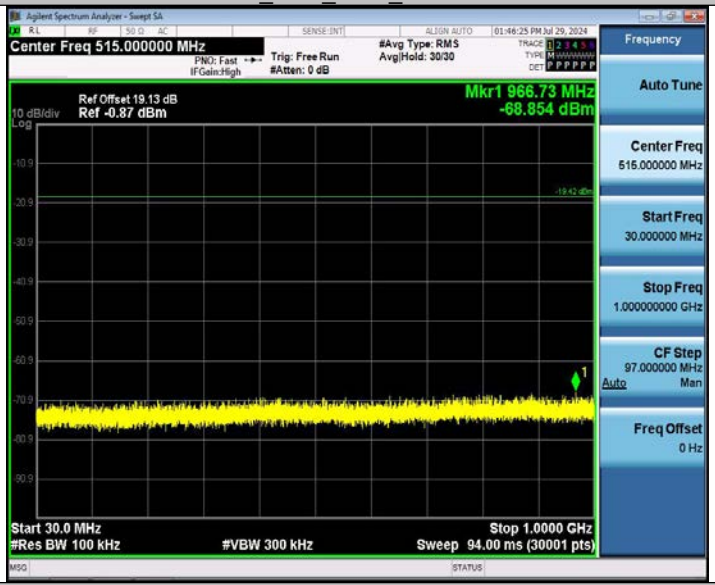
11B_Ant2_2437_0~Reference

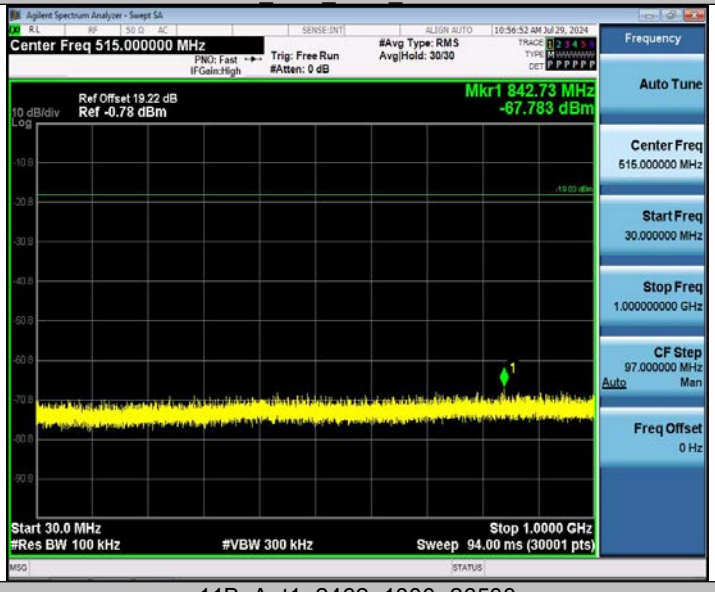
11B_Ant2_2437_30~1000



11B_Ant2_2437_1000~26500

11B_Ant1_2462_0~Reference

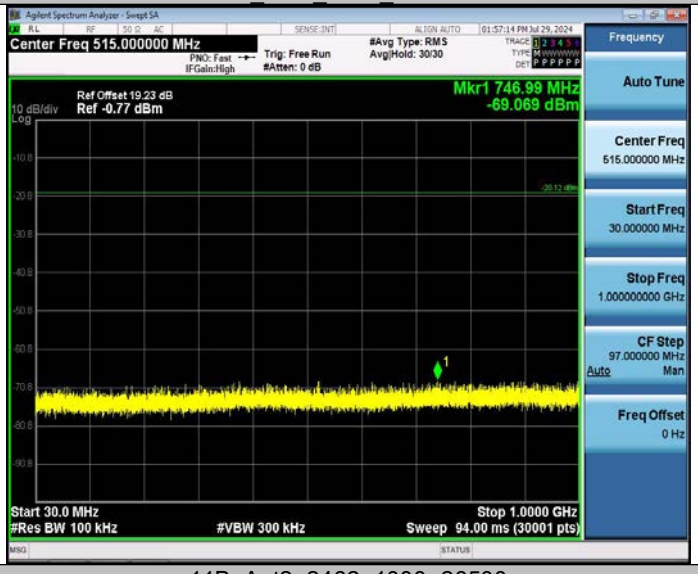
11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500

11B_Ant2_2462_0~Reference

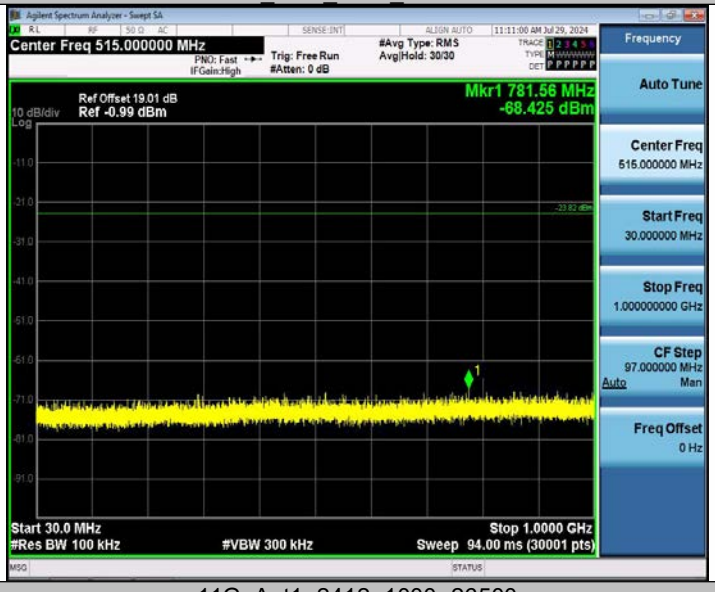
11B_Ant2_2462_30~1000



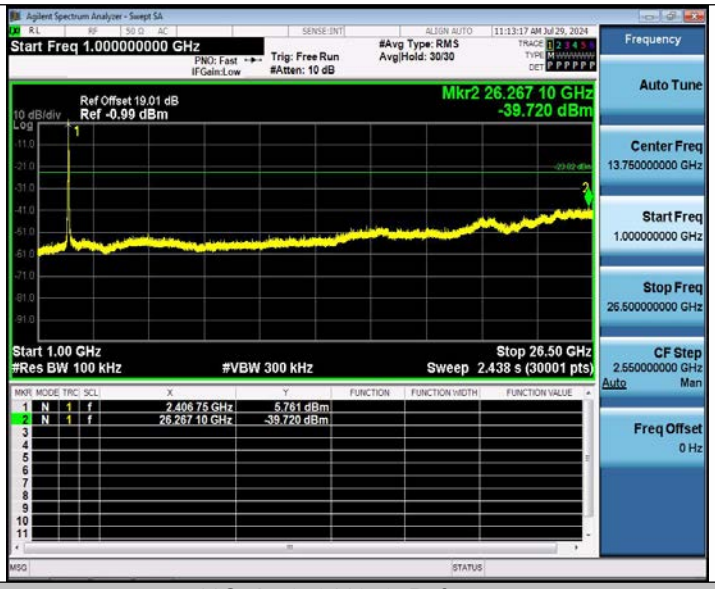
11B_Ant2_2462_1000~26500

11G_Ant1_2412_0~Reference

11G_Ant1_2412_30~1000

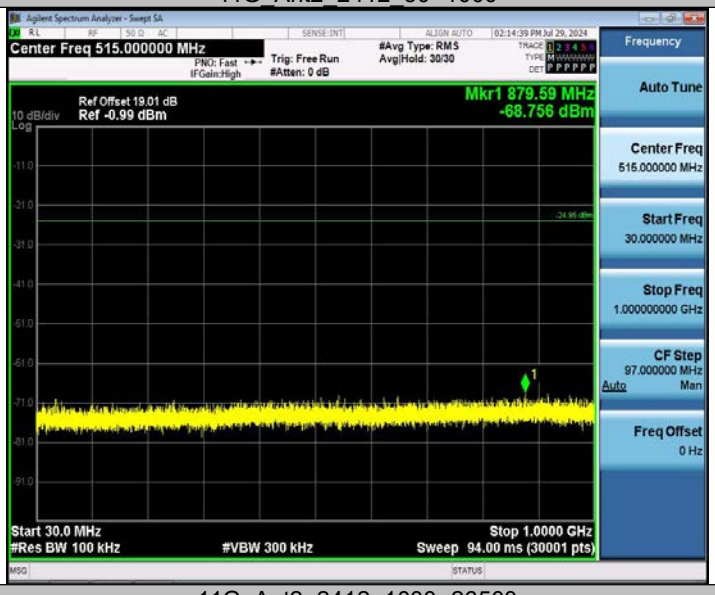


11G_Ant1_2412_1000~26500

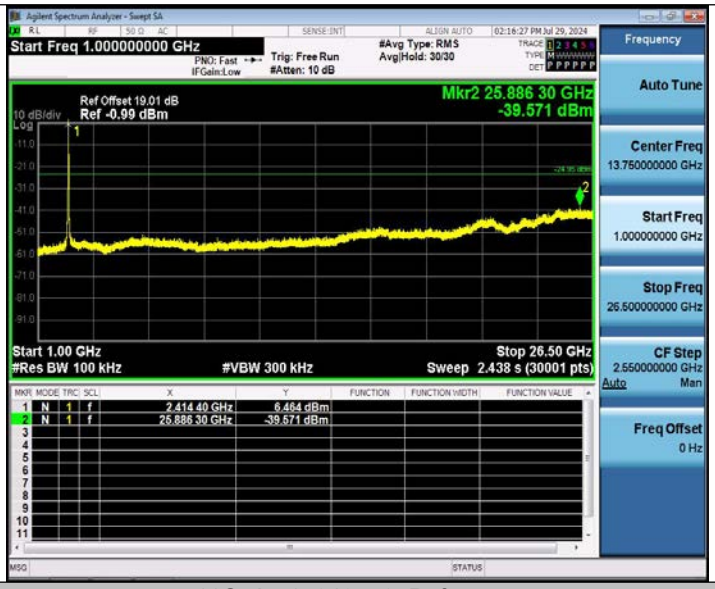


11G_Ant2_2412_0~Reference

11G_Ant2_2412_30~1000

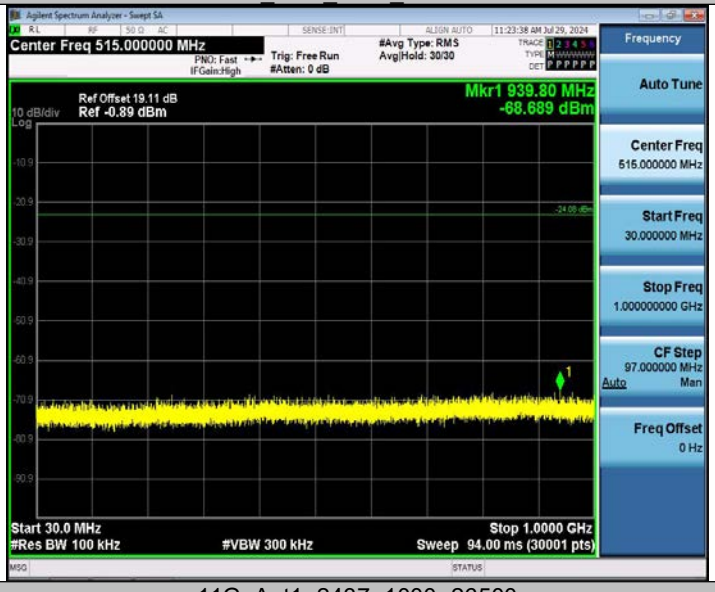


11G_Ant2_2412_1000~26500



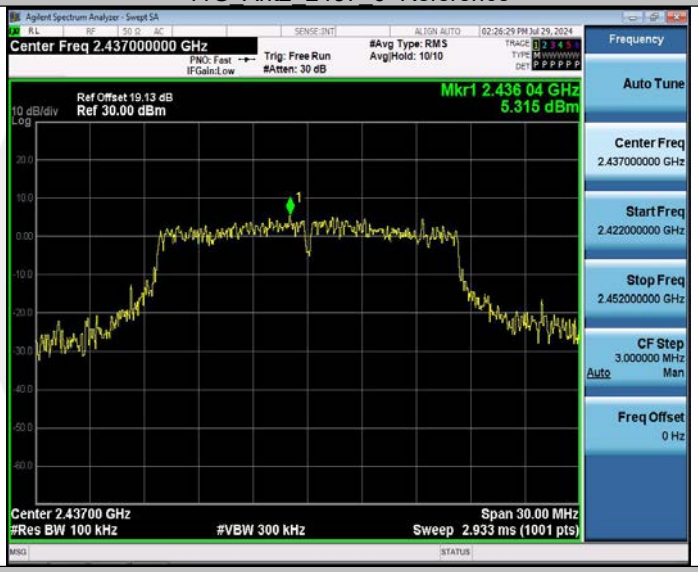
11G_Ant1_2437_0~Reference

11G_Ant1_2437_30~1000

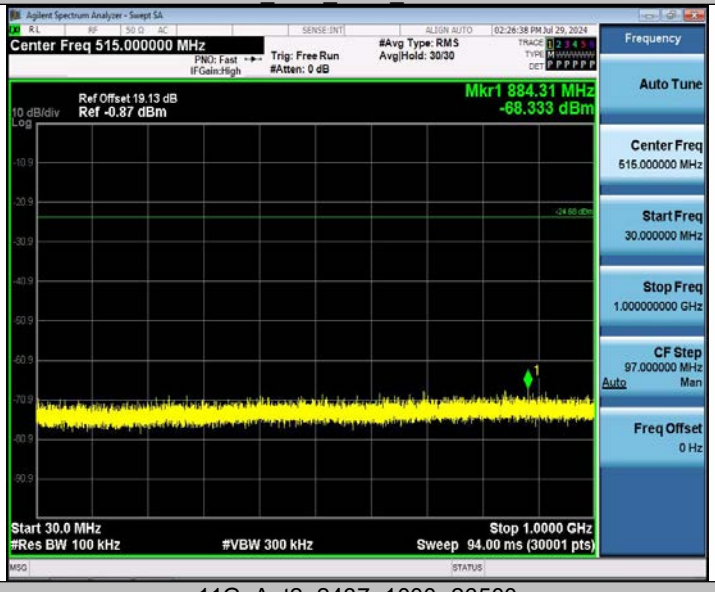


11G_Ant1_2437_1000~26500

11G_Ant2_2437_0~Reference



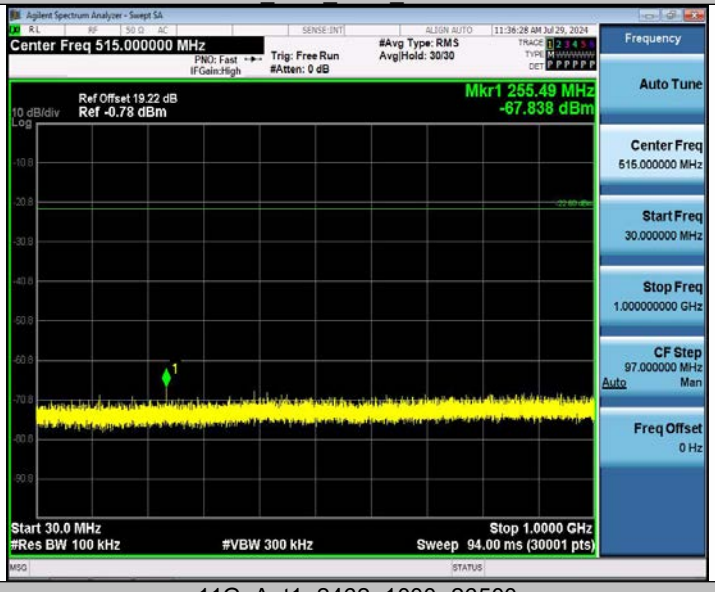
11G_Ant2_2437_30~1000



11G_Ant2_2437_1000~26500

11G_Ant1_2462_0~Reference

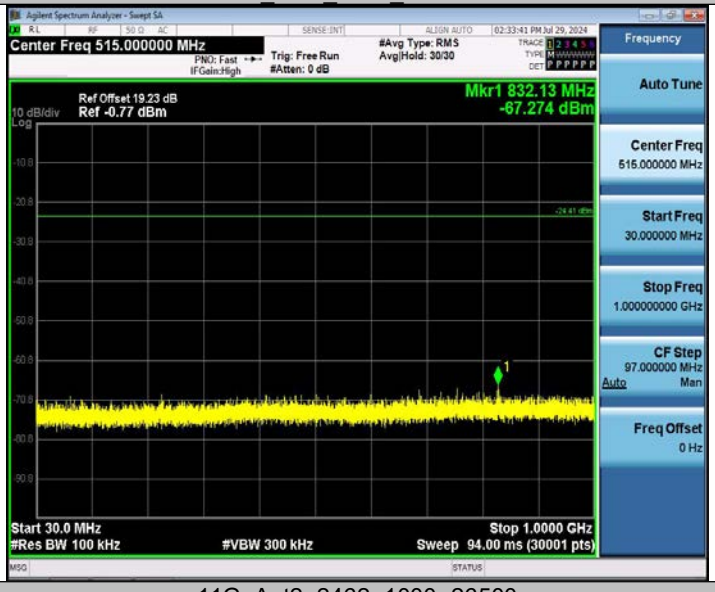
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500

11G_Ant2_2462_0~Reference

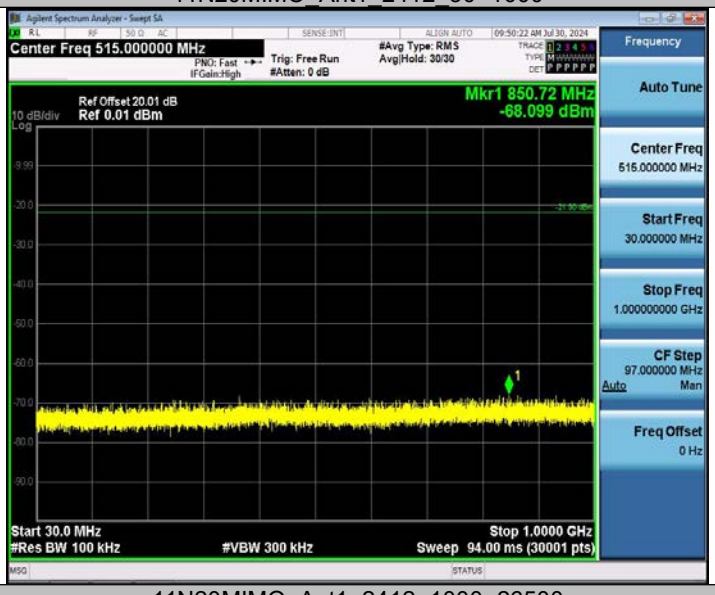
11G_Ant2_2462_30~1000



11G_Ant2_2462_1000~26500

11N20MIMO_Ant1_2412_0~Reference

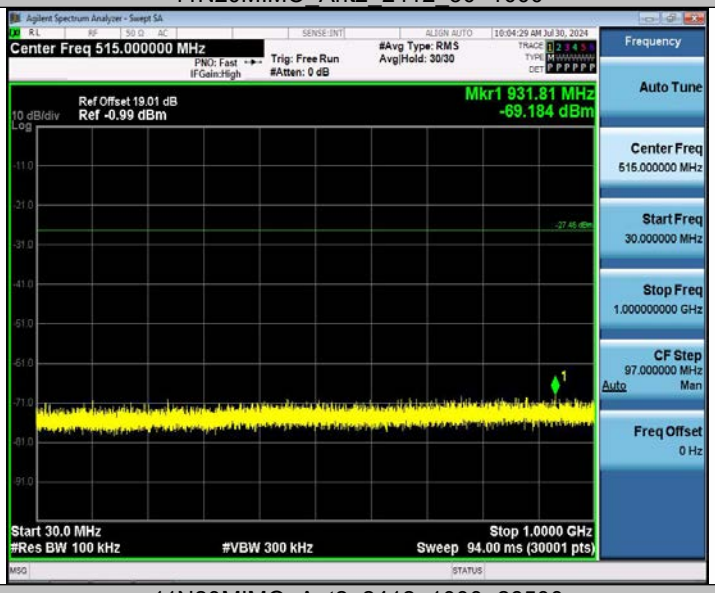
11N20MIMO_Ant1_2412_30~1000



11N20MIMO_Ant1_2412_1000~26500

11N20MIMO_Ant2_2412_0~Reference

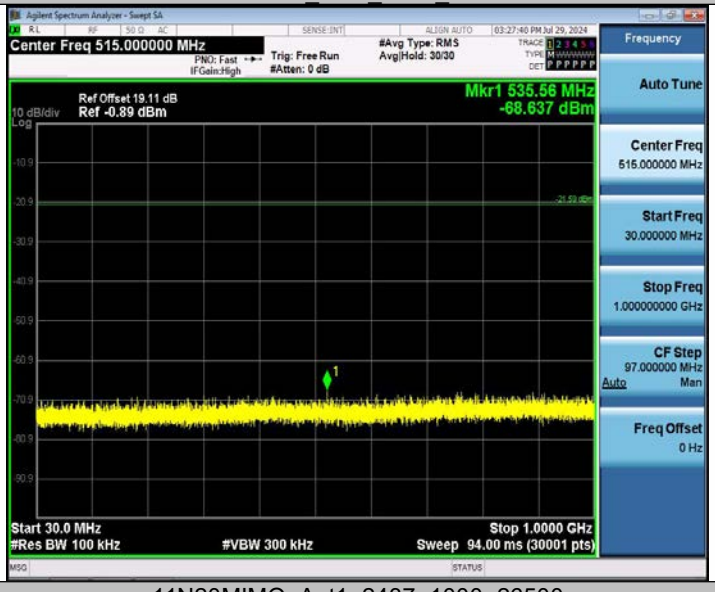
11N20MIMO_Ant2_2412_30~1000



11N20MIMO_Ant2_2412_1000~26500

11N20MIMO_Ant1_2437_0~Reference

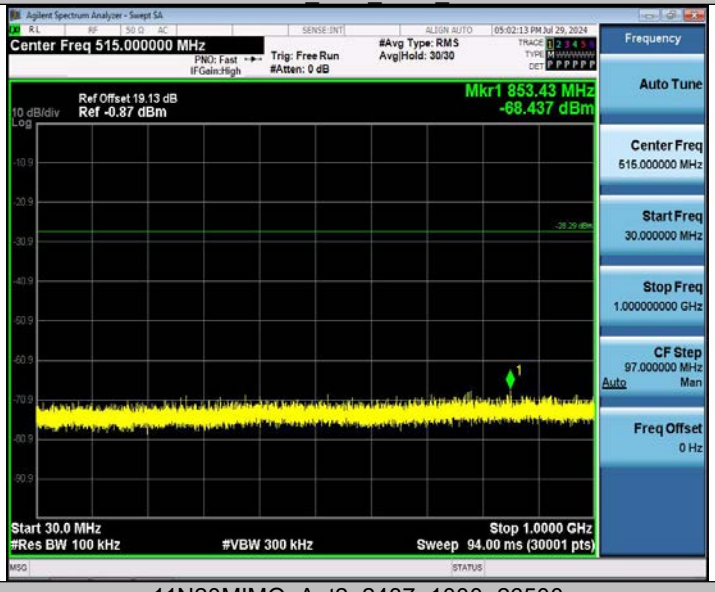
11N20MIMO_Ant1_2437_30~1000



11N20MIMO_Ant1_2437_1000~26500

11N20MIMO_Ant2_2437_0~Reference

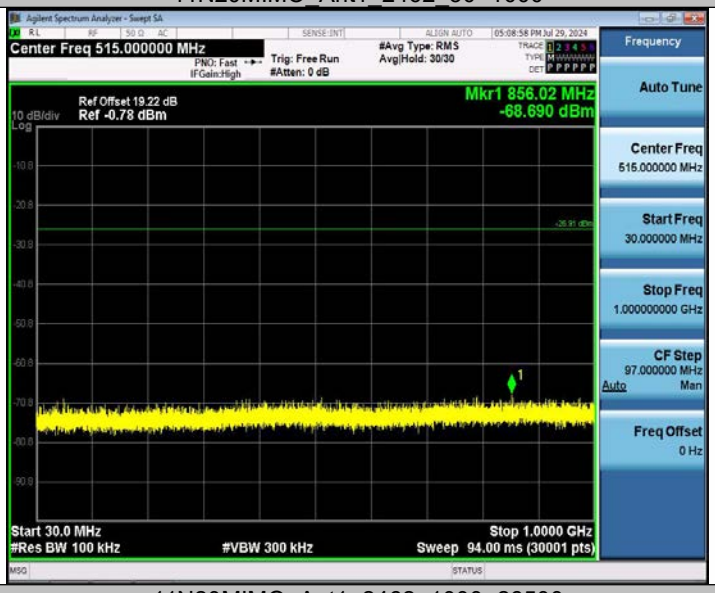
11N20MIMO_Ant2_2437_30~1000



11N20MIMO_Ant2_2437_1000~26500

11N20MIMO_Ant1_2462_0~Reference

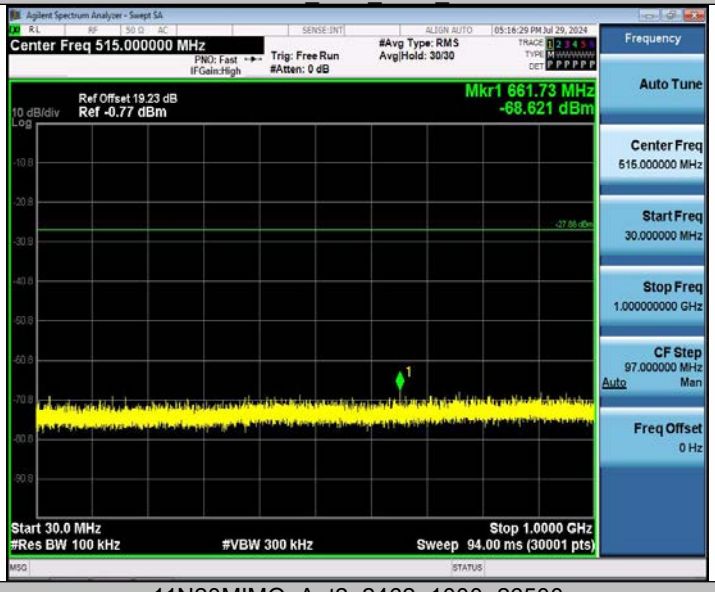
11N20MIMO_Ant1_2462_30~1000



11N20MIMO_Ant1_2462_1000~26500

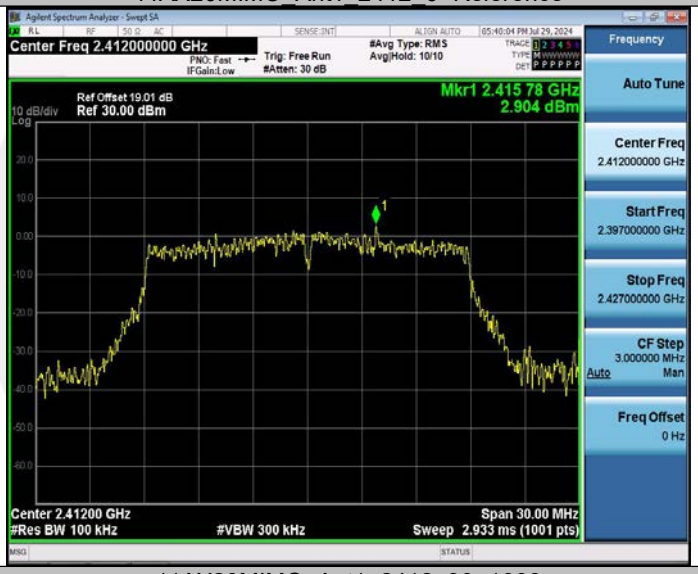
11N20MIMO_Ant2_2462_0~Reference

11N20MIMO_Ant2_2462_30~1000

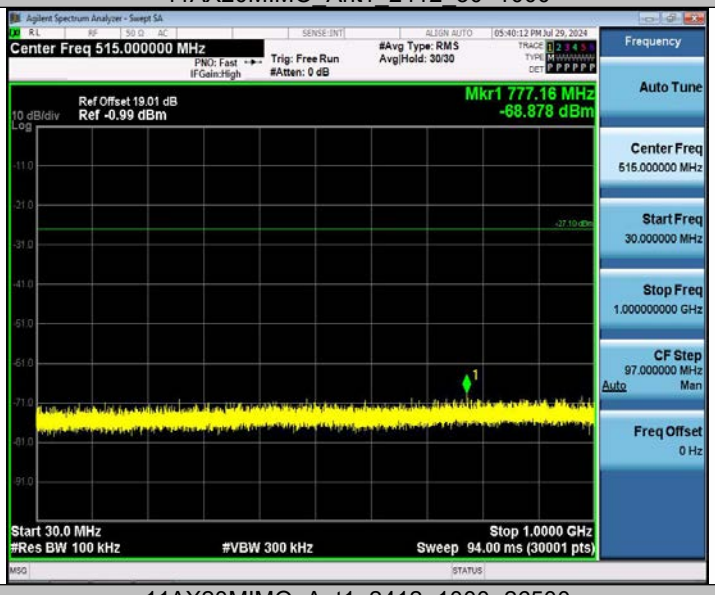


11N20MIMO_Ant2_2462_1000~26500

11AX20MIMO_Ant1_2412_0~Reference

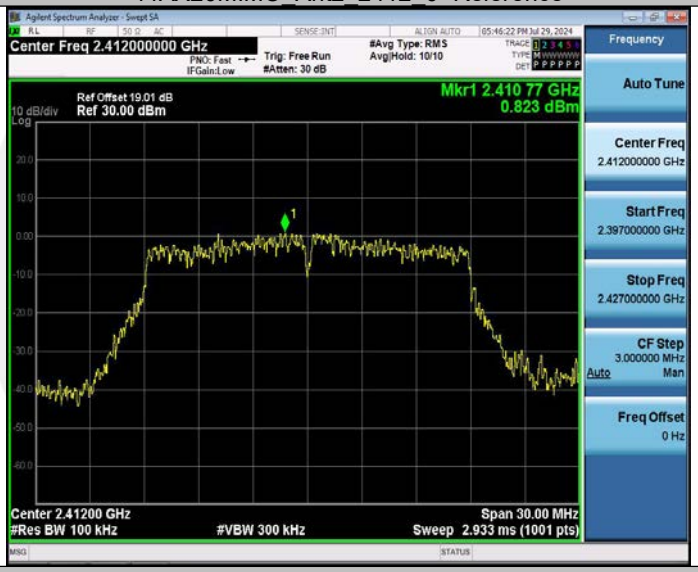


11AX20MIMO_Ant1_2412_30~1000

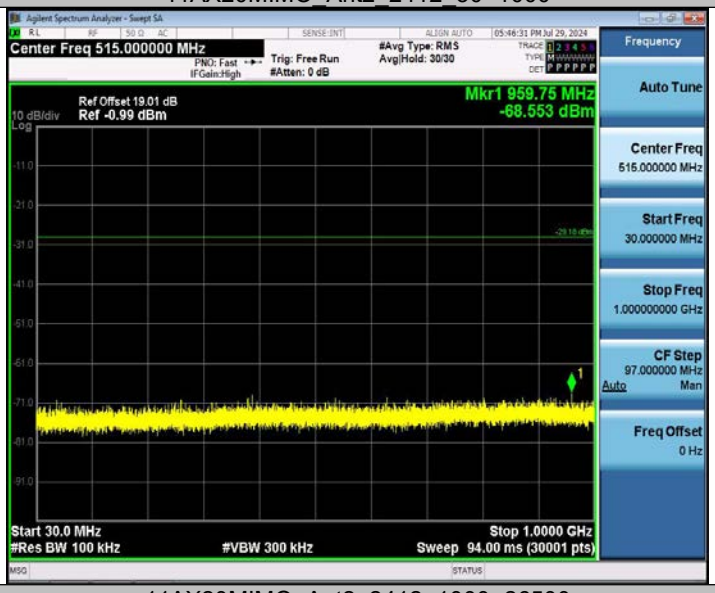


11AX20MIMO_Ant1_2412_1000~26500

11AX20MIMO_Ant2_2412_0~Reference



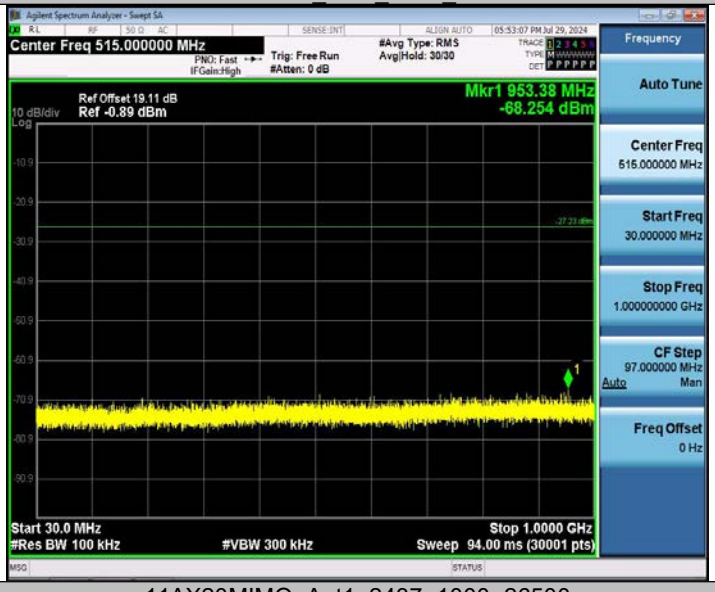
11AX20MIMO_Ant2_2412_30~1000



11AX20MIMO_Ant2_2412_1000~26500

11AX20MIMO_Ant1_2437_0~Reference

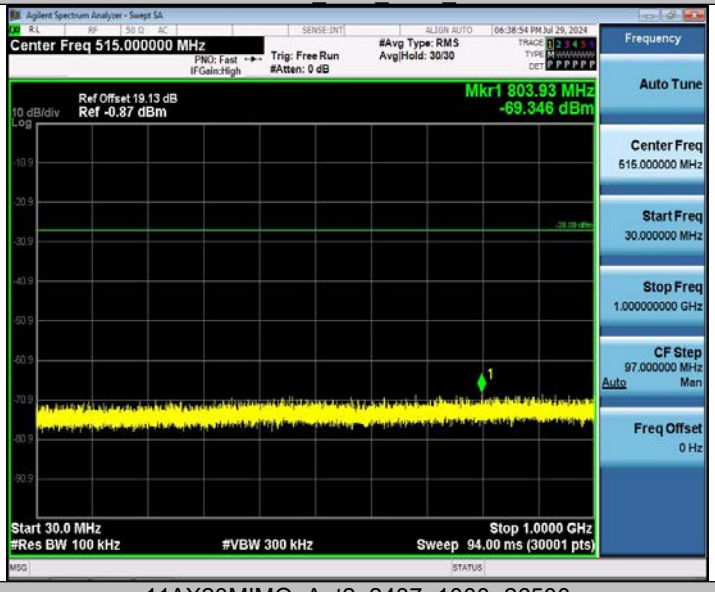
11AX20MIMO_Ant1_2437_30~1000



11AX20MIMO_Ant1_2437_1000~26500

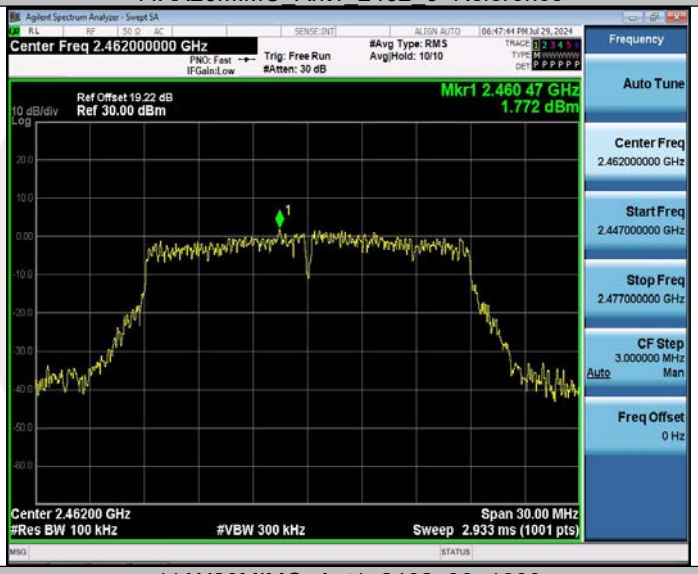
11AX20MIMO_Ant2_2437_0~Reference

11AX20MIMO_Ant2_2437_30~1000

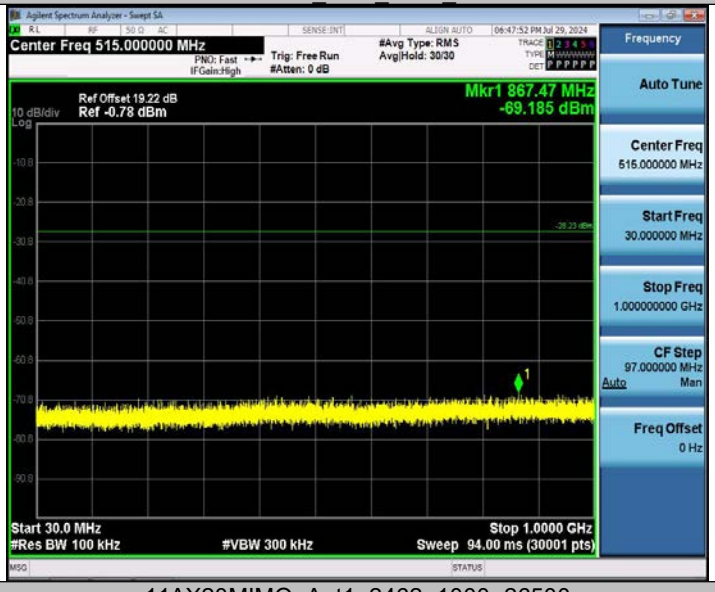


11AX20MIMO_Ant2_2437_1000~26500

11AX20MIMO_Ant1_2462_0~Reference



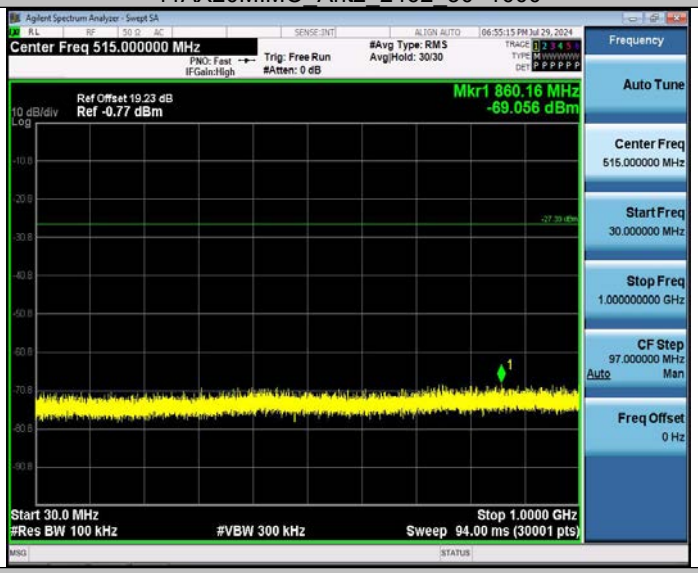
11AX20MIMO_Ant1_2462_30~1000



11AX20MIMO_Ant1_2462_1000~26500

11AX20MIMO_Ant2_2462_0~Reference

11AX20MIMO_Ant2_2462_30~1000



11AX20MIMO_Ant2_2462_1000~26500


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.750000000 GHz
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
#Avg Type: RMS
Avg|Hold: 30/30
06:56:48 PM Jul 29, 2024
Frequency
Auto Tune
Ref Offset 19.23 dB
10 dB/div
Ref -0.77 dBm
Mkr2 24.945 35 GHz
-50.743 dBm
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
1 N 1 f 2.461 15 GHz 1.855 dBm
2 N 1 f 24.945 35 GHz -50.743 dBm
MSG
STATUS

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:	HZB

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

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m) PK	Emission Level(dBuV/m) AV	Limit 3m(dBuV/m) PK	Limit 3m(dBuV/m) AV	Over(dB) PK	Over(dB) 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 ANT1 and MIMO as below:

ANT1:

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

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8488.12	V	63.91	74.00	10.09	Peak
11621.2	V	65.53	74.00	8.47	Peak
17527.5	V	66.84	74.00	7.16	Peak
8488.125	V	44.98	54.00	9.02	Avg
11621.25	V	46.11	54.00	7.89	Avg
17527.5	V	46.51	54.00	7.49	Avg
8458.12	H	63.52	74.00	10.48	Peak
10659.3	H	65.06	74.00	8.94	Peak
17656.8	H	65.74	74.00	8.26	Peak
8458.12	H	44.62	54.00	9.38	Avg
10659.37	H	46.98	54.00	7.02	Avg
17656.87	H	47.75	54.00	6.25	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
6444.37	V	55.31	74.00	18.69	Peak
8416.87	V	63.83	74.00	10.17	Peak
12403.1	V	66.31	74.00	7.69	Peak
6444.375	V	35.85	54.00	18.15	Avg
8416.875	V	40.60	54.00	13.40	Avg
12403.12	V	46.11	54.00	7.89	Avg
8407.5	H	64.10	74.00	9.90	Peak
11428.1	H	64.75	74.00	9.25	Peak
17145	H	65.54	74.00	8.46	Peak
8407.5	H	44.66	54.00	9.34	Avg
11428.12	H	47.08	54.00	6.92	Avg
17145	H	44.91	54.00	9.09	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
9376.87	V	63.60	74.00	10.40	Peak
11488.1	V	65.90	74.00	8.10	Peak
16809.3	V	66.56	74.00	7.44	Peak
9376.875	V	46.27	54.00	7.73	Avg
11488.12	V	47.62	54.00	6.38	Avg
16809.37	V	44.62	54.00	9.38	Avg
9697.5	H	64.21	74.00	9.79	Peak
12538.1	H	66.12	74.00	7.88	Peak
16021.8	H	67.34	74.00	6.66	Peak
9697.5	H	47.31	54.00	6.69	Avg
12538.12	H	47.90	54.00	6.10	Avg
16021.87	H	43.16	54.00	10.84	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
8486.7300	V	63.78	74.00	10.22	Peak
11619.8100	V	65.37	74.00	8.63	Peak
17528.7800	V	66.81	74.00	7.19	Peak
8489.4050	V	44.96	54.00	9.04	Avg
11619.0000	V	45.85	54.00	8.15	Avg
17525.2500	V	46.32	54.00	7.68	Avg
8469.8100	H	63.44	74.00	10.56	Peak
10670.9900	H	64.85	74.00	9.15	Peak
17668.4900	H	65.58	74.00	8.42	Peak
8469.8100	H	44.48	54.00	9.52	Avg
10656.0600	H	46.80	54.00	7.20	Avg
17653.5600	H	47.62	54.00	6.38	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
6442.9800	V	55.18	74.00	18.82	Peak
8415.4800	V	63.67	74.00	10.33	Peak
12404.3800	V	66.28	74.00	7.72	Peak
6445.6550	V	35.83	54.00	18.17	Avg
8414.6250	V	40.34	54.00	13.66	Avg
12400.8700	V	45.92	54.00	8.08	Avg
8419.1900	H	64.02	74.00	9.98	Peak
11439.7900	H	64.54	74.00	9.46	Peak
17156.6900	H	65.38	74.00	8.62	Peak
8419.1900	H	44.52	54.00	9.48	Avg
11424.8100	H	46.90	54.00	7.10	Avg
17141.6900	H	44.78	54.00	9.22	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
9375.4800	V	63.47	74.00	10.53	Peak
11486.7100	V	65.74	74.00	8.26	Peak
16810.5800	V	66.53	74.00	7.47	Peak
9378.1550	V	46.25	54.00	7.75	Avg
11485.8700	V	47.36	54.00	6.64	Avg
16807.1200	V	44.43	54.00	9.57	Avg
9709.1900	H	64.13	74.00	9.87	Peak
12549.7900	H	65.91	74.00	8.09	Peak
16033.4900	H	67.18	74.00	6.82	Peak
9709.1900	H	47.17	54.00	6.83	Avg
12534.8100	H	47.72	54.00	6.28	Avg
16018.5600	H	43.03	54.00	10.97	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

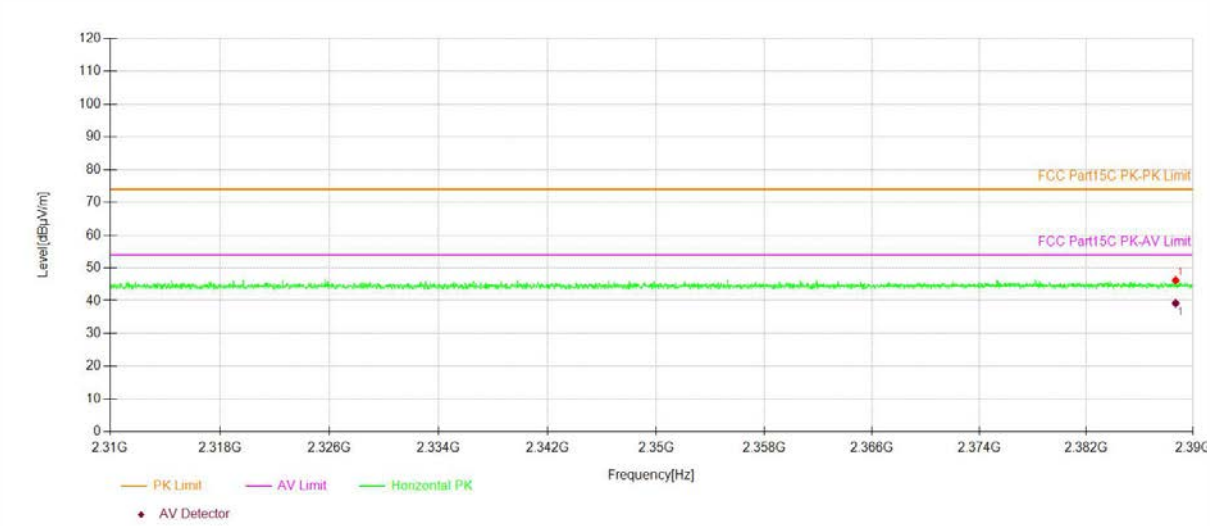
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2384.85	V	46.39	74.00	27.61	Peak
2384.85	V	39.46	54.00	14.54	Avg
2388.69	H	46.23	74.00	27.77	Peak
2388.69	H	39.21	54.00	14.79	Avg

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

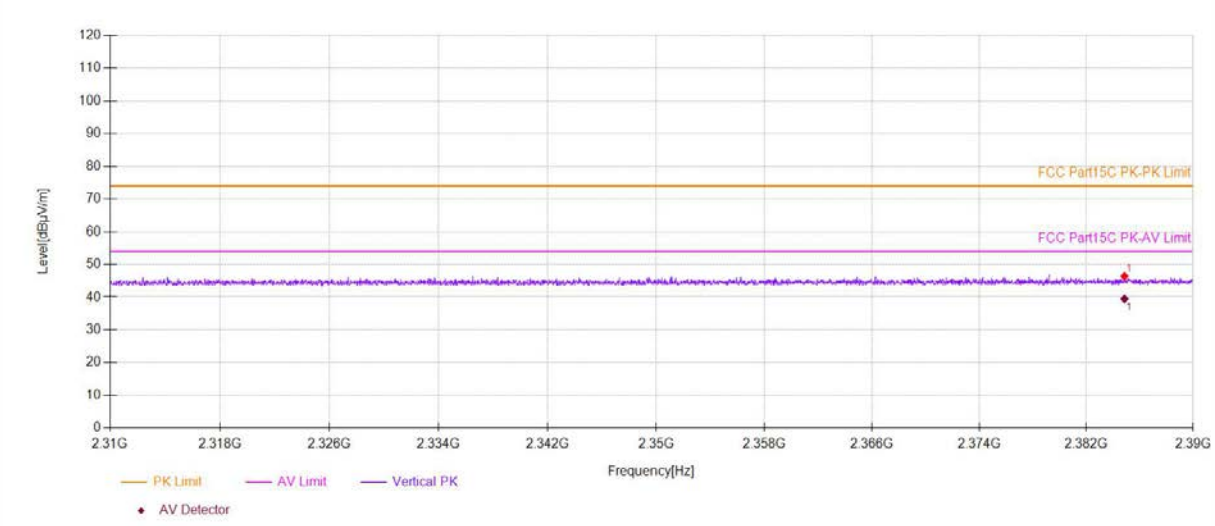
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2484.60	V	49.20	74.00	24.80	Peak
2484.60	V	39.94	54.00	14.06	Avg
2483.68	H	46.95	74.00	27.05	Peak
2483.68	H	40.02	54.00	13.98	Avg

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.

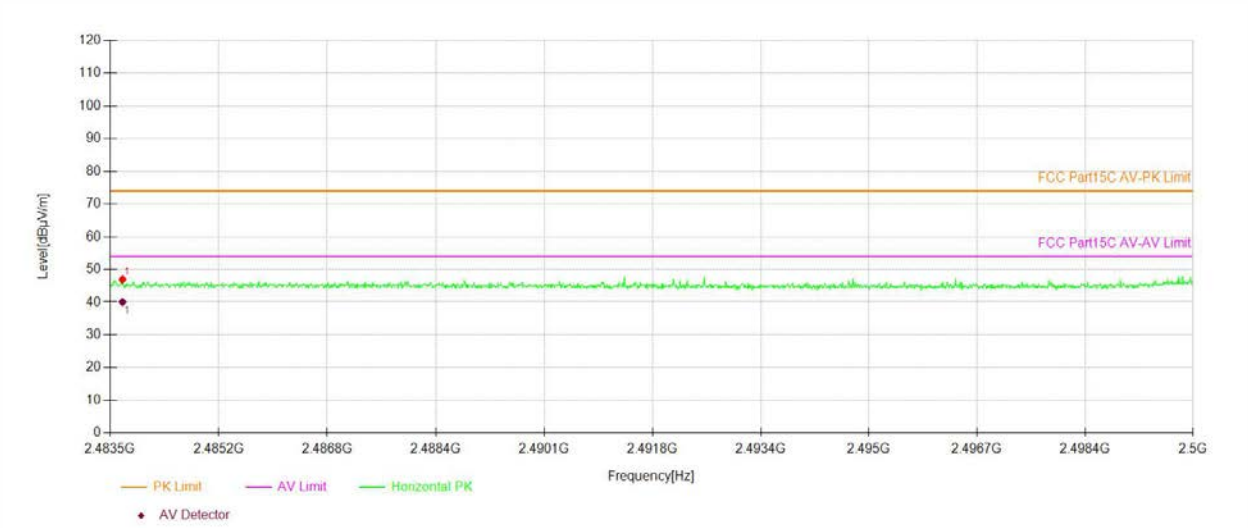
Spurious Emission in Restricted Band 2310-2390MHz				
Test Model	☐ 802.11b	☐ 802.11g	☒ 802.11n(HT20)	☐ 802.11n(HT40)
	☒ Channel 1:2412MHz VBW=3MHz	☐ Channel 3: 2422MHz		Polarity: H



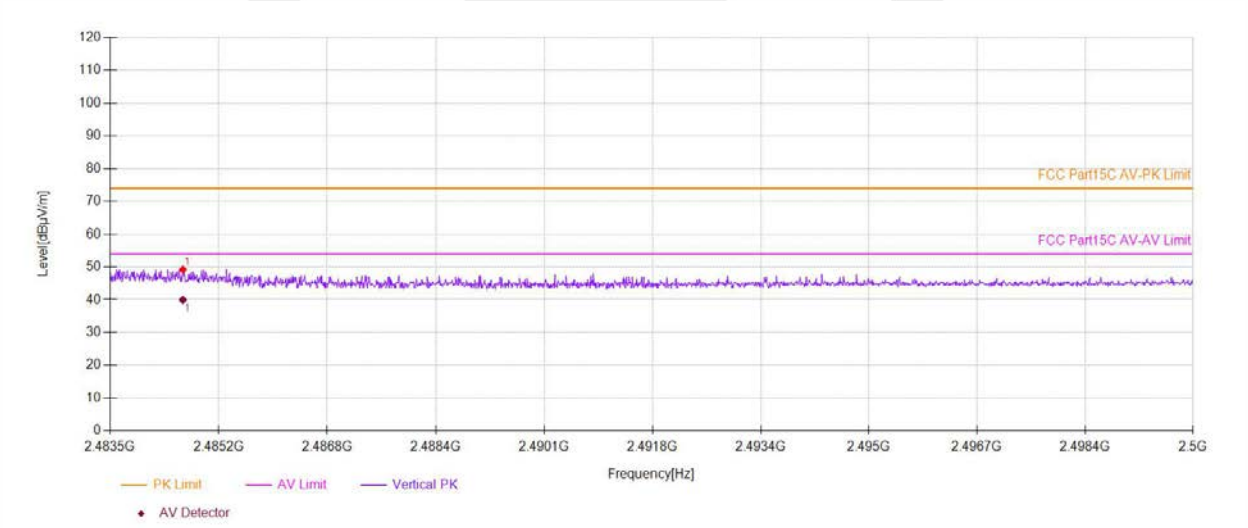
Spurious Emission in Restricted Band 2310-2390MHz				
Test Model	☐ 802.11b	☐ 802.11g	☒ 802.11n(HT20)	☐ 802.11n(HT40)
	☒ Channel 1:2412MHz VBW=3MHz	☐ Channel 3: 2422MHz		Polarity:V



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: H VBW=3MHz



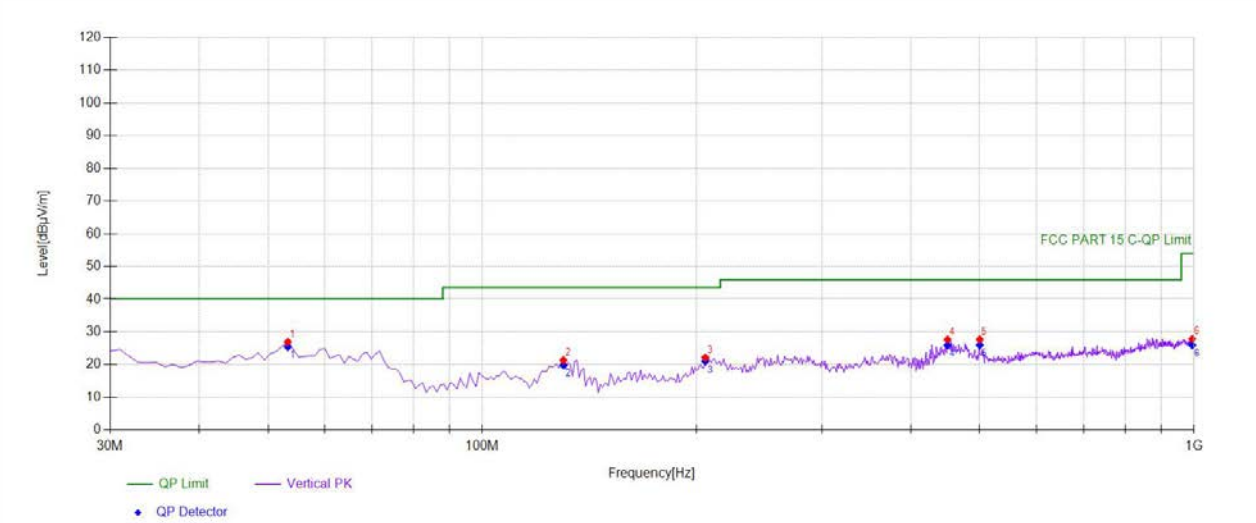
Test Model	Spurious Emission in Restricted Band2483.5-2500MHz ☐ 802.11b ☐ 802.11g ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ Channel 11: 2462MHz ☐ Channel 9: 2452MHz Polarity: V VBW=3MHz



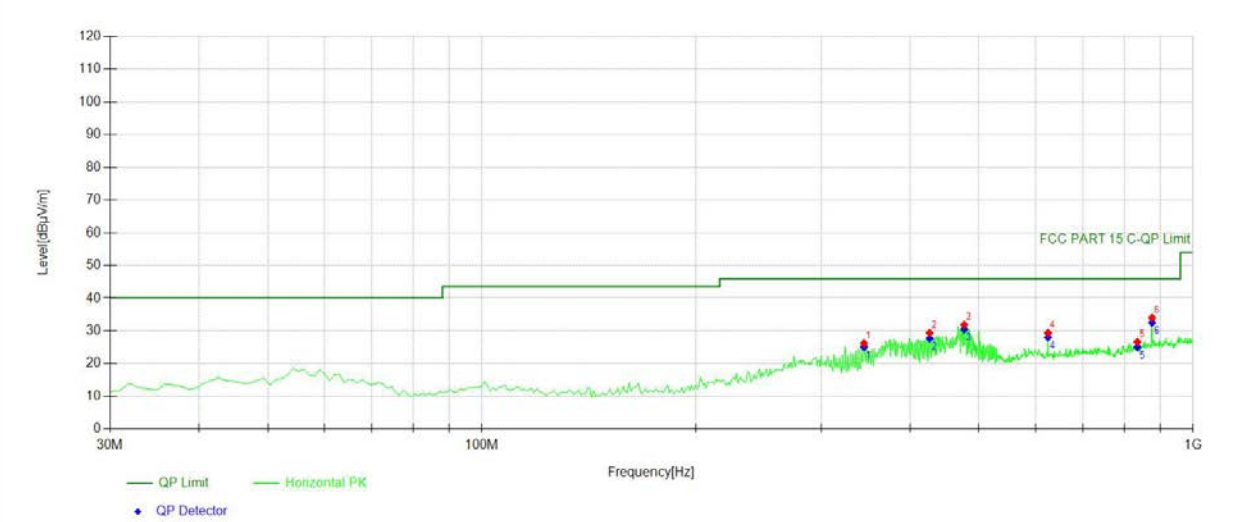
■ Spurious Emission below 1GHz (30MHz to 1GHz)

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

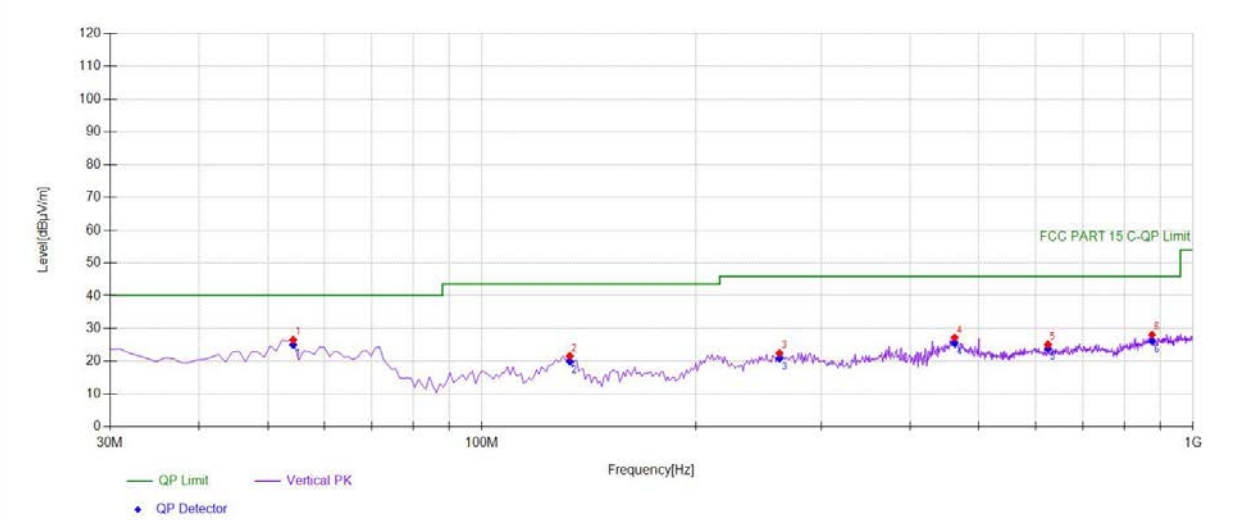


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	53.3033	43.33	-16.44	26.89	PK	40.00	13.11	Vertical
2	130.01	40.45	-19.15	21.30	PK	43.50	22.20	Vertical
3	205.745	39.31	-17.19	22.12	PK	43.50	21.38	Vertical
4	450.430	38.37	-10.72	27.65	PK	46.00	18.35	Vertical
5	499.95	37.76	-10.06	27.70	PK	46.00	18.30	Vertical
6	994.174	30.24	-2.38	27.86	PK	54.00	26.14	Vertical



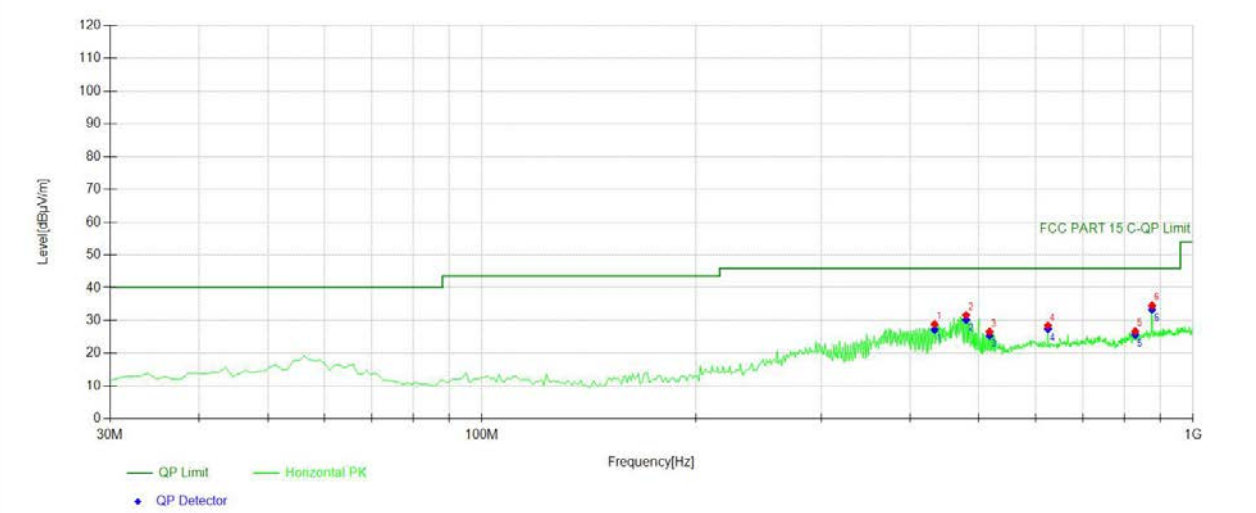
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	344.594	38.52	-12.36	26.16	PK	46.00	19.84	Horizontal
2	426.156	40.98	-11.60	29.38	PK	46.00	16.62	Horizontal
3	476.646	41.99	-10.12	31.87	PK	46.00	14.13	Horizontal
4	625.205	36.99	-7.60	29.39	PK	46.00	16.61	Horizontal
5	834.934	31.36	-4.79	26.57	PK	46.00	19.43	Horizontal
6	875.715	37.73	-3.72	34.01	PK	46.00	11.99	Horizontal

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



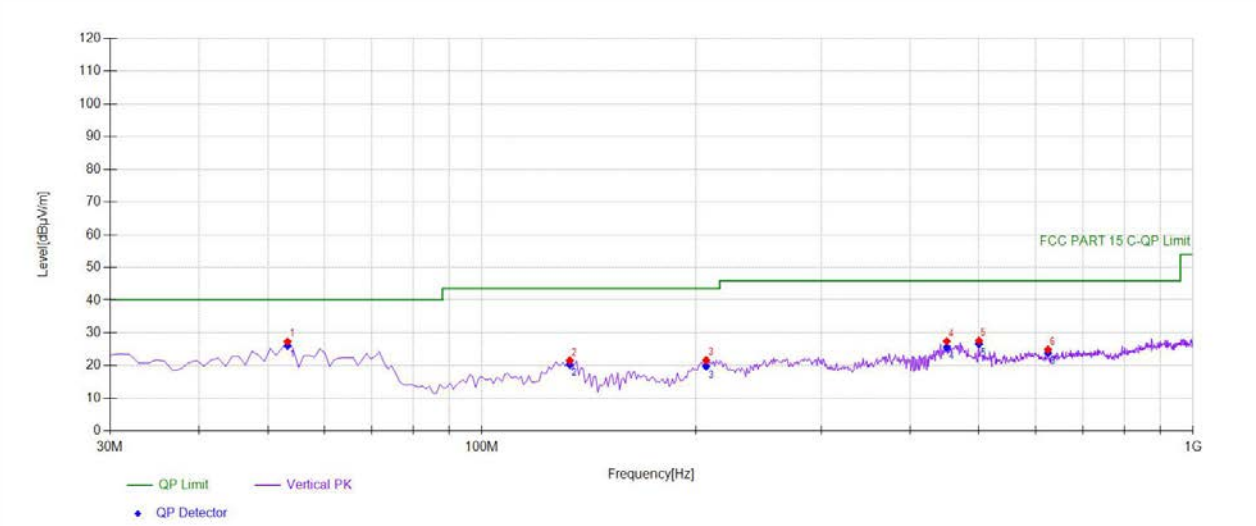
Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	54.2743	43.02	-16.56	26.46	PK	40.00	13.54	Vertical
2	132.922	40.91	-19.31	21.60	PK	43.50	21.90	Vertical
3	262.062	38.19	-15.69	22.50	PK	46.00	23.50	Vertical
4	462.082	37.48	-10.32	27.16	PK	46.00	18.84	Vertical
5	625.205	32.72	-7.60	25.12	PK	46.00	20.88	Vertical
6	875.715	31.81	-3.72	28.09	PK	46.00	17.91	Vertical



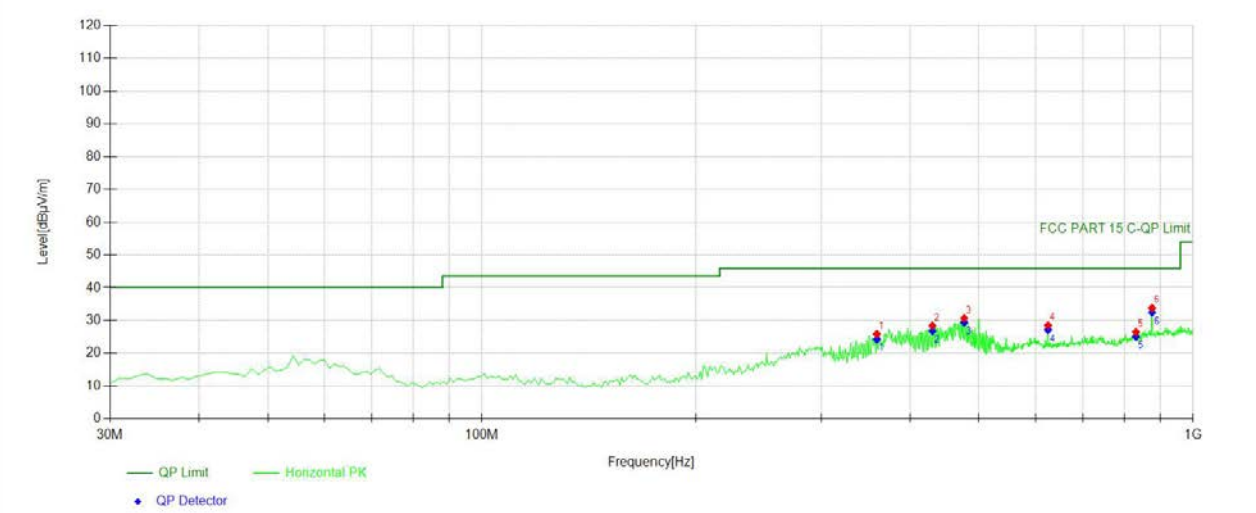
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	432.953	40.23	-11.34	28.89	PK	46.00	17.11	Horizontal
2	479.559	41.71	-10.08	31.63	PK	46.00	14.37	Horizontal
3	517.427	36.25	-9.72	26.53	PK	46.00	19.47	Horizontal
4	625.205	36.05	-7.60	28.45	PK	46.00	17.55	Horizontal
5	829.109	31.64	-4.94	26.70	PK	46.00	19.30	Horizontal
6	875.715	38.29	-3.72	34.57	PK	46.00	11.43	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	53.3033	43.74	-16.44	27.30	PK	40.00	12.70	Vertical
2	132.922	40.86	-19.31	21.55	PK	43.50	21.95	Vertical
3	206.716	38.77	-17.13	21.64	PK	43.50	21.86	Vertical
4	450.430	38.13	-10.72	27.41	PK	46.00	18.59	Vertical
5	499.95	37.66	-10.06	27.60	PK	46.00	18.40	Vertical
6	625.205	32.49	-7.60	24.89	PK	46.00	21.11	Vertical



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	359.159	38.21	-12.34	25.87	PK	46.00	20.13	Horizontal
2	430.04	39.84	-11.45	28.39	PK	46.00	17.61	Horizontal
3	476.646	40.75	-10.12	30.63	PK	46.00	15.37	Horizontal
4	625.205	36.09	-7.60	28.49	PK	46.00	17.51	Horizontal
5	831.051	31.34	-4.89	26.45	PK	46.00	19.55	Horizontal
6	875.715	37.56	-3.72	33.84	PK	46.00	12.16	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.

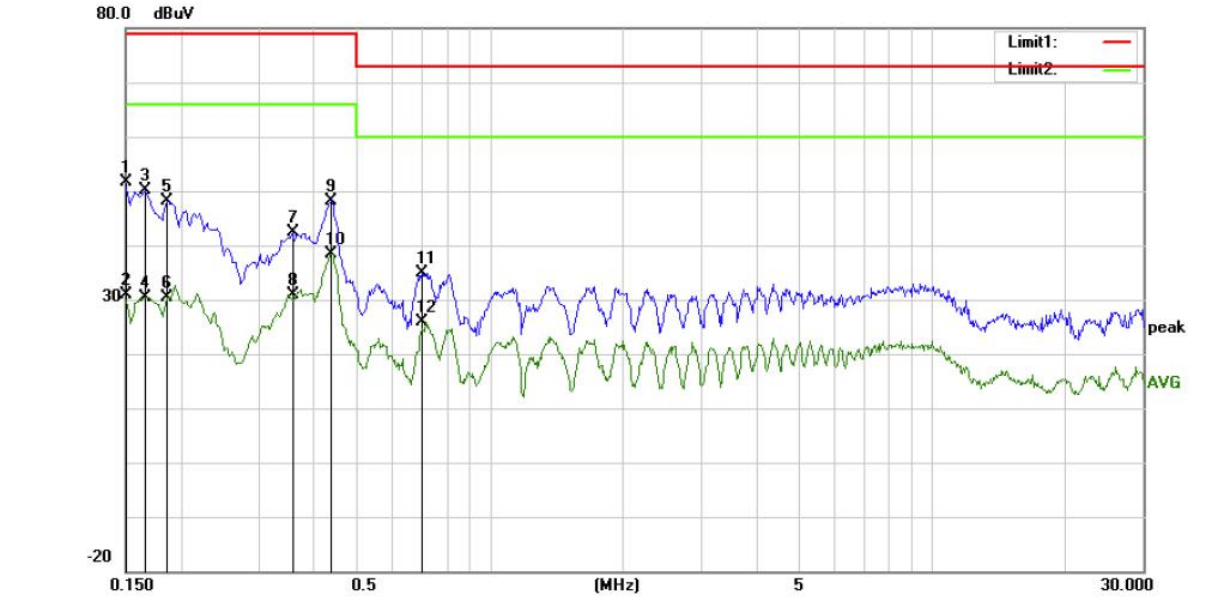
7.6.4 Test Procedure

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

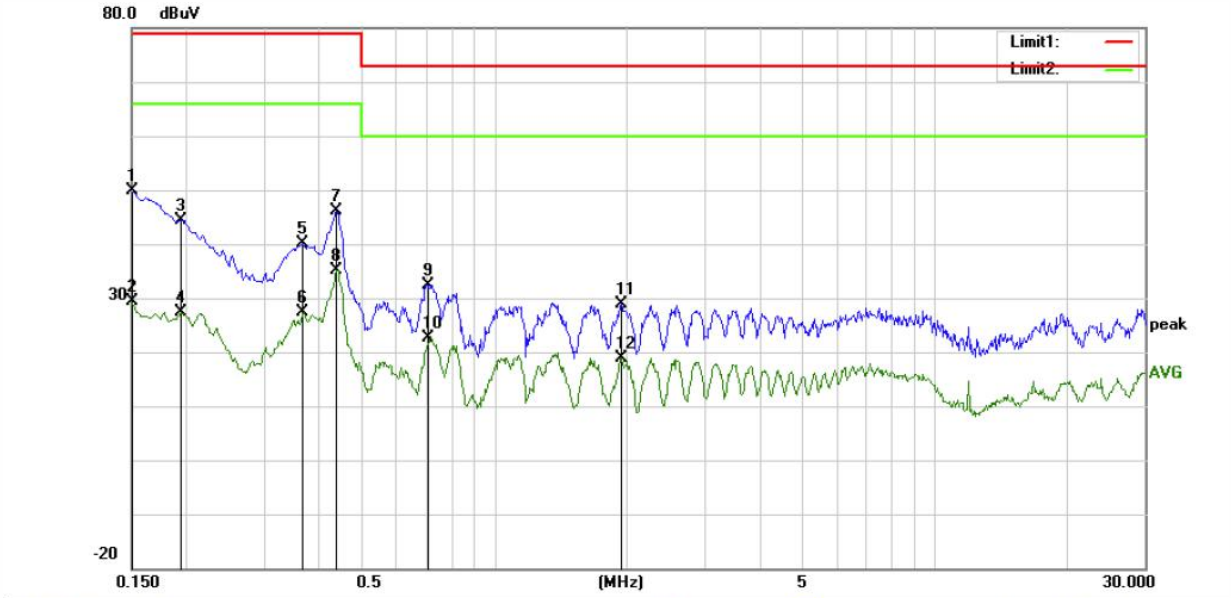
Temperature :	26.9℃	ATM Pressure::	1011 mbar
Humidity :	49 %	Test Engineer:	CSL

Pass



Site Conduction #1 Phase: *L1* Temperature: 26.9

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	41.59	10.01	51.60	79.00	-27.40	QP	
2		0.1500	20.90	10.01	30.91	66.00	-35.09	AVG	
3		0.1660	40.03	10.03	50.06	79.00	-28.94	QP	
4		0.1660	20.33	10.03	30.36	66.00	-35.64	AVG	
5		0.1860	38.17	10.03	48.20	79.00	-30.80	QP	
6		0.1860	20.45	10.03	30.48	66.00	-35.52	AVG	
7		0.3580	32.32	9.98	42.30	79.00	-36.70	QP	
8		0.3580	20.88	9.98	30.86	66.00	-35.14	AVG	
9		0.4380	38.08	9.94	48.02	79.00	-30.98	QP	
10		0.4380	28.46	9.94	38.40	66.00	-27.60	AVG	
11		0.7020	24.77	10.01	34.78	73.00	-38.22	QP	
12		0.7020	15.79	10.01	25.80	60.00	-34.20	AVG	



Site Conduction #1 Phase: N Temperature: 26.9

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	39.82	10.01	49.83	79.00	-29.17	QP	
2		0.1500	19.44	10.01	29.45	66.00	-36.55	AVG	
3		0.1944	34.43	10.03	44.46	79.00	-34.54	QP	
4		0.1944	17.25	10.03	27.28	66.00	-38.72	AVG	
5		0.3660	30.22	9.97	40.19	79.00	-38.81	QP	
6		0.3660	17.35	9.97	27.32	66.00	-38.68	AVG	
7		0.4380	36.07	9.94	46.01	79.00	-32.99	QP	
8		0.4380	25.26	9.94	35.20	66.00	-30.80	AVG	
9		0.7060	22.49	10.01	32.50	73.00	-40.50	QP	
10		0.7060	12.74	10.01	22.75	60.00	-37.25	AVG	
11		1.9420	18.81	9.97	28.78	73.00	-44.22	QP	
12		1.9420	8.91	9.97	18.88	60.00	-41.12	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: 1.16dBi, Ant2: 1.16dBi.

☐ 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 ---

声　明
Statement

1．本报告无授权批准人签字及“检验检测专用章”无效。
1．This report is invalid without the signature of the authorized approver and "special seal for testing".

2．未经许可本报告不得部分复制。
2．This report shall not be copied partly without authorization.

3．本报告的检测结果仅对送测样品有效，委托方对样品的代表性和资料的真实性负责。
3．The test results or observations are applicable only to tested sample. Client shall be responsible for representativeness of the sample and authenticity of the material.

4．本检测报告中检测项目标注有特殊符号则该项目不在资质认定范围内，仅作为客户委托、科研、教学或内部质量控制等目的使用。
4．The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.

5．本检测报告以实测值进行符合性判定，未考虑不确定度所带来的风险，本实验室不承担相关责任，特别约定、标准或规范中有明确规定的除外。
5．The test results or observations are provided in accordance with measured value, without taking risks caused by uncertainty into account. Without explicit stipulation in special agreements, standards or regulations, EMTEK shall not assume any responsibility.

6．对本检验报告若有异议，请于收到报告之日起 20 日内提出。
6．Objections shall be raised within 20 days from the date receiving the report.