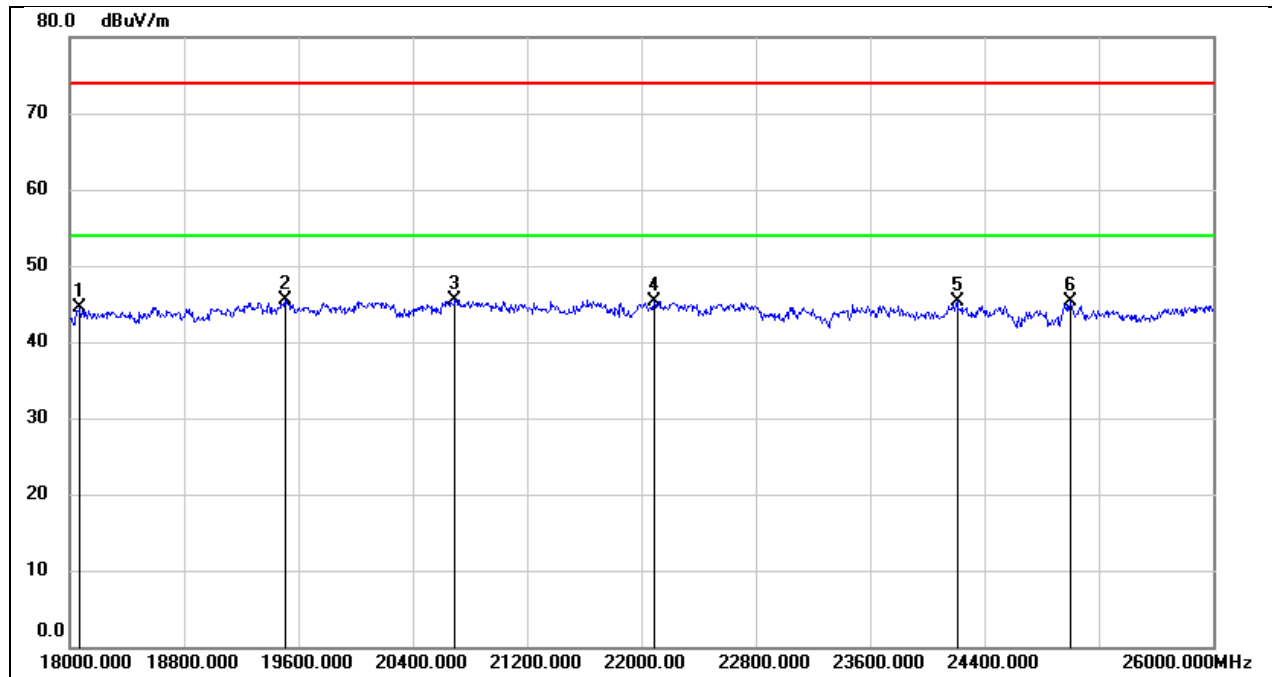


**8.5. SPURIOUS EMISSIONS(18 GHZ~26 GHZ)**

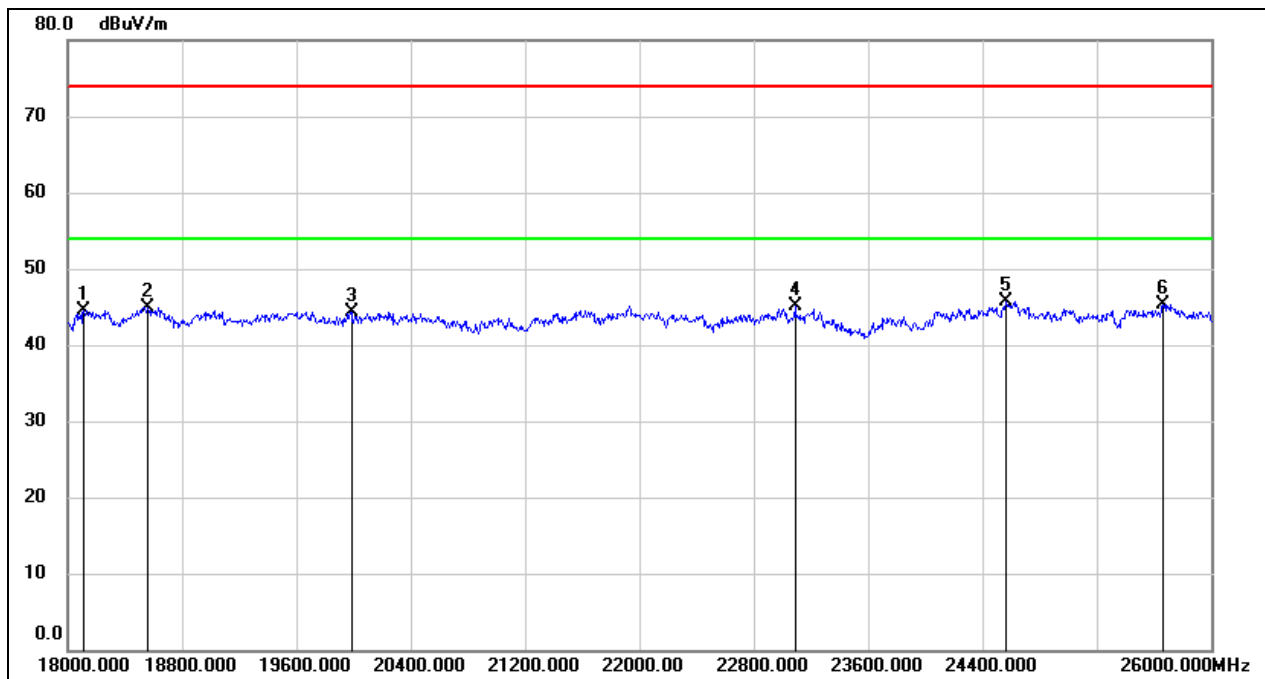
Test Mode:	802.11a 20	Channel:	5180
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18072.000	49.95	-5.43	44.52	74.00	-29.48	peak
2	19504.000	50.97	-5.54	45.43	74.00	-28.57	peak
3	20696.000	50.71	-5.16	45.55	74.00	-28.45	peak
4	22088.000	49.66	-4.39	45.27	74.00	-28.73	peak
5	24208.000	48.21	-2.81	45.40	74.00	-28.60	peak
6	25000.000	47.36	-2.10	45.26	74.00	-28.74	peak



Test Mode:	802.11a 20	Channel:	5180
Polarity:	Vertical	Test Voltage:	DC 12 V

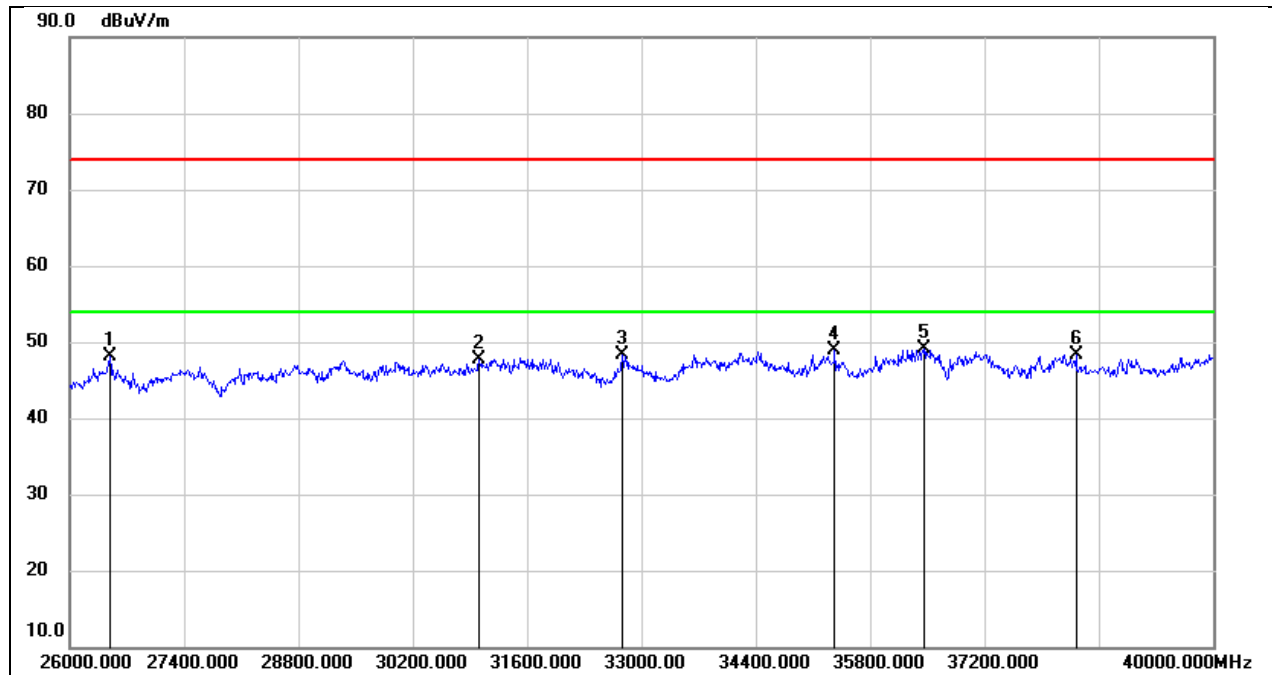


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18112.000	49.96	-5.47	44.49	74.00	-29.51	peak
2	18560.000	50.14	-5.29	44.85	74.00	-29.15	peak
3	19984.000	49.71	-5.44	44.27	74.00	-29.73	peak
4	23088.000	48.52	-3.41	45.11	74.00	-28.89	peak
5	24568.000	48.10	-2.33	45.77	74.00	-28.23	peak
6	25664.000	46.39	-1.01	45.38	74.00	-28.62	peak



8.6. SPURIOUS EMISSIONS(26 GHZ~40 GHZ)

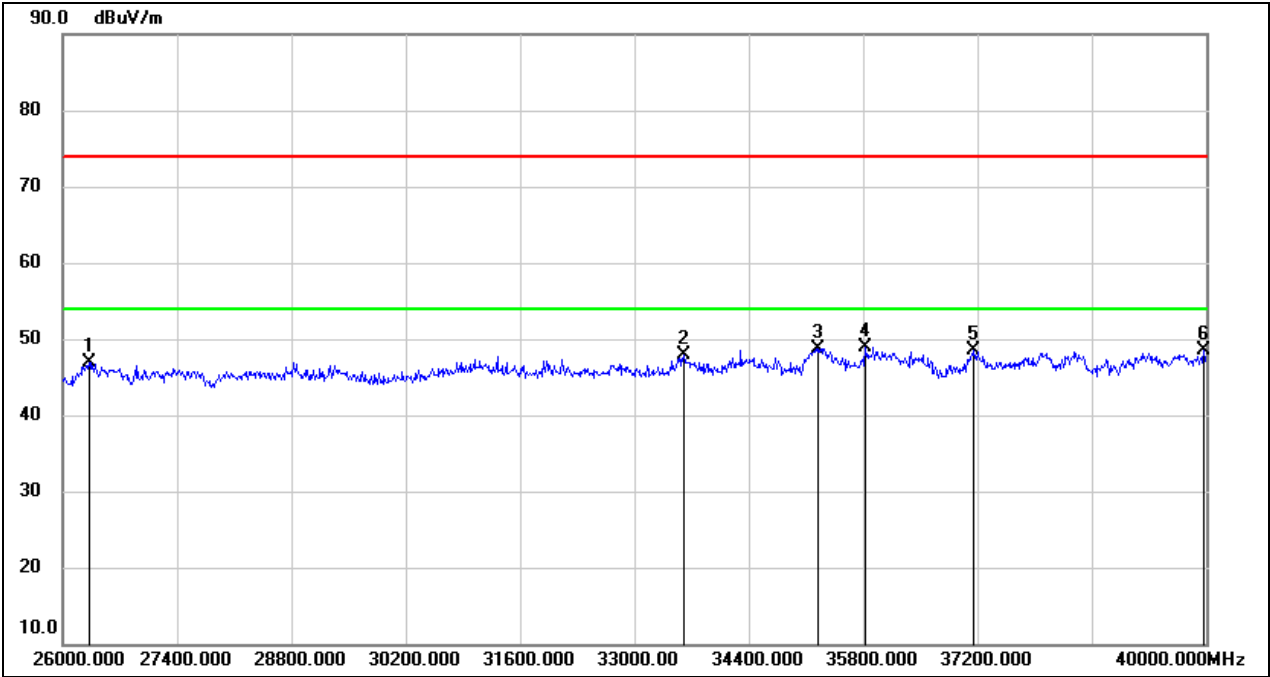
Test Mode:	802.11a 20	Channel:	5180
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	26490.000	52.79	-4.74	48.05	74.00	-25.95	peak
2	31012.000	48.33	-0.71	47.62	74.00	-26.38	peak
3	32762.000	49.45	-1.21	48.24	74.00	-25.76	peak
4	35366.000	46.40	2.59	48.99	74.00	-25.01	peak
5	36458.000	45.38	3.67	49.05	74.00	-24.95	peak
6	38320.000	44.56	3.77	48.33	74.00	-25.67	peak



Test Mode:	802.11a 20	Channel:	5180
Polarity:	Vertical	Test Voltage:	DC 12 V

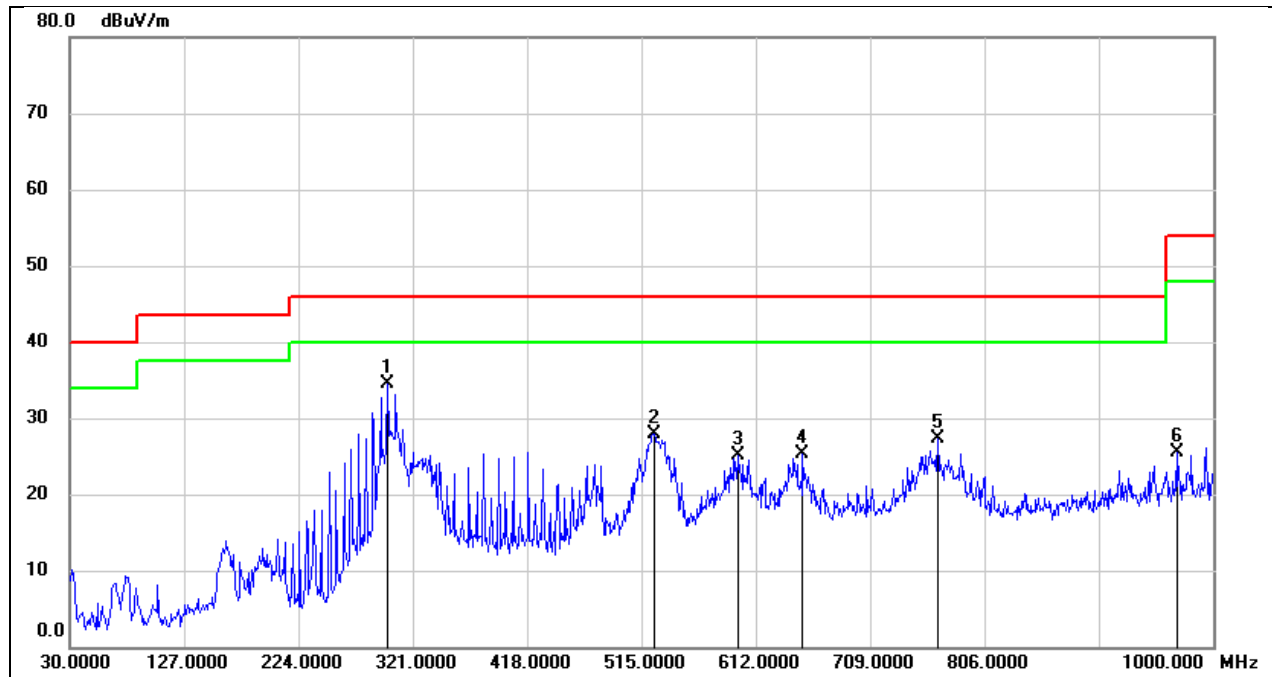


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	26322.000	52.12	-5.18	46.94	74.00	-27.06	peak
2	33602.000	47.51	0.46	47.97	74.00	-26.03	peak
3	35254.000	46.12	2.65	48.77	74.00	-25.23	peak
4	35828.000	45.25	3.67	48.92	74.00	-25.08	peak
5	37158.000	45.34	3.17	48.51	74.00	-25.49	peak
6	39972.000	43.45	5.13	48.58	74.00	-25.42	peak



8.7. SPURIOUS EMISSIONS(30 MHZ~1 GHZ)

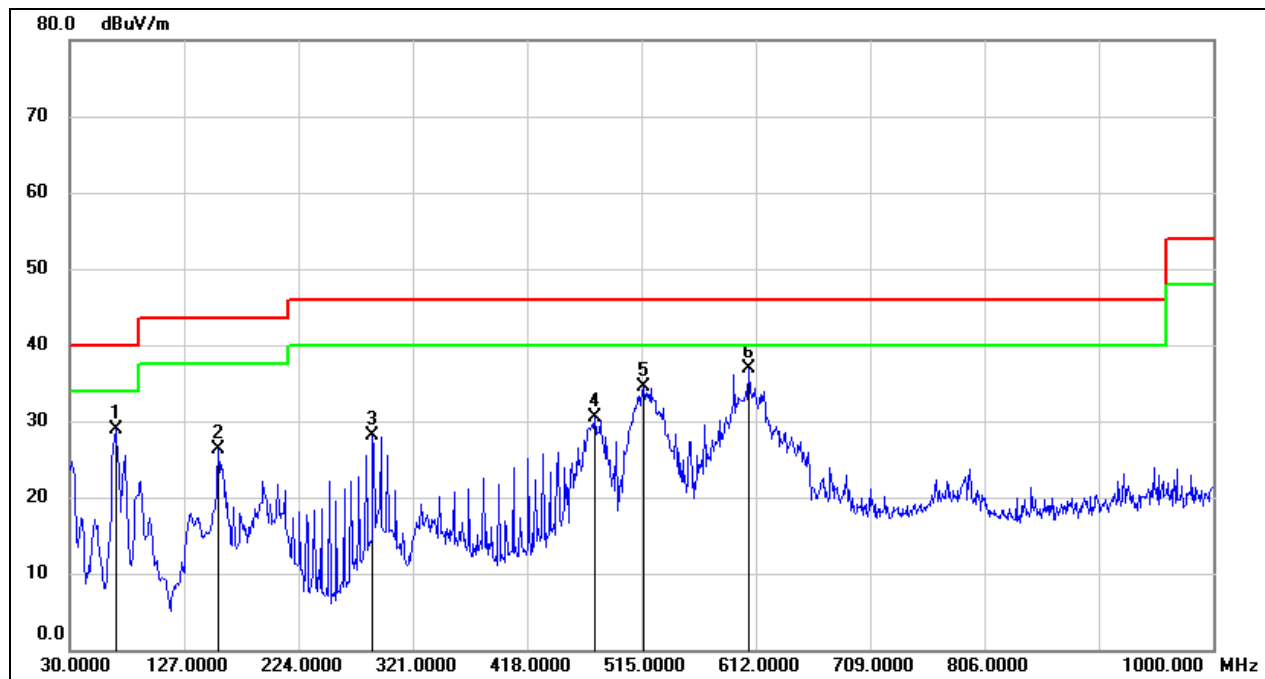
Test Mode:	802.11a 20	Channel:	5180
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	299.6600	49.80	-15.32	34.48	46.00	-11.52	QP
2	525.6700	38.88	-10.93	27.95	46.00	-18.05	QP
3	596.4800	34.77	-9.64	25.13	46.00	-20.87	QP
4	651.7700	34.21	-8.99	25.22	46.00	-20.78	QP
5	766.2300	35.02	-7.64	27.38	46.00	-18.62	QP
6	968.9600	29.90	-4.42	25.48	54.00	-28.52	QP



Test Mode:	802.11a 20	Channel:	5180
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	68.8000	49.51	-20.56	28.95	40.00	-11.05	QP
2	156.1000	44.19	-17.96	26.23	43.50	-17.27	QP
3	287.0500	44.15	-16.14	28.01	46.00	-17.99	QP
4	475.2300	42.38	-11.90	30.48	46.00	-15.52	QP
5	516.9400	45.58	-11.13	34.45	46.00	-11.55	QP
6	606.1800	46.28	-9.45	36.83	46.00	-9.17	QP

9. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a) and ISSED RSS-Gen Clause 8.8

FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

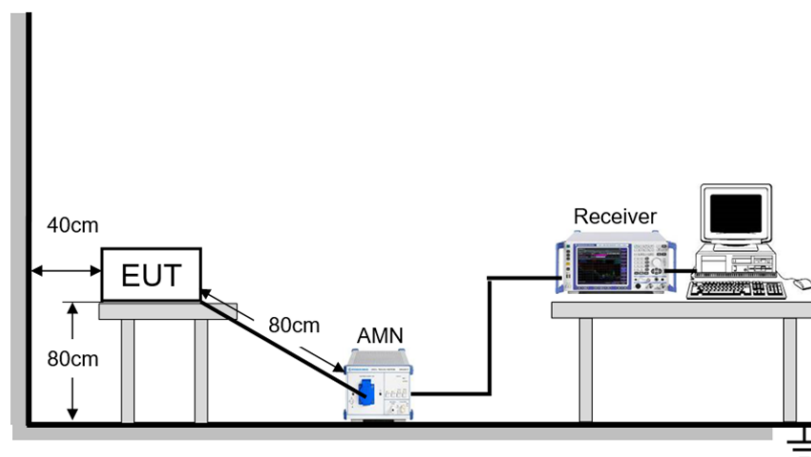
TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

TEST SETUP



**TEST ENVIRONMENT**

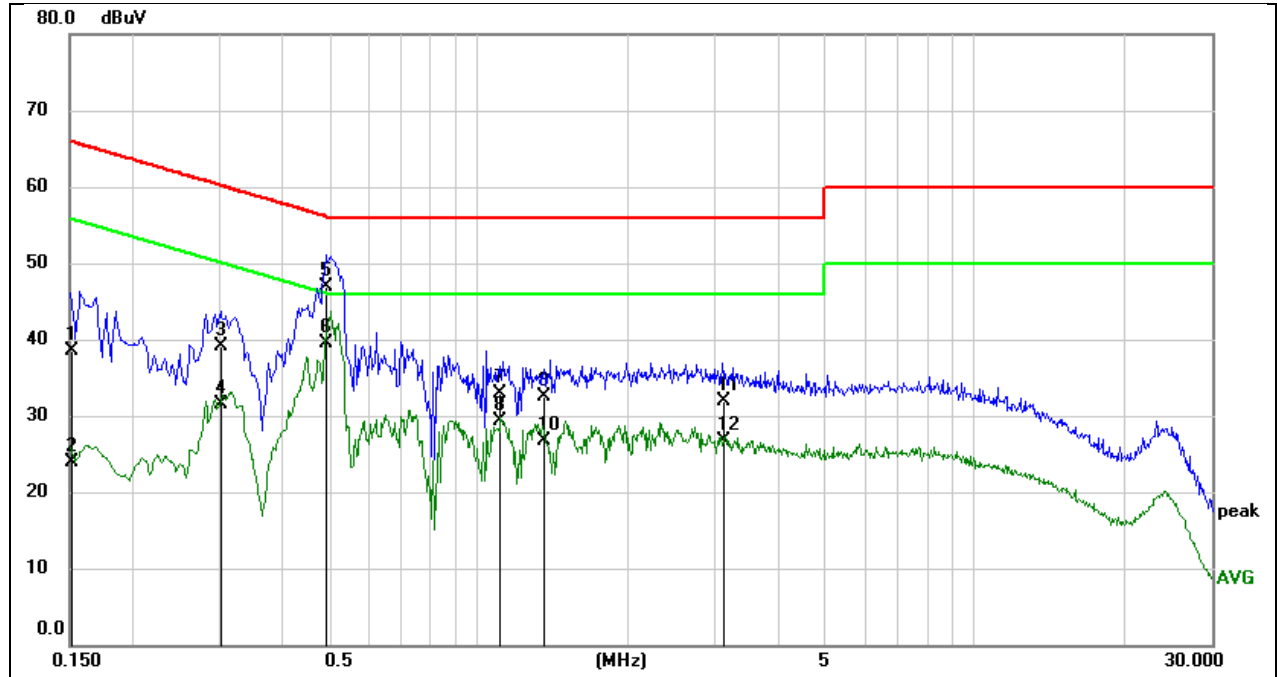
Temperature	22.8°C	Relative Humidity	55.5%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date	February 21, 2023	Test By	Wite Chen
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TEST RESULTS

Test Mode:	802.11a20	Channel:	5180
Line:	Line	Test Voltage:	AC 120 V, 60 Hz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1516	28.96	9.59	38.55	65.91	-27.36	QP
2	0.1516	14.27	9.59	23.86	55.91	-32.05	AVG
3	0.3050	29.60	9.59	39.19	60.11	-20.92	QP
4	0.3050	22.00	9.59	31.59	50.11	-18.52	AVG
5	0.4942	37.30	9.60	46.90	56.10	-9.20	QP
6	0.4942	29.92	9.60	39.52	46.10	-6.58	AVG
7	1.1090	23.32	9.61	32.93	56.00	-23.07	QP
8	1.1090	19.69	9.61	29.30	46.00	-16.70	AVG
9	1.3596	22.97	9.61	32.58	56.00	-23.42	QP
10	1.3596	17.13	9.61	26.74	46.00	-19.26	AVG
11	3.1171	22.14	9.68	31.82	56.00	-24.18	QP
12	3.1171	17.11	9.68	26.79	46.00	-19.21	AVG

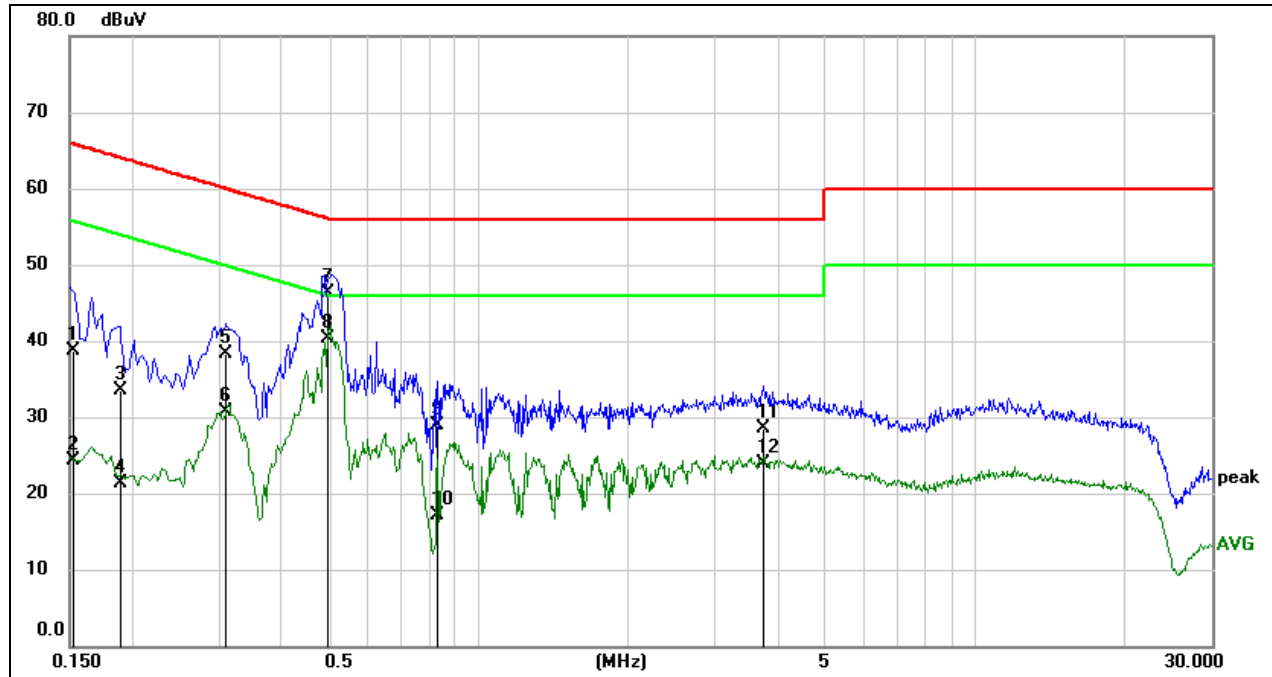
Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.



Test Mode:	802.11a20	Channel:	5180
Line:	Neutral	Test Voltage:	AC 120 V, 60 Hz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1531	29.09	9.59	38.68	65.83	-27.15	QP
2	0.1531	14.62	9.59	24.21	55.83	-31.62	AVG
3	0.1907	23.87	9.59	33.46	64.01	-30.55	QP
4	0.1907	11.70	9.59	21.29	54.01	-32.72	AVG
5	0.3109	28.69	9.59	38.28	59.95	-21.67	QP
6	0.3109	21.14	9.59	30.73	49.95	-19.22	AVG
7	0.4969	36.79	9.60	46.39	56.05	-9.66	QP
8	0.4969	30.68	9.60	40.28	46.05	-5.77	AVG
9	0.8276	19.28	9.60	28.88	56.00	-27.12	QP
10	0.8276	7.58	9.60	17.18	46.00	-28.82	AVG
11	3.7582	18.82	9.70	28.52	56.00	-27.48	QP
12	3.7582	14.11	9.70	23.81	46.00	-22.19	AVG

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.



10. ANTENNA REQUIREMENT

REQUIREMENT

Please refer to FCC 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.

Please refer to FCC part 15.407(a)

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. In addition, the maximum power spectral density shall not exceed 17 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.

DESCRIPTION

Pass



11. TEST DATA

11.1. APPENDIX A: EMISSION BANDWIDTH

11.1.1. Test Result

Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A-CDD	Ant1	5180	21.600	5169.040	5190.640	PASS
	Ant3	5180	22.440	5168.440	5190.880	PASS
	Ant1	5200	22.200	5189.080	5211.280	PASS
	Ant3	5200	21.920	5189.200	5211.120	PASS
	Ant1	5240	21.960	5228.800	5250.760	PASS
	Ant3	5240	22.760	5228.200	5250.960	PASS
	Ant1	5260	22.040	5248.920	5270.960	PASS
	Ant3	5260	21.480	5249.040	5270.520	PASS
	Ant1	5280	21.480	5269.320	5290.800	PASS
	Ant3	5280	22.280	5268.920	5291.200	PASS
	Ant1	5320	21.440	5309.240	5330.680	PASS
	Ant3	5320	21.920	5309.080	5331.000	PASS
	Ant1	5500	21.480	5489.280	5510.760	PASS
	Ant3	5500	21.640	5489.160	5510.800	PASS
	Ant1	5580	21.800	5569.160	5590.960	PASS
	Ant3	5580	22.240	5569.040	5591.280	PASS
	Ant1	5700	21.320	5689.440	5710.760	PASS
	Ant3	5700	22.240	5689.120	5711.360	PASS
	Ant1	5720	22.200	5708.720	5730.920	PASS
	Ant3	5720	21.680	5709.160	5730.840	PASS
	Ant1	5720 UNII-2C	16.28	5708.720	5725	PASS
	Ant3	5720 UNII-2C	15.84	5709.160	5725	PASS
	Ant1	5720 UNII-3	5.92	5725	5730.920	PASS
	Ant3	5720 UNII-3	5.84	5725	5730.840	PASS
	Ant1	5745	21.640	5734.000	5755.640	PASS
	Ant3	5745	22.000	5734.040	5756.040	PASS
	Ant1	5785	20.920	5774.600	5795.520	PASS
	Ant3	5785	21.800	5774.200	5796.000	PASS
	Ant1	5825	21.920	5813.960	5835.880	PASS
	Ant3	5825	23.680	5813.680	5837.360	PASS
11AX20MIMO	Ant1	5180	22.320	5168.720	5191.040	PASS
	Ant3	5180	21.720	5169.080	5190.800	PASS
	Ant1	5200	21.160	5189.400	5210.560	PASS
	Ant3	5200	21.880	5189.000	5210.880	PASS
	Ant1	5240	22.040	5228.840	5250.880	PASS
	Ant3	5240	21.280	5229.280	5250.560	PASS
	Ant1	5260	21.520	5249.160	5270.680	PASS
	Ant3	5260	22.360	5248.600	5270.960	PASS
	Ant1	5280	21.560	5269.320	5290.880	PASS
	Ant3	5280	21.760	5268.920	5290.680	PASS
	Ant1	5320	21.360	5309.200	5330.560	PASS
	Ant3	5320	22.600	5308.600	5331.200	PASS
	Ant1	5500	21.360	5489.680	5511.040	PASS
	Ant3	5500	21.600	5489.440	5511.040	PASS
	Ant1	5580	21.920	5569.040	5590.960	PASS
	Ant3	5580	21.920	5569.040	5590.960	PASS
	Ant1	5700	21.400	5689.400	5710.800	PASS
	Ant3	5700	21.480	5688.880	5710.360	PASS
	Ant1	5720	21.760	5708.840	5730.600	PASS
	Ant3	5720	21.840	5709.280	5731.120	PASS
	Ant1	5720 UNII-2C	16.16	5708.840	5725	PASS
	Ant3	5720 UNII-2C	15.72	5709.280	5725	PASS
	Ant1	5720 UNII-3	5.6	5725	5730.600	PASS
	Ant3	5720 UNII-3	6.12	5725	5731.120	PASS
	Ant1	5745	20.560	5734.800	5755.360	PASS



	Ant3	5745	21.080	5734.680	5755.760	PASS
	Ant1	5785	21.720	5774.080	5795.800	PASS
	Ant3	5785	20.800	5774.520	5795.320	PASS
	Ant1	5825	20.960	5814.200	5835.160	PASS
	Ant3	5825	21.560	5814.440	5836.000	PASS
11AX40MIMO	Ant1	5190	41.280	5169.200	5210.480	PASS
	Ant3	5190	42.160	5169.120	5211.280	PASS
	Ant1	5230	41.520	5208.720	5250.240	PASS
	Ant3	5230	41.600	5208.720	5250.320	PASS
	Ant1	5270	41.920	5248.320	5290.240	PASS
	Ant3	5270	42.640	5248.720	5291.360	PASS
	Ant1	5310	42.240	5288.240	5330.480	PASS
	Ant3	5310	41.520	5289.200	5330.720	PASS
	Ant1	5510	42.240	5488.240	5530.480	PASS
	Ant3	5510	42.800	5488.320	5531.120	PASS
	Ant1	5550	42.160	5528.880	5571.040	PASS
	Ant3	5550	42.720	5529.600	5572.320	PASS
	Ant1	5670	41.200	5649.120	5690.320	PASS
	Ant3	5670	41.280	5648.800	5690.080	PASS
	Ant1	5710	41.040	5689.040	5730.080	PASS
	Ant3	5710	42.720	5688.800	5731.520	PASS
	Ant1	5710 UNII-2C	35.96	5689.040	5725	PASS
	Ant3	5710 UNII-2C	36.2	5688.800	5725	PASS
	Ant1	5710 UNII-3	5.08	5725	5730.080	PASS
	Ant3	5710 UNII-3	6.52	5725	5731.520	PASS
	Ant1	5755	42.000	5733.880	5775.880	PASS
	Ant3	5755	41.840	5734.200	5776.040	PASS
11AX80MIMO	Ant1	5210	86.240	5166.000	5252.240	PASS
	Ant3	5210	88.640	5166.320	5254.960	PASS
	Ant1	5290	84.960	5247.600	5332.560	PASS
	Ant3	5290	83.840	5247.920	5331.760	PASS
	Ant1	5530	84.160	5488.400	5572.560	PASS
	Ant3	5530	82.880	5488.560	5571.440	PASS
	Ant1	5610	84.640	5568.560	5653.200	PASS
	Ant3	5610	84.800	5568.080	5652.880	PASS
	Ant1	5690	84.640	5646.800	5731.440	PASS
	Ant3	5690	83.200	5648.080	5731.280	PASS
	Ant1	5690 UNII-2C	78.2	5646.800	5725	PASS
	Ant3	5690 UNII-2C	76.92	5648.080	5725	PASS
	Ant1	5690 UNII-3	6.44	5725	5731.440	PASS
	Ant3	5690 UNII-3	6.28	5725	5731.280	PASS
	Ant1	5775	85.440	5731.640	5817.080	PASS
	Ant3	5775	85.440	5731.640	5817.080	PASS
11AX160MIMO	Ant1	5250	172.800	5163.920	5336.720	PASS
	Ant3	5250	171.520	5164.560	5336.080	PASS
	Ant1	5250 UNII-1	86.08	5163.920	5250	PASS
	Ant3	5250 UNII-1	85.44	5164.560	5250	PASS
	Ant1	5250 UNII-2A	86.72	5250	5336.720	PASS
	Ant3	5250 UNII-2A	86.08	5250	5336.080	PASS
	Ant1	5570	168.000	5486.160	5654.160	PASS
11BE20MIMO	Ant3	5570	169.600	5485.520	5655.120	PASS
	Ant1	5180	22.120	5169.040	5191.160	PASS
	Ant3	5180	22.800	5168.520	5191.320	PASS
	Ant1	5200	22.280	5189.080	5211.360	PASS
	Ant3	5200	22.000	5189.080	5211.080	PASS
	Ant1	5240	21.960	5228.960	5250.920	PASS
	Ant3	5240	22.640	5228.800	5251.440	PASS
	Ant1	5260	22.560	5248.680	5271.240	PASS
	Ant3	5260	22.720	5248.680	5271.400	PASS
	Ant1	5280	22.880	5268.640	5291.520	PASS
	Ant3	5280	22.480	5268.760	5291.240	PASS



	Ant1	5320	22.280	5308.840	5331.120	PASS
	Ant3	5320	22.760	5308.800	5331.560	PASS
	Ant1	5500	22.360	5488.960	5511.320	PASS
	Ant3	5500	22.000	5488.880	5510.880	PASS
	Ant1	5580	22.120	5569.000	5591.120	PASS
	Ant3	5580	22.680	5568.680	5591.360	PASS
	Ant1	5700	22.480	5688.720	5711.200	PASS
	Ant3	5700	23.120	5688.240	5711.360	PASS
	Ant1	5720	22.920	5708.560	5731.480	PASS
	Ant3	5720	22.640	5708.840	5731.480	PASS
	Ant1	5720 UNII-2C	16.44	5708.560	5725	PASS
	Ant3	5720 UNII-2C	16.16	5708.840	5725	PASS
	Ant1	5720 UNII-3	6.48	5725	5731.480	PASS
	Ant3	5720 UNII-3	6.48	5725	5731.480	PASS
	Ant1	5745	21.840	5733.880	5755.720	PASS
	Ant3	5745	22.280	5734.200	5756.480	PASS
	Ant1	5785	22.880	5773.720	5796.600	PASS
	Ant3	5785	22.560	5773.720	5796.280	PASS
	Ant1	5825	22.200	5813.920	5836.120	PASS
	Ant3	5825	22.160	5813.680	5835.840	PASS
11BE40MIMO	Ant1	5190	43.200	5168.320	5211.520	PASS
	Ant3	5190	44.000	5167.840	5211.840	PASS
	Ant1	5230	43.280	5208.480	5251.760	PASS
	Ant3	5230	43.920	5208.320	5252.240	PASS
	Ant1	5270	44.080	5248.240	5292.320	PASS
	Ant3	5270	42.640	5248.640	5291.280	PASS
	Ant1	5310	43.280	5288.720	5332.000	PASS
	Ant3	5310	43.840	5287.360	5331.200	PASS
	Ant1	5510	43.360	5488.400	5531.760	PASS
	Ant3	5510	43.840	5488.240	5532.080	PASS
	Ant1	5550	42.960	5528.400	5571.360	PASS
	Ant3	5550	42.560	5529.040	5571.600	PASS
	Ant1	5670	42.320	5648.880	5691.200	PASS
	Ant3	5670	43.520	5647.920	5691.440	PASS
	Ant1	5710	43.200	5688.080	5731.280	PASS
	Ant3	5710	42.960	5688.400	5731.360	PASS
	Ant1	5710 UNII-2C	36.92	5688.080	5725	PASS
	Ant3	5710 UNII-2C	36.6	5688.400	5725	PASS
	Ant1	5710 UNII-3	6.28	5725	5731.280	PASS
	Ant3	5710 UNII-3	6.36	5725	5731.360	PASS
11BE80MIMO	Ant1	5755	42.400	5733.720	5776.120	PASS
	Ant3	5755	44.080	5732.680	5776.760	PASS
	Ant1	5795	43.600	5773.000	5816.600	PASS
	Ant3	5795	43.760	5773.400	5817.160	PASS
	Ant1	5210	88.960	5165.520	5254.480	PASS
	Ant3	5210	87.360	5166.480	5253.840	PASS
	Ant1	5290	86.400	5246.320	5332.720	PASS
	Ant3	5290	86.560	5246.640	5333.200	PASS
	Ant1	5530	87.520	5486.000	5573.520	PASS
	Ant3	5530	88.640	5486.000	5574.640	PASS
	Ant1	5610	86.400	5567.120	5653.520	PASS
	Ant3	5610	87.200	5566.000	5653.200	PASS
	Ant1	5690	87.520	5646.640	5734.160	PASS
	Ant3	5690	86.720	5647.280	5734.000	PASS
	Ant1	5690 UNII-2C	78.36	5646.640	5725	PASS
	Ant3	5690 UNII-2C	77.72	5647.280	5725	PASS
	Ant1	5690 UNII-3	9.16	5725	5734.160	PASS
	Ant3	5690 UNII-3	9	5725	5734.000	PASS
	Ant1	5775	86.560	5731.320	5817.880	PASS
	Ant3	5775	88.800	5730.840	5819.640	PASS
11BE160MIMO	Ant1	5250	170.240	5166.160	5336.400	PASS
	Ant3	5250	168.960	5166.160	5335.120	PASS
	Ant1	5250 UNII-1	83.84	5166.160	5250	PASS



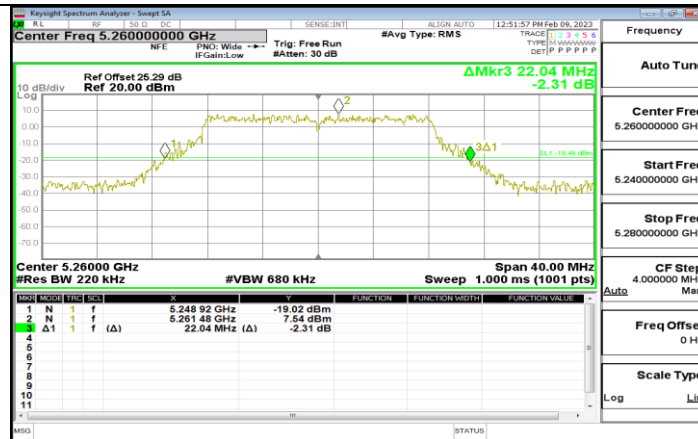
	Ant3	5250 UNII-1	83.84	5166.160	5250	PASS
	Ant1	5250 UNII-2A	86.4	5250	5336.400	PASS
	Ant3	5250 UNII-2A	85.12	5250	5335.120	PASS
	Ant1	5570	164.800	5487.760	5652.560	PASS
	Ant3	5570	169.280	5486.800	5656.080	PASS
11BE240MIMO	Ant1	5610	252.160	5487.120	5739.280	PASS
	Ant3	5610	249.600	5484.560	5734.160	PASS
	Ant1	5610 UNII-2C	237.88	5487.120	5725	PASS
	Ant3	5610 UNII-2C	240.44	5484.560	5725	PASS
	Ant1	5610 UNII-3	14.28	5725	5739.280	PASS
	Ant3	5610 UNII-3	9.16	5725	5734.160	PASS



11.1.2. Test Graphs



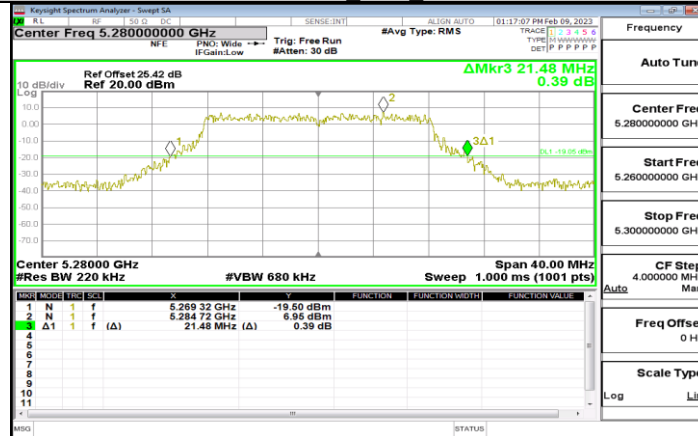




11A-CDD Ant1 5260



11A-CDD Ant3 5260



11A-CDD Ant1 5280



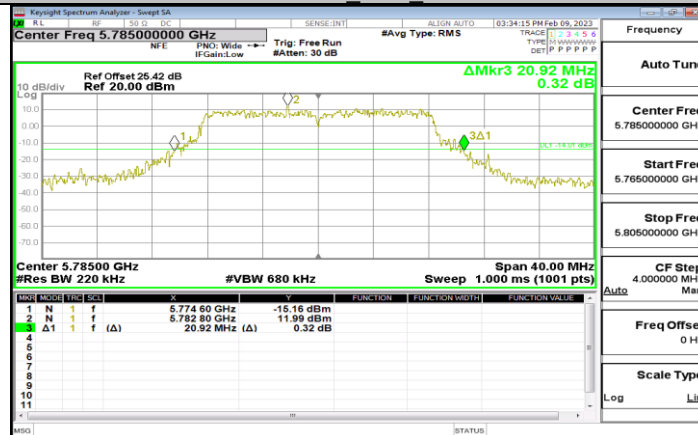




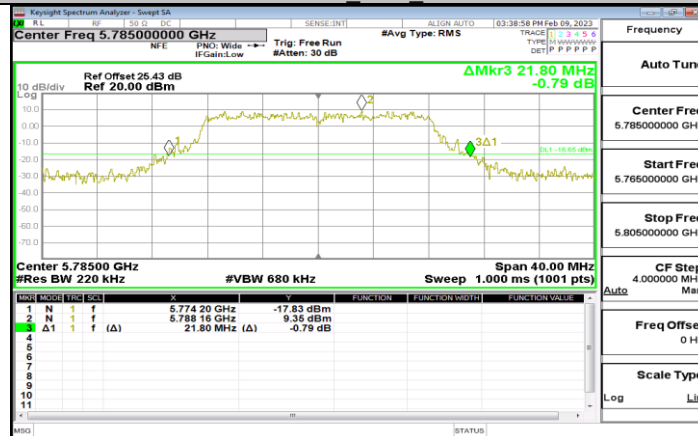




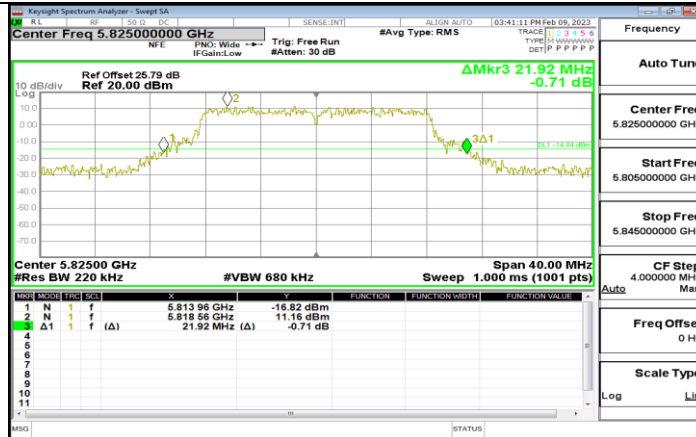
11A-CDD Ant3 5745



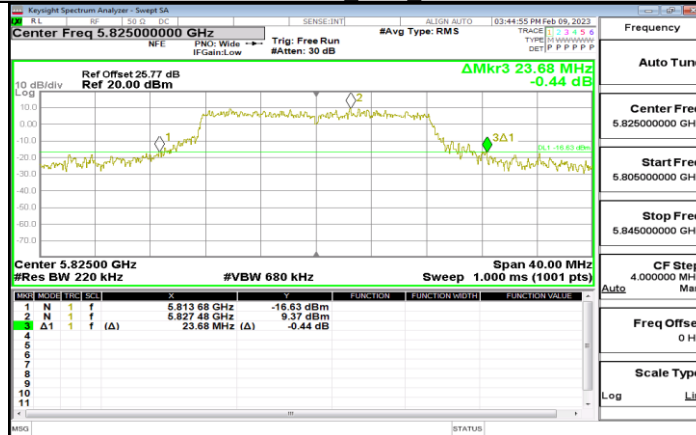
11A-CDD Ant1 5785



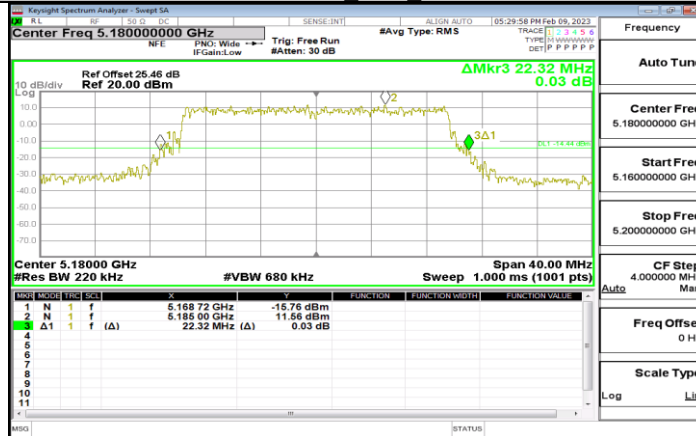
11A-CDD Ant3 5785



11A-CDD Ant1 5825



11A-CDD Ant3 5825



11AX20MIMO_Ant1 5180

