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
BAND26	LTE/TM2	5	LCH	RB1#0	22.1	18.77	38.5	PASS
				RB1#13	22.61	19.37	38.5	PASS
				RB1#24	22.32	19.24	38.5	PASS
				RB12#0	22.06	18.85	38.5	PASS
				RB12#6	22.25	19.11	38.5	PASS
				RB12#13	22.02	18.97	38.5	PASS
				RB25#0	21.96	18.72	38.5	PASS
			MCH	RB1#0	22.14	18.90	38.5	PASS
				RB1#13	22.52	19.22	38.5	PASS
				RB1#24	22.11	19.07	38.5	PASS
				RB12#0	21.95	18.62	38.5	PASS
				RB12#6	22.22	19.12	38.5	PASS
				RB12#13	21.94	18.69	38.5	PASS

				RB25#0	21.98	18.87	38.5	PASS
			HCH	RB1#0	22.12	18.89	38.5	PASS
				RB1#13	22.23	19.12	38.5	PASS
				RB1#24	21.77	18.66	38.5	PASS
				RB12#0	21.9	18.79	38.5	PASS
				RB12#6	21.97	18.95	38.5	PASS
				RB12#13	21.69	18.40	38.5	PASS
				RB25#0	21.83	18.63	38.5	PASS
		10	LCH	RB1#0	22.16	18.86	38.5	PASS
				RB1#25	22.69	19.36	38.5	PASS
				RB1#49	22.5	19.21	38.5	PASS
				RB25#0	21.95	18.79	38.5	PASS
				RB25#13	22.24	18.97	38.5	PASS
				RB25#25	22	18.73	38.5	PASS
				RB50#0	21.95	18.95	38.5	PASS
			MCH	RB1#0	22.41	19.29	38.5	PASS
				RB1#25	22.75	19.63	38.5	PASS
				RB1#49	22.32	19.15	38.5	PASS
				RB25#0	21.99	18.71	38.5	PASS

				RB25#13	22.17	19.14	38.5	PASS
				RB25#25	21.92	18.68	38.5	PASS
				RB50#0	21.91	18.66	38.5	PASS
			HCH	RB1#0	21.94	18.62	38.5	PASS
				RB1#25	22.6	19.50	38.5	PASS
				RB1#49	21.92	18.91	38.5	PASS
				RB25#0	21.83	18.67	38.5	PASS
				RB25#13	22.18	18.94	38.5	PASS
				RB25#25	21.82	18.66	38.5	PASS
				RB50#0	21.76	18.70	38.5	PASS
		15	LCH	RB1#0	22.03	19.01	38.5	PASS
				RB1#38	22.49	19.35	38.5	PASS
				RB1#74	22.17	19.07	38.5	PASS
				RB36#0	21.96	18.70	38.5	PASS
				RB36#18	22.13	18.89	38.5	PASS
				RB36#39	21.81	18.52	38.5	PASS
				RB75#0	21.85	18.55	38.5	PASS
			MCH	RB1#0	22.1	19.01	38.5	PASS
				RB1#38	22.43	19.38	38.5	PASS

				RB1#74	22.18	19.04	38.5	PASS
				RB36#0	21.94	18.90	38.5	PASS
				RB36#18	21.93	18.90	38.5	PASS
				RB36#39	21.72	18.72	38.5	PASS
				RB75#0	21.8	18.62	38.5	PASS
			HCH	RB1#0	22.03	19.00	38.5	PASS
				RB1#38	22.28	19.21	38.5	PASS
				RB1#74	21.78	18.50	38.5	PASS
				RB36#0	21.8	18.50	38.5	PASS
				RB36#18	21.82	18.85	38.5	PASS
				RB36#39	21.73	18.41	38.5	PASS
				RB75#0	21.81	18.58	38.5	PASS
BAND26	LTE/TM1	5	LCH	RB1#0	22.82	19.52	38.5	PASS
				RB1#13	23.38	20.35	38.5	PASS
				RB1#24	23.03	19.97	38.5	PASS
				RB12#0	22.09	18.89	38.5	PASS
				RB12#6	22.28	19.27	38.5	PASS
				RB12#13	22.06	18.85	38.5	PASS
				RB25#0	22.07	19.02	38.5	PASS

				RB1#0	22.92	19.97	38.5	PASS
				RB1#13	23.34	20.02	38.5	PASS
				RB1#24	22.86	19.73	38.5	PASS
			MCH	RB12#0	22.03	18.95	38.5	PASS
				RB12#6	22.3	18.98	38.5	PASS
				RB12#13	22.02	18.85	38.5	PASS
				RB25#0	22.09	18.86	38.5	PASS
				RB1#0	22.85	19.75	38.5	PASS
				RB1#13	22.99	19.78	38.5	PASS
				RB1#24	22.48	19.25	38.5	PASS
			HCH	RB12#0	21.96	18.75	38.5	PASS
				RB12#6	22.03	18.86	38.5	PASS
				RB12#13	21.75	18.80	38.5	PASS
				RB25#0	21.91	18.79	38.5	PASS
				RB1#0	22.92	19.95	38.5	PASS
				RB1#25	23.49	20.43	38.5	PASS
		10	LCH	RB1#49	23.26	20.26	38.5	PASS
				RB25#0	22.03	18.80	38.5	PASS
				RB25#13	22.32	19.27	38.5	PASS

				RB25#25	22.09	18.75	38.5	PASS
				RB50#0	22.05	18.71	38.5	PASS
			MCH	RB1#0	23.14	20.14	38.5	PASS
				RB1#25	23.47	20.24	38.5	PASS
				RB1#49	23	19.91	38.5	PASS
				RB25#0	22.03	19.01	38.5	PASS
				RB25#13	22.2	18.97	38.5	PASS
				RB25#25	21.95	18.67	38.5	PASS
				RB50#0	21.98	18.74	38.5	PASS
			HCH	RB1#0	22.79	19.82	38.5	PASS
				RB1#25	23.46	20.46	38.5	PASS
				RB1#49	22.75	19.43	38.5	PASS
				RB25#0	21.86	18.79	38.5	PASS
				RB25#13	22.21	19.03	38.5	PASS
				RB25#25	21.85	18.67	38.5	PASS
				RB50#0	21.86	18.80	38.5	PASS
		15	LCH	RB1#0	22.82	19.76	38.5	PASS
				RB1#38	23.33	20.28	38.5	PASS
				RB1#74	22.89	19.90	38.5	PASS

				RB36#0	22.01	18.76	38.5	PASS
				RB36#18	22.19	19.03	38.5	PASS
				RB36#39	21.87	18.90	38.5	PASS
				RB75#0	21.95	18.88	38.5	PASS
			MCH	RB1#0	22.83	19.71	38.5	PASS
				RB1#38	23.2	19.87	38.5	PASS
				RB1#74	22.91	19.78	38.5	PASS
				RB36#0	22	19.04	38.5	PASS
				RB36#18	21.98	18.77	38.5	PASS
				RB36#39	21.77	18.69	38.5	PASS
				RB75#0	21.9	18.56	38.5	PASS
			HCH	RB1#0	22.81	19.53	38.5	PASS
				RB1#38	23.06	19.94	38.5	PASS
				RB1#74	22.58	19.40	38.5	PASS
				RB36#0	21.86	18.56	38.5	PASS
				RB36#18	21.87	18.55	38.5	PASS
				RB36#39	21.79	18.56	38.5	PASS
				RB75#0	21.9	18.93	38.5	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: RBW > emission bandwidth, VBW > 3 x RBW.

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
BAND26	LTE/TM2	10	LCH	RB1#0	5.52	13	PASS
				RB1#25	4.8	13	PASS
				RB1#49	5.14	13	PASS
				RB25#0	6.08	13	PASS
				RB25#13	5.52	13	PASS
				RB25#25	5.86	13	PASS
				RB50#0	6.32	13	PASS
			MCH	RB1#0	4.92	13	PASS
				RB1#25	4.93	13	PASS
				RB1#49	5.33	13	PASS
				RB25#0	6.15	13	PASS
				RB25#13	6.08	13	PASS
				RB25#25	6.44	13	PASS
				RB50#0	6.68	13	PASS
			HCH	RB1#0	5.74	13	PASS
				RB1#25	4.74	13	PASS
				RB1#49	5.13	13	PASS
				RB25#0	6.29	13	PASS
				RB25#13	5.59	13	PASS
				RB25#25	5.87	13	PASS
				RB50#0	6.45	13	PASS
		15	LCH	RB1#0	5.53	13	PASS
				RB1#38	4.75	13	PASS
				RB1#74	5.54	13	PASS
				RB36#0	5.98	13	PASS
				RB36#18	5.69	13	PASS
				RB36#39	6.27	13	PASS
				RB75#0	6.61	13	PASS
			MCH	RB1#0	5.32	13	PASS
				RB1#38	5.49	13	PASS
				RB1#74	5.36	13	PASS
				RB36#0	6.18	13	PASS
				RB36#18	6.31	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB36#39	6.64	13	PASS
				RB75#0	6.69	13	PASS
			HCH	RB1#0	5.7	13	PASS
				RB1#38	5.45	13	PASS
				RB1#74	5.28	13	PASS
				RB36#0	6.43	13	PASS
				RB36#18	6.15	13	PASS
				RB36#39	5.99	13	PASS
				RB75#0	6.53	13	PASS
BAND26	LTE/TM2	10	LCH	RB1#0	5.38	13	PASS
				RB1#25	4.46	13	PASS
				RB1#49	4.97	13	PASS
				RB25#0	5.82	13	PASS
				RB25#13	5.25	13	PASS
				RB25#25	5.74	13	PASS
				RB50#0	6.15	13	PASS
			MCH	RB1#0	4.67	13	PASS
				RB1#25	4.82	13	PASS
				RB1#49	5.04	13	PASS
				RB25#0	5.97	13	PASS
				RB25#13	5.92	13	PASS
				RB25#25	6.28	13	PASS
				RB50#0	6.55	13	PASS
			HCH	RB1#0	5.6	13	PASS
				RB1#25	4.6	13	PASS
				RB1#49	4.97	13	PASS
				RB25#0	6.1	13	PASS
				RB25#13	5.47	13	PASS
				RB25#25	5.75	13	PASS
				RB50#0	6.36	13	PASS
		15	LCH	RB1#0	5.23	13	PASS
				RB1#38	4.63	13	PASS
				RB1#74	5.4	13	PASS
				RB36#0	5.91	13	PASS
				RB36#18	5.53	13	PASS
				RB36#39	6.25	13	PASS
				RB75#0	6.57	13	PASS
			MCH	RB1#0	5.09	13	PASS
				RB1#38	5.24	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#74	5.08	13	PASS
				RB36#0	5.98	13	PASS
				RB36#18	6.1	13	PASS
				RB36#39	6.42	13	PASS
				RB75#0	6.63	13	PASS
			HCH	RB1#0	5.29	13	PASS
				RB1#38	5.02	13	PASS
				RB1#74	4.96	13	PASS
				RB36#0	6.41	13	PASS
				RB36#18	6.08	13	PASS
				RB36#39	5.93	13	PASS
				RB75#0	6.55	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = BAND26

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
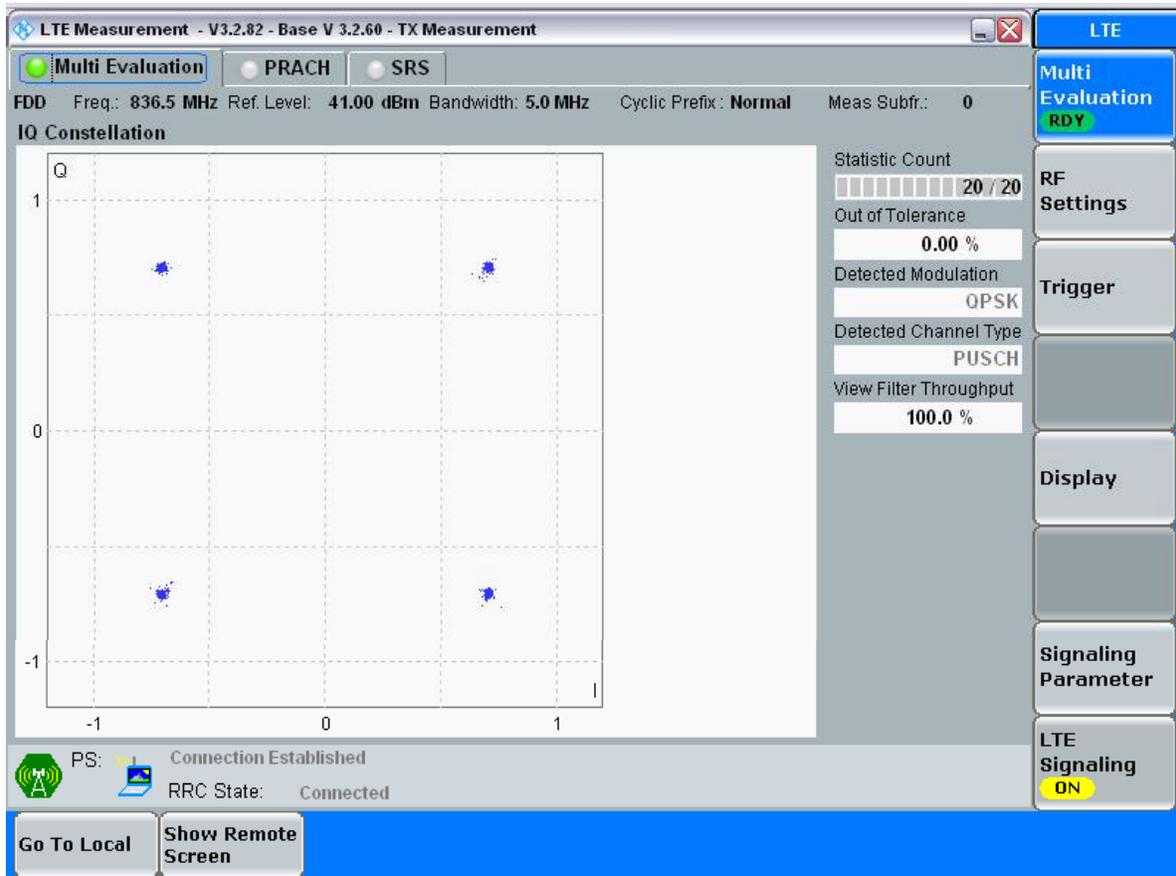
3.1.1.1.2 Test Bandwidth = 10

3.1.1.1.2.1 Test Channel = MCH

3.1.1.1.2.1.1 Test RB = RB50#0
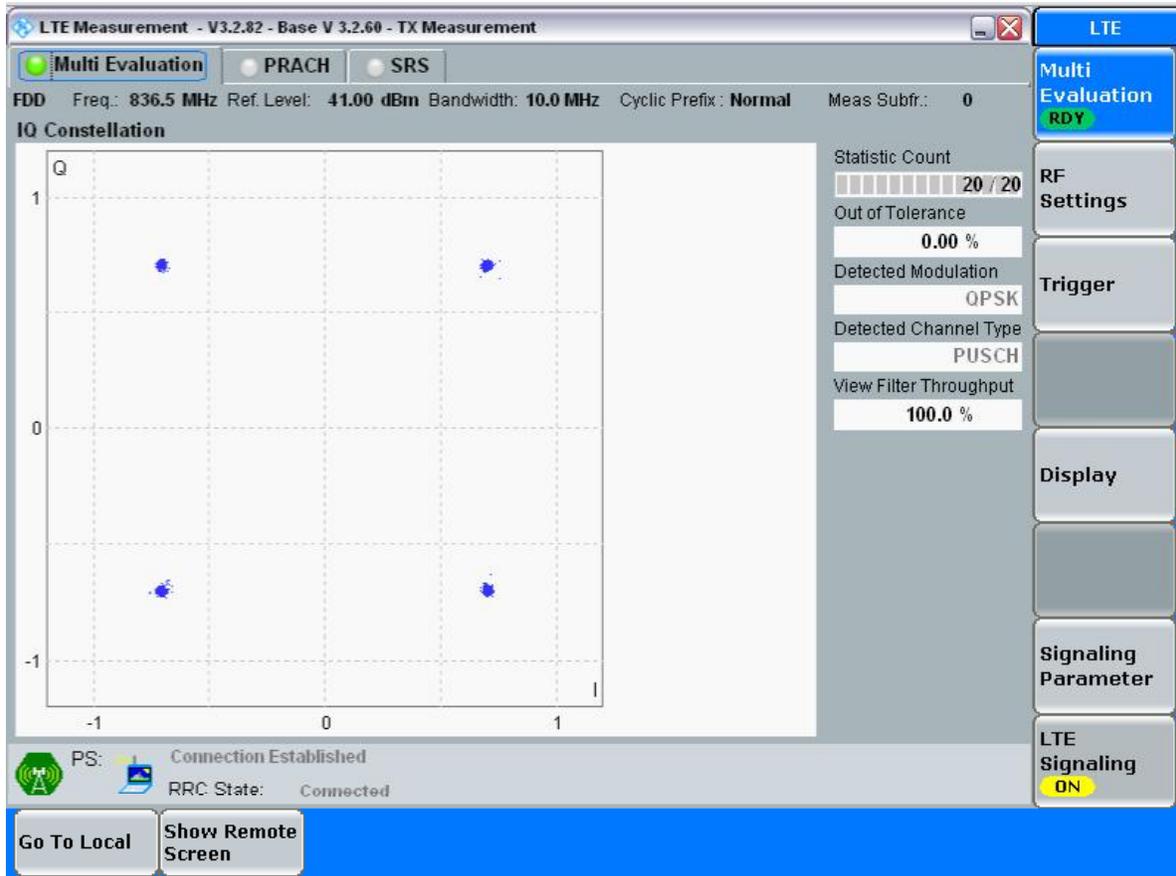
3.1.1.1.3 Test Bandwidth = 15

3.1.1.1.3.1 Test Channel = MCH

### 3.1.1.1.3.1.1 Test RB = RB75#0
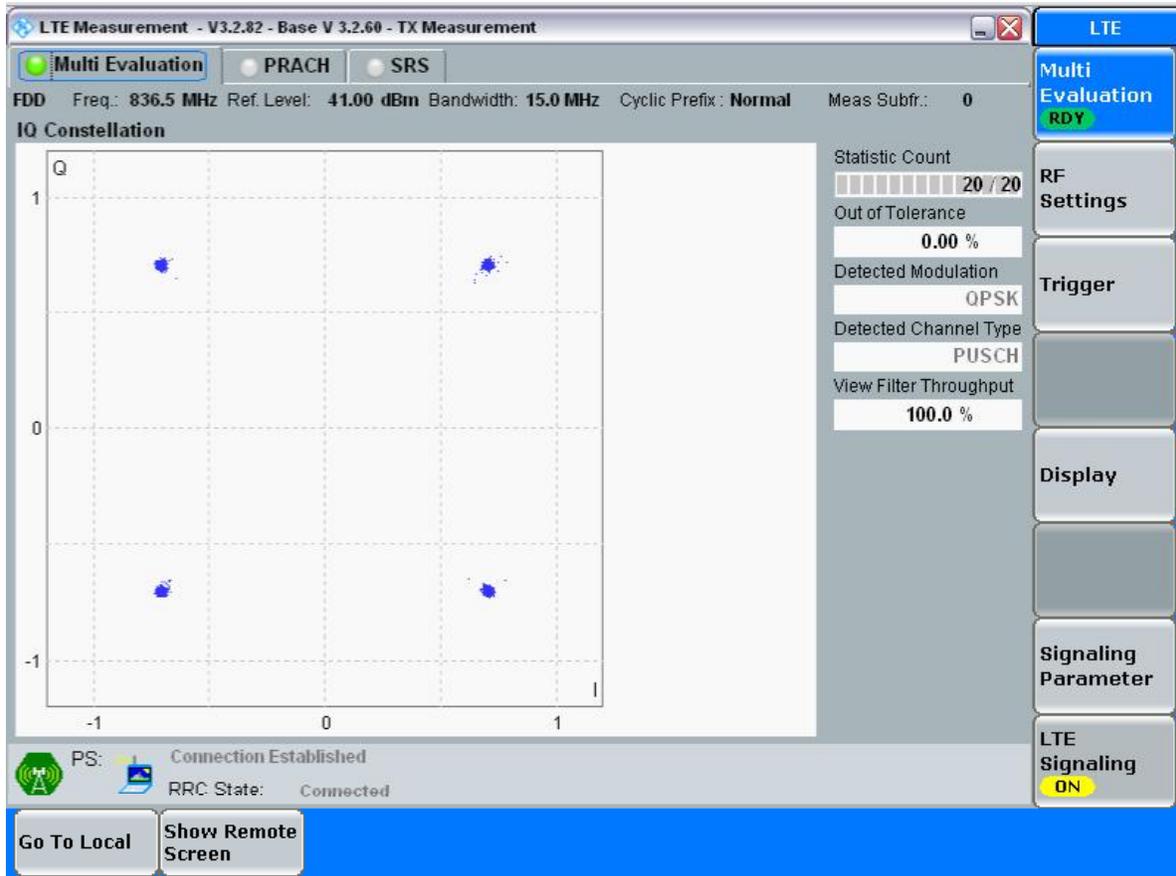
3.1.1.2 Test Mode = LTE/TM2

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
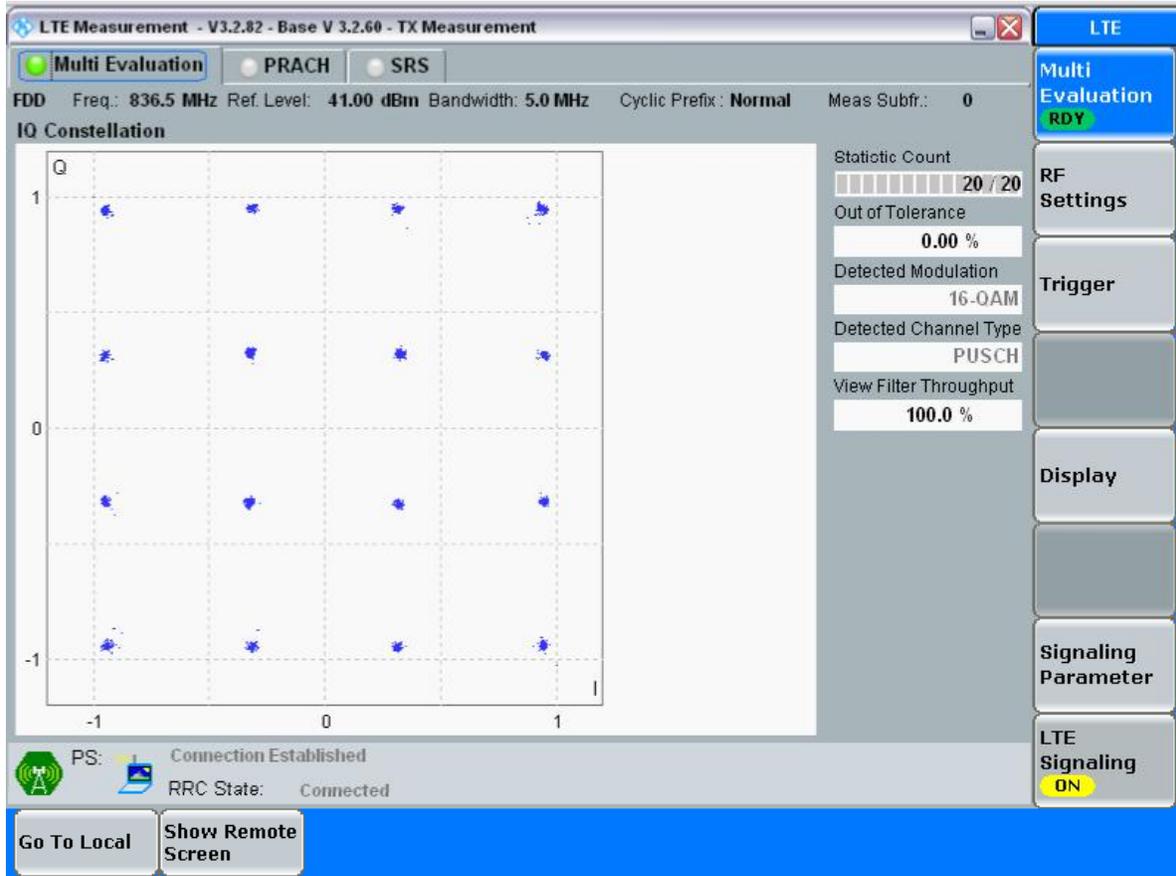
3.1.1.2.2 Test Bandwidth = 10

3.1.1.2.2.1 Test Channel = MCH

3.1.1.2.2.1.1 Test RB = RB50#0
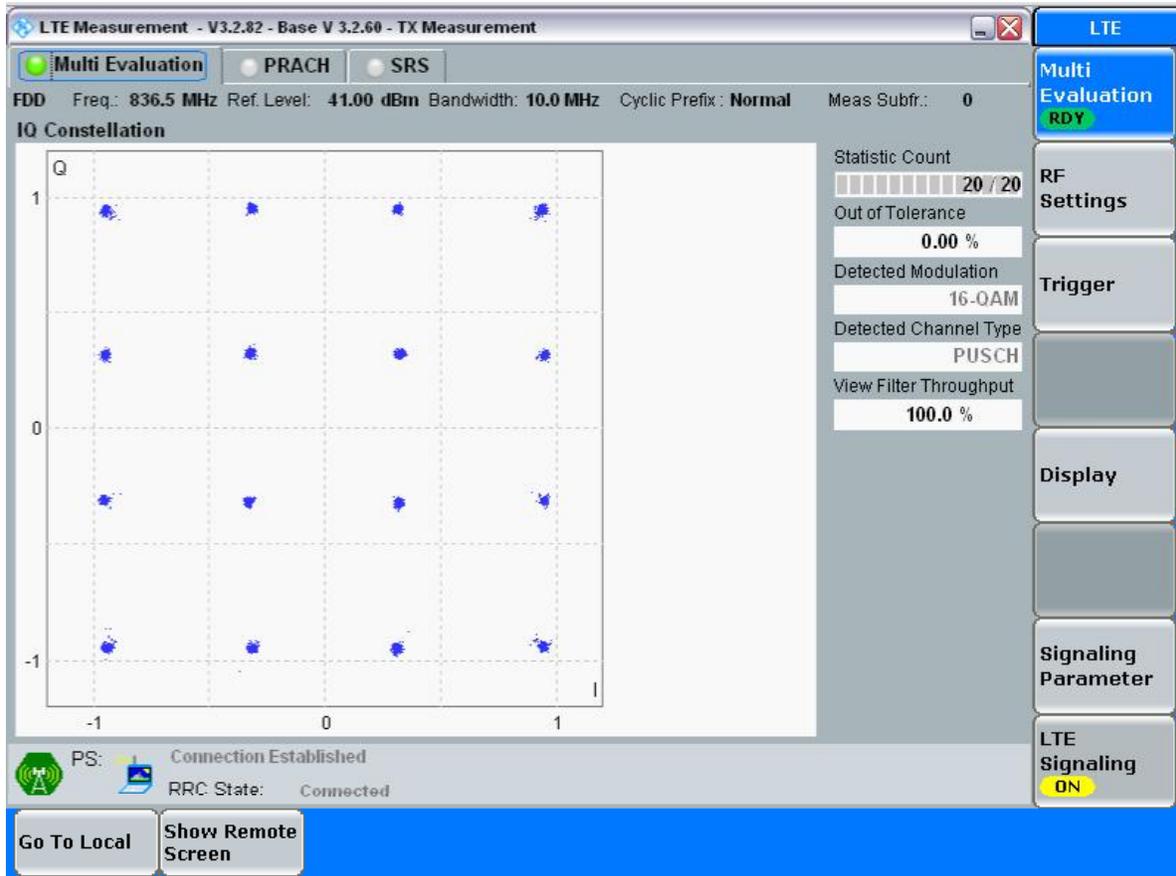
3.1.1.2.3 Test Bandwidth = 15

3.1.1.2.3.1 Test Channel = MCH

3.1.1.2.3.1.1 Test RB = RB75#0
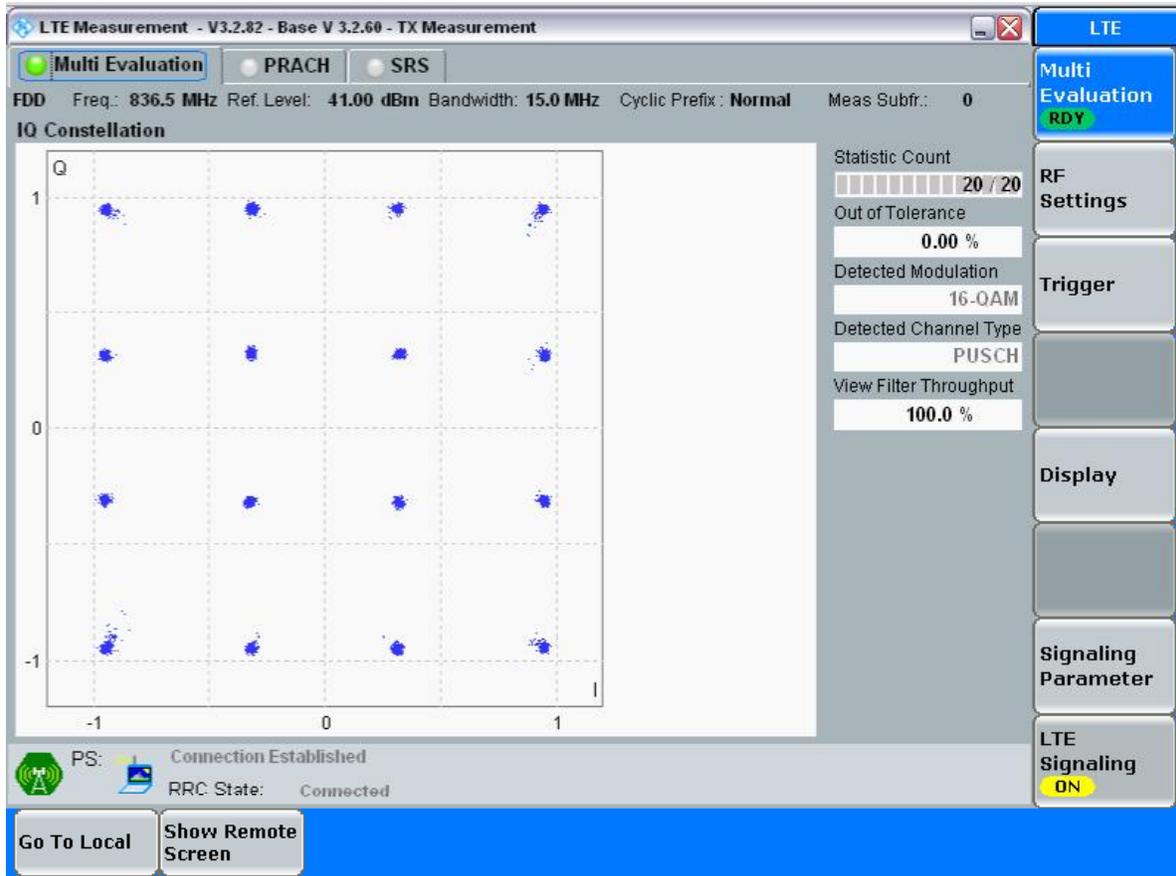
4Appendix_D: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Bandwidth	Test Channel	Test RB	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
BAND26	LTE/TM1	5	LCH	RB25#0	4.50	4.87	Pass
		5	MCH	RB25#0	4.49	4.86	Pass
		5	HCH	RB25#0	4.49	4.81	Pass
		10	LCH	RB50#0	8.99	9.61	Pass
		10	MCH	RB50#0	9.01	9.66	Pass
		10	HCH	RB50#0	8.99	9.66	Pass
		15	LCH	RB75#0	13.48	14.50	Pass
		15	MCH	RB75#0	13.49	14.41	Pass
		15	HCH	RB75#0	13.46	14.32	Pass
	LTE/TM2	5	LCH	RB25#0	4.50	4.87	Pass
		5	MCH	RB25#0	4.50	4.88	Pass
		5	HCH	RB25#0	4.50	4.89	Pass
		10	LCH	RB50#0	8.99	9.57	Pass
		10	MCH	RB50#0	9.00	9.70	Pass
		10	HCH	RB50#0	9.00	9.64	Pass
		15	LCH	RB75#0	13.47	14.37	Pass
		15	MCH	RB75#0	13.49	14.38	Pass
		15	HCH	RB75#0	13.46	14.34	Pass

Part II - Test Plots

4.1 For LTE

4.1.1 Test Band = BAND26

4.1.1.1 Test Mode = LTE/TM1

4.1.1.1.1 Test Bandwidth = 5
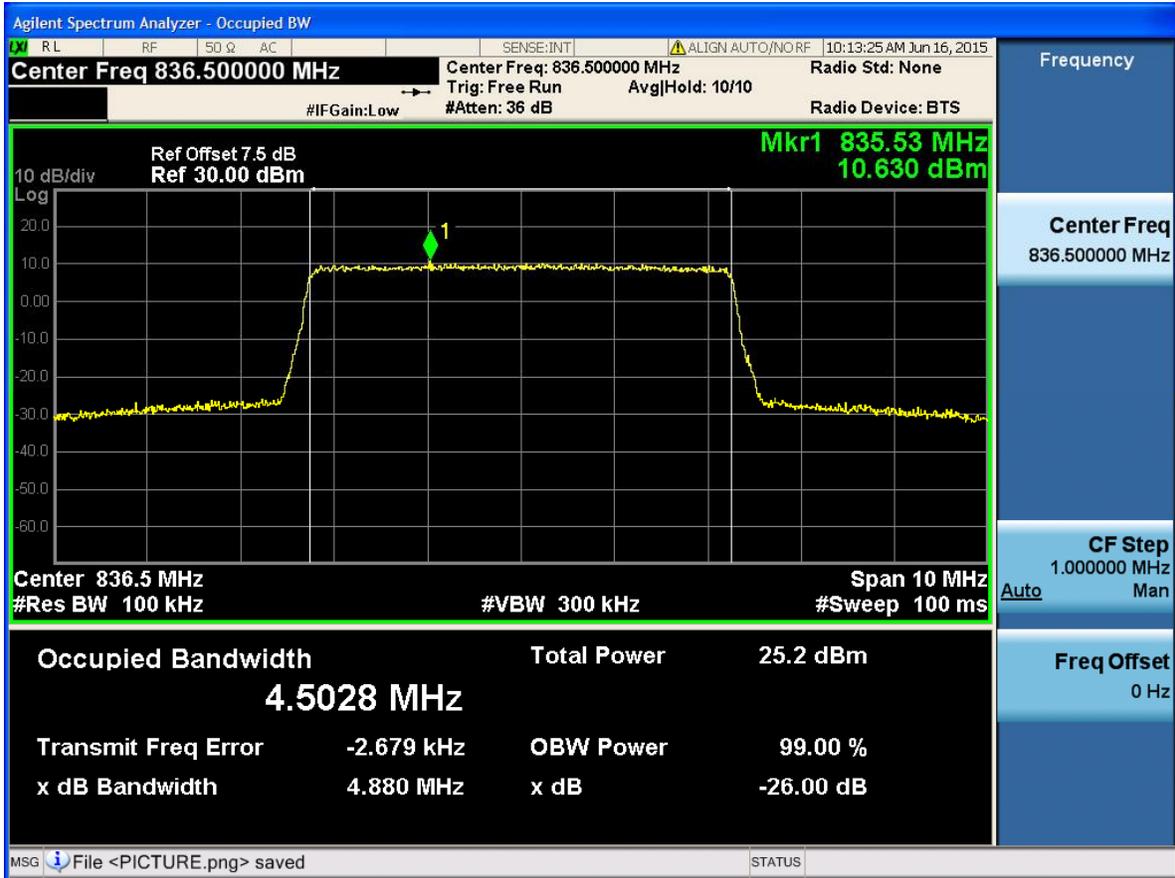
4.1.1.1.1.1 Test Channel = LCH

**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
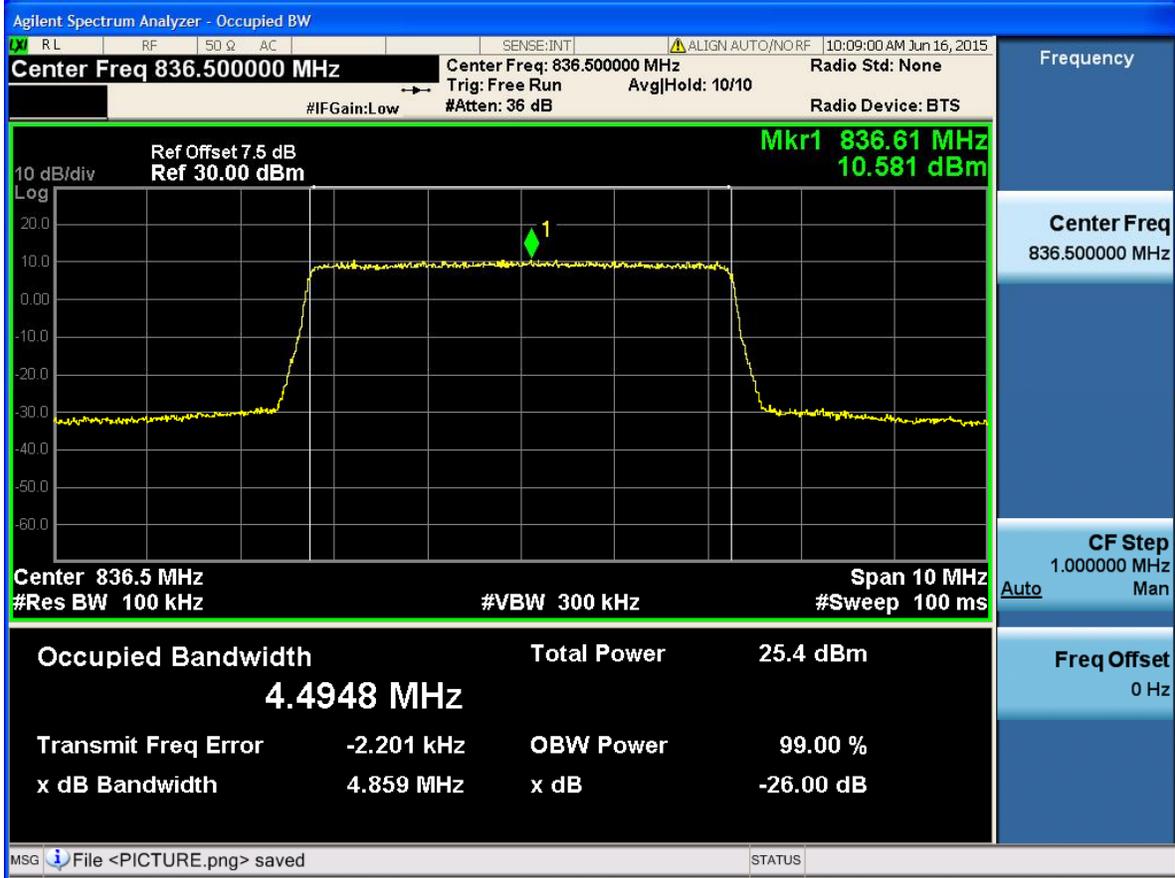
4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 Test RB = RB25#0

Huawei Proprietary and Confidential
Copyright © Huawei Technologies Co., Ltd.
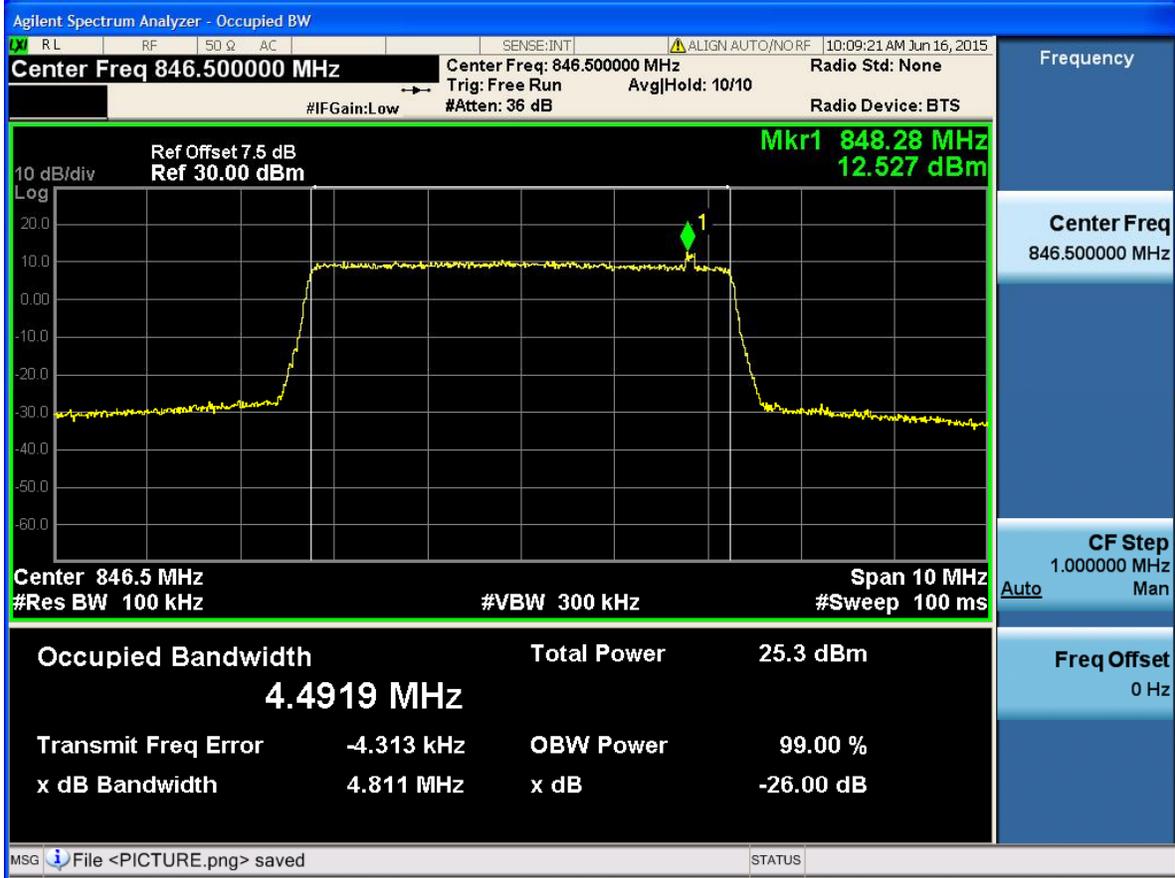
4.1.1.1.2 Test Bandwidth = 10

4.1.1.1.2.1 Test Channel = LCH

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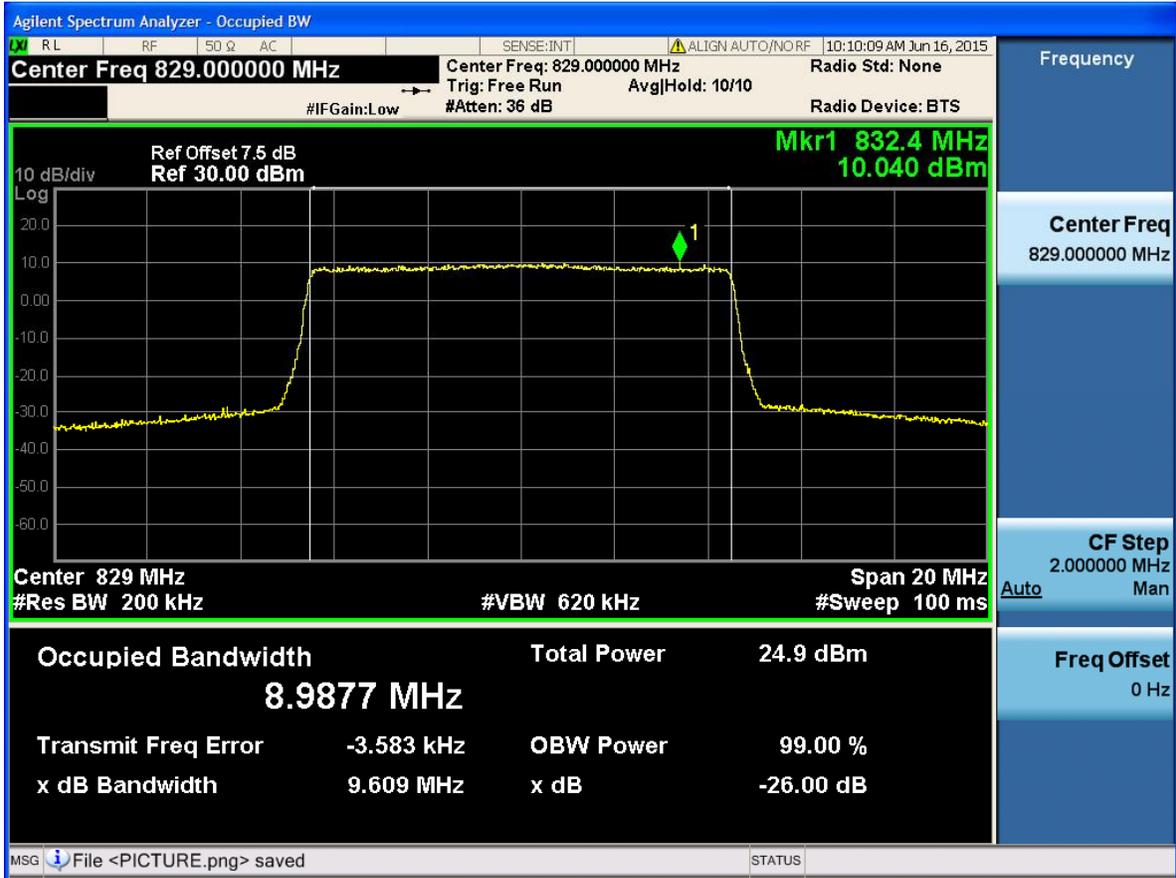
4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 Test RB = RB50#0
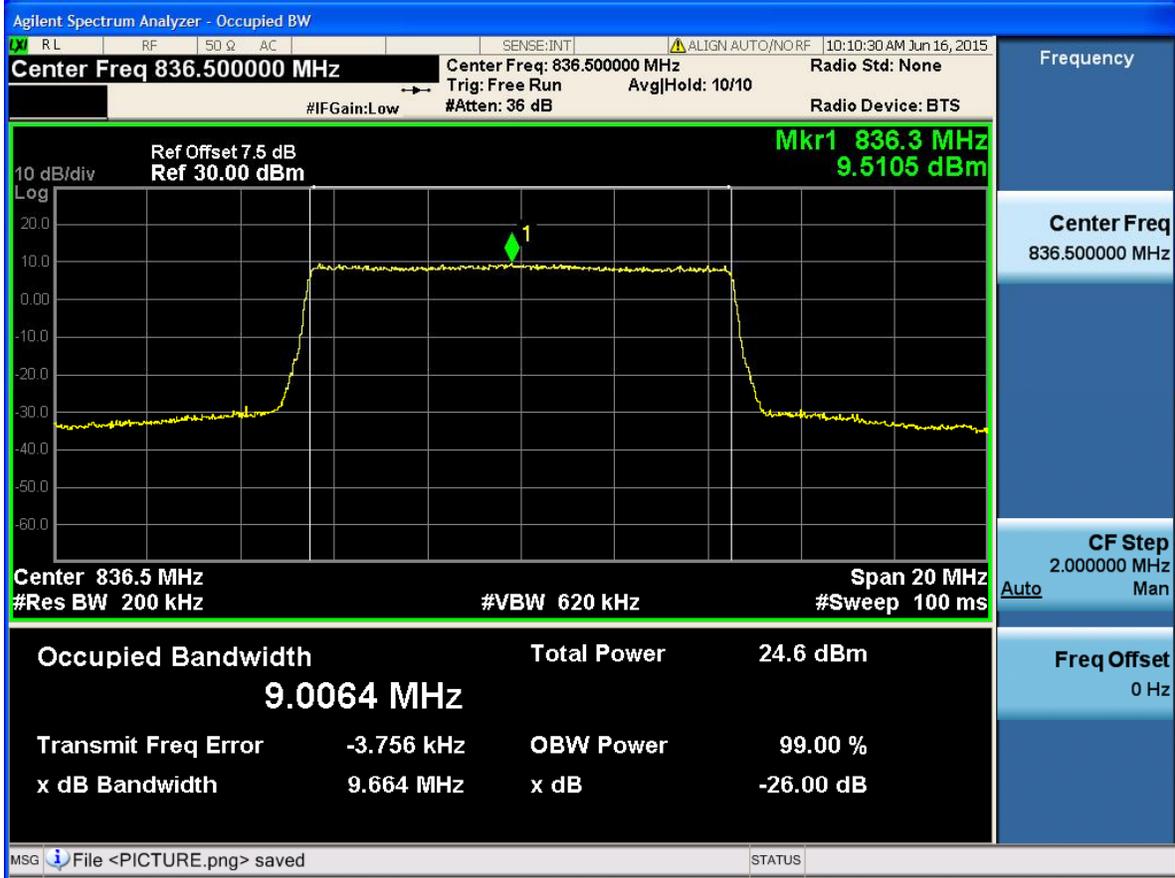
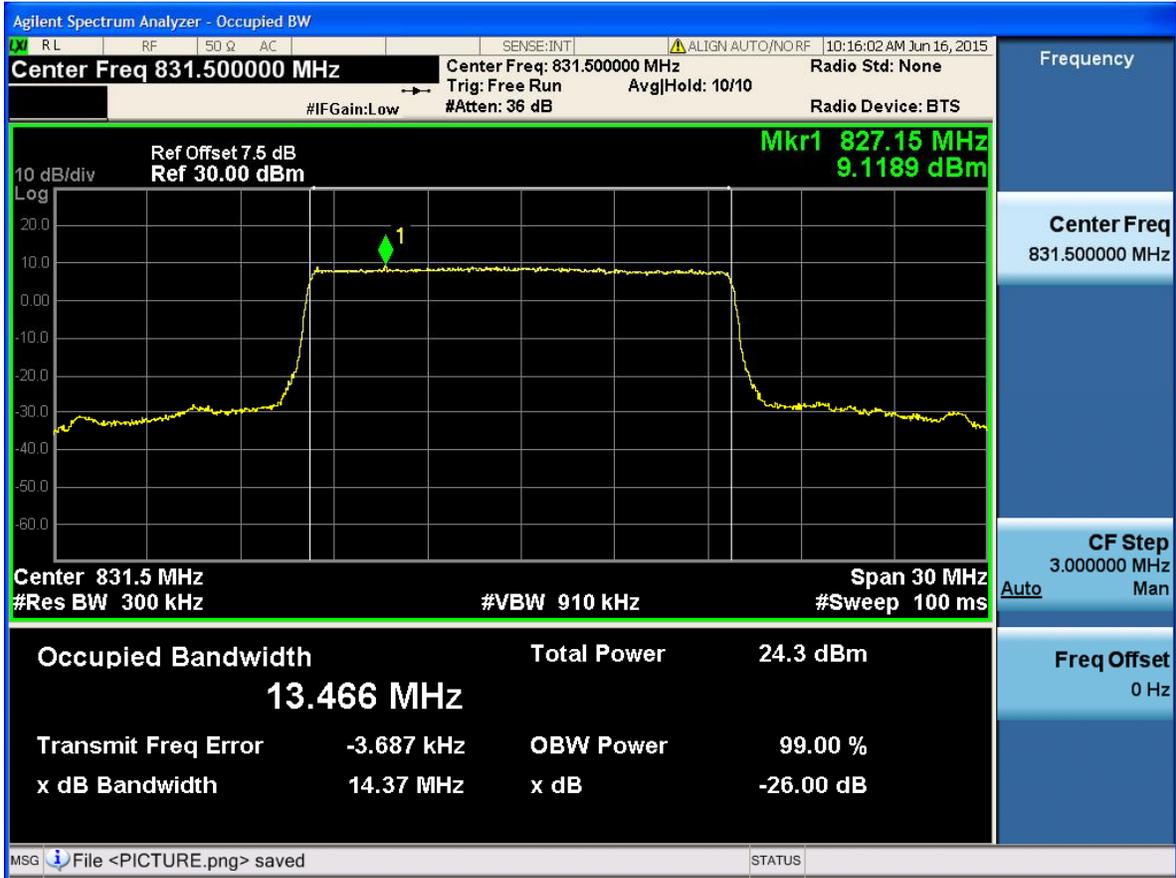## 4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 Test RB = RB50#0

4.1.1.1.3 Test Bandwidth = 15

4.1.1.1.3.1 Test Channel = LCH

4.1.1.1.3.1.1 Test RB = RB75#0
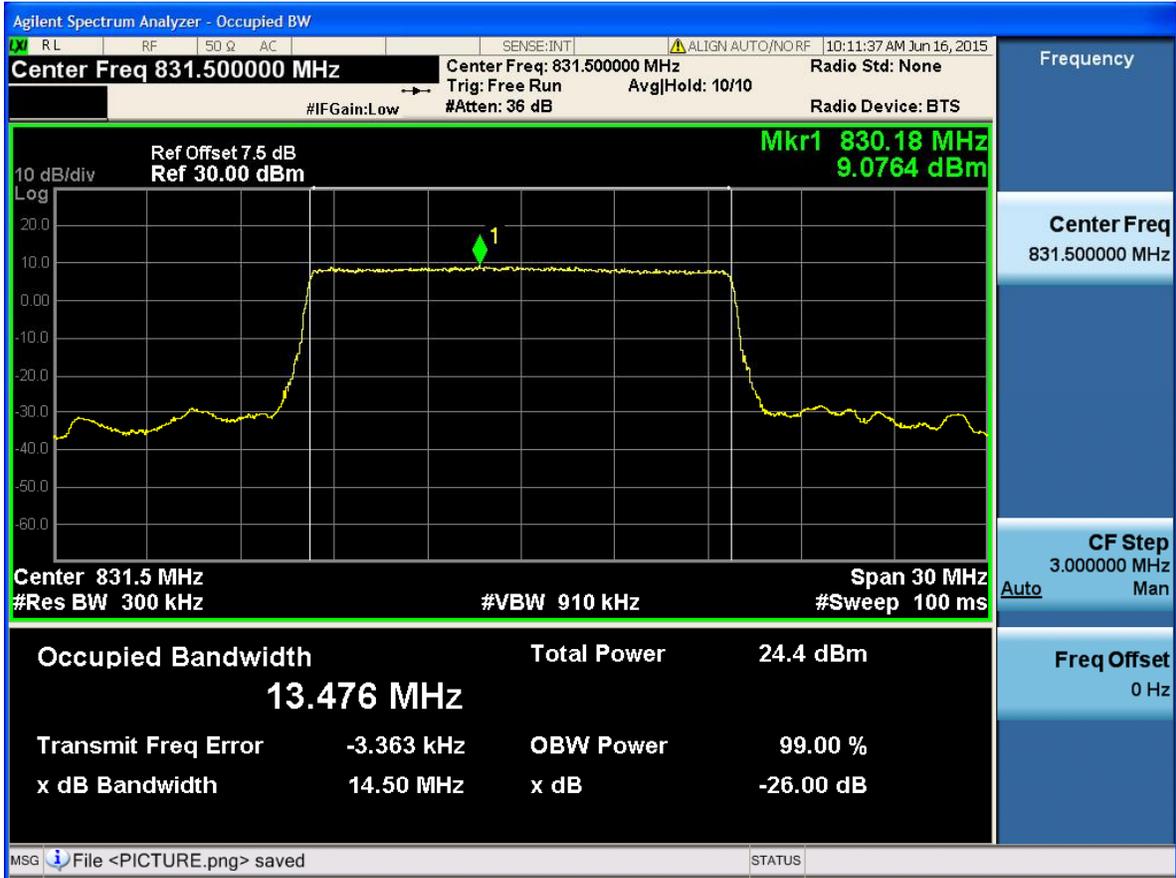
4.1.1.1.3.2 Test Channel = MCH

4.1.1.1.3.2.1 Test RB = RB75#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
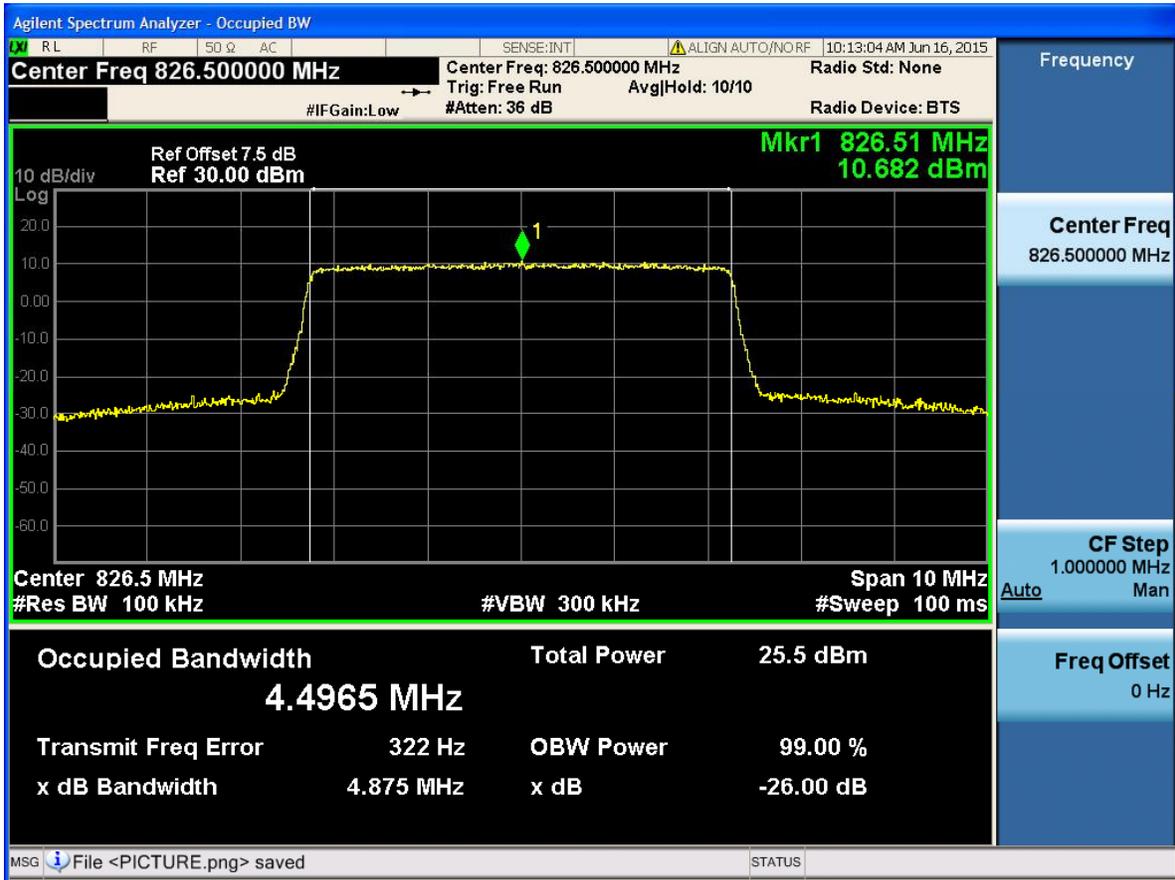
4.1.1.2.1.2 Test Channel = MCH

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
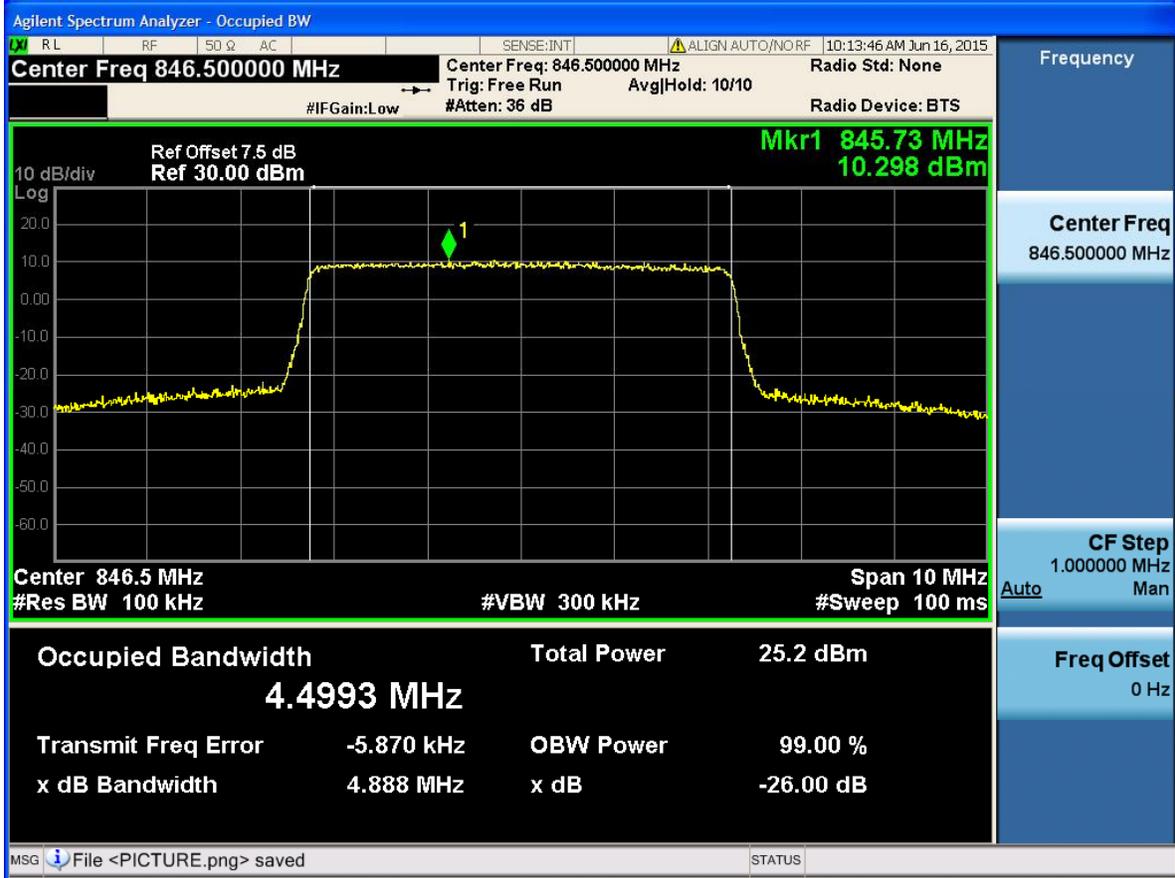
4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

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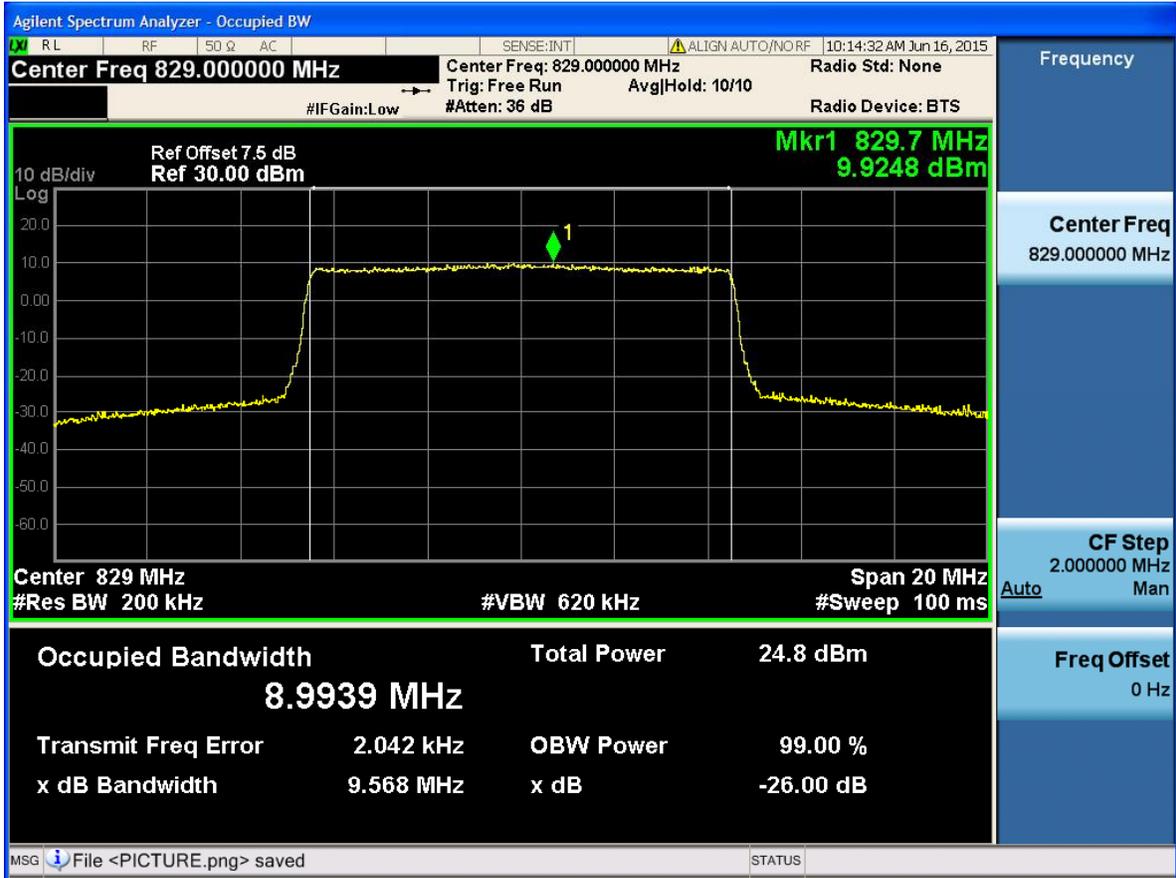
4.1.1.2.2.2 Test Channel = MCH

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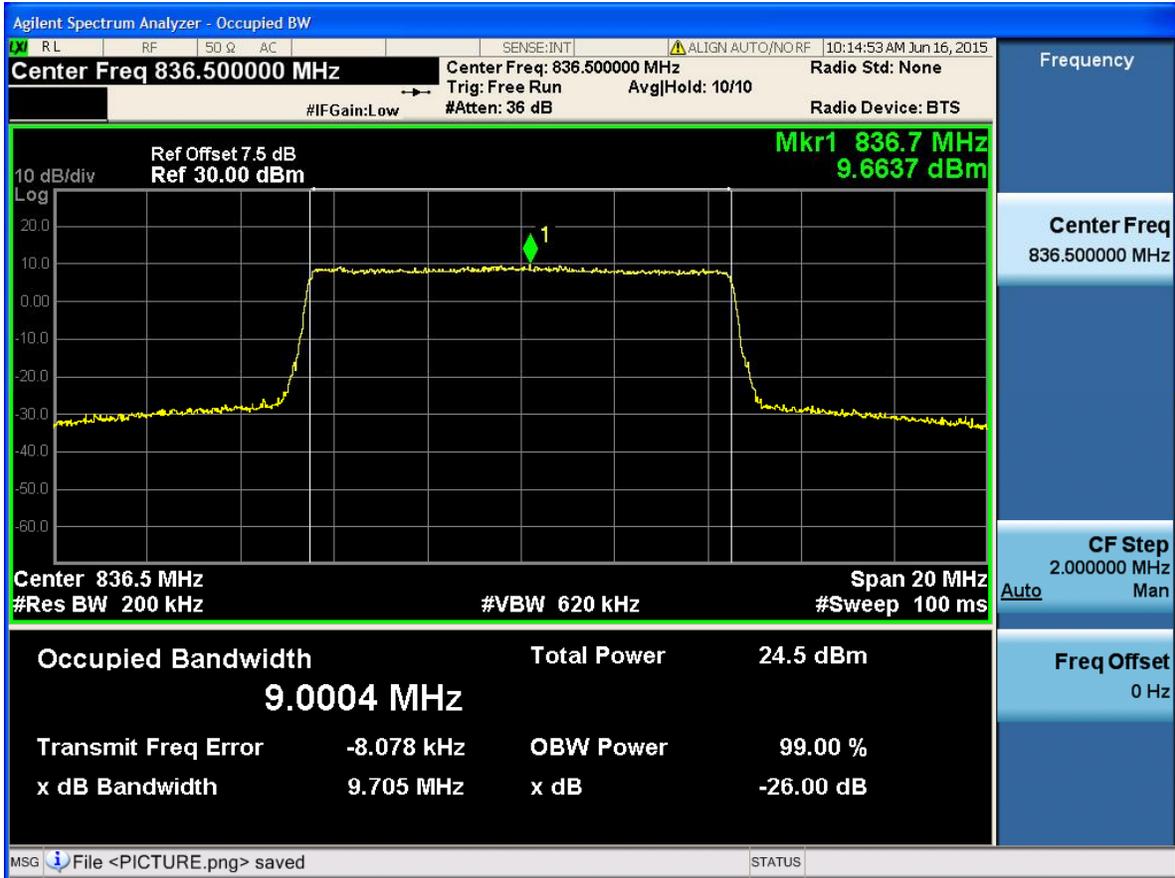
4.1.1.2.2.3 Test Channel = HCH

4.1.1.2.2.3.1 Test RB = RB50#0

4.1.1.2.3 Test Bandwidth = 15

4.1.1.2.3.1 Test Channel = LCH

4.1.1.2.3.1.1 Test RB = RB75#0

4.1.1.2.3.2 Test Channel = MCH

4.1.1.2.3.2.1 Test RB = RB75#0

4.1.1.2.3.3 Test Channel = HCH

4.1.1.2.3.3.1 Test RB = RB75#0

5Appendix_E: Band Edges Compliance

Part I - Test Plots

5.1 For LTE

5.1.1 Test Band = BAND26

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
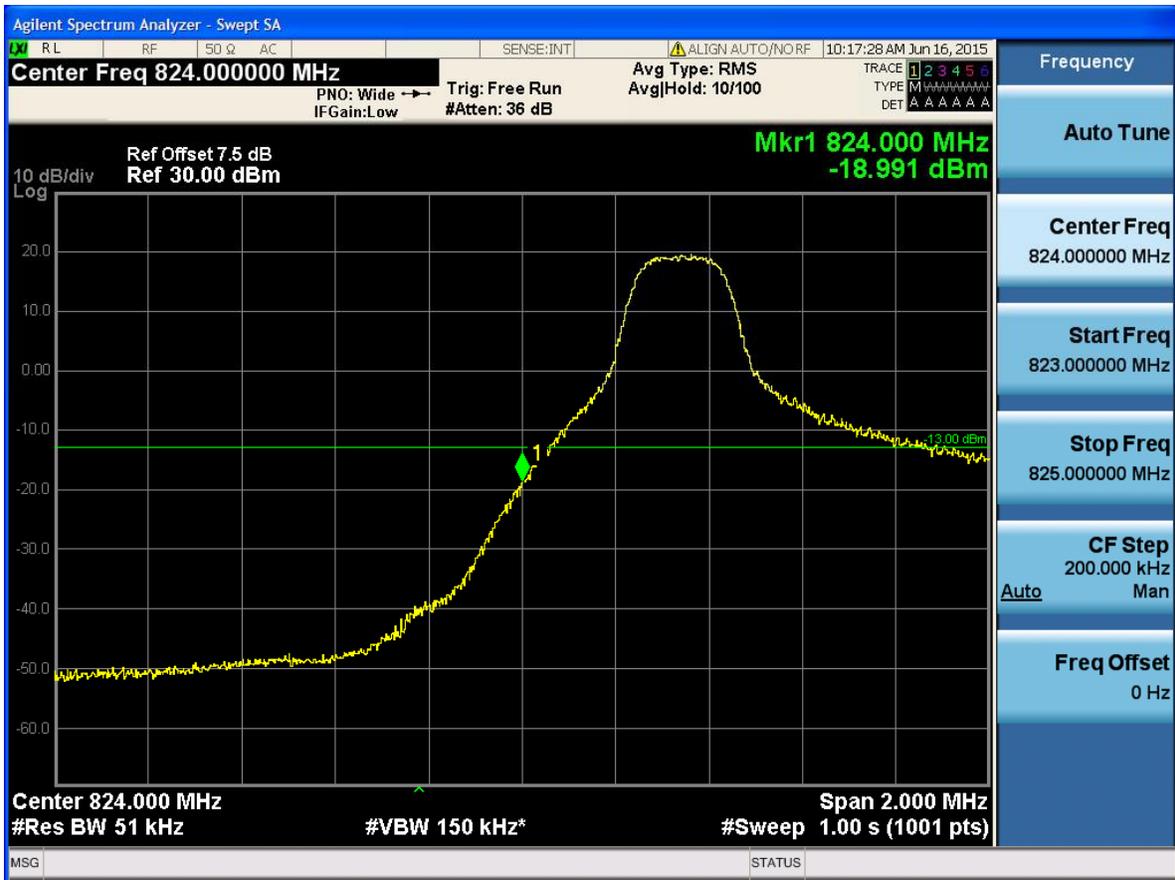
5.1.1.1.1.1.2 Test RB = RB1#24
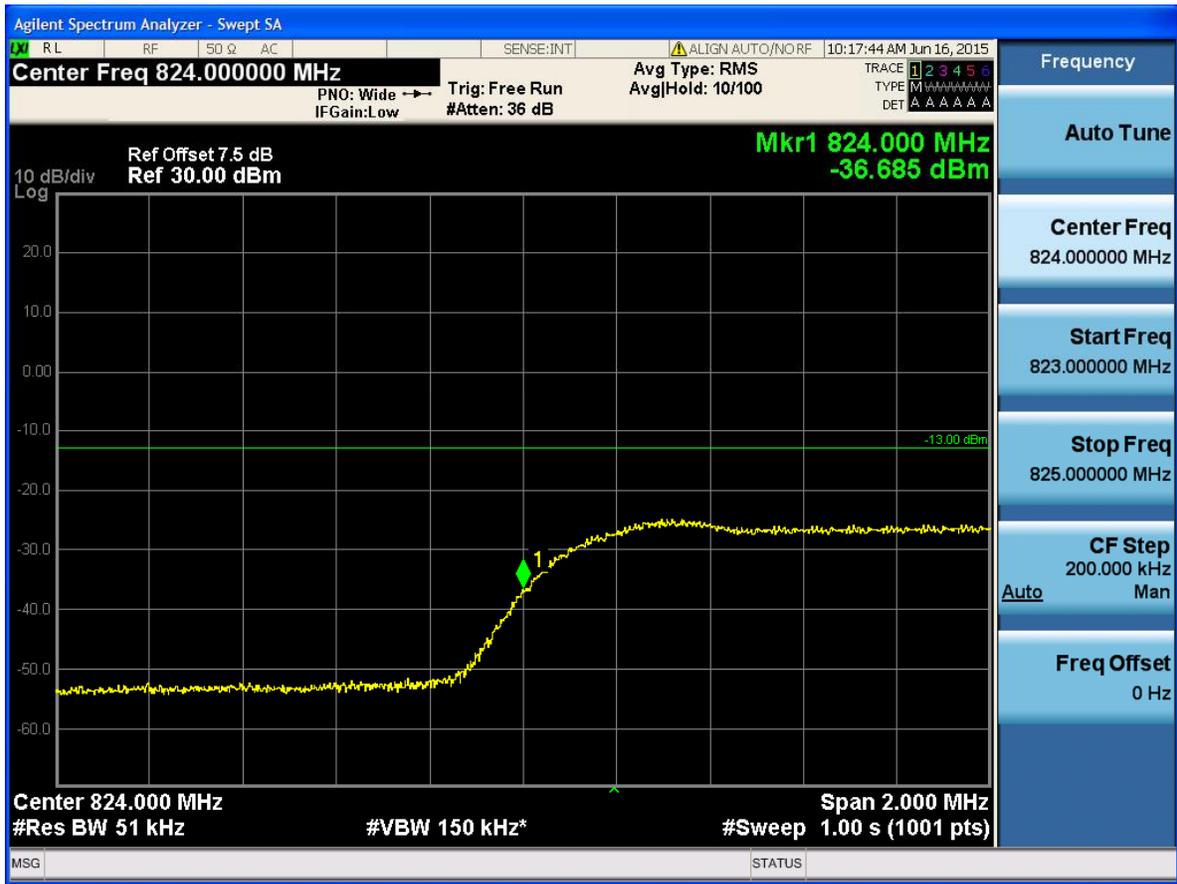
5.1.1.1.1.1.3 Test RB = RB12#6

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

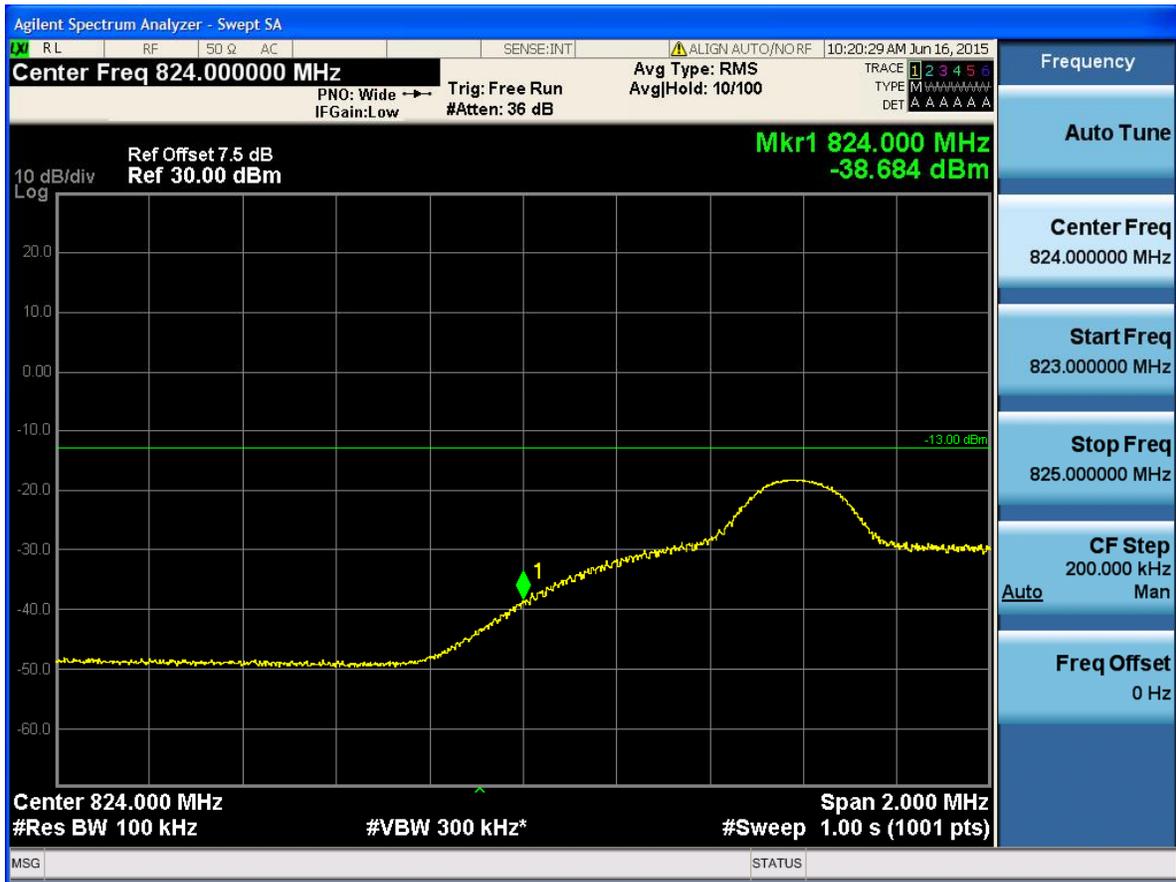## 5.1.1.1.1.2.4 Test RB = RB25#0

5.1.1.1.2 Test Bandwidth = 10

5.1.1.1.2.1 Test Channel = LCH
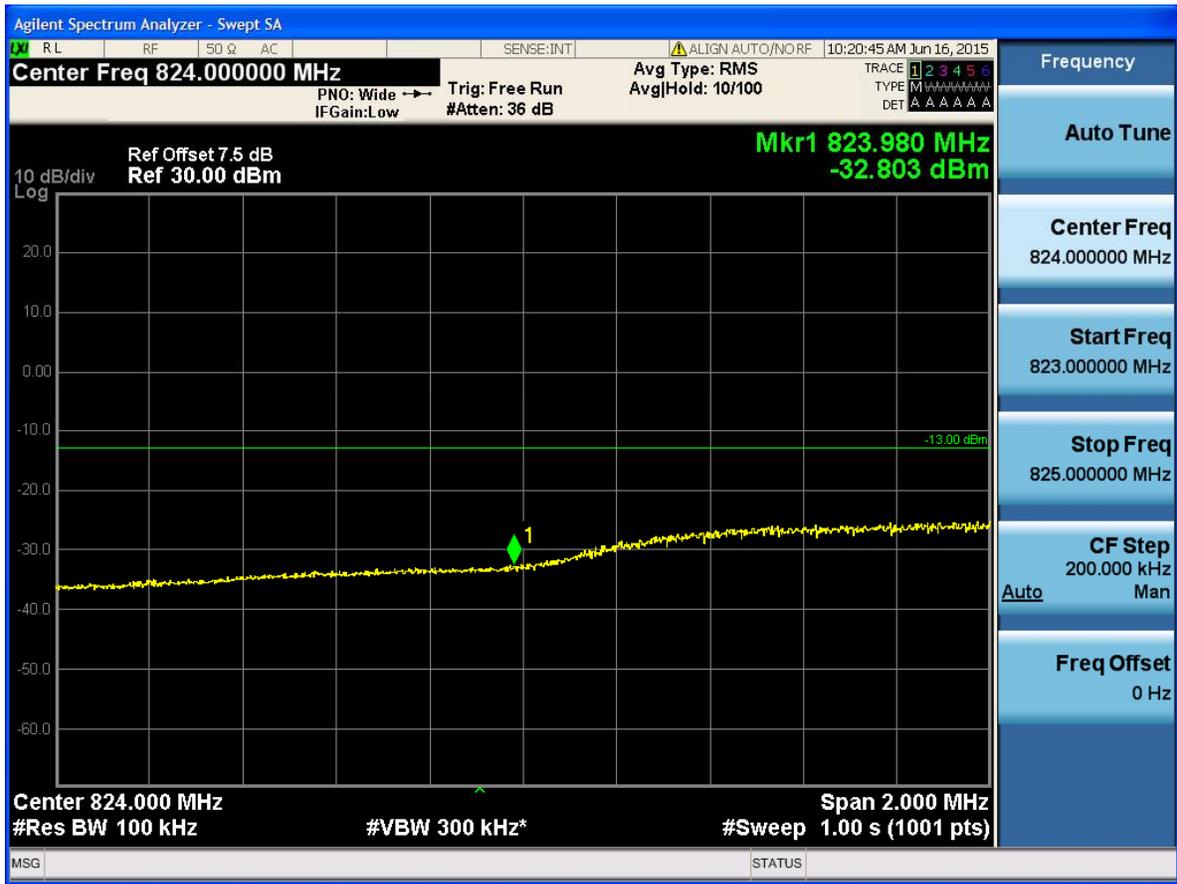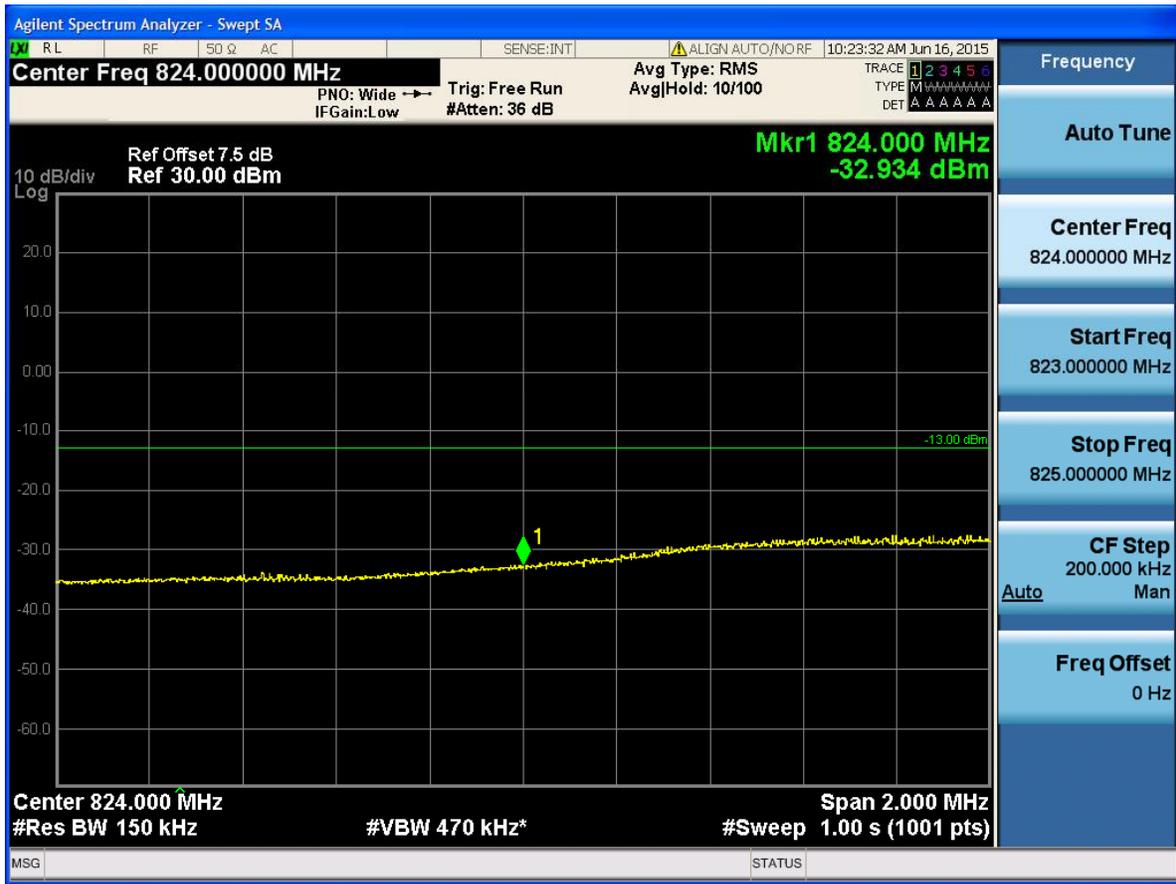
5.1.1.1.2.1.1 Test RB = RB1#0
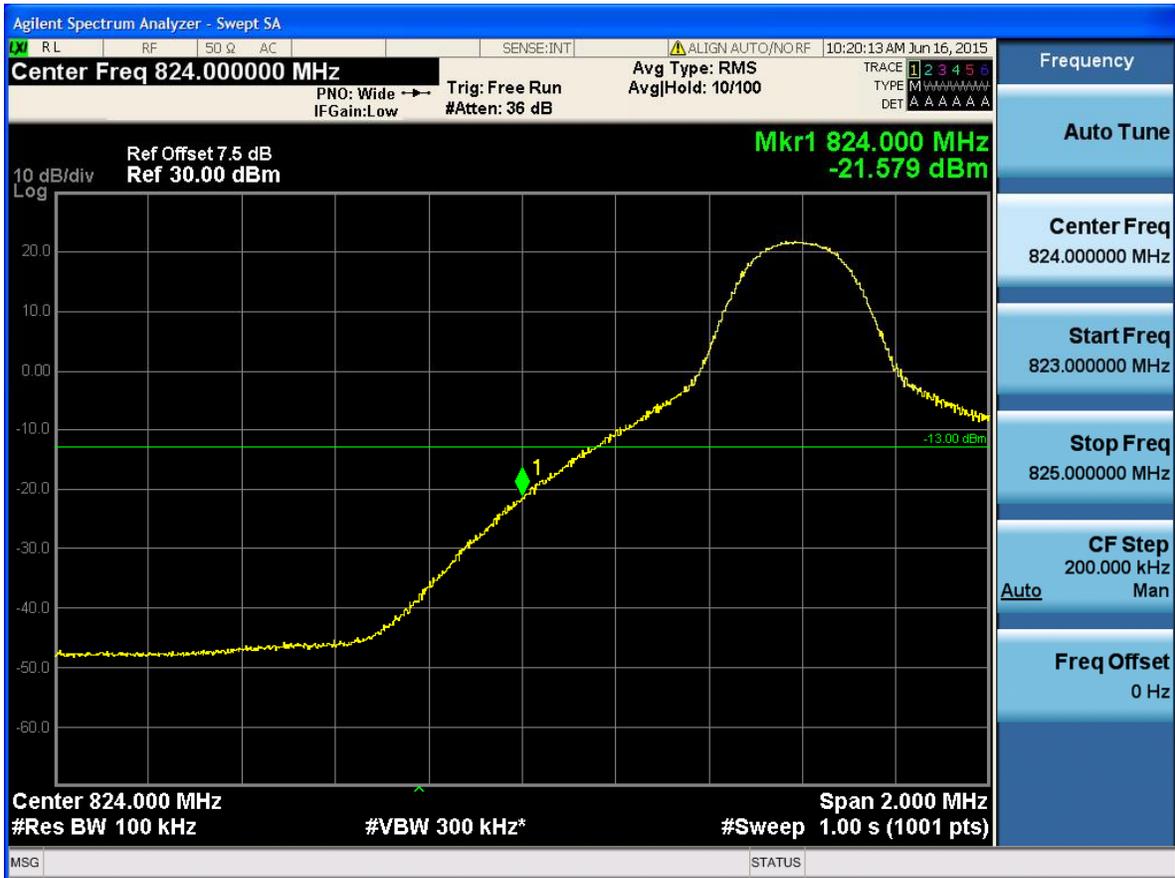
5.1.1.1.2.1.2 Test RB = RB1#49

5.1.1.1.2.1.3 Test RB = RB25#13

5.1.1.1.2.1.4 Test RB = RB50#0

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

Agilent Spectrum Analyzer - Swept SA

LXI R L RF 50 Ω AC	SENSE:INT ⚠ ALIGN AUTO/NORF 10:21:39 AM Jun 16, 2015

Center Freq 849.000000 MHz
PNO: Wide ➝ Trig: Free Run Avg Type: RMS TRACE 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB Avg|Hold: 10/100 TYPE M wwwww
DET A A A A A A

Ref Offset 7.5 dB
10 dB/div Ref 30.00 dBm
Log

Mkr1 849.000 MHz
-21.449 dBm

20.0
10.0
0.00
-13.00 dBm
-10.0
-20.0
1
-30.0
-40.0
-50.0
-60.0

Center 849.000 MHz Span 2.000 MHz
#Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
849.000000 MHz

Start Freq
848.000000 MHz

Stop Freq
850.000000 MHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

5.1.1.1.2.2.3 Test RB = RB25#13

5.1.1.1.2.2.4 Test RB = RB50#0

Agilent Spectrum Analyzer - Swept SA

R L	RF	50 Ω	AC			SENSE:INT		ALIGN AUTO/NORF	10:22:12 AM Jun 16, 2015

Center Freq 849.000000 MHz

PNO: Wide →
IFGain:Low

Trig: Free Run
#Atten: 36 dB

Avg Type: RMS
Avg|Hold: 10/100

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

Frequency

Mkr1 849.000 MHz
-32.788 dBm

Auto Tune

Ref Offset 7.5 dB
10 dB/div Ref 30.00 dBm
Log

Center Freq
849.000000 MHz

20.0

10.0

0.00

-10.0   -13.00 dBm

-20.0

-30.0

-40.0

-50.0

-60.0

Start Freq
848.000000 MHz

Stop Freq
850.000000 MHz

CF Step
200.000 kHz
Auto   Man

Freq Offset
0 Hz

Center 849.000 MHz
#Res BW 100 kHz   #VBW 300 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

MSG   STATUS

5.1.1.1.3 Test Bandwidth = 15

5.1.1.1.3.1 Test Channel = LCH

5.1.1.1.3.1.1 Test RB = RB1#0

5.1.1.1.3.1.2 Test RB = RB1#74

5.1.1.1.3.1.3 Test RB = RB36#18

5.1.1.1.3.1.4 Test RB = RB75#0

5.1.1.1.3.2 Test Channel = HCH

5.1.1.1.3.2.1 Test RB = RB1#0

5.1.1.1.3.2.2 Test RB = RB1#74

5.1.1.1.3.2.3 Test RB = RB36#18

5.1.1.1.3.2.4 Test RB = RB75#0
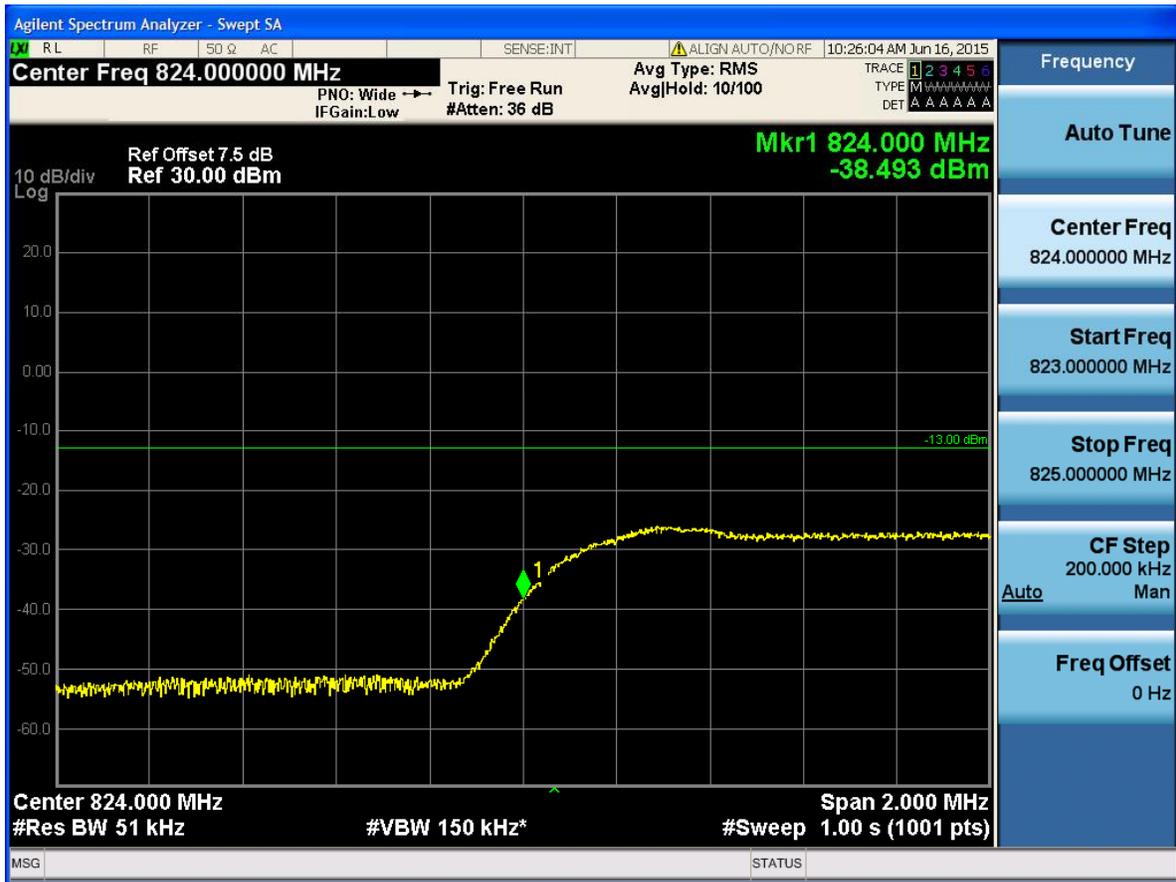
5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 5

5.1.1.2.1.1 Test Channel = LCH

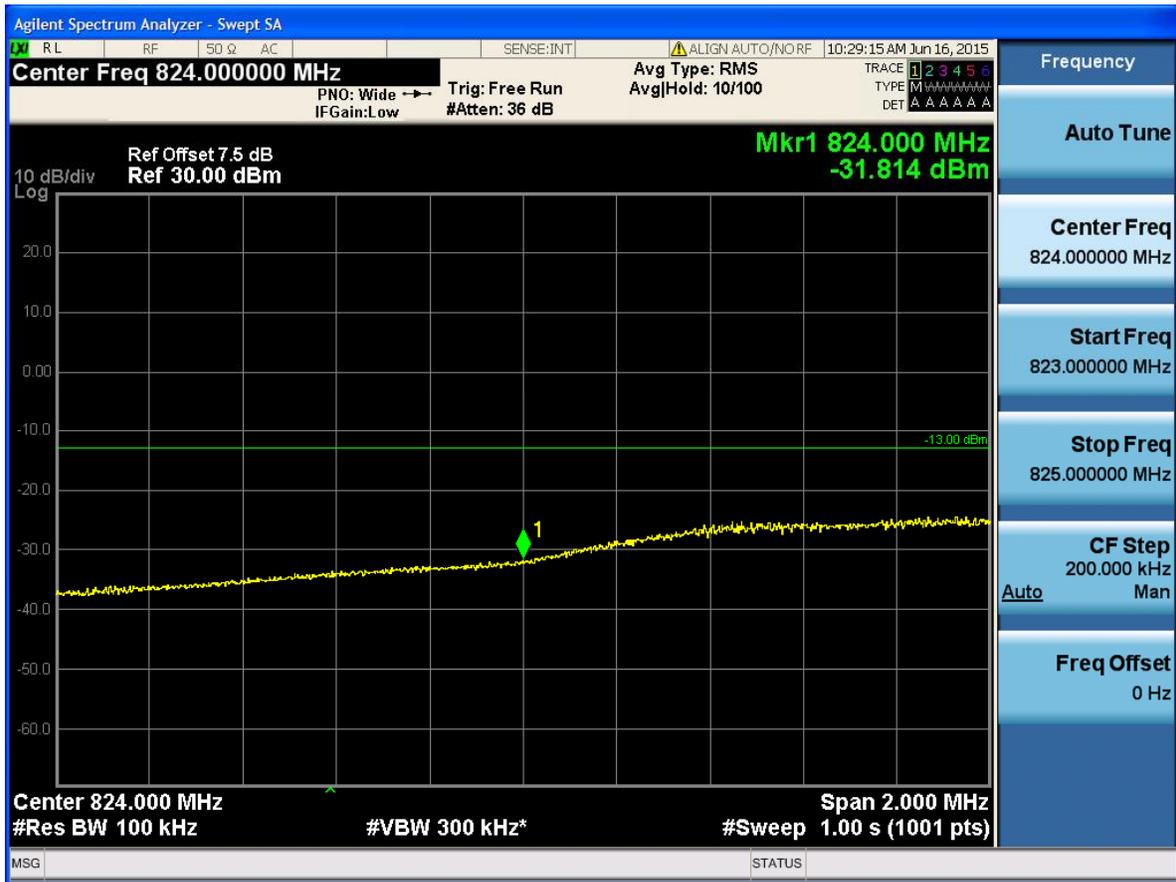## 5.1.1.2.1.1.1 Test RB = RB1#0
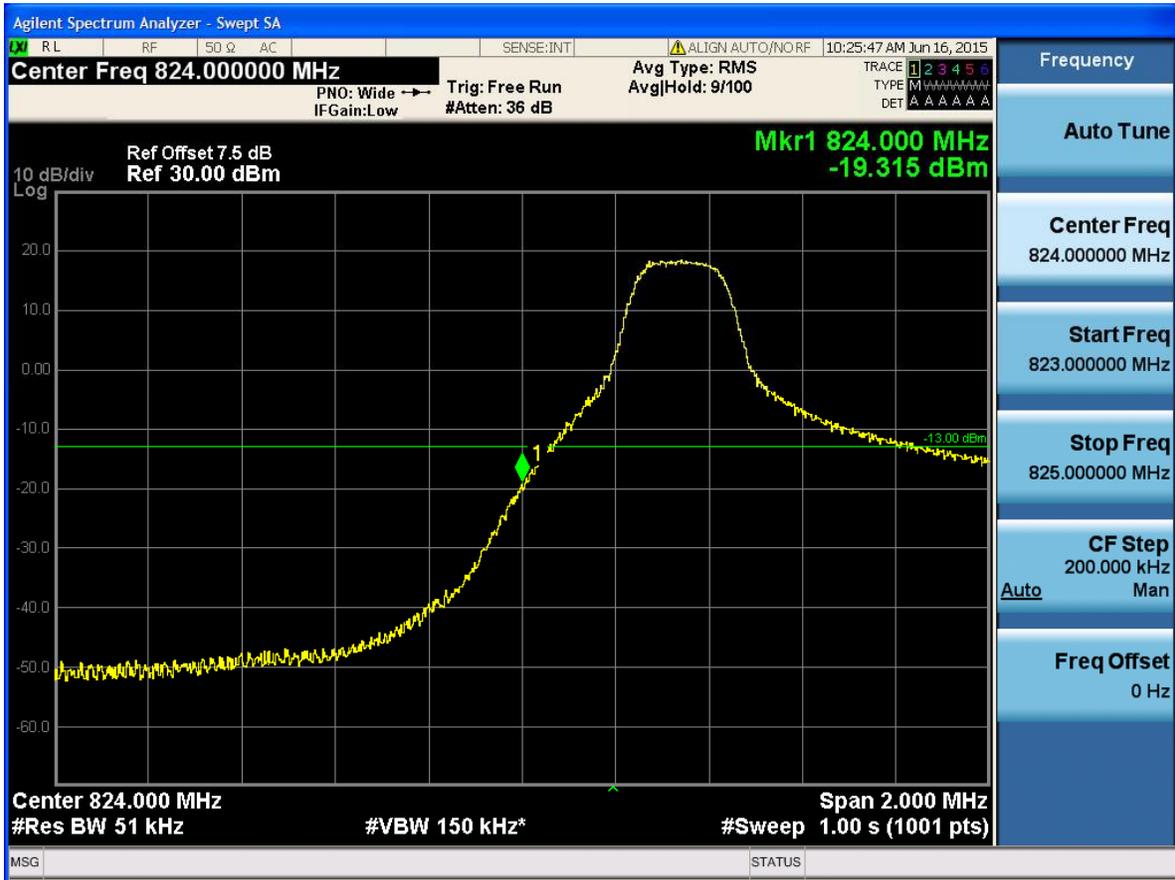
5.1.1.2.1.1.2 Test RB = RB1#24

5.1.1.2.1.1.3 Test RB = RB12#6
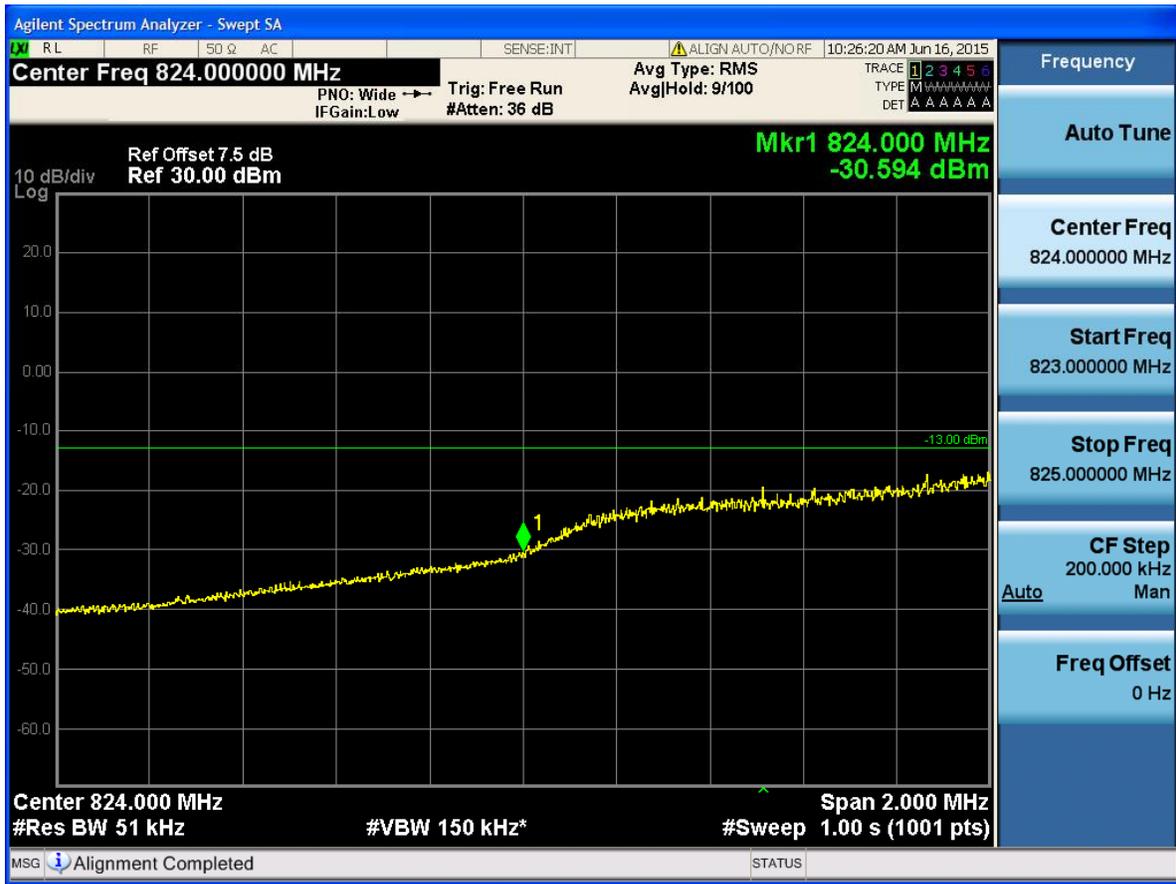
5.1.1.2.1.1.4 Test RB = RB25#0

5.1.1.2.1.2 Test Channel = HCH

5.1.1.2.1.2.1 Test RB = RB1#0
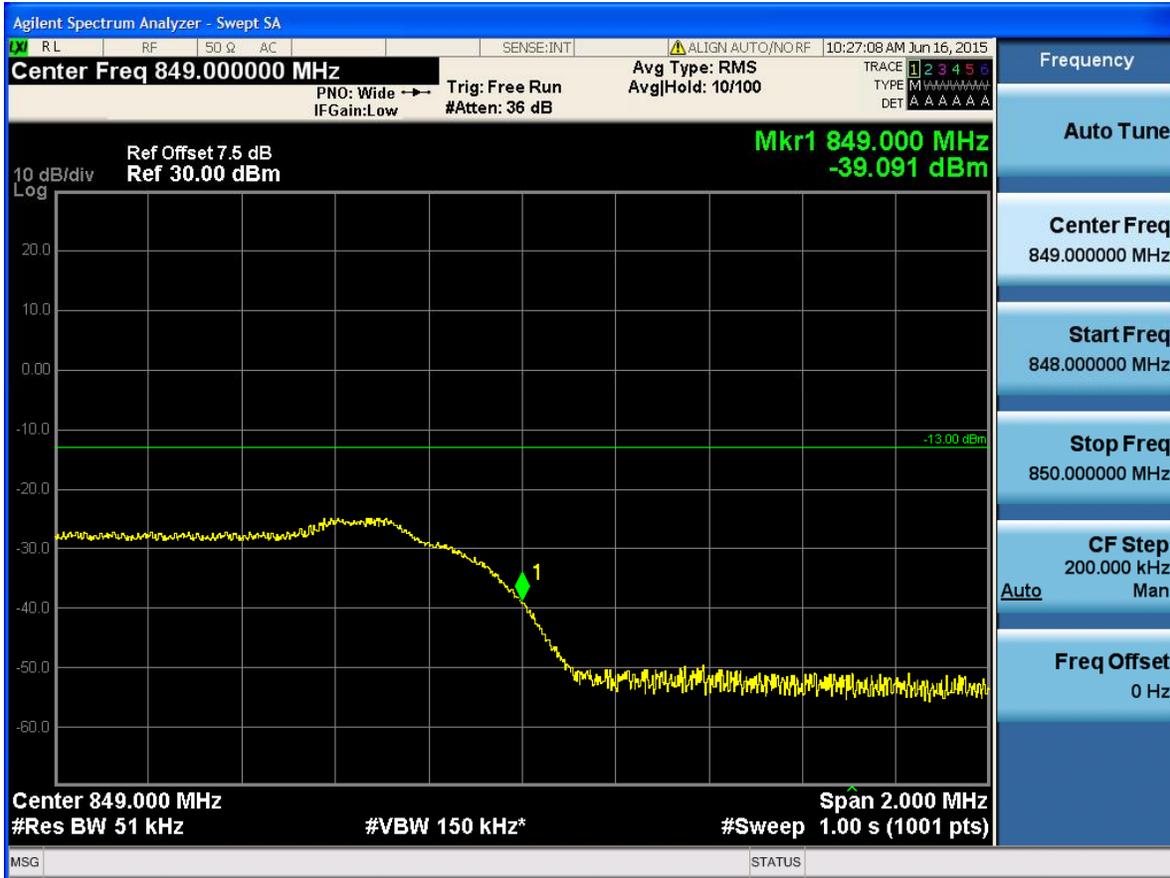
5.1.1.2.1.2.2 Test RB = RB1#24
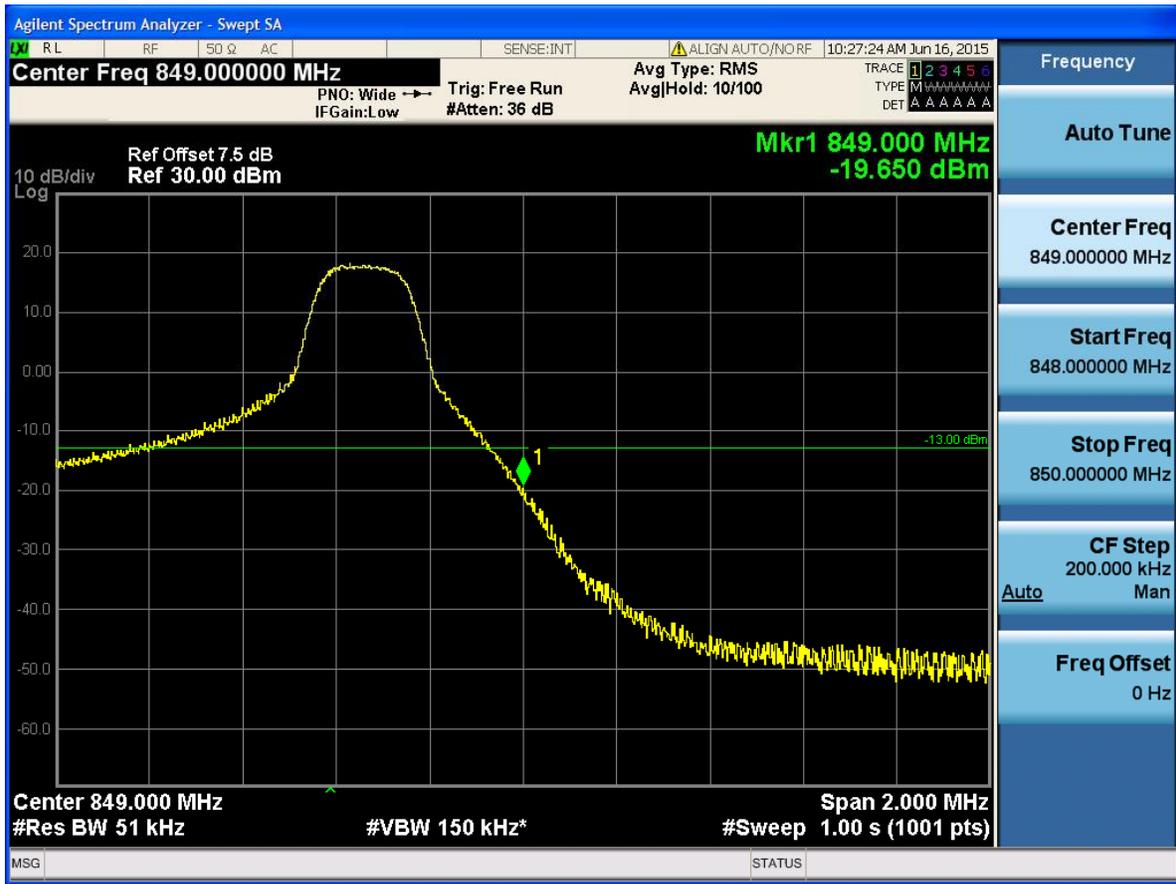
5.1.1.2.1.2.3 Test RB = RB12#6

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

5.1.1.2.2.1.3 Test RB = RB25#13

5.1.1.2.2.1.4 Test RB = RB50#0

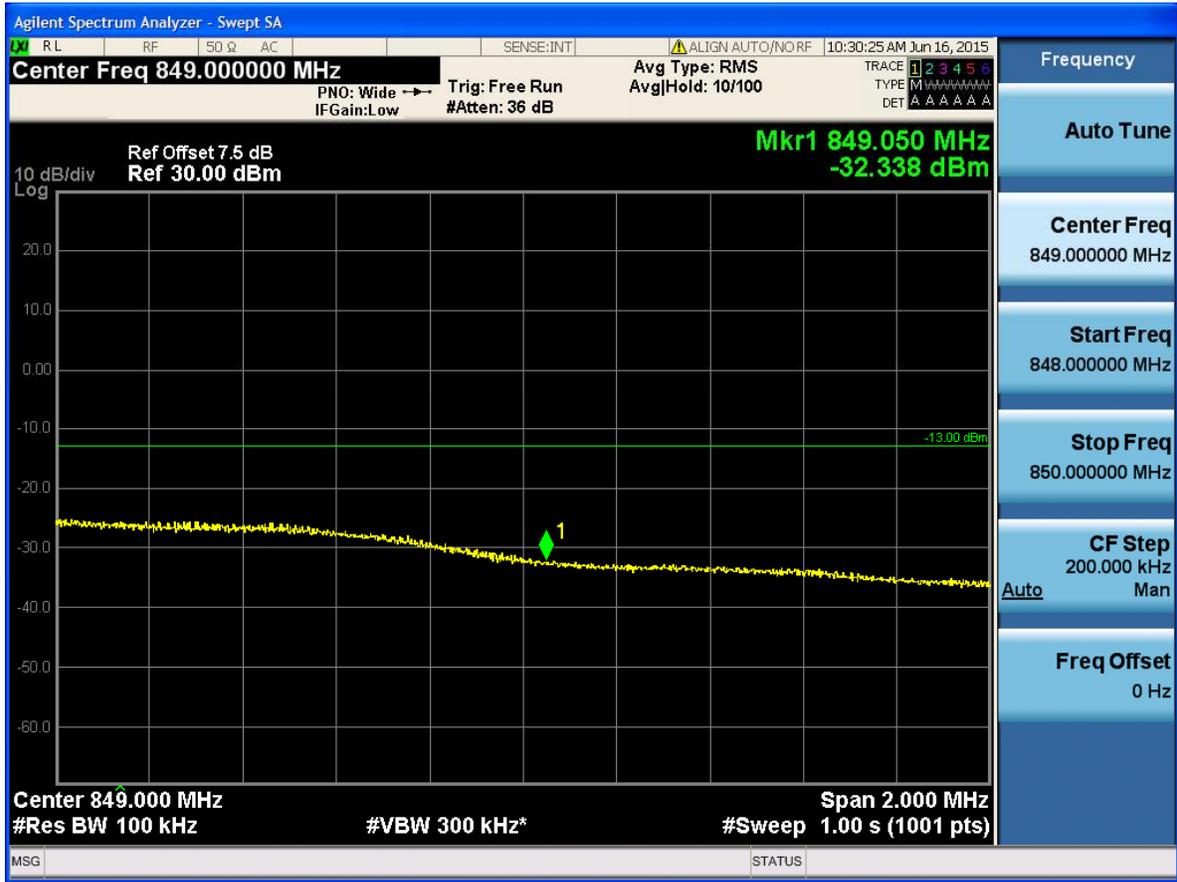**5.1.1.2.2.2 Test Channel = HCH**

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

5.1.1.2.3 Test Bandwidth = 15

5.1.1.2.3.1 Test Channel = LCH
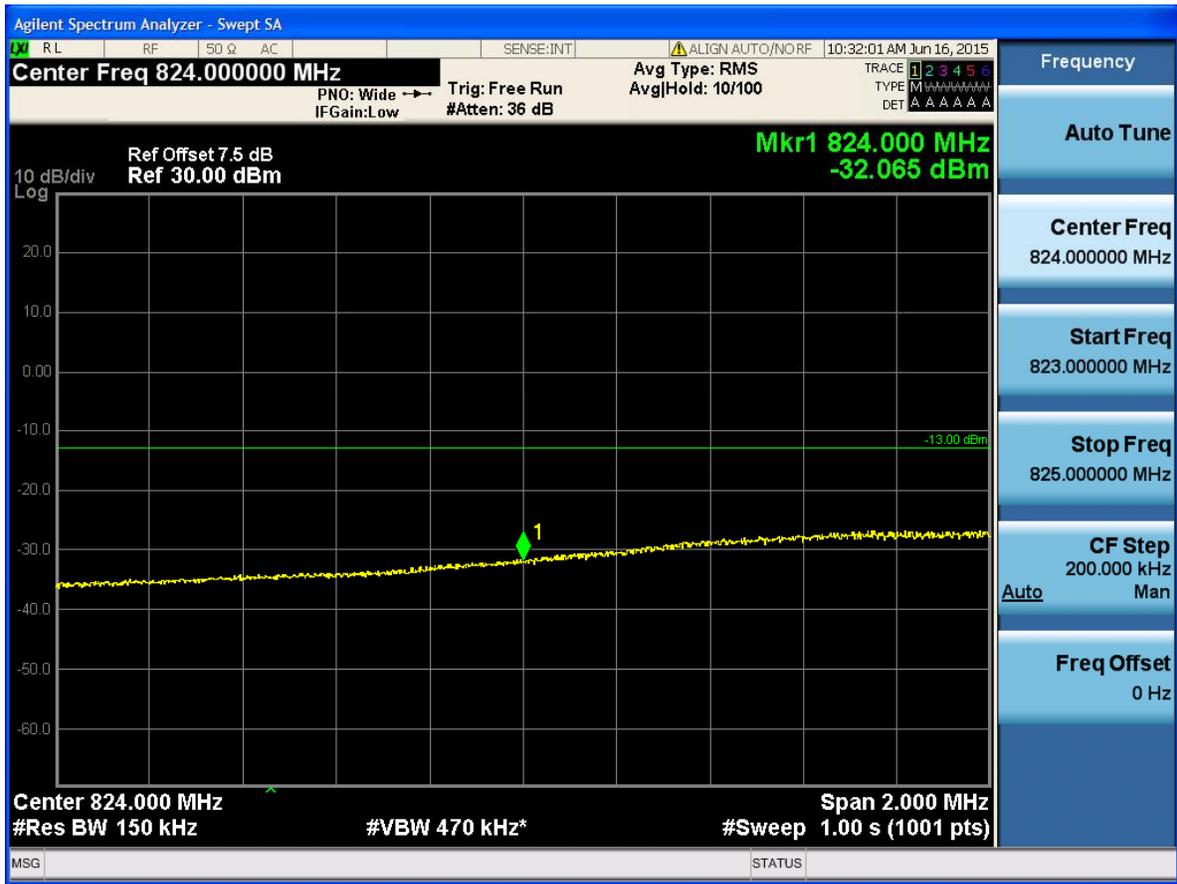
5.1.1.2.3.1.1 Test RB = RB1#0

5.1.1.2.3.1.2 Test RB = RB1#74

5.1.1.2.3.1.3 Test RB = RB36#18

5.1.1.2.3.1.4 Test RB = RB75#0

5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0

5.1.1.2.3.2.2 Test RB = RB1#74

5.1.1.2.3.2.3 Test RB = RB36#18

5.1.1.2.3.2.4 Test RB = RB75#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 = BAND26

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