

6. BAND EDGE COMPLIANCE TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Sep.08,18	1Year
2.	Amplifier	HP	8449B	3008A02495	Apr.23.18	1 Year
3.	Horn Antenna	ETS	3115	9510-4580	Dec.01,17	1 Year
4.	RF Cable	Hubersuhner	RF Cable	No.5	Oct.15,17	1 Year

6.2. Limit

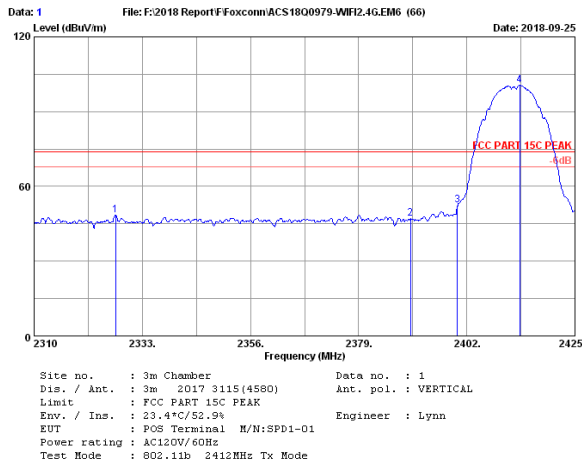
All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3. Test Procedure

1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

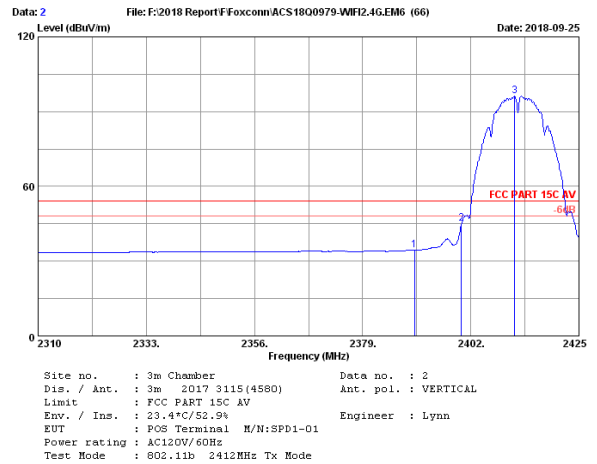
6.4. Test Results

Pass (The testing data was attached in the next pages.)



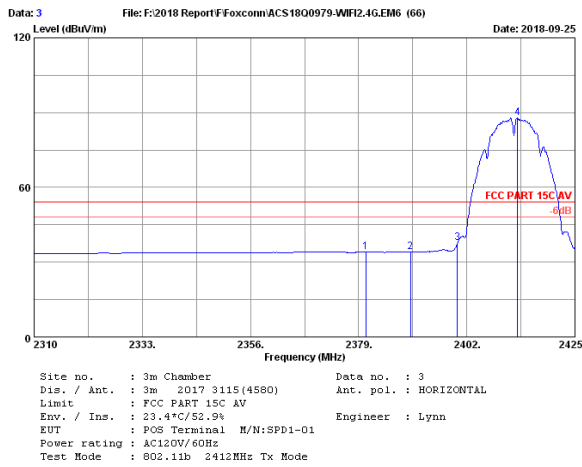
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2327.37	27.44	10.14	43.53	32.63	48.48	74.00	25.52	Peak
2	2390.00	27.79	10.28	41.46	32.56	46.97	74.00	27.03	Peak
3	2400.00	27.79	10.28	47.02	32.56	52.53	74.00	21.47	Peak
4	2413.27	27.87	10.31	94.90	32.53	100.55	74.00	-26.55	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.



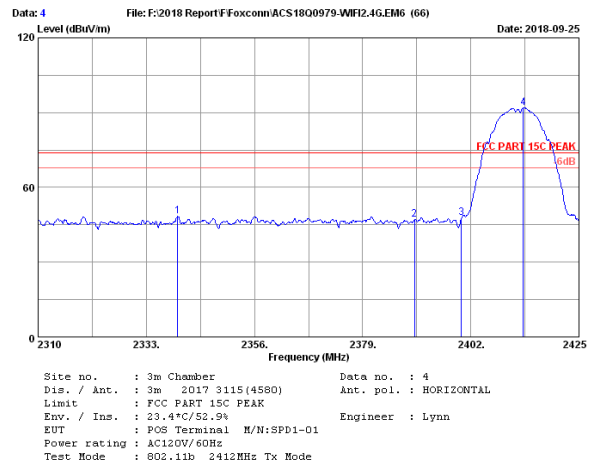
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	28.91	32.56	34.42	54.00	19.58	Average
2	2400.00	27.79	10.28	39.59	32.56	45.10	54.00	8.90	Average
3	2411.32	27.87	10.31	90.71	32.53	96.36	54.00	-42.36	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.



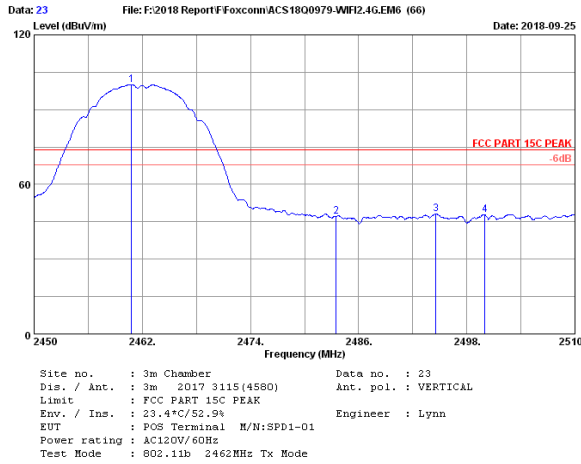
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2380.50	27.70	10.25	28.69	32.58	34.06	54.00	19.94	Average
2	2390.00	27.79	10.28	28.47	32.56	33.98	54.00	20.02	Average
3	2400.00	27.79	10.28	32.28	32.56	37.79	54.00	16.21	Average
4	2412.81	27.87	10.31	82.31	32.53	87.96	54.00	-33.96	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.



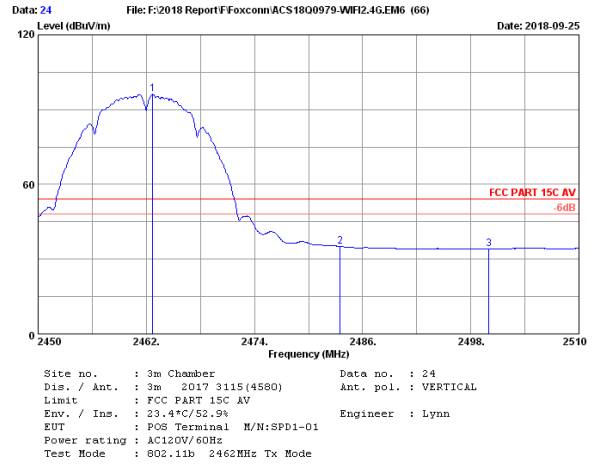
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2339.67	27.53	10.18	43.26	32.61	48.36	74.00	25.64	Peak
2	2390.00	27.79	10.28	41.49	32.56	47.00	74.00	27.00	Peak
3	2400.00	27.79	10.28	42.41	32.56	47.92	74.00	26.08	Peak
4	2413.16	27.87	10.31	86.37	32.53	92.02	74.00	-18.02	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.



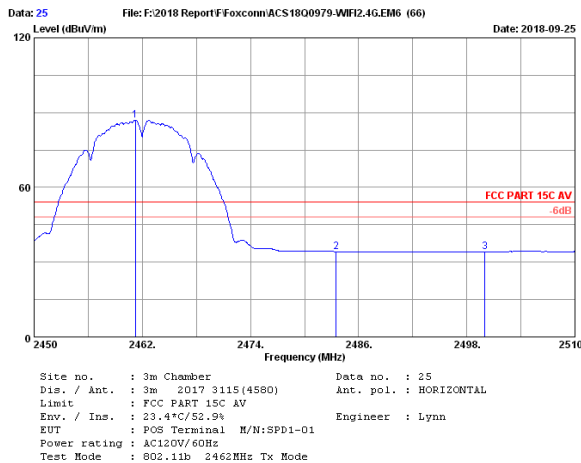
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.80	28.13	10.42	94.04	32.51	100.08	74.00	-26.08	Peak
2	2483.50	28.21	10.45	40.98	32.48	47.16	74.00	26.84	Peak
3	2494.58	28.30	10.48	41.72	32.46	48.04	74.00	25.96	Peak
4	2500.00	28.30	10.48	41.46	32.46	47.78	74.00	26.22	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.



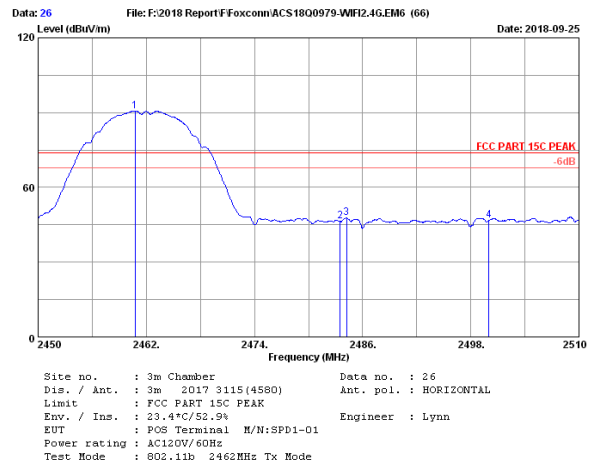
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.72	28.13	10.42	90.07	32.51	96.11	54.00	-42.11	Average
2	2483.50	28.21	10.45	28.96	32.48	35.14	54.00	18.86	Average
3	2500.00	28.30	10.48	27.91	32.46	34.23	54.00	19.77	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.



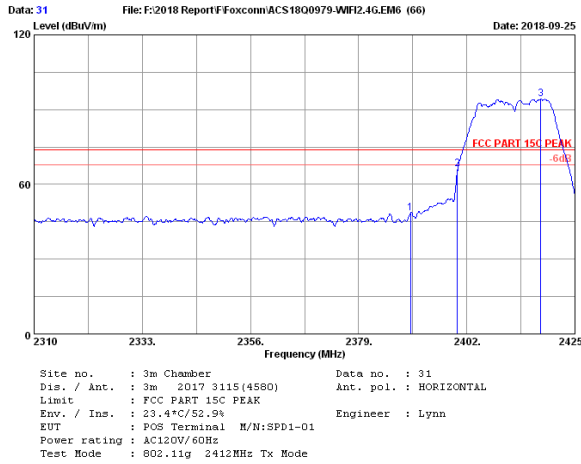
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.22	28.13	10.42	81.02	32.51	87.06	54.00	-33.06	Average
2	2483.50	28.21	10.45	28.06	32.48	34.24	54.00	19.76	Average
3	2500.00	28.30	10.48	27.87	32.46	34.19	54.00	19.81	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.



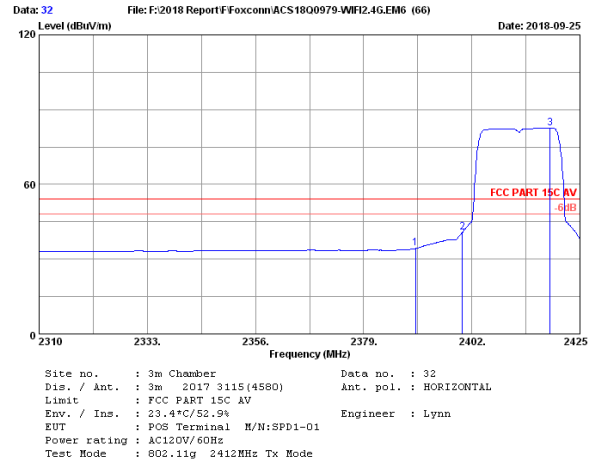
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.74	28.13	10.42	84.63	32.51	90.67	74.00	-16.67	Peak
2	2483.50	28.21	10.45	40.31	32.48	46.49	74.00	27.51	Peak
3	2484.20	28.21	10.45	41.50	32.48	47.68	74.00	26.32	Peak
4	2500.00	28.30	10.48	40.42	32.46	46.74	74.00	27.26	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.



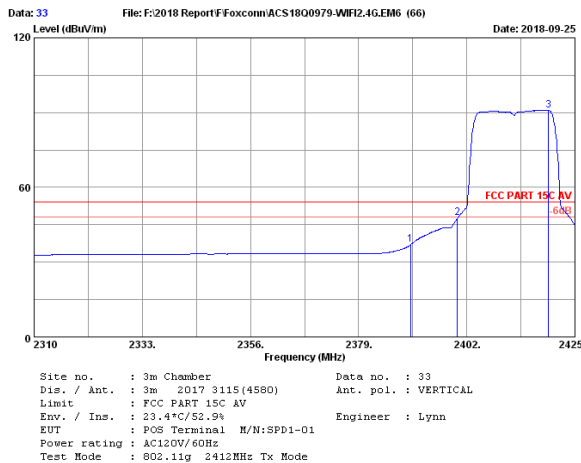
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	43.08	32.56	48.59	74.00	25.41	Peak
2	2400.00	27.79	10.28	60.53	32.56	66.04	74.00	7.96	Peak
3	2417.76	27.87	10.31	88.51	32.53	94.16	74.00	-20.16	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.



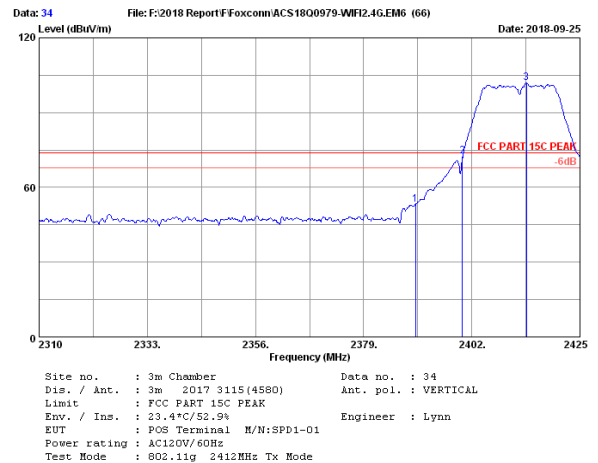
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1	2390.00	27.79	10.28	28.75	32.56	34.26	54.00	19.74	Average
2	2400.00	27.79	10.28	35.43	32.56	40.94	54.00	13.06	Average
3	2418.68	27.87	10.31	77.04	32.53	82.69	54.00	-28.69	Average

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.



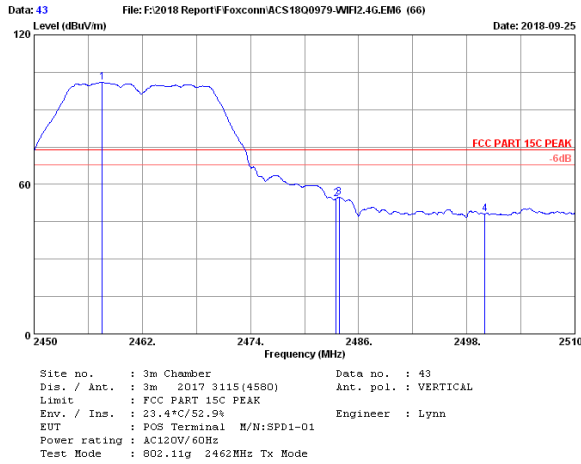
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	31.53	32.56	37.04	54.00	16.96	Average
2	2400.00	27.79	10.28	42.15	32.56	47.66	54.00	6.34	Average
3	2419.37	27.87	10.31	85.29	32.53	90.94	54.00	-36.94	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.



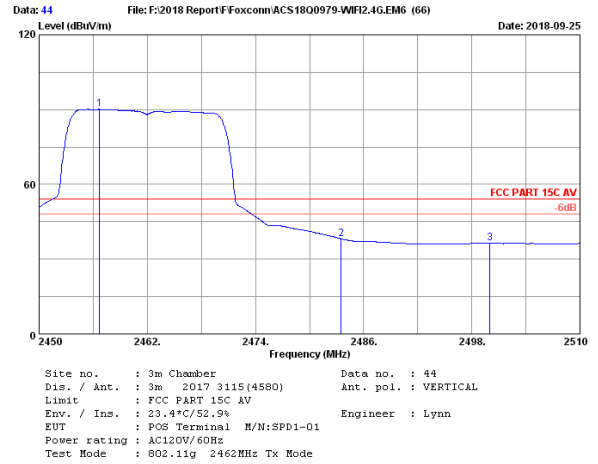
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	47.61	32.56	53.12	74.00	20.88	Peak
2	2400.00	27.79	10.28	66.96	32.56	72.47	74.00	1.53	Peak
3	2419.62	27.87	10.31	96.27	32.53	101.92	74.00	-27.92	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.



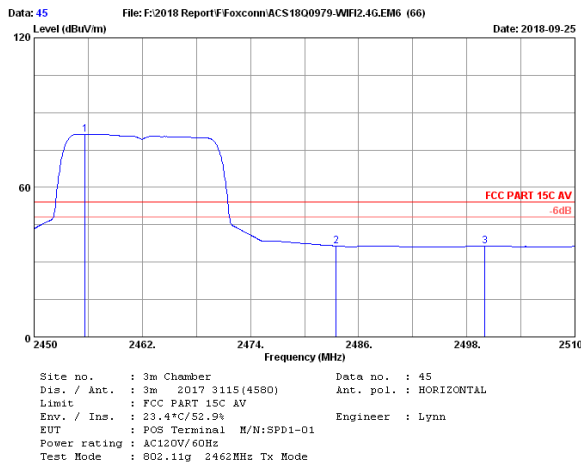
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.56	28.13	10.42	94.87	32.51	100.91	74.00	-26.91	Average
2	2483.50	28.21	10.45	48.02	32.48	54.20	74.00	19.80	Average
3	2483.84	28.21	10.45	48.55	32.48	54.73	74.00	19.27	Average
4	2500.00	28.30	10.48	41.82	32.46	48.14	74.00	25.86	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.



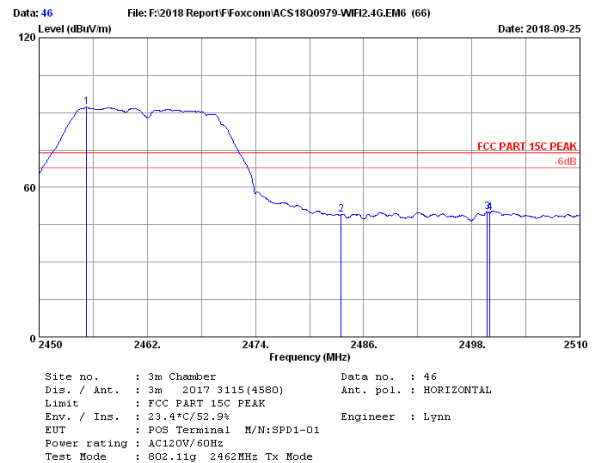
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2456.72	28.13	10.42	84.07	32.51	90.11	54.00	-36.11	Average
2	2483.50	28.21	10.45	31.99	32.48	39.17	54.00	15.03	Average
3	2500.00	28.30	10.48	30.10	32.46	36.42	54.00	17.58	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.



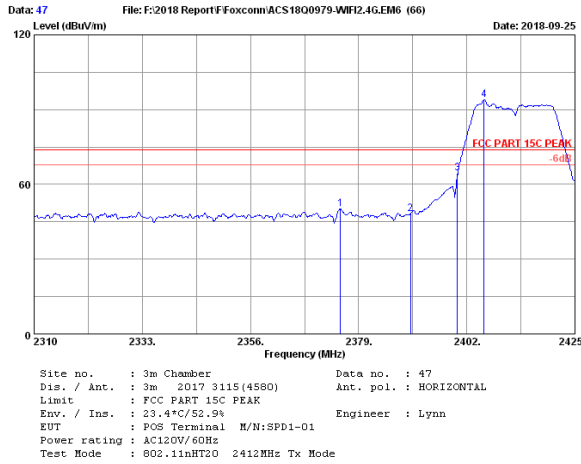
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.64	28.13	10.42	75.28	32.51	81.32	54.00	-27.32	Average
2	2483.50	28.21	10.45	30.33	32.48	36.51	54.00	17.49	Average
3	2500.00	28.30	10.48	30.08	32.46	36.40	54.00	17.60	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.



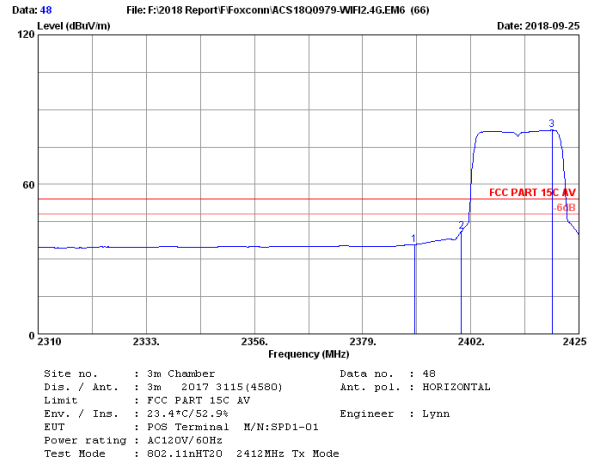
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.28	28.13	10.42	86.10	32.51	92.14	74.00	-18.14	Peak
2	2483.50	28.21	10.45	42.84	32.48	49.02	74.00	24.98	Peak
3	2499.74	28.30	10.48	43.82	32.46	50.14	74.00	23.86	Peak
4	2500.00	28.30	10.48	43.36	32.46	49.68	74.00	24.32	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.



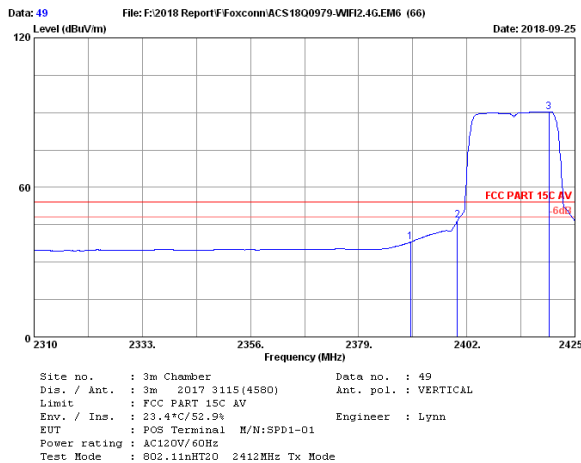
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2375.09	27.70	10.25	44.67	32.58	50.04	74.00	23.96	Peak
2	2390.00	27.79	10.28	42.72	32.56	48.23	74.00	25.77	Peak
3	2400.00	27.79	10.28	58.92	32.56	64.43	74.00	9.57	Peak
4	2405.68	27.87	10.31	88.25	32.56	93.87	74.00	-19.87	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.



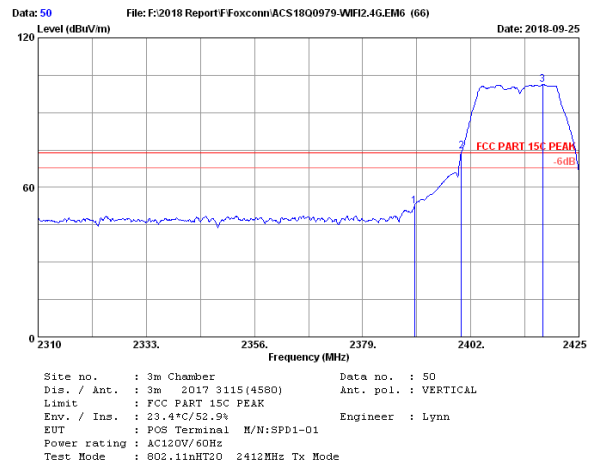
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	30.34	32.56	35.85	54.00	18.15	Average
2	2400.00	27.79	10.28	35.75	32.56	41.26	54.00	12.74	Average
3	2419.25	27.87	10.31	76.12	32.53	81.77	54.00	-27.77	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.



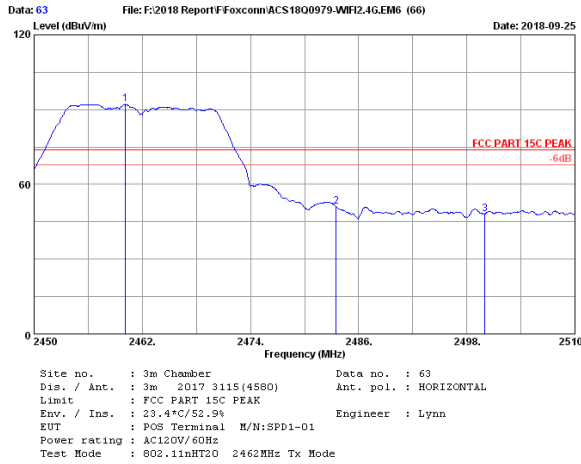
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	32.54	32.56	38.05	54.00	15.95	Average
2	2400.00	27.79	10.28	41.16	32.56	46.67	54.00	7.33	Average
3	2419.48	27.87	10.31	84.77	32.53	90.42	54.00	-36.42	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.



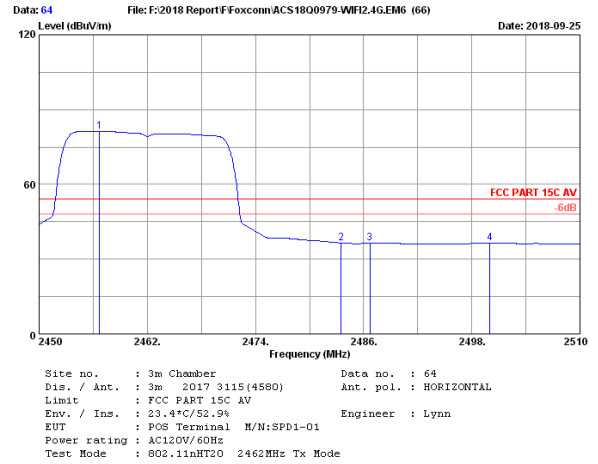
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.79	10.28	46.98	32.56	52.49	74.00	21.51	Peak
2	2400.00	27.79	10.28	69.09	32.56	74.60	74.00	-0.60	Peak
3	2417.30	27.87	10.31	95.66	32.53	101.31	74.00	-27.31	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.



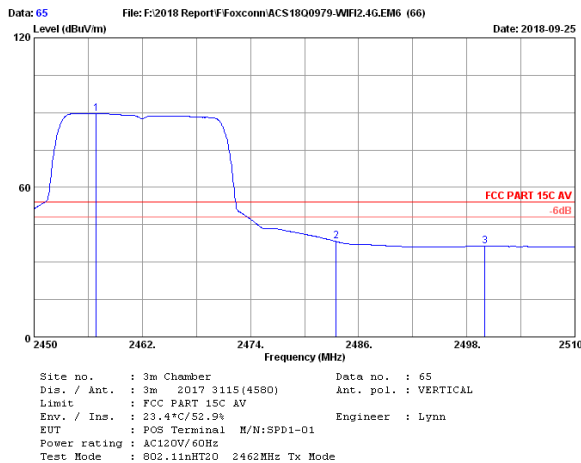
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.14	28.13	10.42	86.06	32.51	92.10	74.00	-18.10	Peak
2	2483.50	28.21	10.45	44.94	32.48	51.12	74.00	22.88	Peak
3	2500.00	28.30	10.48	41.72	32.46	48.04	74.00	25.96	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.



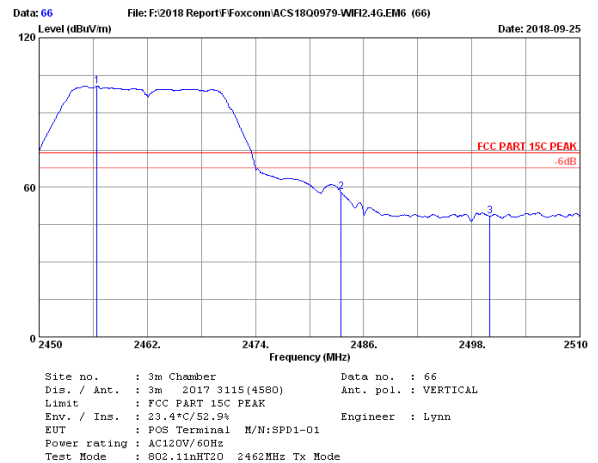
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2456.72	28.13	10.42	75.22	32.51	81.26	54.00	-27.26	Average
2	2483.50	28.21	10.45	30.32	32.48	36.50	54.00	17.50	Average
3	2486.72	28.21	10.45	30.36	32.48	36.54	54.00	17.46	Average
4	2500.00	28.30	10.48	30.08	32.46	36.40	54.00	17.60	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	2456.90	28.13	10.42	83.63	32.51	89.67	54.00	-35.67	Average
2	2483.50	28.21	10.45	32.10	32.48	38.28	54.00	15.72	Average
3	2500.00	28.30	10.48	30.06	32.46	36.38	54.00	17.62	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	2456.42	28.13	10.42	94.70	32.51	100.74	74.00	-26.74	Peak
2	2483.50	28.21	10.45	51.95	32.48	58.13	74.00	15.87	Peak
3	2500.00	28.30	10.48	41.99	32.46	48.31	74.00	25.69	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 Bandwidth Test

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Sep.08,18	1 Year
2.	Attenuator (20dB)	Agilent	8491B	MY39262165	Oct.14,17	1 Year
3.	RF Cable	Hubersuhner	141	NO.1	Oct.14,17	1 Year

7.2. Limit

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

7.3. Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.4. Test Results

EUT: POS Terminal		
M/N: SPD1-01		
Test date: 2018-09-18	Pressure: 102.1±1.0 kpa	Humidity: 51.1±3.0%
Tested by: Lynn	Test site: RF site	Temperature: 22.8±0.6 °C

Test Mode	CH	6dB bandwidth (MHz)		Limit (kHz)
		ANT0	ANT1	
11b	CH1	8.091	8.077	≥ 500
	CH6	8.090	8.092	≥ 500
	CH11	8.554	8.086	≥ 500
11g	CH1	16.38	16.38	≥ 500
	CH6	16.37	16.37	≥ 500
	CH11	16.37	16.37	≥ 500
11n HT20	CH1	17.60	17.59	≥ 500
	CH6	17.59	17.59	≥ 500
	CH11	17.61	17.59	≥ 500
Conclusion : PASS				

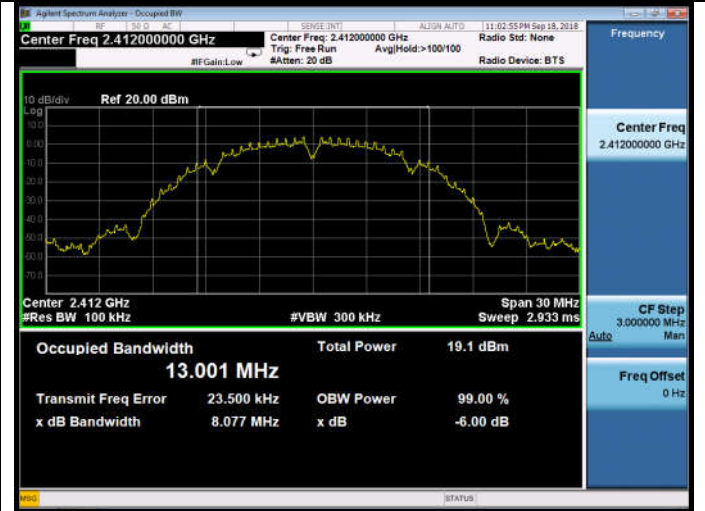
ANT0:

Test Mode: IEEE 802.11b
Test CH1: 2412MHz



ANT1:

Test Mode: IEEE 802.11b
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

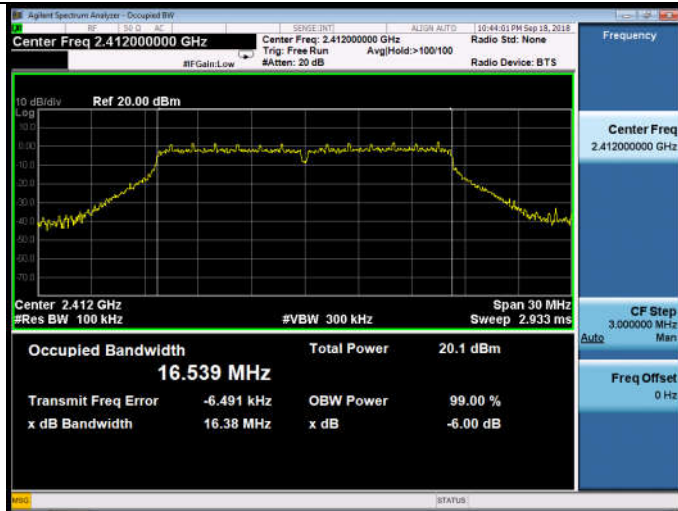


Test CH11: 2462MHz



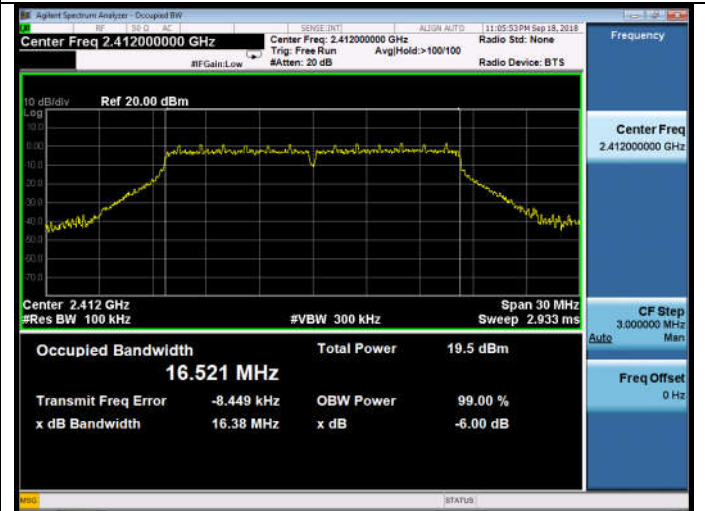
ANT0:

Test Mode: IEEE 802.11g
Test CH1: 2412MHz

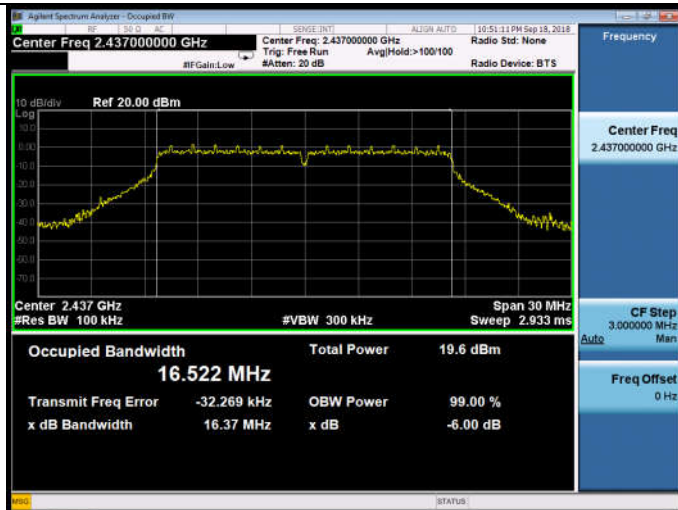


ANT1:

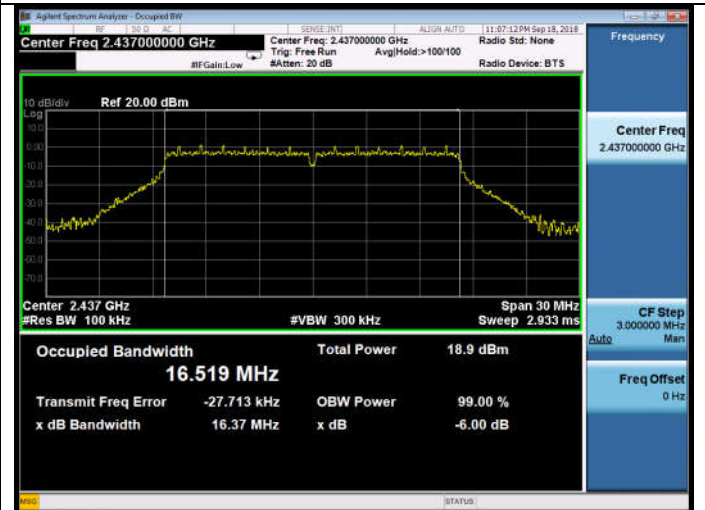
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



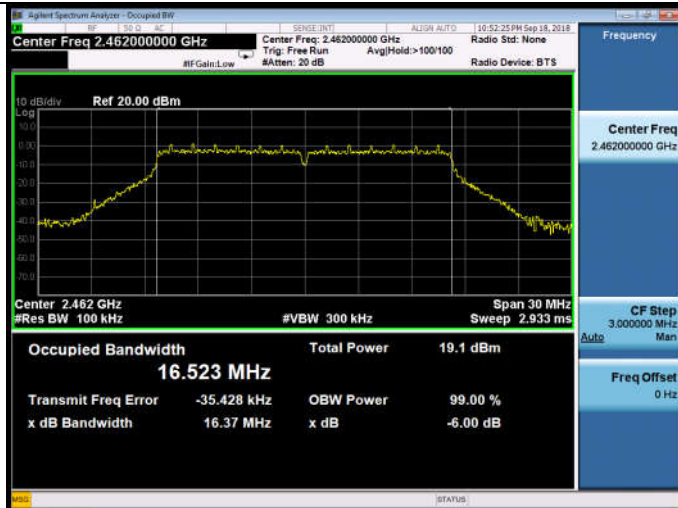
Test CH6: 2437MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

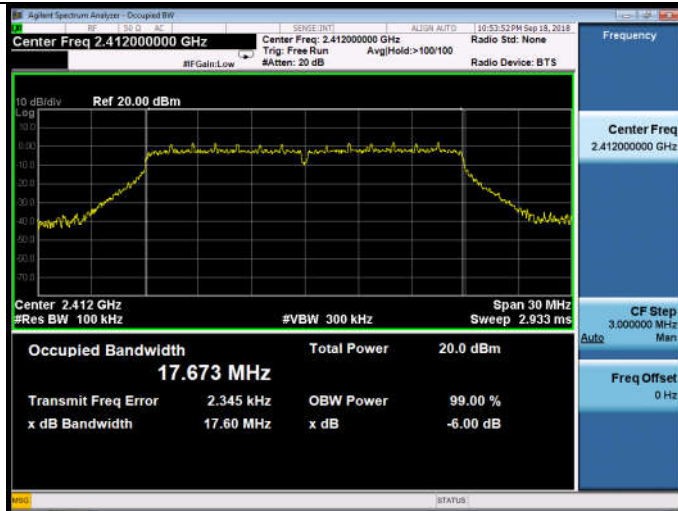


Test CH11: 2462MHz



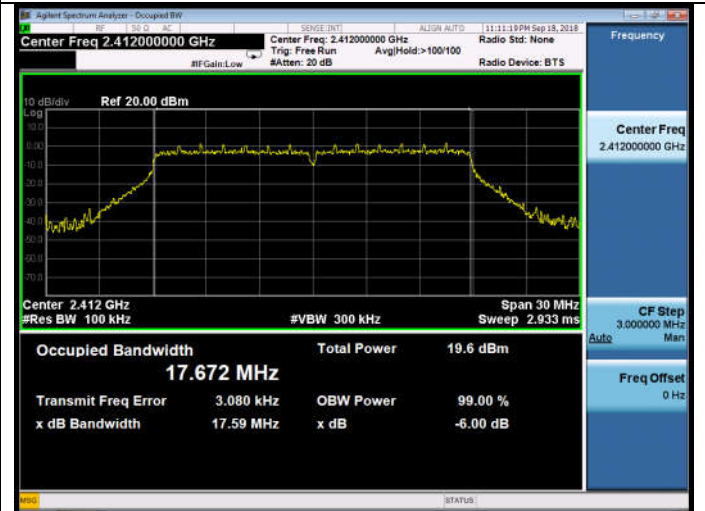
ANT0:

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

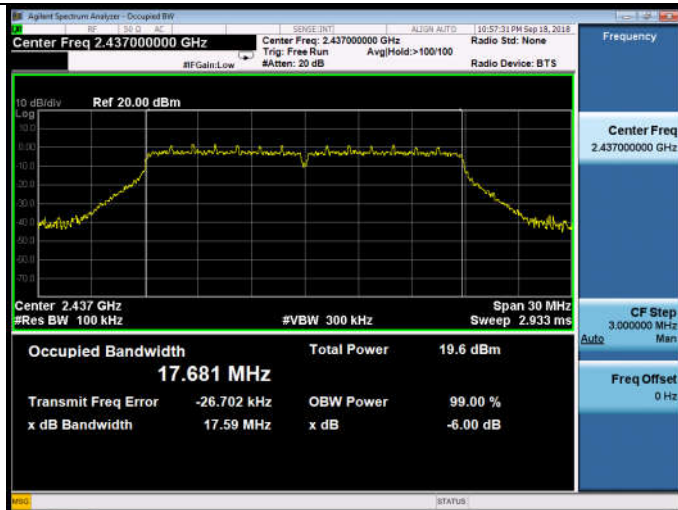


ANT1:

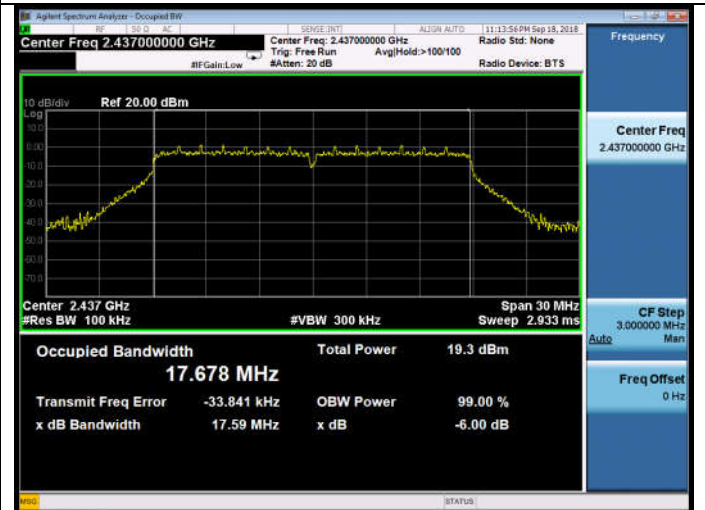
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



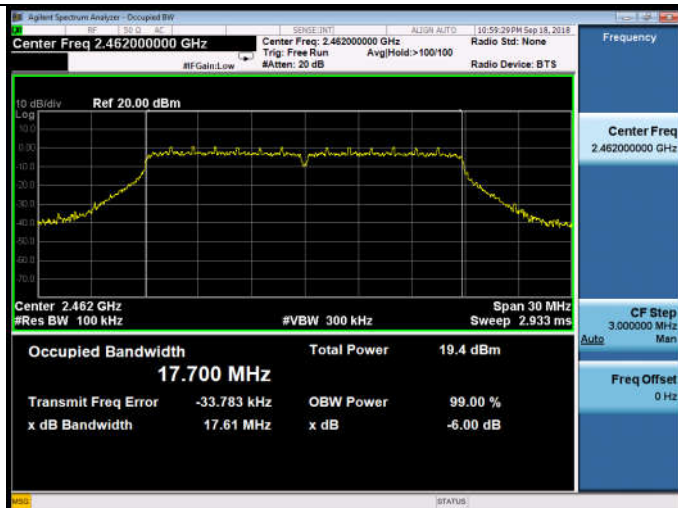
Test CH6: 2437MHz



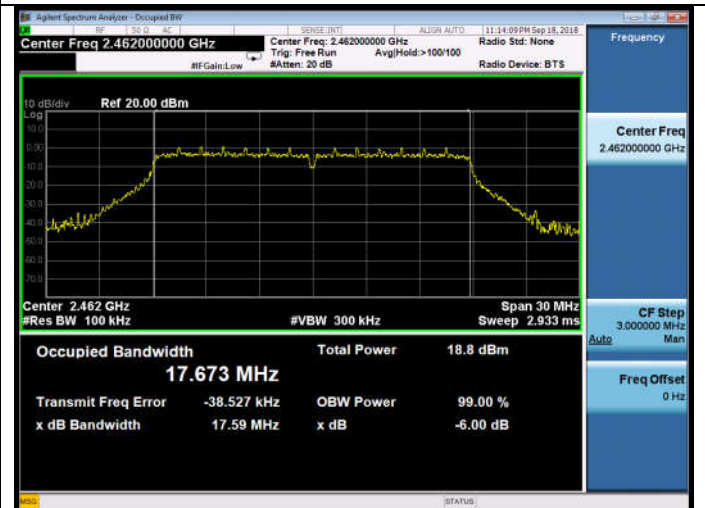
Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH11: 2462MHz



8. OUTPUT POWER TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Sep.08,18	1 Year
2.	Power meter	Anritsu	ML2487A	6K00002472	Apr.23,18	1 Year
3.	Power sensor	Anritsu	MA2491A	033005	Apr.23,18	1 Year
4.	Attenuator (20dB)	Agilent	8491B	MY39262165	Oct.14,17	1 Year
5.	RF Cable	Hubersuhner	141	NO.1	Oct.14,17	1 Year

8.2. 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.

8.3. Test Procedure

- 1, Connected the EUT's antenna port to measure device by 20dB attenuator.
- 2, Use the test method described in KDB 558074 clause 9.2.2.
 - 1) Set span to at least 1.5 OBW.
 - 2) Set RBW = 1 % to 5 % of the OBW, not to exceed 1 MHz.
 - 3) Set VBW \geq 3 RBW.
 - 4) Number of points in sweep \geq 2 span / RBW.
 - 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 maximum power control level for the entire 558074 D01 DTS Meas Guidance v04 Page 8 duration of every sweep. If the EUT transmits continuously 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 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.

8.4. Test Results

EUT: POS Terminal		
M/N: SPD1-01		
Test date: 2018-09-18	Pressure: 102.1±1.0 kpa	Humidity: 51.1±3.0%
Tested by: Lynn	Test site: RF site	Temperature: 22.8±0.6 °C

Test Mode	CH	output Power (dBm)		Limit (dBm)
		ANT0	ANT1	
11b	CH1	12.46	12.24	30
	CH6	12.50	12.49	30
	CH11	12.49	12.46	30
11g	CH1	13.01	12.65	30
	CH6	12.71	12.35	30
	CH11	12.19	11.86	30
11n HT20	CH1	13.06	12.82	30
	CH6	12.74	12.47	30
	CH11	12.08	11.98	30

Conclusion: PASS

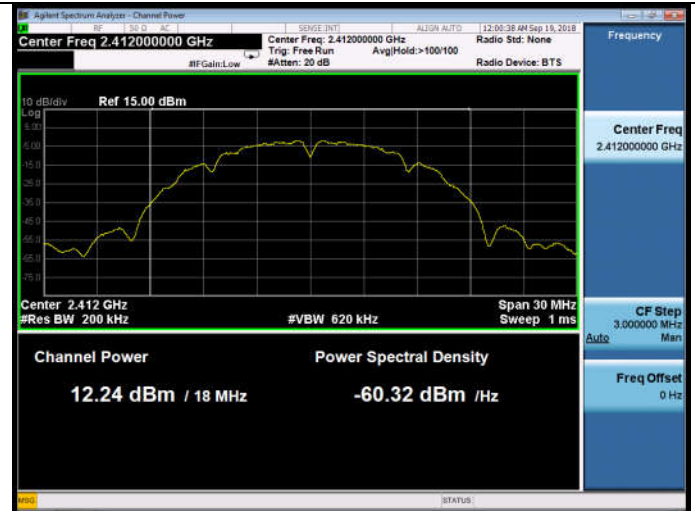
ANT0:

Test Mode: IEEE 802.11b
Test CH1: 2412MHz



ANT1:

Test Mode: IEEE 802.11b
Test CH1: 2412MHz



Test CH6: 2437MHz



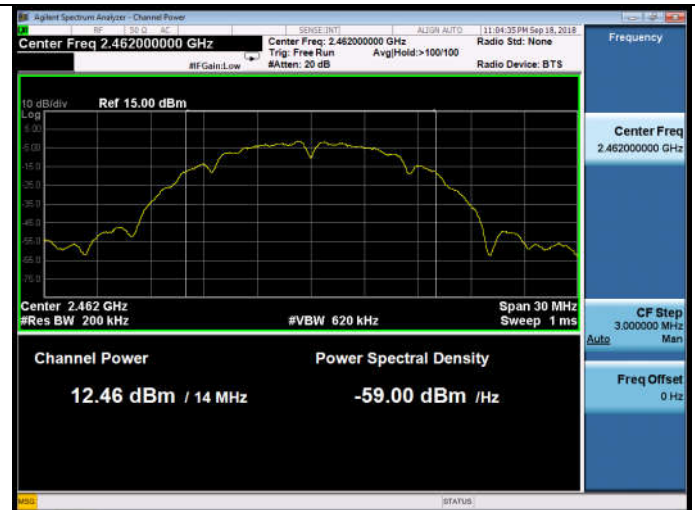
Test CH6: 2437MHz



Test CH11: 2462MHz

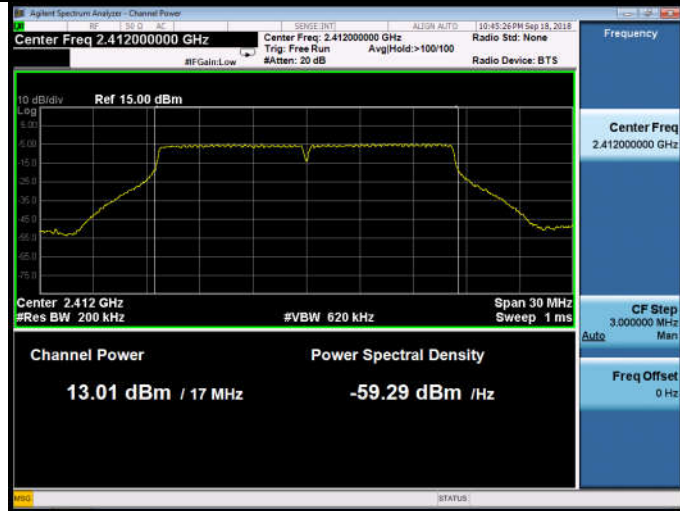


Test CH11: 2462MHz



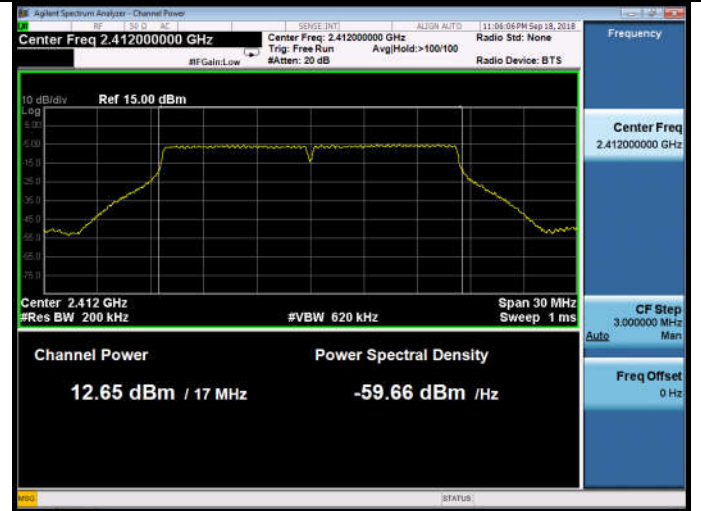
ANT0:

Test Mode: IEEE 802.11g
Test CH1: 2412MHz

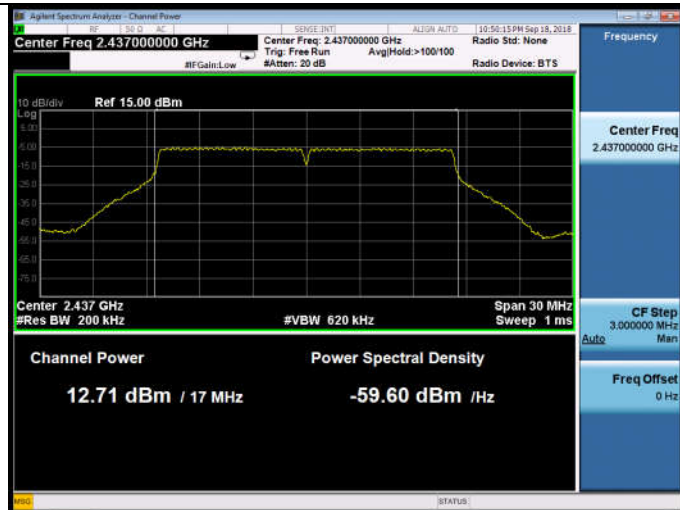


ANT1:

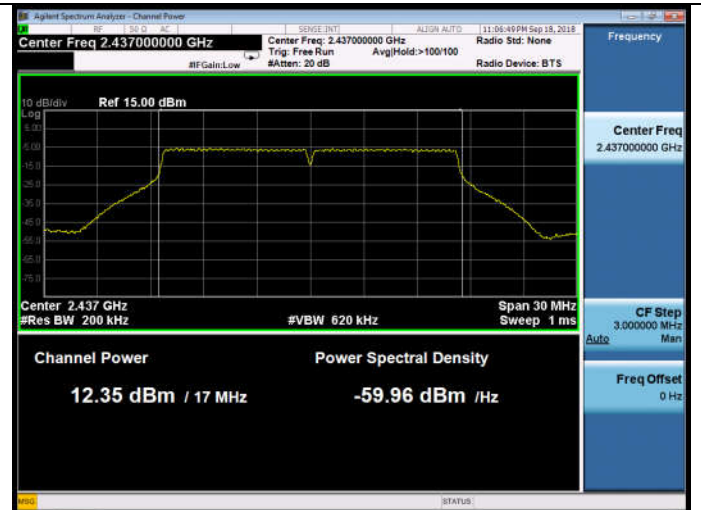
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



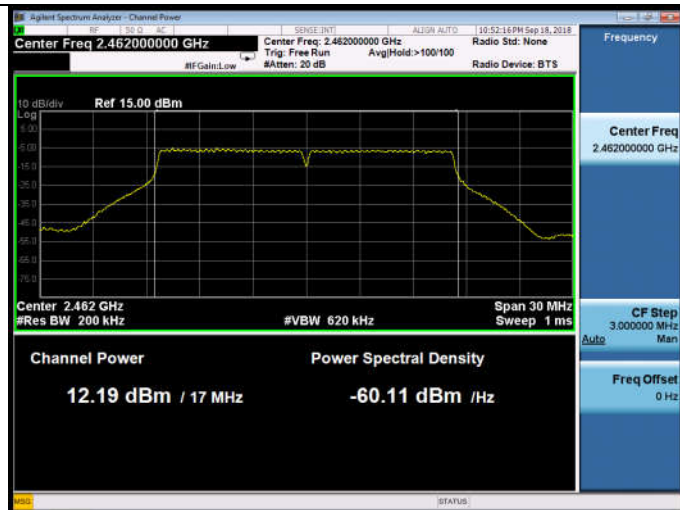
Test CH6: 2437MHz



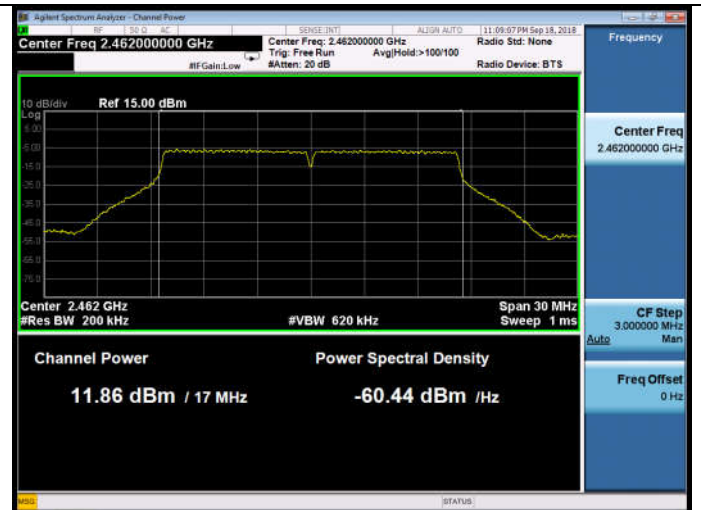
Test CH6: 2437MHz



Test CH11: 2462MHz

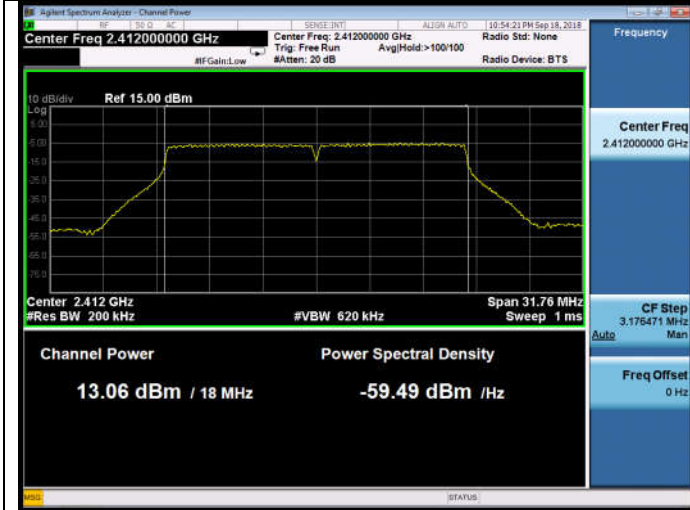


Test CH11: 2462MHz



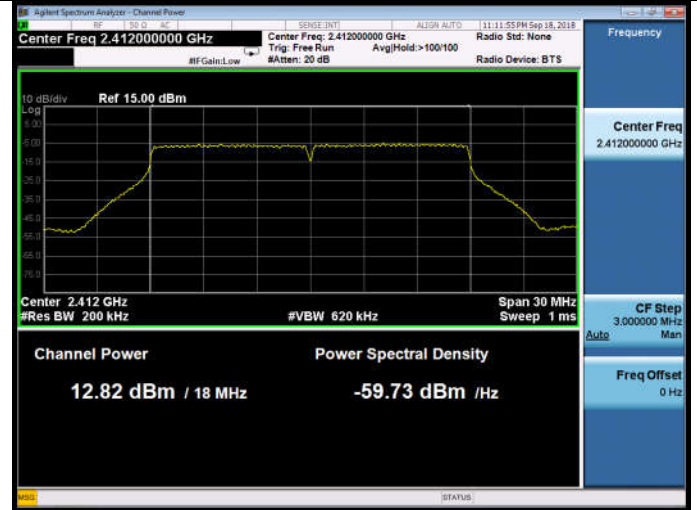
ANT0:

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

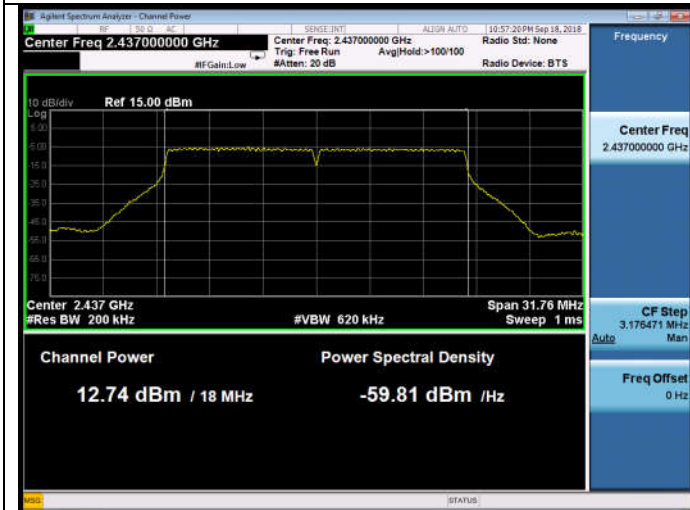


ANT1:

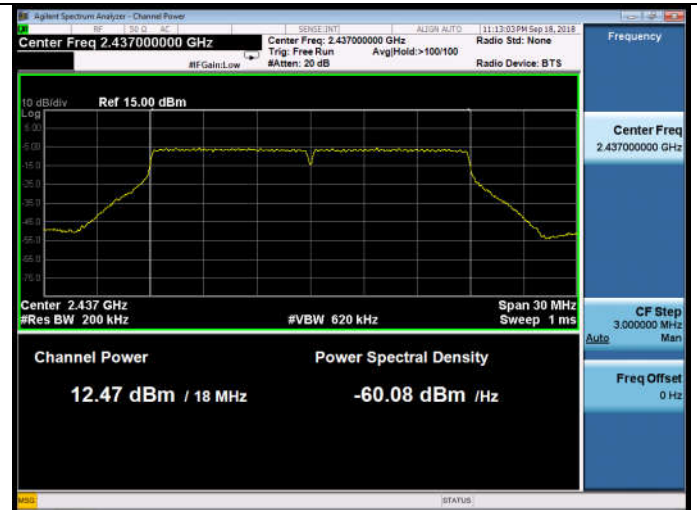
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



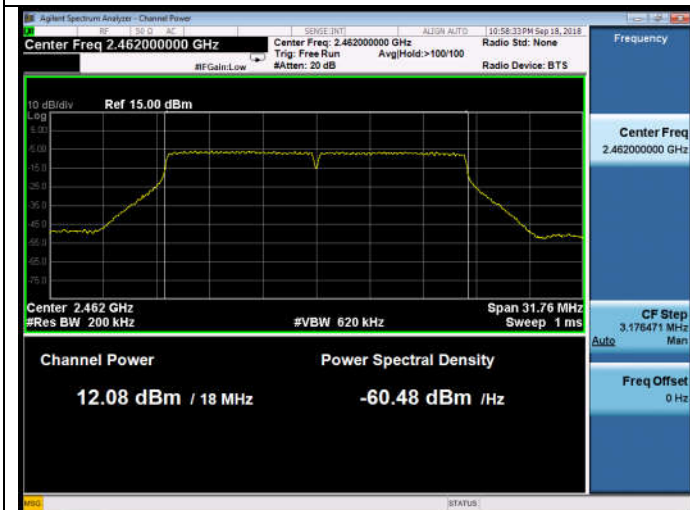
Test CH6: 2437MHz



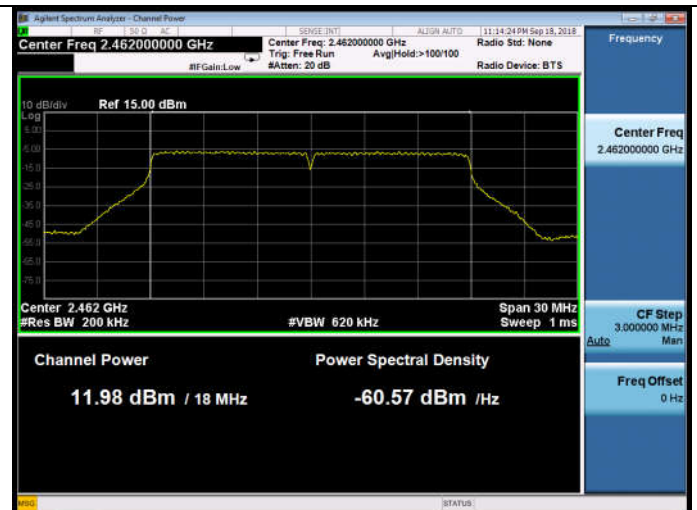
Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH11: 2462MHz



9. POWER SPECTRAL DENSITY TEST

9.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Sep.08,18	1 Year
2.	Attenuator (20dB)	Agilent	8491B	MY39262165	Oct.14,17	1 Year
3.	RF Cable	Hubersuhner	RF Cable	No.5	Oct.15,17	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: POS Terminal		
M/N: SPD1-01		
Test date: 2018-09-18	Pressure: 102.1±1.0 kpa	Humidity: 51.1±3.0%
Tested by: Lynn	Test site: RF site	Temperature: 22.8±0.6 °C

Test Mode	CH	Power Density (dBm/3kHz)		Limit (dBm/3kHz)
		ANT0	ANT1	
11b	CH1	-9.321	-9.510	8
	CH6	-9.299	-8.940	8
	CH11	-8.762	-8.309	8
11g	CH1	-10.418	-11.313	8
	CH6	-12.061	-11.637	8
	CH11	-11.945	-12.396	8
11n HT20	CH1	-11.113	-10.135	8
	CH6	-11.471	-10.809	8
	CH11	-11.642	-12.502	8
Conclusion: PASS				

ANT0:

Test Mode: IEEE 802.11b
Test CH1: 2412MHz



ANT1:

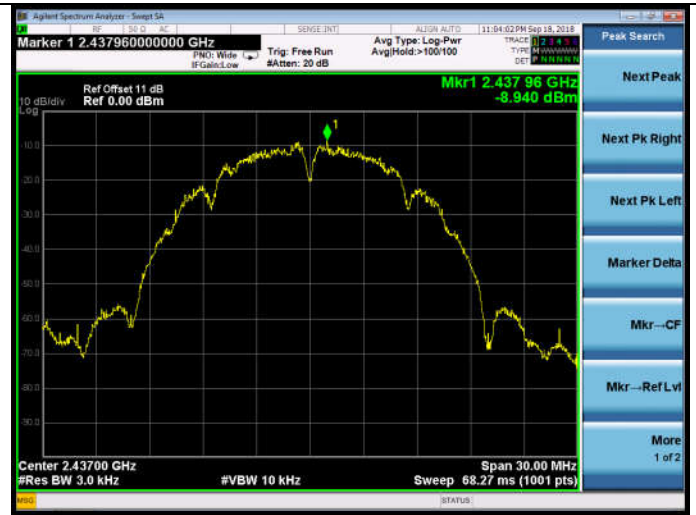
Test Mode: IEEE 802.11b
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

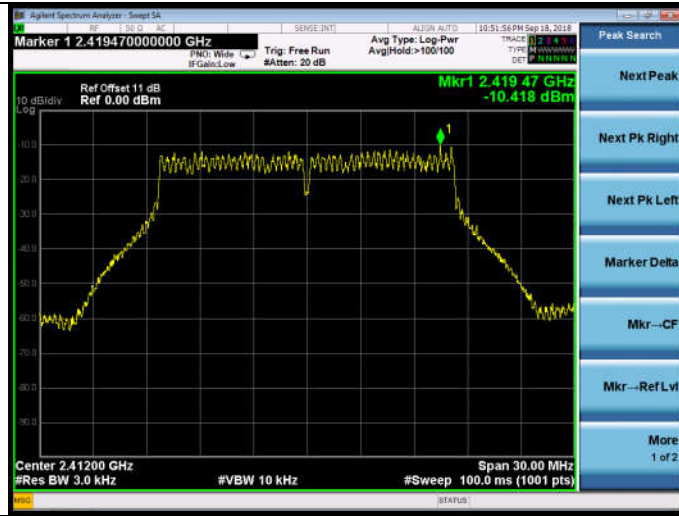


Test CH11: 2462MHz



ANT0:

Test Mode: IEEE 802.11g
Test CH1: 2412MHz

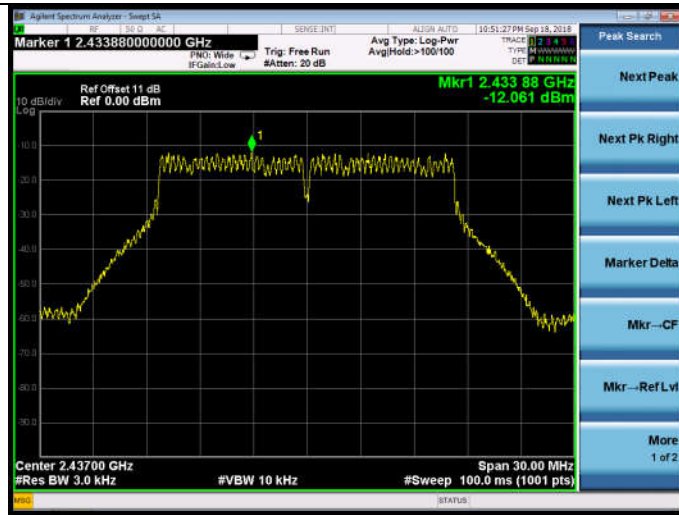


ANT1:

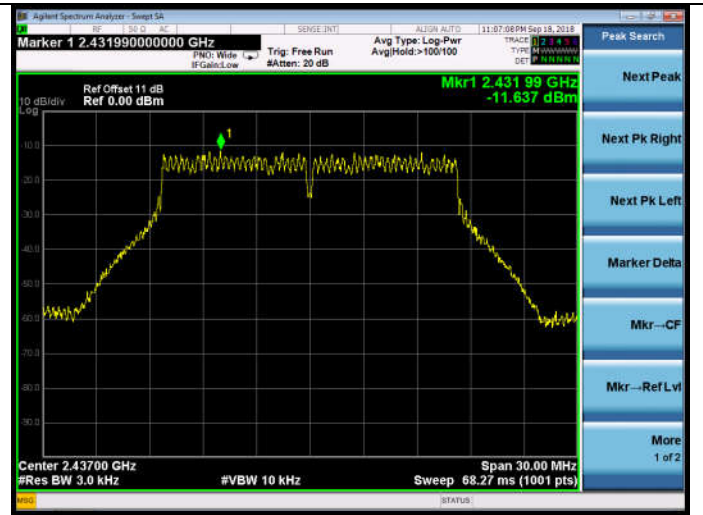
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



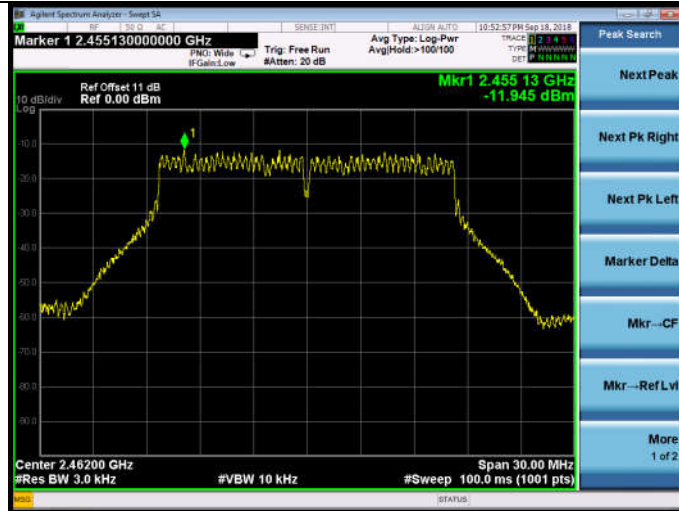
Test CH6: 2437MHz



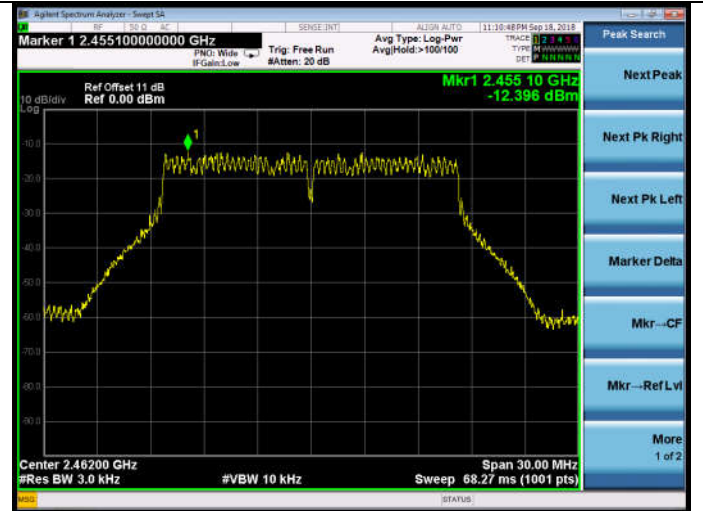
Test CH6: 2437MHz



Test CH11: 2462MHz

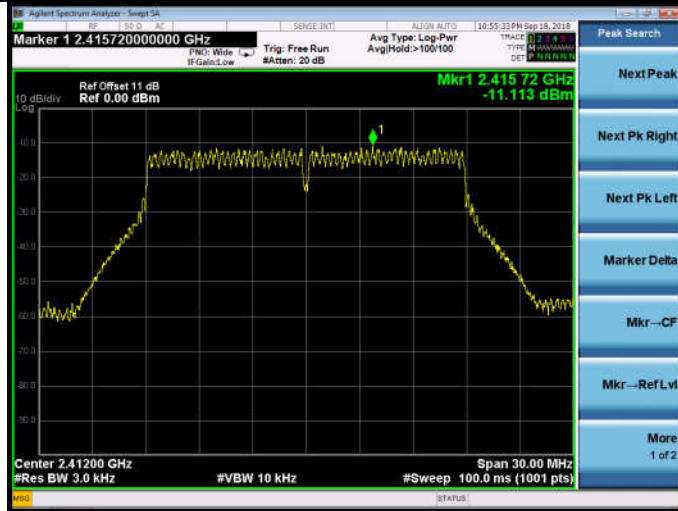


Test CH11: 2462MHz



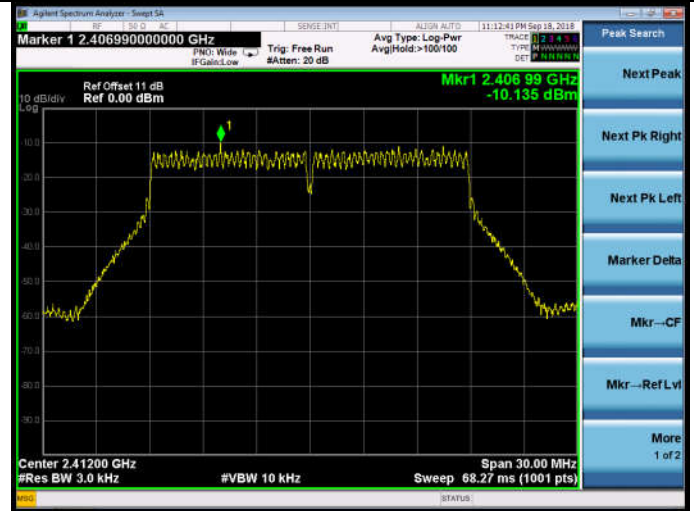
ANT0:

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

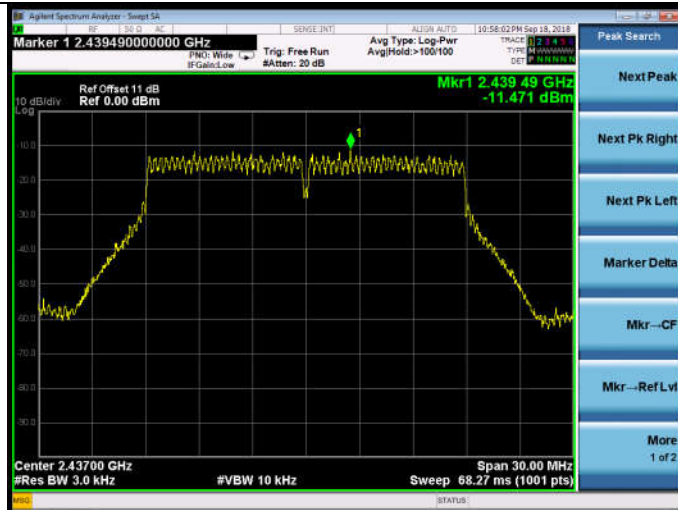


ANT1:

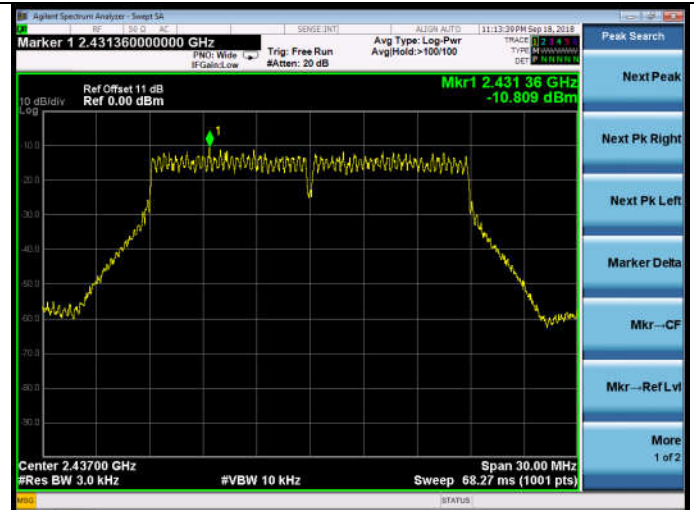
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



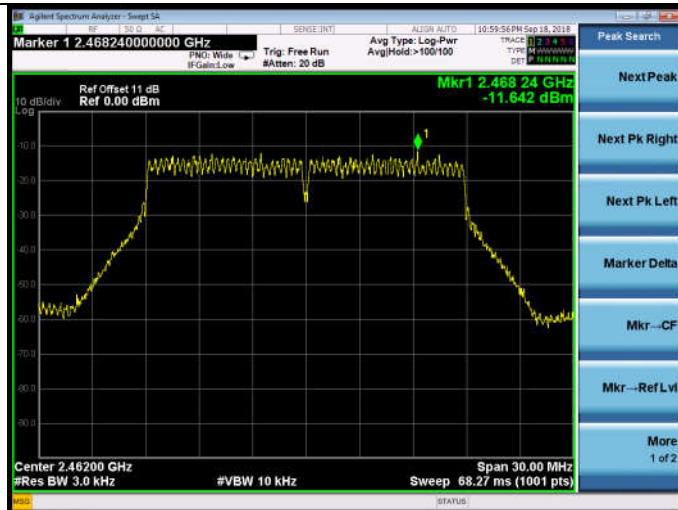
Test CH6: 2437MHz



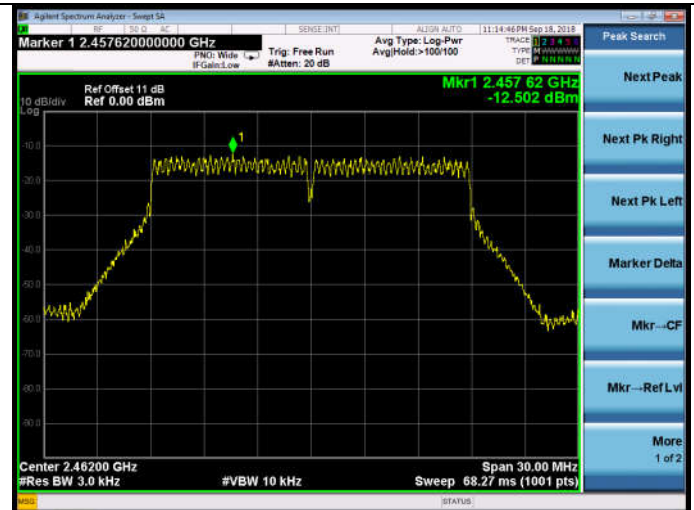
Test CH6: 2437MHz



Test CH11: 2462MHz



Test CH11: 2462MHz



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 4.06dBi.

11.DEVIATION TO TEST SPECIFICATIONS

[NONE]