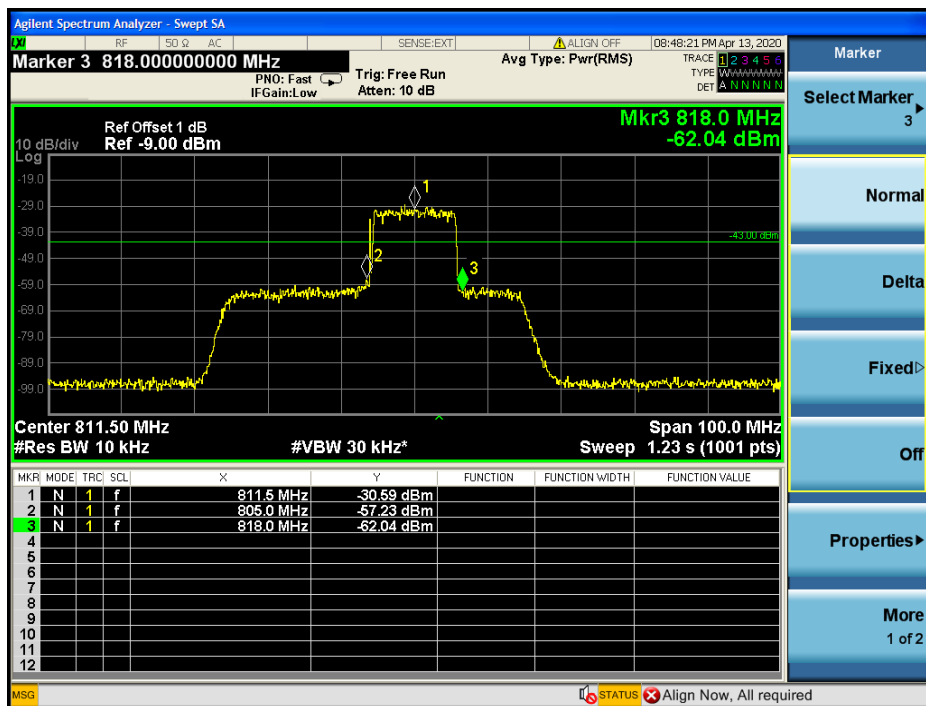


Class B model number:

Downlink: 851MHz to 862MHz
IN Band Amplifier noise



Uplink: 806MHz to 817MHz
IN Band Amplifier noise



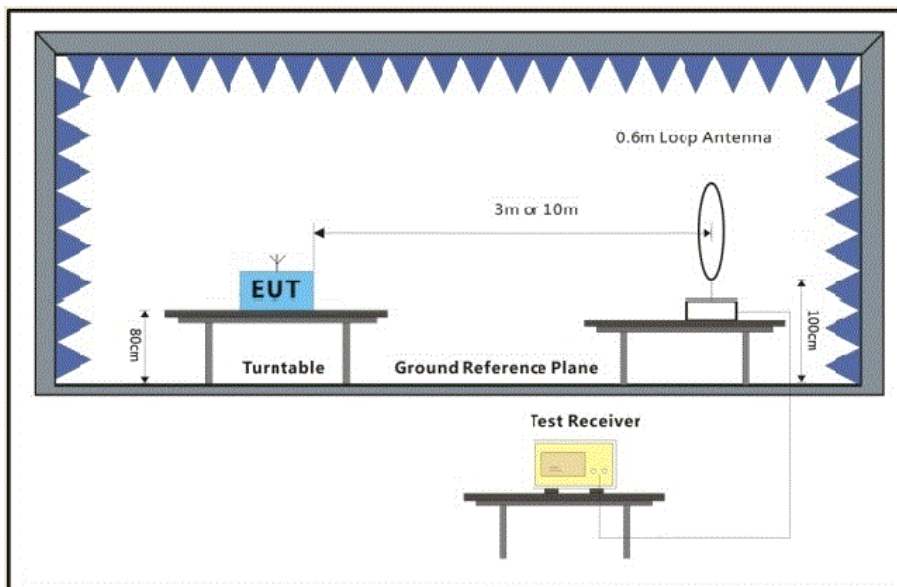
6.1.8 Radiated Spurious Emissions

Test Requirement: FCC part 90.219(e) (3)
 (3) Spurious emissions from a signal booster must not exceed -13 dBm within any 100 kHz measurement bandwidth..

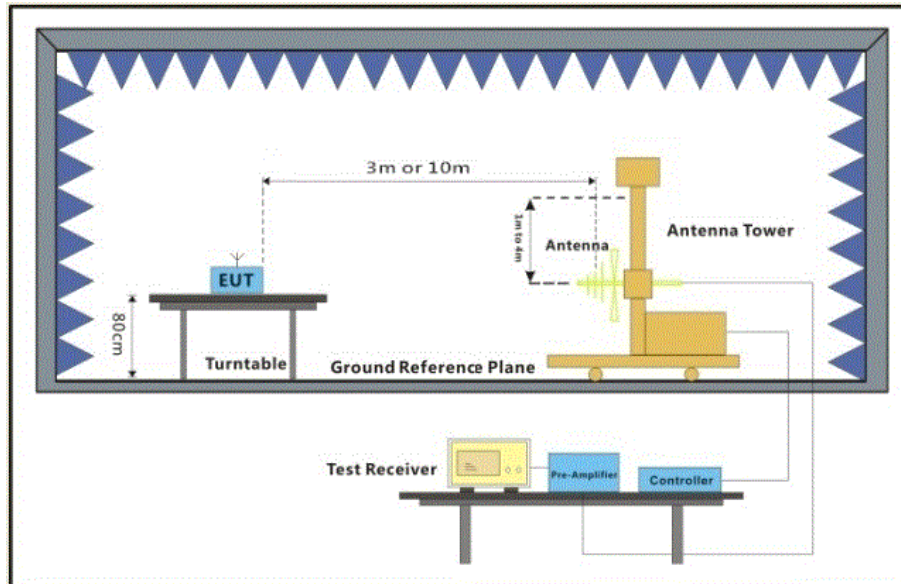
Test Method: FCC part 2.1053
 TIA-603-E-2016

EUT Operation:
 Status: Drive the EUT to maximum output power.
 Conditions: Normal conditions
 Application: Enclosure

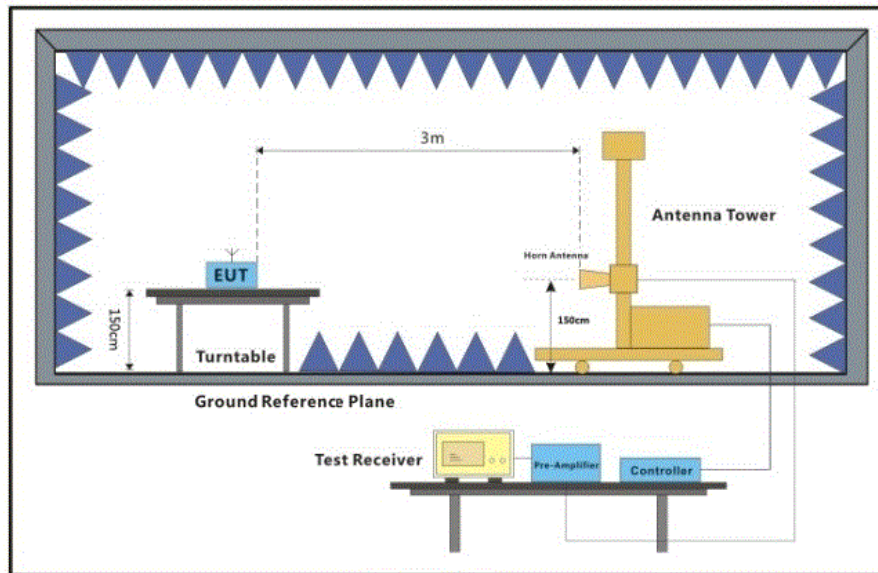
Test Configuration:
 9 kHz to 30 MHz emissions:



30MHz to 1GHz emissions:



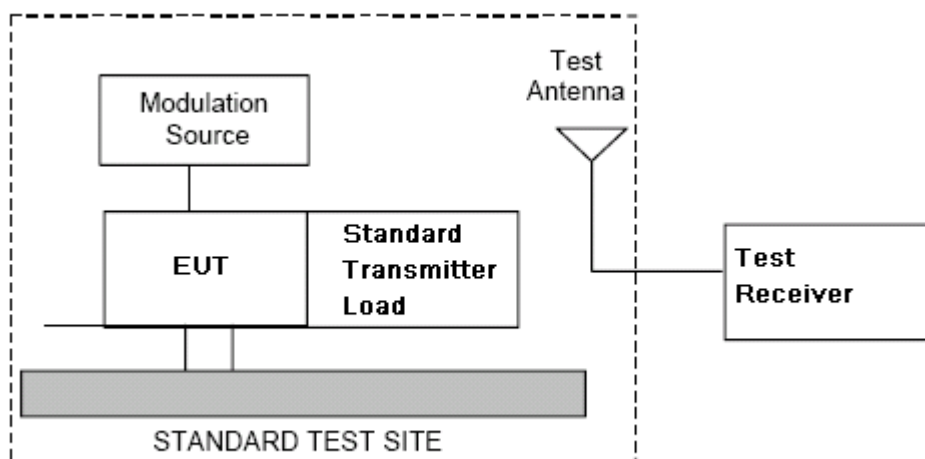
1GHz to 40GHz emissions:



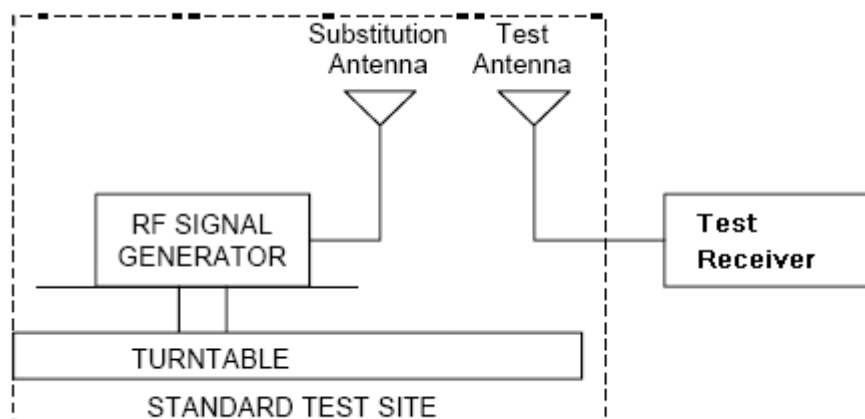
Test Procedure:

1. Test the background noise level with all the test facilities;
2. Keep one transmitting path, all other connectors shall be connected by normal power or RF leads;
3. Select the suitable RF notch filter to avoid the test receiver or spectrum analyzer produce unwanted spurious emissions;
4. Keep the EUT continuously transmitting in max power;
5. Read the radiated emissioins of the EUT enclosure.

Radiated Emissions Test Procedure:



- a) Connect the equipment as illustrated.
- b) Adjust the spectrum analyzer for the following settings:
 - 1) Resolution Bandwidth = 100 kHz for spurious emissions below 1 GHz, and 1 MHz for spurious emissions above 1GHz.
 - 2) Video Bandwidth = 300 kHz for spurious emissions below 1 GHz, and 3 MHz for spurious emissions above 1 GHz.
 - 3) Sweep Speed slow enough to maintain measurement calibration.
 - 4) Detector Mode = Positive Peak.
- c) Place the transmitter to be tested on the turntable in the standard test site, The transmitter is transmitting into a nonradiating load that is placed on the turntable. The RF cable to this load should be of minimum length.
- d) Measurements shall be made from 30MHz to 10 times of fundamental carrier, except for the region close to the carrier equal to $\pm$ the carrier bandwidth.
- e) Key the transmitter without modulation or normal modulation base the standard.
- f) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Then the turntable should be rotated 360° to determine the maximum reading. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.
- g) Repeat step f) for each spurious frequency with the test antenna polarized vertically.



- h) Reconnect the equipment as illustrated.
- i) Keep the spectrum analyzer adjusted as in step b).
- j) Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At the lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.
- k) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.
- l) Repeat step k) with both antennas vertically polarized for each spurious frequency.
- m) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps k) and l) by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole

antenna by the following formula:

$$Pd(\text{dBm}) = Pg(\text{dBm}) - \text{cable loss (dB)} + \text{antenna gain (dB)}$$

where:

Pd is the dipole equivalent power and

Pg is the generator output power into the substitution antenna.

NOTE: It is permissible to use other antennas provided they can be referenced to a dipole.

NOTE: Effective radiated power (e.r.p) refers to the radiation of a half wave tuned dipole instead of an isotropic antenna. There is a constant difference of 2.15 dB between e.i.r.p. and e.r.p.

$$\text{e.r.p (dBm)} = \text{e.i.r.p. (dBm)} - 2.15$$



6.1.8.1 Measurement Record:

Test frequency band and frequency point summary:

Class A model number:

Band	Link	9k-30MHz	30MHz-1GHz	Above 1GHz	Test frequency
800MHz band	UL: 806-817MHz	Pass	Pass	Pass	815.0125MHz
	DL: 851-862MHz	Pass	Pass	Pass	860.0125MHz

Class B model number:

Band	Link	9k-30MHz	30MHz-1GHz	Above 1GHz	Test frequency
800MHz band	UL: 806-817MHz	Pass	Pass	Pass	815.0125MHz
	DL: 851-862MHz	Pass	Pass	Pass	860.0125MHz

Pretest the 800MHz uplink and downlink for RXA3748 and RXB3748 in lowest/middle/ highest channel, found no emissions were detected within 20dB below the limit. So only the worst case band 800MHz downlink frequency point 860.0125MHz data were recorded in the report.



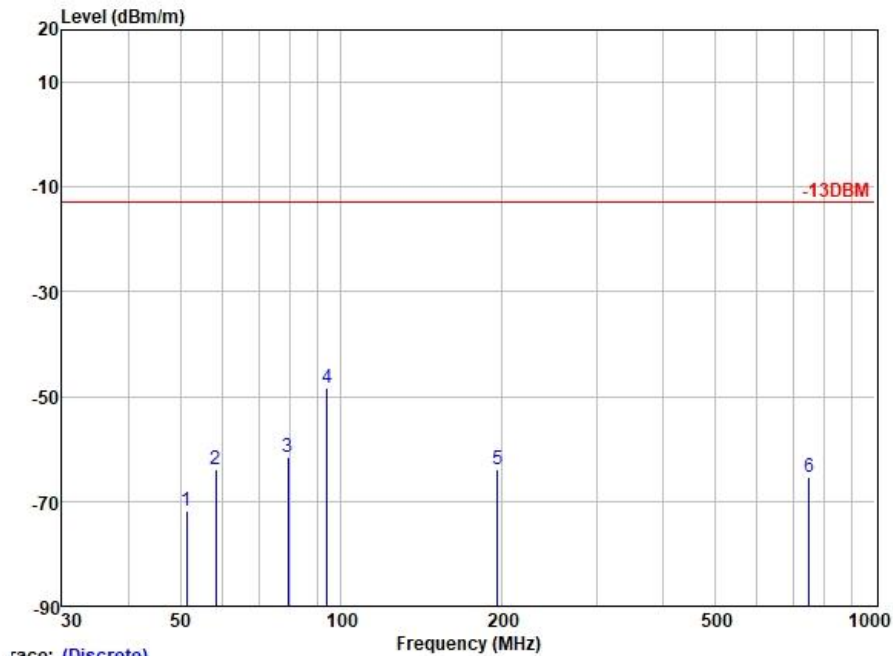
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30 MHz~1 GHz Spurious Emissions Peak Measurement

Vertical

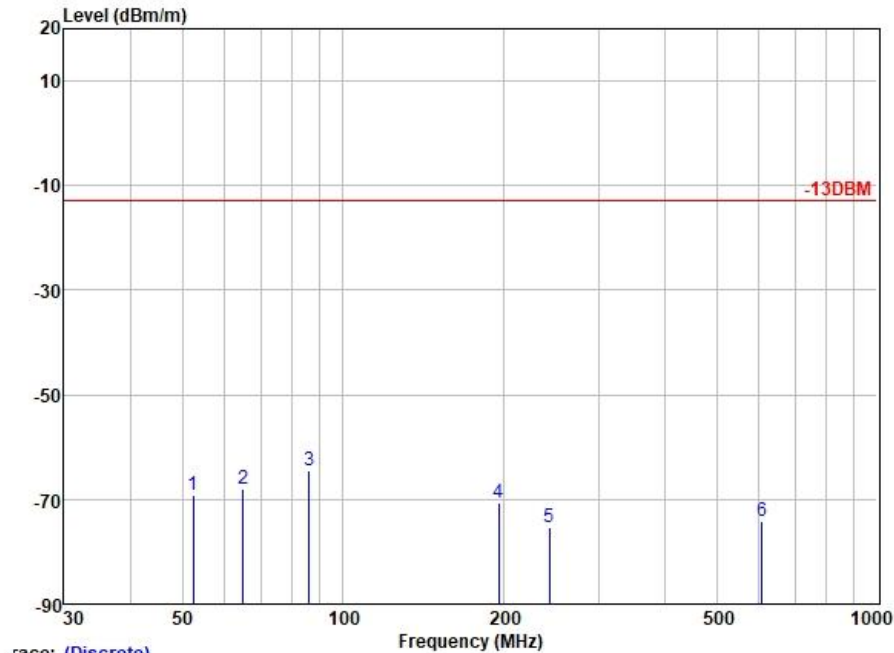
Model number RXA3792 is with 120V /50Hz AC power supply



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB		
1	51.301	-65.30	-6.41	0.00	0.00	-71.71	-13.00	-58.71	VERTICAL	Peak
2	58.203	-61.35	-2.63	0.00	0.00	-63.98	-13.00	-50.98	VERTICAL	Peak
3	79.521	-51.19	-10.28	0.00	0.00	-61.47	-13.00	-48.47	VERTICAL	Peak
4	94.098	-42.16	-6.13	0.00	0.00	-48.29	-13.00	-35.29	VERTICAL	Peak
5	195.822	-59.30	-4.64	0.00	0.00	-63.94	-13.00	-50.94	VERTICAL	Peak
6	750.108	-71.55	6.09	0.00	0.00	-65.46	-13.00	-52.46	VERTICAL	Peak

Horizontal:

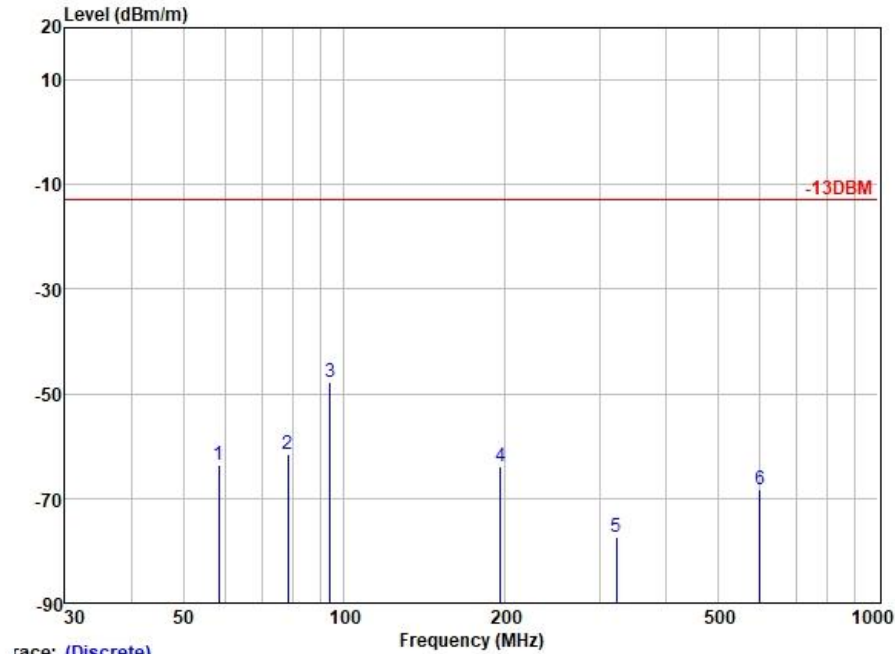


	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB		
1	52.391	-67.68	-1.48	0.00	0.00	-69.16	-13.00	-56.16	HORIZONTAL	Peak
2	64.887	-63.45	-4.49	0.00	0.00	-67.94	-13.00	-54.94	HORIZONTAL	Peak
3	86.200	-54.58	-9.91	0.00	0.00	-64.49	-13.00	-51.49	HORIZONTAL	Peak
4	195.137	-64.04	-6.49	0.00	0.00	-70.53	-13.00	-57.53	HORIZONTAL	Peak
5	243.377	-69.24	-5.95	0.00	0.00	-75.19	-13.00	-62.19	HORIZONTAL	Peak
6	607.787	-77.38	3.16	0.00	0.00	-74.22	-13.00	-61.22	HORIZONTAL	Peak



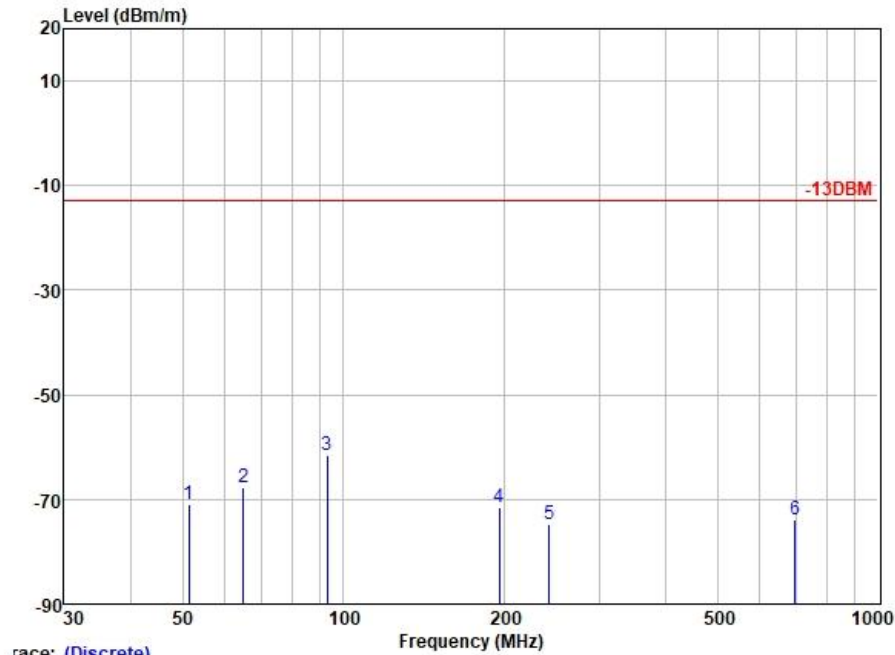
Model number RXA3748 is with DC power supply:

Vertical:



		ReadAntenna	Cable	Preamp		Limit	Over			
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB		
1	58.203	-60.96	-2.63	0.00	0.00	-63.59	-13.00	-50.59	VERTICAL	Peak
2	78.413	-51.49	-10.14	0.00	0.00	-61.63	-13.00	-48.63	VERTICAL	Peak
3	94.098	-41.77	-6.13	0.00	0.00	-47.90	-13.00	-34.90	VERTICAL	Peak
4	195.822	-59.37	-4.64	0.00	0.00	-64.01	-13.00	-51.01	VERTICAL	Peak
5	323.320	-74.75	-2.50	0.00	0.00	-77.25	-13.00	-64.25	VERTICAL	Peak
6	599.321	-72.48	4.19	0.00	0.00	-68.29	-13.00	-55.29	VERTICAL	Peak

Horizontal:



Trace: (Discrete)

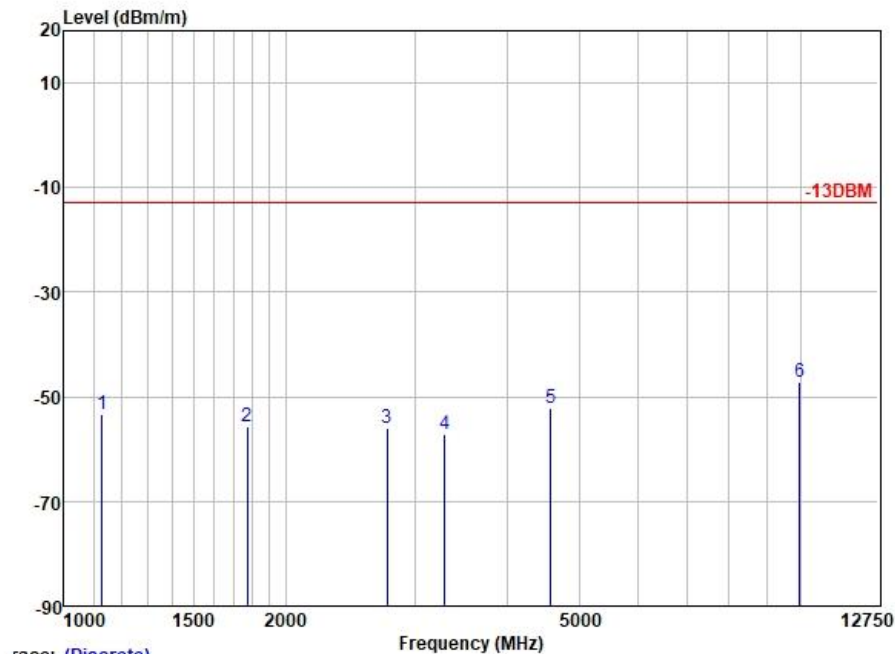
	ReadAntenna	Cable	Preamp		Limit	Over			
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB		
1	51.301	-69.42	-1.37	0.00	0.00	-70.79	-13.00	-57.79	HORIZONTAL Peak
2	64.887	-63.13	-4.49	0.00	0.00	-67.62	-13.00	-54.62	HORIZONTAL Peak
3	93.113	-51.88	-9.72	0.00	0.00	-61.60	-13.00	-48.60	HORIZONTAL Peak
4	195.137	-64.98	-6.49	0.00	0.00	-71.47	-13.00	-58.47	HORIZONTAL Peak
5	242.525	-68.87	-6.00	0.00	0.00	-74.87	-13.00	-61.87	HORIZONTAL Peak
6	699.305	-78.34	4.34	0.00	0.00	-74.00	-13.00	-61.00	HORIZONTAL Peak



For above 1Ghz :

Model number RXA3792 is with 120V /50Hz AC power supply

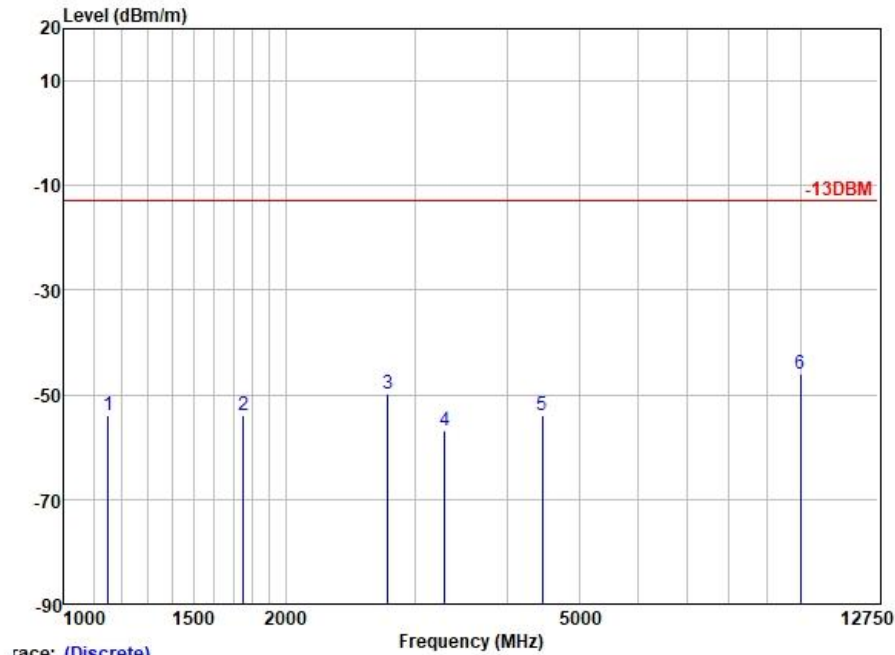
Horizontal



Trace: (Discrete)

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB	
1	1125.574	-57.22	3.85	0.00	0.00	-53.37	-13.00	-40.37 HORIZONTAL Peak
2	1773.225	-61.52	5.83	0.00	0.00	-55.69	-13.00	-42.69 HORIZONTAL Peak
3	2746.145	-59.96	4.07	0.00	0.00	-55.89	-13.00	-42.89 HORIZONTAL Peak
4	3287.247	-59.46	2.22	0.00	0.00	-57.24	-13.00	-44.24 HORIZONTAL Peak
5	4574.000	-59.06	7.03	0.00	0.00	-52.03	-13.00	-39.03 HORIZONTAL Peak
6	9972.160	-67.28	20.01	0.00	0.00	-47.27	-13.00	-34.27 HORIZONTAL Peak

Vertical:



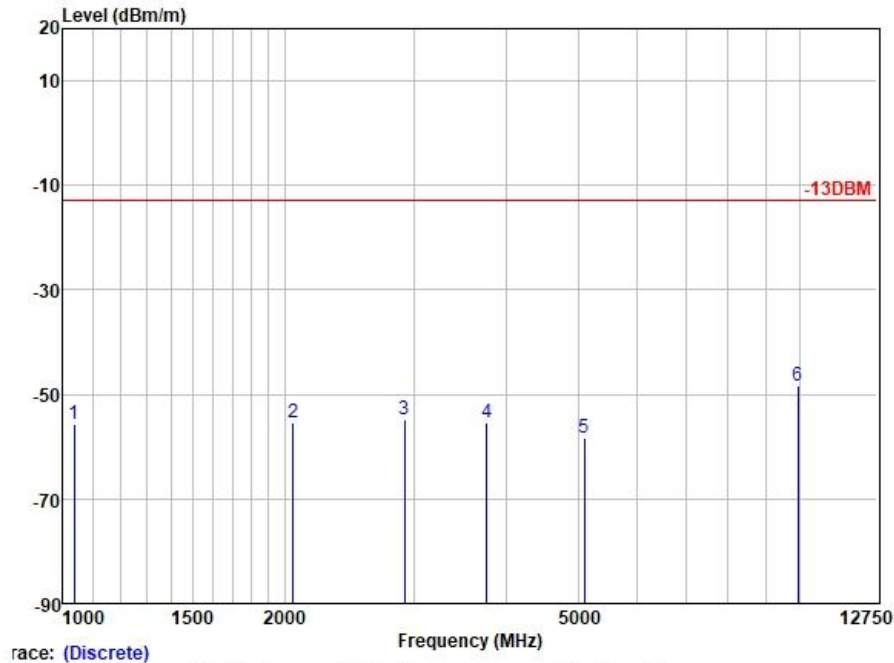
Trace: (Discrete)

	Freq	ReadAntenna Level Factor	Cable Loss	Preamplifier Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBm	dB/m	dB	dB	dBm/m	dB		
1	1147.190	-57.70	3.83	0.00	0.00	-53.87	-13.00	-40.87	VERTICAL Peak
2	1752.618	-59.47	5.70	0.00	0.00	-53.77	-13.00	-40.77	VERTICAL Peak
3	2753.692	-54.40	4.53	0.00	0.00	-49.87	-13.00	-36.87	VERTICAL Peak
4	3287.687	-59.68	2.85	0.00	0.00	-56.83	-13.00	-43.83	VERTICAL Peak
5	4459.315	-59.22	5.36	0.00	0.00	-53.86	-13.00	-40.86	VERTICAL Peak
6	9998.586	-66.48	20.40	0.00	0.00	-46.08	-13.00	-33.08	VERTICAL Peak



Model number RXA3748 is with DC power supply:

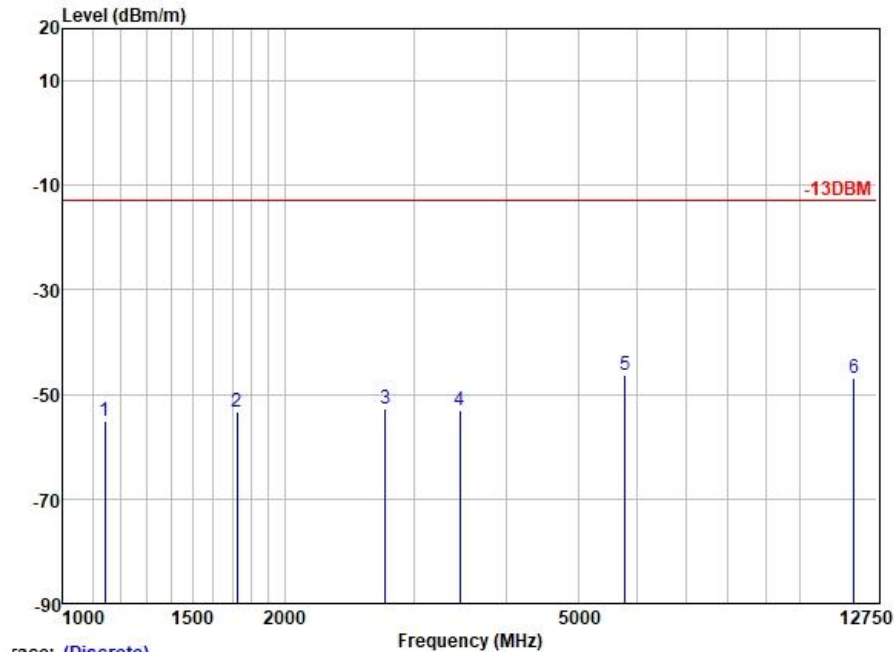
Horizontal:



	Read	Antenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB		
1	1034.826	-58.20	2.59	0.00	0.00	-55.61	-13.00	-42.61	HORIZONTAL Peak
2	2053.224	-65.20	9.74	0.00	0.00	-55.46	-13.00	-42.46	HORIZONTAL Peak
3	2907.063	-58.71	4.01	0.00	0.00	-54.70	-13.00	-41.70	HORIZONTAL Peak
4	3756.413	-58.79	3.43	0.00	0.00	-55.36	-13.00	-42.36	HORIZONTAL Peak
5	5106.150	-70.17	11.95	0.00	0.00	-58.22	-13.00	-45.22	HORIZONTAL Peak
6	9935.017	-67.93	19.62	0.00	0.00	-48.31	-13.00	-35.31	HORIZONTAL Peak



Vertical:



	ReadAntenna	Cable	Preamp	Limit	Over				
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBm	dB/m	dB	dB	dBm/m	dBm/m	dB		
1	1139.004	-58.56	3.52	0.00	0.00	-55.04	-13.00	-42.04	VERTICAL Peak
2	1723.171	-58.99	5.67	0.00	0.00	-53.32	-13.00	-40.32	VERTICAL Peak
3	2735.140	-57.59	4.72	0.00	0.00	-52.87	-13.00	-39.87	VERTICAL Peak
4	3456.140	-56.71	3.55	0.00	0.00	-53.16	-13.00	-40.16	VERTICAL Peak
5	5798.261	-62.16	15.97	0.00	0.00	-46.19	-13.00	-33.19	VERTICAL Peak
6	11857.270	-68.45	21.67	0.00	0.00	-46.78	-13.00	-33.78	VERTICAL Peak

Remark:

The cabinet radiation was measured with the equipment transmitting a CW signal into a non-radiating 50 Ohm load at maximum output power on a signal frequency .

Measured were performed in the lowest, middle and highest frequency for the Downlink of products which included AC and DC Unit.

6.1.9 Occupied Bandwidth

Test Requirement: KDB935210 D02;

Test Method: FCC part 2.1049

The spectral shape of the output should look similar to input for all modulations.

EUT Operation:

Status: Drive the EUT to maximum output power. the EUT was pretested at compression and 10dB into compression to show AGC operation, worse case results taken..

Conditions: Normal conditions

Application: Cellular Band RF output ports

Test Configuration:

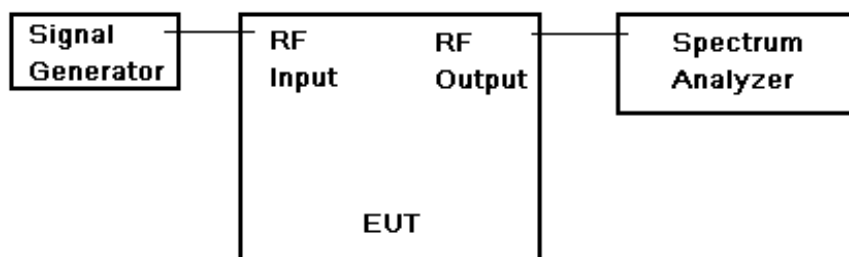


Fig.2. Conducted Spurious Emissions test configuration

Test Procedure:

- Set the spectrum analyzer RBW 300 Hz or $>1\%$ & $<2\%$ emission bandwidth of carrier.
- Capture the trace of input signal;
- Connect the equipment as illustrated;
- Capture the trace of output signal;

6.1.9.1 Measurement Record:

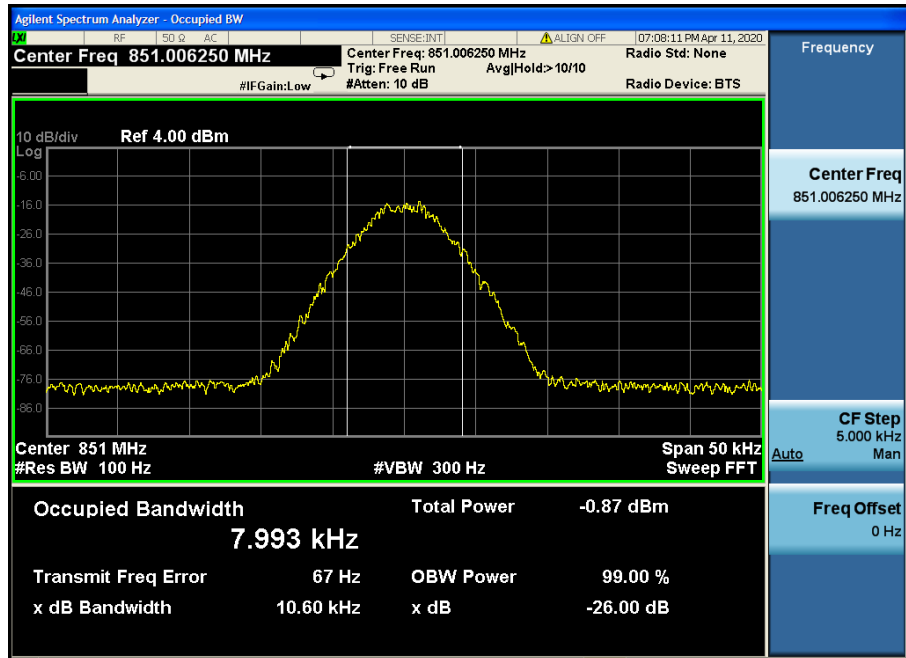
Class A model number:

1. Downlink:851MHz to 862MHz

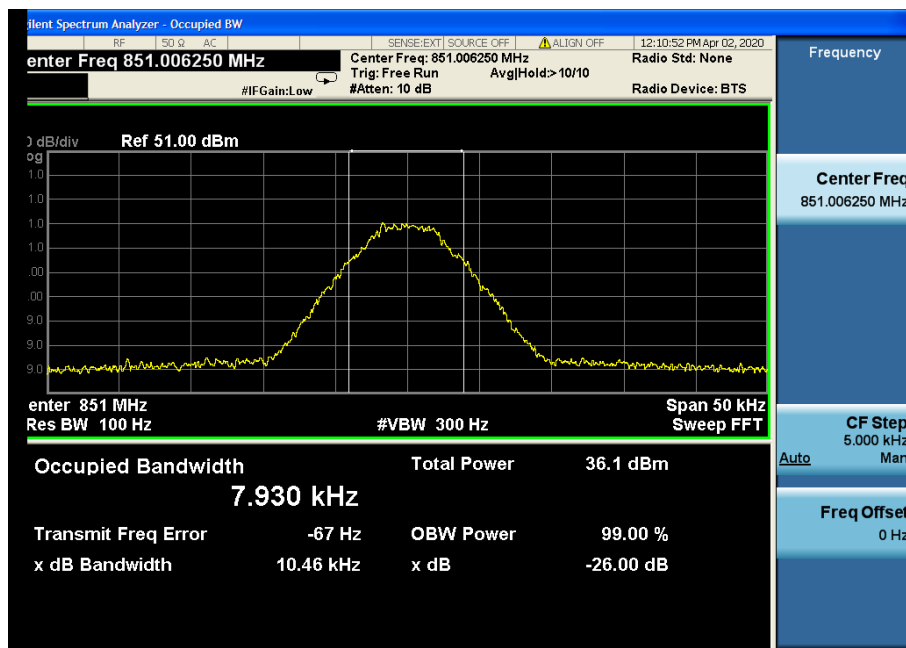
1.1 For C4FM mode

1.1 lowest frequency

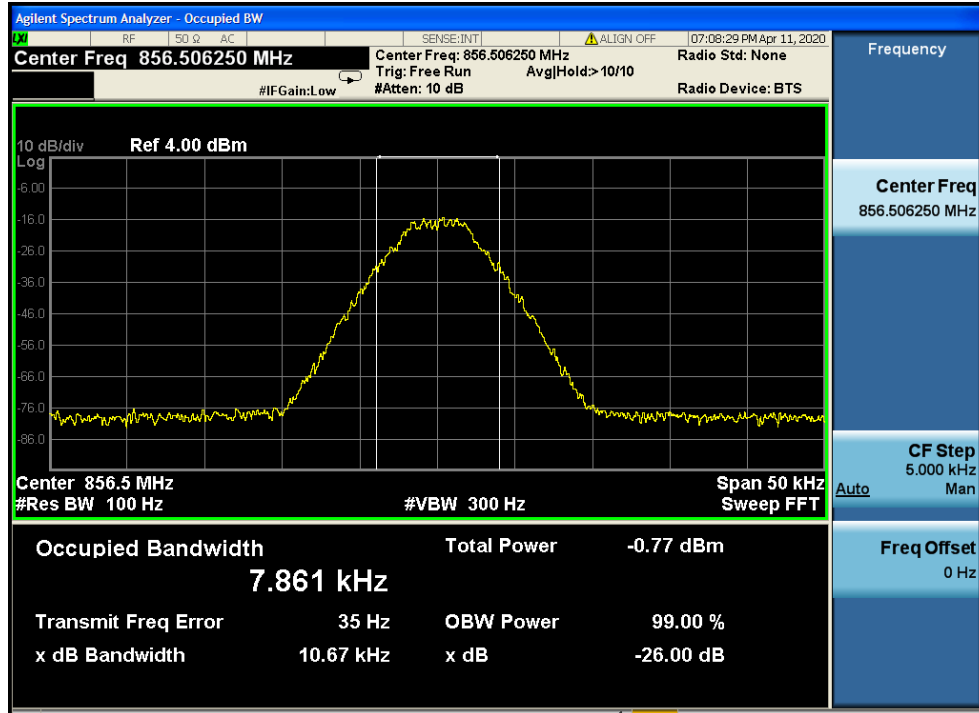
Input



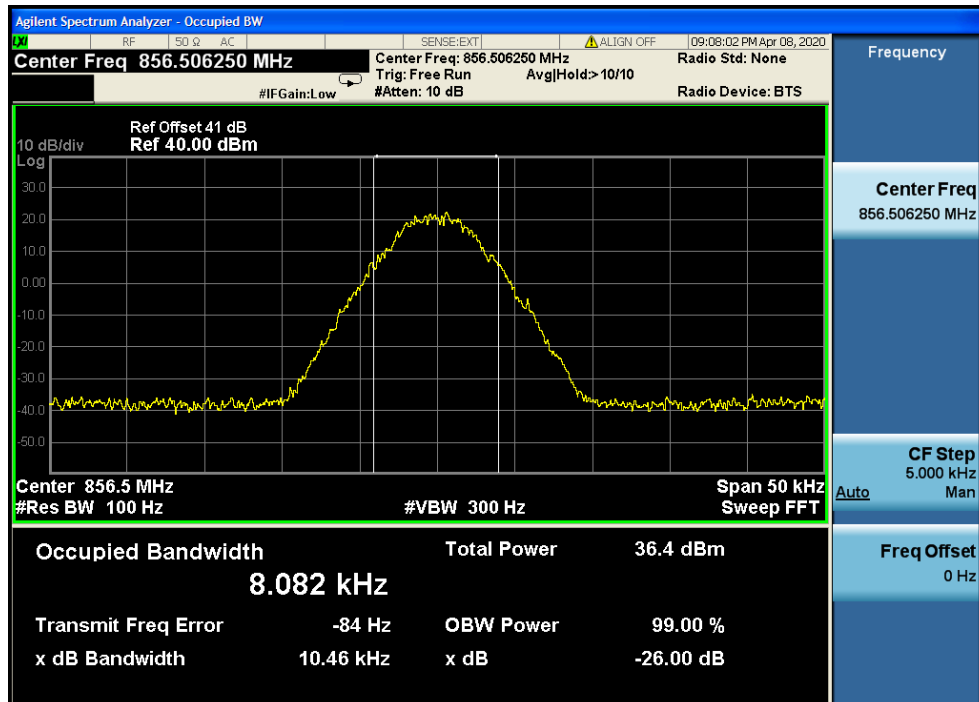
Output



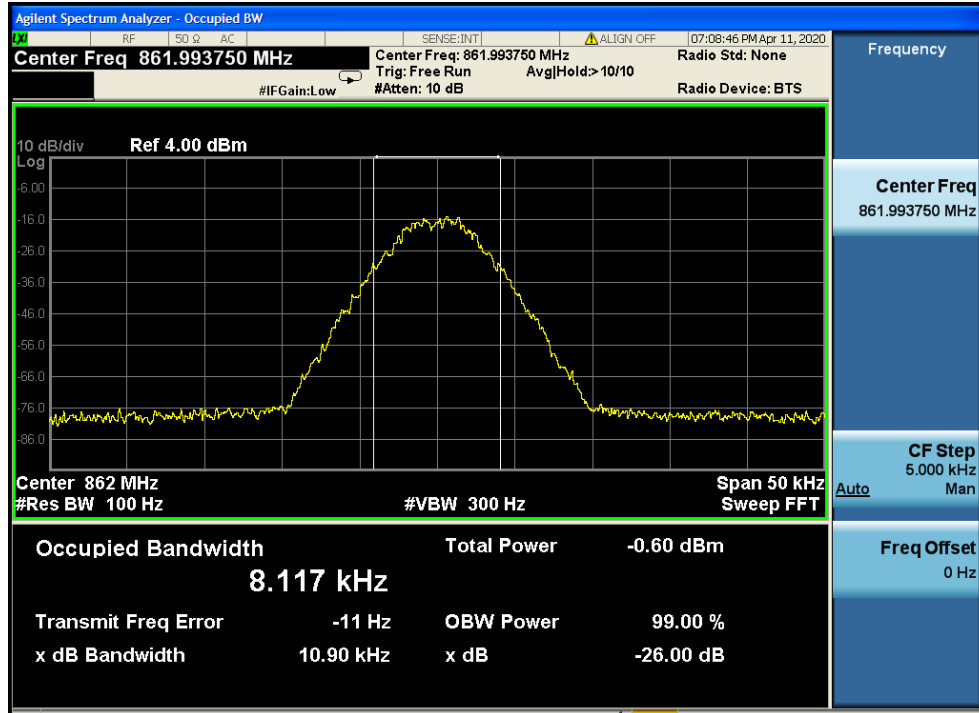
1.3 middle frequency Input



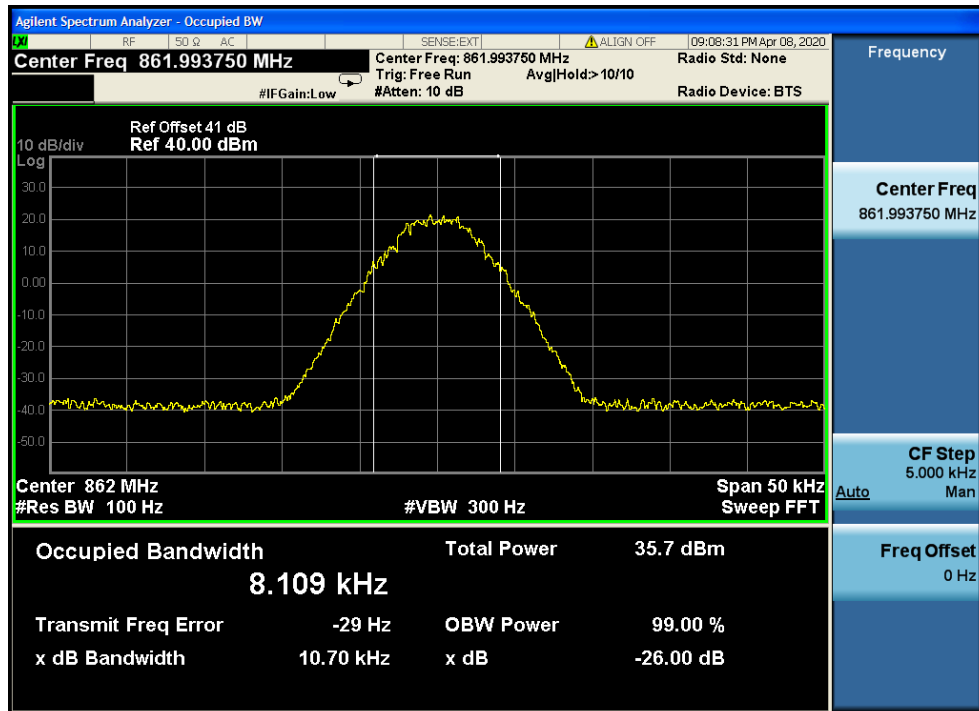
Output



1.6 highest frequency
Input



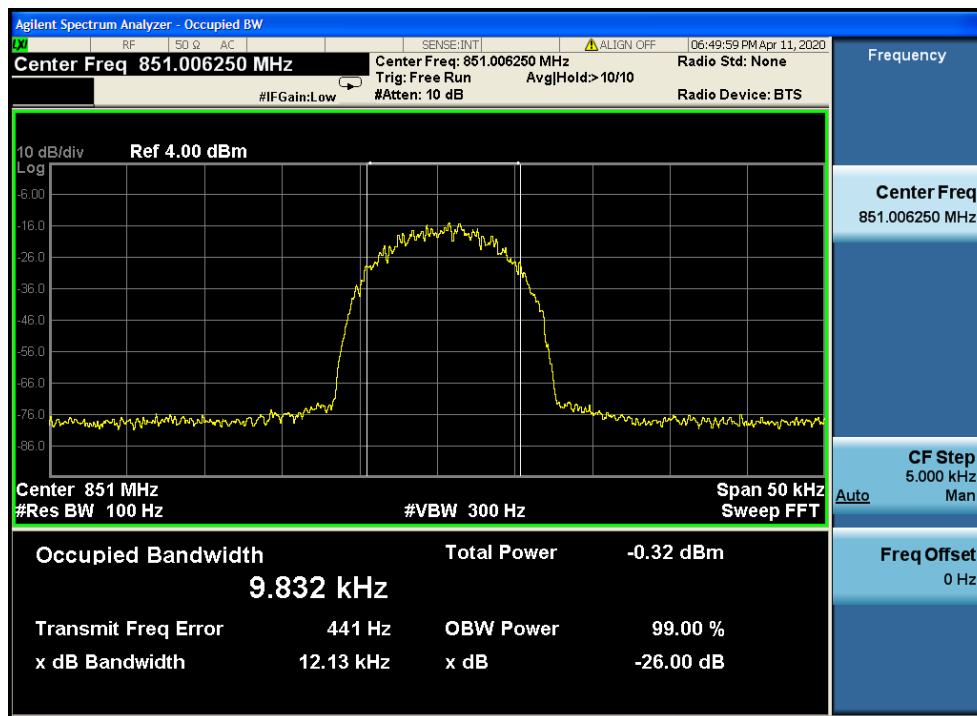
Output



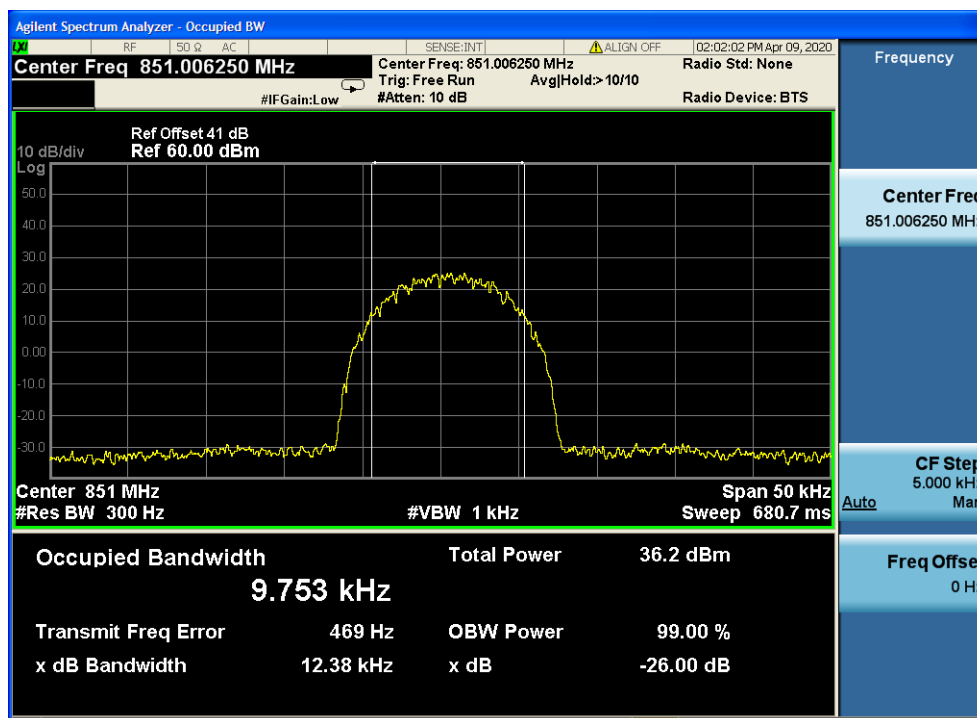
5.2 For HDQPSK mode

1.1 lowest frequency

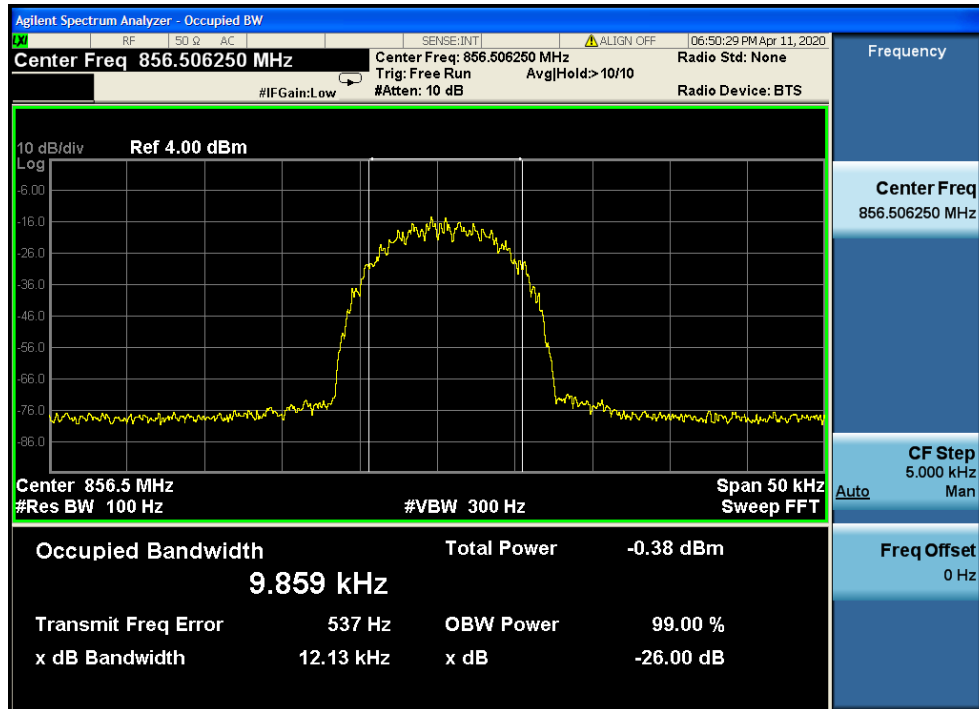
Input



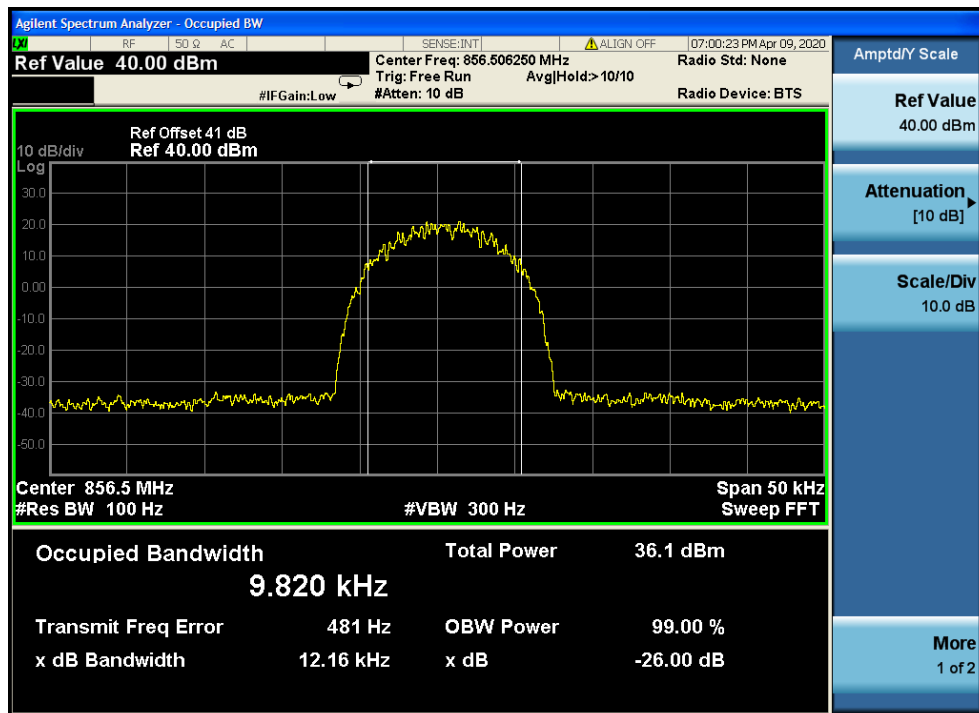
Output



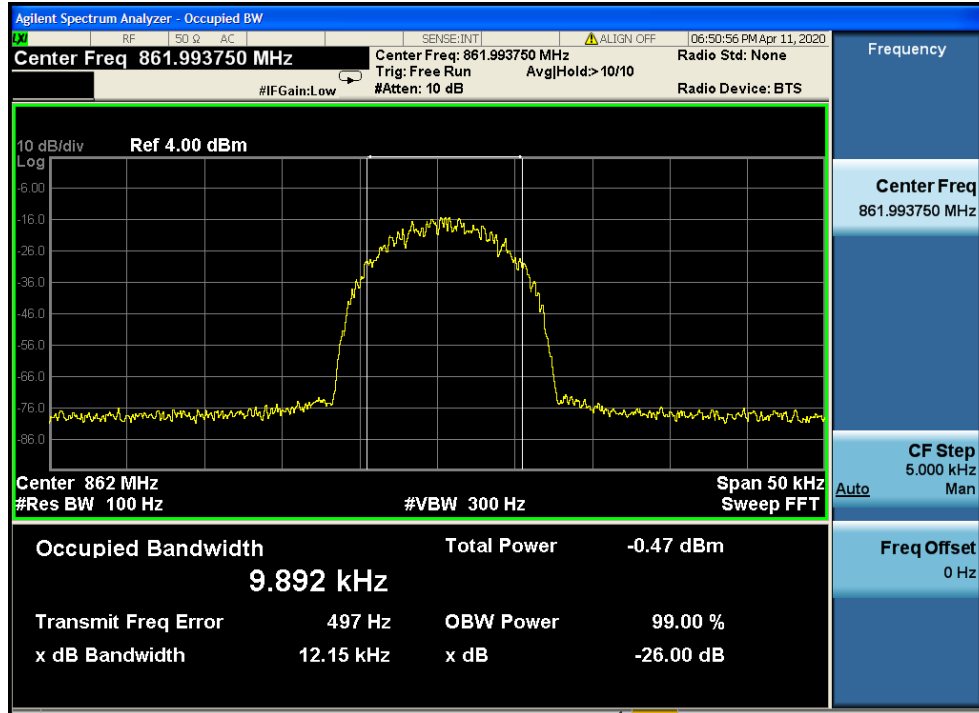
1.2 middle frequency Input



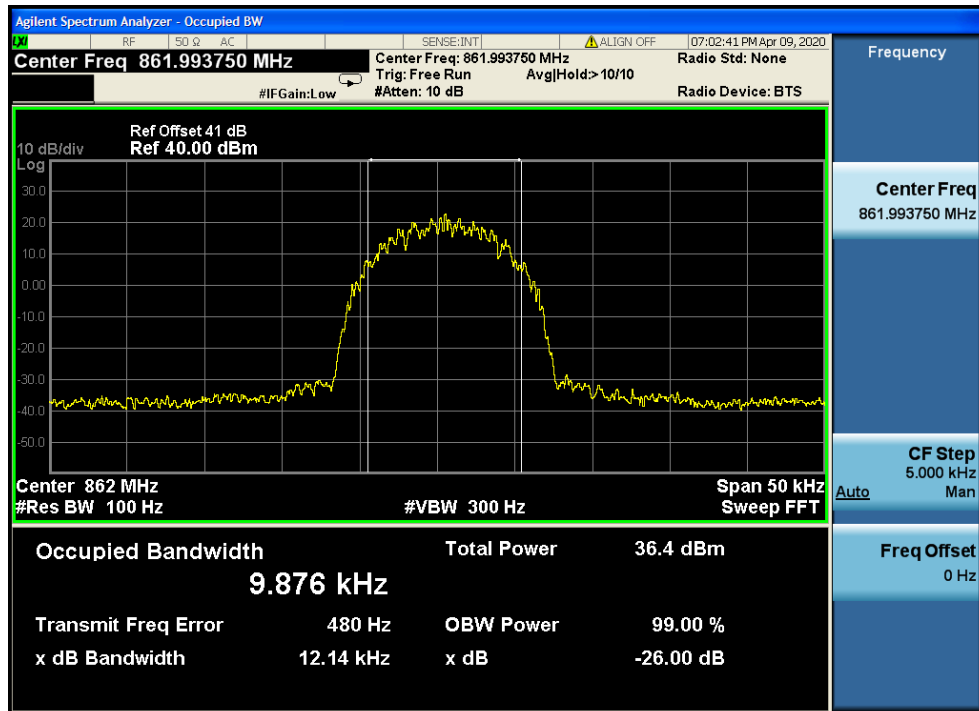
Output



1.3 highest frequency Input



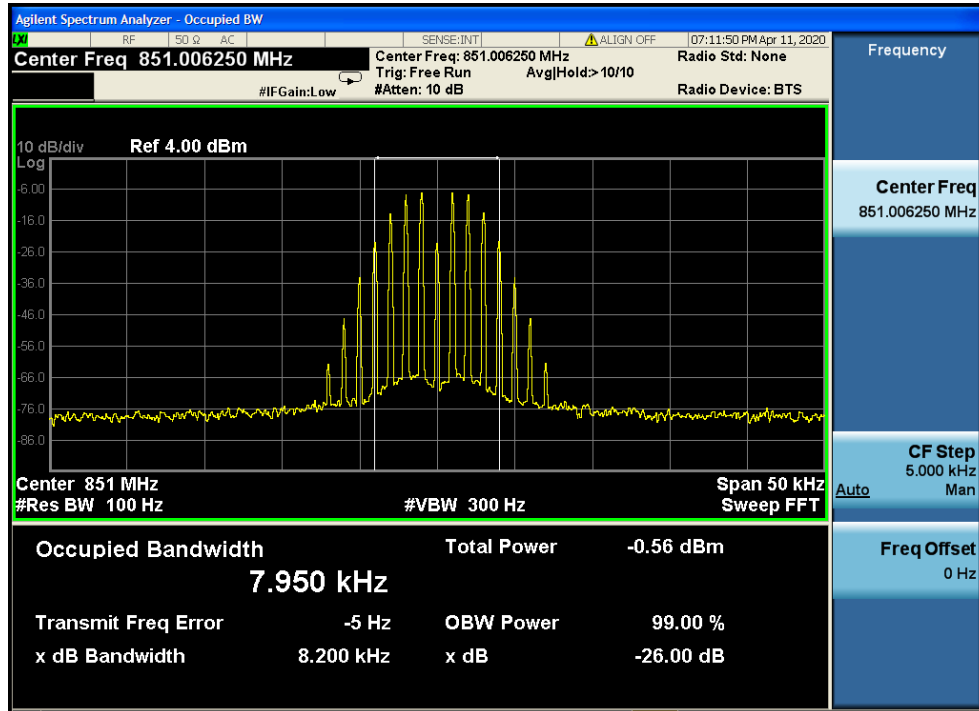
Output



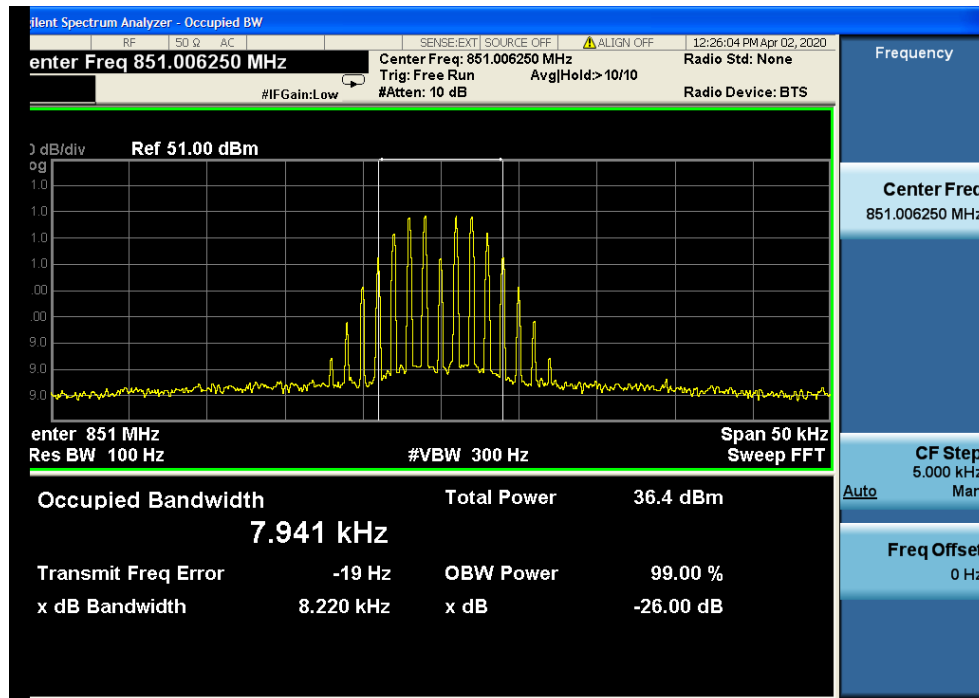
5.3 For FM-12.5K mode

1.1 lowest frequency

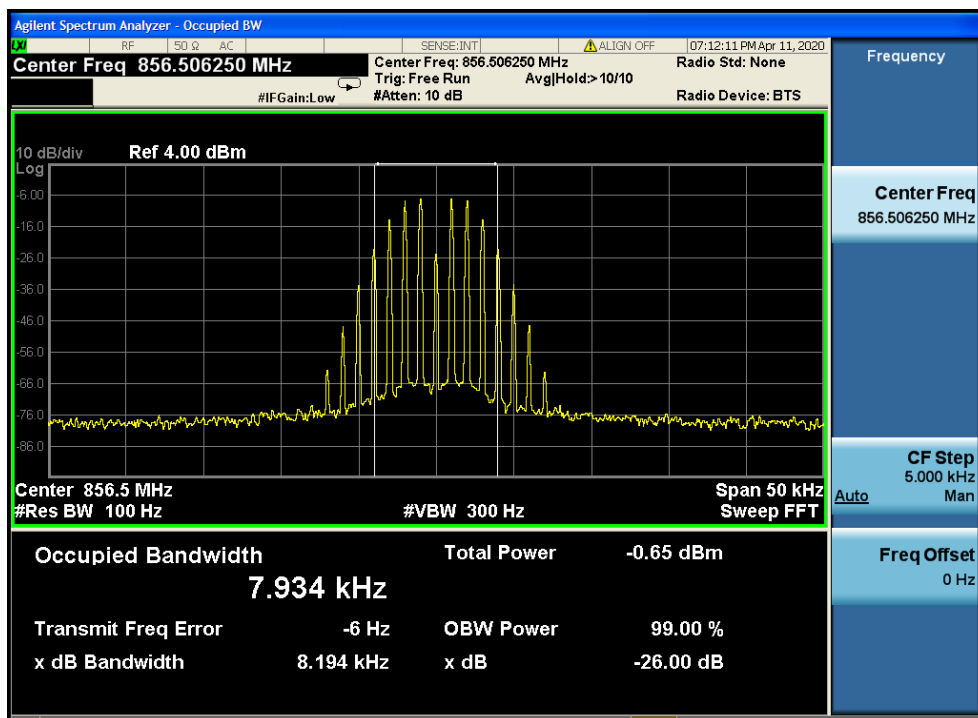
Input



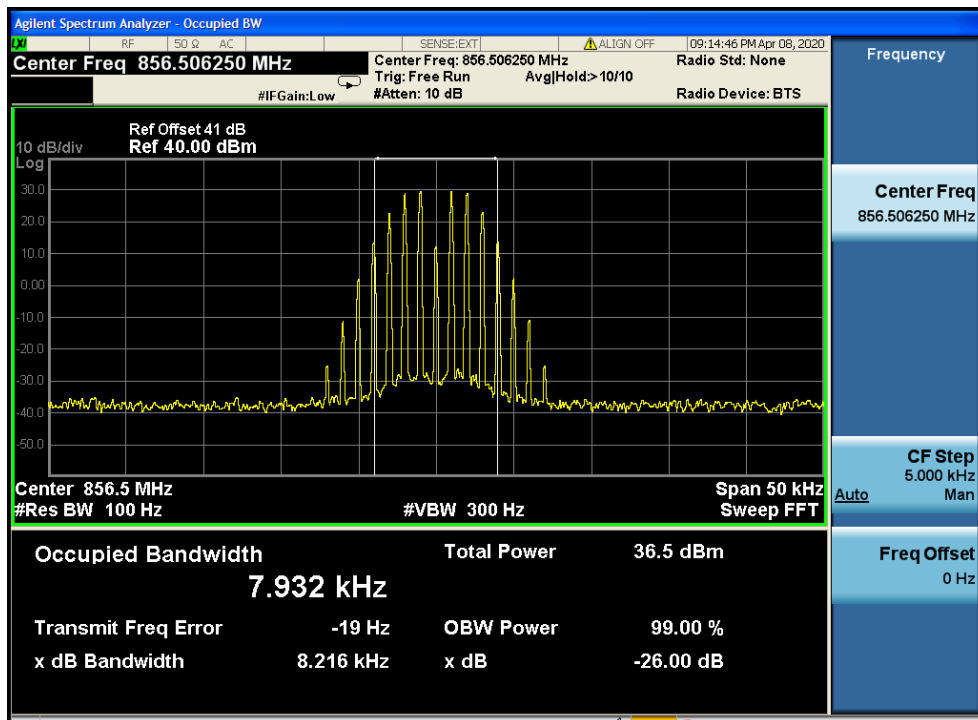
Output



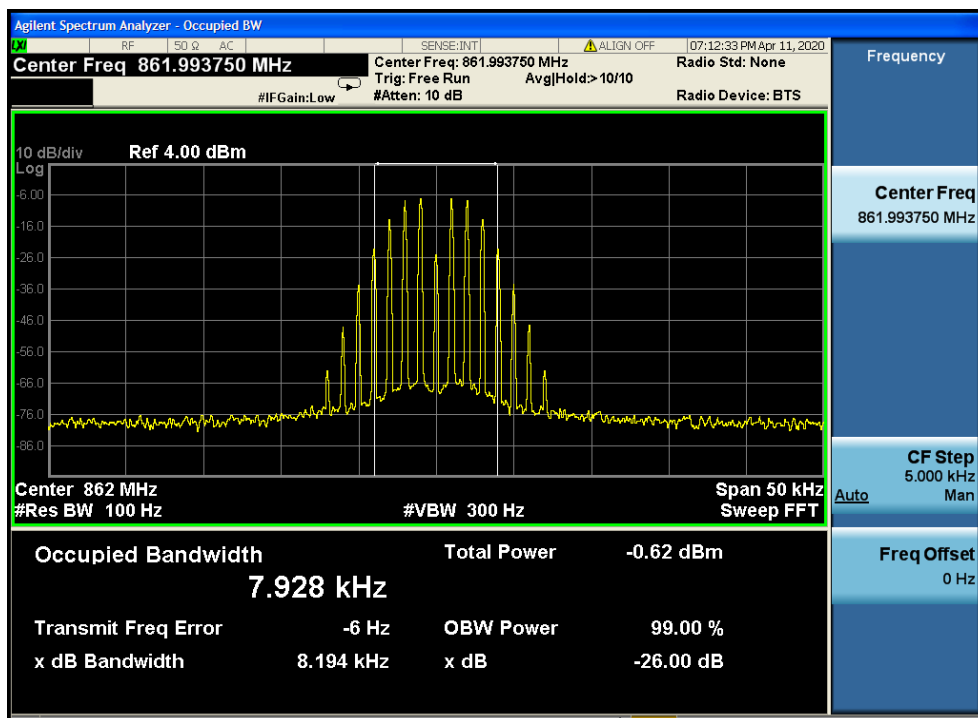
1.2 middle frequency Input



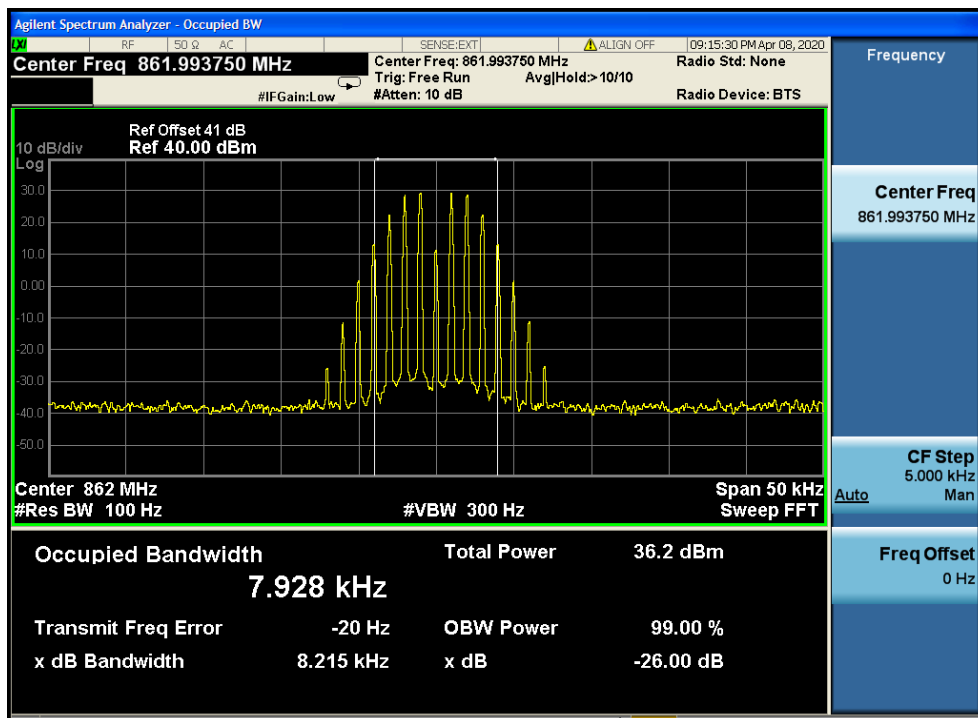
Output



1.3 highest frequency Input



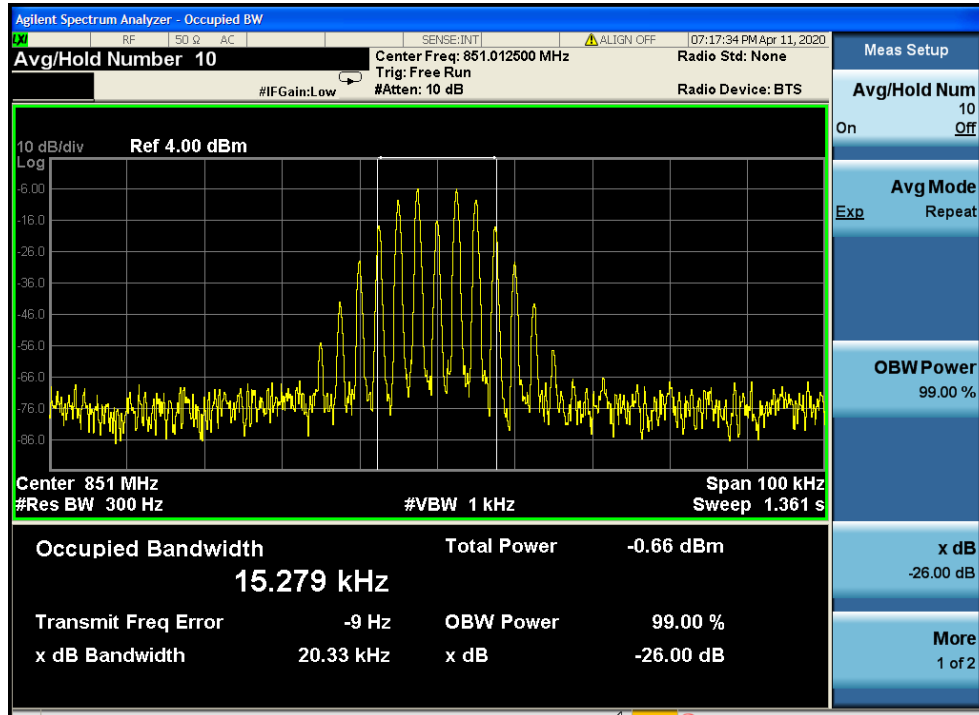
Output



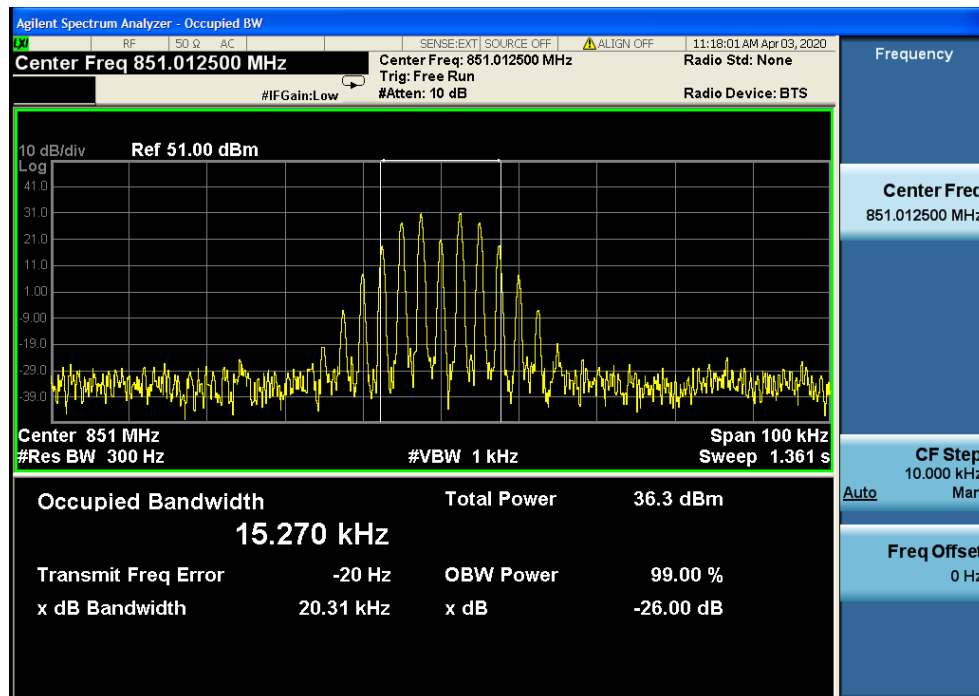
5.4 For FM-25K mode

1.1 lowest frequency

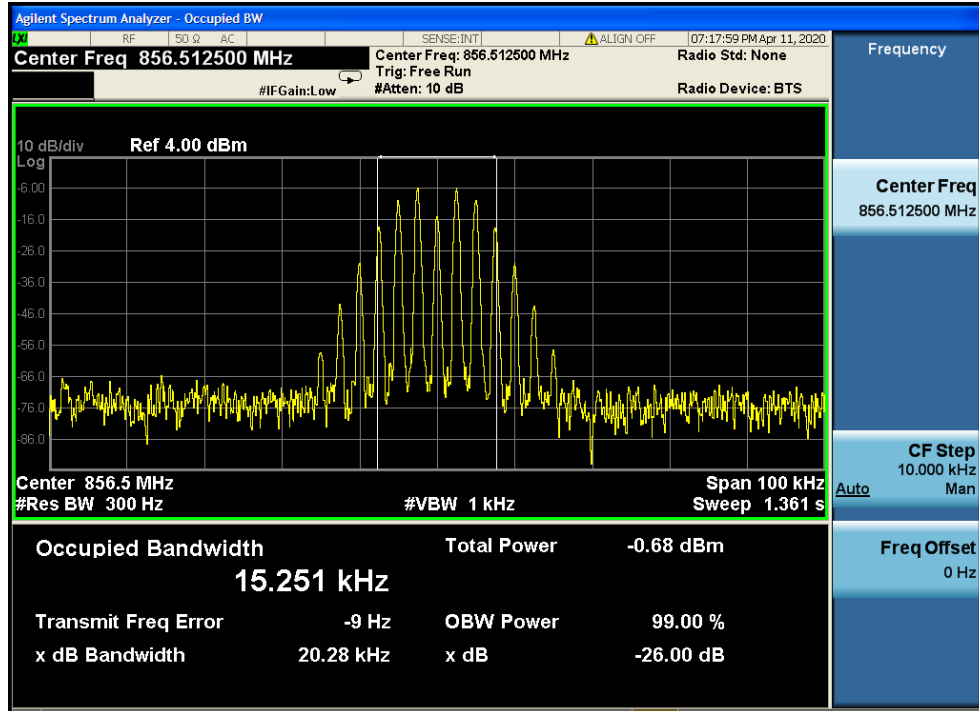
Input



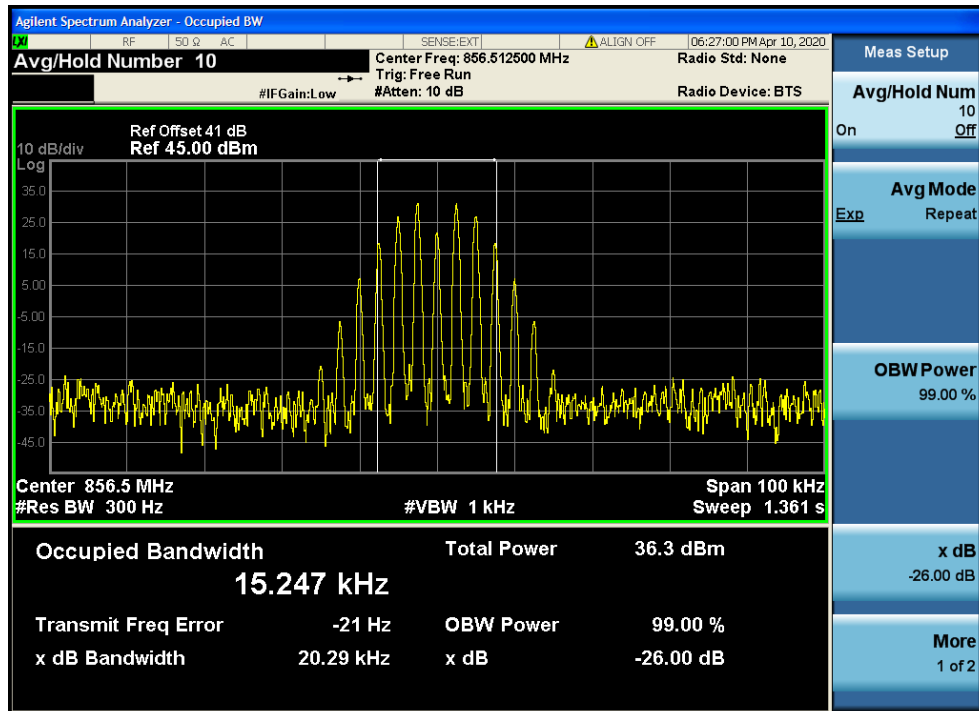
Output



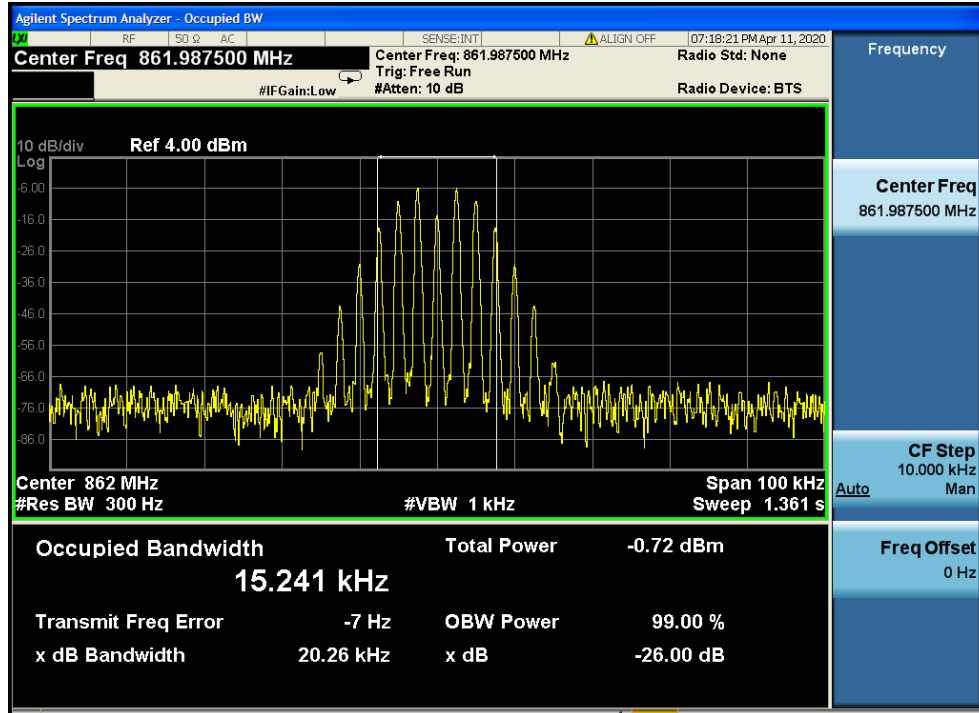
1.2 middle frequency
Input



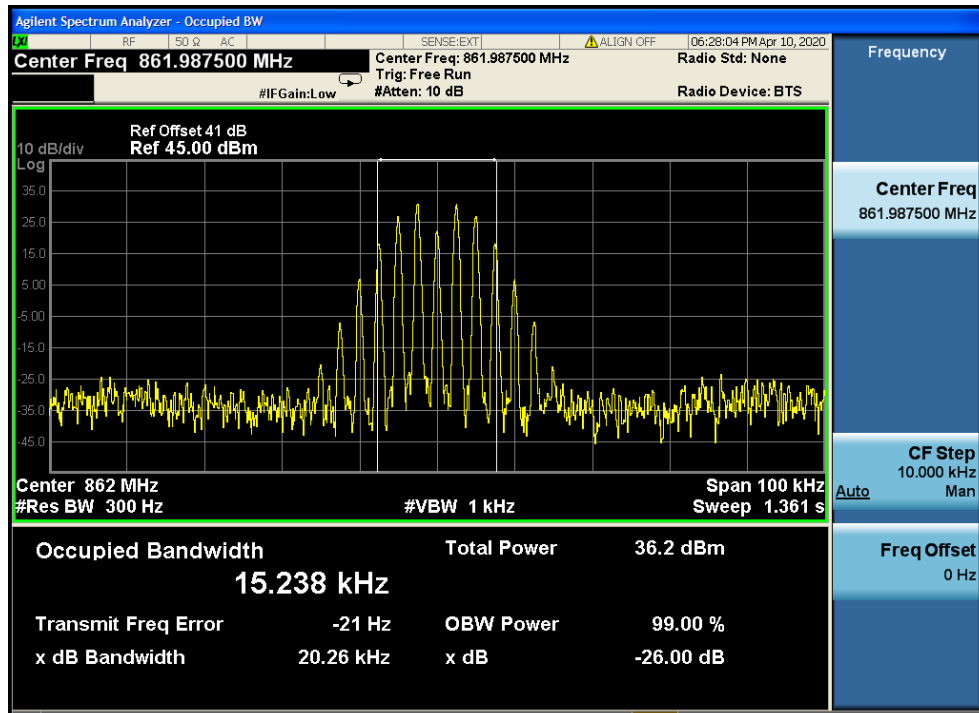
Output



1.3 highest frequency Input



Output

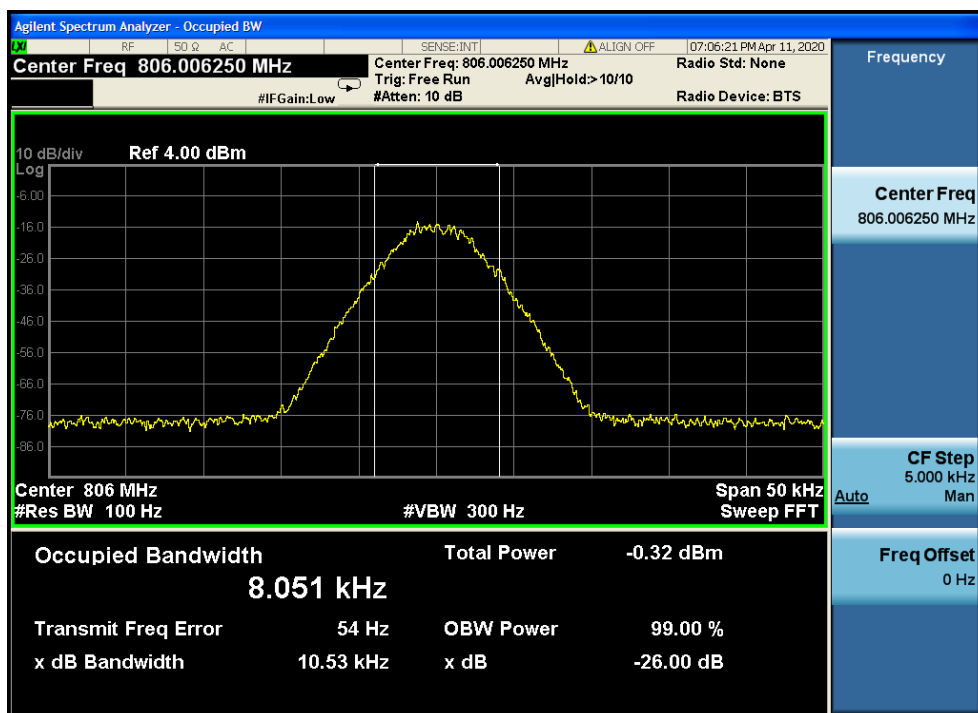


Downlink: 806MHz to 817MHz

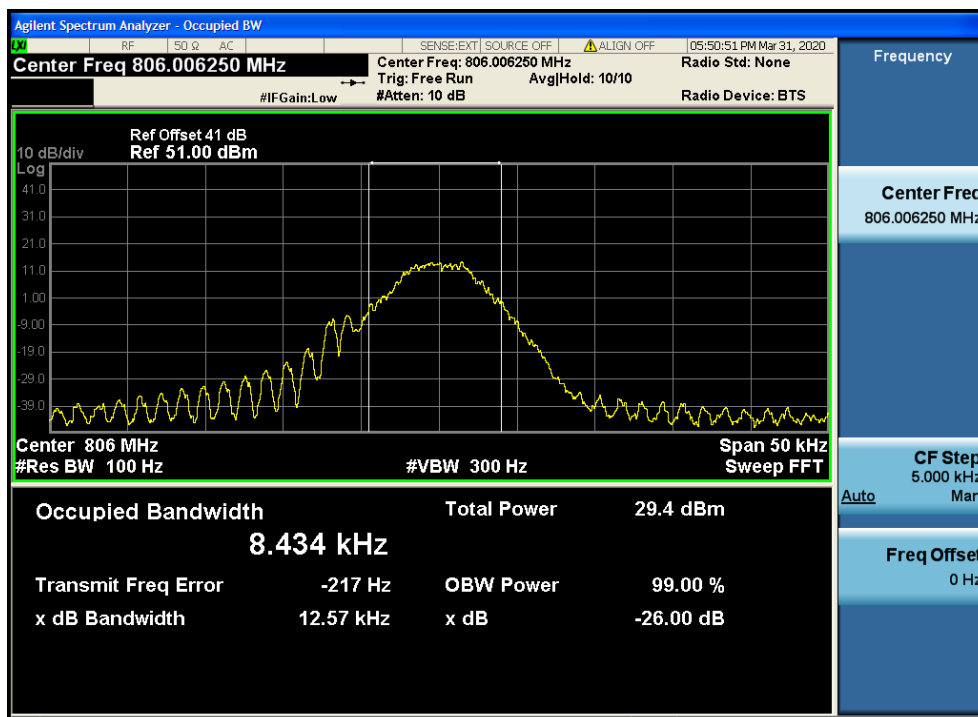
6.1 For C4FM mode

1.1 lowest frequency

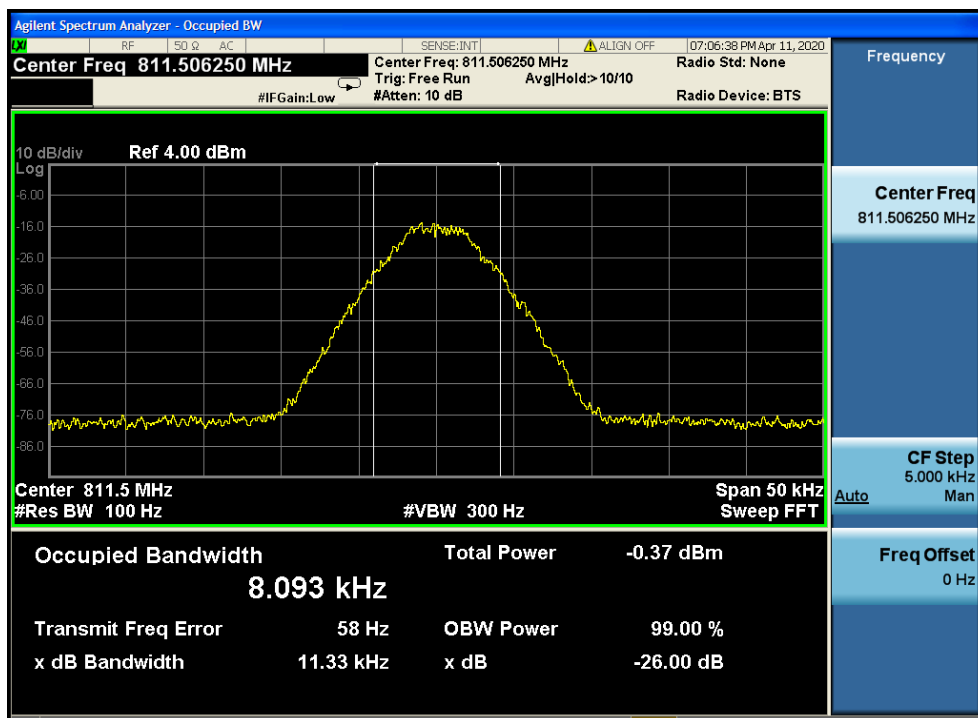
Input



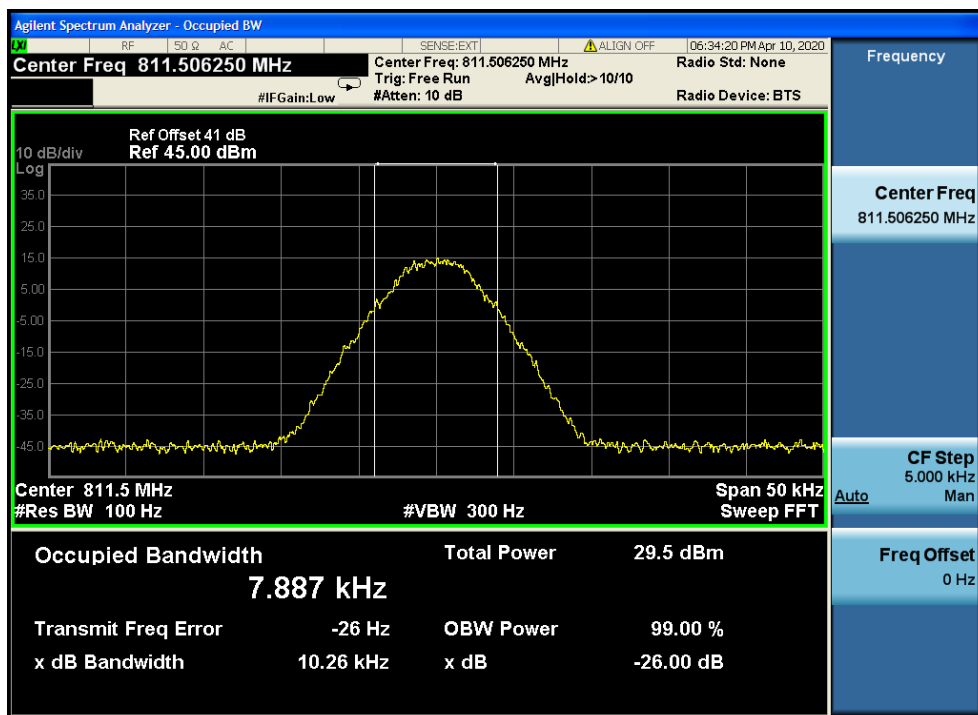
Output



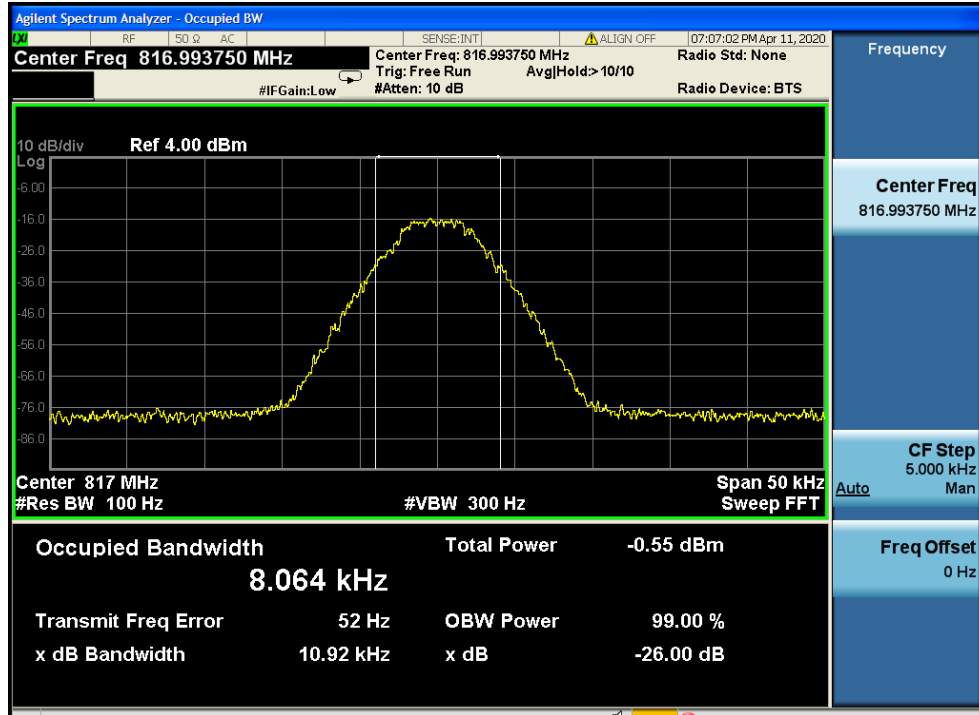
1.2 middle frequency
Input



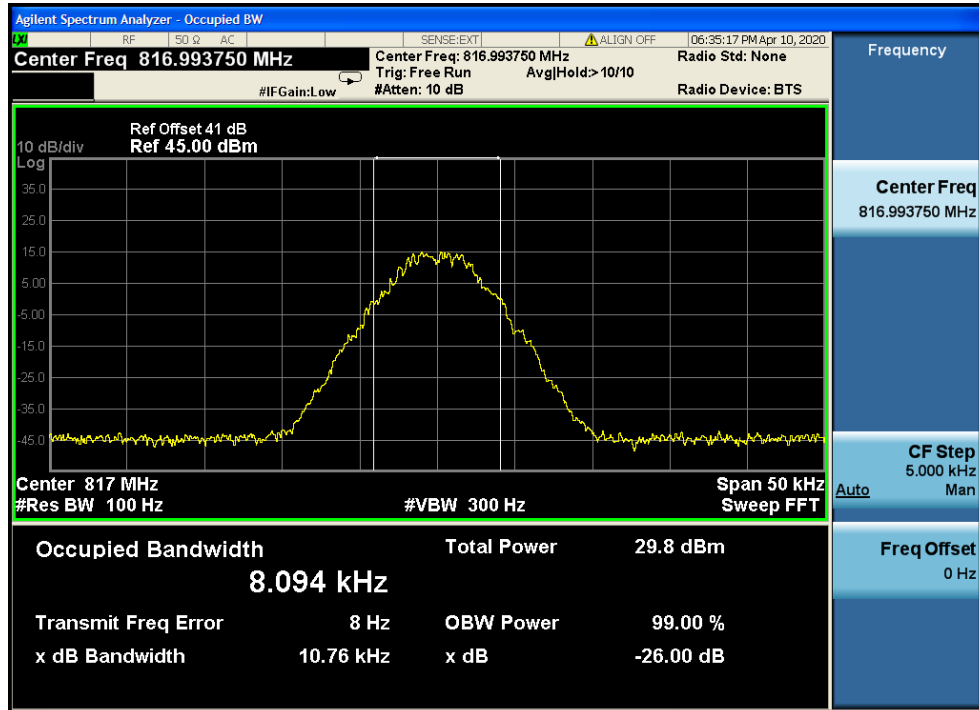
Output



1.3 highest frequency Input



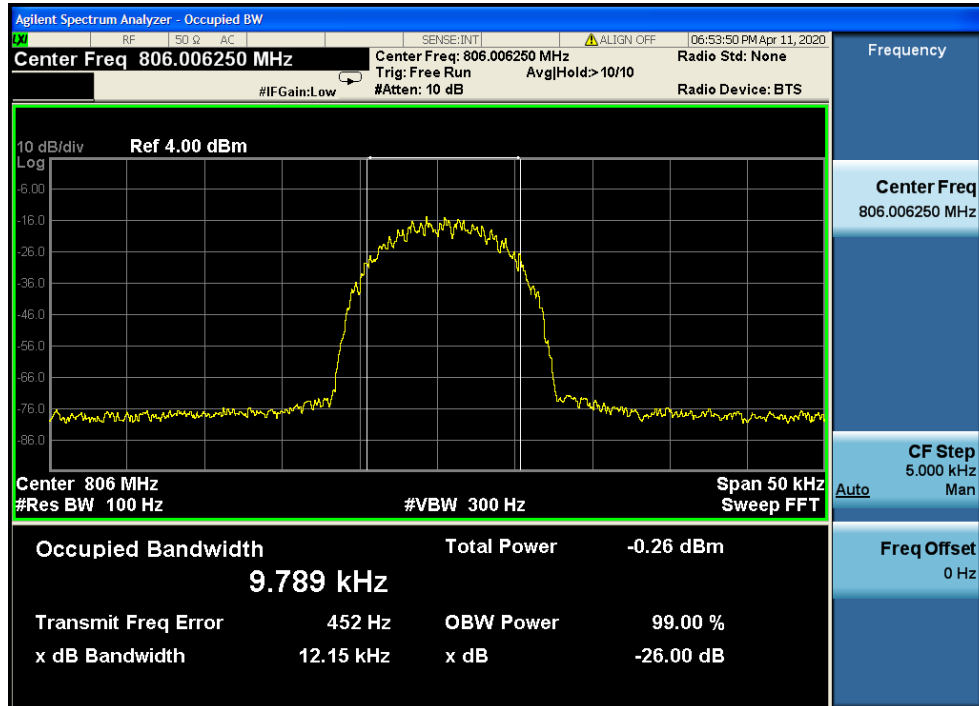
Output



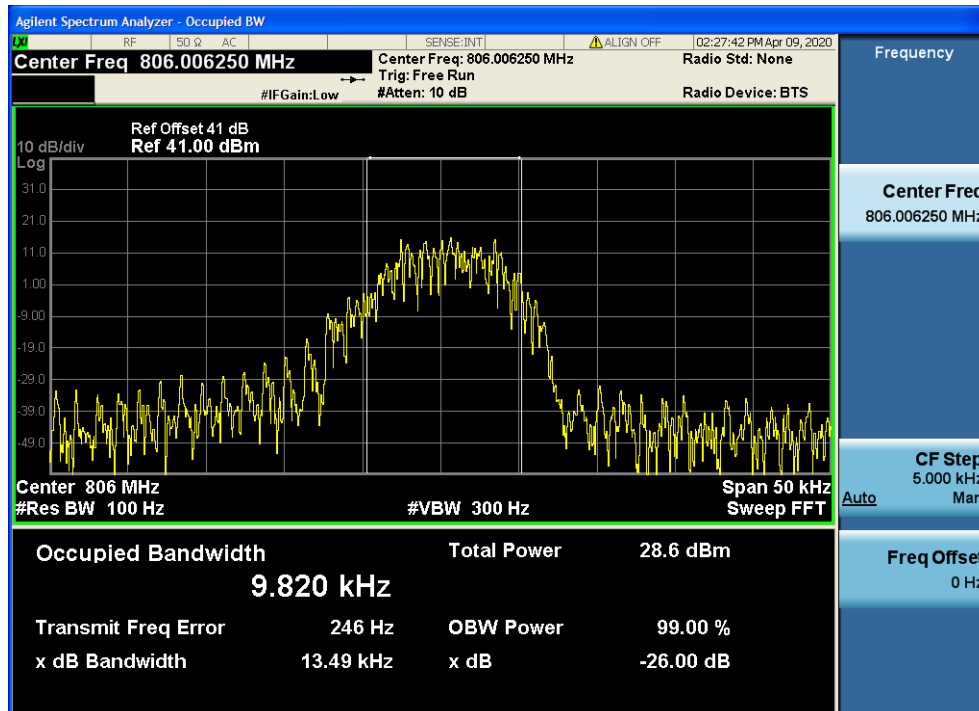
6.2 For HDQPSK mode

1.1 lowest frequency

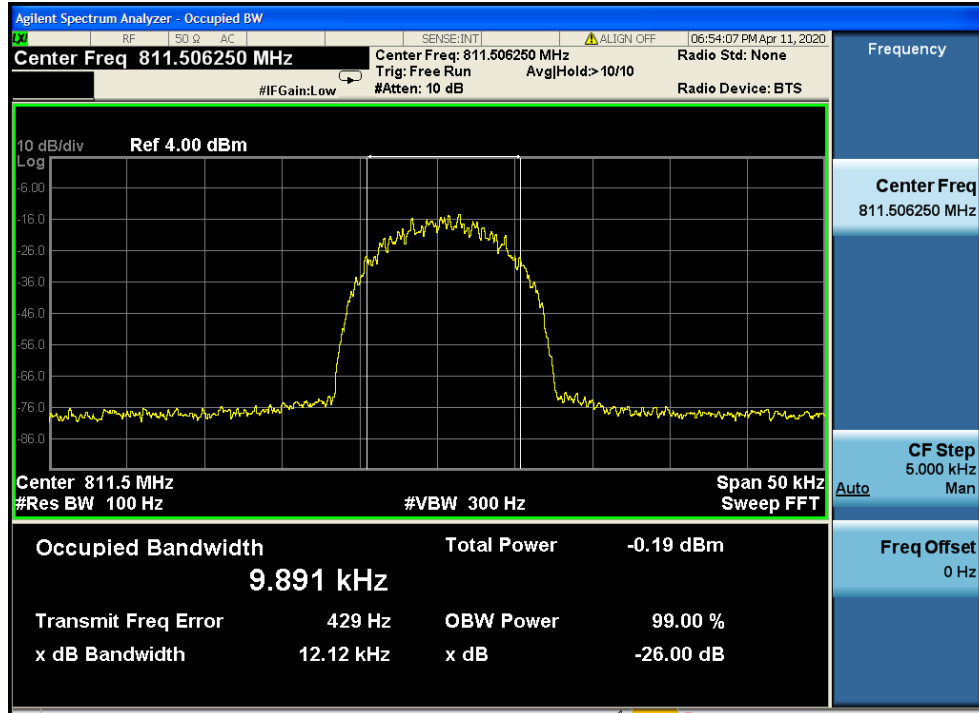
Input



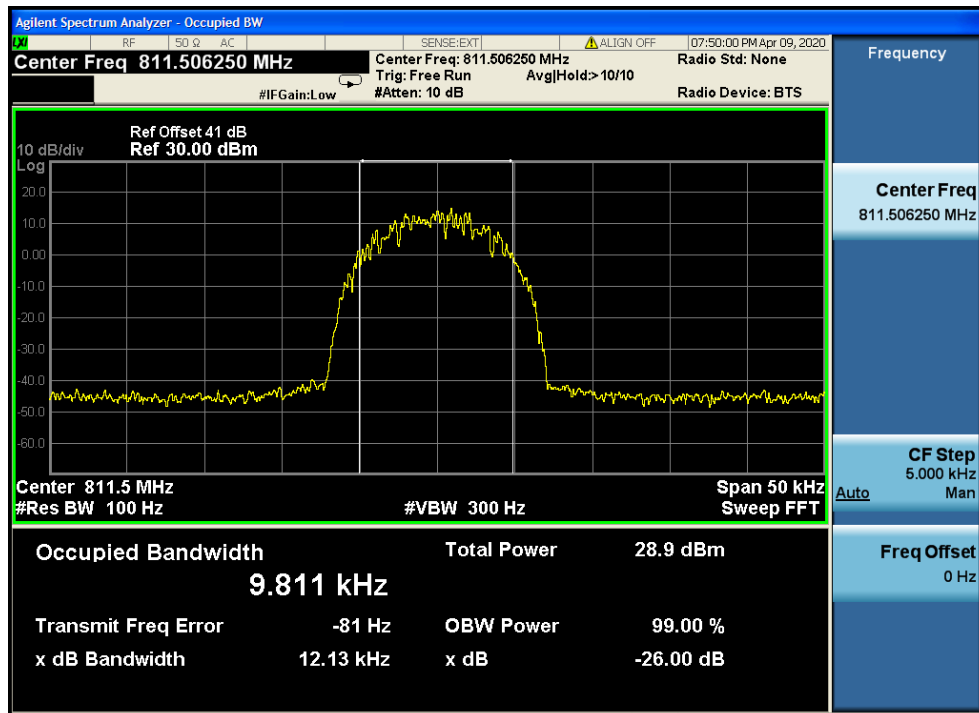
Output



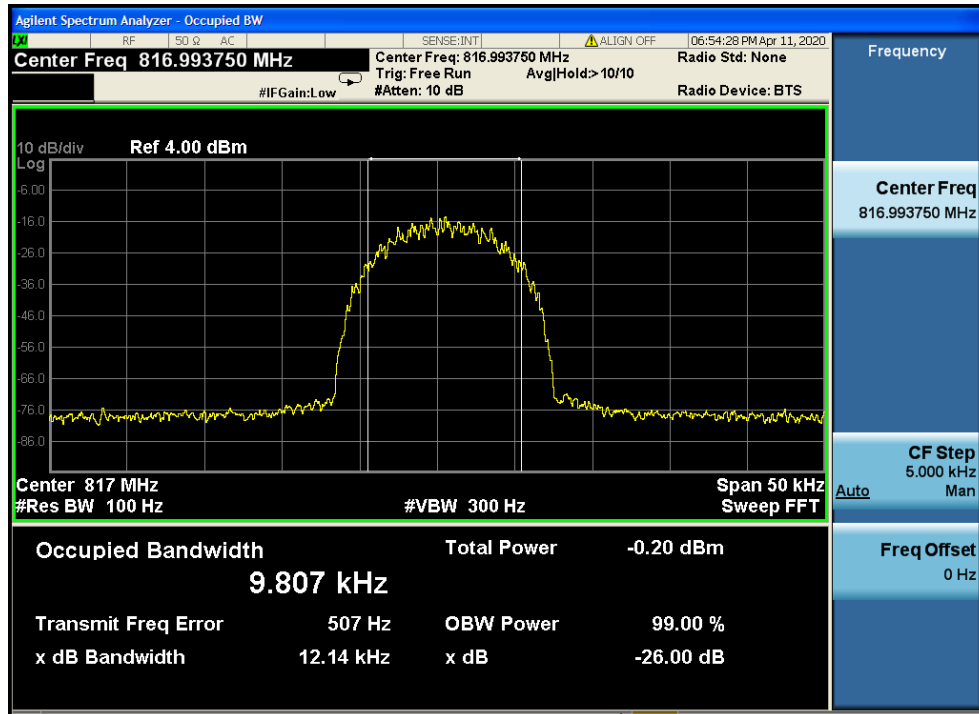
1.2 middle frequency Input



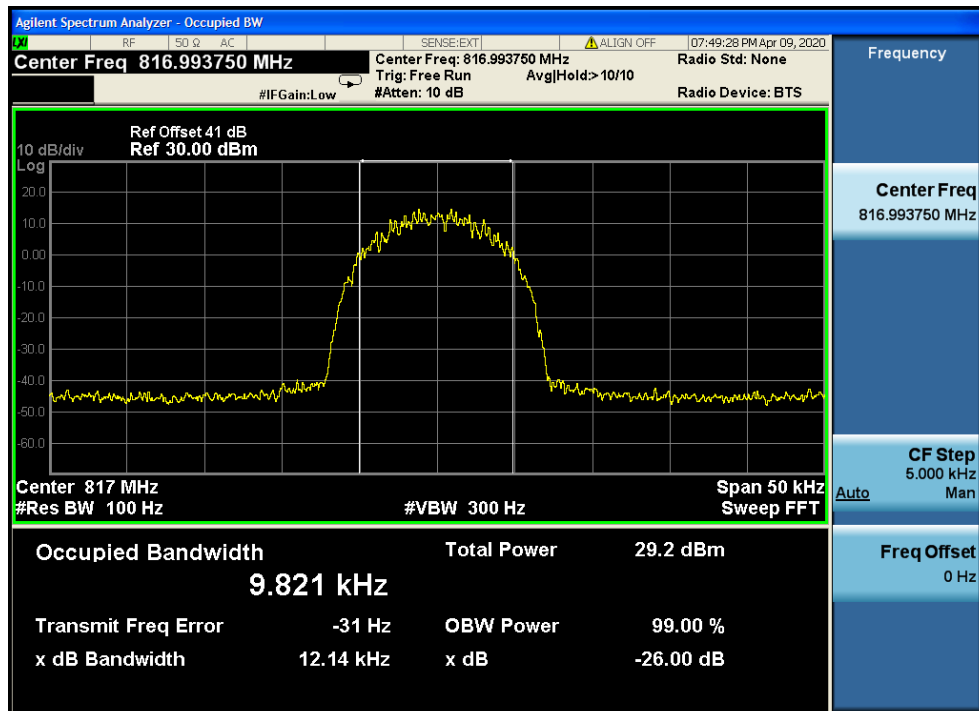
Output



1.3 highest frequency Input



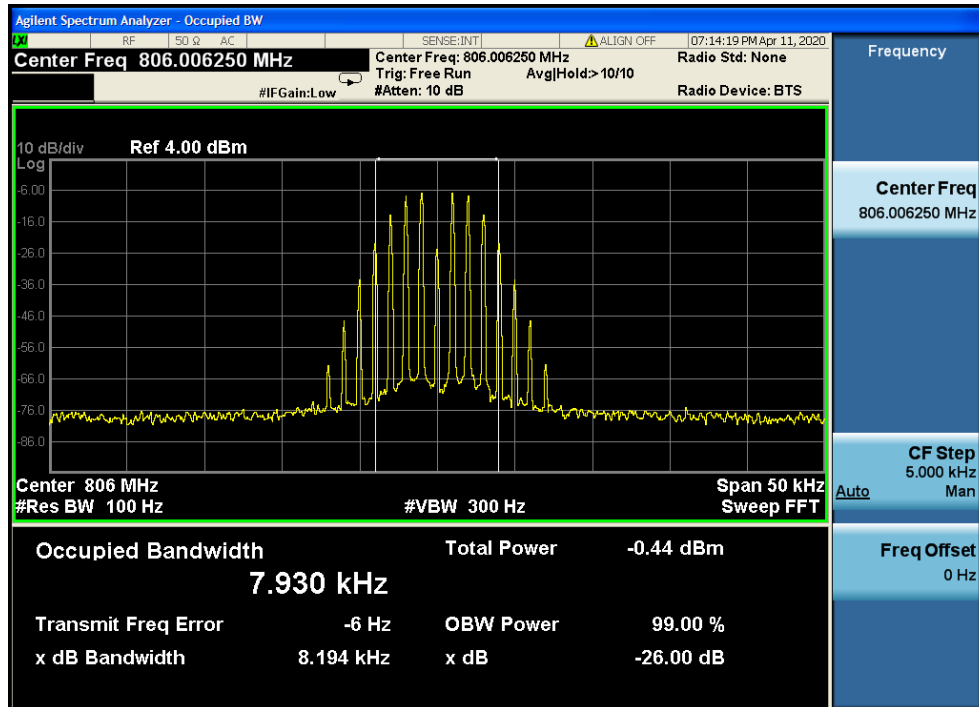
Output



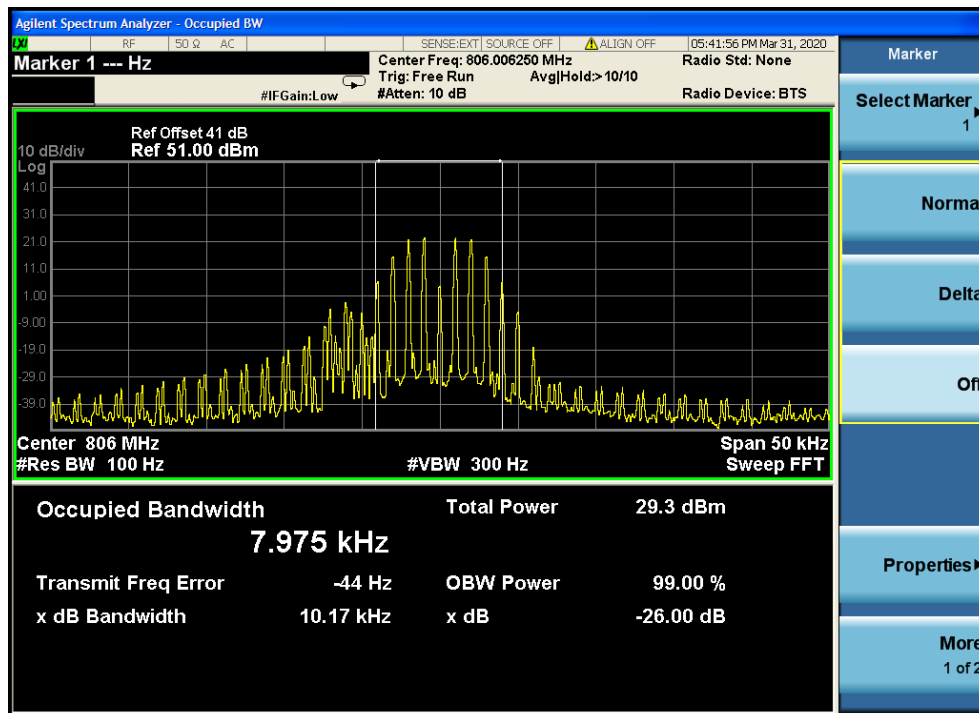
6.3 For FM-12.5K mode

1.1 lowest frequency

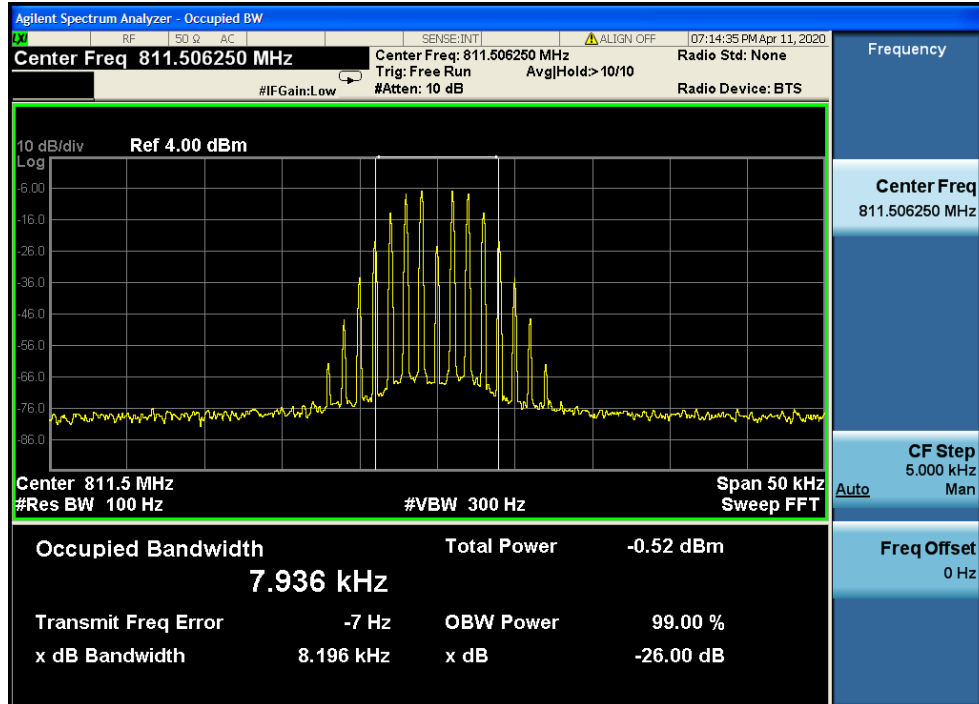
Input



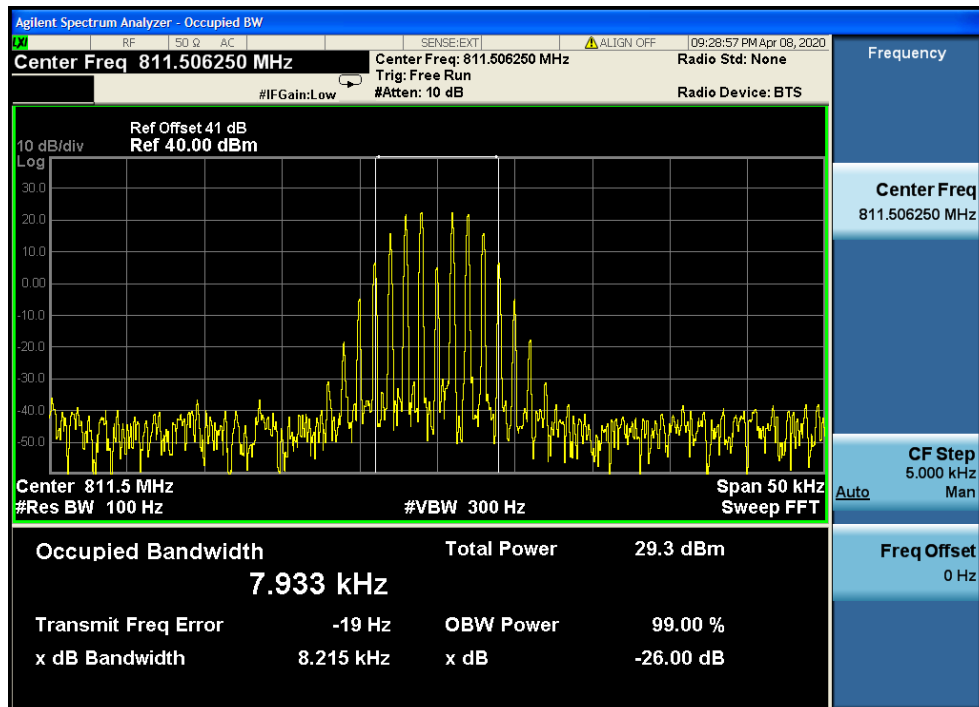
Output



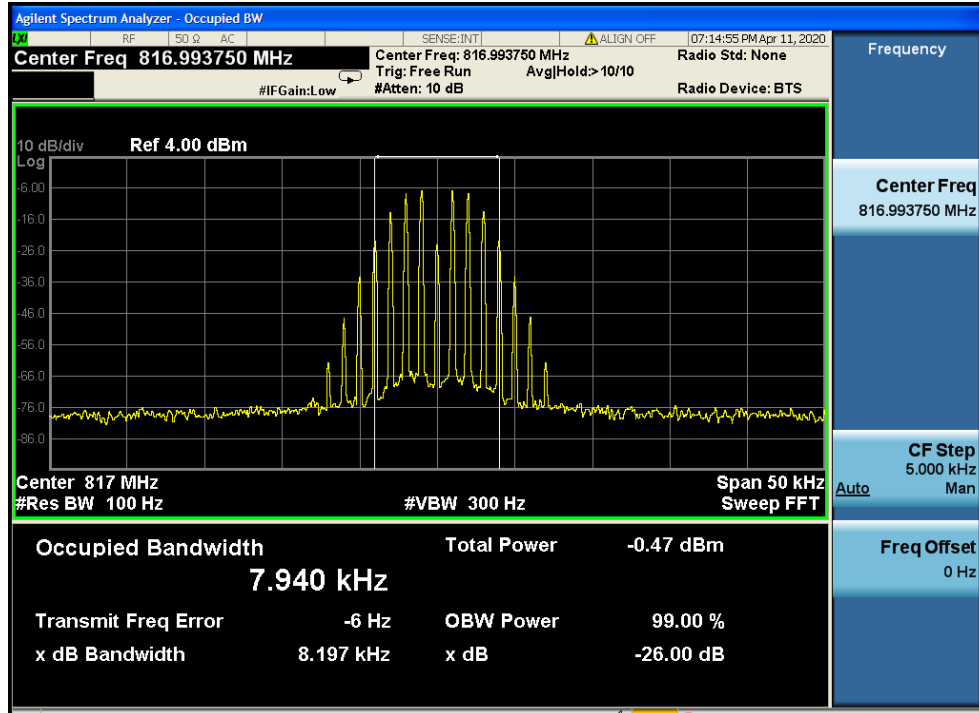
1.2 middle frequency Input



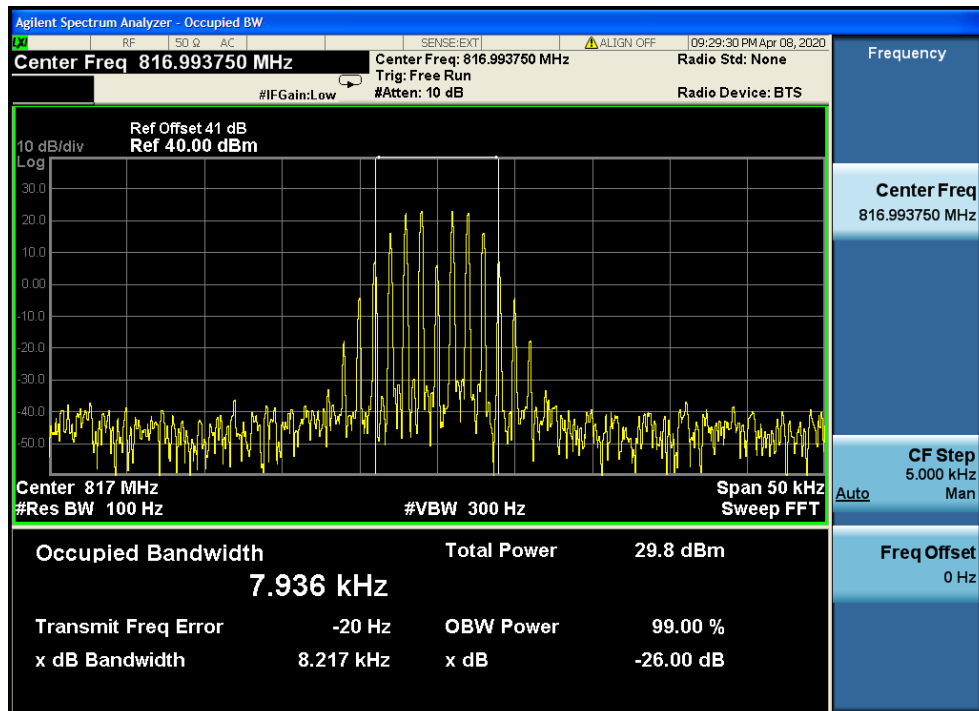
Output



1.3 highest frequency Input



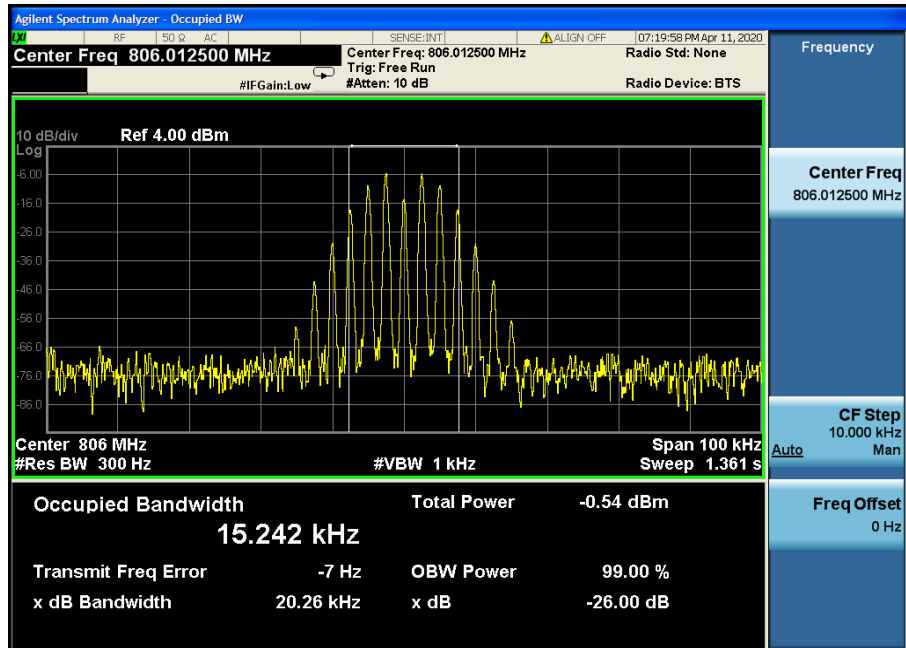
Output



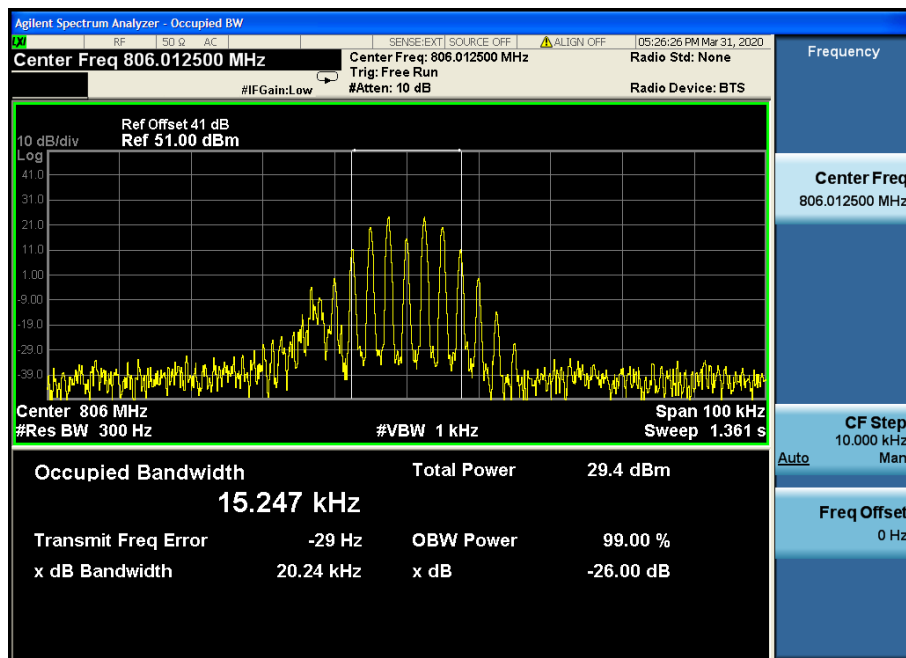
6.4 For FM-25K mode

1.1 lowest frequency

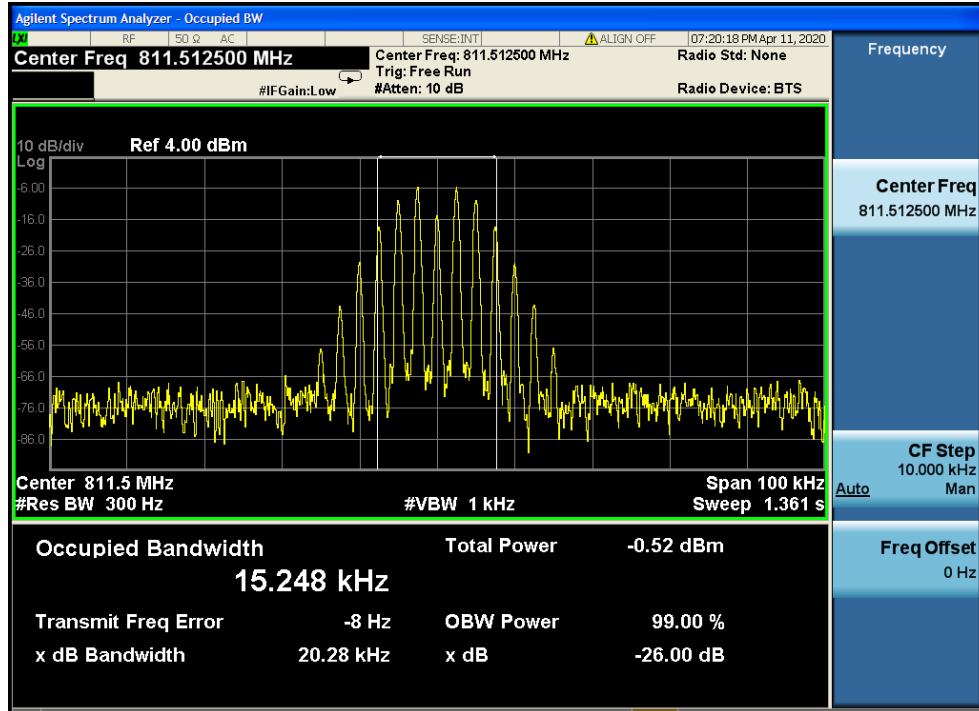
Input



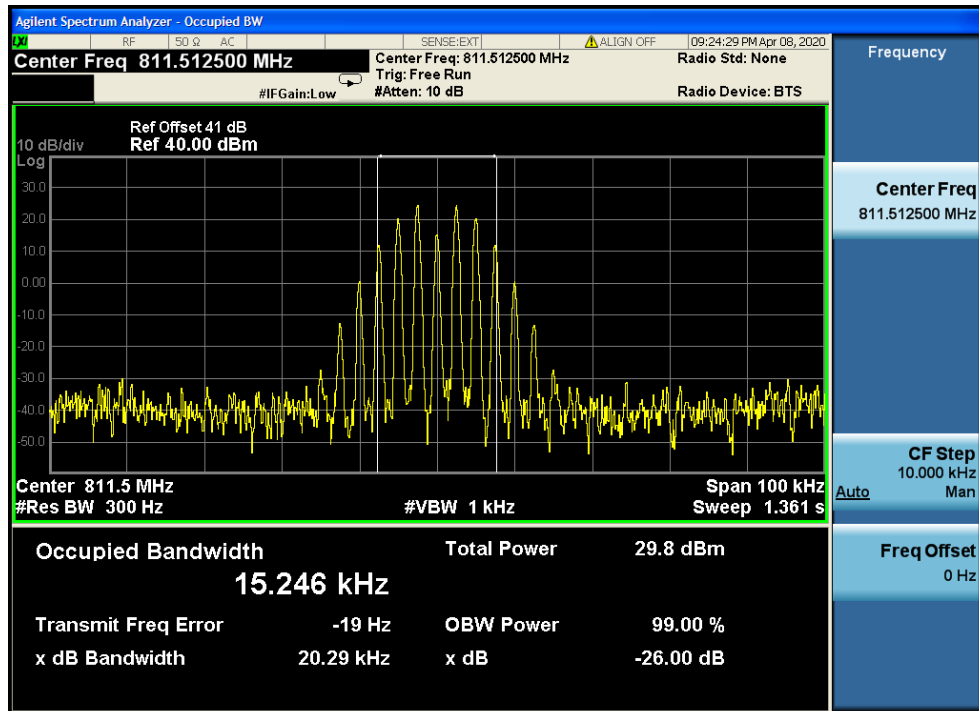
Output



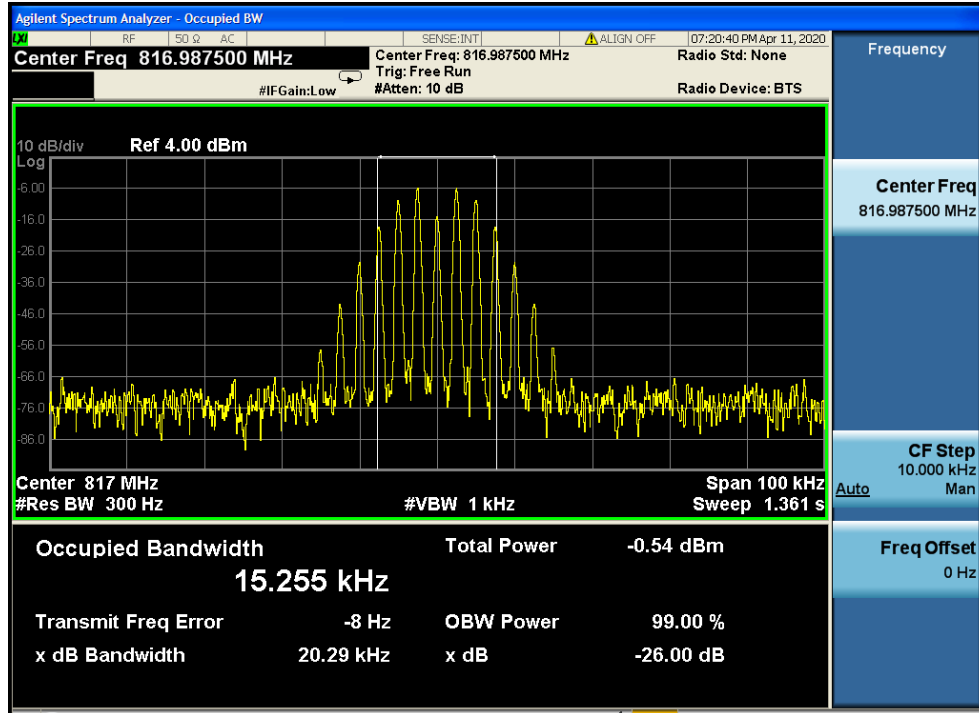
1.2 middle frequency Input



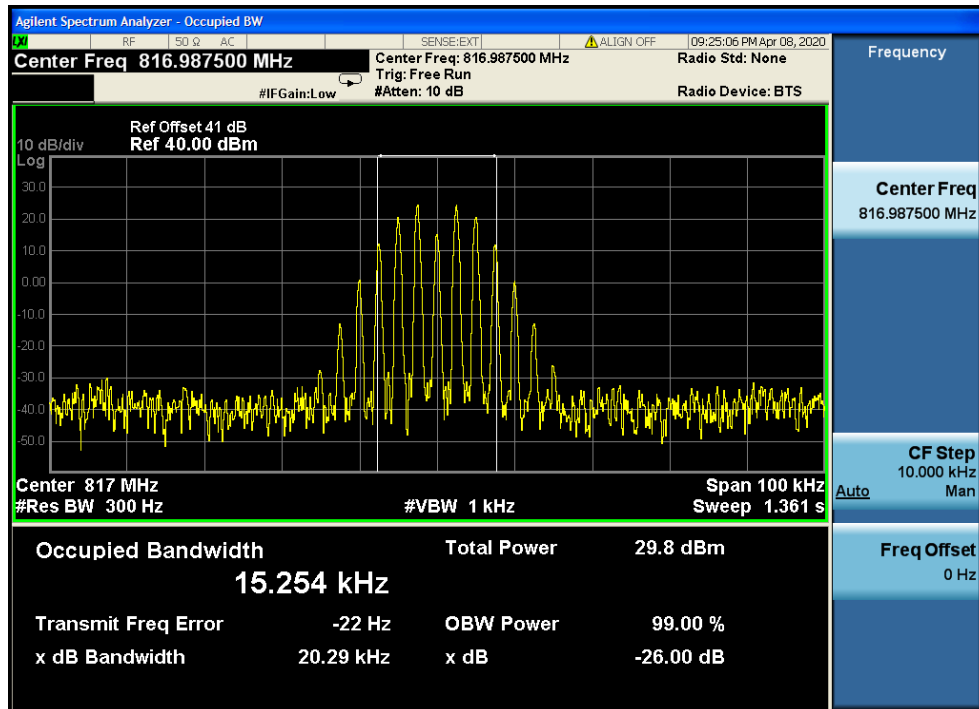
Output



1.3 highest frequency Input



Output



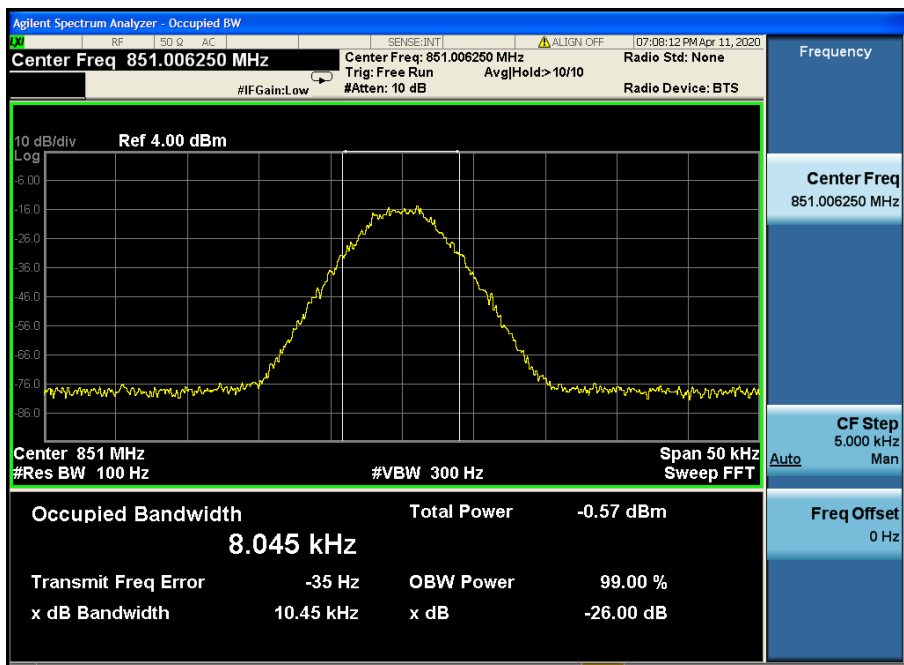
Class B model number:

2. Downlink:851MHz to 862MHz

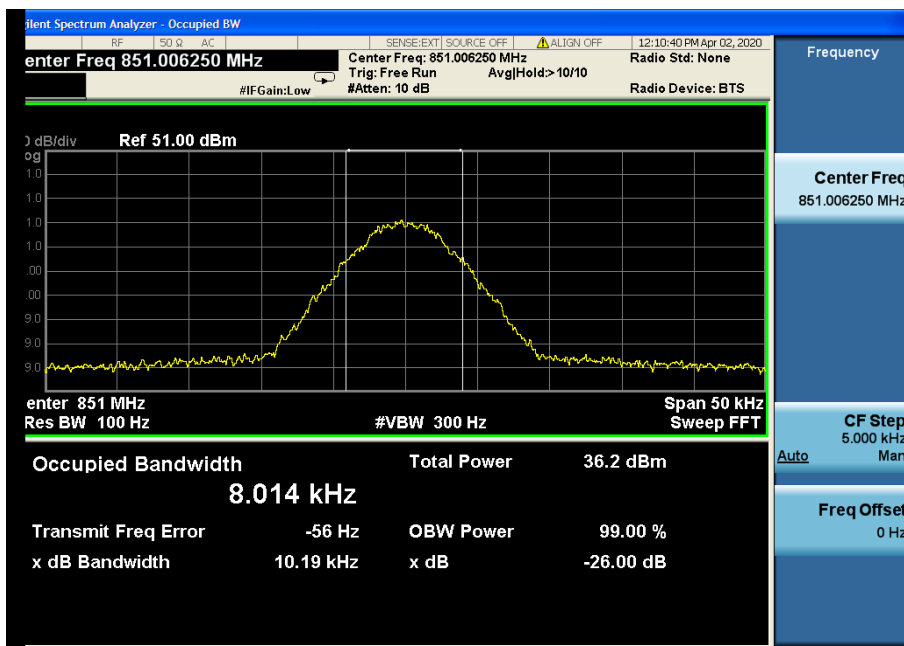
5.1 For C4FM mode

1.1 lowest frequency

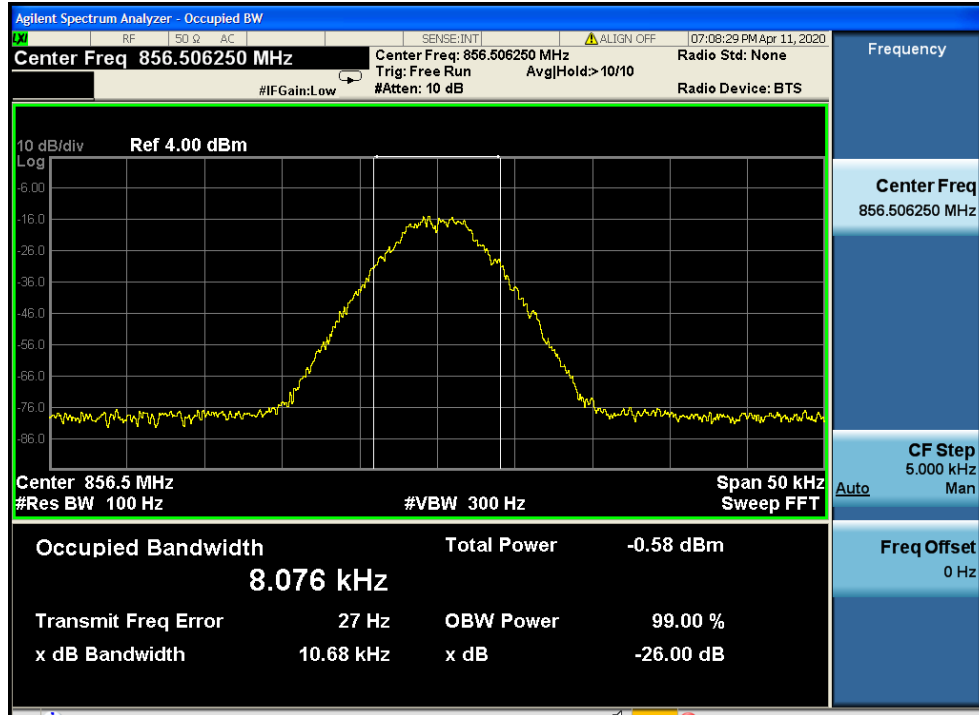
Input



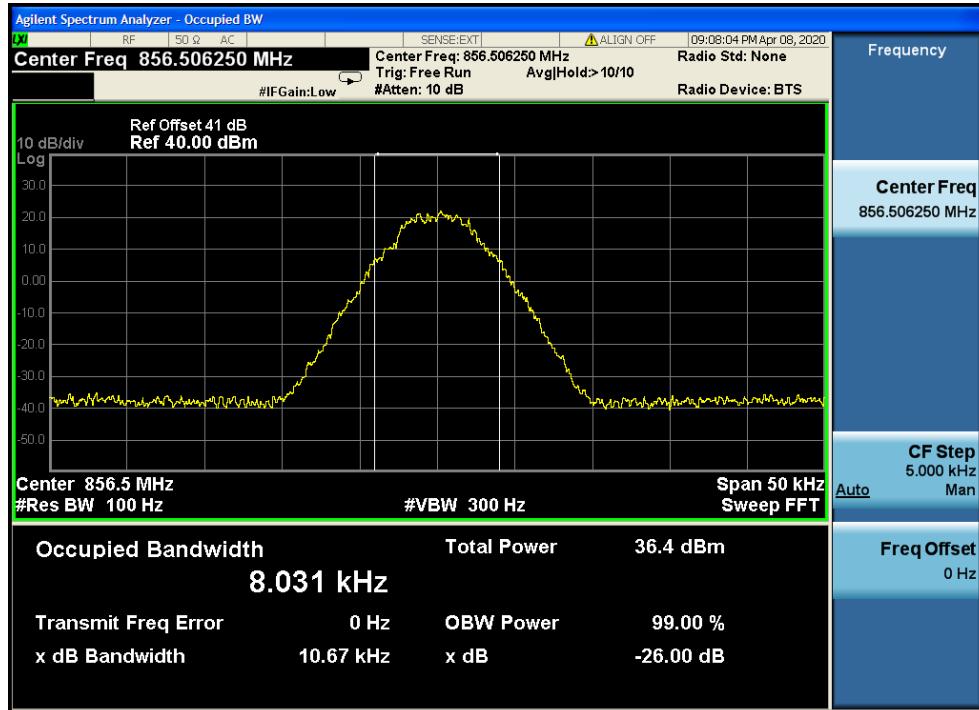
Output



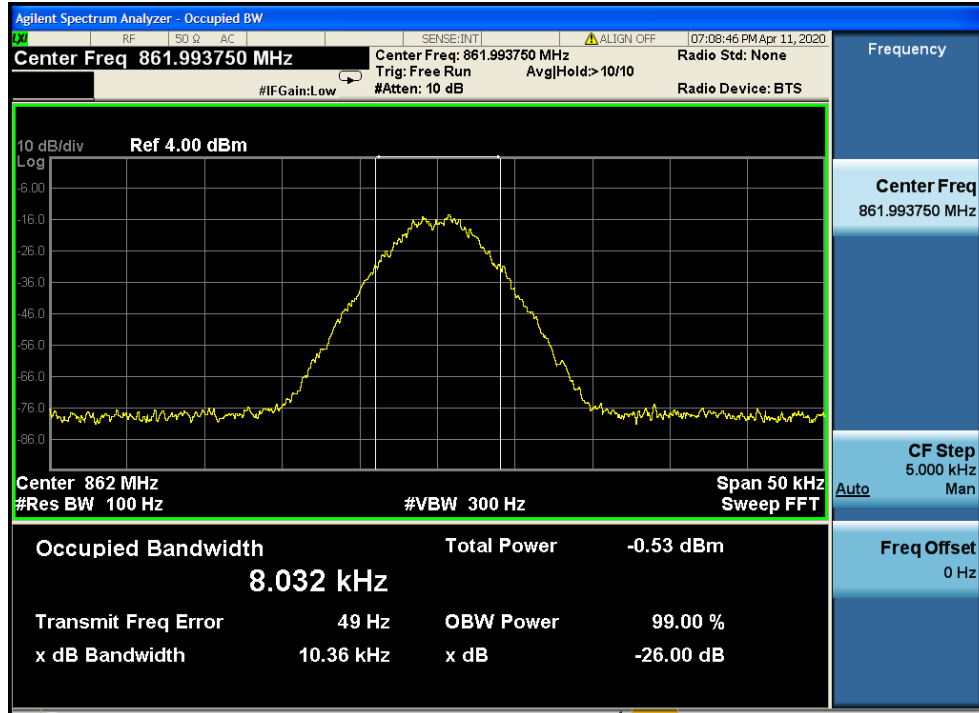
1.3 middle frequency Input



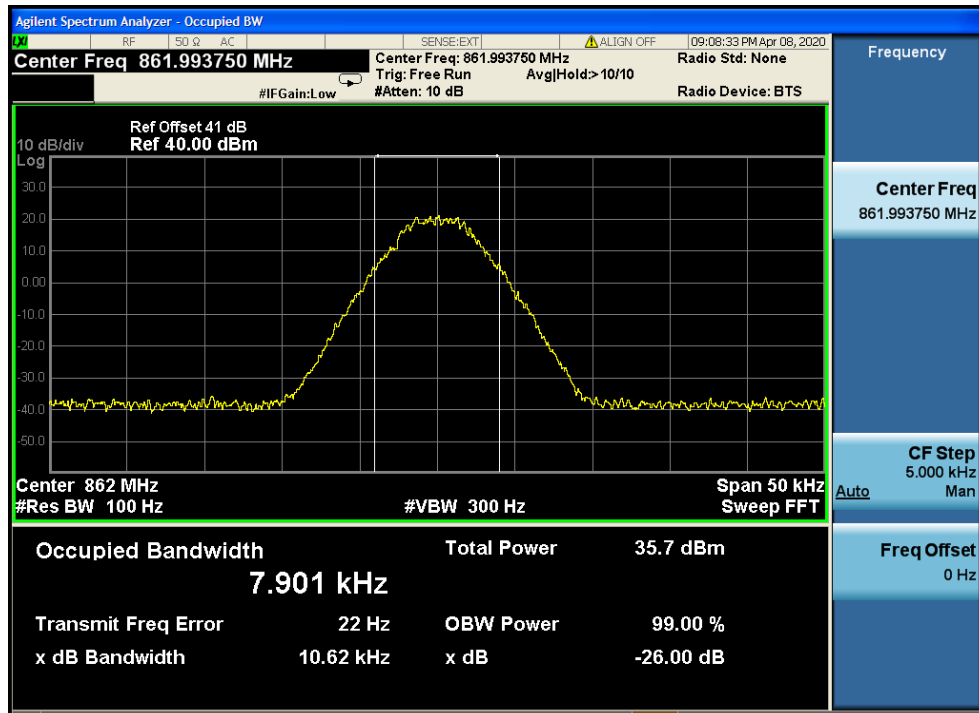
Output



1.6 highest frequency
Input



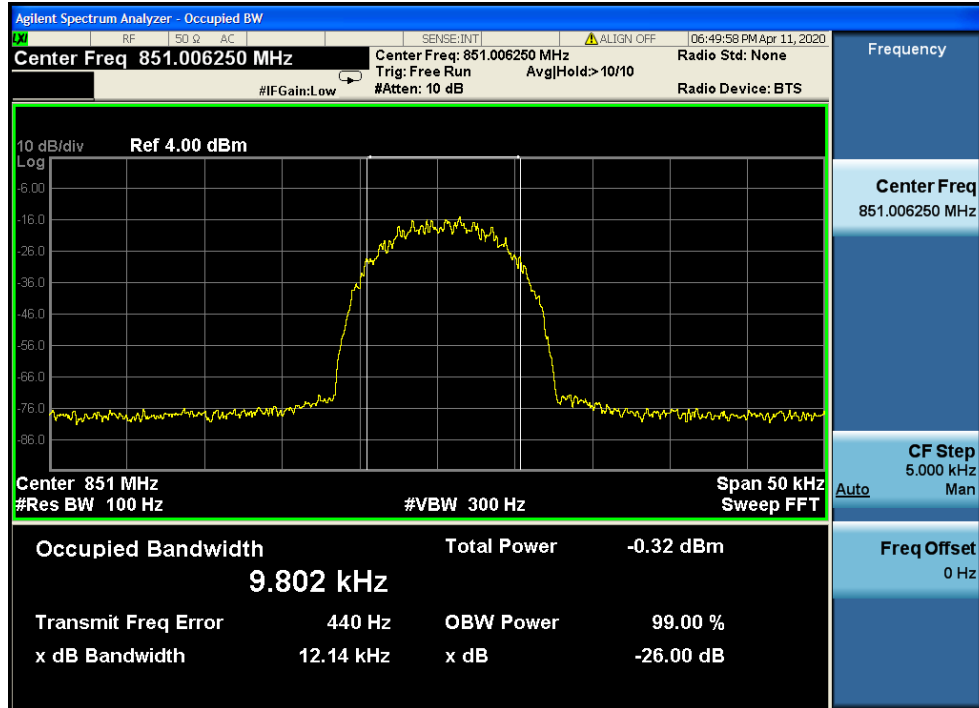
Output



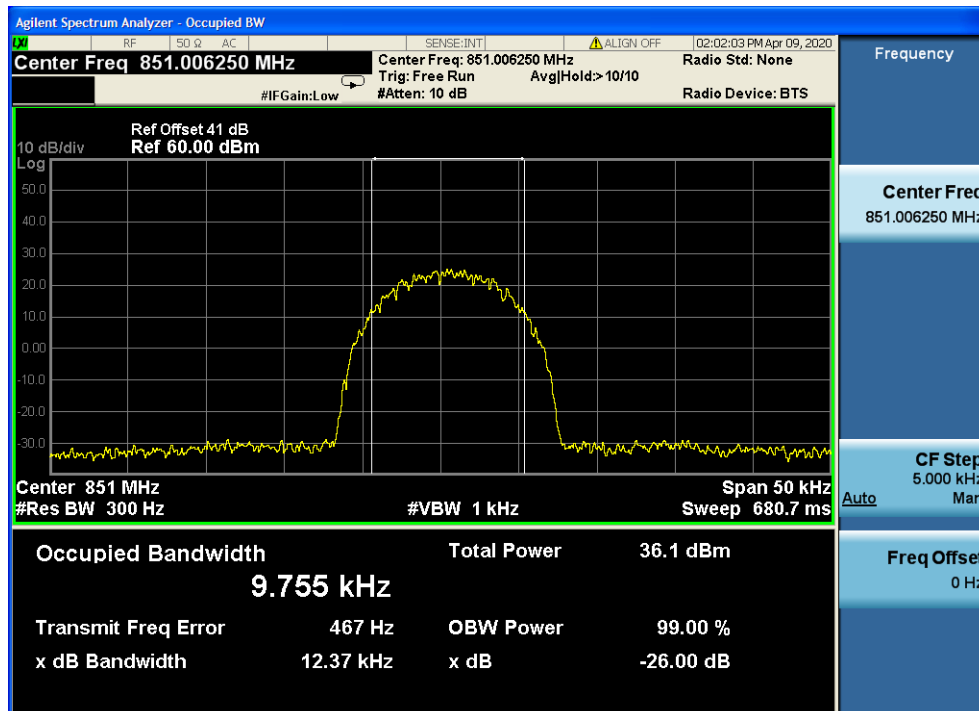
5.2 For HDQPSK mode

1.1 lowest frequency

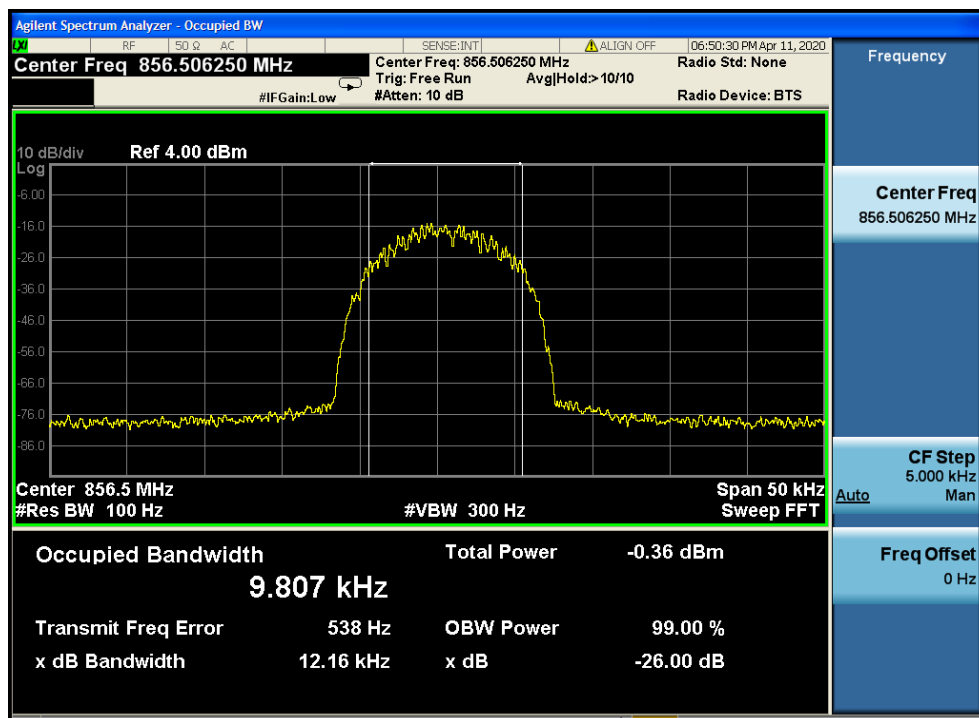
Input



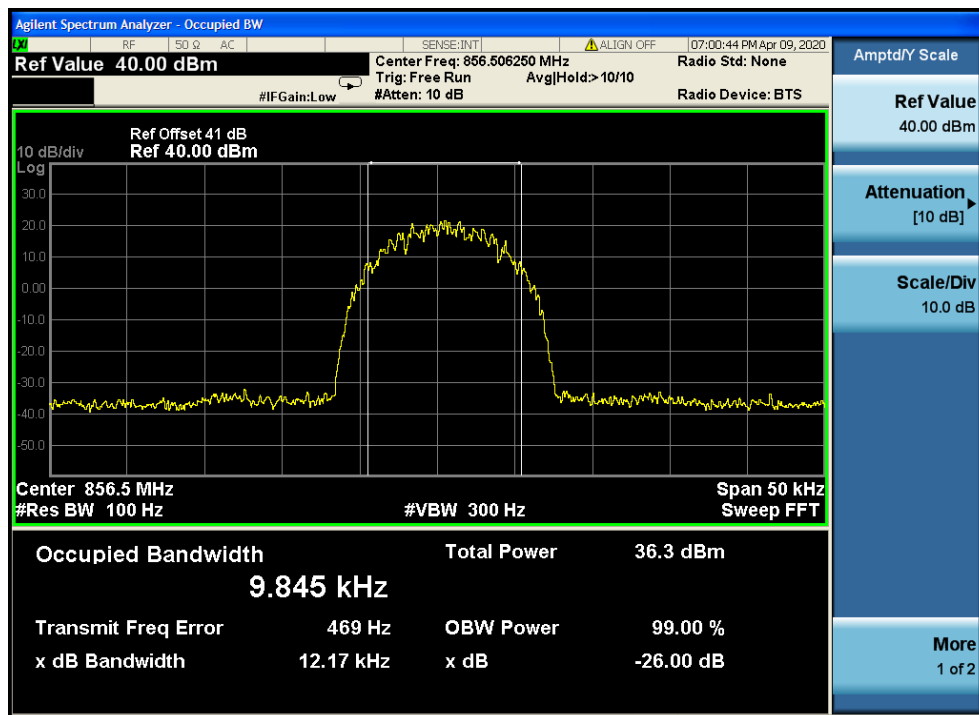
Output



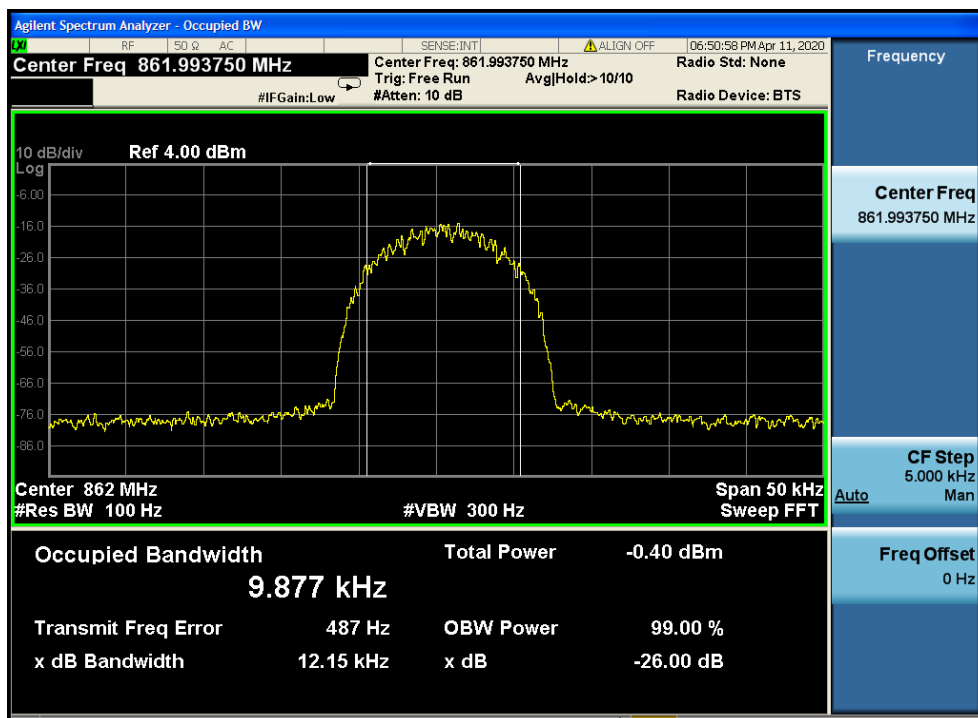
1.2 middle frequency Input



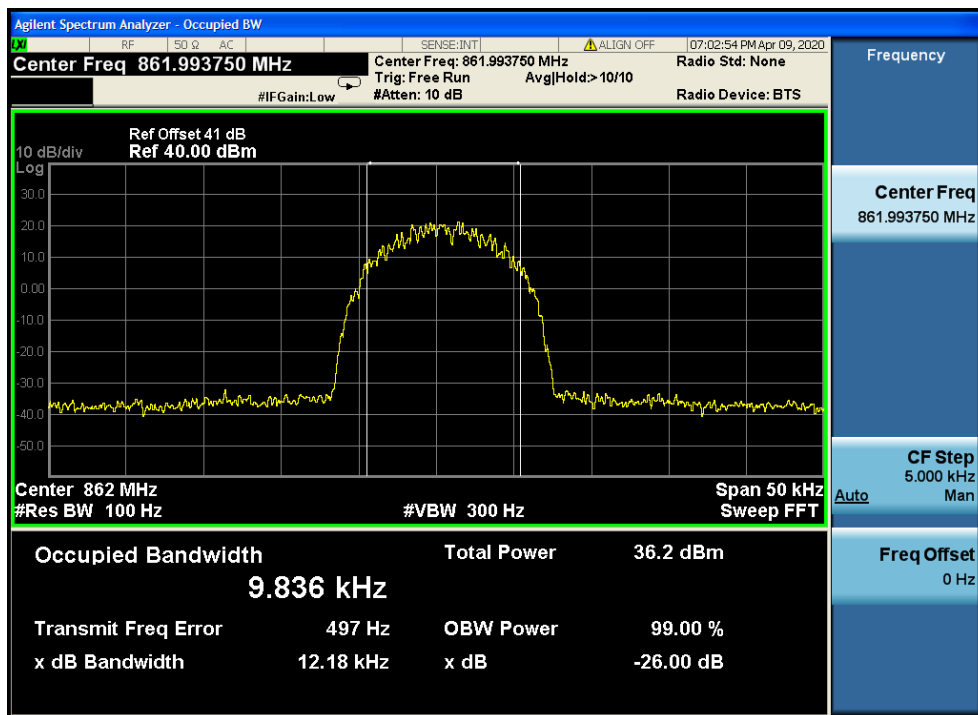
Output



1.3 highest frequency Input



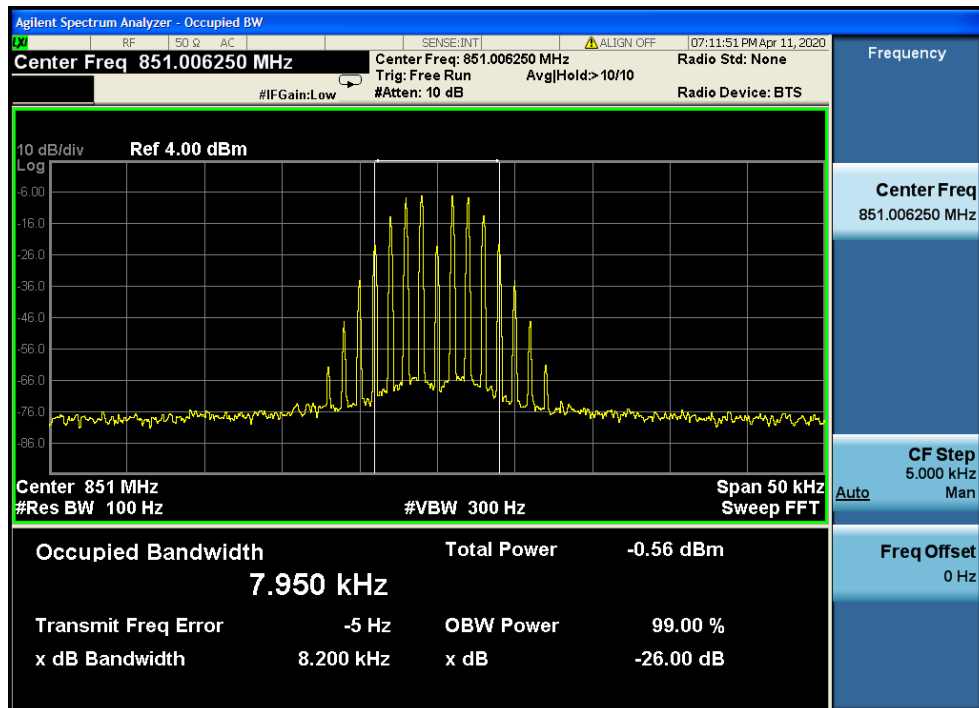
Output



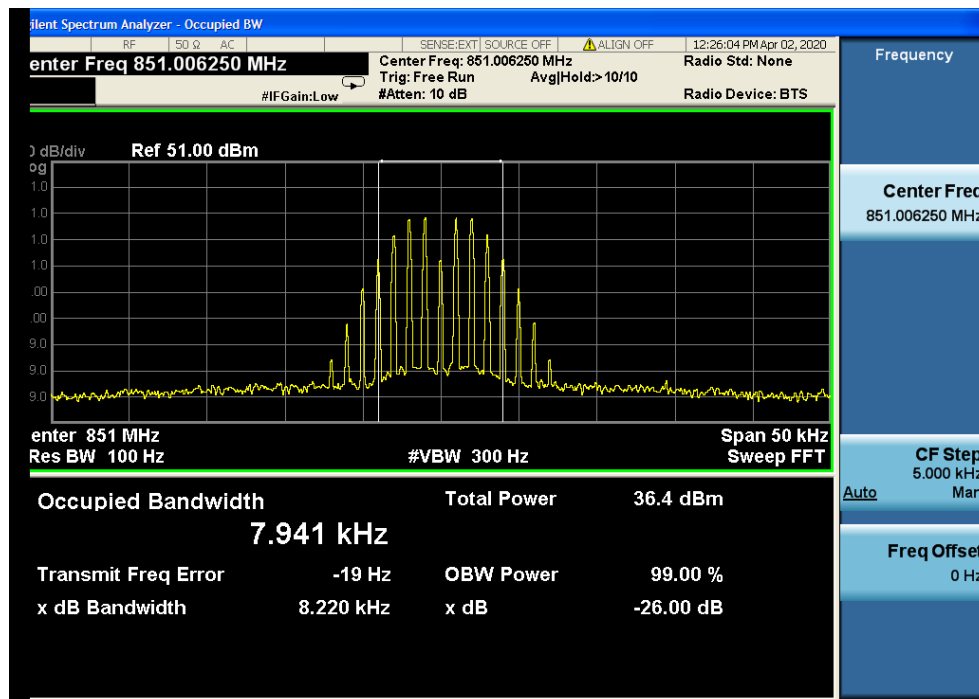
5.3 For FM-12.5K mode

1.1 lowest frequency

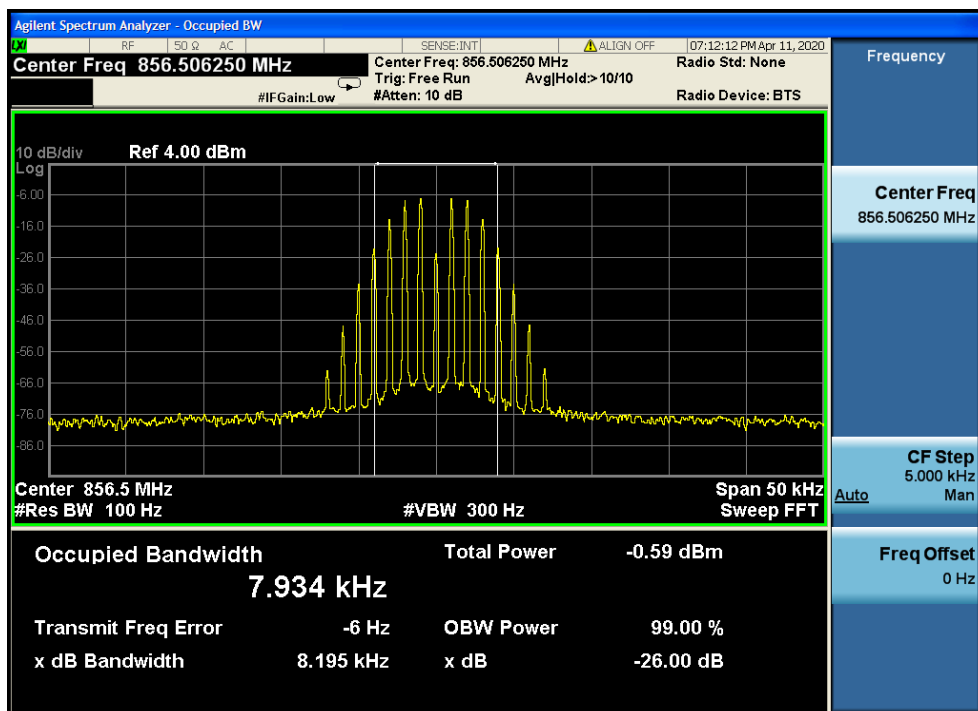
Input



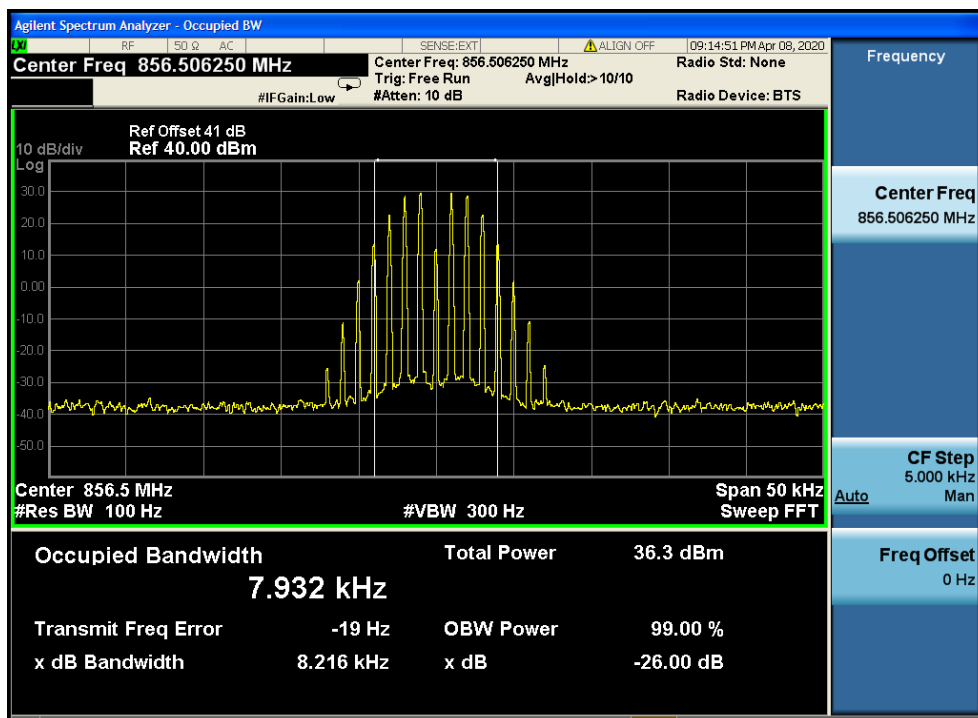
Output



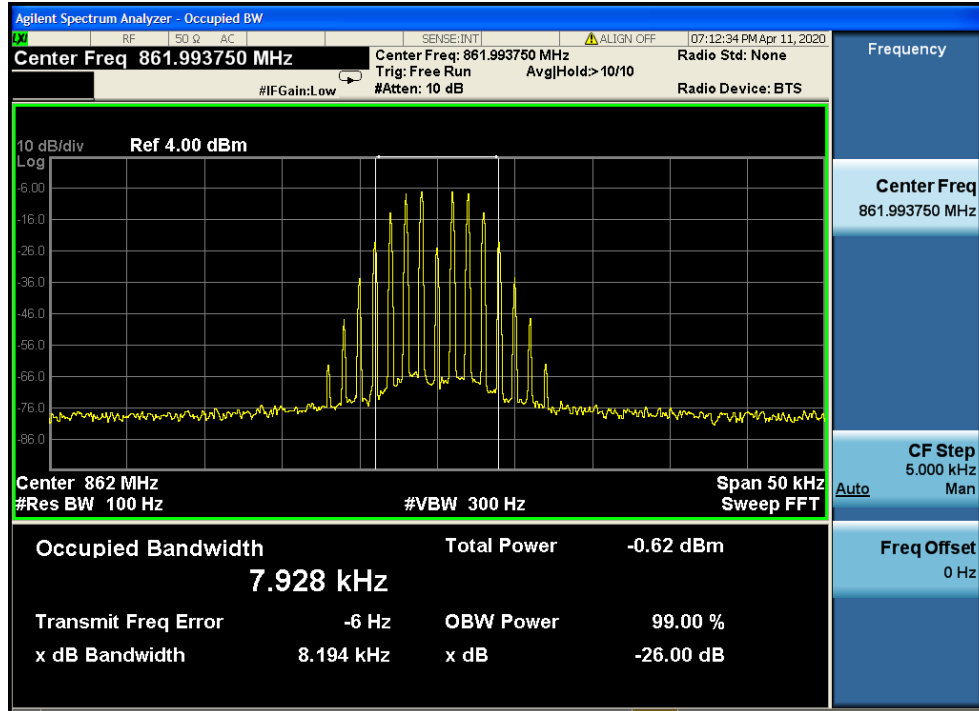
1.2 middle frequency Input



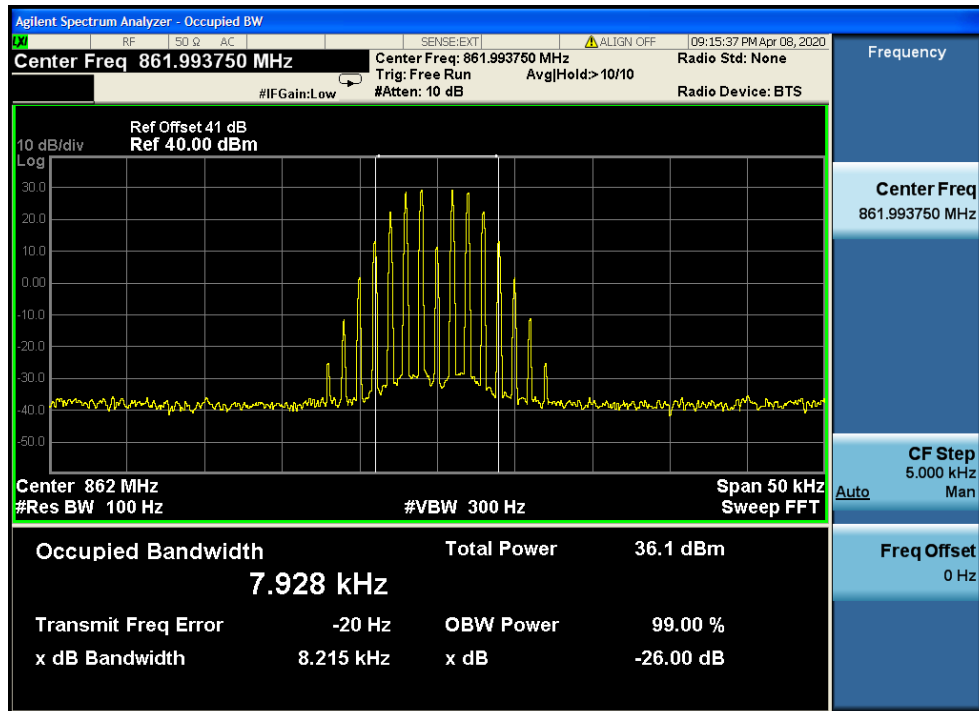
Output



1.3 highest frequency Input



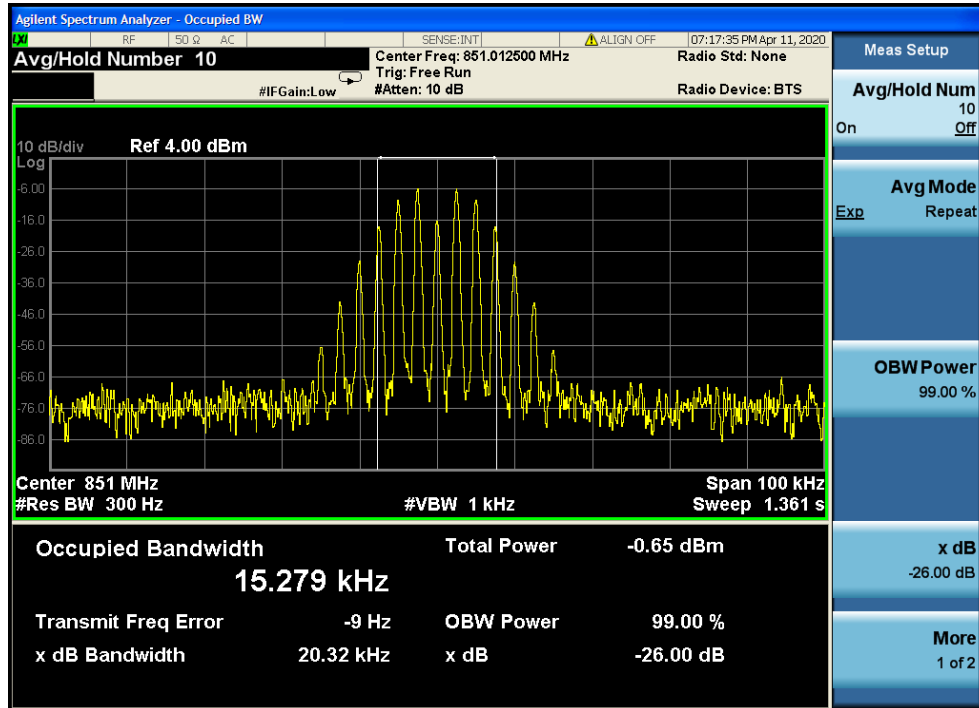
Output



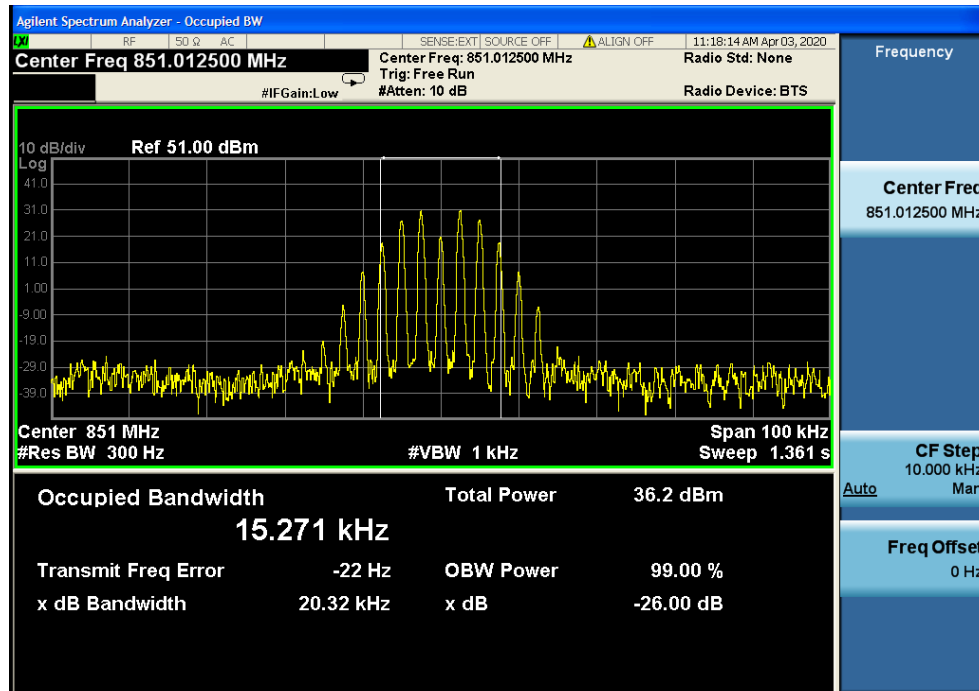
5.4 For FM-25K mode

1.1 lowest frequency

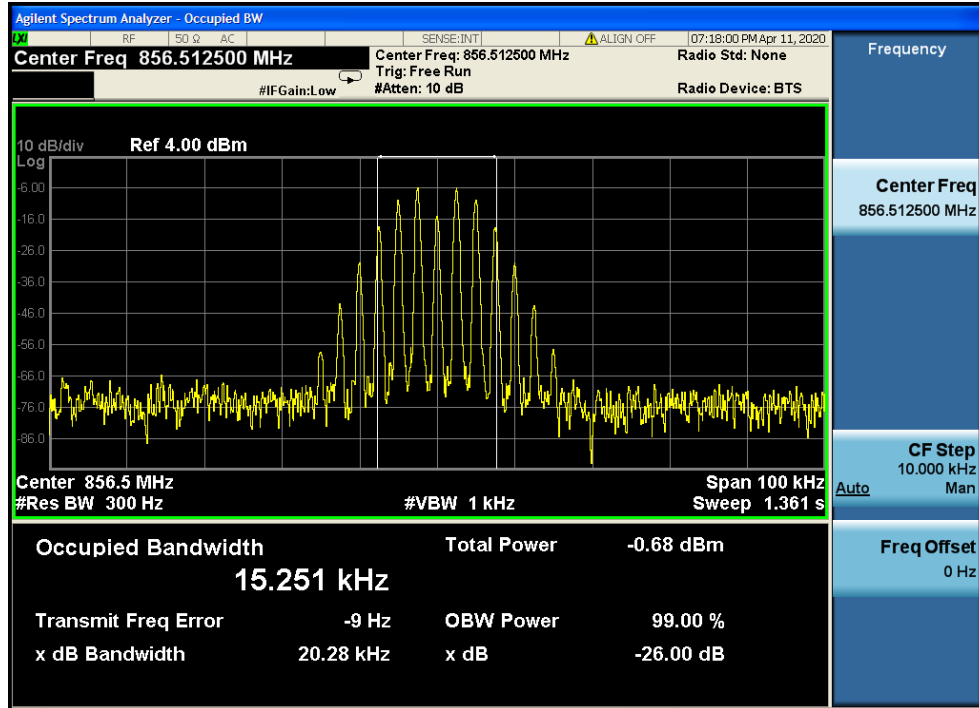
Input



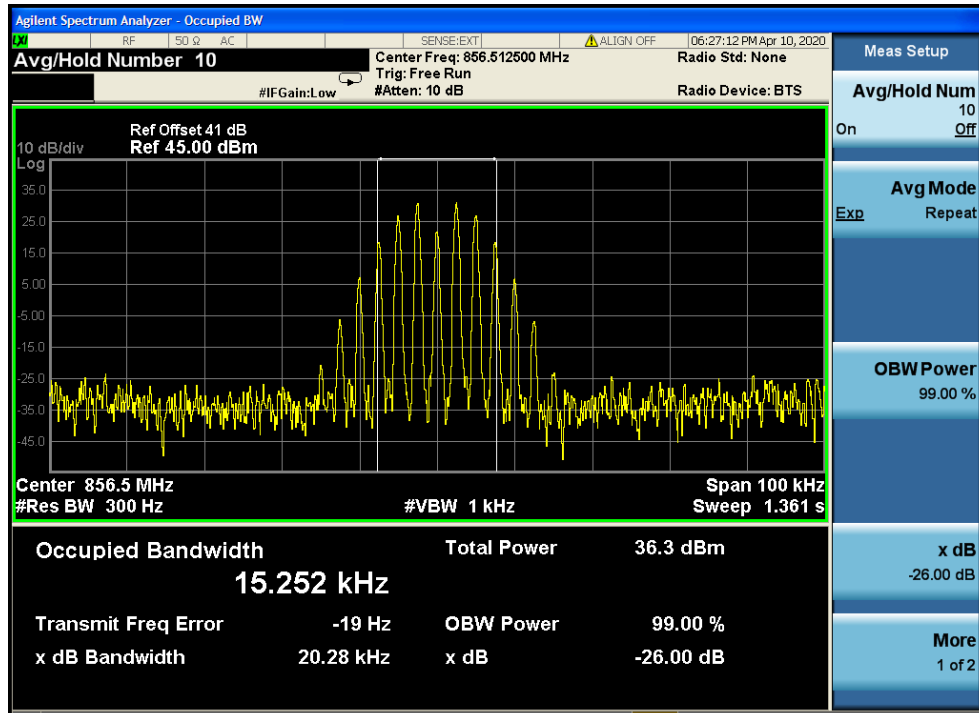
Output



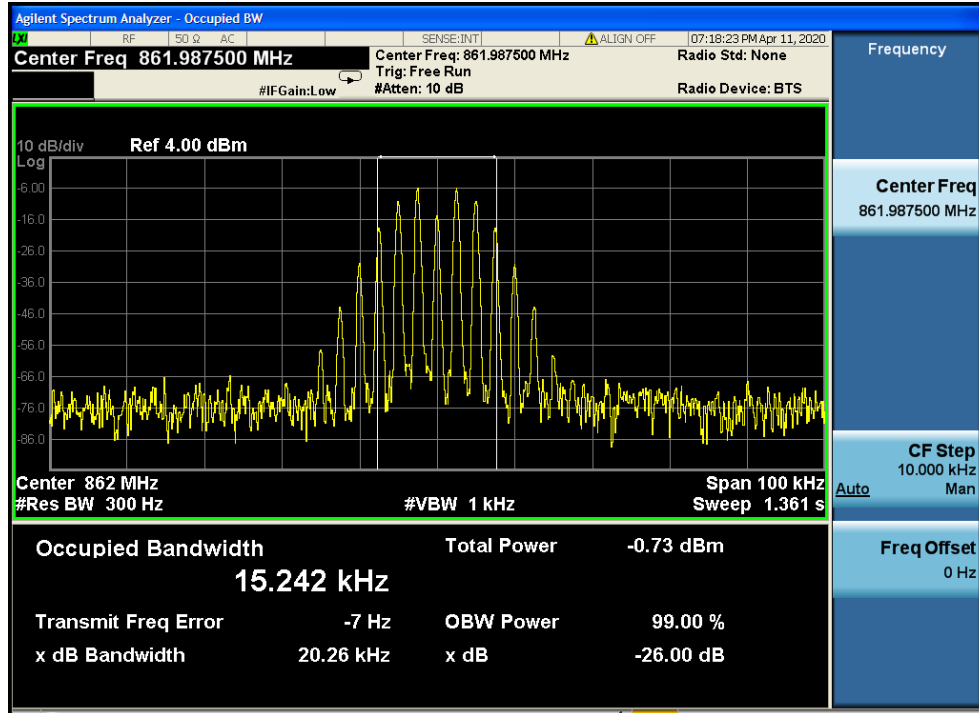
1.2 middle frequency Input



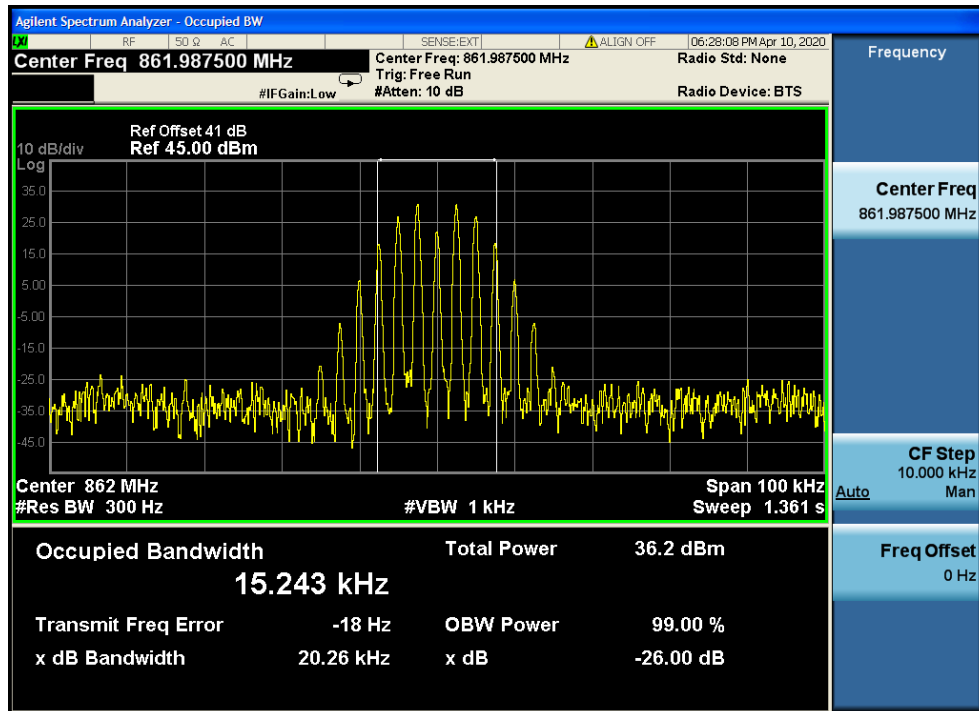
Output



1.3 highest frequency Input



Output

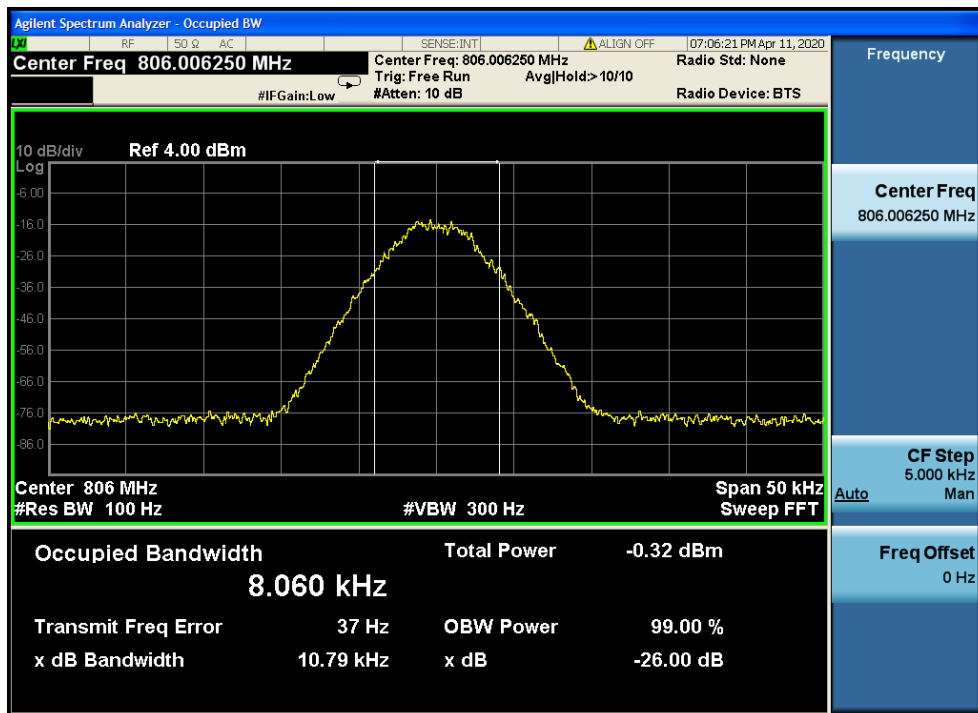


Downlink: 806MHz to 817MHz

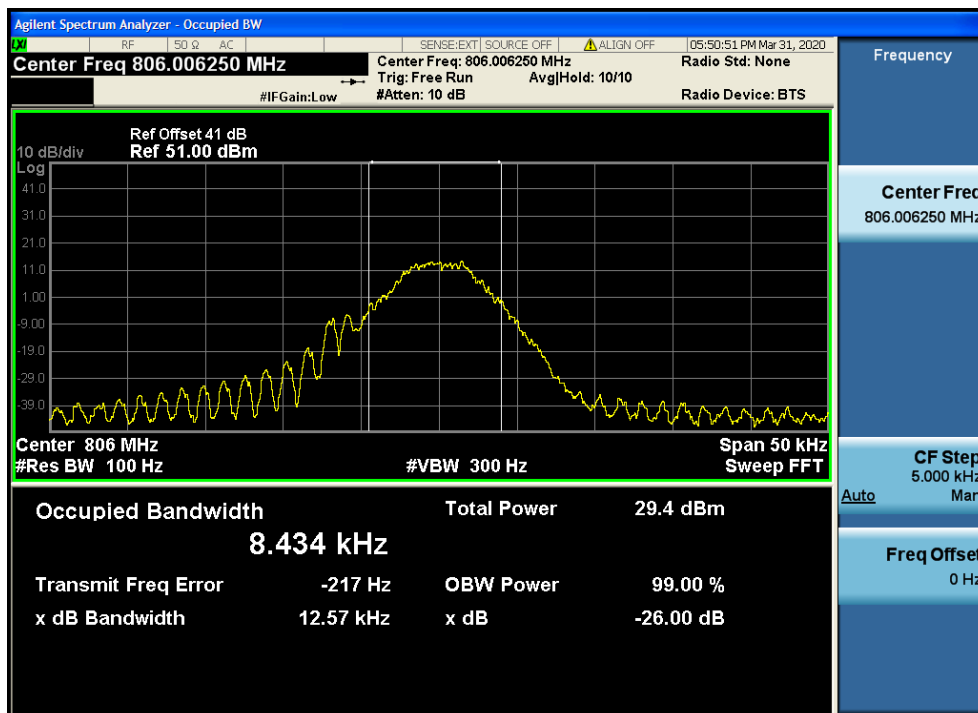
6.1 For C4FM mode

1.1 lowest frequency

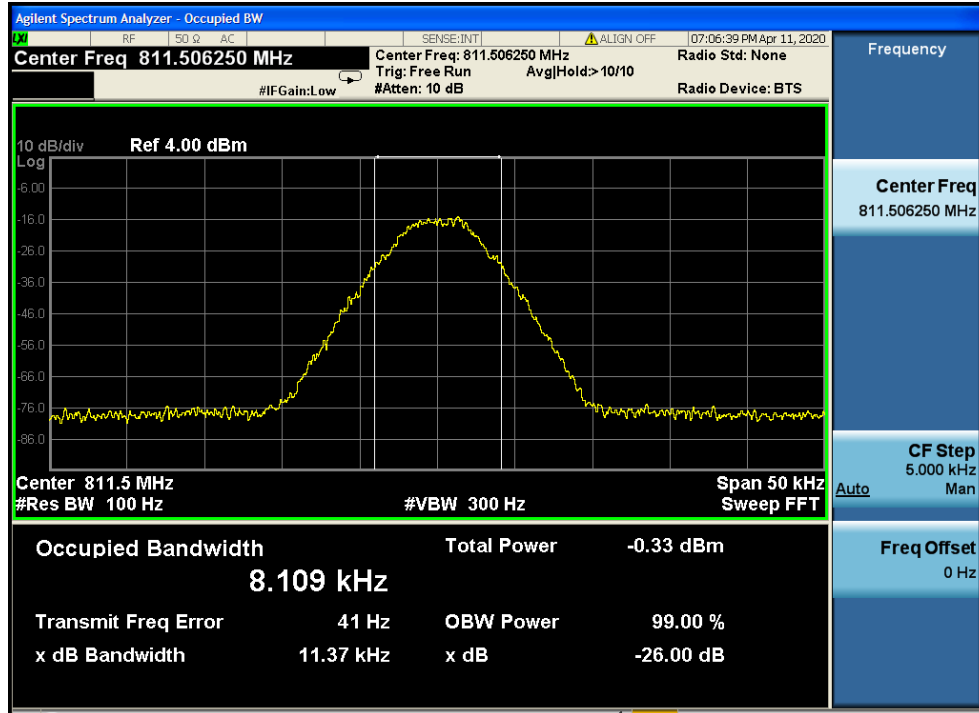
Input



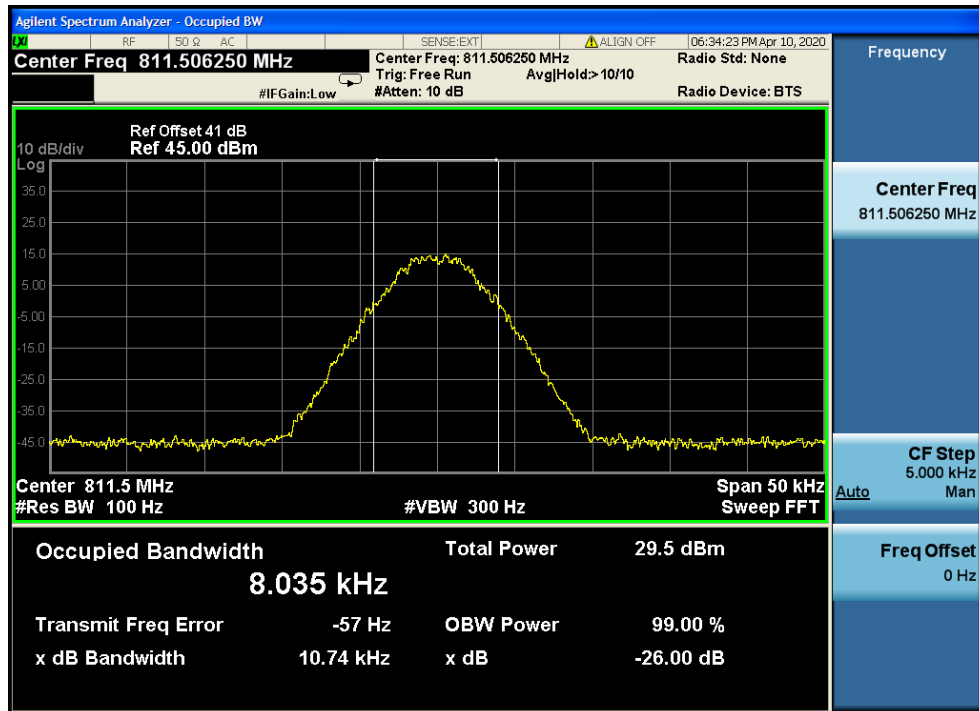
Output



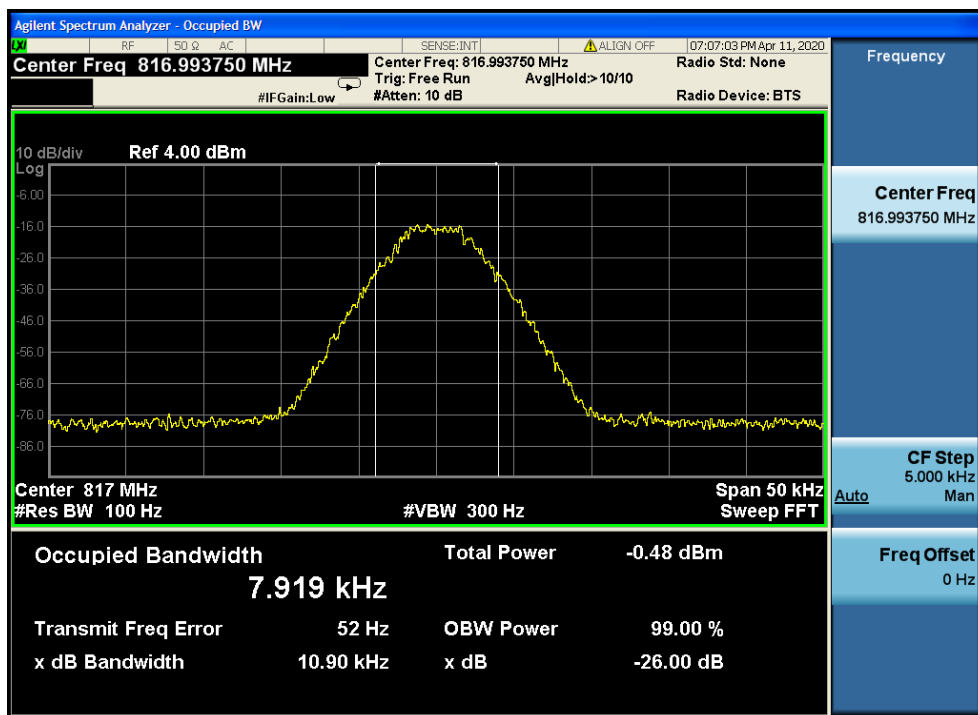
1.2 middle frequency Input



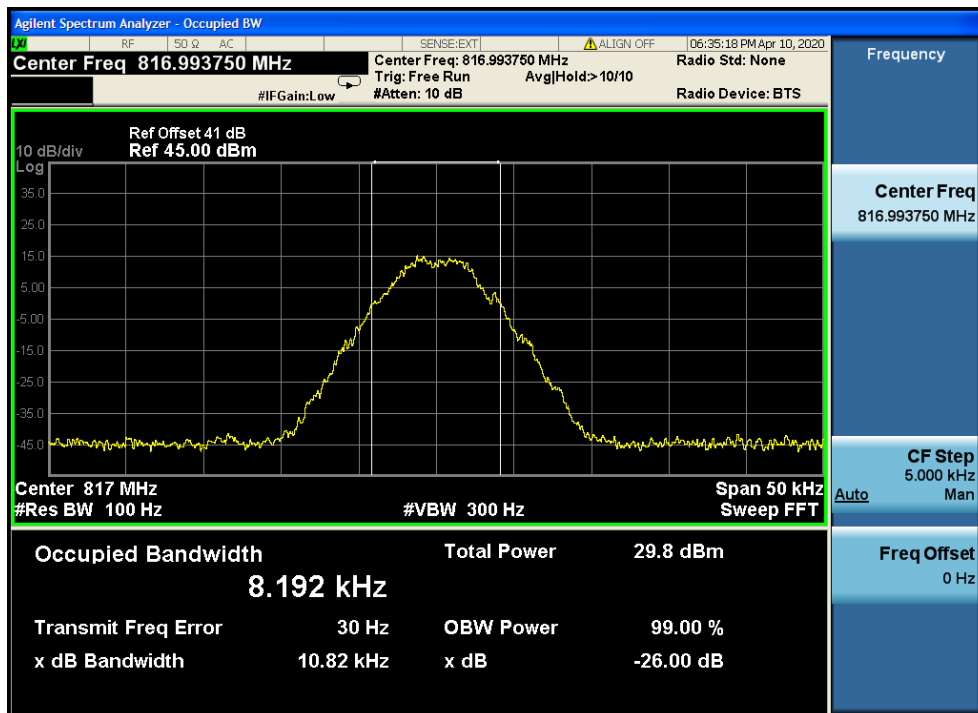
Output



1.3 highest frequency Input



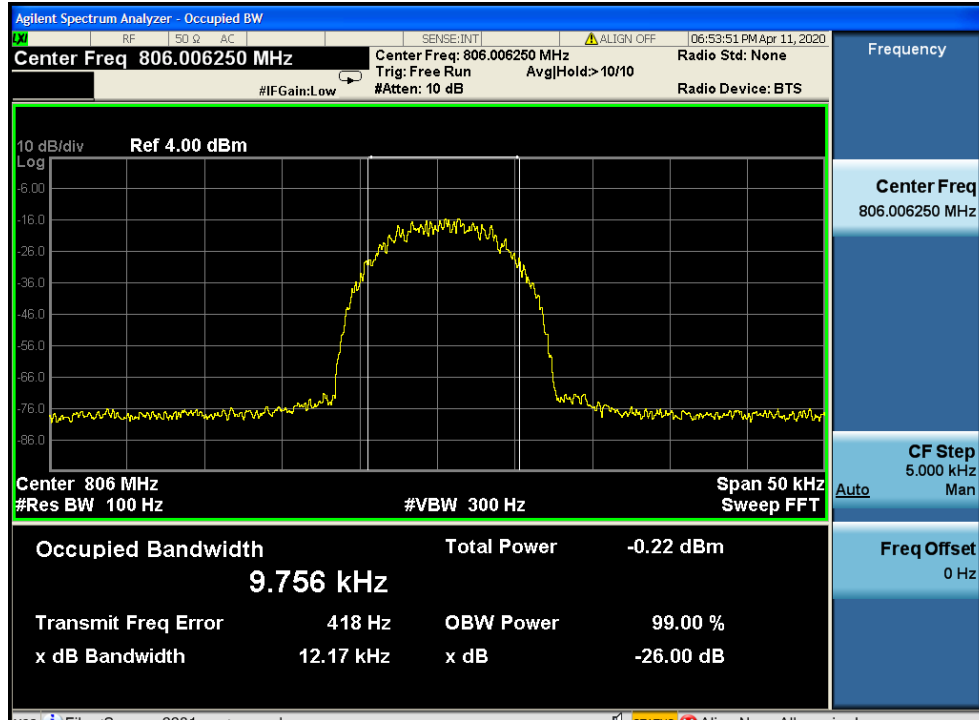
Output



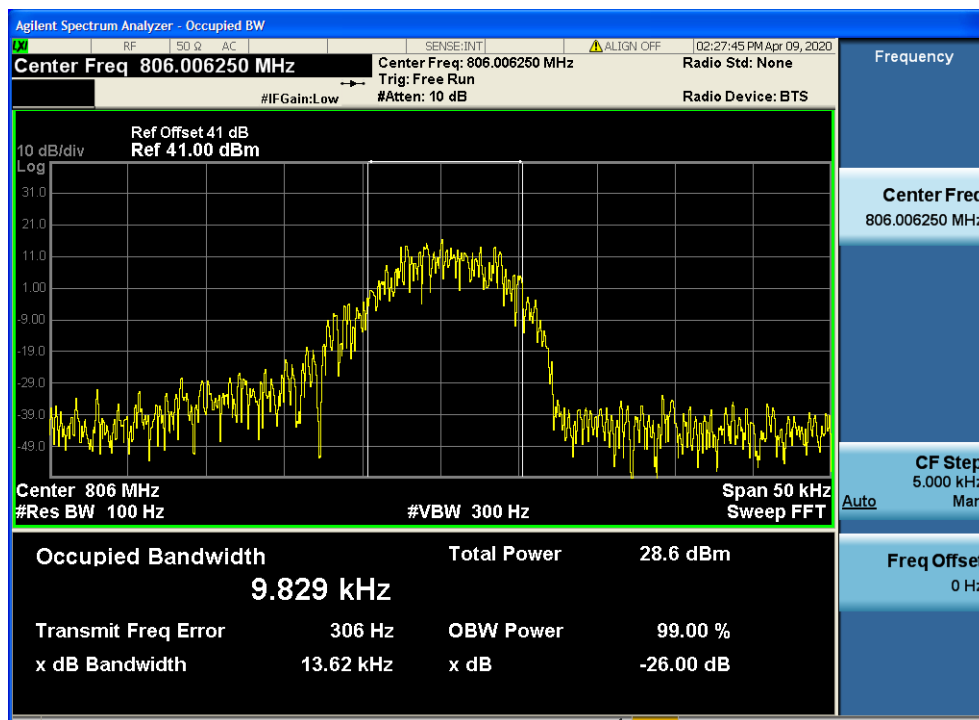
6.2 For HDQPSK mode

1.1 lowest frequency

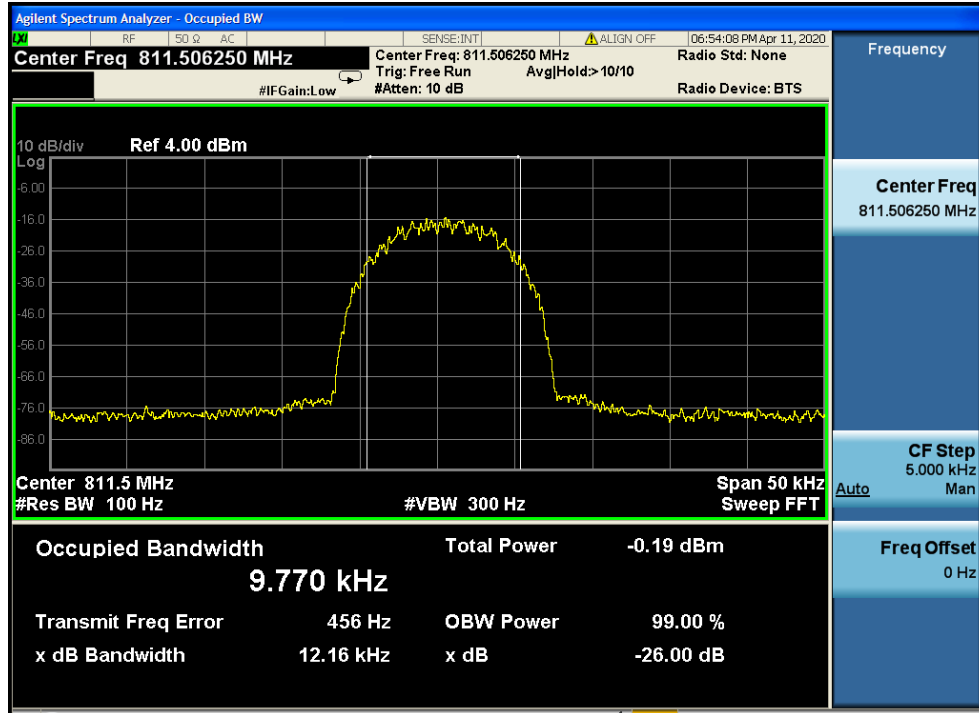
Input



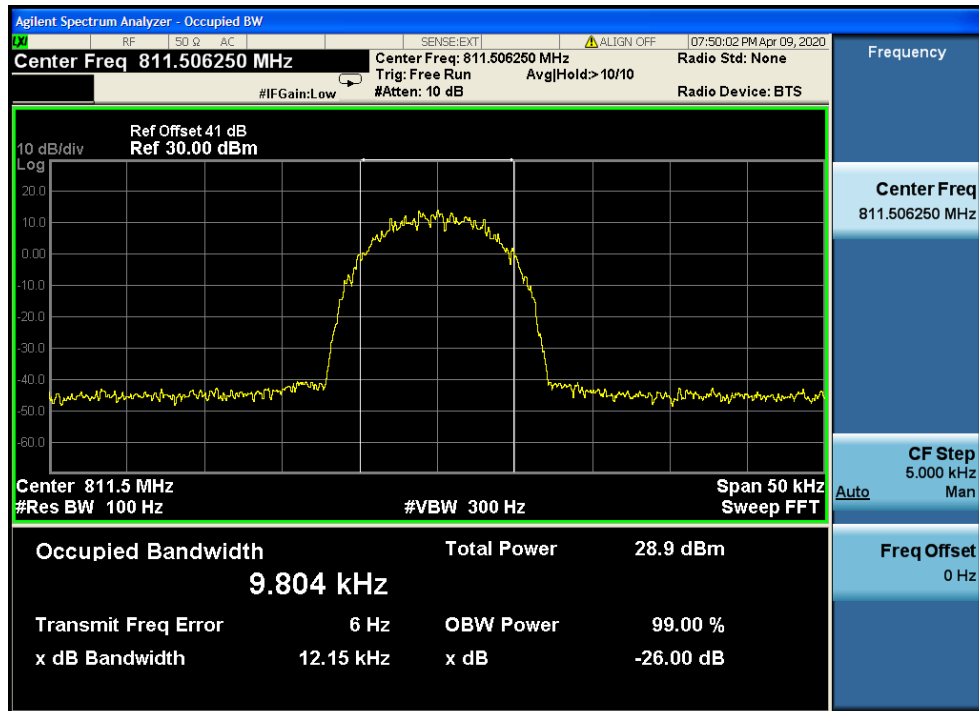
Output



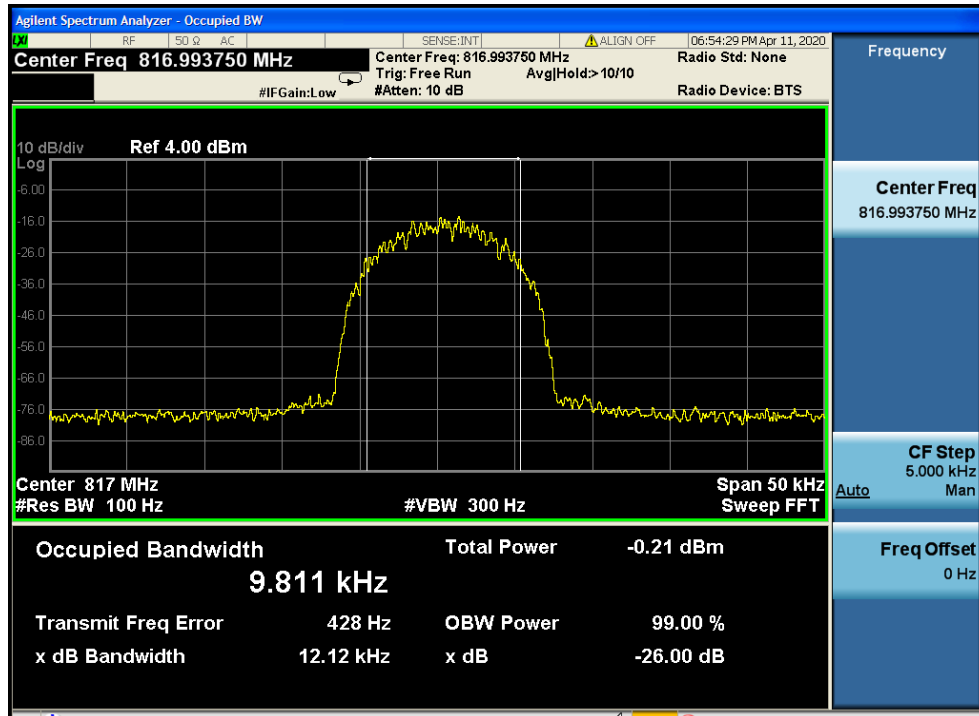
1.2 middle frequency Input



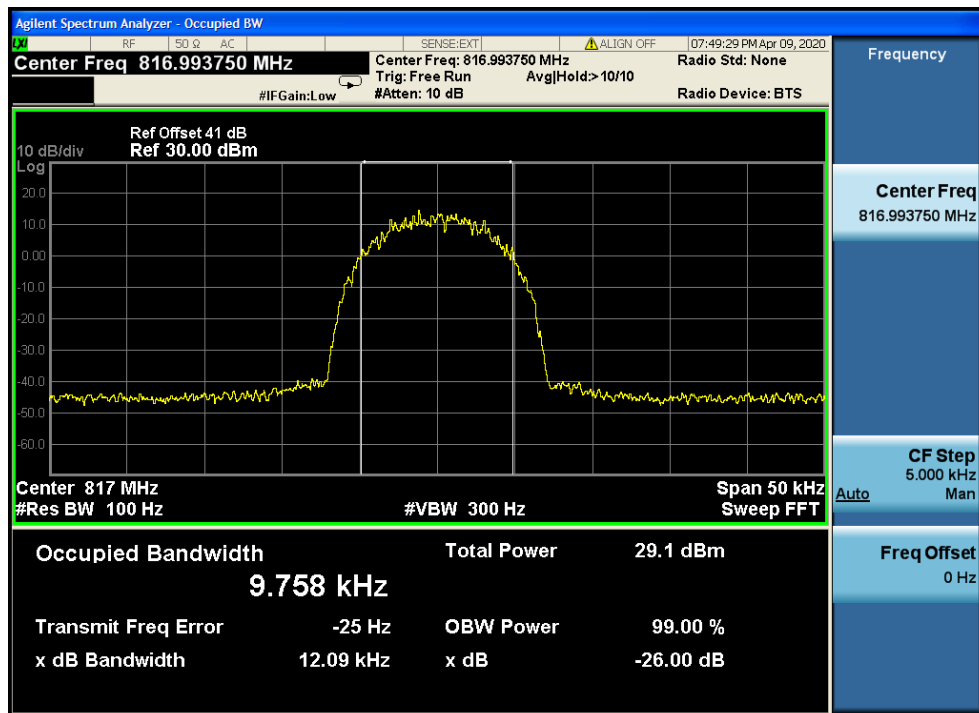
Output



1.3 highest frequency Input



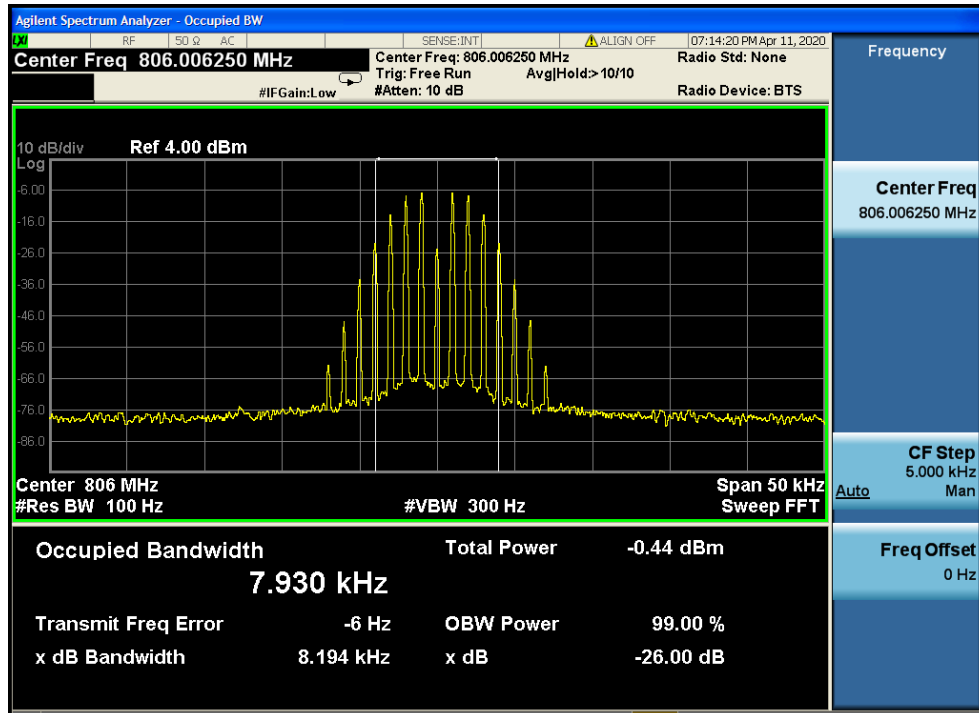
Output



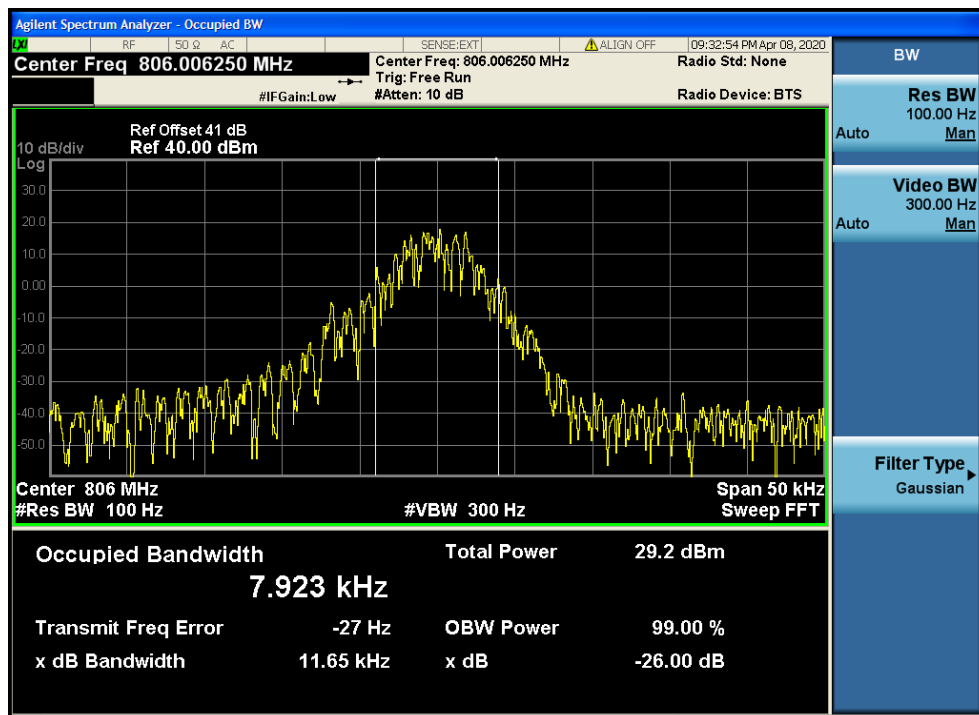
6.3 For FM-12.5K mode

1.1 lowest frequency

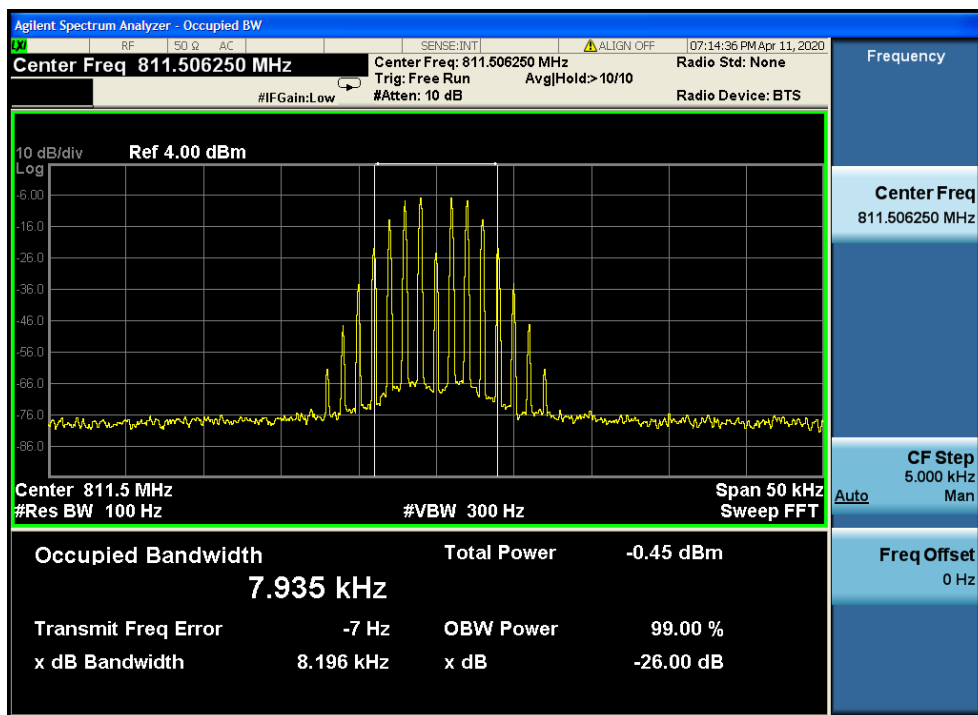
Input



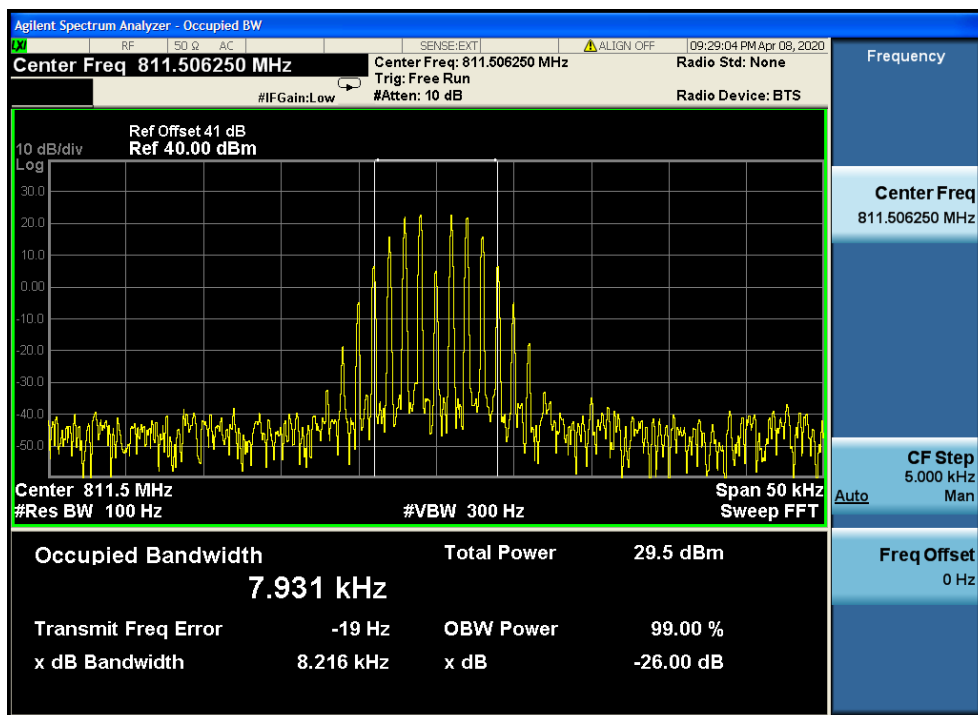
Output



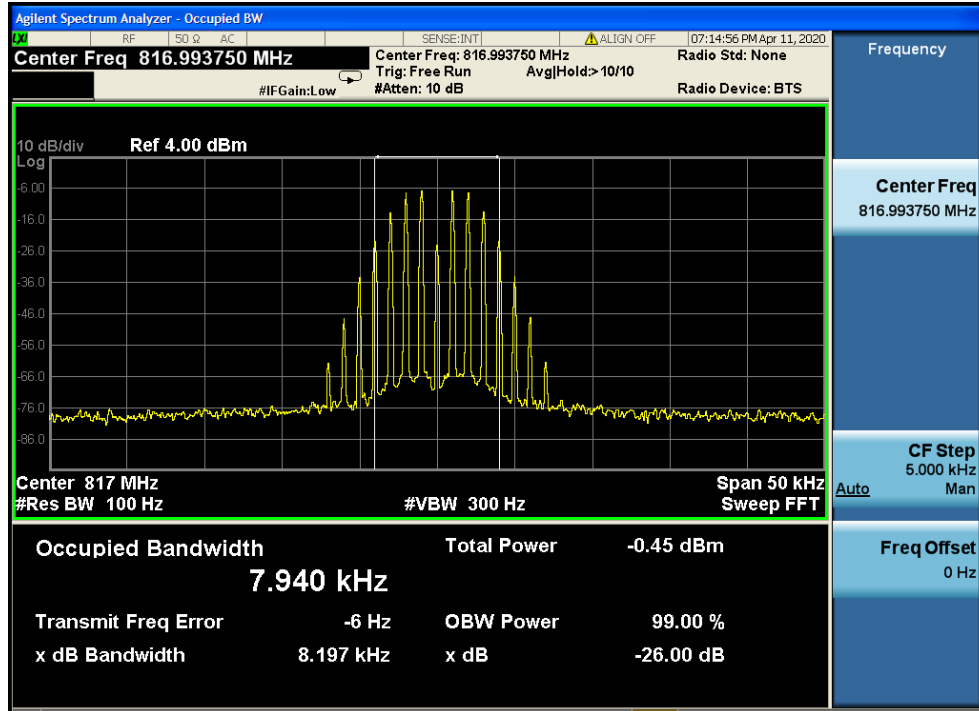
1.2 middle frequency
Input



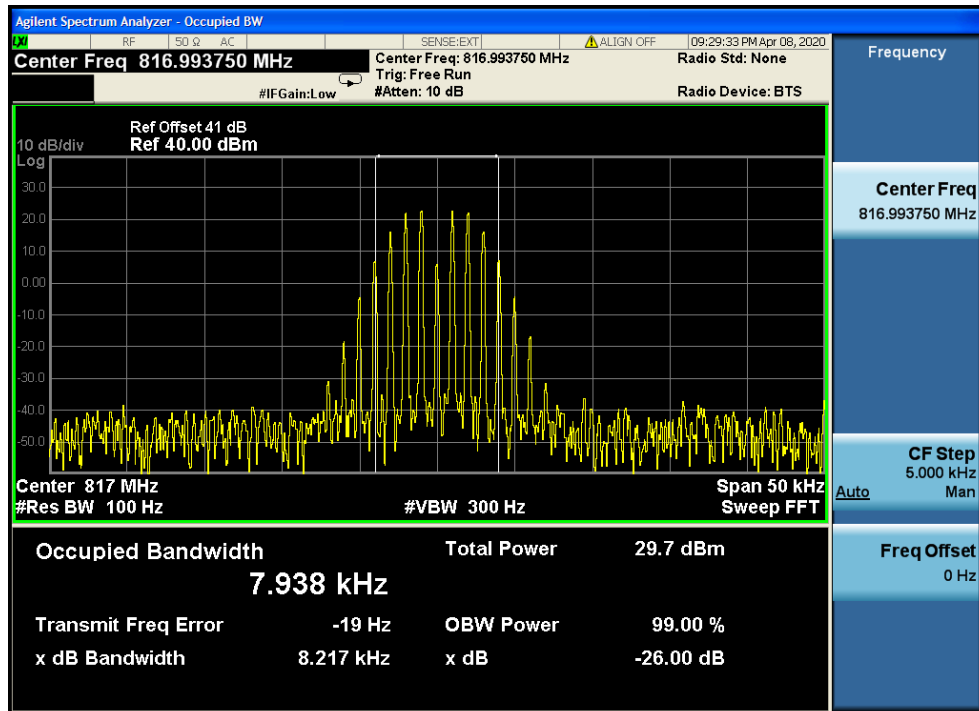
Output



1.3 highest frequency Input



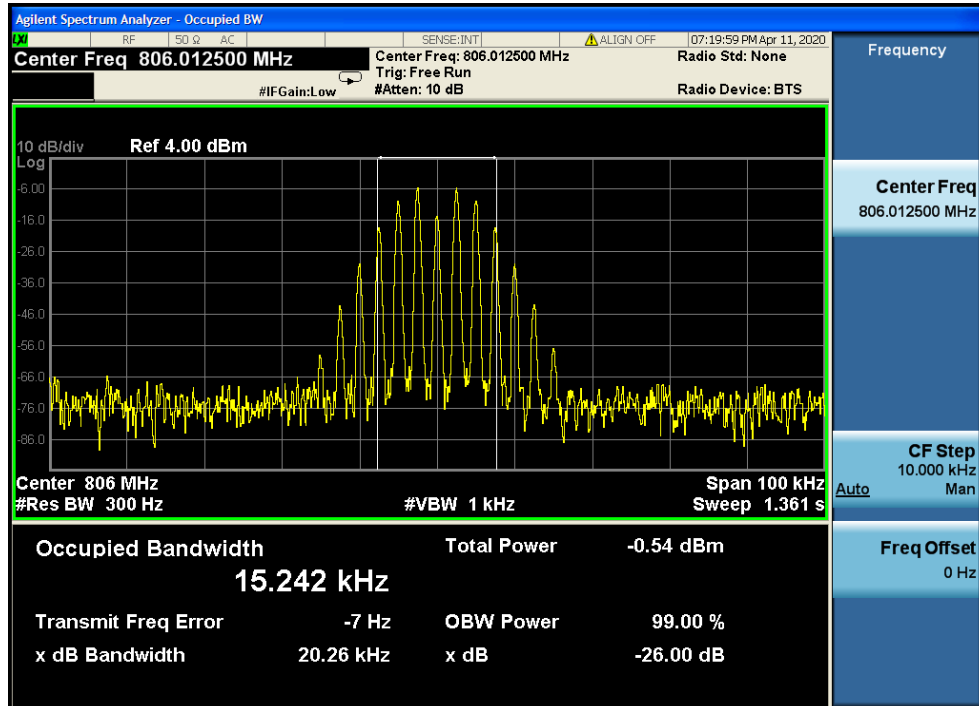
Output



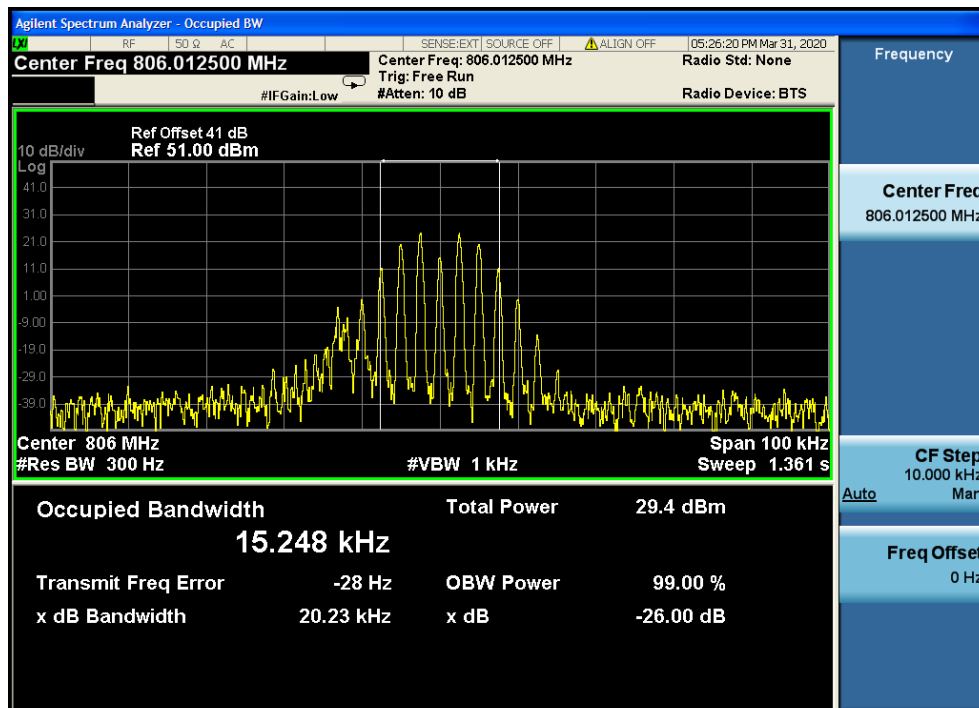
6.4 For FM-25K mode

1.1 lowest frequency

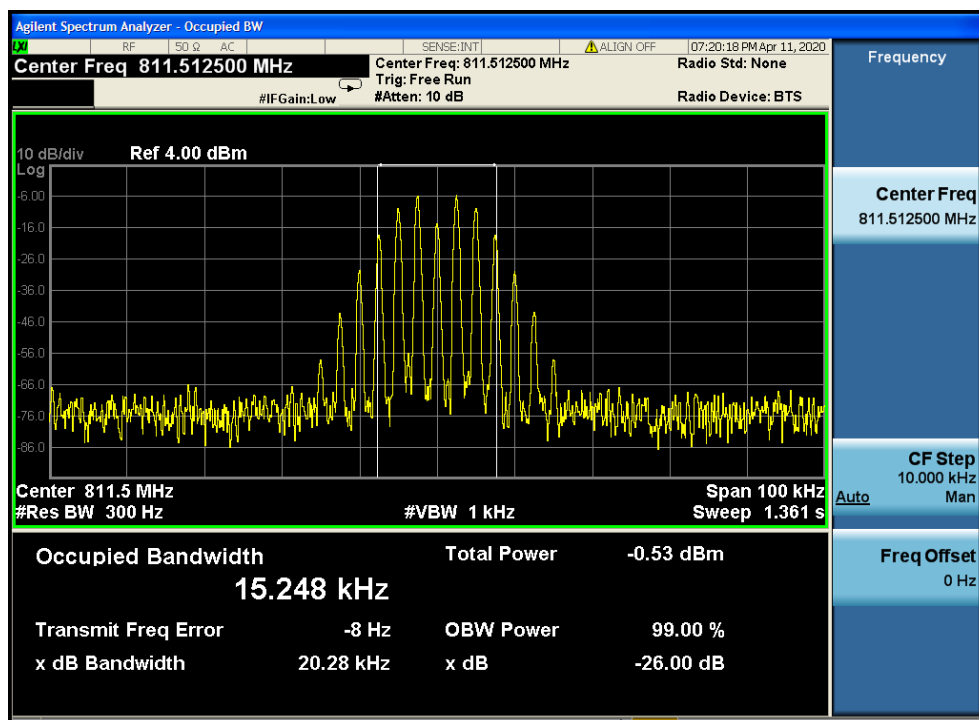
Input



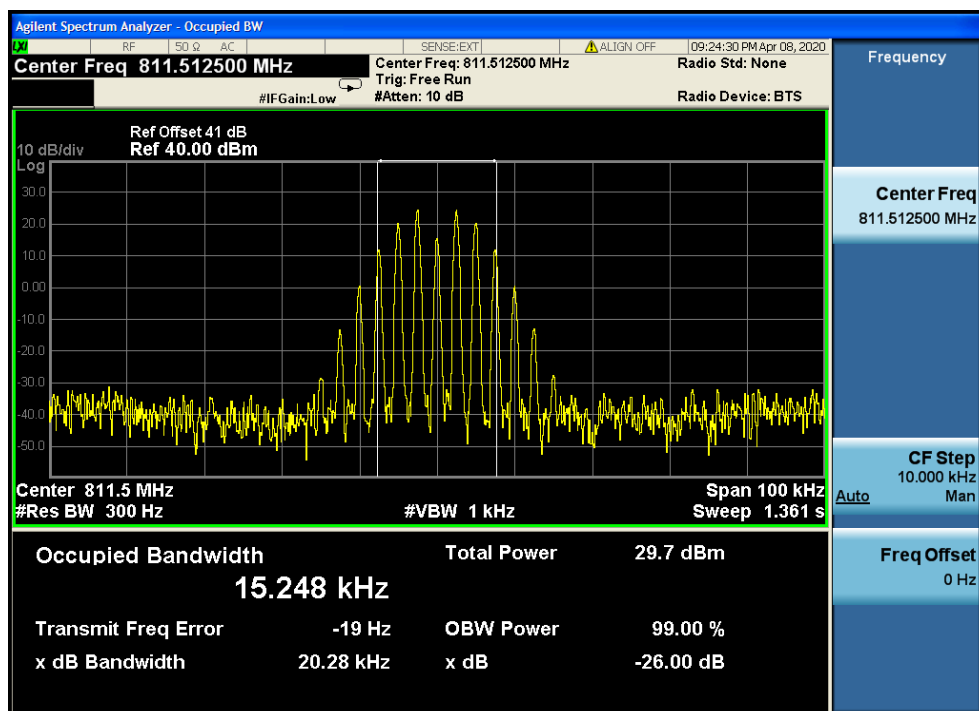
Output



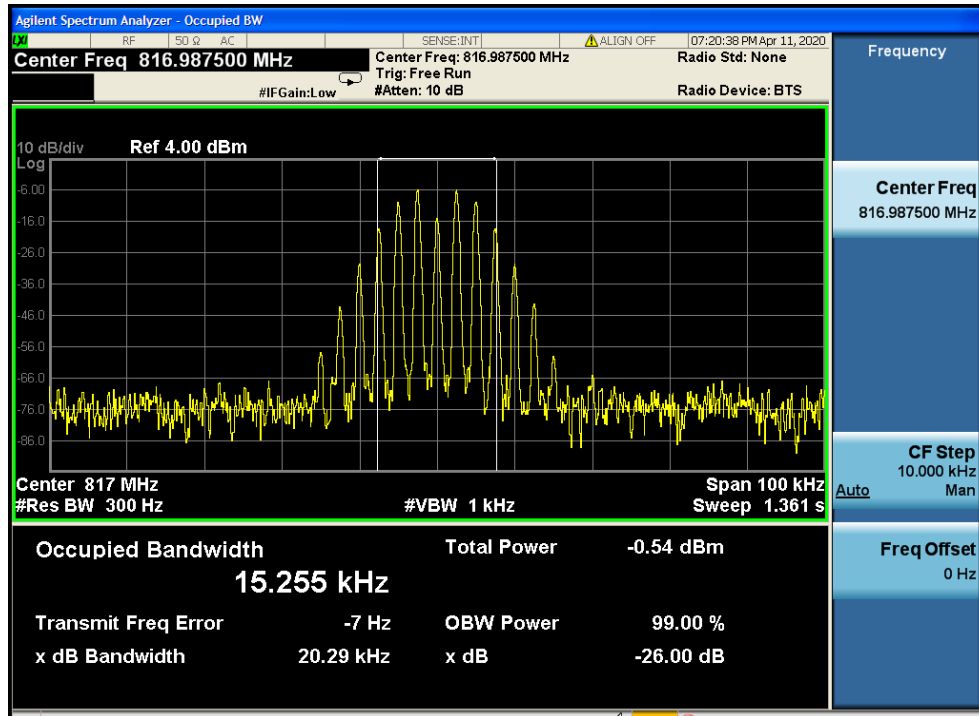
1.2 middle frequency Input



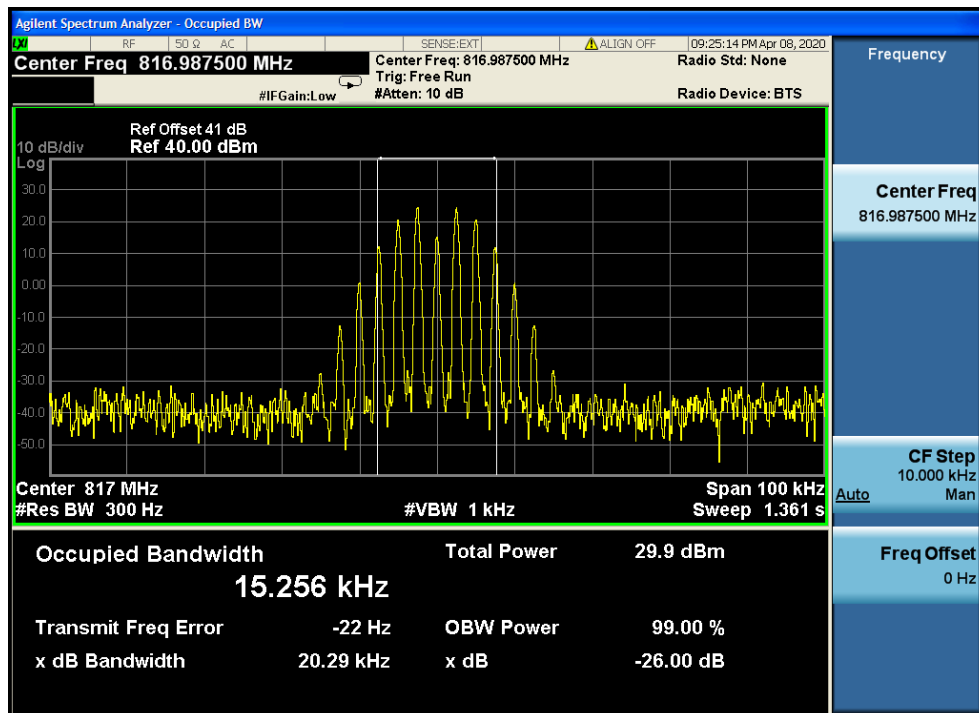
Output



1.3 highest frequency Input



Output



6.1.10 Out of Band Rejection

Test Requirement: KDB935210 D02

Test for rejection of out of band signals. Filter freq. response plots are acceptable.

Test Method: KDB935210 D02

EUT Operation:

Status: Drive the EUT to maximum output power. .

Conditions: Normal conditions

Application: Cellular Band RF output ports

Test Configuration:

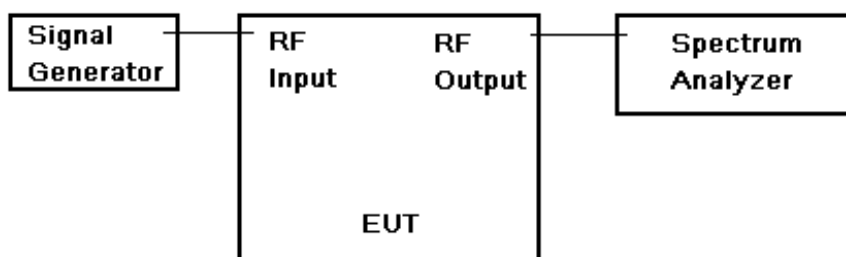


Fig.4. Out of Band rejection test configuration

Test Procedure:

1. Connect the equipment as illustrated;
 2. Test the background noise level with all the test facilities;
 3. Keep one transmitting path, all other connectors shall be connected by normal power or RF leads;
 4. Select the attenuator to avoid the test receiver or spectrum analyzer being destroyed;
 5. Keep the EUT continuously transmitting in max power;
 6. Signal generator sweep from the frequency more lower than the product frequency to the frequency more higher than it, find the product band filter characteristic;
- With the aid of a CW Swept signal generator and spectrum analyser, the bandwidth and frequency response of the open channel (i.e. at the point where the gain has fallen by 20dB) is measured.

This measurement shows the gain-versus-frequency response of the open channel from the midband frequency f_0 of the channel up to at least $f_0 + 250\%$ of the 20dB bandwidth.





6.1.10.1 Measurement Record:

Class A model number:

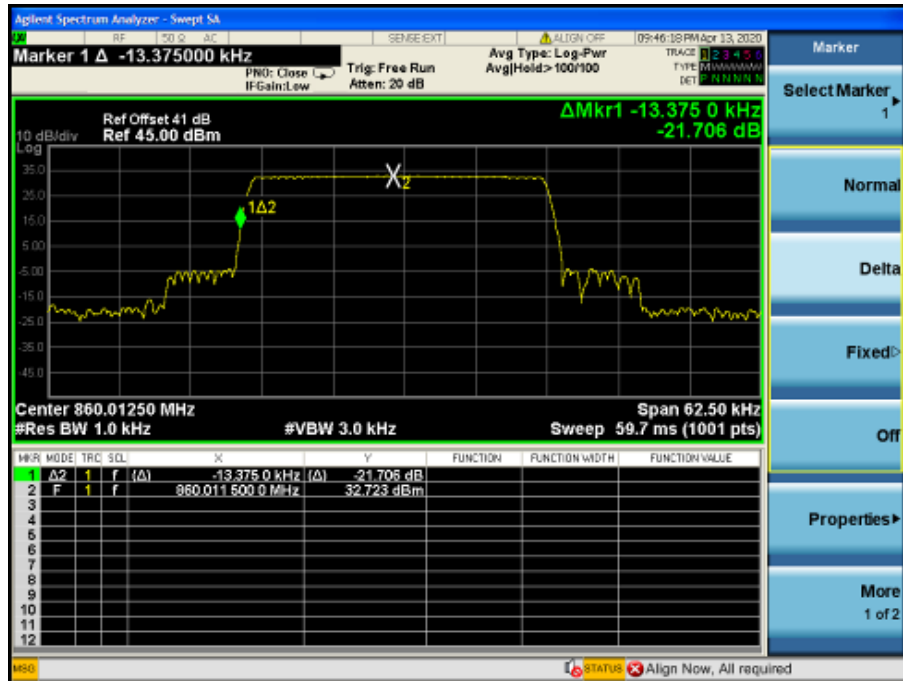
Frequency (MHz)	20dB Bandwidth (kHz)
851.0125	27.6875
856.0125	27.6875
861.9875	27.6875
806.0125	27.8125
811.0125	27.8125
816.9875	27.8125



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Downlink:851MHz -862MHz

Middle frequency
Left



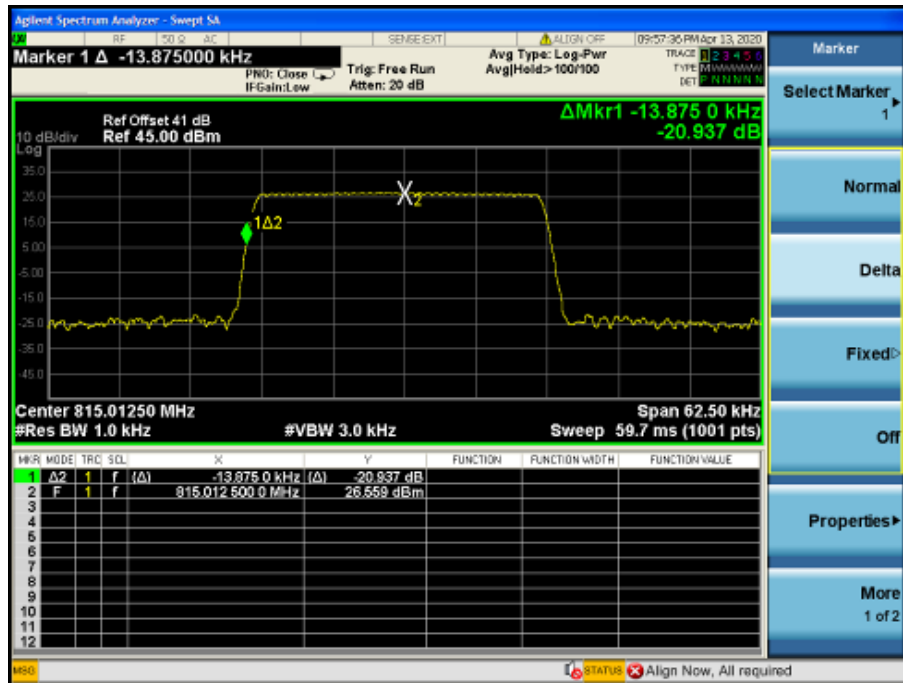
right



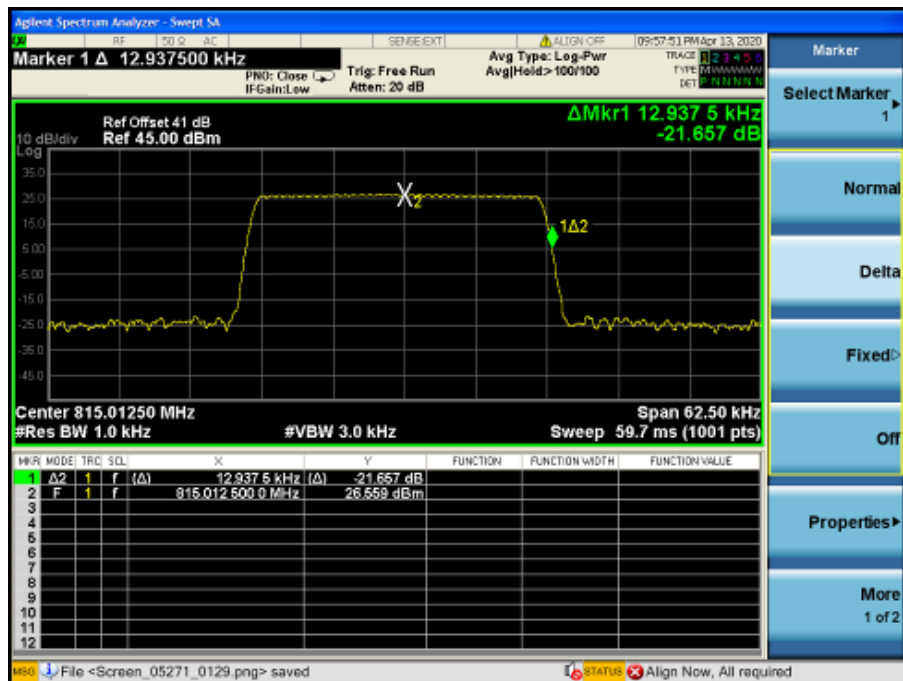
4. Test for Uplink :806MHz -817MHz

Middle frequency

left



right





Class B model number:

Frequency (MHz)	20dB Bandwidth (MHz)
851-862	11.8525
806-817	11.7975

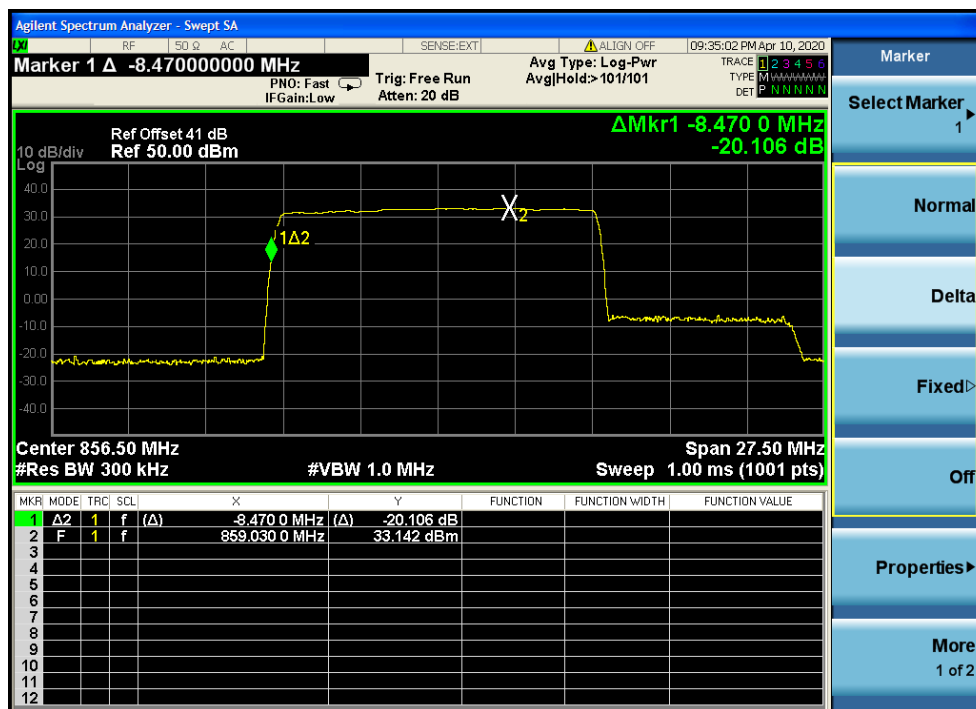


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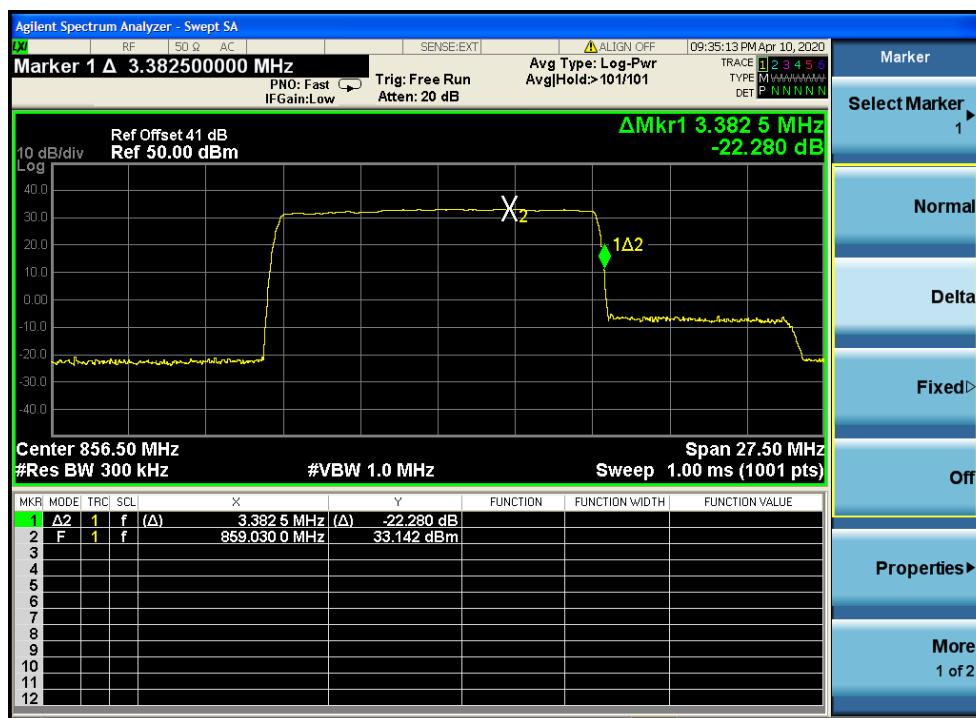
Test for Uplink :851MHz -862MHz

1)Lowest frequency

left



right



2. Test for Uplink :806MHz -817MHz

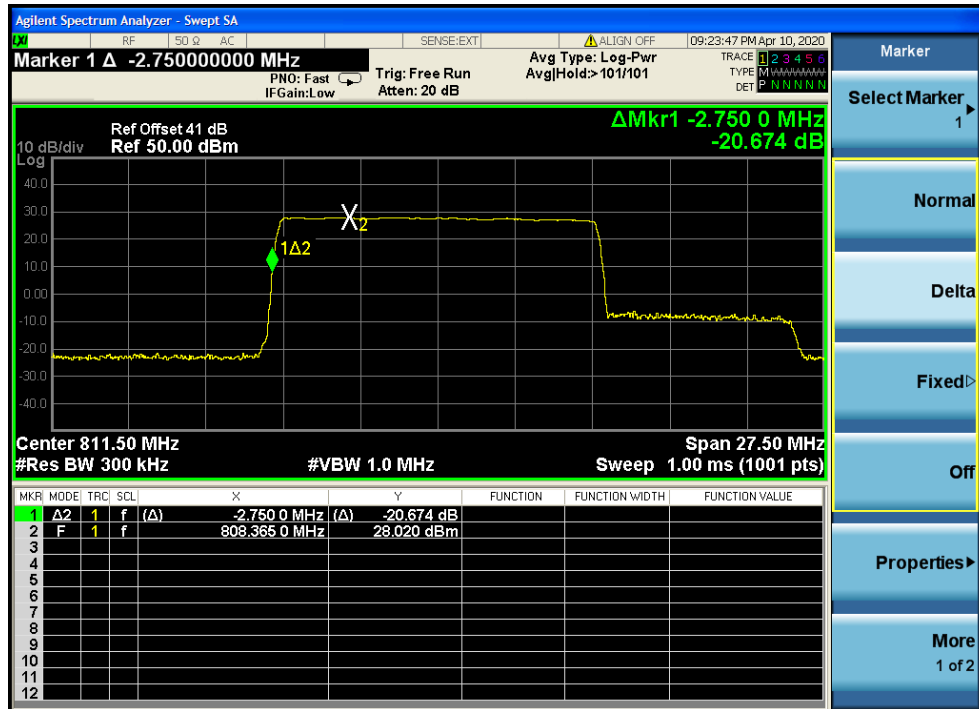


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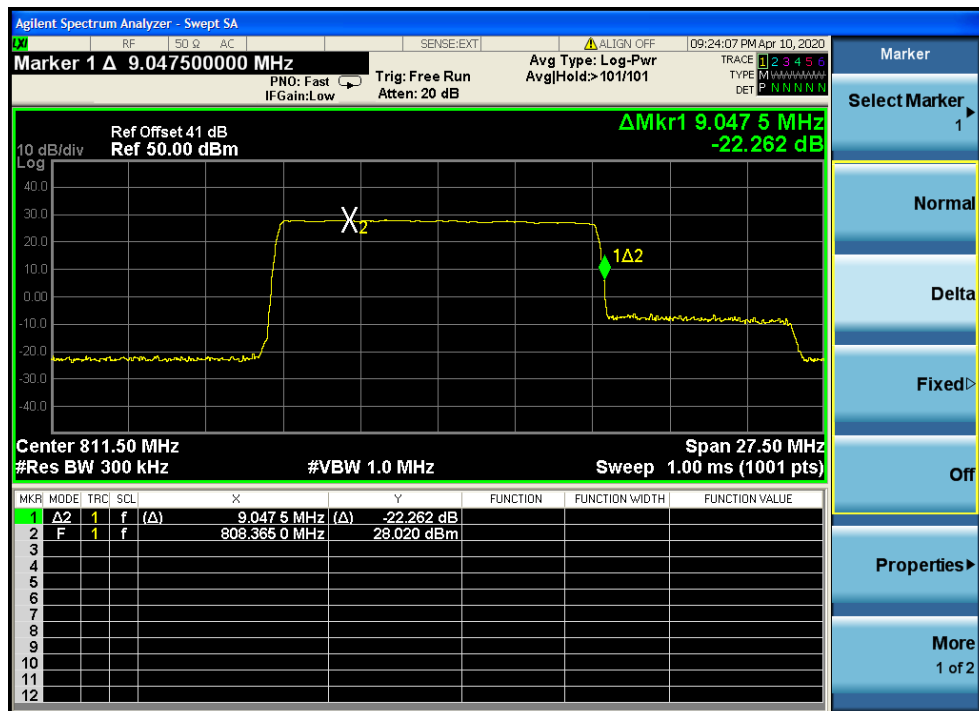
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1) Lowest frequency left



right



6.1.11 Frequency Stability

Test Requirement: FCC part 90.213

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

Test Method: FCC part 2.1055

EUT Operation:

Status: Drive the EUT to maximum output power.

Conditions: Temperature conditions, voltage conditions

Application: Cellular Band RF output ports

Test Procedure:

1. Temperature conditions:

- a) The RF output port of the EUT was connected to Frequency Meter;
- b) Set the working Frequency in the middle channel;
- c) record the 20°C and nominal voltage frequency value as reference point;
- d) vary the temperature from -30°C to 50°C with step 10°C
- e) when reach a temperature point, keep the temperature balance at least 1 hour to make the product working in this status;
- f) read the frequency at the relative temperature.

2. Voltage conditions:

- a) record the 20°C and nominal voltage frequency value as reference point;
- b) vary the voltage from -15% nominal voltage to +15% voltage;
- c) read the frequency at the relative voltage.

Test limit:

frequency range(MHz)	Minimum Frequency Stability(ppm)
758-768/788~798	±2.5
769-775/799-805	±1.5(Channel Bandwidth 12.5kHz) ±2.5(Channel Bandwidth 25kHz)
806-809/851-854	±1.0
809-824/854-869	±1.5



6.1.11.1 Measurement Record:

1) Frequency Stability vs temperature:

Class A model number:

1.3) Test for Downlink: 851~862MHz (middle channel 856.5062513)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	856.5062508	0.000580
40	856.5062512	0.000120
30	856.5062519	0.000698
20	856.5062513	Reference
10	856.5062511	0.000230
0	856.5062507	0.000070
-10	856.5062516	0.000349
-20	856.5062509	-0.000470
-30	856.5062514	-0.000116

1.4) Test for Uplink: 806~817MHz (middle channel 811.5062509)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	811.5062507	-0.000250
40	811.5062512	0.000368
30	811.5062515	0.000736
20	811.5062509	Reference
10	811.5062507	-0.000125
0	811.5062513	0.000491
-10	811.5062516	0.000859
-20	811.5062518	0.001100
-30	811.5062517	0.000982

Class B model number:

1.1) Test for Downlink: 851~862MHz (middle channel 856.5062509)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	856.5062505	0.000470
40	856.5062513	0.000465
30	856.5062512	0.000349
20	856.5062509	Reference
10	856.5062514	0.000581
0	856.5062508	0.000120
-10	856.5062517	0.000930
-20	856.5062518	-0.001050
-30	856.5062516	-0.000814

1.2) Test for Uplink: 806~817MHz (middle channel 811.5062513)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	811.5062514	-0.000123
40	811.5062512	-0.000120
30	811.5062516	0.000368
20	811.5062513	Reference
10	811.5062509	-0.000490
0	811.5062508	0.000610
-10	811.5062507	0.000740
-20	811.5062517	0.000491
-30	811.5062508	0.000610



2) Frequency Stability vs voltage:

Class A model number:

2.1) For AC supplied:

2.1.1) Test for Downlink:851~862MHz (middle channel 856.50625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	856.5062508	0.000230
120	856.5062510	Reference
138 (120*1.15)	856.5062513	0.000349

2.1.2) Test for Downlink:806~817MHz (middle channel 811.50625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	811.5062507	0.000610
120	811.5062512	Reference
138 (120*1.15)	811.5062514	0.0002450

2.2) For DC supplied:

2.2.1) Test for Downlink:851~862MHz (middle channel 856.50625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
+40.8 (+48.0*0.85)	772.0062519	0.000260
+48.0	772.0062521	Reference
+55.2 (+48.0*1.15)	772.0062515	0.000780

2.2.2) Test for Uplink: 806~817MHz (middle channel 811.50625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
+40.8 (+48.0*0.85)	802.0062516	0.000374
+48.0	802.0062513	Reference
+55.2 (+48.0*1.15)	802.0062521	0.000997

Frequency Stability vs voltage:

Class B model number:

2.1) For AC supplied:

2.1.1) Test for Downlink:851~862MHz (middle channel 856.50625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	856.5062505	0.000231
120	856.5062511	Reference
138 (120*1.15)	856.5062514	0.000348

2.1.2) Test for Downlink:806~817MHz (middle channel 811.50625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	811.5062508	0.000611
120	811.5062513	Reference
138 (120*1.15)	811.5062515	0.0002451

2.2) For DC supplied:

2.2.1) Test for Downlink:851~862MHz (middle channel 856.50625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
+40.8 (+48.0*0.85)	772.0062518	0.000260
+48.0	772.0062521	Reference
+55.2 (+48.0*1.15)	772.0062514	0.000780

2.2.2) Test for Uplink: 806~817MHz (middle channel 811.50625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
+40.8 (+48.0*0.85)	802.0062517	0.000375
+48.0	802.0062513	Reference
+55.2 (+48.0*1.15)	802.0062522	0.000998

--The End of Report--