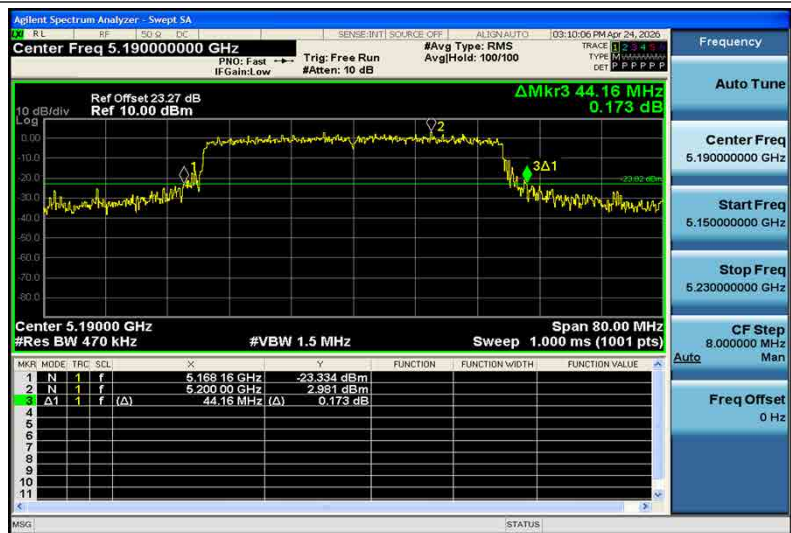
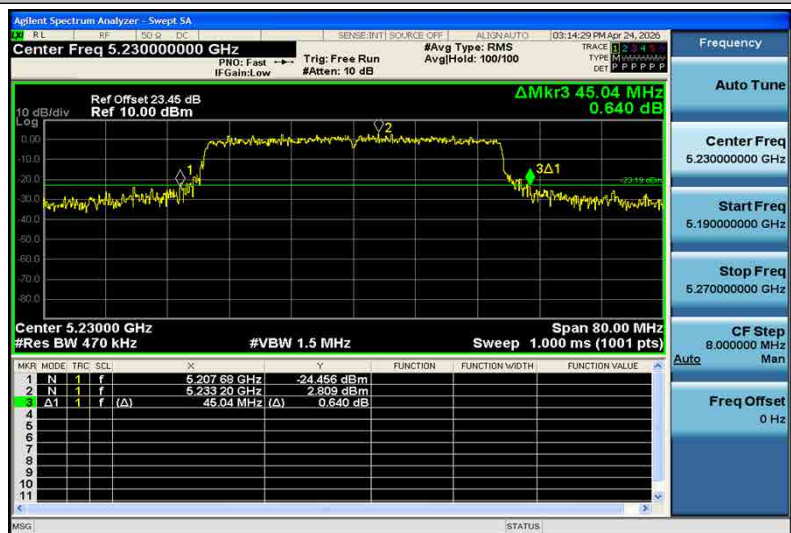
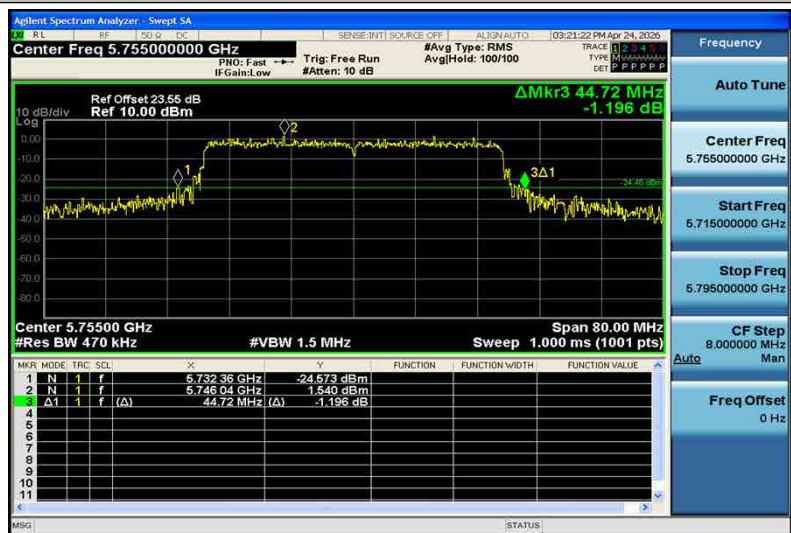




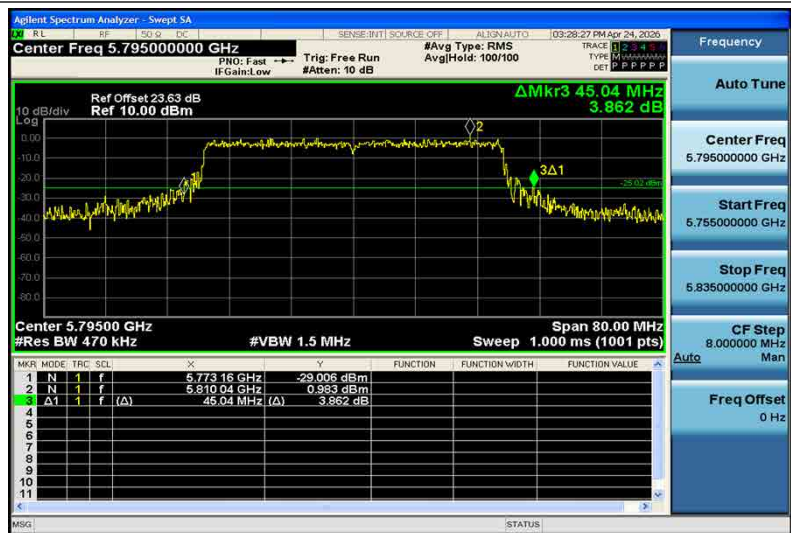
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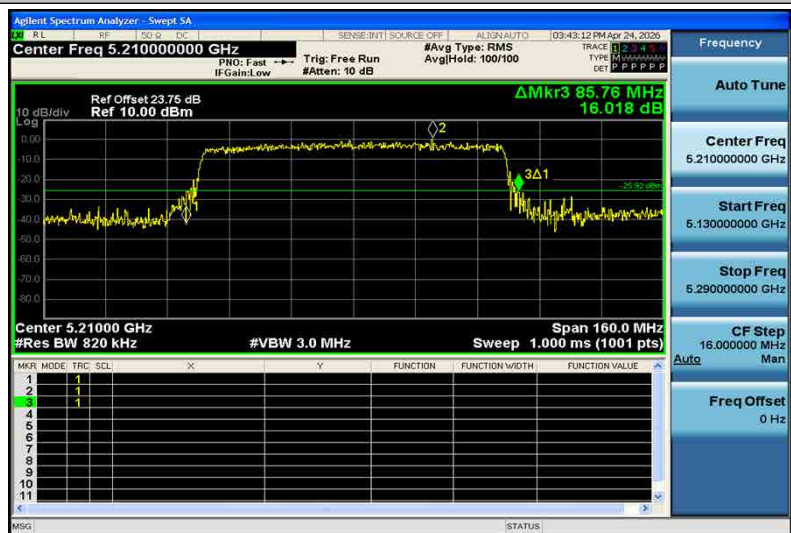
11AX40SISO-Ant1-5230



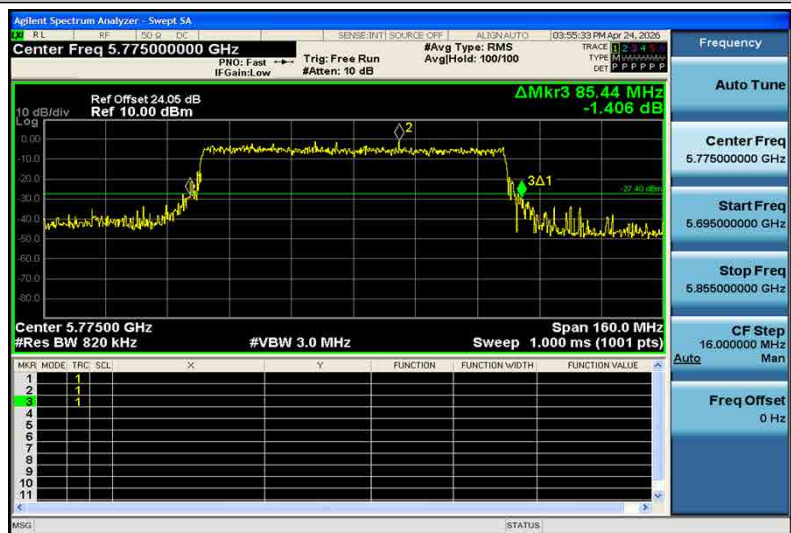
11AX40SISO-Ant1-5755



11AX40SISO-Ant1-5795



11AX80SISO-Ant1-5210

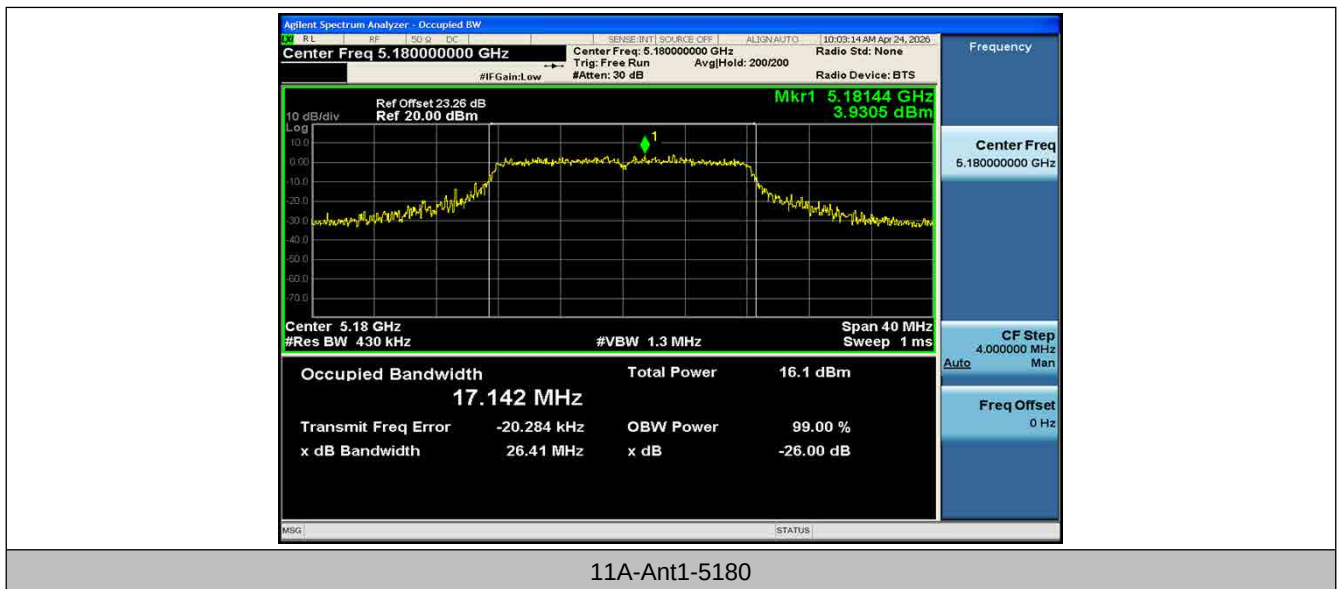


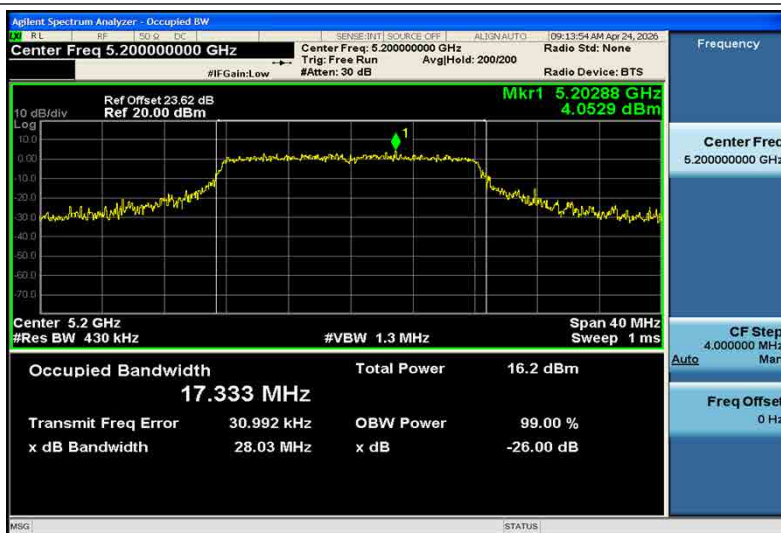
11AX80SISO-Ant1-5775

Occupied channel bandwidth

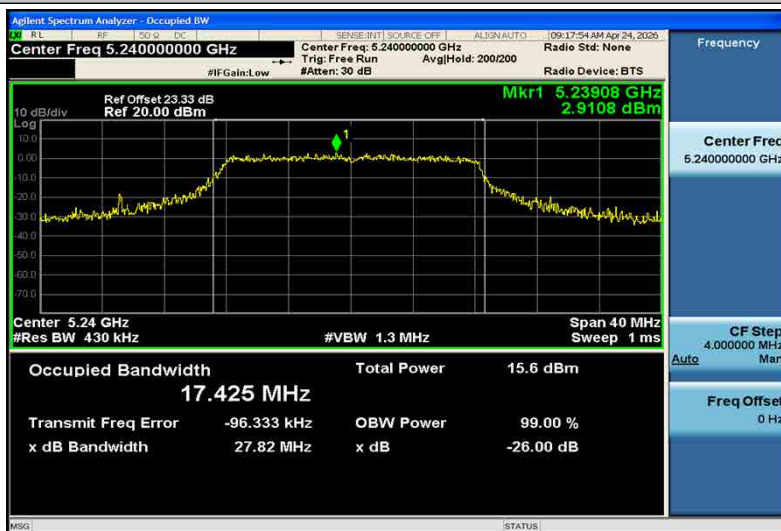
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.142	5171.4087	5188.5507	---	---
11A	Ant1	5200	17.333	5191.3645	5208.6975	---	---
11A	Ant1	5240	17.425	5231.1912	5248.6162	---	---
11A	Ant1	5745	17.522	5736.2226	5753.7446	---	---
11A	Ant1	5785	17.447	5776.2414	5793.6884	---	---
11A	Ant1	5825	17.658	5816.1238	5833.7818	---	---
11N20SISO	Ant1	5180	18.543	5170.7474	5189.2904	---	---
11N20SISO	Ant1	5200	18.696	5190.6753	5209.3713	---	---
11N20SISO	Ant1	5240	18.674	5230.6809	5249.3549	---	---
11N20SISO	Ant1	5745	18.785	5735.6004	5754.3854	---	---
11N20SISO	Ant1	5785	18.949	5775.5128	5794.4618	---	---
11N20SISO	Ant1	5825	18.853	5815.5483	5834.4013	---	---
11N40SISO	Ant1	5190	37.128	5171.5115	5208.6395	---	---
11N40SISO	Ant1	5230	36.990	5211.5349	5248.5249	---	---
11N40SISO	Ant1	5755	37.443	5736.2367	5773.6797	---	---
11N40SISO	Ant1	5795	37.489	5776.2581	5813.7471	---	---
11AC20SISO	Ant1	5180	18.597	5170.7559	5189.3529	---	---
11AC20SISO	Ant1	5200	18.535	5190.7681	5209.3031	---	---
11AC20SISO	Ant1	5240	18.495	5230.7398	5249.2348	---	---
11AC20SISO	Ant1	5745	18.761	5735.5765	5754.3375	---	---
11AC20SISO	Ant1	5785	18.831	5775.6277	5794.4587	---	---
11AC20SISO	Ant1	5825	18.888	5815.4896	5834.3776	---	---
11AC40SISO	Ant1	5190	36.967	5171.4664	5208.4334	---	---
11AC40SISO	Ant1	5230	37.018	5211.6176	5248.6356	---	---
11AC40SISO	Ant1	5755	37.430	5736.3040	5773.7340	---	---
11AC40SISO	Ant1	5795	37.491	5776.2748	5813.7658	---	---
11AC80SISO	Ant1	5210	76.229	5172.0233	5248.2523	---	---
11AC80SISO	Ant1	5775	76.586	5736.6083	5813.1943	---	---
11AX20SISO	Ant1	5180	19.257	5170.3836	5189.6406	---	---

11AX20SIS O	Ant1	5200	19.196	5190.4014	5209.5974	---	---
11AX20SIS O	Ant1	5240	19.270	5230.3461	5249.6161	---	---
11AX20SIS O	Ant1	5745	19.450	5735.2444	5754.6944	---	---
11AX20SIS O	Ant1	5785	19.327	5775.3015	5794.6285	---	---
11AX20SIS O	Ant1	5825	19.364	5815.3052	5834.6692	---	---
11AX40SIS O	Ant1	5190	38.106	5170.8938	5208.9998	---	---
11AX40SIS O	Ant1	5230	38.075	5210.9694	5249.0444	---	---
11AX40SIS O	Ant1	5755	38.344	5735.7886	5774.1326	---	---
11AX40SIS O	Ant1	5795	38.351	5775.8607	5814.2117	---	---
11AX80SIS O	Ant1	5210	77.603	5171.4381	5249.0411	---	---
11AX80SIS O	Ant1	5775	77.931	5735.9754	5813.9064	---	---

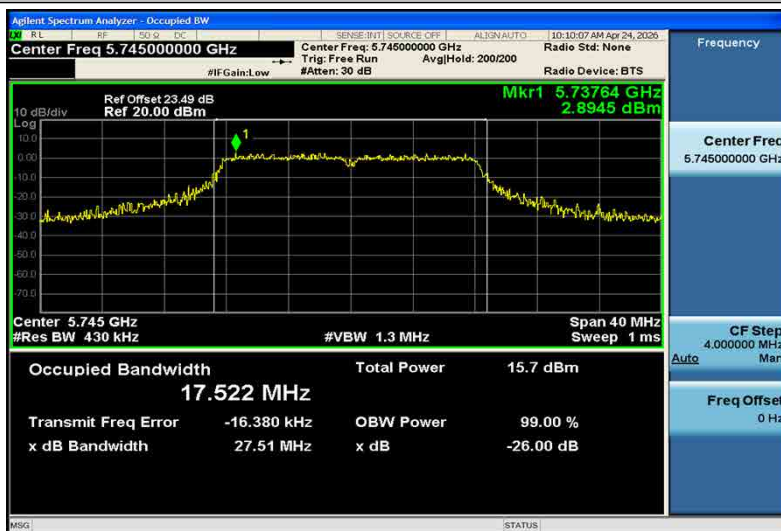




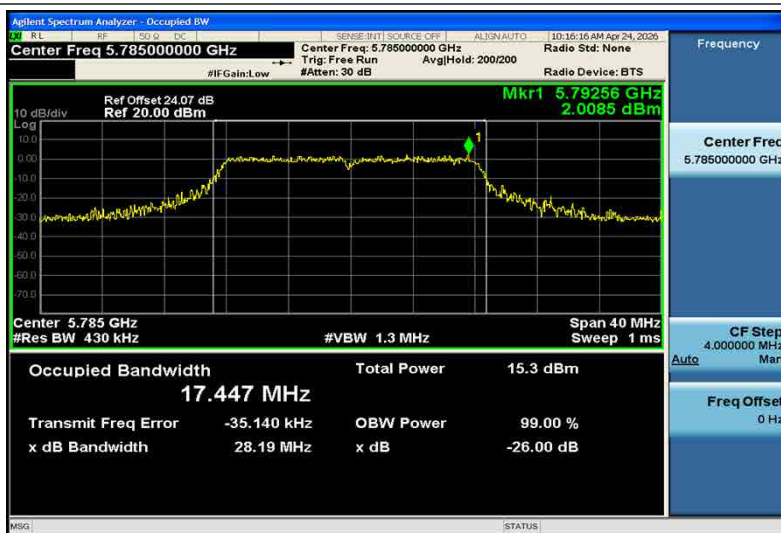
11A-Ant1-5200



11A-Ant1-5240



11A-Ant1-5745



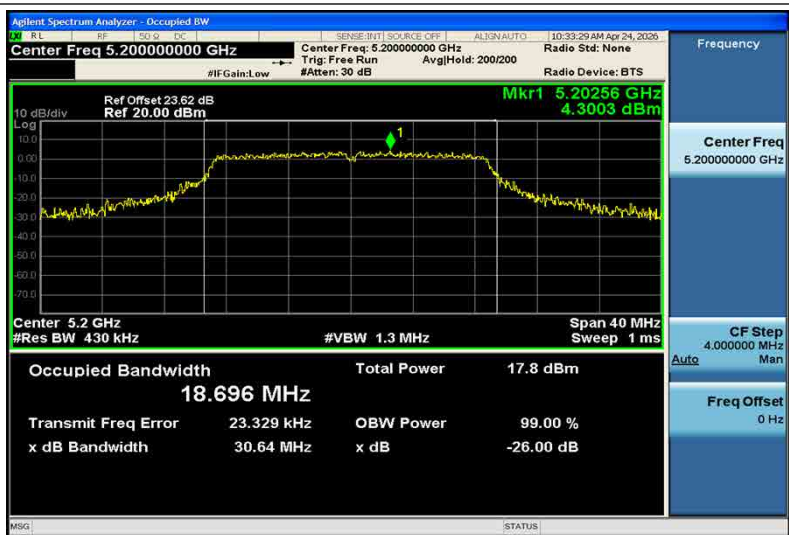
11A-Ant1-5785



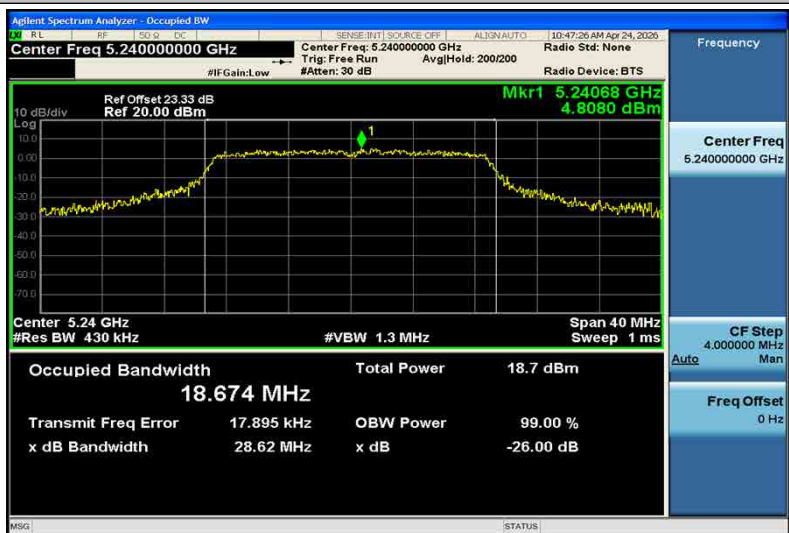
11A-Ant1-5825



11N20SISO-Ant1-5180



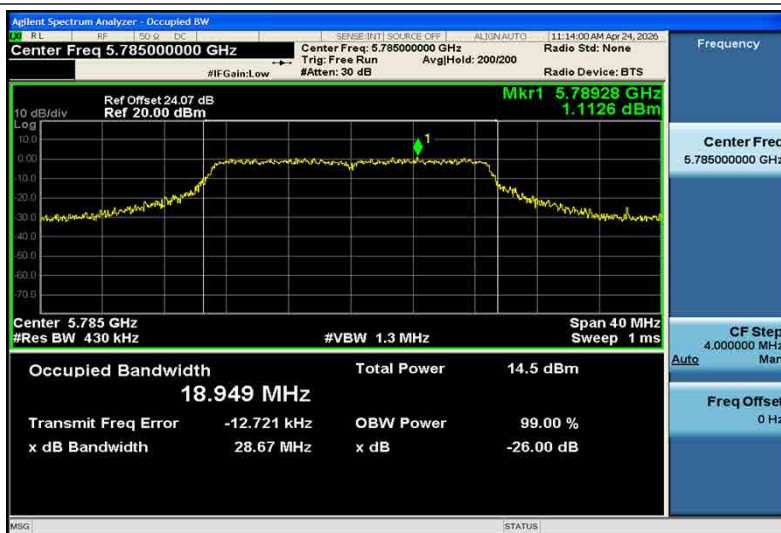
11N20SISO-Ant1-5200



11N20SISO-Ant1-5240



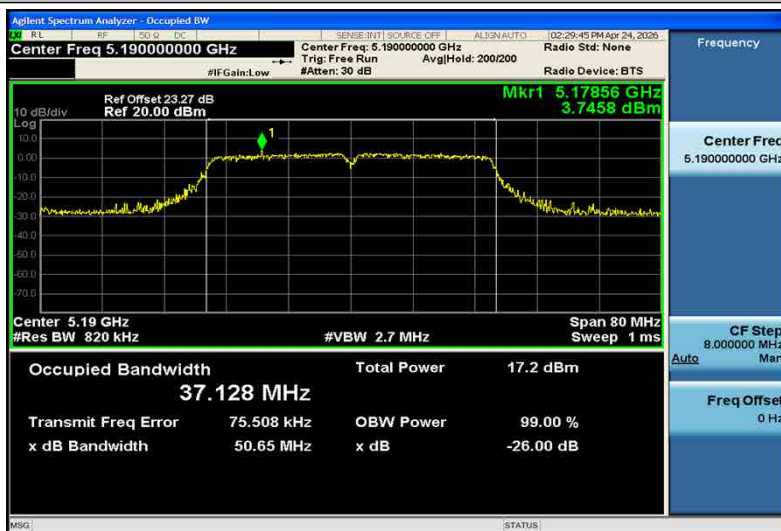
11N20SISO-Ant1-5745



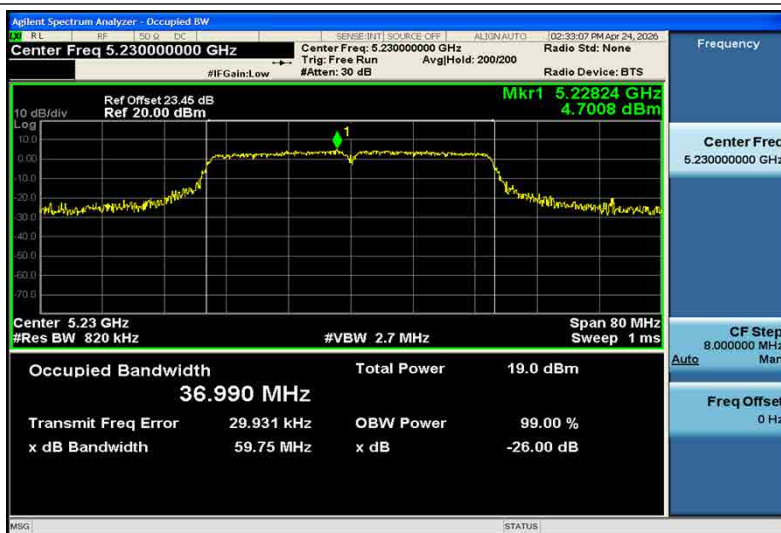
11N20SISO-Ant1-5785



11N20SISO-Ant1-5825



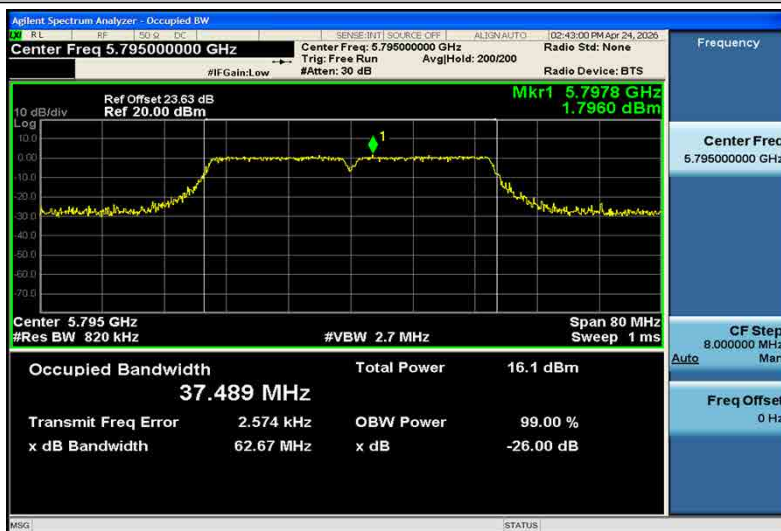
11N40SISO-Ant1-5190



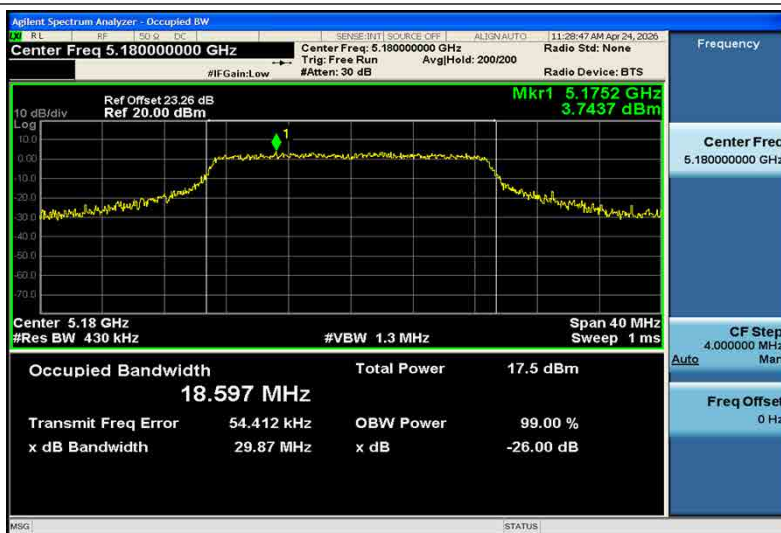
11N40SISO-Ant1-5230



11N40SISO-Ant1-5755



11N40SISO-Ant1-5795



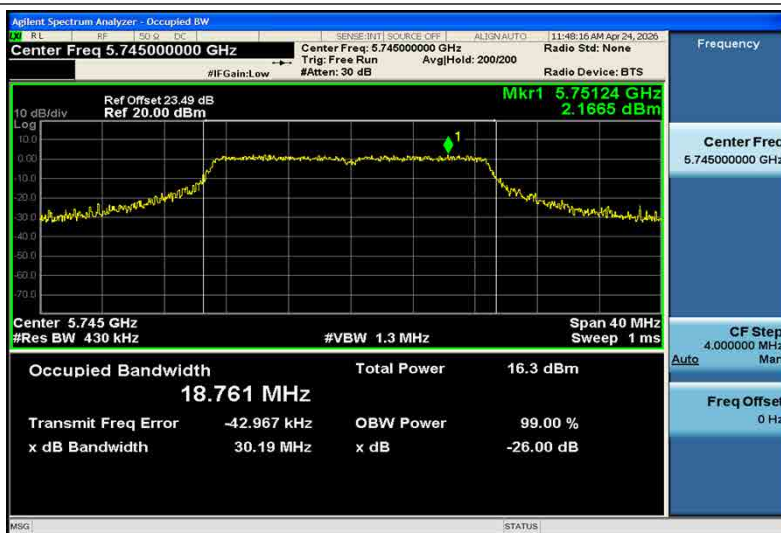
11AC20SISO-Ant1-5180



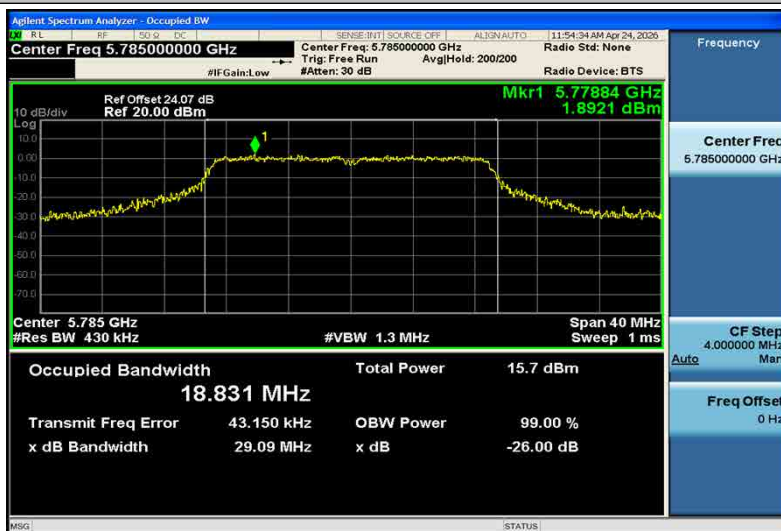
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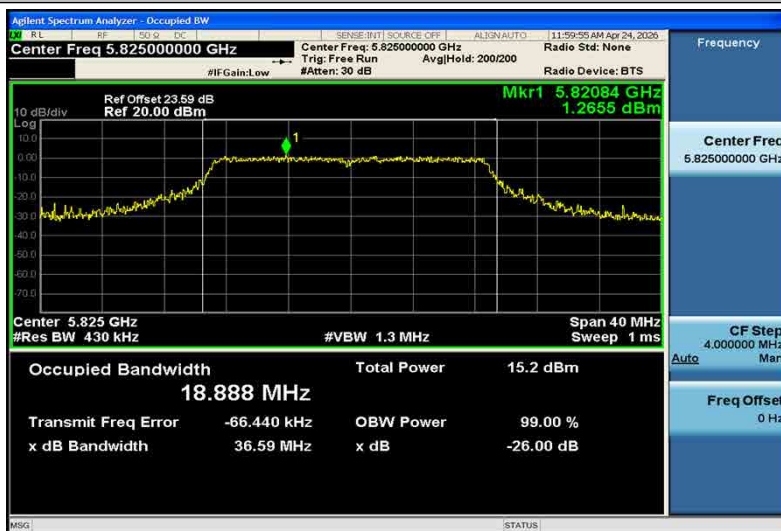
11AC20SISO-Ant1-5240



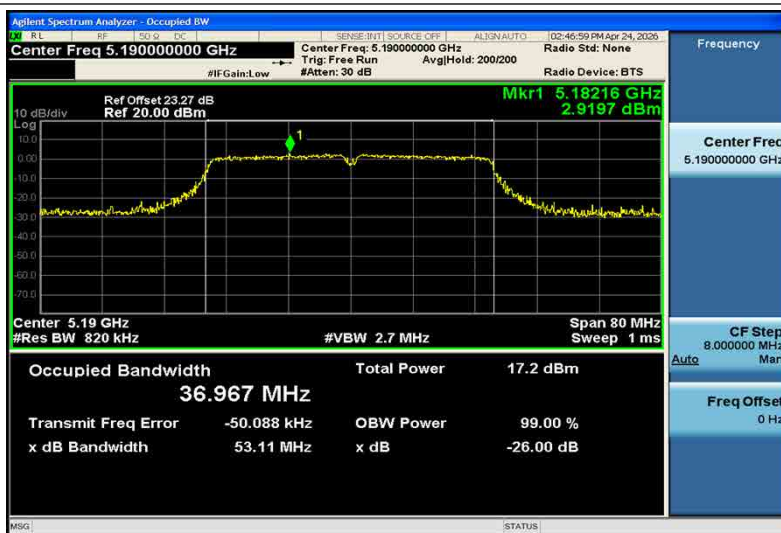
11AC20SISO-Ant1-5745



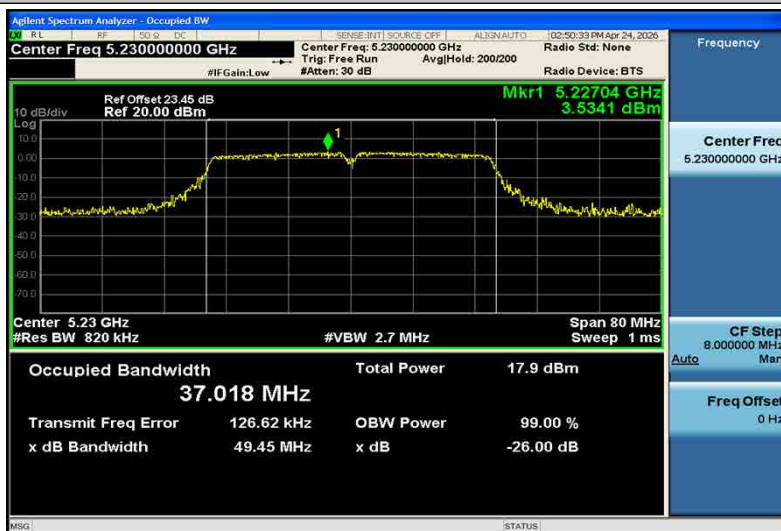
11AC20SISO-Ant1-5785



11AC20SISO-Ant1-5825



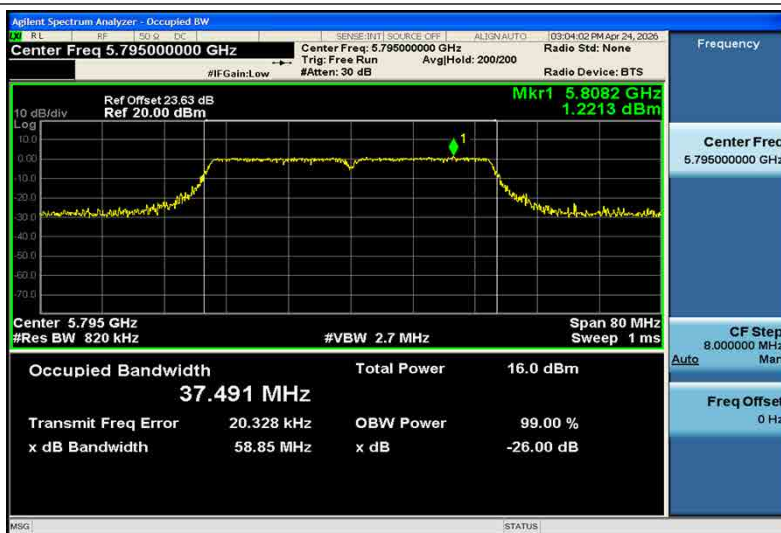
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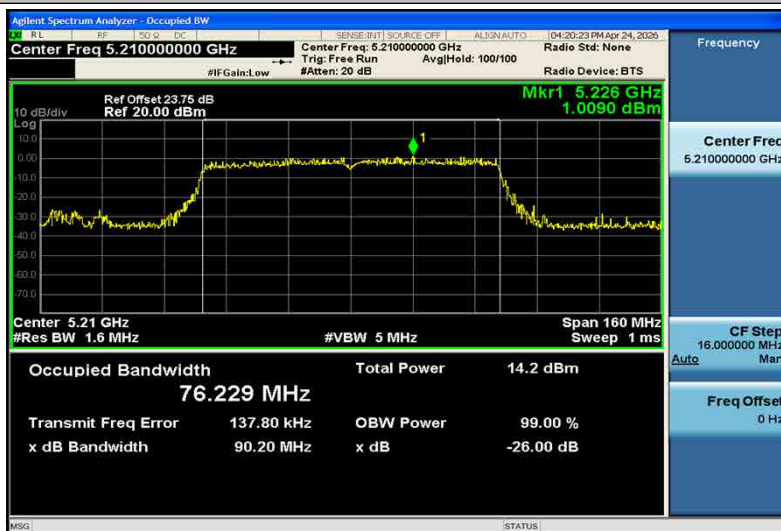
11AC40SISO-Ant1-5230



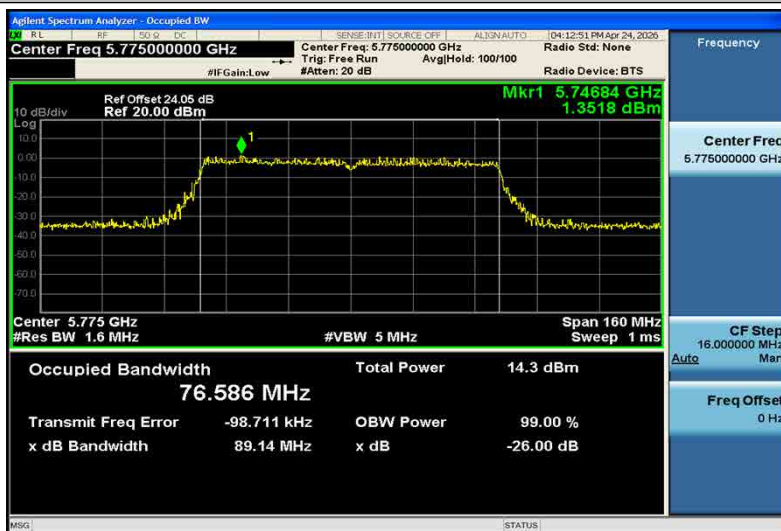
11AC40SISO-Ant1-5755



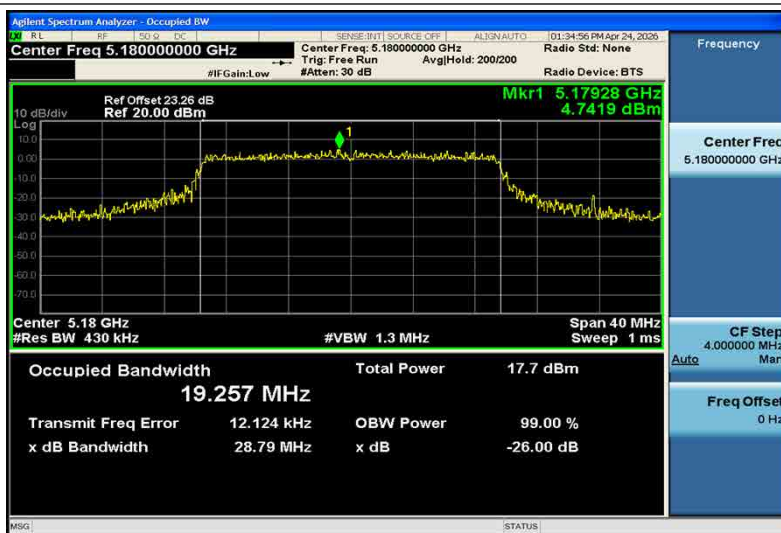
11AC40SISO-Ant1-5795



11AC80SISO-Ant1-5210



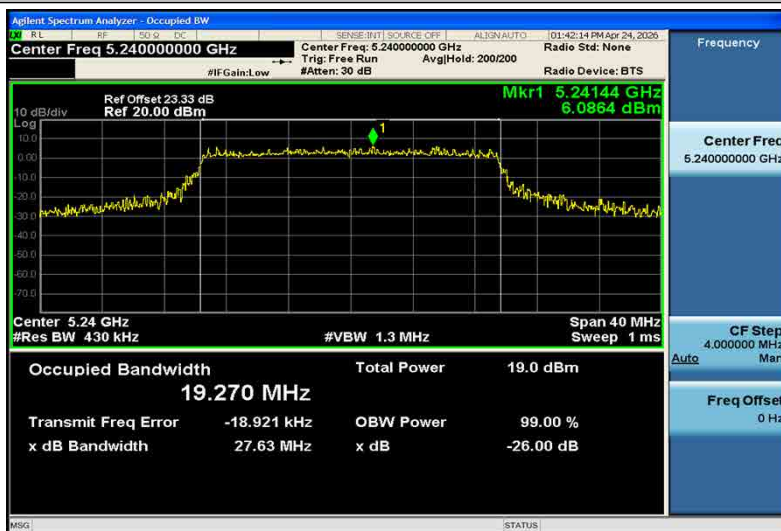
11AC80SISO-Ant1-5775



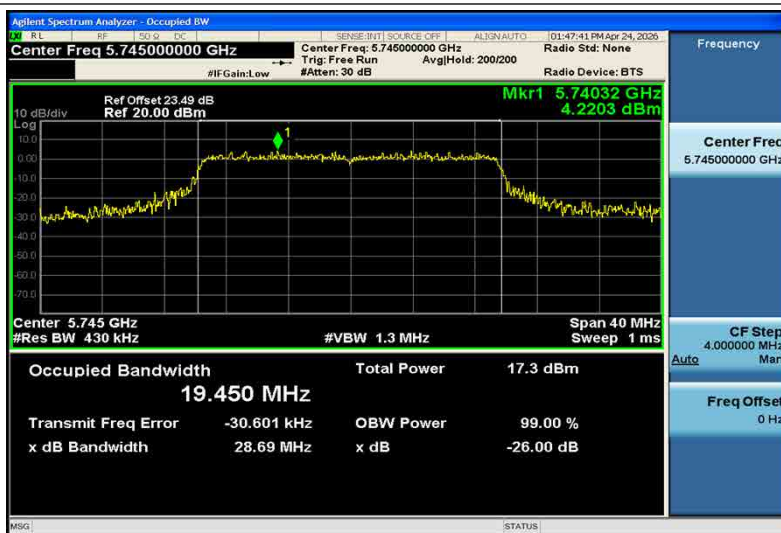
11AX20SISO-Ant1-5180



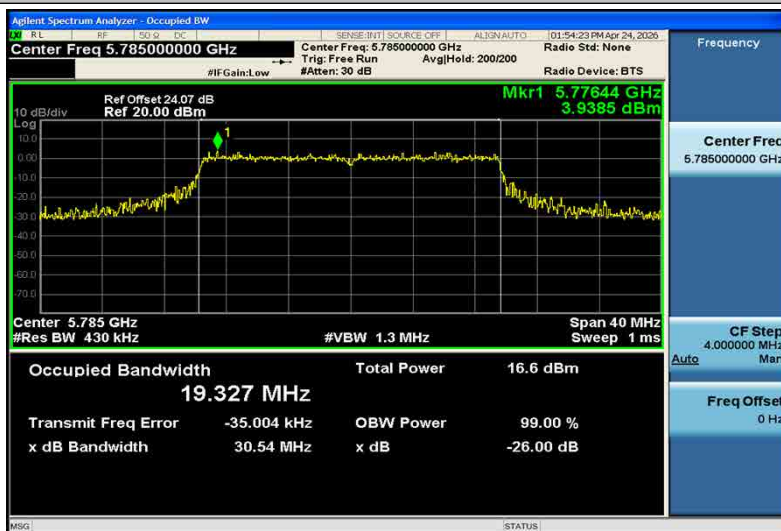
11AX20SISO-Ant1-5200



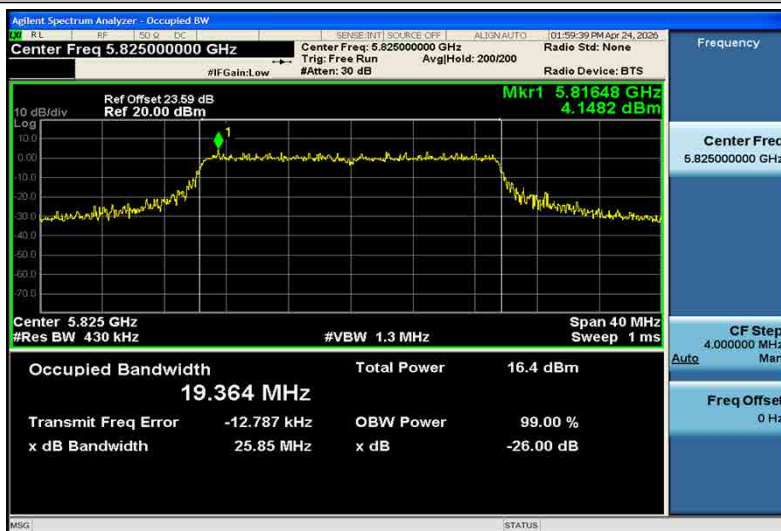
11AX20SISO-Ant1-5240



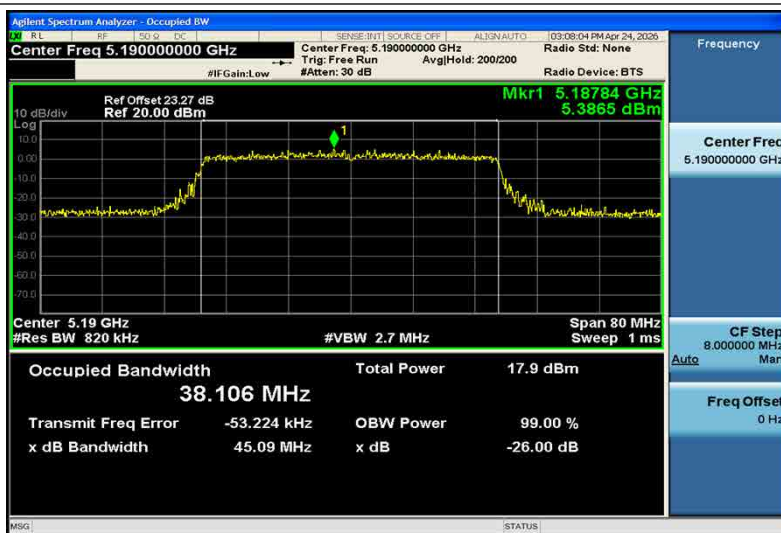
11AX20SISO-Ant1-5745



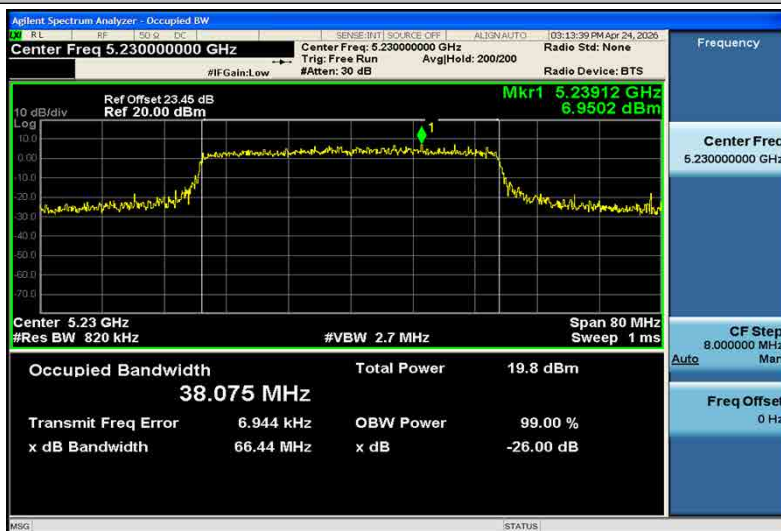
11AX20SISO-Ant1-5785



11AX20SISO-Ant1-5825



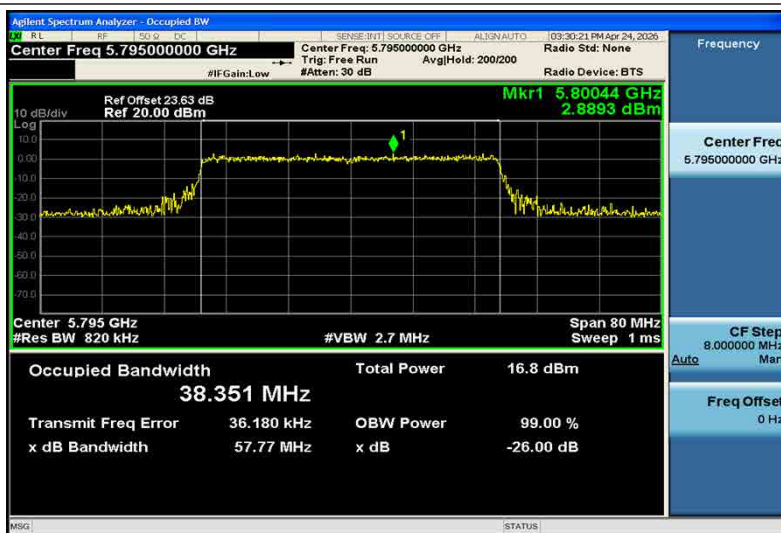
11AX40SISO-Ant1-5190



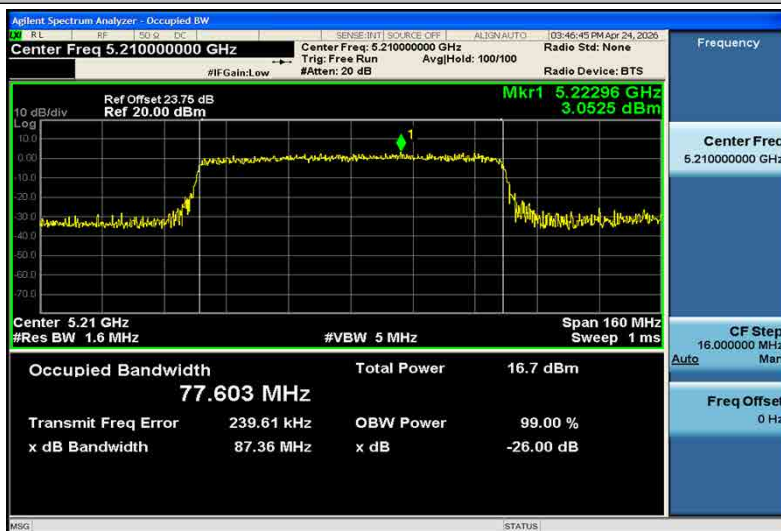
11AX40SISO-Ant1-5230



11AX40SISO-Ant1-5755



11AX40SISO-Ant1-5795



11AX80SISO-Ant1-5210



11AX80SISO-Ant1-5775

Min emission bandwidth(Band 4)

TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
11A	Ant1	5785	16.320	5776.840	5793.160	0.5	PASS
11A	Ant1	5825	16.480	5816.760	5833.240	0.5	PASS
11N20SISO	Ant1	5745	17.600	5736.200	5753.800	0.5	PASS
11N20SISO	Ant1	5785	17.760	5776.120	5793.880	0.5	PASS
11N20SISO	Ant1	5825	17.720	5816.160	5833.880	0.5	PASS
11N40SISO	Ant1	5755	36.560	5736.680	5773.240	0.5	PASS
11N40SISO	Ant1	5795	36.320	5776.840	5813.160	0.5	PASS
11AC20SISO	Ant1	5745	17.560	5736.200	5753.760	0.5	PASS
11AC20SISO	Ant1	5785	17.640	5776.200	5793.840	0.5	PASS
11AC20SISO	Ant1	5825	17.600	5816.200	5833.800	0.5	PASS
11AC40SISO	Ant1	5755	36.400	5736.760	5773.160	0.5	PASS
11AC40SISO	Ant1	5795	36.320	5776.840	5813.160	0.5	PASS
11AC80SISO	Ant1	5775	76.480	5736.760	5813.240	0.5	PASS
11AX20SISO	Ant1	5745	19.120	5735.400	5754.520	0.5	PASS
11AX20SISO	Ant1	5785	18.920	5775.560	5794.480	0.5	PASS
11AX20SISO	Ant1	5825	19.160	5815.440	5834.600	0.5	PASS
11AX40SISO	Ant1	5755	38.080	5735.960	5774.040	0.5	PASS
11AX40SISO	Ant1	5795	38.160	5775.880	5814.040	0.5	PASS
11AX80SISO	Ant1	5775	77.920	5735.960	5813.880	0.5	PASS



11A-Ant1-5745-PASS



11A-Ant1-5785-PASS



11A-Ant1-5825-PASS



11N20SISO-Ant1-5745-PASS



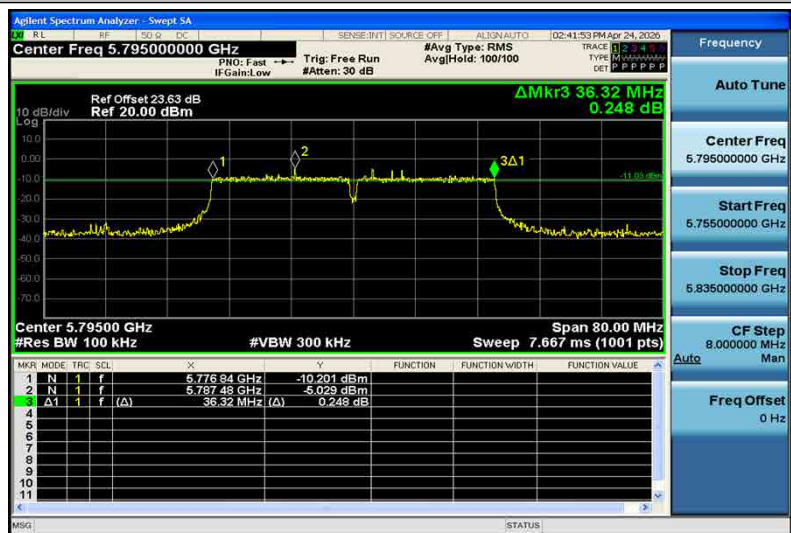
11N20SISO-Ant1-5785-PASS



11N20SISO-Ant1-5825-PASS



11N40SISO-Ant1-5755-PASS



11N40SISO-Ant1-5795-PASS



11AC20SISO-Ant1-5745-PASS



11AC20SISO-Ant1-5785-PASS



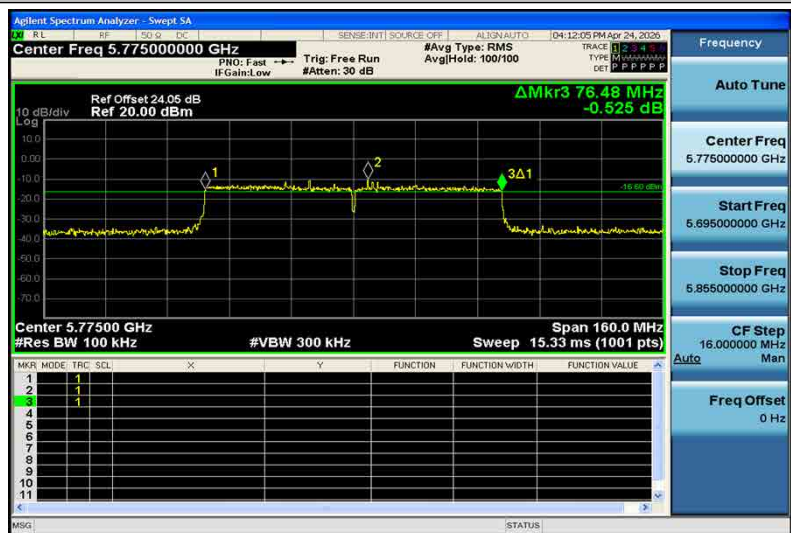
11AC20SISO-Ant1-5825-PASS



11AC40SISO-Ant1-5755-PASS



11AC40SISO-Ant1-5795-PASS



11AC80SISO-Ant1-5775-PASS



11AX20SISO-Ant1-5745-PASS



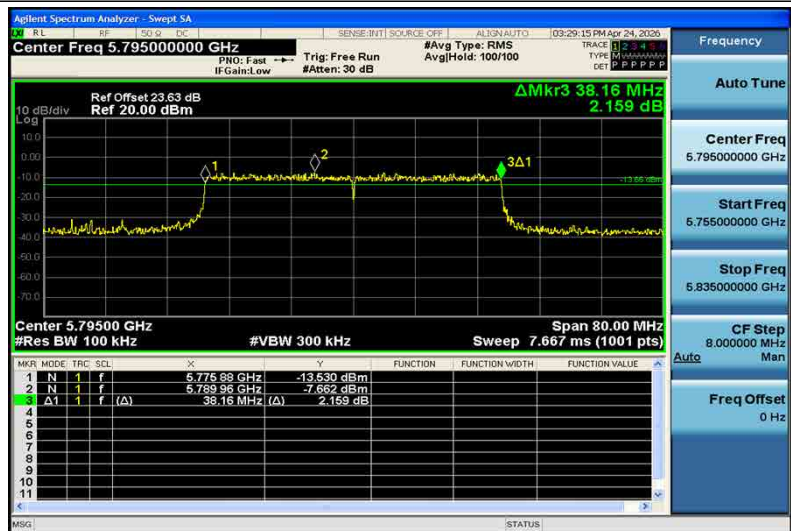
11AX20SISO-Ant1-5785-PASS



11AX20SISO-Ant1-5825-PASS



11AX40SISO-Ant1-5755-PASS



11AX40SISO-Ant1-5795-PASS



11AX80SISO-Ant1-5775-PASS

3.4 Conducted Output Power

3.4.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Conducted Output Power	Master device: 1 Watt (30 dBm) Client device: 250 mW (23.98 dBm)	5150-5250
		250 mW (23.98 dBm)	5250-5350
		250 mW (23.98 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

- 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.
- b. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

3.4.2 Test Procedure

Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

- a) The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- b) Test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

3.4.3 Test Setup



3.4.4 Table of Parameters of Text Software Setting

UNII-1			
Test Software	MobaXterm		
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	Default	Default	Default
IEEE 802.11n20	Default	Default	Default
IEEE 802.11ac20	Default	Default	Default
IEEE 802.11ax20	Default	Default	Default
Frequency (MHz)	5190	5230	
IEEE 802.11n40	Default	Default	
IEEE 802.11ac40	Default	Default	
IEEE 802.11ax40	Default	Default	
Frequency (MHz)	5210		
IEEE 802.11ac80	Default		
IEEE 802.11ax80	Default		

UNII-3			
Test Software	MobaXterm		
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	Default	Default	Default
IEEE 802.11n20	Default	Default	Default
IEEE 802.11ac20	Default	Default	Default
IEEE 802.11ax20	Default	Default	Default
Frequency (MHz)	5755	5795	
IEEE 802.11n40	Default	Default	
IEEE 802.11ac40	Default	Default	
IEEE 802.11ax40	Default	Default	
Frequency (MHz)	5775		
IEEE 802.11ac80	Default		
IEEE 802.11ax80	Default		

3.4.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	11.15	≤23.98	PASS
11A	Ant1	5200	10.71	≤23.98	PASS
11A	Ant1	5240	10.28	≤23.98	PASS
11A	Ant1	5745	9.44	≤30.00	PASS
11A	Ant1	5785	9.96	≤30.00	PASS
11A	Ant1	5825	10.53	≤30.00	PASS
11N20SISO	Ant1	5180	10.77	≤23.98	PASS
11N20SISO	Ant1	5200	10.35	≤23.98	PASS
11N20SISO	Ant1	5240	13.20	≤23.98	PASS
11N20SISO	Ant1	5745	10.03	≤30.00	PASS
11N20SISO	Ant1	5785	10.62	≤30.00	PASS
11N20SISO	Ant1	5825	10.22	≤30.00	PASS
11N40SISO	Ant1	5190	10.63	≤23.98	PASS
11N40SISO	Ant1	5230	12.06	≤23.98	PASS
11N40SISO	Ant1	5755	10.61	≤30.00	PASS
11N40SISO	Ant1	5795	9.70	≤30.00	PASS
11AC20SISO	Ant1	5180	12.13	≤23.98	PASS
11AC20SISO	Ant1	5200	10.99	≤23.98	PASS
11AC20SISO	Ant1	5240	12.38	≤23.98	PASS
11AC20SISO	Ant1	5745	10.60	≤30.00	PASS
11AC20SISO	Ant1	5785	10.10	≤30.00	PASS
11AC20SISO	Ant1	5825	9.24	≤30.00	PASS
11AC40SISO	Ant1	5190	10.62	≤23.98	PASS
11AC40SISO	Ant1	5230	11.70	≤23.98	PASS
11AC40SISO	Ant1	5755	10.52	≤30.00	PASS
11AC40SISO	Ant1	5795	10.02	≤30.00	PASS
11AC80SISO	Ant1	5210	9.77	≤23.98	PASS
11AC80SISO	Ant1	5775	9.33	≤30.00	PASS
11AX20SISO	Ant1	5180	10.95	≤23.98	PASS
11AX20SISO	Ant1	5200	11.46	≤23.98	PASS
11AX20SISO	Ant1	5240	12.05	≤23.98	PASS
11AX20SISO	Ant1	5745	10.15	≤30.00	PASS
11AX20SISO	Ant1	5785	10.53	≤30.00	PASS
11AX20SISO	Ant1	5825	9.46	≤30.00	PASS
11AX40SISO	Ant1	5190	11.12	≤23.98	PASS
11AX40SISO	Ant1	5230	12.11	≤23.98	PASS
11AX40SISO	Ant1	5755	11.47	≤30.00	PASS
11AX40SISO	Ant1	5795	9.99	≤30.00	PASS
11AX80SISO	Ant1	5210	9.17	≤23.98	PASS
11AX80SISO	Ant1	5775	9.45	≤30.00	PASS

Note: The duty cycle factor and line loss are compensated in the average conducted output power.

3.5 Power Spectral Density

3.5.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Power Spectral Density	Master device: 17 dBm/MHz Client device: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
		11 dBm/MHz	5470-5725
		30 dBm/500 kHz	5725-5850

Note:

- For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 300kHz and VBW at 1500kHz if the spectrum analyzer does not have 500 kHz RBW. Then, add $10 \log (500 \text{ kHz}/300 \text{ kHz})$ to the measured result, i.e. 2.22 dB.
- During the test of U-NII 3 PSD, the measurement result with RBW=300kHz has been added 2.22 dB by compensating offset, offset=cable loss+duty factor+ $10\log(500\text{kHz}/300\text{kHz})$.

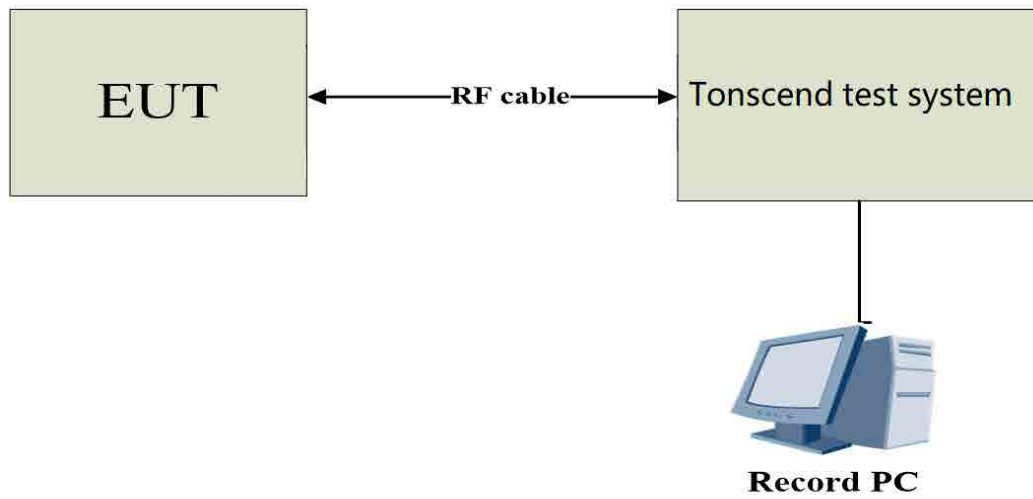
3.5.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ :Test ☐ :No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below. Spectrum analyser settings as following:

Centre Frequency	The centre frequency of the channel under test
RBW	= 1 MHz (Band1/2/3); = 300kHz (Band4)
VBW	$\geq 3 \times \text{RBW}$
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	RMS
Trace Mode	Max Hold
Sweep Time	Auto Couple

3.5.3 Test Setup



3.5.4 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	2.70	≤11.00	PASS
11A	Ant1	5200	1.03	≤11.00	PASS
11A	Ant1	5240	0.13	≤11.00	PASS
11N20SISO	Ant1	5180	0.41	≤11.00	PASS
11N20SISO	Ant1	5200	-1.13	≤11.00	PASS
11N20SISO	Ant1	5240	1.76	≤11.00	PASS
11N40SISO	Ant1	5190	-3.24	≤11.00	PASS
11N40SISO	Ant1	5230	-1.26	≤11.00	PASS
11AC20SISO	Ant1	5180	1.16	≤11.00	PASS
11AC20SISO	Ant1	5200	1.40	≤11.00	PASS
11AC20SISO	Ant1	5240	0.62	≤11.00	PASS
11AC40SISO	Ant1	5190	-2.41	≤11.00	PASS
11AC40SISO	Ant1	5230	-2.55	≤11.00	PASS
11AC80SISO	Ant1	5210	-8.78	≤11.00	PASS
11AX20SISO	Ant1	5180	0.69	≤11.00	PASS
11AX20SISO	Ant1	5200	0.96	≤11.00	PASS
11AX20SISO	Ant1	5240	2.43	≤11.00	PASS
11AX40SISO	Ant1	5190	-2.84	≤11.00	PASS
11AX40SISO	Ant1	5230	-0.78	≤11.00	PASS
11AX80SISO	Ant1	5210	-7.38	≤11.00	PASS

Test Mode	Antenna	Frequency[MHz]	Result [dBm/500kHz]	Limit[dBm/500kHz]	Verdict
11A	Ant1	5745	-1.13	≤30.00	PASS
11A	Ant1	5785	-1.66	≤30.00	PASS
11A	Ant1	5825	-2.80	≤30.00	PASS
11N20SISO	Ant1	5745	-3.52	≤30.00	PASS
11N20SISO	Ant1	5785	-3.10	≤30.00	PASS
11N20SISO	Ant1	5825	-3.27	≤30.00	PASS
11N40SISO	Ant1	5755	-6.81	≤30.00	PASS
11N40SISO	Ant1	5795	-7.78	≤30.00	PASS
11AC20SISO	Ant1	5745	-3.66	≤30.00	PASS
11AC20SISO	Ant1	5785	-4.21	≤30.00	PASS
11AC20SISO	Ant1	5825	-4.28	≤30.00	PASS
11AC40SISO	Ant1	5755	-5.71	≤30.00	PASS
11AC40SISO	Ant1	5795	-7.58	≤30.00	PASS
11AC80SISO	Ant1	5775	-10.39	≤30.00	PASS
11AX20SISO	Ant1	5745	-3.17	≤30.00	PASS
11AX20SISO	Ant1	5785	-3.62	≤30.00	PASS
11AX20SISO	Ant1	5825	-4.51	≤30.00	PASS
11AX40SISO	Ant1	5755	-5.52	≤30.00	PASS
11AX40SISO	Ant1	5795	-7.94	≤30.00	PASS
11AX80SISO	Ant1	5775	-10.27	≤30.00	PASS

Note: The Duty Cycle Factor and line loss are compensated in the test system

For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 300kHz and VBW at 1500kHz if the spectrum analyzer does not have 500 kHz RBW. Then, add $10 \log (500 \text{ kHz}/300 \text{ kHz})$ to the measured result, i.e. 2.22 dB.

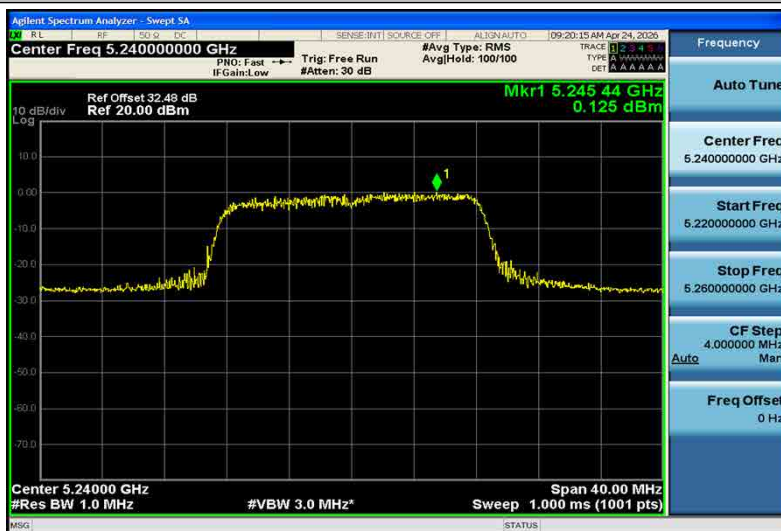
During the test of U-NII 3 PSD, the measurement result with RBW=300kHz has been added 2.22 dB by compensating offset, $\text{offset} = \text{cable loss} + \text{duty cycle factor} + 10 \log(500 \text{ kHz}/300 \text{ kHz})$.



11A-Ant1-5180-PASS



11A-Ant1-5200-PASS



11A-Ant1-5240-PASS



11A-Ant1-5745-PASS



11A-Ant1-5785-PASS



11A-Ant1-5825-PASS



11N20SISO-Ant1-5180-PASS



11N20SISO-Ant1-5200-PASS



11N20SISO-Ant1-5240-PASS



11N20SISO-Ant1-5745-PASS



11N20SISO-Ant1-5785-PASS



11N20SISO-Ant1-5825-PASS



11N40SISO-Ant1-5190-PASS



11N40SISO-Ant1-5230-PASS



11N40SISO-Ant1-5755-PASS



11N40SISO-Ant1-5795-PASS



11AC20SISO-Ant1-5180-PASS



11AC20SISO-Ant1-5200-PASS



11AC20SISO-Ant1-5240-PASS



11AC20SISO-Ant1-5745-PASS



11AC20SISO-Ant1-5785-PASS



11AC20SISO-Ant1-5825-PASS



11AC40SISO-Ant1-5190-PASS



11AC40SISO-Ant1-5230-PASS



11AC40SISO-Ant1-5755-PASS



11AC40SISO-Ant1-5795-PASS



11AC80SISO-Ant1-5210-PASS



11AC80SISO-Ant1-5775-PASS



11AX20SISO-Ant1-5180-PASS



11AX20SISO-Ant1-5200-PASS



11AX20SISO-Ant1-5240-PASS



11AX20SISO-Ant1-5745-PASS



11AX20SISO-Ant1-5785-PASS



11AX20SISO-Ant1-5825-PASS



11AX40SISO-Ant1-5190-PASS



11AX40SISO-Ant1-5230-PASS



11AX40SISO-Ant1-5755-PASS



11AX40SISO-Ant1-5795-PASS



11AX80SISO-Ant1-5210-PASS



11AX80SISO-Ant1-5775-PASS

Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technical Co., Ltd.

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(END OF REPORT)