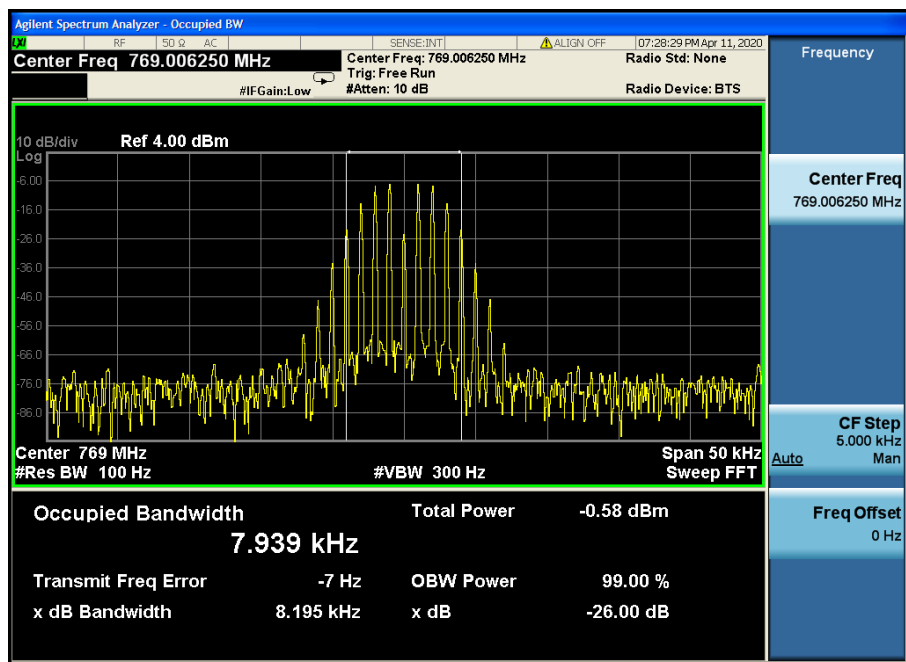
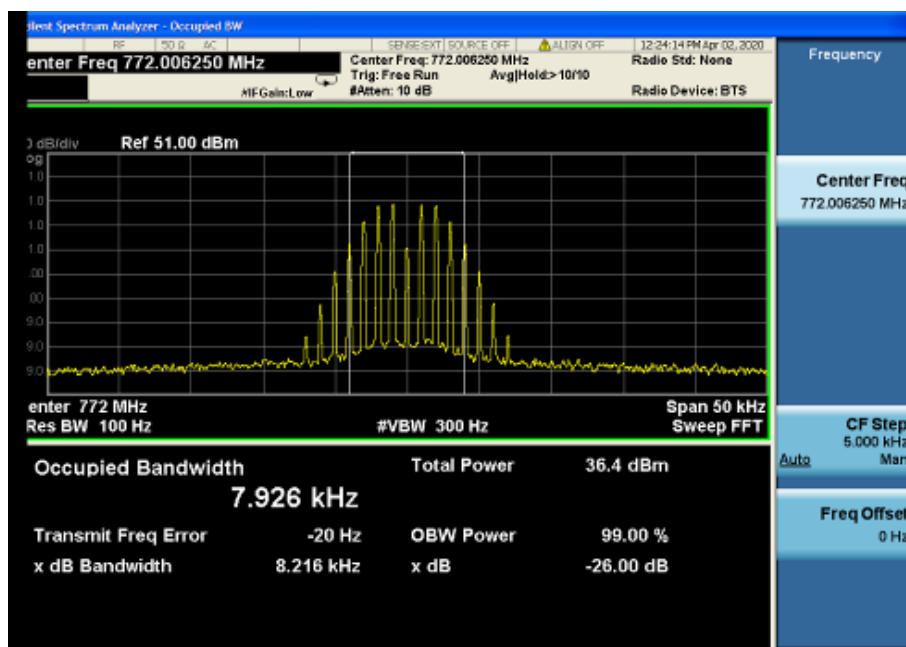


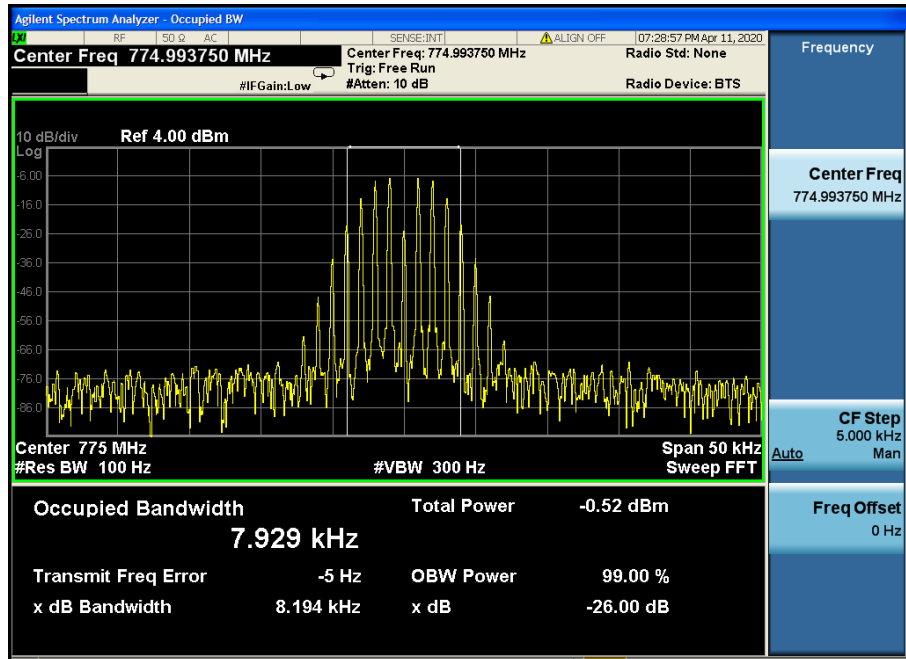
1.3.2 middle frequency Input



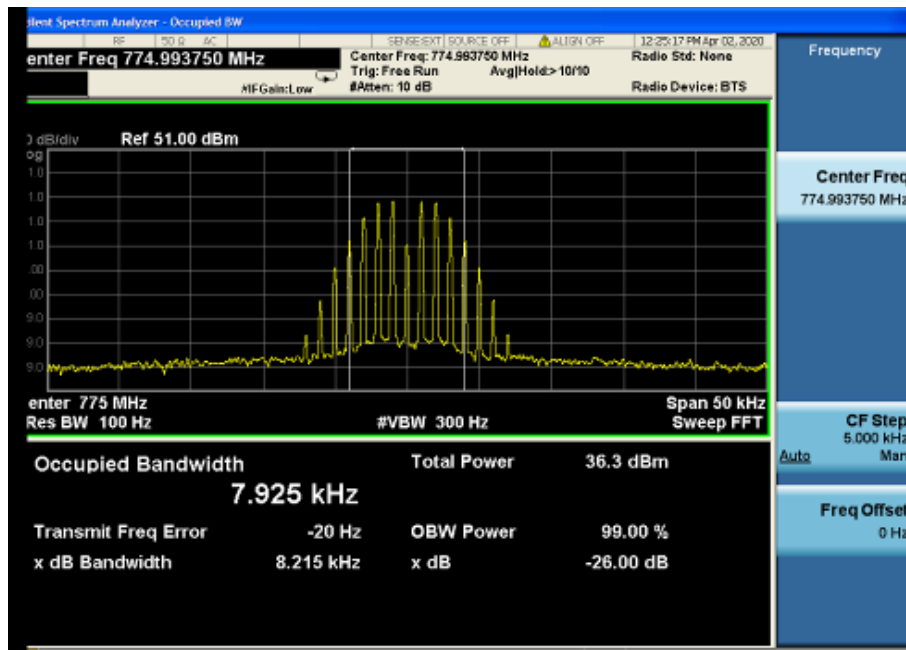
Output



1.3.3 highest frequency Input



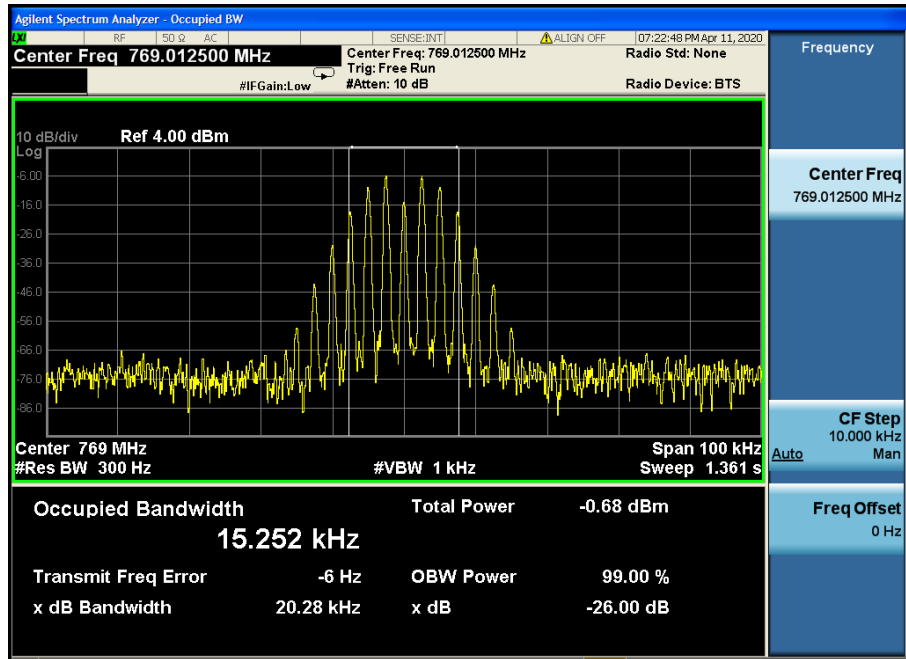
Output



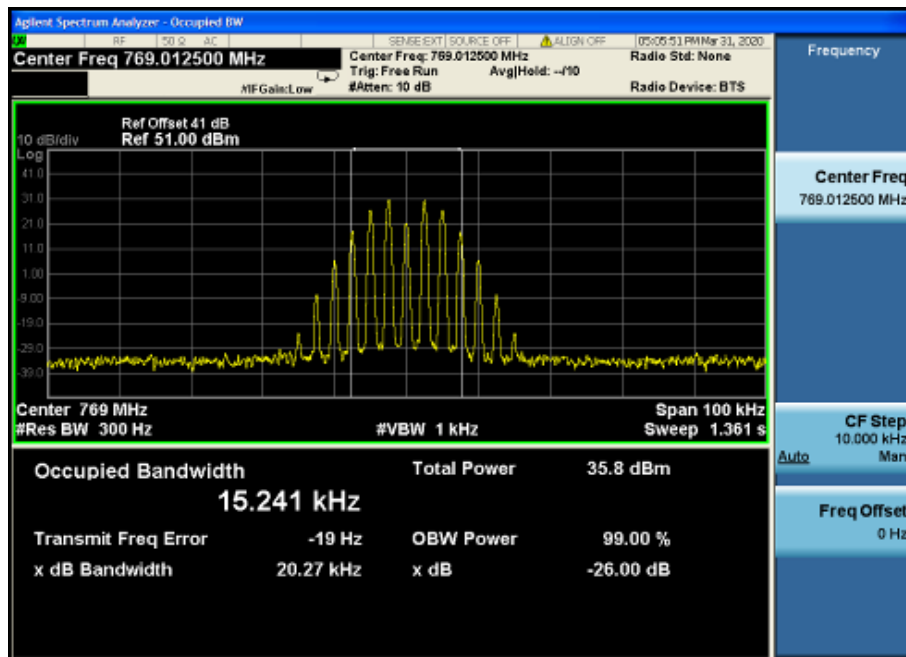
1.4 for FM-25K mode

1.4.1 lowest frequency

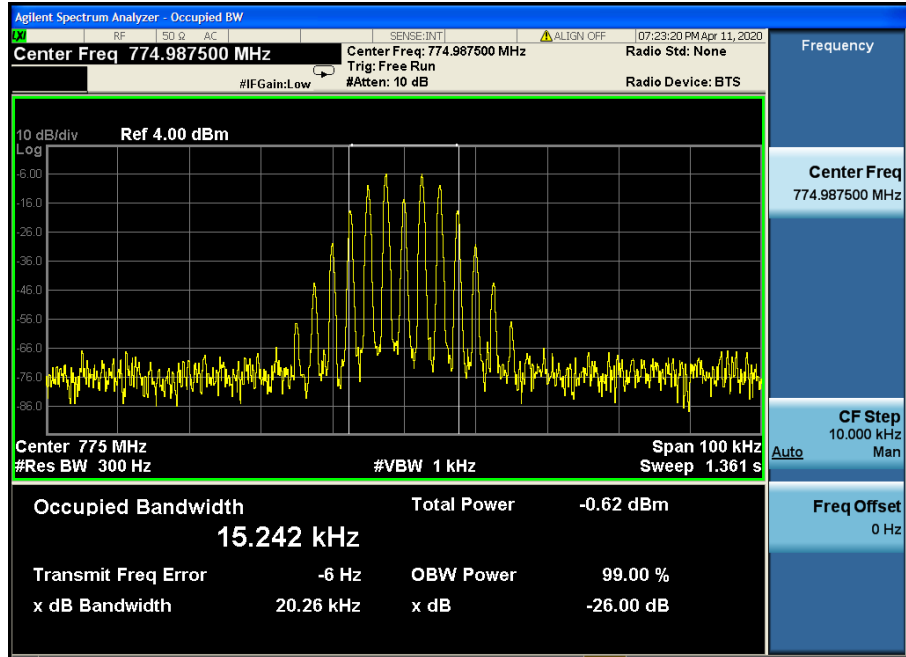
Input



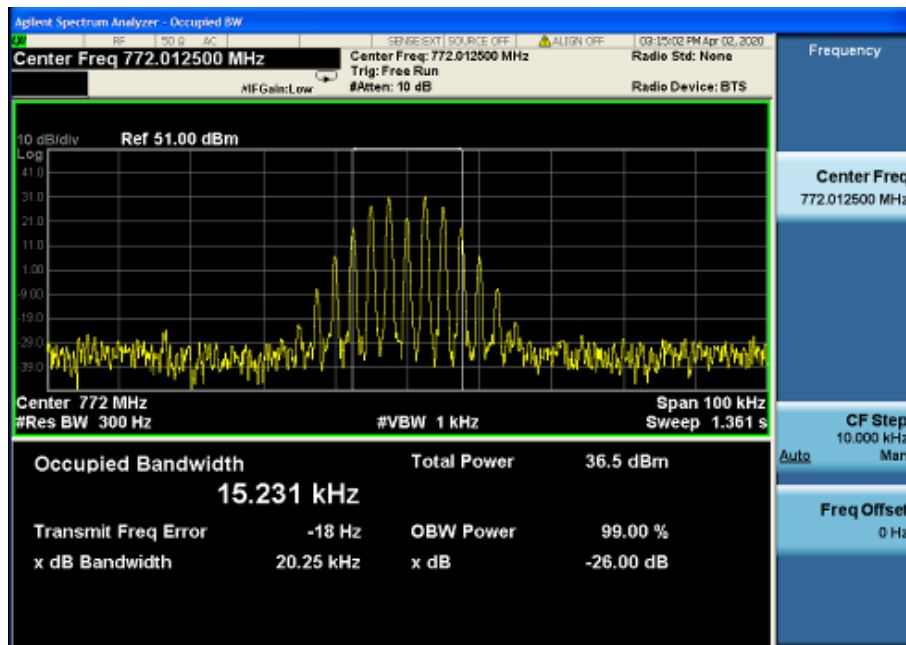
Output



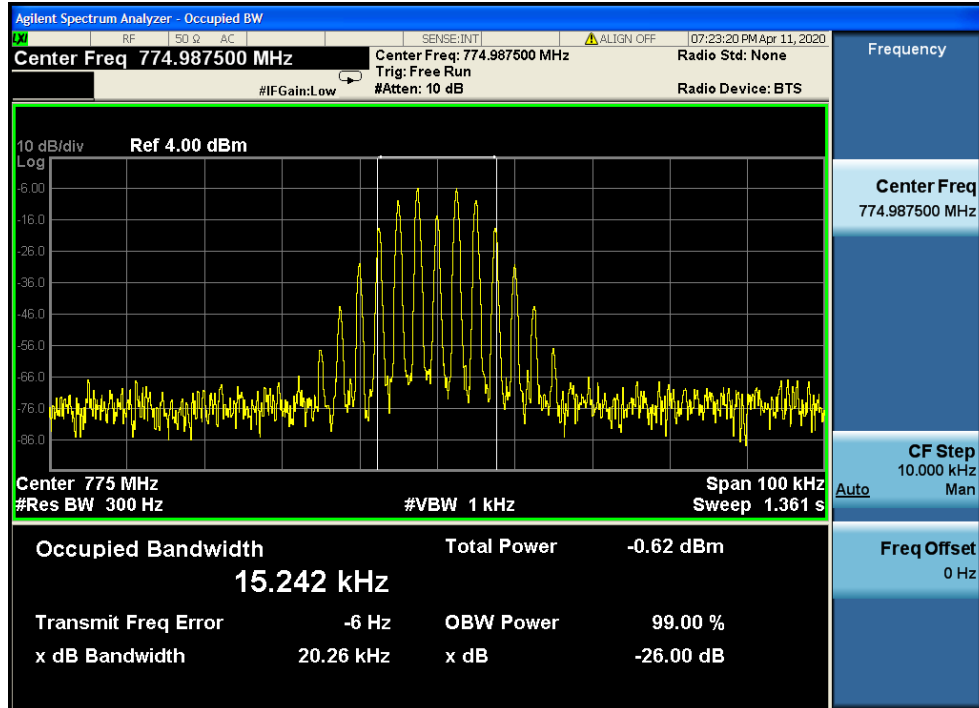
1.4.2 middle frequency Input



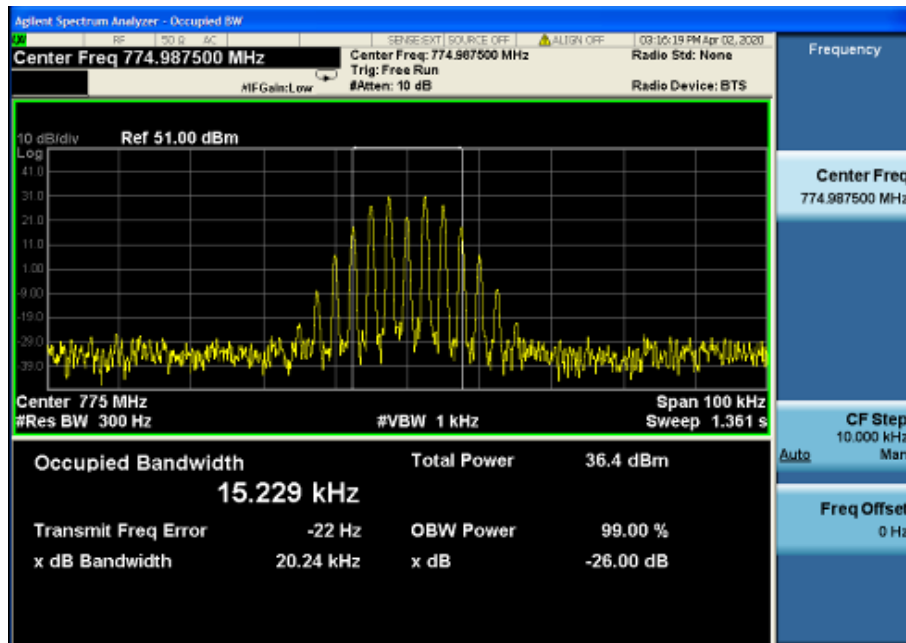
Output



1.4.3 highest frequency Input



Output

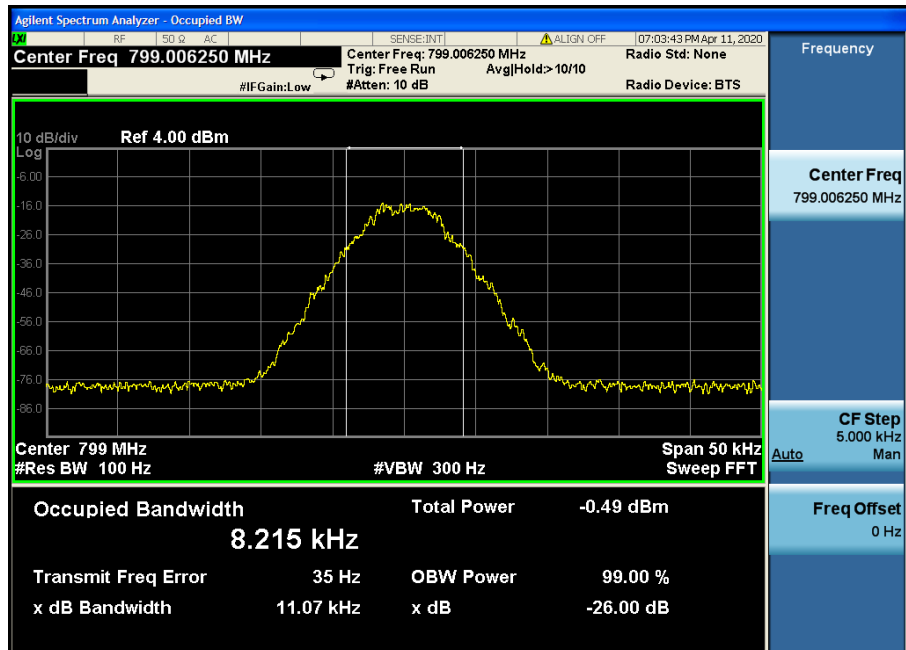


2、700MHz band Uplink:799MHz to 805MHz

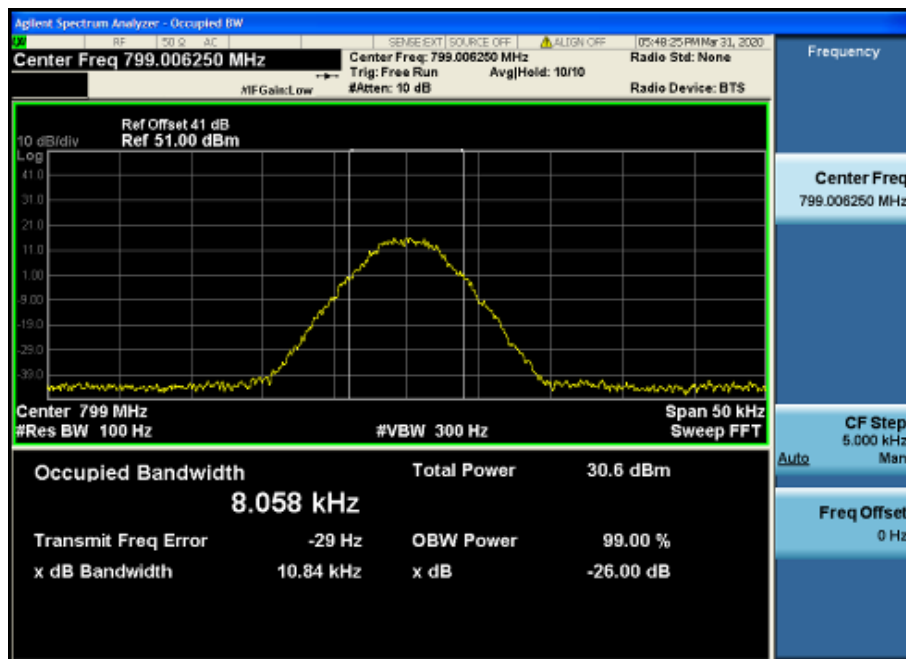
2.1 for C4FM mode

2.1.1 lowest frequency

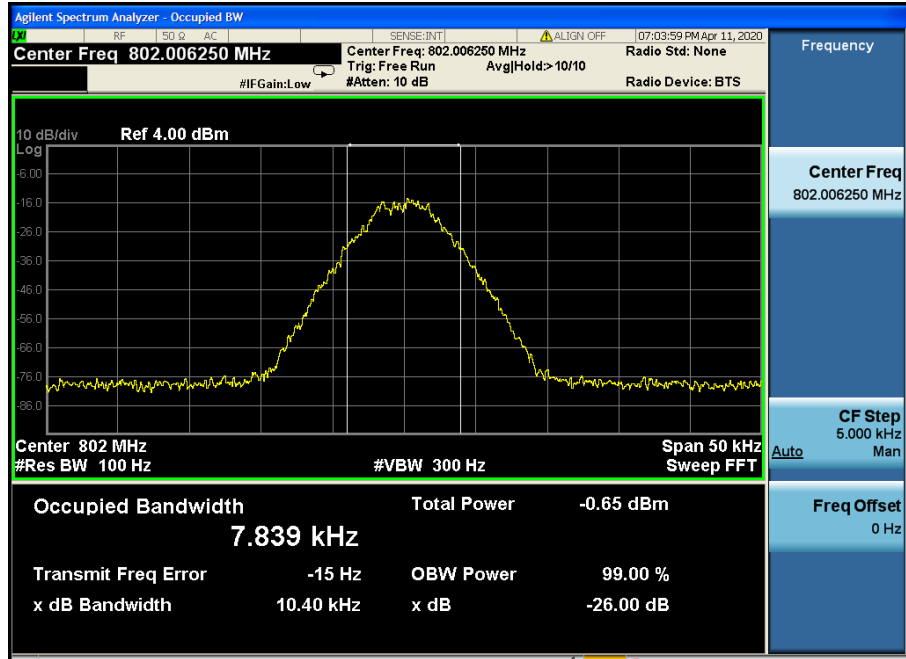
Input



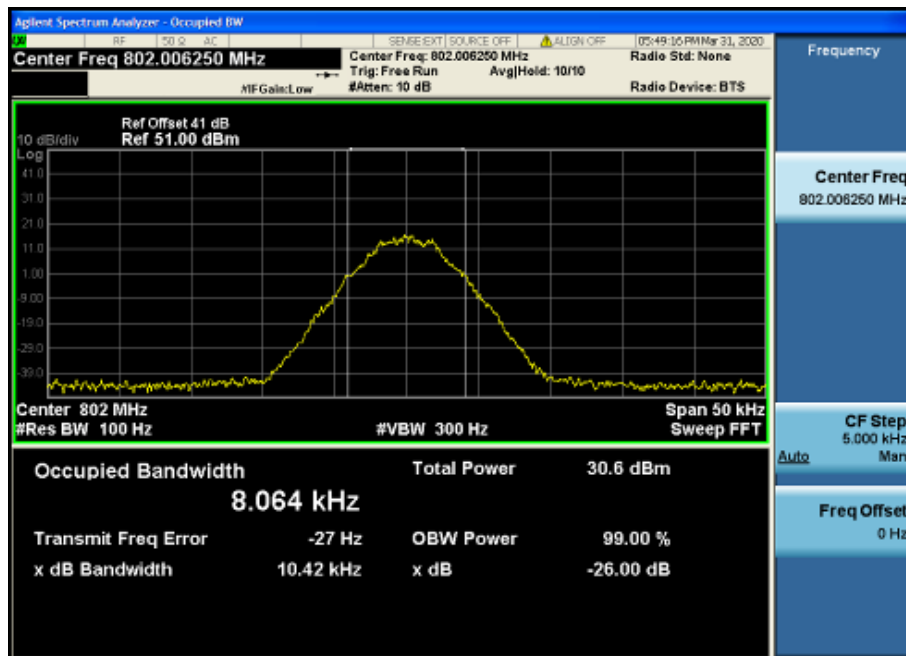
Output



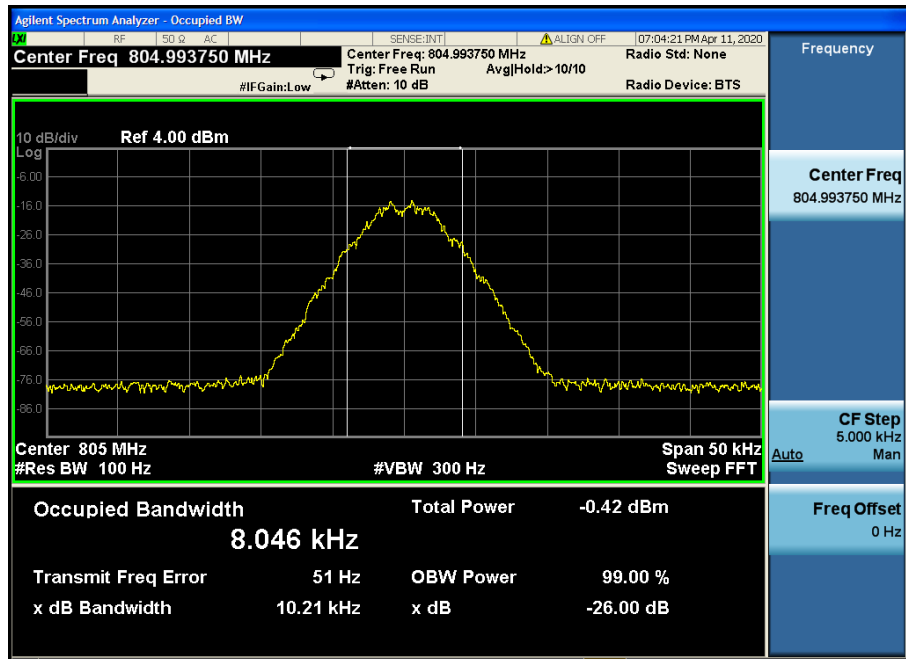
2.1.2 middle frequency Input



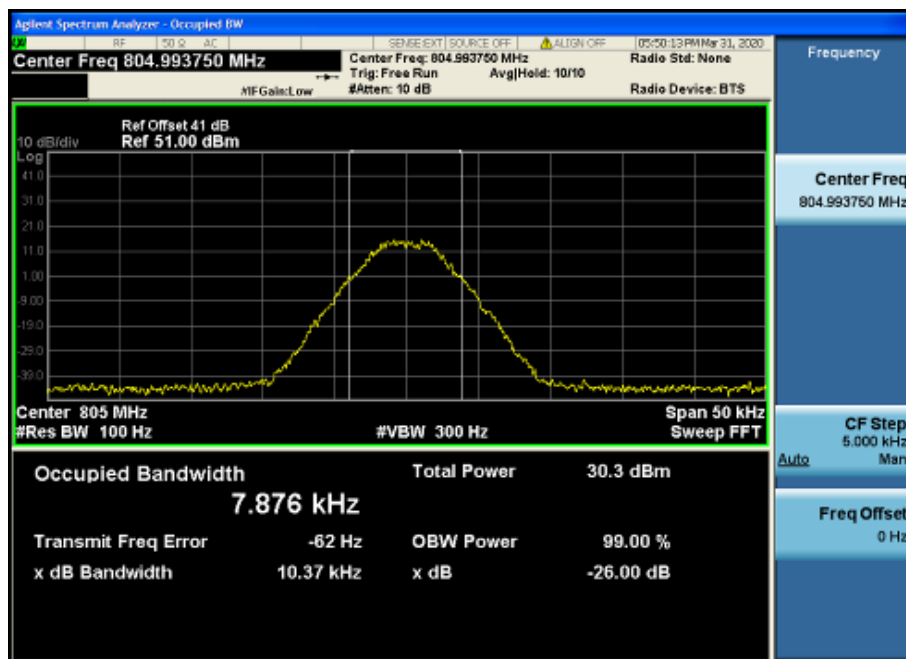
Output



2.1.3 highest frequency Input



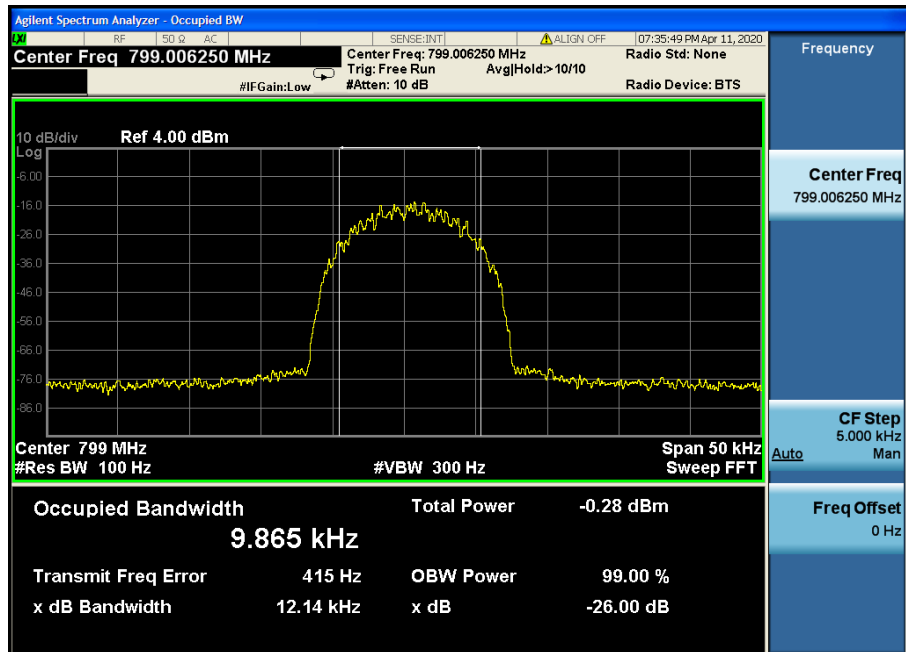
Output



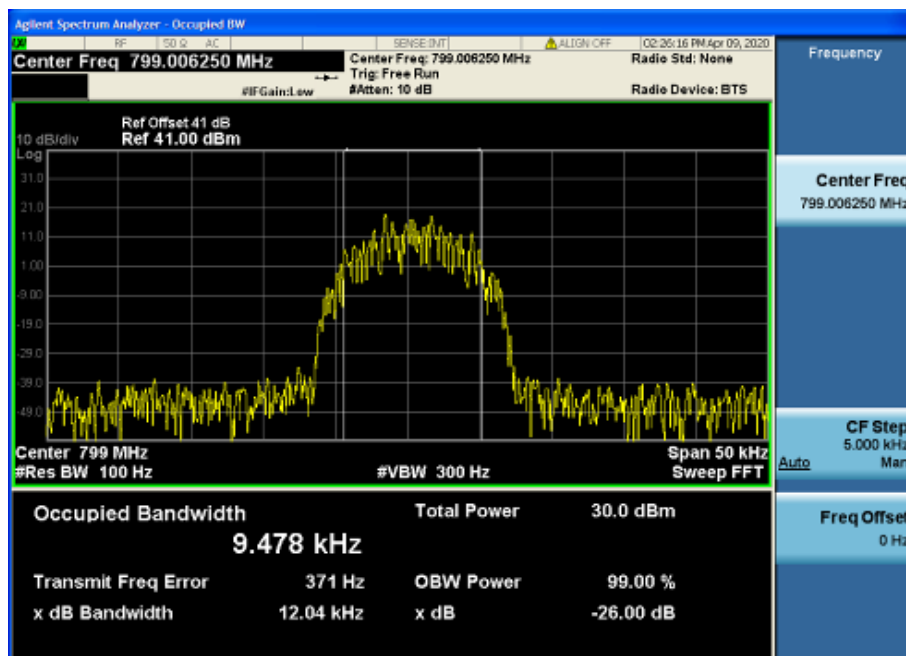
2.2 for HDQPSK mode

2.2.1 lowest frequency

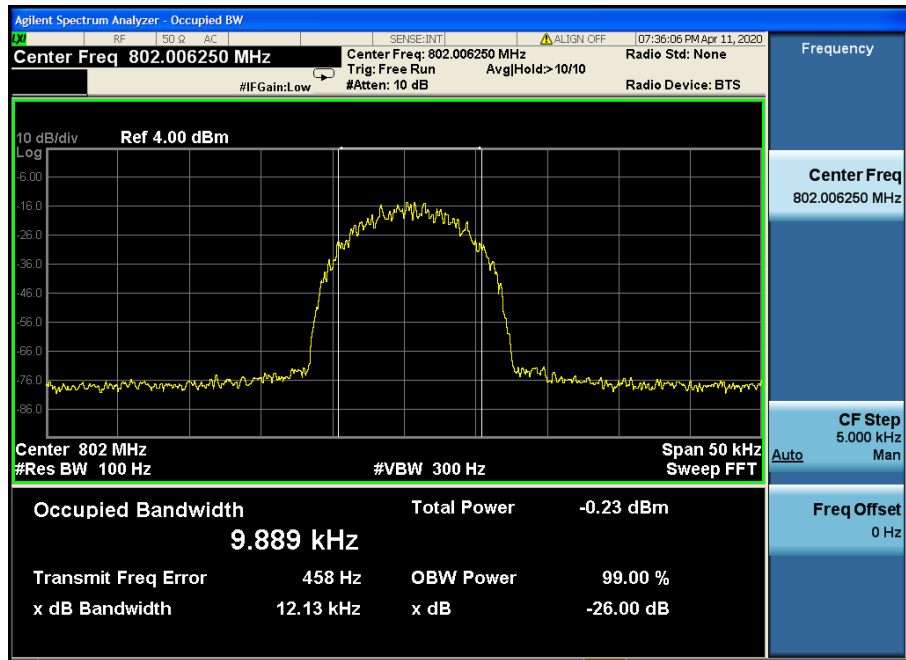
Input



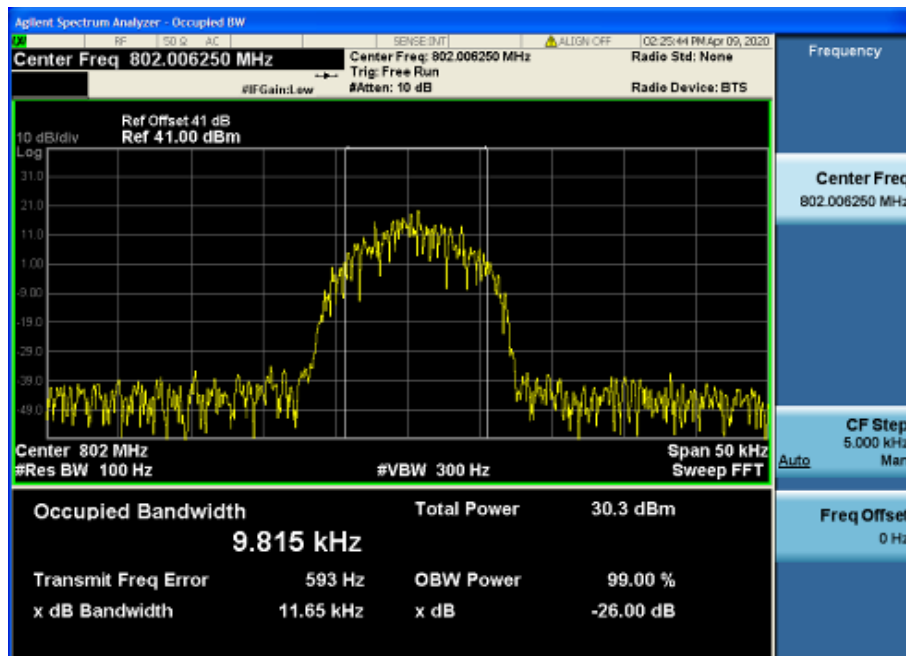
Output



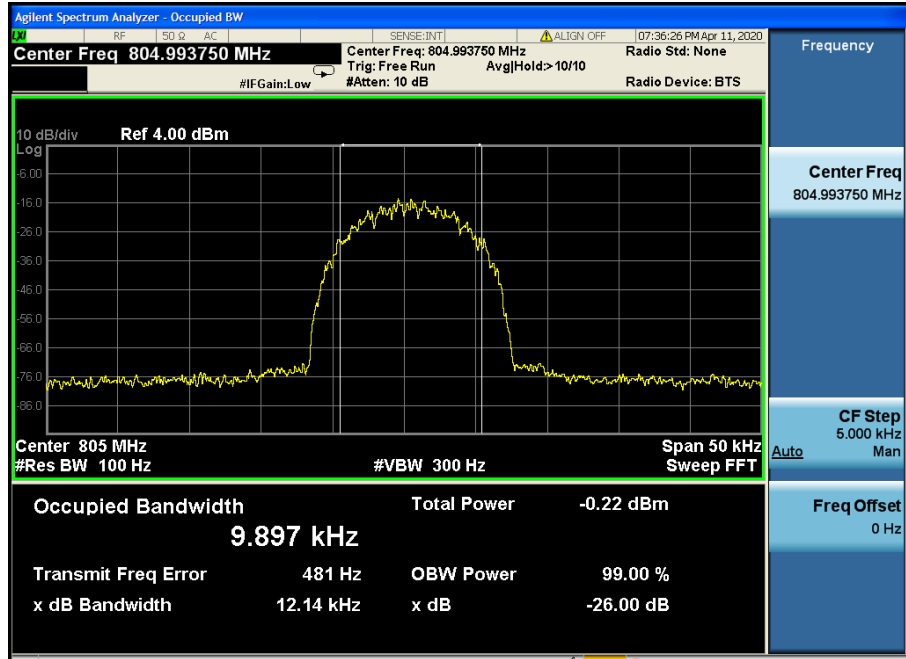
2.2.2 middle frequency Input



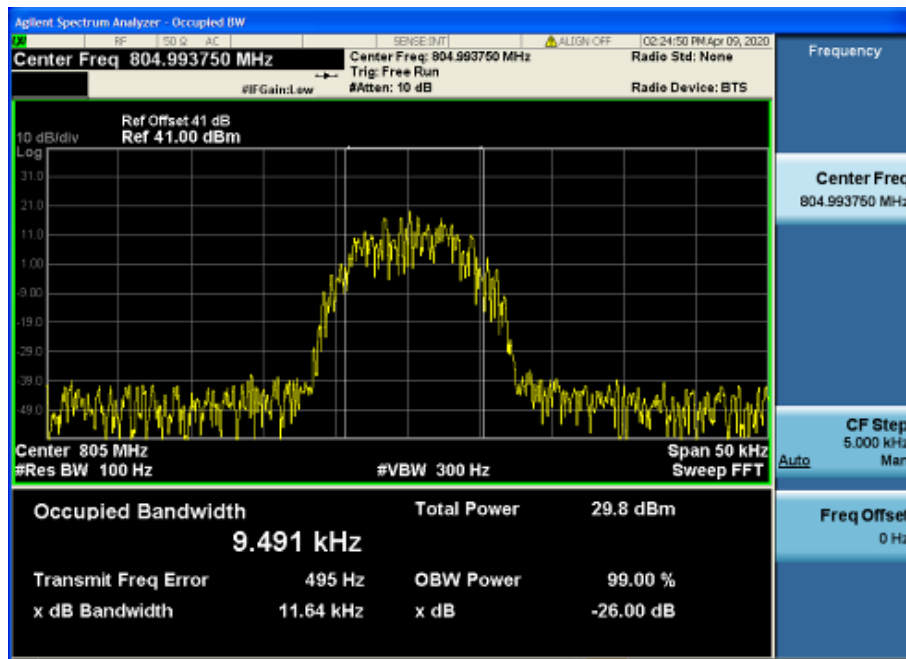
Output



2.2.3 highest frequency Input



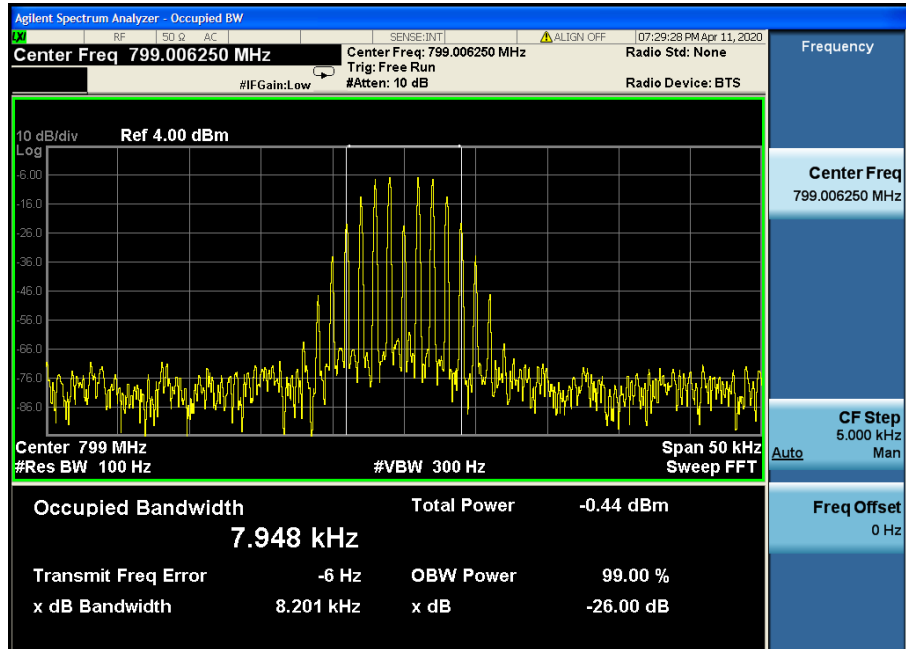
Output



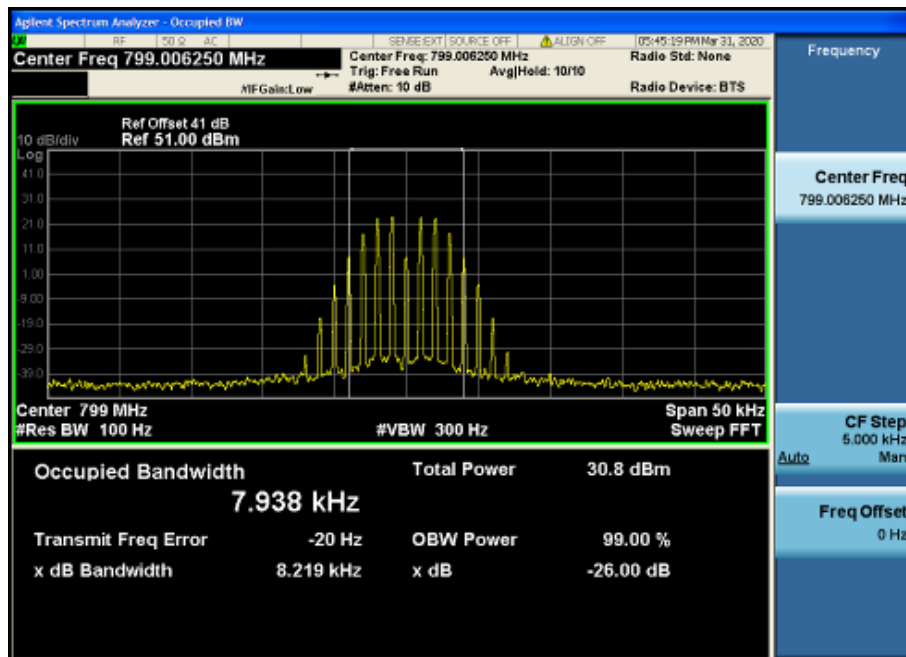
2.3 for FM-12.5K mode

2.3.1 lowest frequency

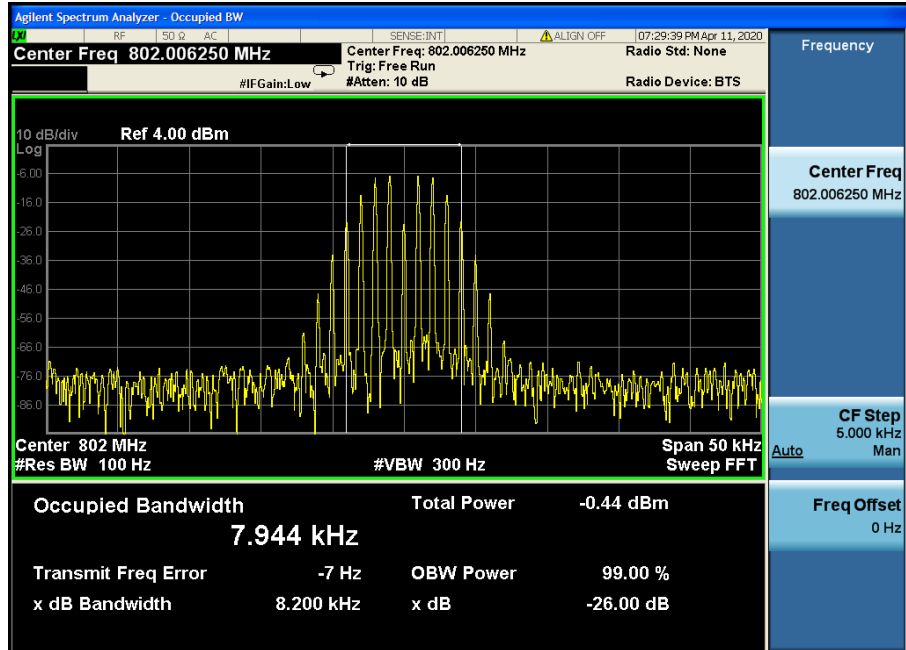
Input



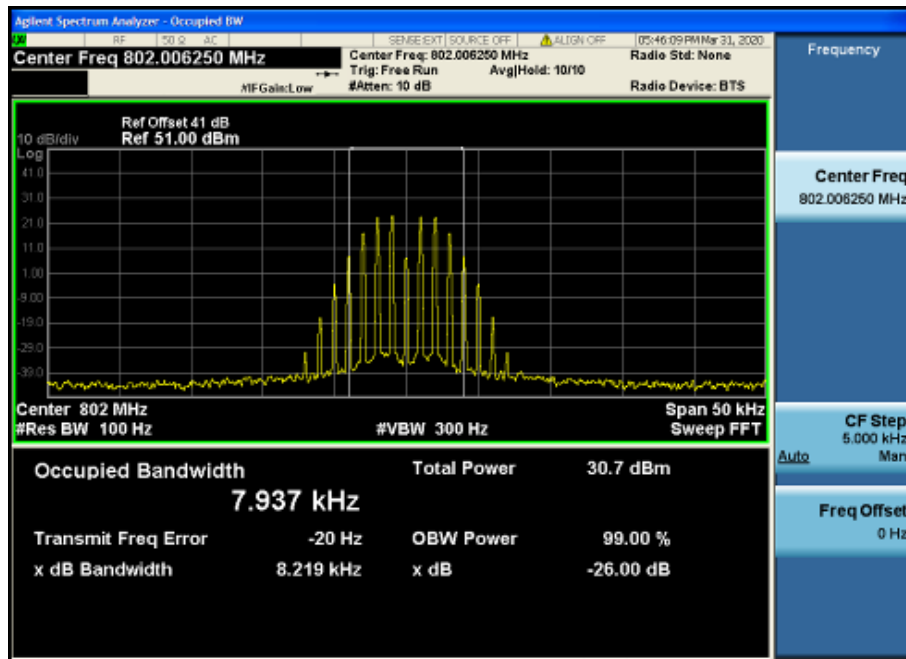
Output



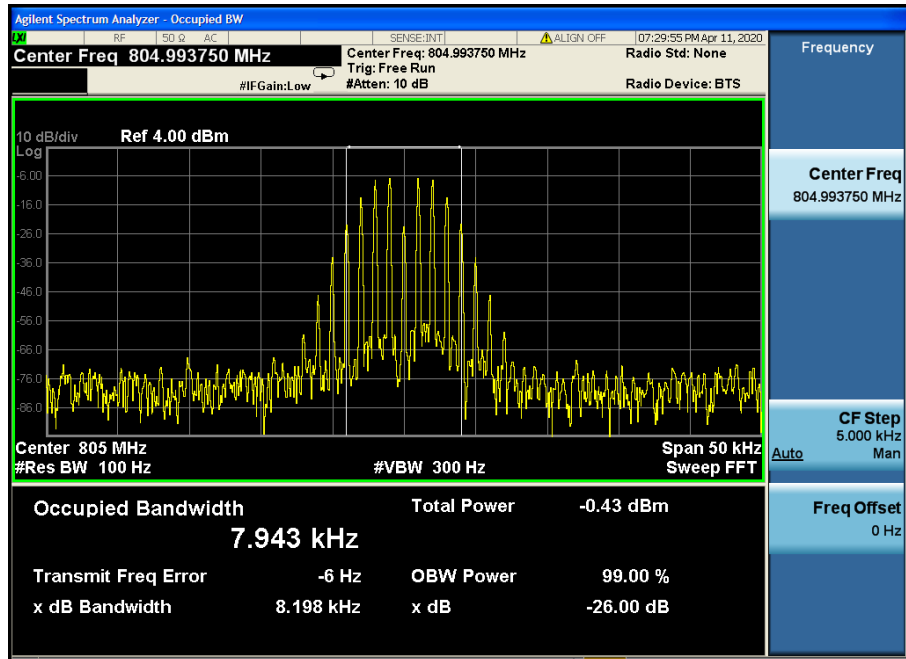
2.3.2 middle frequency Input



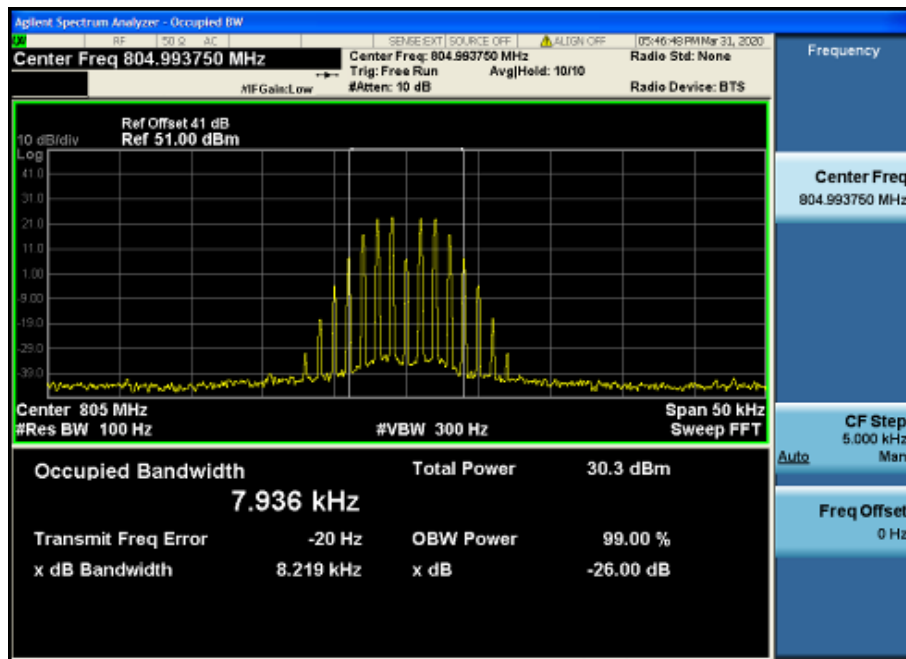
Output



2.3.3 highest frequency Input



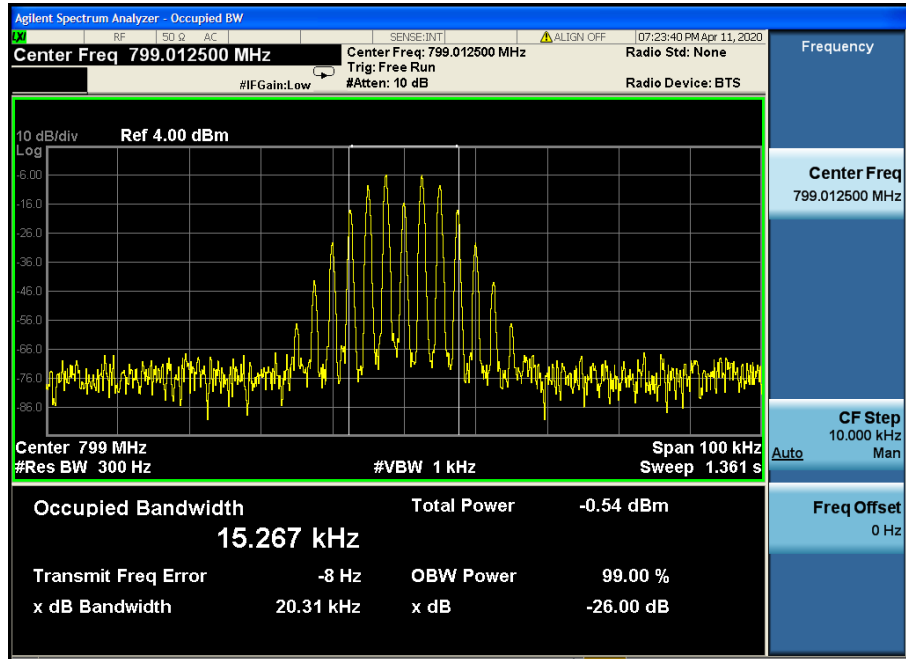
Output



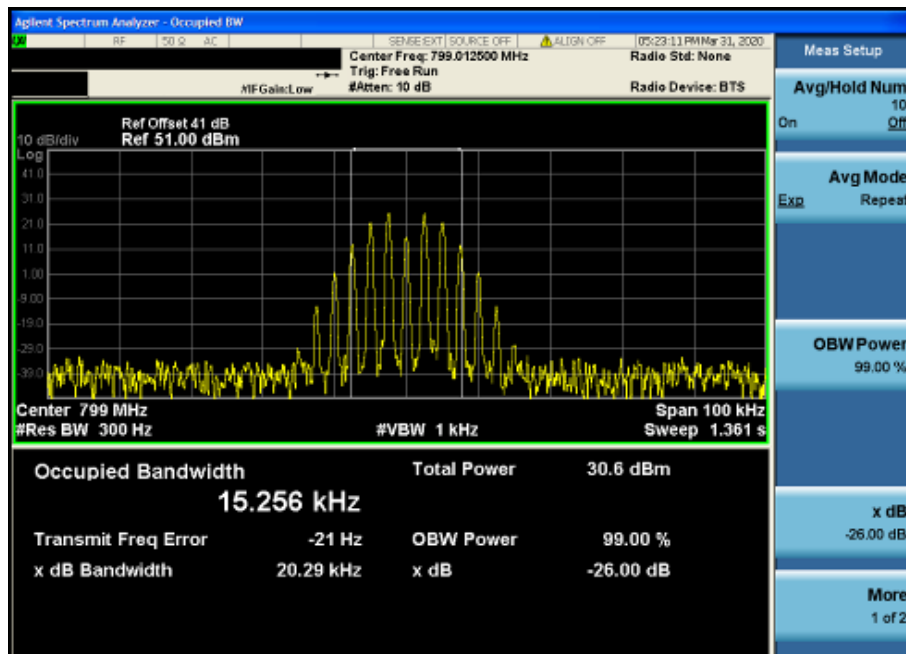
2.4 for FM-25K mode

2.4.1 lowest frequency

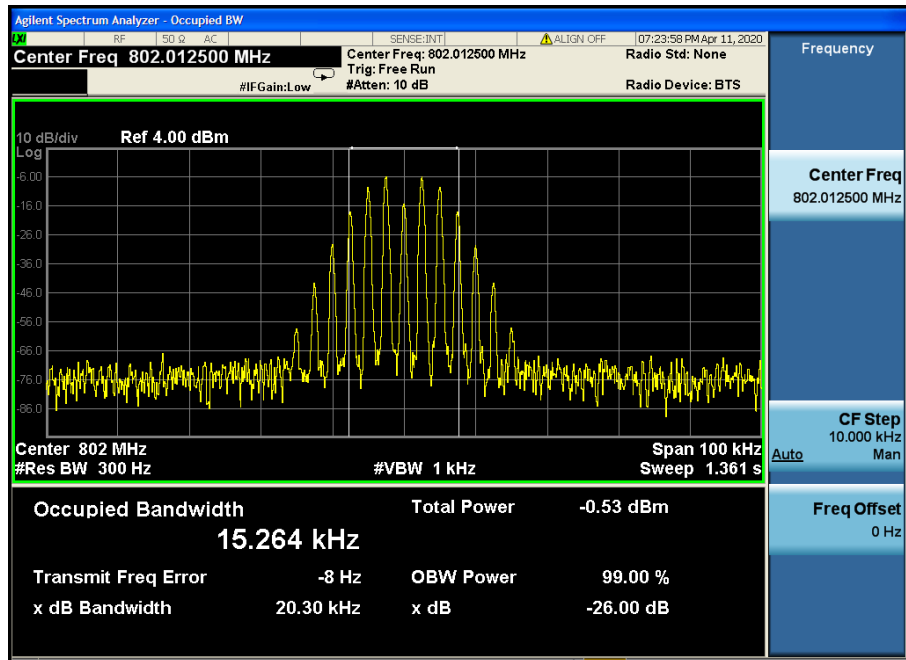
Input



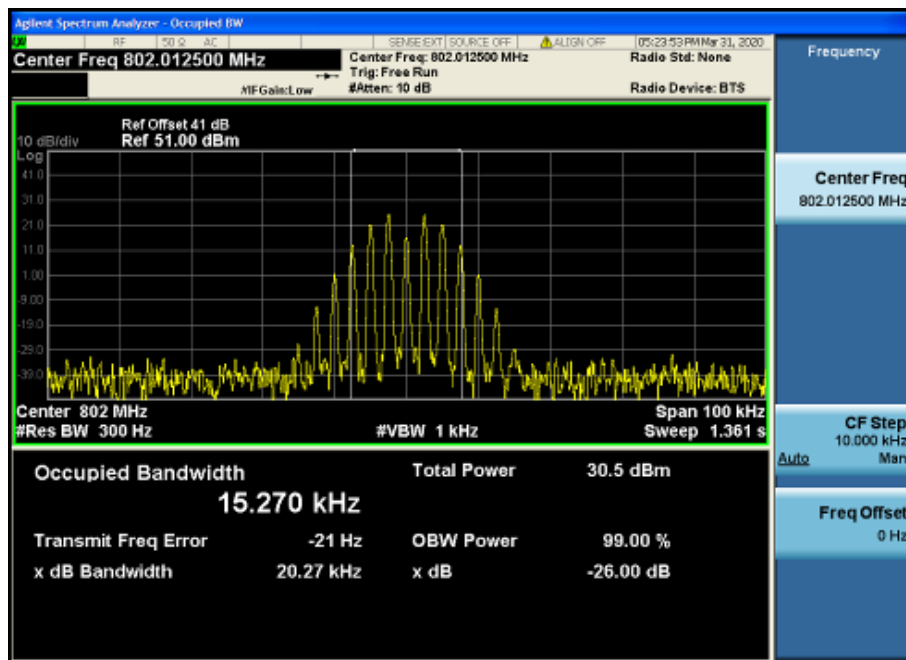
Output



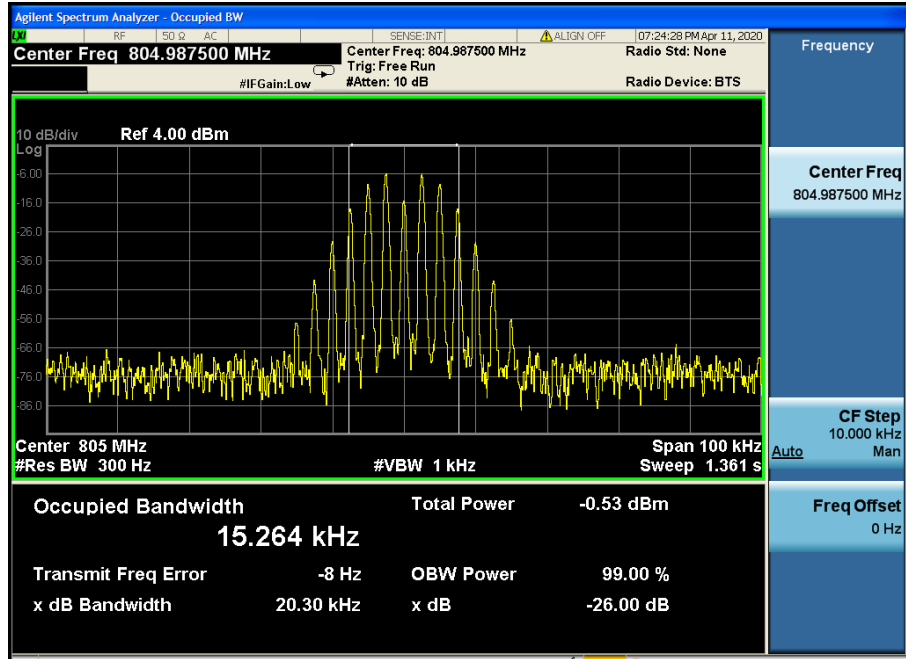
2.4.2 middle frequency Input



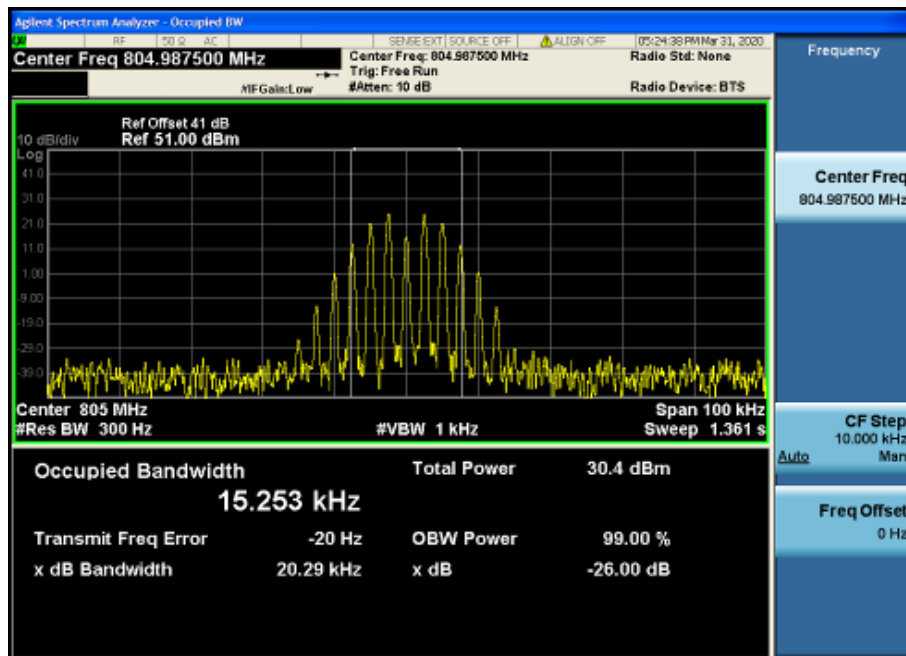
Output



2.4.3 highest frequency Input



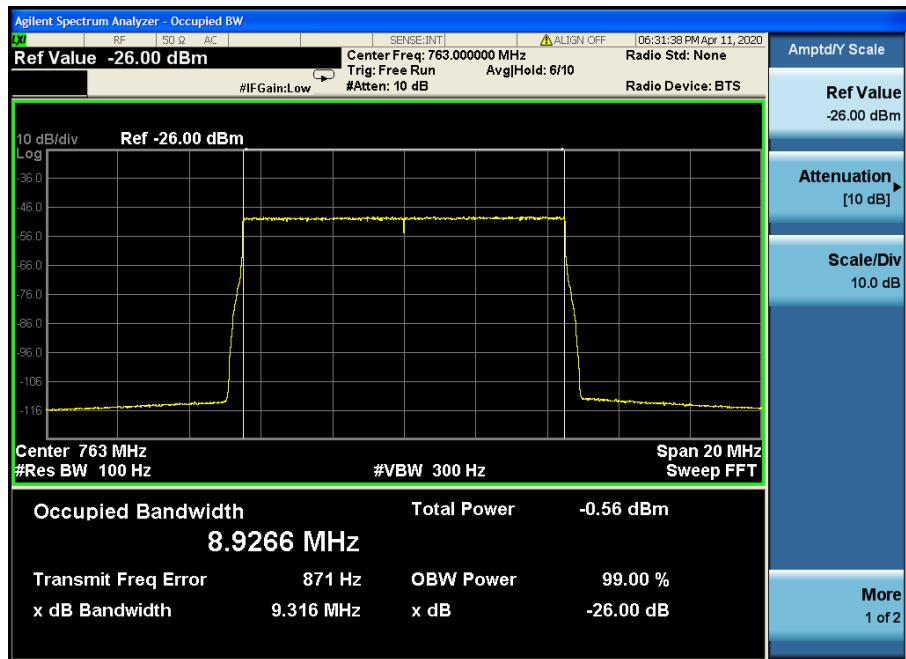
Output



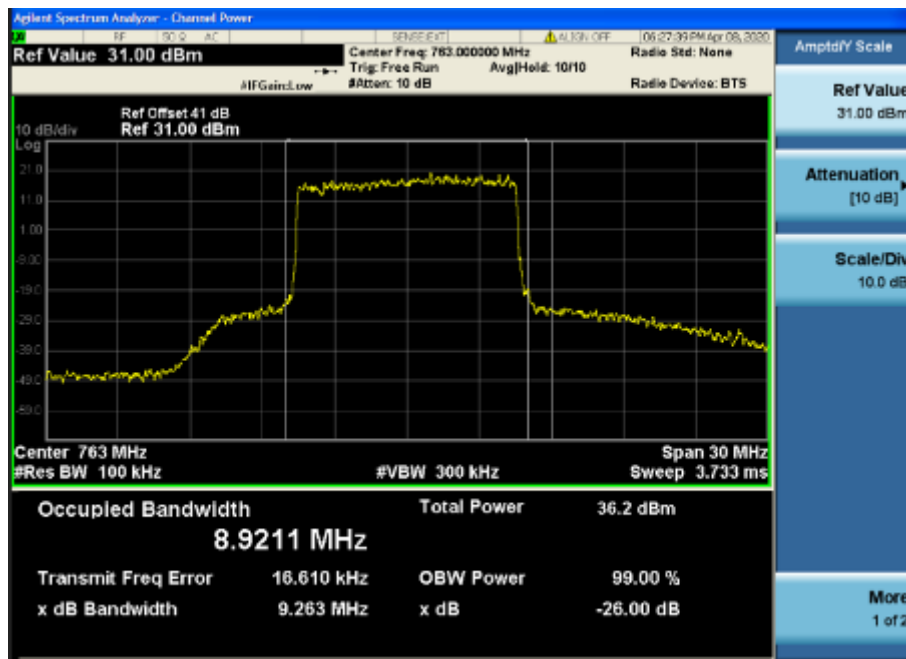
Class B model number:

700MHz Downlink :758-768MHz

Input

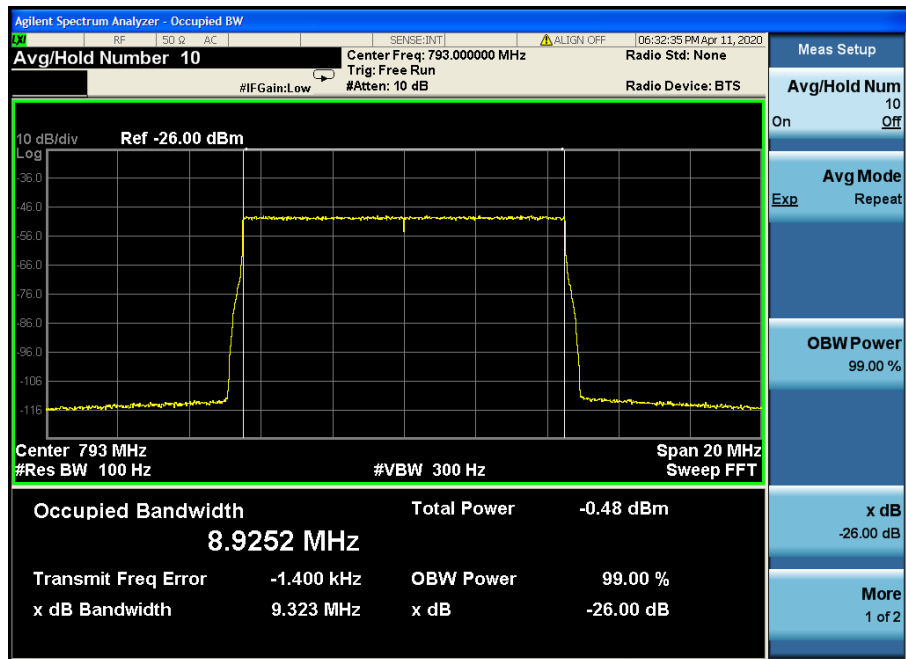


Output

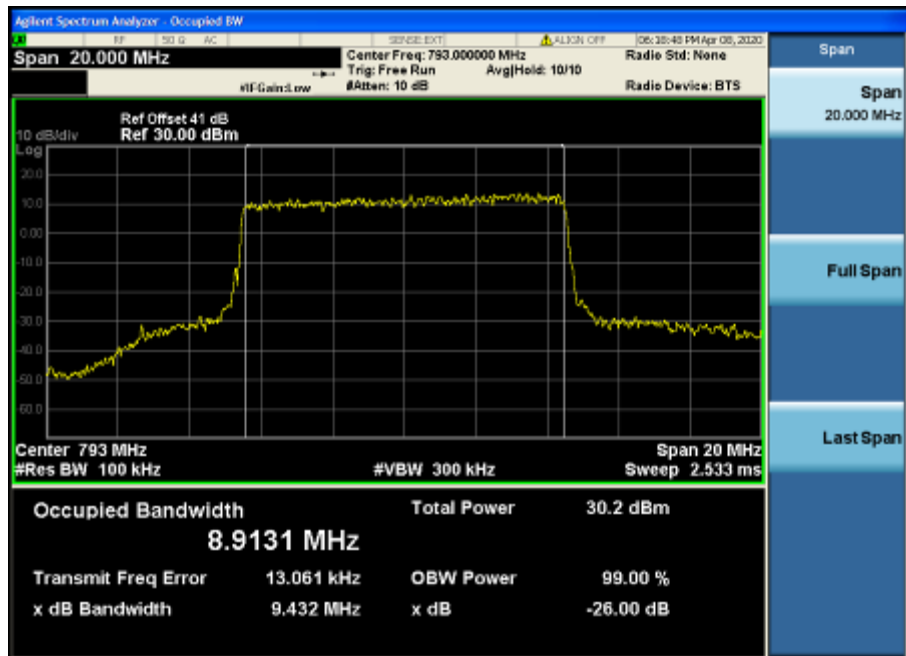


700MHz Uplink :788-798MHz

Input



Output

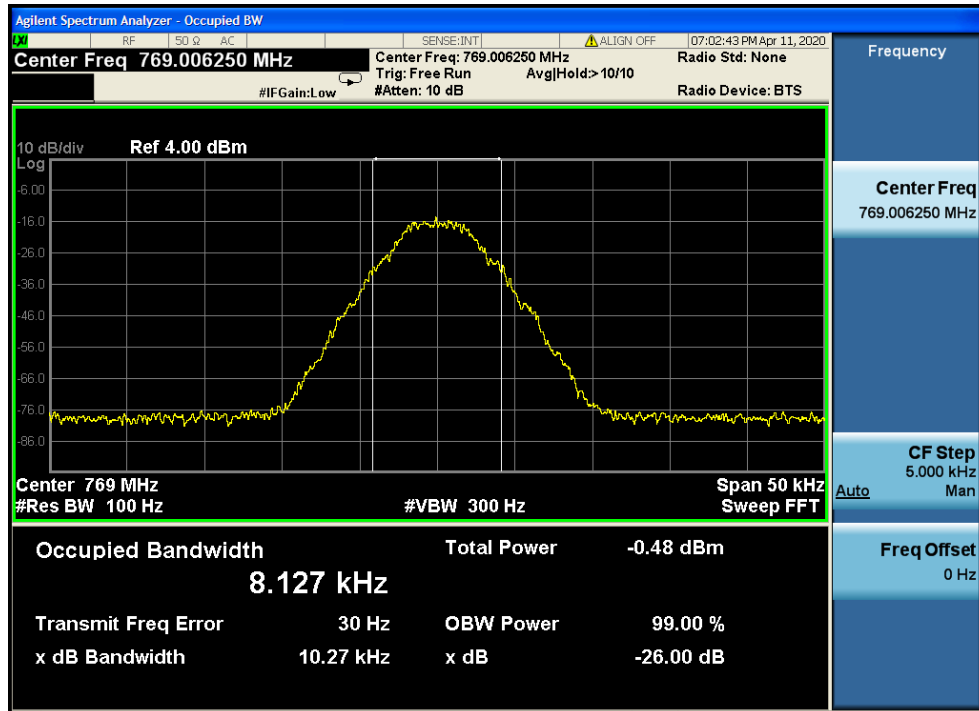


1. Downlink:769MHz to 775MHz

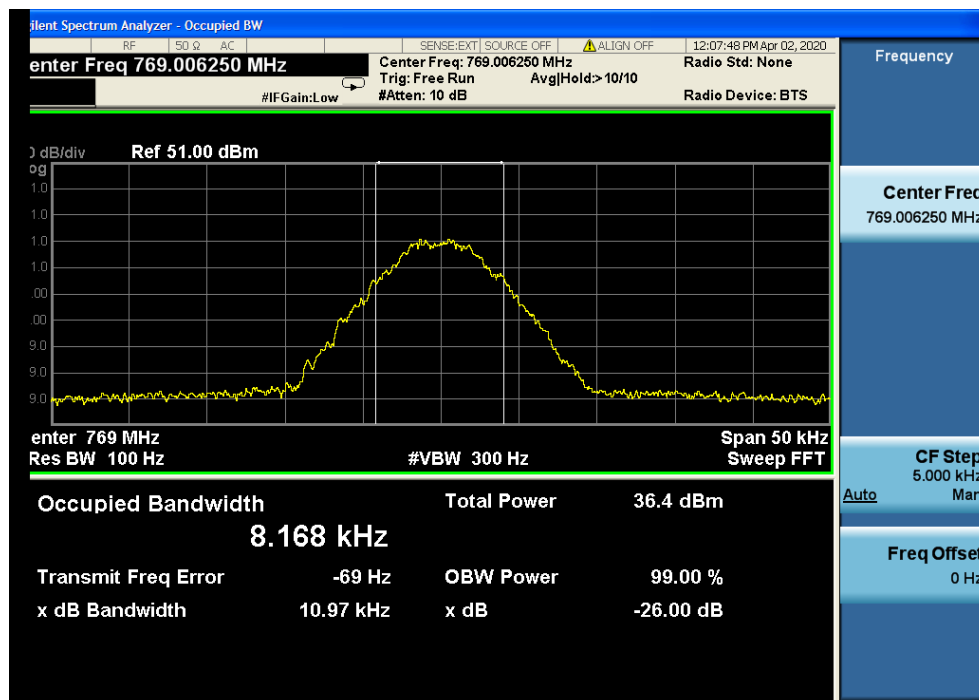
3.1 for C4FM mode

1.1 lowest frequency

Input

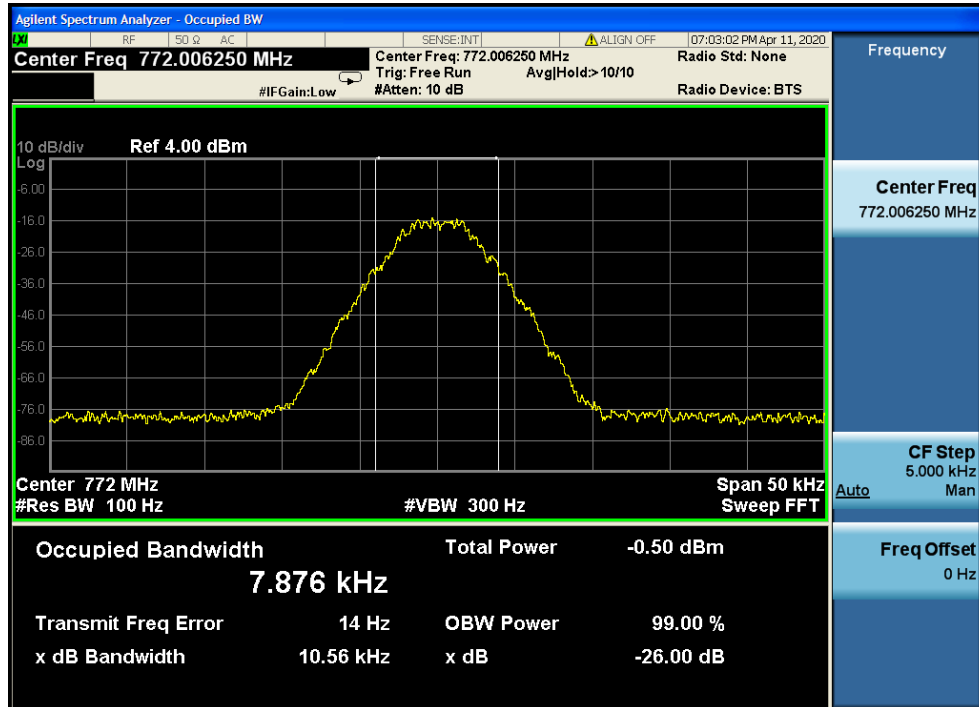


Output

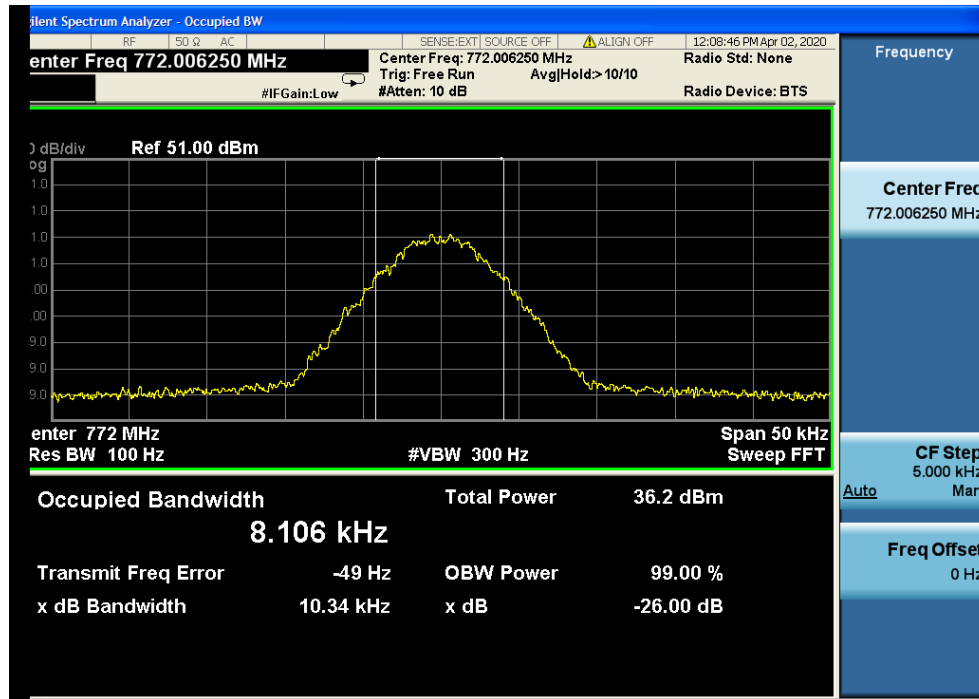


1.3 middle frequency

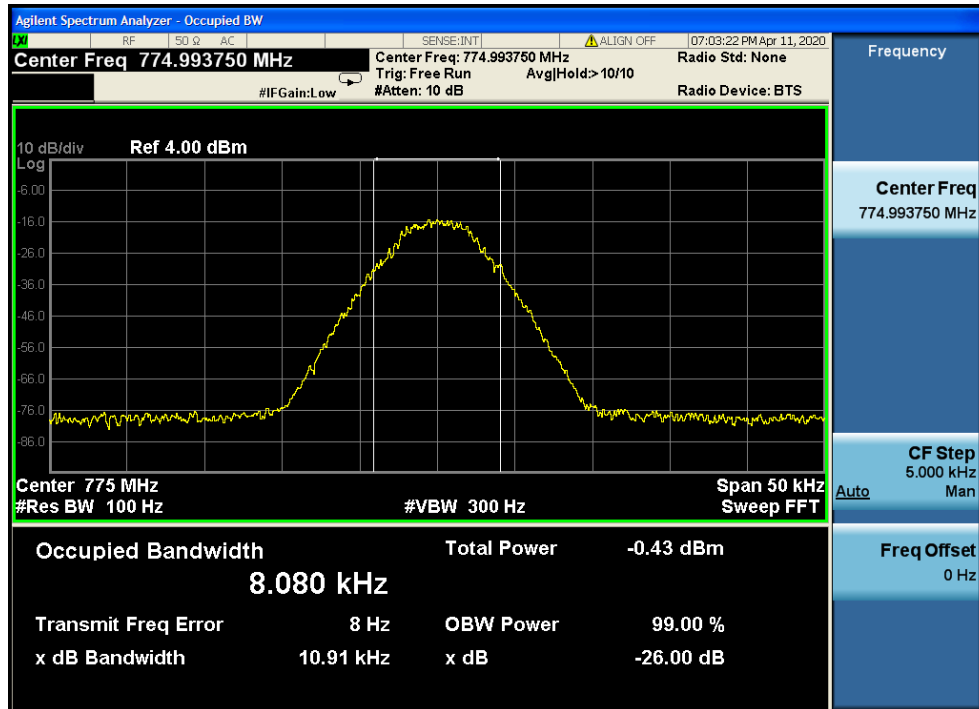
Input



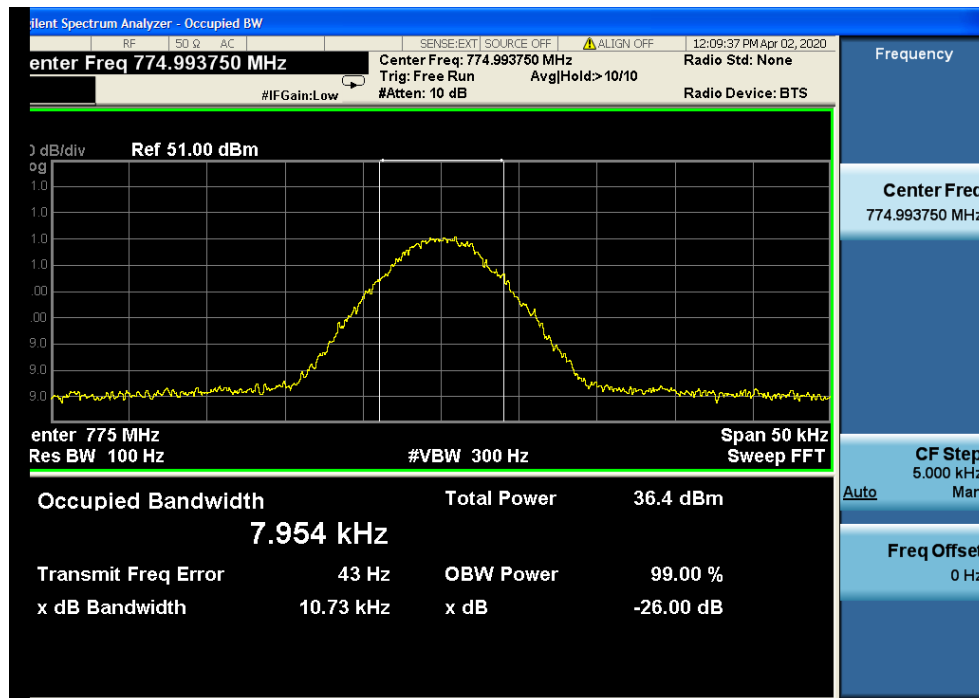
Output



1.6 highest frequency
Input



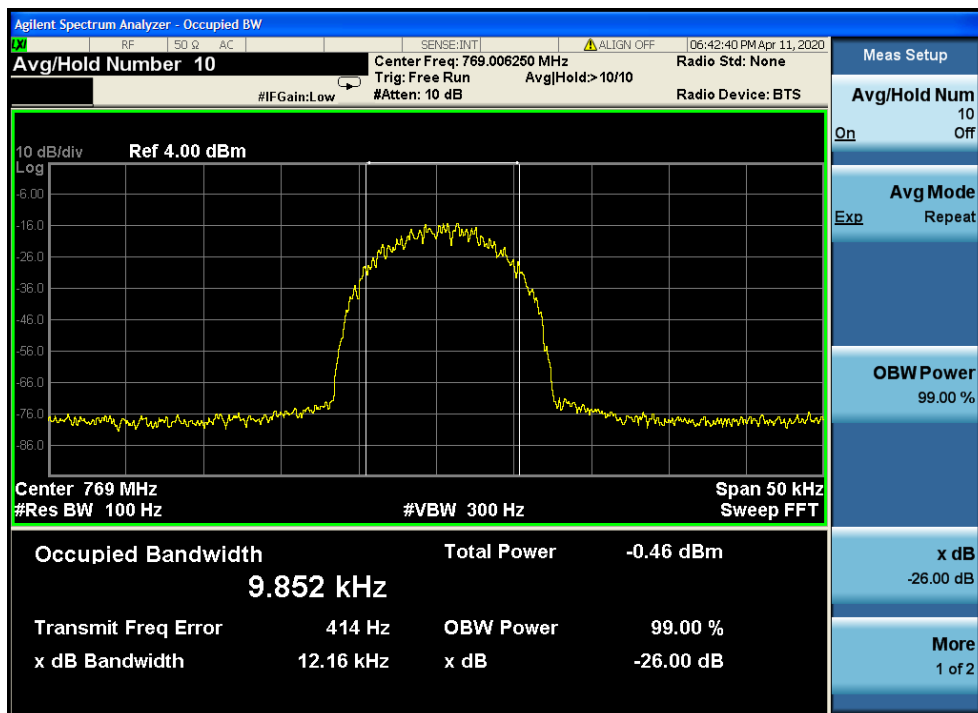
Output



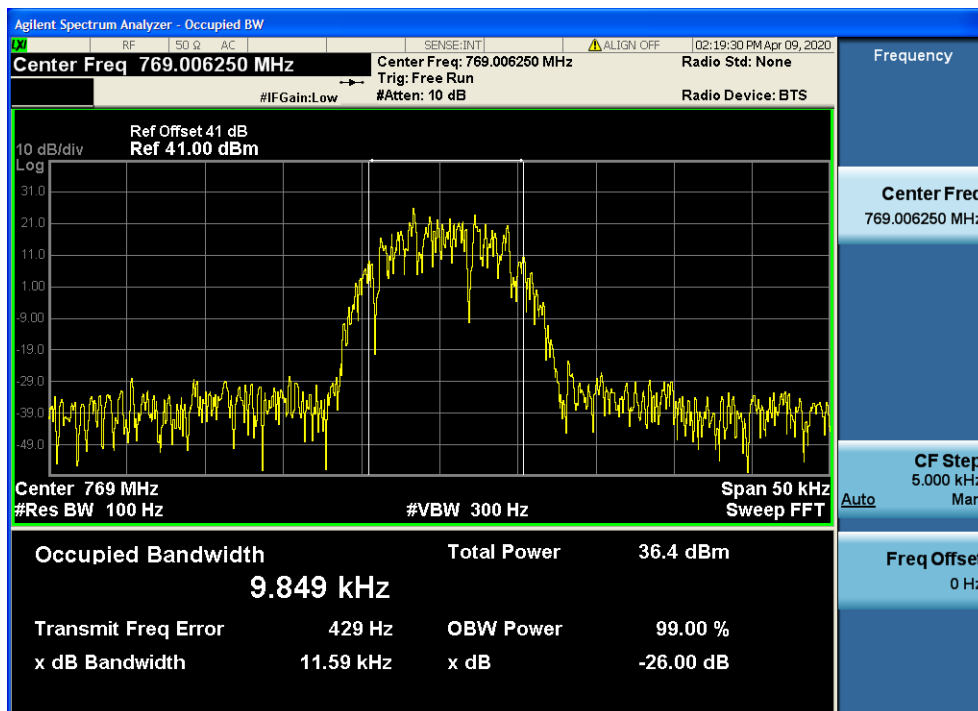
3.2 for HDQPSK mode

1.1 lowest frequency

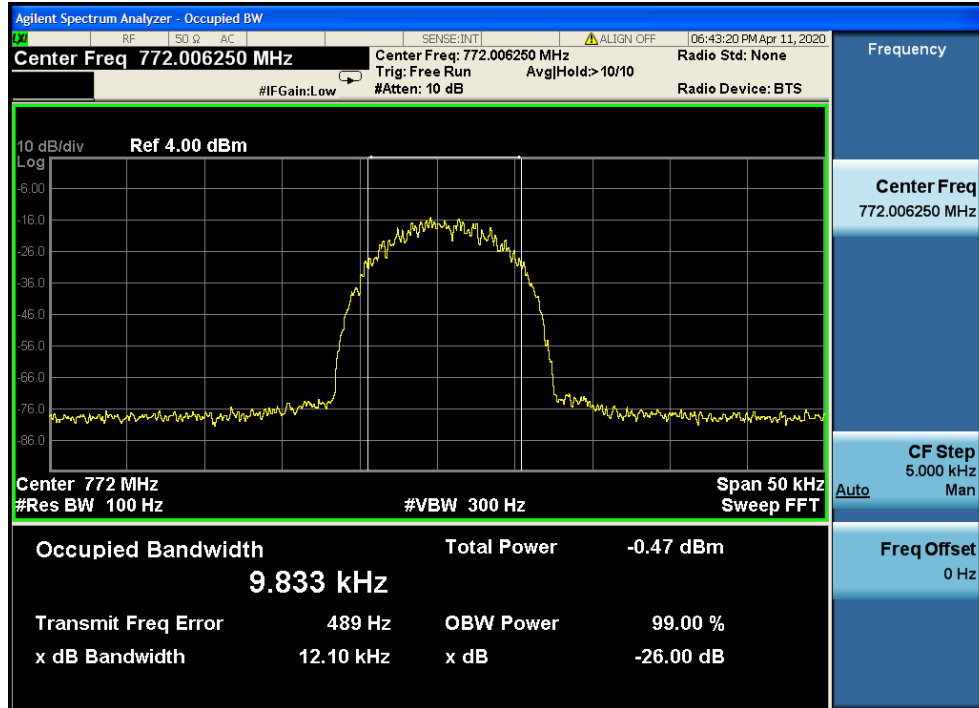
Input



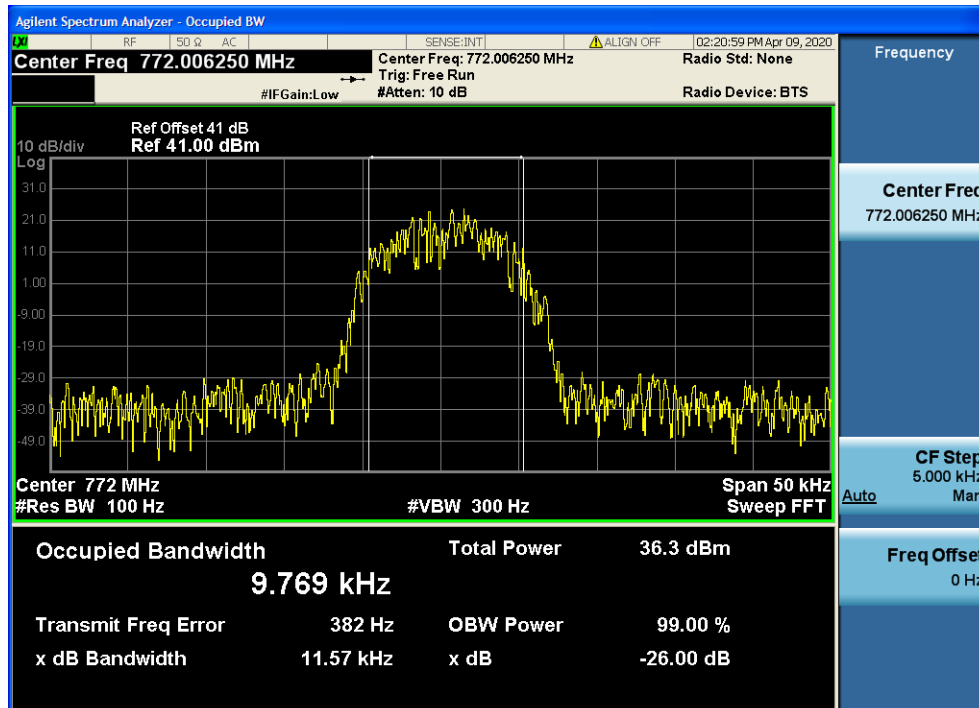
Output



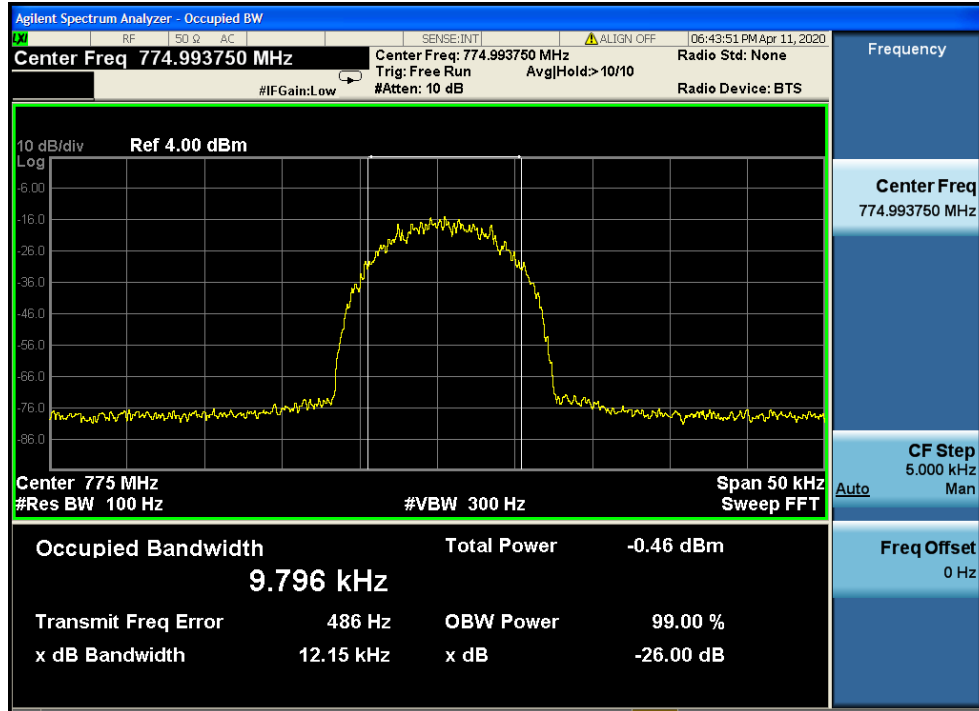
1.4 middle frequency Input



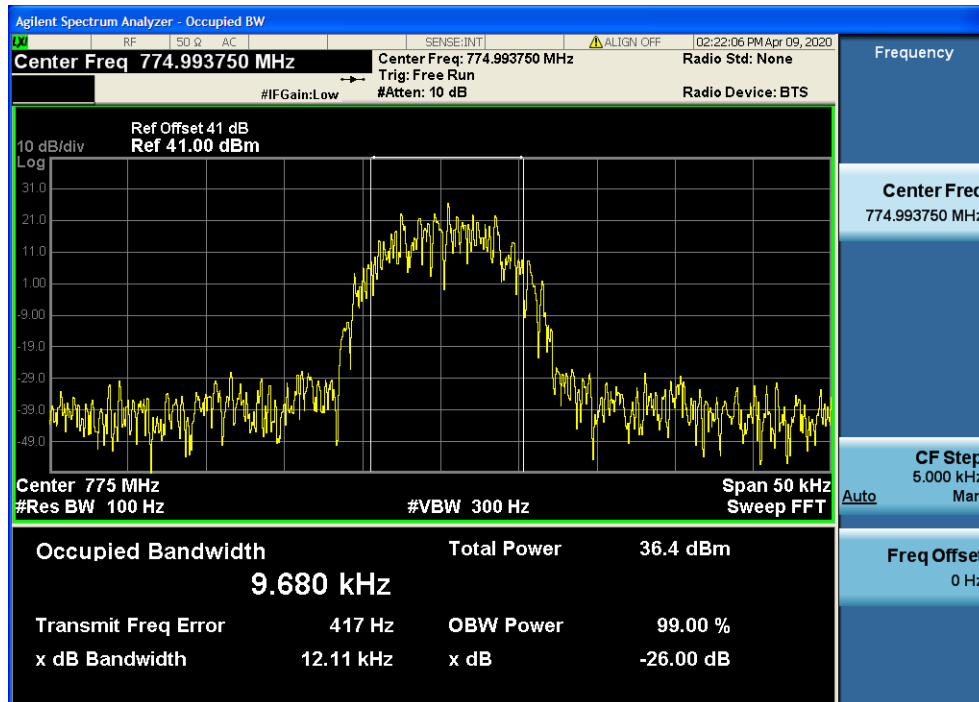
Output



1.6 highest frequency
Input



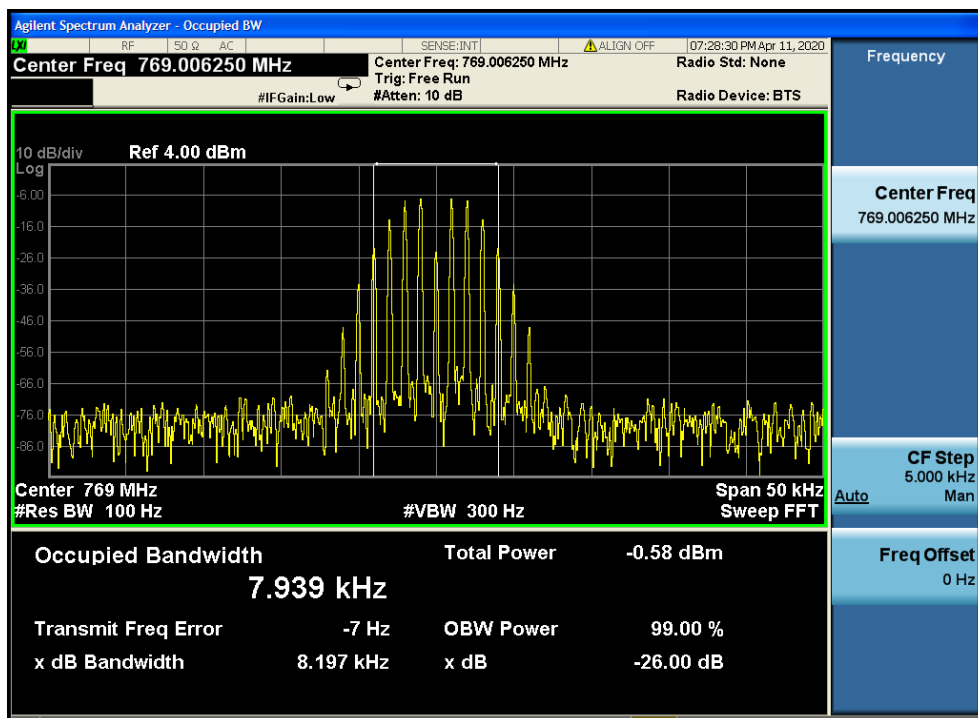
Output



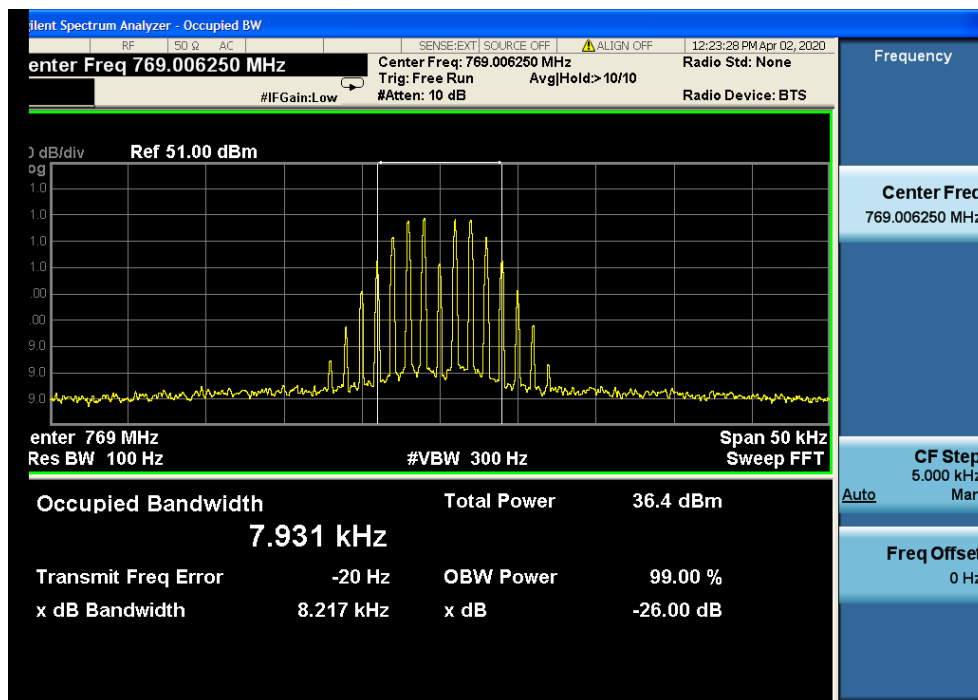
3.3 for FM-12.5K mode

1.1 lowest frequency

Input

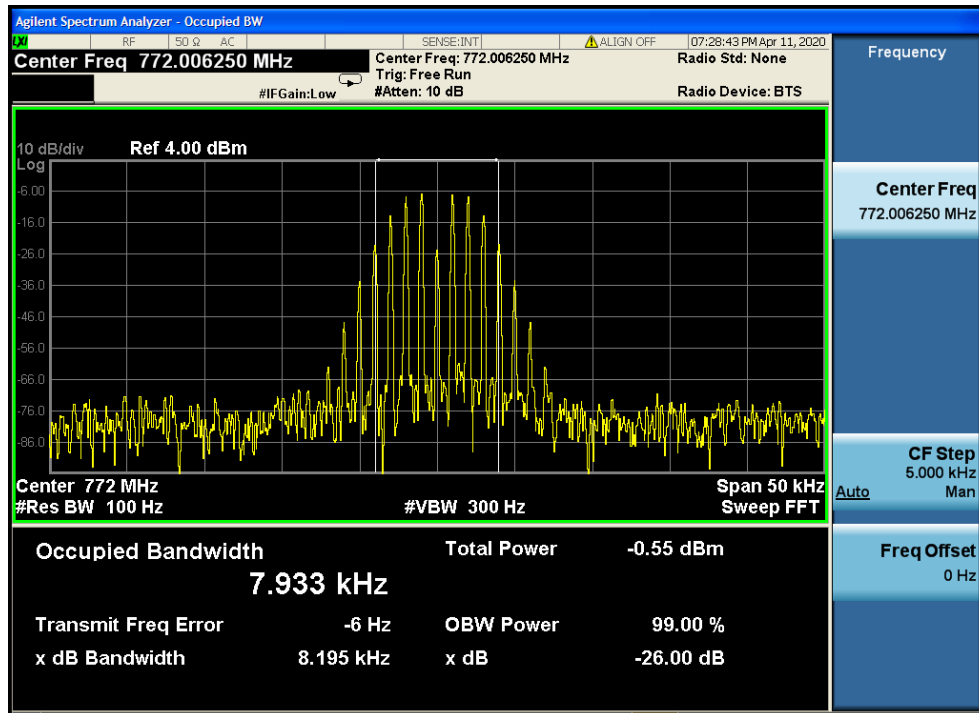


Output

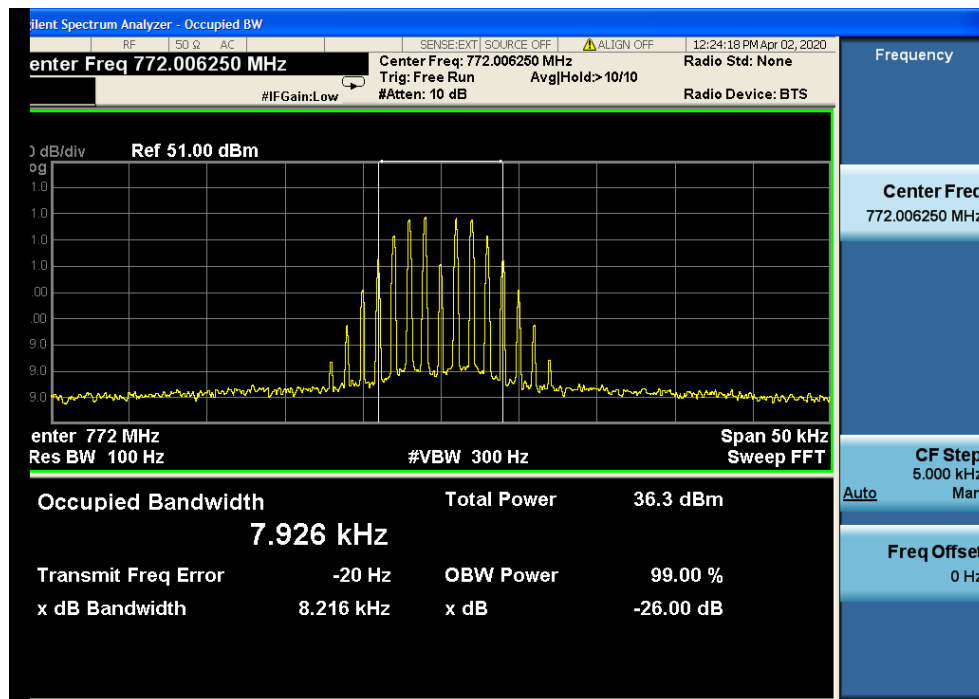


1.4 middle frequency

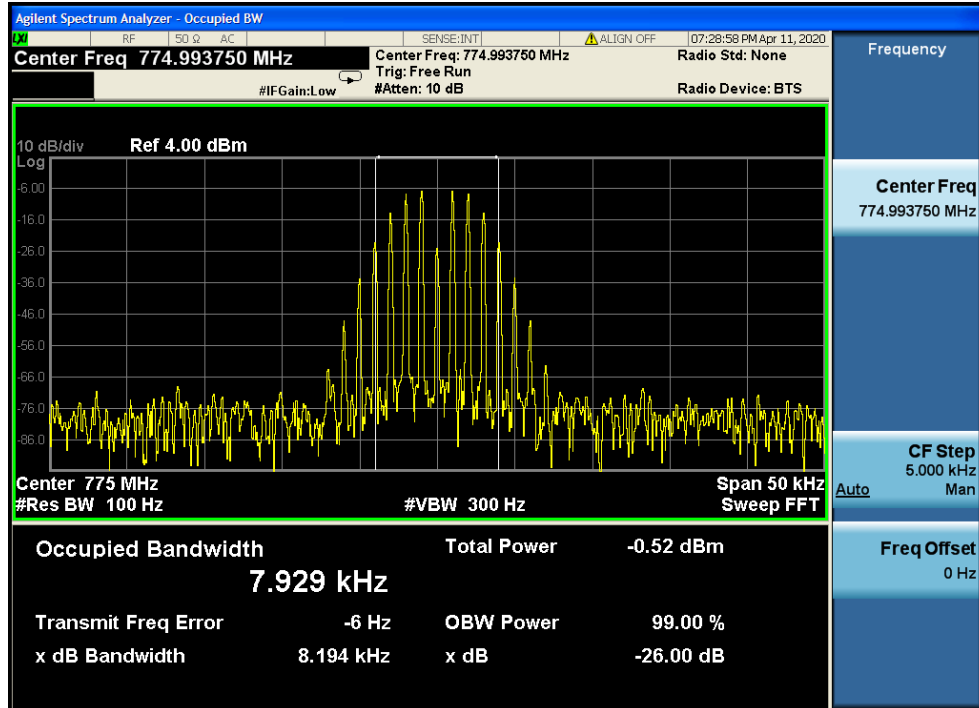
Input



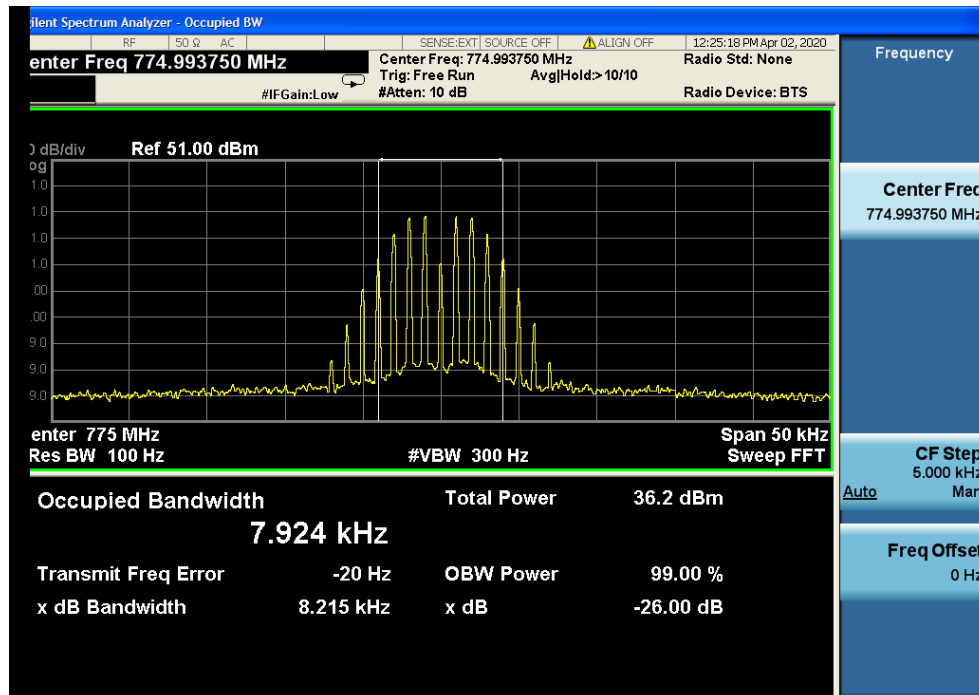
Output



1.5 highest frequency
Input



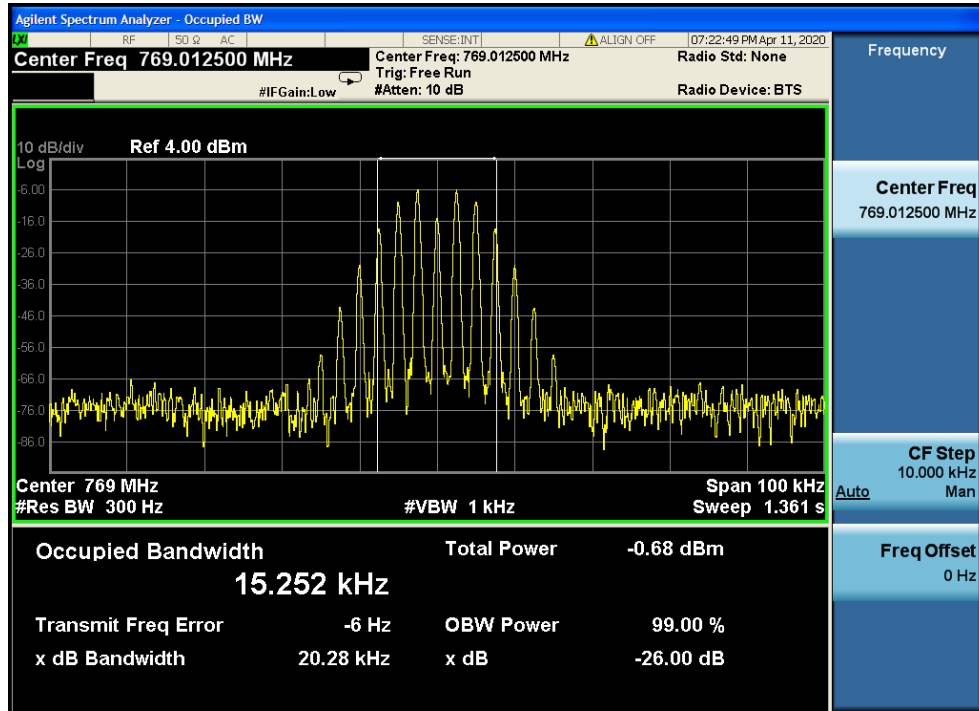
Output



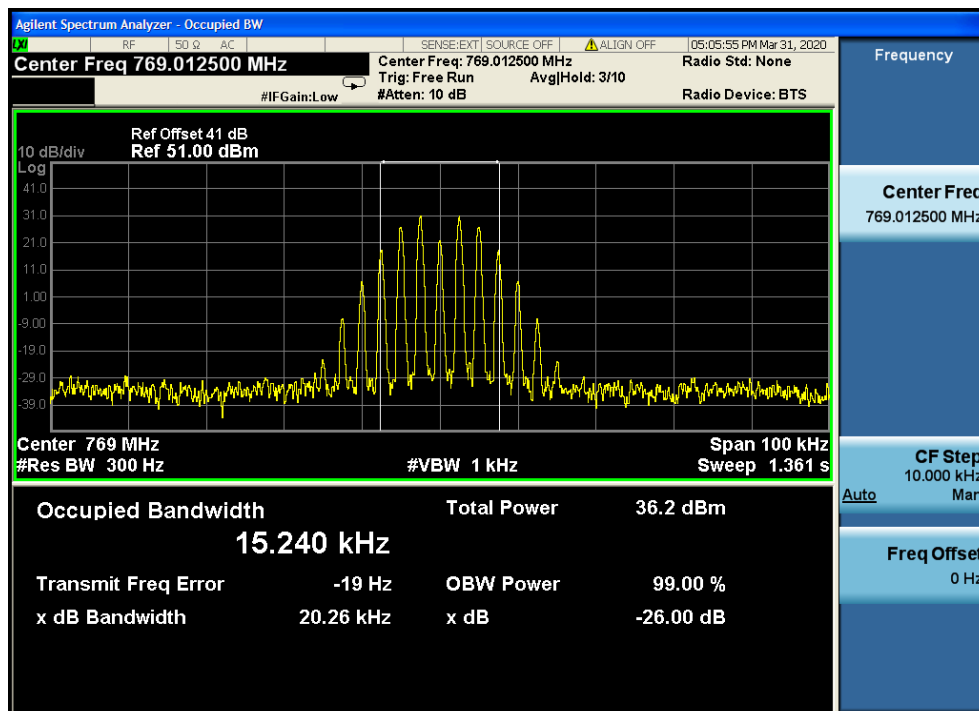
3.4 for FM-25K mode

1.1 lowest frequency

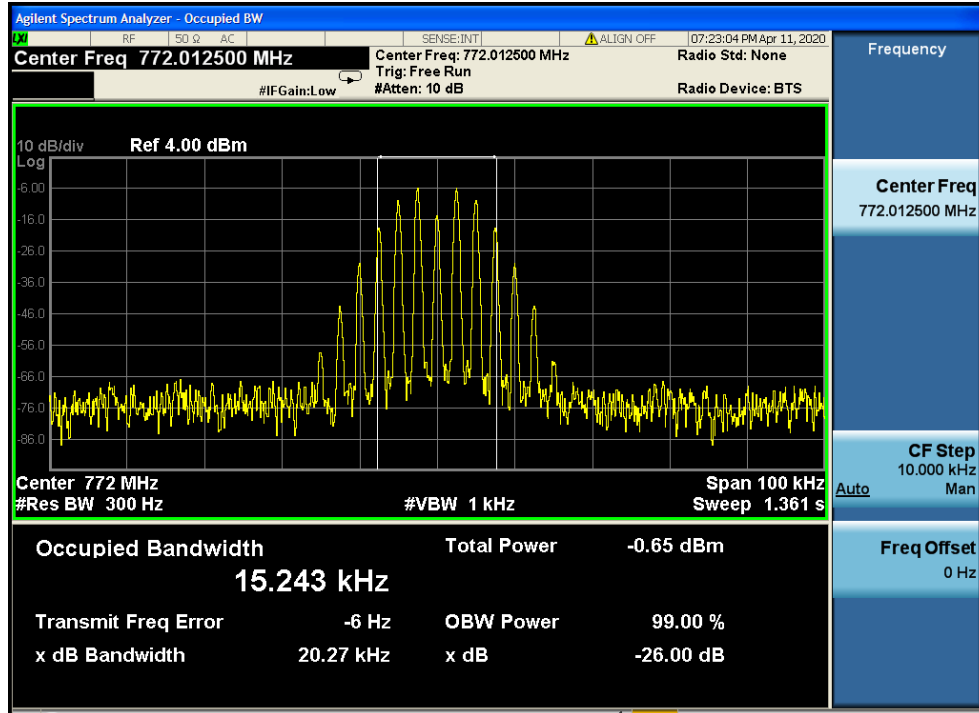
Input



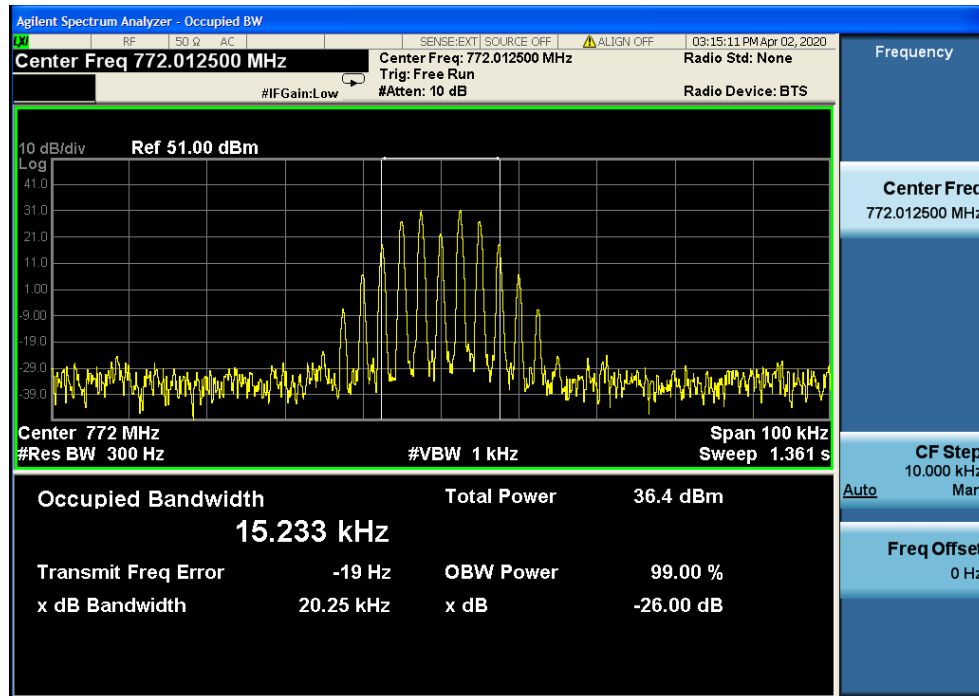
Output



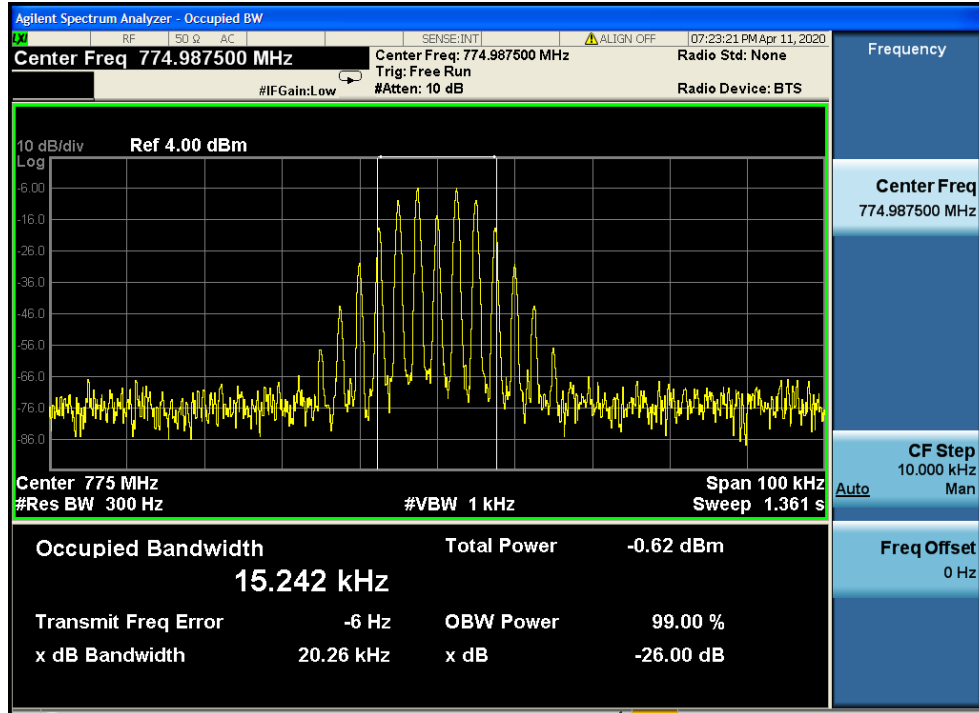
1.3 middle frequency Input



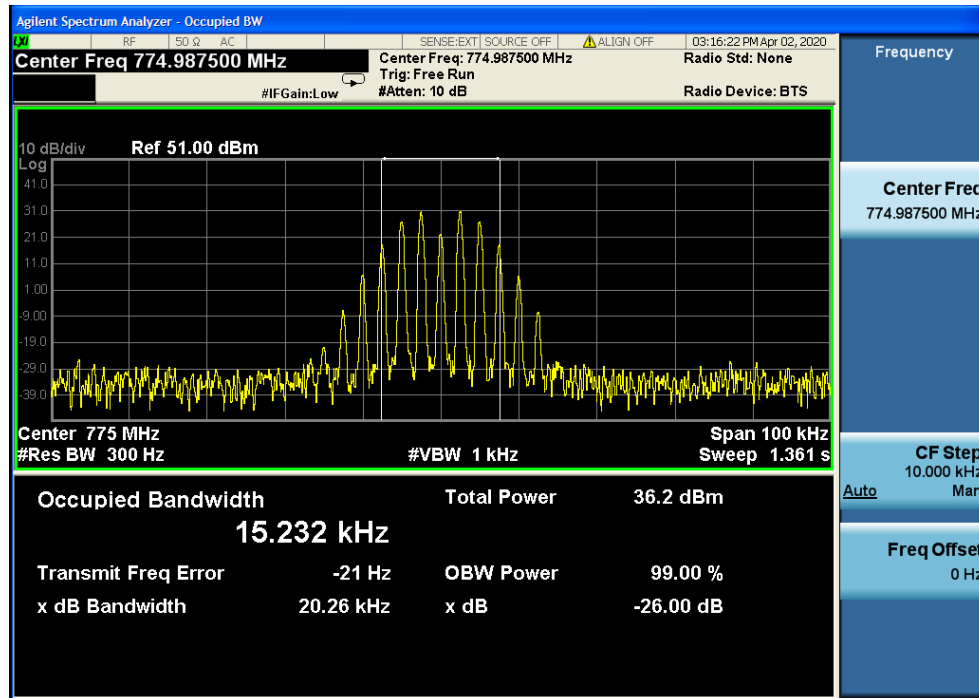
Output



1.5 highest frequency
Input



Output

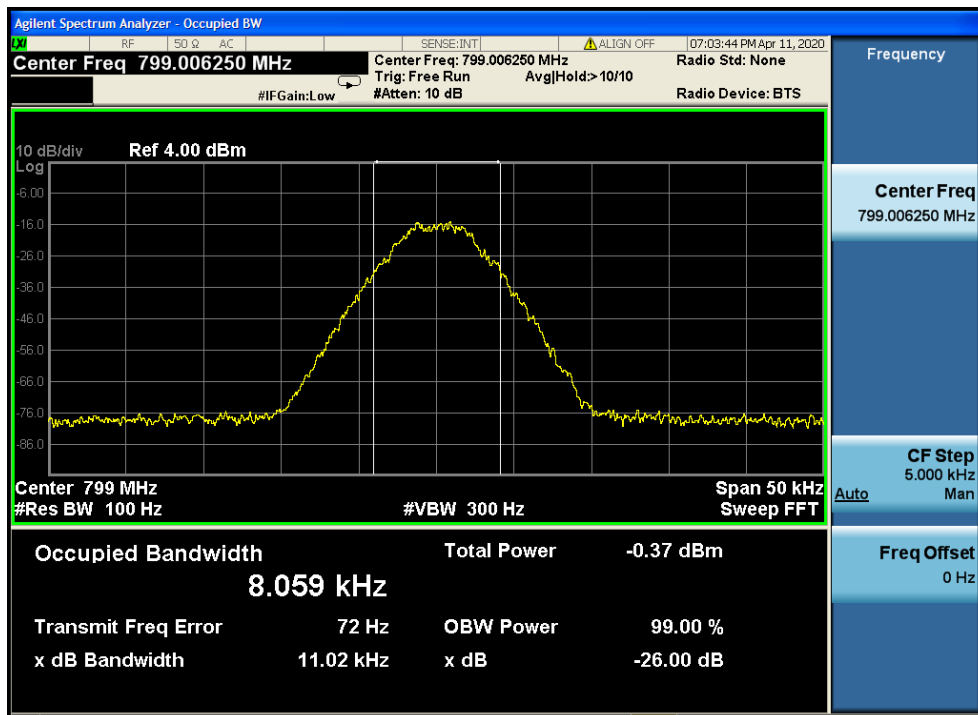


2. Uplink:799MHz to 805MHz

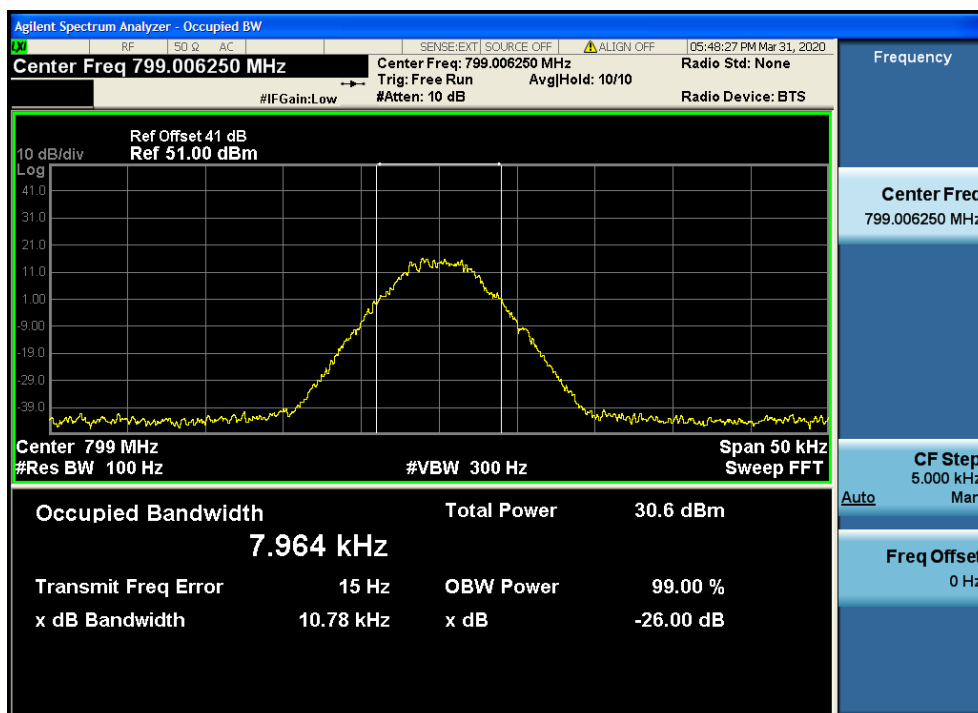
4.1 for C4FM mode

1.1 lowest frequency

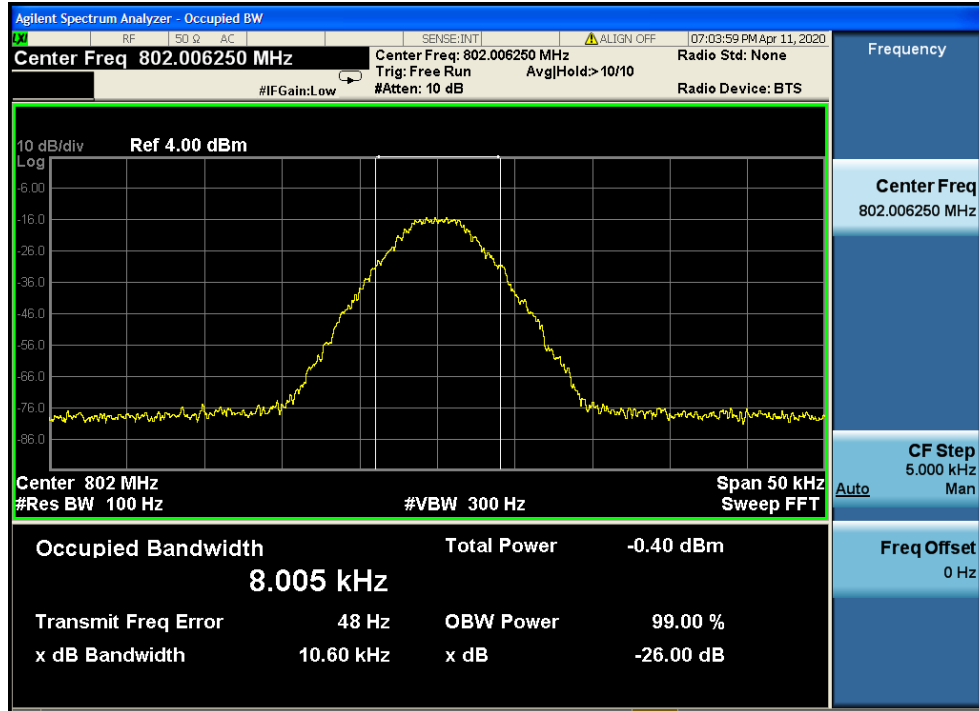
Input



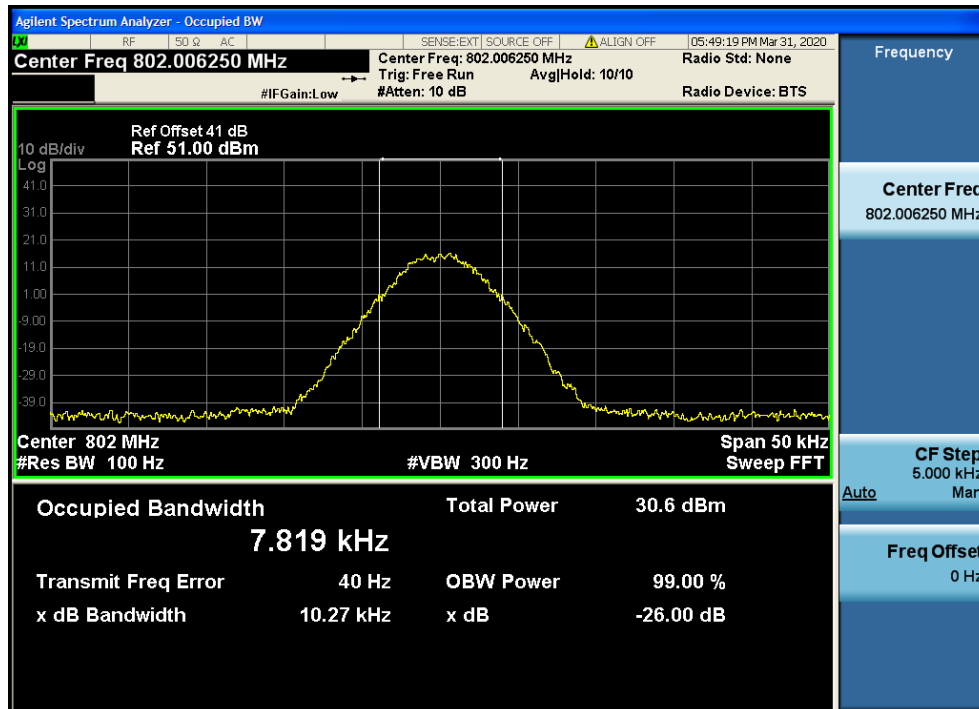
Output



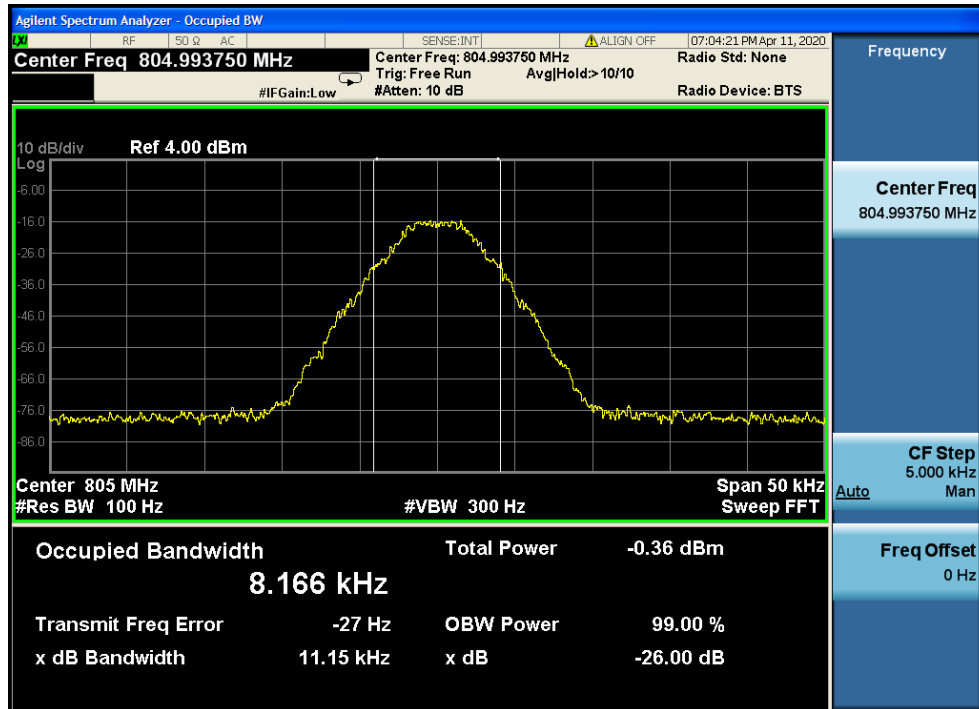
1.1 middle frequency Input



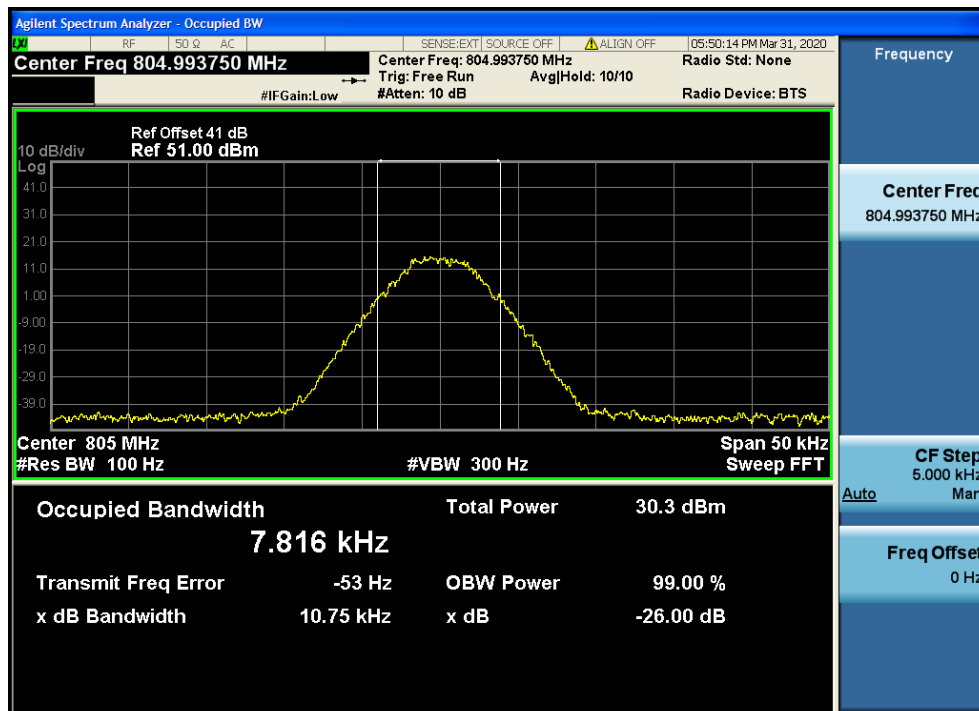
Output



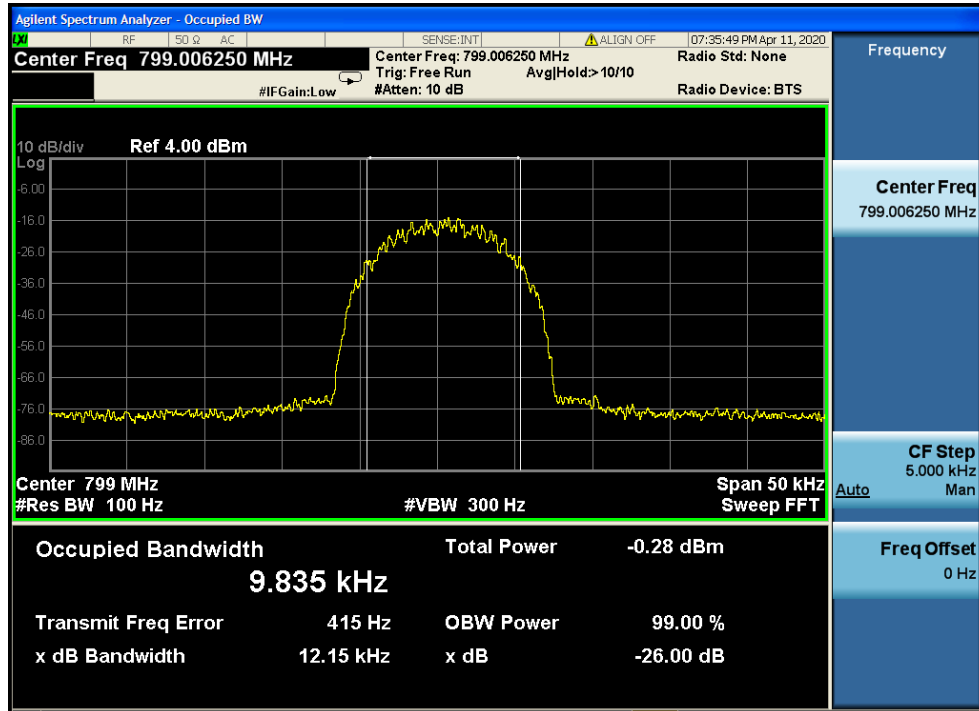
1.2 highest frequency Input



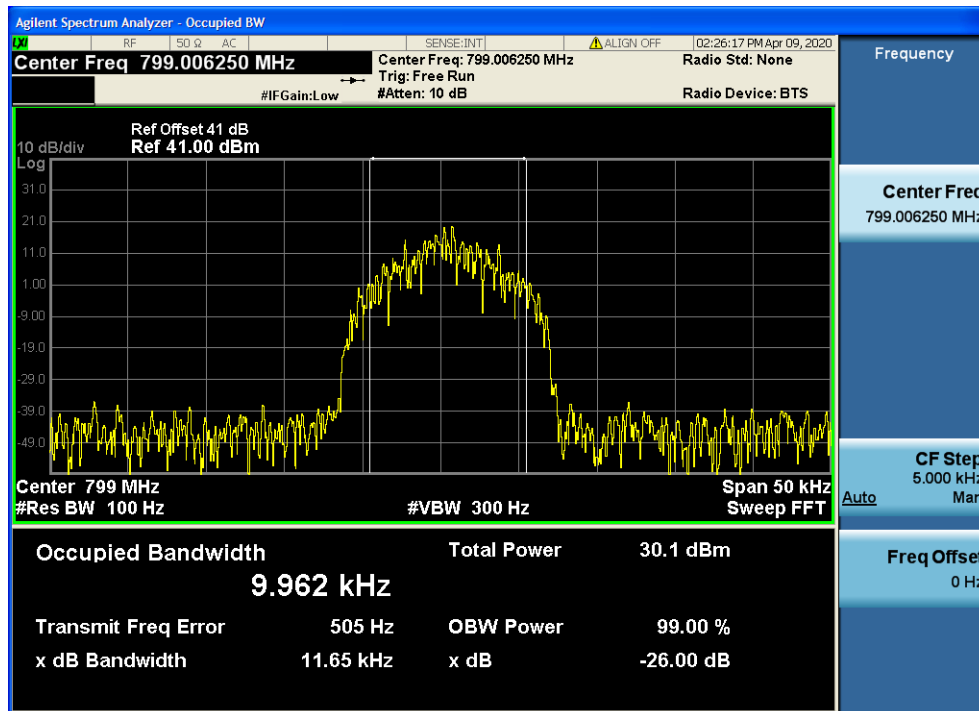
Output



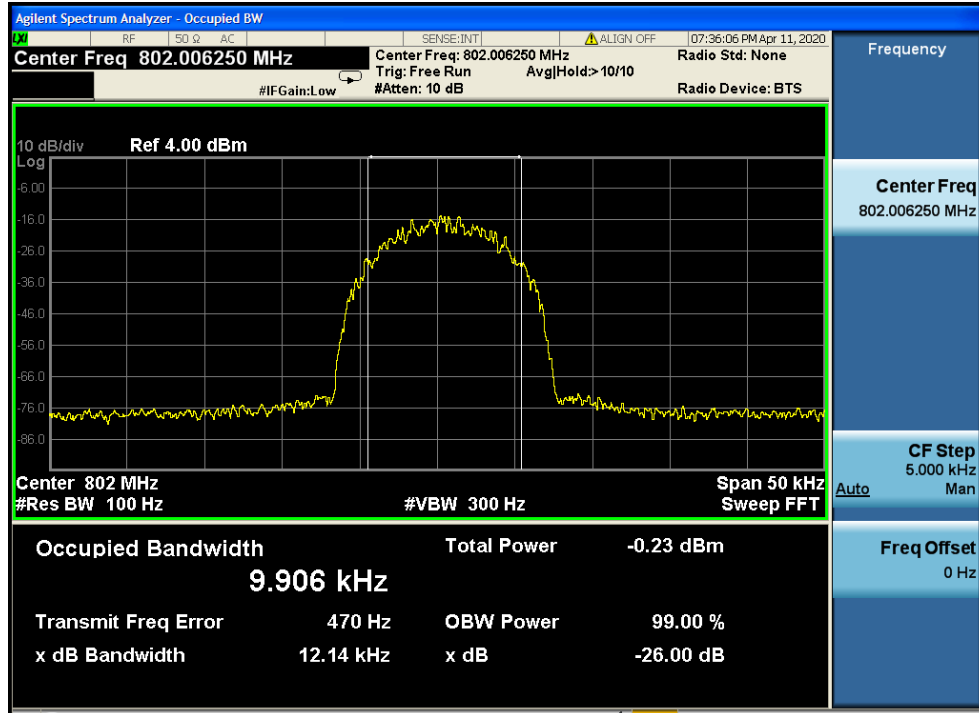
4.2 for HDQPSK mode 1.1 lowest frequency Input



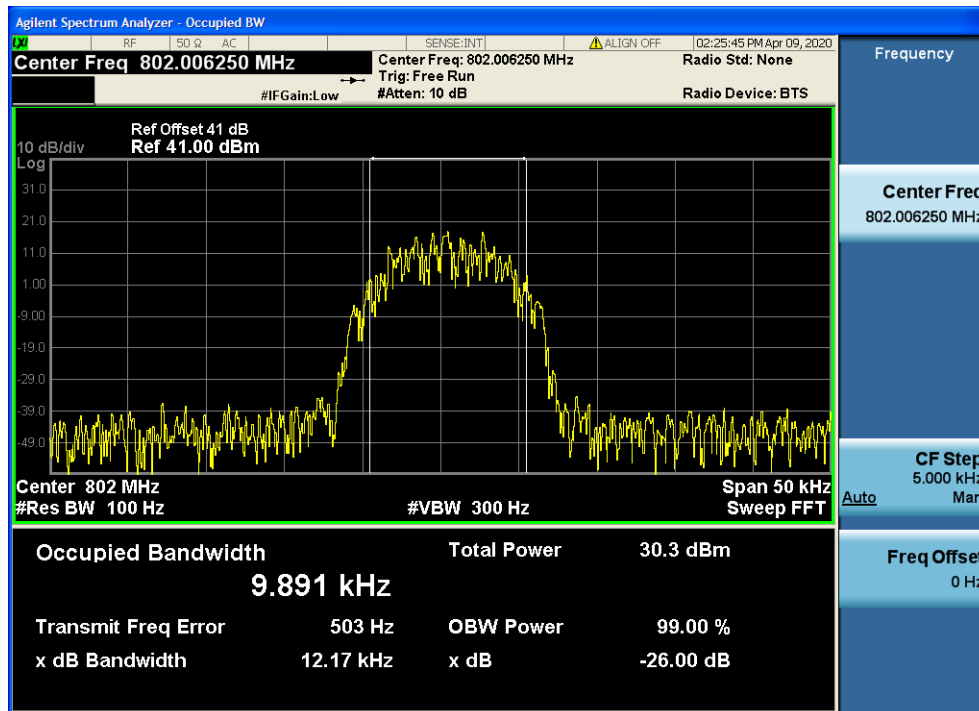
Output



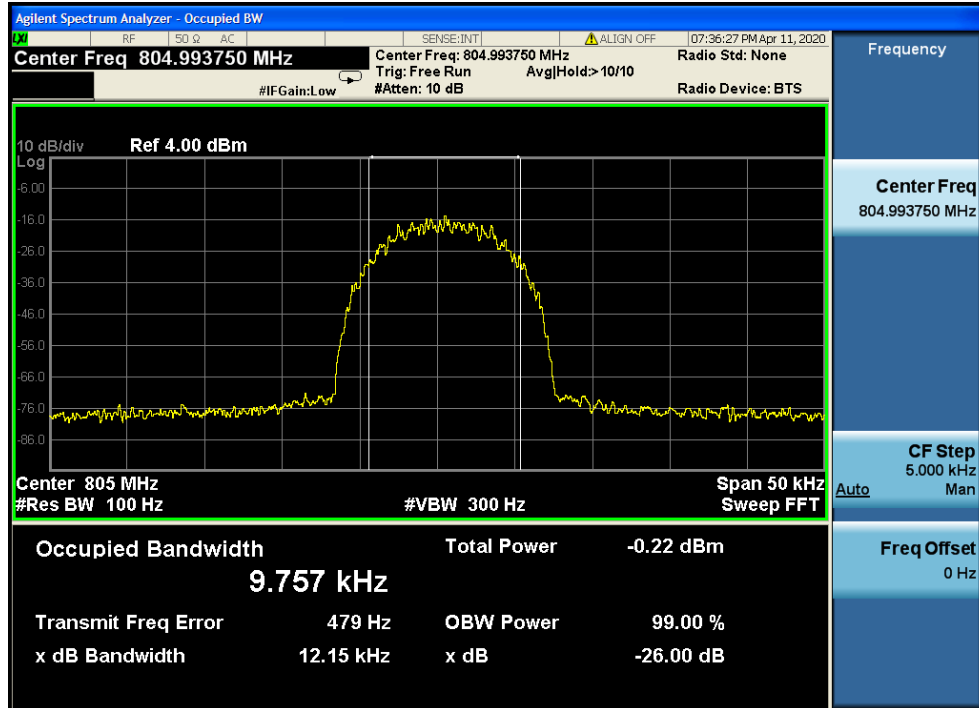
1.4 middle frequency Input



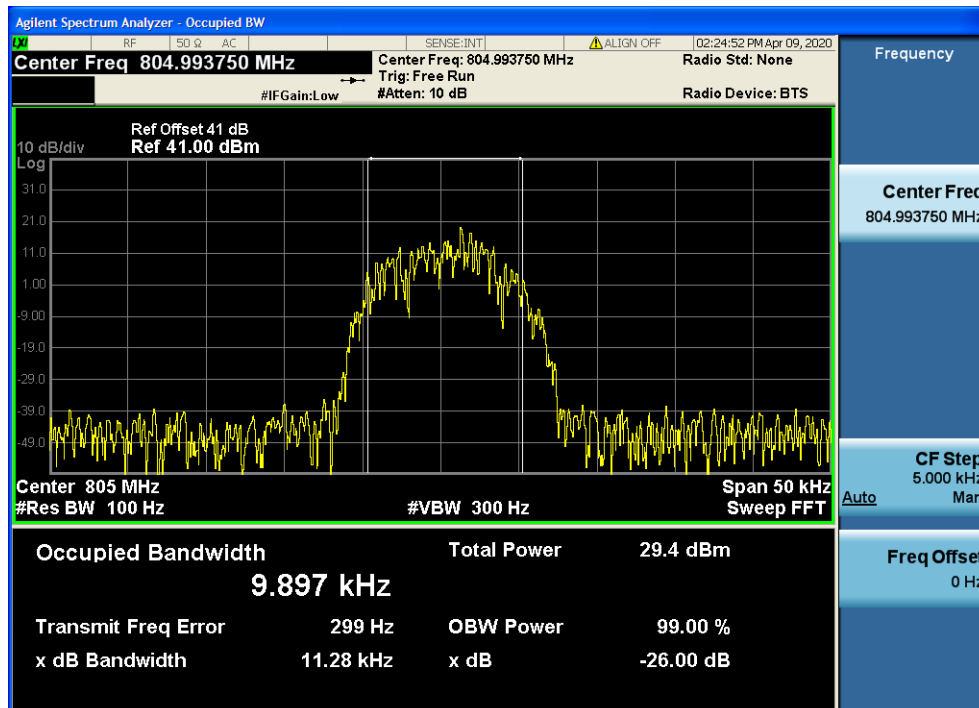
Output



1.6 highest frequency
Input



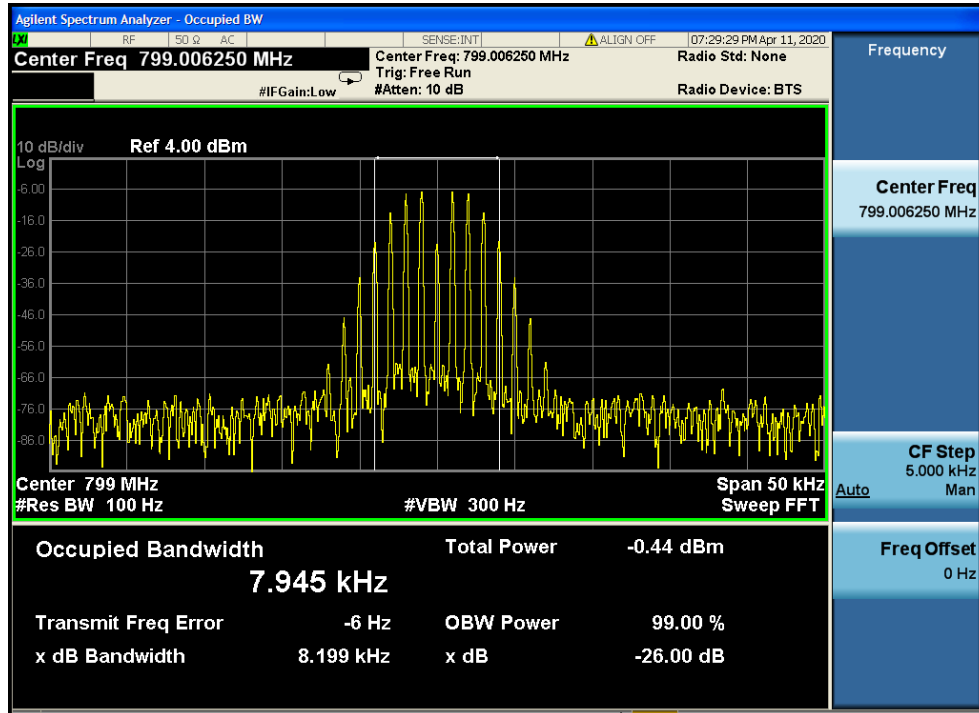
Output



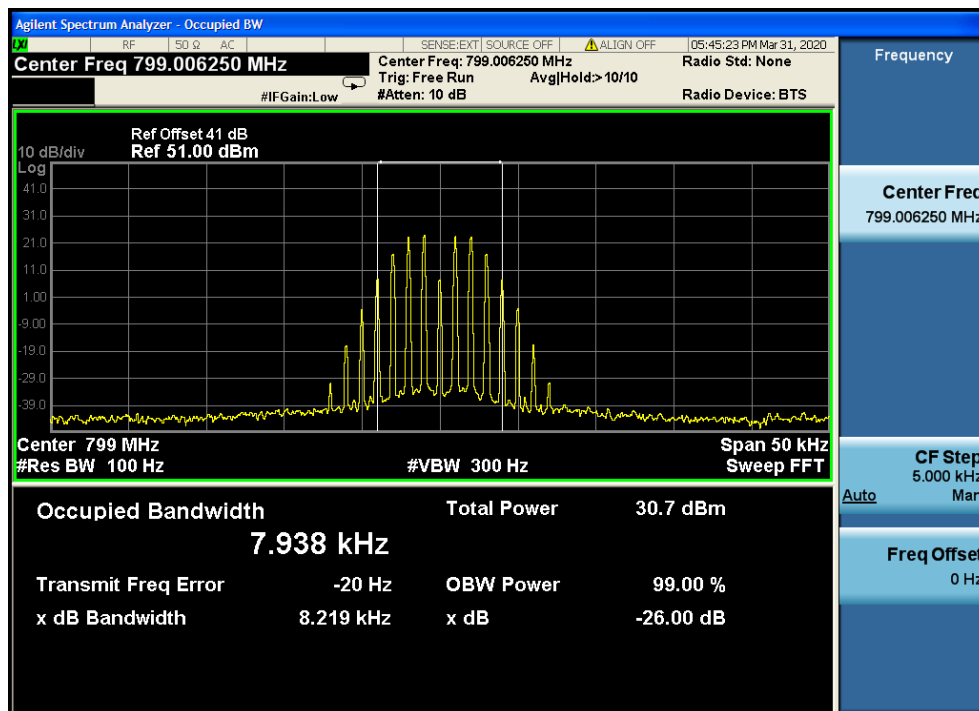
4.3 for FM-12.5K mode

1.1 lowest frequency

Input



Output



1.3 middle frequency

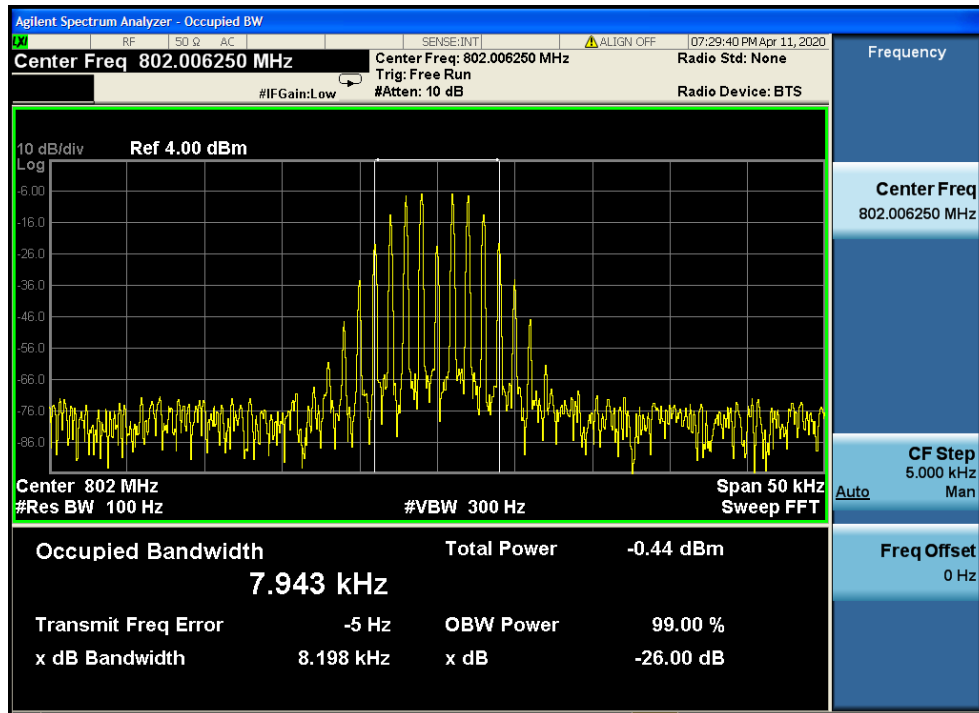


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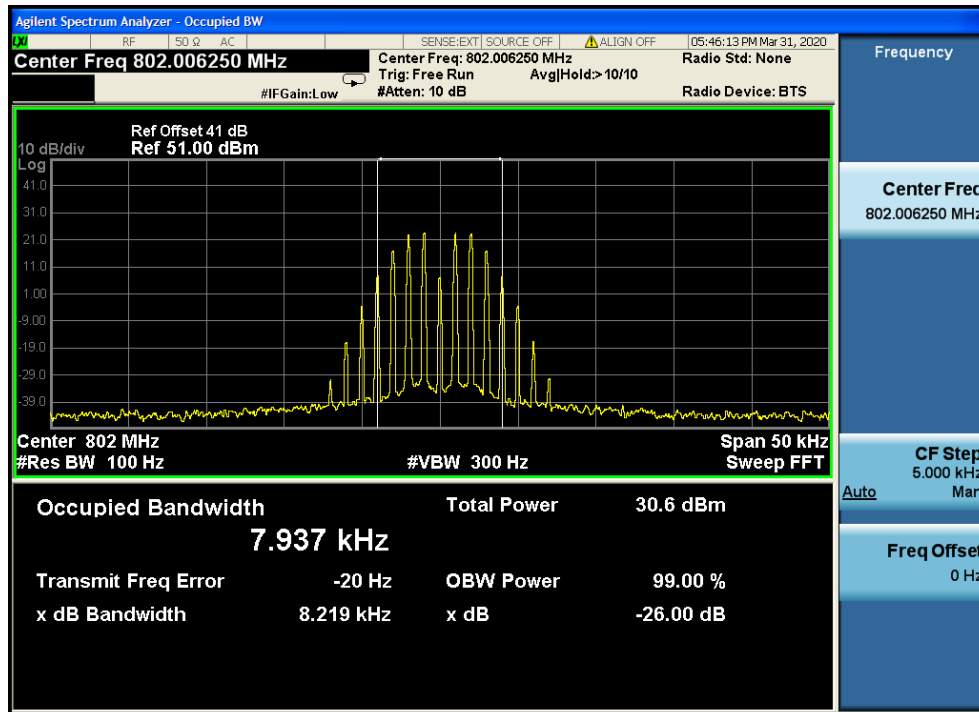
Attention: To check the authenticity of testing (inspection report & certificate), please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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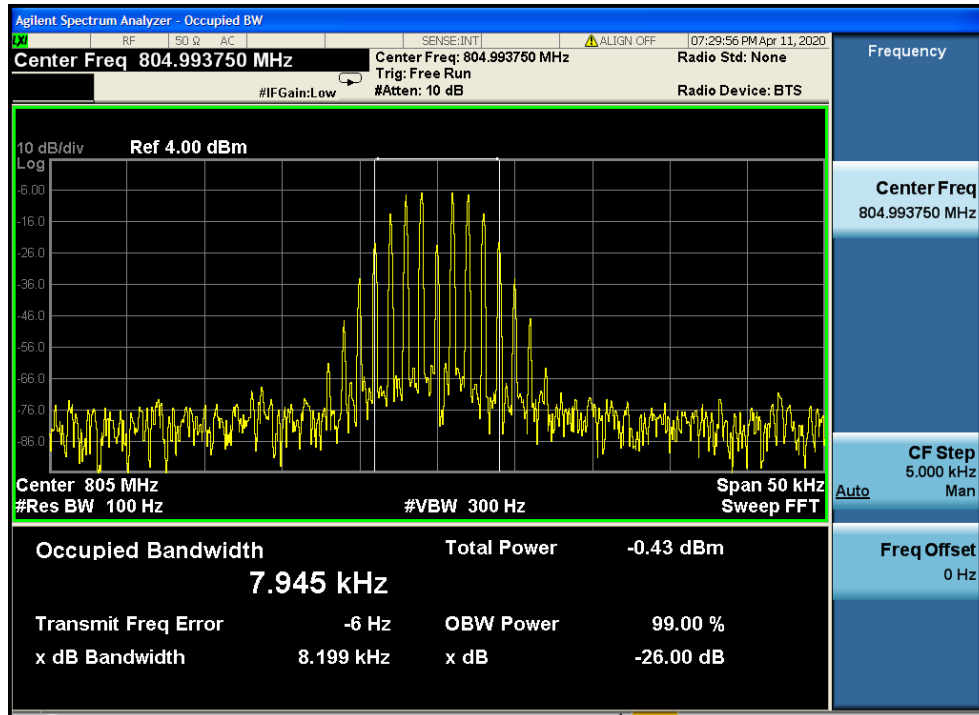
Input



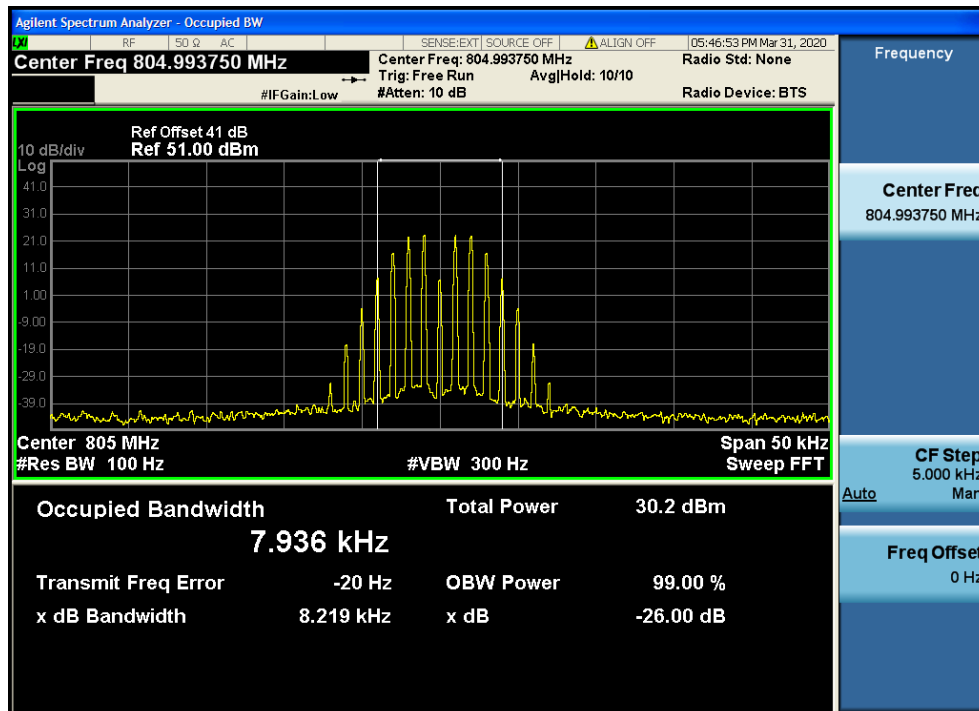
Output



1.5 highest frequency
Input



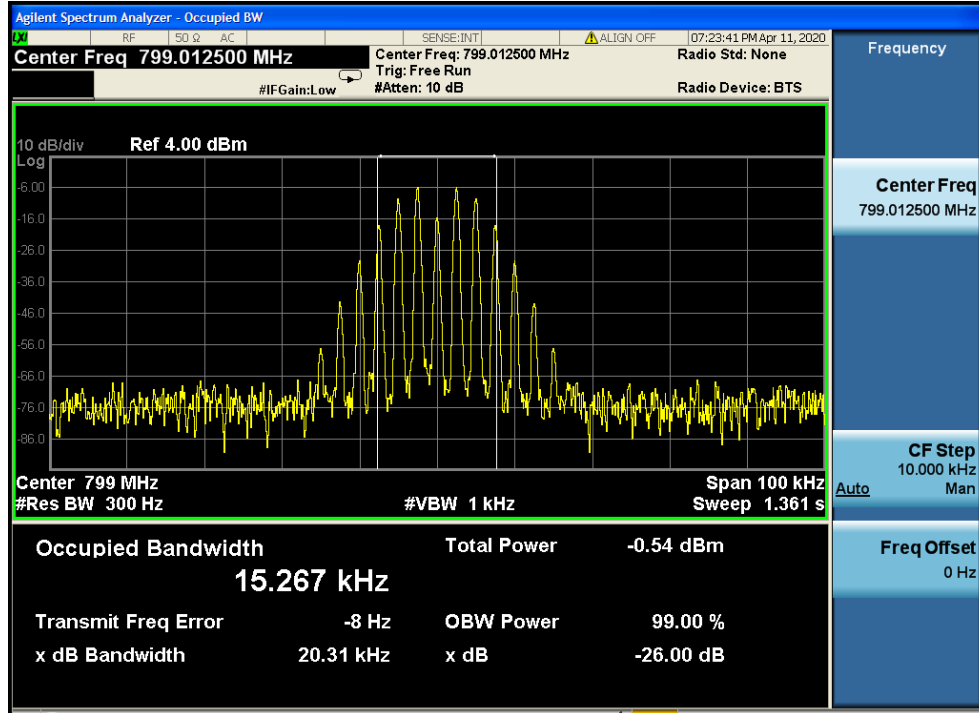
Output



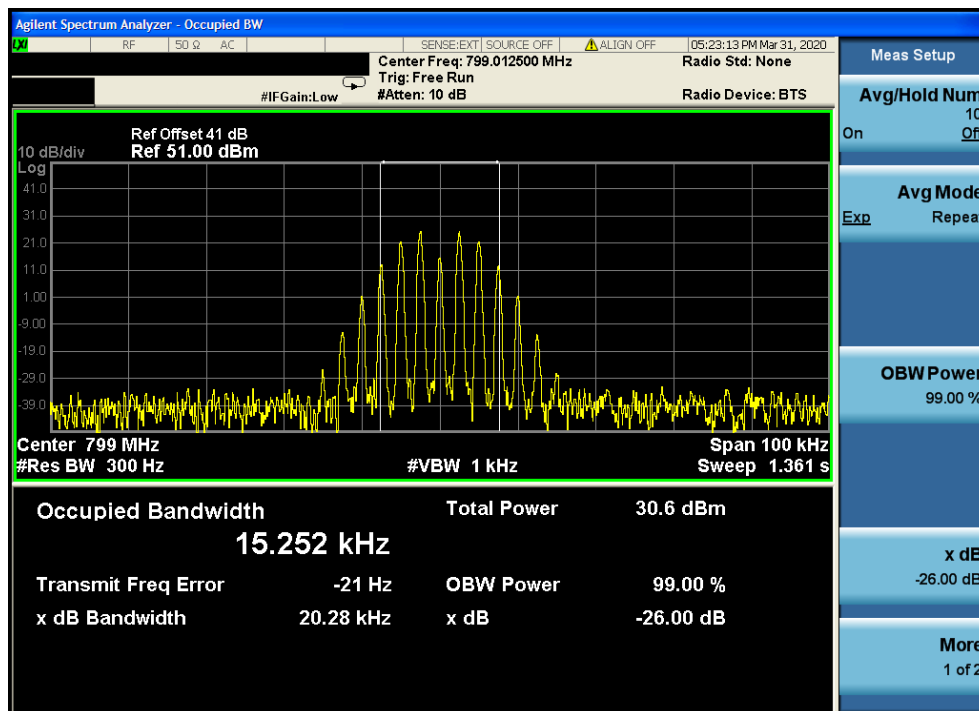
4.4 for FM-25K mode

1.1 lowest frequency

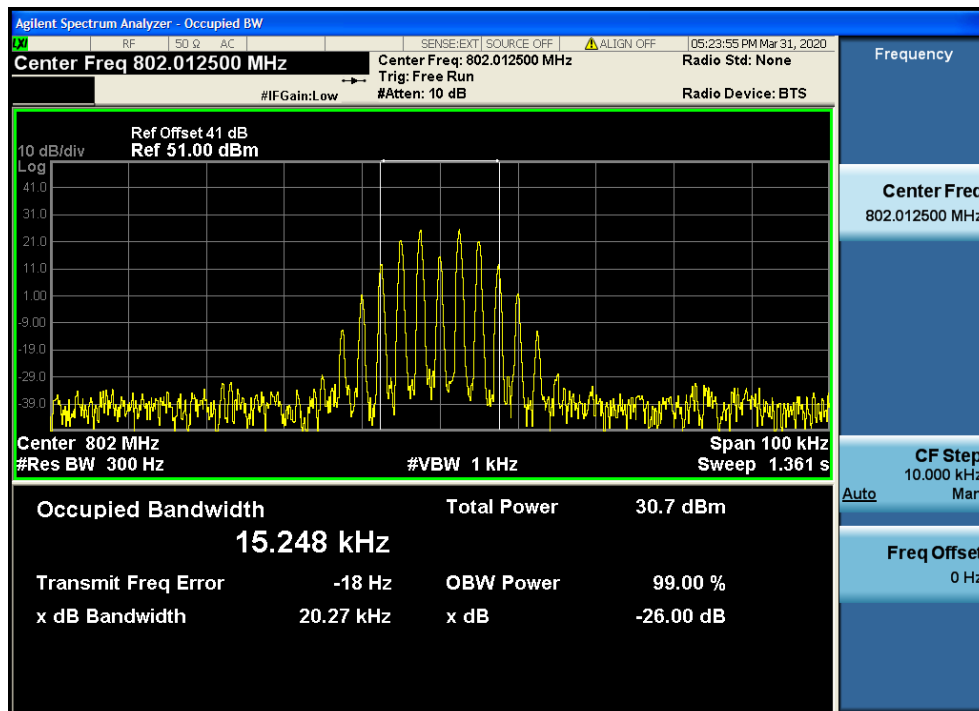
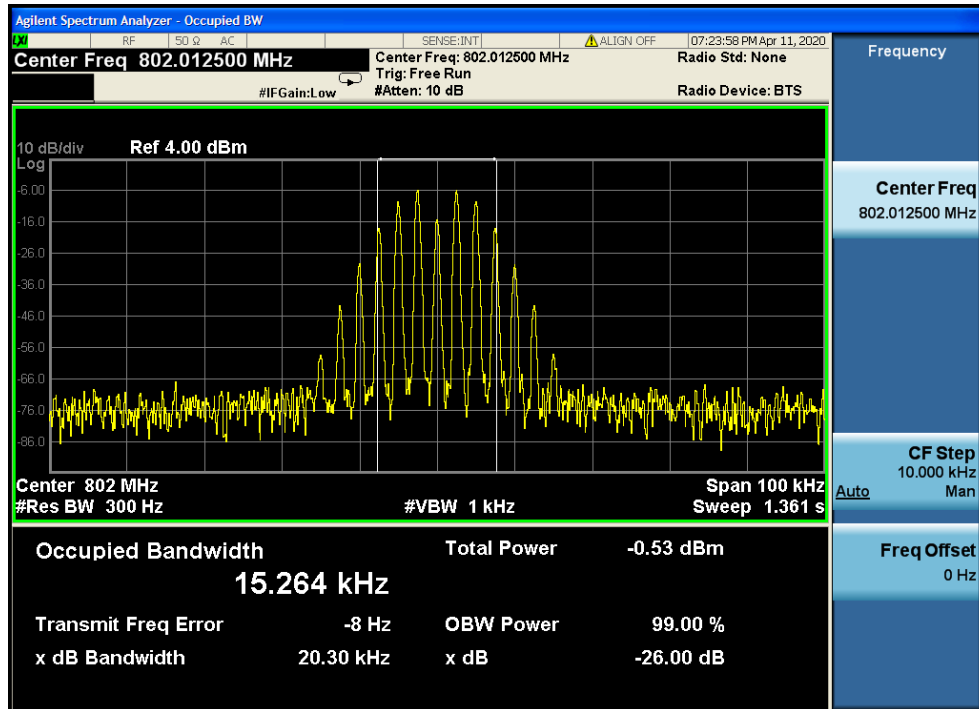
Input



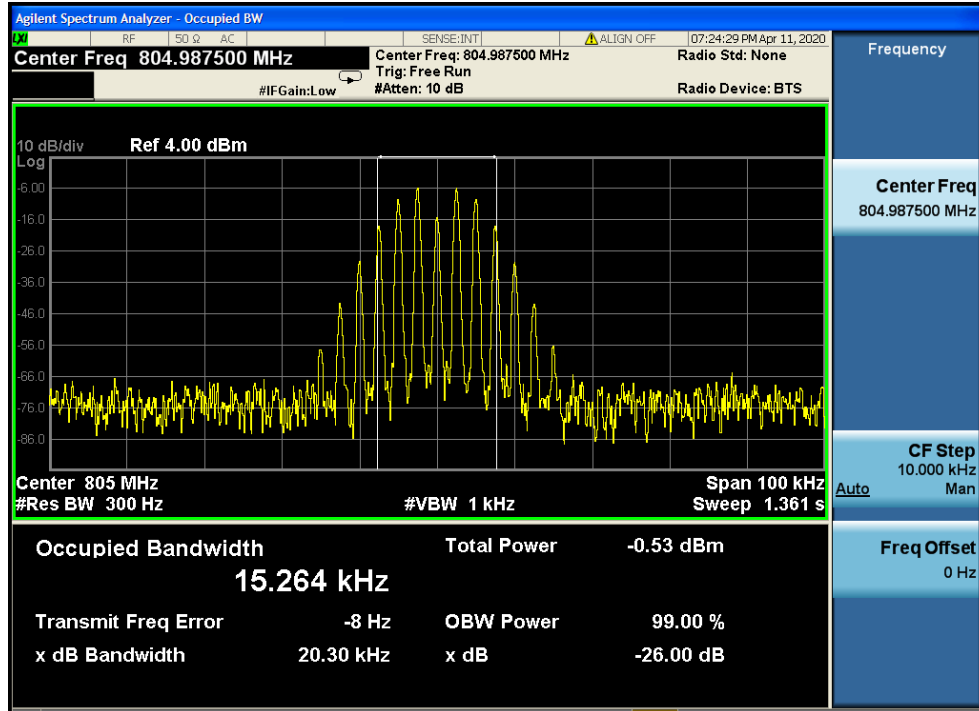
Output



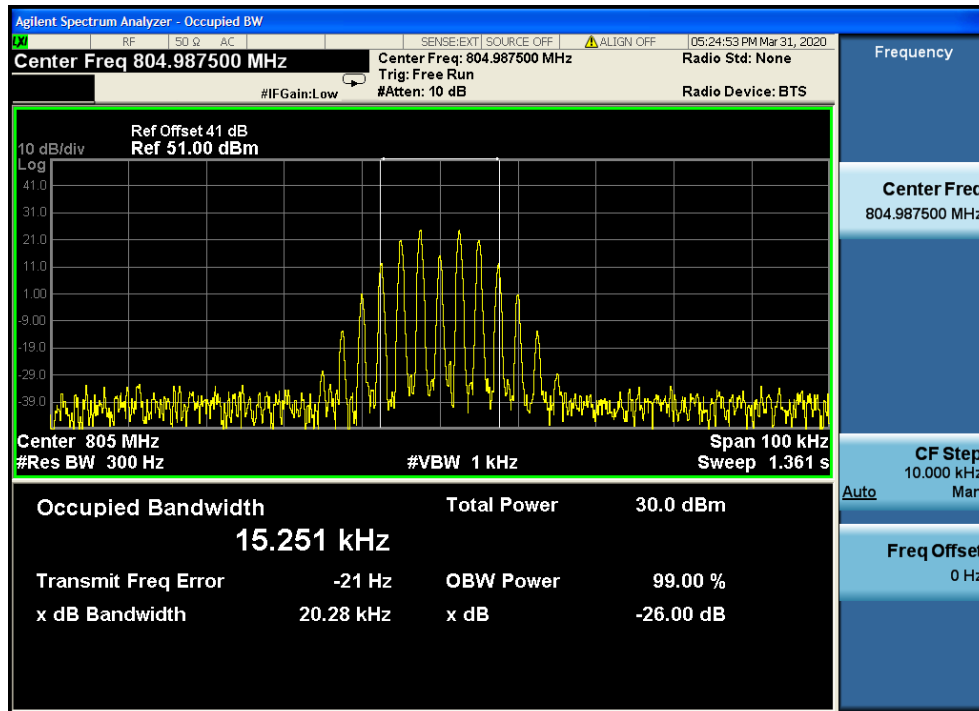
1.3 middle frequency Input



1.5 highest frequency
Input



Output



6.2.9 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:

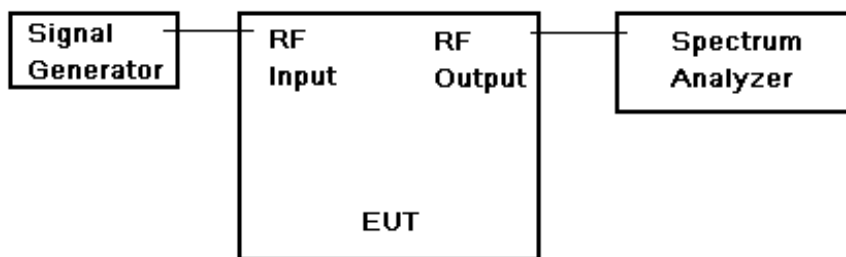


Fig.4. Out of Band rejection test configuration

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 ain-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.



6.2.9.1 Measurement Record:

Class A model number:

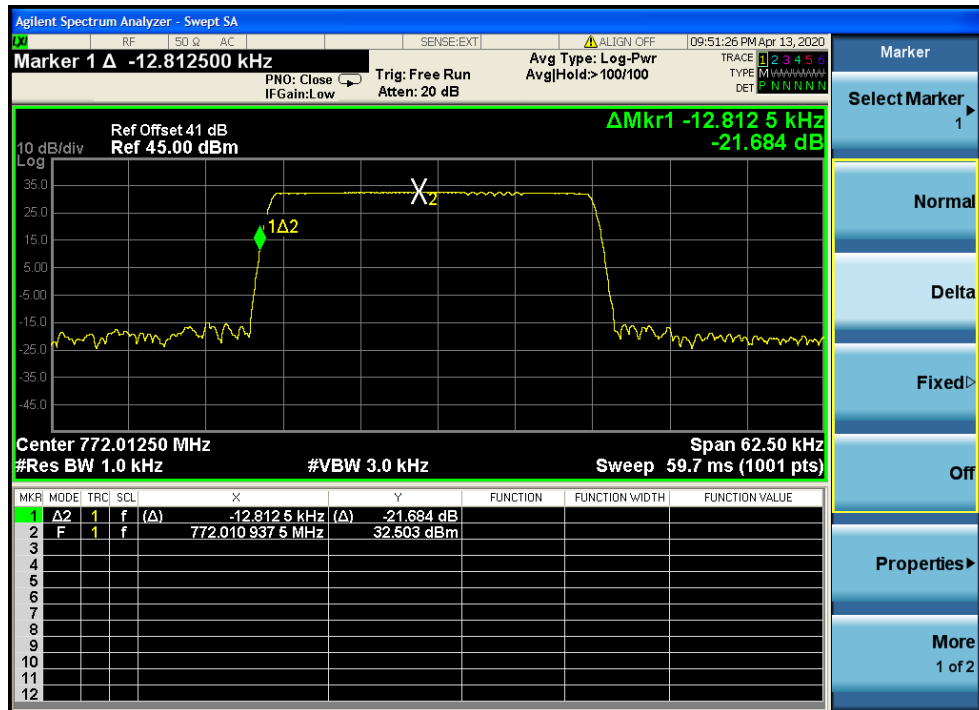
Frequency (MHz)	20dB Bandwidth (kHz)
769.0125	27.75
772.0125	27.75
774.9875	27.75
772.0125	27.68
799.0125	27.68
802.0125	27.68
804.9875	27.68



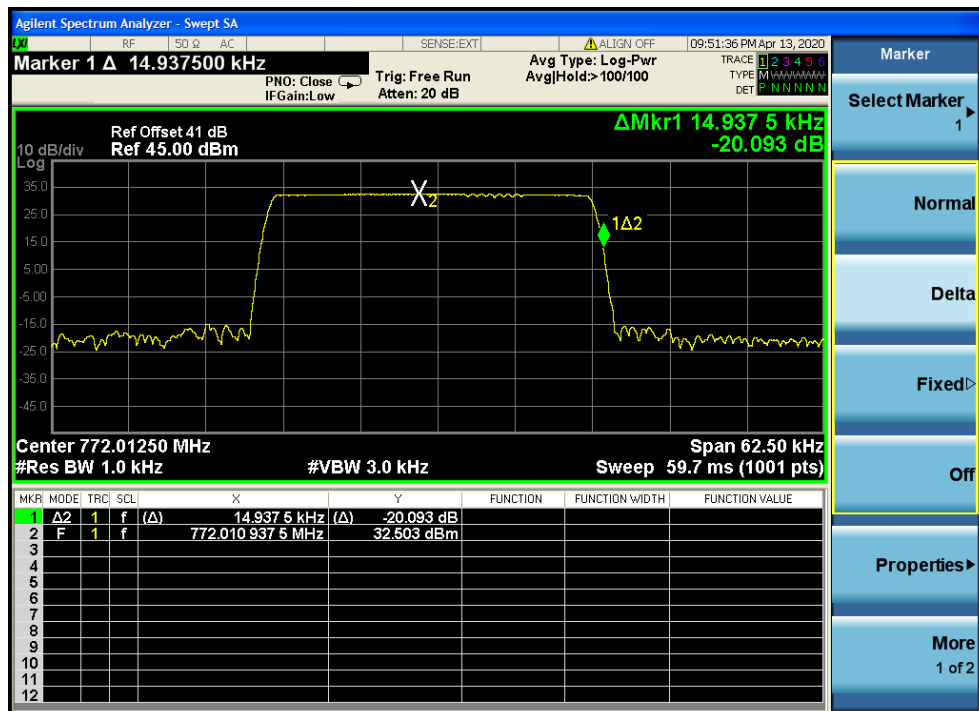
1. Test for Downlink:769MHz -775MHz

1) Middle frequency

left



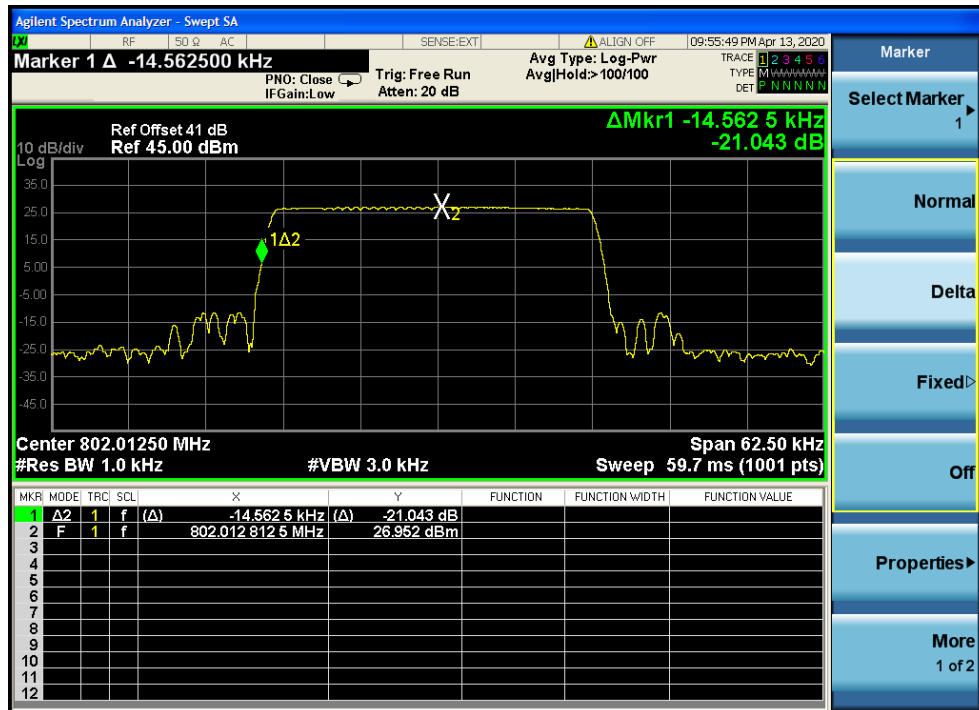
right



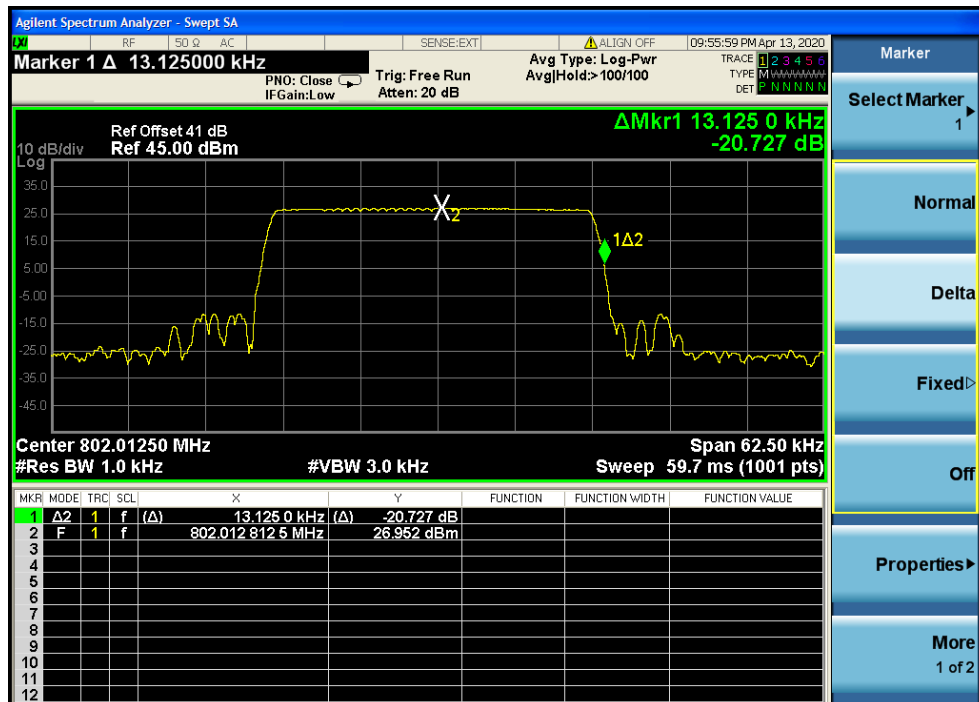
Uplink: 799MHz -805MHz

7) Middle frequency

Left



right





Class B model number:

frequency band 758-768Mhz and 788Mhz-798Mhz

Frequency (MHz)	20dB Bandwidth (MHz)
758-768	10.82
788-798	6.77
769-775	6.87
799-805	6.912

The frequency band 769-775Mhz and 799Mhz-805Mhz test plot almost identical with the above class A Model number test data, so only the data was recored in the table.

769.0125	27.76
772.0125	27.75
774.9875	27.75
772.0125	27.67
799.0125	27.68
802.0125	27.67
804.9875	27.68

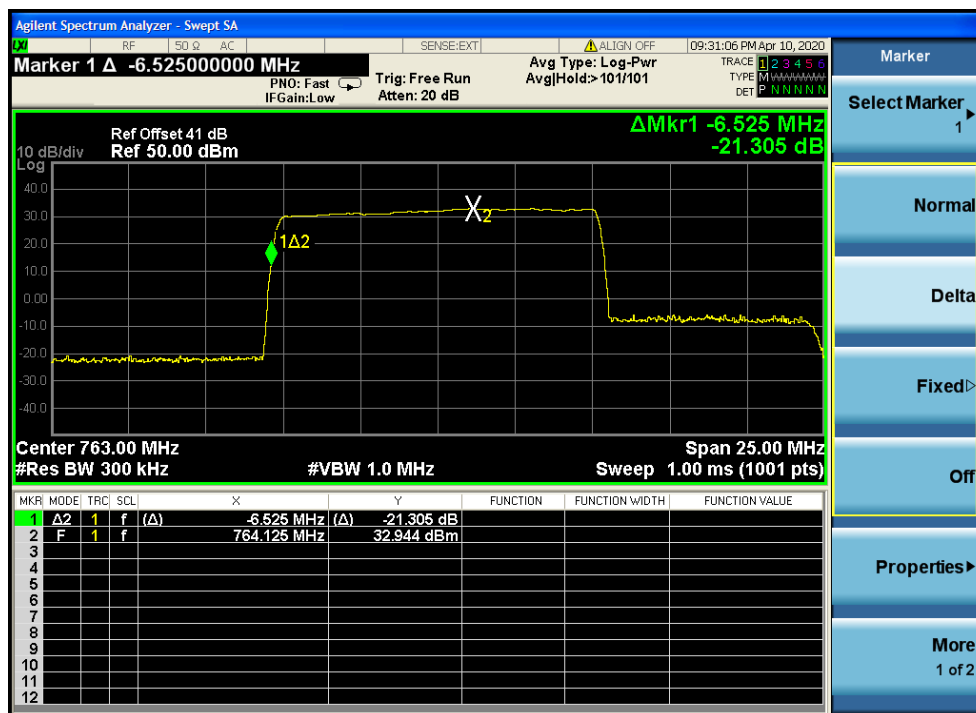


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Attention: To check the authenticity of testing (inspection) report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

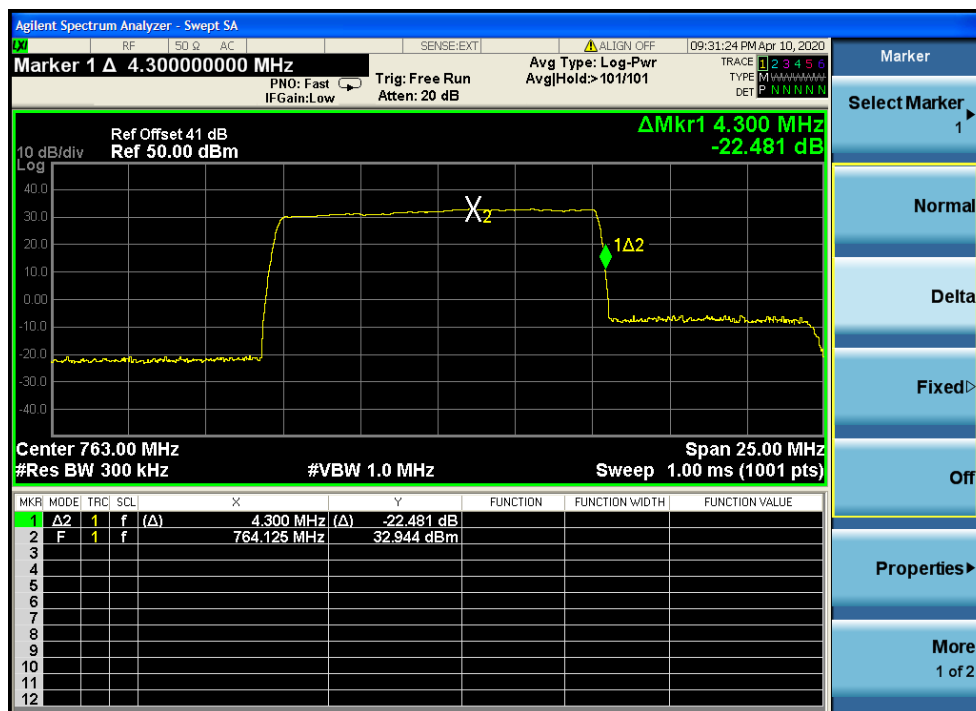
2. Test for Uplink :758MHz -768MHz

1)Lowest frequency

left



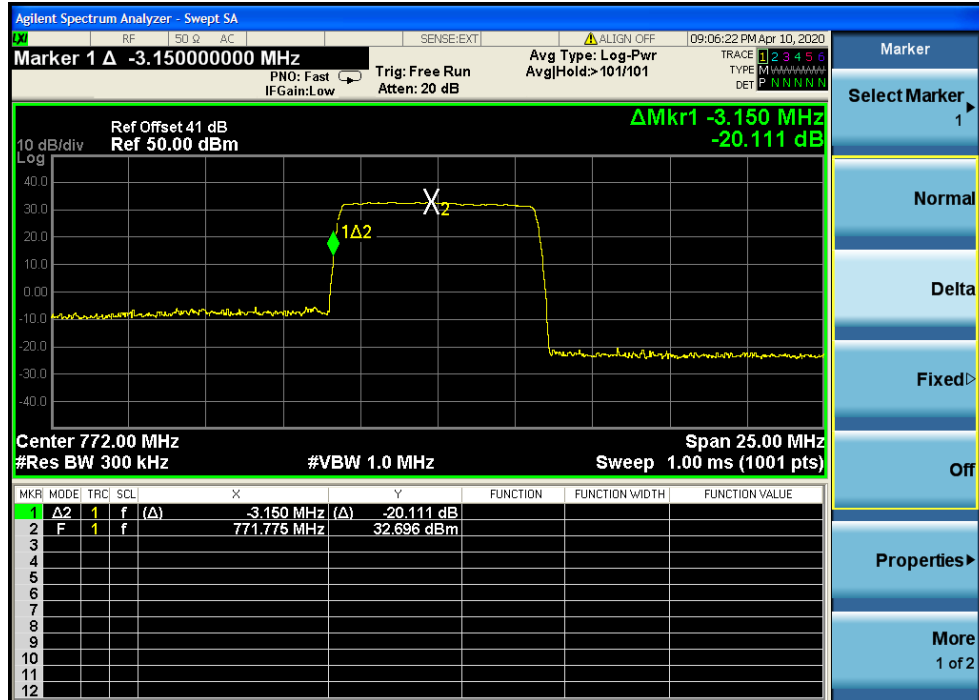
right



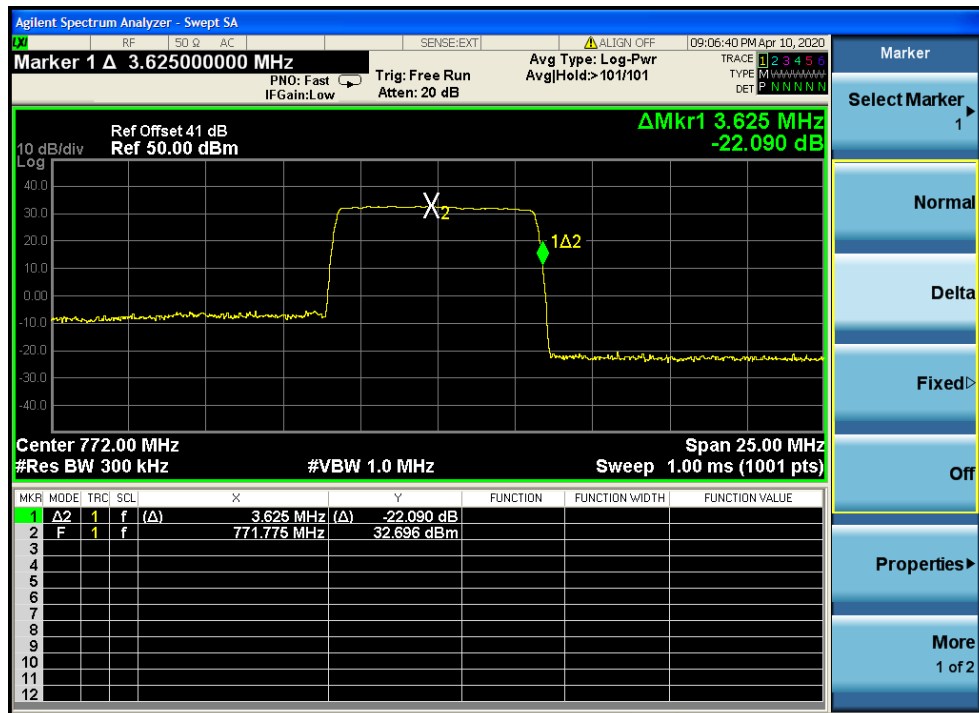
3. Test for Uplink :788MHz -798MHz

1)Lowest frequency

left



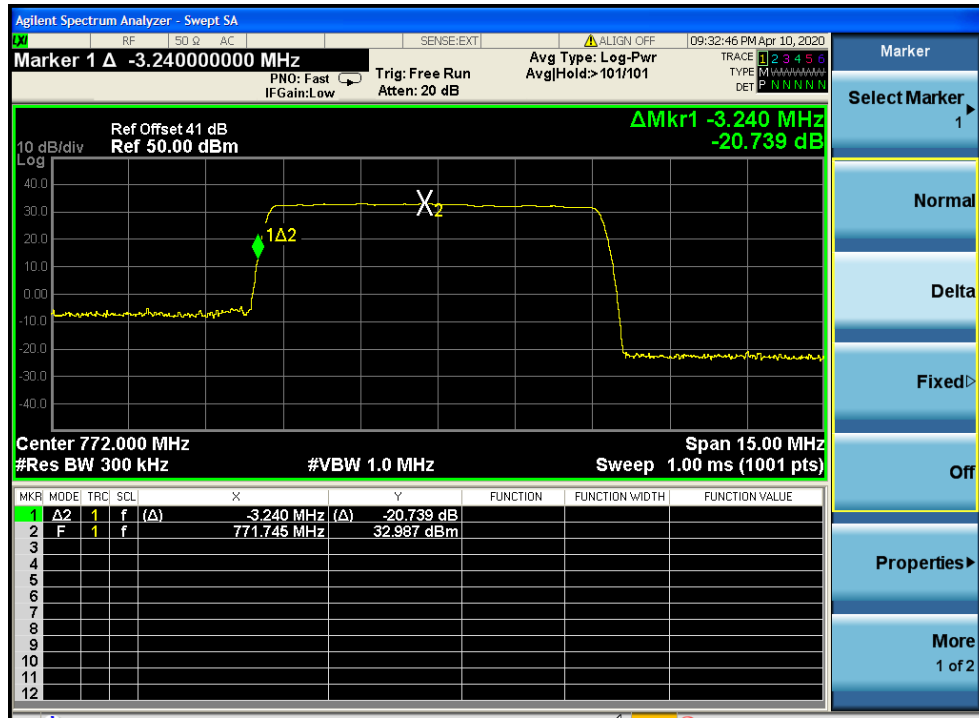
right



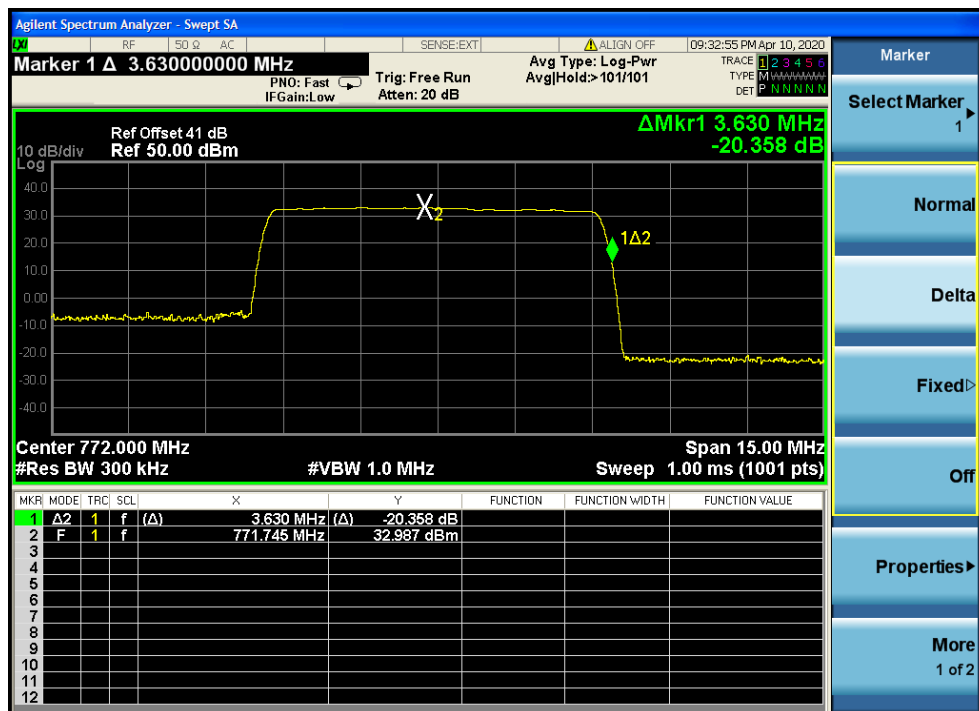
4. Test for Uplink :769MHz -775MHz

1)Lowest frequency

left



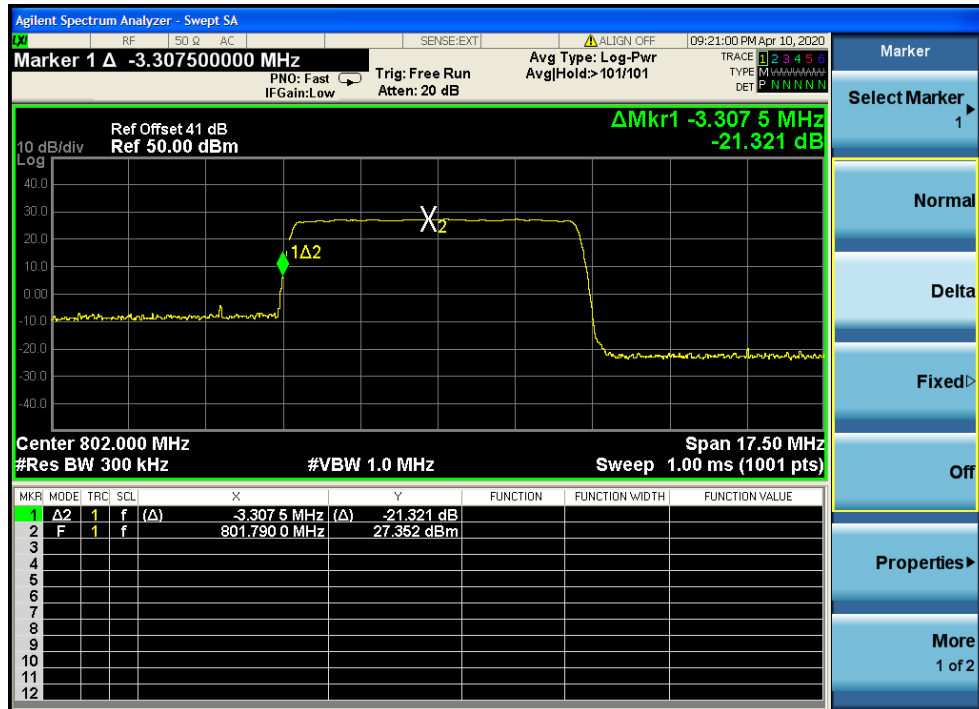
right



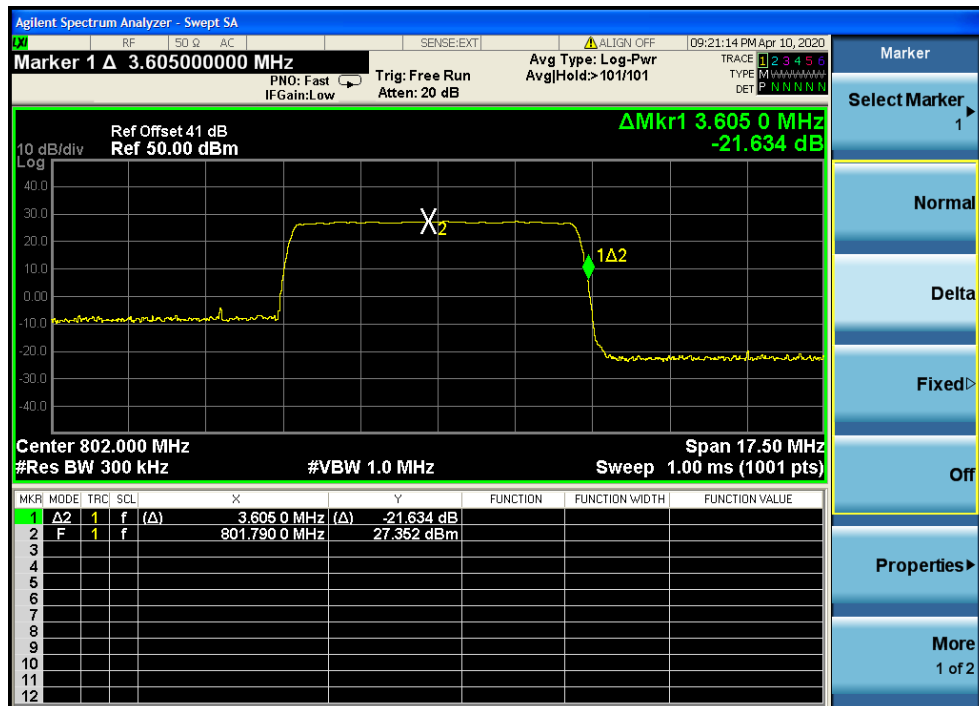
5. Test for Uplink :799MHz -805MHz

1)Lowest frequency

left



right



6.2.10 Frequency Stability

Test Requirement: FCC part 90.539 (b)(d)

Transmitters designed to operate in 769-775 MHz and 799-805 MHz frequency bands must meet the frequency stability requirements in this section.

(b) The frequency stability of base transmitters operating in the narrowband segment must be 100 parts per billion or better.

(d) The frequency stability of base transmitters operating in the wideband segment must be 1 part per million or better.

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.



6.2.10.1 Measurement Record:

Class A model number:

1) Frequency Stability vs temperature:

1.1) Test for Downlink: 769~775MHz (middle channel 772.0062515MHz)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	772.0062519	0.000518
40	772.0062515	0
30	772.0062521	0.000777
20	772.0062515	Reference frequency
10	772.0062518	0.000389
0	772.0062520	0.000648
-10	772.0062519	0.000518
-20	772.0062517	-0.000259
-30	772.0062516	-0.000130

1.2) Test for Uplink: 799~805MHz (middle channel 802.00625MHz)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	802.0062520	0.000249
40	802.0062516	0.000250
30	802.0062517	0.000120
20	802.0062518	Reference
10	802.0062519	0.000125
0	802.0062521	0.000374
-10	802.0062525	0.000873
-20	802.0062520	0.000249
-30	802.0062514	-0.000500

2) Frequency Stability vs voltage:

2.1) For AC supplied:

2.1.1) Test for Downlink:769~775MHz (middle channel 772.00625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	772.0062509	-0.000390
120	772.0062512	Reference
138 (120*1.15)	772.0062513	0.000130

2.1.2) Test for Uplink:799~805MHz (middle channel 802.00625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	802.0062511	0.000249
120	802.0062509	Reference
138 (120*1.15)	802.0062507	0.000250

2.2) For DC supplied:

2.2.1) Test for Downlink:769~775MHz (middle channel 772.00625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
+40.8 (+48.0*0.85)	772.0062516	0.000520
+48.0	772.0062520	Reference
+55.2 (+48.0*1.15)	772.0062517	0.000390

2.2.2) Test for Uplink: 799~805MHz (middle channel 802.00625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
+40.8 (+48.0*0.85)	802.0062522	0.000499
+48.0	802.0062518	Reference
+55.2 (+48.0*1.15)	802.0062526	0.000997

Class B model number:

6.2.10.2 Measurement Record:

1) Frequency Stability vs temperature:

1.1) Test for Downlink: 758~768MHz (middle channel 763MHz)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	763.0000007	0.000660
40	763.0000009	0.000390
30	763.0000014	0.000262
20	763.0000012	Reference
10	763.0000006	0.000790
0	763.0000017	0.000655
-10	763.0000011	-0.000130
-20	763.0000008	-0.000520
-30	763.0000006	-0.000790

1.1) Test for Downlink: 788~798MHz (middle channel 793MHz)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	793.0000016	0.000126
40	793.0000013	0.000250
30	793.0000009	0.000760
20	793.0000015	Reference
10	793.0000007	0.001000
0	793.0000011	0.000500
-10	793.0000008	0.000880
-20	793.0000014	-0.000130
-30	793.0000007	-0.001000

1.1) Test for Downlink: 769~775MHz (middle channel 772.00625MHz)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	772.0062515	0.000389
40	772.0062514	0.000259
30	772.0062509	0.000390
20	772.0062512	Reference
10	772.0062513	0.000130
0	772.0062511	0.000130
-10	772.0062508	0.000520
-20	772.0062507	-0.000650
-30	772.0062506	-0.000780

1.2) Test for Uplink: 799~805MHz (middle channel 802.00625MHz)

Temperature(°C)	Frequency(MHz)	Tolerance(ppm)
50	802.0062515	0.000249
40	802.0062509	0.000500
30	802.0062512	0.000120
20	802.0062513	Reference
10	802.0062510	0.000370
0	802.0062516	0.000374
-10	802.0062514	0.000125
-20	802.0062518	0.000623
-30	802.0062517	-0.000499



2) Frequency Stability vs voltage:

2.1) For AC supplied:

2.1.1) Test for Downlink:758~768MHz (middle channel 763MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	763.0000010	-0.000131
120	763.0000009	Reference
138 (120*1.15)	763.0000014	0.000655

2.1.1) Test for Downlink:788~798MHz (middle channel 793MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	793.0000009	-0.000630
120	793.0000014	Reference
138 (120*1.15)	793.0000011	0.000380

2.1.1) Test for Downlink:769~775MHz (middle channel 772.00625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	772.0062510	-0.000390
120	772.0062513	Reference
138 (120*1.15)	772.0062507	0.000780

2.1.2) Test for Uplink:799~805MHz (middle channel 802.00625MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	802.0062507	0.000250
120	802.0062509	Reference
138 (120*1.15)	802.0062513	0.000499

3) Frequency Stability vs voltage:

2.1) For DC supplied:

2.1.1) Test for Downlink:758~768MHz (middle channel 763MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	763.0000012	-0.000655
120	763.0000007	Reference
138 (120*1.15)	763.0000009	0.000262

.1.1) Test for Downlink:788~798MHz (middle channel 793MHz)

Voltage(V AC)	Frequency(MHz)	Tolerance(ppm)
102 (120*0.85)	793.0000013	-0.000500
120	793.0000017	Reference
138 (120*1.15)	793.0000019	0.000252

2.1.1) Test for Downlink:769~775MHz (middle channel 772.00625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
-40.8 (-48.0*0.85)	772.0062513	0.000650
-48.0	772.0062518	Reference
-55.2 (-48.0*1.15)	772.0062515	0.000390

2.1.2) Test for Uplink: 799~805MHz (middle channel 802.00625MHz)

Voltage(V DC)	Frequency(MHz)	Tolerance(ppm)
-40.8 (-48.0*0.85)	802.0062512	0.000500
-48.0	802.0062516	Reference
-55.2 (-48.0*1.15)	802.0062519	0.000374

--The End of Report--