



5.1.1.2.3.1.3 Test RB = RB36#18



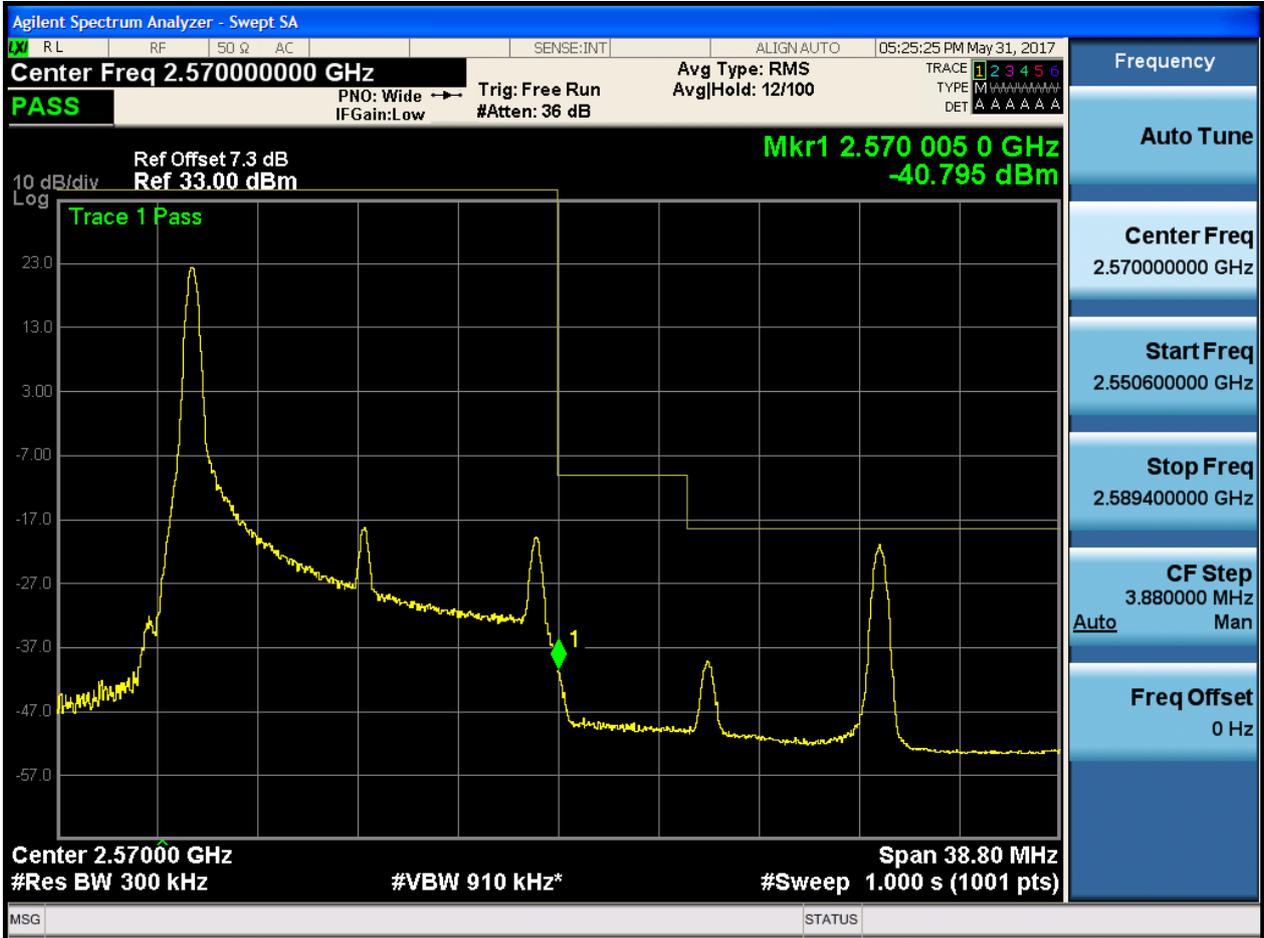


5.1.1.2.3.1.4 Test RB = RB75#0



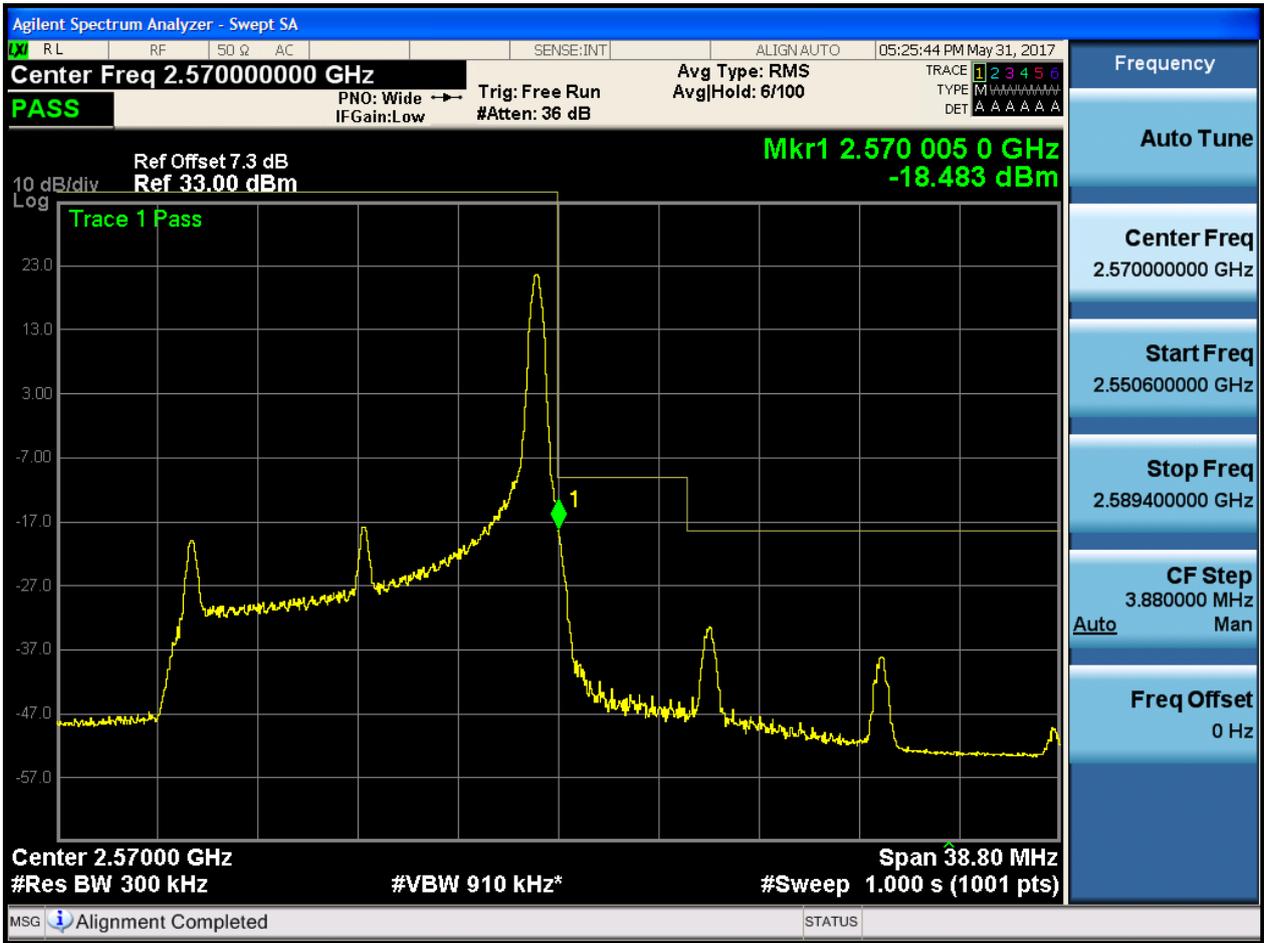
5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0





5.1.1.2.3.2.2 Test RB = RB1#74





5.1.1.2.3.2.3 Test RB = RB36#18





5.1.1.2.3.2.4 Test RB = RB75#0

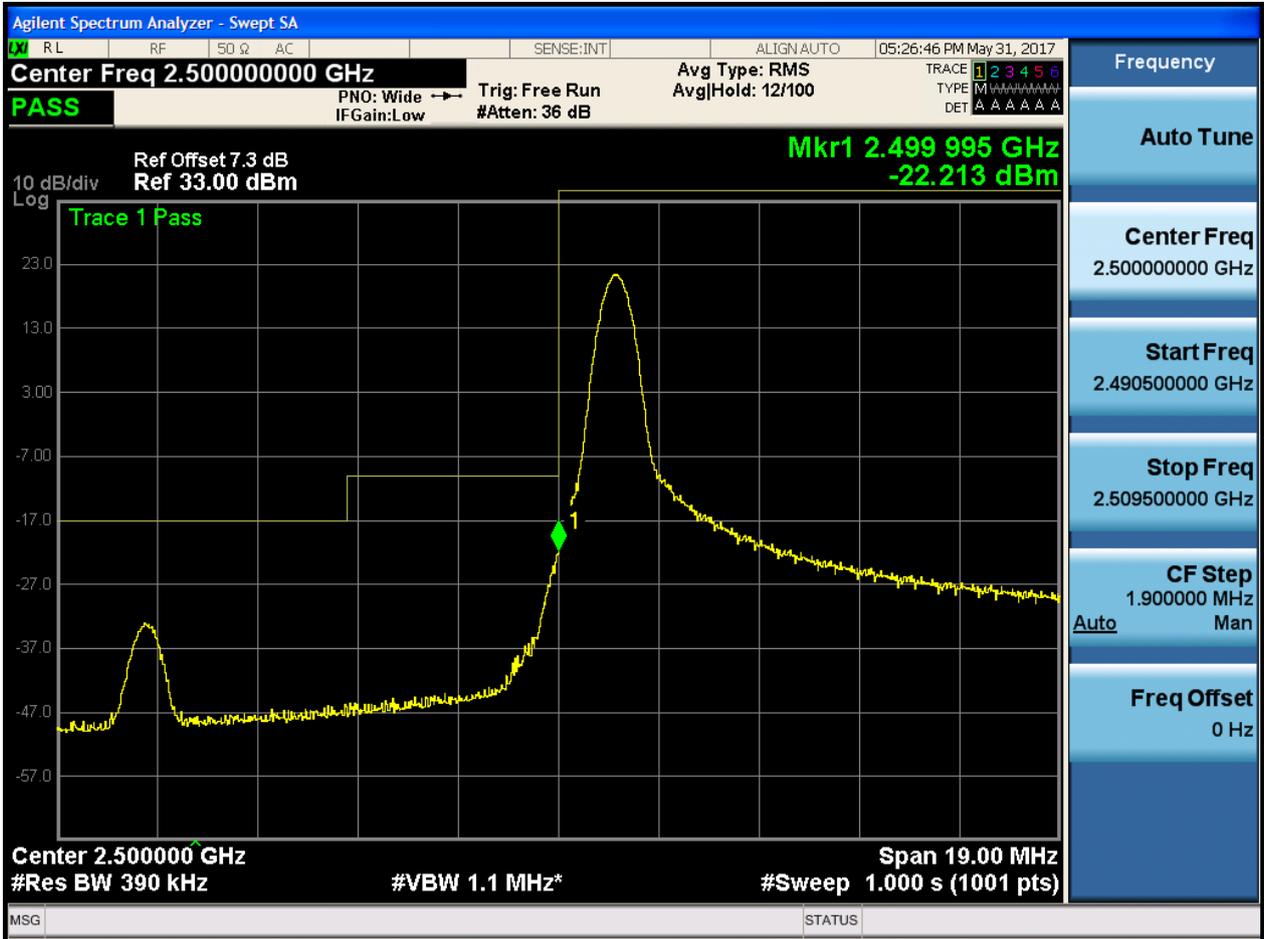




5.1.1.2.4 Test Bandwidth = 20

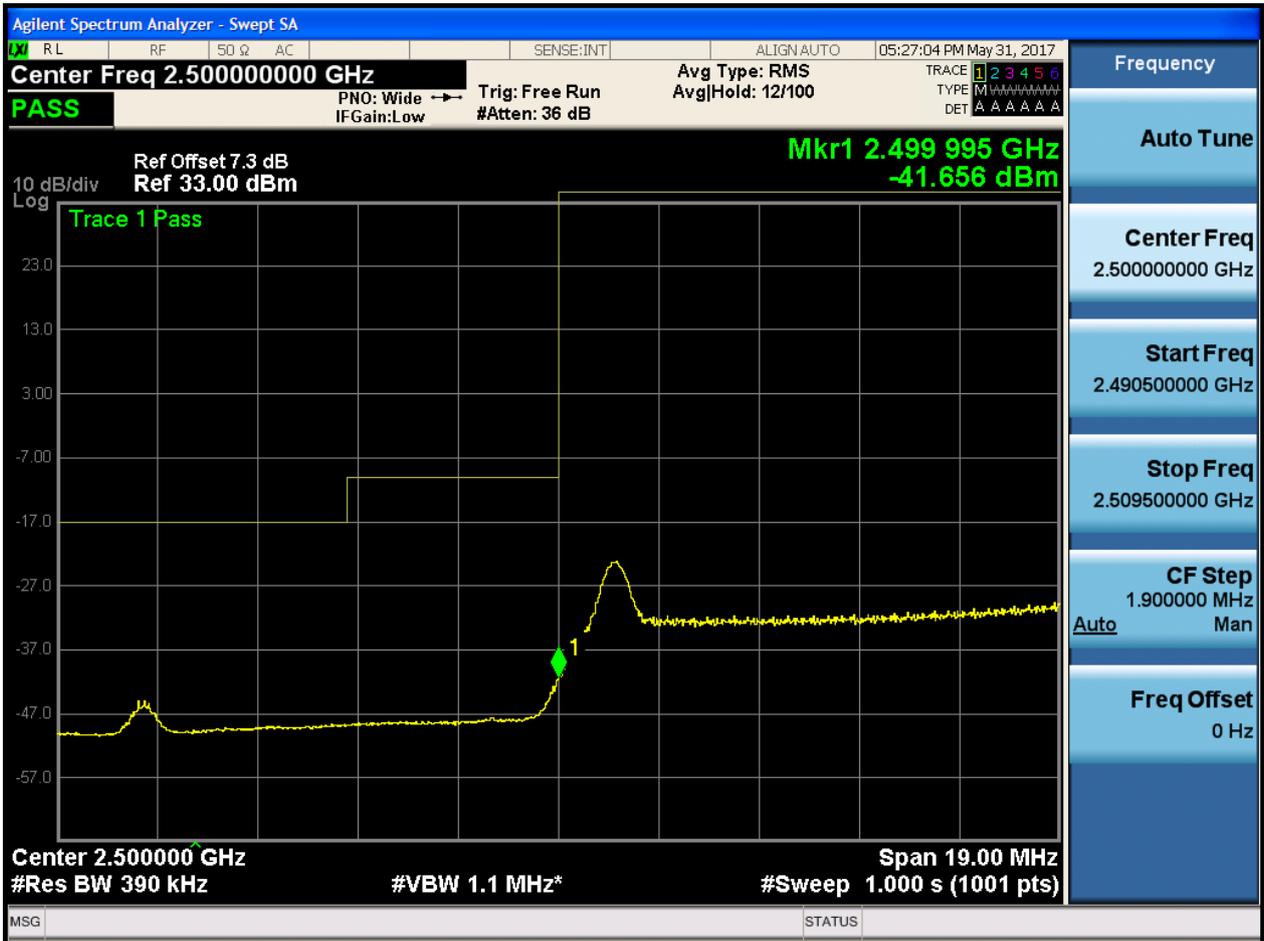
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#99



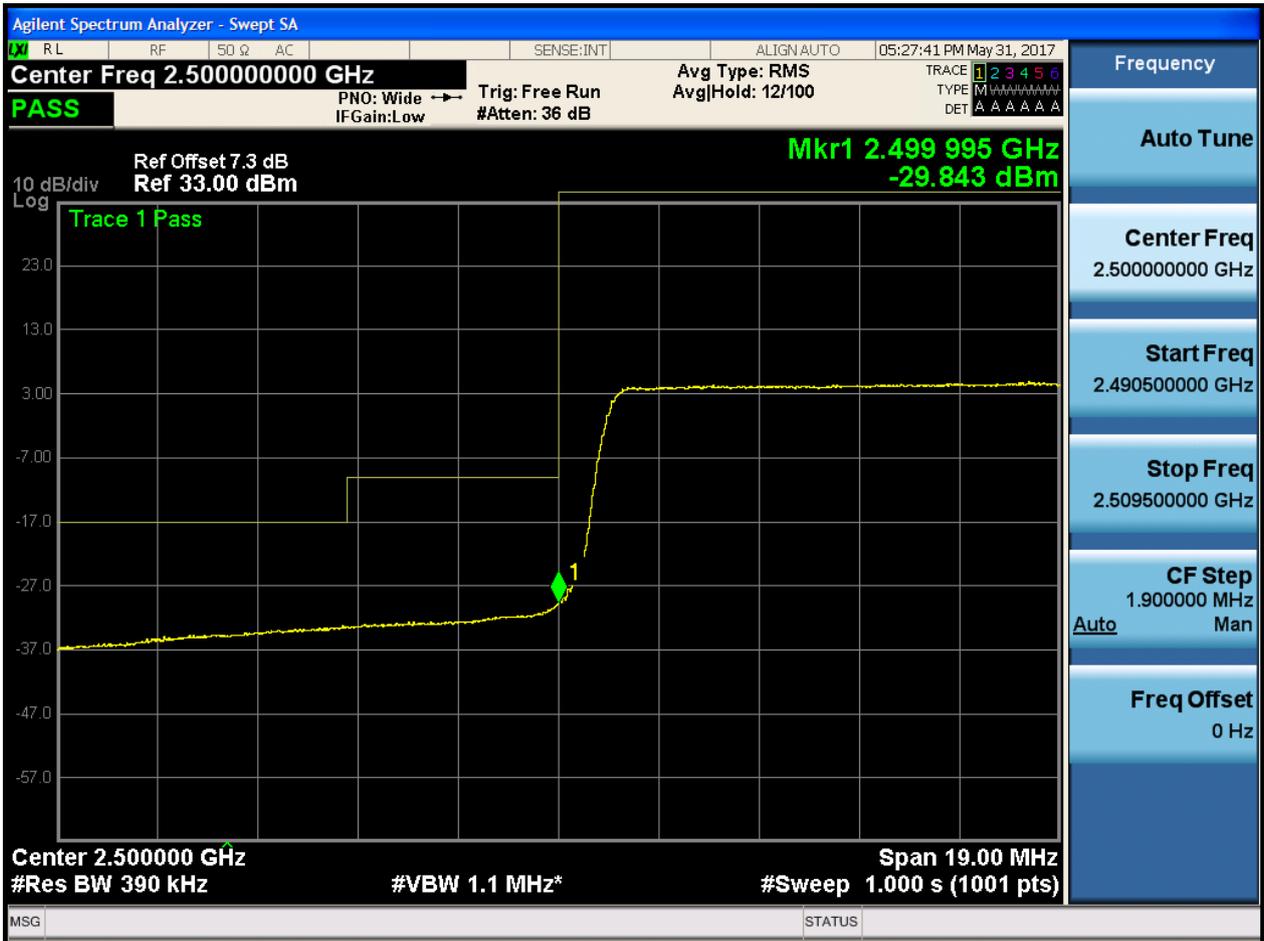


5.1.1.2.4.1.3 Test RB = RB50#25





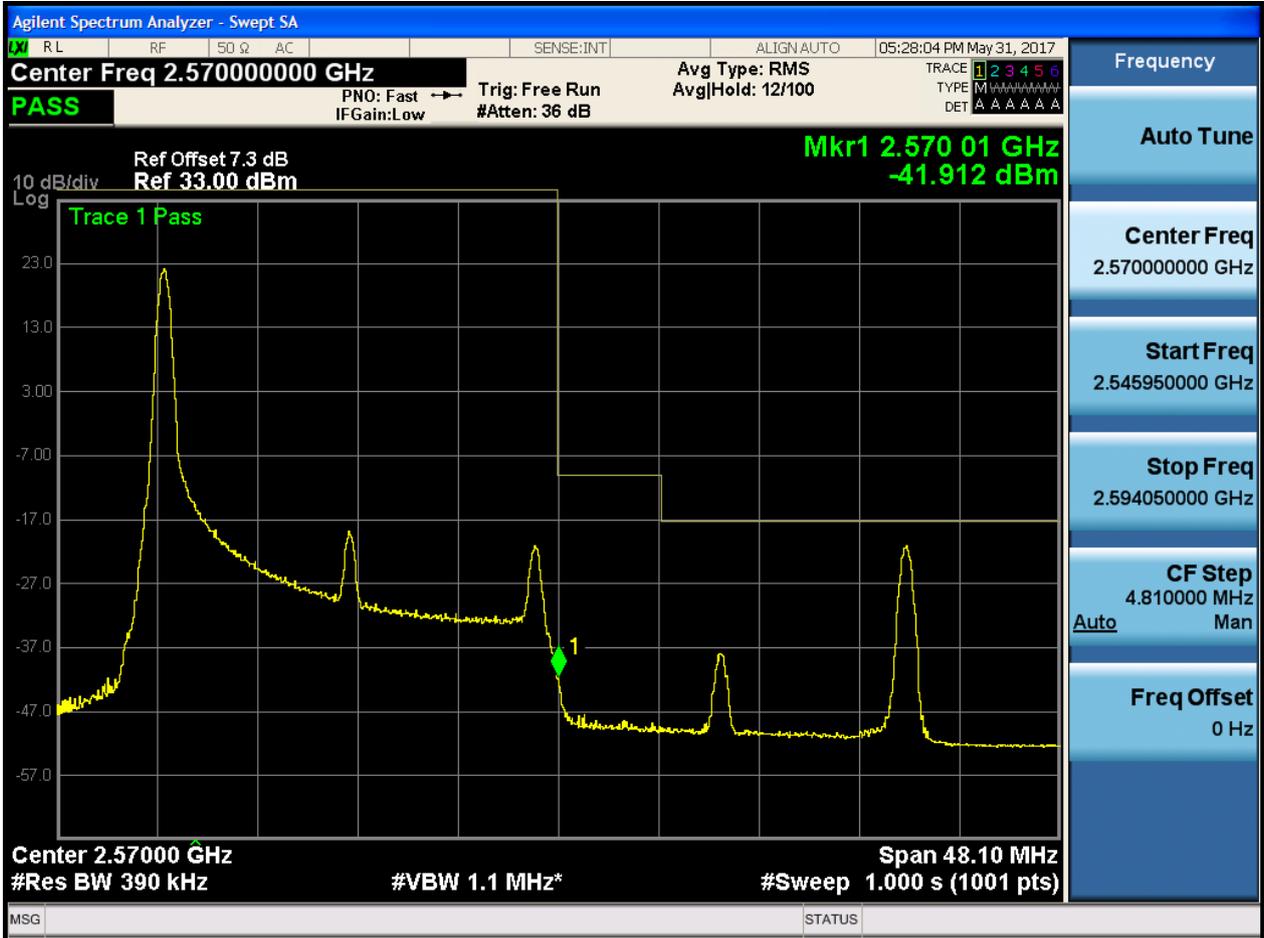
5.1.1.2.4.1.4 Test RB = RB100#0





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

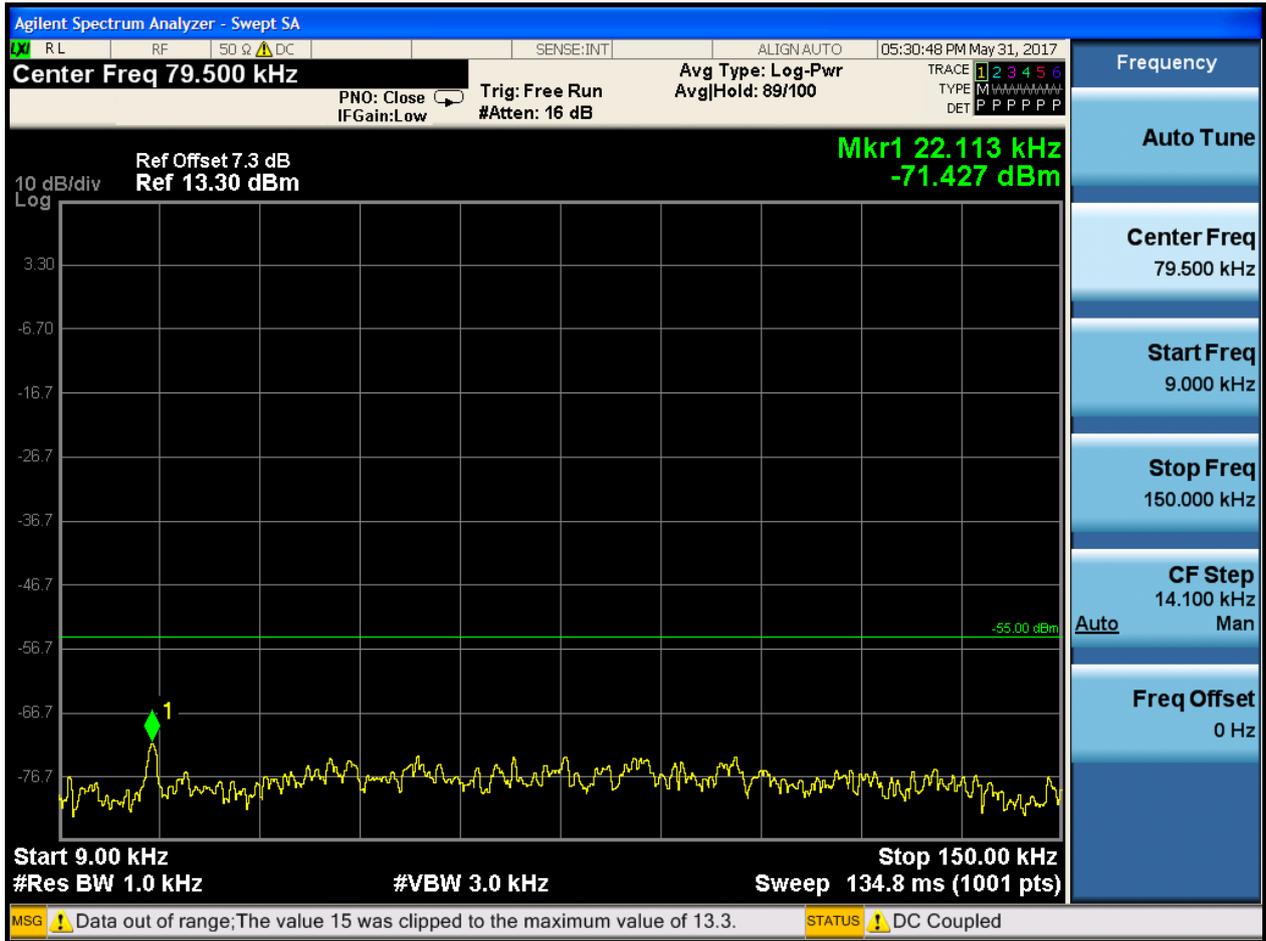
##### 6.1.1 Test Band = BAND7

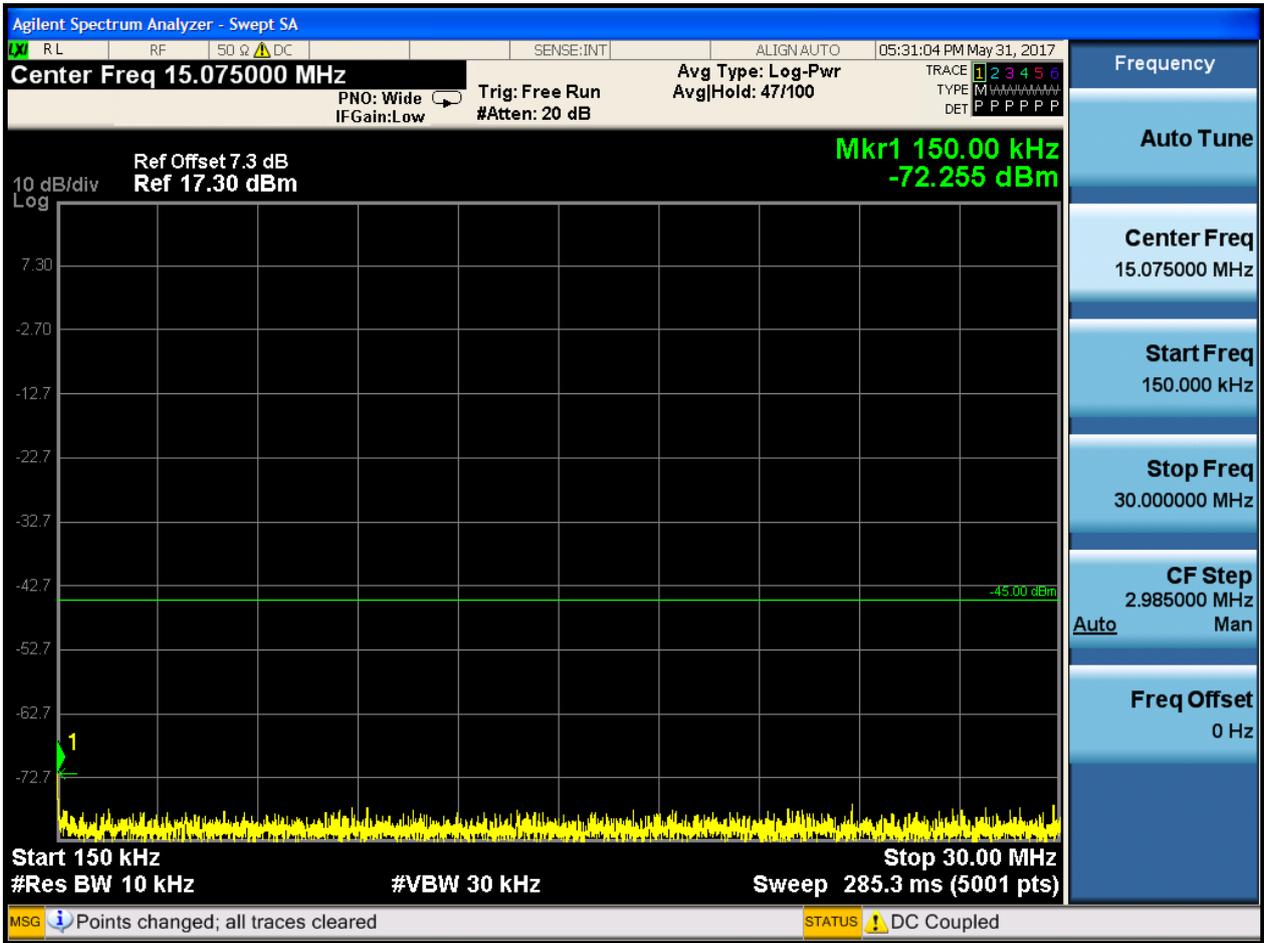
##### 6.1.1.1 Test Mode = LTE/TM1

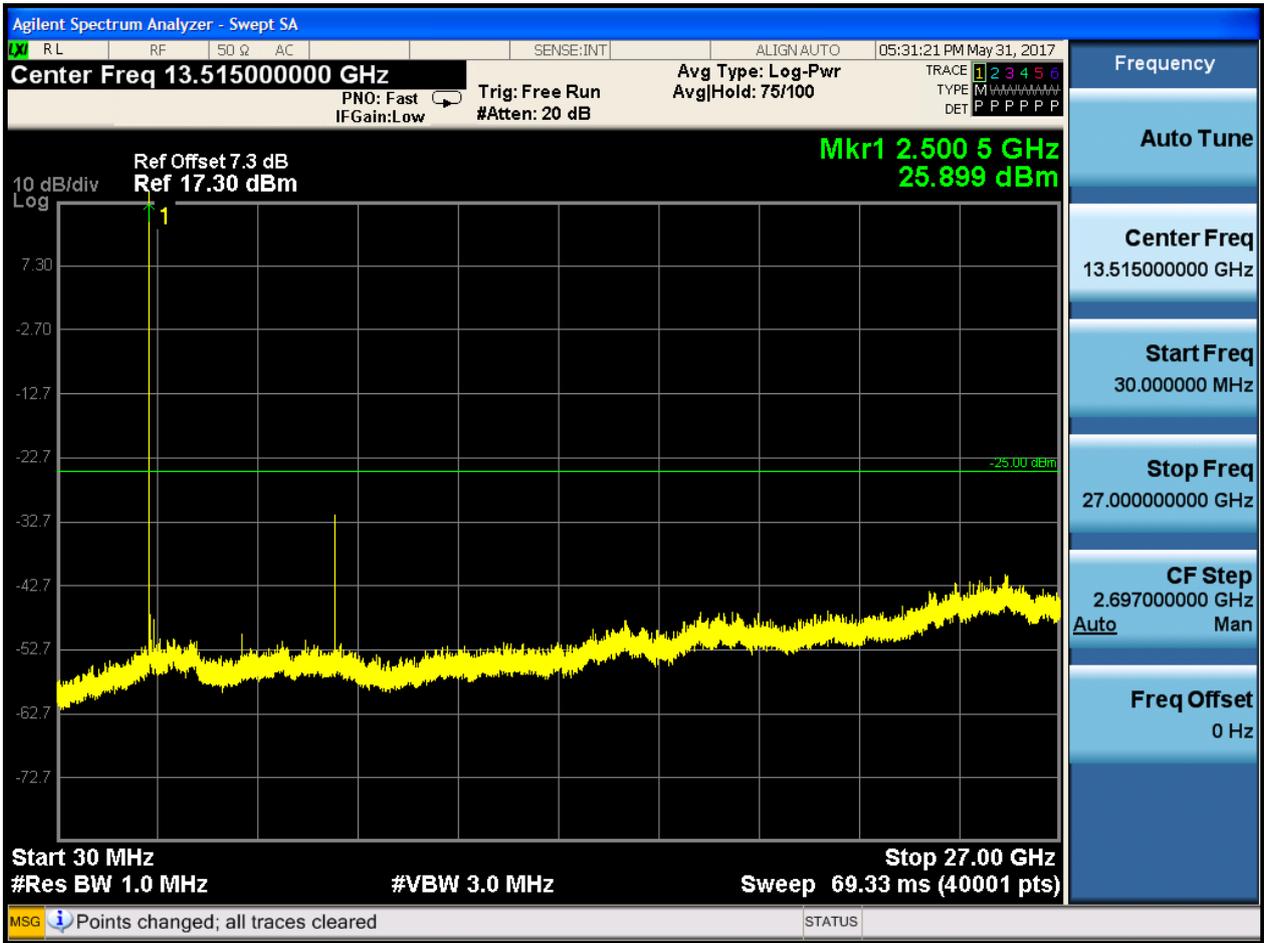
##### 6.1.1.1.1 Test Bandwidth = 5

##### 6.1.1.1.1.1 Test Channel = LCH

##### 6.1.1.1.1.1.1 Test RB = RB1#0

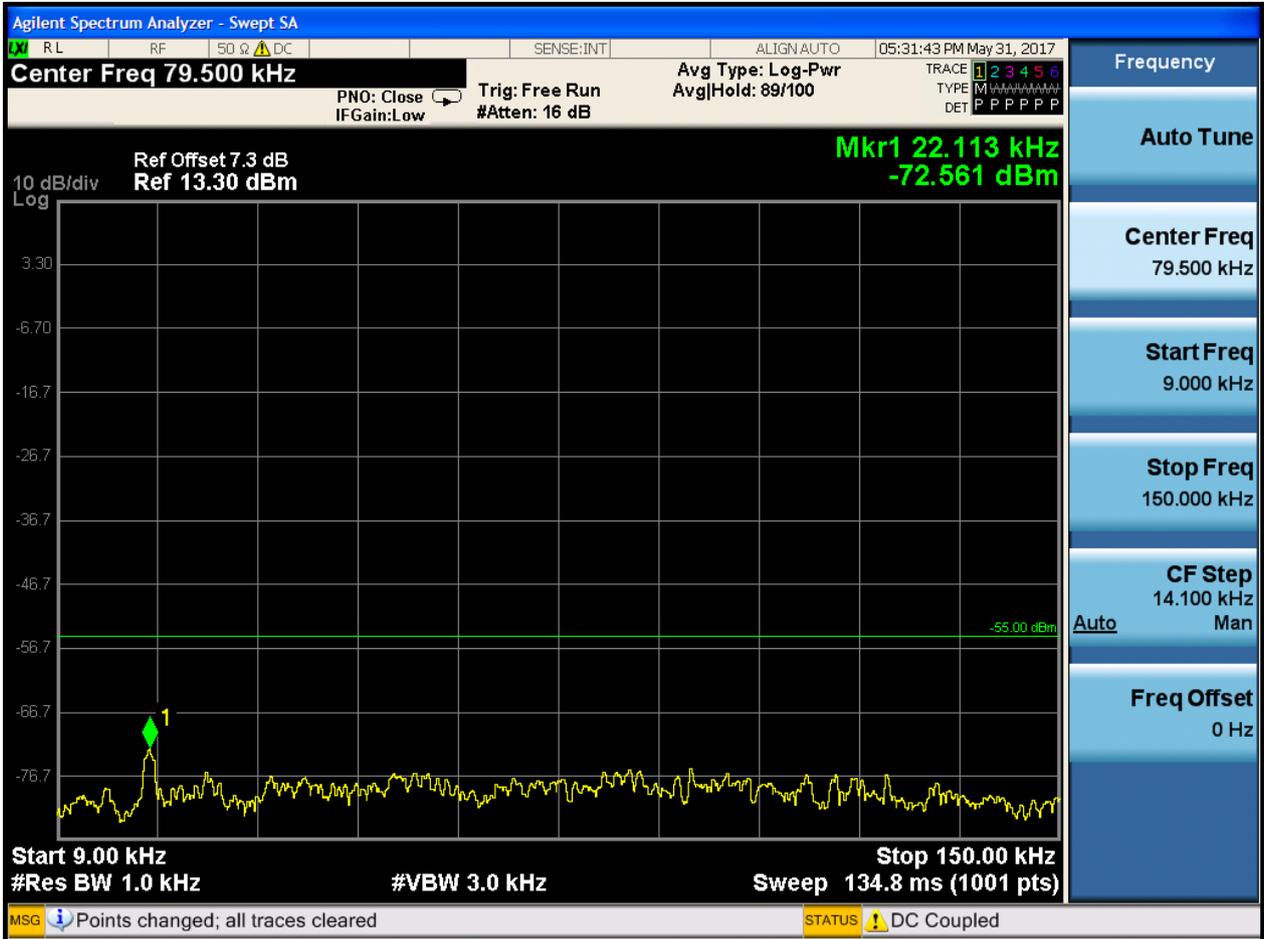


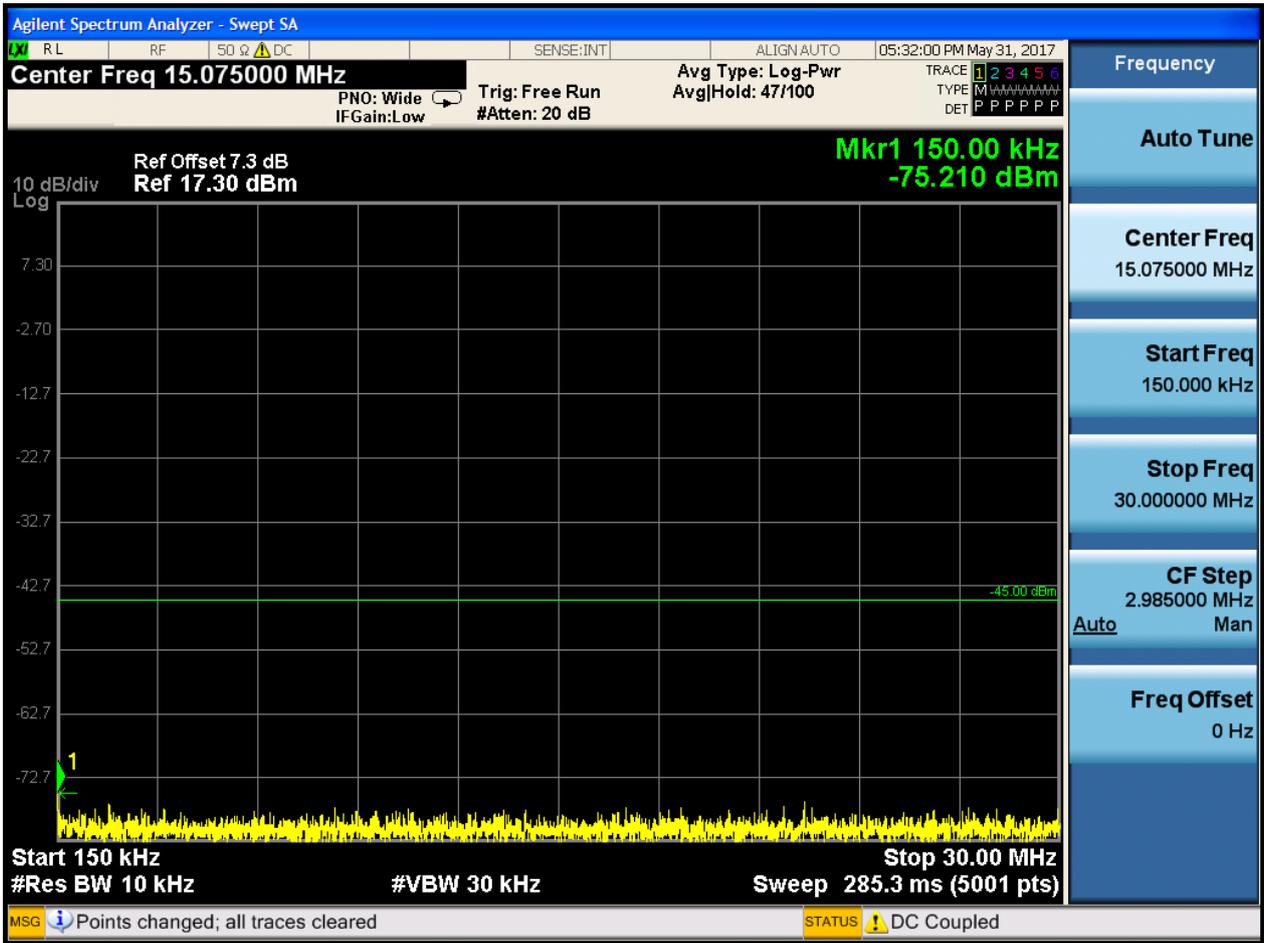


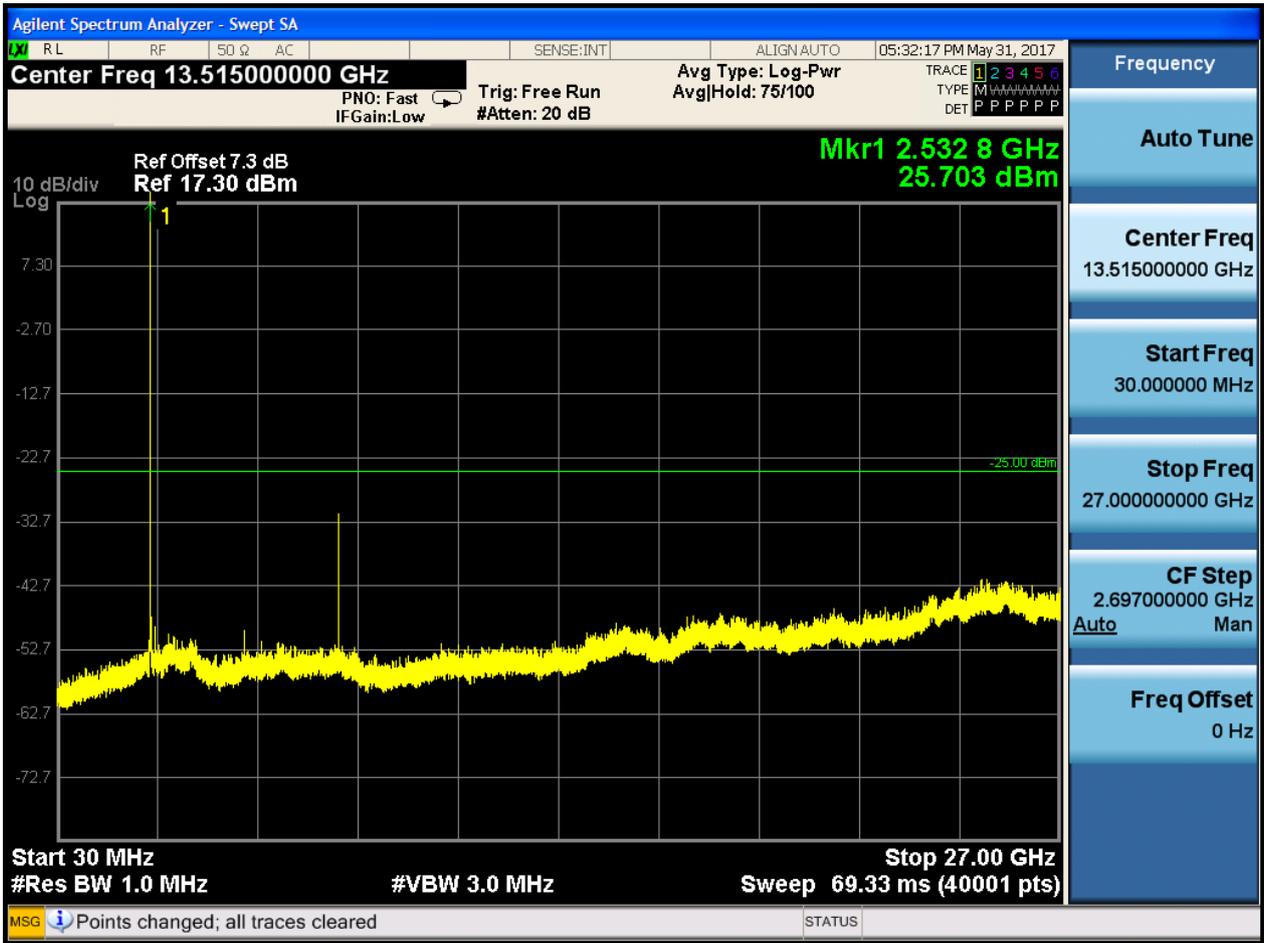


6.1.1.1.1.2 Test Channel = MCH

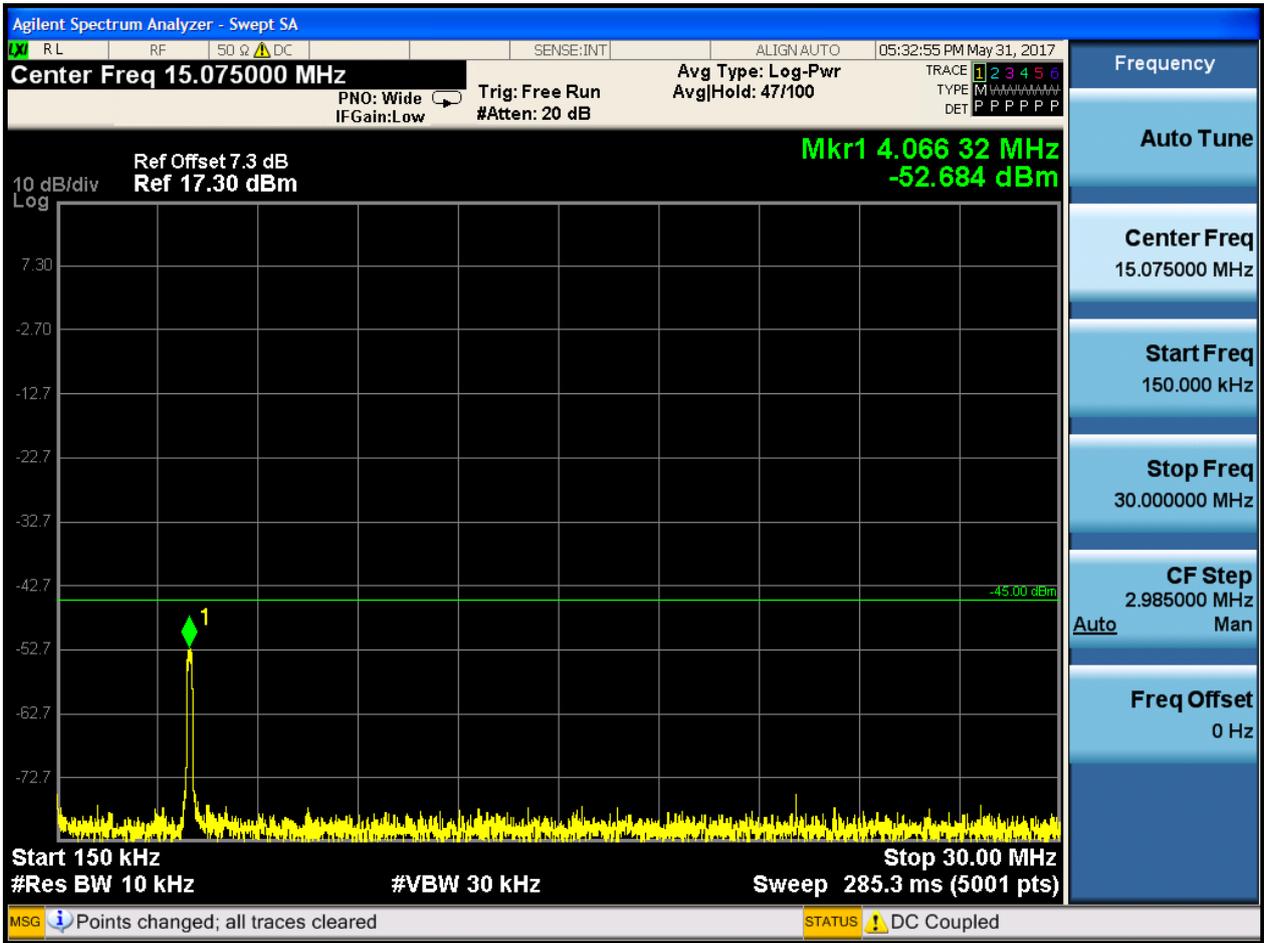
6.1.1.1.1.2.1 Test RB = RB1#0

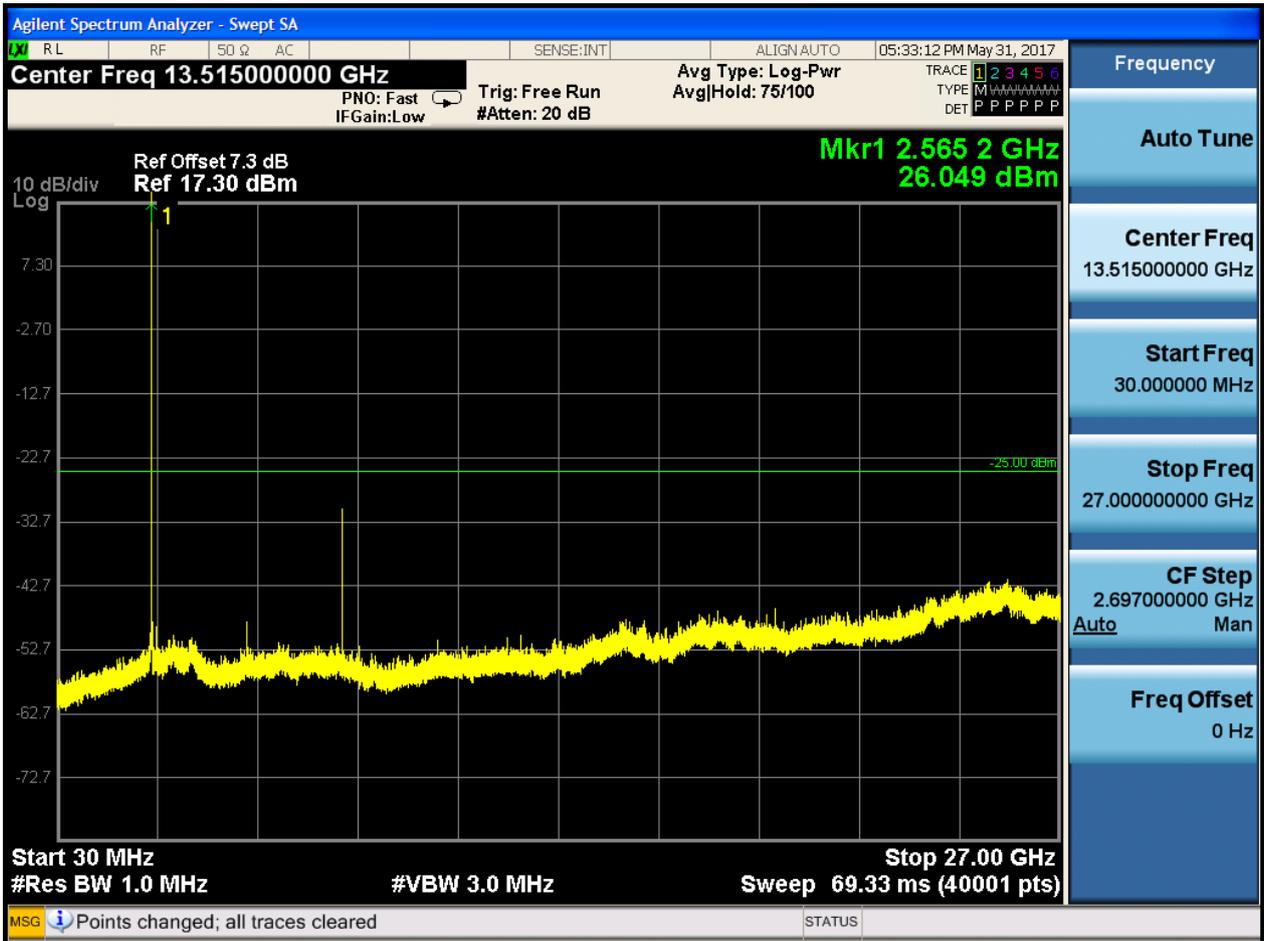










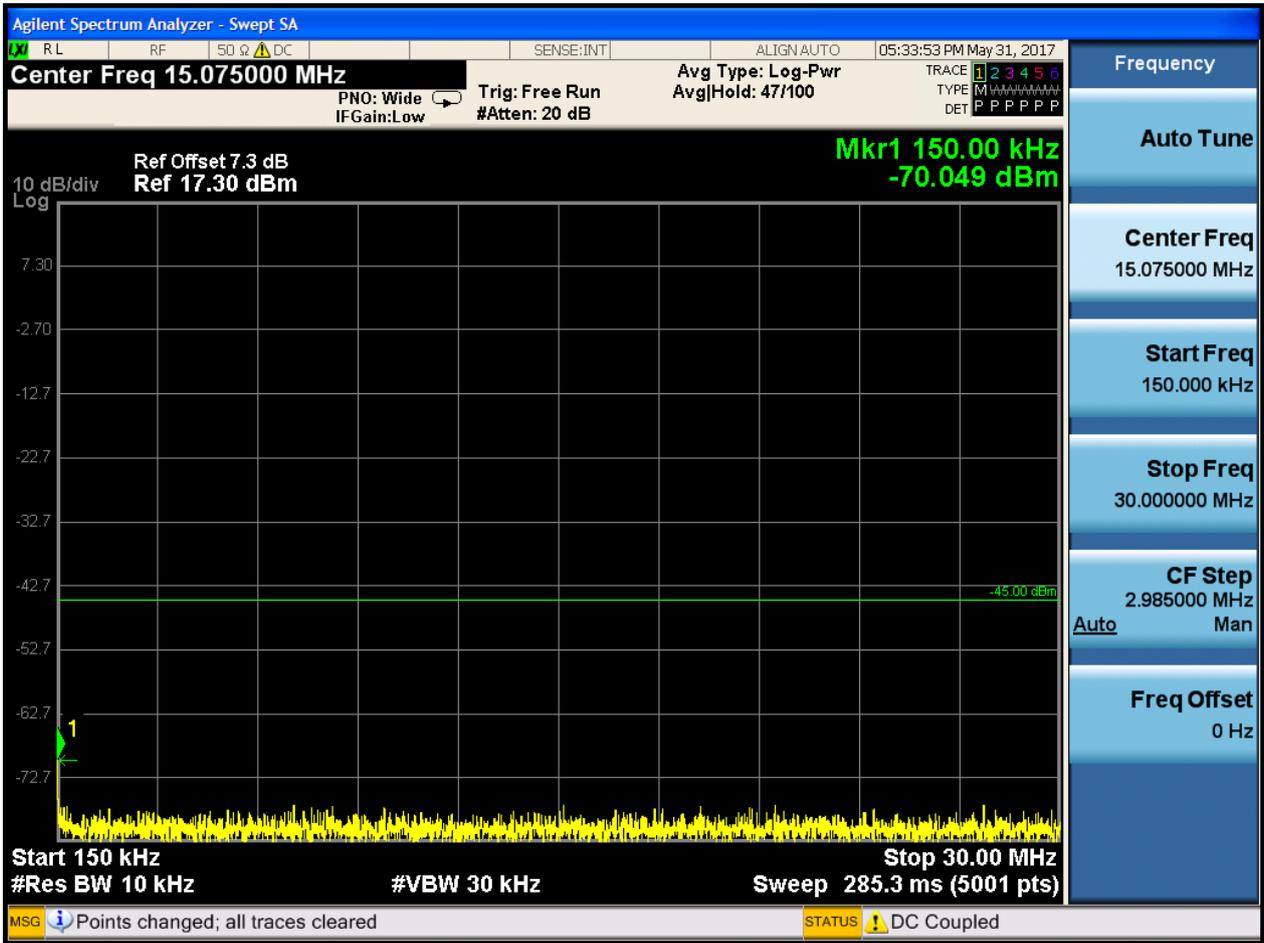


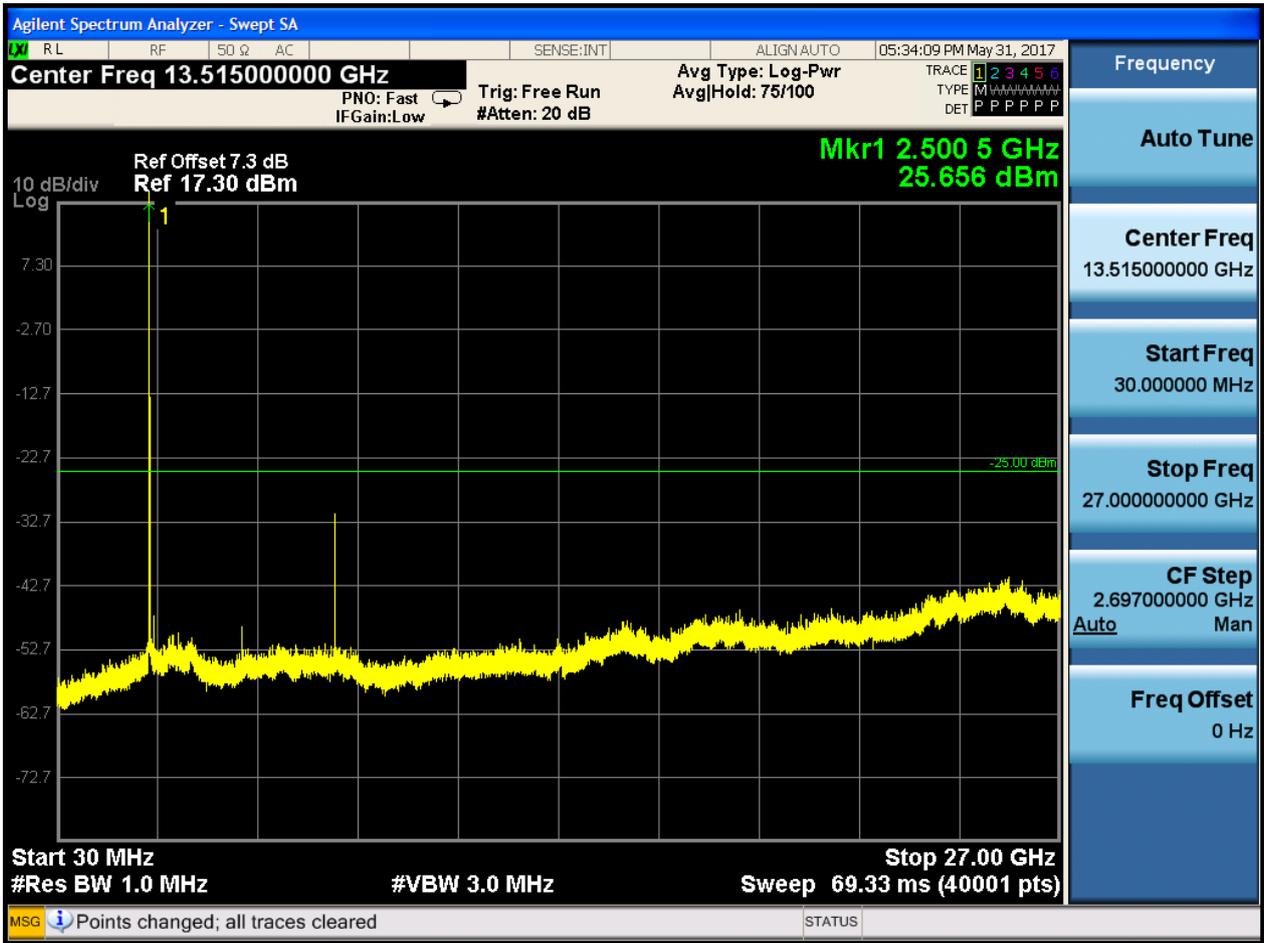
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

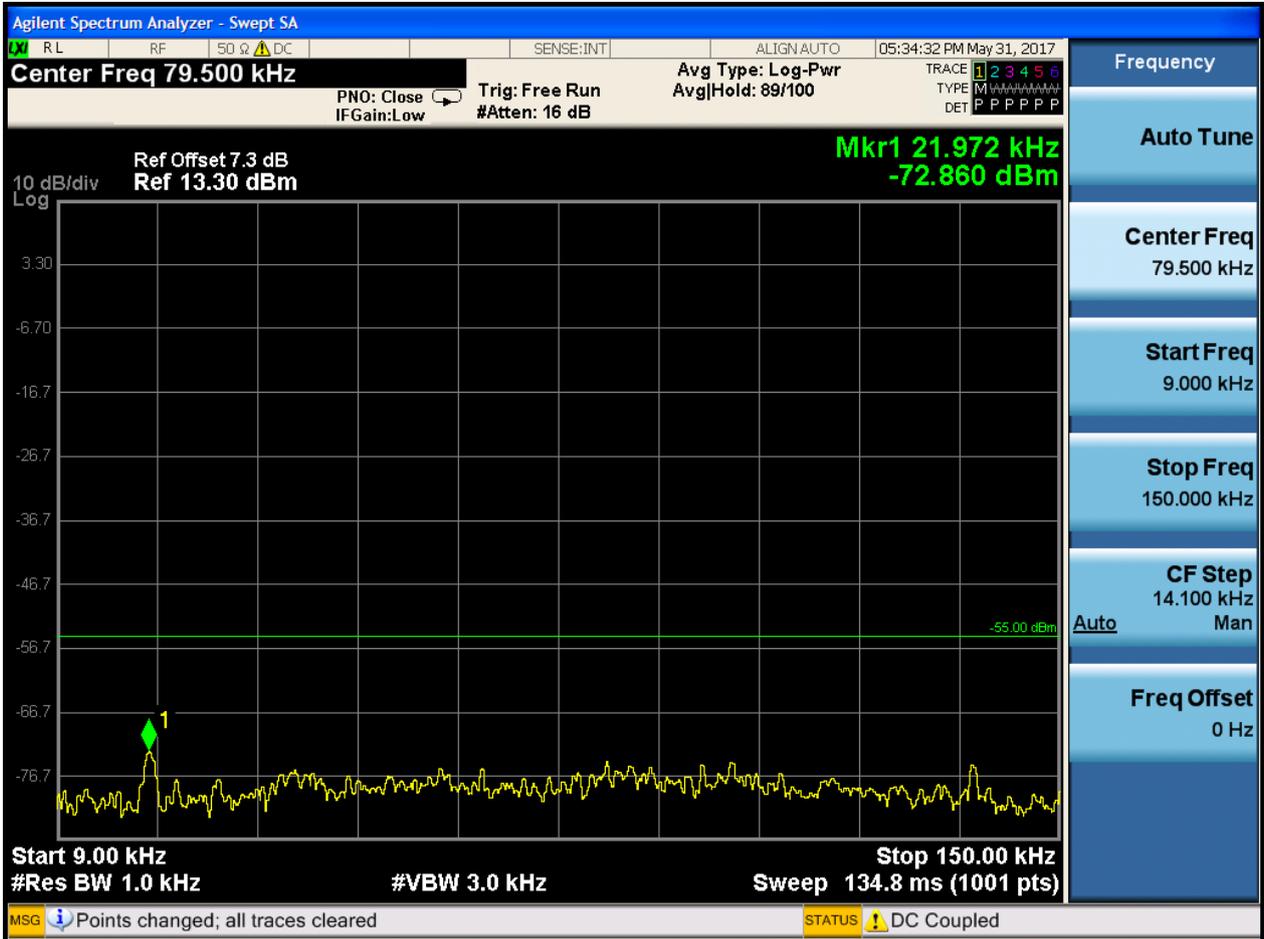


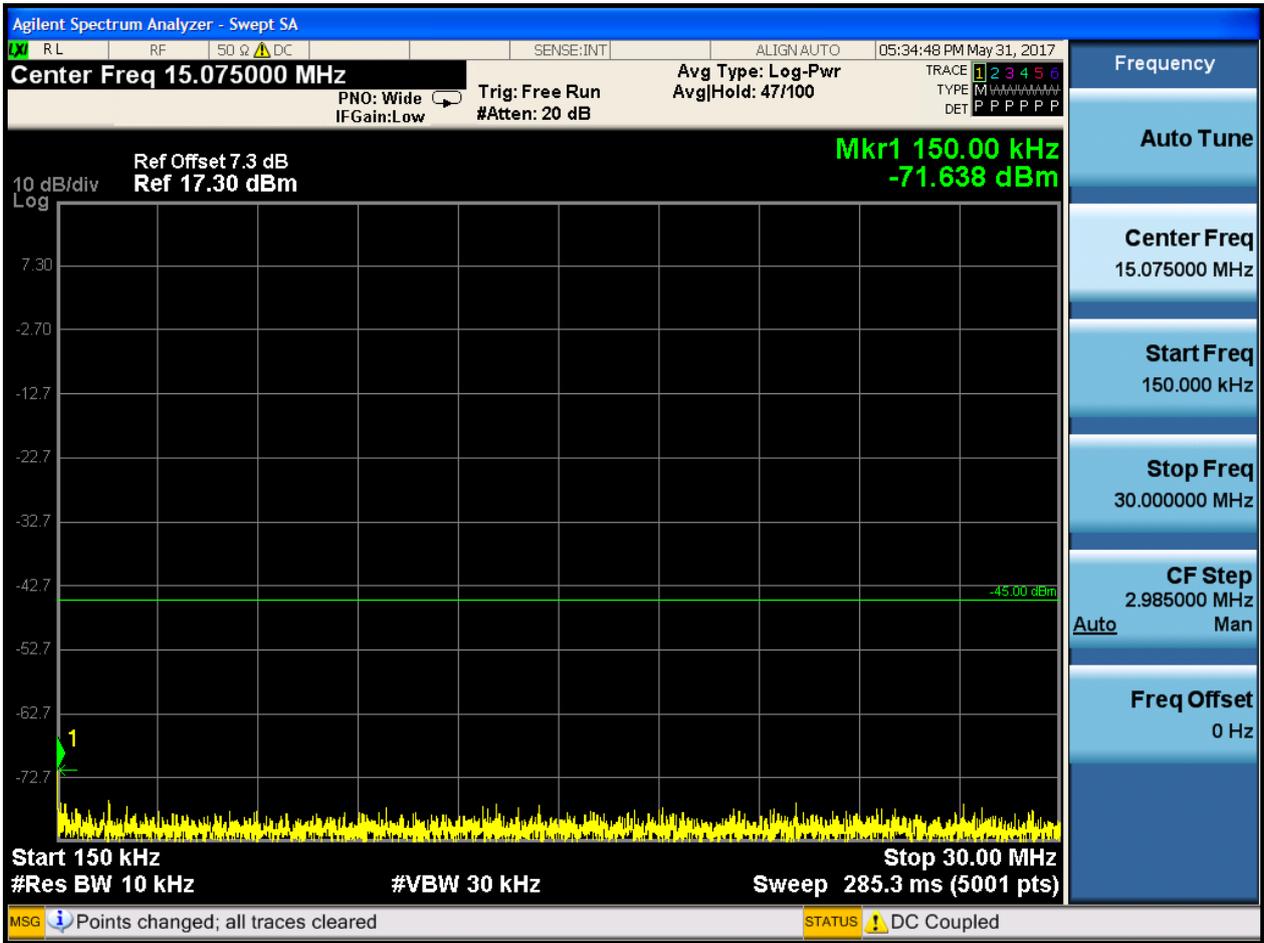


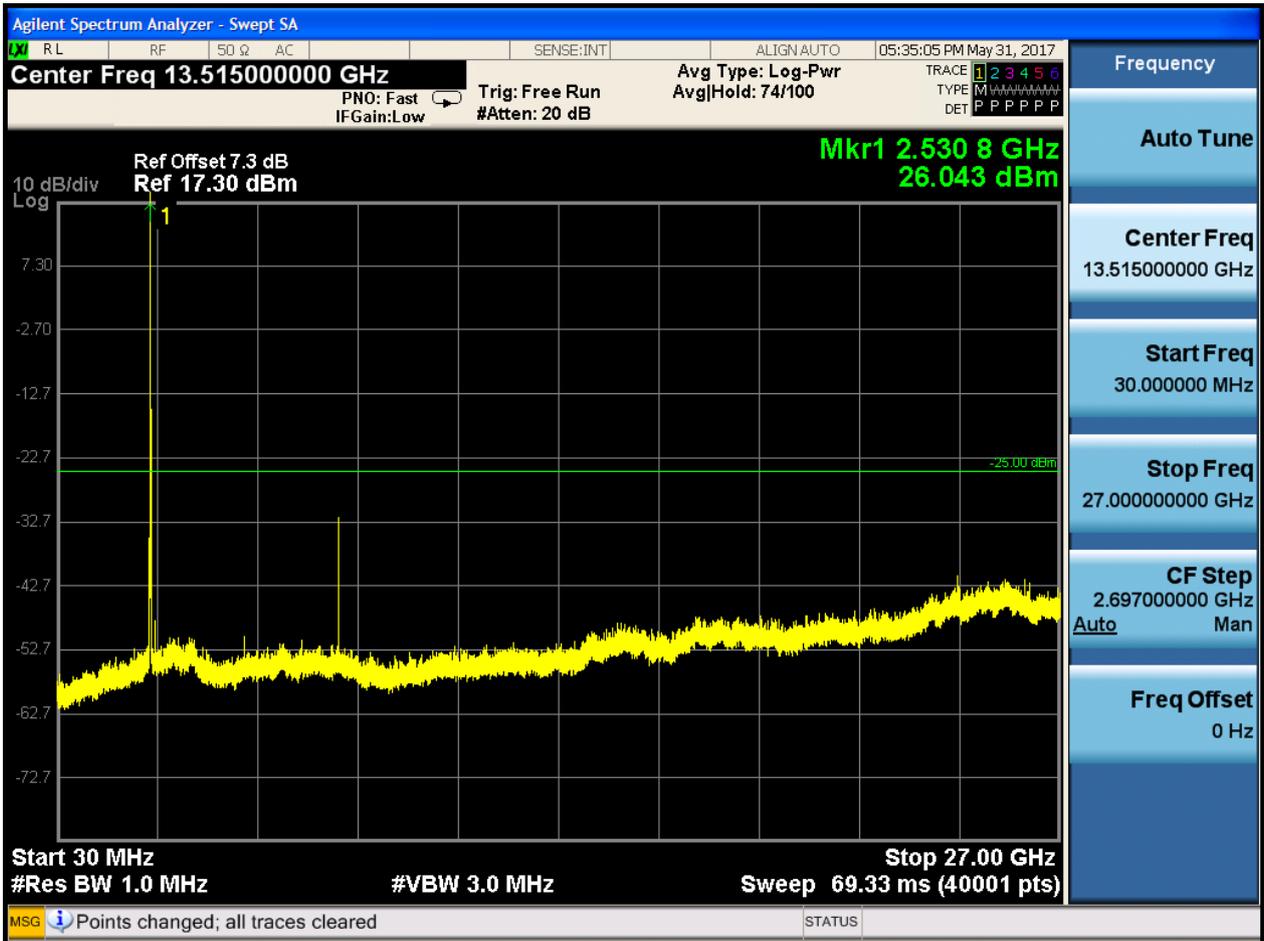


6.1.1.1.2.2 Test Channel = MCH

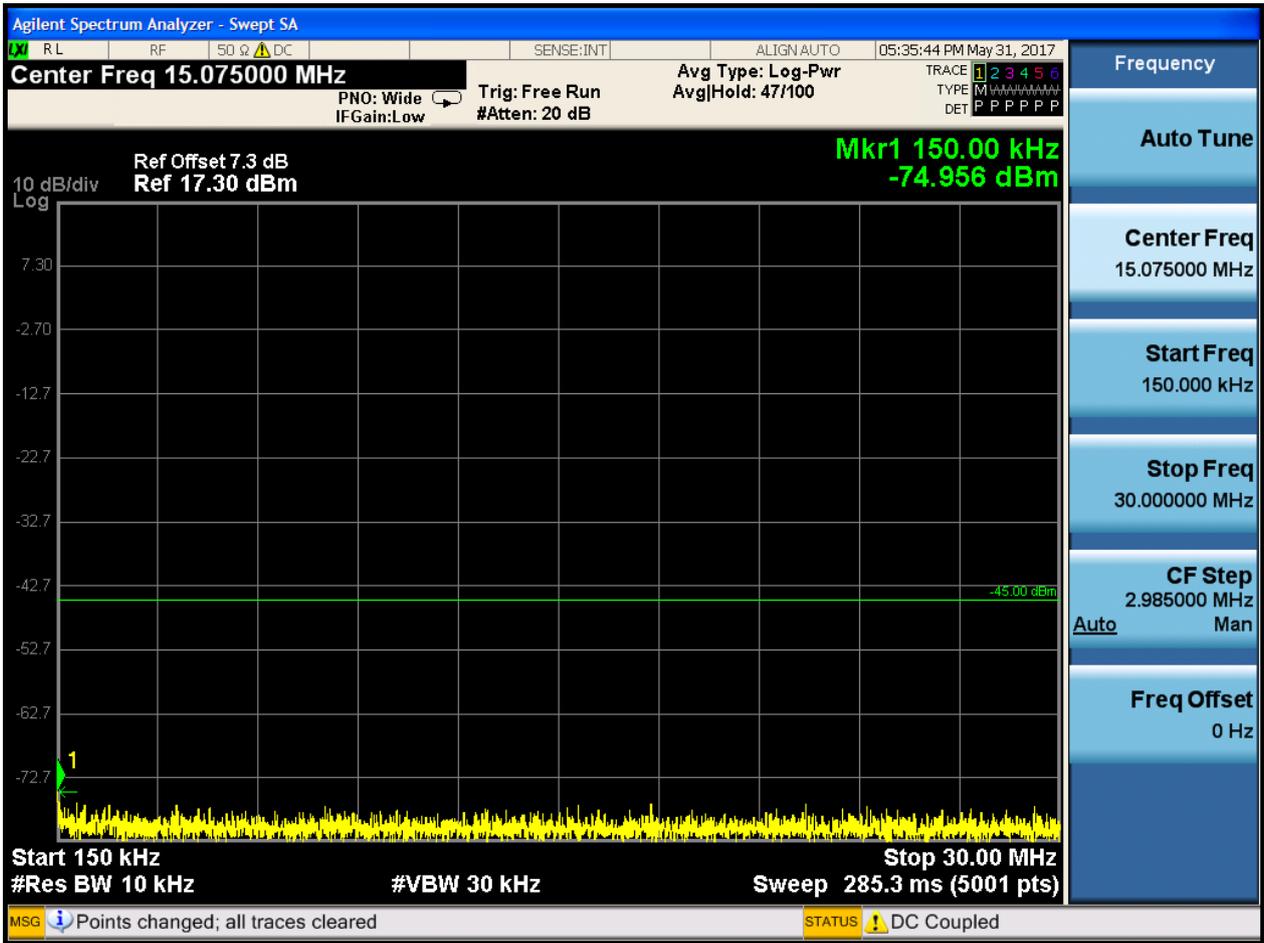
6.1.1.1.2.2.1 Test RB = RB1#0

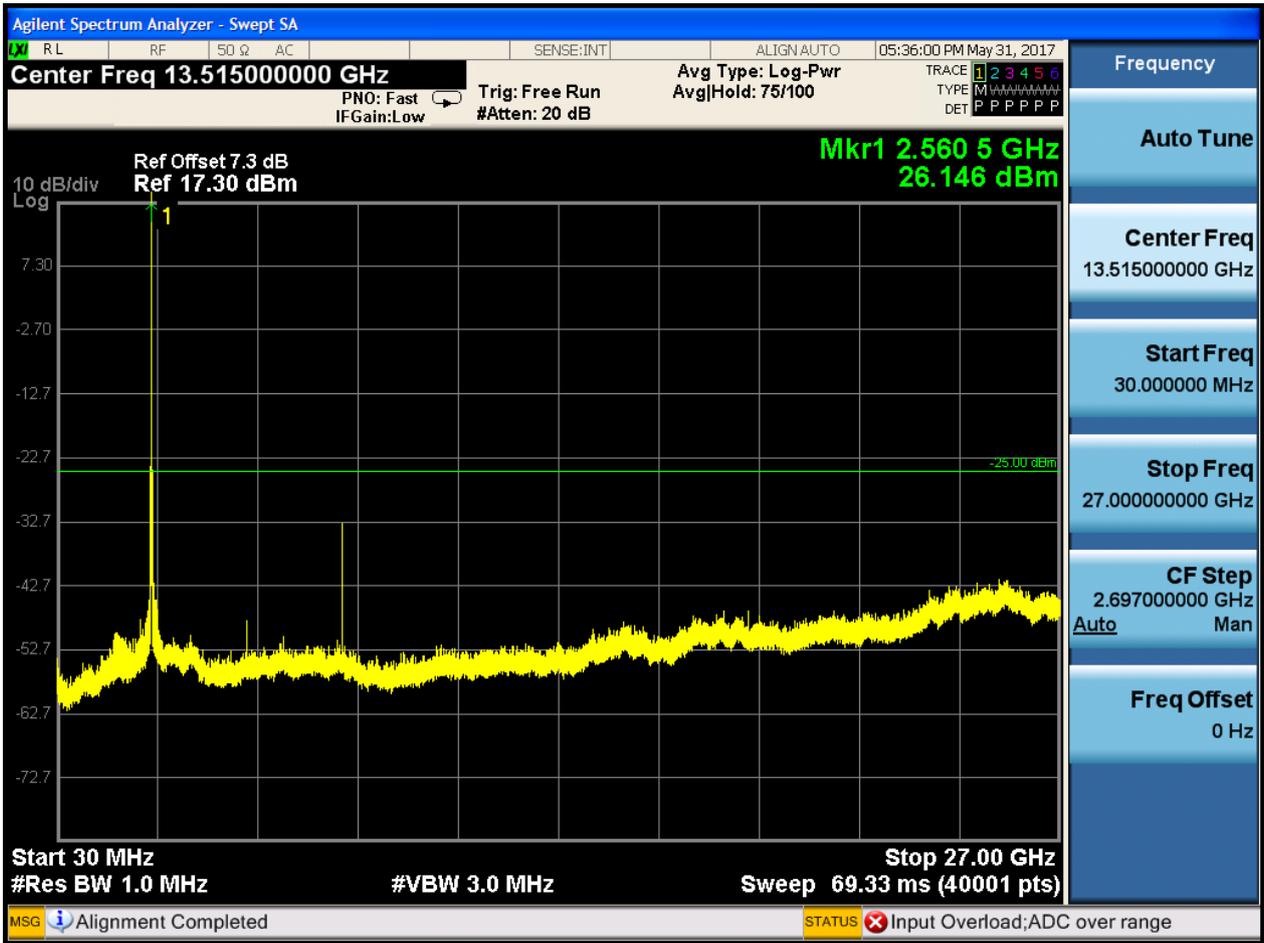










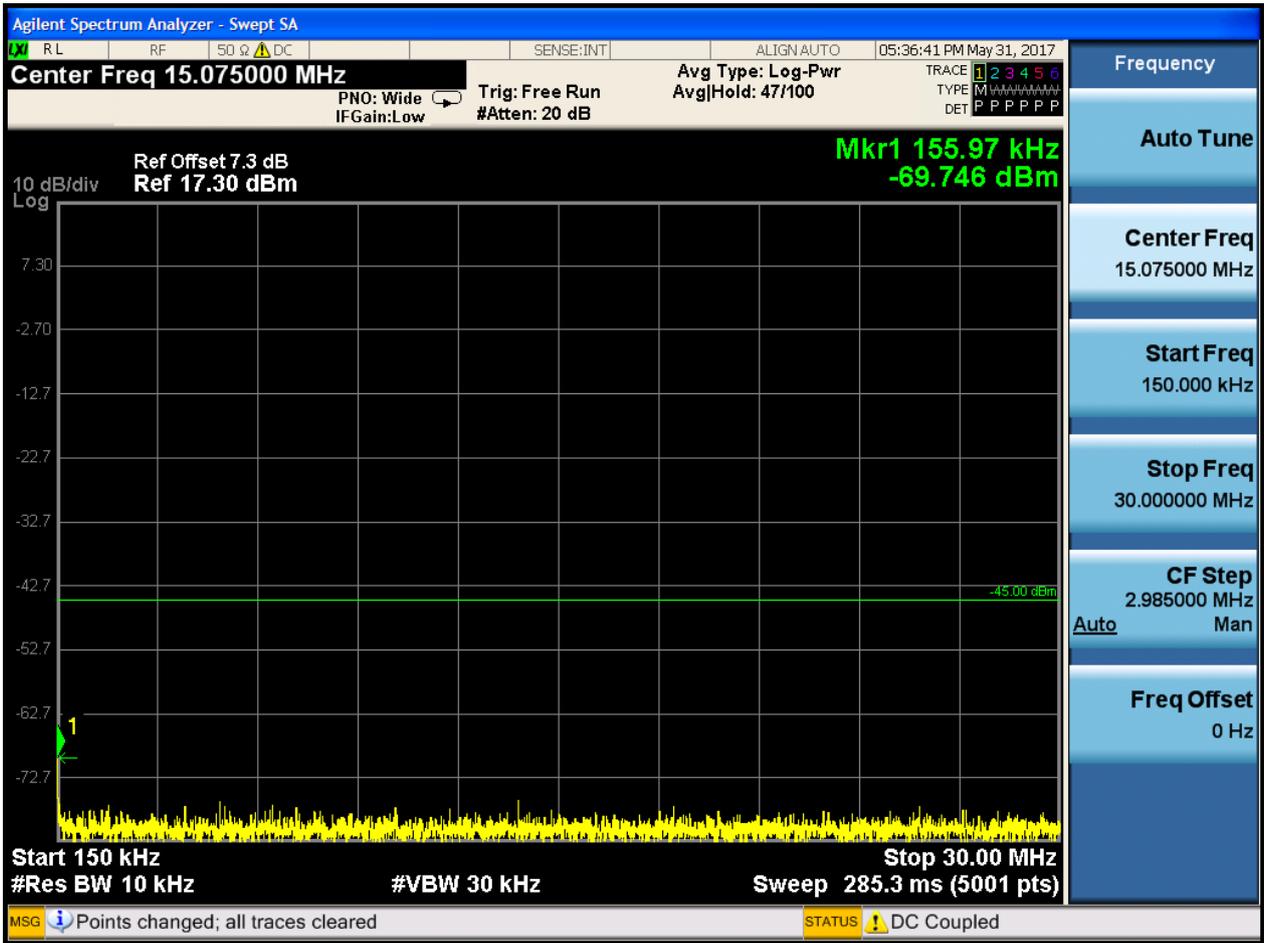


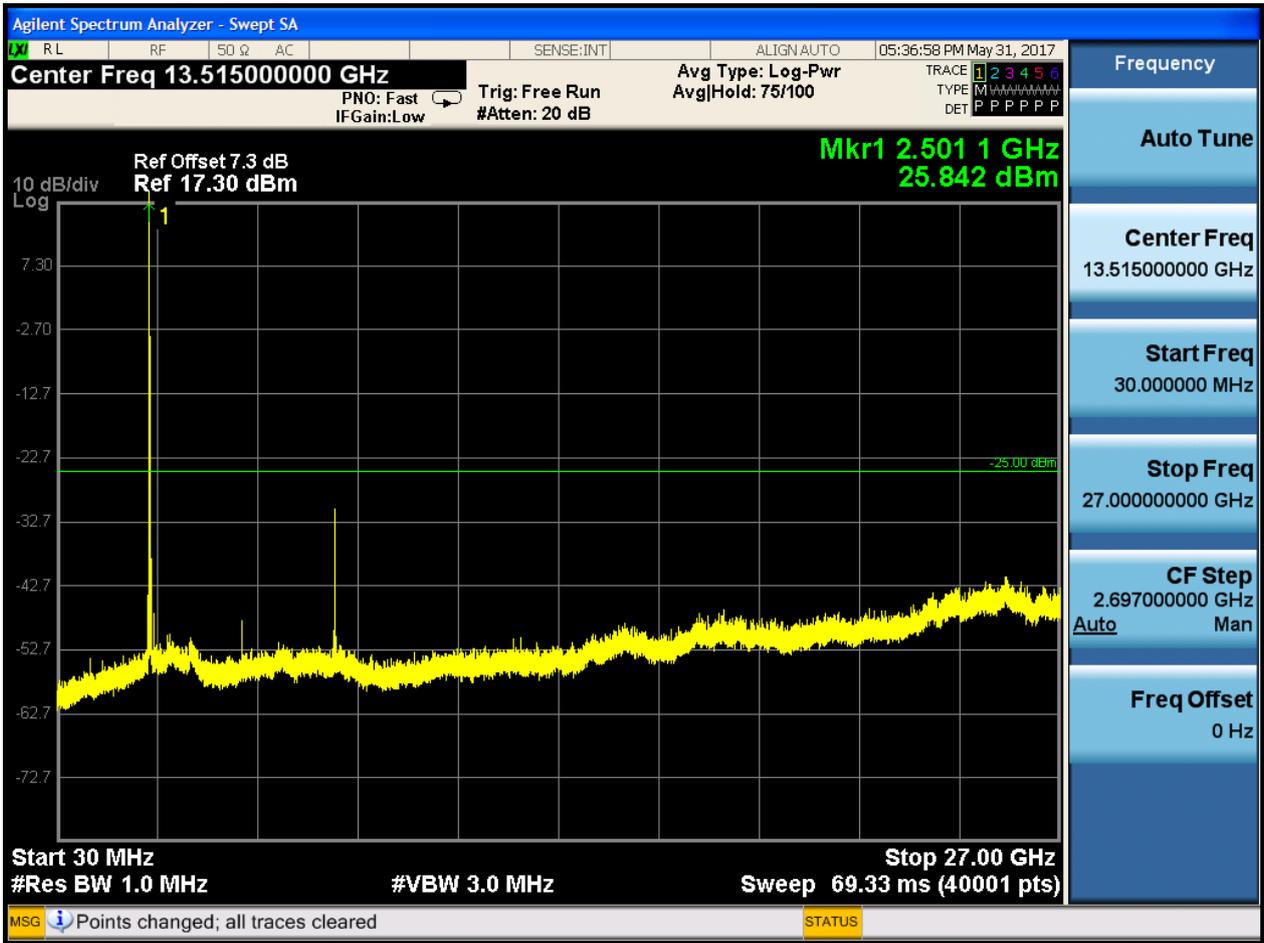
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0

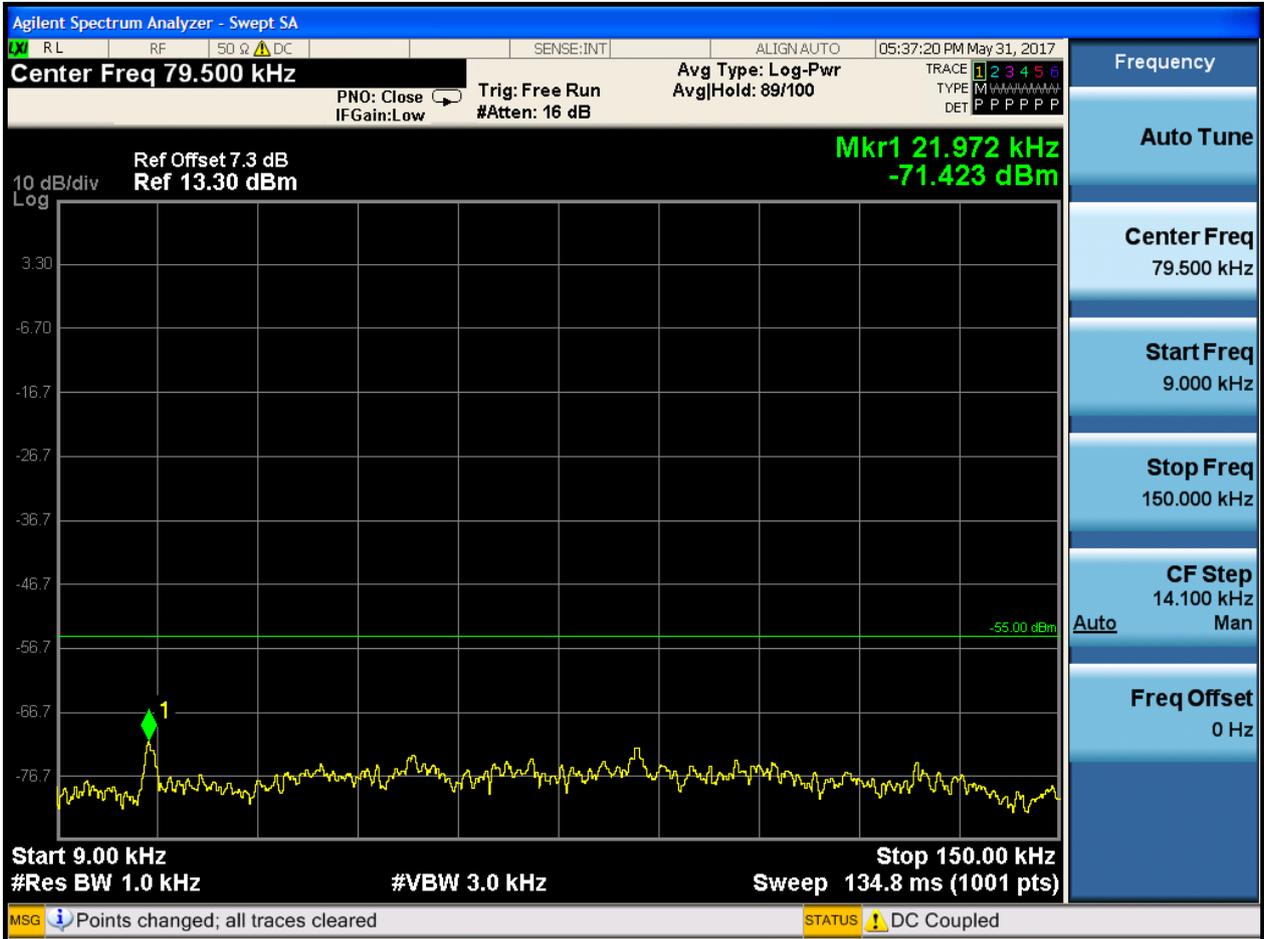


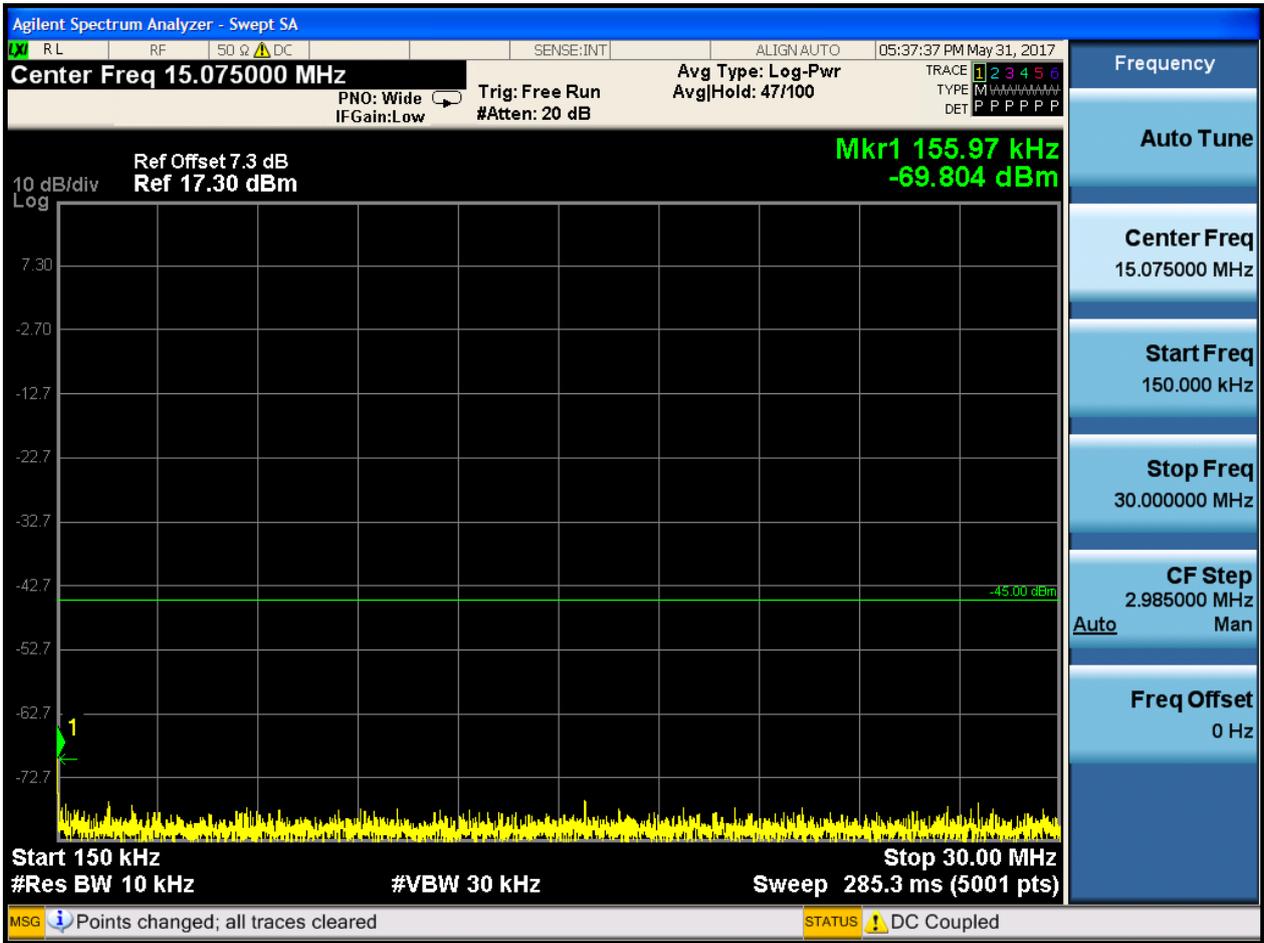


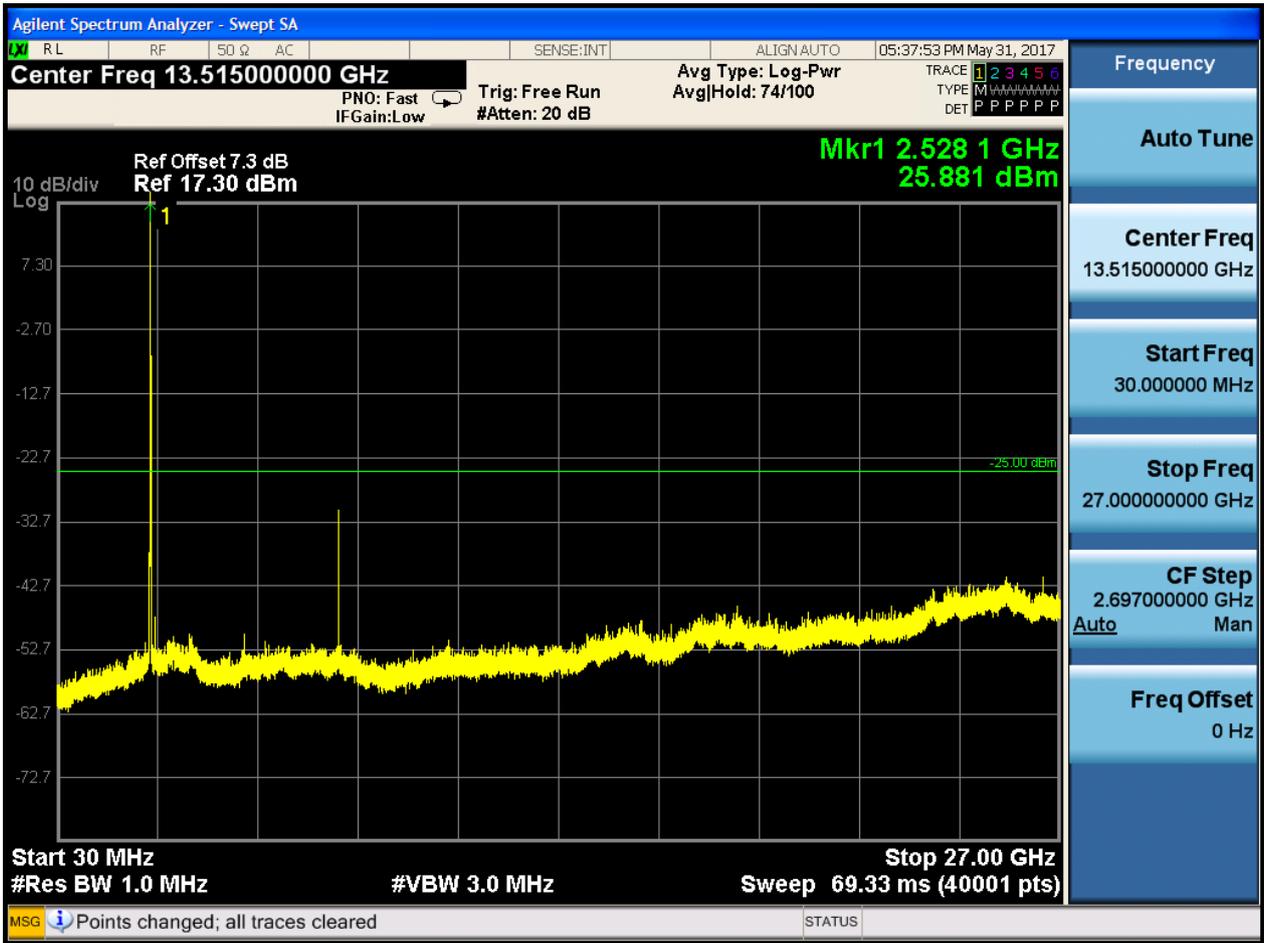


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

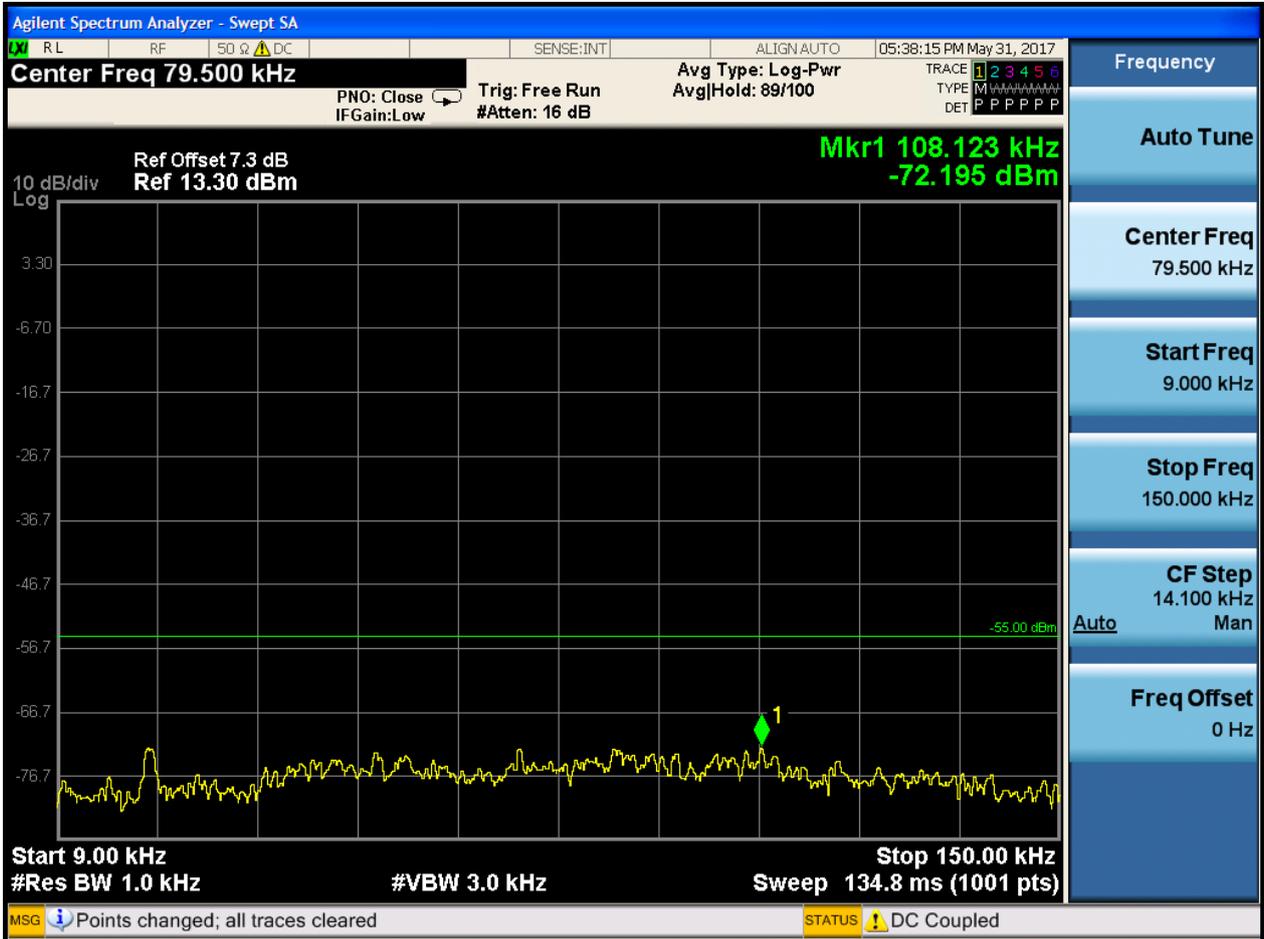


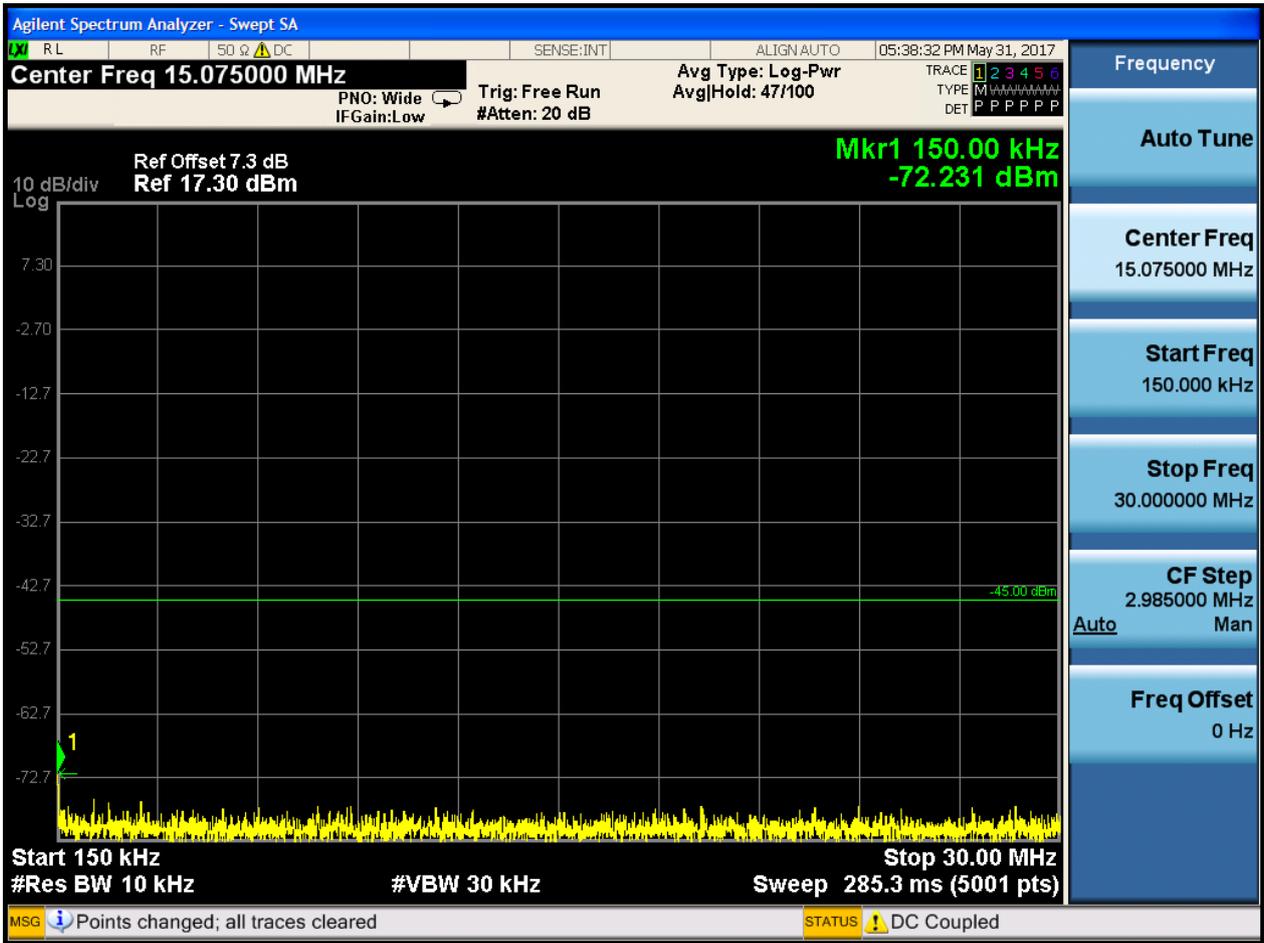




6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0



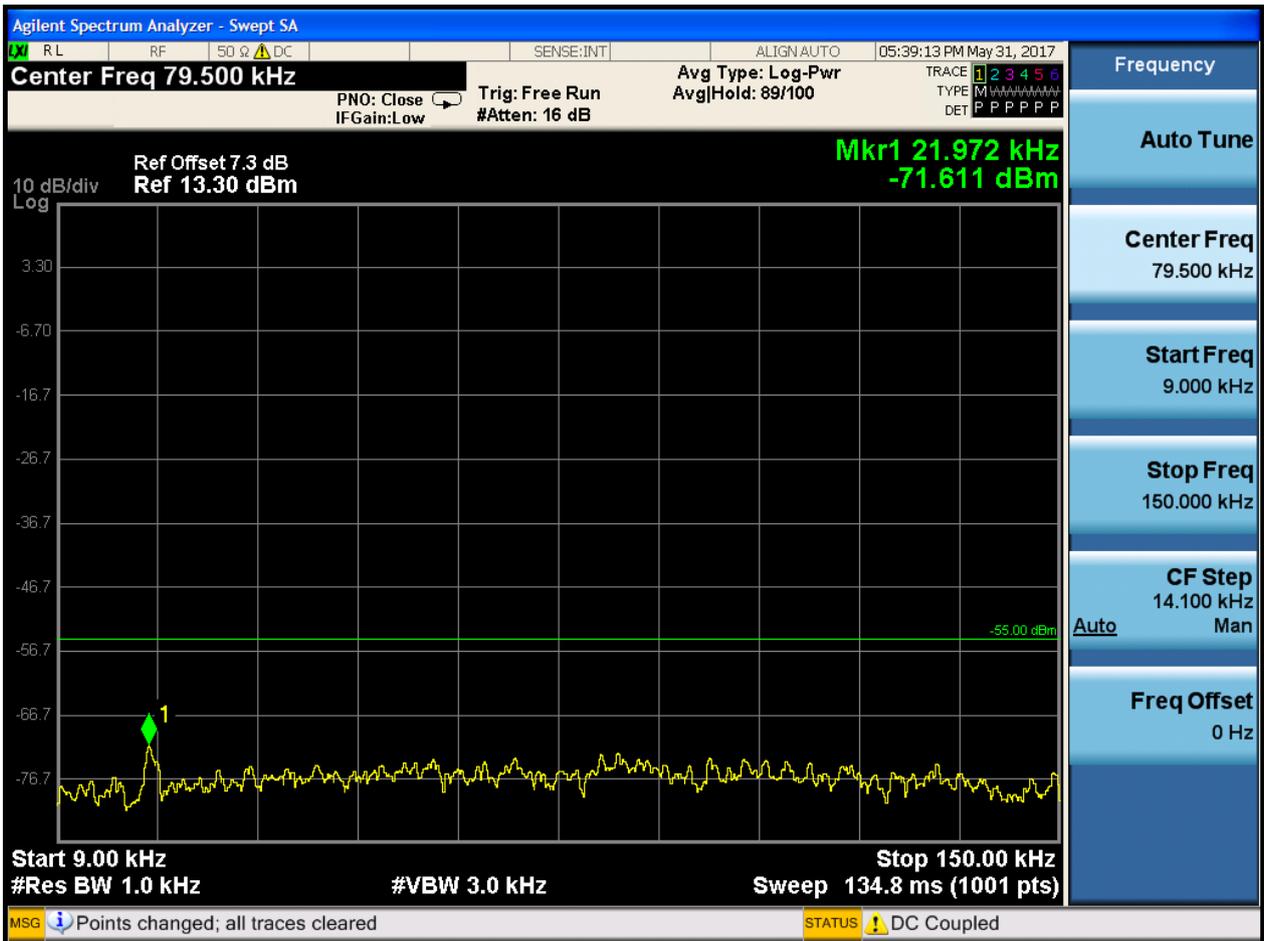


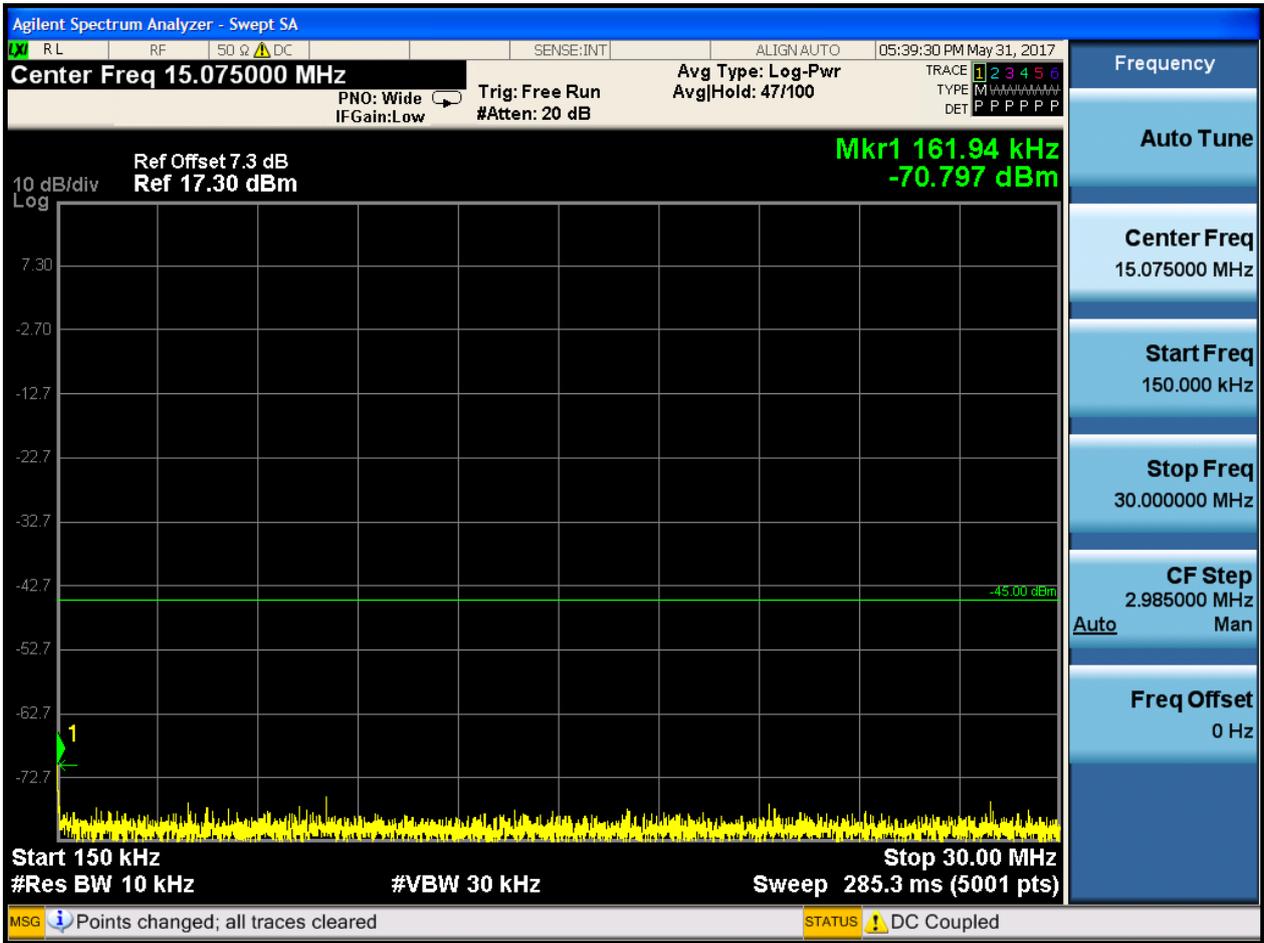


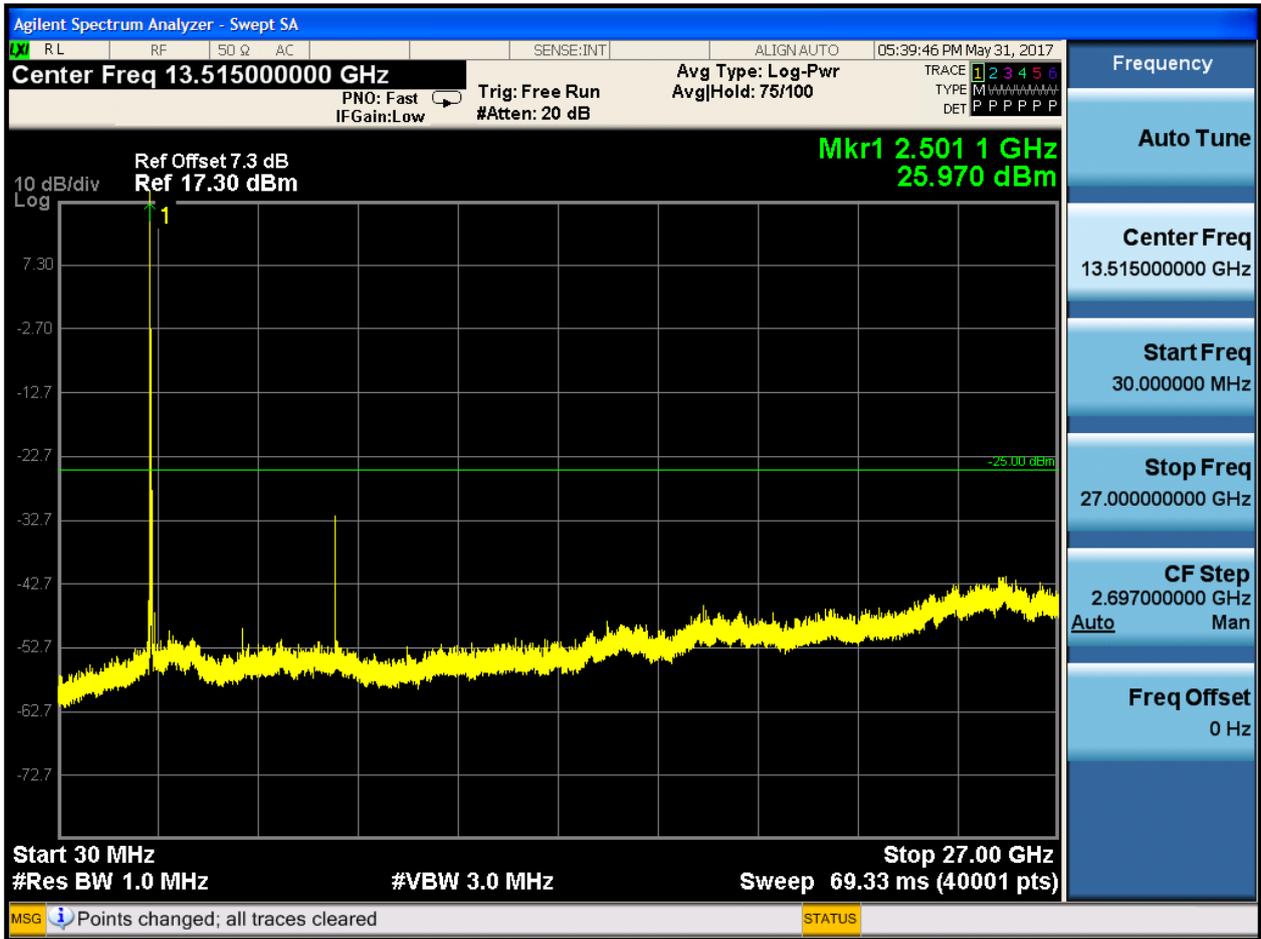
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0

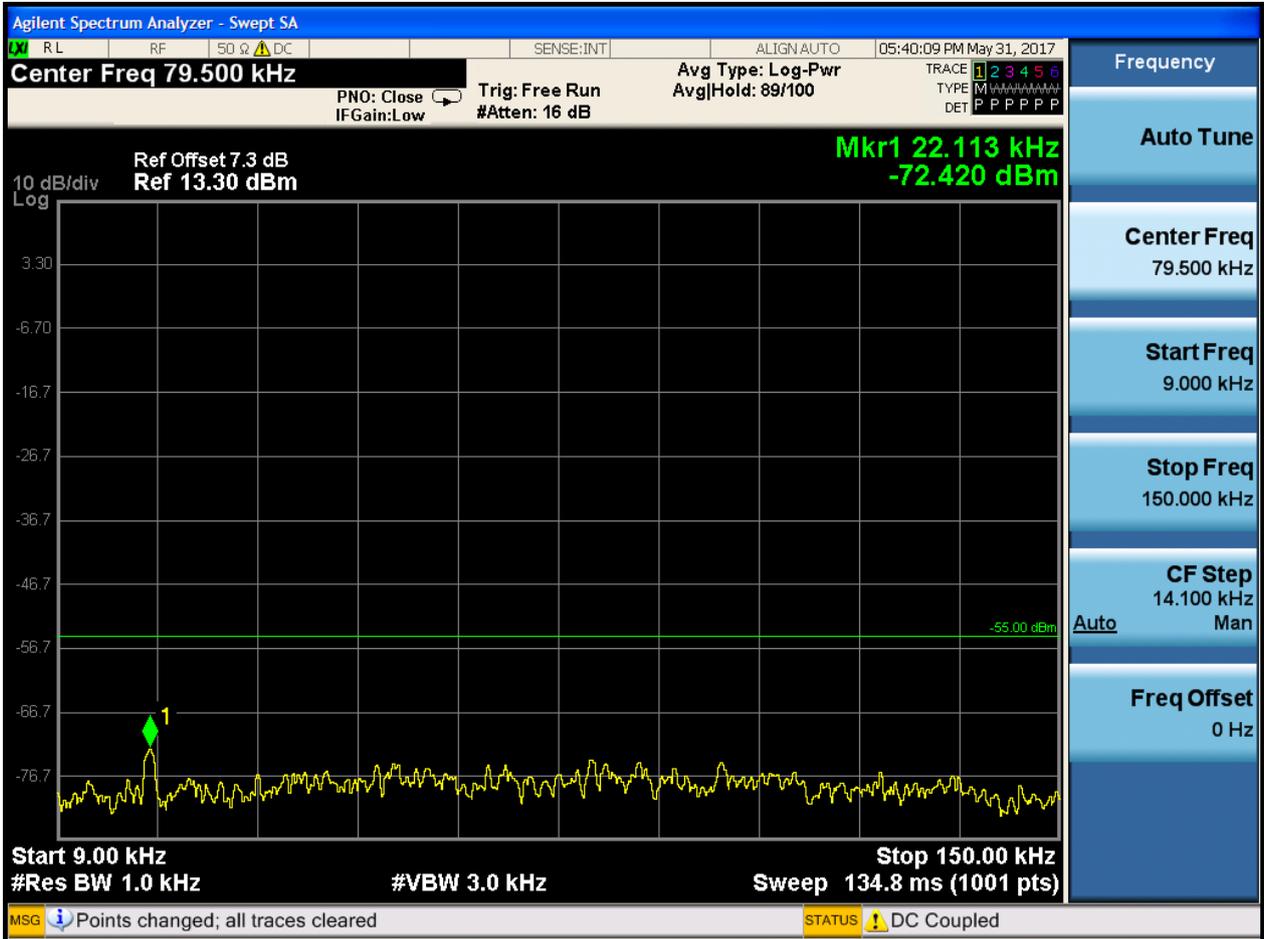


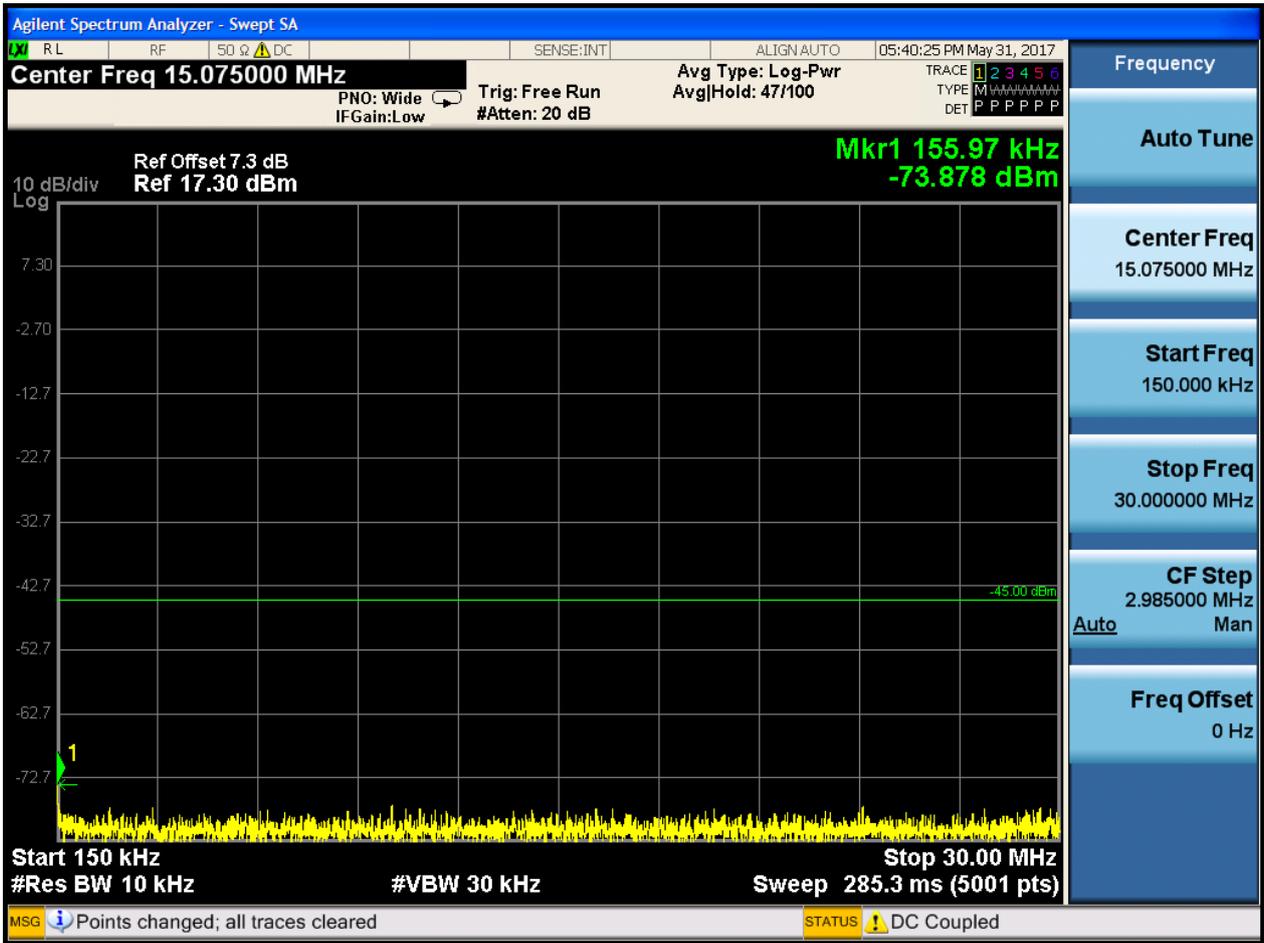


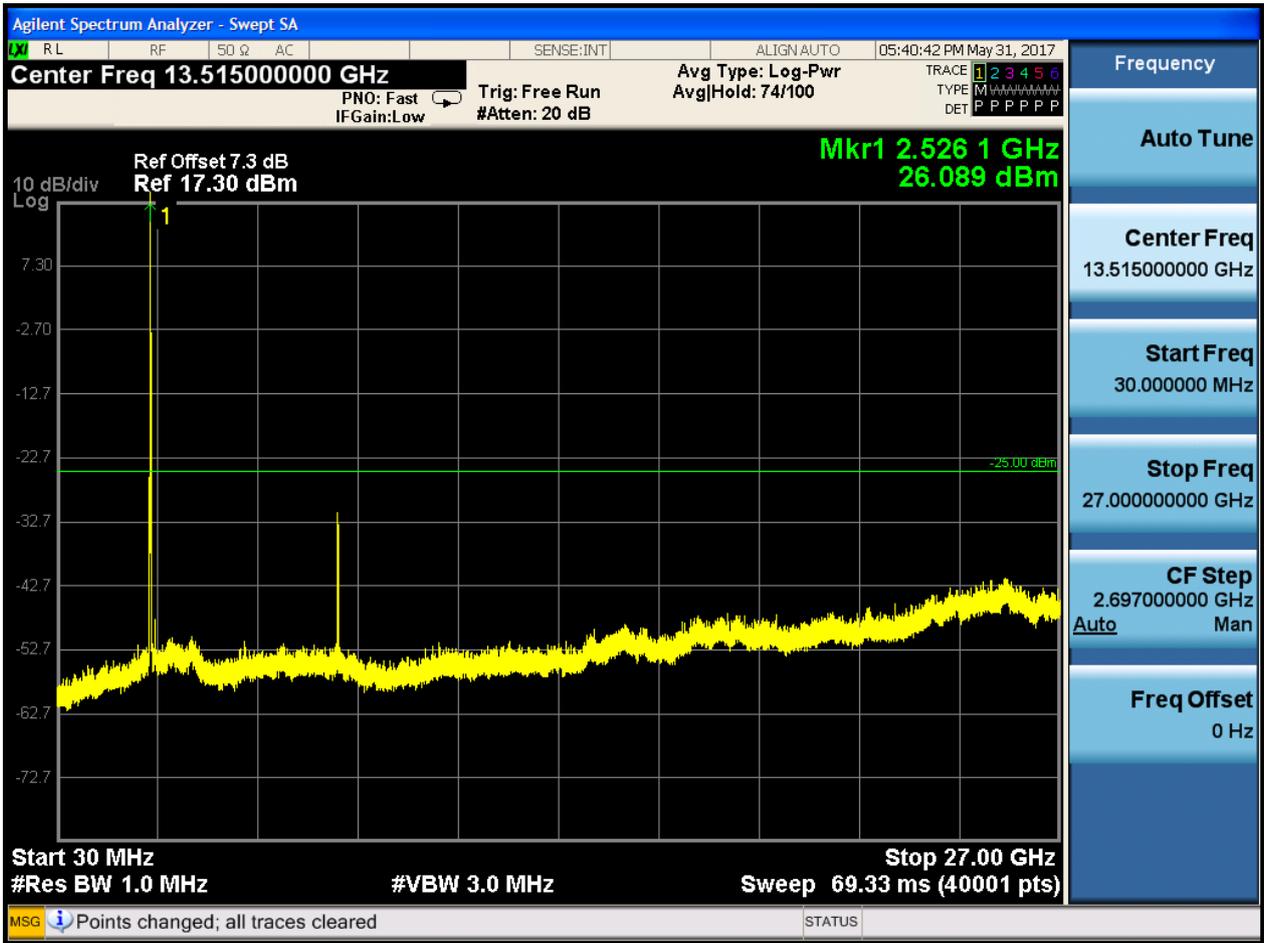


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0

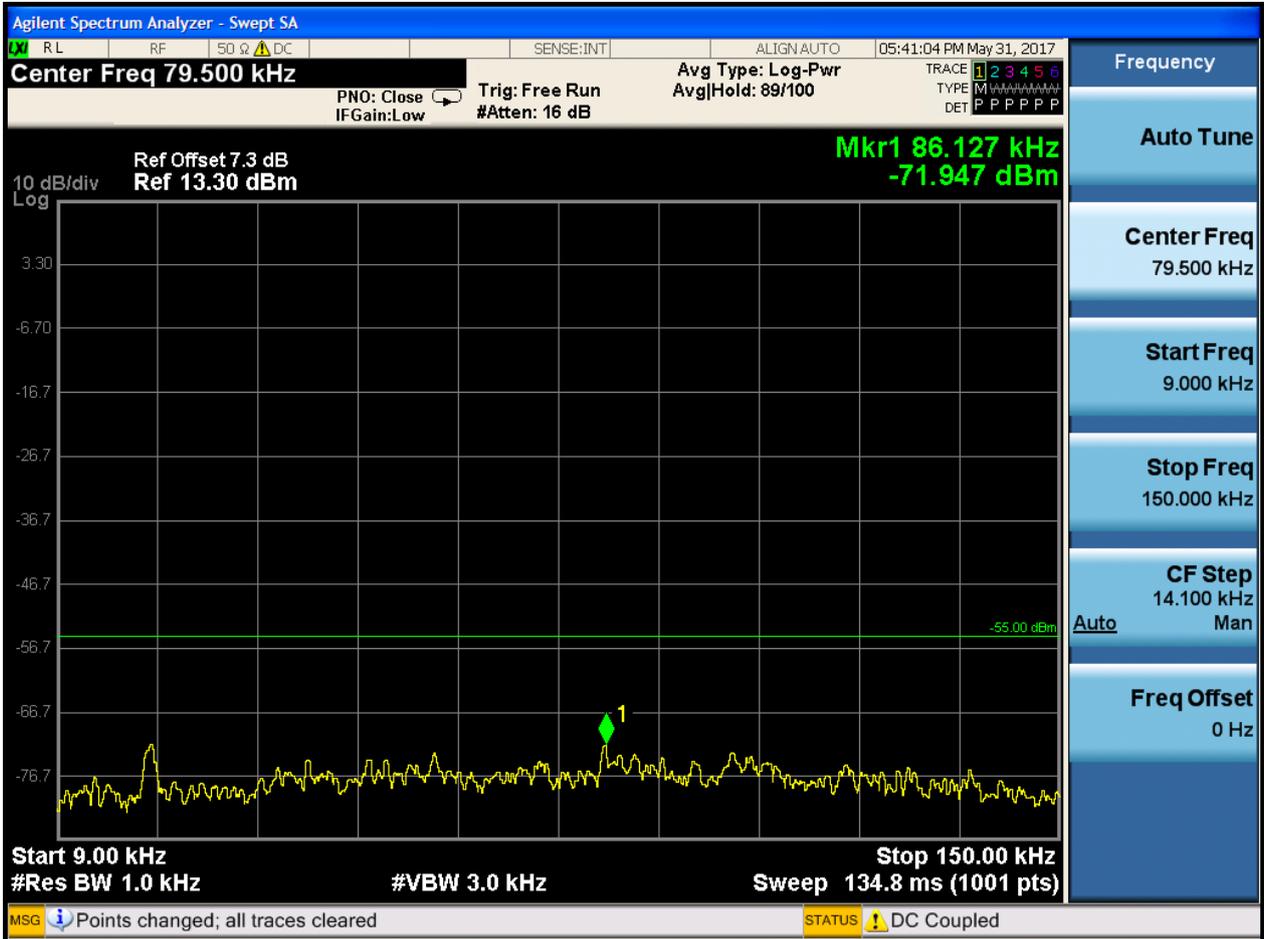


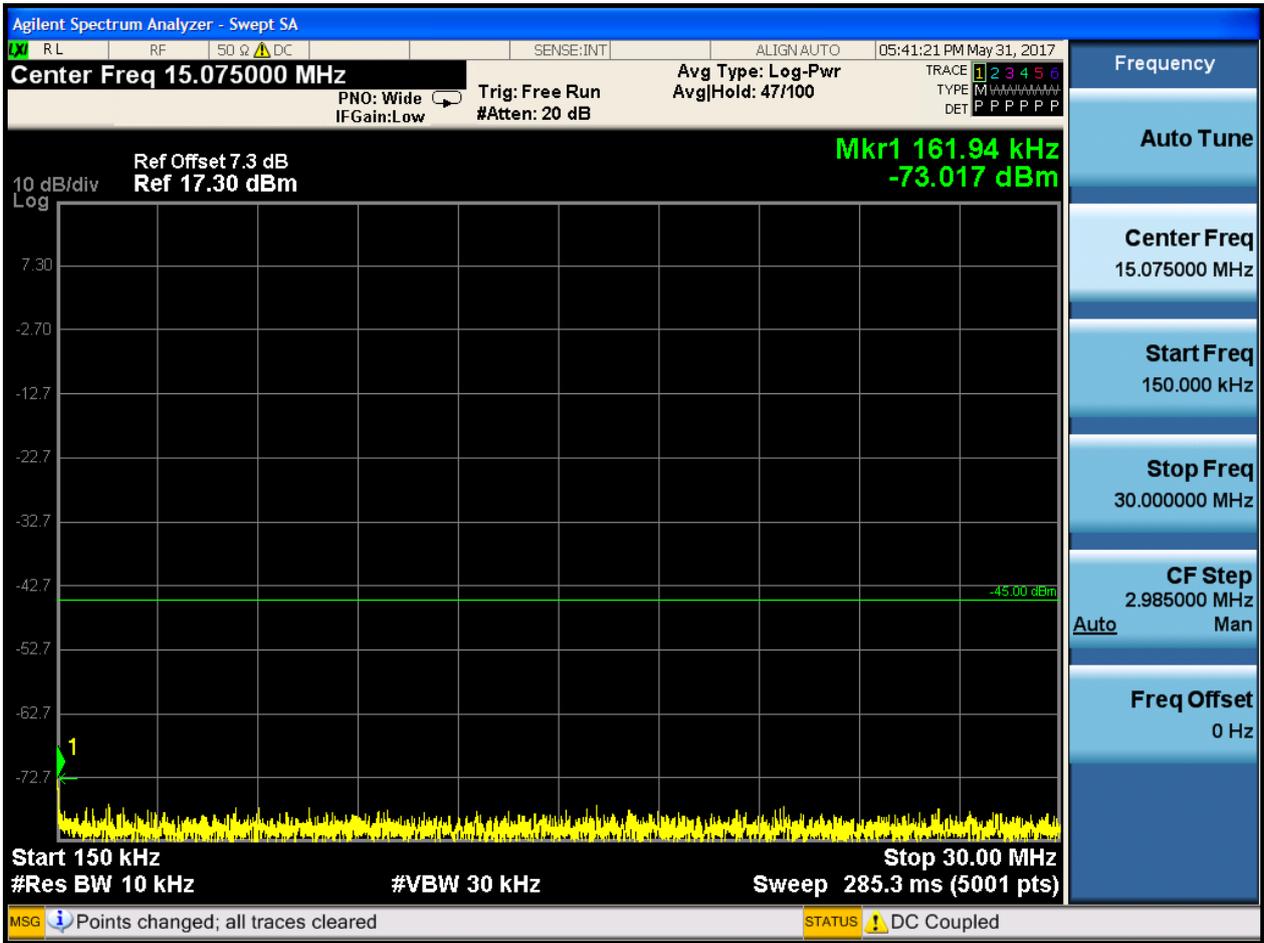


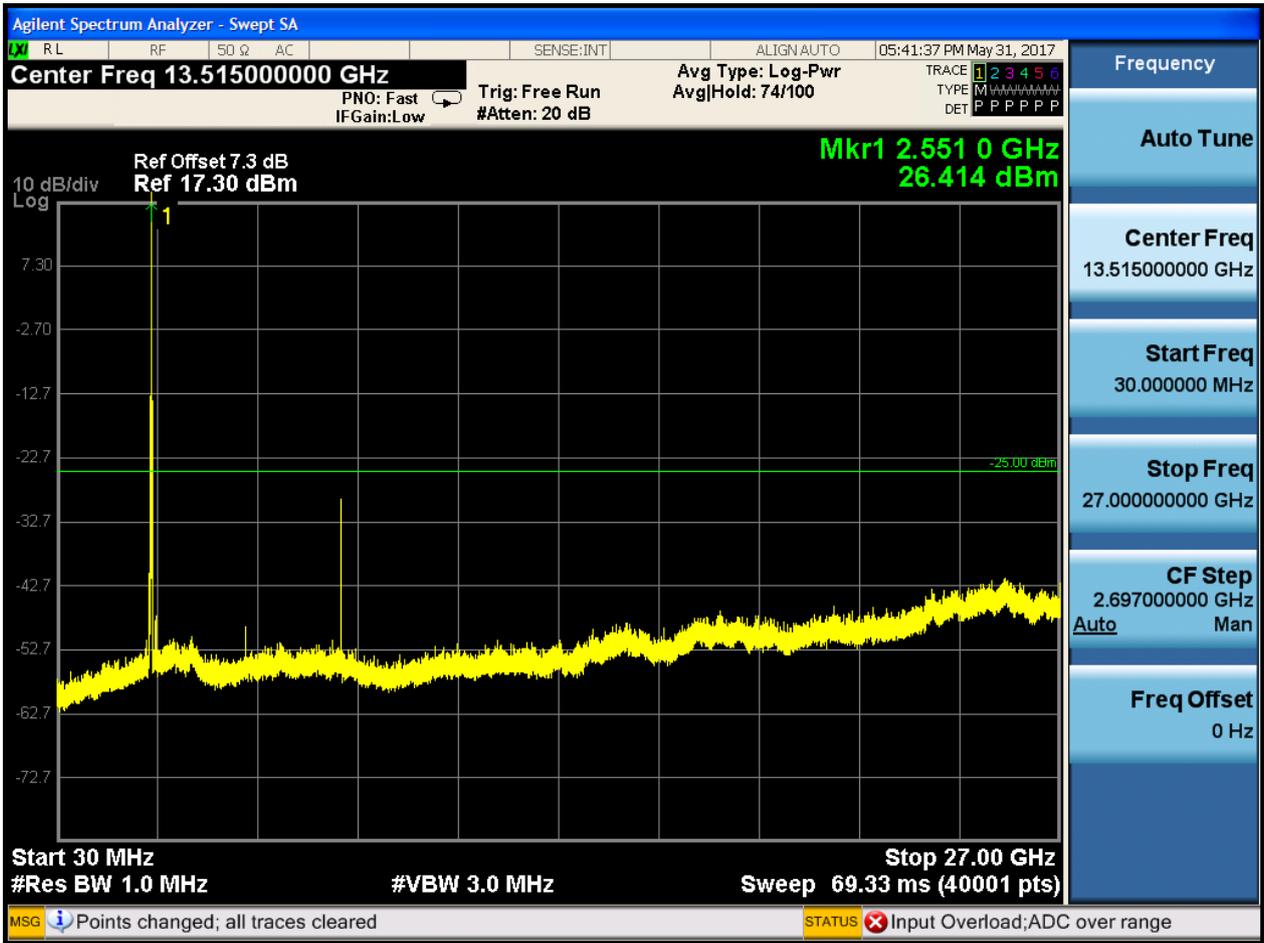


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0





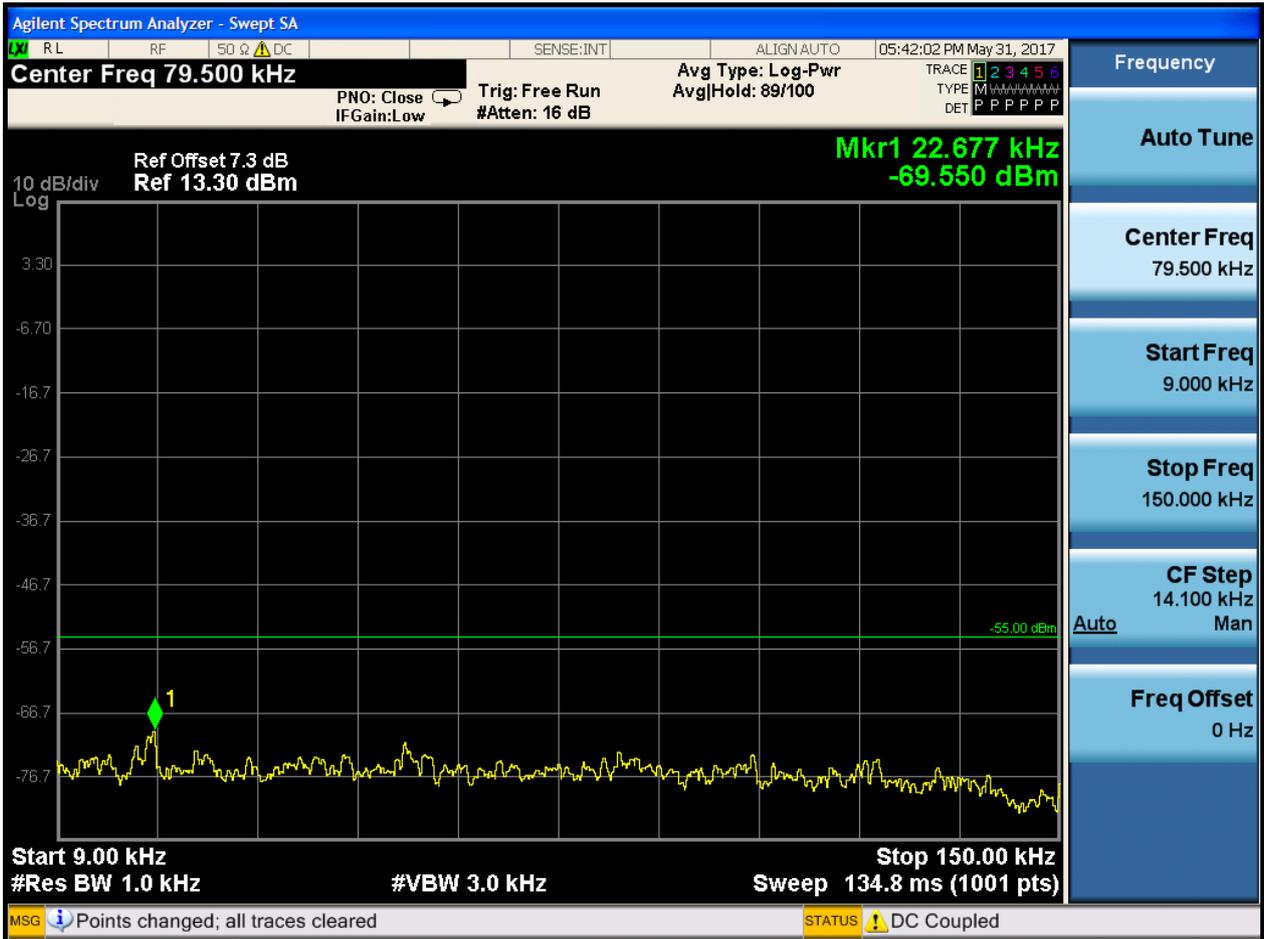


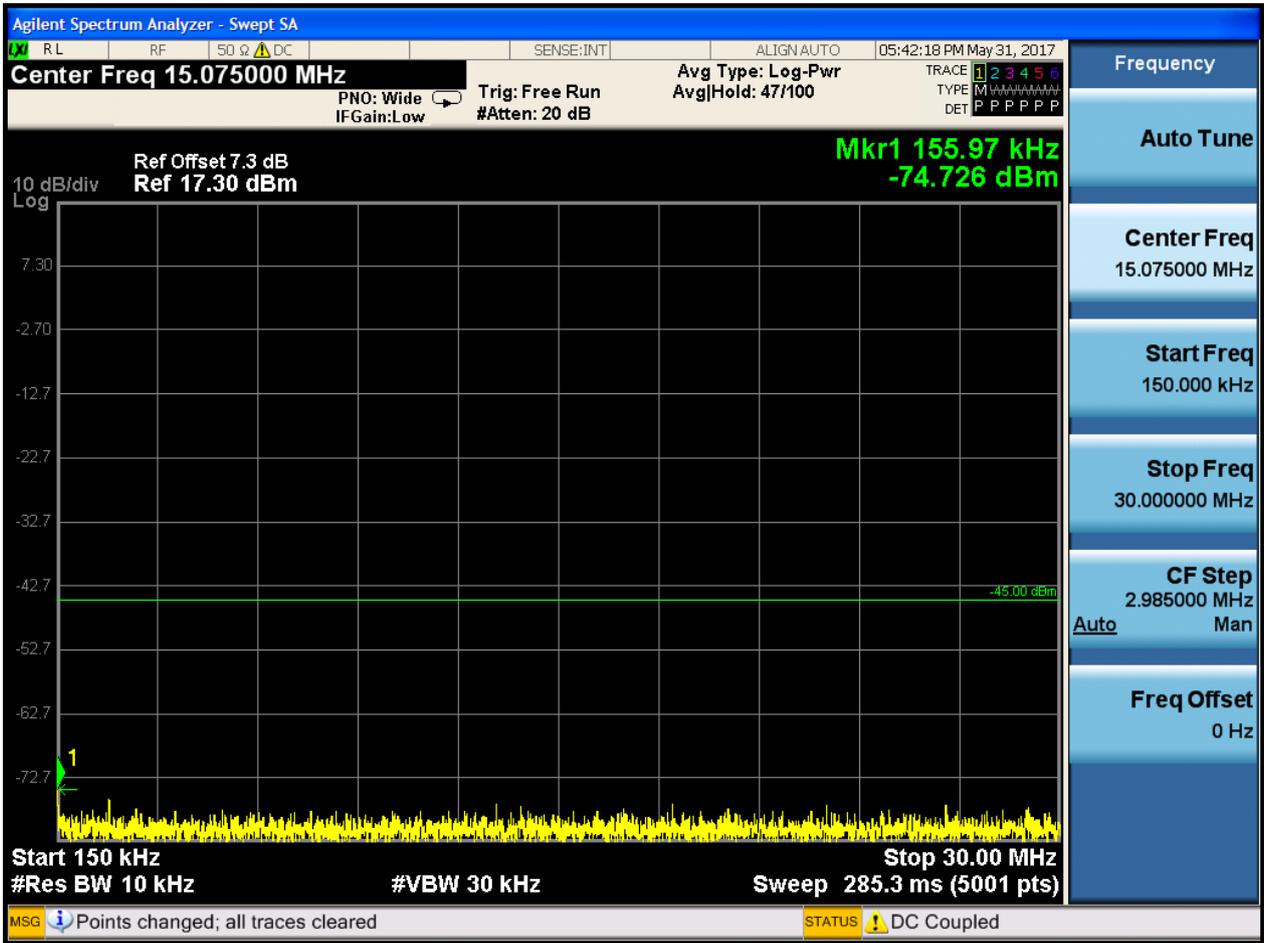
6.1.1.2 Test Mode = LTE/TM2

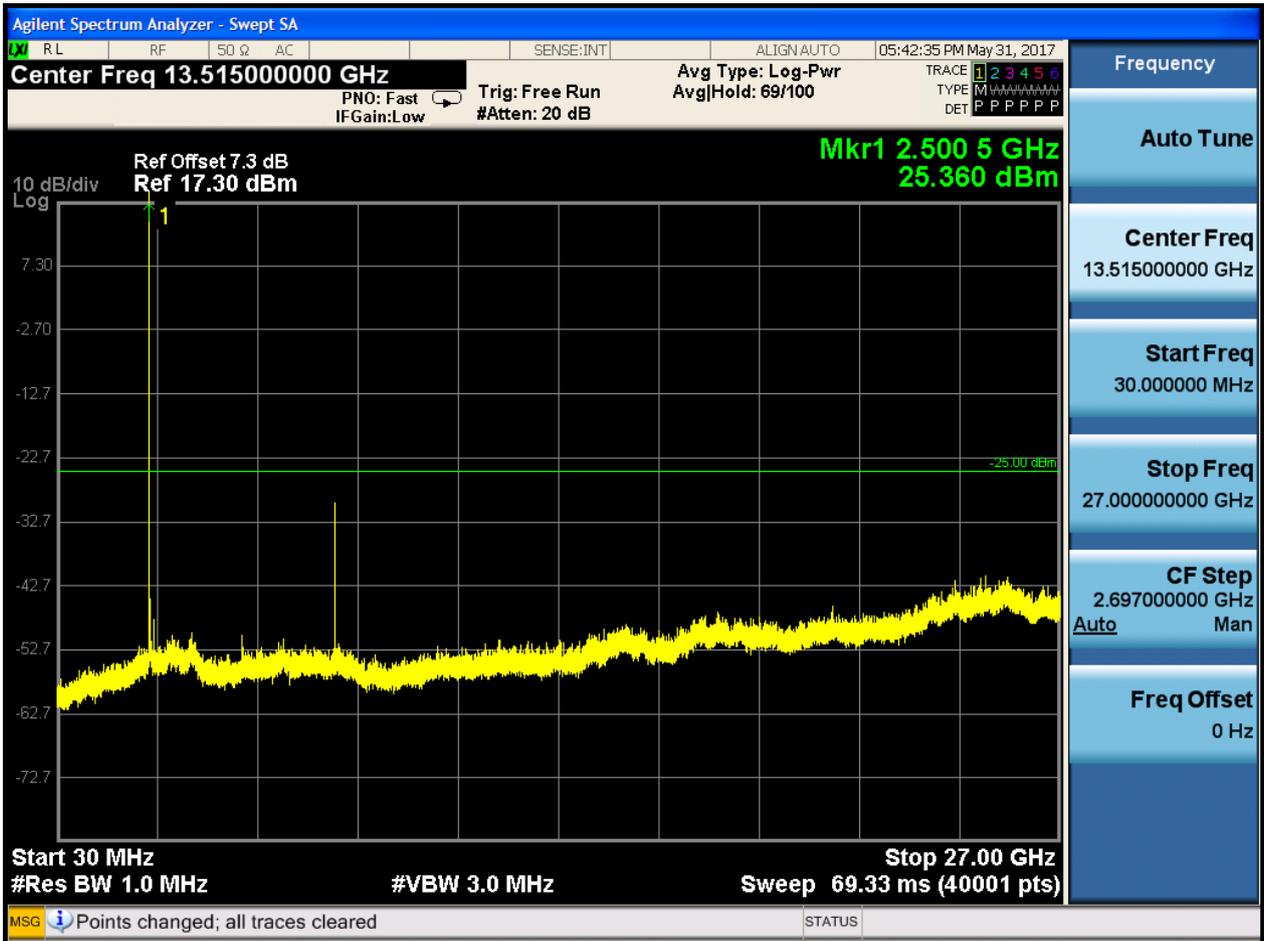
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0

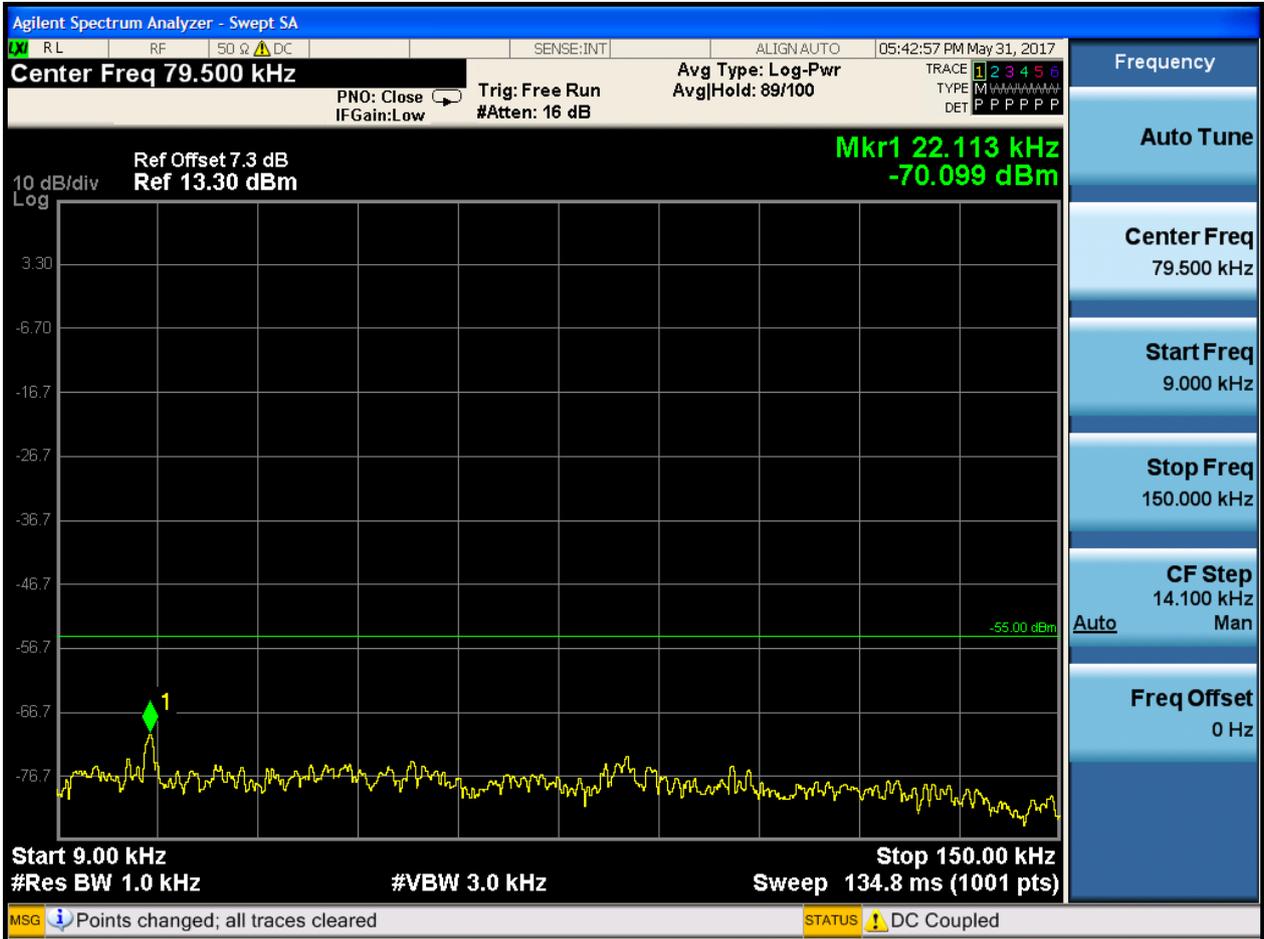


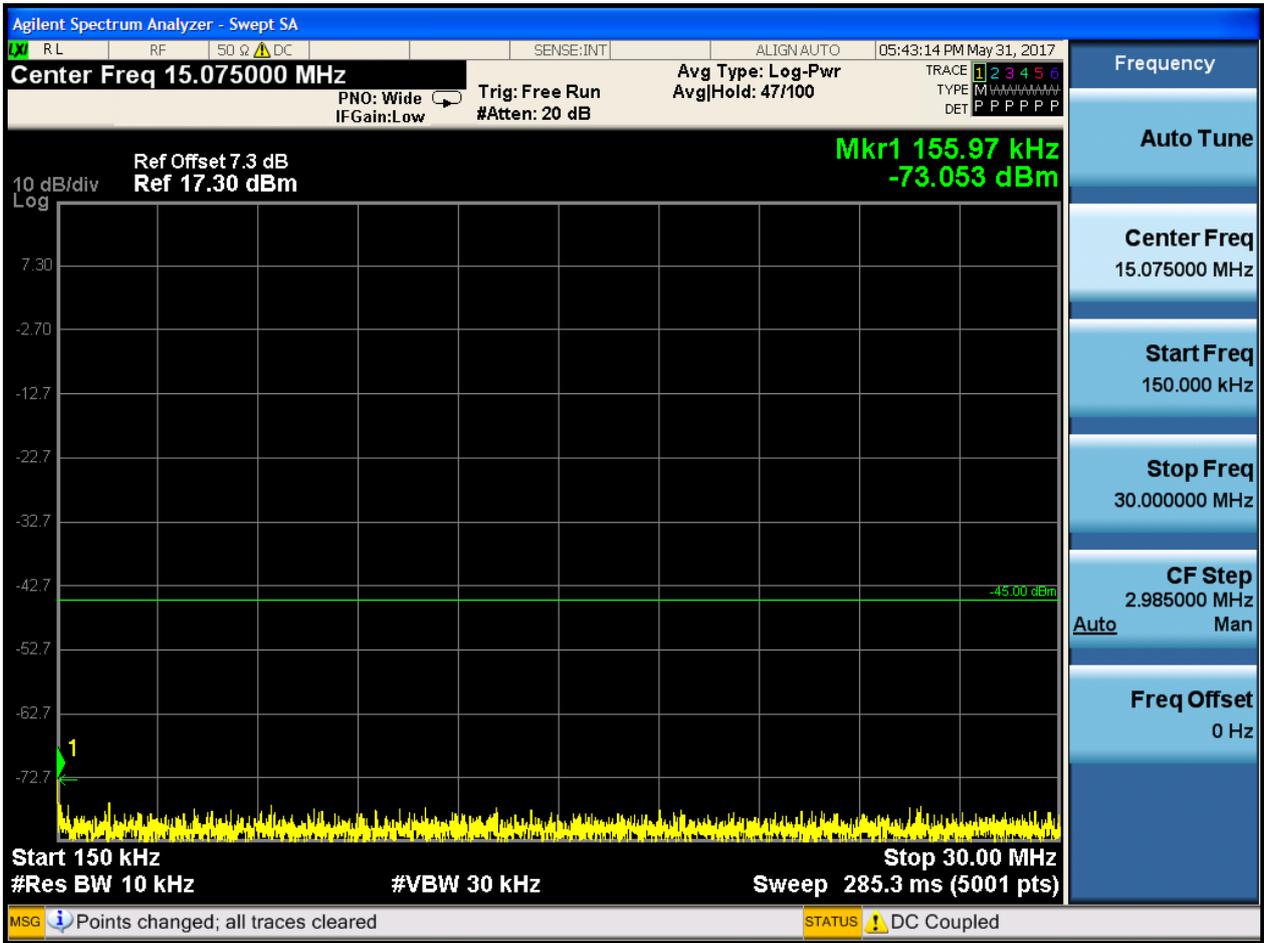


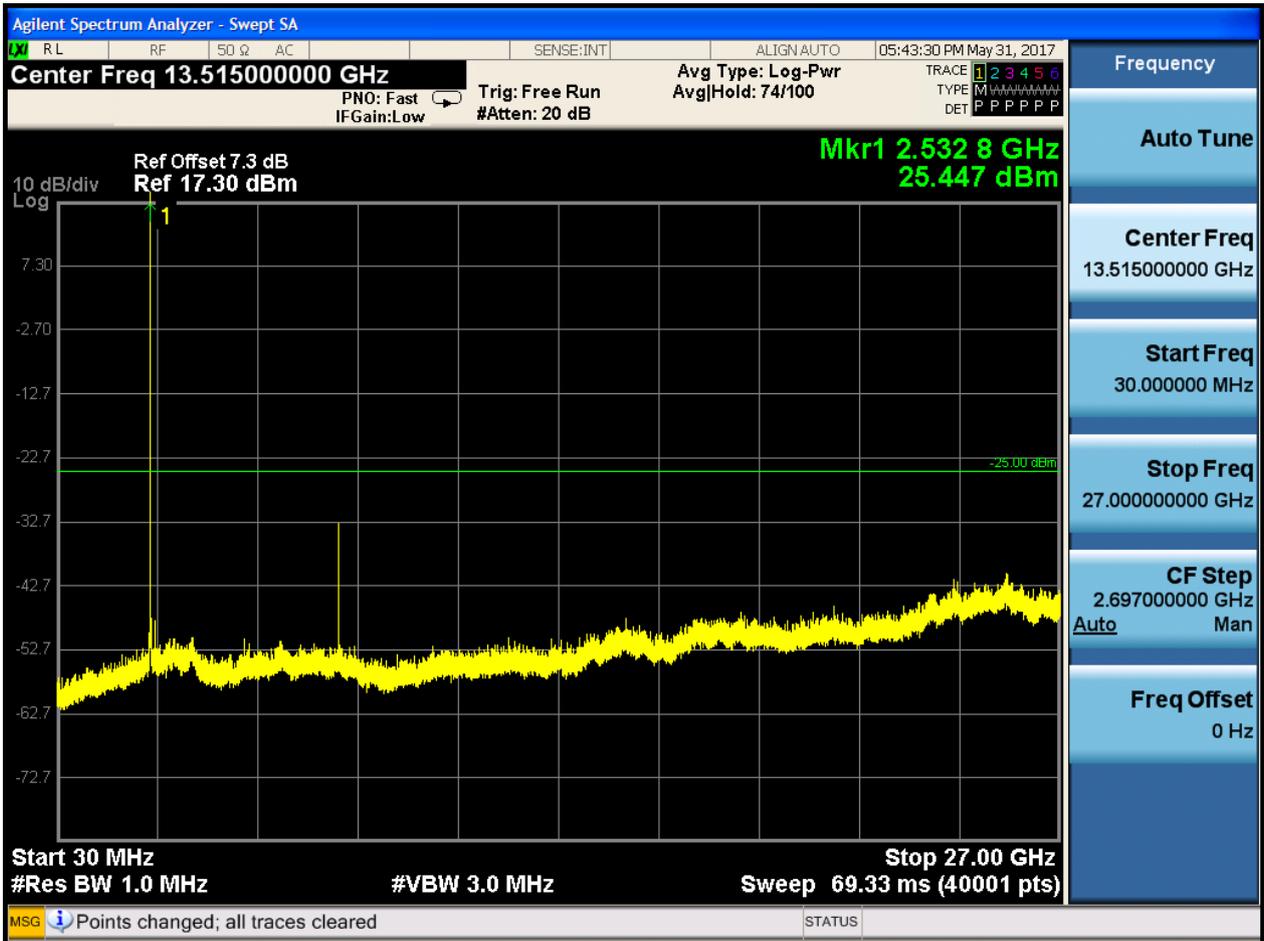


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



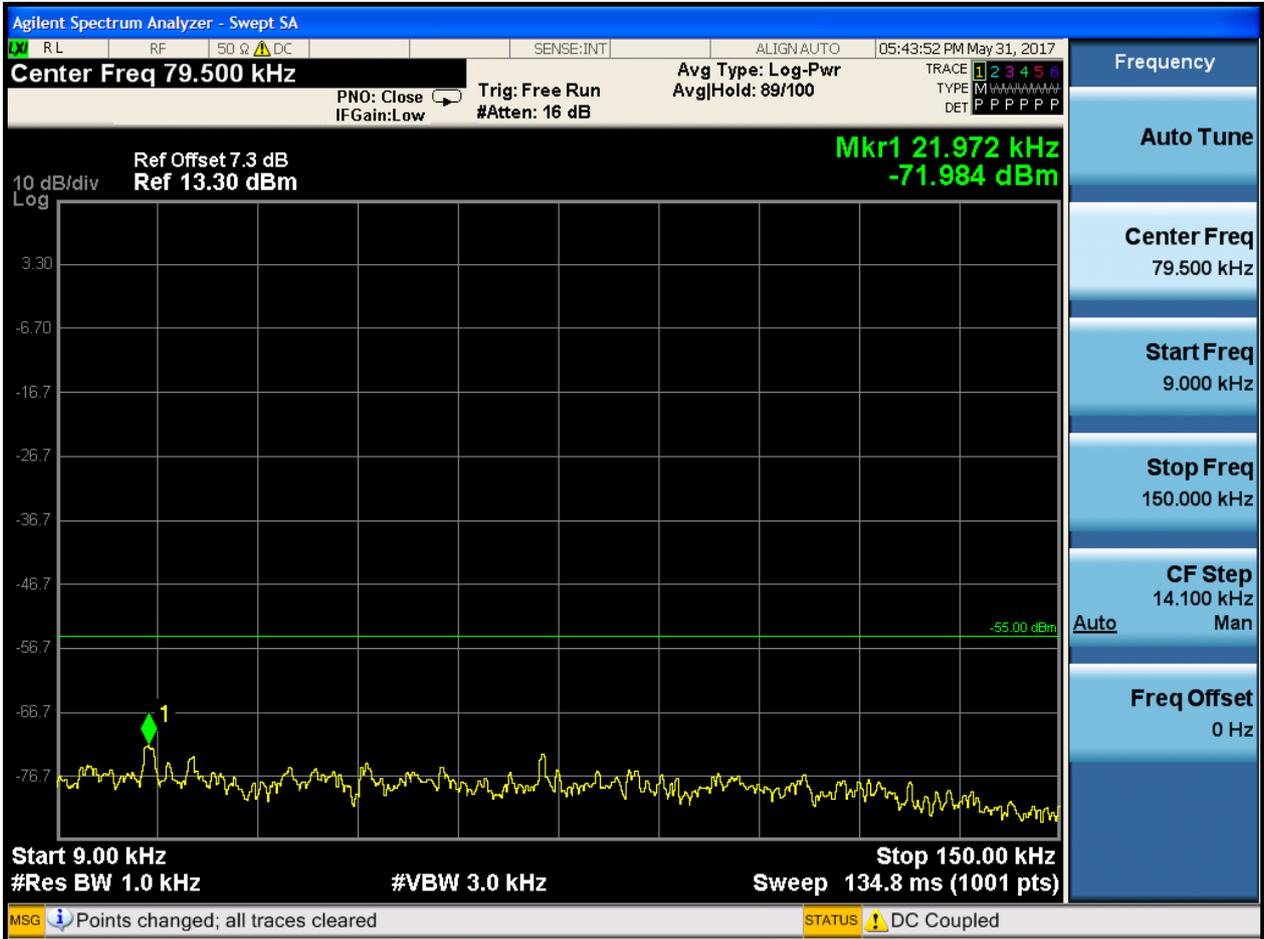


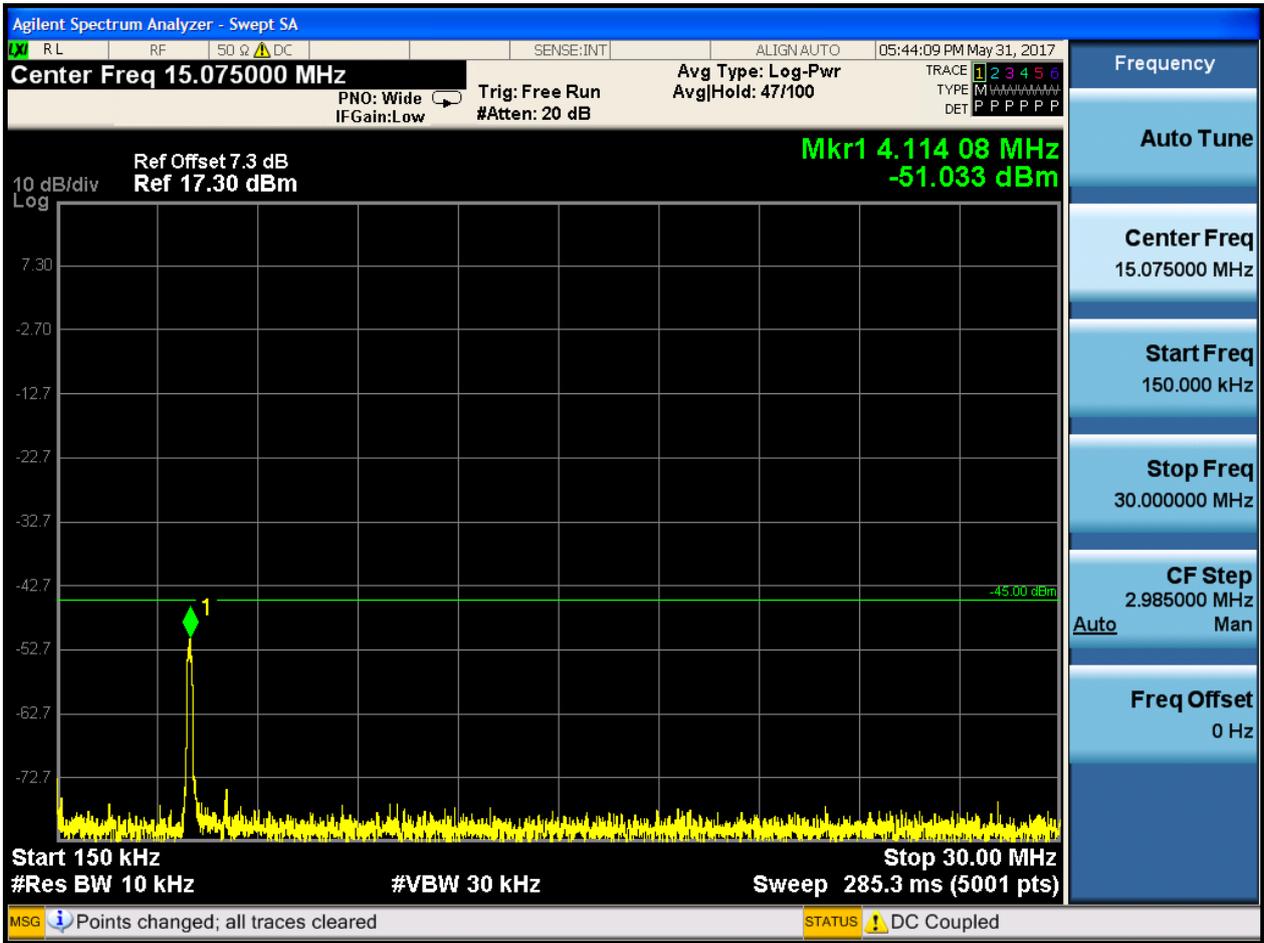




6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0



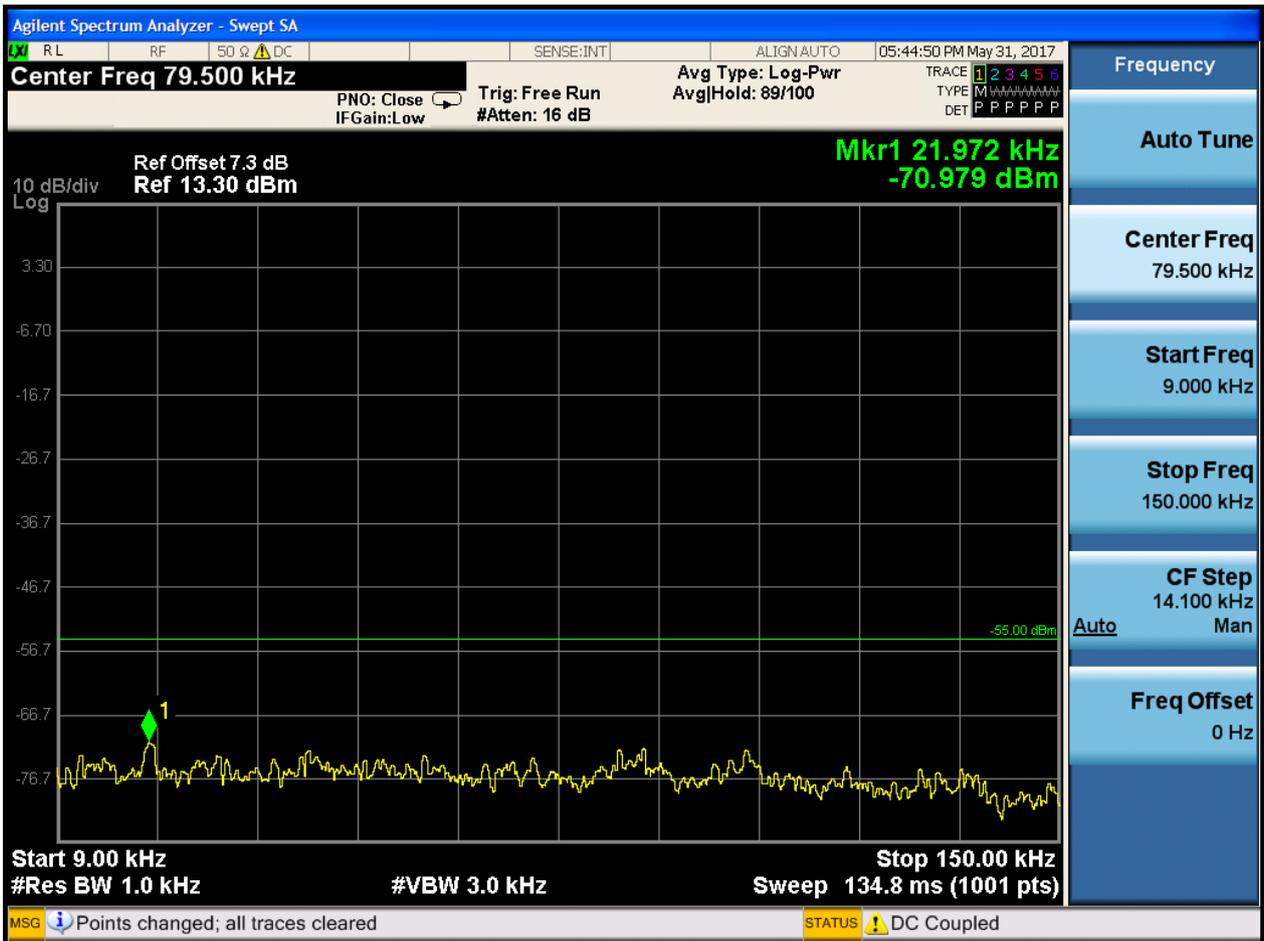


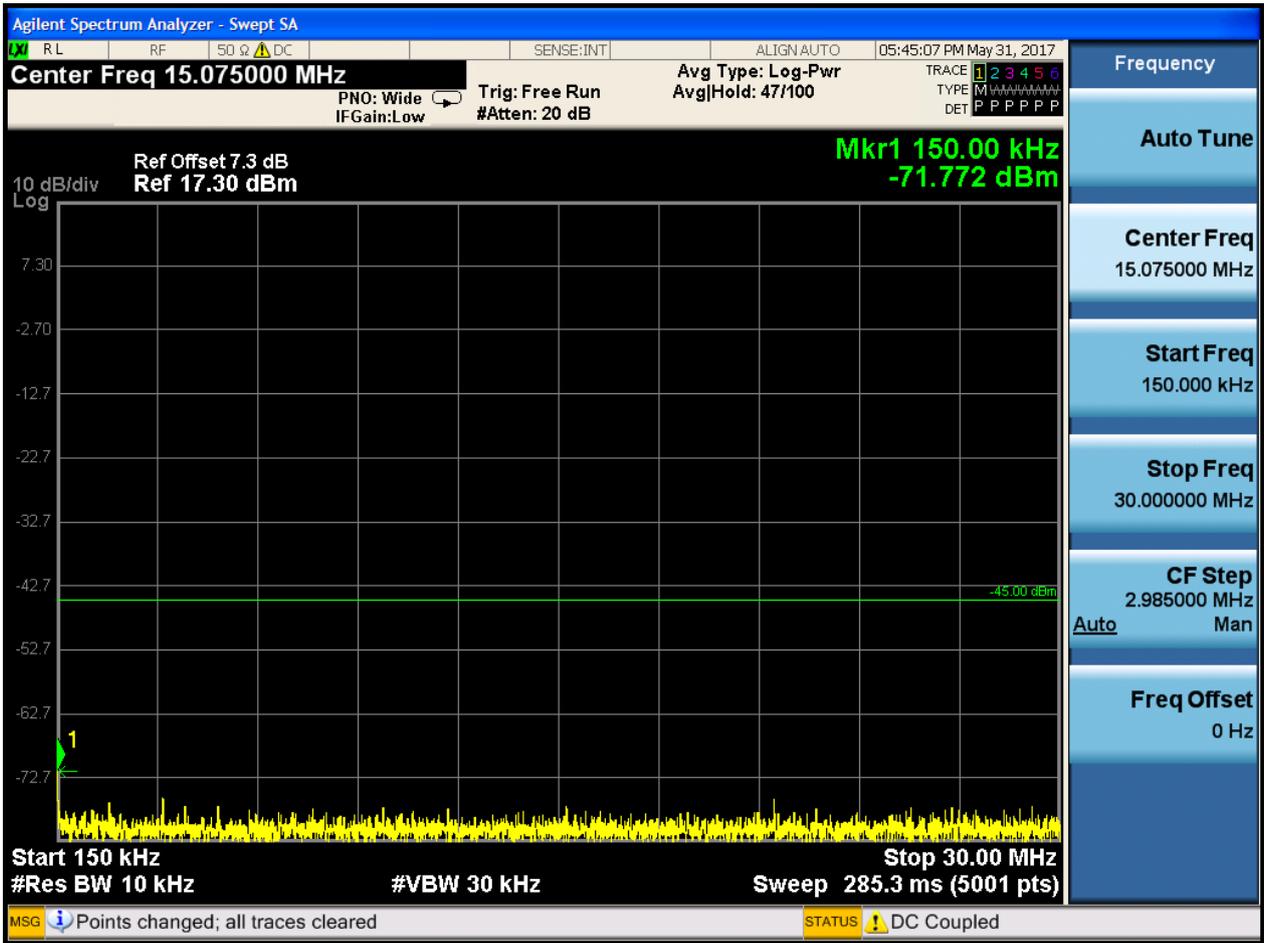


6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

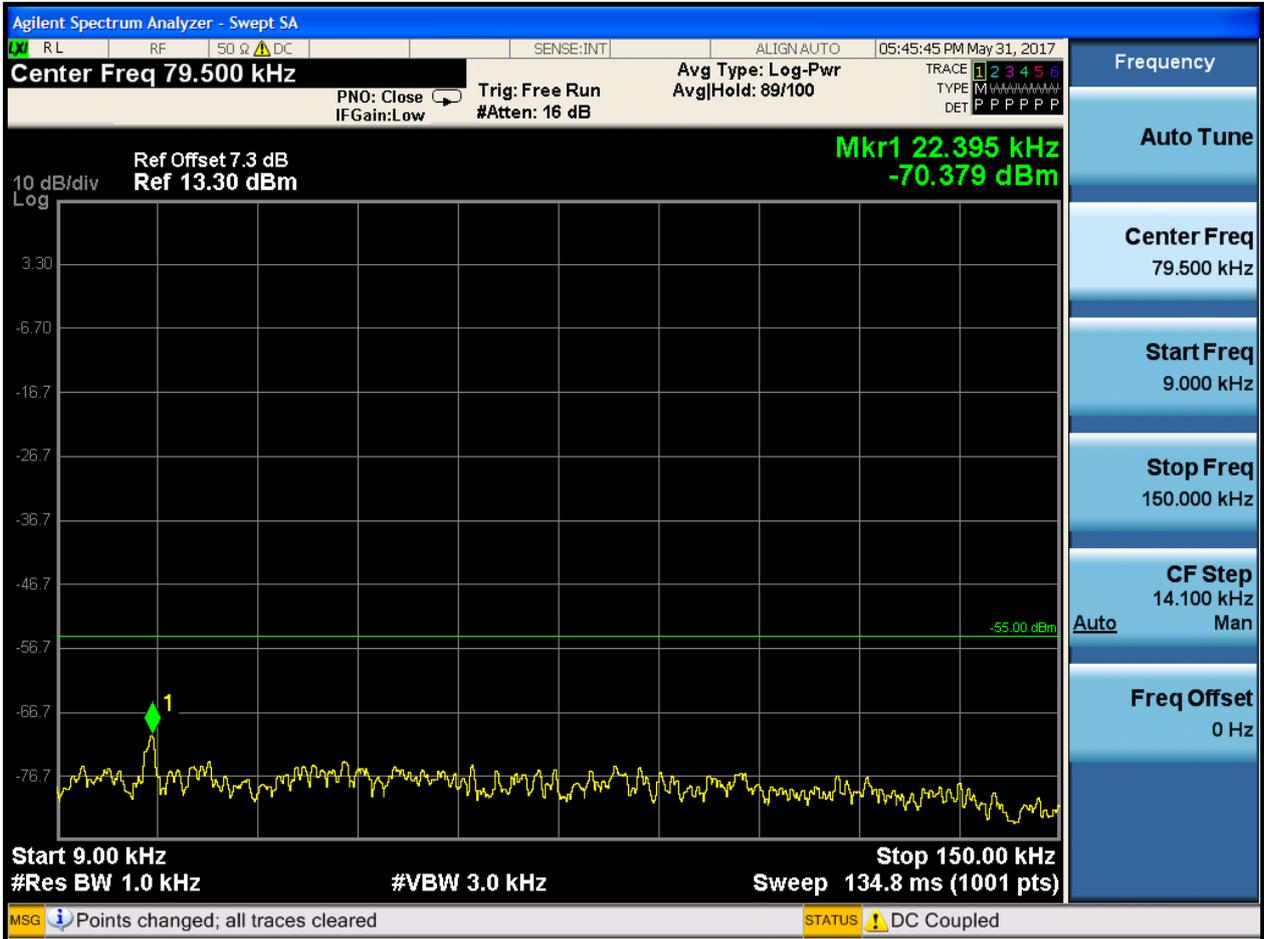


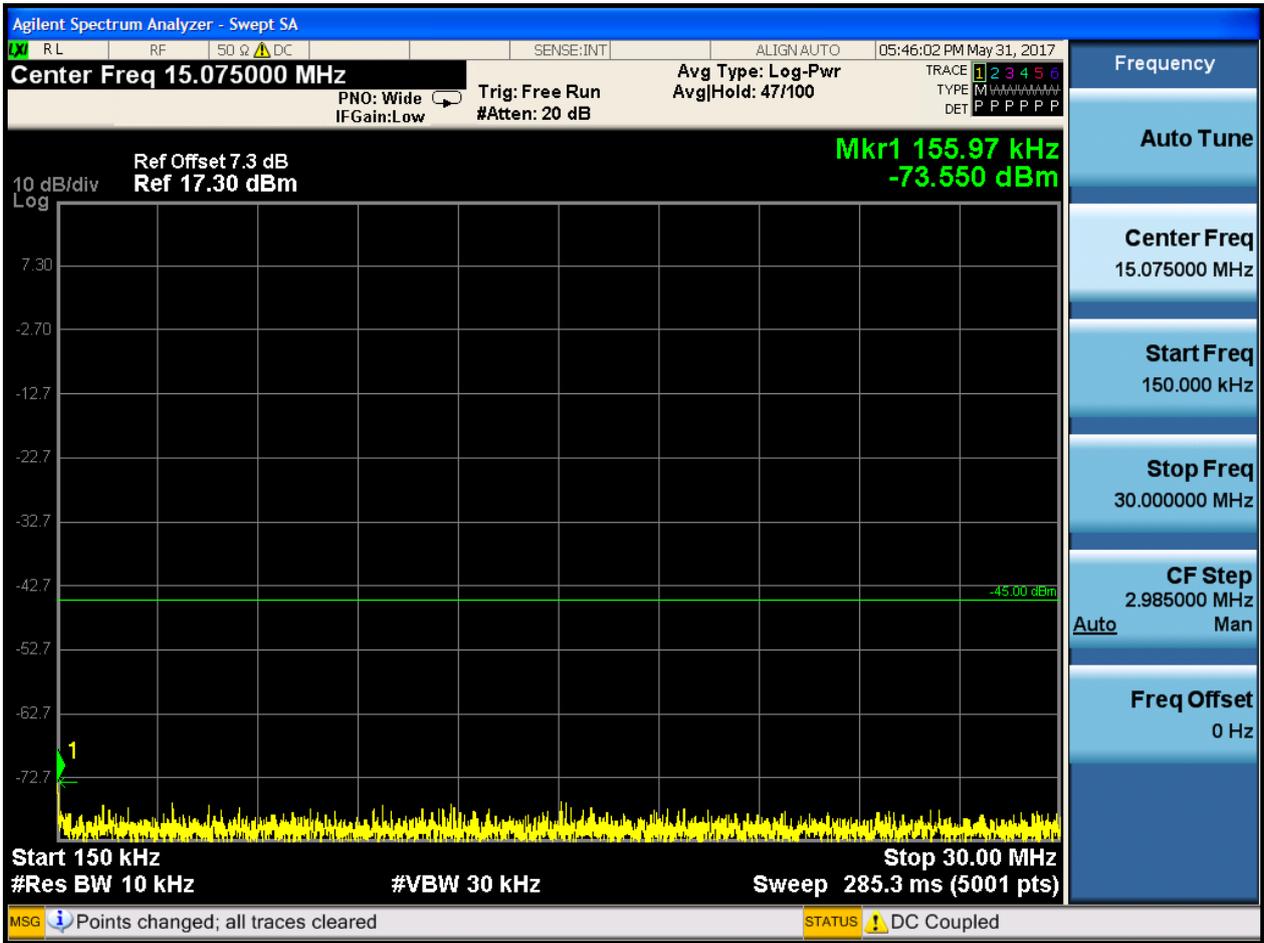


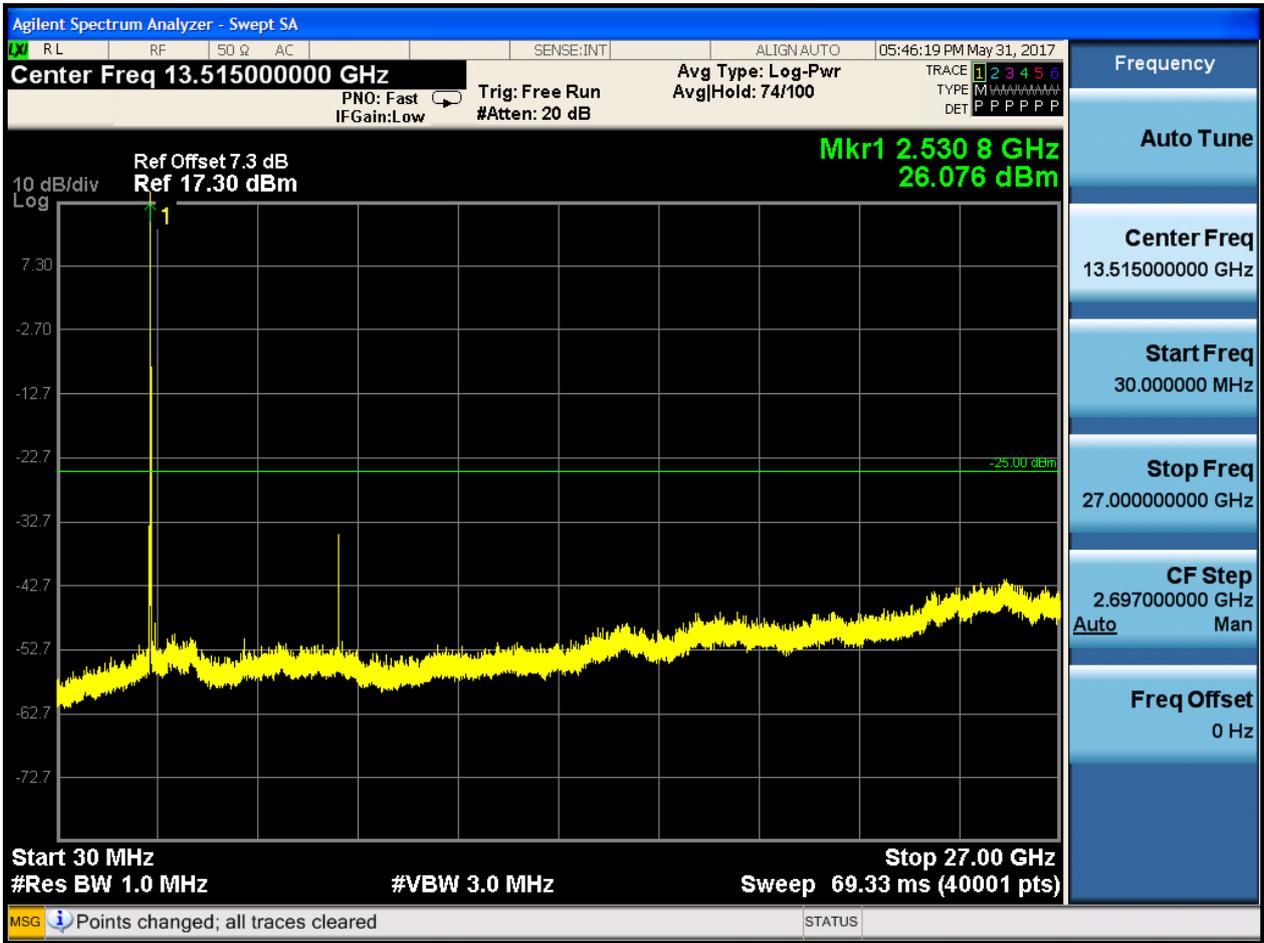


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0

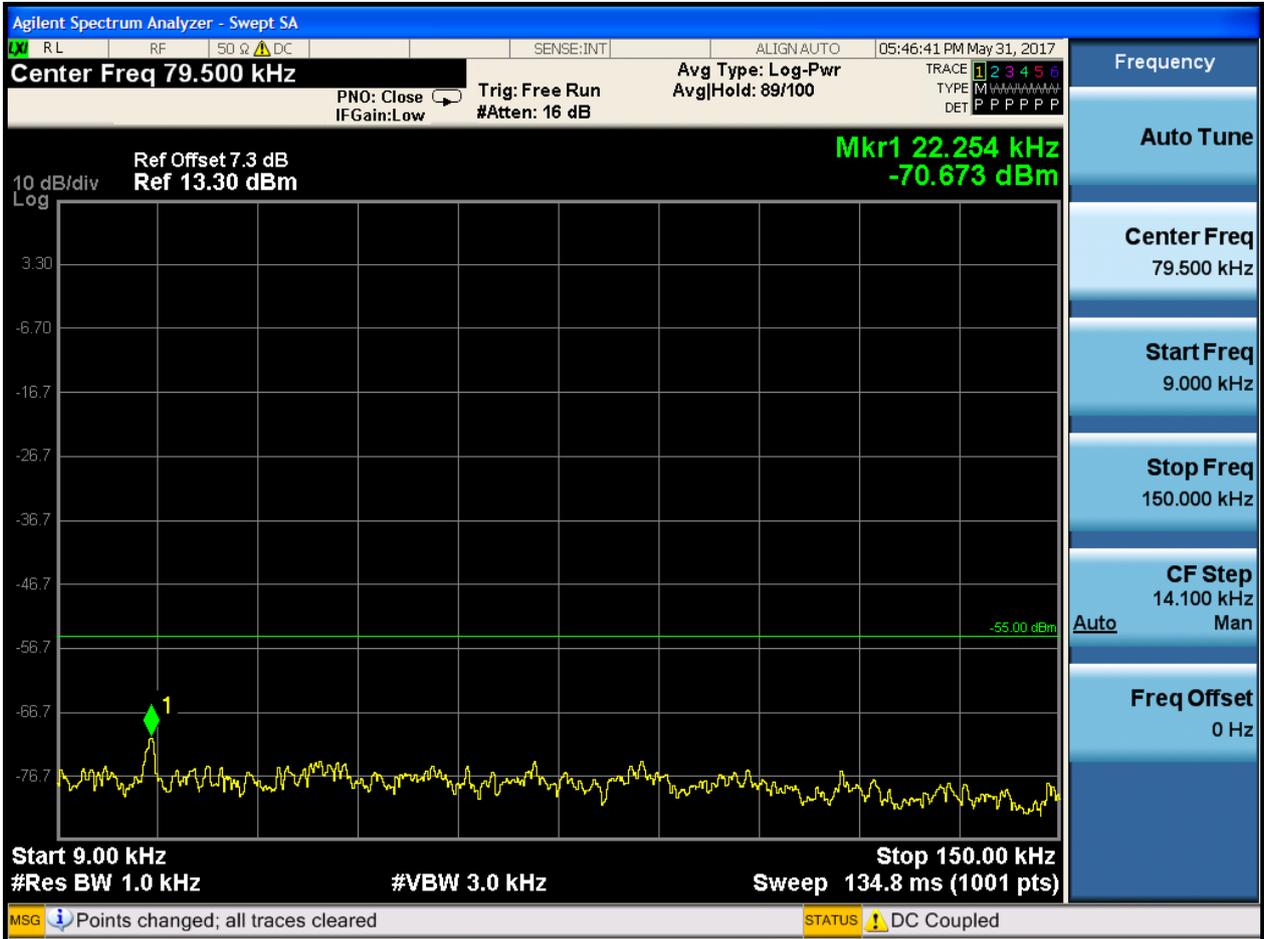


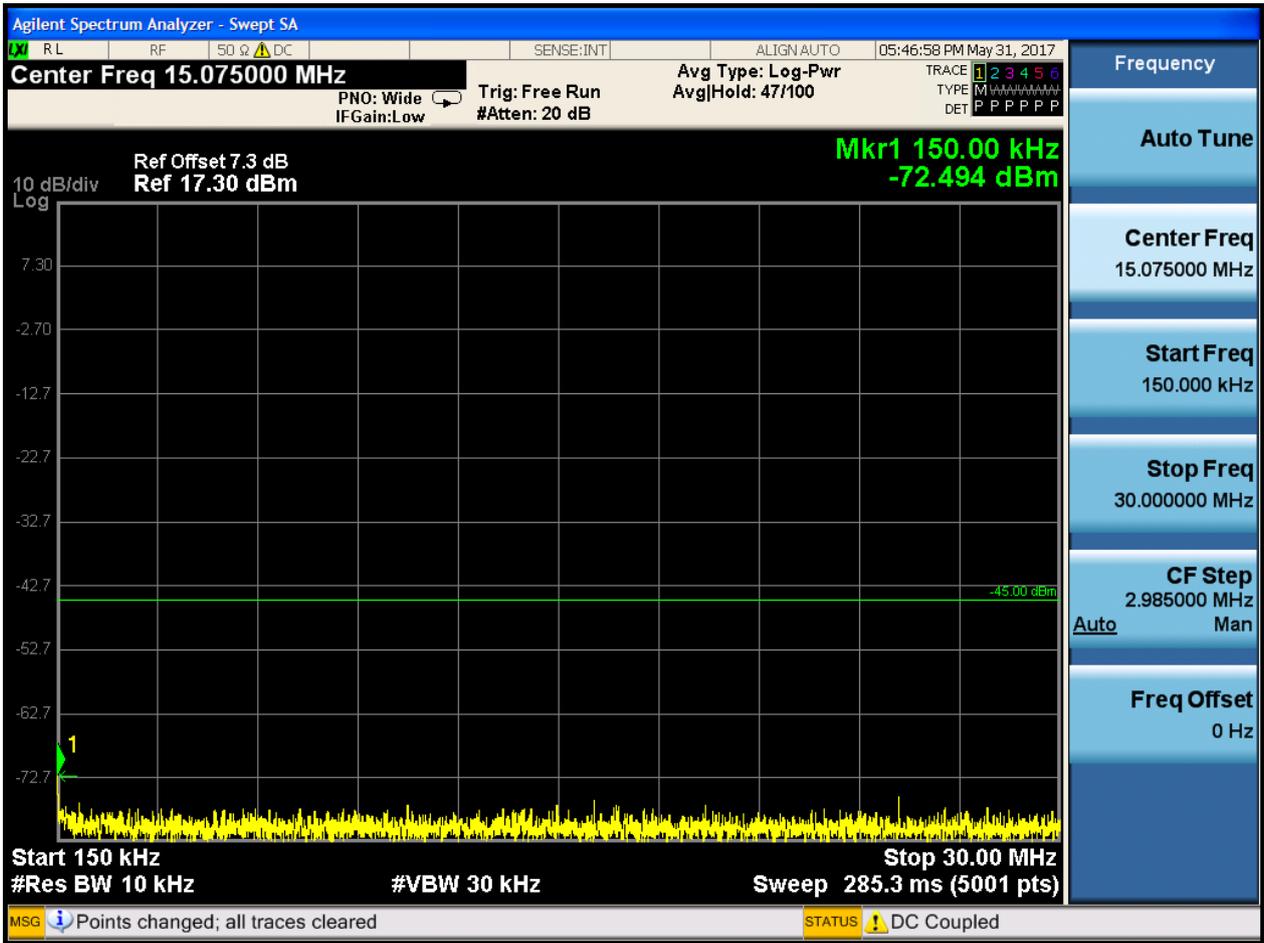


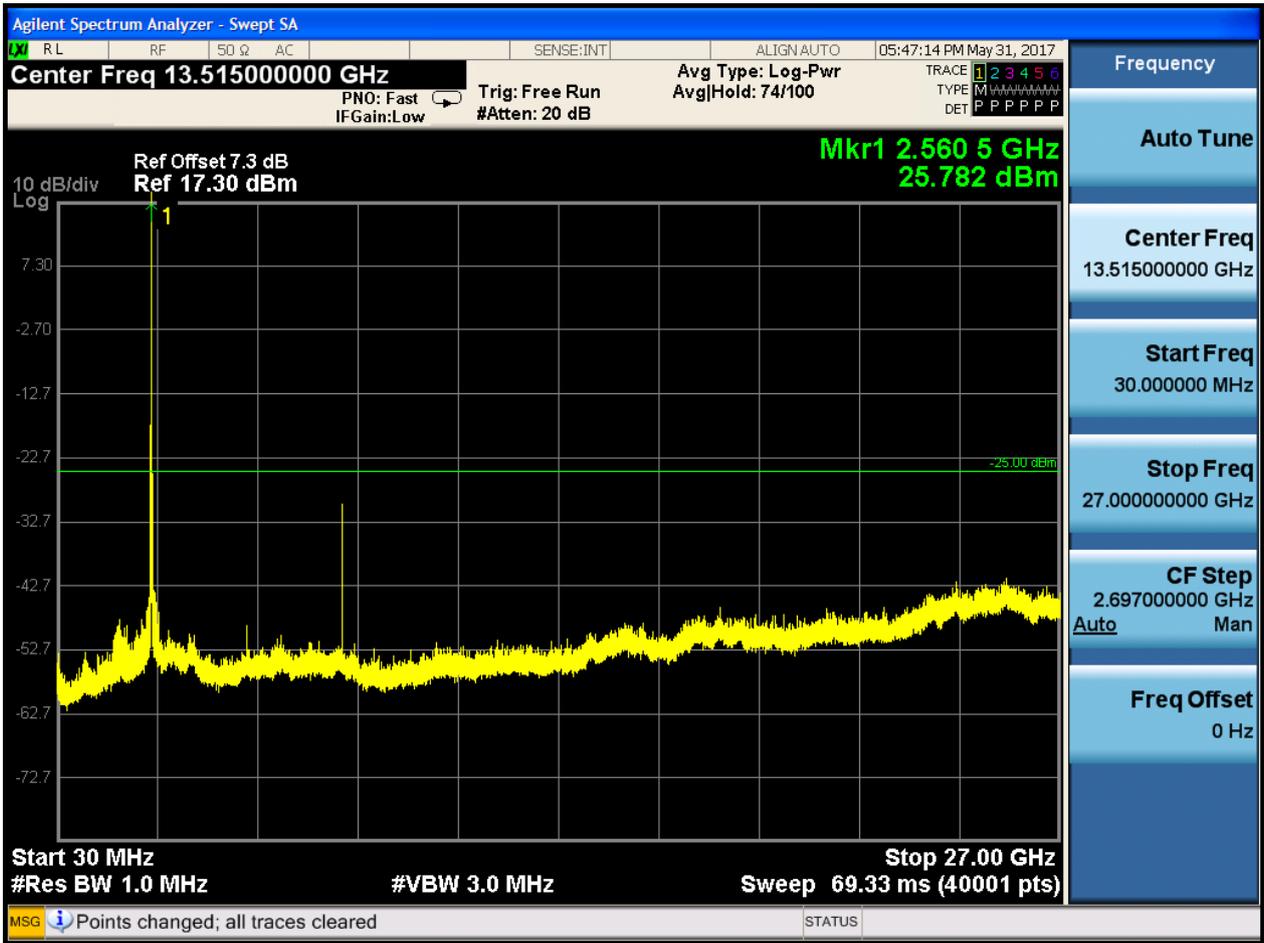


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0



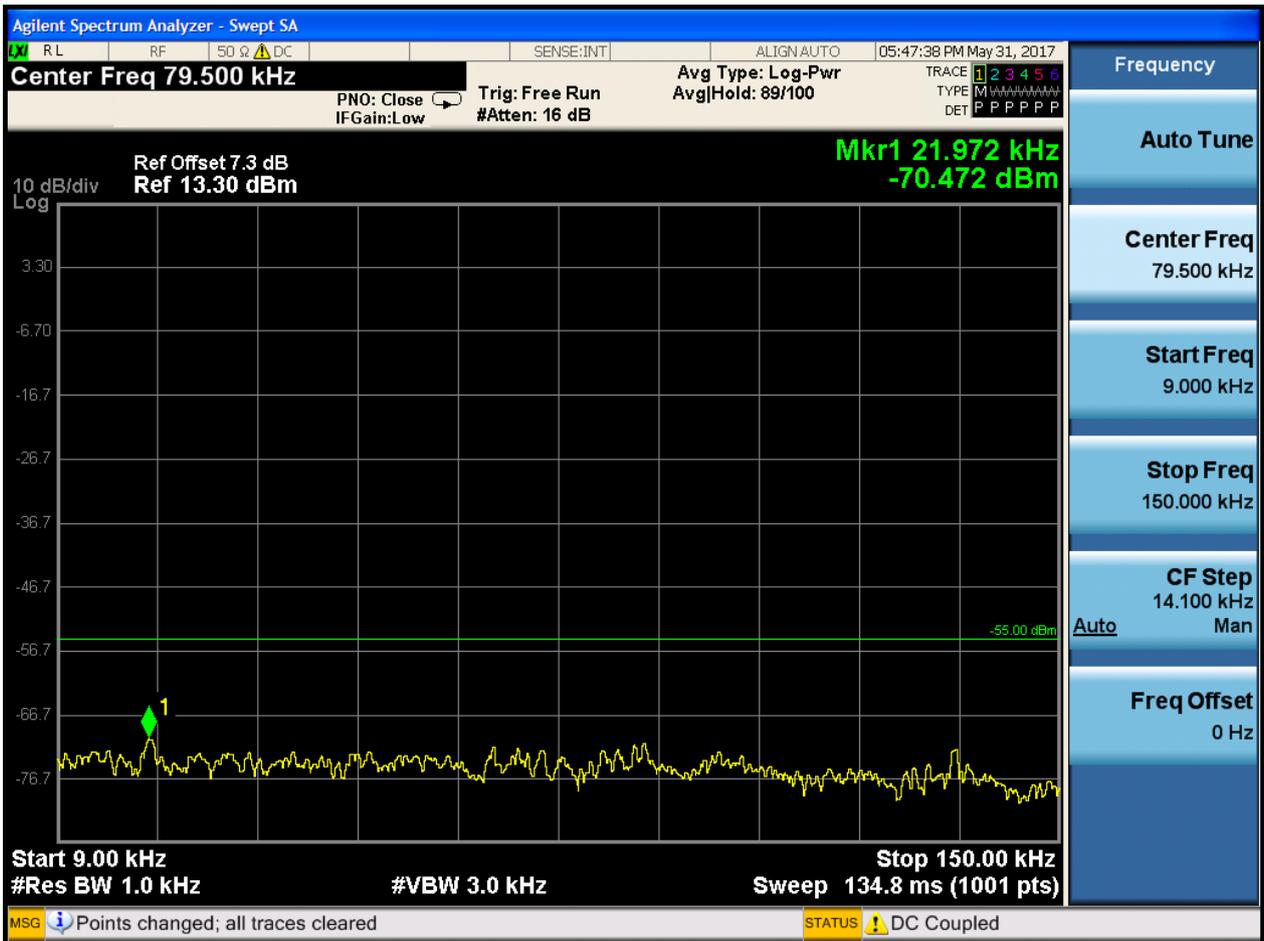


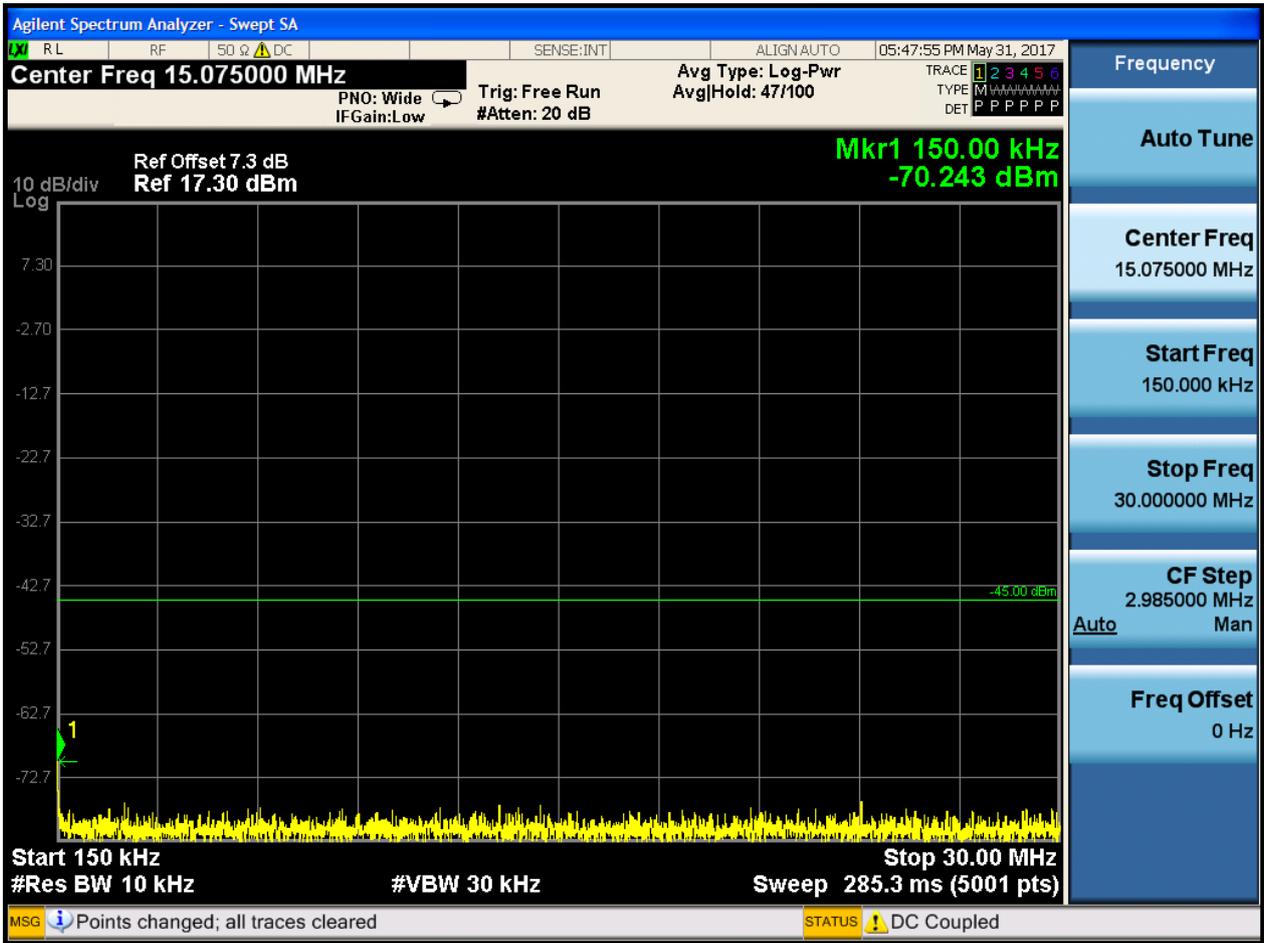


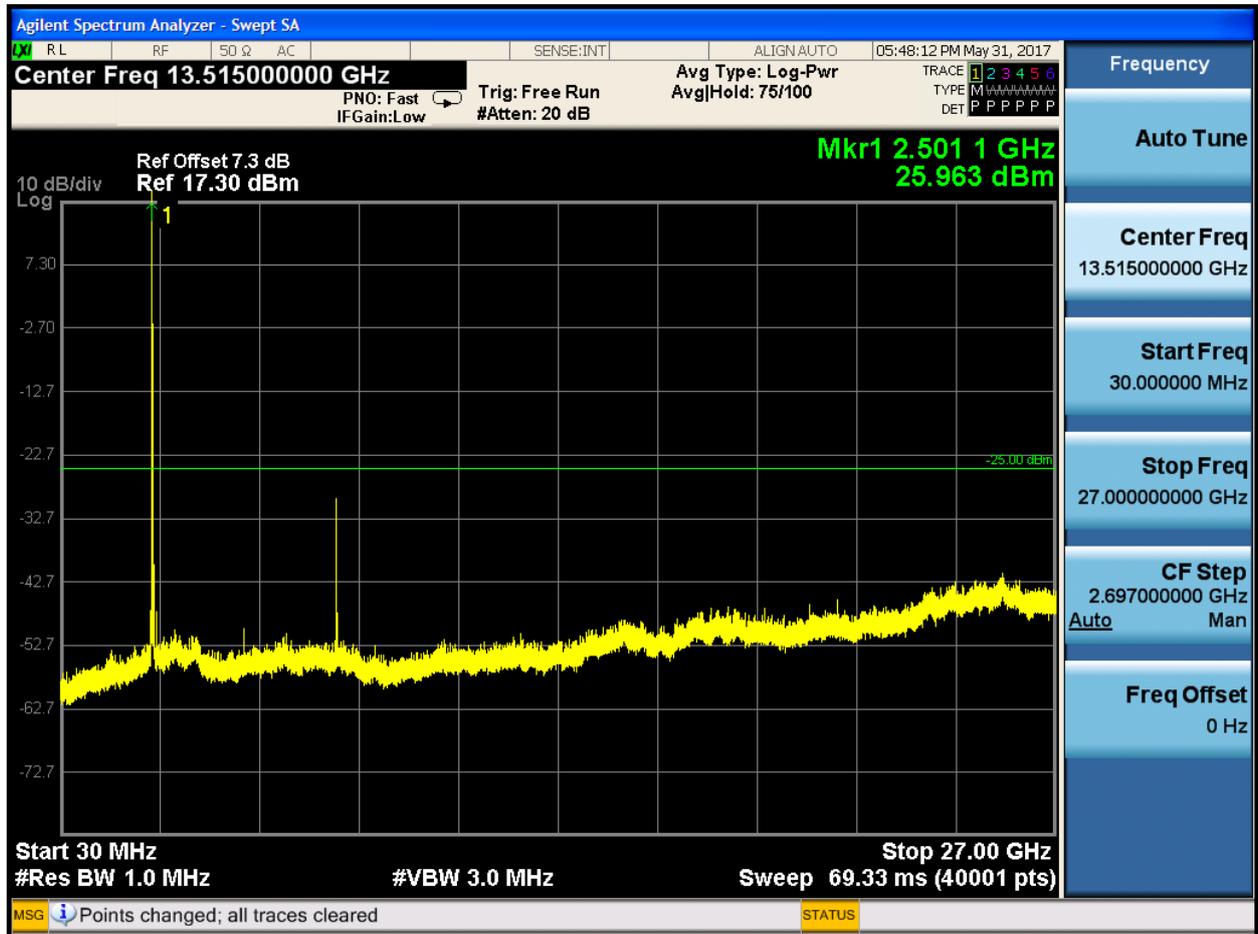
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

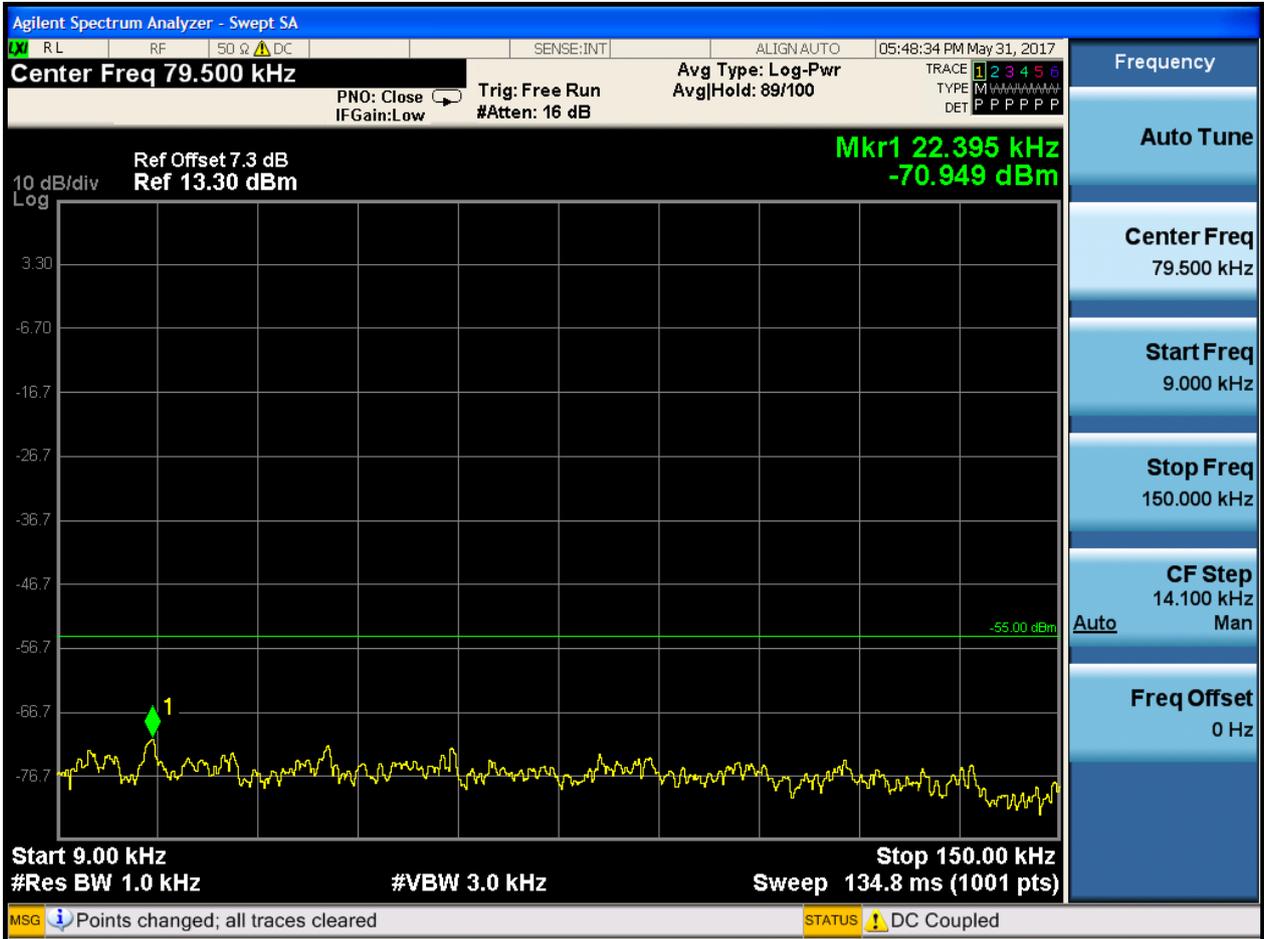


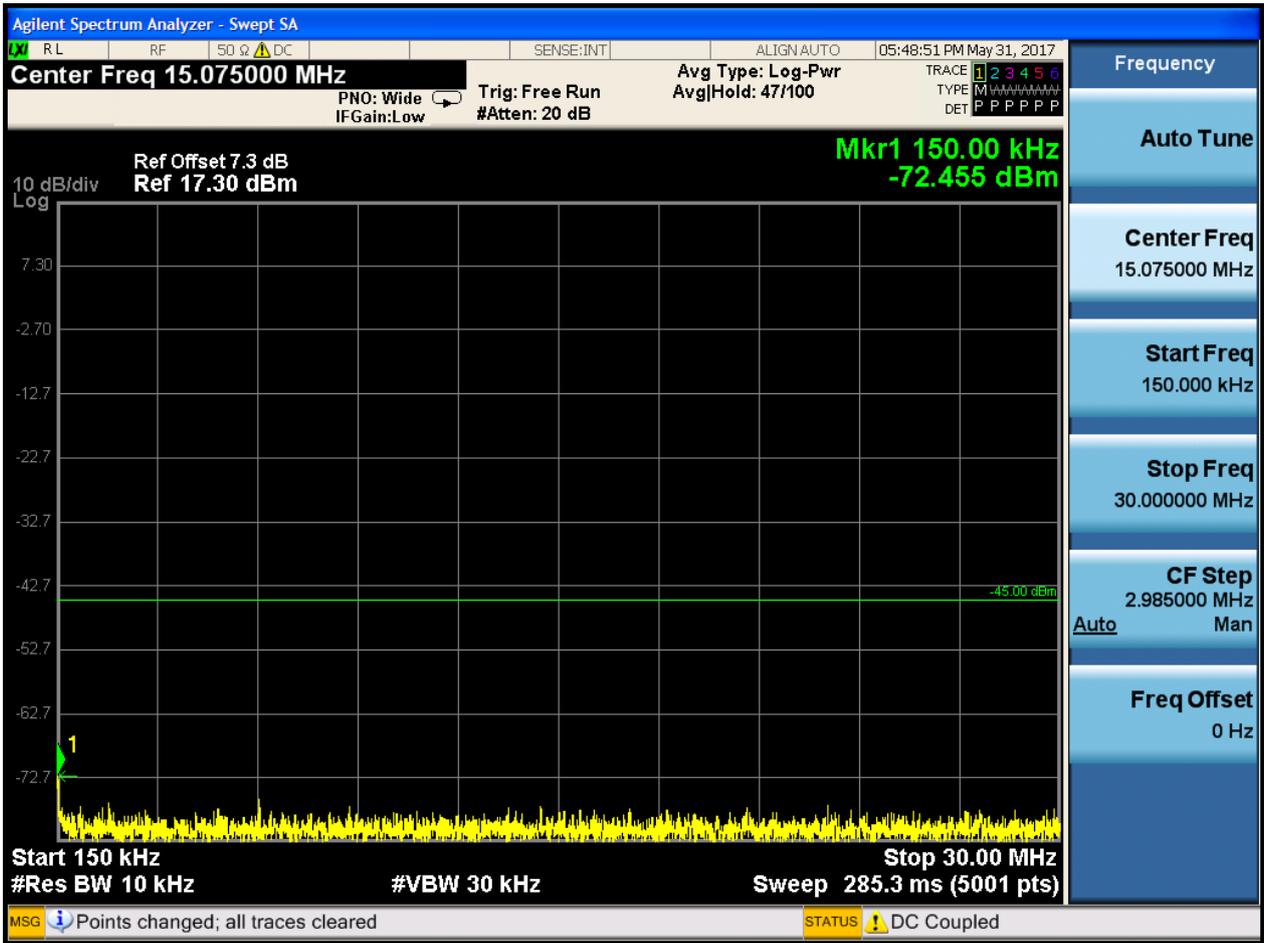


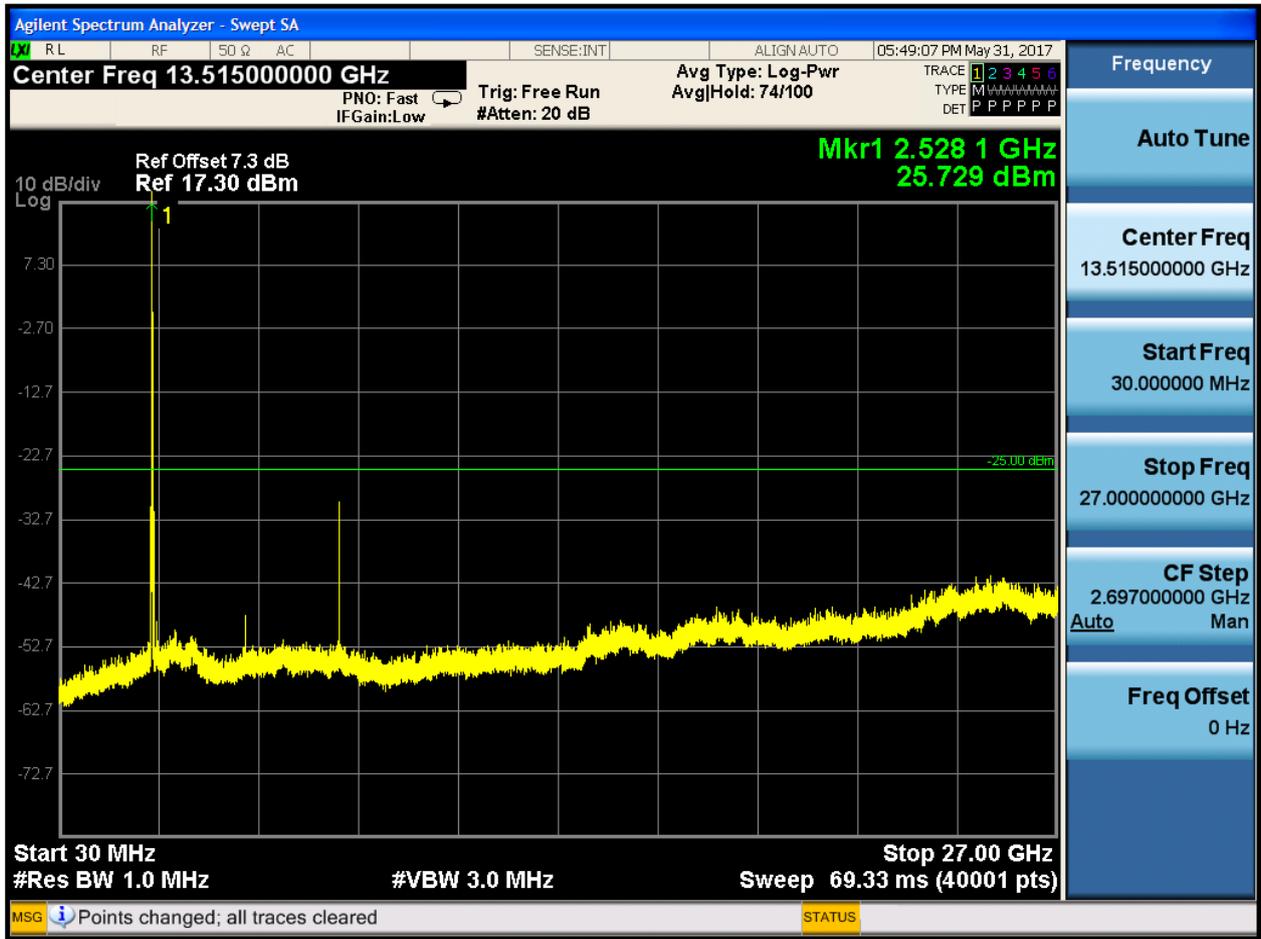


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0

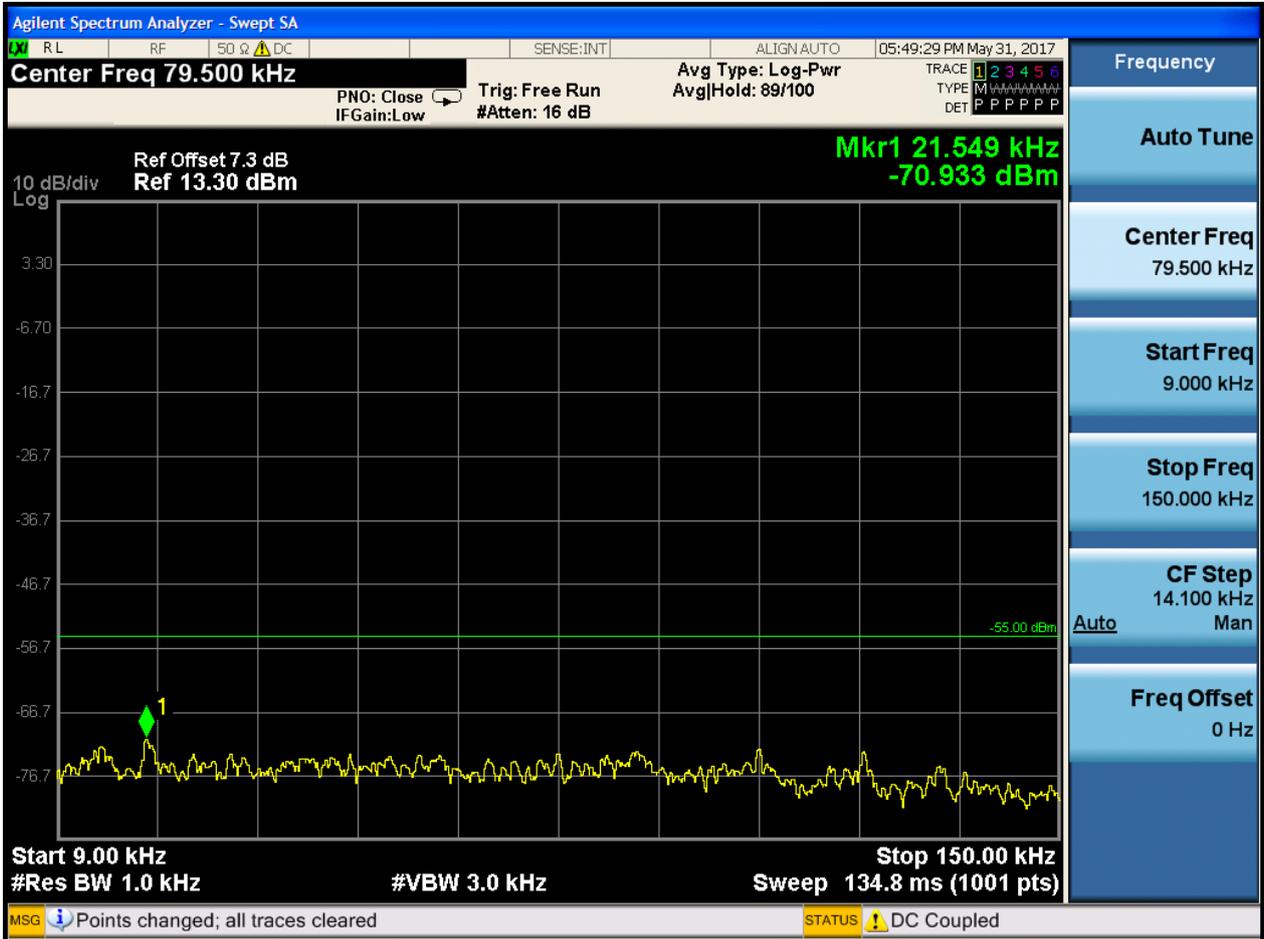


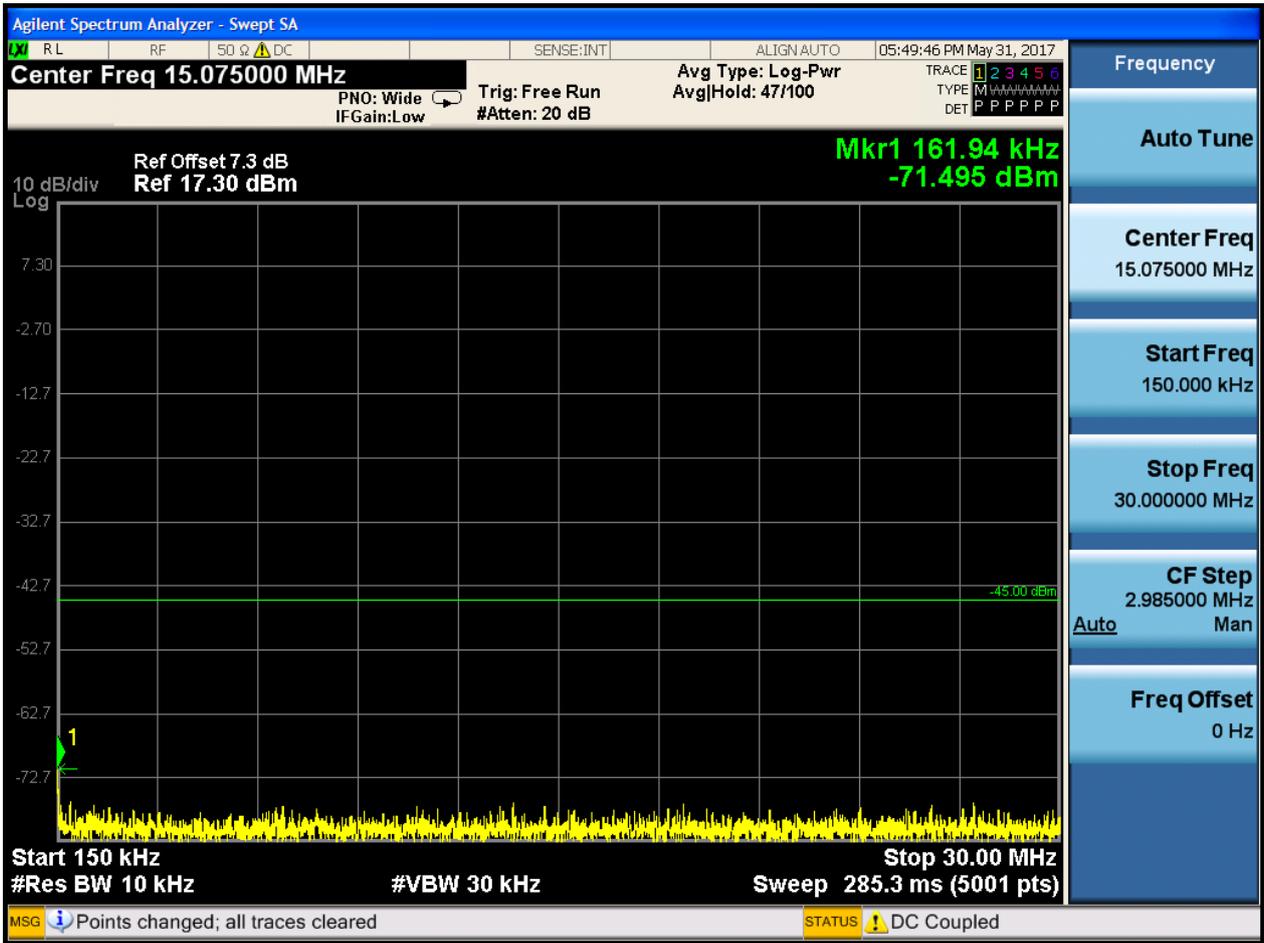


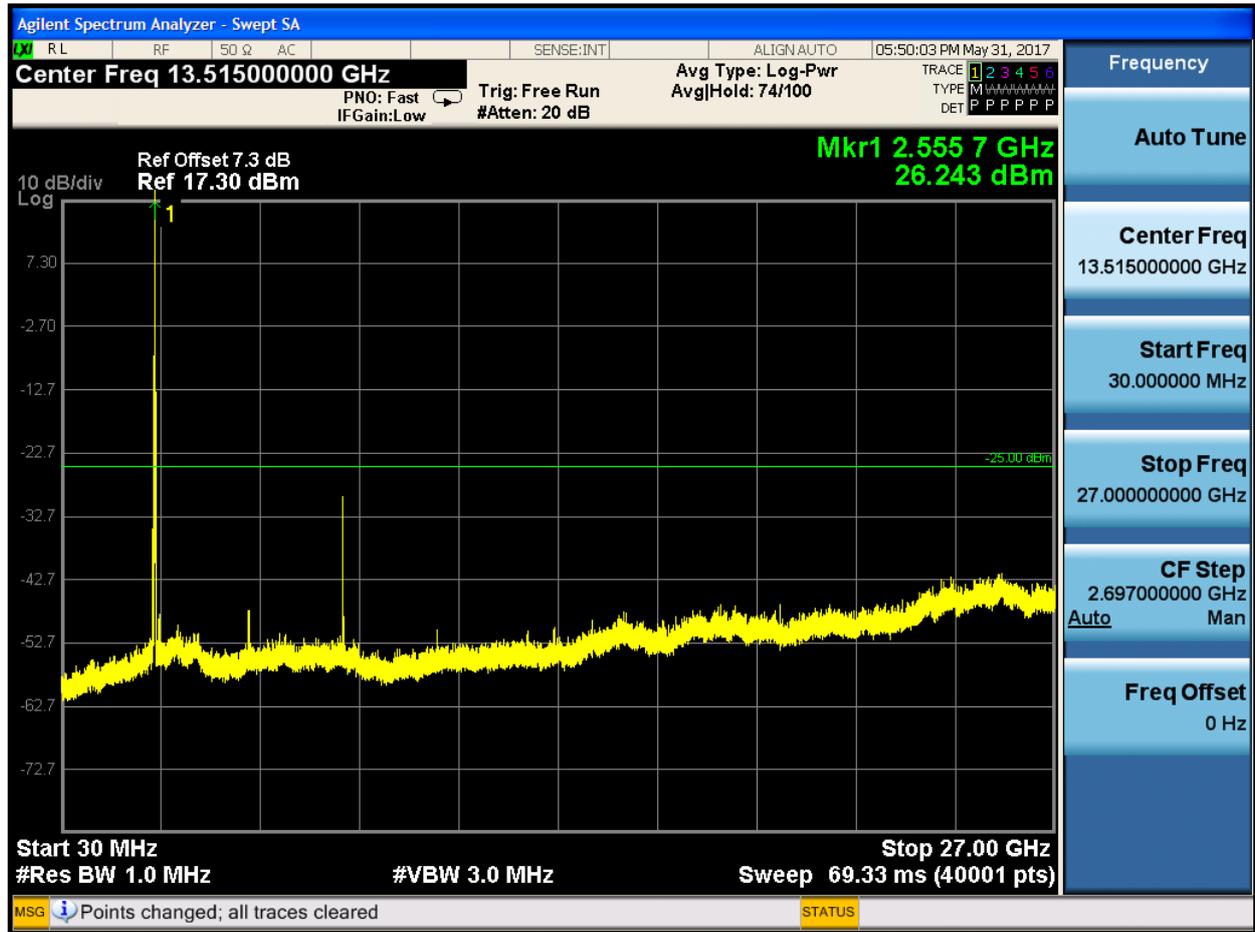


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0



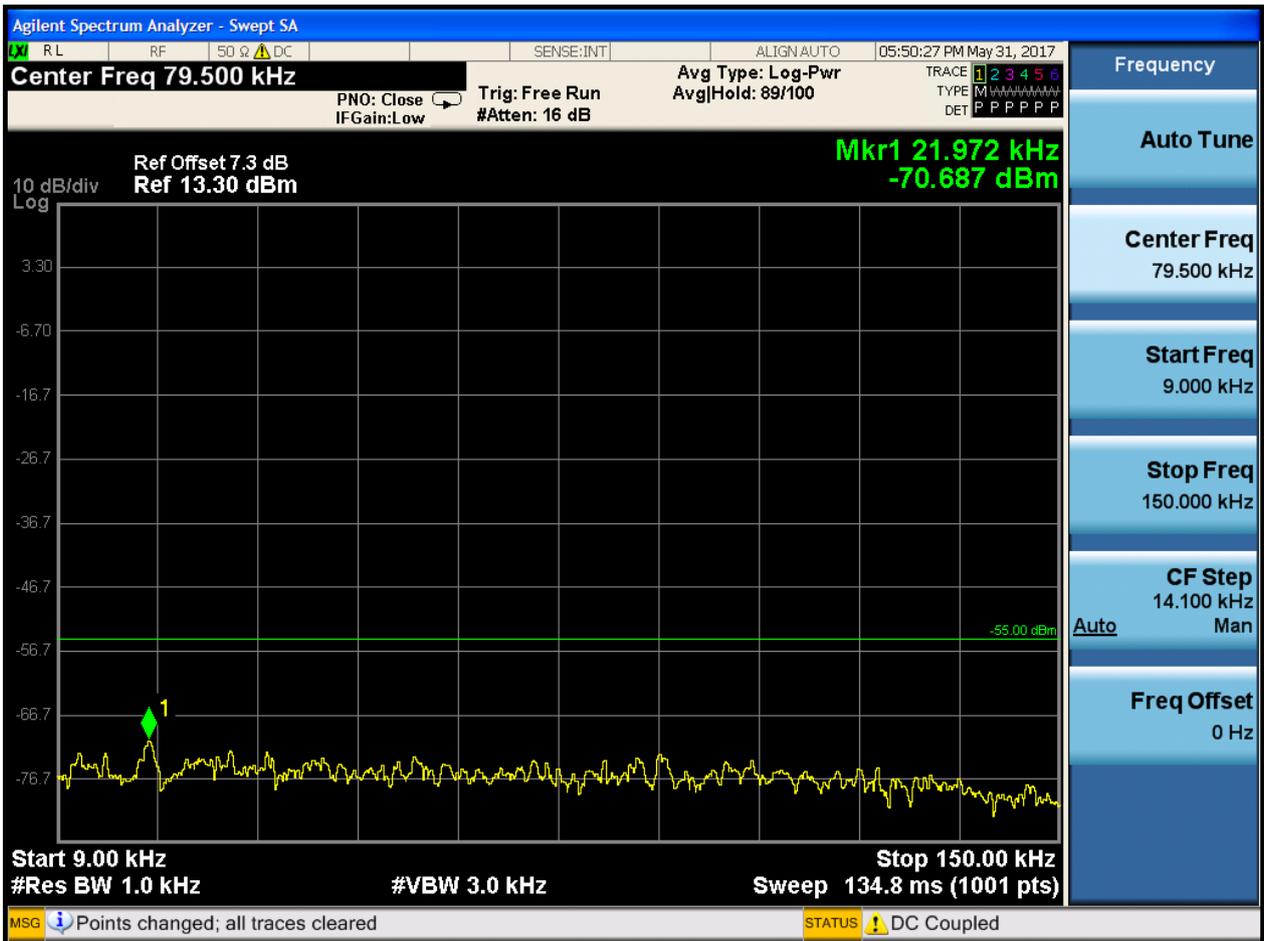


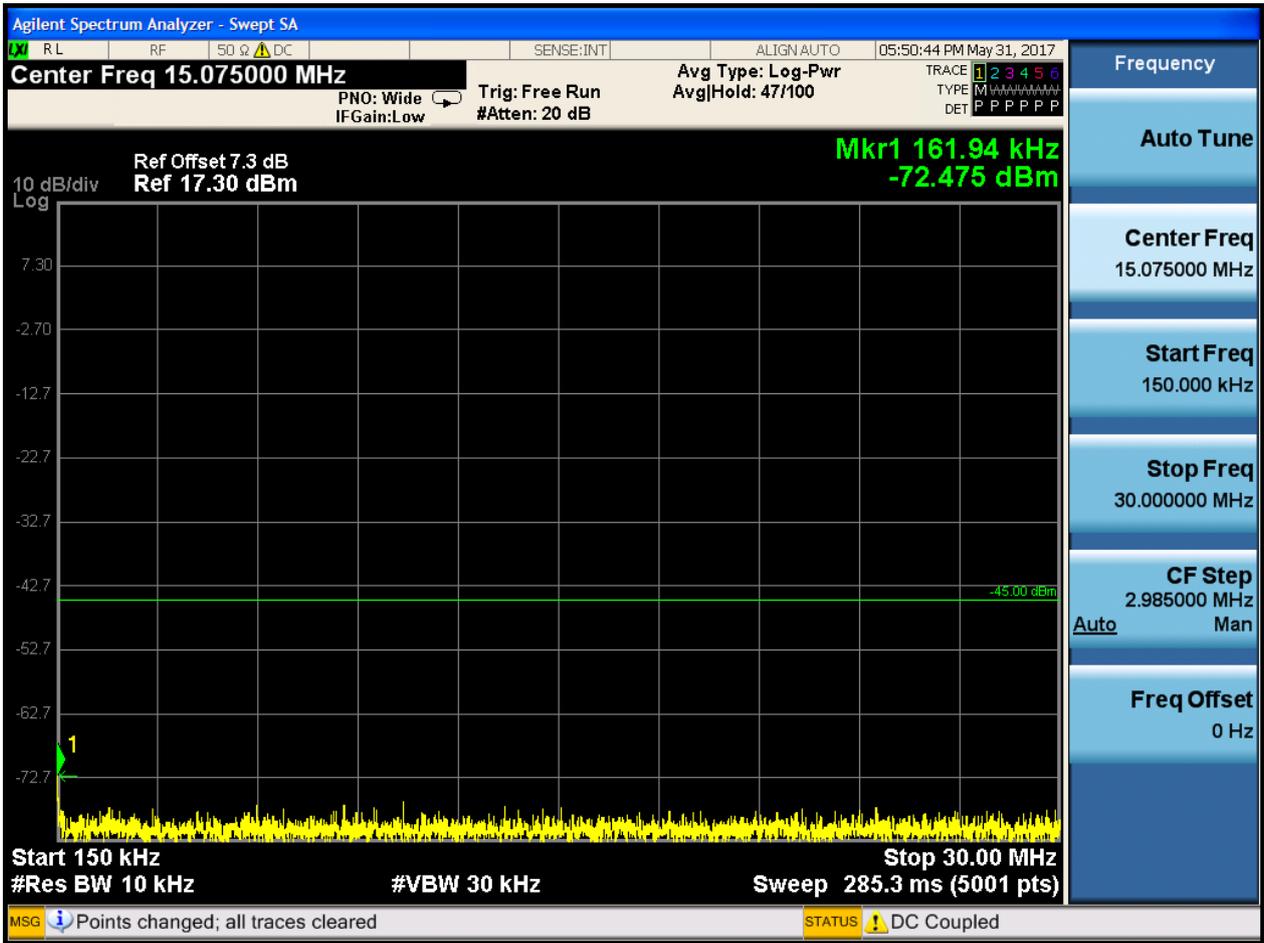


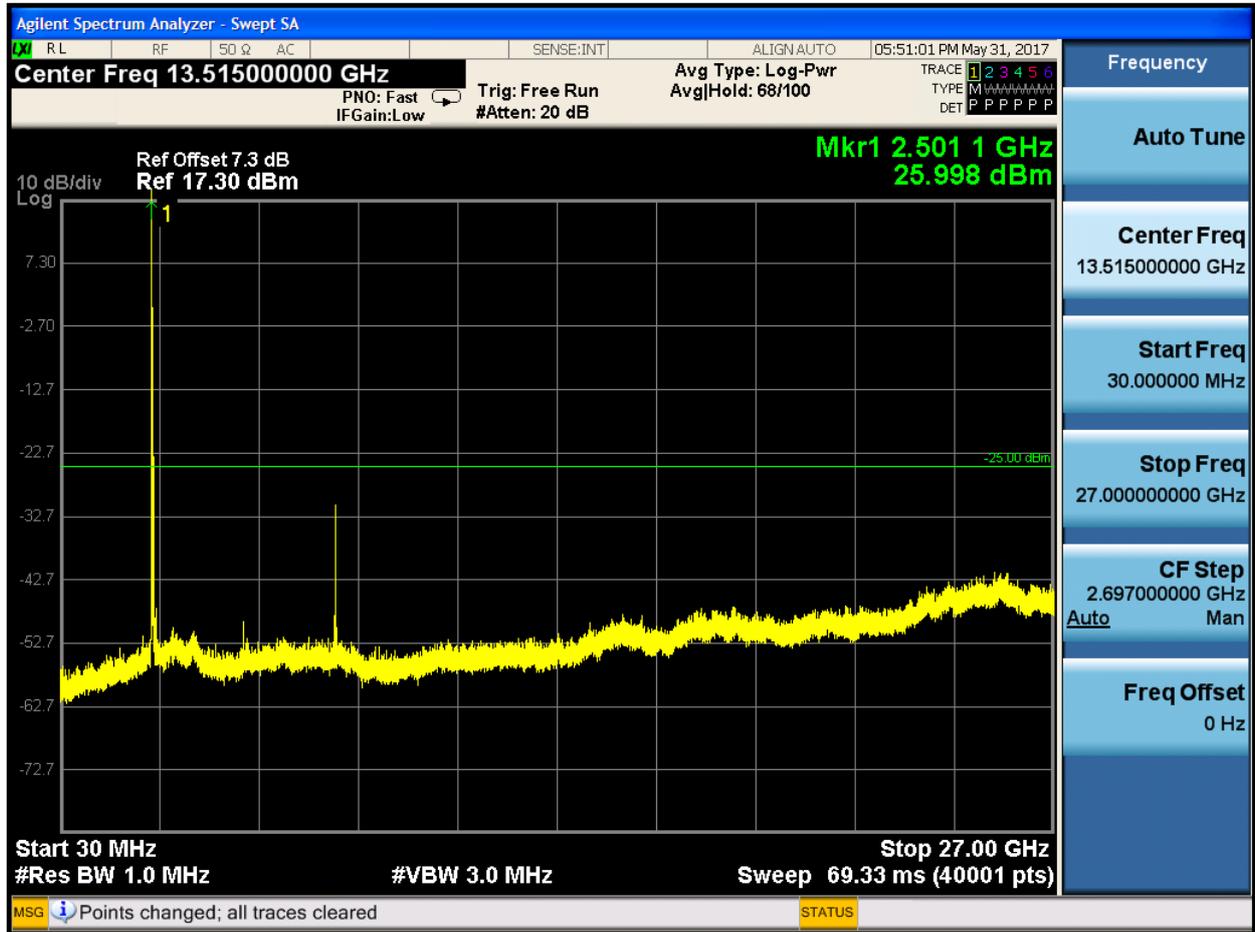
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

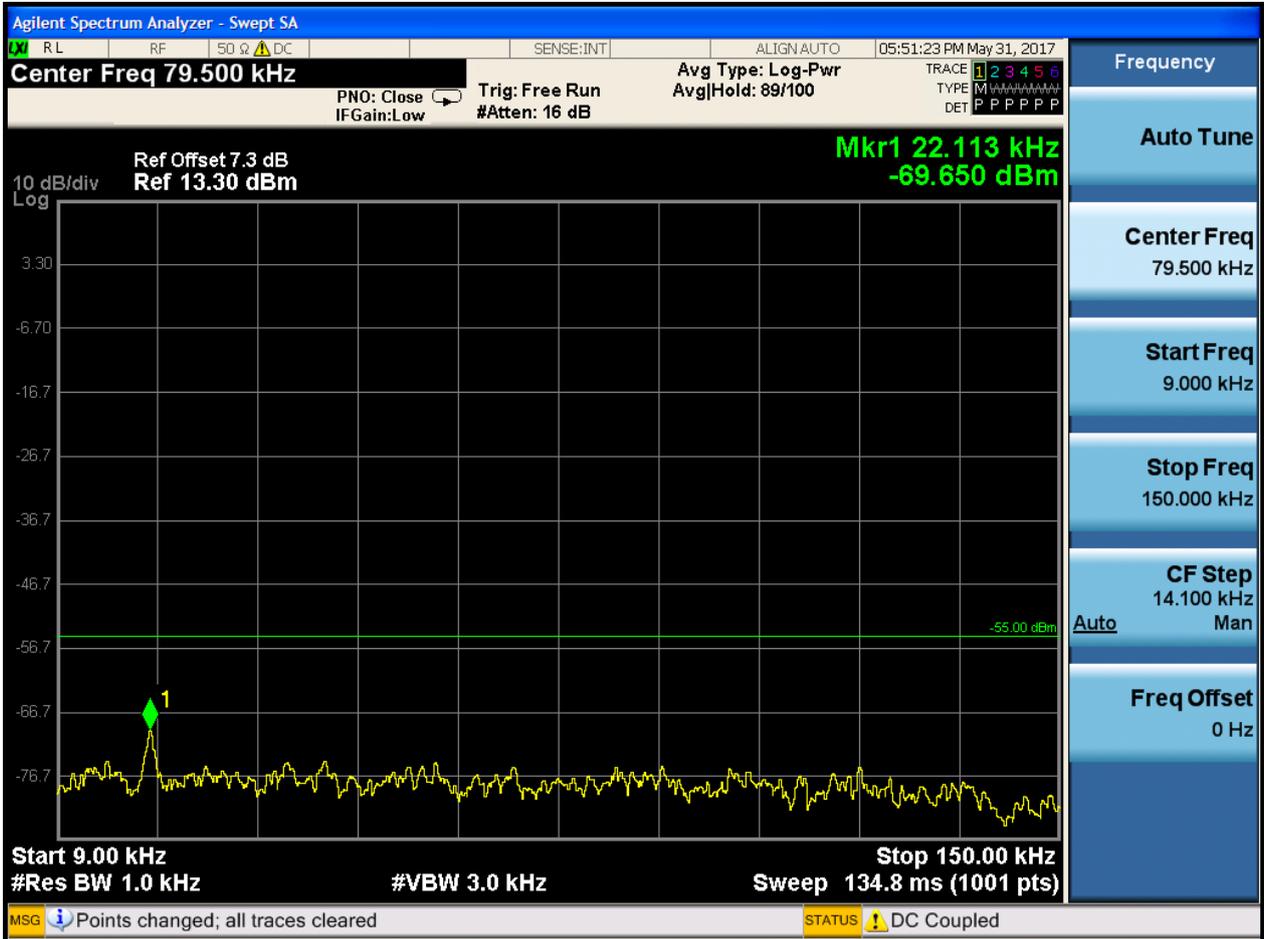


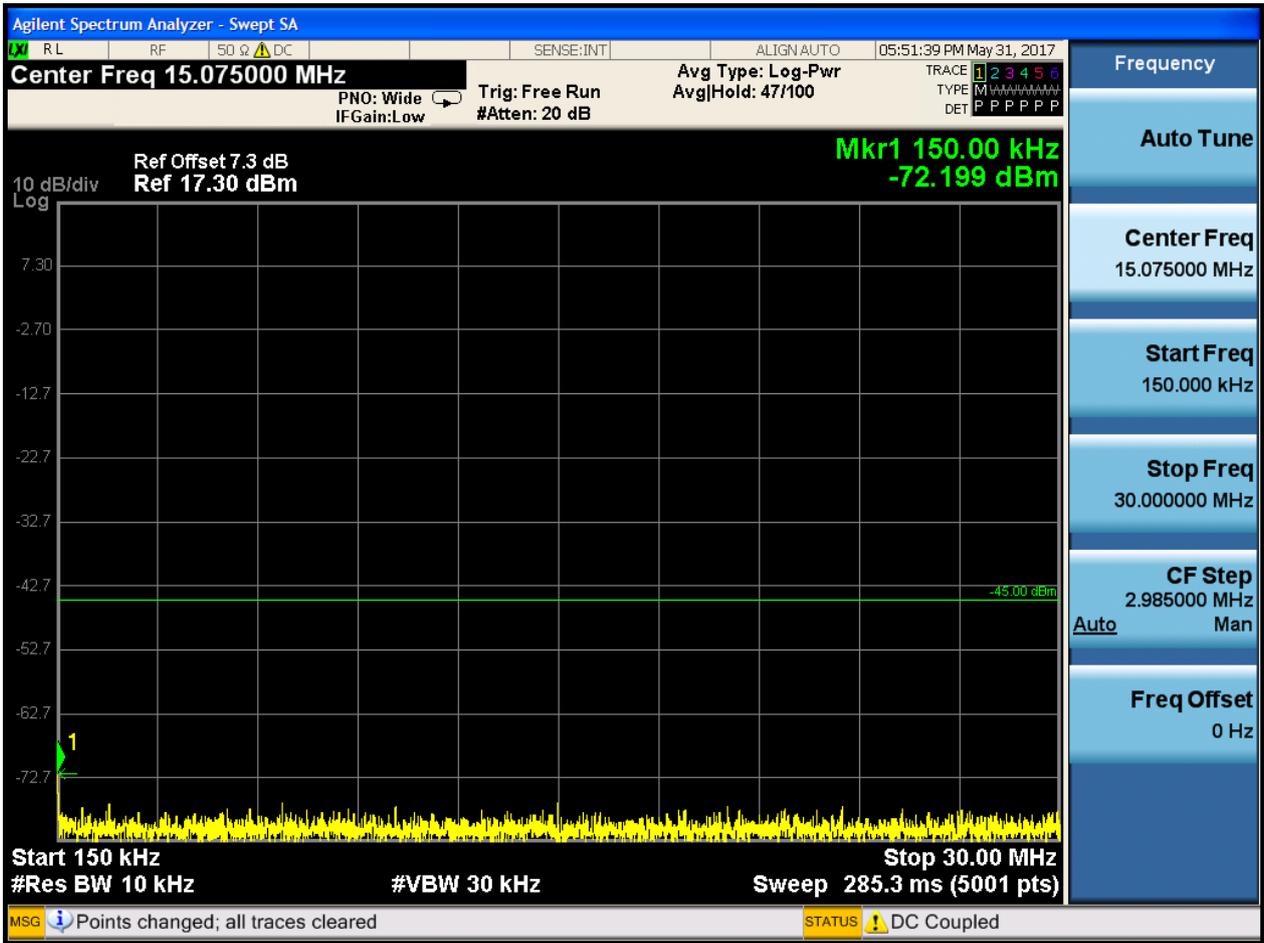


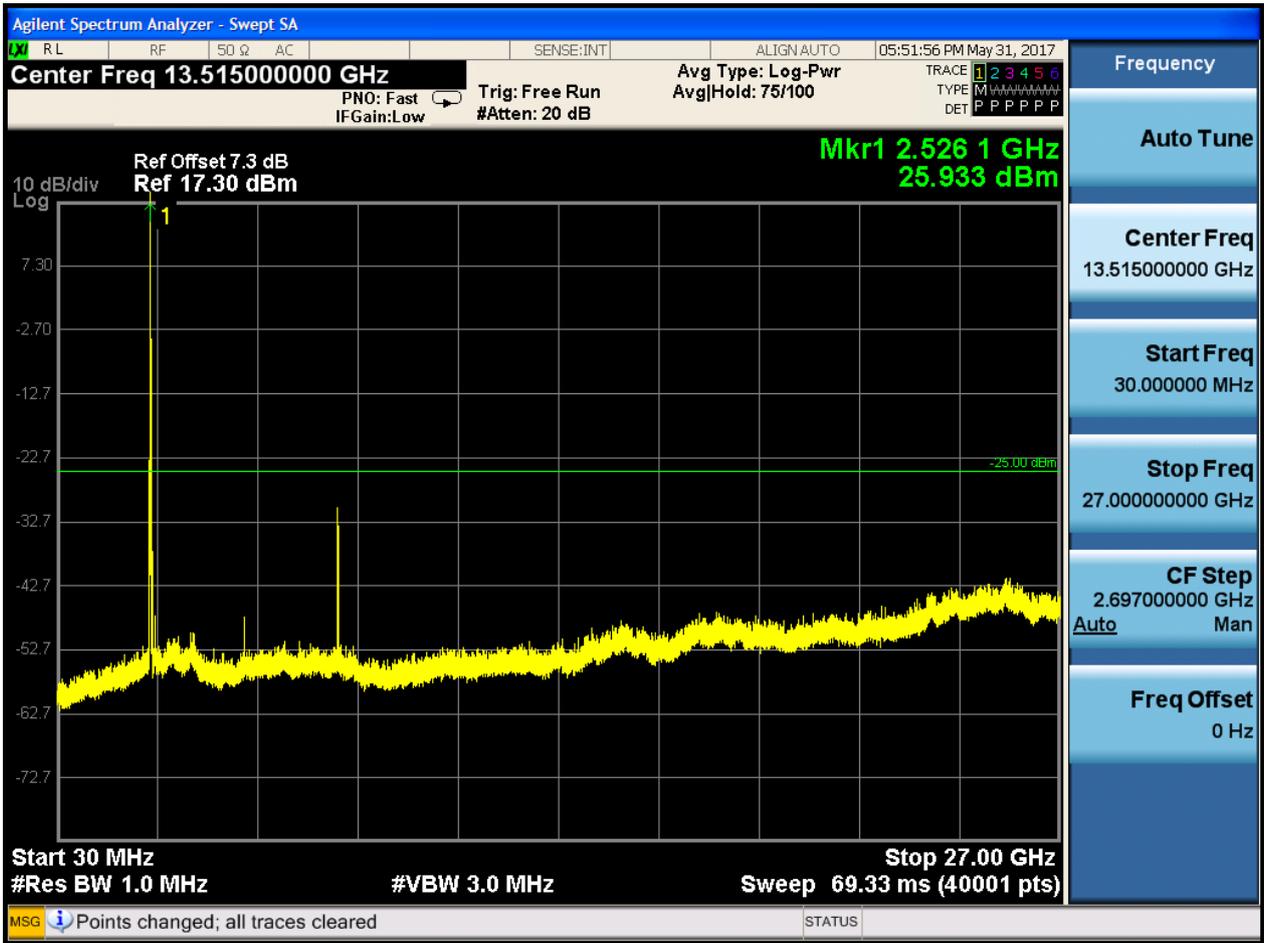


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0

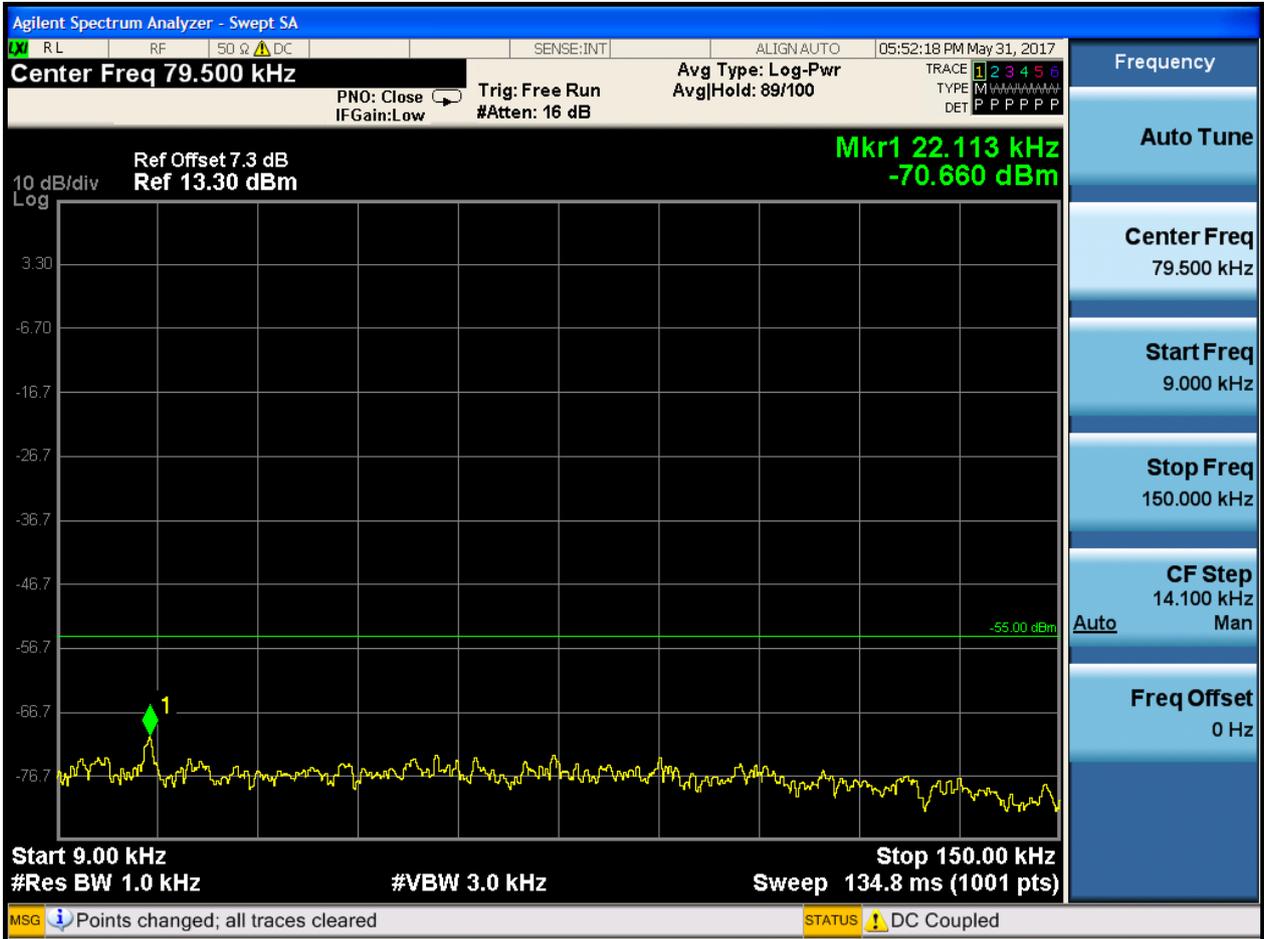


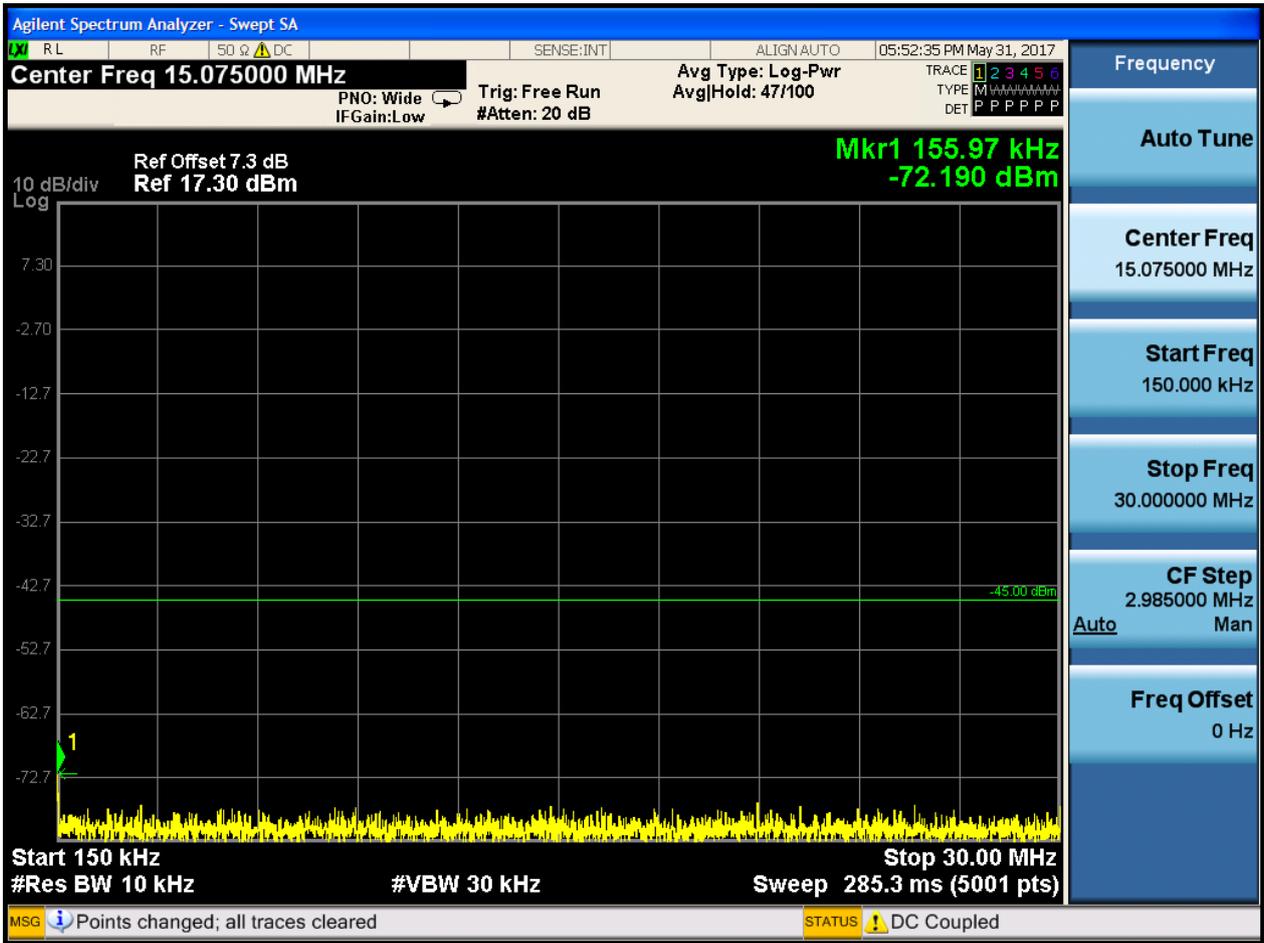


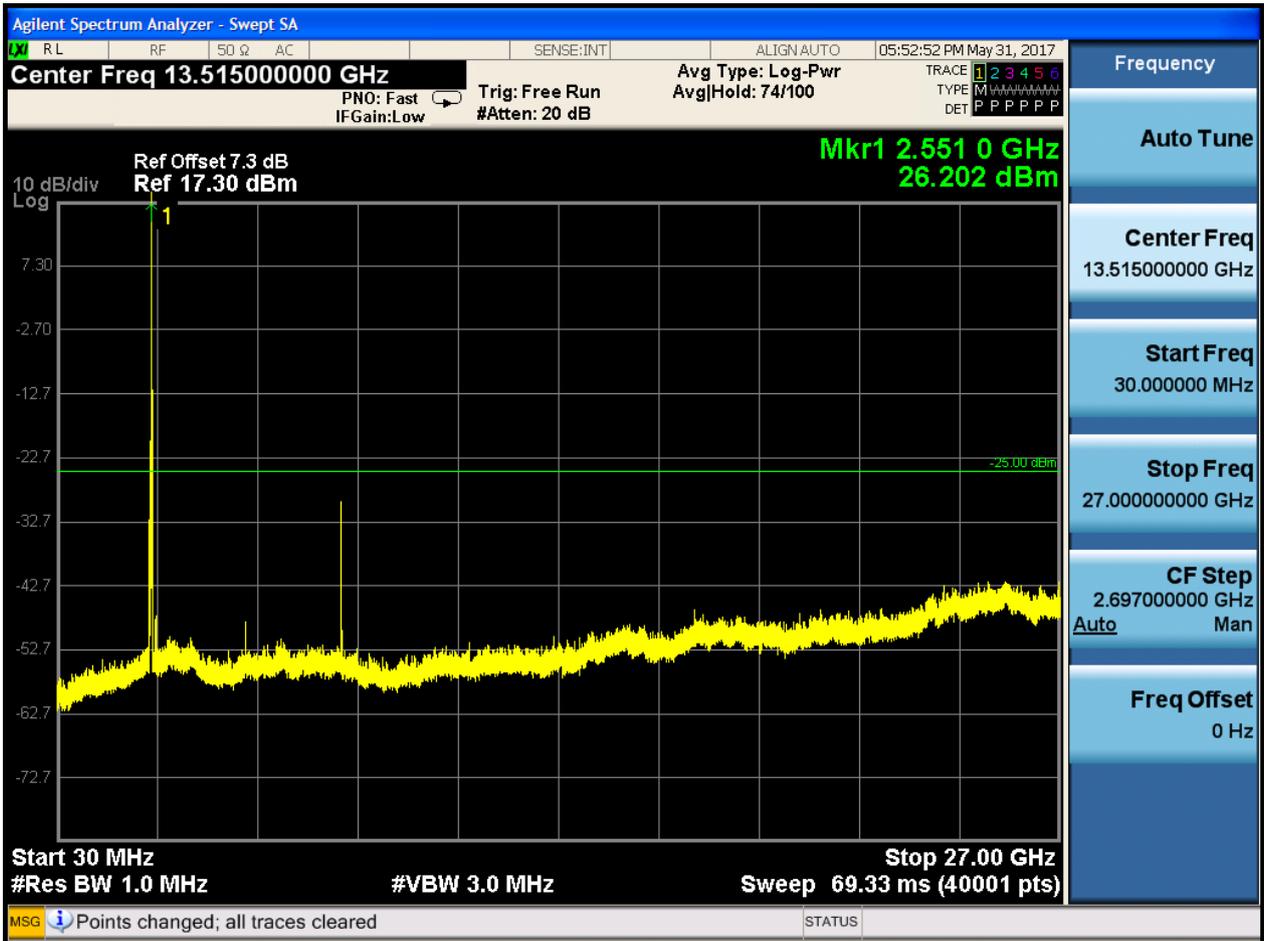


6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0









## 7Appendix\_G: Field Strength of Spurious Radiation

Note: We tested all modes, but the data presented below is the worst case.

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

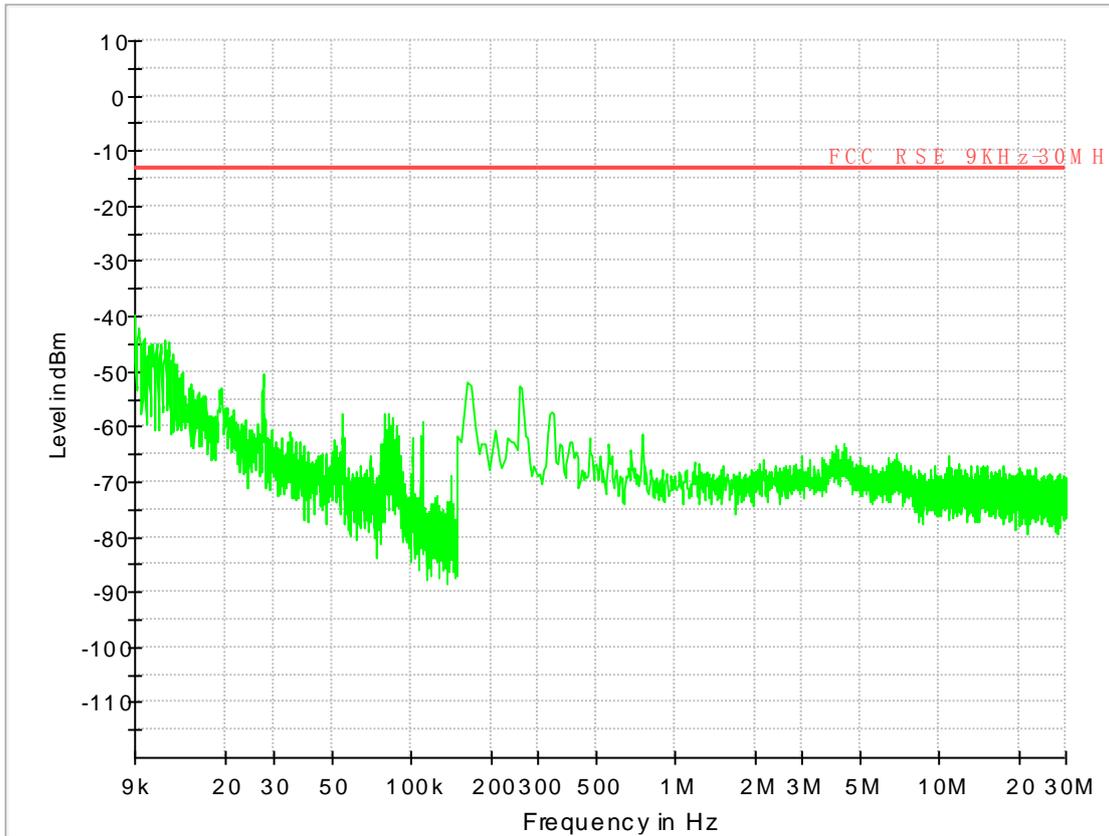
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

### Part I - Test Plots

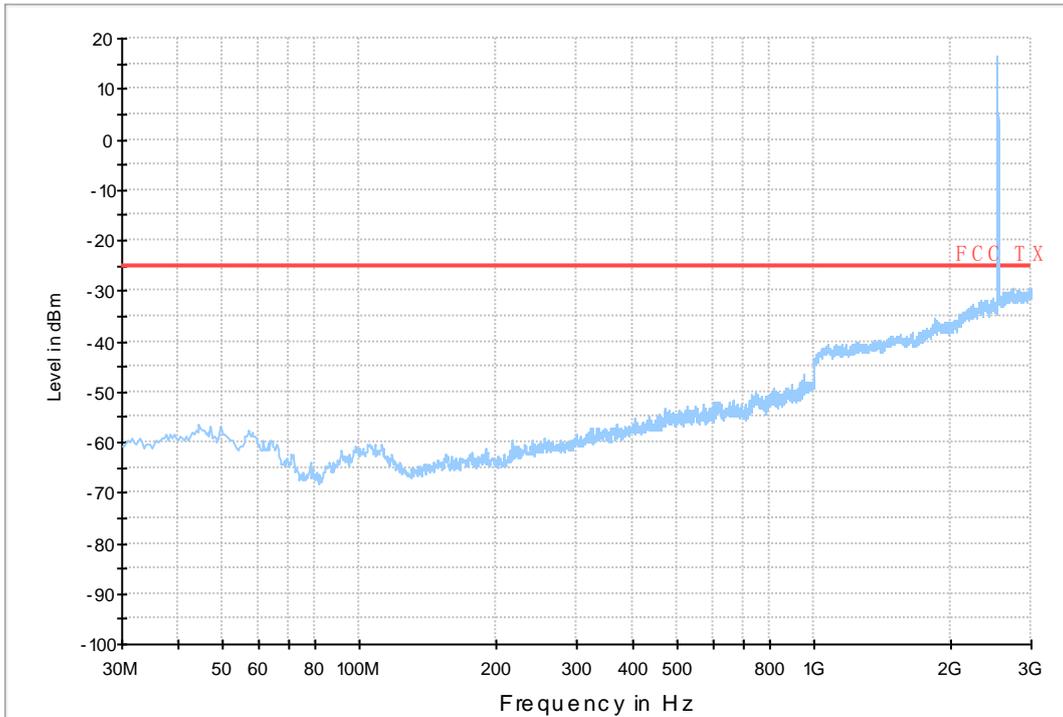
#### 7.1 For LTE

##### 7.1.1 Test Band = BAND7\_Ant1

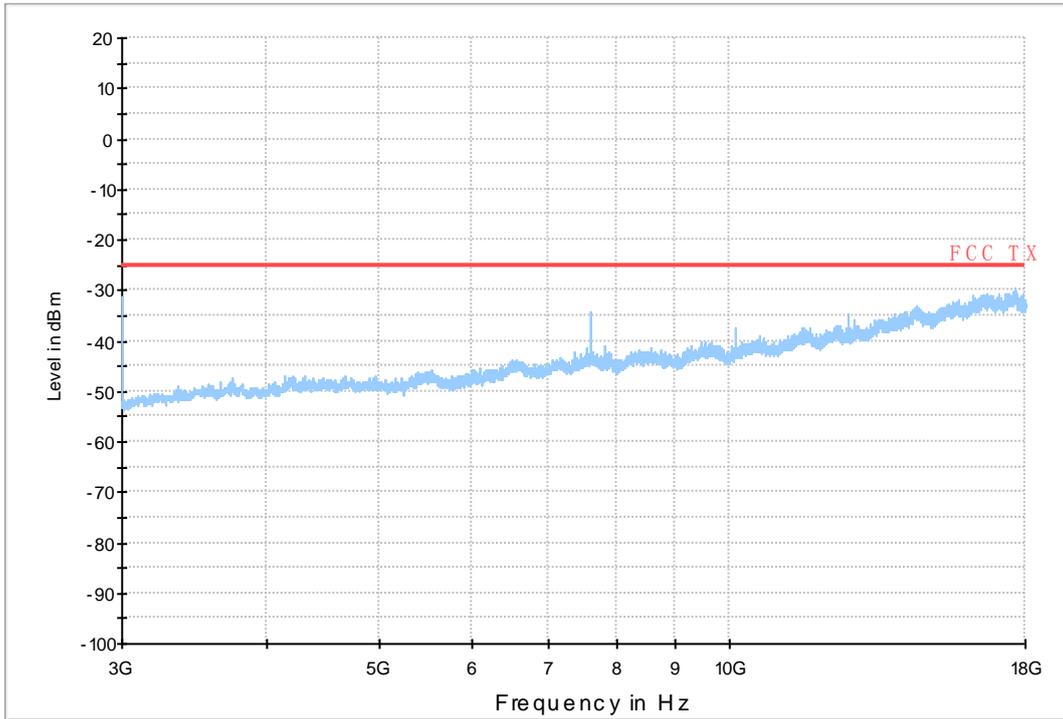
##### 7.1.1.1 Test Bandwidth = 5



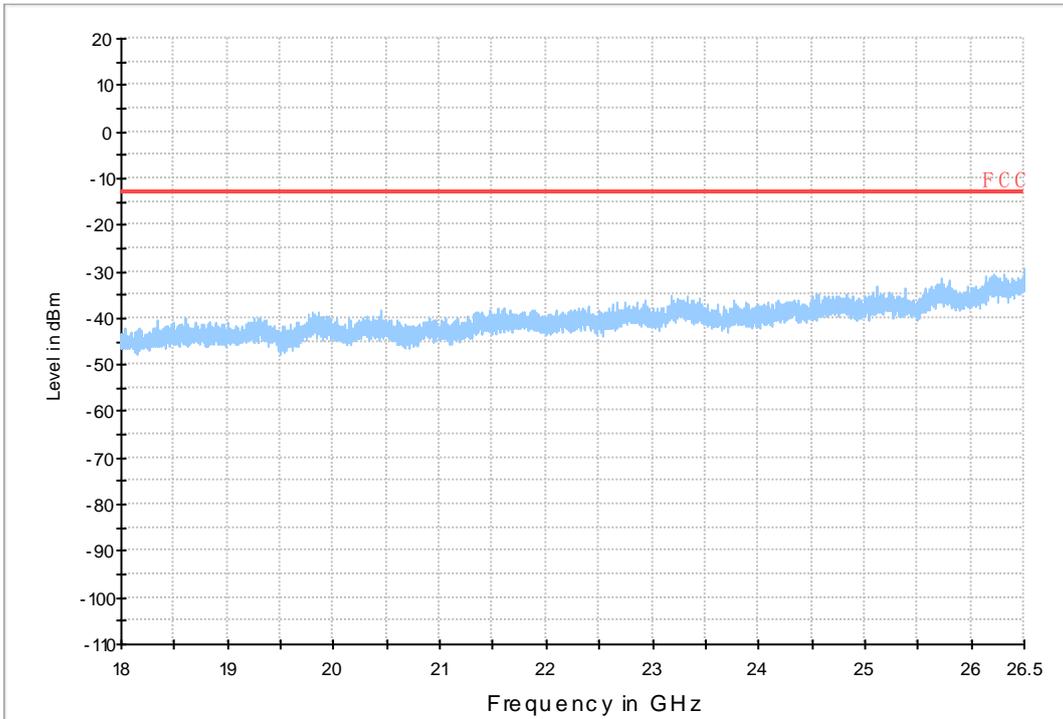
Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_L



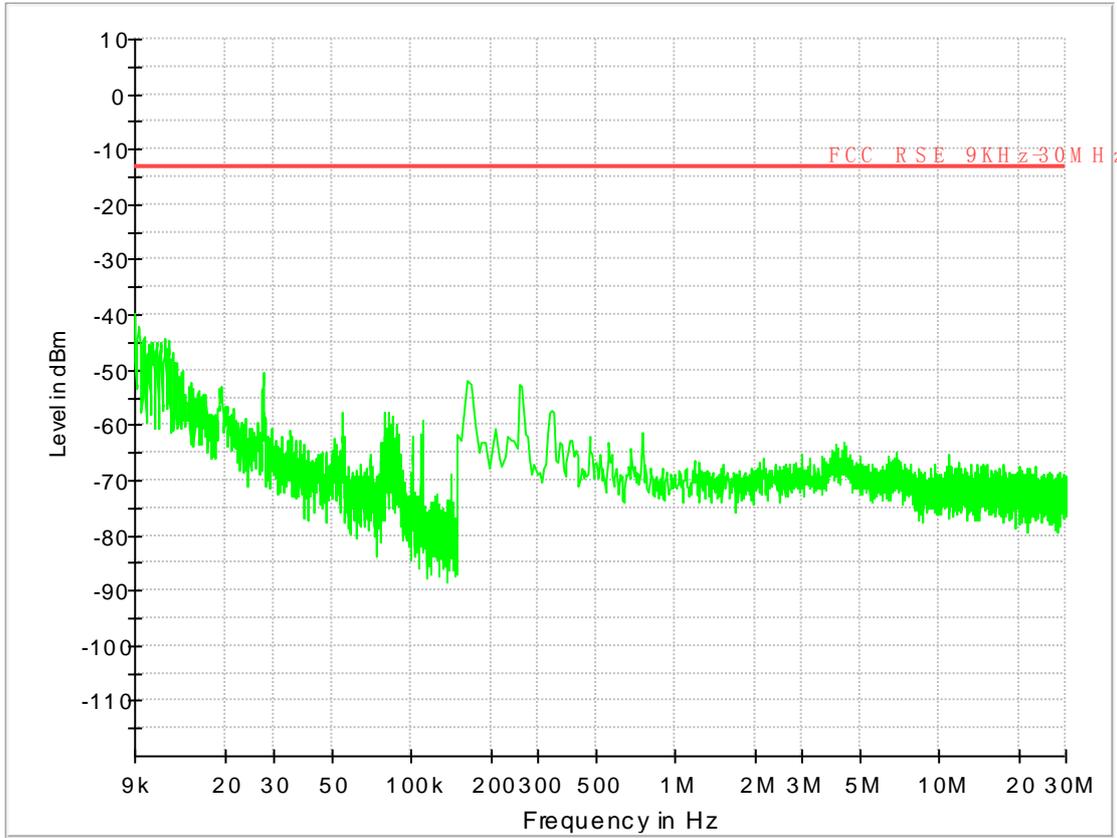
Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_H



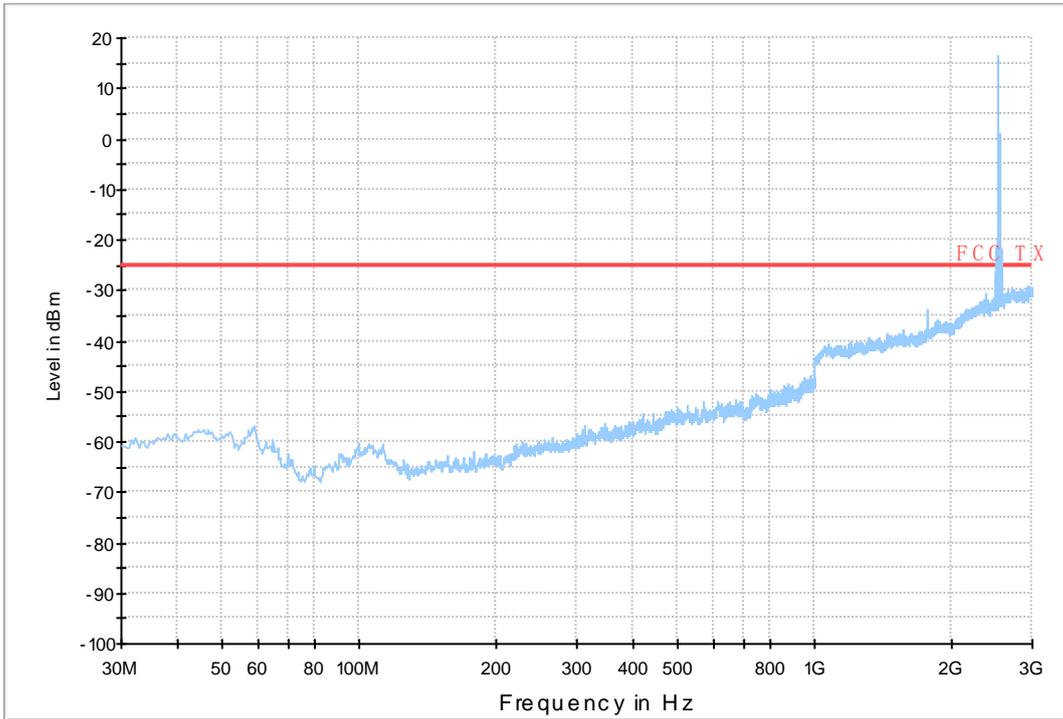
FCC 18-26.5G



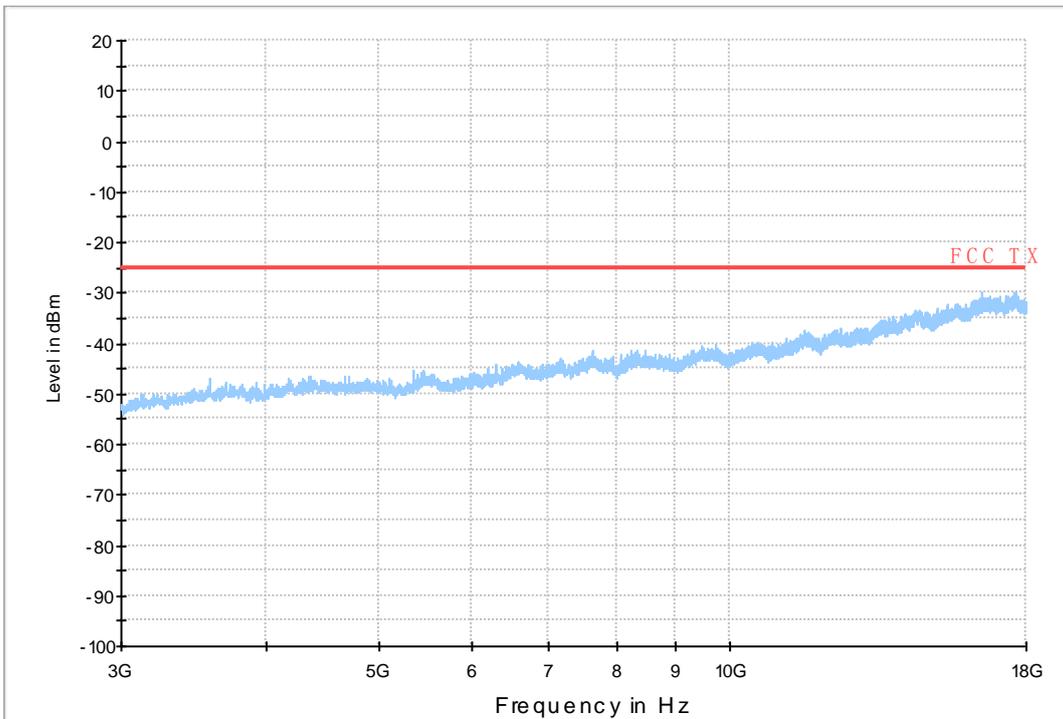
### 7.1.1.2 Test Bandwidth = 20



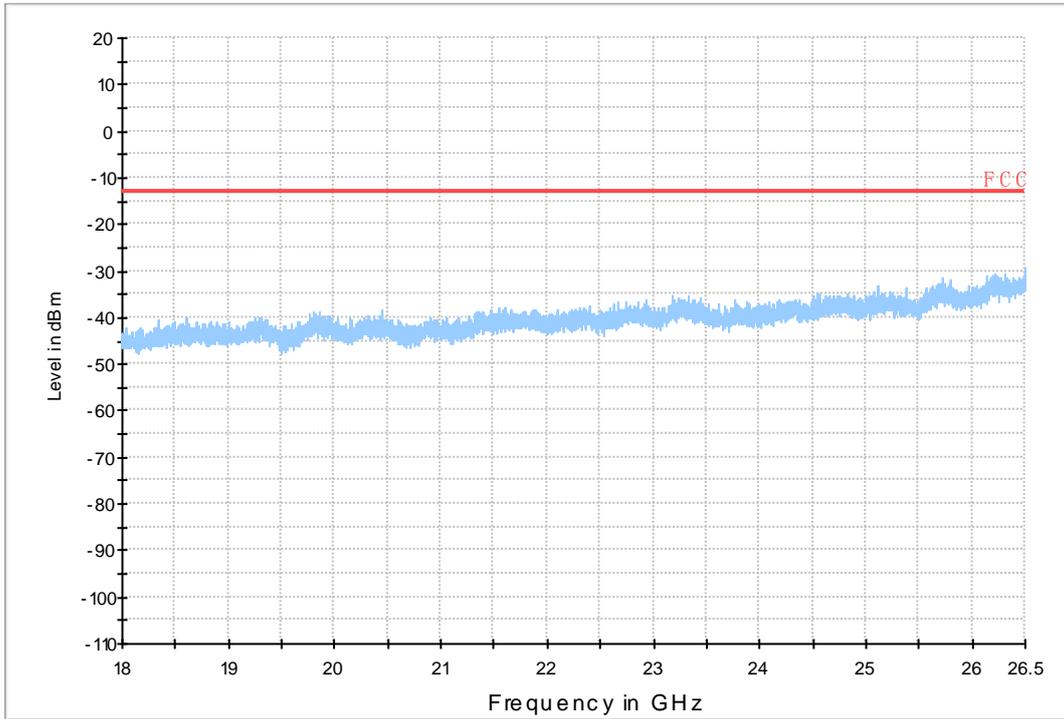
Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_L



Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_H

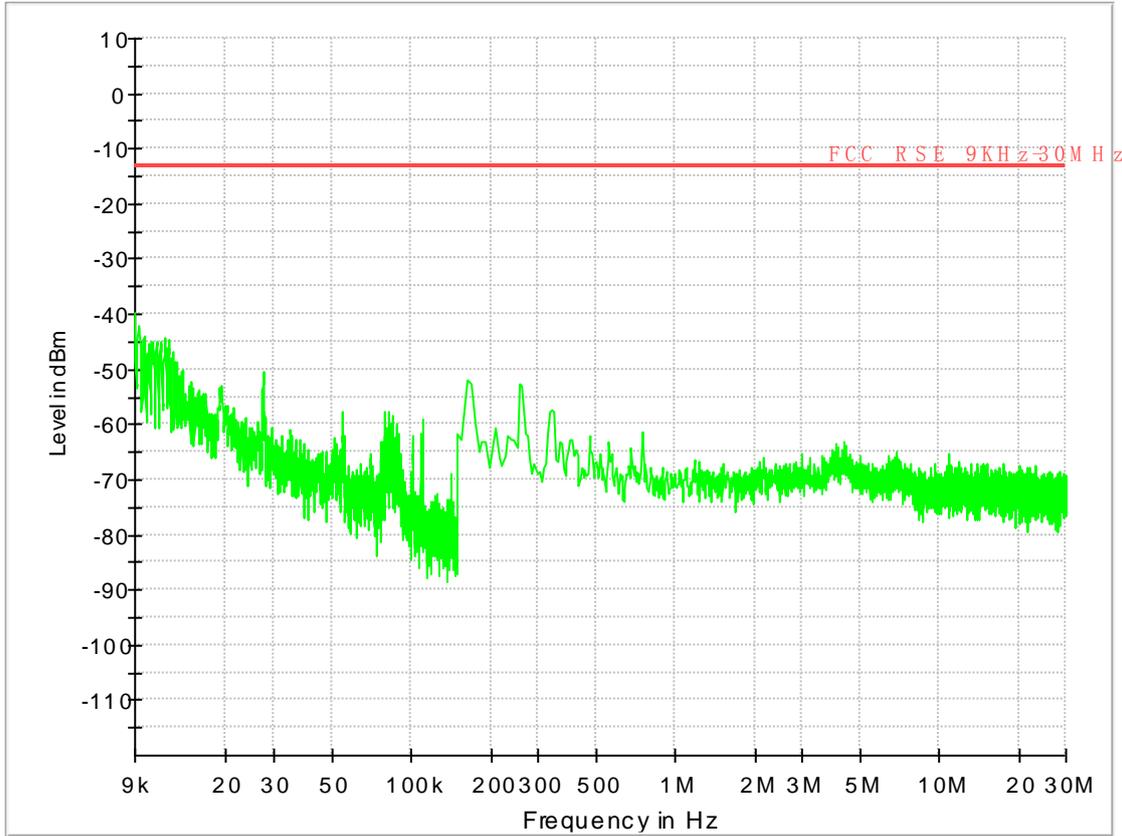


FCC 18-26.5G

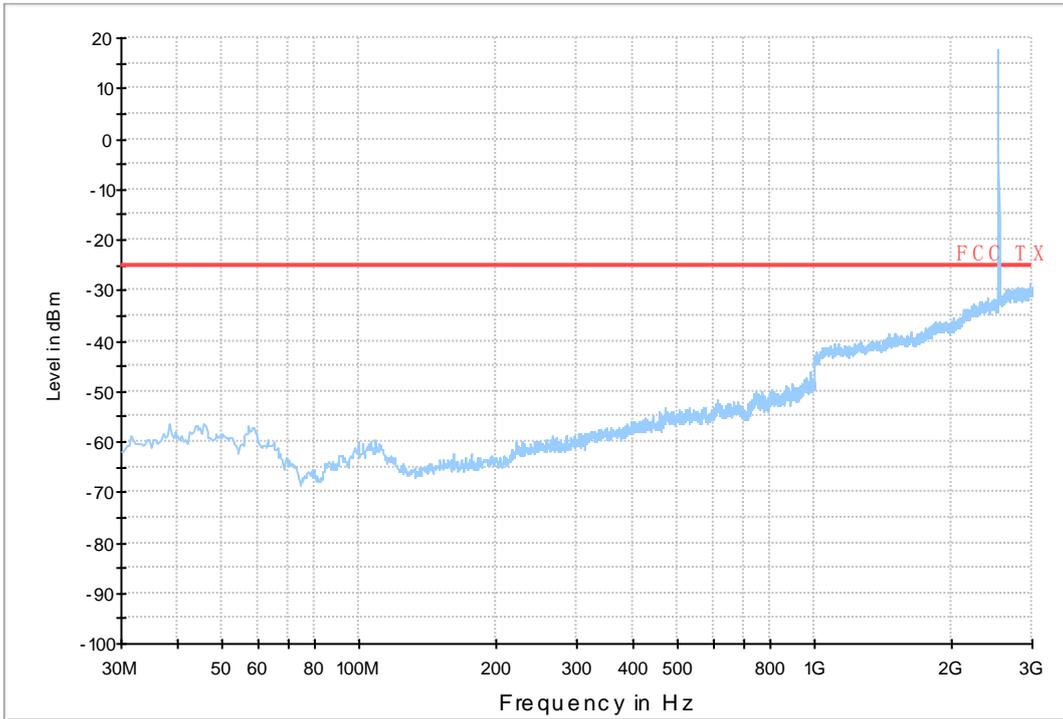


### 7.1.2 Test Band = BAND7\_Ant2

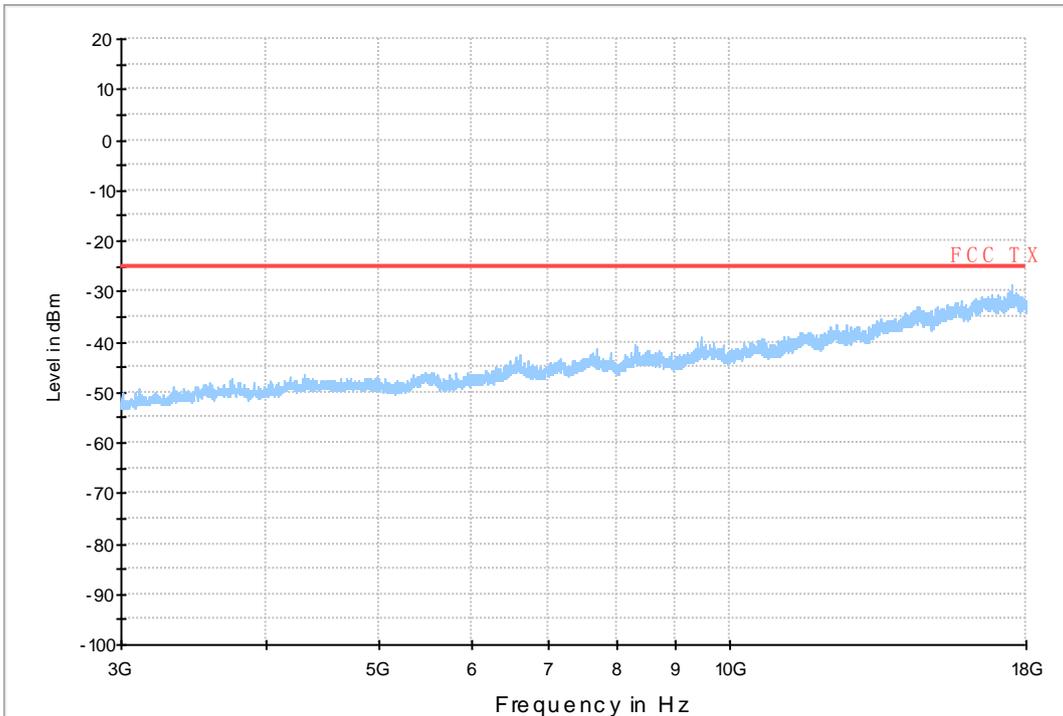
#### 7.1.2.1 Test Bandwidth = 5



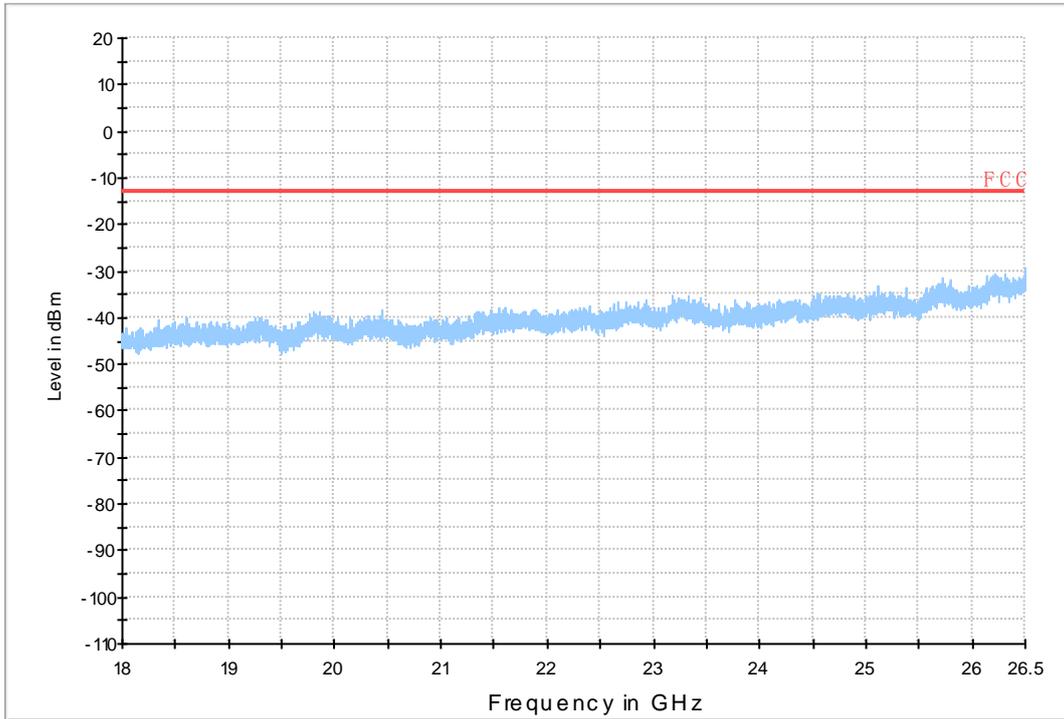
Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_L



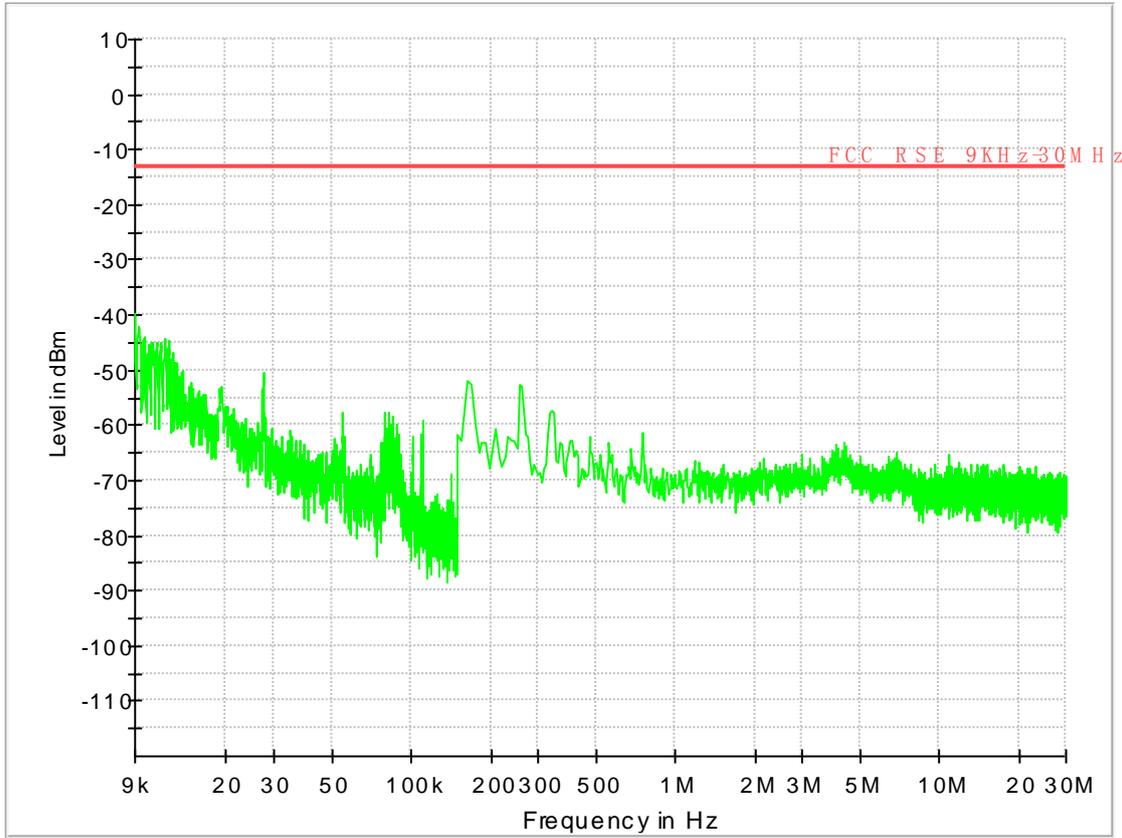
Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_H



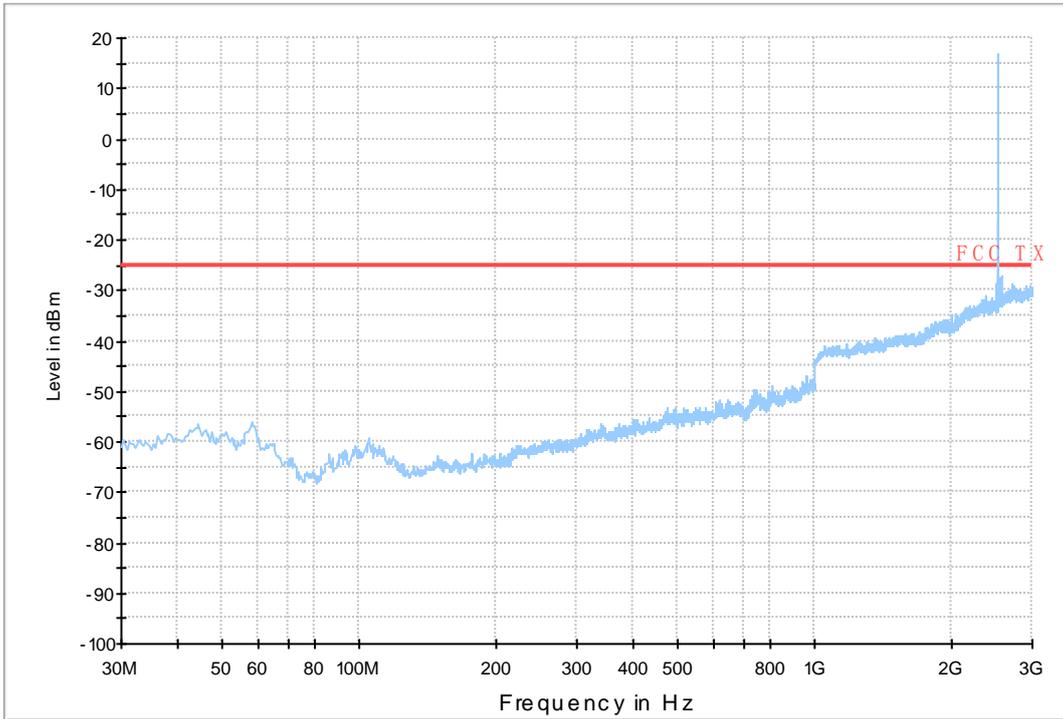
FCC 18-26.5G



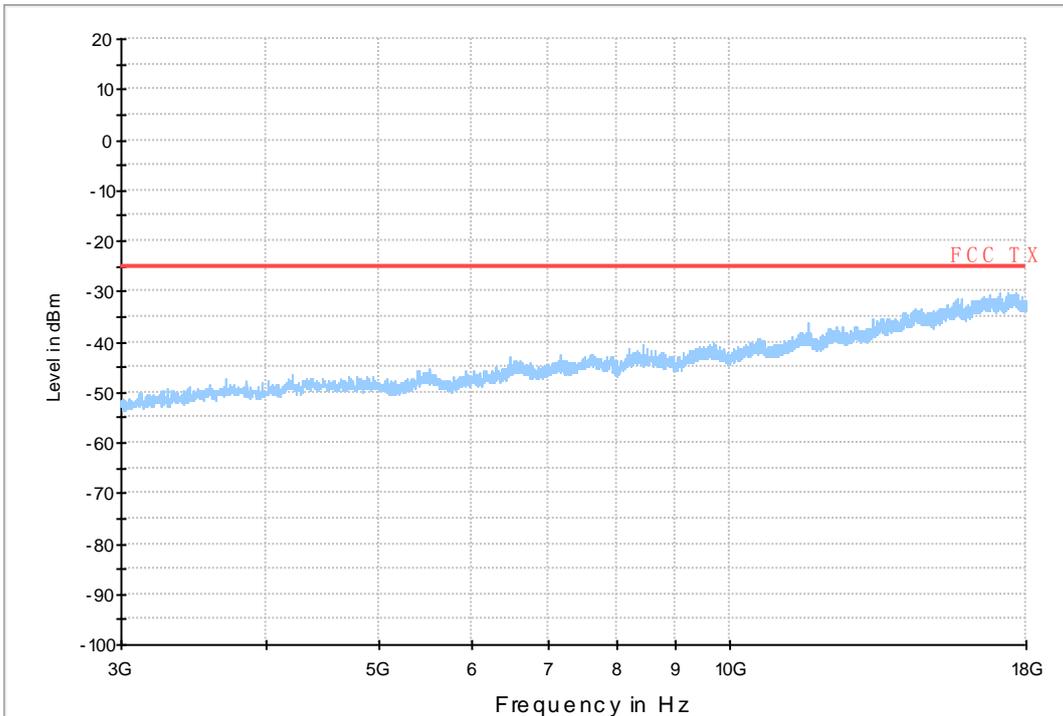
### 7.1.2.2 Test Bandwidth = 20



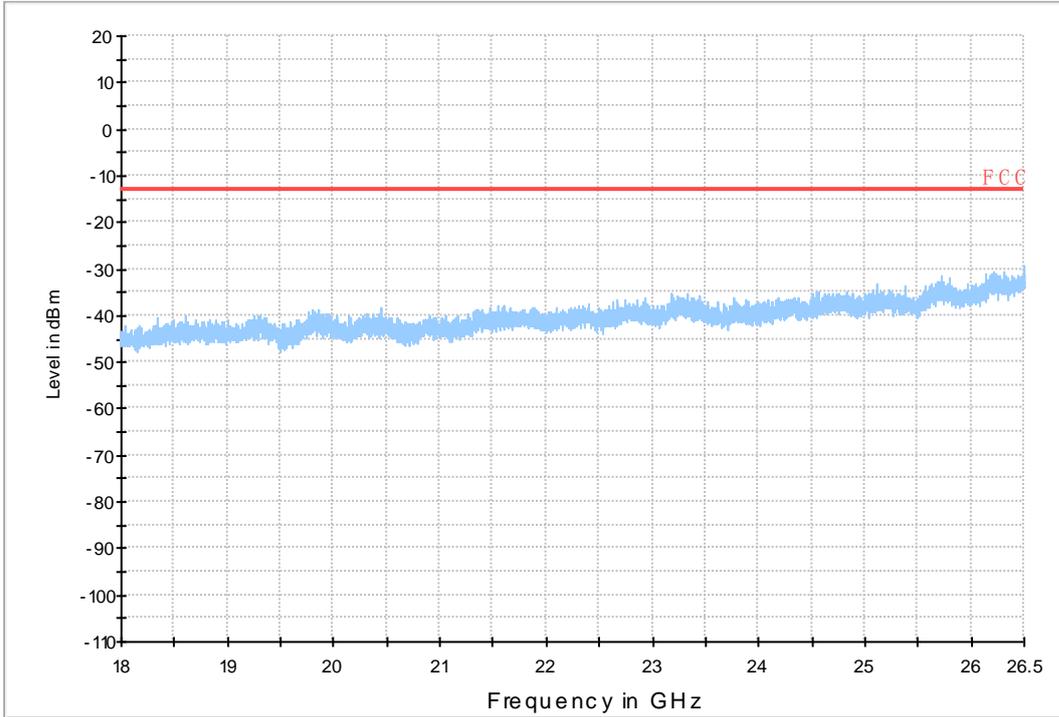
Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_L



Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_H



FCC 18-26.5G



## 8Appendix\_H: Frequency Stability

### 8.1 For LTE

#### 8.1.1 Frequency 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	1.53	0.00061	PASS
					VN	1.47	0.00059	PASS
					VH	0.51	0.0002	PASS
			MCH	TN	VL	1.72	0.00068	PASS
					VN	1.59	0.00063	PASS
					VH	0.20	0.00008	PASS
			HCH	TN	VL	1.86	0.00072	PASS
					VN	2.70	0.00105	PASS
					VH	-54.99	-0.02142	PASS
		10	LCH	TN	VL	1.77	0.00071	PASS
					VN	2.20	0.00088	PASS
					VH	-0.47	-0.00019	PASS
			MCH	TN	VL	1.06	0.00042	PASS
					VN	-13.66	-0.00539	PASS
					VH	0.76	0.0003	PASS
			HCH	TN	VL	1.13	0.00044	PASS
					VN	-11.77	-0.00459	PASS
					VH	2.20	0.00086	PASS
		15	LCH	TN	VL	-0.84	-0.00033	PASS
					VN	1.34	0.00053	PASS
					VH	2.17	0.00087	PASS
			MCH	TN	VL	-11.63	-0.00459	PASS
					VN	-26.29	-0.01037	PASS
					VH	4.56	0.0018	PASS
			HCH	TN	VL	4.48	0.00175	PASS
					VN	3.60	0.0014	PASS
					VH	-0.10	-0.00004	PASS
		20	LCH	TN	VL	2.02	0.0008	PASS
					VN	-1.26	-0.0005	PASS
					VH	-1.40	-0.00056	PASS
			MCH	TN	VL	3.32	0.00131	PASS
					VN	0.19	0.00007	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2	5	HCH	TN	VH	-3.88	-0.00153	PASS
					VL	-0.27	-0.00011	PASS
					VN	-0.97	-0.00038	PASS
			LCH	TN	VH	0.50	0.0002	PASS
					VL	-2.32	-0.00093	PASS
					VN	-1.33	-0.00053	PASS
		10	MCH	TN	VH	3.52	0.00141	PASS
					VL	3.72	0.00147	PASS
					VN	-3.25	-0.00128	PASS
			HCH	TN	VH	2.92	0.00115	PASS
					VL	-93.27	-0.03633	PASS
					VN	-22.32	-0.00869	PASS
		15	LCH	TN	VH	-4.09	-0.00159	PASS
					VL	-18.93	-0.00756	PASS
					VN	19.90	0.00794	PASS
			MCH	TN	VH	12.52	0.005	PASS
					VL	-1.62	-0.00064	PASS
					VN	0.73	0.00029	PASS
		20	HCH	TN	VH	2.98	0.00118	PASS
					VL	-5.72	-0.00223	PASS
					VN	5.71	0.00223	PASS
			LCH	TN	VH	-5.62	-0.00219	PASS
					VL	-1.07	-0.00043	PASS
					VN	-1.39	-0.00055	PASS
		20	MCH	TN	VH	-1.07	-0.00043	PASS
					VL	-3.83	-0.00151	PASS
					VN	-0.97	-0.00038	PASS
			HCH	TN	VH	0.24	0.00009	PASS
					VL	-1.09	-0.00043	PASS
					VN	-1.36	-0.00053	PASS
		20	LCH	TN	VH	0.11	0.00004	PASS
					VL	-1.26	-0.0005	PASS
					VN	-2.57	-0.00102	PASS
			MCH	TN	VH	-1.90	-0.00076	PASS
					VL	-3.45	-0.00136	PASS
					VN	-1.20	-0.00047	PASS
		HCH	TN	VH	0.27	0.00011	PASS	
				VL	1.54	0.0006	PASS	
				VN	-4.21	-0.00164	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VH	-0.44	-0.00017	PASS

## 8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND7	LTE/TM1	5	LCH	VN	-30	-1.33	-0.00053	PASS
					-20	-1.95	-0.00078	PASS
					-10	0.64	0.00026	PASS
					0	-1.96	-0.00078	PASS
					10	2.13	0.00085	PASS
					20	2.00	0.0008	PASS
					30	-0.24	-0.0001	PASS
					40	1.90	0.00076	PASS
			50	-3.39	-0.00135	PASS		
			MCH	VN	-30	-3.55	-0.0014	PASS
					-20	-44.73	-0.01764	PASS
					-10	-7.17	-0.00283	PASS
					0	-4.01	-0.00158	PASS
					10	-2.65	-0.00105	PASS
					20	0.24	0.00009	PASS
					30	-8.68	-0.00342	PASS
					40	0.94	0.00037	PASS
			HCH	VN	-30	-8.45	-0.00329	PASS
					-20	-4.49	-0.00175	PASS
					-10	-8.65	-0.00337	PASS
					0	0.50	0.00019	PASS
					10	0.26	0.0001	PASS
					20	-0.04	-0.00002	PASS
					30	0.67	0.00026	PASS
		40			-3.95	-0.00154	PASS	
		50	-1.14	-0.00044	PASS			
		10	LCH	VN	-30	-0.47	-0.00019	PASS
					-20	-1.53	-0.00061	PASS
					-10	-4.22	-0.00168	PASS
					0	0.36	0.00014	PASS
					10	-2.09	-0.00083	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
					20	1.62	0.00065	PASS			
					30	-1.14	-0.00046	PASS			
					40	-0.97	-0.00039	PASS			
					50	-0.97	-0.00039	PASS			
			MCH	VN				-30	-10.66	-0.00421	PASS
								-20	-2.13	-0.00084	PASS
								-10	-18.01	-0.0071	PASS
								0	1.06	0.00042	PASS
								10	-1.29	-0.00051	PASS
								20	-0.20	-0.00008	PASS
								30	-1.75	-0.00069	PASS
								40	0.34	0.00013	PASS
			HCH	VN				50	-0.72	-0.00028	PASS
								-30	-3.10	-0.00121	PASS
								-20	-0.17	-0.00007	PASS
								-10	-6.88	-0.00268	PASS
		0						-5.14	-0.002	PASS	
		10						0.64	0.00025	PASS	
		20						-1.63	-0.00064	PASS	
		30						-2.92	-0.00114	PASS	
		LCH	VN	15			40	-0.56	-0.00022	PASS	
							50	3.15	0.00123	PASS	
							-30	-7.27	-0.0029	PASS	
							-20	-1.82	-0.00073	PASS	
							-10	-2.63	-0.00105	PASS	
							0	-1.62	-0.00065	PASS	
							10	-1.32	-0.00053	PASS	
							20	-3.50	-0.0014	PASS	
		MCH	VN	15			30	-1.92	-0.00077	PASS	
							40	1.34	0.00053	PASS	
							50	-3.63	-0.00145	PASS	
							-30	0.77	0.0003	PASS	
-20	-3.48						-0.00137	PASS			
-10	0.24						0.00009	PASS			
0	0.54						0.00021	PASS			
10	3.16						0.00125	PASS			
					20	-2.53	-0.001	PASS			
					30	0.10	0.00004	PASS			
					40	1.50	0.00059	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
			HCH	VN	50	-4.29	-0.00169	PASS	
					-30	-2.57	-0.001	PASS	
					-20	-3.19	-0.00124	PASS	
					-10	-2.79	-0.00109	PASS	
					0	-0.41	-0.00016	PASS	
					10	-1.60	-0.00062	PASS	
					20	-1.53	-0.0006	PASS	
					30	-1.32	-0.00052	PASS	
					40	-8.68	-0.00339	PASS	
			50	1.34	0.00052	PASS			
			LCH	VN	-30	-1.20	-0.00048	PASS	
					-20	4.33	0.00173	PASS	
					-10	1.33	0.00053	PASS	
					0	1.14	0.00045	PASS	
					10	0.82	0.00033	PASS	
					20	1.30	0.00052	PASS	
					30	-2.06	-0.00082	PASS	
					40	-0.86	-0.00034	PASS	
		50			1.03	0.00041	PASS		
		MCH	VN	-30	-3.33	-0.00131	PASS		
				-20	-1.57	-0.00062	PASS		
				-10	-0.77	-0.0003	PASS		
				0	-1.39	-0.00055	PASS		
				10	-1.17	-0.00046	PASS		
				20	-2.55	-0.00101	PASS		
				30	-0.20	-0.00008	PASS		
				40	-0.92	-0.00036	PASS		
				50	-3.85	-0.00152	PASS		
		HCH	VN	-30	-4.06	-0.00159	PASS		
				-20	-1.54	-0.0006	PASS		
				-10	-0.36	-0.00014	PASS		
				0	-2.25	-0.00088	PASS		
				10	1.73	0.00068	PASS		
				20	1.75	0.00068	PASS		
				30	-4.41	-0.00172	PASS		
				40	0.57	0.00022	PASS		
				50	1.17	0.00046	PASS		
		LTE/TM2	5	LCH	VN	-30	1.54	0.00062	PASS
						-20	1.02	0.00041	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
		10			-10	2.55	0.00102	PASS			
					0	-0.89	-0.00036	PASS			
					10	1.19	0.00048	PASS			
					20	2.50	0.001	PASS			
					30	2.55	0.00102	PASS			
					40	-0.51	-0.0002	PASS			
					50	-21.99	-0.00879	PASS			
			MCH	VN	-30	1.89	0.00075	PASS			
					-20	1.37	0.00054	PASS			
					-10	-16.57	-0.00654	PASS			
					0	1.32	0.00052	PASS			
					10	3.88	0.00153	PASS			
					20	0.57	0.00022	PASS			
					30	1.82	0.00072	PASS			
			HCH	VN	-30	1.13	0.00044	PASS			
					-20	-6.54	-0.00255	PASS			
					-10	3.06	0.00119	PASS			
					0	-3.05	-0.00119	PASS			
					10	-2.12	-0.00083	PASS			
					20	1.56	0.00061	PASS			
					30	-6.28	-0.00245	PASS			
			LCH	VN	-30	-4.78	-0.00191	PASS			
					-20	-1.36	-0.00054	PASS			
					-10	-2.35	-0.00094	PASS			
					0	2.40	0.00096	PASS			
					10	4.55	0.00182	PASS			
					20	-2.47	-0.00099	PASS			
					30	0.64	0.00026	PASS			
			MCH	VN	40	-2.96	-0.00118	PASS			
					50	-1.79	-0.00071	PASS			
					-30	-2.36	-0.00093	PASS			
					-20	-1.12	-0.00044	PASS			
					-10	0.67	0.00026	PASS			
								0	-10.86	-0.00428	PASS
								10	-3.05	-0.0012	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
					20	-2.65	-0.00105	PASS			
					30	-18.71	-0.00738	PASS			
					40	2.19	0.00086	PASS			
					50	-1.09	-0.00043	PASS			
			HCH	VN				-30	-3.66	-0.00143	PASS
								-20	1.10	0.00043	PASS
								-10	-3.62	-0.00141	PASS
								0	-7.61	-0.00297	PASS
								10	2.03	0.00079	PASS
								20	1.69	0.00066	PASS
								30	-7.77	-0.00303	PASS
								40	-4.69	-0.00183	PASS
								50	-0.30	-0.00012	PASS
								LCH	VN		
		-20	-2.57	-0.00102		PASS					
		-10	-2.43	-0.00097		PASS					
		0	-1.76	-0.0007		PASS					
		10	-2.33	-0.00093		PASS					
		20	-0.09	-0.00004	PASS						
		30	0.90	0.00036	PASS						
		40	0.63	0.00025	PASS						
		50	-0.57	-0.00023	PASS						
		MCH	VN				-30				
							-20	-0.24	-0.00009		PASS
							-10	-1.10	-0.00043		PASS
							0	0.53	0.00021		PASS
							10	-0.44	-0.00017		PASS
							20	0.99	0.00039	PASS	
							30	-1.03	-0.00041	PASS	
							40	-1.65	-0.00065	PASS	
		HCH	VN					50	-4.62	-0.00182	PASS
								-30	-2.29	-0.00089	PASS
								-20	1.44	0.00056	PASS
								-10	0.21	0.00008	PASS
								0	-1.20	-0.00047	PASS
								10	-0.74	-0.00029	PASS
				20				-3.32	-0.0013	PASS	
				30				0.03	0.00001	PASS	
		40	-2.32	-0.00091		PASS					

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					50	-2.59	-0.00101	PASS
		20	LCH	VN	-30	0.24	0.0001	PASS
					-20	-18.08	-0.0072	PASS
					-10	6.38	0.00254	PASS
					0	4.09	0.00163	PASS
					10	3.40	0.00135	PASS
					20	1.67	0.00067	PASS
					30	0.43	0.00017	PASS
					40	1.30	0.00052	PASS
					50	0.62	0.00025	PASS
			MCH	VN	-30	-3.76	-0.00148	PASS
					-20	0.66	0.00026	PASS
					-10	0.84	0.00033	PASS
					0	-0.80	-0.00032	PASS
					10	1.06	0.00042	PASS
					20	1.03	0.00041	PASS
					30	-0.60	-0.00024	PASS
					40	-1.72	-0.00068	PASS
			50	-4.16	-0.00164	PASS		
			HCH	VN	-30	-1.46	-0.00057	PASS
					-20	3.10	0.00121	PASS
					-10	0.16	0.00006	PASS
					0	0.49	0.00019	PASS
					10	-2.06	-0.0008	PASS
					20	0.74	0.00029	PASS
		30			-0.14	-0.00005	PASS	
		40			-0.56	-0.00022	PASS	
		50	-0.92	-0.00036	PASS			

END