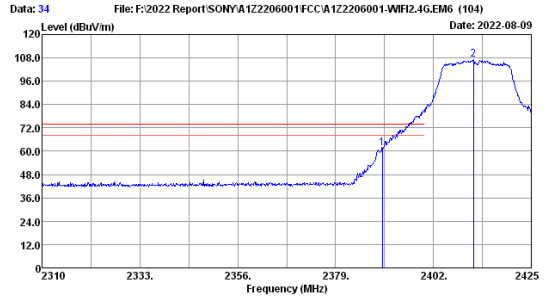


Site no. : 3m Chamber Data no. : 33  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	61.26	35.24	57.97	74.00	16.03	Peak
2	2415.60	28.30	3.67	105.24	35.24	101.97	-----	-----	Peak

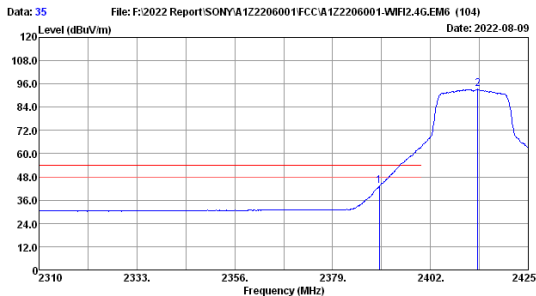
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 34  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	64.99	35.24	61.70	74.00	12.30	Peak
2	2411.40	28.30	3.66	110.25	35.24	106.97	-----	-----	Peak

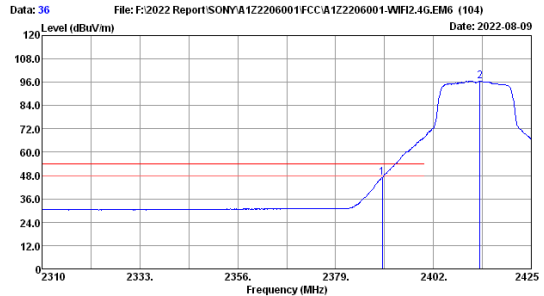
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 35  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	46.66	35.24	43.37	54.00	10.63	Average
2	2413.08	28.30	3.66	96.52	35.24	93.24	-----	-----	Average

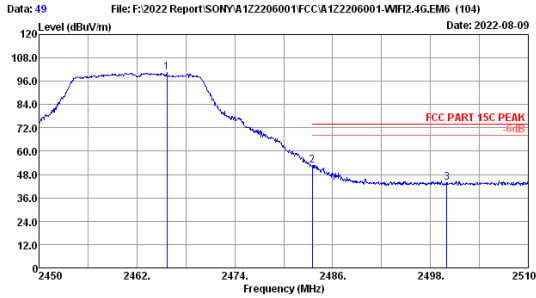
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 36  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	50.40	35.24	47.11	54.00	6.89	Average
2	2412.93	28.30	3.66	99.96	35.24	96.68	-----	-----	Average

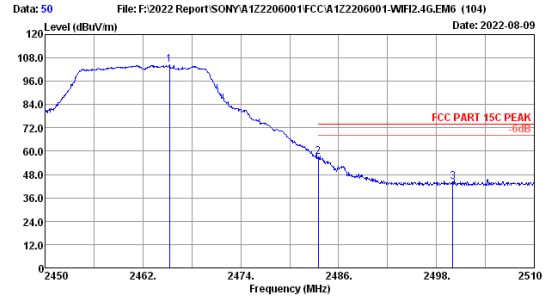
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 49  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.66	28.30	3.70	103.93	35.25	100.68	74.00	26.68	Peak
2	2483.50	28.30	3.71	55.88	35.25	52.64	74.00	21.36	Peak
3	2500.00	28.30	3.72	46.88	35.25	43.65	74.00	30.35	Peak

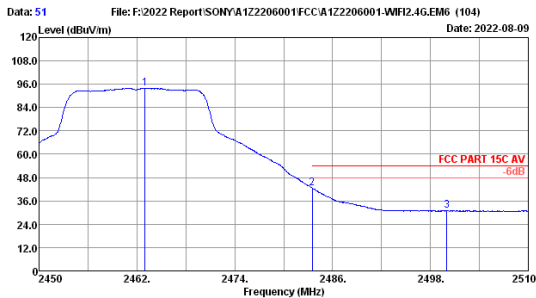
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 50  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.24	28.30	3.70	107.74	35.25	104.49	74.00	30.49	Peak
2	2483.50	28.30	3.71	60.25	35.25	57.01	74.00	16.99	Peak
3	2500.00	28.30	3.72	47.31	35.25	44.08	74.00	29.92	Peak

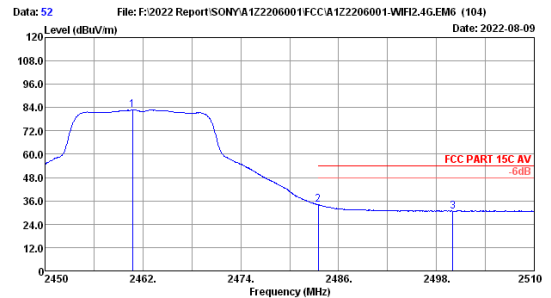
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 51  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.02	28.30	3.70	97.32	35.25	94.07	54.00	40.07	Average
2	2483.50	28.30	3.71	45.91	35.25	42.67	54.00	11.33	Average
3	2500.00	28.30	3.72	34.08	35.25	30.85	54.00	23.15	Average

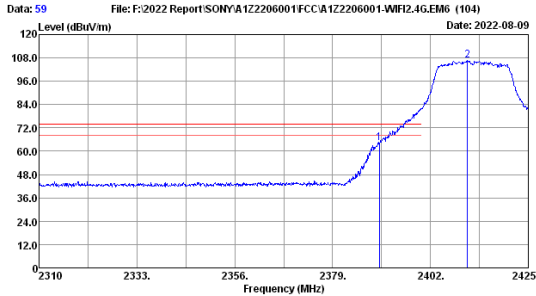
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 52  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11g 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.74	28.30	3.70	86.04	35.25	82.79	54.00	28.79	Average
2	2483.50	28.30	3.71	37.21	35.25	33.97	54.00	20.03	Average
3	2500.00	28.30	3.72	34.00	35.25	30.77	54.00	23.23	Average

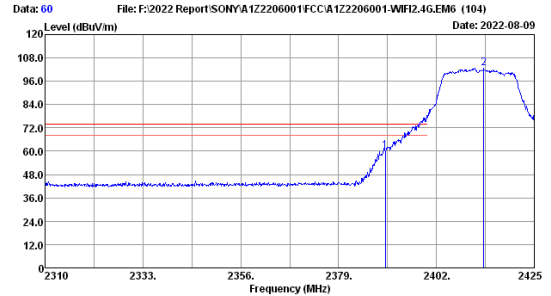
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 59  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	67.28	35.24	63.99	74.00	10.01	Peak
2	2410.74	28.30	3.66	109.98	35.24	106.70	-----	-----	Peak

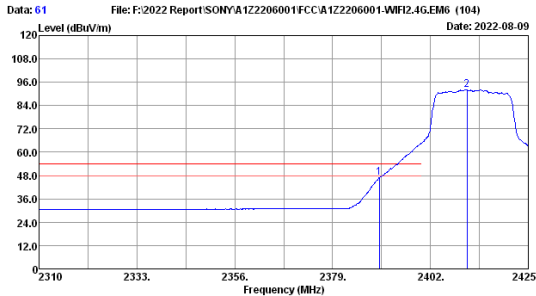
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 60  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	63.38	35.24	60.09	74.00	13.91	Peak
2	2413.16	28.30	3.66	106.15	35.24	102.87	-----	-----	Peak

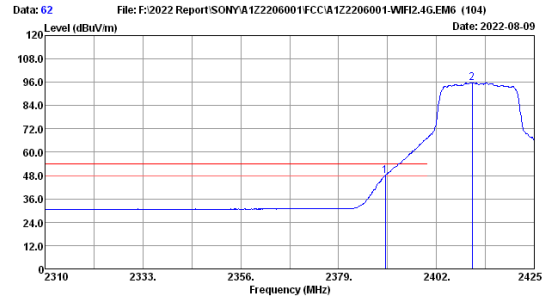
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 61  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	50.38	35.24	47.09	54.00	6.91	Average
2	2410.63	28.30	3.66	95.43	35.24	92.15	-----	-----	Average

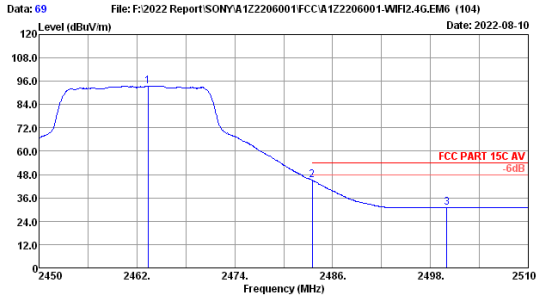
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 62  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2412MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	51.28	35.24	47.99	54.00	6.01	Average
2	2410.40	28.30	3.66	98.99	35.24	95.71	-----	-----	Average

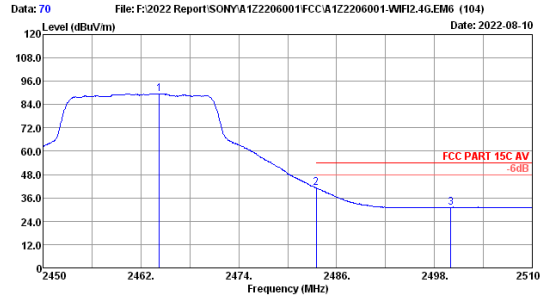
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2022 Report\SONYA\I22206001\FCC\A\I22206001-WIFI2.4G.EM6 (104)  
 Date: 2022-08-10  
 Site no. : 3m Chamber Data no. : 69  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.38	28.30	3.70	96.85	35.25	93.60	54.00	8.88	Average
2	2483.50	28.30	3.71	48.36	35.25	45.12	54.00	8.88	Average
3	2500.00	28.30	3.72	34.11	35.25	30.88	54.00	23.12	Average

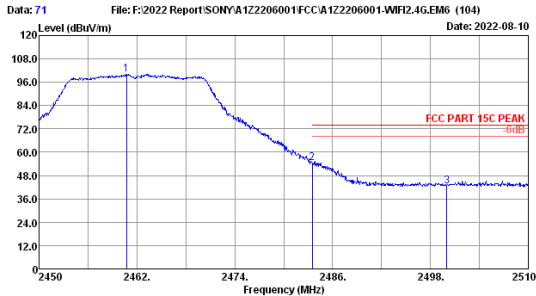
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2022 Report\SONYA\I22206001\FCC\A\I22206001-WIFI2.4G.EM6 (104)  
 Date: 2022-08-10  
 Site no. : 3m Chamber Data no. : 70  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.28	28.30	3.70	92.85	35.25	89.60	54.00	12.84	Average
2	2483.50	28.30	3.71	44.40	35.25	41.16	54.00	12.84	Average
3	2500.00	28.30	3.72	34.24	35.25	31.01	54.00	22.99	Average

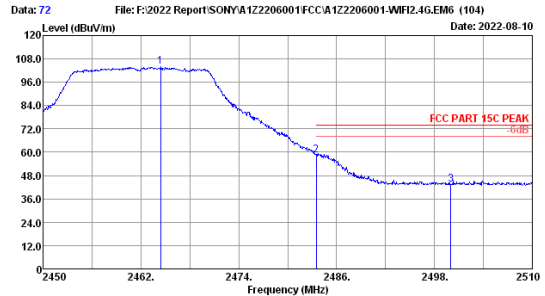
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2022 Report\SONYA\I22206001\FCC\A\I22206001-WIFI2.4G.EM6 (104)  
 Date: 2022-08-10  
 Site no. : 3m Chamber Data no. : 71  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2462MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.74	28.30	3.70	103.29	35.25	100.04	74.00	19.53	Peak
2	2483.50	28.30	3.71	57.71	35.25	54.47	74.00	19.53	Peak
3	2500.00	28.30	3.72	45.73	35.25	42.50	74.00	31.50	Peak

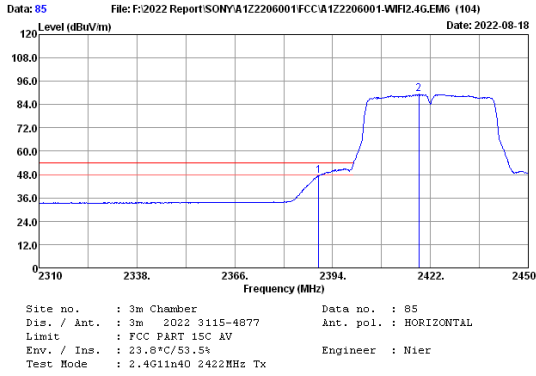
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



File: F:\2022 Report\SONYA\I22206001\FCC\A\I22206001-WIFI2.4G.EM6 (104)  
 Date: 2022-08-10  
 Site no. : 3m Chamber Data no. : 72  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n20 2462MHz Tx

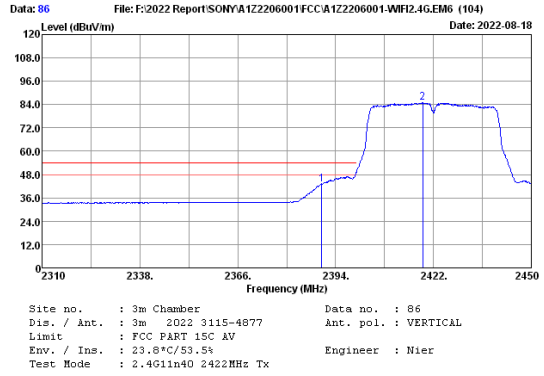
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.40	28.30	3.70	107.33	35.25	104.08	74.00	15.55	Peak
2	2483.50	28.30	3.71	61.69	35.25	58.45	74.00	15.55	Peak
3	2500.00	28.30	3.72	46.64	35.25	43.41	74.00	30.59	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



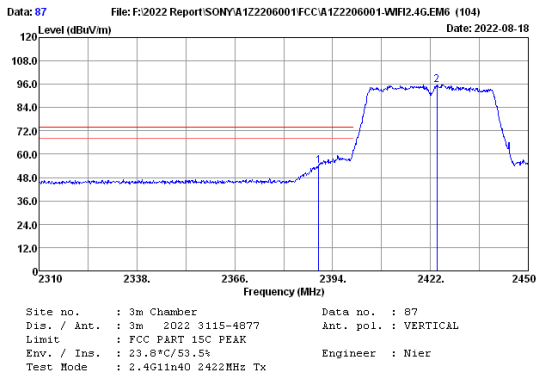
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	50.85	35.24	47.56	54.00	6.44	Average
2	2418.64	28.30	3.67	92.54	35.24	89.27	-----	-----	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



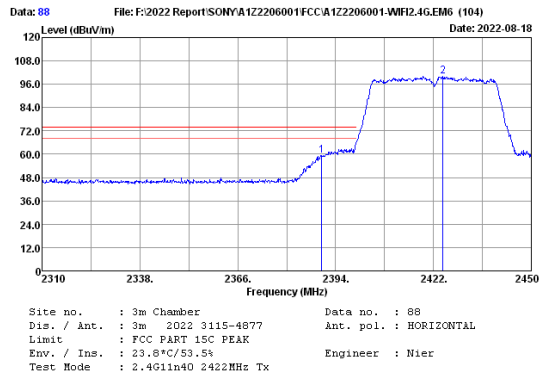
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	46.37	35.24	43.08	54.00	10.92	Average
2	2418.92	28.30	3.67	88.18	35.24	84.91	-----	-----	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



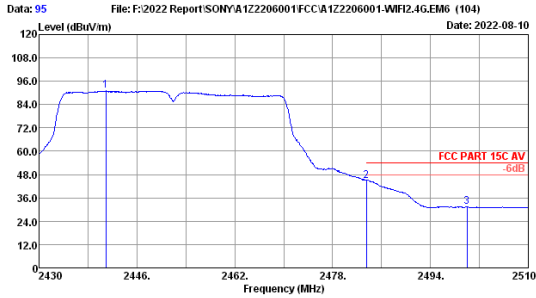
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	57.22	35.24	53.93	74.00	20.07	Peak
2	2423.82	28.30	3.67	96.95	35.24	95.68	-----	-----	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.30	3.65	62.47	35.24	59.18	74.00	14.82	Peak
2	2424.66	28.30	3.67	103.40	35.24	100.13	-----	-----	Peak

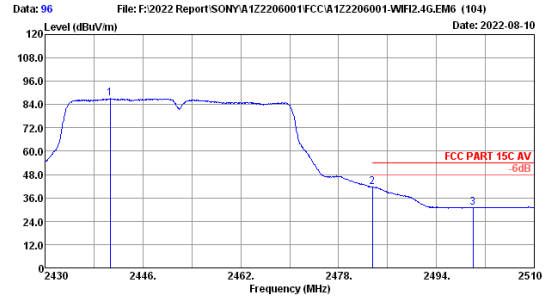
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 95  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n40 2452MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.96	28.30	3.68	94.28	35.25	91.01	---	---	Average
2	2483.50	28.30	3.71	48.14	35.25	44.90	54.00	9.10	Average
3	2500.00	28.30	3.72	34.60	35.25	31.37	54.00	22.63	Average

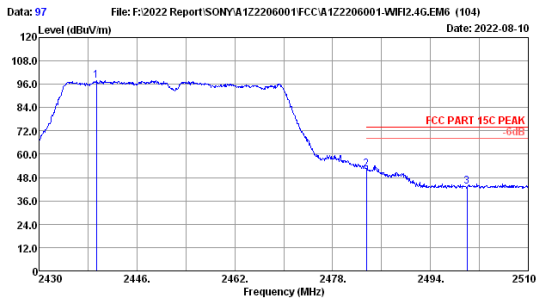
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 96  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n40 2452MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.64	28.30	3.68	90.31	35.24	87.05	---	---	Average
2	2483.50	28.30	3.71	44.93	35.25	41.69	54.00	12.31	Average
3	2500.00	28.30	3.72	34.07	35.25	30.84	54.00	23.16	Average

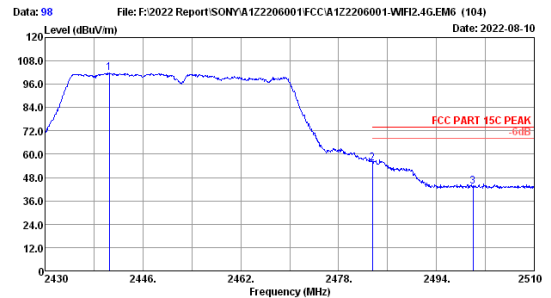
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 97  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n40 2452MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2439.36	28.30	3.68	101.15	35.24	97.89	---	---	Peak
2	2483.50	28.30	3.71	55.54	35.25	52.30	74.00	21.70	Peak
3	2500.00	28.30	3.72	46.69	35.25	43.46	74.00	30.54	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 98  
 Dis. / Ant. : 3m 2022 3115-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Nier  
 Test Mode : 2.4G11n40 2452MHz Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.48	28.30	3.68	104.94	35.24	101.68	---	---	Peak
2	2483.50	28.30	3.71	58.73	35.25	55.49	74.00	18.51	Peak
3	2500.00	28.30	3.72	46.66	35.25	43.43	74.00	30.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.

## 7. 6dB & 99% Bandwidth Test

### 7.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,22	1 Year
2.	RF Cable	HUBER+SUHNER	SUCOFLE X-106	505238/6	Apr.06,22	1 Year

### 7.2. Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

### 7.3. Test Procedure

Use the test method described in ANSI C63.10 Section 11.8:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW  $\geq 3 \times$  RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be  $\geq 6$  dB.

Use the test method described in ANSI C63.10 Section 6.9.2:

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (OBW/RBW)]$  below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

### 7.4. Test Results

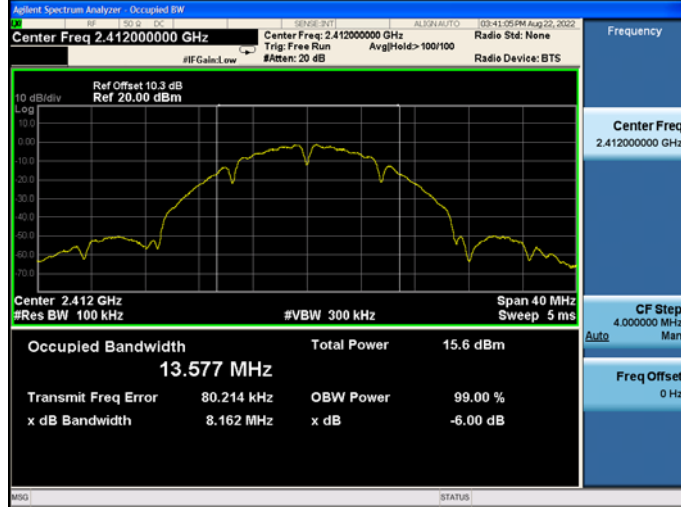
EUT: Digital Media Player		
M/N: YY1301B1		
Test date: 2022-08-22	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Winter	Test site: RF site	Temperature: 22.4±0.6°C

Test Mode	CH	-6dB Bandwidth (MHz)	Limit (KHz)
11b	CH1	8.162	≧ 500
	CH6	8.764	
	CH11	8.564	
11g	CH1	16.44	≧ 500
	CH6	16.51	
	CH11	16.45	
11n HT20	CH1	17.70	≧ 500
	CH6	17.77	
	CH11	17.73	
11n HT40	CH3	36.48	≧ 500
	CH6	36.53	
	CH9	36.47	

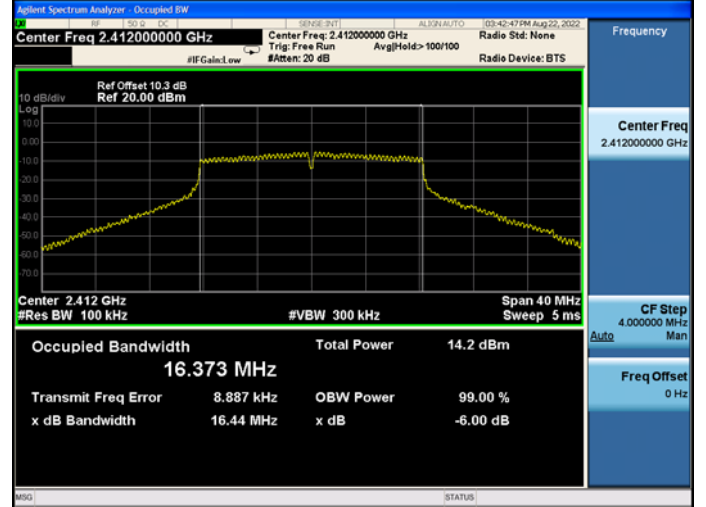
Conclusion: Pass



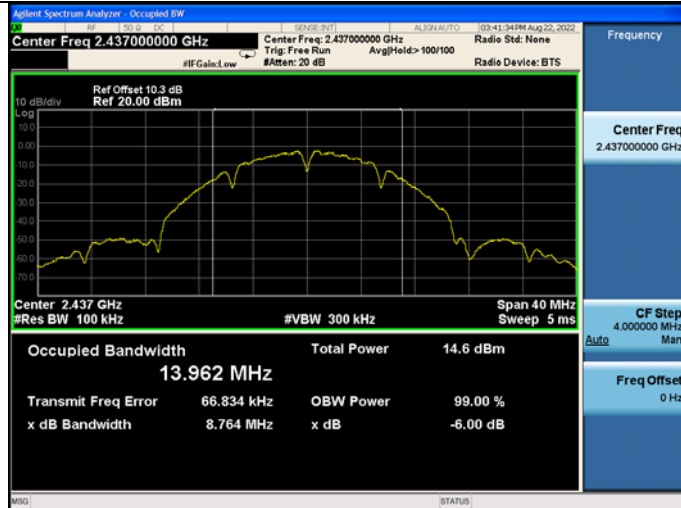
Test Mode: IEEE 802.11b  
Test CH1: 2412MHz



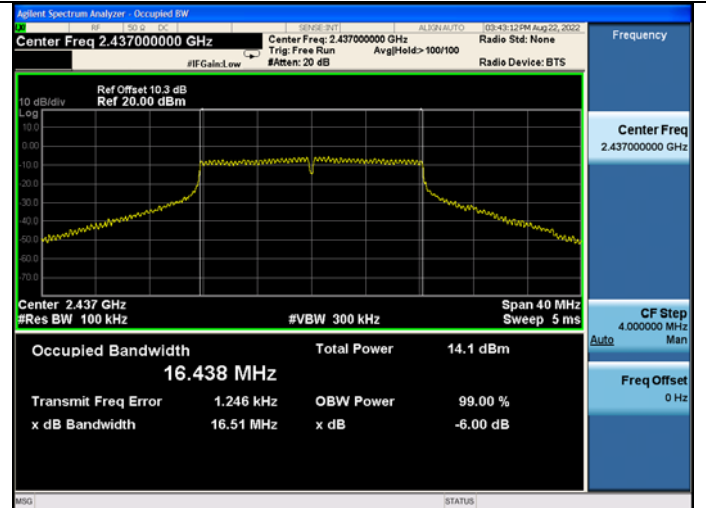
Test Mode: IEEE 802.11g  
Test CH1: 2412MHz



Test CH6: 2437MHz



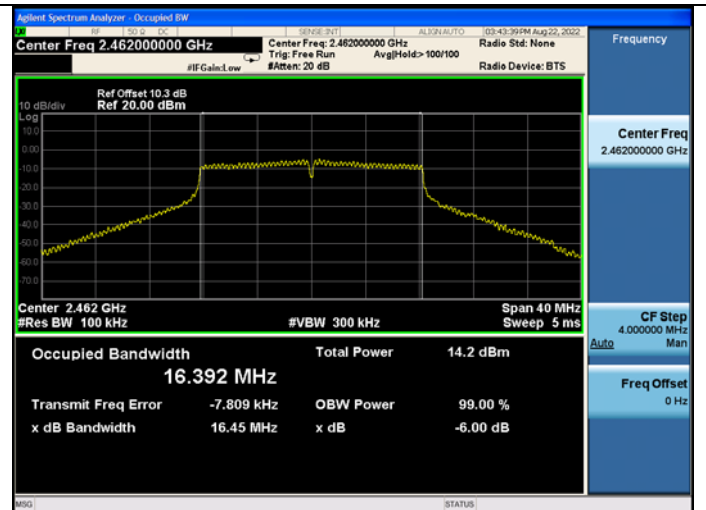
Test CH6: 2437MHz



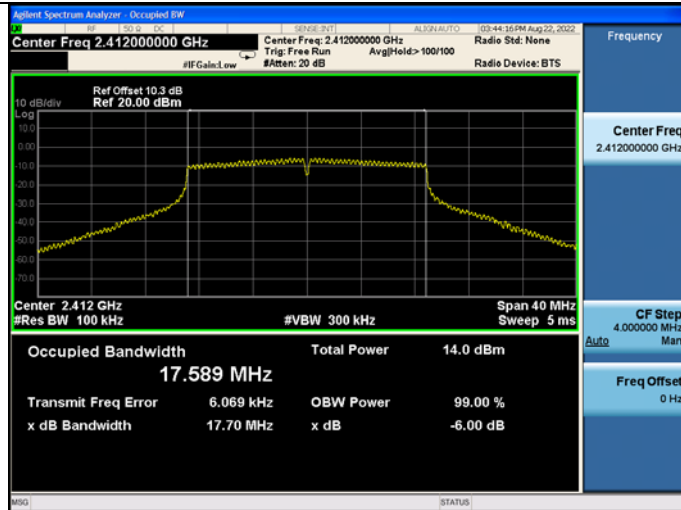
Test CH11: 2462MHz



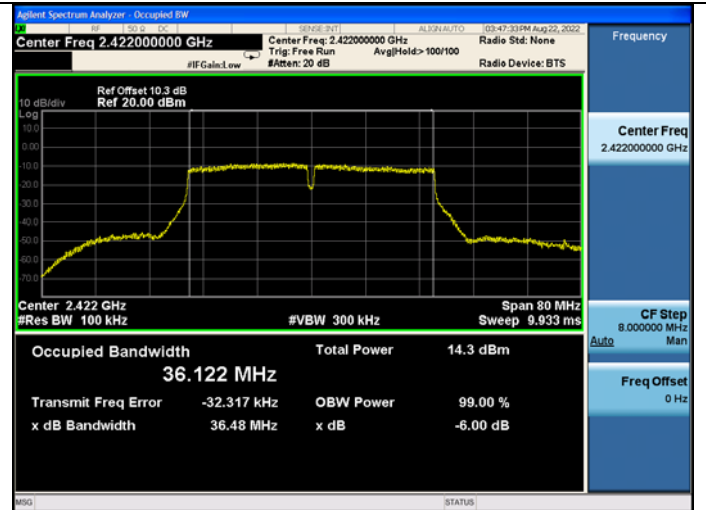
Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20  
Test CH1: 2412MHz



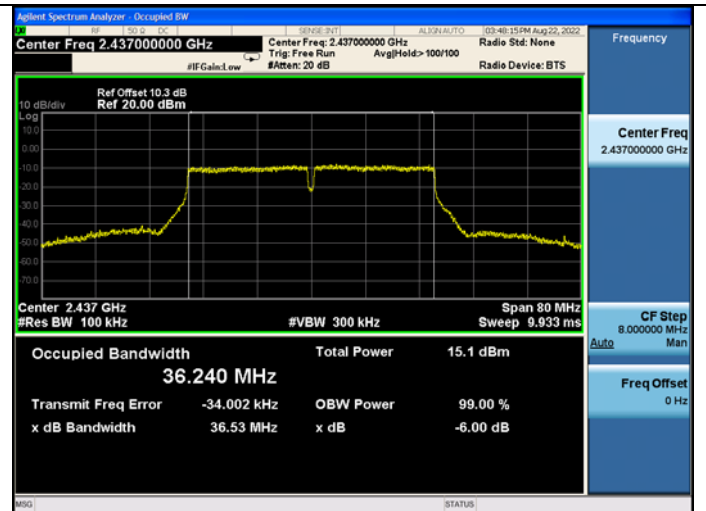
Test Mode: IEEE 802.11n HT40  
Test CH3: 2422MHz



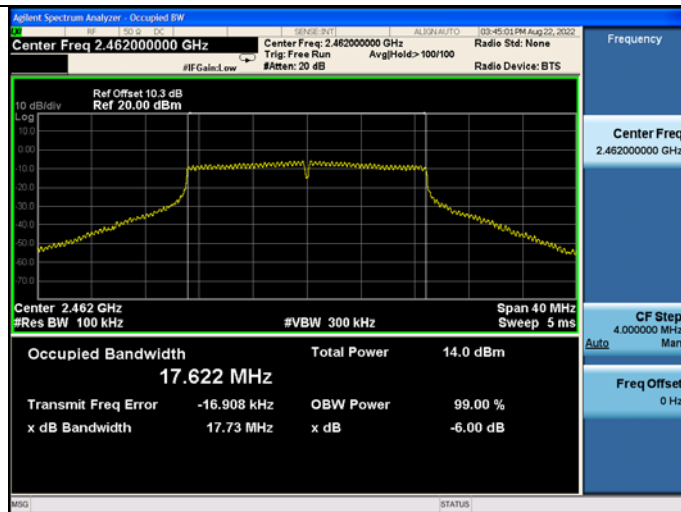
Test CH6: 2437MHz



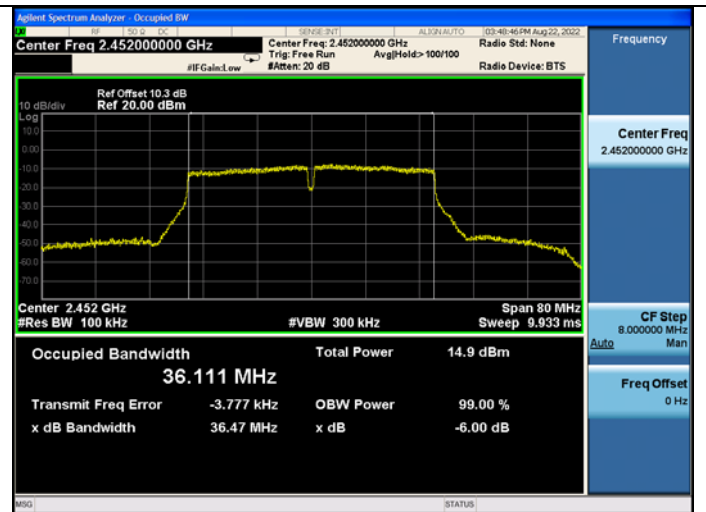
Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH9: 2452MHz

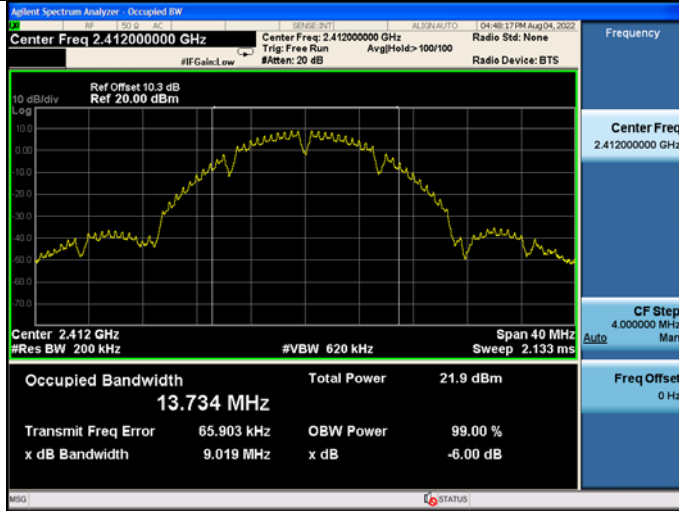


EUT: Digital Media Player		
M/N: YY1301B1		
Test date: 2022-08-04~22	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Winter	Test site: RF site	Temperature: 22.4±0.6°C

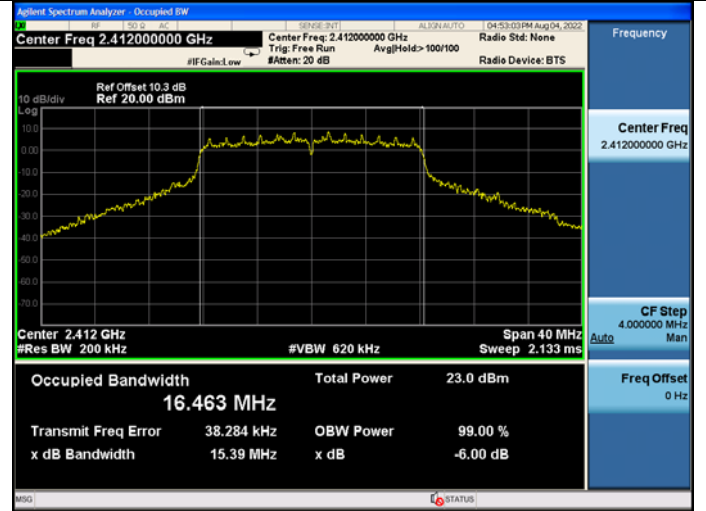
Test Mode	CH	99%Bandwidth (MHz)	Limit (MHz)
11b	CH1	13.734	N/A
	CH6	14.046	
	CH11	13.859	
11g	CH1	16.463	N/A
	CH6	16.600	
	CH11	16.491	
11n HT20	CH1	17.660	N/A
	CH6	17.805	
	CH11	17.700	
11n HT40	CH3	36.122	N/A
	CH6	36.289	
	CH9	36.126	

Conclusion:Pass

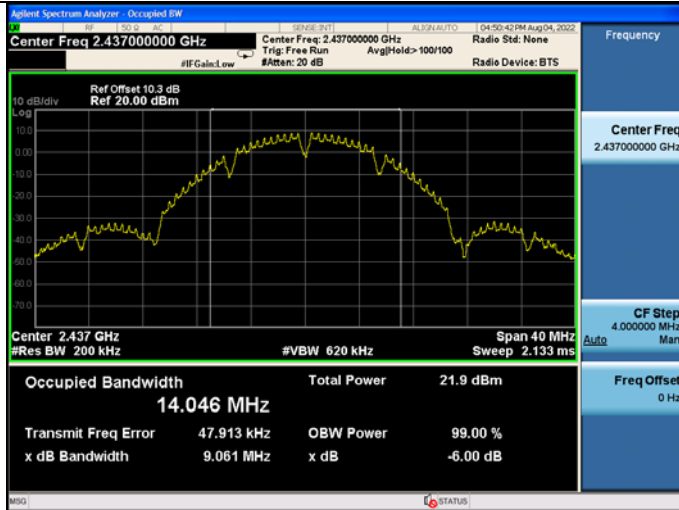
Test Mode: IEEE 802.11b  
Test CH1: 2412MHz



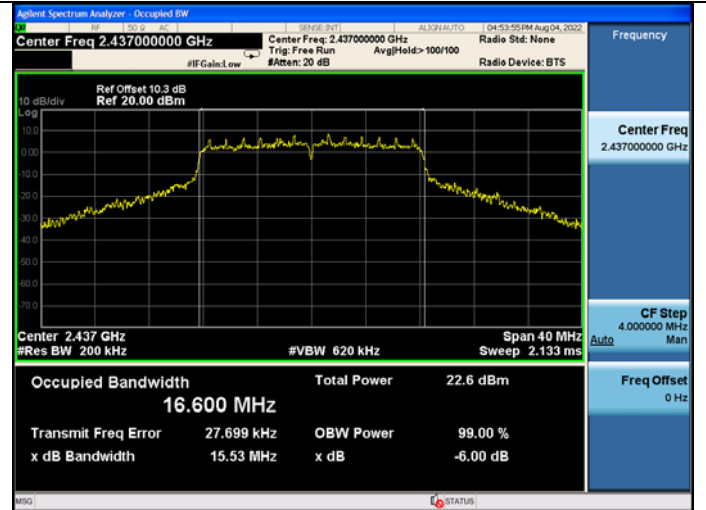
Test Mode: IEEE 802.11g  
Test CH1: 2412MHz



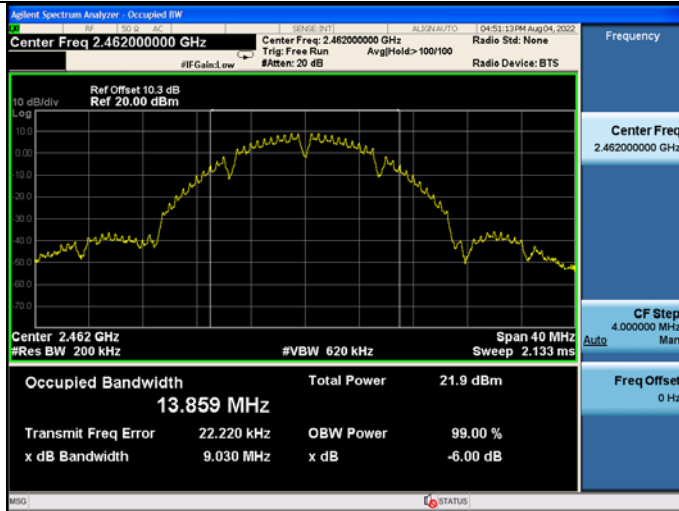
Test CH6: 2437MHz



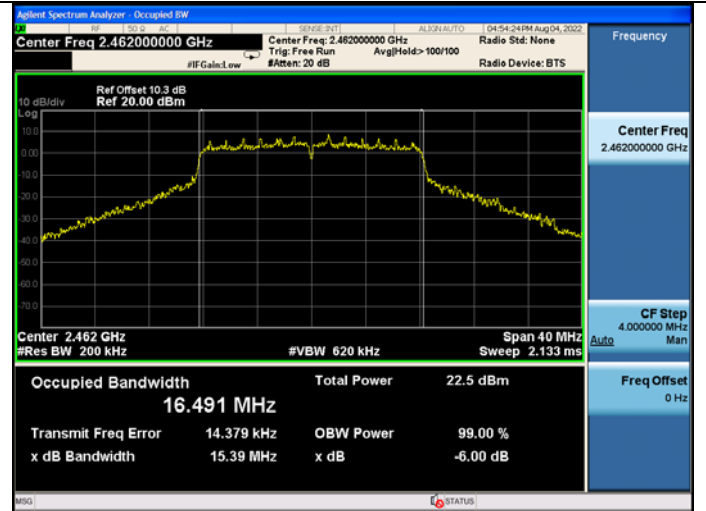
Test CH6: 2437MHz



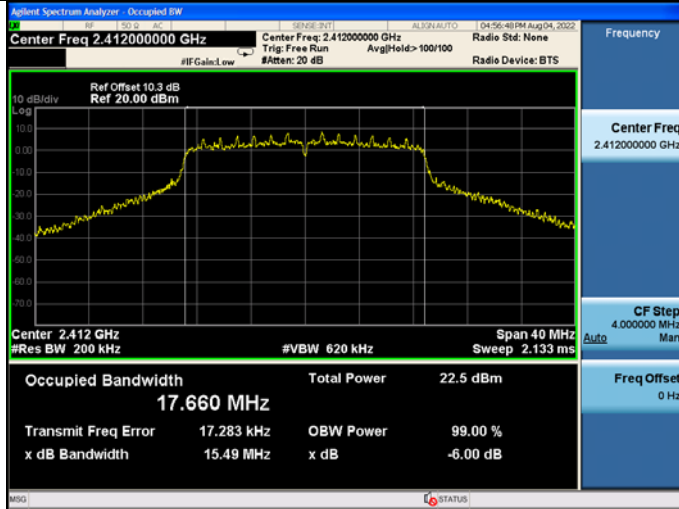
Test CH11: 2462MHz



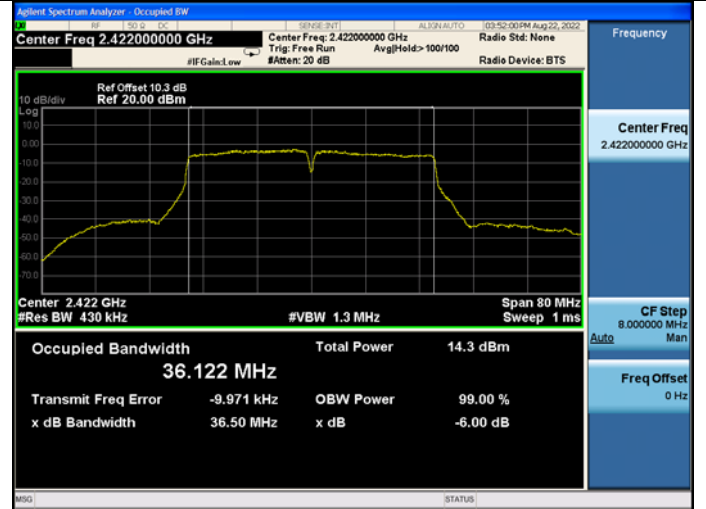
Test CH11: 2462MHz



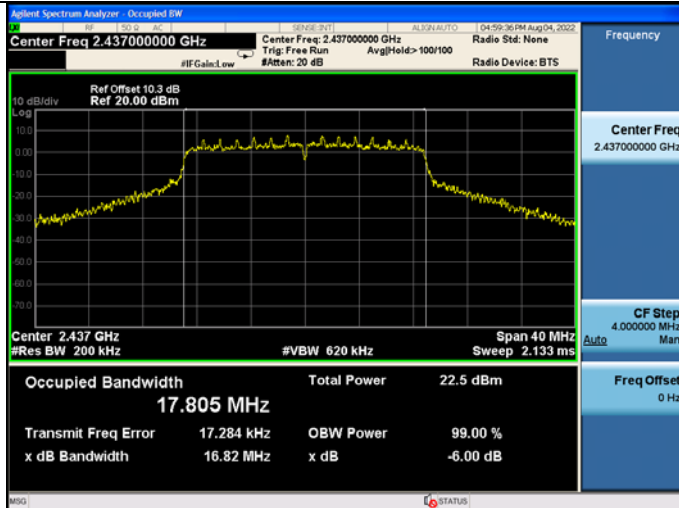
Test Mode: IEEE 802.11n HT20  
Test CH1: 2412MHz



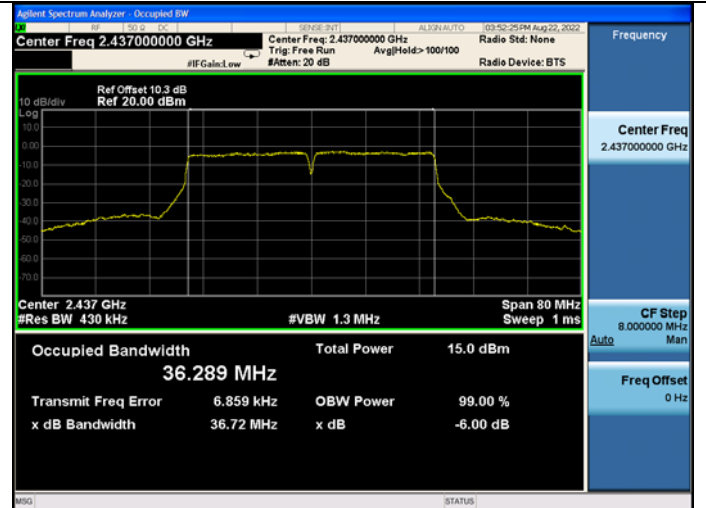
Test Mode: IEEE 802.11n HT40  
Test CH3: 2422MHz



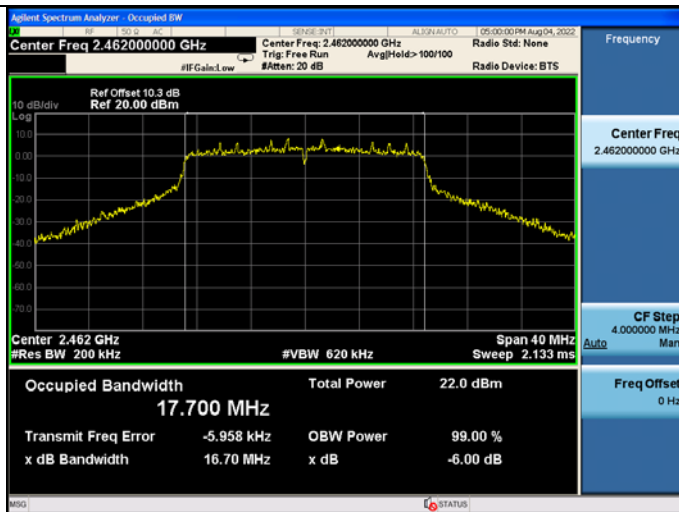
Test CH6: 2437MHz



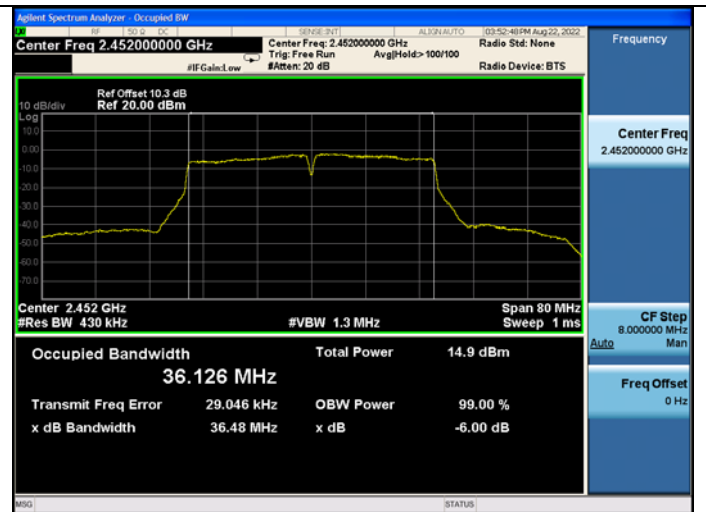
Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH9: 2452MHz



## 8. OUTPUT POWER TEST

### 8.1.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak output Power shall not exceed 1W(30dBm), As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level.

### 8.2.Test Procedure

- 1, Connected the EUT's antenna port to measure device by 10dB attenuator.
- 2, Use the test method described in ANSI C63.10 clause 11.9.2.2.2 Method AVGSA-1.
  - 1) Set span to at least 1.5 times the OBW.
  - 2) Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.
  - 3) Set VBW  $\geq [3 \times \text{RBW}]$ .
  - 4) Number of points in sweep  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
  - 5) Sweep time = auto.
  - 6) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
  - 7) If transmit duty cycle  $< 98\%$ , use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at the maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF intervals) or at duty cycle  $\geq 98\%$ , and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."
  - 8) Trace average at least 100 traces in power averaging (rms) mode.
  - 9) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

### 8.3. Test Results

EUT: Digital Media Player		
M/N: YY1301B1		
Test date: 2022-08-17	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Winter	Test site: RF site	Temperature: 22.4±0.6°C

Test Mode	CH	Power Setting	Output Power (dBm)	Limit (dBm)
11b	CH1	15	12.23	30
	CH6	15	11.44	
	CH11	15	11.89	
11g	CH1	15	14.25	30
	CH6	15	14.08	
	CH11	15	14.39	
11n HT20	CH1	15	13.98	30
	CH6	15	13.89	
	CH11	15	14.16	
11n HT40	CH3	15	14.39	30
	CH6	15	15.07	
	CH9	15	14.99	

Conclusion: Pass

Test Mode: IEEE 802.11b  
Test CH1: 2412MHz



Test Mode: IEEE 802.11g  
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH11: 2462MHz





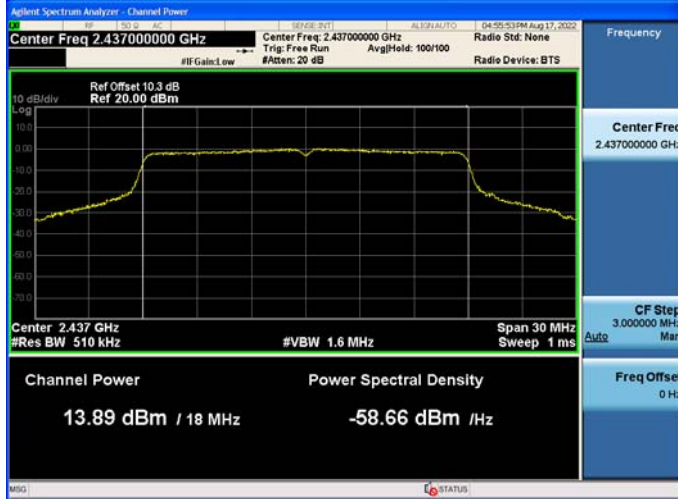
Test Mode: IEEE 802.11n HT20  
Test CH1: 2412MHz



Test Mode: IEEE 802.11n HT40  
Test CH3: 2422MHz



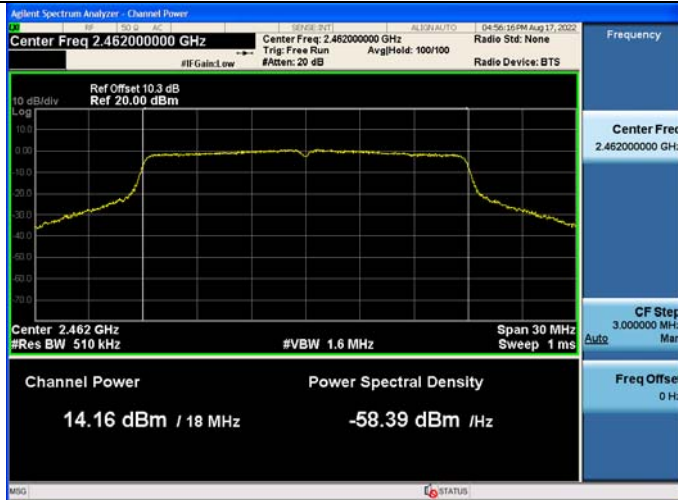
Test CH6: 2437MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH9: 2452MHz



## 9. POWER SPECTRAL DENSITY TEST

### 9.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,22	1 Year
2.	RF Cable	Mini-Circults	CBL-1M-SMSM+	No.4	Oct.11,21	1 Year

### 9.2. Limit

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

### 9.3. Test Procedure

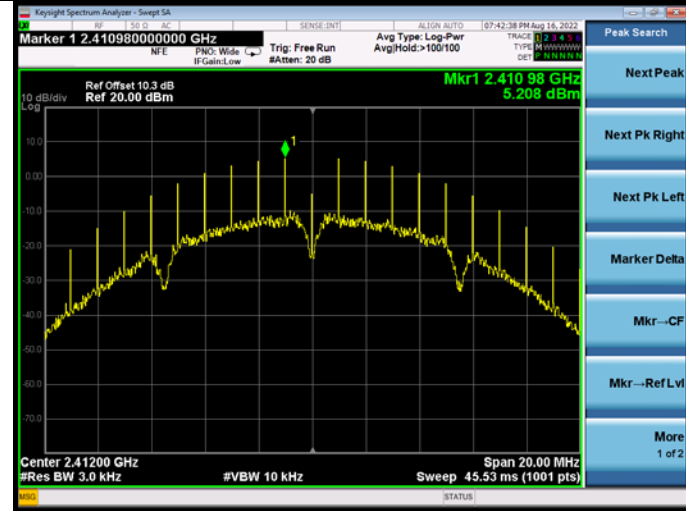
- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 DTS bandwidth.
- c) Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- d) Set the VBW  $\geq [3 \times \text{RBW}]$ .
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.

9.4. Test Results

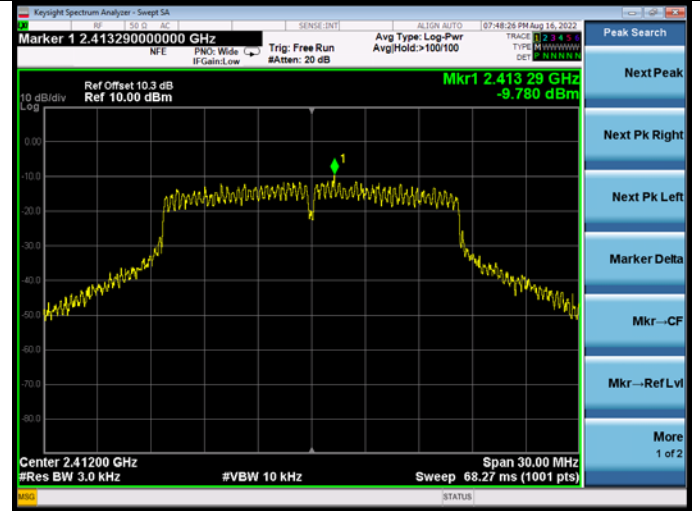
EUT: Digital Media Player		
M/N: YY1301B1		
Test date: 2022-08-16~21	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Winter	Test site: RF site	Temperature: 22.4±0.6°C

Test Mode	CH	Power Spectral Density (dBm/3KHz)	Limit (dBm/3KHz)
11b	CH1	5.208	8
	CH6	5.891	
	CH11	5.510	
11g	CH1	-9.780	8
	CH6	-9.576	
	CH11	-10.506	
11n HT20	CH1	-10.202	8
	CH6	-11.580	
	CH11	-10.681	
11n HT40	CH3	-13.772	8
	CH6	-14.420	
	CH9	-13.989	
Conclusion: Pass			

Test Mode: IEEE 802.11b  
Test CH1: 2412MHz



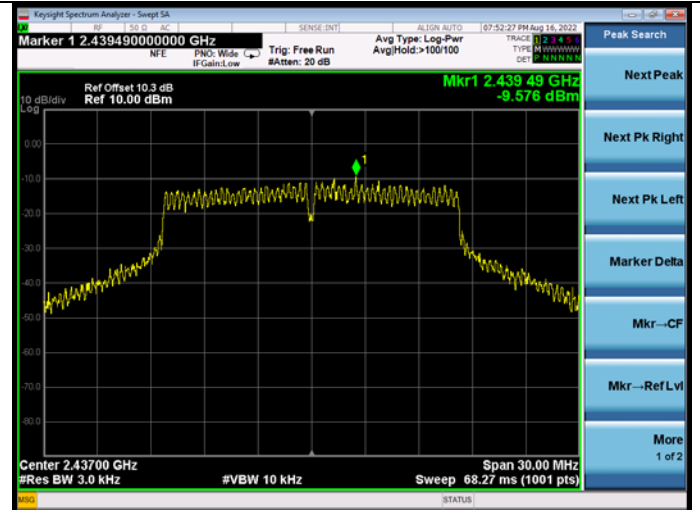
Test Mode: IEEE 802.11g  
Test CH1: 2412MHz



Test CH6: 2437MHz



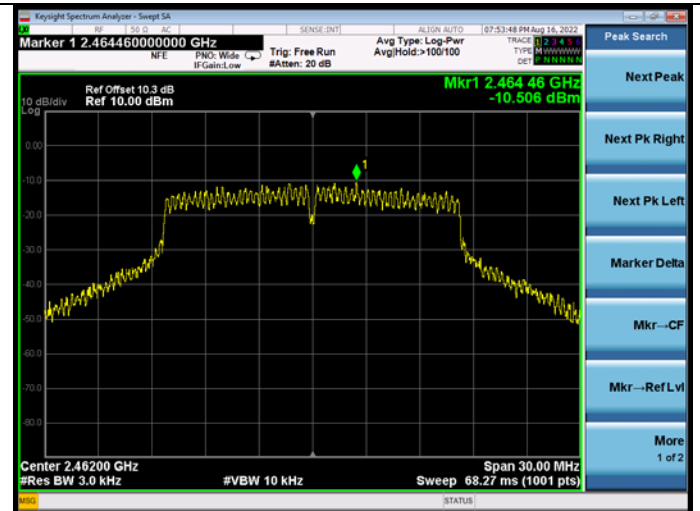
Test CH6: 2437MHz



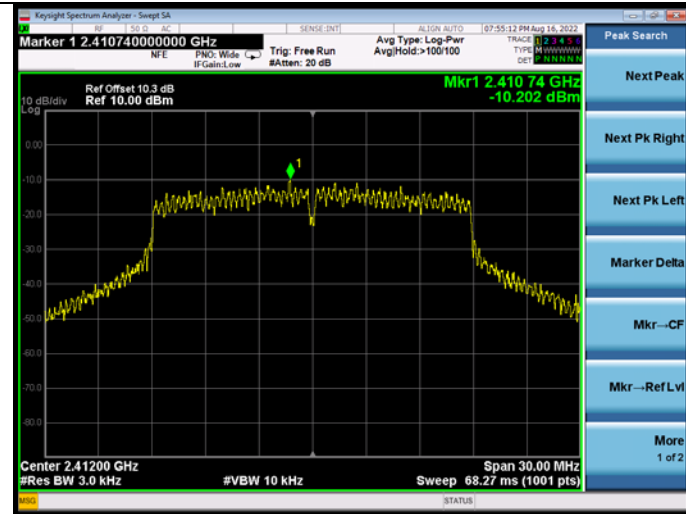
Test CH11: 2462MHz



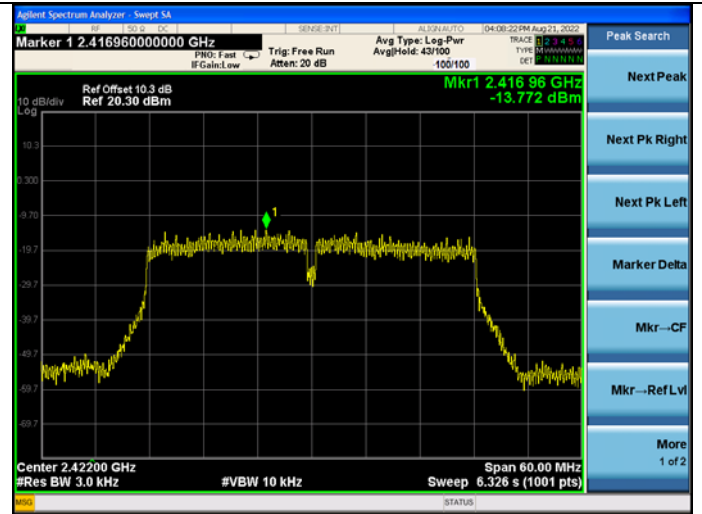
Test CH11: 2462MHz



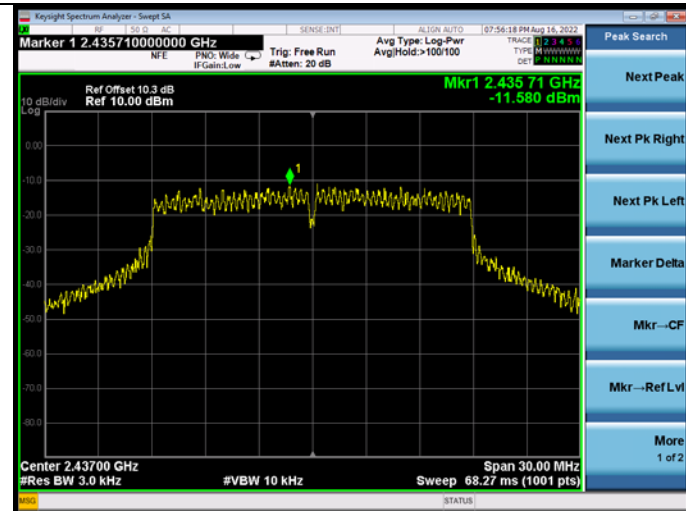
Test Mode: IEEE 802.11n HT20  
Test CH1: 2412MHz



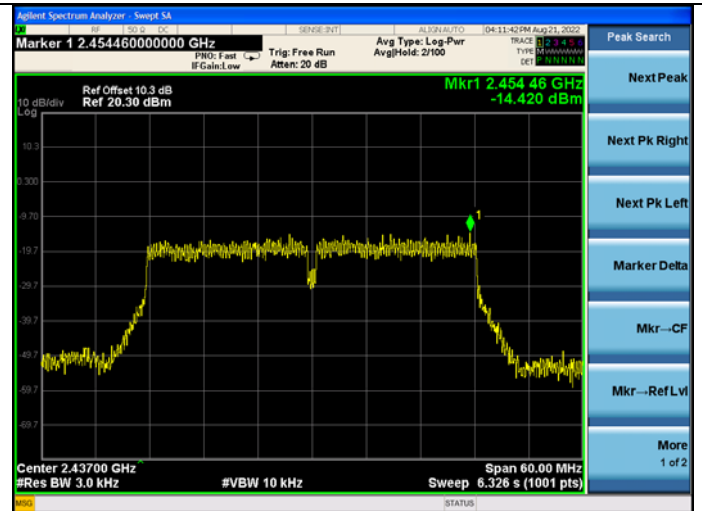
Test Mode: IEEE 802.11n HT40  
Test CH3: 2422MHz



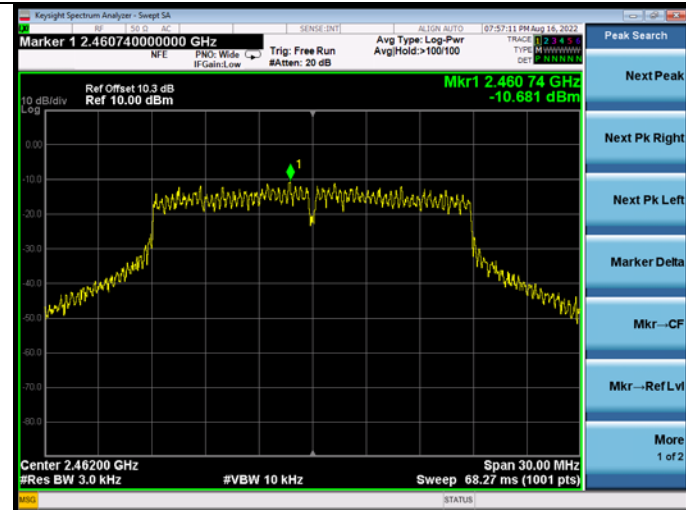
Test CH6: 2437MHz



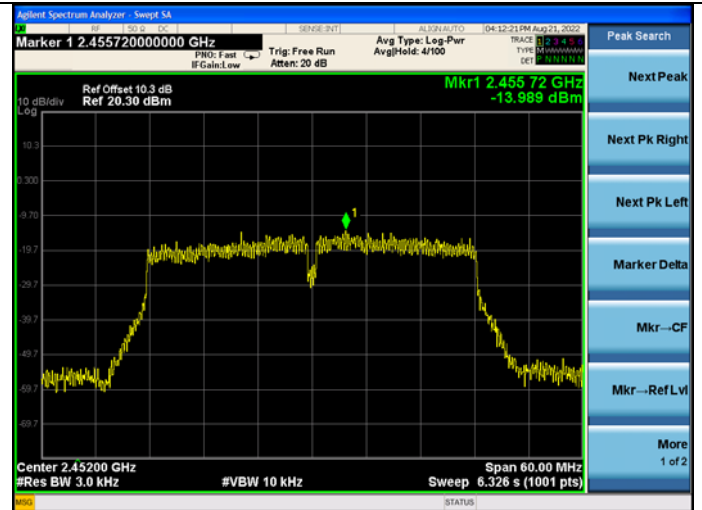
Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH9: 2452MHz



## 10. ANTENNA REQUIREMENT

### 10.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 10.2. Antenna Connected Construction

The antennas used for this product are PIFA antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is DTS Band: -0.3dBi.

**11. DEVIATION TO TEST SPECIFICATIONS**

[NONE]

..... **THE END** .....