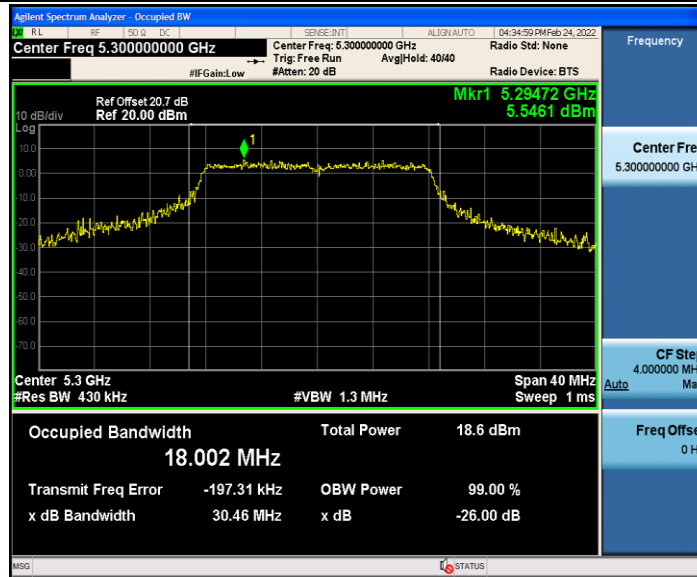
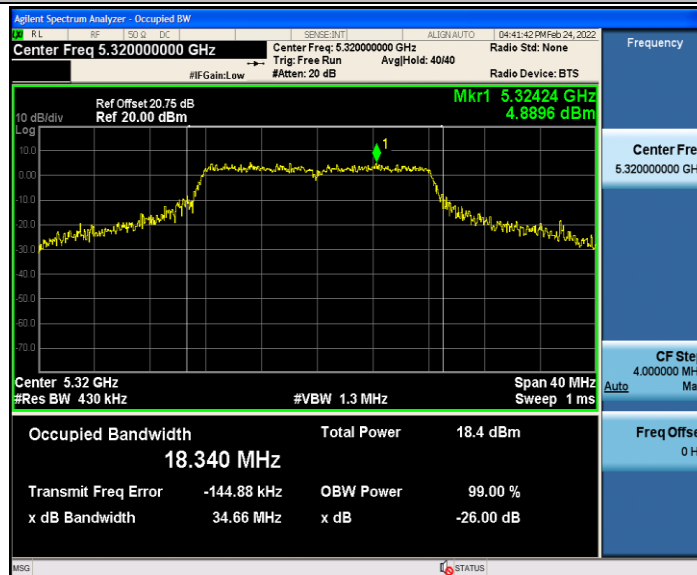
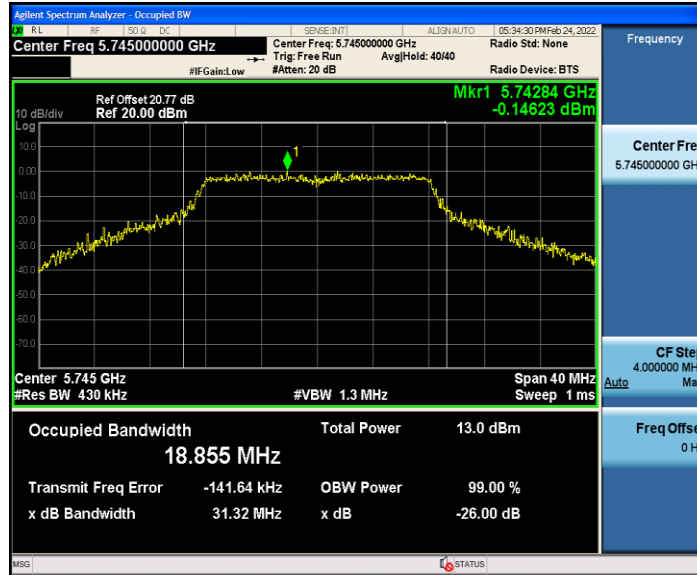




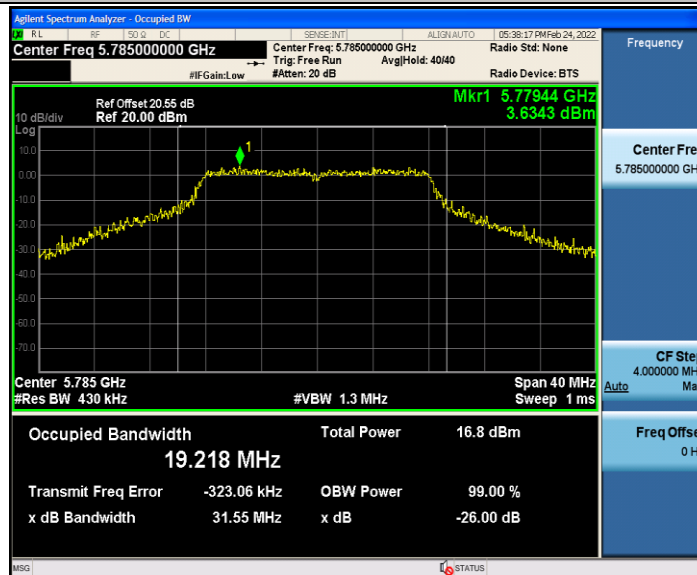
11A_Ant1_5320



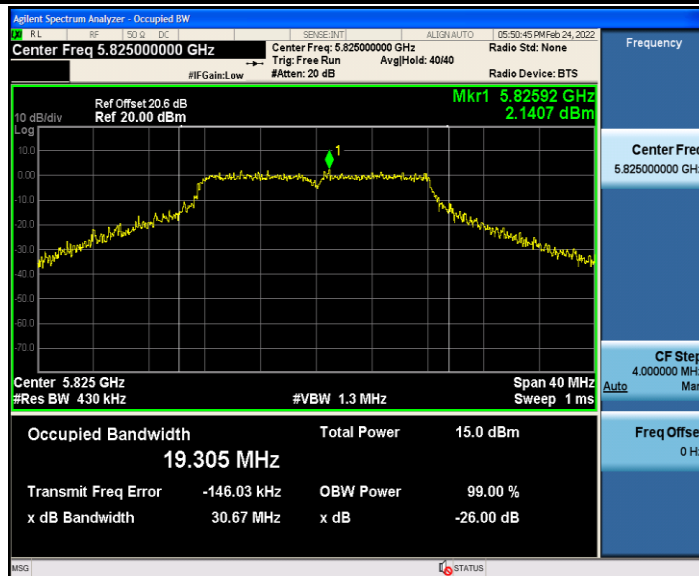
11A_Ant1_5745



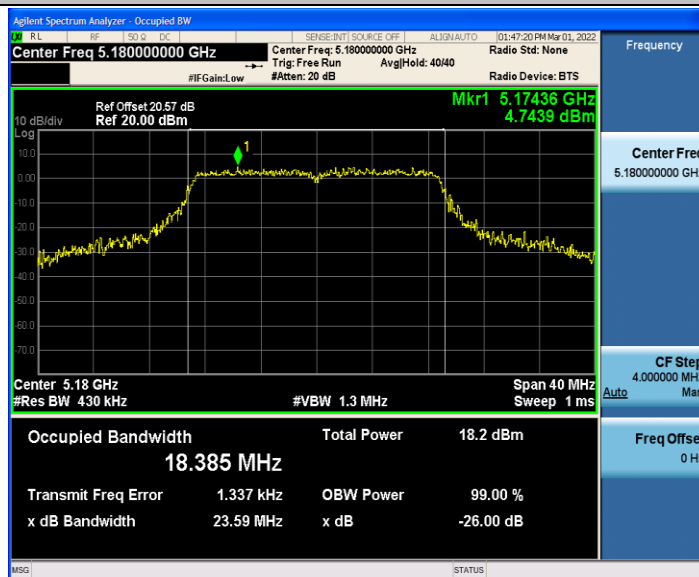
11A_Ant1_5785



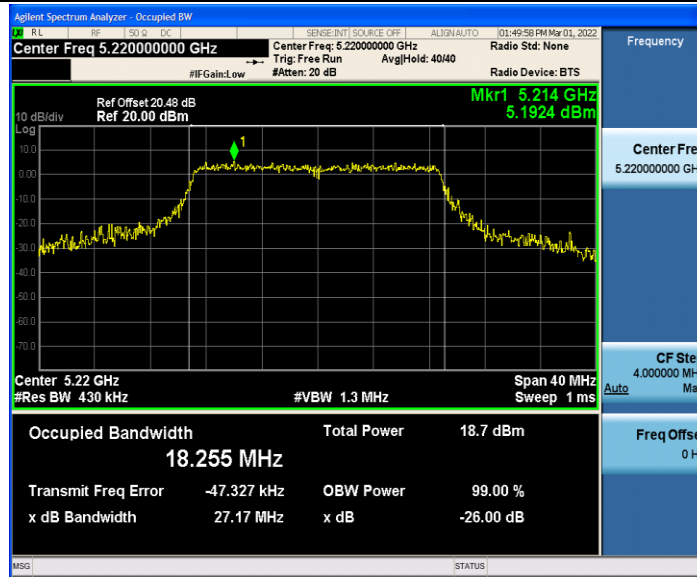
11A_Ant1_5825



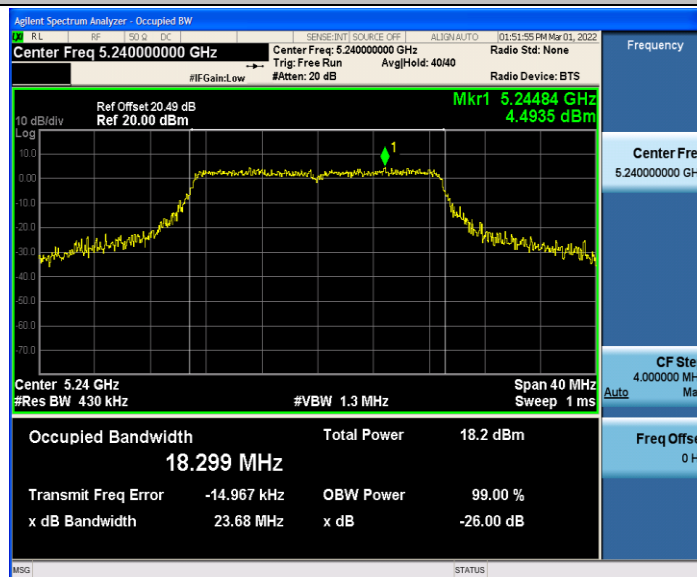
11N20SISO_Ant1_5180



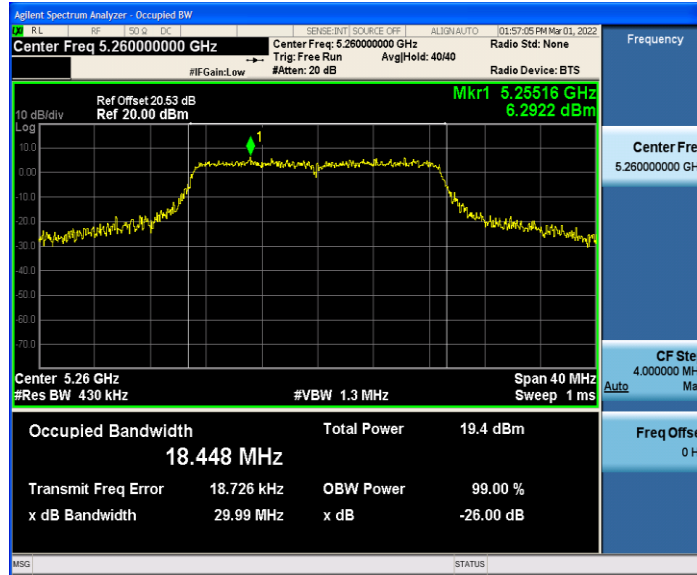
11N20SISO_Ant1_5220



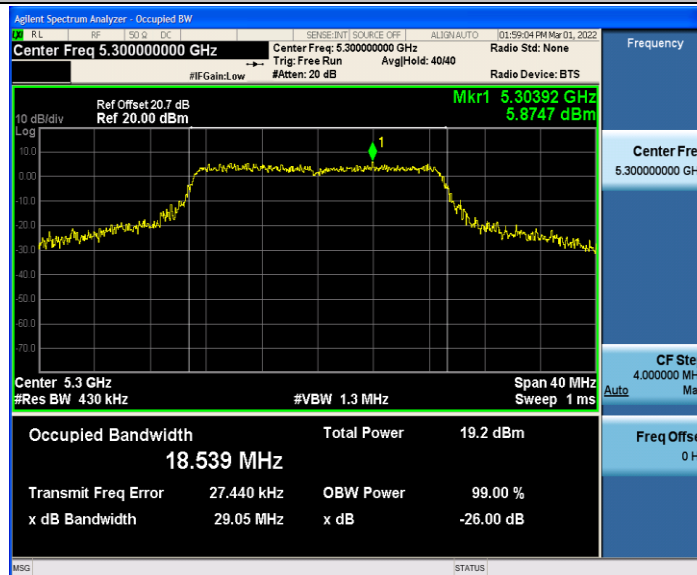
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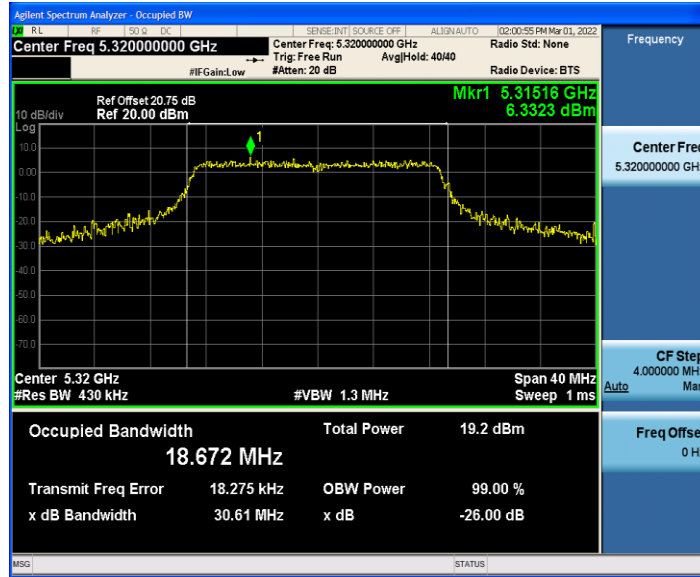
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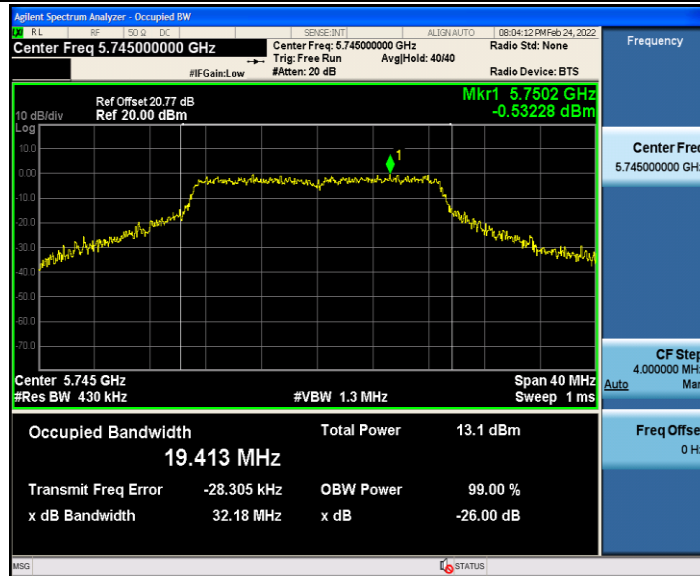
11N20SISO_Ant1_5300



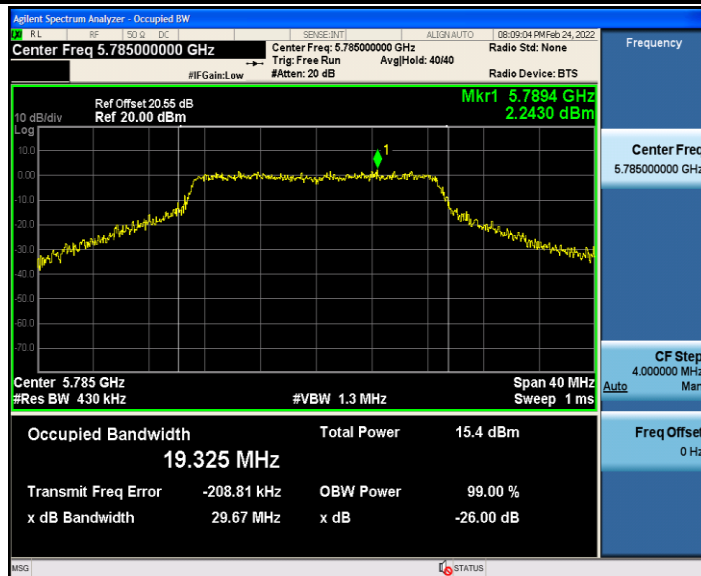
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11N20SISO_Ant1_5745



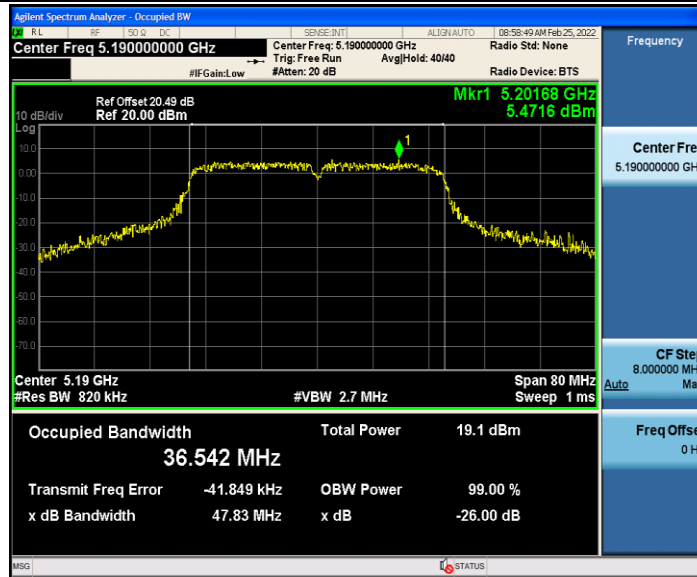
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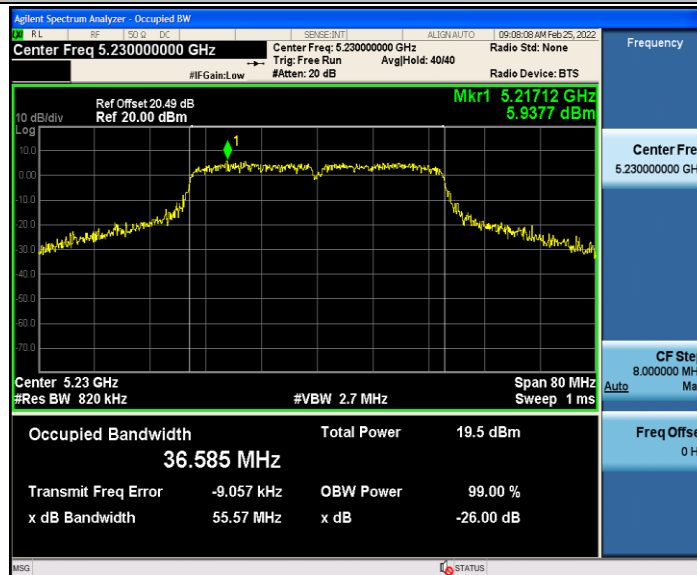
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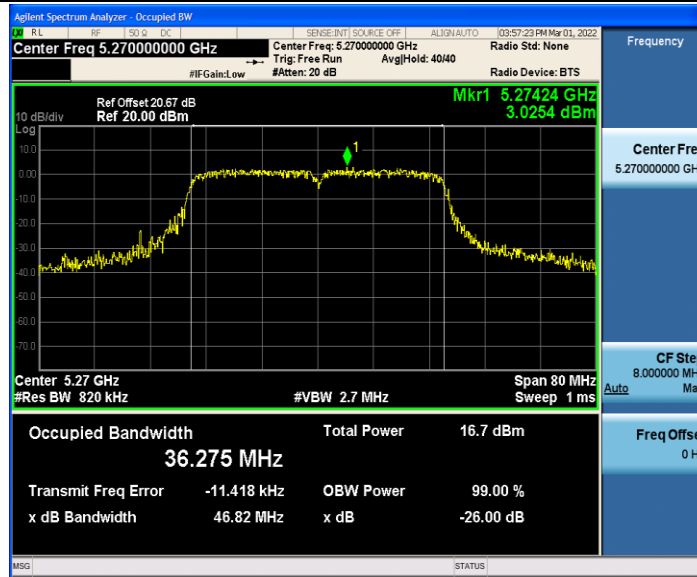
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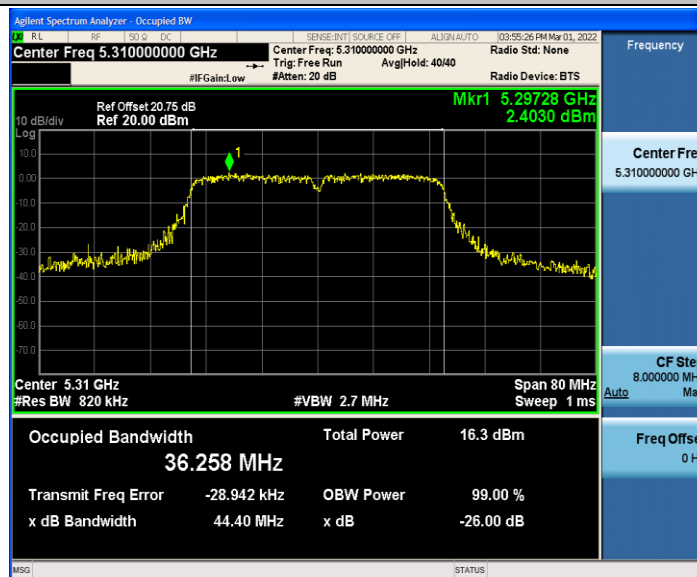
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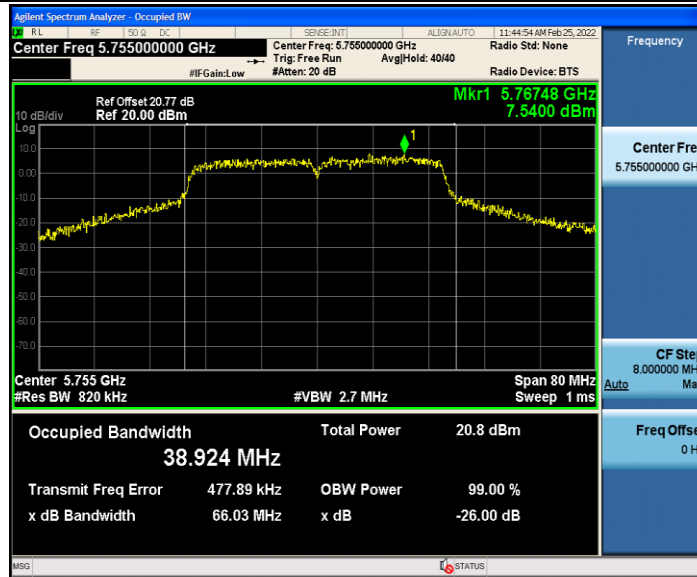
11N40SISO_Ant1_5270



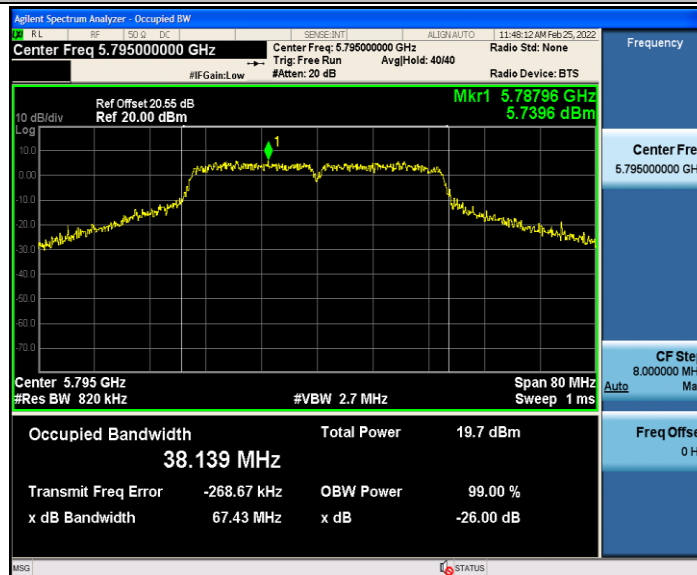
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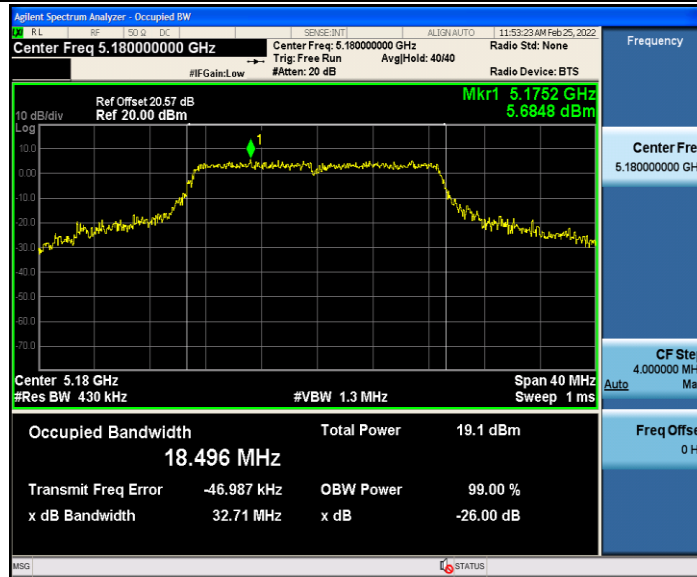
11N40SISO_Ant1_5755



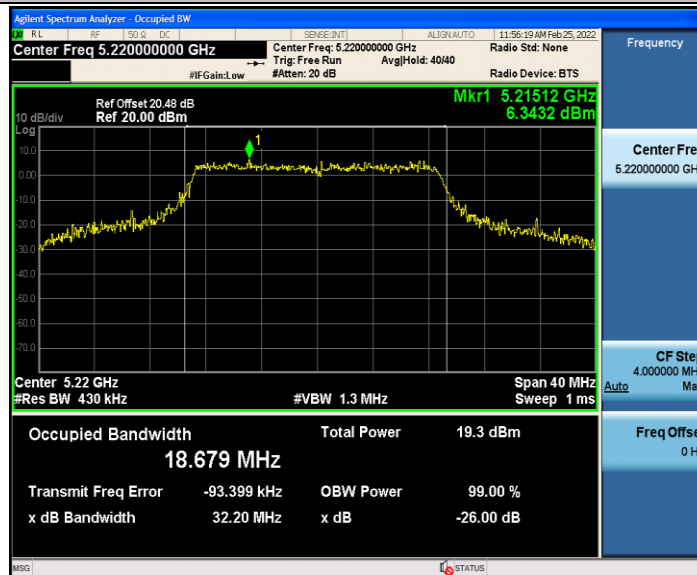
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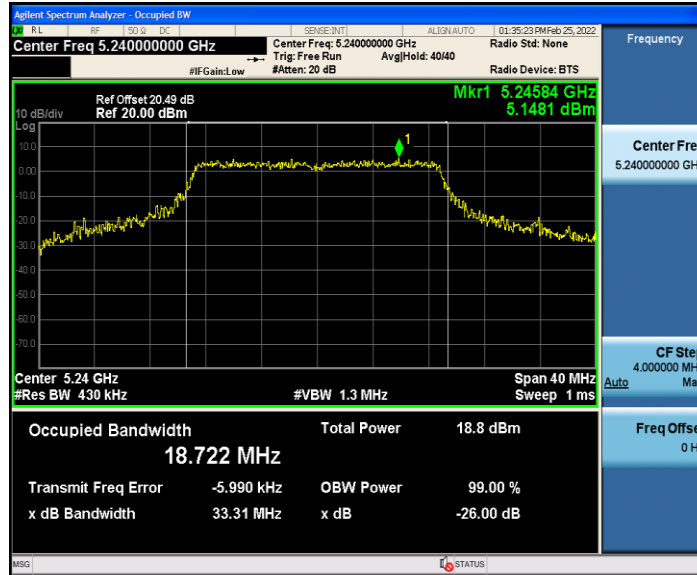
11AC20SISO_Ant1_5180



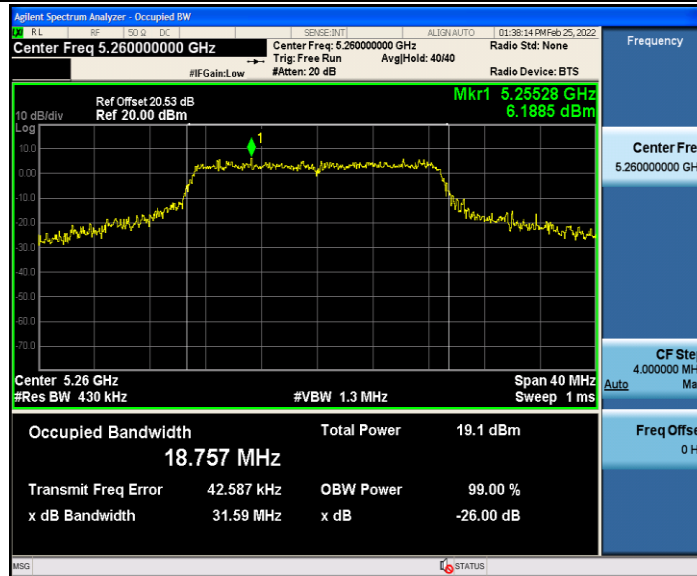
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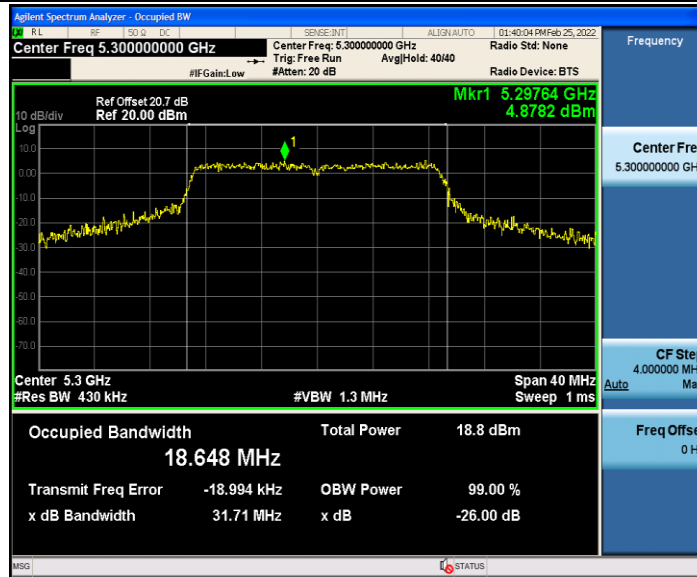
11AC20SISO_Ant1_5240



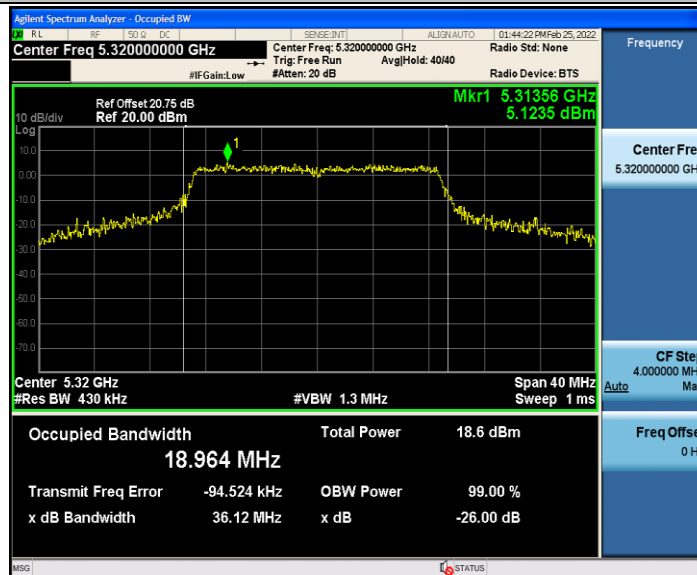
11AC20SISO_Ant1_5260



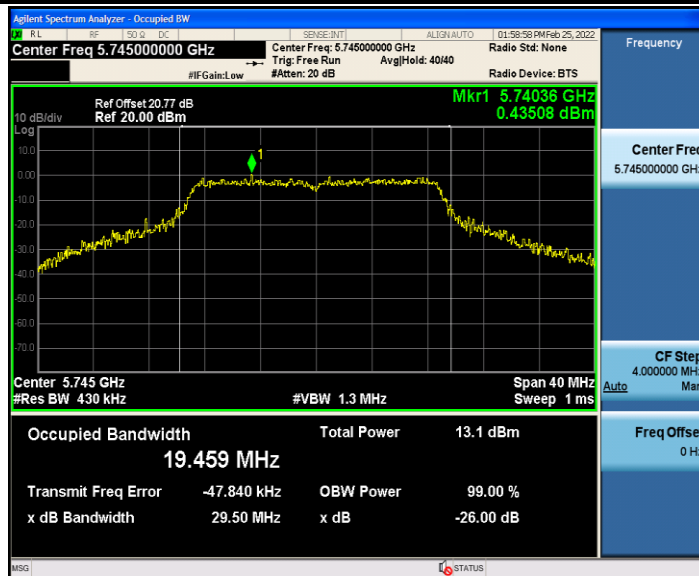
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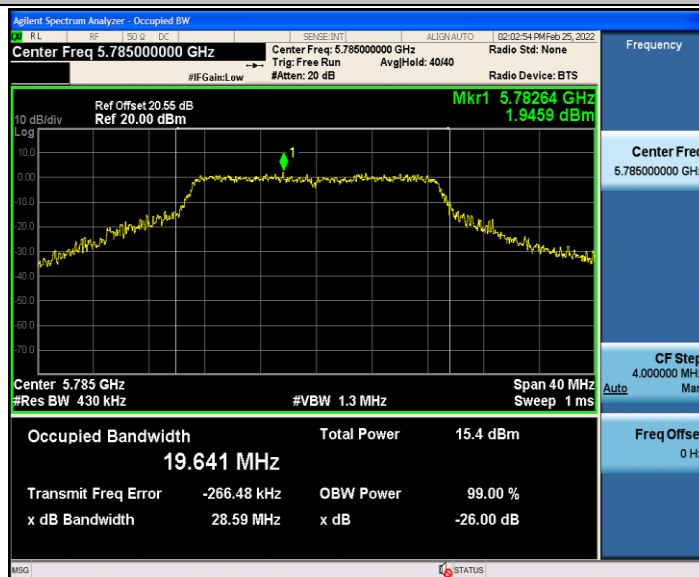
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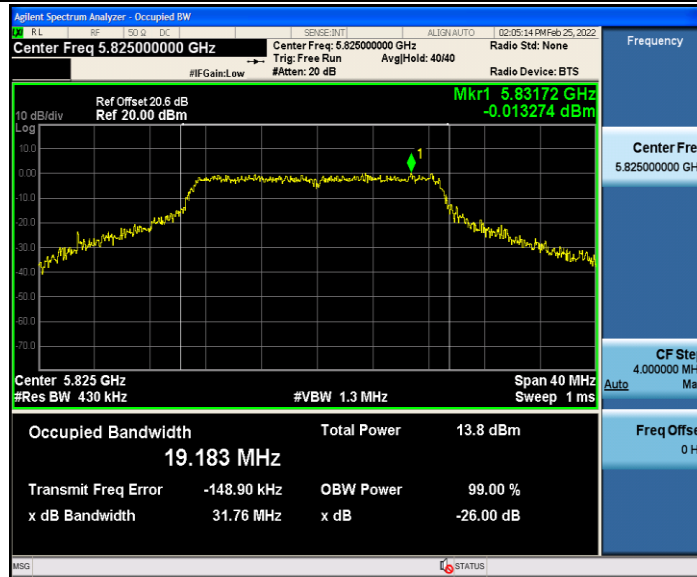
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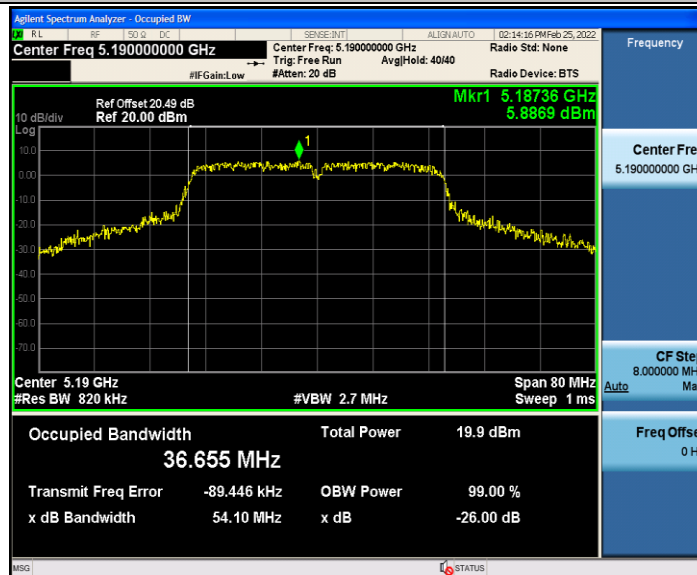
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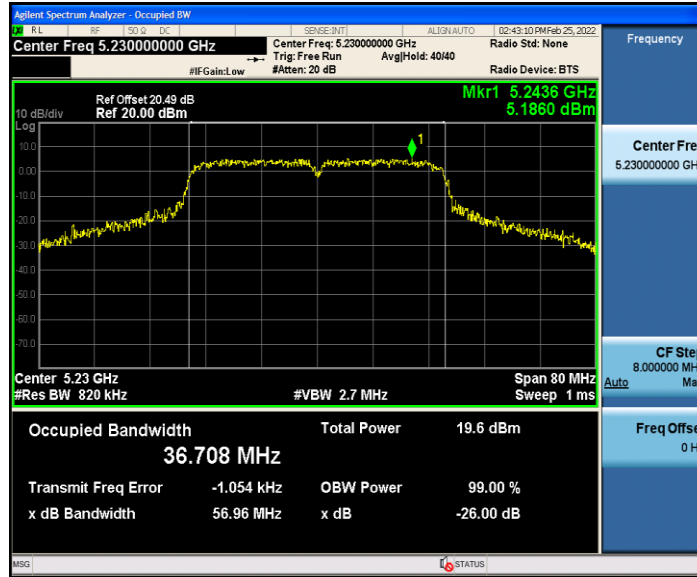
11AC20SISO_Ant1_5825



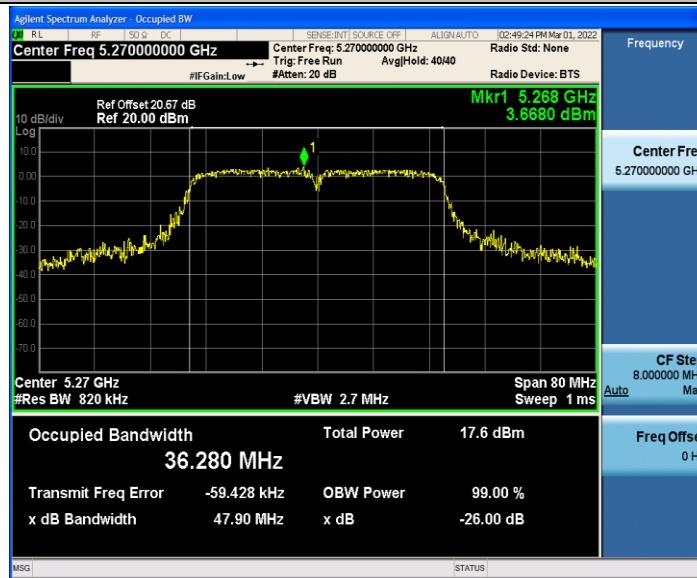
11AC40SISO_Ant1_5190



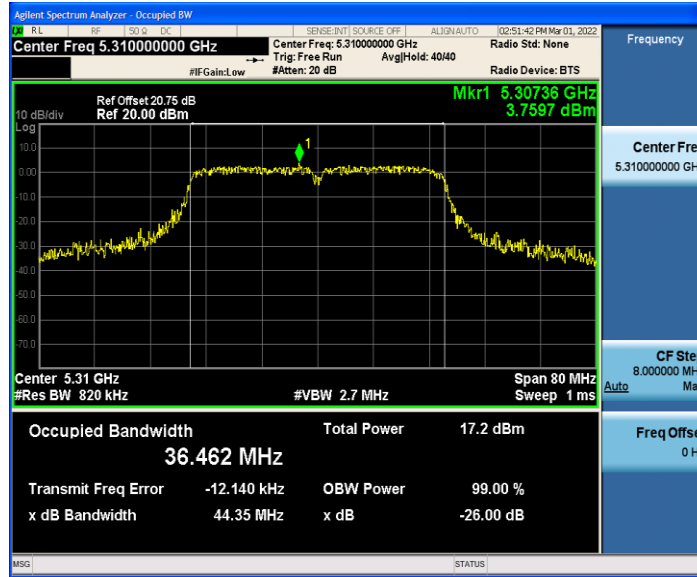
11AC40SISO_Ant1_5230



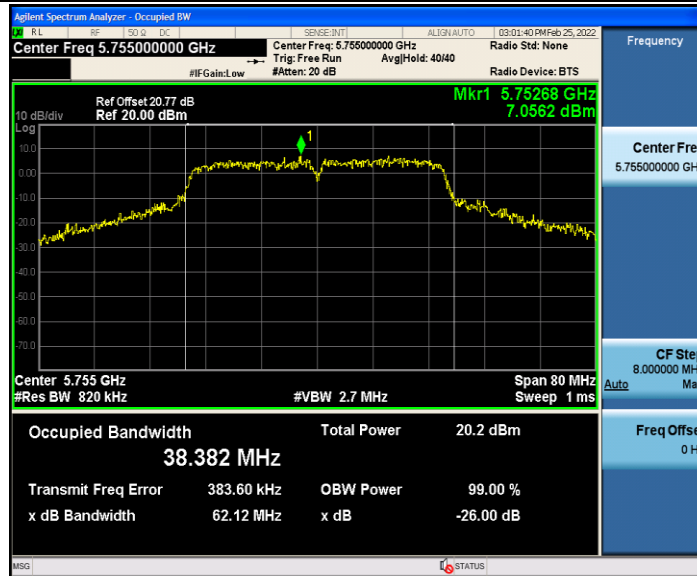
11AC40SISO_Ant1_5270



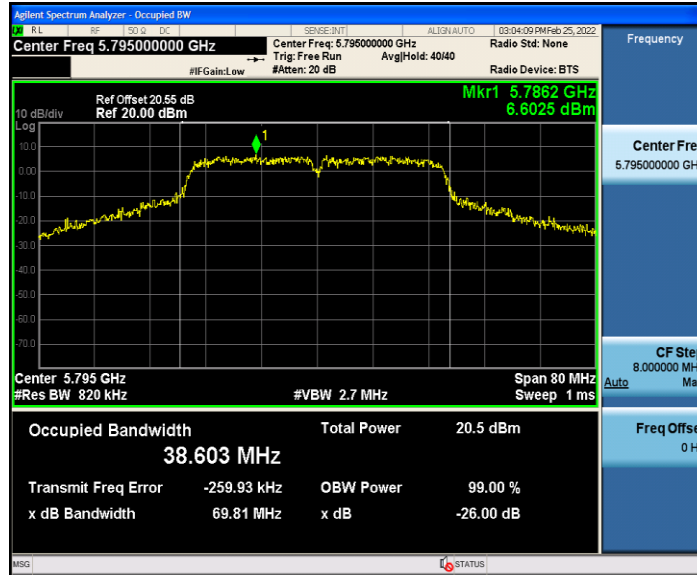
11AC40SISO_Ant1_5310



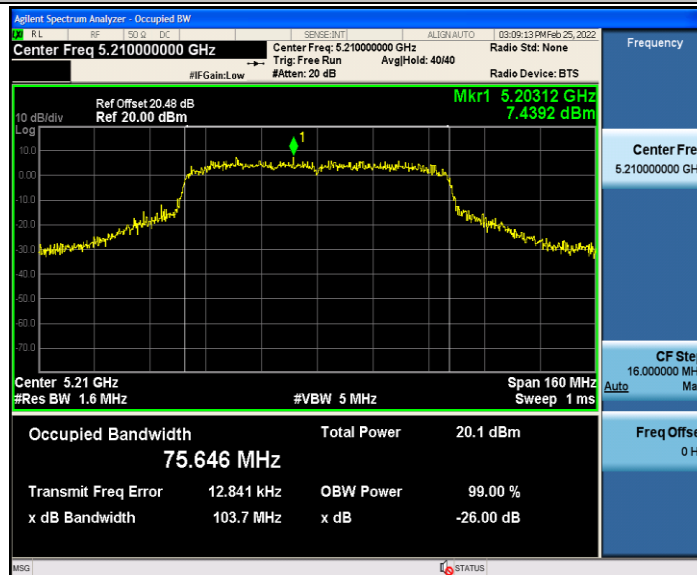
11AC40SISO_Ant1_5755



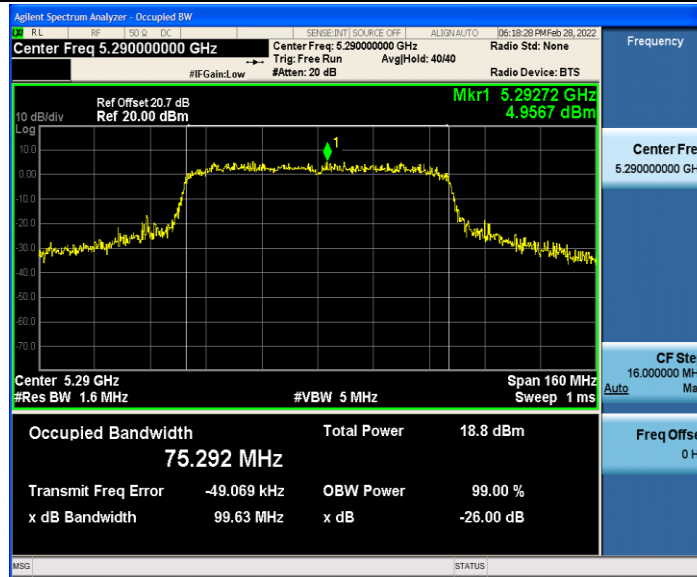
11AC40SISO_Ant1_5795



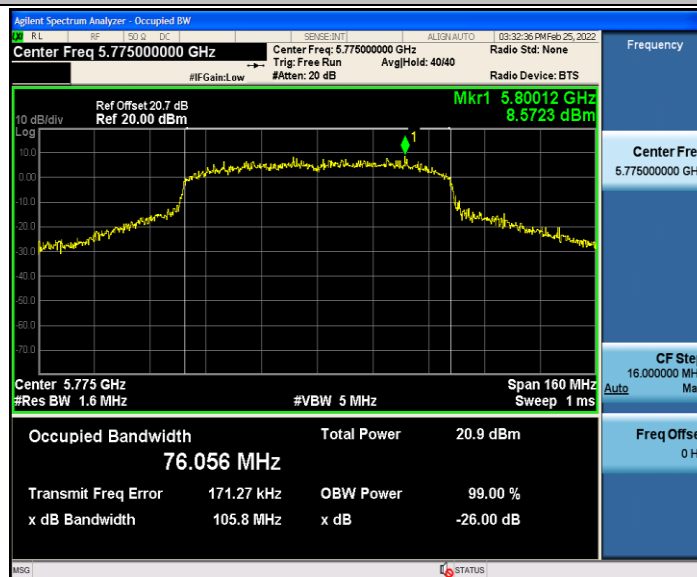
11AC80SISO_Ant1_5210



11AC80SISO_Ant1_5290



11AC80SISO_Ant1_5775



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	AP device: 1 Watt (30 dBm) Client device: 250 mW (24 dBm)	5150-5250
		250 mW (24 dBm)	5250-5350
		250 mW (24 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 Peripherals

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	Type-C Cable	AWM	E101344	0.9m,No Shielding
2	Adaptor	FUSHIGANG	AS1201A-0502000 USU	NA
3	Record PC	Lenovo	M4500T	NA
4	Control PC	Lenovo	M4500T	NA

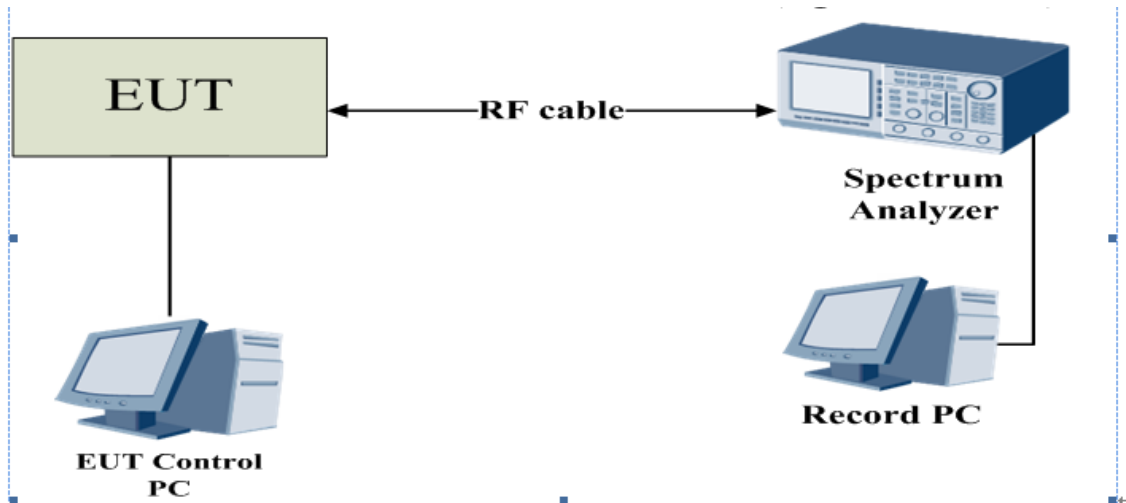
3.4.3 Test Procedure

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 test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

3.4.4 Test Setup



3.4.5 Table of Parameters of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

For Power Setting value

Test Mode	Power Level Setting defined by Manufacturer							
	ALL ANT							
	Channel	Value	Channel	Value	Channel	Value	Channel	Value
11A-CDD	5180	25	5220	25	5240	25	5260	25
	5300	25	5320	25	5500	/	5580	/
	5700	/	5745	13	5785	15	5825	14
11N20MIMO	5180	19	5220	19	5240	19	5260	20
	5300	20	5320	20	5500	/	5580	/
	5700	/	5745	13	5785	14	5825	13
11N40MIMO	5190	20	5230	25	5270	16	5310	16
	5510	/	5550	/	5670	/	5755	19
	5795	17	/	/	/	/	/	/
11AC20MIMO	5180	25	5220	25	5240	25	5260	25
	5300	25	5320	25	5500	/	5580	/
	5700	/	5745	13	5785	14	5825	13
11AC40MIMO	5190	25	5230	25	5270	17	5310	17

Test Mode	Power Level Setting defined by Manufacturer							
	5510	/	5550	/	5670	/	5755	18
	5795	18	/	/	/	/	/	/
11AC80MIMO	5210	25	5290	18	5530	/	5610	/
	5775	18	/	/	/	/	/	/

3.4.6 The Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	13.51	≤24.00	PASS
		5220	13.57	≤24.00	PASS
		5240	13.03	≤24.00	PASS
		5260	13.29	≤24.00	PASS
		5300	13.16	≤24.00	PASS
		5320	12.75	≤24.00	PASS
		5745	7.38	≤30.00	PASS
		5785	11.32	≤30.00	PASS
		5825	9.45	≤30.00	PASS
11N20SISO	Ant1	5180	12.83	≤24.00	PASS
		5220	13.02	≤24.00	PASS
		5240	12.76	≤24.00	PASS
		5260	13.98	≤24.00	PASS
		5300	13.76	≤24.00	PASS
		5320	13.76	≤24.00	PASS
		5745	7.66	≤30.00	PASS
		5785	9.90	≤30.00	PASS
		5825	8.22	≤30.00	PASS
11N40SISO	Ant1	5190	13.01	≤24.00	PASS
		5230	13.35	≤24.00	PASS
		5270	10.40	≤24.00	PASS
		5310	10.04	≤24.00	PASS
		5755	14.25	≤30.00	PASS
		5795	13.32	≤30.00	PASS
11AC20SISO	Ant1	5180	13.74	≤24.00	PASS
		5220	13.52	≤24.00	PASS
		5240	13.30	≤24.00	PASS
		5260	13.62	≤24.00	PASS
		5300	13.50	≤24.00	PASS
		5320	13.30	≤24.00	PASS
		5745	7.69	≤30.00	PASS
		5785	9.82	≤30.00	PASS
		5825	8.30	≤30.00	PASS
11AC40SISO	Ant1	5190	13.41	≤24.00	PASS
		5230	13.38	≤24.00	PASS
		5270	11.56	≤24.00	PASS
		5310	11.10	≤24.00	PASS
		5755	13.87	≤30.00	PASS
		5795	14.36	≤30.00	PASS

11AC80SISO	Ant1	5210	13.46	≤24.00	PASS
		5290	12.12	≤24.00	PASS
		5775	14.21	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the graph.

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	AP 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

3.5.2 Test Peripherals

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	Type-C Cable	AWM	E101344	0.9m, No Shielding
2	Adaptor	FUSHIGANG	AS1201A-0502000 USU	NA
3	Record PC	Lenovo	M4500T	NA
4	Control PC	Lenovo	M4500T	NA

3.5.3 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	

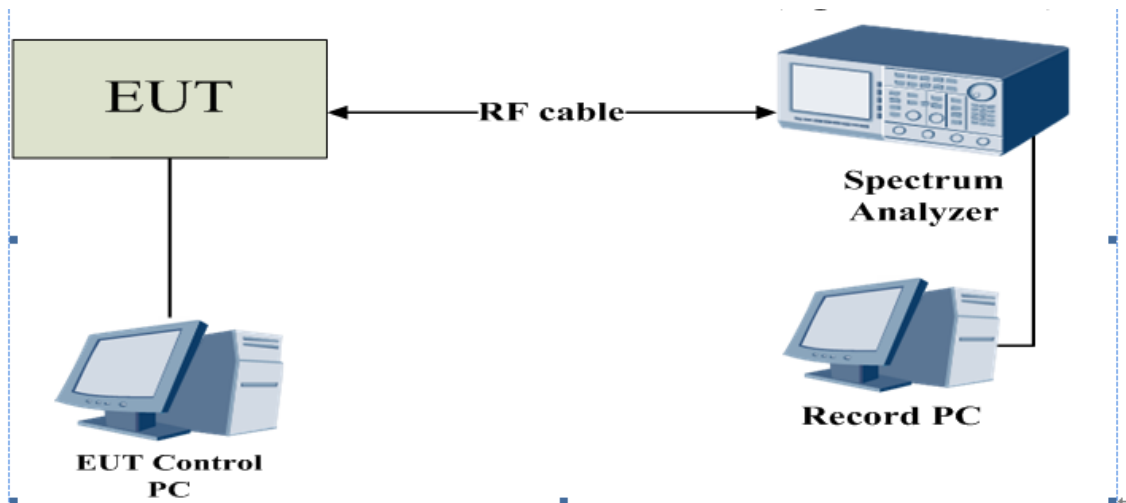
a) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below. Spectrum analyser settings as following:

Centre Frequency	The centre frequency of the channel under test
RBW	= 1 MHz (Band1/2/3) = 500 KHz (Band4)
VBW	≥ 3 x RBW
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	RMS
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize. Use the peak marker function to determine the maximum amplitude level within the RBW.

c) The value defined in step b shall be compared to the limits and be recorded .

3.5.4 Test Setup



3.5.5 The Result

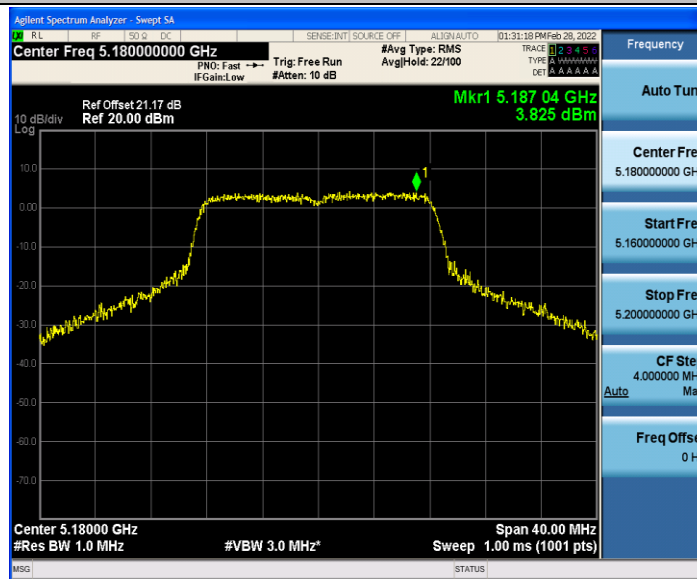
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	3.83	≤11.00	PASS
		5220	4.02	≤11.00	PASS
		5240	4.29	≤11.00	PASS
		5260	3.94	≤11.00	PASS
		5300	4.14	≤11.00	PASS
		5320	3.93	≤11.00	PASS
		5745	-5.73	≤30.00	PASS
		5785	-2.31	≤30.00	PASS
		5825	-5.22	≤30.00	PASS
11N20SISO	Ant1	5180	4.17	≤11.00	PASS
		5220	3.65	≤11.00	PASS
		5240	3.54	≤11.00	PASS
		5260	3.67	≤11.00	PASS
		5300	3.51	≤11.00	PASS
		5320	3.11	≤11.00	PASS
		5745	-6.06	≤30.00	PASS
		5785	-3.56	≤30.00	PASS
		5825	-5.29	≤30.00	PASS
11N40SISO	Ant1	5190	0.13	≤11.00	PASS
		5230	0.91	≤11.00	PASS
		5270	1.24	≤11.00	PASS
		5310	1.63	≤11.00	PASS
		5755	-0.3	≤30.00	PASS
		5795	-1.6	≤30.00	PASS
11AC20SISO	Ant1	5180	3.68	≤11.00	PASS
		5220	4.31	≤11.00	PASS
		5240	3.87	≤11.00	PASS
		5260	4.37	≤11.00	PASS
		5300	4.11	≤11.00	PASS
		5320	3.3	≤11.00	PASS
		5745	-5.35	≤30.00	PASS
		5785	-4.12	≤30.00	PASS
		5825	-4.32	≤30.00	PASS
11AC40SISO	Ant1	5190	2.13	≤11.00	PASS
		5230	1.86	≤11.00	PASS
		5270	1.67	≤11.00	PASS
		5310	1.43	≤11.00	PASS
		5755	-0.6	≤30.00	PASS
		5795	-0.39	≤30.00	PASS

11AC80SISO	Ant1	5210	-1.7	≤11.00	PASS
		5290	-1.6	≤11.00	PASS
		5775	-3.34	≤30.00	PASS

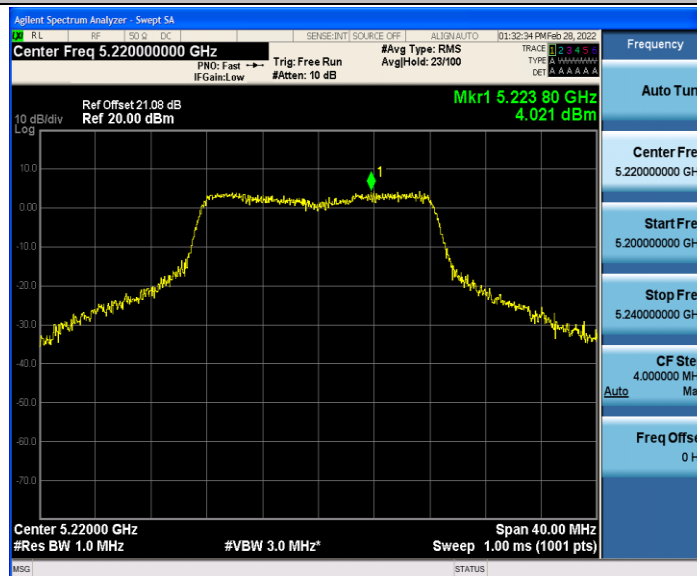
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

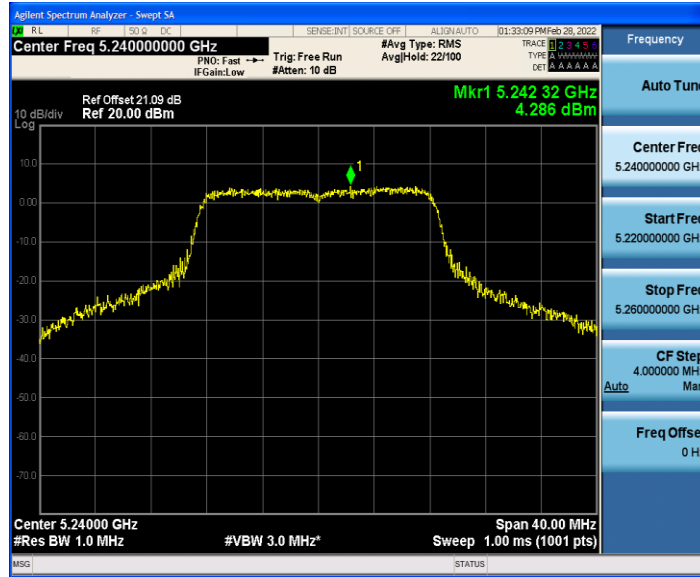
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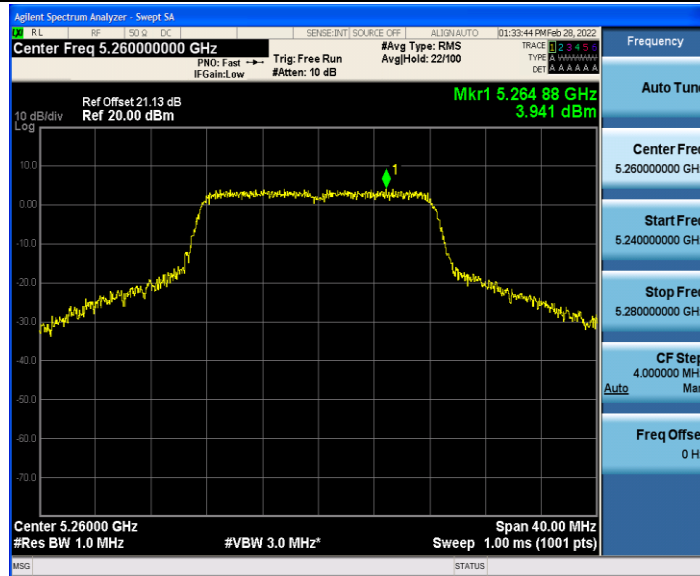
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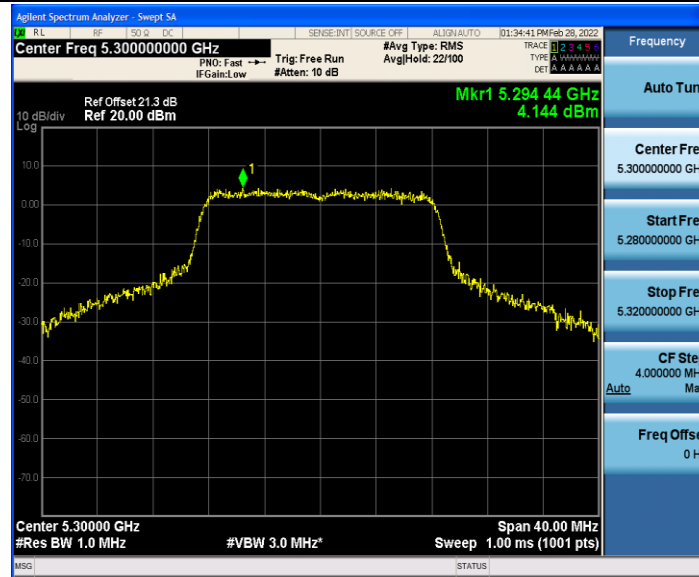
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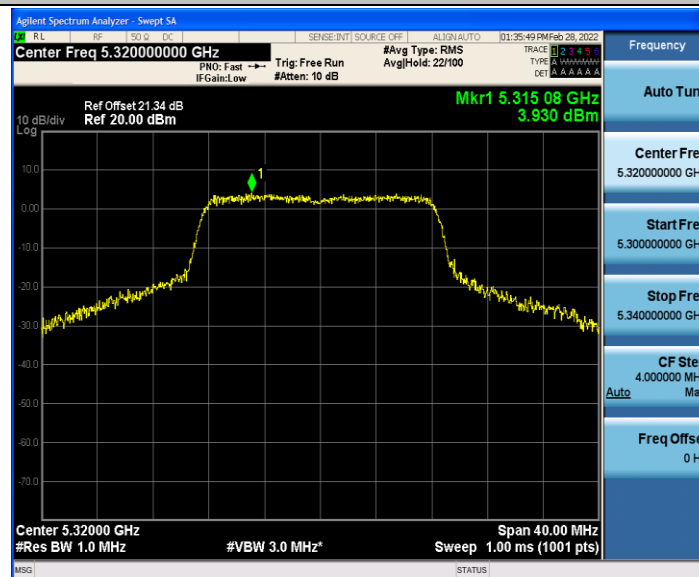
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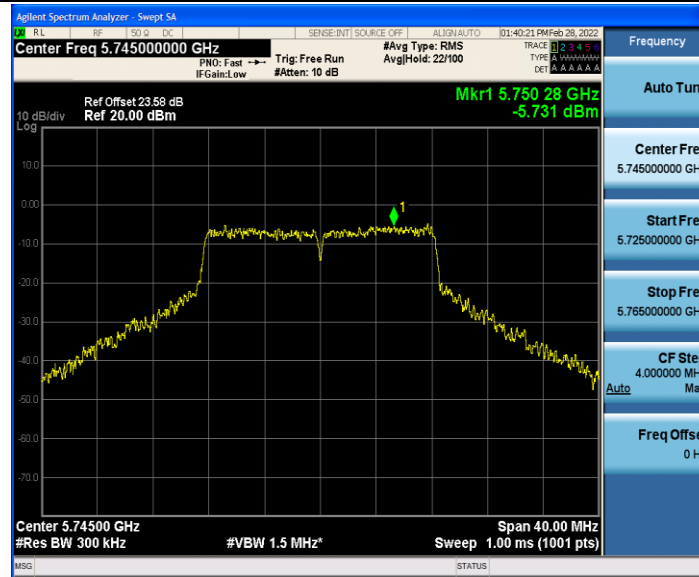
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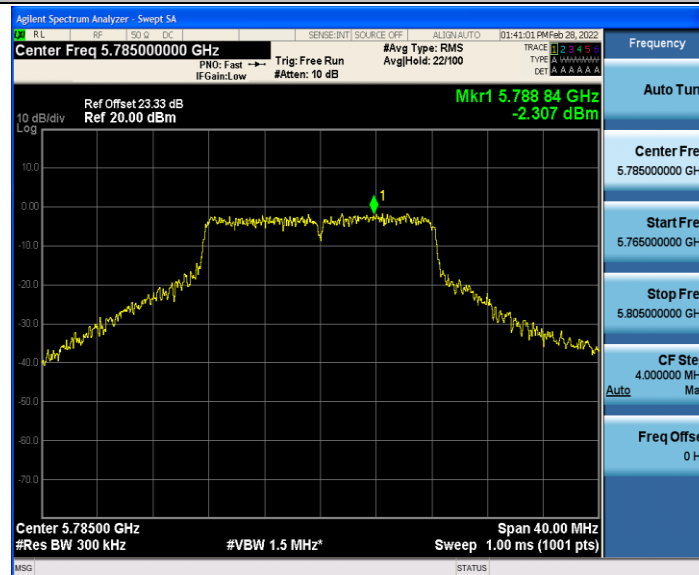
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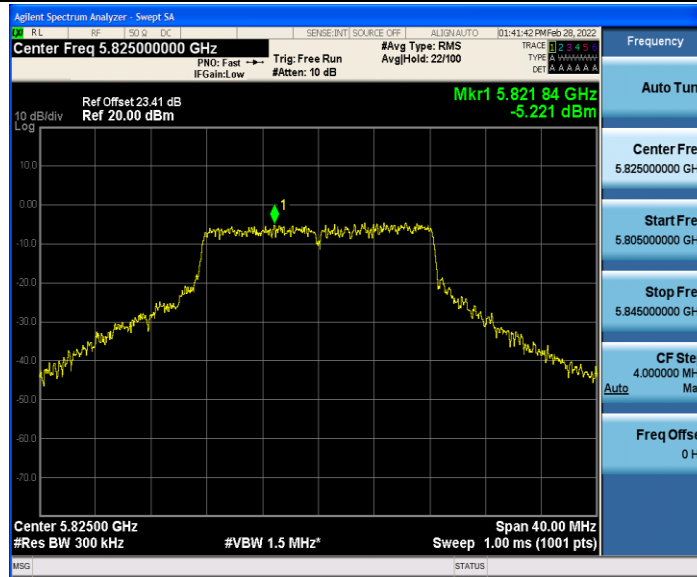
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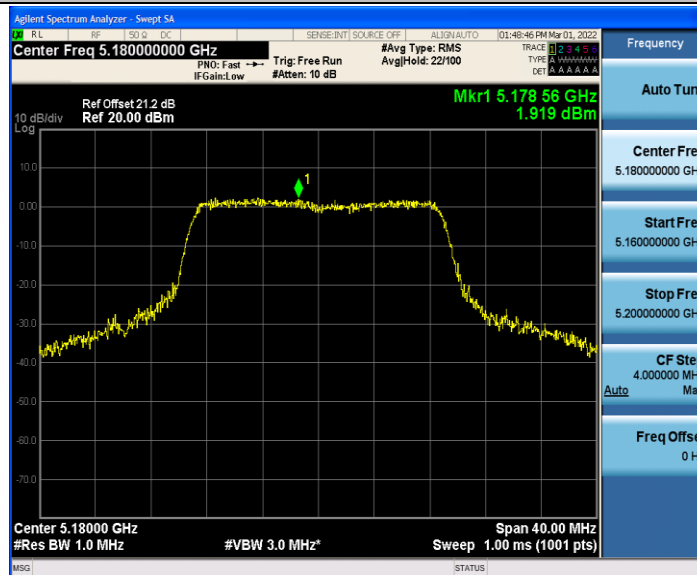
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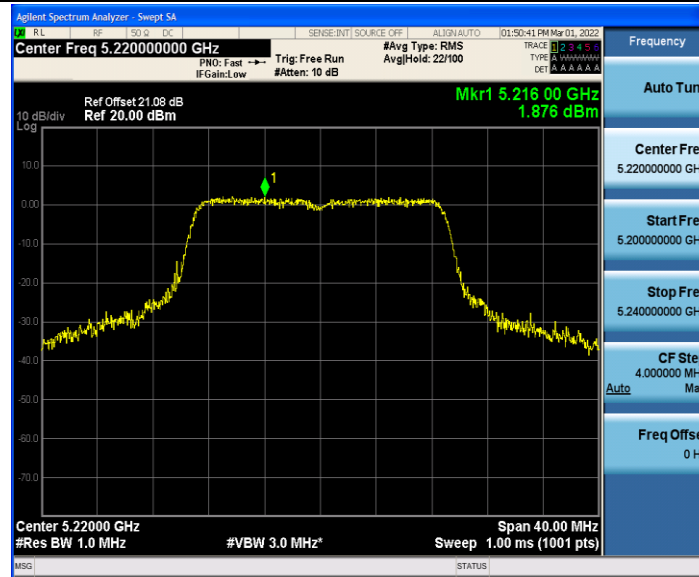
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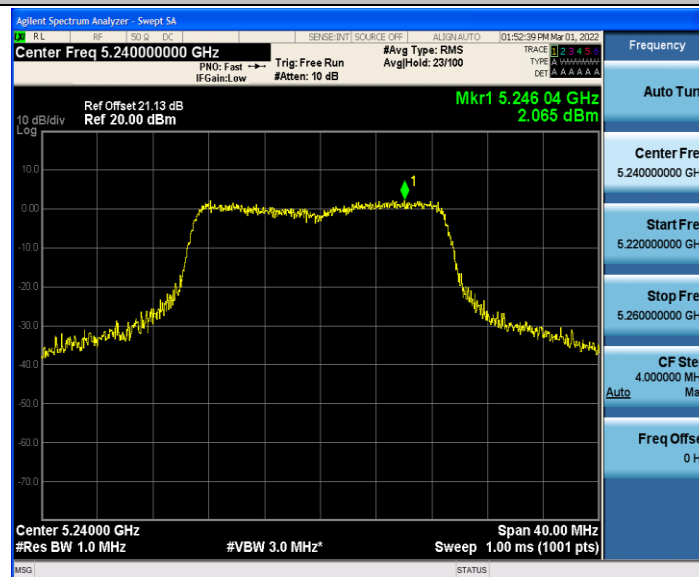
11N20SISO_Ant1_5180



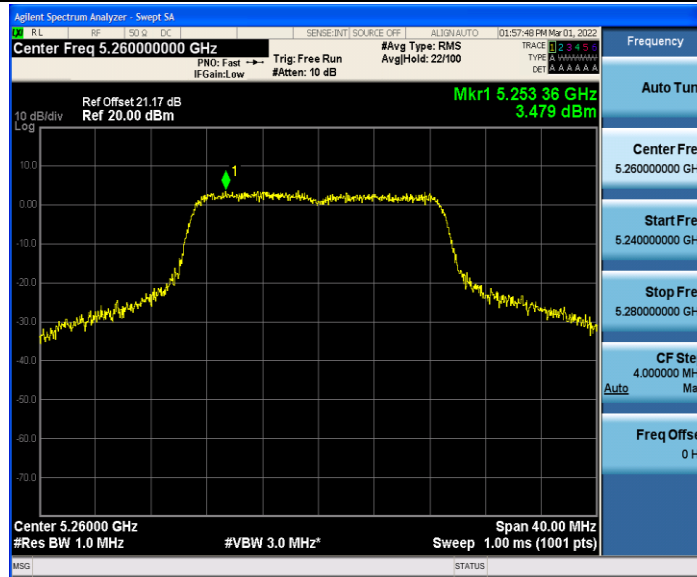
11N20SISO_Ant1_5220



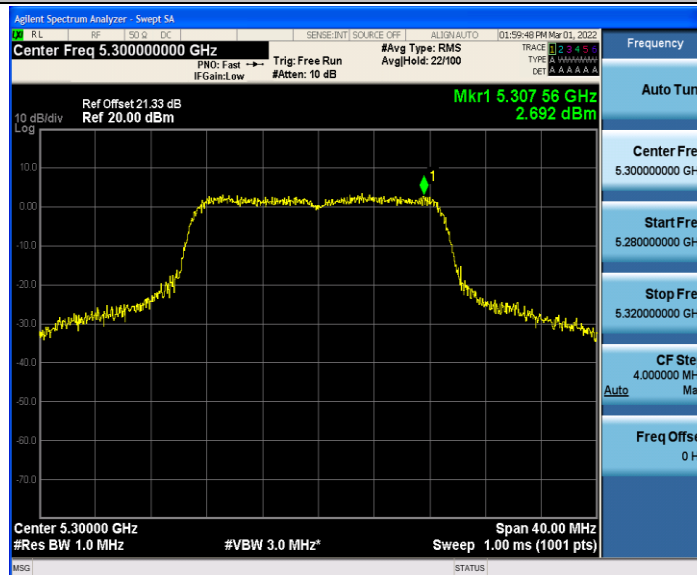
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11N20SISO_Ant1_5260



11N20SISO_Ant1_5300



11N20SISO_Ant1_5320