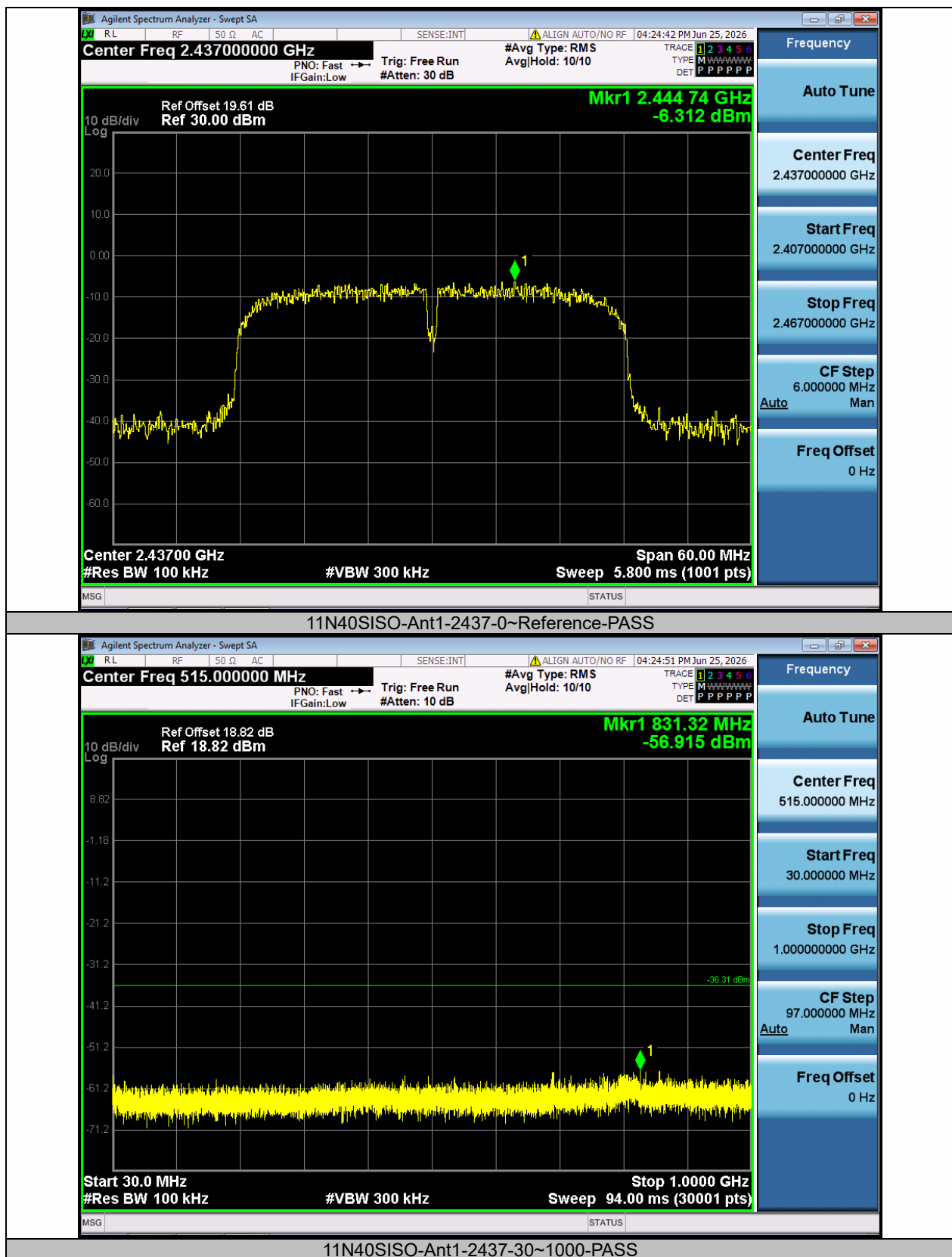
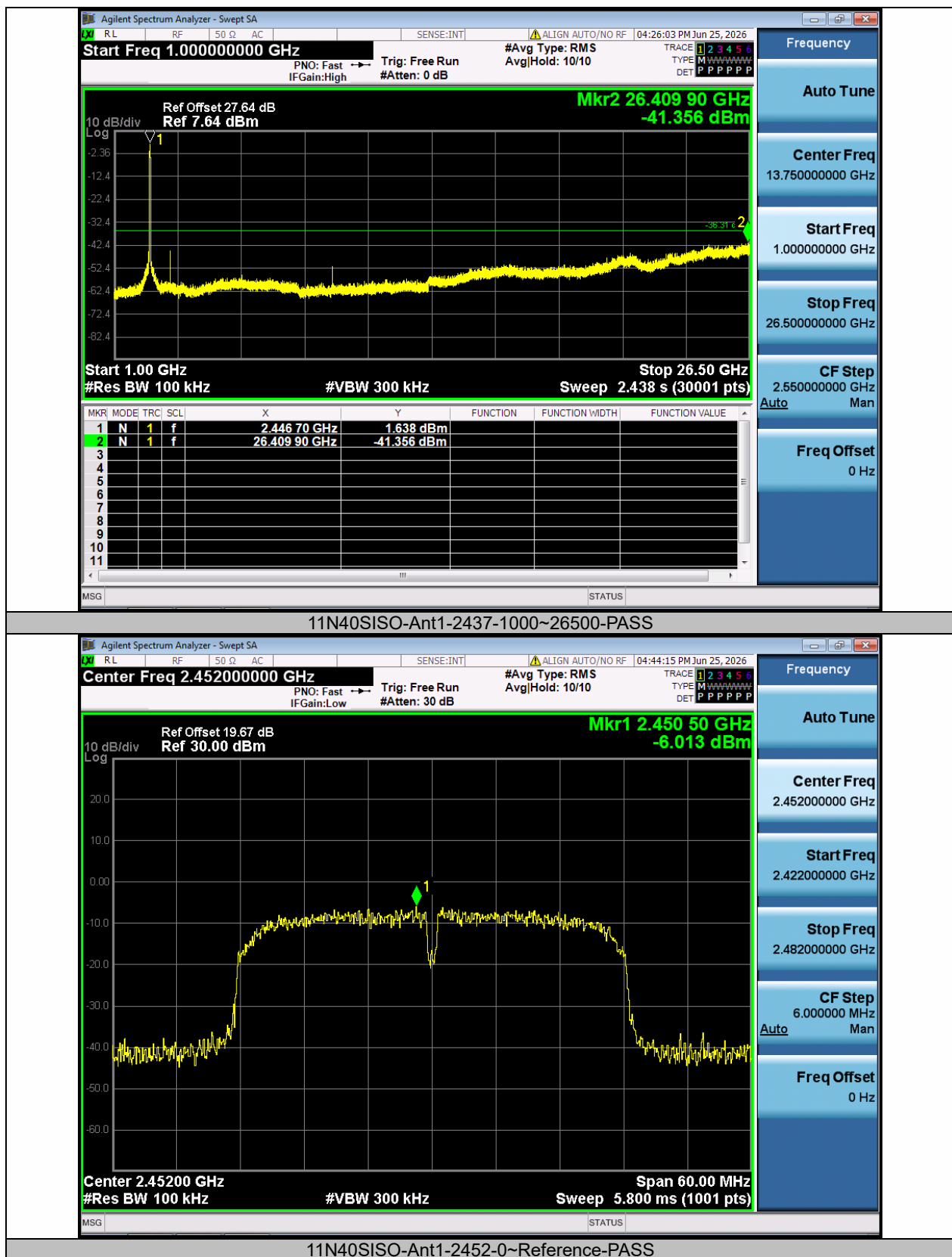
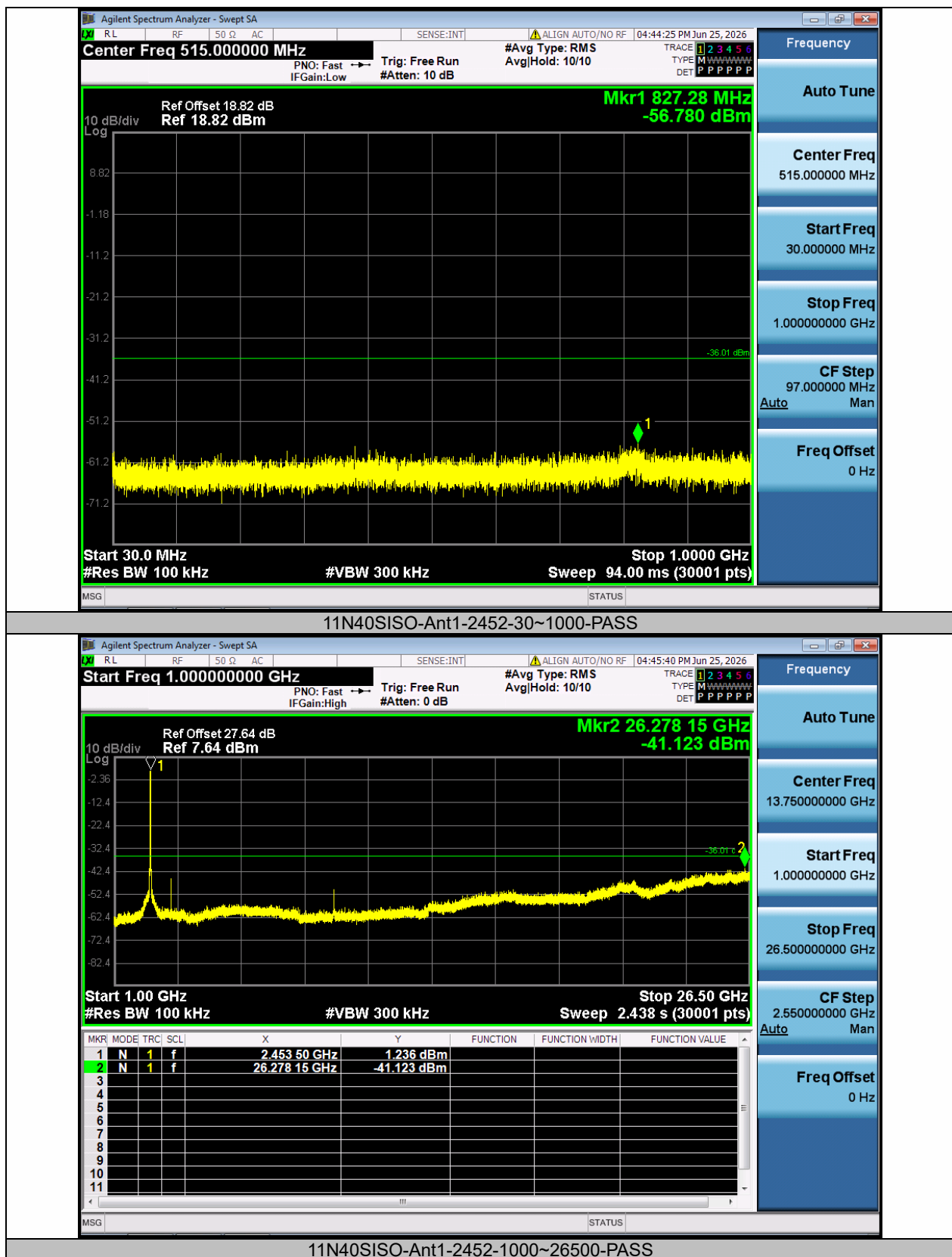








7.5 RADIATED EMISSION

7.5.1 Applicable Standard

According to FCC Part 15.247(d) and 15.209 and KDB 558074 D01 15.247 Meas Guidance v05r02.

7.5.2 Conformance Limit

According to FCC Part 15.247(d): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

According to FCC Part 15.205 the level of any transmitter spurious emission in Restricted bands shall not exceed the level of the emission specified in the following table.

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

7.5.3 Test Configuration

Test according to clause 6.2 radio frequency test setup 2.

7.5.4 Test Procedure

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

For Above 1GHz:

The EUT was placed on a turn table which is 1.5m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured.

RBW = 1 MHz.

VBW ≥ RBW.

Sweep = auto.

Detector function = peak.
Trace = max hold.

For Below 1GHz:

The EUT was placed on a turn table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Span = wide enough to fully capture the emission being measured.
RBW = 100 kHz.
VBW $\geq$ RBW.
Sweep = auto.
Detector function = peak.
Trace = max hold.

For Below 30MHz:

The EUT was placed on a turn table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Span = wide enough to fully capture the emission being measured.
RBW = 9kHz.
VBW $\geq$ RBW.
Sweep = auto.
Detector function = peak.
Trace = max hold.

For Below 150KHz:

The EUT was placed on a turn table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Span = wide enough to fully capture the emission being measured.
RBW = 200Hz.
VBW $\geq$ RBW.
Sweep = auto.
Detector function = peak.
Trace = max hold.

Follow the guidelines in ANSI C63.10-2020/Cor 1-2021 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit. Submit this data.

Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{dwell time}/100 \text{ ms})$, in an effort to demonstrate compliance with the limit. Submit this data.

Repeat above procedures until all frequency measured was complete.

7.5.5 Test Results

Temperature :	25°C	ATM Pressure:	1011 mbar
Humidity :	60%	Test Engineer:	LJM

All of the configurations or modes are tested, the data of the worst case is recorded as below.

■ Spurious Emission below 30MHz(9KHz to 30MHz)

Temperature: 25℃ Test By: LJM
Humidity: 60%
Test mode: 802.11b

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
--	--	--	--	--	--	--	--

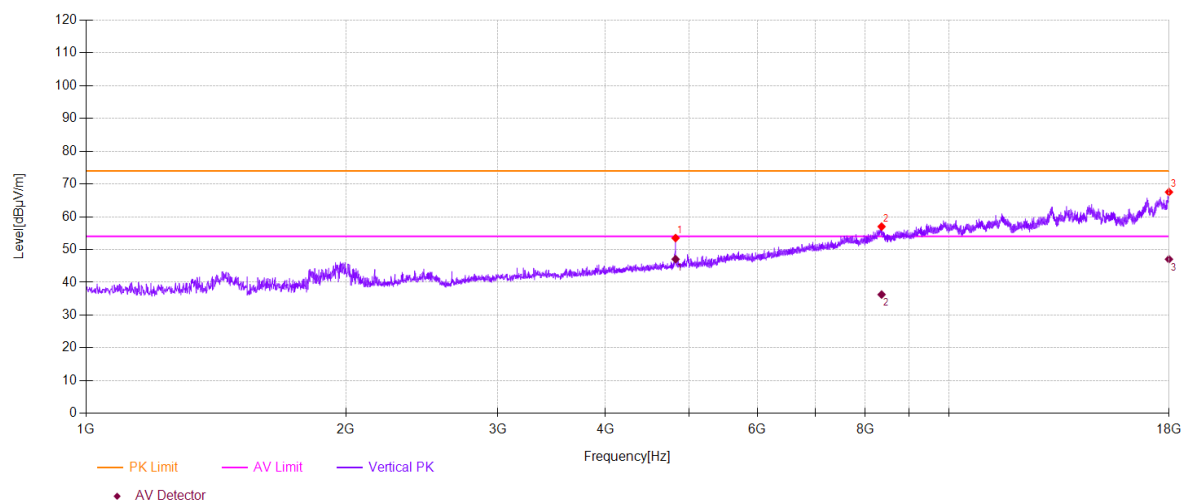
Note: Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

■ Spurious Emission Above 1GHz(1GHz to 25GHz)

All antennas and modulation modes are tested, the data of the worst mode is described in the table.
Highest gain of each antenna and highest output power is ANT1 and MIMO as below:

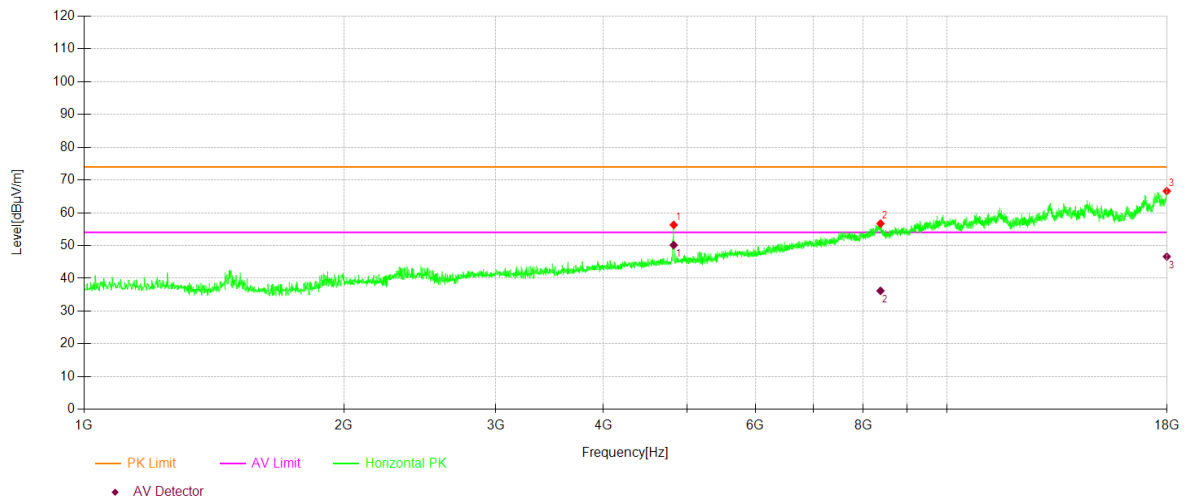
ANT1:

Test mode: 802.11B Frequency: Channel 1: 2412MHz



Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4822.5	53.51	-12.34	74.00	20.49	PK	Vertical
2	8356.87	57.00	-2.07	74.00	17.00	PK	Vertical
3	17994.3	67.53	11.85	74.00	6.47	PK	Vertical

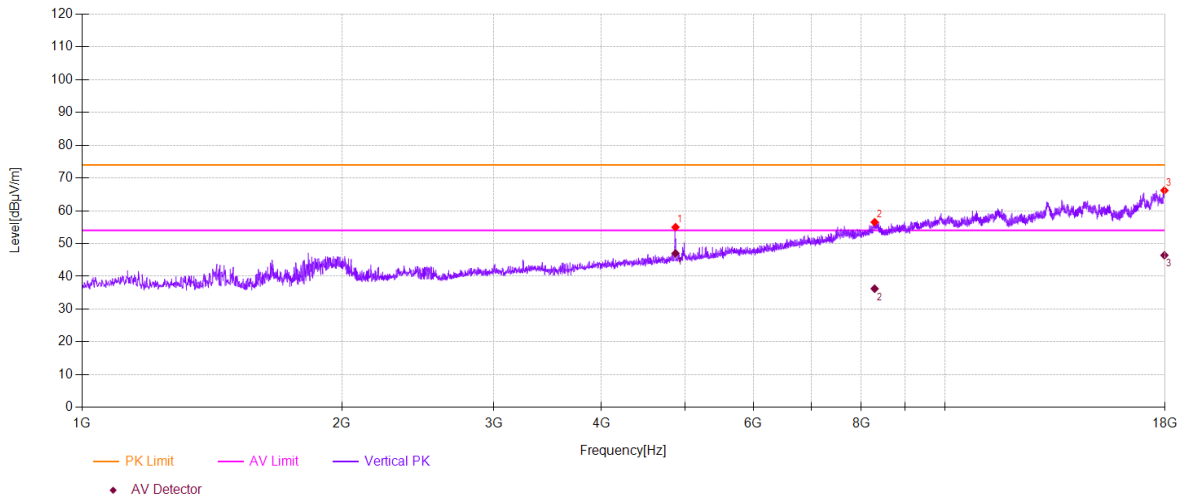
AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	4822.5	47.06	54.00	6.94	AV	Vertical
2	8356.875	36.27	54.00	17.73	AV	Vertical
3	17994.37	47.05	54.00	6.95	AV	Vertical



Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4824.37	56.29	-12.34	74.00	17.71	PK	Horizontal
2	8377.5	56.70	-2.07	74.00	17.30	PK	Horizontal
3	17986.8	66.61	11.54	74.00	7.39	PK	Horizontal

AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	4824.025	50.14	54.00	3.86	AV	Horizontal
2	8377.5	36.19	54.00	17.81	AV	Horizontal
3	17986.87	46.63	54.00	7.37	AV	Horizontal

Test mode: 802.11 B Frequency: Channel 6: 2437MHz

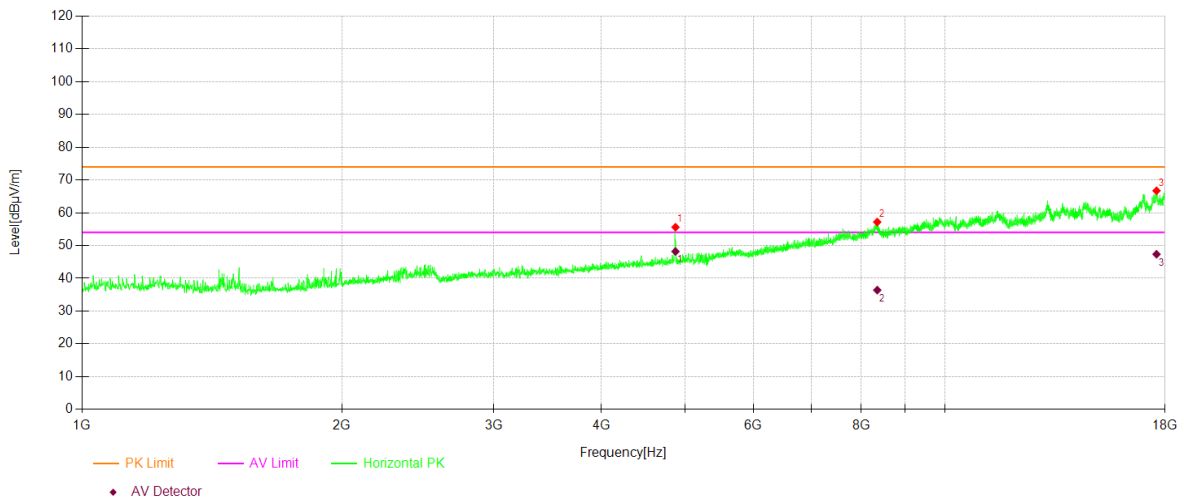


Suspected Data List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4873.12	54.98	-12.34	74.00	19.02	PK	Vertical
2	8291.25	56.51	-2.26	74.00	17.49	PK	Vertical
3	17968.1	66.21	10.79	74.00	7.79	PK	Vertical

AV Final Data List

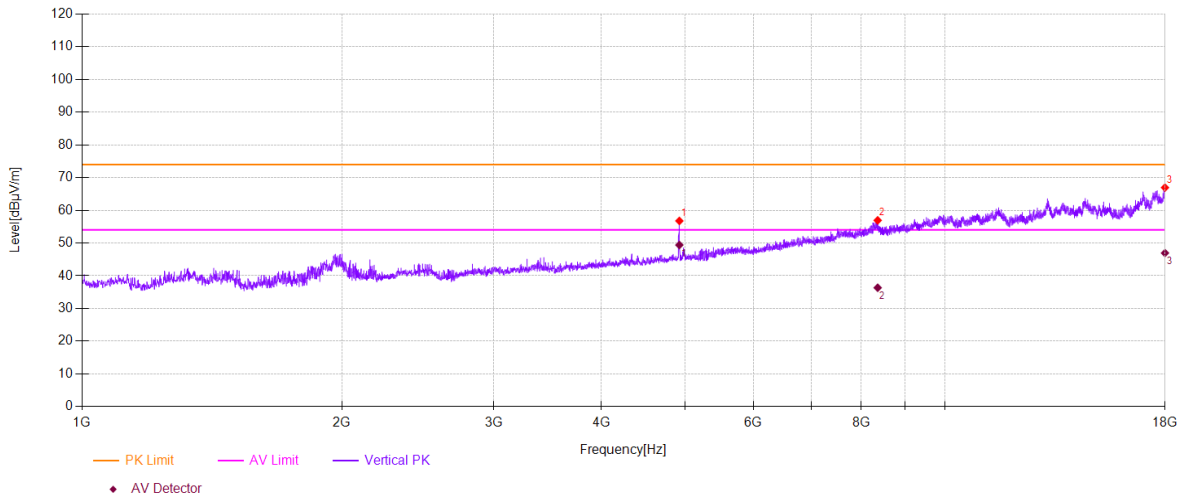
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	4873.125	47.00	54.00	7.00	AV	Vertical
2	8291.25	36.23	54.00	17.77	AV	Vertical
3	17968.12	46.43	54.00	7.57	AV	Vertical



Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4873.12	55.59	-12.34	74.00	18.41	PK	Horizontal
2	8349.37	57.17	-2.08	74.00	16.83	PK	Horizontal
3	17593.1	66.71	12.12	74.00	7.29	PK	Horizontal

AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	4873.125	48.19	54.00	5.81	AV	Horizontal
2	8349.375	36.41	54.00	17.59	AV	Horizontal
3	17593.12	47.34	54.00	6.66	AV	Horizontal

Test mode: 802.11 B Frequency: Channel 11: 2472MHz

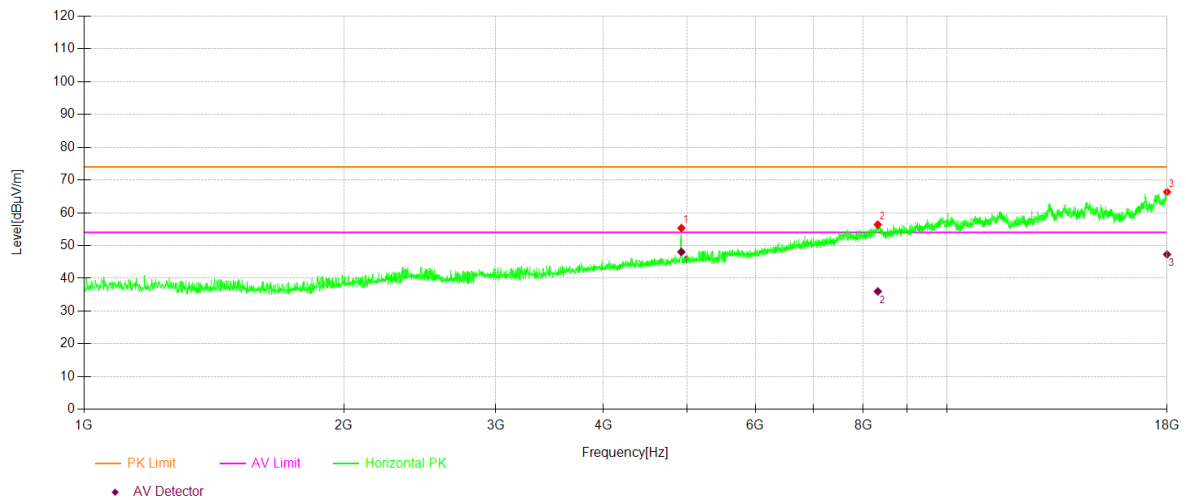


Suspected Data List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4923.75	56.77	-12.29	74.00	17.23	PK	Vertical
2	8358.75	56.93	-2.07	74.00	17.07	PK	Vertical
3	17994.3	66.95	11.85	74.00	7.05	PK	Vertical

AV Final Data List

NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	4923.75	49.40	54.00	4.60	AV	Vertical
2	8358.75	36.35	54.00	17.65	AV	Vertical
3	17994.37	46.95	54.00	7.05	AV	Vertical



Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4923.75	55.33	-12.29	74.00	18.67	PK	Horizontal
2	8317.5	56.39	-2.14	74.00	17.61	PK	Horizontal
3	17998.1	66.35	12.00	74.00	7.65	PK	Horizontal

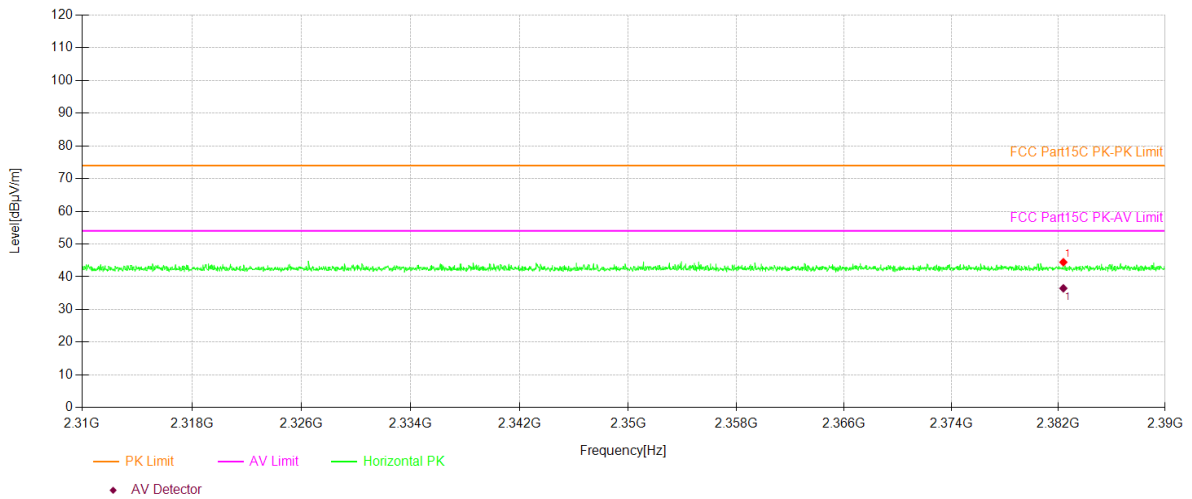
AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	4923.75	48.06	54.00	5.94	AV	Horizontal
2	8317.5	36.00	54.00	18.00	AV	Horizontal
3	17998.12	47.29	54.00	6.71	AV	Horizontal

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

■ Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz

Spurious Emission in Restricted Band 2310-2390MHz

Test Model ☒ 802.11n20 ☐ 802.11g ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ Channel 1:2412MHz ☐ Channel 3: 2422MHz Polarity: H
 VBW=3MHz

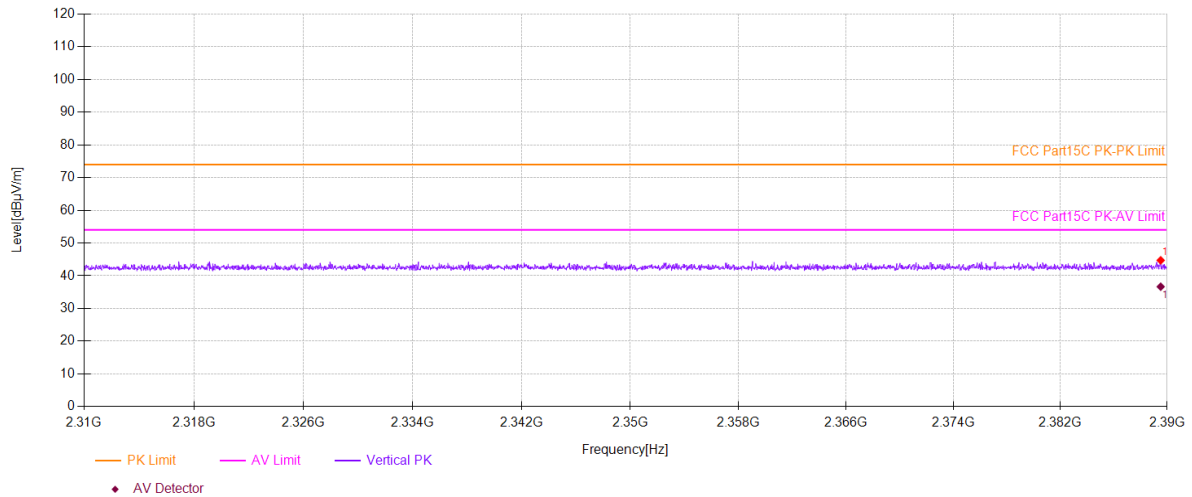


Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2382.37	44.45	30.29	74.00	29.55	PK	Horizontal

AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	2382.370	36.48	54.00	17.52	AV	Horizontal

Spurious Emission in Restricted Band 2310-2390MHz

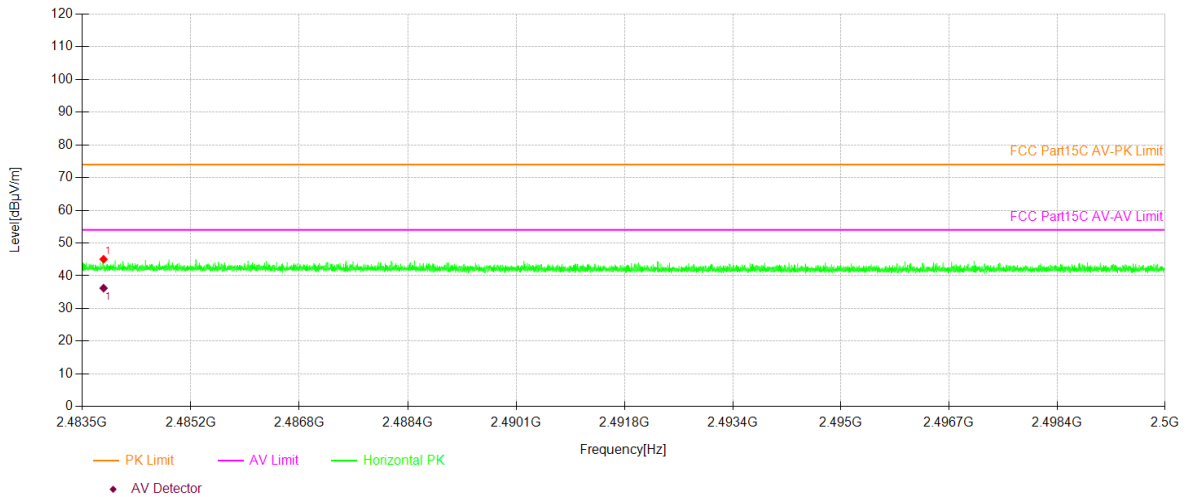
Test Model ☒ 802.11 n20 ☐ 802.11g ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ Channel 1:2412MHz ☐ Channel 3: 2422MHz Polarity:V
VBW=3MHz



Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2389.51	44.72	30.29	74.00	29.28	PK	Vertical

AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	2389.519	36.66	54.00	17.34	AV	Vertical

Spurious Emission in Restricted Band 2483.5-2500MHz
Test Model ☒ 802.11 n20 ☐ 802.11g ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ Channel 11: 2462MHz ☐ Channel 9: 2452MHz Polarity: H
VBW=3MHz



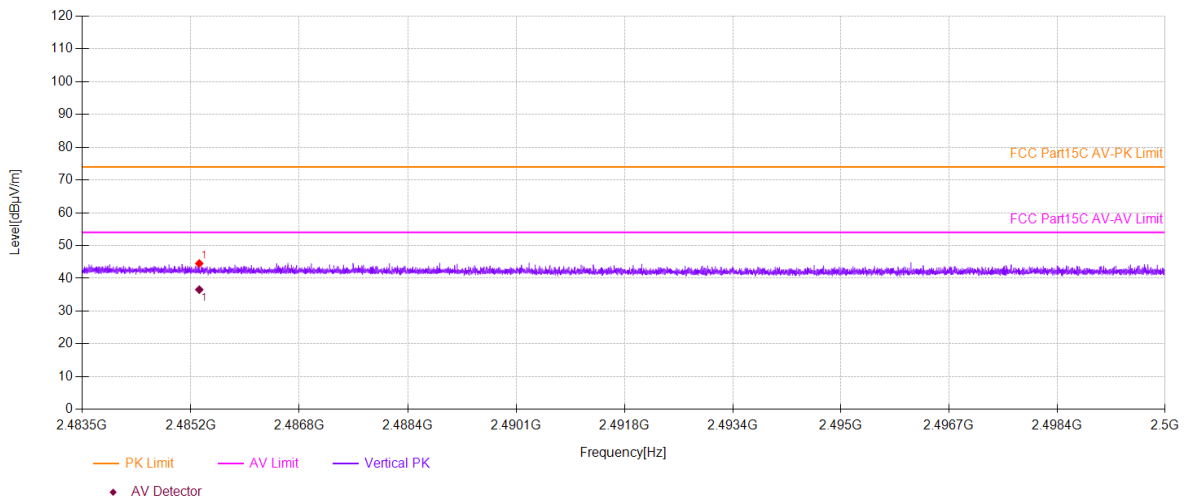
Suspected Data List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.82	45.05	30.13	74.00	28.95	PK	Horizontal

AV Final Data List

NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	2483.826	36.21	54.00	17.79	AV	Horizontal

Test Model Spurious Emission in Restricted Band 2483.5-2500MHz
☒ 802.11 n20 ☐ 802.11g ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ Channel 11: 2462MHz ☐ Channel 9: 2452MHz Polarity: V
 VBW=3MHz

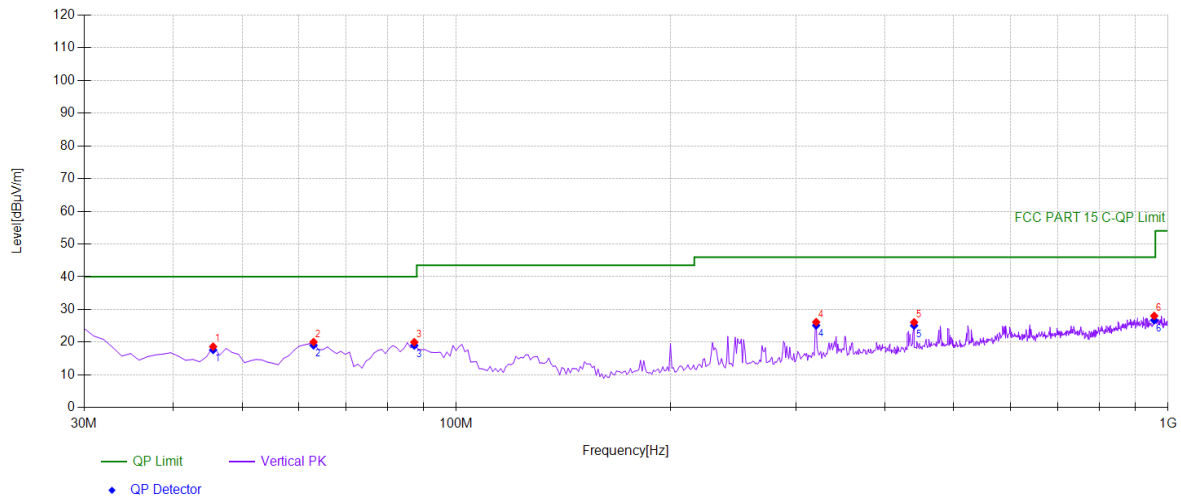


Suspected Data List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor[dB/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2485.28	44.54	30.12	74.00	29.46	PK	Vertical

AV Final Data List						
NO.	Freq. [MHz]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Detector	Polarity
1	2485.280	36.55	54.00	17.45	AV	Vertical

■ Spurious Emission below 1GHz (30MHz to 1GHz)

Test mode: 802.11B Frequency: Channel 1: 2412MHz

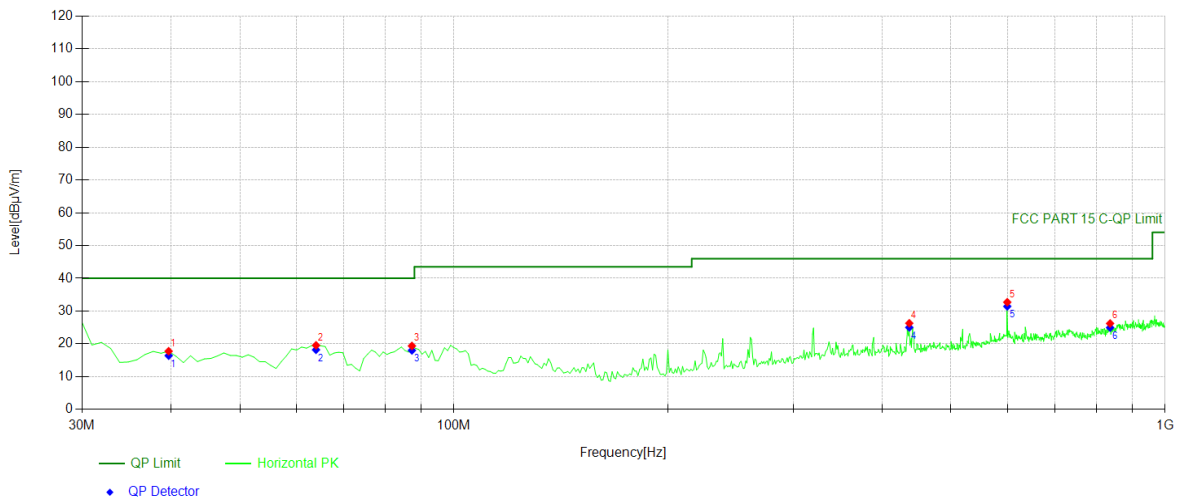


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	45.5355	30.03	-11.38	18.65	PK	40.00	21.35	Vertical
2	63.013	32.51	-12.45	20.06	PK	40.00	19.94	Vertical
3	87.2873	33.82	-13.80	20.02	PK	40.00	19.98	Vertical
4	320.320	34.12	-7.97	26.15	PK	46.00	19.85	Vertical
5	439.749	31.26	-5.17	26.09	PK	46.00	19.91	Vertical
6	956.306	24.90	3.16	28.06	PK	46.00	17.94	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	45.5355	-11.38	17.64	40.00	22.36
2	63.013	-12.45	19.05	40.00	20.95
3	87.2873	-13.80	19.01	40.00	20.99
4	320.3203	-7.97	25.14	46.00	20.86
5	439.7498	-5.17	25.08	46.00	20.92
6	956.3063	3.16	26.73	46.00	19.27



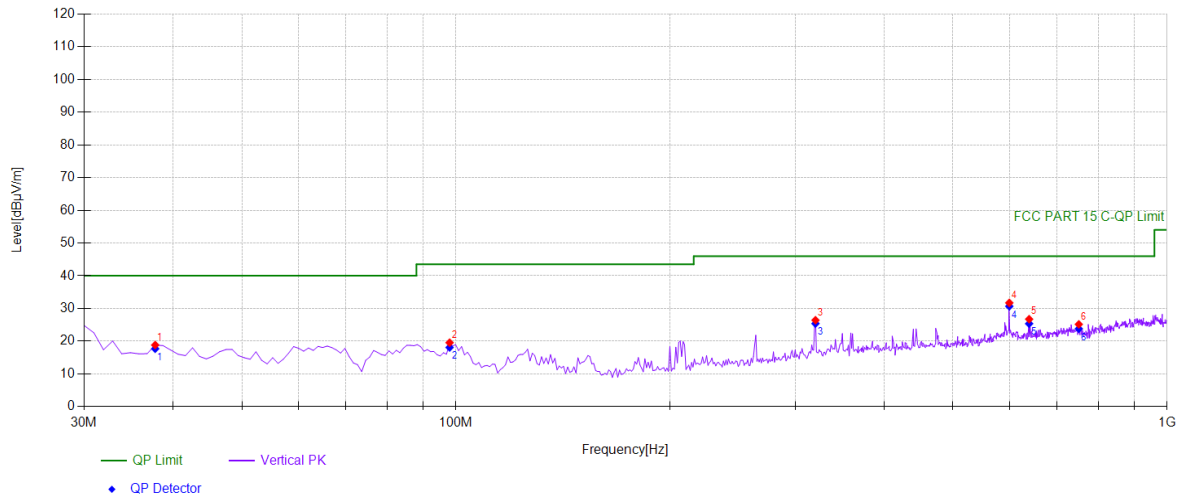
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	39.7097	30.08	-12.31	17.77	PK	40.00	22.23	Horizontal
2	63.984	32.15	-12.59	19.56	PK	40.00	20.44	Horizontal
3	87.2873	33.18	-13.80	19.38	PK	40.00	20.62	Horizontal
4	436.836	31.60	-5.30	26.30	PK	46.00	19.70	Horizontal
5	599.96	32.99	-0.27	32.72	PK	46.00	13.28	Horizontal
6	836.876	25.28	0.95	26.23	PK	46.00	19.77	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	39.7097	-12.31	16.42	40.00	23.58
2	63.984	-12.59	18.21	40.00	21.79
3	87.2873	-13.80	18.03	40.00	21.97
4	436.8368	-5.30	25.03	46.00	20.97
5	599.96	-0.27	31.45	46.00	14.55
6	836.8769	0.95	24.96	46.00	21.04

Test mode: 802.11B Frequency: Channel 6: 2437MHz

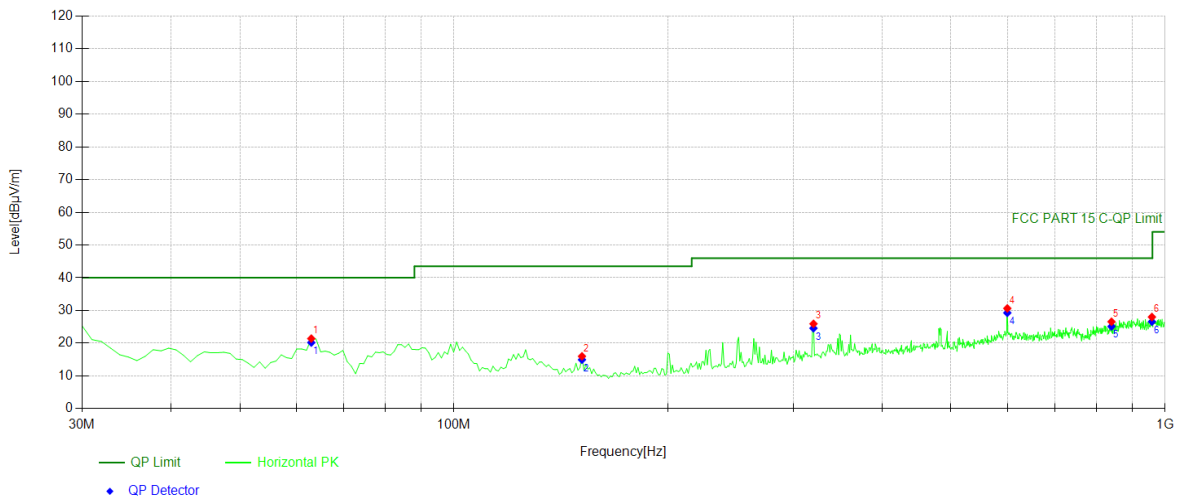


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	37.7678	31.44	-12.60	18.84	PK	40.00	21.16	Vertical
2	97.968	31.66	-12.10	19.56	PK	43.50	23.94	Vertical
3	320.320	34.40	-7.97	26.43	PK	46.00	19.57	Vertical
4	599.96	31.99	-0.27	31.72	PK	46.00	14.28	Vertical
5	639.769	28.00	-1.26	26.74	PK	46.00	19.26	Vertical
6	751.431	25.45	-0.28	25.17	PK	46.00	20.83	Vertical

Final Data List

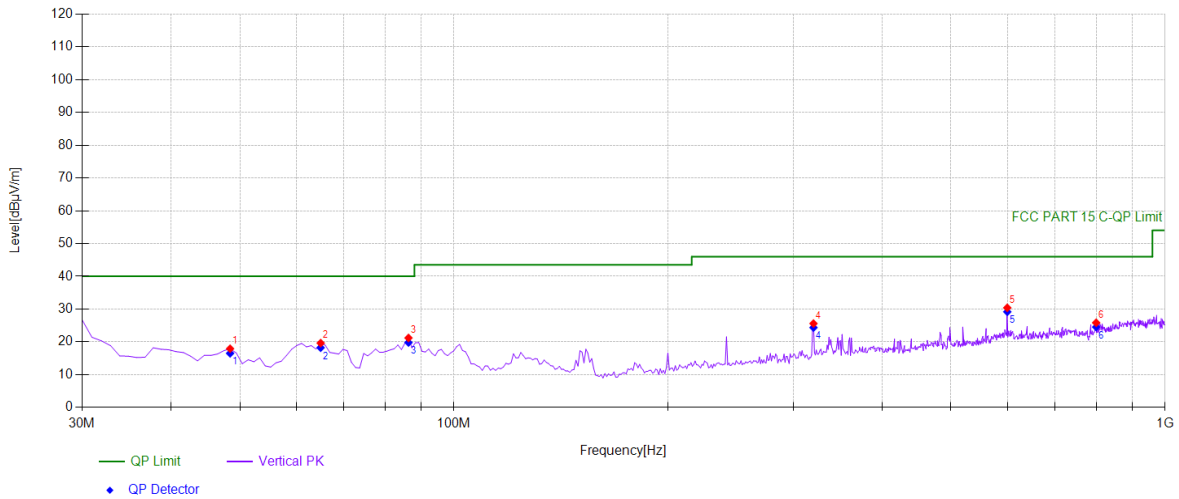
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	37.7678	-12.60	17.70	40.00	22.30
2	97.968	-12.10	18.10	43.50	25.40
3	320.3203	-7.97	25.39	46.00	20.61
4	599.96	-0.27	30.68	46.00	15.32
5	639.7698	-1.26	25.37	46.00	20.63
6	751.4314	-0.28	23.80	46.00	22.20



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	63.013	33.87	-12.45	21.42	PK	40.00	18.58	Horizontal
2	151.371	30.28	-14.28	16.00	PK	43.50	27.50	Horizontal
3	320.320	33.91	-7.97	25.94	PK	46.00	20.06	Horizontal
4	599.96	30.92	-0.27	30.65	PK	46.00	15.35	Horizontal
5	840.760	25.55	1.02	26.57	PK	46.00	19.43	Horizontal
6	958.248	24.69	3.32	28.01	PK	46.00	17.99	Horizontal

Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	63.013	-12.45	20.20	40.00	19.80
2	151.3714	-14.28	14.96	43.50	28.54
3	320.3203	-7.97	24.58	46.00	21.42
4	599.96	-0.27	29.29	46.00	16.71
5	840.7608	1.02	25.13	46.00	20.87
6	958.2482	3.32	26.57	46.00	19.43

Test mode: 802.11B Frequency: Channel 11: 2462MHz

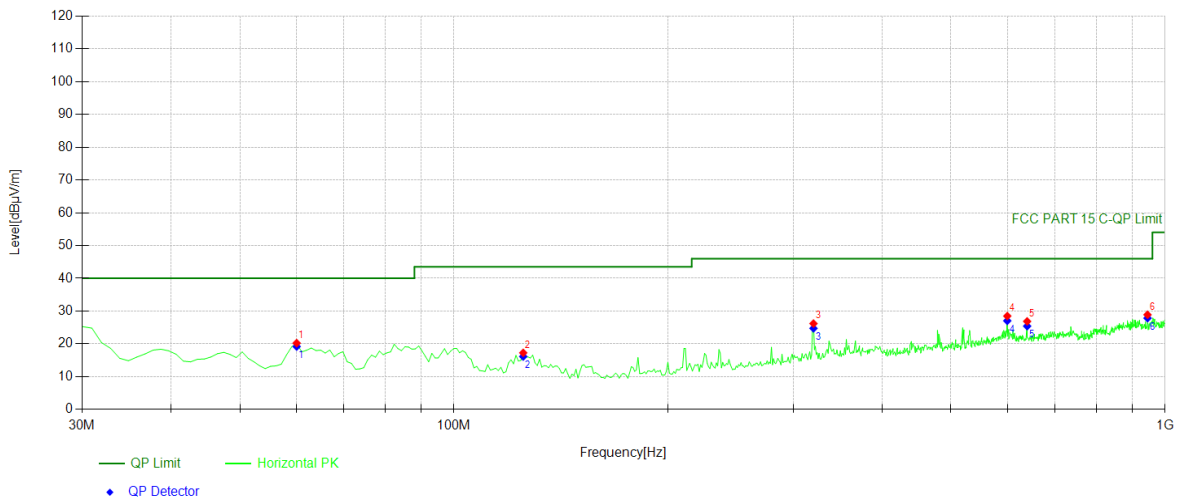


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	48.4484	28.83	-10.90	17.93	PK	40.00	22.07	Vertical
2	64.955	32.37	-12.73	19.64	PK	40.00	20.36	Vertical
3	86.3163	35.16	-13.95	21.21	PK	40.00	18.79	Vertical
4	320.320	33.57	-7.97	25.60	PK	46.00	20.40	Vertical
5	599.96	30.68	-0.27	30.41	PK	46.00	15.59	Vertical
6	799.98	25.31	0.53	25.84	PK	46.00	20.16	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	48.4484	-10.90	16.52	40.00	23.48
2	64.955	-12.73	18.23	40.00	21.77
3	86.3163	-13.95	19.80	40.00	20.20
4	320.3203	-7.97	24.37	46.00	21.63
5	599.96	-0.27	29.18	46.00	16.82
6	799.98	0.53	24.53	46.00	21.47



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	60.1001	32.27	-12.03	20.24	PK	40.00	19.76	Horizontal
2	125.155	30.89	-13.61	17.28	PK	43.50	26.22	Horizontal
3	320.320	34.17	-7.97	26.20	PK	46.00	19.80	Horizontal
4	599.96	28.77	-0.27	28.50	PK	46.00	17.50	Horizontal
5	639.769	28.13	-1.26	26.87	PK	46.00	19.13	Horizontal
6	944.654	26.57	2.32	28.89	PK	46.00	17.11	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	60.1001	-12.03	19.19	40.00	20.81
2	125.1552	-13.61	16.15	43.50	27.35
3	320.3203	-7.97	24.75	46.00	21.25
4	599.96	-0.27	27.05	46.00	18.95
5	639.7698	-1.26	25.42	46.00	20.58
6	944.6547	2.32	27.86	46.00	18.14

7.6 CONDUCTED EMISSION TEST

7.6.1 Applicable Standard

According to FCC Part 15.207(a).

7.6.2 Conformance Limit

Conducted Emission Limit		
Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:

1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

7.6.3 Test Configuration

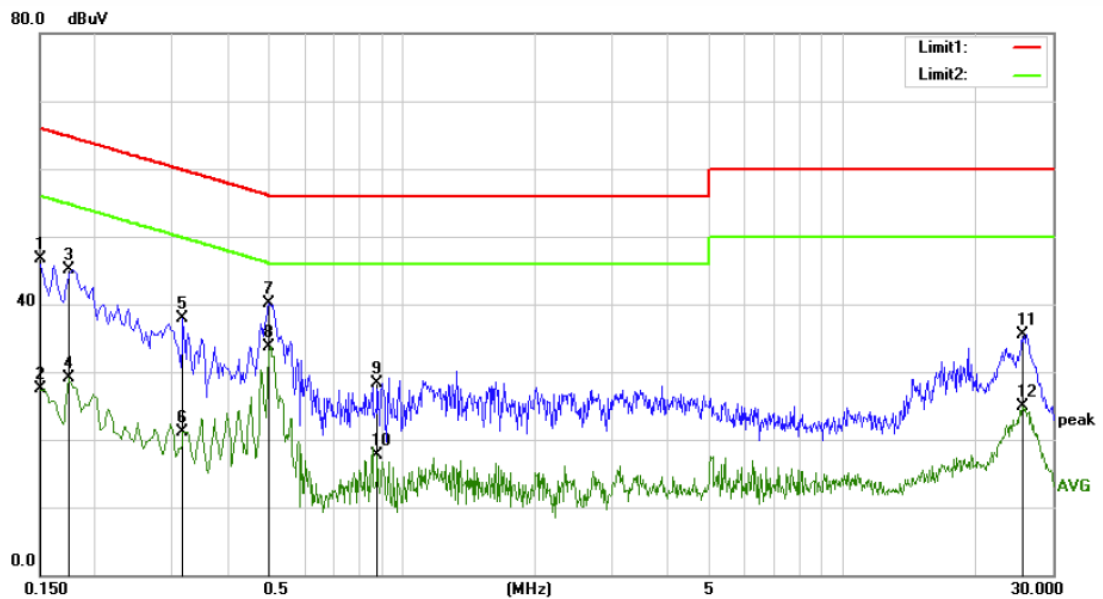
Test according to clause 6.3 conducted emission test setup 3.

7.6.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

7.6.5 Test Results

PASS.



Site Conduction #1

Phase: **L1**

Temperature: 25.5

Limit: (CE)FCC PART 15 class B_QP

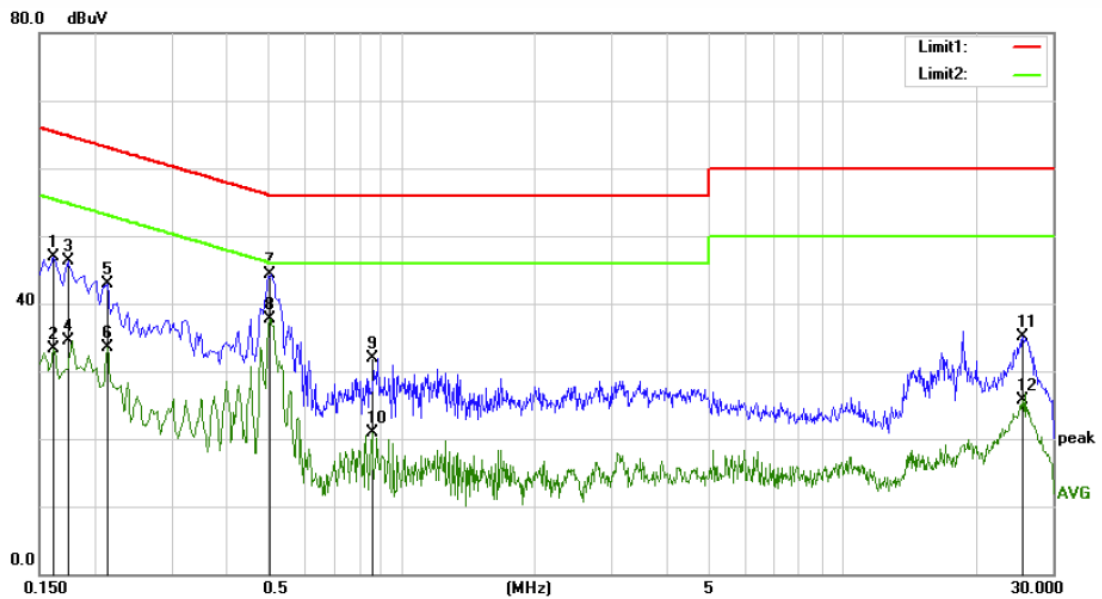
Power: AC 120V/60Hz

Humidity: 57 %

Mode: WiFi mode

Note: KUANTEN

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	37.07	9.57	46.64	66.00	-19.36	QP	
2		0.1500	17.91	9.57	27.48	56.00	-28.52	AVG	
3		0.1740	35.57	9.60	45.17	64.77	-19.60	QP	
4		0.1740	19.53	9.60	29.13	54.77	-25.64	AVG	
5		0.3180	28.28	9.69	37.97	59.76	-21.79	QP	
6		0.3180	11.48	9.69	21.17	49.76	-28.59	AVG	
7		0.4980	30.33	9.79	40.12	56.03	-15.91	QP	
8	*	0.4980	23.94	9.79	33.73	46.03	-12.30	AVG	
9		0.8780	18.52	9.70	28.22	56.00	-27.78	QP	
10		0.8780	8.02	9.70	17.72	46.00	-28.28	AVG	
11		25.7220	25.29	10.20	35.49	60.00	-24.51	QP	
12		25.7220	14.76	10.20	24.96	50.00	-25.04	AVG	



Site Conduction #1

Phase: **N**

Temperature: 25.5

Limit: (CE)FCC PART 15 class B_QP

Power: AC 120V/60Hz

Humidity: 57 %

Mode: WiFi mode

Note: KUANTEN

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1620	37.29	9.58	46.87	65.36	-18.49	QP	
2		0.1620	23.72	9.58	33.30	55.36	-22.06	AVG	
3		0.1740	36.76	9.60	46.36	64.77	-18.41	QP	
4		0.1740	24.93	9.60	34.53	54.77	-20.24	AVG	
5		0.2140	33.20	9.64	42.84	63.05	-20.21	QP	
6		0.2140	23.87	9.64	33.51	53.05	-19.54	AVG	
7		0.5020	34.57	9.79	44.36	56.00	-11.64	QP	
8	*	0.5020	28.01	9.79	37.80	46.00	-8.20	AVG	
9		0.8540	22.17	9.71	31.88	56.00	-24.12	QP	
10		0.8540	11.25	9.71	20.96	46.00	-25.04	AVG	
11		25.6100	24.82	10.20	35.02	60.00	-24.98	QP	
12		25.6100	15.54	10.20	25.74	50.00	-24.26	AVG	

7.7 ANTENNA APPLICATION

7.7.1 Antenna Requirement

Standard	Requirement
FCC CRF Part15.203	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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

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..

7.7.2 Result

PASS

Temperature : 23.5°C ATM Pressure: 1011 mbar
Humidity : 58% Test Engineer: Zhu Guangjun

- ☐ Antenna uses a permanently attached antenna which is not replaceable.
- ☒ Not using a standard antenna jack or electrical connector for antenna replacement.
- ☐ The antenna has to be professionally installed (please provide method of installation).

Which in accordance to section 15.203, please refer to the internal photos.

Detail of factor for radiated emission:

Frequency(MHz)	Ant F(dB)	Cab L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

--- End of Report ---

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6. Objections shall be raised within 20 days from the date receiving the report.