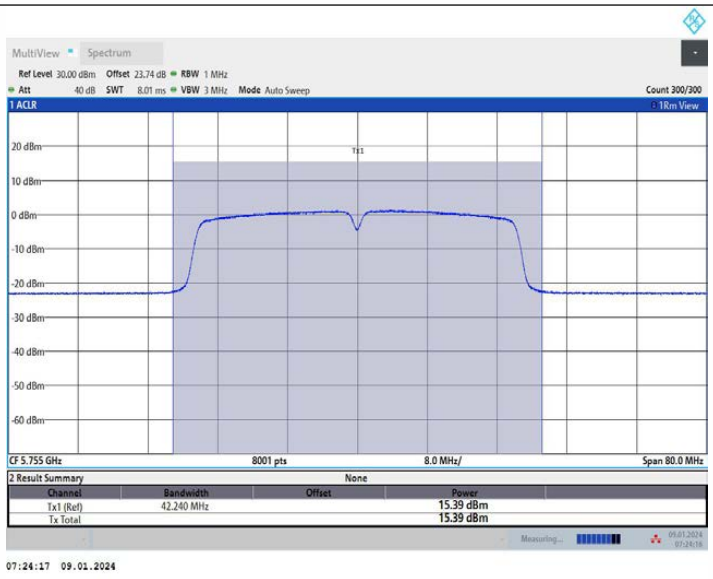

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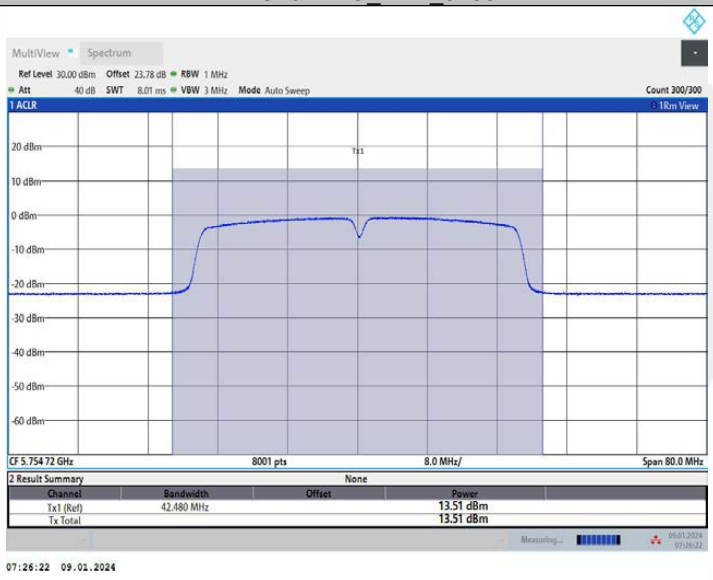

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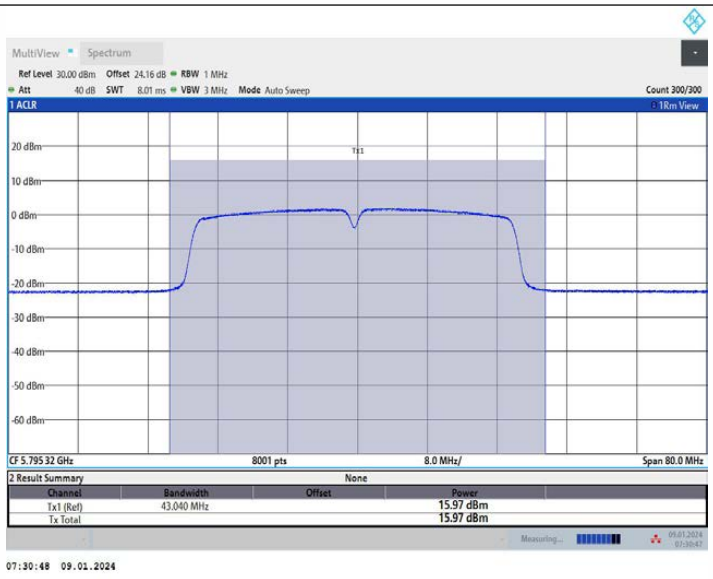

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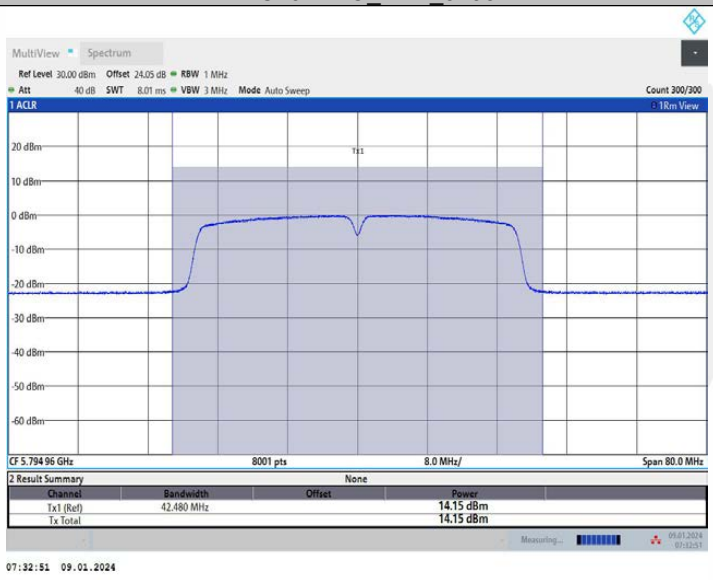

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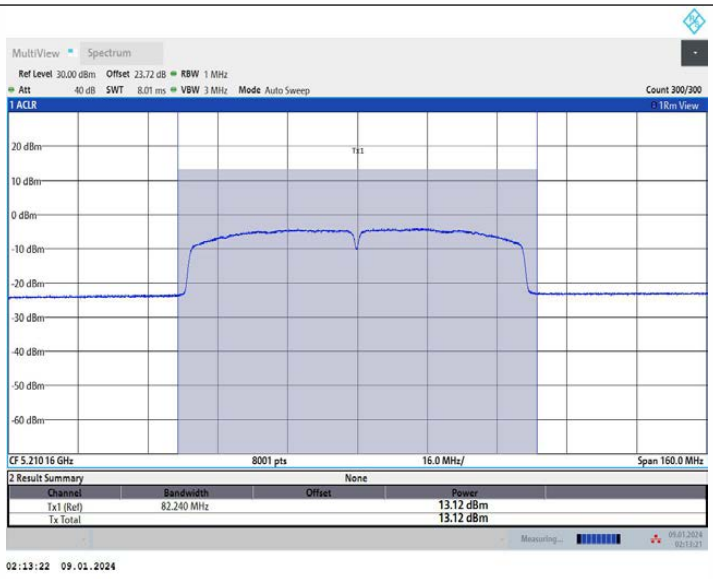

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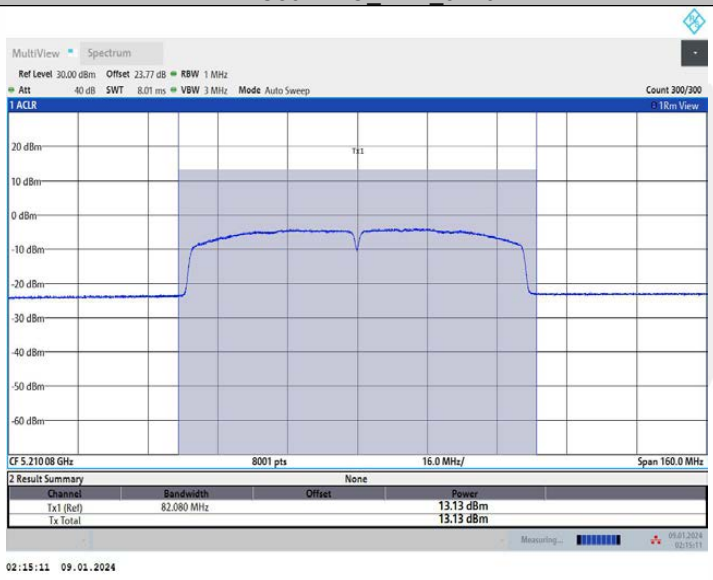

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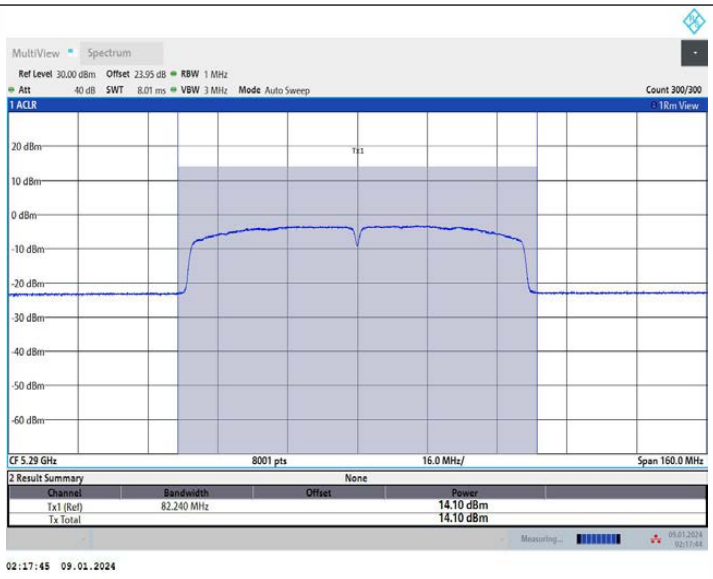

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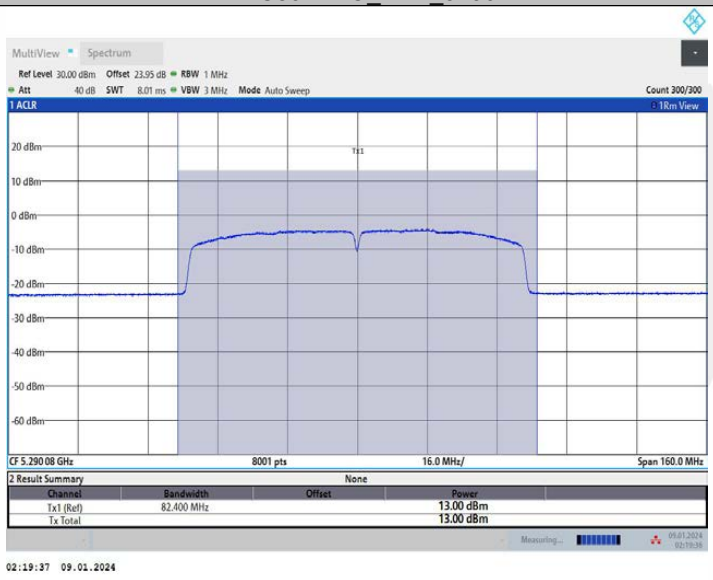

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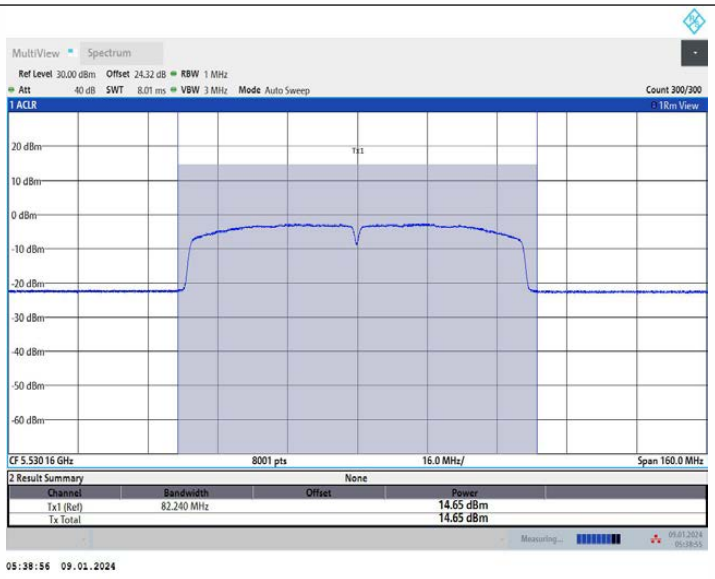

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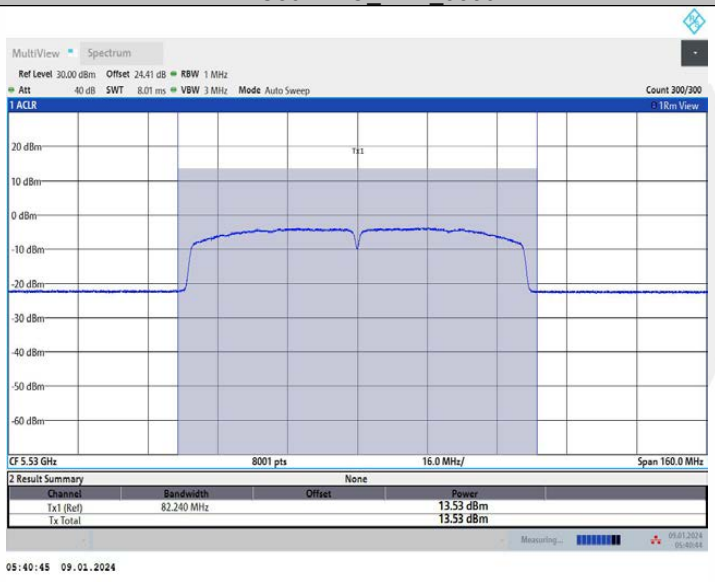

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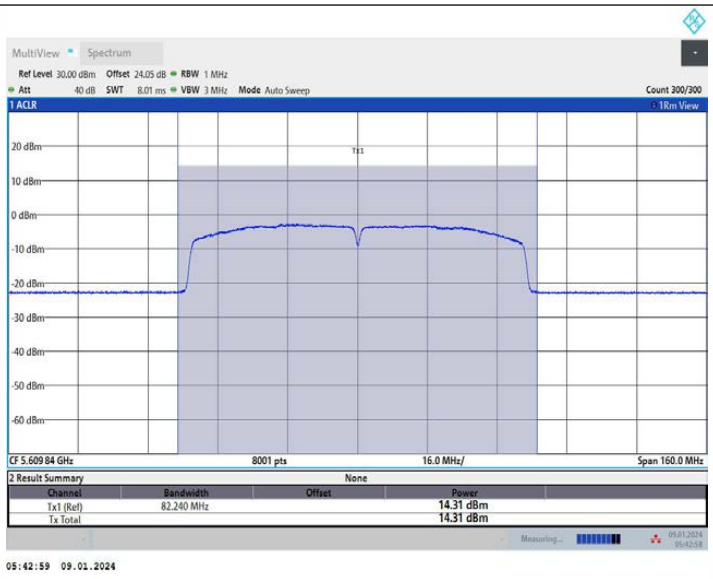

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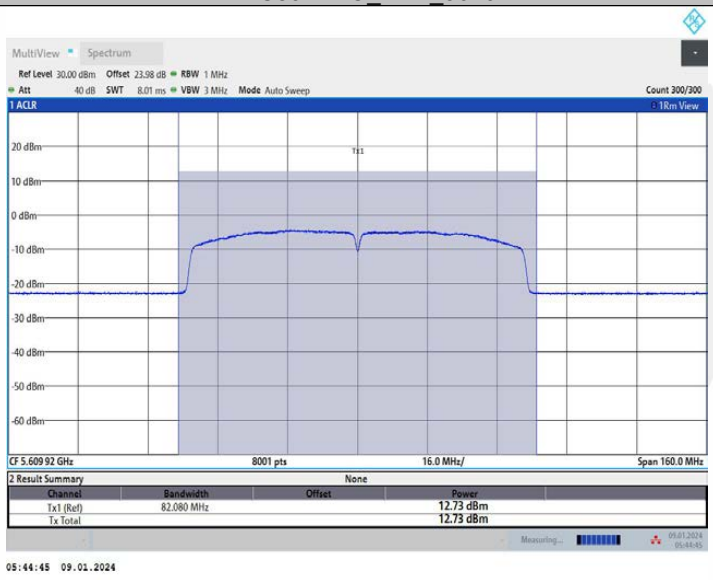

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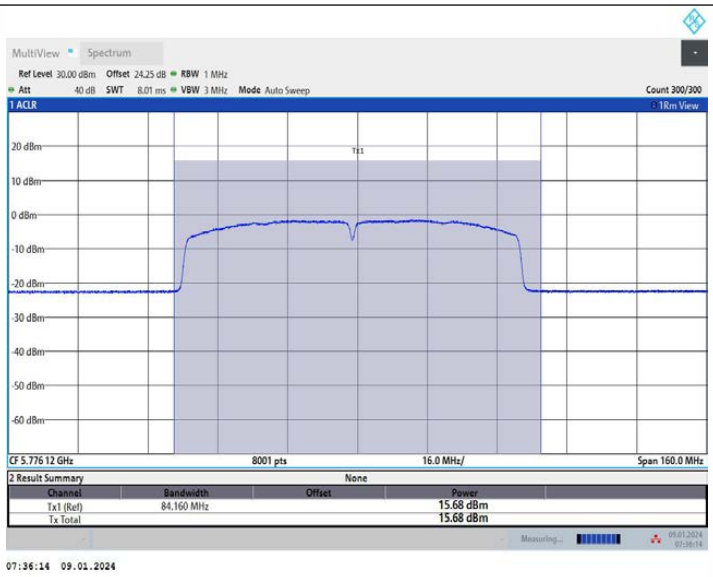
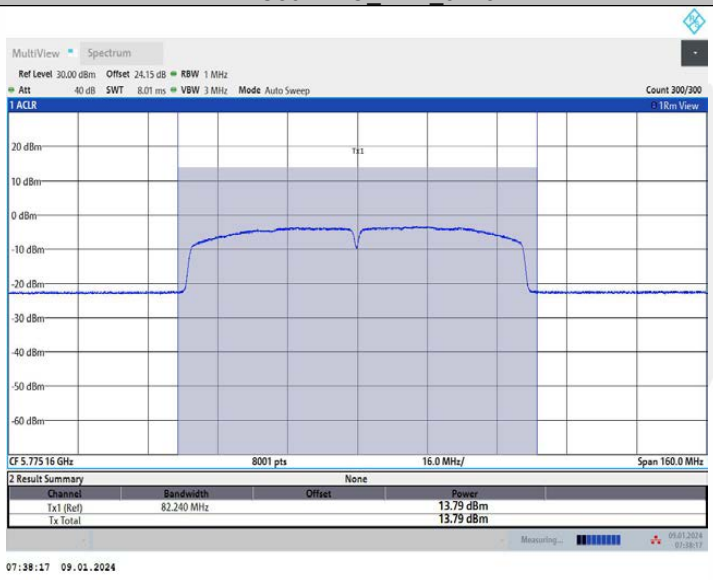


11AC80MIMO_Ant2_5775



8.3 MAXIMUM PEAK POWER DENSITY

8.3.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I
According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C
According to FCC Part 15.407(a)(3) for UNII Band III
According to 789033 D02 Section II(F)

8.3.2 Conformance Limit

■ For the band 5.15-5.25 GHz

(a) (1) (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(a) (1) (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(a) (1) (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
(a) (1) (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the 5.25-5.35 GHz and 5.47-5.725 GHz

(b) (2) the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the band 5.725-5.85 GHz

(a) (3)For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3.3 Test Configuration

Test according to clause 6.1 radio frequency test setup 1.

8.3.4 Test Procedure

Methods refer to FCC KDB 789033.

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections.

5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

8.3.5 Test Results

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

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	2.48	≤11.00	PASS
	Ant2	5180	2.56	≤11.00	PASS
	Ant1	5200	2.52	≤11.00	PASS
	Ant2	5200	2.69	≤11.00	PASS
	Ant1	5240	2.93	≤11.00	PASS
	Ant2	5240	2.82	≤11.00	PASS
	Ant1	5260	3.72	≤11.00	PASS
	Ant2	5260	2.45	≤11.00	PASS
	Ant1	5280	3.66	≤11.00	PASS
	Ant2	5280	2.76	≤11.00	PASS
	Ant1	5320	4.27	≤11.00	PASS
	Ant2	5320	3.25	≤11.00	PASS
	Ant1	5500	4.46	≤11.00	PASS
	Ant2	5500	3.45	≤11.00	PASS
	Ant1	5580	3.91	≤11.00	PASS
	Ant2	5580	2.91	≤11.00	PASS
	Ant1	5700	3.57	≤11.00	PASS
	Ant2	5700	2.41	≤11.00	PASS
	Ant1	5745	1.59	≤30.00	PASS
	Ant2	5745	-0.20	≤30.00	PASS
	Ant1	5785	2.31	≤30.00	PASS
	Ant2	5785	0.42	≤30.00	PASS
	Ant1	5825	2.58	≤30.00	PASS
	Ant2	5825	1.13	≤30.00	PASS
11N20MIMO	Ant1	5180	2.04	≤11.00	PASS
	Ant2	5180	1.89	≤11.00	PASS
	total	5180	4.98	≤11.00	PASS
	Ant1	5200	1.89	≤11.00	PASS
	Ant2	5200	1.91	≤11.00	PASS
	total	5200	4.91	≤11.00	PASS
	Ant1	5240	2.42	≤11.00	PASS
	Ant2	5240	2.36	≤11.00	PASS
	total	5240	5.40	≤11.00	PASS
	Ant1	5260	3.98	≤11.00	PASS
	Ant2	5260	2.76	≤11.00	PASS
	total	5260	6.42	≤11.00	PASS
	Ant1	5280	4.10	≤11.00	PASS
	Ant2	5280	2.36	≤11.00	PASS
	total	5280	6.33	≤11.00	PASS
	Ant1	5320	4.12	≤11.00	PASS
	Ant2	5320	2.91	≤11.00	PASS
	total	5320	6.57	≤11.00	PASS
	Ant1	5500	3.96	≤11.00	PASS
	Ant2	5500	2.63	≤11.00	PASS
	total	5500	6.36	≤11.00	PASS
	Ant1	5580	2.95	≤11.00	PASS
	Ant2	5580	2.17	≤11.00	PASS
	total	5580	5.59	≤11.00	PASS
	Ant1	5700	3.19	≤11.00	PASS
	Ant2	5700	1.64	≤11.00	PASS

	total	5700	5.49	≤11.00	PASS
	Ant1	5745	1.39	≤30.00	PASS
	Ant2	5745	-0.39	≤30.00	PASS
	total	5745	3.60	≤30.00	PASS
	Ant1	5785	1.97	≤30.00	PASS
	Ant2	5785	0.25	≤30.00	PASS
	total	5785	4.20	≤30.00	PASS
	Ant1	5825	2.27	≤30.00	PASS
	Ant2	5825	0.68	≤30.00	PASS
	total	5825	4.56	≤30.00	PASS
11N40MIMO	Ant1	5190	-0.55	≤11.00	PASS
	Ant2	5190	-0.36	≤11.00	PASS
	total	5190	2.56	≤11.00	PASS
	Ant1	5230	-0.62	≤11.00	PASS
	Ant2	5230	-0.50	≤11.00	PASS
	total	5230	2.45	≤11.00	PASS
	Ant1	5270	0.51	≤11.00	PASS
	Ant2	5270	-0.92	≤11.00	PASS
	total	5270	2.86	≤11.00	PASS
	Ant1	5310	0.74	≤11.00	PASS
	Ant2	5310	-0.52	≤11.00	PASS
	total	5310	3.17	≤11.00	PASS
	Ant1	5510	0.76	≤11.00	PASS
	Ant2	5510	-0.43	≤11.00	PASS
	total	5510	3.22	≤11.00	PASS
	Ant1	5550	0.30	≤11.00	PASS
	Ant2	5550	-0.67	≤11.00	PASS
	total	5550	2.85	≤11.00	PASS
	Ant1	5670	0.58	≤11.00	PASS
	Ant2	5670	-1.51	≤11.00	PASS
	total	5670	2.67	≤11.00	PASS
	Ant1	5755	-1.63	≤30.00	PASS
	Ant2	5755	-3.57	≤30.00	PASS
	total	5755	0.52	≤30.00	PASS
	Ant1	5795	-0.94	≤30.00	PASS
	Ant2	5795	-2.80	≤30.00	PASS
	total	5795	1.24	≤30.00	PASS
11AC20MIMO	Ant1	5180	2.16	≤11.00	PASS
	Ant2	5180	2.10	≤11.00	PASS
	total	5180	5.14	≤11.00	PASS
	Ant1	5200	2.02	≤11.00	PASS
	Ant2	5200	2.06	≤11.00	PASS
	total	5200	5.05	≤11.00	PASS
	Ant1	5240	2.35	≤11.00	PASS
	Ant2	5240	2.31	≤11.00	PASS
	total	5240	5.34	≤11.00	PASS
	Ant1	5260	3.08	≤11.00	PASS
	Ant2	5260	1.98	≤11.00	PASS
	total	5260	5.58	≤11.00	PASS
	Ant1	5280	3.10	≤11.00	PASS
	Ant2	5280	1.92	≤11.00	PASS
	total	5280	5.56	≤11.00	PASS
	Ant1	5320	3.68	≤11.00	PASS
	Ant2	5320	2.50	≤11.00	PASS
	total	5320	6.14	≤11.00	PASS
	Ant1	5500	4.02	≤11.00	PASS
	Ant2	5500	2.47	≤11.00	PASS
	total	5500	6.32	≤11.00	PASS
	Ant1	5580	3.63	≤11.00	PASS
	Ant2	5580	1.95	≤11.00	PASS
	total	5580	5.88	≤11.00	PASS

	Ant1	5700	3.13	≤11.00	PASS
	Ant2	5700	1.82	≤11.00	PASS
	total	5700	5.53	≤11.00	PASS
	Ant1	5745	1.30	≤30.00	PASS
	Ant2	5745	-0.74	≤30.00	PASS
	total	5745	3.41	≤30.00	PASS
	Ant1	5785	1.91	≤30.00	PASS
	Ant2	5785	0.22	≤30.00	PASS
	total	5785	4.16	≤30.00	PASS
	Ant1	5825	2.15	≤30.00	PASS
	Ant2	5825	0.39	≤30.00	PASS
	total	5825	4.37	≤30.00	PASS
11AC40MIMO	Ant1	5190	-1.00	≤11.00	PASS
	Ant2	5190	-0.93	≤11.00	PASS
	total	5190	2.05	≤11.00	PASS
	Ant1	5230	-0.80	≤11.00	PASS
	Ant2	5230	-0.70	≤11.00	PASS
	total	5230	2.26	≤11.00	PASS
	Ant1	5270	0.10	≤11.00	PASS
	Ant2	5270	-1.01	≤11.00	PASS
	total	5270	2.59	≤11.00	PASS
	Ant1	5310	0.53	≤11.00	PASS
	Ant2	5310	-0.40	≤11.00	PASS
	total	5310	3.10	≤11.00	PASS
	Ant1	5510	0.73	≤11.00	PASS
	Ant2	5510	-0.20	≤11.00	PASS
	total	5510	3.30	≤11.00	PASS
	Ant1	5550	0.63	≤11.00	PASS
	Ant2	5550	-0.82	≤11.00	PASS
	total	5550	2.98	≤11.00	PASS
	Ant1	5670	0.44	≤11.00	PASS
	Ant2	5670	-1.47	≤11.00	PASS
	total	5670	2.60	≤11.00	PASS
	Ant1	5755	-1.58	≤30.00	PASS
	Ant2	5755	-3.45	≤30.00	PASS
	total	5755	0.60	≤30.00	PASS
	Ant1	5795	-0.88	≤30.00	PASS
	Ant2	5795	-2.68	≤30.00	PASS
	total	5795	1.32	≤30.00	PASS
11AC80MIMO	Ant1	5210	-4.08	≤11.00	PASS
	Ant2	5210	-3.98	≤11.00	PASS
	total	5210	-1.02	≤11.00	PASS
	Ant1	5290	-3.27	≤11.00	PASS
	Ant2	5290	-4.08	≤11.00	PASS
	total	5290	-0.65	≤11.00	PASS
	Ant1	5530	-2.70	≤11.00	PASS
	Ant2	5530	-3.74	≤11.00	PASS
	total	5530	-0.18	≤11.00	PASS
	Ant1	5610	-2.79	≤11.00	PASS
	Ant2	5610	-4.23	≤11.00	PASS
	total	5610	-0.44	≤11.00	PASS
	Ant1	5775	-3.98	≤30.00	PASS
	Ant2	5775	-6.20	≤30.00	PASS
	total	5775	-1.94	≤30.00	PASS

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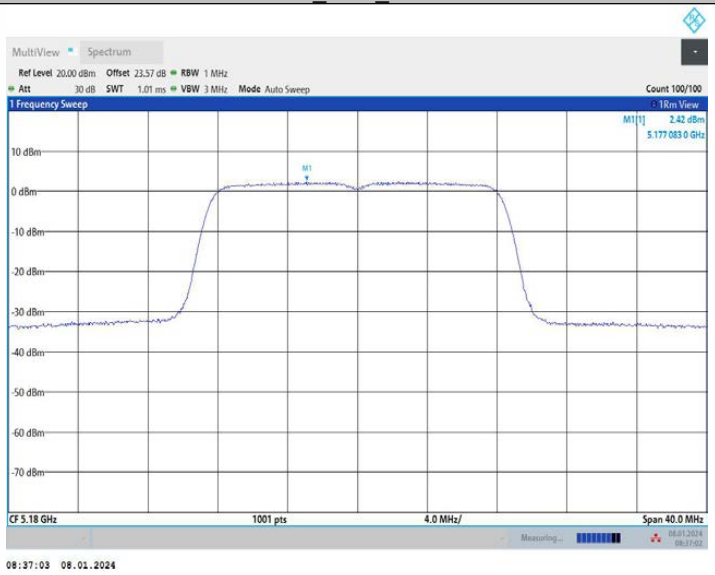
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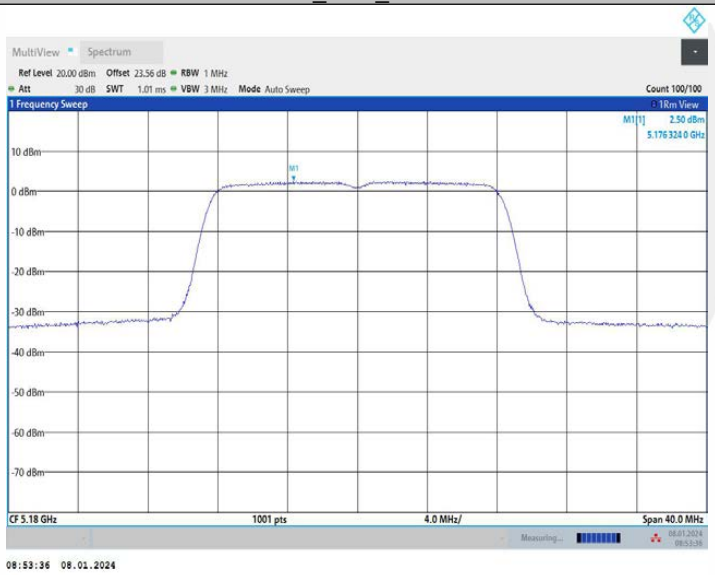
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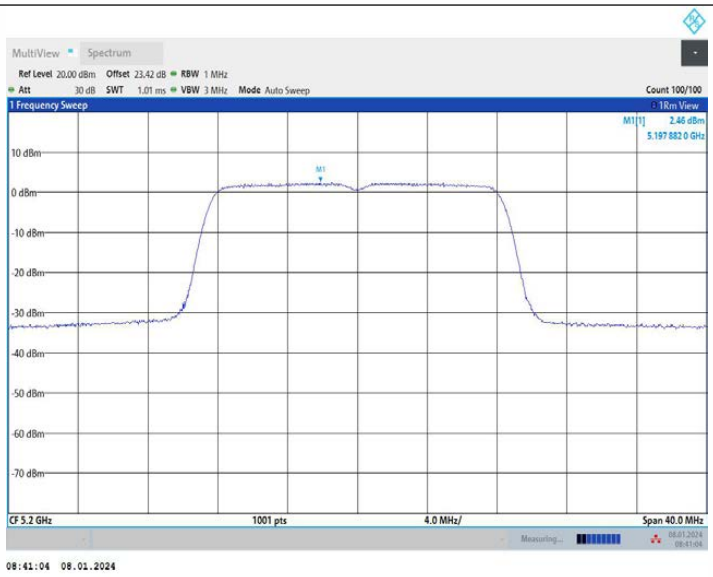

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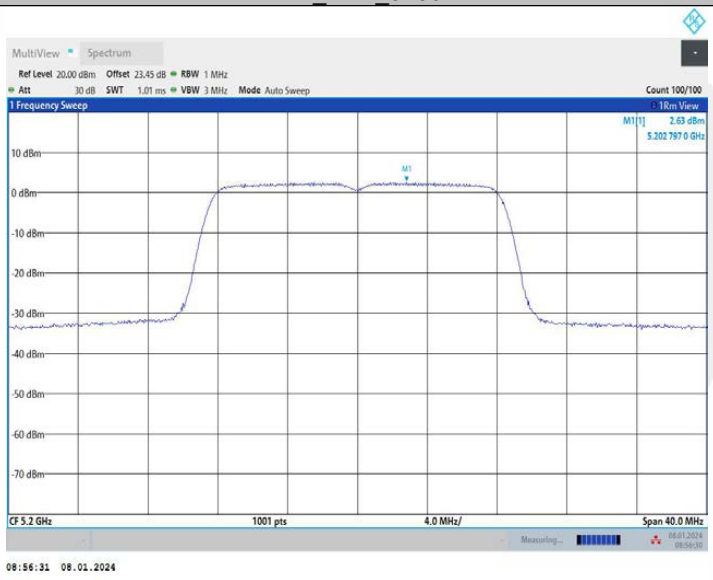

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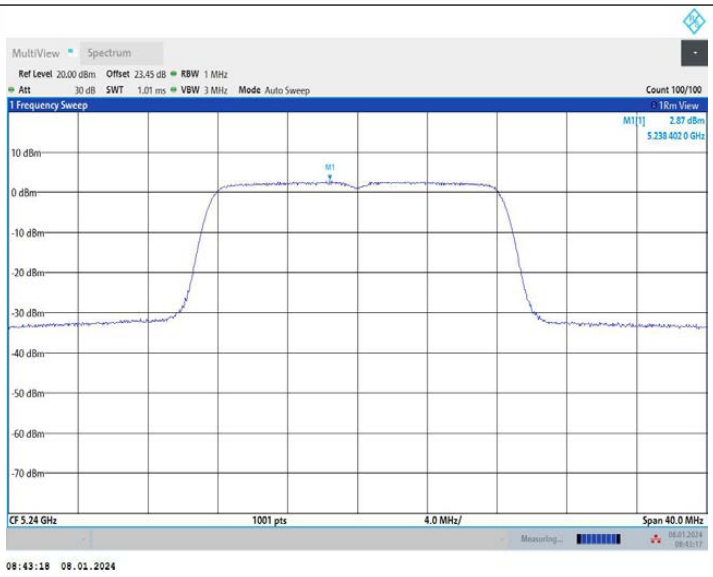

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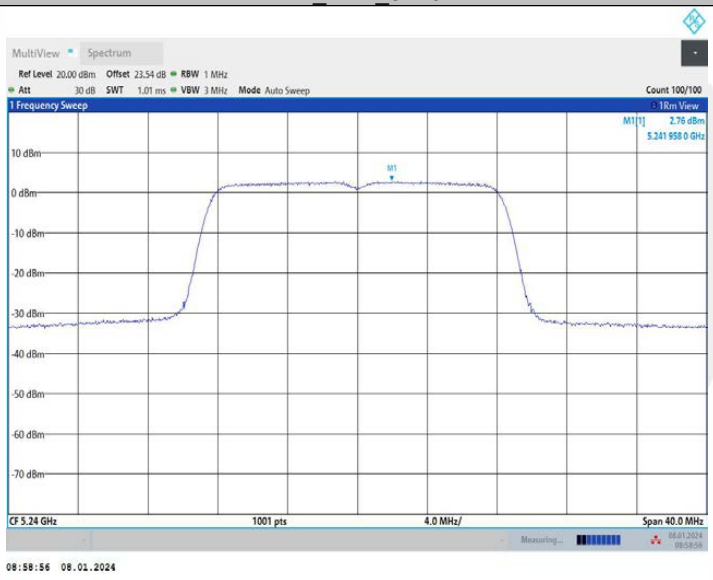

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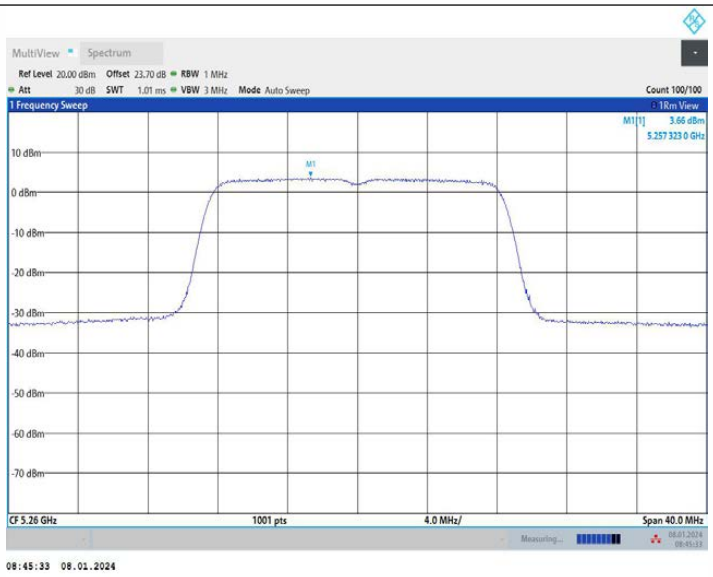

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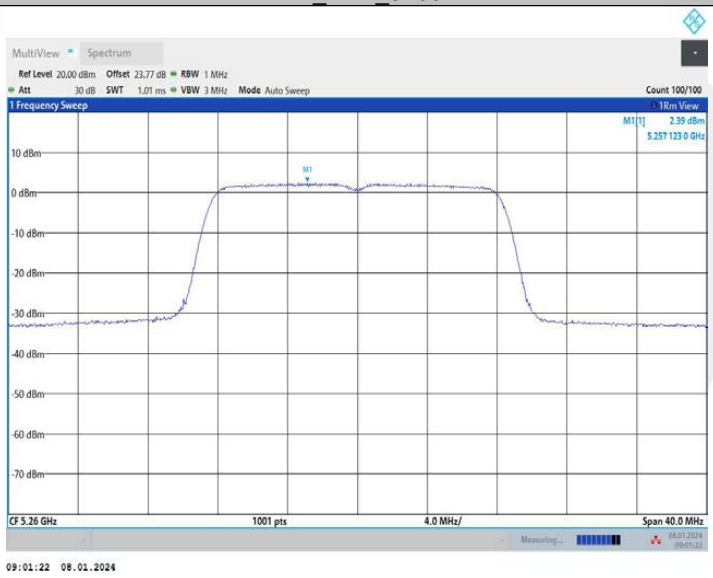

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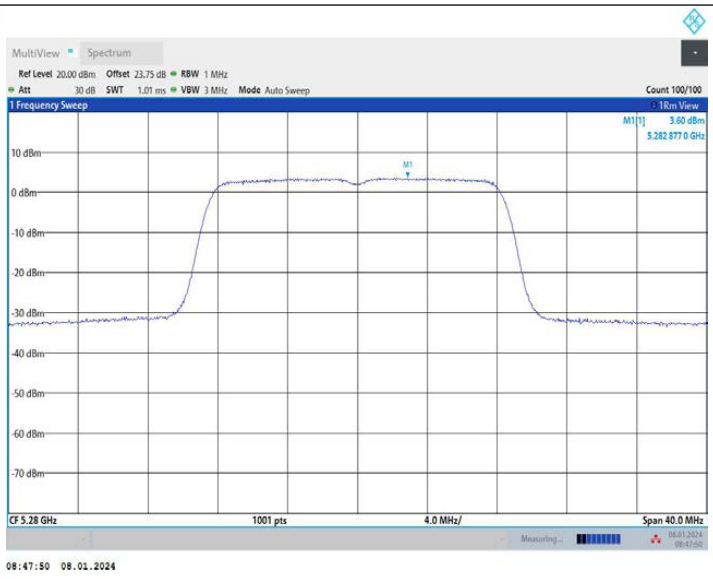

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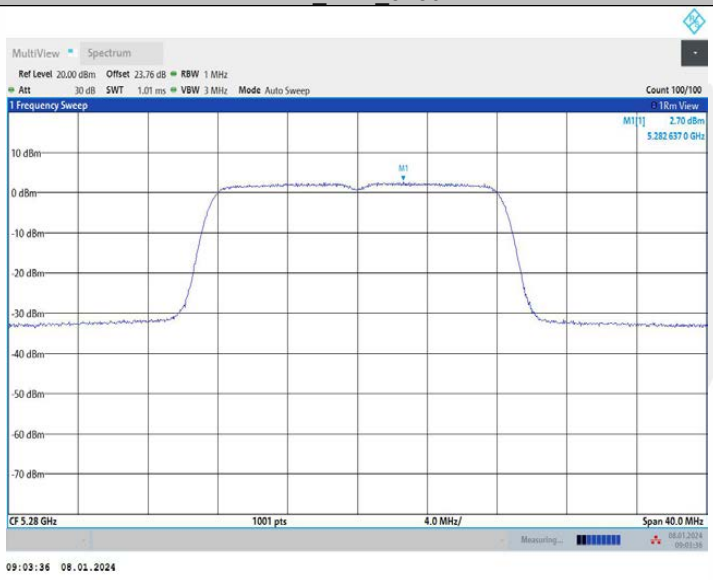

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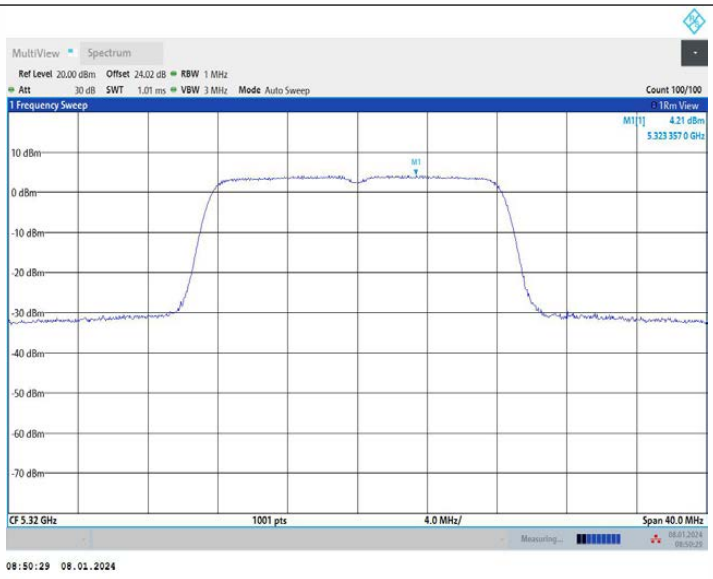
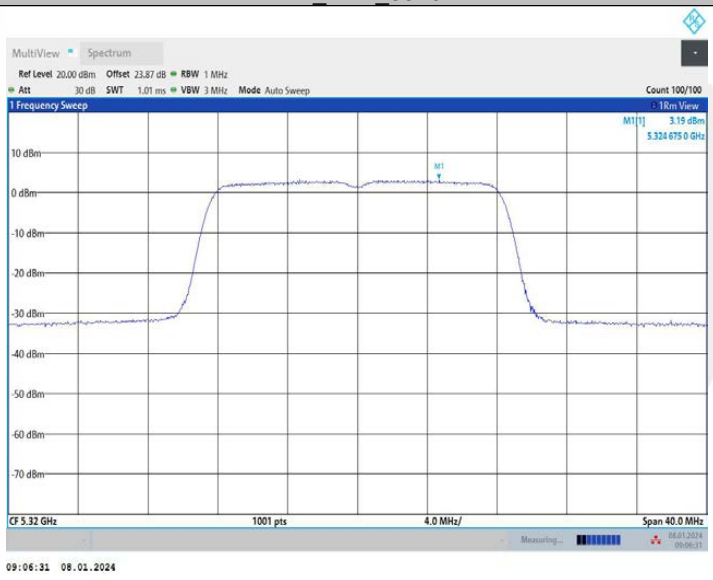
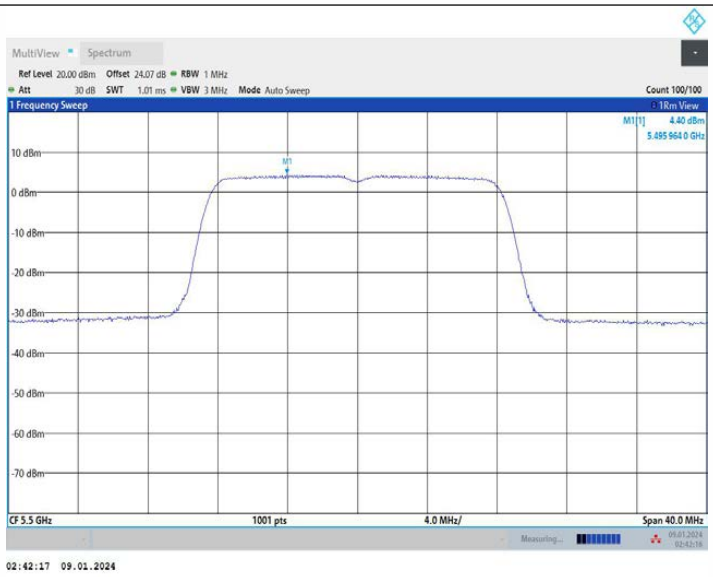


11A_Ant2_5320



11A_Ant1_5500



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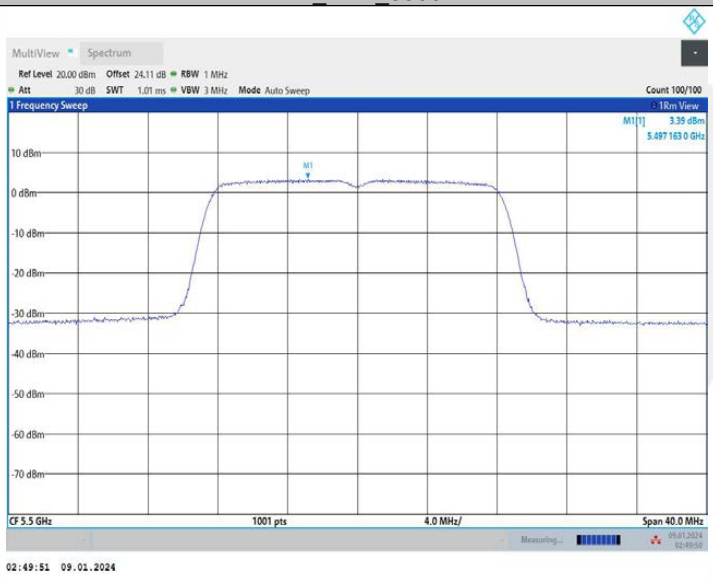

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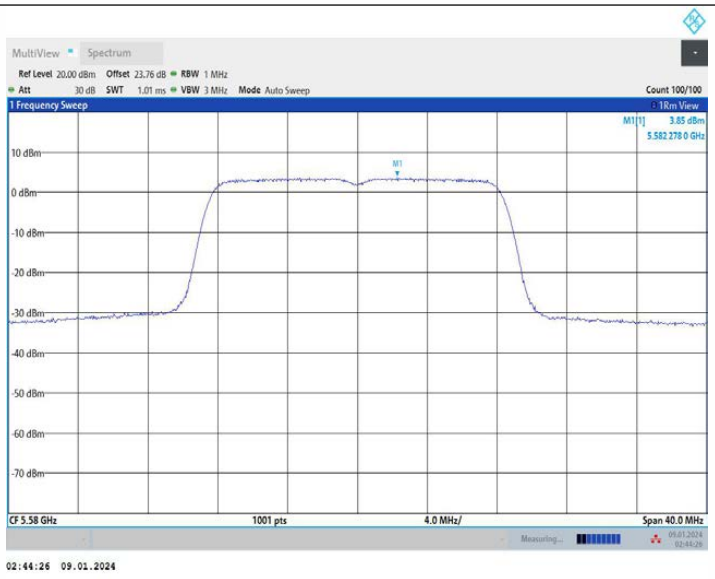

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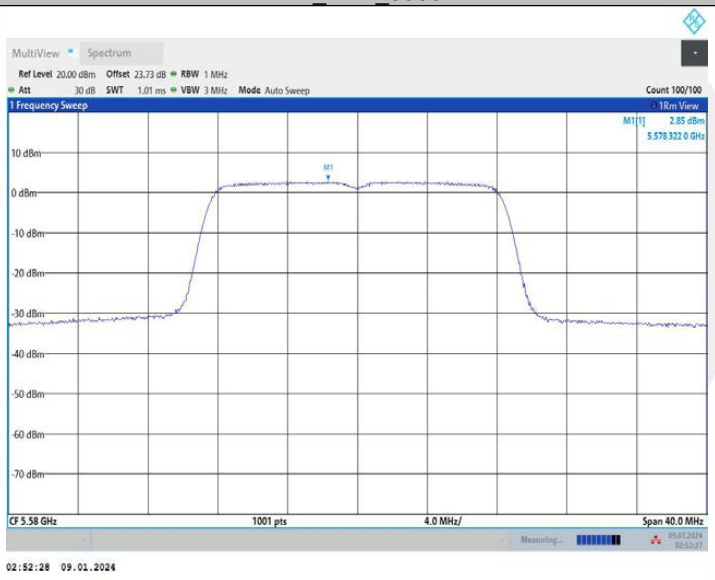

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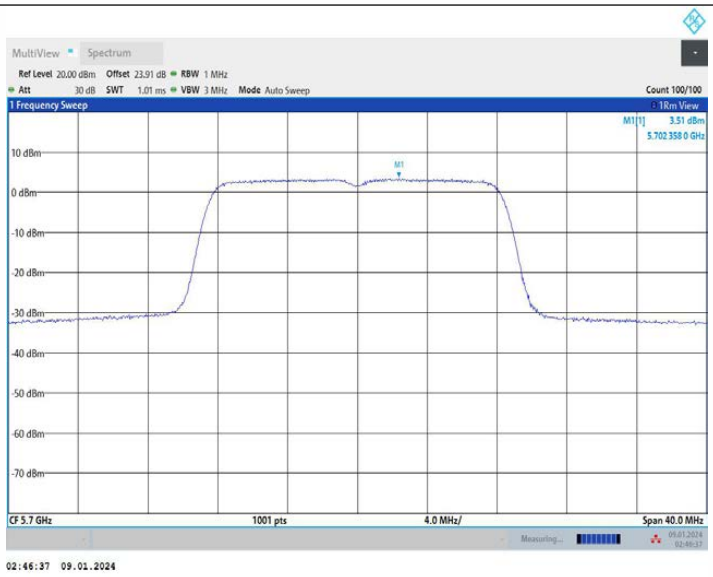

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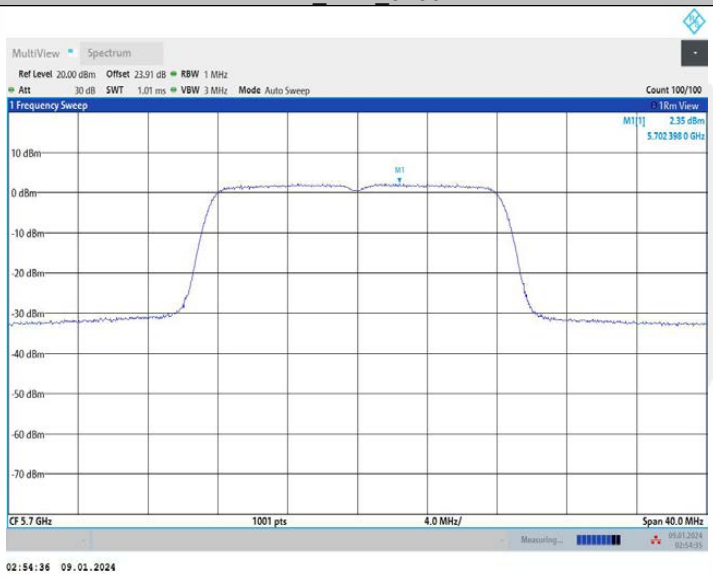

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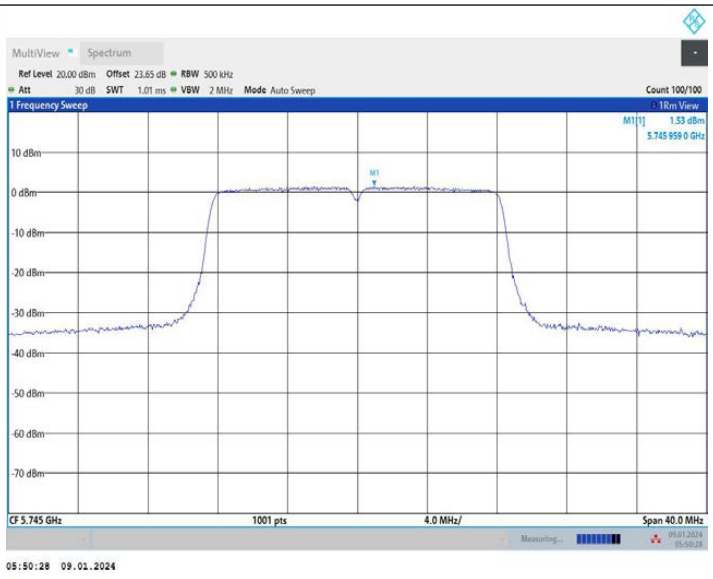

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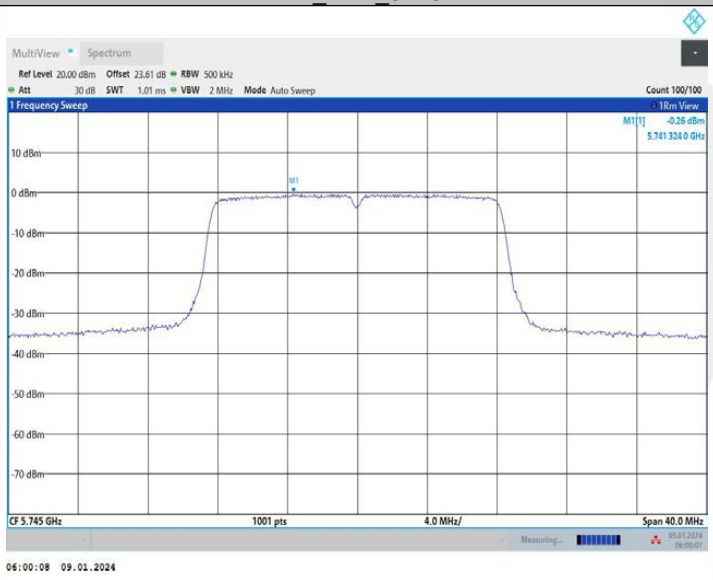

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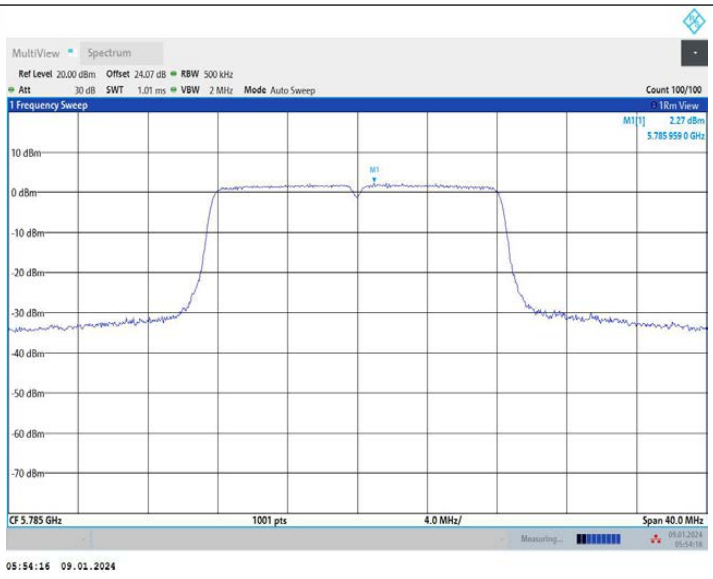

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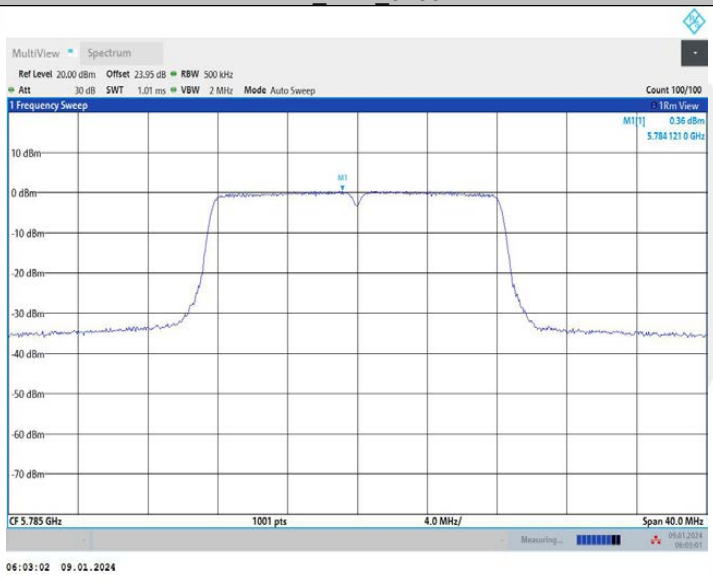
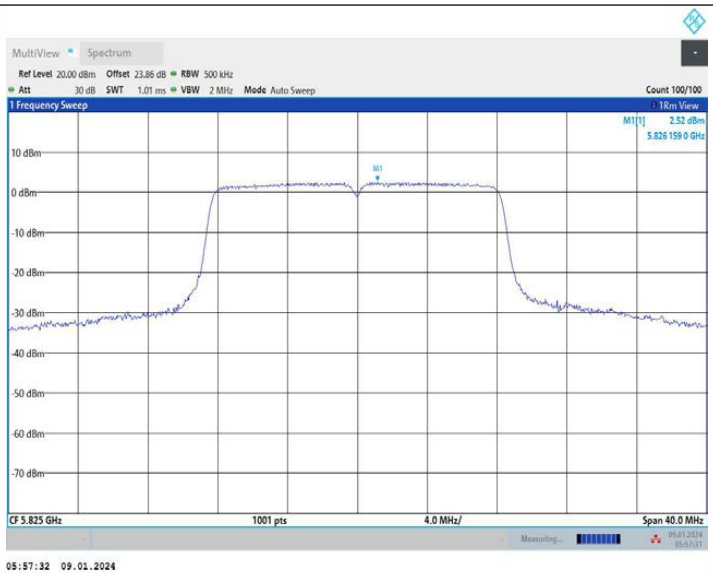


11A_Ant1_5825



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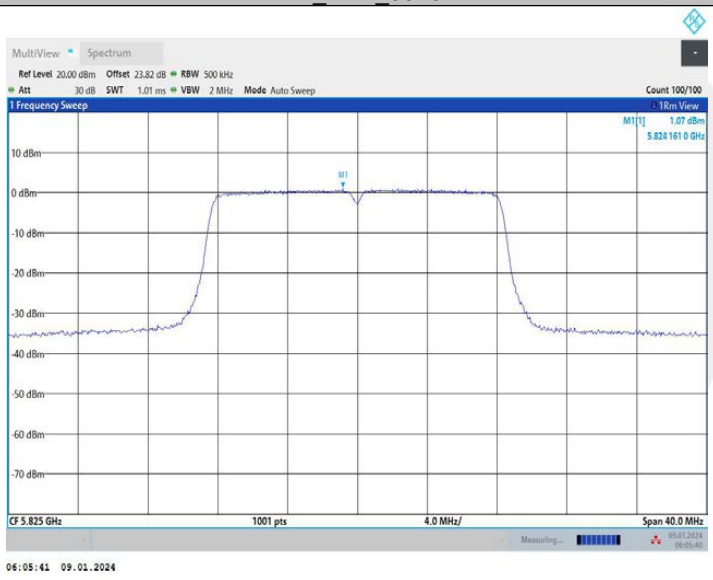
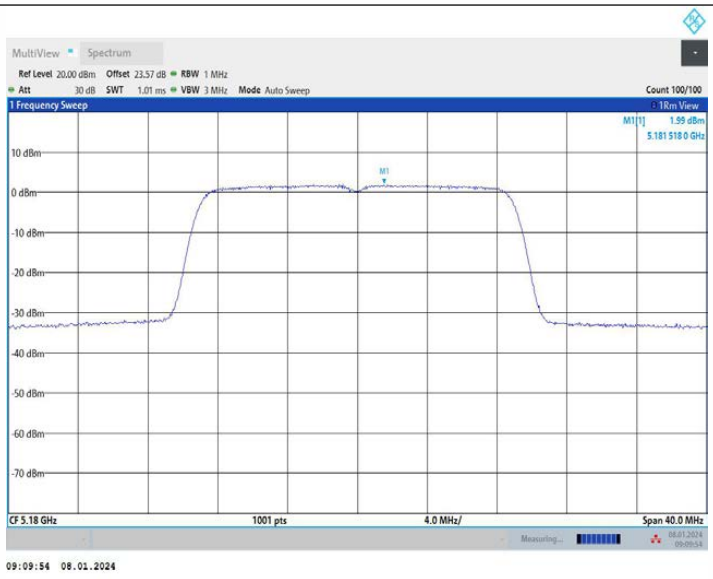


11N20MIMO_Ant1_5180



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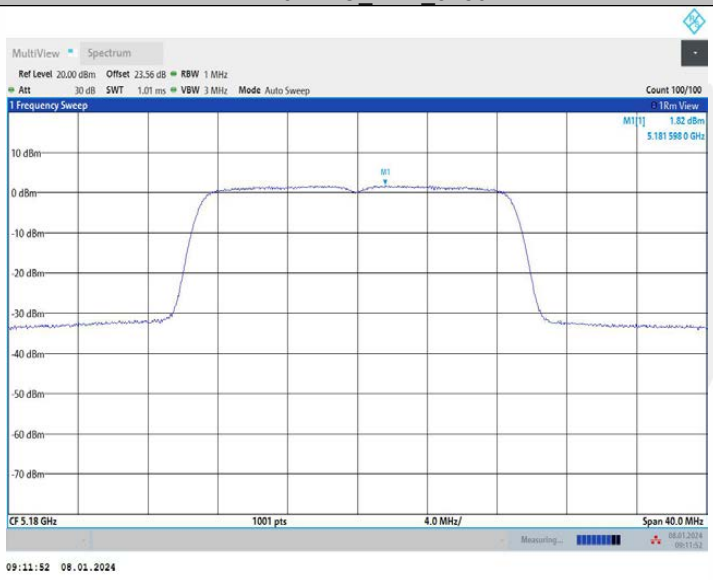

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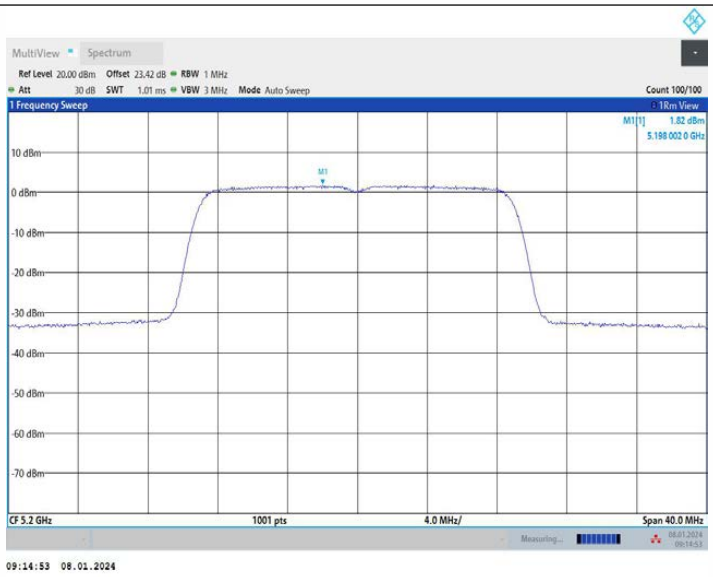

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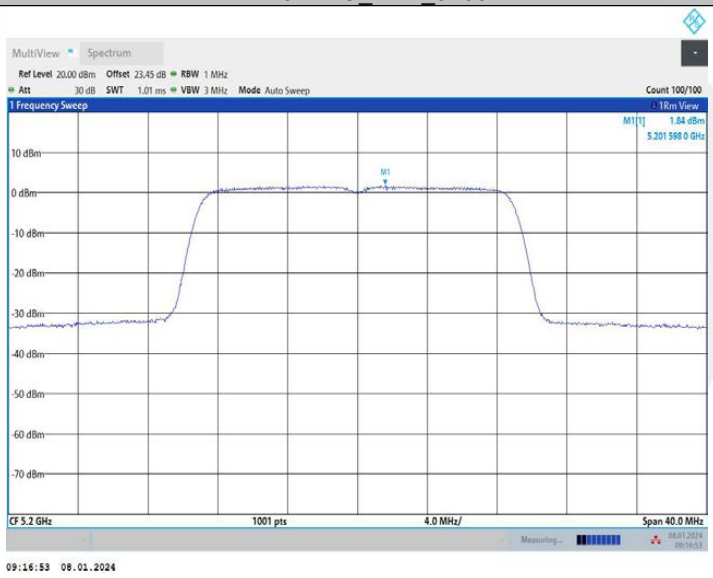

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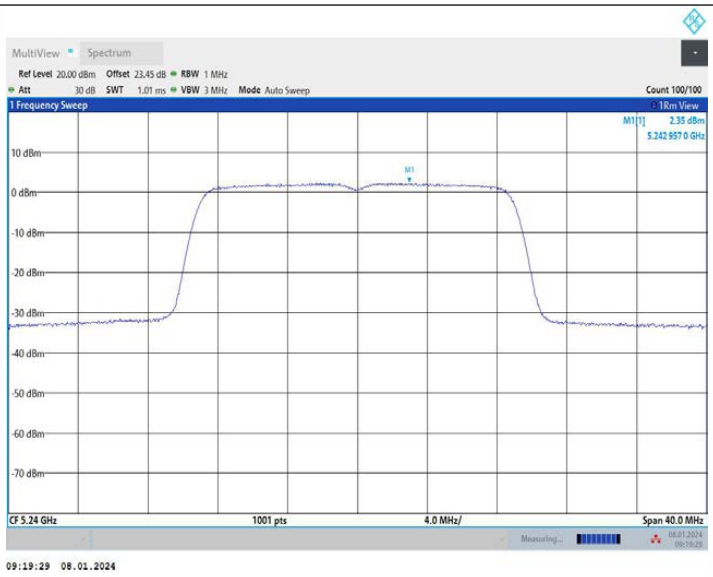

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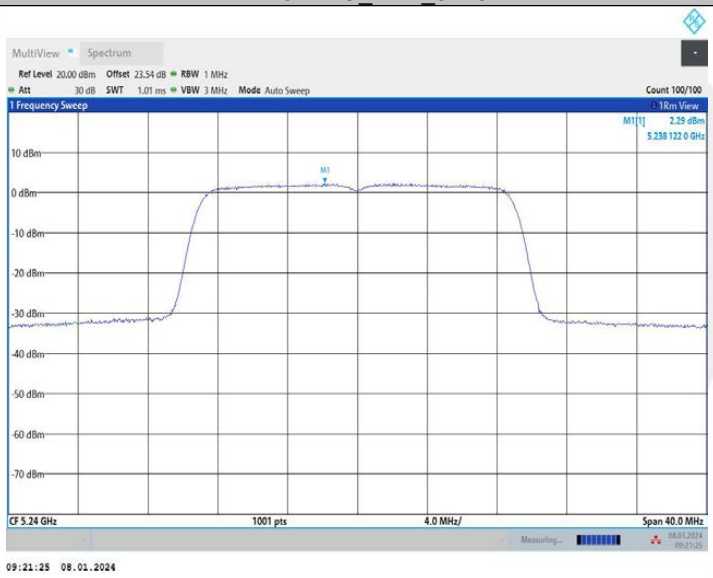

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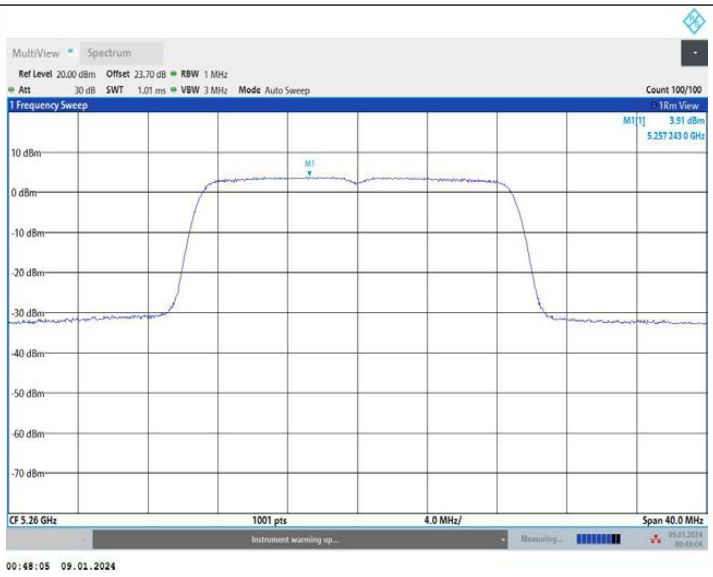

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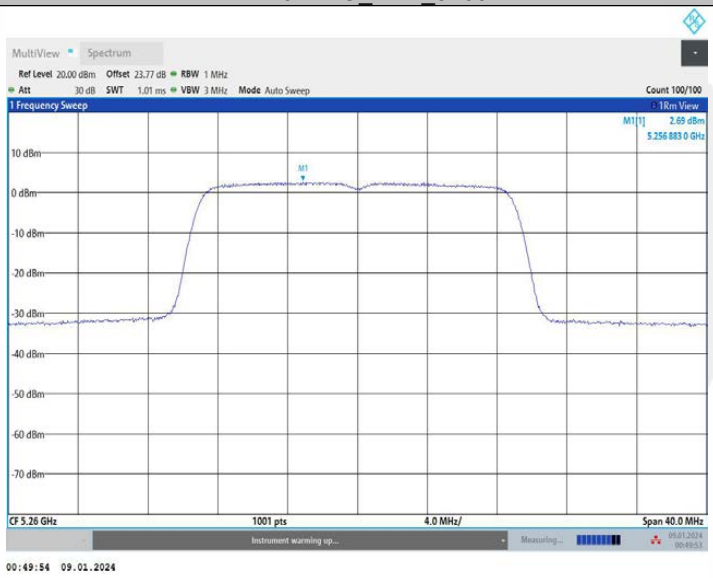

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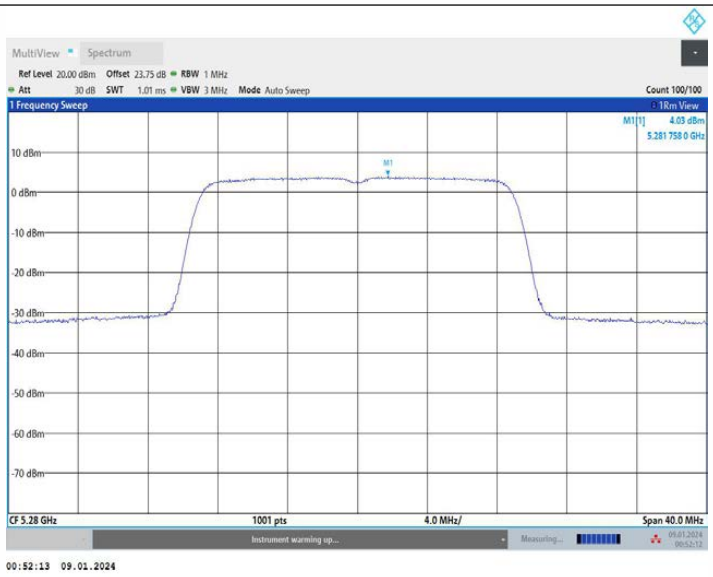

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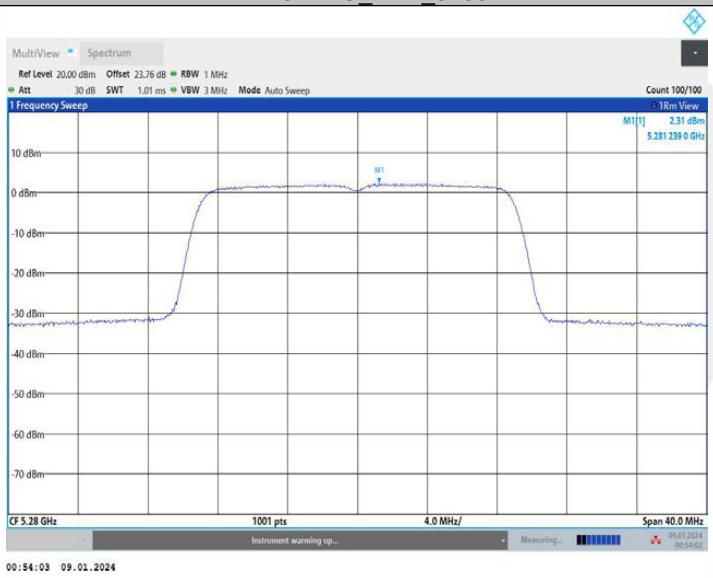

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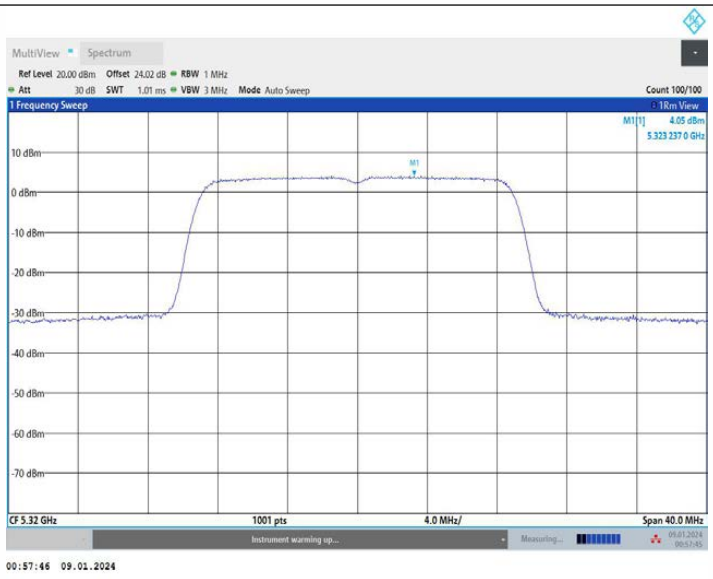

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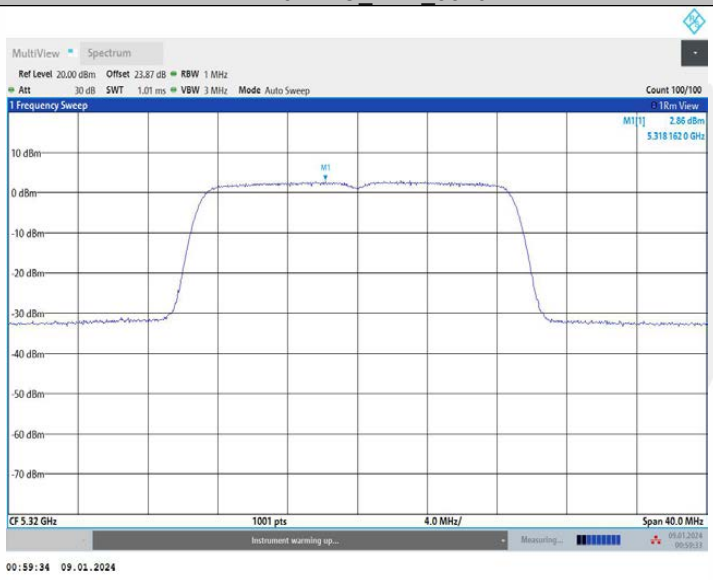

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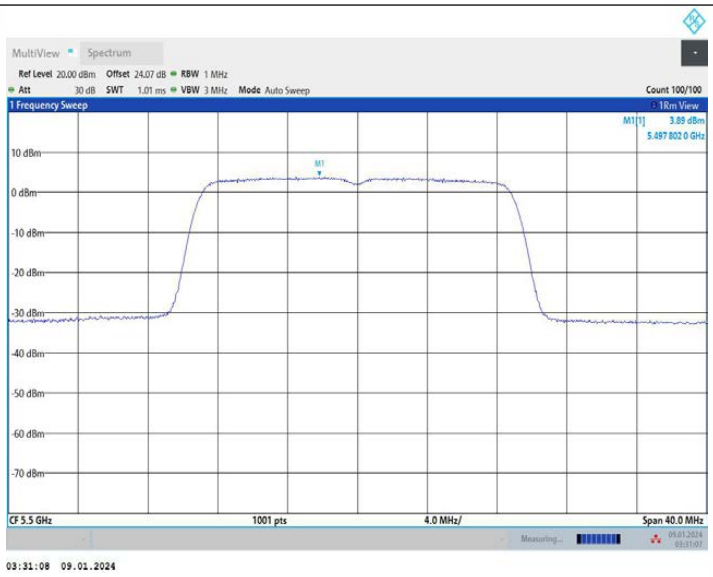

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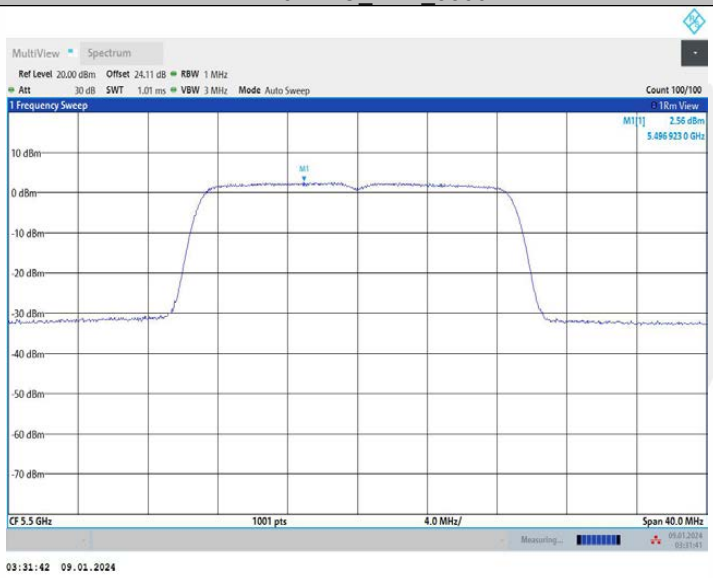

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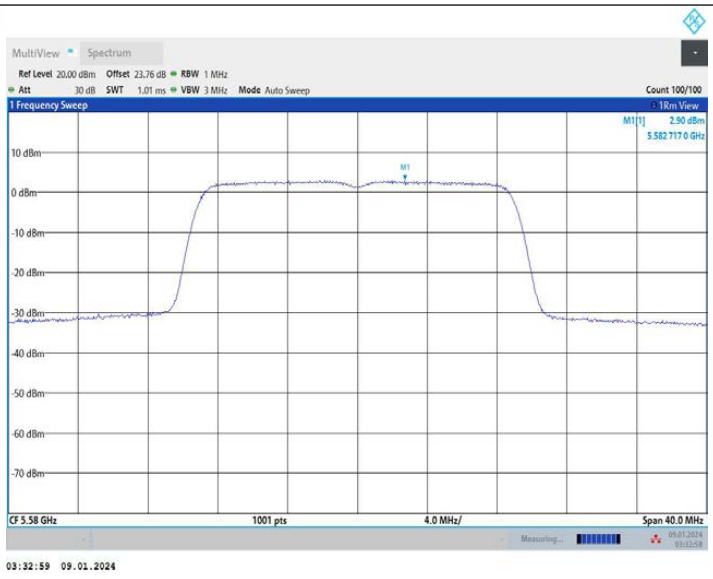

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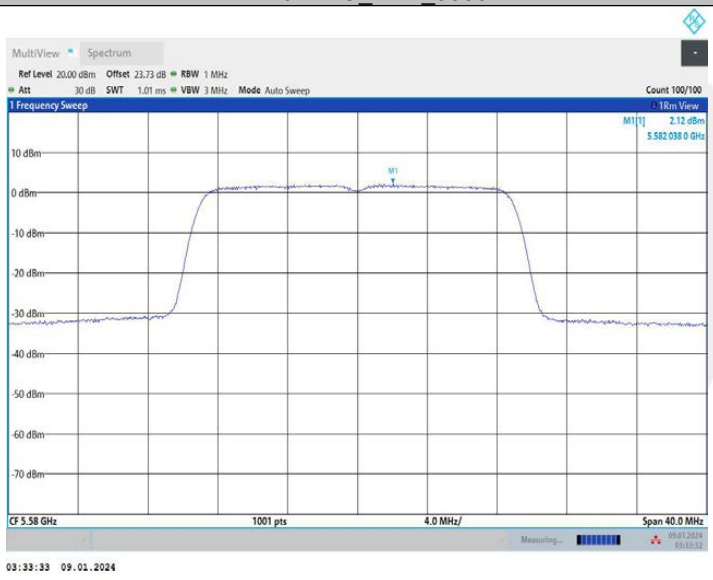

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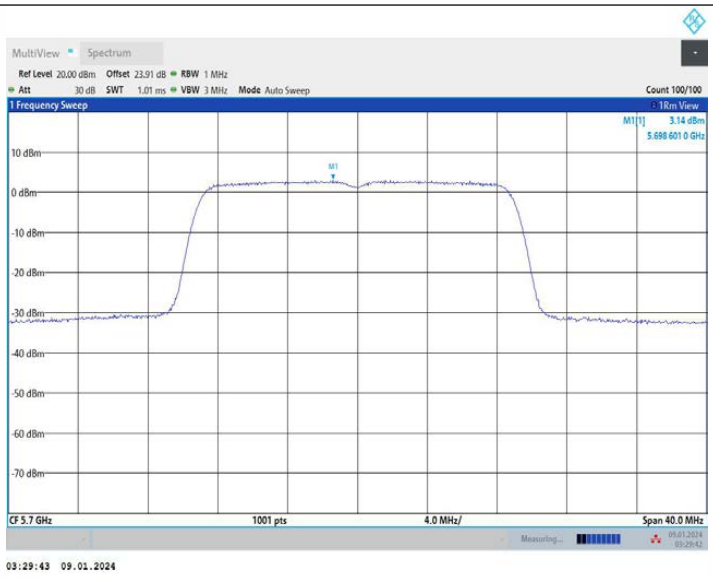

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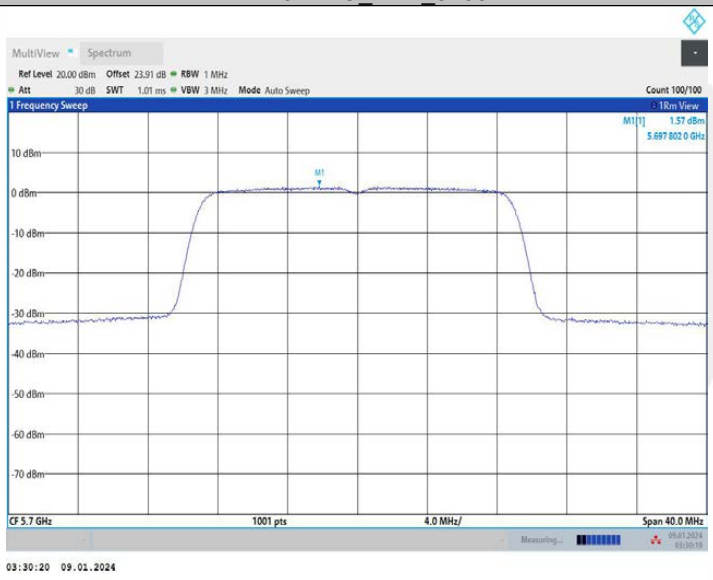

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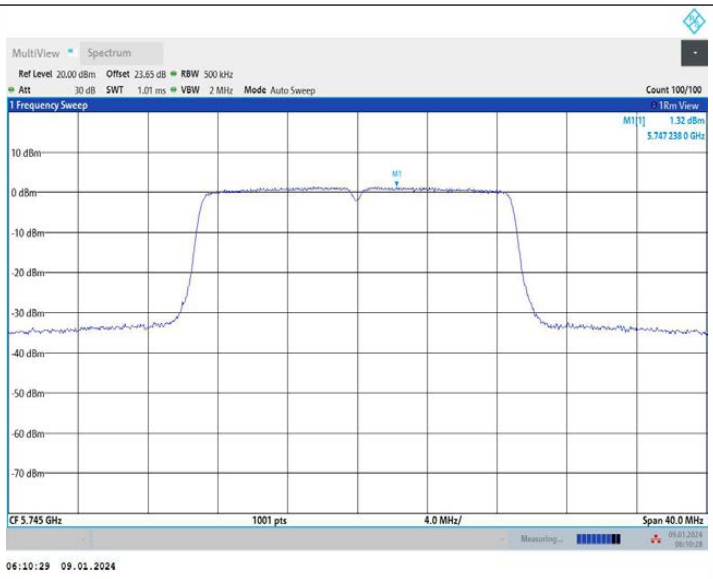

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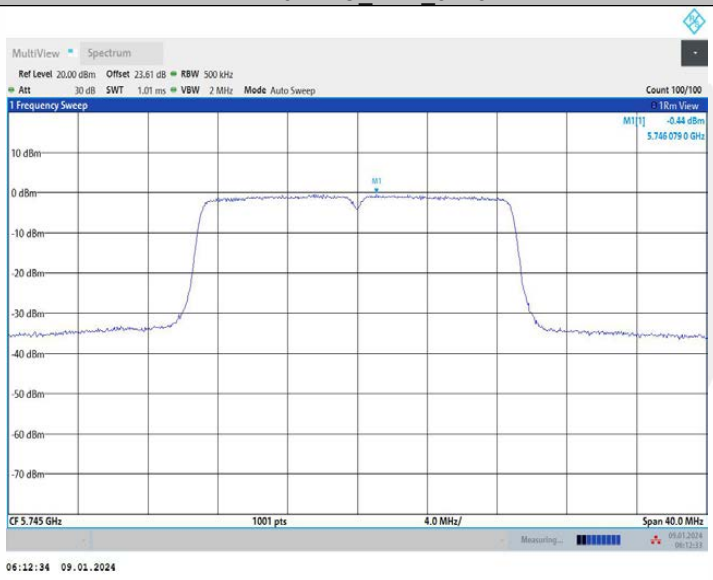

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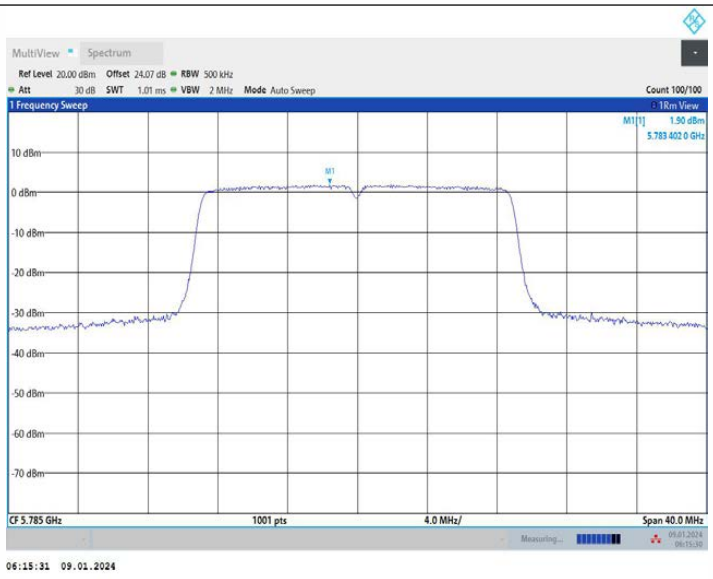

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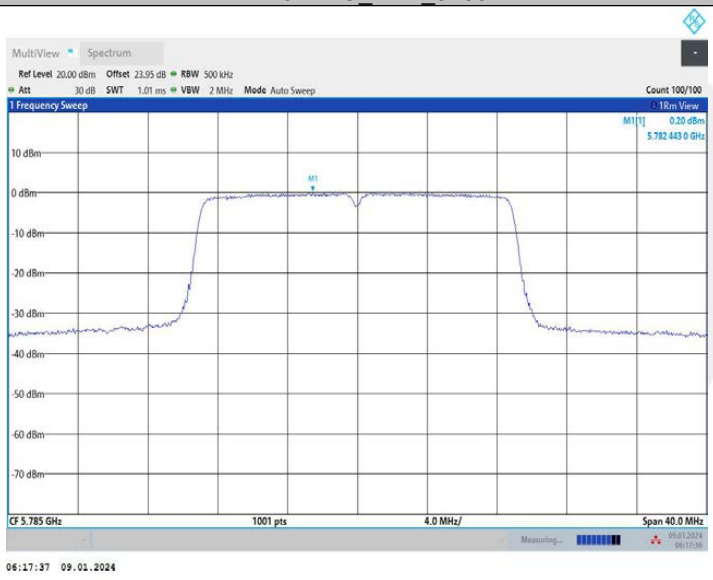

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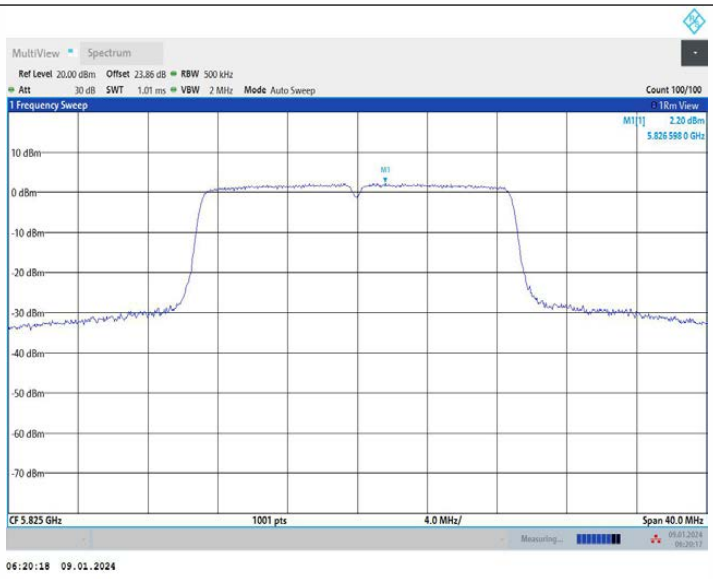

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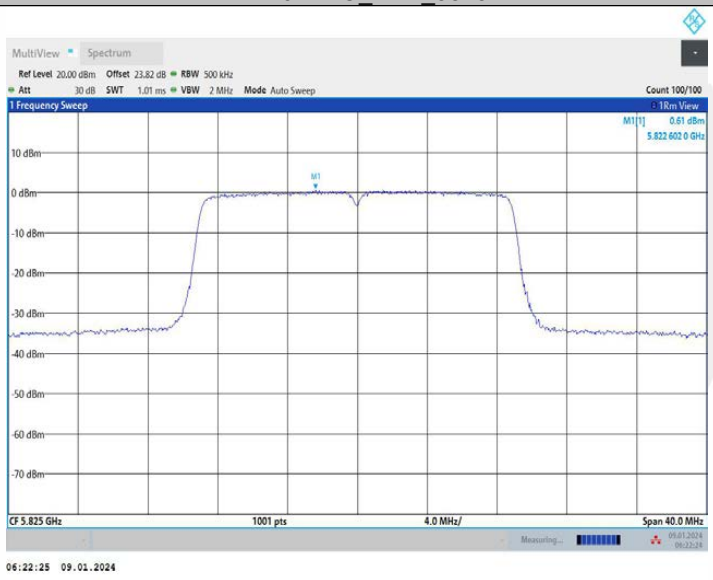

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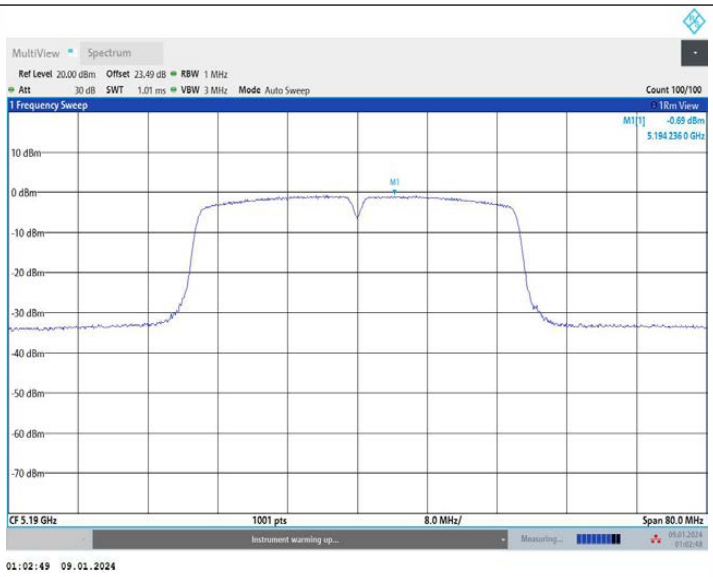

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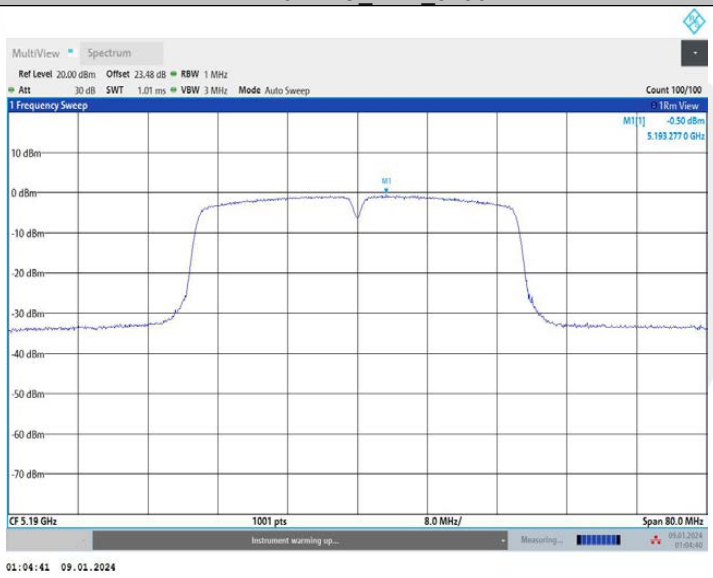

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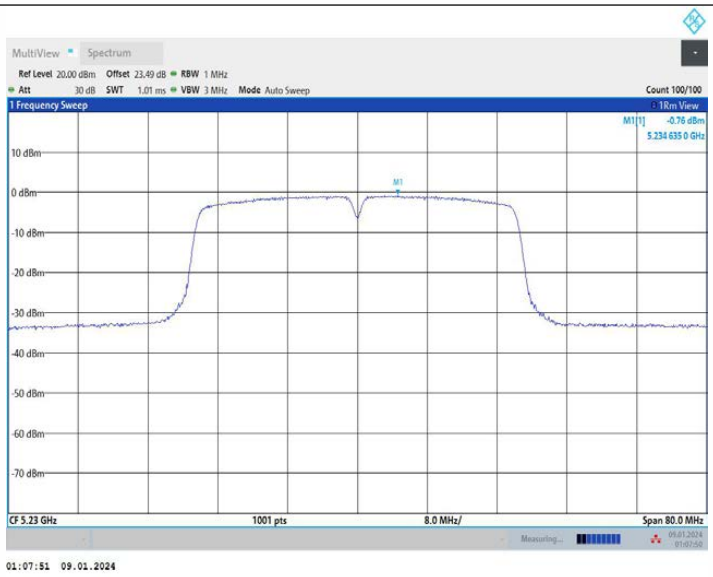

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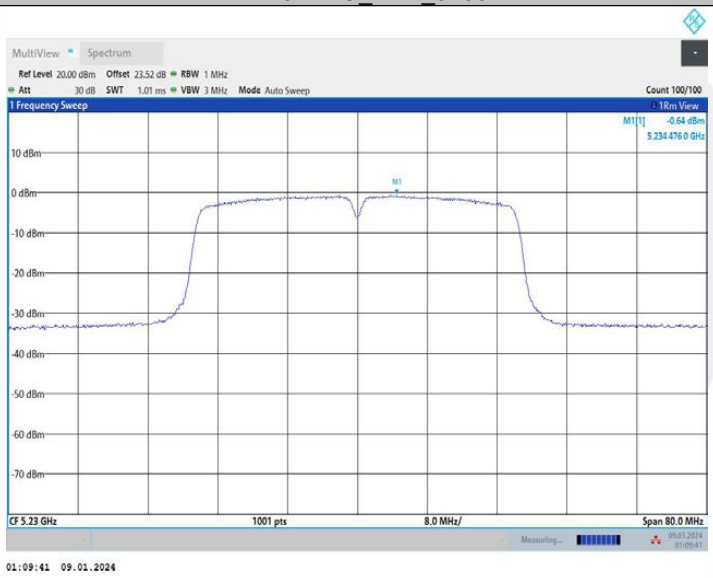

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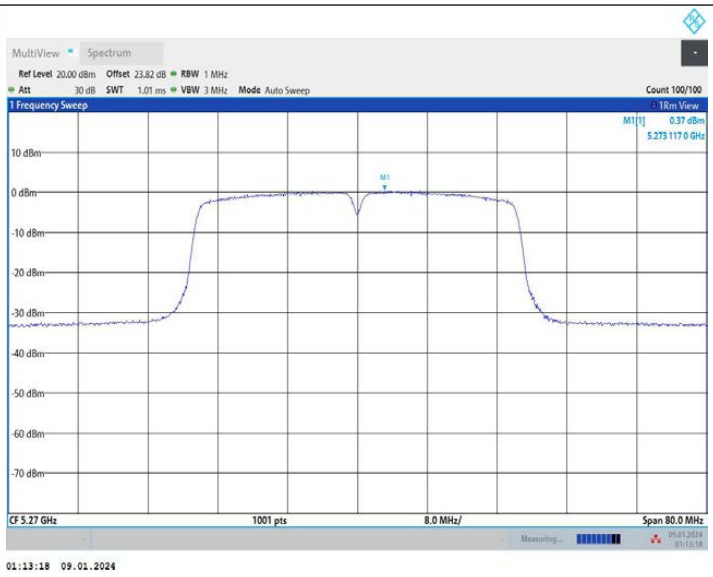

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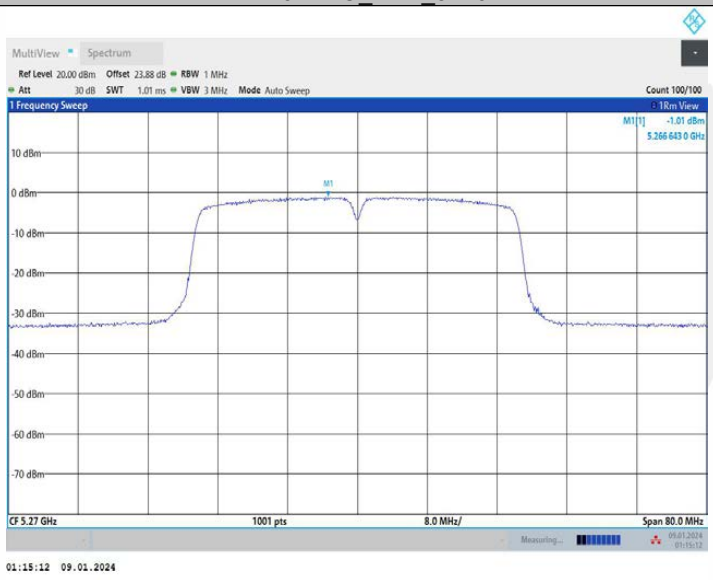

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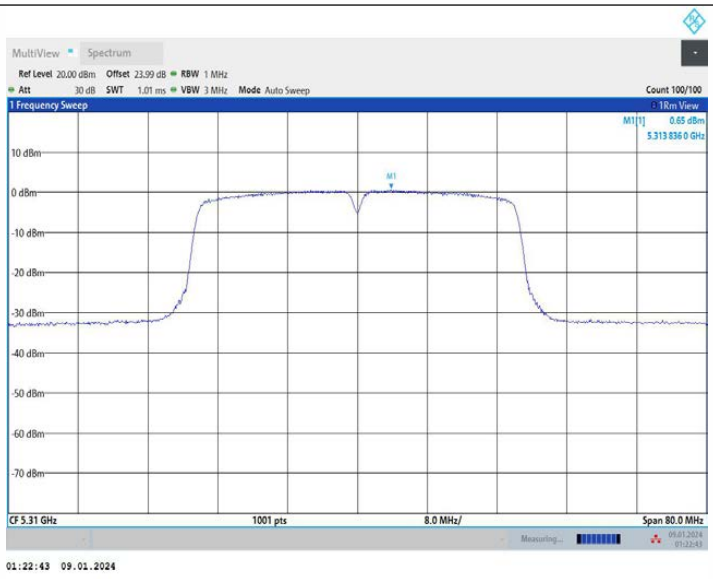

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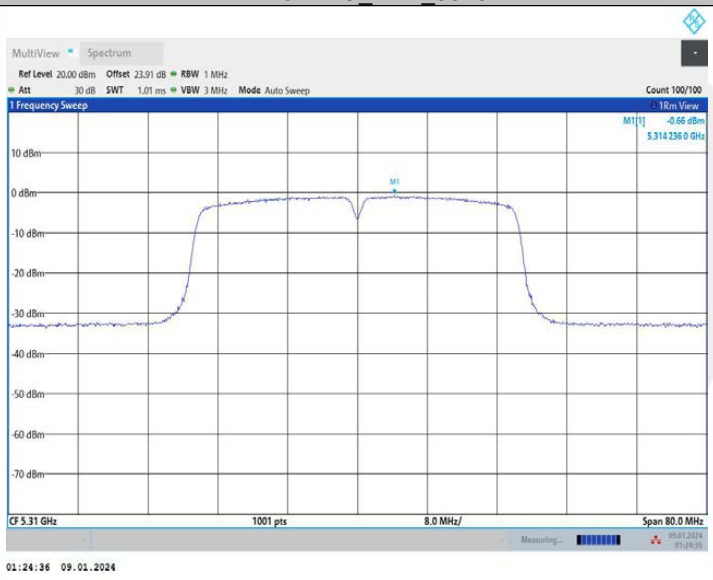

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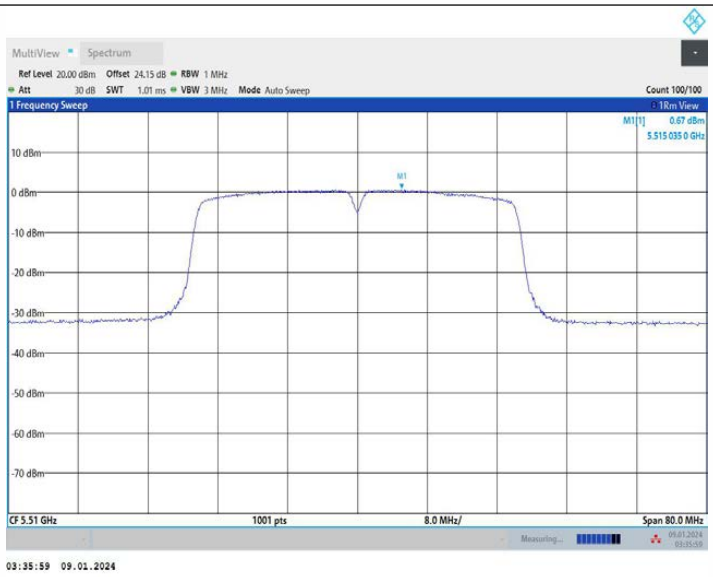

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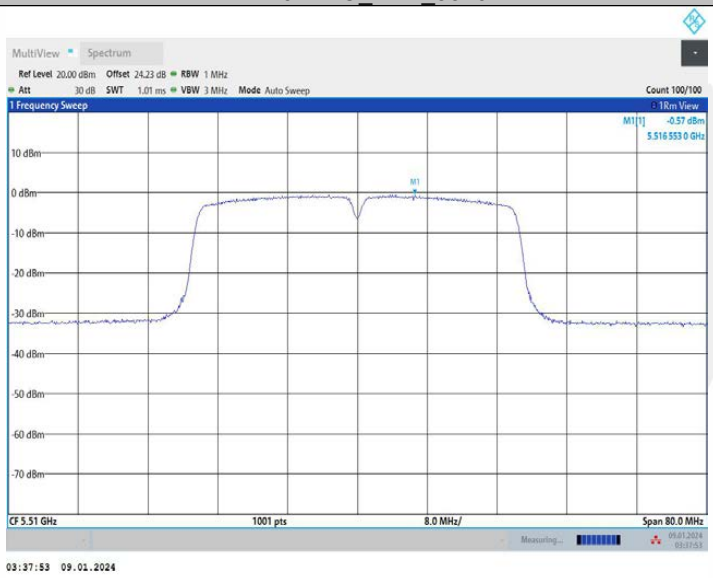

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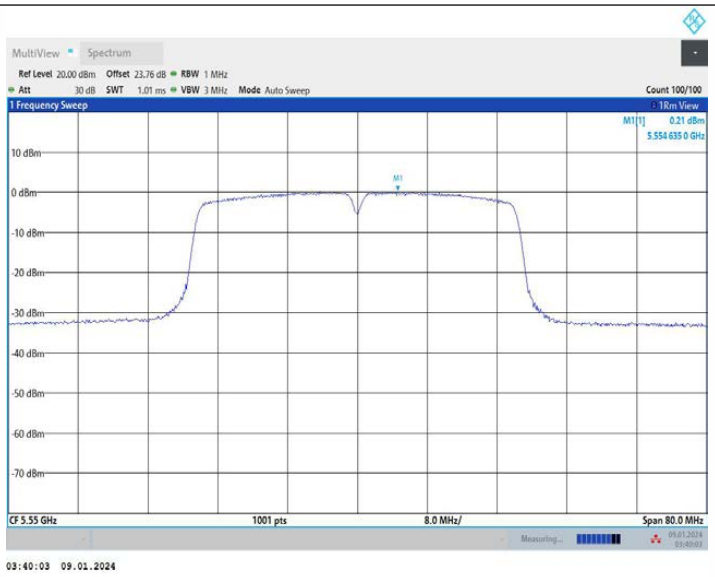

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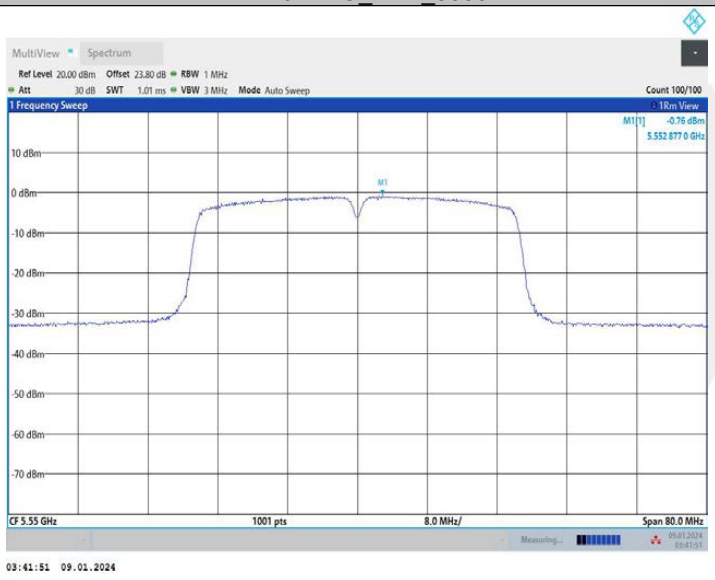

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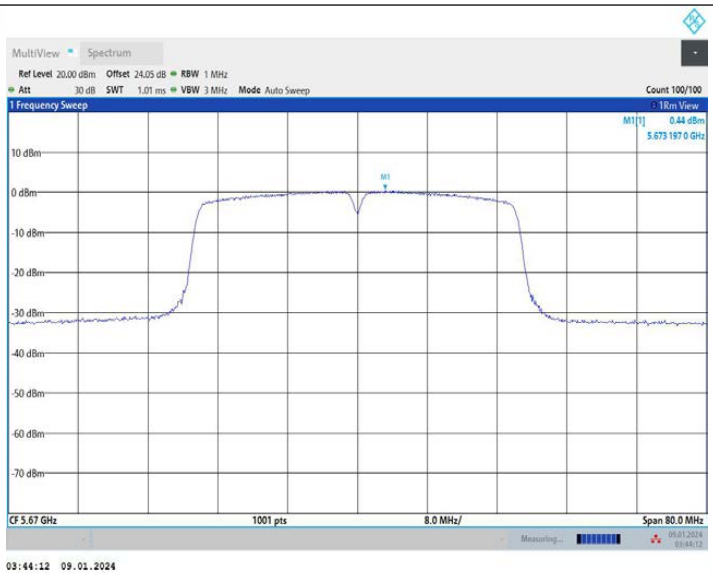

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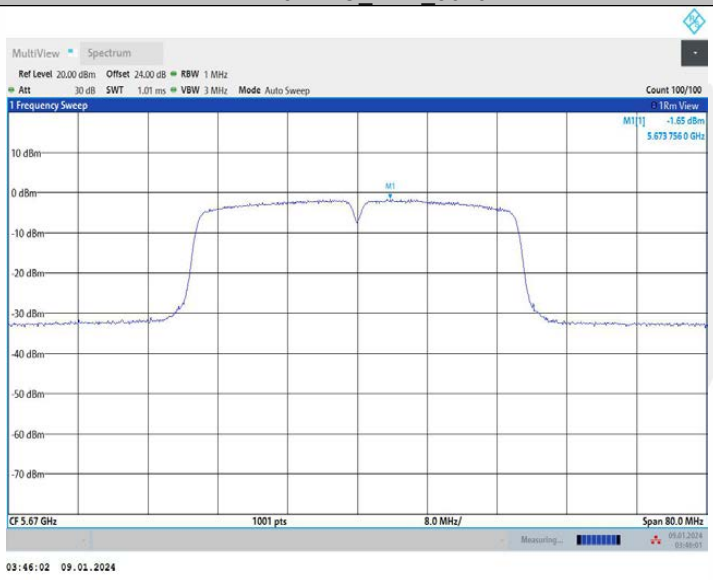

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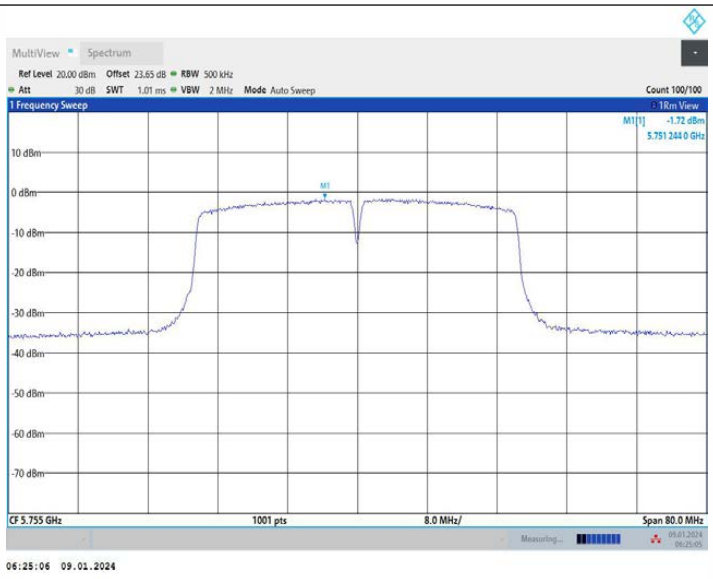

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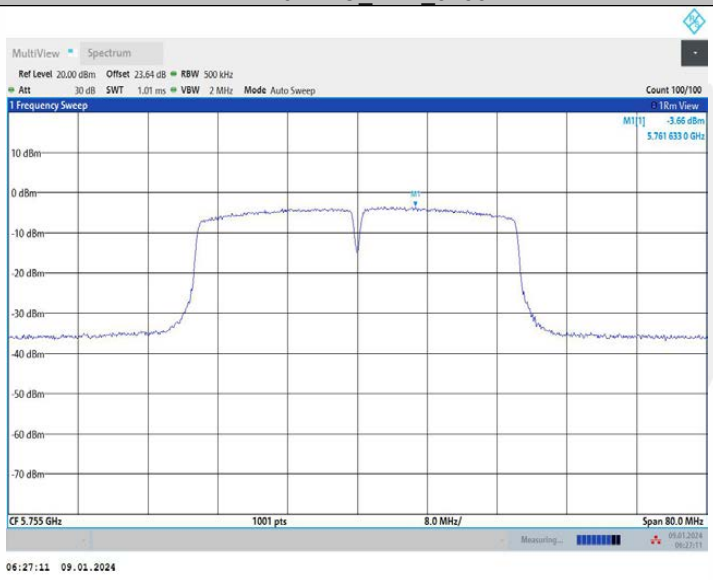

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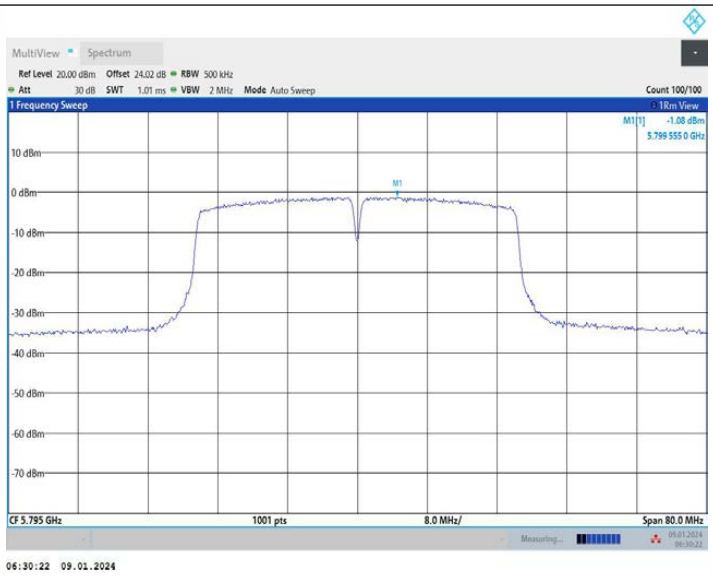

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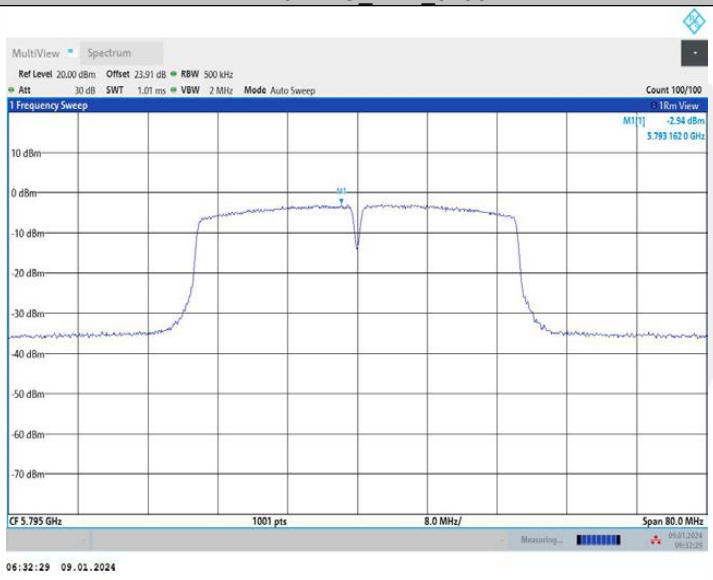
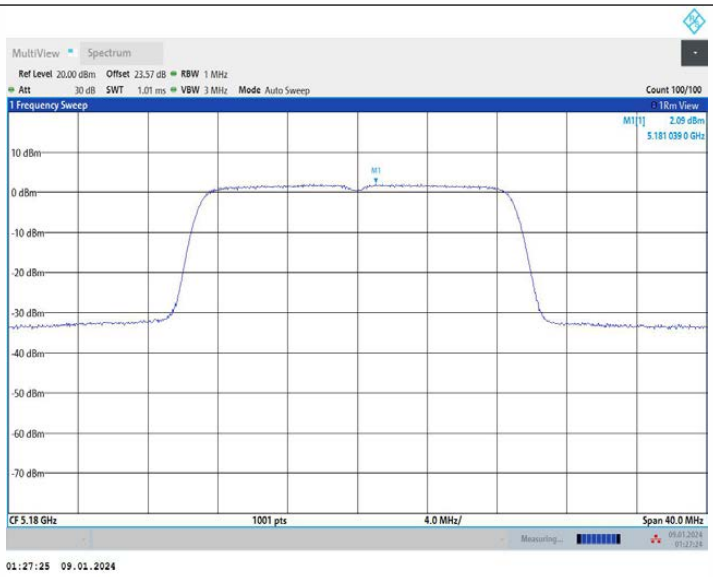


11AC20MIMO_Ant1_5180



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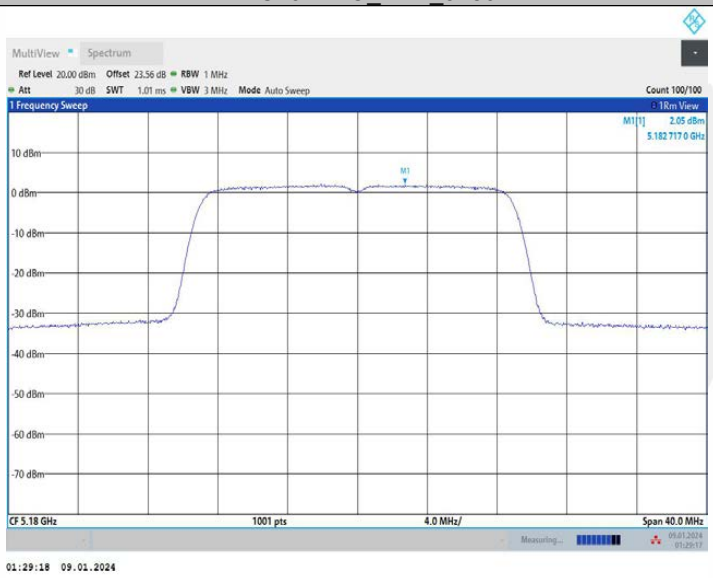
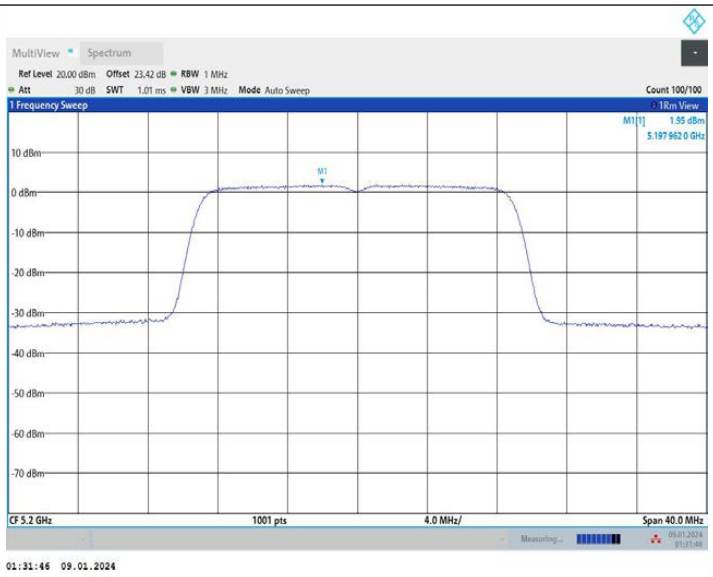


11AC20MIMO_Ant1_5200



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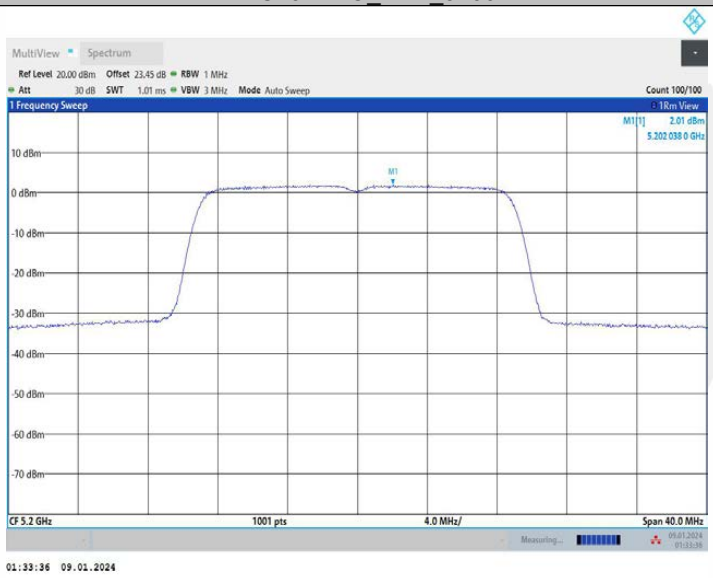

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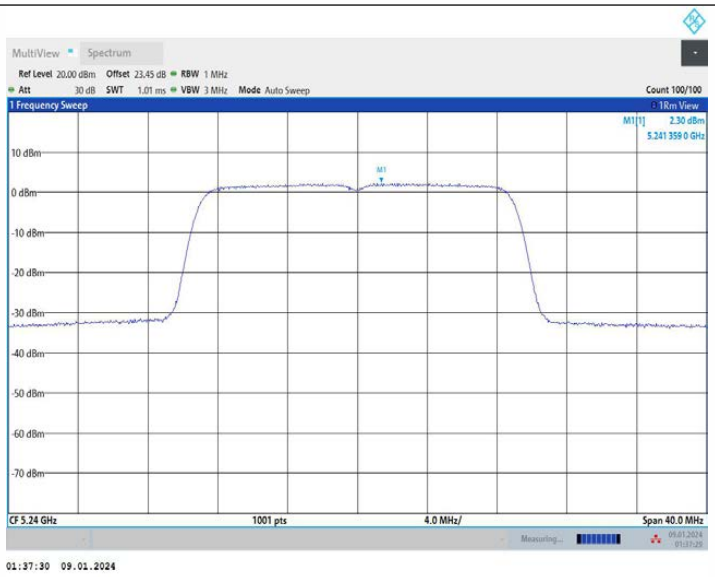

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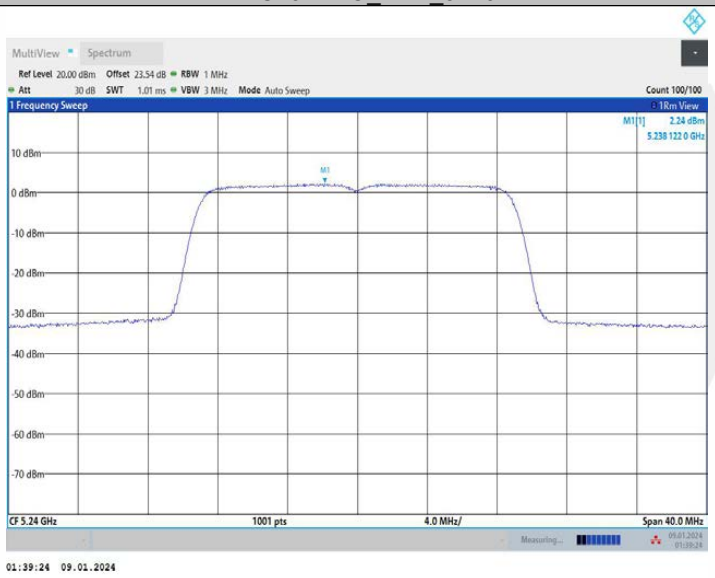

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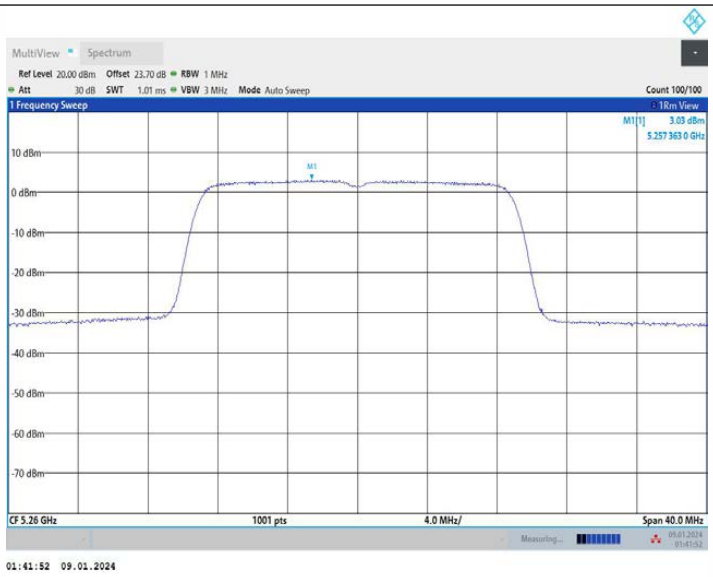

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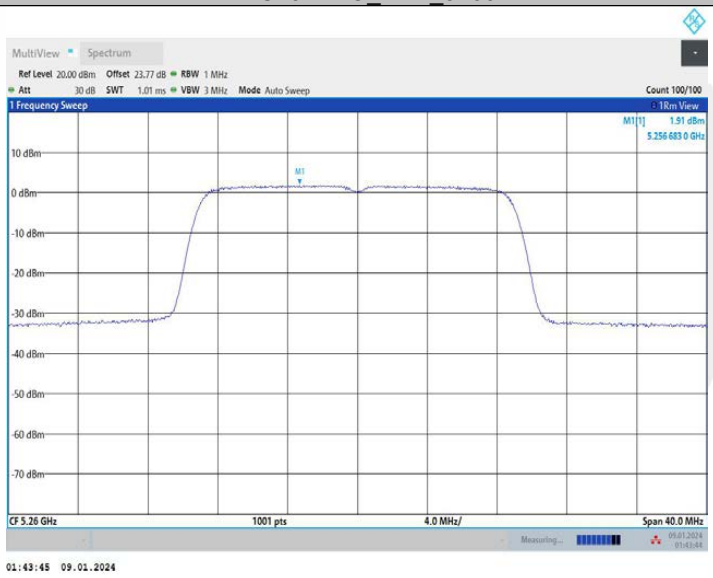

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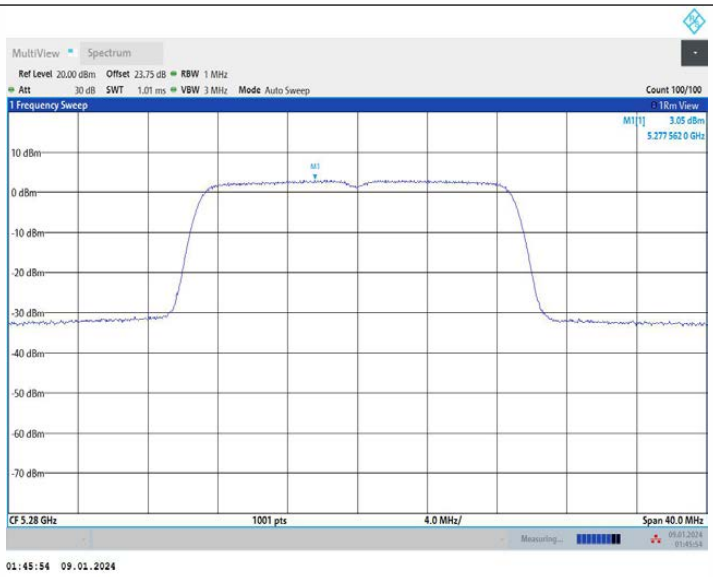

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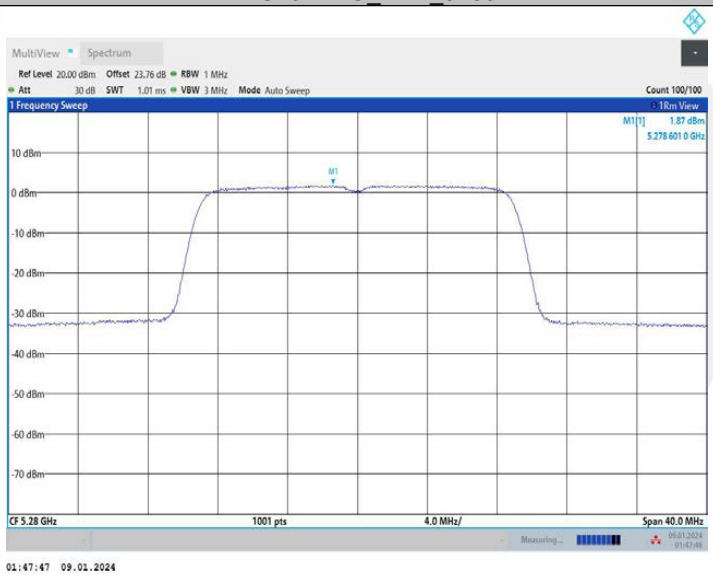

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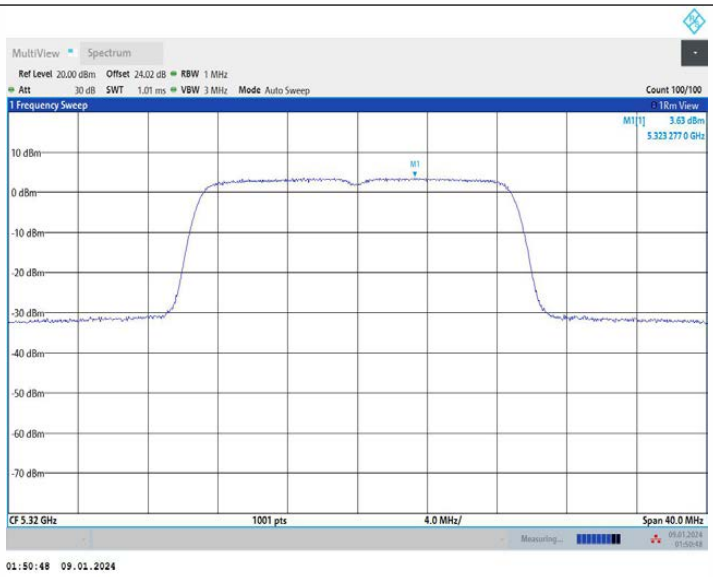

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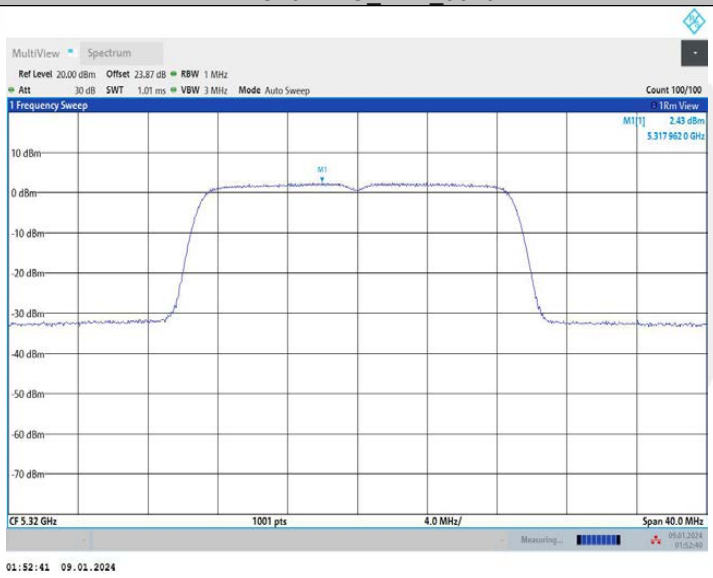

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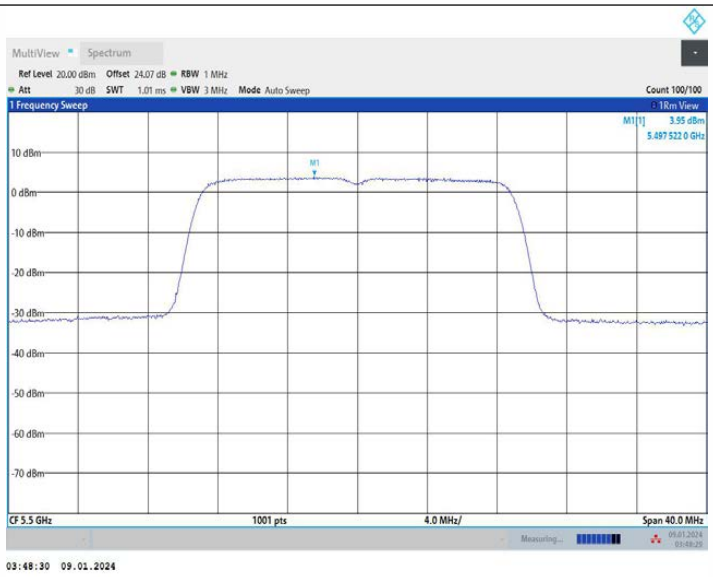

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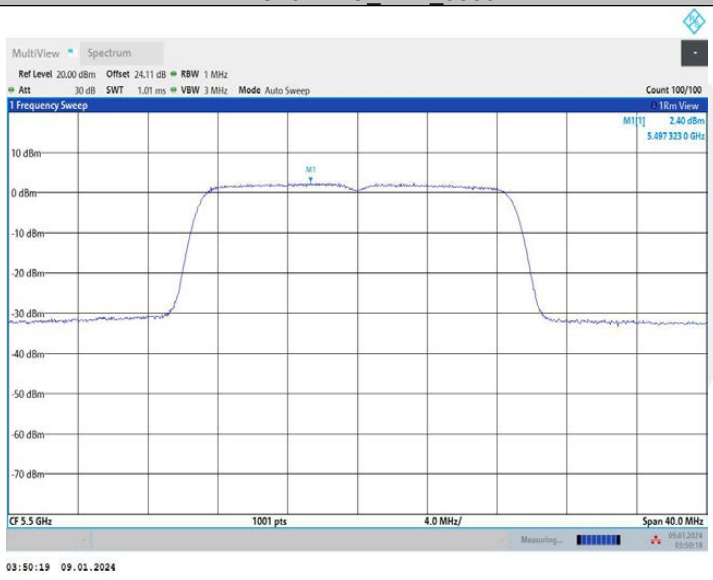

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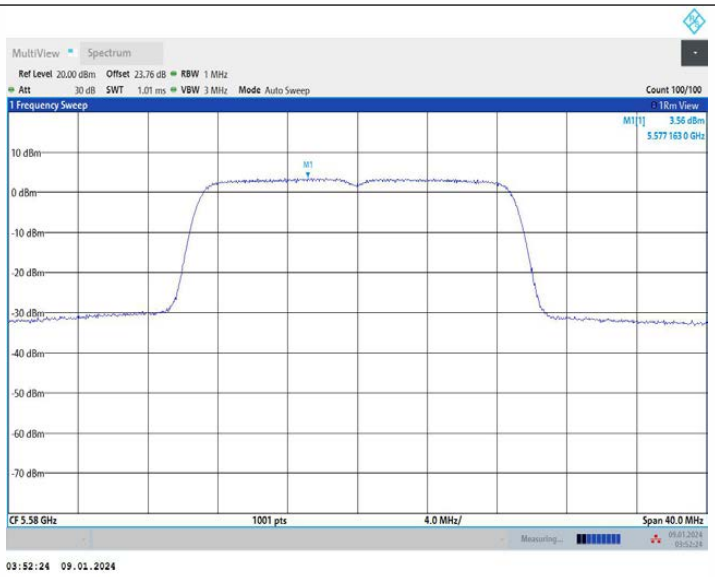

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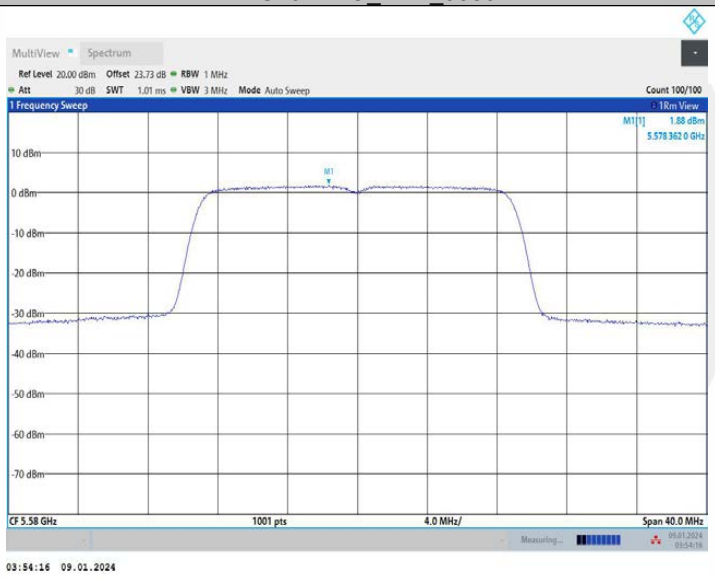

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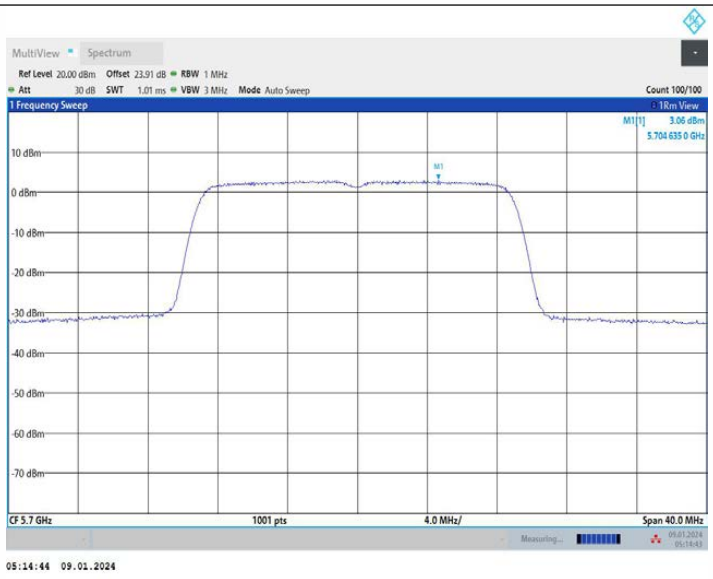

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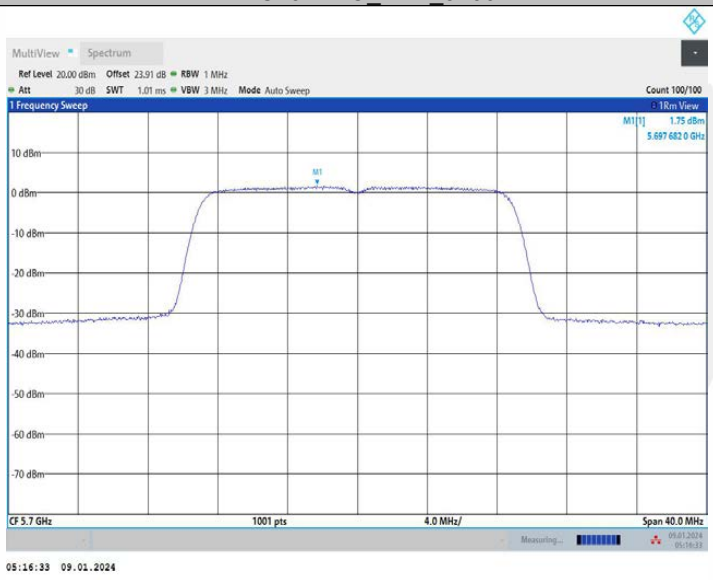

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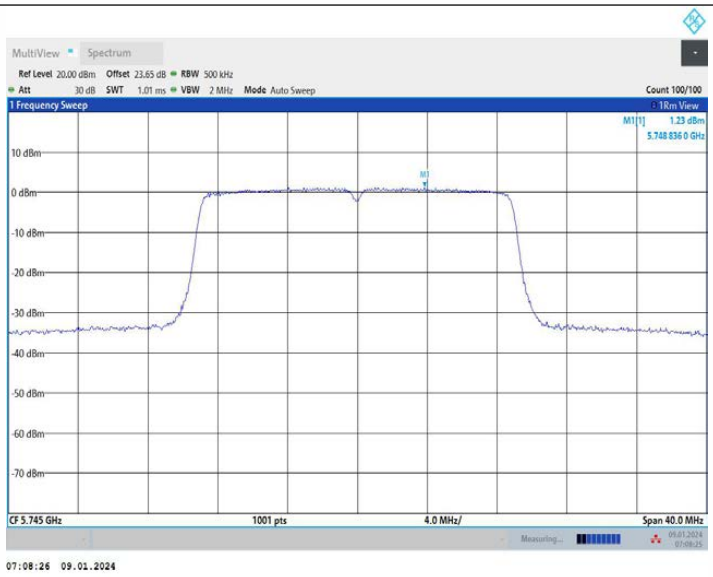

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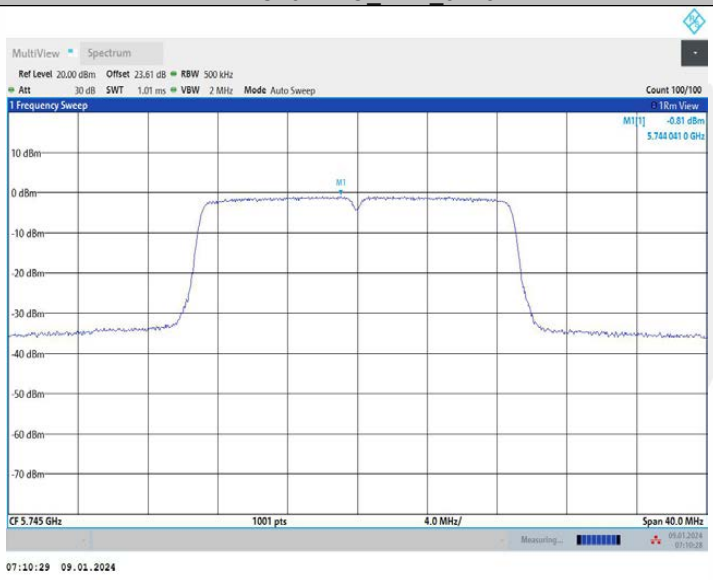

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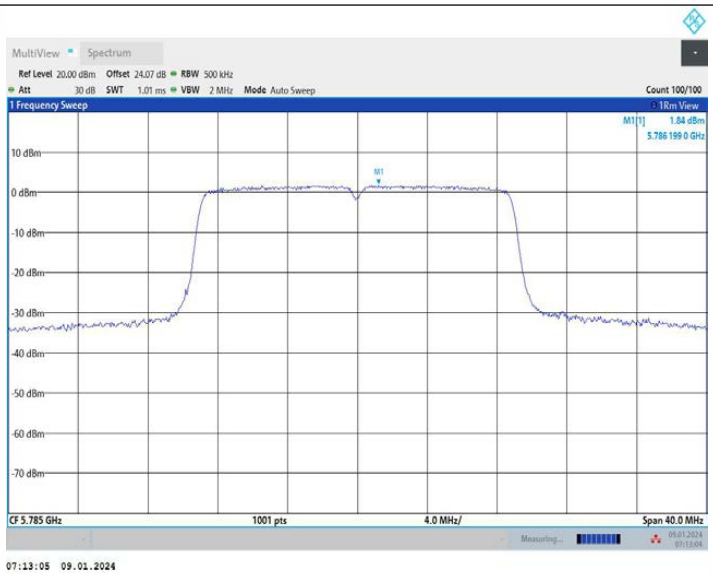

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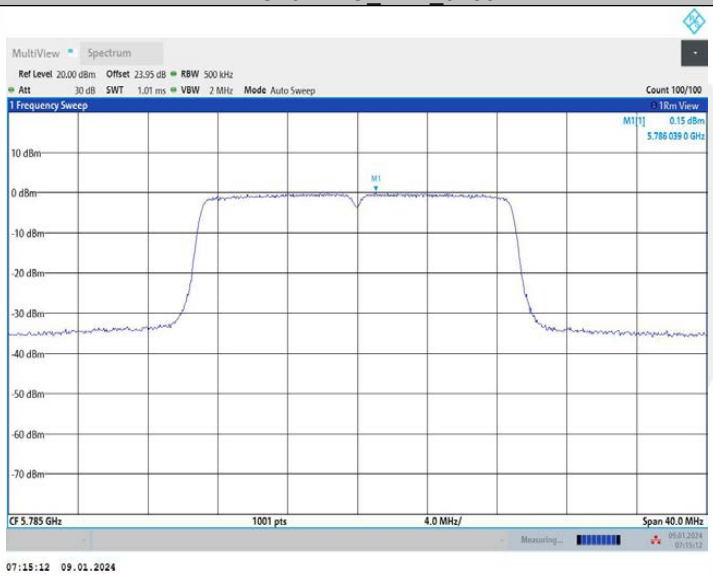

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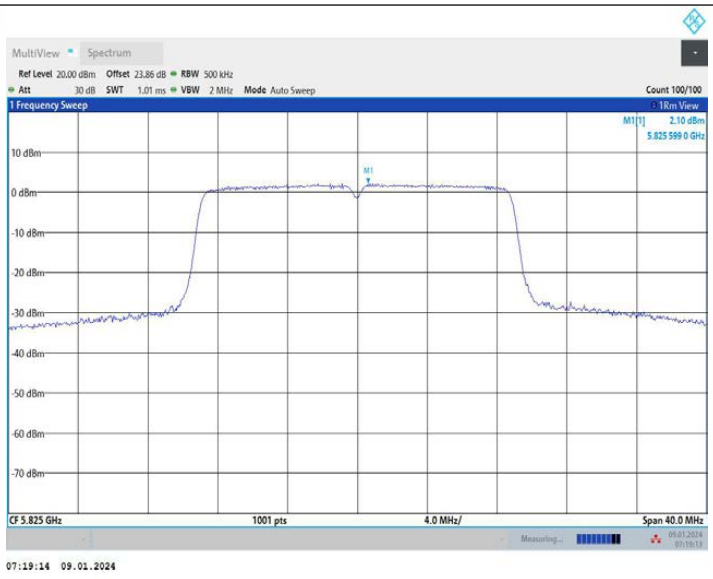

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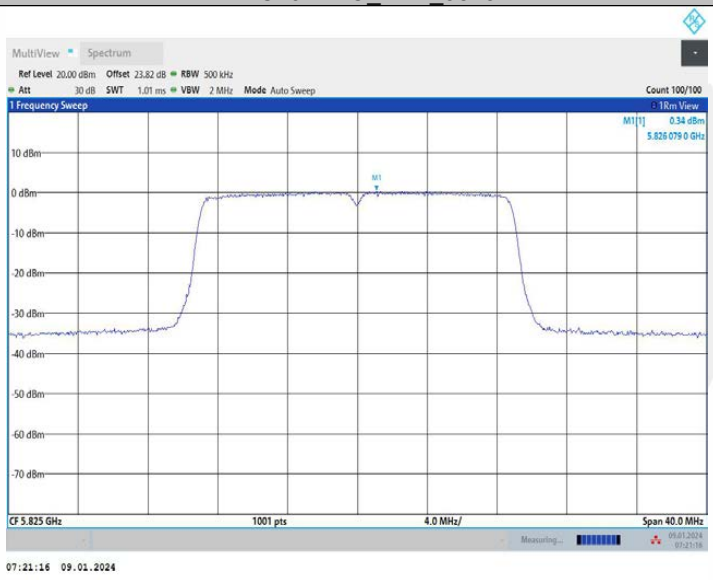

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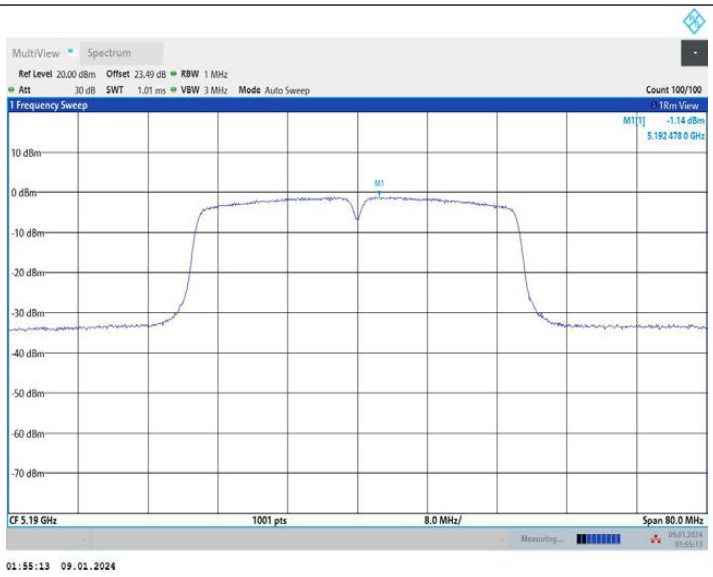

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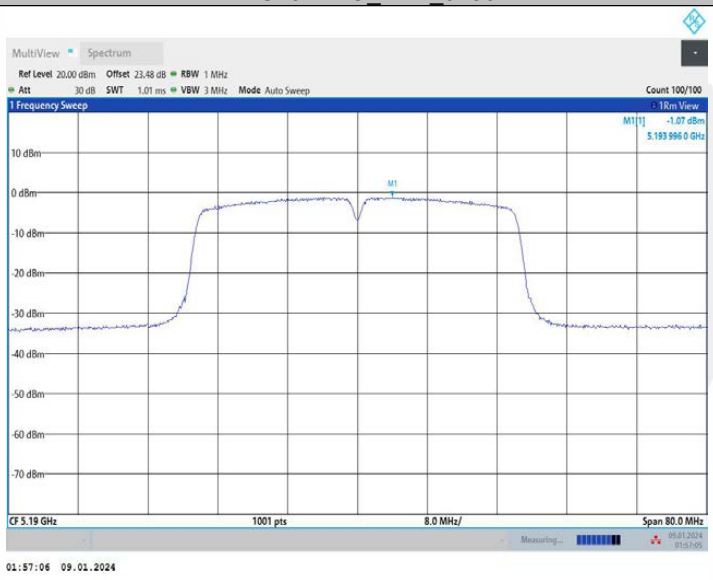

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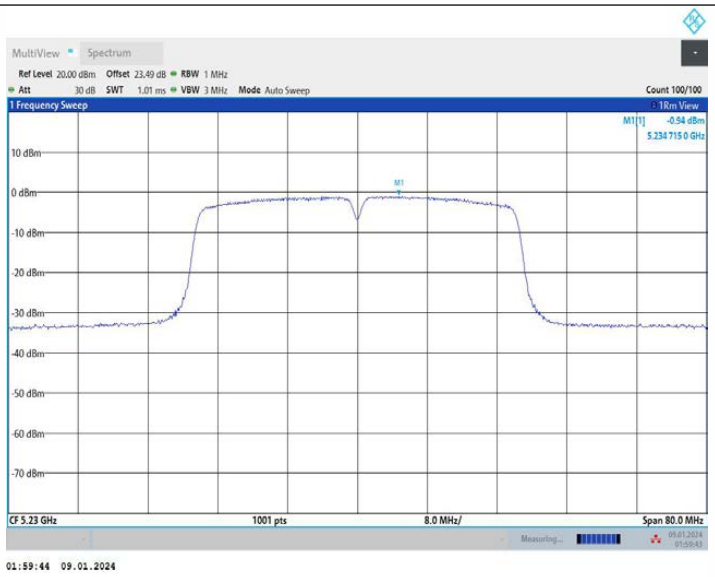

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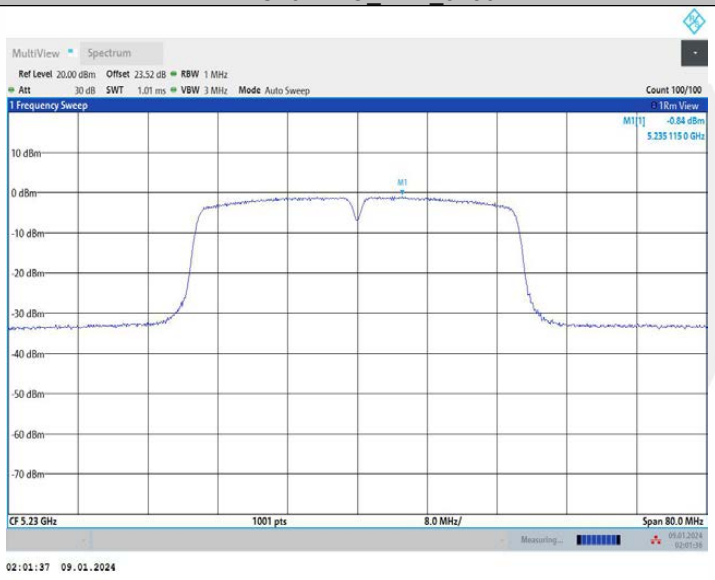

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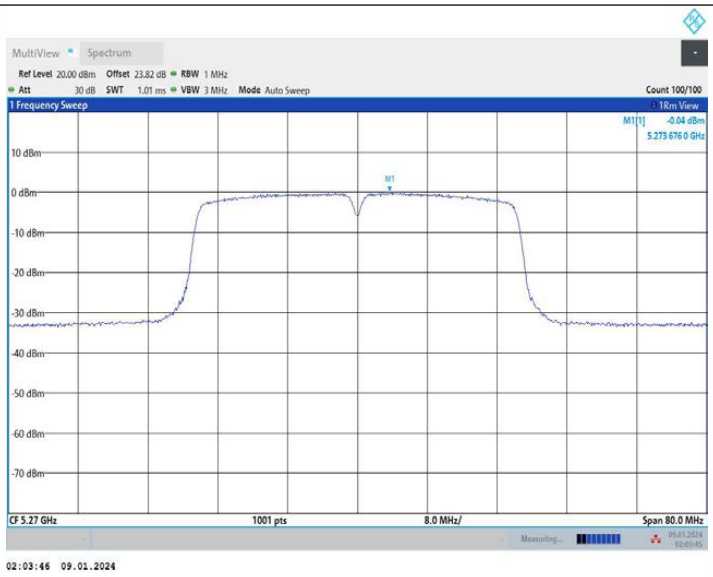

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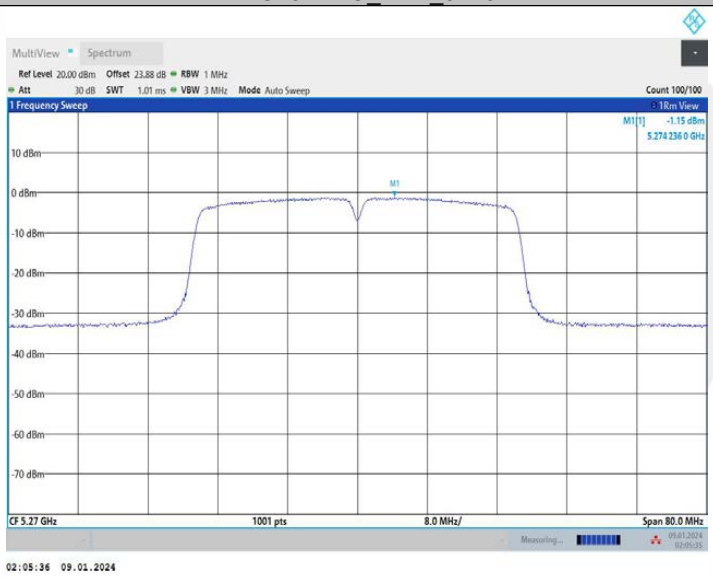

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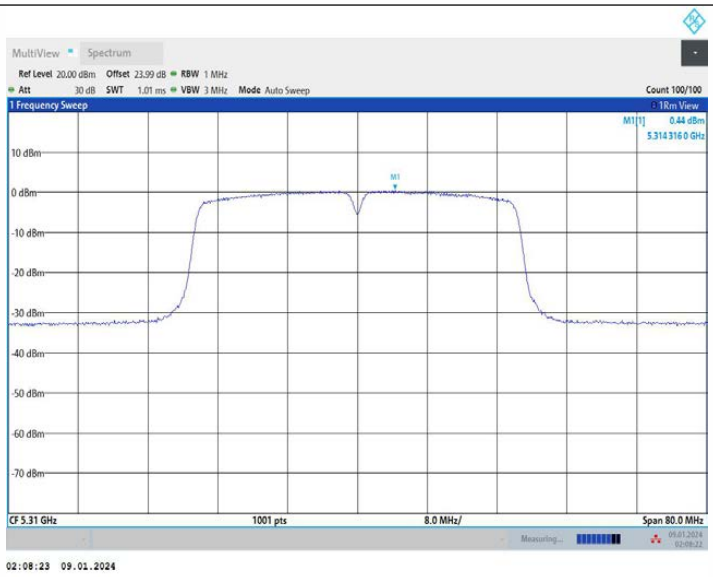

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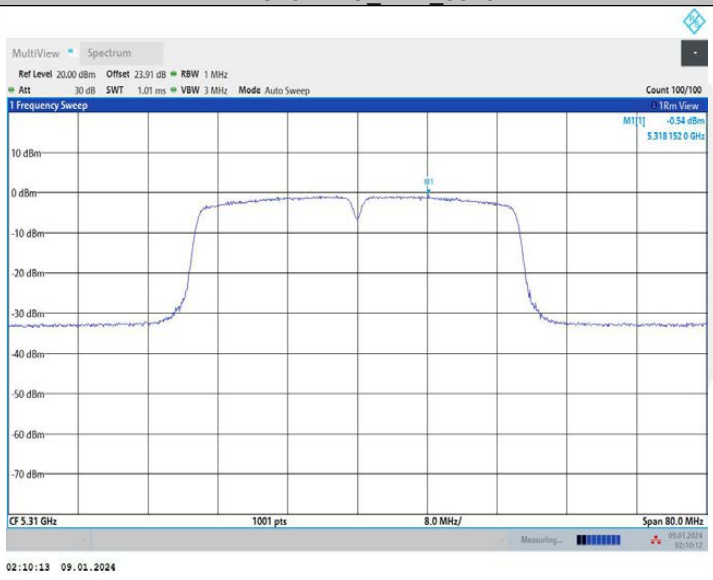

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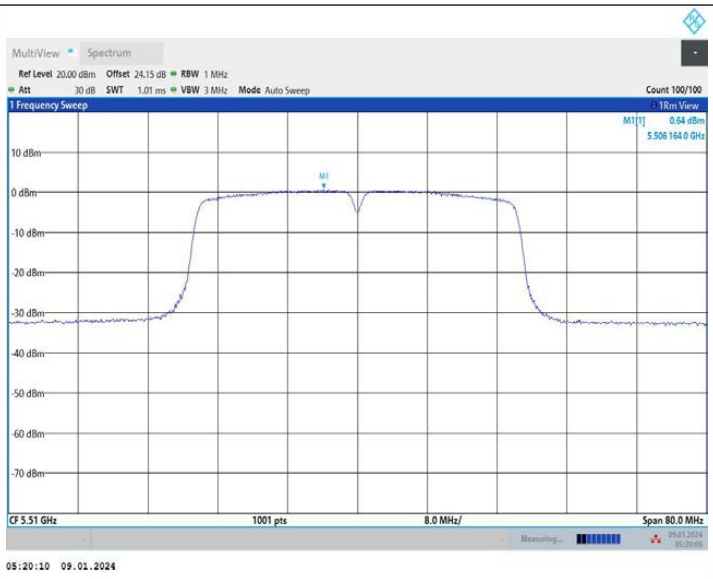

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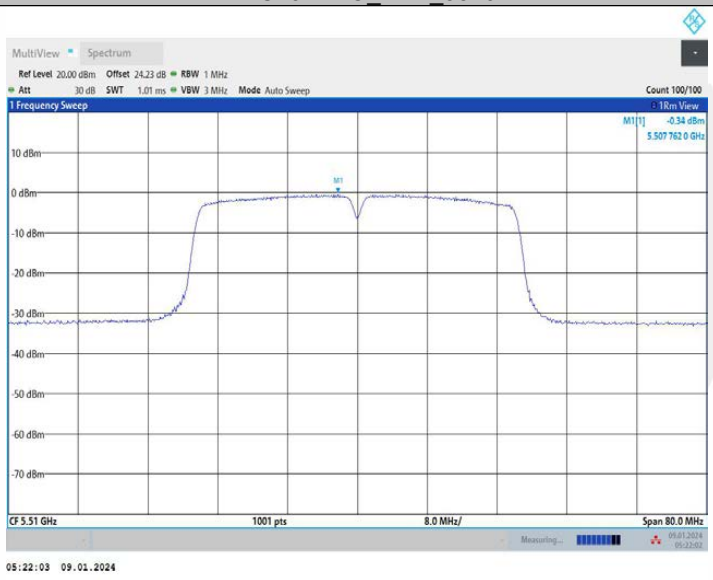

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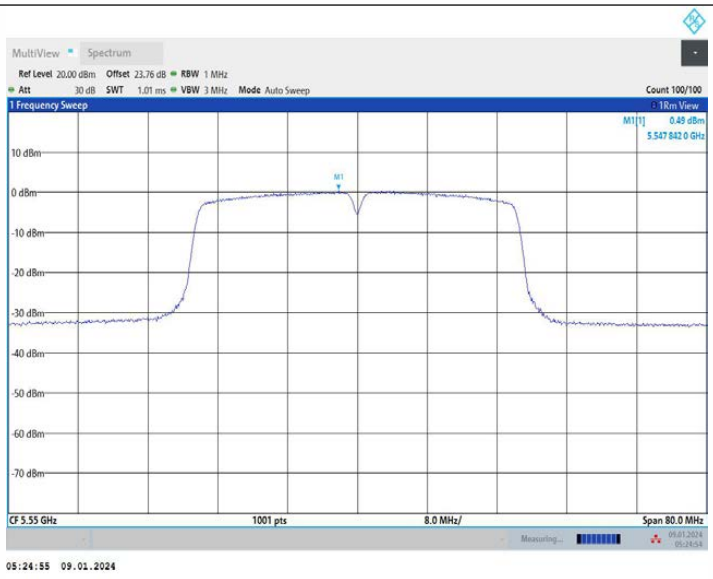

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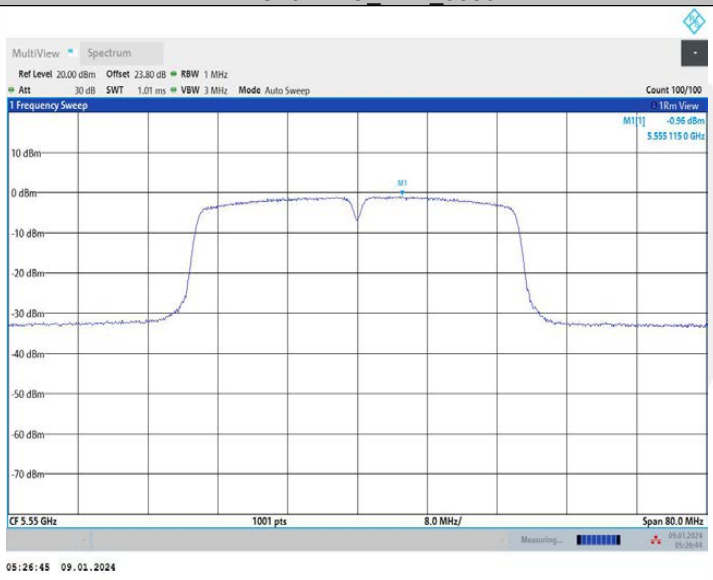

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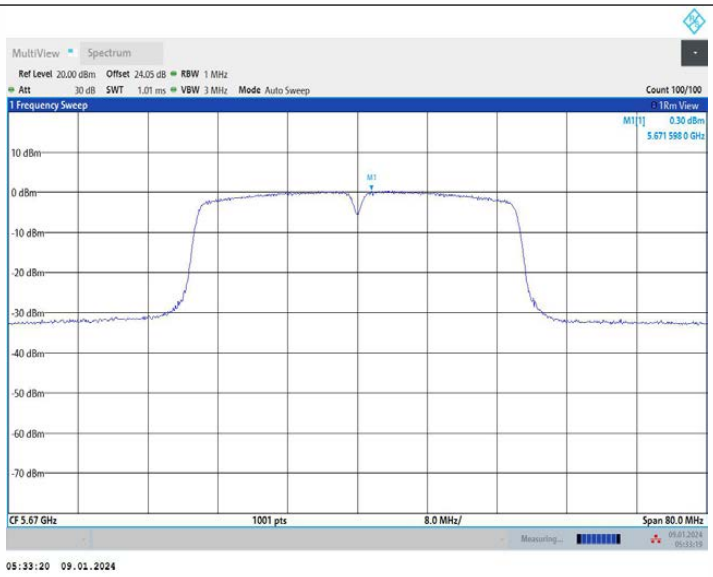

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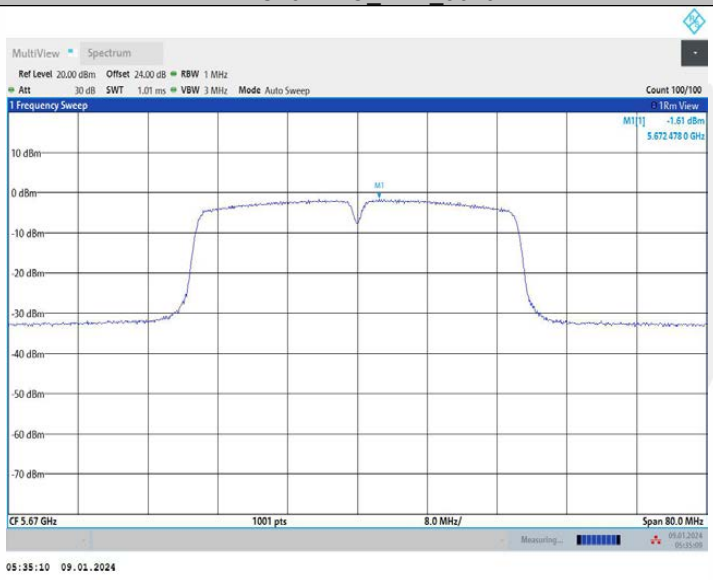

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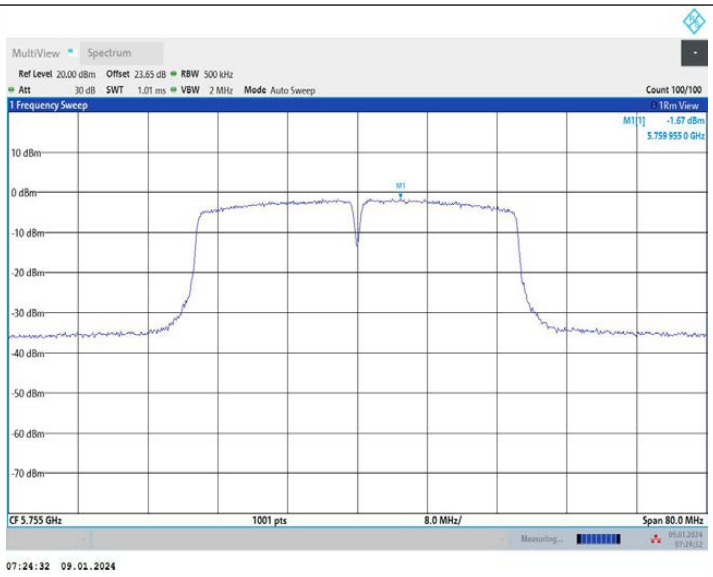

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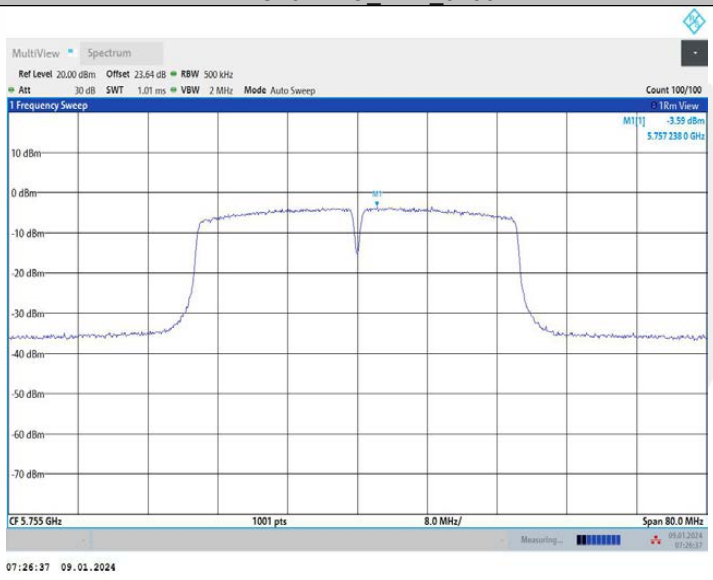

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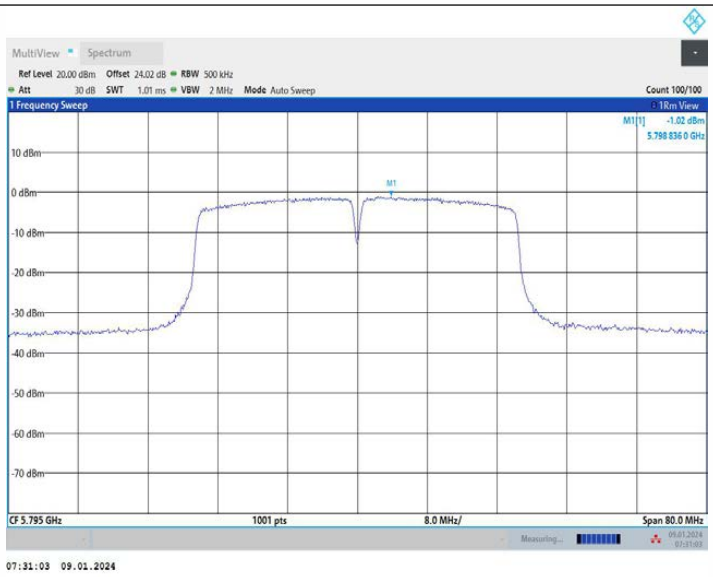

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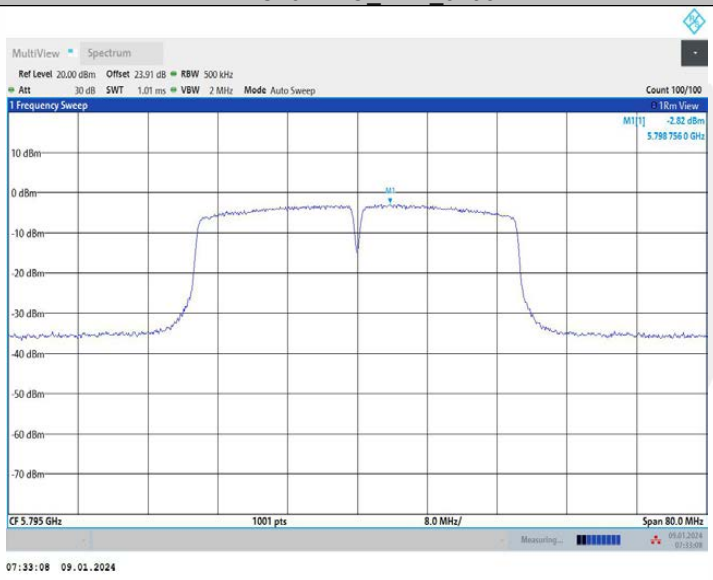

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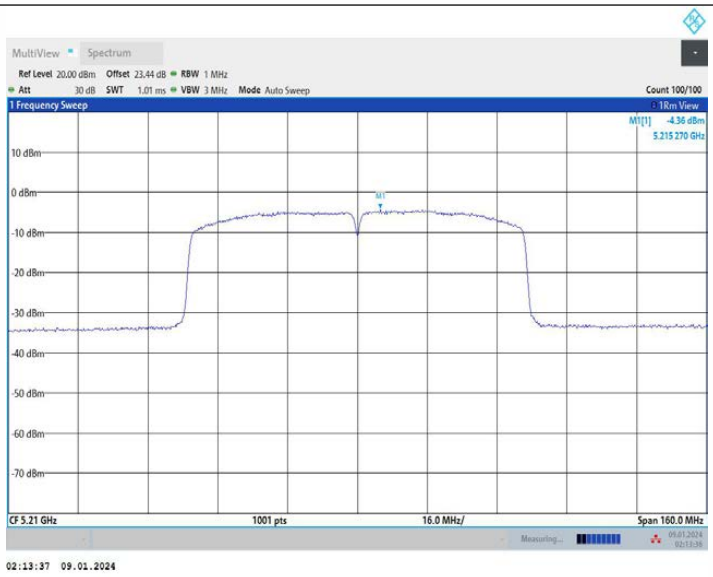

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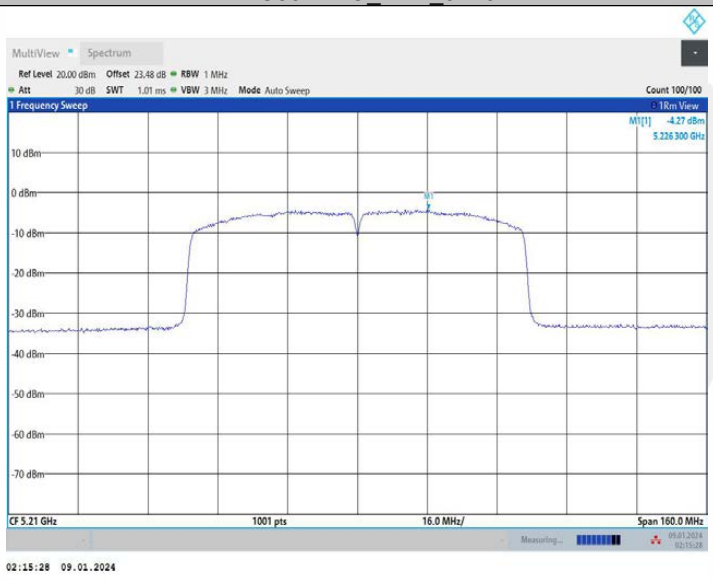

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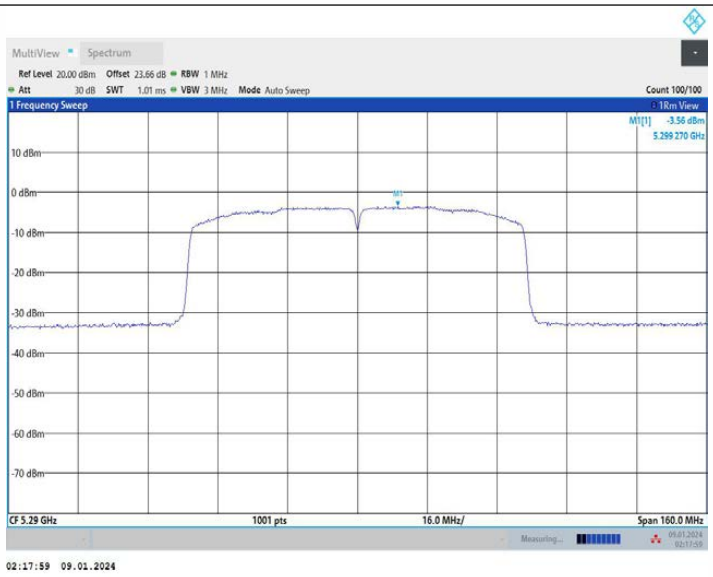

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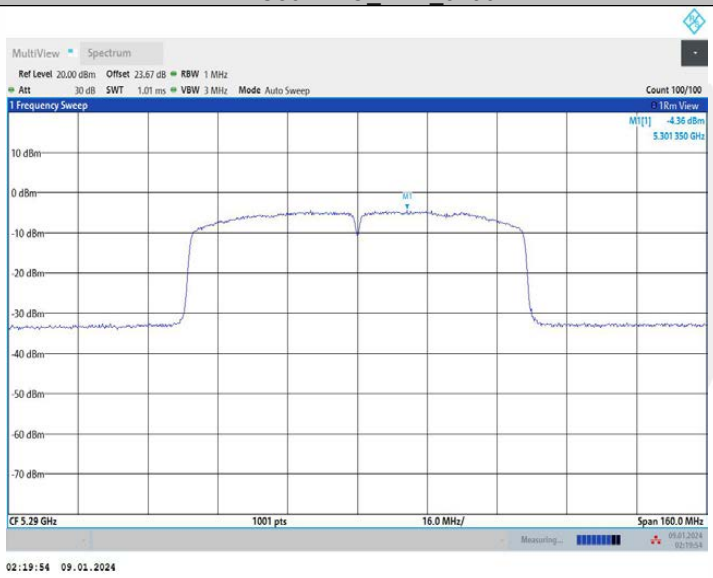

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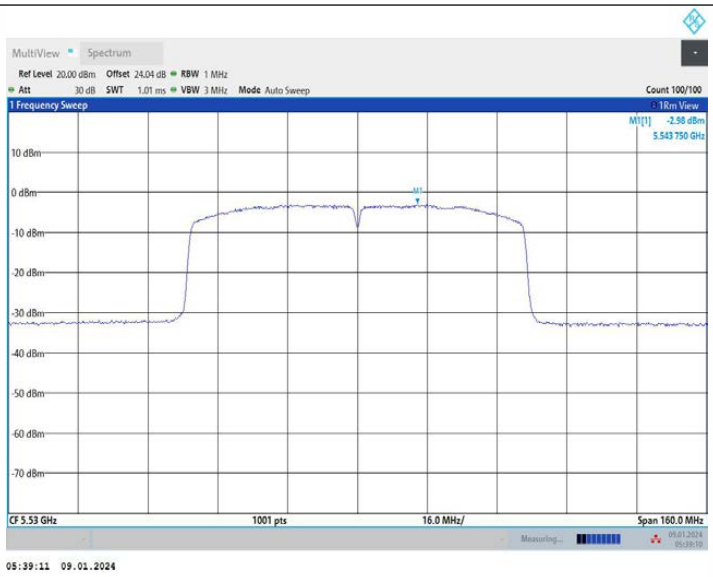

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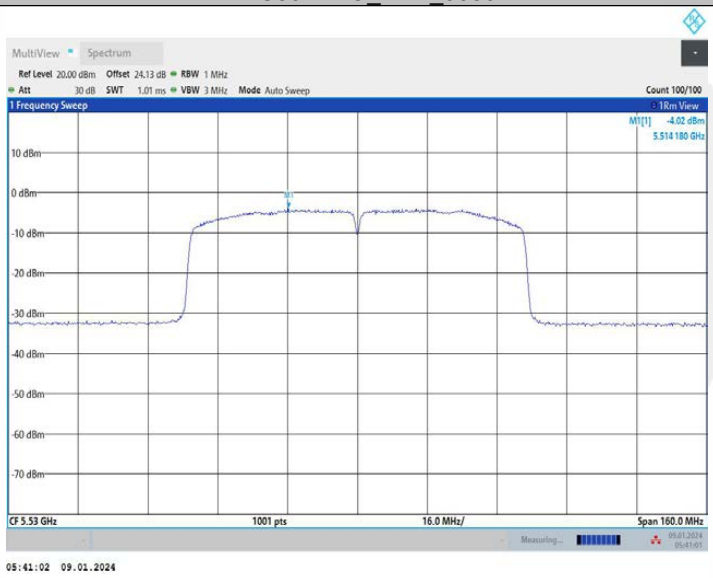

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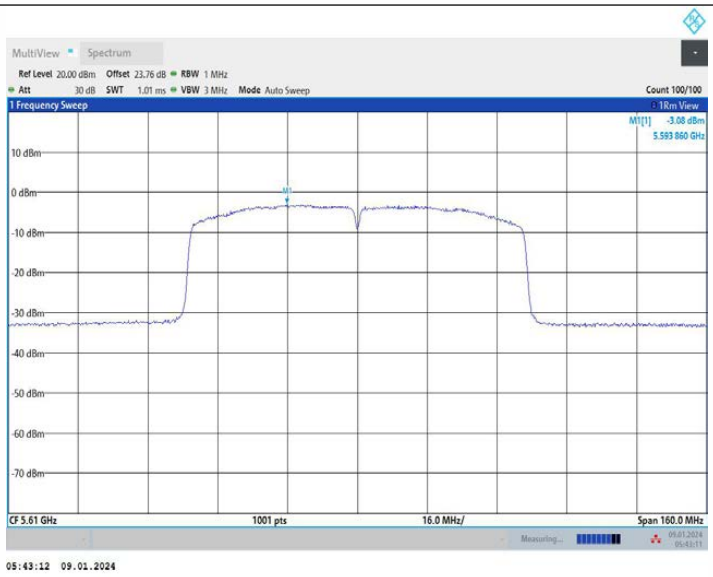

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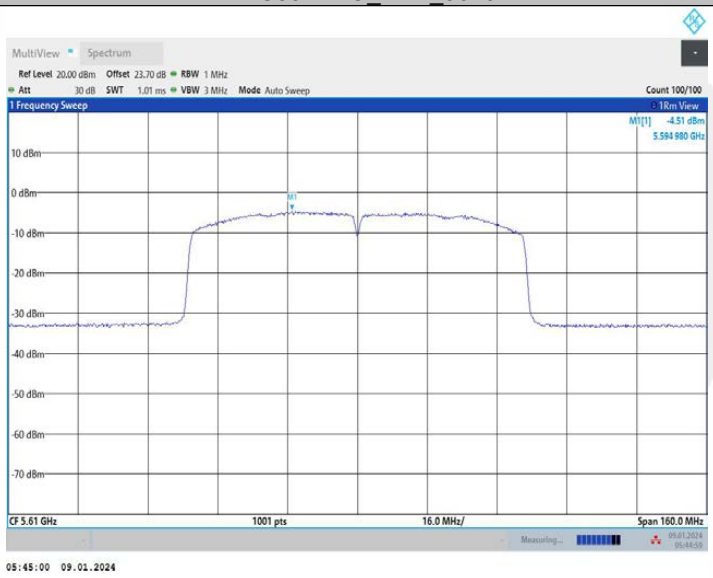

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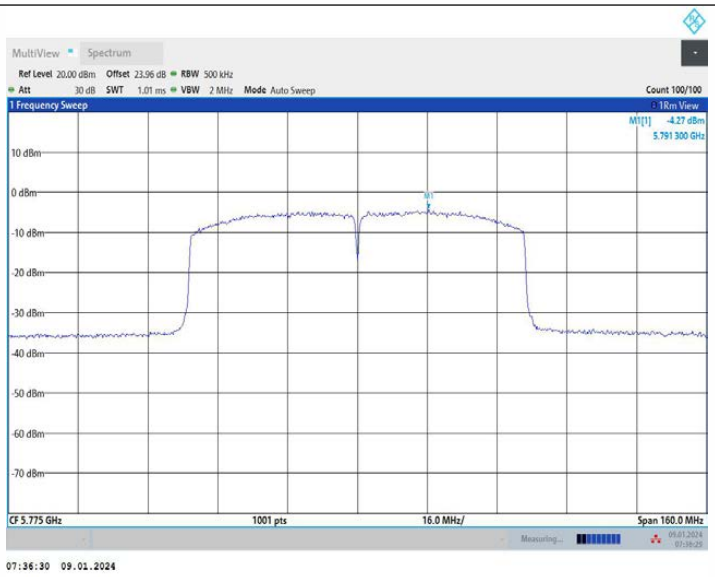

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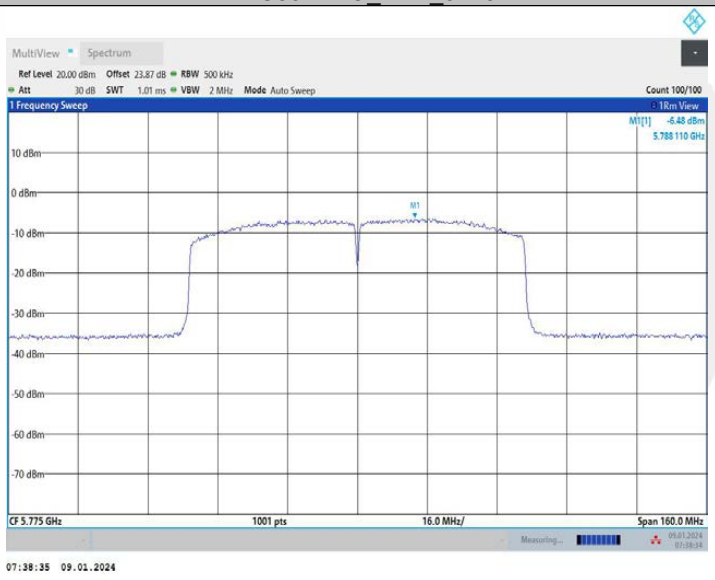


8.4 UNDESIRABLE RADIATED SPURIOUS EMISSION

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:	HZB

■ ☒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 ANT1 and MIMO as below:

ANT1:

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)
13118.56	V	61.65	-33.58	-27	6.58
15474.24	V	61.9	-33.33	-27	6.33
17498.25	V	65.74	-29.49	-27	2.49
10652.33	H	59.5	-35.73	-27	8.73
15448.72	H	62.23	-33.00	-27	6.00
17506.75	H	66.13	-29.10	-27	2.10

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)
11383.69	V	59.52	-35.71	-27	8.71
15550.78	V	62.3	-32.93	-27	5.93
17498.25	V	66.36	-28.87	-27	1.87
10669.33	H	59.78	-35.45	-27	8.45
14521.76	H	61.94	-33.29	-27	6.29
17005.00	H	65.48	-29.75	-27	2.75

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)
10030.13	V	58.65	-36.58	-27	9.58
11611.92	V	59.27	-35.96	-27	8.96
17499.53	V	66.15	-29.08	-27	2.08
11684.53	H	59.61	-35.62	-27	8.62
15290.33	H	61.53	-33.70	-27	6.70
17509.94	H	65.13	-30.10	-27	3.10

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)
13117.17	V	61.52	-33.71	-27	6.71
15472.85	V	61.74	-33.49	-27	6.49
17499.53	V	65.71	-29.52	-27	2.52
10664.02	H	59.42	-35.81	-27	8.81
15460.41	H	62.02	-33.21	-27	6.21
17518.44	H	65.97	-29.26	-27	2.26

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)
11382.30	V	59.39	-35.84	-27	8.84
15549.39	V	62.14	-33.09	-27	6.09
17499.53	V	66.33	-28.90	-27	1.90
10681.02	H	59.7	-35.53	-27	8.53
14533.45	H	61.73	-33.50	-27	6.50
17016.69	H	65.32	-29.91	-27	2.91

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)
10031.52	V	58.78	-36.45	-27	9.45
11613.31	V	59.43	-35.80	-27	8.80
17498.25	V	66.18	-29.05	-27	2.05
11672.84	H	59.69	-35.54	-27	8.54
15278.64	H	61.74	-33.49	-27	6.49
17498.25	H	65.29	-29.94	-27	2.94

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

ANT1:

Test mode:	802.11n(20)	Frequency(MHz):	5180		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
13118.5593	V	61.65	74.00	12.35	peak
15474.2371	V	61.90	74.00	12.10	peak
17498.2491	V	65.74	74.00	8.26	peak
13118.5593	V	48.88	54.00	5.12	AVG
15474.2371	V	43.11	54.00	10.89	AVG
17498.2491	V	44.65	54.00	9.35	AVG
10652.3262	H	59.50	74.00	14.50	peak
15448.7244	H	62.23	74.00	11.77	peak
17506.7534	H	66.13	74.00	7.87	peak
10652.3262	H	46.30	54.00	7.70	AVG
15448.7244	H	43.14	54.00	10.86	AVG
17506.7534	H	44.47	54.00	9.53	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5200		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11383.6918	V	59.52	74.00	14.48	peak
15550.7754	V	62.30	74.00	11.70	peak
17498.2491	V	66.36	74.00	7.64	peak
11383.6918	V	45.80	54.00	8.20	AVG
15550.7754	V	43.65	54.00	10.35	AVG
17498.2491	V	45.09	54.00	8.91	AVG
10669.3347	H	59.78	74.00	14.22	peak
14521.7609	H	61.94	74.00	12.06	peak
17005.0025	H	65.48	74.00	8.52	peak
10669.3347	H	46.79	54.00	7.21	AVG
14521.7609	H	45.06	54.00	8.94	AVG
17005.0025	H	45.41	54.00	8.59	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10031.5158	V	58.78	74.00	15.22	peak
11613.3067	V	59.43	74.00	14.57	peak
17498.2491	V	66.18	74.00	7.82	peak
10031.5158	V	45.56	54.00	8.44	AVG
11613.3067	V	40.02	54.00	13.98	AVG
17498.2491	V	45.09	54.00	8.91	AVG
11672.8364	H	59.69	74.00	14.31	peak
15278.6393	H	61.74	74.00	12.26	peak
17498.2491	H	65.29	74.00	8.71	peak
11672.8364	H	45.84	54.00	8.16	AVG
15278.6393	H	42.90	54.00	11.10	AVG
17498.2491	H	45.14	54.00	8.86	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
13117.169	V	61.52	74.00	12.48	peak
15472.847	V	61.74	74.00	12.26	peak
17499.529	V	65.71	74.00	8.29	peak
13119.839	V	48.86	54.00	5.14	AVG
15471.987	V	42.85	54.00	11.15	AVG
17495.999	V	44.46	54.00	9.54	AVG
10664.016	H	59.42	74.00	14.58	peak
15460.414	H	62.02	74.00	11.98	peak
17518.443	H	65.97	74.00	8.03	peak
10664.016	H	46.16	54.00	7.84	AVG
15445.414	H	42.96	54.00	11.04	AVG
17503.443	H	44.34	54.00	9.66	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5200		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11382.302	V	59.39	74.00	14.61	peak
15549.385	V	62.14	74.00	11.86	peak
17499.529	V	66.33	74.00	7.67	peak
11384.972	V	45.78	54.00	8.22	AVG
15548.525	V	43.39	54.00	10.61	AVG
17495.999	V	44.9	54.00	9.1	AVG
10681.025	H	59.7	74.00	14.3	peak
14533.451	H	61.73	74.00	12.27	peak
17016.693	H	65.32	74.00	8.68	peak
10681.025	H	46.65	54.00	7.35	AVG
14518.451	H	44.88	54.00	9.12	AVG
17001.693	H	45.28	54.00	8.72	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10030.126	V	58.65	74.00	15.35	peak
11611.917	V	59.27	74.00	14.73	peak
17499.529	V	66.15	74.00	7.85	peak
10032.796	V	45.54	54.00	8.46	AVG
11611.057	V	39.76	54.00	14.24	AVG
17495.999	V	44.9	54.00	9.1	AVG
11684.526	H	59.61	74.00	14.39	peak
15290.329	H	61.53	74.00	12.47	peak
17509.939	H	65.13	74.00	8.87	peak
11684.526	H	45.7	54.00	8.3	AVG
15275.329	H	42.72	54.00	11.28	AVG
17494.939	H	45.01	54.00	8.99	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
5037.55	H	54.78	-40.45	-27	Pass
4993.51	V	54.76	-40.47	-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
5381.17	H	54.1	-41.13	-27	Pass
5395.84	V	54.62	-40.61	-27	Pass

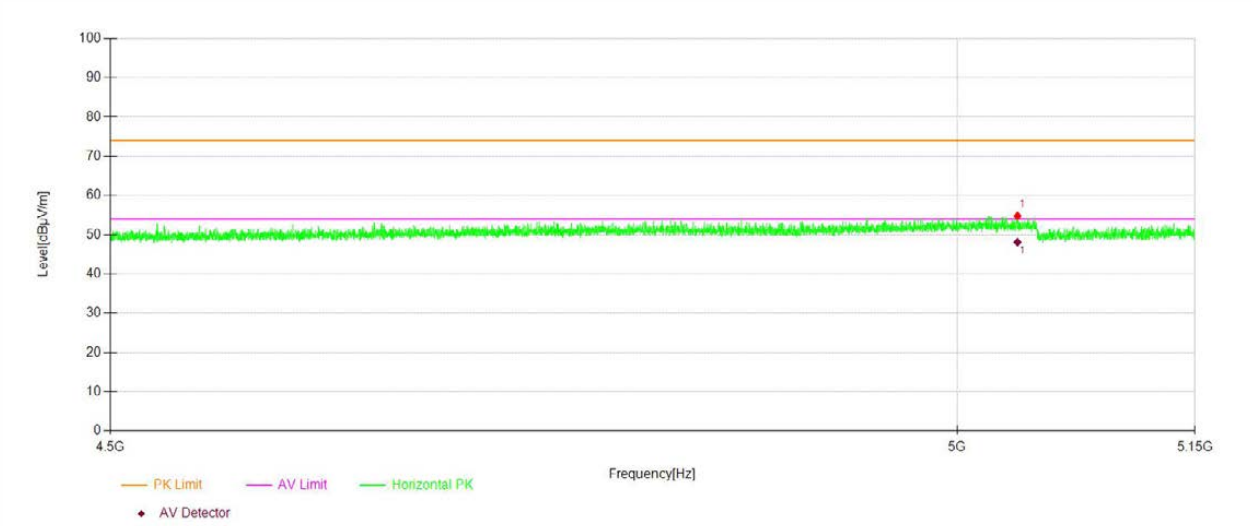
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode:	802.11n(20)	Frequency(MHz):	5180		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4993.51	V	54.76	74.00	19.24	peak
4993.51	V	50.41	54.00	3.59	AVG
5037.55	H	54.78	74.00	19.22	peak
5037.55	H	48.11	54.00	5.89	AVG

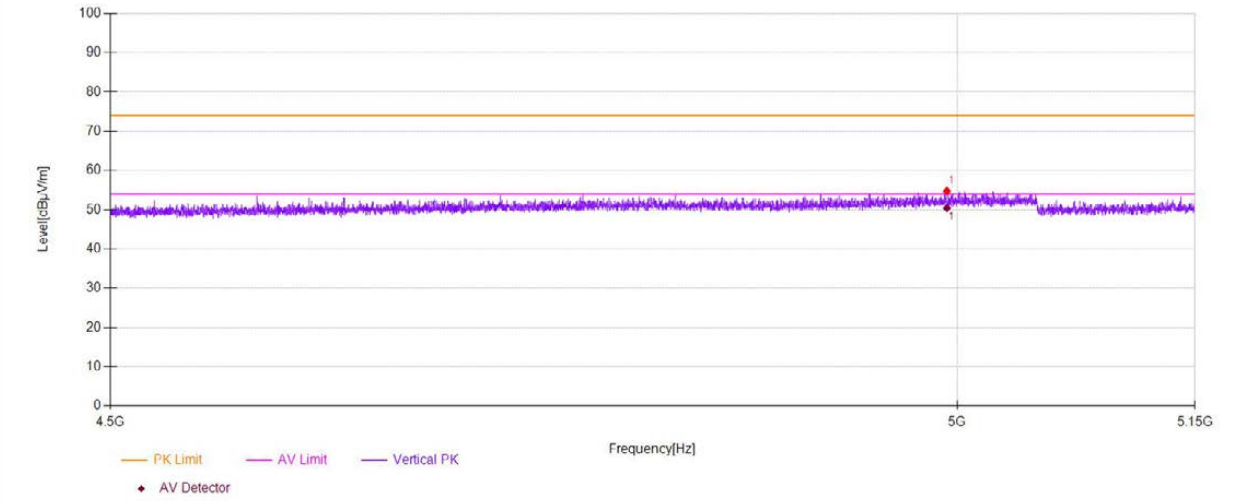
Test mode:	802.11n(20)	Frequency(MHz):	5240		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5395.84	V	54.62	74.00	19.38	peak
5395.84	V	50.34	54.00	3.66	AVG
5381.17	H	54.10	74.00	19.90	peak
5381.17	H	50.77	54.00	3.23	AVG

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.

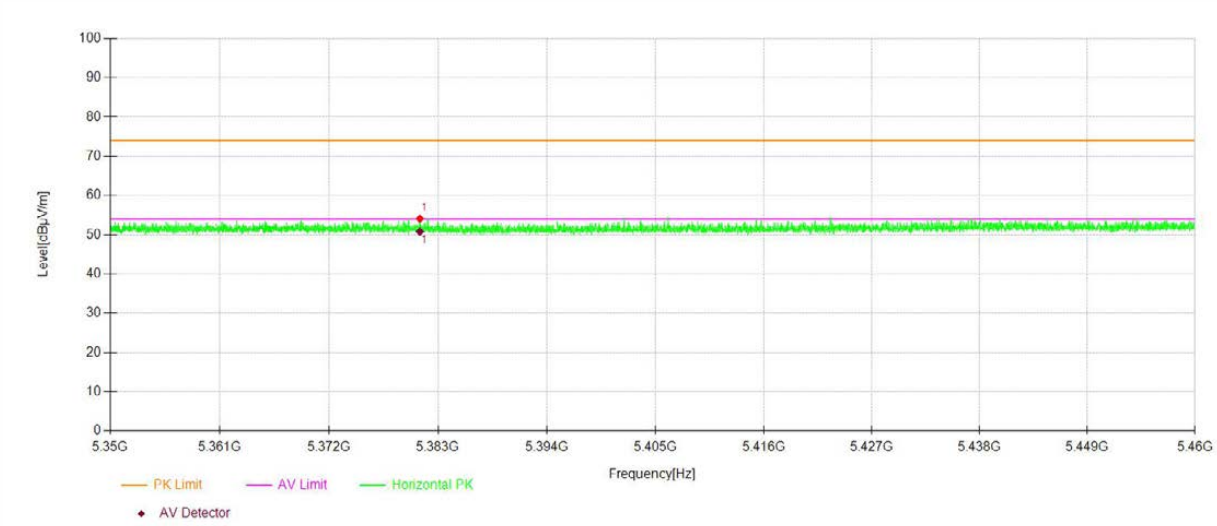
Test Model	U-NII - 1 Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol H



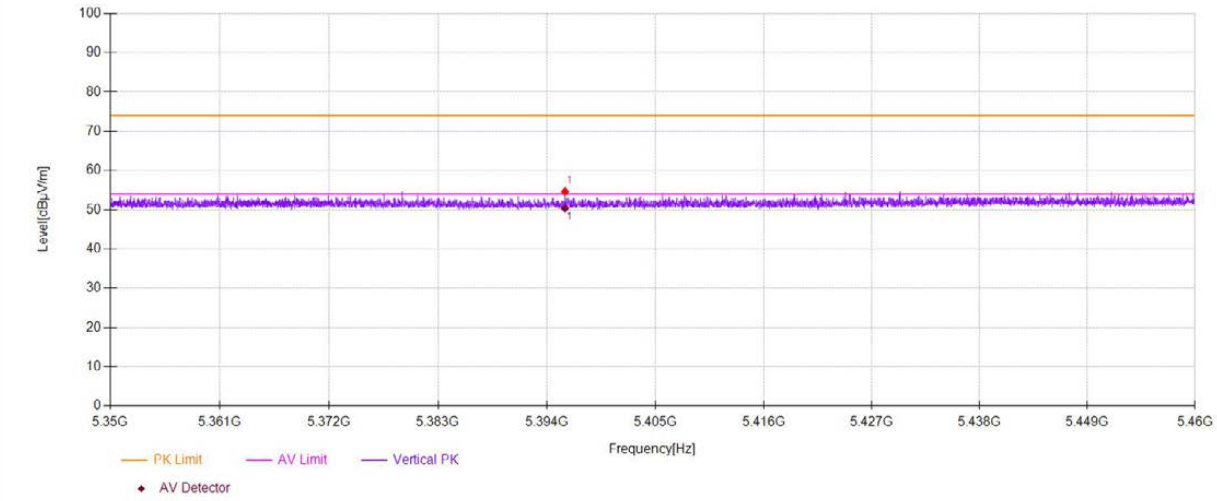
Test Model	U-NII - 1 Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol V



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 ANT1 and MIMO as below:

ANT1:

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)
11519.76	V	59.61	-35.62	-27	8.62
15142.57	V	61.4	-33.83	-27	6.83
17489.74	V	65.84	-29.39	-27	2.39
10108.05	H	59.17	-36.06	-27	9.06
14317.66	H	61.83	-33.40	-27	6.40
17039.02	H	65.39	-29.84	-27	2.84

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)
10660.83	V	59.56	-35.67	-27	8.67
14555.78	V	61.42	-33.81	-27	6.81
17489.74	V	65.68	-29.55	-27	2.55
11502.75	H	59.67	-35.56	-27	8.56
15159.58	H	61.54	-33.69	-27	6.69
17498.25	H	66.06	-29.17	-27	2.17

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)
10669.33	V	59.04	-36.19	-27	9.19
15142.57	V	61.5	-33.73	-27	6.73
17498.25	V	66.43	-28.80	-27	1.80
11366.68	H	58.61	-36.62	-27	9.62
15134.07	H	61.81	-33.42	-27	6.42
17506.75	H	66.71	-28.52	-27	1.52

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)
11518.37	V	59.48	-35.75	-27	8.75
15141.18	V	61.24	-33.99	-27	6.99
17491.02	V	65.81	-29.42	-27	2.42
10119.74	H	59.09	-36.14	-27	9.14
14329.35	H	61.62	-33.61	-27	6.61
17050.71	H	65.23	-30.00	-27	3.00

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)
10659.44	V	59.43	-35.80	-27	8.80
14554.39	V	61.26	-33.97	-27	6.97
17491.02	V	65.65	-29.58	-27	2.58
11514.44	H	59.59	-35.64	-27	8.64
15171.27	H	61.33	-33.90	-27	6.90
17509.94	H	65.9	-29.33	-27	2.33

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)
10667.94	V	58.91	-36.32	-27	9.32
15141.18	V	61.34	-33.89	-27	6.89
17499.53	V	66.4	-28.83	-27	1.83
11378.37	H	58.53	-36.70	-27	9.70
15145.76	H	61.6	-33.63	-27	6.63
17518.44	H	66.55	-28.68	-27	1.68

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

ANT1:

Test mode:	802.11n(20)	Frequency(MHz):	5260		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11519.7599	V	59.61	74.00	14.39	peak
15142.5713	V	61.40	74.00	12.60	peak
17489.7449	V	65.84	74.00	8.16	peak
11519.7599	V	46.41	54.00	7.59	AVG
15142.5713	V	43.80	54.00	10.20	AVG
17489.7449	V	44.71	54.00	9.29	AVG
10108.054	H	59.17	74.00	14.83	peak
14317.6588	H	61.83	74.00	12.17	peak
17039.0195	H	65.39	74.00	8.61	peak
10108.054	H	45.45	54.00	8.55	AVG
14317.6588	H	44.89	54.00	9.11	AVG
17039.0195	H	44.08	54.00	9.92	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5280		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10660.8304	V	59.56	74.00	14.44	peak
14555.7779	V	61.42	74.00	12.58	peak
17489.7449	V	65.68	74.00	8.32	peak
10660.8304	V	46.53	54.00	7.47	AVG
14555.7779	V	45.41	54.00	8.59	AVG
17489.7449	V	44.73	54.00	9.27	AVG
11502.7514	H	59.67	74.00	14.33	peak
15159.5798	H	61.54	74.00	12.46	peak
17498.2491	H	66.06	74.00	7.94	peak
11502.7514	H	46.75	54.00	7.25	AVG
15159.5798	H	40.77	54.00	13.23	AVG
17498.2491	H	44.66	54.00	9.34	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10669.3347	V	59.04	74.00	14.96	peak
15142.5713	V	61.50	74.00	12.50	peak
17498.2491	V	66.43	74.00	7.57	peak
10669.3347	V	46.71	54.00	7.29	AVG
15142.5713	V	43.45	54.00	10.55	AVG
17498.2491	V	45.42	54.00	8.58	AVG
11366.6833	H	58.61	74.00	15.39	peak
15134.067	H	61.81	74.00	12.19	peak
17506.7534	H	66.71	74.00	7.29	peak
11366.6833	H	46.06	54.00	7.94	AVG
15134.067	H	43.52	54.00	10.48	AVG
17506.7534	H	44.58	54.00	9.42	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
11518.370	V	59.48	74.00	14.52	peak
15141.181	V	61.24	74.00	12.76	peak
17491.025	V	65.81	74.00	8.19	peak
11521.040	V	46.39	54.00	7.61	AVG
15140.321	V	43.54	54.00	10.46	AVG
17487.495	V	44.52	54.00	9.48	AVG
10119.744	H	59.09	74.00	14.91	peak
14329.349	H	61.62	74.00	12.38	peak
17050.710	H	65.23	74.00	8.77	peak
10119.744	H	45.31	54.00	8.69	AVG
14314.349	H	44.71	54.00	9.29	AVG
17035.710	H	43.95	54.00	10.05	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5280		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10659.440	V	59.43	74.00	14.57	peak
14554.388	V	61.26	74.00	12.74	peak
17491.025	V	65.65	74.00	8.35	peak
10662.110	V	46.51	54.00	7.49	AVG
14553.528	V	45.15	54.00	8.85	AVG
17487.495	V	44.54	54.00	9.46	AVG
11514.441	H	59.59	74.00	14.41	peak
15171.270	H	61.33	74.00	12.67	peak
17509.939	H	65.9	74.00	8.1	peak
11514.441	H	46.61	54.00	7.39	AVG
15156.270	H	40.59	54.00	13.41	AVG
17494.939	H	44.53	54.00	9.47	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10667.945	V	58.91	74.00	15.09	peak
15141.181	V	61.34	74.00	12.66	peak
17499.529	V	66.4	74.00	7.6	peak
10670.615	V	46.69	54.00	7.31	AVG
15140.321	V	43.19	54.00	10.81	AVG
17495.999	V	45.23	54.00	8.77	AVG
11378.373	H	58.53	74.00	15.47	peak
15145.757	H	61.6	74.00	12.4	peak
17518.443	H	66.55	74.00	7.45	peak
11378.373	H	45.92	54.00	8.08	AVG
15130.757	H	43.34	54.00	10.66	AVG
17503.443	H	44.45	54.00	9.55	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
5002.36	H	54.7	-40.53	-27	Pass
5008.46	V	55.16	-40.07	-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
5414.72	H	53.74	-41.49	-27	Pass
5410.99	V	53.97	-41.26	-27	Pass

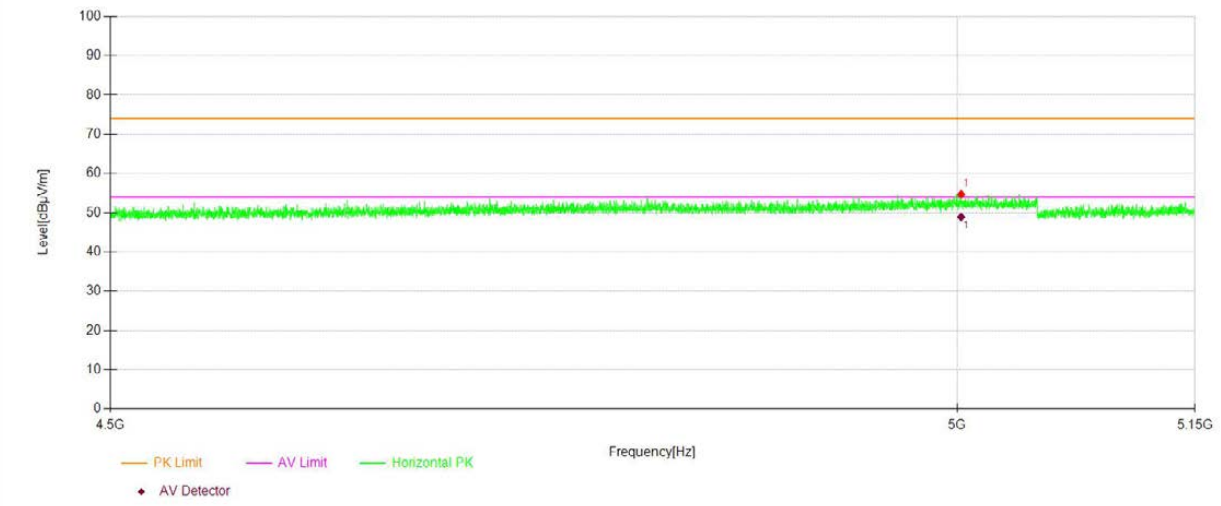
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode:	802.11n(20)	Frequency(MHz):	5260		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5008.46	V	55.16	74.00	18.84	peak
5008.46	V	49.46	54.00	4.54	AVG
5002.36	H	54.70	74.00	19.30	peak
5002.36	H	48.90	54.00	5.10	AVG

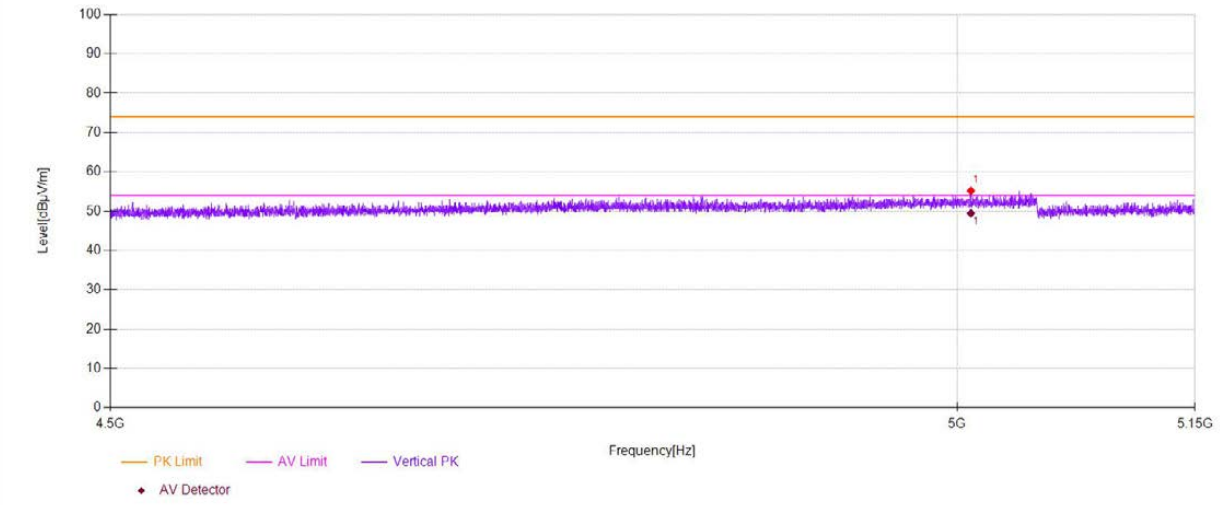
Test mode:	802.11n(20)	Frequency(MHz):	5320		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5410.99	V	53.97	74.00	20.03	peak
5410.99	V	49.30	54.00	4.70	AVG
5414.72	H	53.74	74.00	20.26	peak
5414.72	H	48.56	54.00	5.44	AVG

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.

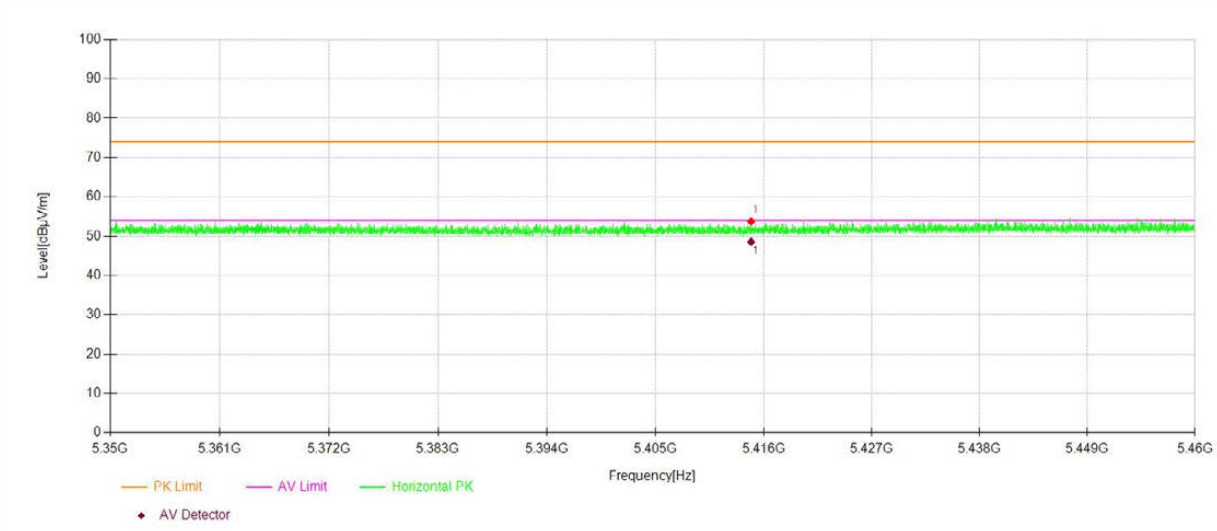
Test Model	U-NII -2A Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20) ☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol H



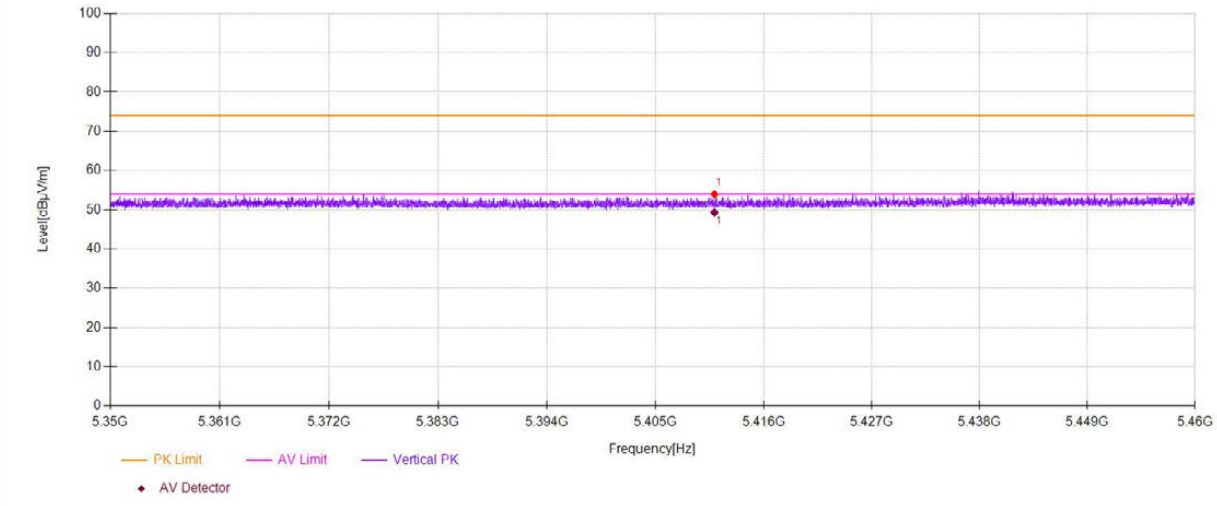
Test Model	U-NII -2A Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz) ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20) ☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol V



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 ANT1 and MIMO as below:

ANT1:

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)
10677.84	V	58.78	-36.45	-27	9.45
14538.77	V	61.93	-33.30	-27	6.30
17506.75	V	65.94	-29.29	-27	2.29
11587.79	H	59.17	-36.06	-27	9.06
15559.28	H	61.8	-33.43	-27	6.43
17498.25	H	67.02	-28.21	-27	1.21

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)
10669.33	V	58.93	-36.30	-27	9.30
14581.29	V	62.26	-32.97	-27	5.97
17498.25	V	66.55	-28.68	-27	1.68
10711.86	H	59.71	-35.52	-27	8.52
14572.79	H	62.32	-32.91	-27	5.91
17481.24	H	65.98	-29.25	-27	2.25

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)
10065.53	V	59.02	-36.21	-27	9.21
14589.79	V	61.99	-33.24	-27	6.24
17506.75	V	65.51	-29.72	-27	2.72
11570.79	H	58.96	-36.27	-27	9.27
15176.59	H	61.69	-33.54	-27	6.54
17498.25	H	65.57	-29.66	-27	2.66

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)
10676.45	V	58.65	-36.58	-27	9.58
14537.38	V	61.77	-33.46	-27	6.46
17508.03	V	65.91	-29.32	-27	2.32
11599.48	H	59.09	-36.14	-27	9.14
15570.97	H	61.59	-33.64	-27	6.64
17509.94	H	66.86	-28.37	-27	1.37

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)
10667.94	V	58.8	-36.43	-27	9.43
14579.90	V	62.1	-33.13	-27	6.13
17499.53	V	66.52	-28.71	-27	1.71
10723.55	H	59.63	-35.60	-27	8.60
14584.48	H	62.11	-33.12	-27	6.12
17492.93	H	65.82	-29.41	-27	2.41

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)
10064.14	V	58.89	-36.34	-27	9.34
14588.40	V	61.83	-33.40	-27	6.40
17508.03	V	65.48	-29.75	-27	2.75
11582.48	H	58.88	-36.35	-27	9.35
15188.28	H	61.48	-33.75	-27	6.75
17509.94	H	65.41	-29.82	-27	2.82

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

ANT1:

Test mode:	802.11n(20)	Frequency(MHz):	5500		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10677.8389	V	58.78	74.00	15.22	peak
14538.7694	V	61.93	74.00	12.07	peak
17506.7534	V	65.94	74.00	8.06	peak
10677.8389	V	47.26	54.00	6.74	AVG
14538.7694	V	45.05	54.00	8.95	AVG
17506.7534	V	44.51	54.00	9.49	AVG
11587.7939	H	59.17	74.00	14.83	peak
15559.2796	H	61.80	74.00	12.20	peak
17498.2491	H	67.02	74.00	6.98	peak
11587.7939	H	46.97	54.00	7.03	AVG
15559.2796	H	43.72	54.00	10.28	AVG
17498.2491	H	44.85	54.00	9.15	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5580		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10669.3347	V	58.93	74.00	15.07	peak
14581.2906	V	62.26	74.00	11.74	peak
17498.2491	V	66.55	74.00	7.45	peak
10669.3347	V	46.86	54.00	7.14	AVG
14581.2906	V	42.49	54.00	11.51	AVG
17498.2491	V	45.06	54.00	8.94	AVG
10711.8559	H	59.71	74.00	14.29	peak
14572.7864	H	62.32	74.00	11.68	peak
17481.2406	H	65.98	74.00	8.02	peak
10711.8559	H	47.12	54.00	6.88	AVG
14572.7864	H	45.39	54.00	8.61	AVG
17481.2406	H	44.10	54.00	9.90	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5700		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10065.5328	V	59.02	74.00	14.98	peak
14589.7949	V	61.99	74.00	12.01	peak
17506.7534	V	65.51	74.00	8.49	peak
10065.5328	V	45.42	54.00	8.58	AVG
14589.7949	V	45.63	54.00	8.37	AVG
17506.7534	V	45.01	54.00	8.99	AVG
11570.7854	H	58.96	74.00	15.04	peak
15176.5883	H	61.69	74.00	12.31	peak
17498.2491	H	65.57	74.00	8.43	peak
11570.7854	H	46.19	54.00	7.81	AVG
15176.5883	H	44.01	54.00	9.99	AVG
17498.2491	H	45.18	54.00	8.82	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
10676.449	V	58.65	74.00	15.35	peak
14537.379	V	61.77	74.00	12.23	peak
17508.033	V	65.91	74.00	8.09	peak
10679.119	V	47.24	54.00	6.76	AVG
14536.519	V	44.79	54.00	9.21	AVG
17504.503	V	44.32	54.00	9.68	AVG
11599.484	H	59.09	74.00	14.91	peak
15570.970	H	61.59	74.00	12.41	peak
17509.939	H	66.86	74.00	7.14	peak
11599.484	H	46.83	54.00	7.17	AVG
15555.970	H	43.54	54.00	10.46	AVG
17494.939	H	44.72	54.00	9.28	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5580		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10667.945	V	58.8	74.00	15.2	peak
14579.901	V	62.1	74.00	11.9	peak
17499.529	V	66.52	74.00	7.48	peak
10670.615	V	46.84	54.00	7.16	AVG
14579.041	V	42.23	54.00	11.77	AVG
17495.999	V	44.87	54.00	9.13	AVG
10723.546	H	59.63	74.00	14.37	peak
14584.476	H	62.11	74.00	11.89	peak
17492.931	H	65.82	74.00	8.18	peak
10723.546	H	46.98	54.00	7.02	AVG
14569.476	H	45.21	54.00	8.79	AVG
17477.931	H	43.97	54.00	10.03	AVG

Test mode:	802.11n(20)	Frequency(MHz):	5700		
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
10064.143	V	58.89	74.00	15.11	peak
14588.405	V	61.83	74.00	12.17	peak
17508.033	V	65.48	74.00	8.52	peak
10066.813	V	45.4	54.00	8.6	AVG
14587.545	V	45.37	54.00	8.63	AVG
17504.503	V	44.82	54.00	9.18	AVG
11582.475	H	58.88	74.00	15.12	peak
15188.278	H	61.48	74.00	12.52	peak
17509.939	H	65.41	74.00	8.59	peak
11582.475	H	46.05	54.00	7.95	AVG
15173.278	H	43.83	54.00	10.17	AVG
17494.939	H	45.05	54.00	8.95	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
5442.14	H	54.33	-40.90	-27	Pass
5435.66	V	54.52	-40.71	-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
5743.48	H	54.82	-40.41	-27	Pass
5745.04	V	54.64	-40.59	-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
5435.66	V	54.52	74.00	19.48	peak
5435.66	V	49.57	54.00	4.43	AVG
5442.14	H	54.33	74.00	19.67	peak
5442.14	H	49.79	54.00	4.21	AVG

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

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5745.04	V	54.64	74.00	19.36	peak
5745.04	V	50.43	54.00	3.57	AVG
5743.48	H	54.82	74.00	19.18	peak
5743.48	H	49.32	54.00	4.68	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.