



5.1.1.2.3.1.3 Test RB = RB36#18





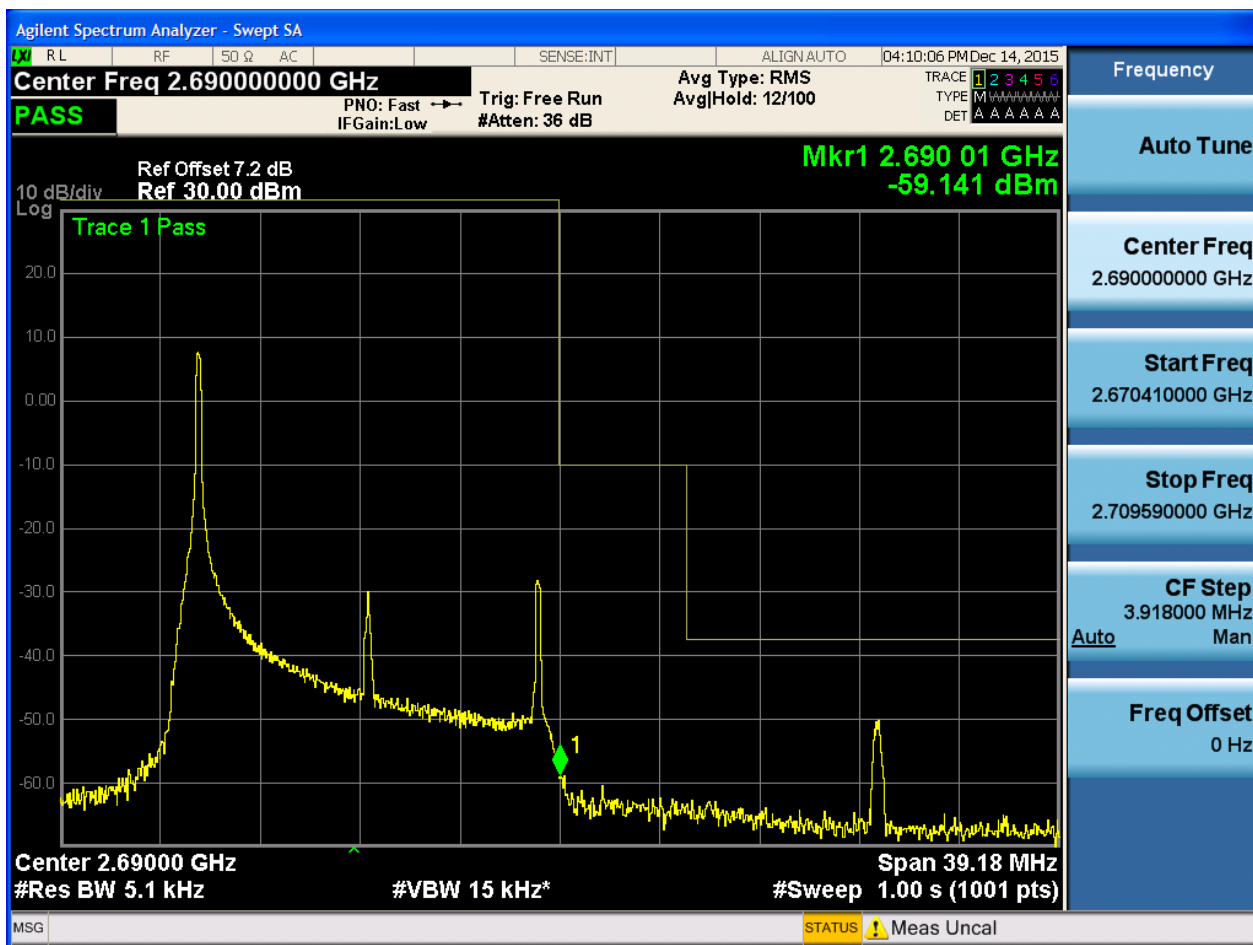
5.1.1.2.3.1.4 Test RB = RB75#0





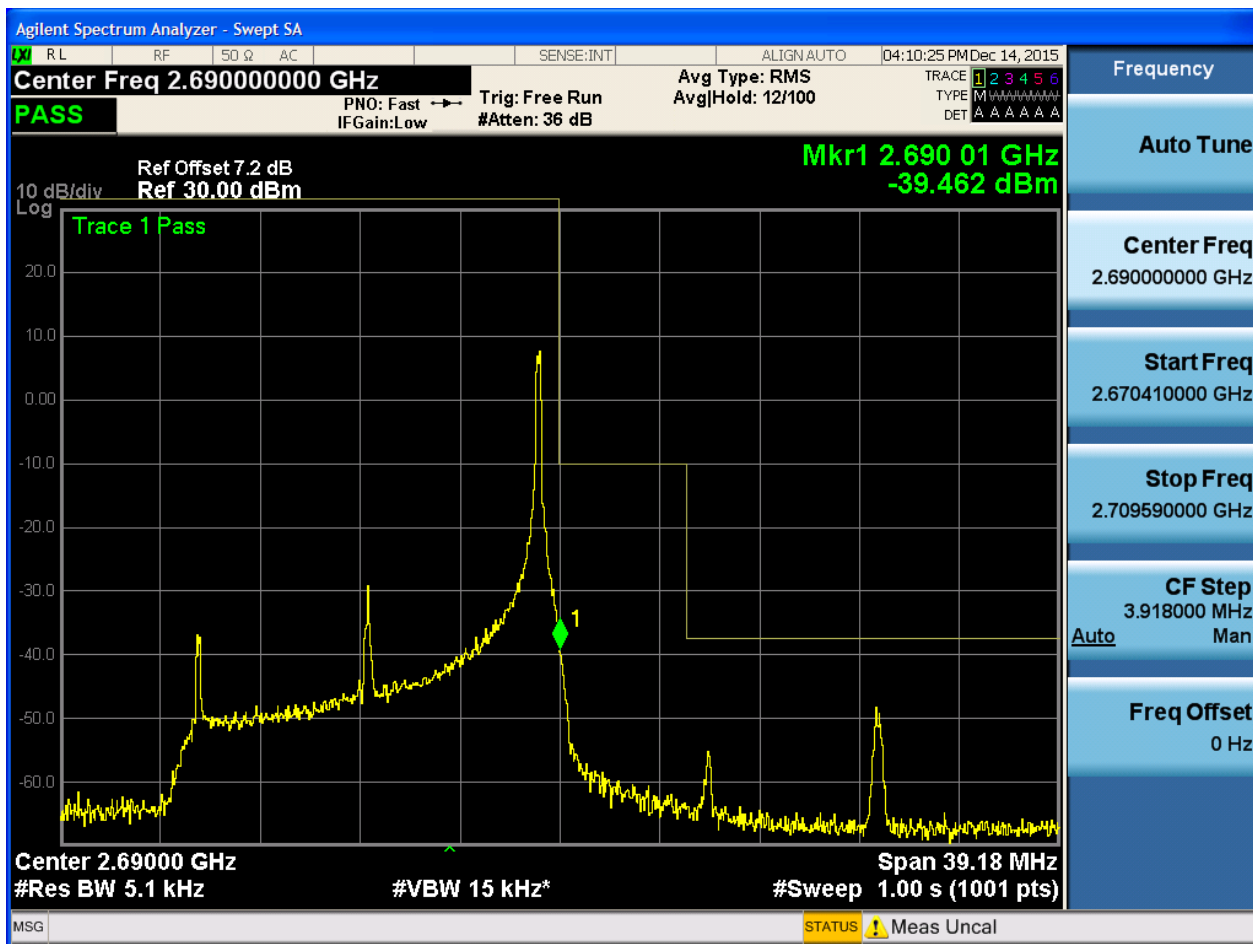
5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0





5.1.1.2.3.2.2 Test RB = RB1#74





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.69000000 GHz
PASS

PNO: Fast → Trig: Free Run
IFGain: Low #Atten: 36 dB

Avg Type: RMS
Avg/Hold: 10/100

Ref Offset 7.2 dB
Ref 30.00 dBm

Mkr1 2.690 01 GHz
-30.663 dBm

Trace 1 Pass

The figure displays a spectrum analyzer screen with a grid background. A yellow trace shows a signal centered at 2.69000000 GHz. The signal has a flat top between approximately 2.685 GHz and 2.695 GHz, followed by a roll-off. A marker labeled '1' is placed on the roll-off curve at approximately 2.69001 GHz and -30.663 dBm. The y-axis is labeled 'Log' and ranges from -60.0 to 20.0 dB/div. The x-axis represents frequency.

Center 2.69000 GHz
#Res BW 130 kHz
#VBW 390 kHz*

Span 39.18 MHz
#Sweep 1.00 s (1001 pts)

MSG Alignment Completed STATUS



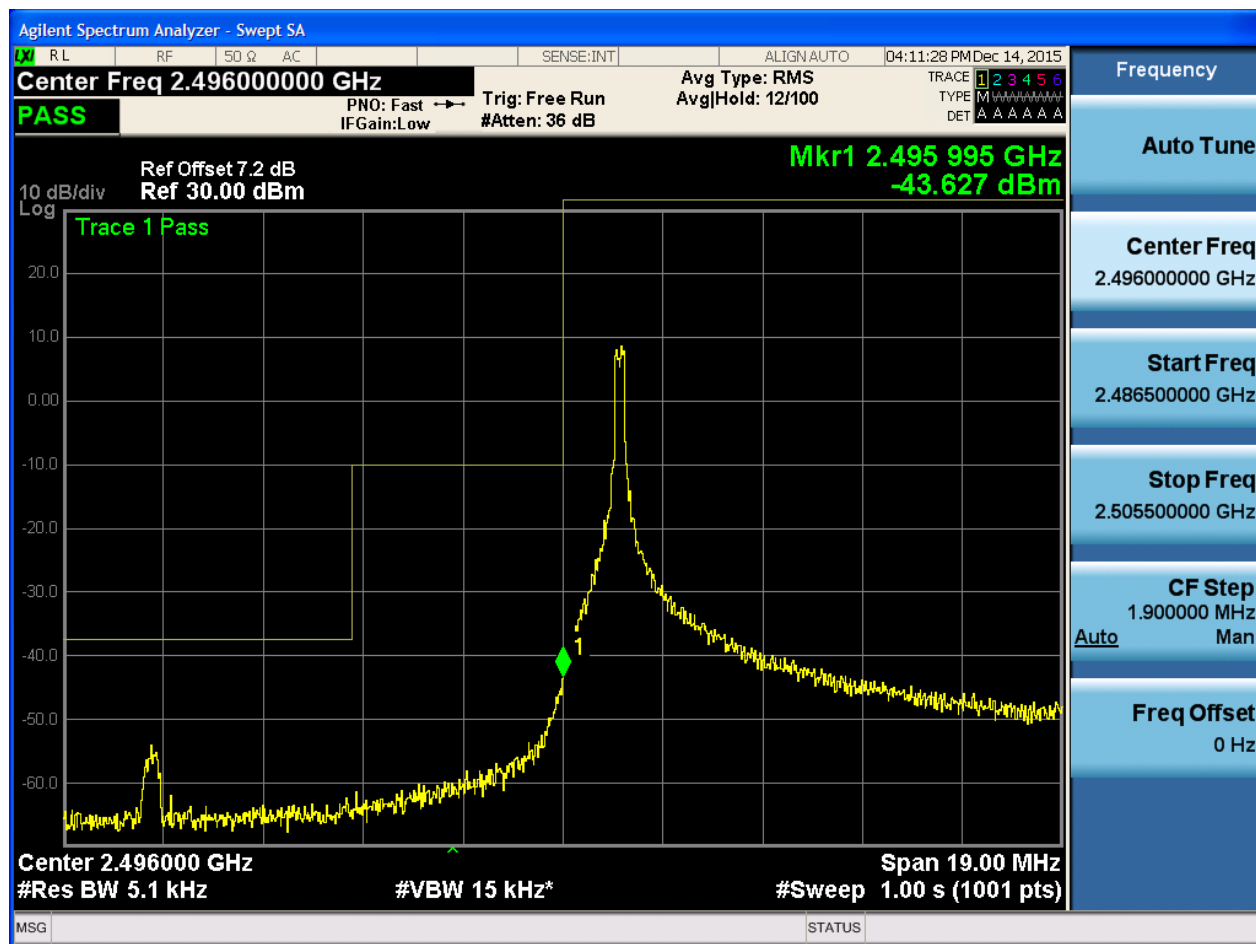
5.1.1.2.3.2.4 Test RB = RB75#0



5.1.1.2.4 Test Bandwidth = 20

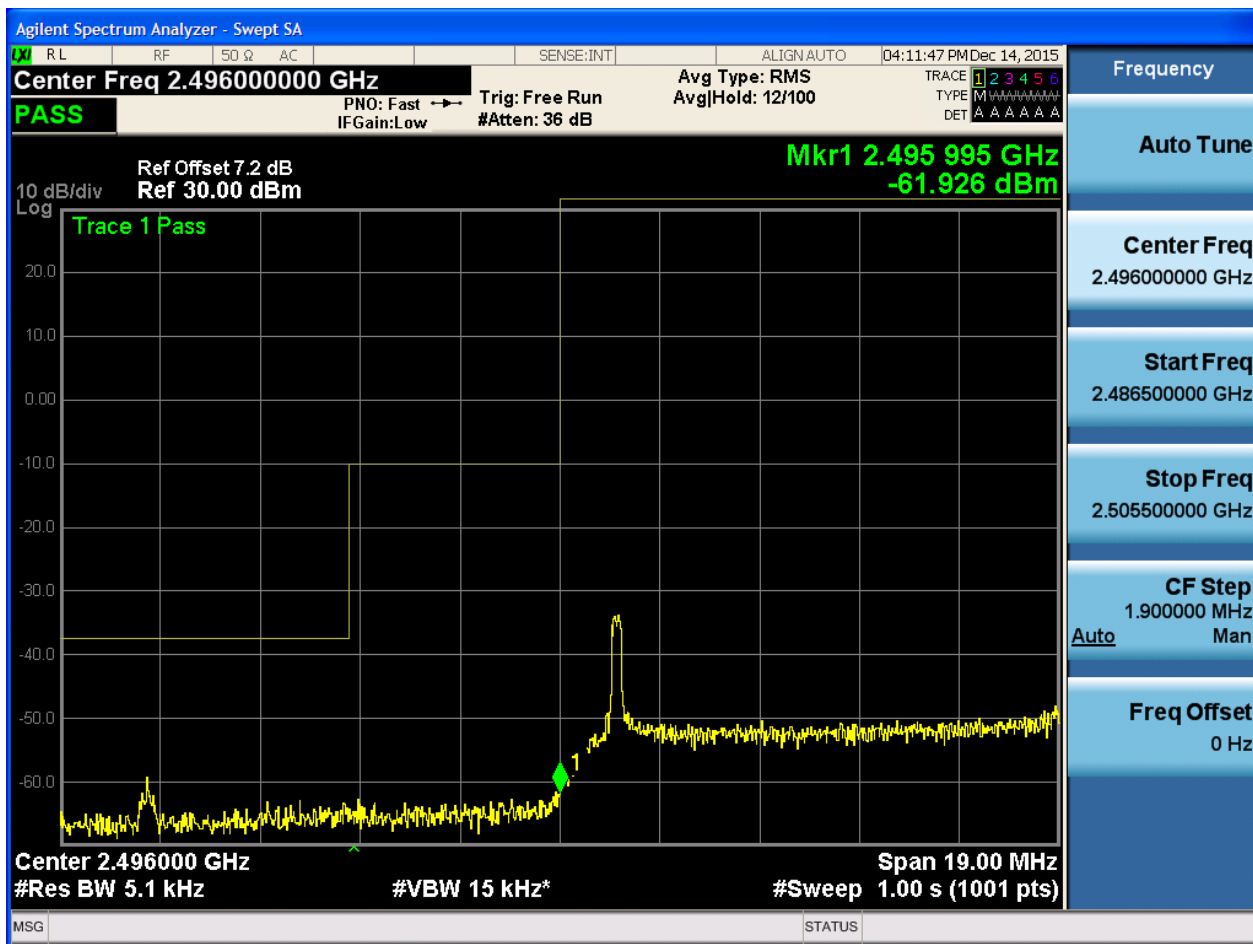
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#99





5.1.1.2.4.1.3 Test RB = RB50#25





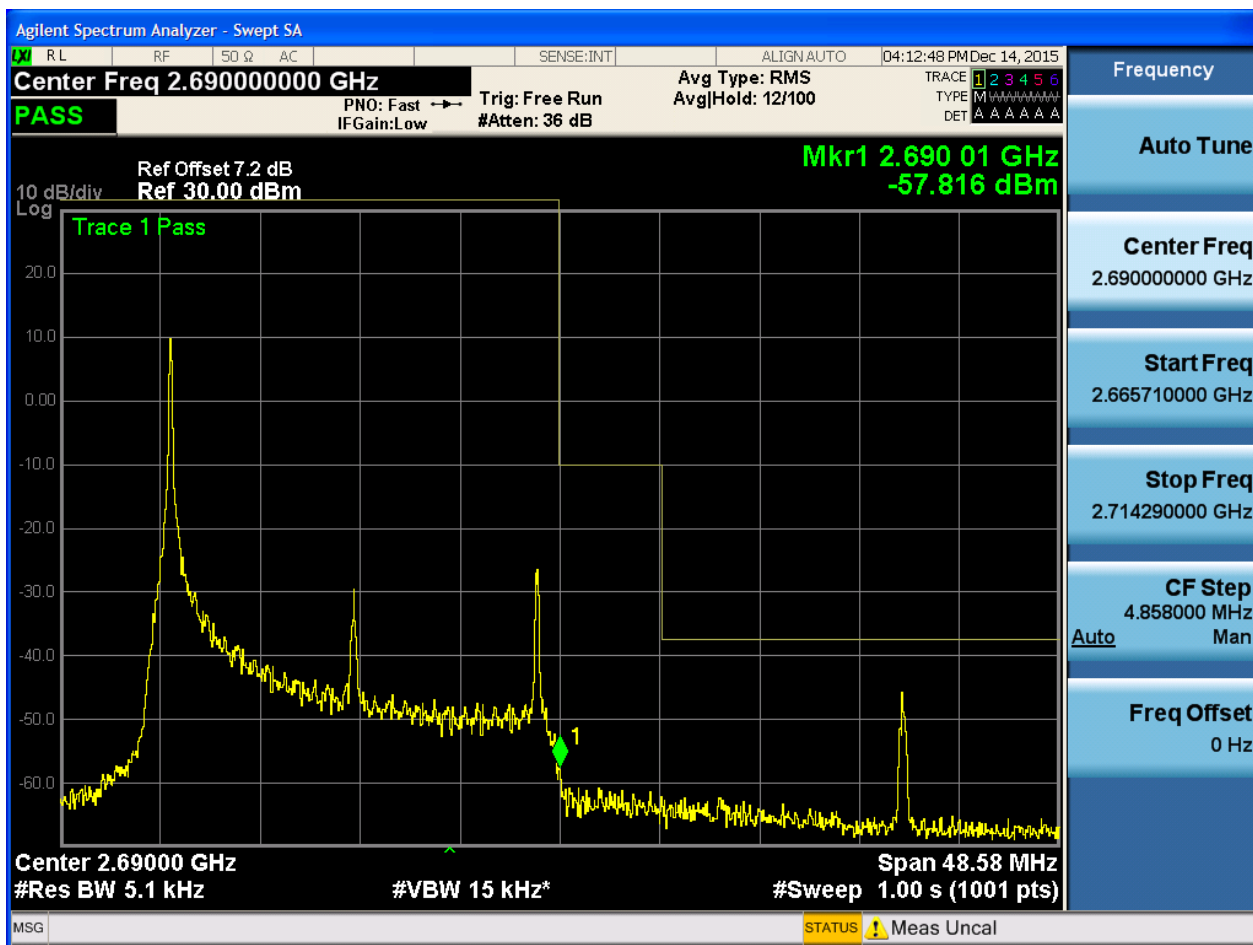
5.1.1.2.4.1.4 Test RB = RB100#0





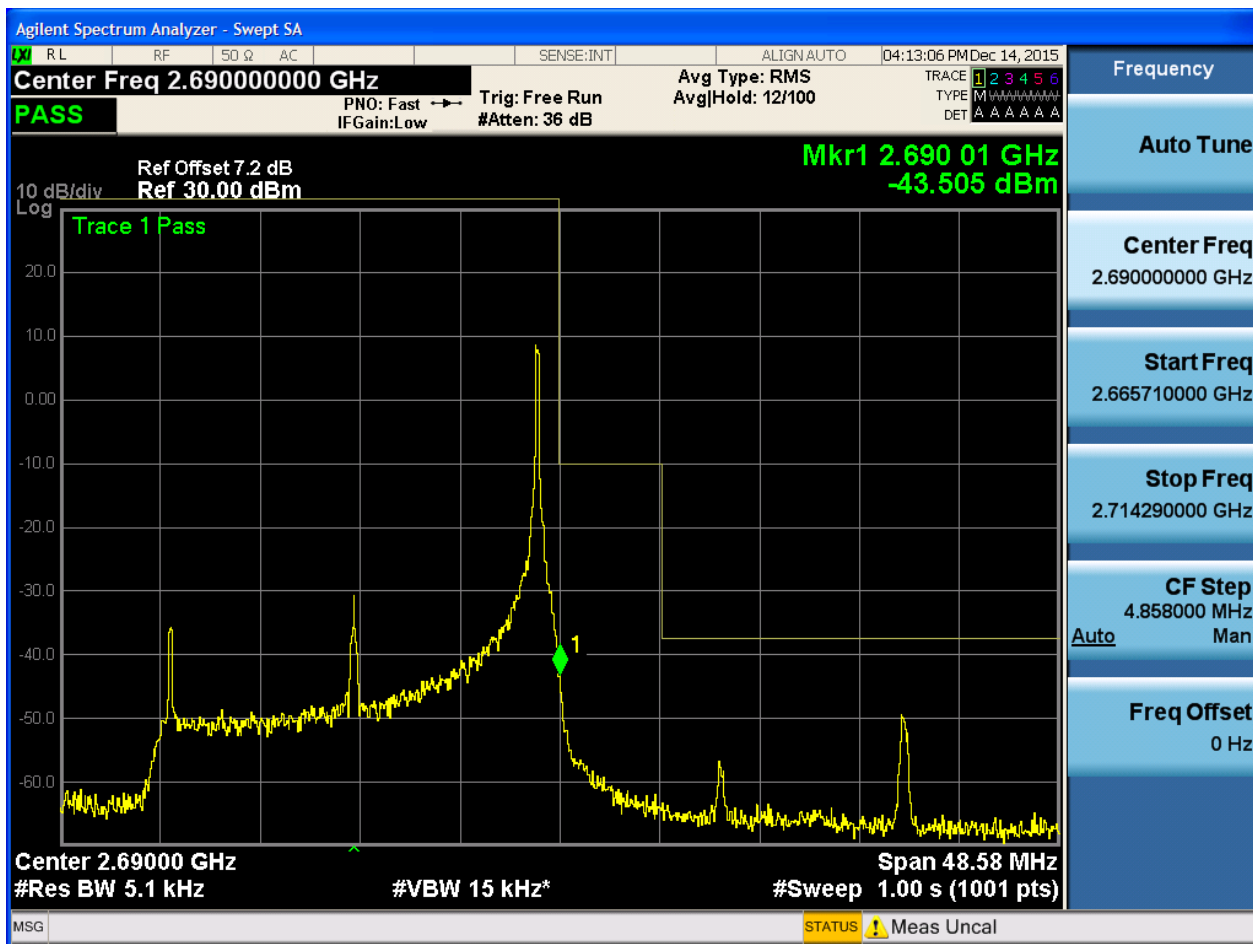
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0



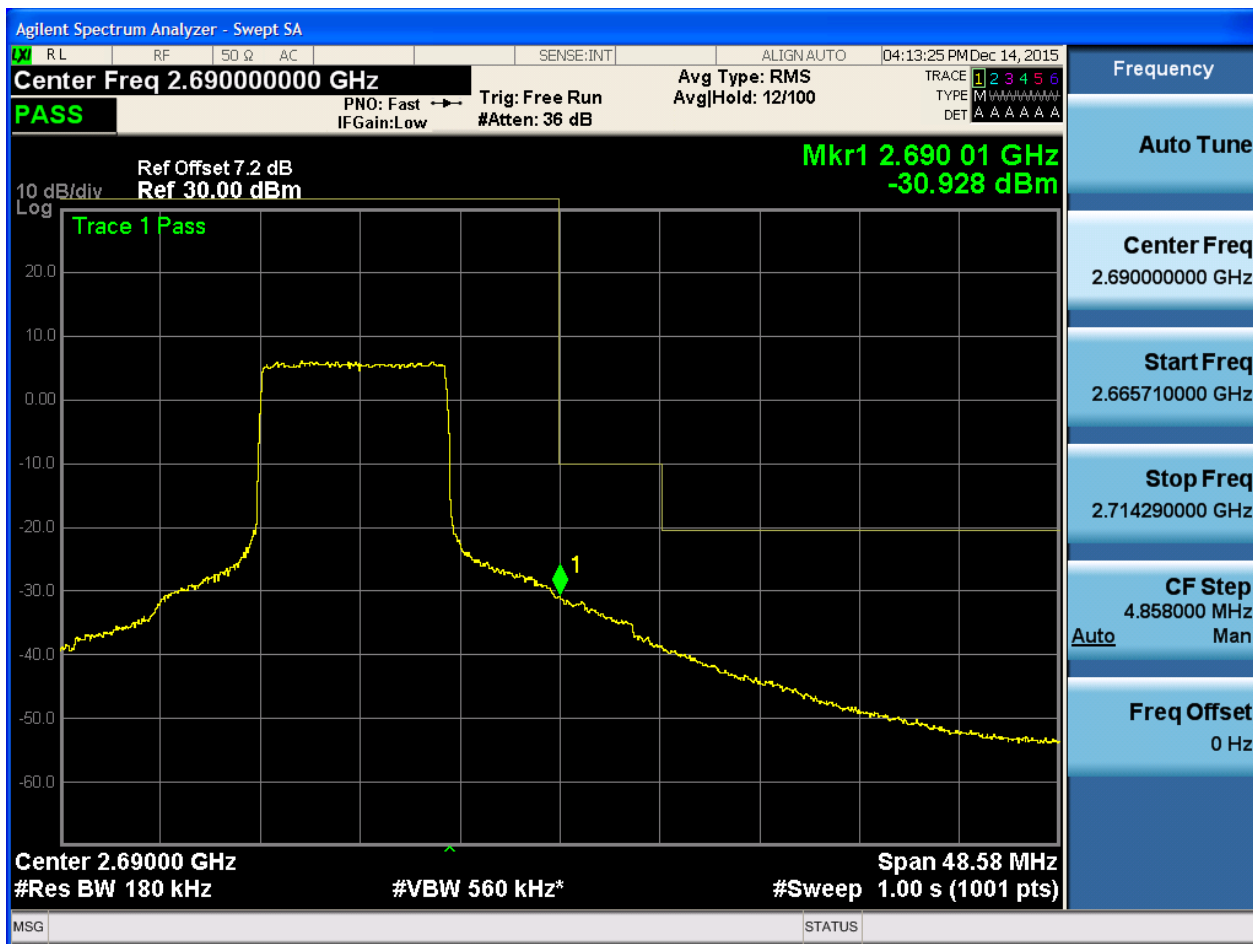


5.1.1.2.4.2.2 Test RB = RB1#99





5.1.1.2.4.2.3 Test RB = RB50#25





5.1.1.2.4.2.4 Test RB = RB100#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

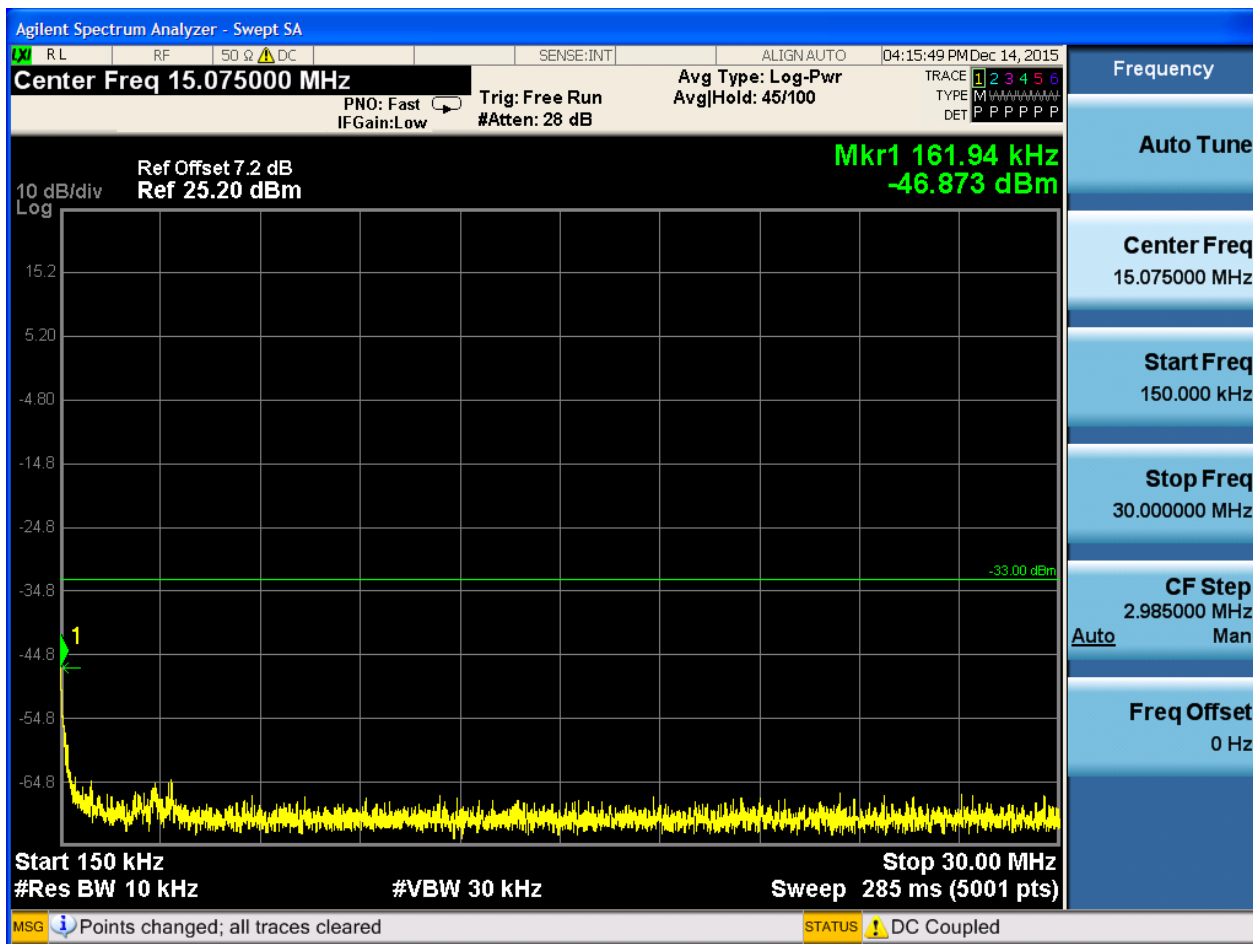
6.1.1 Test Band = BAND41

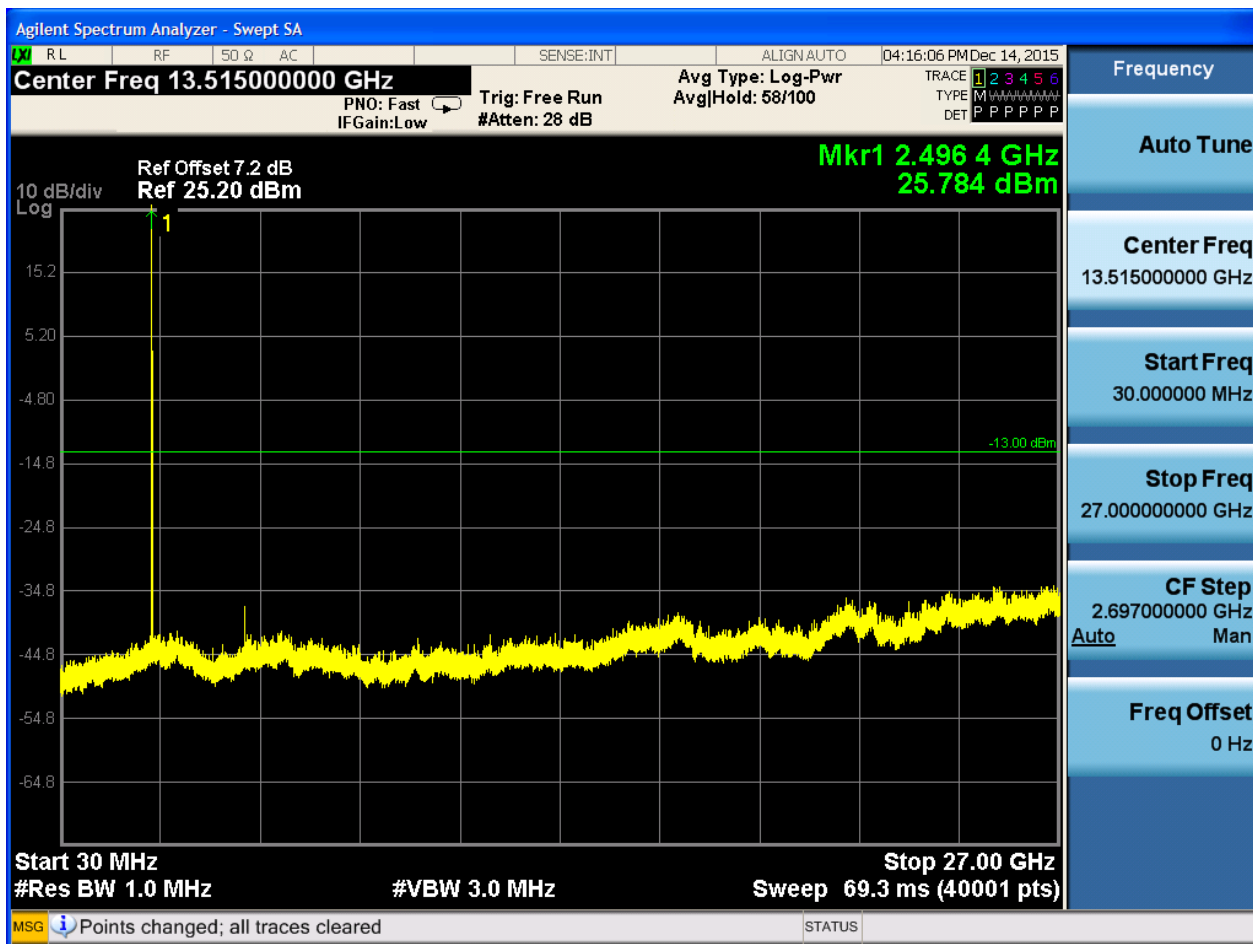
6.1.1.1 Test Mode = LTE/TM1

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

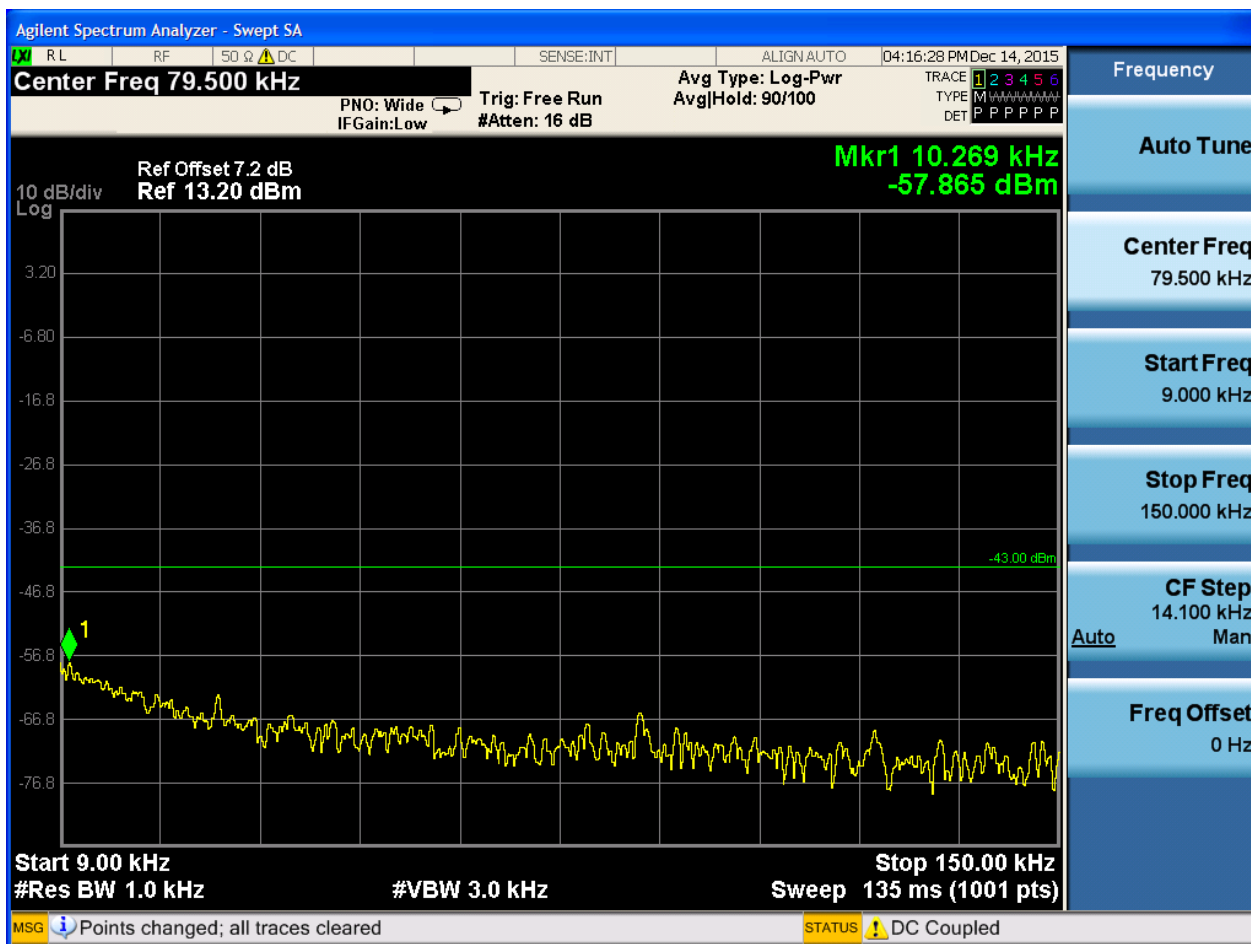


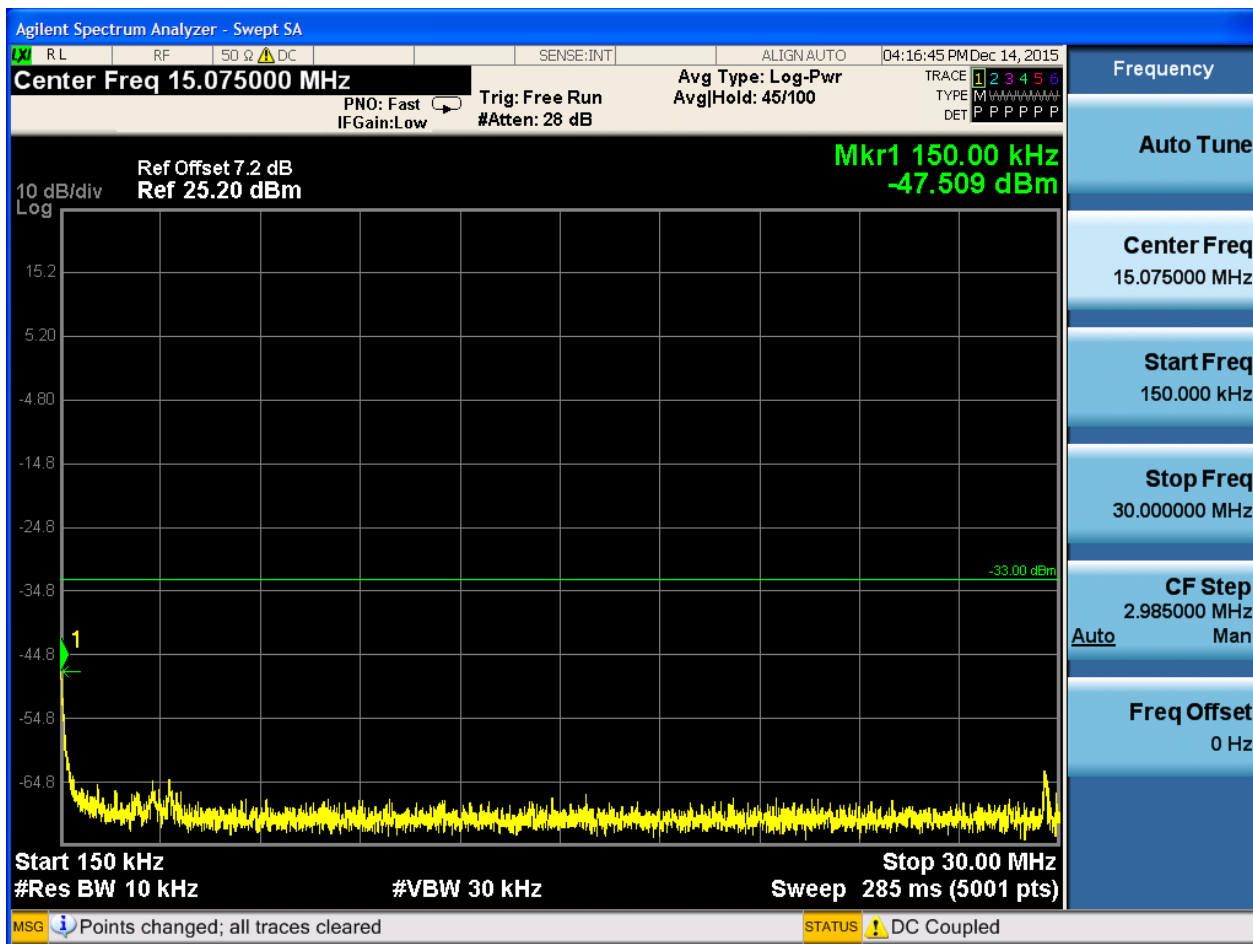


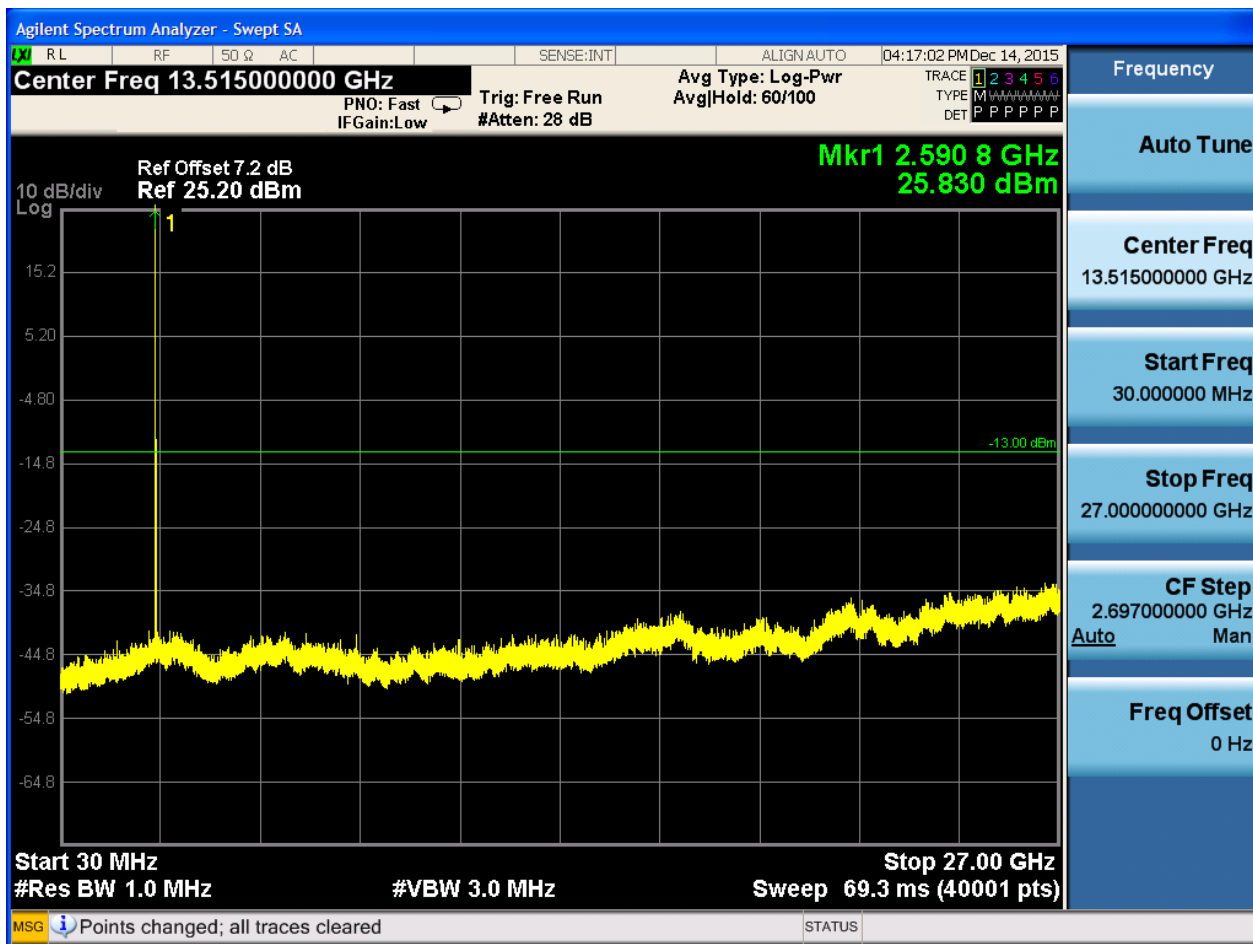


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



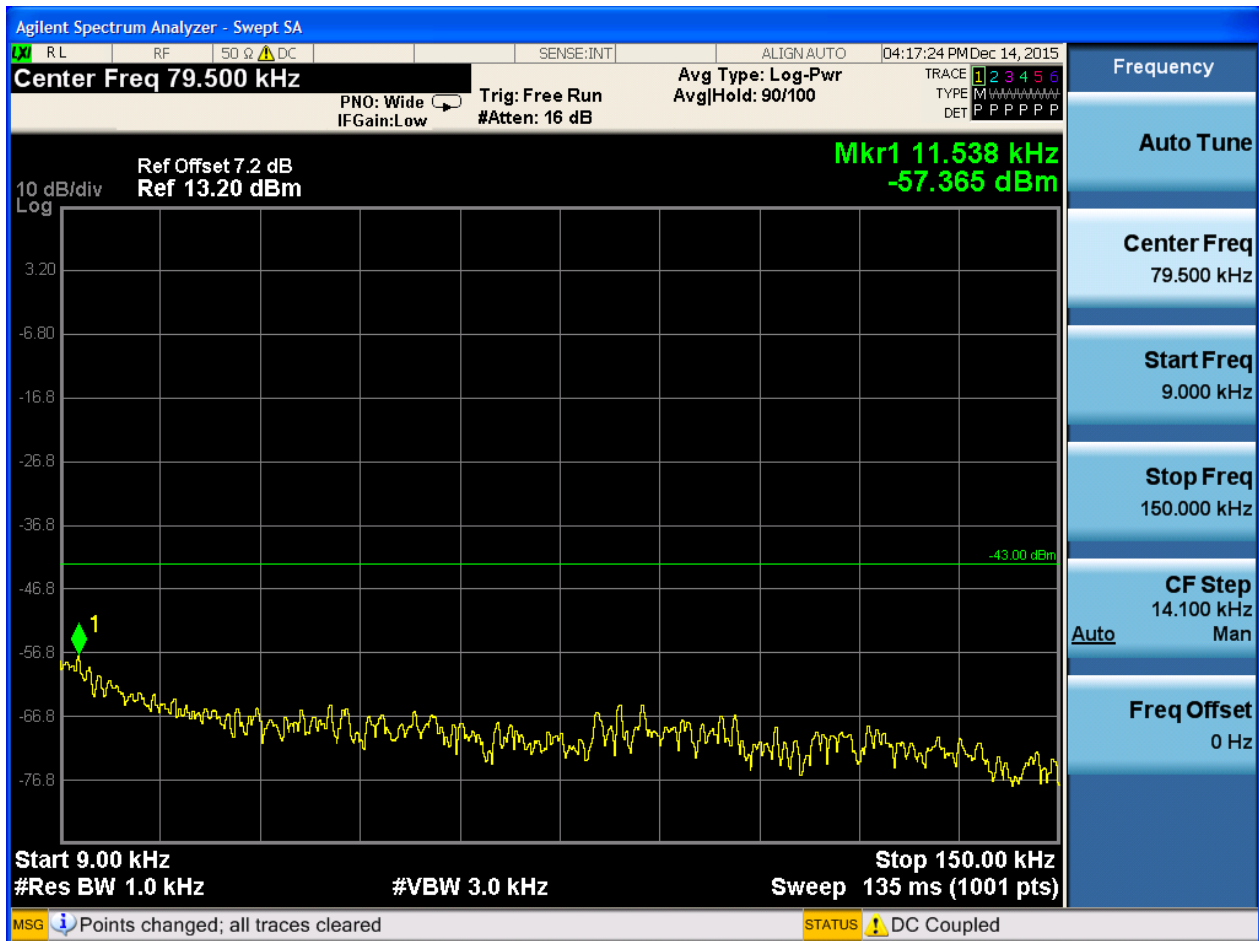


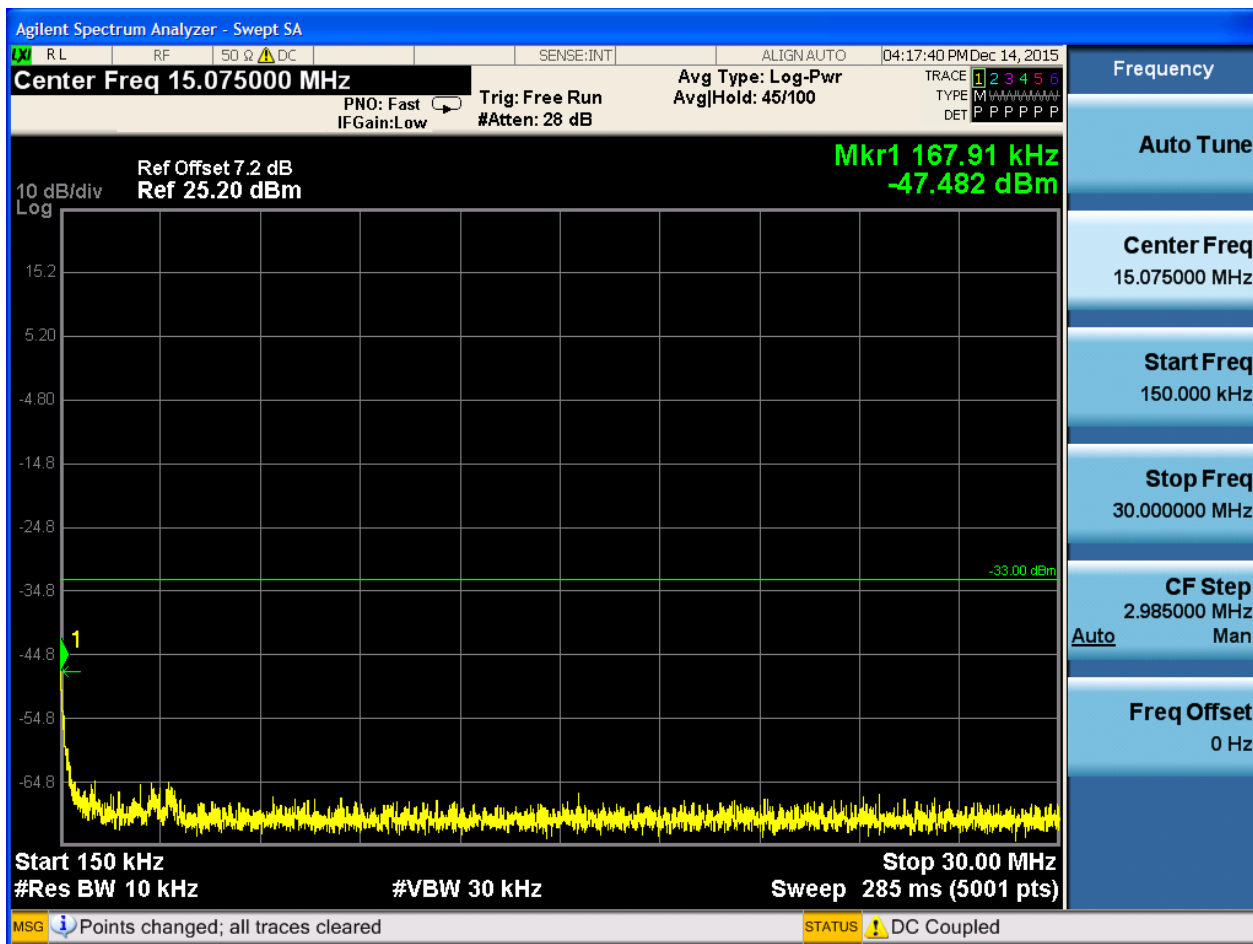


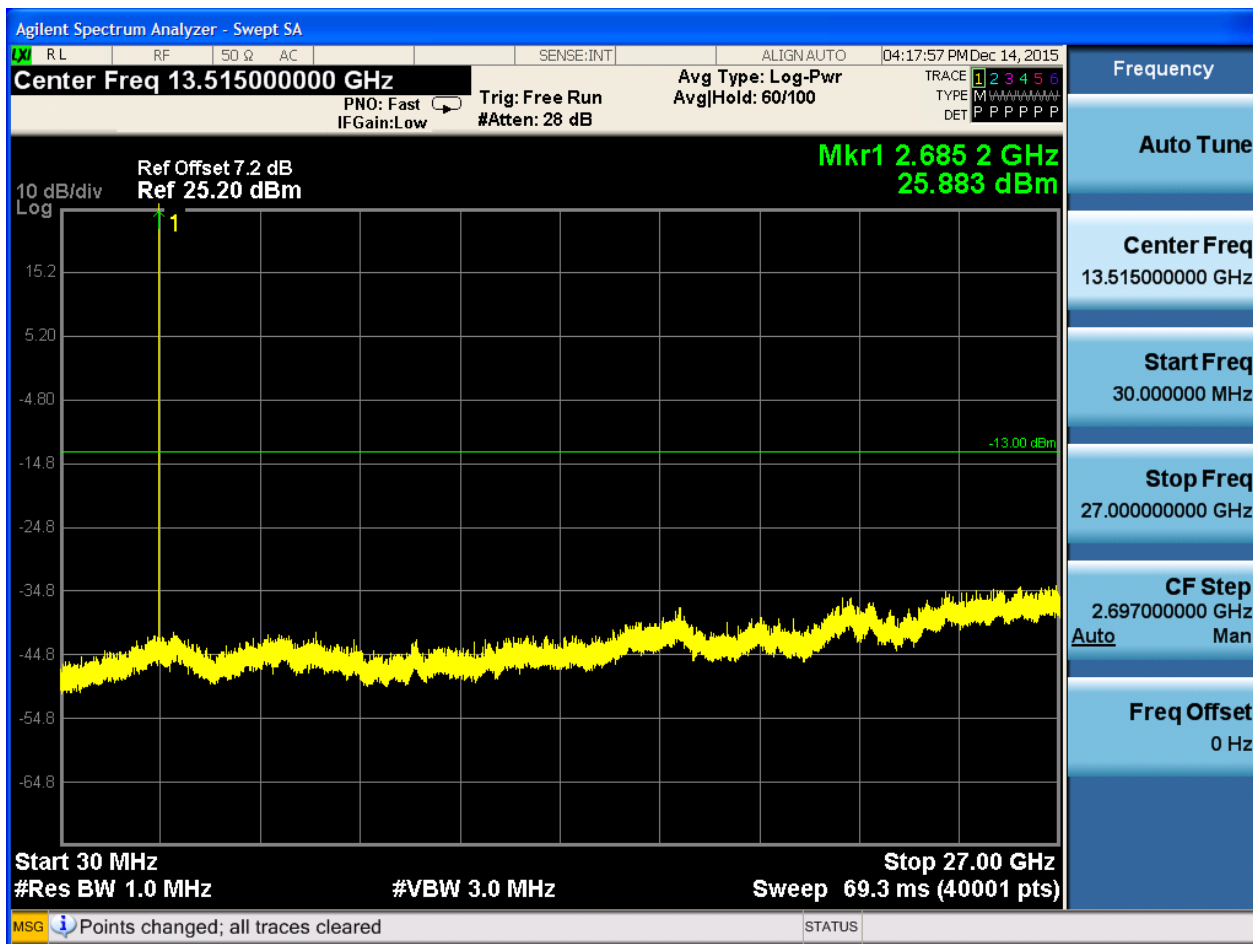


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0





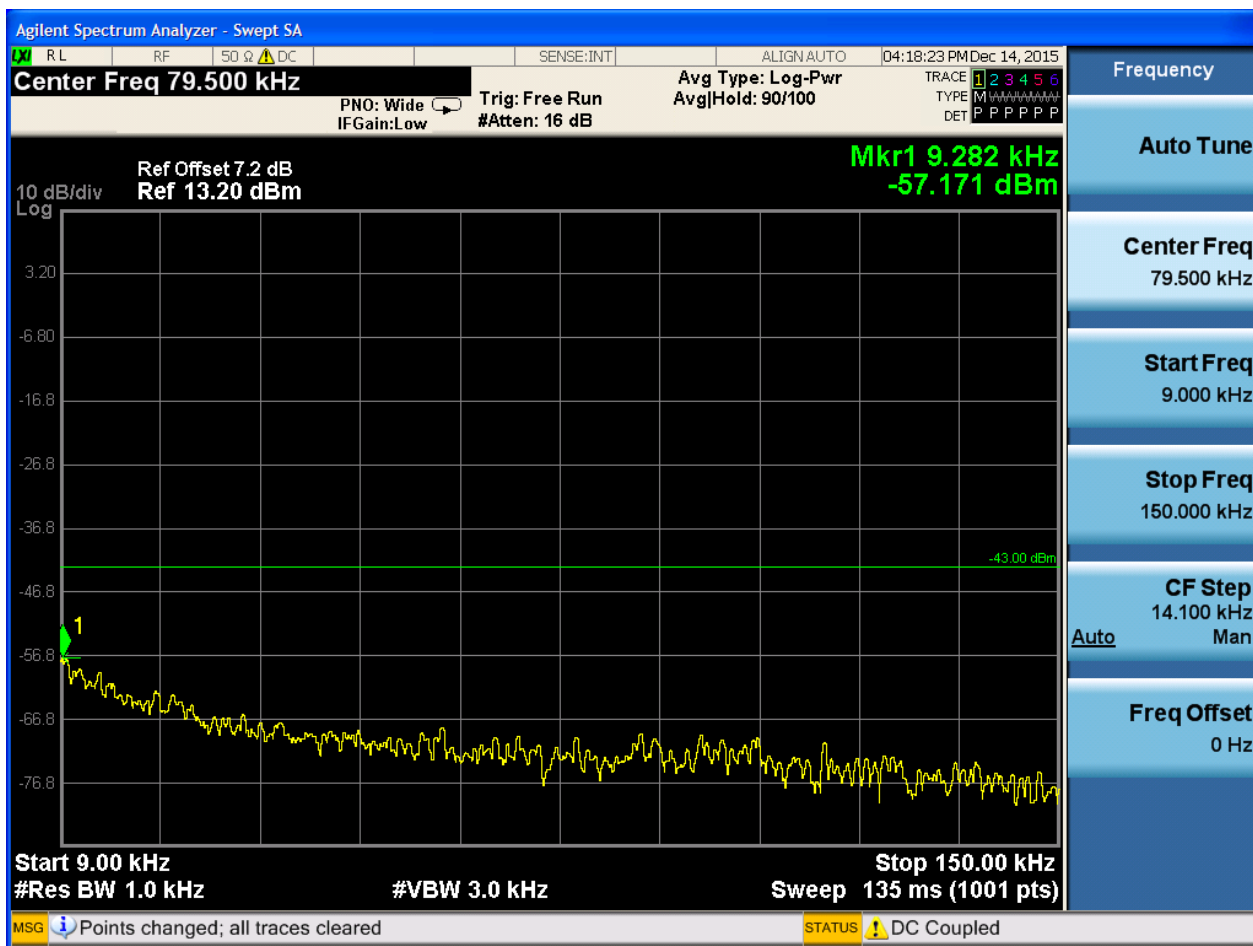


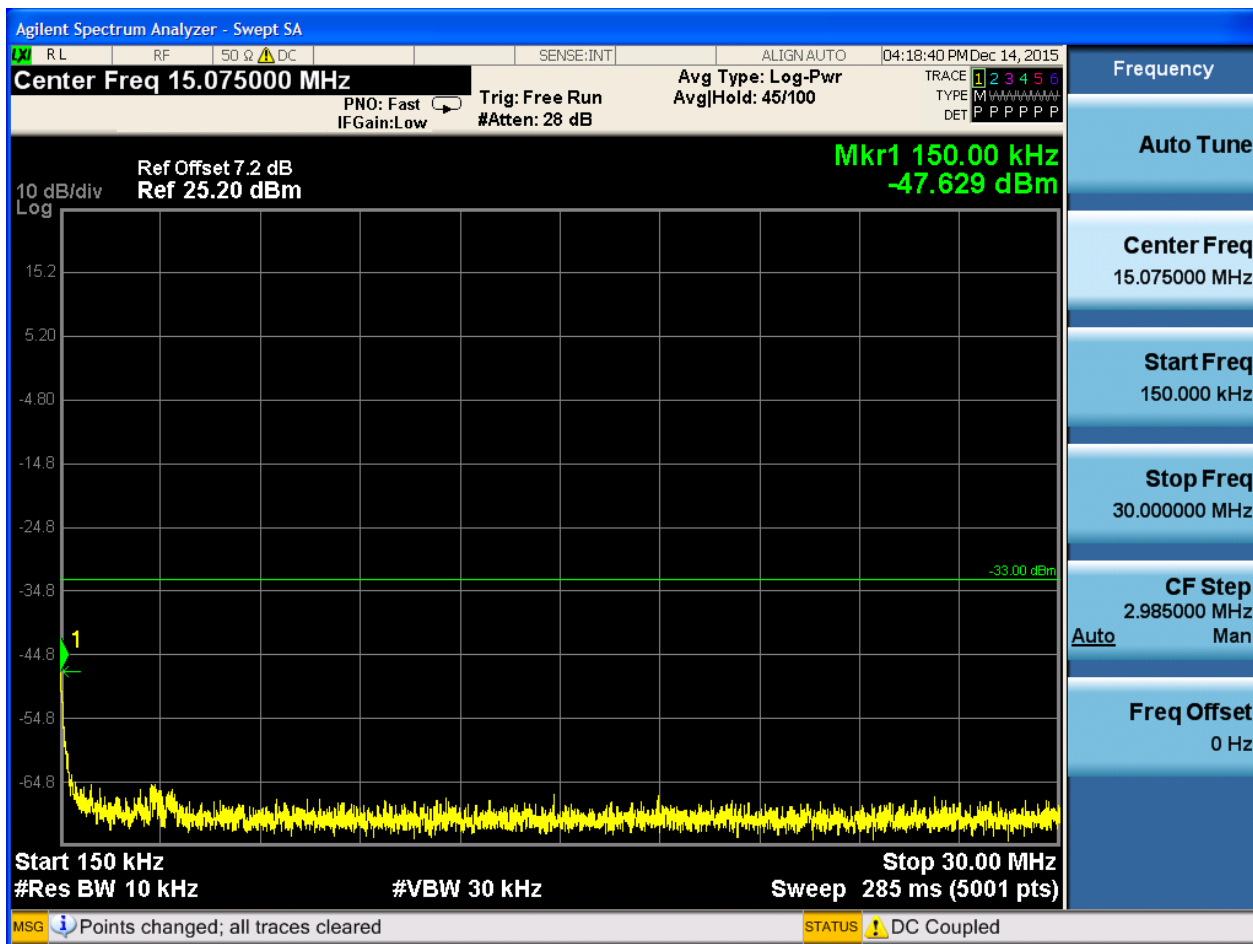


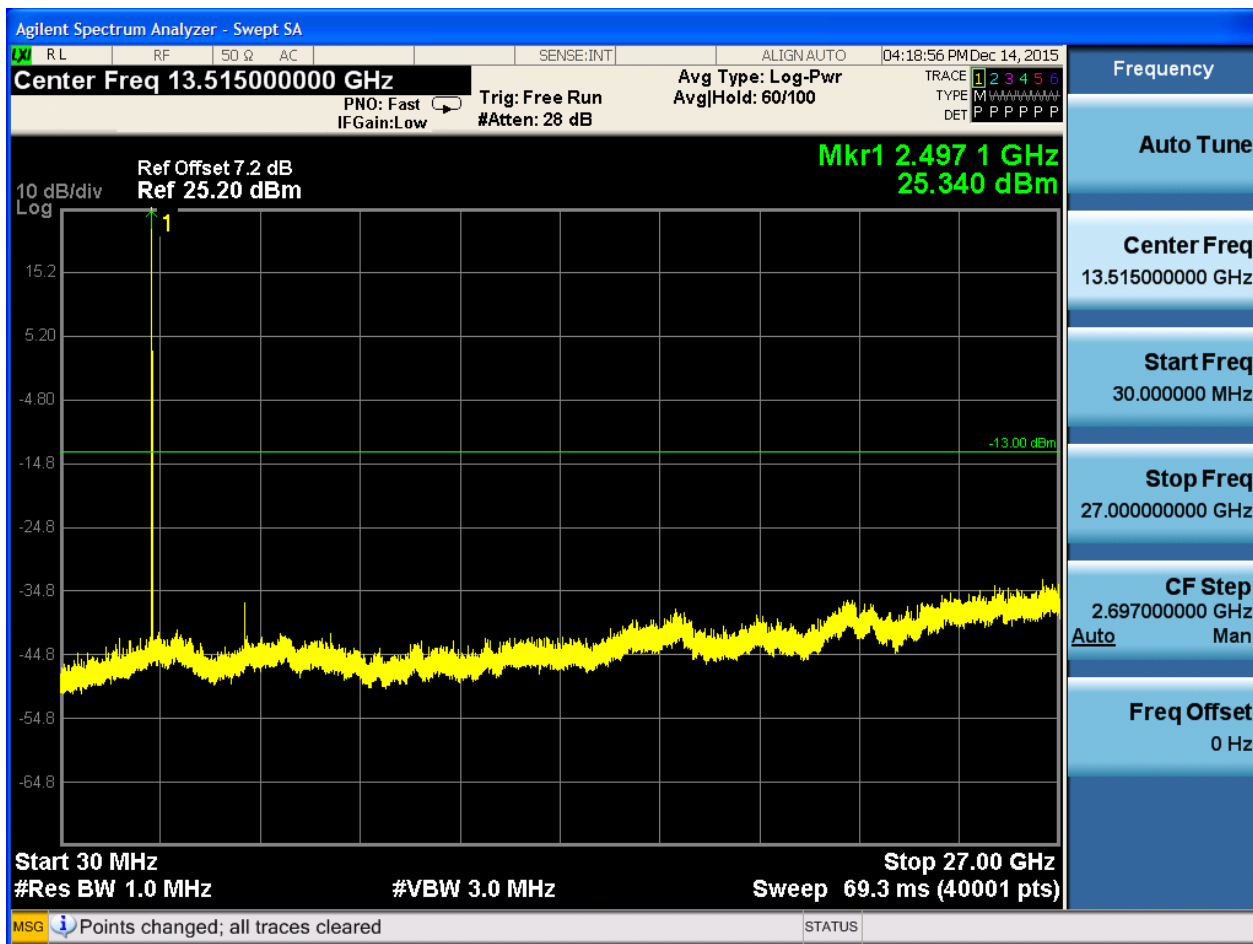
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



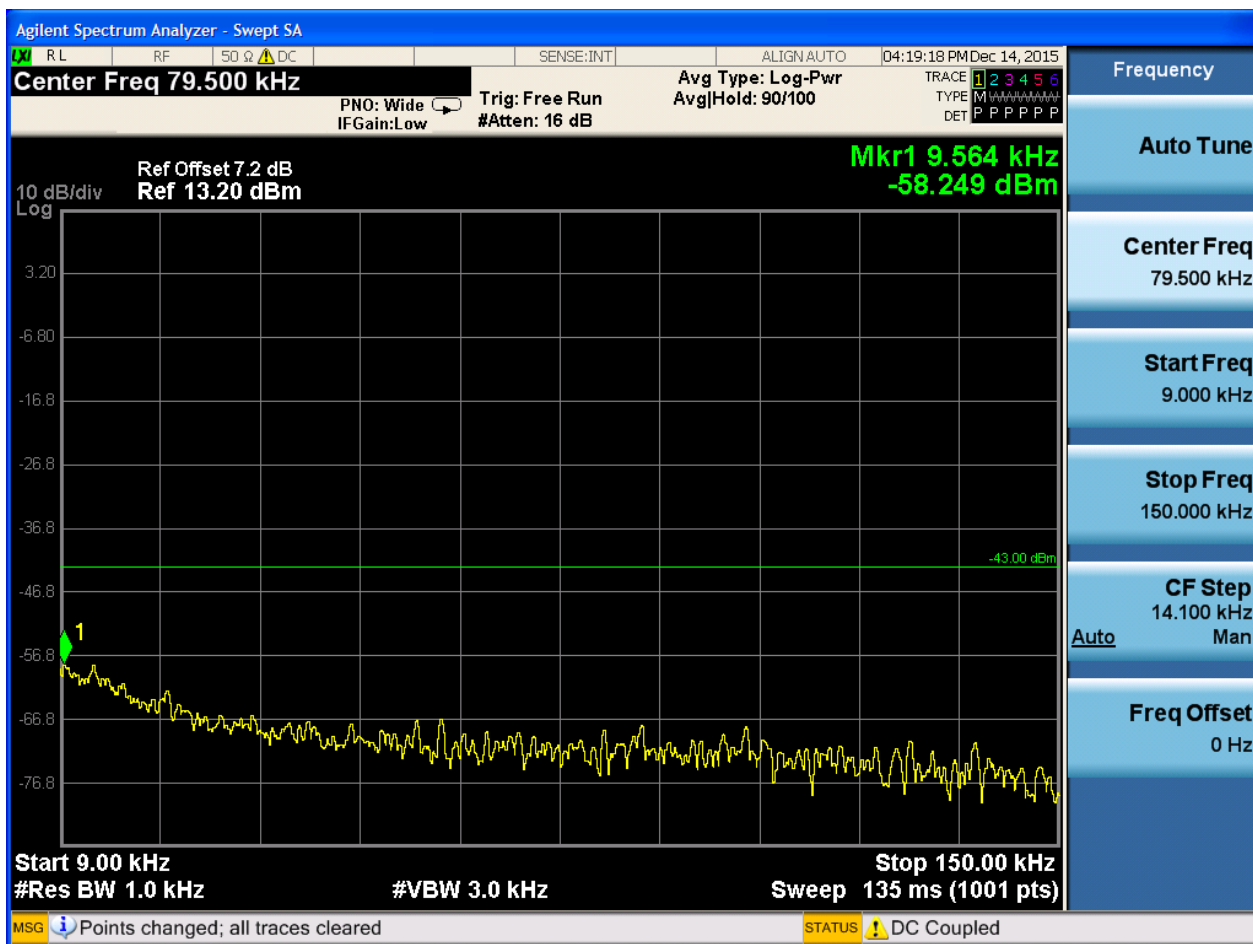


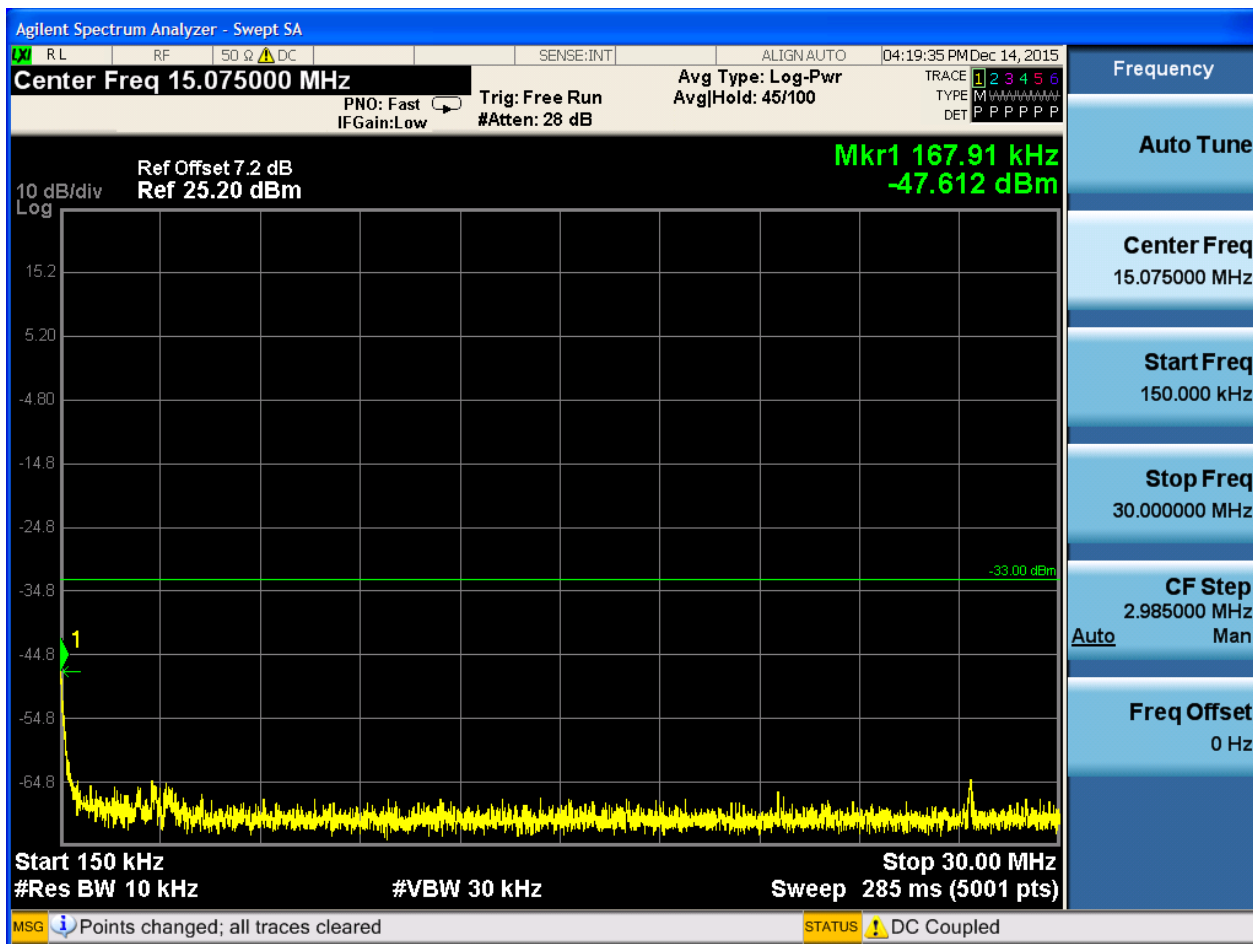


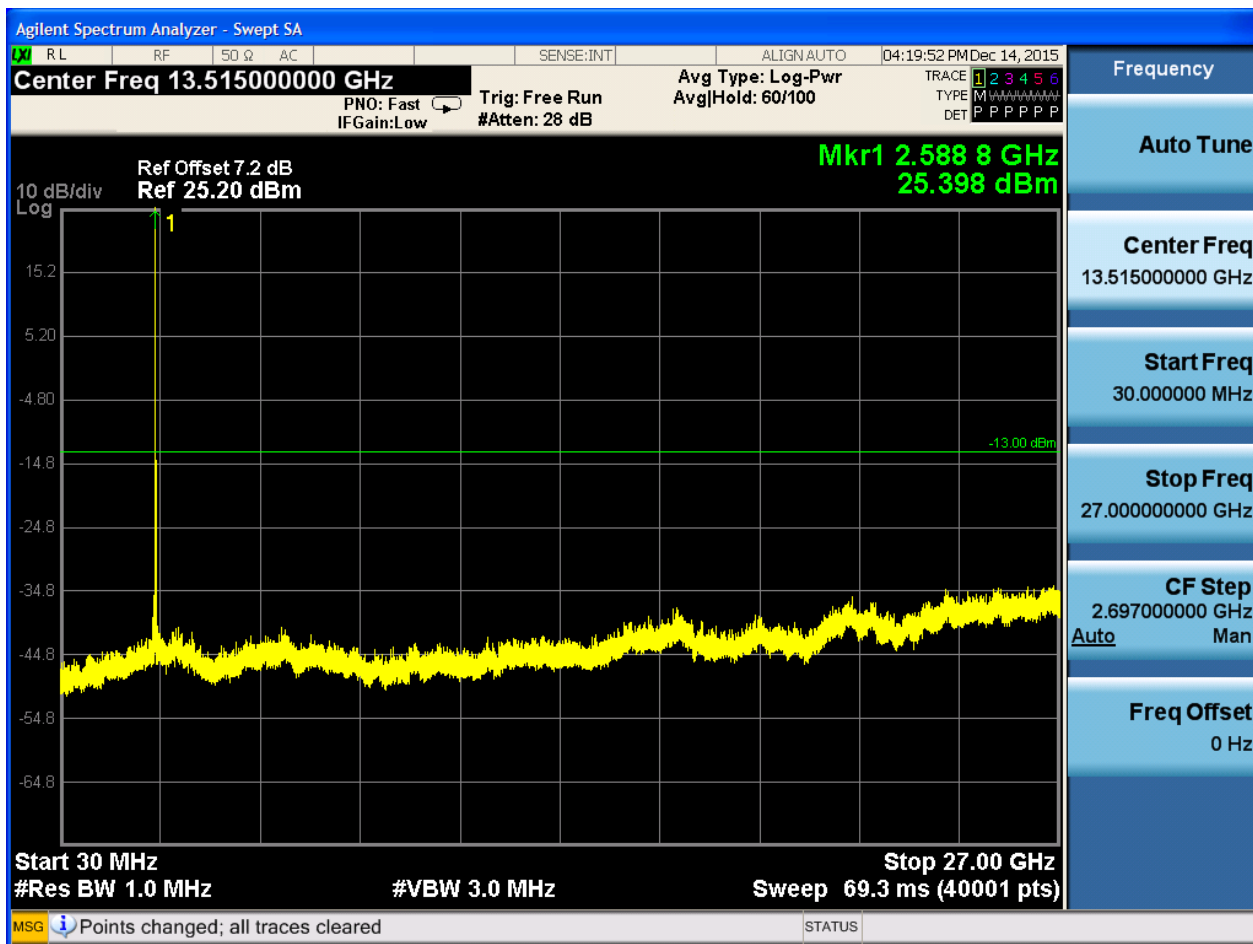


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



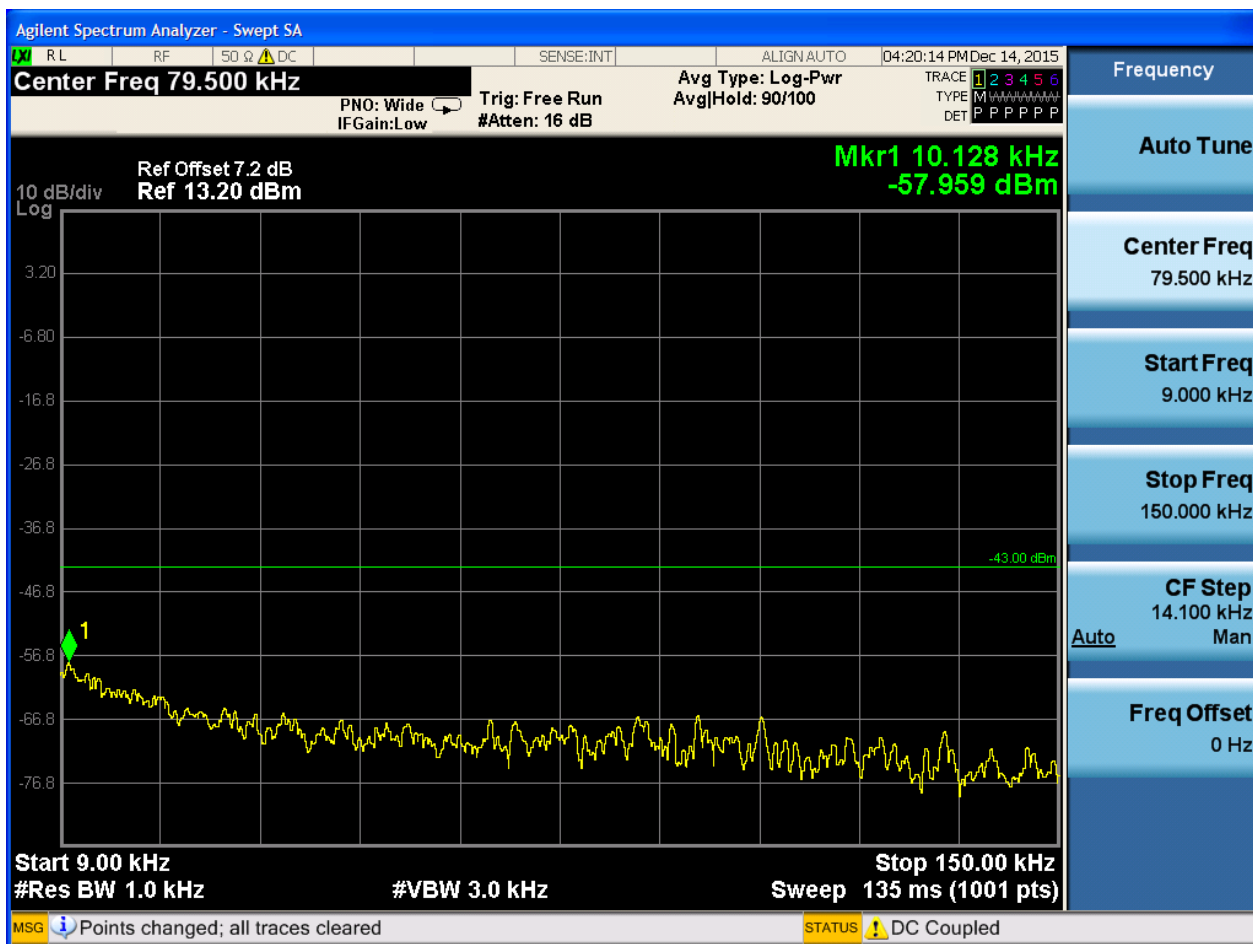


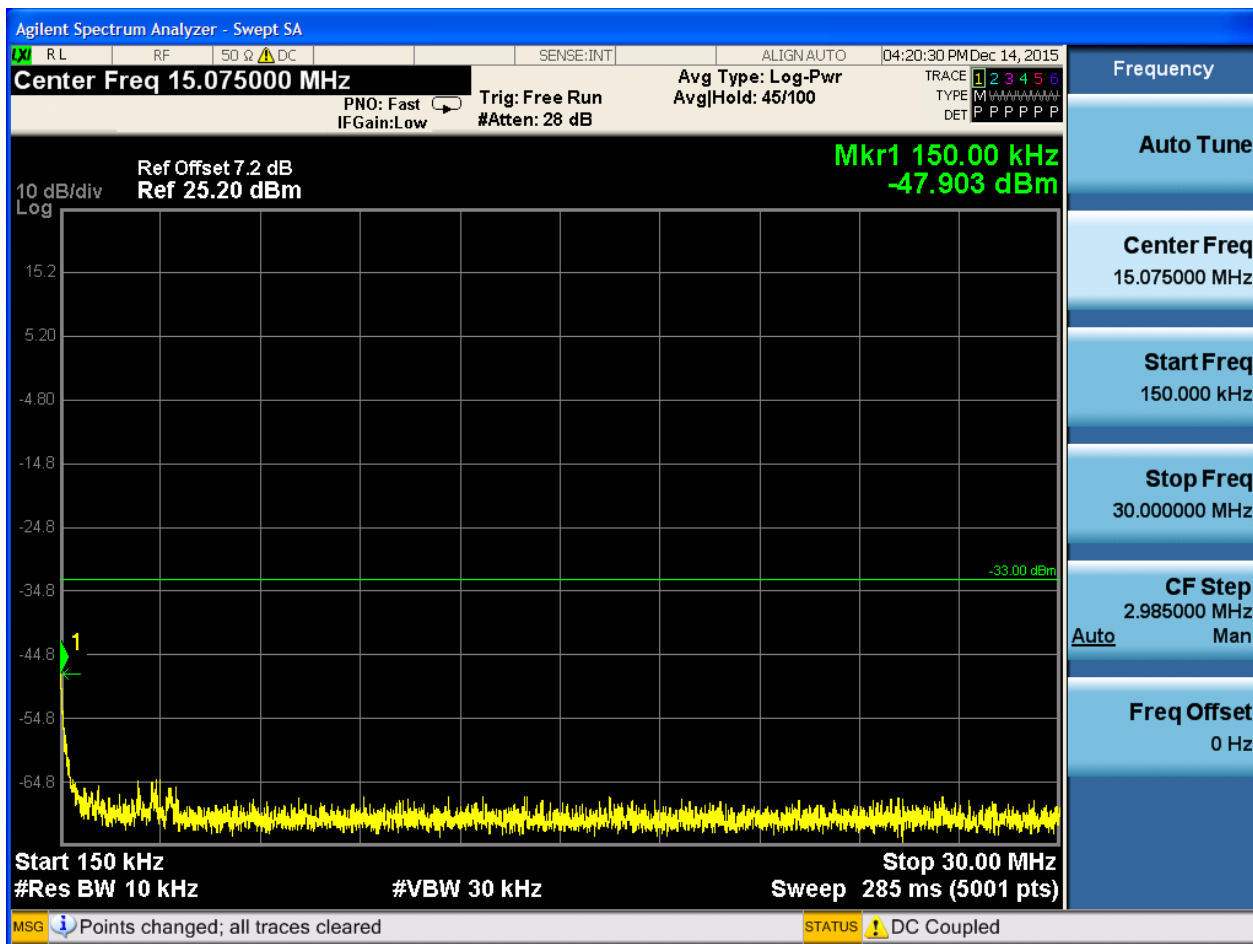


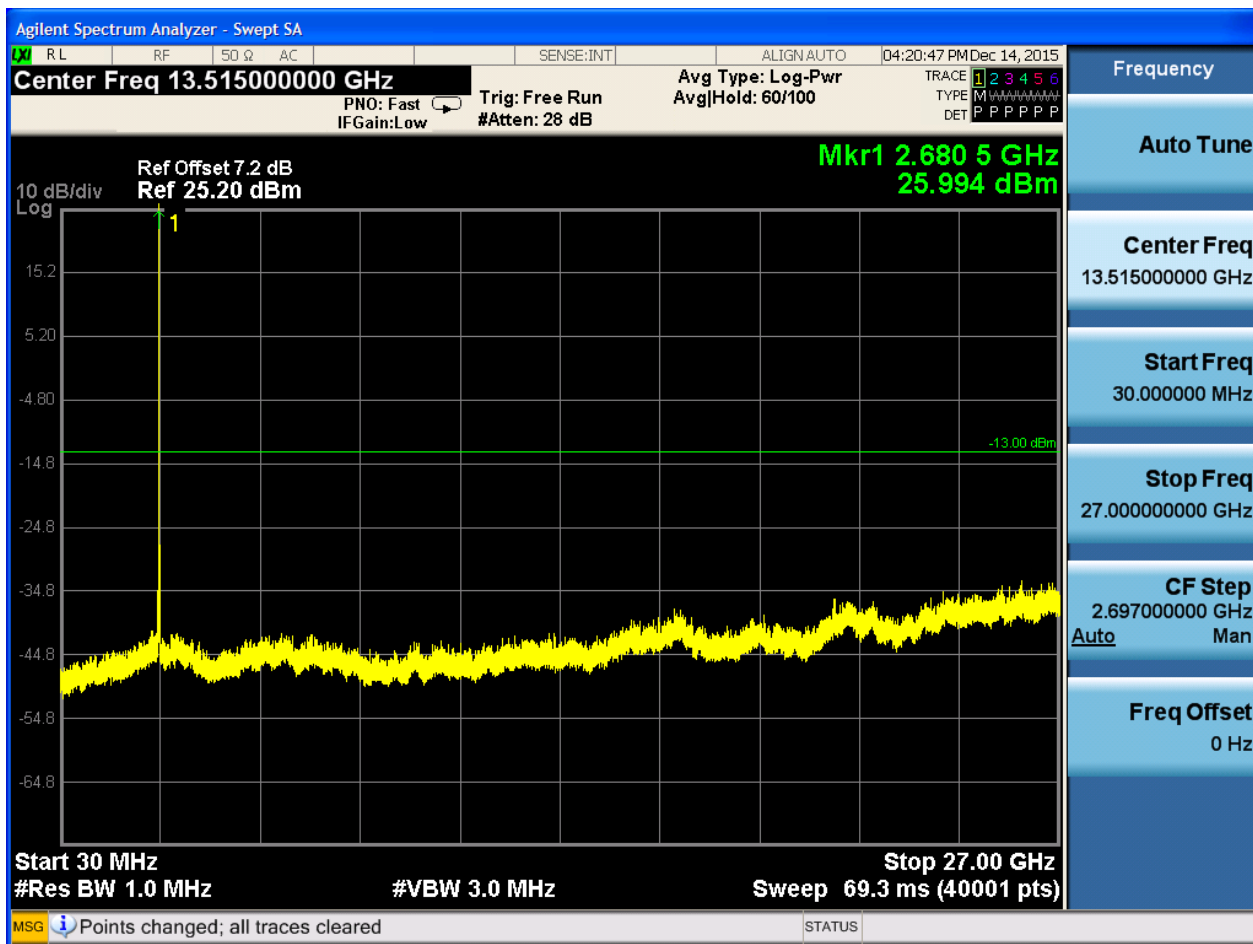


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0





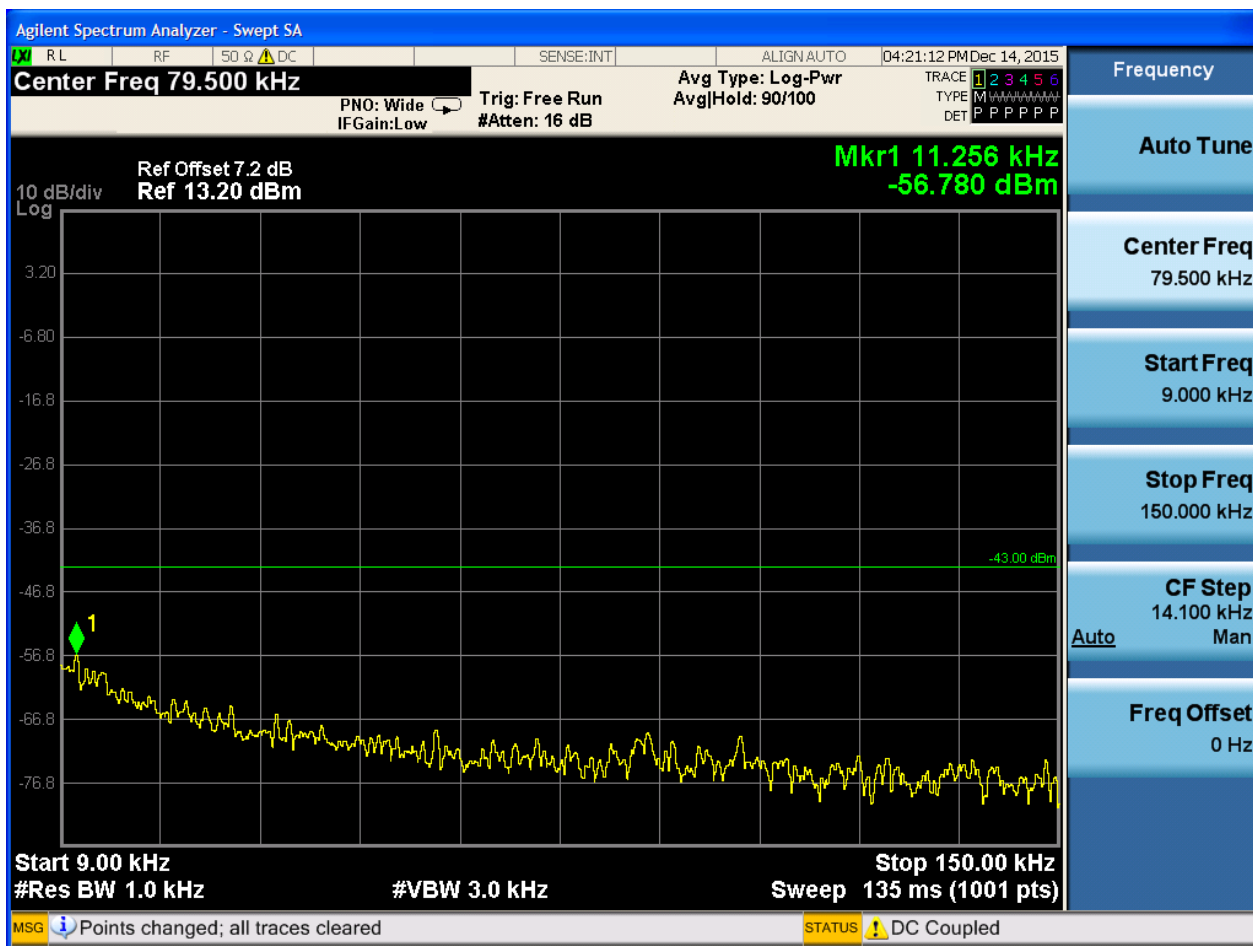


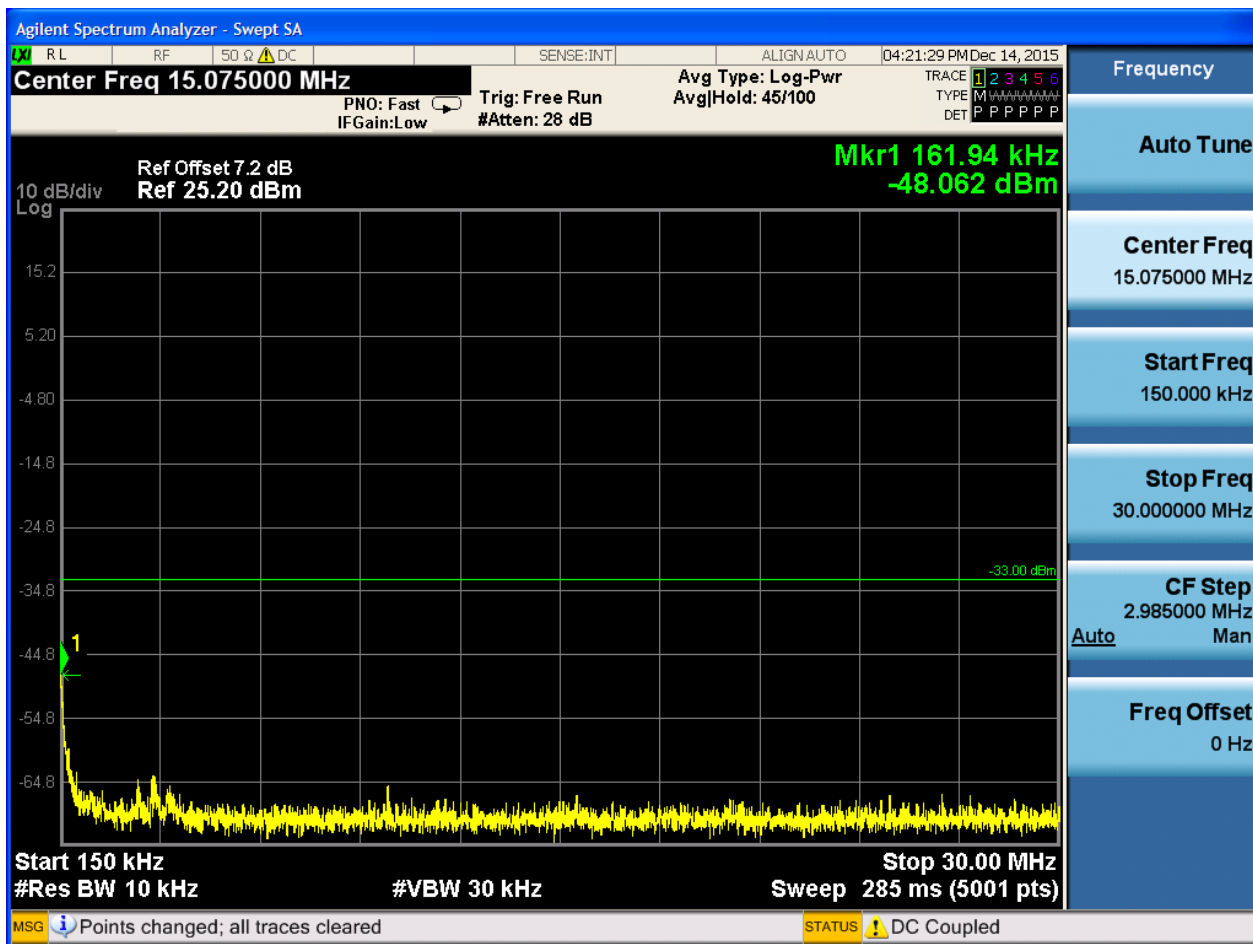


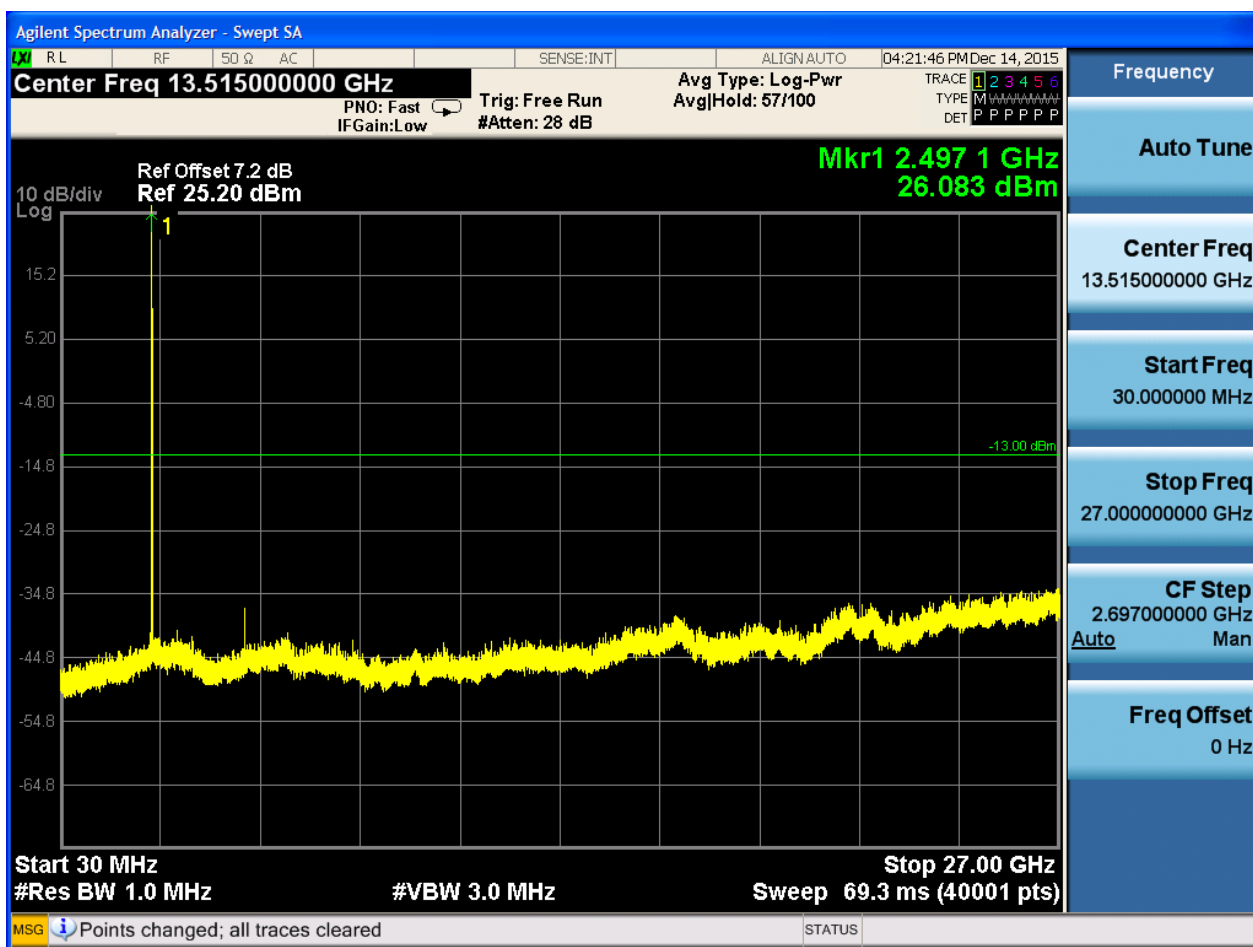
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



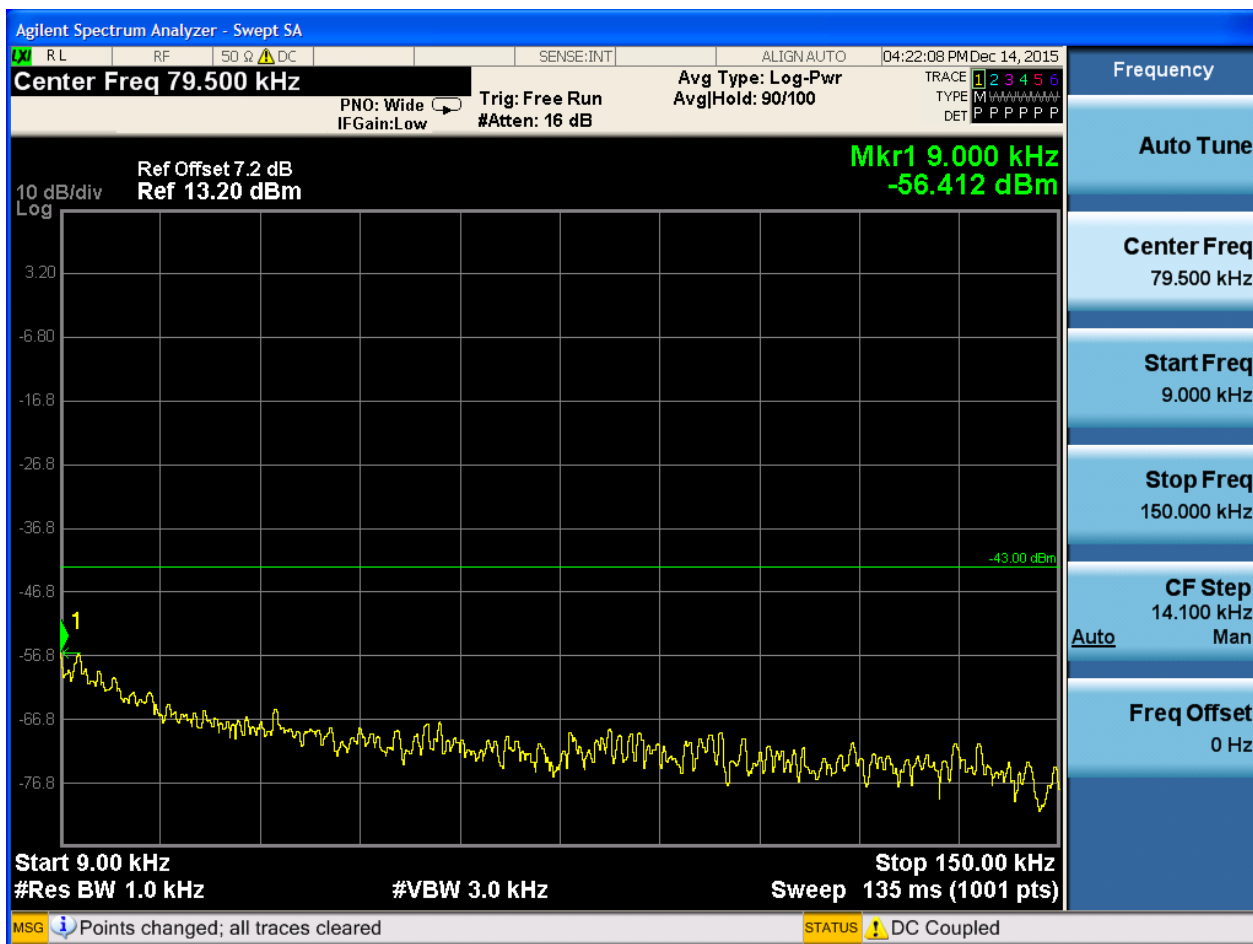


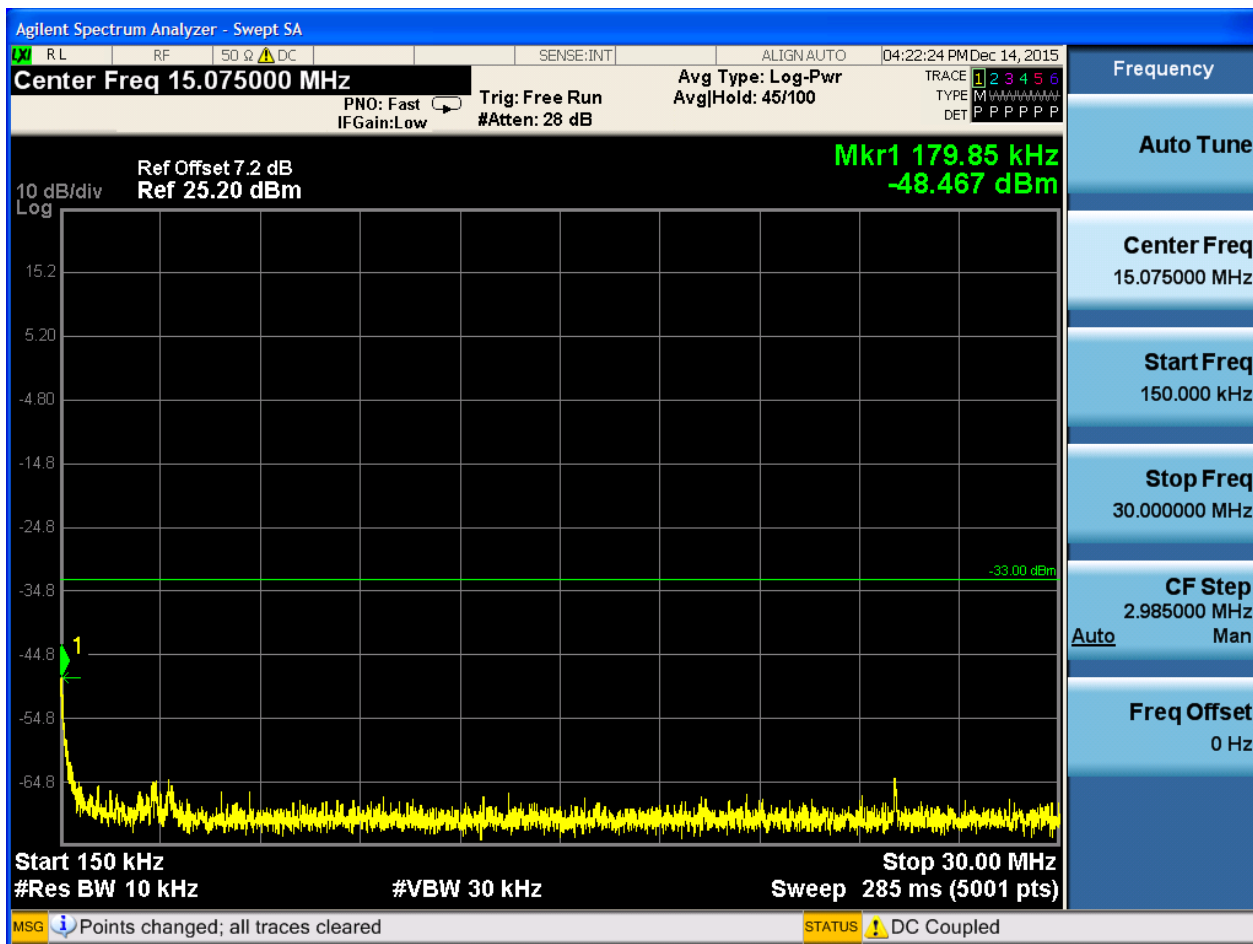


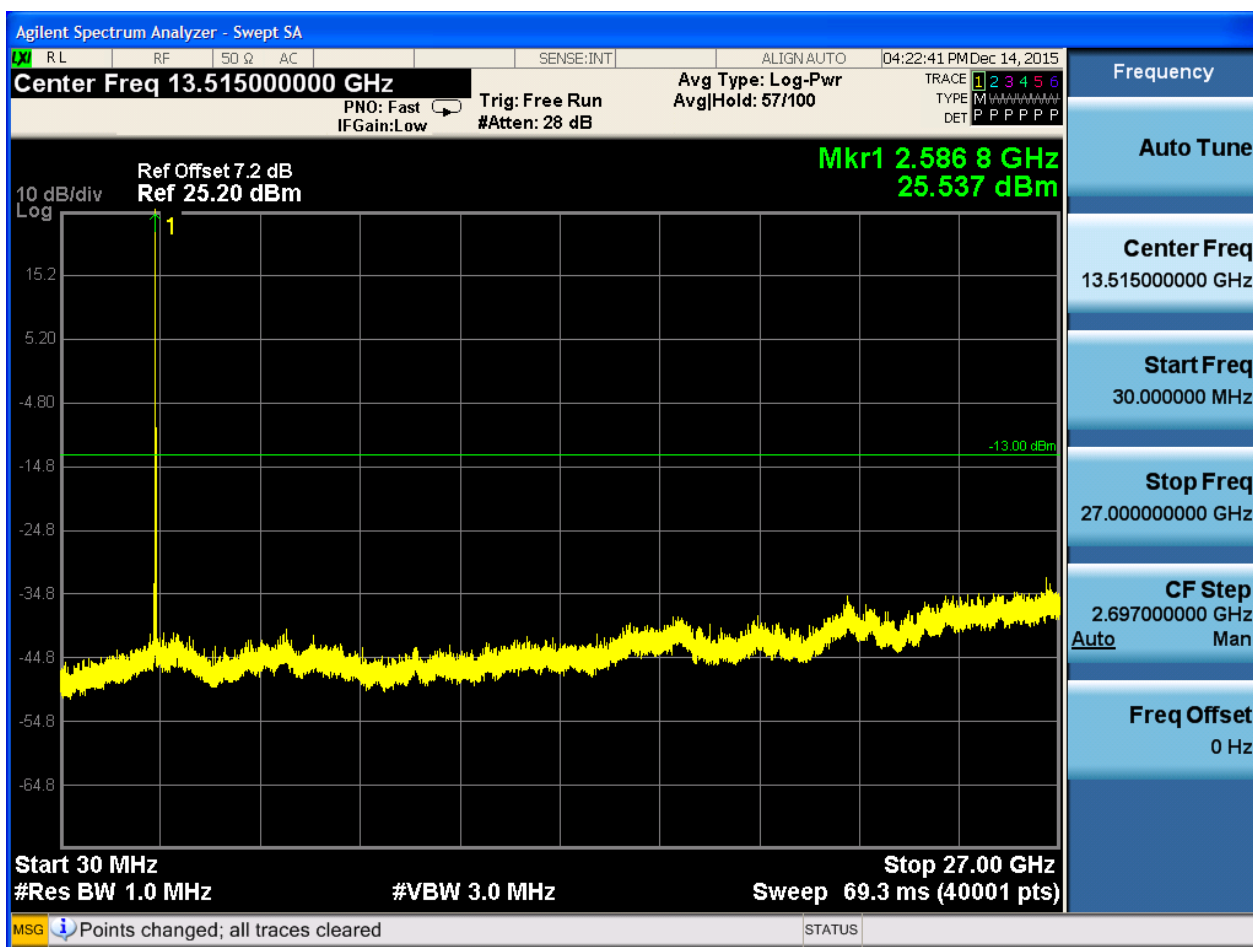


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



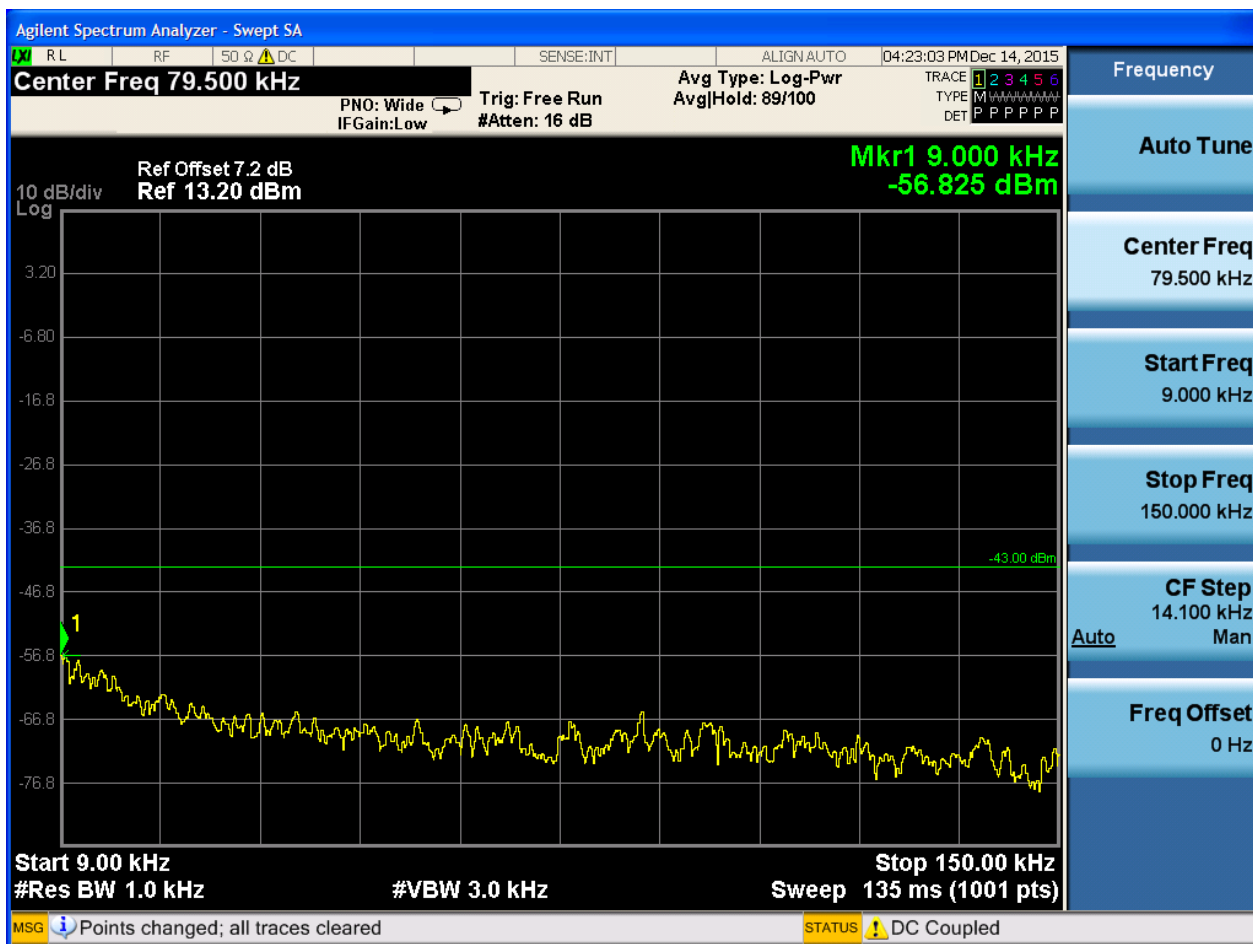


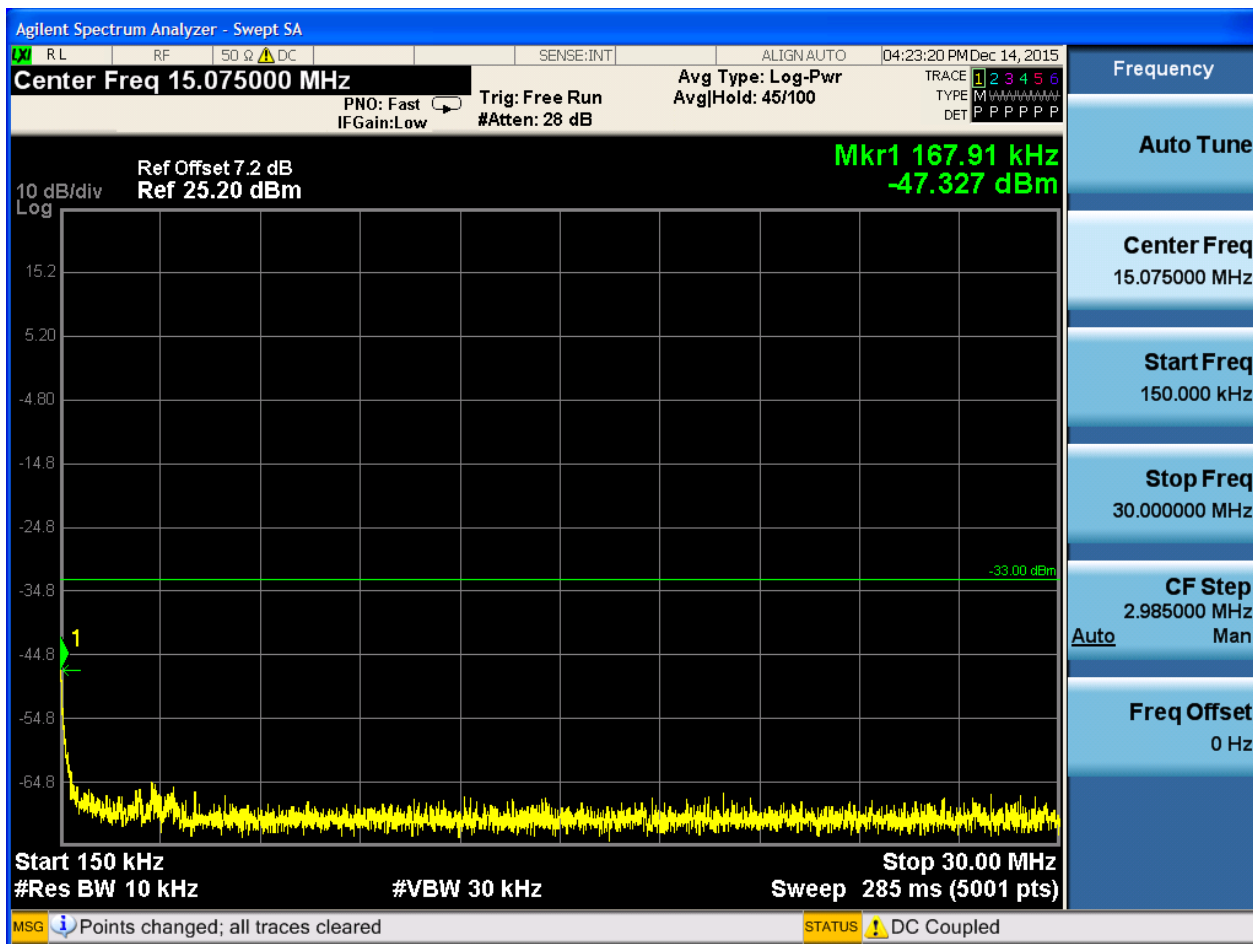


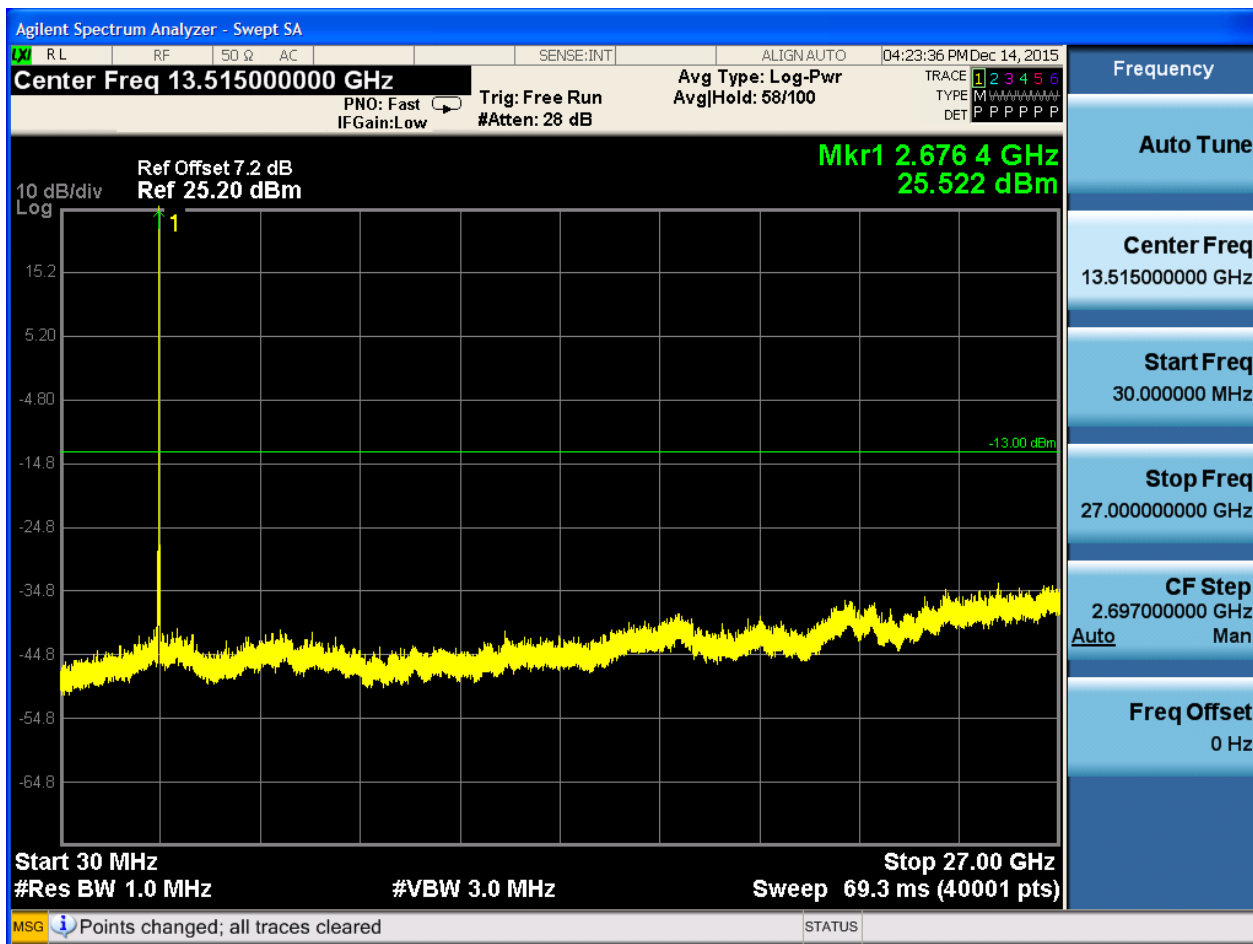


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





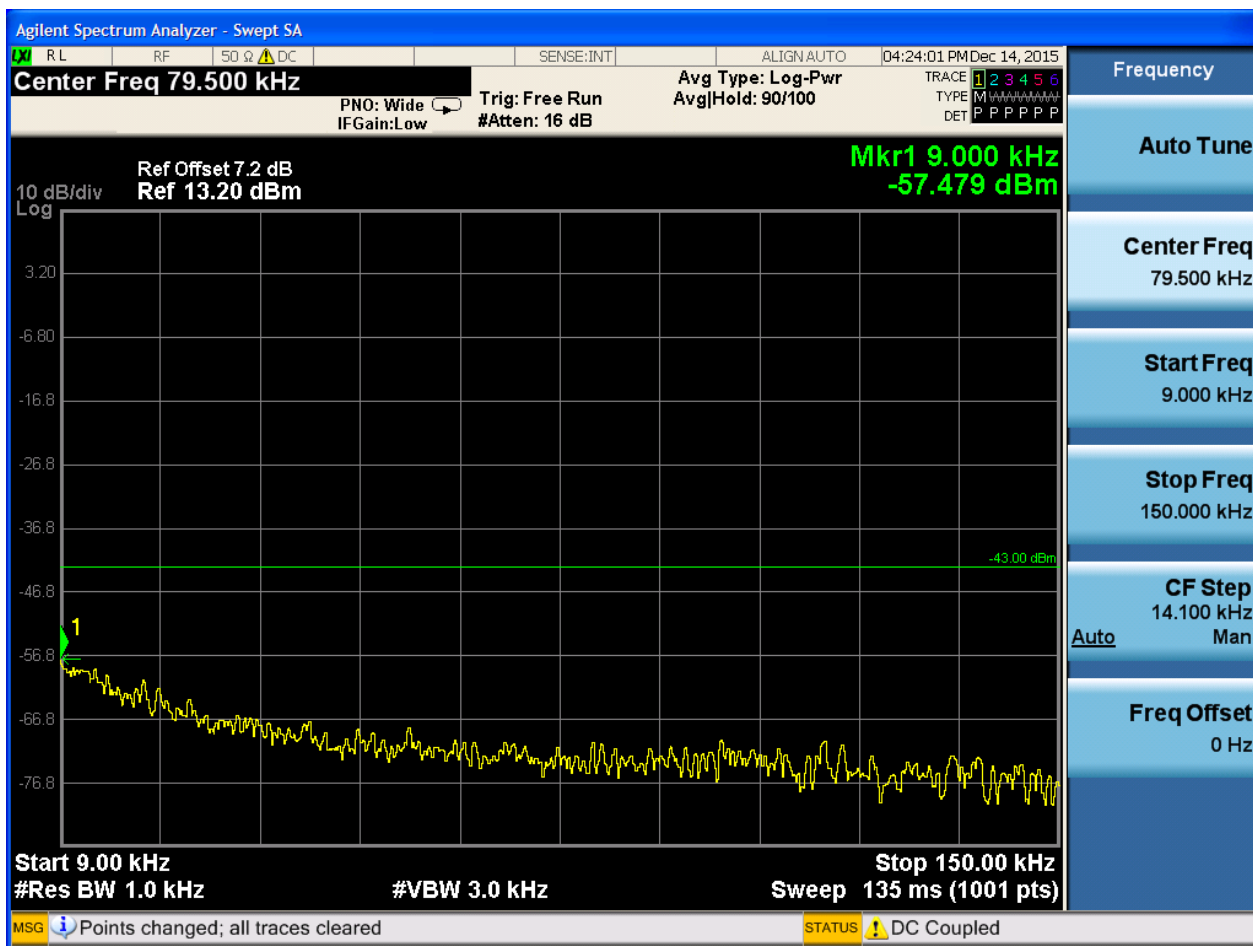


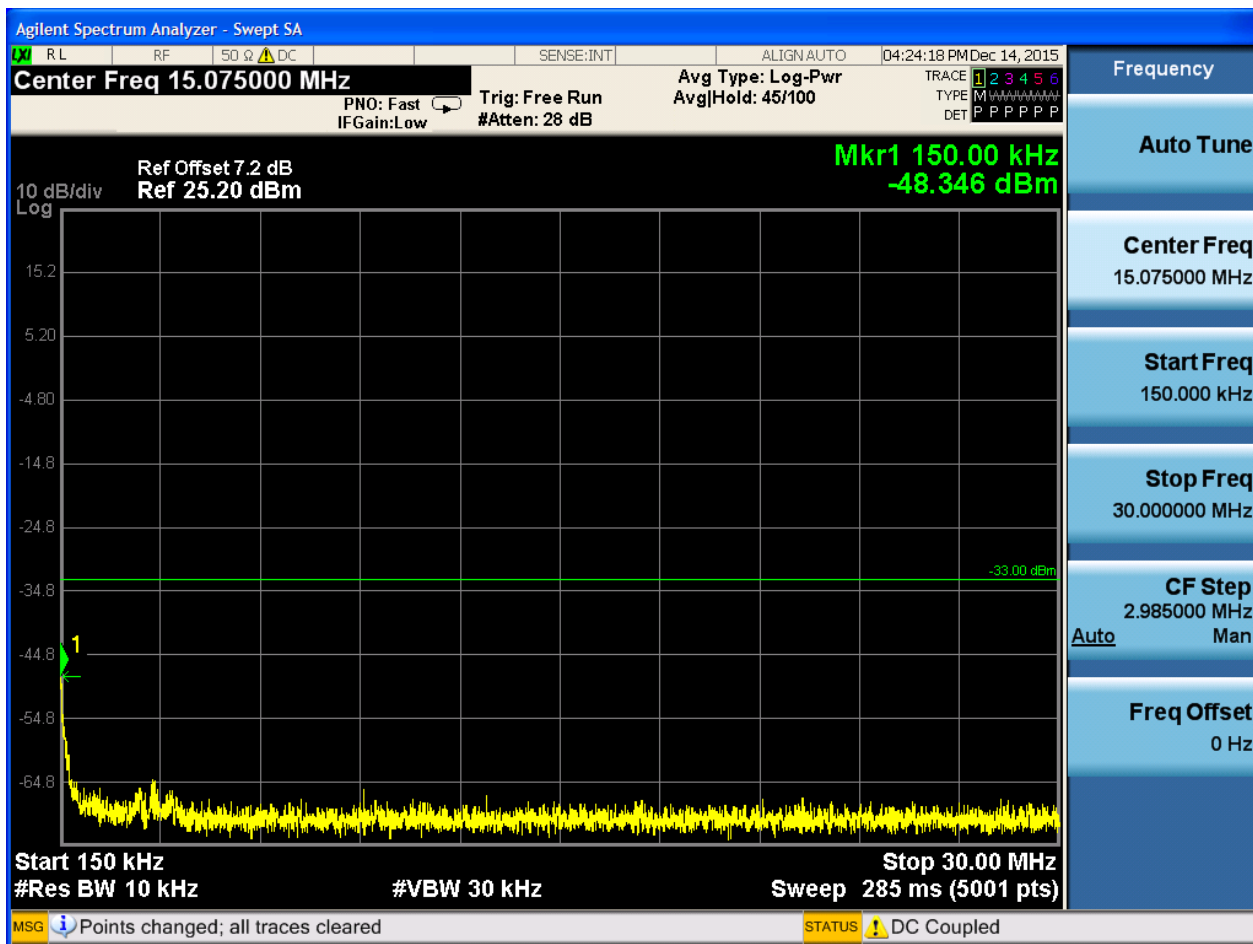


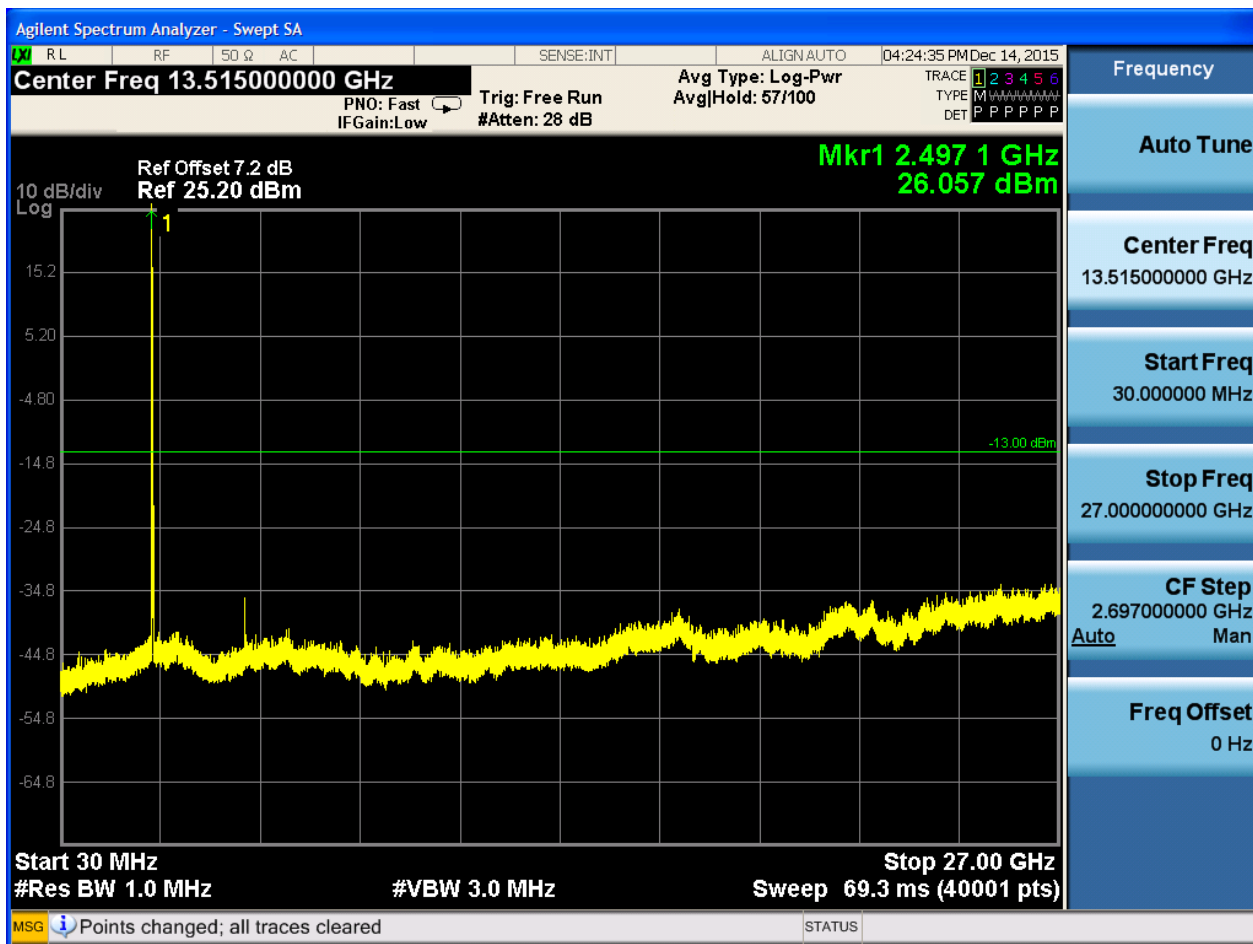
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



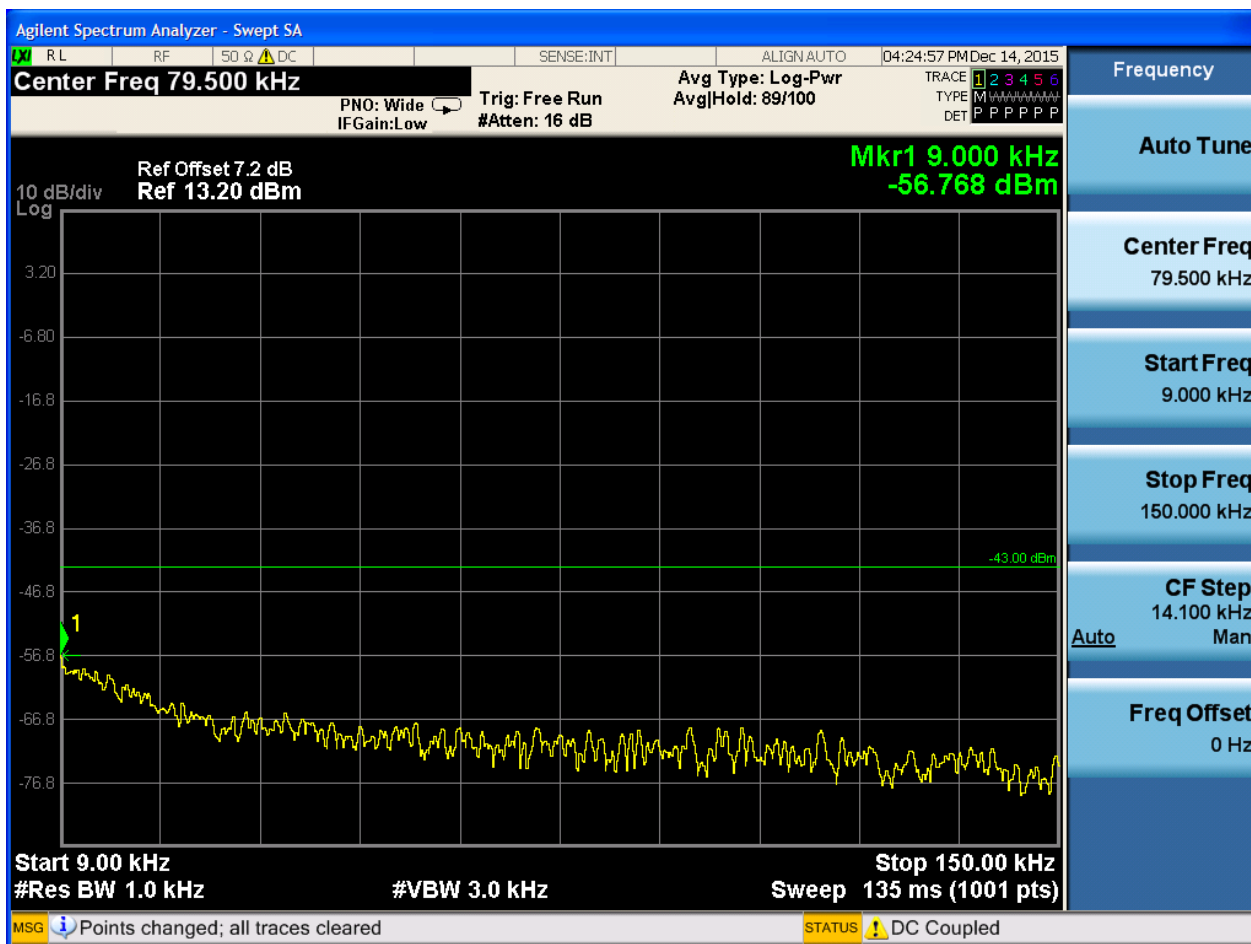


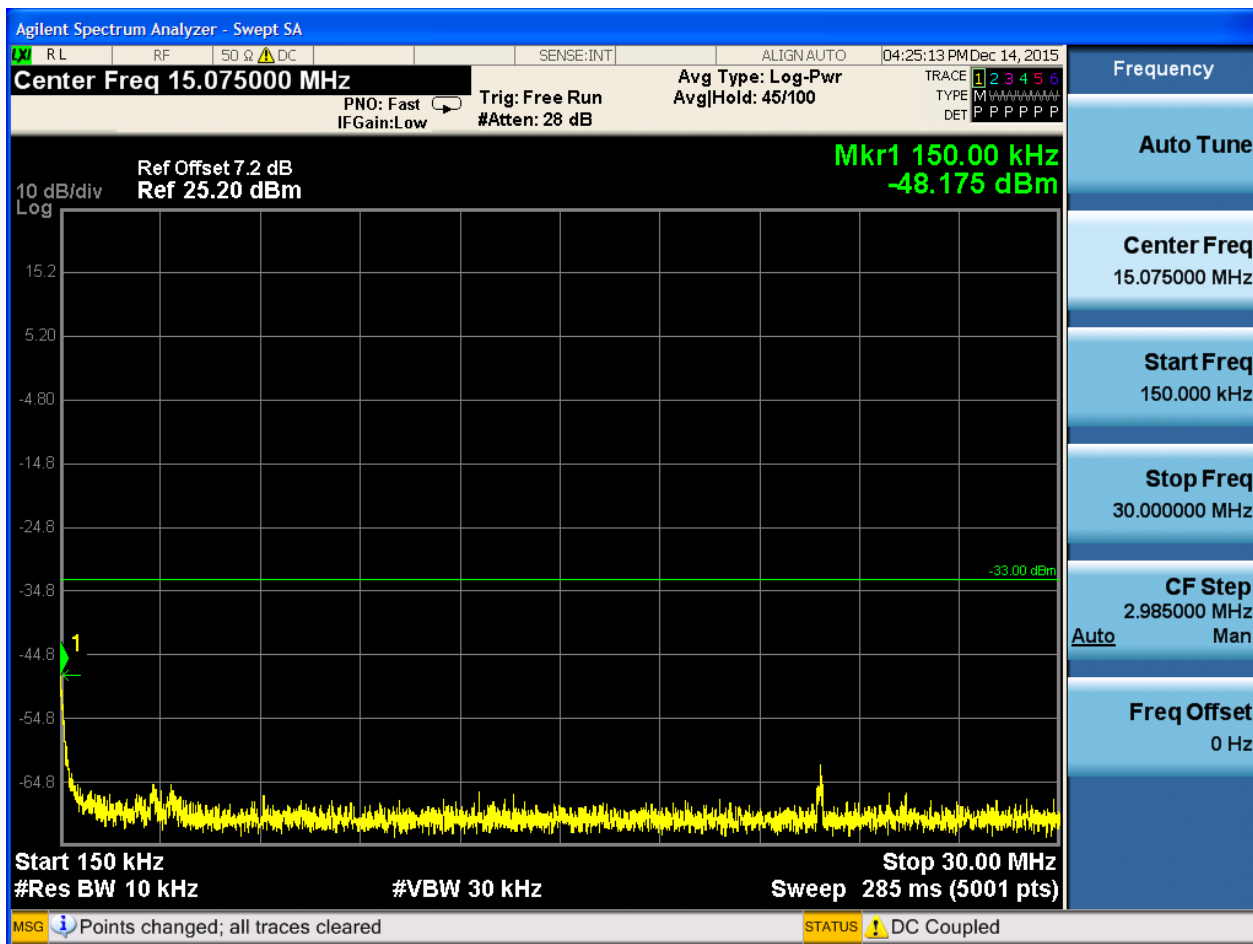


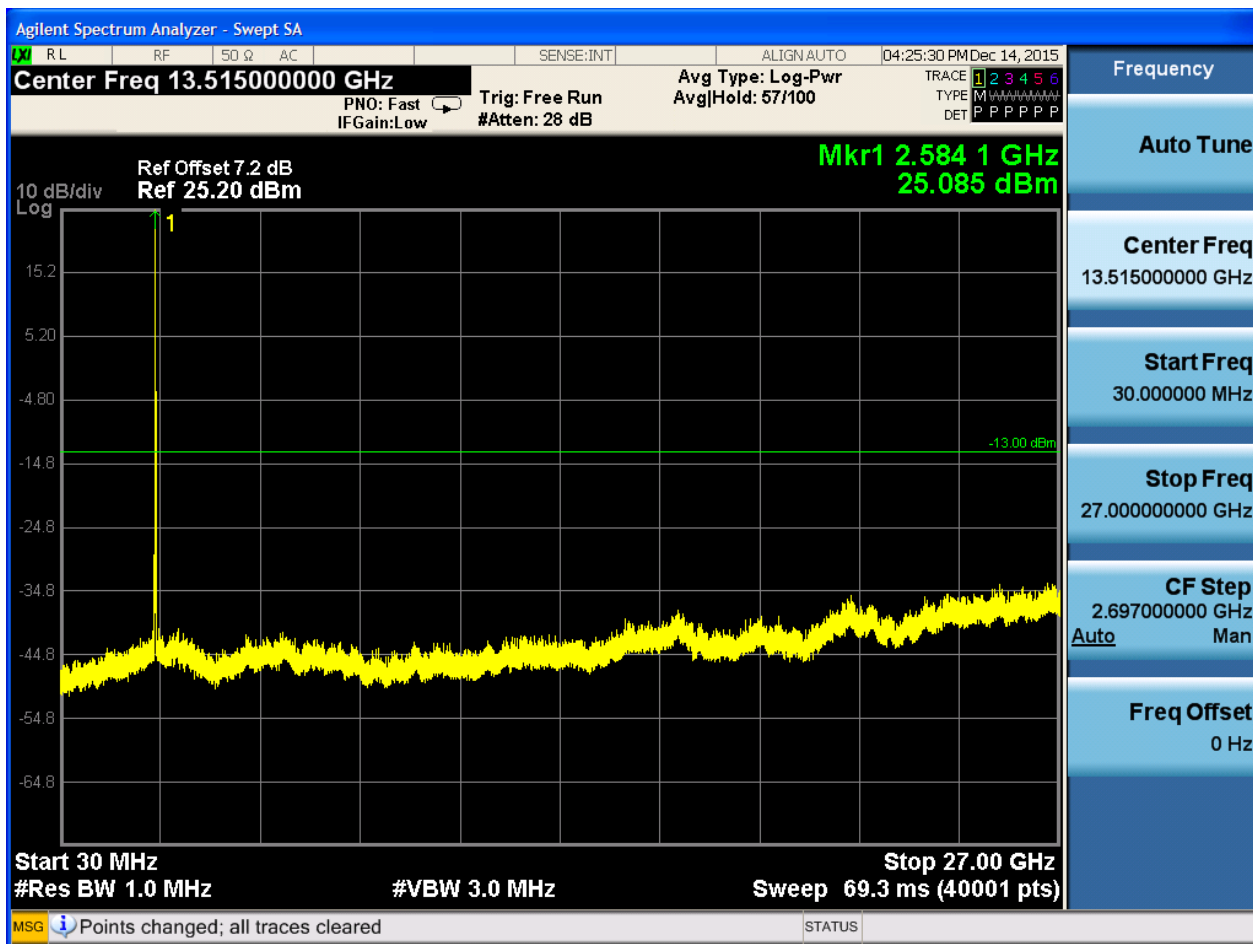


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



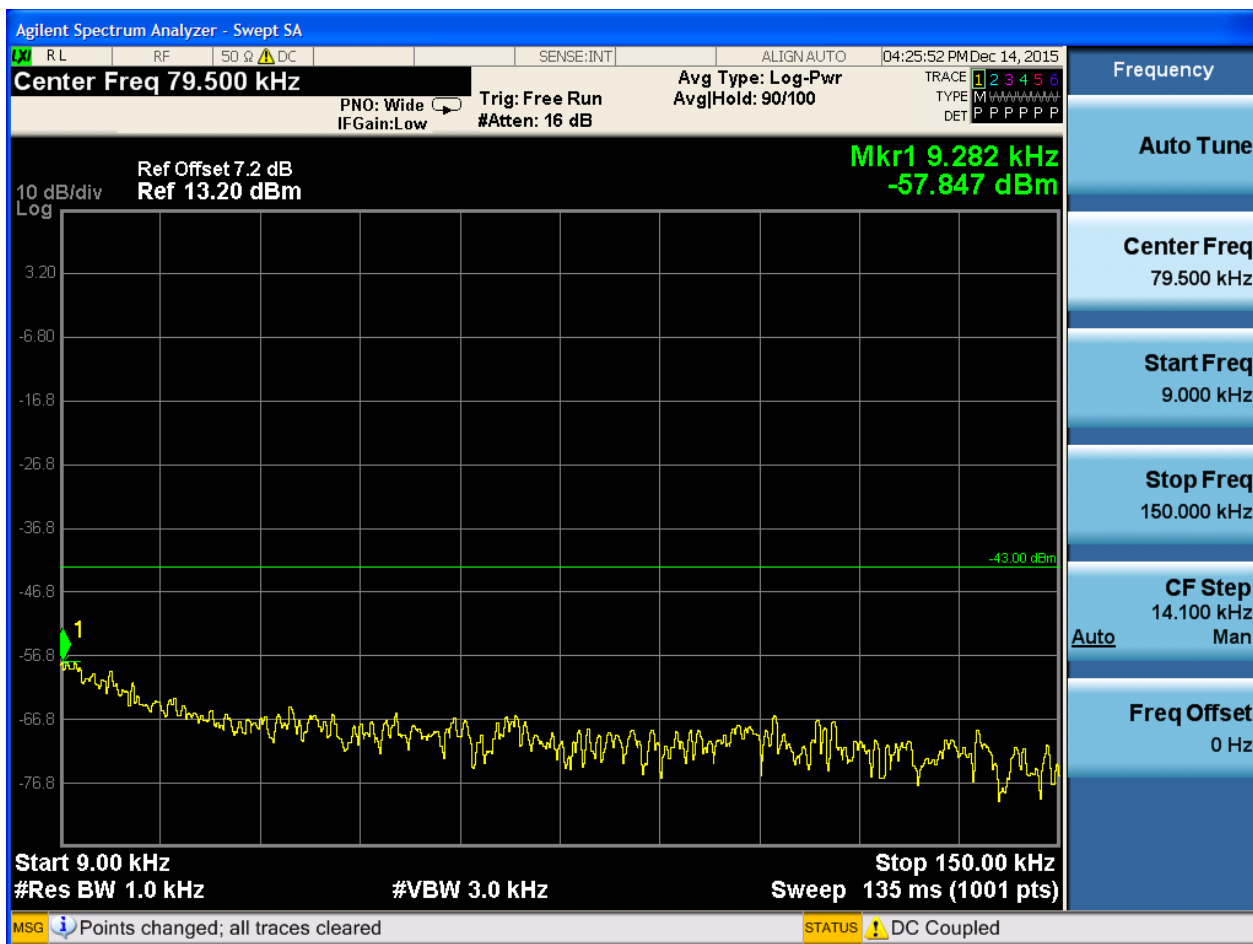


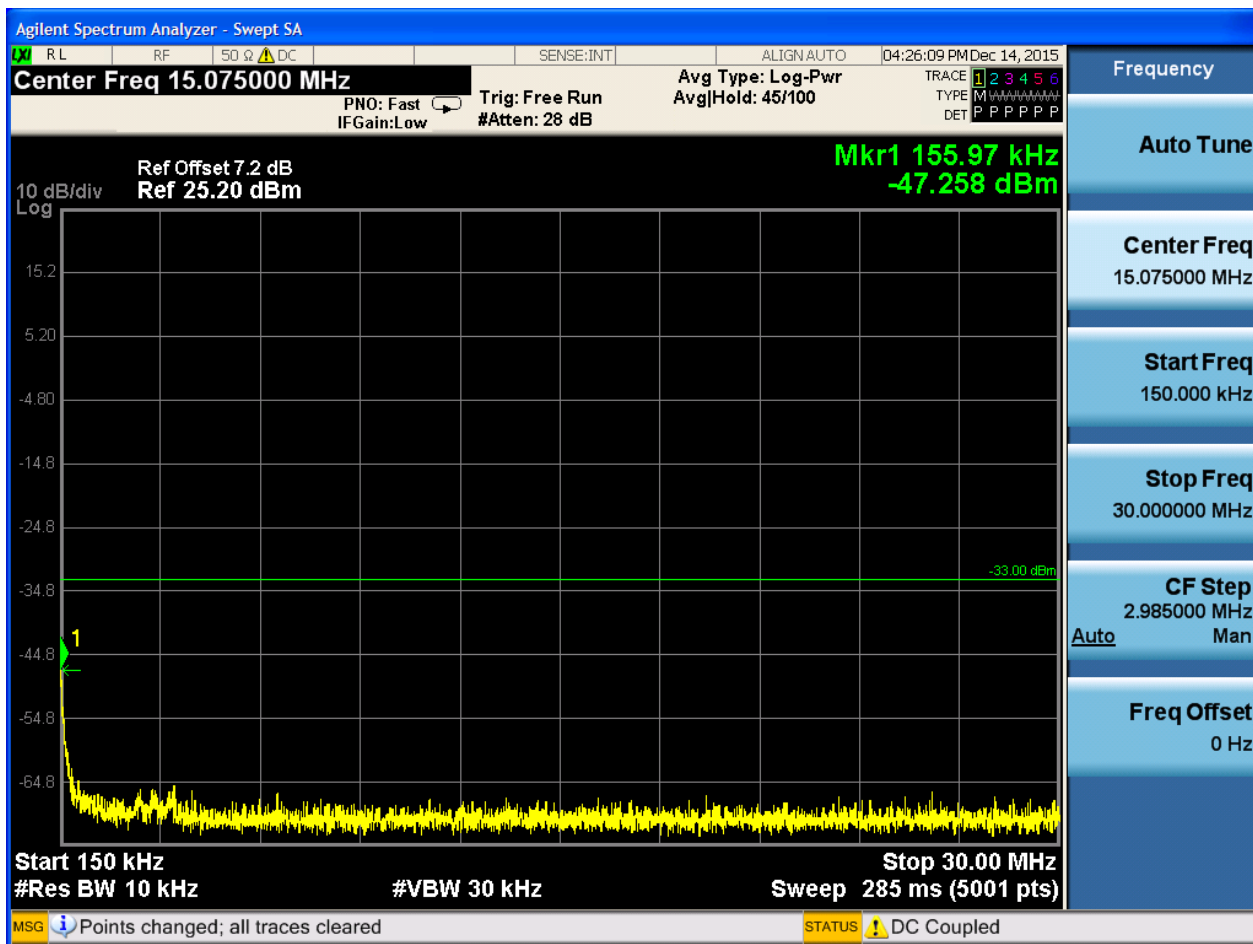


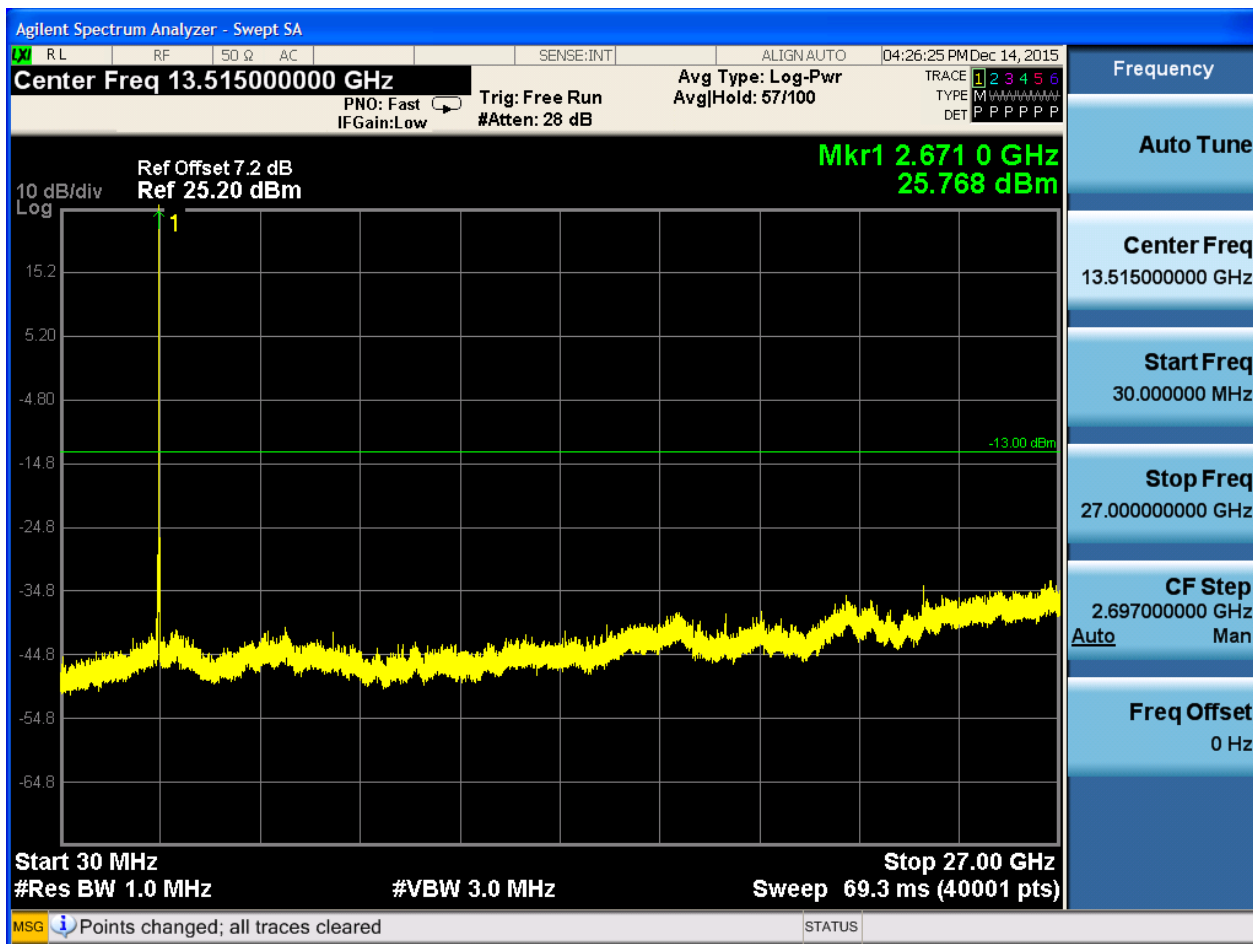


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







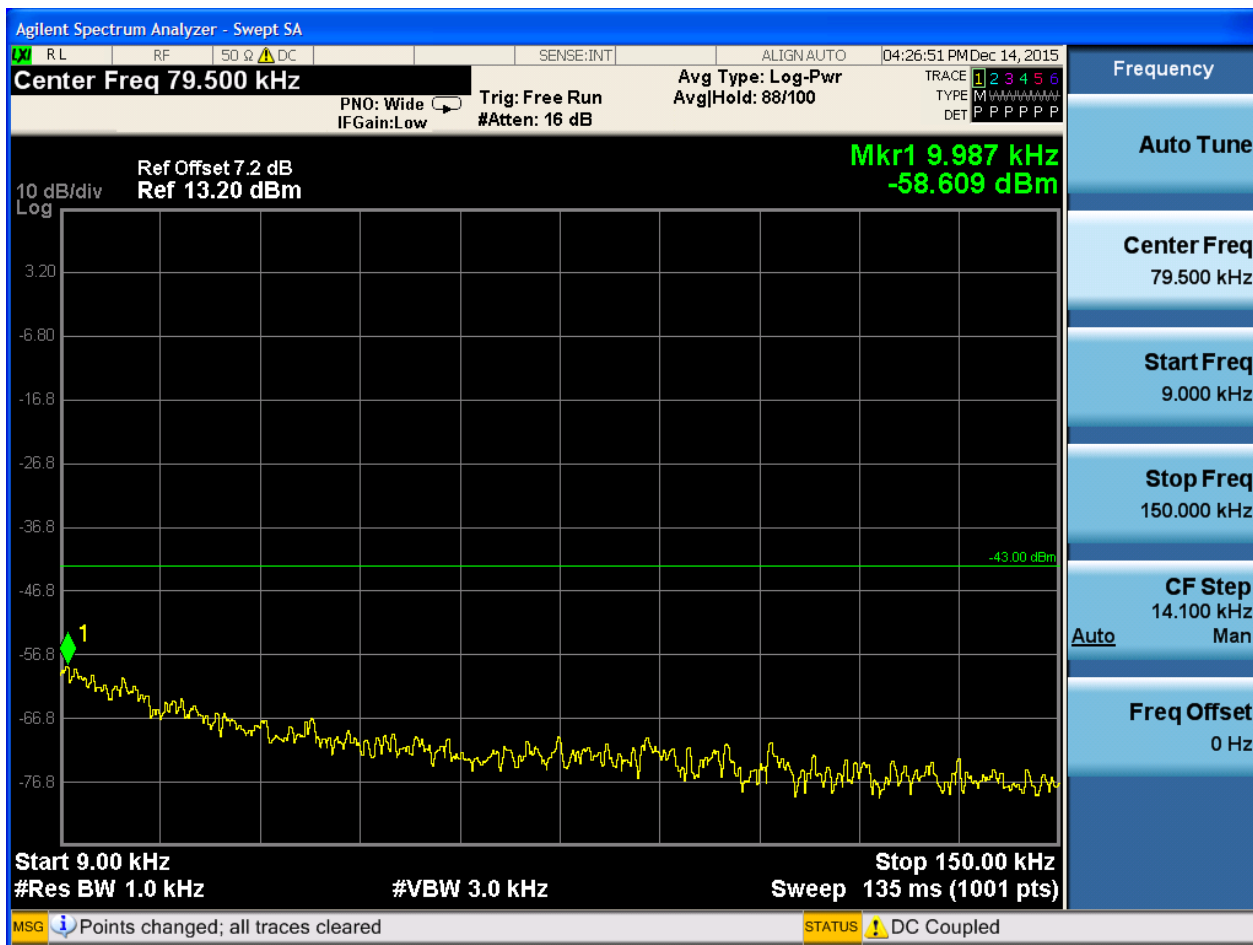


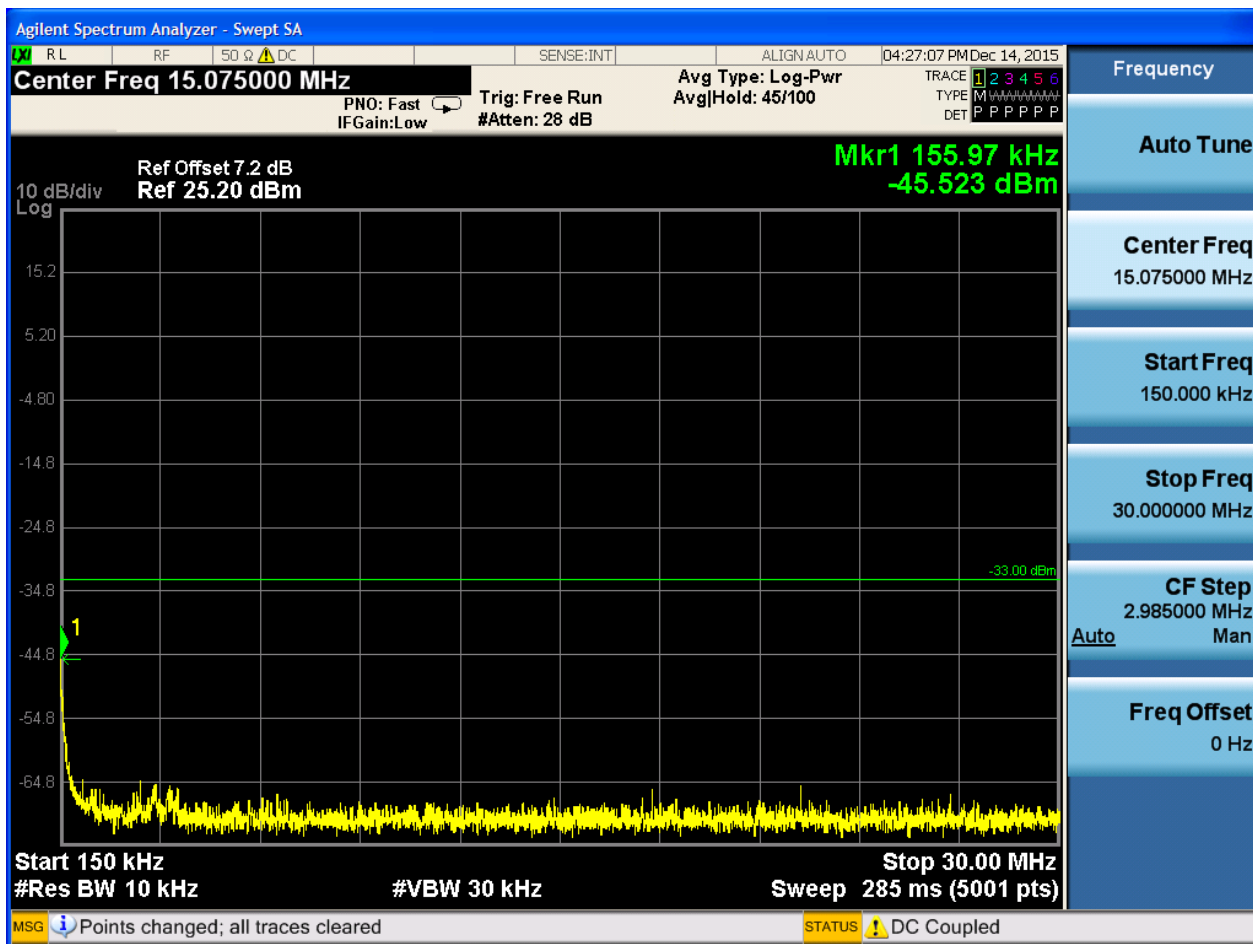
6.1.1.2 Test Mode = LTE/TM2

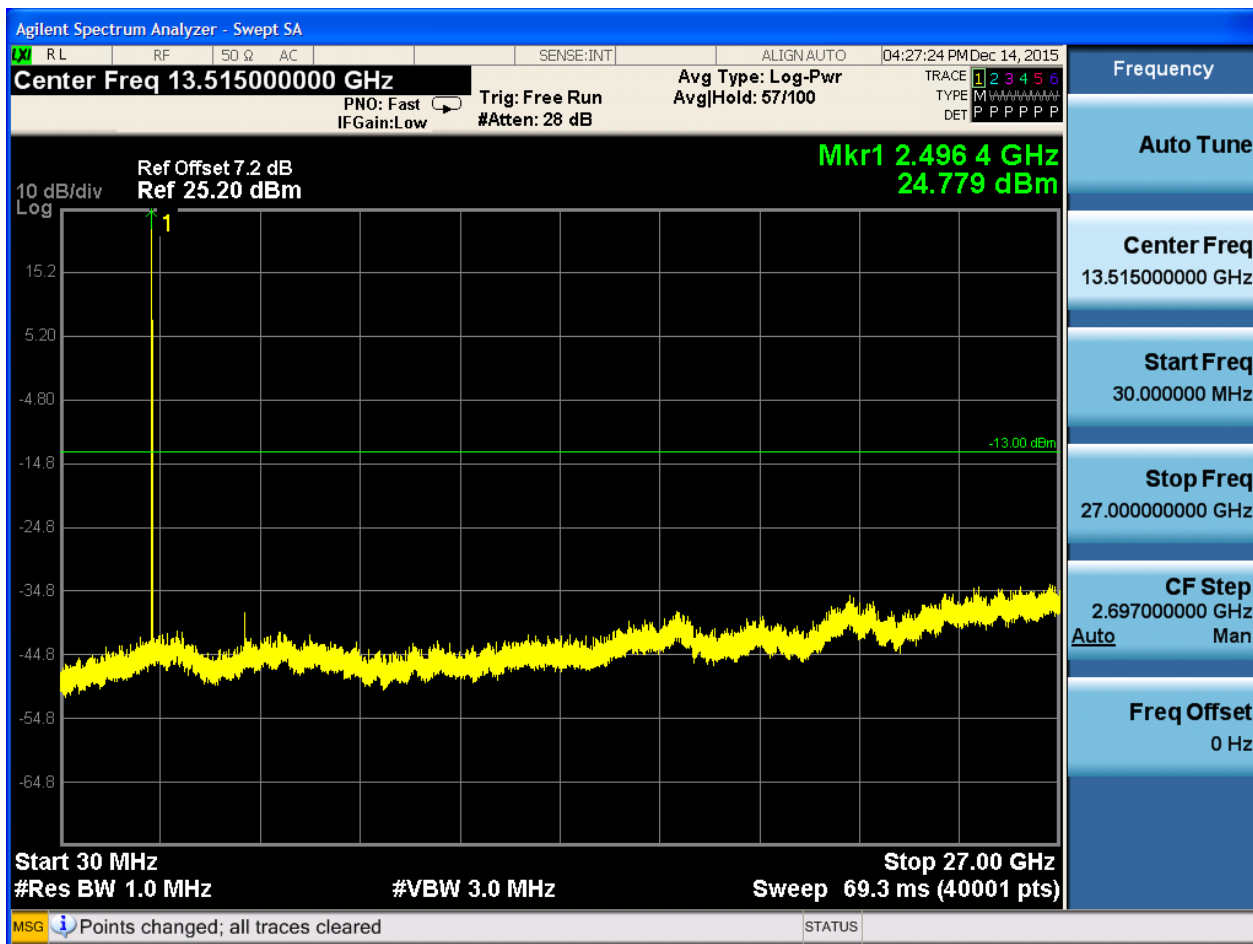
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



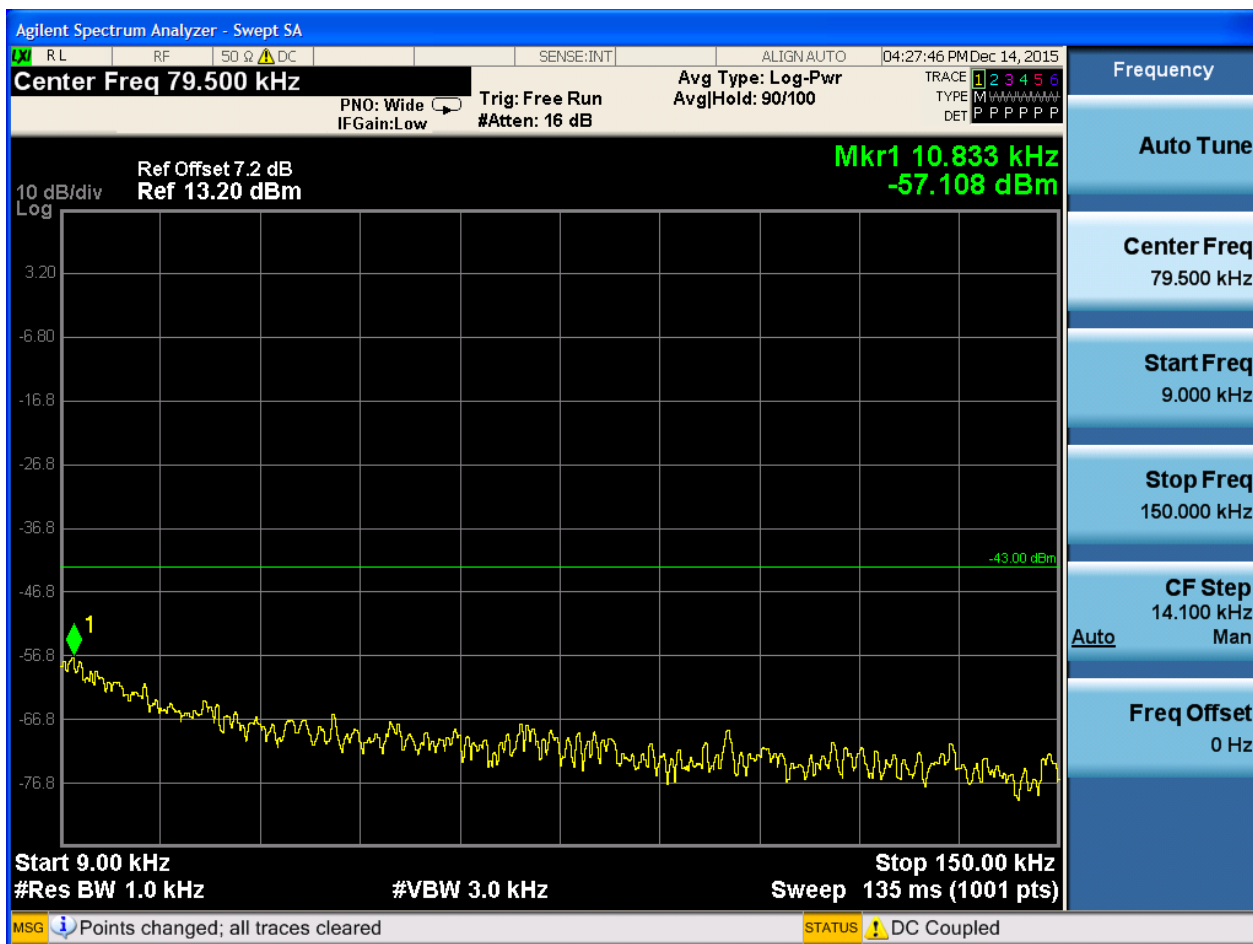


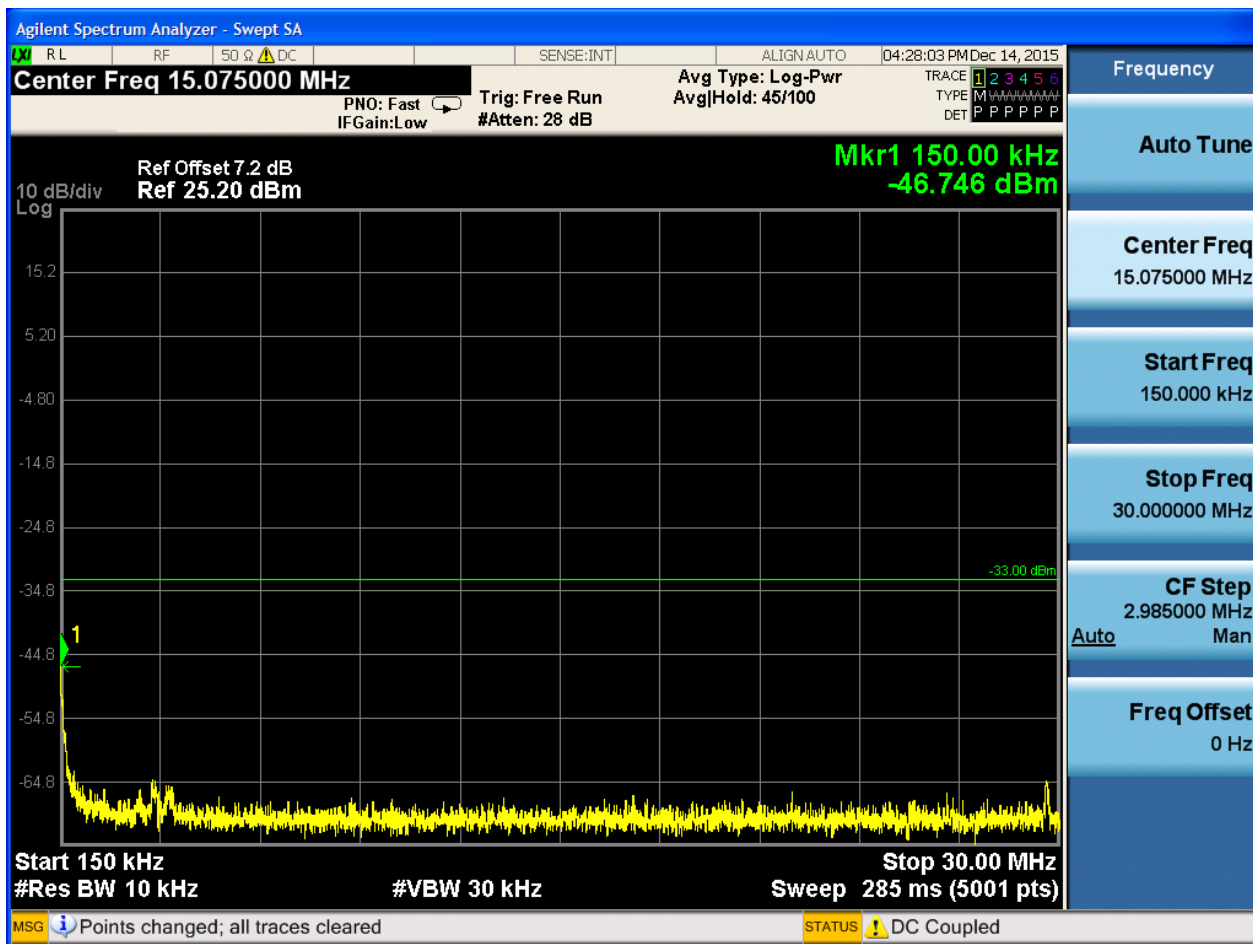


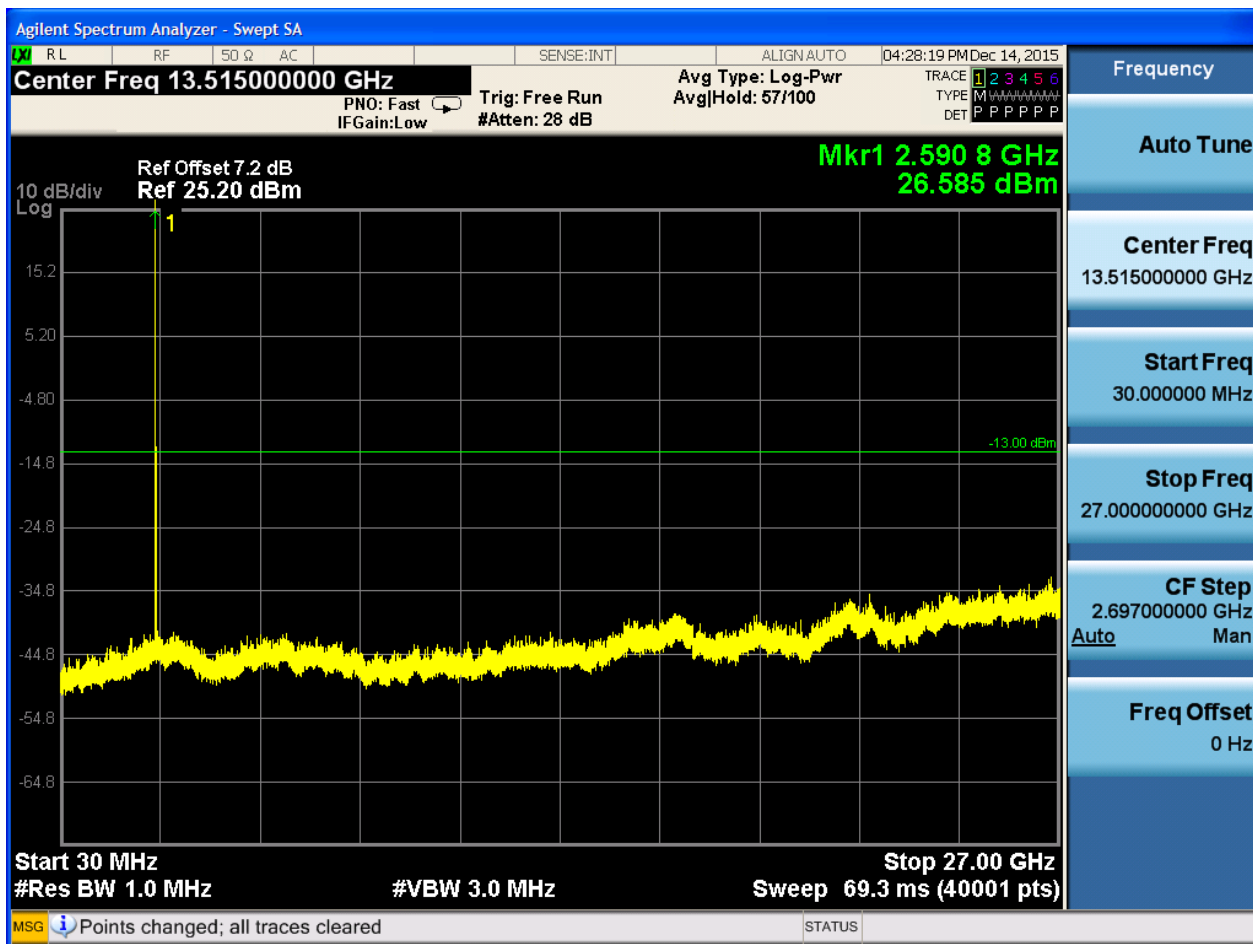


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



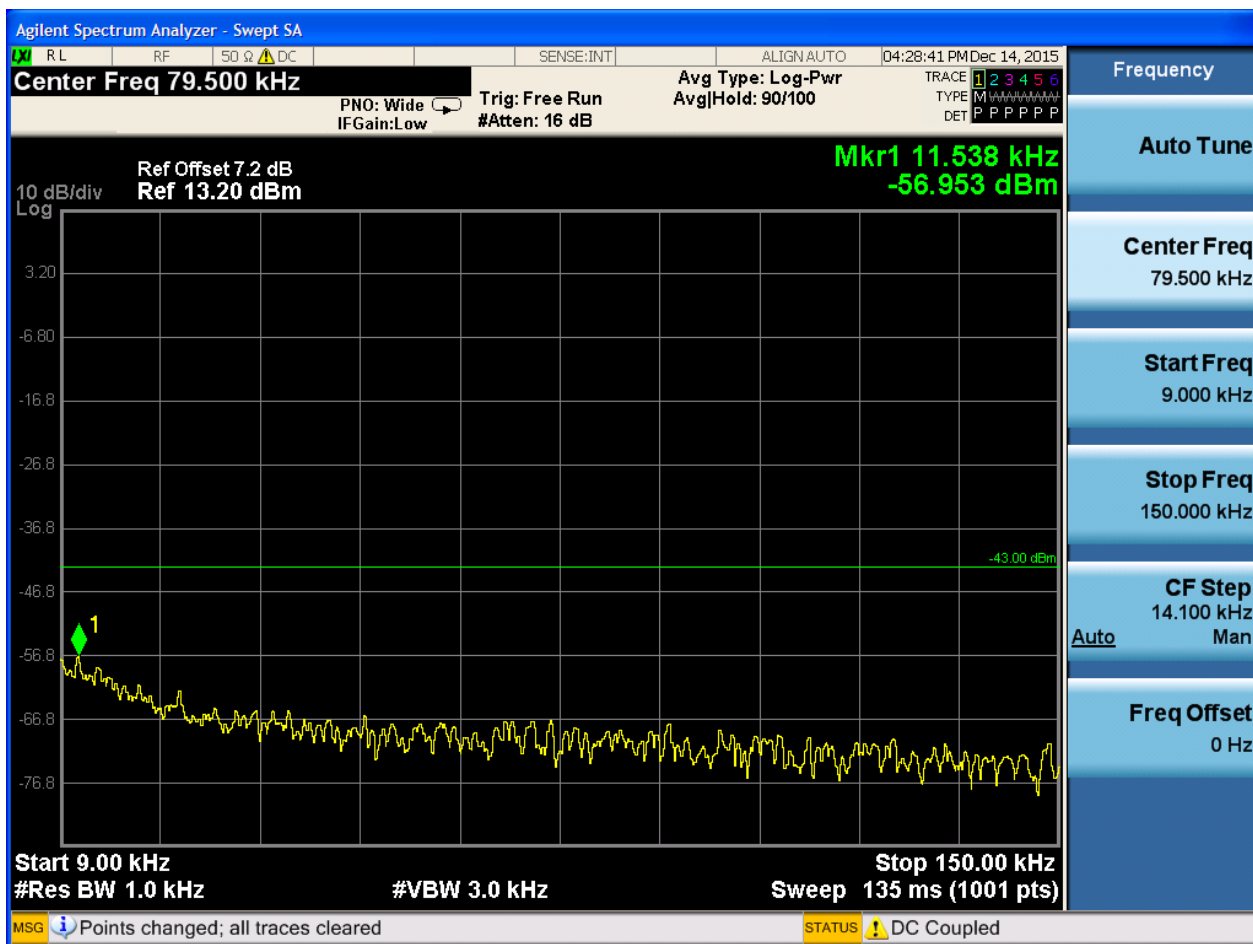




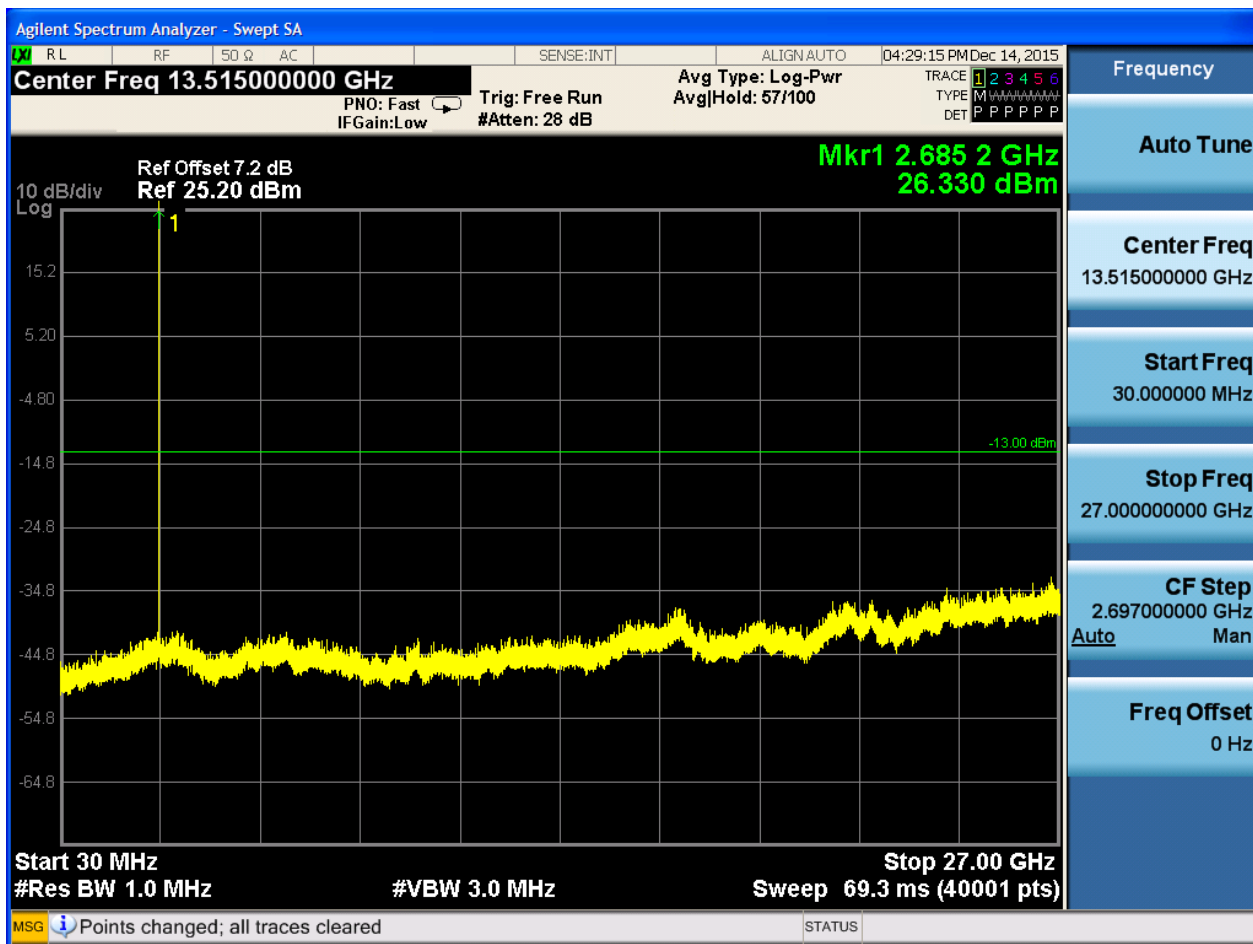


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





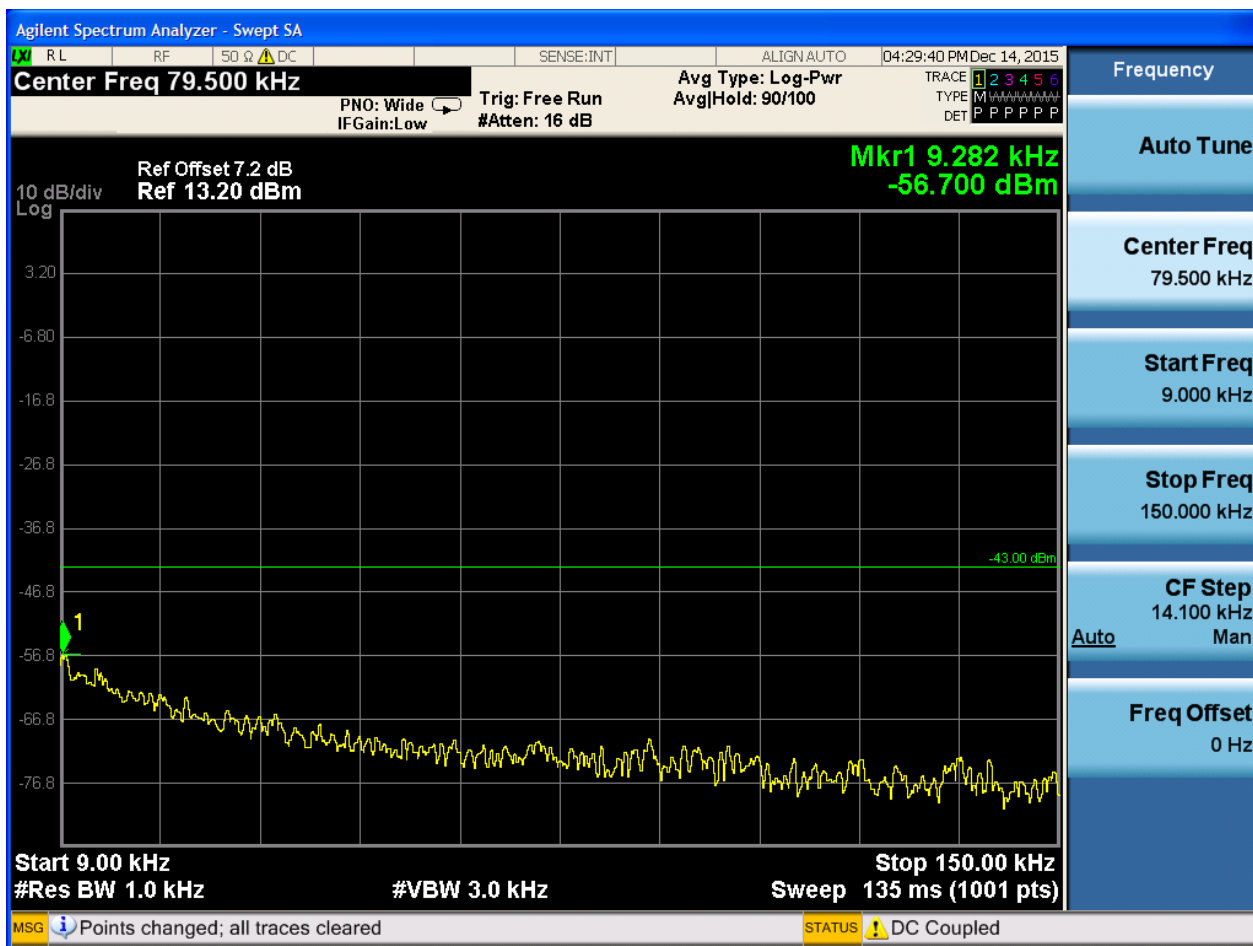


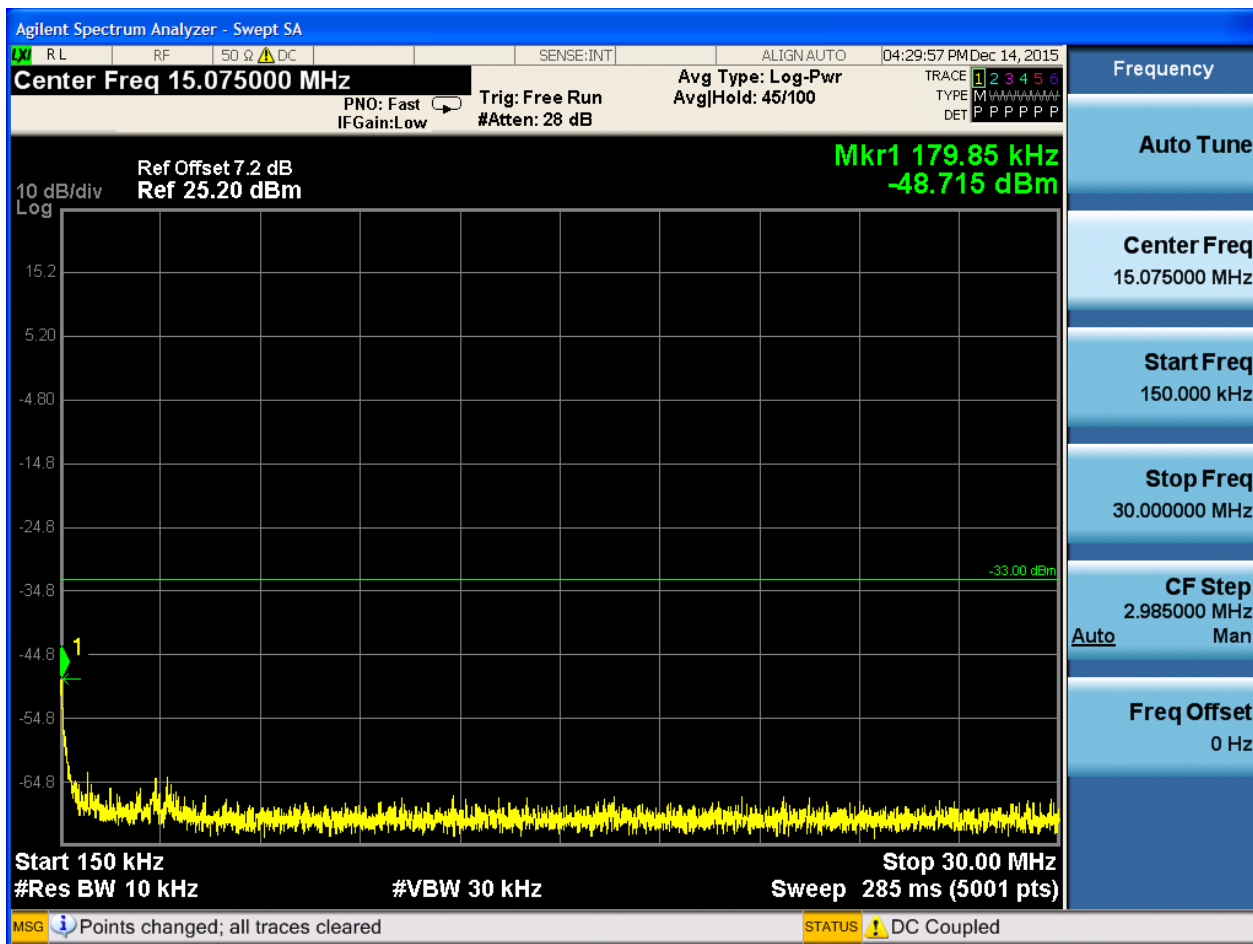


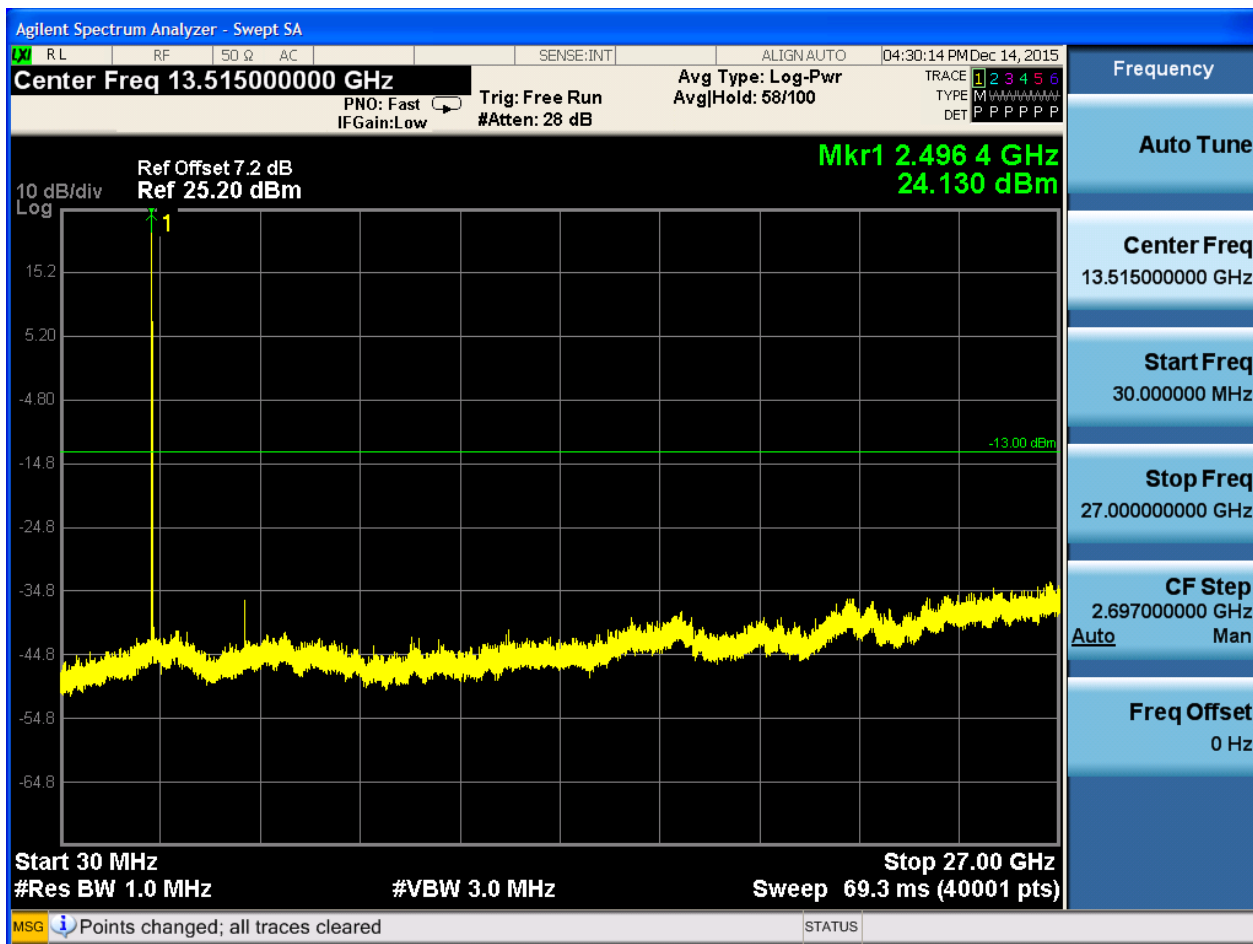
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

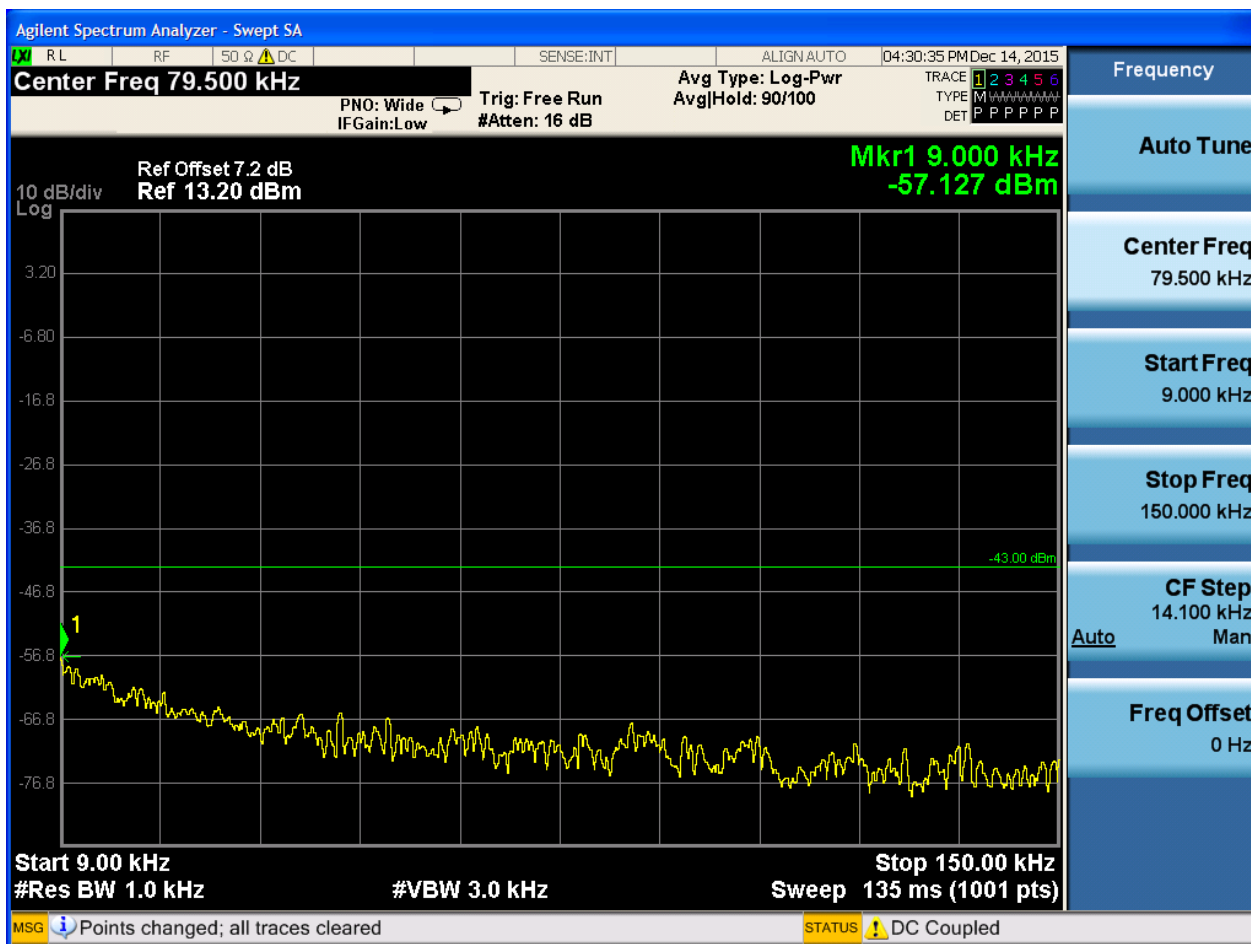


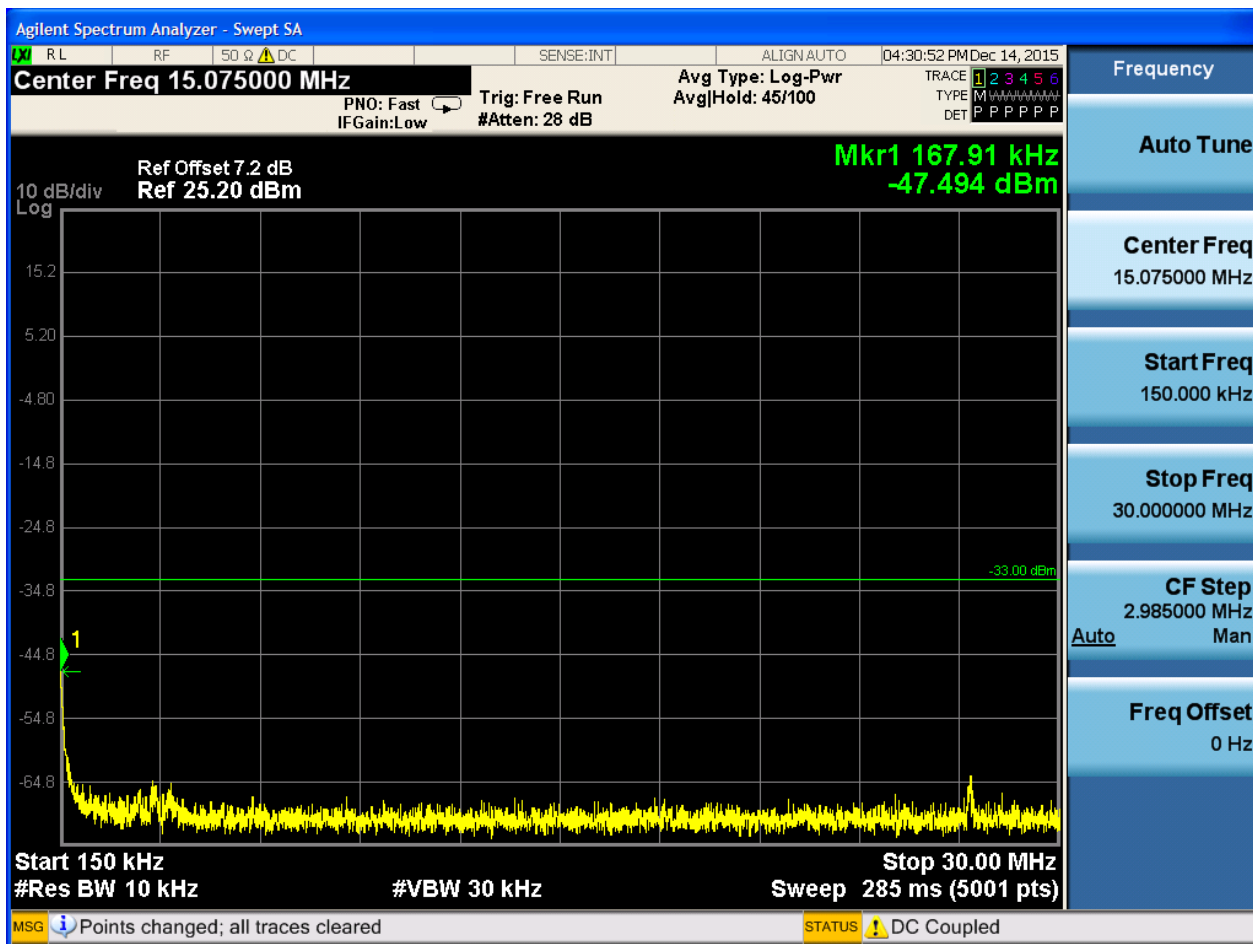


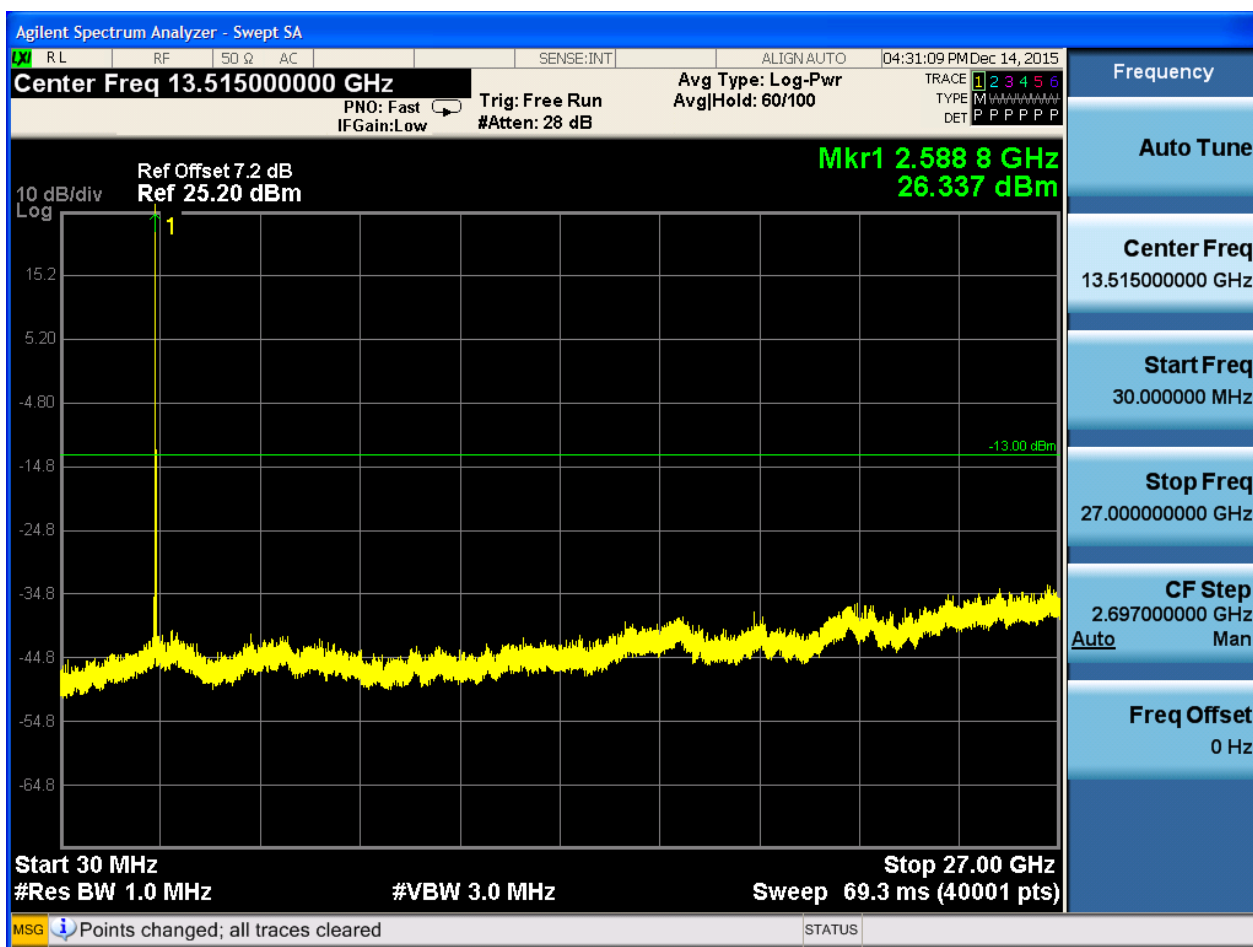


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0



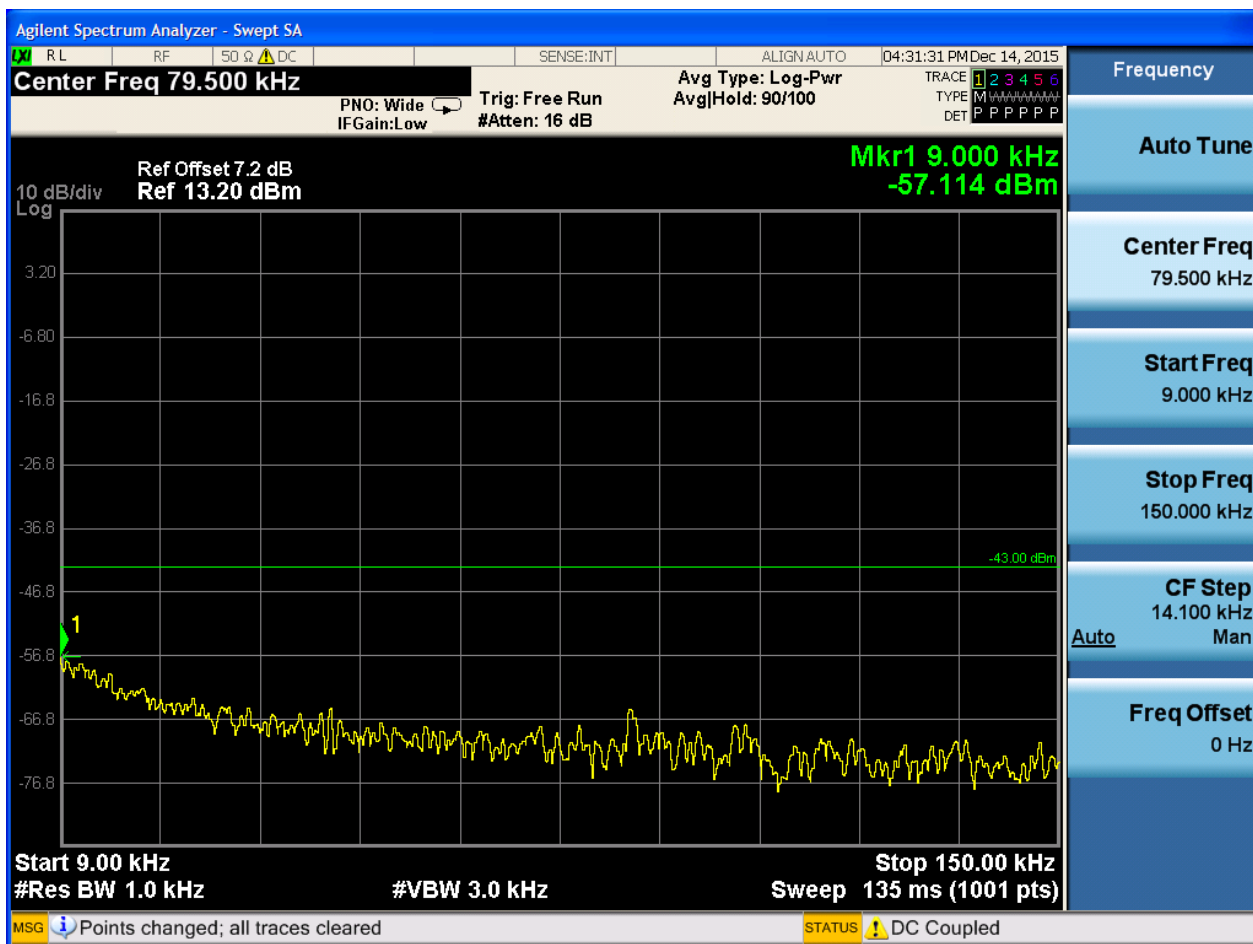


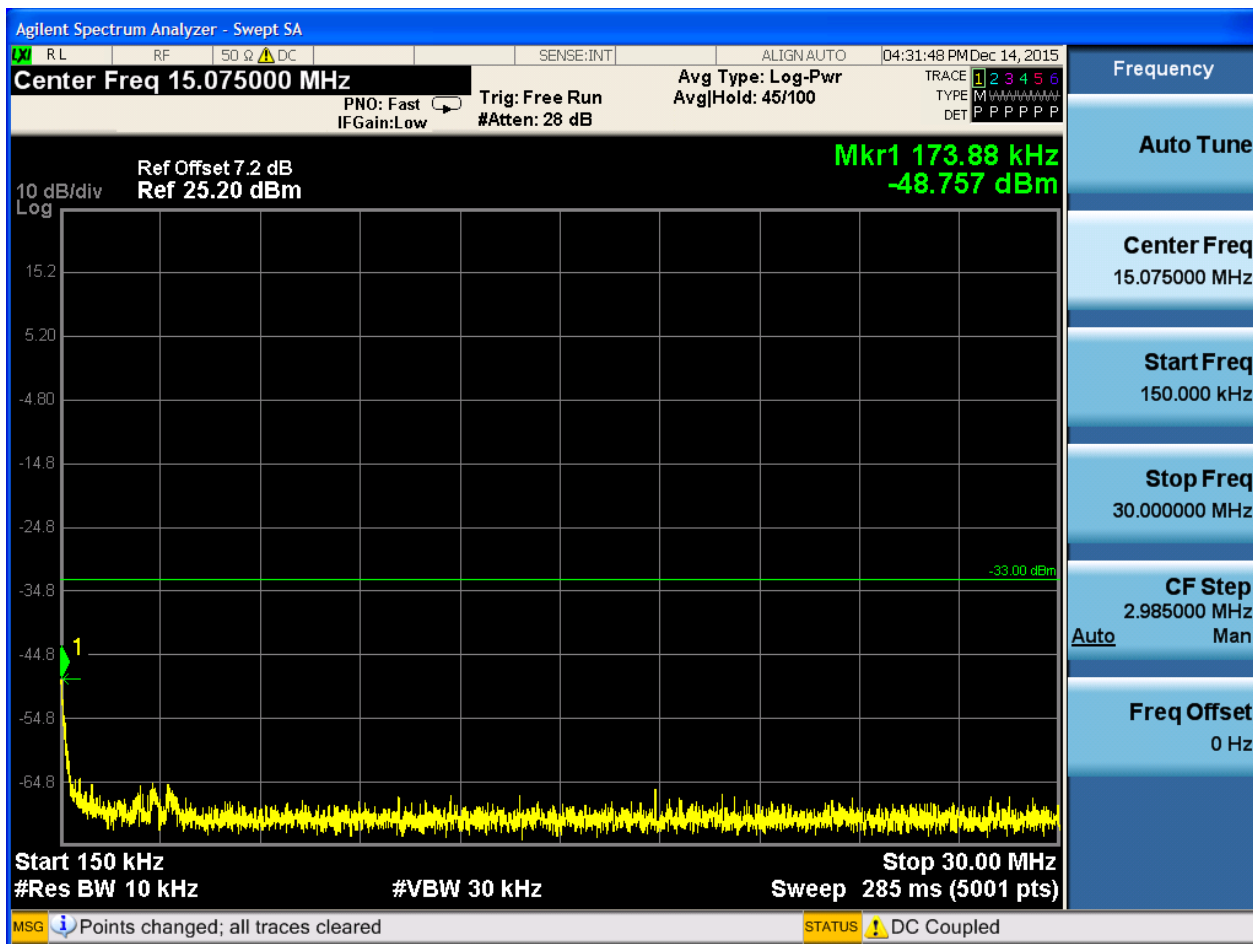


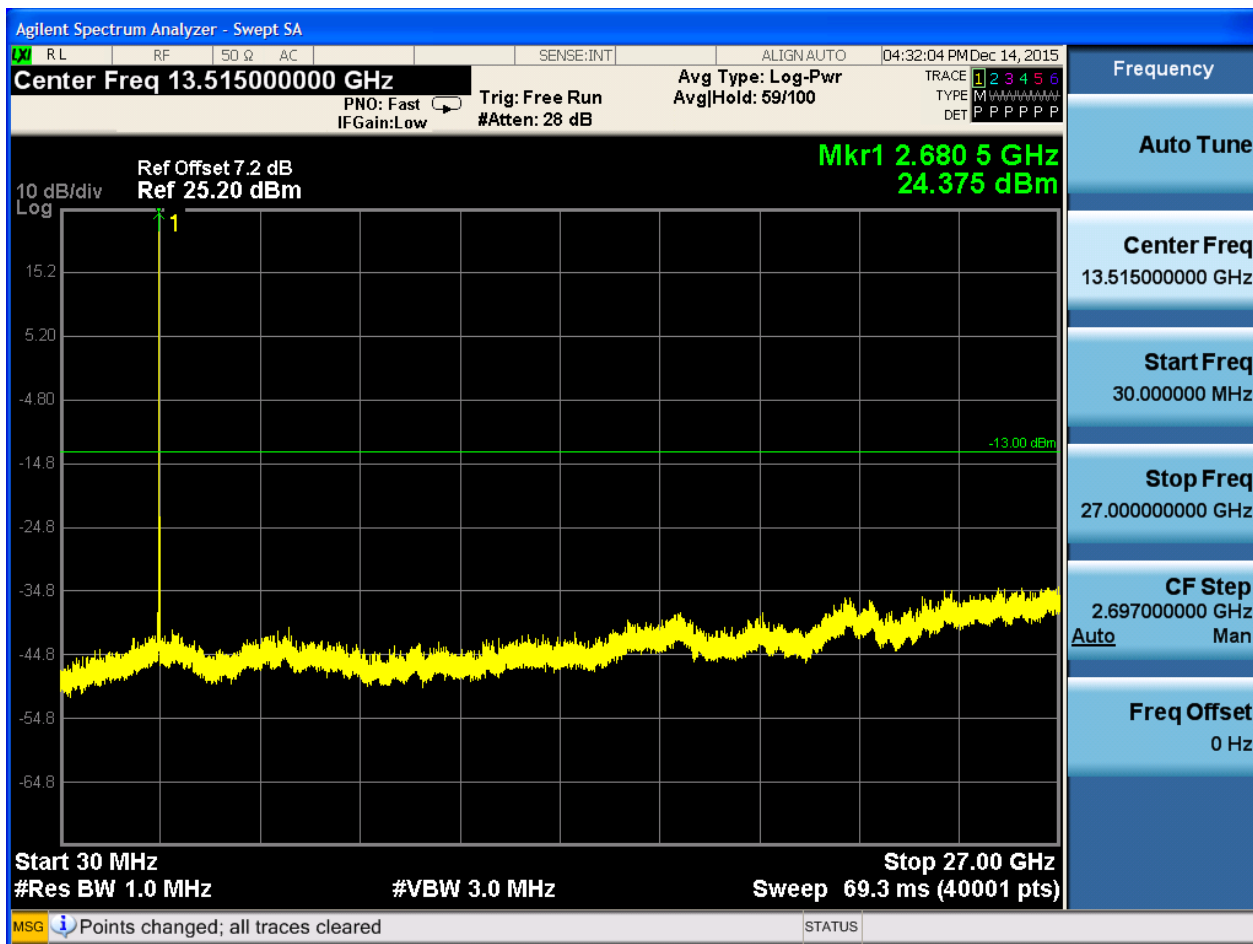


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





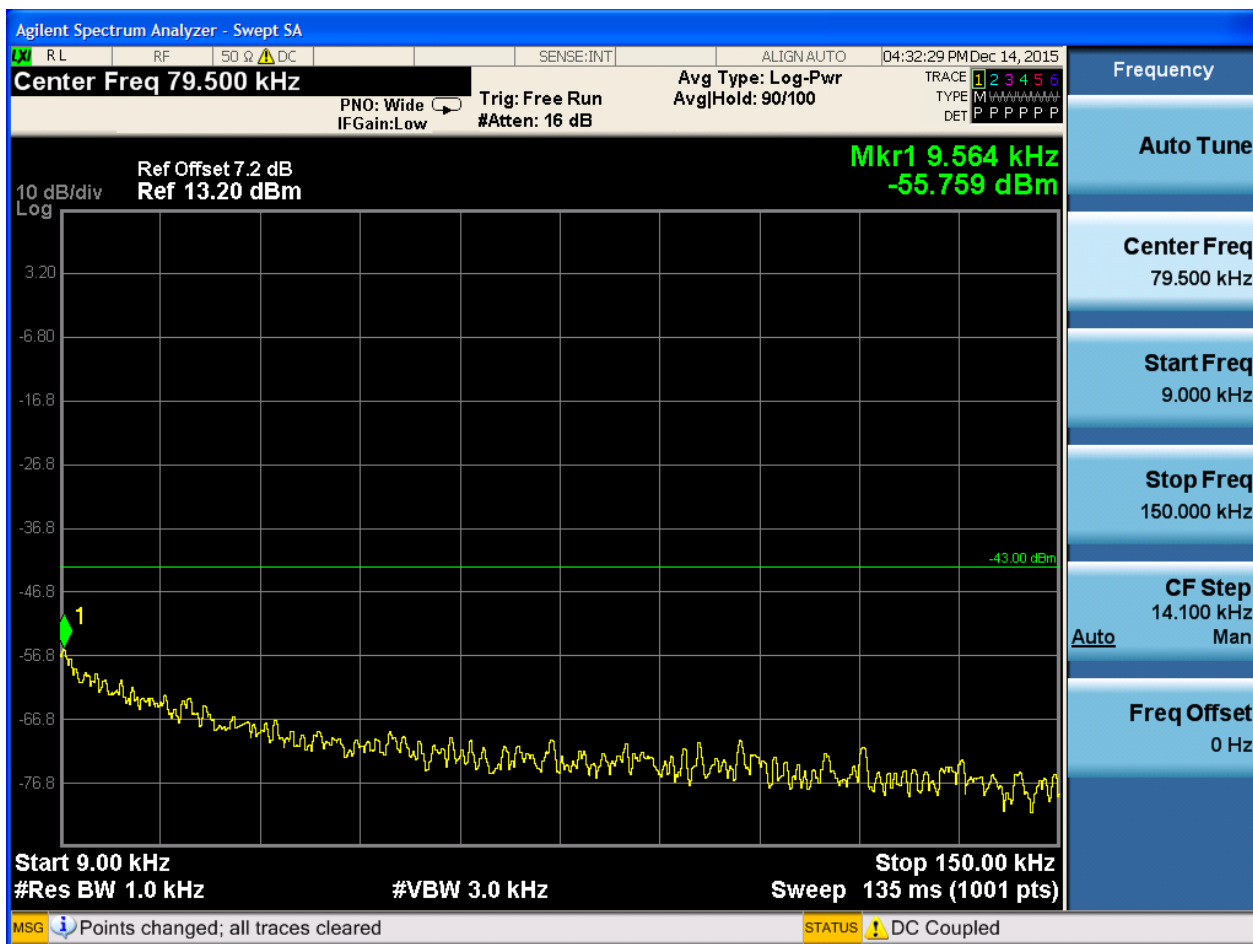


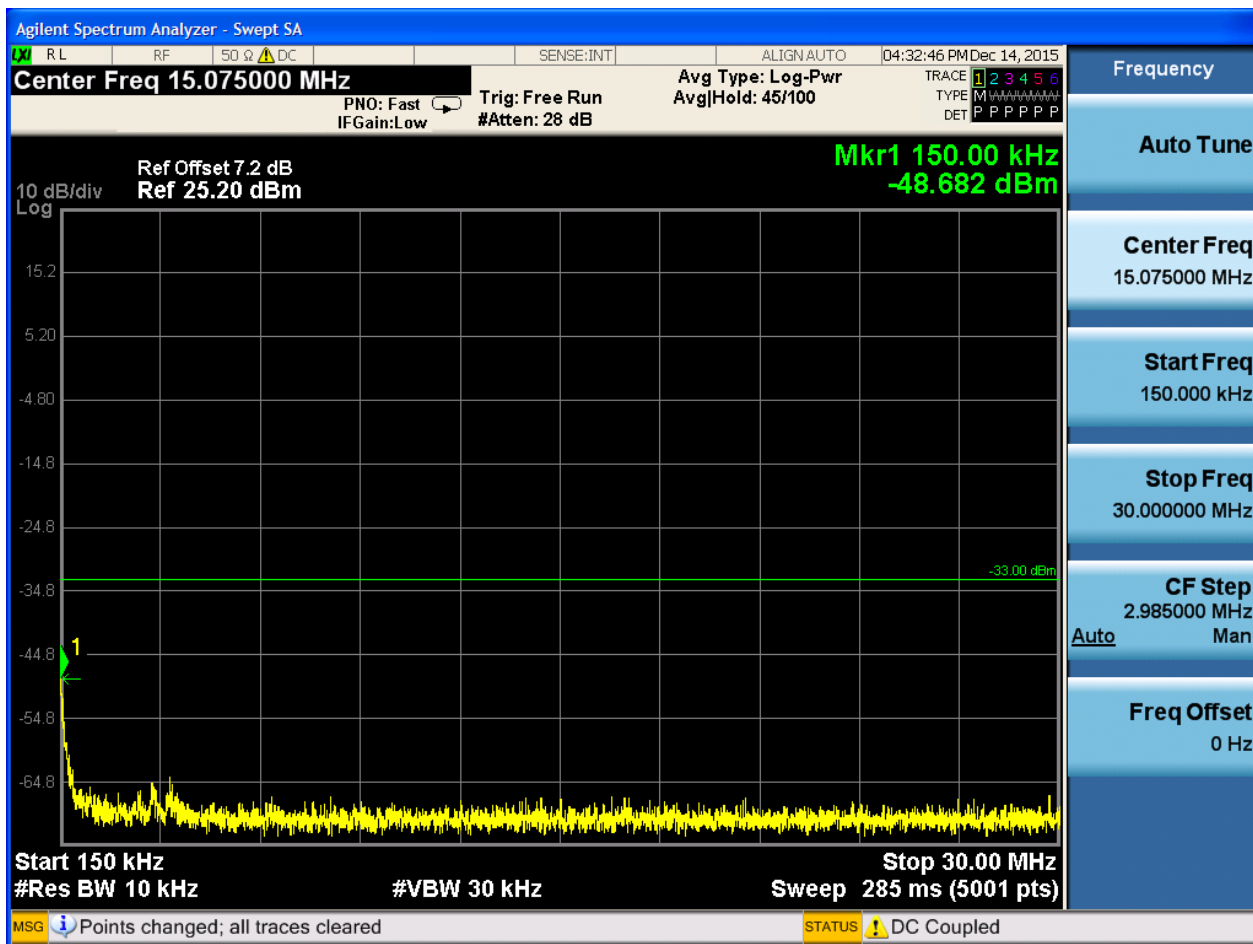


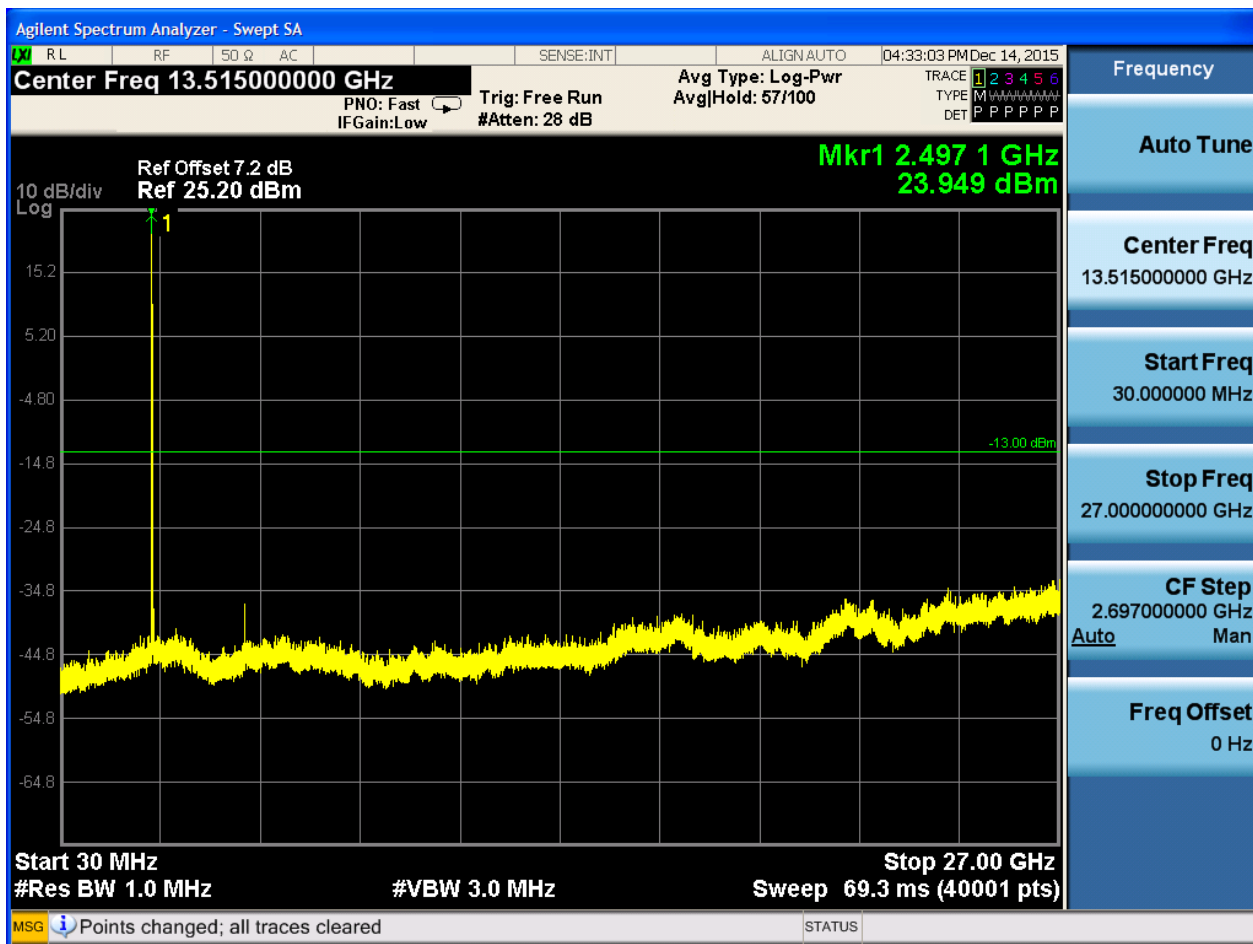
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0



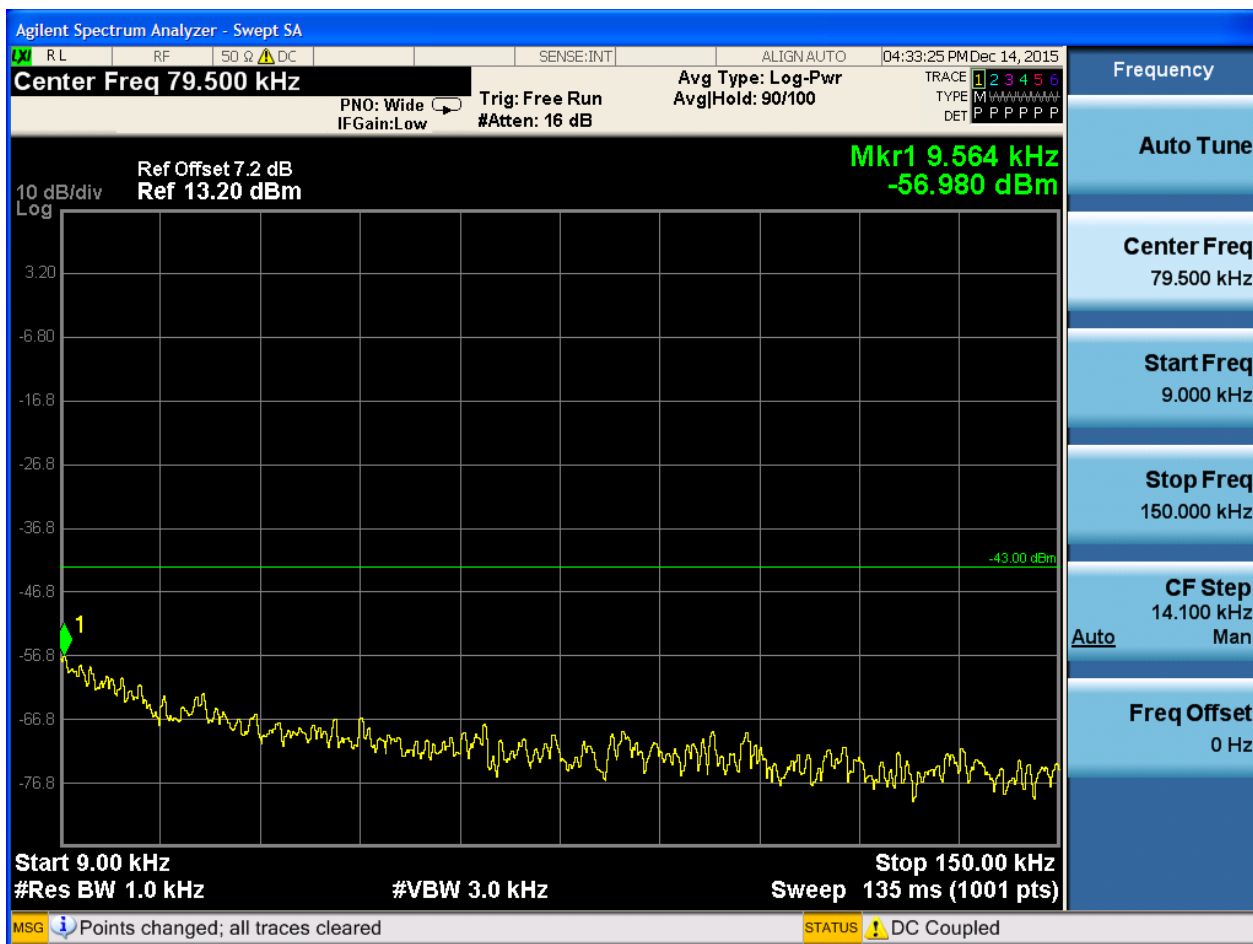


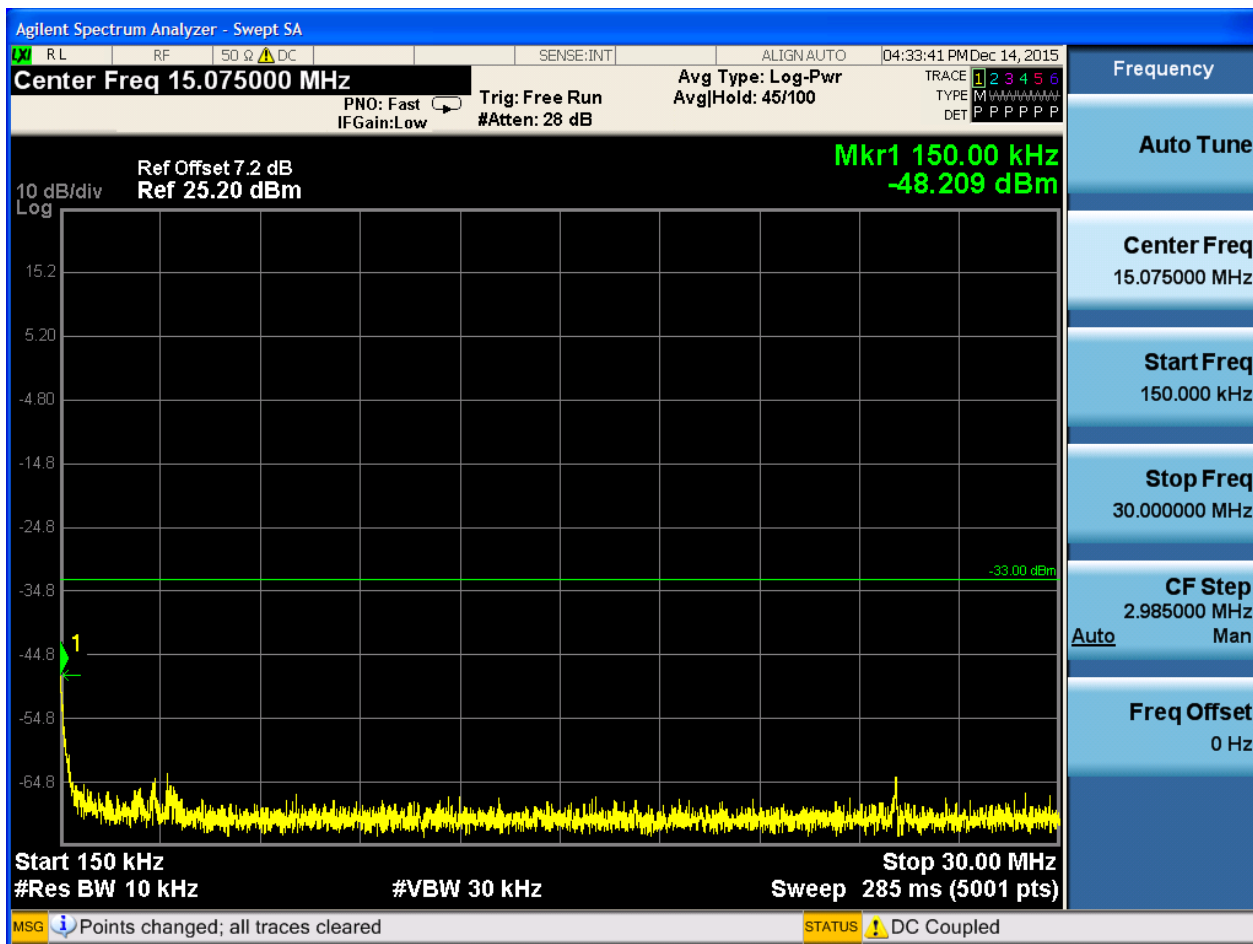


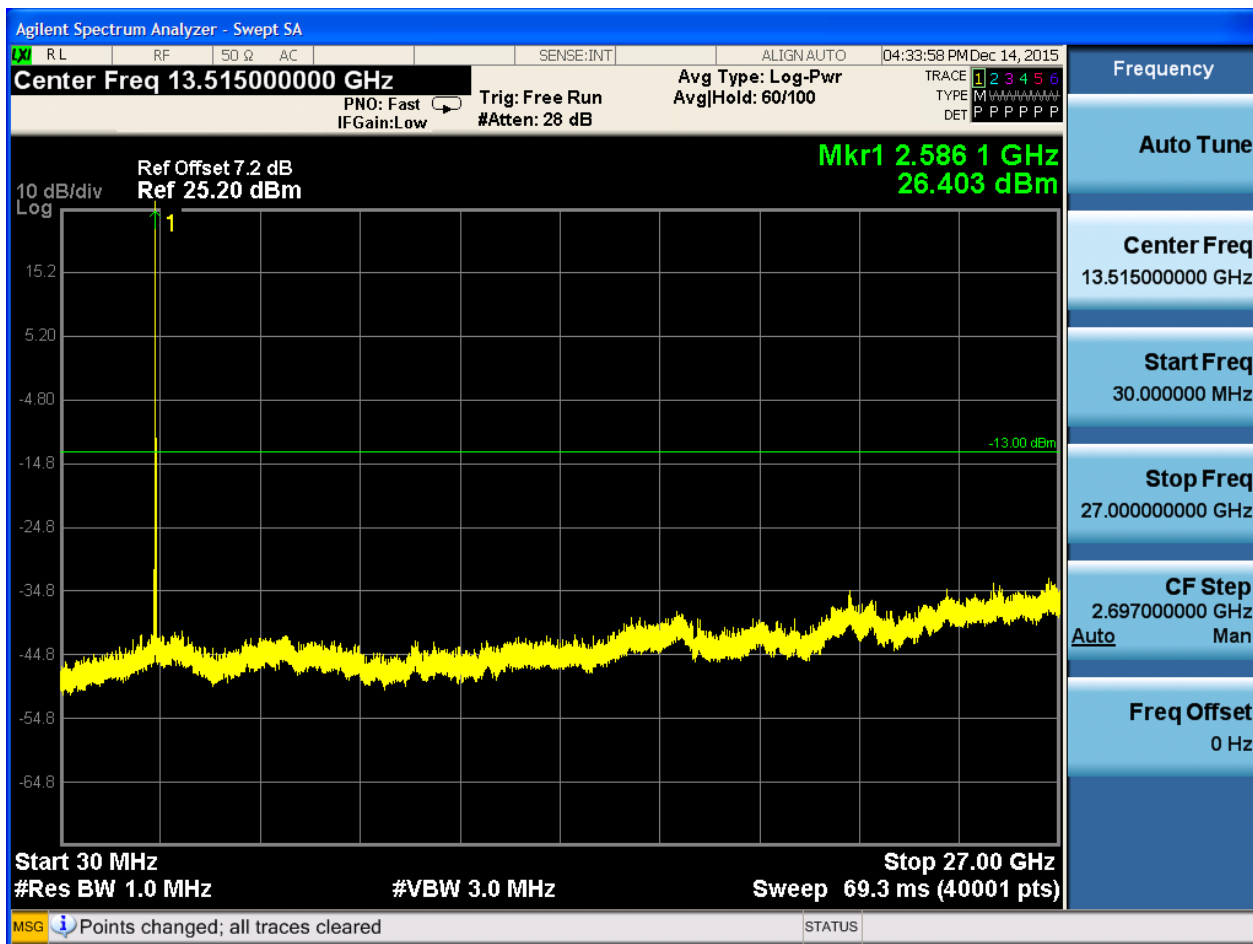


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



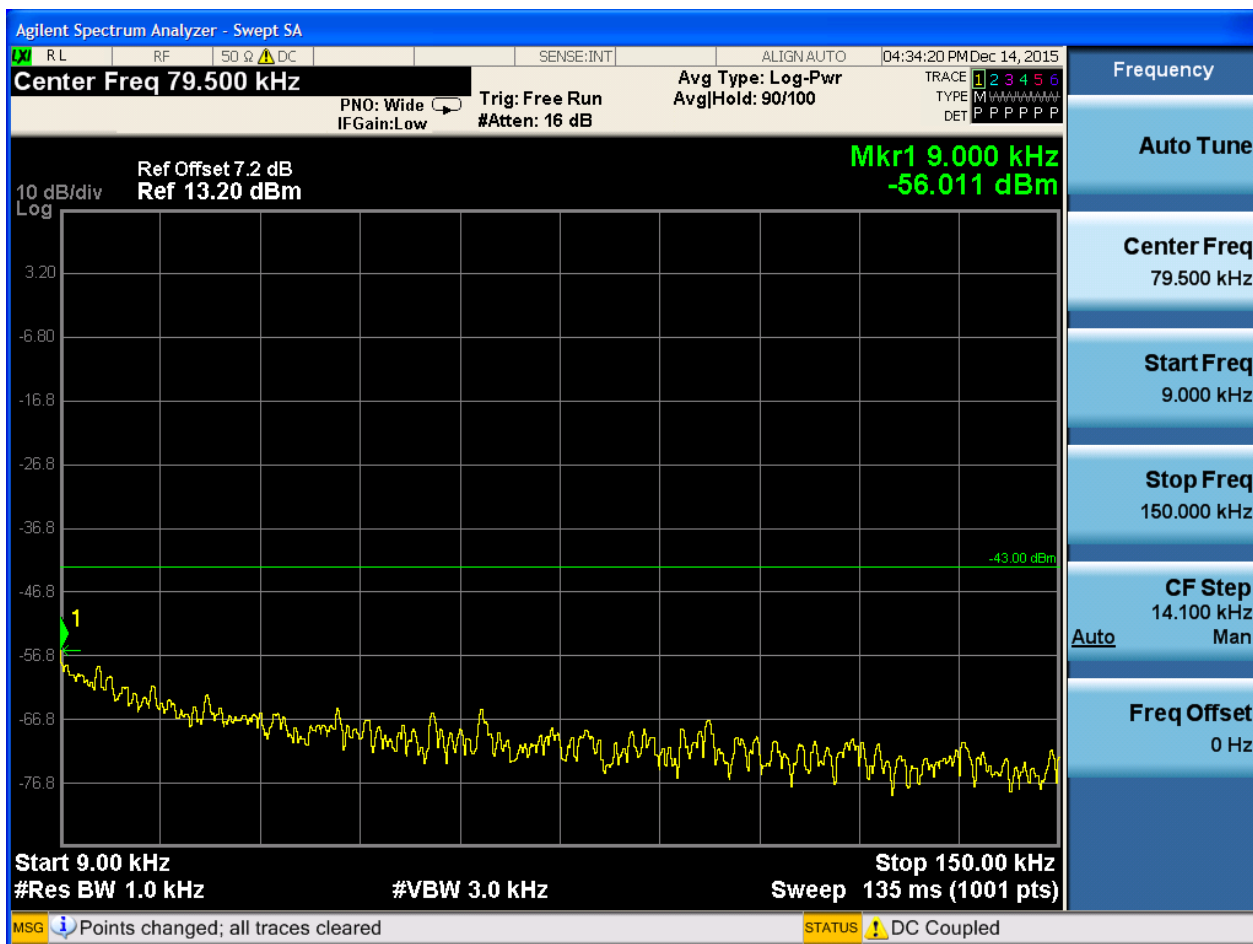


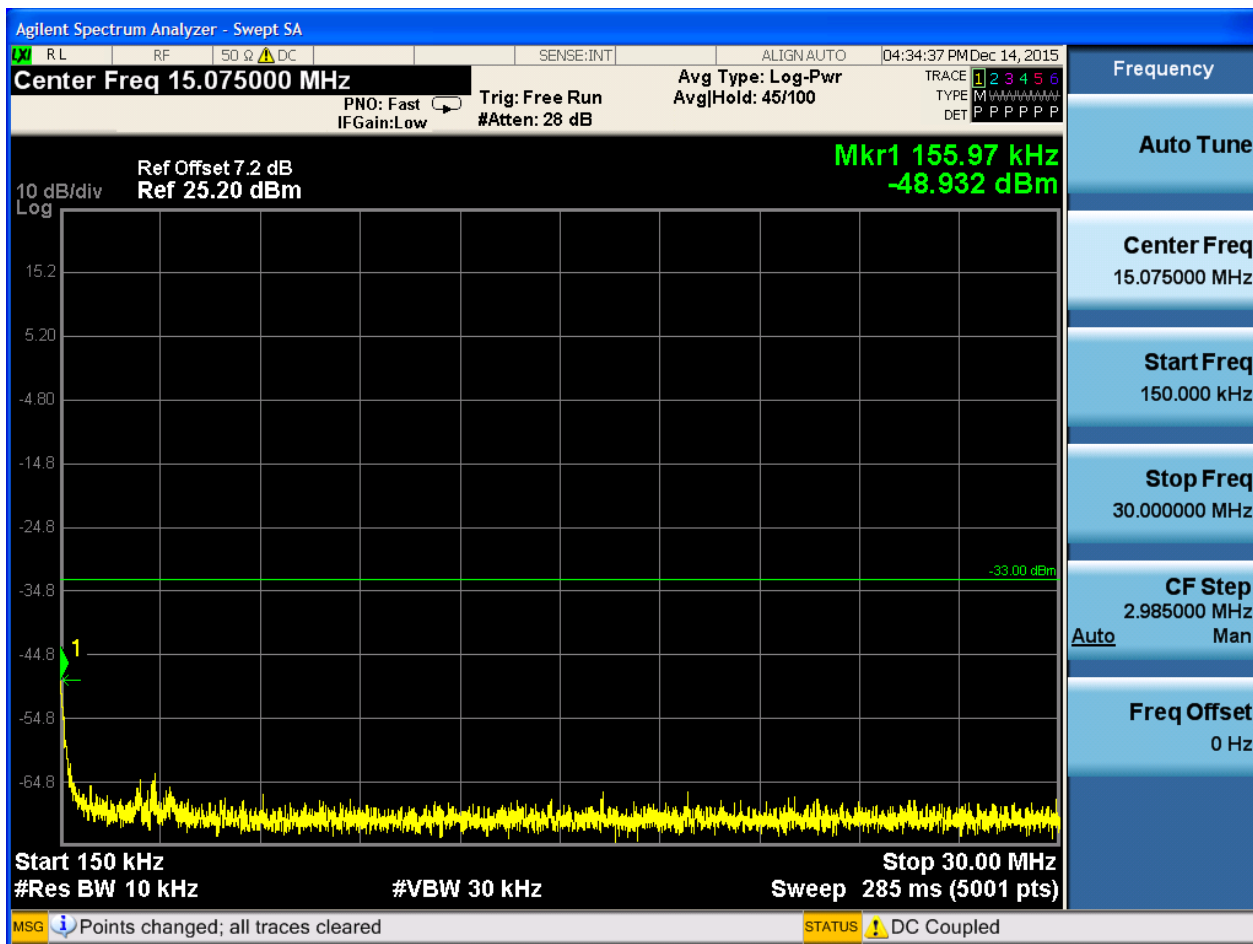


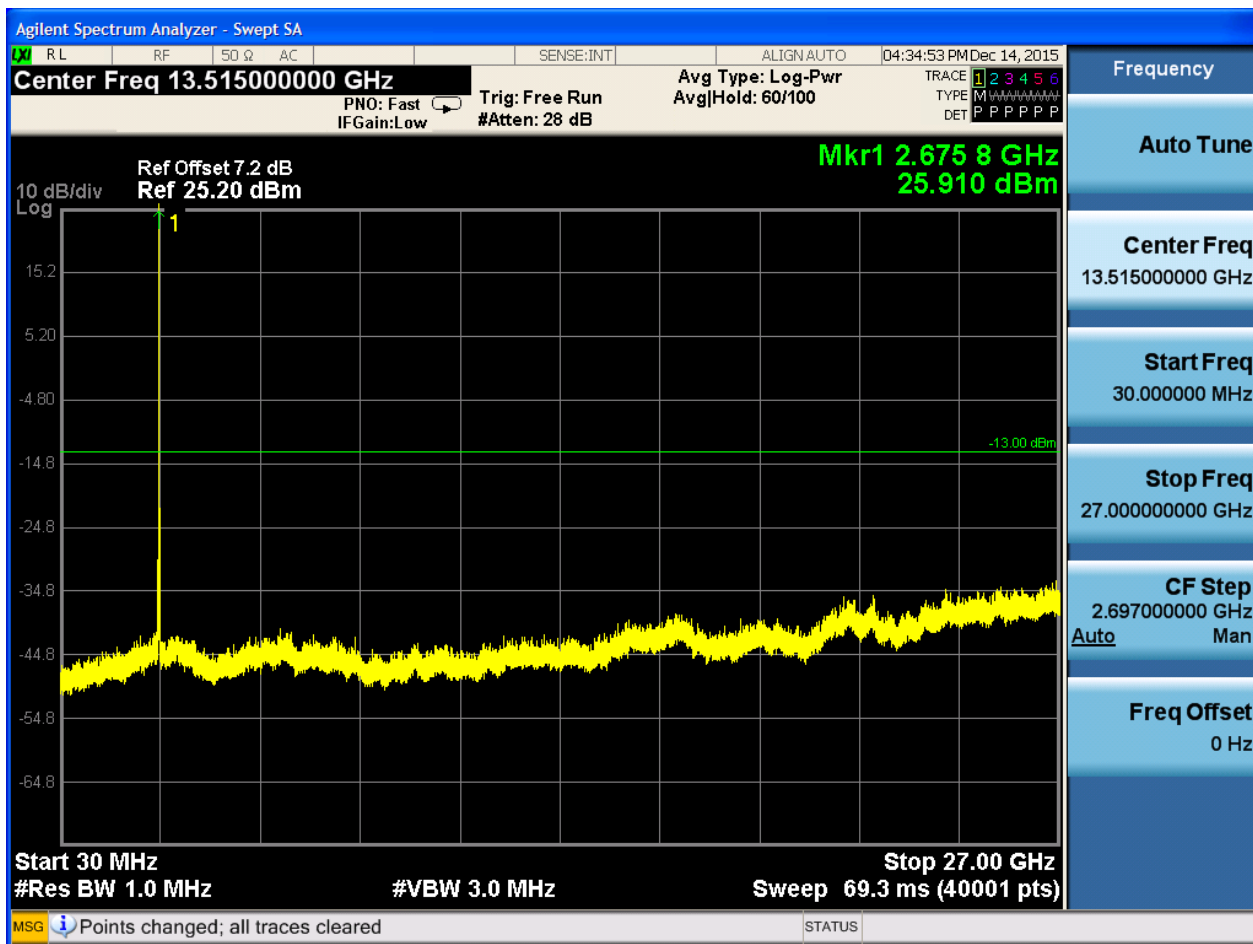


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





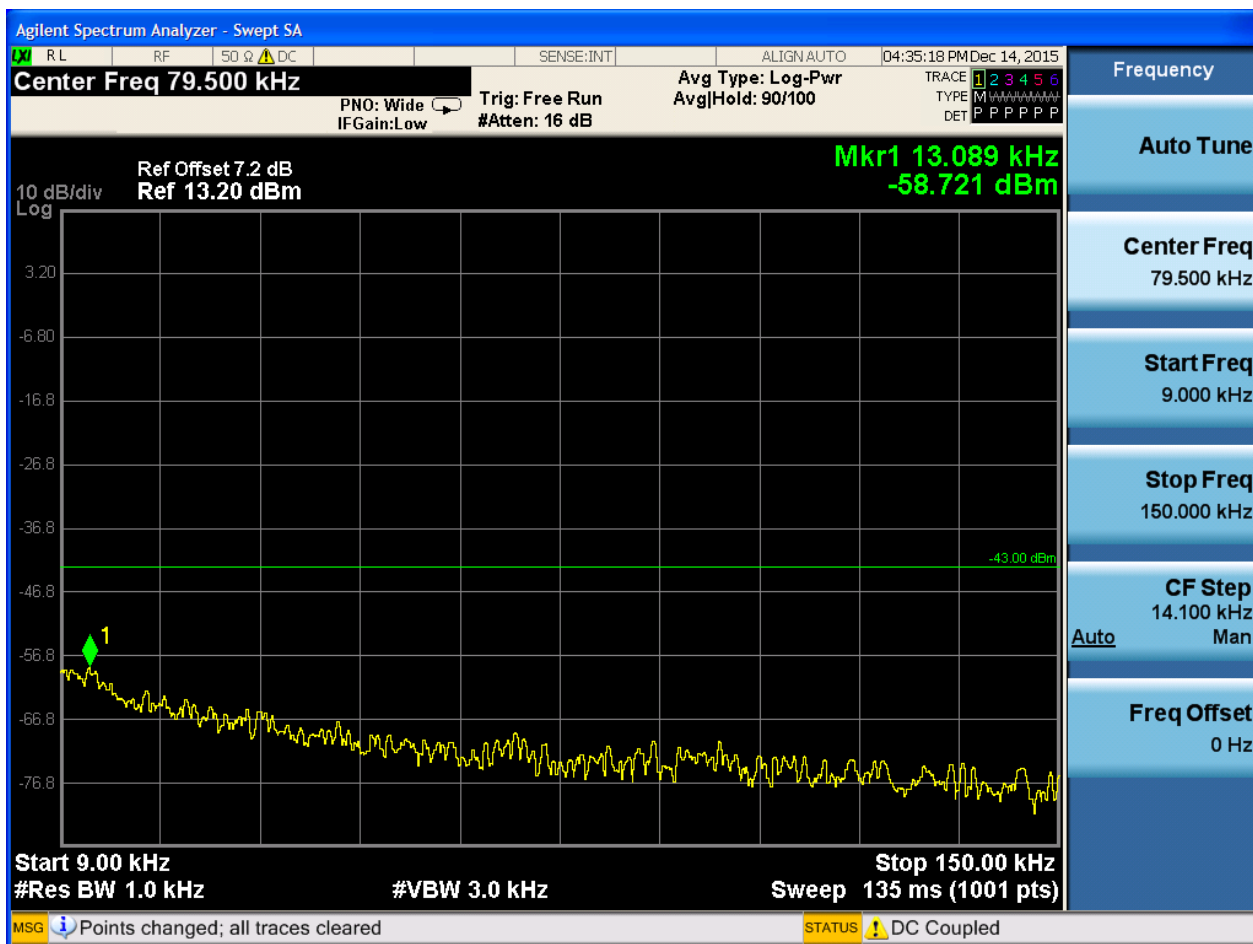


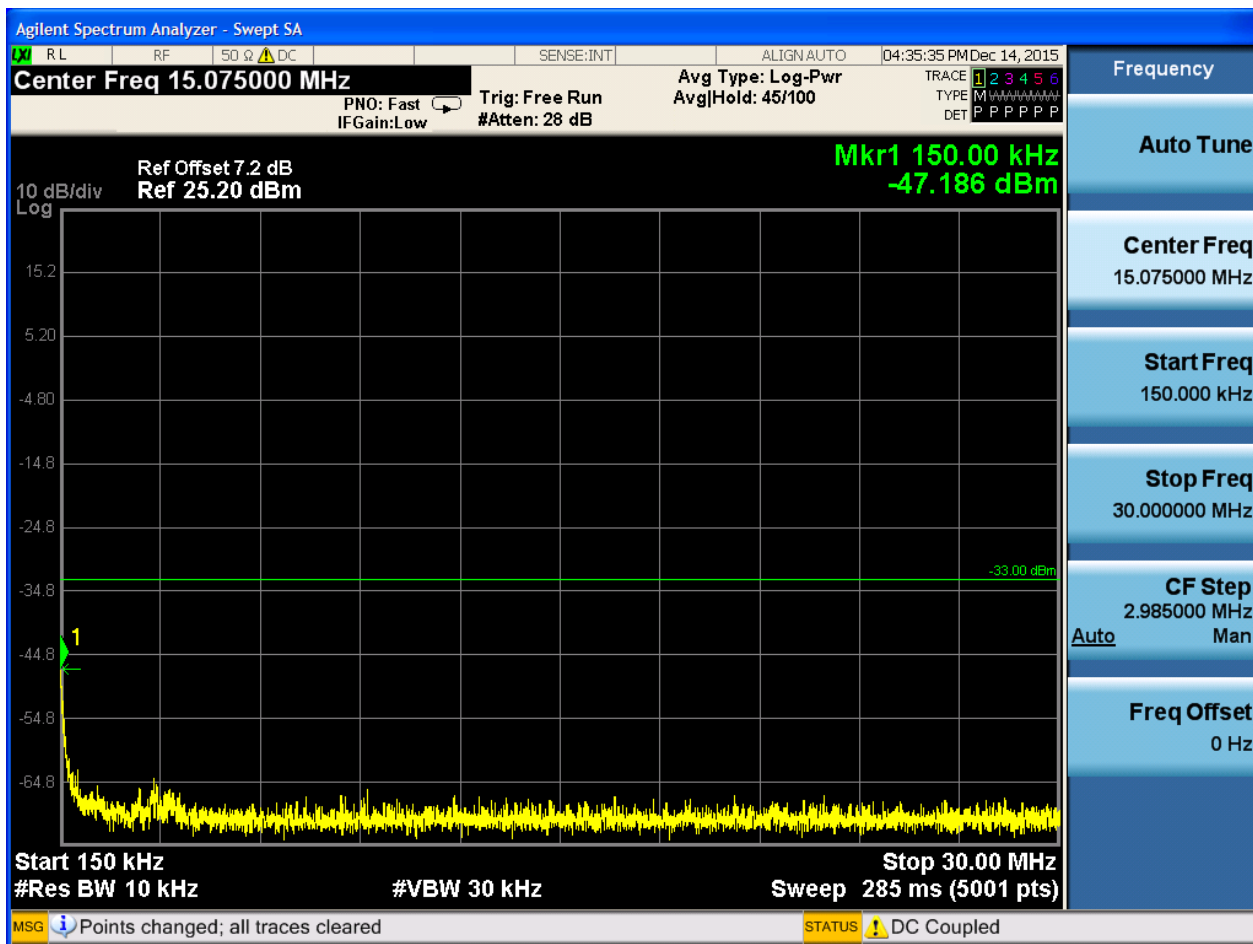


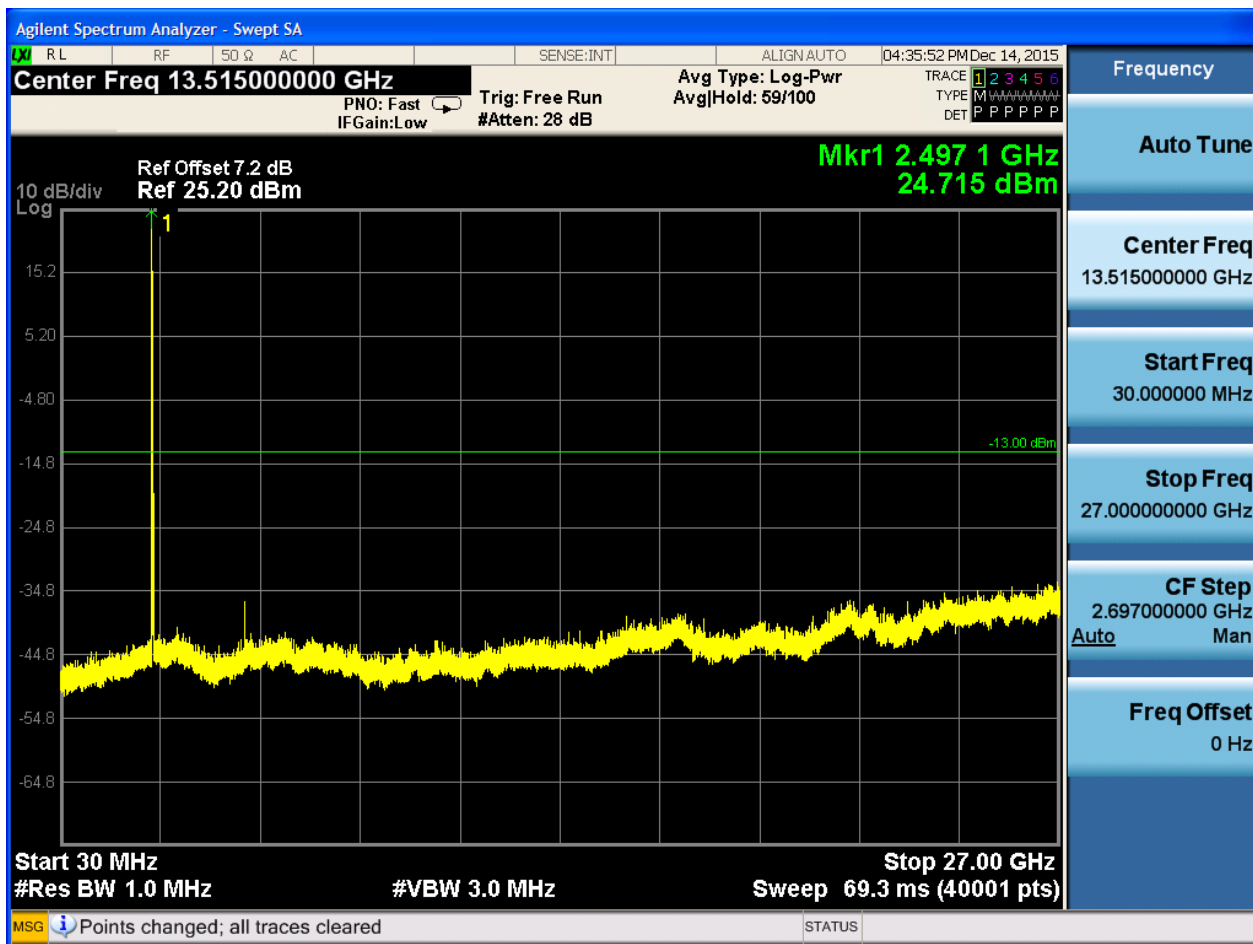
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



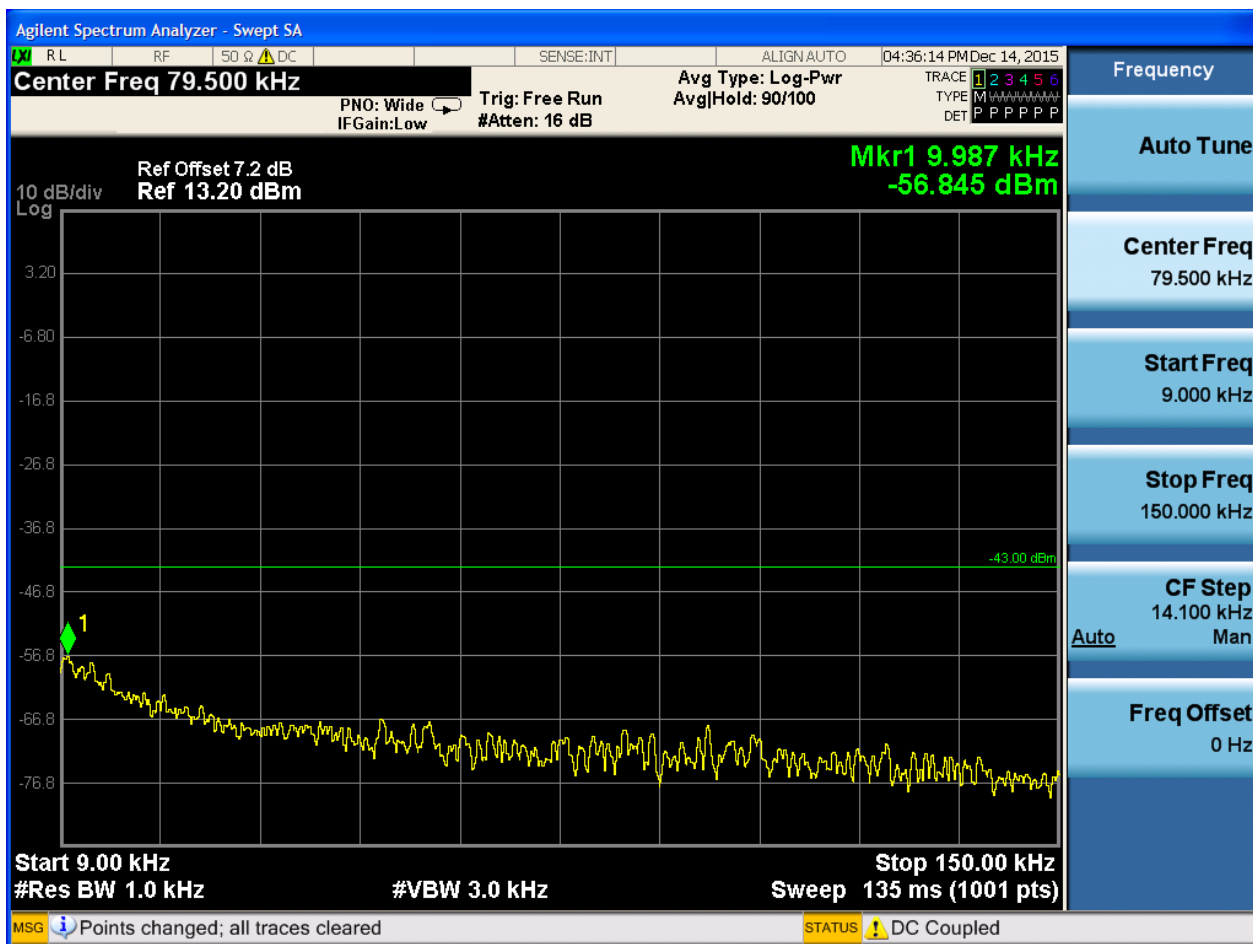


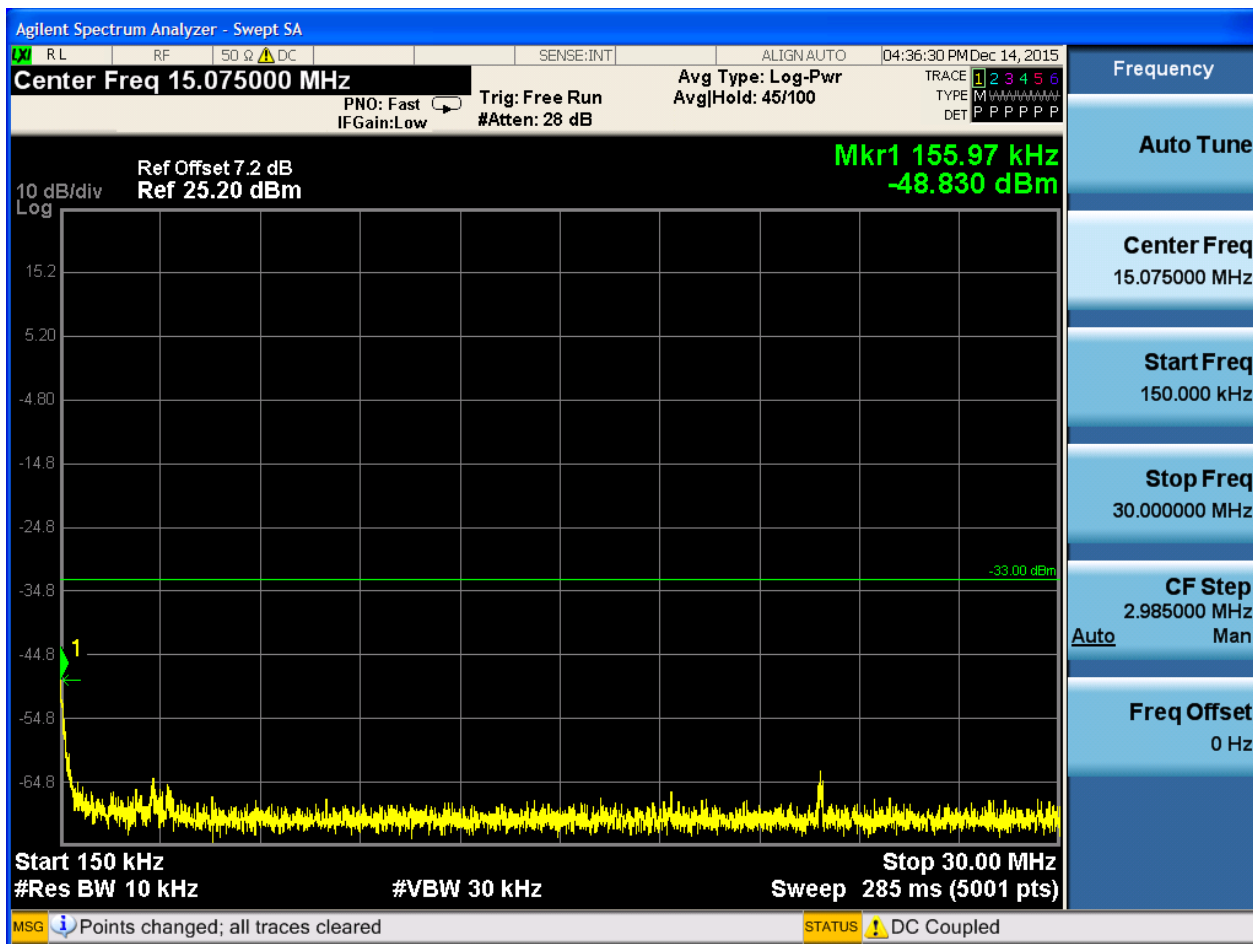


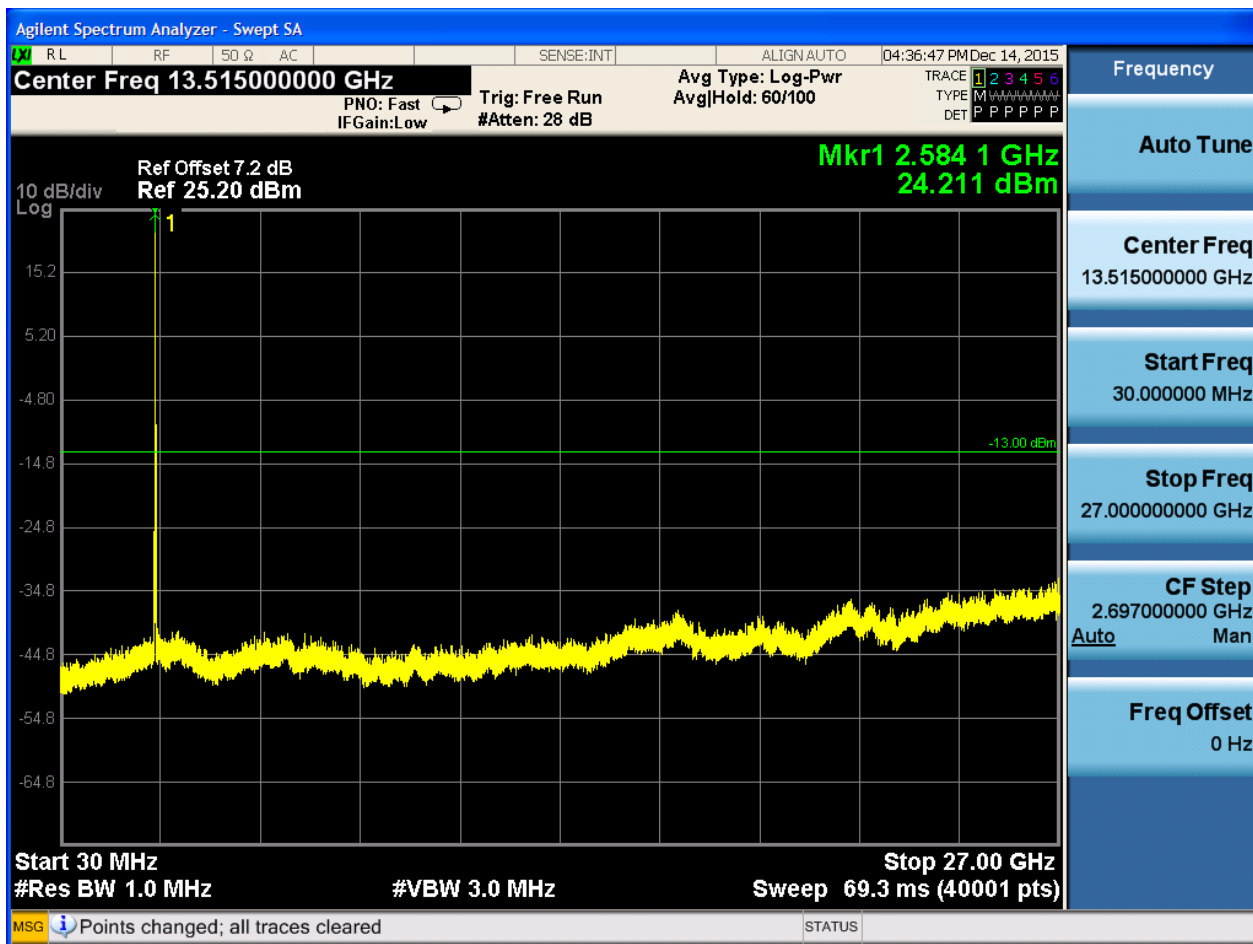


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



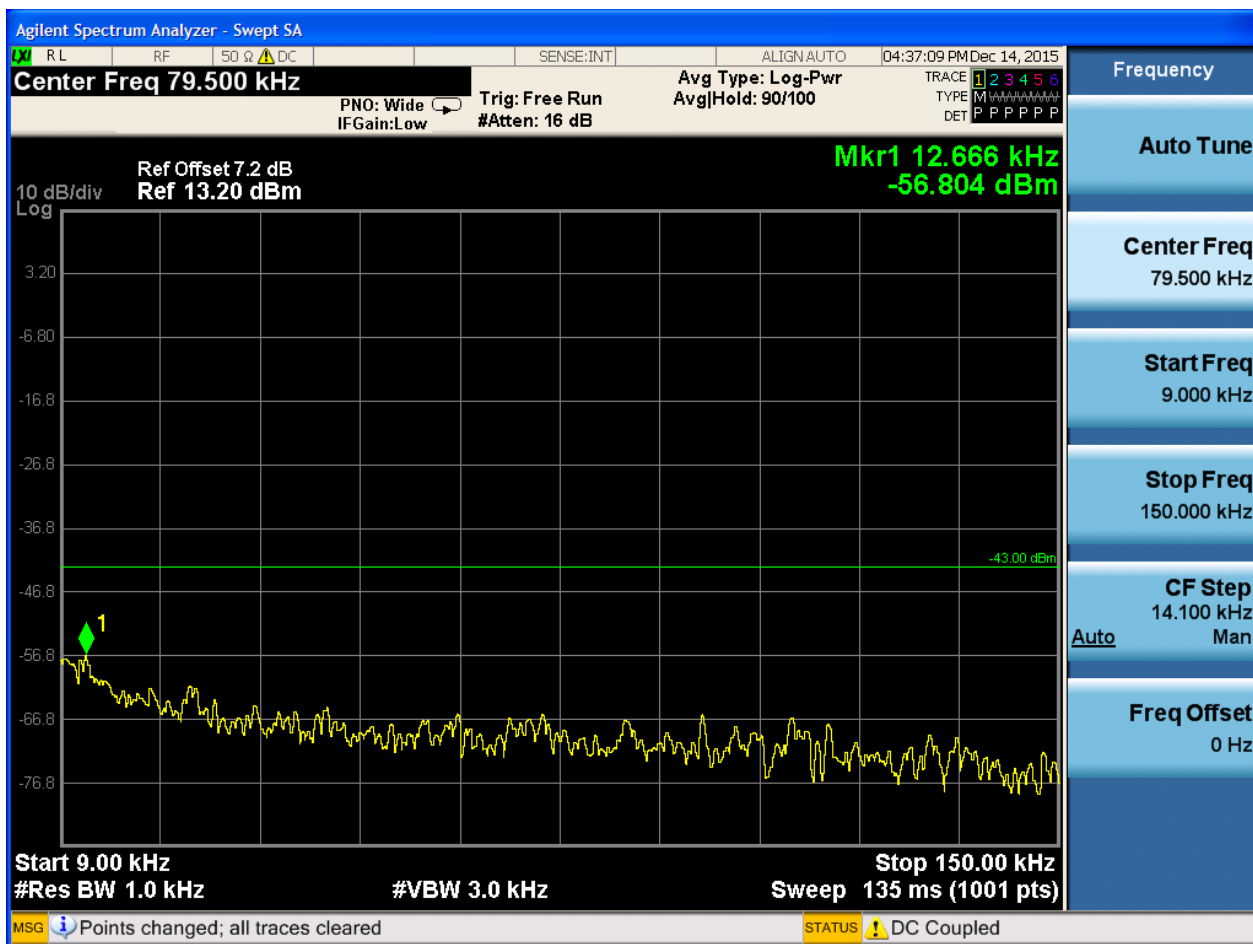


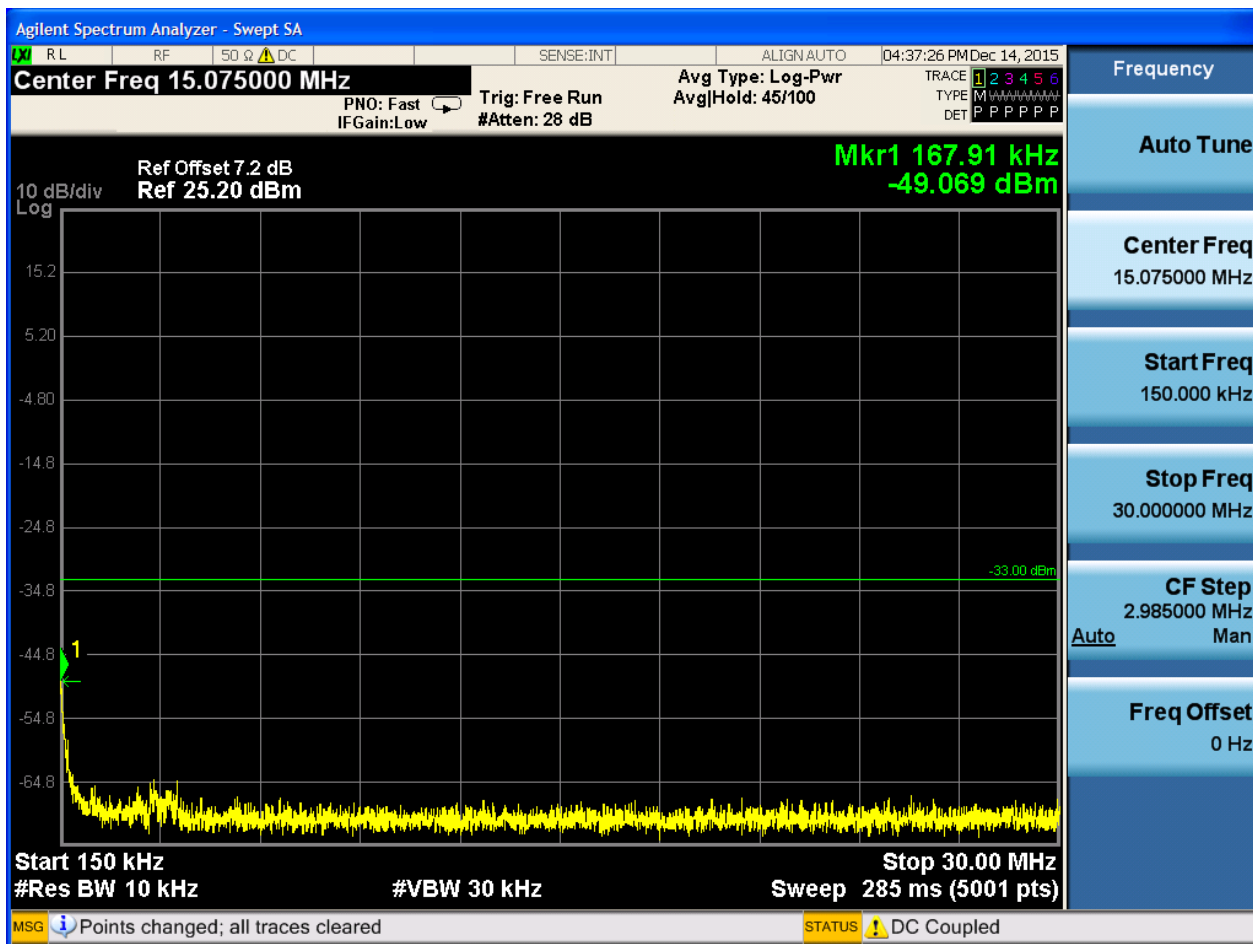


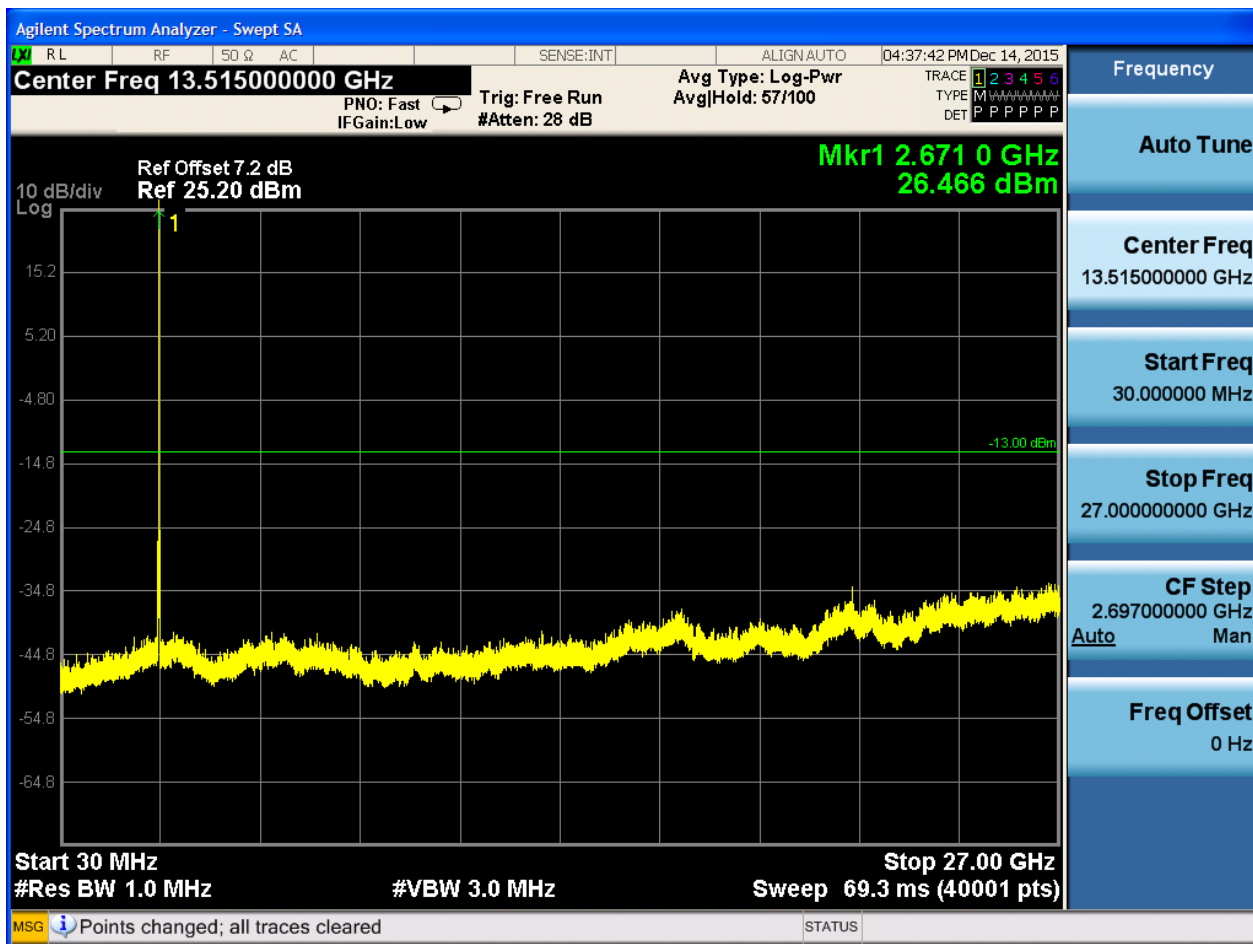


6.1.1.2.4.3 Test Channel = HCH

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

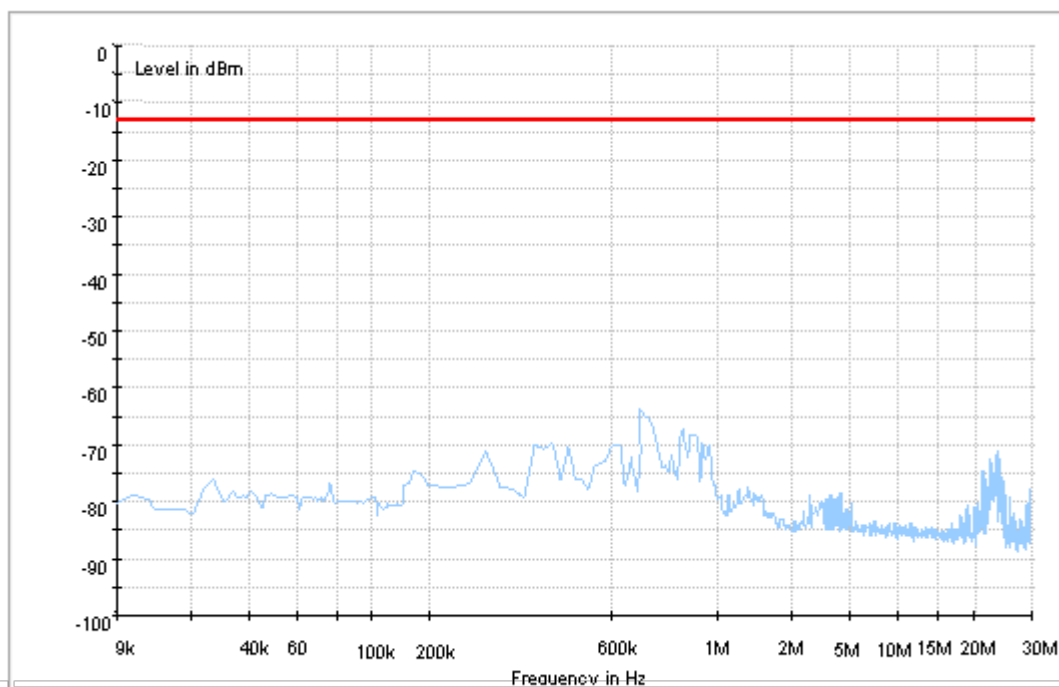
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

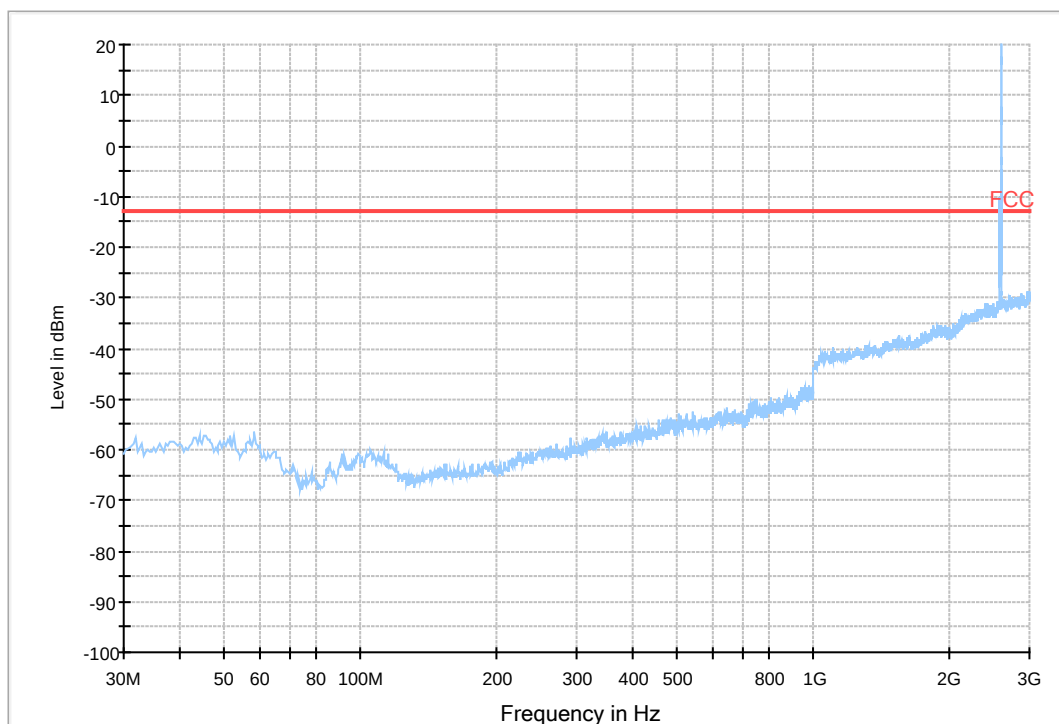
7.1 For LTE

7.1.1 Test Band = BAND41

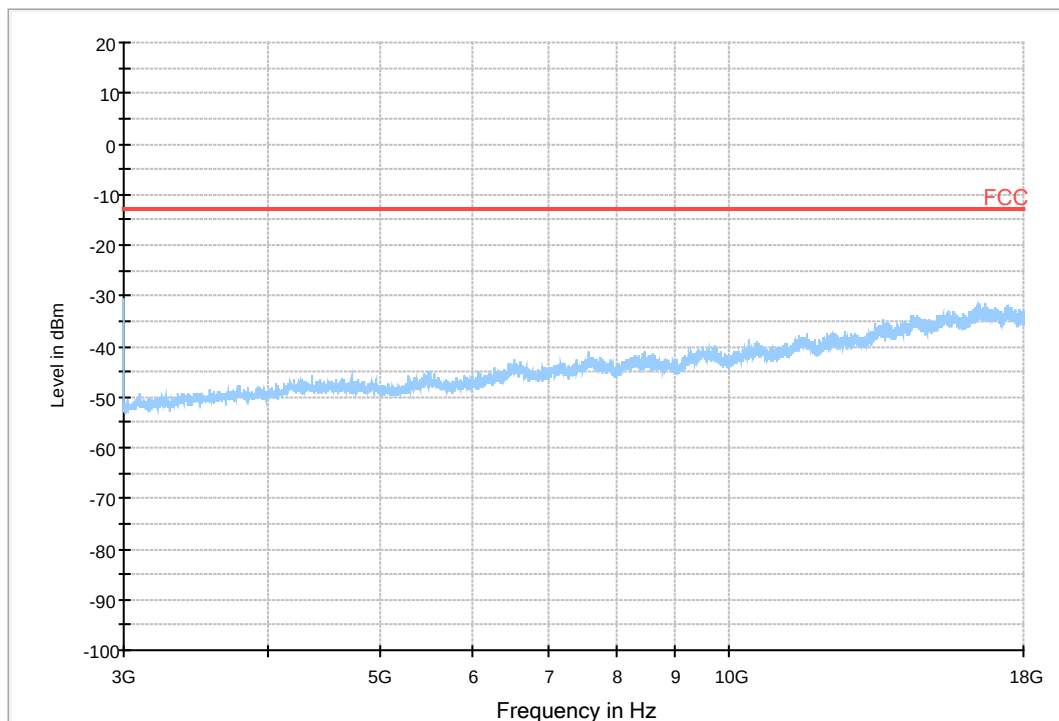
7.1.1.1 Test Bandwidth = 5

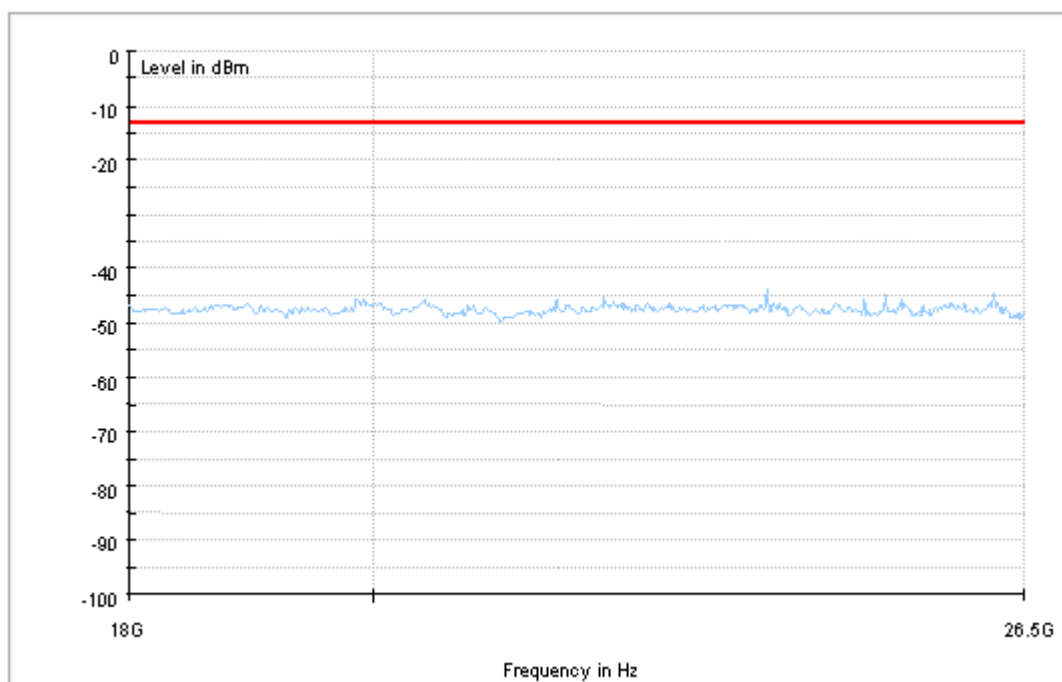


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L

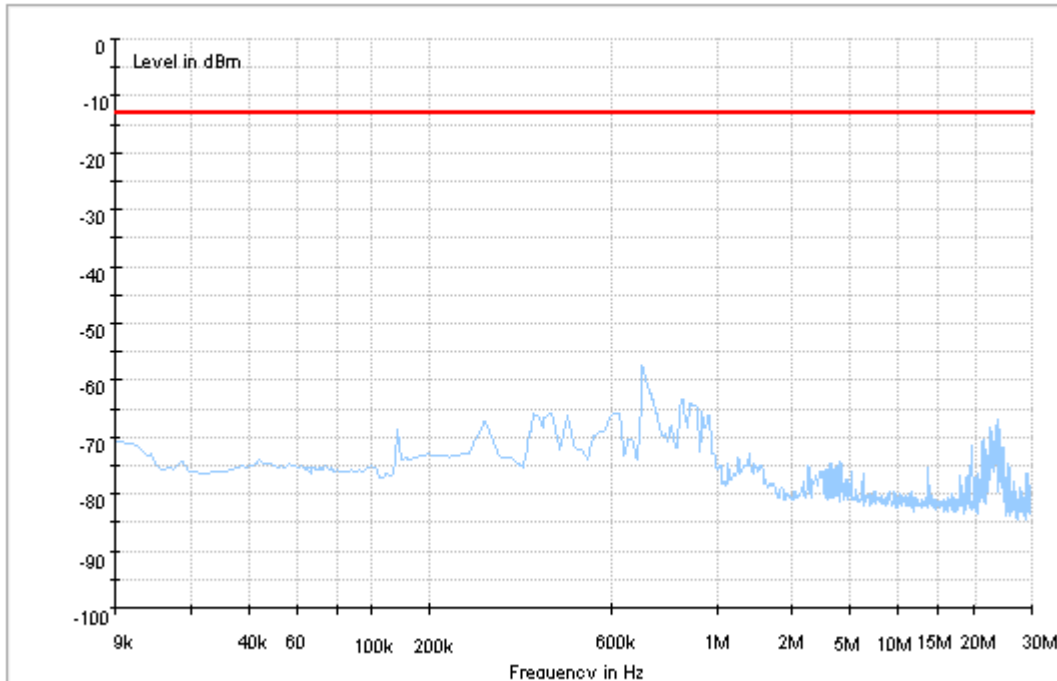


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H

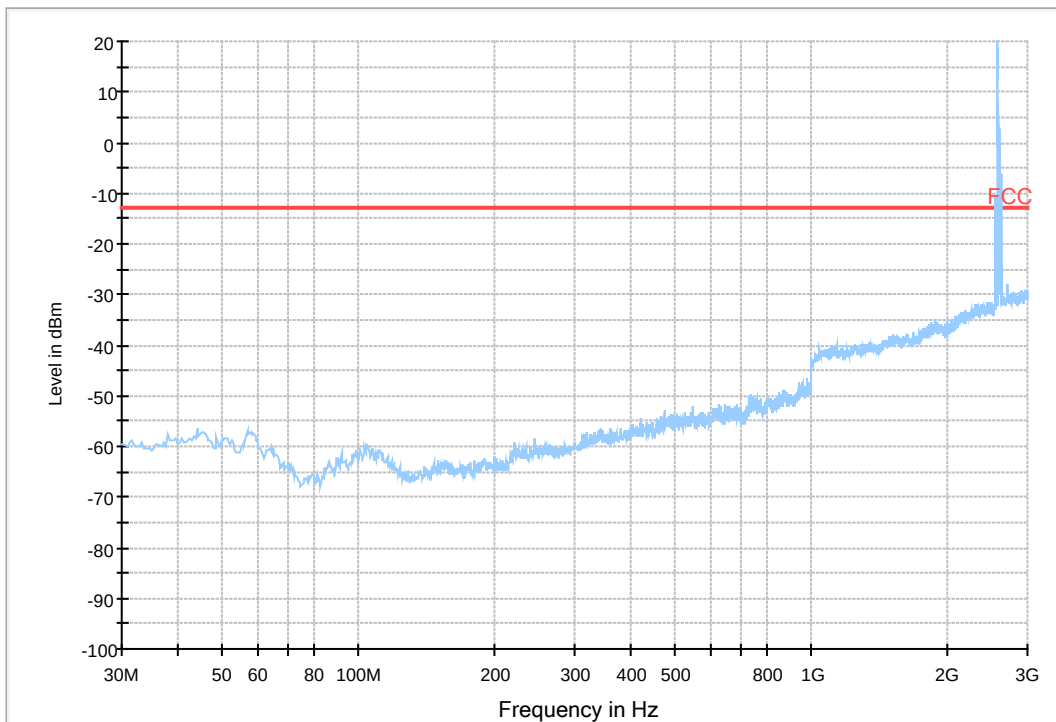




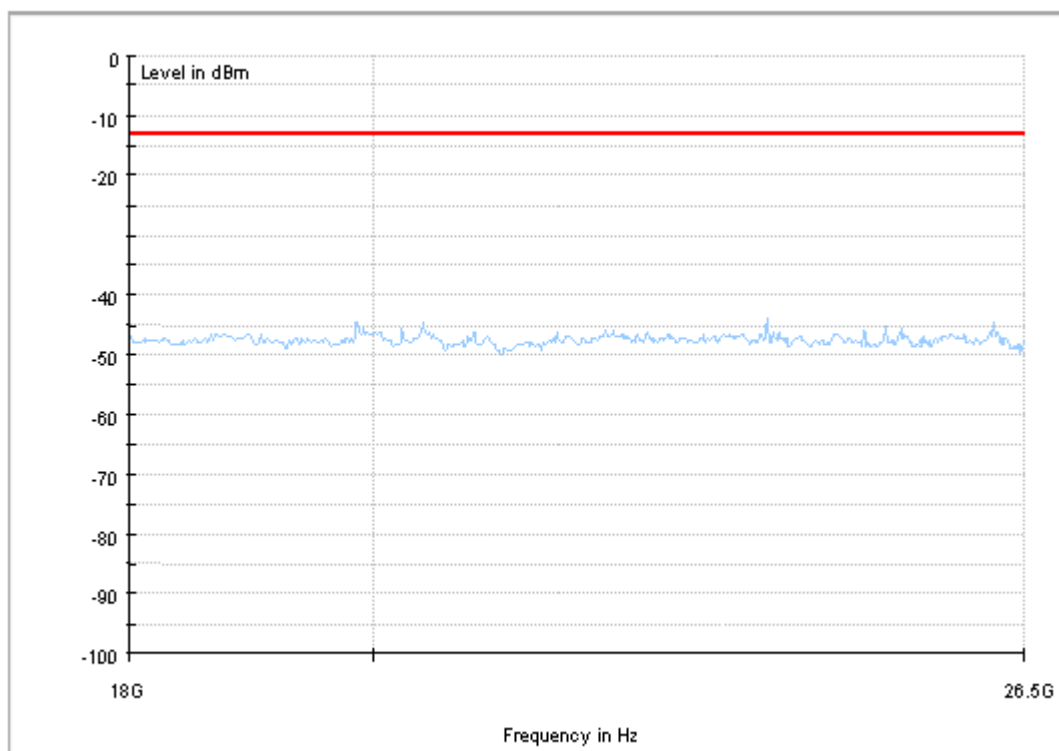
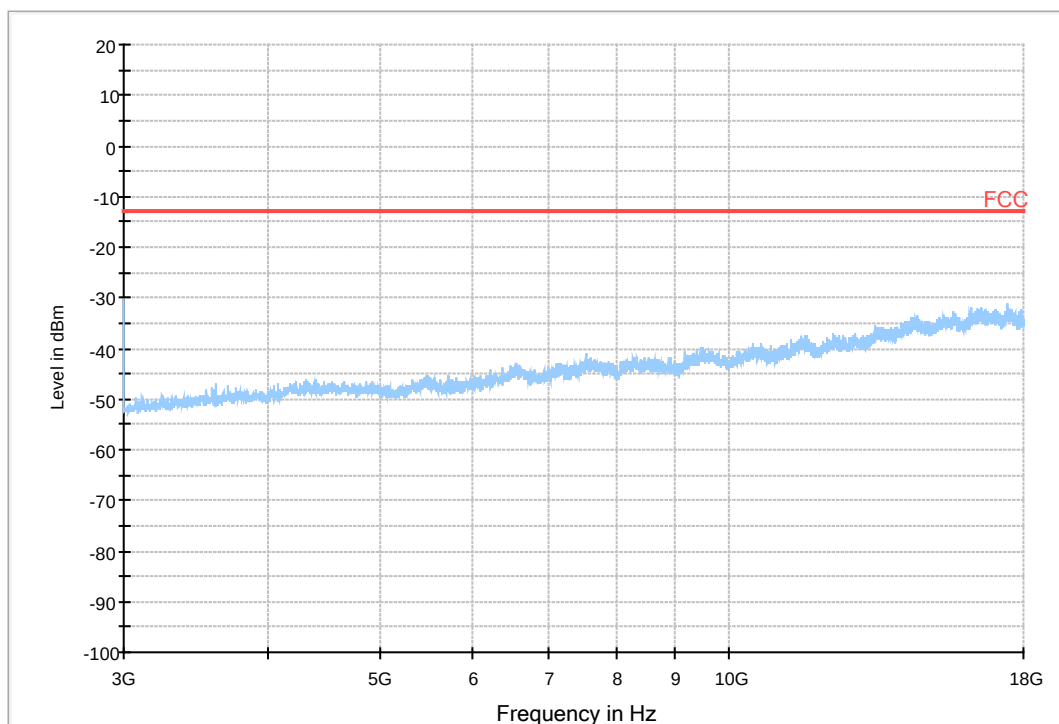
7.1.1.2 Test Bandwidth = 20



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
BAND41	LTE/TM1	5	LCH	TN	VL	70.07	0.02804	PASS
					VN	72.21	0.0289	PASS
					VH	76.73	0.03071	PASS
			MCH	TN	VL	69.44	0.02678	PASS
					VN	67.96	0.02621	PASS
					VH	64.17	0.02475	PASS
			HCH	TN	VL	79.57	0.02961	PASS
					VN	76.89	0.02861	PASS
					VH	81.4	0.03029	PASS
		10	LCH	TN	VL	74.69	0.02986	PASS
					VN	65.4	0.02615	PASS
					VH	70.8	0.02831	PASS
			MCH	TN	VL	64.74	0.02497	PASS
					VN	66.68	0.02572	PASS
					VH	58.68	0.02263	PASS
			HCH	TN	VL	67.62	0.02518	PASS
					VN	70.65	0.02631	PASS
					VH	75.13	0.02798	PASS
		15	LCH	TN	VL	80.34	0.03209	PASS
					VN	76.6	0.0306	PASS
					VH	81.34	0.03249	PASS
			MCH	TN	VL	61.11	0.02357	PASS
					VN	67.41	0.026	PASS
					VH	63.9	0.02464	PASS
			HCH	TN	VL	67.63	0.02521	PASS
					VN	75.65	0.0282	PASS
					VH	75.59	0.02818	PASS
		20	LCH	TN	VL	71.73	0.02862	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	69.27	0.02764	PASS
					VH	72.46	0.02891	PASS
					VL	66.92	0.02581	PASS
			MCH	TN	VN	65.69	0.02533	PASS
					VH	59.61	0.02299	PASS
					VL	72.68	0.02712	PASS
			HCH	TN	VN	70.62	0.02635	PASS
					VH	78.22	0.02919	PASS
					VL	75.06	0.03004	PASS
	LTE/TM2	5	LCH	TN	VN	64.87	0.02596	PASS
					VH	77.75	0.03112	PASS
					VL	57.62	0.02222	PASS
			MCH	TN	VN	58.51	0.02256	PASS
					VH	59.92	0.02311	PASS
					VL	68.38	0.02544	PASS
			HCH	TN	VN	61.05	0.02272	PASS
					VH	72.13	0.02684	PASS
					VL	67.52	0.027	PASS
		10	LCH	TN	VN	75.23	0.03008	PASS
					VH	66.58	0.02662	PASS
					VL	61	0.02352	PASS
			MCH	TN	VN	61.35	0.02366	PASS
					VH	64.93	0.02504	PASS
					VL	71.38	0.02658	PASS
			HCH	TN	VN	73	0.02719	PASS
					VH	73.08	0.02722	PASS
					VL	72.71	0.02904	PASS
		15	LCH	TN	VN	79.05	0.03158	PASS
					VH	76.26	0.03046	PASS
					VL	60.91	0.02349	PASS
			MCH	TN	VN	62.61	0.02415	PASS
					VH	67.68	0.0261	PASS
					VL	77.05	0.02872	PASS
			HCH	TN	VN	77.45	0.02887	PASS
					VH	76.79	0.02863	PASS
					VL	75.22	0.03002	PASS
		20	LCH	TN	VN	72.98	0.02912	PASS
					VH	69.34	0.02767	PASS
					VL	63.63	0.02454	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			HCH	TN	VN	68.15	0.02628	PASS
					VH	62.61	0.02415	PASS
					VL	67.02	0.02501	PASS
					VN	77.95	0.02909	PASS
					VH	76.66	0.0286	PASS

8.1.2Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Tem.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND41	LTE/TM1	5	LCH	VN	-30	70.74	0.02831	PASS
					-20	64.07	0.02564	PASS
					-10	65.52	0.02622	PASS
					0	71.2	0.0285	PASS
					10	73.69	0.02949	PASS
					20	66.49	0.02661	PASS
					30	64.09	0.02565	PASS
					40	64.6	0.02586	PASS
					50	66.72	0.0267	PASS
			MCH	VN	-30	58.11	0.02241	PASS
					-20	58.64	0.02261	PASS
					-10	67.02	0.02585	PASS
					0	61.15	0.02358	PASS
					10	61.9	0.02387	PASS
					20	59.77	0.02305	PASS
					30	59.48	0.02294	PASS
					40	61.01	0.02353	PASS
					50	64.04	0.0247	PASS
			HCH	VN	-30	77.55	0.02886	PASS
					-20	77.38	0.02879	PASS
					-10	82.98	0.03088	PASS
					0	79.94	0.02975	PASS
					10	71.97	0.02678	PASS
					20	81.58	0.03036	PASS
					30	73.66	0.02741	PASS
					40	76.05	0.0283	PASS
					50	65.99	0.02455	PASS
		10	LCH	VN	-30	79.81	0.03191	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Tem.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	75.99	0.03038	PASS
					-10	71.78	0.0287	PASS
					0	80.95	0.03237	PASS
					10	81.25	0.03249	PASS
					20	76.13	0.03044	PASS
					30	70.58	0.02822	PASS
					40	71.2	0.02847	PASS
					50	74.99	0.02998	PASS
			MCH	VN	-30	61.74	0.02381	PASS
					-20	63.49	0.02449	PASS
					-10	65.53	0.02527	PASS
					0	68.79	0.02653	PASS
					10	66.72	0.02573	PASS
					20	67.05	0.02586	PASS
					30	62.7	0.02418	PASS
					40	68.09	0.02626	PASS
					50	72.78	0.02807	PASS
			HCH	VN	-30	75.53	0.02813	PASS
					-20	71.2	0.02652	PASS
					-10	71.13	0.02649	PASS
					0	80.97	0.03016	PASS
					10	73.61	0.02742	PASS
					20	73.11	0.02723	PASS
					30	77.91	0.02902	PASS
					40	70.47	0.02625	PASS
					50	72.11	0.02686	PASS
		15	LCH	VN	-30	78.52	0.03136	PASS
					-20	76.02	0.03037	PASS
					-10	70.01	0.02796	PASS
					0	76.93	0.03073	PASS
					10	81.24	0.03245	PASS
					20	70.14	0.02802	PASS
					30	71.88	0.02871	PASS
					40	66.26	0.02647	PASS
					50	72.16	0.02882	PASS
			MCH	VN	-30	63.31	0.02442	PASS
					-20	61.68	0.02379	PASS
					-10	60.93	0.0235	PASS
					0	63.8	0.0246	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Tem.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	59.71	0.02303	PASS
					20	66.92	0.02581	PASS
					30	66.12	0.0255	PASS
					40	64.76	0.02497	PASS
					50	65.2	0.02514	PASS
			HCH	VN	-30	82.24	0.03066	PASS
					-20	76.12	0.02838	PASS
					-10	73.29	0.02732	PASS
					0	72.5	0.02703	PASS
					10	79.65	0.02969	PASS
					20	76.33	0.02845	PASS
					30	76.68	0.02859	PASS
					40	71.94	0.02682	PASS
					50	77.36	0.02884	PASS
		20	LCH	VN	-30	78.26	0.03123	PASS
					-20	79.65	0.03178	PASS
					-10	74.26	0.02963	PASS
					0	77.42	0.03089	PASS
					10	82	0.03272	PASS
					20	75.37	0.03008	PASS
					30	73.33	0.02926	PASS
					40	80.37	0.03207	PASS
					50	77.46	0.03091	PASS
			MCH	VN	-30	61.74	0.02381	PASS
					-20	64.86	0.02501	PASS
					-10	67.32	0.02596	PASS
					0	65.89	0.02541	PASS
					10	65.05	0.02509	PASS
					20	62.04	0.02393	PASS
					30	63.37	0.02444	PASS
					40	64.27	0.02479	PASS
					50	68.41	0.02638	PASS
			HCH	VN	-30	75.63	0.02822	PASS
					-20	73.74	0.02751	PASS
					-10	70.97	0.02648	PASS
					0	73.7	0.0275	PASS
					10	71.41	0.02665	PASS
					20	77.28	0.02884	PASS
					30	70.88	0.02645	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Tem.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2	5			40	74.52	0.02781	PASS
					50	77.81	0.02903	PASS
			LCH	VN	-30	74.32	0.02975	PASS
					-20	65.47	0.0262	PASS
					-10	67.19	0.02689	PASS
					0	75.22	0.03011	PASS
					10	75.43	0.03019	PASS
					20	81.45	0.0326	PASS
					30	73.11	0.02926	PASS
					40	72.4	0.02898	PASS
					50	72.16	0.02888	PASS
			MCH	VN	-30	64.92	0.02504	PASS
					-20	64.19	0.02476	PASS
					-10	62.89	0.02425	PASS
					0	59.97	0.02313	PASS
					10	63.59	0.02452	PASS
					20	67.93	0.0262	PASS
					30	62.48	0.0241	PASS
					40	64.12	0.02473	PASS
					50	55.03	0.02122	PASS
			HCH	VN	-30	77.38	0.02879	PASS
					-20	74.43	0.02769	PASS
					-10	76.32	0.0284	PASS
					0	68.79	0.0256	PASS
					10	79.34	0.02952	PASS
					20	75.04	0.02792	PASS
					30	72.74	0.02707	PASS
					40	73.24	0.02725	PASS
					50	81.85	0.03046	PASS
		10	LCH	VN	-30	80.81	0.03231	PASS
					-20	79.54	0.0318	PASS
					-10	82.41	0.03295	PASS
					0	72.03	0.0288	PASS
					10	72.41	0.02895	PASS
					20	70.62	0.02824	PASS
					30	78.15	0.03125	PASS
					40	82.33	0.03292	PASS
					50	81.48	0.03258	PASS
			MCH	VN	-30	58.14	0.02242	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Tem.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	62.99	0.02429	PASS
					-10	63.54	0.0245	PASS
					0	61.15	0.02358	PASS
					10	68.42	0.02639	PASS
					20	65.1	0.02511	PASS
					30	67.22	0.02592	PASS
					40	65.17	0.02513	PASS
					50	69.81	0.02692	PASS
			HCH	VN	-30	66.12	0.02463	PASS
					-20	81.71	0.03043	PASS
					-10	76.48	0.02848	PASS
					0	75.17	0.028	PASS
					10	67.11	0.02499	PASS
					20	76.8	0.0286	PASS
					30	72.26	0.02691	PASS
					40	72.86	0.02714	PASS
					50	73.7	0.02745	PASS
		15	LCH	VN	-30	80.05	0.03198	PASS
					-20	76.95	0.03074	PASS
					-10	69.97	0.02795	PASS
					0	80.12	0.032	PASS
					10	78.22	0.03124	PASS
					20	76.32	0.03049	PASS
					30	75.02	0.02997	PASS
					40	75.76	0.03026	PASS
					50	76.83	0.03069	PASS
			MCH	VN	-30	60.58	0.02336	PASS
					-20	59.85	0.02308	PASS
					-10	60.83	0.02346	PASS
					0	64.53	0.02489	PASS
					10	69.91	0.02696	PASS
					20	57.86	0.02231	PASS
					30	66.36	0.02559	PASS
					40	63.94	0.02466	PASS
					50	62	0.02391	PASS
			HCH	VN	-30	80.61	0.03005	PASS
					-20	74.37	0.02772	PASS
					-10	78.12	0.02912	PASS
					0	78.78	0.02937	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Tem.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	78.01	0.02908	PASS
					20	79.97	0.02981	PASS
					30	78.79	0.02937	PASS
					40	77.92	0.02905	PASS
					50	79.45	0.02962	PASS
		20	LCH	VN	-30	65.09	0.02597	PASS
					-20	70.61	0.02818	PASS
					-10	69.72	0.02782	PASS
					0	71.35	0.02847	PASS
					10	70.95	0.02831	PASS
					20	74.82	0.02986	PASS
					30	68.99	0.02753	PASS
					40	71	0.02833	PASS
					50	68.68	0.02741	PASS
			MCH	VN	-30	64.67	0.02494	PASS
					-20	61.2	0.0236	PASS
					-10	65.69	0.02533	PASS
					0	66.12	0.0255	PASS
					10	61.84	0.02385	PASS
					20	68.55	0.02644	PASS
					30	63.6	0.02453	PASS
					40	65.32	0.02519	PASS
					50	64.67	0.02494	PASS
			HCH	VN	-30	73.03	0.02725	PASS
					-20	73.13	0.02729	PASS
					-10	66.12	0.02467	PASS
					0	74.37	0.02775	PASS
					10	72.2	0.02694	PASS
					20	77.98	0.0291	PASS
					30	72.03	0.02688	PASS
					40	75.66	0.02823	PASS
					50	76.7	0.02862	PASS

END