Agilent Spectrum Analyzer - Swept SA

LXI R L | RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 04:40:09 PM Aug 10, 2015

Center Freq 13.515000000 GHz

PNO: Fast
IFGain:Low

Trig: Free Run
#Atten: 28 dB

Avg Type: Log-Pwr
Avg|Hold: 57/100

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

Mkr1 2.500 5 GHz
25.631 dBm

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

15.0

5.00

-5.00

-15.0

-25.0   -25.00 dBm

-35.0

-45.0

-55.0

-65.0

Start 30 MHz   **Stop 27.00 GHz**
#Res BW 1.0 MHz   **#VBW 3.0 MHz**   **Sweep   69.3 ms (40001 pts)**

MSG Points changed; all traces cleared   STATUS

Frequency

Auto Tune

Center Freq
13.515000000 GHz

Start Freq
30.000000 MHz

Stop Freq
27.000000000 GHz

CF Step
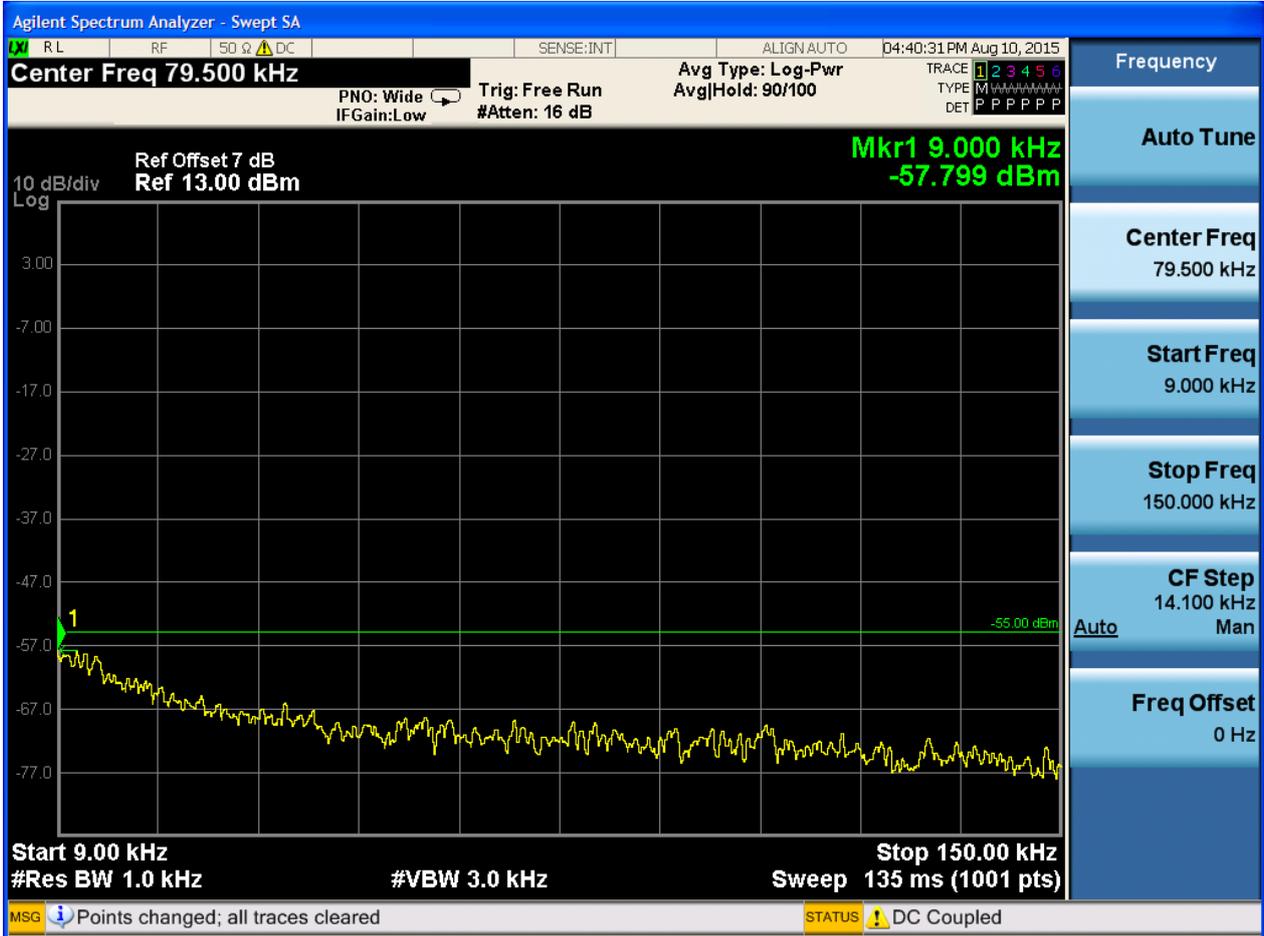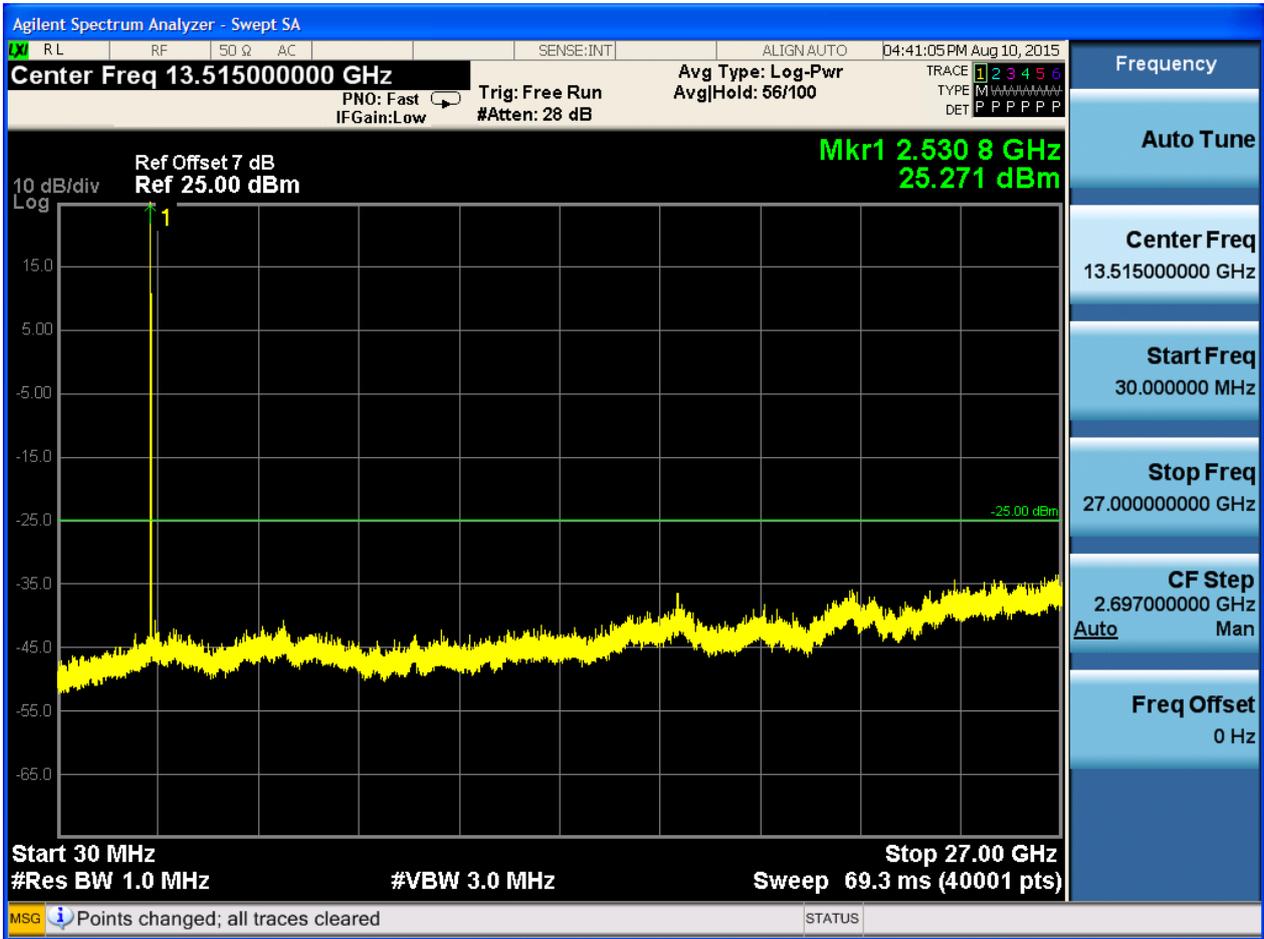2.697000000 GHz
Auto   Man

Freq Offset
0 Hz

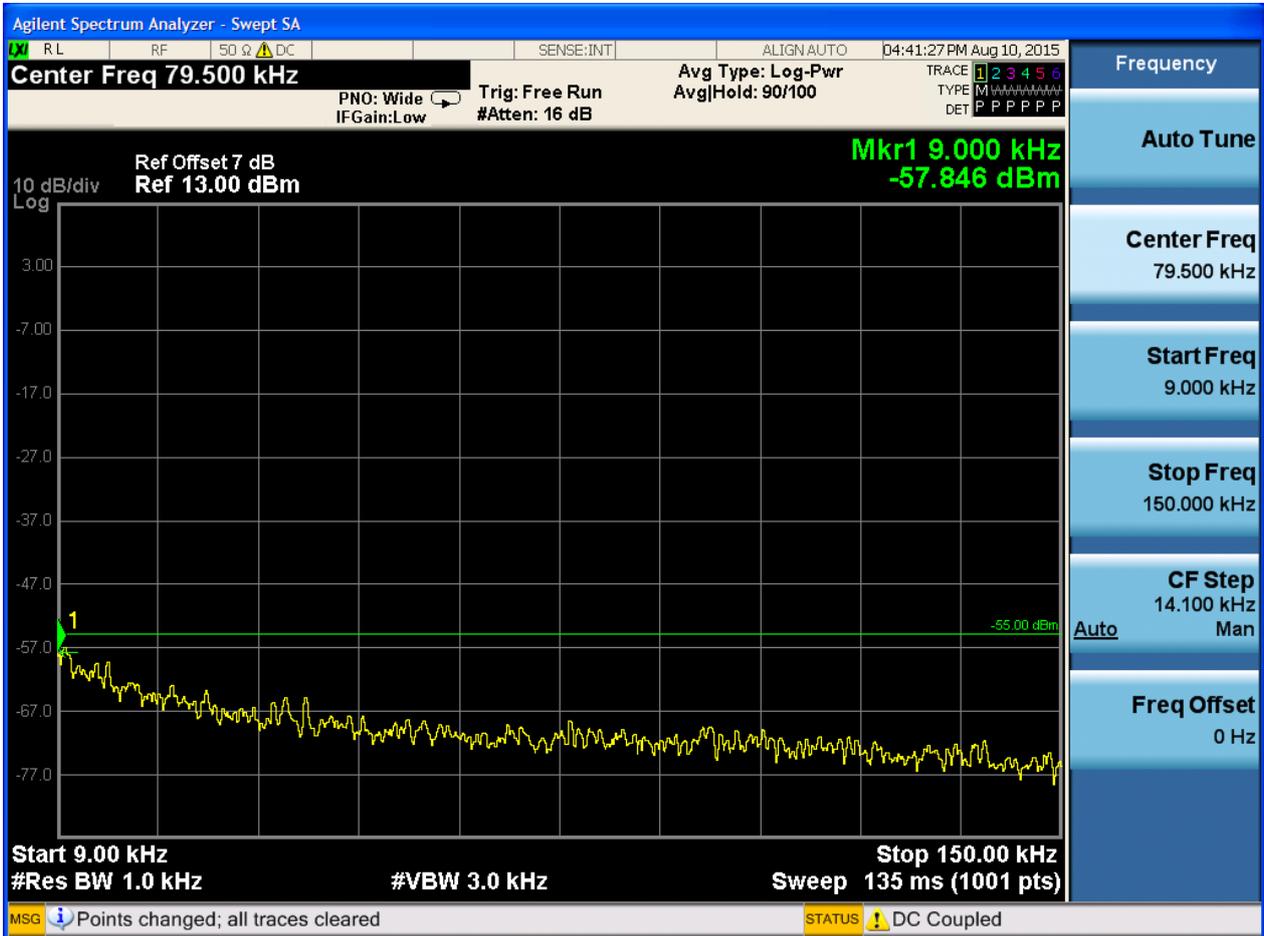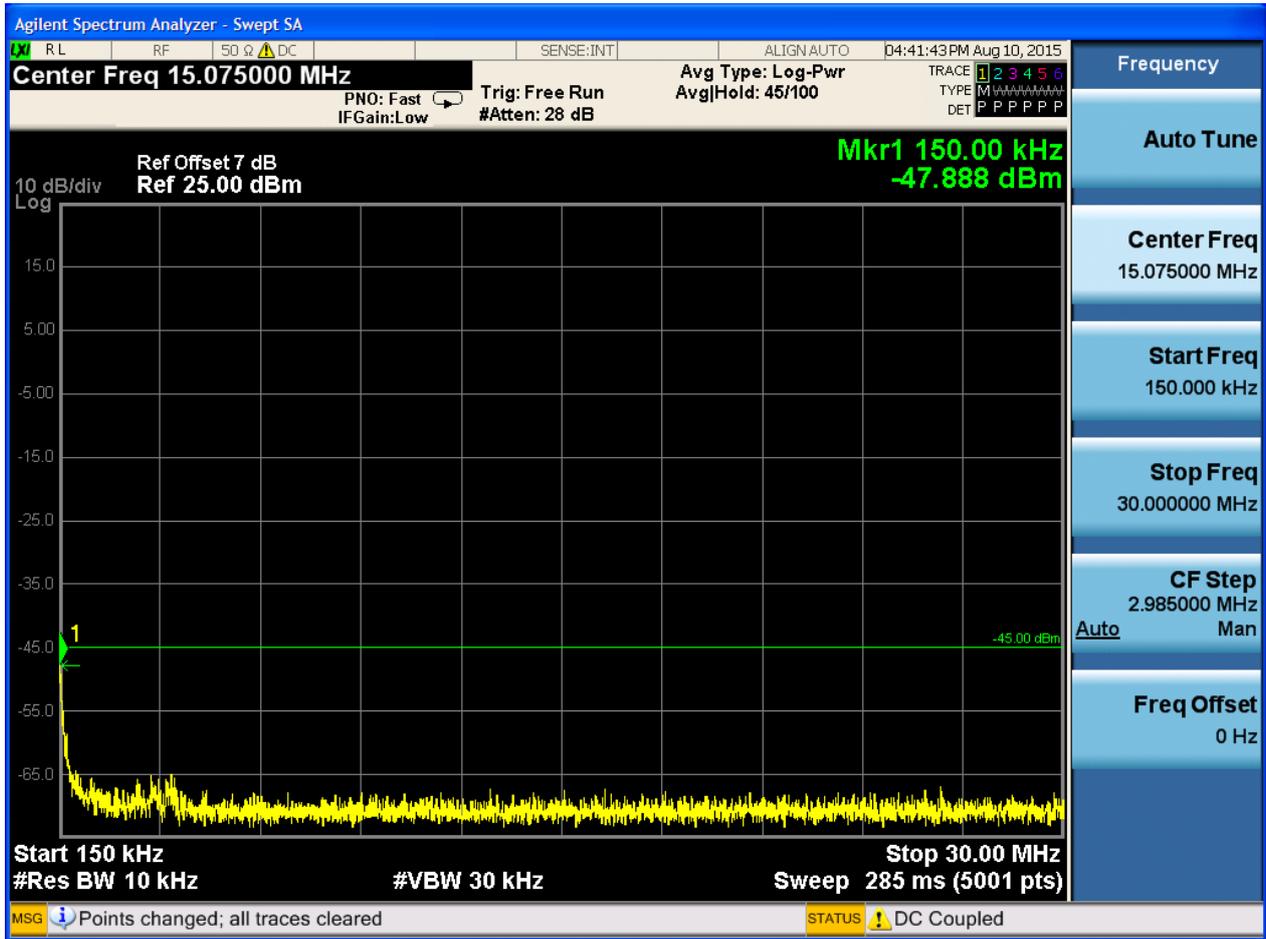## 6.1.1.1.2.2 Test Channel = MCH

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 | 04:41:27 PM Aug 10, 2015 |

Center Freq 79.500 kHz

PNO: Wide
IFGain:Low

Trig: Free Run
#Atten: 16 dB

Avg Type: Log-Pwr
Avg|Hold: 90/100

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

Ref Offset 7 dB
10 dB/div   **Ref 13.00 dBm**
Log

Mkr1 9.000 kHz
-57.846 dBm

3.00

-7.00

-17.0

-27.0

-37.0

-47.0

-55.00 dBm

-57.0   1

-67.0

-77.0

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

MSG ⓘ Points changed; all traces cleared   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
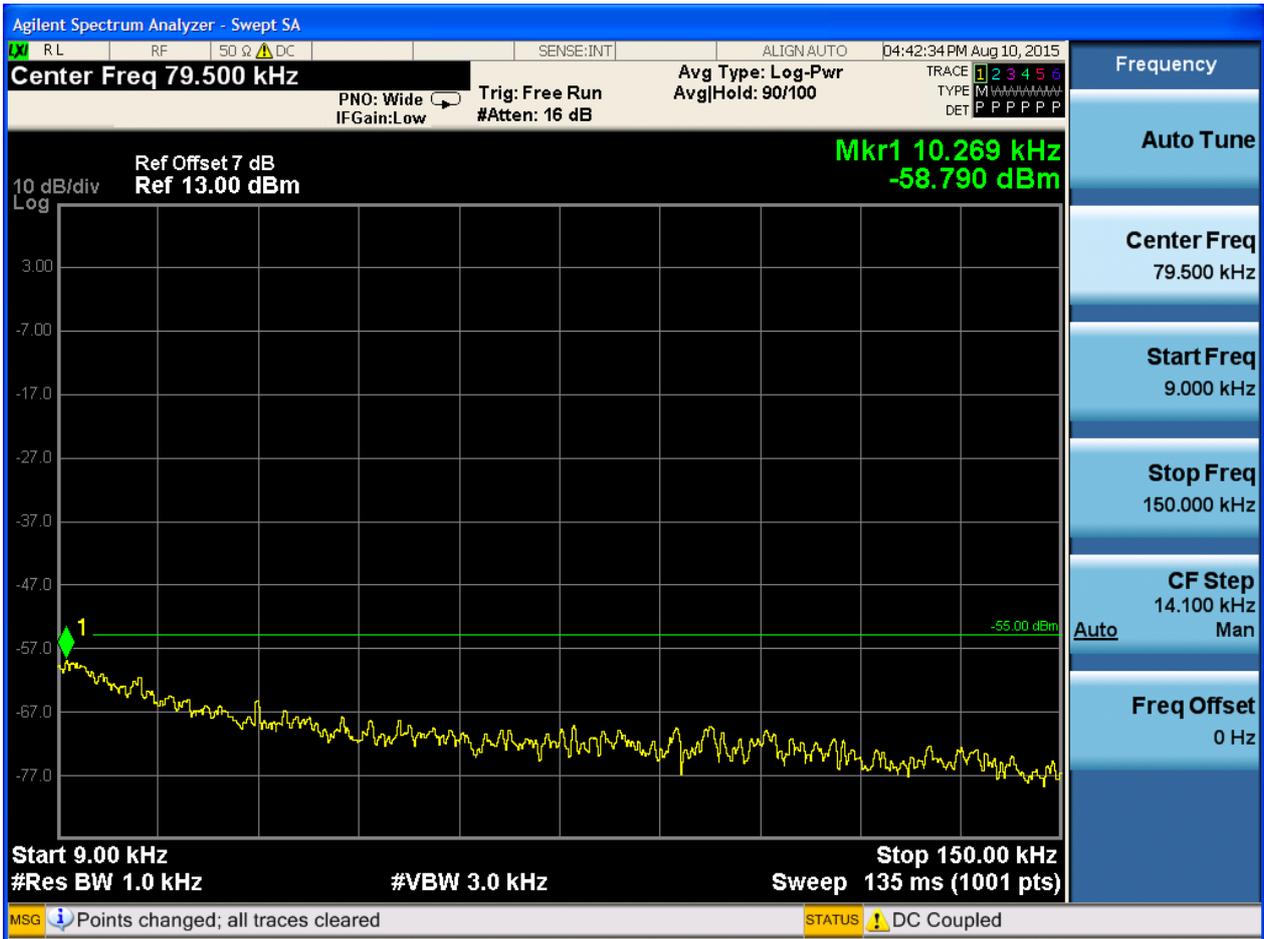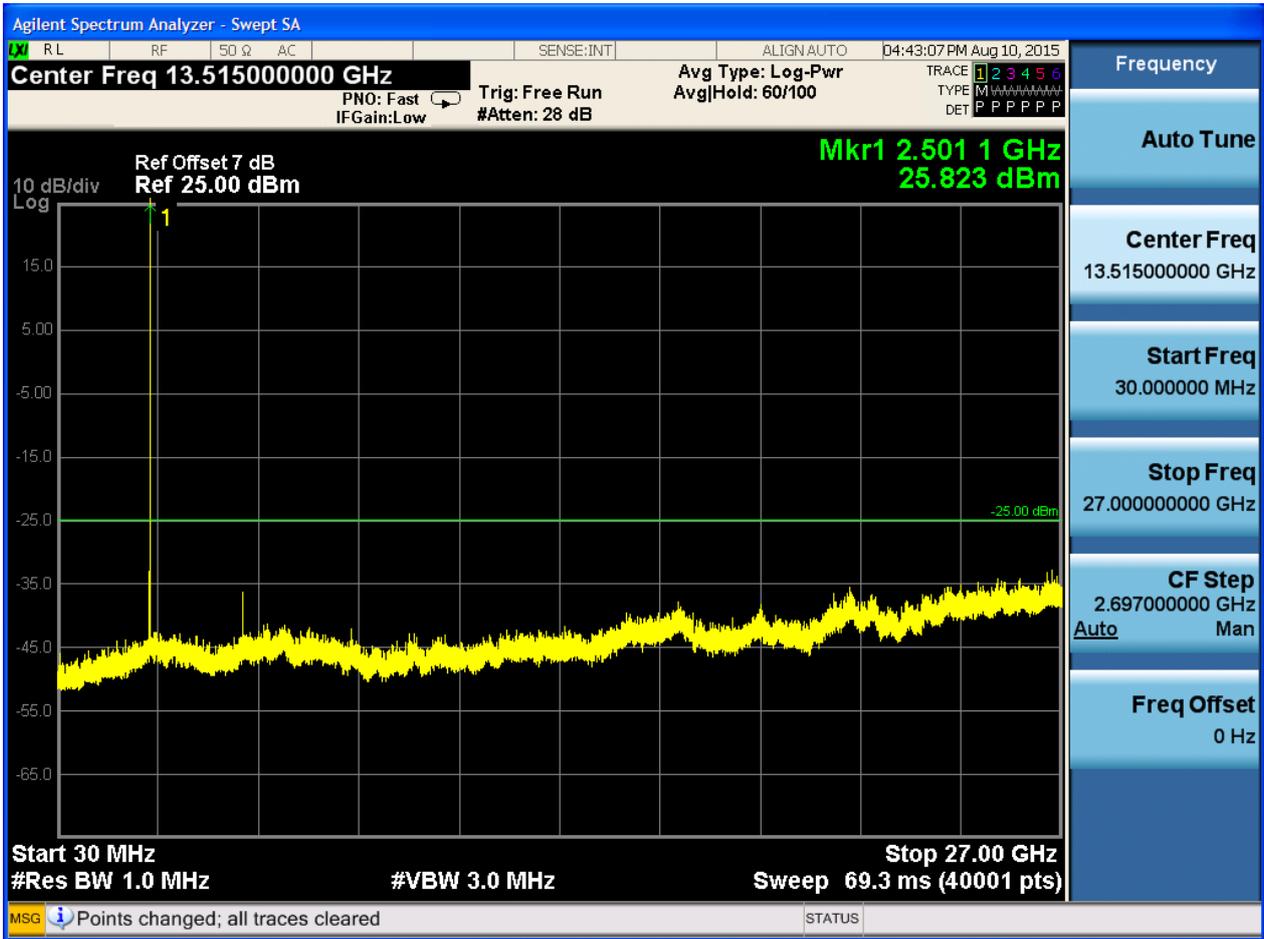Auto   Man

Freq Offset
0 Hz

6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH
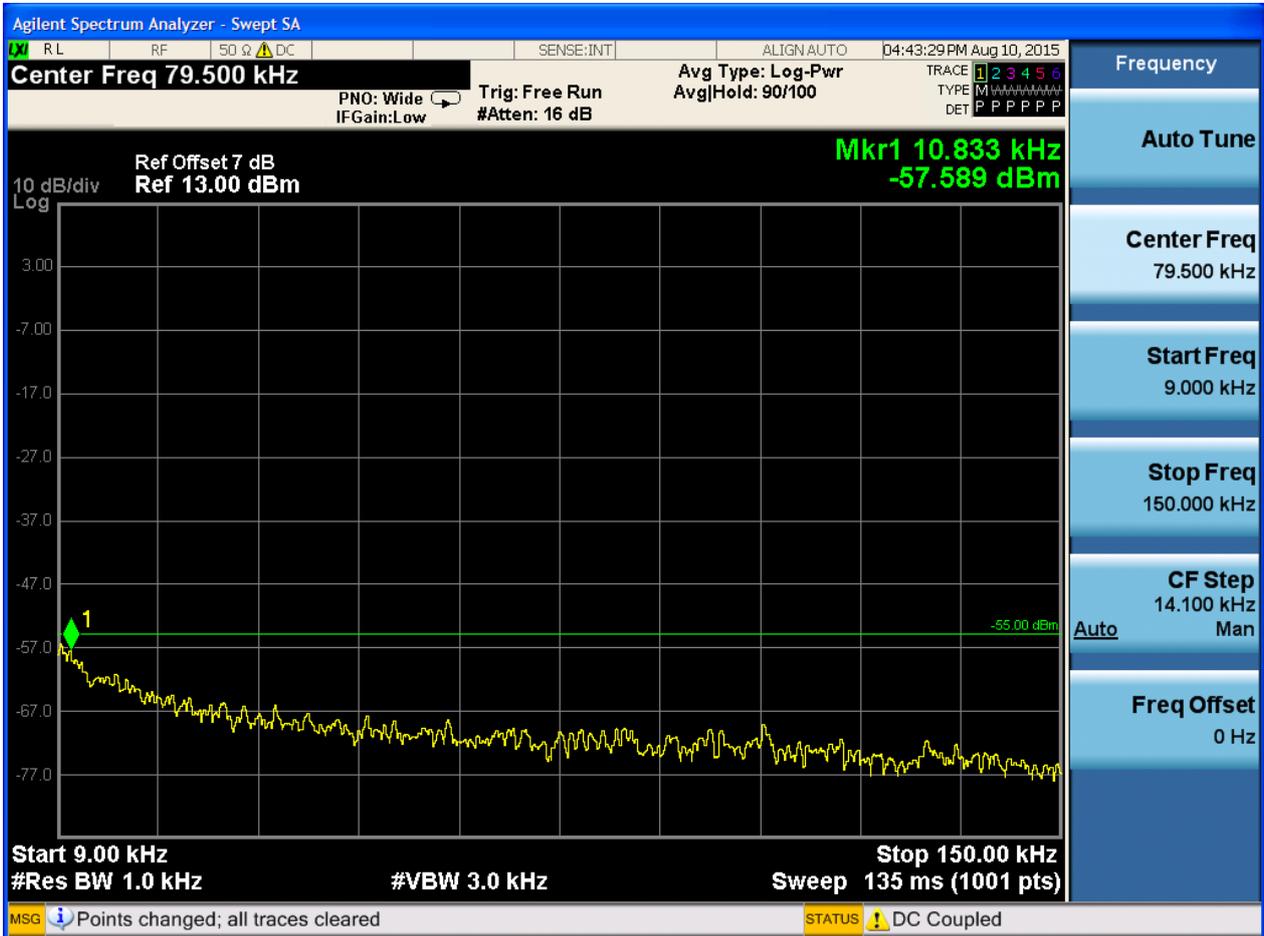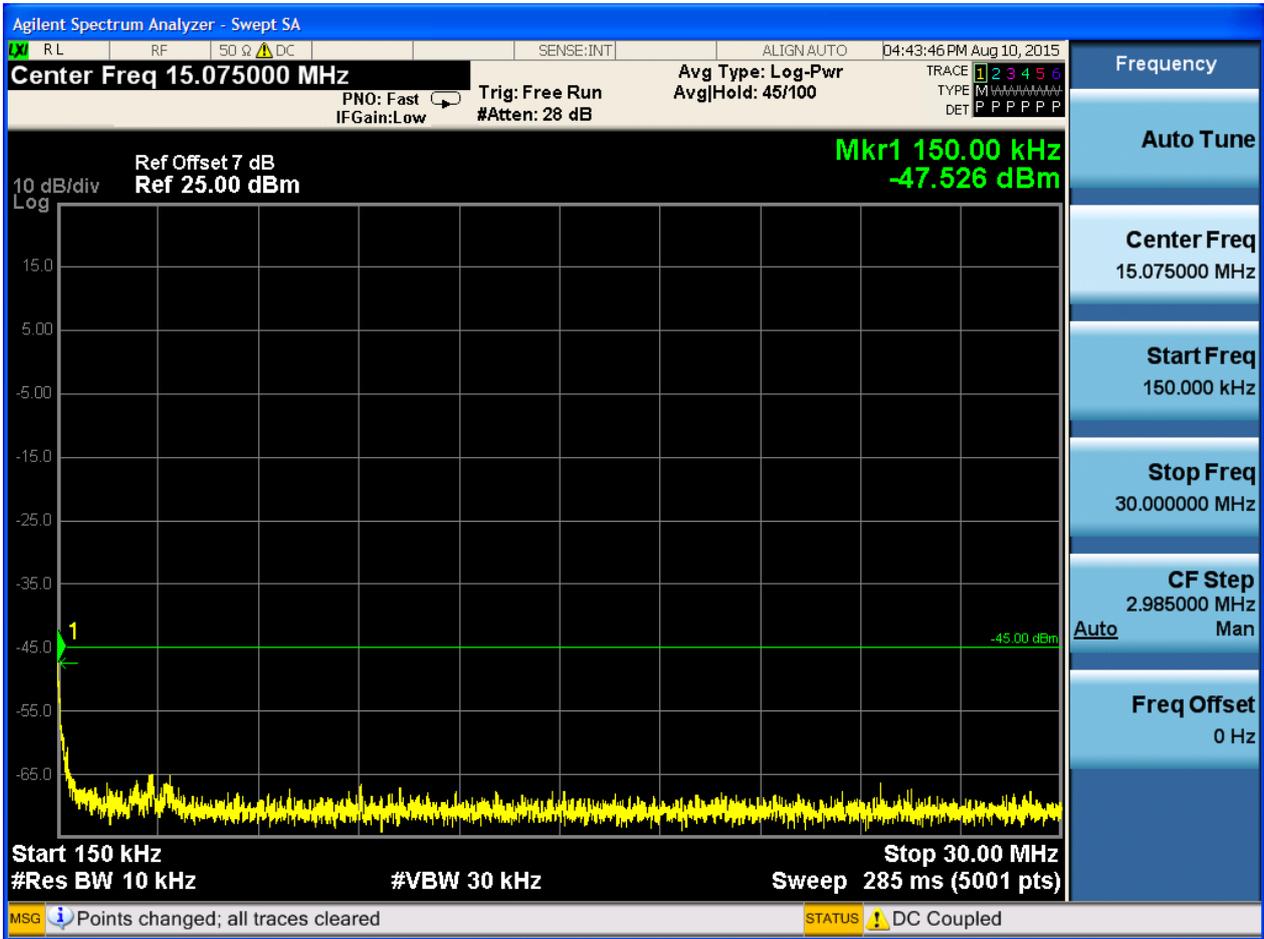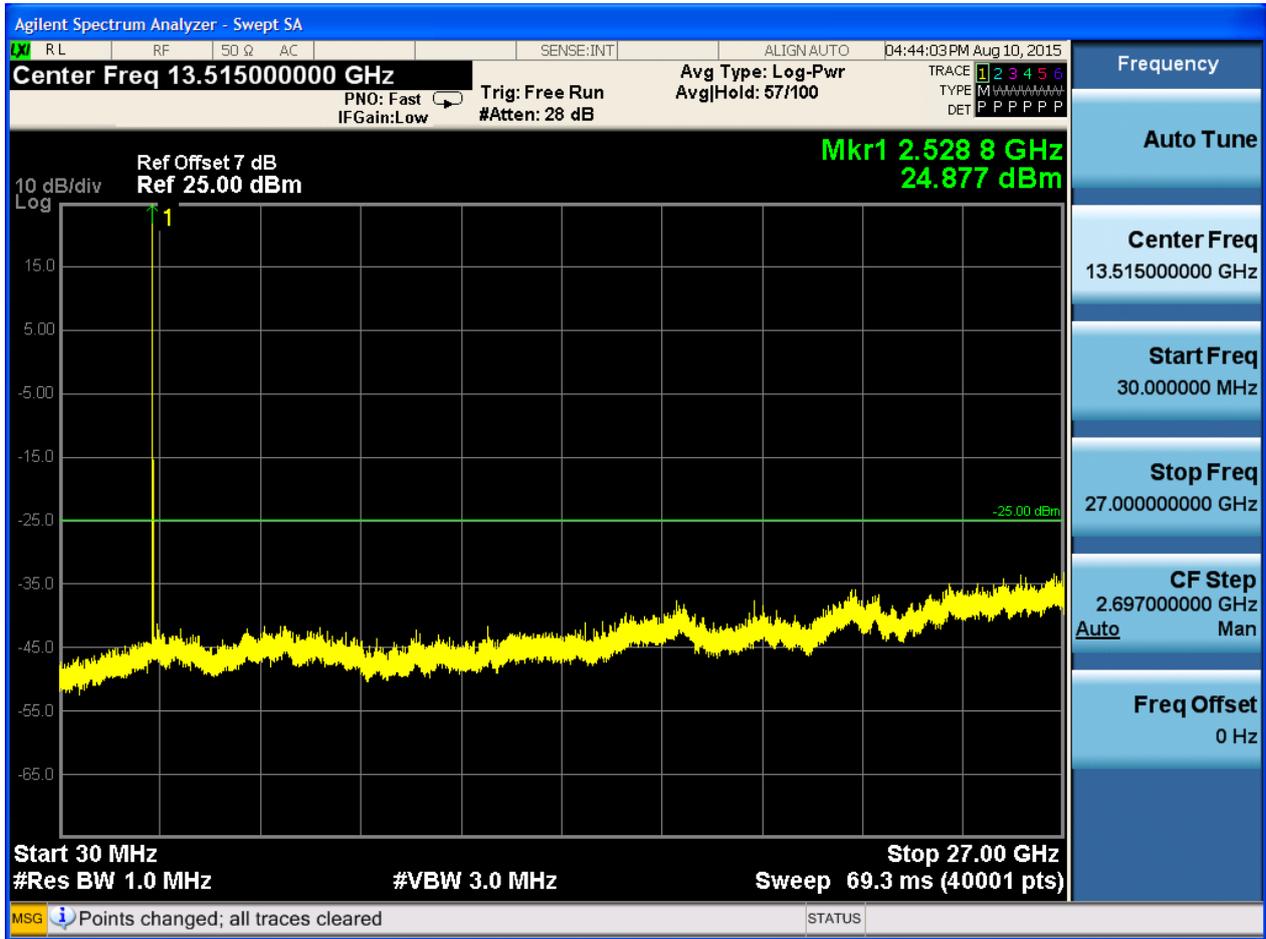
6.1.1.1.3.1.1 Test RB = RB1#0

6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

| R L | RF | 50 Ω | AC | | SENSE:INT | | ALIGN AUTO | 04:44:03 PM Aug 10, 2015 |

Center Freq 13.515000000 GHz

PNO: Fast
IFGain:Low

Trig: Free Run
#Atten: 28 dB

Avg Type: Log-Pwr
Avg|Hold: 57/100

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

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

Mkr1 2.528 8 GHz
24.877 dBm

15.0

5.00

-5.00

-15.0

-25.0   -25.00 dBm

-35.0

-45.0

-55.0

-65.0

Start 30 MHz   Stop 27.00 GHz
#Res BW 1.0 MHz   #VBW 3.0 MHz   Sweep 69.3 ms (40001 pts)

MSG Points changed; all traces cleared   STATUS

Frequency

Auto Tune

Center Freq
13.515000000 GHz

Start Freq
30.000000 MHz

Stop Freq
27.000000000 GHz

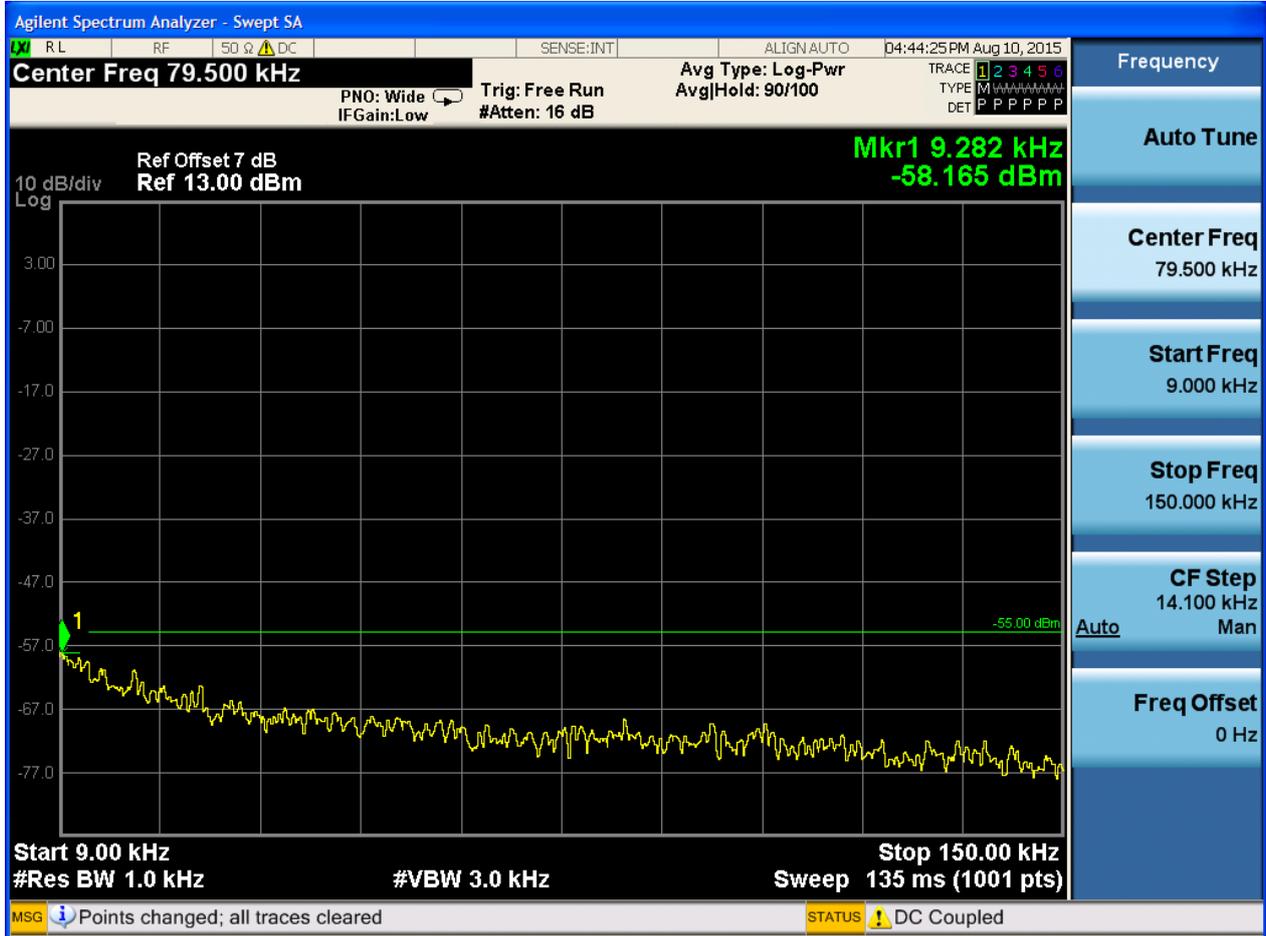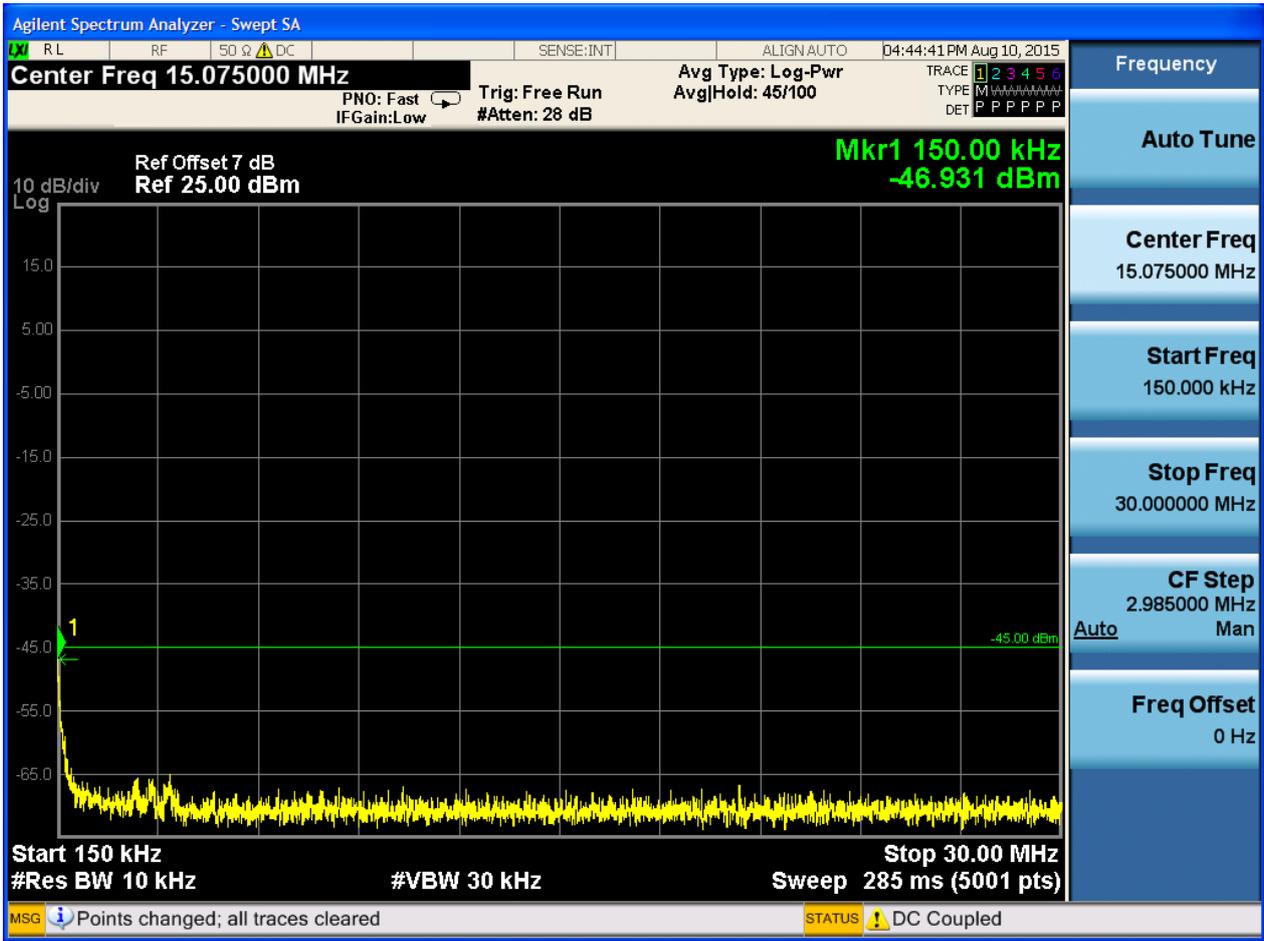CF Step
2.697000000 GHz
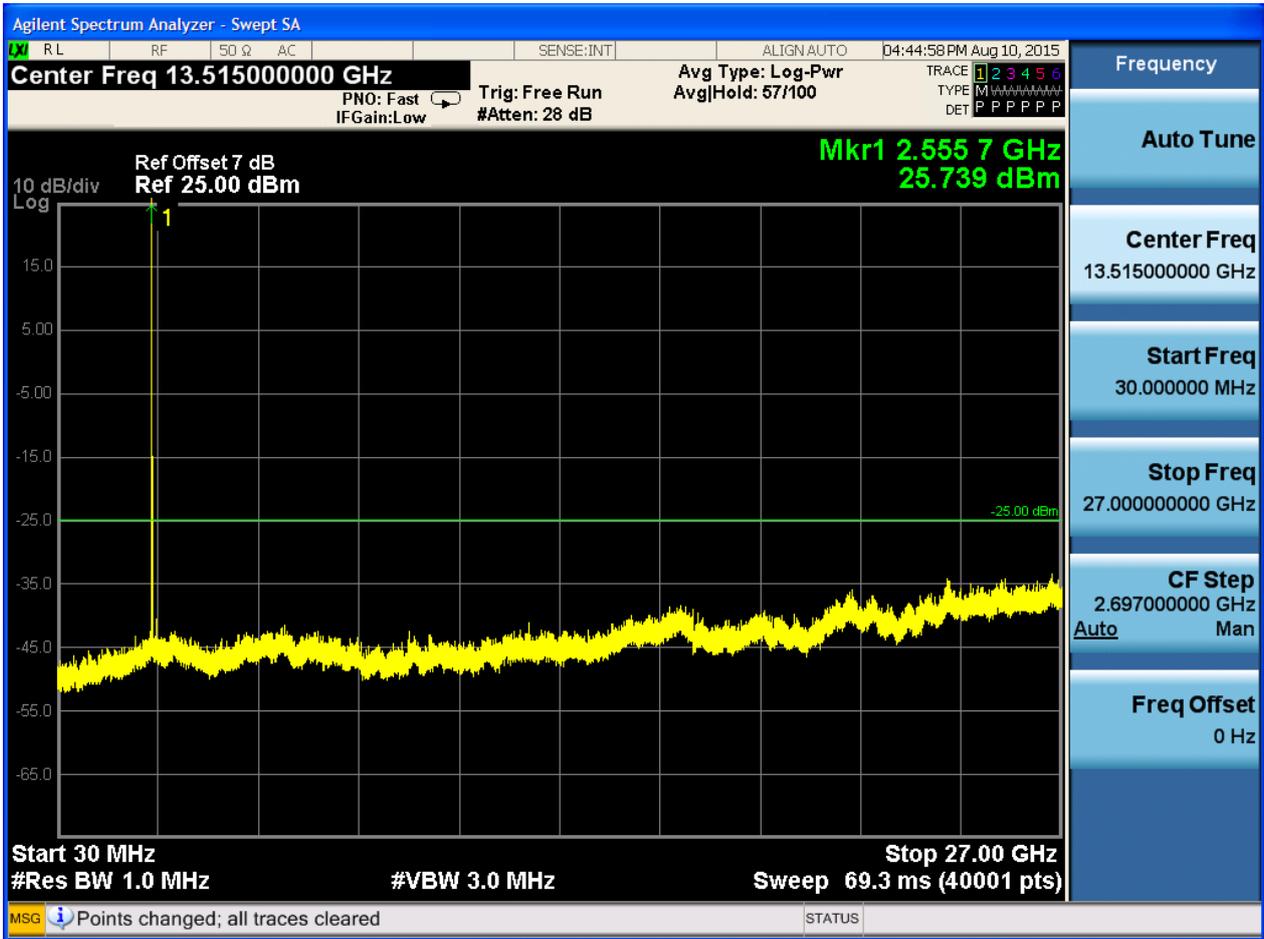Auto   Man

Freq Offset
0 Hz

6.1.1.1.3.3 Test Channel = HCH
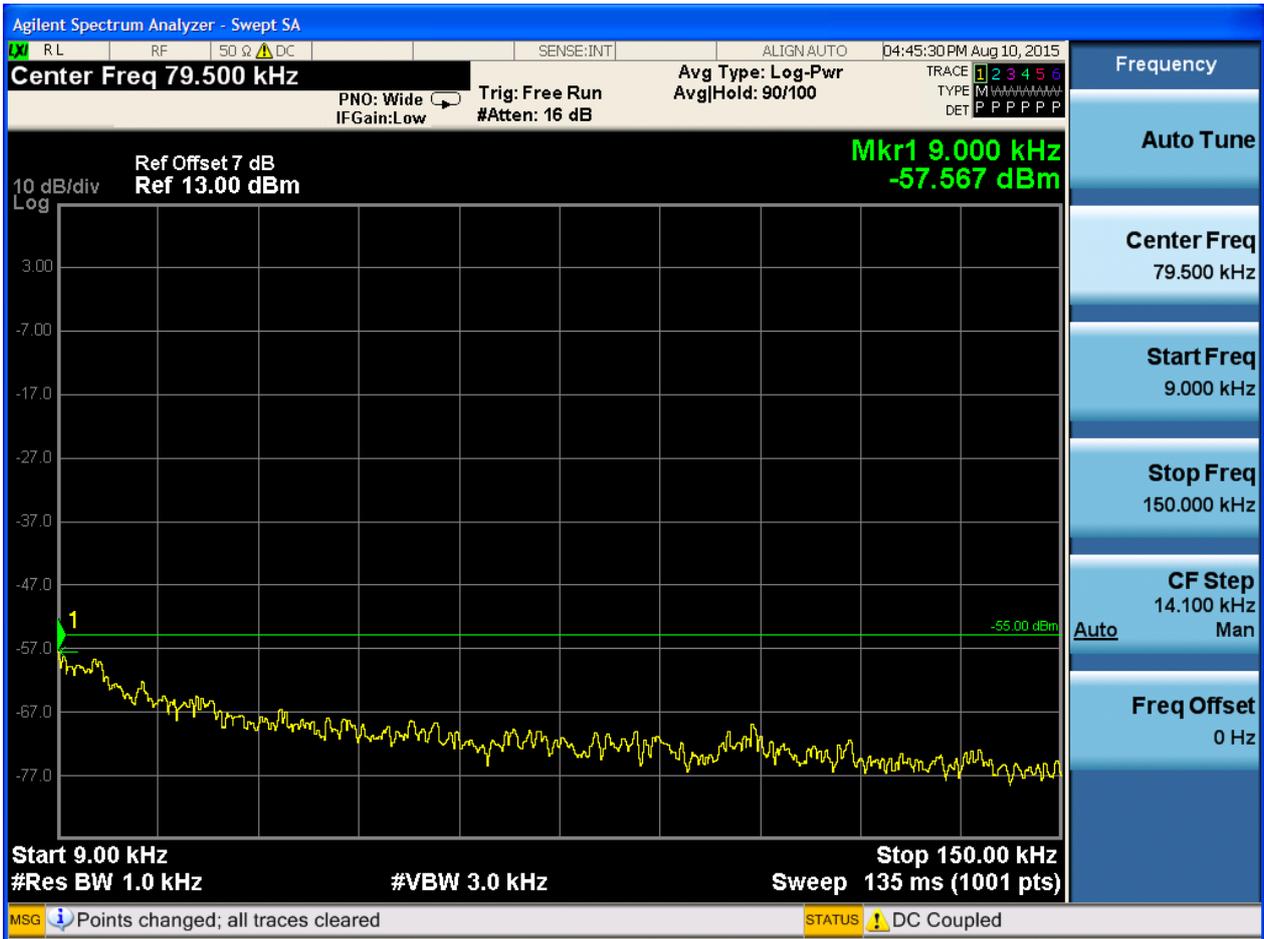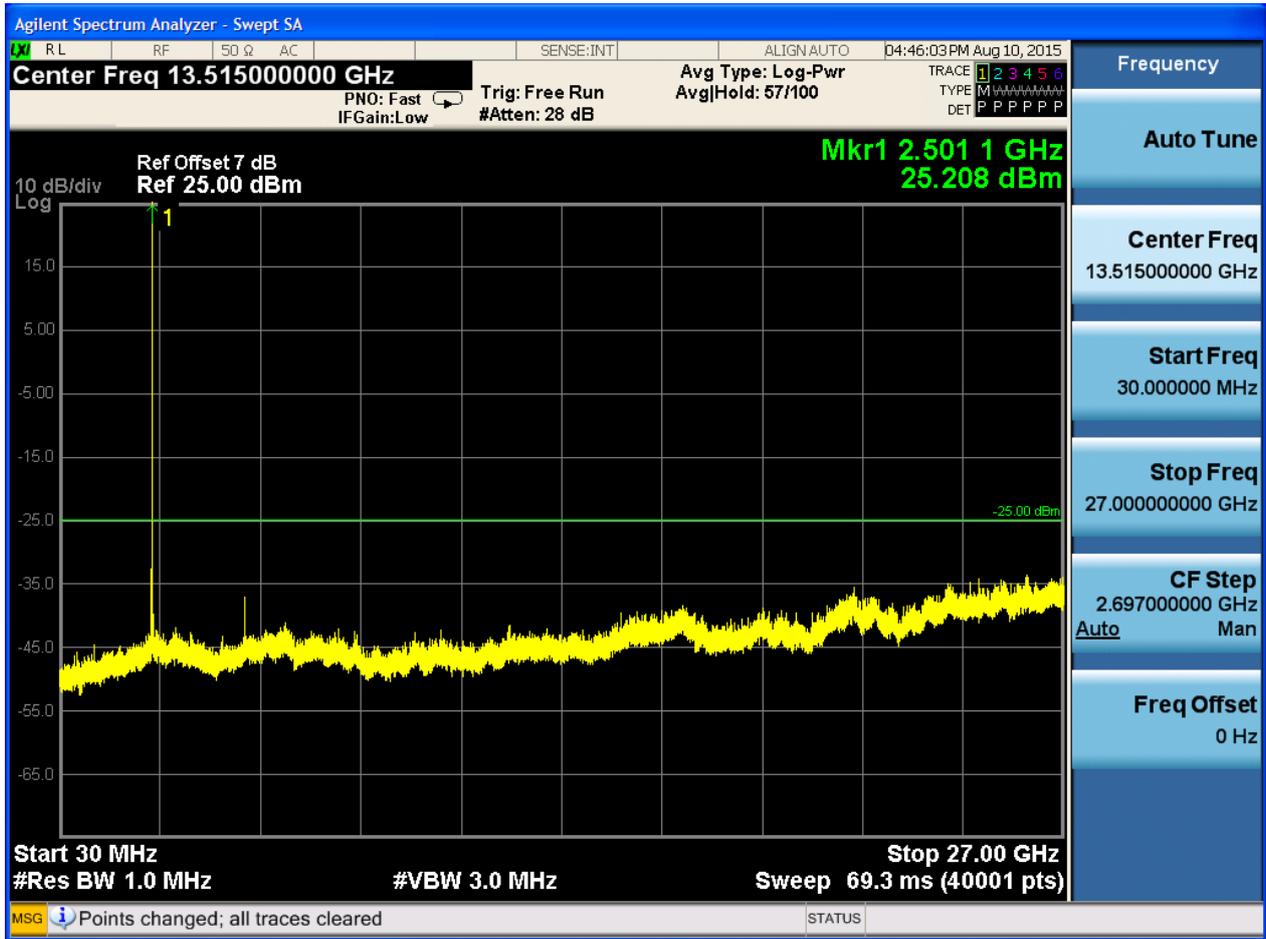
6.1.1.1.3.3.1 Test RB = RB1#0

6.1.1.1.4 Test Bandwidth = 20

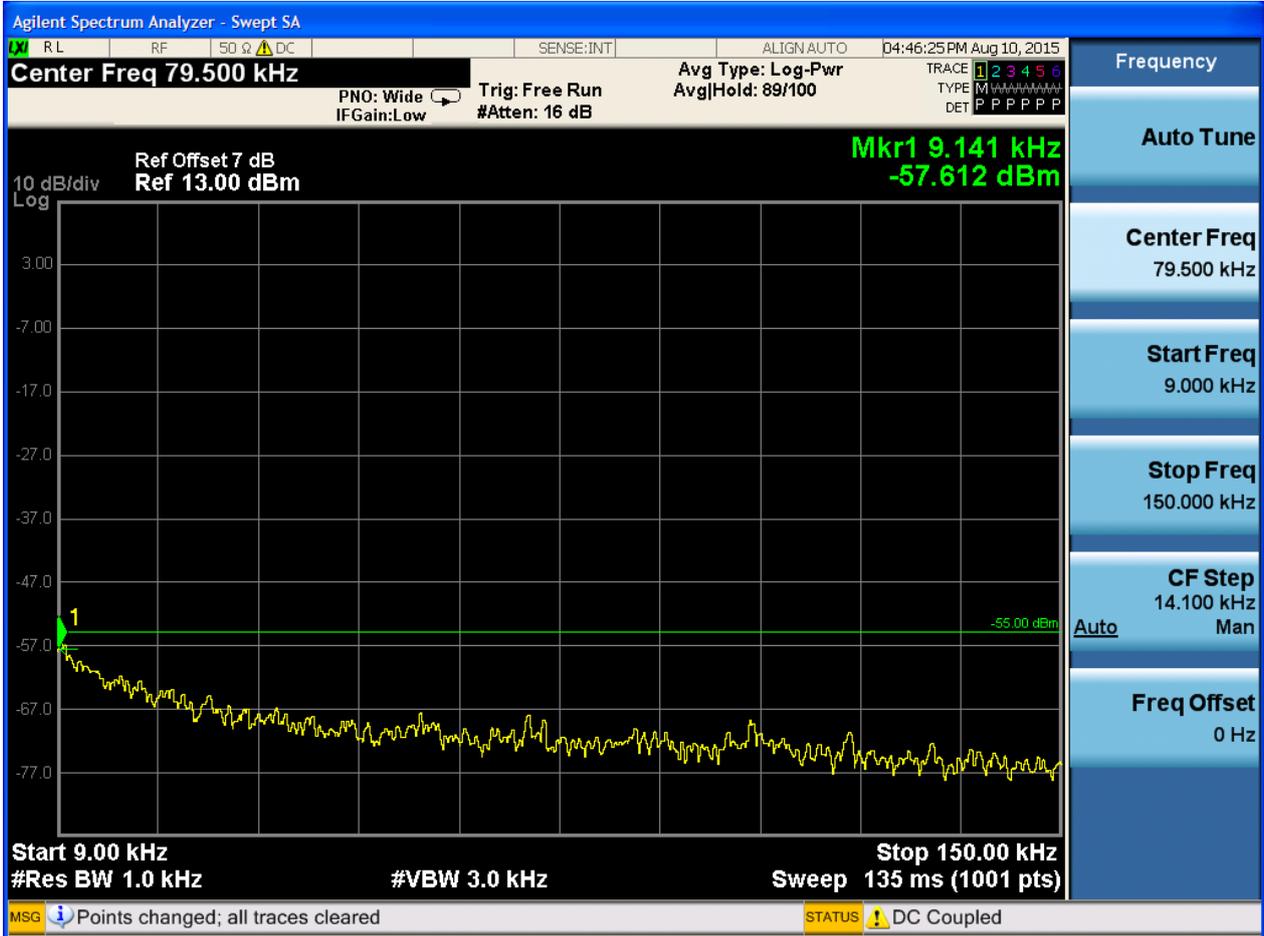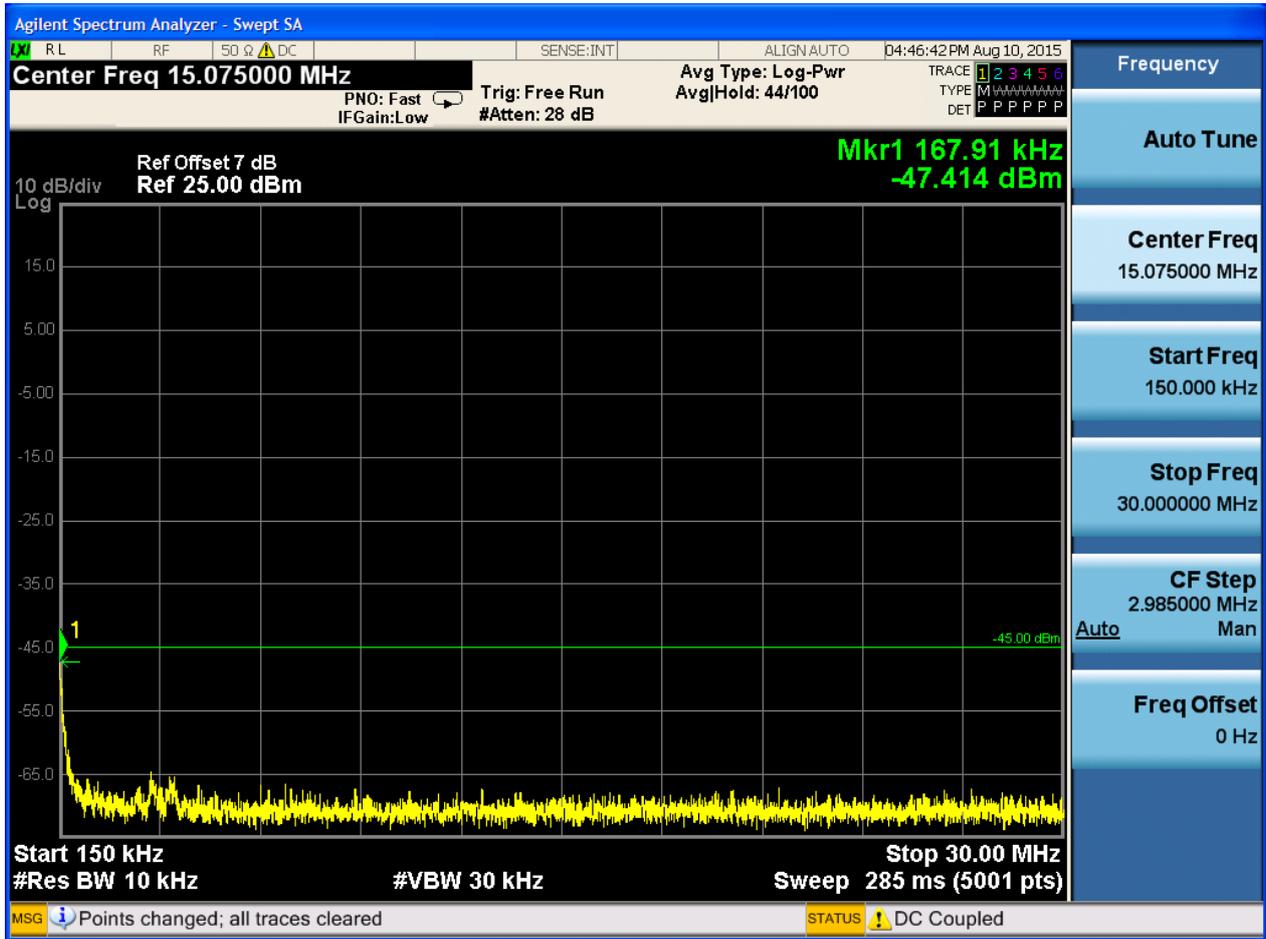### 6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0

6.1.1.1.4.2 Test Channel = MCH
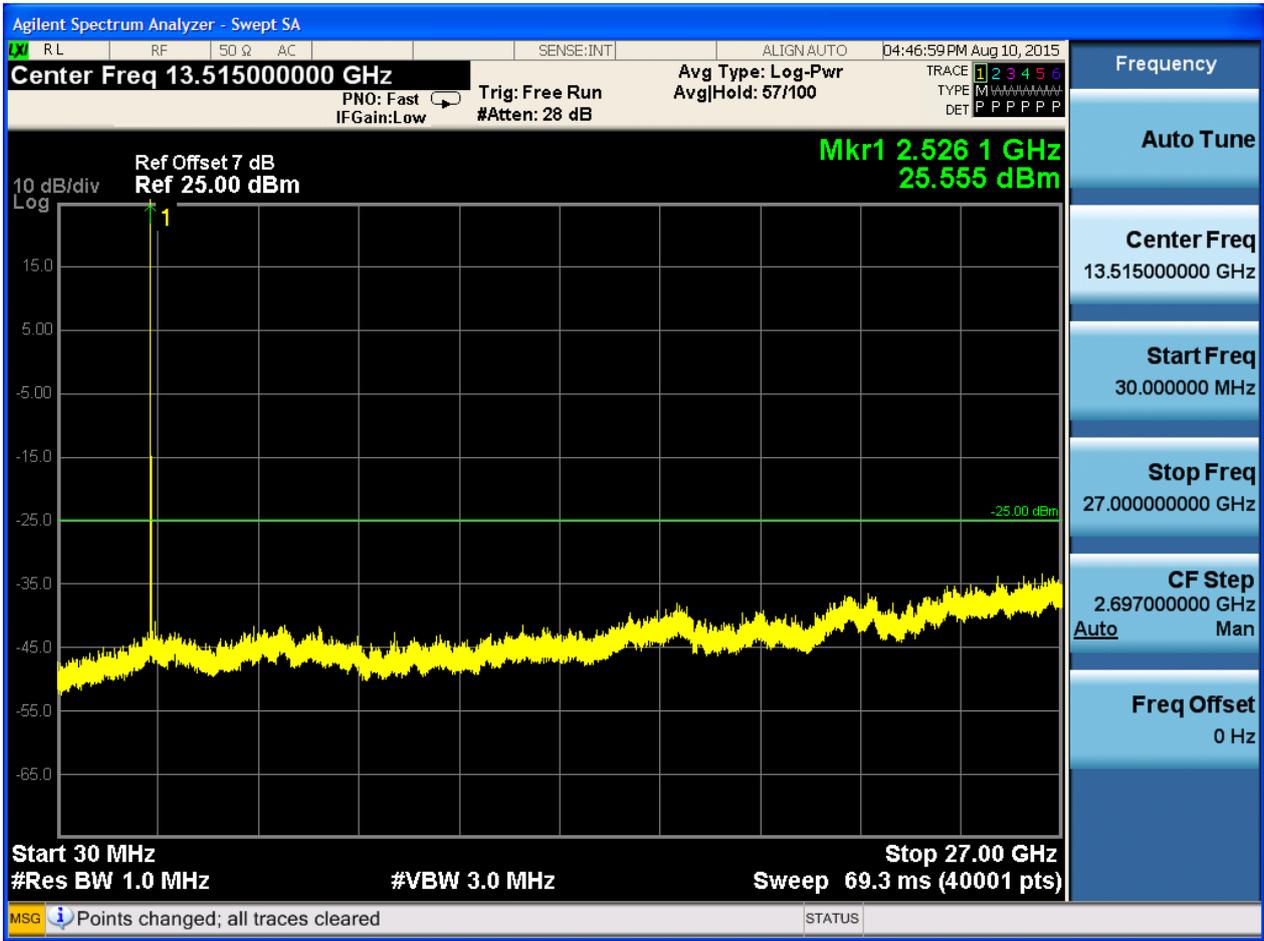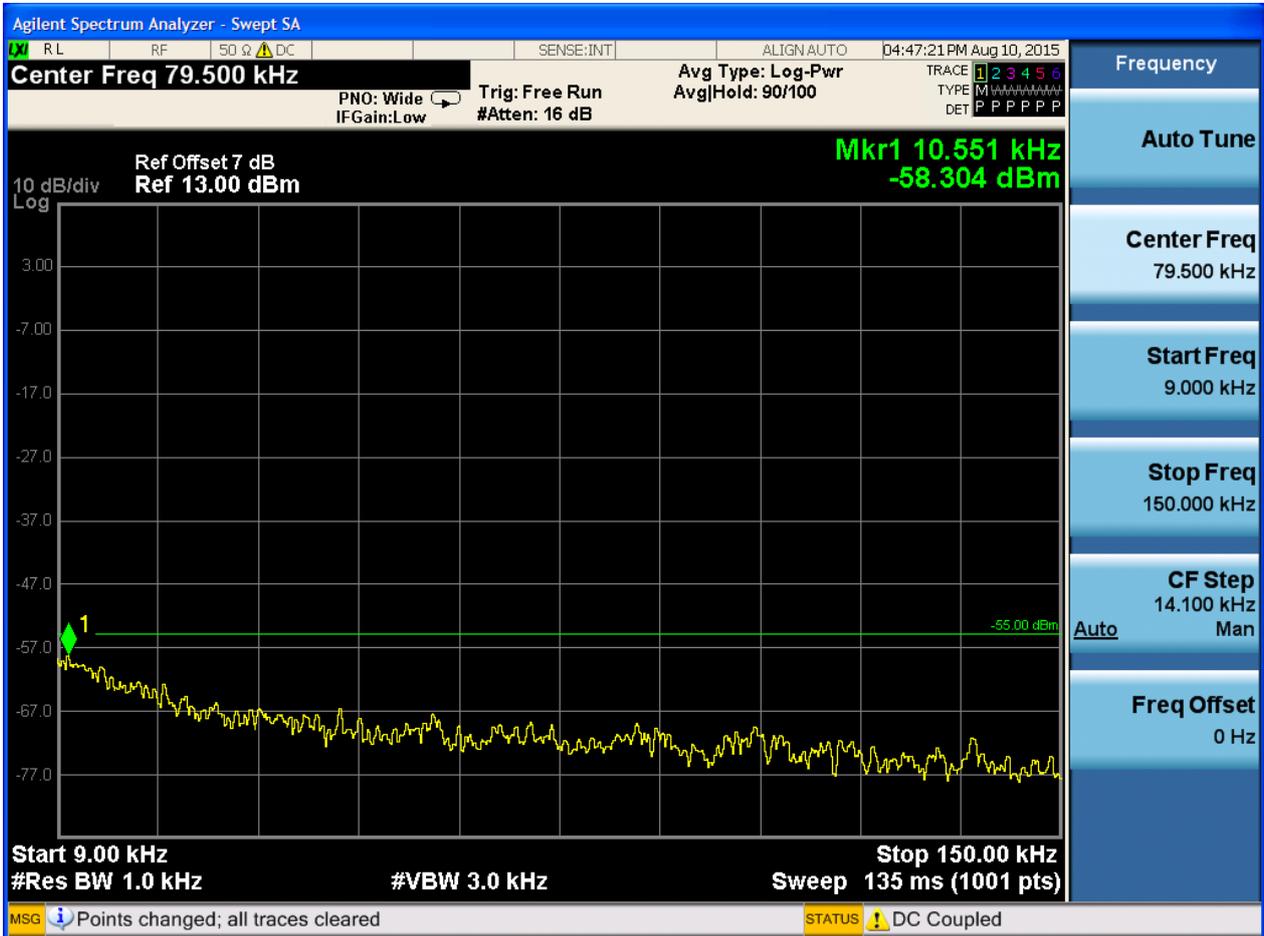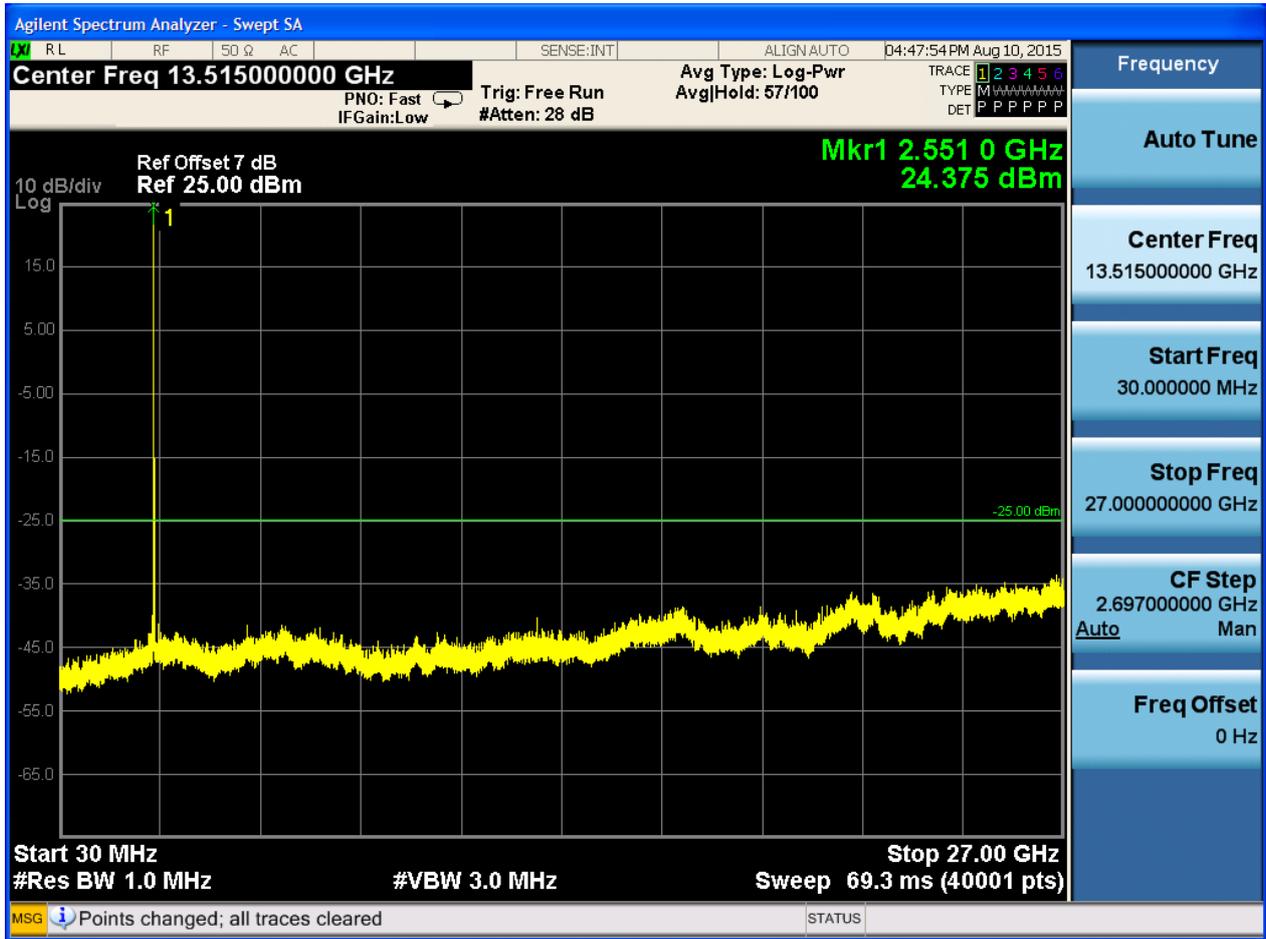
6.1.1.1.4.2.1 Test RB = RB1#0

6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0

6.1.1.2 Test Mode = LTE/TM2
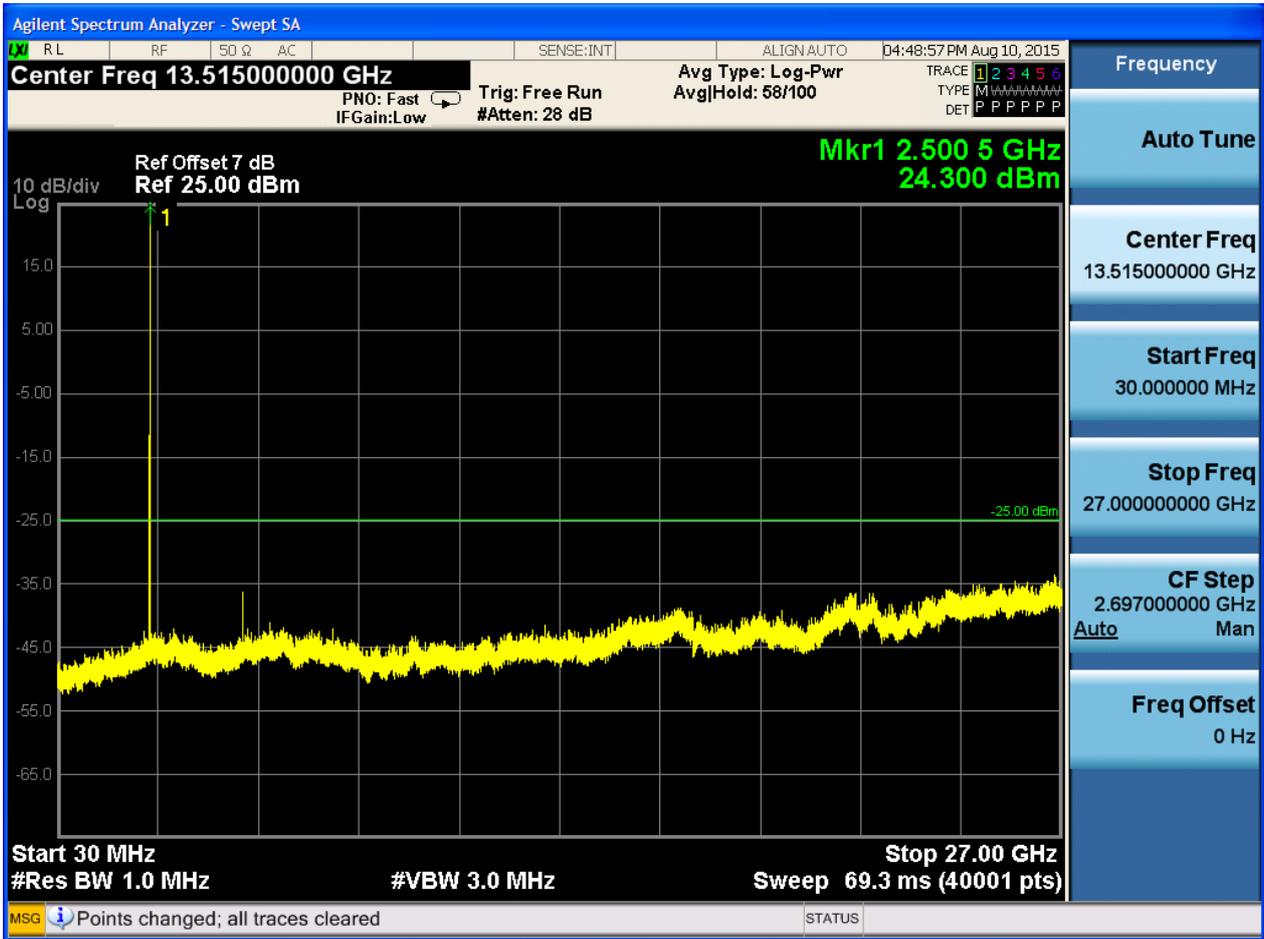
6.1.1.2.1 Test Bandwidth = 5

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

Agilent Spectrum Analyzer - Swept SA

R L	RF	50 Ω	AC	SENSE:INT	ALIGN AUTO	04:50:48 PM Aug 10, 2015

Center Freq 13.515000000 GHz

PNO: Fast
IFGain:Low

Trig: Free Run
#Atten: 28 dB

Avg Type: Log-Pwr
Avg|Hold: 58/100

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

Mkr1 2.565 2 GHz
24.500 dBm

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

15.0

5.00

-5.00

-15.0

-25.0   -25.00 dBm

-35.0

-45.0

-55.0

-65.0

Start 30 MHz
#Res BW 1.0 MHz   #VBW 3.0 MHz

Stop 27.00 GHz
Sweep 69.3 ms (40001 pts)

MSG Points changed; all traces cleared   STATUS

Frequency

Auto Tune

Center Freq
13.515000000 GHz

Start Freq
30.000000 MHz

Stop Freq
27.000000000 GHz

CF Step
2.697000000 GHz
Auto   Man

Freq Offset
0 Hz

6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH
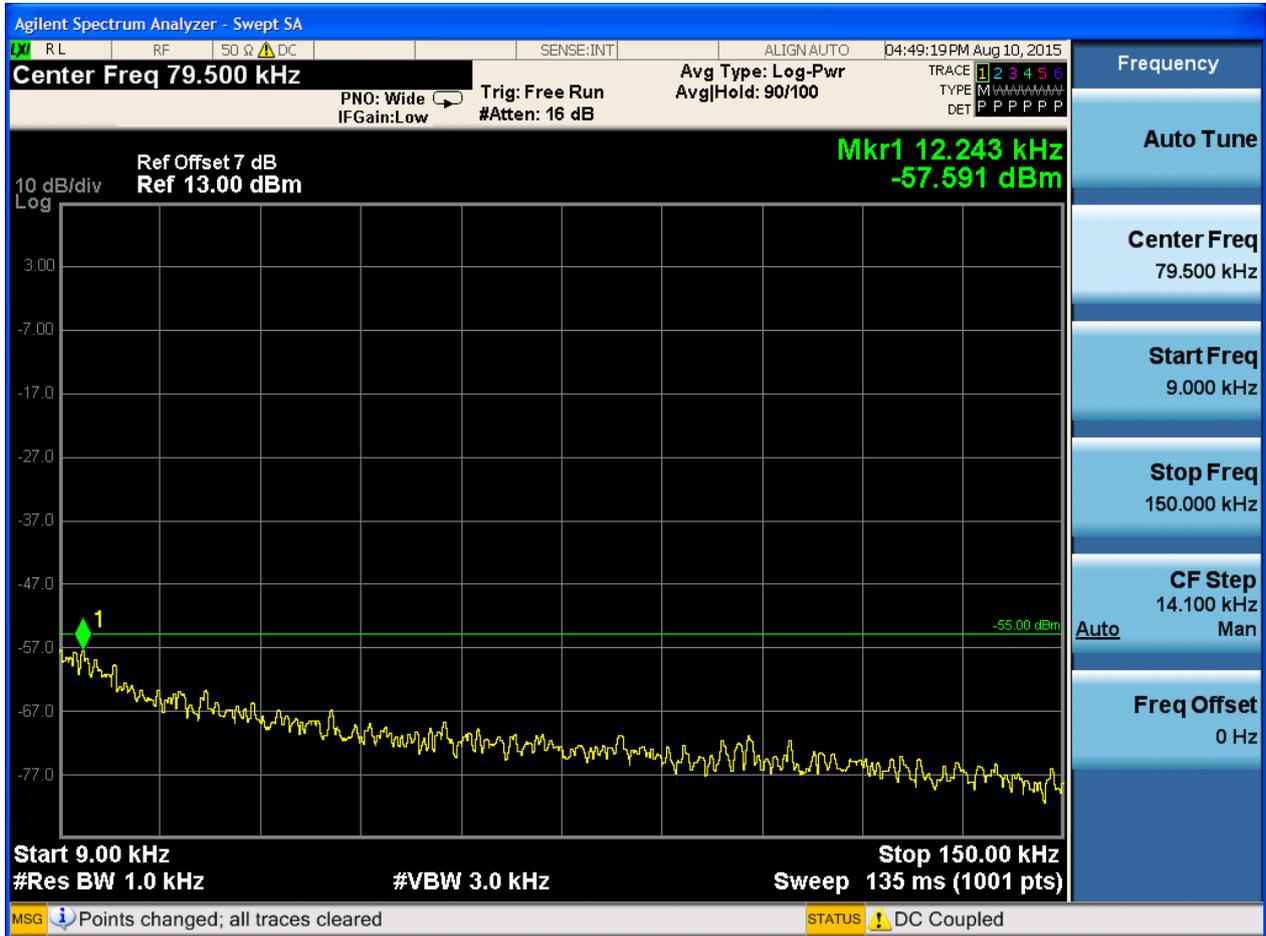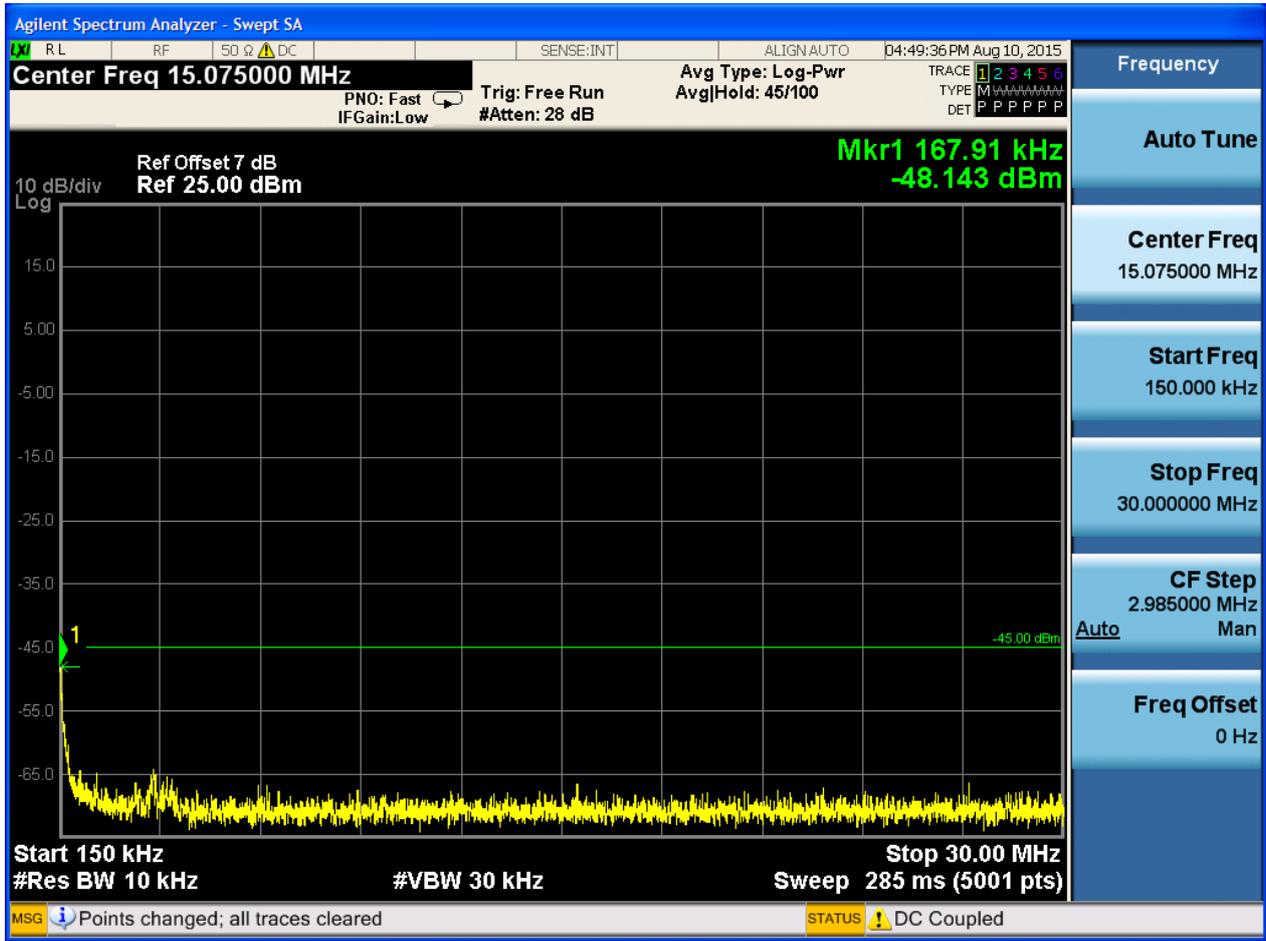
6.1.1.2.2.1.1 Test RB = RB1#0
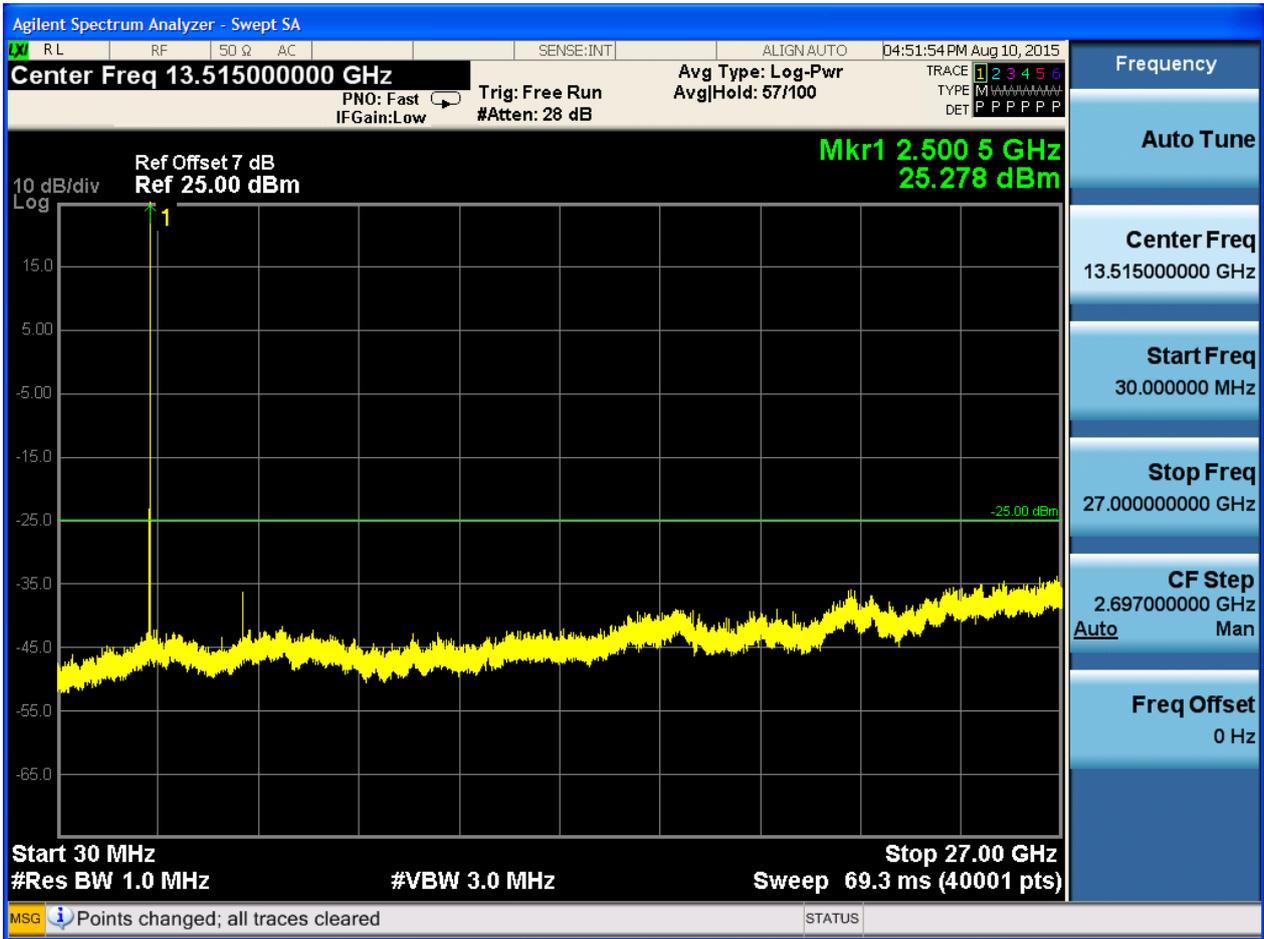
6.1.1.2.2.2 Test Channel = MCH

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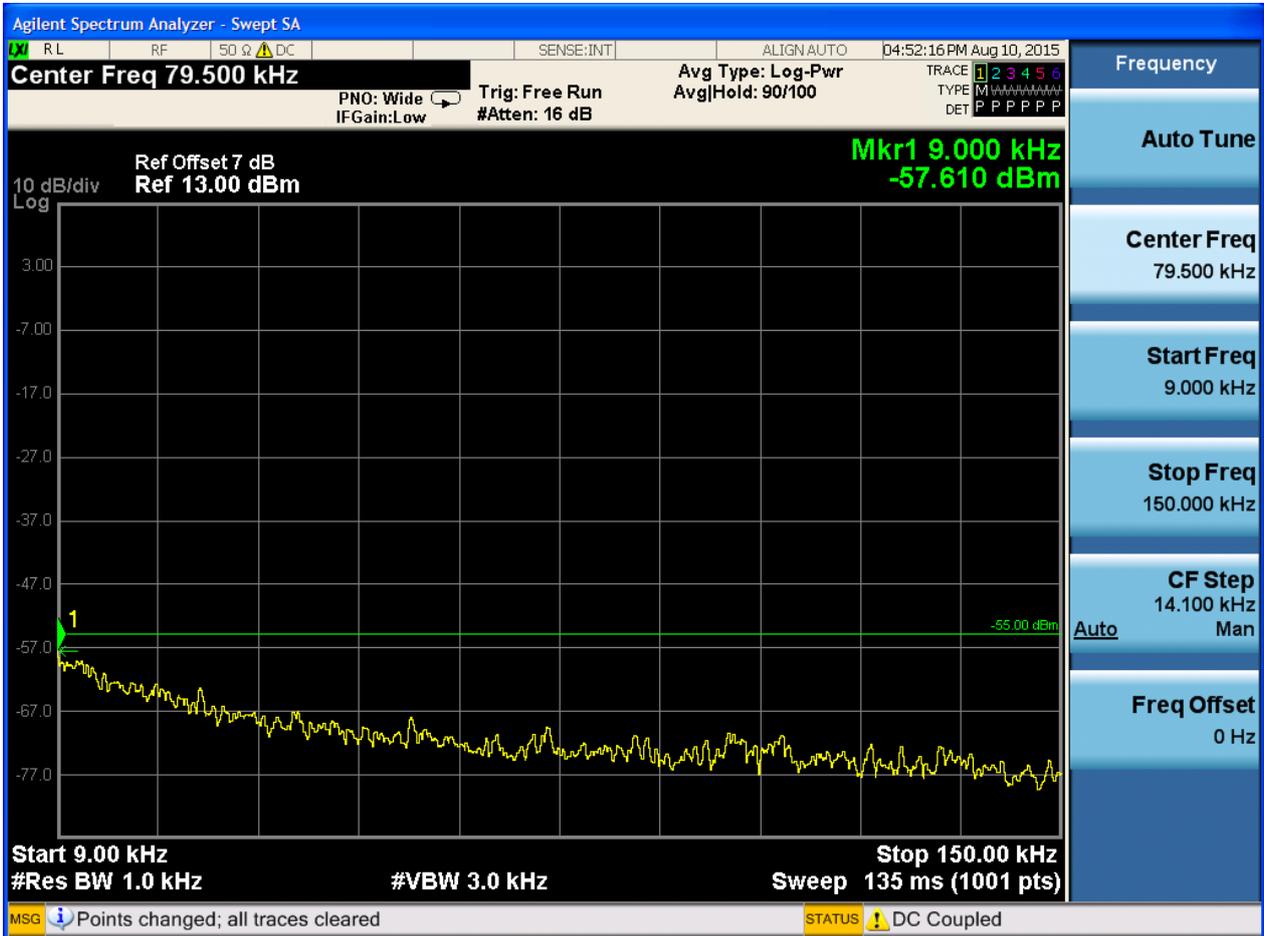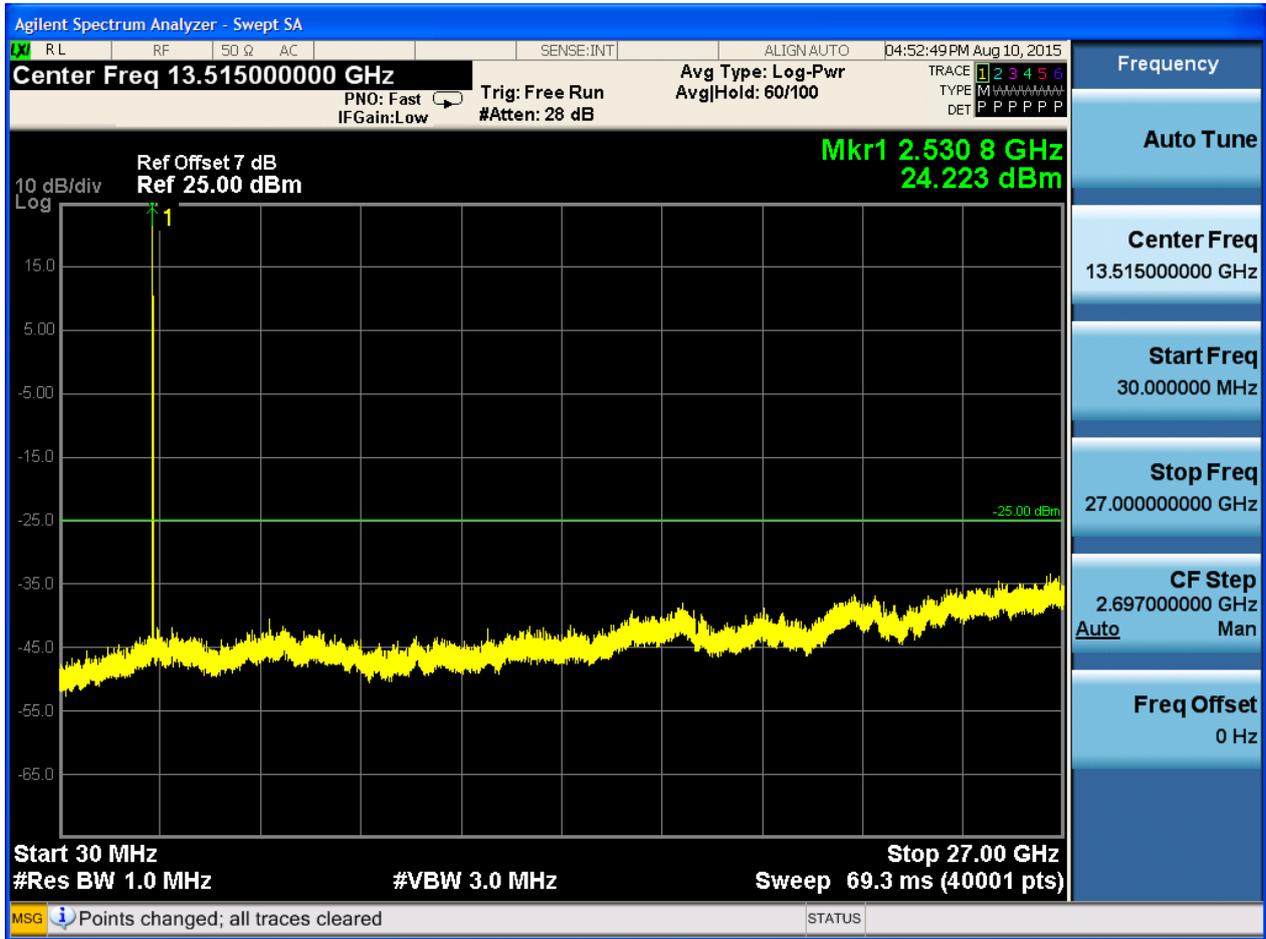
6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0

6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

R L | RF | 50 Ω DC | | | SENSE:INT | ALIGN AUTO | 04:54:16 PM Aug 10, 2015

Center Freq 79.500 kHz

PNO: Wide
IFGain:Low

Trig: Free Run
#Atten: 16 dB

Avg Type: Log-Pwr
Avg|Hold: 90/100

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

Mkr1 11.115 kHz
-57.739 dBm

Ref Offset 7 dB
10 dB/div **Ref 13.00 dBm**
Log

3.00

-7.00

-17.0

-27.0

-37.0

-47.0

-57.0   1   -55.00 dBm

-67.0

-77.0

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

MSG Points changed; all traces cleared   STATUS DC Coupled

Frequency

Auto Tune

Center Freq
79.500 kHz

Start Freq
9.000 kHz

Stop Freq
150.000 kHz

CF Step
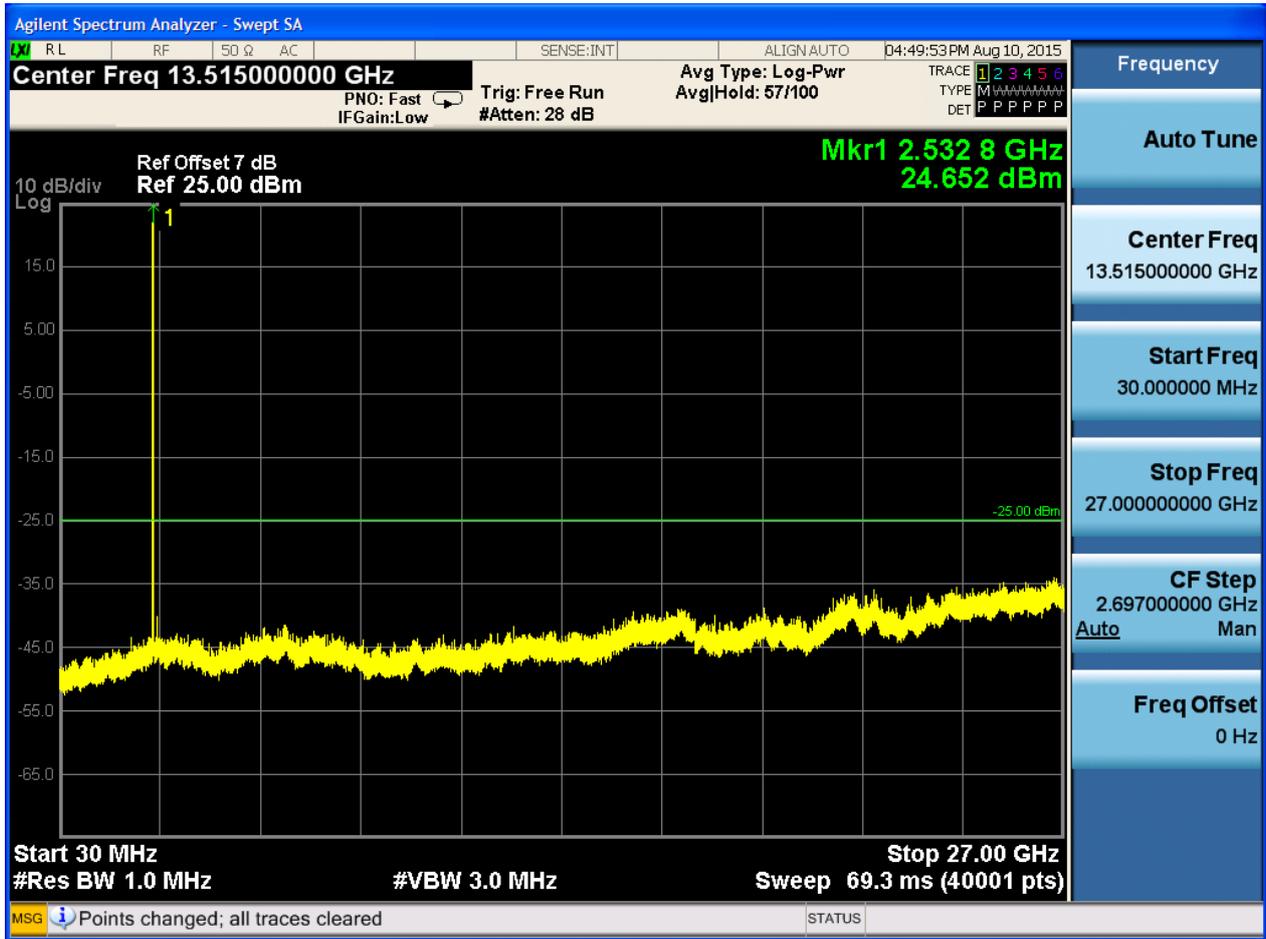14.100 kHz
Auto   Man

Freq Offset
0 Hz

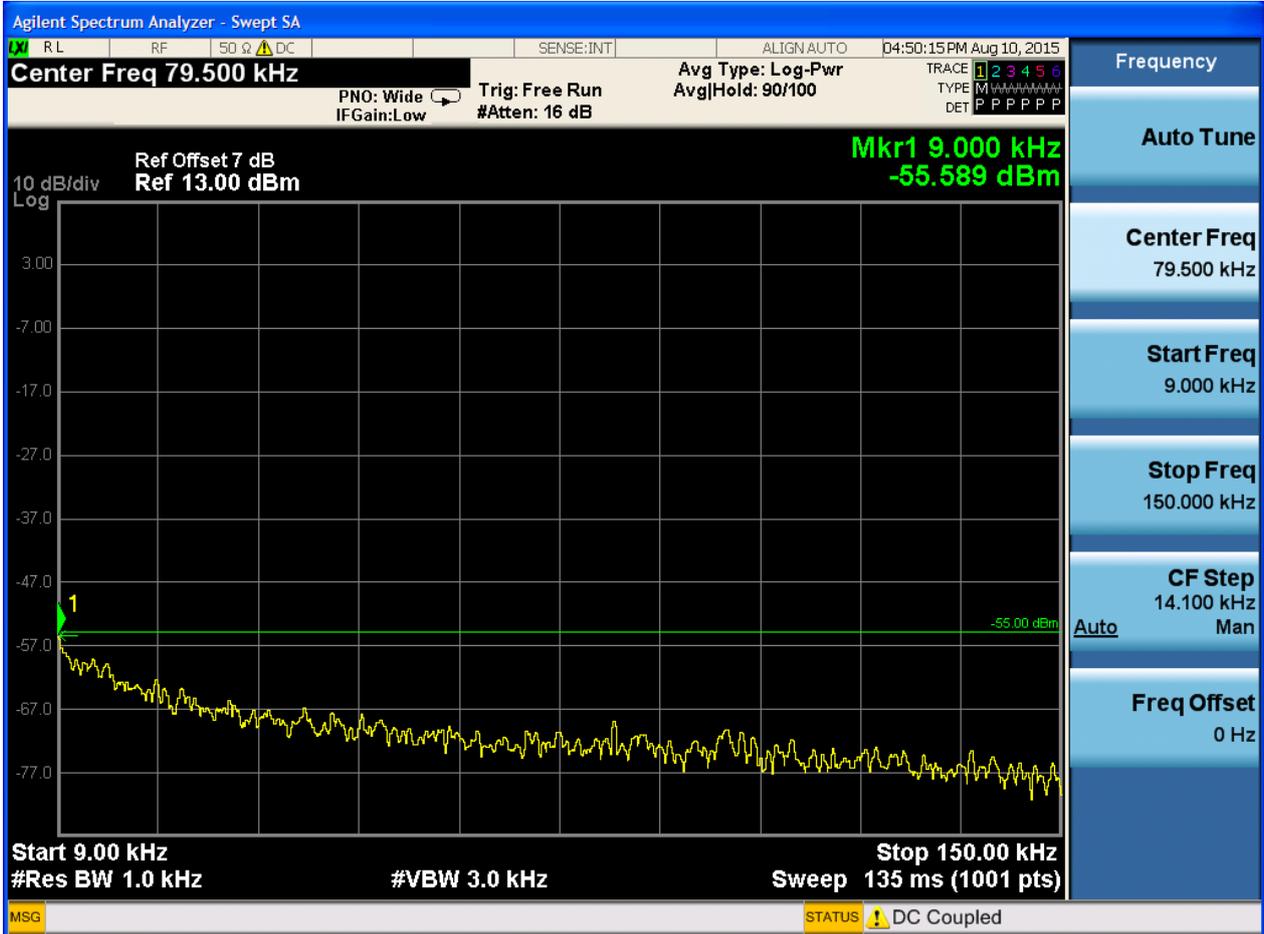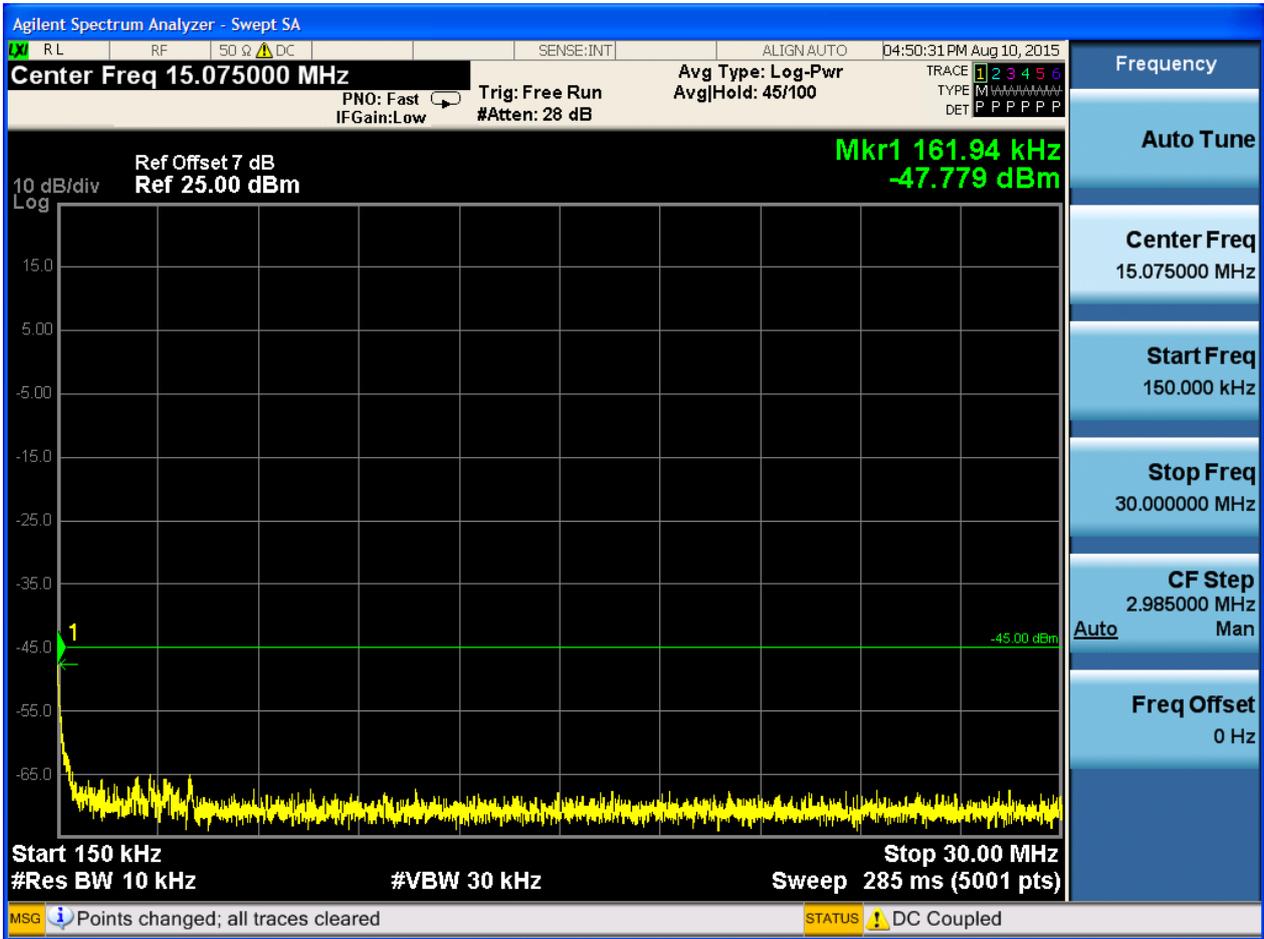## 6.1.1.2.3.2 Test Channel = MCH
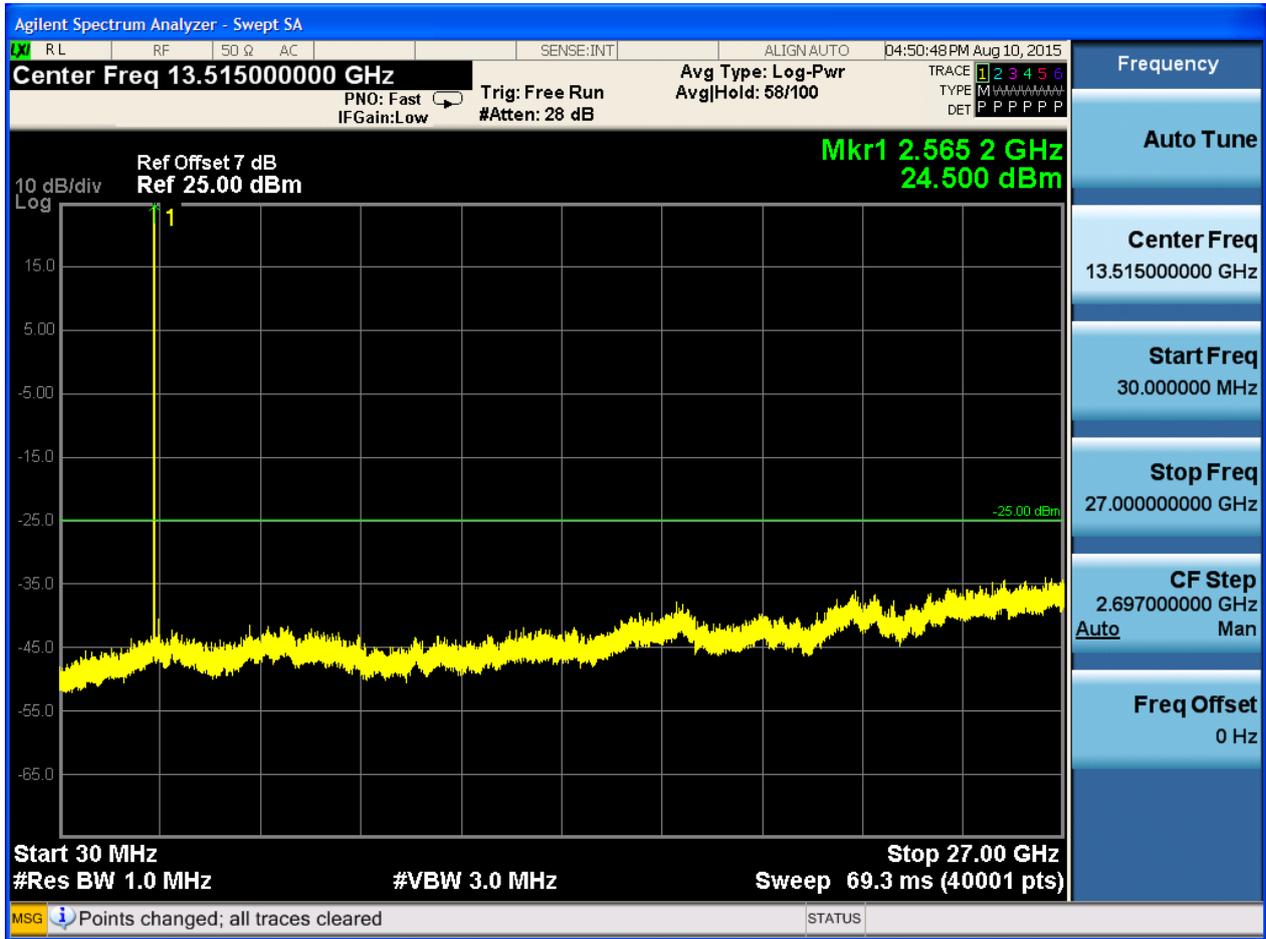
6.1.1.2.3.2.1 Test RB = RB1#0
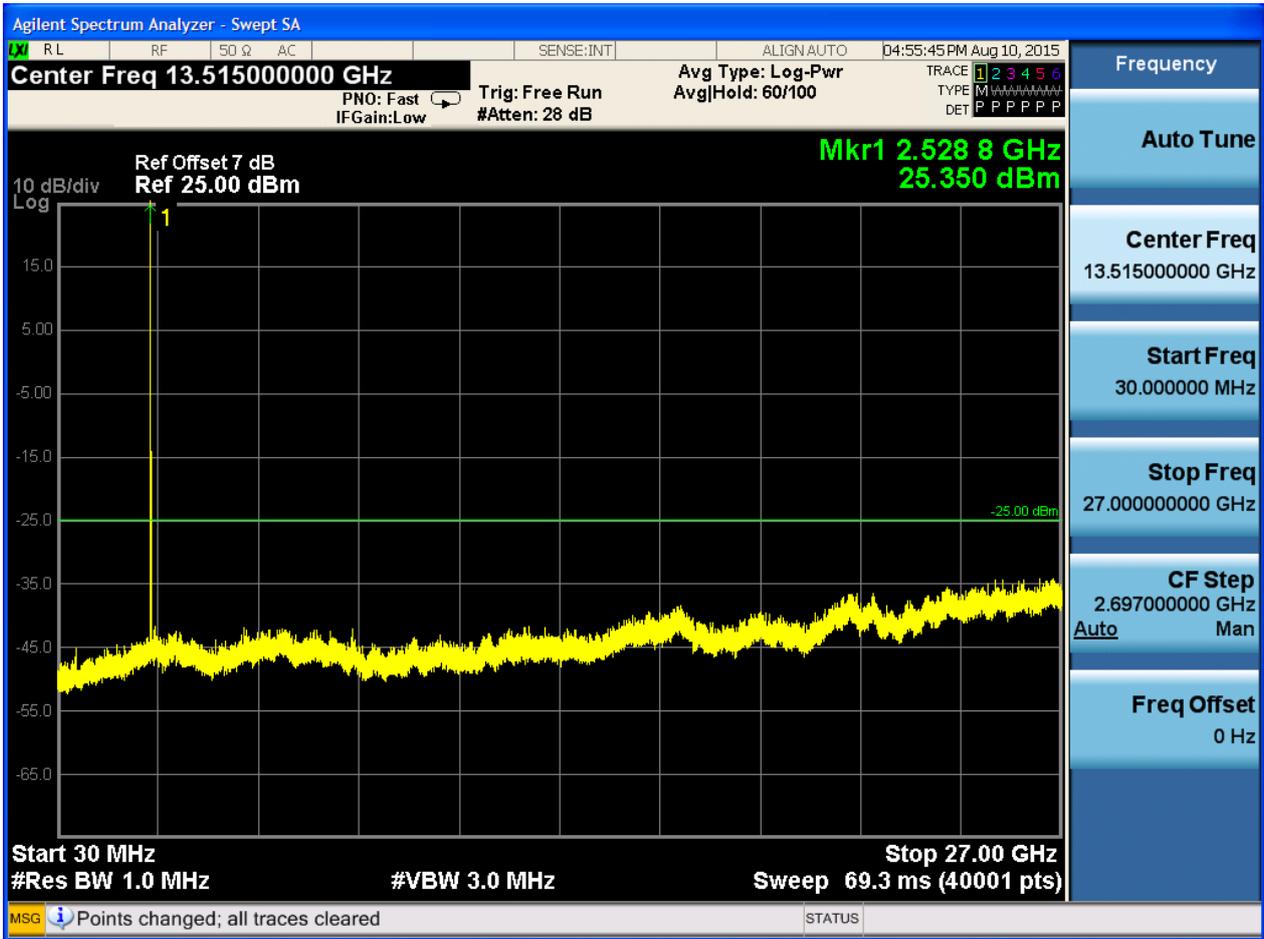
6.1.1.2.3.3 Test Channel = HCH
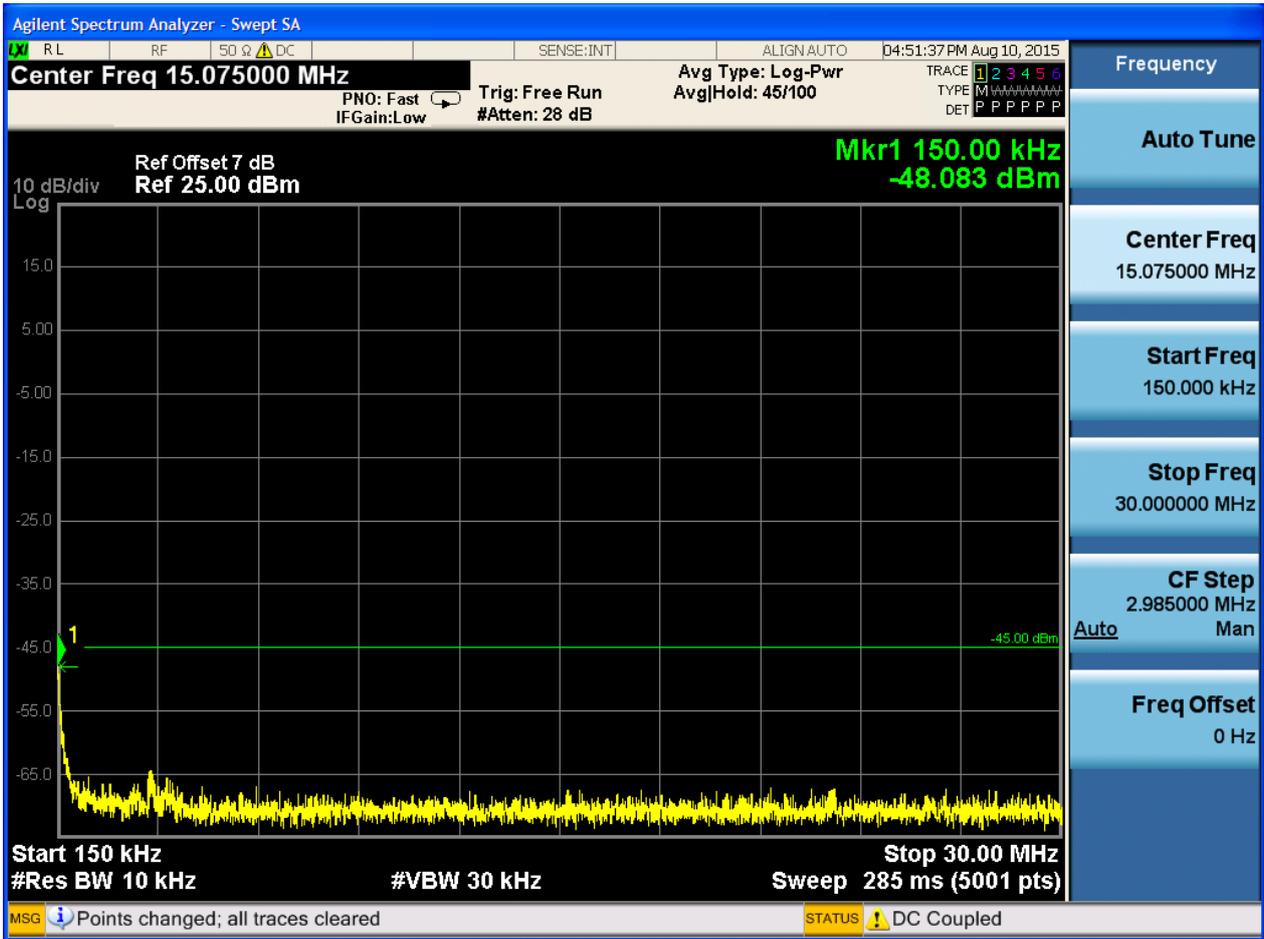
6.1.1.2.3.3.1 Test RB = RB1#0
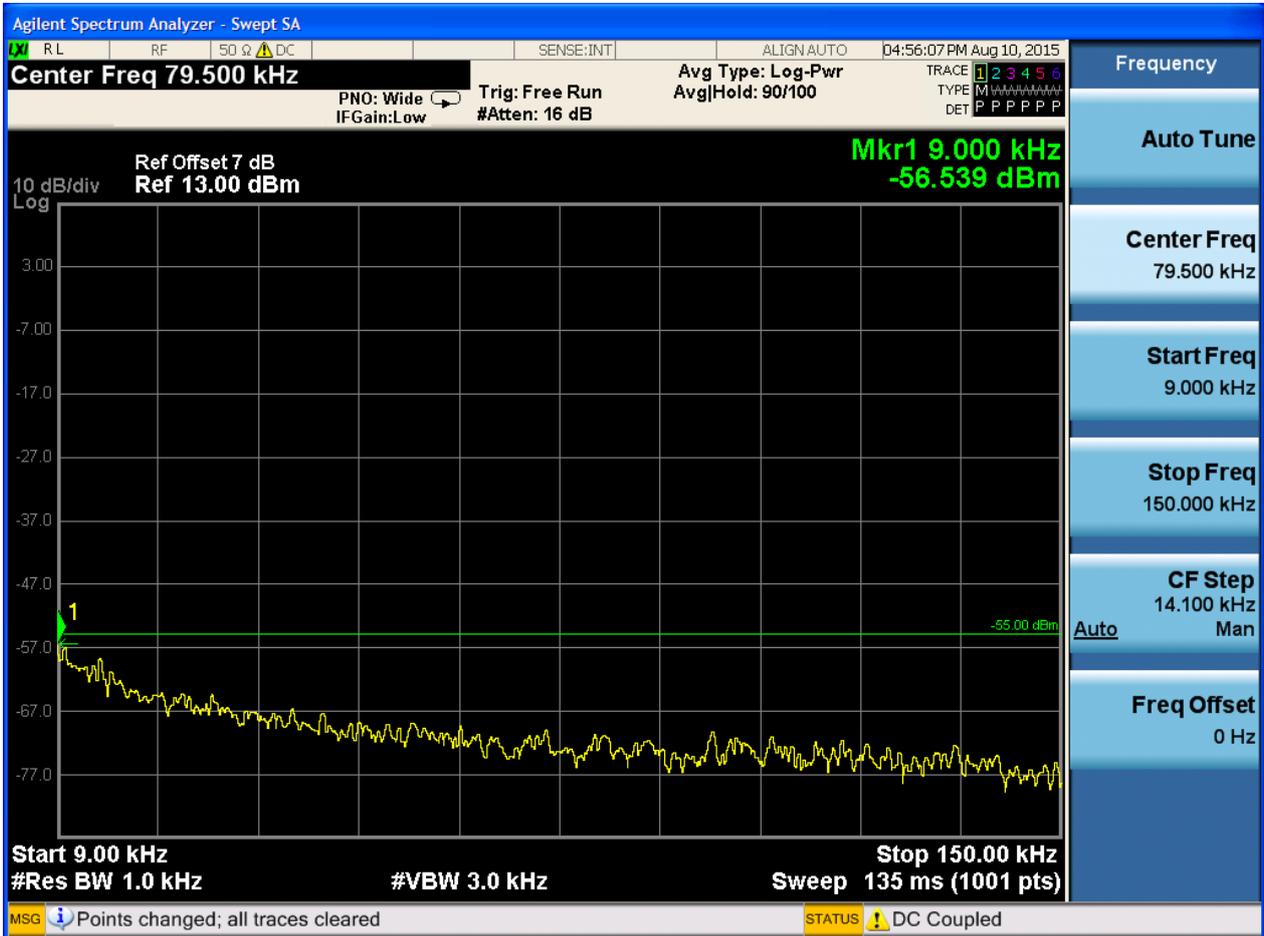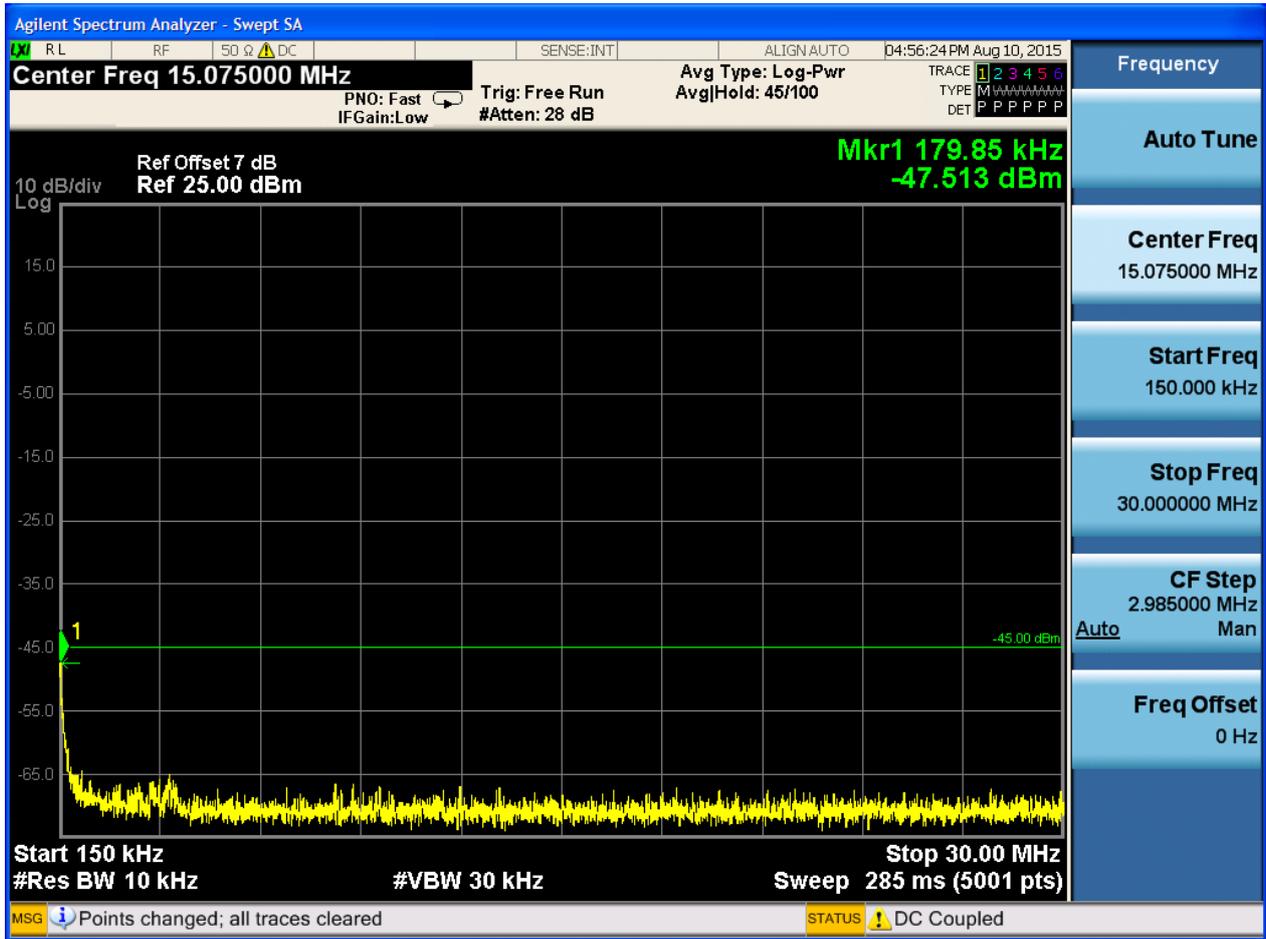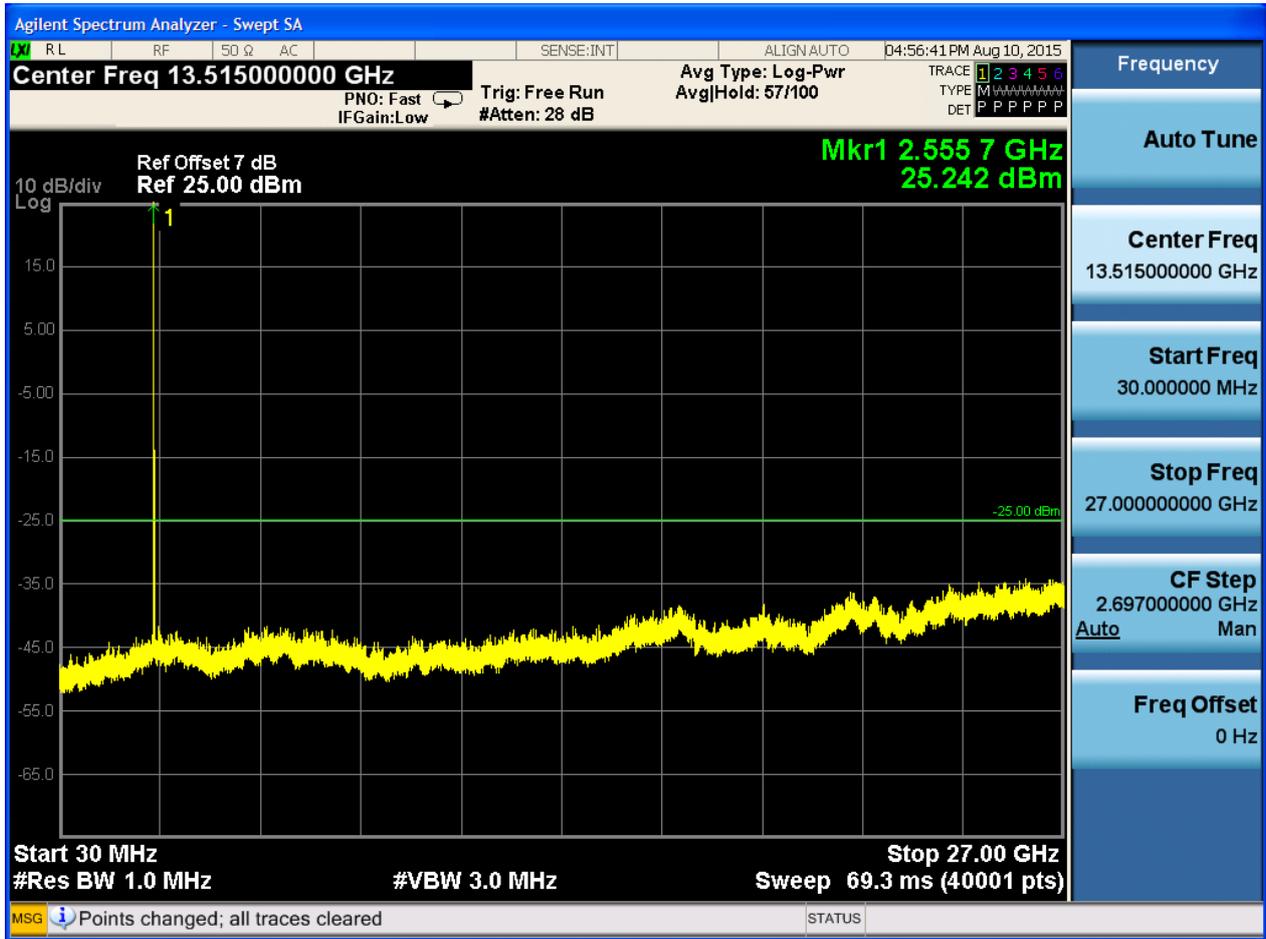
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

LXI R L   RF   50 Ω ⚠ DC   SENSE:INT   ALIGN AUTO   04:57:29 PM Aug 10, 2015
Center Freq 15.075000 MHz   Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
                        PNO: Fast ⟳   Trig: Free Run   Avg|Hold: 45/100   TYPE M W W W W W W
                        IFGain:Low   #Atten: 28 dB   DET P P P P P P

                                                              Mkr1 155.97 kHz
        Ref Offset 7 dB   -48.740 dBm
10 dB/div **Ref 25.00 dBm**
Log

  15.0

  5.00

 -5.00

 -15.0

 -25.0

 -35.0
                                                                              -45.00 dBm
 -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 |

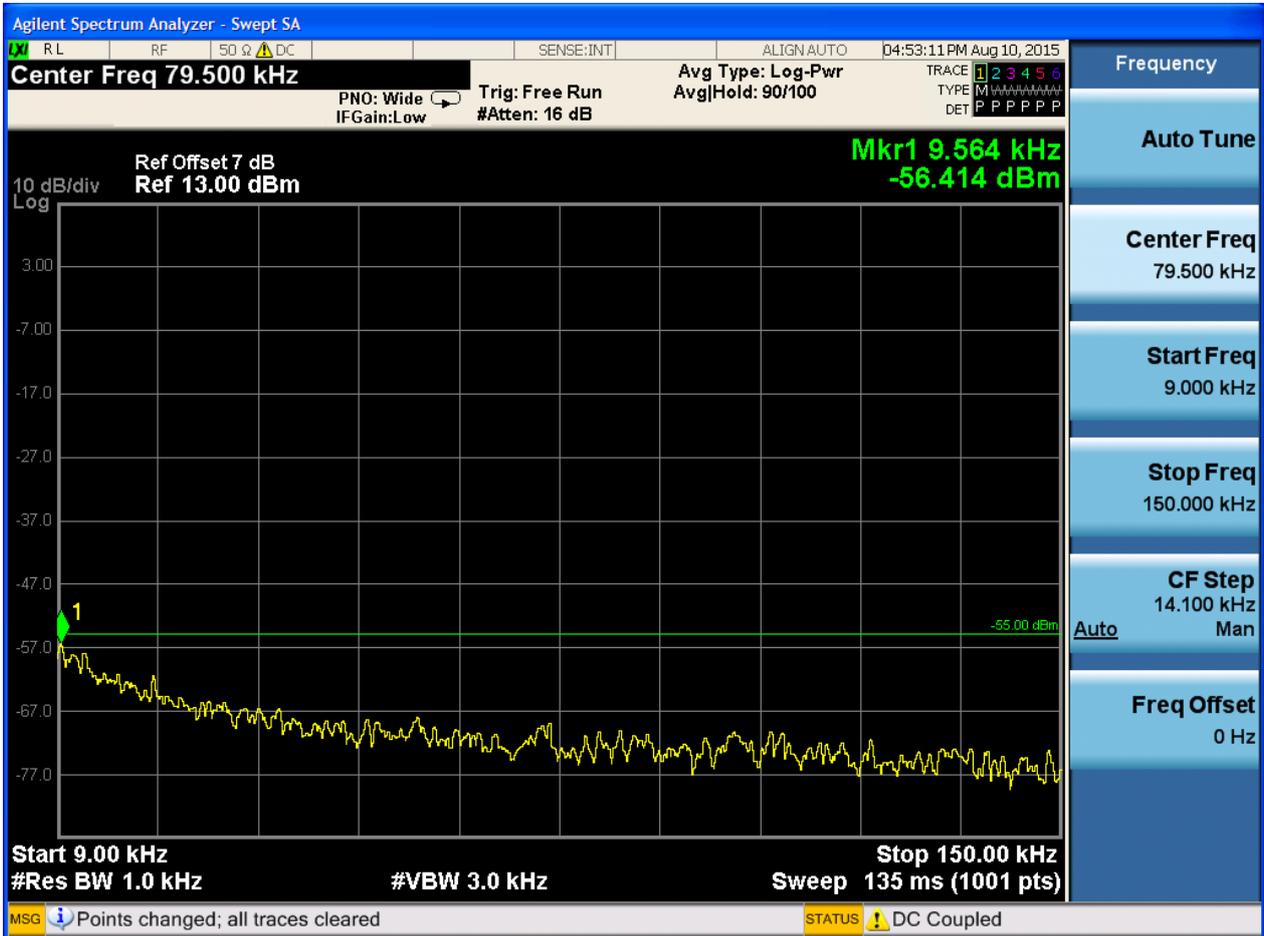### 6.1.1.2.4.2 Test Channel = MCH
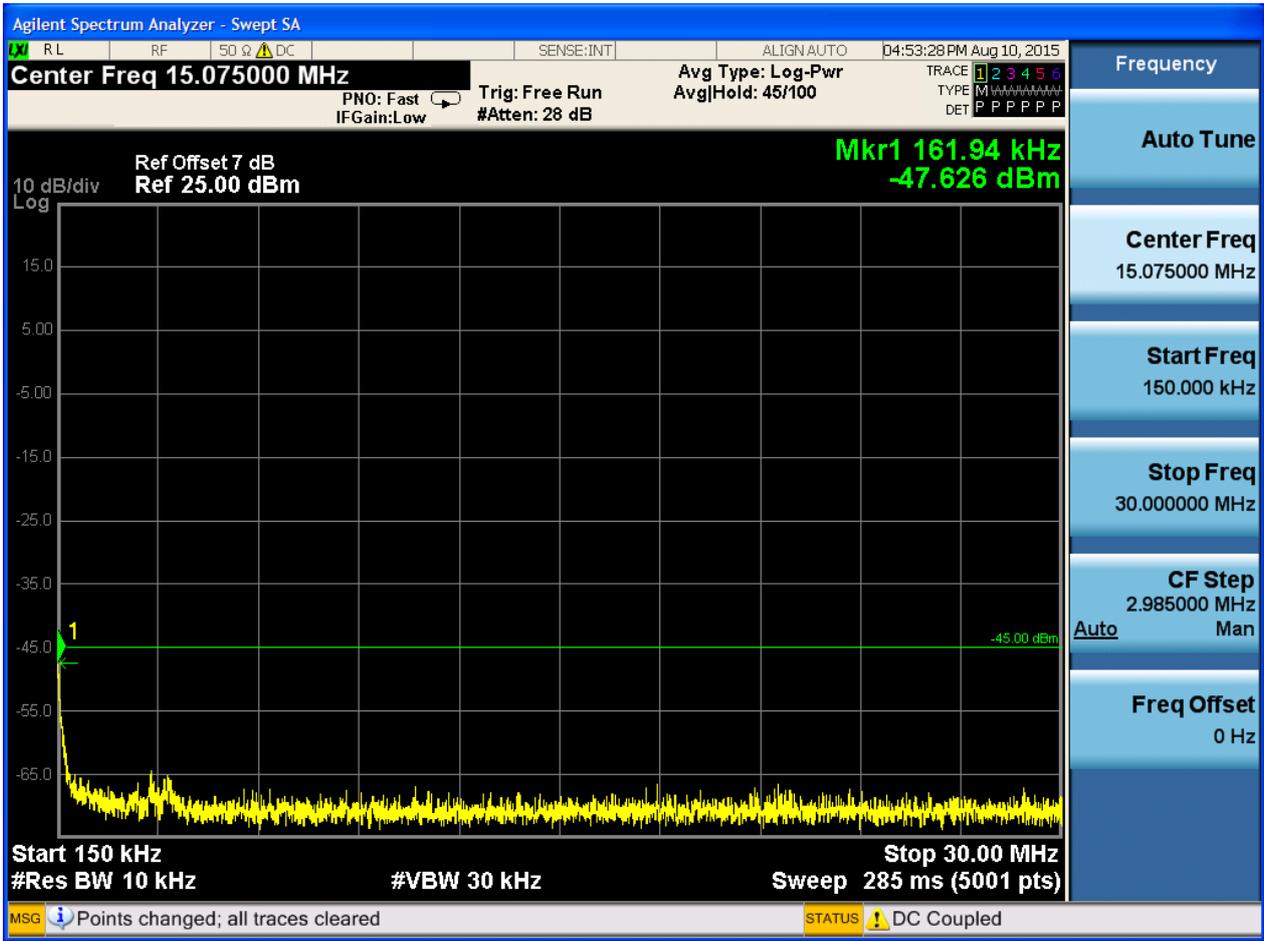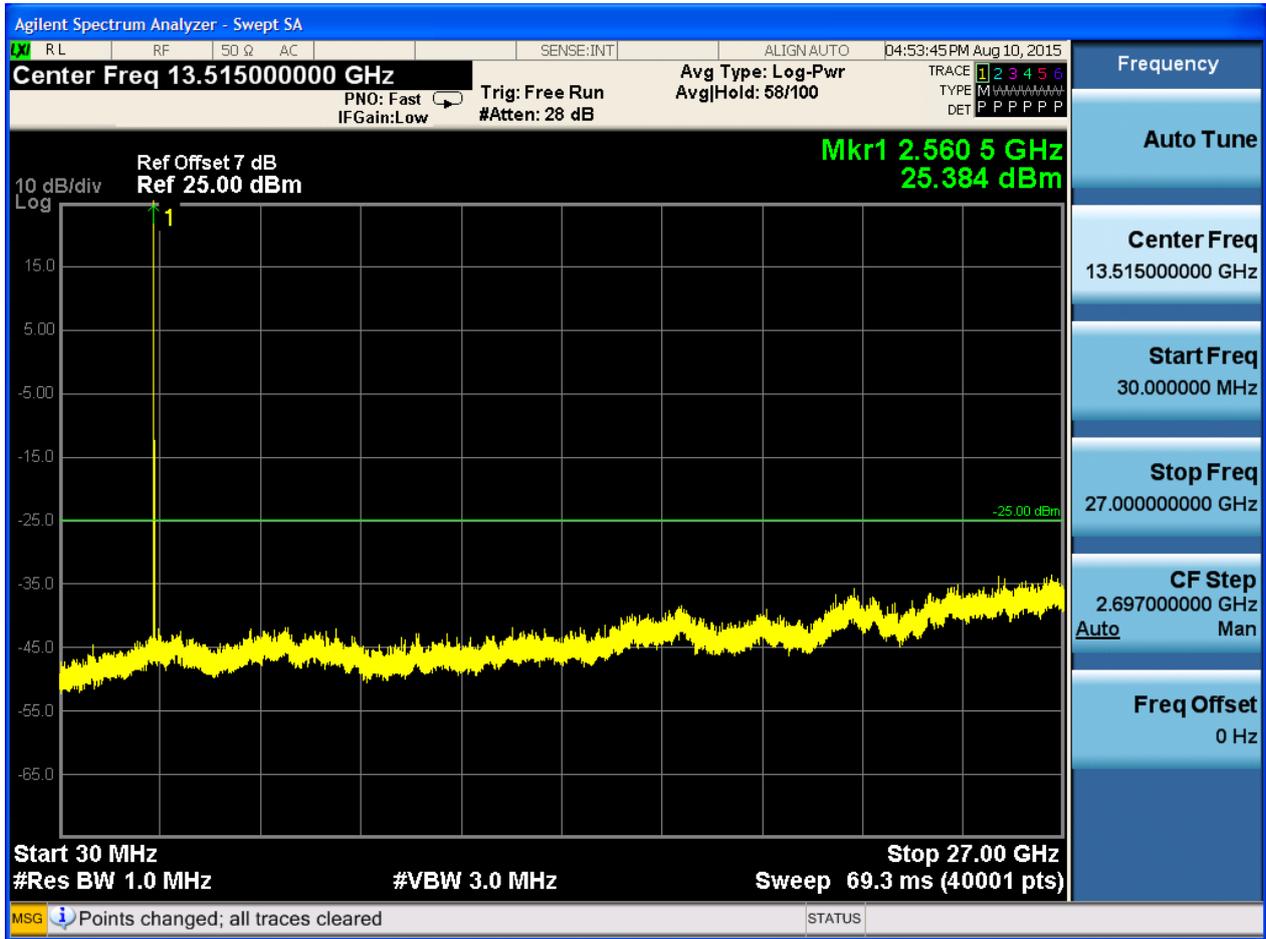
6.1.1.2.4.2.1 Test RB = RB1#0
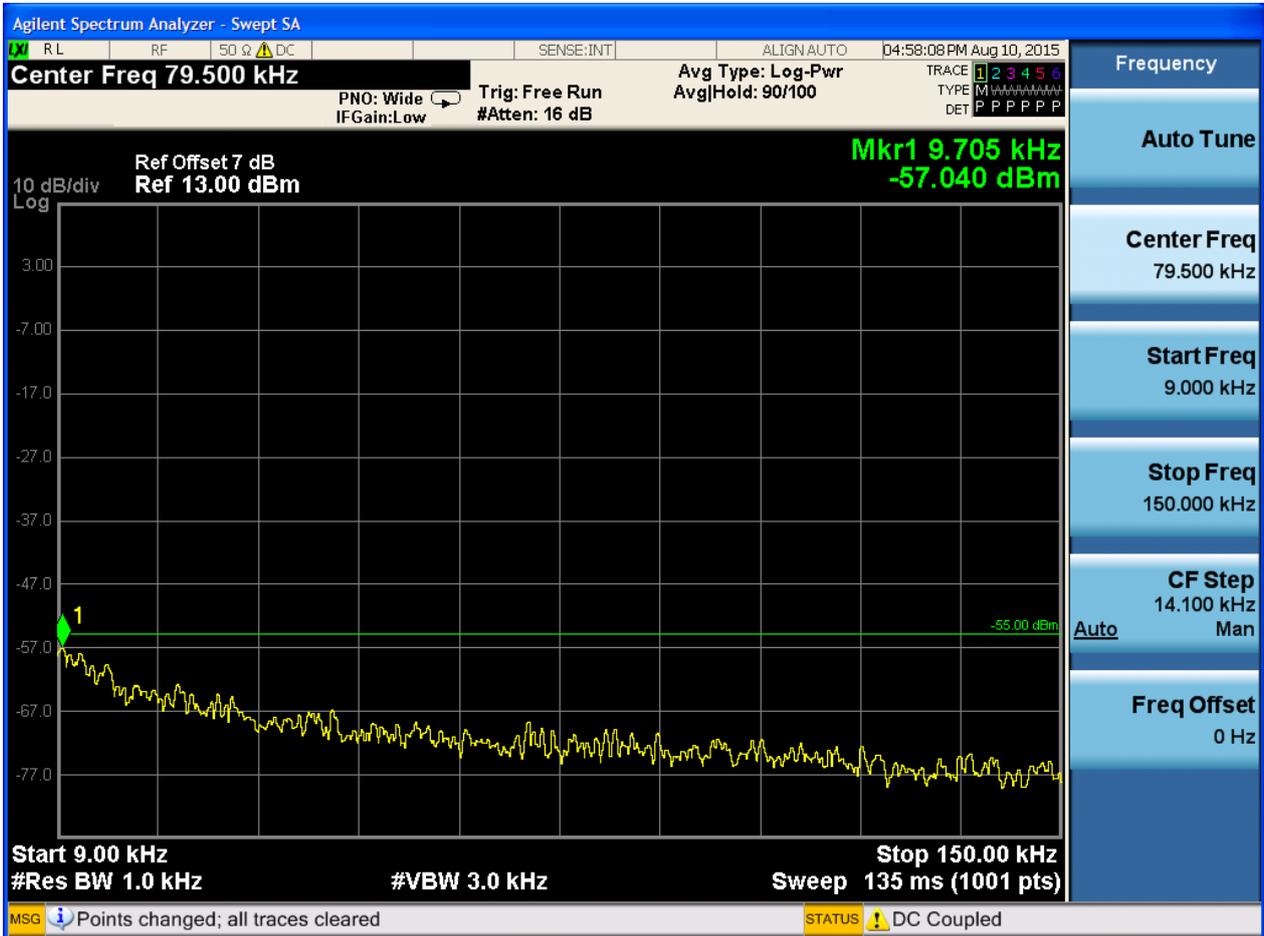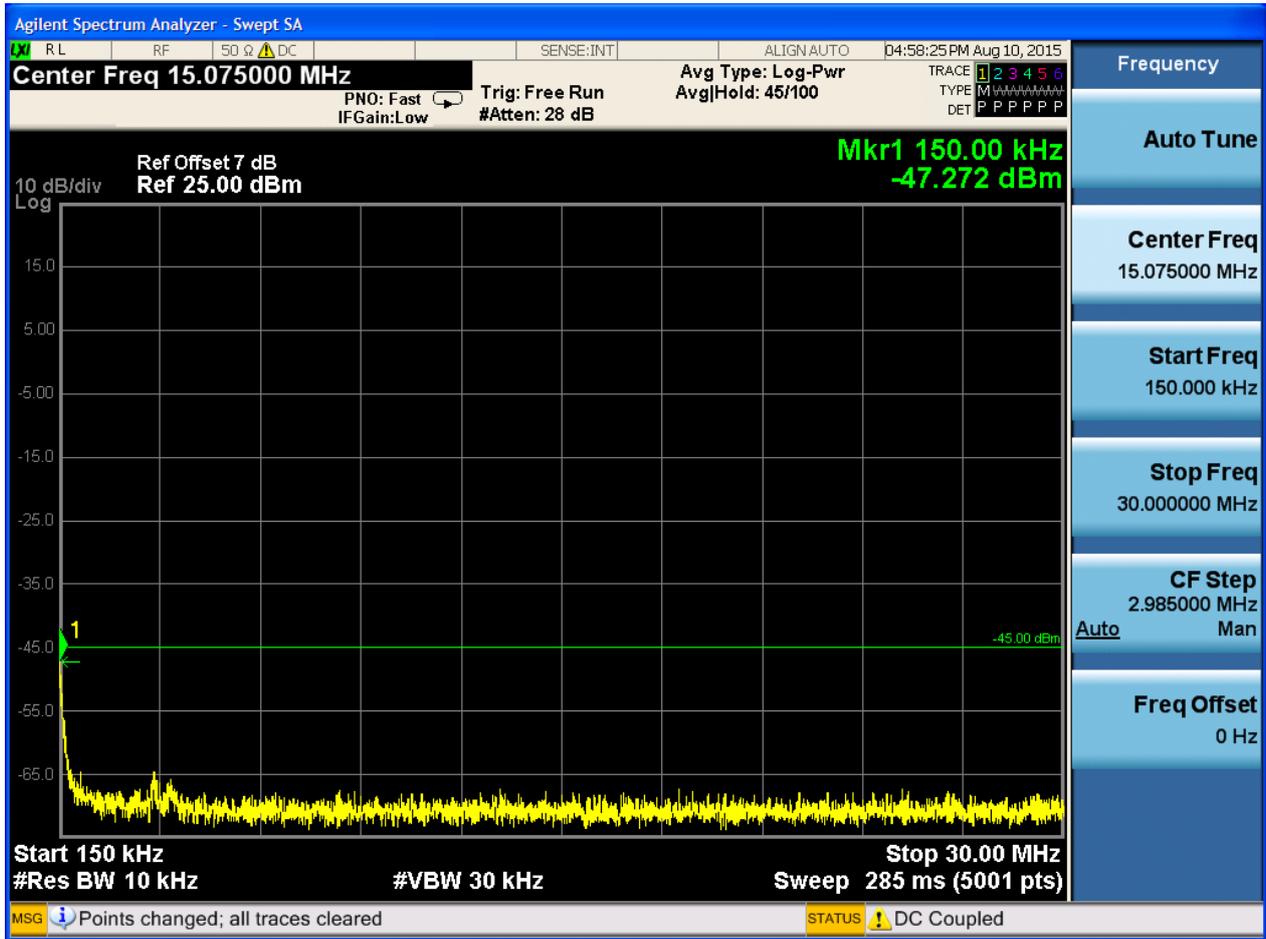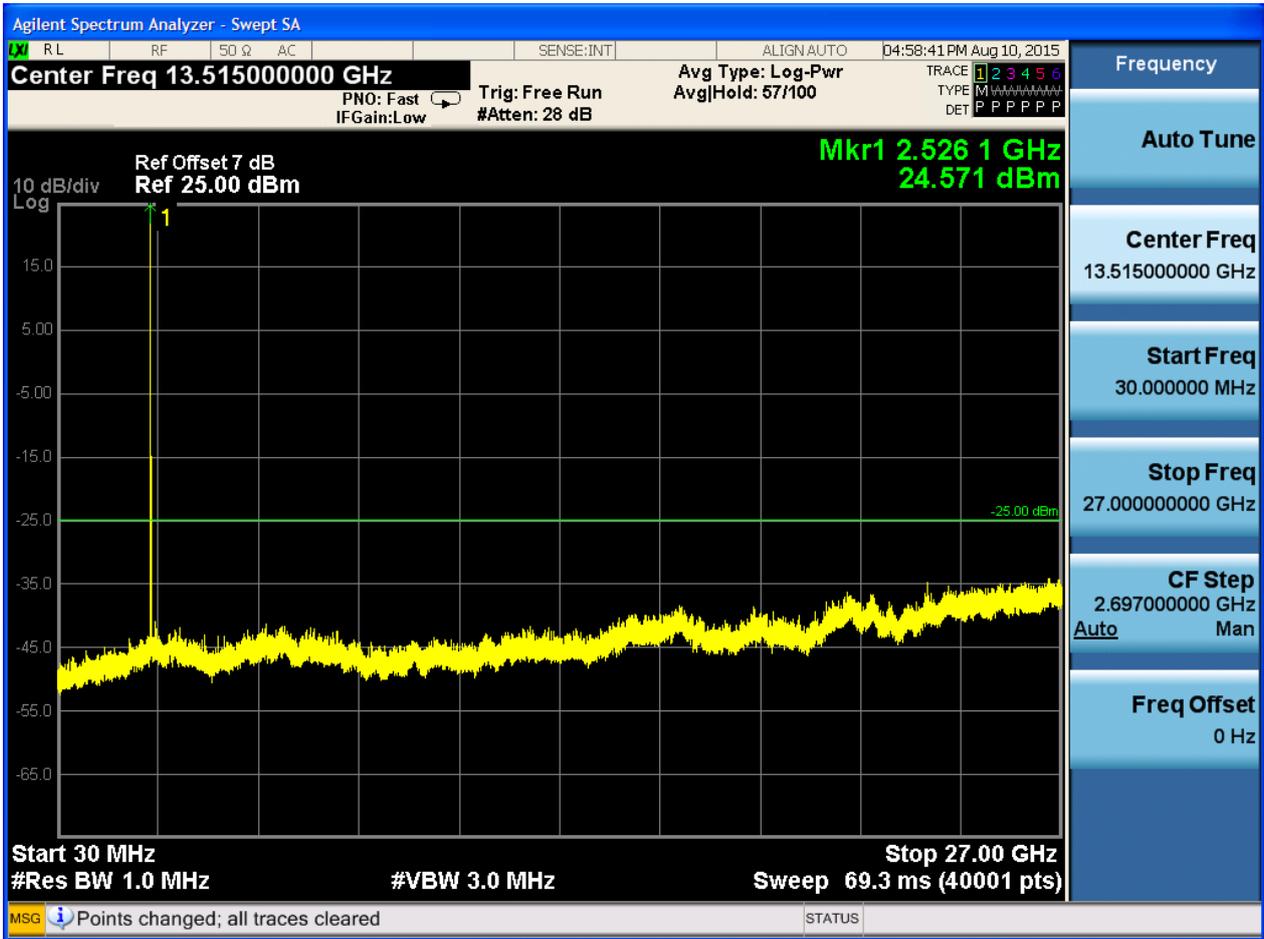
6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0
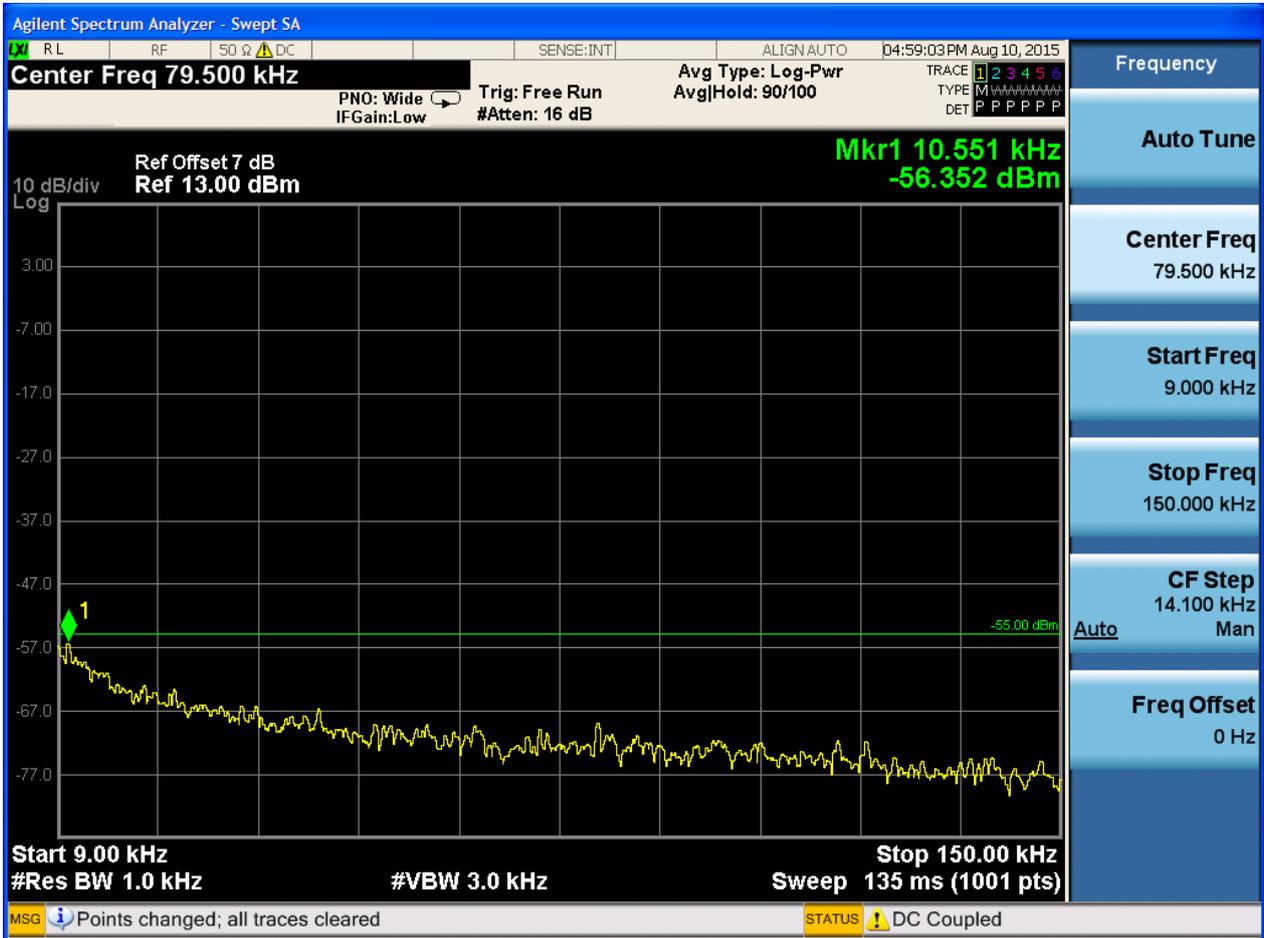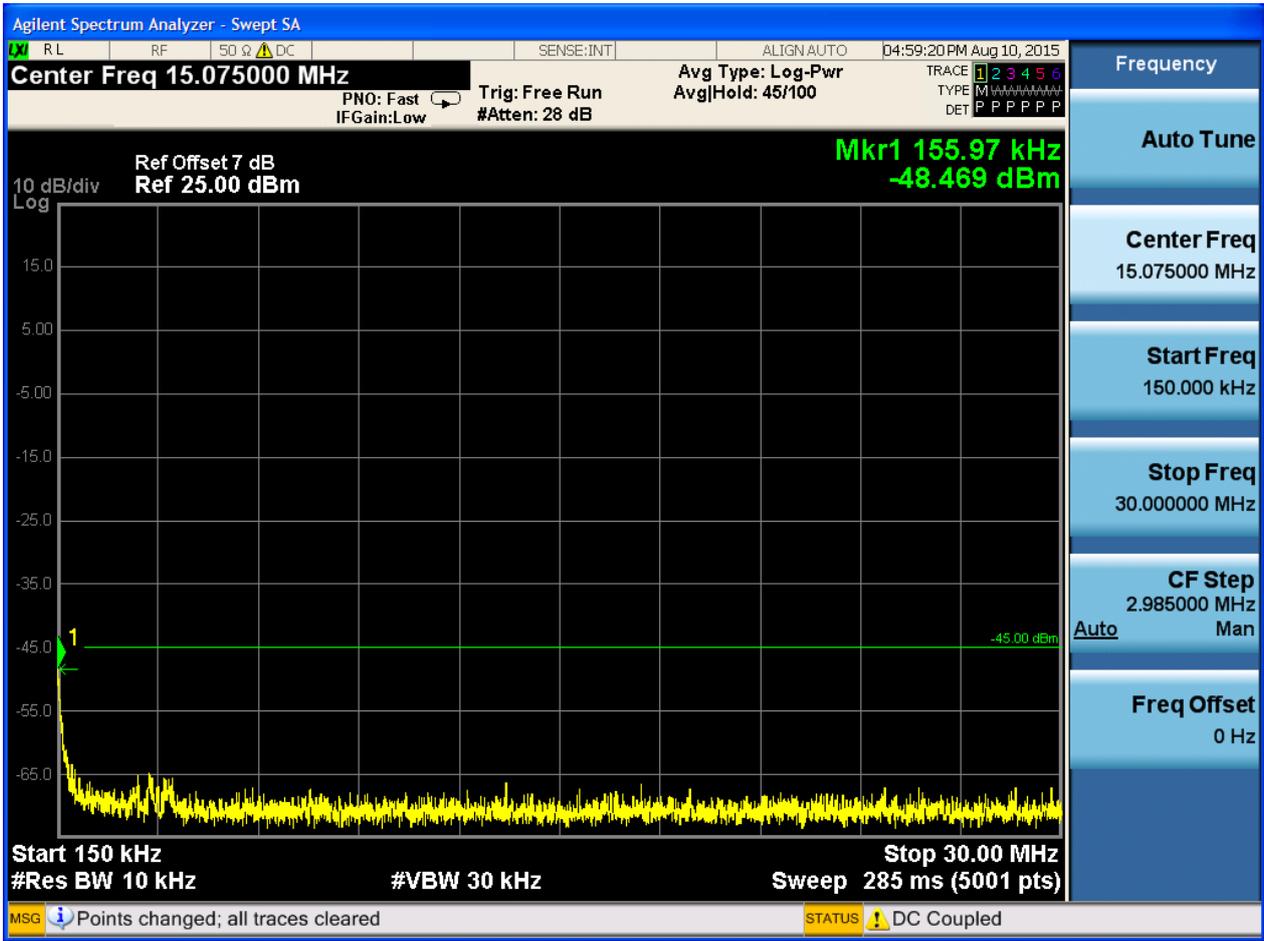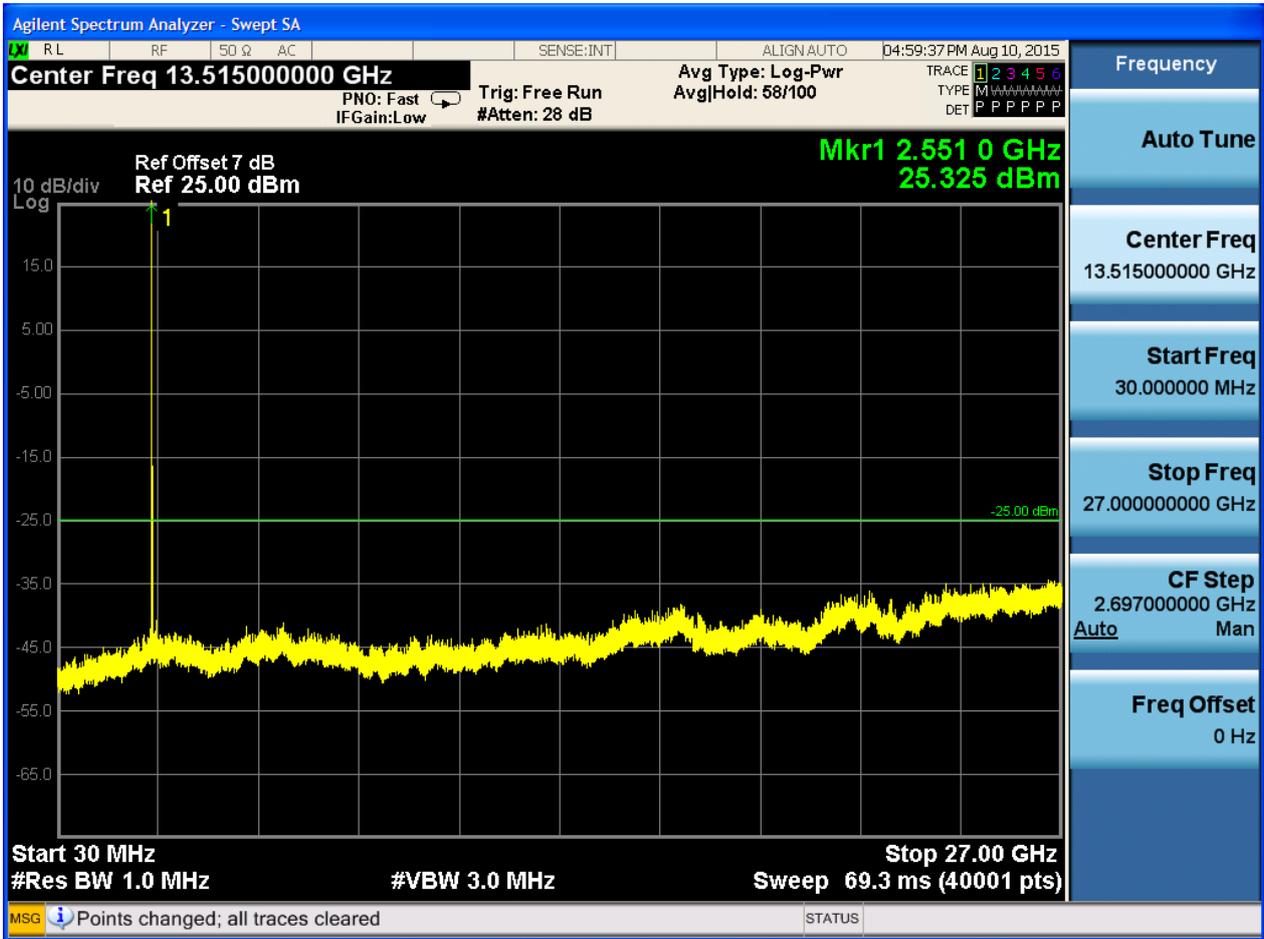
7Appendix_G: Field Strength of Spurious Radiation

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 = BAND7

7.1.1.1 Test Bandwidth = 5
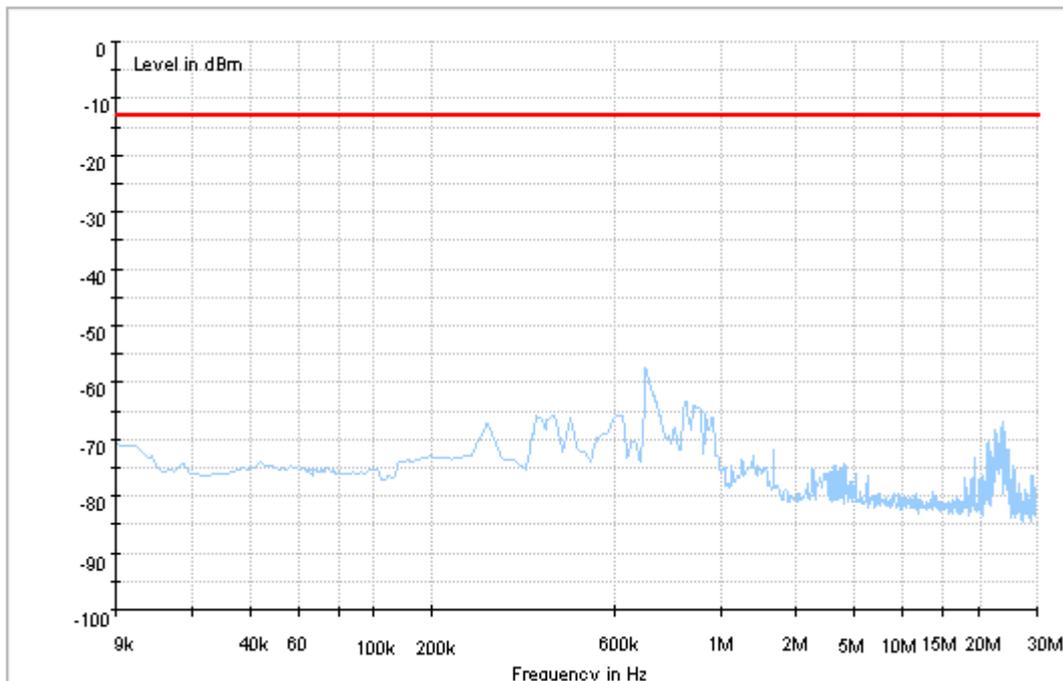
Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L
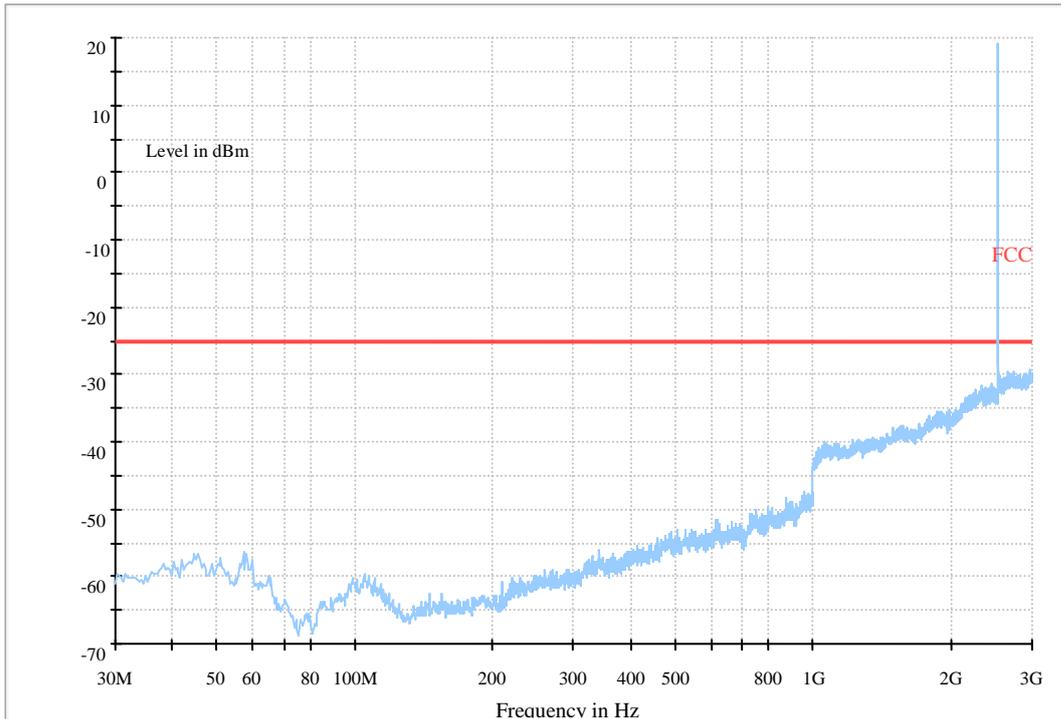
Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H
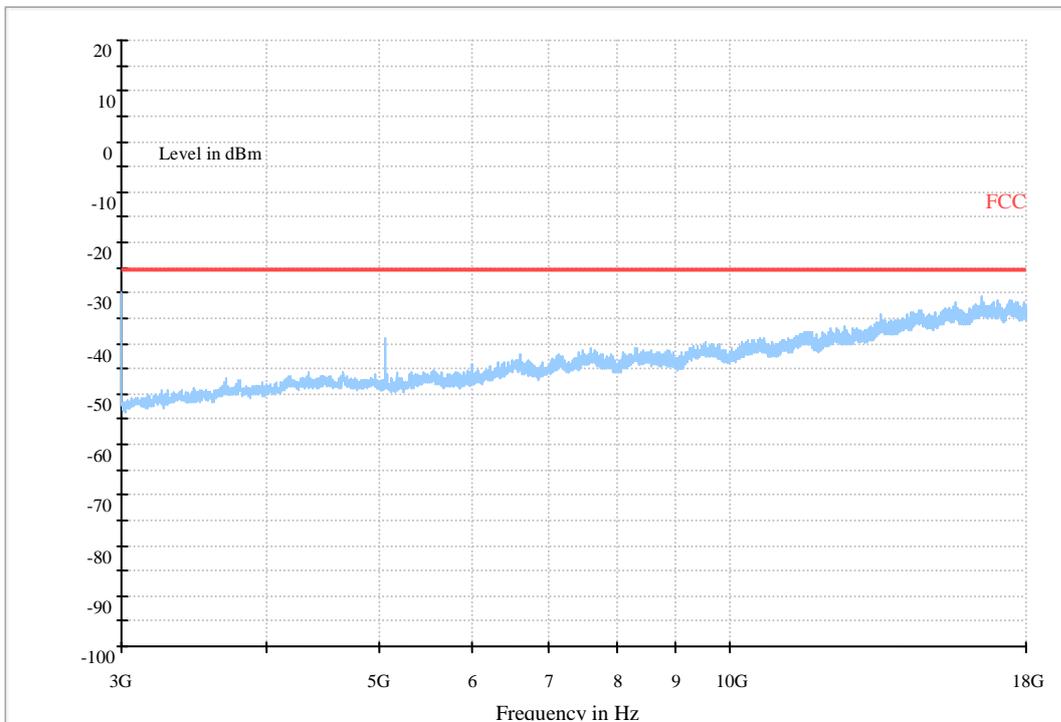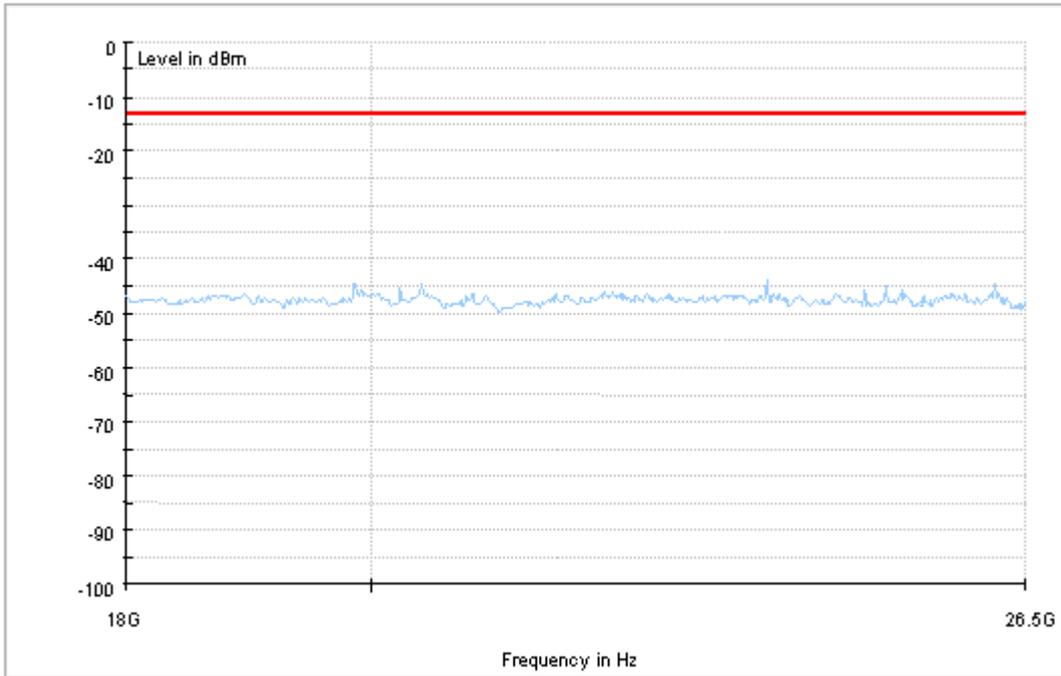
7.1.1.2 Test Bandwidth = 20
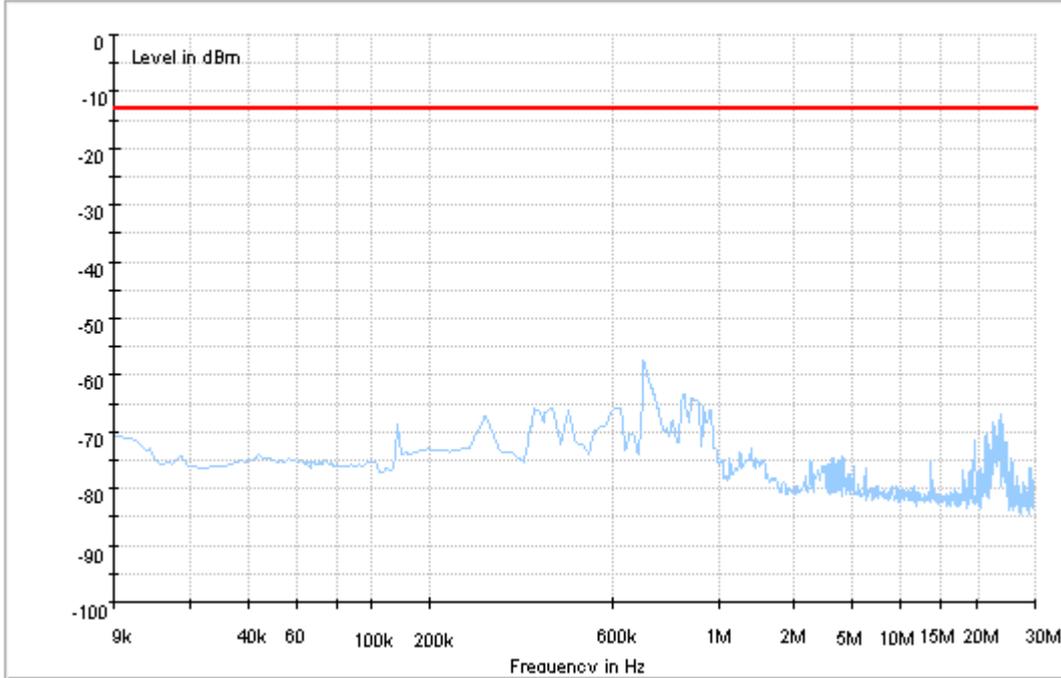
Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L
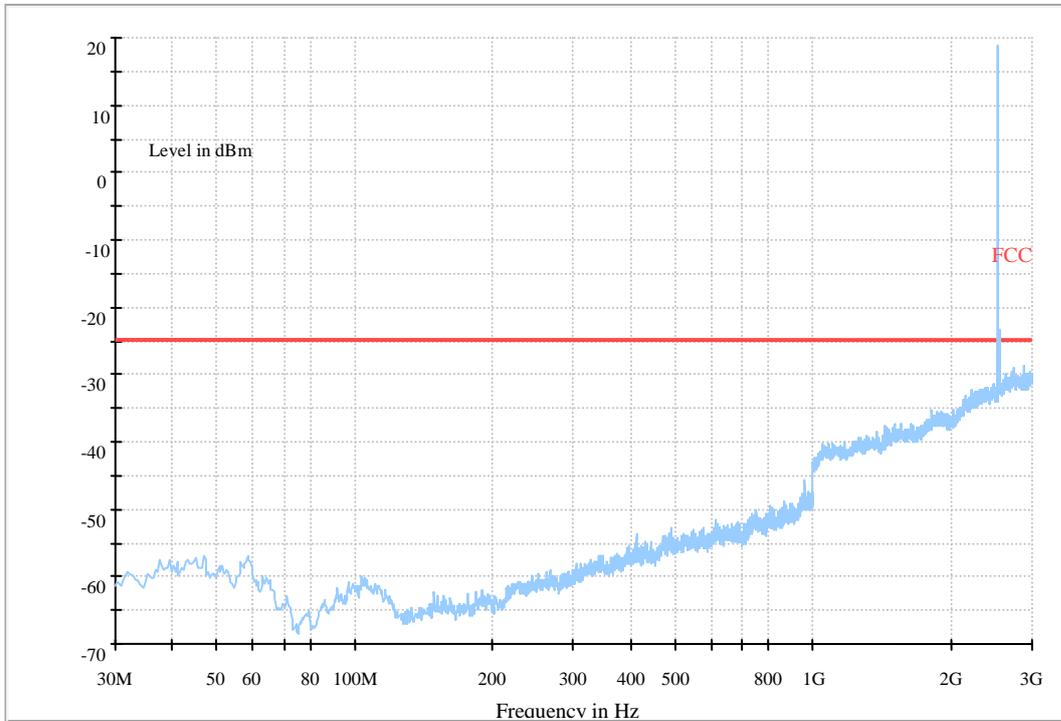
Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H
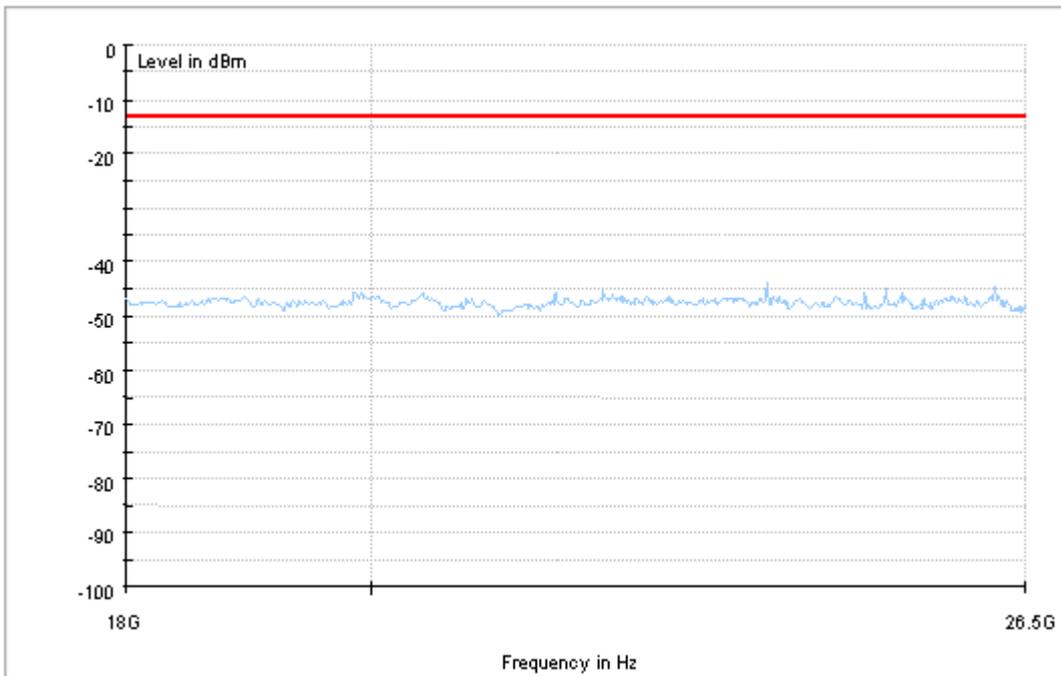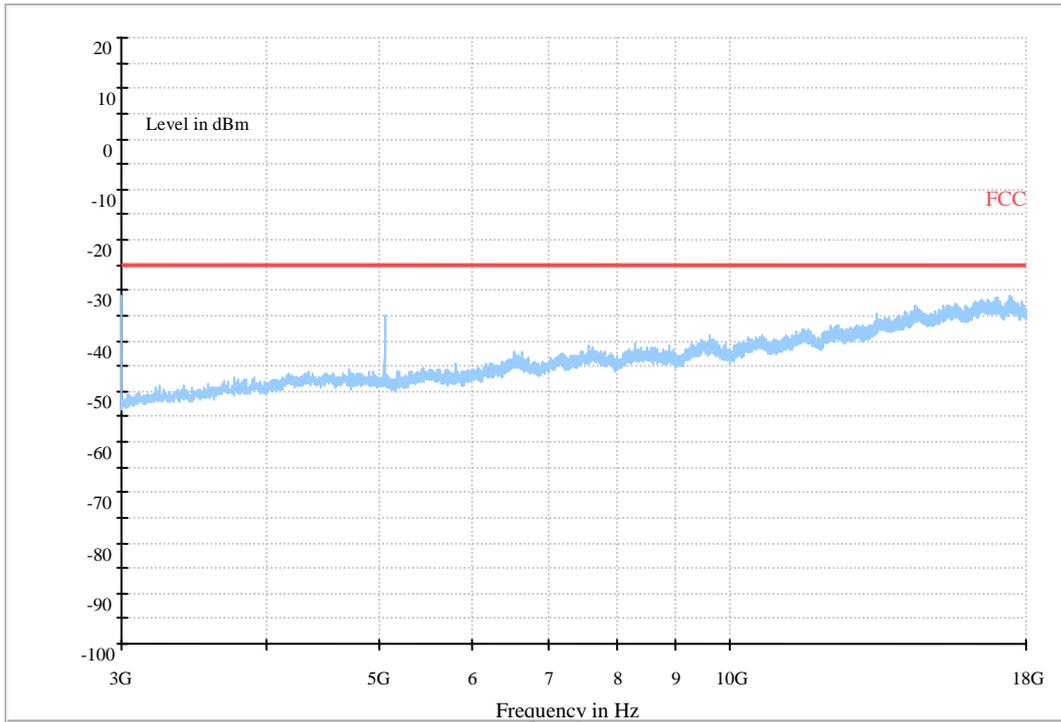
8Appendix_H: Frequency Stability

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
BAND7	LTE/TM1	5	LCH	TN	VL	3.16	0.00126	PASS
					VN	0.26	0.0001	PASS
					VH	-0.36	-0.00014	PASS
			MCH	TN	VL	1.86	0.00073	PASS
					VN	-6.9	-0.00272	PASS
					VH	-0.54	-0.00021	PASS
			HCH	TN	VL	-14.26	-0.00555	PASS
					VN	-24.79	-0.00966	PASS
					VH	-17.45	-0.0068	PASS
		10	LCH	TN	VL	-2.79	-0.00111	PASS
					VN	-2.35	-0.00094	PASS
					VH	-3.99	-0.00159	PASS
			MCH	TN	VL	-3.85	-0.00152	PASS
					VN	-1.44	-0.00057	PASS
					VH	-0.17	-0.00007	PASS
			HCH	TN	VL	-15.44	-0.00602	PASS
					VN	-20.44	-0.00797	PASS
					VH	-24.46	-0.00954	PASS
		15	LCH	TN	VL	-3.56	-0.00142	PASS
					VN	-6.85	-0.00273	PASS
					VH	-2.89	-0.00115	PASS
			MCH	TN	VL	-3.3	-0.0013	PASS
					VN	-3.58	-0.00141	PASS
					VH	-5.46	-0.00215	PASS
			HCH	TN	VL	0.57	0.00022	PASS
					VN	0.47	0.00018	PASS
					VH	1.27	0.0005	PASS
		20	LCH	TN	VL	1.7	0.00068	PASS
					VN	0.86	0.00034	PASS
					VH	2.86	0.00114	PASS
			MCH	TN	VL	-5.31	-0.00209	PASS
					VN	-2.99	-0.00118	PASS
					VH	-3.33	-0.00131	PASS
			HCH	TN	VL	38.97	0.01522	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	33.2	0.01297	PASS
					VH	26.54	0.01037	PASS
		5	LCH	TN	VL	0.9	0.00036	PASS
					VN	0.82	0.00033	PASS
					VH	2.4	0.00096	PASS
			MCH	TN	VL	-2	-0.00079	PASS
					VN	-4.84	-0.00191	PASS
					VH	-0.87	-0.00034	PASS
			HCH	TN	VL	-23.17	-0.00902	PASS
					VN	-26.22	-0.01021	PASS
					VH	-25.59	-0.00997	PASS
		10	LCH	TN	VL	-2.83	-0.00113	PASS
					VN	-4.55	-0.00182	PASS
					VH	0.17	0.00007	PASS
			MCH	TN	VL	-1.83	-0.00072	PASS
					VN	-3.52	-0.00139	PASS
					VH	-1.24	-0.00049	PASS
	LTE/TM2		HCH	TN	VL	-189.09	-0.07372	PASS
					VN	-192.56	-0.07507	PASS
					VH	-185.34	-0.07226	PASS
		15	LCH	TN	VL	1	0.0004	PASS
					VN	-0.36	-0.00014	PASS
					VH	-0.96	-0.00038	PASS
			MCH	TN	VL	-1.69	-0.00067	PASS
					VN	-0.01	0	PASS
					VH	-3.1	-0.00122	PASS
			HCH	TN	VL	-0.21	-0.00008	PASS
					VN	0.16	0.00006	PASS
					VH	-0.53	-0.00021	PASS
		20	LCH	TN	VL	-0.93	-0.00037	PASS
					VN	-1.75	-0.0007	PASS
					VH	1.66	0.00066	PASS
			MCH	TN	VL	-4.42	-0.00174	PASS
					VN	-1.97	-0.00078	PASS
					VH	-1.14	-0.00045	PASS
			HCH	TN	VL	123.83	0.04837	PASS
					VN	105.46	0.0412	PASS
					VH	96.96	0.03787	PASS

8.1.2Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND7	LTE/TM1	5	LCH	VN	-30	3.16	0.00126	PASS
					-20	2.8	0.00112	PASS
					-10	2.57	0.00103	PASS
					0	1.39	0.00056	PASS
					10	1.7	0.00068	PASS
					20	0.56	0.00022	PASS
					30	0.57	0.00023	PASS
					40	1.93	0.00077	PASS
					50	1.04	0.00042	PASS
			MCH	VN	-30	-2.95	-0.00116	PASS
					-20	-1.79	-0.00071	PASS
					-10	-2.06	-0.00081	PASS
					0	-3.49	-0.00138	PASS
					10	-0.51	-0.0002	PASS
					20	-4.65	-0.00183	PASS
					30	-3.89	-0.00153	PASS
					40	-5.09	-0.00201	PASS
					50	-3.52	-0.00139	PASS
			HCH	VN	-30	-1.56	-0.00061	PASS
					-20	2.13	0.00083	PASS
					-10	-0.47	-0.00018	PASS
					0	1.89	0.00074	PASS
					10	0	0	PASS
					20	-1.02	-0.0004	PASS
					30	1.06	0.00041	PASS
					40	1.83	0.00071	PASS
					50	1.1	0.00043	PASS
		10	LCH	VN	-30	-3.49	-0.00139	PASS
					-20	-1.96	-0.00078	PASS
					-10	-1.72	-0.00069	PASS
					0	-3.43	-0.00137	PASS
					10	-2.83	-0.00113	PASS
					20	-3.89	-0.00155	PASS
					30	-1.79	-0.00071	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-2.52	-0.00101	PASS
					50	-4.03	-0.00161	PASS
			MCH	VN	-30	-2.53	-0.001	PASS
					-20	-2.95	-0.00116	PASS
					-10	-2.27	-0.0009	PASS
					0	-4.59	-0.00181	PASS
					10	-3.53	-0.00139	PASS
					20	-1.6	-0.00063	PASS
					30	-2.95	-0.00116	PASS
					40	-2.37	-0.00093	PASS
					50	0.21	0.00008	PASS
			HCH	VN	-30	-2.19	-0.00085	PASS
					-20	-1.29	-0.0005	PASS
					-10	-2.49	-0.00097	PASS
					0	-1.69	-0.00066	PASS
					10	-2.68	-0.00104	PASS
					20	-1.86	-0.00073	PASS
					30	-1.03	-0.0004	PASS
					40	-4.85	-0.00189	PASS
					50	-1.93	-0.00075	PASS
			LCH	VN	-30	39.35	0.01569	PASS
					-20	26.85	0.01071	PASS
					-10	11.62	0.00463	PASS
					0	-0.86	-0.00034	PASS
					10	-13.92	-0.00555	PASS
					20	-25.43	-0.01014	PASS
					30	-32.14	-0.01282	PASS
					40	-38.14	-0.01521	PASS
					50	-37.04	-0.01477	PASS
		15	MCH	VN	-30	-2.57	-0.00101	PASS
					-20	-3.73	-0.00147	PASS
					-10	-1.82	-0.00072	PASS
					0	-1.75	-0.00069	PASS
					10	-3.73	-0.00147	PASS
					20	-2.46	-0.00097	PASS
					30	-2.23	-0.00088	PASS
					40	-4.11	-0.00162	PASS
					50	-4.68	-0.00185	PASS
			HCH	VN	-30	5.04	0.00197	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	3.52	0.00137	PASS
					-10	3.02	0.00118	PASS
					0	1.99	0.00078	PASS
					10	3.3	0.00129	PASS
					20	3.58	0.0014	PASS
					30	2.26	0.00088	PASS
					40	3.28	0.00128	PASS
					50	1.9	0.00074	PASS
			LCH	VN	-30	0.29	0.00012	PASS
					-20	2.25	0.0009	PASS
					-10	3.69	0.00147	PASS
					0	3.13	0.00125	PASS
					10	3.4	0.00135	PASS
					20	3.98	0.00159	PASS
					30	6.17	0.00246	PASS
					40	3.56	0.00142	PASS
					50	3.03	0.00121	PASS
		20	MCH	VN	-30	-3.5	-0.00138	PASS
					-20	-1.89	-0.00075	PASS
					-10	-1.87	-0.00074	PASS
					0	-2.2	-0.00087	PASS
					10	-2.68	-0.00106	PASS
					20	-1.26	-0.0005	PASS
					30	-1.37	-0.00054	PASS
					40	-4.69	-0.00185	PASS
					50	-3.08	-0.00121	PASS
			HCH	VN	-30	1.24	0.00048	PASS
					-20	0.16	0.00006	PASS
					-10	0.44	0.00017	PASS
					0	-0.49	-0.00019	PASS
					10	0.29	0.00011	PASS
					20	-1.2	-0.00047	PASS
					30	-0.86	-0.00034	PASS
					40	-0.01	0	PASS
					50	0.5	0.0002	PASS
	LTE/TM2	5	LCH	VN	-30	2.19	0.00088	PASS
					-20	3.49	0.00139	PASS
					-10	3.56	0.00142	PASS
					0	0.57	0.00023	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	2.29	0.00092	PASS
					20	4.66	0.00186	PASS
					30	2.75	0.0011	PASS
					40	2.37	0.00095	PASS
					50	4.82	0.00193	PASS
			MCH	VN	-30	-4.95	-0.00195	PASS
					-20	-0.82	-0.00032	PASS
					-10	-2.13	-0.00084	PASS
					0	-4.36	-0.00172	PASS
					10	-2.86	-0.00113	PASS
					20	-3.99	-0.00157	PASS
					30	-2.78	-0.0011	PASS
					40	-2.76	-0.00109	PASS
					50	-2.92	-0.00115	PASS
			HCH	VN	-30	-0.66	-0.00026	PASS
					-20	0.5	0.00019	PASS
					-10	1.97	0.00077	PASS
					0	-1.16	-0.00045	PASS
					10	1.07	0.00042	PASS
					20	2.3	0.0009	PASS
					30	2.4	0.00093	PASS
					40	0.6	0.00023	PASS
					50	1.47	0.00057	PASS
		10	LCH	VN	-30	-3.1	-0.00124	PASS
					-20	-2.45	-0.00098	PASS
					-10	-5.16	-0.00206	PASS
					0	-3.09	-0.00123	PASS
					10	-2.96	-0.00118	PASS
					20	-4.36	-0.00174	PASS
					30	-3.6	-0.00144	PASS
					40	-3.81	-0.00152	PASS
					50	-3.49	-0.00139	PASS
			MCH	VN	-30	-2.68	-0.00106	PASS
					-20	-2.36	-0.00093	PASS
					-10	-4.15	-0.00164	PASS
					0	-1.77	-0.0007	PASS
					10	-2.92	-0.00115	PASS
					20	-3.29	-0.0013	PASS
					30	-4.33	-0.00171	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-4.11	-0.00162	PASS
					50	-0.37	-0.00015	PASS
			HCH	VN	-30	-2.19	-0.00085	PASS
					-20	-3.48	-0.00136	PASS
					-10	-4.21	-0.00164	PASS
					0	-4.13	-0.00161	PASS
					10	-4.78	-0.00186	PASS
					20	-4.82	-0.00188	PASS
					30	-3.88	-0.00151	PASS
					40	-3.32	-0.00129	PASS
					50	-2.73	-0.00106	PASS
			LCH	VN	-30	78.36	0.03125	PASS
					-20	75.14	0.02997	PASS
					-10	63.63	0.02538	PASS
					0	55.23	0.02203	PASS
					10	42.97	0.01714	PASS
					20	32.04	0.01278	PASS
					30	21.11	0.00842	PASS
					40	12.99	0.00518	PASS
					50	2.73	0.00109	PASS
			MCH	VN	-30	-2.6	-0.00103	PASS
					-20	-2.53	-0.001	PASS
					-10	-2.65	-0.00105	PASS
					0	-2.33	-0.00092	PASS
		15			10	-2.22	-0.00088	PASS
					20	-2.76	-0.00109	PASS
					30	-3.98	-0.00157	PASS
					40	-1.56	-0.00062	PASS
					50	-3.62	-0.00143	PASS
			HCH	VN	-30	1.13	0.00044	PASS
					-20	2.7	0.00105	PASS
					-10	2.85	0.00111	PASS
					0	2.86	0.00112	PASS
					10	0.19	0.00007	PASS
					20	1.13	0.00044	PASS
					30	2.55	0.001	PASS
					40	2.89	0.00113	PASS
					50	2.99	0.00117	PASS
		20	LCH	VN	-30	1.54	0.00061	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	1.4	0.00056	PASS
					-10	4.39	0.00175	PASS
					0	1.75	0.0007	PASS
					10	2.6	0.00104	PASS
					20	3.05	0.00122	PASS
					30	0.83	0.00033	PASS
					40	3.52	0.0014	PASS
					50	1.6	0.00064	PASS
			MCH	VN	-30	-4.88	-0.00193	PASS
					-20	-4.25	-0.00168	PASS
					-10	-3.38	-0.00133	PASS
					0	-1.6	-0.00063	PASS
					10	-3.28	-0.00129	PASS
					20	-2.07	-0.00082	PASS
					30	-0.92	-0.00036	PASS
					40	-3.16	-0.00125	PASS
					50	-4.69	-0.00185	PASS
			HCH	VN	-30	2.02	0.00079	PASS
					-20	0.73	0.00029	PASS
					-10	3.45	0.00135	PASS
					0	1.97	0.00077	PASS
					10	1.39	0.00054	PASS
					20	-0.21	-0.00008	PASS
					30	3.71	0.00145	PASS
					40	2.15	0.00084	PASS
					50	1.34	0.00052	PASS

END