



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
BAND13	LTE/TM1	5	LCH	RB1#0	22.66	23.01	34.8	PASS
				RB1#13	22.73	23.08	34.8	PASS
				RB1#24	22.79	23.14	34.8	PASS
				RB12#0	21.67	22.02	34.8	PASS
				RB12#6	21.84	22.19	34.8	PASS
				RB12#13	21.87	22.22	34.8	PASS
				RB25#0	21.66	22.01	34.8	PASS
			MCH	RB1#0	22.74	23.09	34.8	PASS
				RB1#13	22.81	23.16	34.8	PASS
				RB1#24	22.74	23.09	34.8	PASS
				RB12#0	21.81	22.16	34.8	PASS
				RB12#6	21.92	22.27	34.8	PASS
				RB12#13	21.87	22.22	34.8	PASS
				RB25#0	21.82	22.17	34.8	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
			HCH	RB1#0	22.88	23.23	34.8	PASS
				RB1#13	22.76	23.11	34.8	PASS
				RB1#24	22.61	22.96	34.8	PASS
				RB12#0	21.86	22.21	34.8	PASS
				RB12#6	21.75	22.1	34.8	PASS
				RB12#13	21.63	21.98	34.8	PASS
				RB25#0	21.68	22.03	34.8	PASS
		10	LCH	RB1#0	22.59	22.94	34.8	PASS
				RB1#25	22.83	23.18	34.8	PASS
				RB1#49	22.54	22.89	34.8	PASS
				RB25#0	21.58	21.93	34.8	PASS
				RB25#13	21.82	22.17	34.8	PASS
				RB25#25	21.76	22.11	34.8	PASS
				RB50#0	21.66	22.01	34.8	PASS
			MCH	RB1#0	22.5	22.85	34.8	PASS
				RB1#25	22.78	23.13	34.8	PASS
				RB1#49	22.58	22.93	34.8	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#0	21.62	21.97	34.8	PASS
				RB25#13	21.83	22.18	34.8	PASS
				RB25#25	21.71	22.06	34.8	PASS
				RB50#0	21.6	21.95	34.8	PASS
			HCH	RB1#0	22.51	22.86	34.8	PASS
				RB1#25	22.78	23.13	34.8	PASS
				RB1#49	22.59	22.94	34.8	PASS
				RB25#0	21.58	21.93	34.8	PASS
				RB25#13	21.97	22.32	34.8	PASS
				RB25#25	21.88	22.23	34.8	PASS
				RB50#0	21.67	22.02	34.8	PASS
	LTE/TM2	5	LCH	RB1#0	21.57	21.92	34.8	PASS
				RB1#13	21.69	22.04	34.8	PASS
				RB1#24	21.79	22.14	34.8	PASS
				RB12#0	20.84	21.19	34.8	PASS
				RB12#6	20.92	21.27	34.8	PASS
				RB12#13	20.96	21.31	34.8	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#0	20.72	21.07	34.8	PASS
			MCH	RB1#0	21.75	22.1	34.8	PASS
				RB1#13	21.77	22.12	34.8	PASS
				RB1#24	21.81	22.16	34.8	PASS
				RB12#0	20.97	21.32	34.8	PASS
				RB12#6	21.02	21.37	34.8	PASS
				RB12#13	21.03	21.38	34.8	PASS
				RB25#0	20.83	21.18	34.8	PASS
			HCH	RB1#0	21.84	22.19	34.8	PASS
				RB1#13	21.71	22.06	34.8	PASS
				RB1#24	21.57	21.92	34.8	PASS
				RB12#0	20.99	21.34	34.8	PASS
				RB12#6	20.92	21.27	34.8	PASS
				RB12#13	20.75	21.1	34.8	PASS
				RB25#0	20.81	21.16	34.8	PASS
		10	LCH	RB1#0	21.86	22.21	34.8	PASS
				RB1#25	22.08	22.43	34.8	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB1#49	21.91	22.26	34.8	PASS
				RB25#0	20.67	21.02	34.8	PASS
				RB25#13	20.78	21.13	34.8	PASS
				RB25#25	20.76	21.11	34.8	PASS
				RB50#0	20.77	21.12	34.8	PASS
			MCH	RB1#0	21.85	22.2	34.8	PASS
				RB1#25	22.12	22.47	34.8	PASS
				RB1#49	21.86	22.21	34.8	PASS
				RB25#0	20.63	20.98	34.8	PASS
				RB25#13	20.77	21.12	34.8	PASS
				RB25#25	20.71	21.06	34.8	PASS
				RB50#0	20.73	21.08	34.8	PASS
			HCH	RB1#0	21.85	22.2	34.8	PASS
				RB1#25	22.08	22.43	34.8	PASS
				RB1#49	21.88	22.23	34.8	PASS
				RB25#0	20.66	21.01	34.8	PASS
				RB25#13	20.83	21.18	34.8	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#25	20.69	21.04	34.8	PASS
				RB50#0	20.71	21.06	34.8	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,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

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
BAND13	LTE/TM1	5	LCH	RB1#0	3.96	13	PASS
				RB1#13	4.06	13	PASS
				RB1#24	4.31	13	PASS
				RB12#0	5.65	13	PASS
				RB12#6	5.7	13	PASS
				RB12#13	5.99	13	PASS
				RB25#0	6.22	13	PASS
			MCH	RB1#0	4.15	13	PASS
				RB1#13	4.22	13	PASS
				RB1#24	4.37	13	PASS
				RB12#0	5.91	13	PASS
				RB12#6	5.87	13	PASS
				RB12#13	5.97	13	PASS
				RB25#0	6.14	13	PASS
			HCH	RB1#0	4.33	13	PASS
				RB1#13	4.34	13	PASS
				RB1#24	4.47	13	PASS
				RB12#0	6.16	13	PASS
				RB12#6	6.05	13	PASS
				RB12#13	6.31	13	PASS
				RB25#0	6.37	13	PASS
		10	LCH	RB1#0	3.86	13	PASS
				RB1#25	4.21	13	PASS
				RB1#49	4.35	13	PASS
				RB25#0	5.88	13	PASS
				RB25#13	5.8	13	PASS
				RB25#25	5.87	13	PASS
				RB50#0	6.26	13	PASS
			MCH	RB1#0	3.9	13	PASS
				RB1#25	4.24	13	PASS
				RB1#49	4.32	13	PASS
				RB25#0	5.81	13	PASS
				RB25#13	5.87	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB25#25	5.94	13	PASS
				RB50#0	6.5	13	PASS
			HCH	RB1#0	3.89	13	PASS
				RB1#25	4.25	13	PASS
				RB1#49	4.34	13	PASS
				RB25#0	5.87	13	PASS
				RB25#13	5.8	13	PASS
				RB25#25	5.88	13	PASS
				RB50#0	6.44	13	PASS
	LTE/TM2	5	LCH	RB1#0	5.26	13	PASS
				RB1#13	5.39	13	PASS
				RB1#24	5.63	13	PASS
				RB12#0	6.49	13	PASS
				RB12#6	6.62	13	PASS
				RB12#13	6.8	13	PASS
				RB25#0	7.52	13	PASS
			MCH	RB1#0	5.5	13	PASS
				RB1#13	5.5	13	PASS
				RB1#24	5.6	13	PASS
				RB12#0	6.82	13	PASS
				RB12#6	6.76	13	PASS
				RB12#13	6.85	13	PASS
				RB25#0	7.49	13	PASS
		10	HCH	RB1#0	4.83	13	PASS
				RB1#13	4.77	13	PASS
				RB1#24	4.93	13	PASS
				RB12#0	6.83	13	PASS
				RB12#6	6.78	13	PASS
				RB12#13	6.87	13	PASS
				RB25#0	7.39	13	PASS
			LCH	RB1#0	5.42	13	PASS
				RB1#25	5.77	13	PASS
				RB1#49	5.86	13	PASS
				RB25#0	7.13	13	PASS
				RB25#13	7.28	13	PASS
				RB25#25	7.42	13	PASS
				RB50#0	7.37	13	PASS
			MCH	RB1#0	5.42	13	PASS
				RB1#25	5.77	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#49	5.88	13	PASS
				RB25#0	7.09	13	PASS
				RB25#13	7.26	13	PASS
				RB25#25	7.35	13	PASS
				RB50#0	7.44	13	PASS
			HCH	RB1#0	5.4	13	PASS
				RB1#25	5.77	13	PASS
				RB1#49	5.9	13	PASS
				RB25#0	7.16	13	PASS
				RB25#13	7.31	13	PASS
				RB25#25	7.35	13	PASS
				RB50#0	7.36	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

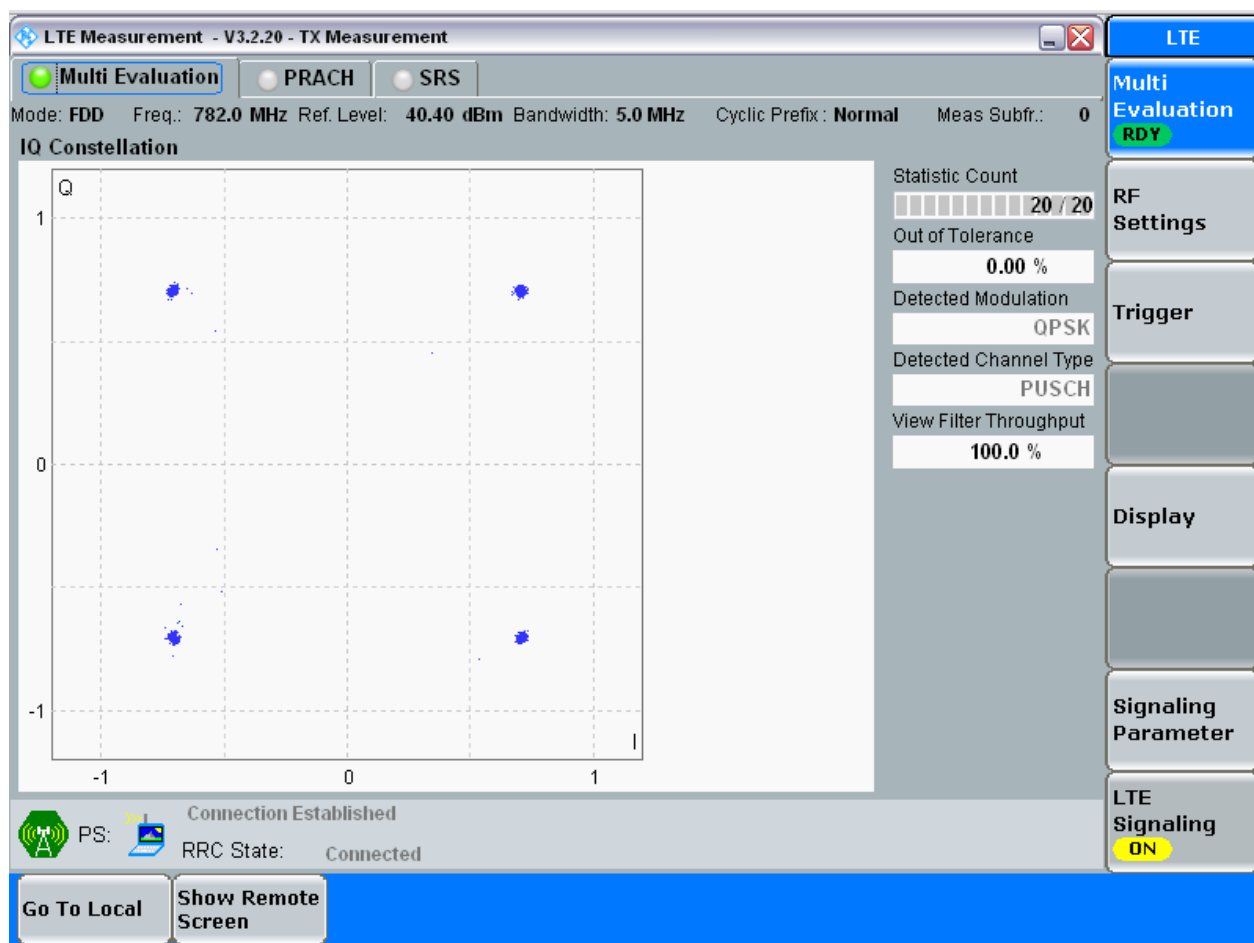
3.1.1 Test Band = BAND13

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

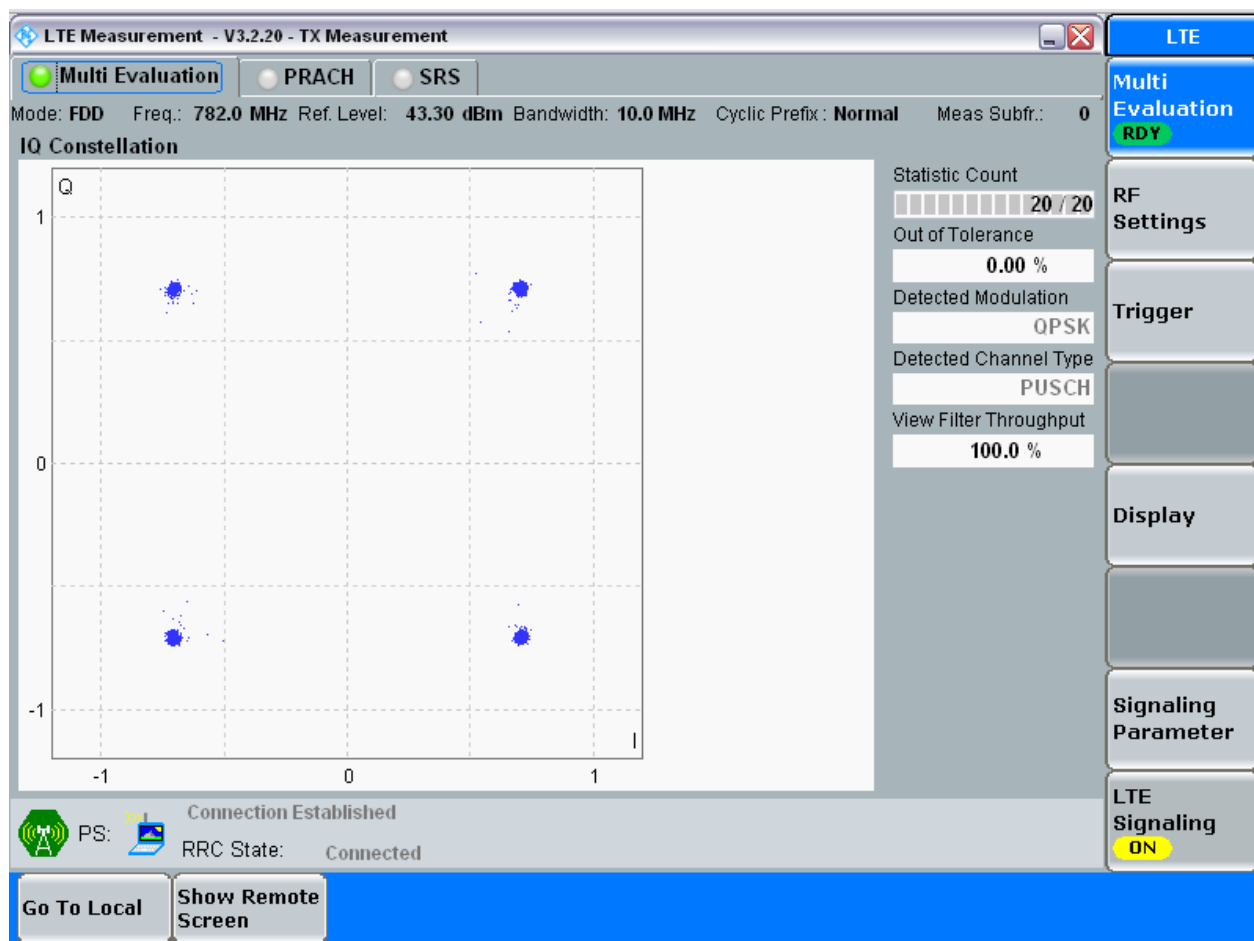
3.1.1.1.1.1.1 Test RB = RB25#0



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

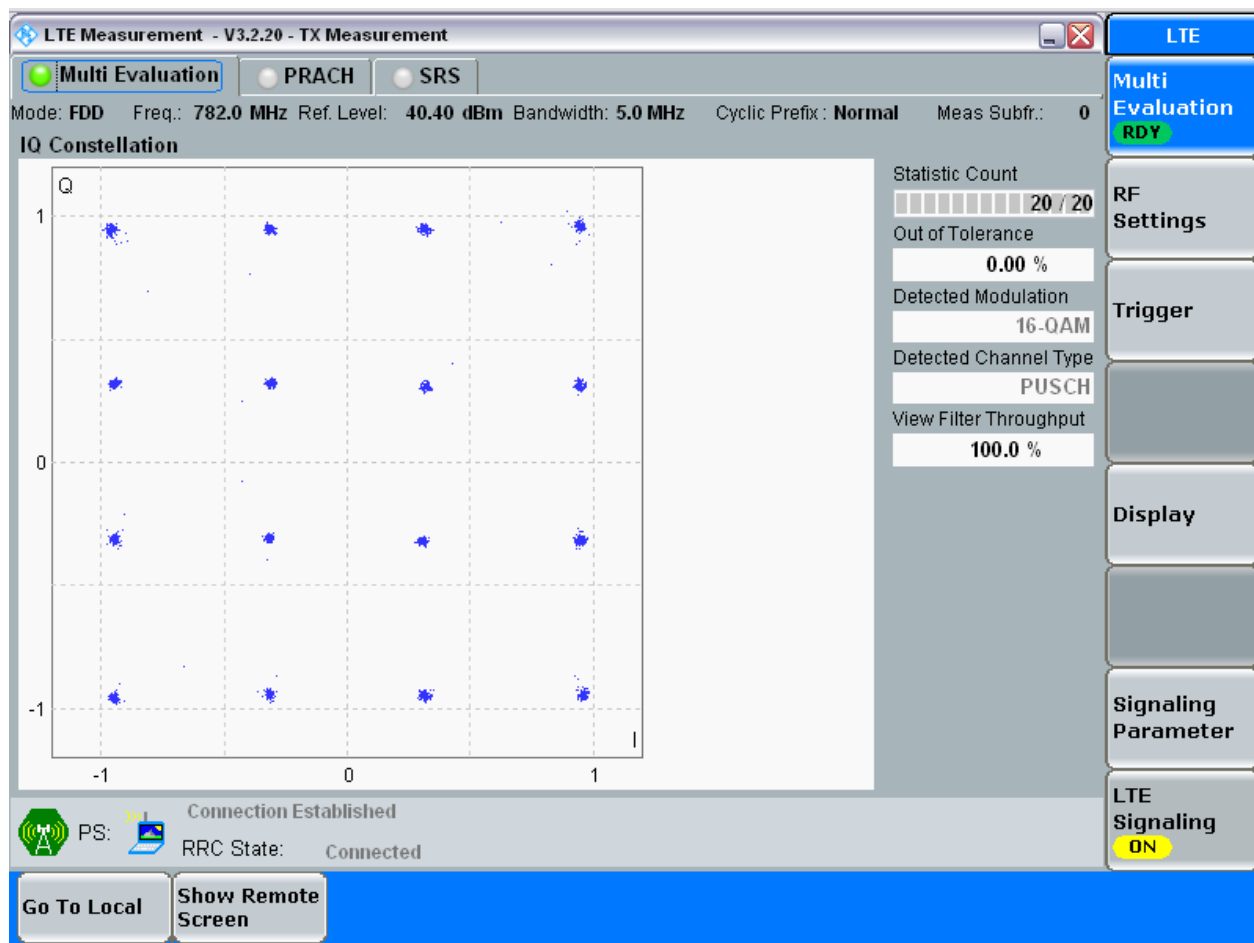


3.1.1.2 Test Mode = LTE/TM2

3.1.1.2.1 Test Bandwidth = 5

3.1.1.2.1.1 Test Channel = MCH

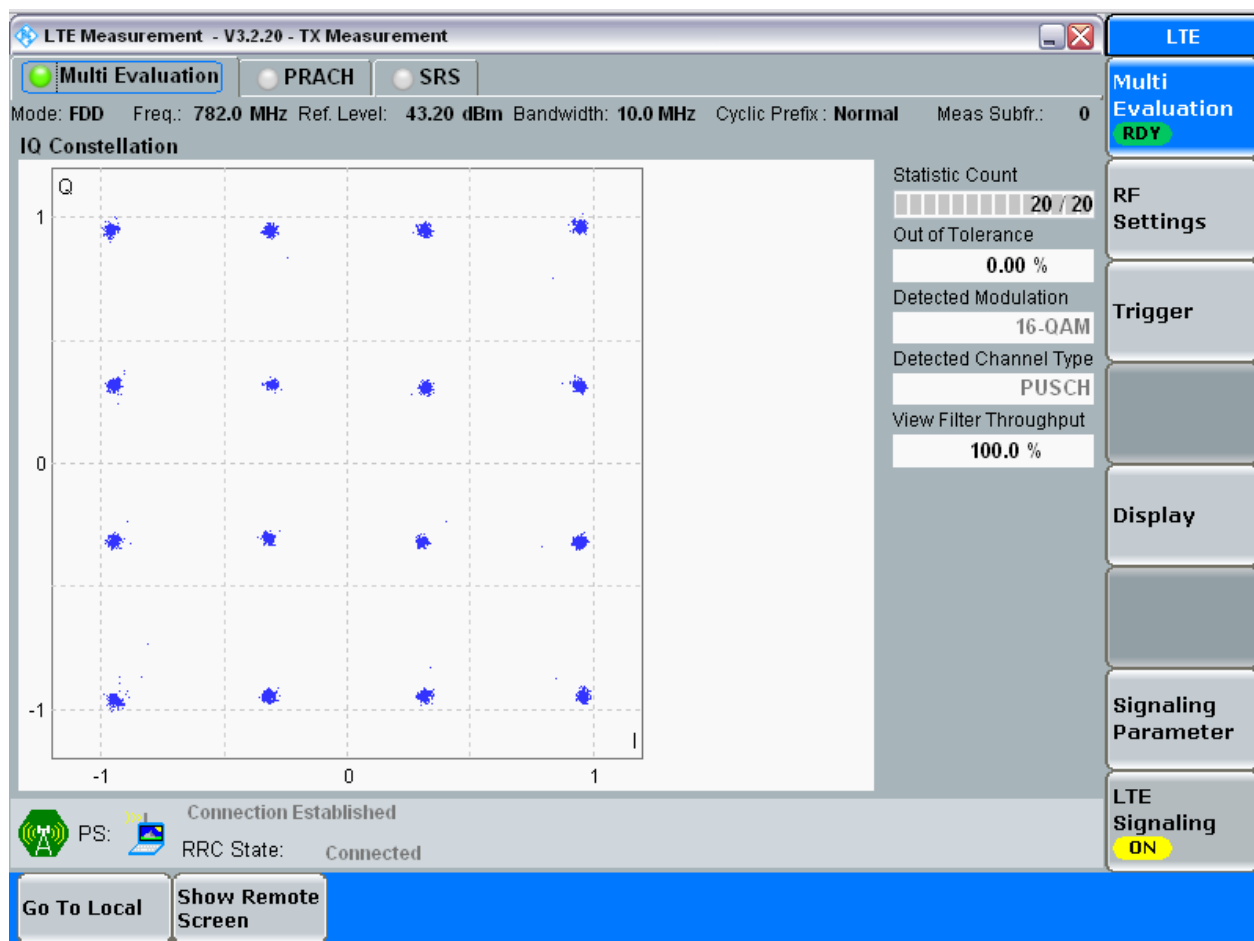
3.1.1.2.1.1.1 Test RB = RB25#0



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
BAND13	LTE/TM1	5	LCH	RB25#0	4.51	4.91	Pass
			MCH	RB25#0	4.51	4.92	Pass
			HCH	RB25#0	4.50	4.88	Pass
		10	LCH	RB50#0	9.01	9.70	Pass
			MCH	RB50#0	9.01	9.67	Pass
			HCH	RB50#0	9.02	9.70	Pass
	LTE/TM2	5	LCH	RB25#0	4.51	4.93	Pass
			MCH	RB25#0	4.51	4.90	Pass
			HCH	RB25#0	4.51	4.93	Pass
		10	LCH	RB50#0	9.00	9.63	Pass
			MCH	RB50#0	9.00	9.64	Pass
			HCH	RB50#0	9.01	9.67	Pass

Part II - Test Plots

4.1 For LTE

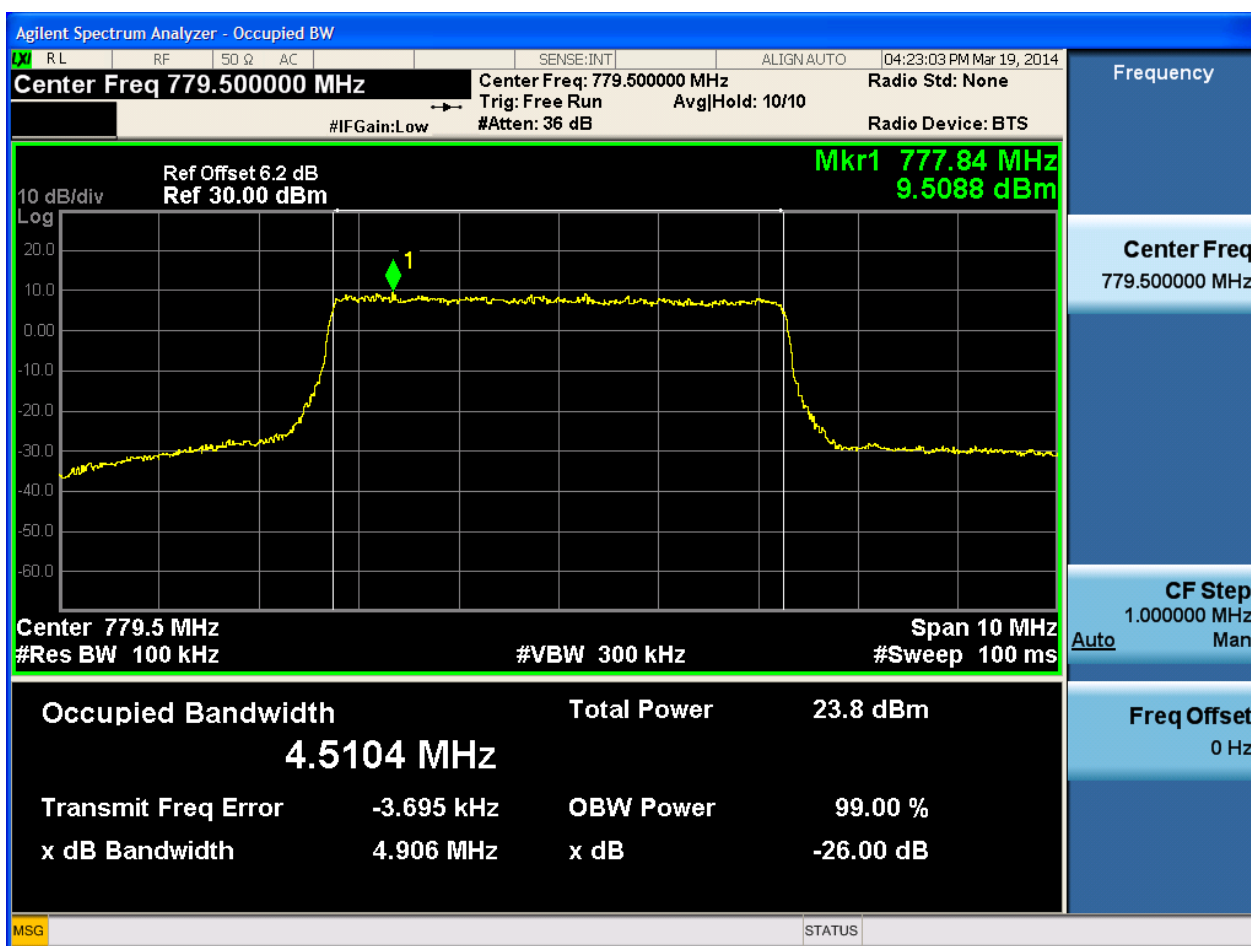
4.1.1 Test Band = BAND13

4.1.1.1 Test Mode = LTE/TM1

4.1.1.1.1 Test Bandwidth = 5

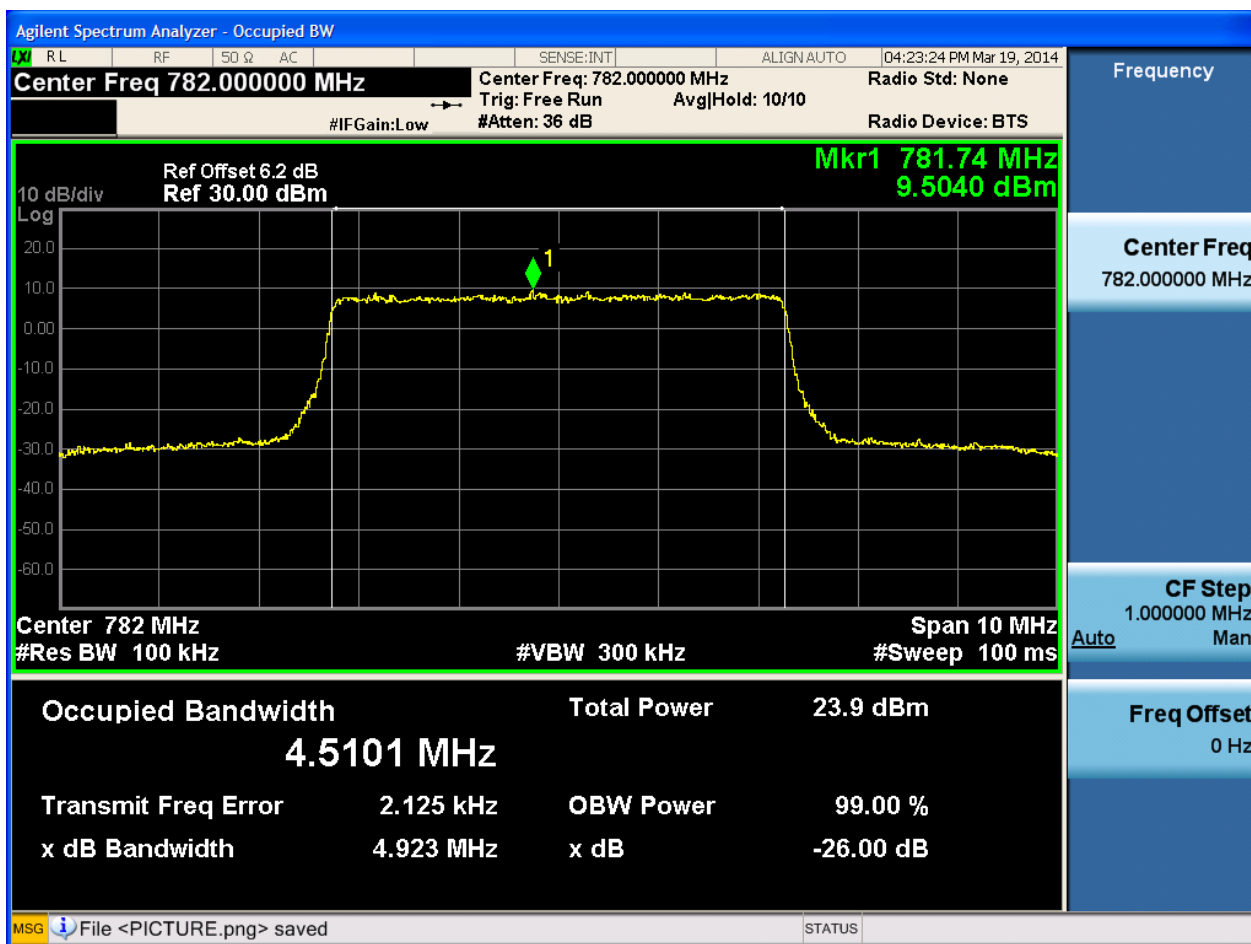
4.1.1.1.1.1 Test Channel = LCH

4.1.1.1.1.1.1 Test RB = RB25#0



4.1.1.1.1.2 Test Channel = MCH

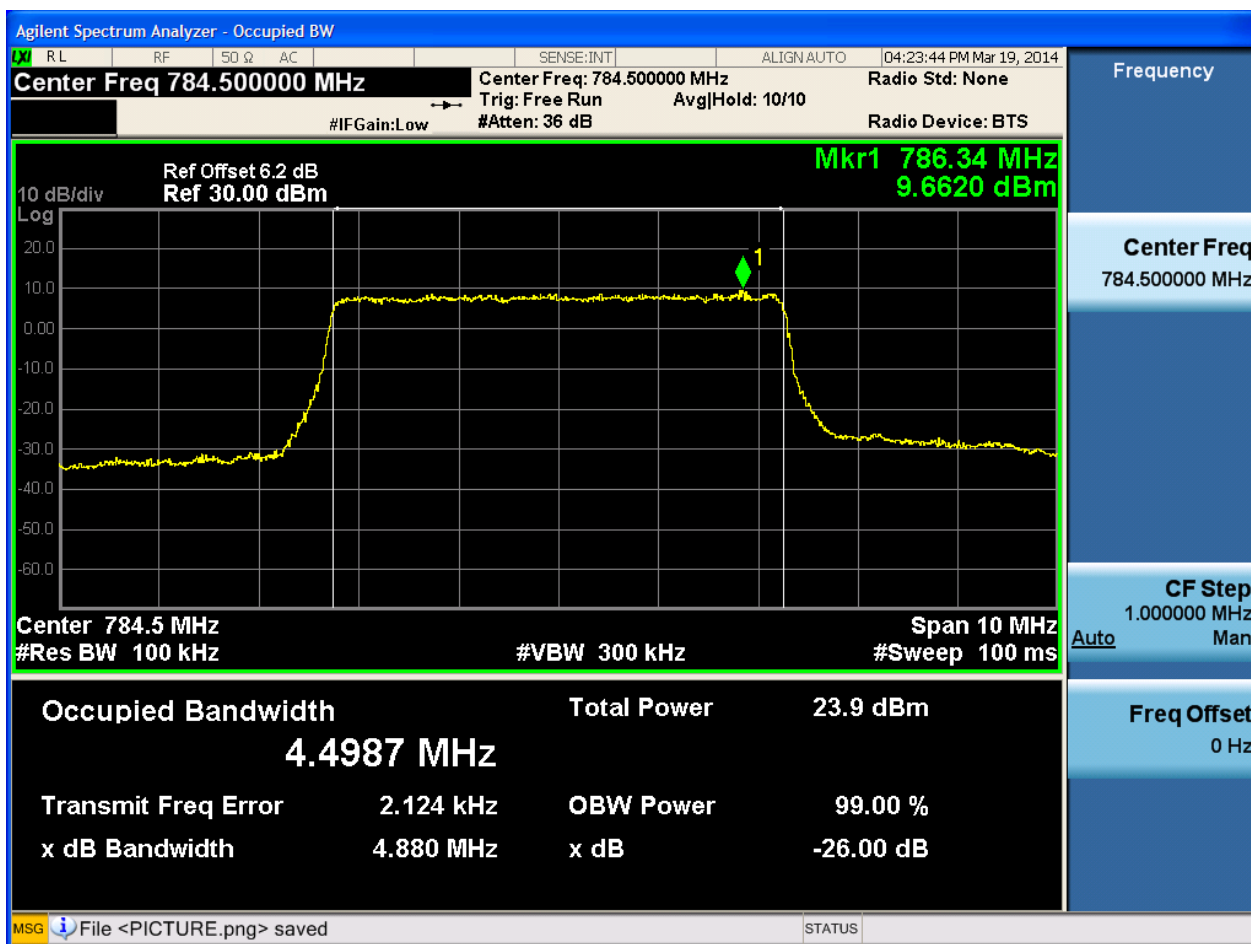
4.1.1.1.1.2.1 Test RB = RB25#0





4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 Test RB = RB25#0

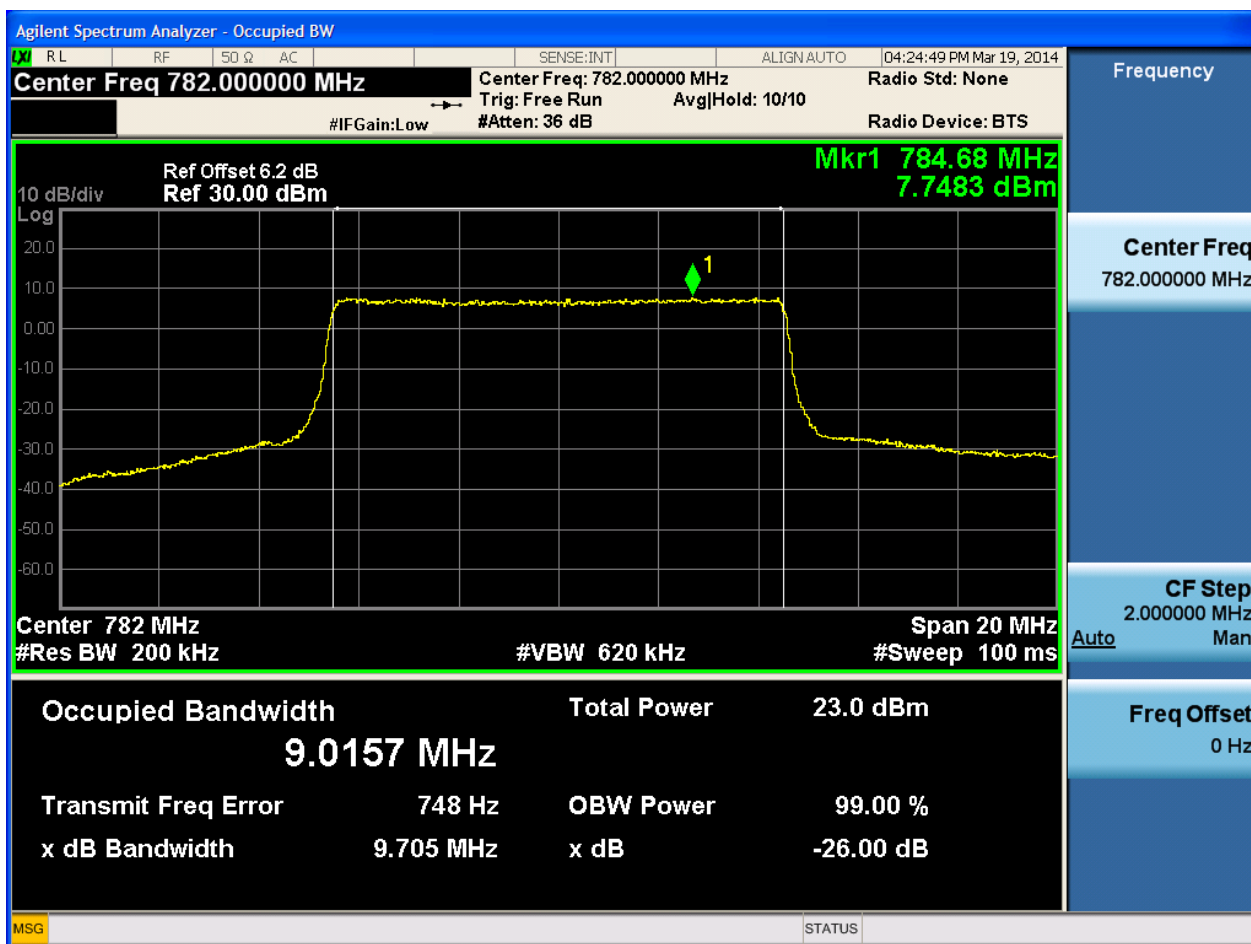




4.1.1.1.2 Test Bandwidth = 10

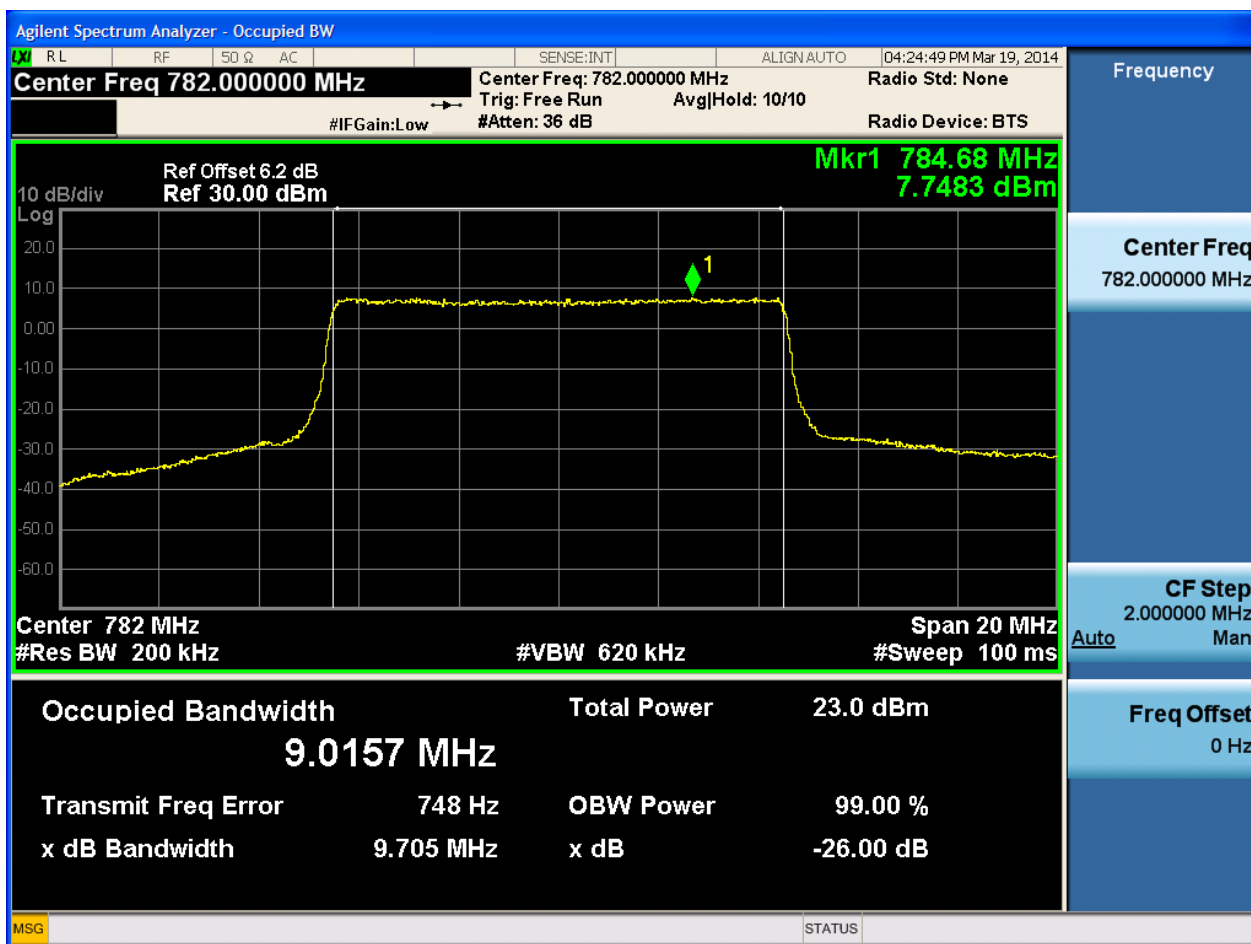
4.1.1.1.2.1 Test Channel = LCH

4.1.1.1.2.1.1 Test RB = RB50#0



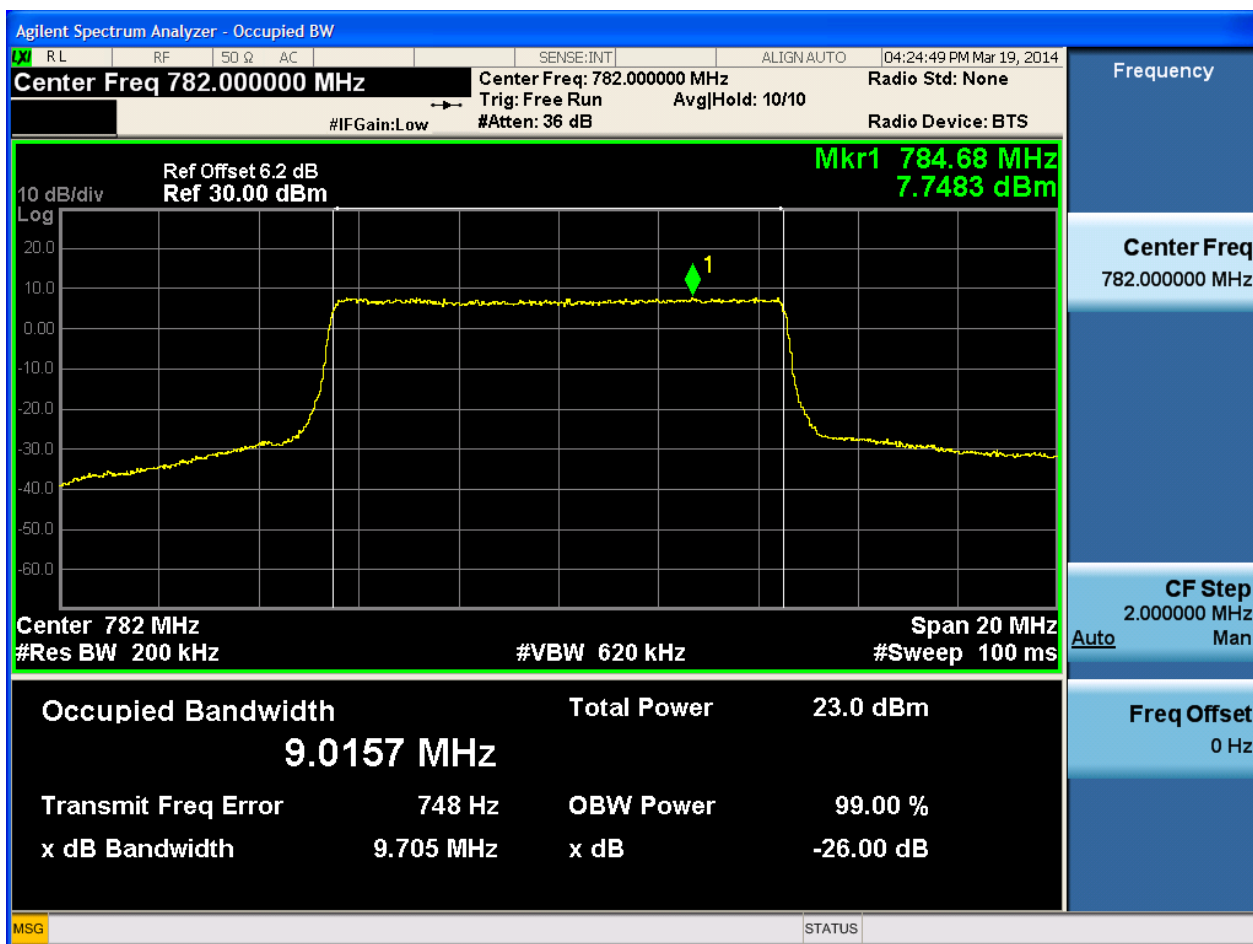
4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 Test RB = RB50#0



4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 Test RB = RB50#0



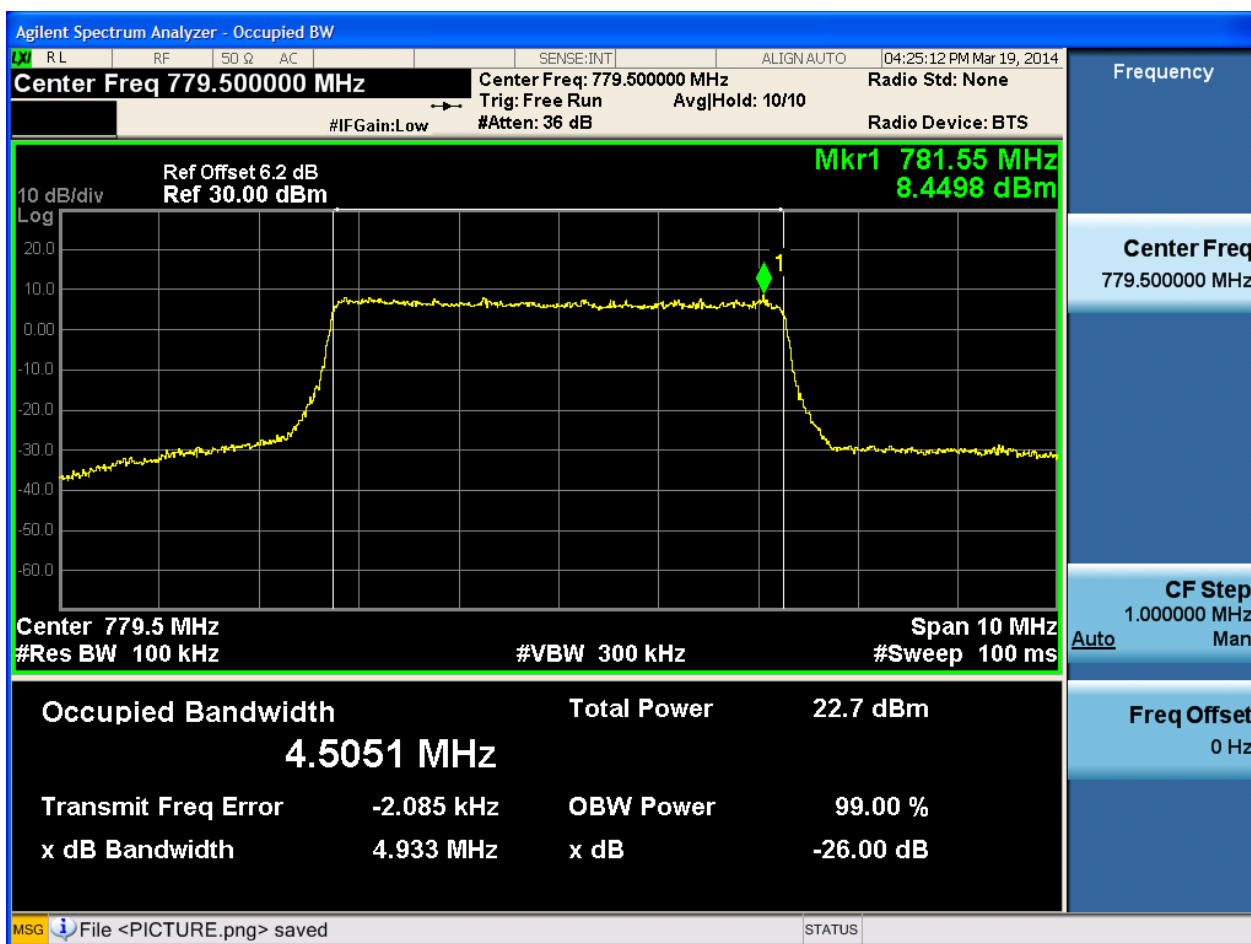


4.1.1.2 Test Mode = LTE/TM2

4.1.1.2.1 Test Bandwidth = 5

4.1.1.2.1.1 Test Channel = LCH

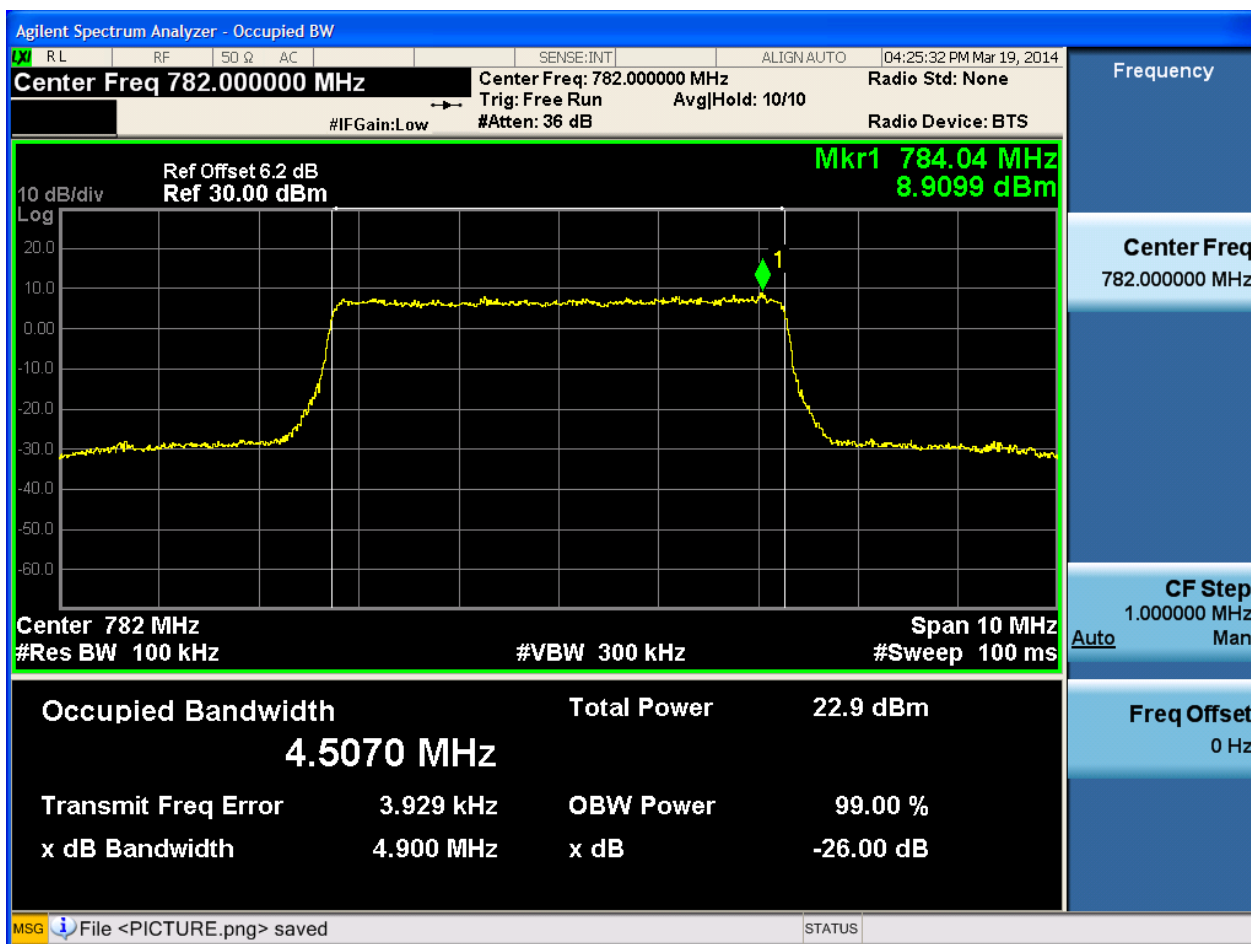
4.1.1.2.1.1.1 Test RB = RB25#0





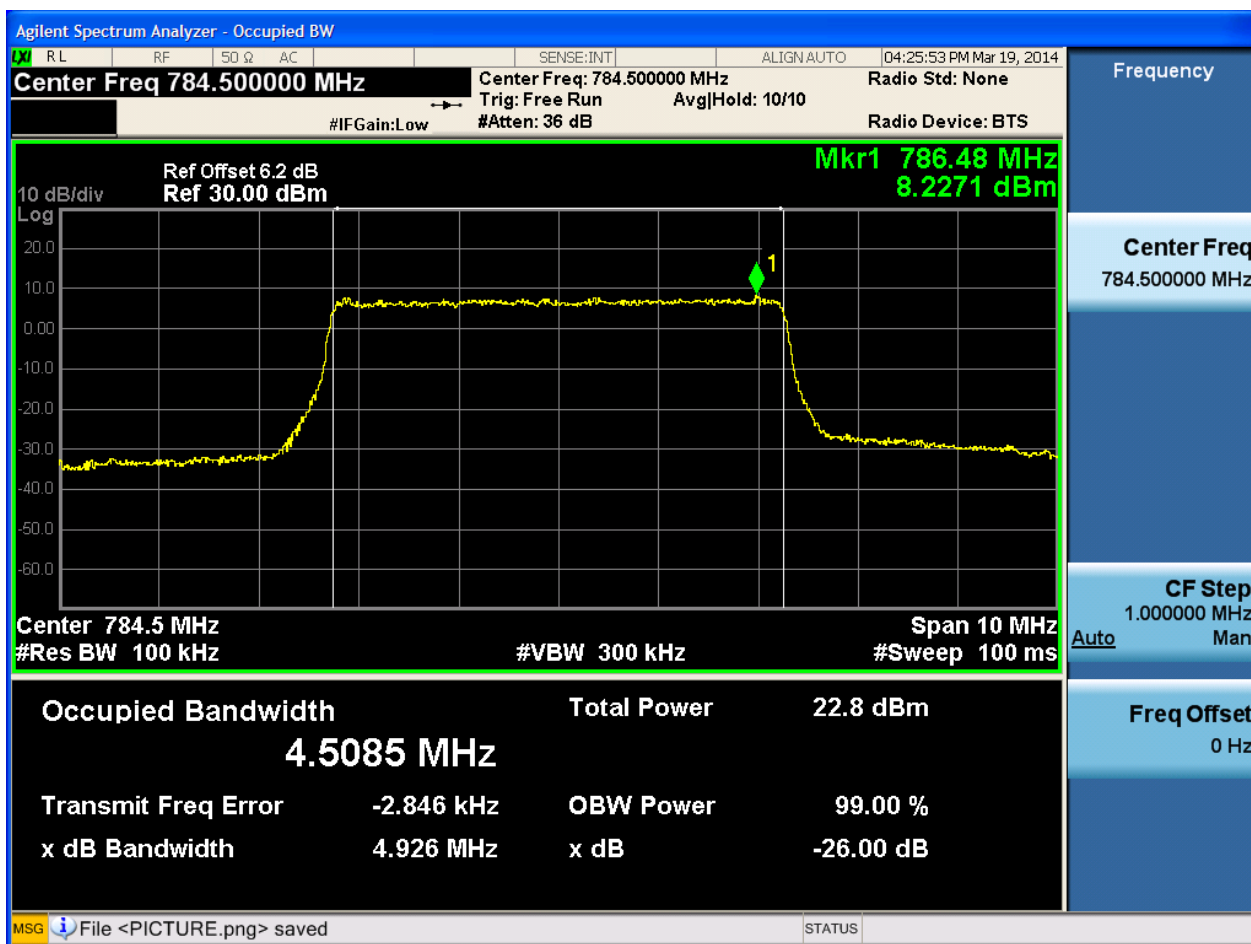
4.1.1.2.1.2 Test Channel = MCH

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

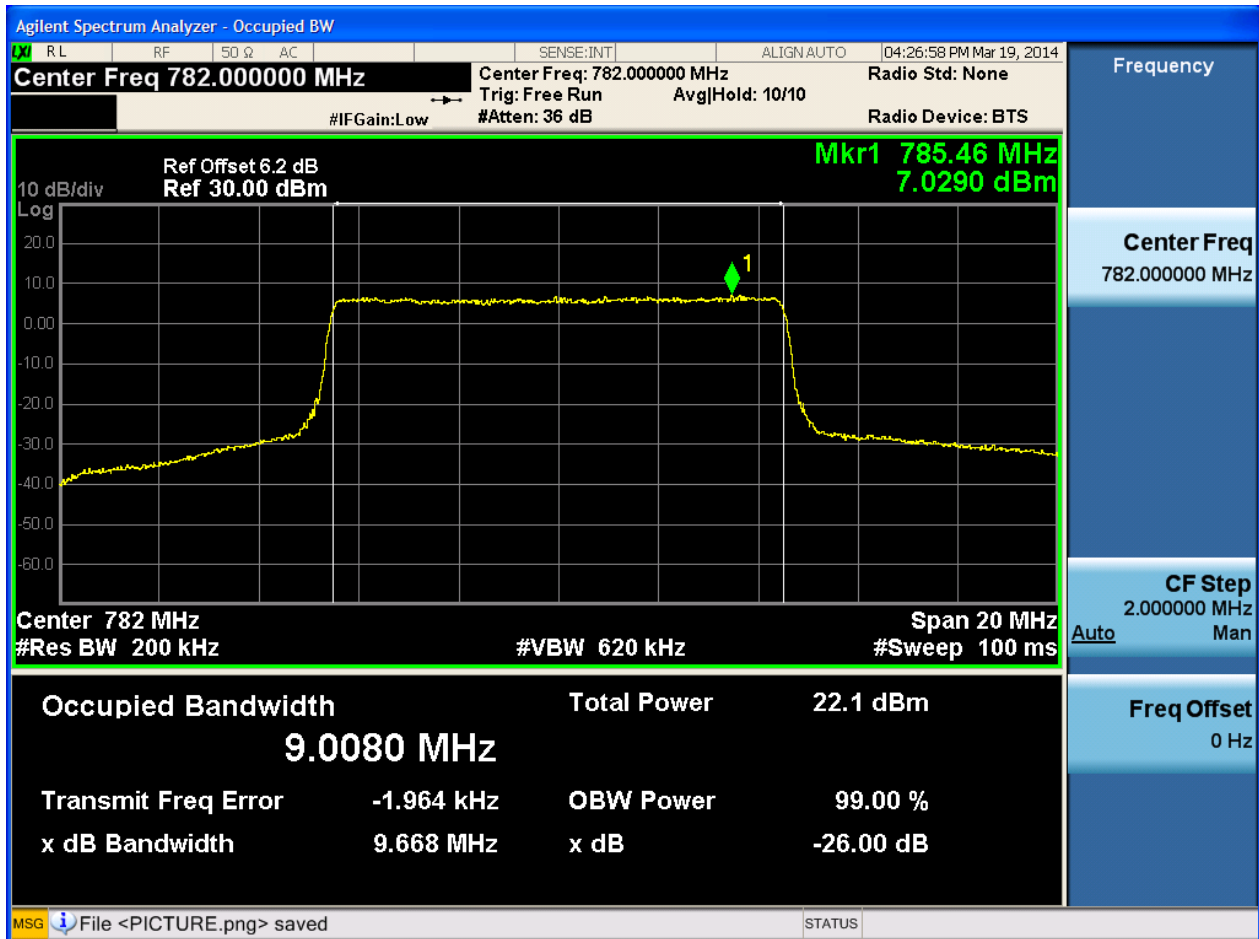




4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

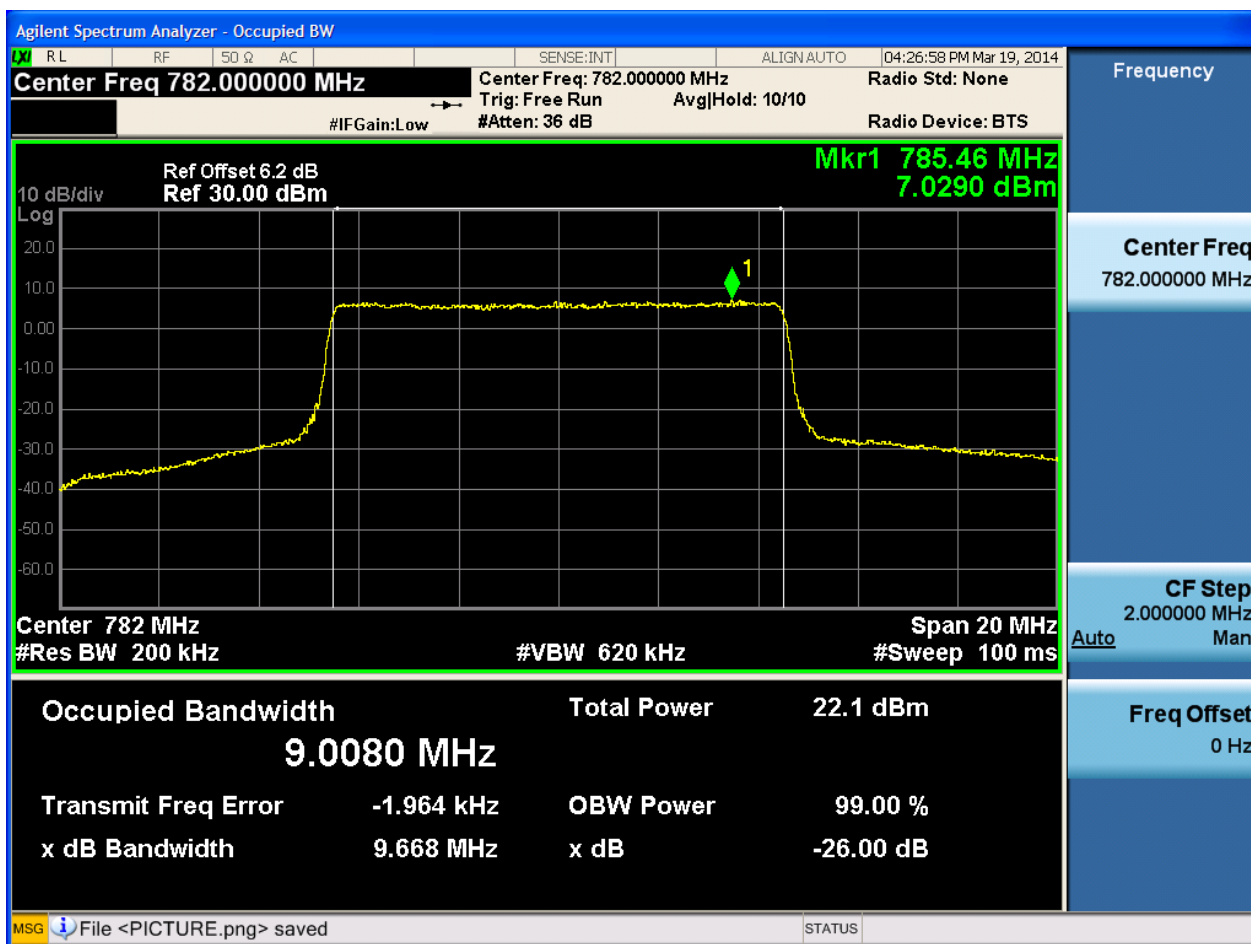
4.1.1.2.2.1.1 Test RB = RB50#0





4.1.1.2.2.2 Test Channel = MCH

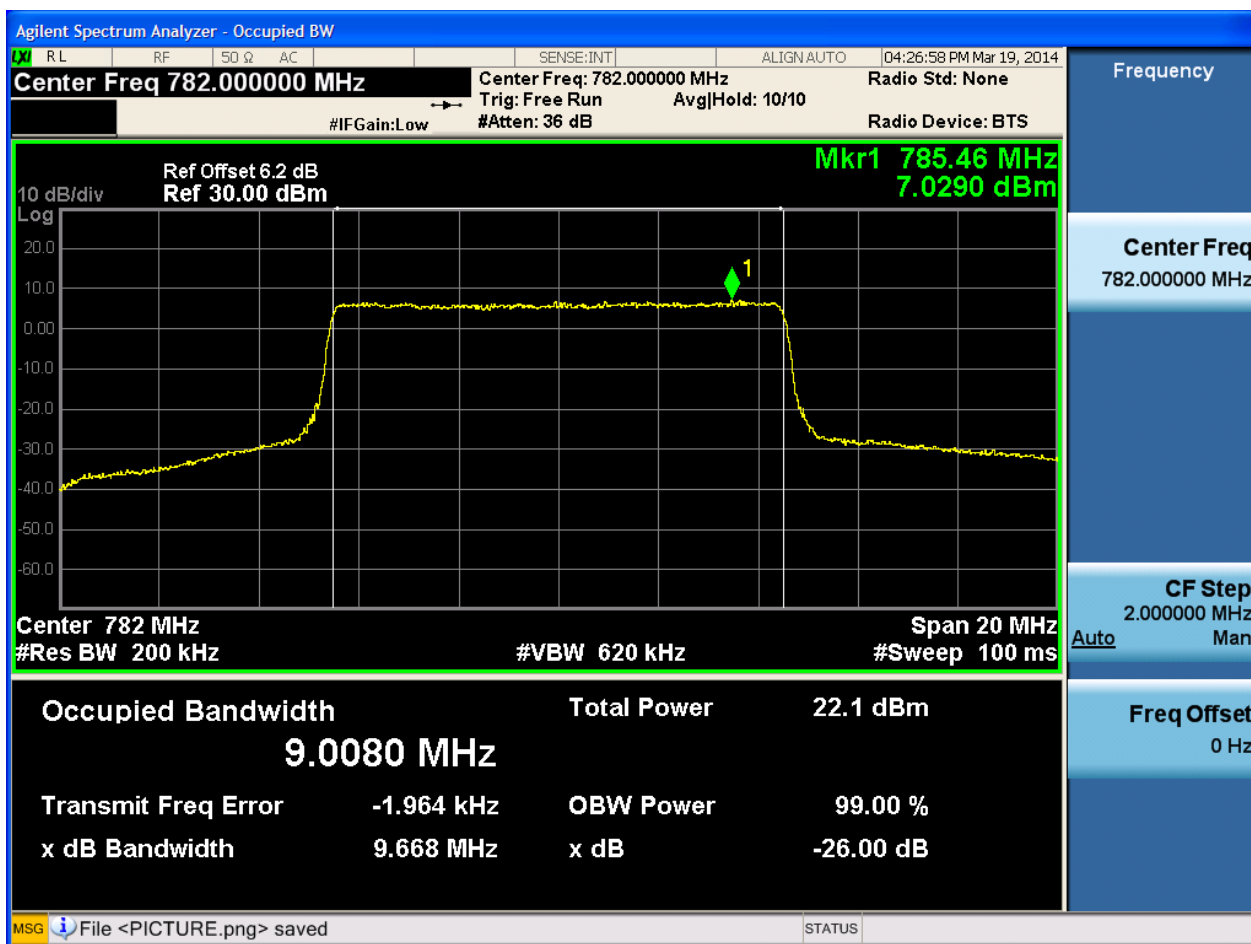
4.1.1.2.2.2.1 Test RB = RB50#0





4.1.1.2.2.3 Test Channel = HCH

4.1.1.2.2.3.1 Test RB = RB50#0



5Appendix_E: Band Edges Compliance

Part I - Test Plots

5.1 For LTE

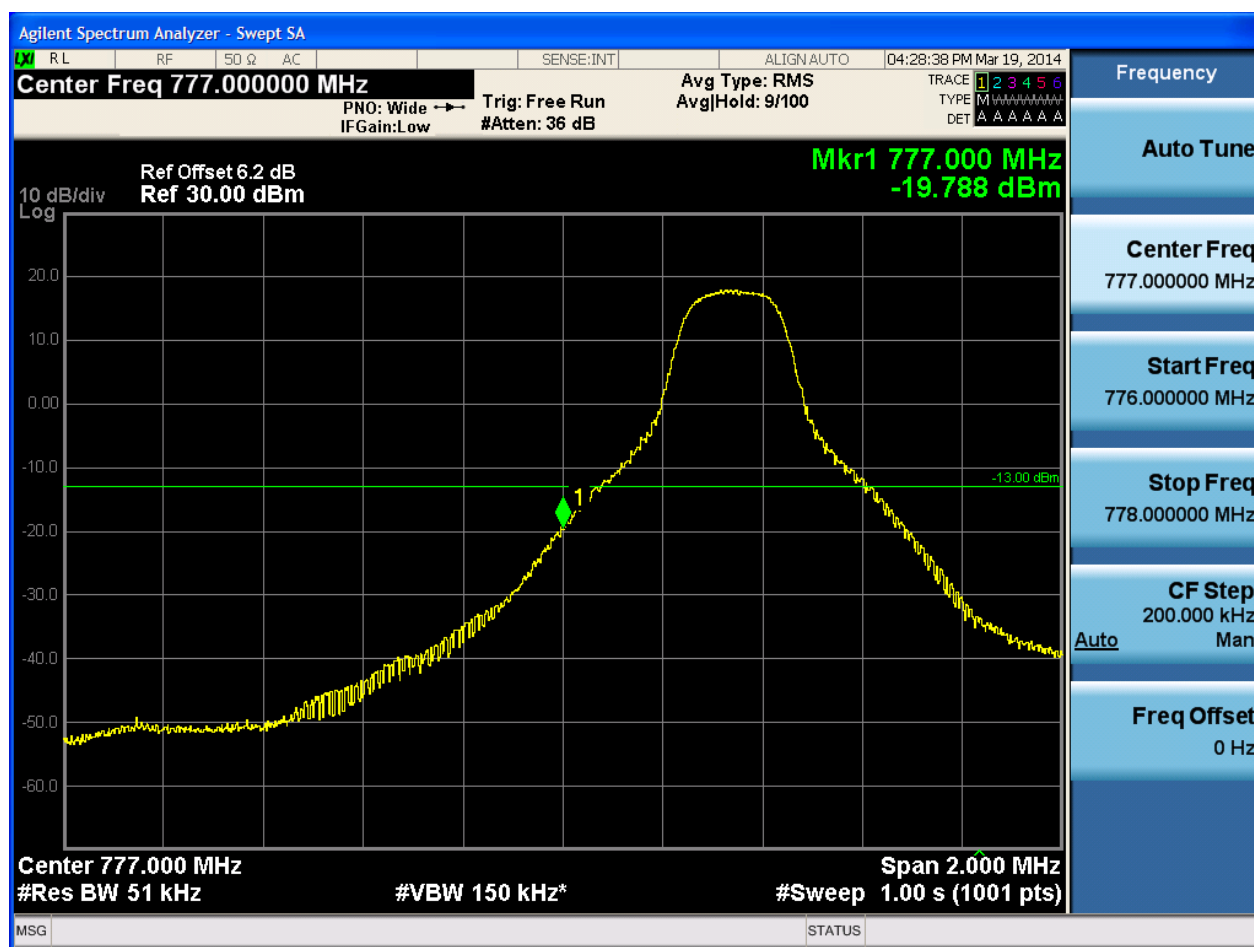
5.1.1 Test Band = BAND13

5.1.1.1 Test Mode = LTE/TM1

5.1.1.1.1 Test Bandwidth = 5

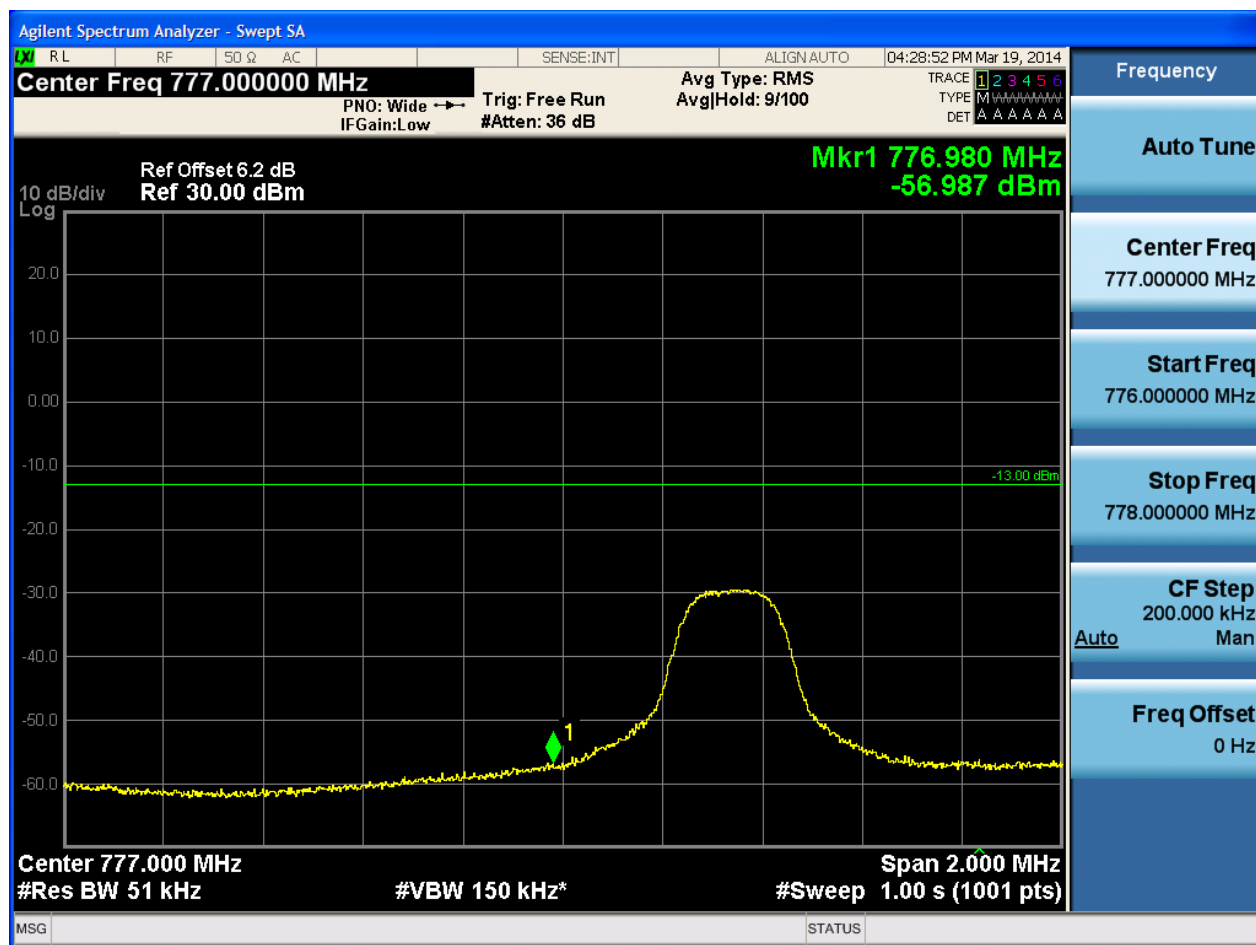
5.1.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1.1 Test RB = RB1#0



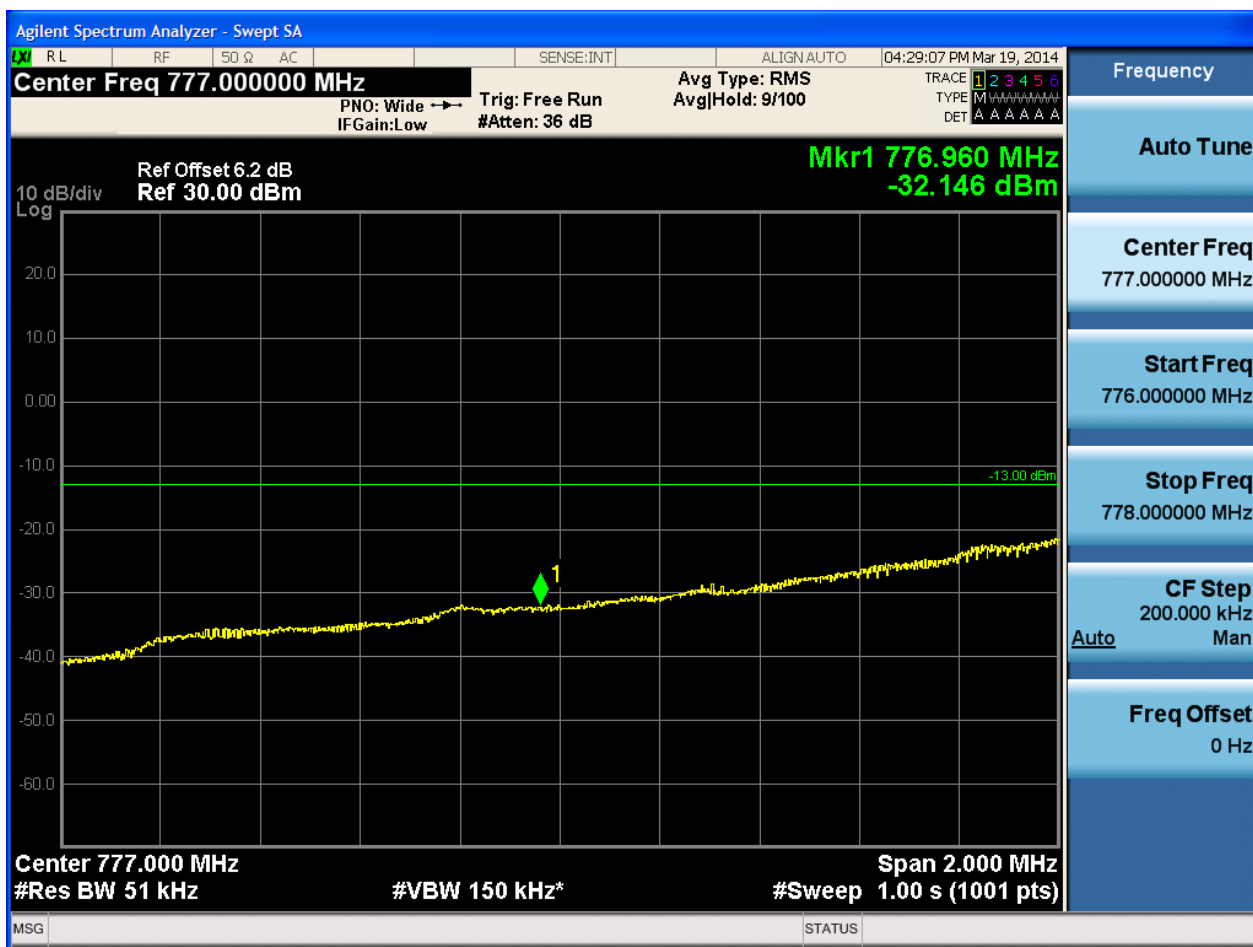


5.1.1.1.1.2 Test RB = RB1#24



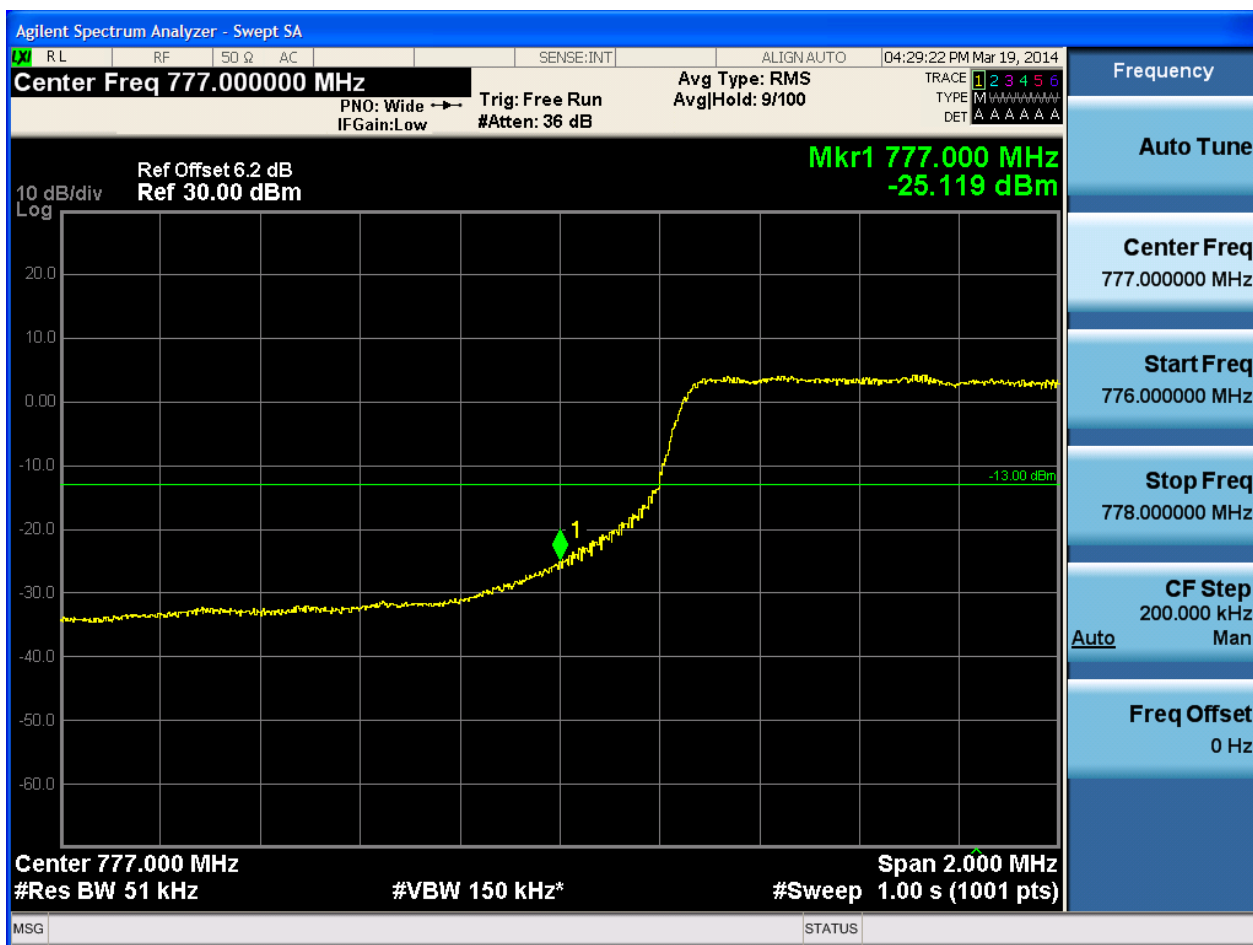


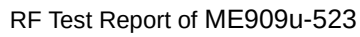
5.1.1.1.1.3 Test RB = RB12#6



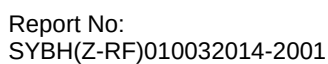


5.1.1.1.1.4 Test RB = RB25#0



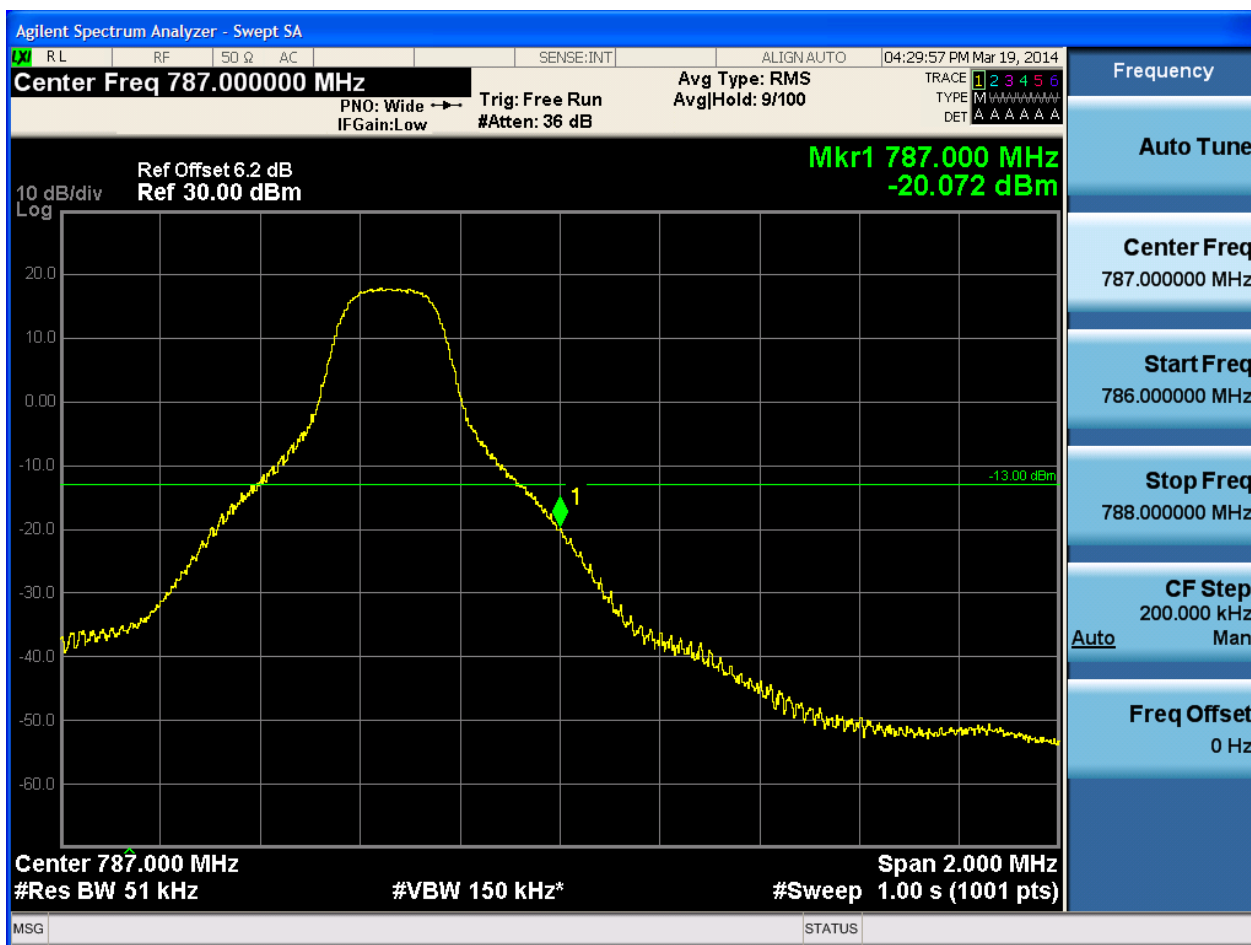


5.1.1.1.1.2.1 Test RB = RB1#0





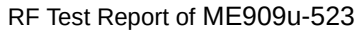
5.1.1.1.2.2 Test RB = RB1#24





5.1.1.1.2.3 Test RB = RB12#6





Agilent Spectrum Analyzer - Swept SA

Center Freq 787.000000 MHz

Ref Offset 6.2 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 787.000 MHz
-26.309 dBm

Trig: Free Run
#Atten: 36 dB

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Center 787.000 MHz
#Res BW 51 kHz
#VBW 150 kHz*

Auto Tune

Center Freq
787.000000 MHz

Start Freq
786.000000 MHz

Stop Freq
788.000000 MHz

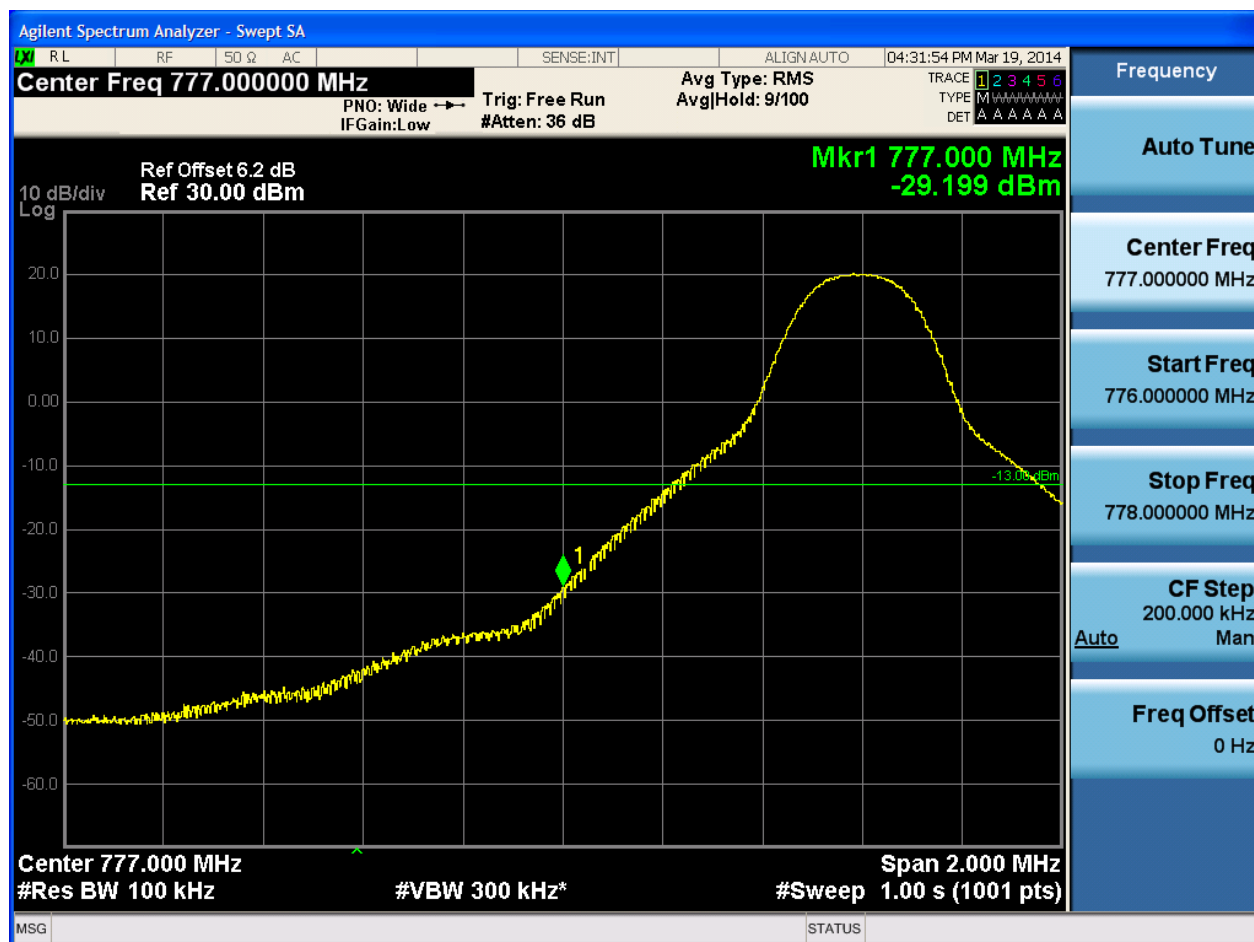
CF Step
200.000 kHz
Man

Freq Offset
0 Hz

5.1.1.1.2 Test Bandwidth = 10

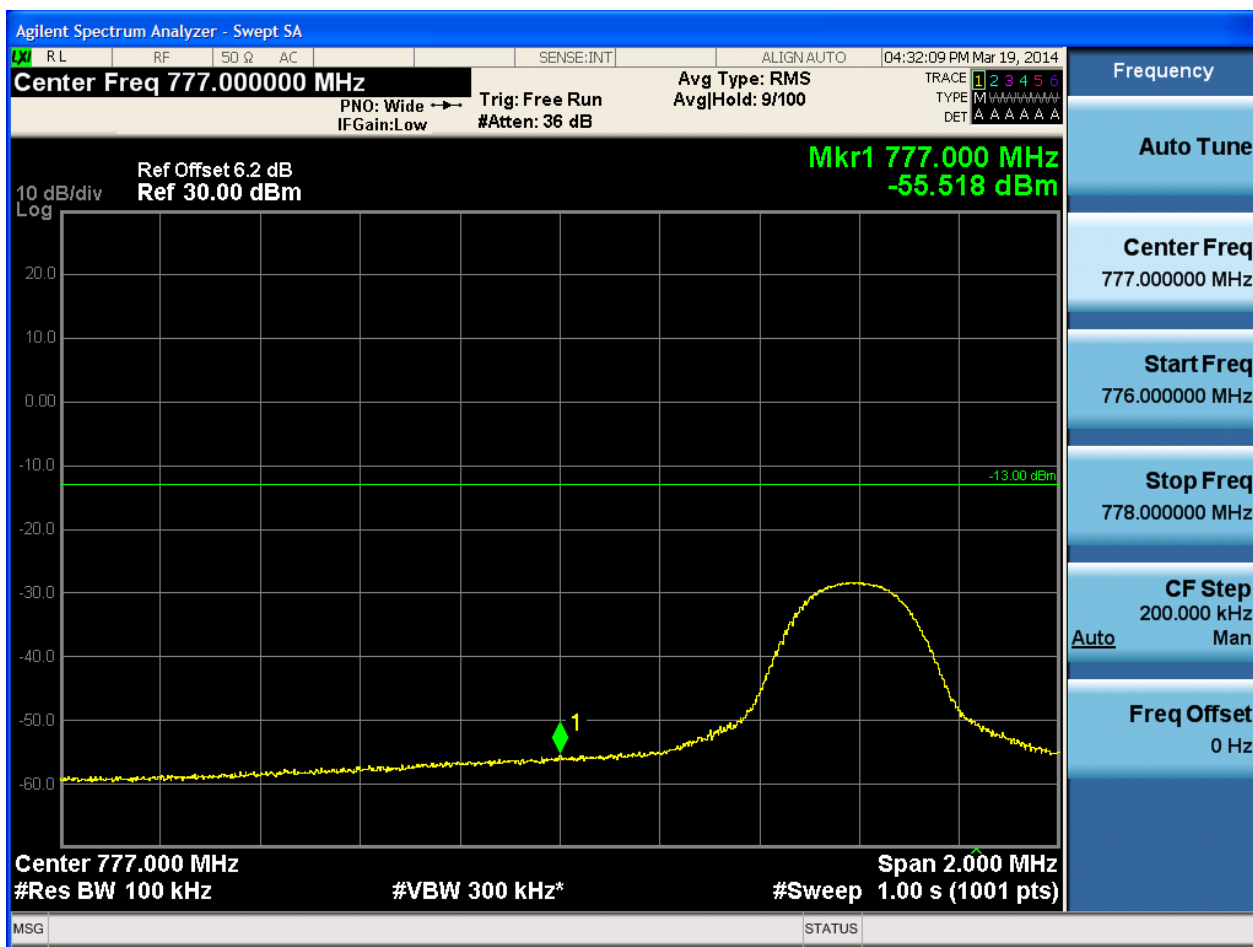
5.1.1.1.2.1 Test Channel = LCH

5.1.1.1.2.1.1 Test RB = RB1#0



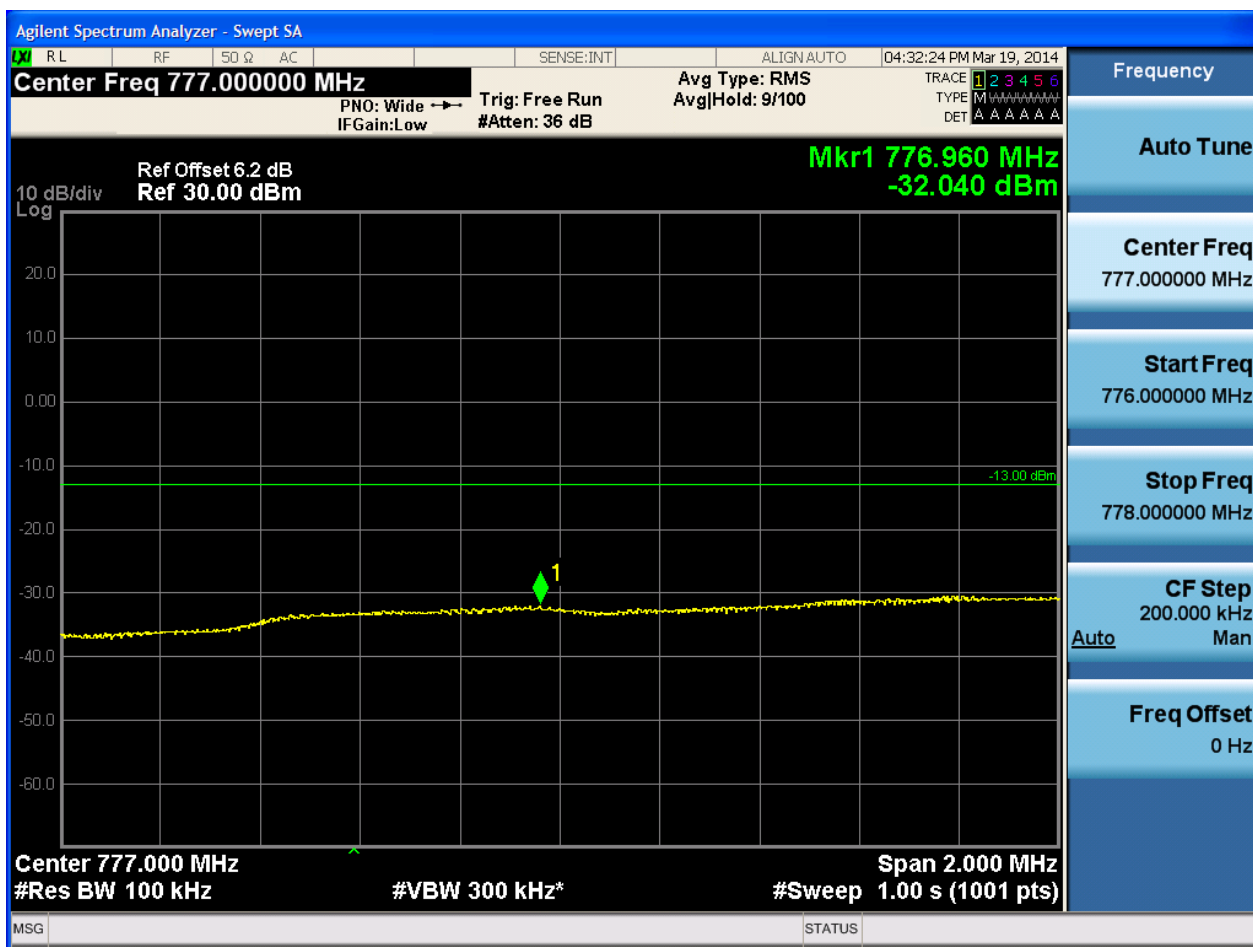


5.1.1.1.2.1.2 Test RB = RB1#49



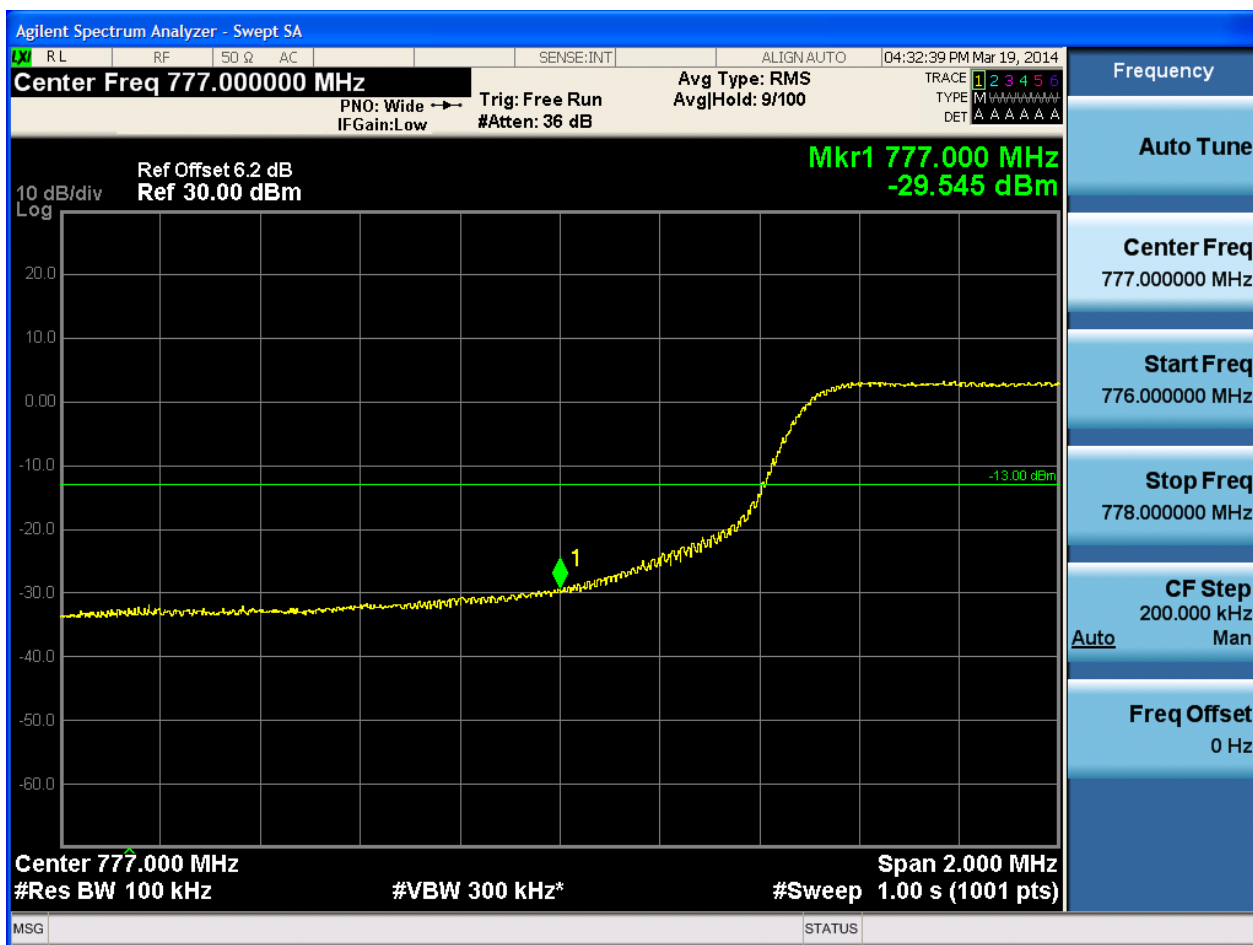


5.1.1.1.2.1.3 Test RB = RB25#13





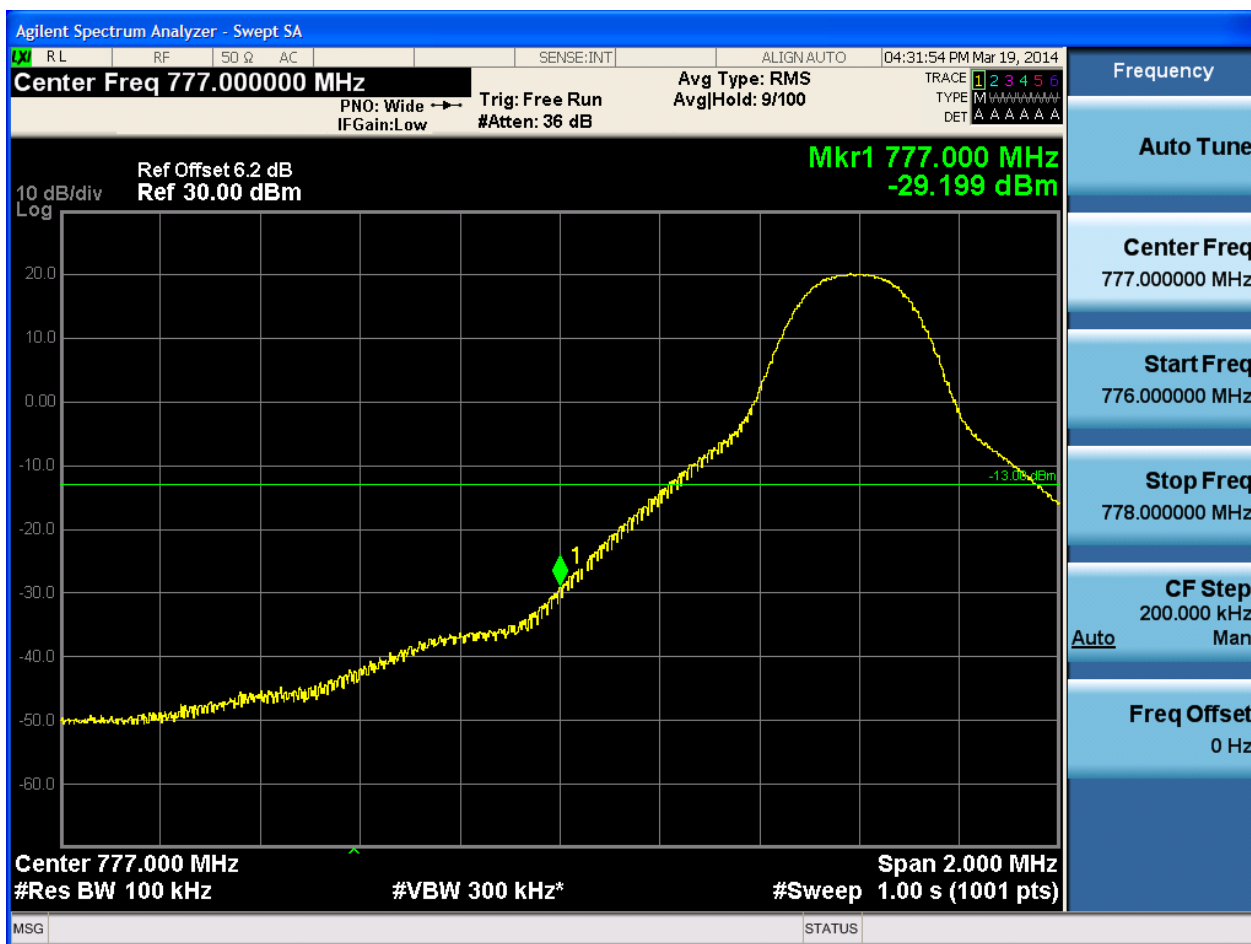
5.1.1.1.2.1.4 Test RB = RB50#0





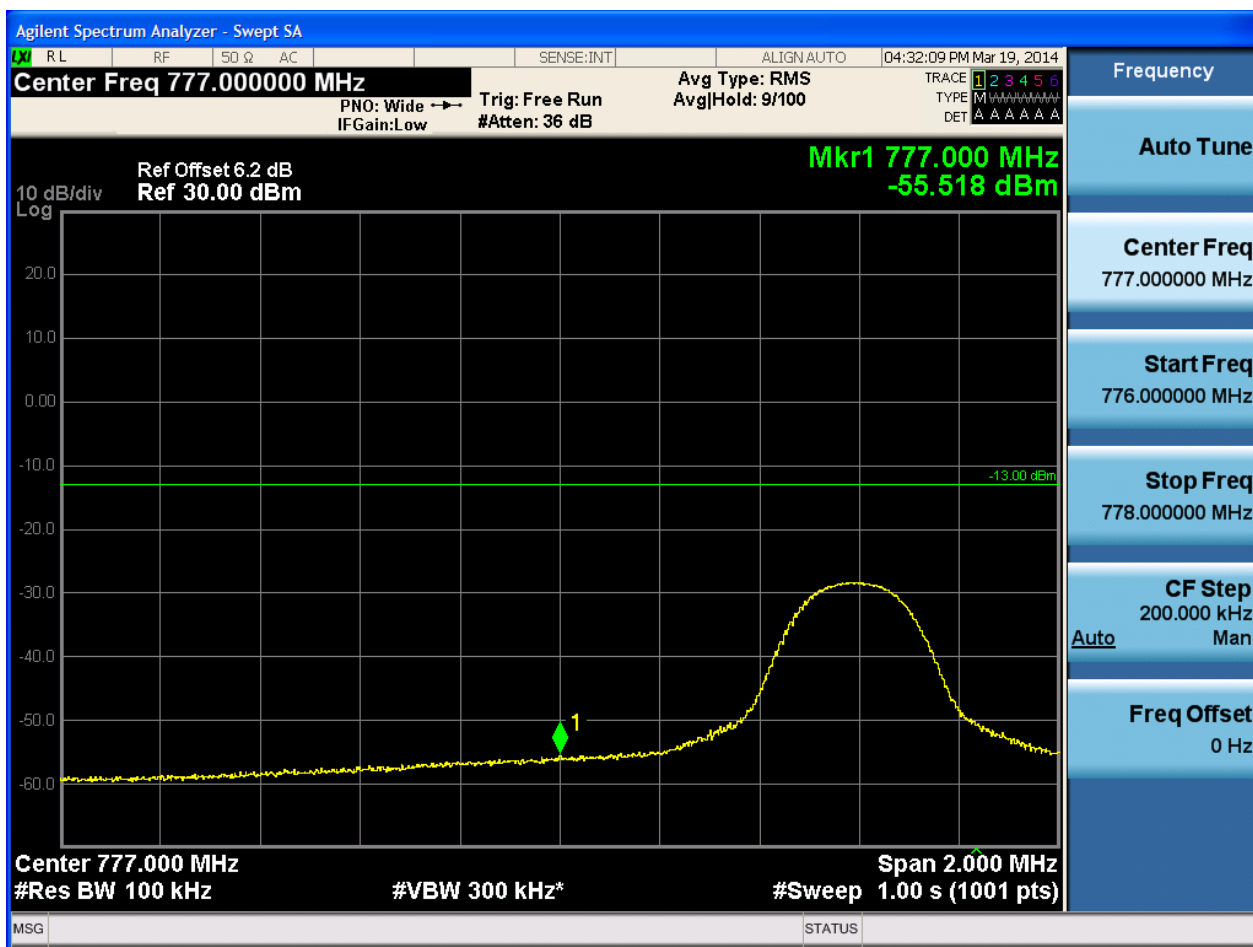
5.1.1.1.2.2 Test Channel = HCH

5.1.1.1.2.2.1 Test RB = RB1#0



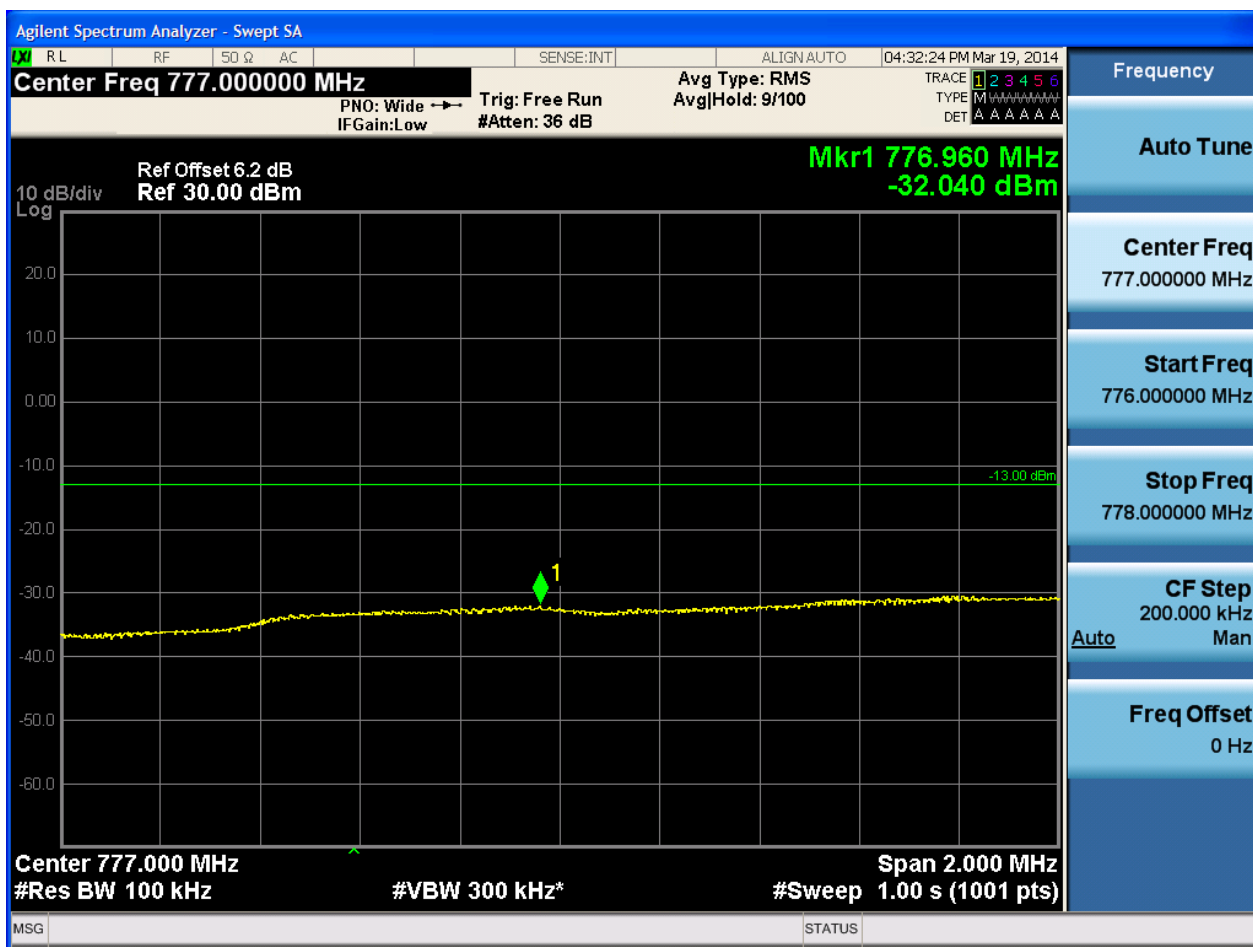


5.1.1.1.2.2 Test RB = RB1#49



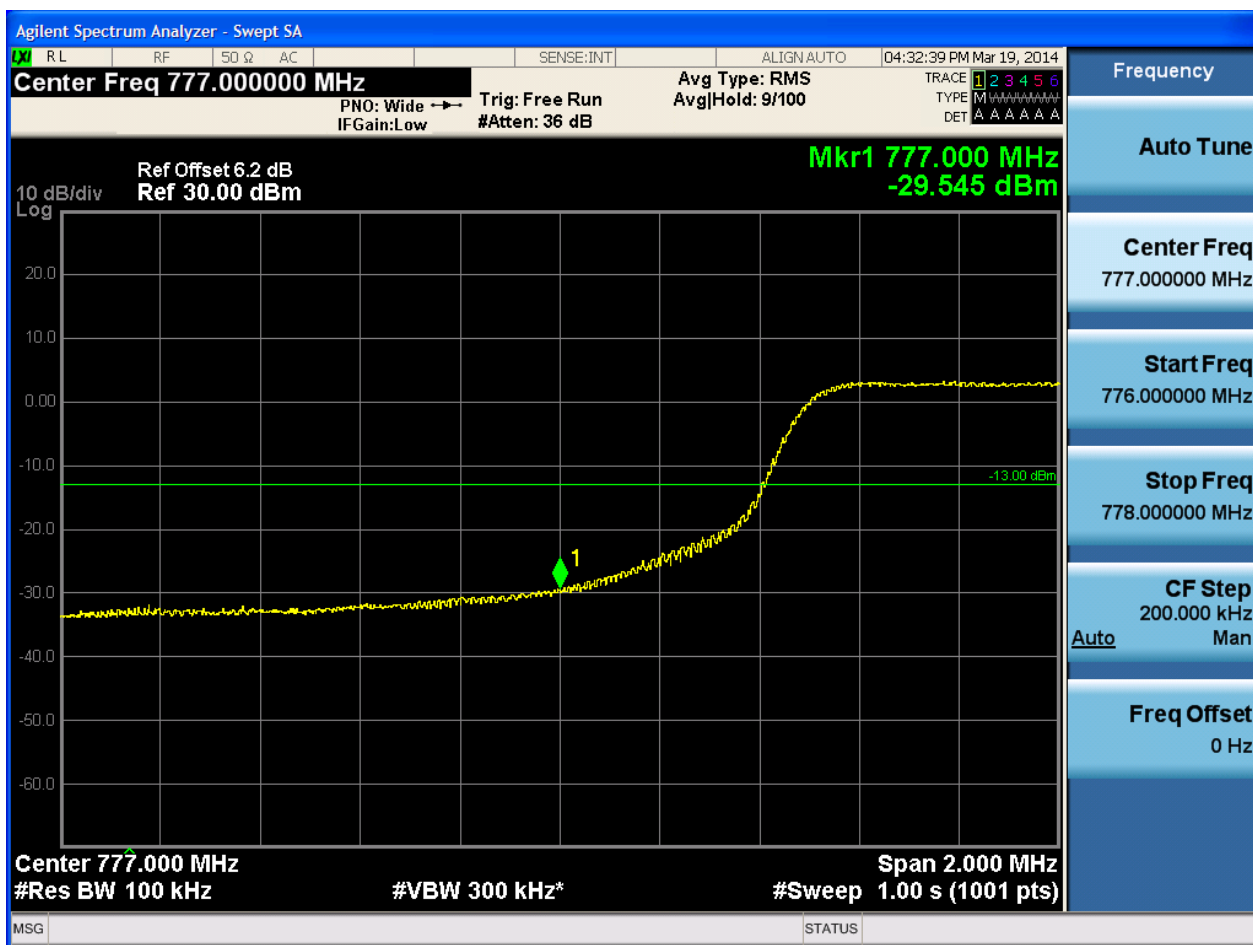


5.1.1.1.2.2.3 Test RB = RB25#13





5.1.1.1.2.2.4 Test RB = RB50#0



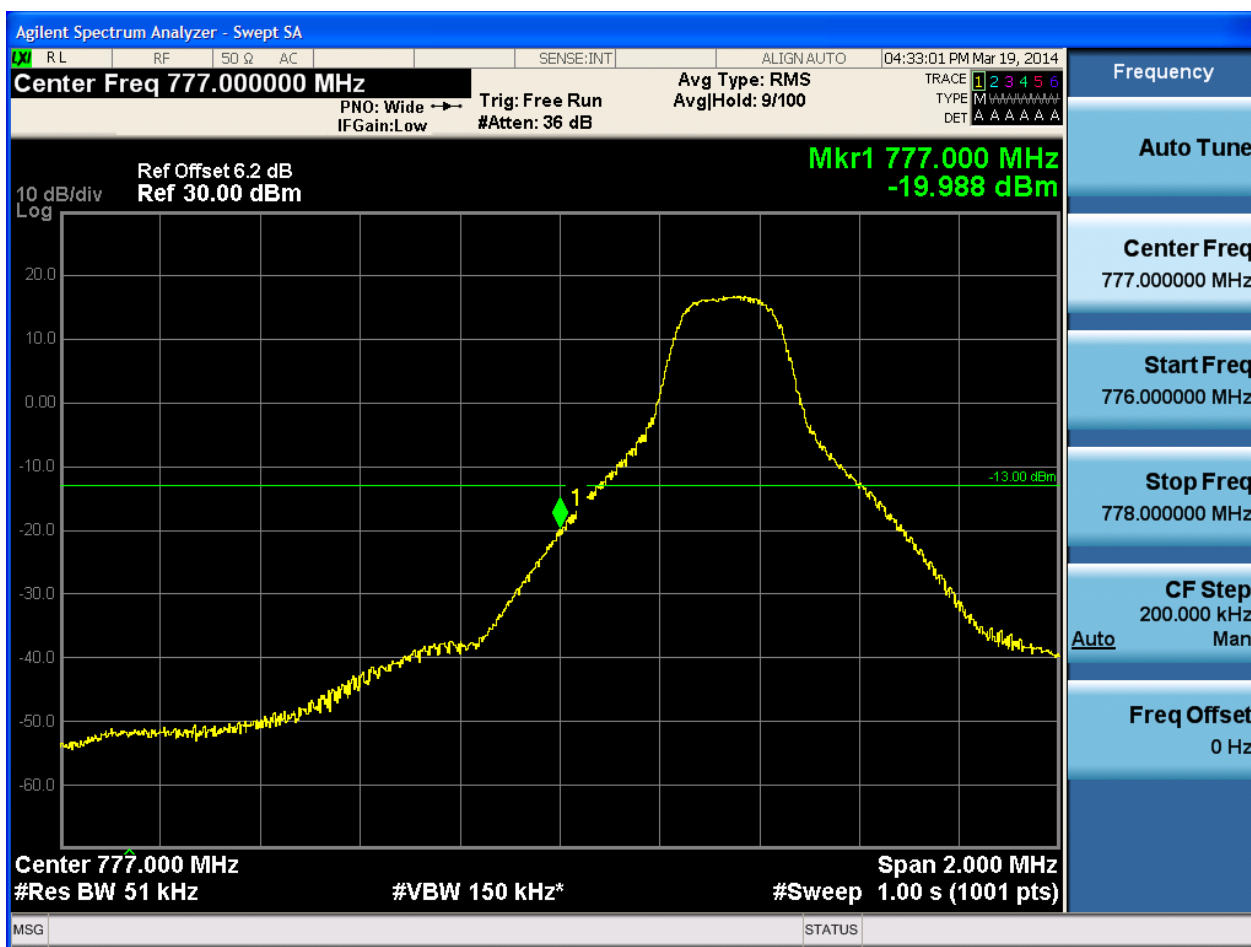


5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 5

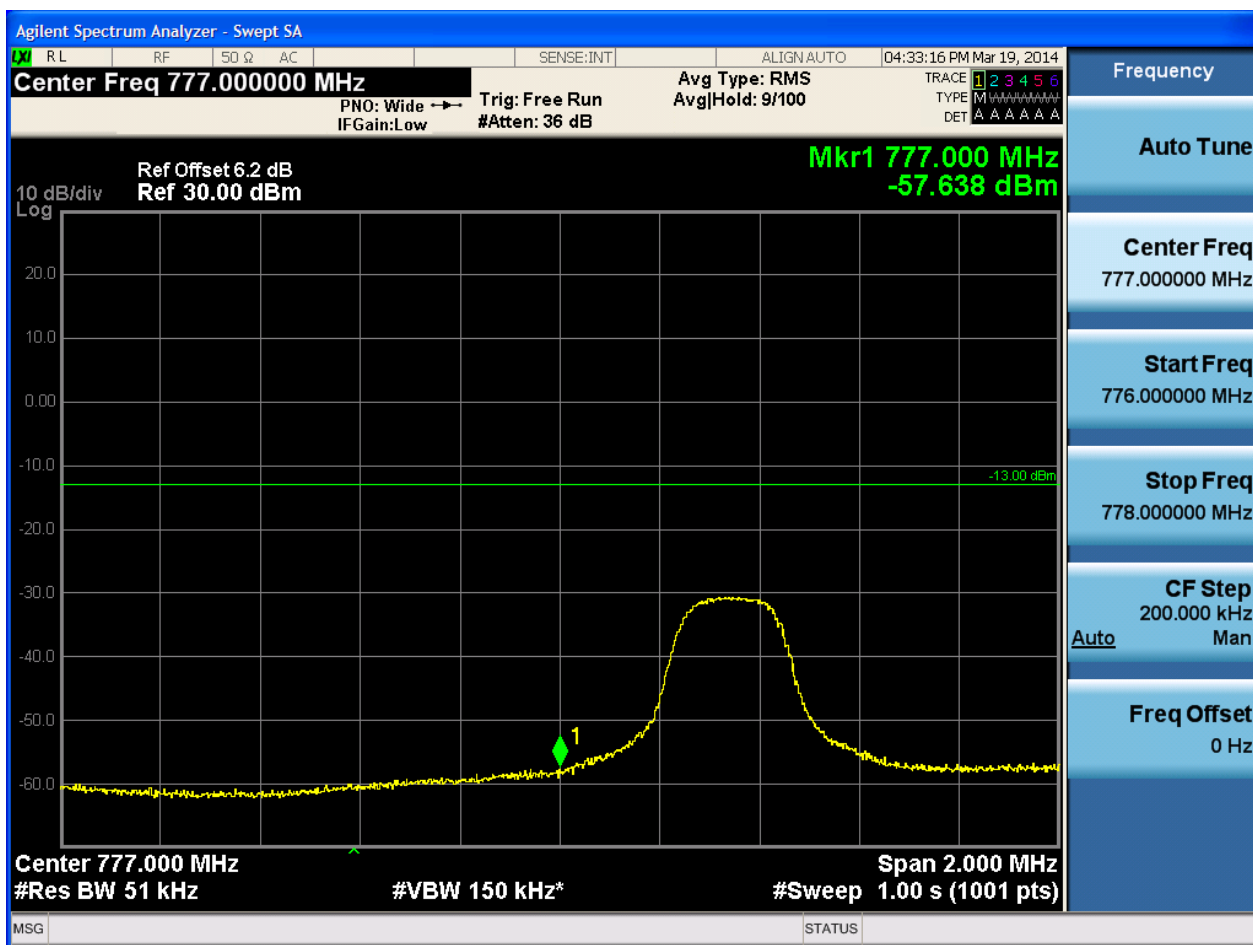
5.1.1.2.1.1 Test Channel = LCH

5.1.1.2.1.1.1 Test RB = RB1#0



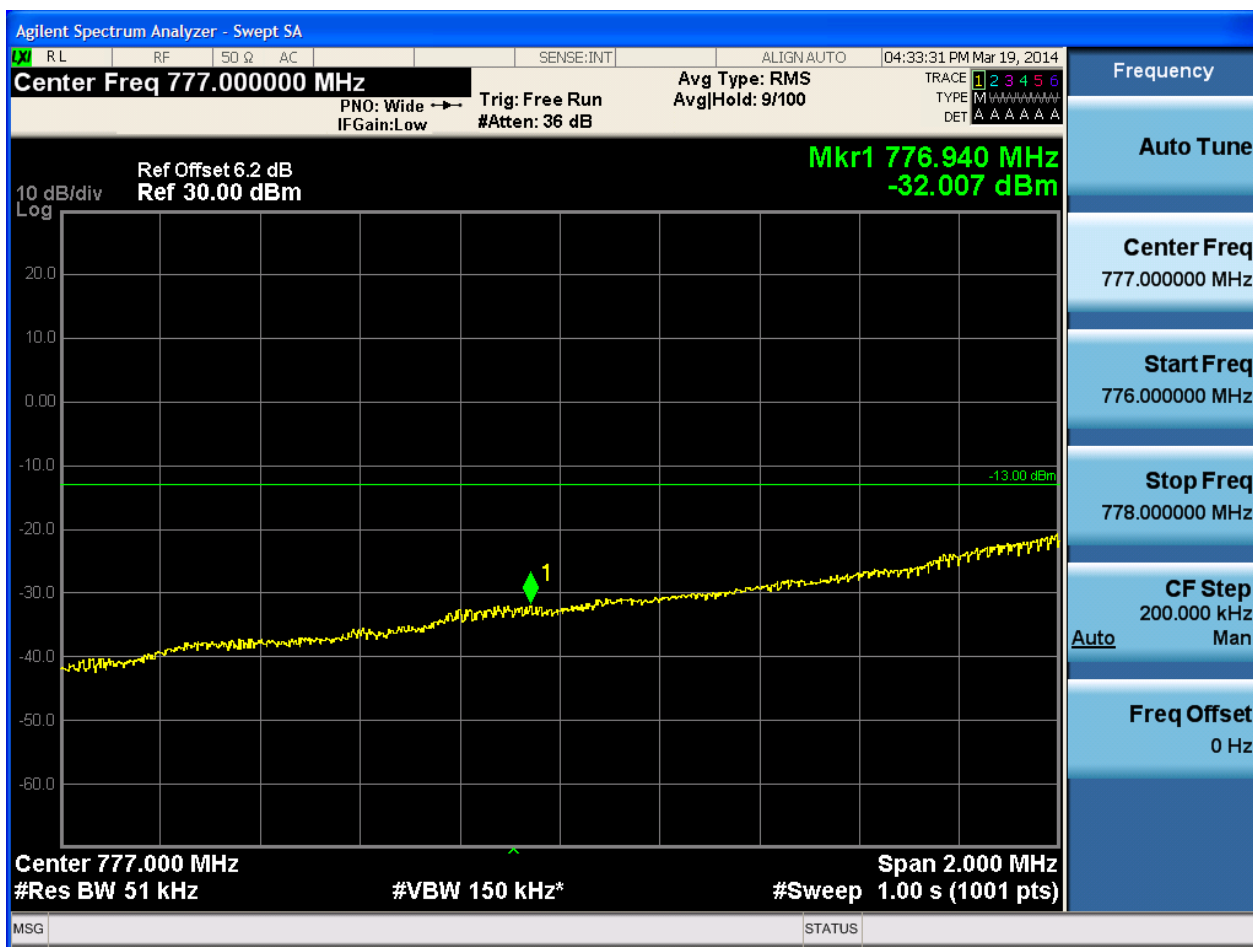


5.1.1.2.1.1.2 Test RB = RB1#24



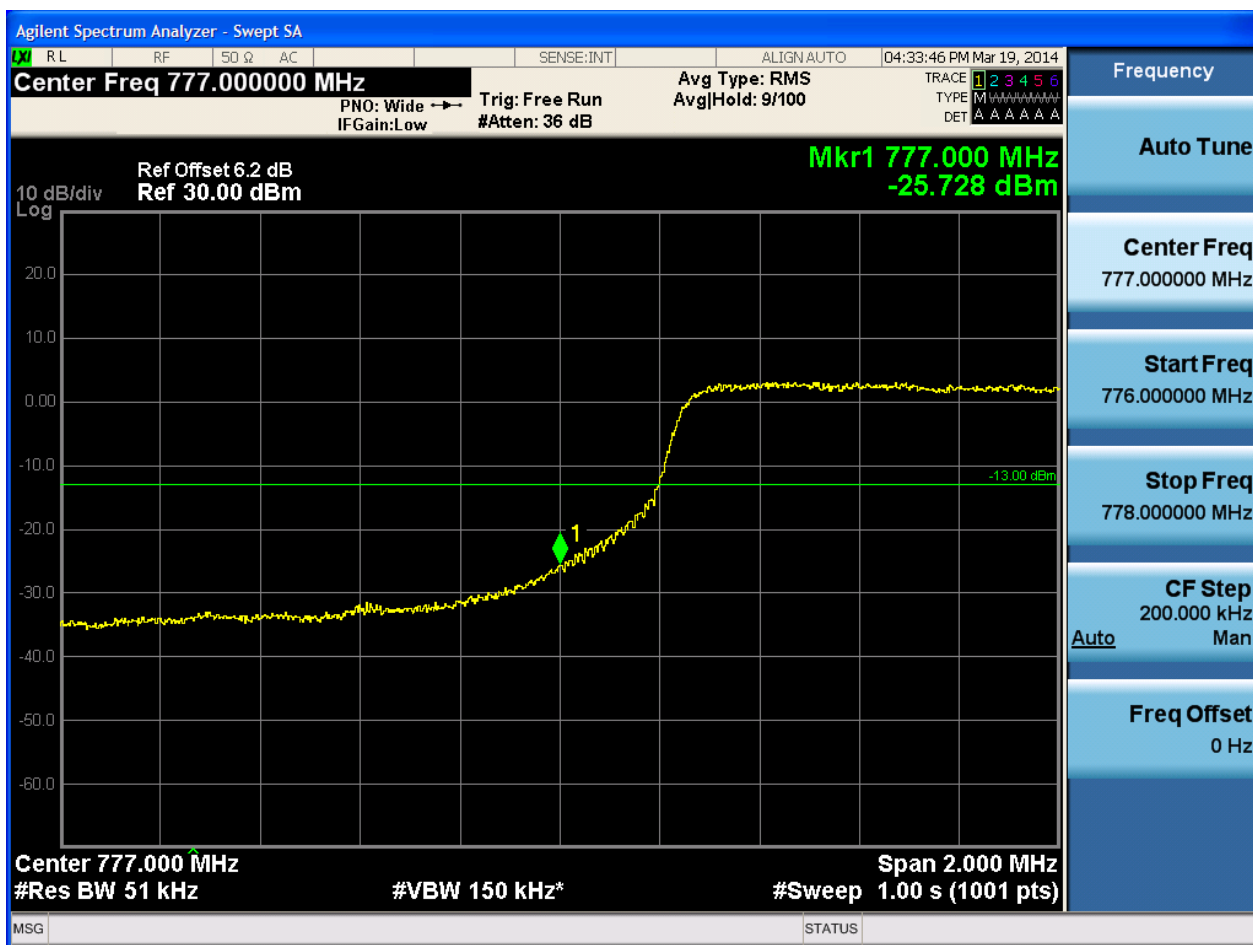


5.1.1.2.1.1.3 Test RB = RB12#6





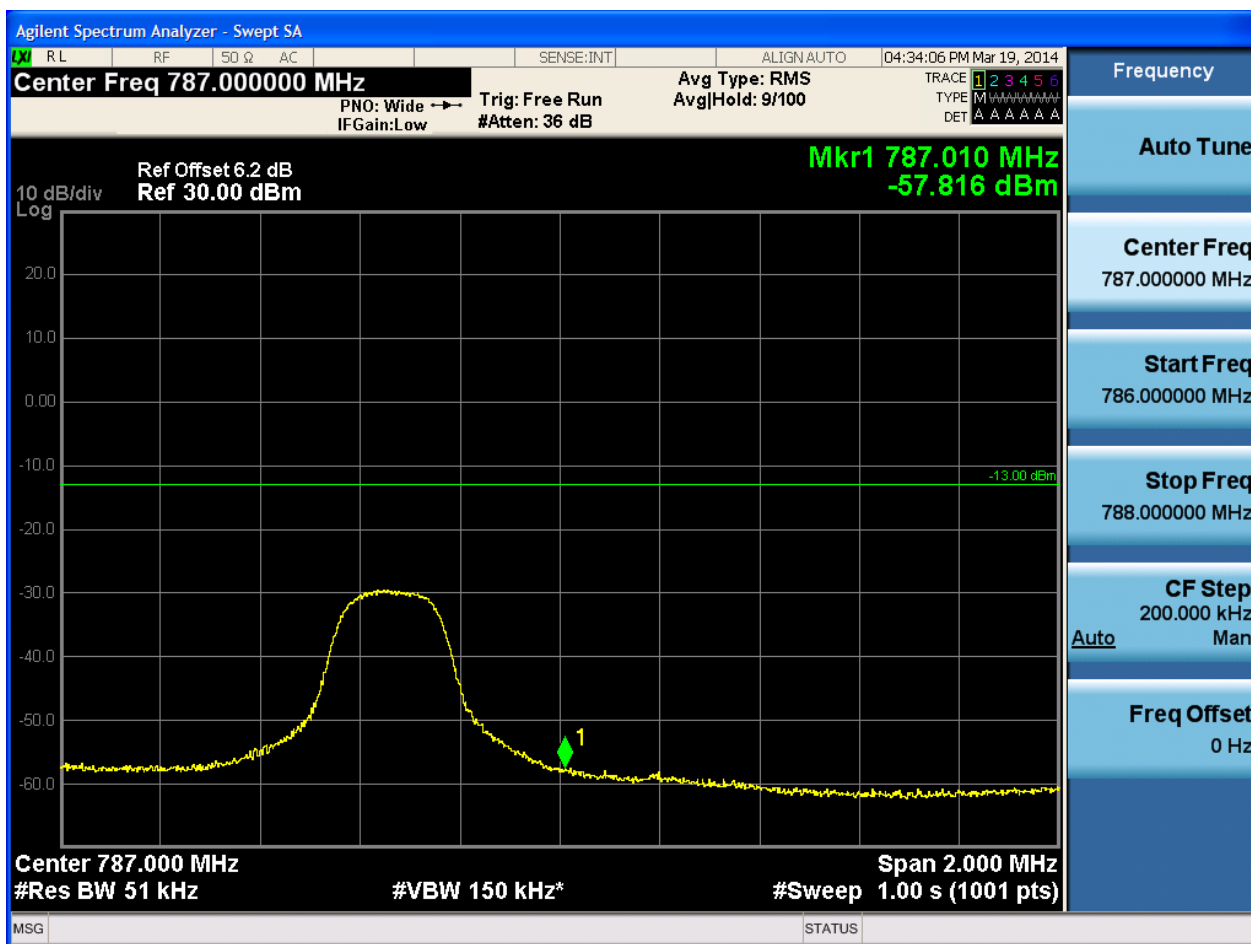
5.1.1.2.1.1.4 Test RB = RB25#0

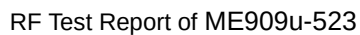




5.1.1.2.1.2 Test Channel = HCH

5.1.1.2.1.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 04:34:21 PM Mar 19, 2014

Center Freq 787.000000 MHz Avg Type: RMS
PNO: Wide Trig: Free Run Avg|Hold: 9/100
IFGain: Low #Atten: 36 dB

TRACE 1 2 3 4 5 6
TYPE [M] [M] [M] [M] [M] [M]
DET A A A A A A

Ref Offset 6.2 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 787.000 MHz
-20.935 dBm

-13.00 dBm

1

Center 787.000 MHz
#Res BW 51 kHz

#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
787.000000 MHz

Start Freq
786.000000 MHz

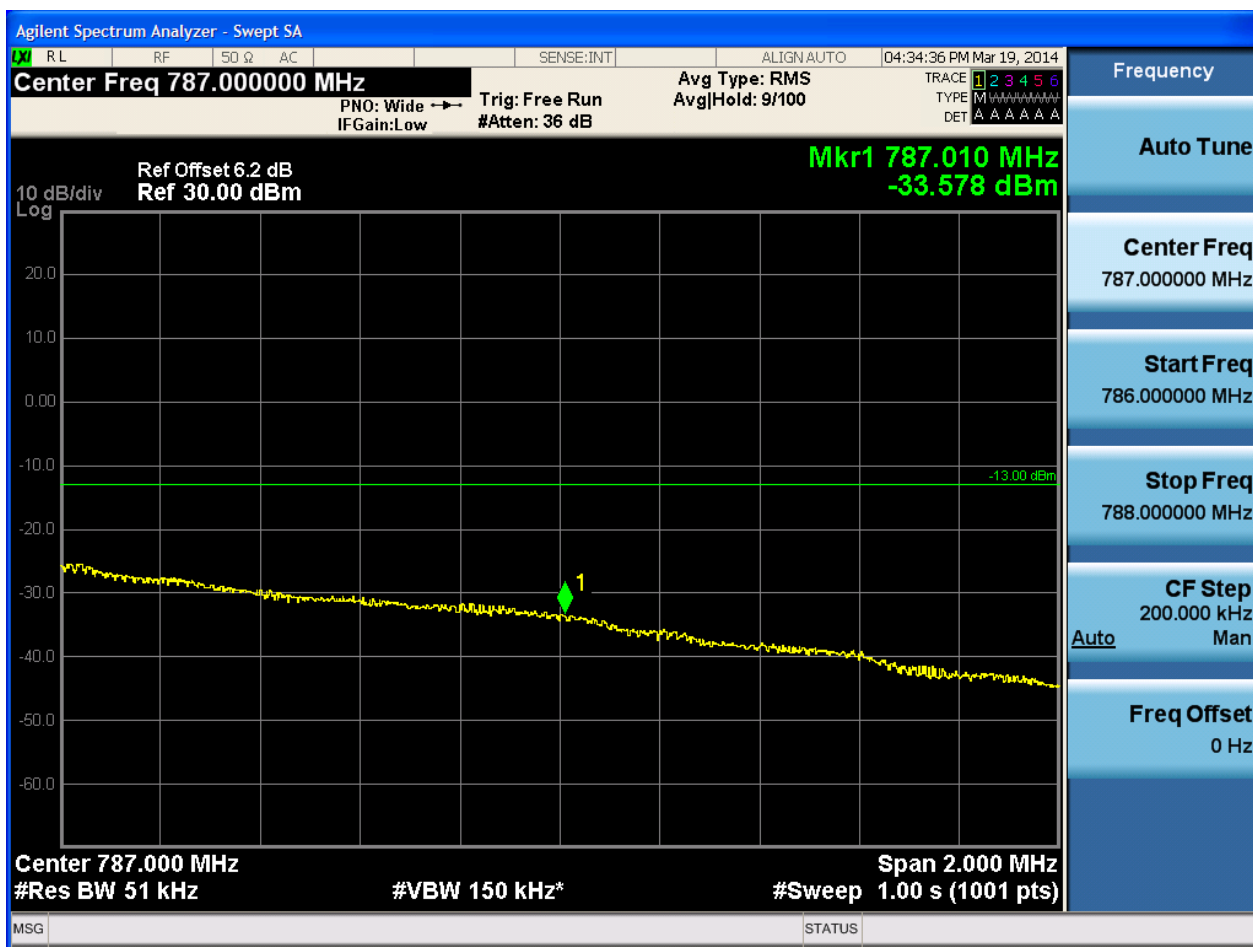
Stop Freq
788.000000 MHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

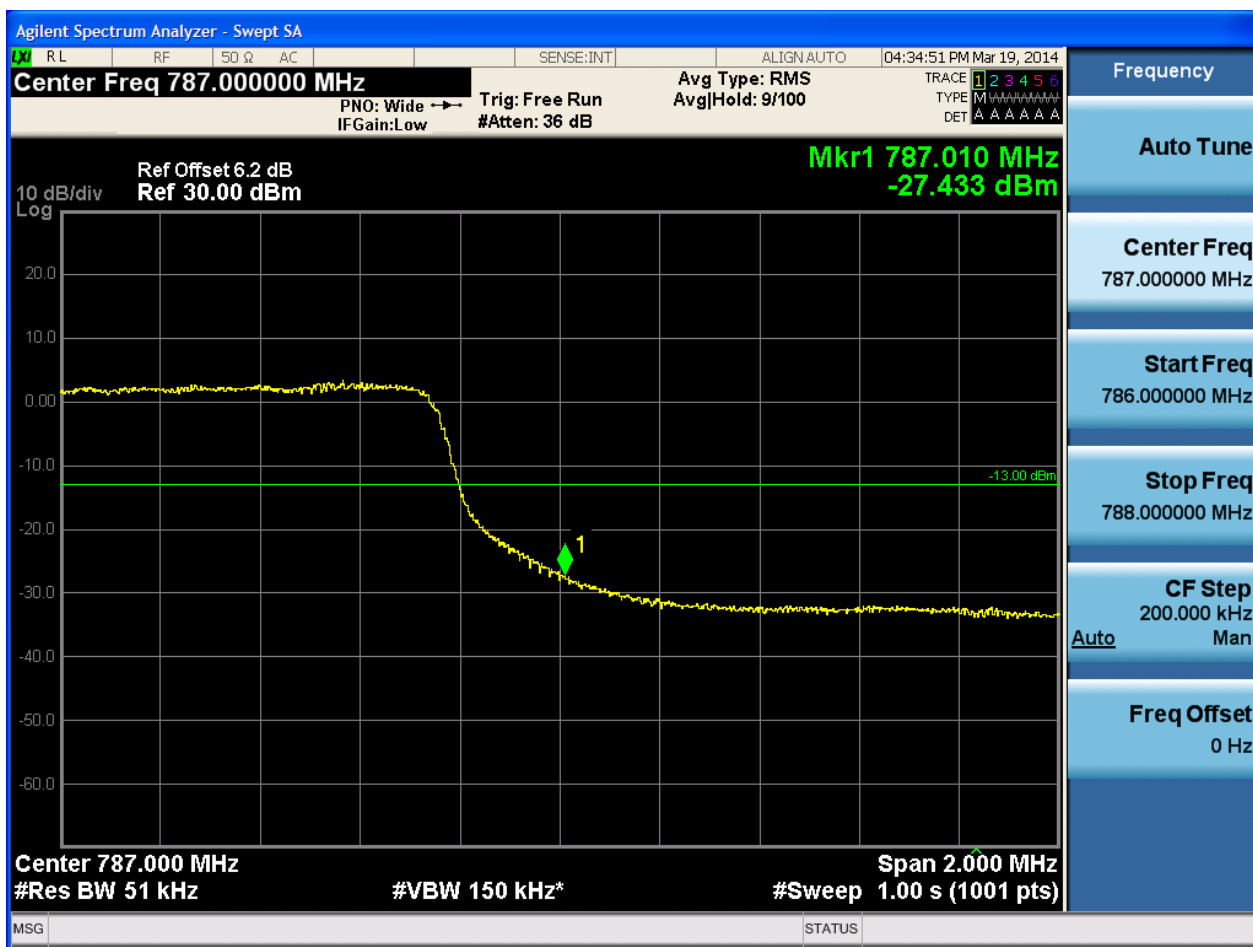


5.1.1.2.1.2.3 Test RB = RB12#6





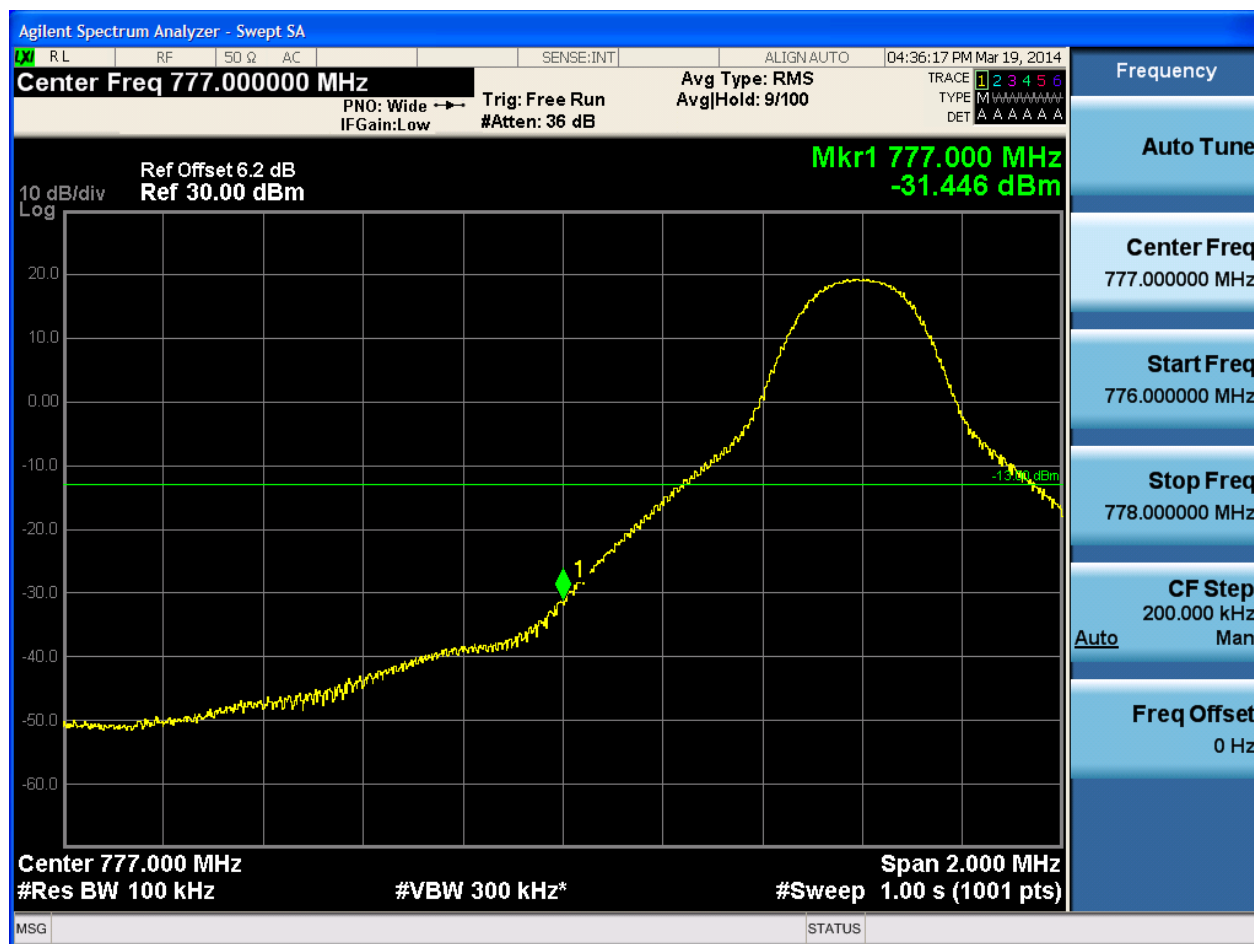
5.1.1.2.1.2.4 Test RB = RB25#0



5.1.1.2.2 Test Bandwidth = 10

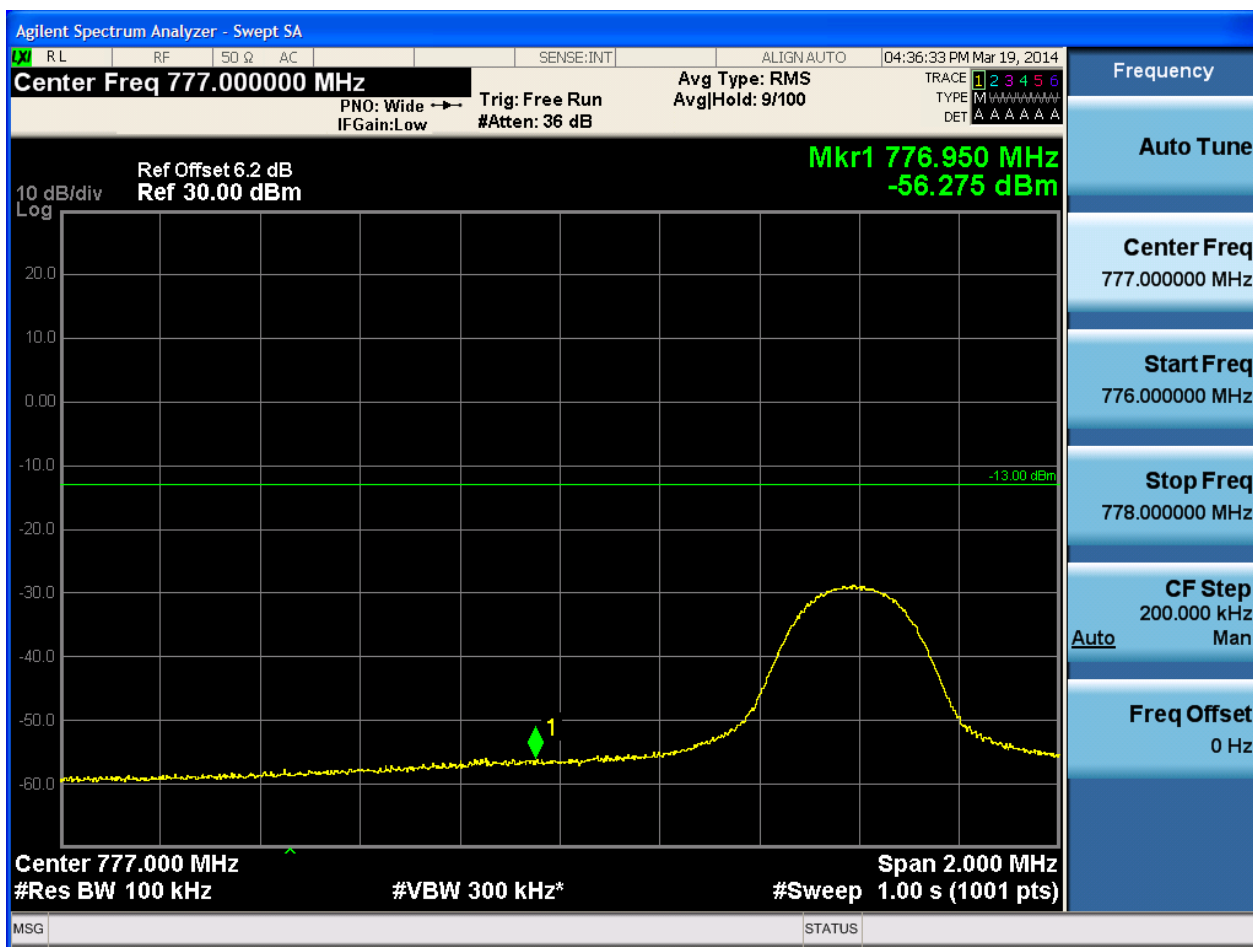
5.1.1.2.2.1 Test Channel = LCH

5.1.1.2.2.1.1 Test RB = RB1#0



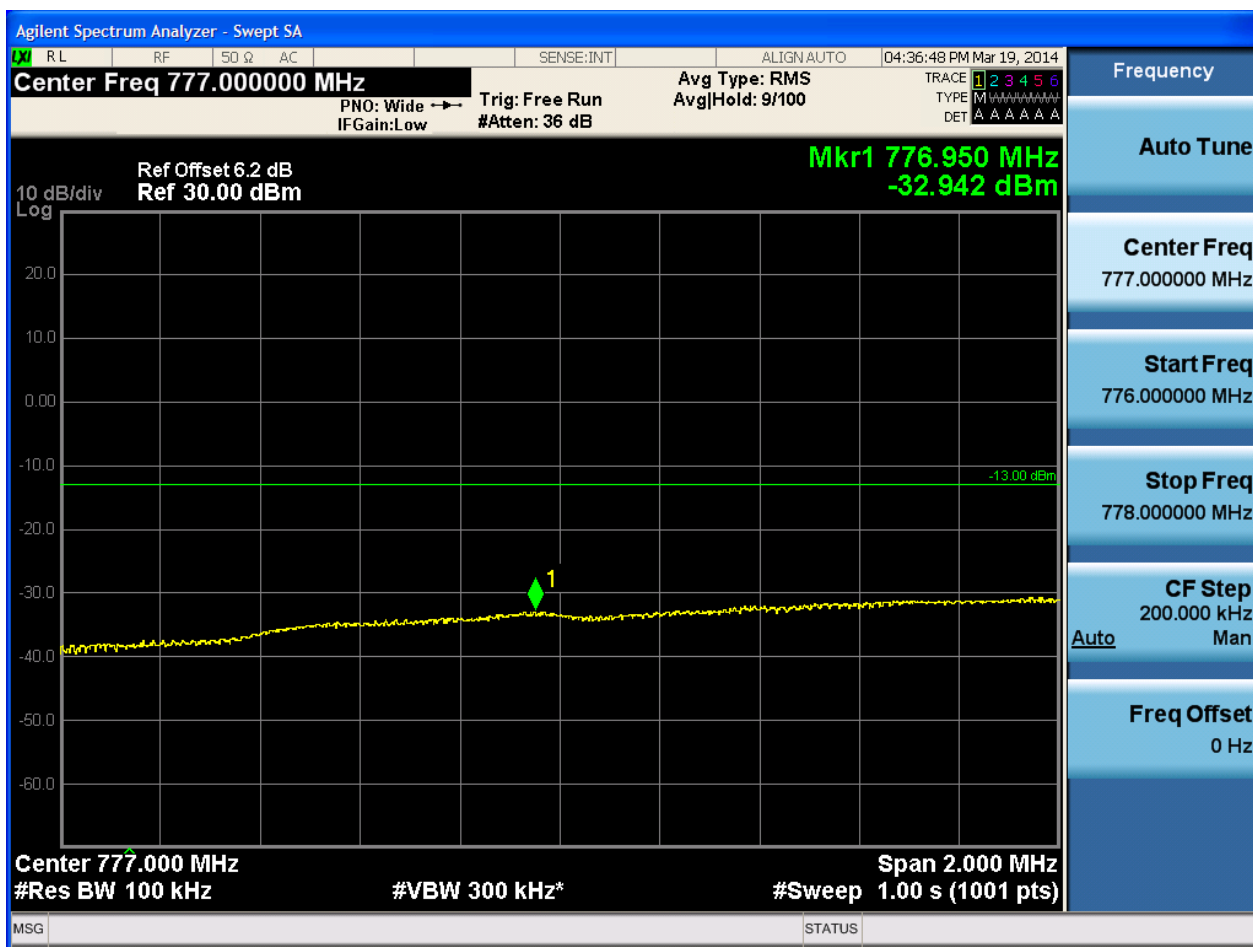


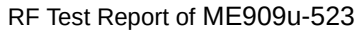
5.1.1.2.2.1.2 Test RB = RB1#49





5.1.1.2.2.1.3 Test RB = RB25#13





Agilent Spectrum Analyzer - Swept SA

Center Freq 777.000000 MHz

Ref Offset 6.2 dB
Ref 30.00 dBm

Mkr1 777.000 MHz
-30.718 dBm

10 dB/div
Log

Center 777.000 MHz
#Res BW 100 kHz

#VBW 300 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
777.000000 MHz

Start Freq
776.000000 MHz

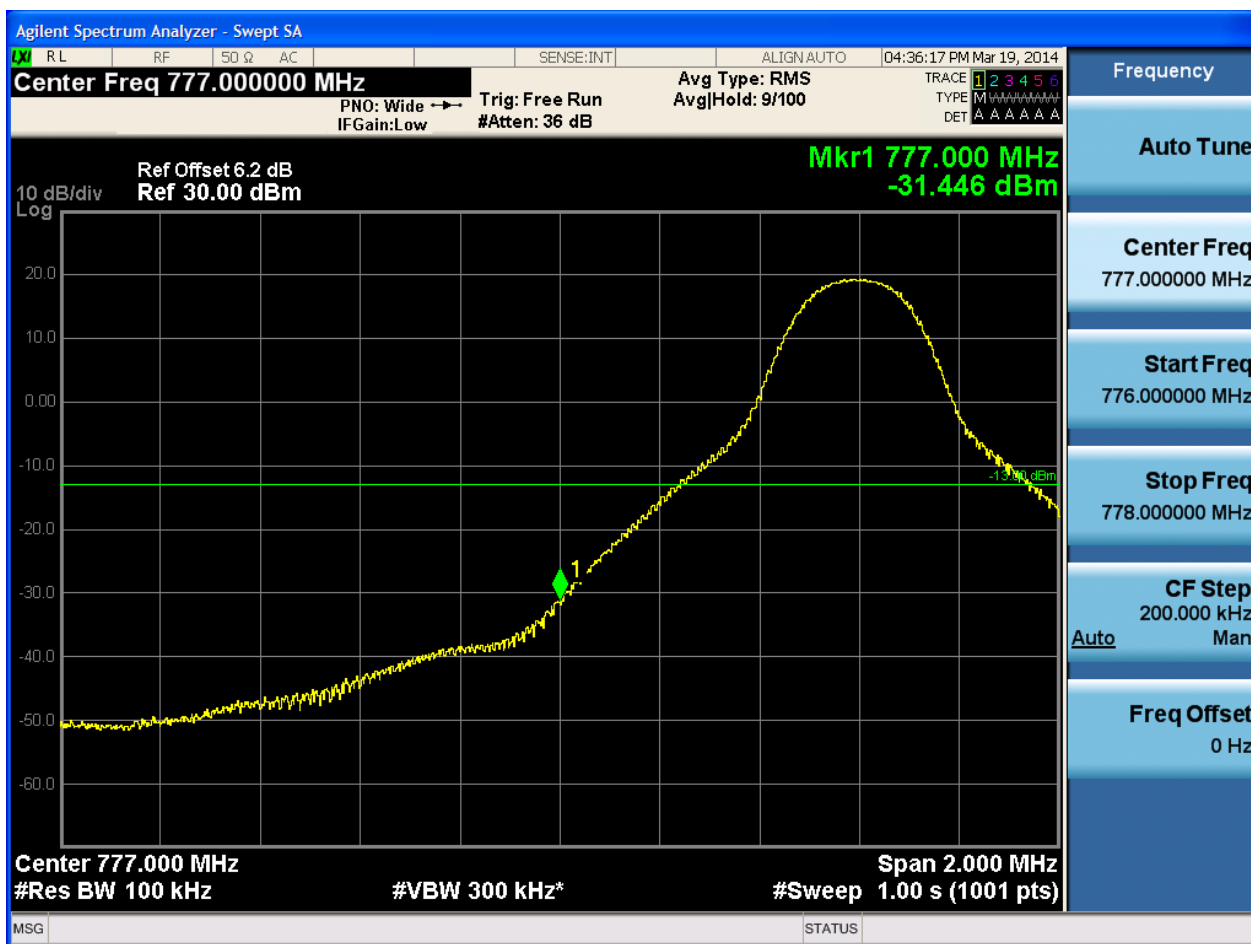
Stop Freq
778.000000 MHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz

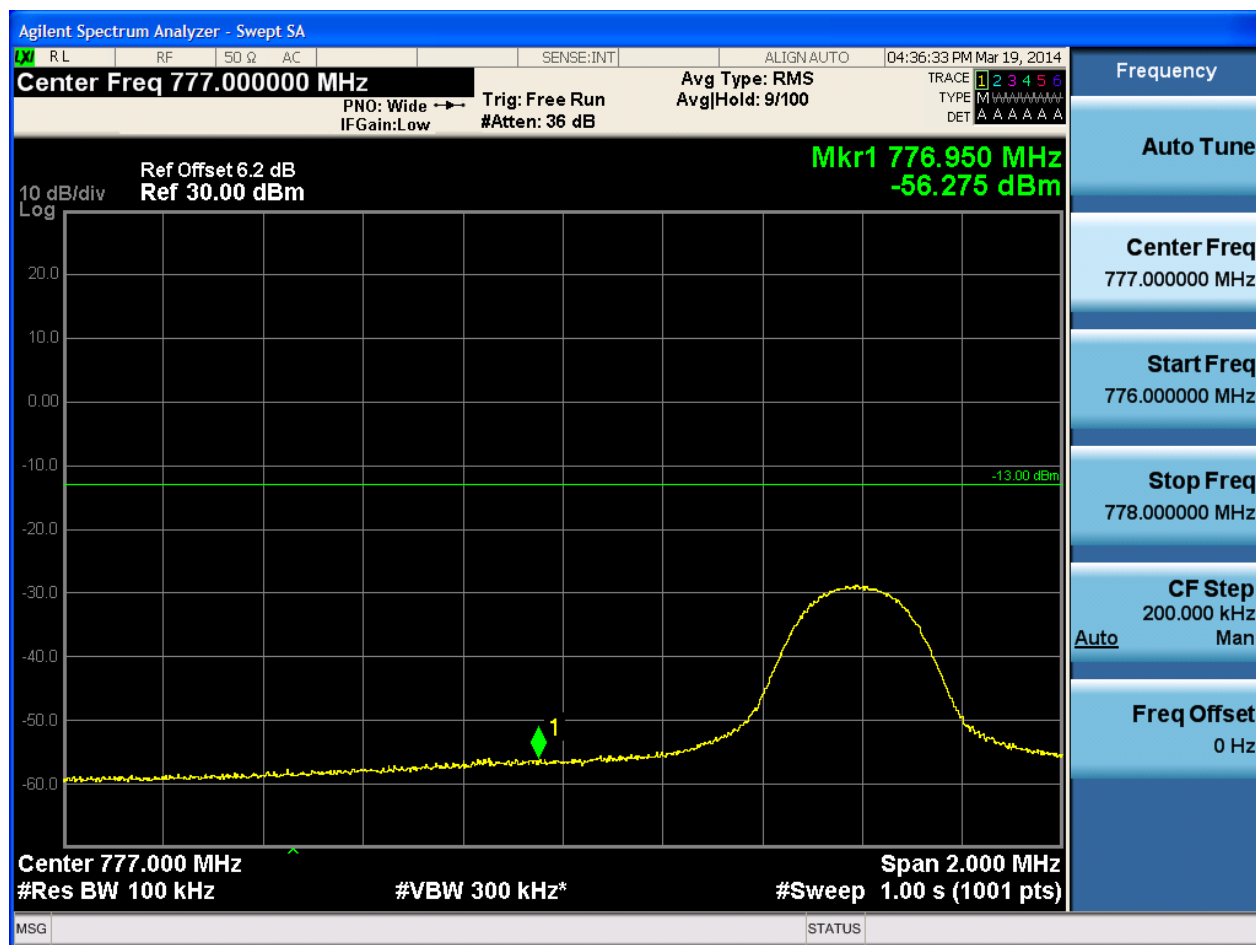
5.1.1.2.2.2 Test Channel = HCH

5.1.1.2.2.2.1 Test RB = RB1#0



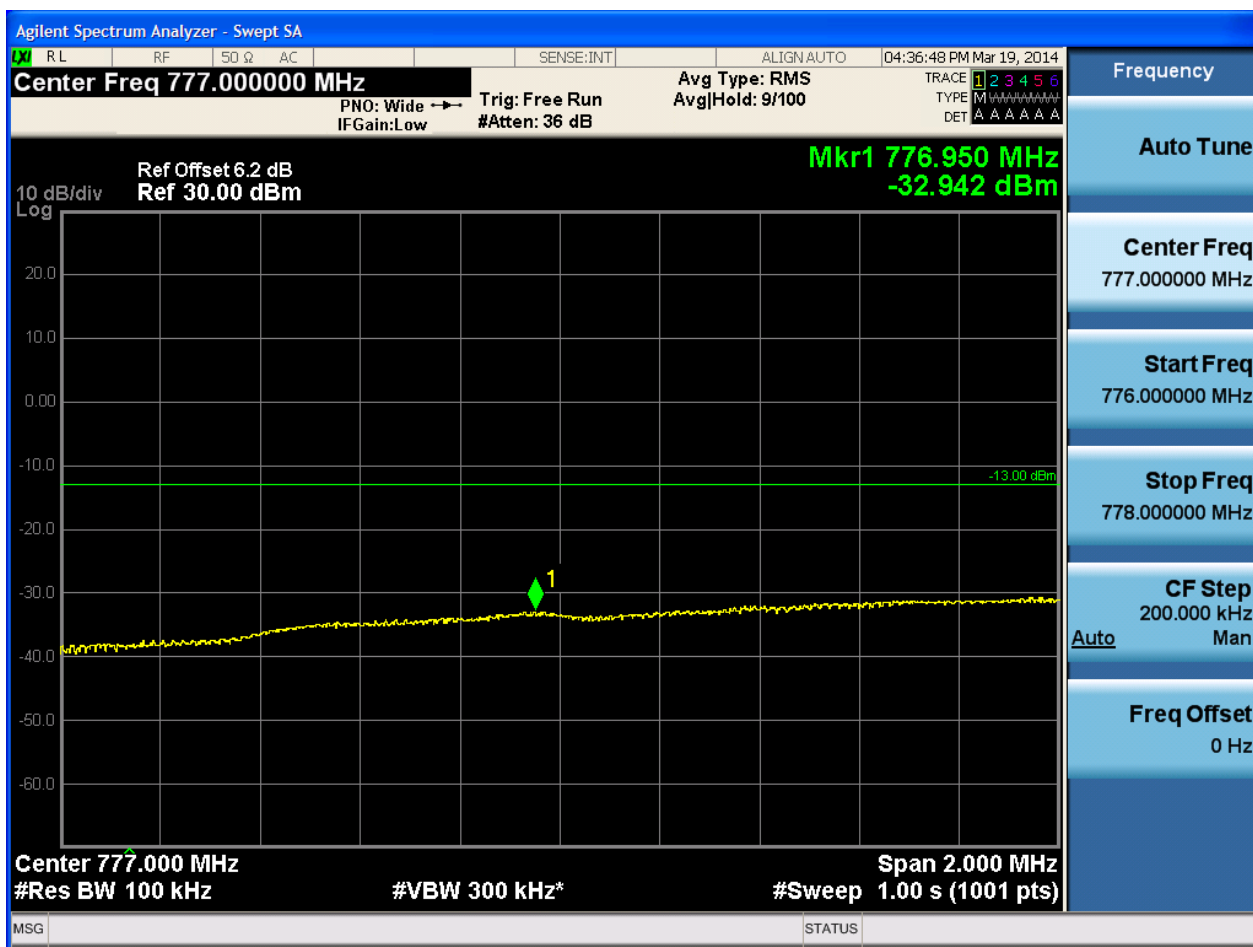


5.1.1.2.2.2 Test RB = RB1#49



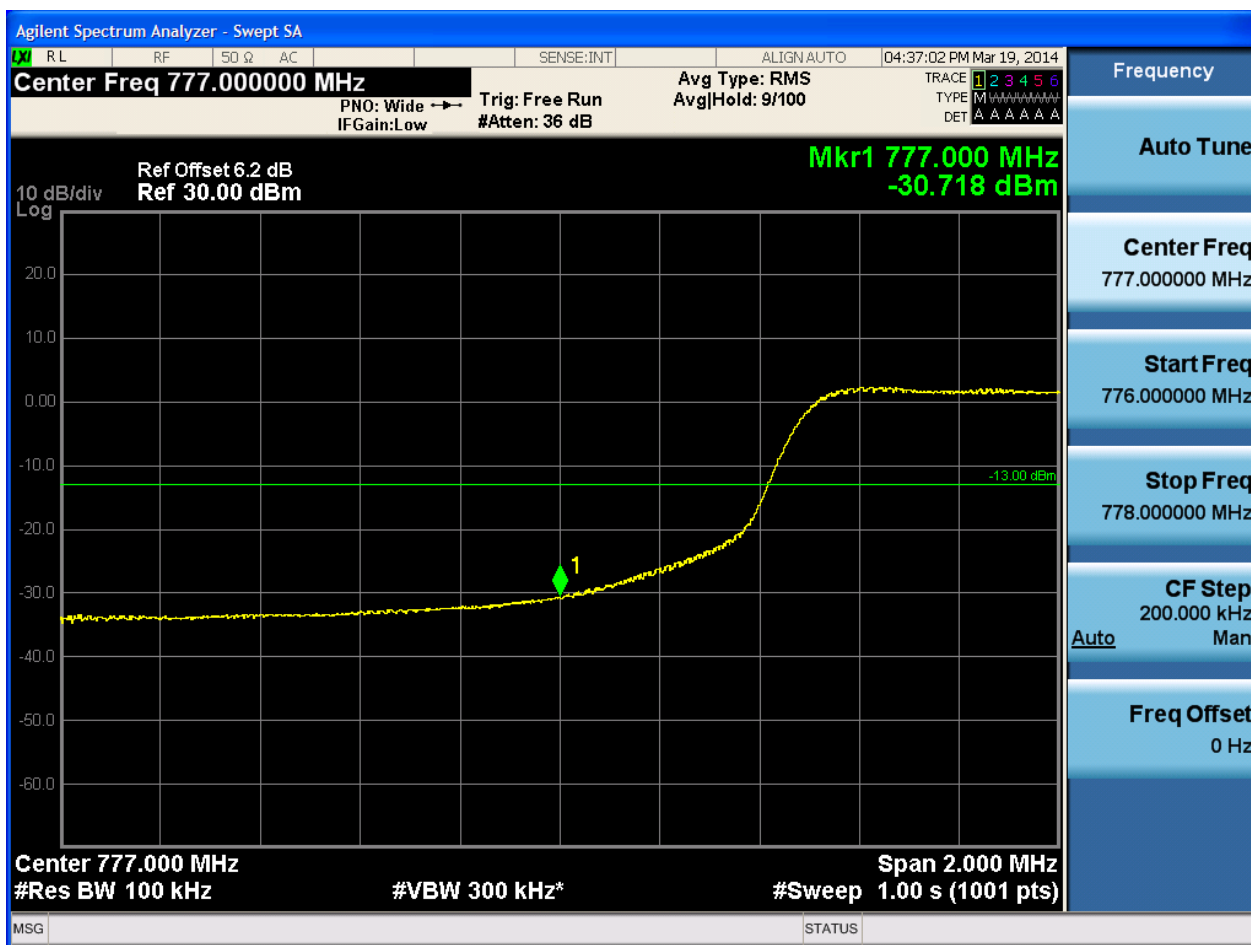


5.1.1.2.2.3 Test RB = RB25#13





5.1.1.2.2.4 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

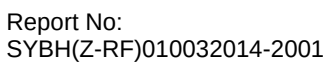
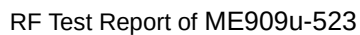
6.1.1 Test Band = BAND13

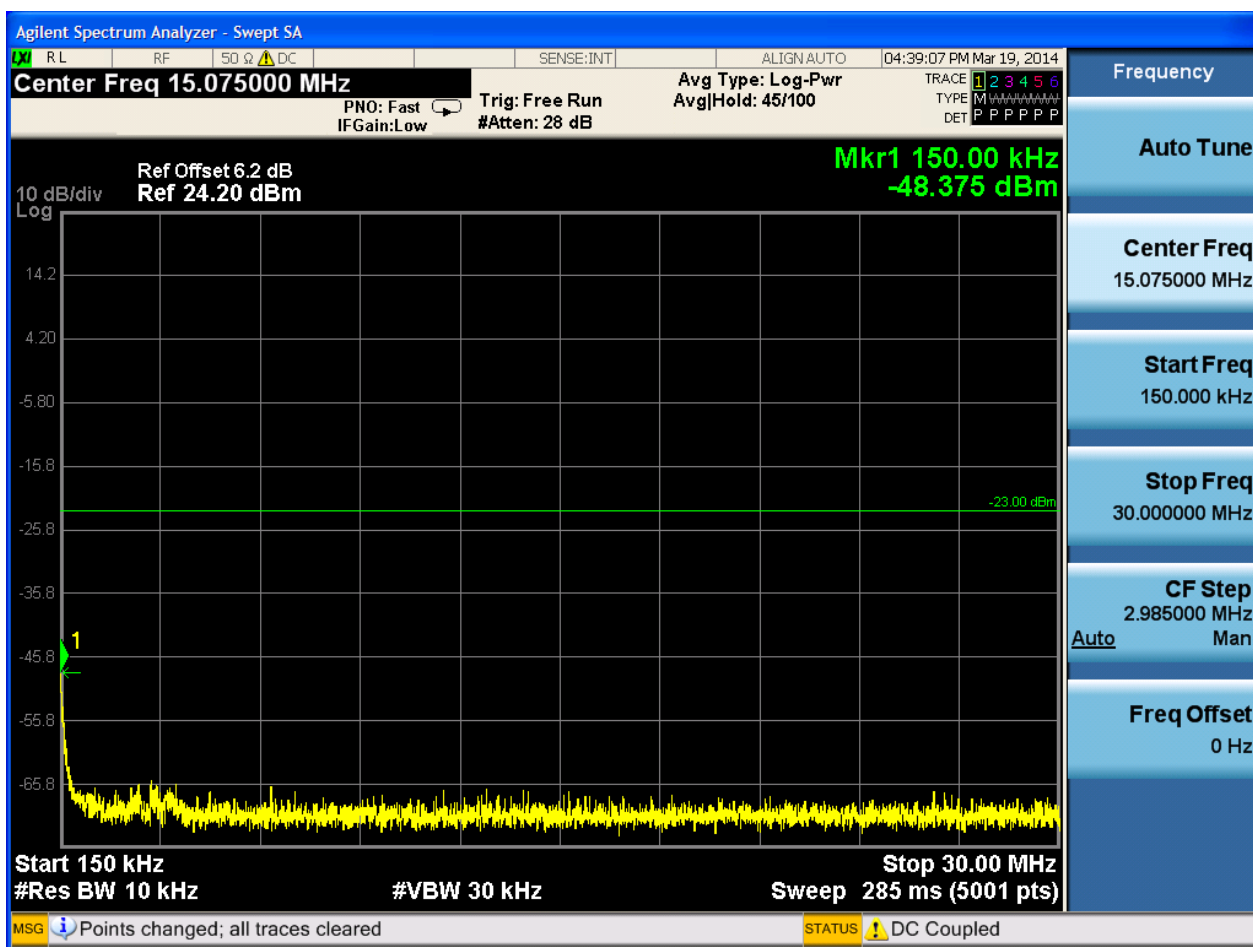
6.1.1.1 Test Mode = LTE/TM1

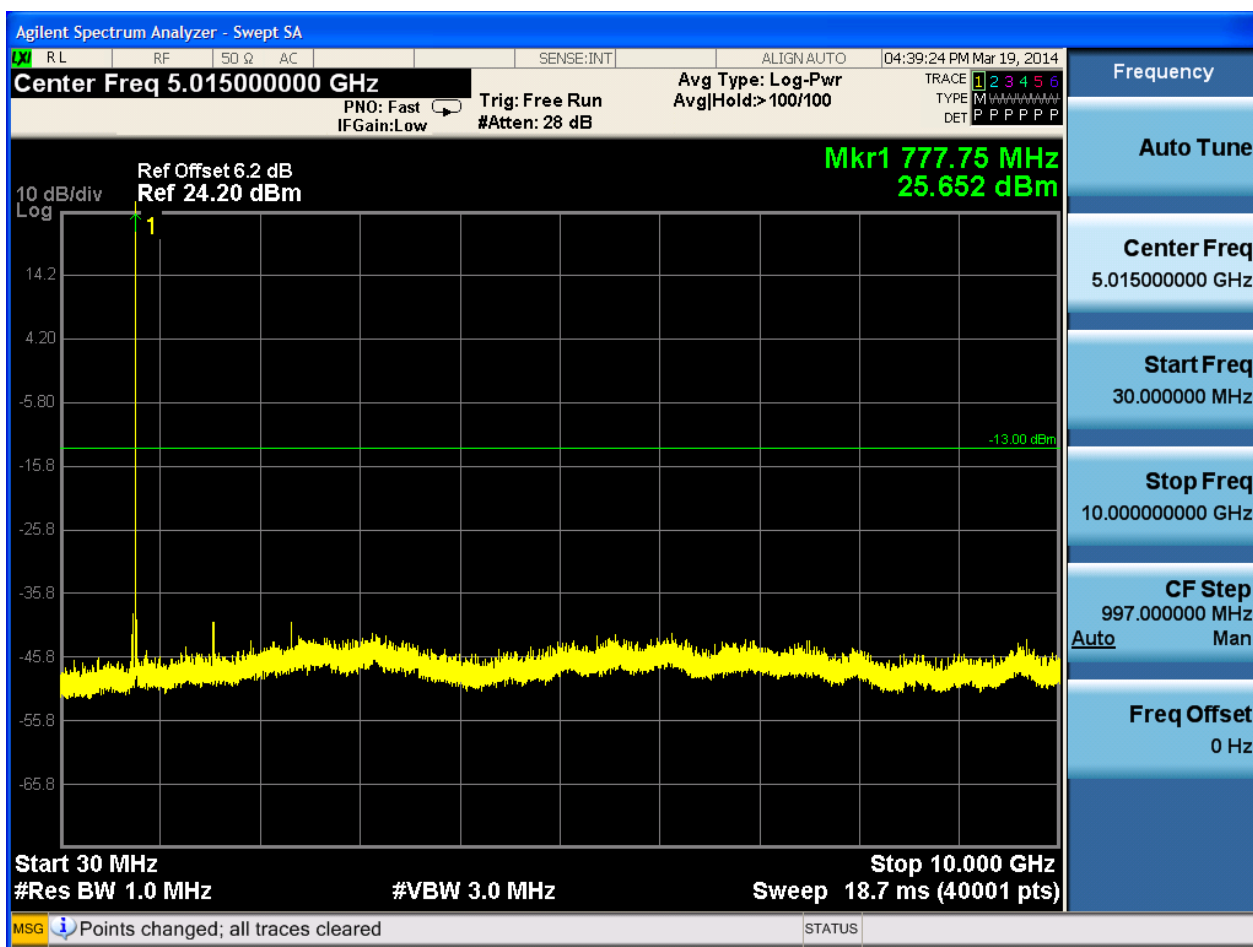
6.1.1.1.1 Test Bandwidth = 5

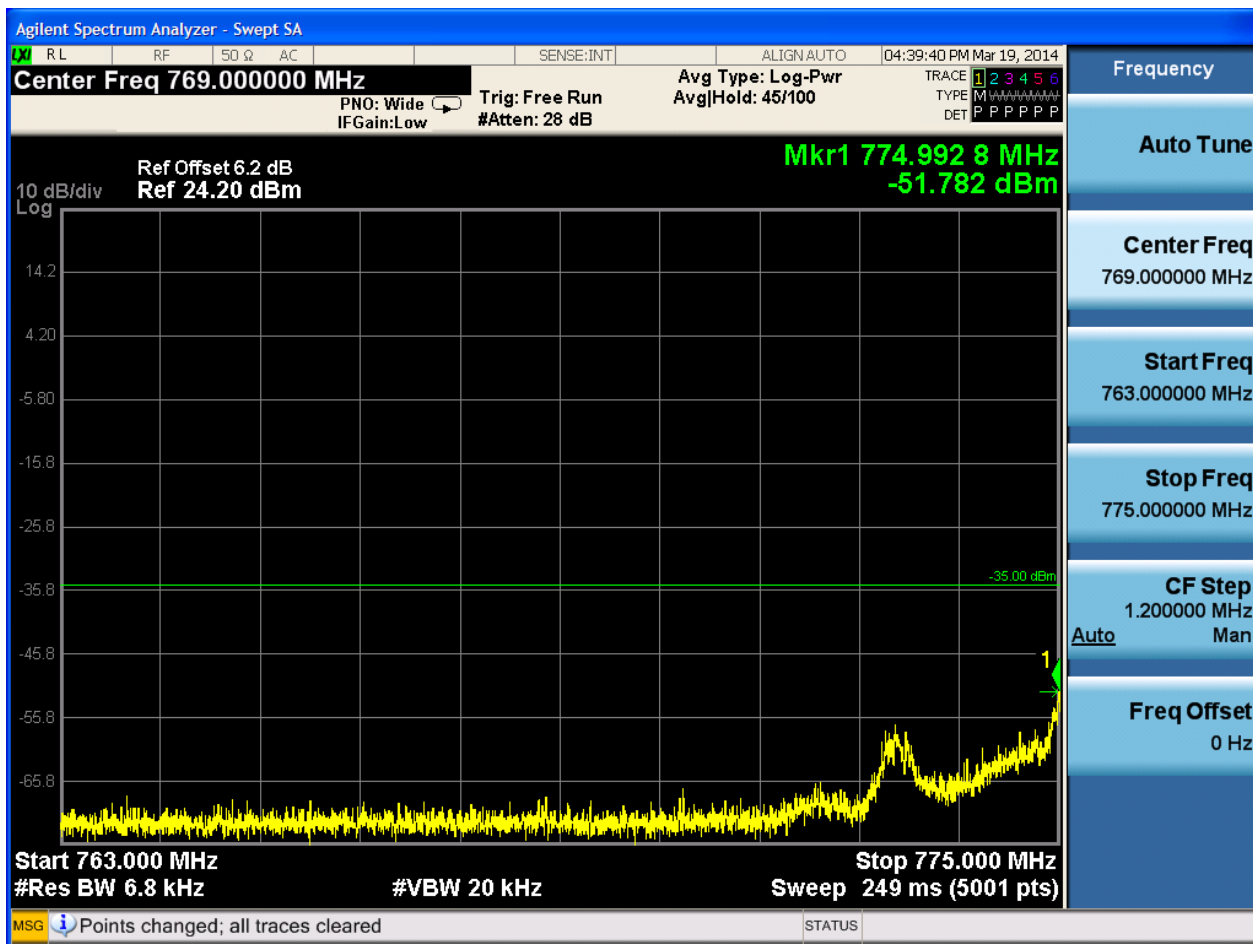
6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0







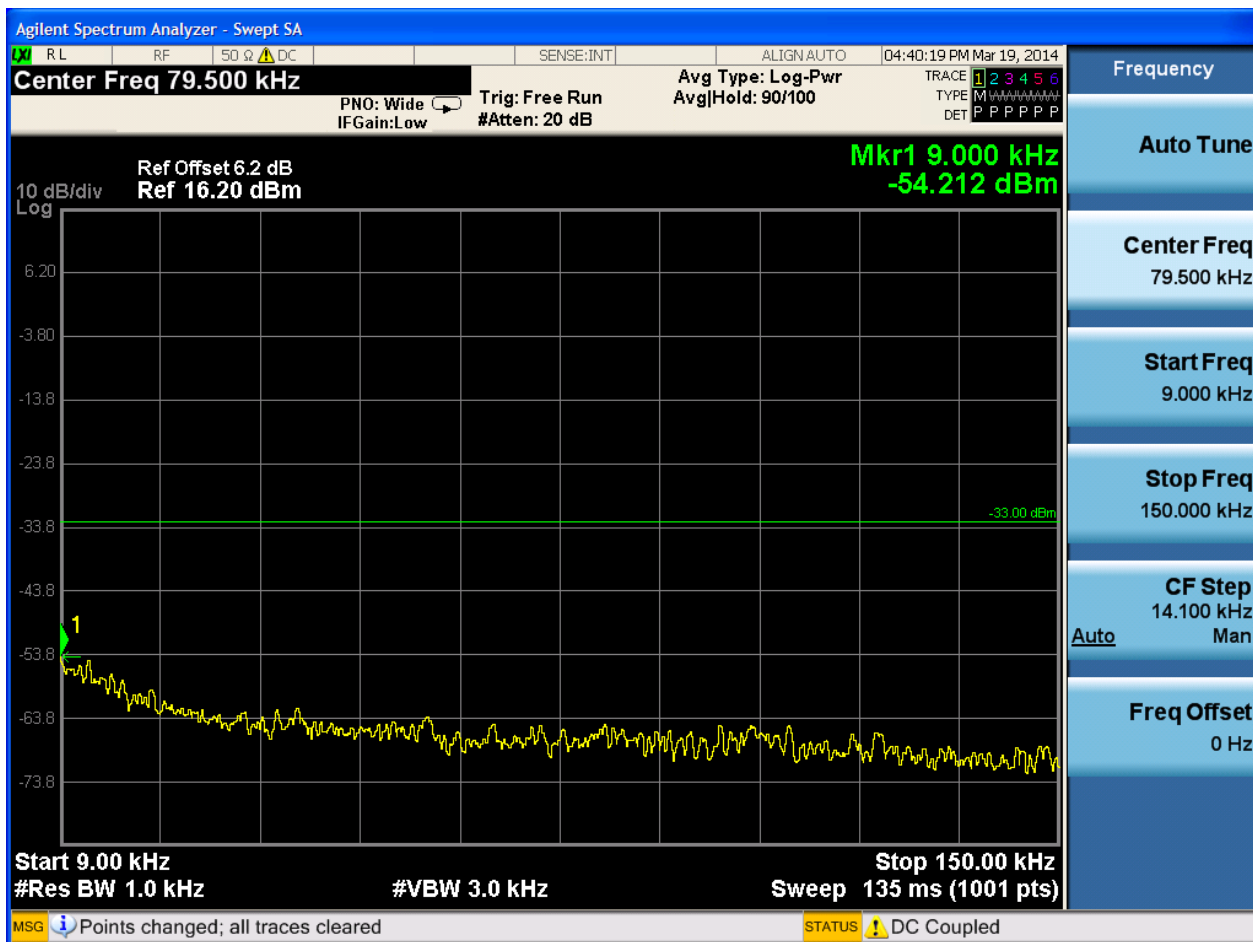


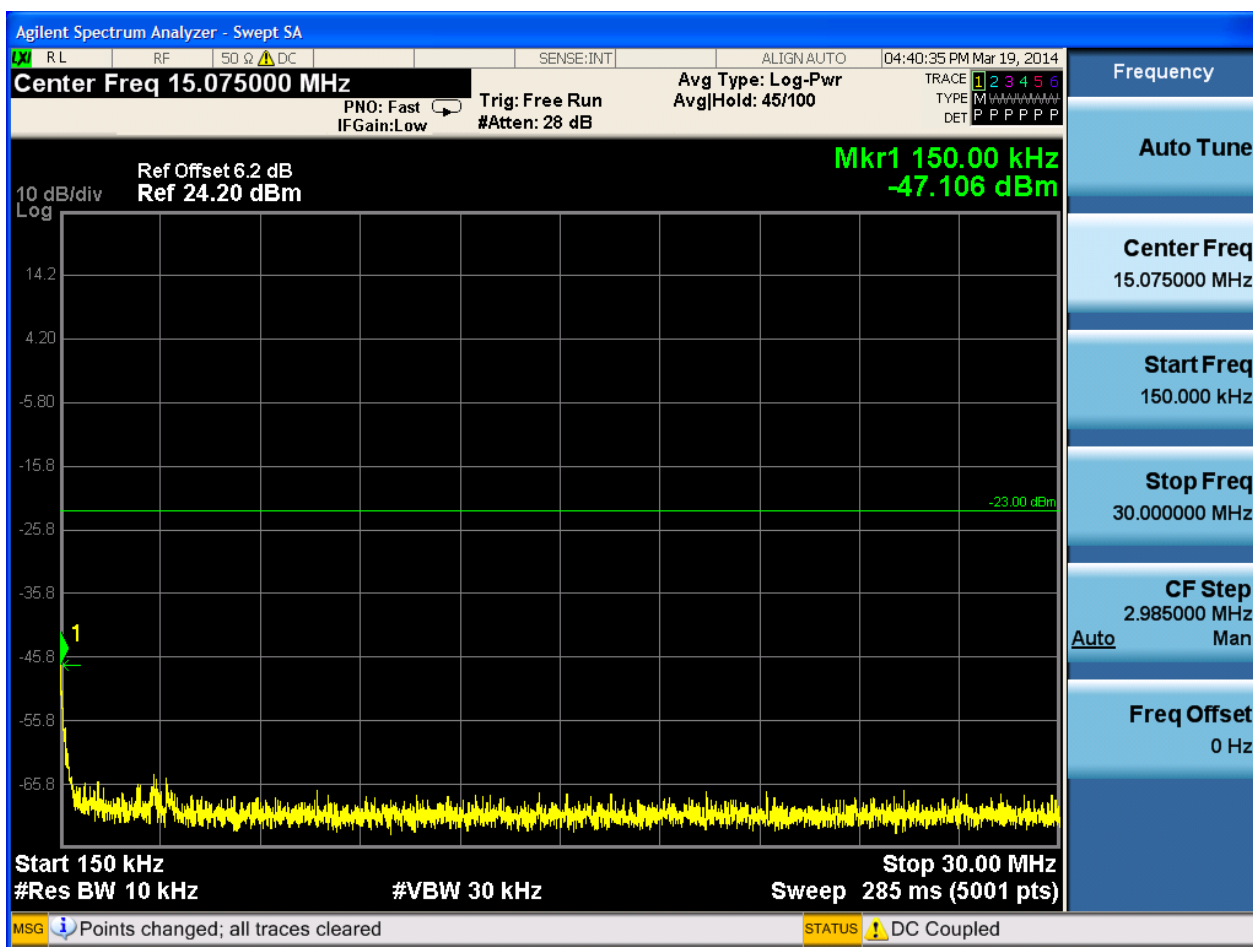


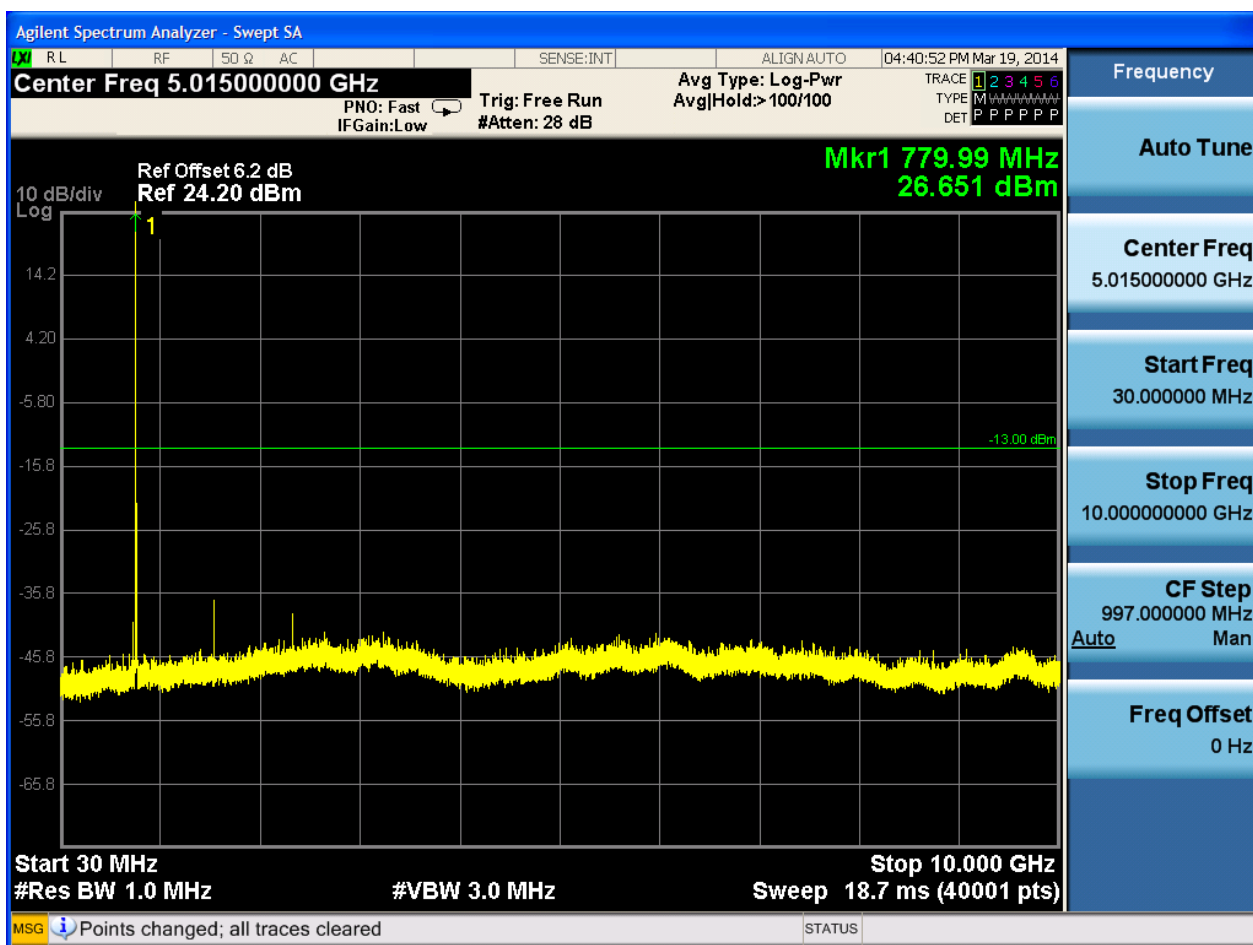


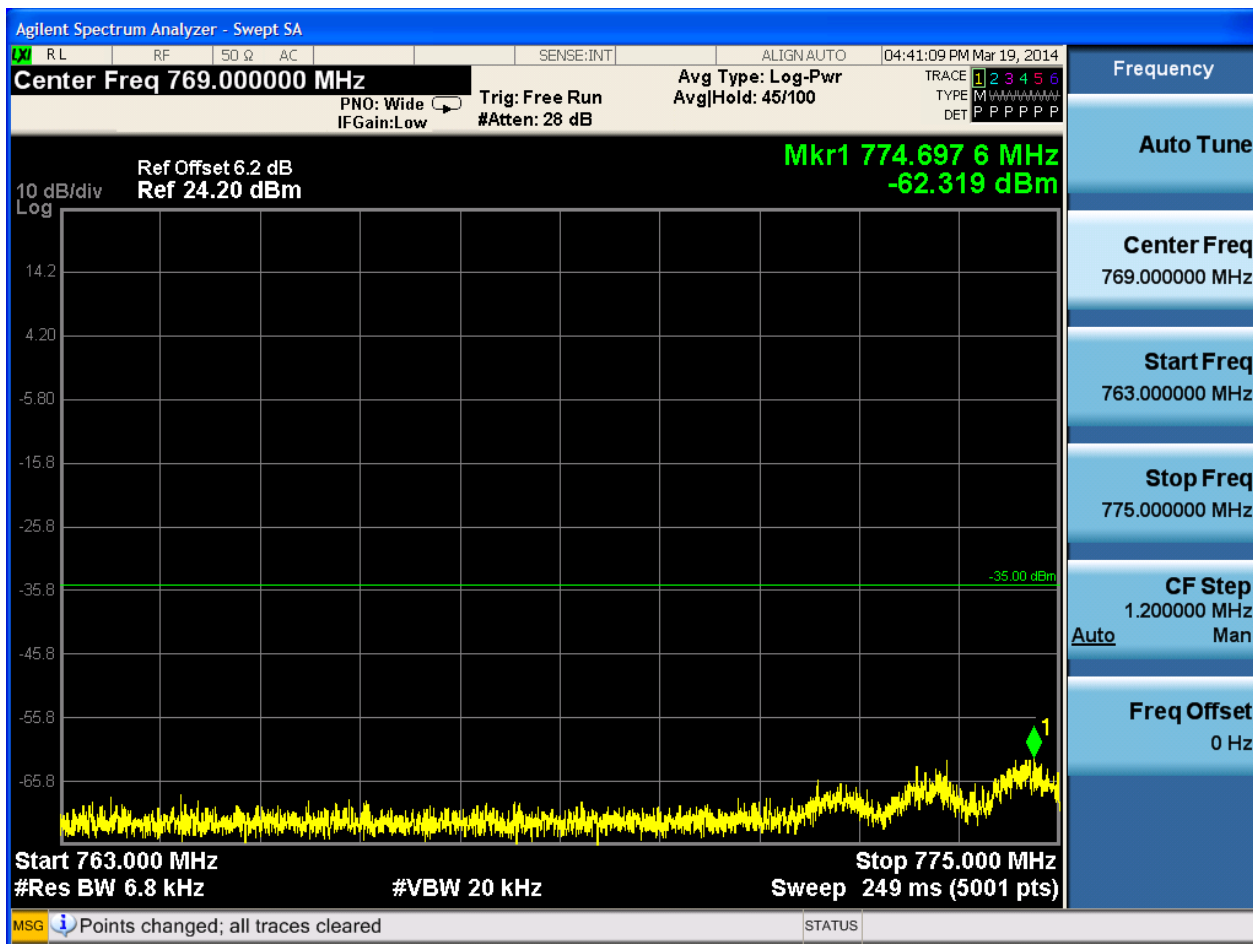
6.1.1.1.1.2 Test Channel = MCH

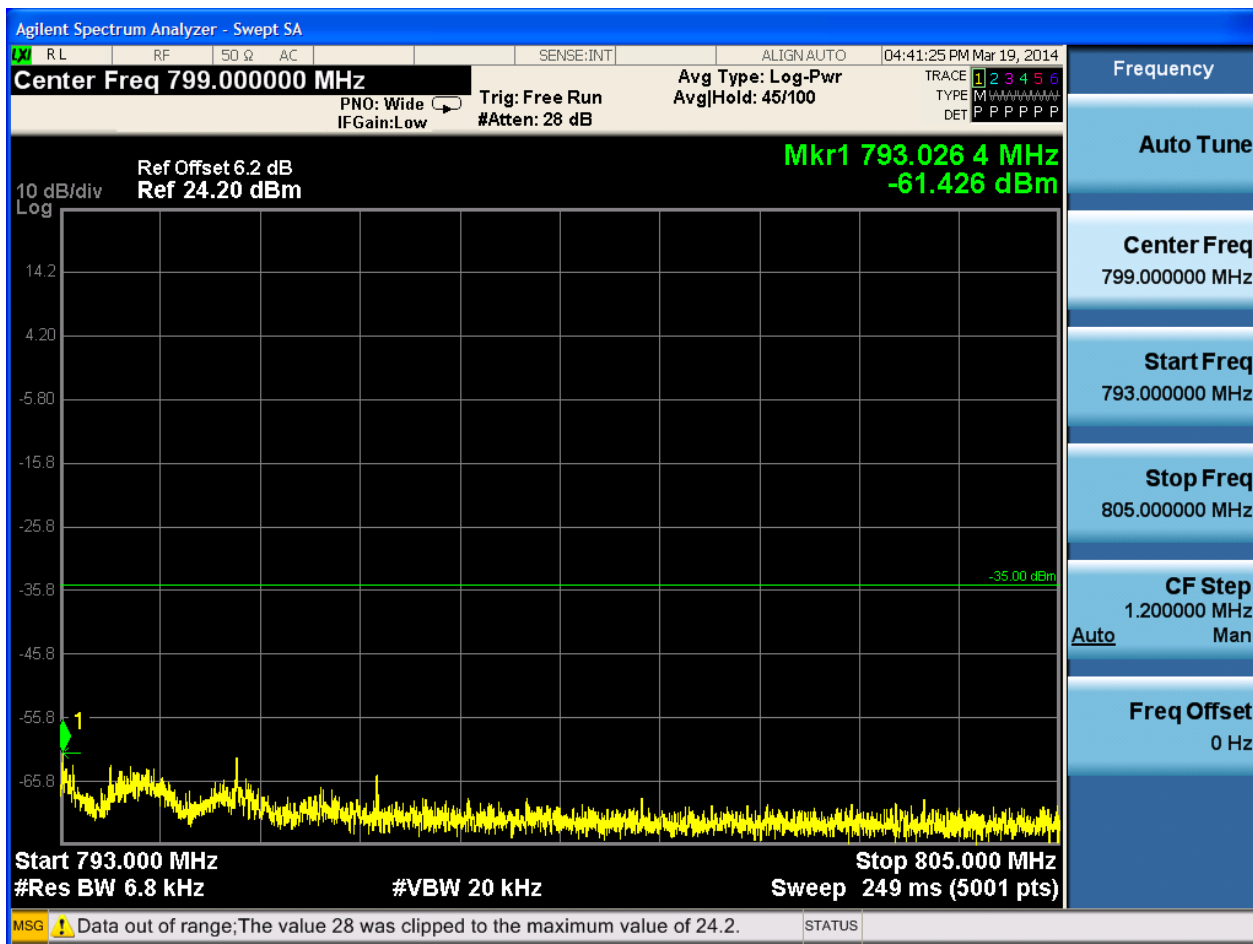
6.1.1.1.1.2.1 Test RB = RB1#0







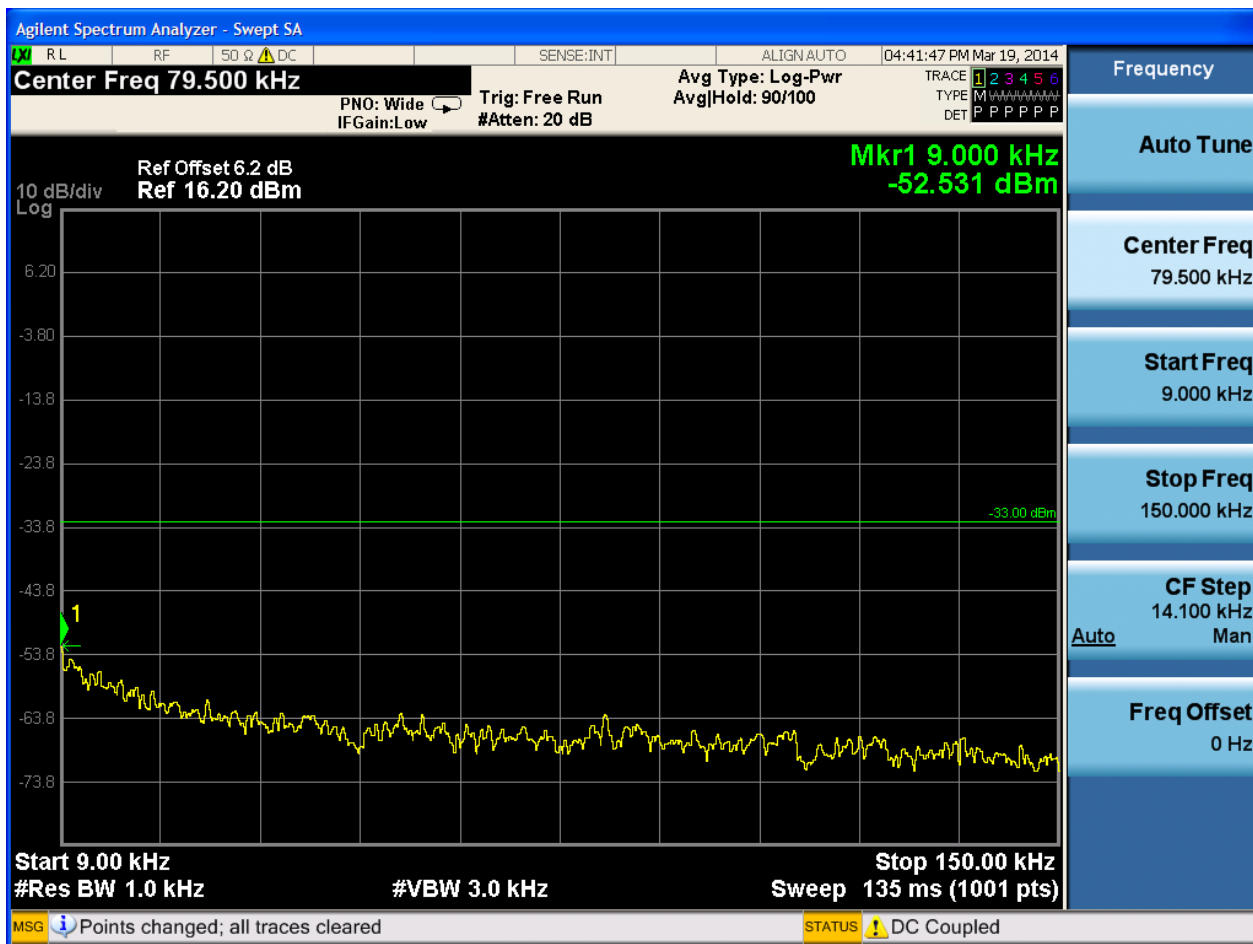


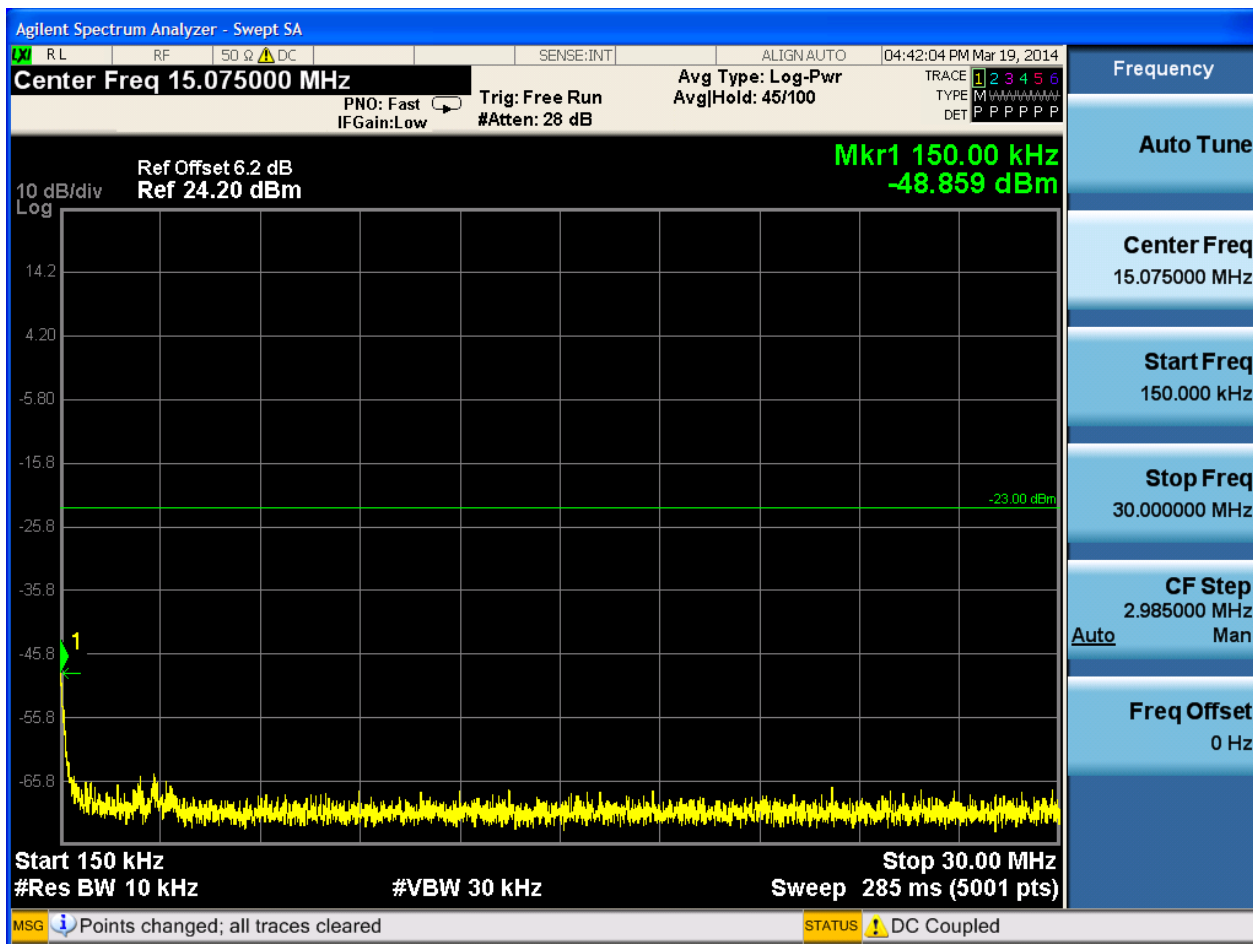


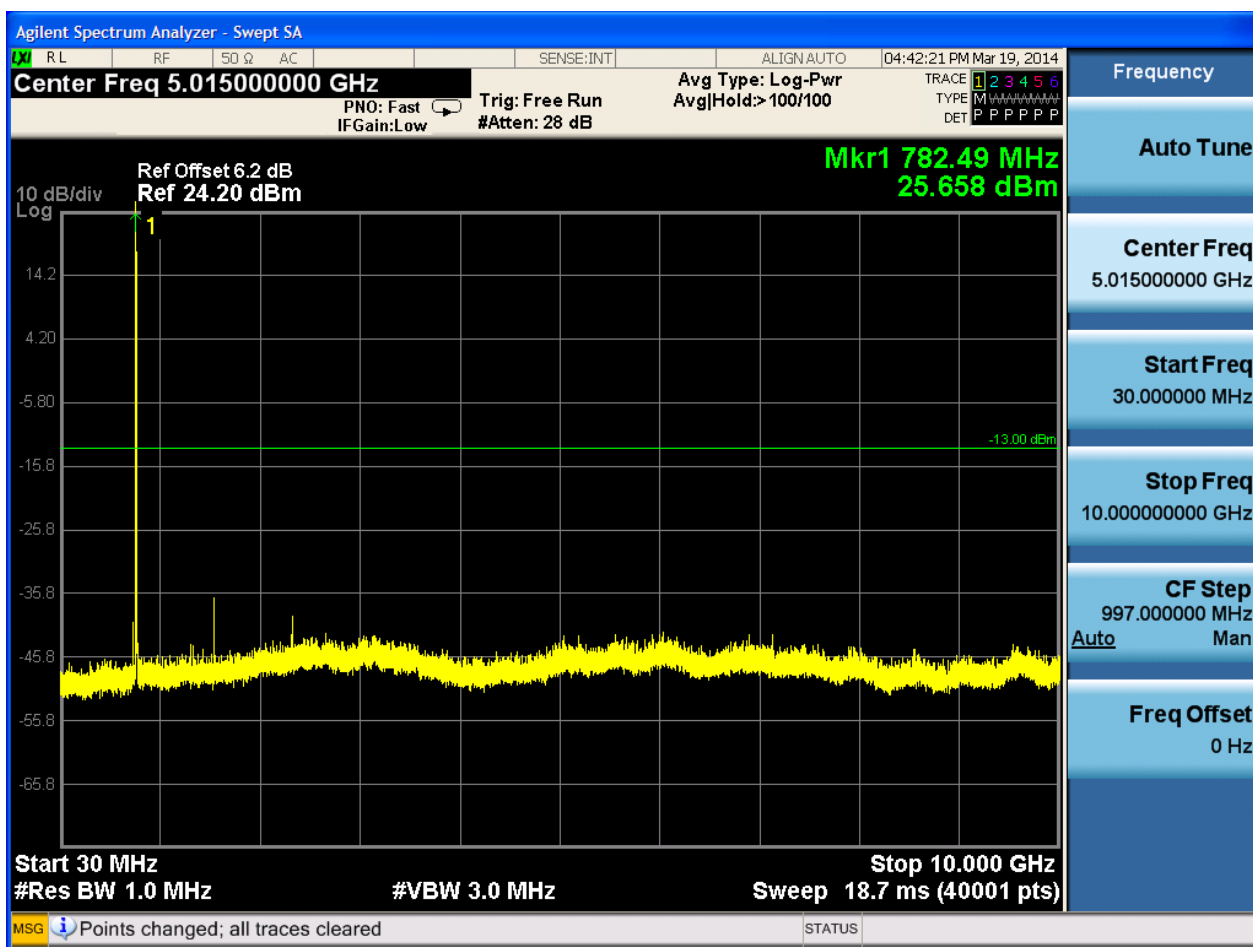


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0







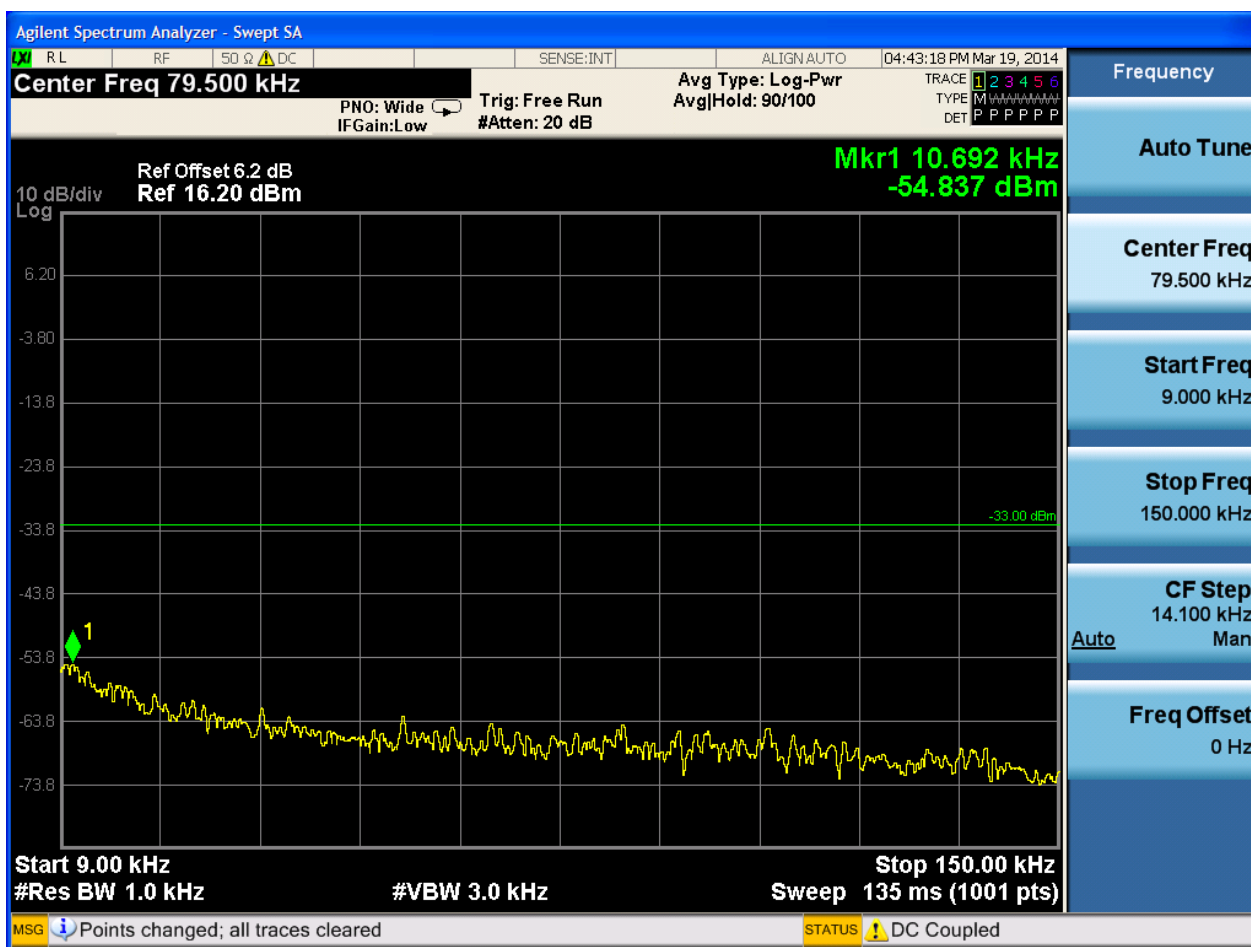


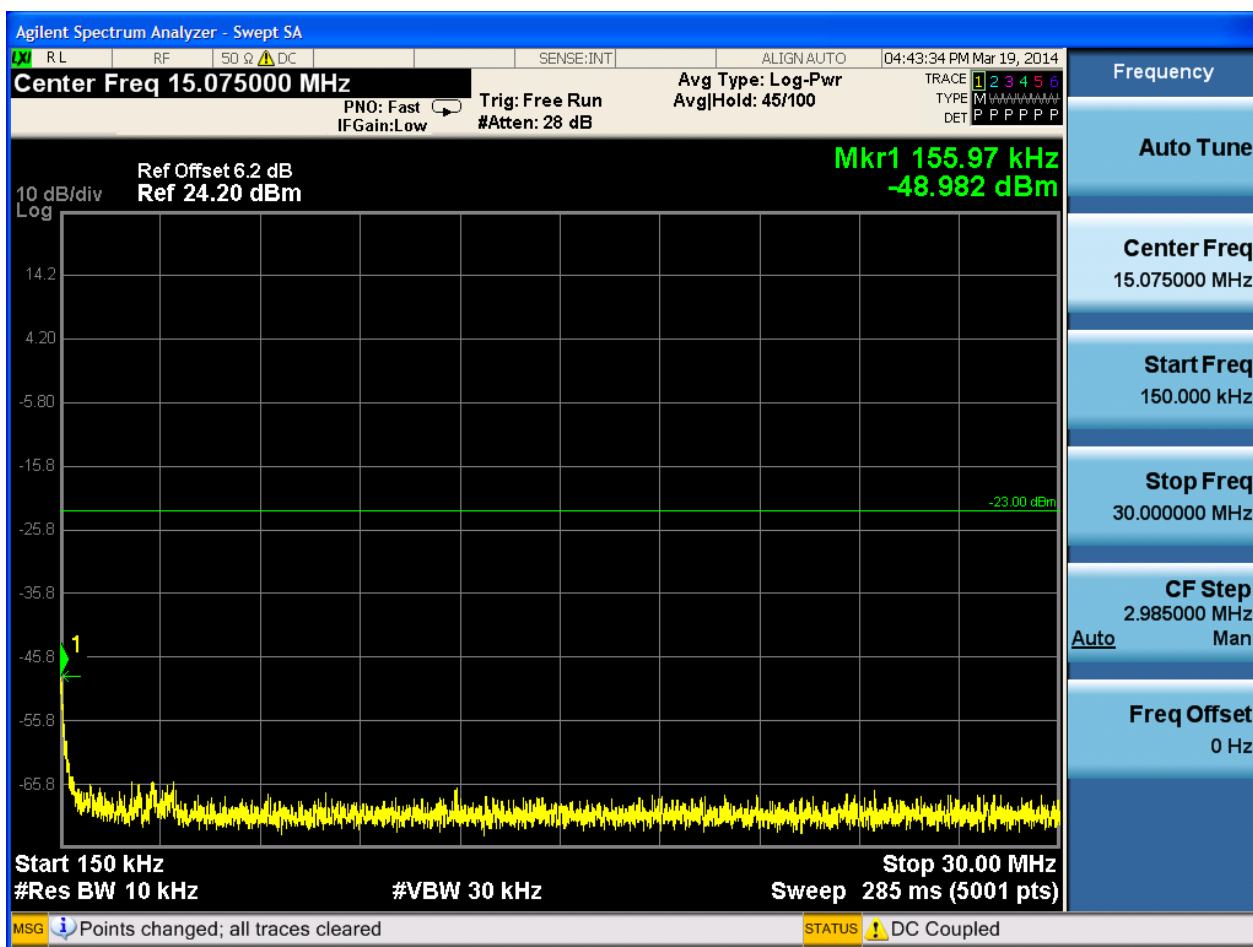


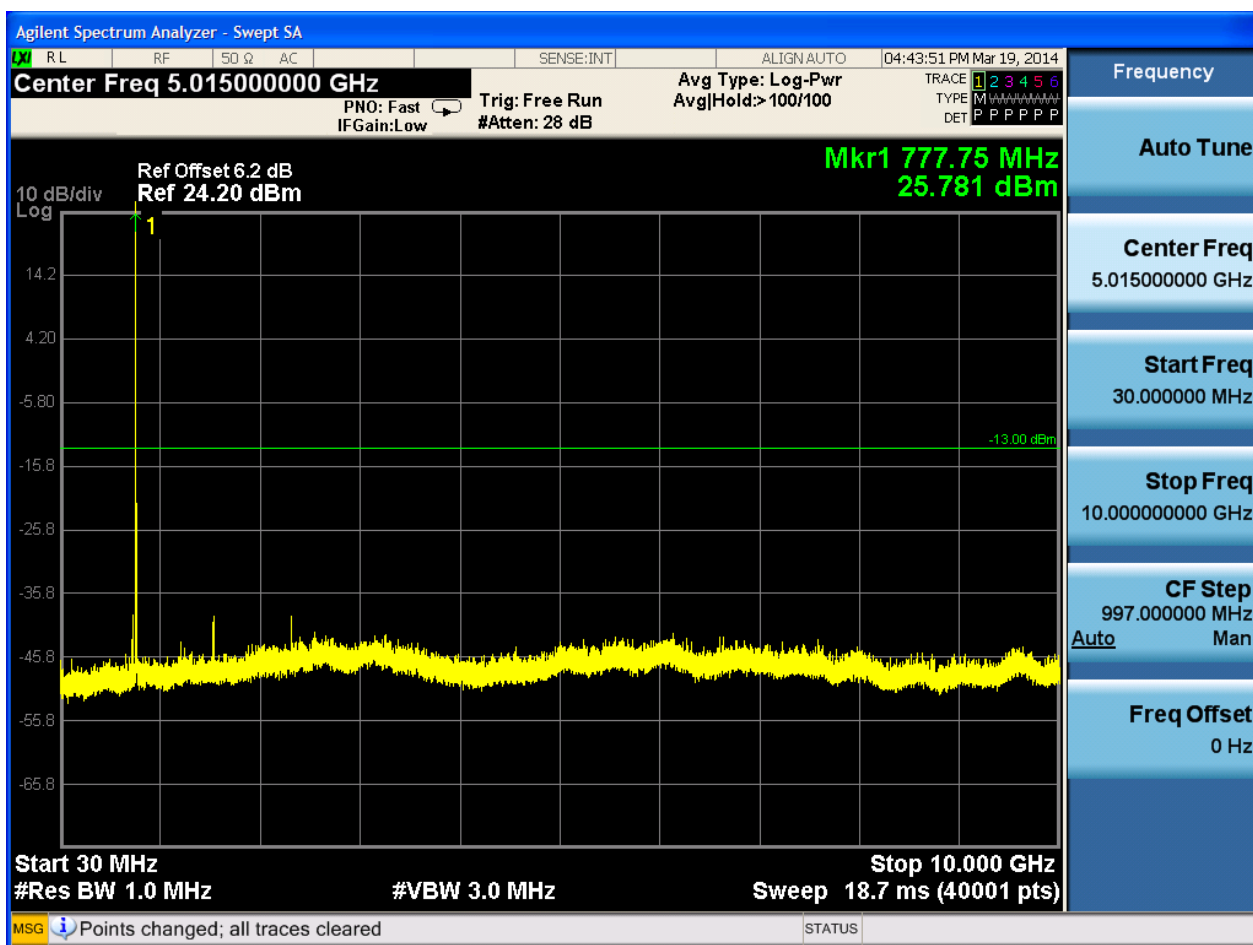
6.1.1.1.2 Test Bandwidth = 10

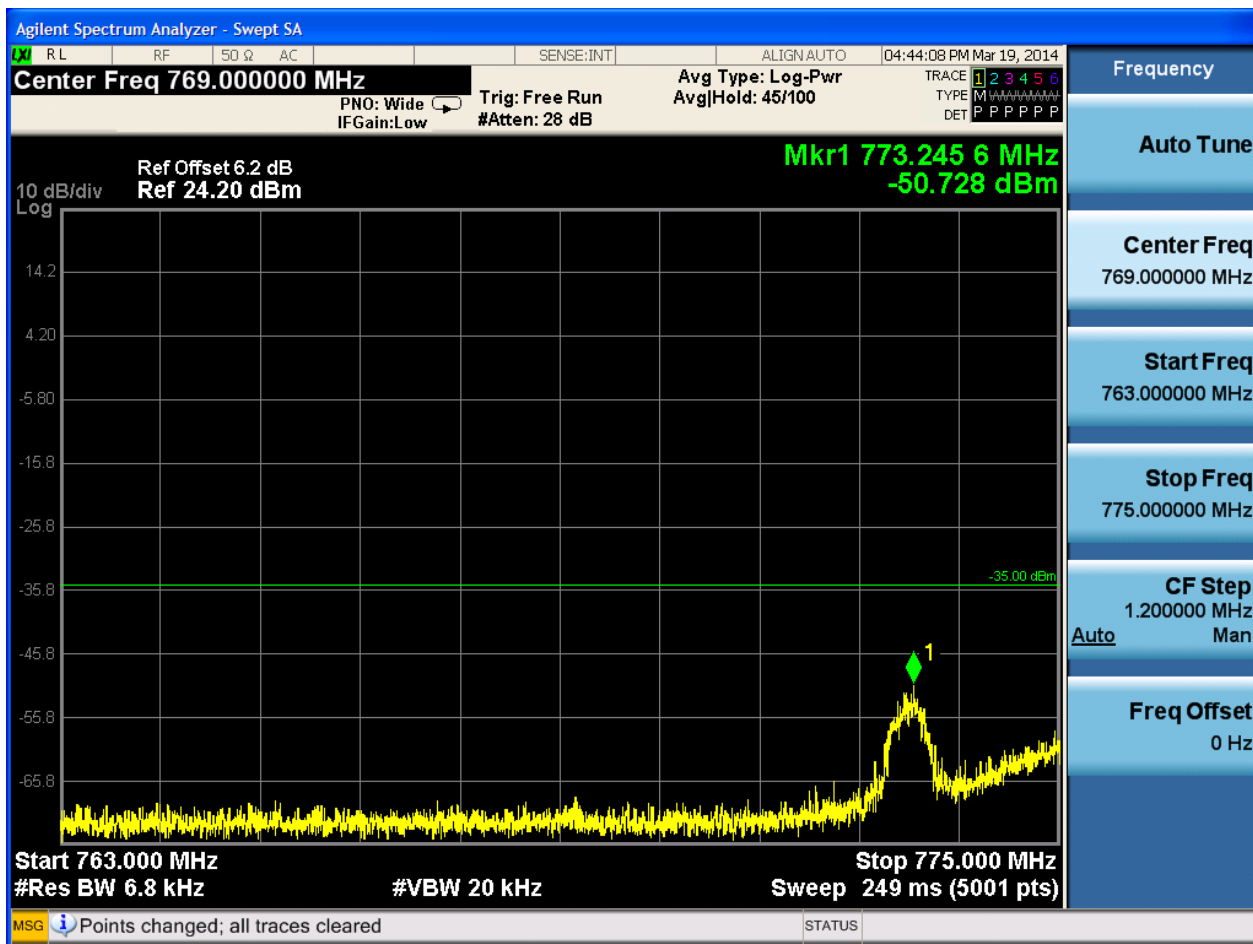
6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0







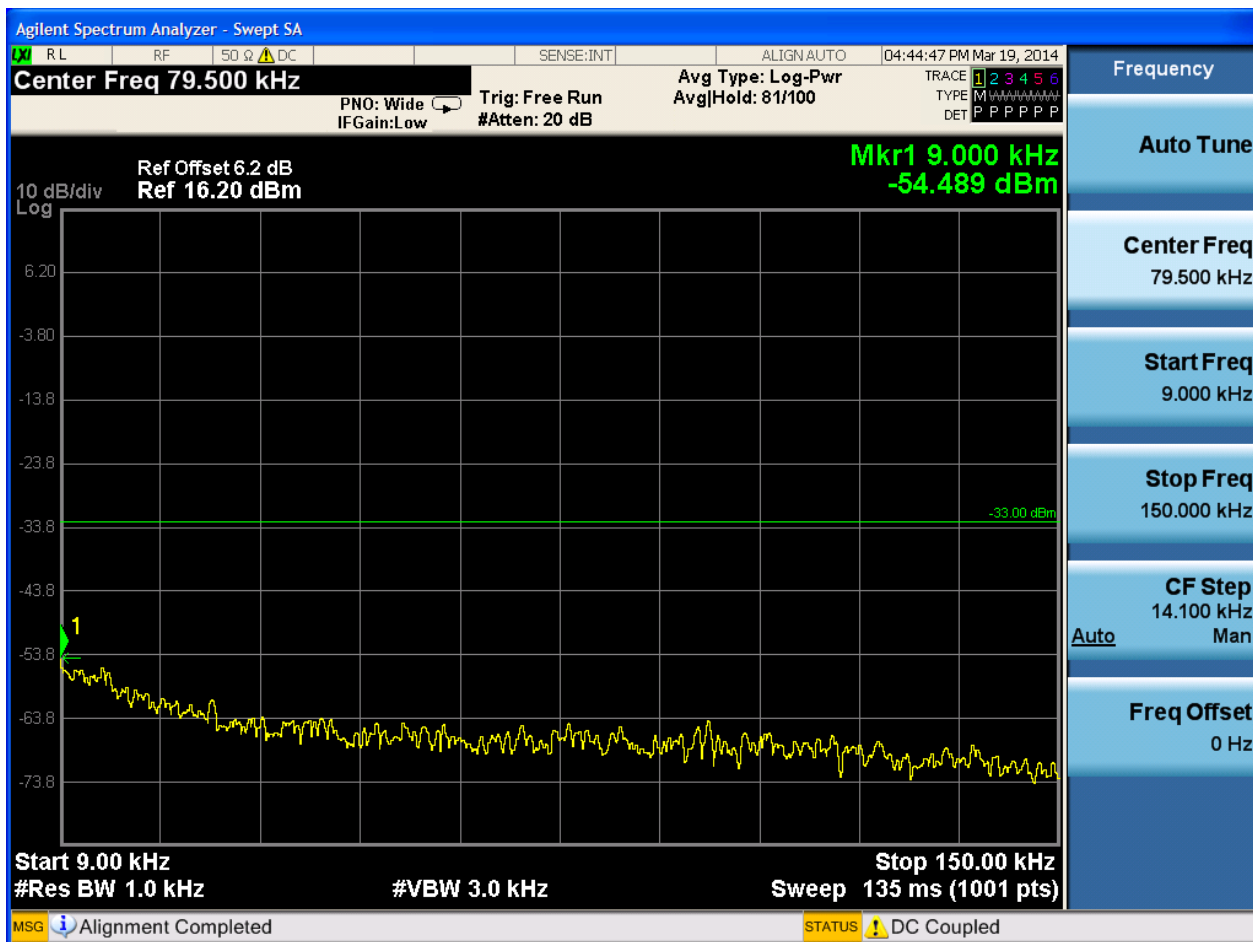


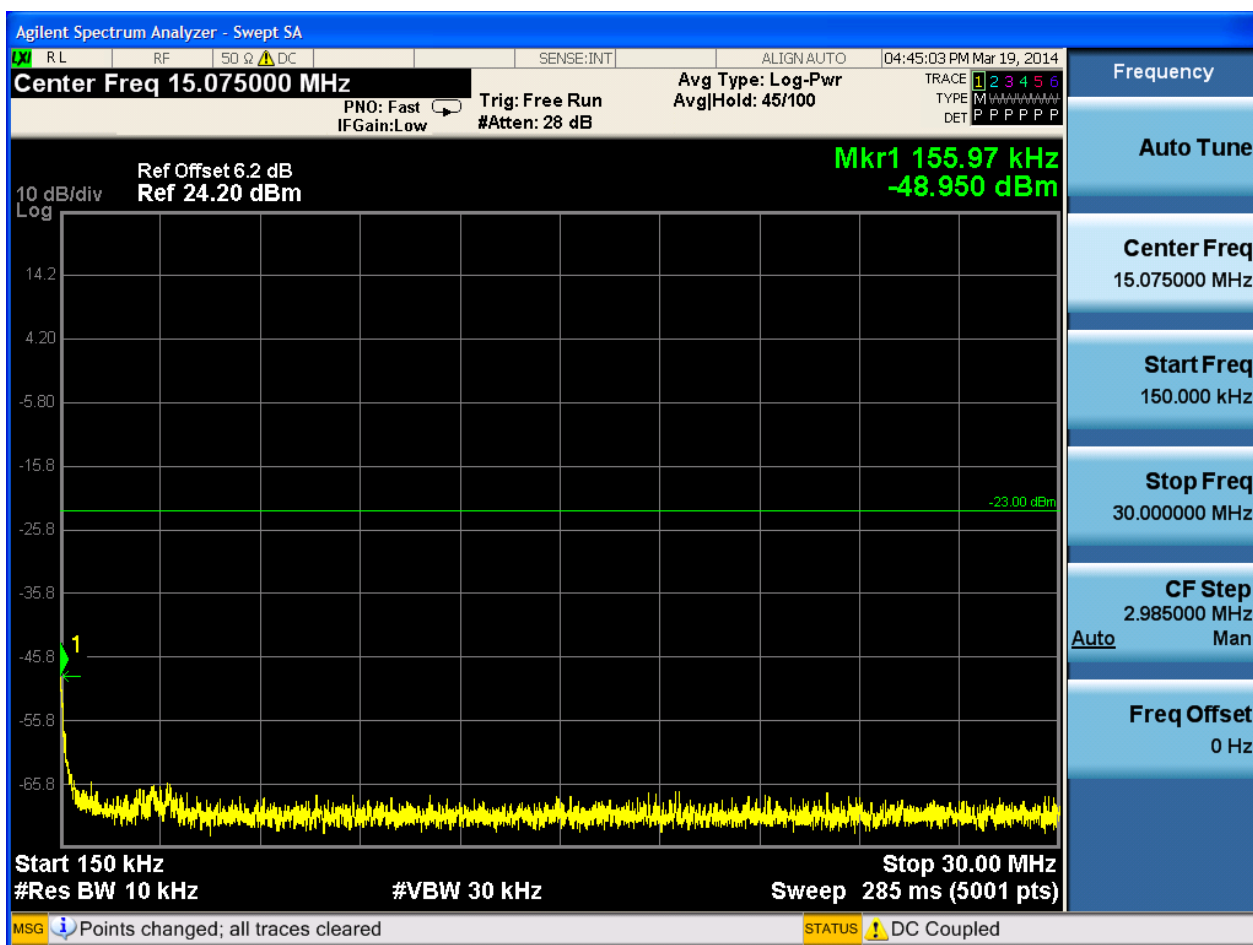


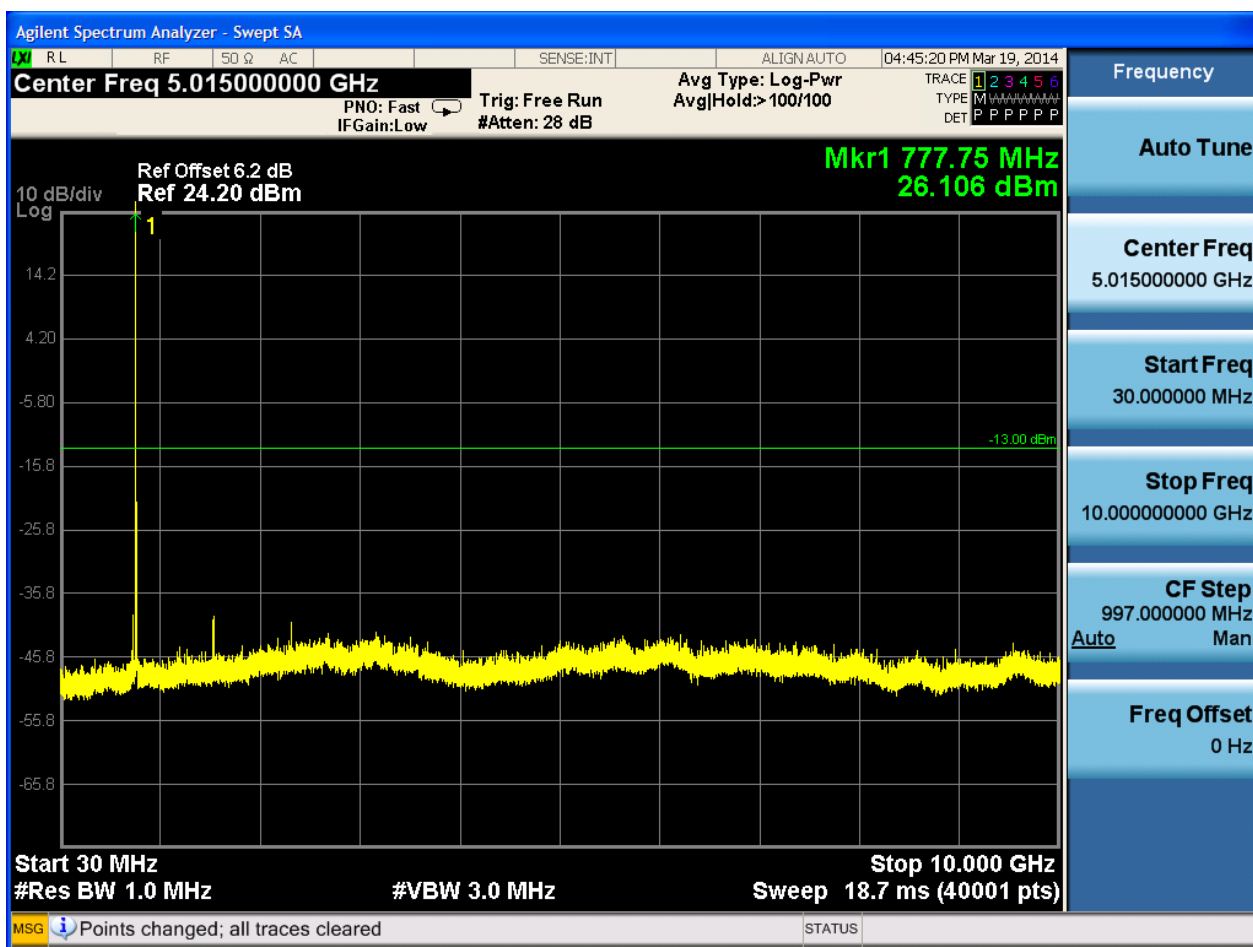


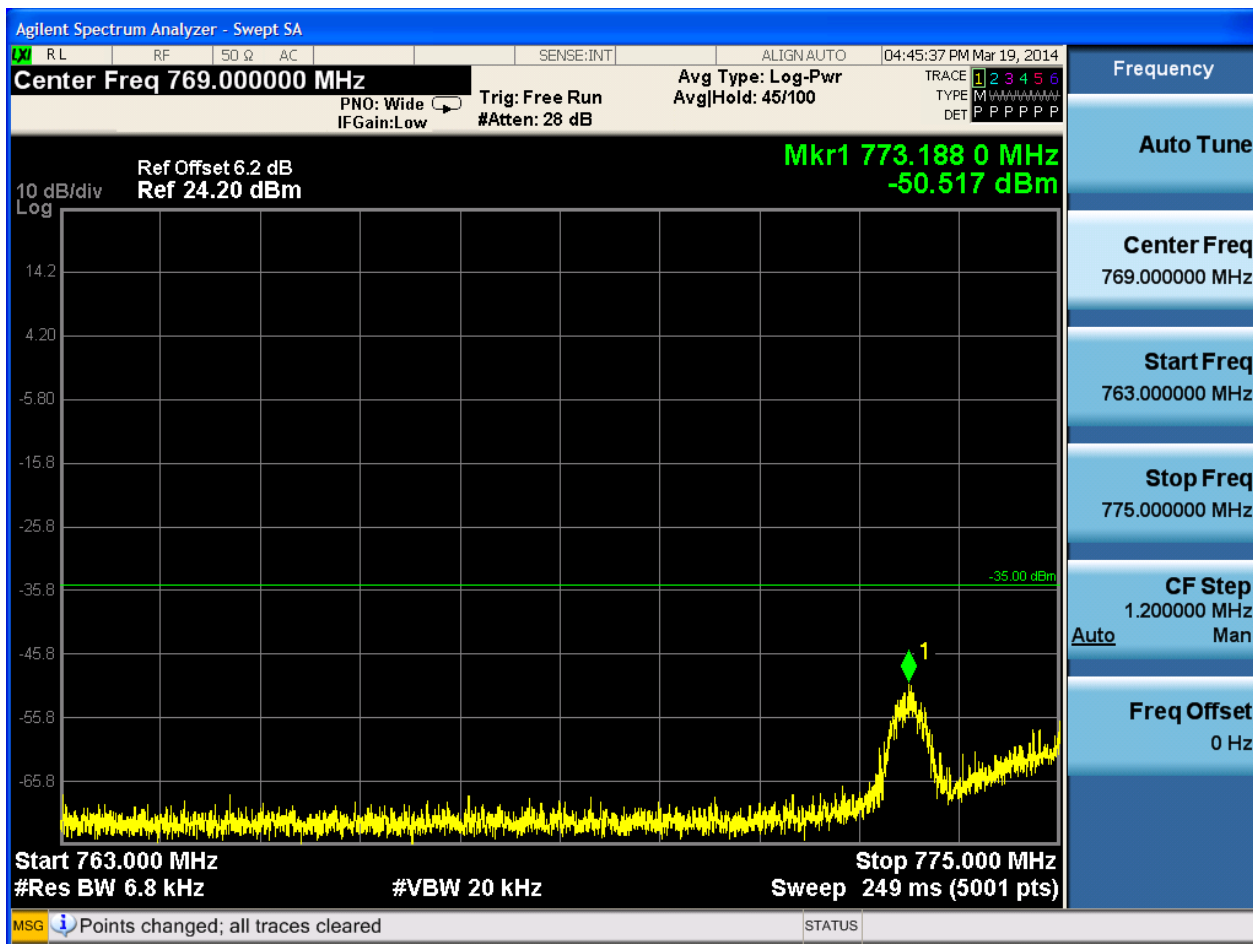
6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0







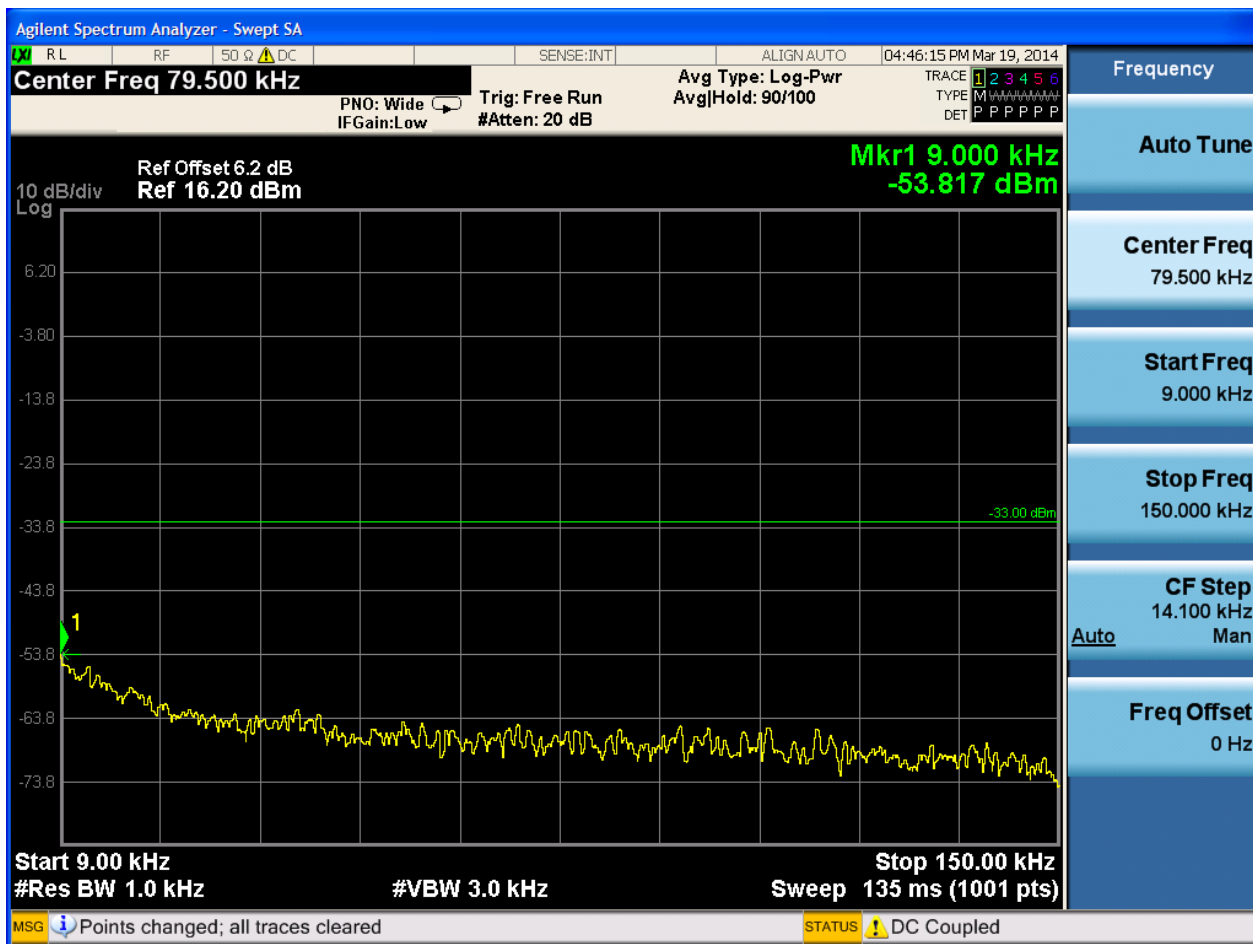


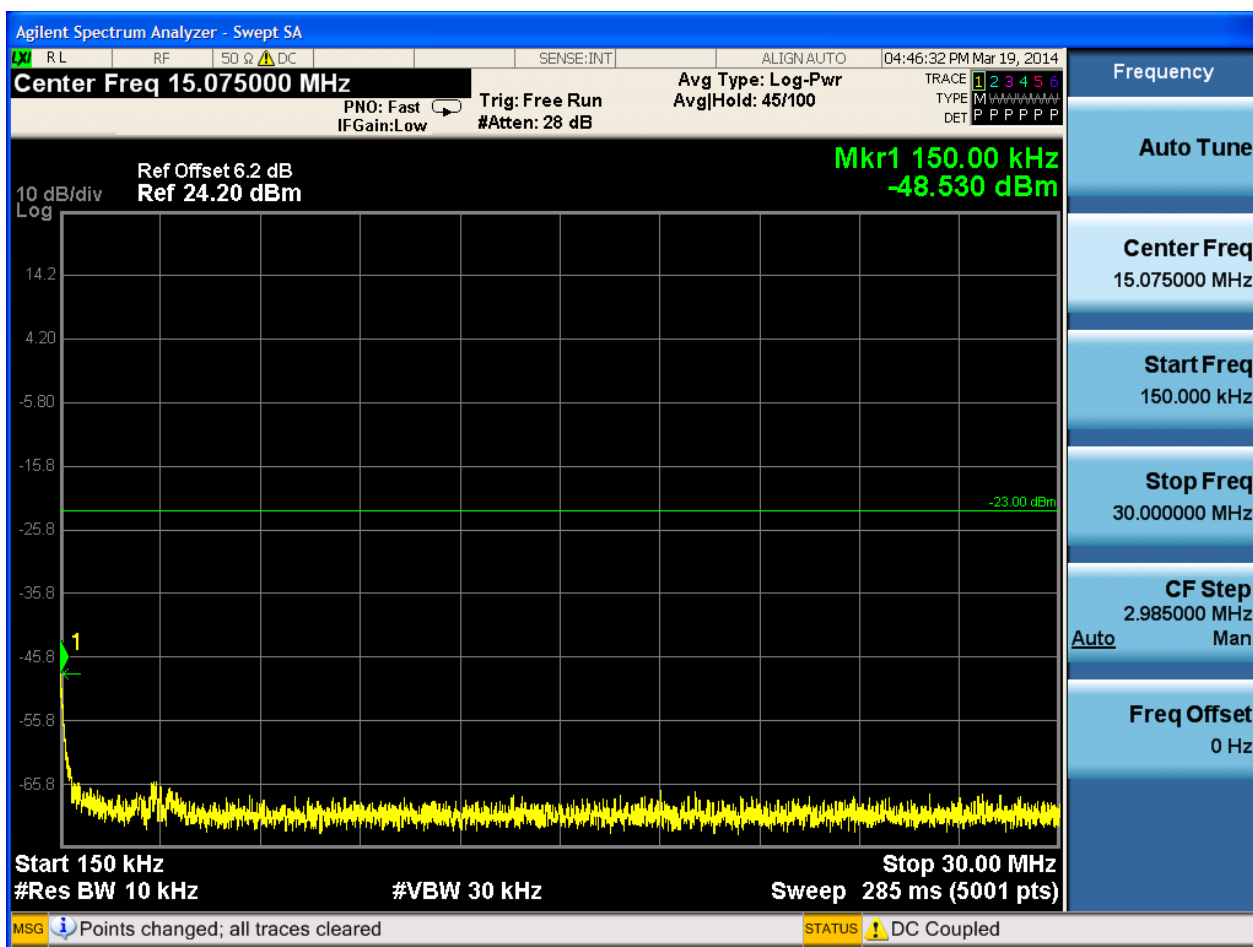


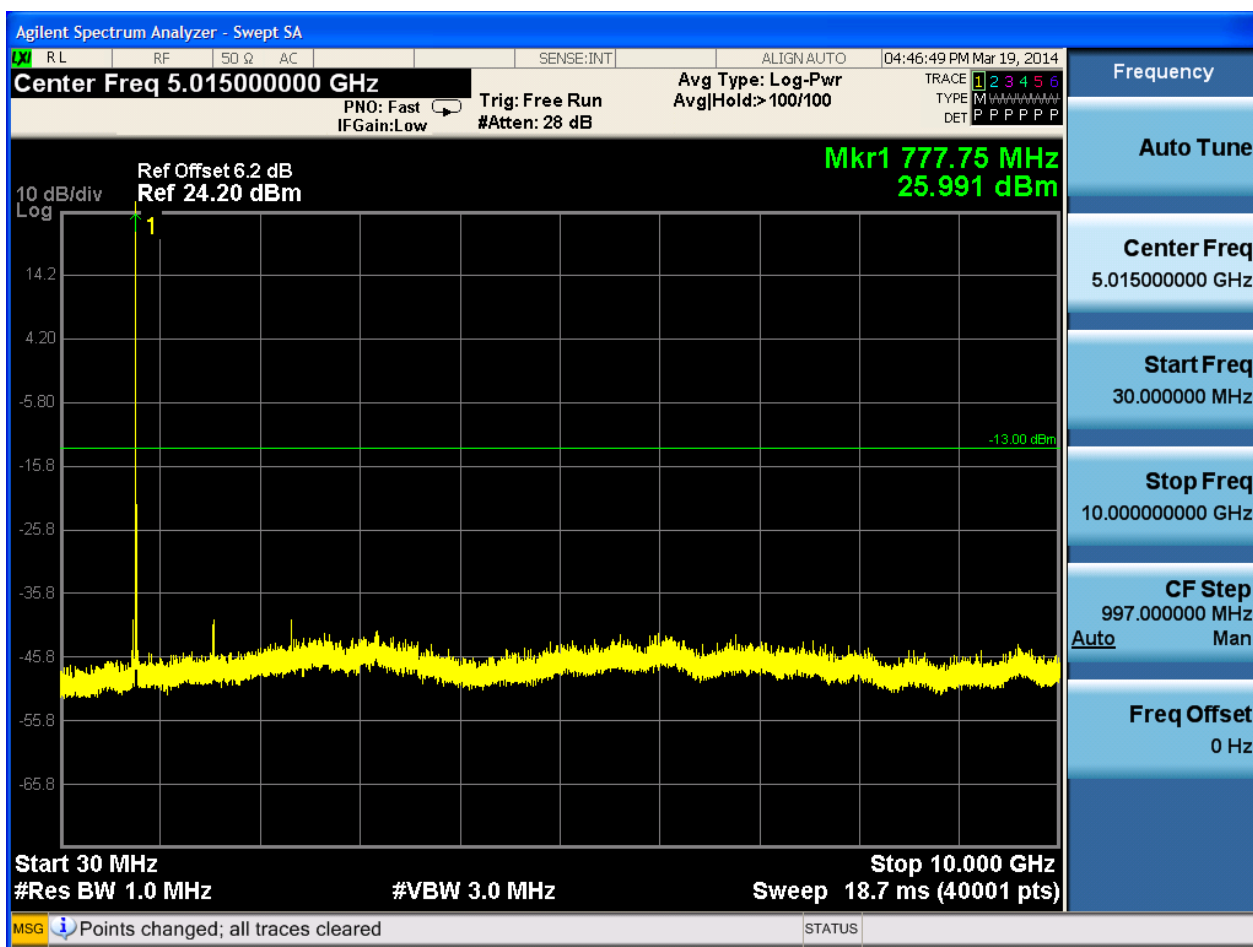


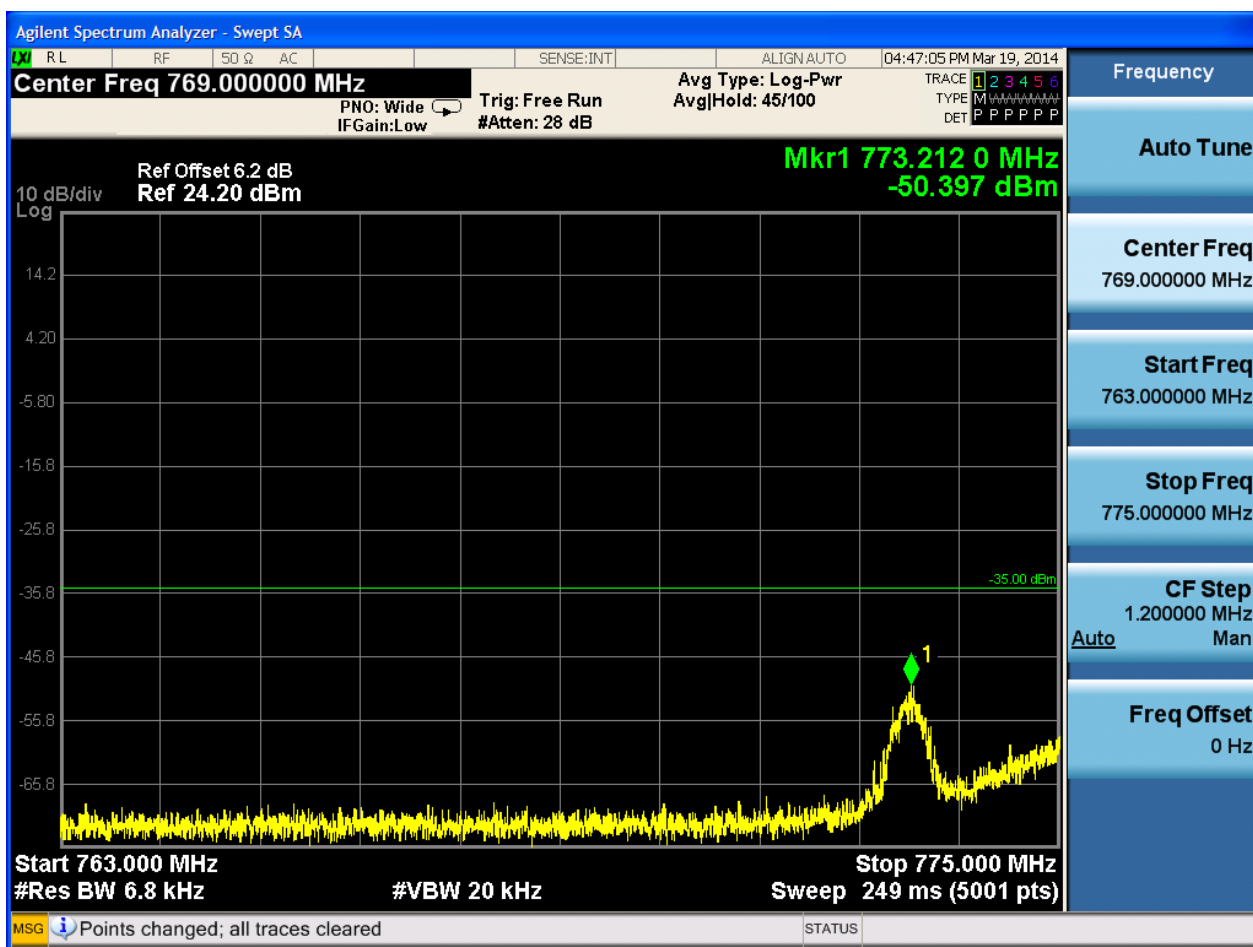
6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0









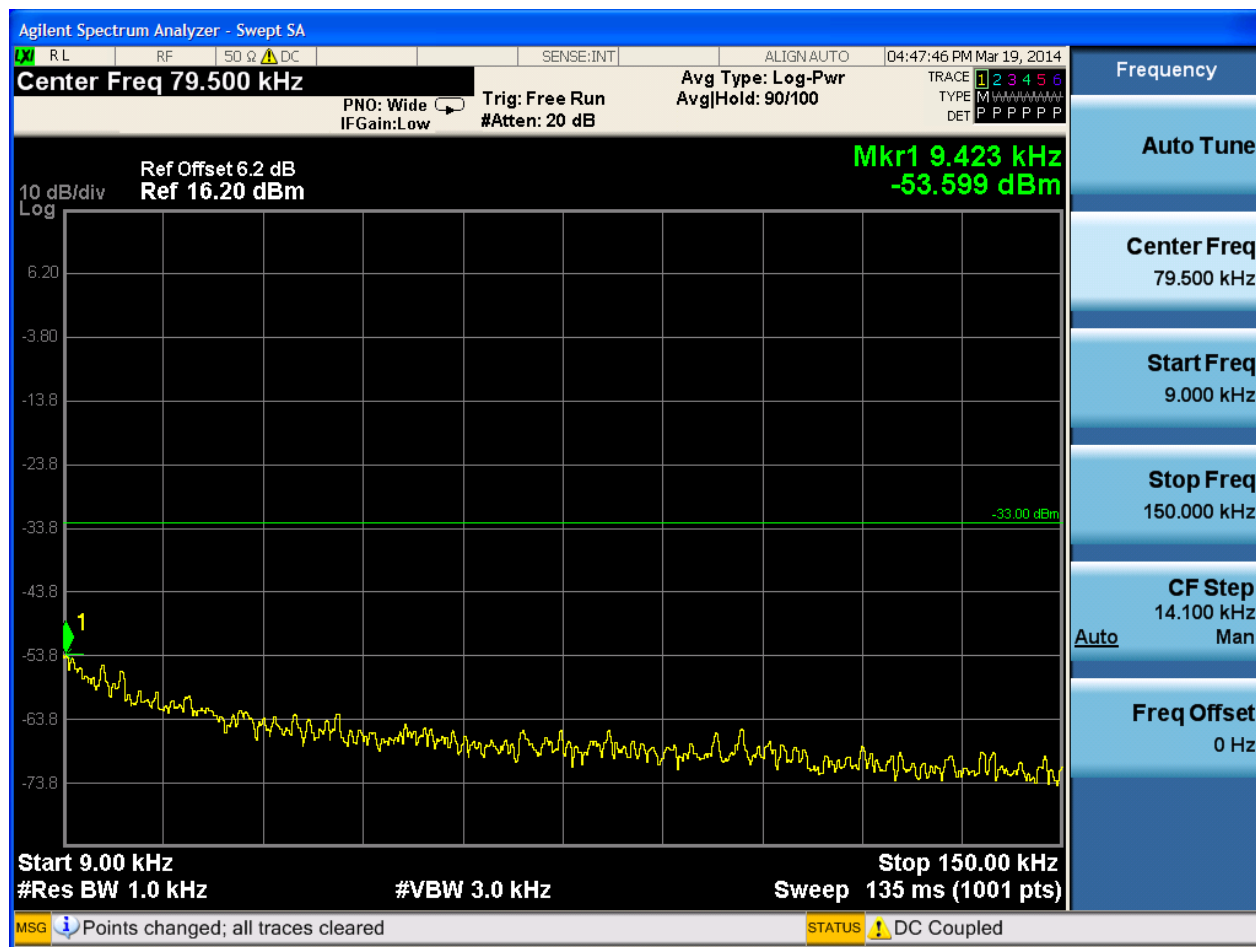


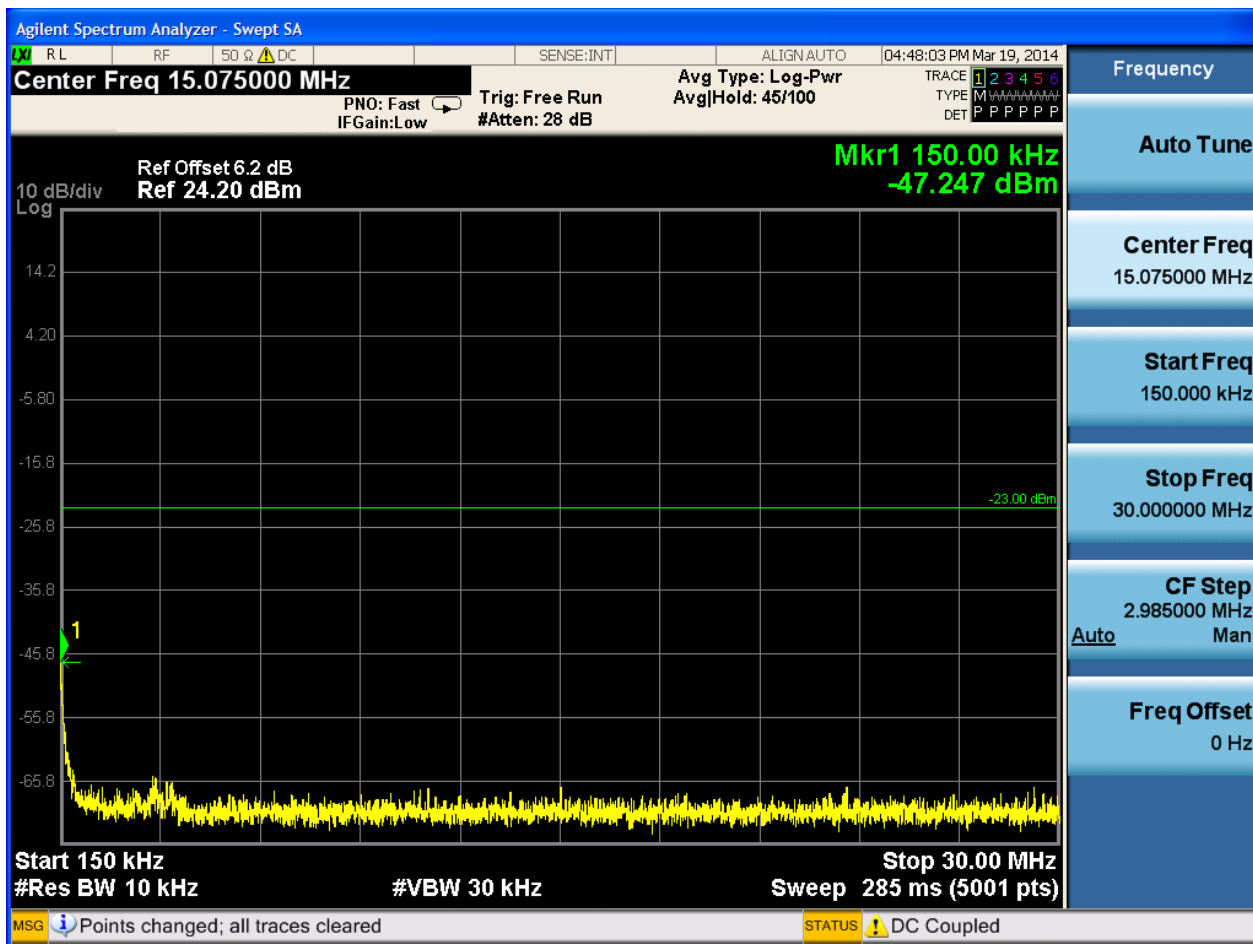
6.1.1.2 Test Mode = LTE/TM2

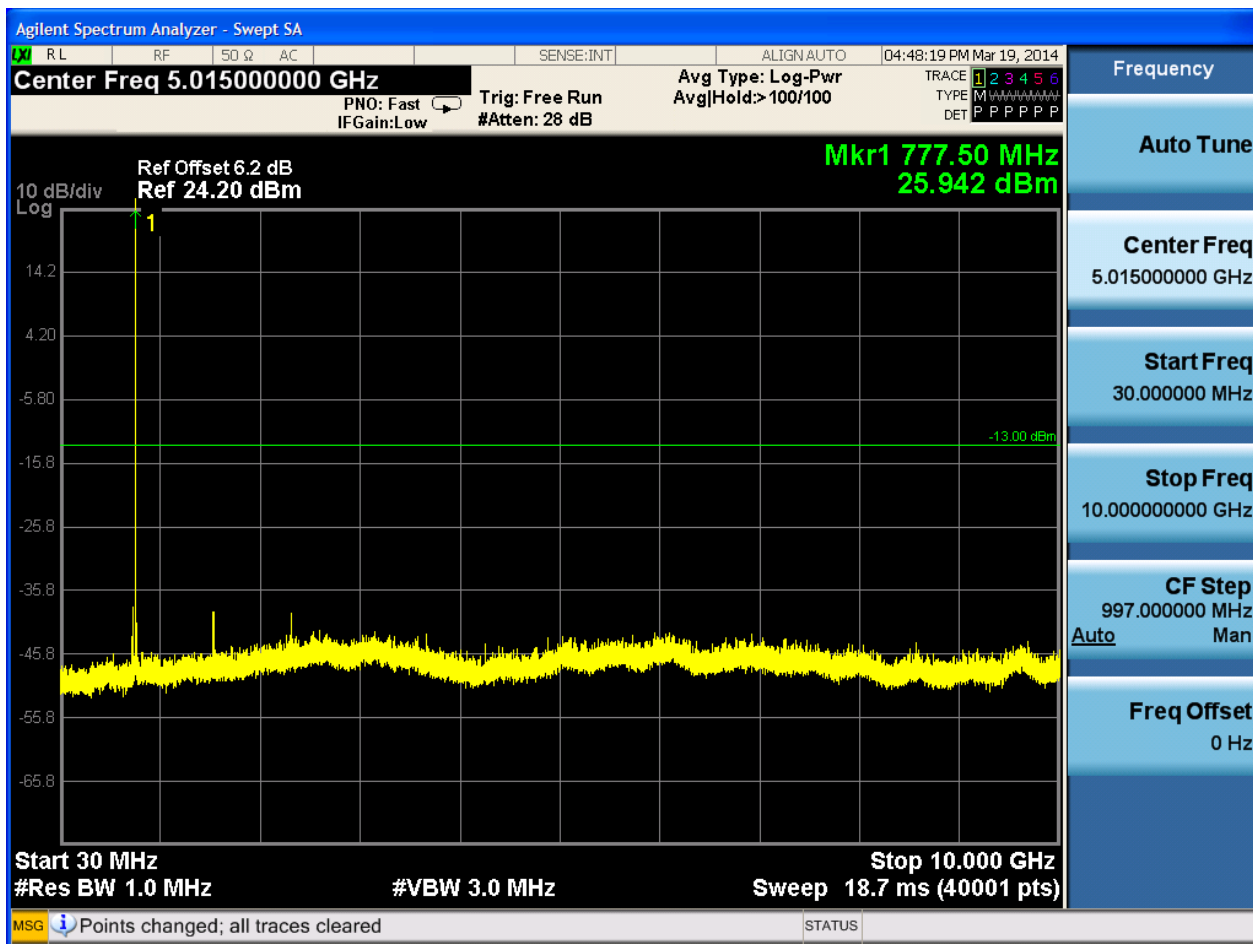
6.1.1.2.1 Test Bandwidth = 5

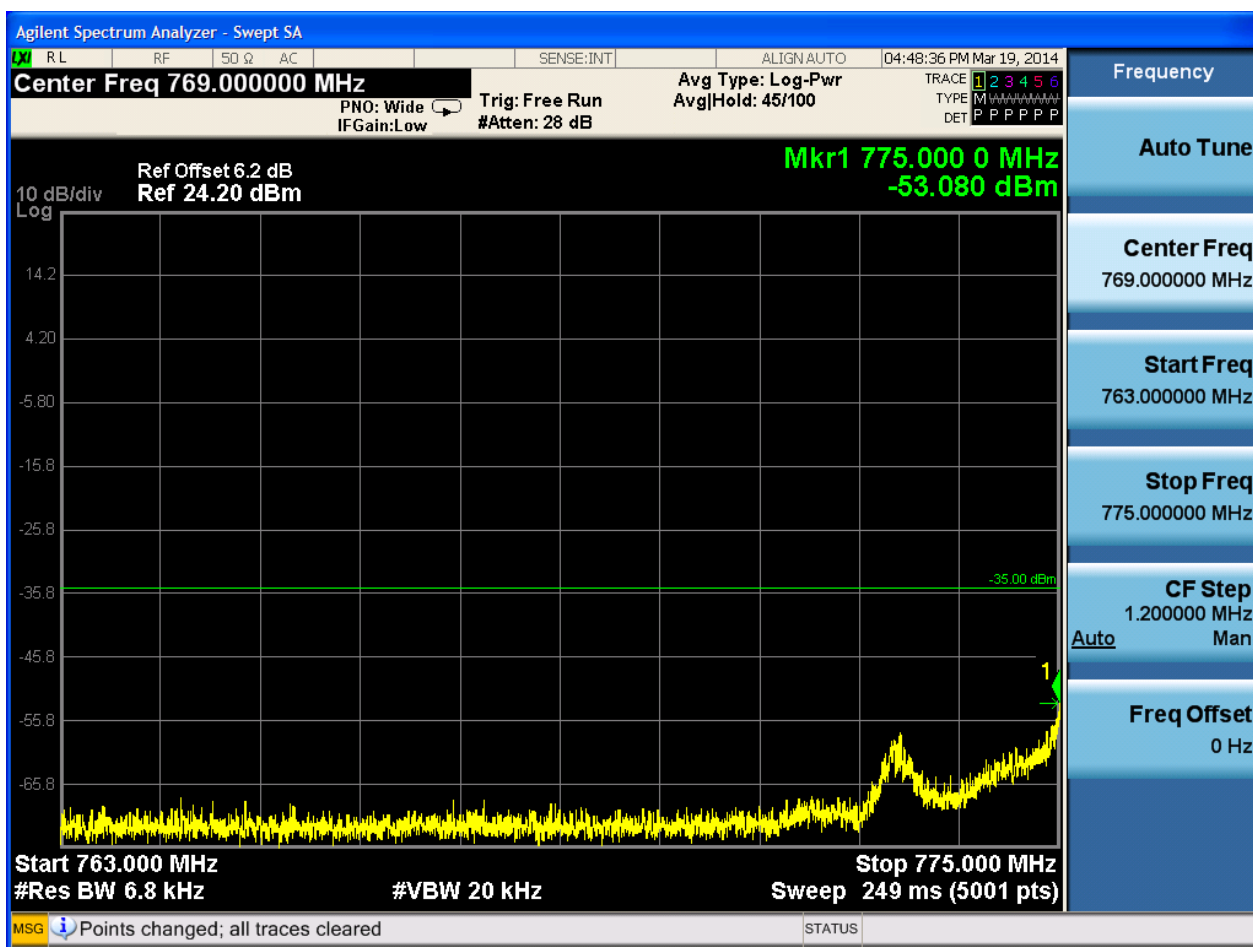
6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0





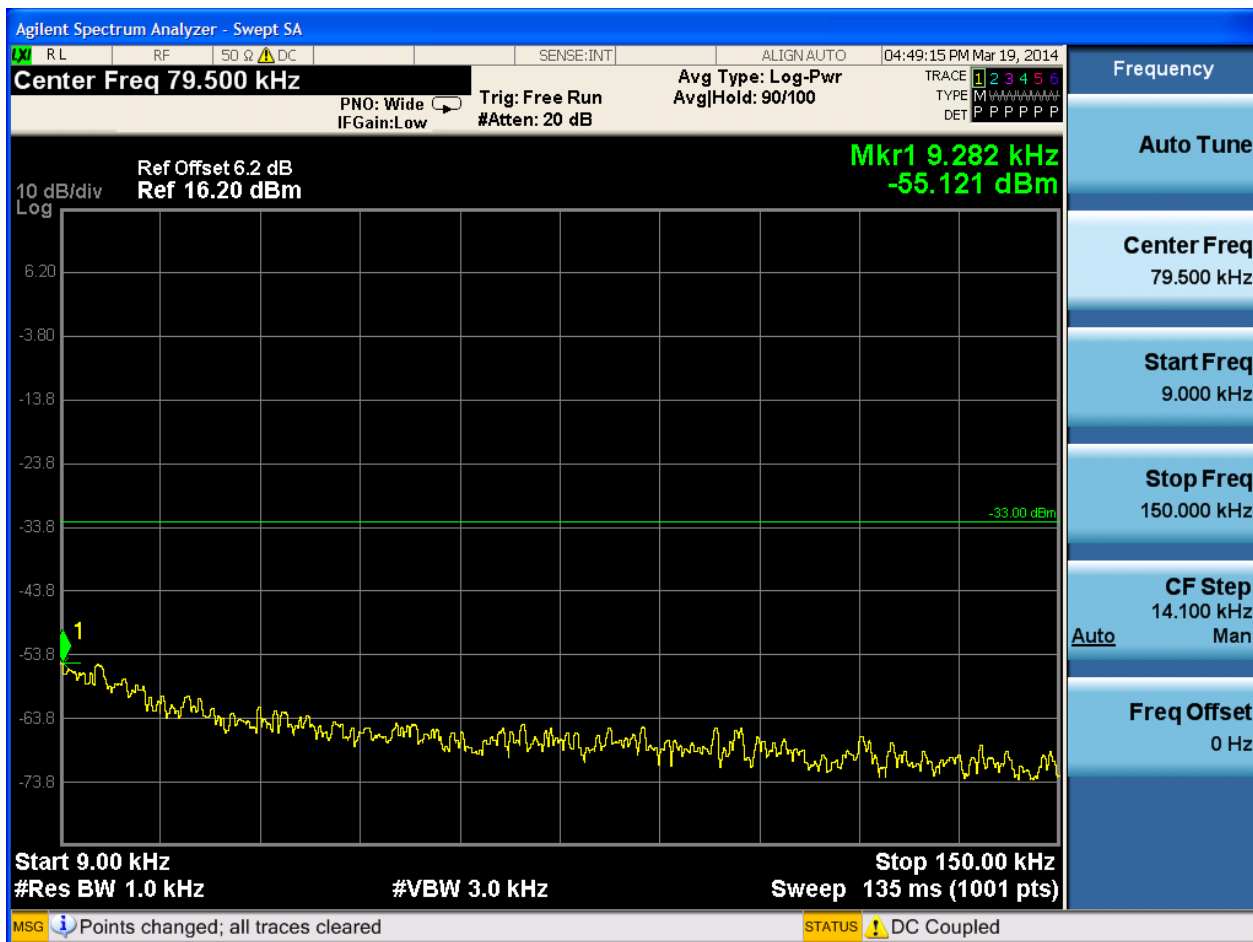


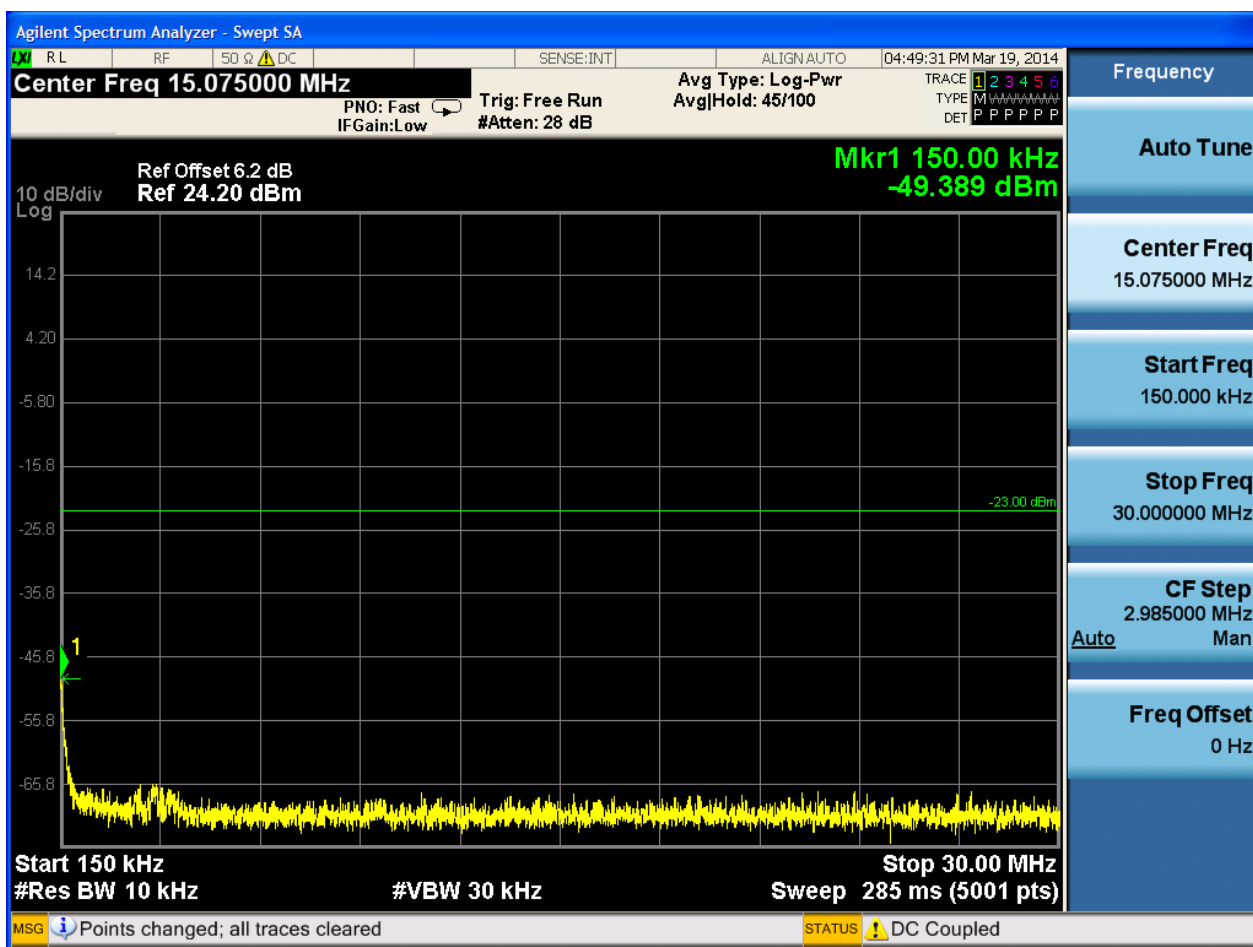


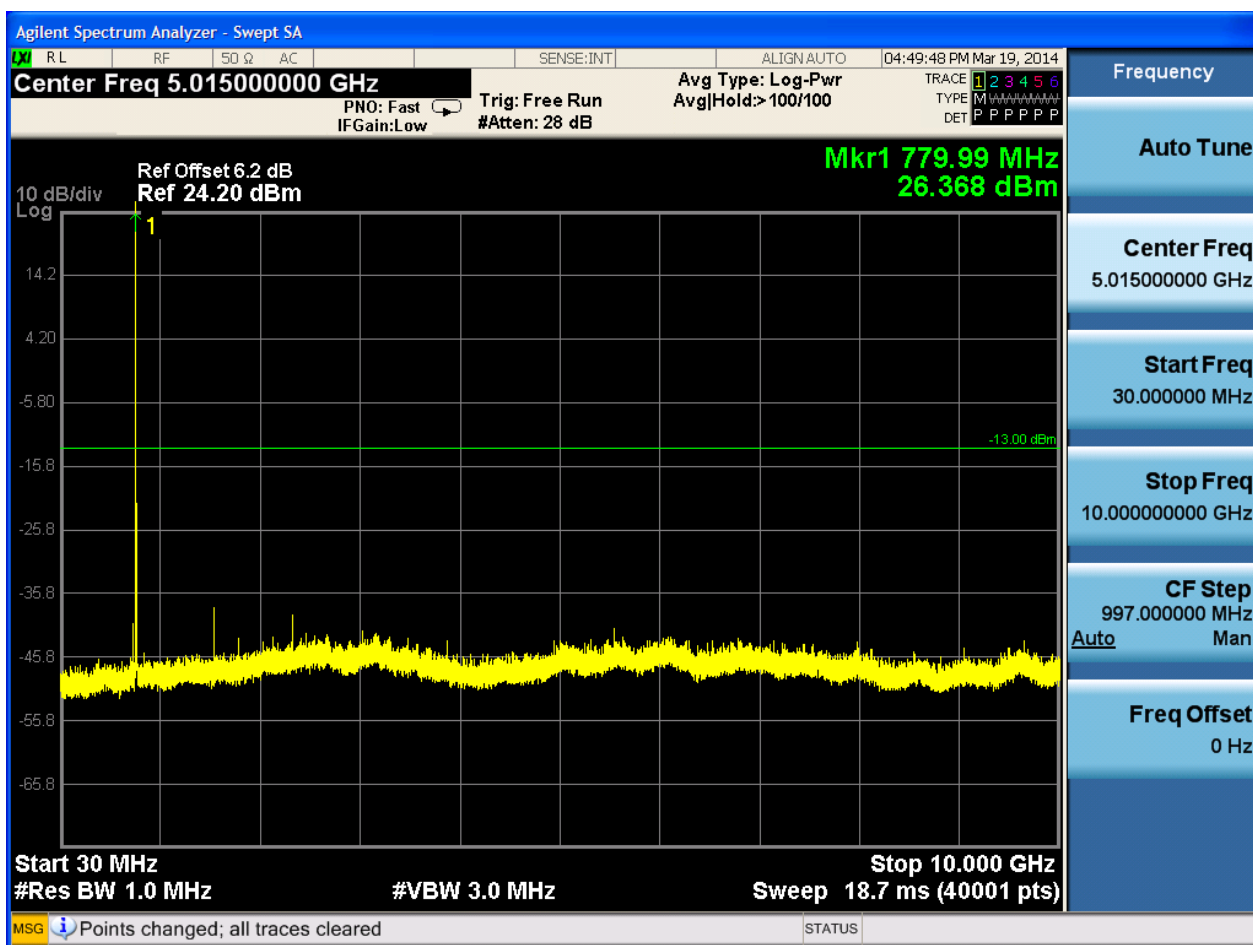


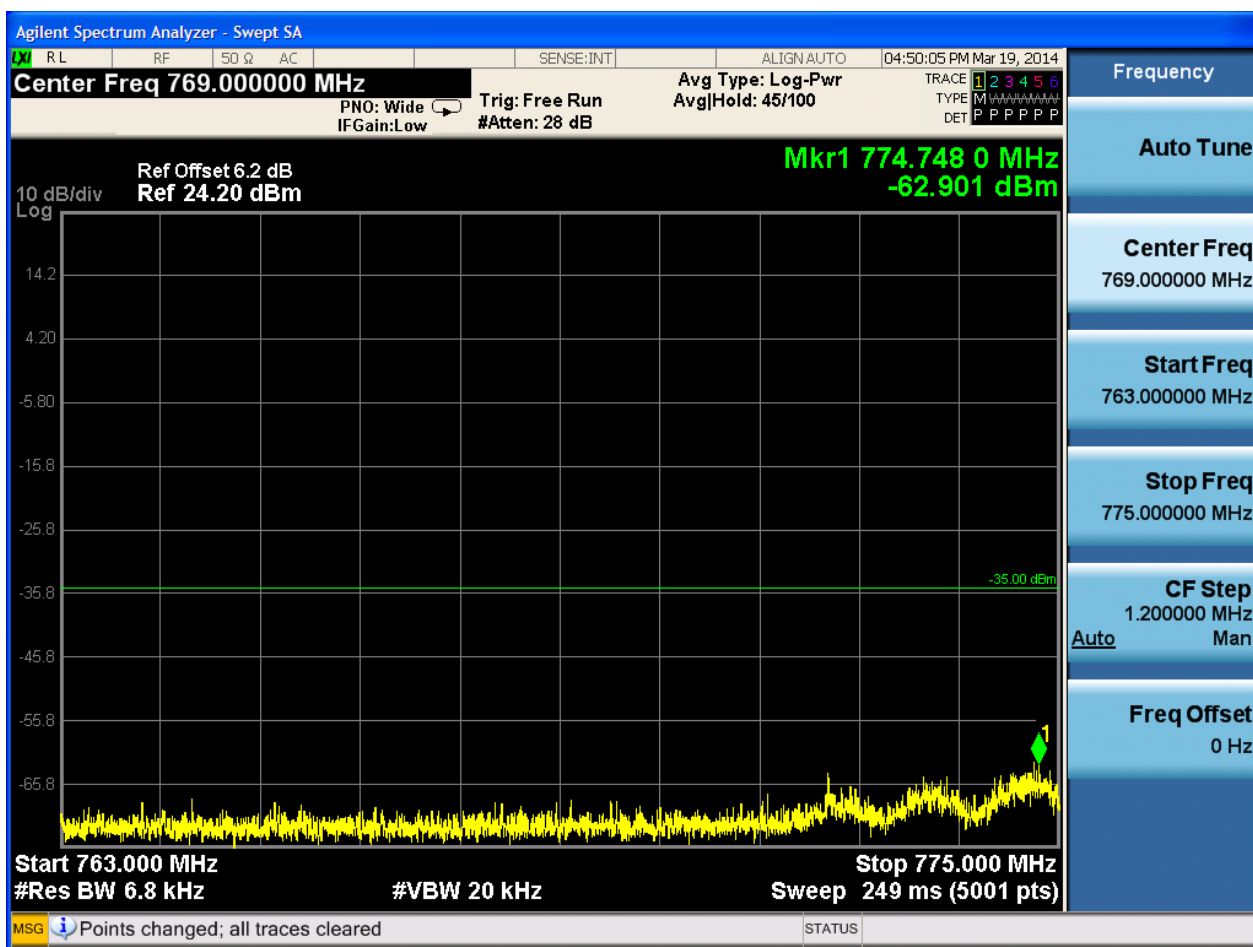
6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0







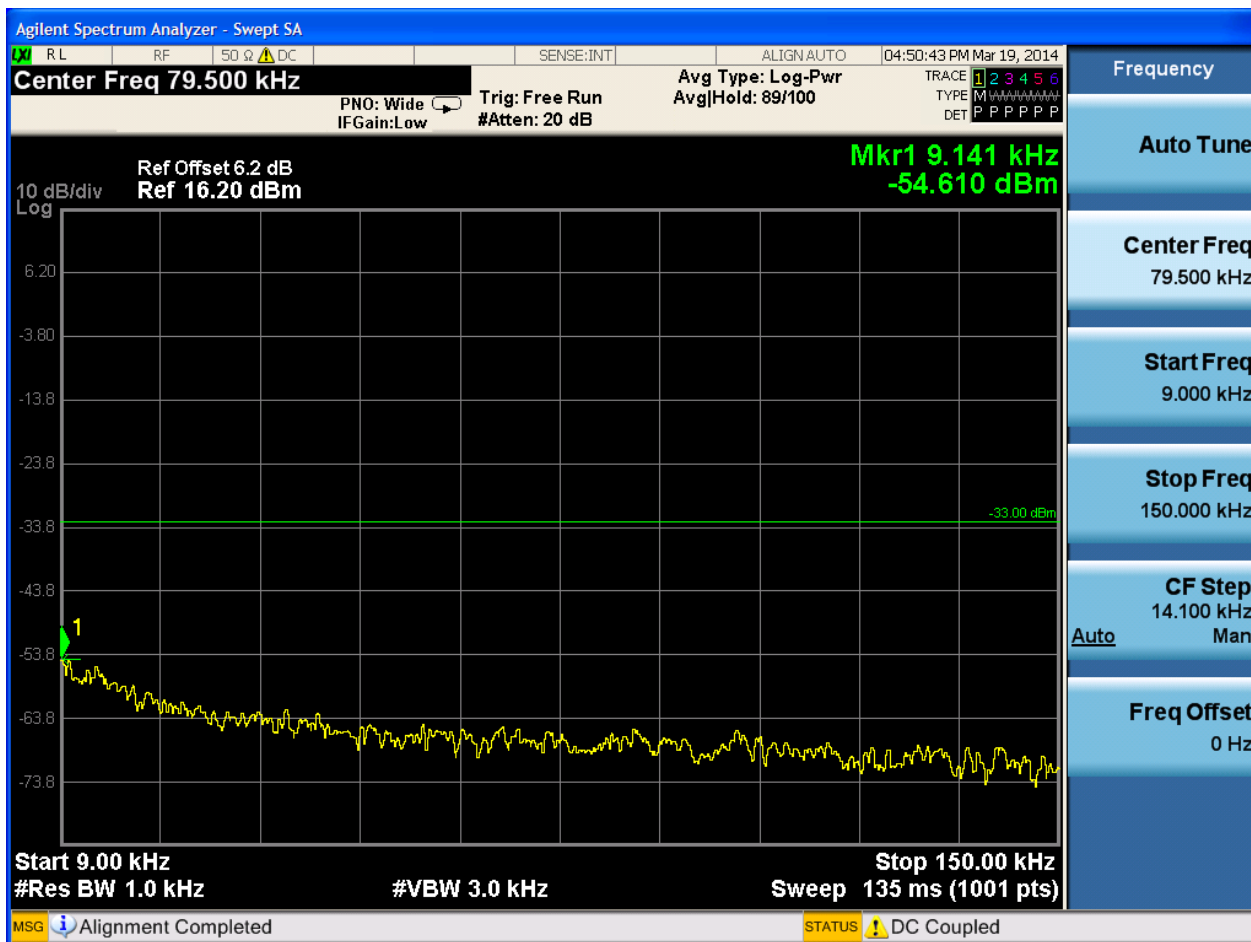


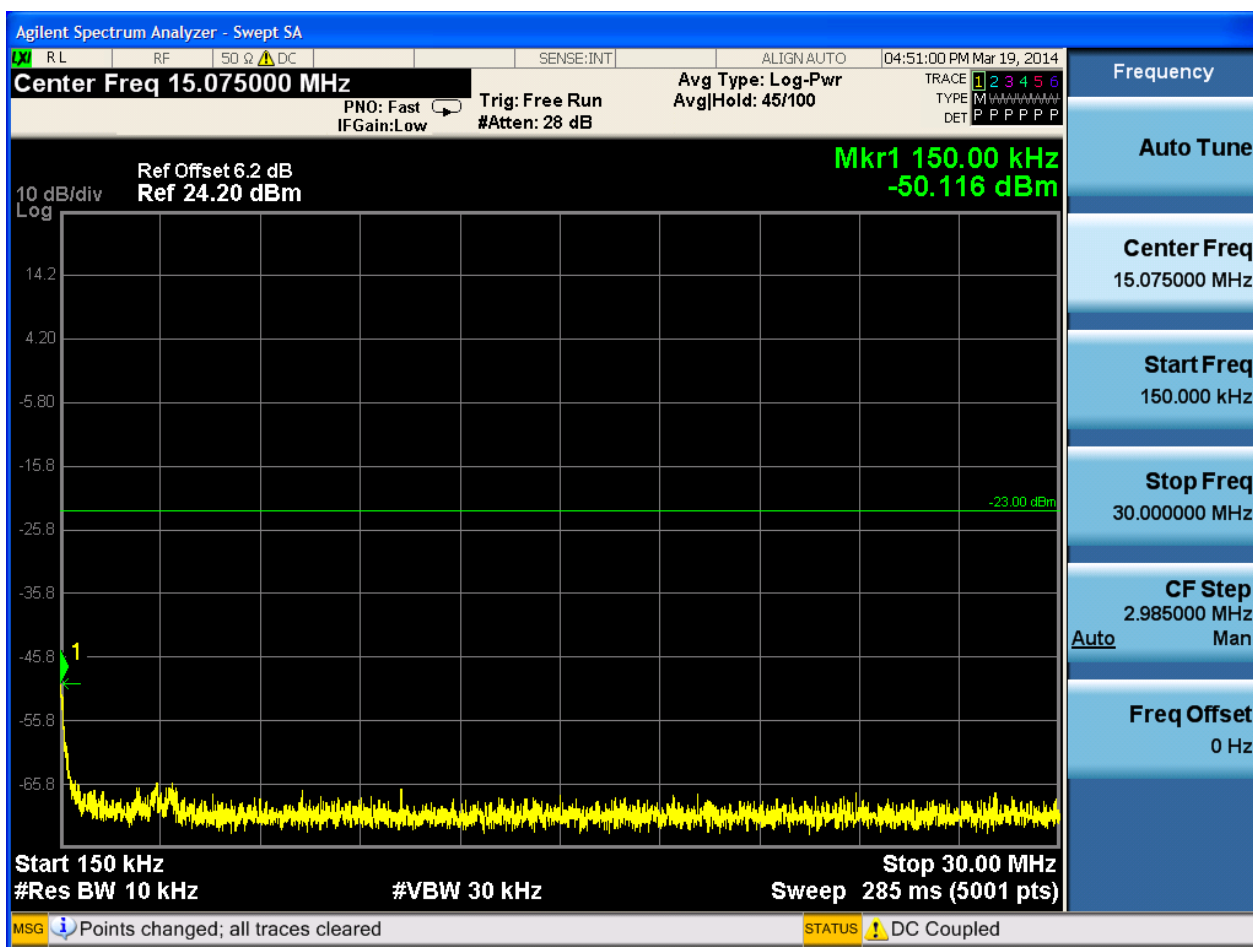


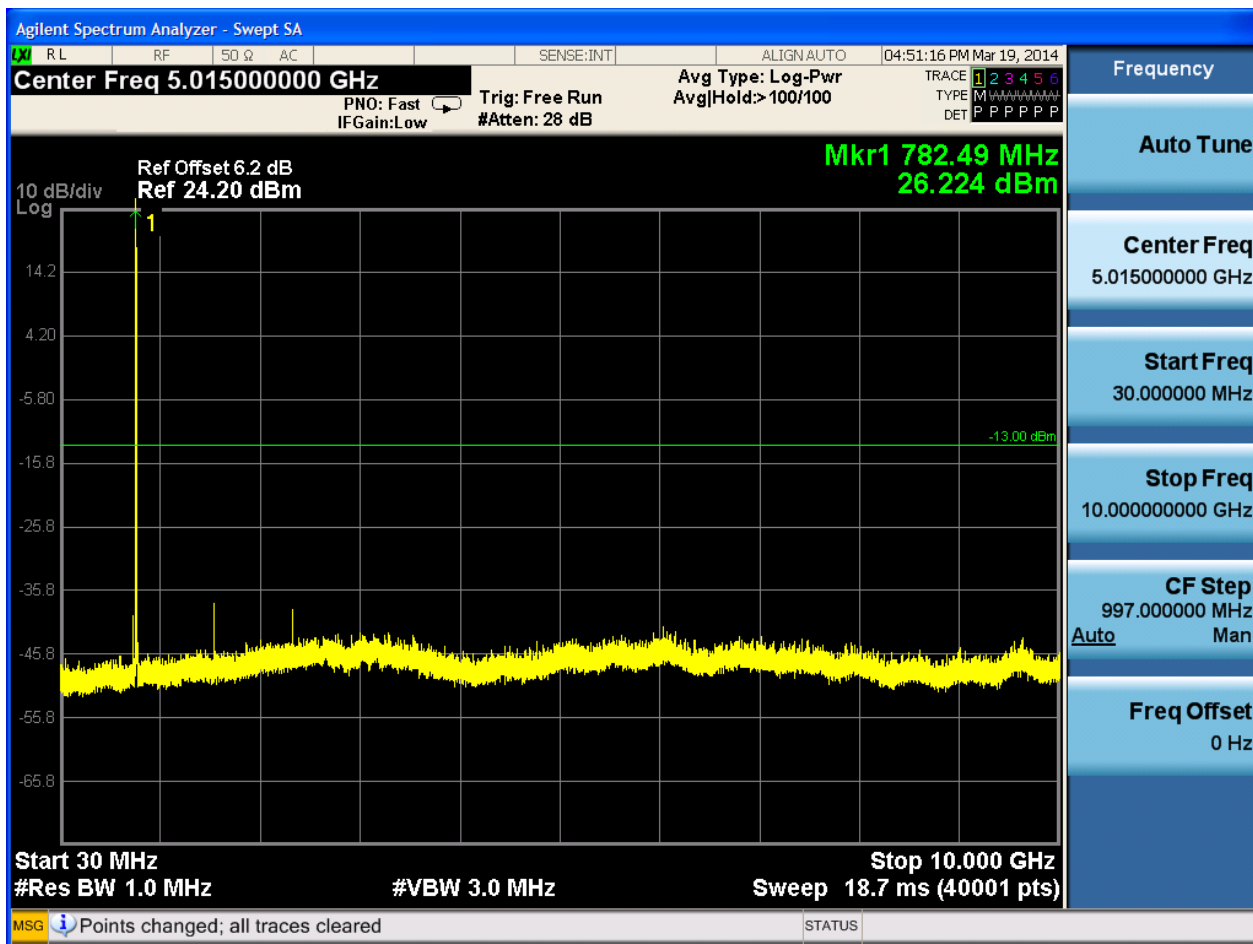


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0







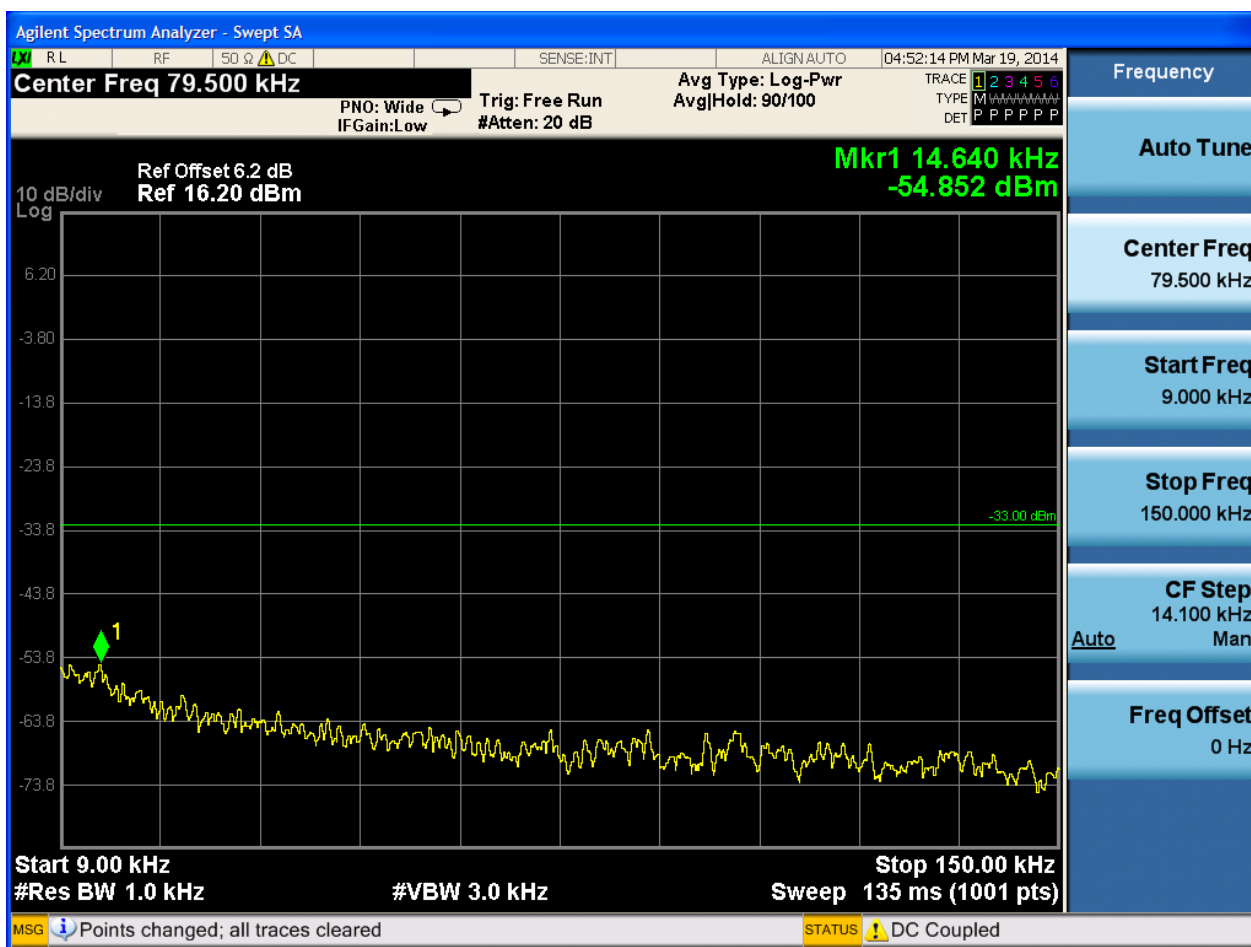


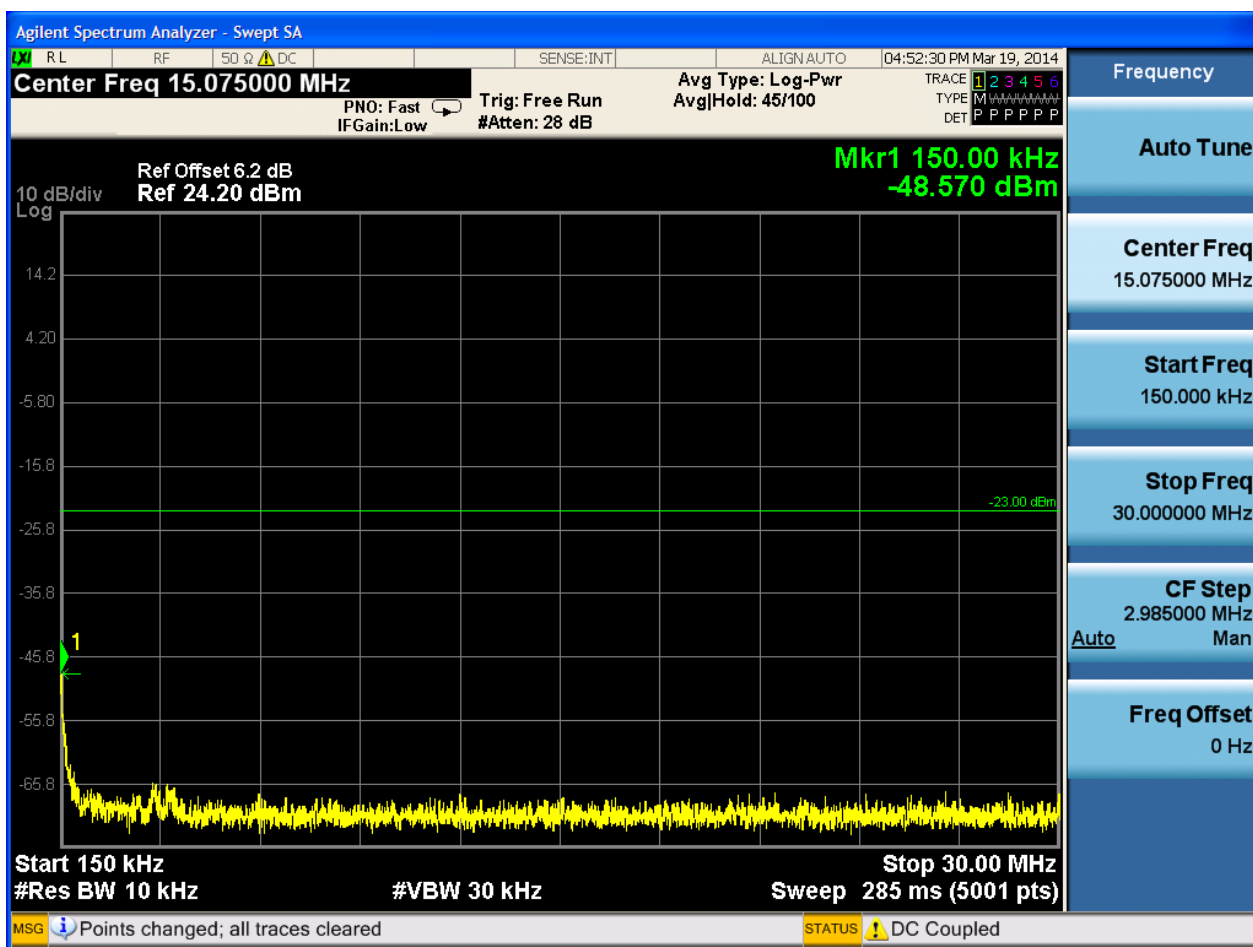


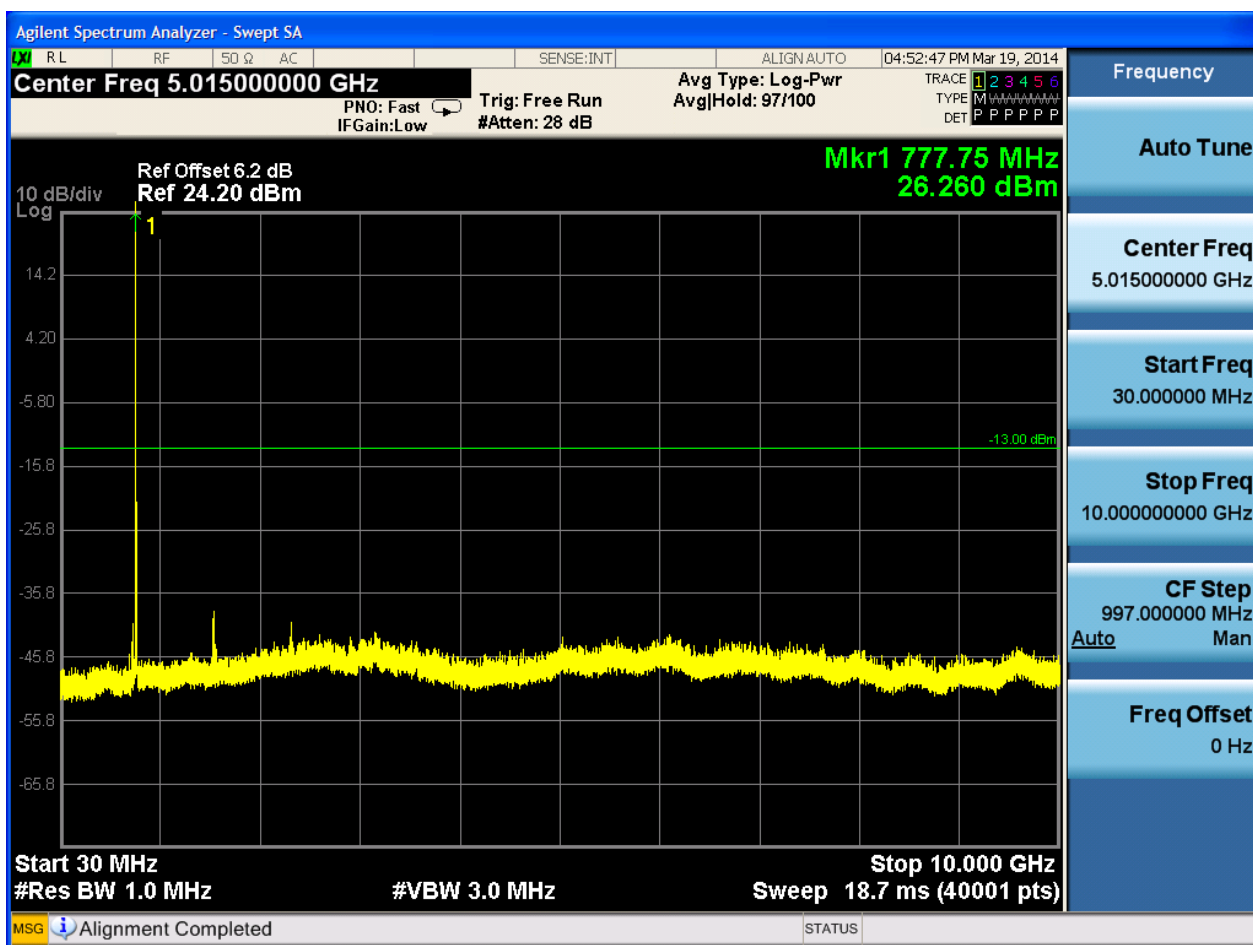
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0





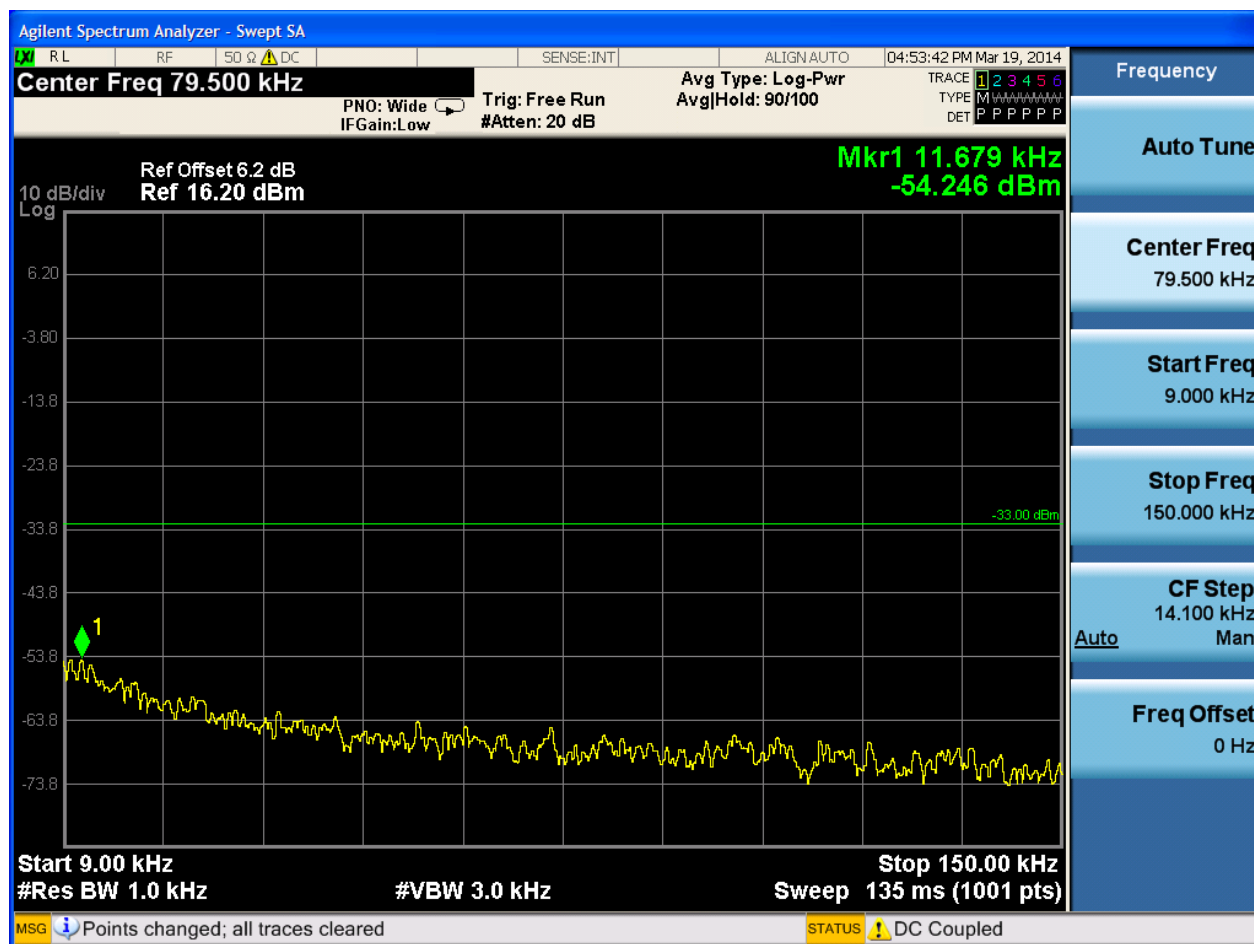


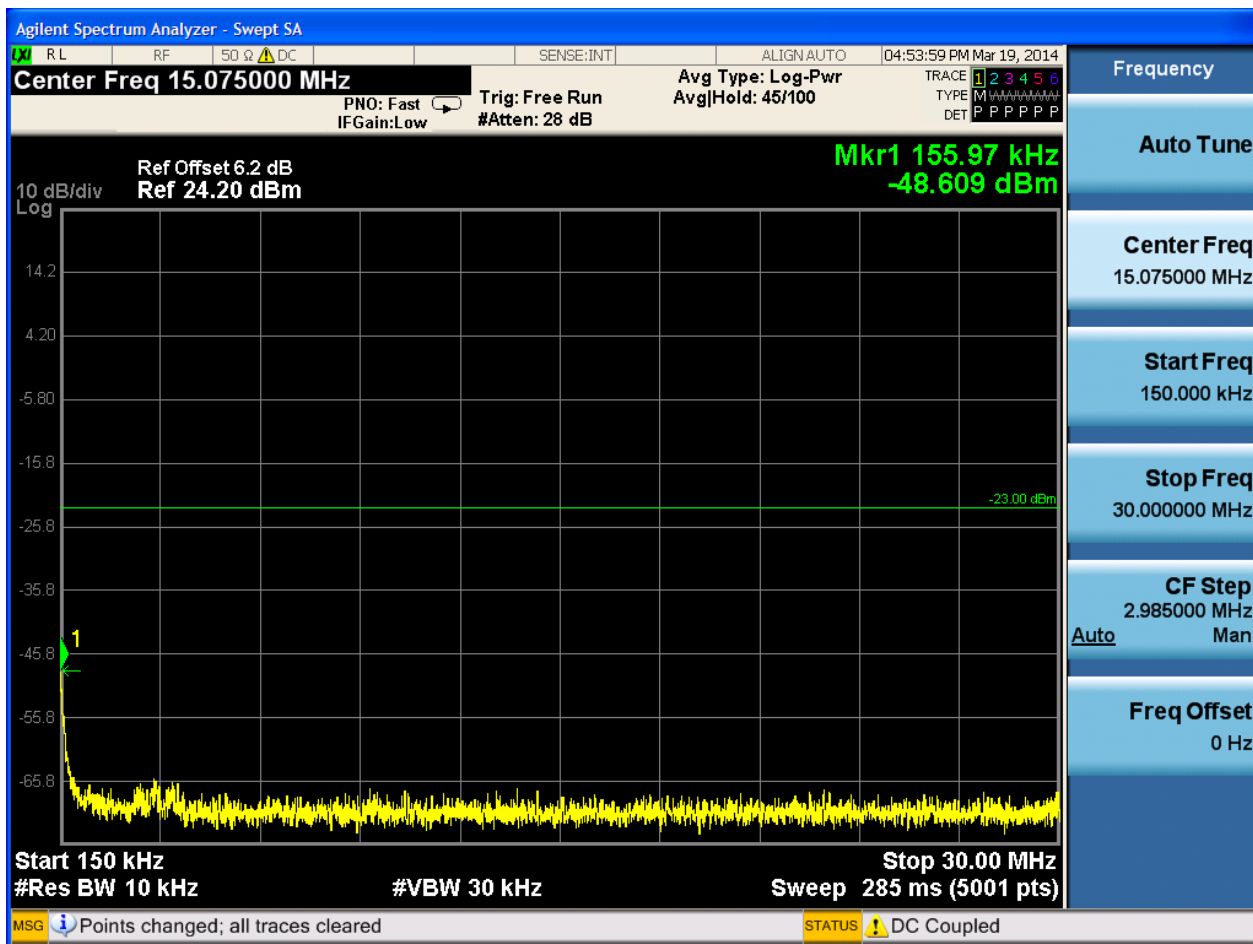


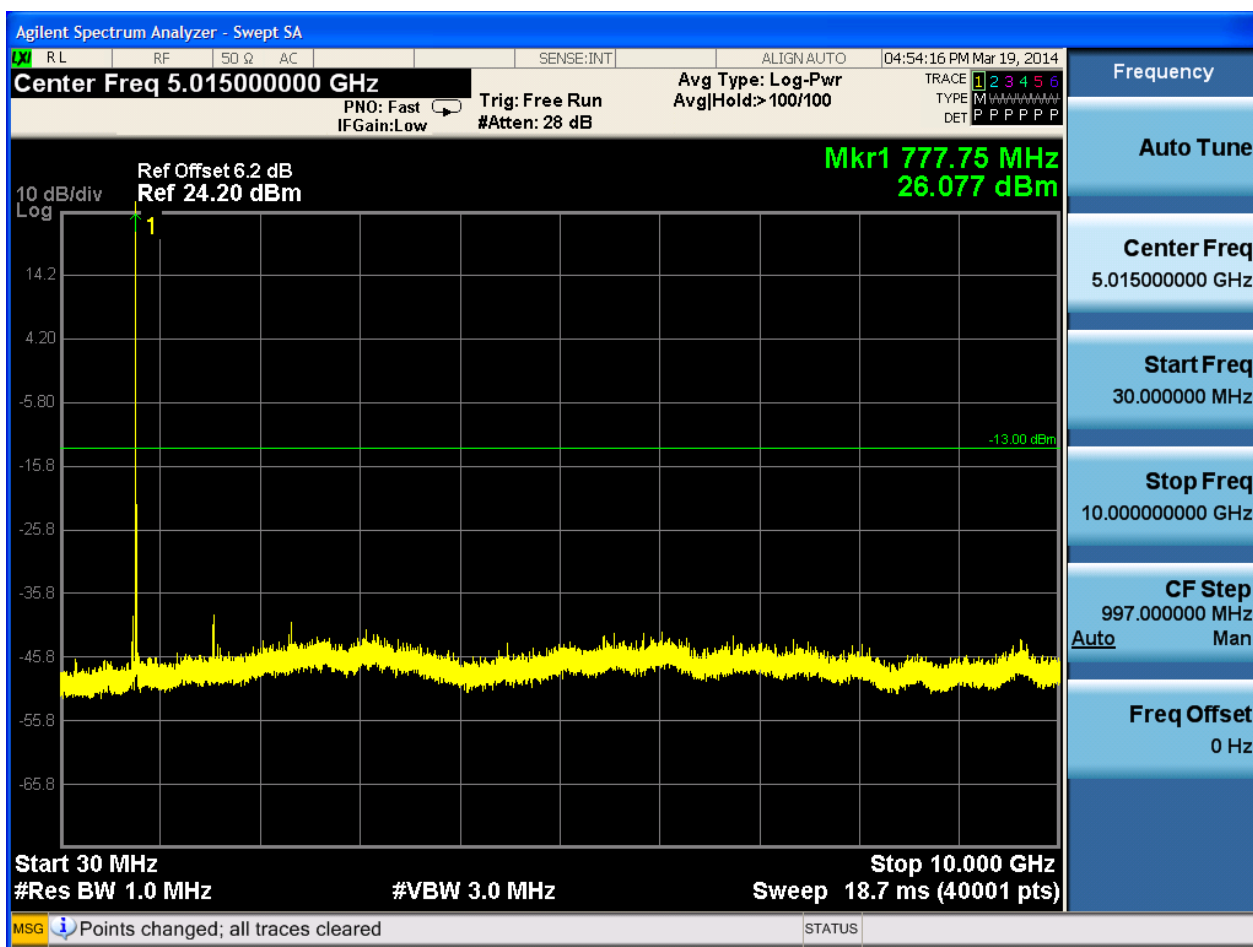


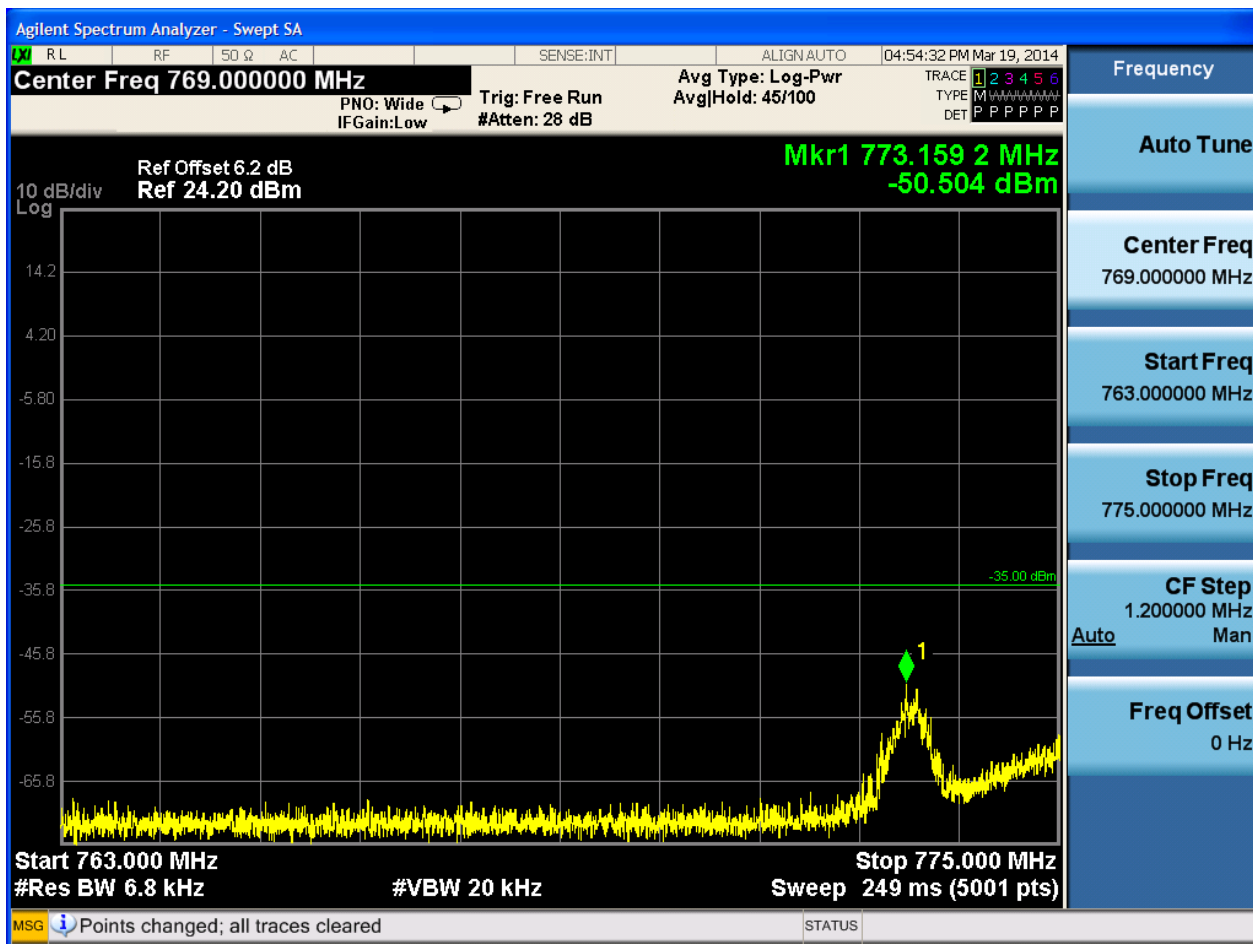
6.1.1.2.2.2 Test Channel = MCH

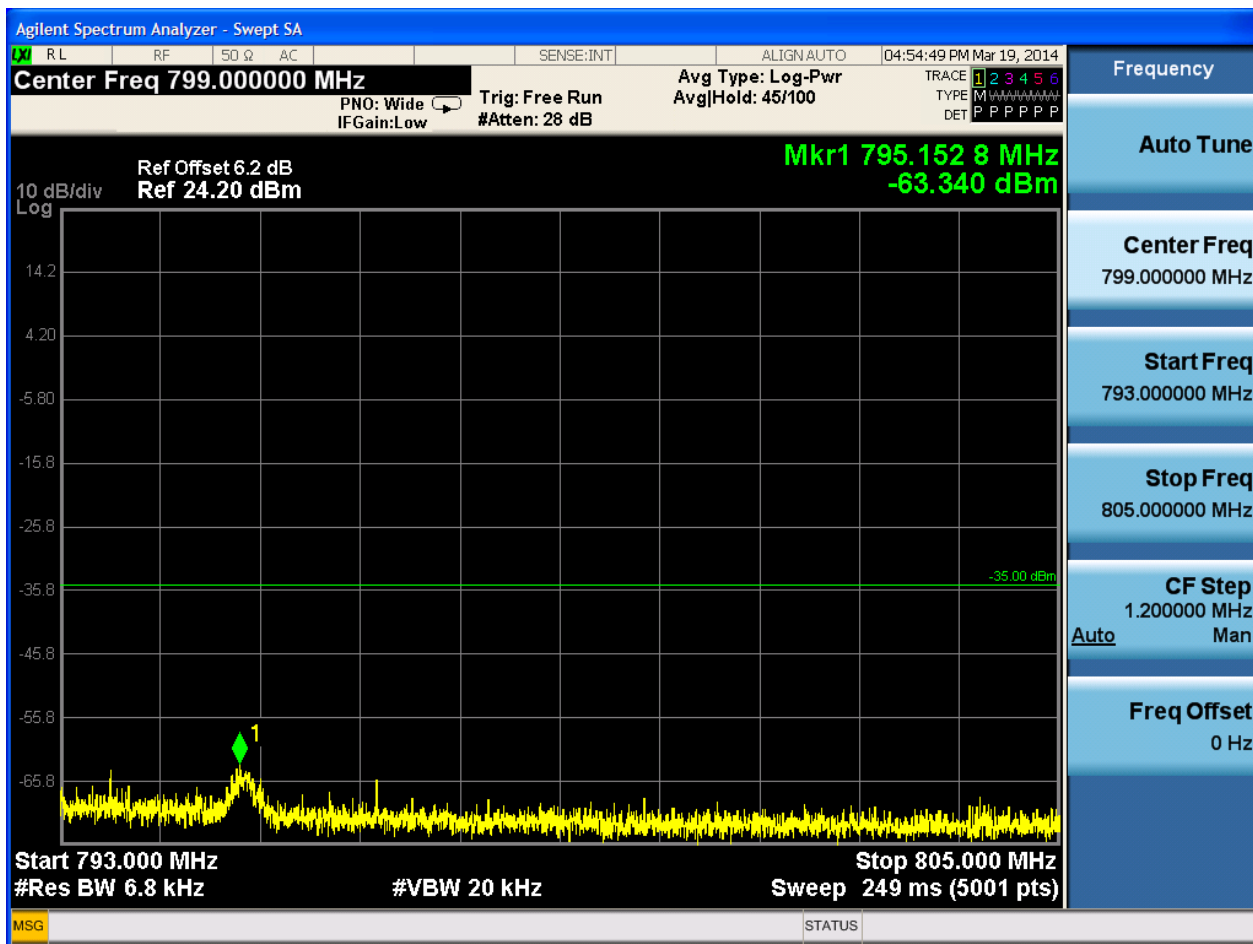
6.1.1.2.2.2.1 Test RB = RB1#0







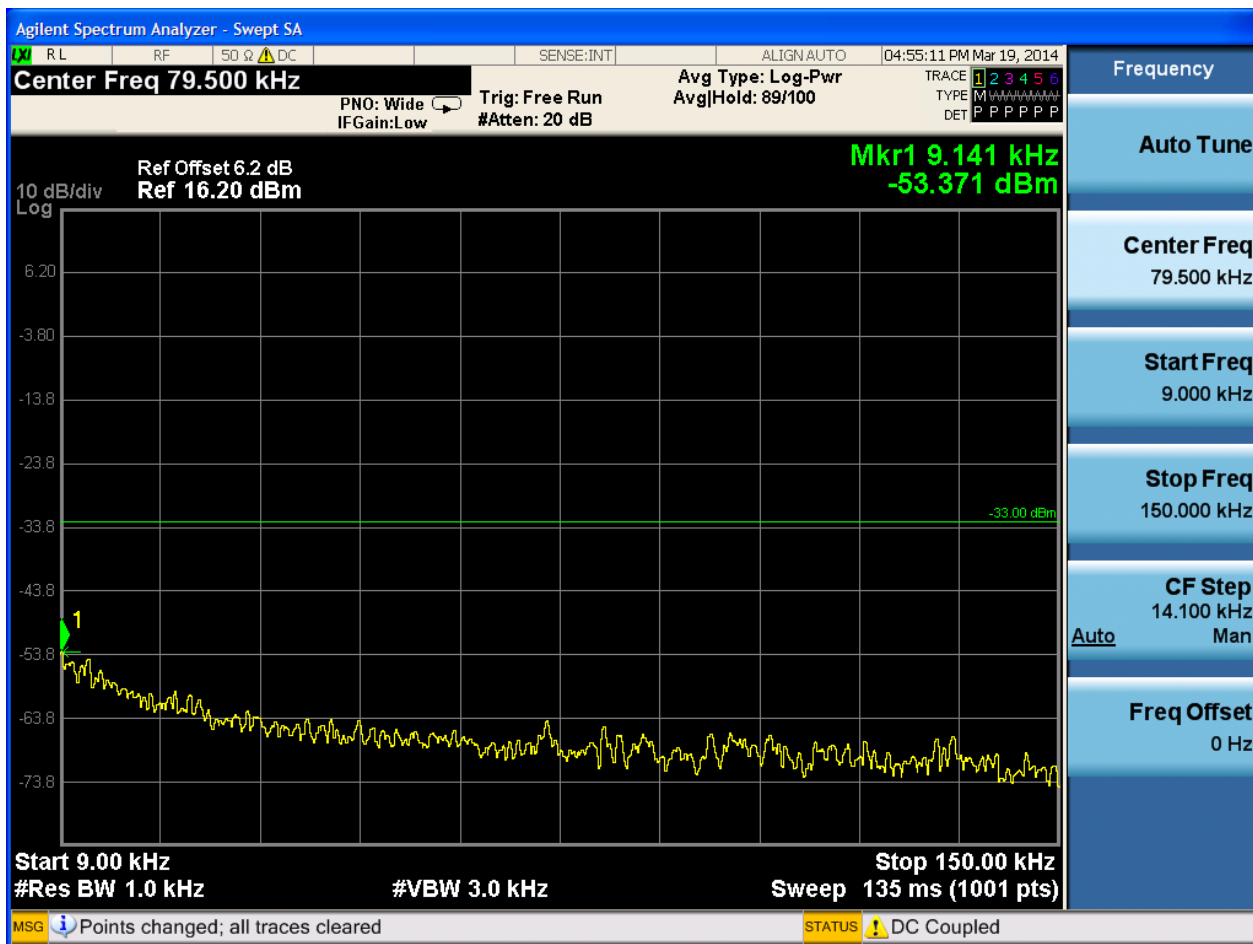


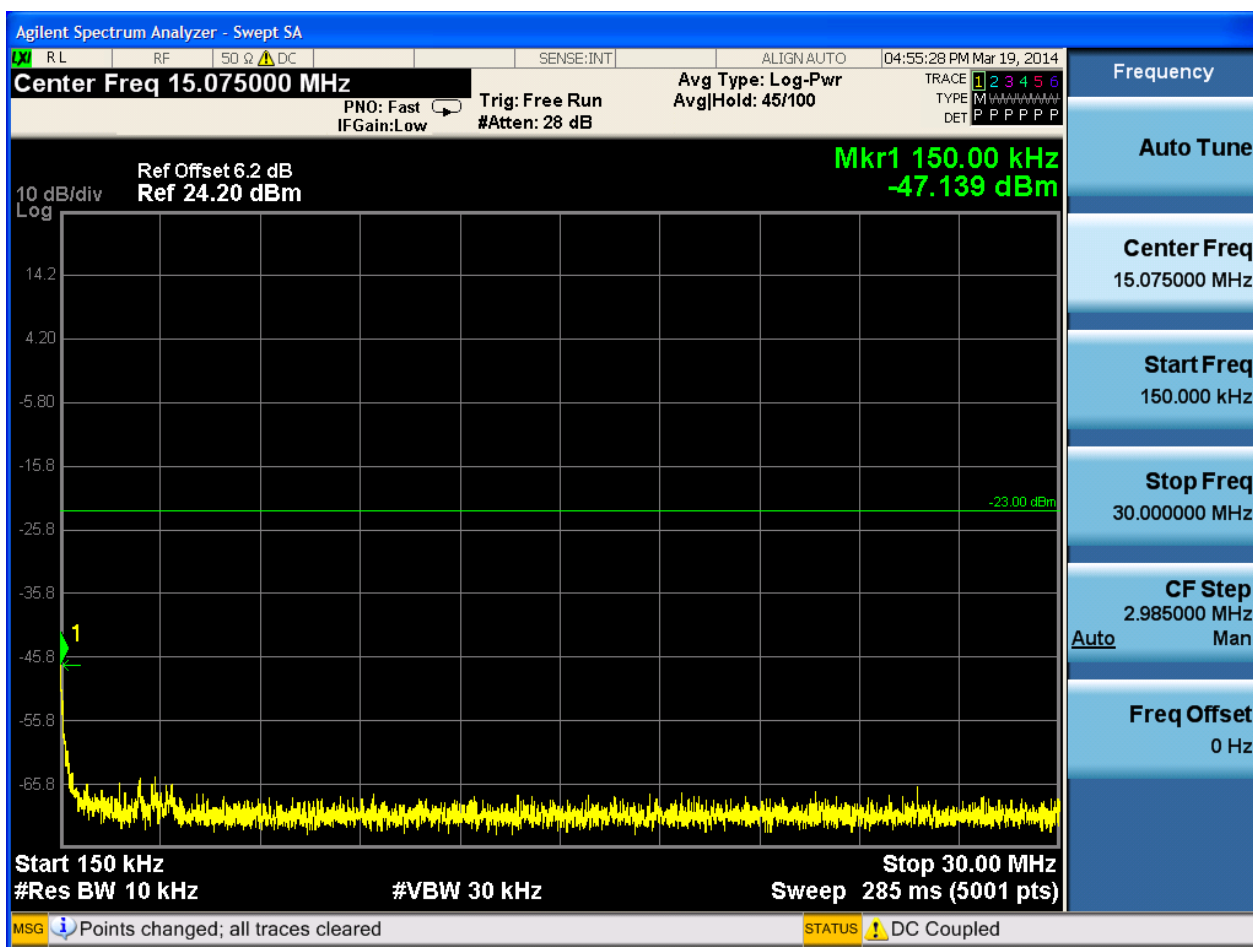


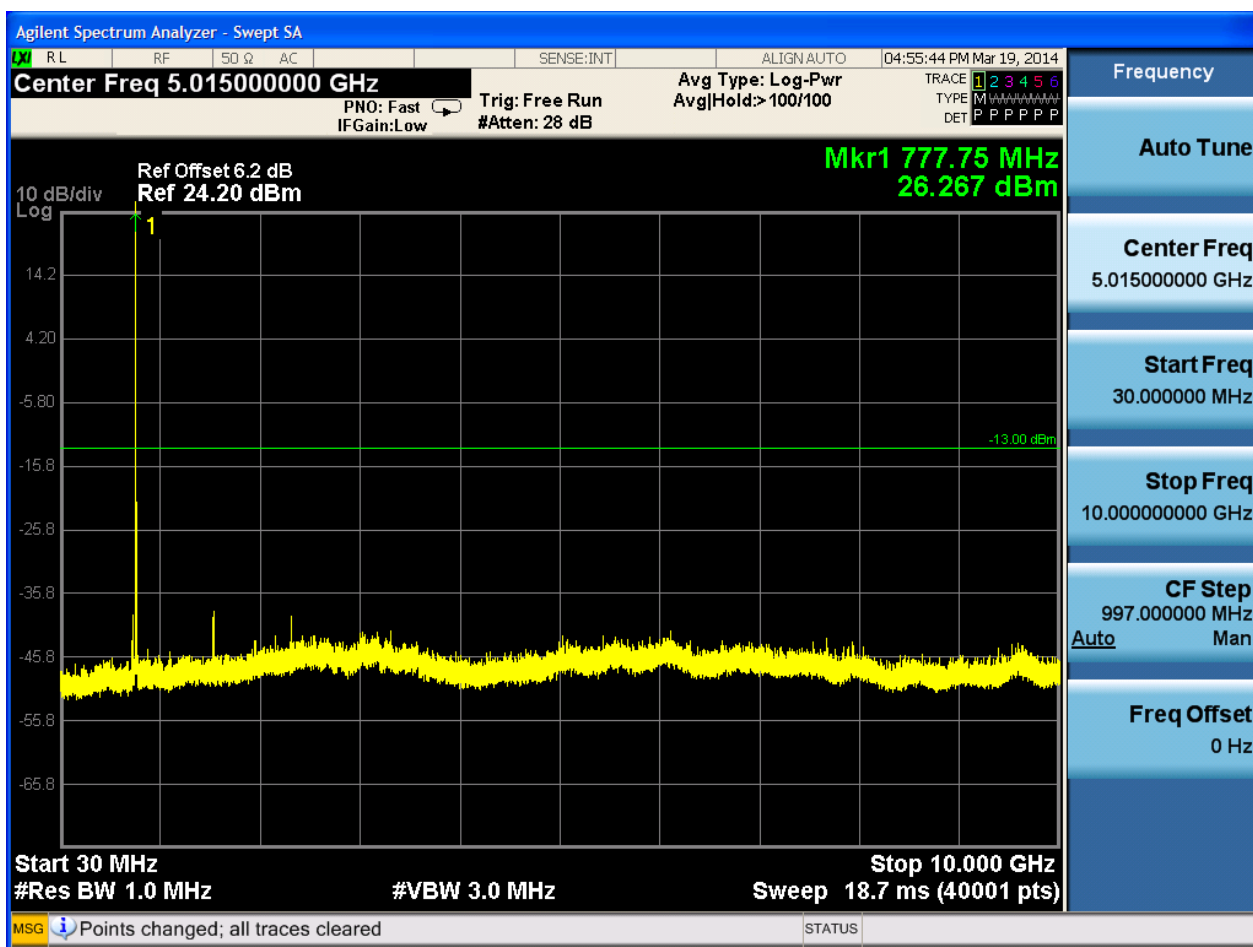


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0











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

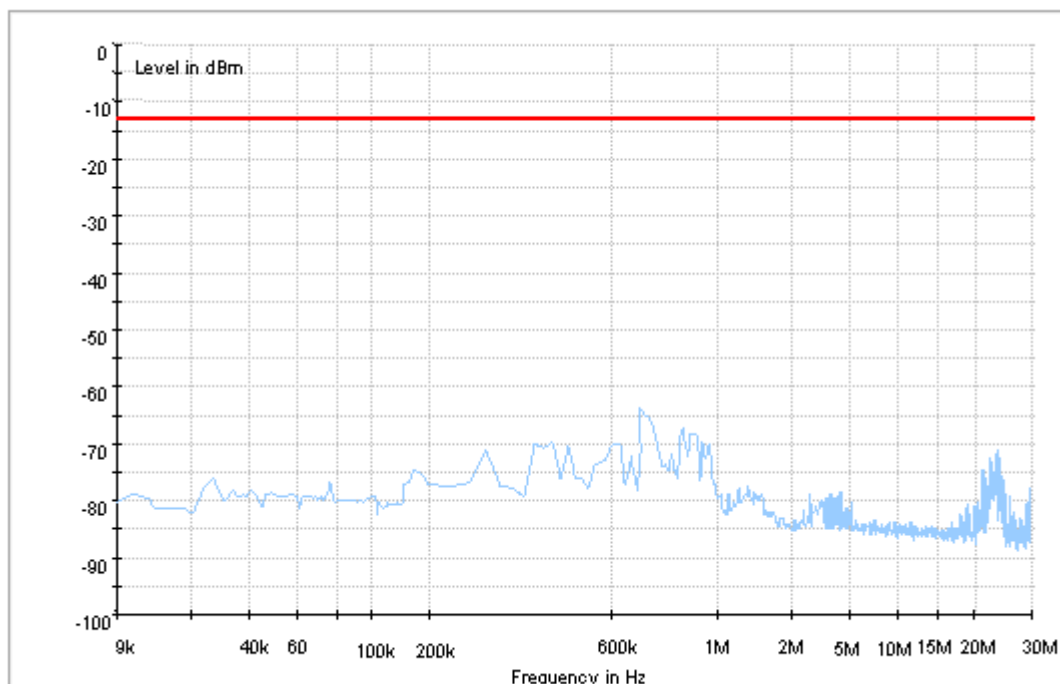
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

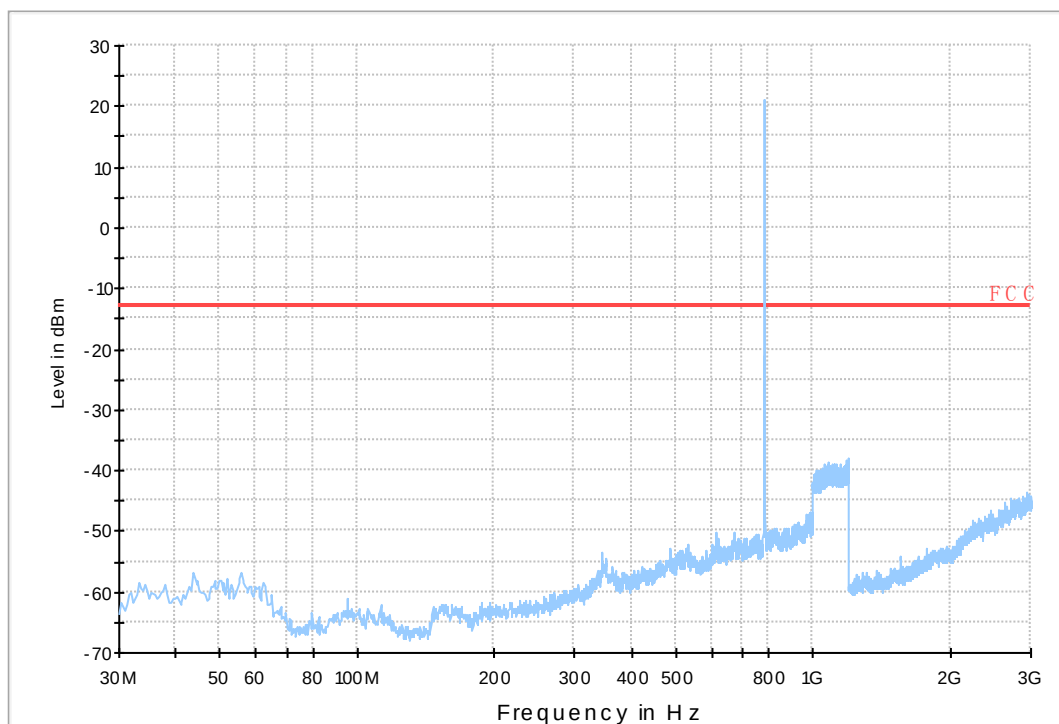
7.1 For LTE

7.1.1 Test Band = BAND13

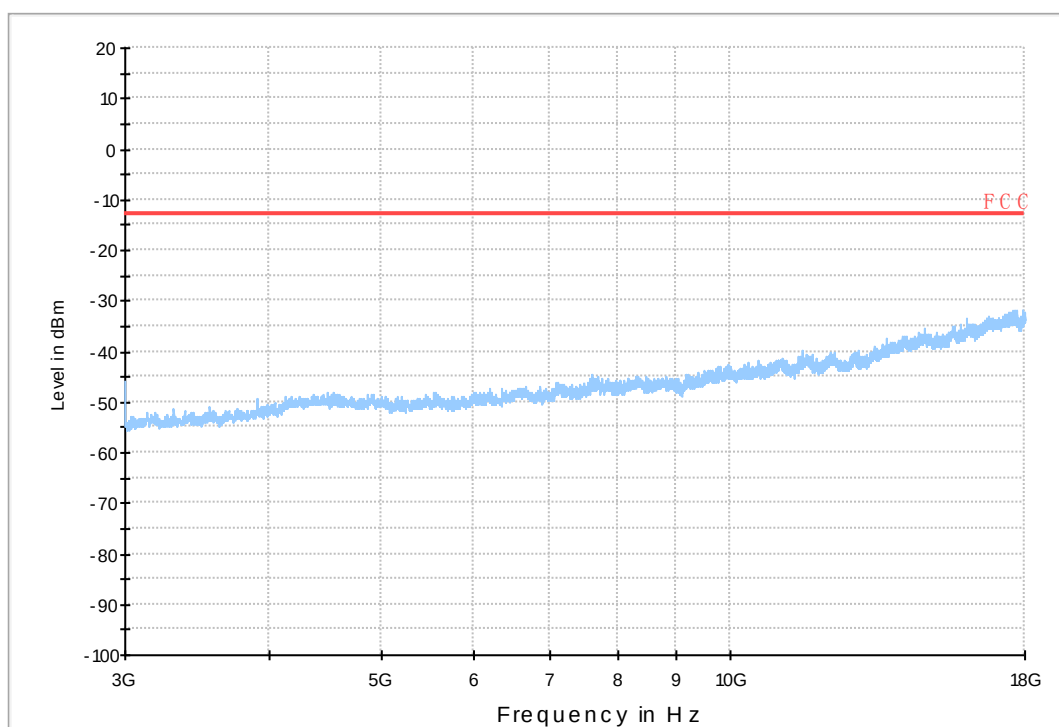
7.1.1.1 Test Bandwidth = 5



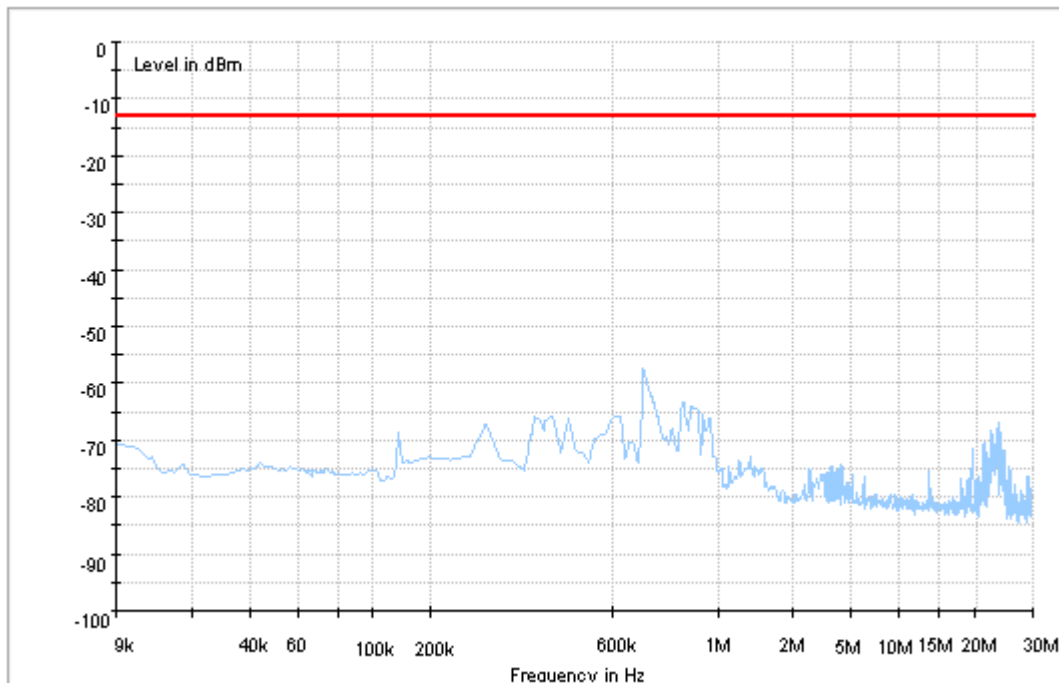
Copy of RSE-TX-DIRECTOR BELOW 1G_L



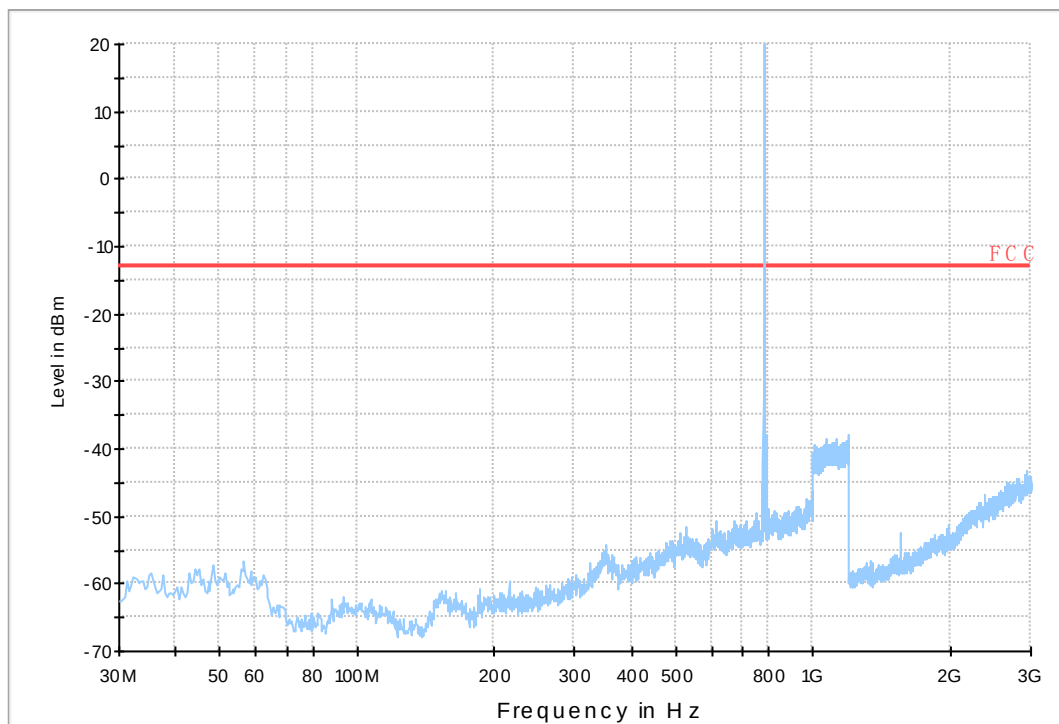
Copy of RSE-TX-DIRECTOR BELOW 1G_H



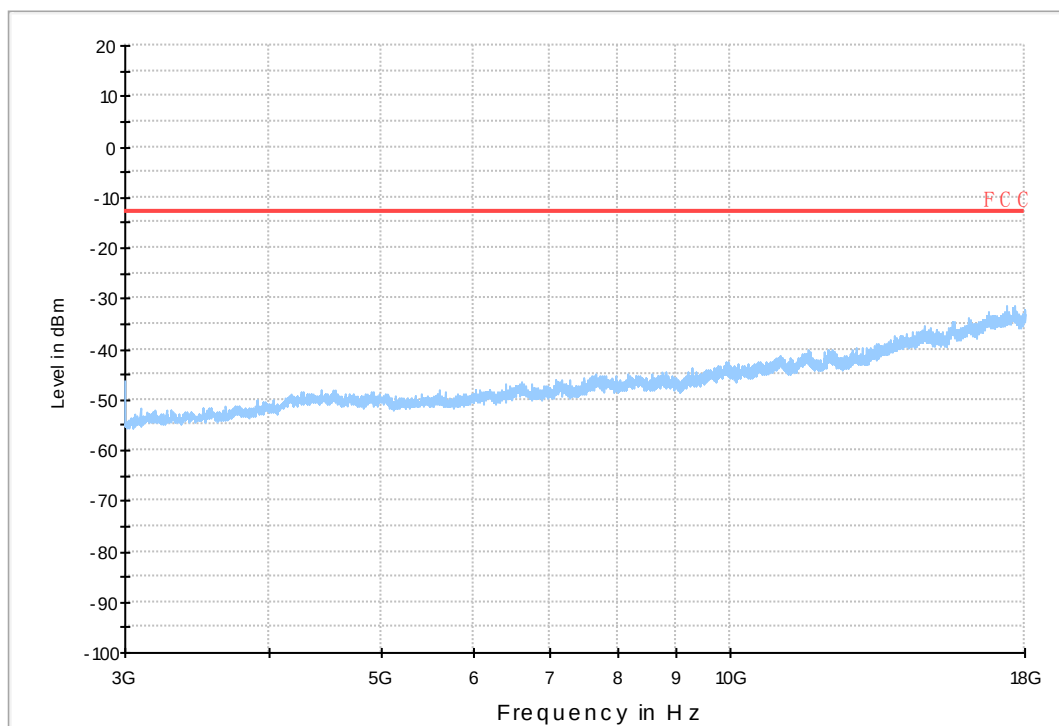
7.1.1.2 Test Bandwidth = 10



Copy of RSE-TX-DIRECTOR BELOW 1G_L



Copy of RSE-TX-DIRECTOR BELOW 1G_H



8Appendix_H: Frequency Stability

8.3 For LTE

8.3.1Frequency Error vs. Tempreature

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND13	LTE/TM1	5	LCH	TN	VL	-1.02	-0.00131	PASS
					VN	-0.79	-0.00101	PASS
					VH	-2.10	-0.00269	PASS
			MCH	TN	VL	-0.89	-0.00114	PASS
					VN	0.73	0.00093	PASS
					VH	-0.54	-0.00069	PASS
			HCH	TN	VL	-0.57	-0.00073	PASS
					VN	-1.42	-0.00181	PASS
					VH	-0.82	-0.00105	PASS
		10	LCH	TN	VL	0.36	0.00046	PASS
					VN	-1.32	-0.00169	PASS
					VH	0.89	0.00114	PASS
			MCH	TN	VL	-0.62	-0.00079	PASS
					VN	1.07	0.00137	PASS
					VH	0.44	0.00056	PASS
			HCH	TN	VL	-0.09	-0.00012	PASS
					VN	2.05	0.00262	PASS
					VH	0.94	0.0012	PASS
	LTE/TM2	5	LCH	TN	VL	-0.30	-0.00038	PASS
					VN	-0.74	-0.00095	PASS
					VH	-1.67	-0.00214	PASS
			MCH	TN	VL	-0.36	-0.00046	PASS
					VN	-0.72	-0.00092	PASS
					VH	-2.20	-0.00281	PASS
			HCH	TN	VL	-0.86	-0.0011	PASS
					VN	-0.30	-0.00038	PASS
					VH	-0.27	-0.00034	PASS
		10	LCH	TN	VL	-1.02	-0.0013	PASS
					VN	-0.20	-0.00026	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			MCH	TN	VH	-2.59	-0.00331	PASS
					VL	0.23	0.00029	PASS
					VN	-0.86	-0.0011	PASS
					VH	-0.06	-0.00008	PASS
			HCH	TN	VL	-0.49	-0.00063	PASS
					VN	-0.62	-0.00079	PASS
					VH	0.46	0.00059	PASS

8.3.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND13	LTE/TM1	5	LCH	VN	-30	-1.89	-0.00242	PASS
					-20	-2.45	-0.00314	PASS
					-10	-0.33	-0.00042	PASS
					0	-0.96	-0.00123	PASS
					10	-1.10	-0.00141	PASS
					20	-1.90	-0.00244	PASS
					30	-1.30	-0.00167	PASS
					40	-1.03	-0.00132	PASS
					50	-1.07	-0.00137	PASS
			MCH	VN	-30	-0.59	-0.00075	PASS
					-20	-1.19	-0.00152	PASS
					-10	-2.80	-0.00358	PASS
					0	-1.02	-0.0013	PASS
					10	-1.97	-0.00252	PASS
					20	0.14	0.00018	PASS
					30	-0.03	-0.00004	PASS
					40	-1.29	-0.00165	PASS
					50	-1.42	-0.00182	PASS
			HCH	VN	-30	-0.40	-0.00051	PASS
					-20	-0.27	-0.00034	PASS
					-10	0.41	0.00052	PASS
					0	-0.67	-0.00085	PASS
					10	-0.66	-0.00084	PASS
					20	-1.37	-0.00175	PASS
					30	-0.86	-0.0011	PASS
					40	-1.77	-0.00226	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		10	LCH	VN	50	-1.85	-0.00236	PASS
					-30	1.72	0.0022	PASS
					-20	2.60	0.00332	PASS
					-10	0.87	0.00111	PASS
					0	1.14	0.00146	PASS
					10	2.22	0.00284	PASS
					20	1.37	0.00175	PASS
					30	2.43	0.00311	PASS
					40	1.02	0.0013	PASS
					50	1.19	0.00152	PASS
			MCH	VN	-30	3.03	0.00387	PASS
					-20	1.22	0.00156	PASS
					-10	2.78	0.00355	PASS
					0	1.42	0.00182	PASS
					10	1.54	0.00197	PASS
					20	1.57	0.00201	PASS
					30	0.60	0.00077	PASS
					40	0.49	0.00063	PASS
					50	2.72	0.00348	PASS
			HCH	VN	-30	2.36	0.00302	PASS
					-20	2.69	0.00344	PASS
					-10	1.62	0.00207	PASS
					0	1.26	0.00161	PASS
					10	1.30	0.00166	PASS
					20	1.86	0.00238	PASS
					30	0.37	0.00047	PASS
					40	1.62	0.00207	PASS
					50	2.75	0.00352	PASS
	LTE/TM2	5	LCH	VN	-30	0.27	0.00035	PASS
					-20	-2.43	-0.00312	PASS
					-10	-2.27	-0.00291	PASS
					0	-1.19	-0.00153	PASS
					10	-0.79	-0.00101	PASS
					20	-1.73	-0.00222	PASS
					30	-0.99	-0.00127	PASS
					40	-1.62	-0.00208	PASS
					50	-1.24	-0.00159	PASS
			MCH	VN	-30	-2.06	-0.00263	PASS
					-20	-0.77	-0.00098	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	-2.00	-0.00256	PASS
					0	-1.24	-0.00159	PASS
					10	-1.83	-0.00234	PASS
					20	-0.70	-0.0009	PASS
					30	-0.50	-0.00064	PASS
					40	-2.75	-0.00352	PASS
					50	-3.02	-0.00386	PASS
			HCH	VN	-30	-0.59	-0.00075	PASS
					-20	-0.94	-0.0012	PASS
					-10	-1.90	-0.00242	PASS
					0	-0.80	-0.00102	PASS
					10	-1.86	-0.00237	PASS
					20	-1.23	-0.00157	PASS
					30	-1.27	-0.00162	PASS
					40	0.14	0.00018	PASS
					50	-1.22	-0.00156	PASS
		10	LCH	VN	-30	-1.13	-0.00145	PASS
					-20	-0.73	-0.00093	PASS
					-10	-0.47	-0.0006	PASS
					0	0.24	0.00031	PASS
					10	-0.10	-0.00013	PASS
					20	-0.43	-0.00055	PASS
					30	-1.60	-0.00205	PASS
					40	-1.32	-0.00169	PASS
					50	0.10	0.00013	PASS
			MCH	VN	-30	-1.23	-0.00157	PASS
					-20	-0.69	-0.00088	PASS
					-10	-0.23	-0.00029	PASS
					0	-0.72	-0.00092	PASS
					10	-0.36	-0.00046	PASS
					20	-1.20	-0.00153	PASS
					30	-0.36	-0.00046	PASS
					40	-0.46	-0.00059	PASS
					50	-0.11	-0.00014	PASS
			HCH	VN	-30	-0.20	-0.00026	PASS
					-20	-1.16	-0.00148	PASS
					-10	0.03	0.00004	PASS
					0	-1.09	-0.00139	PASS
					10	-0.56	-0.00072	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					20	0.19	0.00024	PASS
					30	0.07	0.00009	PASS
					40	-0.29	-0.00037	PASS
					50	-0.56	-0.00072	PASS

END