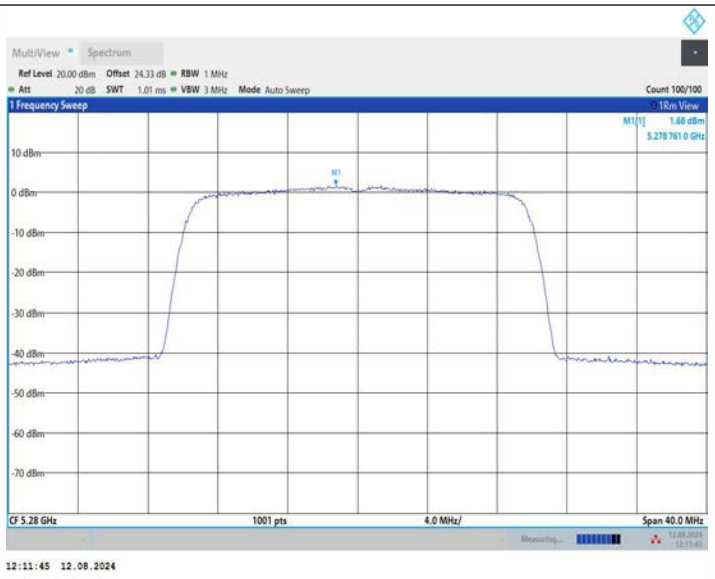
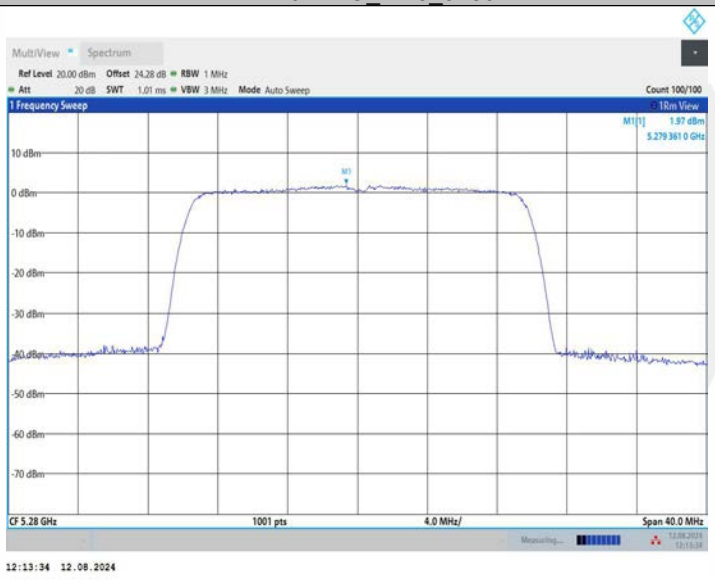


11BE20MIMO_Ant3_5280



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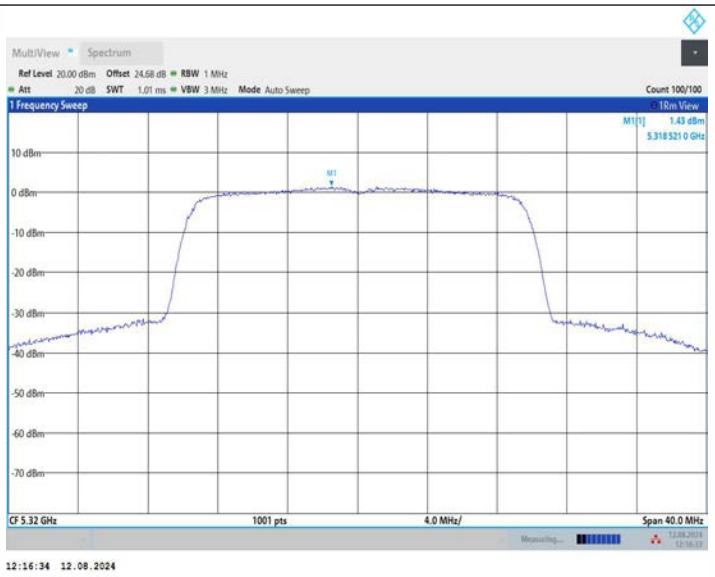

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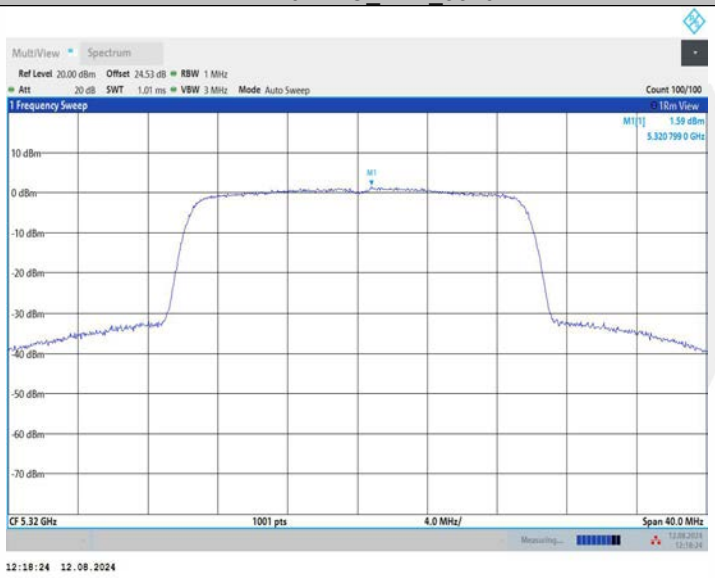

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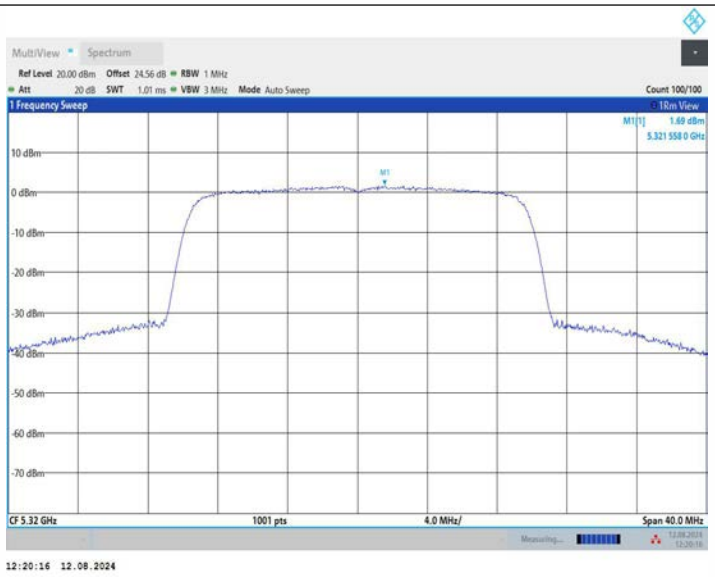

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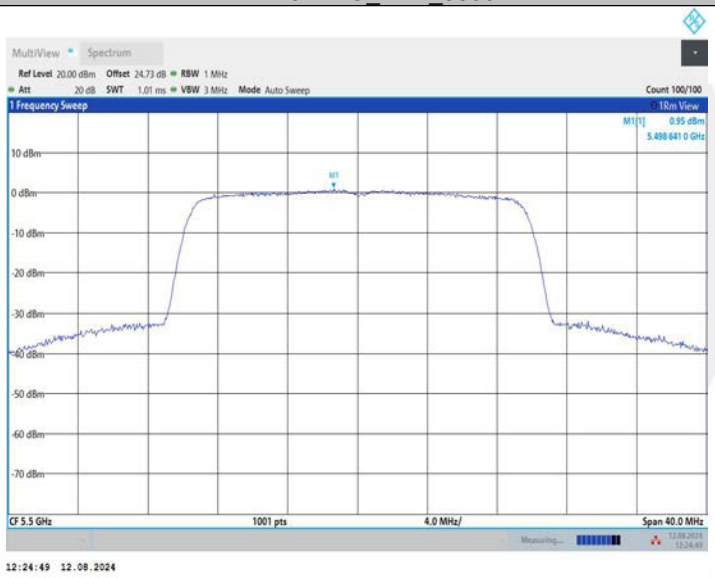

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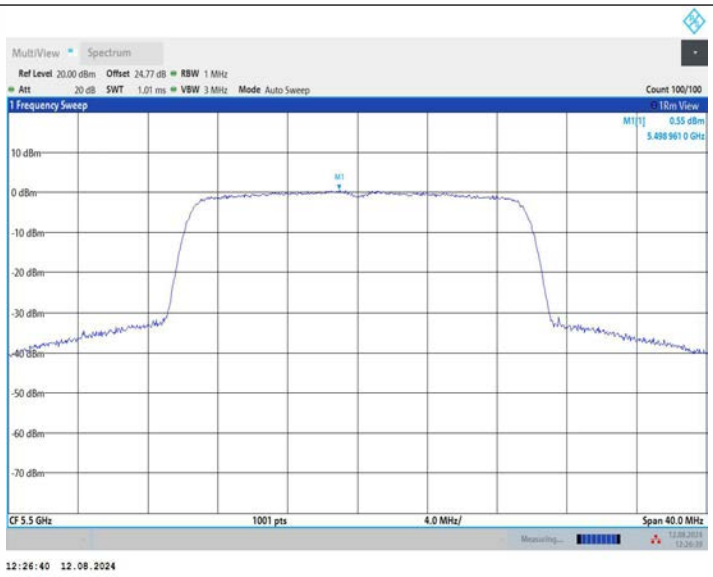

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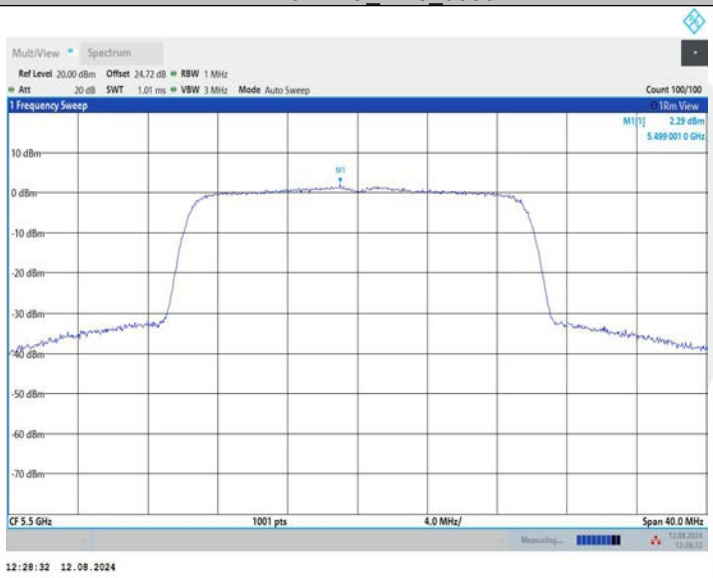

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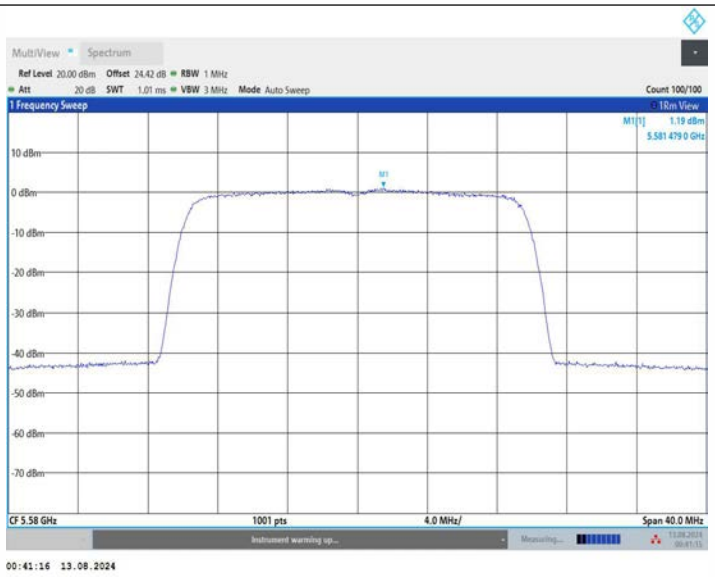

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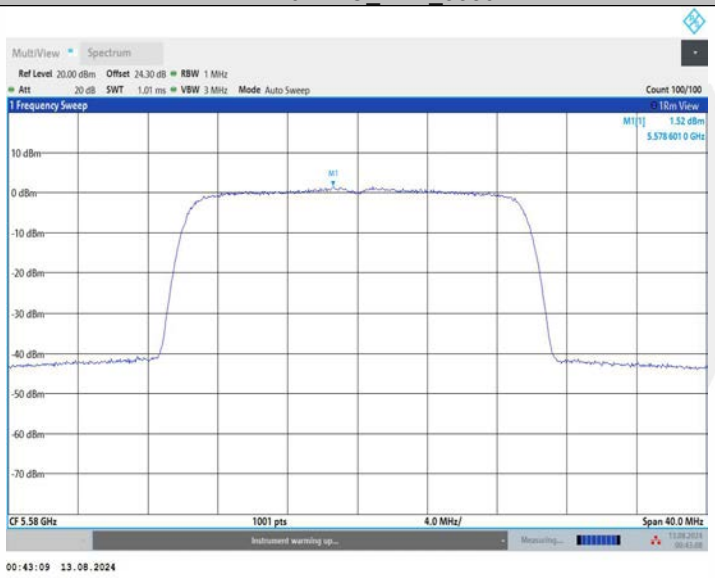

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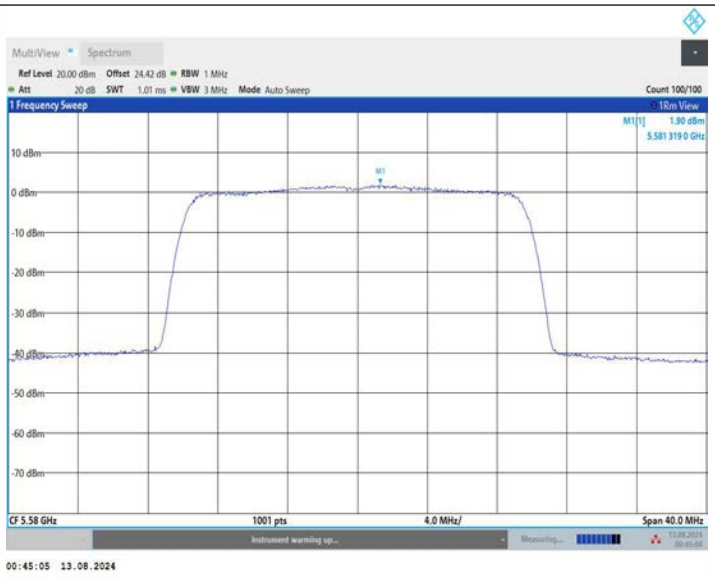

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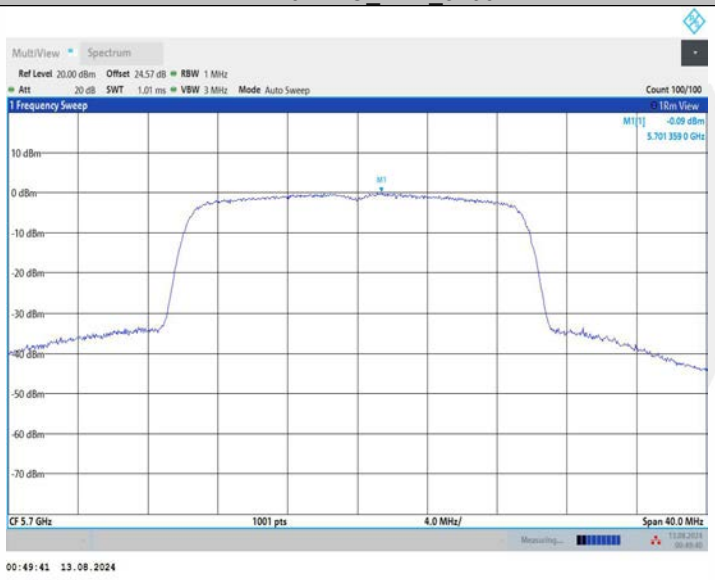

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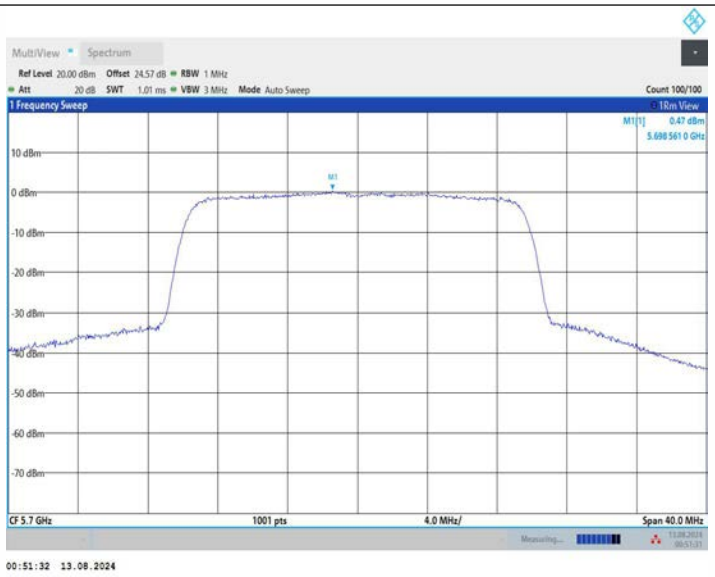

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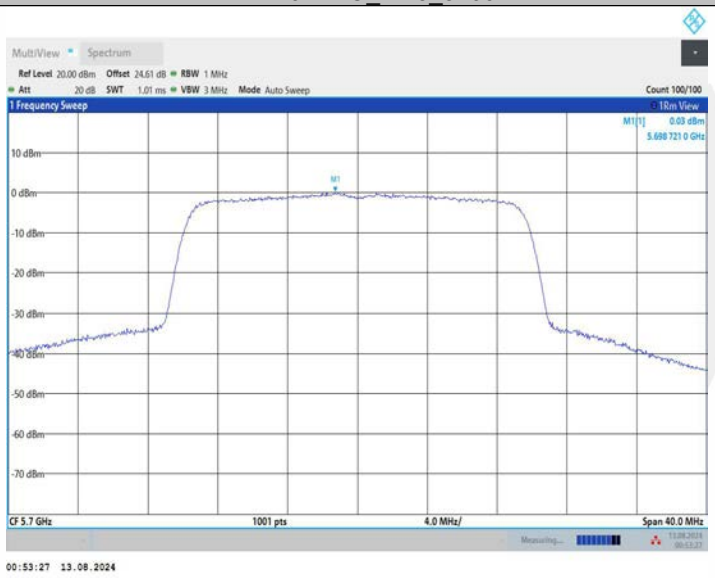

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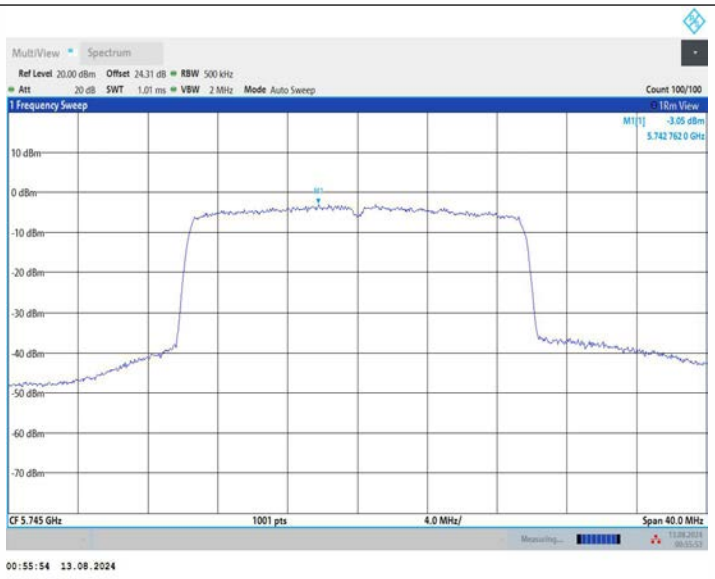

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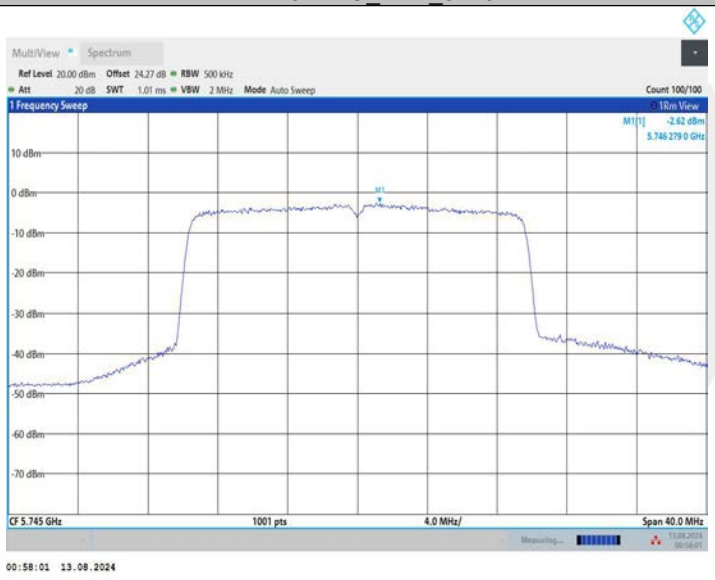

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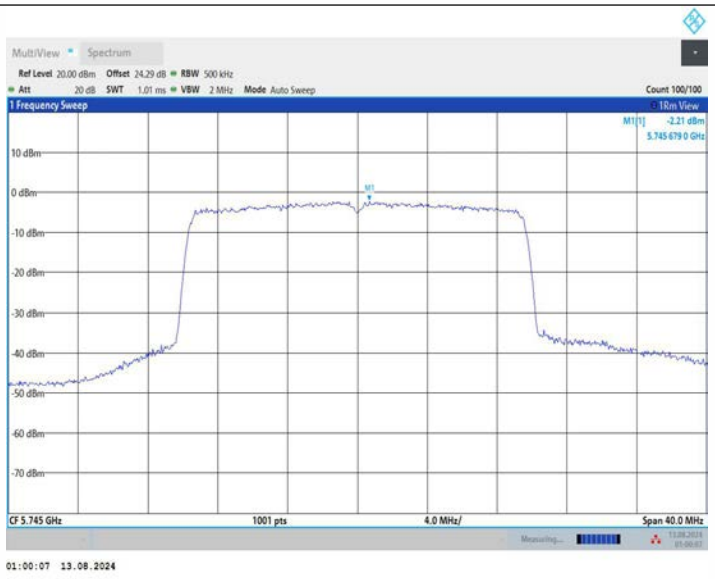

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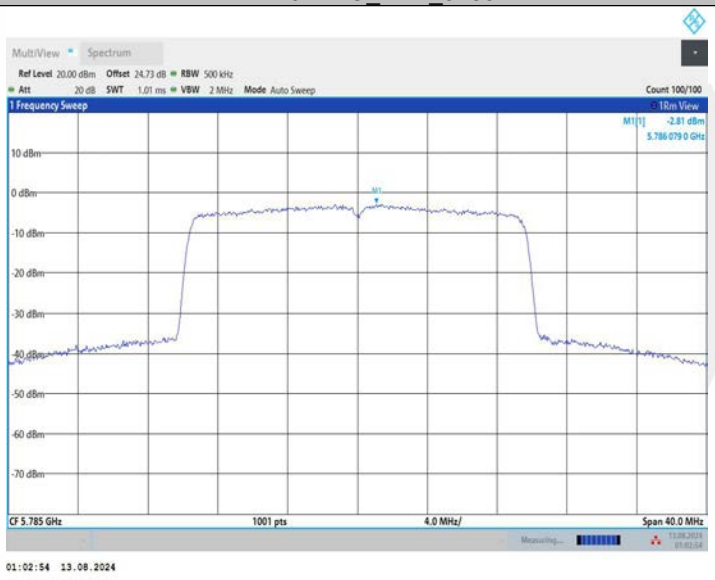

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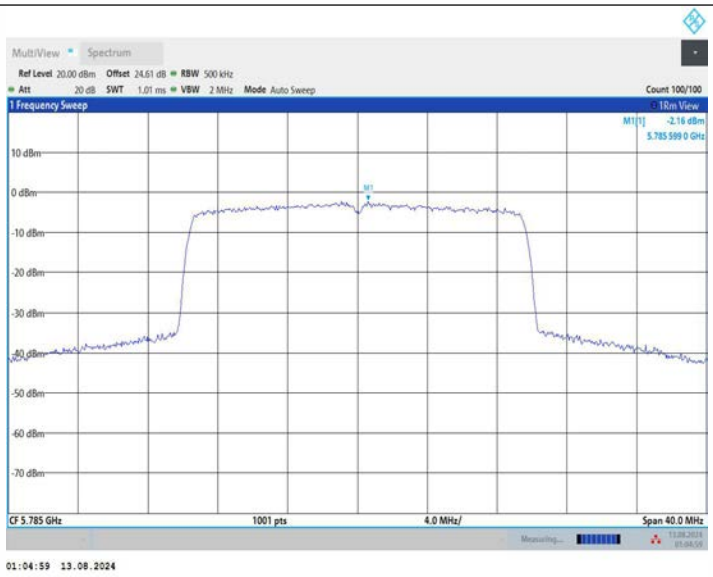

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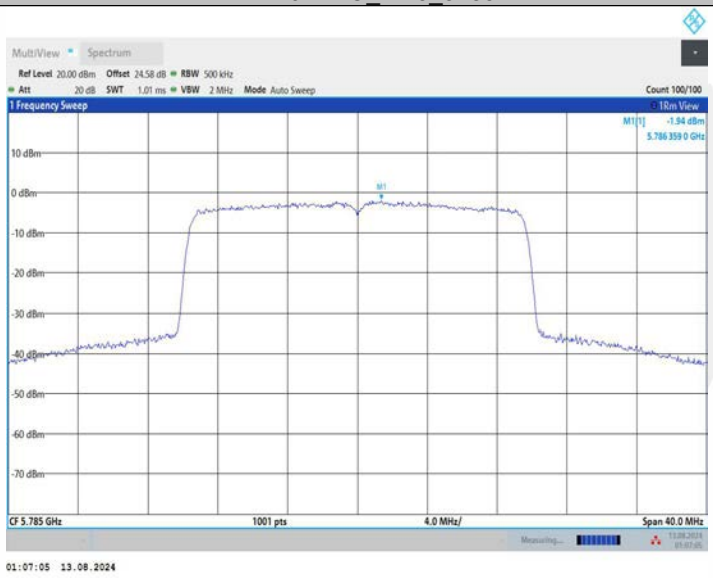

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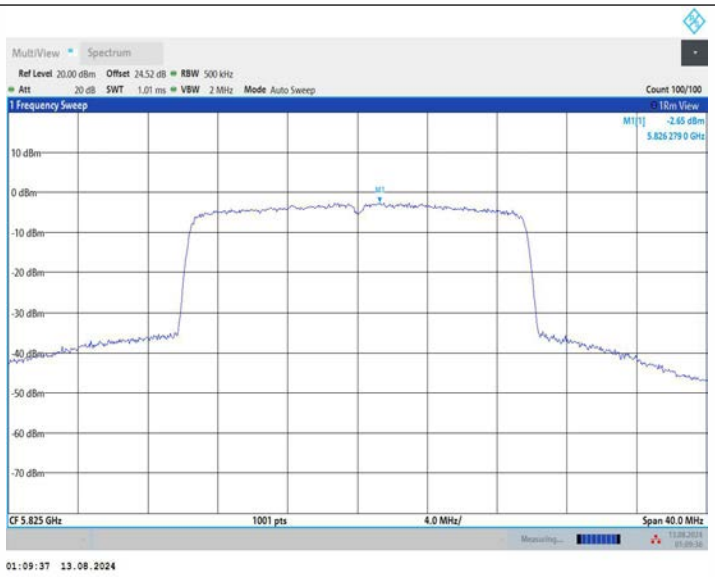

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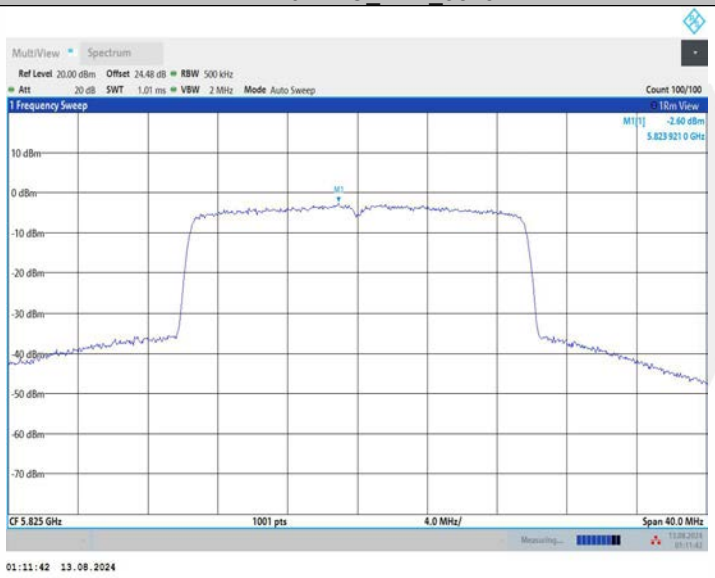

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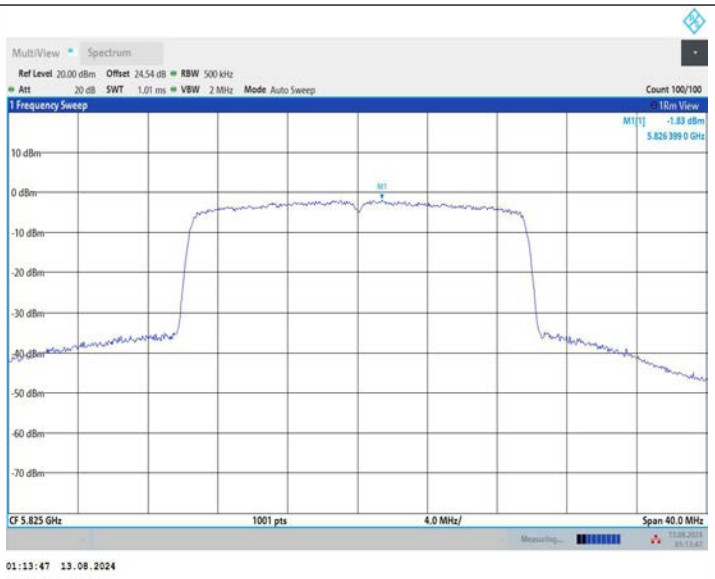

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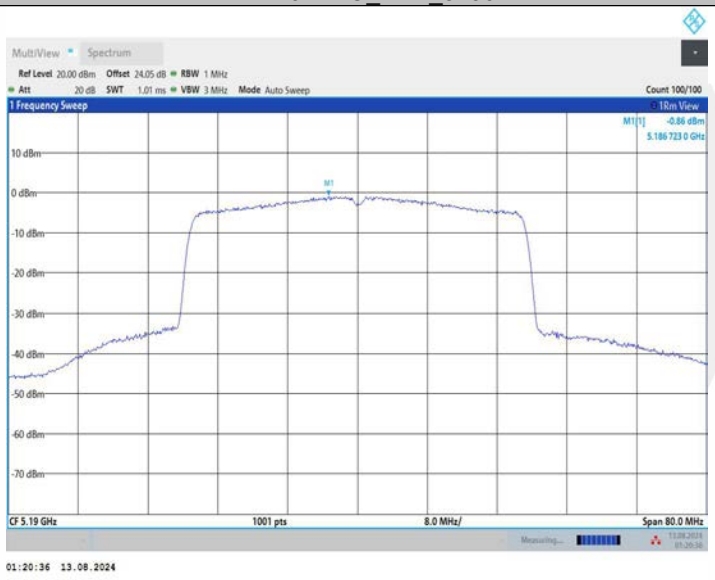

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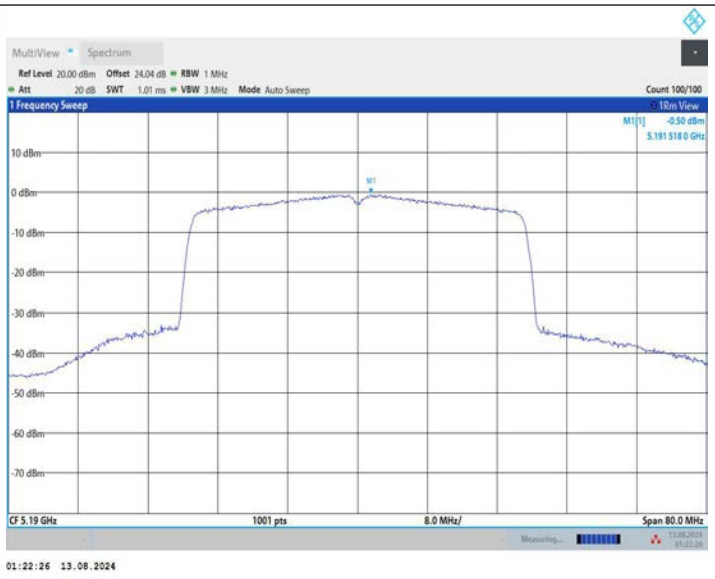

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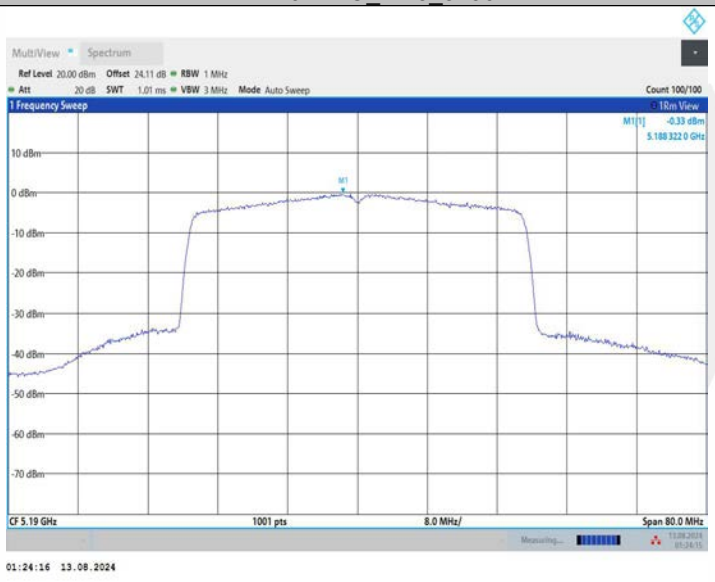

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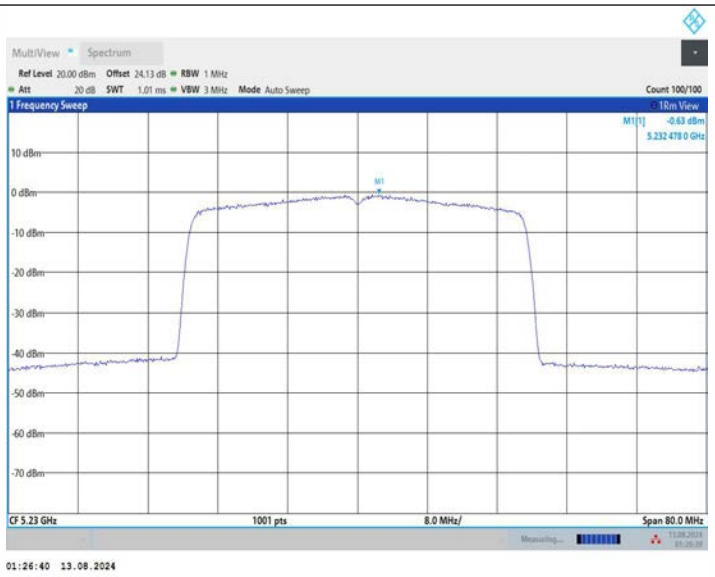

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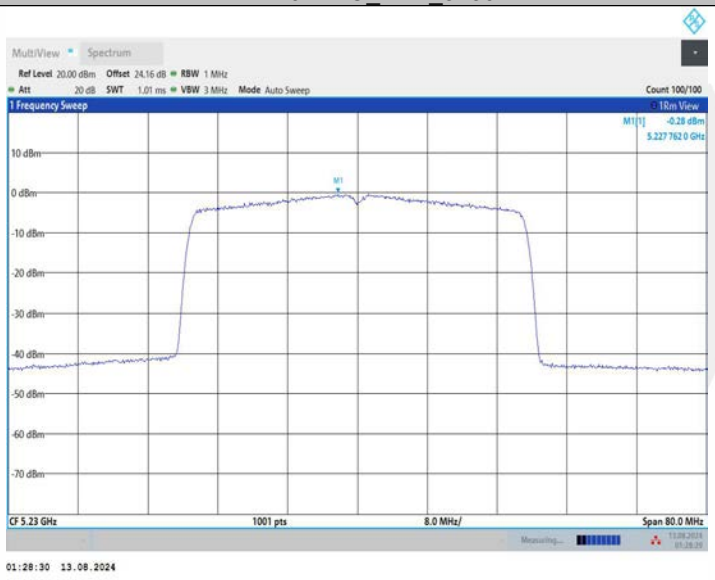

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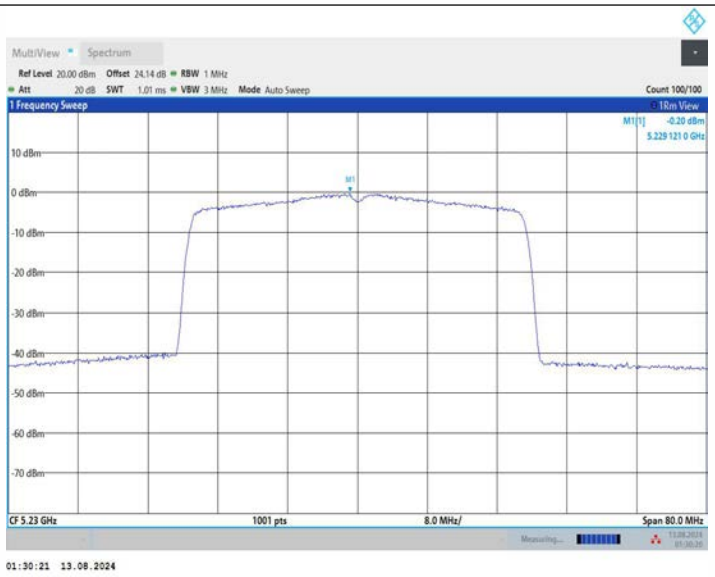

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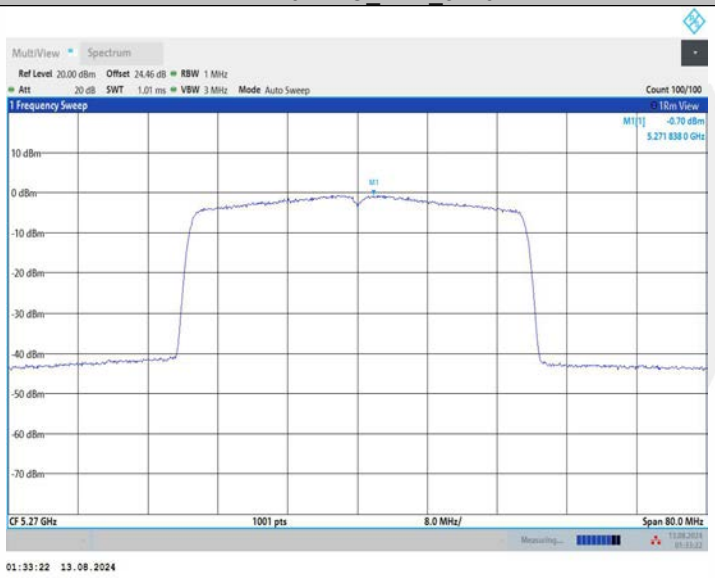

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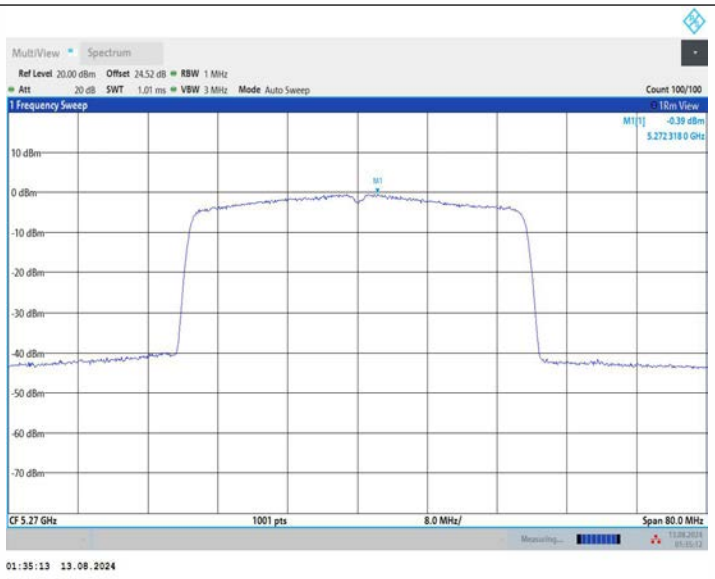

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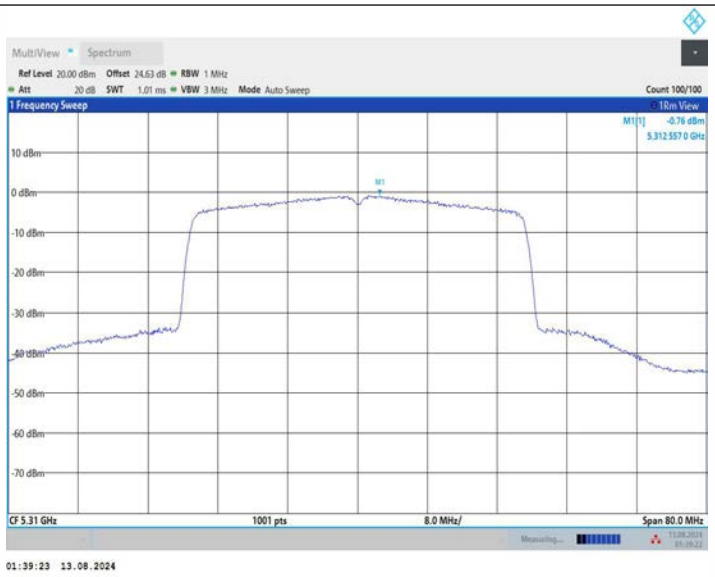

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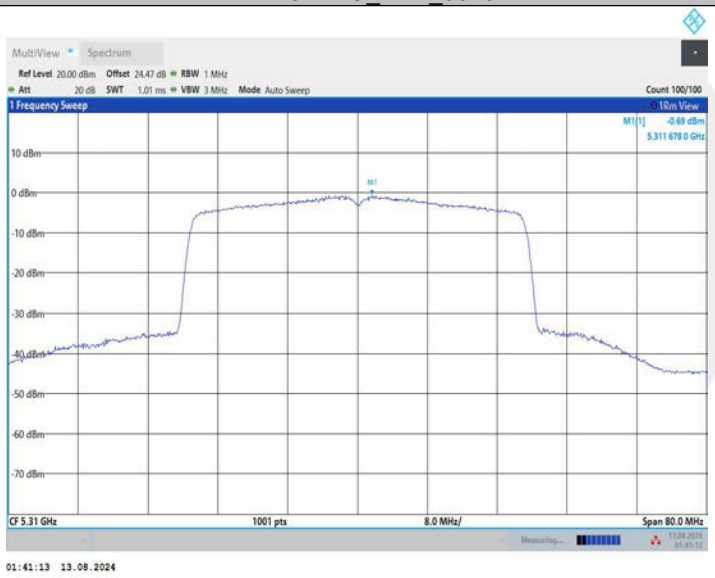

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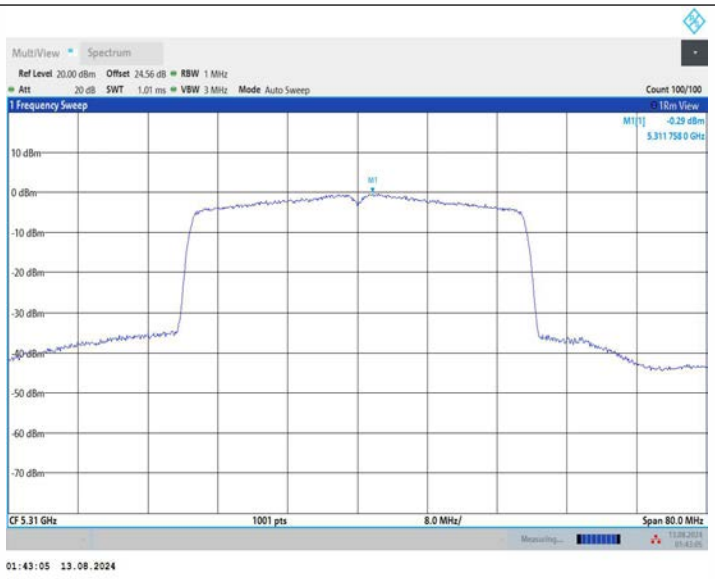

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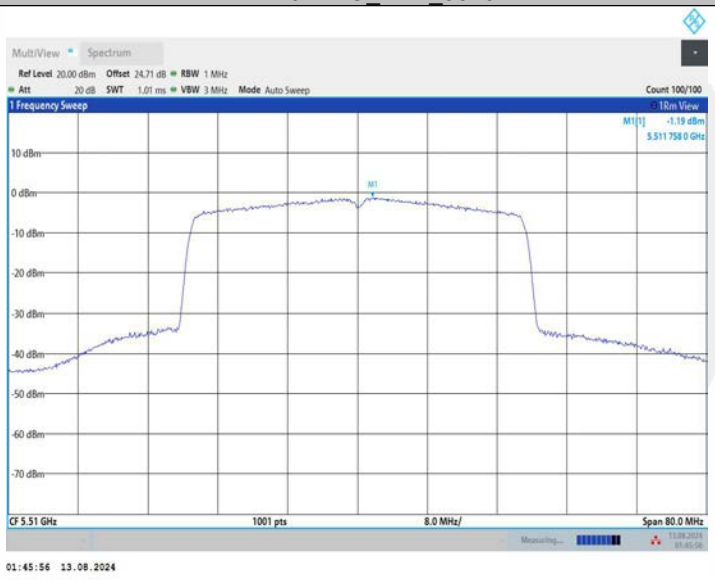

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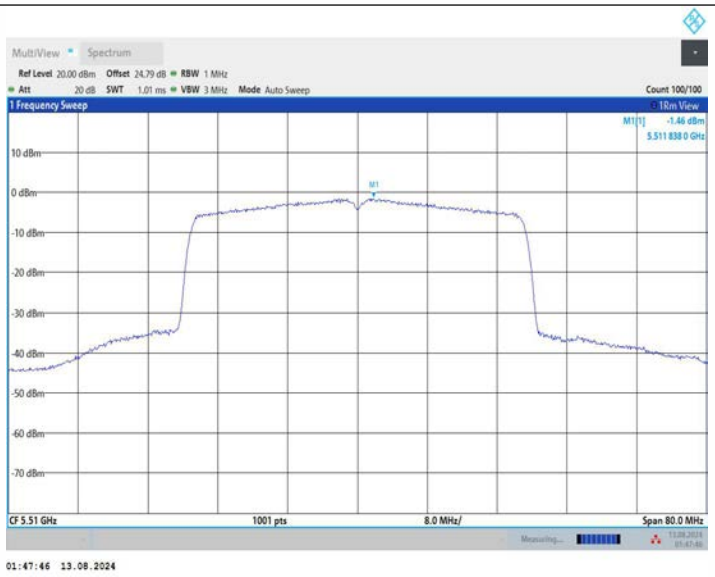

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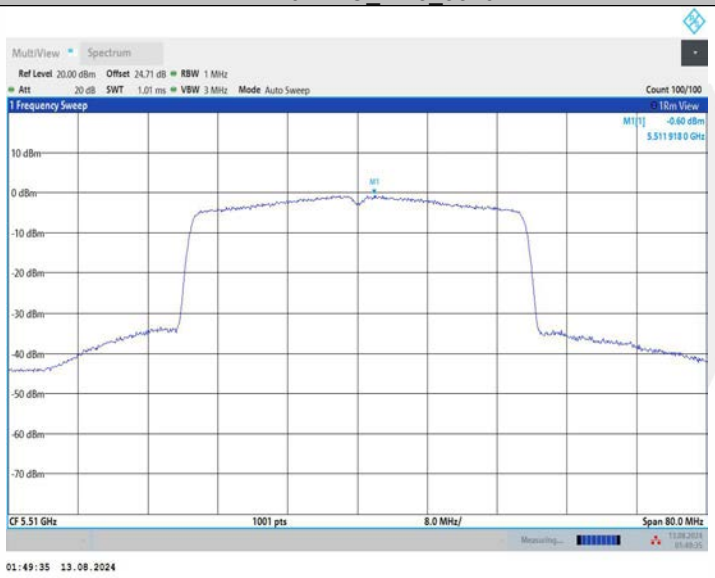

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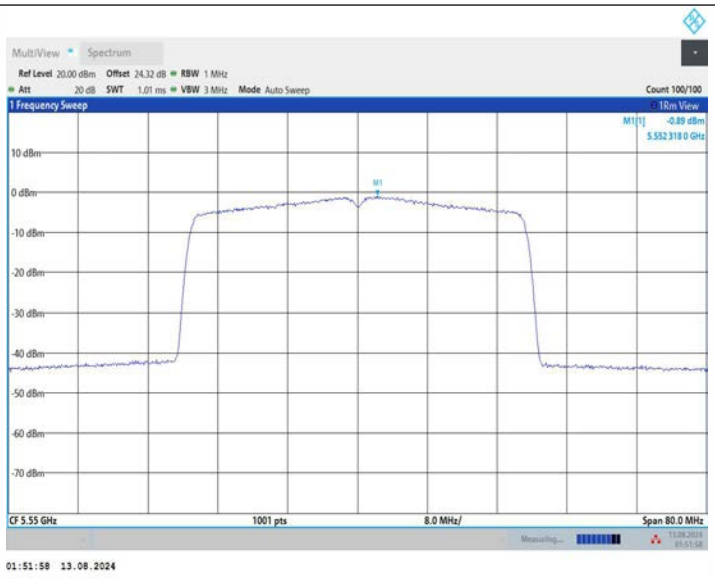

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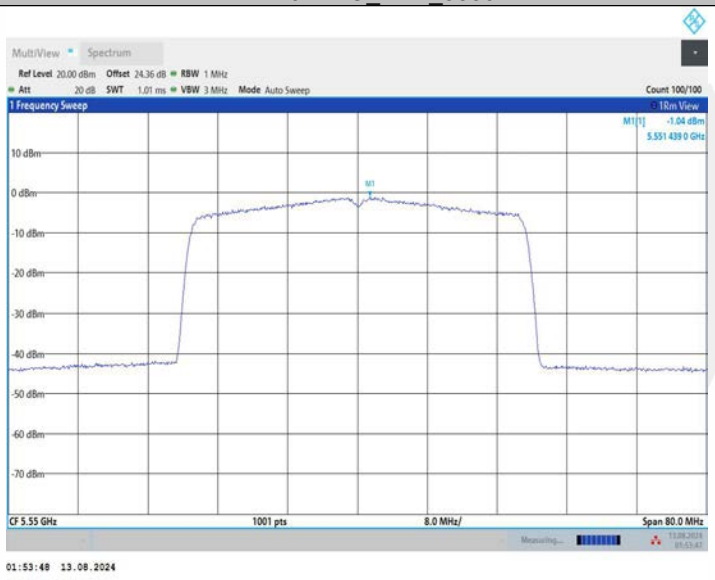

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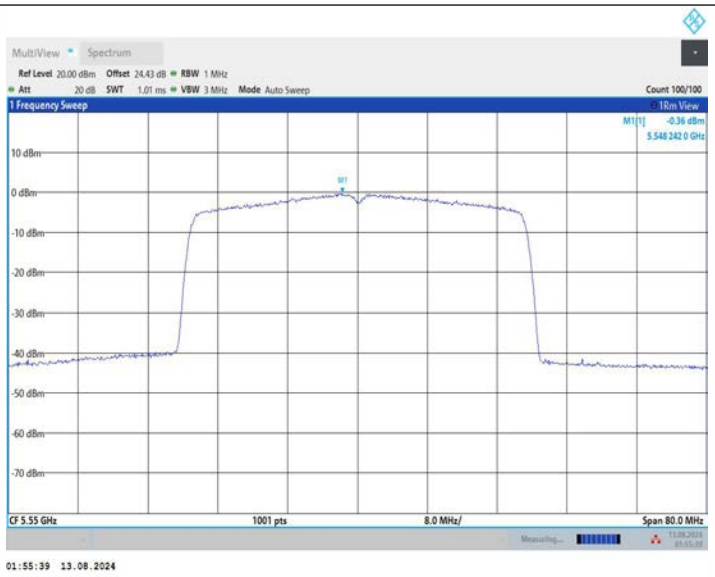

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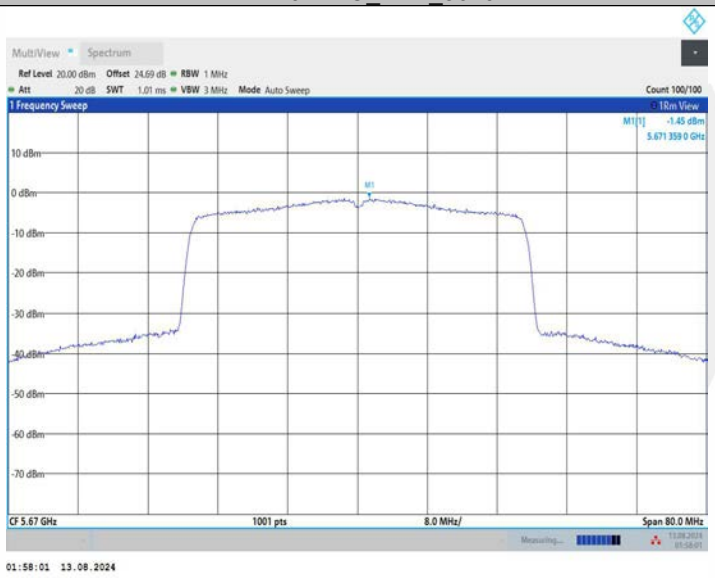

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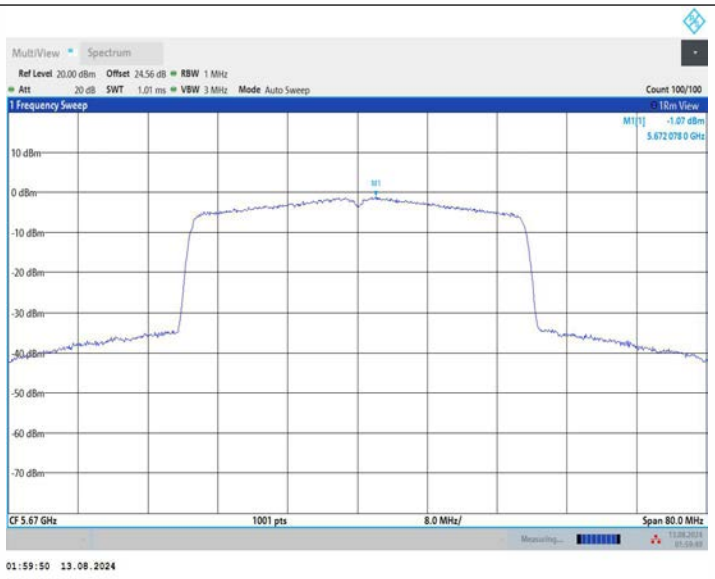

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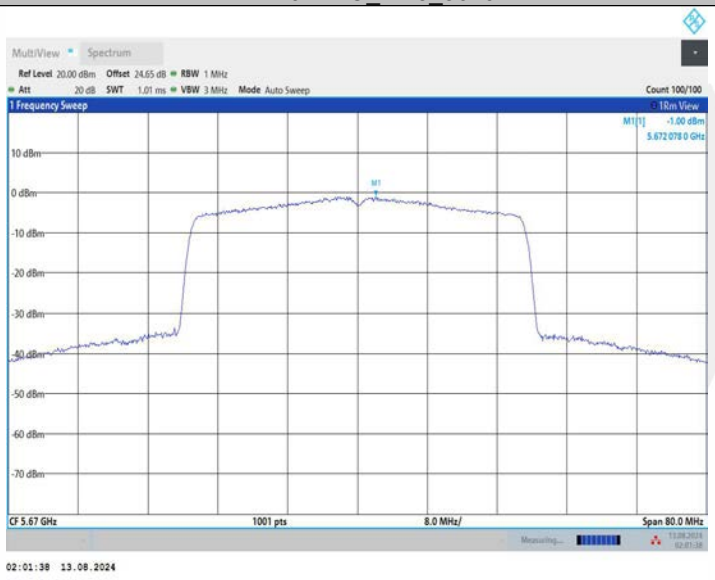

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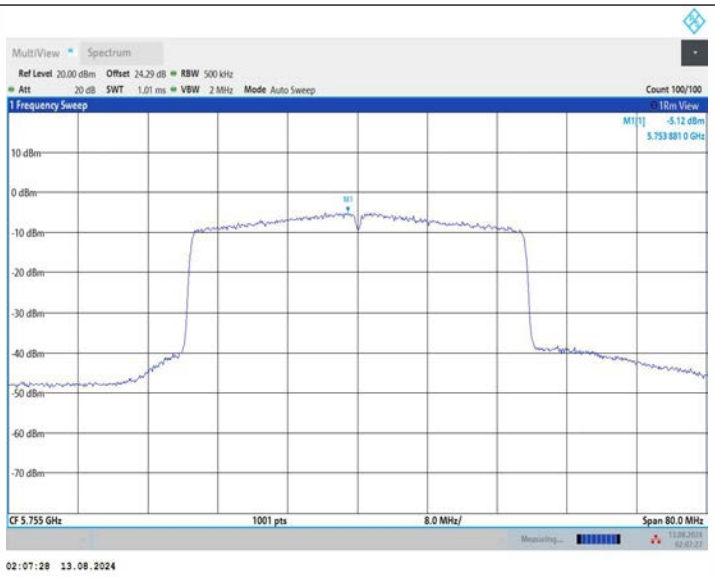

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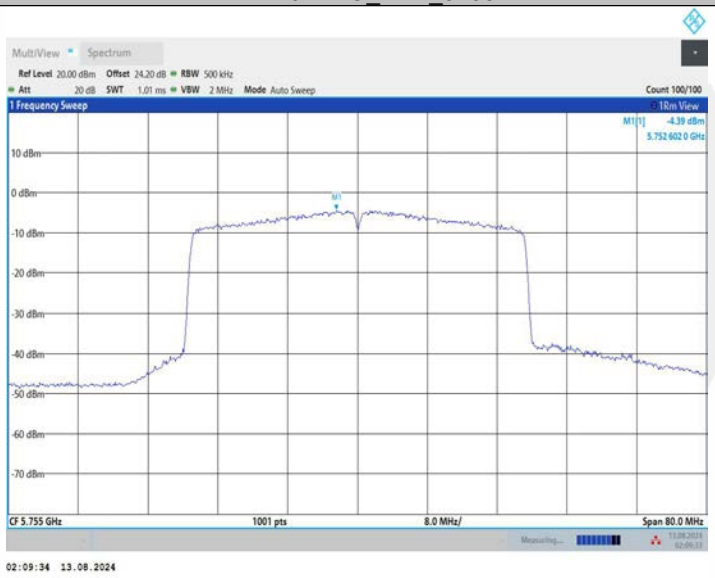

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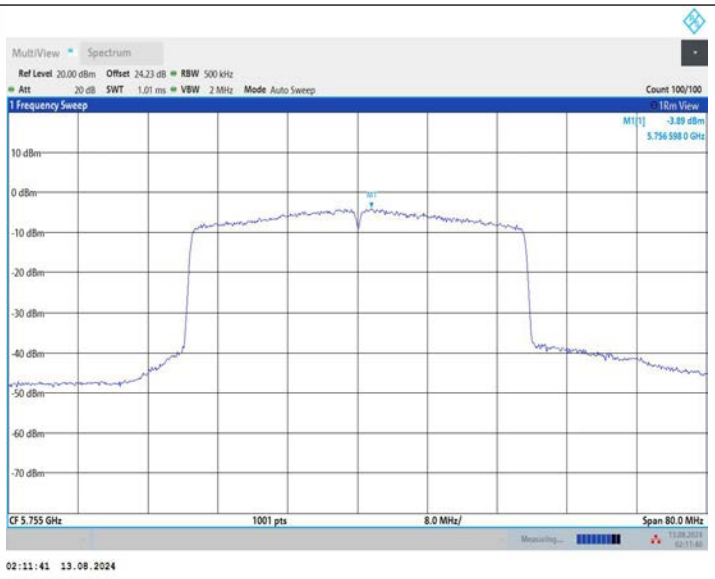

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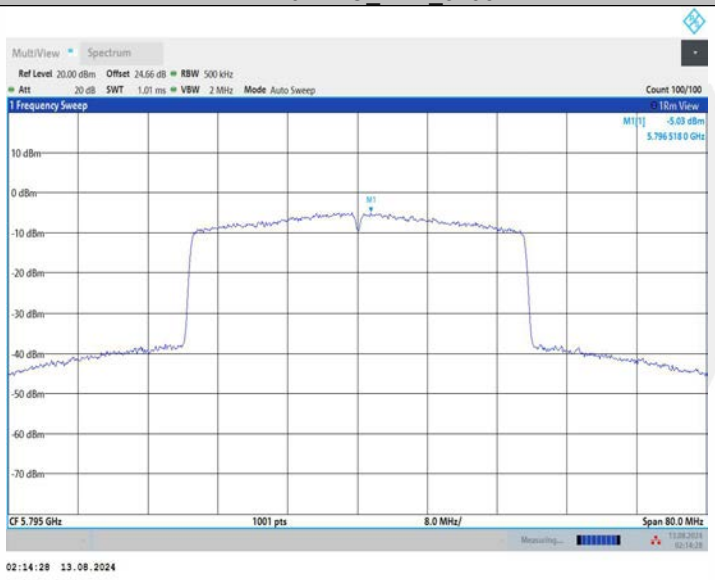

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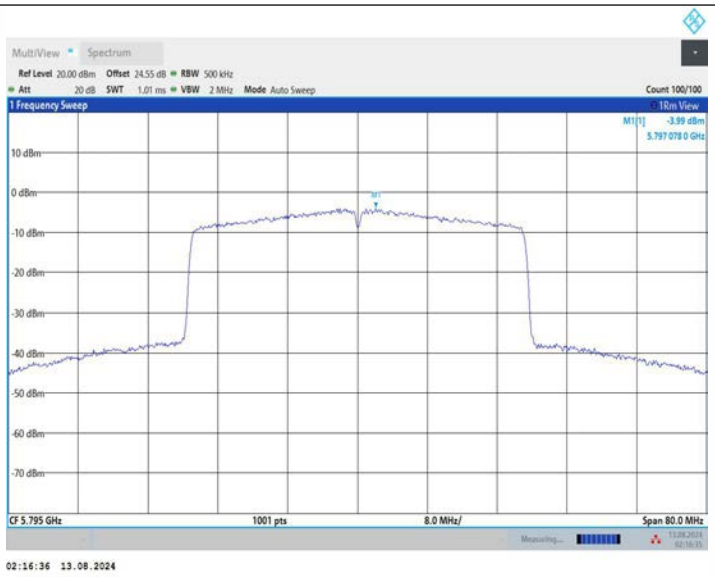

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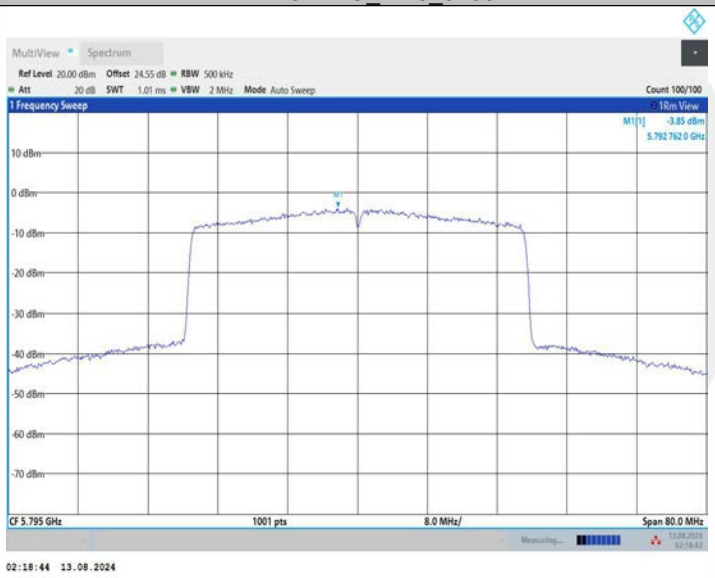

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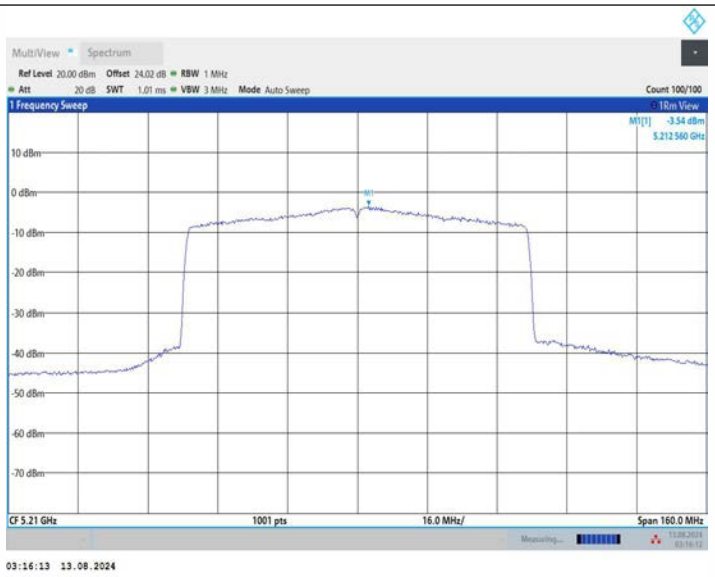

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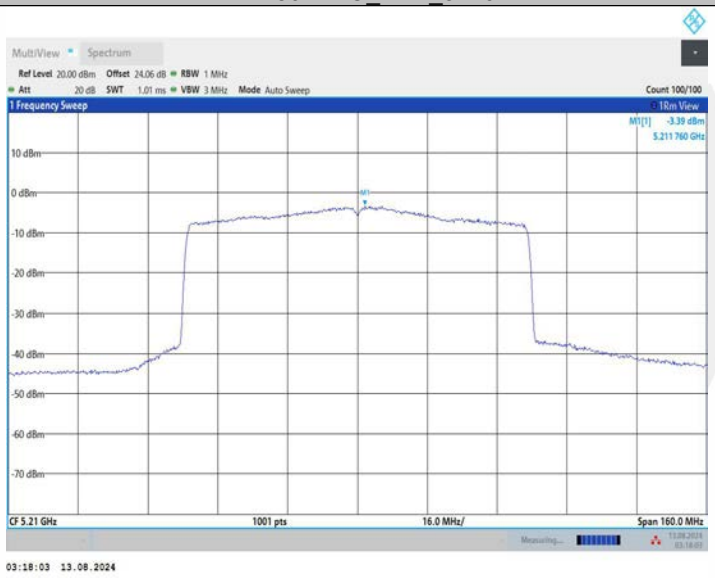

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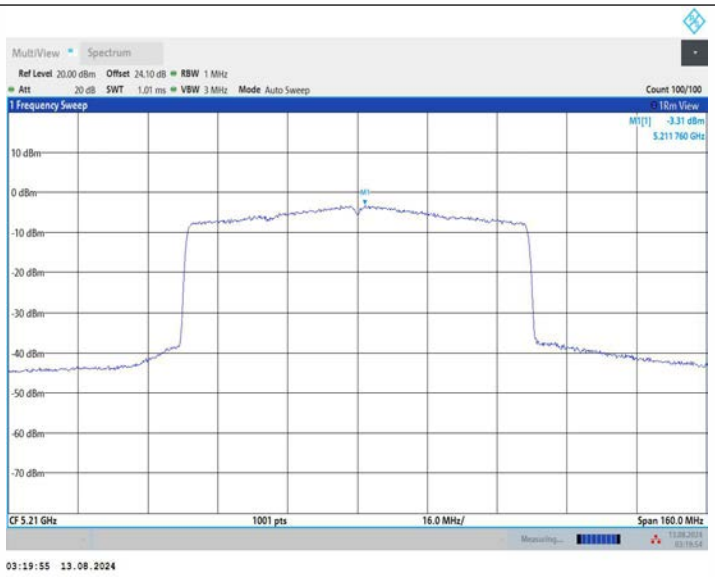

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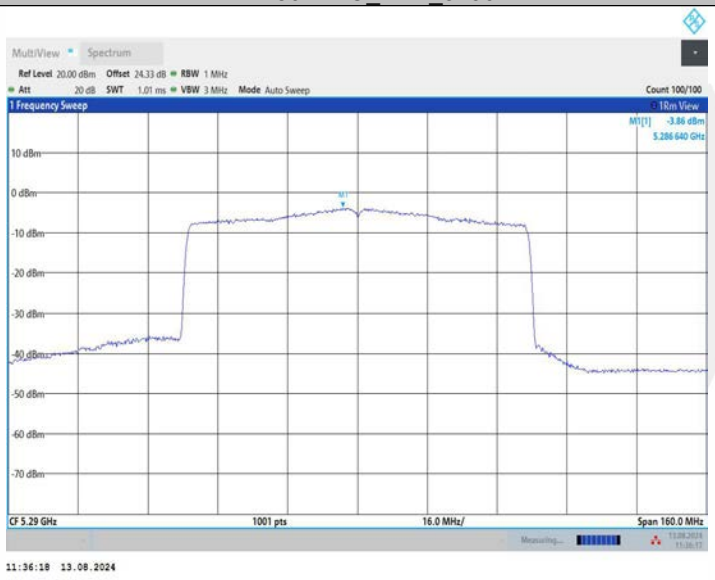

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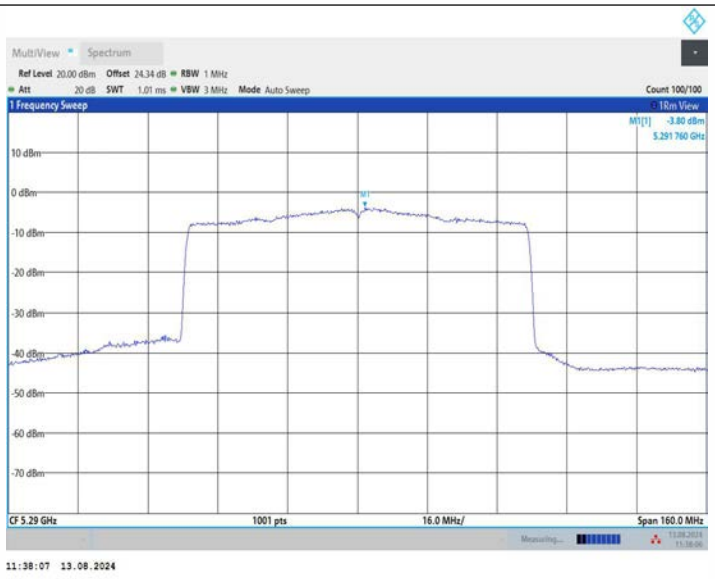

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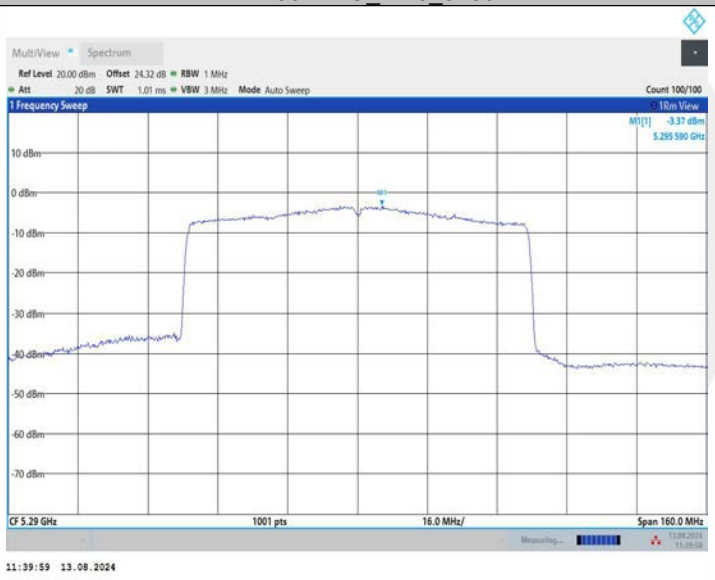

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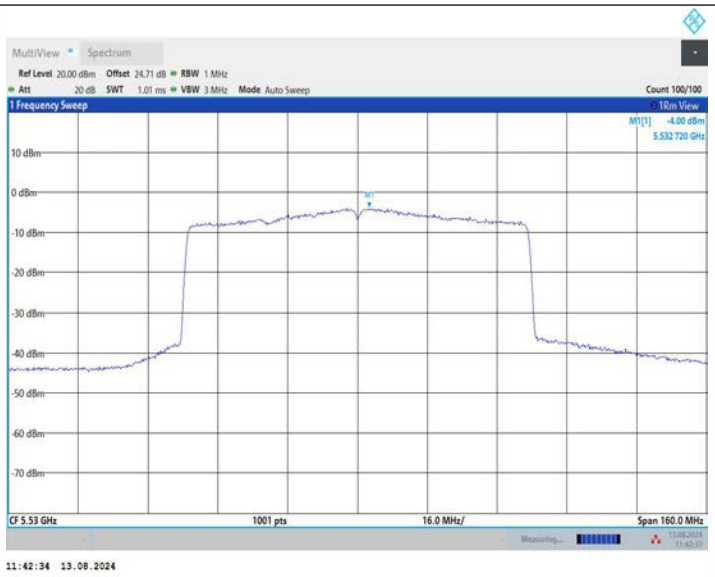

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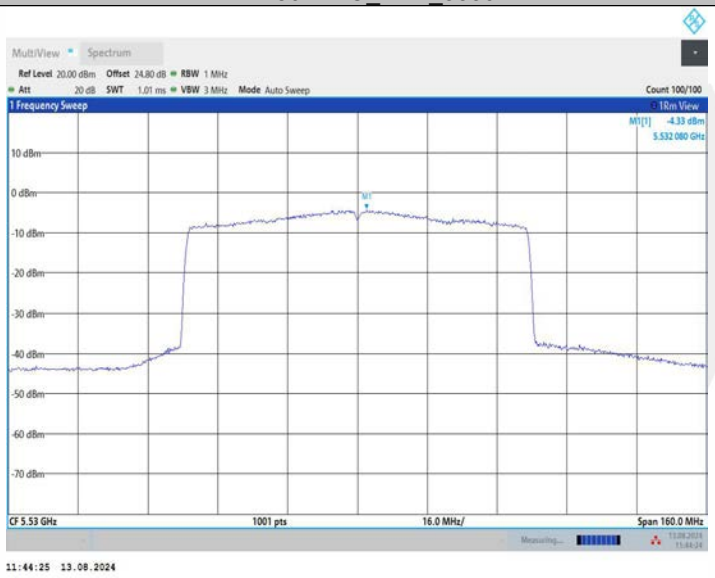

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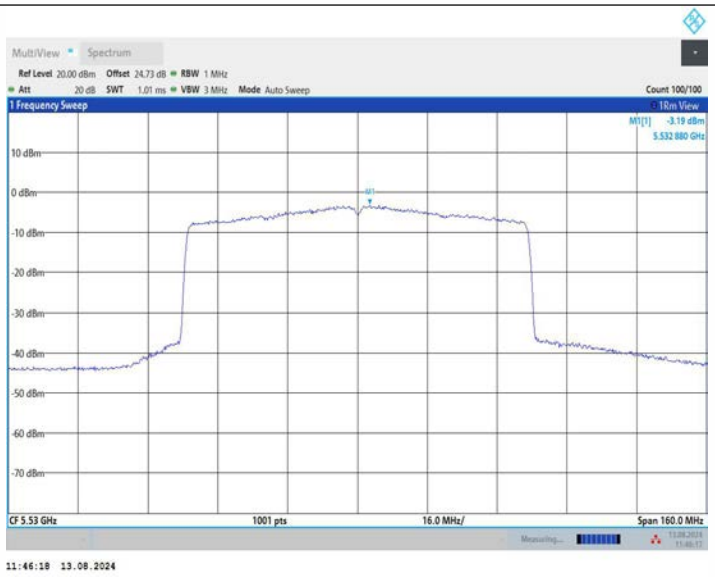

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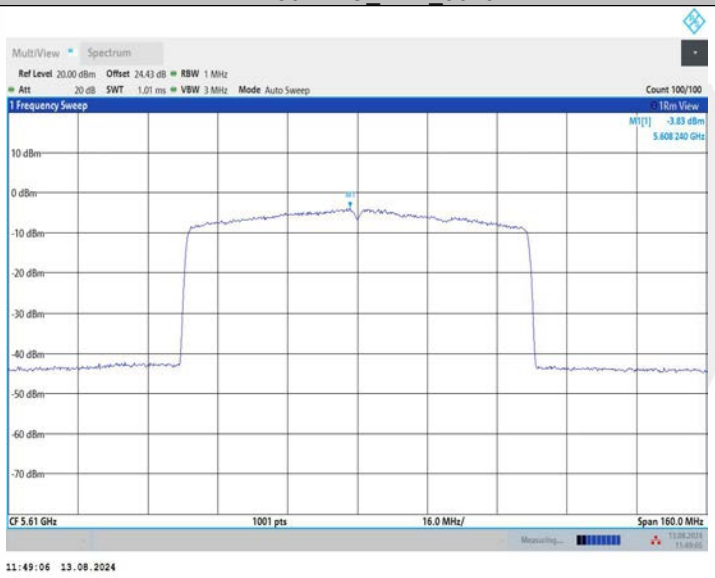
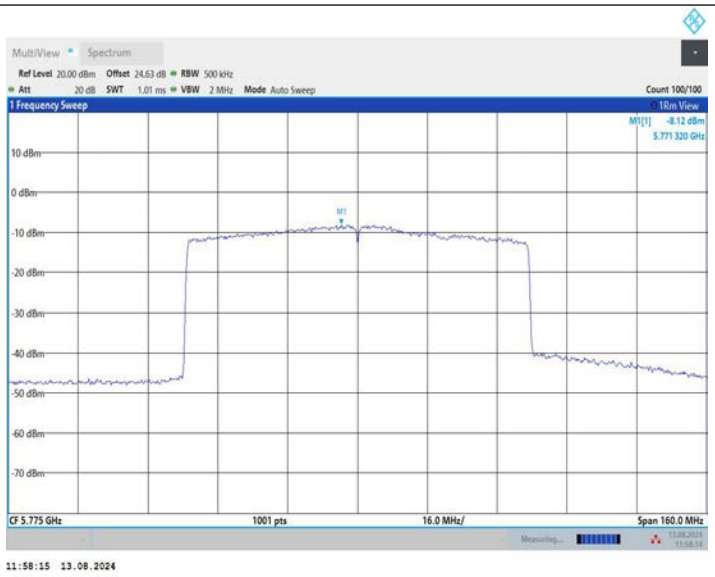


11BE80MIMO_Ant2_5610

11BE80MIMO_Ant3_5610

11BE80MIMO_Ant1_5775



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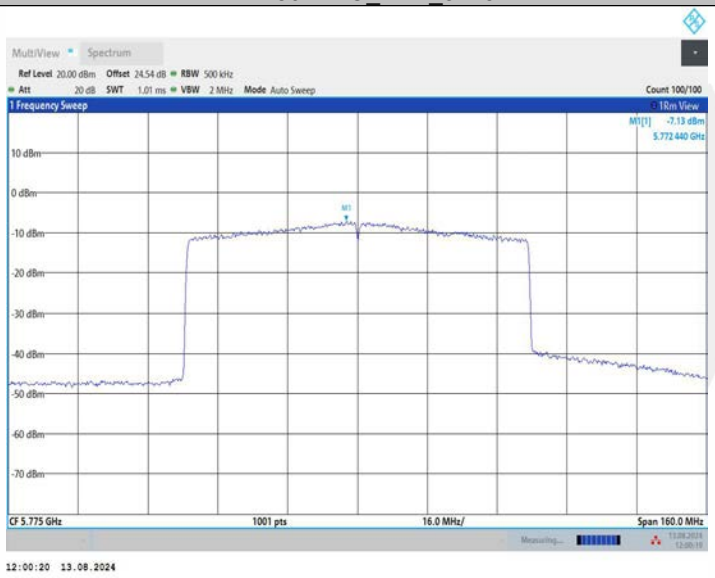

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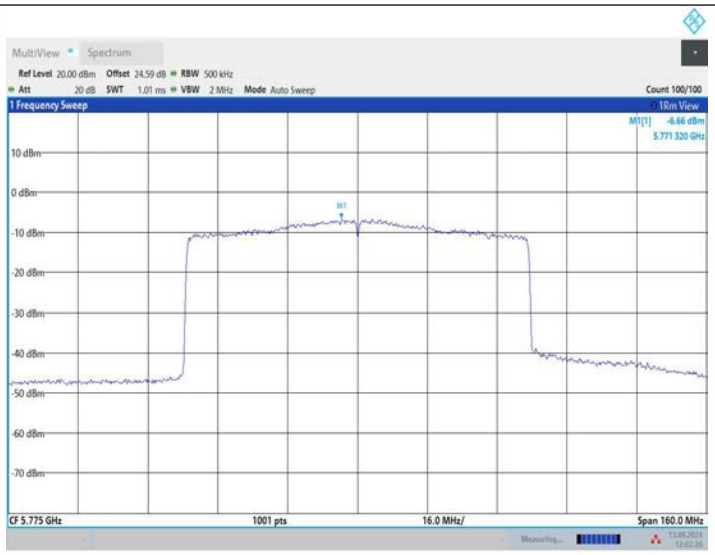
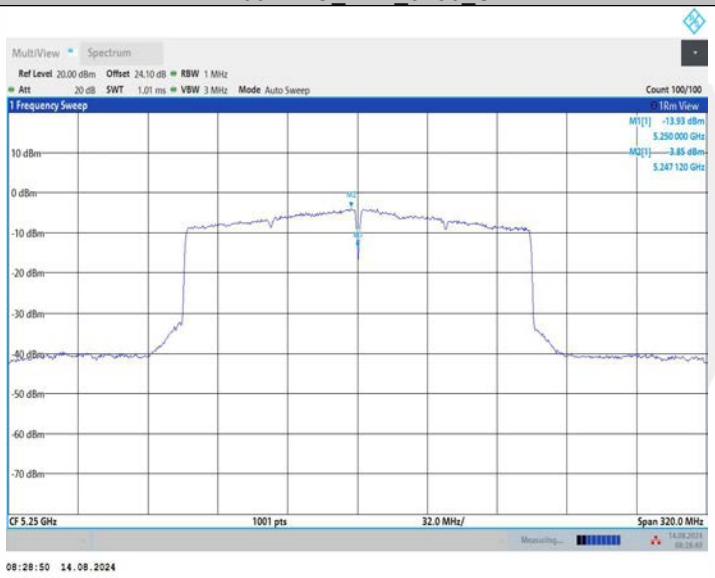


11BE160MIMO_Ant1_5250_UNII-1



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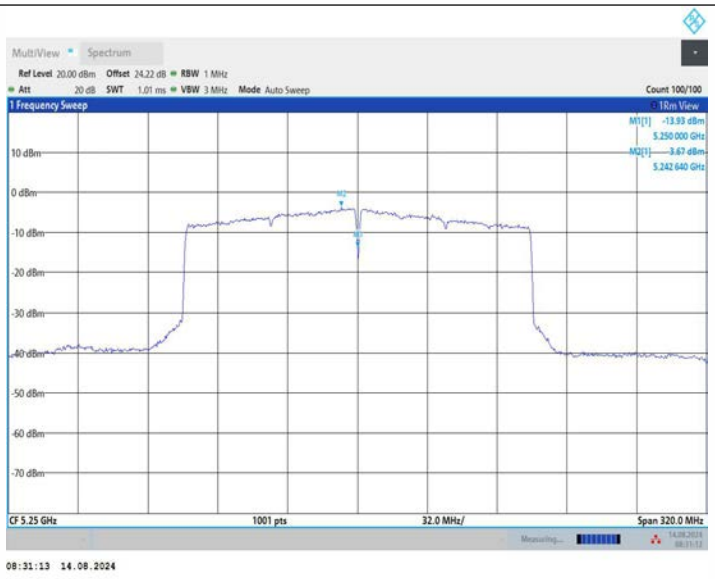

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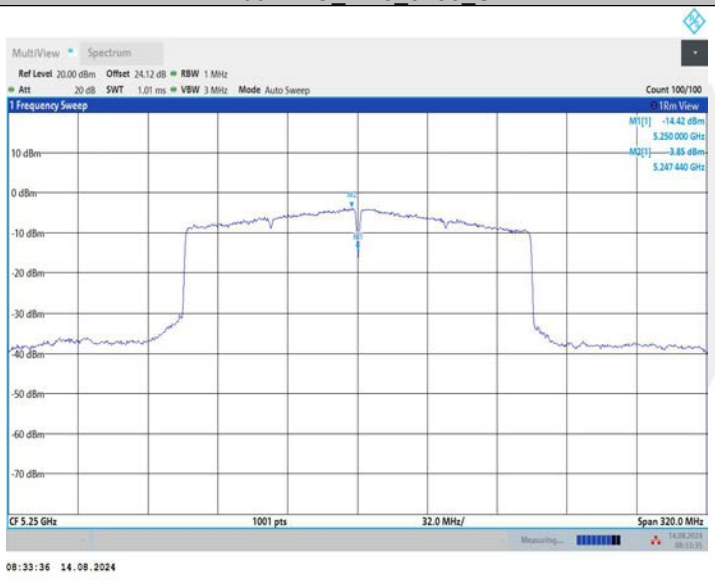

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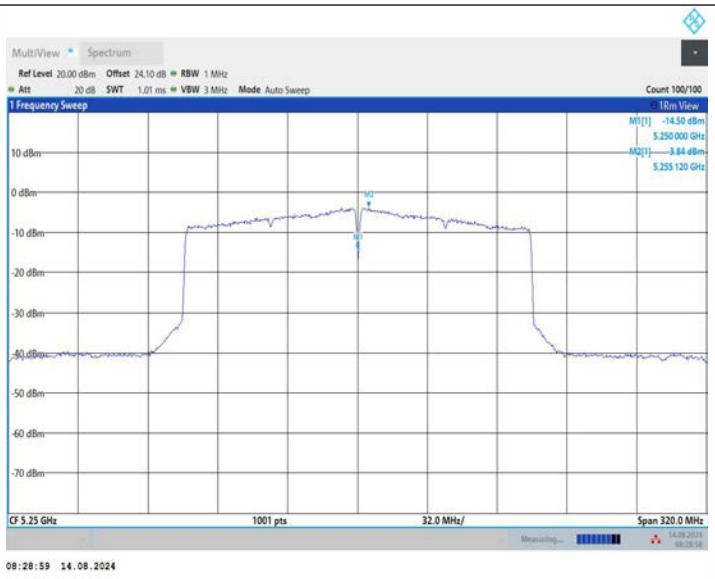

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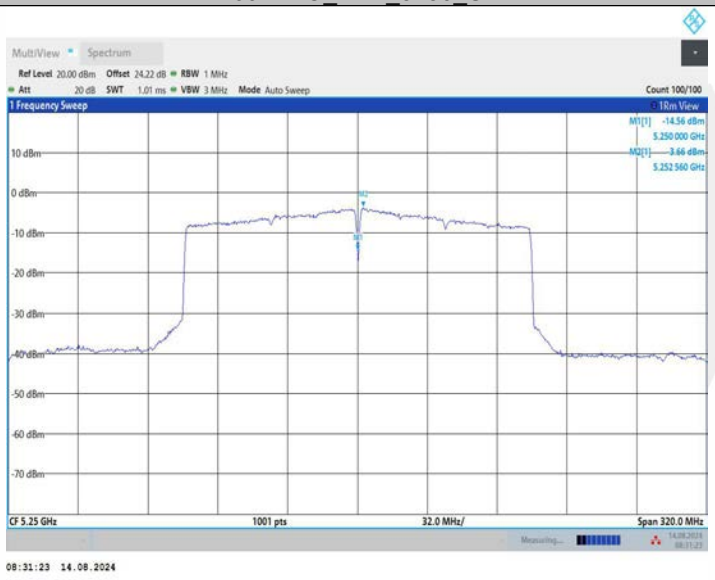

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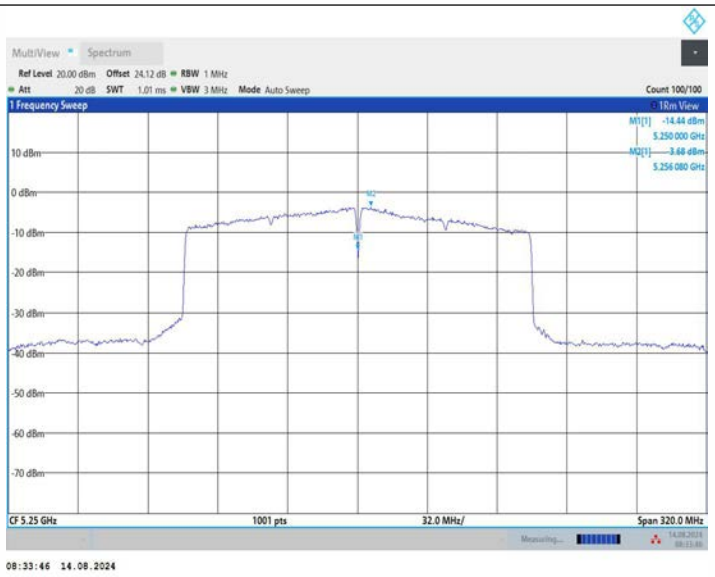

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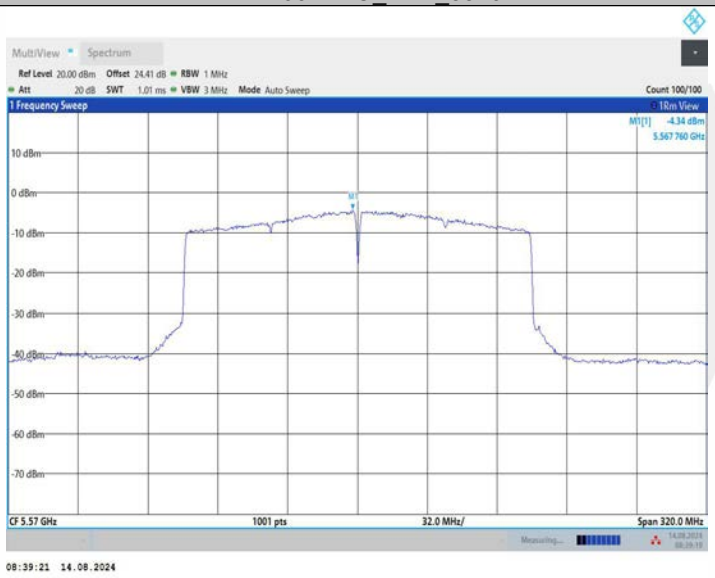

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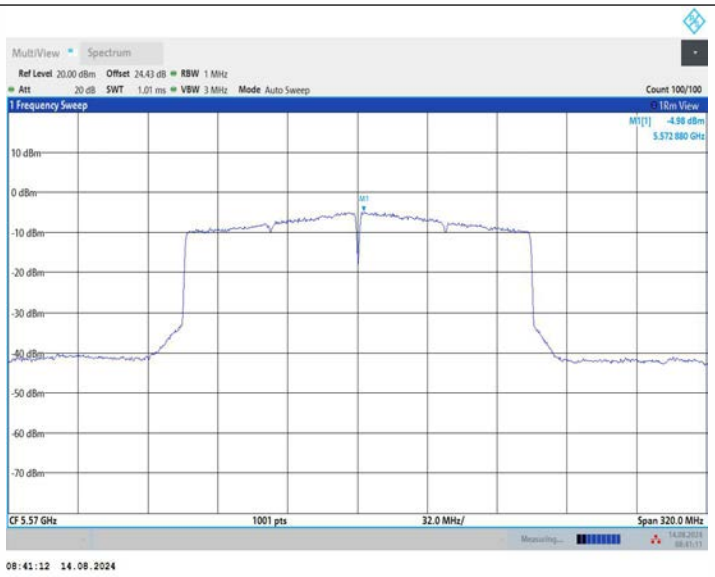

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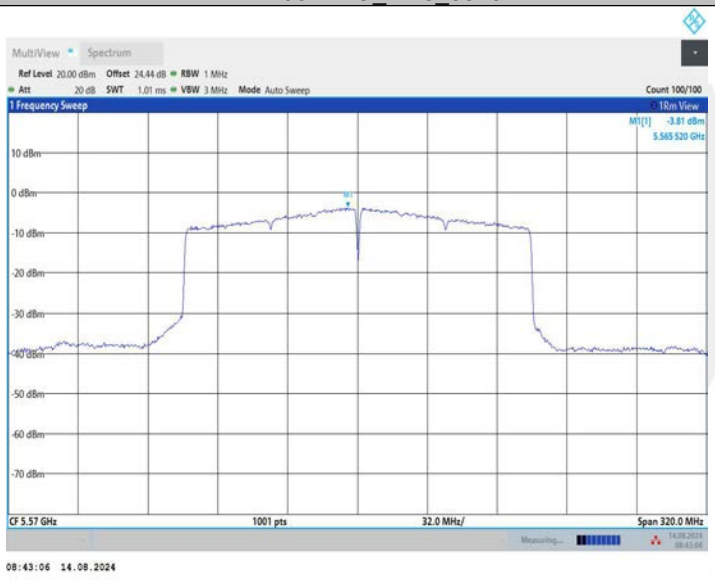


8.4 UNDESIRABLE RADIATED SPURIOUS EMISSION

8.4.1 Applicable Standard

According to FCC Part 15.407 (b)
According to 789033 D02 Section II(G)

8.4.2 Conformance Limit

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

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	2400/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

The provisions of §15.205 apply to intentional radiators operating under this section,15.205 Restricted bands of operation

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			

Remark: 1. Emission level in dBuV/m=20 log (uV/m)
2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

8.4.3 Test Configuration

Test according to clause 6.2 radio frequency test setup 2.

8.4.4 Test Procedure

■ Unwanted Emissions Measurements below 1000 MHz

Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.
The EUT was placed on a turn table which is 0.8m above ground plane.
And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
Repeat above procedures until all frequency measured was complete.
We use software control the EUT, Let EUT hopping on and transmit with highest power, All the modes have been tested and the worst result was reported.
Use the following spectrum analyzer settings:
Set RBW=120kHz for f < 1 GHz(30MHz to 1GHz), 200Hz for f<150KHz(9KHz to 150KHz), 9KHz for <30MHz (150KHz to 30KHz).
Set the VBW > RBW.
Detector = Peak.
Trace mode = max hold.
Follow the guidelines in ANSI C63.10-2013 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 specified in Section 15.35(b). Submit this data.
Repeat above procedures until all frequency measured was complete.

■ Unwanted Maximum peak Emissions Measurements above 1000 MHz

Maximum emission levels are measured by setting the analyzer as follows:
RBW = 1 MHz.
VBW ≥ 3 MHz.
Detector = Peak.
Sweep time = auto.
Trace mode = max hold.
Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

■ Unwanted Average Emissions Measurements above 1000 MHz

Method VB (Averaging using reduced video bandwidth): Alternative method.
RBW = 1 MHz.
Video bandwidth. • If the EUT is configured to transmit with duty cycle ≥ 98 percent, set VBW ≤ RBW/100 (i.e., 10 kHz) but not less than 10 Hz.
• If the EUT duty cycle is < 98 percent, set VBW ≥ 1/T, where T is defined in section II.B.1.a).
Video bandwidth mode or display mode • The instrument shall be set to ensure that video filtering is applied in the power domain. Typically, this requires setting the detector mode to RMS and setting the Average-VBW Type to Power (RMS).
• As an alternative, the analyzer may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some analyzers require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode.
Detector = Peak.

Sweep time = auto.
Trace mode = max hold.
Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of 1/x, where x is the duty cycle. For example, use at least 200 traces if the duty cycle is 25 percent. (If a specific emission is demonstrated to be continuous—i.e., 100 percent duty cycle—rather than turning on and off with the transmit cycle, at least 50 traces shall be averaged).

■ Band edge measurements.

Unwanted band-edge emissions may be measured using either of the special band-edge measurement techniques (the marker-delta or integration methods) described below. Note that the marker-delta method is primarily a radiated measurement technique that requires the 99% occupied bandwidth edge to be within 2 MHz of the authorized band edge, whereas the integration method can be used in either a radiated or conducted measurement without any special requirement with regards to the displacement of the unwanted emission(s) relative to the authorized bandwidth.
Marker-Delta Method.
The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

8.4.5 Test Results

Temperature :	25℃	ATM Pressure::	1011 mbar
Humidity :	60 %	Test Engineer:	CZF

■ ☒For Undesirable radiated Spurious Emission in U-NII – 1
☒Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
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 ANT3 and MIMO as below:

ANT3:

Test mode: 802.11n(20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7990.4952	V	62.34	-32.89	-27	5.89
11094.5473	V	66.45	-28.78	-27	1.78
16231.1156	V	67.22	-28.01	-27	1.01
7981.9910	H	63.64	-31.59	-27	4.59
10575.7879	H	65.76	-29.47	-27	2.47
16273.6368	H	67.47	-27.76	-27	0.76

Test mode: 802.11n(20) Frequency(MHz): 5200

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8645.3227	V	64.89	-30.34	-27	3.34
11723.8619	V	67.44	-27.79	-27	0.79
17583.2916	V	67.46	-27.77	-27	0.77
8058.5293	H	62.74	-32.49	-27	5.49
9708.3542	H	65.16	-30.07	-27	3.07
17863.9320	H	67.42	-27.81	-27	0.81

Test mode: 802.11n(20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9011.0055	V	64.95	-30.28	-27	3.28
11205.1026	V	67.26	-27.97	-27	0.97
16630.8154	V	67.37	-27.86	-27	0.86
8687.8439	H	64.51	-30.72	-27	3.72
11511.2556	H	66.63	-28.60	-27	1.60
16350.1751	H	67.48	-27.75	-27	0.75

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7989.1052	V	62.21	-33.02	-27	6.02
11093.1573	V	66.29	-28.94	-27	1.94
16232.3956	V	67.19	-28.04	-27	1.04
7993.6810	H	63.56	-31.67	-27	4.67
10587.4779	H	65.55	-29.68	-27	2.68
16285.3268	H	67.31	-27.92	-27	0.92

Test mode: 802.11n(20) Frequency(MHz): 5200

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8643.9327	V	64.76	-30.47	-27	3.47
11722.4719	V	67.28	-27.95	-27	0.95
17584.5716	V	67.43	-27.80	-27	0.80
8070.2193	H	62.66	-32.57	-27	5.57
9720.0442	H	64.95	-30.28	-27	3.28
17875.6220	H	67.26	-27.97	-27	0.97

Test mode: 802.11n(20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9009.6155	V	64.82	-30.41	-27	3.41
11203.7126	V	67.1	-28.13	-27	1.13
16632.0954	V	67.34	-27.89	-27	0.89
8699.5339	H	64.43	-30.80	-27	3.80
11522.9456	H	66.42	-28.81	-27	1.81
16361.8651	H	67.32	-27.91	-27	0.91

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

ANT3:

Test mode:	802.11n(20)	Frequency(MHz):	5180		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7990.4952	V	62.34	74.00	11.66	Peak
11094.5473	V	66.45	74.00	7.55	Peak
16231.1156	V	67.22	74.00	6.78	Peak
7990.4952	V	43.35	54.00	10.65	Avg
11094.5473	V	46.29	54.00	7.71	Avg
16231.1156	V	46.80	54.00	7.20	Avg
7981.991	H	63.64	74.00	10.36	Peak
10575.7879	H	65.76	74.00	8.24	Peak
16273.6368	H	67.47	74.00	6.53	Peak
7981.991	H	43.25	54.00	10.75	Avg
10575.7879	H	45.18	54.00	8.82	Avg
16273.6368	H	43.92	54.00	10.08	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5200		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8645.3227	V	64.89	74.00	9.11	Peak
11723.8619	V	67.44	74.00	6.56	Peak
17583.2916	V	67.46	74.00	6.54	Peak
8645.3227	V	45.37	54.00	8.63	Avg
11723.8619	V	45.96	54.00	8.04	Avg
17583.2916	V	47.44	54.00	6.56	Avg
8058.5293	H	62.74	74.00	11.26	Peak
9708.3542	H	65.16	74.00	8.84	Peak
17863.932	H	67.42	74.00	6.58	Peak
8058.5293	H	43.31	54.00	10.69	Avg
9708.3542	H	43.16	54.00	10.84	Avg
17863.932	H	47.03	54.00	6.97	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9011.0055	V	64.95	74.00	9.05	Peak
11205.1026	V	67.26	74.00	6.74	Peak
16630.8154	V	67.37	74.00	6.63	Peak
9011.0055	V	47.76	54.00	6.24	Avg
11205.1026	V	46.94	54.00	7.06	Avg
16630.8154	V	43.71	54.00	10.29	Avg
8687.8439	H	64.51	74.00	9.49	Peak
11511.2556	H	66.63	74.00	7.37	Peak
16350.1751	H	67.48	74.00	6.52	Peak
8687.8439	H	46.70	54.00	7.30	Avg
11511.2556	H	46.86	54.00	7.14	Avg
16350.1751	H	44.12	54.00	9.88	Avg

MIMO:

Test mode:	802.11n(20)	Frequency(MHz):	5180		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7989.1052	V	62.21	74.00	11.79	Peak
11093.1573	V	66.29	74.00	7.71	Peak
16232.3956	V	67.19	74.00	6.81	Peak
7991.7752	V	43.33	54.00	10.67	Avg
11092.2973	V	46.03	54.00	7.97	Avg
16228.8656	V	46.61	54.00	7.39	Avg
7993.6810	H	63.56	74.00	10.44	Peak
10587.4779	H	65.55	74.00	8.45	Peak
16285.3268	H	67.31	74.00	6.69	Peak
7993.6810	H	43.11	54.00	10.89	Avg
10572.4779	H	45.00	54.00	9.00	Avg
16270.3268	H	43.79	54.00	10.21	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5200		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8643.9327	V	64.76	74.00	9.24	Peak
11722.4719	V	67.28	74.00	6.72	Peak
17584.5716	V	67.43	74.00	6.57	Peak
8646.6027	V	45.35	54.00	8.65	Avg
11721.6119	V	45.70	54.00	8.30	Avg
17581.0416	V	47.25	54.00	6.75	Avg
8070.2193	H	62.66	74.00	11.34	Peak
9720.0442	H	64.95	74.00	9.05	Peak
17875.6220	H	67.26	74.00	6.74	Peak
8070.2193	H	43.17	54.00	10.83	Avg
9705.0442	H	42.98	54.00	11.02	Avg
17860.6220	H	46.90	54.00	7.10	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9009.6155	V	64.82	74.00	9.18	Peak
11203.7126	V	67.10	74.00	6.90	Peak
16632.0954	V	67.34	74.00	6.66	Peak
9012.2855	V	47.74	54.00	6.26	Avg
11202.8526	V	46.68	54.00	7.32	Avg
16628.5654	V	43.52	54.00	10.48	Avg
8699.5339	H	64.43	74.00	9.57	Peak
11522.9456	H	66.42	74.00	7.58	Peak
16361.8651	H	67.32	74.00	6.68	Peak
8699.5339	H	46.56	54.00	7.44	Avg
11507.9456	H	46.68	54.00	7.32	Avg
16346.8651	H	43.99	54.00	10.01	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode:	802.11n(20)	Frequency(MHz):	5180		
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5119.21	V	55.53	-39.70	-27	Pass
5127.25	H	56.49	-38.74	-27	Pass

Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5352.04	V	56.26	-38.97	-27	Pass
5353.92	H	56.33	-38.90	-27	Pass

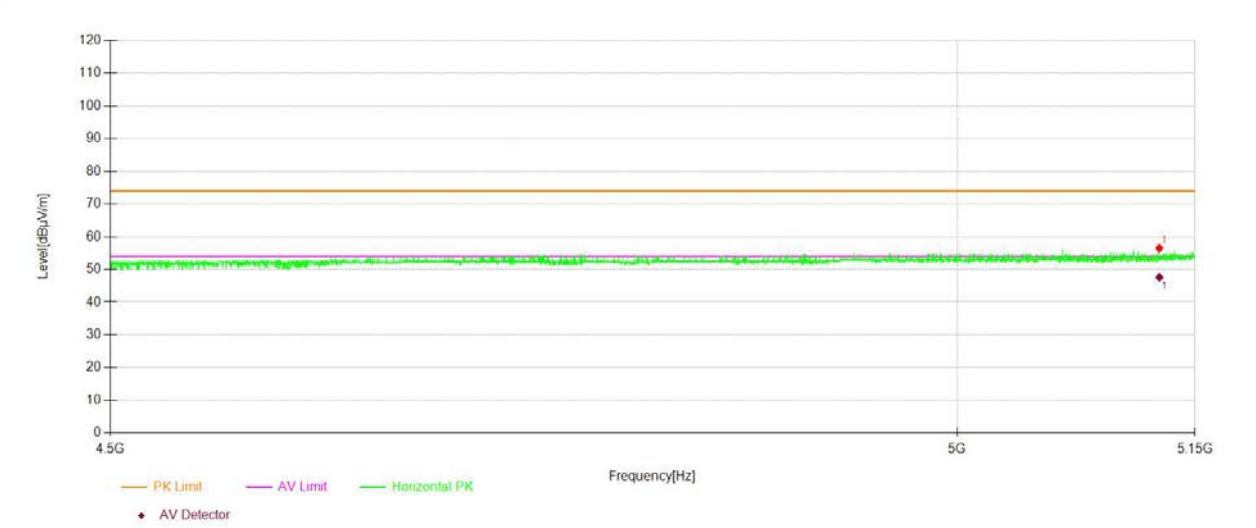
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode:	802.11n(20)	Frequency(MHz):	5180		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5119.206	V	55.53	74.00	18.47	Peak
5119.206	V	47.74	54.00	6.26	Avg
5127.250	H	56.49	74.00	17.51	Peak
5127.250	H	47.61	54.00	6.39	Avg

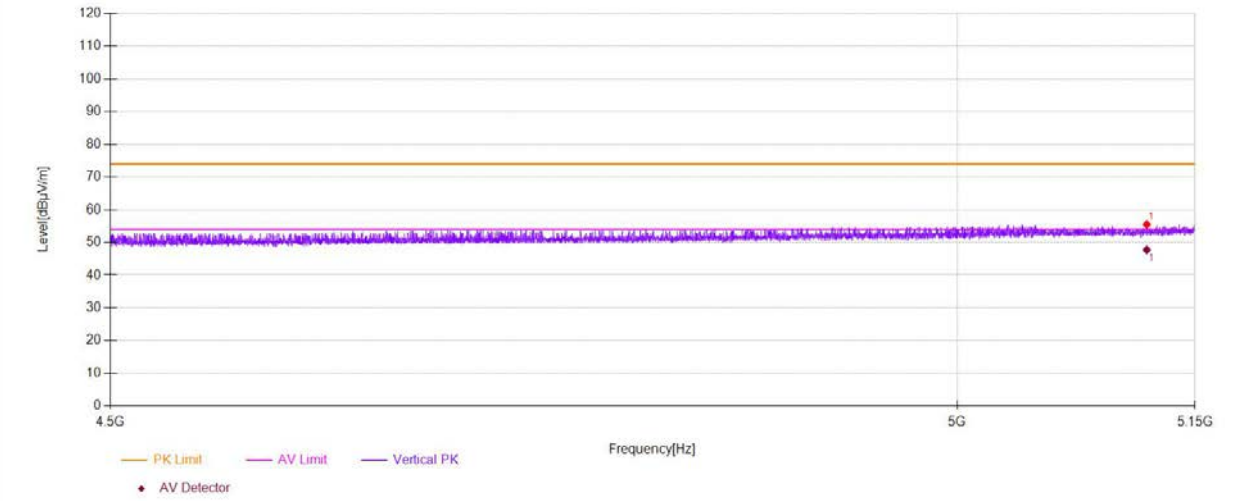
Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5352.035	V	56.26	74.00	17.74	Peak
5352.035	V	47.64	54.00	6.36	Avg
5353.918	H	56.33	74.00	17.67	Peak
5353.918	H	47.84	54.00	6.16	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

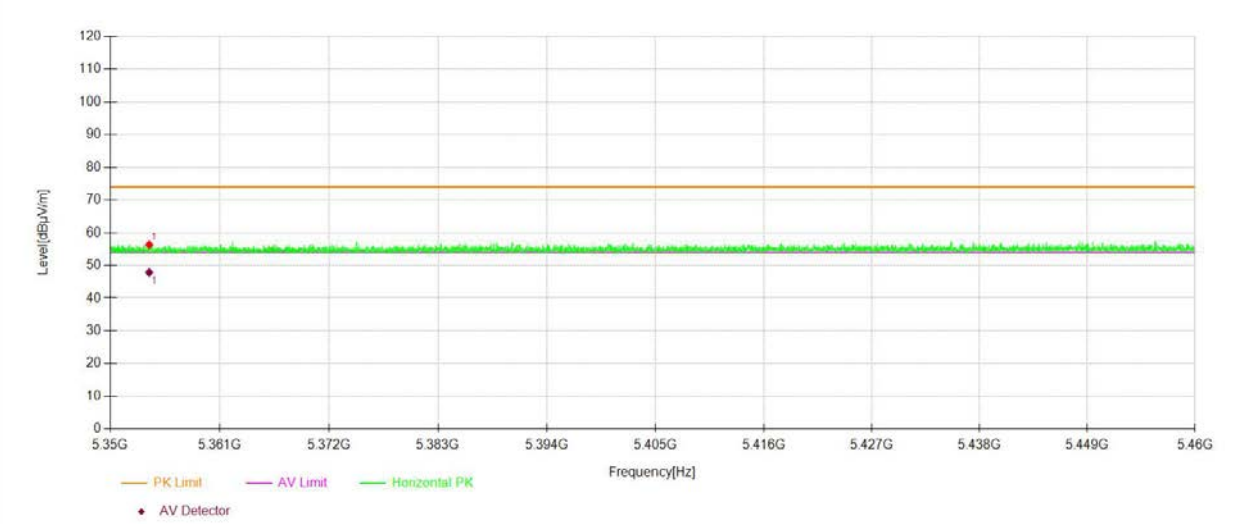
Test Model	U-NII - 1 Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol H



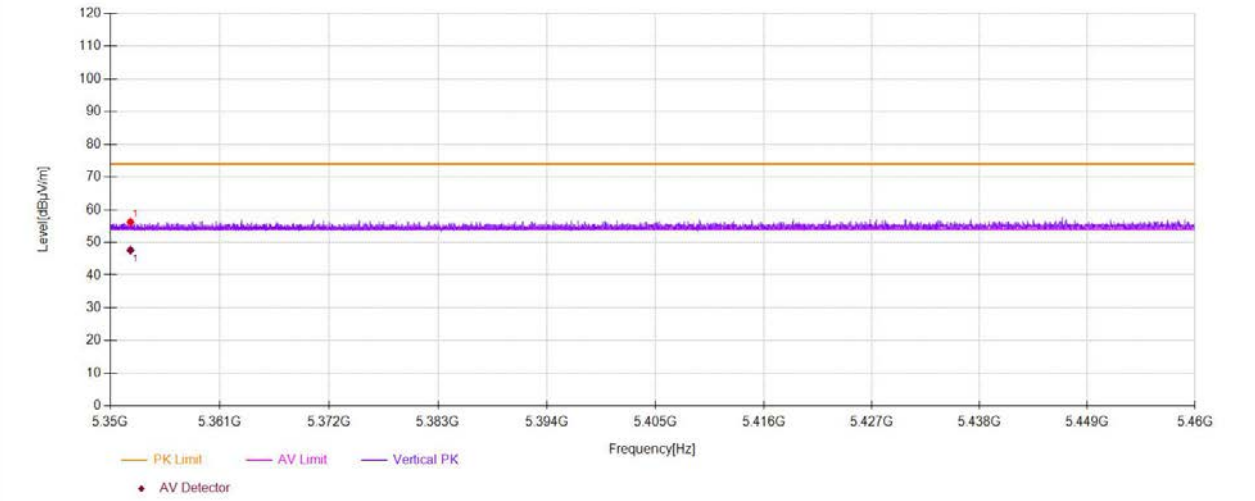
Test Model	U-NII - 1 Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol V



Test Model	U-NII - 1 Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)				
	☐ 802.11a		☒ 802.11n(HT20)		☐ 802.11n(HT40)
	☐ 5180	☐ 5200	☒ 5240	Ant.Pol	H



Test Model	U-NII - 1 Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)				
	☐ 802.11a		☒ 802.11n(HT20)		☐ 802.11n(HT40)
	☐ 5180	☐ 5200	☒ 5240	Ant.Pol	V



■ ☒For Undesirable radiated Spurious Emission in U-NII -2A
☒Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
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 ANT3 and MIMO as below:

ANT3:

Test mode: 802.11n(20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9682.8414	V	65.03	-30.20	-27	3.20
12387.1936	V	66.04	-29.19	-27	2.19
16894.4472	V	66.96	-28.27	-27	1.27
8662.3312	H	64.64	-30.59	-27	3.59
11196.5983	H	67.82	-27.41	-27	0.41
15593.2966	H	67.41	-27.82	-27	0.82

Test mode: 802.11n(20) Frequency(MHz): 5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8670.8354	V	64.53	-30.70	-27	3.70
12021.5108	V	66.41	-28.82	-27	1.82
17600.3002	V	67.52	-27.71	-27	0.71
8696.3482	H	64.51	-30.72	-27	3.72
11587.7939	H	65.65	-29.58	-27	2.58
17056.0280	H	67.37	-27.86	-27	0.86

Test mode: 802.11n(20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8704.8524	V	64.58	-30.65	-27	3.65
12633.8169	V	66.05	-29.18	-27	2.18
17438.7194	V	67.68	-27.55	-27	0.55
8662.3312	H	65.07	-30.16	-27	3.16
10881.9410	H	66.24	-28.99	-27	1.99
17991.4957	H	67.89	-27.34	-27	0.34

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9681.4514	V	64.9	-30.33	-27	3.33
12385.8036	V	65.88	-29.35	-27	2.35
16895.7272	V	66.93	-28.30	-27	1.30
8674.0212	H	64.56	-30.67	-27	3.67
11208.2883	H	67.61	-27.62	-27	0.62
15604.9866	H	67.25	-27.98	-27	0.98

Test mode: 802.11n(20) Frequency(MHz): 5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8669.4454	V	64.4	-30.83	-27	3.83
12020.1208	V	66.25	-28.98	-27	1.98
17601.5802	V	67.49	-27.74	-27	0.74
8708.0382	H	64.43	-30.80	-27	3.80
11599.4839	H	65.44	-29.79	-27	2.79
17067.7180	H	67.21	-28.02	-27	1.02

Test mode: 802.11n(20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8703.4624	V	64.45	-30.78	-27	3.78
12632.4269	V	65.89	-29.34	-27	2.34
17439.9994	V	67.65	-27.58	-27	0.58
8674.0212	H	64.99	-30.24	-27	3.24
10893.6310	H	66.03	-29.20	-27	2.20
18003.1857	H	67.73	-27.50	-27	0.50

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

ANT2:

Test mode:	802.11n(20)	Frequency(MHz):	5260		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9682.8414	V	65.03	74.00	8.97	Peak
12387.1936	V	66.04	74.00	7.96	Peak
16894.4472	V	66.96	74.00	7.04	Peak
9682.8414	V	47.28	54.00	6.72	Avg
12387.1936	V	47.17	54.00	6.83	Avg
16894.4472	V	44.75	54.00	9.25	Avg
8662.3312	H	64.64	74.00	9.36	Peak
11196.5983	H	67.82	74.00	6.18	Peak
15593.2966	H	67.41	74.00	6.59	Peak
8662.3312	H	46.36	54.00	7.64	Avg
11196.5983	H	46.84	54.00	7.16	Avg
15593.2966	H	42.27	54.00	11.73	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5280		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8670.8354	V	64.53	74.00	9.47	Peak
12021.5108	V	66.41	74.00	7.59	Peak
17600.3002	V	67.52	74.00	6.48	Peak
8670.8354	V	46.59	54.00	7.41	Avg
12021.5108	V	45.58	54.00	8.42	Avg
17600.3002	V	47.21	54.00	6.79	Avg
8696.3482	H	64.51	74.00	9.49	Peak
11587.7939	H	65.65	74.00	8.35	Peak
17056.028	H	67.37	74.00	6.63	Peak
8696.3482	H	47.14	54.00	6.86	Avg
11587.7939	H	45.80	54.00	8.20	Avg
17056.028	H	45.83	54.00	8.17	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8704.8524	V	64.58	74.00	9.42	Peak
12633.8169	V	66.05	74.00	7.95	Peak
17438.7194	V	67.68	74.00	6.32	Peak
8704.8524	V	47.53	54.00	6.47	Avg
12633.8169	V	46.36	54.00	7.64	Avg
17438.7194	V	46.02	54.00	7.98	Avg
8662.3312	H	65.07	74.00	8.93	Peak
10881.941	H	66.24	74.00	7.76	Peak
17991.4957	H	67.89	74.00	6.11	Peak
8662.3312	H	45.76	54.00	8.24	Avg
10881.941	H	47.03	54.00	6.97	Avg
17991.4957	H	47.19	54.00	6.81	Avg

MIMO:

Test mode:	802.11n(20)	Frequency(MHz):	5260		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9681.4514	V	64.90	74.00	9.10	Peak
12385.8036	V	65.88	74.00	8.12	Peak
16895.7272	V	66.93	74.00	7.07	Peak
9684.1214	V	47.26	54.00	6.74	Avg
12384.9436	V	46.91	54.00	7.09	Avg
16892.1972	V	44.56	54.00	9.44	Avg
8674.0212	H	64.56	74.00	9.44	Peak
11208.2883	H	67.61	74.00	6.39	Peak
15604.9866	H	67.25	74.00	6.75	Peak
8674.0212	H	46.22	54.00	7.78	Avg
11193.2883	H	46.66	54.00	7.34	Avg
15589.9866	H	42.14	54.00	11.86	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5280		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8669.4454	V	64.40	74.00	9.60	Peak
12020.1208	V	66.25	74.00	7.75	Peak
17601.5802	V	67.49	74.00	6.51	Peak
8672.1154	V	46.57	54.00	7.43	Avg
12019.2608	V	45.32	54.00	8.68	Avg
17598.0502	V	47.02	54.00	6.98	Avg
8708.0382	H	64.43	74.00	9.57	Peak
11599.4839	H	65.44	74.00	8.56	Peak
17067.7180	H	67.21	74.00	6.79	Peak
8708.0382	H	47.00	54.00	7.00	Avg
11584.4839	H	45.62	54.00	8.38	Avg
17052.7180	H	45.70	54.00	8.30	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8703.4624	V	64.45	74.00	9.55	Peak
12632.4269	V	65.89	74.00	8.11	Peak
17439.9994	V	67.65	74.00	6.35	Peak
8706.1324	V	47.51	54.00	6.49	Avg
12631.5669	V	46.10	54.00	7.90	Avg
17436.4694	V	45.83	54.00	8.17	Avg
8674.0212	H	64.99	74.00	9.01	Peak
10893.6310	H	66.03	74.00	7.97	Peak
18003.1857	H	67.73	74.00	6.27	Peak
8674.0212	H	45.62	54.00	8.38	Avg
10878.6310	H	46.85	54.00	7.15	Avg
17988.1857	H	47.06	54.00	6.94	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode:	802.11n(20)	Frequency(MHz):	5260		
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5127.66	V	65.35	-29.88	-27	Pass
5107.10	H	65.58	-29.65	-27	Pass

Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5352.17	V	66.12	-29.11	-27	Pass
5354.58	H	66.87	-28.36	-27	Pass

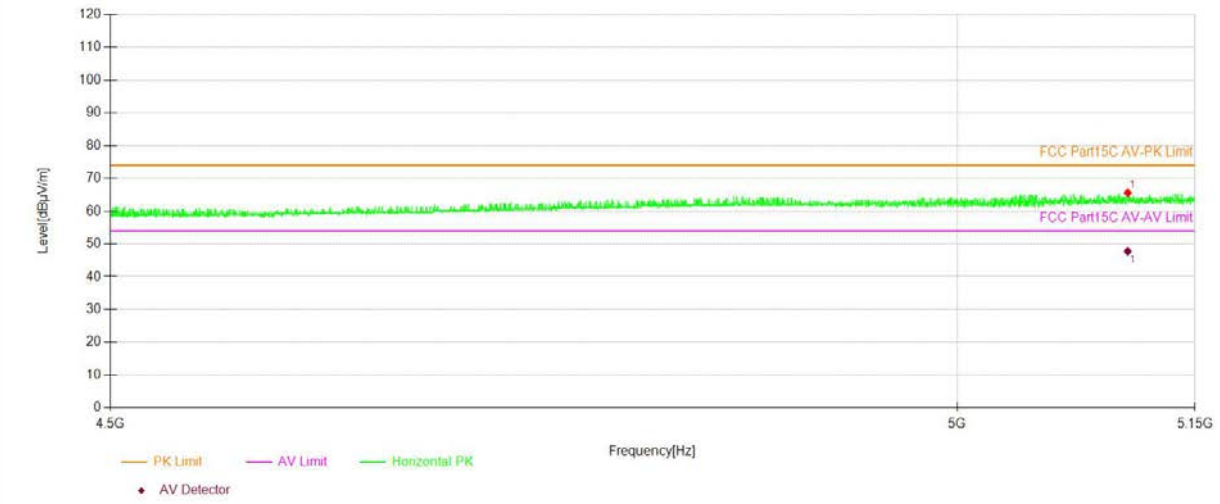
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode:	802.11n(20)	Frequency(MHz):	5260		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5127.656	V	65.35	74.00	8.65	Peak
5127.656	V	47.35	54.00	6.65	Avg
5107.100	H	65.58	74.00	8.42	Peak
5107.100	H	47.74	54.00	6.26	Avg

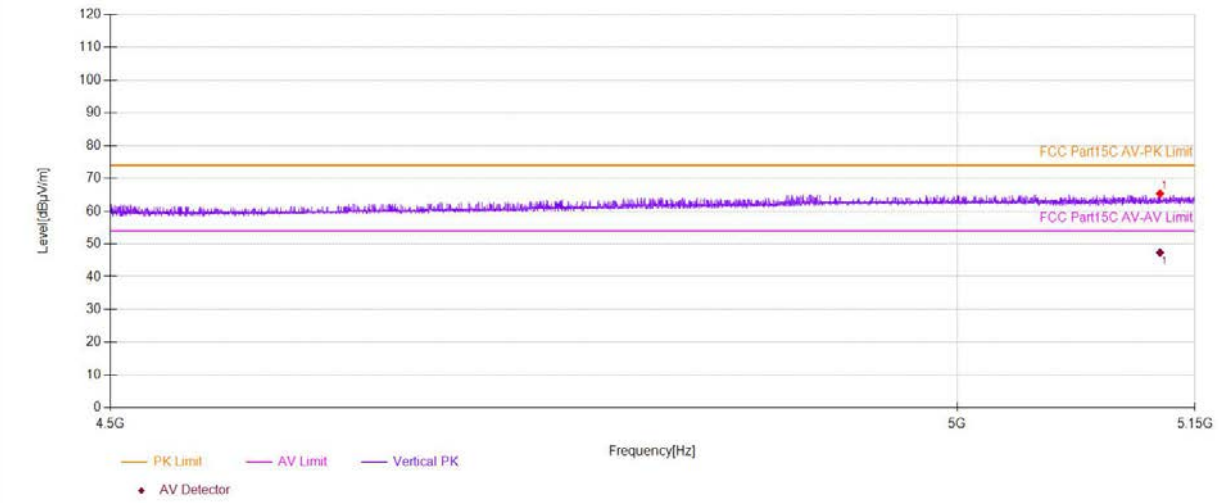
Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5352.172	V	66.12	74.00	7.88	Peak
5352.172	V	47.66	54.00	6.34	Avg
5354.578	H	66.87	74.00	7.13	Peak
5354.578	H	47.64	54.00	6.36	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

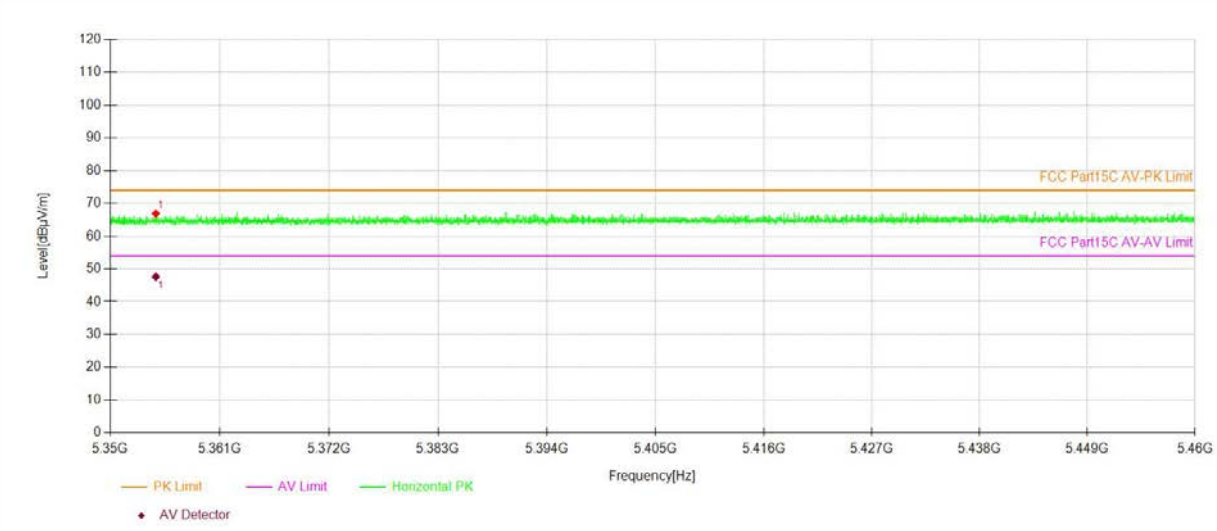
Test Model	U-NII -2A Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20) ☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol H



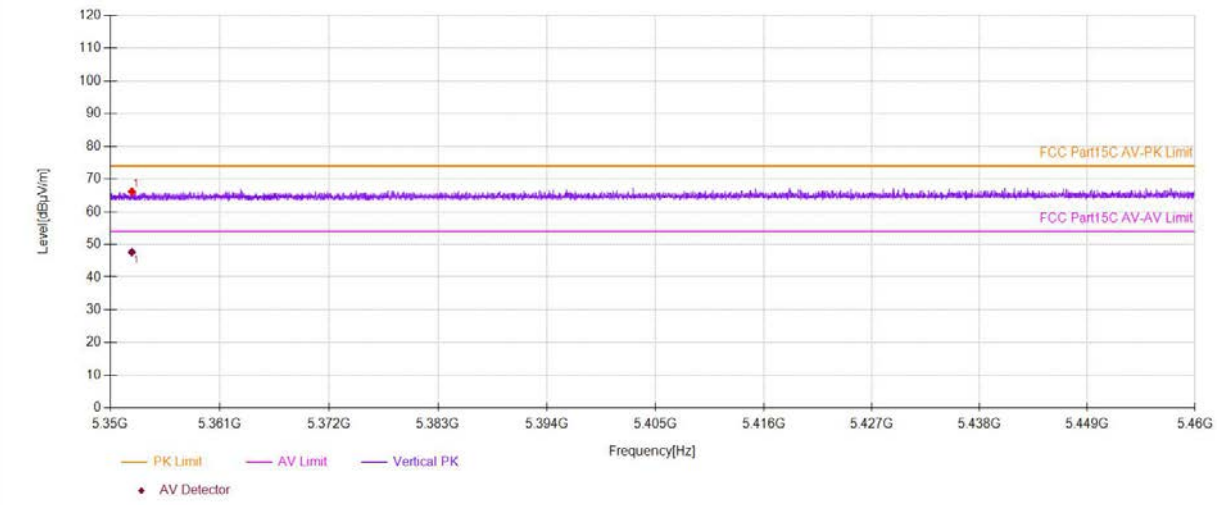
Test Model	U-NII -2A Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20) ☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol V



Test Model	U-NII -2A Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
	☐802.11a ☒802.11n(HT20) ☐802.11 ac (VHT20)
	☐5260 ☐5300 ☒5320 Ant.Pol H



Test Model	U-NII -2A Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
	☐802.11a ☒802.11n(HT20) ☐802.11 ac (VHT20)
	☐5260 ☐5300 ☒5320 Ant.Pol V



■ ☒For Undesirable radiated Spurious Emission in U-NII -2C
☒Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
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 ANT3 and MIMO as below:

ANT3:

Test mode: 802.11n(20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9002.5013	V	64.37	-30.86	-27	3.86
11230.6153	V	67.67	-27.56	-27	0.56
17336.6683	V	67.61	-27.62	-27	0.62
8687.8439	H	64.72	-30.51	-27	3.51
10694.8474	H	66.38	-28.85	-27	1.85
17676.8384	H	67.78	-27.45	-27	0.45

Test mode: 802.11n(20) Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8687.8439	V	64.5	-30.73	-27	3.73
11205.1026	V	67.57	-27.66	-27	0.66
15584.7924	V	67.6	-27.63	-27	0.63
8704.8524	H	64.16	-31.07	-27	4.07
12293.6468	H	65.64	-29.59	-27	2.59
17753.3767	H	66.77	-28.46	-27	1.46

Test mode: 802.11n(20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8696.3482	V	64.23	-31.00	-27	4.00
9895.4477	V	66.63	-28.60	-27	1.60
15185.0925	V	67.51	-27.72	-27	0.72
8968.4842	H	64.7	-30.53	-27	3.53
11876.9385	H	66.12	-29.11	-27	2.11
17073.0365	H	67.15	-28.08	-27	1.08

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9001.1113	V	64.24	-30.99	-27	3.99
11229.2253	V	67.51	-27.72	-27	0.72
17337.9483	V	67.58	-27.65	-27	0.65
8699.5339	H	64.64	-30.59	-27	3.59
10706.5374	H	66.17	-29.06	-27	2.06
17688.5284	H	67.62	-27.61	-27	0.61

Test mode: 802.11n(20) Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8686.4539	V	64.37	-30.86	-27	3.86
11203.7126	V	67.41	-27.82	-27	0.82
15586.0724	V	67.57	-27.66	-27	0.66
8716.5424	H	64.08	-31.15	-27	4.15
12305.3368	H	65.43	-29.80	-27	2.80
17765.0667	H	66.61	-28.62	-27	1.62

Test mode: 802.11n(20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8694.9582	V	64.1	-31.13	-27	4.13
9894.0577	V	66.47	-28.76	-27	1.76
15186.3725	V	67.48	-27.75	-27	0.75
8980.1742	H	64.62	-30.61	-27	3.61
11888.6285	H	65.91	-29.32	-27	2.32
17084.7265	H	66.99	-28.24	-27	1.24

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

ANT3:

Test mode:	802.11n(20)	Frequency(MHz):	5500		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9002.5013	V	64.37	74.00	9.63	Peak
11230.6153	V	67.67	74.00	6.33	Peak
17336.6683	V	67.61	74.00	6.39	Peak
9002.5013	V	47.84	54.00	6.16	Avg
11230.6153	V	46.78	54.00	7.22	Avg
17336.6683	V	45.05	54.00	8.95	Avg
8687.8439	H	64.72	74.00	9.28	Peak
10694.8474	H	66.38	74.00	7.62	Peak
17676.8384	H	67.78	74.00	6.22	Peak
8687.8439	H	46.88	54.00	7.12	Avg
10694.8474	H	47.84	54.00	6.16	Avg
17676.8384	H	47.67	54.00	6.33	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5580		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8687.8439	V	64.50	74.00	9.50	Peak
11205.1026	V	67.57	74.00	6.43	Peak
15584.7924	V	67.60	74.00	6.40	Peak
8687.8439	V	46.68	54.00	7.32	Avg
11205.1026	V	46.87	54.00	7.13	Avg
15584.7924	V	43.07	54.00	10.93	Avg
8704.8524	H	64.16	74.00	9.84	Peak
12293.6468	H	65.64	74.00	8.36	Peak
17753.3767	H	66.77	74.00	7.23	Peak
8704.8524	H	47.53	54.00	6.47	Avg
12293.6468	H	46.71	54.00	7.29	Avg
17753.3767	H	47.46	54.00	6.54	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5700		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8696.3482	V	64.23	74.00	9.77	Peak
9895.4477	V	66.63	74.00	7.37	Peak
15185.0925	V	67.51	74.00	6.49	Peak
8696.3482	V	47.15	54.00	6.85	Avg
9895.4477	V	44.72	54.00	9.28	Avg
15185.0925	V	43.80	54.00	10.20	Avg
8968.4842	H	64.70	74.00	9.30	Peak
11876.9385	H	66.12	74.00	7.88	Peak
17073.0365	H	67.15	74.00	6.85	Peak
8968.4842	H	47.58	54.00	6.42	Avg
11876.9385	H	46.34	54.00	7.66	Avg
17073.0365	H	45.96	54.00	8.04	Avg

MIMO:

Test mode:	802.11n(20)	Frequency(MHz):	5500		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9001.1113	V	64.24	74.00	9.76	Peak
11229.2253	V	67.51	74.00	6.49	Peak
17337.9483	V	67.58	74.00	6.42	Peak
9003.7813	V	47.82	54.00	6.18	Avg
11228.3653	V	46.52	54.00	7.48	Avg
17334.4183	V	44.86	54.00	9.14	Avg
8699.5339	H	64.64	74.00	9.36	Peak
10706.5374	H	66.17	74.00	7.83	Peak
17688.5284	H	67.62	74.00	6.38	Peak
8699.5339	H	46.74	54.00	7.26	Avg
10691.5374	H	47.66	54.00	6.34	Avg
17673.5284	H	47.54	54.00	6.46	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5580		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8686.4539	V	64.37	74.00	9.63	Peak
11203.7126	V	67.41	74.00	6.59	Peak
15586.0724	V	67.57	74.00	6.43	Peak
8689.1239	V	46.66	54.00	7.34	Avg
11202.8526	V	46.61	54.00	7.39	Avg
15582.5424	V	42.88	54.00	11.12	Avg
8716.5424	H	64.08	74.00	9.92	Peak
12305.3368	H	65.43	74.00	8.57	Peak
17765.0667	H	66.61	74.00	7.39	Peak
8716.5424	H	47.39	54.00	6.61	Avg
12290.3368	H	46.53	54.00	7.47	Avg
17750.0667	H	47.33	54.00	6.67	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5700		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8694.9582	V	64.10	74.00	9.90	Peak
9894.0577	V	66.47	74.00	7.53	Peak
15186.3725	V	67.48	74.00	6.52	Peak
8697.6282	V	47.13	54.00	6.87	Avg
9893.1977	V	44.46	54.00	9.54	Avg
15182.8425	V	43.61	54.00	10.39	Avg
8980.1742	H	64.62	74.00	9.38	Peak
11888.6285	H	65.91	74.00	8.09	Peak
17084.7265	H	66.99	74.00	7.01	Peak
8980.1742	H	47.44	54.00	6.56	Avg
11873.6285	H	46.16	54.00	7.84	Avg
17069.7265	H	45.83	54.00	8.17	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode:	802.11n(20)	Frequency(MHz):	5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5468.06	V	57.33	-37.90	-27	Pass
5469.01	H	59.09	-36.14	-27	Pass

Test mode:	802.11n(20)	Frequency(MHz):	5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5726.16	V	57.46	-37.77	-27	Pass
5727.00	H	60.52	-34.71	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode:	802.11n(20)	Frequency(MHz):	5500

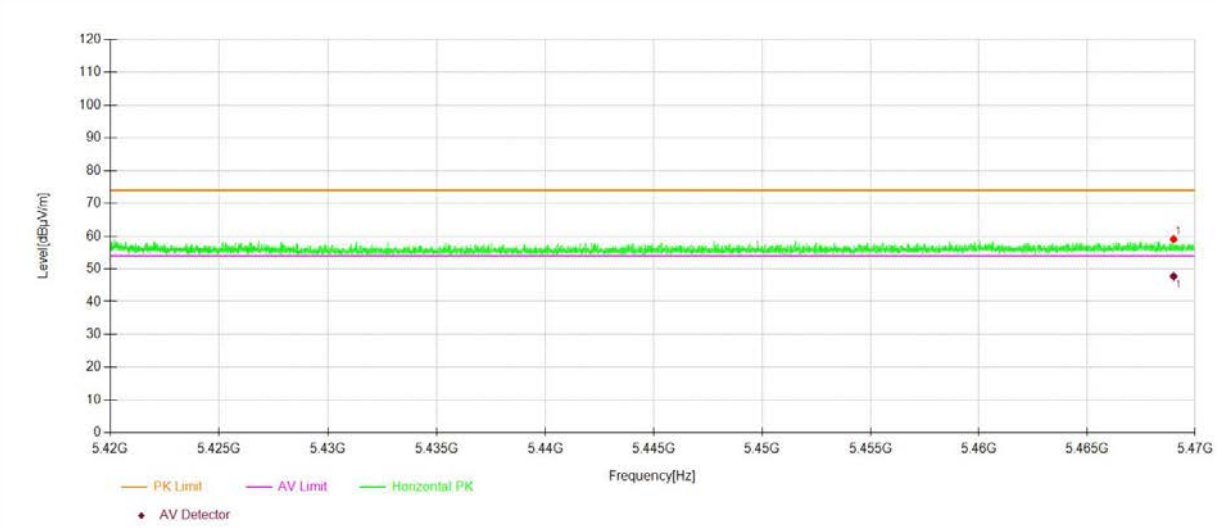
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5468.062	V	57.33	74.00	16.67	Peak
5468.062	V	46.93	54.00	7.07	Avg
5469.012	H	59.09	74.00	14.91	Peak
5469.012	H	47.72	54.00	6.28	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5700

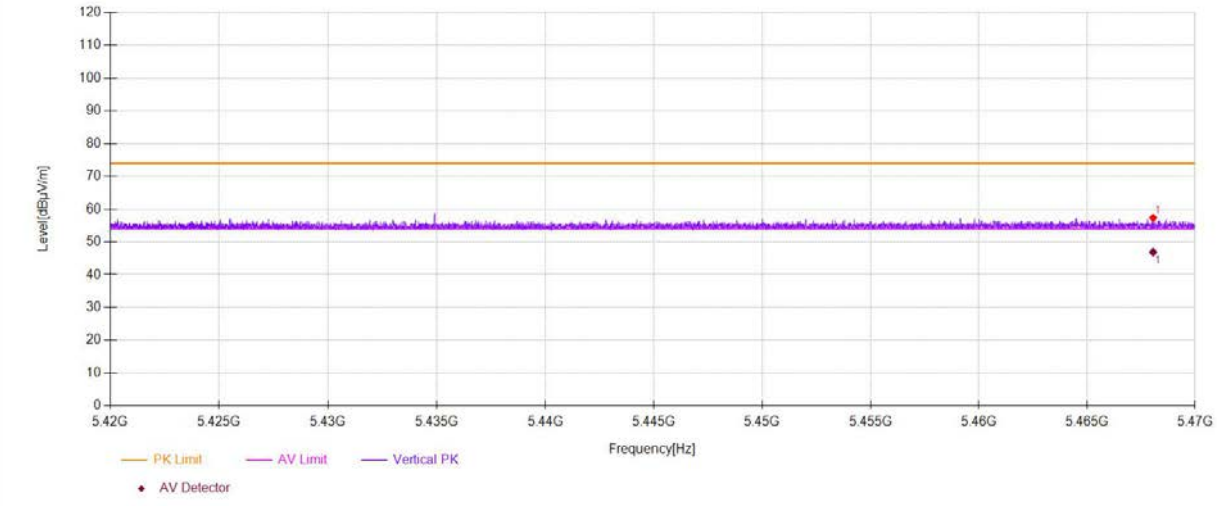
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5726.156	V	57.46	74.00	16.54	Peak
5726.156	V	47.66	54.00	6.34	Avg
5727.000	H	60.52	74.00	13.48	Peak
5727.000	H	47.73	54.00	6.27	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

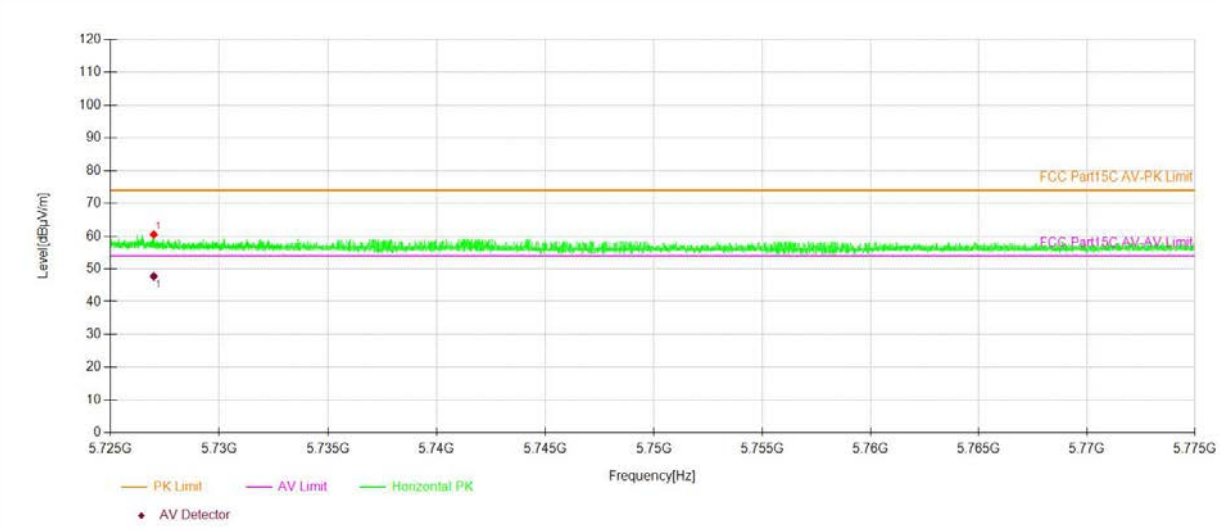
Test Model	U-NII -2C Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20) ☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol H



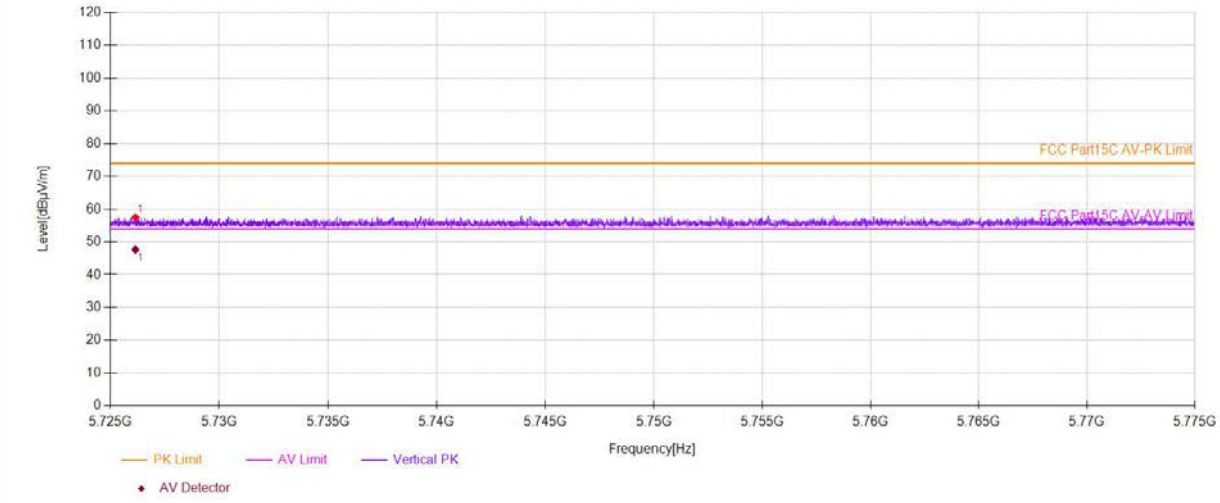
Test Model	U-NII -2C Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20) ☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol V



Test Model	U-NII -2C Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)				
	☐802.11a	☒802.11n(HT20)	☐802.11 ac (VHT20)		
	☐5500	☐5580	☒5700	Ant.Pol	H



Test Model	U-NII -2C Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)				
	☐802.11a	☒802.11n(HT20)	☐802.11 ac (VHT20)		
	☐5500	☐5580	☒5700	Ant.Pol	V



■ ☒For Undesirable radiated Spurious Emission in U-NII -3
☒Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
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 ANT3 and MIMO as below:

ANT3:

Test mode: 802.11n(20) Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8679.3397	V	64.42	-30.81	-27	3.81
11162.5813	V	67.57	-27.66	-27	0.66
17030.5153	V	67.91	-27.32	-27	0.32
9002.5013	H	64.46	-30.77	-27	3.77
11655.8279	H	66.03	-29.20	-27	2.20
16588.2941	H	67.37	-27.86	-27	0.86

Test mode: 802.11n(20) Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8687.8439	V	64.93	-30.30	-27	3.30
11511.2556	V	67.24	-27.99	-27	0.99
16137.5688	V	67.85	-27.38	-27	0.38
8704.8524	H	64.72	-30.51	-27	3.51
11264.6323	H	66.79	-28.44	-27	1.44
17566.2831	H	67.97	-27.26	-27	0.26

Test mode: 802.11n(20) Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9563.7819	V	64.93	-30.30	-27	3.30
13127.0635	V	66.35	-28.88	-27	1.88
17804.4022	V	67.56	-27.67	-27	0.67
8696.3482	H	64.57	-30.66	-27	3.66
11715.3577	H	65.66	-29.57	-27	2.57
15567.7839	H	67.19	-28.04	-27	1.04

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8677.9497	V	64.29	-30.94	-27	3.94
11161.1913	V	67.41	-27.82	-27	0.82
17031.7953	V	67.88	-27.35	-27	0.35
9014.1913	H	64.38	-30.85	-27	3.85
11667.5179	H	65.82	-29.41	-27	2.41
16599.9841	H	67.21	-28.02	-27	1.02

Test mode: 802.11n(20) Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8686.4539	V	64.8	-30.43	-27	3.43
11509.8656	V	67.08	-28.15	-27	1.15
16138.8488	V	67.82	-27.41	-27	0.41
8716.5424	H	64.64	-30.59	-27	3.59
11276.3223	H	66.58	-28.65	-27	1.65
17577.9731	H	67.81	-27.42	-27	0.42

Test mode: 802.11n(20) Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9562.3919	V	64.8	-30.43	-27	3.43
13125.6735	V	66.19	-29.04	-27	2.04
17805.6822	V	67.53	-27.70	-27	0.70
8708.0382	H	64.49	-30.74	-27	3.74
11727.0477	H	65.45	-29.78	-27	2.78
15579.4739	H	67.03	-28.20	-27	1.20

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

ANT3:

Test mode:	802.11n(20)	Frequency(MHz):	5745		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8679.3397	V	64.42	74.00	9.58	Peak
11162.5813	V	67.57	74.00	6.43	Peak
17030.5153	V	67.91	74.00	6.09	Peak
8679.3397	V	46.65	54.00	7.35	Avg
11162.5813	V	46.59	54.00	7.41	Avg
17030.5153	V	45.55	54.00	8.45	Avg
9002.5013	H	64.46	74.00	9.54	Peak
11655.8279	H	66.03	74.00	7.97	Peak
16588.2941	H	67.37	74.00	6.63	Peak
9002.5013	H	47.87	54.00	6.13	Avg
11655.8279	H	45.82	54.00	8.18	Avg
16588.2941	H	43.40	54.00	10.60	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5785		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8687.8439	V	64.93	74.00	9.07	Peak
11511.2556	V	67.24	74.00	6.76	Peak
16137.5688	V	67.85	74.00	6.15	Peak
8687.8439	V	46.58	54.00	7.42	Avg
11511.2556	V	46.28	54.00	7.72	Avg
16137.5688	V	42.40	54.00	11.60	Avg
8704.8524	H	64.72	74.00	9.28	Peak
11264.6323	H	66.79	74.00	7.21	Peak
17566.2831	H	67.97	74.00	6.03	Peak
8704.8524	H	46.99	54.00	7.01	Avg
11264.6323	H	46.63	54.00	7.37	Avg
17566.2831	H	47.37	54.00	6.63	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5825		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9563.7819	V	64.93	74.00	9.07	Peak
13127.0635	V	66.35	74.00	7.65	Peak
17804.4022	V	67.56	74.00	6.44	Peak
9563.7819	V	46.26	54.00	7.74	Avg
13127.0635	V	46.41	54.00	7.59	Avg
17804.4022	V	47.39	54.00	6.61	Avg
8696.3482	H	64.57	74.00	9.43	Peak
11715.3577	H	65.66	74.00	8.34	Peak
15567.7839	H	67.19	74.00	6.81	Peak
8696.3482	H	46.85	54.00	7.15	Avg
11715.3577	H	45.99	54.00	8.01	Avg
15567.7839	H	43.08	54.00	10.92	Avg

MIMO:

Test mode:	802.11n(20)	Frequency(MHz):	5745		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8677.9497	V	64.29	74.00	9.71	Peak
11161.1913	V	67.41	74.00	6.59	Peak
17031.7953	V	67.88	74.00	6.12	Peak
8680.6197	V	46.63	54.00	7.37	Avg
11160.3313	V	46.33	54.00	7.67	Avg
17028.2653	V	45.36	54.00	8.64	Avg
9014.1913	H	64.38	74.00	9.62	Peak
11667.5179	H	65.82	74.00	8.18	Peak
16599.9841	H	67.21	74.00	6.79	Peak
9014.1913	H	47.73	54.00	6.27	Avg
11652.5179	H	45.64	54.00	8.36	Avg
16584.9841	H	43.27	54.00	10.73	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5785		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8686.4539	V	64.80	74.00	9.20	Peak
11509.8656	V	67.08	74.00	6.92	Peak
16138.8488	V	67.82	74.00	6.18	Peak
8689.1239	V	46.56	54.00	7.44	Avg
11509.0056	V	46.02	54.00	7.98	Avg
16135.3188	V	42.21	54.00	11.79	Avg
8716.5424	H	64.64	74.00	9.36	Peak
11276.3223	H	66.58	74.00	7.42	Peak
17577.9731	H	67.81	74.00	6.19	Peak
8716.5424	H	46.85	54.00	7.15	Avg
11261.3223	H	46.45	54.00	7.55	Avg
17562.9731	H	47.24	54.00	6.76	Avg

Test mode:	802.11n(20)	Frequency(MHz):	5825		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
9562.3919	V	64.80	74.00	9.20	Peak
13125.6735	V	66.19	74.00	7.81	Peak
17805.6822	V	67.53	74.00	6.47	Peak
9565.0619	V	46.24	54.00	7.76	Avg
13124.8135	V	46.15	54.00	7.85	Avg
17802.1522	V	47.20	54.00	6.80	Avg
8708.0382	H	64.49	74.00	9.51	Peak
11727.0477	H	65.45	74.00	8.55	Peak
15579.4739	H	67.03	74.00	6.97	Peak
8708.0382	H	46.71	54.00	7.29	Avg
11712.0477	H	45.81	54.00	8.19	Avg
15564.4739	H	42.95	54.00	11.05	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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.

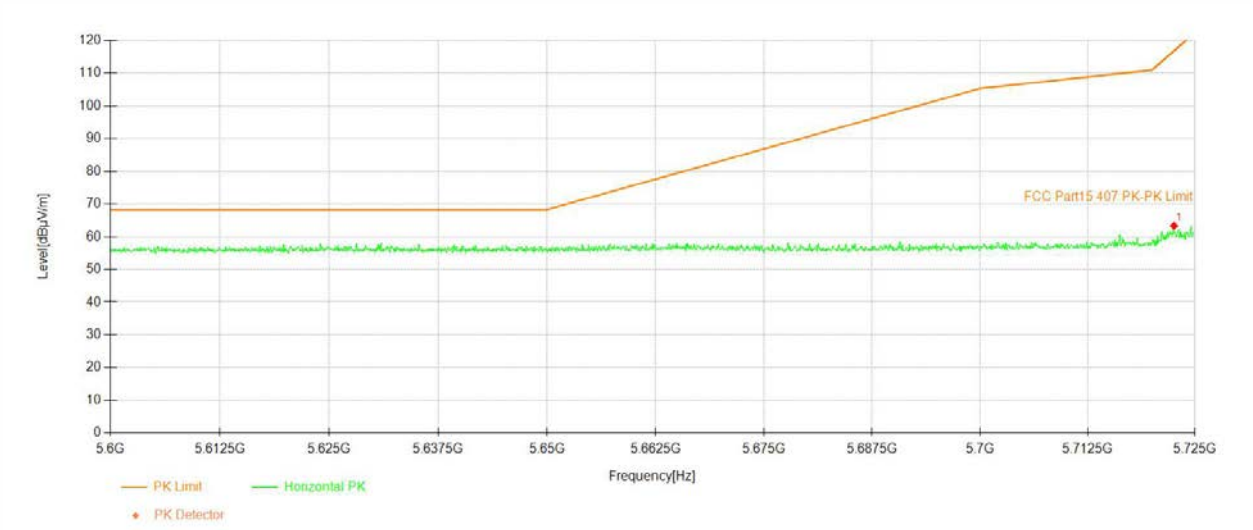
- ☒ Undesirable radiated Spurious Emission in band edge

Test mode:	802.11n(20)	Frequency:	5745		
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5724.12	V	58.29	-36.94	-27.00	PASS
5722.56	H	63.31	-31.92	-27.00	PASS

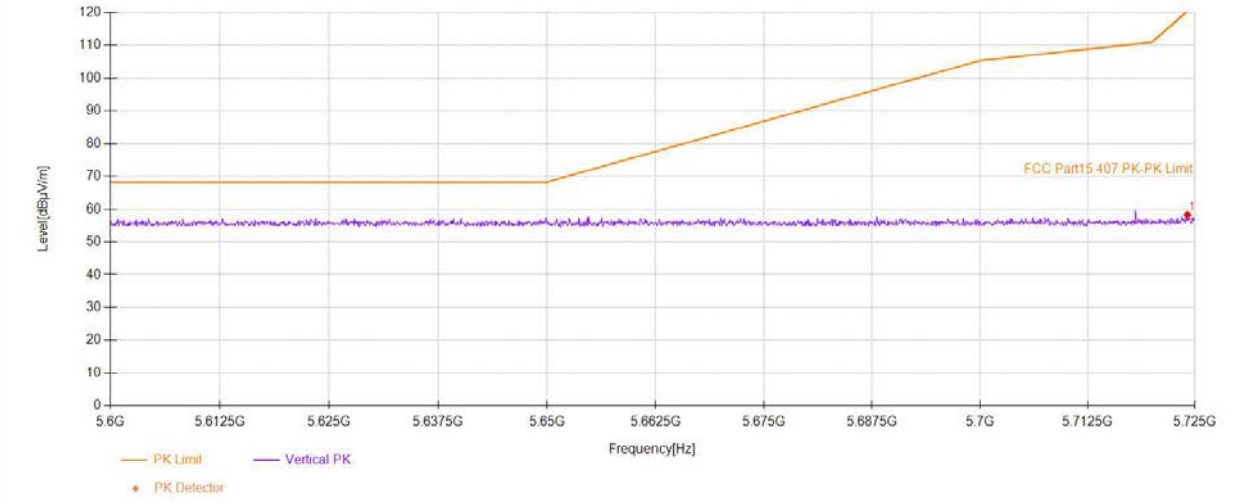
Test mode:	802.11n(20)	Frequency:	5825		
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5852.75	V	58.23	-37.00	-27.00	PASS
5855.69	H	59.98	-35.25	-27.00	PASS

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

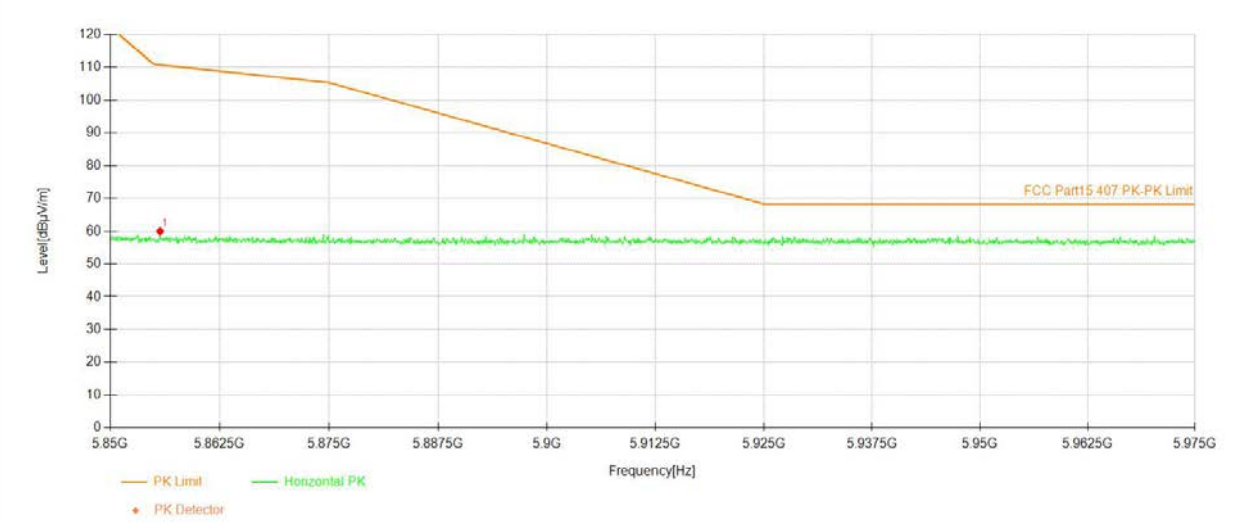
Test Model	U-NII -3 Undesirable radiated Undesirable radiated Spurious Emission in Band Edge ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5745 Ant.Pol H



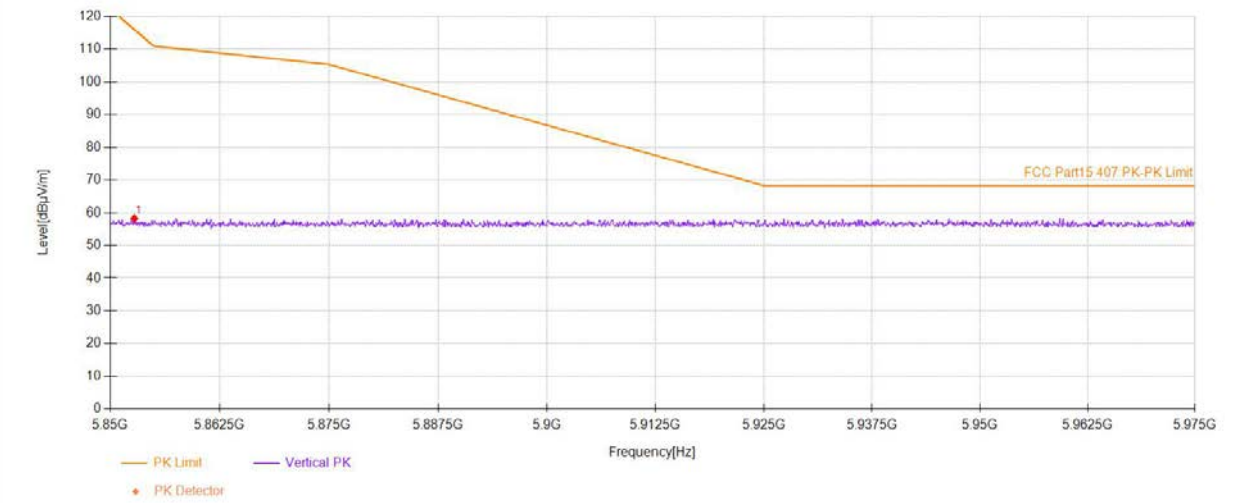
Test Model	U-NII -3 Undesirable radiated Undesirable radiated Spurious Emission in Band Edge ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5745 Ant.Pol V



Test Model	U-NII -3 Undesirable radiated Undesirable radiated Spurious Emission in Band Edge ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5825 Ant.Pol H

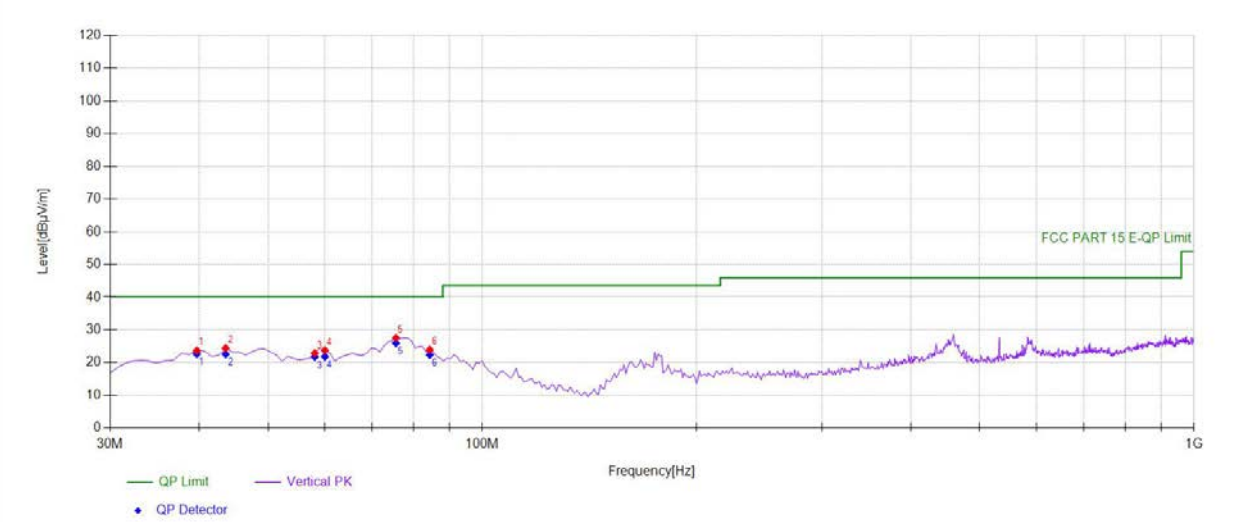


Test Model	U-NII -3 Undesirable radiated Undesirable radiated Spurious Emission in Band Edge ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5825 Ant.Pol V

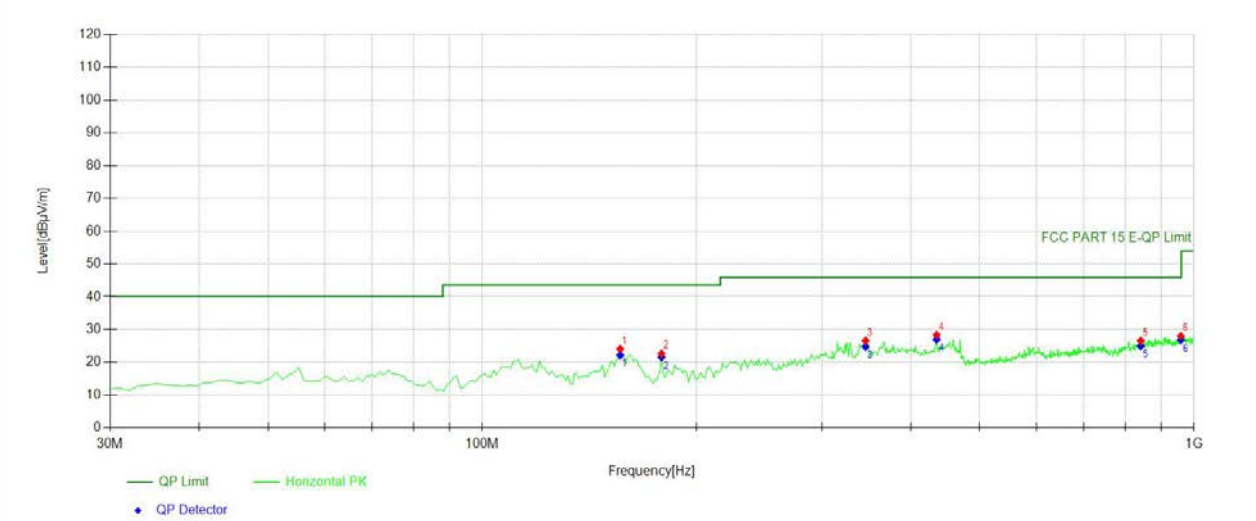


- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)
  All of the configurations or modes are tested, the data of the worst case is recorded in the report.

Test mode:	802.11n(20)	Frequency(MHz):	5180

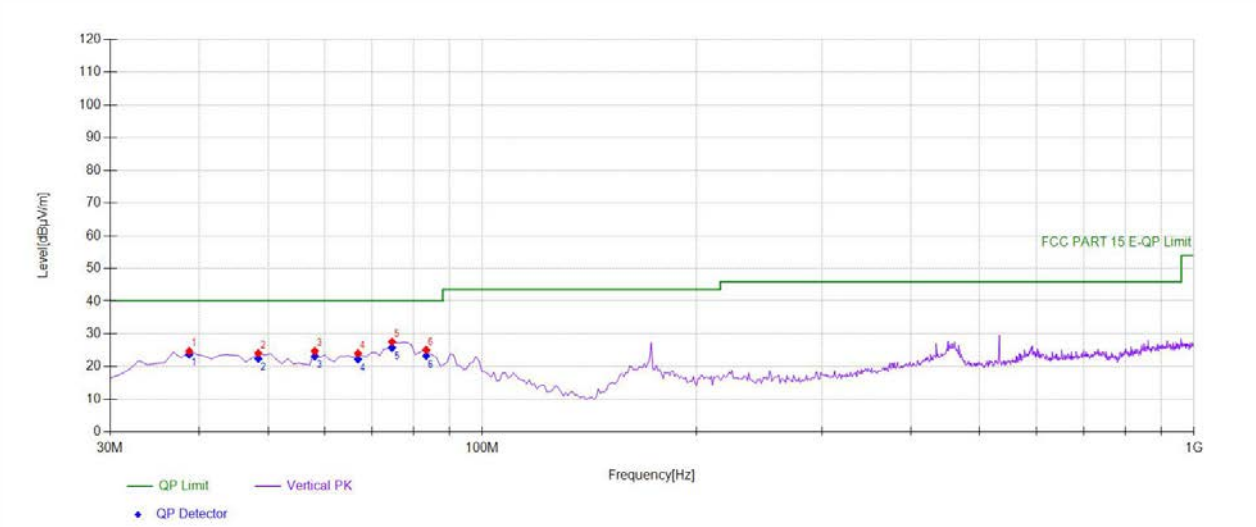


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	39.7097	41.13	-17.45	23.68	PK	40.00	16.32	Vertical
2	43.5936	41.33	-16.91	24.42	PK	40.00	15.58	Vertical
3	58.1582	39.97	-17.08	22.89	PK	40.00	17.11	Vertical
4	60.1001	41.08	-17.33	23.75	PK	40.00	16.25	Vertical
5	75.6356	47.07	-19.54	27.53	PK	40.00	12.47	Vertical
6	84.3744	43.46	-19.52	23.94	PK	40.00	16.06	Vertical

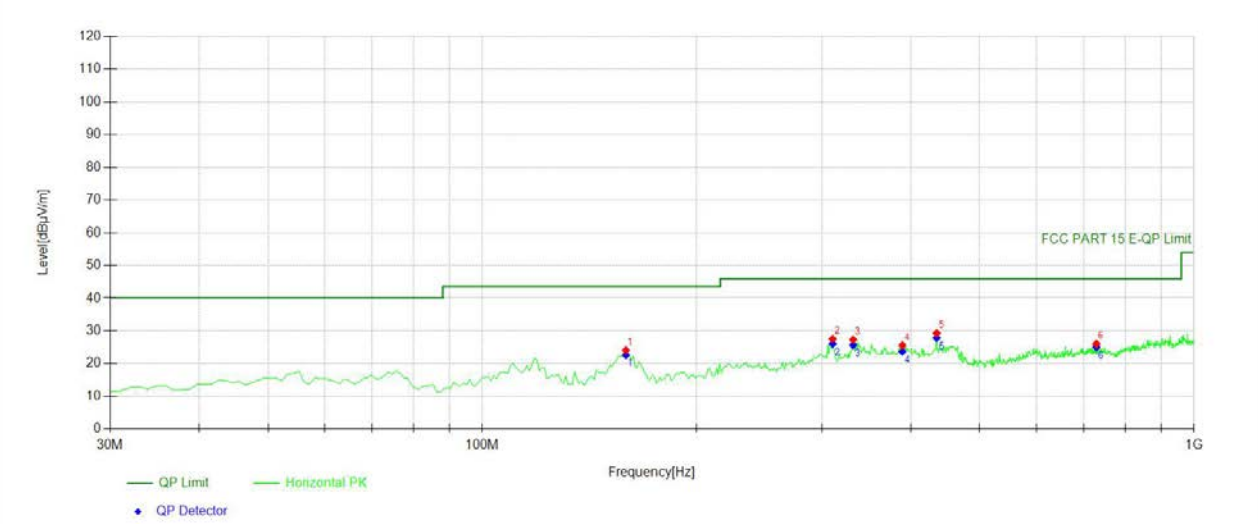


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	156.226	43.52	-19.45	24.07	PK	43.50	19.43	Horizontal
2	178.558	41.21	-18.55	22.66	PK	43.50	20.84	Horizontal
3	345.565	38.87	-12.36	26.51	PK	46.00	19.49	Horizontal
4	434.894	39.59	-11.27	28.32	PK	46.00	17.68	Horizontal
5	841.731	31.08	-4.57	26.51	PK	46.00	19.49	Horizontal
6	958.248	30.49	-2.48	28.01	PK	46.00	17.99	Horizontal

Test mode:	802.11n(20)	Frequency(MHz):	5200

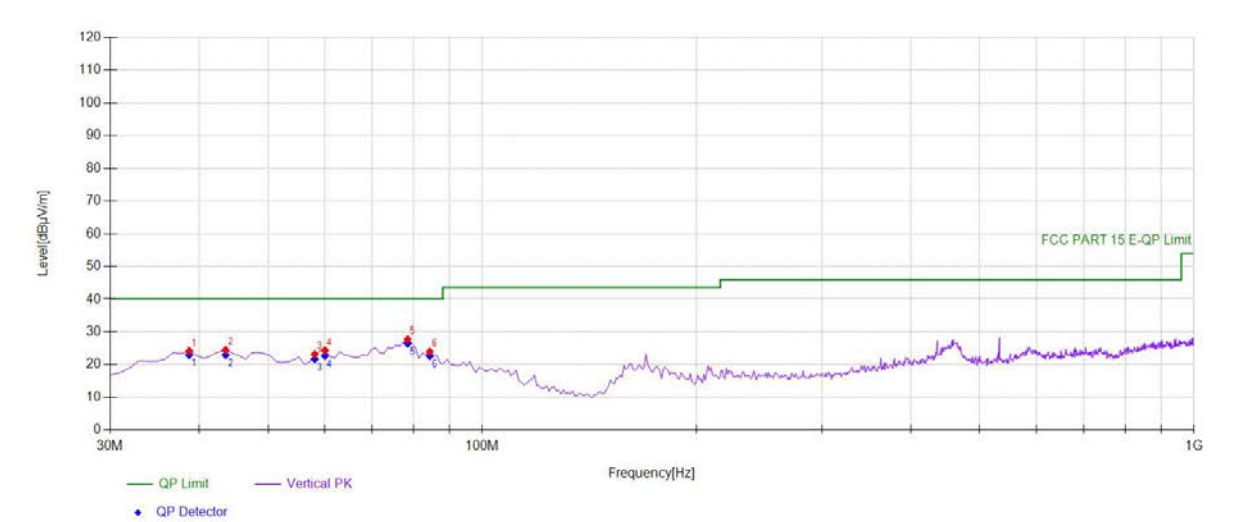


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	38.7387	42.28	-17.58	24.70	PK	40.00	15.30	Vertical
2	48.4484	40.32	-16.22	24.10	PK	40.00	15.90	Vertical
3	58.1582	41.83	-17.08	24.75	PK	40.00	15.25	Vertical
4	66.8969	42.32	-18.27	24.05	PK	40.00	15.95	Vertical
5	74.6647	46.96	-19.40	27.56	PK	40.00	12.44	Vertical
6	83.4034	44.75	-19.67	25.08	PK	40.00	14.92	Vertical

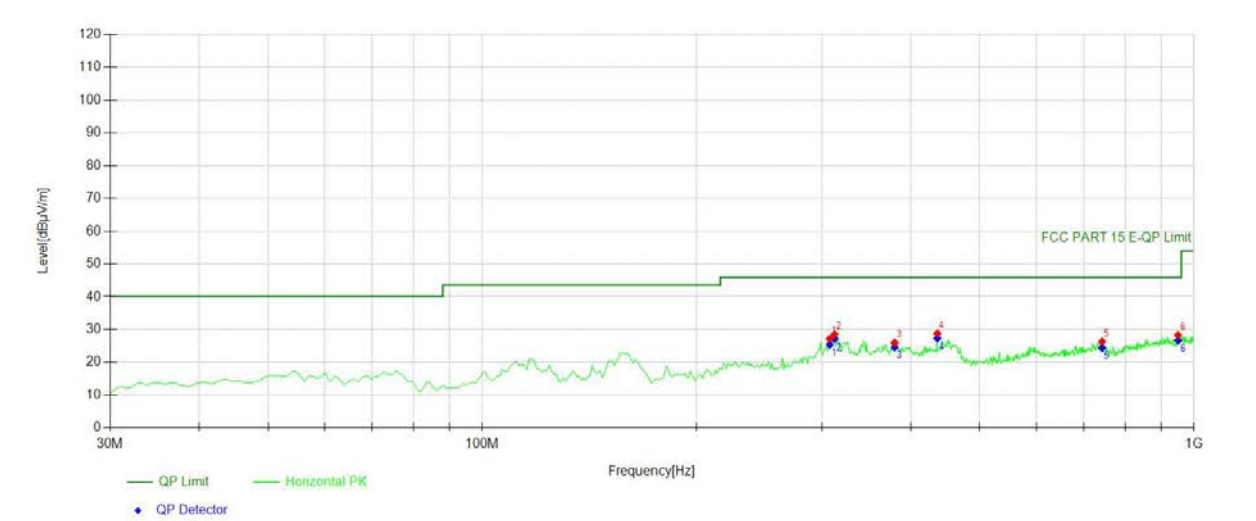


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	159.139	43.50	-19.42	24.08	PK	43.50	19.42	Horizontal
2	310.610	41.31	-13.79	27.52	PK	46.00	18.48	Horizontal
3	331.972	40.13	-12.84	27.29	PK	46.00	18.71	Horizontal
4	389.259	37.04	-11.49	25.55	PK	46.00	20.45	Horizontal
5	434.894	40.56	-11.27	29.29	PK	46.00	16.71	Horizontal
6	729.099	31.96	-5.94	26.02	PK	46.00	19.98	Horizontal

Test mode:	802.11n(20)	Frequency(MHz):	5240



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	38.7387	41.74	-17.58	24.16	PK	40.00	15.84	Vertical
2	43.5936	41.37	-16.91	24.46	PK	40.00	15.54	Vertical
3	58.1582	40.27	-17.08	23.19	PK	40.00	16.81	Vertical
4	60.1001	41.70	-17.33	24.37	PK	40.00	15.63	Vertical
5	78.5485	47.72	-19.98	27.74	PK	40.00	12.26	Vertical
6	84.3744	43.48	-19.52	23.96	PK	40.00	16.04	Vertical



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	307.697	40.96	-13.83	27.13	PK	46.00	18.87	Horizontal
2	312.552	42.24	-13.75	28.49	PK	46.00	17.51	Horizontal
3	379.549	37.62	-11.64	25.98	PK	46.00	20.02	Horizontal
4	435.865	40.01	-11.23	28.78	PK	46.00	17.22	Horizontal
5	742.692	32.06	-5.79	26.27	PK	46.00	19.73	Horizontal
6	949.509	31.24	-2.96	28.28	PK	46.00	17.72	Horizontal

8.5 POWER LINE CONDUCTED EMISSIONS

8.5.1 Applicable Standard

According to FCC Part 15.207(a)

8.5.2 Conformance Limit

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

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

8.5.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

8.5.4 Test Procedure

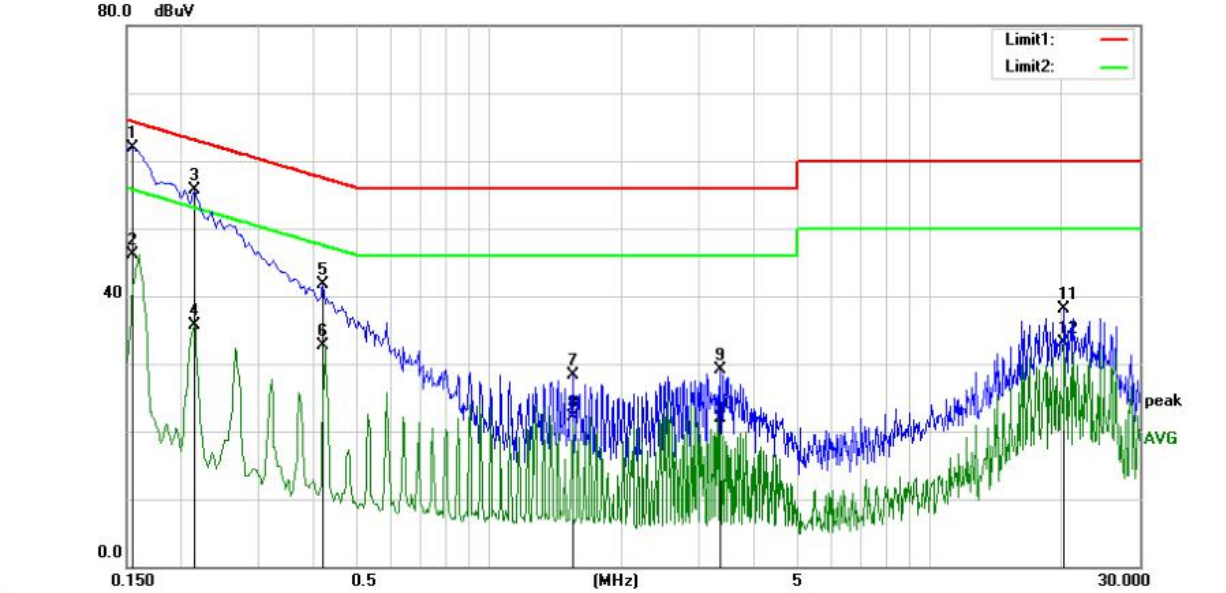
The EUT was placed on a table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

8.5.5 Test Results

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

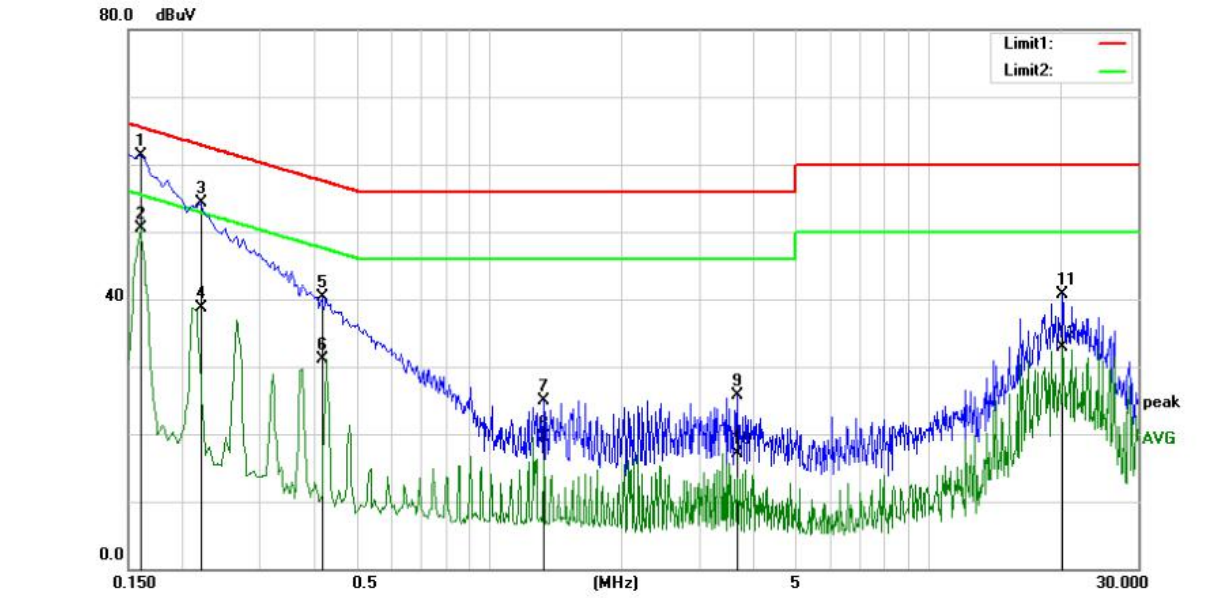
Pass

The 120V &240V voltage have been tested, and the worst result recorded was report as below:



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	*	0.1550	51.26	10.67	61.93	65.73	-3.80	QP	
2		0.1550	35.42	10.67	46.09	55.73	-9.64	AVG	
3		0.2150	45.07	10.64	55.71	63.01	-7.30	QP	
4		0.2150	25.02	10.64	35.66	53.01	-17.35	AVG	
5		0.4200	31.09	10.66	41.75	57.45	-15.70	QP	
6		0.4200	22.11	10.66	32.77	47.45	-14.68	AVG	
7		1.5450	17.57	10.67	28.24	56.00	-27.76	QP	
8		1.5450	11.44	10.67	22.11	46.00	-23.89	AVG	
9		3.3500	18.53	10.49	29.02	56.00	-26.98	QP	
10		3.3500	11.41	10.49	21.90	46.00	-24.10	AVG	
11		20.1800	26.98	11.15	38.13	60.00	-21.87	QP	
12		20.1800	21.94	11.15	33.09	50.00	-16.91	AVG	



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	*	0.1600	50.71	10.67	61.38	65.46	-4.08	QP	
2		0.1600	39.91	10.67	50.58	55.46	-4.88	AVG	
3		0.2200	43.58	10.65	54.23	62.82	-8.59	QP	
4		0.2200	28.11	10.65	38.76	52.82	-14.06	AVG	
5		0.4150	29.71	10.66	40.37	57.55	-17.18	QP	
6		0.4150	20.46	10.66	31.12	47.55	-16.43	AVG	
7		1.3300	14.19	10.67	24.86	56.00	-31.14	QP	
8		1.3300	8.91	10.67	19.58	46.00	-26.42	AVG	
9		3.6700	15.30	10.46	25.76	56.00	-30.24	QP	
10		3.6700	6.67	10.46	17.13	46.00	-28.87	AVG	
11		20.1800	29.50	11.15	40.65	60.00	-19.35	QP	
12		20.1800	21.71	11.15	32.86	50.00	-17.14	AVG	

8.6 ANTENNA APPLICATION

8.6.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 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. 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 15.407 (a), 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.

8.6.2 Result

Temperature :	25℃	ATM Pressure::	1011 mbar
Humidity :	60 %	Test Engineer:	XXH

PASS

The EUT is integrated antenna, ANT1: 4.53dBi, ANT2: 4.32dBi, ANT3: 4.56dBi.

☒ Antennas use 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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