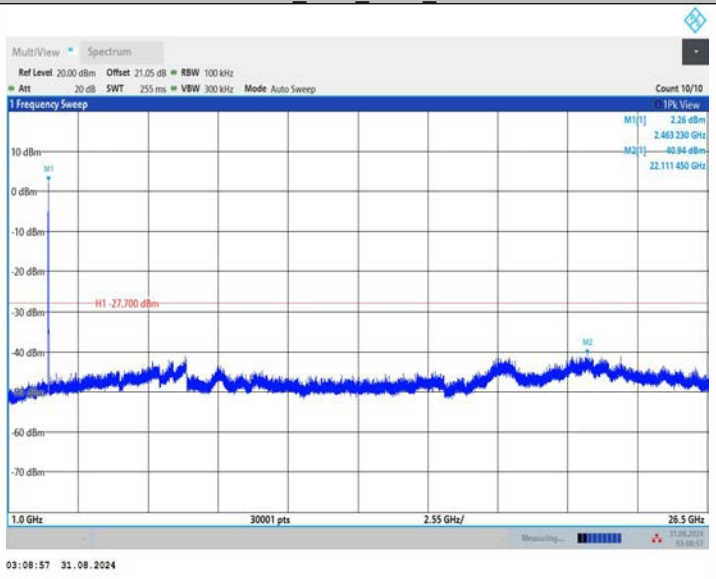
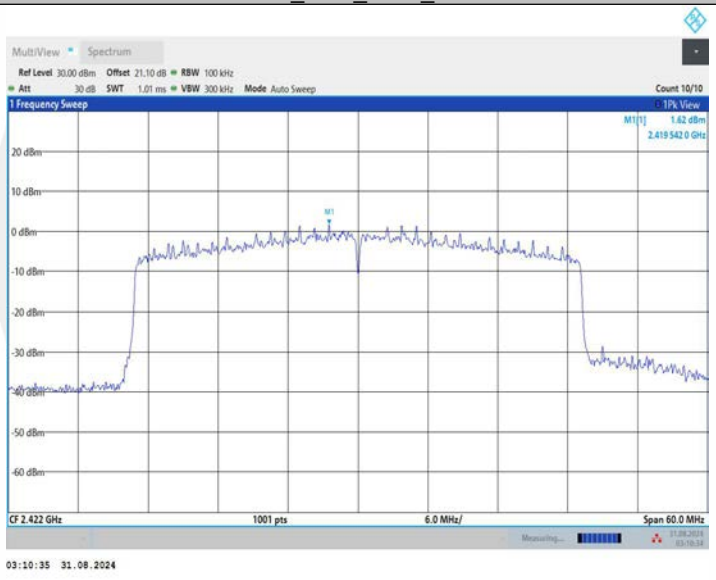
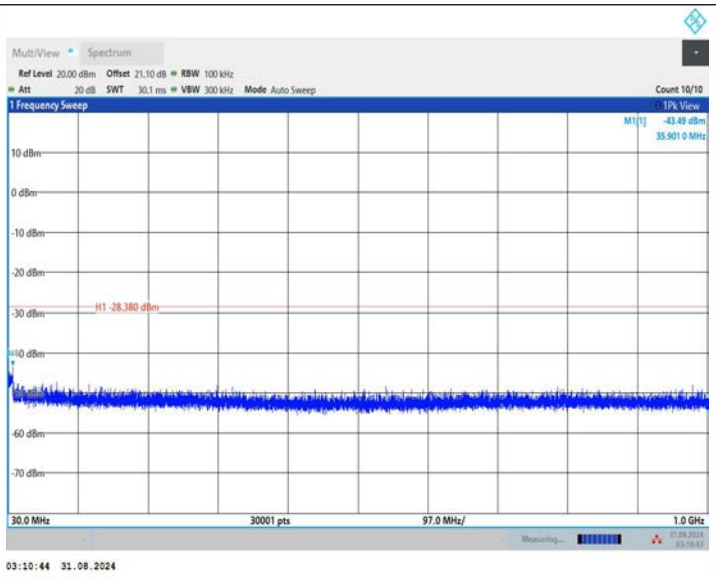
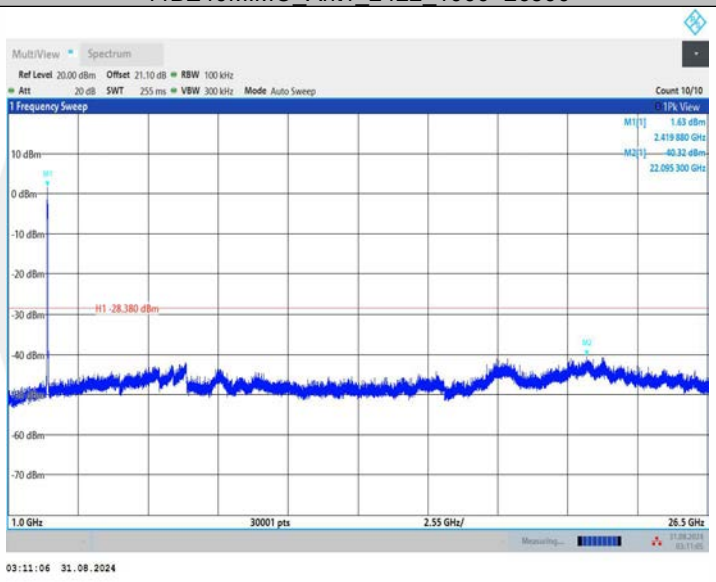
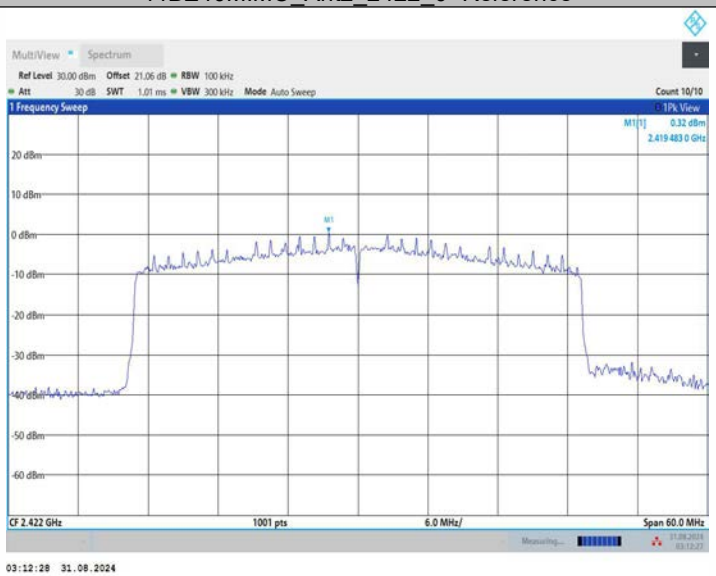
11BE20MIMO_Ant2_2462_1000~26500

11BE40MIMO_Ant1_2422_0~Reference

11BE40MIMO_Ant1_2422_30~1000

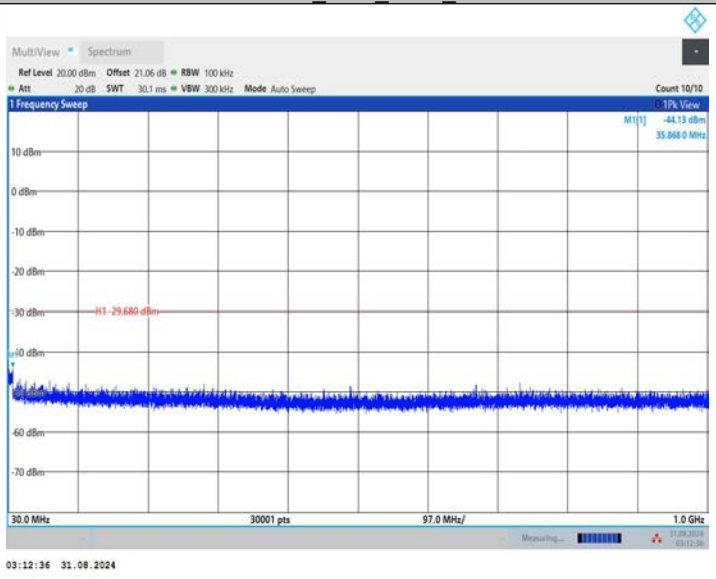
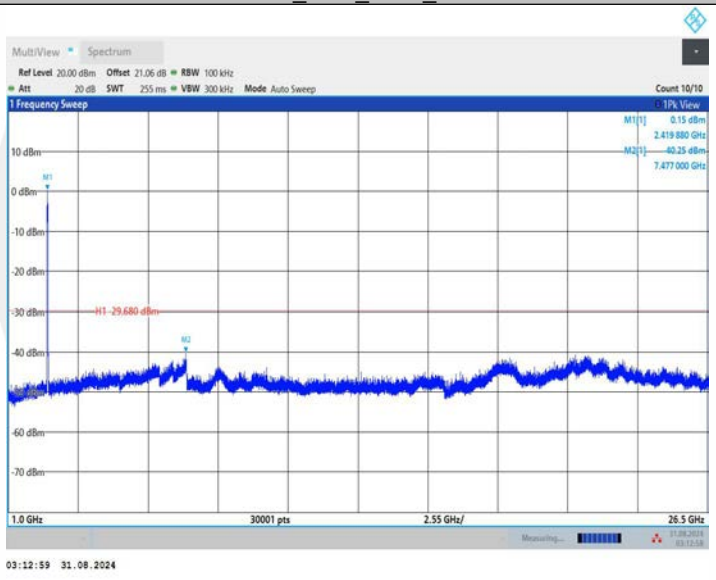


11BE40MIMO_Ant1_2422_1000~26500

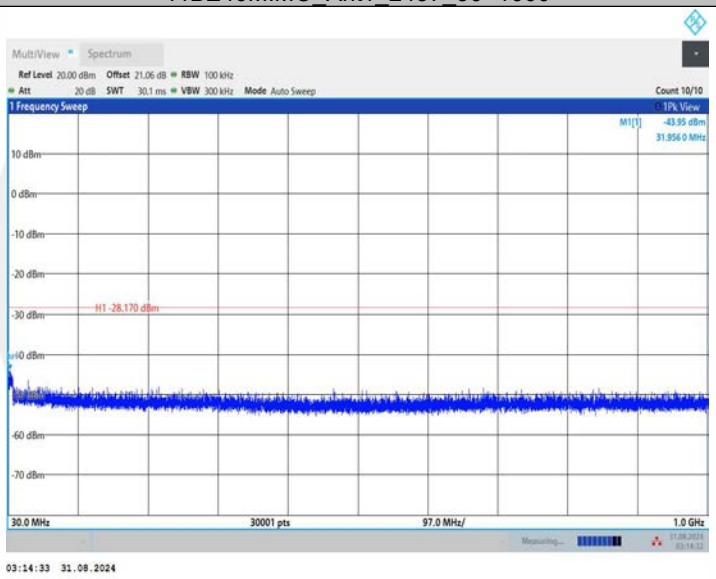


11BE40MIMO_Ant2_2422_0~Reference

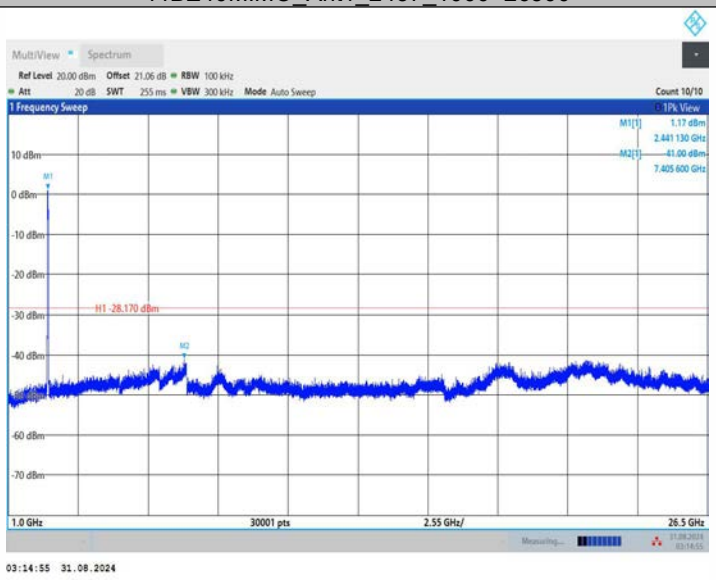


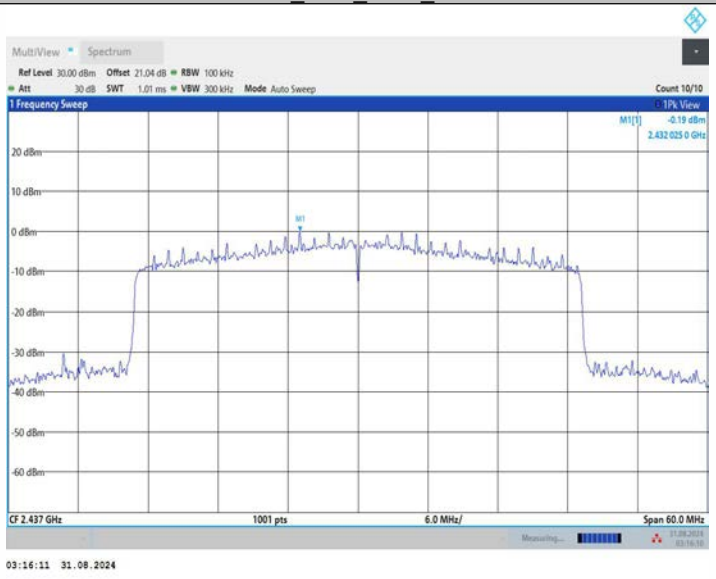
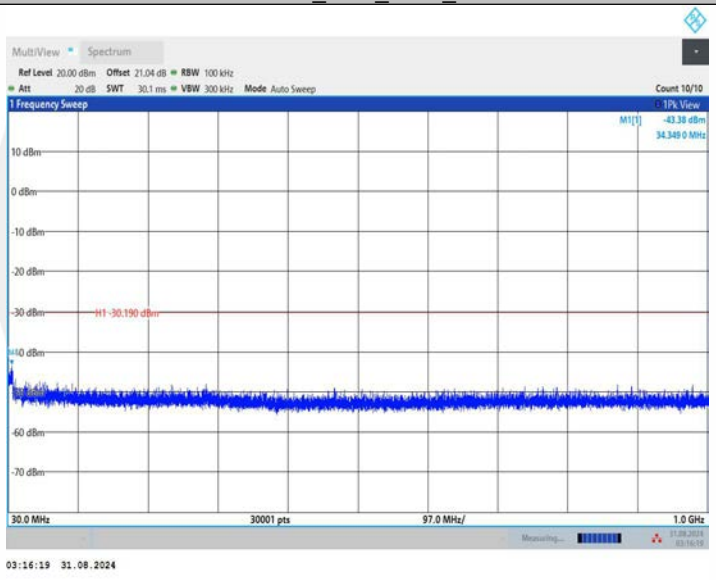
11BE40MIMO_Ant2_2422_30~1000

11BE40MIMO_Ant2_2422_1000~26500

11BE40MIMO_Ant1_2437_0~Reference

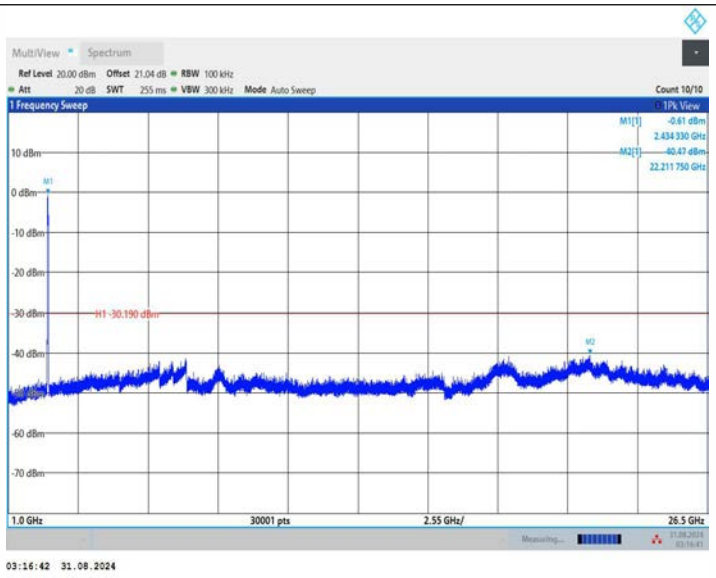
11BE40MIMO_Ant1_2437_30~1000



11BE40MIMO_Ant1_2437_1000~26500

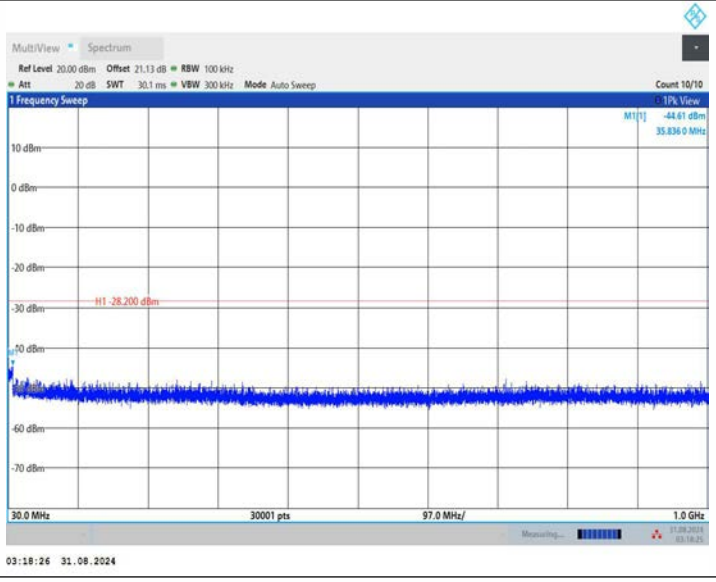


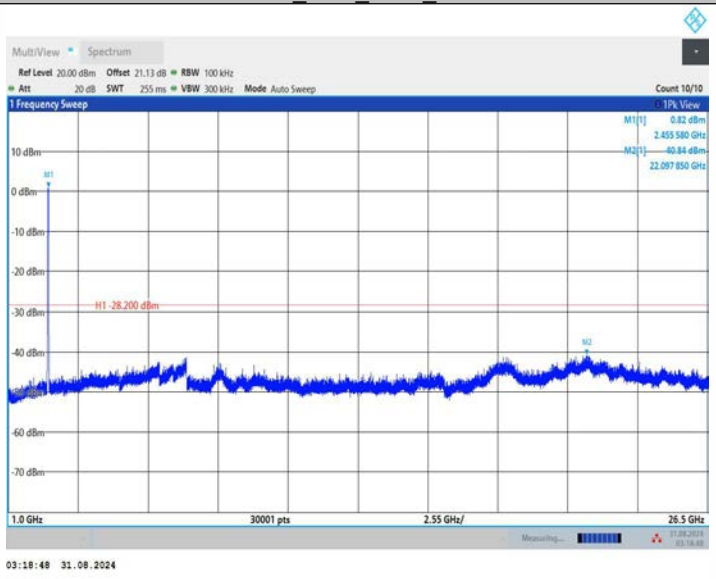
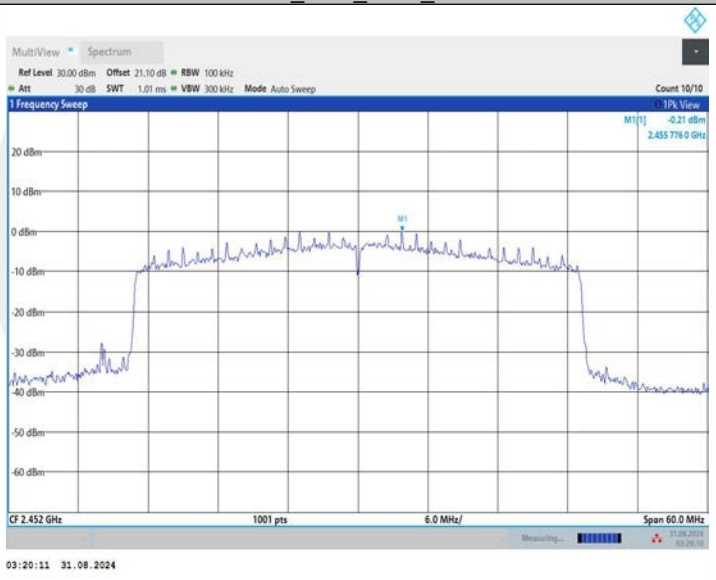
11BE40MIMO_Ant2_2437_0~Reference

11BE40MIMO_Ant2_2437_30~1000

11BE40MIMO_Ant2_2437_1000~26500

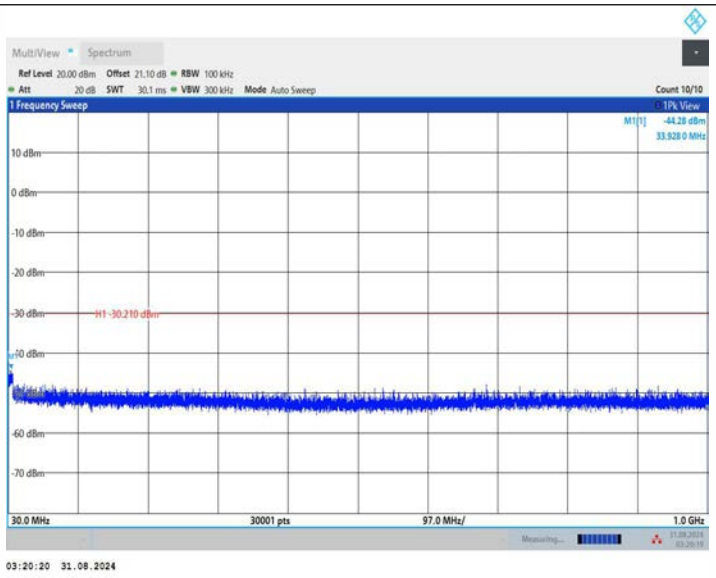


11BE40MIMO_Ant1_2452_0~Reference

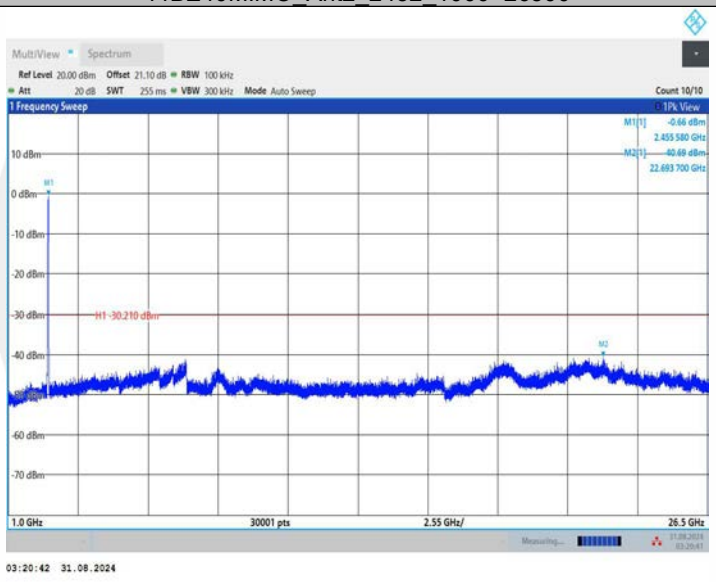
11BE40MIMO_Ant1_2452_30~1000



11BE40MIMO_Ant1_2452_1000~26500

11BE40MIMO_Ant2_2452_0~Reference

11BE40MIMO_Ant2_2452_30~1000



11BE40MIMO_Ant2_2452_1000~26500



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 Part15.205, 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 Part15.205 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 ≥ 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 ≥ 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 ≥ RBW.
Sweep = auto.
Detector function = peak.
Trace = max hold.

Follow the guidelines in ANSI C63.10 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 20log(dwell time/100 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℃	ATM Pressure::	1011 mbar
Humidity :	60 %	Test Engineer:	CZF

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

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 of the configurations or modes are tested, the data of the worst case is recorded in the report.
Highest gain of each antenna and highest output power is ANT2 and MIMO as below:

ANT2:

Test mode: 802.11n(20) Frequency: Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4822.5	V	58.49	74.00	15.51	Peak
7235.625	V	57.77	74.00	16.23	Peak
11505	V	62.56	74.00	11.44	Peak
4822.5	V	50.94	54.00	3.06	Avg
7235.625	V	49.66	54.00	4.34	Avg
11505	V	46.78	54.00	7.22	Avg
4824.375	H	51.60	74.00	22.40	Peak
7233.75	H	57.51	74.00	16.49	Peak
14105.625	H	63.39	74.00	10.61	Peak
4824.375	H	46.15	54.00	7.85	Avg
7233.75	H	46.63	54.00	7.37	Avg
14105.625	H	44.42	54.00	9.58	Avg

Test mode: 802.11n(20) Frequency: Channel 6: 2437MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4873.125	V	58.54	74.00	15.46	Peak
7310.625	V	57.93	74.00	16.07	Peak
16366.875	V	64.38	74.00	9.62	Peak
4873.125	V	50.89	54.00	3.11	Avg
7310.625	V	49.12	54.00	4.88	Avg
16366.875	V	43.44	54.00	10.56	Avg
4873.125	H	52.74	74.00	21.26	Peak
9886.875	H	62.14	74.00	11.86	Peak
15311.25	H	64.44	74.00	9.56	Peak
4873.125	H	46.67	54.00	7.33	Avg
9886.875	H	42.35	54.00	11.65	Avg
15311.25	H	42.08	54.00	11.92	Avg

Test mode:	802.11n(20)	Frequency:	Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5756.25	V	53.59	74.00	20.41	Peak
7916.25	V	58.76	74.00	15.24	Peak
16063.125	V	64.08	74.00	9.92	Peak
5756.25	V	36.63	54.00	17.37	Avg
7916.25	V	37.39	54.00	16.61	Avg
16063.125	V	41.84	54.00	12.16	Avg
7453.125	H	57.52	74.00	16.48	Peak
13785	H	64.04	74.00	9.96	Peak
17591.25	H	64.46	74.00	9.54	Peak
7453.125	H	41.20	54.00	12.80	Avg
13785	H	47.65	54.00	6.35	Avg
17591.25	H	44.39	54.00	9.61	Avg

MIMO:

Test mode:	802.11n(20)	Frequency:	Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4821.1100	V	58.36	74.00	15.64	Peak
7234.2350	V	57.61	74.00	16.39	Peak
11506.2800	V	62.53	74.00	11.47	Peak
4823.7800	V	50.92	54.00	3.08	Avg
7233.3750	V	49.40	54.00	4.60	Avg
11502.7500	V	46.59	54.00	7.41	Avg
4836.0650	H	51.52	74.00	22.48	Peak
7245.4400	H	57.30	74.00	16.70	Peak
14117.3150	H	63.23	74.00	10.77	Peak
4836.0650	H	46.01	54.00	7.99	Avg
7230.4400	H	46.45	54.00	7.55	Avg
14102.3150	H	44.29	54.00	9.71	Avg

Test mode:	802.11n(20)	Frequency:	Channel 6: 2437MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4871.7350	V	58.41	74.00	15.59	Peak
7309.2350	V	57.77	74.00	16.23	Peak
16368.1550	V	64.35	74.00	9.65	Peak
4874.4050	V	50.87	54.00	3.13	Avg
7308.3750	V	48.86	54.00	5.14	Avg
16364.6250	V	43.25	54.00	10.75	Avg
4884.8150	H	52.66	74.00	21.34	Peak
9898.5650	H	61.93	74.00	12.07	Peak
15322.9400	H	64.28	74.00	9.72	Peak
4884.8150	H	46.53	54.00	7.47	Avg
9883.5650	H	42.17	54.00	11.83	Avg
15307.9400	H	41.95	54.00	12.05	Avg

Test mode:	802.11n(20)	Frequency:	Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5754.8600	V	53.46	74.00	20.54	Peak
7914.8600	V	58.60	74.00	15.40	Peak
16064.4050	V	64.05	74.00	9.95	Peak
5757.5300	V	36.61	54.00	17.39	Avg
7914.0000	V	37.13	54.00	16.87	Avg
16060.8750	V	41.65	54.00	12.35	Avg
7464.8150	H	57.44	74.00	16.56	Peak
13796.6900	H	63.83	74.00	10.17	Peak
17602.9400	H	64.30	74.00	9.70	Peak
7464.8150	H	41.06	54.00	12.94	Avg
13781.6900	H	47.47	54.00	6.53	Avg
17587.9400	H	44.26	54.00	9.74	Avg

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
All of the configurations or modes are tested, the data of the worst case is recorded in the report.

Test mode:	802.11n(20)	Frequency:	Channel 1: 2412MHz

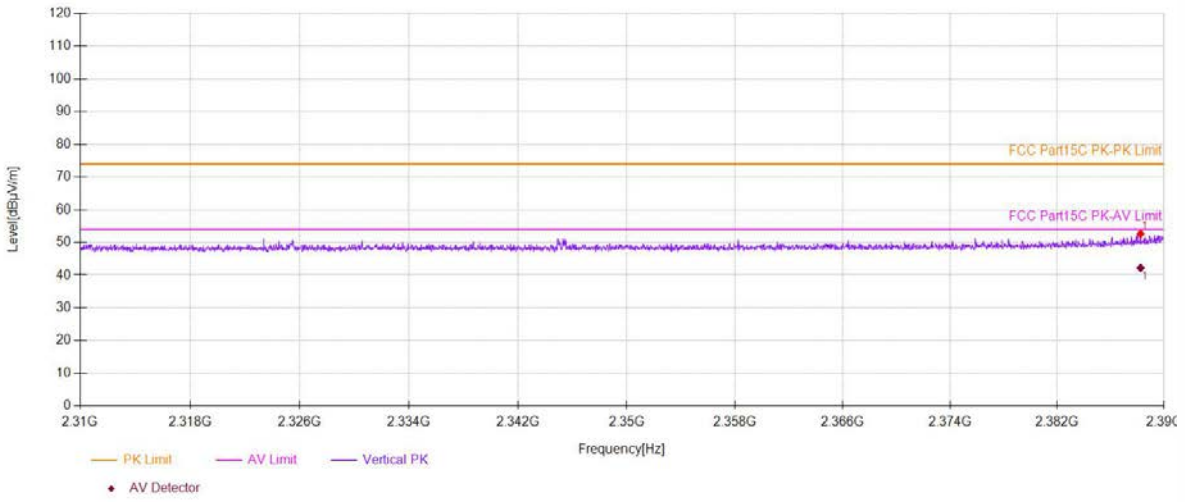
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2388.23	V	52.62	74.00	21.38	Peak
2388.23	V	42.22	54.00	11.78	Avg
2389.92	H	65.14	74.00	8.86	Peak
2389.92	H	43.95	54.00	10.05	Avg

Test mode:	802.11n(20)	Frequency:	Channel 11: 2462MHz

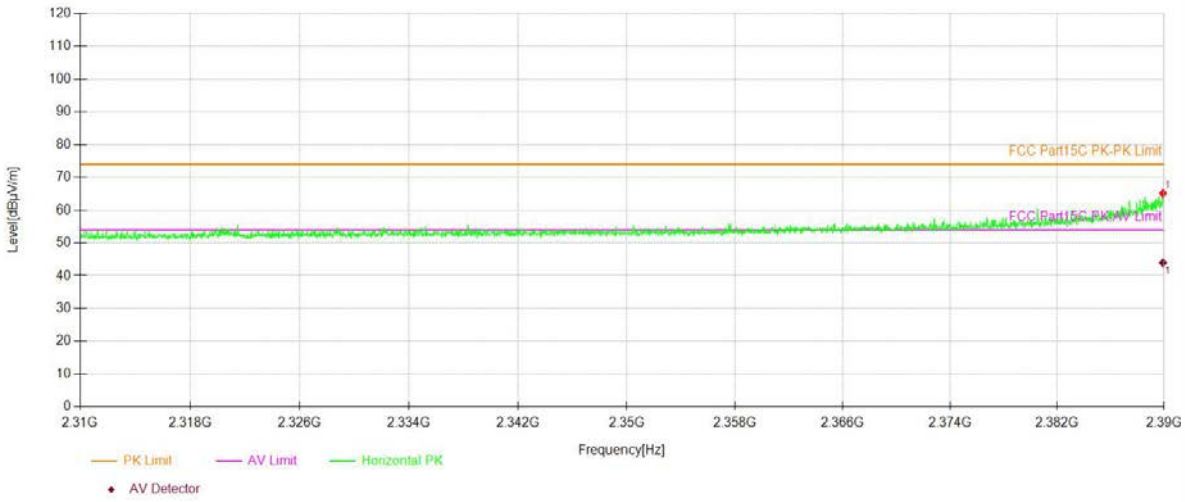
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2483.78	V	53.90	74.00	20.10	Peak
2483.78	V	43.13	54.00	10.87	Avg
2483.73	H	63.05	74.00	10.95	Peak
2483.73	H	43.45	54.00	10.55	Avg

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.

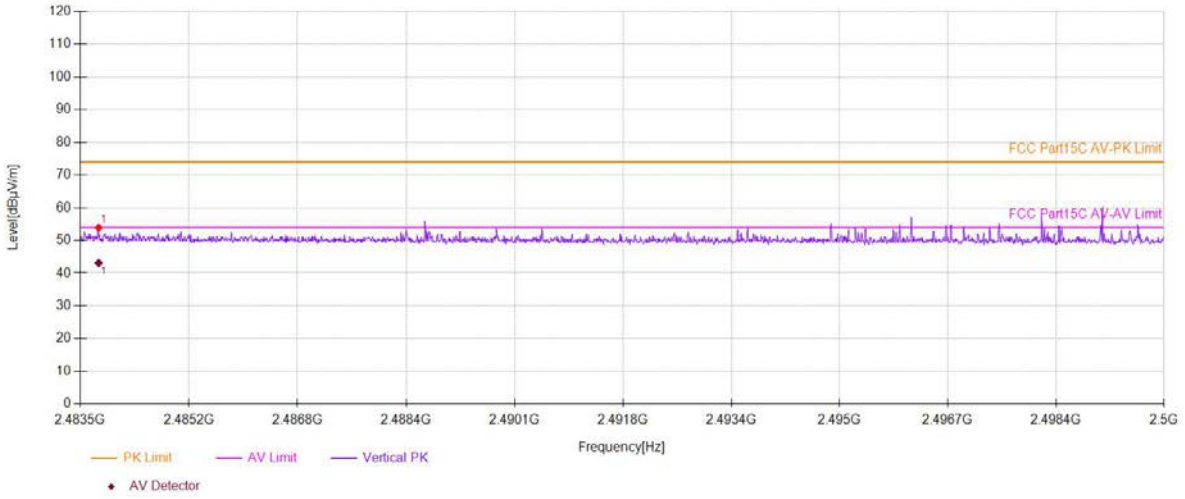
Test Model	Spurious Emission in Restricted Band 2310-2390MHz ☐ 802.11b ☐ 802.11g ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ Channel 1:2412MHz ☐ Channel 3: 2422MHz Polarity: V VBW=3MHz



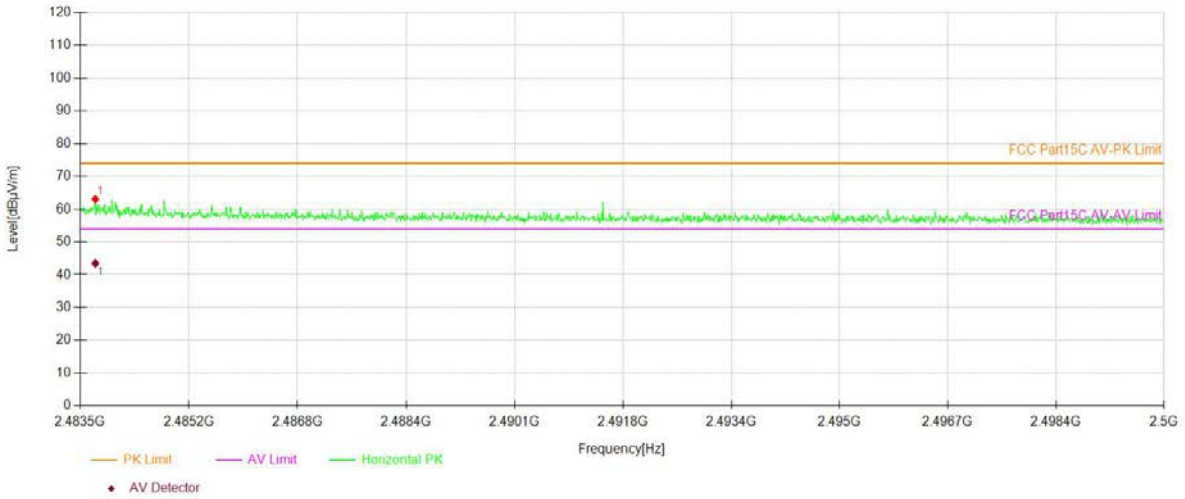
Test Model	Spurious Emission in Restricted Band 2310-2390MHz ☐ 802.11b ☐ 802.11g ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ Channel 1:2412MHz ☐ Channel 3: 2422MHz Polarity:H VBW=3MHz



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



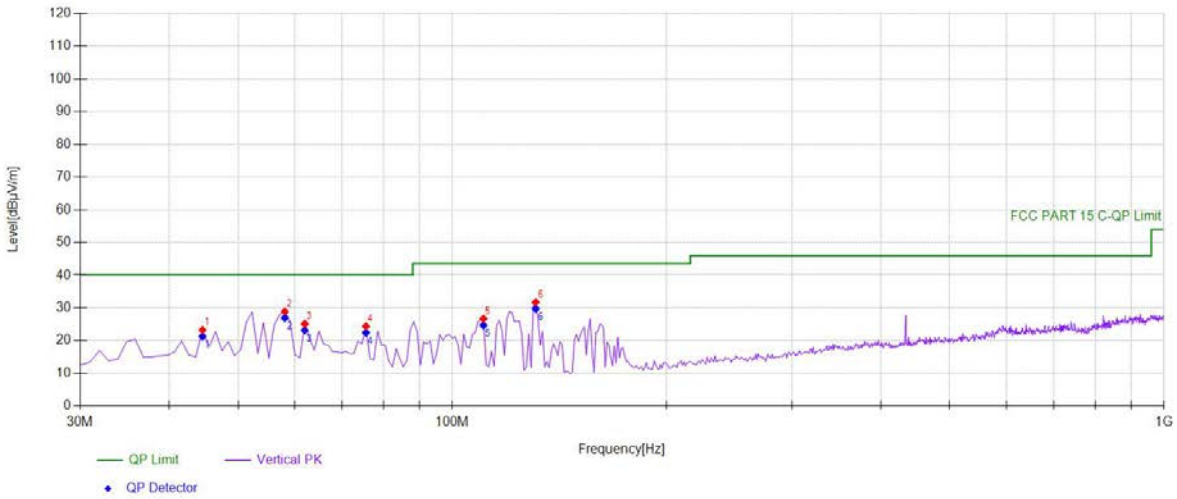
Test Model	Spurious Emission in Restricted Band2483.5-2500MHz ☐ 802.11b ☐ 802.11g ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ Channel 11: 2462MHz ☐ Channel 9: 2452MHz Polarity: H VBW=3MHz



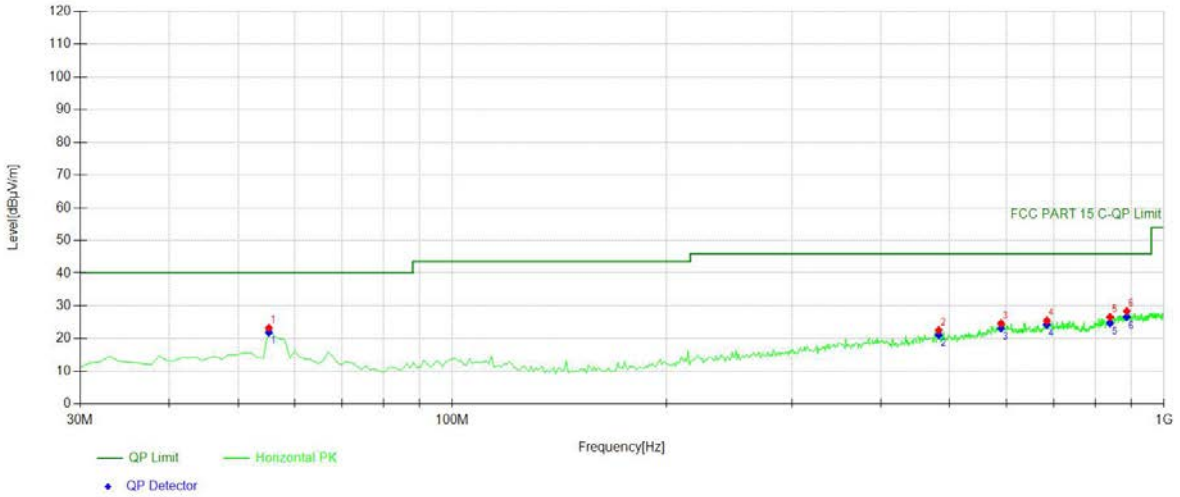
■ Spurious Emission below 1GHz (30MHz to 1GHz)

All of the configurations or modes are tested, the data of the worst case is recorded in the report.

Test mode:	802.11n(20)	Frequency:	Channel 1: 2412MHz

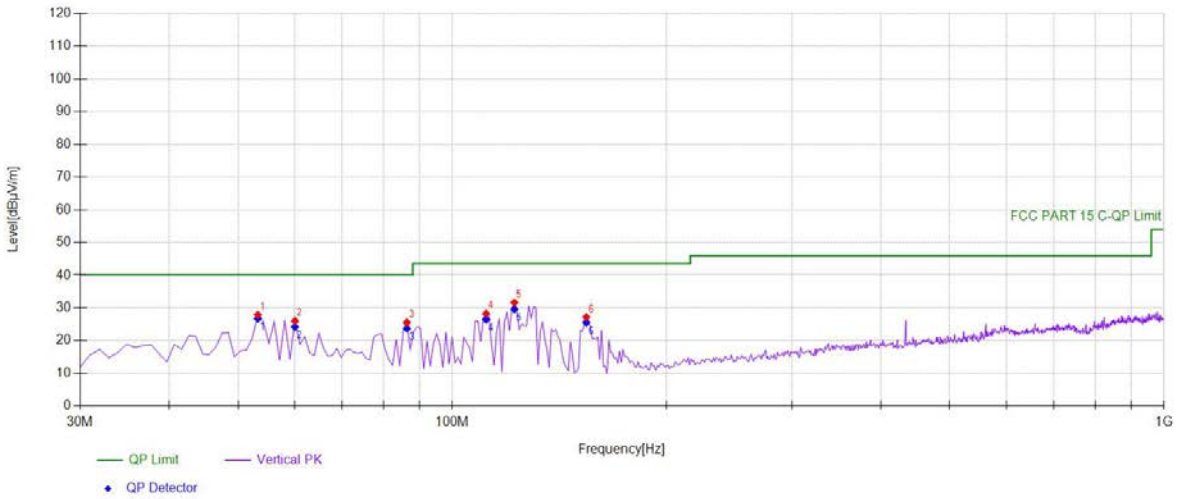


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	44.5646	40.01	-16.77	23.24	PK	40.00	16.76	Vertical
2	58.1582	45.96	-17.08	28.88	PK	40.00	11.12	Vertical
3	62.042	42.72	-17.60	25.12	PK	40.00	14.88	Vertical
4	75.6356	43.93	-19.54	24.39	PK	40.00	15.61	Vertical
5	110.590	44.46	-17.81	26.65	PK	43.50	16.85	Vertical
6	130.981	50.93	-19.21	31.72	PK	43.50	11.78	Vertical



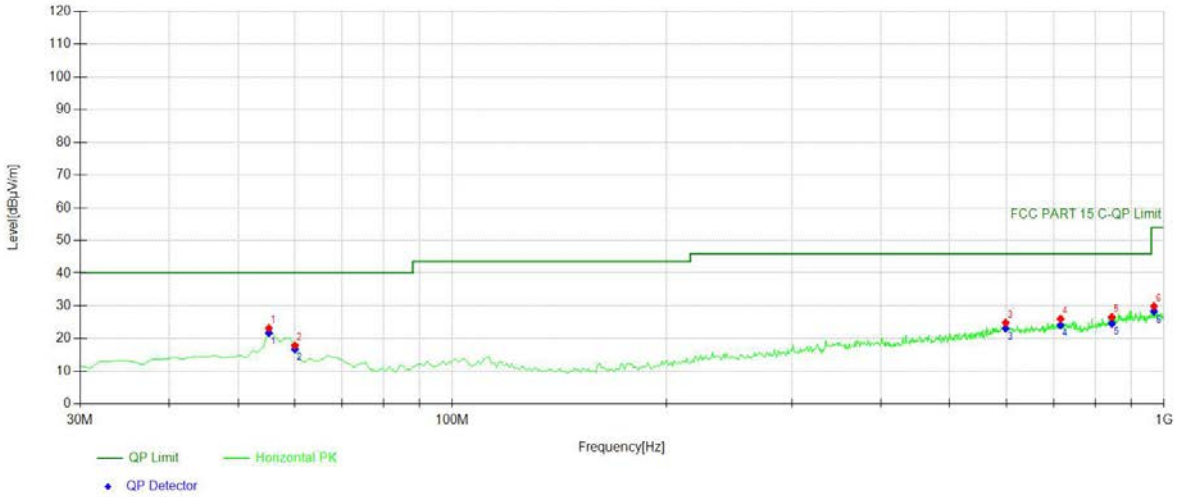
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	55.2452	39.92	-16.69	23.23	PK	40.00	16.77	Horizontal
2	482.472	32.69	-10.08	22.61	PK	46.00	23.39	Horizontal
3	590.250	31.58	-6.93	24.65	PK	46.00	21.35	Horizontal
4	684.434	32.21	-6.74	25.47	PK	46.00	20.53	Horizontal
5	839.789	31.18	-4.66	26.52	PK	46.00	19.48	Horizontal
6	886.396	31.91	-3.52	28.39	PK	46.00	17.61	Horizontal

Test mode:	802.11n(20)	Frequency:	Channel 6: 2437MHz



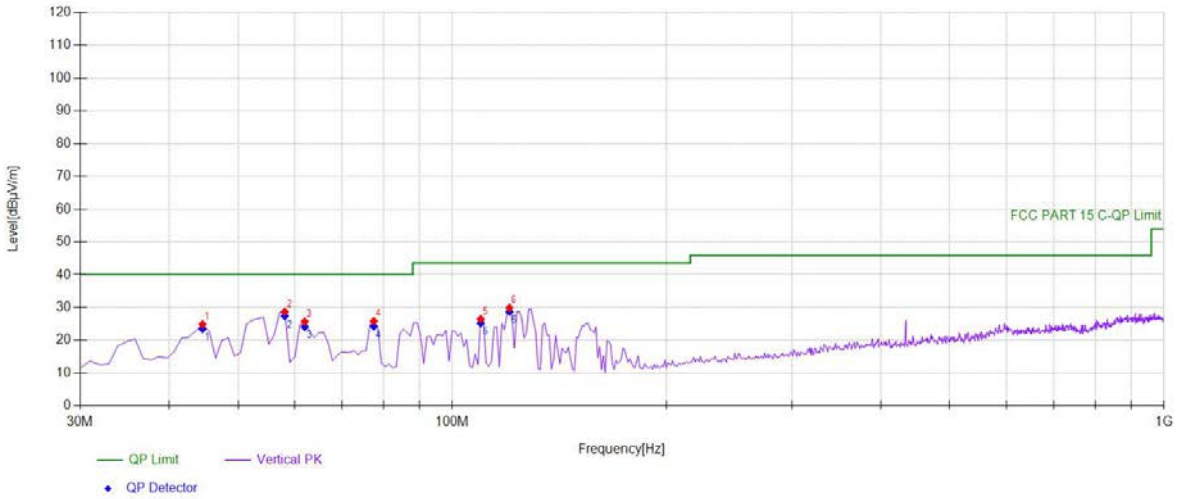
Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	53.3033	44.30	-16.44	27.86	PK	40.00	12.14	Vertical
2	60.1001	43.32	-17.33	25.99	PK	40.00	14.01	Vertical
3	86.3163	44.75	-19.23	25.52	PK	40.00	14.48	Vertical
4	111.5610	46.13	-17.88	28.25	PK	43.50	15.25	Vertical
5	122.2420	50.24	-18.66	31.58	PK	43.50	11.92	Vertical
6	154.2840	46.58	-19.47	27.11	PK	43.50	16.39	Vertical

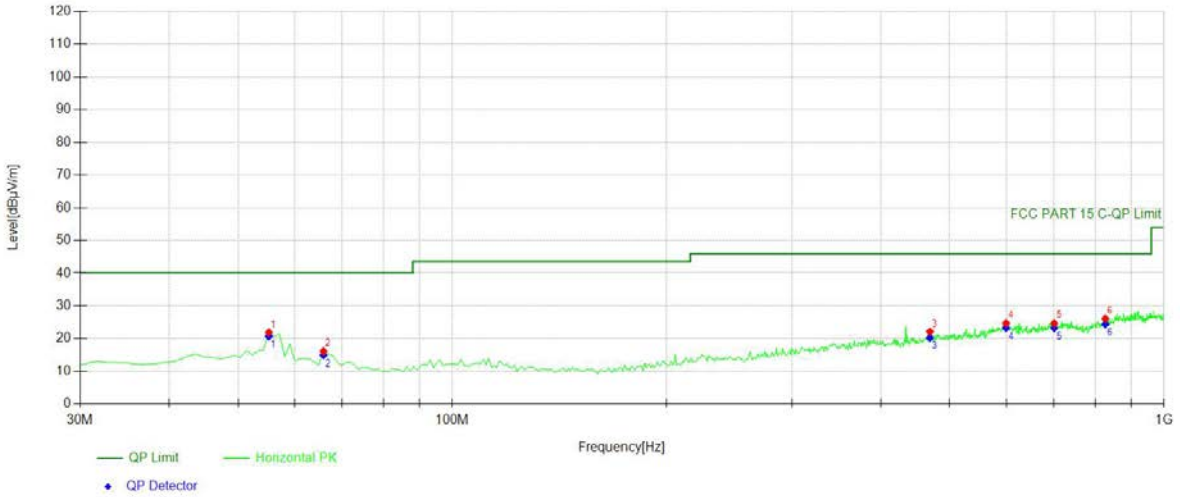


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	55.2452	39.87	-16.69	23.18	PK	40.00	16.82	Horizontal
2	60.1001	35.21	-17.33	17.88	PK	40.00	22.12	Horizontal
3	598.989	31.33	-6.49	24.84	PK	46.00	21.16	Horizontal
4	715.505	32.12	-6.11	26.01	PK	46.00	19.99	Horizontal
5	844.644	30.95	-4.42	26.53	PK	46.00	19.47	Horizontal
6	967.958	32.24	-2.38	29.86	PK	54.00	24.14	Horizontal

Test mode:	802.11n(20)	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	44.5646	41.62	-16.77	24.85	PK	40.00	15.15	Vertical
2	58.1582	45.78	-17.08	28.70	PK	40.00	11.30	Vertical
3	62.042	43.24	-17.60	25.64	PK	40.00	14.36	Vertical
4	77.5776	45.64	-19.83	25.81	PK	40.00	14.19	Vertical
5	109.619	44.18	-17.75	26.43	PK	43.50	17.07	Vertical
6	120.300	48.40	-18.54	29.86	PK	43.50	13.64	Vertical



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	55.2452	38.56	-16.69	21.87	PK	40.00	18.13	Horizontal
2	65.9259	34.25	-18.14	16.11	PK	40.00	23.89	Horizontal
3	468.8780	32.34	-10.23	22.11	PK	46.00	23.89	Horizontal
4	599.96	31.14	-6.44	24.70	PK	46.00	21.30	Horizontal
5	700.9400	30.81	-6.13	24.68	PK	46.00	21.32	Horizontal
6	827.1678	31.04	-4.97	26.07	PK	46.00	19.93	Horizontal

7.6 CONDUCTED EMISSION TEST

7.6.1 Applicable Standard

According to IC RSS-Gen 8.8

7.6.2 Conformance Limit

FCC Part 15, Subpart B, Class B

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

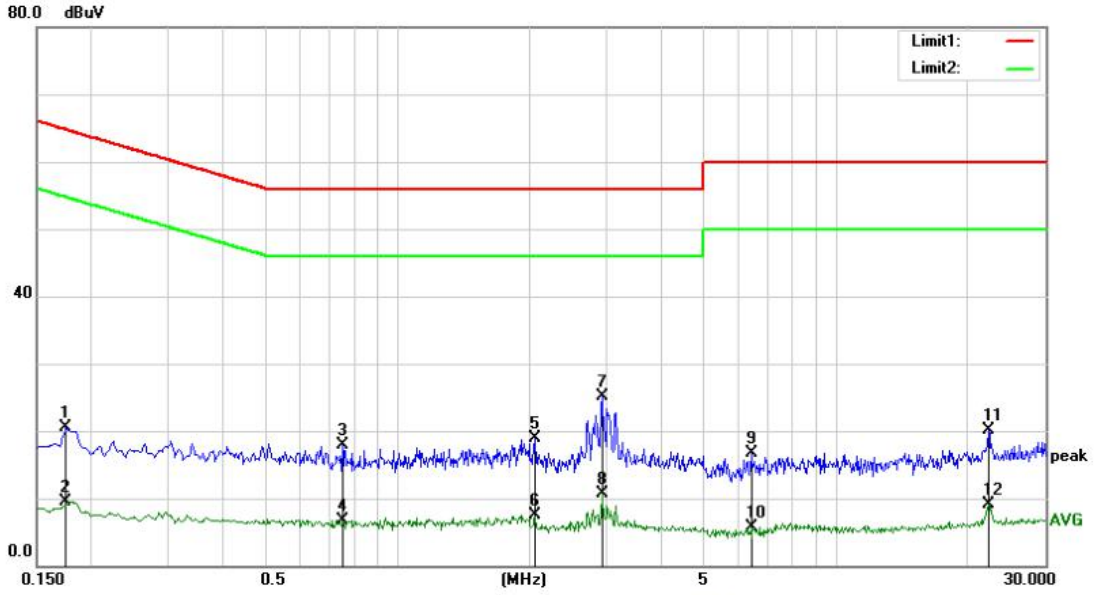
The EUT was placed on a table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

7.6.5 Test Results

Temperature :	25.1℃	ATM Pressure::	1011 mbar
Humidity :	45 %	Test Engineer:	XZC

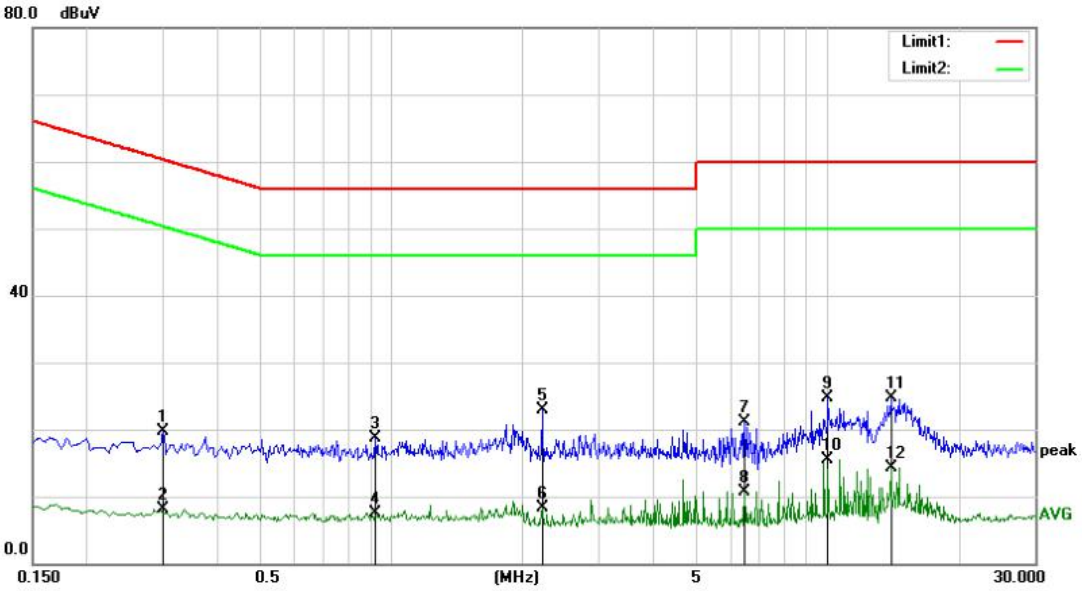
Pass

The all voltage have been tested, and the worst result recorded was report as below.



Site Conduction 2# Phase: *L1* Temperature: 25.1

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1750	9.84	10.66	20.50	64.72	-44.22	QP	
2		0.1750	-1.11	10.66	9.55	54.72	-45.17	AVG	
3		0.7500	7.35	10.65	18.00	56.00	-38.00	QP	
4		0.7500	-3.87	10.65	6.78	46.00	-39.22	AVG	
5		2.0550	8.21	10.64	18.85	56.00	-37.15	QP	
6		2.0550	-3.05	10.64	7.59	46.00	-38.41	AVG	
7	*	2.9300	14.48	10.55	25.03	56.00	-30.97	QP	
8		2.9300	0.15	10.55	10.70	46.00	-35.30	AVG	
9		6.4050	6.26	10.43	16.69	60.00	-43.31	QP	
10		6.4050	-4.73	10.43	5.70	50.00	-44.30	AVG	
11		22.2550	8.83	11.21	20.04	60.00	-39.96	QP	
12		22.2550	-2.01	11.21	9.20	50.00	-40.80	AVG	



Site Conduction 2# Phase: N Temperature: 25.1

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3000	9.11	10.65	19.76	60.24	-40.48	QP	
2		0.3000	-2.64	10.65	8.01	50.24	-42.23	AVG	
3		0.9200	7.97	10.67	18.64	56.00	-37.36	QP	
4		0.9200	-3.13	10.67	7.54	46.00	-38.46	AVG	
5	*	2.2200	12.33	10.62	22.95	56.00	-33.05	QP	
6		2.2200	-2.37	10.62	8.25	46.00	-37.75	AVG	
7		6.4800	10.70	10.44	21.14	60.00	-38.86	QP	
8		6.4800	0.25	10.44	10.69	50.00	-39.31	AVG	
9		10.0300	14.03	10.59	24.62	60.00	-35.38	QP	
10		10.0300	4.91	10.59	15.50	50.00	-34.50	AVG	
11		14.0550	14.01	10.67	24.68	60.00	-35.32	QP	
12		14.0550	3.66	10.67	14.33	50.00	-35.67	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

Temperature :	25℃	ATM Pressure::	1011 mbar
Humidity :	45 %	Test Engineer:	GJ

PASS

The EUT is integrated antenna, Ant1: 3.38dBi, Ant2: 3.62dBi.

☐ 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.

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

Temperature :	25℃	ATM Pressure::	1011 mbar
Humidity :	45 %	Test Engineer:	GJ

PASS

The EUT is integrated antenna, Ant1: 3.38dBi, Ant2: 3.62dBi.

☐ 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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