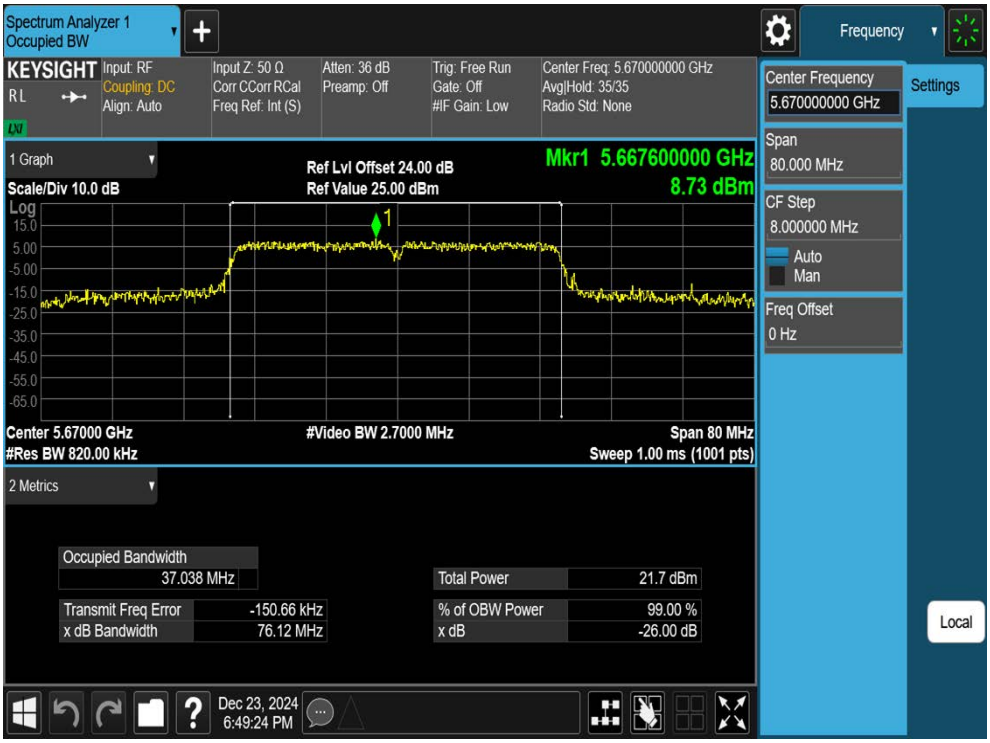
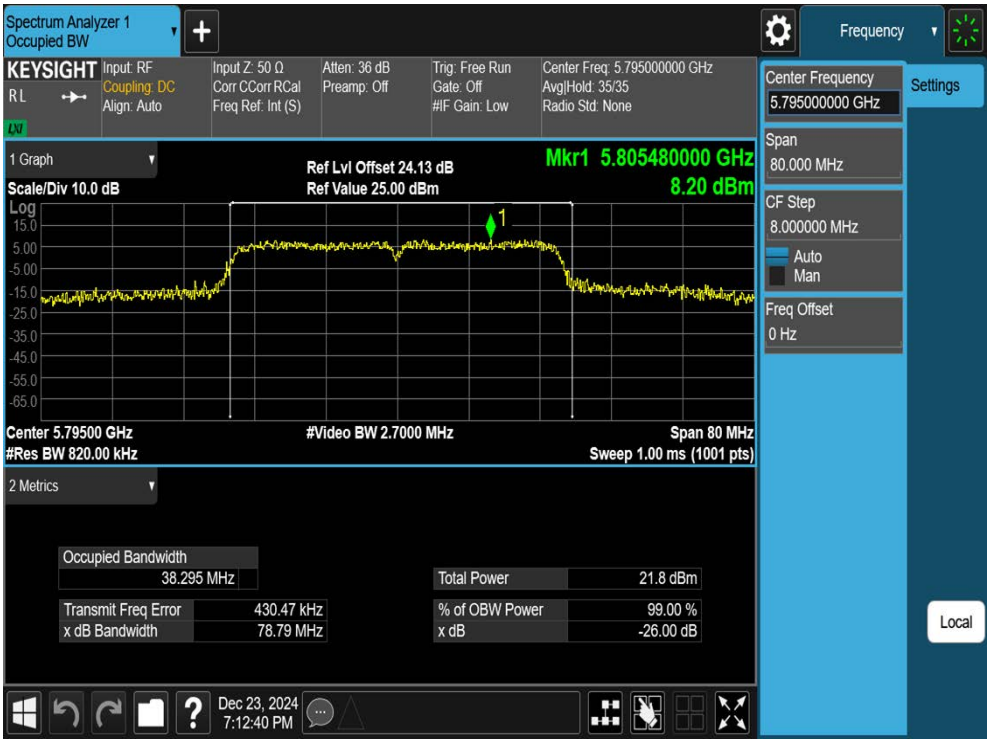


11N40SISO-Ant1-5670

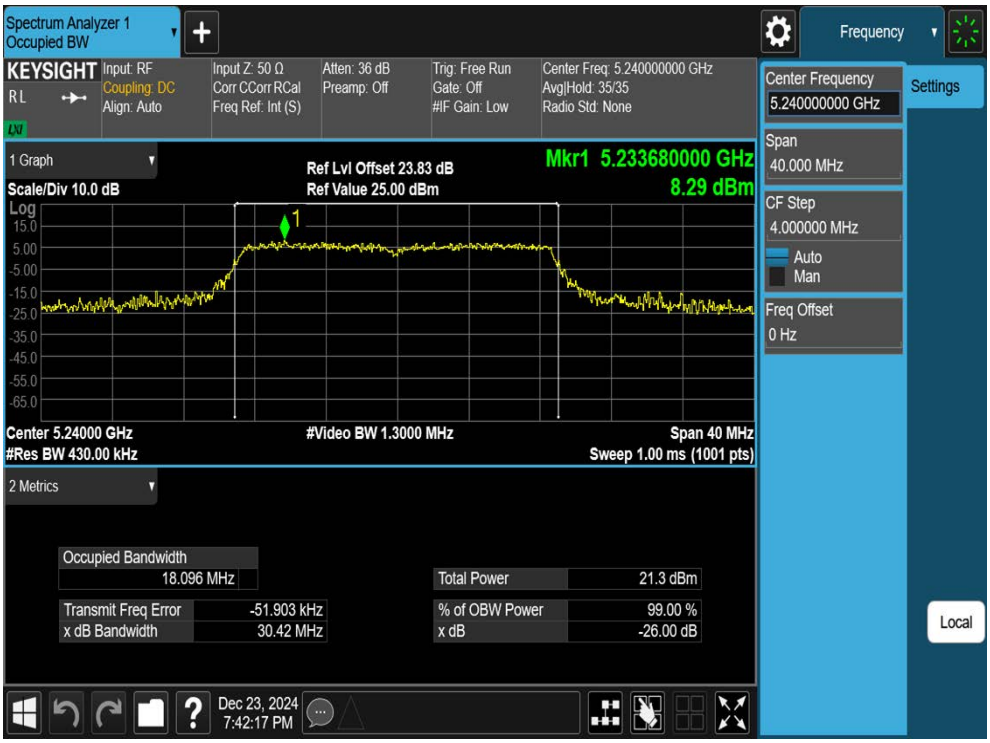
11N40SISO-Ant1-5755



11N40SISO-Ant1-5795

11AC20SISO-Ant1-5180

11AC20SISO-Ant1-5200

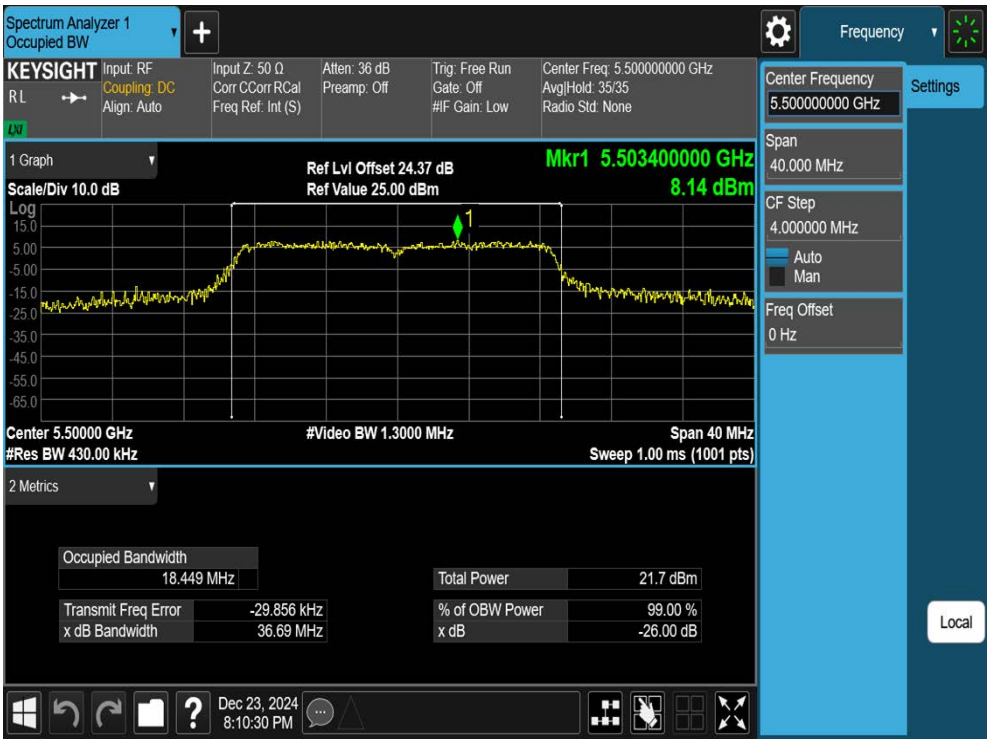


11AC20SISO-Ant1-5240

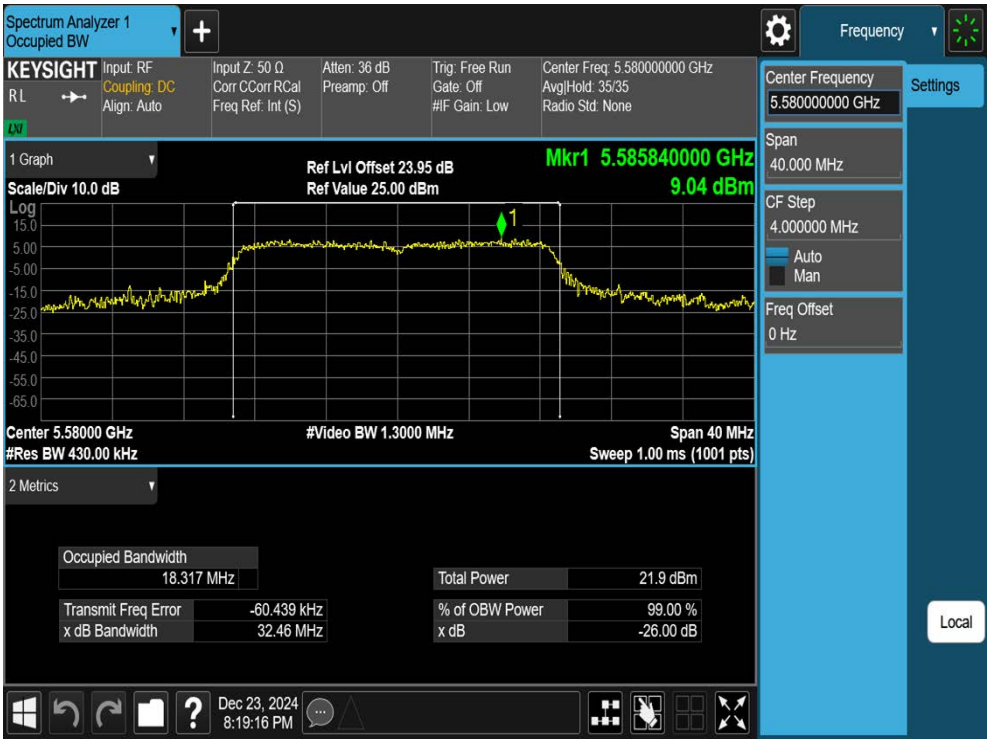
11AC20SISO-Ant1-5260

11AC20SISO-Ant1-5280

11AC20SISO-Ant1-5320



11AC20SISO-Ant1-5500



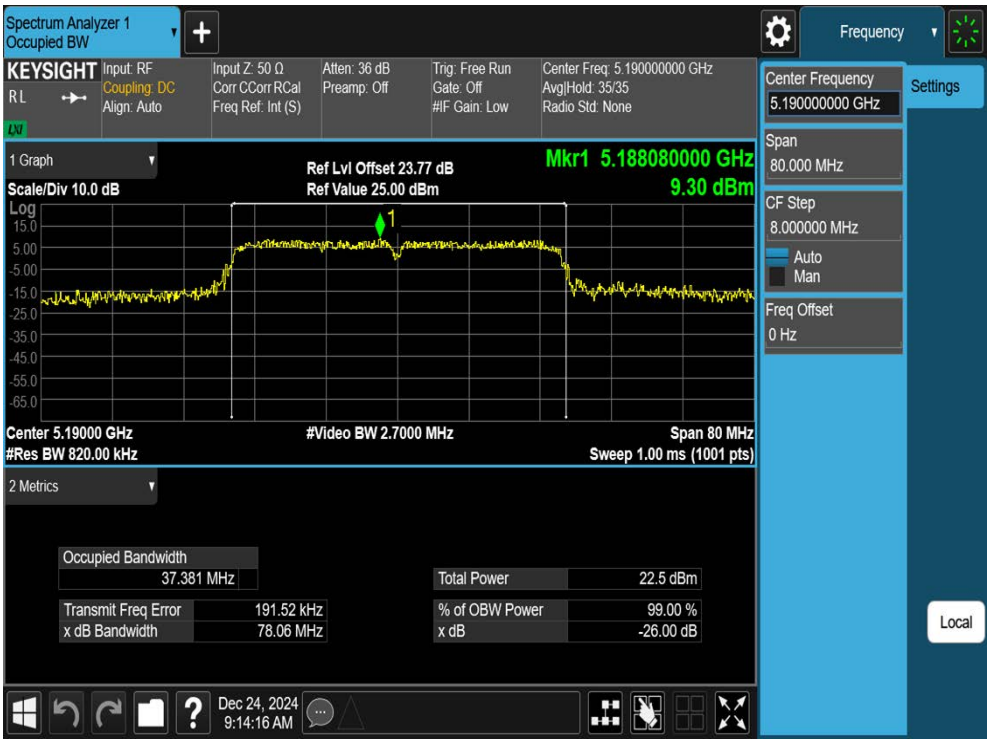
11AC20SISO-Ant1-5580

11AC20SISO-Ant1-5700

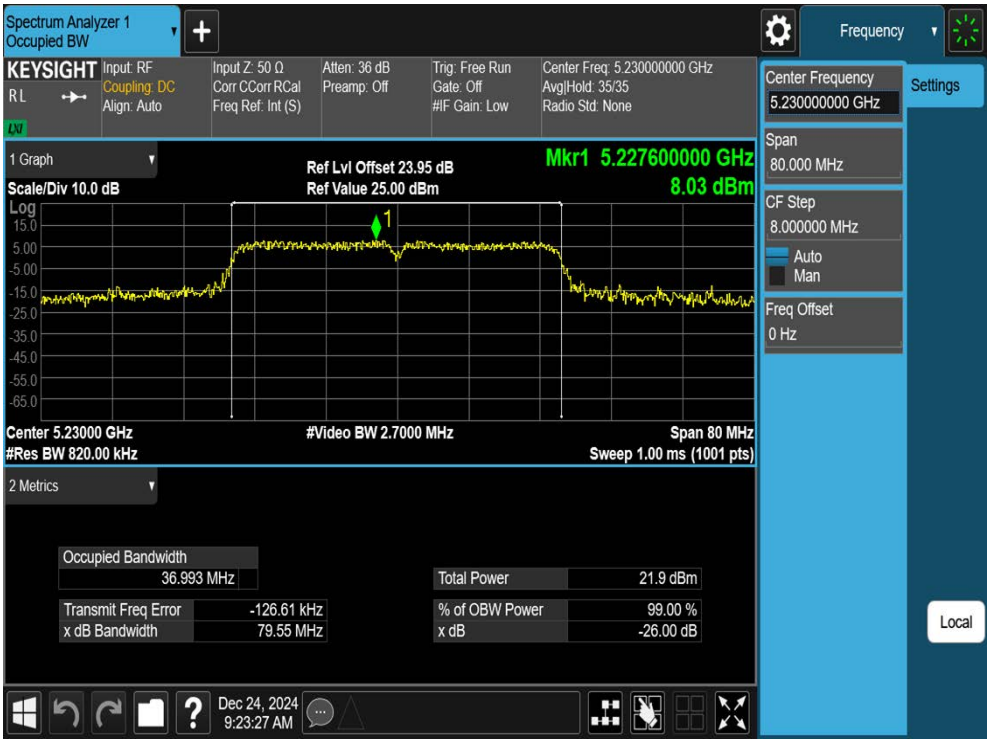
11AC20SISO-Ant1-5745

11AC20SISO-Ant1-5785

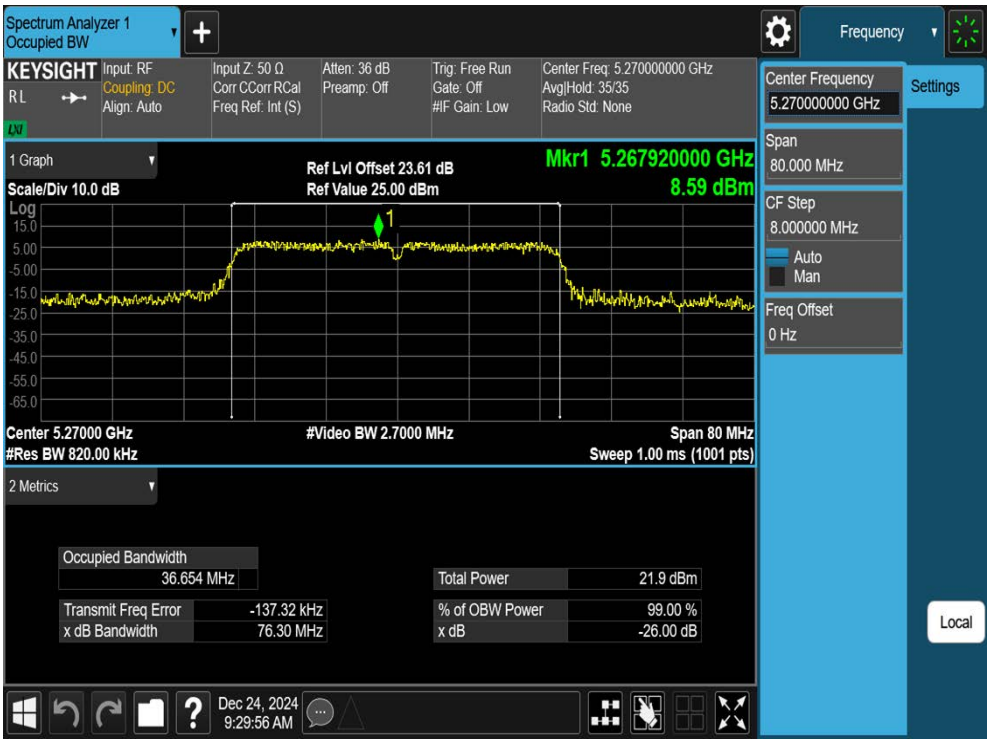
11AC20SISO-Ant1-5825



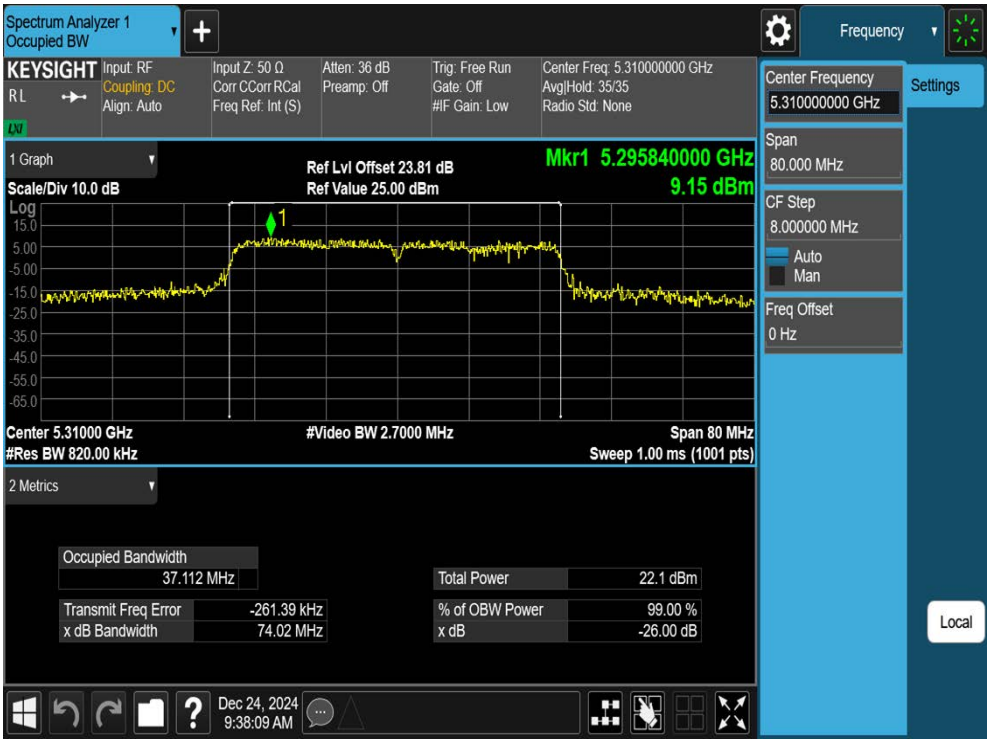
11AC40SISO-Ant1-5190



11AC40SISO-Ant1-5230

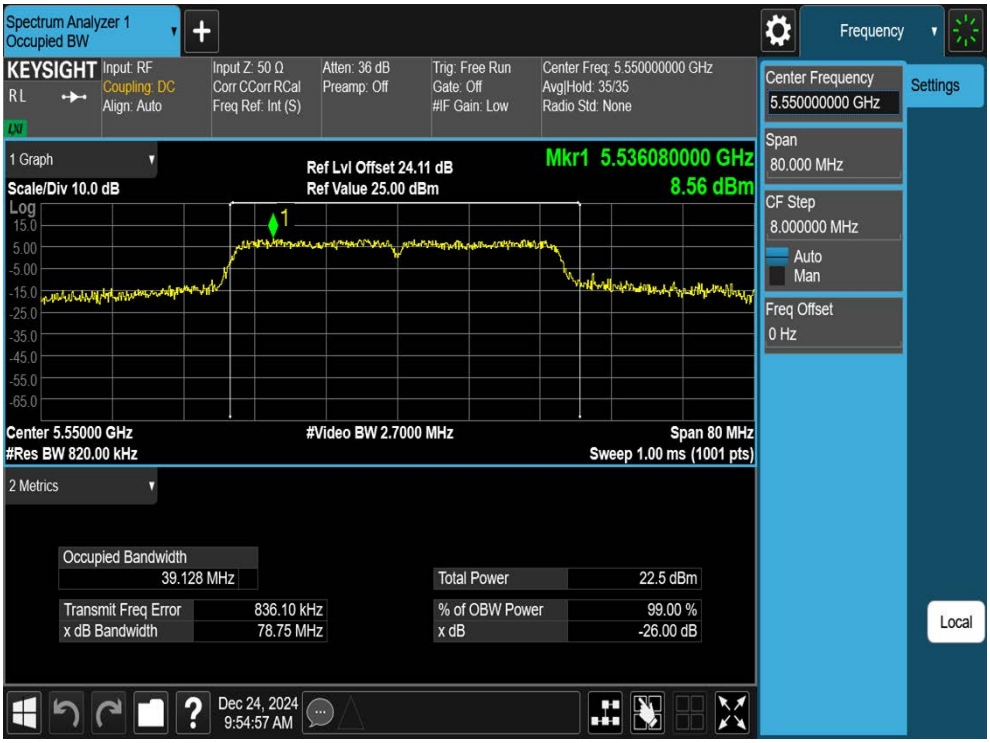


11AC40SISO-Ant1-5270



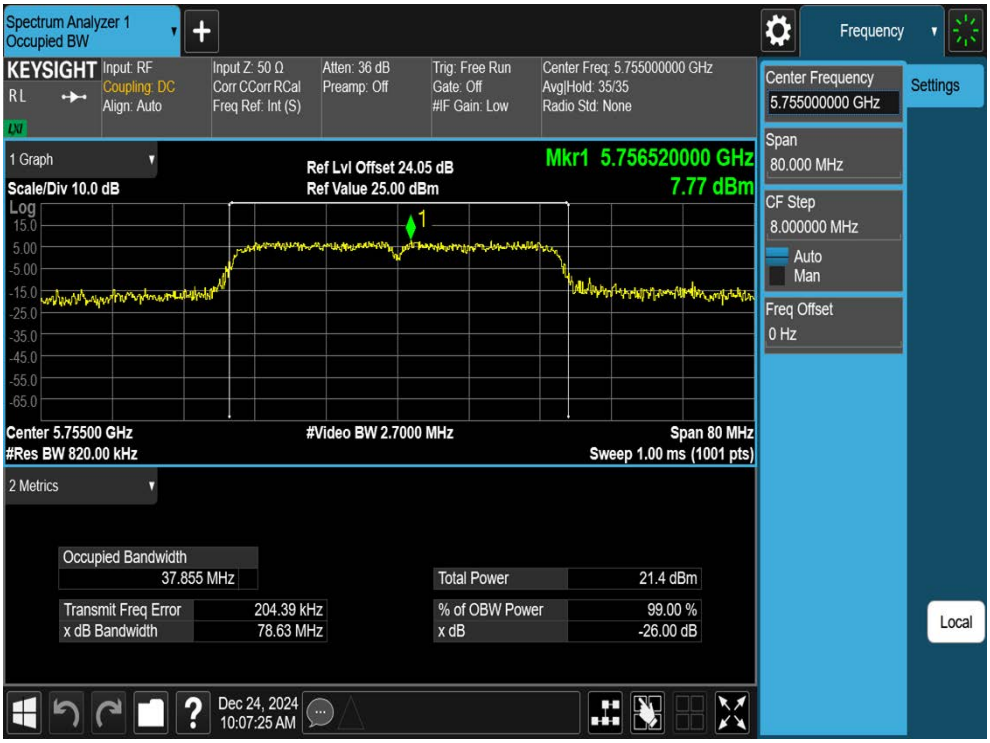
11AC40SISO-Ant1-5310

11AC40SISO-Ant1-5510

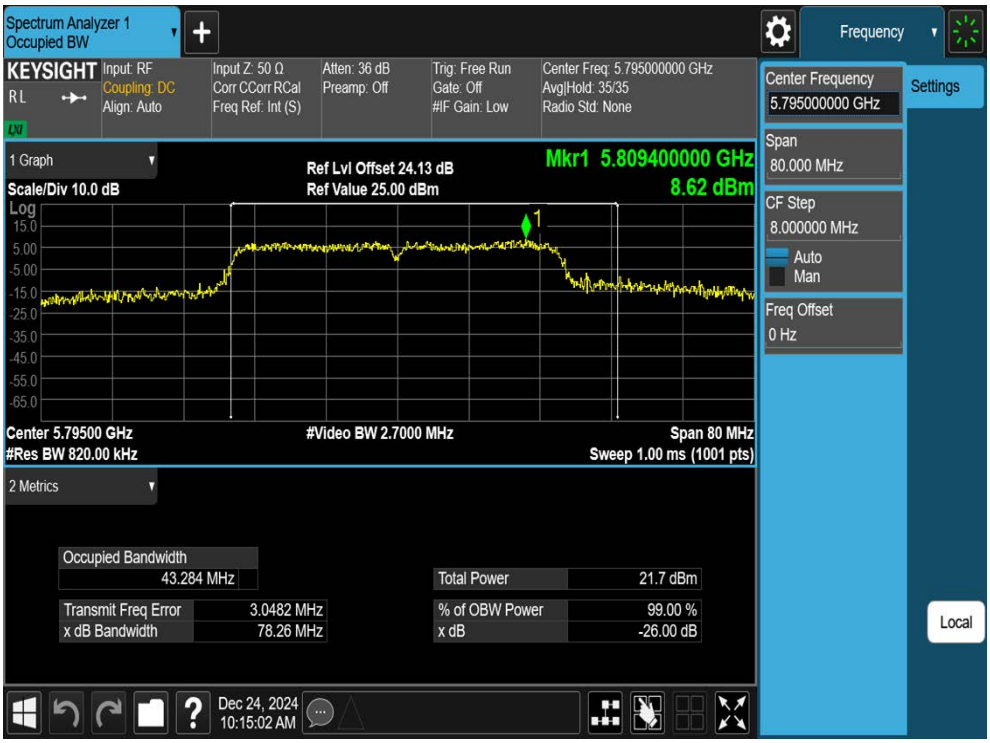


11AC40SISO-Ant1-5550

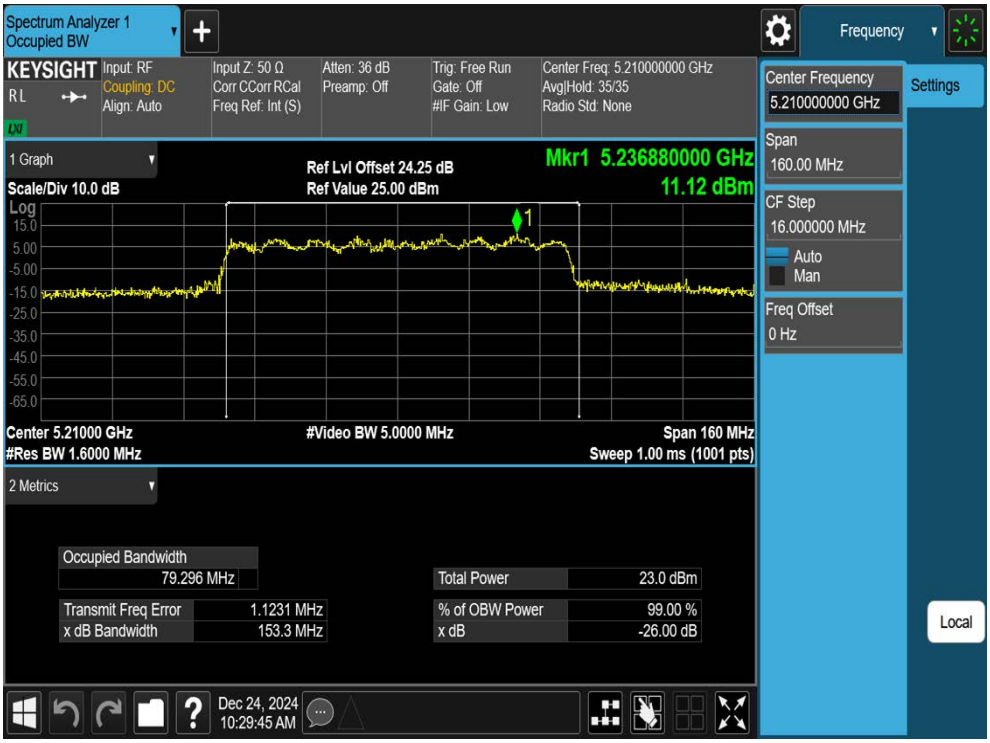
11AC40SISO-Ant1-5670



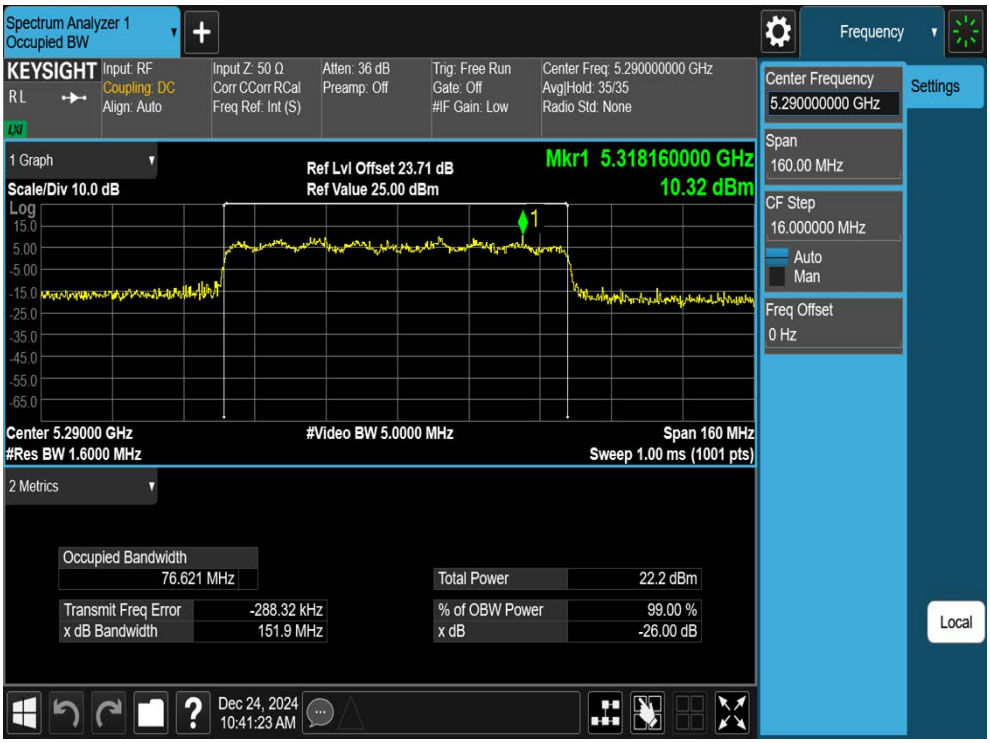
11AC40SISO-Ant1-5755



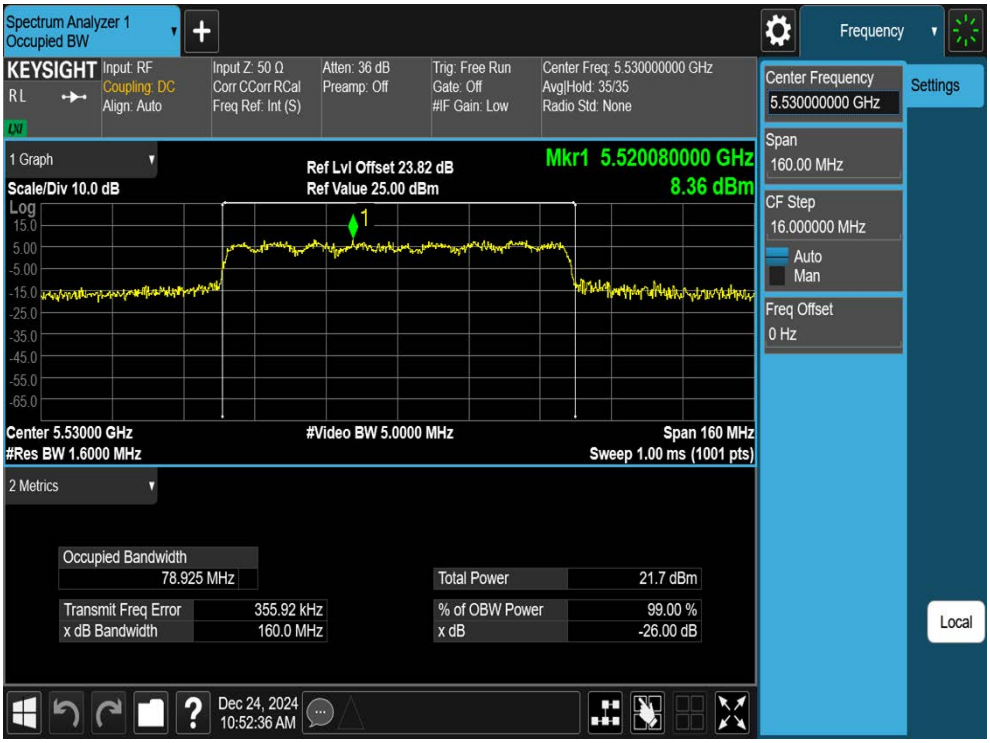
11AC40SISO-Ant1-5795



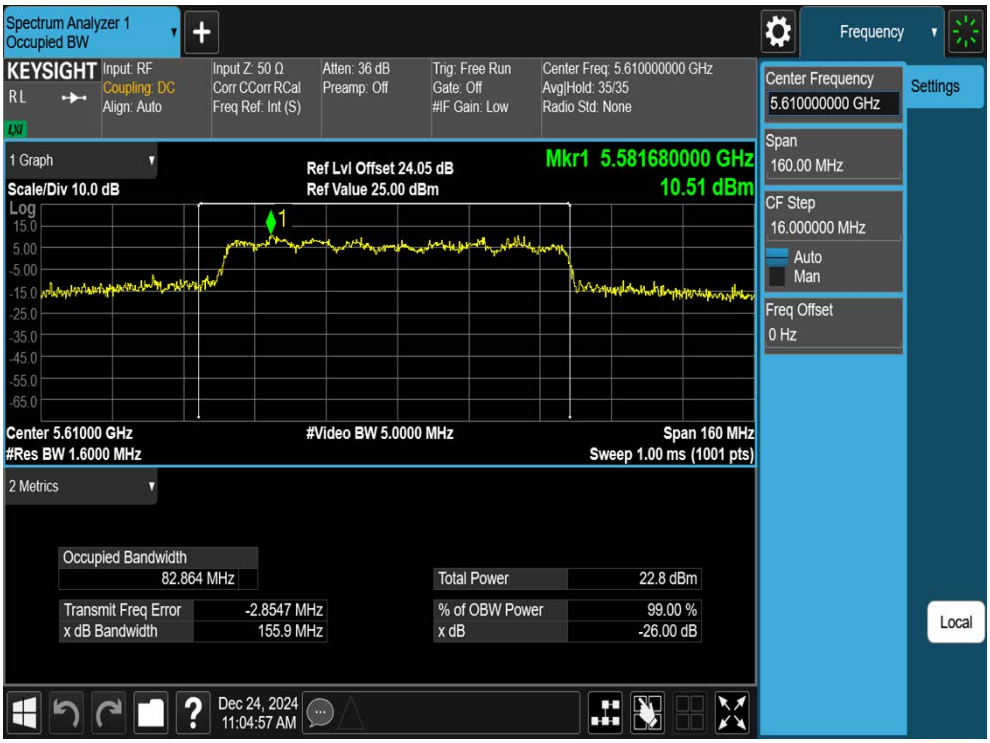
11AC80SISO-Ant1-5210



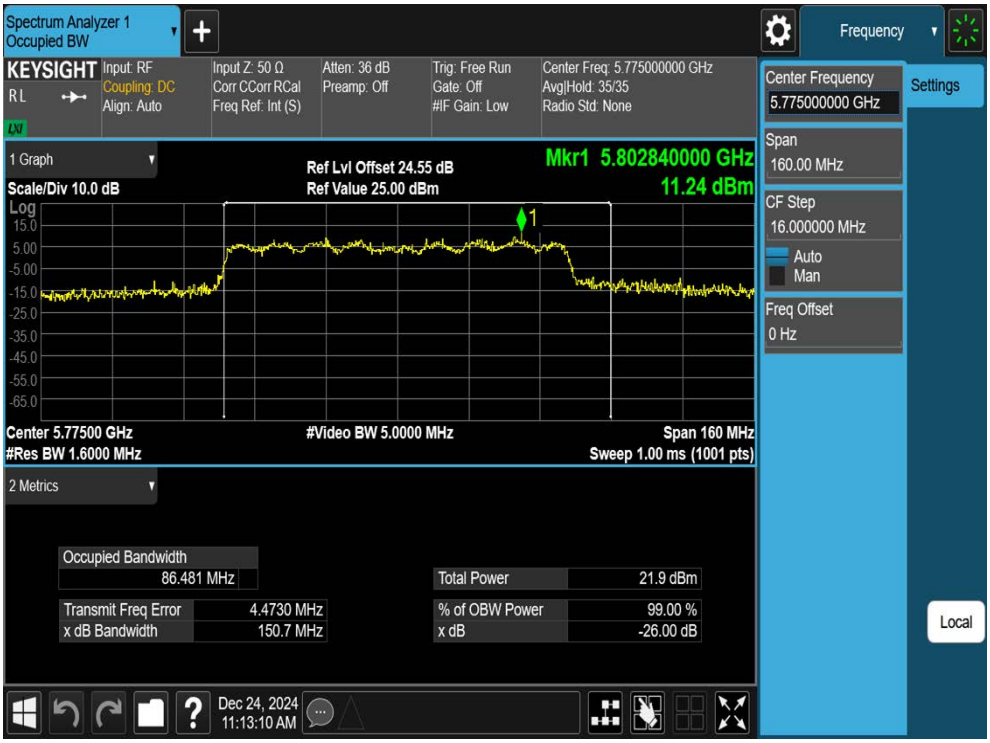
11AC80SISO-Ant1-5290



11AC80SISO-Ant1-5530



11AC80SISO-Ant1-5610



11AC80SISO-Ant1-5775

Min emission bandwidth

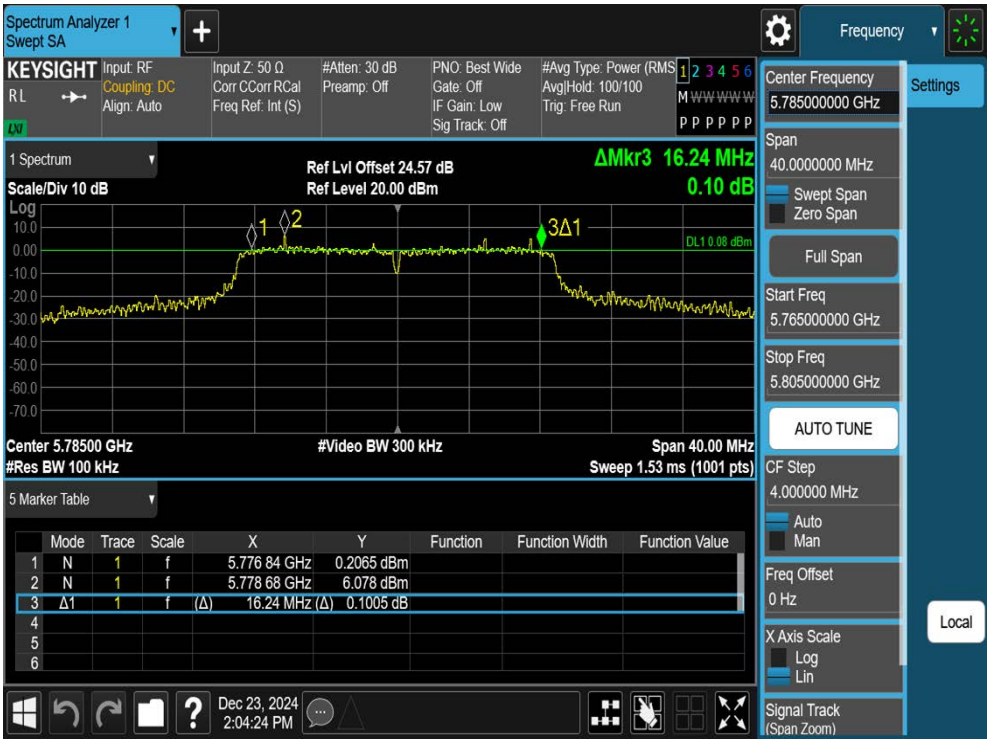
Test Mode	Antenna	Frequency[MHz]	6dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.800	5753.120	0.5	PASS
11A	Ant1	5785	16.360	5776.760	5793.120	0.5	PASS
11A	Ant1	5825	16.320	5816.760	5833.080	0.5	PASS
11N20SISO	Ant1	5745	16.920	5736.560	5753.480	0.5	PASS
11N20SISO	Ant1	5785	16.240	5776.840	5793.080	0.5	PASS
11N20SISO	Ant1	5825	17.560	5816.160	5833.720	0.5	PASS
11N40SISO	Ant1	5755	35.440	5737.080	5772.520	0.5	PASS
11N40SISO	Ant1	5795	35.040	5777.400	5812.440	0.5	PASS
11AC20SISO	Ant1	5745	16.760	5736.560	5753.320	0.5	PASS
11AC20SISO	Ant1	5785	16.640	5776.440	5793.080	0.5	PASS
11AC20SISO	Ant1	5825	16.880	5816.560	5833.440	0.5	PASS
11AC40SISO	Ant1	5755	35.680	5737.160	5772.840	0.5	PASS
11AC40SISO	Ant1	5795	34.800	5778.280	5813.080	0.5	PASS
11AC80SISO	Ant1	5775	74.560	5572.880	5647.440	0.5	PASS

11A-Ant1-5745-PASS

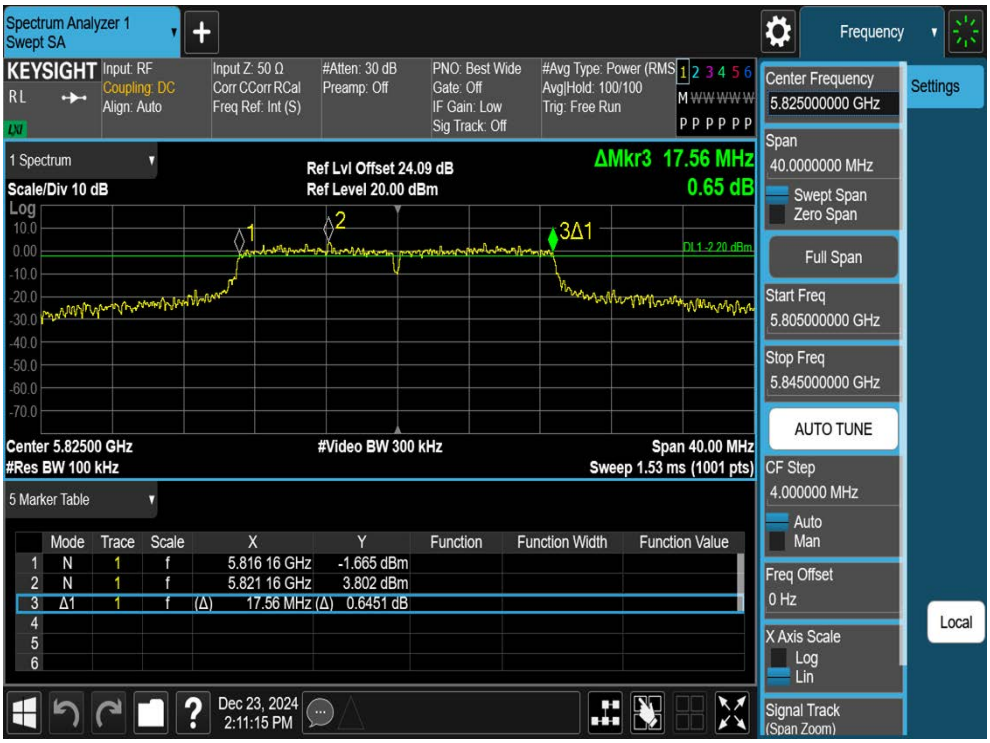
11A-Ant1-5785-PASS

11A-Ant1-5825-PASS

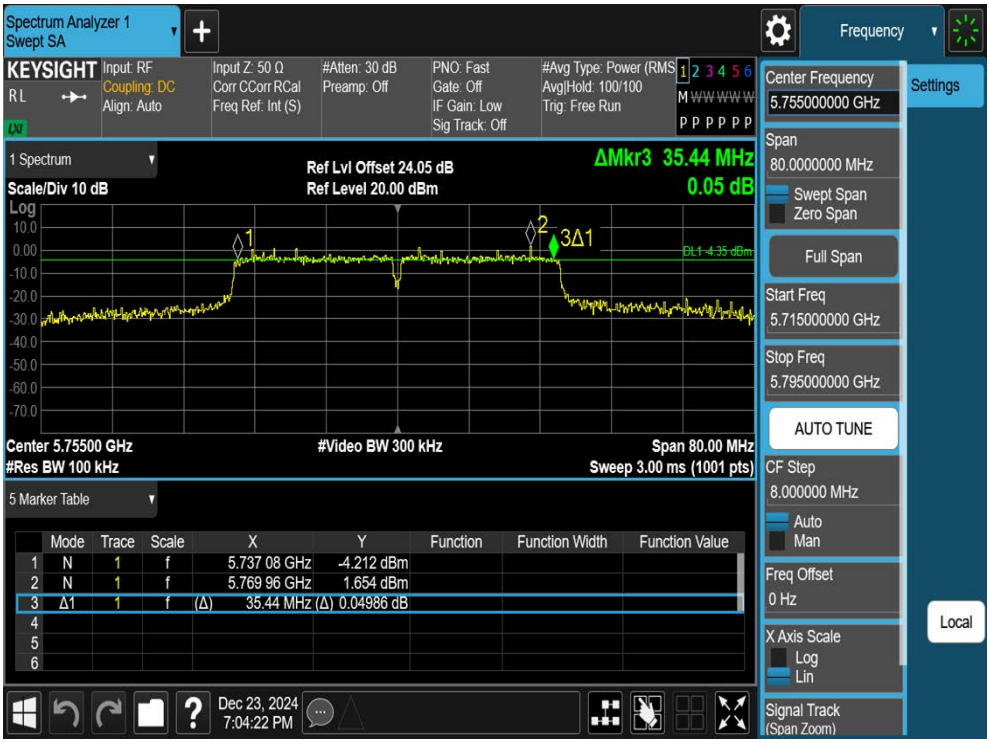
11N20SISO-Ant1-5745-PASS



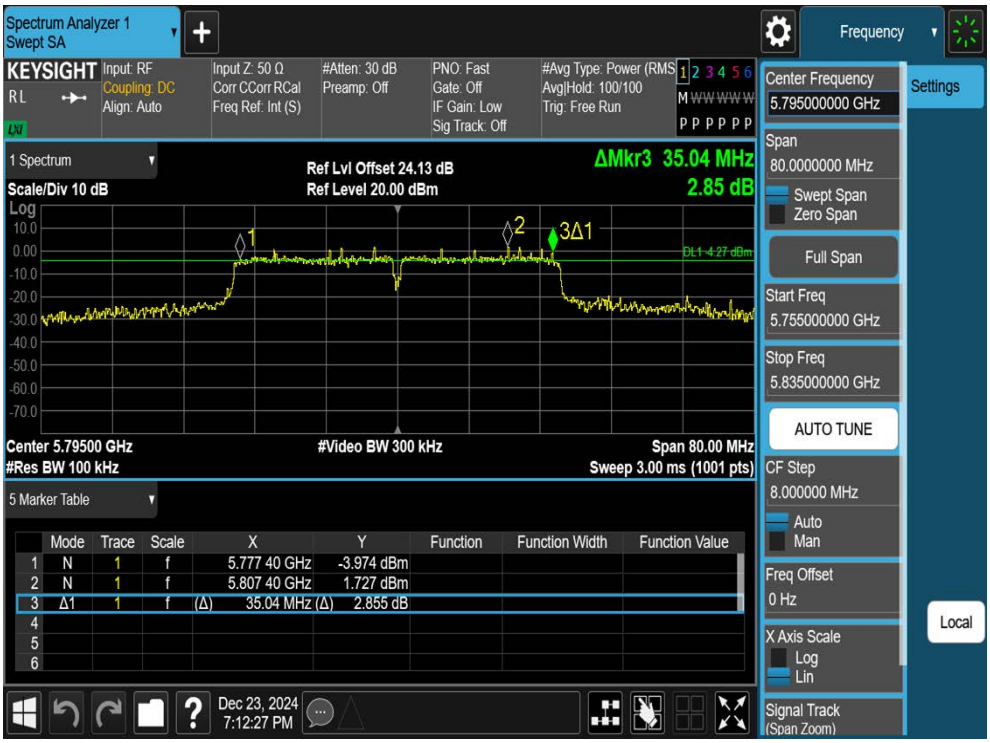
11N20SISO-Ant1-5785-PASS



11N20SISO-Ant1-5825-PASS

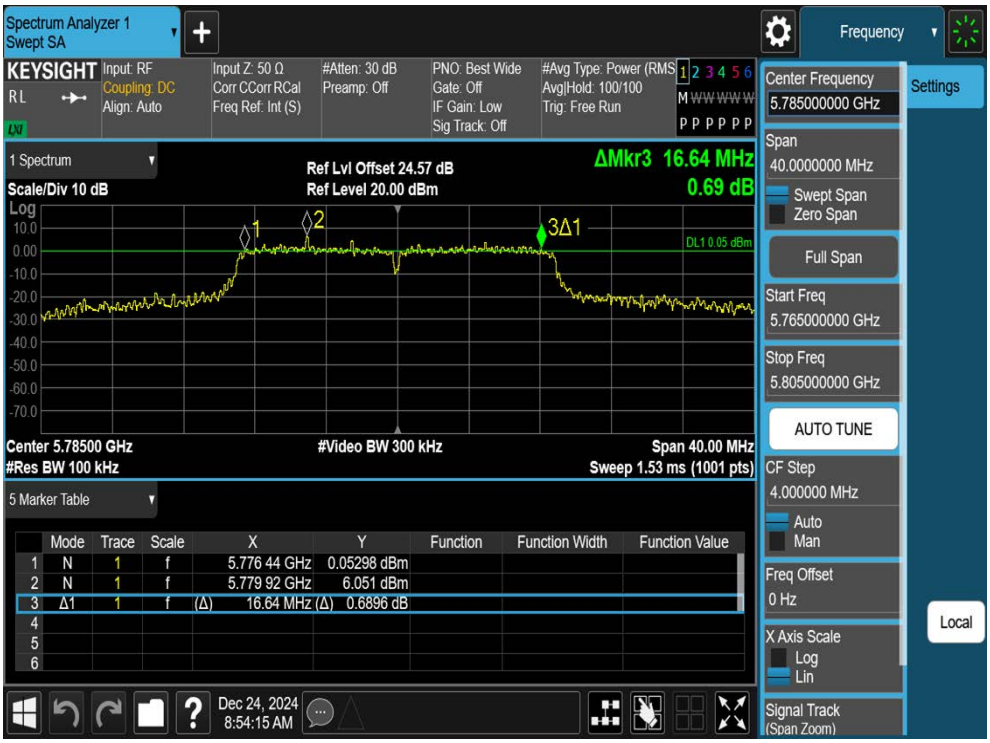


11N40SISO-Ant1-5755-PASS



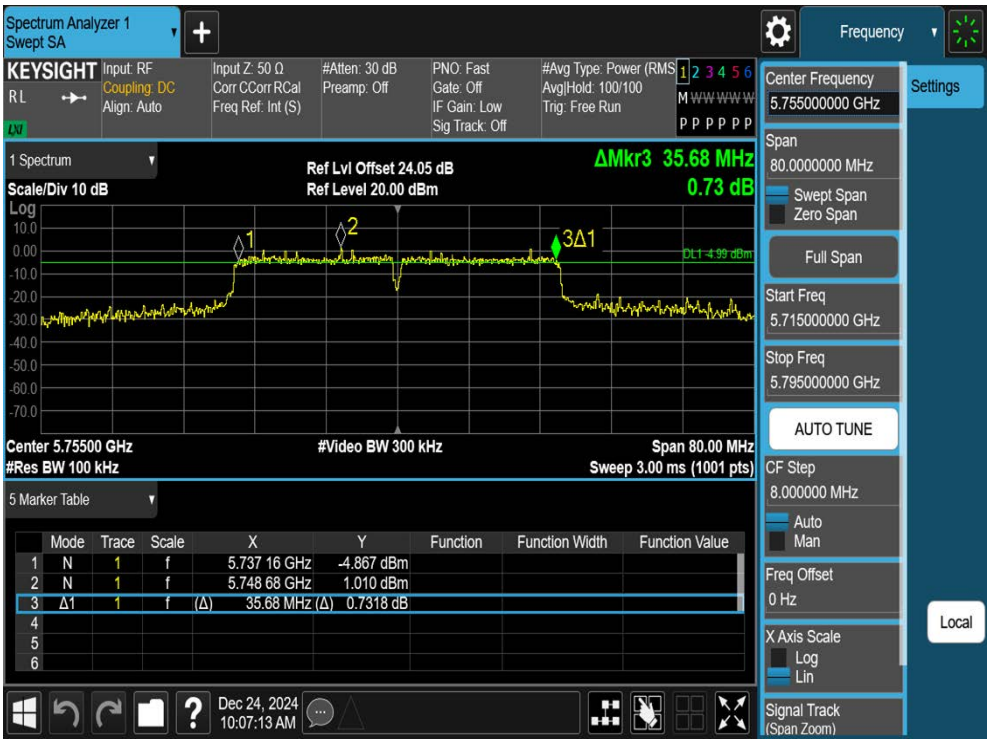
11N40SISO-Ant1-5795-PASS

11AC20SISO-Ant1-5745-PASS

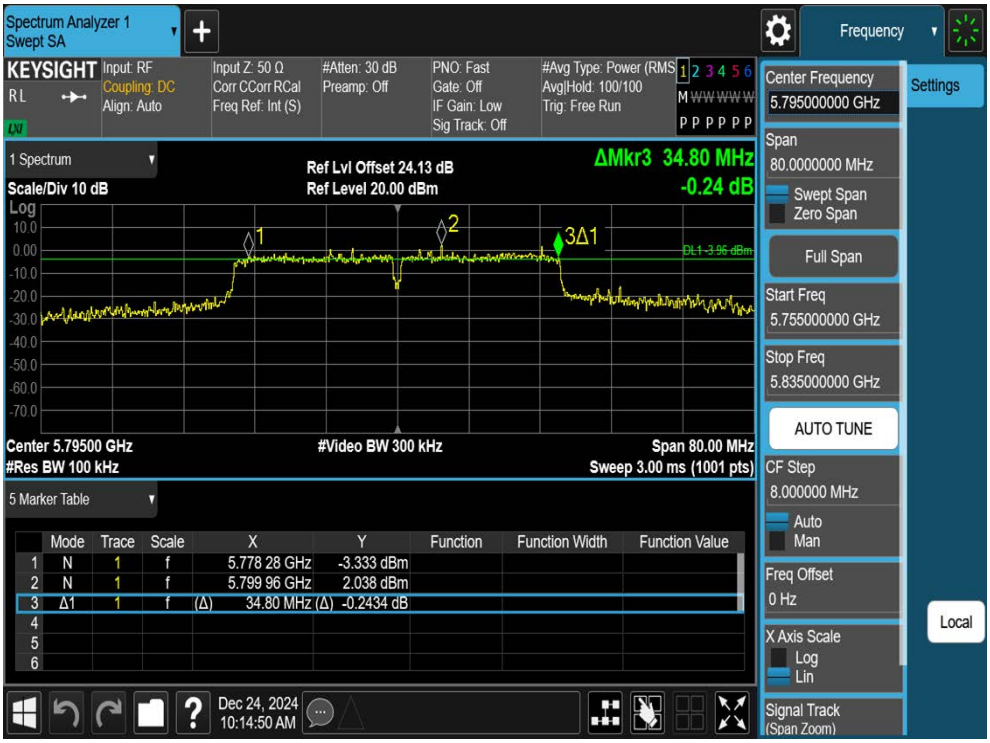


11AC20SISO-Ant1-5785-PASS

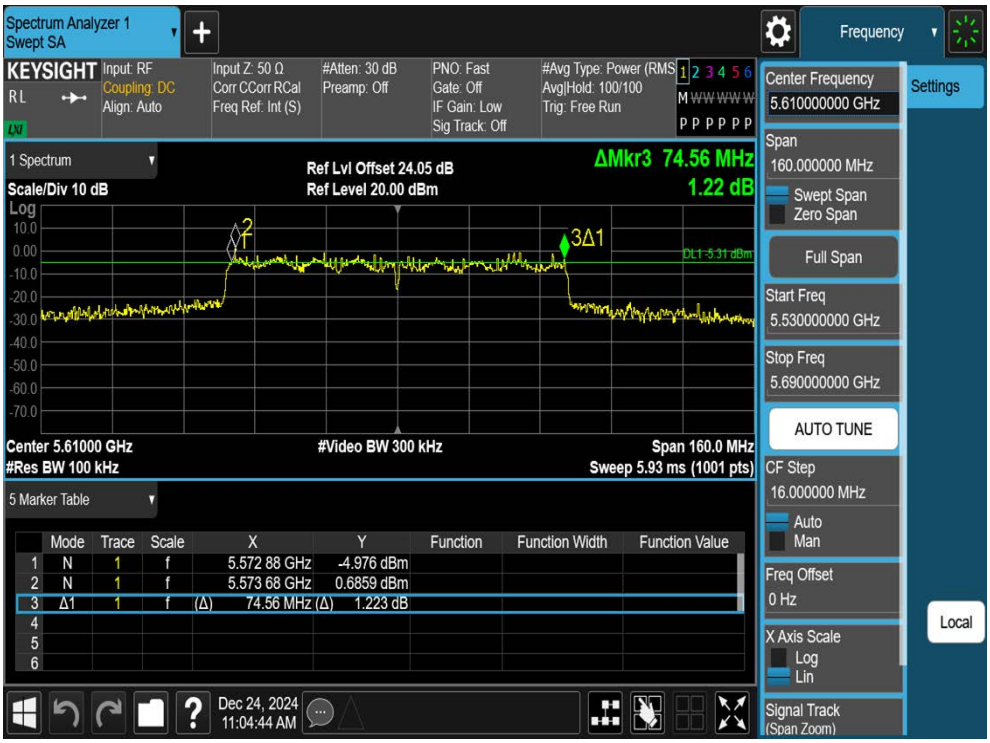
11AC20SISO-Ant1-5825-PASS



11AC40SISO-Ant1-5755-PASS



11AC40SISO-Ant1-5795-PASS



11AC80SISO-Ant1-5610-PASS

11AC80SISO-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.

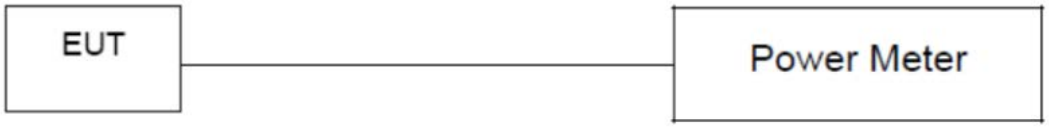
3.4.2 Test Procedure

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 Version	Realtek 11ac 8821C		
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	37	37	37
IEEE 802.11n(HT20)	35	35	35
IEEE 802.11ac(VHT20)	36	36	36
Frequency (MHz)	5190	5230	
IEEE 802.11n(HT40)	35	35	
IEEE 802.11ac(VHT40)	35	35	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	35		

UNII-2A			
Test Software Version	Realtek 11ac 8821C		
Frequency (MHz)	5260	5300	5320
IEEE 802.11a	37	37	37
IEEE 802.11n(HT20)	35	35	35
IEEE 802.11ac(VHT20)	36	36	36
Frequency (MHz)	5270	5310	
IEEE 802.11n(HT40)	35	35	
IEEE 802.11ac(VHT40)	35	35	
Frequency (MHz)	5290		
IEEE 802.11ac(VHT80)	35		

UNII-2C			
Test Software Version	Realtek 11ac 8821C		
Frequency (MHz)	5500	5580	5700
IEEE 802.11a	37	37	37
IEEE 802.11n(HT20)	35	35	35
IEEE 802.11ac(VHT20)	36	36	36
Frequency (MHz)	5510	5550	5670
IEEE 802.11n(HT40)	35	35	35
IEEE 802.11ac(VHT40)	35	35	35
Frequency (MHz)	5530	5610	
IEEE 802.11ac(VHT80)	35	35	

UNII-3			
Test Software Version	Realtek 11ac 8821C		
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	37	37	37
IEEE 802.11n(HT20)	35	35	35
IEEE 802.11ac(VHT20)	36	36	36
Frequency (MHz)	5755	5795	
IEEE 802.11n(HT40)	35	35	
IEEE 802.11ac(VHT40)	35	35	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	35		

3.4.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	15.50	≤23.98	PASS
11A	Ant1	5200	16.63	≤23.98	PASS
11A	Ant1	5240	16.47	≤23.98	PASS
11A	Ant1	5260	16.53	≤23.98	PASS
11A	Ant1	5280	16.93	≤23.98	PASS
11A	Ant1	5320	16.23	≤23.98	PASS
11A	Ant1	5500	16.73	≤23.98	PASS
11A	Ant1	5580	16.94	≤23.98	PASS
11A	Ant1	5700	16.25	≤23.98	PASS
11A	Ant1	5745	16.48	≤30.00	PASS
11A	Ant1	5785	16.54	≤30.00	PASS
11A	Ant1	5825	16.76	≤30.00	PASS
11N20SISO	Ant1	5180	16.96	≤23.98	PASS
11N20SISO	Ant1	5200	16.73	≤23.98	PASS
11N20SISO	Ant1	5240	16.53	≤23.98	PASS
11N20SISO	Ant1	5260	16.82	≤23.98	PASS
11N20SISO	Ant1	5280	16.28	≤23.98	PASS
11N20SISO	Ant1	5320	16.67	≤23.98	PASS
11N20SISO	Ant1	5500	16.89	≤23.98	PASS
11N20SISO	Ant1	5580	16.92	≤23.98	PASS
11N20SISO	Ant1	5700	16.70	≤23.98	PASS
11N20SISO	Ant1	5745	16.08	≤30.00	PASS
11N20SISO	Ant1	5785	16.55	≤30.00	PASS
11N20SISO	Ant1	5825	16.93	≤30.00	PASS
11N40SISO	Ant1	5190	16.59	≤23.98	PASS
11N40SISO	Ant1	5230	16.73	≤23.98	PASS
11N40SISO	Ant1	5270	16.34	≤23.98	PASS
11N40SISO	Ant1	5310	16.70	≤23.98	PASS
11N40SISO	Ant1	5510	16.80	≤23.98	PASS
11N40SISO	Ant1	5550	16.84	≤23.98	PASS
11N40SISO	Ant1	5670	16.37	≤23.98	PASS
11N40SISO	Ant1	5755	16.00	≤30.00	PASS
11N40SISO	Ant1	5795	16.19	≤30.00	PASS
11AC20SISO	Ant1	5180	16.63	≤23.98	PASS
11AC20SISO	Ant1	5200	16.54	≤23.98	PASS
11AC20SISO	Ant1	5240	16.16	≤23.98	PASS
11AC20SISO	Ant1	5260	16.25	≤23.98	PASS
11AC20SISO	Ant1	5280	16.05	≤23.98	PASS
11AC20SISO	Ant1	5320	16.38	≤23.98	PASS
11AC20SISO	Ant1	5500	16.54	≤23.98	PASS

11AC20SISO	Ant1	5580	16.70	≤23.98	PASS
11AC20SISO	Ant1	5700	16.17	≤23.98	PASS
11AC20SISO	Ant1	5745	16.17	≤30.00	PASS
11AC20SISO	Ant1	5785	16.24	≤30.00	PASS
11AC20SISO	Ant1	5825	16.53	≤30.00	PASS
11AC40SISO	Ant1	5190	16.79	≤23.98	PASS
11AC40SISO	Ant1	5230	16.11	≤23.98	PASS
11AC40SISO	Ant1	5270	16.30	≤23.98	PASS
11AC40SISO	Ant1	5310	16.21	≤23.98	PASS
11AC40SISO	Ant1	5510	16.35	≤23.98	PASS
11AC40SISO	Ant1	5550	16.68	≤23.98	PASS
11AC40SISO	Ant1	5670	16.45	≤23.98	PASS
11AC40SISO	Ant1	5755	16.54	≤30.00	PASS
11AC40SISO	Ant1	5795	16.41	≤30.00	PASS
11AC80SISO	Ant1	5210	16.61	≤23.98	PASS
11AC80SISO	Ant1	5290	16.55	≤23.98	PASS
11AC80SISO	Ant1	5530	16.46	≤23.98	PASS
11AC80SISO	Ant1	5610	16.92	≤23.98	PASS
11AC80SISO	Ant1	5775	16.09	≤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:

1. 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 kHz/300 kHz) to the measured result, i.e. 2.22 dB.
2. 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+10log(500kHz/300kHz).

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 tonscend 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	≥3 x RBW
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	RMS
Trace Mode	Max Hold
Sweep Time	Auto Couple