Appendix for test report

1Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
BAND17	LTE/TM1	5	LCH	RB1#0	21.54	17.72	34.7	PASS
				RB1#13	21.88	18.06	34.7	PASS
				RB1#24	21.43	17.61	34.7	PASS
				RB12#0	21.29	17.47	34.7	PASS
				RB12#6	21.38	17.56	34.7	PASS
				RB12#13	21.2	17.38	34.7	PASS
				RB25#0	21.23	17.41	34.7	PASS
			MCH	RB1#0	21.6	17.78	34.7	PASS
				RB1#13	21.9	18.08	34.7	PASS
				RB1#24	21.55	17.73	34.7	PASS
				RB12#0	21.25	17.43	34.7	PASS
				RB12#6	21.38	17.56	34.7	PASS
				RB12#13	21.17	17.35	34.7	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#0	21.23	17.41	34.7	PASS
			HCH	RB1#0	21.61	17.79	34.7	PASS
				RB1#13	22.01	18.19	34.7	PASS
				RB1#24	20.79	16.97	34.7	PASS
				RB12#0	21.37	17.55	34.7	PASS
				RB12#6	21.49	17.67	34.7	PASS
				RB12#13	21.08	17.26	34.7	PASS
				RB25#0	21.2	17.38	34.7	PASS
		10	LCH	RB1#0	21.34	17.52	34.7	PASS
				RB1#25	21.9	18.08	34.7	PASS
				RB1#49	21.2	17.38	34.7	PASS
				RB25#0	21.14	17.32	34.7	PASS
				RB25#13	21.24	17.42	34.7	PASS
				RB25#25	21	17.18	34.7	PASS
				RB50#0	21.06	17.24	34.7	PASS
			MCH	RB1#0	21.31	17.49	34.7	PASS
				RB1#25	21.9	18.08	34.7	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB1#49	21.06	17.24	34.7	PASS
				RB25#0	21.17	17.35	34.7	PASS
				RB25#13	21.29	17.47	34.7	PASS
				RB25#25	21.06	17.24	34.7	PASS
				RB50#0	21.13	17.31	34.7	PASS
			HCH	RB1#0	21.43	17.61	34.7	PASS
				RB1#25	22	18.18	34.7	PASS
				RB1#49	20.66	16.84	34.7	PASS
				RB25#0	21.16	17.34	34.7	PASS
				RB25#13	21.32	17.5	34.7	PASS
				RB25#25	20.95	17.13	34.7	PASS
				RB50#0	21.12	17.3	34.7	PASS
	LTE/TM2	5	LCH	RB1#0	21.11	17.29	34.7	PASS
				RB1#13	21.46	17.64	34.7	PASS
				RB1#24	20.98	17.16	34.7	PASS
				RB12#0	21.33	17.51	34.7	PASS
				RB12#6	21.35	17.53	34.7	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB12#13	21.33	17.51	34.7	PASS
				RB25#0	21.36	17.54	34.7	PASS
			MCH	RB1#0	21.26	17.44	34.7	PASS
				RB1#13	21.56	17.74	34.7	PASS
				RB1#24	21.23	17.41	34.7	PASS
				RB12#0	21.19	17.37	34.7	PASS
				RB12#6	21.39	17.57	34.7	PASS
				RB12#13	21.39	17.57	34.7	PASS
				RB25#0	21.47	17.65	34.7	PASS
			HCH	RB1#0	21.27	17.45	34.7	PASS
				RB1#13	21.57	17.75	34.7	PASS
				RB1#24	20.47	16.65	34.7	PASS
				RB12#0	21.28	17.46	34.7	PASS
				RB12#6	21.46	17.64	34.7	PASS
				RB12#13	21.3	17.48	34.7	PASS
				RB25#0	21.31	17.49	34.7	PASS
		10	LCH	RB1#0	20.83	17.01	34.7	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB1#25	21.42	17.6	34.7	PASS
				RB1#49	20.72	16.9	34.7	PASS
				RB25#0	21.3	17.48	34.7	PASS
				RB25#13	21.48	17.66	34.7	PASS
				RB25#25	21.26	17.44	34.7	PASS
				RB50#0	21.29	17.47	34.7	PASS
			MCH	RB1#0	20.78	16.96	34.7	PASS
				RB1#25	21.44	17.62	34.7	PASS
				RB1#49	20.53	16.71	34.7	PASS
				RB25#0	21.31	17.49	34.7	PASS
				RB25#13	21.48	17.66	34.7	PASS
				RB25#25	21.17	17.35	34.7	PASS
				RB50#0	21.33	17.51	34.7	PASS
			HCH	RB1#0	20.94	17.12	34.7	PASS
				RB1#25	21.52	17.7	34.7	PASS
				RB1#49	20.2	16.38	34.7	PASS
				RB25#0	21.33	17.51	34.7	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#13	21.52	17.7	34.7	PASS
				RB25#25	21.09	17.27	34.7	PASS
				RB50#0	21.31	17.49	34.7	PASS

Note1:

a, For getting the ERP (Efficient Radiated Power) or EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]

EIRP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBi]

b, SGP=Signal Generator Level

Note2:

SET Span=1.5*OBW

SET RBW=1%of the OBW,not to wxceed 1MHz

SET VBW>= 3*RBW

SET Sweep time=auto-couple.

Detector:RMS

2Appendix_B: Peak-to-Average Ratio

Part I - Test Results

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
BAND17	LTE/TM1	5	LCH	RB1#0	4.11	13	PASS
				RB1#13	3.96	13	PASS
				RB1#24	4.31	13	PASS
				RB12#0	4.96	13	PASS
				RB12#6	4.8	13	PASS
				RB12#13	5.11	13	PASS
				RB25#0	5.33	13	PASS
			MCH	RB1#0	4.39	13	PASS
				RB1#13	4.28	13	PASS
				RB1#24	4.37	13	PASS
				RB12#0	5.04	13	PASS
				RB12#6	4.8	13	PASS
				RB12#13	5.08	13	PASS
				RB25#0	5.62	13	PASS
			HCH	RB1#0	4.22	13	PASS
				RB1#13	3.79	13	PASS
				RB1#24	4.34	13	PASS
				RB12#0	4.94	13	PASS
				RB12#6	4.63	13	PASS
				RB12#13	4.83	13	PASS
				RB25#0	5.3	13	PASS
		10	LCH	RB1#0	4.16	13	PASS
				RB1#25	3.92	13	PASS
				RB1#49	4.04	13	PASS
				RB25#0	5.27	13	PASS
				RB25#13	5.03	13	PASS
				RB25#25	5.29	13	PASS
				RB50#0	5.52	13	PASS
			MCH	RB1#0	4.21	13	PASS
				RB1#25	4.03	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#49	4.22	13	PASS
				RB25#0	5.27	13	PASS
				RB25#13	5.04	13	PASS
				RB25#25	5.24	13	PASS
				RB50#0	5.5	13	PASS
			HCH	RB1#0	4.31	13	PASS
				RB1#25	4.07	13	PASS
				RB1#49	4.45	13	PASS
				RB25#0	5.18	13	PASS
				RB25#13	4.87	13	PASS
				RB25#25	5.17	13	PASS
				RB50#0	5.33	13	PASS
	LTE/TM2	5	LCH	RB1#0	5.08	13	PASS
				RB1#13	4.91	13	PASS
				RB1#24	5.24	13	PASS
				RB12#0	5.93	13	PASS
				RB12#6	5.81	13	PASS
				RB12#13	6.06	13	PASS
				RB25#0	6.37	13	PASS
			MCH	RB1#0	4.88	13	PASS
				RB1#13	4.71	13	PASS
				RB1#24	4.91	13	PASS
				RB12#0	6	13	PASS
				RB12#6	5.81	13	PASS
				RB12#13	6.12	13	PASS
				RB25#0	6.26	13	PASS
			HCH	RB1#0	5.02	13	PASS
				RB1#13	4.65	13	PASS
				RB1#24	5.13	13	PASS
				RB12#0	5.96	13	PASS
				RB12#6	5.69	13	PASS
				RB12#13	5.84	13	PASS
				RB25#0	6.06	13	PASS
		10	LCH	RB1#0	5.04	13	PASS
				RB1#25	4.92	13	PASS
				RB1#49	4.71	13	PASS
				RB25#0	6.13	13	PASS
				RB25#13	5.95	13	PASS
				RB25#25	6.22	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB50#0	6.47	13	PASS
			MCH	RB1#0	4.86	13	PASS
				RB1#25	4.83	13	PASS
				RB1#49	5	13	PASS
				RB25#0	6.17	13	PASS
				RB25#13	5.98	13	PASS
				RB25#25	6.1	13	PASS
				RB50#0	6.37	13	PASS
			HCH	RB1#0	4.73	13	PASS
				RB1#25	4.58	13	PASS
				RB1#49	4.91	13	PASS
				RB25#0	6.2	13	PASS
				RB25#13	5.93	13	PASS
				RB25#25	6.12	13	PASS
				RB50#0	6.33	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = BAND17

3.1.1.1 Test Mode = LTE/TM1

3.1.1.1.1 Test Bandwidth = 5

3.1.1.1.1.1 Test Channel = MCH

3.1.1.1.1.1.1 Test RB = RB25#0
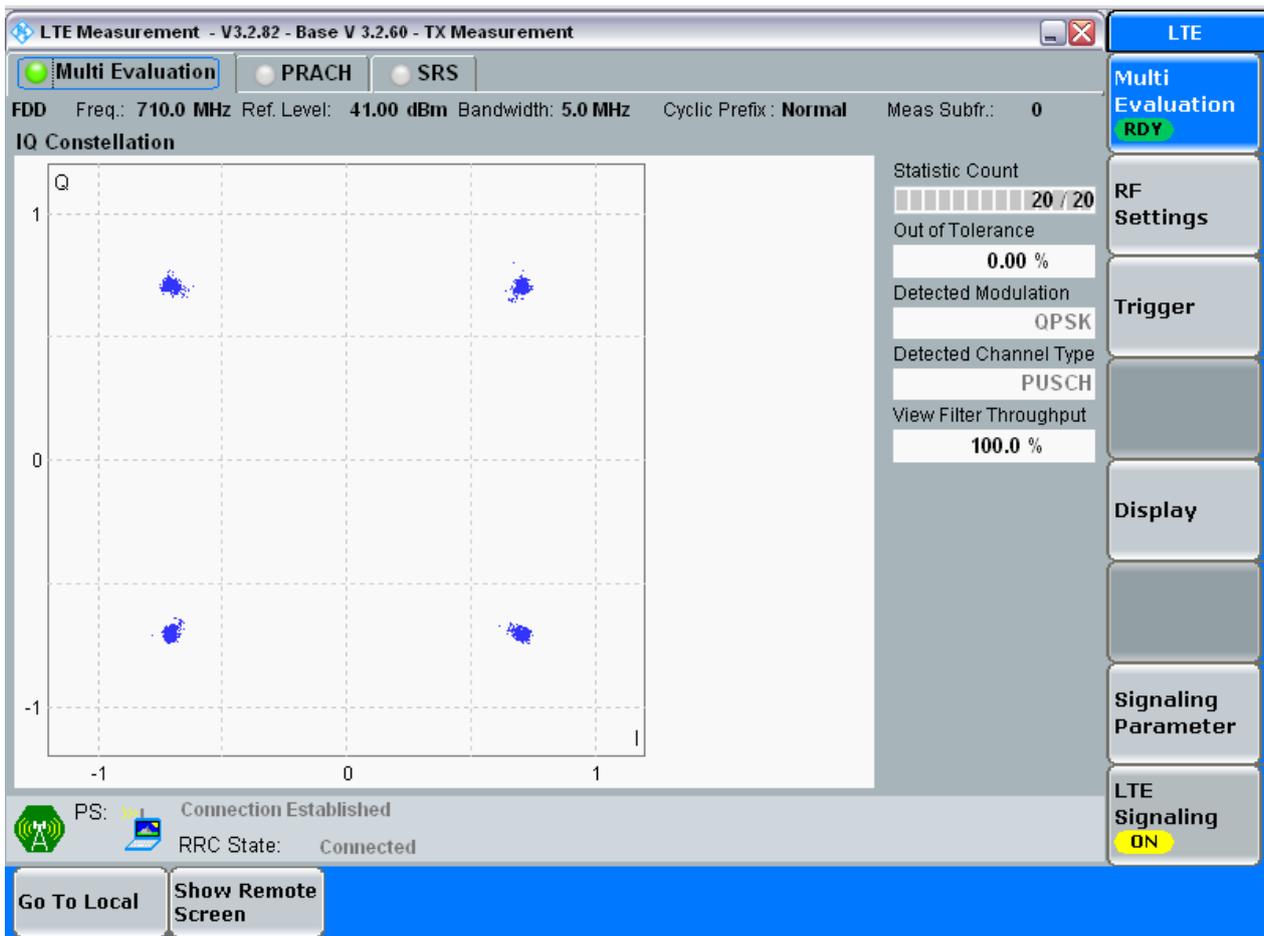
3.1.1.1.2 Test Bandwidth = 10

3.1.1.1.2.1 Test Channel = MCH

3.1.1.1.2.1.1 Test RB = RB50#0
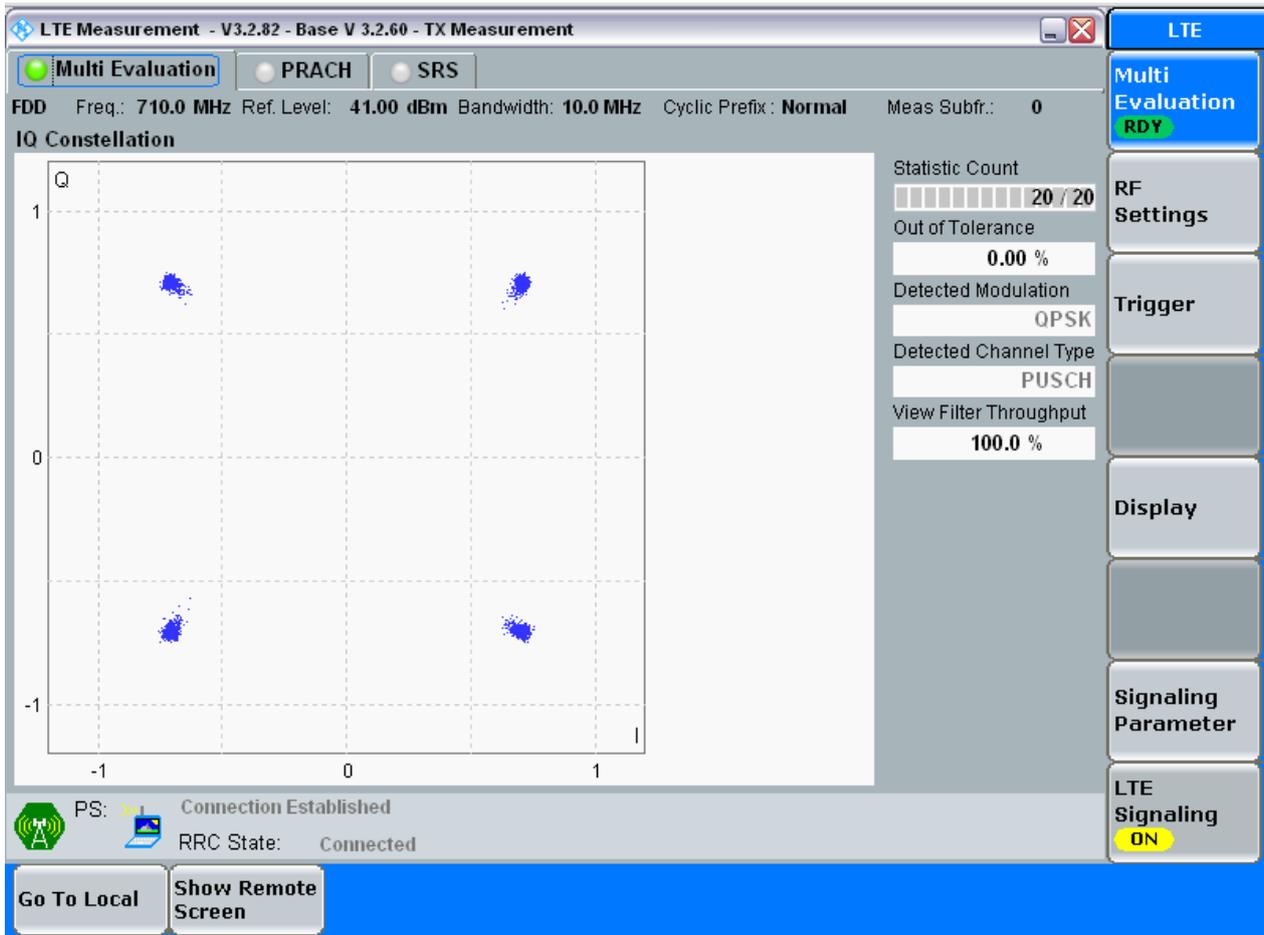
3.1.1.2 Test Mode = LTE/TM2

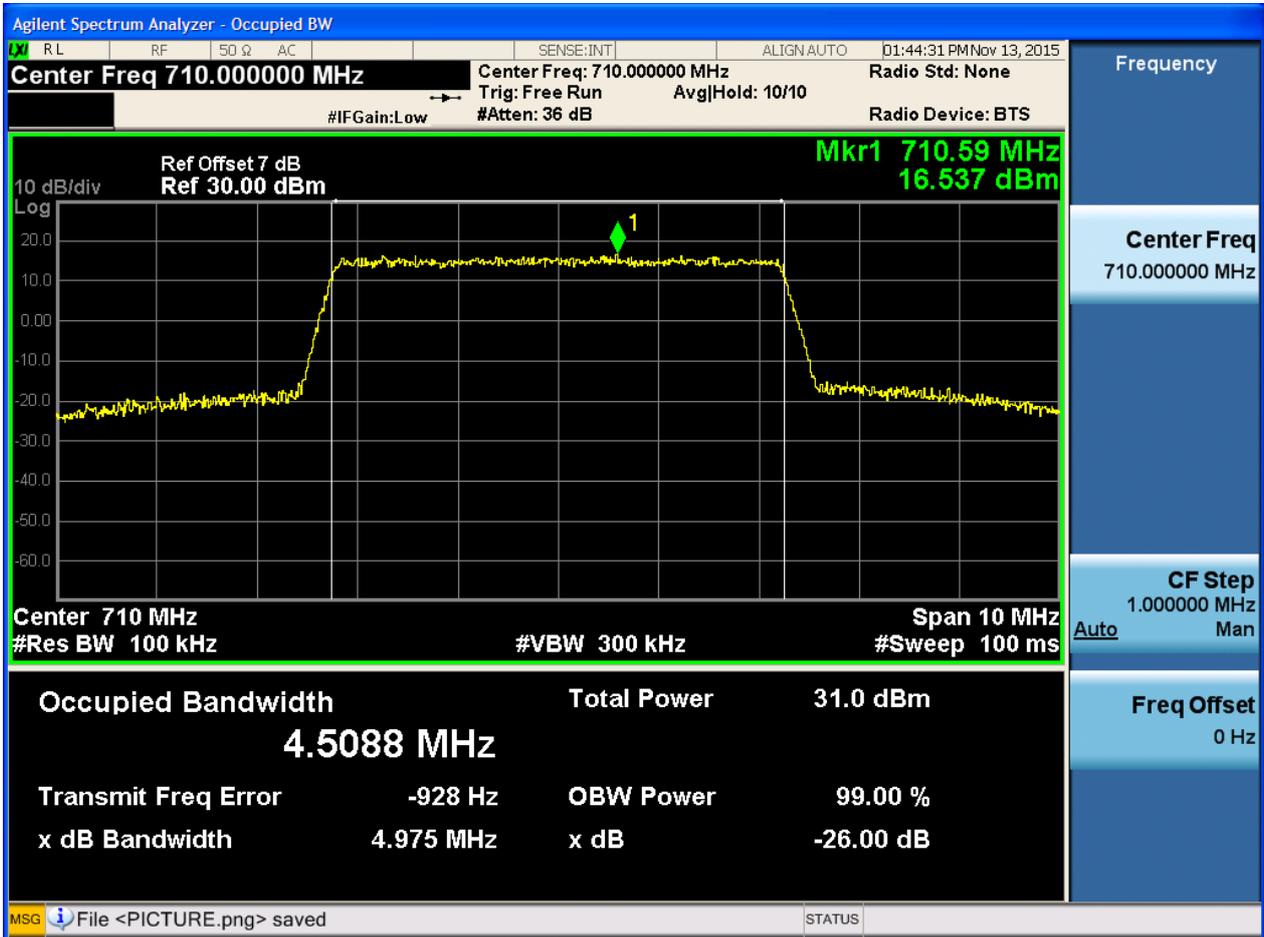### 3.1.1.2.1 Test Bandwidth = 5

3.1.1.2.1.1 Test Channel = MCH

3.1.1.2.1.1.1 Test RB = RB25#0
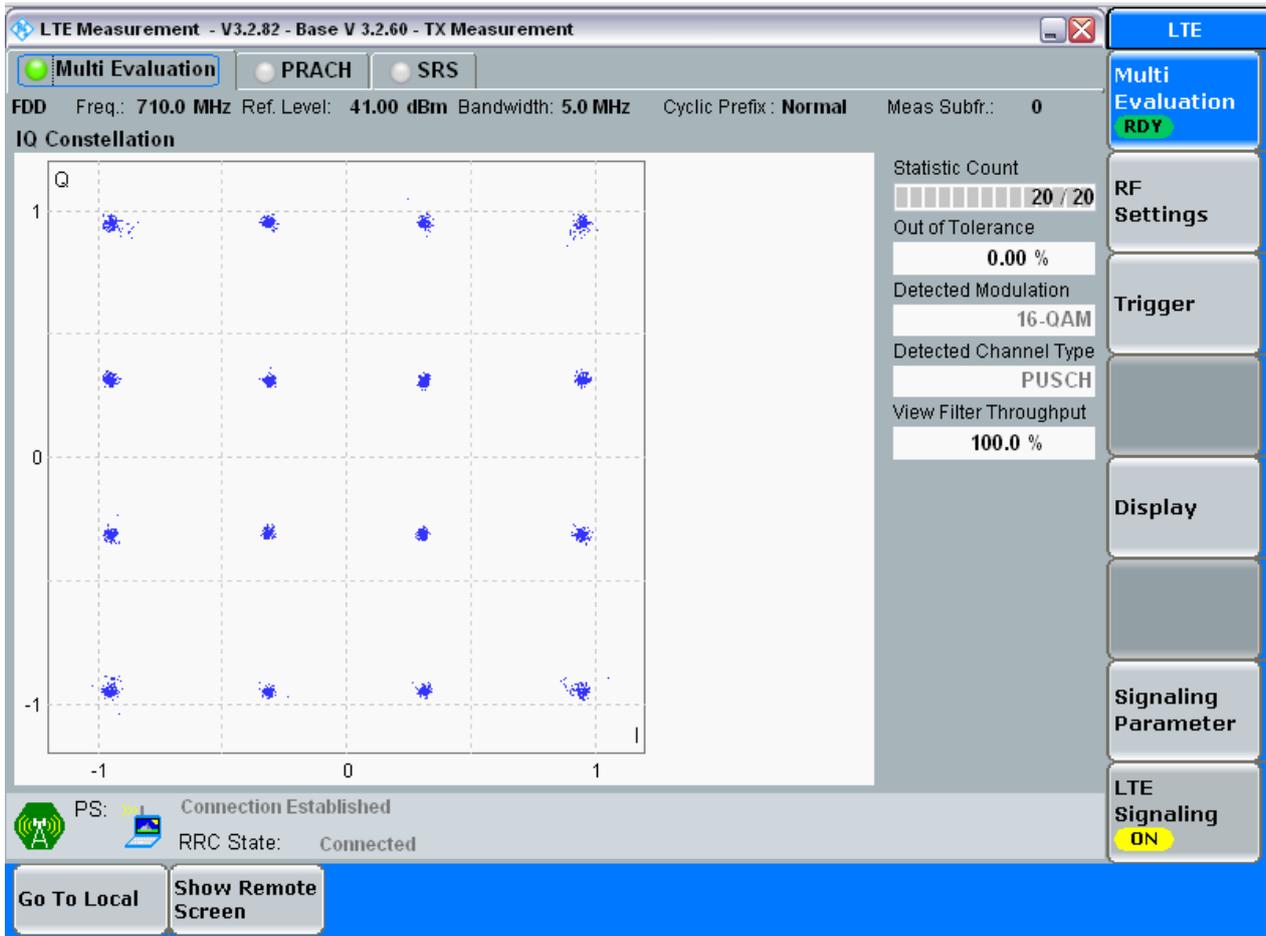
3.1.1.2.2 Test Bandwidth = 10

3.1.1.2.2.1 Test Channel = MCH

3.1.1.2.2.1.1 Test RB = RB50#0
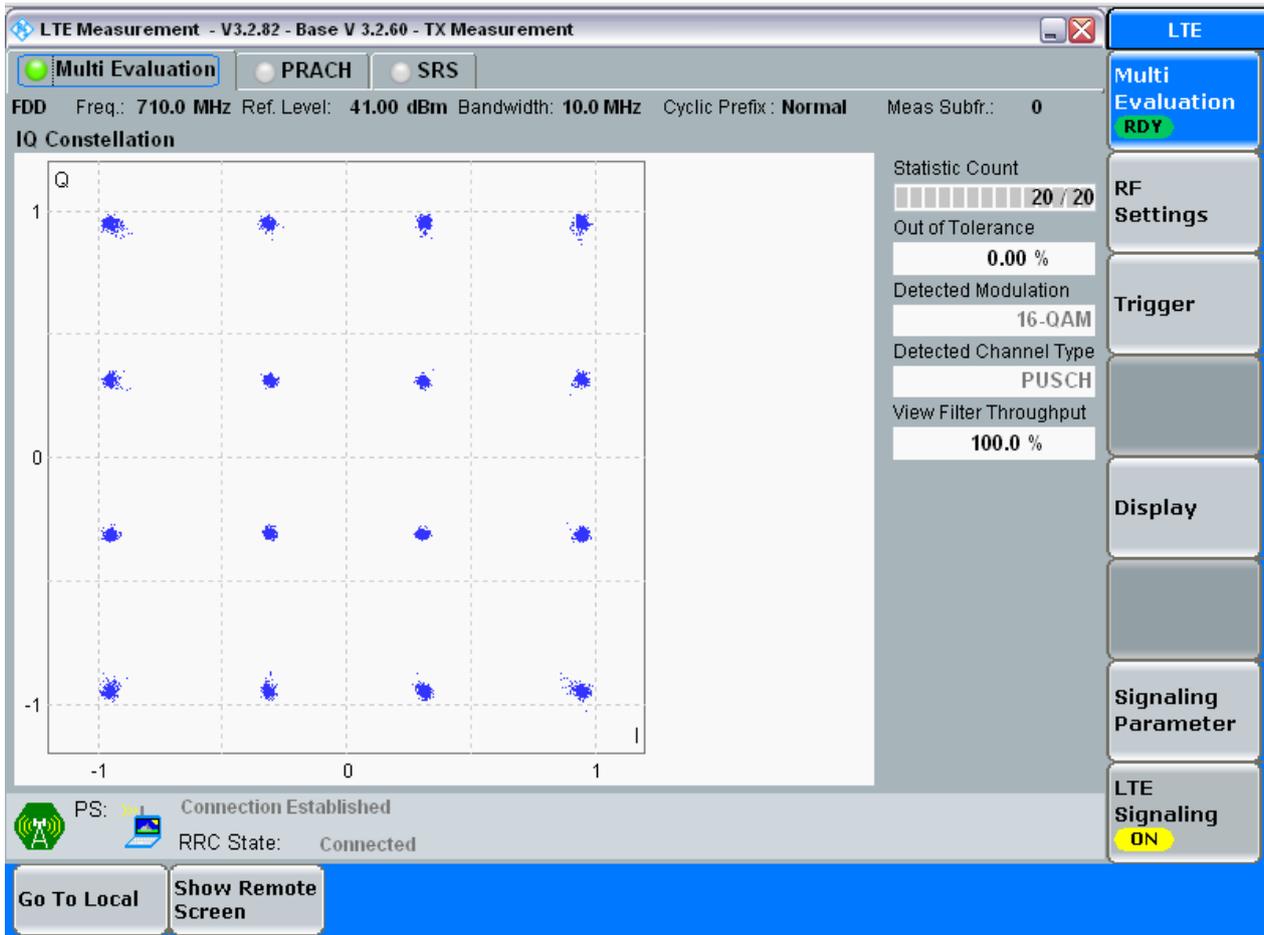
4Appendix_D: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Bandwidth	Test Channel	Test RB	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
BAND17	LTE/TM1	5	LCH	RB25#0	4.52	4.97	Pass
			MCH	RB25#0	4.52	4.98	Pass
			HCH	RB25#0	4.51	4.96	Pass
		10	LCH	RB50#0	9.01	9.92	Pass
			MCH	RB50#0	8.98	9.86	Pass
			HCH	RB50#0	8.97	9.83	Pass
	LTE/TM2	5	LCH	RB25#0	4.51	4.97	Pass
			MCH	RB25#0	4.51	4.97	Pass
			HCH	RB25#0	4.50	4.96	Pass
		10	LCH	RB50#0	9.00	9.93	Pass
			MCH	RB50#0	8.98	9.91	Pass
			HCH	RB50#0	8.98	9.85	Pass

Part II - Test Plots

4.1 For LTE

4.1.1 Test Band = BAND17

4.1.1.1 Test Mode = LTE/TM1

4.1.1.1.1 Test Bandwidth = 5

4.1.1.1.1.1 Test Channel = LCH

4.1.1.1.1.1.1 Test RB = RB25#0
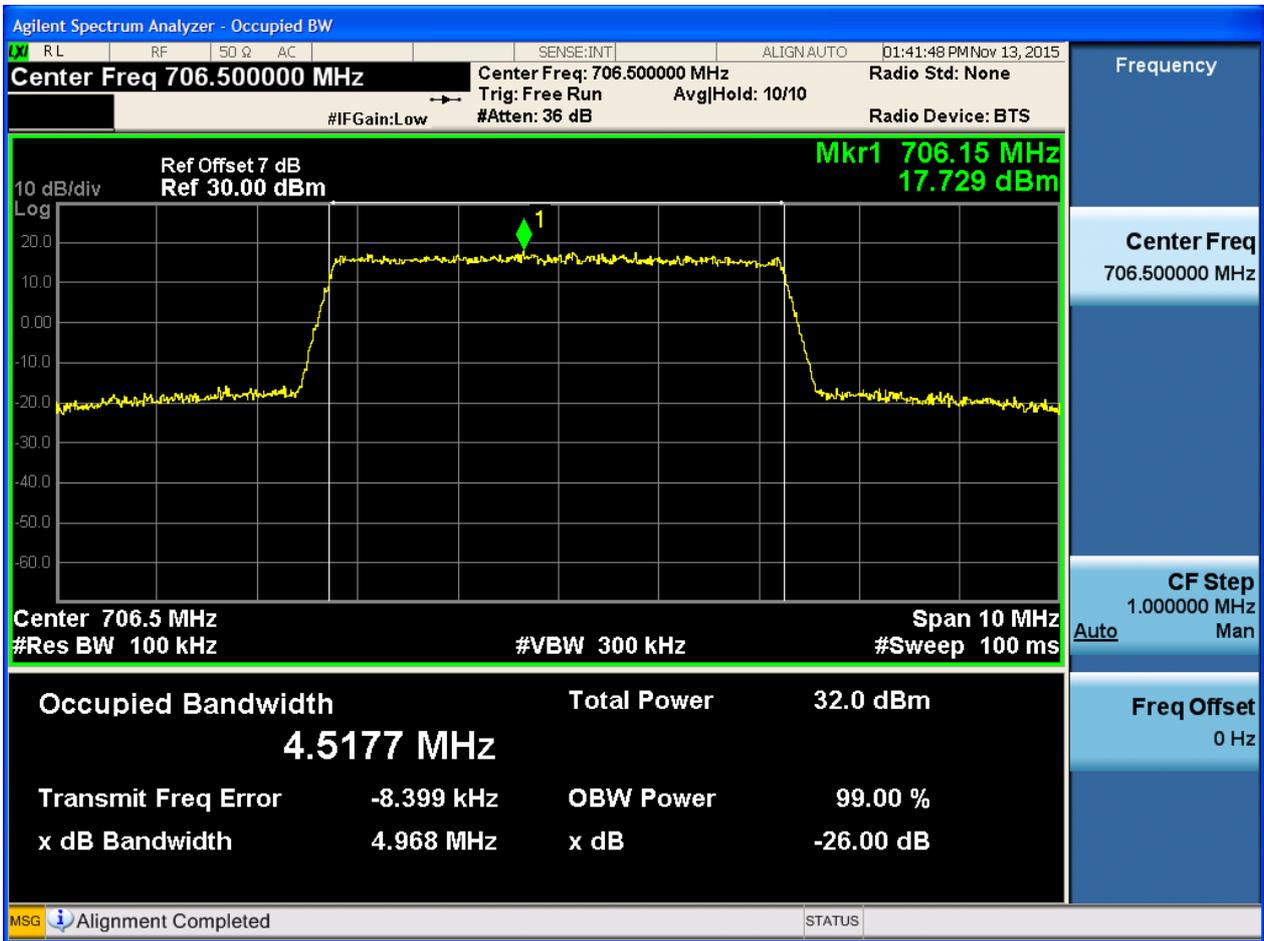
4.1.1.1.1.2 Test Channel = MCH

4.1.1.1.1.2.1 Test RB = RB25#0
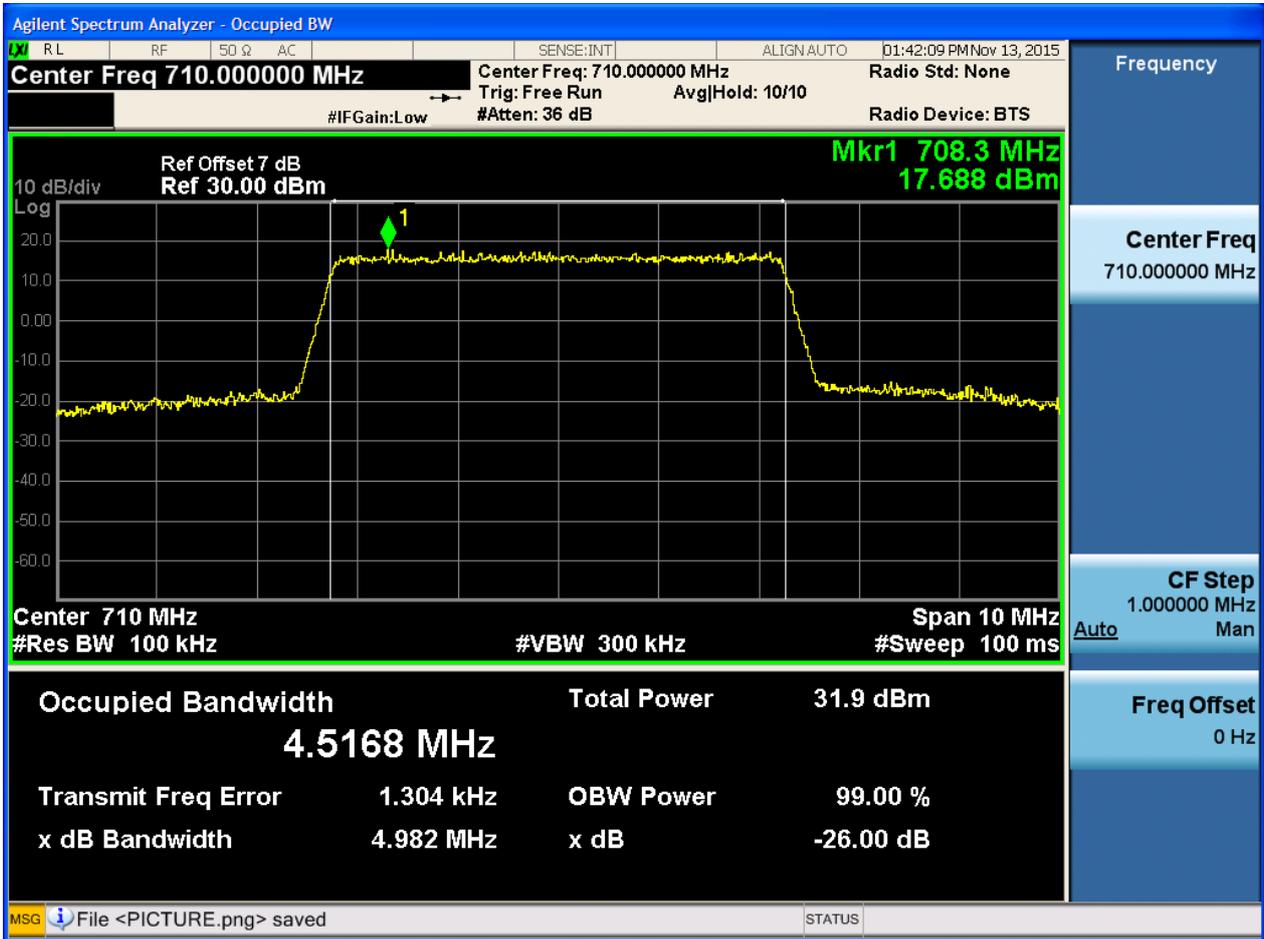
4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 Test RB = RB25#0
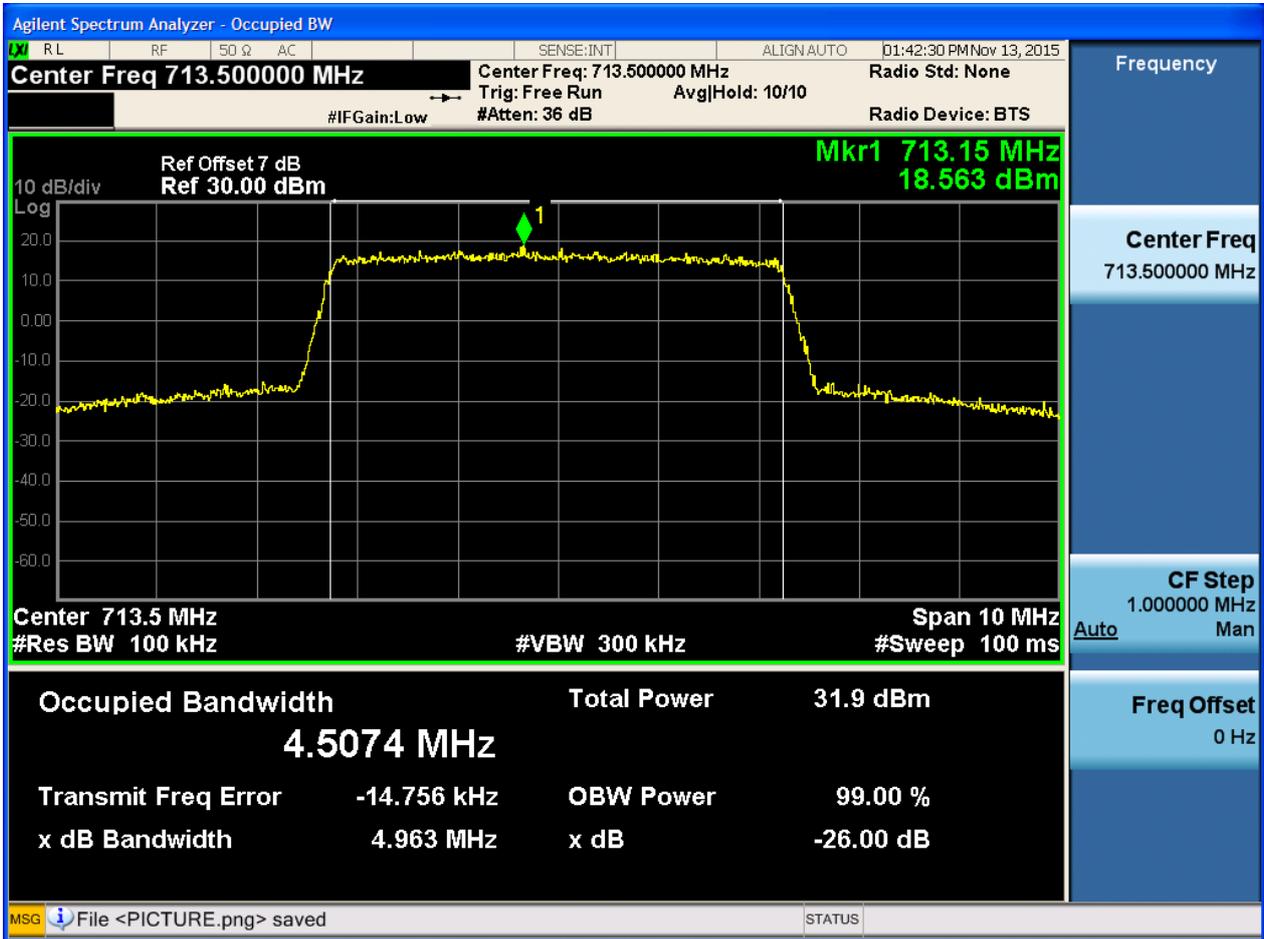
4.1.1.1.2 Test Bandwidth = 10

4.1.1.1.2.1 Test Channel = LCH

4.1.1.1.2.1.1 Test RB = RB50#0
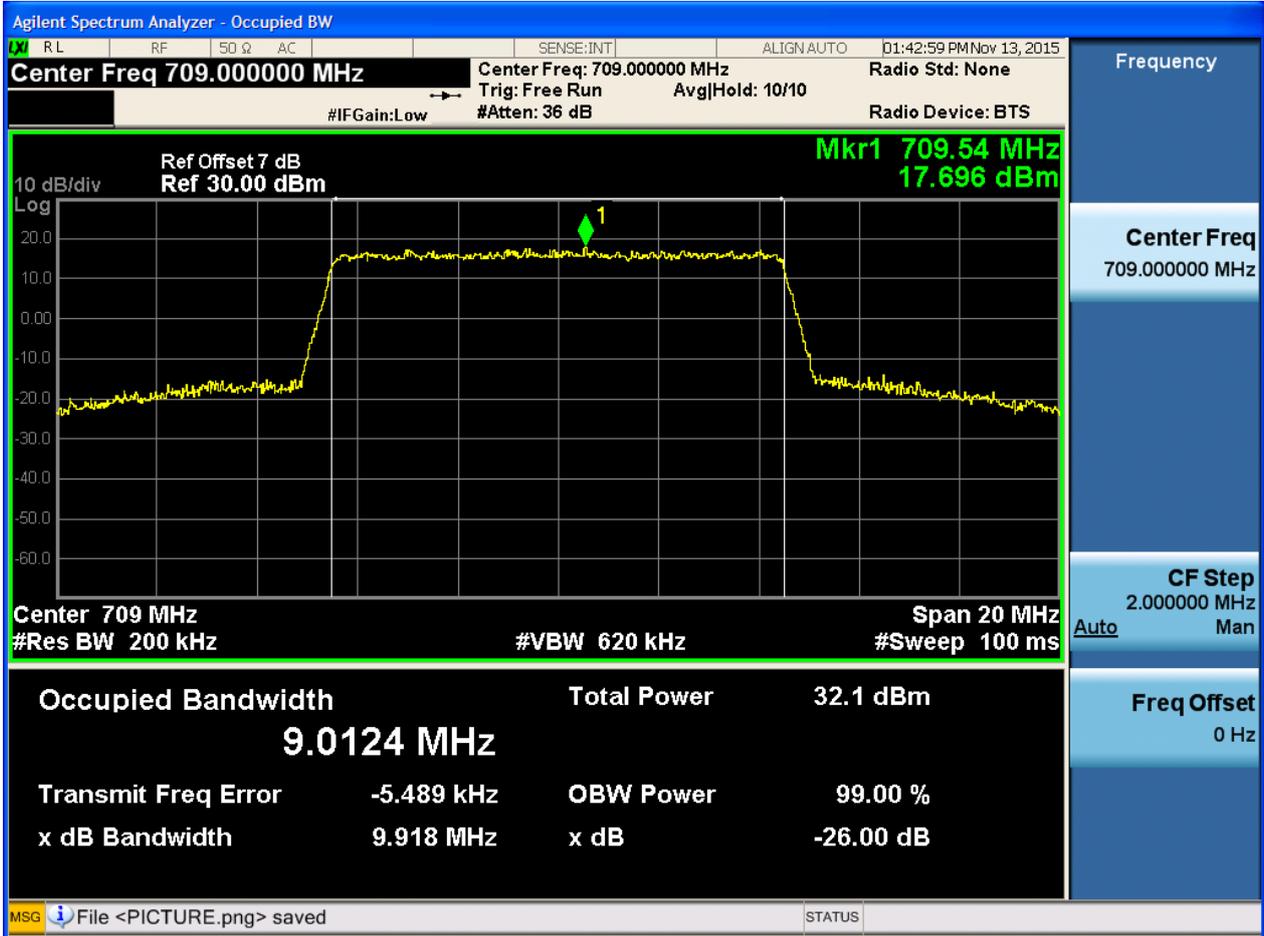
4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 Test RB = RB50#0

Agilent Spectrum Analyzer - Occupied BW

Occupied Bandwidth	**Total Power**	32.2 dBm
8.9780 MHz		
Transmit Freq Error 241 Hz	**OBW Power**	99.00 %
x dB Bandwidth 9.859 MHz	**x dB**	-26.00 dB
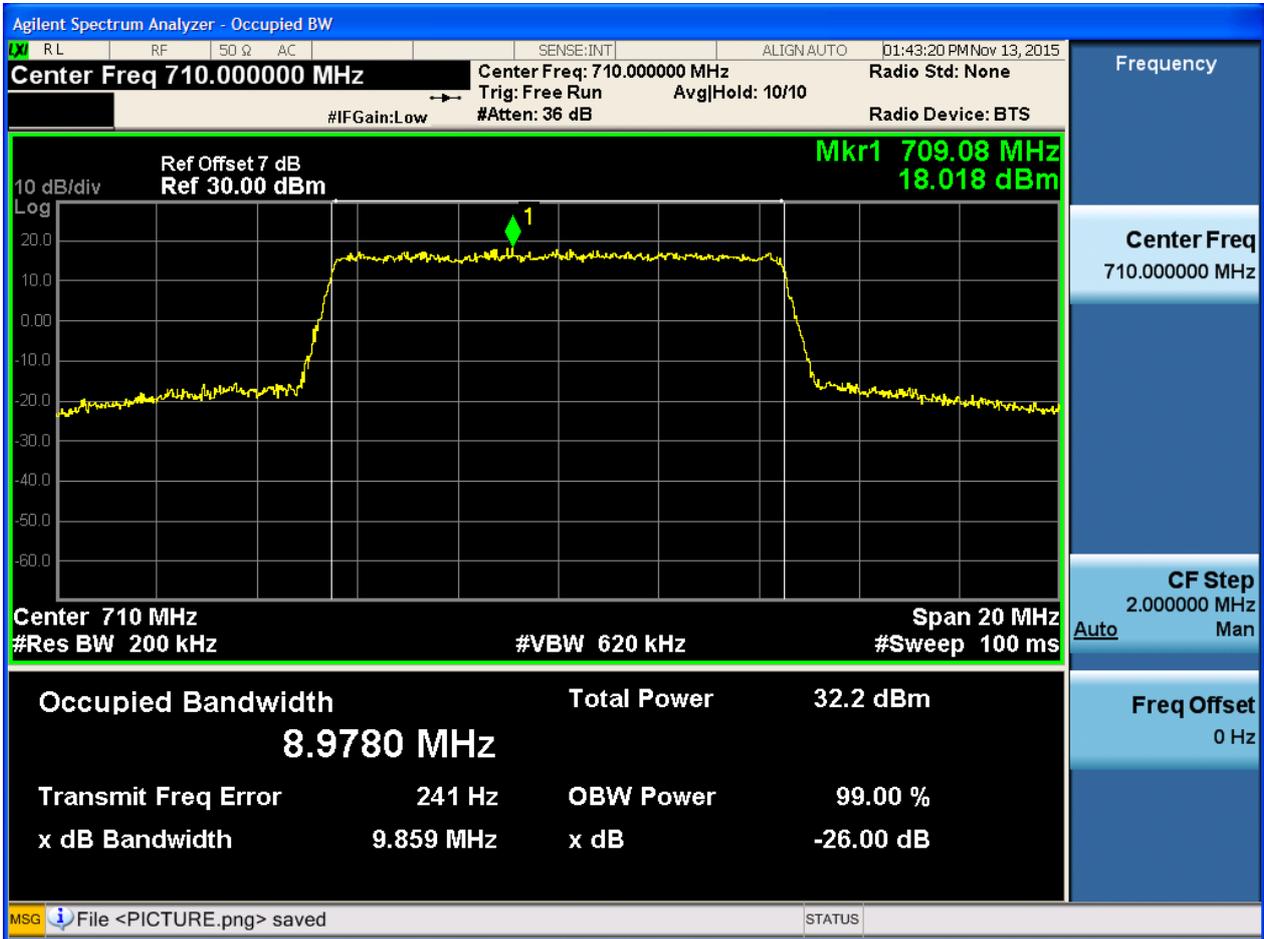
4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 Test RB = RB50#0
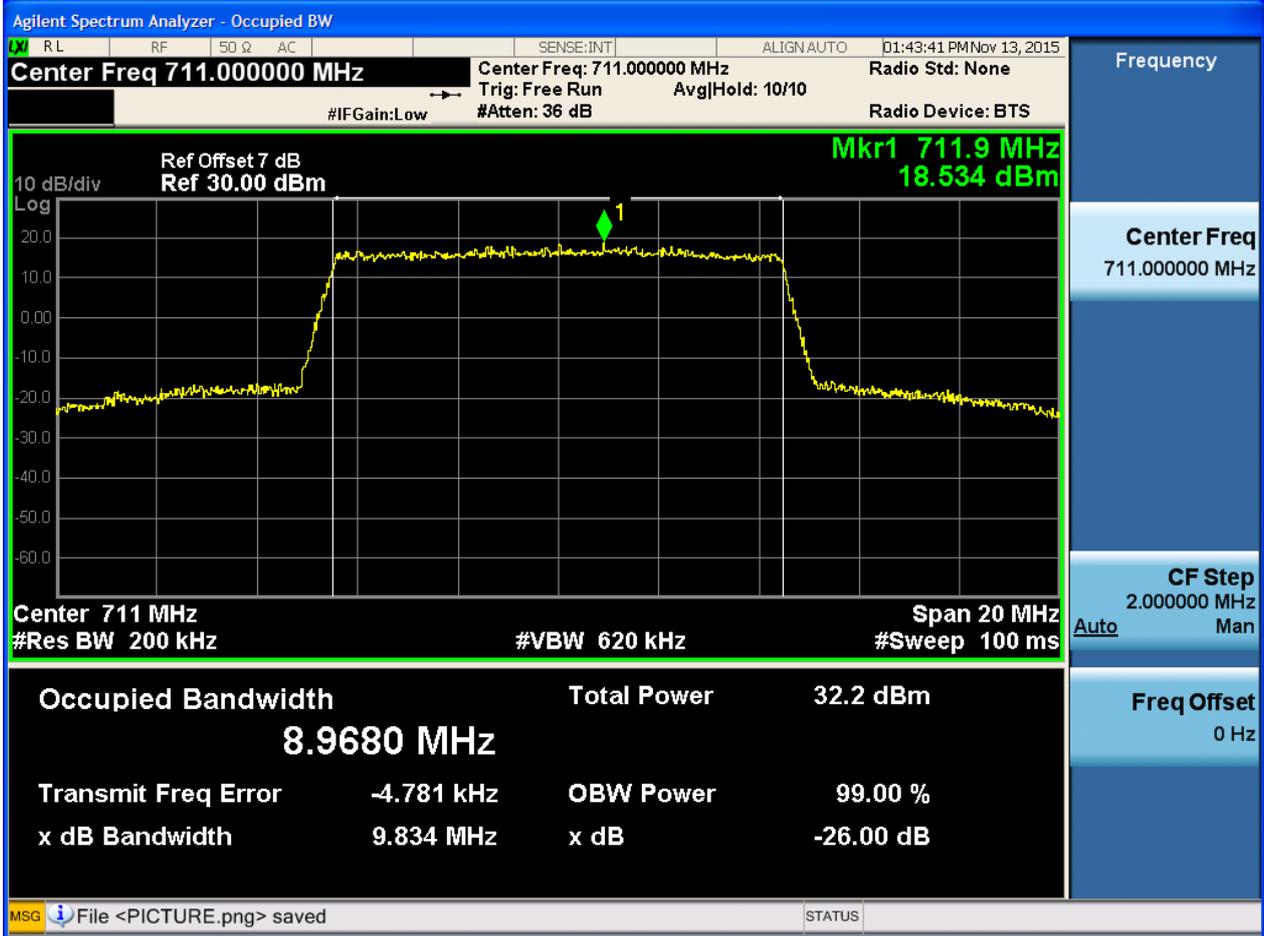
4.1.1.2 Test Mode = LTE/TM2

4.1.1.2.1 Test Bandwidth = 5

4.1.1.2.1.1 Test Channel = LCH

4.1.1.2.1.1.1 Test RB = RB25#0
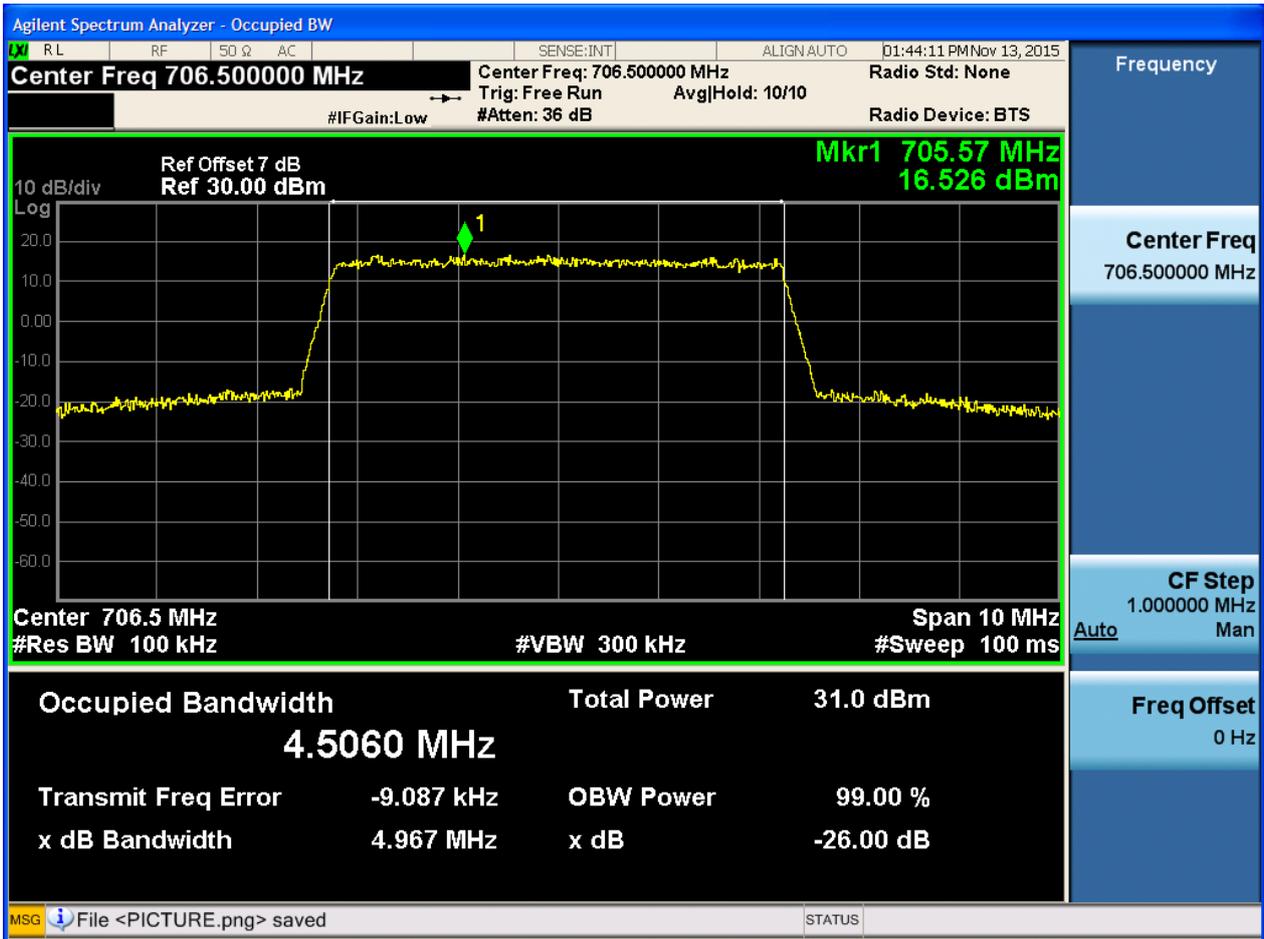
4.1.1.2.1.2 Test Channel = MCH

4.1.1.2.1.2.1 Test RB = RB25#0

4.1.1.2.1.3 Test Channel = HCH

4.1.1.2.1.3.1 Test RB = RB25#0
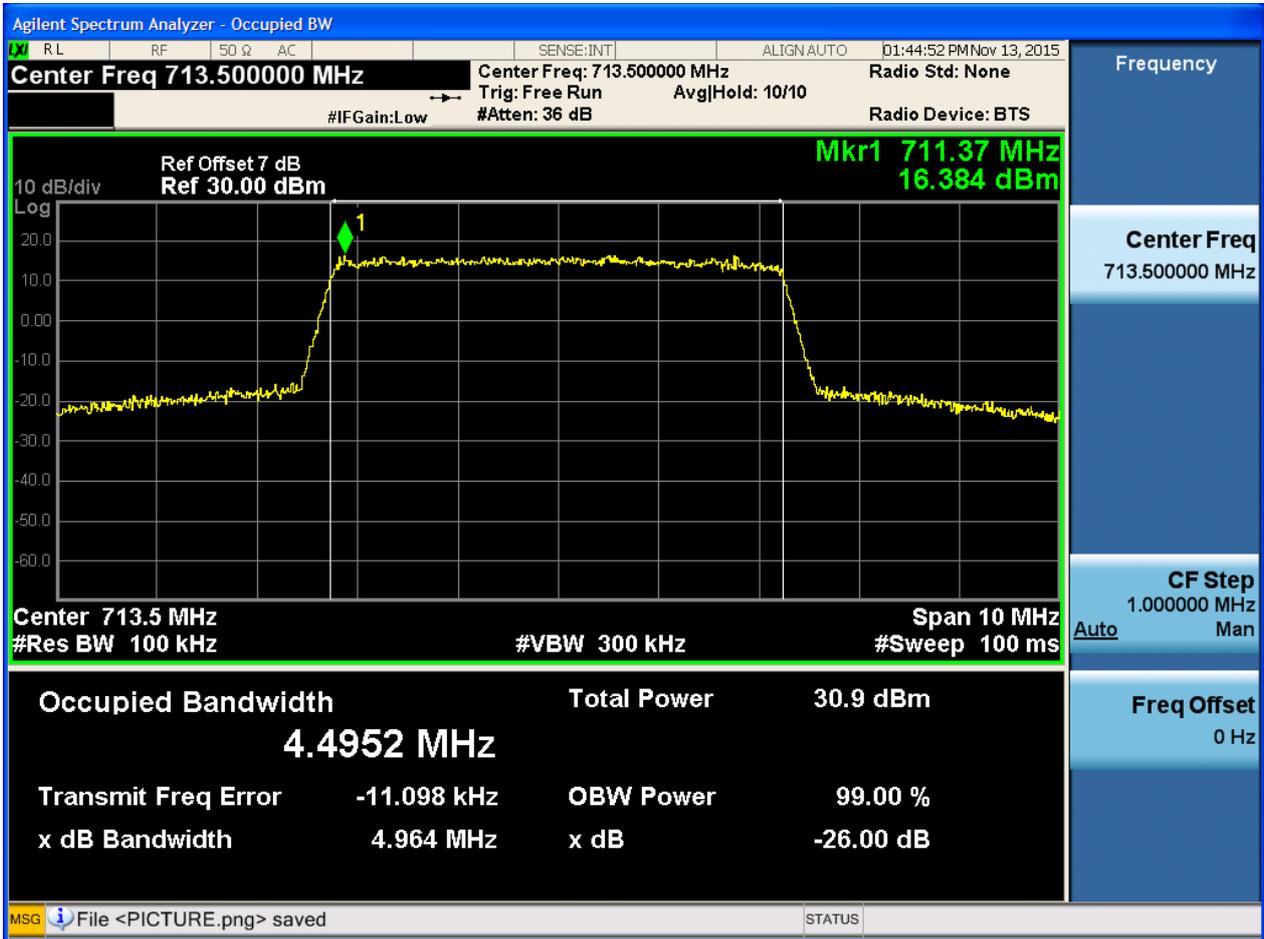
4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

4.1.1.2.2.1.1 Test RB = RB50#0
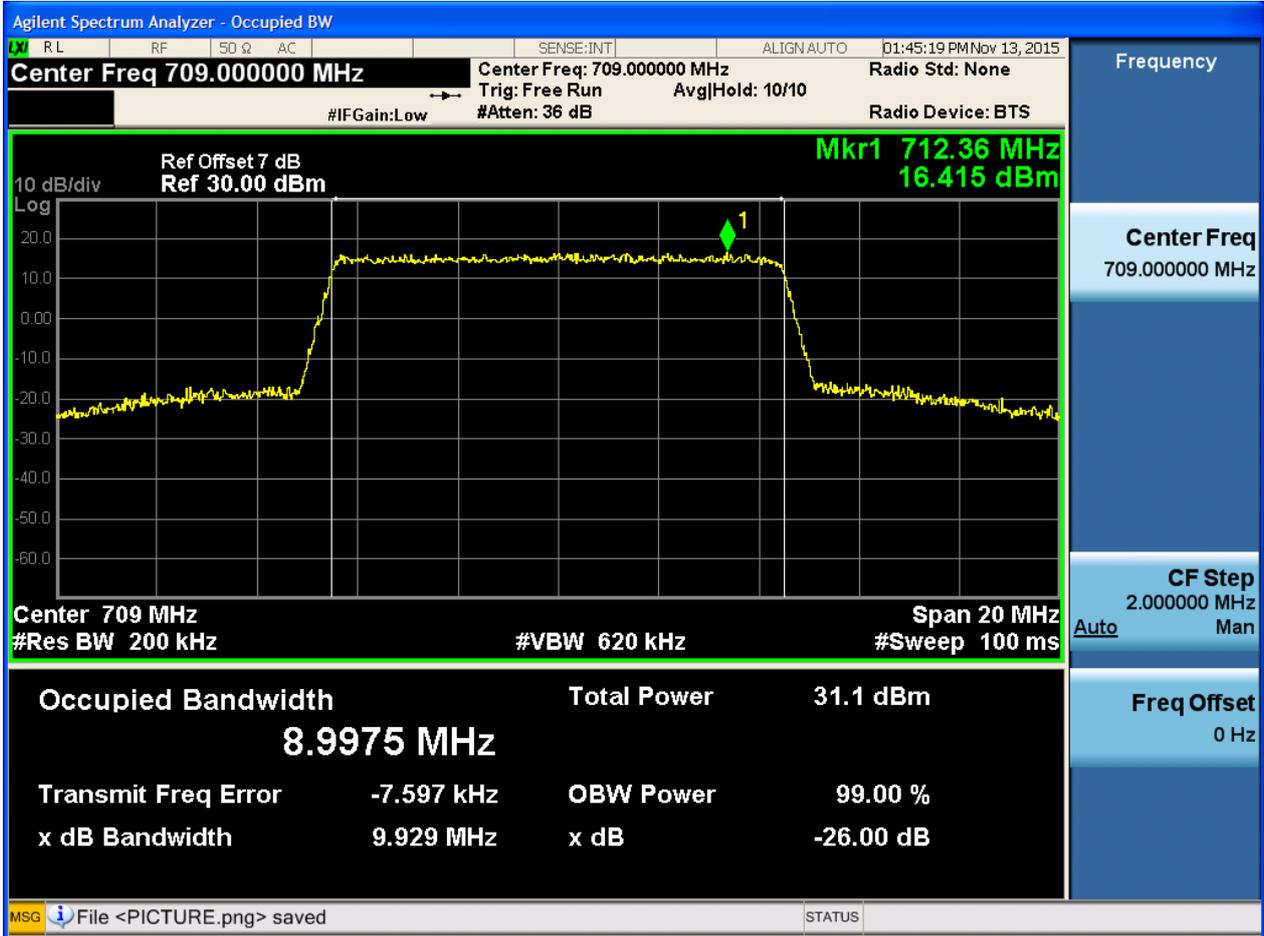
4.1.1.2.2.2 Test Channel = MCH

4.1.1.2.2.2.1 Test RB = RB50#0
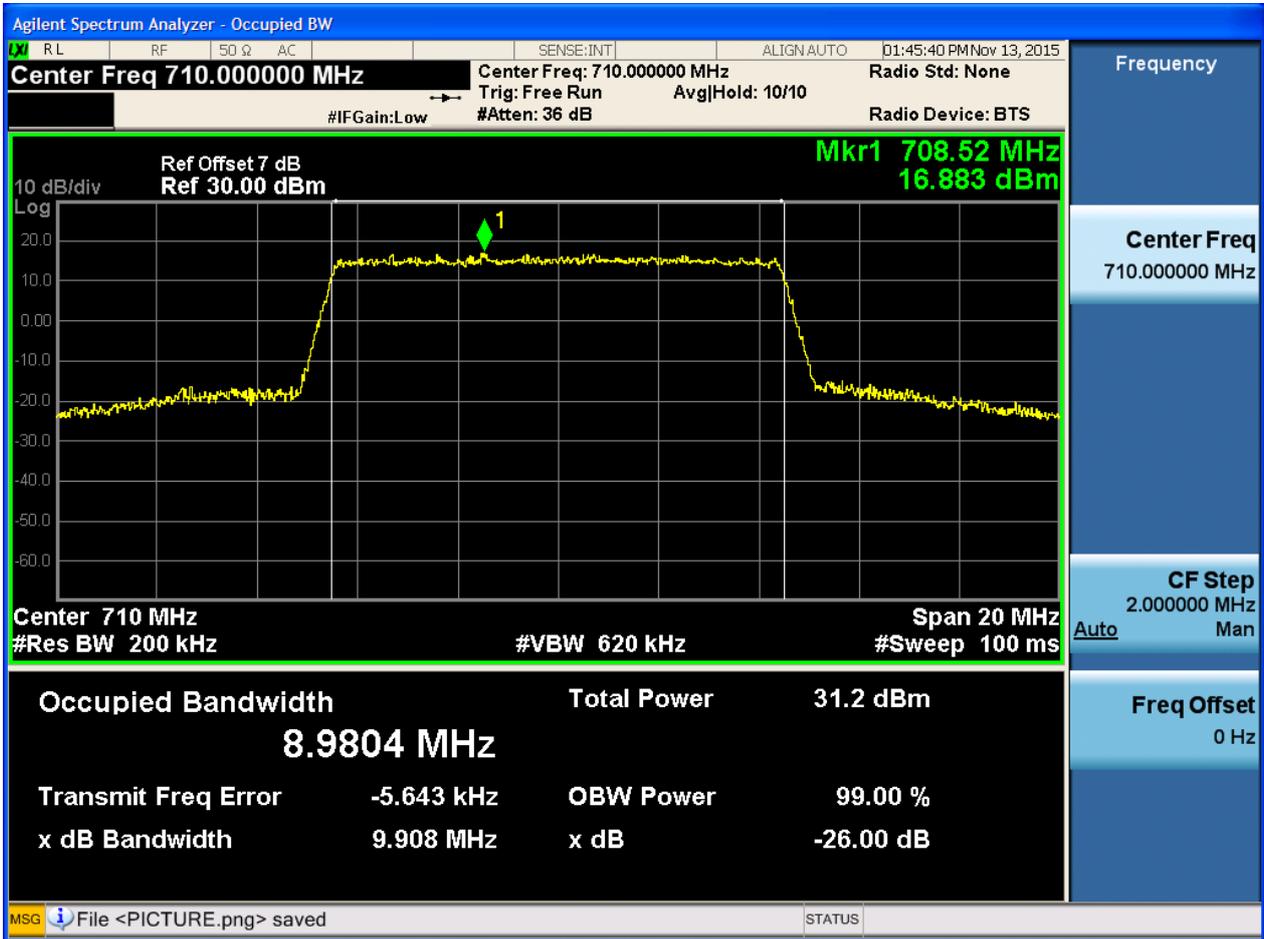
4.1.1.2.2.3 Test Channel = HCH

4.1.1.2.2.3.1 Test RB = RB50#0

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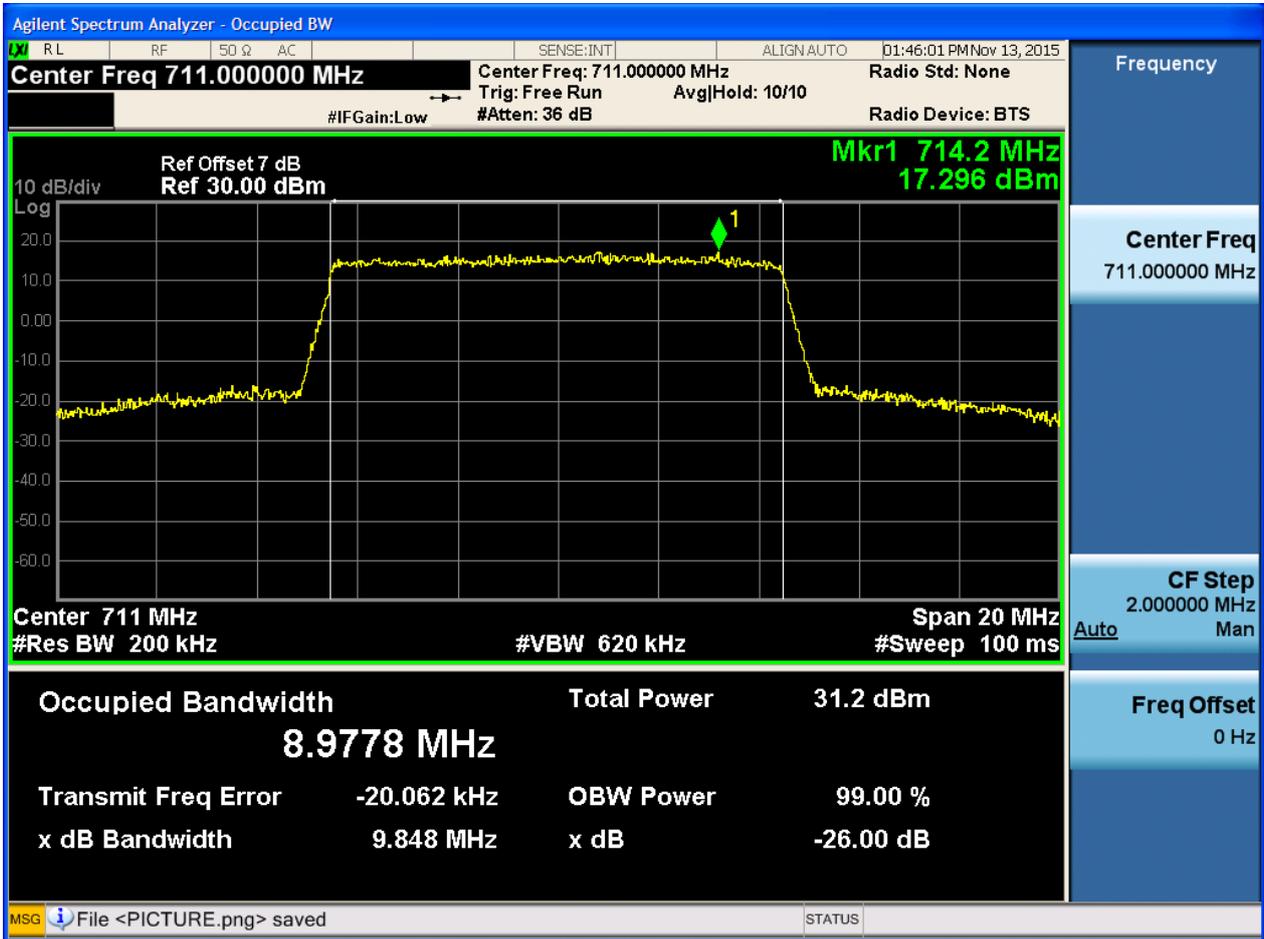
5Appendix_E: Band Edges Compliance

Part I - Test Plots

5.1 For LTE

5.1.1 Test Band = BAND17

5.1.1.1 Test Mode = LTE/TM1

5.1.1.1.1 Test Bandwidth = 5

5.1.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1.1 Test RB = RB1#0
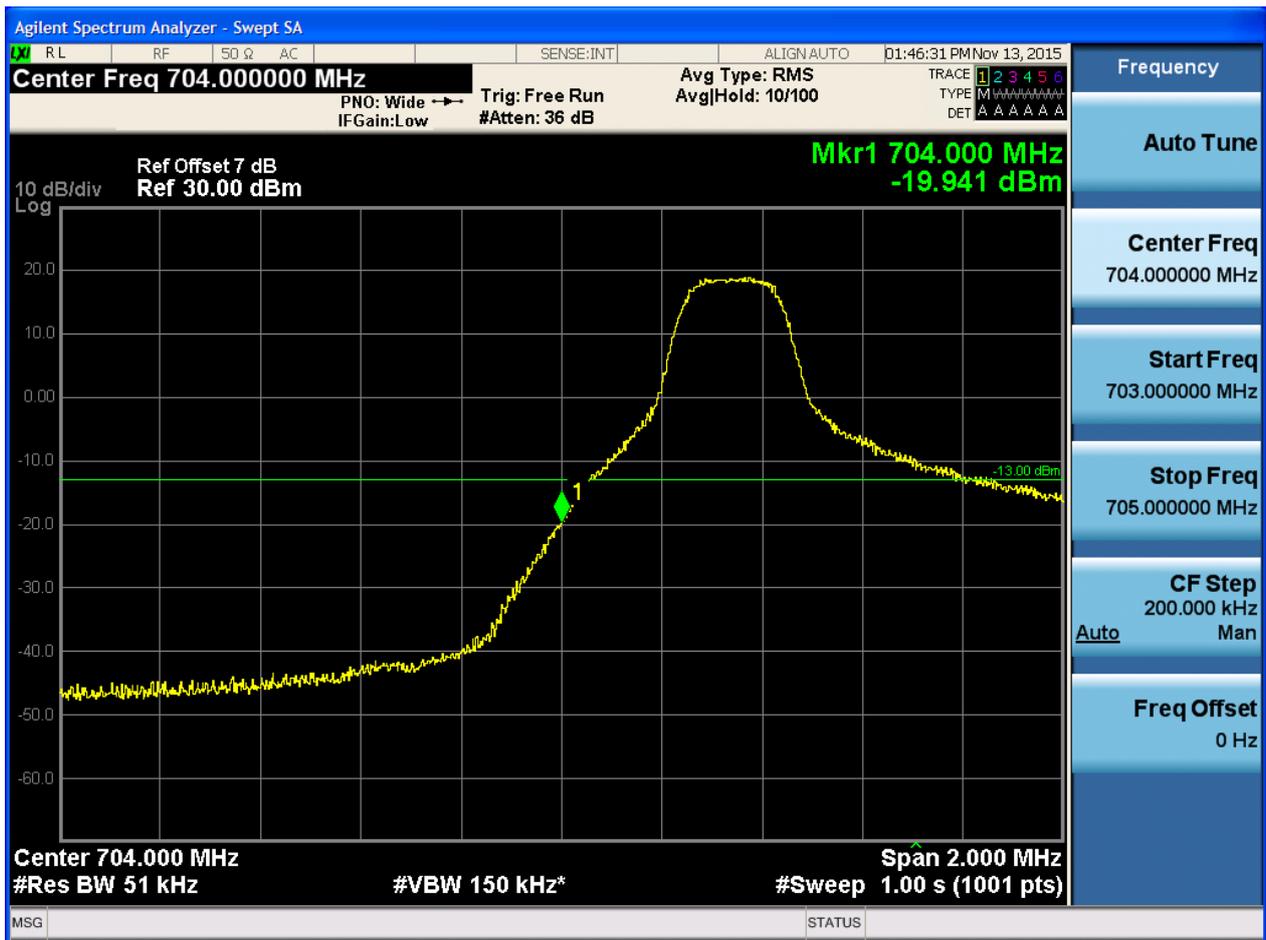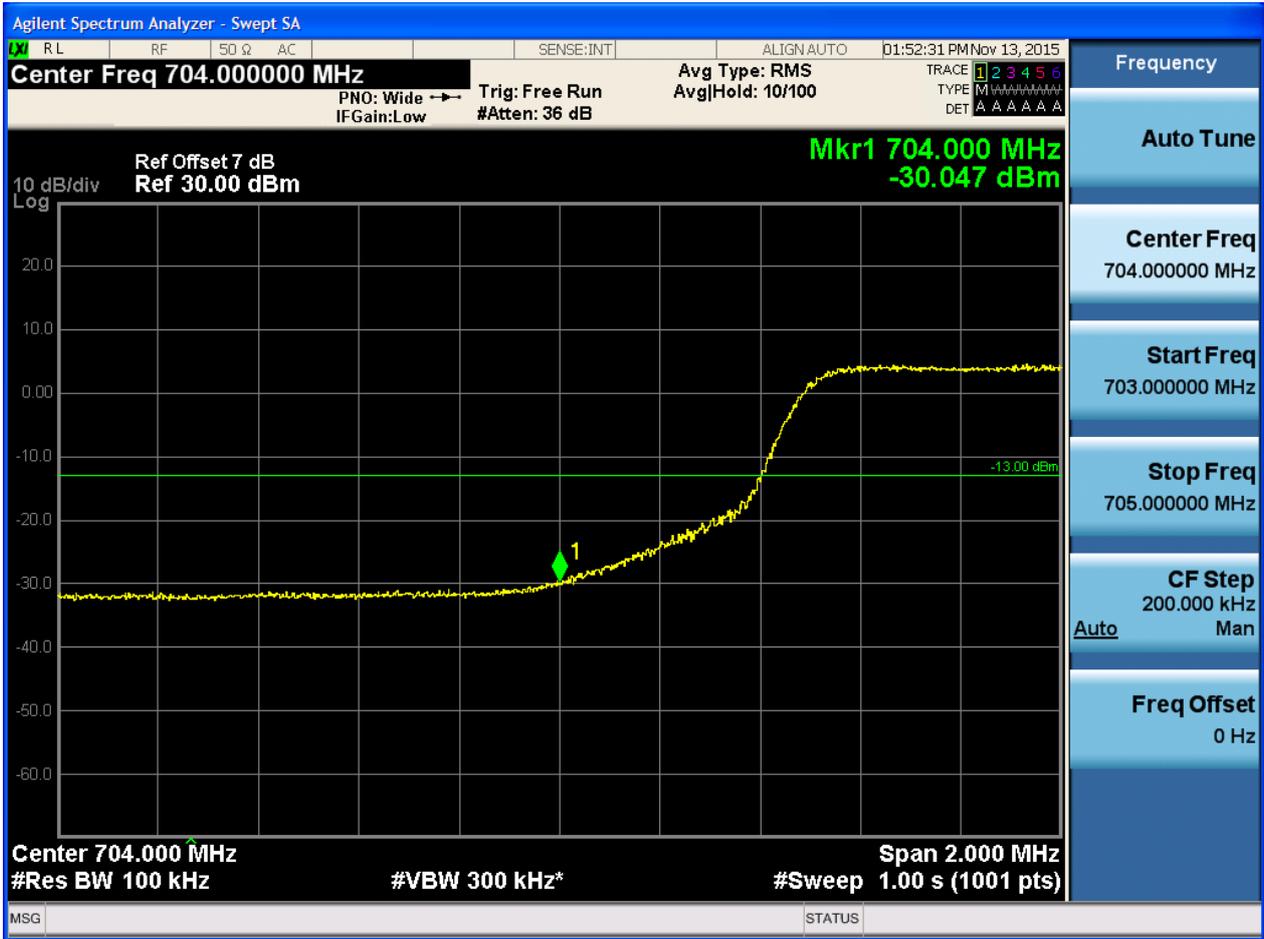
5.1.1.1.1.1.2 Test RB = RB1#24
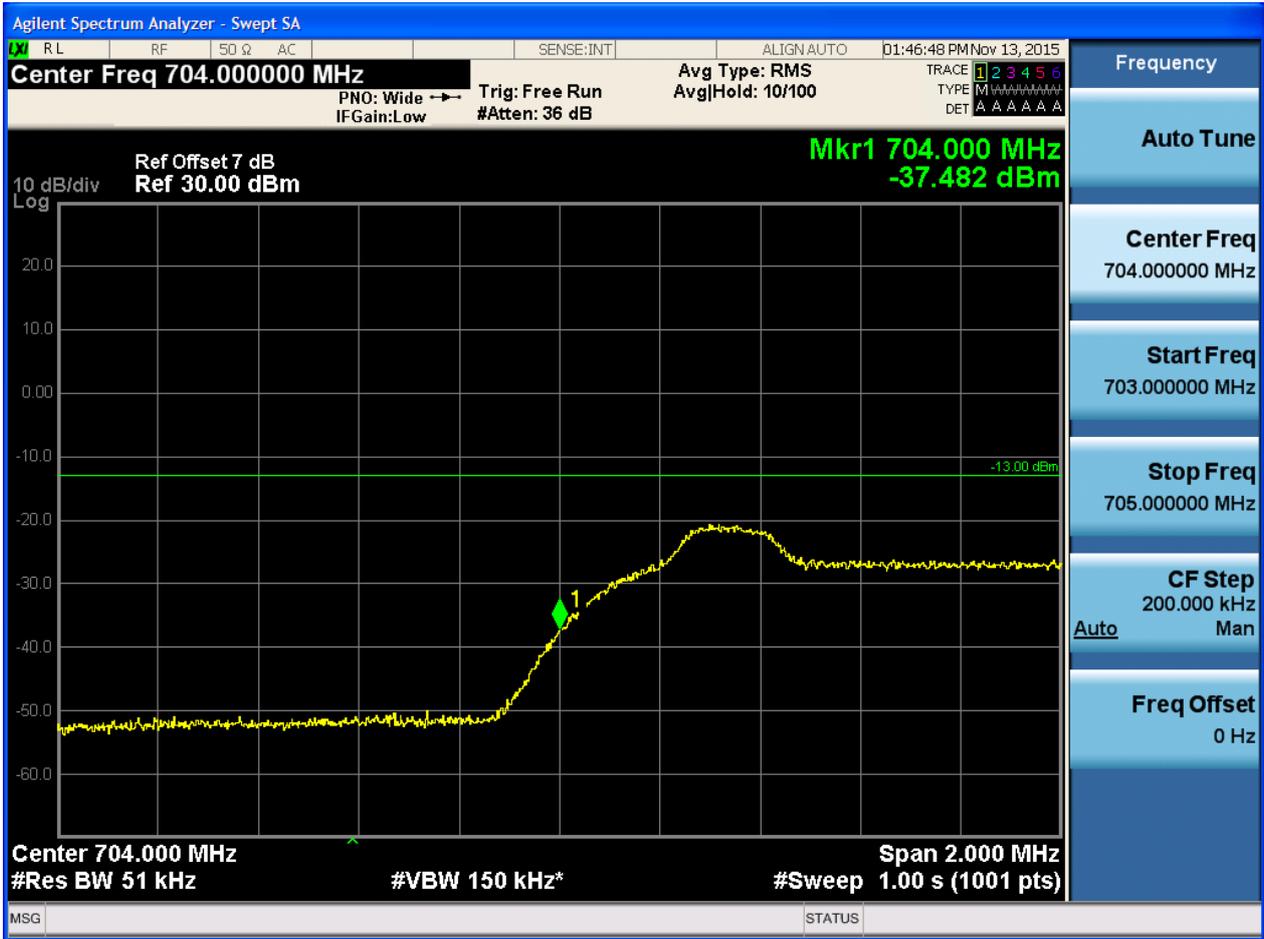
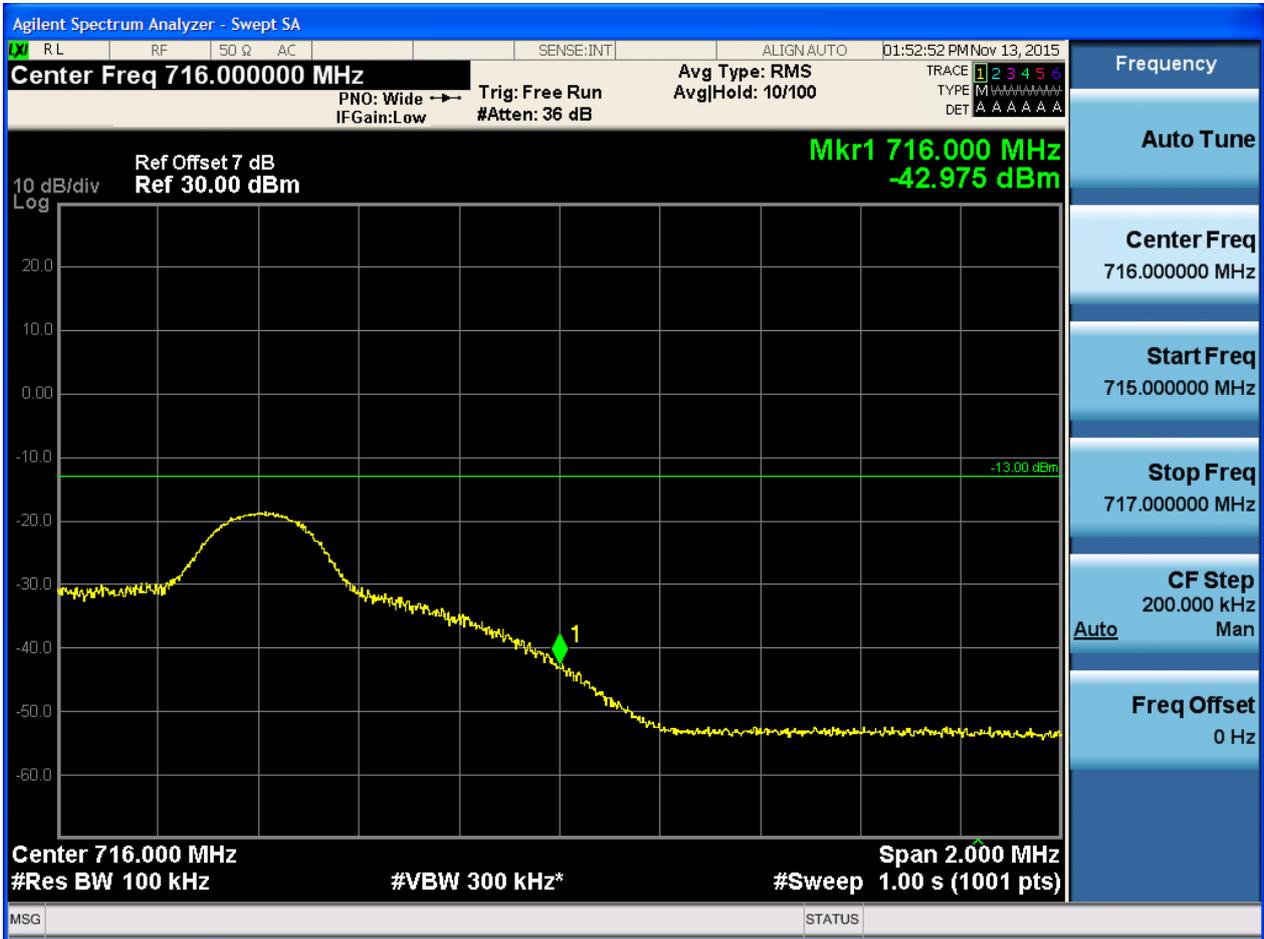## 5.1.1.1.1.1.3 Test RB = RB12#6
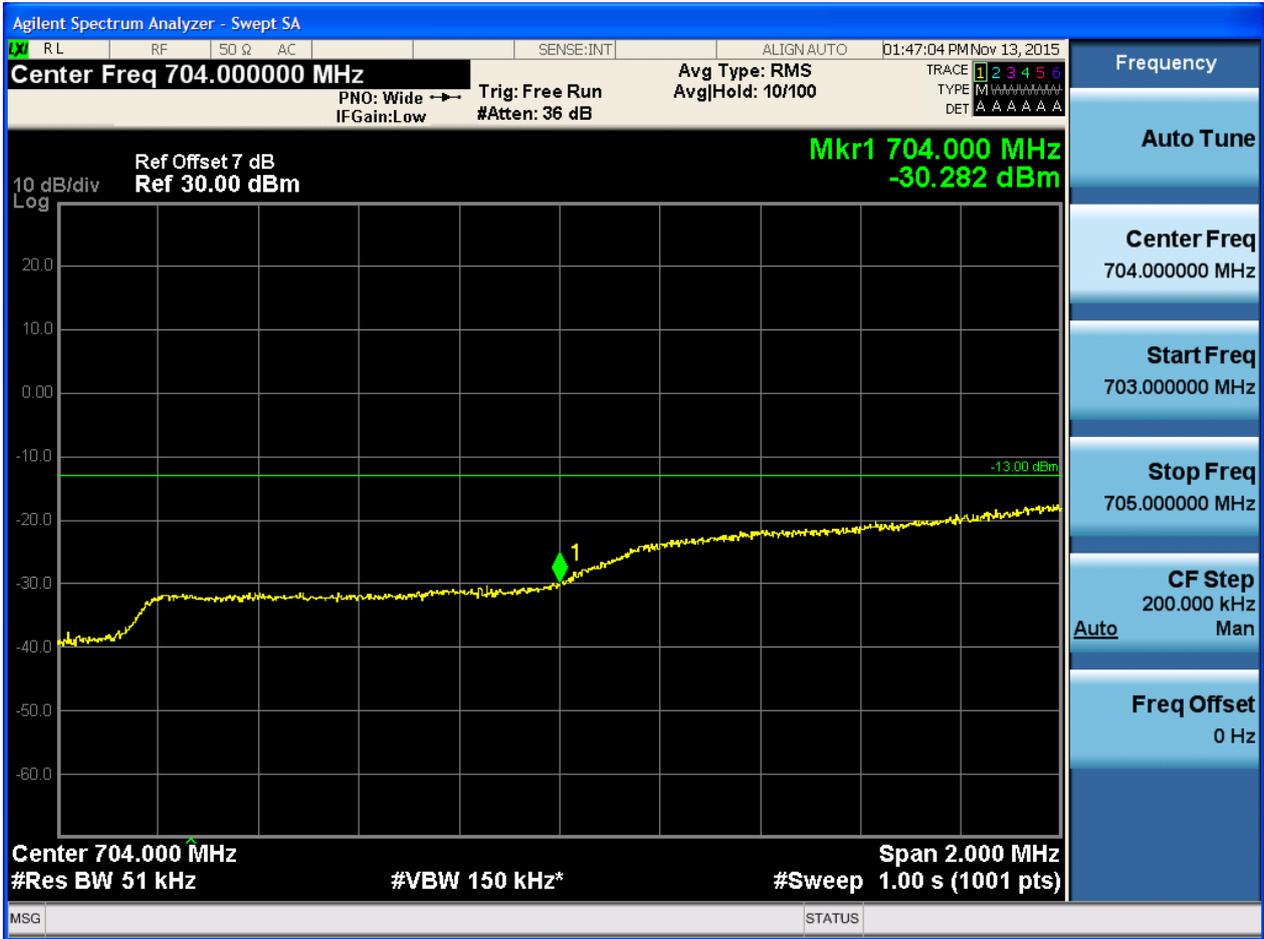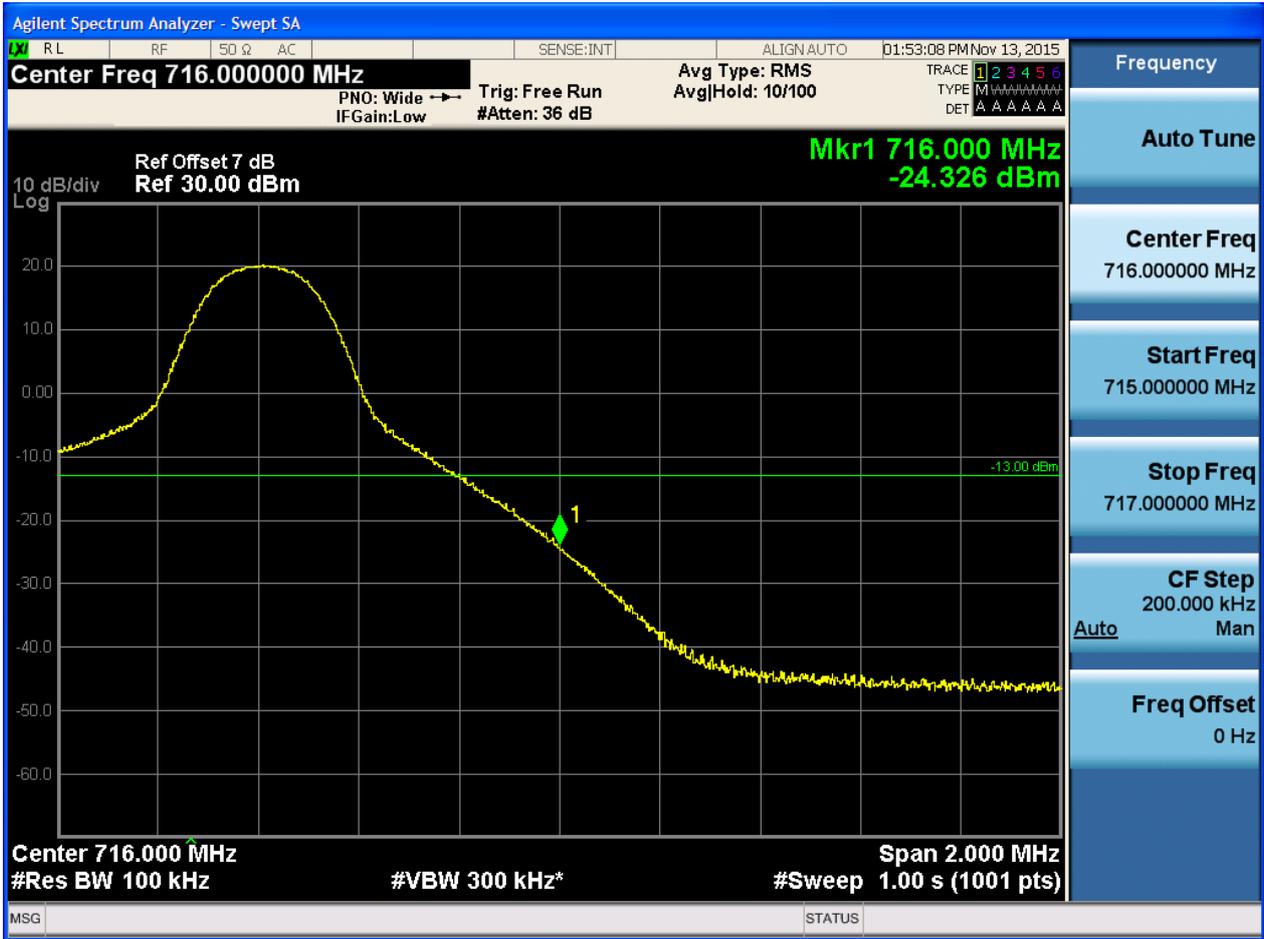
5.1.1.1.1.1.4 Test RB = RB25#0
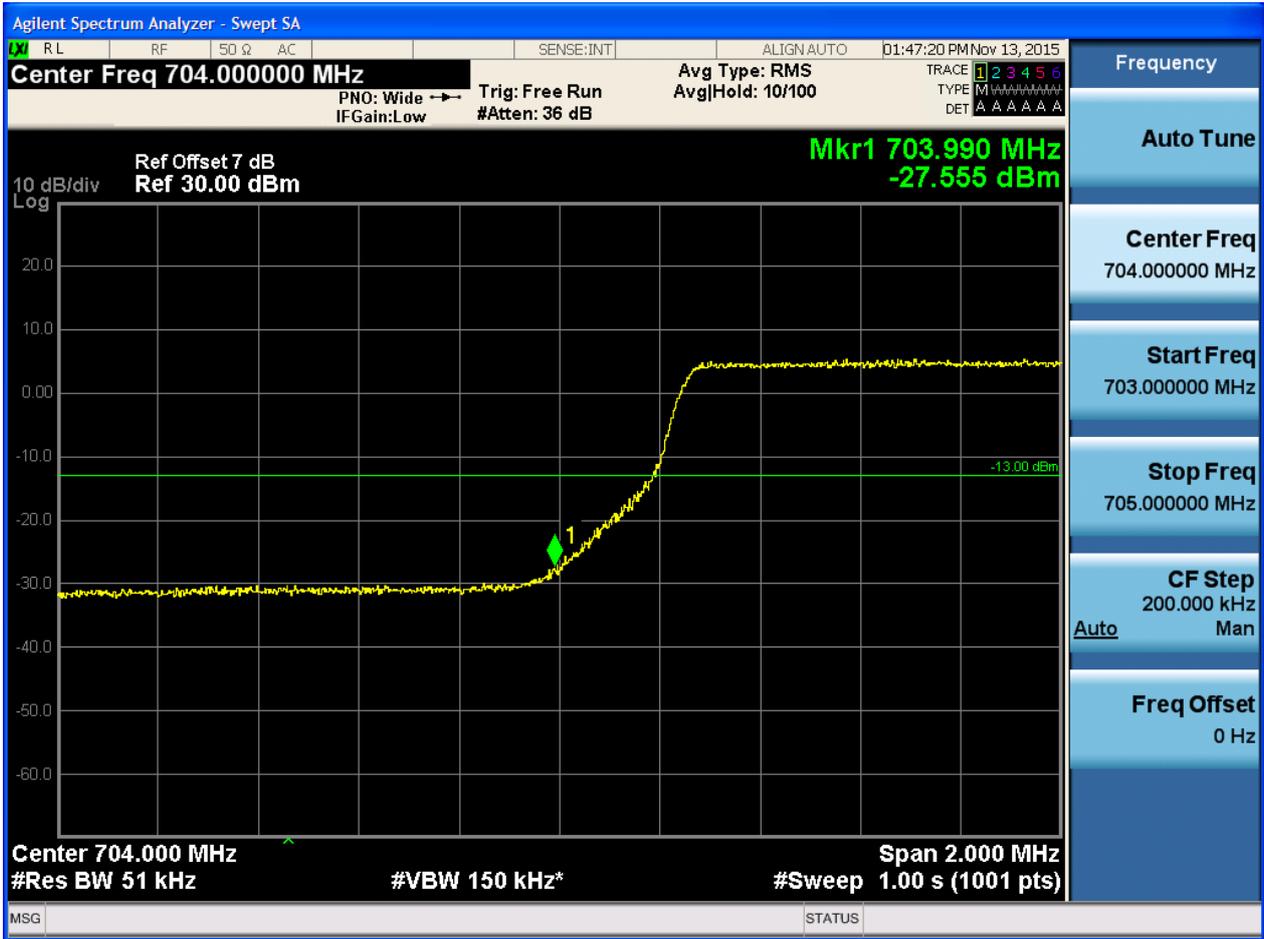
5.1.1.1.1.2 Test Channel = HCH

5.1.1.1.1.2.1 Test RB = RB1#0
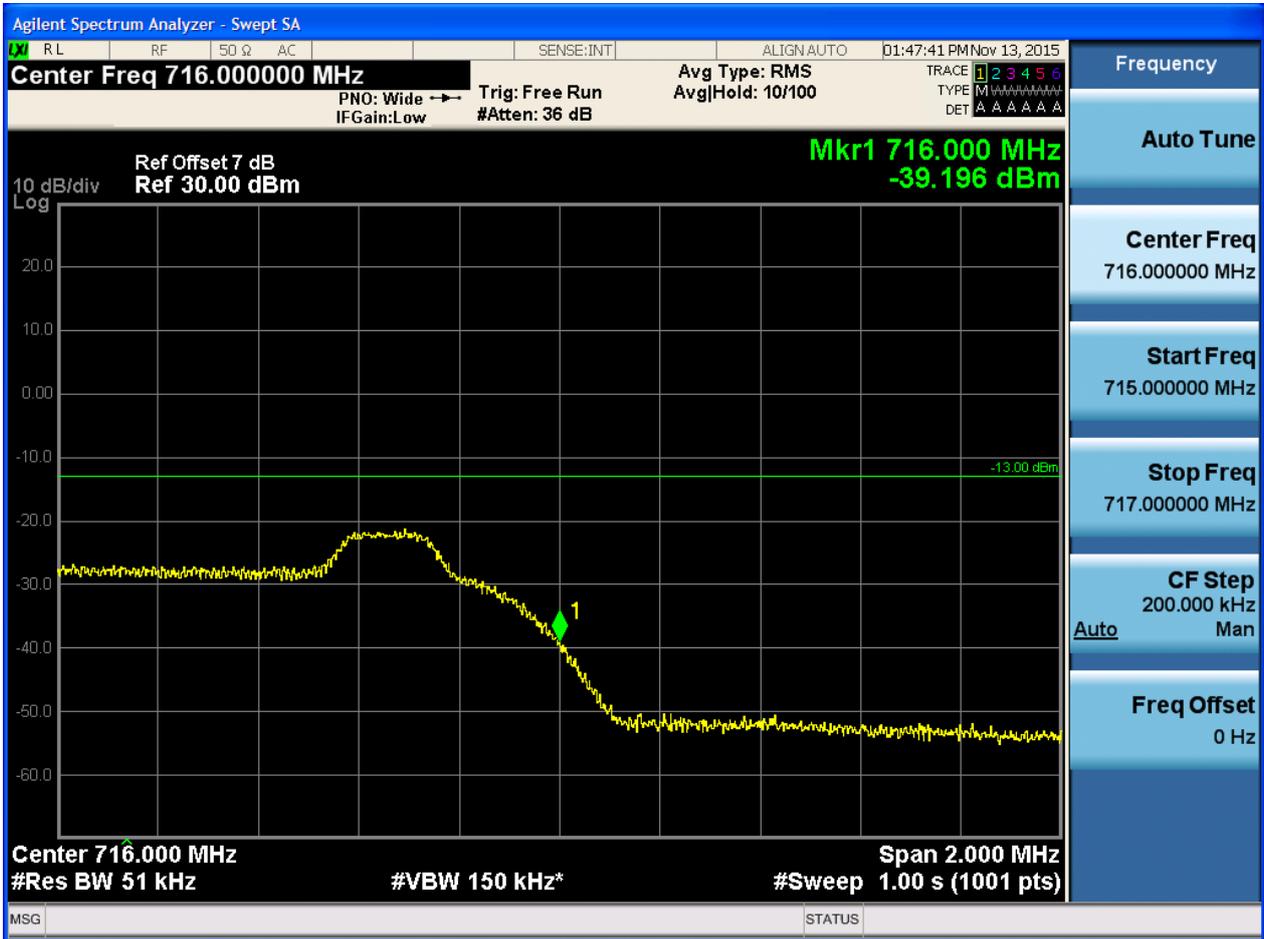
5.1.1.1.1.2.2 Test RB = RB1#24
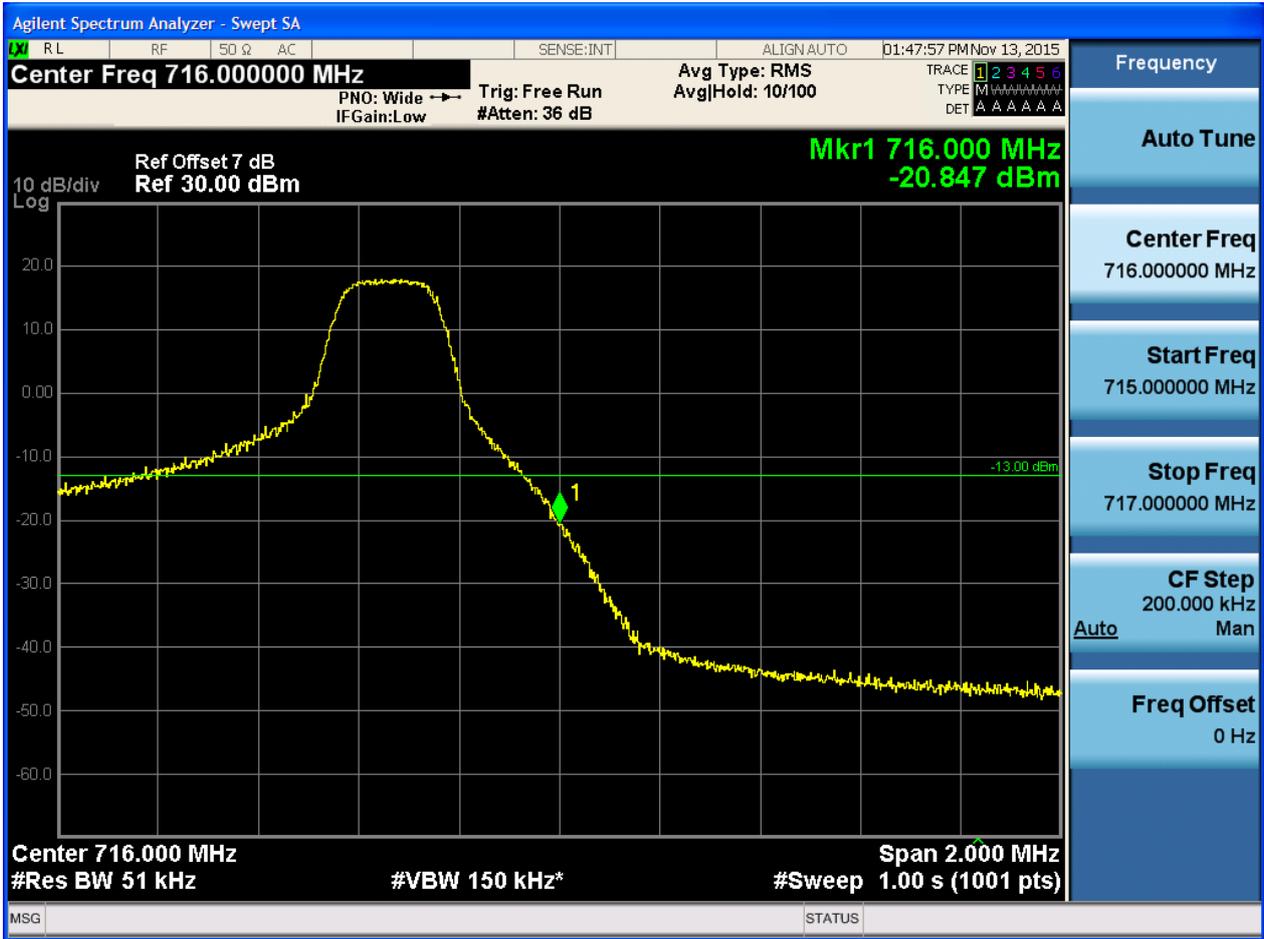
5.1.1.1.1.2.3 Test RB = RB12#6

5.1.1.1.1.2.4 Test RB = RB25#0

5.1.1.1.2 Test Bandwidth = 10

5.1.1.1.2.1 Test Channel = LCH

5.1.1.1.2.1.1 Test RB = RB1#0
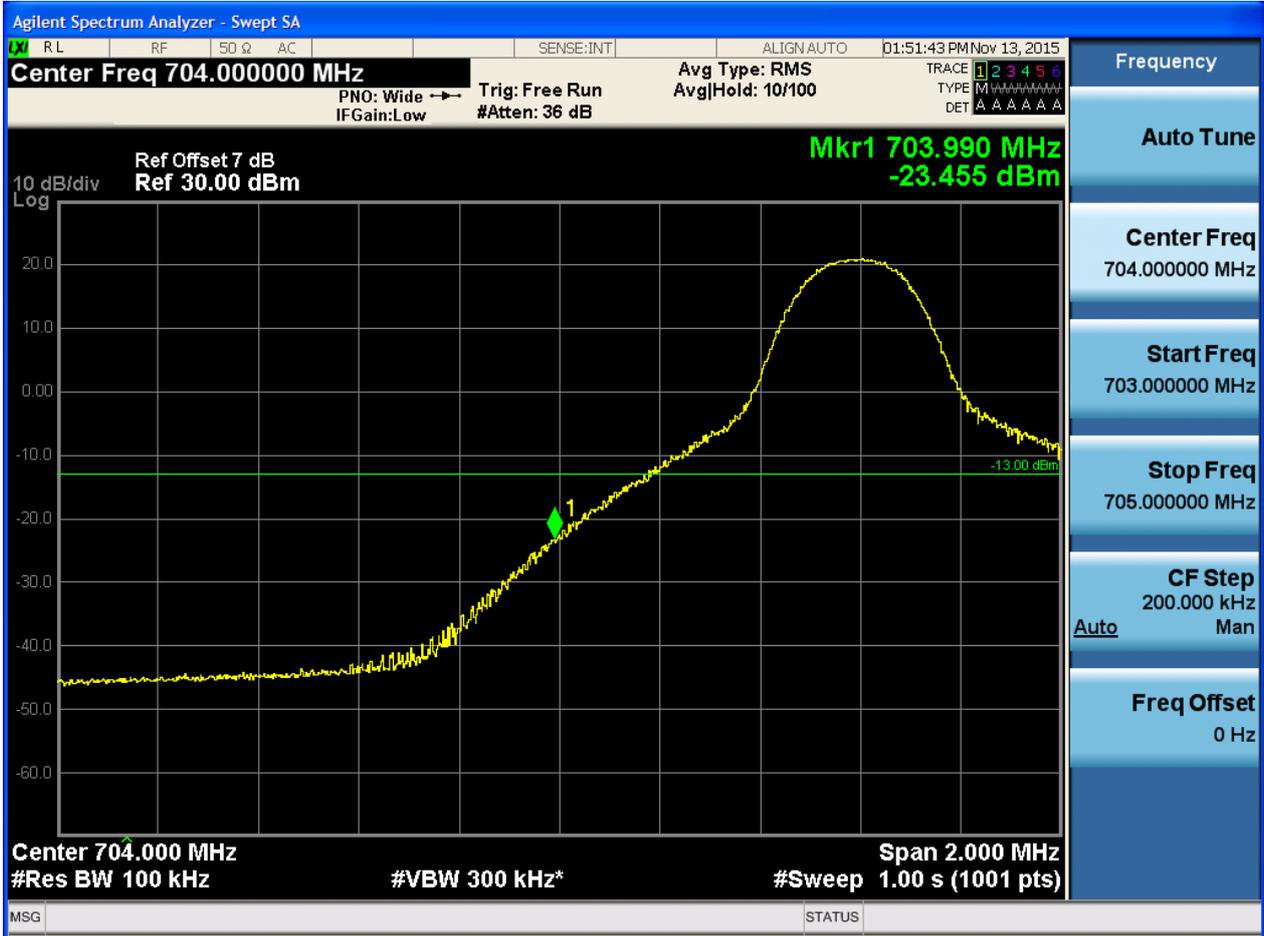
5.1.1.1.2.1.2 Test RB = RB1#49

5.1.1.1.2.1.3 Test RB = RB25#13
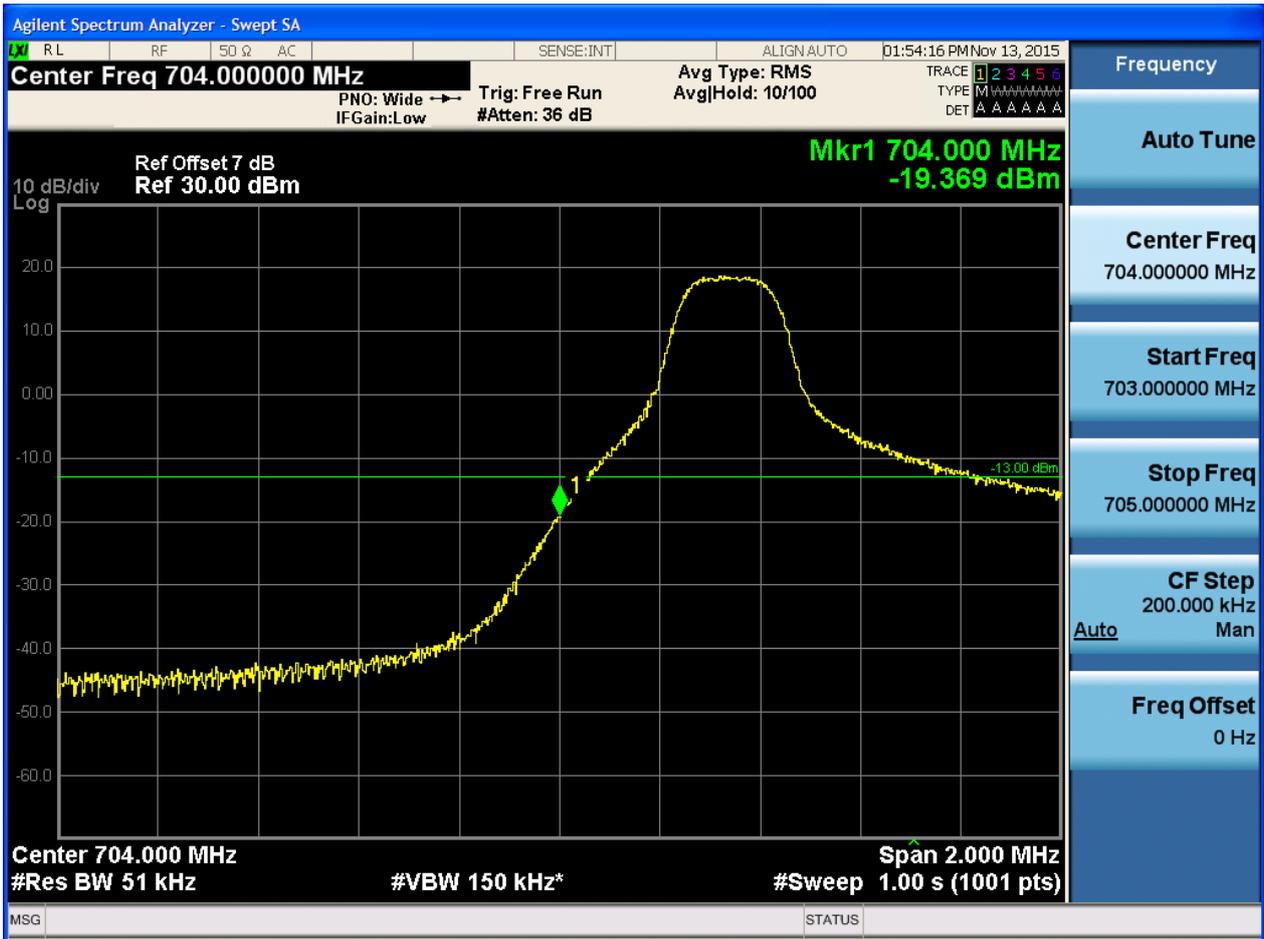
5.1.1.1.2.1.4 Test RB = RB50#0

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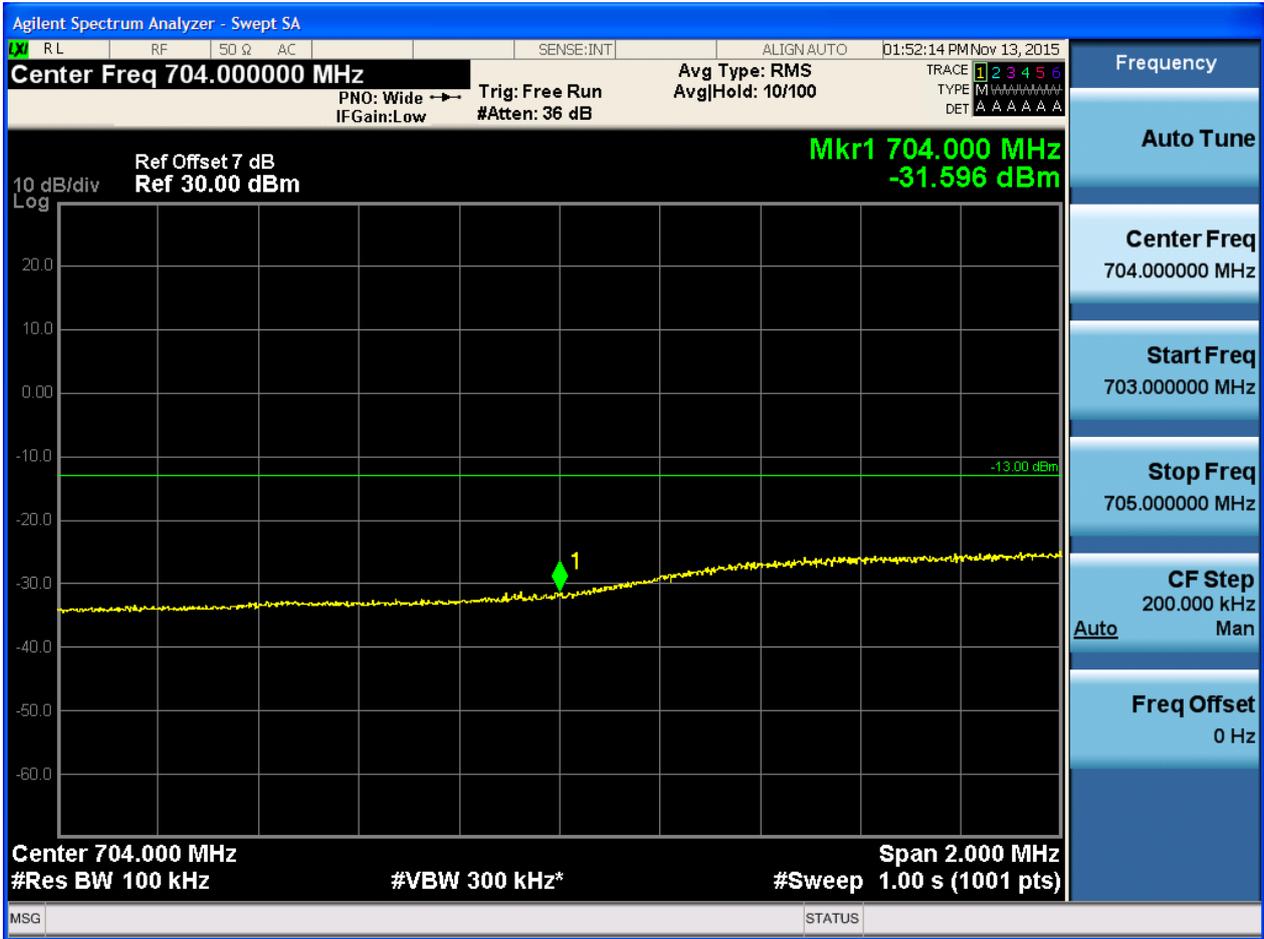
5.1.1.1.2.2 Test Channel = HCH

5.1.1.1.2.2.1 Test RB = RB1#0

5.1.1.1.2.2.2 Test RB = RB1#49

5.1.1.1.2.2.3 Test RB = RB25#13

5.1.1.1.2.2.4 Test RB = RB50#0

5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 5

5.1.1.2.1.1 Test Channel = LCH
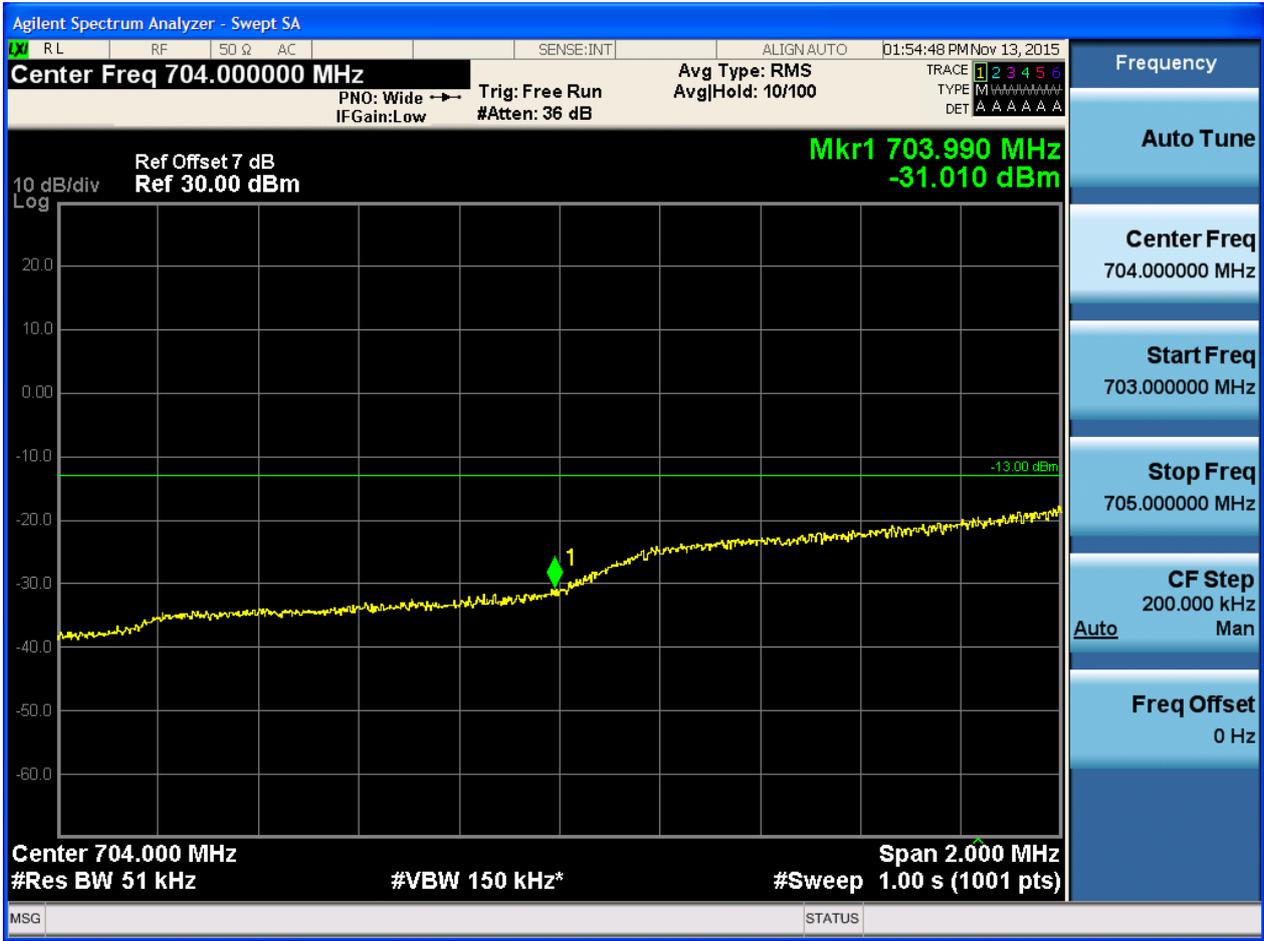
5.1.1.2.1.1.1 Test RB = RB1#0

5.1.1.2.1.1.2 Test RB = RB1#24
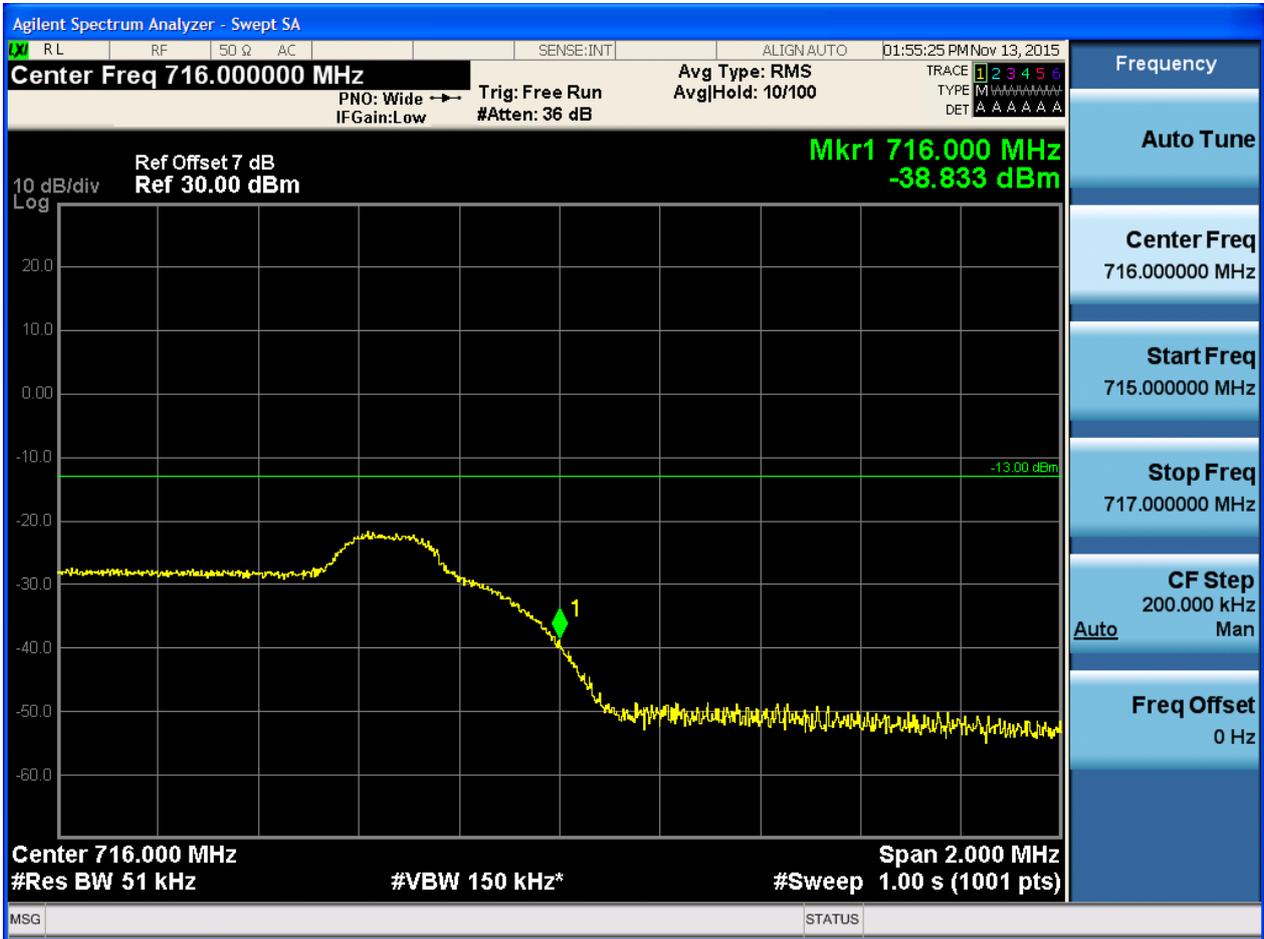
5.1.1.2.1.1.3 Test RB = RB12#6

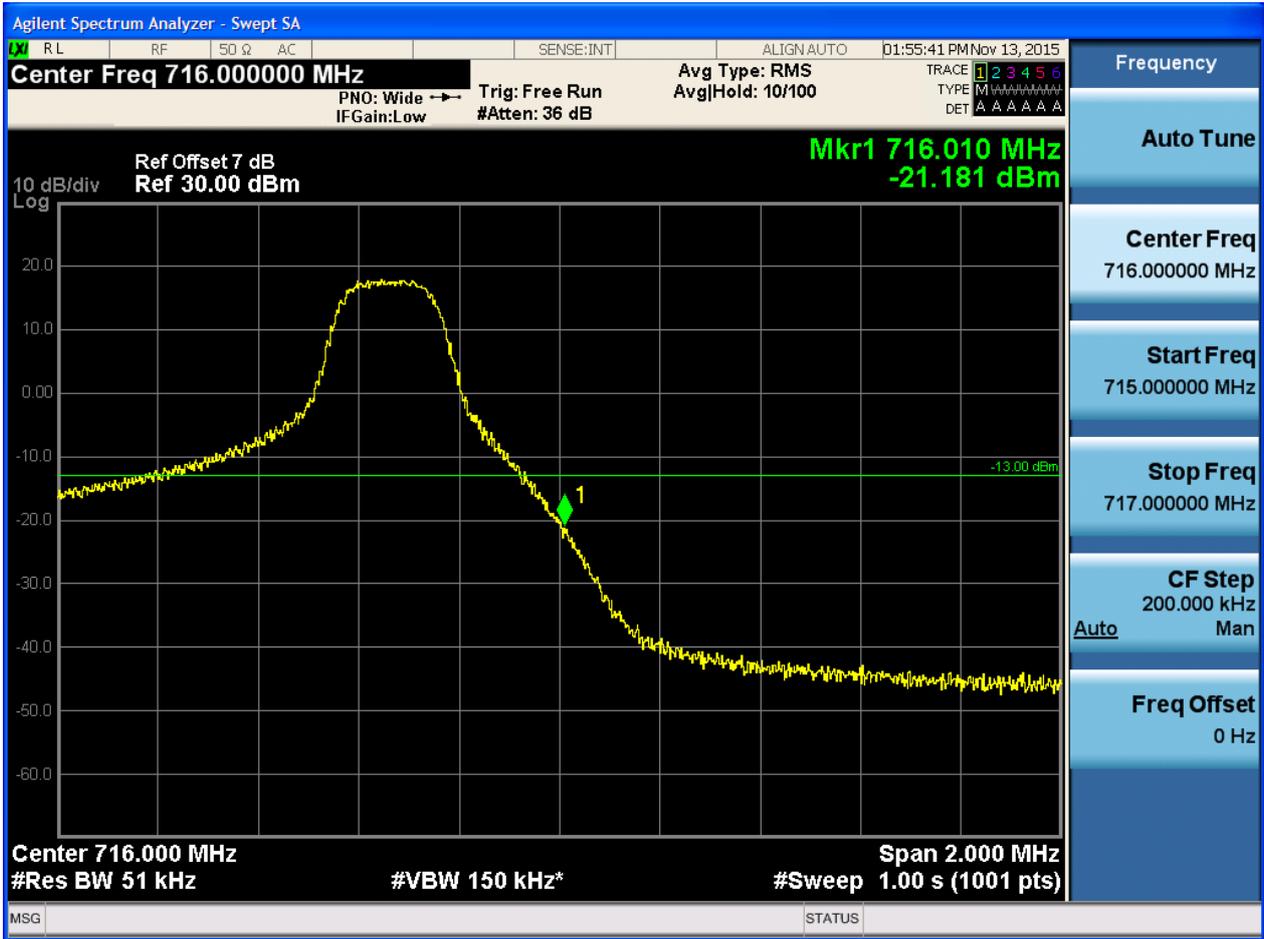## 5.1.1.2.1.1.4 Test RB = RB25#0

5.1.1.2.1.2 Test Channel = HCH

5.1.1.2.1.2.1 Test RB = RB1#0

5.1.1.2.1.2.2 Test RB = RB1#24

5.1.1.2.1.2.3 Test RB = RB12#6

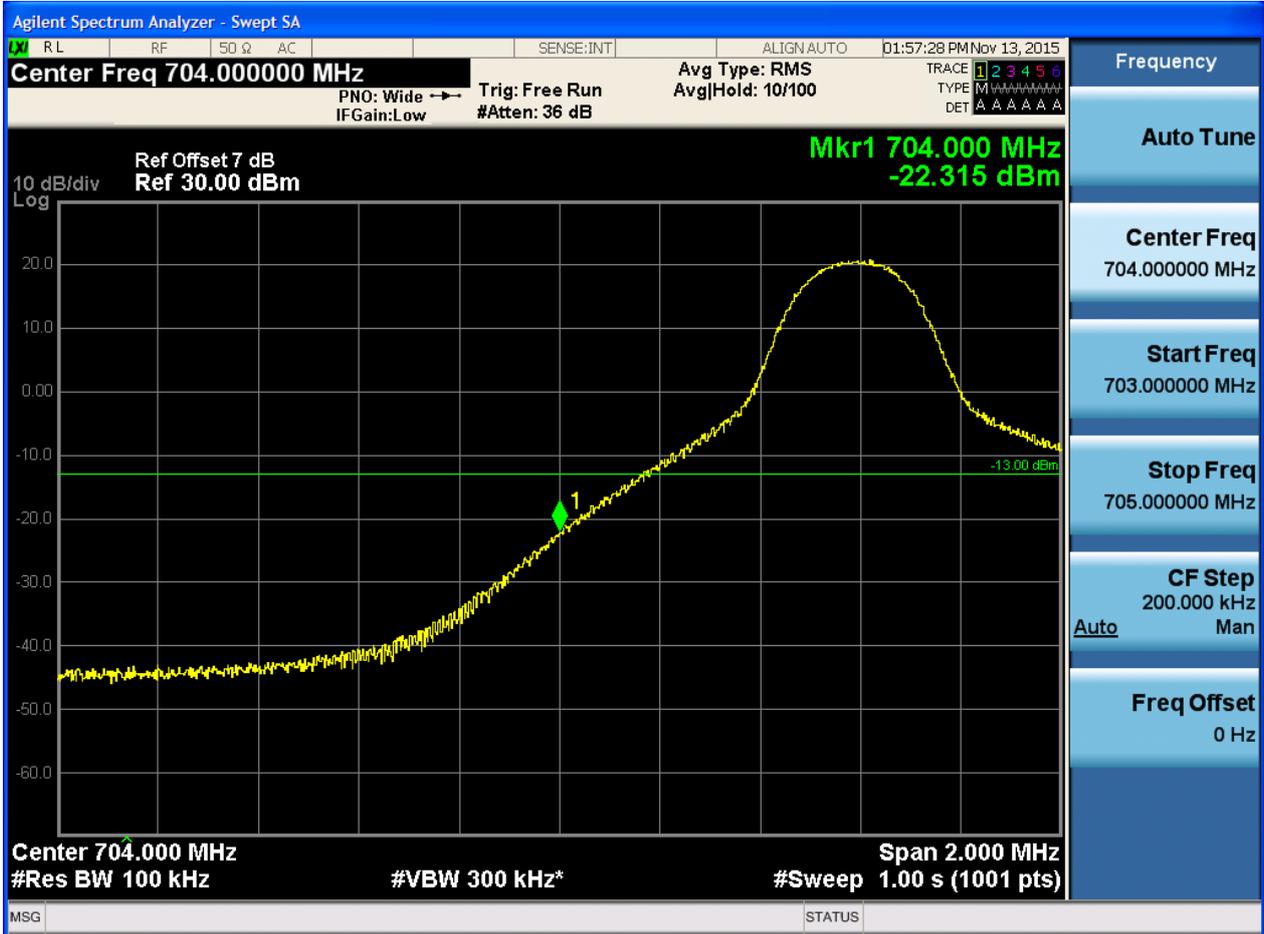## 5.1.1.2.1.2.4 Test RB = RB25#0

5.1.1.2.2 Test Bandwidth = 10

5.1.1.2.2.1 Test Channel = LCH

5.1.1.2.2.1.1 Test RB = RB1#0

5.1.1.2.2.1.2 Test RB = RB1#49

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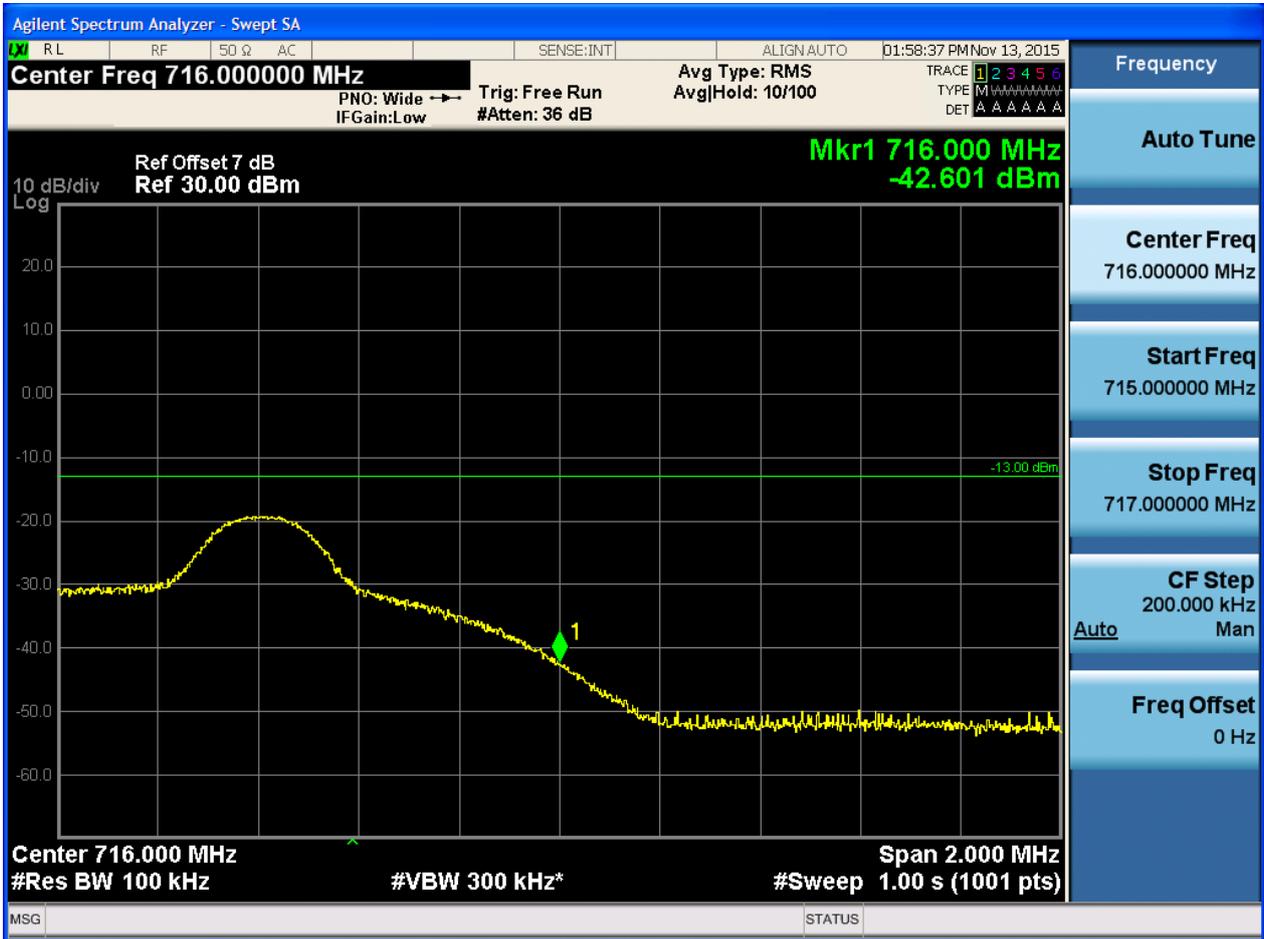### 5.1.1.2.2.1.3 Test RB = RB25#13
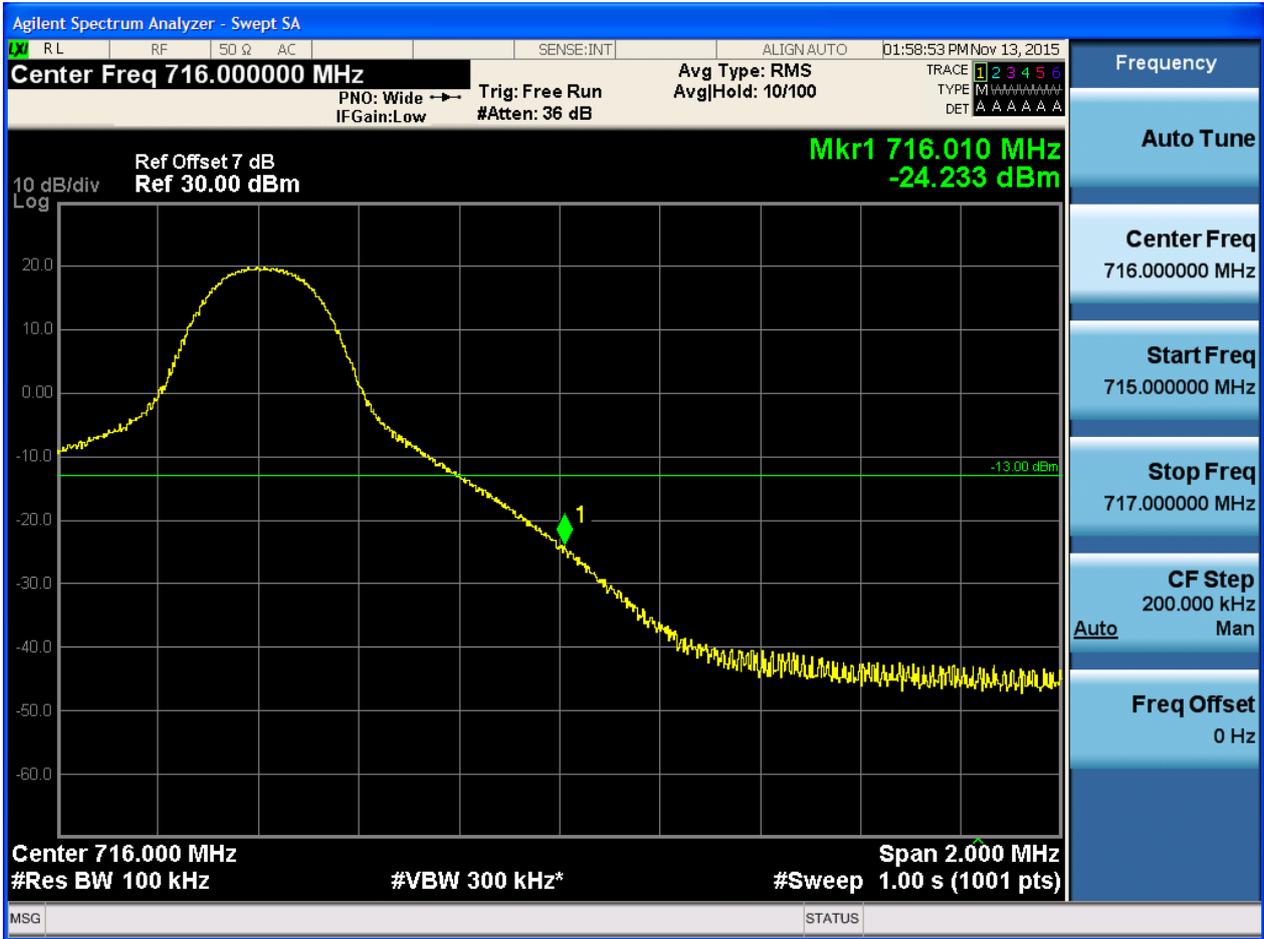
5.1.1.2.2.1.4 Test RB = RB50#0

5.1.1.2.2.2 Test Channel = HCH

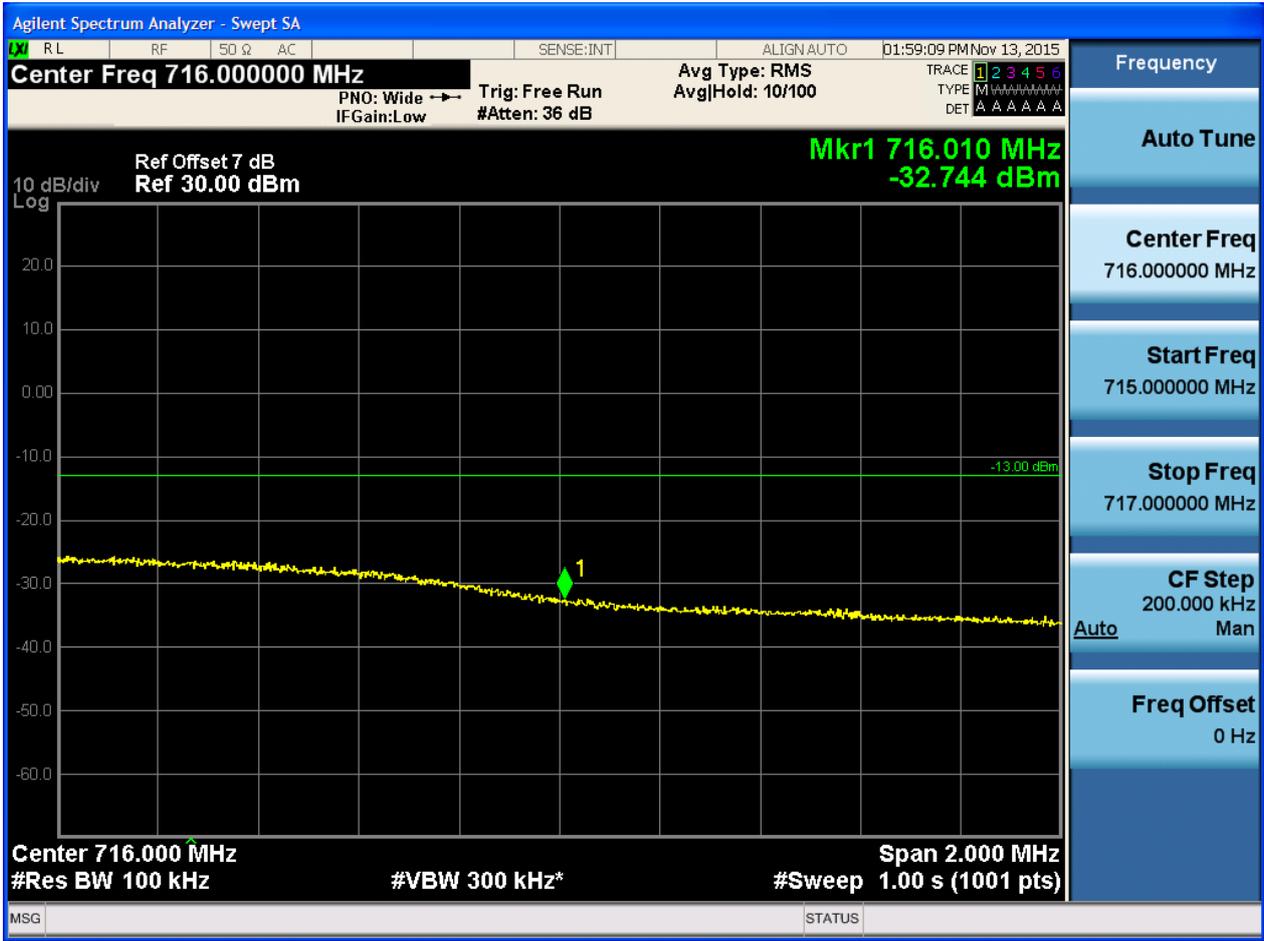### 5.1.1.2.2.2.1 Test RB = RB1#0

5.1.1.2.2.2.2 Test RB = RB1#49

5.1.1.2.2.2.3 Test RB = RB25#13

5.1.1.2.2.2.4 Test RB = RB50#0

6Appendix_F: Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.
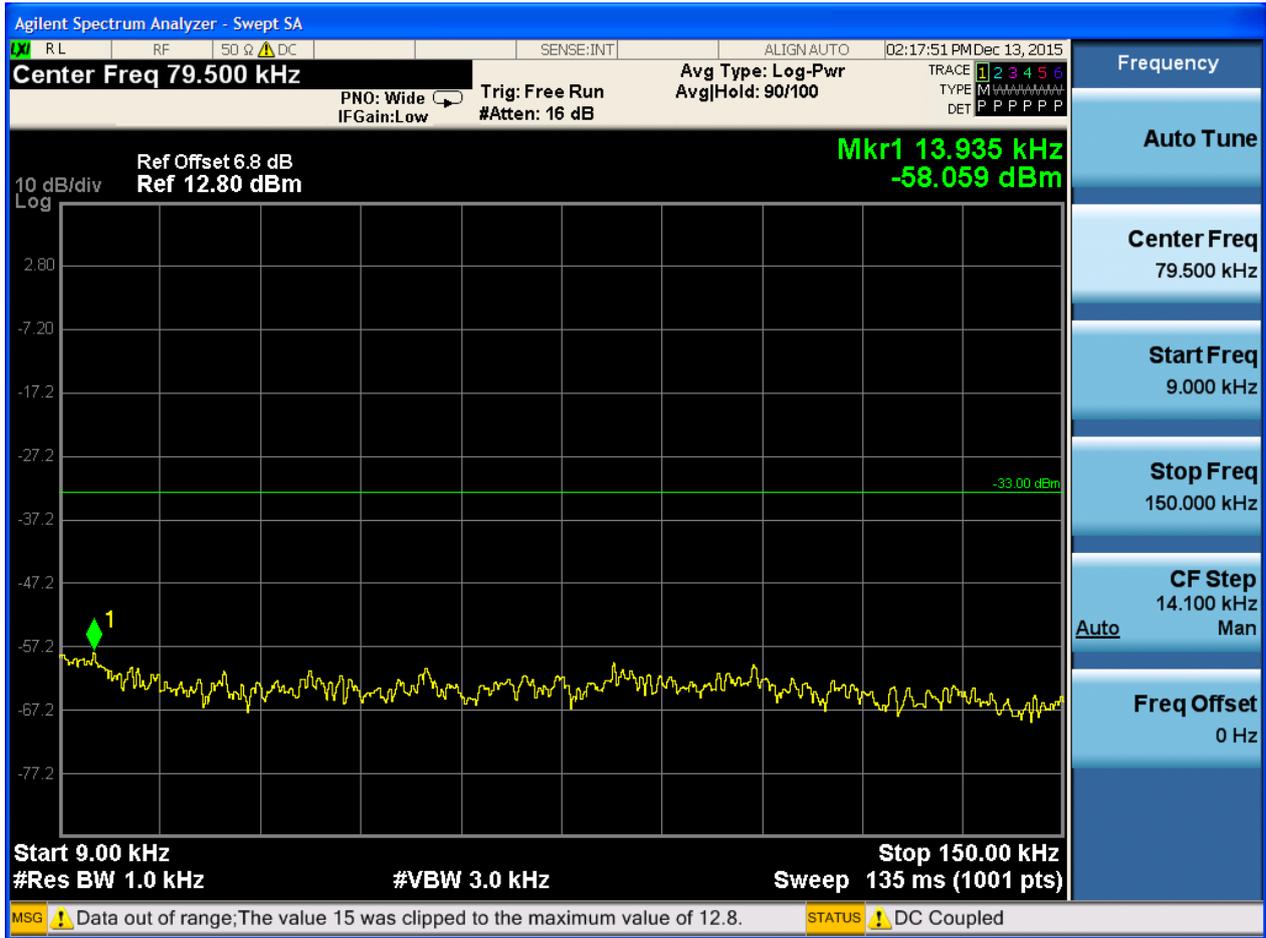
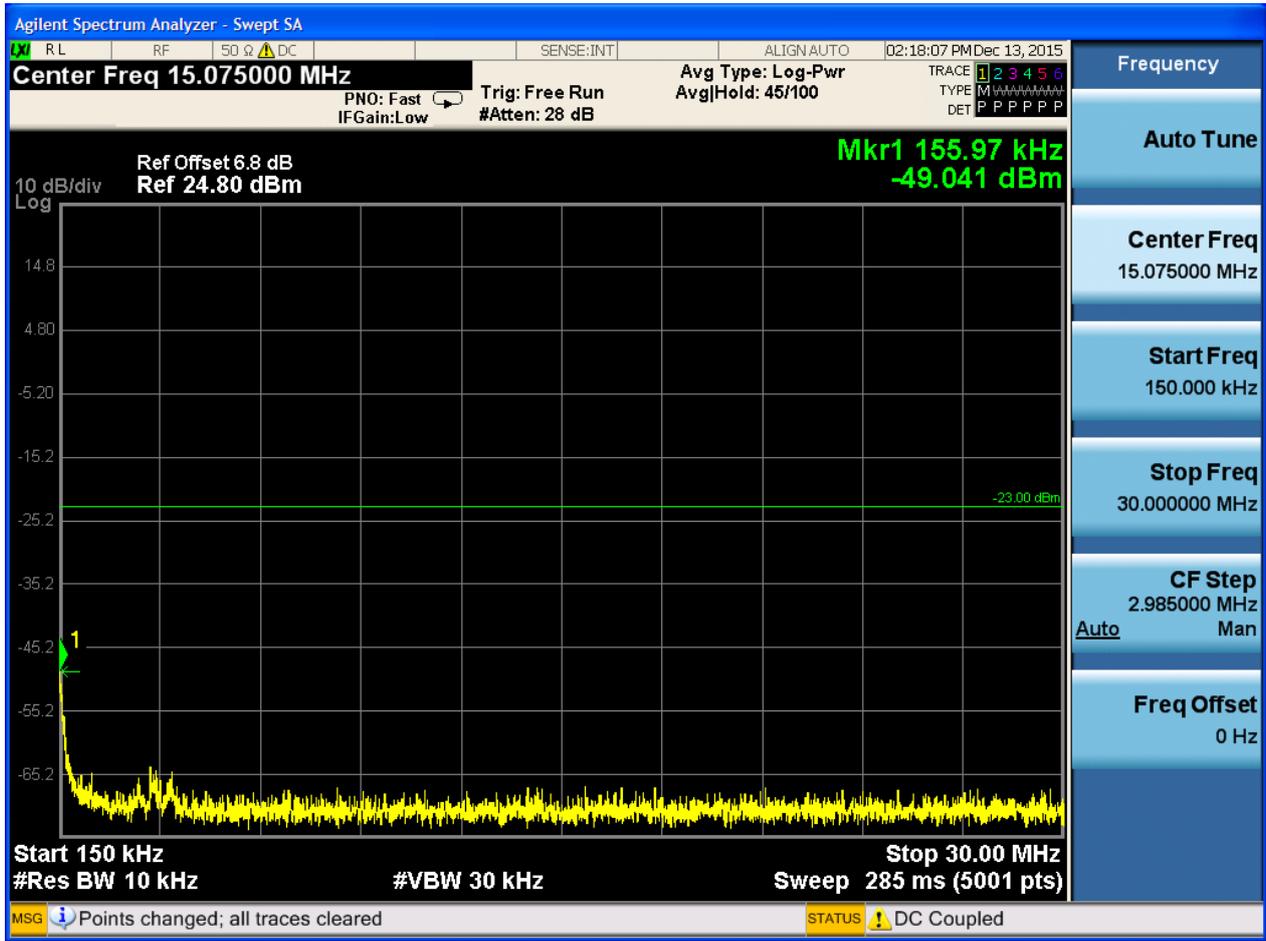**Part I - Test Plots**

6.1 For LTE

6.1.1 Test Band = BAND17

6.1.1.1 Test Mode = LTE/TM1

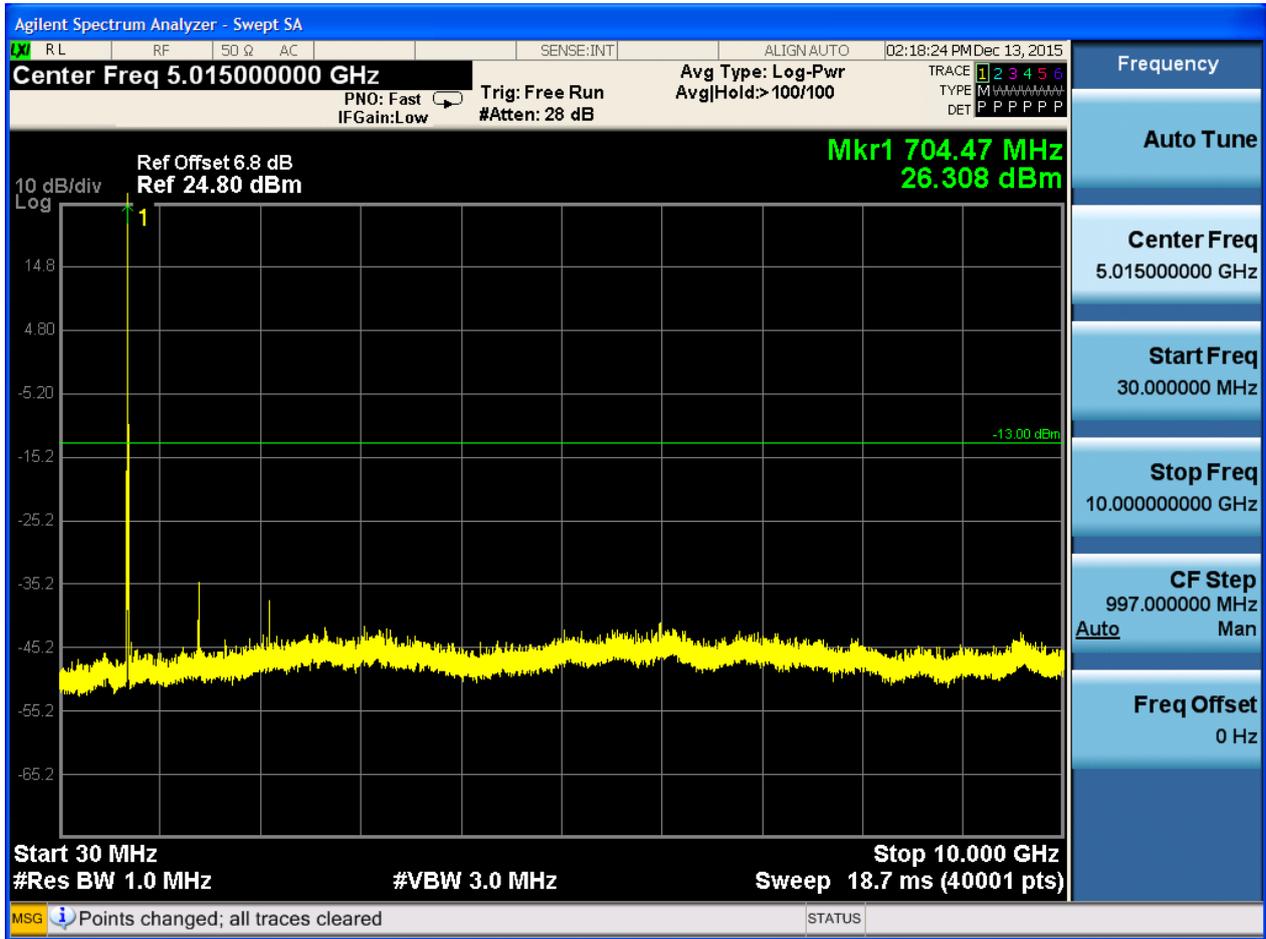**6.1.1.1.1 Test Bandwidth = 5**

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

LXI R L   RF   50 Ω ⚠ DC   SENSE:INT   ALIGN AUTO   02:17:51 PM Dec 13, 2015

Center Freq 79.500 kHz

PNO: Wide ⟳   Trig: Free Run   Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
IFGain:Low   #Atten: 16 dB   Avg|Hold: 90/100   TYPE M WWWWWWW
                                                           DET P P P P P P

Mkr1 13.935 kHz
-58.059 dBm

Ref Offset 6.8 dB
10 dB/div   **Ref 12.80 dBm**
Log

2.80

-7.20

-17.2

-27.2
                                                                    -33.00 dBm
-37.2

-47.2

-57.2

1

-67.2

-77.2

Start 9.00 kHz   **Stop 150.00 kHz**
#Res BW 1.0 kHz   **#VBW 3.0 kHz**   **Sweep 135 ms (1001 pts)**

MSG ⚠ Data out of range;The value 15 was clipped to the maximum value of 12.8.   STATUS ⚠ DC Coupled

Frequency

Auto Tune

Center Freq
79.500 kHz

Start Freq
9.000 kHz

Stop Freq
150.000 kHz

CF Step
14.100 kHz
Auto   Man

Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA

	RL		RF	50 Ω	AC			SENSE:INT		ALIGN AUTO	02:18:24 PM Dec 13, 2015		

Center Freq 5.015000000 GHz

PNO: Fast
IFGain:Low

Trig: Free Run
#Atten: 28 dB

Avg Type: Log-Pwr
Avg|Hold:> 100/100

TRACE 1 2 3 4 5 6
TYPE M WWWWWW
DET P P P P P P

Mkr1 704.47 MHz
26.308 dBm

Ref Offset 6.8 dB
Ref 24.80 dBm

10 dB/div
Log

14.8

4.80

-5.20

-15.2

-25.2

-35.2

-45.2

-55.2

-65.2

-13.00 dBm

Start 30 MHz
#Res BW 1.0 MHz

#VBW 3.0 MHz

Stop 10.000 GHz
Sweep 18.7 ms (40001 pts)

MSG ⓘ Points changed; all traces cleared

STATUS

Frequency

Auto Tune

Center Freq
5.015000000 GHz

Start Freq
30.000000 MHz

Stop Freq
10.000000000 GHz
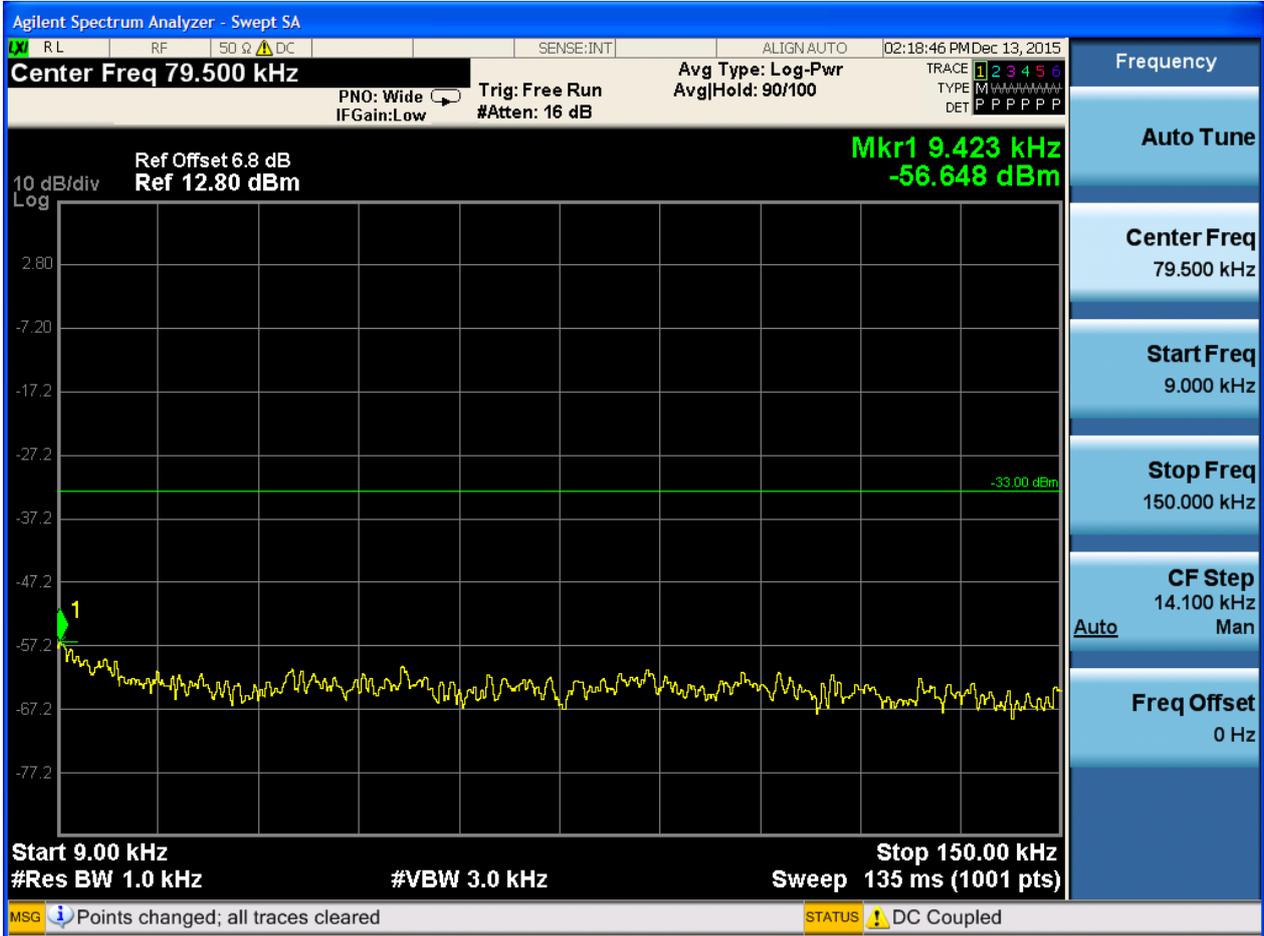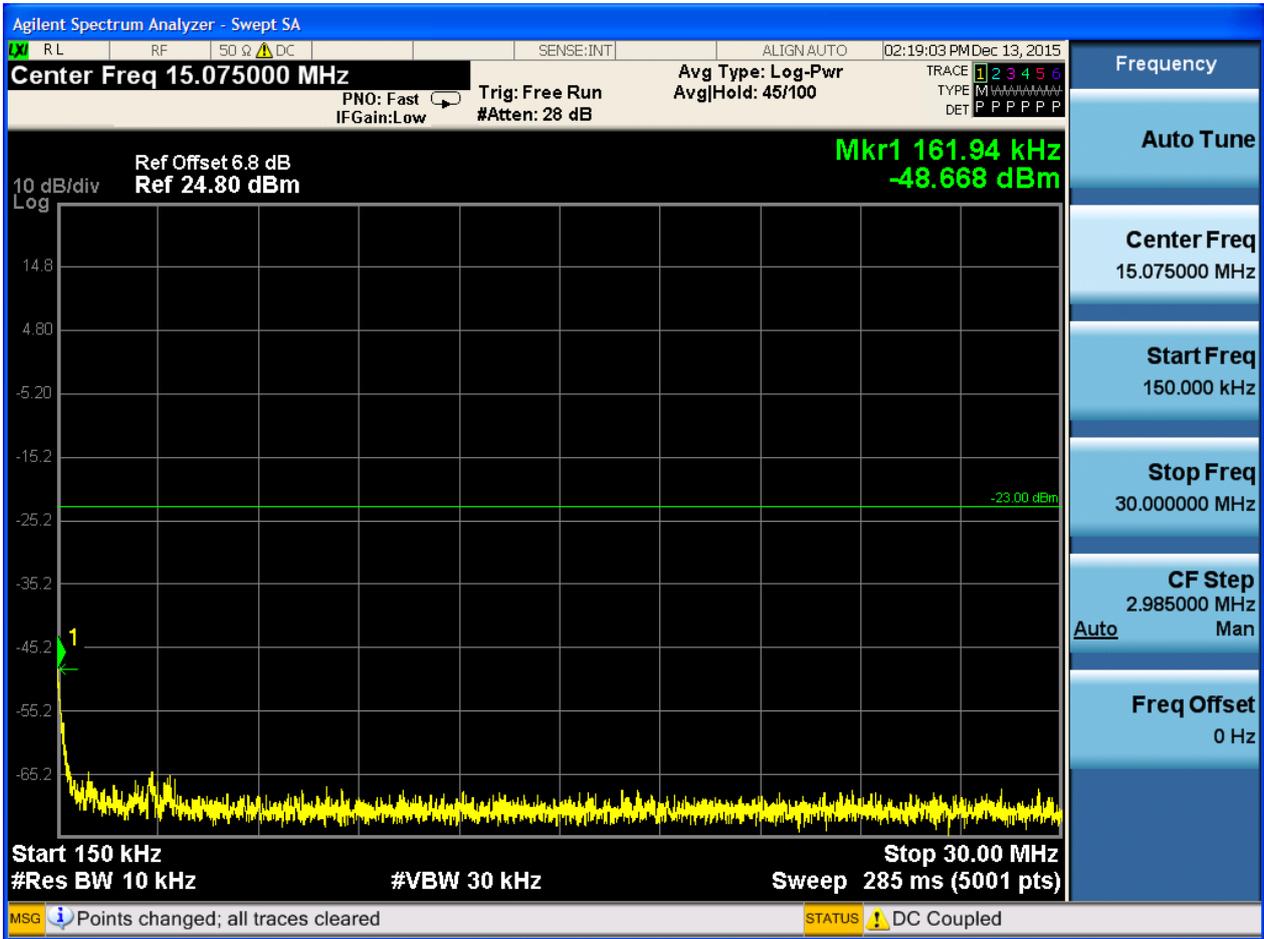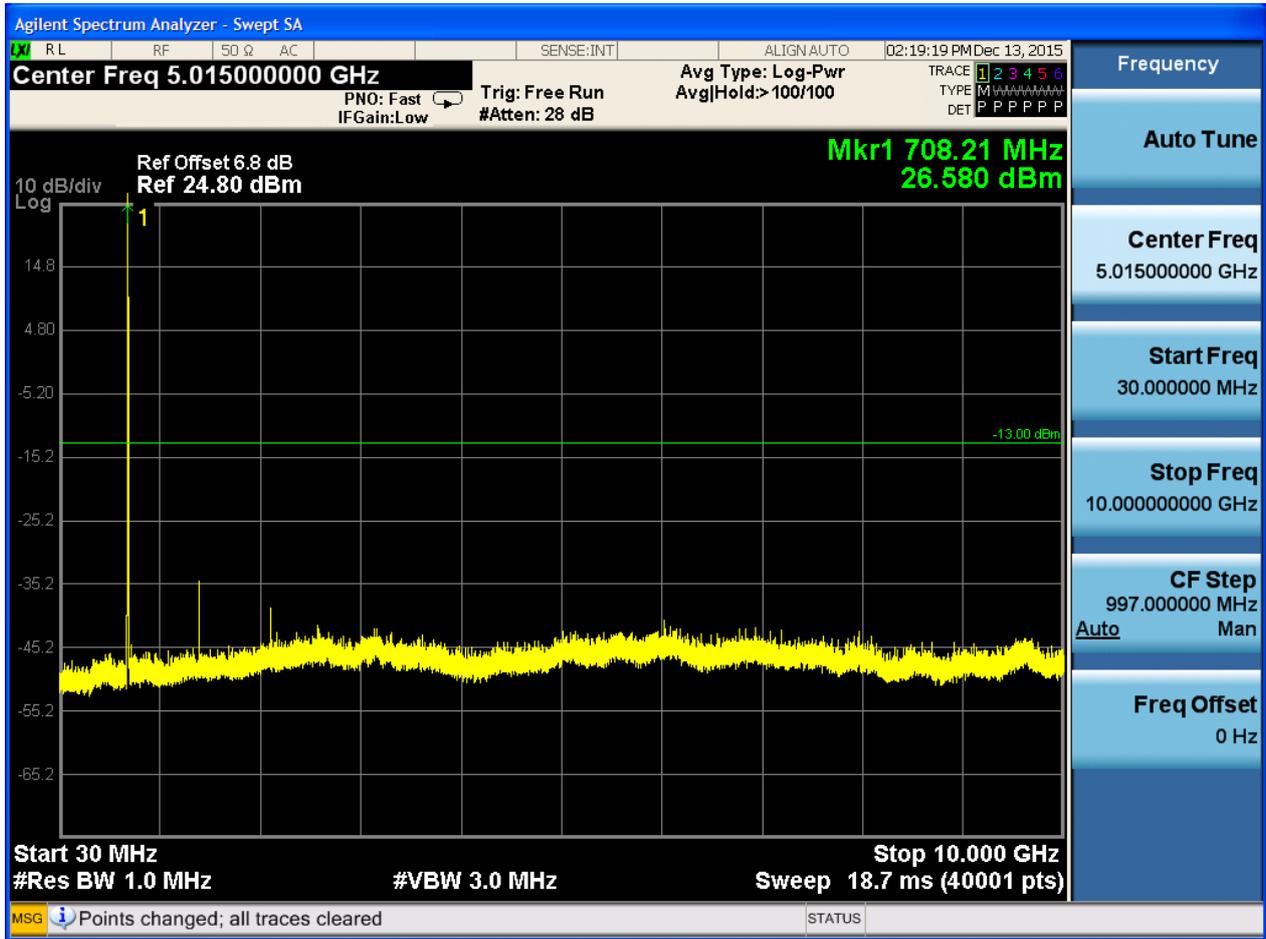
CF Step
997.000000 MHz
Auto   Man

Freq Offset
0 Hz
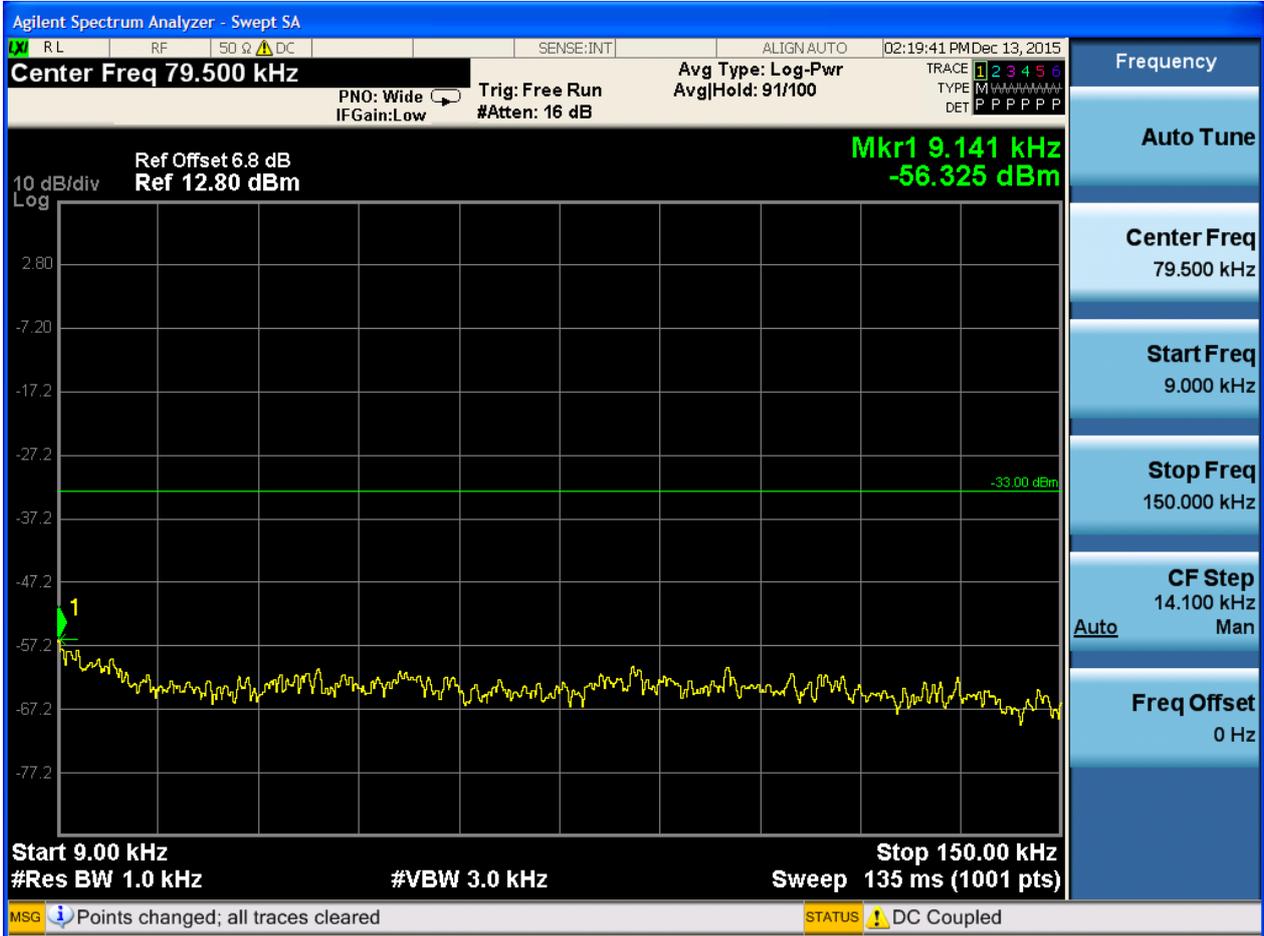
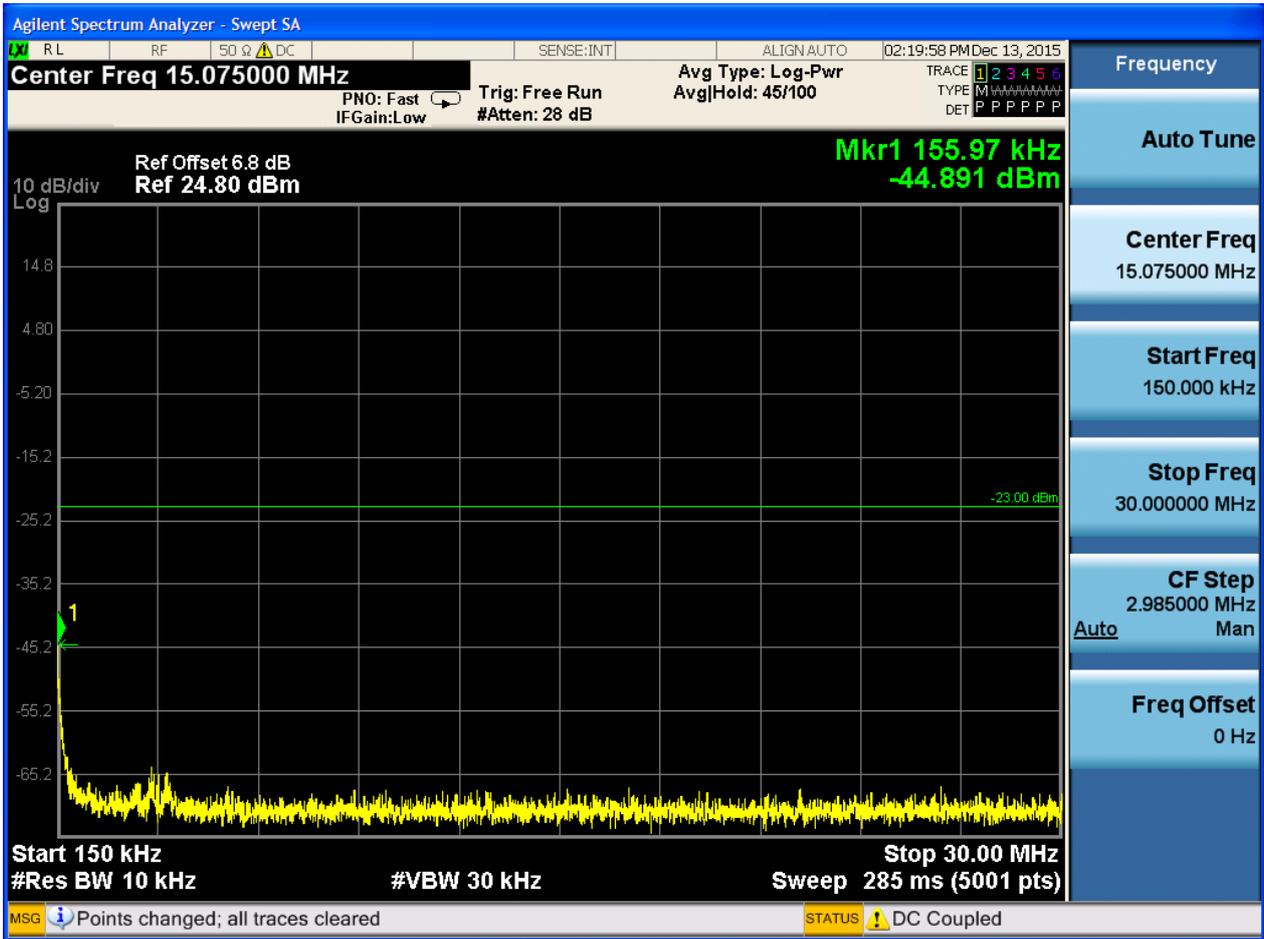## 6.1.1.1.1.2 Test Channel = MCH

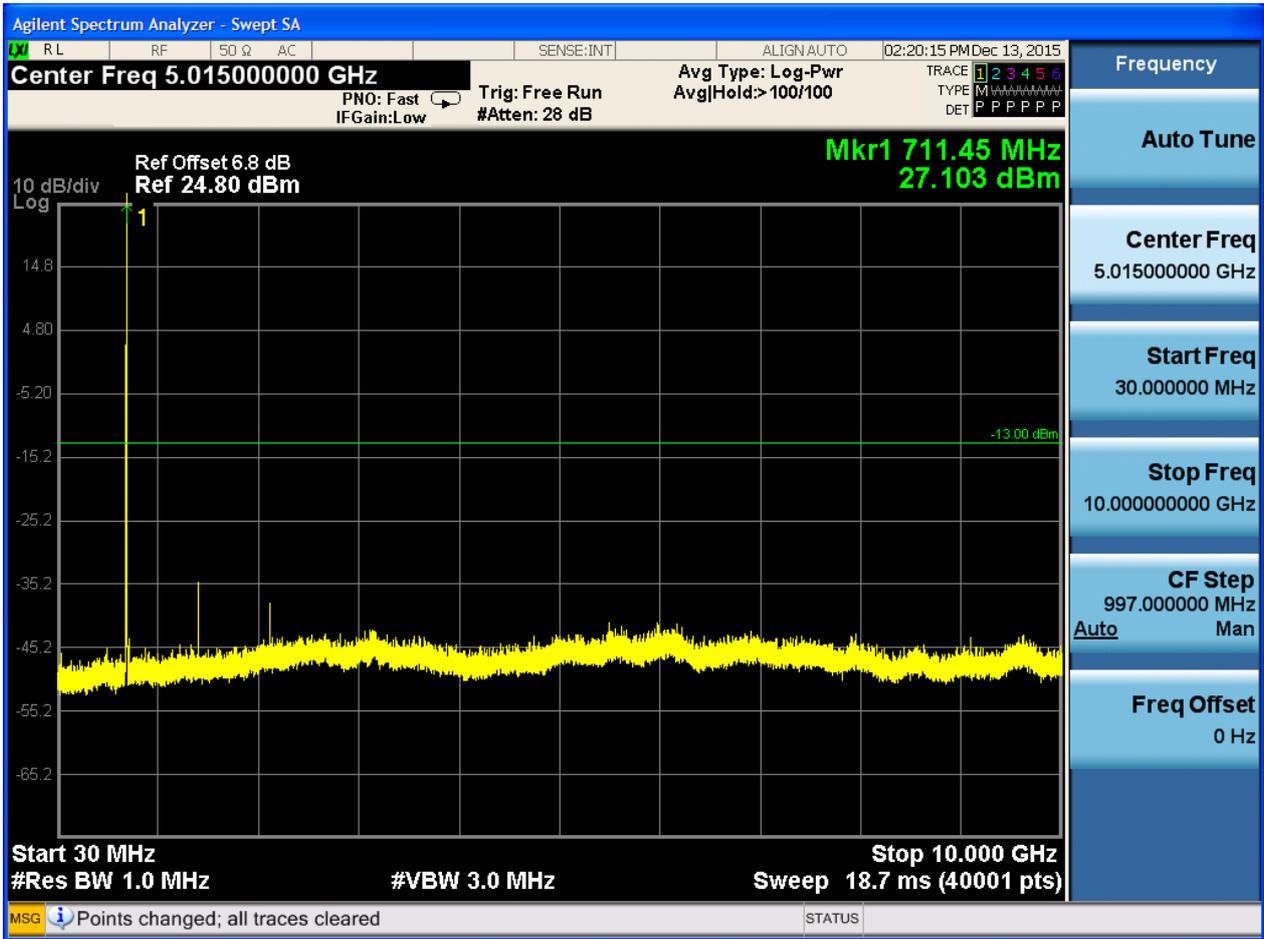## 6.1.1.1.1.2.1 Test RB = RB1#0

6.1.1.1.1.3 Test Channel = HCH

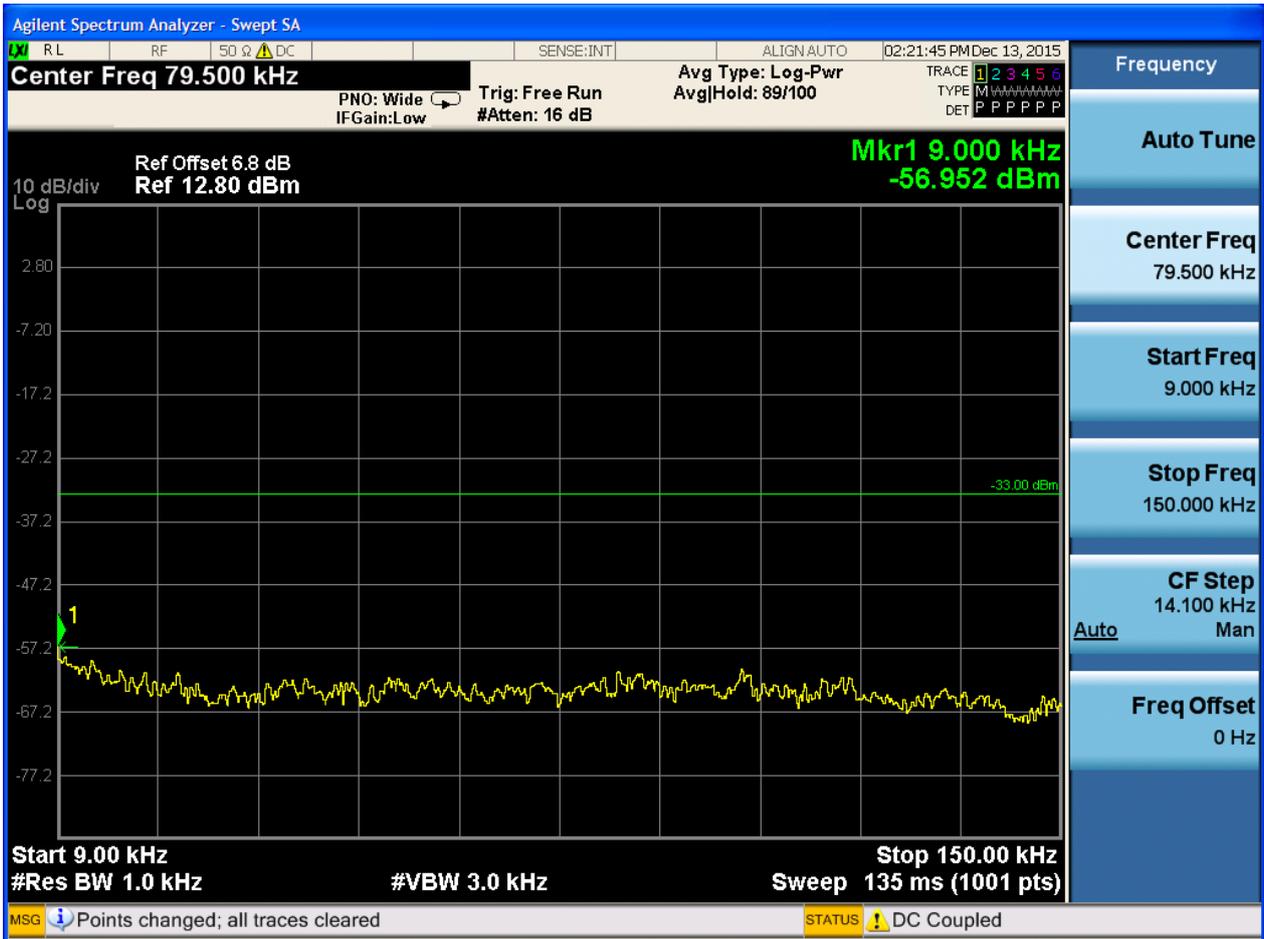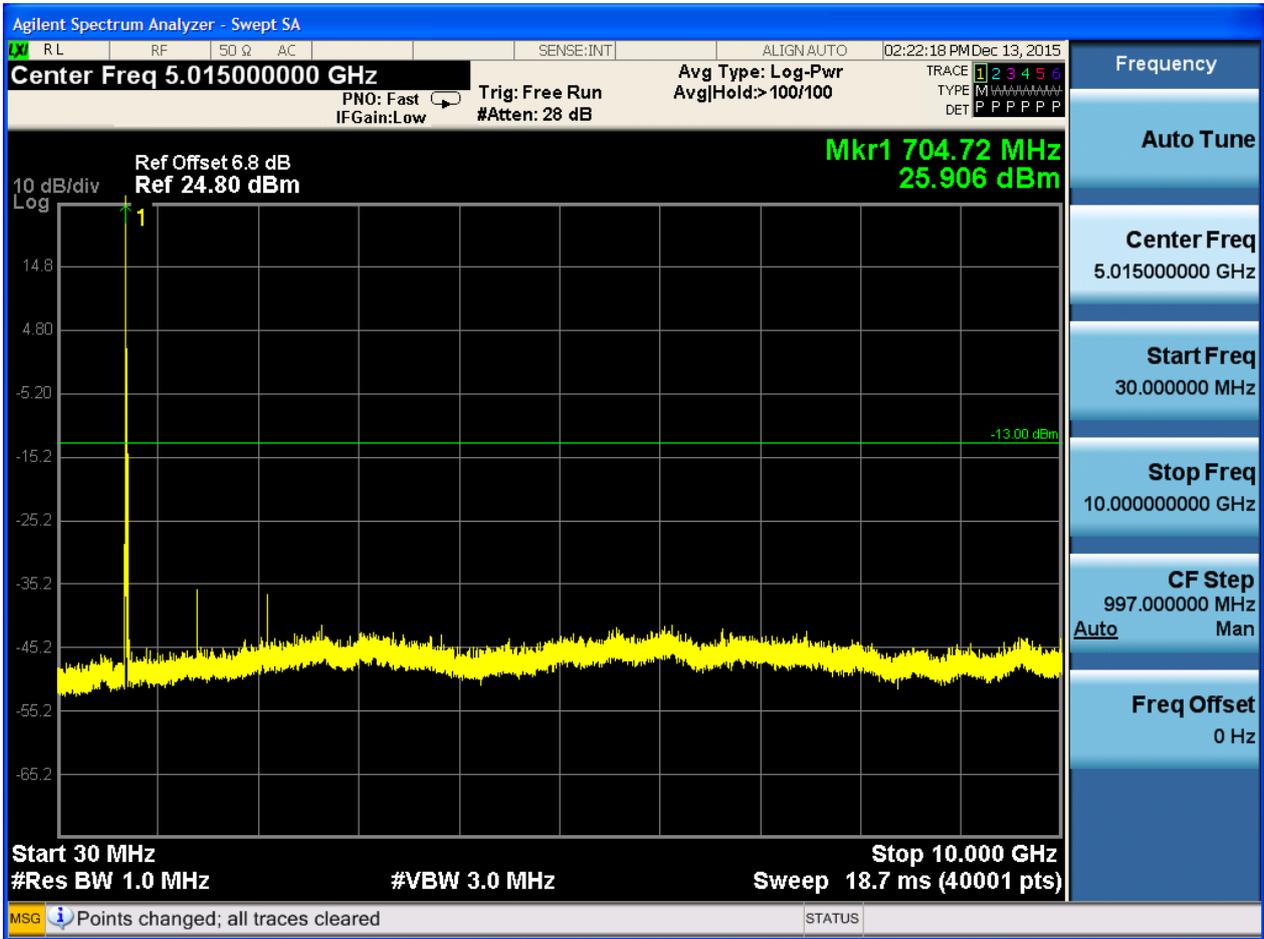### 6.1.1.1.1.3.1 Test RB = RB1#0

6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH
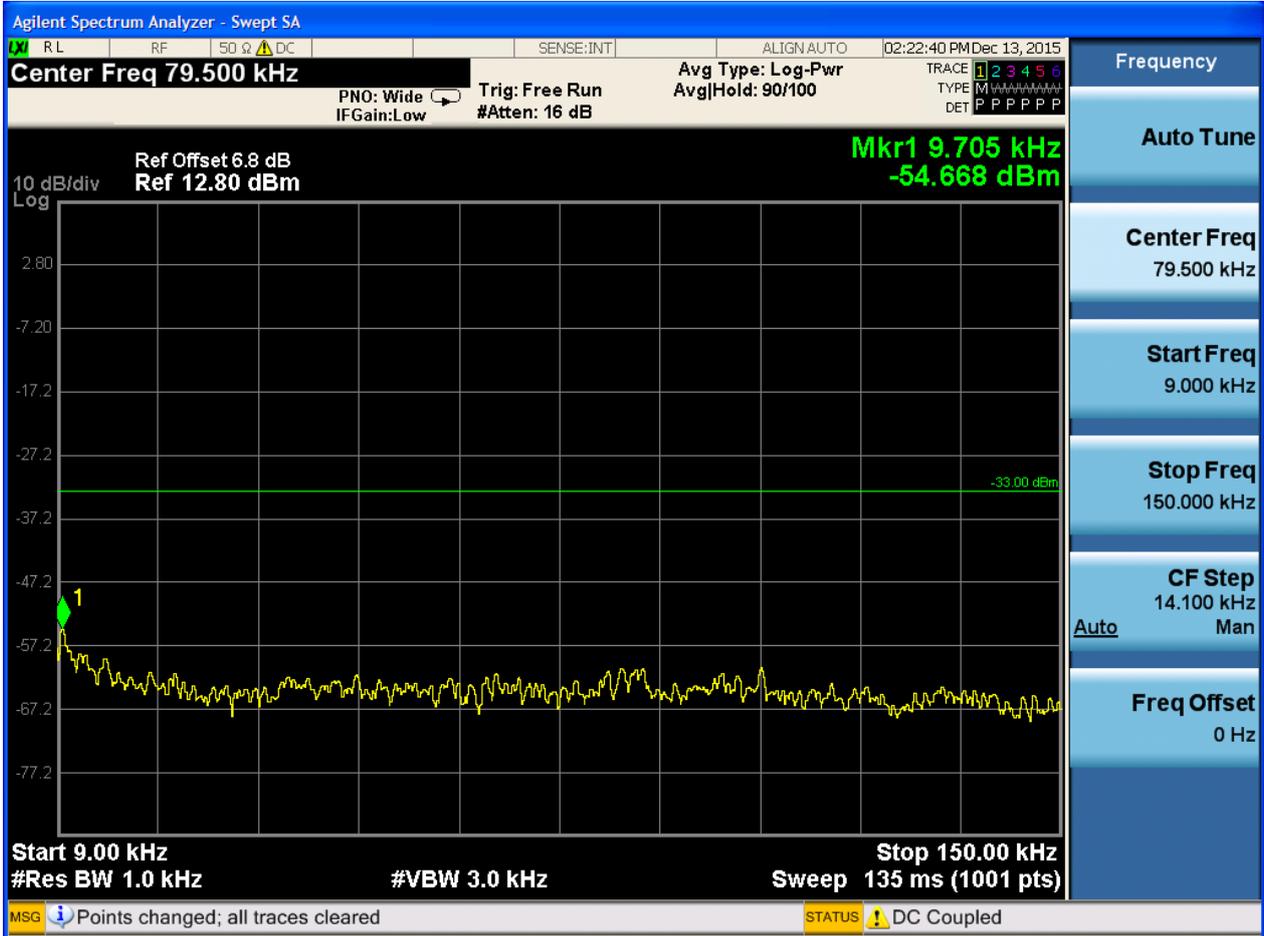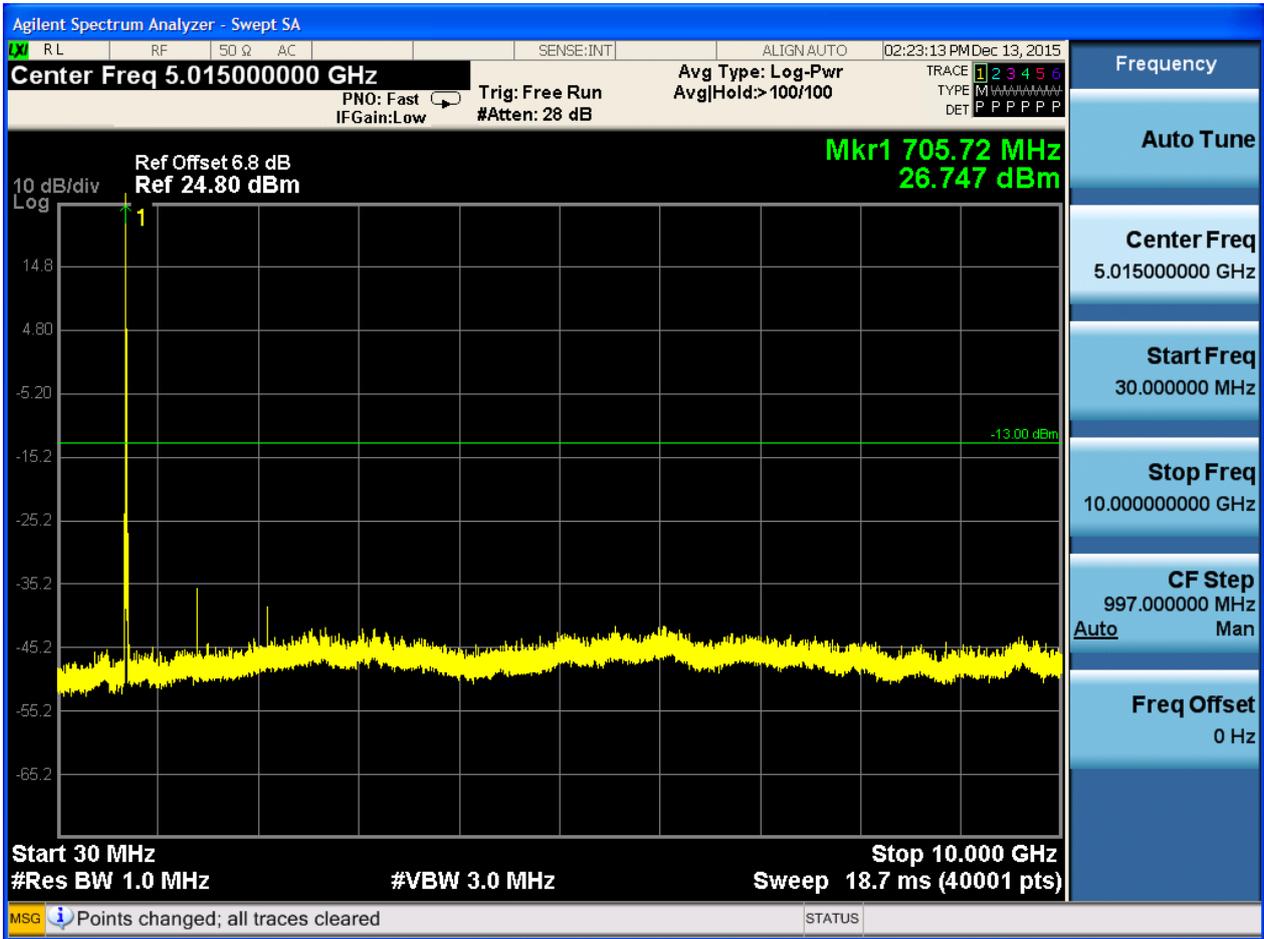
6.1.1.1.2.1.1 Test RB = RB1#0

6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

LXI R L | RF | 50 Ω ⚠ DC | | | SENSE:INT | ALIGN AUTO | 02:23:52 PM Dec 13, 2015

Center Freq 15.075000 MHz

PNO: Fast ⟳
IFGain:Low

Trig: Free Run
#Atten: 28 dB

Avg Type: Log-Pwr
Avg|Hold: 45/100

TRACE 1 2 3 4 5 6
TYPE M WWWWWW
DET P P P P P P

Ref Offset 6.8 dB
Ref 24.80 dBm

10 dB/div
Log

Mkr1 179.85 kHz
-49.730 dBm

14.8

4.80

-5.20

-15.2

-23.00 dBm

-25.2

-35.2

-45.2   1

-55.2

-65.2

Start 150 kHz
#Res BW 10 kHz   **#VBW 30 kHz**   **Stop 30.00 MHz**
    Sweep 285 ms (5001 pts)

MSG ⓘ Points changed; all traces cleared   STATUS ⚠ DC Coupled

Frequency

Auto Tune

Center Freq
15.075000 MHz

Start Freq
150.000 kHz

Stop Freq
30.000000 MHz

CF Step
2.985000 MHz
Auto   Man

Freq Offset
0 Hz

6.1.1.2 Test Mode = LTE/TM2

6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0

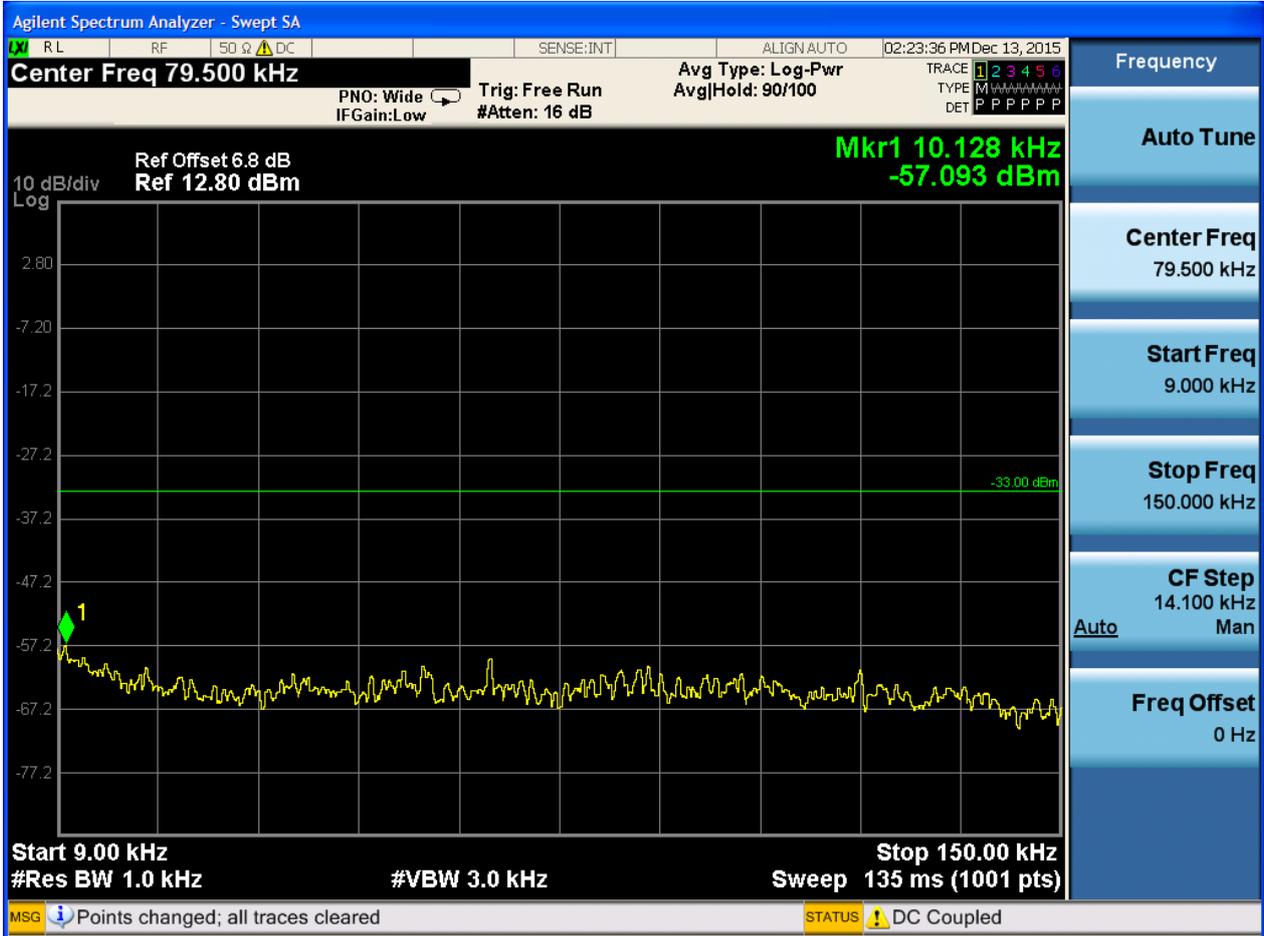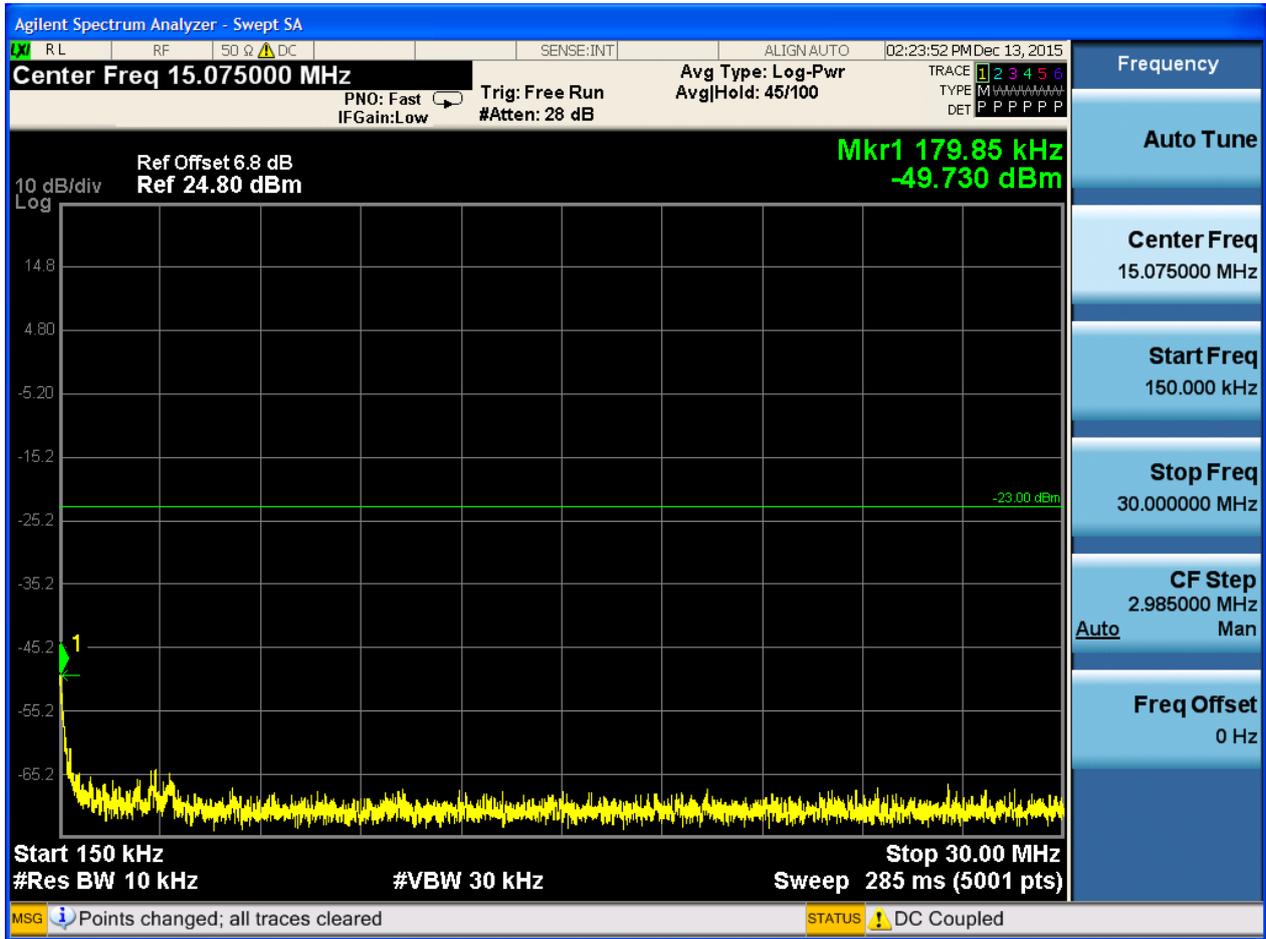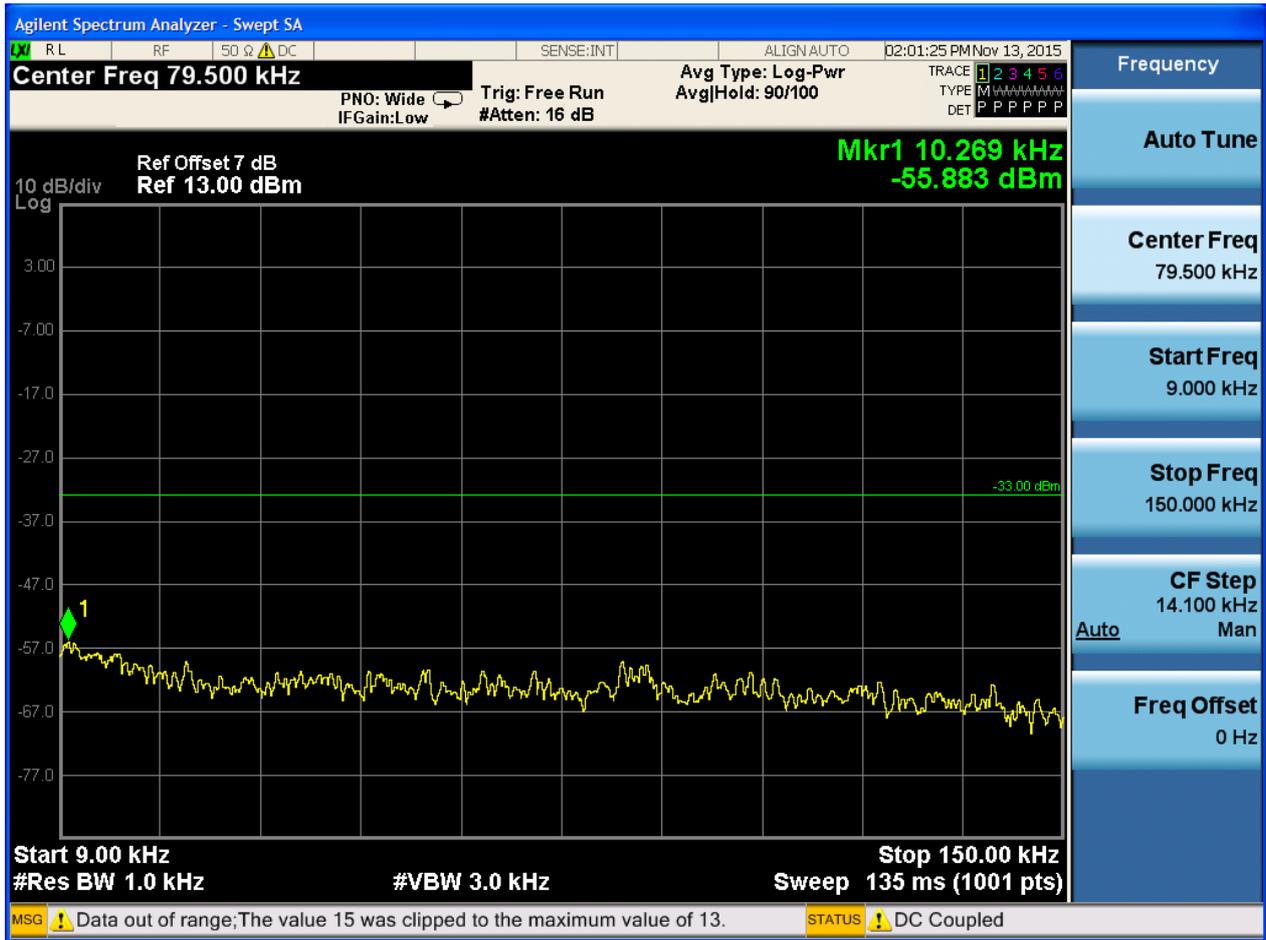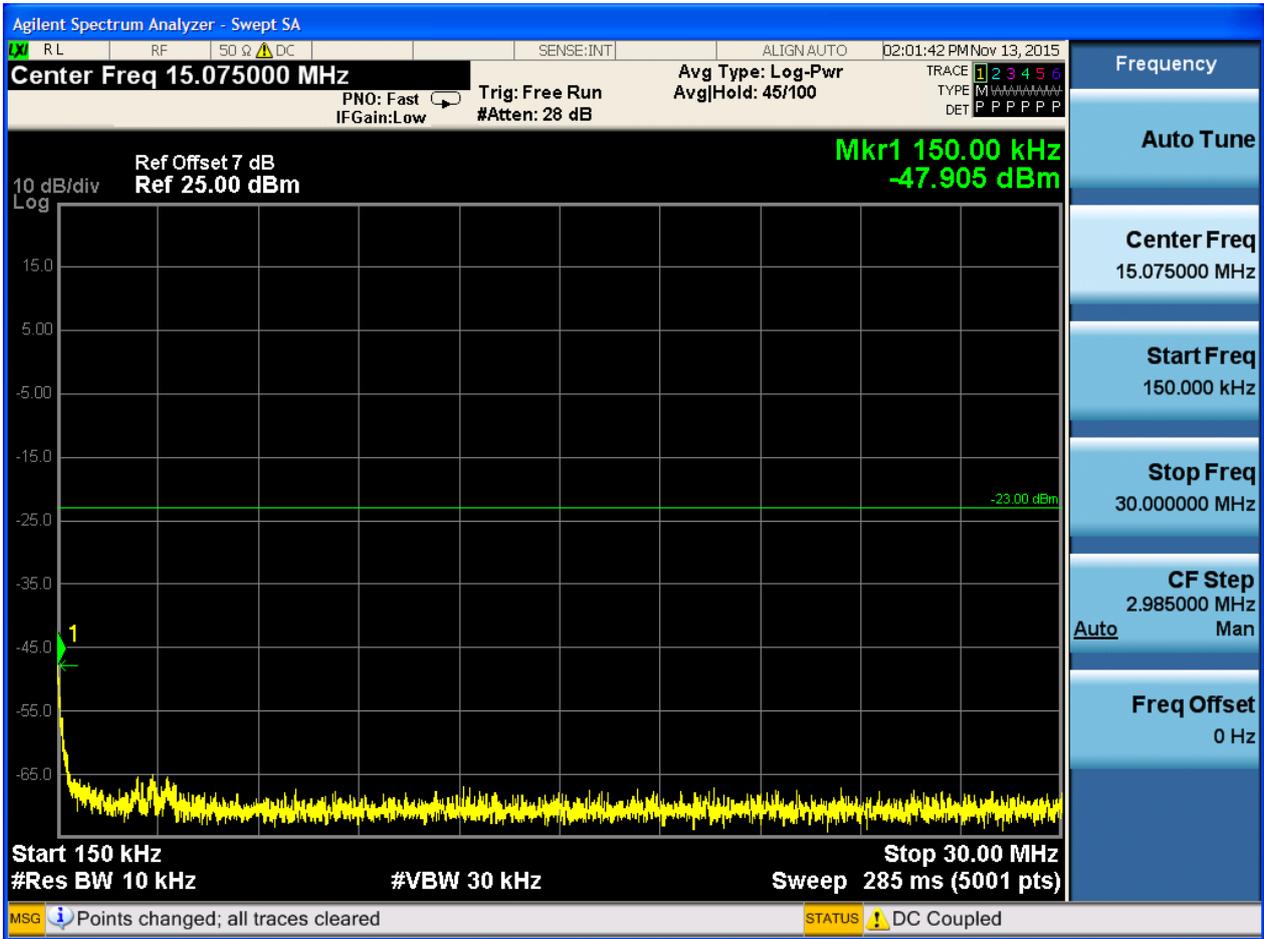### 6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0
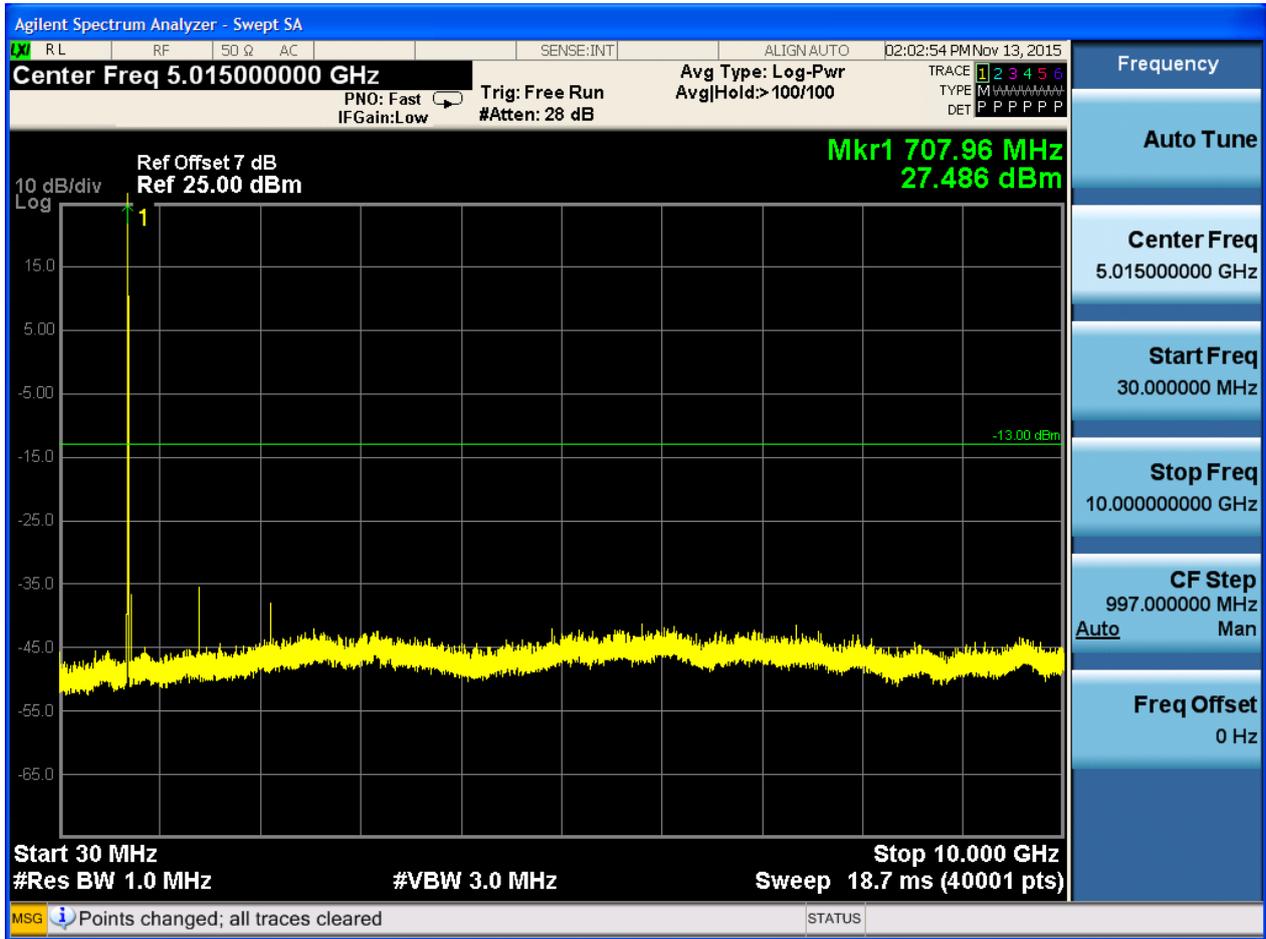
6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0
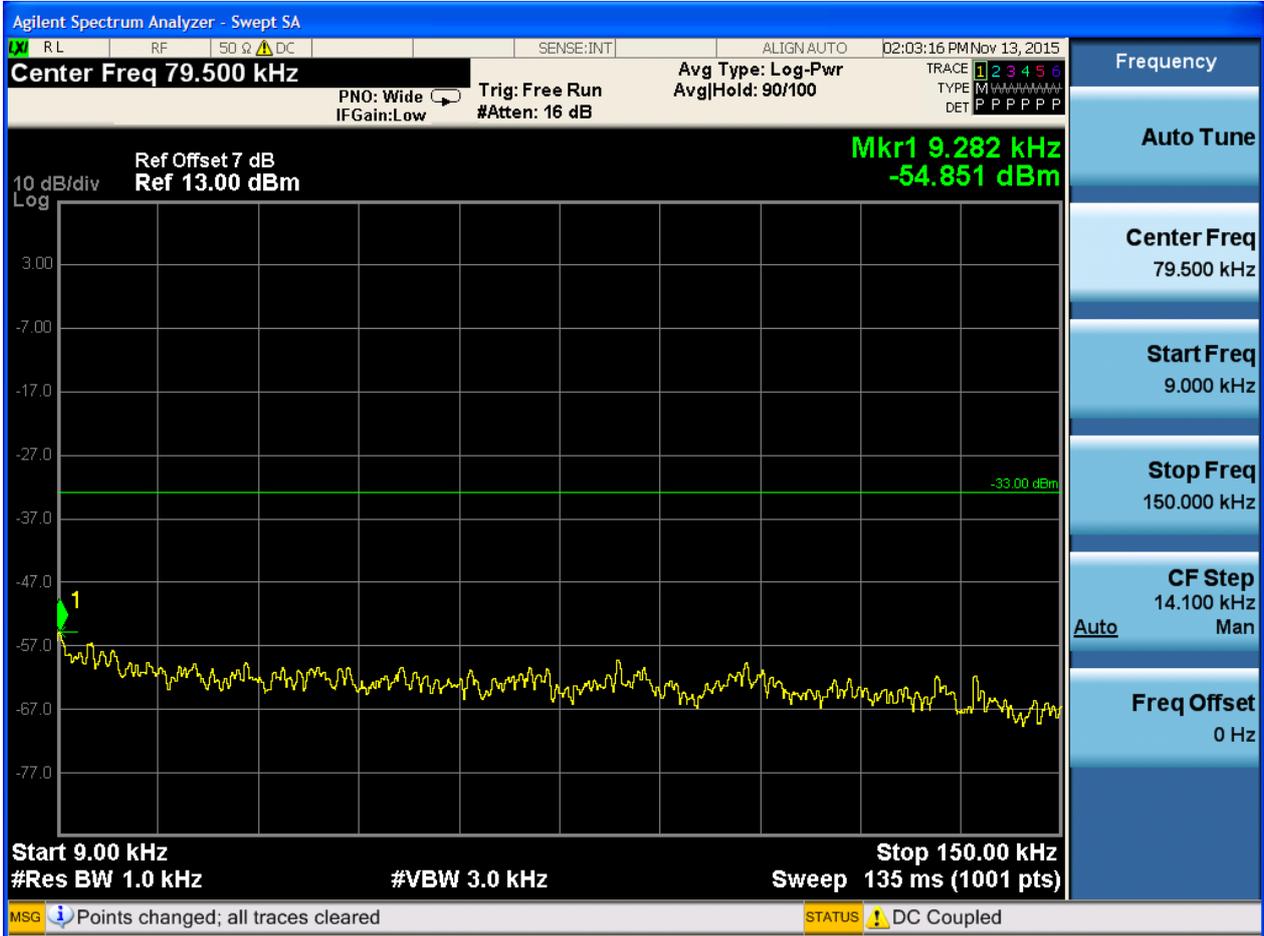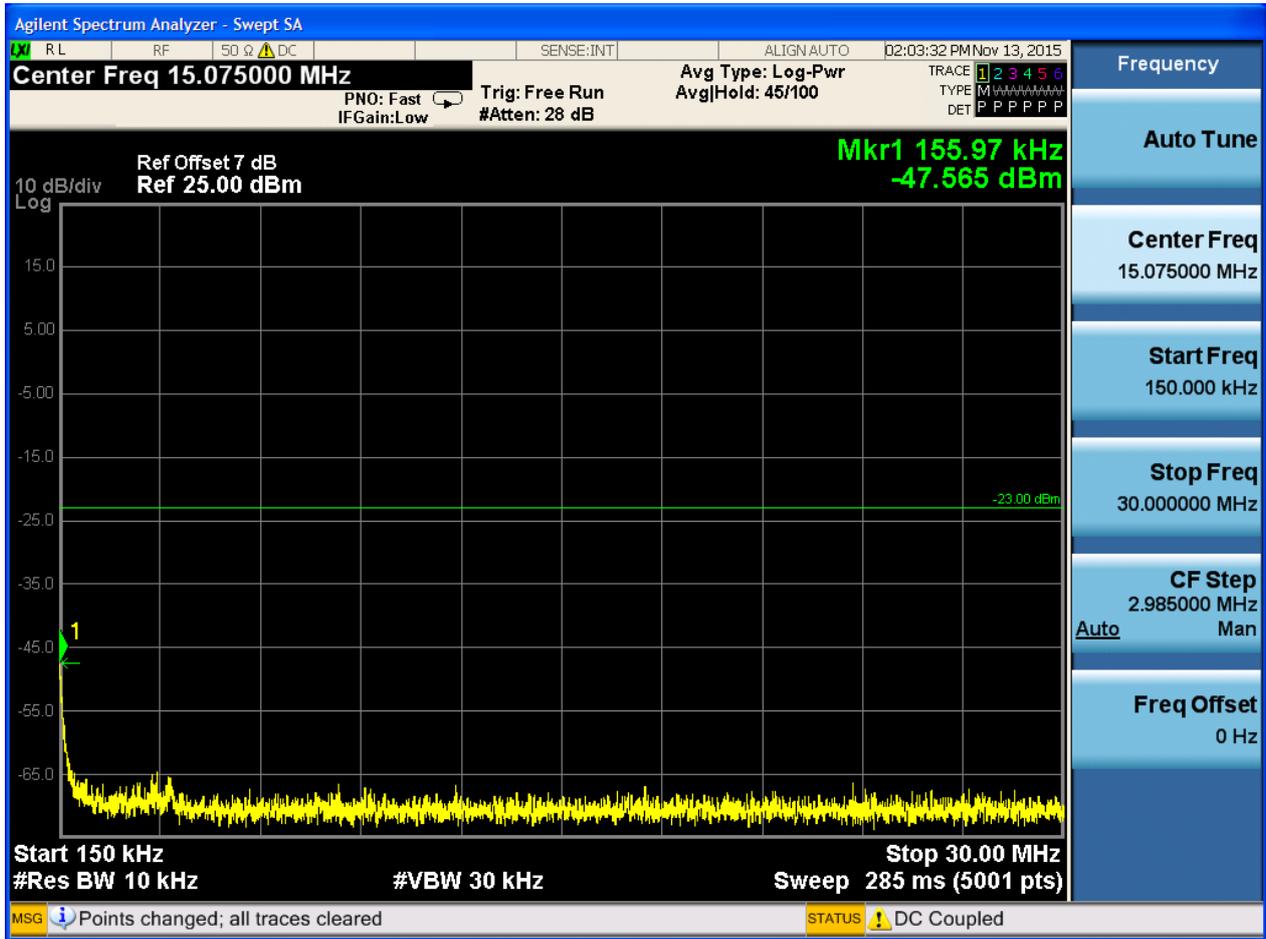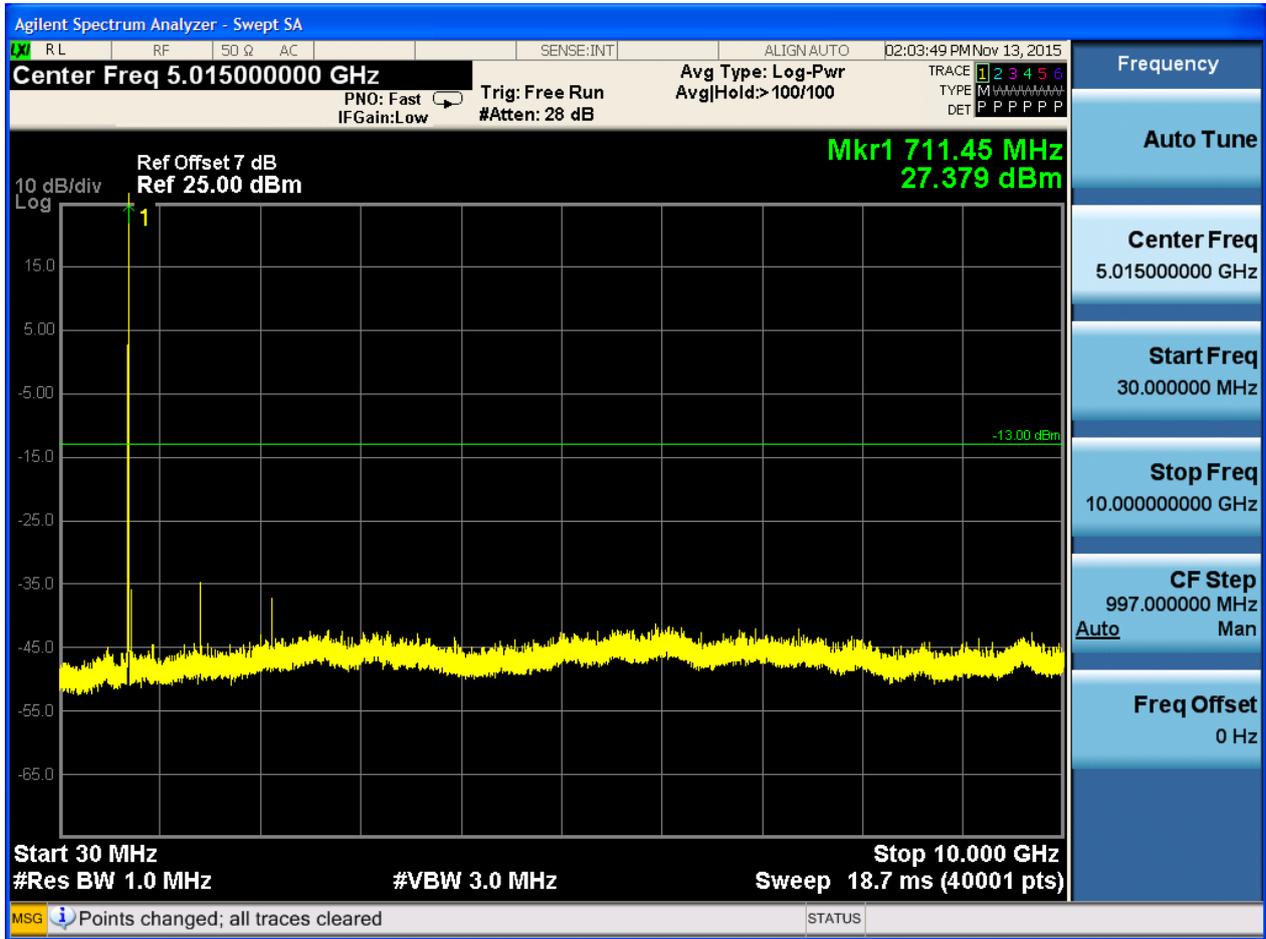
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

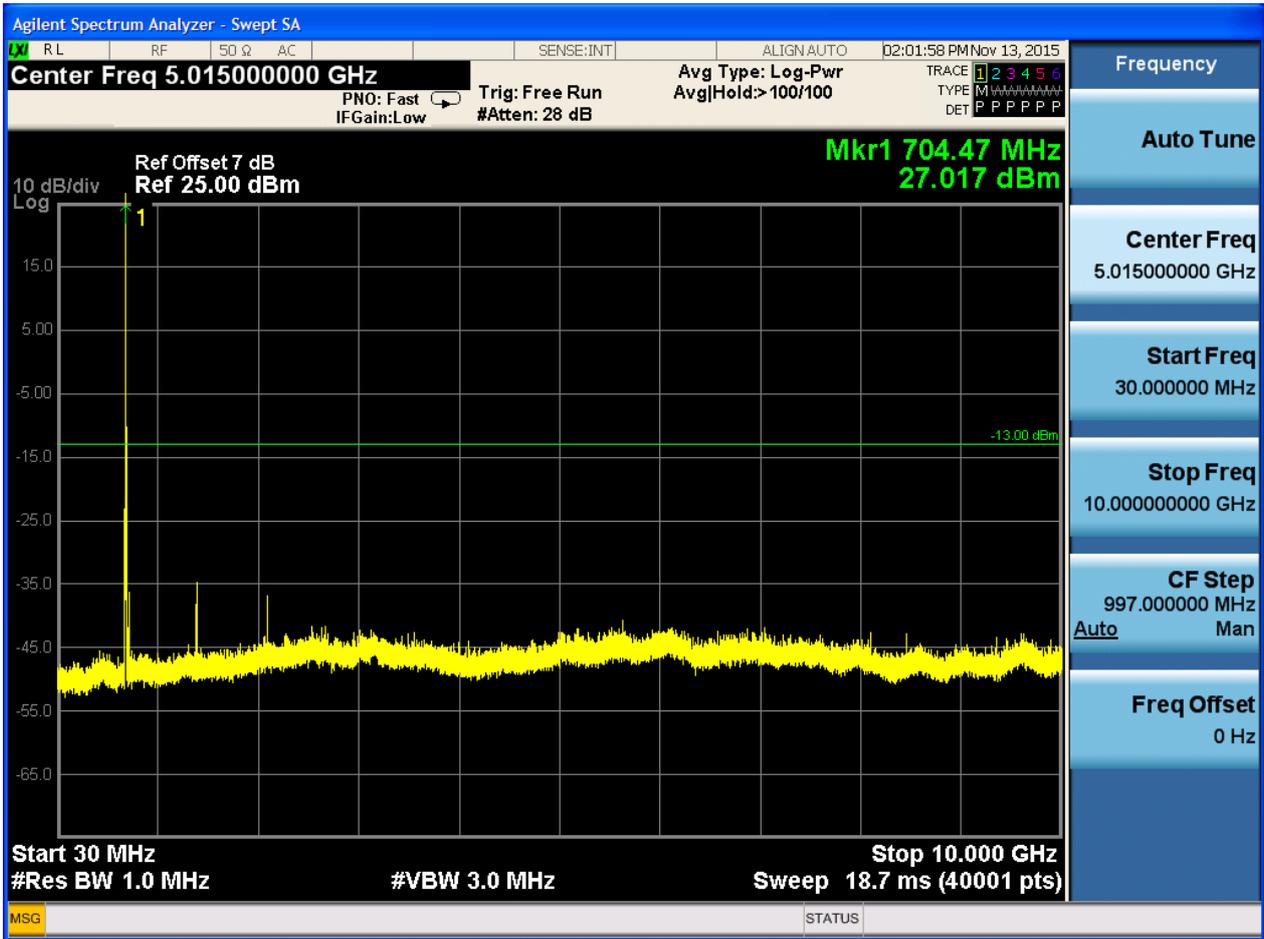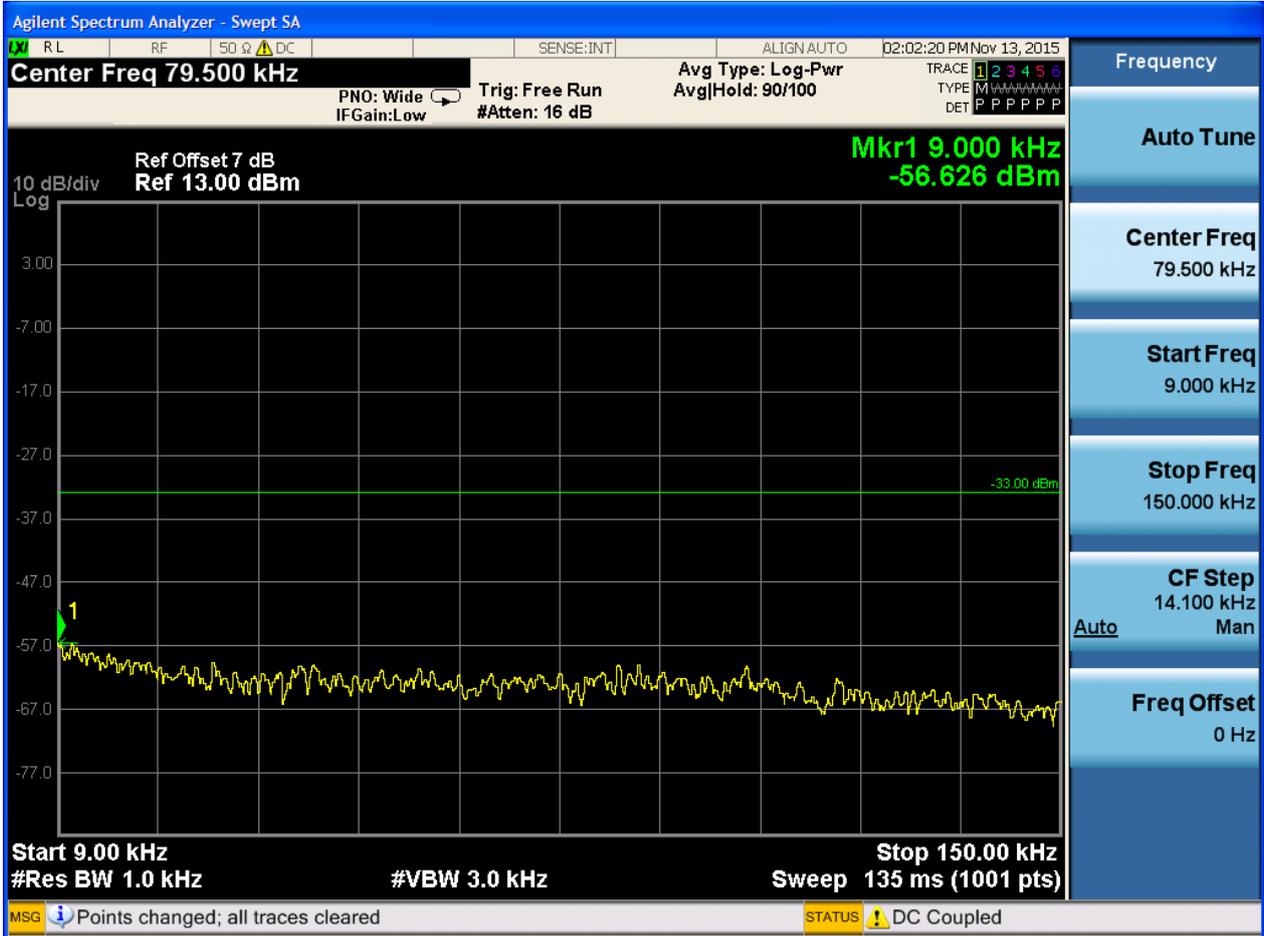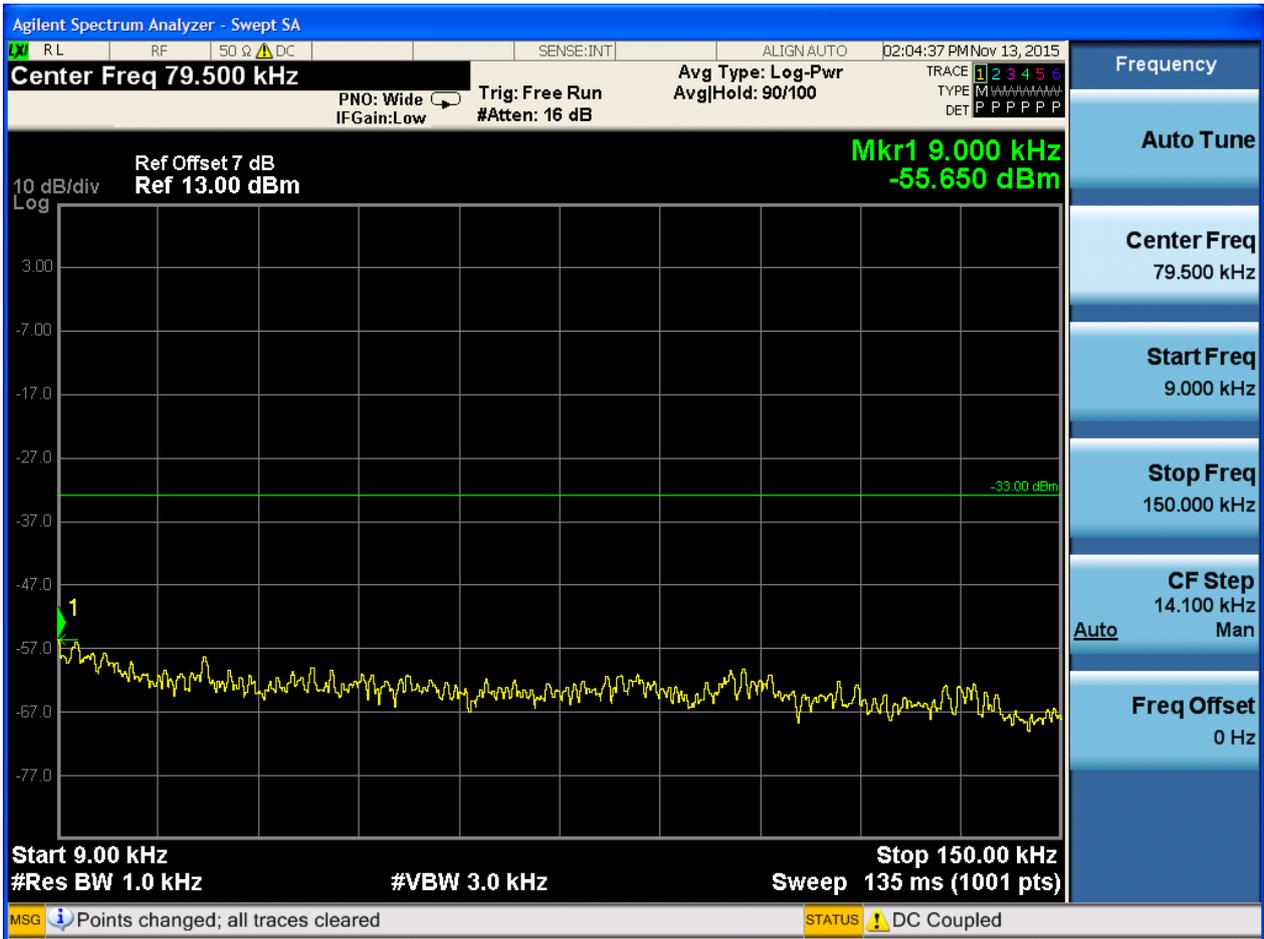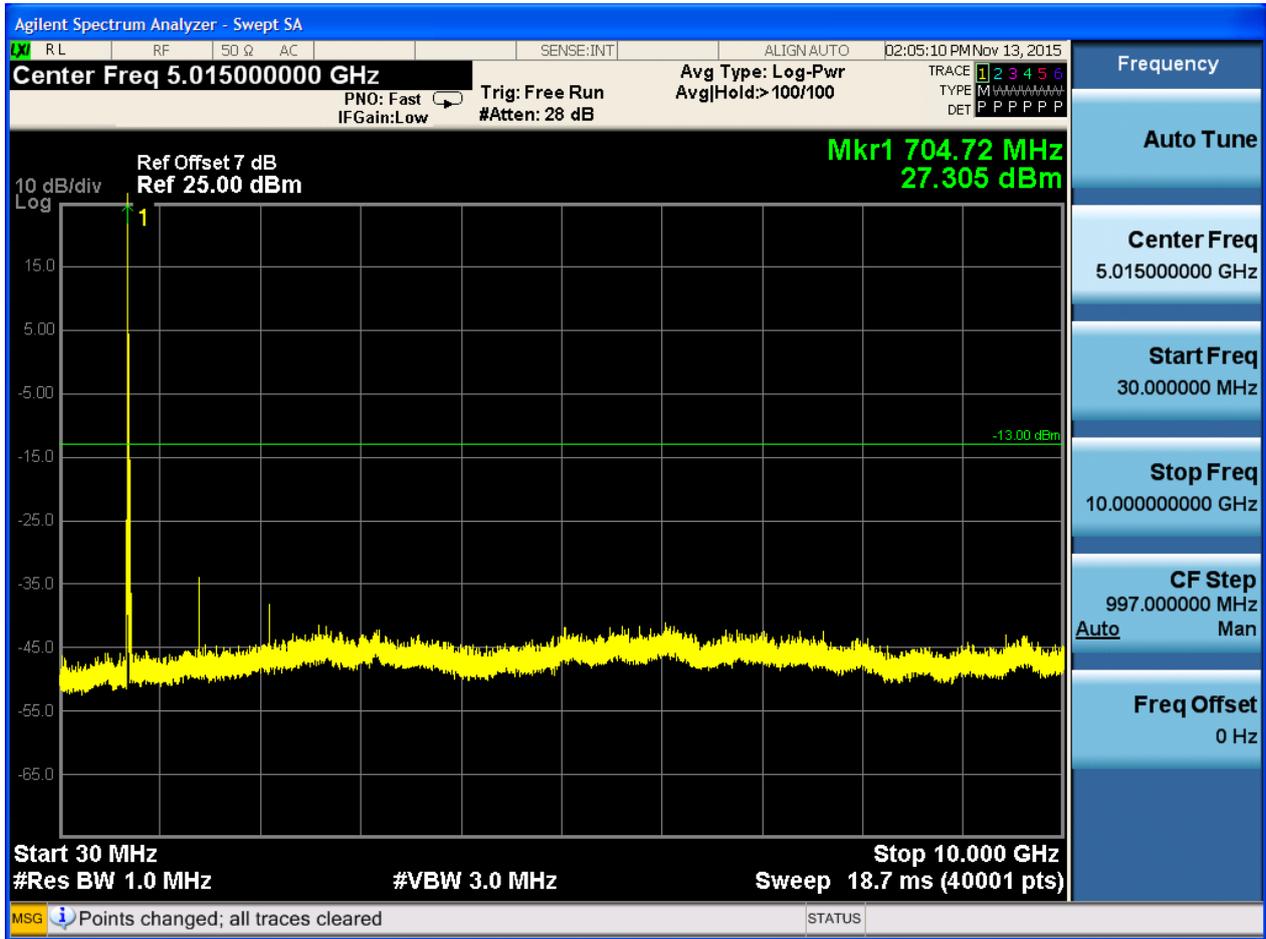### 6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0
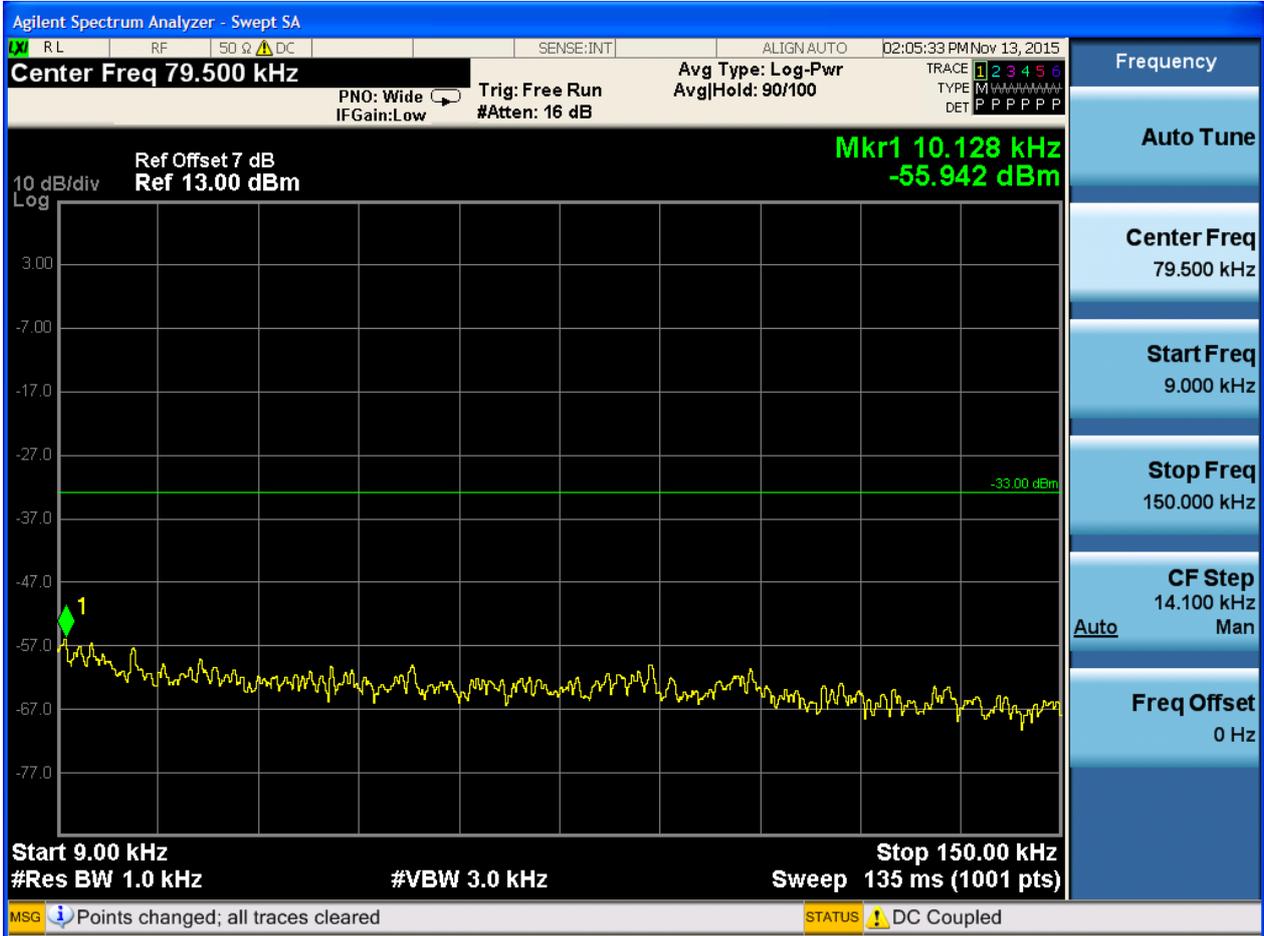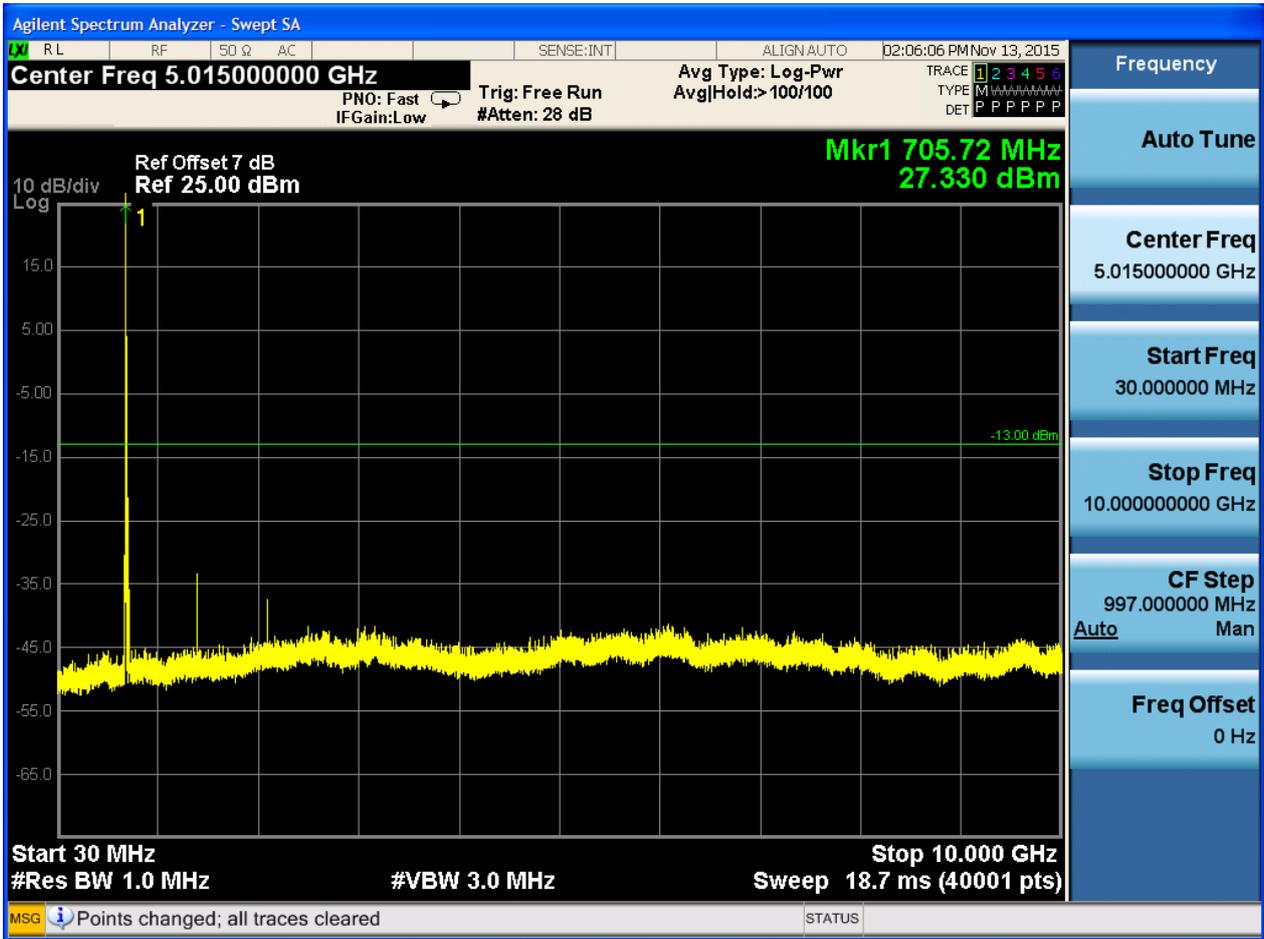
6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

					SENSE:INT		ALIGN AUTO	02:06:45 PM Nov 13, 2015

R L   RF   50 Ω DC

Center Freq 15.075000 MHz

PNO: Fast
IFGain:Low

Trig: Free Run
#Atten: 28 dB

Avg Type: Log-Pwr
Avg|Hold: 45/100

TRACE 1 2 3 4 5 6
TYPE M W W W W W
DET P P P P P P

Ref Offset 7 dB
10 dB/div   **Ref 25.00 dBm**
Log

Mkr1 150.00 kHz
-47.894 dBm

15.0

5.00

-5.00

-15.0

-23.00 dBm

-25.0

-35.0

-45.0   1

-55.0

-65.0

Start 150 kHz   **Stop 30.00 MHz**
#Res BW 10 kHz   **#VBW 30 kHz**   **Sweep 285 ms (5001 pts)**

MSG Points changed; all traces cleared   STATUS DC Coupled

Frequency

Auto Tune

Center Freq
15.075000 MHz

Start Freq
150.000 kHz

Stop Freq
30.000000 MHz

CF Step
2.985000 MHz
Auto   Man

Freq Offset
0 Hz

7Appendix_G: Field Strength of Spurious Radiation

Note:

9kHz~150kHz, VBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, VBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

7.1 For LTE

7.1.1 Test Band = BAND17

7.1.1.1 Test Bandwidth = 5

Copy of RSE-TX-DIRECTOR BELOW 1G_L
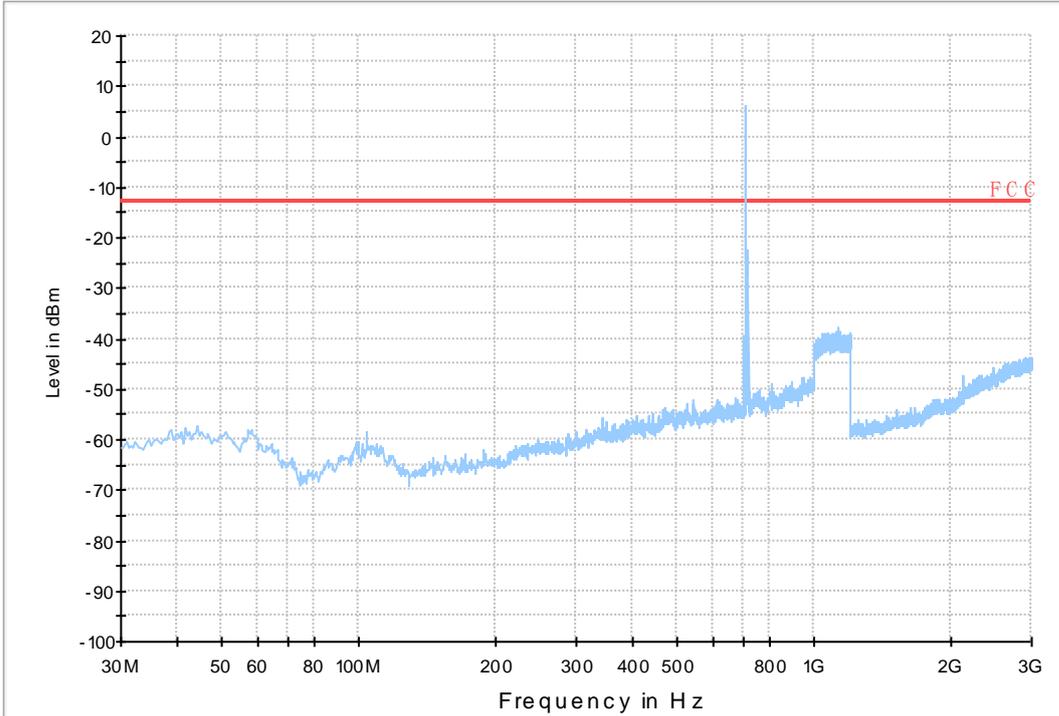
Copy of RSE-TX-DIRECTOR BELOW 1G_H
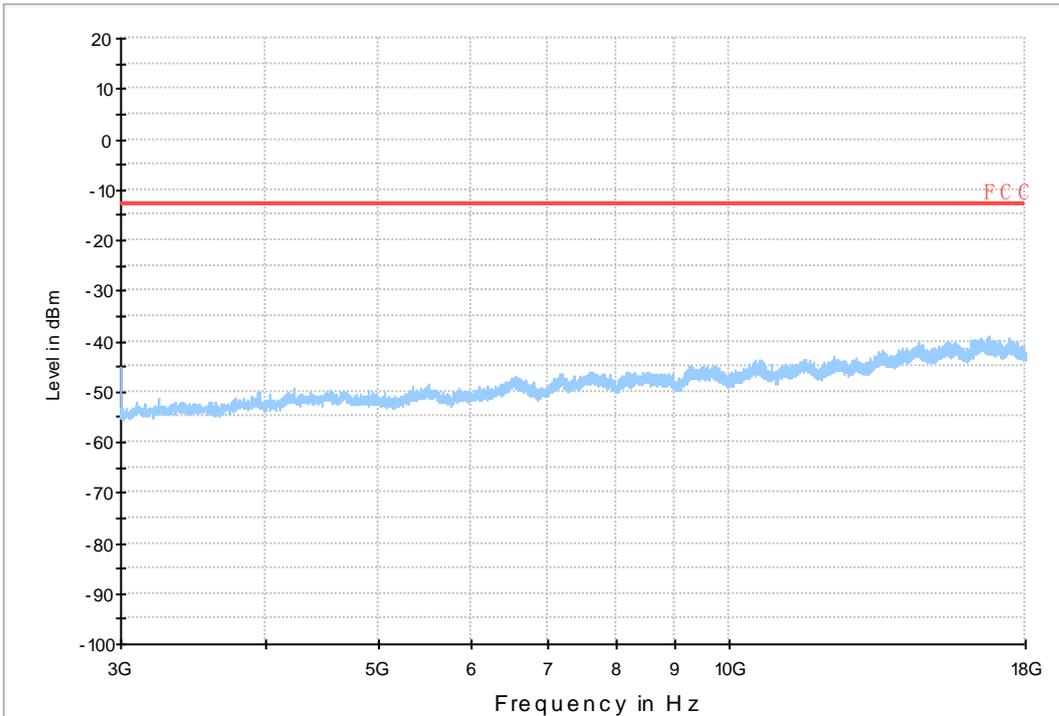
7.1.1.2 Test Bandwidth = 10
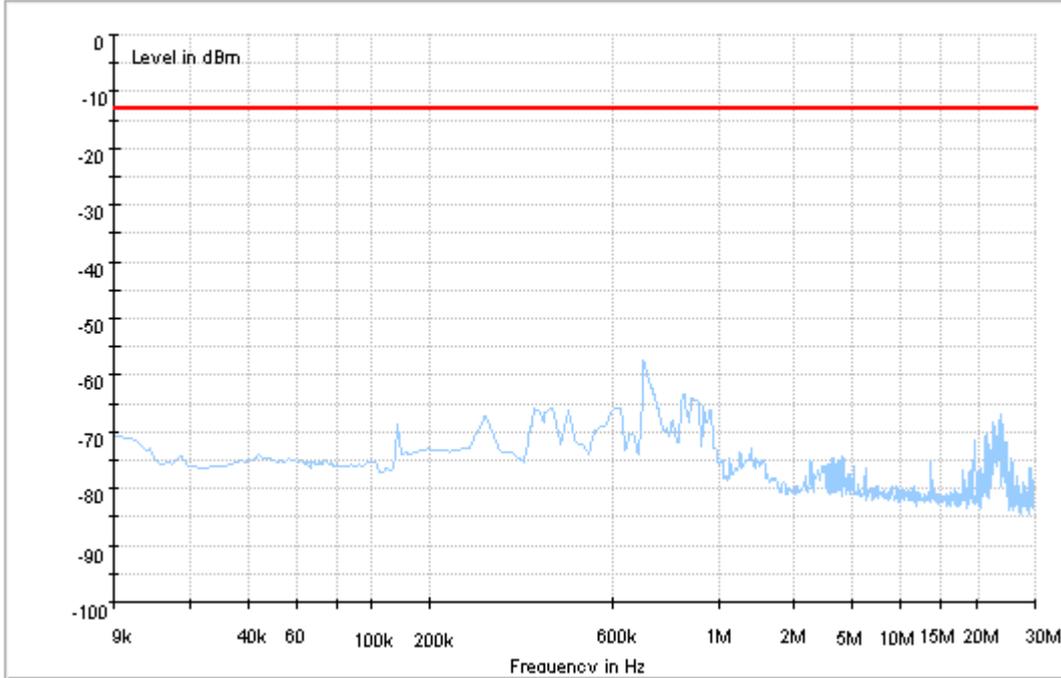
Copy of R SE-T X-D IRECTO R BELOW 1G_L
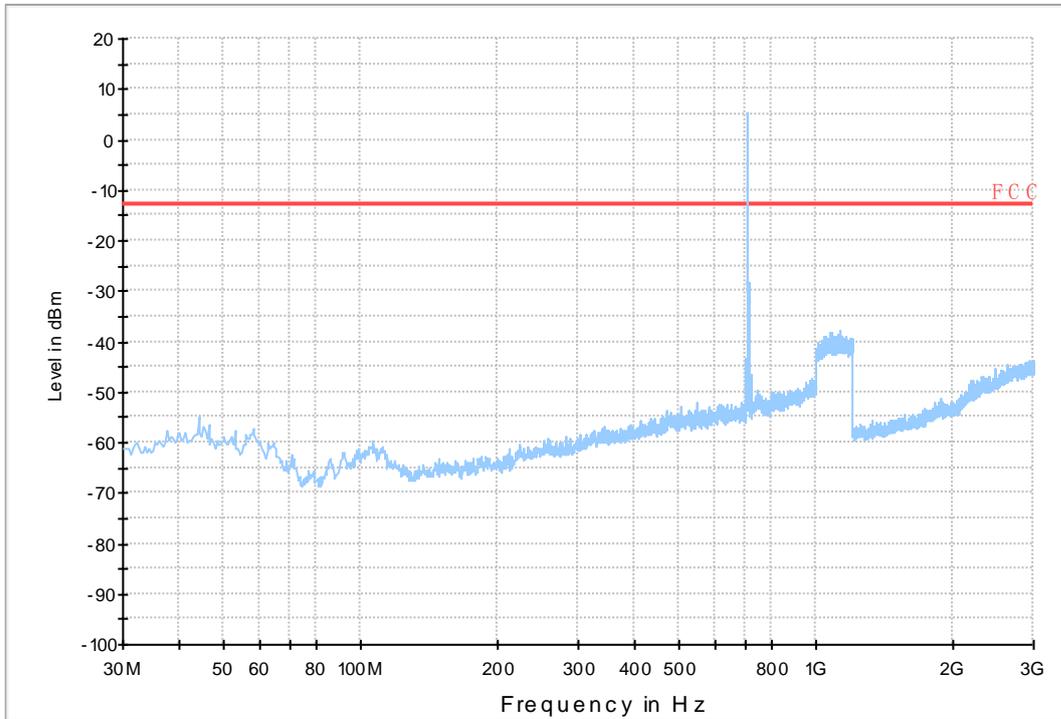
Copy of R SE-T X-D IR E CT O R B E L O W 1G_H
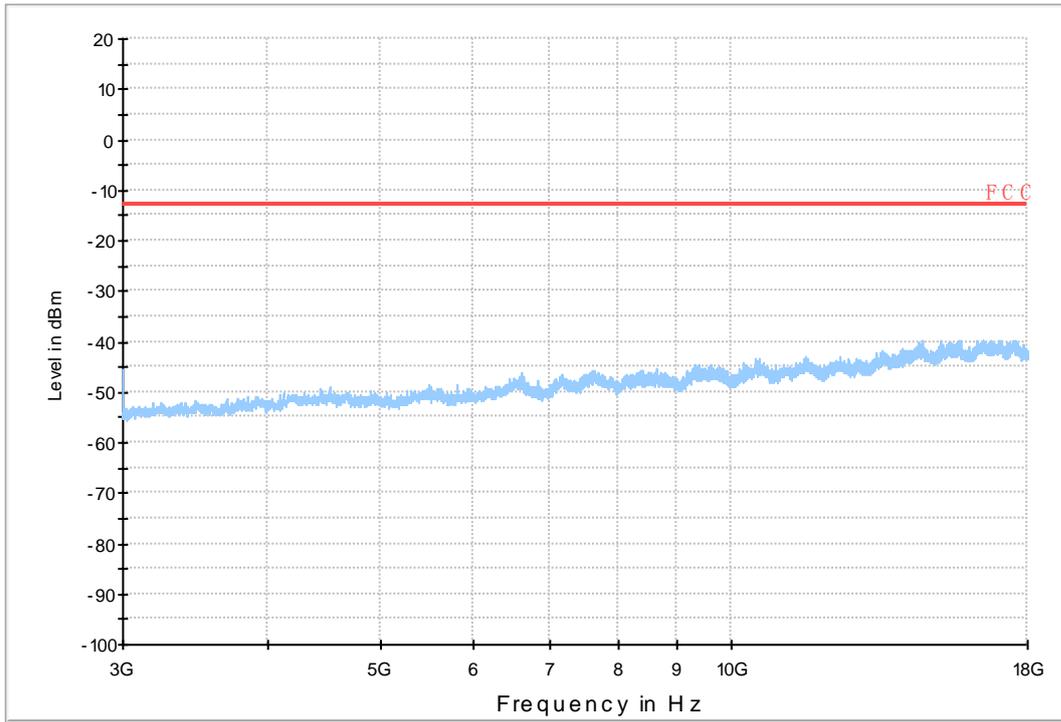
8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1Frequency Error vs. Voltage:

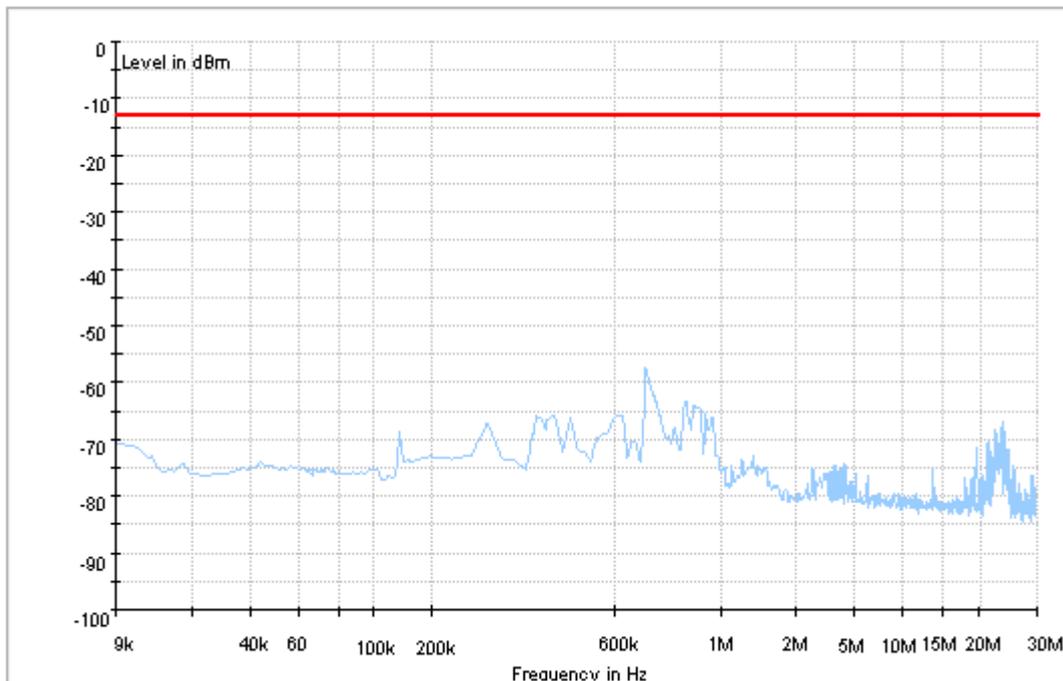| Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND17	LTE/TM1	5	LCH	TN	VL	2.43	0.00344	PASS
					VN	-0.41	-0.00058	PASS
					VH	-0.01	-0.00001	PASS
			MCH	TN	VL	0.57	0.0008	PASS
					VN	2.92	0.00411	PASS
					VH	-3.36	-0.00473	PASS
			HCH	TN	VL	-1.42	-0.00199	PASS
					VN	-0.84	-0.00118	PASS
					VH	0.94	0.00132	PASS
		10	LCH	TN	VL	-22.5	-0.03173	PASS
					VN	-3.72	-0.00525	PASS
					VH	-2.29	-0.00323	PASS
			MCH	TN	VL	20.79	0.02928	PASS
					VN	10.97	0.01545	PASS
					VH	-7.25	-0.01021	PASS
			HCH	TN	VL	71.57	0.10066	PASS
					VN	26.05	0.03664	PASS
					VH	35.1	0.04937	PASS
	LTE/TM2	5	LCH	TN	VL	-0.7	-0.00099	PASS
					VN	2.42	0.00343	PASS
					VH	0.5	0.00071	PASS
			MCH	TN	VL	-0.69	-0.00097	PASS
					VN	-1.32	-0.00186	PASS
					VH	3.88	0.00546	PASS
			HCH	TN	VL	-1.79	-0.00251	PASS
					VN	-3.02	-0.00423	PASS
					VH	-4.03	-0.00565	PASS
		10	LCH	TN	VL	-3.72	-0.00525	PASS
					VN	-0.01	-0.00001	PASS
					VH	-41.53	-0.05858	PASS
			MCH	TN	VL	-21.7	-0.03056	PASS
					VN	-43.83	-0.06173	PASS
					VH	-7.35	-0.01035	PASS
			HCH	TN	VL	-20.64	-0.02903	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-33.1	-0.04655	PASS
					VH	-29.07	-0.04089	PASS

8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND17	LTE/TM1	5	LCH	VN	-30	-0.66	-0.00093	PASS
					-20	0.07	0.0001	PASS
					-10	-0.43	-0.00061	PASS
					0	1.17	0.00166	PASS
					10	-3.66	-0.00518	PASS
					20	0.31	0.00044	PASS
					30	1.87	0.00265	PASS
					40	-4.98	-0.00705	PASS
					50	-4.05	-0.00573	PASS
			MCH	VN	-30	1.42	0.002	PASS
					-20	-4.48	-0.00631	PASS
					-10	1.13	0.00159	PASS
					0	0.87	0.00123	PASS
					10	0.31	0.00044	PASS
					20	5.64	0.00794	PASS
					30	-4.21	-0.00593	PASS
					40	0.53	0.00075	PASS
					50	-4.08	-0.00575	PASS
			HCH	VN	-30	2.57	0.0036	PASS
					-20	1.4	0.00196	PASS
					-10	-3.2	-0.00448	PASS
					0	0.31	0.00043	PASS
					10	-0.5	-0.0007	PASS
					20	0.9	0.00126	PASS
					30	2.02	0.00283	PASS
					40	0.73	0.00102	PASS
					50	-2.69	-0.00377	PASS
		10	LCH	VN	-30	-16.42	-0.02316	PASS
					-20	-4.11	-0.0058	PASS
					-10	-9.94	-0.01402	PASS
					0	-9.83	-0.01386	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	5.29	0.00746	PASS
					20	-10.3	-0.01453	PASS
					30	-4.05	-0.00571	PASS
					40	1.44	0.00203	PASS
					50	-3.62	-0.00511	PASS
			MCH	VN	-30	-14.39	-0.02027	PASS
					-20	-1.76	-0.00248	PASS
					-10	21.69	0.03055	PASS
					0	-12.7	-0.01789	PASS
					10	-4.01	-0.00565	PASS
					20	-0.31	-0.00044	PASS
					30	2.15	0.00303	PASS
					40	9.4	0.01324	PASS
					50	3	0.00423	PASS
			HCH	VN	-30	15.98	0.02248	PASS
					-20	1.36	0.00191	PASS
					-10	-3.95	-0.00556	PASS
					0	10.41	0.01464	PASS
					10	13.26	0.01865	PASS
					20	19.86	0.02793	PASS
					30	18	0.02532	PASS
					40	2.22	0.00312	PASS
					50	6.34	0.00892	PASS
	LTE/TM2	5	LCH	VN	-30	-0.47	-0.00067	PASS
					-20	-2.69	-0.00381	PASS
					-10	-1.16	-0.00164	PASS
					0	-0.54	-0.00076	PASS
					10	-1.16	-0.00164	PASS
					20	-8.27	-0.01171	PASS
					30	1.06	0.0015	PASS
					40	-0.84	-0.00119	PASS
					50	3.3	0.00467	PASS
			MCH	VN	-30	-4.82	-0.00679	PASS
					-20	-2.86	-0.00403	PASS
					-10	3.55	0.005	PASS
					0	-2.75	-0.00387	PASS
					10	-0.09	-0.00013	PASS
					20	-0.7	-0.00099	PASS
					30	-1.86	-0.00262	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	0.83	0.00117	PASS
					50	-1.02	-0.00144	PASS
			HCH	VN	-30	0.97	0.00136	PASS
					-20	-2.76	-0.00387	PASS
					-10	-0.57	-0.0008	PASS
					0	-1.3	-0.00182	PASS
					10	1.04	0.00146	PASS
					20	-3.16	-0.00443	PASS
					30	-0.23	-0.00032	PASS
					40	-1.37	-0.00192	PASS
					50	-0.83	-0.00116	PASS
			LCH	VN	-30	-20.91	-0.02949	PASS
					-20	-26.81	-0.03781	PASS
					-10	-10.06	-0.01419	PASS
					0	-10.57	-0.01491	PASS
					10	-20.06	-0.02829	PASS
					20	-13.85	-0.01953	PASS
					30	-6.81	-0.00961	PASS
					40	-17.87	-0.0252	PASS
					50	-11.9	-0.01678	PASS
		10	MCH	VN	-30	-24.45	-0.03444	PASS
					-20	-26.41	-0.0372	PASS
					-10	-30.93	-0.04356	PASS
					0	-17.71	-0.02494	PASS
					10	-16.28	-0.02293	PASS
					20	-37.69	-0.05308	PASS
					30	-16.84	-0.02372	PASS
					40	-28.74	-0.04048	PASS
					50	-25.86	-0.03642	PASS
			HCH	VN	-30	-53.13	-0.07473	PASS
					-20	-45.42	-0.06388	PASS
					-10	-52.7	-0.07412	PASS
					0	-43.36	-0.06098	PASS
					10	-46.94	-0.06602	PASS
					20	-54.12	-0.07612	PASS
					30	-63.66	-0.08954	PASS
					40	-41.5	-0.05837	PASS
					50	-52.93	-0.07444	PASS