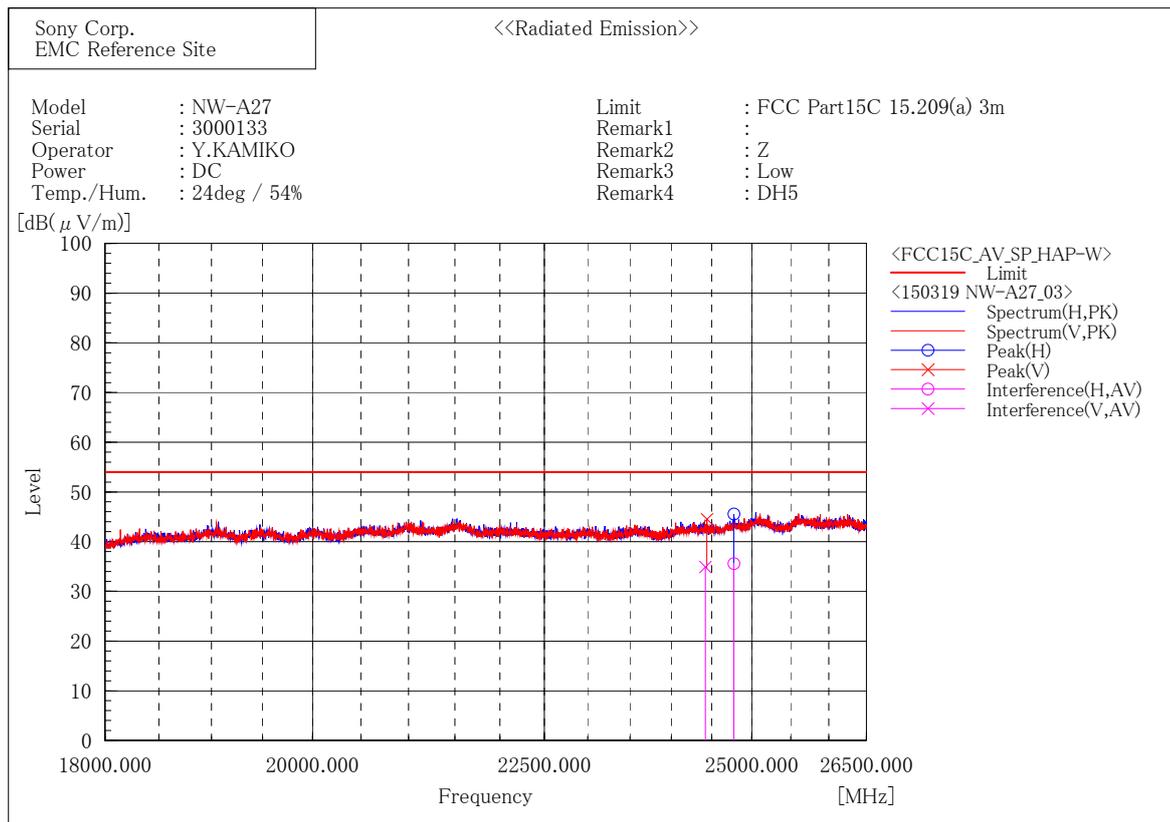
--- Horizontal Polarization (PK)---

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	7439.596	50.8	-9.6	41.2	74.0	32.8	300.2	139.6
2	9917.877	50.3	-6.6	43.7	74.0	30.3	163.6	142.7
3	16272.608	48.7	-3.9	44.8	74.0	29.2	331.0	17.7

--- 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	7435.683	49.4	-9.6	39.8	74.0	34.2	179.4	169.1
2	9917.955	49.6	-6.6	43.0	74.0	31.0	111.0	160.2
3	15606.224	50.0	-4.6	45.4	74.0	28.6	105.0	185.2

18 GHz – 24.835 GHz  
[BDR (DH5) / 2402MHz]



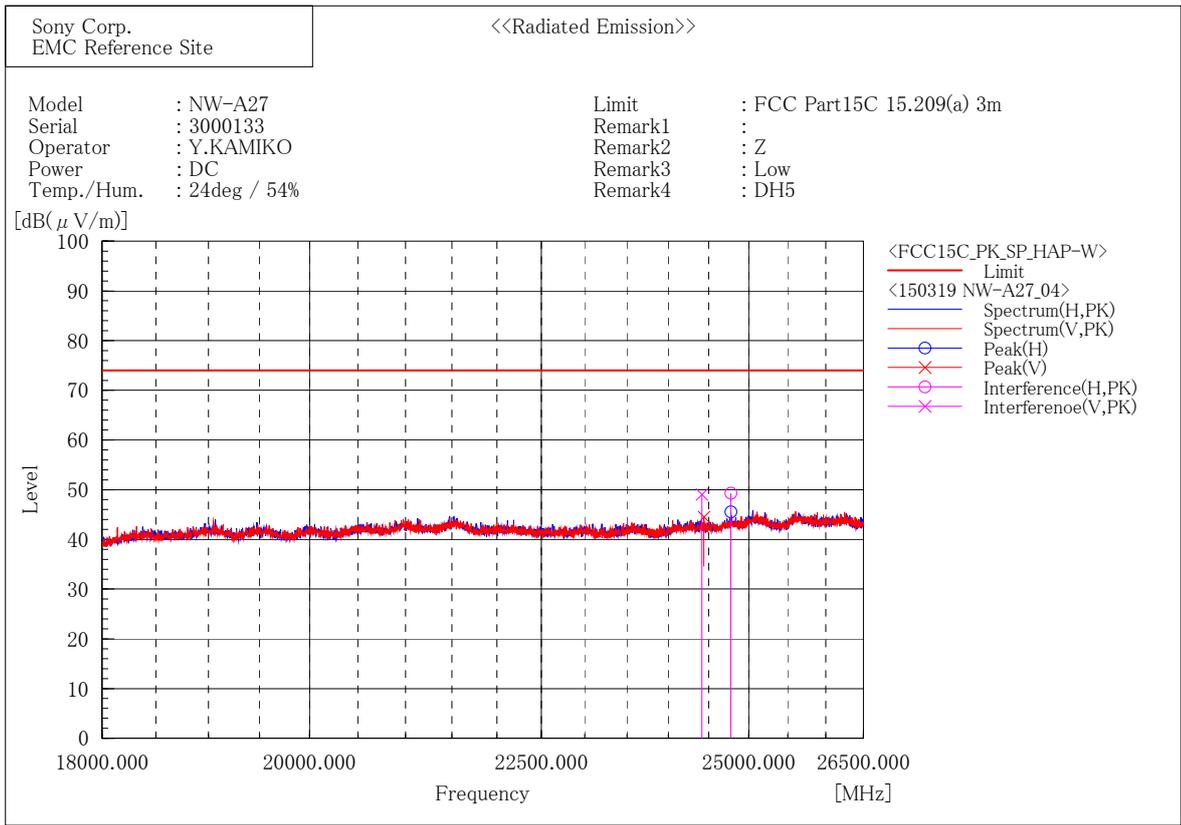
Final Result

--- 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	24776.880	37.7	-2.1	35.6	54.0	18.4	202.3	184.6

--- 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	24419.026	37.2	-2.3	34.9	54.0	19.1	174.0	28.1



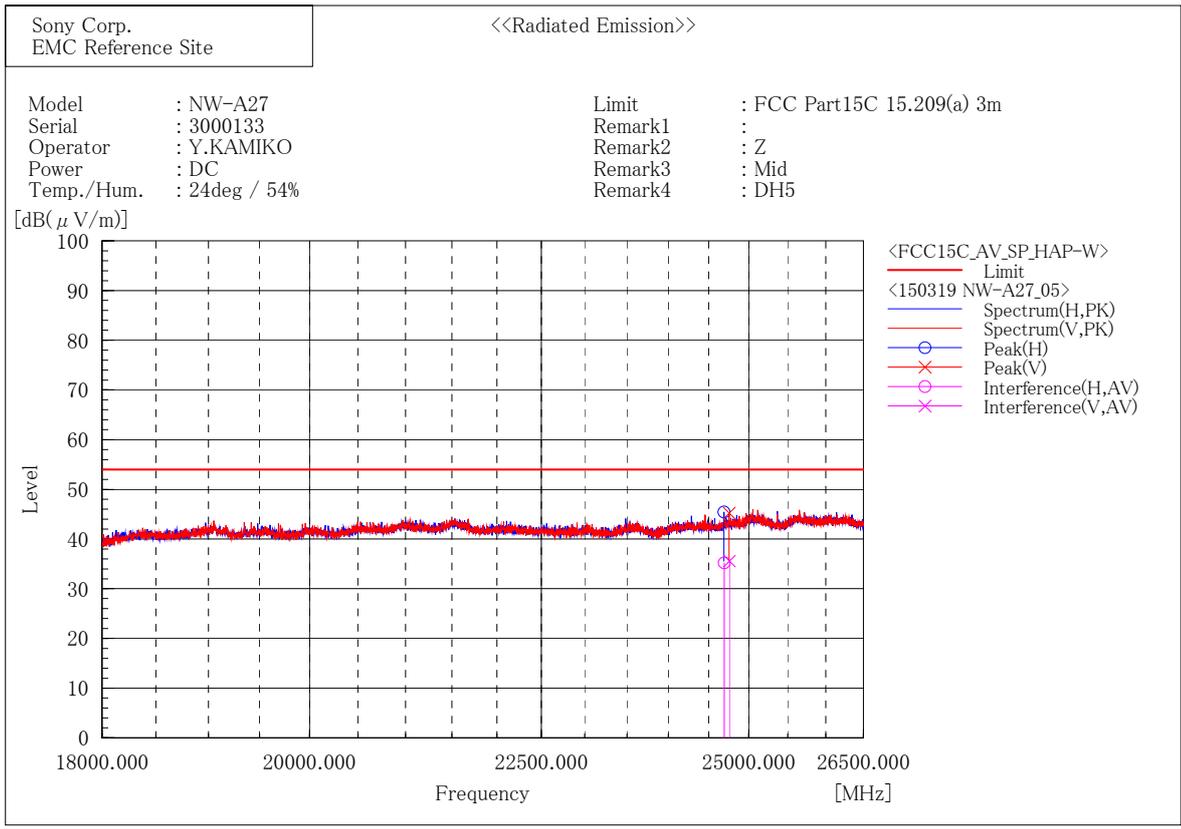
Final Result

--- 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	24775.610	51.4	-2.1	49.3	74.0	24.7	196.1	151.8

--- 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	24412.728	51.3	-2.3	49.0	74.0	25.0	181.3	206.5



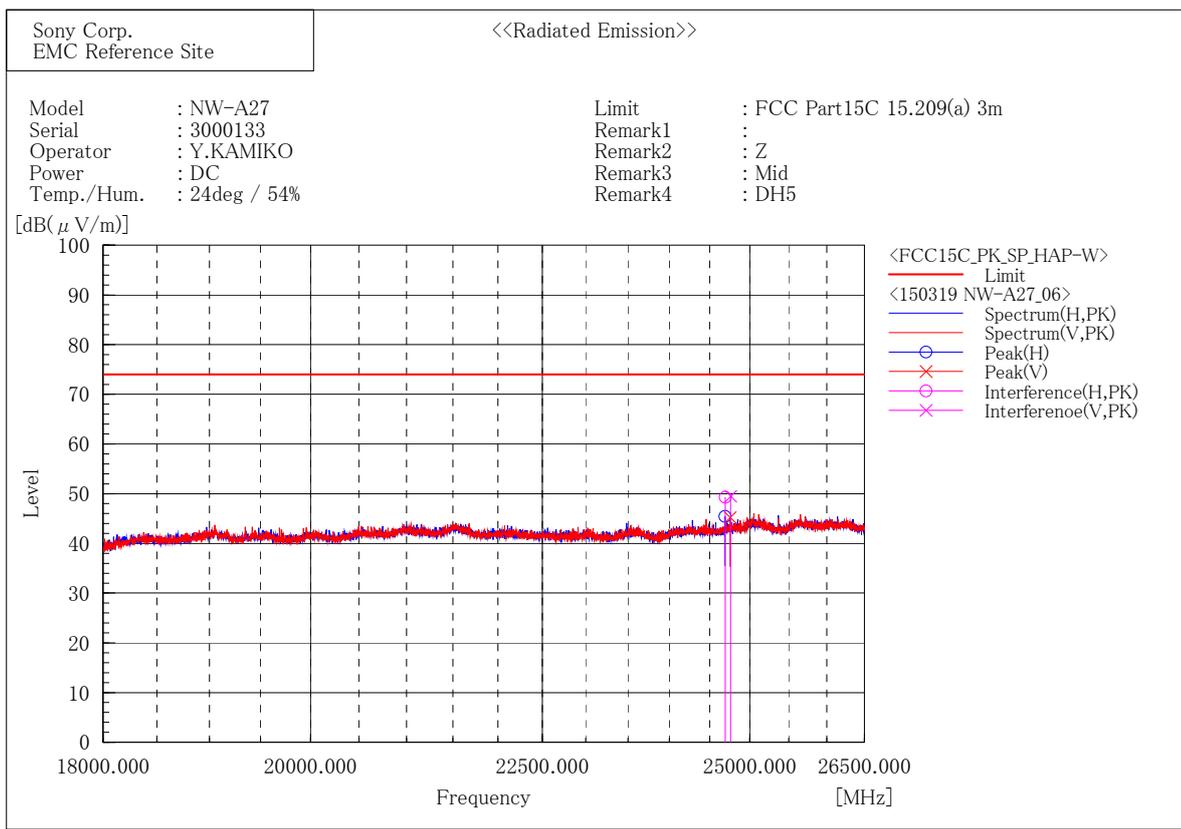
Final Result

--- 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	24690.082	37.4	-2.2	35.2	54.0	18.8	224.1	190.1

--- 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	24755.418	37.7	-2.1	35.6	54.0	18.4	397.2	148.4



Final Result

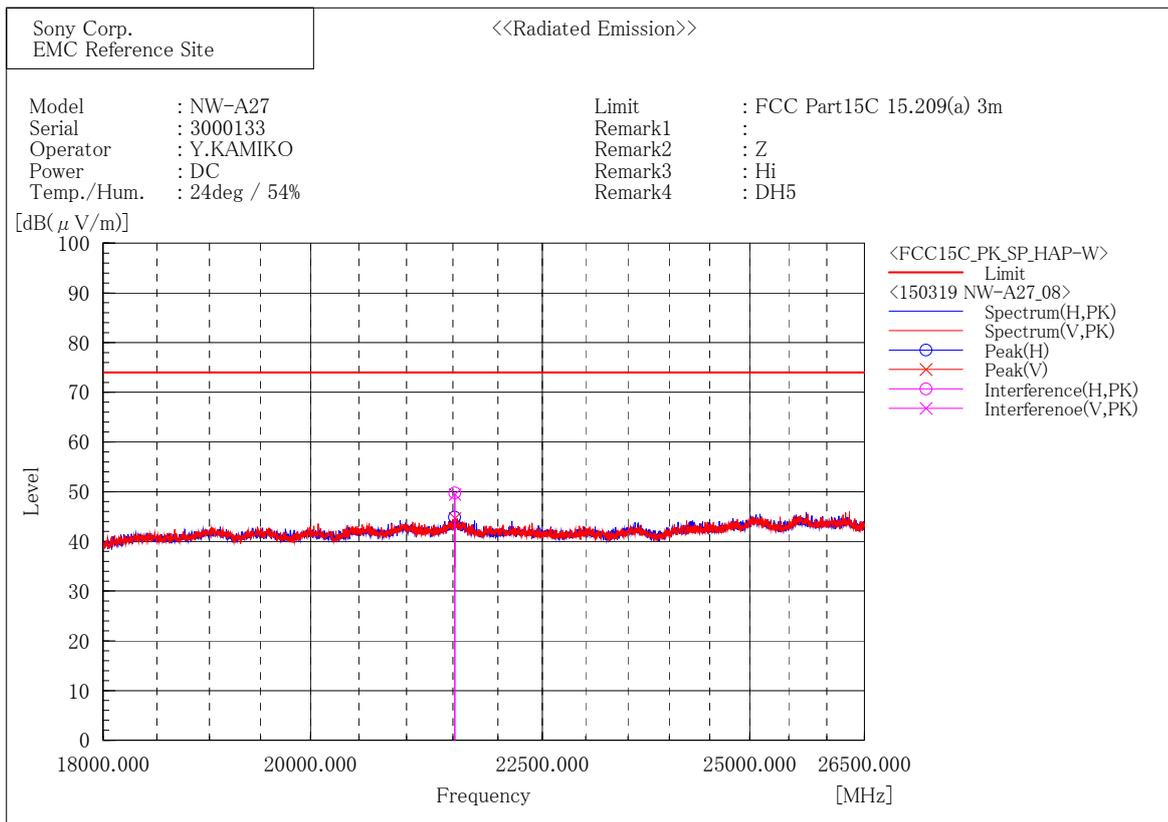
--- Horizontal Polarization (PK)---

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	24691.428	51.5	-2.2	49.3	74.0	24.7	220.9	117.5

--- 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	24758.788	51.6	-2.1	49.5	74.0	24.5	375.9	142.5





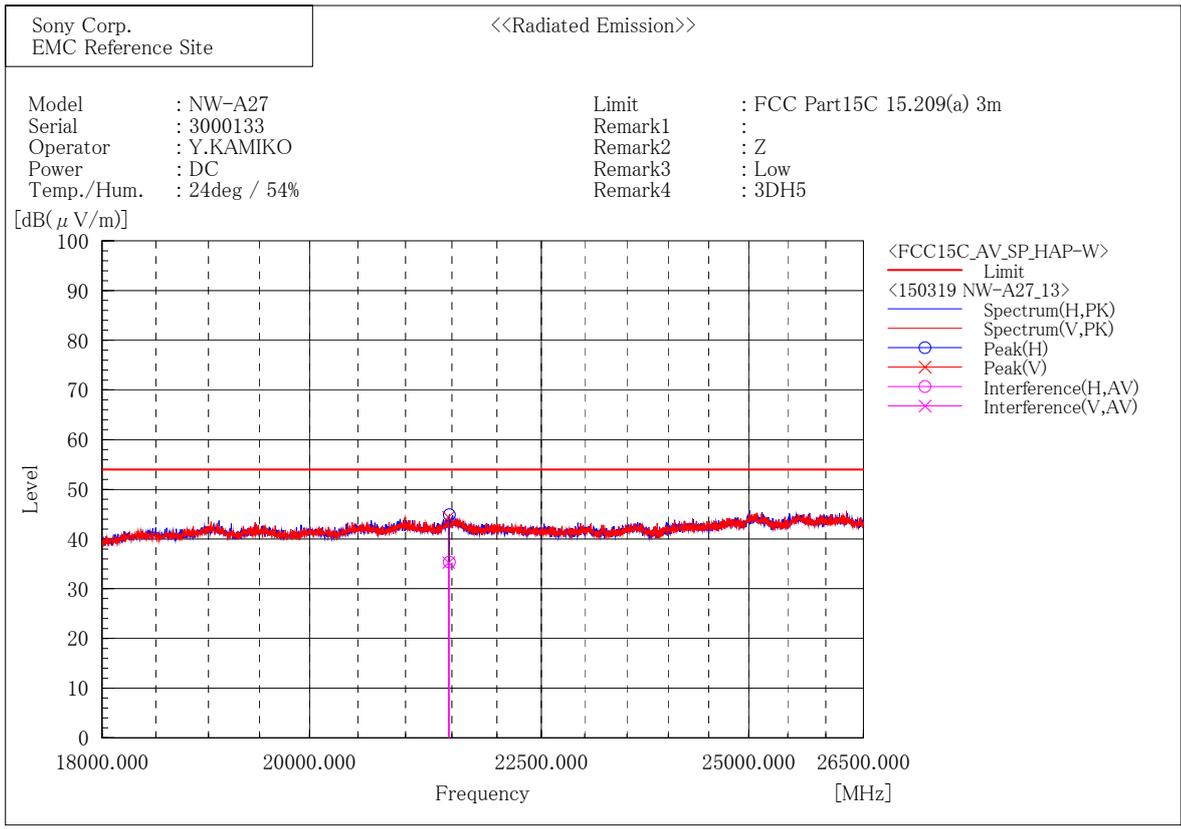
Final Result

--- 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	21522.066	50.5	-0.7	49.8	74.0	24.2	120.2	284.4

--- 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	21523.452	50.1	-0.7	49.4	74.0	24.6	142.5	226.2



**Final Result**

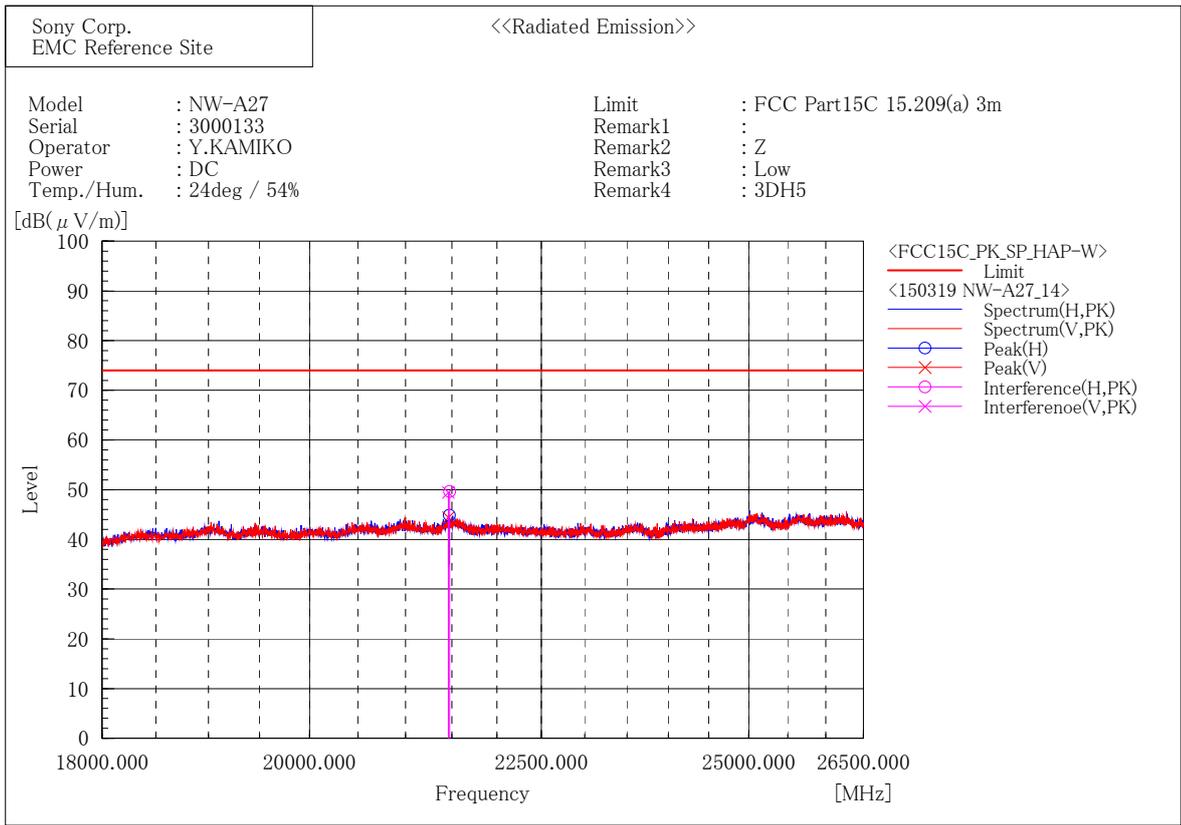
--- Horizontal Polarization (AV)---

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	21473.138	36.0	-0.6	35.4	54.0	18.6	364.0	195.5

--- 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	21464.128	35.9	-0.6	35.3	54.0	18.7	115.9	208.0



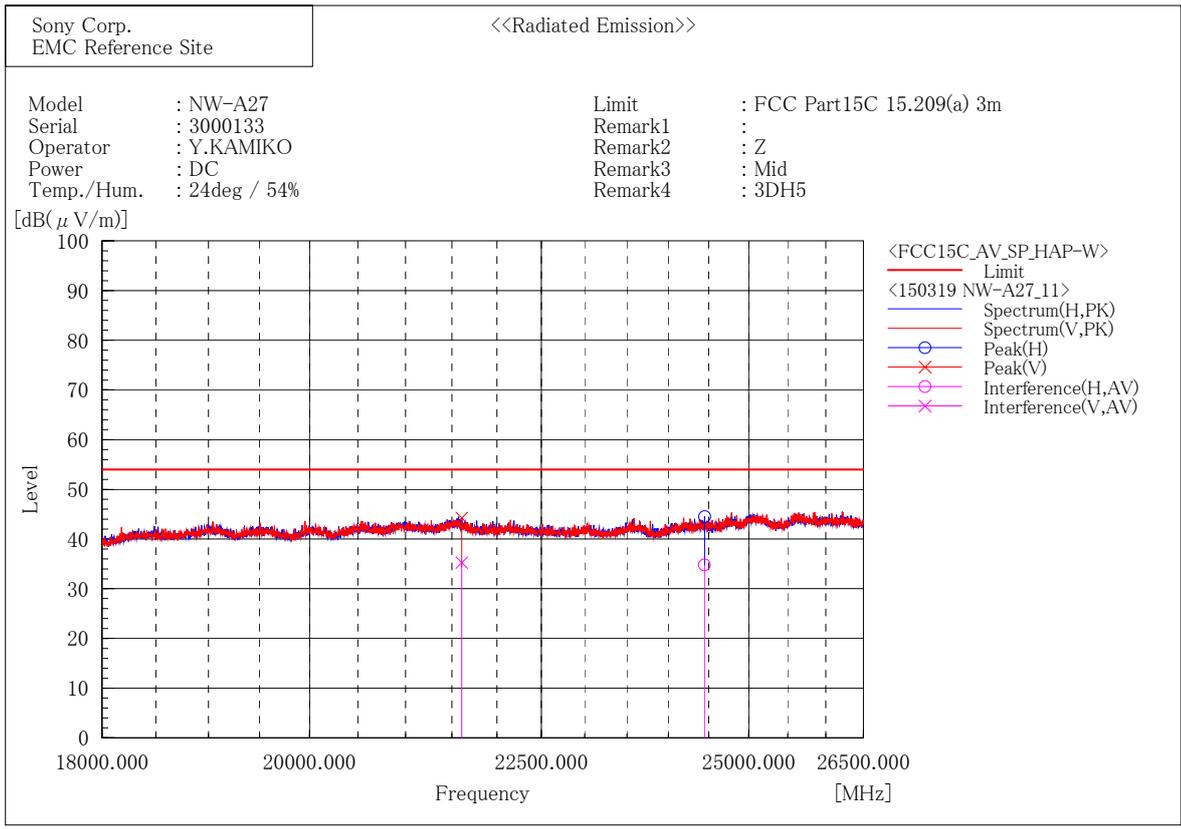
Final Result

--- 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	21475.186	50.3	-0.6	49.7	74.0	24.3	140.3	180.7

--- 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	21462.760	50.1	-0.6	49.5	74.0	24.5	118.6	246.3



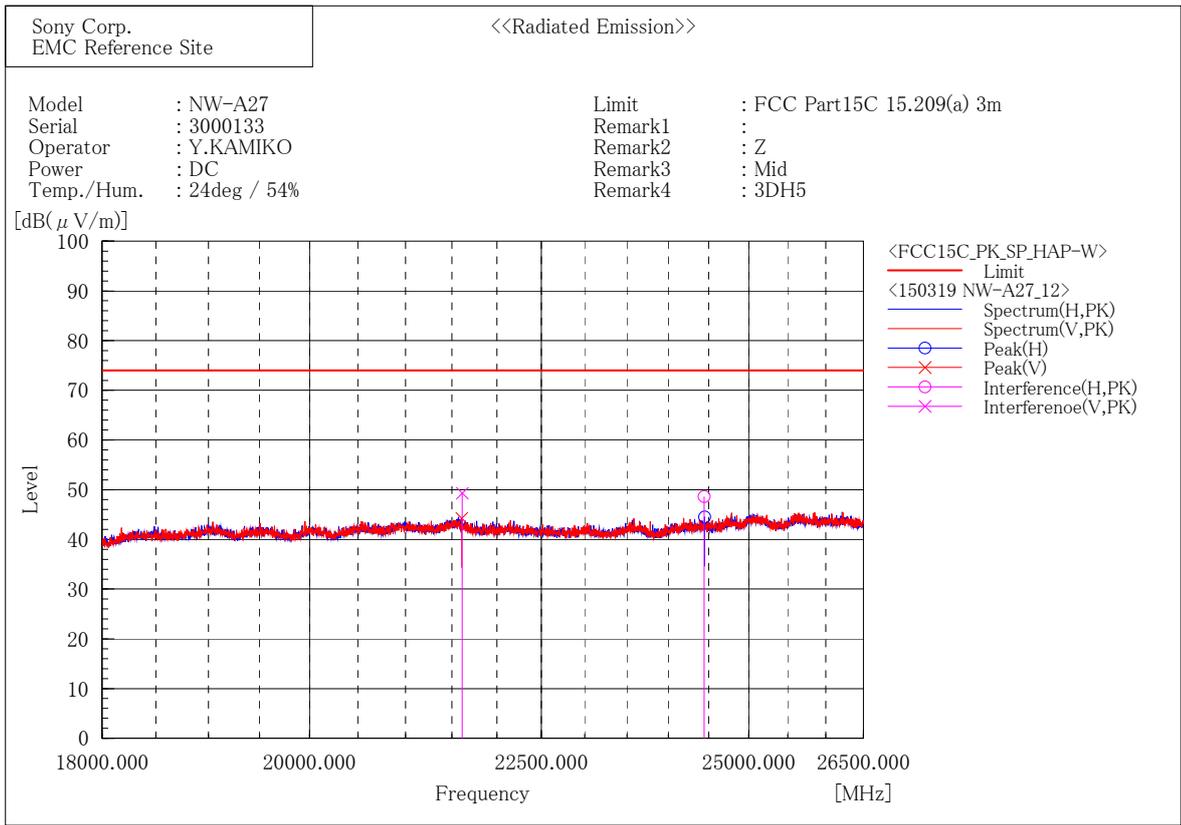
Final Result

--- 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	24442.586	37.1	-2.3	34.8	54.0	19.2	100.0	234.4

--- 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	21608.140	36.1	-0.8	35.3	54.0	18.7	120.7	37.1



Final Result

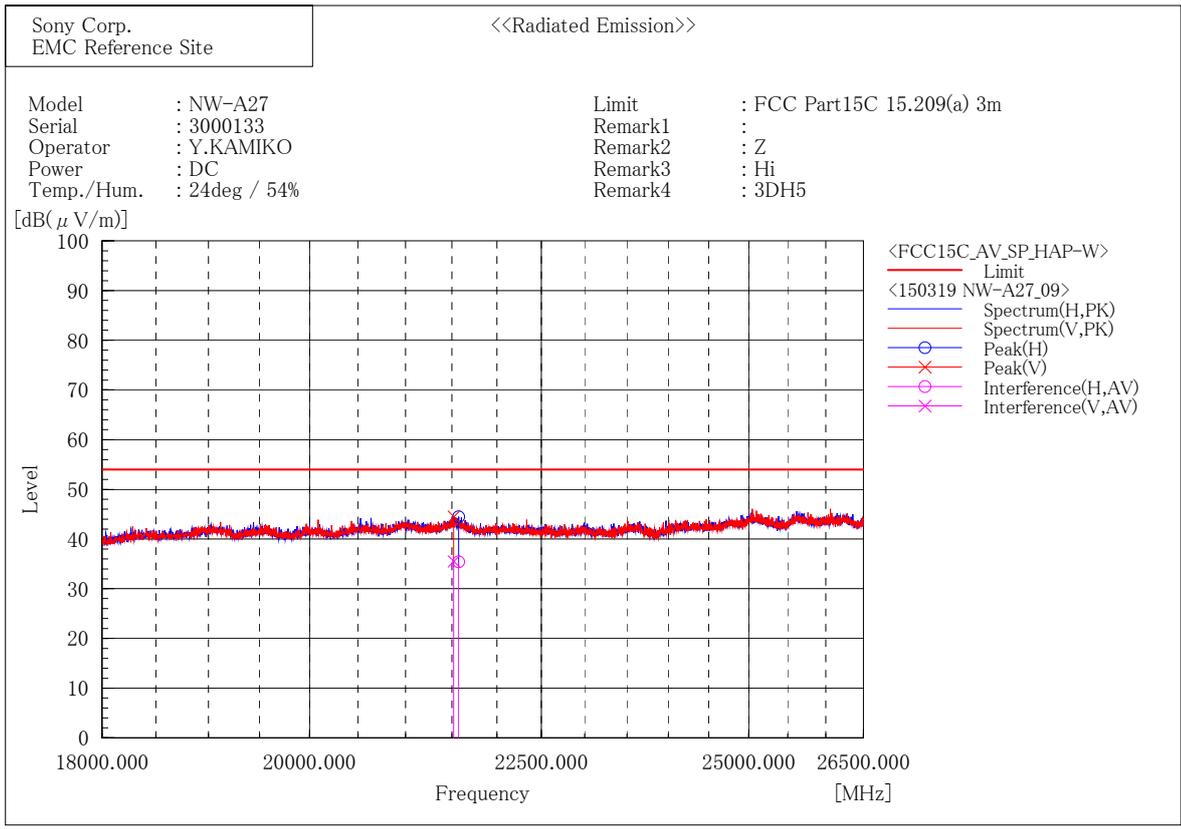
--- Horizontal Polarization (PK)---

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	24440.518	50.9	-2.3	48.6	74.0	25.4	100.0	192.1

--- 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	21614.418	50.1	-0.8	49.3	74.0	24.7	130.1	208.3



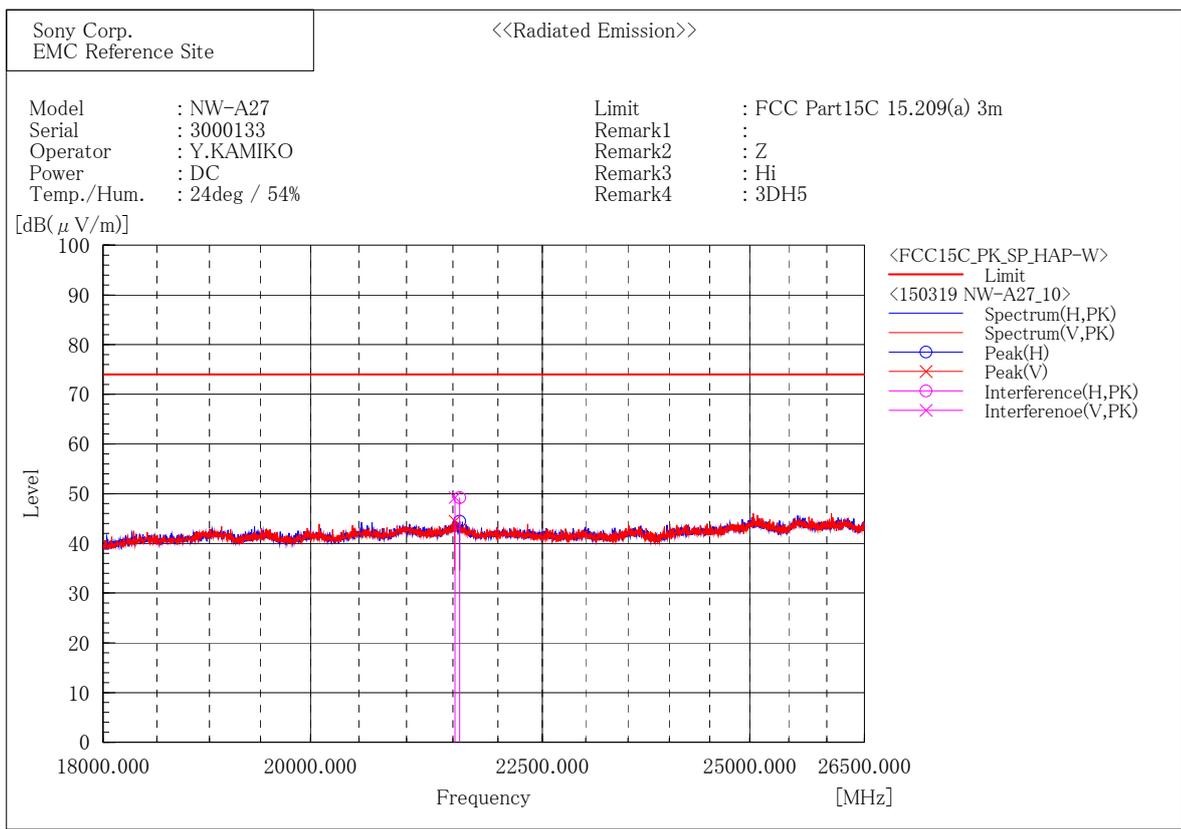
Final Result

--- 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	21575.082	36.2	-0.8	35.4	54.0	18.6	114.6	132.9

--- 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	21521.784	36.2	-0.7	35.5	54.0	18.5	395.3	205.8

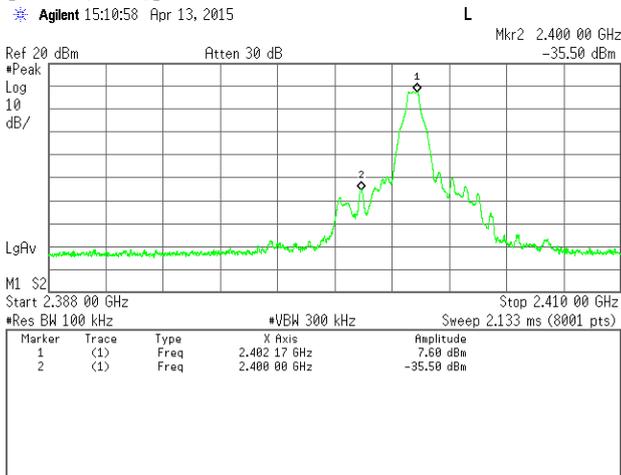


3.8. Conducted Spurious Emissions for Band Edge

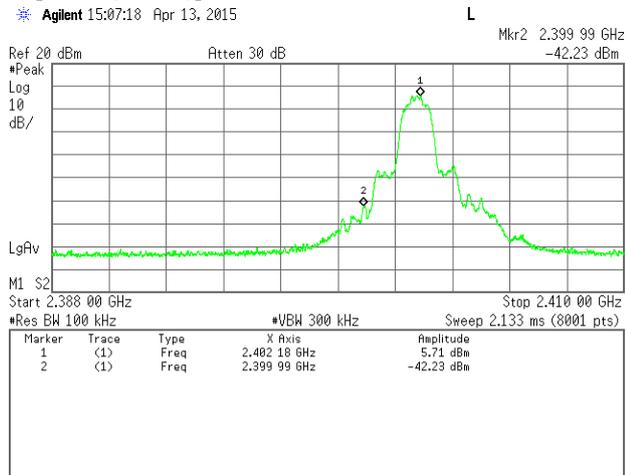
- 1) Ambient temperature : 25.8deg.C
- 2) Relative humidity : 41.5%
- 3) Date of measurement : April 13, 2015
- 4) Measured by : Y.AOYAMA
- 5) Operating mode : Transmitting mode

Mode		Channel [MHz]	Frequency [MHz]	Reading(PK) [dBm]	C.F. [dB]	Result(PK) [dBm]	Limit [dBm]	Margin [dB]
BDR	DH5	2402	2400.00	-35.50	0.66	-34.84	-11.7	23.10
			2402.17	7.60	0.66	8.26	-	-
EDR	3DH5	2402	2399.99	-42.23	0.66	-41.57	-13.6	27.94
			2402.18	5.71	0.66	6.37	-	-

[BDR (DH5)]



[EDR (3DH5)]



## 4. Method of Calculation

### 4.1. Time of Occupancy (Dwell Time) Measurement

Method of calculation : Software  
 The Software for Calculation Name : SW-308  
 Version : Ver1.0

$$\text{Test Result [ msec ]} = \text{Dwell Time [ msec ]} * \text{Cycle [ time ]} * 31.6 \text{ [ sec ]} / \text{Sweep Time [ sec ]}$$

Notes :

- (a) Dwell Time : Transmission duration of 1 hopping.
- (b) Cycle : Number of hopping appearances on the spectrum analyzer.
- (c) 31.6 : 0.4 [sec] \* Number of Hopping Frequencies(79)
- (d) Sweep Time : Sweep time settings on the spectrum analyzer.

### 4.2. Maximum Peak Conducted Output Power Measurement

Method of calculation : Software  
 The Software for Calculation Name : SW-308  
 Version : Ver1.0

$$\text{Test Result [ dBm ]} = \text{Meter Reading [ dBm ]} + \text{C.F. [ dB ]}$$

$$\text{Duty Cycle [ \% ]} = \text{Tx ON Time} / (\text{Tx ON Time} + \text{Tx OFF Time}) * 100$$

Notes :

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

### 4.3. Radiated Spurious Emission Measurement

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

$$\text{Test Result [ dBuV/m ]} = \text{Meter Reading [ dBuV ]} + \text{C.F. [ dB/m ]}$$

Notes :

- (a) Meter Reading : Reading of the EMI test receiver or 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)

#### 4.4. Conducted Spurious Emission for Band Edge Measurement

Method of calculation : Software  
The Software for Calculation Name : SW-308  
Version : Ver1.0

$$\text{Test Result [ dBm ]} = \text{Meter Reading [ dBm ]} + \text{C.F. [ dB ]}$$

Notes :

- (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. Antenna-port Conducted Measurements

#### 4th Site Shielded Room 1

	Control No.	Equipment	Model No.	Serial No.	Manufacturer	Cal. Int.	Last Cal.
<input checked="" type="checkbox"/>	-	Shield Room	B83117-B2432-T161	P26428	Albatross Project	-	-
<input checked="" type="checkbox"/>	W003	Spectrum Analyzer	E4440A	US42511926	Keysight Technologies	12	14.05.19
<input type="checkbox"/>	W006	Power Meter	N1911A	MY50000295	Keysight Technologies	12	14.10.16
<input type="checkbox"/>	W007	Power Sensor	N1922A	MY50180022	Keysight Technologies	12	14.10.16
<input type="checkbox"/>	W029	10dB Attenuator	8493C	76549	Keysight Technologies	12	14.09.26
<input checked="" type="checkbox"/>	WC05	RF Cable	SUCOFLEX 102	34287	HUBER + SUHNER	12	14.09.26
<input checked="" type="checkbox"/>	M719	Thermo Meter	TH-321	140053	AS ONE	12	14.06.02

### 5.2. Radiated Spurious Emissions

#### 4th Site 10m Semi-Anechoic Chamber

	Control No.	Equipment	Model No.	Serial No.	Manufacturer	Cal. Int.	Last Cal.
<input checked="" type="checkbox"/>	M506	Semi-Anechoic Chamber	-	-	TDK	12	14.05.20
<input checked="" type="checkbox"/>	M575	EMI Receiver	ESCI	100161	Rohde & Schwarz	12	14.10.23
<input checked="" type="checkbox"/>	M669	EMI Receiver	N9038A	MY51210223	Keysight Technologies	12	14.05.23
<input checked="" type="checkbox"/>	A073	Loop Antenna	HFH2-Z2	100171	Rohde & Schwarz	12	14.04.08
<input checked="" type="checkbox"/>	A043	Biconical Antenna	BBA9106	V5 (91032598)	Schwarzbeck	12	14.08.19
<input checked="" type="checkbox"/>	A046	Logperiodic Antenna	UHALP9108A1	0830	Schwarzbeck	12	14.08.20
<input checked="" type="checkbox"/>	A056	Horn Antenna	BBHA9120D	1201	Schwarzbeck	12	15.01.26
<input checked="" type="checkbox"/>	A057	Horn Antenna	HAP06-18W	00000037	TOYO Corporation	12	14.08.22
<input checked="" type="checkbox"/>	A058	Horn Antenna	HAP18-26W	00000016	TOYO Corporation	12	15.01.14
<input type="checkbox"/>	CS037	4th Site RE Cable SYS1	-	-	EMC/RF Test Lab.	12	14.11.20
<input checked="" type="checkbox"/>	CS039	4th Site RE Cable SYS3	-	-	EMC/RF Test Lab.	12	14.11.20
<input checked="" type="checkbox"/>	CS054	4th Site EMF Cable SYS	-	-	EMC/RF Test Lab.	12	14.11.20
<input checked="" type="checkbox"/>	CS064/065	Ref Site RE Cable SYS8	-	-	EMC/RF Test Lab.	12	14.05.19
<input checked="" type="checkbox"/>	M510	RF Selector	NS4900	0802-226	TOYO Corporation	12	14.11.20
<input checked="" type="checkbox"/>	M706	3dB Attenuator	8491A	MY39267782	Keysight Technologies	12	14.11.20
<input checked="" type="checkbox"/>	M620	RF Pre-Amp	8447D	2944A10720	Keysight Technologies	12	14.11.20
<input checked="" type="checkbox"/>	M737	GHz Filter Box	GB-G01	001	Sony EMCS	12	14.05.19
<input checked="" type="checkbox"/>	M689	Thermo Meter	AD-5640A	201303	A&D	12	14.10.03