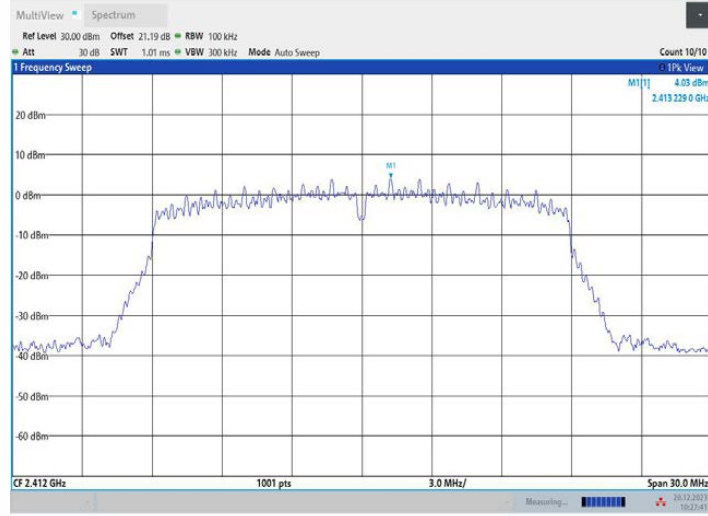
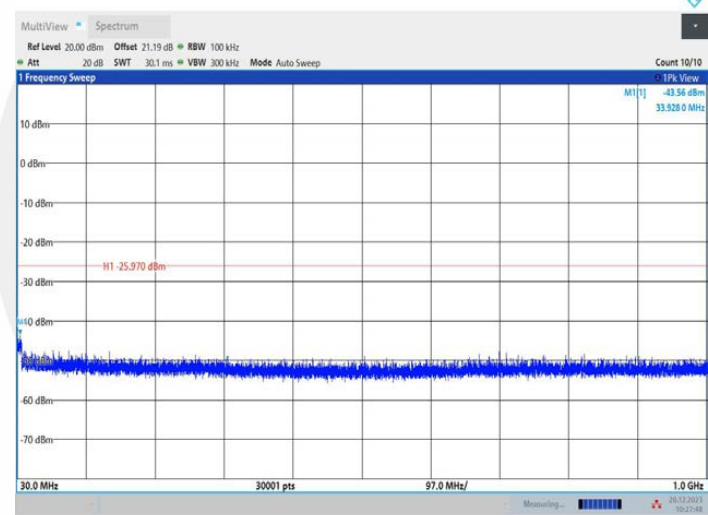


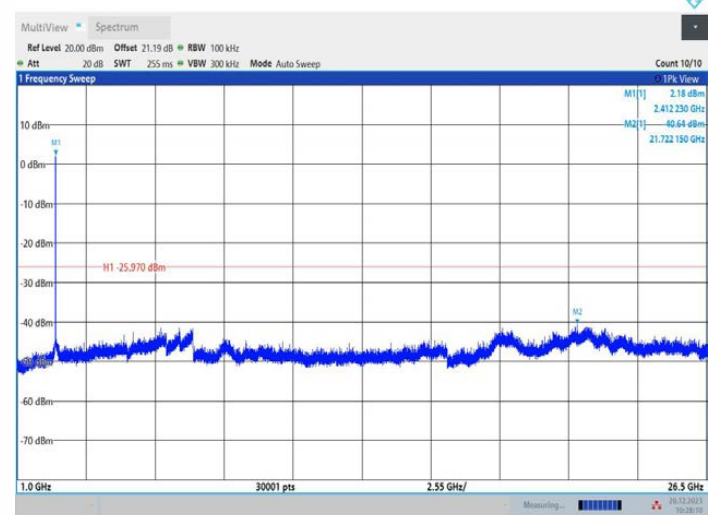
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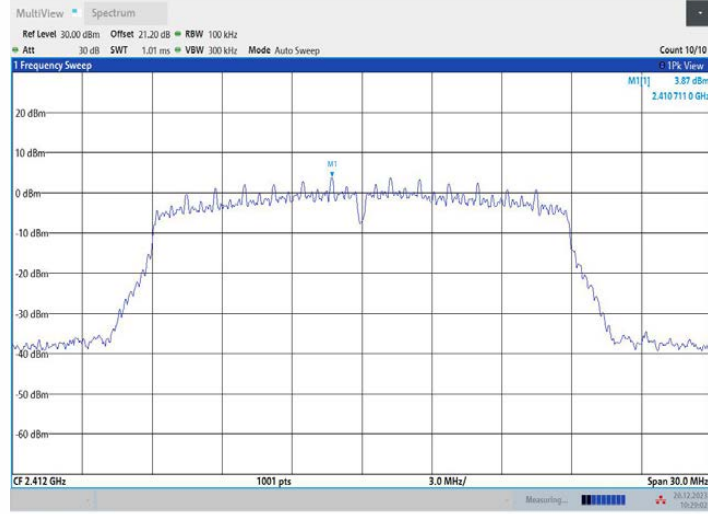
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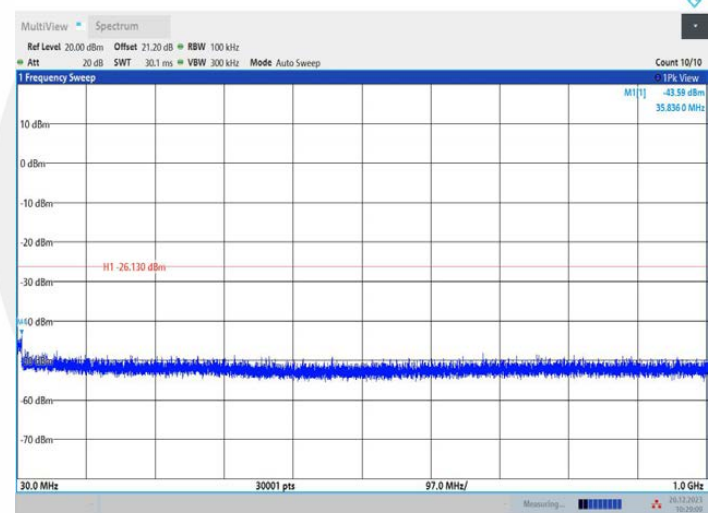
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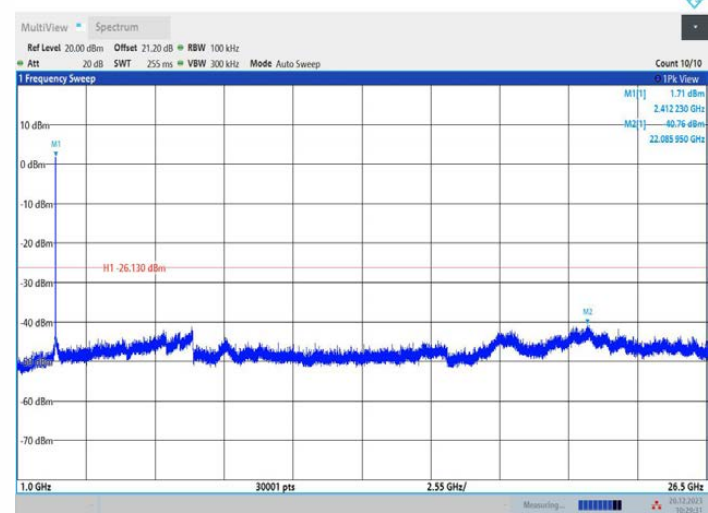
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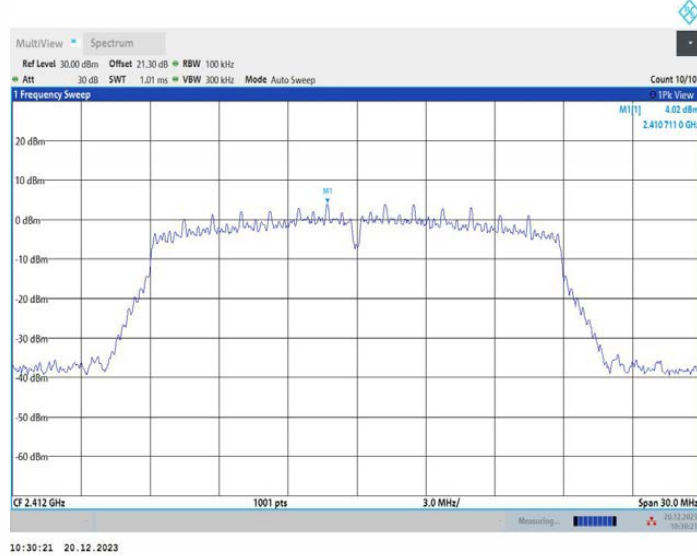
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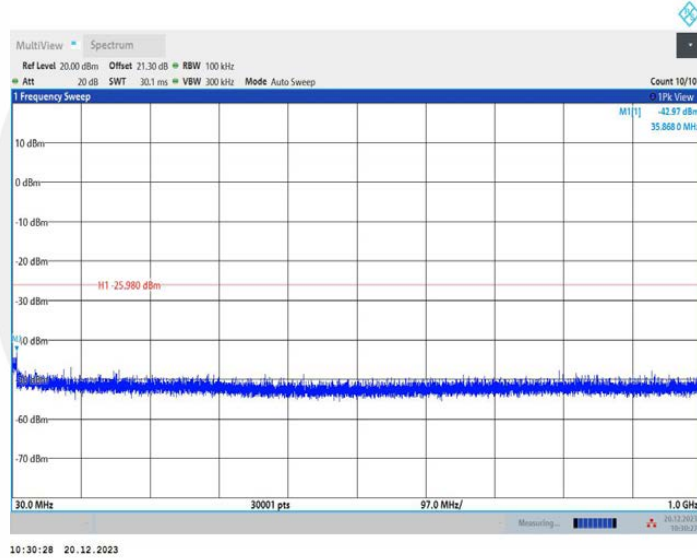
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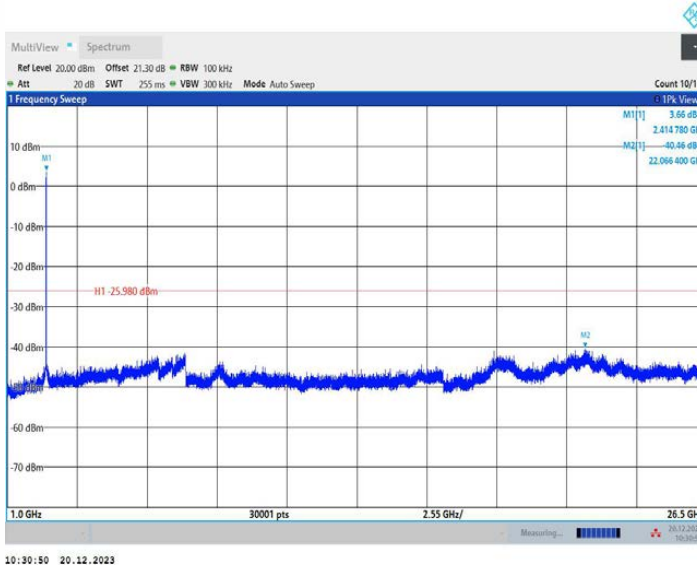
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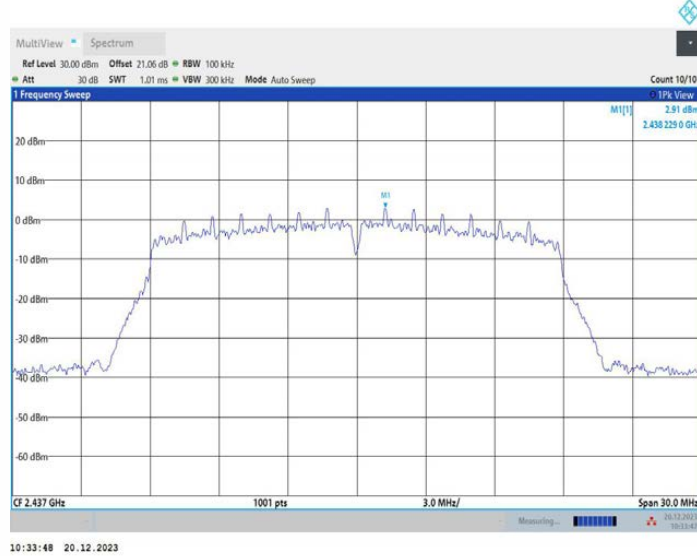
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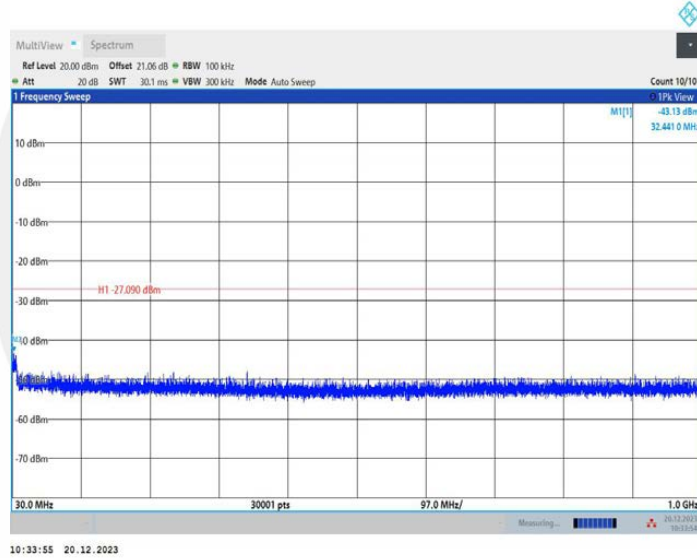
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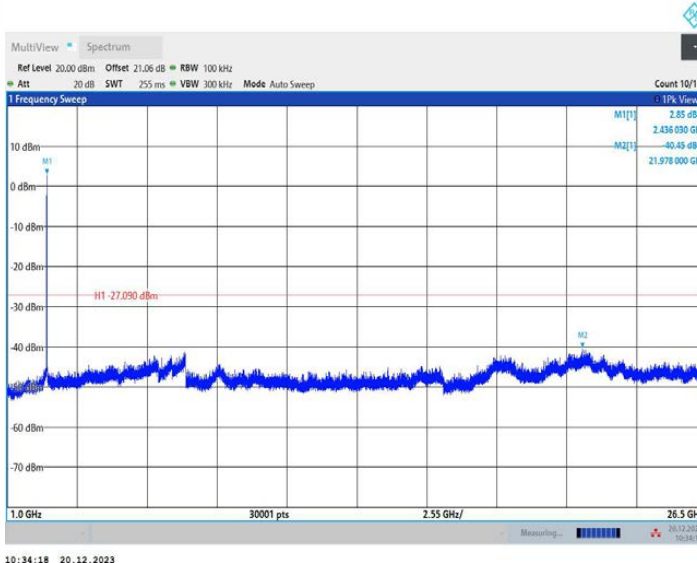
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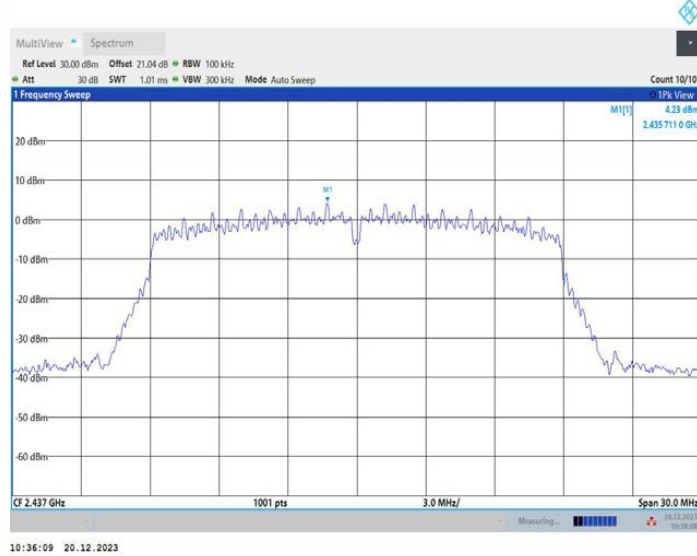
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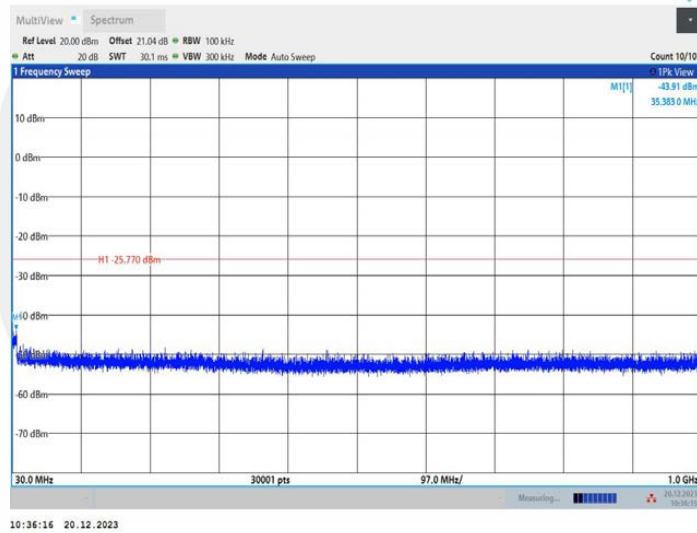
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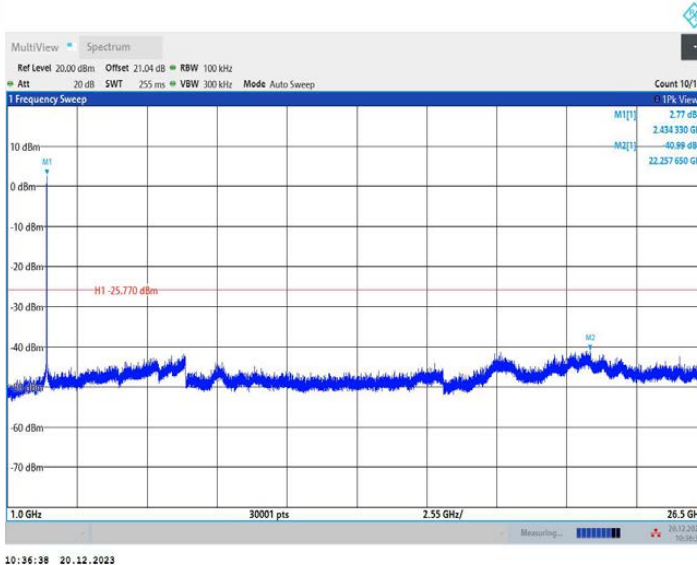
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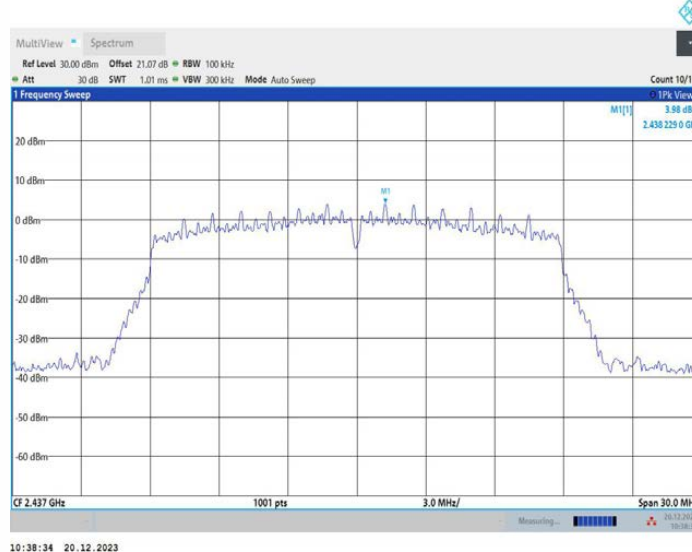
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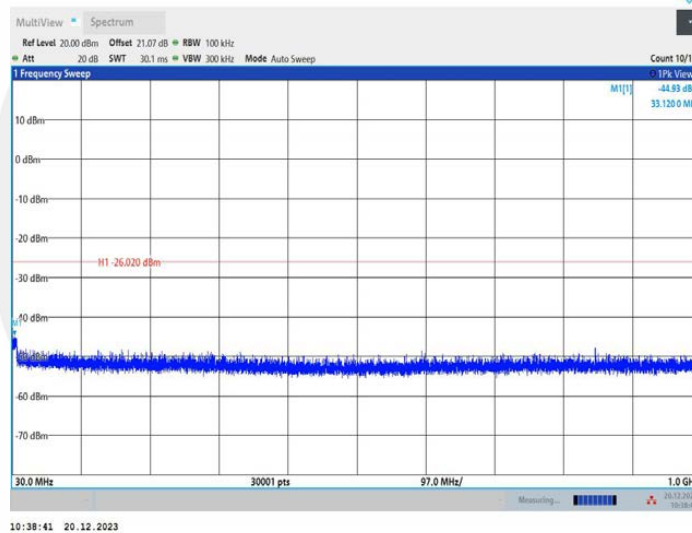
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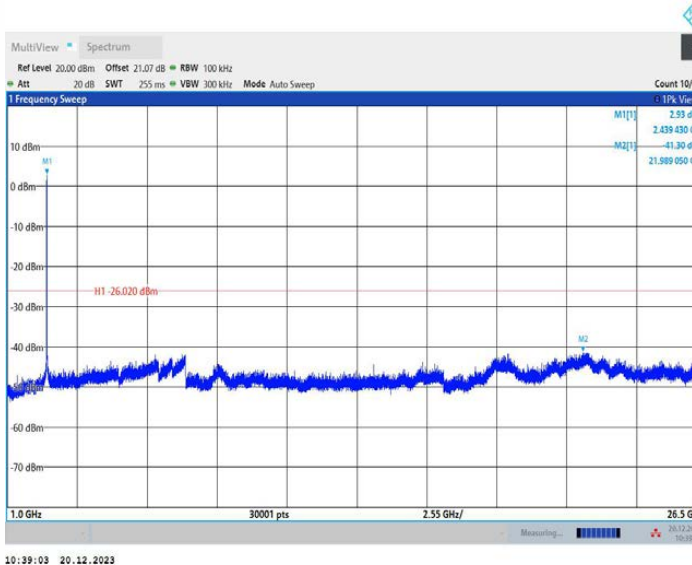
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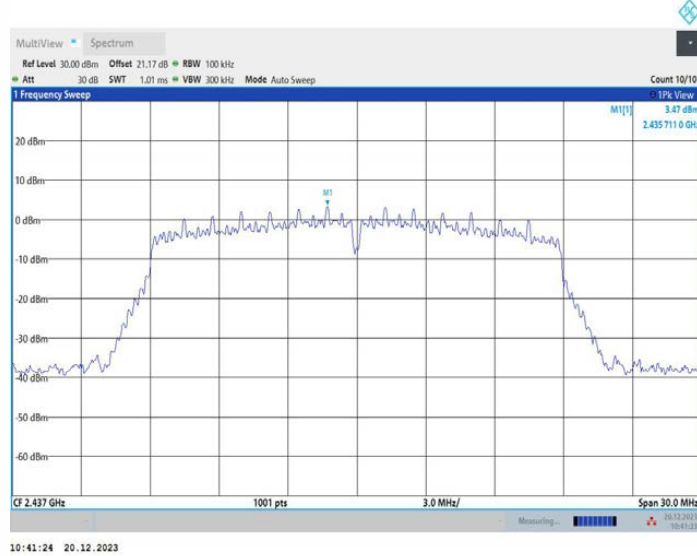
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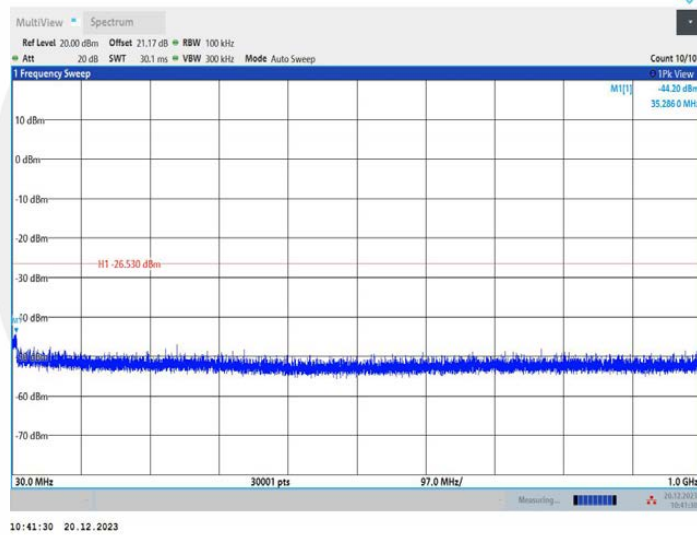
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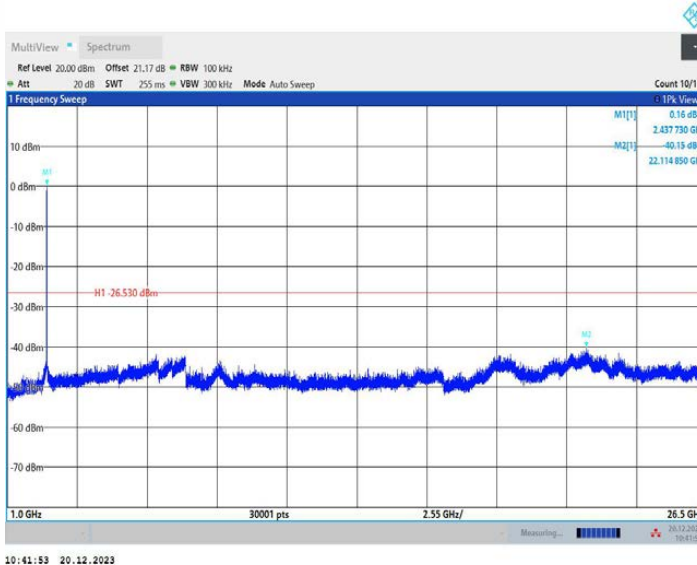
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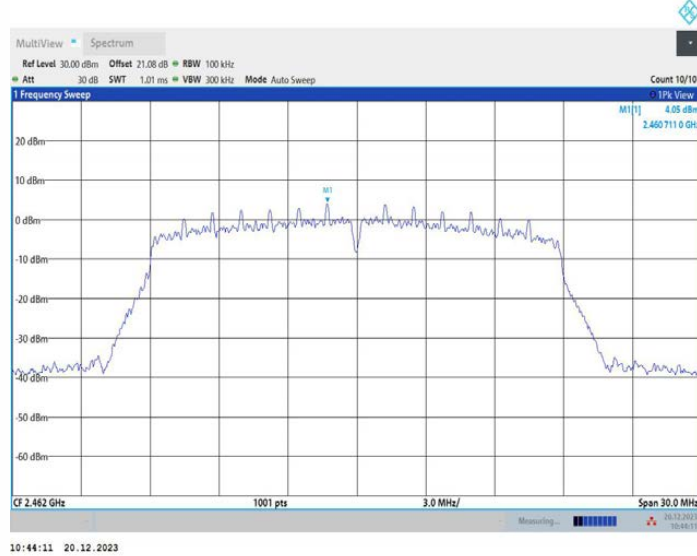
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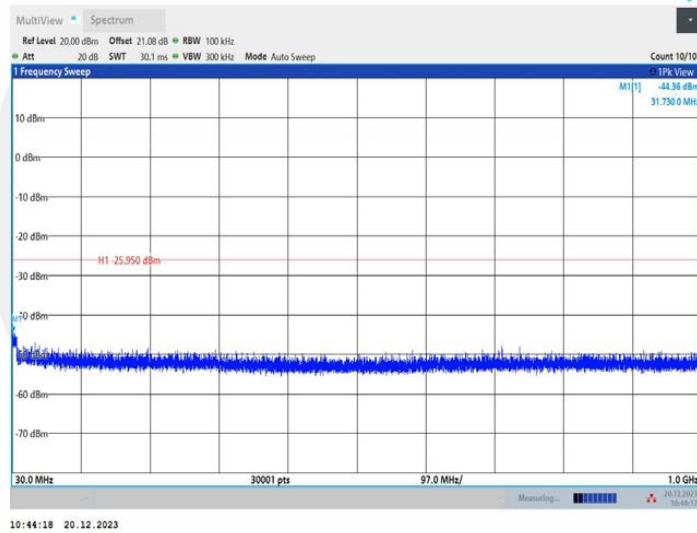
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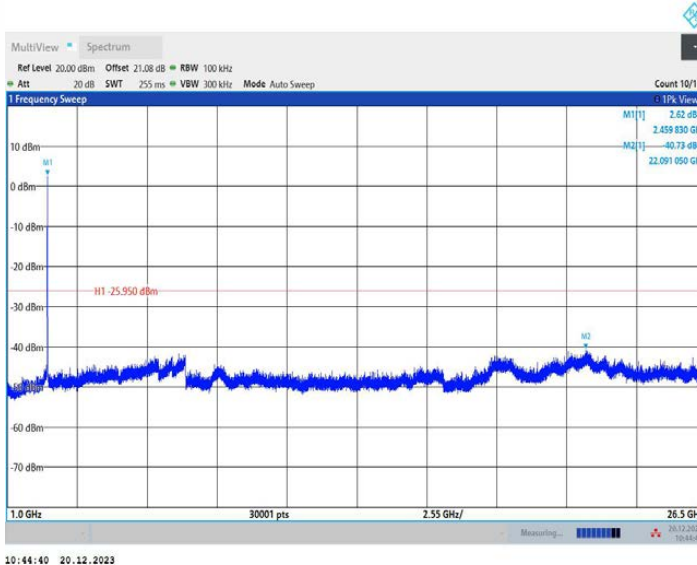
11N20MIMO_Ant1_2462_0~Reference



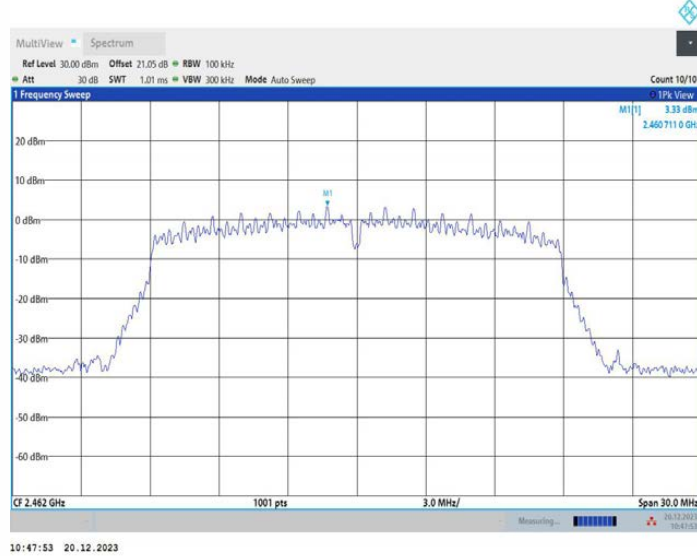
11N20MIMO_Ant1_2462_30~1000



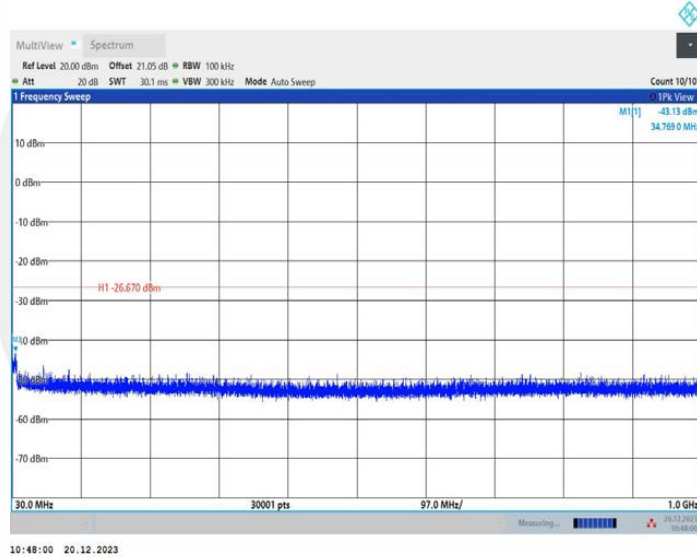
11N20MIMO_Ant1_2462_1000~26500



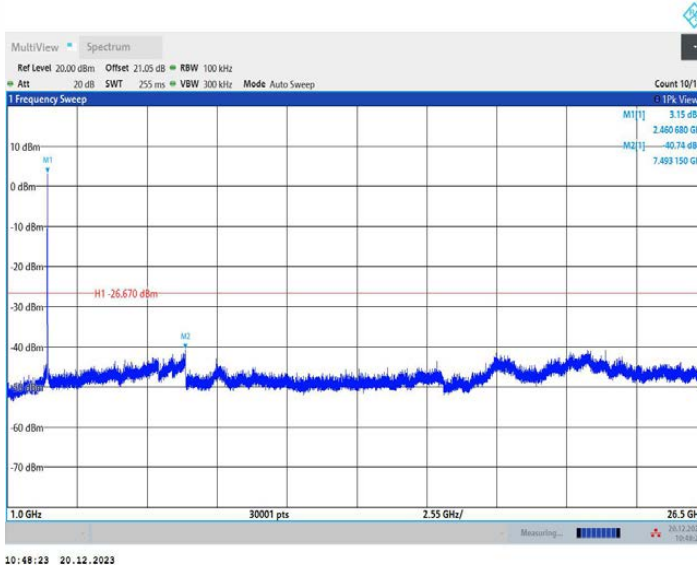
11N20MIMO_Ant2_2462_0~Reference



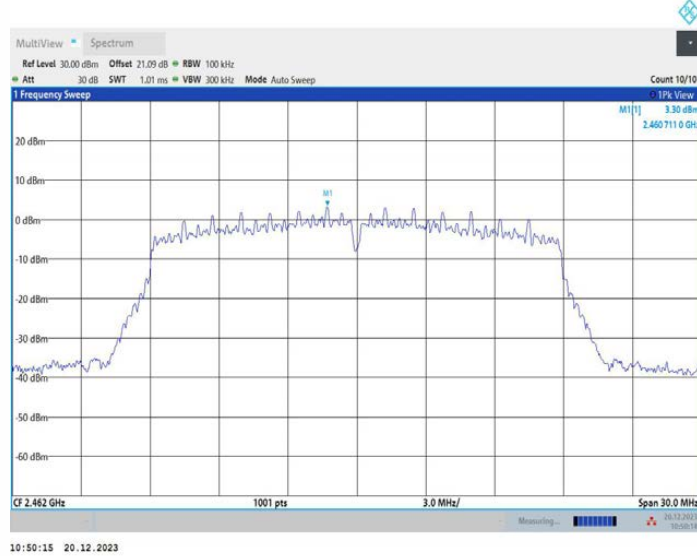
11N20MIMO_Ant2_2462_30~1000



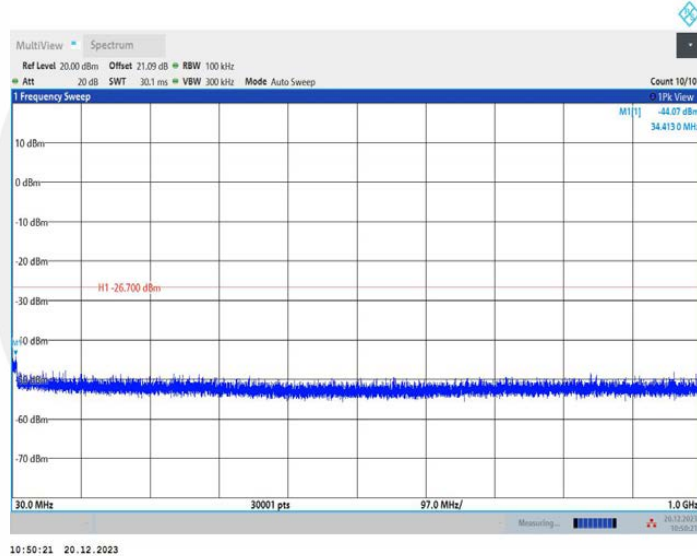
11N20MIMO_Ant2_2462_1000~26500



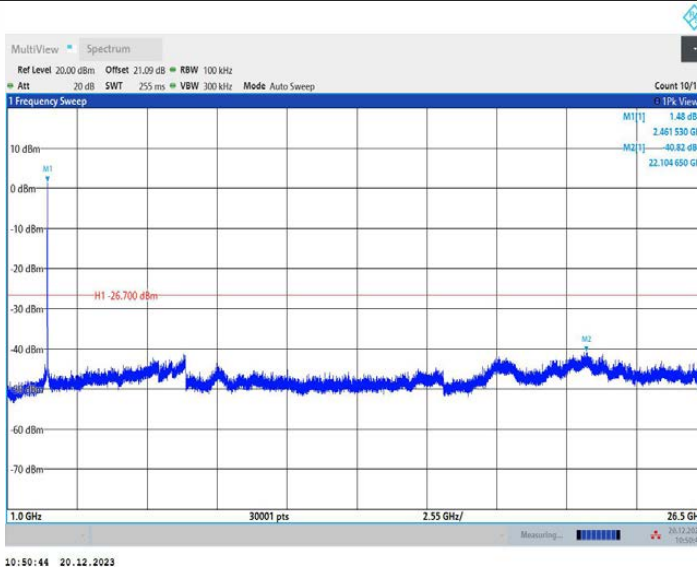
11N20MIMO_Ant3_2462_0~Reference



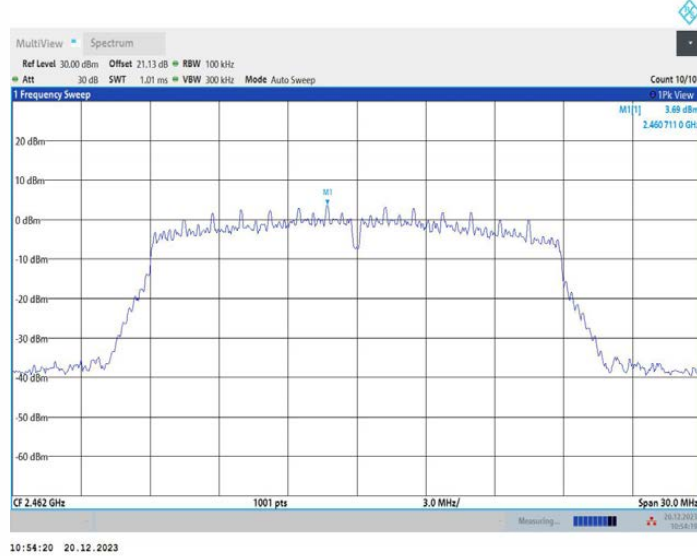
11N20MIMO_Ant3_2462_30~1000



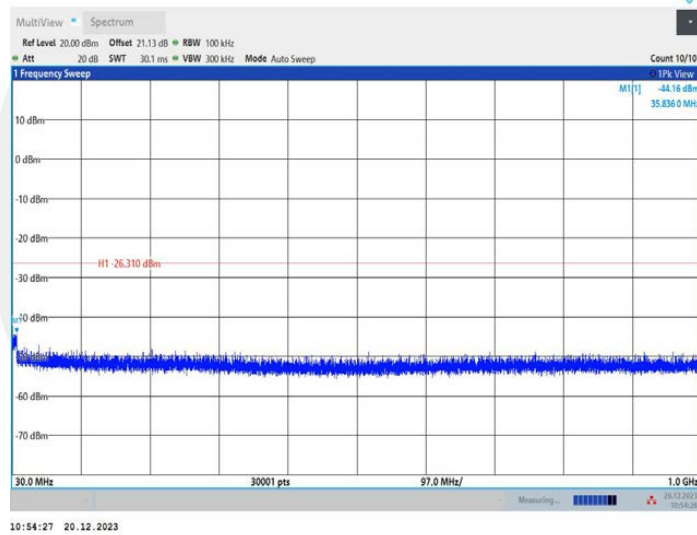
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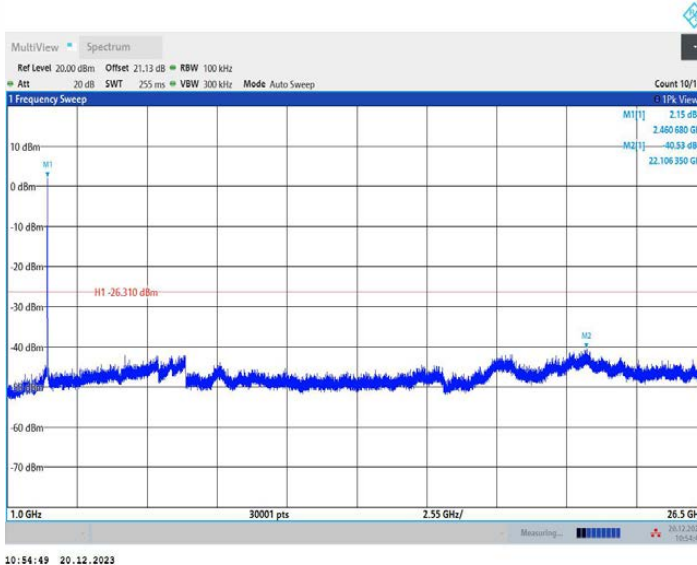
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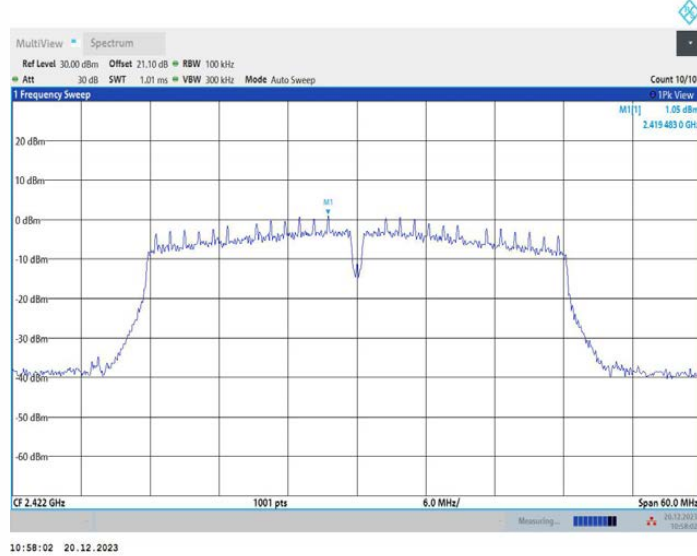
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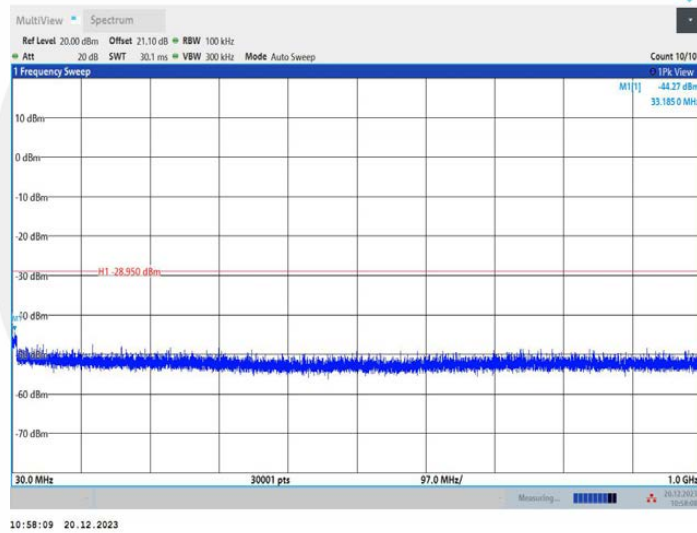
11N20MIMO_Ant4_2462_1000~26500



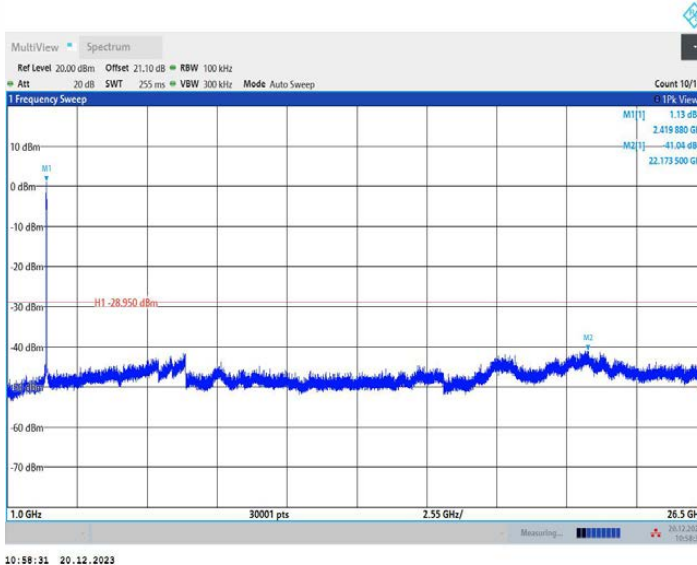
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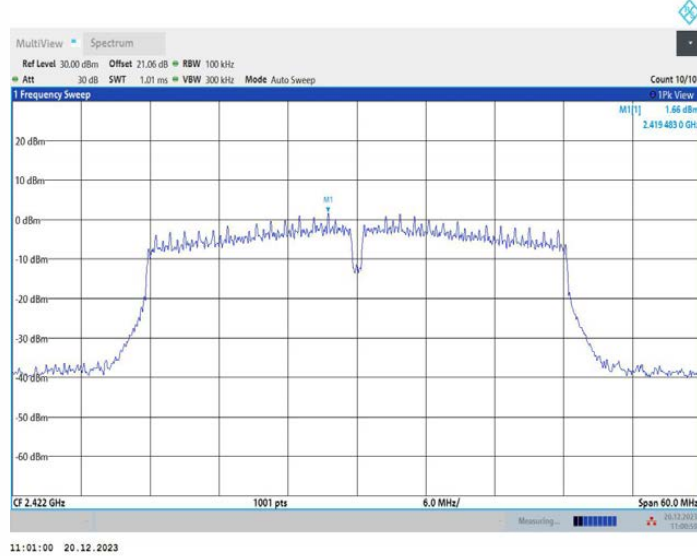
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11N40MIMO_Ant1_2422_1000~26500

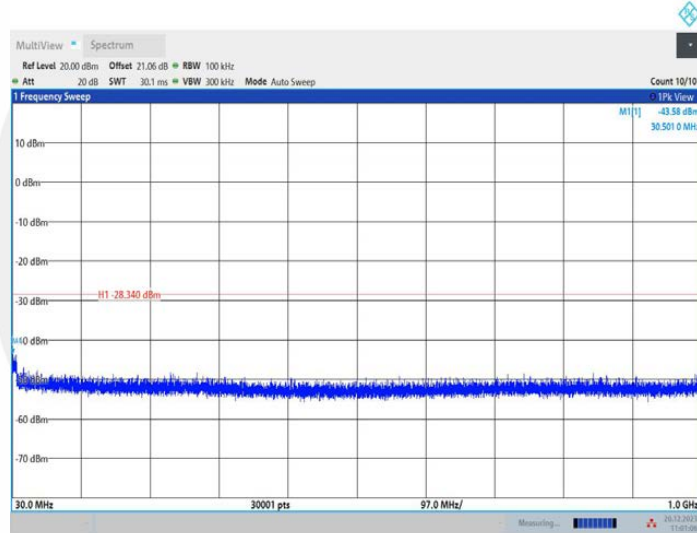


11N40MIMO_Ant2_2422_0~Reference



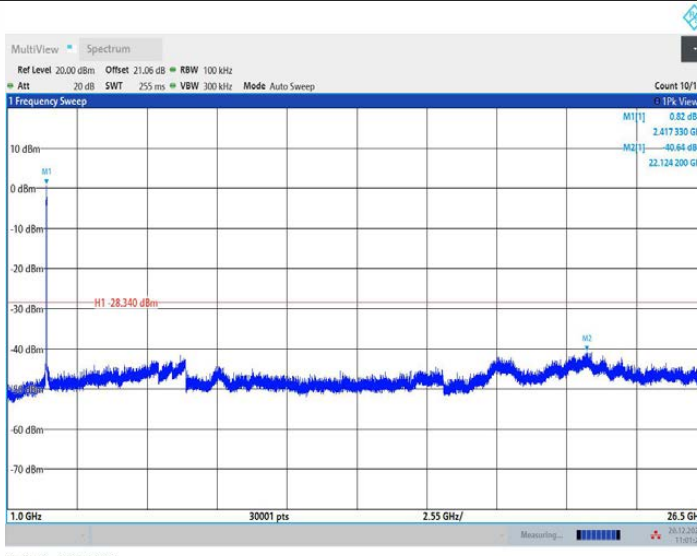
11:01:00 20.12.2023

11N40MIMO_Ant2_2422_30~1000



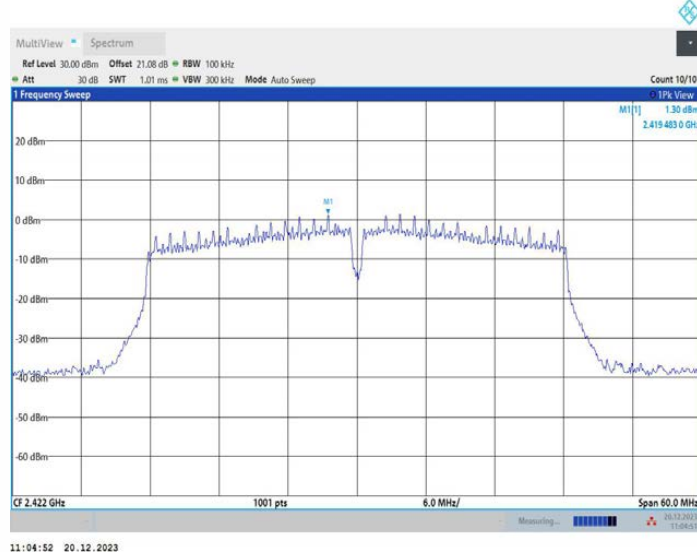
11:01:07 20.12.2023

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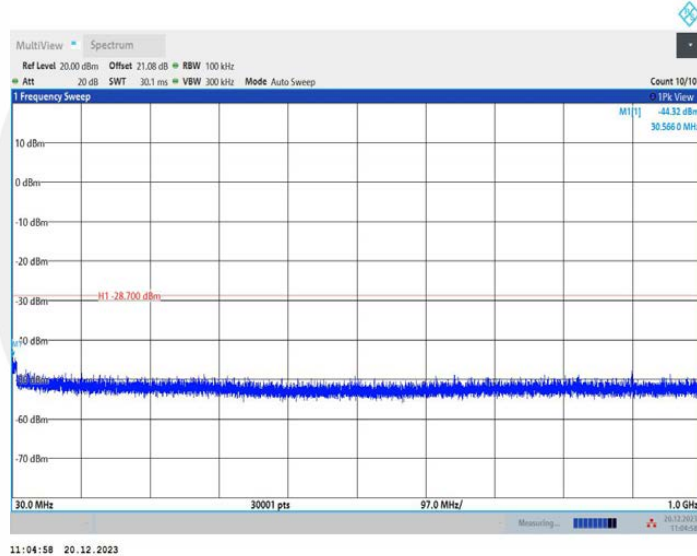


11:01:29 20.12.2023

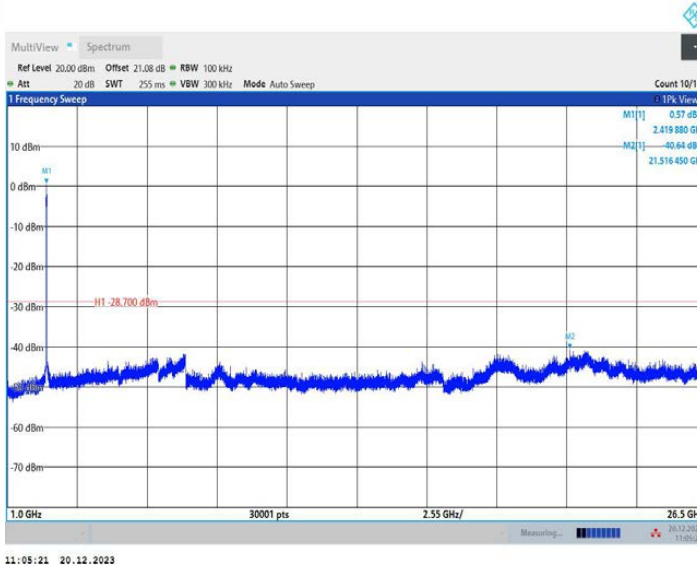
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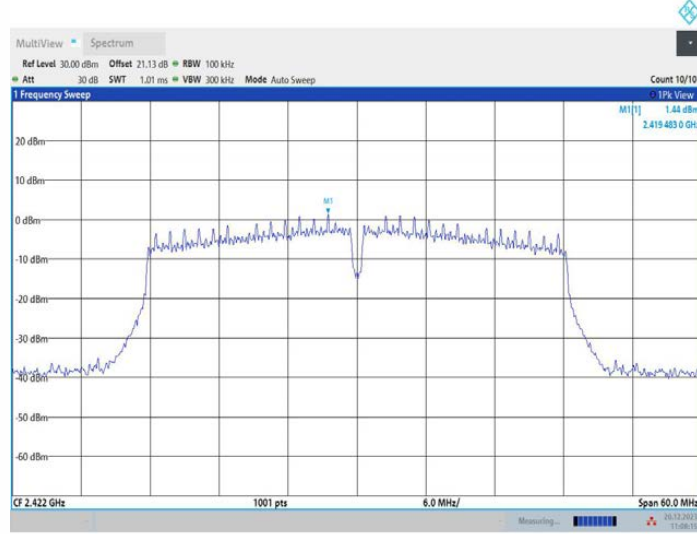
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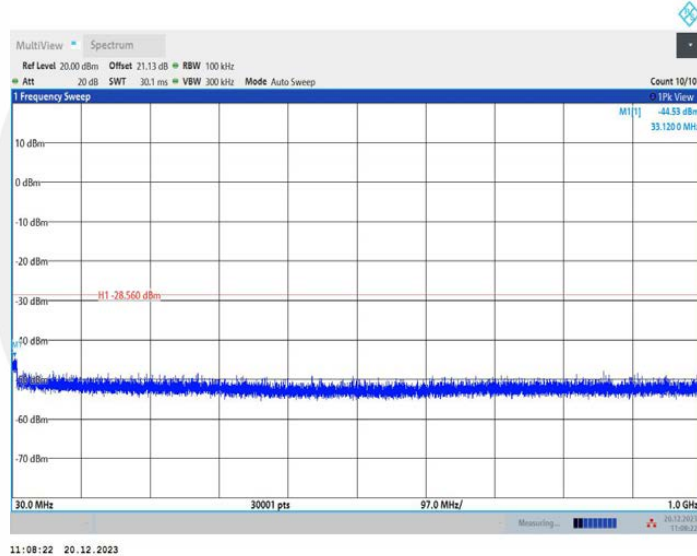
11N40MIMO_Ant3_2422_1000~26500



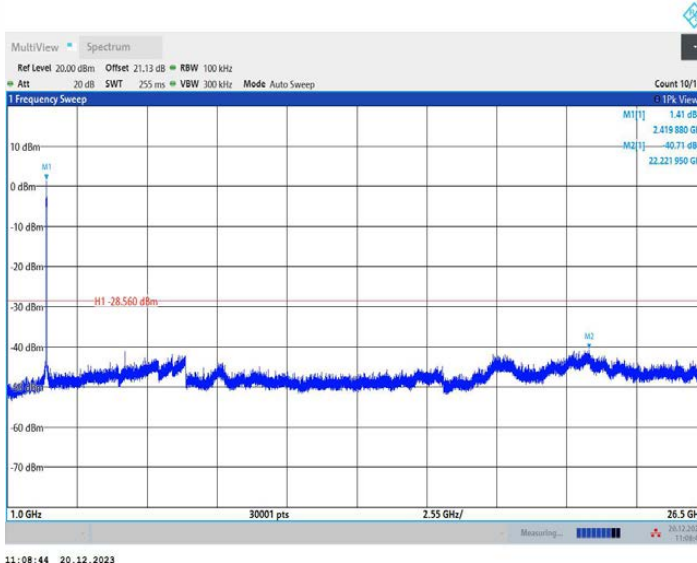
11N40MIMO_Ant4_2422_0~Reference



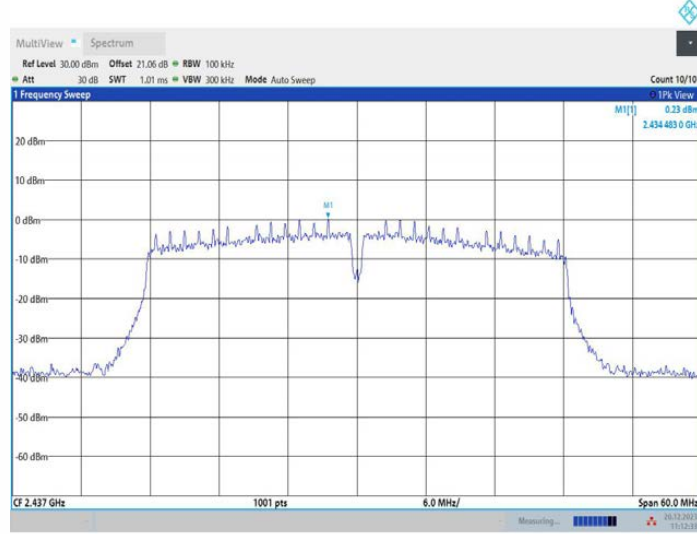
11N40MIMO_Ant4_2422_30~1000



11N40MIMO_Ant4_2422_1000~26500

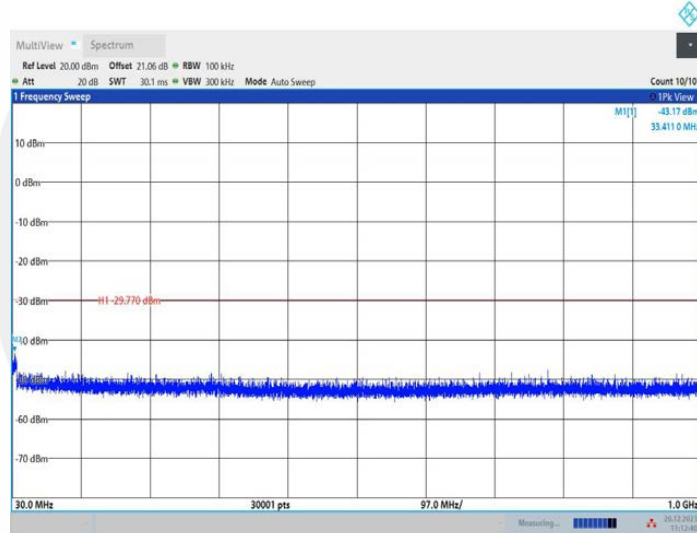


11N40MIMO_Ant1_2437_0~Reference



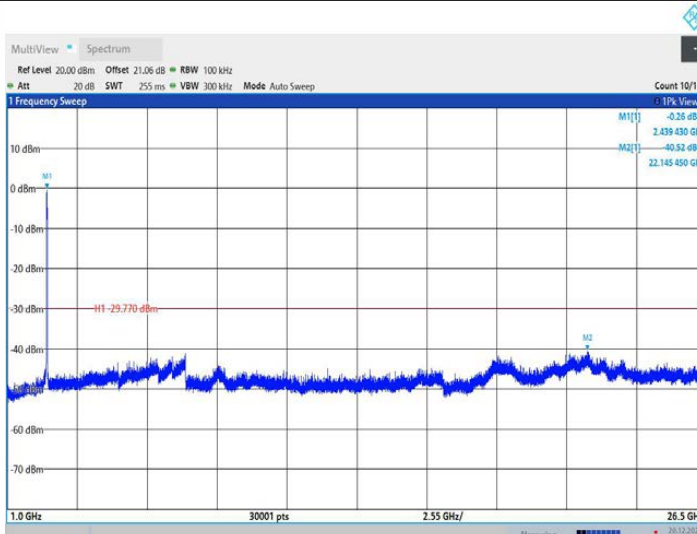
11:12:33 20.12.2023

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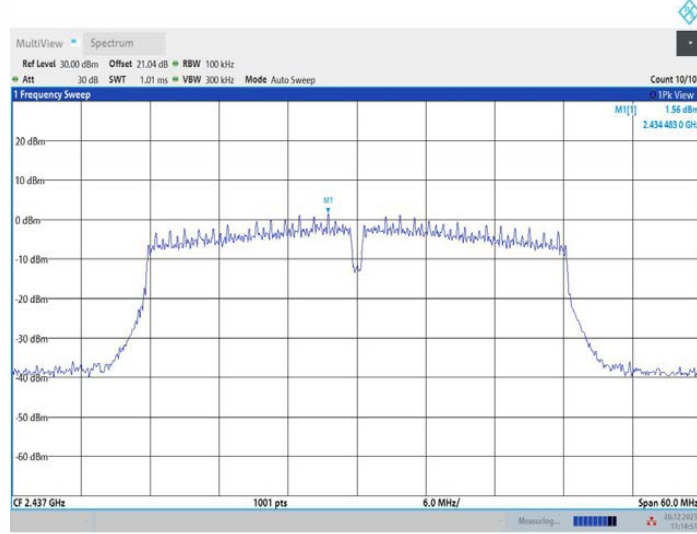
11:12:40 20.12.2023

11N40MIMO_Ant1_2437_1000~26500

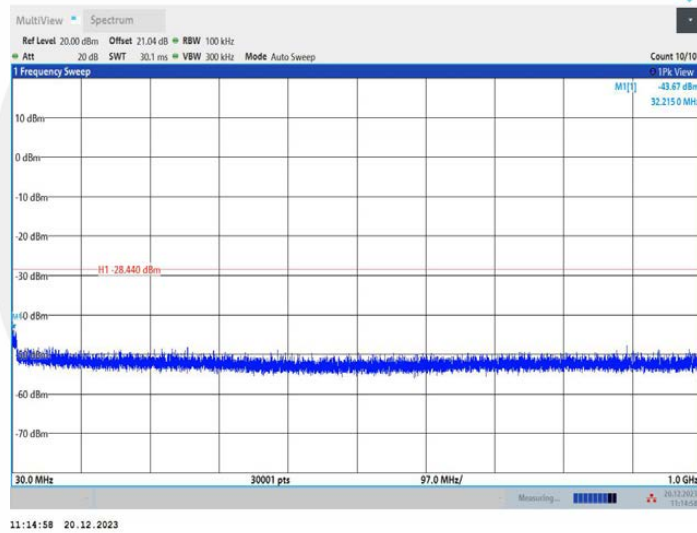


11:13:03 20.12.2023

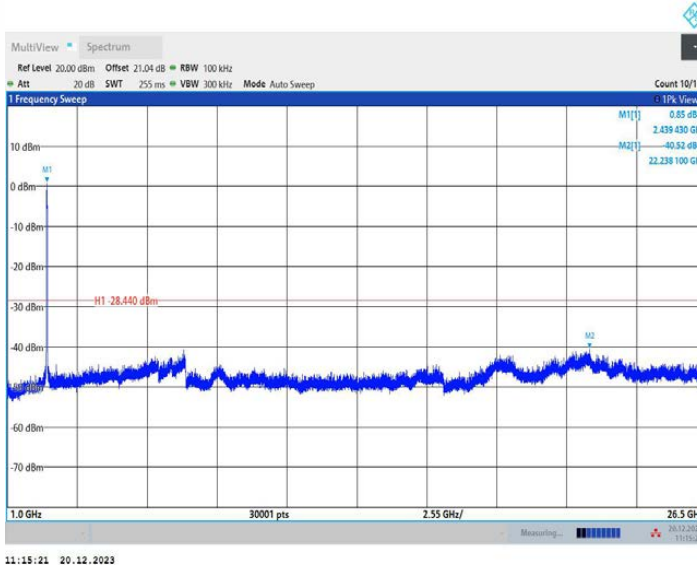
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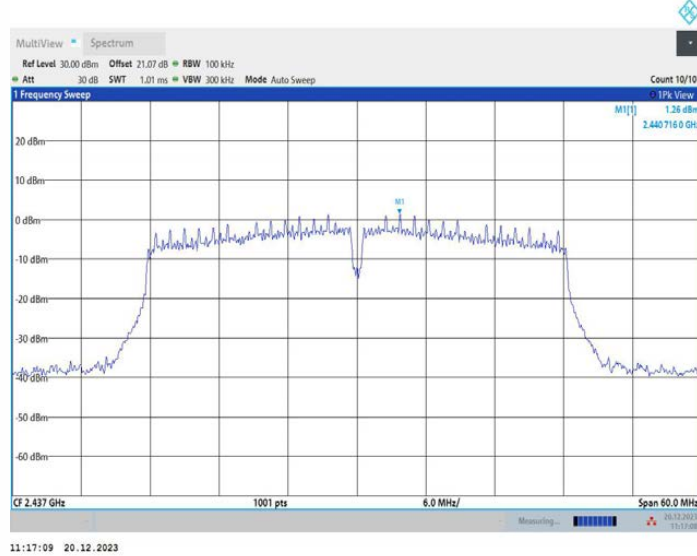
11N40MIMO_Ant2_2437_30~1000



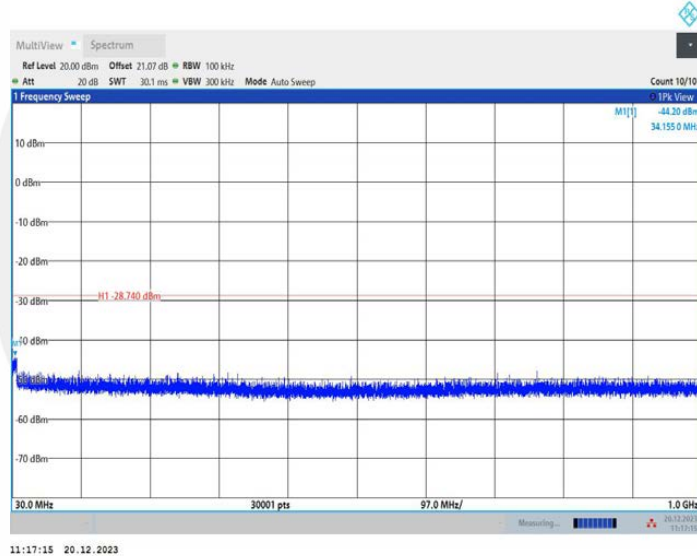
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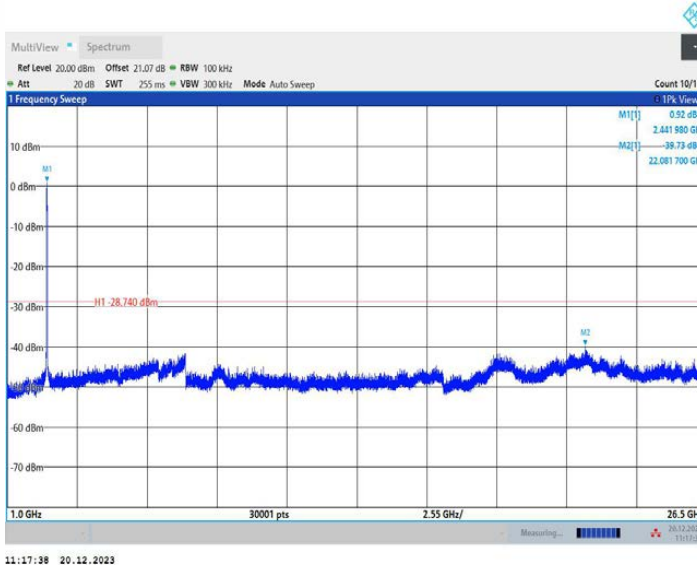
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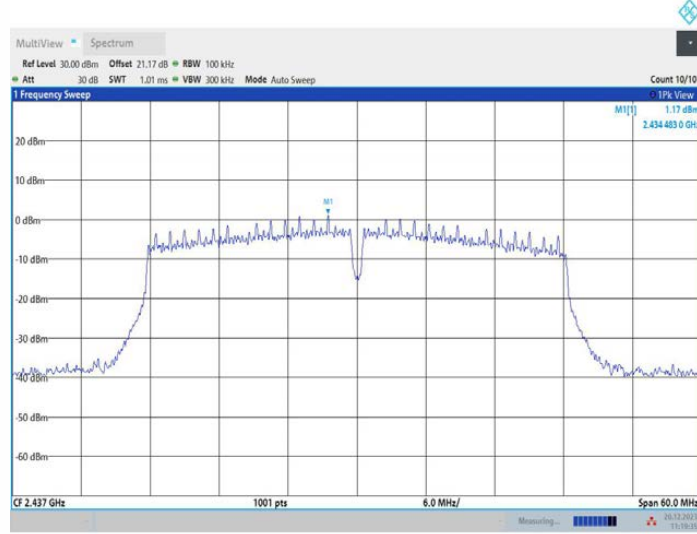
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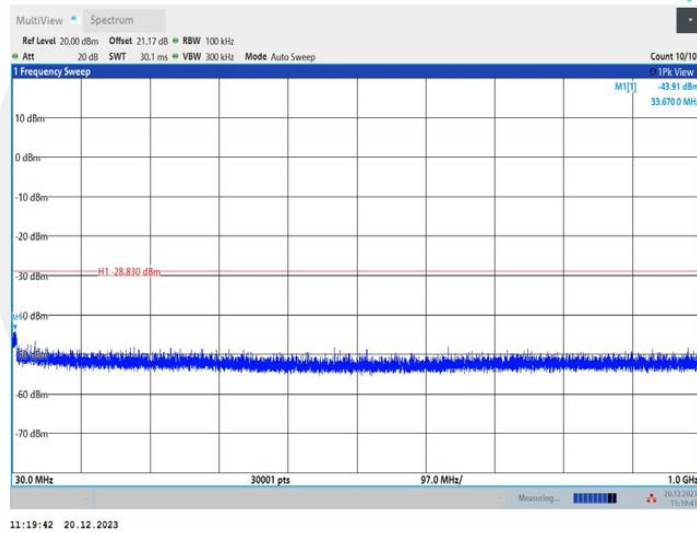
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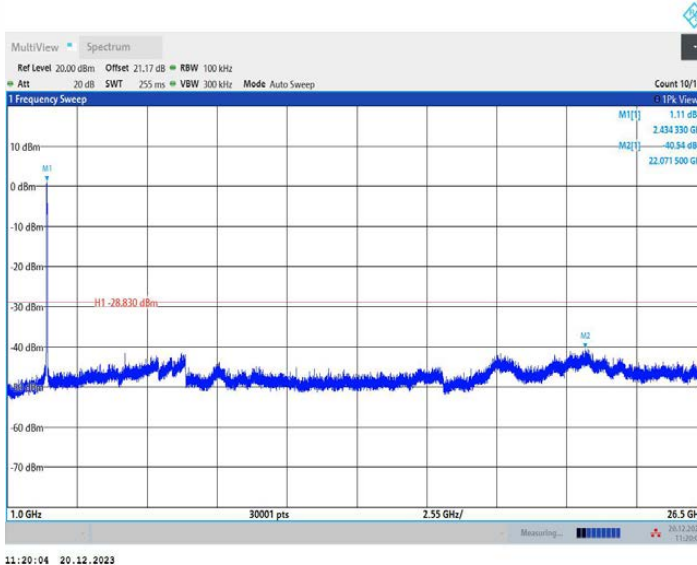
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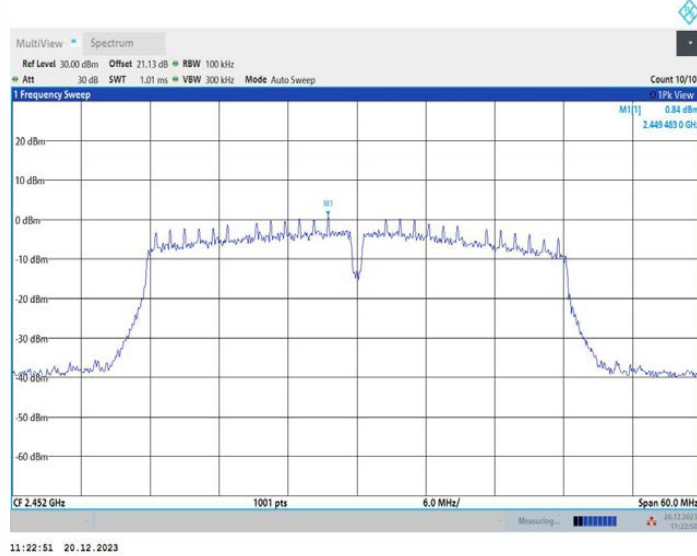
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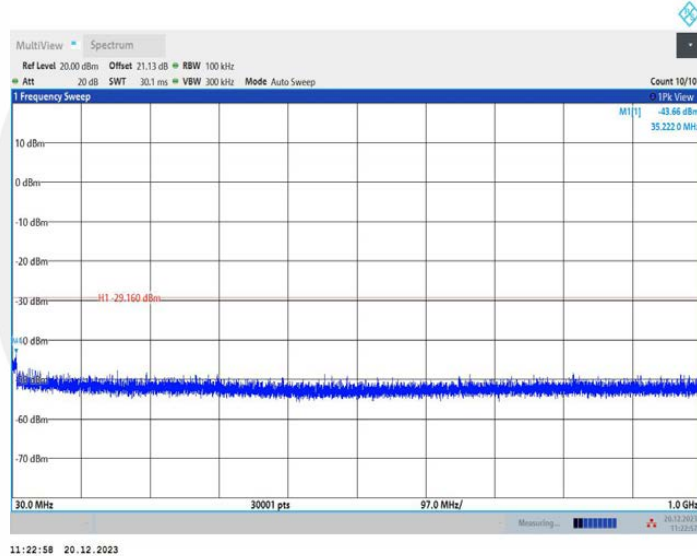
11N40MIMO_Ant4_2437_1000~26500



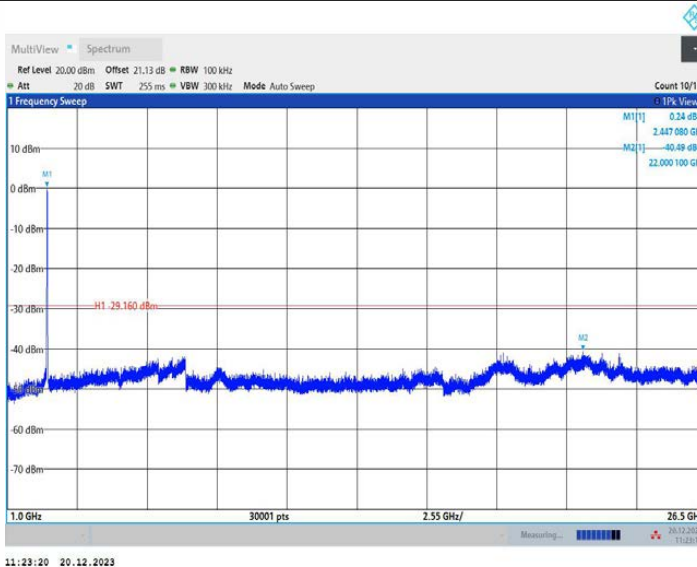
11N40MIMO_Ant1_2452_0~Reference



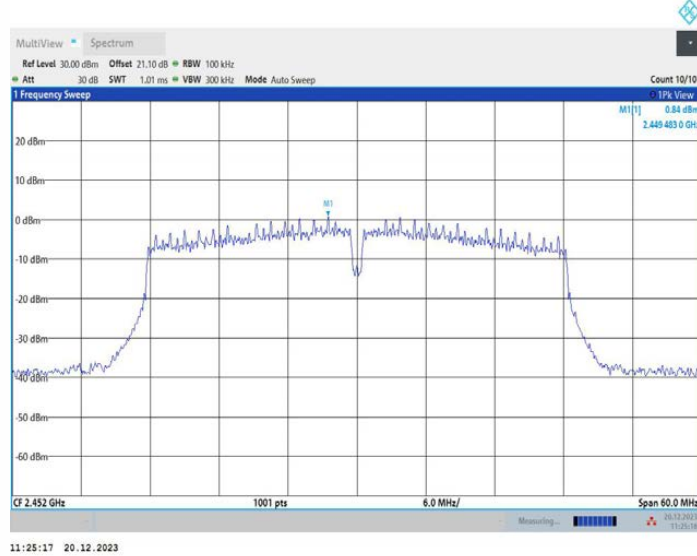
11N40MIMO_Ant1_2452_30~1000



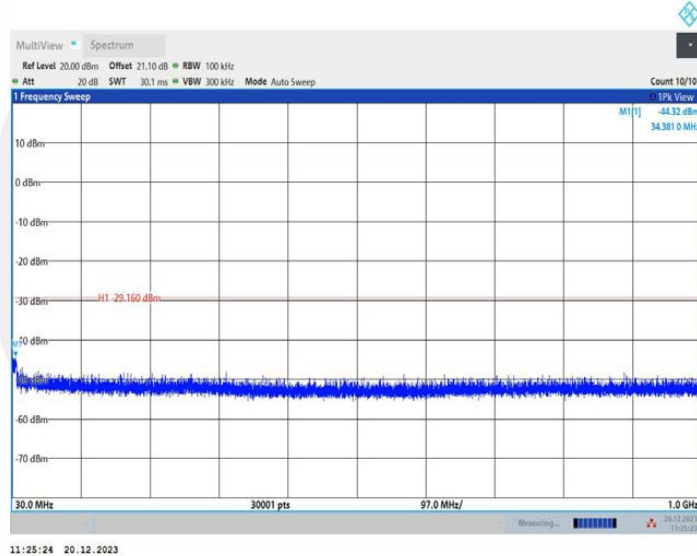
11N40MIMO_Ant1_2452_1000~26500



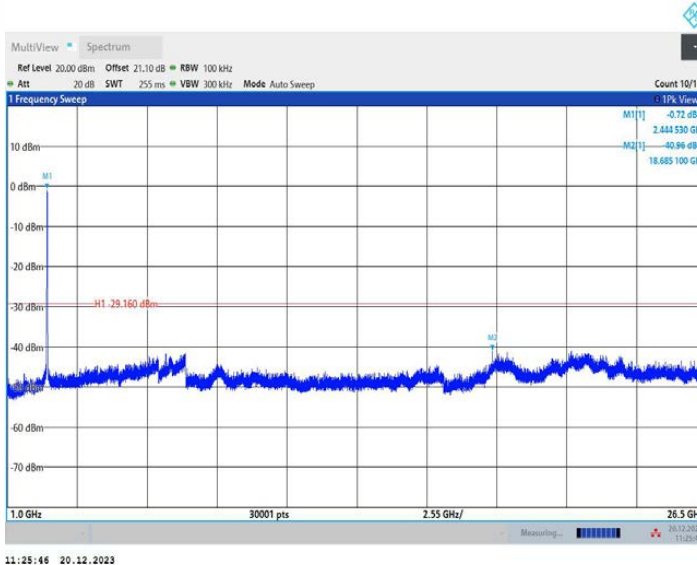
11N40MIMO_Ant2_2452_0~Reference



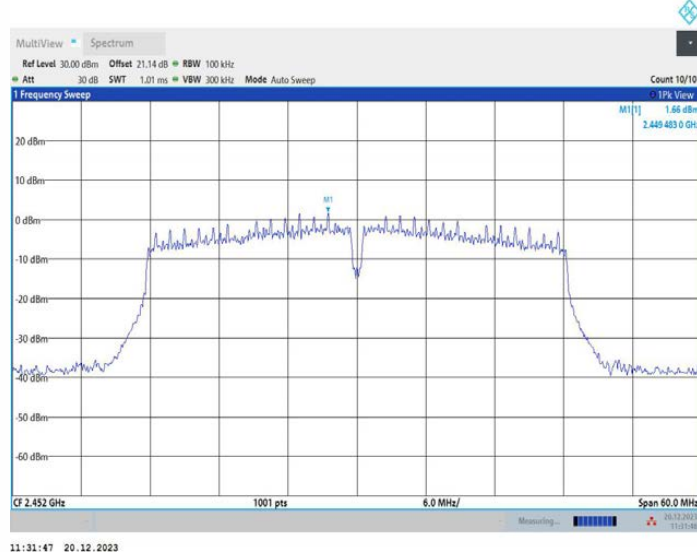
11N40MIMO_Ant2_2452_30~1000



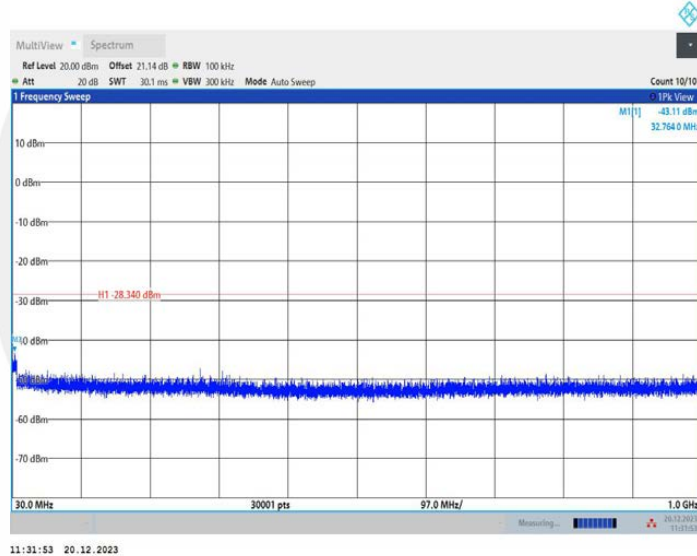
11N40MIMO_Ant2_2452_1000~26500



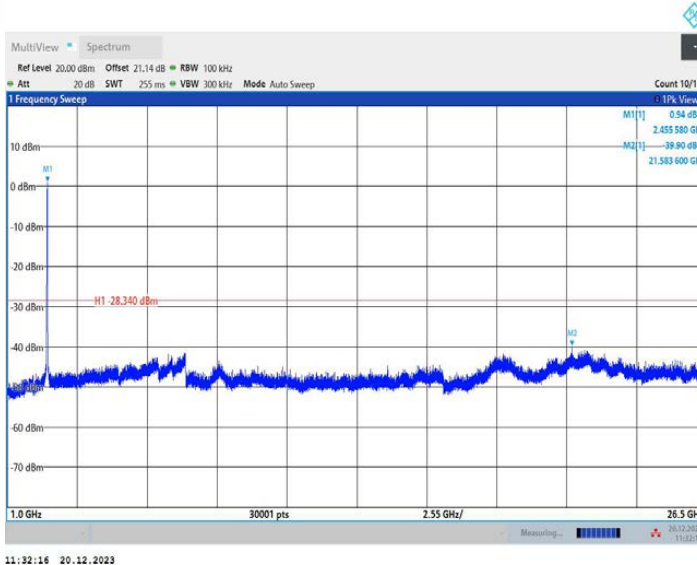
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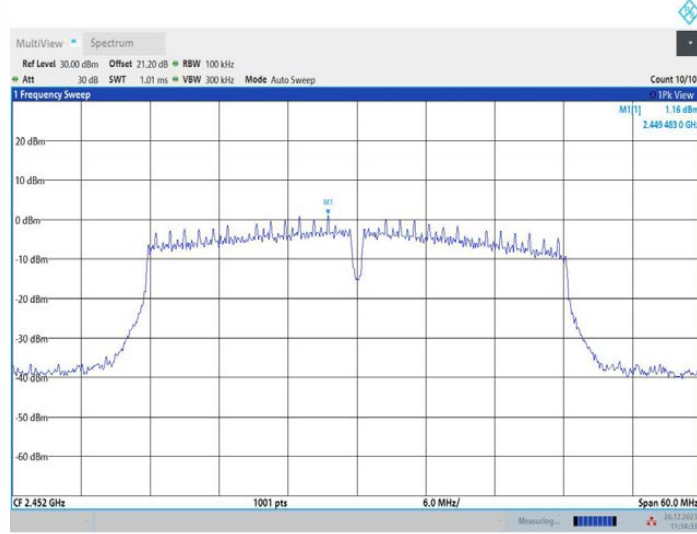
11N40MIMO_Ant3_2452_30~1000



11N40MIMO_Ant3_2452_1000~26500

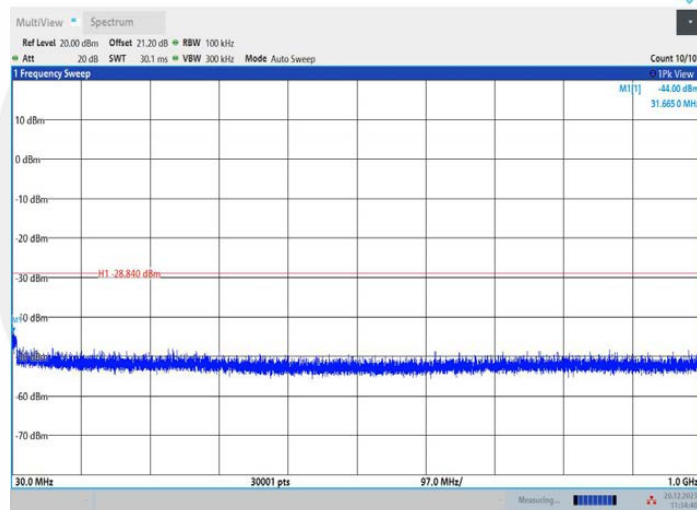


11N40MIMO_Ant4_2452_0~Reference



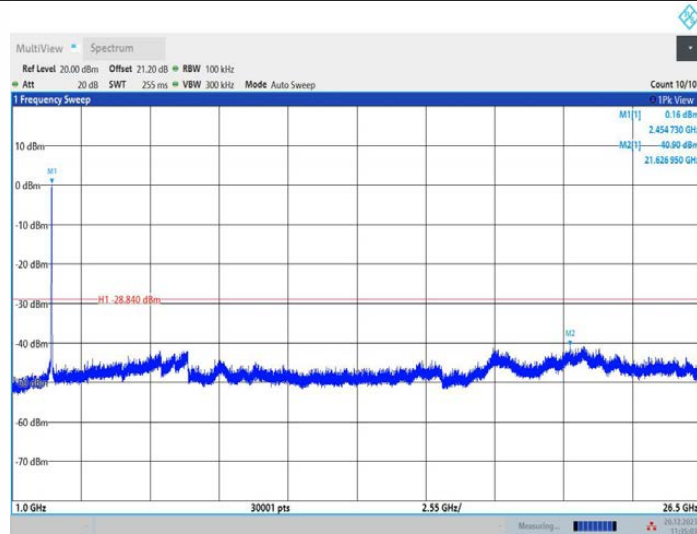
11:34:34 20.12.2023

11N40MIMO_Ant4_2452_30~1000



11:34:41 20.12.2023

11N40MIMO_Ant4_2452_1000~26500



11:35:04 20.12.2023

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 ($\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V/m}$)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log ($\mu\text{V/m}$)	300
0.490-1.705	24000/F(KHz)	20 log ($\mu\text{V/m}$)	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 \geq 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 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:	HZB

■ 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 ANT1 and MIMO as below:

ANT1:

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

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11431.8	V	60.66	74.00	13.34	peak
14593.1	V	62.68	74.00	11.32	peak
17617.5	V	67.78	74.00	6.22	peak
11431.87	V	41.11	54.00	12.89	AVG
14593.12	V	44.75	54.00	9.25	AVG
17617.5	V	45.61	54.00	8.39	AVG
11435.6	H	60.22	74.00	13.78	peak
14641.8	H	62.79	74.00	11.21	peak
17621.2	H	67.35	74.00	6.65	peak
11435.62	H	41.53	54.00	12.47	AVG
14641.87	H	44.42	54.00	9.58	AVG
17621.25	H	45.44	54.00	8.56	AVG

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

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11503.1	V	59.79	74.00	14.21	peak
14576.2	V	62.80	74.00	11.20	peak
17613.7	V	66.61	74.00	7.39	peak
11503.12	V	42.40	54.00	11.60	AVG
14576.25	V	44.25	54.00	9.75	AVG
17613.75	V	46.29	54.00	7.71	AVG
11471.2	H	60.00	74.00	14.00	peak
14548.1	H	62.89	74.00	11.11	peak
17606.2	H	67.84	74.00	6.16	peak
11471.25	H	41.64	54.00	12.36	AVG
14548.12	H	43.27	54.00	10.73	AVG
17606.25	H	46.19	54.00	7.81	AVG

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

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11508.7	V	59.39	74.00	14.61	peak
14656.8	V	62.86	74.00	11.14	peak
17615.6	V	67.70	74.00	6.30	peak
11508.75	V	42.33	54.00	11.67	AVG
14656.87	V	43.62	54.00	10.38	AVG
17615.62	V	45.71	54.00	8.29	AVG
11493.7	H	60.38	74.00	13.62	peak
14551.8	H	62.17	74.00	11.83	peak
17608.1	H	67.01	74.00	6.99	peak
11493.75	H	42.37	54.00	11.63	AVG
14551.87	H	43.50	54.00	10.50	AVG
17608.12	H	46.11	54.00	7.89	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
11430.410	V	60.53	74.00	13.47	peak
14591.710	V	62.52	74.00	11.48	peak
17618.780	V	67.75	74.00	6.25	peak
11433.150	V	41.09	54.00	12.91	AVG
14590.870	V	44.49	54.00	9.51	AVG
17615.250	V	45.42	54.00	8.58	AVG
11447.290	H	60.14	74.00	13.86	peak
14653.490	H	62.58	74.00	11.42	peak
17632.890	H	67.19	74.00	6.81	peak
11447.310	H	41.39	54.00	12.61	AVG
14638.560	H	44.24	54.00	9.76	AVG
17617.940	H	45.31	54.00	8.69	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
11501.710	V	59.66	74.00	14.34	peak
14574.810	V	62.64	74.00	11.36	peak
17614.980	V	66.58	74.00	7.42	peak
11504.400	V	42.38	54.00	11.62	AVG
14574.000	V	43.99	54.00	10.01	AVG
17611.500	V	46.1	54.00	7.9	AVG
11482.890	H	59.92	74.00	14.08	peak
14559.790	H	62.68	74.00	11.32	peak
17617.890	H	67.68	74.00	6.32	peak
11482.940	H	41.5	54.00	12.5	AVG
14544.810	H	43.09	54.00	10.91	AVG
17602.940	H	46.06	54.00	7.94	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
11507.310	V	59.26	74.00	14.74	peak
14655.410	V	62.7	74.00	11.3	peak
17616.880	V	67.67	74.00	6.33	peak
11510.030	V	42.31	54.00	11.69	AVG
14654.620	V	43.36	54.00	10.64	AVG
17613.370	V	45.52	54.00	8.48	AVG
11505.390	H	60.3	74.00	13.7	peak
14563.490	H	61.96	74.00	12.04	peak
17619.790	H	66.85	74.00	7.15	peak
11505.440	H	42.23	54.00	11.77	AVG
14548.560	H	43.32	54.00	10.68	AVG
17604.810	H	45.98	54.00	8.02	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
2387.41	V	55.25	74.00	18.75	peak
2387.41	V	40.93	54.00	13.07	AVG
2388.53	H	49.04	74.00	24.96	peak
2388.53	H	36.46	54.00	17.54	AVG

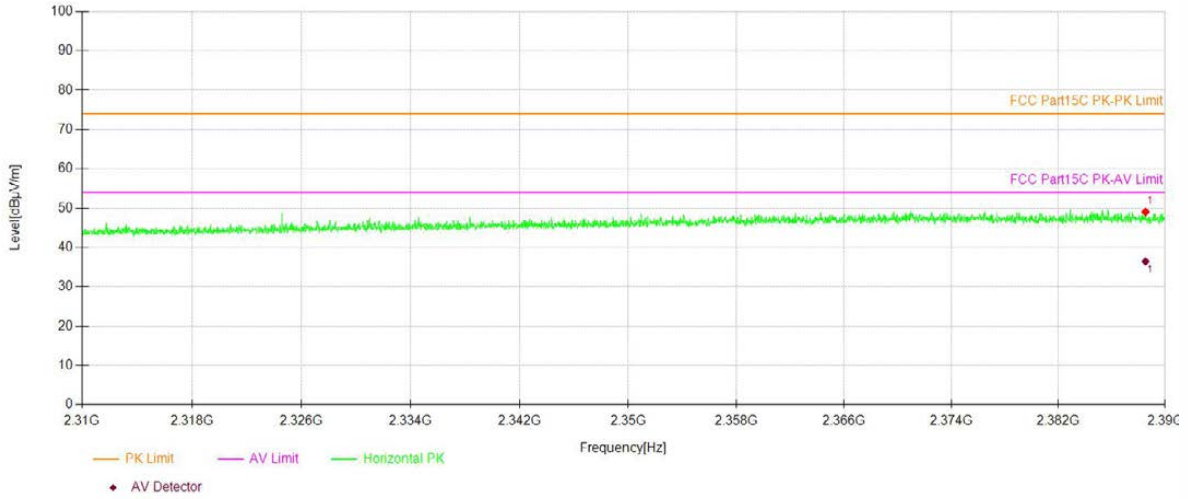
Test mode: 802.11n(20) Frequency: Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2483.58	V	51.84	74.00	22.16	peak
2483.58	V	38.57	54.00	15.43	AVG
2484.88	H	46.32	74.00	27.68	peak
2484.88	H	35.40	54.00	18.60	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.

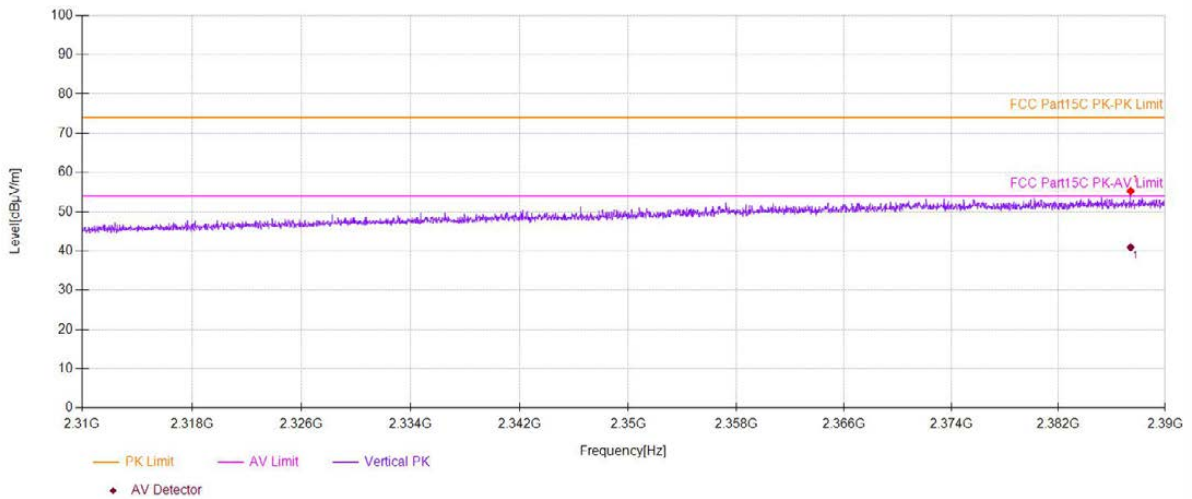
Spurious Emission in Restricted Band 2310-2390MHz

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



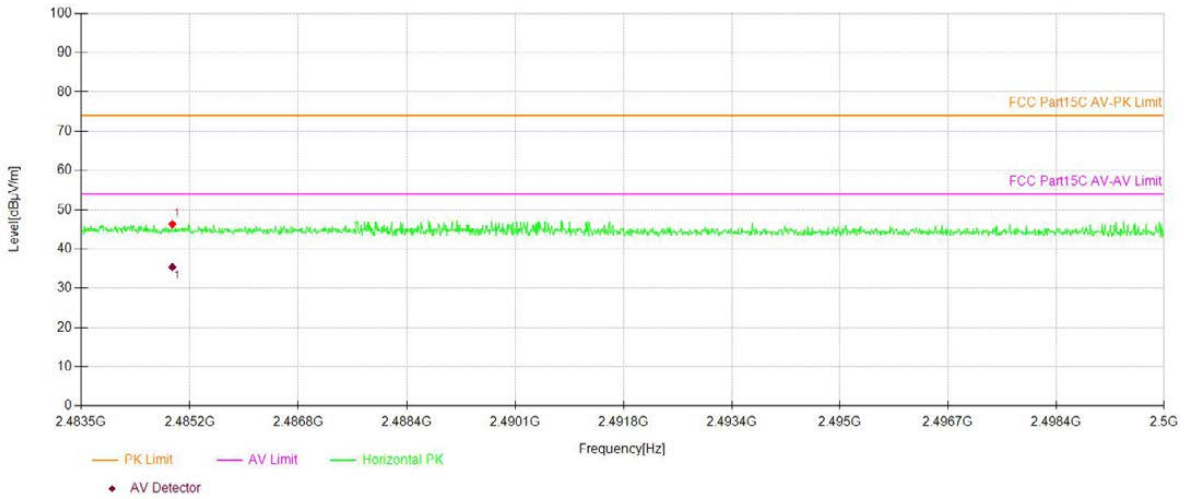
Spurious Emission in Restricted Band 2310-2390MHz

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



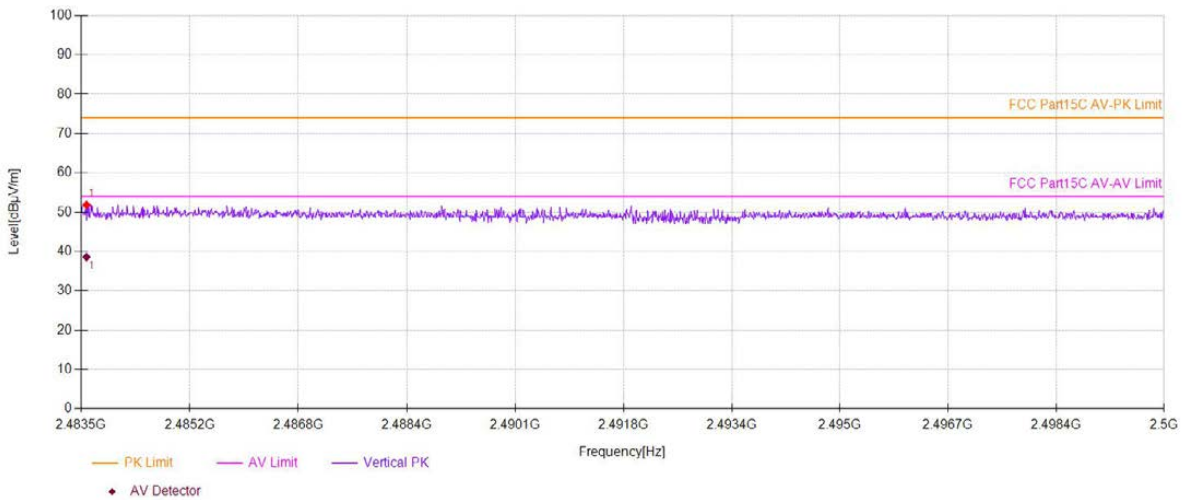
Spurious Emission in Restricted Band 2483.5-2500MHz

Test Model 802.11b 802.11g 802.11n(HT20) 802.11n(HT40)
 Channel 11: 2462MHz Channel 9: 2452MHz Polarity: H
 VBW=3MHz



Spurious Emission in Restricted Band 2483.5-2500MHz

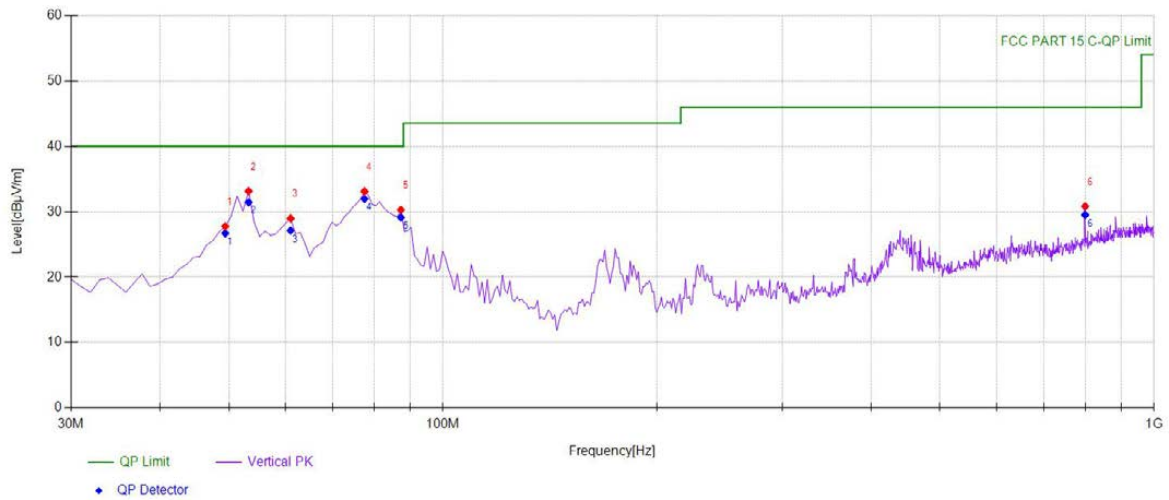
Test Model 802.11b 802.11g 802.11n(HT20) 802.11n(HT40)
 Channel 11: 2462MHz Channel 9: 2452MHz Polarity: V
 VBW=3MHz



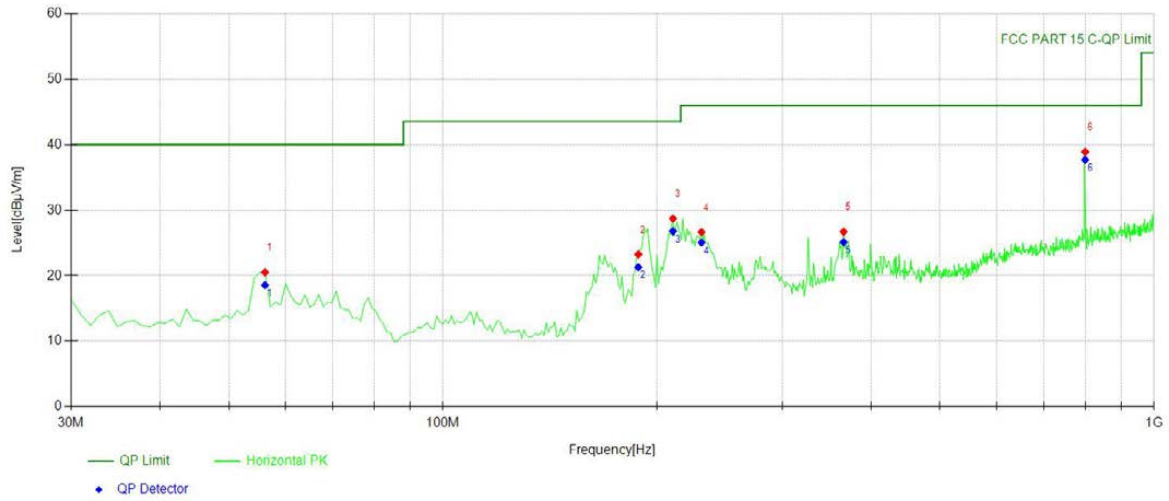
■ Spurious Emission below 1GHz (30MHz to 1GHz)

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

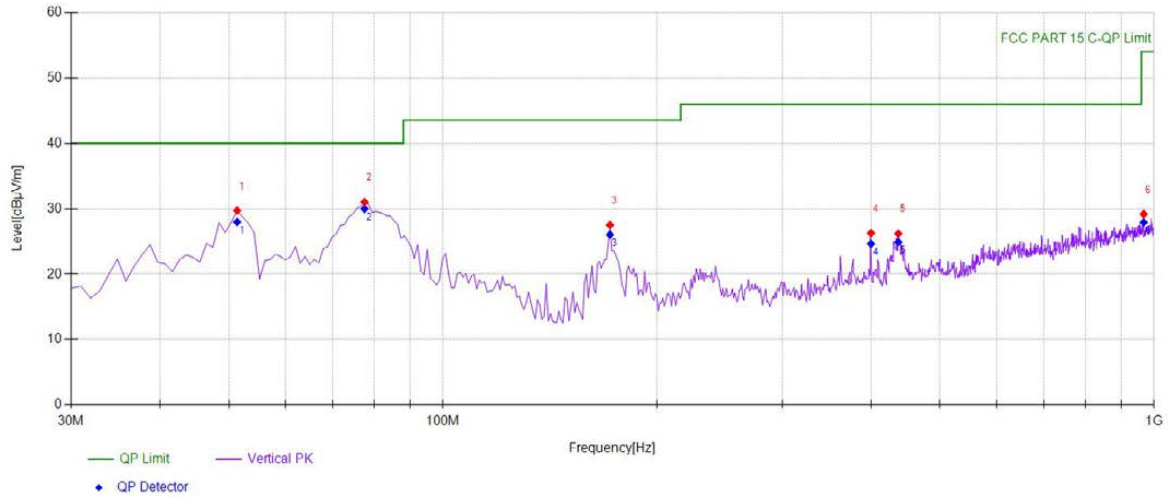


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	49.4194	45.01	-17.25	27.76	PK	40.00	12.24	Vertical
2	53.3033	50.79	-17.65	33.14	PK	40.00	6.86	Vertical
3	61.0711	47.68	-18.70	28.98	PK	40.00	11.02	Vertical
4	77.5776	54.23	-21.12	33.11	PK	40.00	6.89	Vertical
5	87.2873	50.09	-19.80	30.29	PK	40.00	9.71	Vertical
6	799.98	35.24	-4.42	30.82	PK	46.00	15.18	Vertical

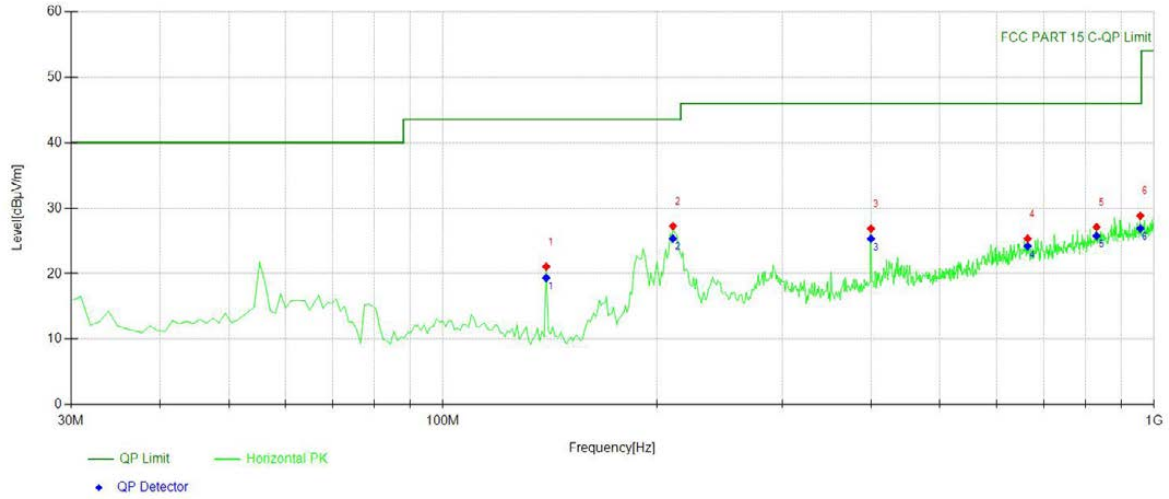


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	56.2162	38.56	-18.04	20.52	PK	40.00	19.48	Horizontal
2	188.268	41.11	-17.87	23.24	PK	43.50	20.26	Horizontal
3	210.600	45.85	-17.13	28.72	PK	43.50	14.78	Horizontal
4	230.991	42.70	-16.05	26.65	PK	46.00	19.35	Horizontal
5	365.956	39.66	-12.96	26.70	PK	46.00	19.30	Horizontal
6	799.98	43.31	-4.42	38.89	PK	46.00	7.11	Horizontal

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

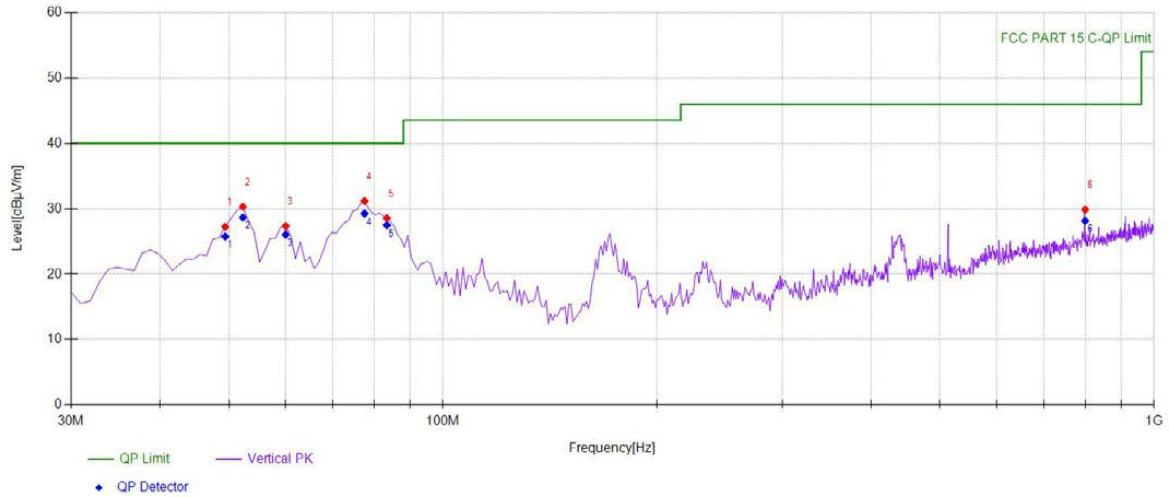


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	51.3614	47.11	-17.39	29.72	PK	40.00	10.28	Vertical
2	77.5776	52.12	-21.12	31.00	PK	40.00	9.00	Vertical
3	171.761	46.37	-18.86	27.51	PK	43.50	15.99	Vertical
4	399.939	38.06	-11.79	26.27	PK	46.00	19.73	Vertical
5	436.836	37.46	-11.27	26.19	PK	46.00	19.81	Vertical
6	966.987	31.30	-2.11	29.19	PK	54.00	24.81	Vertical

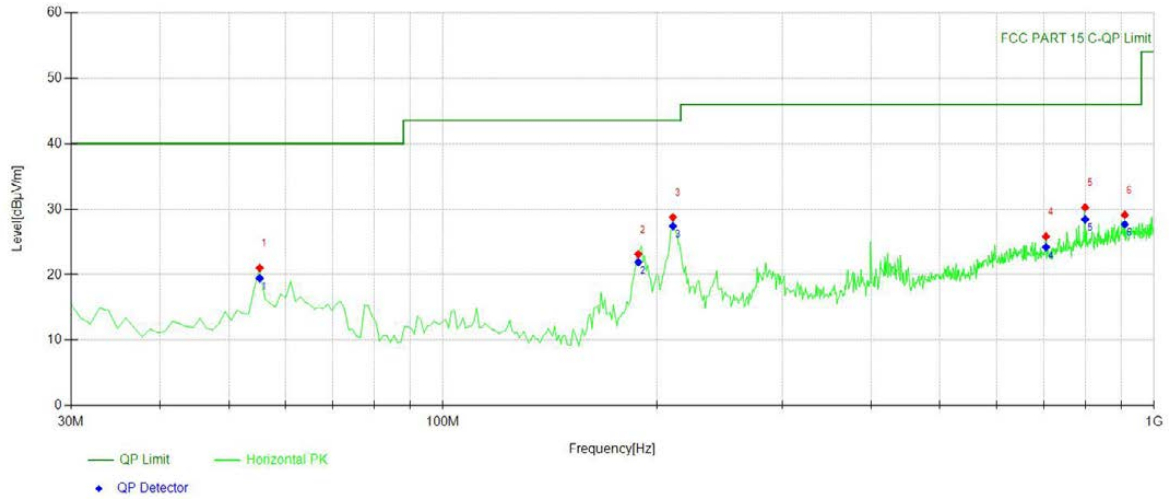


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	139.719	41.06	-19.98	21.08	PK	43.50	22.42	Horizontal
2	210.600	44.38	-17.13	27.25	PK	43.50	16.25	Horizontal
3	399.939	38.65	-11.79	26.86	PK	46.00	19.14	Horizontal
4	664.044	31.50	-6.14	25.36	PK	46.00	20.64	Horizontal
5	830.080	31.23	-4.12	27.11	PK	46.00	18.89	Horizontal
6	956.306	31.15	-2.30	28.85	PK	46.00	17.15	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	49.4194	44.47	-17.25	27.22	PK	40.00	12.78	Vertical
2	52.3323	47.82	-17.52	30.30	PK	40.00	9.70	Vertical
3	60.1001	45.88	-18.56	27.32	PK	40.00	12.68	Vertical
4	77.5776	52.29	-21.12	31.17	PK	40.00	8.83	Vertical
5	83.4034	49.26	-20.70	28.56	PK	40.00	11.44	Vertical
6	799.98	34.28	-4.42	29.86	PK	46.00	16.14	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	38.93	-17.91	21.02	PK	40.00	18.98	Horizontal
2	188.268	40.98	-17.87	23.11	PK	43.50	20.39	Horizontal
3	210.600	45.90	-17.13	28.77	PK	43.50	14.73	Horizontal
4	704.824	31.74	-5.89	25.85	PK	46.00	20.15	Horizontal
5	799.98	34.67	-4.42	30.25	PK	46.00	15.75	Horizontal
6	909.699	31.97	-2.84	29.13	PK	46.00	16.87	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.

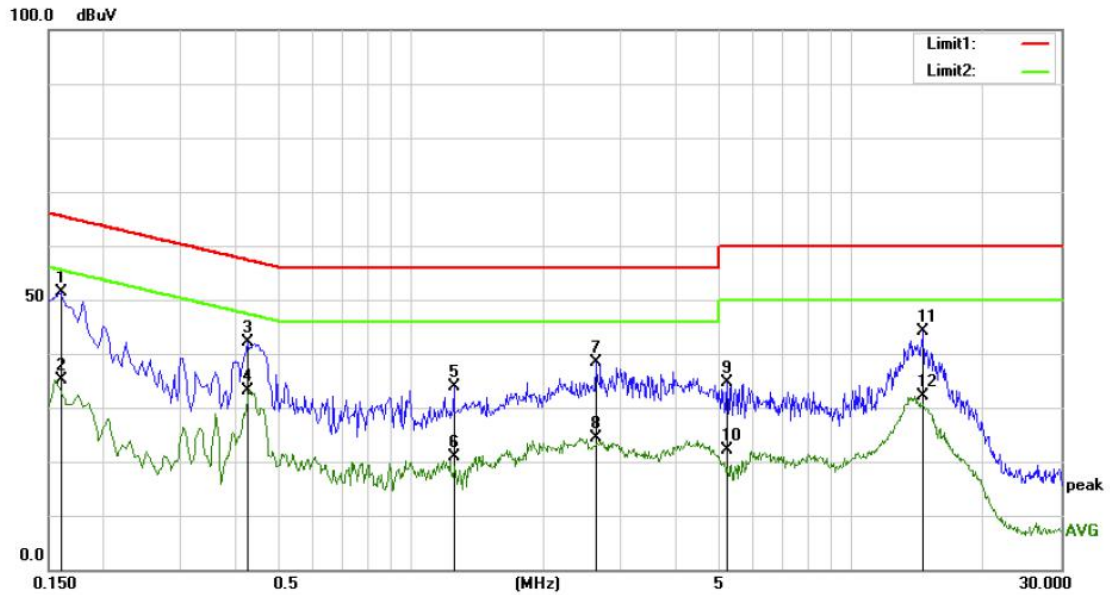
7.6.4 Test Procedure

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

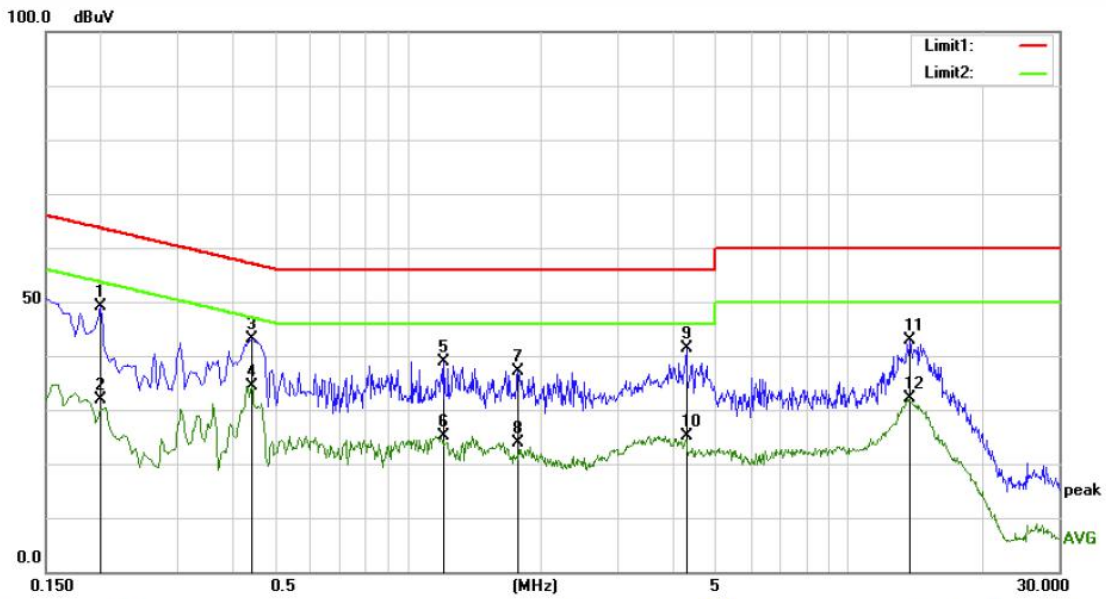
Temperature : 21.9°C ATM Pressure:: 1011 mbar
Humidity : 58 % Test Engineer: WAP

Pass



Site Conduction #1 Phase: **L1** Temperature: 21.9

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1600	41.46	9.82	51.28	65.46	-14.18	QP	
2		0.1600	25.23	9.82	35.05	55.46	-20.41	AVG	
3		0.4250	32.22	9.86	42.08	57.35	-15.27	QP	
4		0.4250	23.27	9.86	33.13	47.35	-14.22	AVG	
5		1.2550	23.97	9.89	33.86	56.00	-22.14	QP	
6		1.2550	11.05	9.89	20.94	46.00	-25.06	AVG	
7		2.6250	28.62	9.78	38.40	56.00	-17.60	QP	
8		2.6250	14.65	9.78	24.43	46.00	-21.57	AVG	
9		5.2300	24.83	9.92	34.75	60.00	-25.25	QP	
10		5.2300	12.13	9.92	22.05	50.00	-27.95	AVG	
11		14.5550	34.27	9.92	44.19	60.00	-15.81	QP	
12		14.5550	22.09	9.92	32.01	50.00	-17.99	AVG	



Site Conduction #1 Phase: **N** Temperature: 21.9

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.2000	39.04	10.00	49.04	63.61	-14.57	QP	
2		0.2000	21.93	10.00	31.93	53.61	-21.68	AVG	
3		0.4400	33.25	9.85	43.10	57.06	-13.96	QP	
4	*	0.4400	24.50	9.85	34.35	47.06	-12.71	AVG	
5		1.2050	29.01	9.90	38.91	56.00	-17.09	QP	
6		1.2050	15.17	9.90	25.07	46.00	-20.93	AVG	
7		1.7800	27.41	9.83	37.24	56.00	-18.76	QP	
8		1.7800	14.16	9.83	23.99	46.00	-22.01	AVG	
9		4.2750	31.41	9.86	41.27	56.00	-14.73	QP	
10		4.2750	15.32	9.86	25.18	46.00	-20.82	AVG	
11		13.8300	32.82	9.94	42.76	60.00	-17.24	QP	
12		13.8300	22.25	9.94	32.19	50.00	-17.81	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°C ATM Pressure:: 1011 mbar
Humidity : 45 % Test Engineer: XXH

PASS

The EUT integrated antenna, antenna gain as below.
Ant1: 5.16dBi, Ant2: 4.86dBi, Ant3:5.05dBi , Ant4: 5.12dBi

- 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

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