



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 09:02:10 AM Nov 25, 2017

Center Freq 2.570000000 GHz Avg Type: RMS
#Res BW 430 kHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 36 dB

PASS

Ref Offset 7.5 dB Ref 30.00 dBm

Mkr1 2.570 005 0 GHz -22.953 dBm

10 dB/div Log

Trace 1 Pass

The spectrum analyzer trace shows a signal at 2.570 GHz with a peak at -22.953 dBm. The trace is labeled 'Trace 1 Pass'. The frequency range is from 2.54515 GHz to 2.59485 GHz, and the span is 49.70 MHz. The resolution bandwidth is 430 kHz, and the sweep time is 1.000 s (1001 pts). The center frequency is 2.57000 GHz. The reference level is 30.00 dBm, and the reference offset is 7.5 dB. The signal is measured with a 10 dB/div scale on a logarithmic scale. The trace shows a peak at 2.570 GHz with a power level of -22.953 dBm. There are also smaller peaks at approximately 2.545 GHz and 2.594 GHz.

Center 2.57000 GHz Span 49.70 MHz
#Res BW 430 kHz #VBW 1.3 MHz* #Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.570000000 GHz

Start Freq
2.545150000 GHz

Stop Freq
2.594850000 GHz

CF Step
4.970000 MHz
Auto Man

Freq Offset
0 Hz



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 09:02:29 AM Nov 25, 2017

Center Freq 2.57000000 GHz Avg Type: RMS
PNO: Fast Trig: Free Run AvgHold: 12/100
IFGain: Low #Atten: 36 dB

PASS

Ref Offset 7.5 dB
Ref 30.00 dBm

Mkr1 2.570 005 0 GHz
-33.858 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.57000 GHz
#Res BW 430 kHz

#VBW 1.3 MHz*

Span 49.70 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.57000000 GHz

Start Freq
2.545150000 GHz

Stop Freq
2.594850000 GHz

CF Step
4.970000 MHz
Auto Man

Freq Offset
0 Hz



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

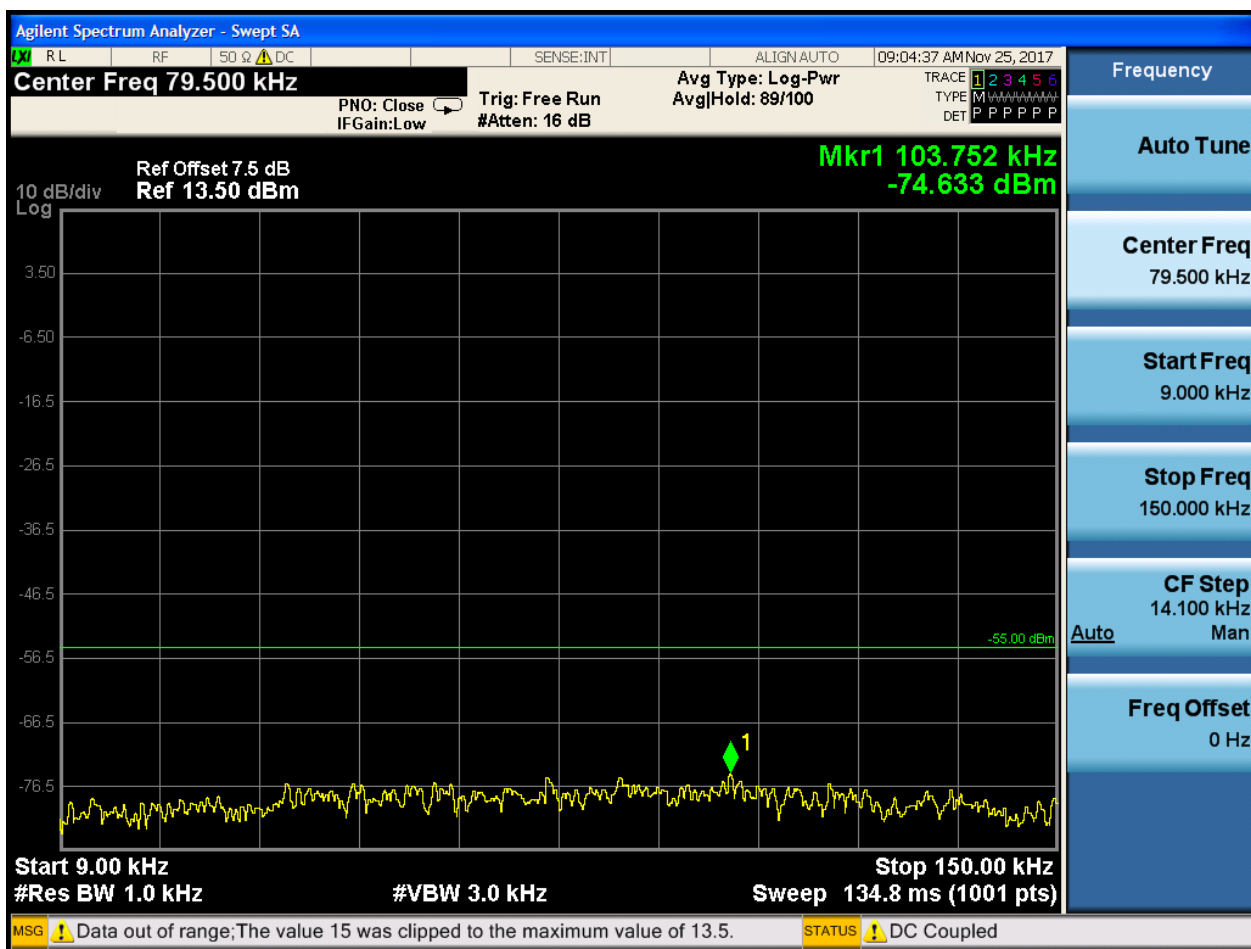
6.1.1 Test Band = BAND7

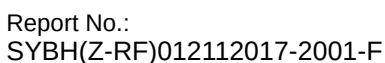
6.1.1.1 Test Mode = LTE/TM1

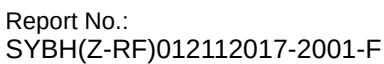
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

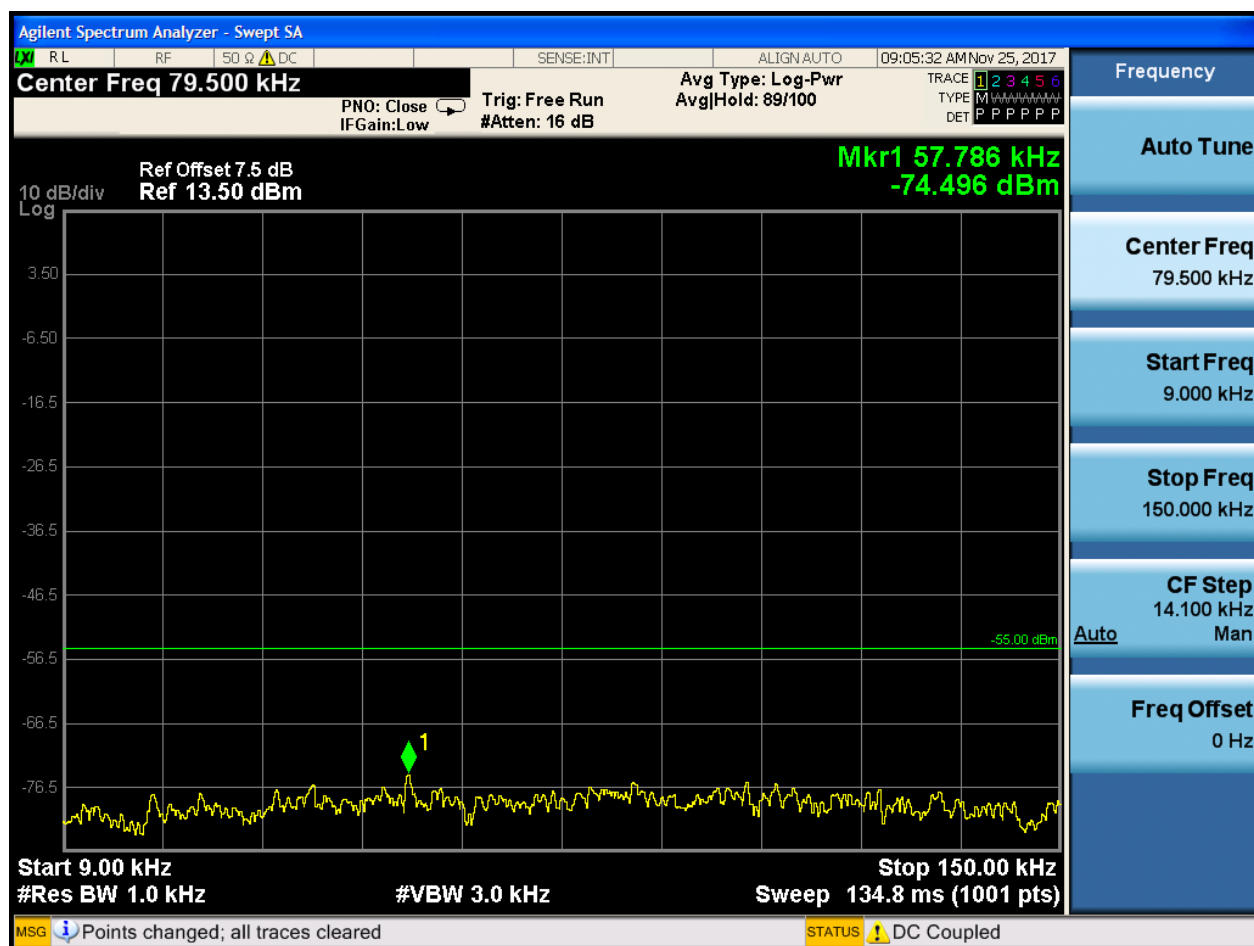




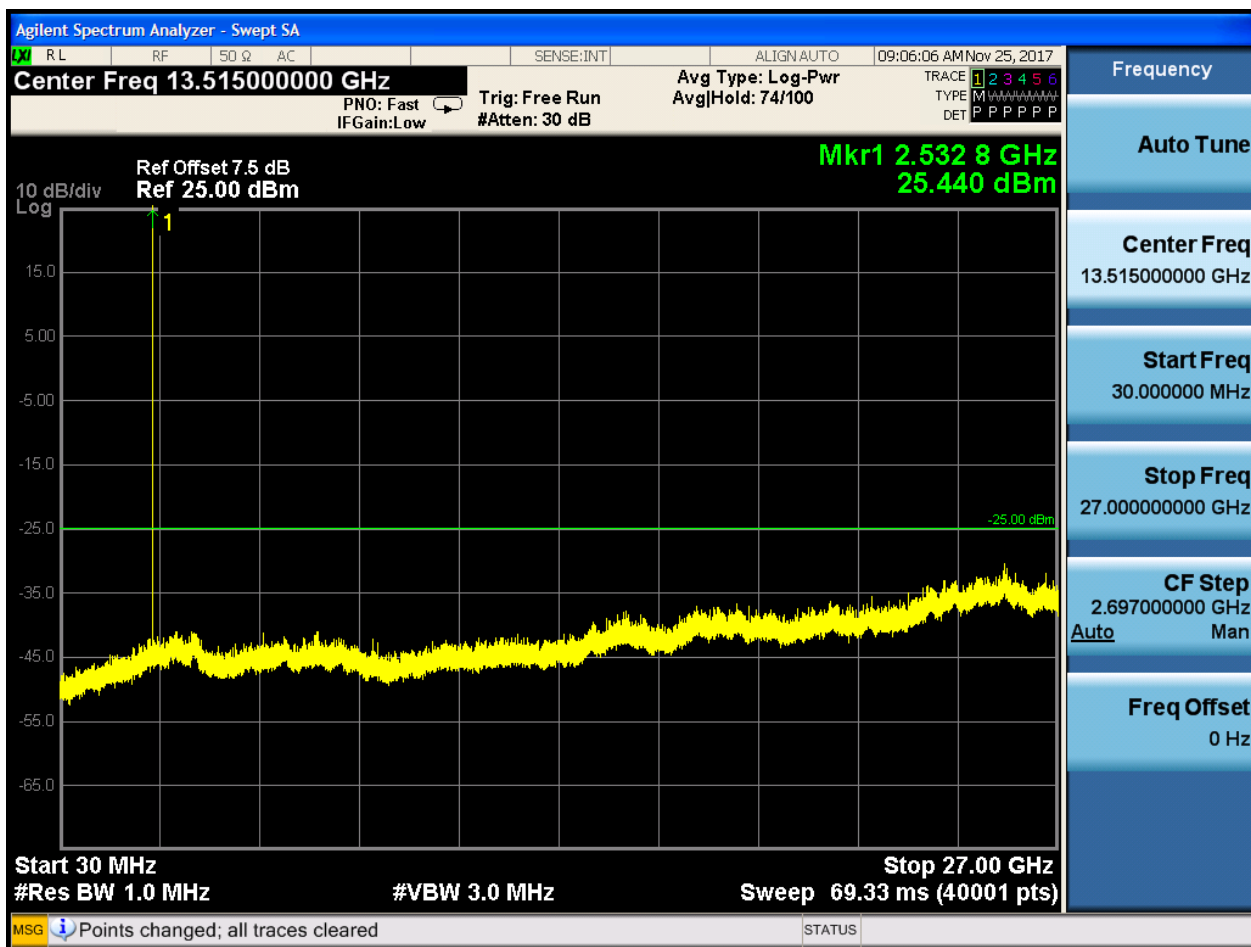


6.1.1.1.1.2 Test Channel = MCH

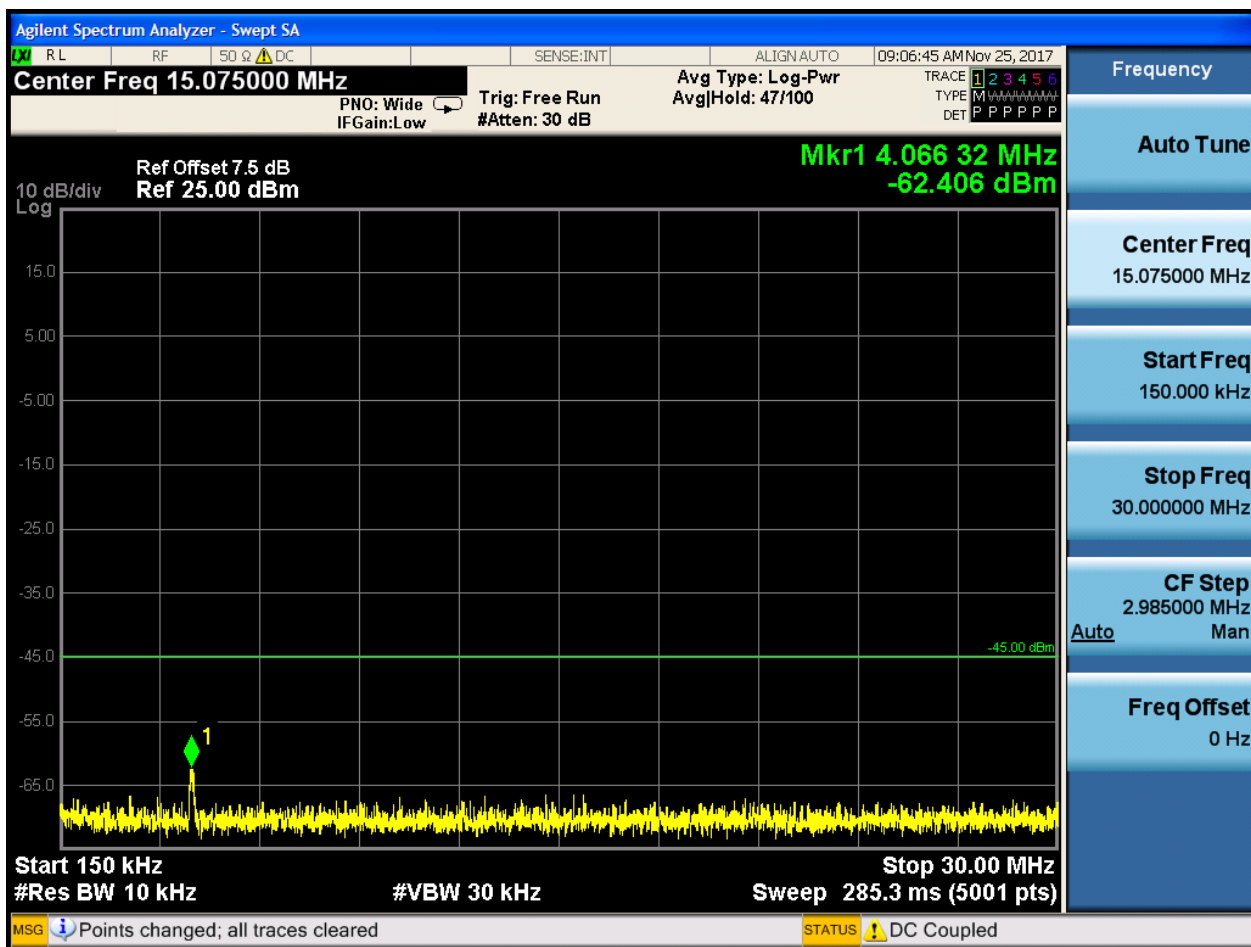
6.1.1.1.1.2.1 Test RB = RB1#0

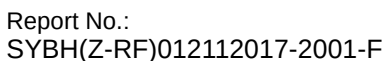








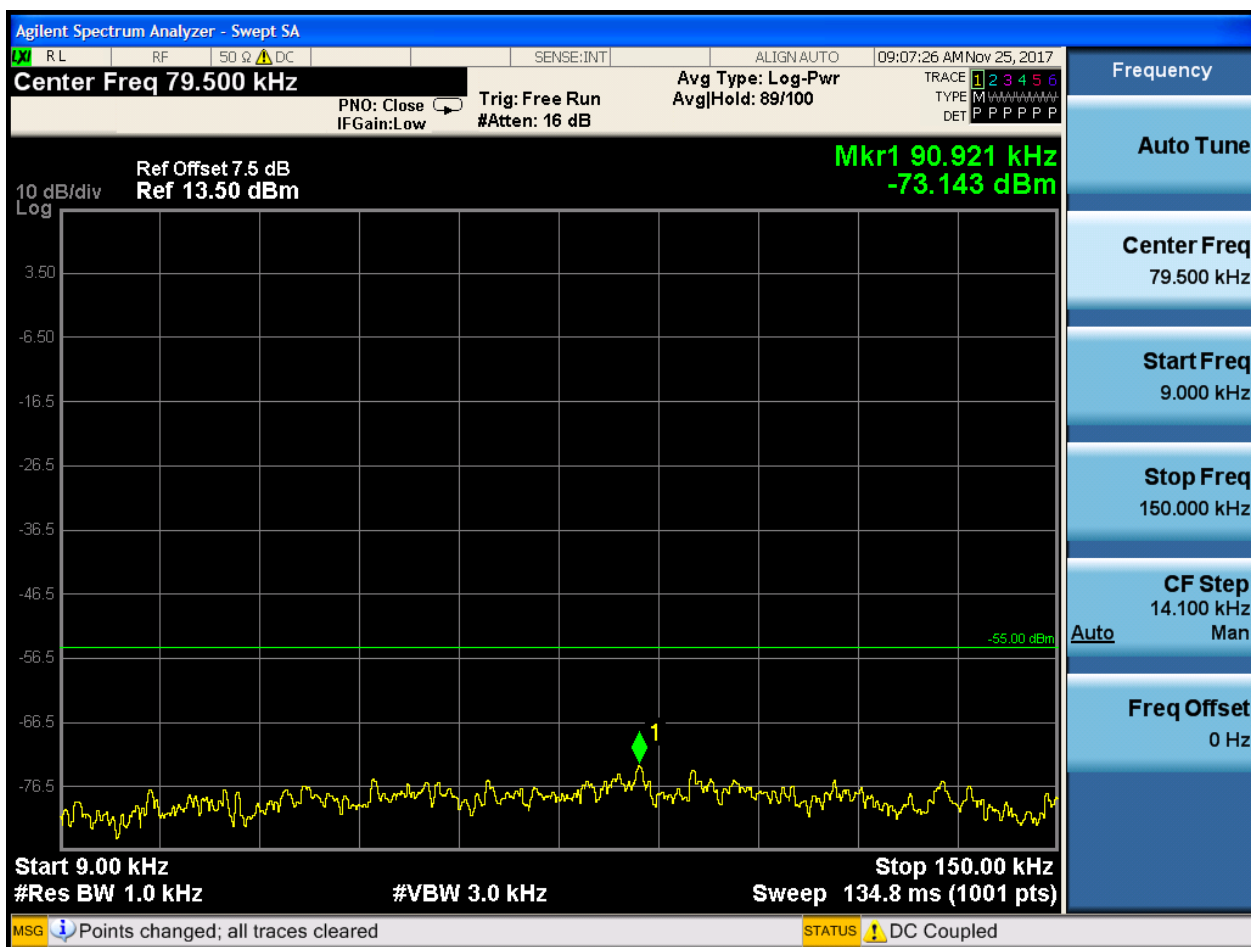




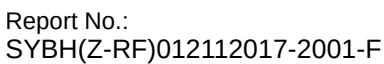
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



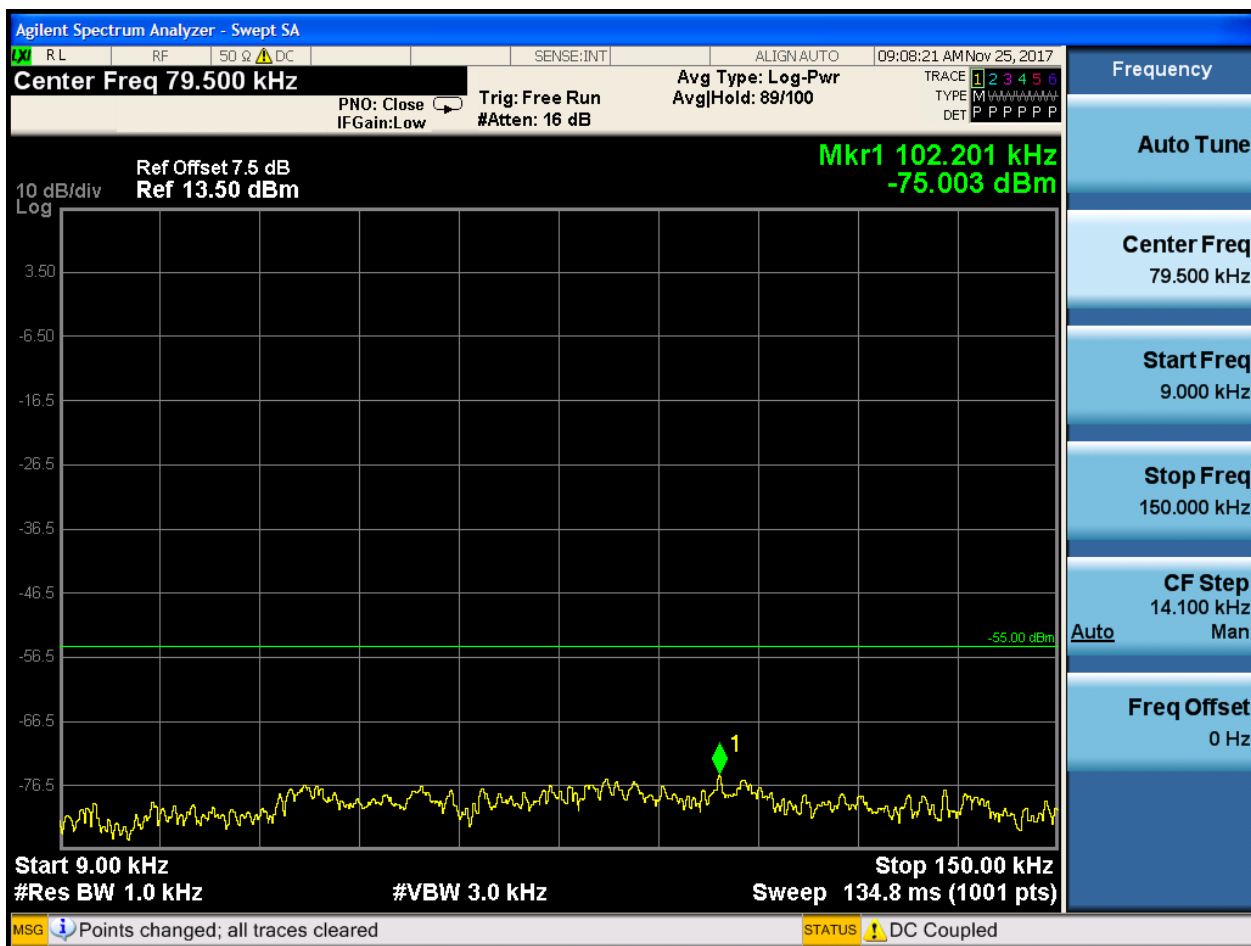




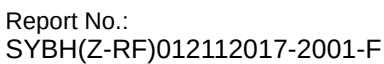


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



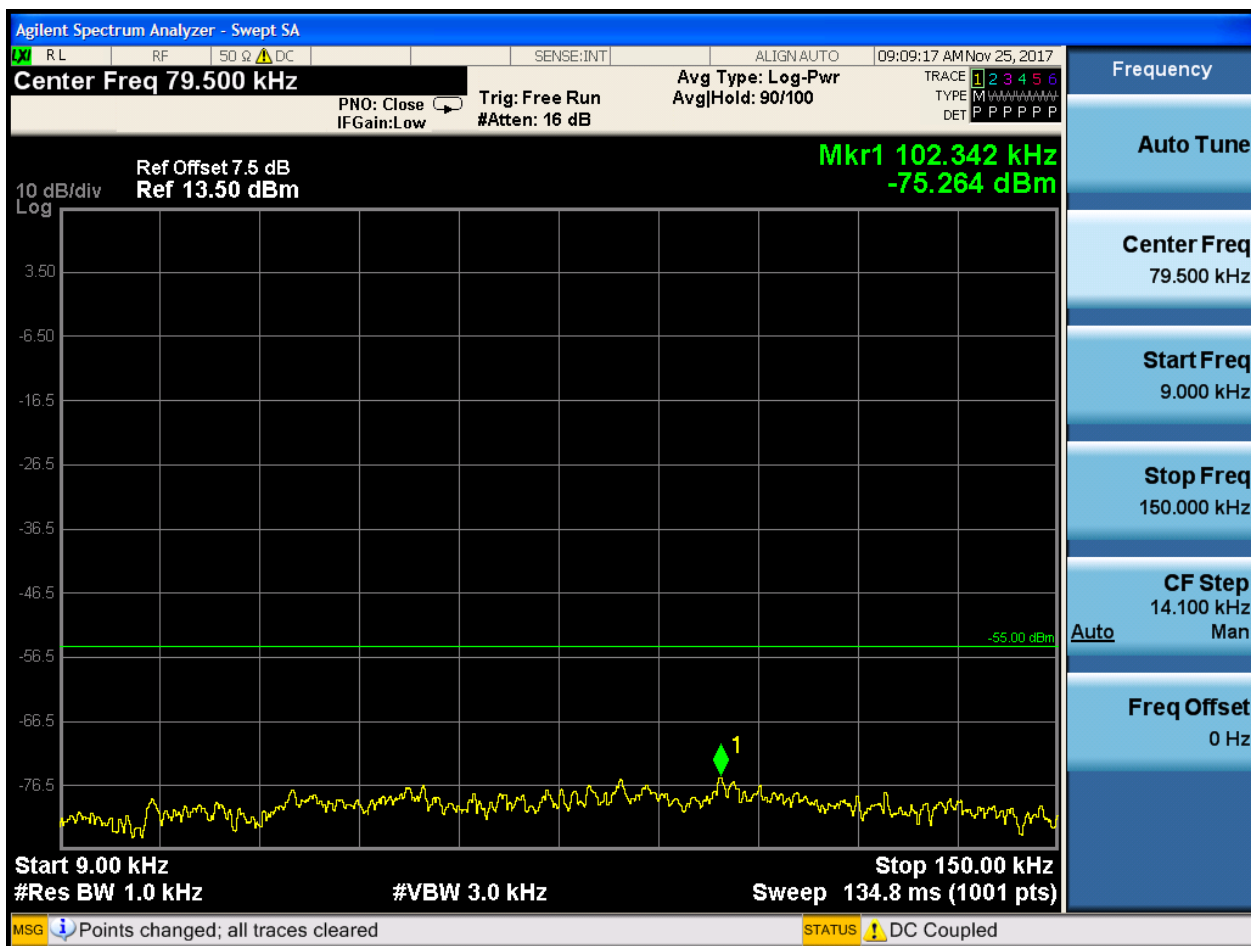


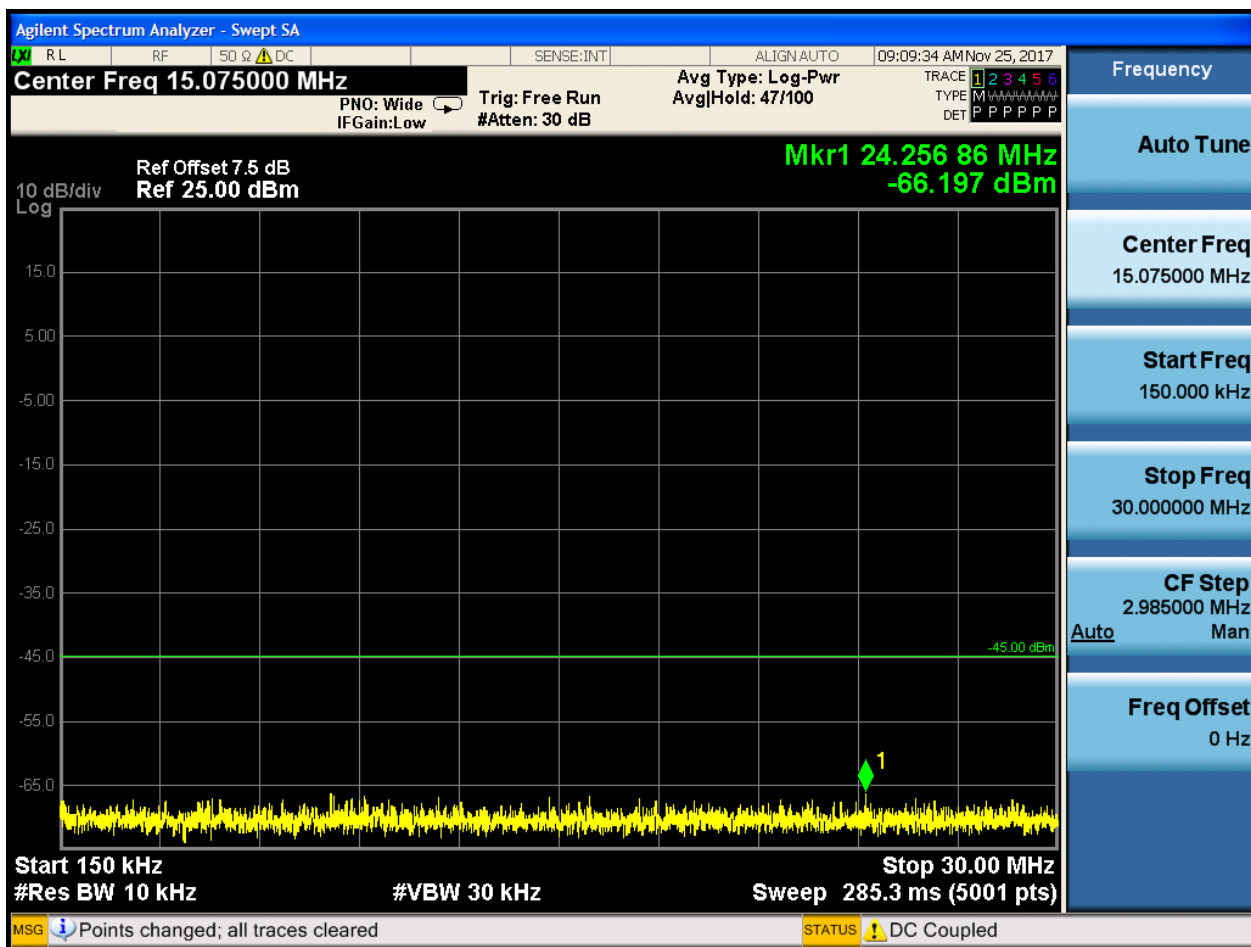


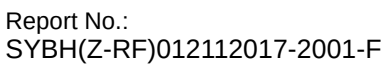


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0



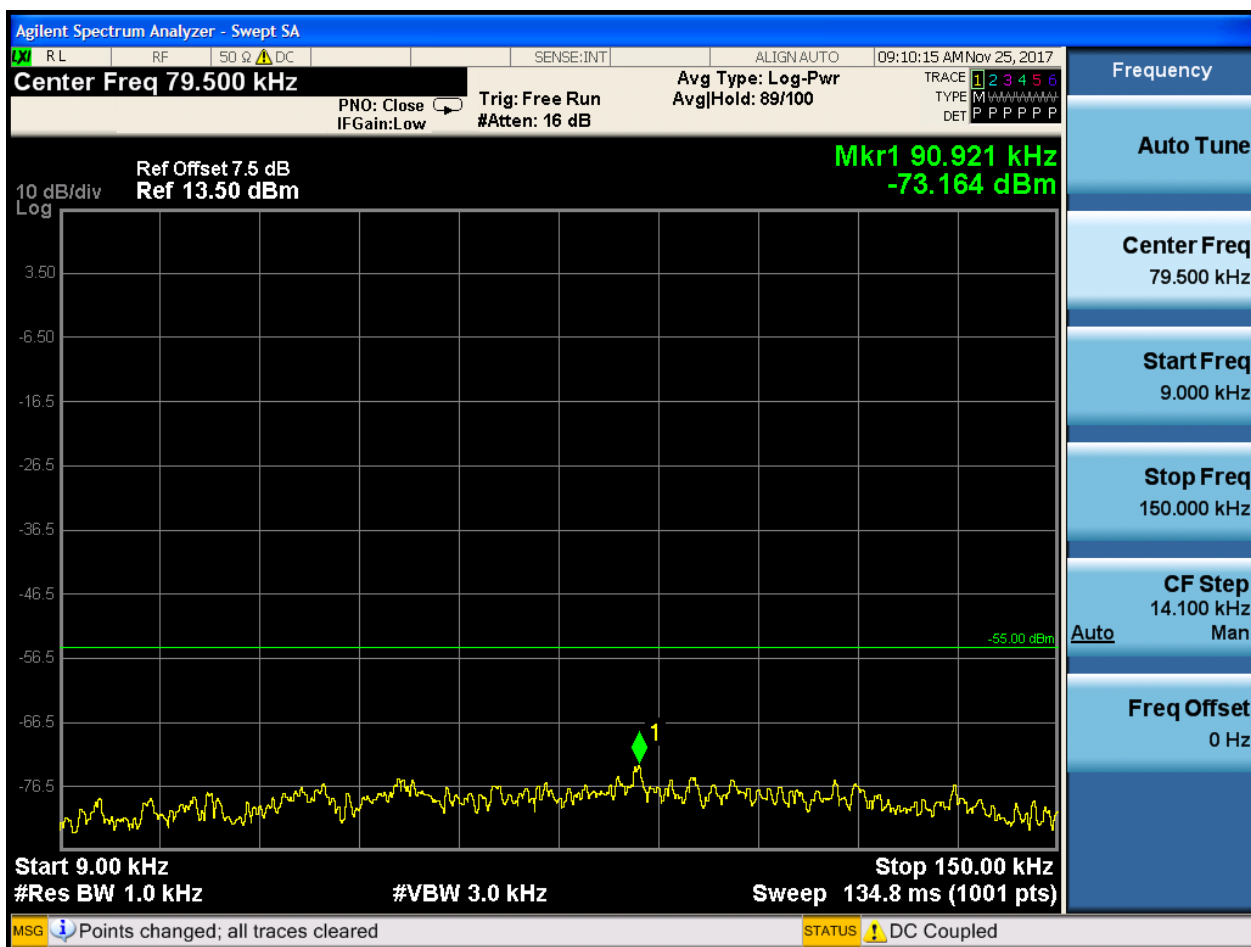


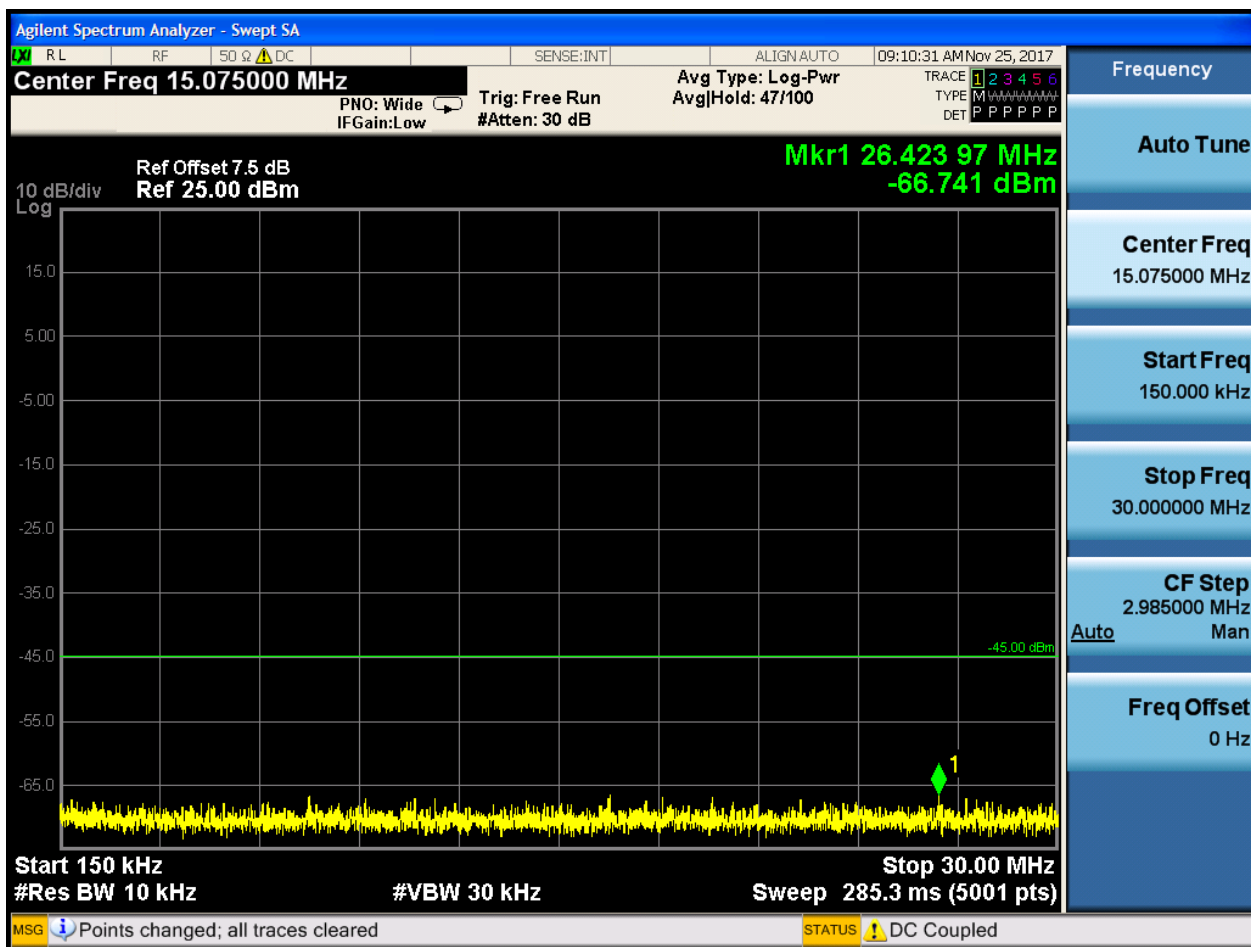


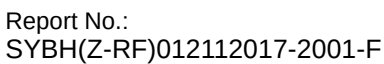
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



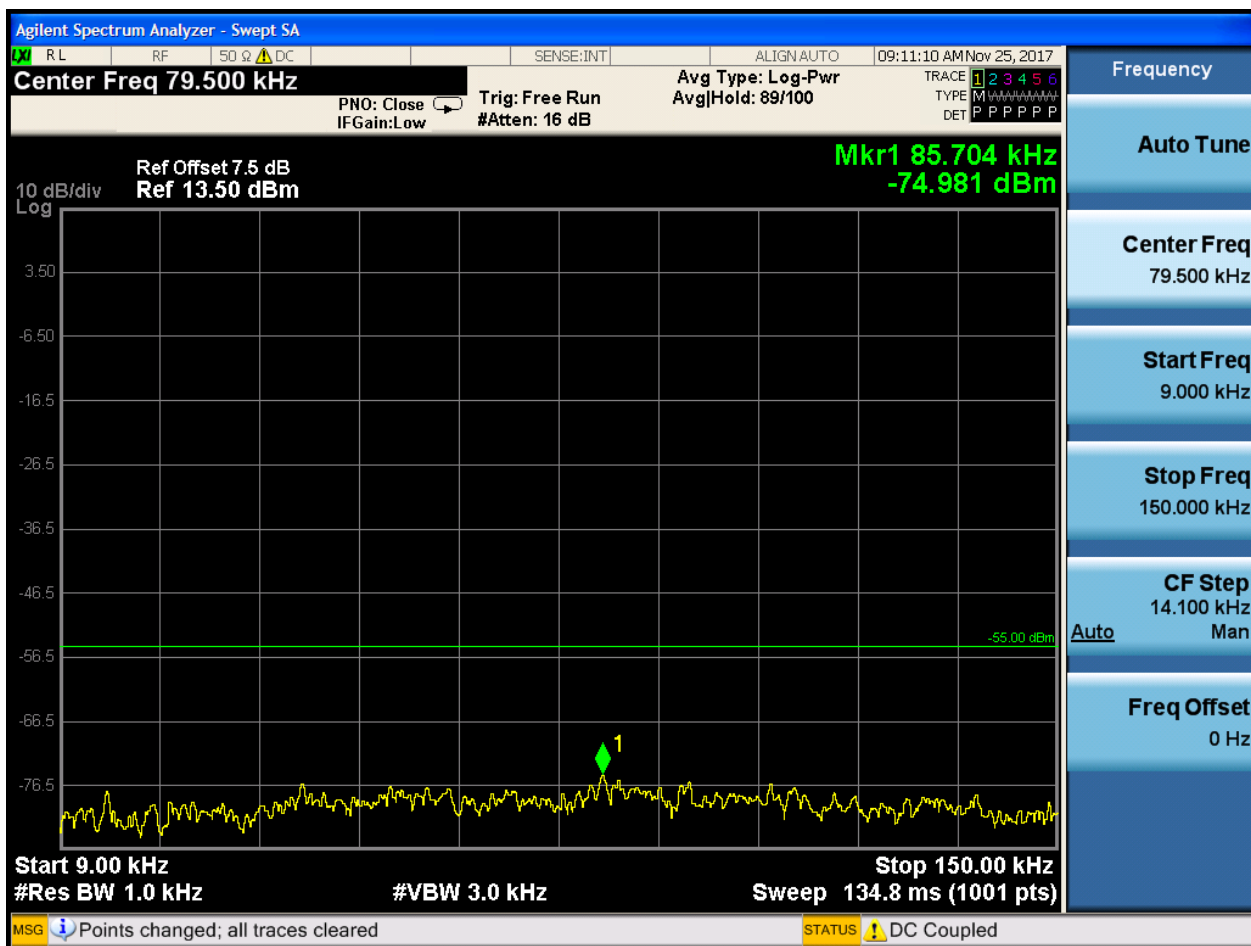


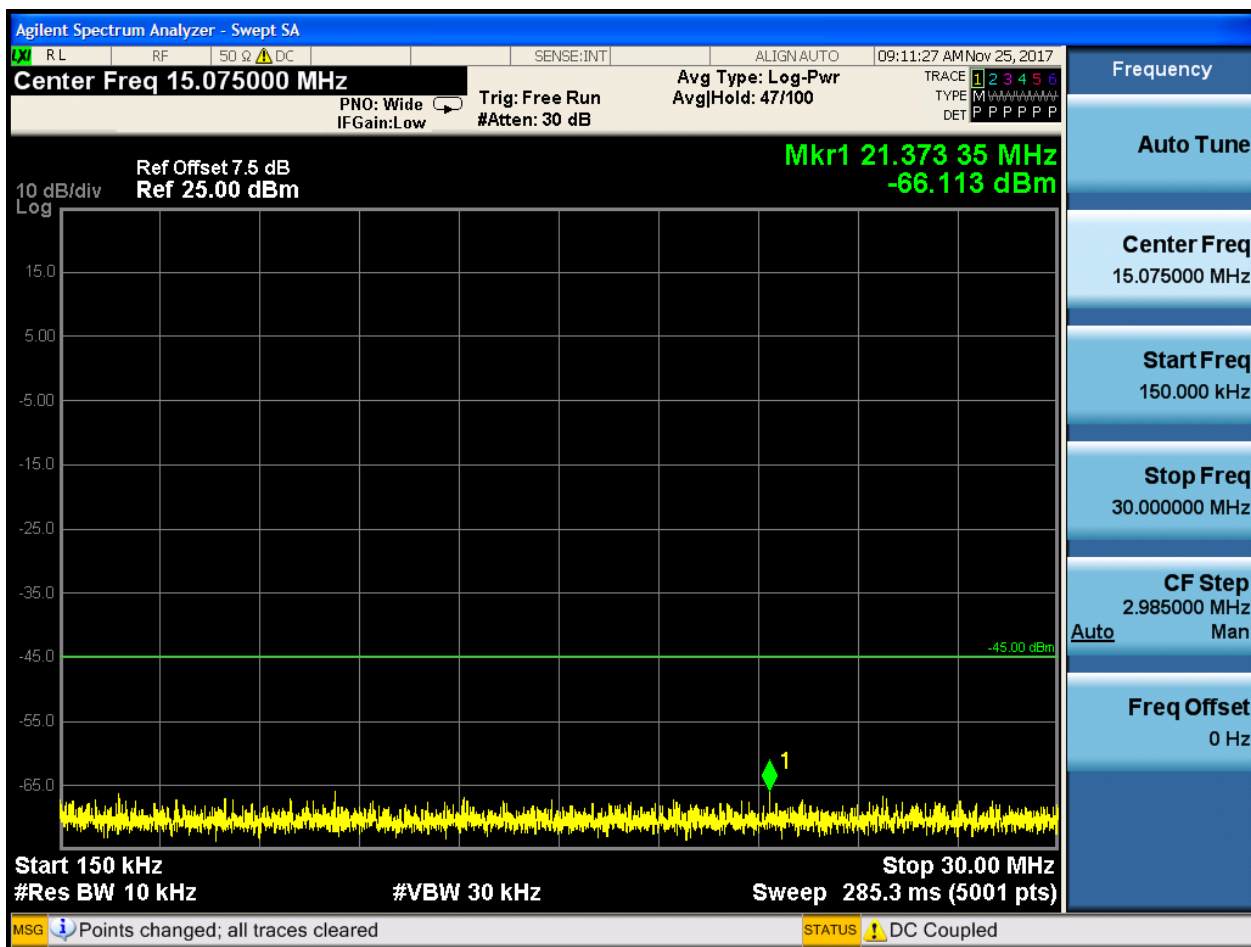




6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



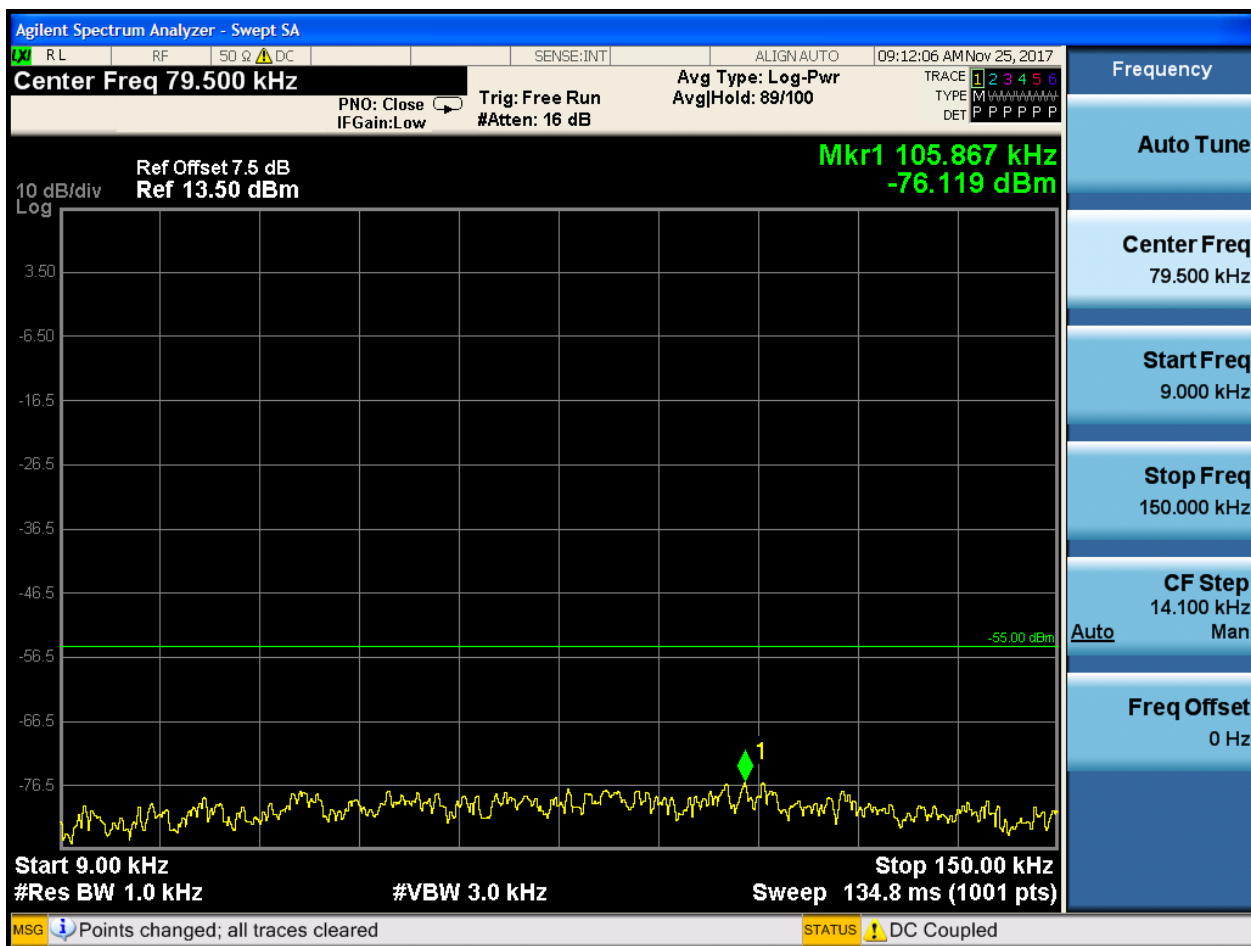


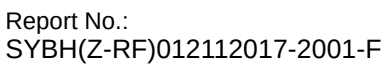


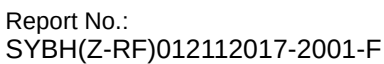


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0



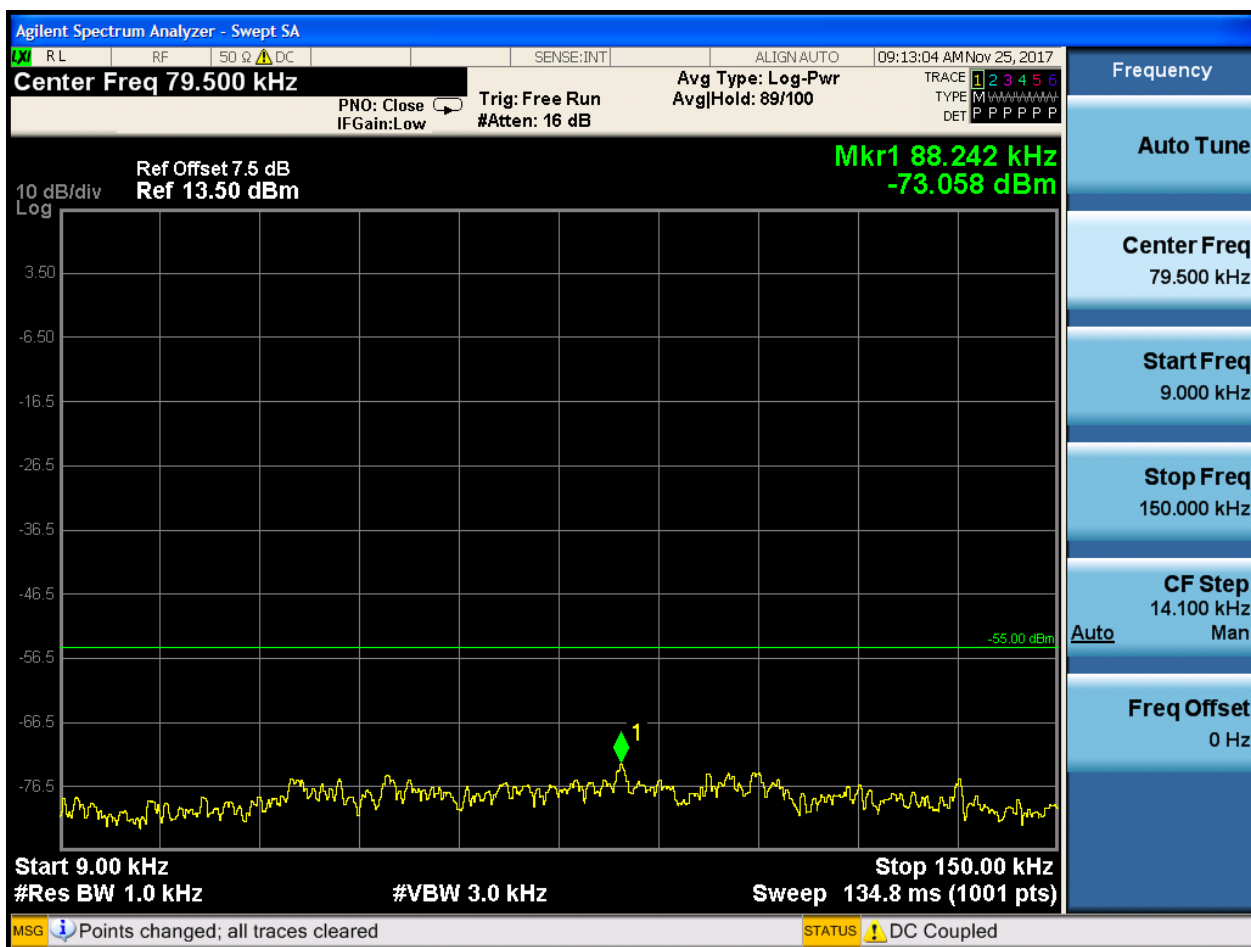


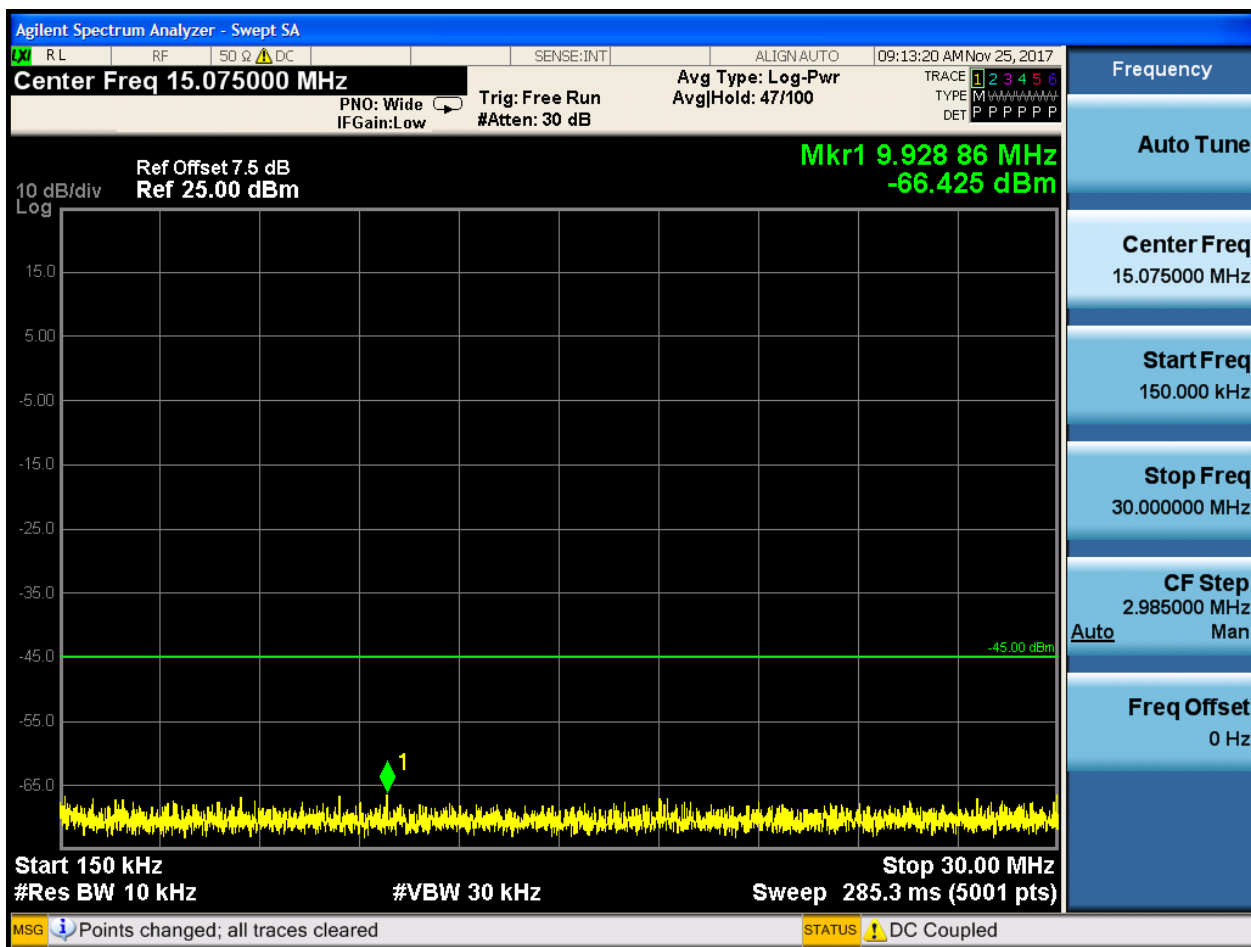


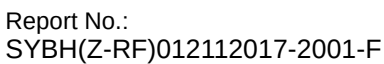
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



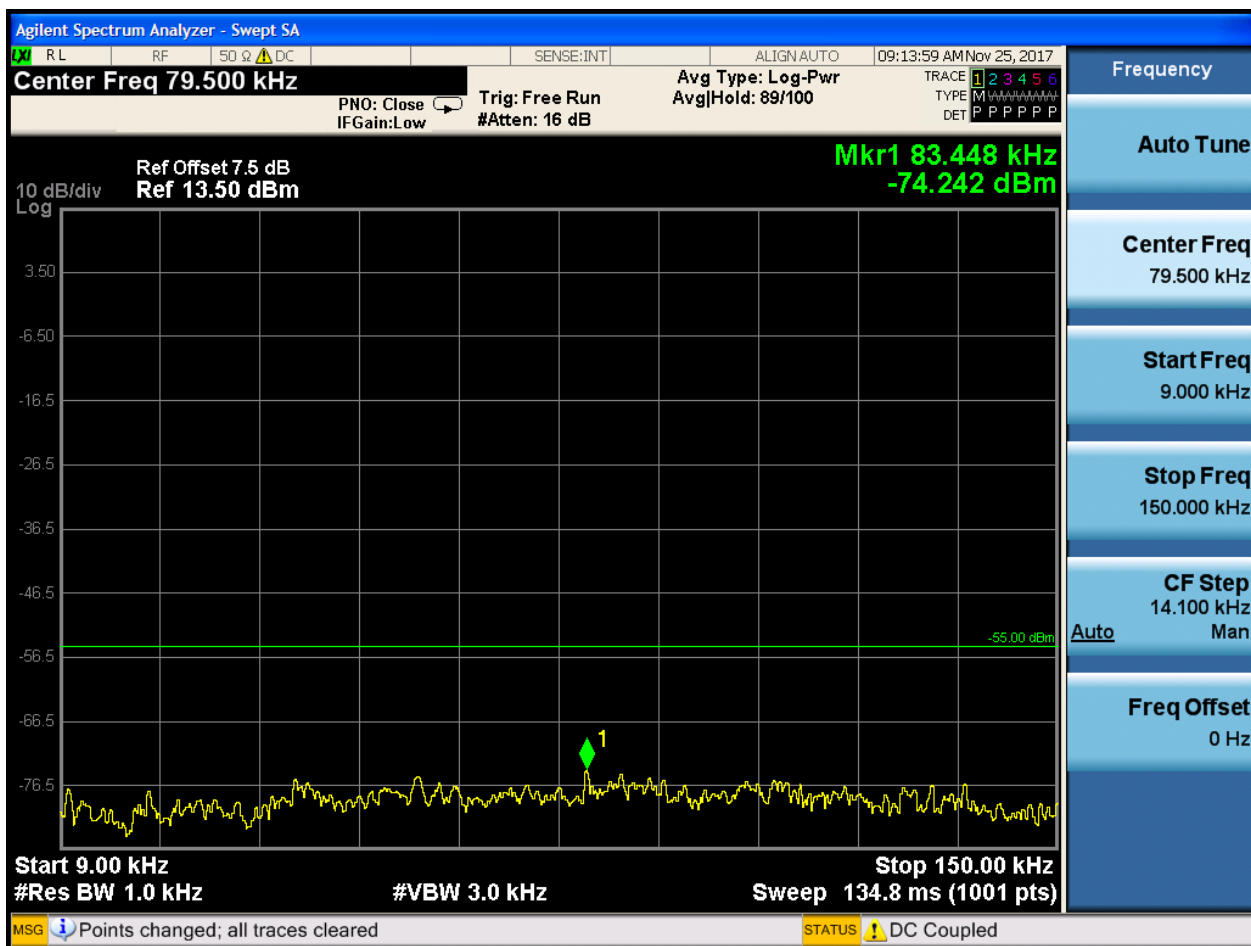


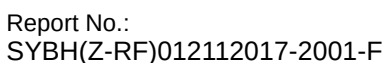


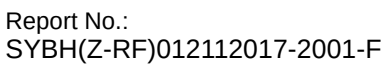


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0

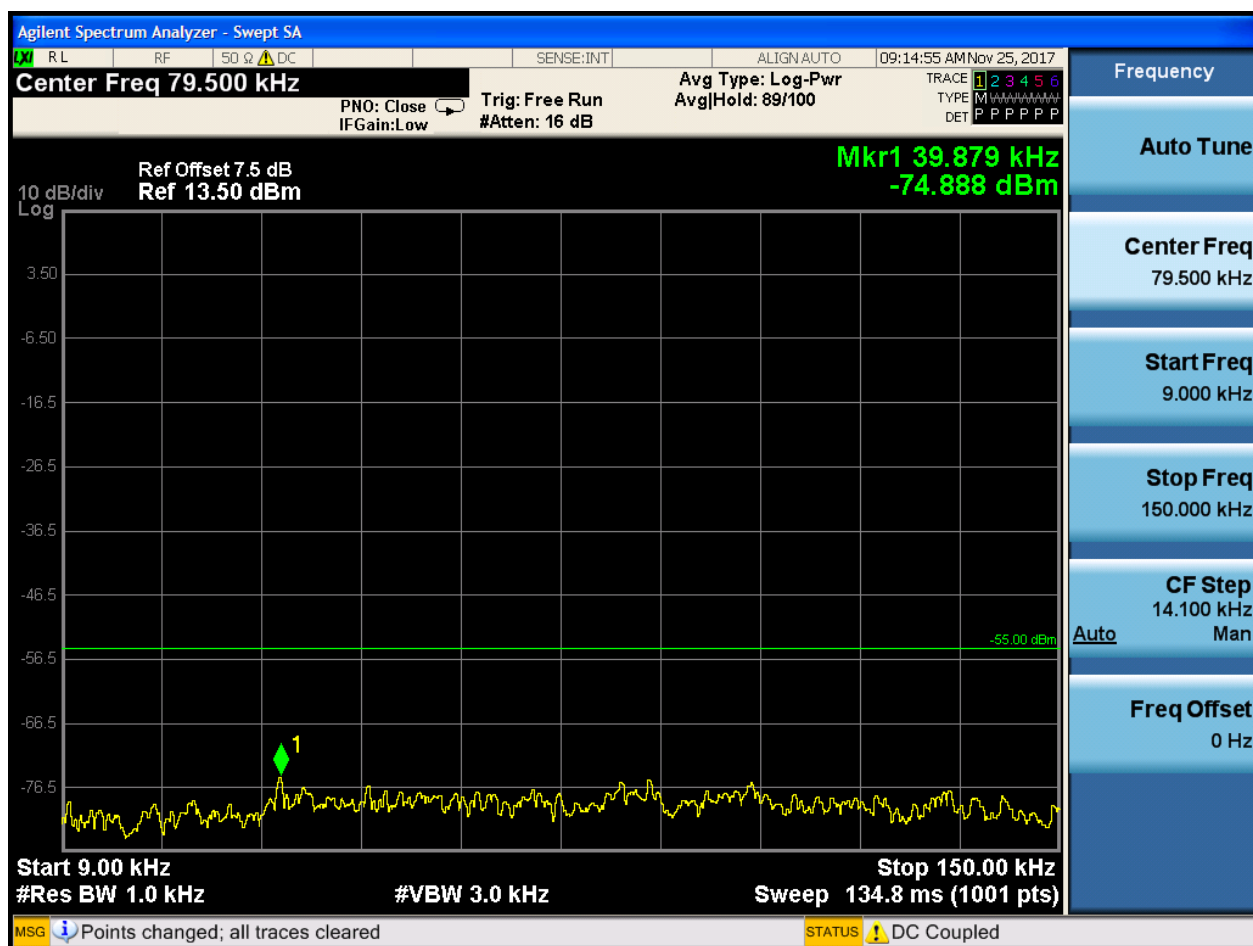


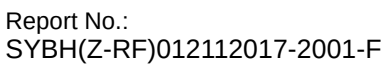






6.1.1.1.4.3.1 Test RB = RB1#0







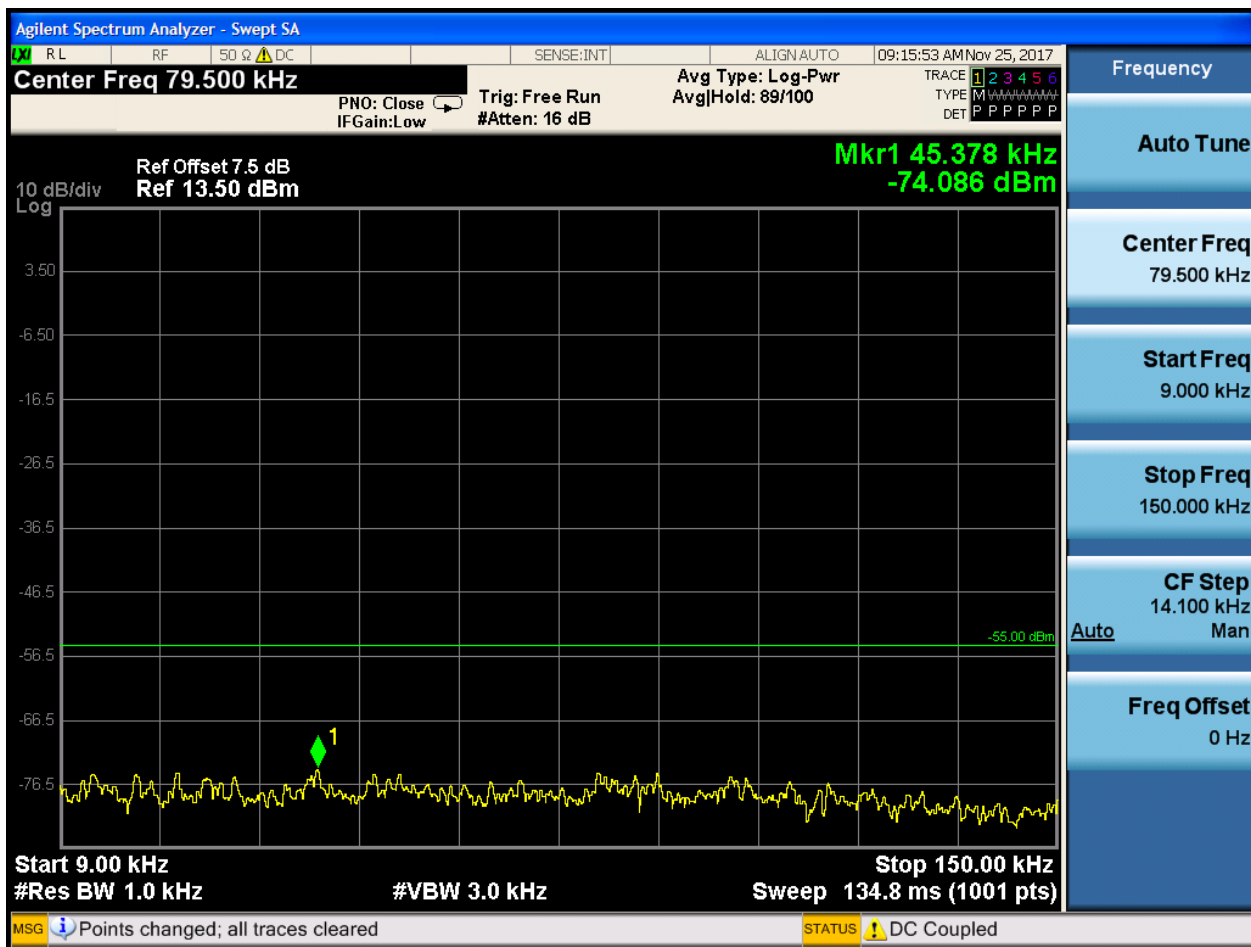


6.1.1.2 Test Mode = LTE/TM2

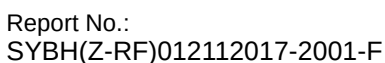
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0

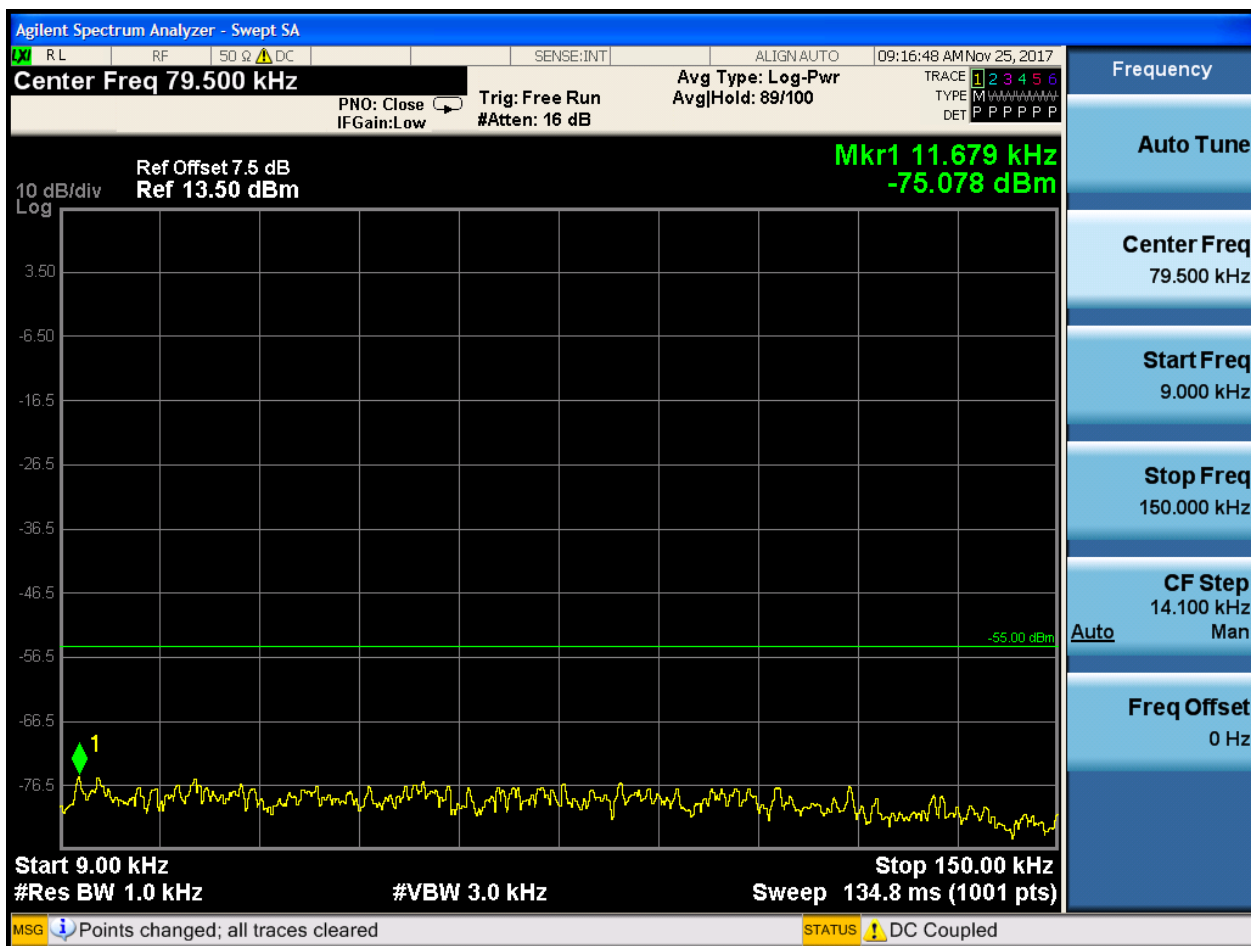


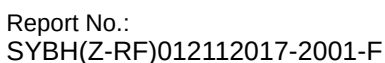


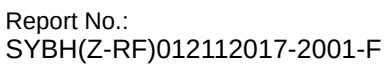


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0

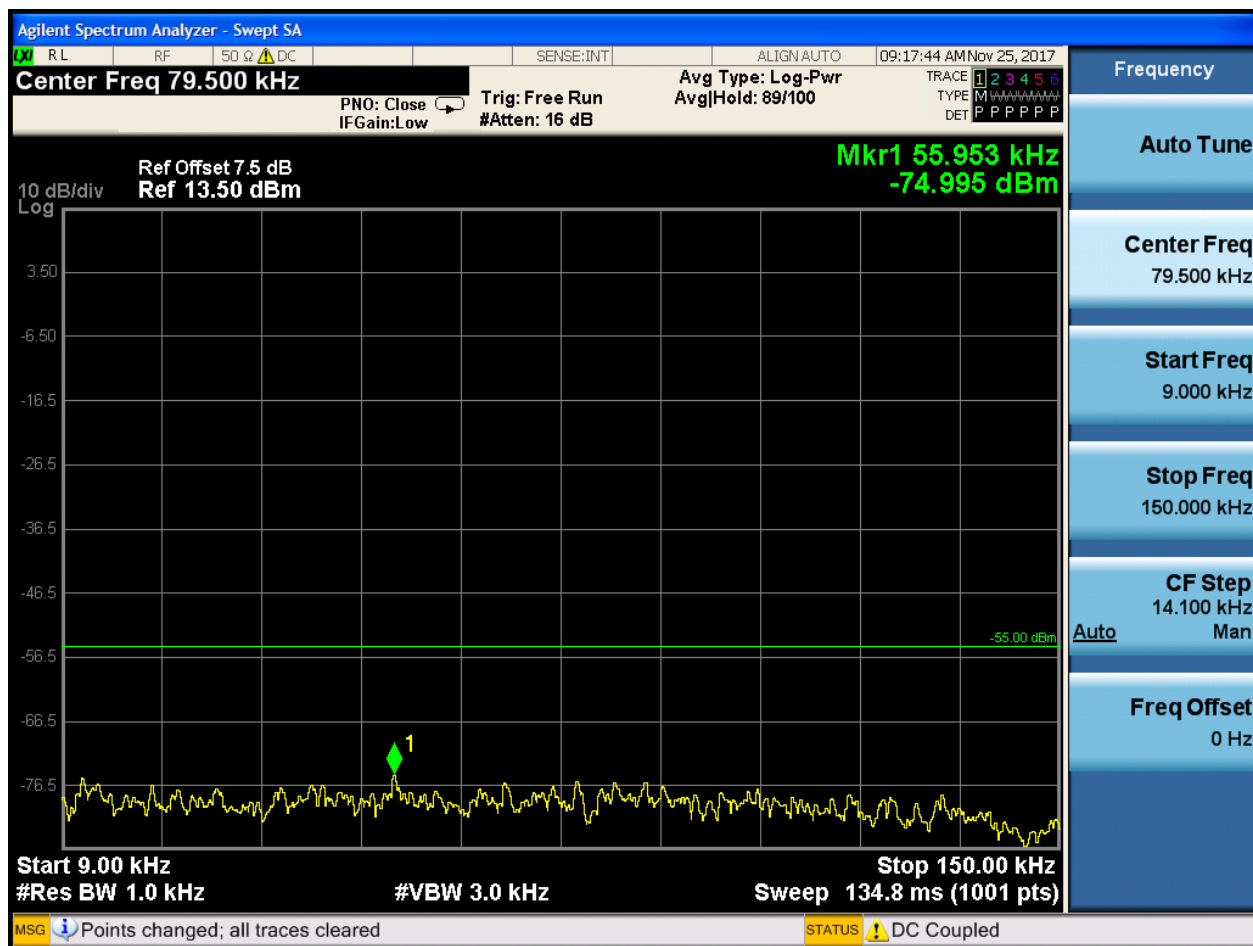


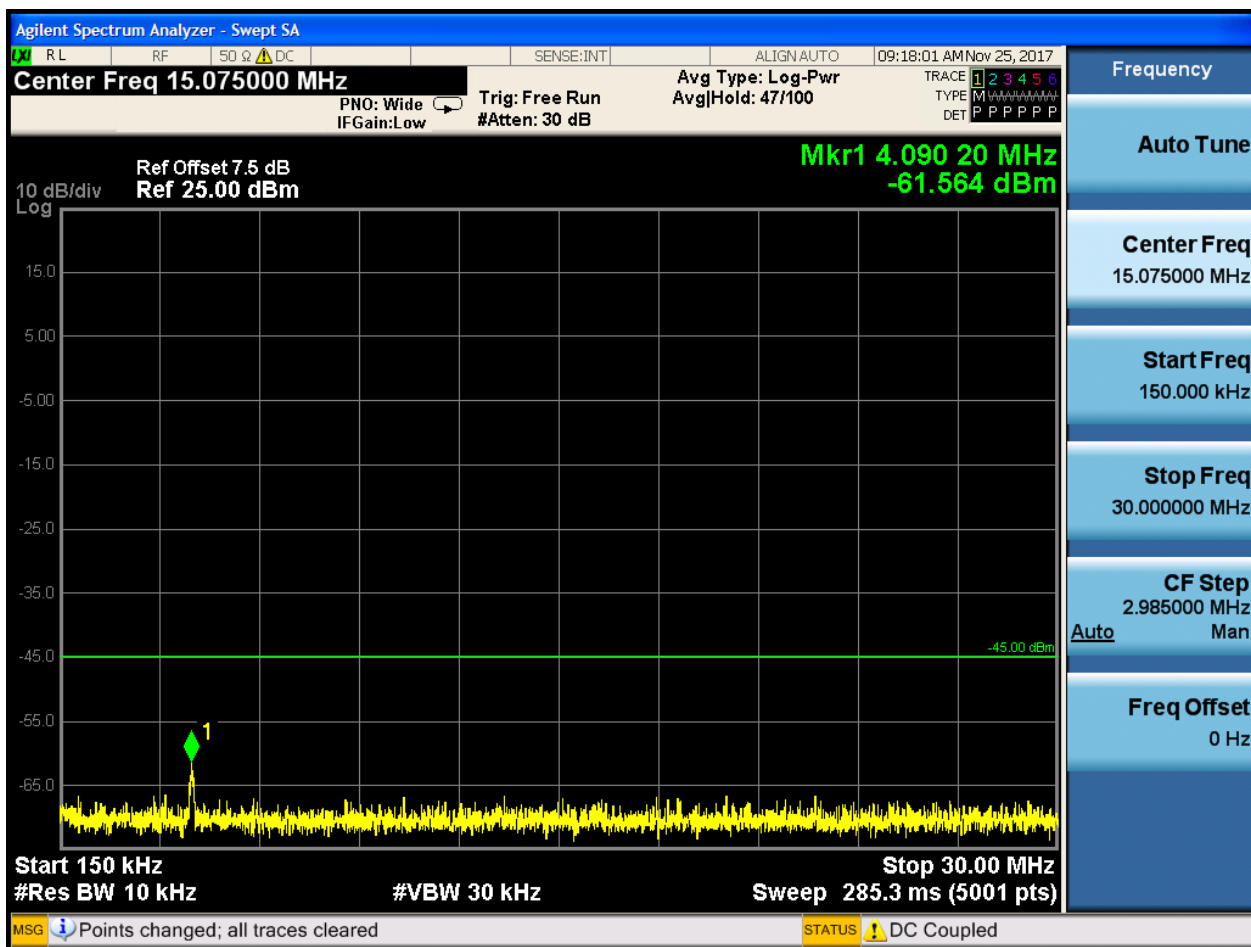


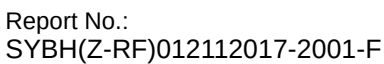


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0



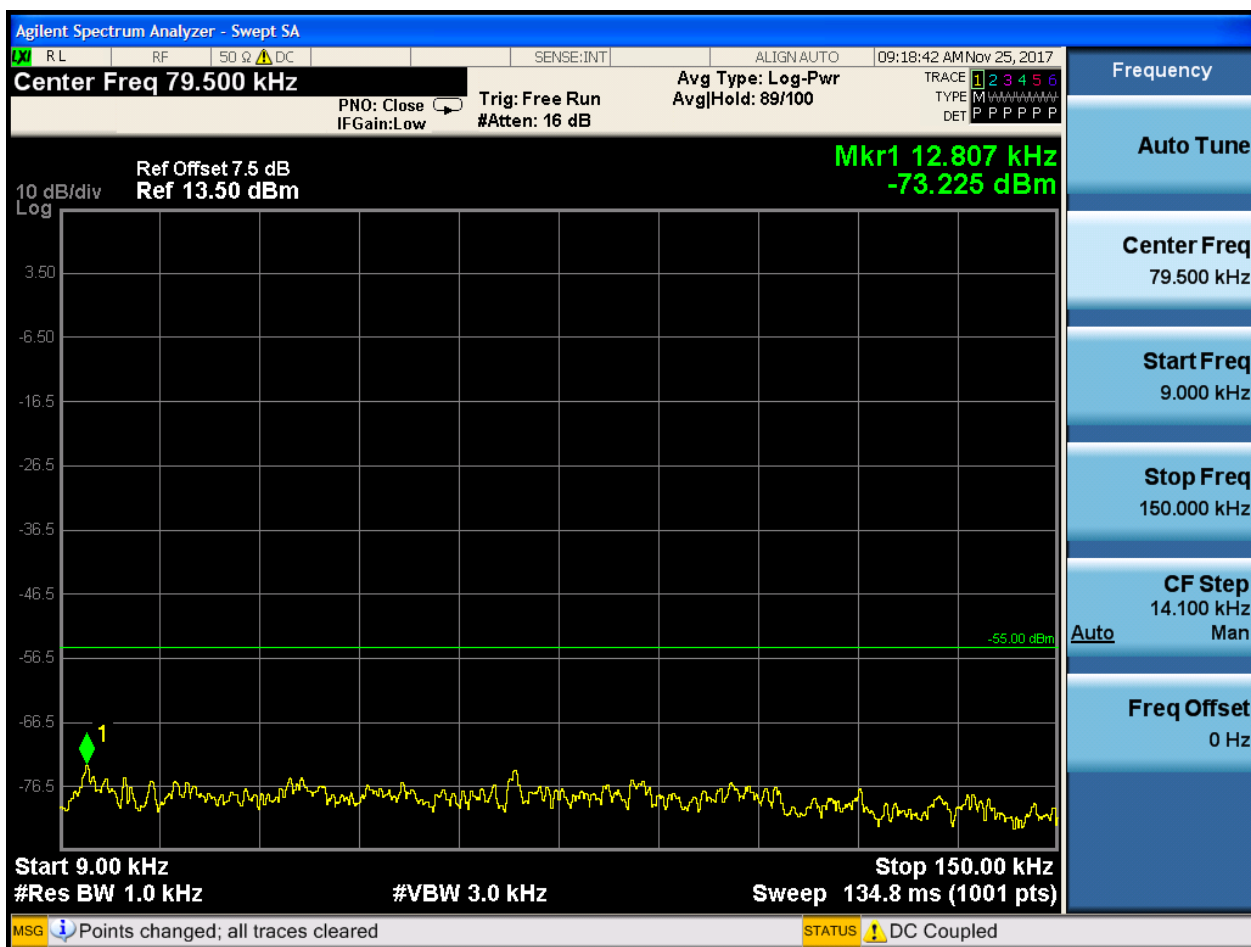


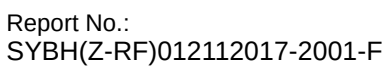


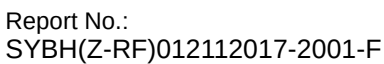
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

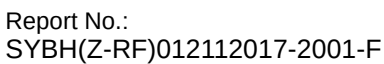
6.1.1.2.2.1.1 Test RB = RB1#0

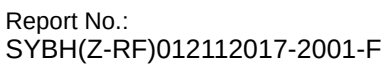




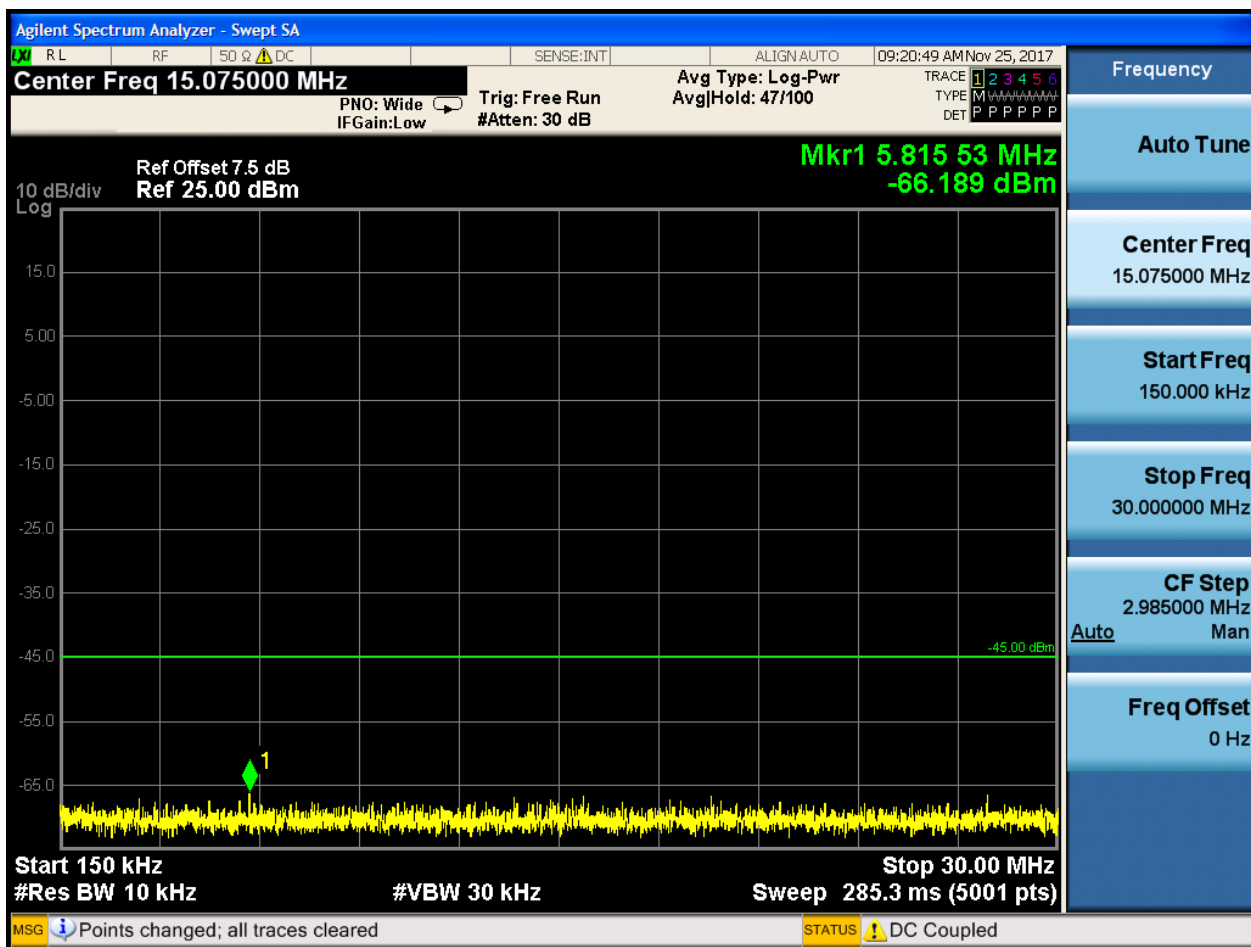


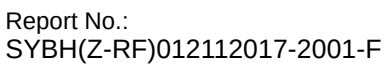










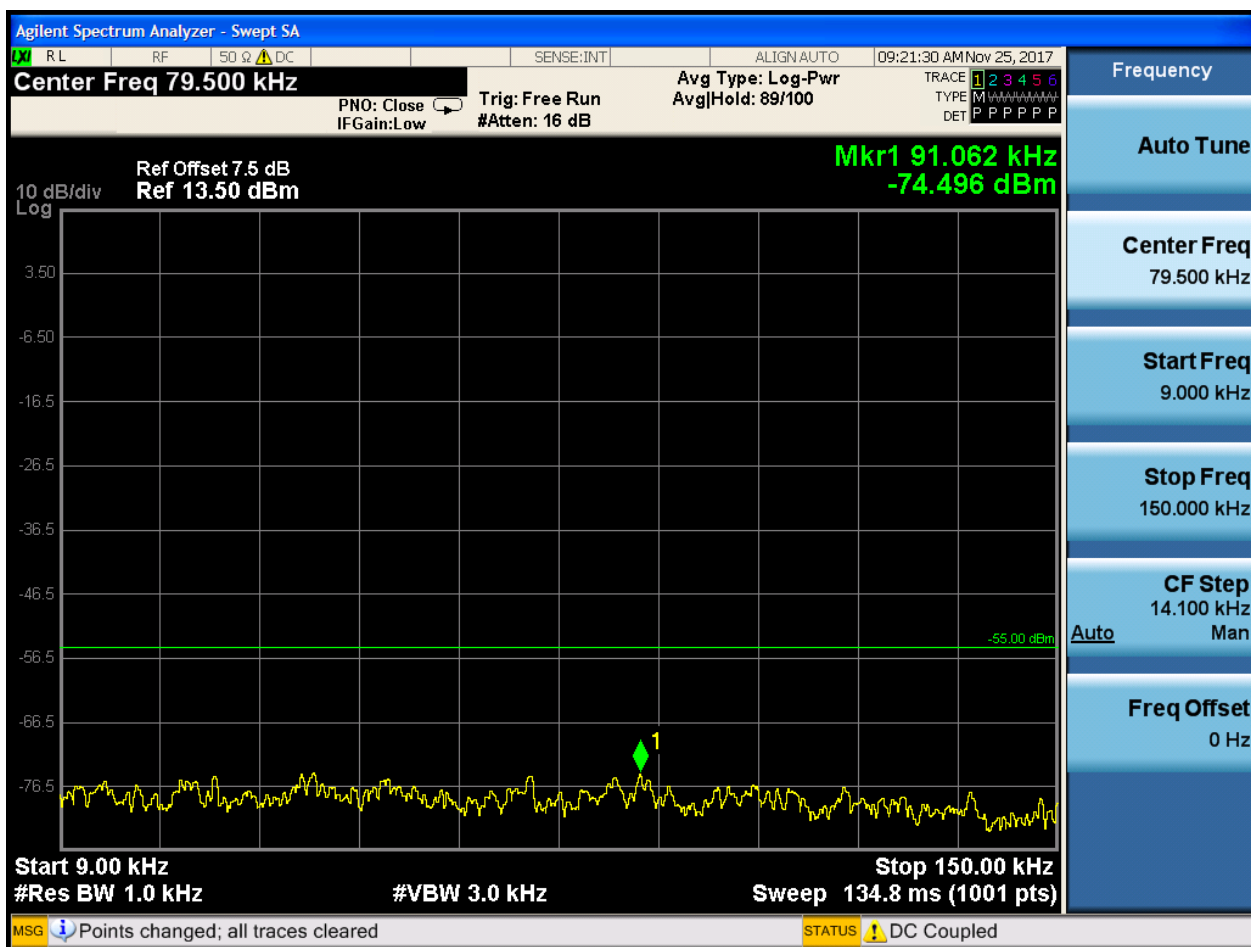


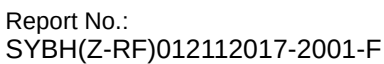


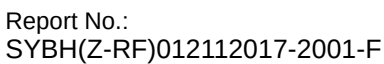
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

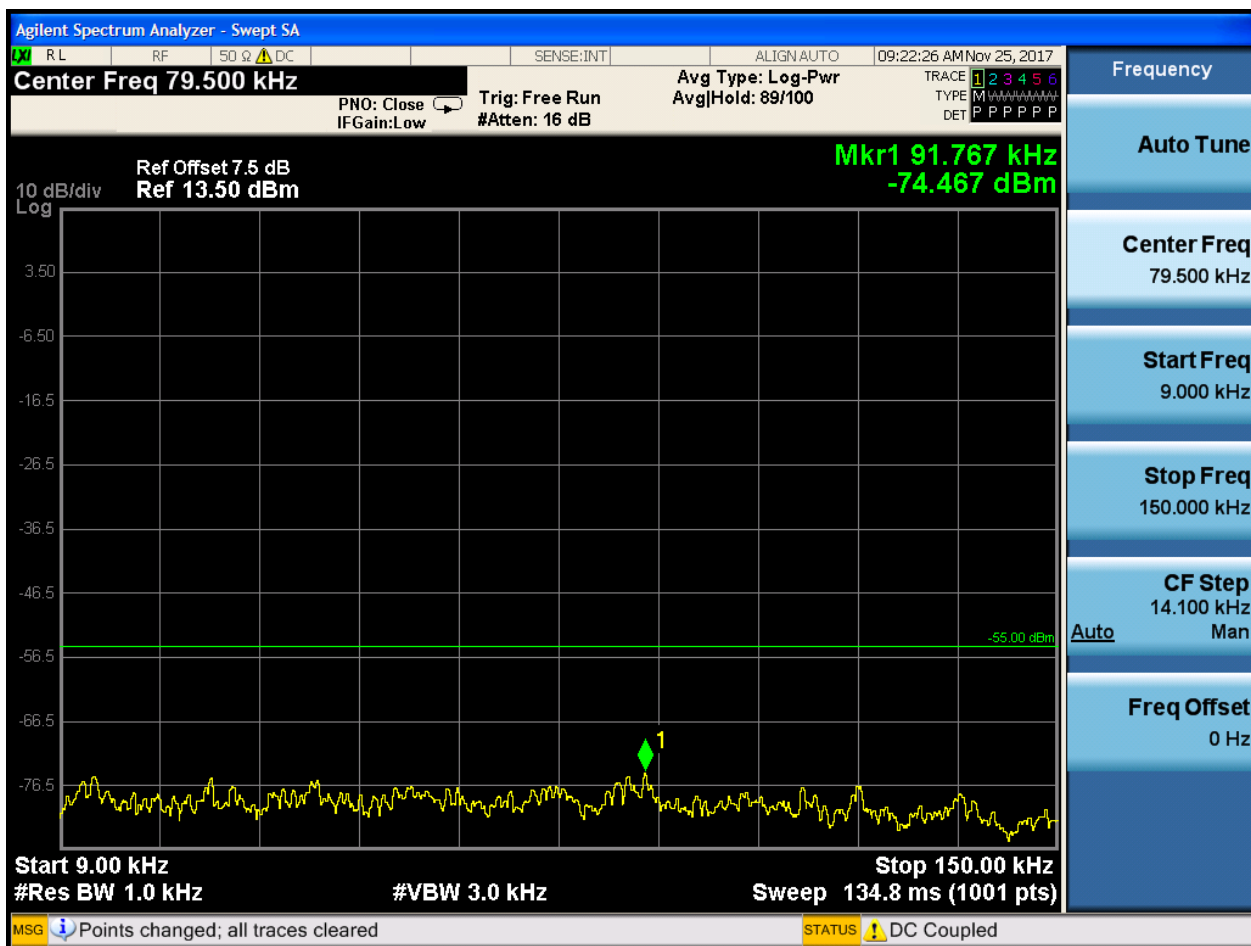


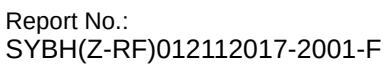


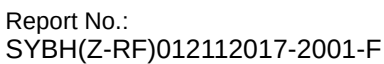


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0

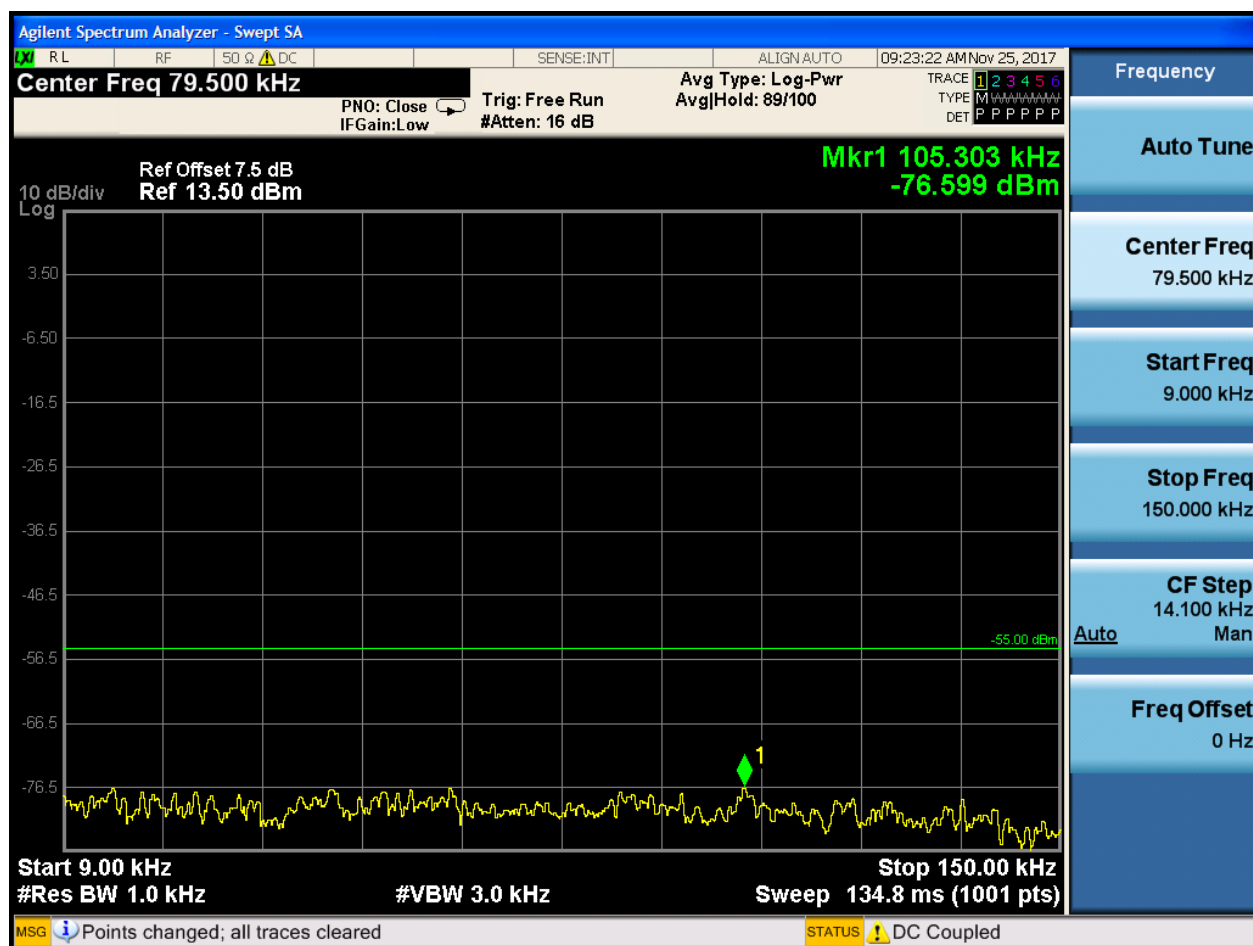


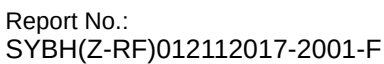


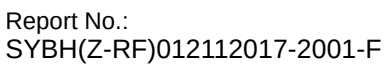


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0



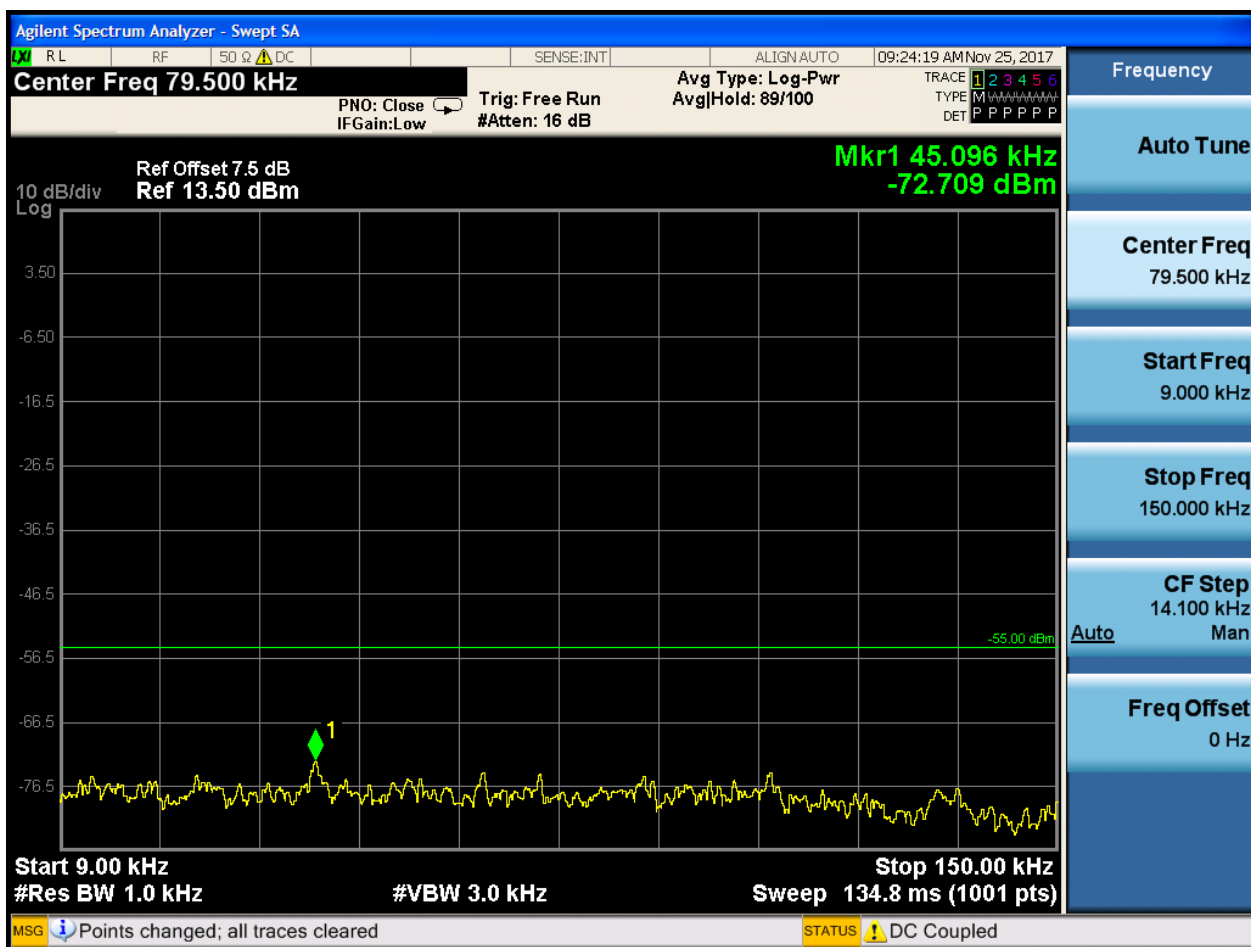


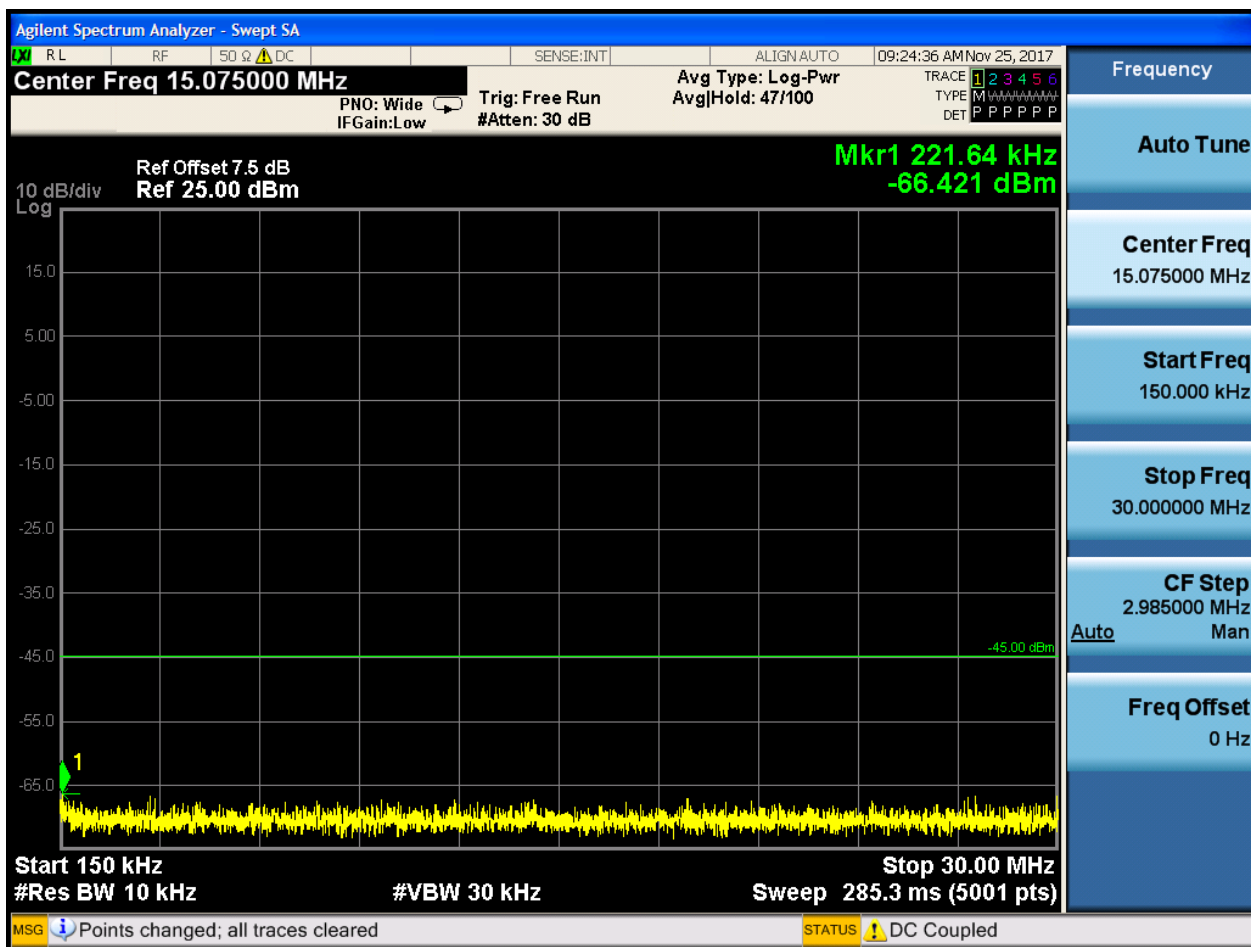


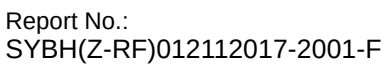
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

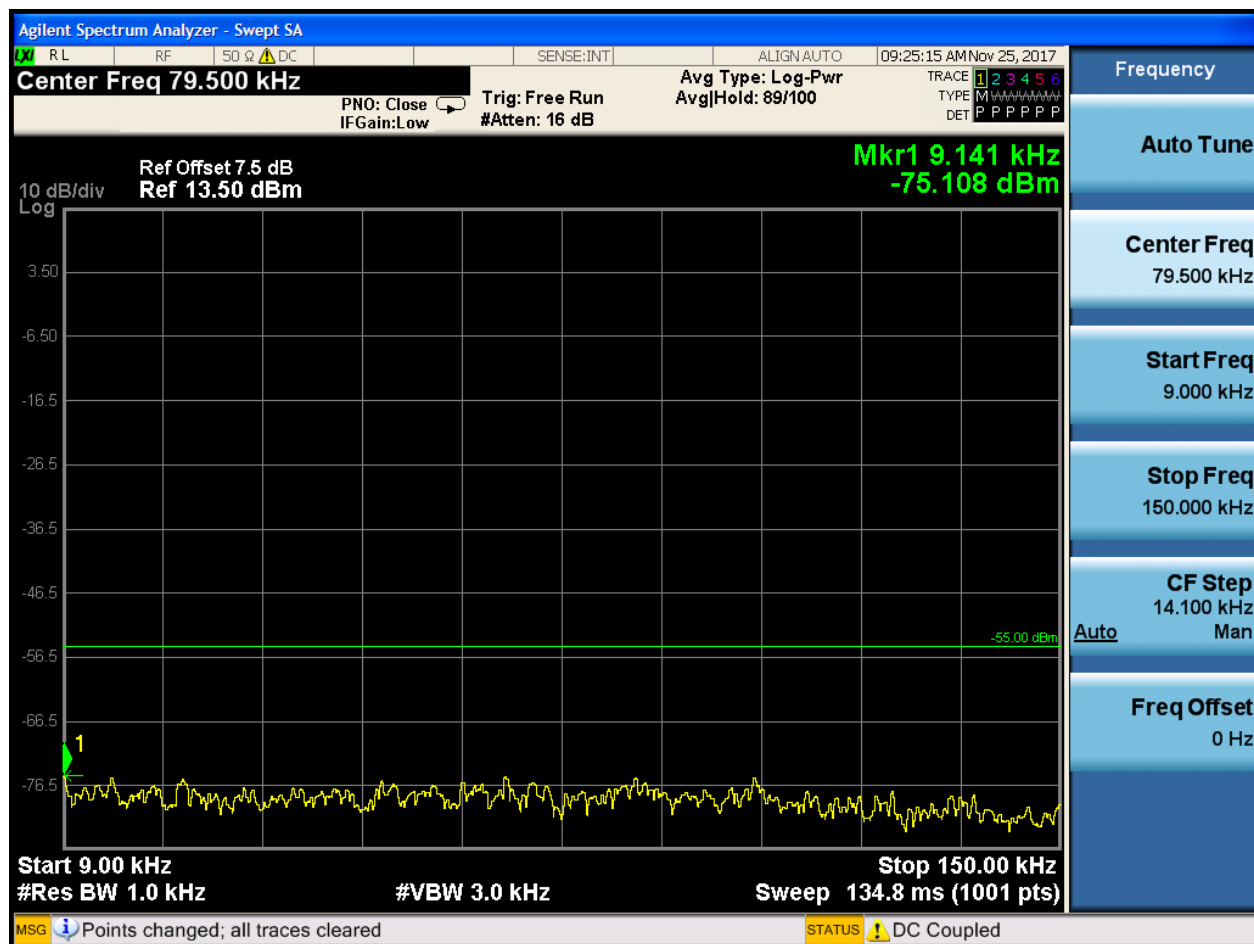


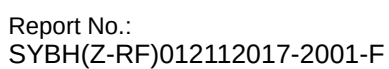


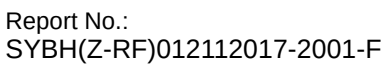




6.1.1.2.4.2.1 Test RB = RB1#0

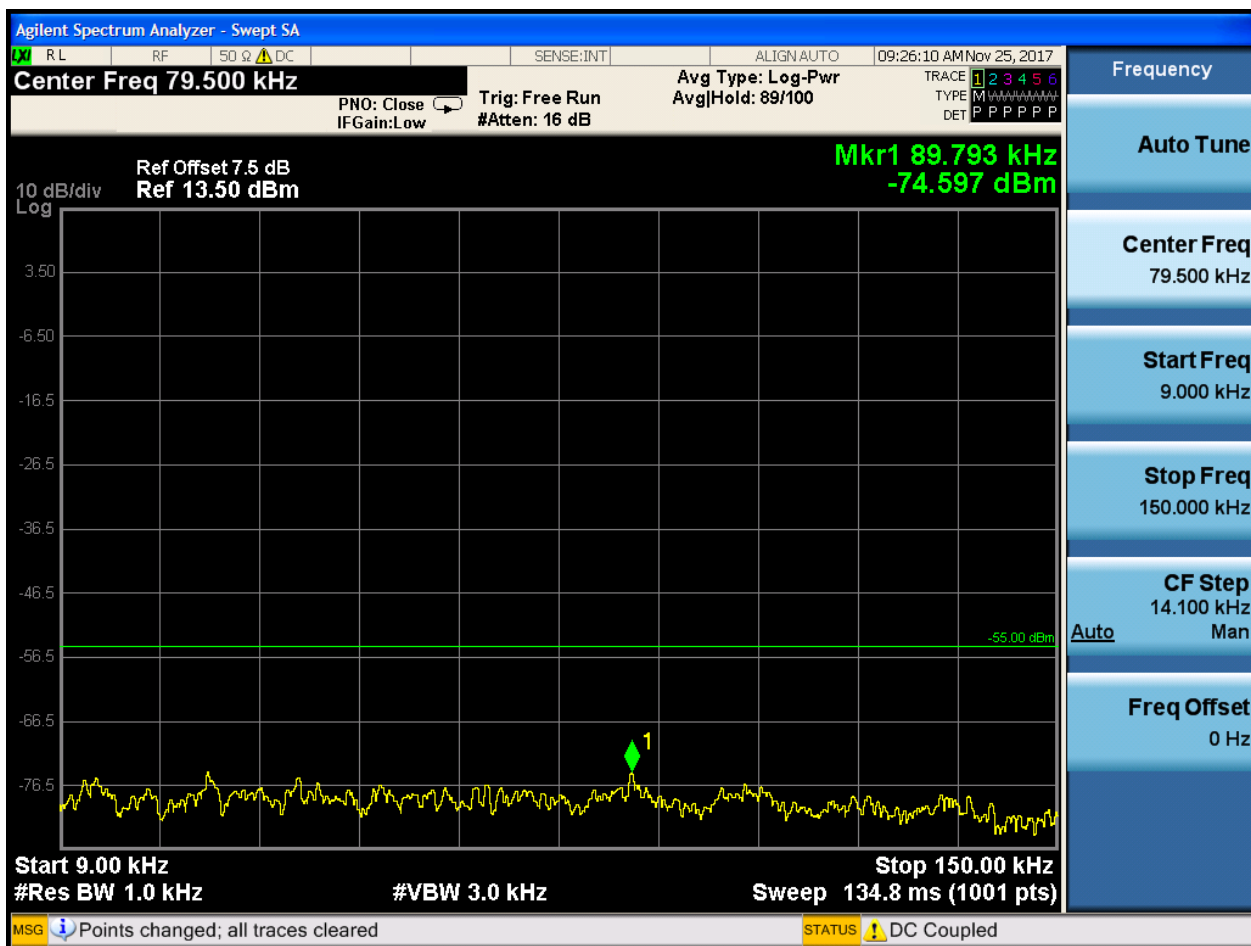


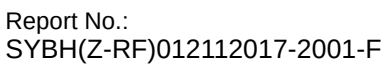


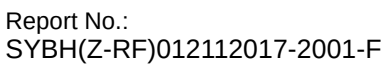


6.1.1.2.4.3 Test Channel = HCH

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, RBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, RBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

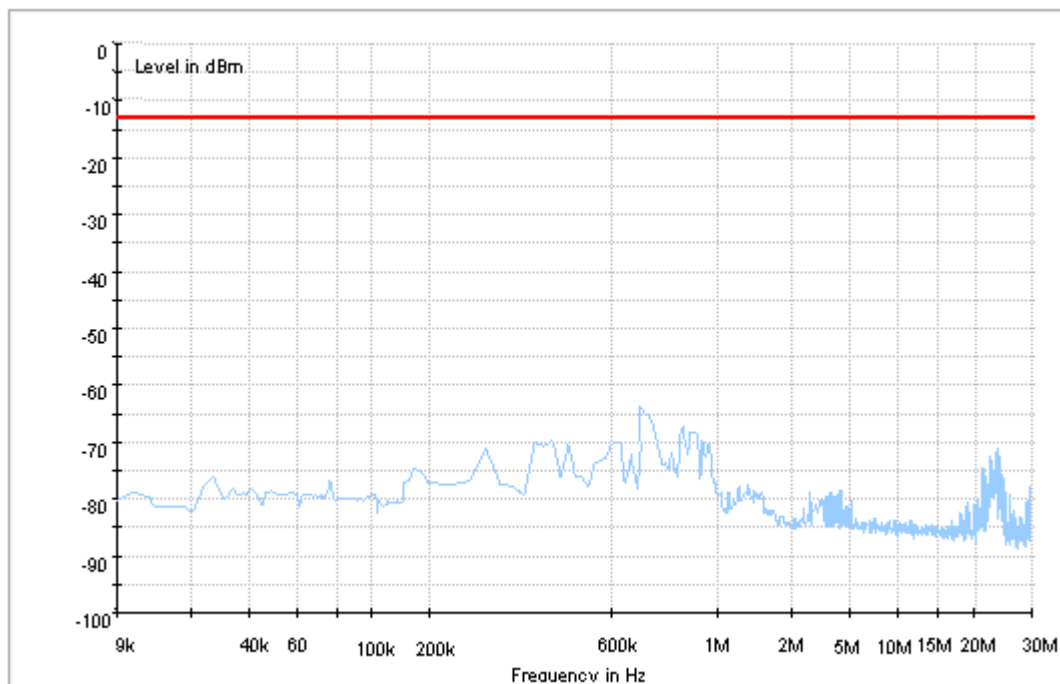
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

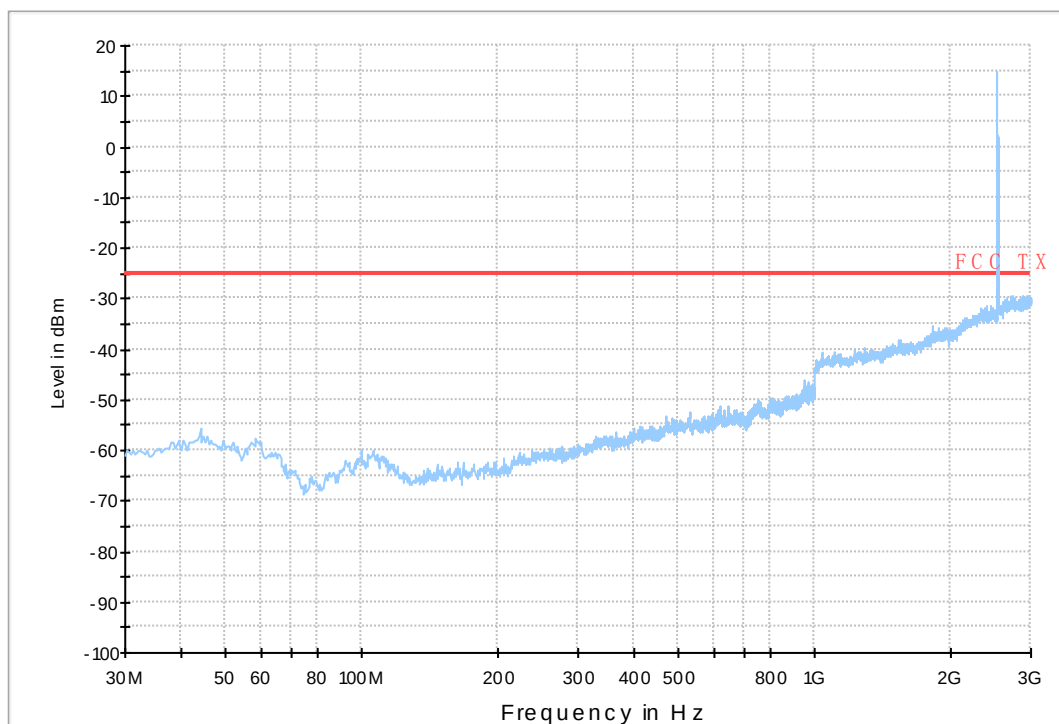
7.1 For LTE

7.1.1 Test Band = BAND7_ANT1

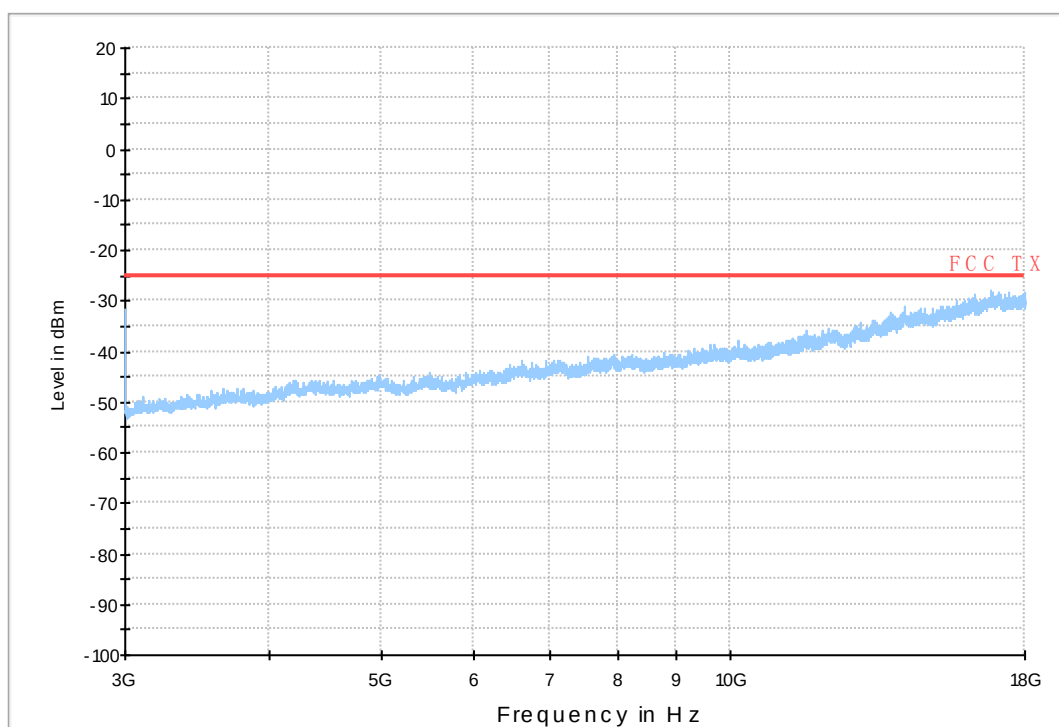
7.1.1.1 Test Bandwidth = 5

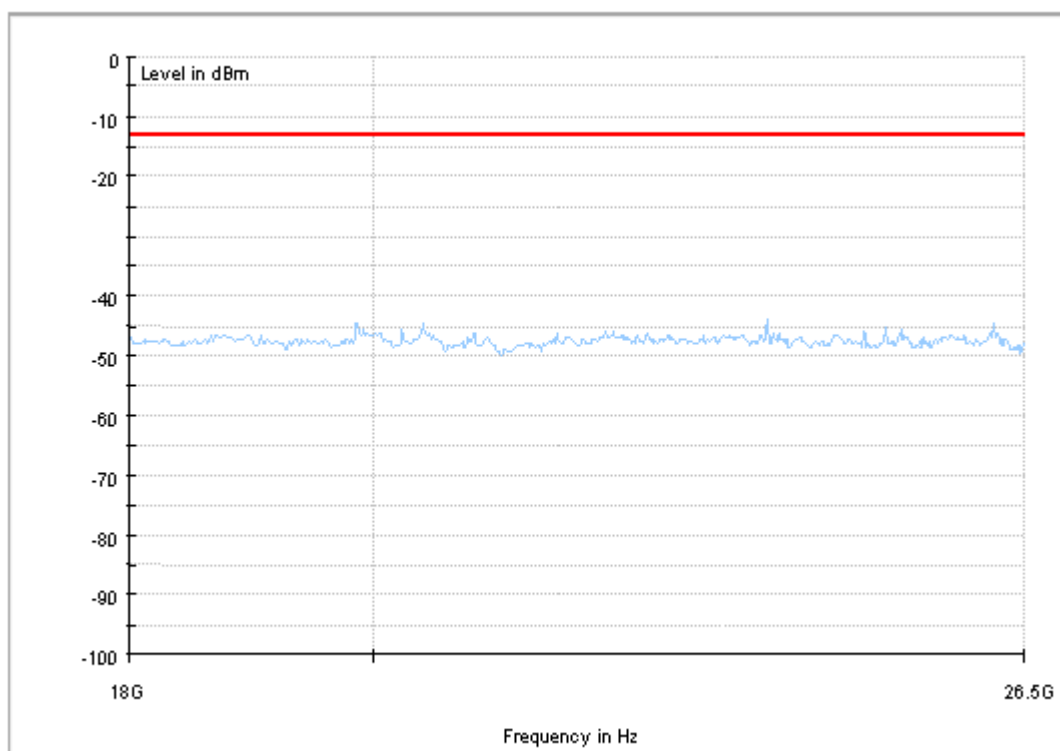


RSE-TX-DIRECTOR LTE 7 38 41_L

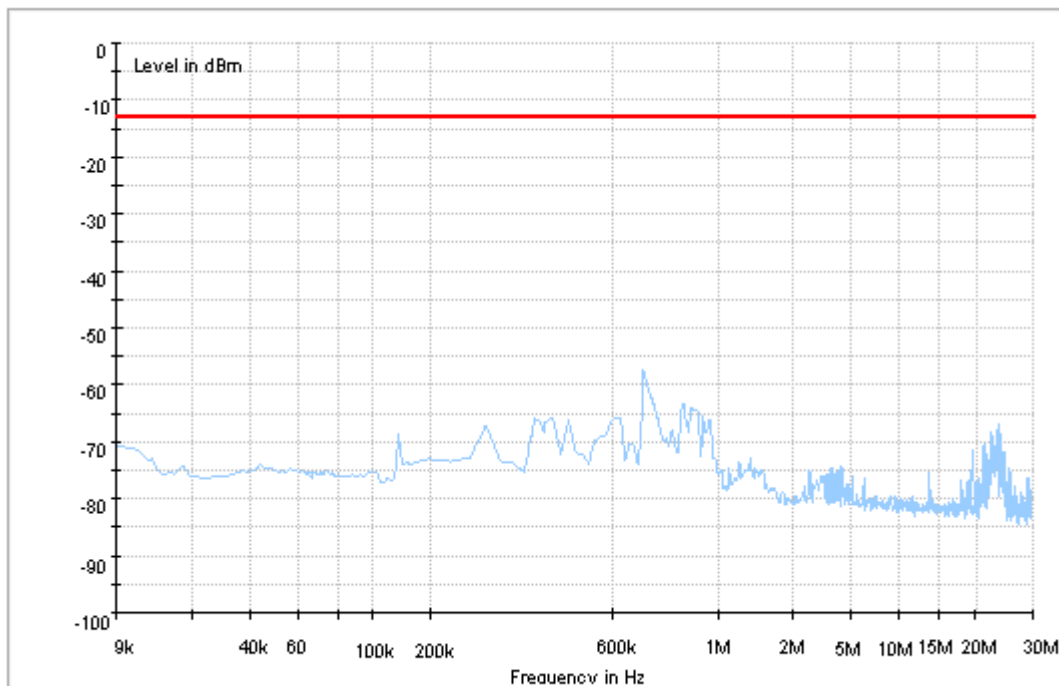


RSE-TX-DIRECTOR LTE7 38 41_H

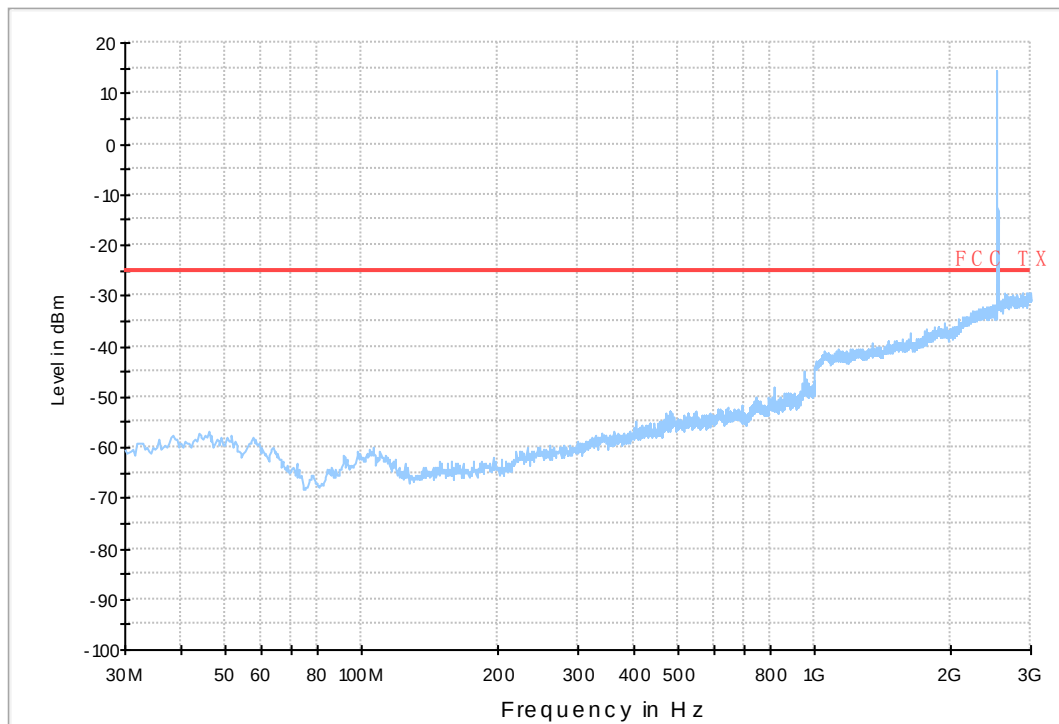




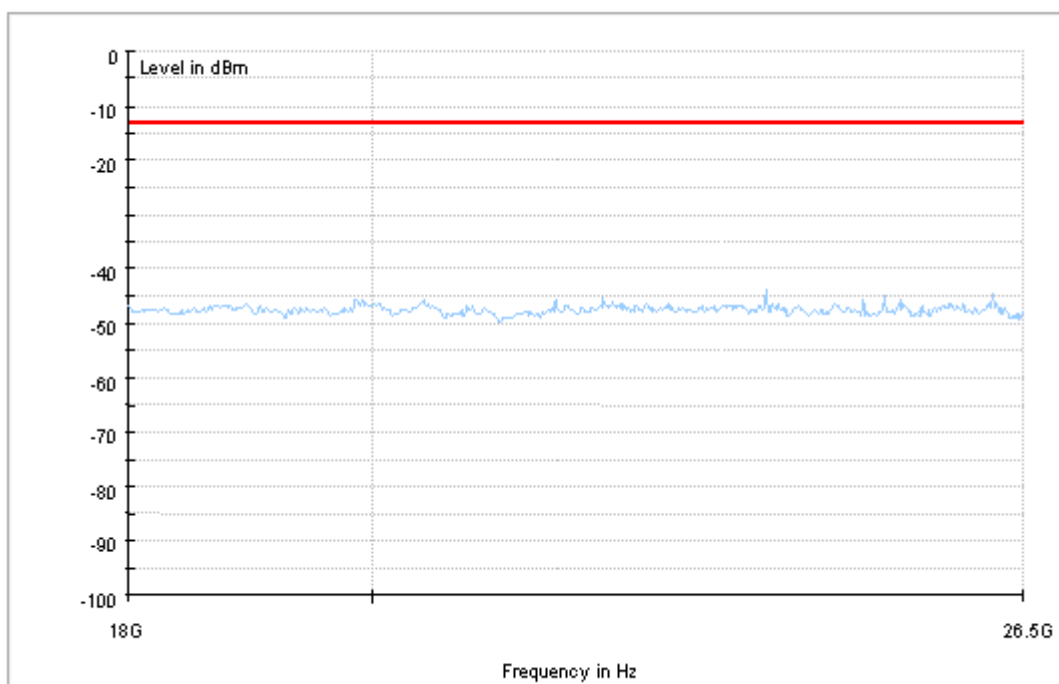
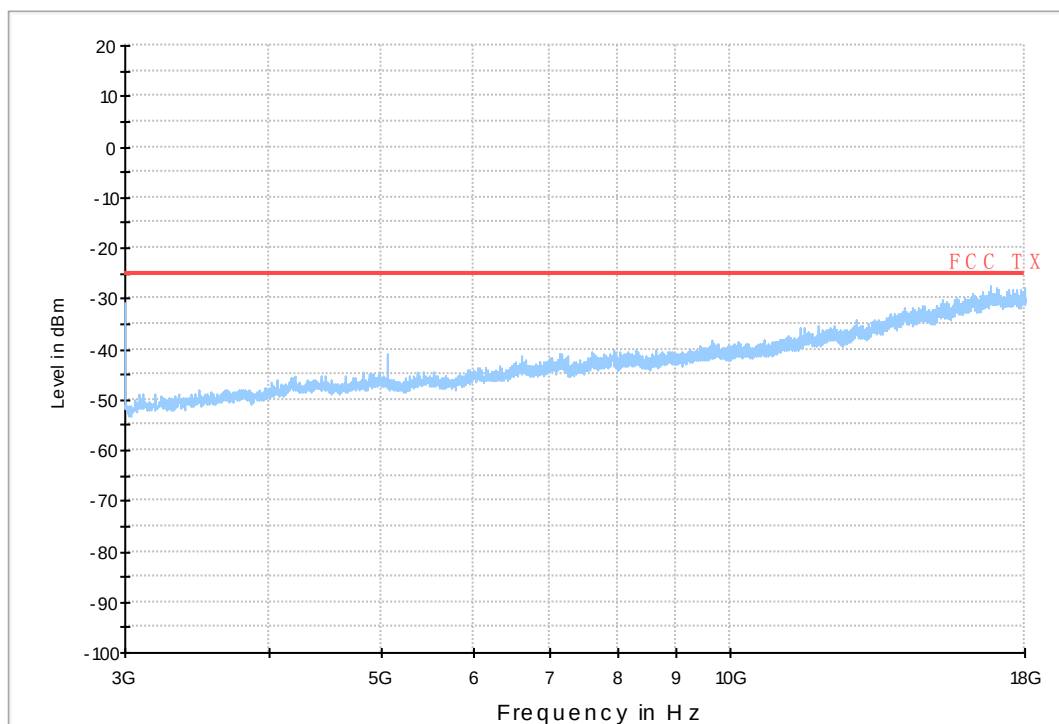
7.1.1.2 Test Bandwidth = 20



RSE-TX-DIRECTOR LTE 7 38 41_L

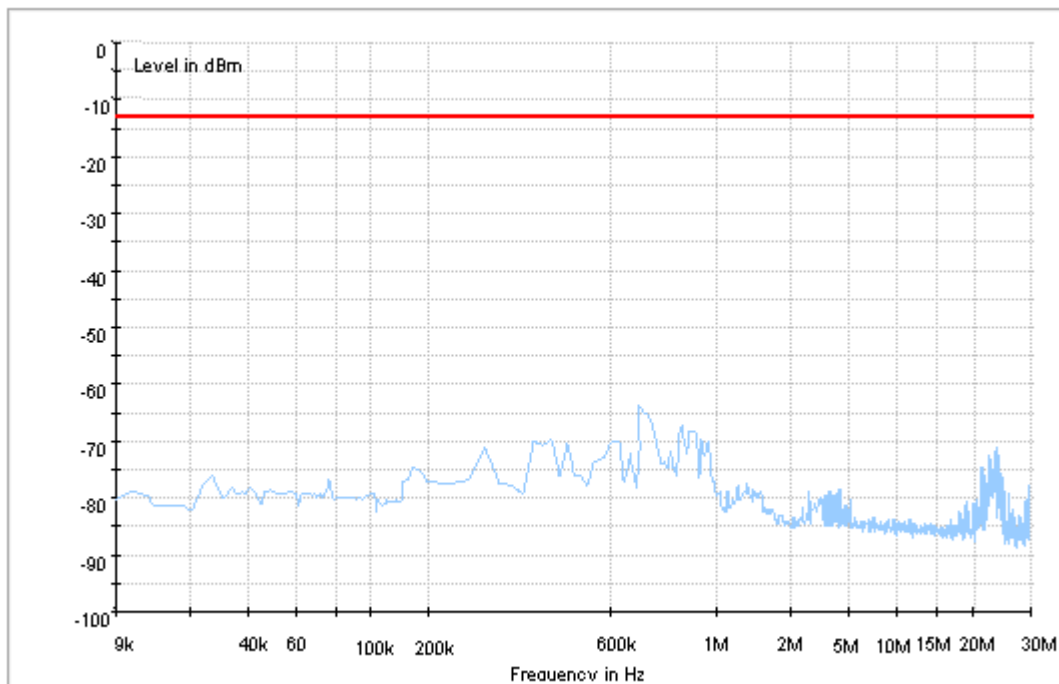


RSE-TX-DIRECTOR LTE7 38 41_H

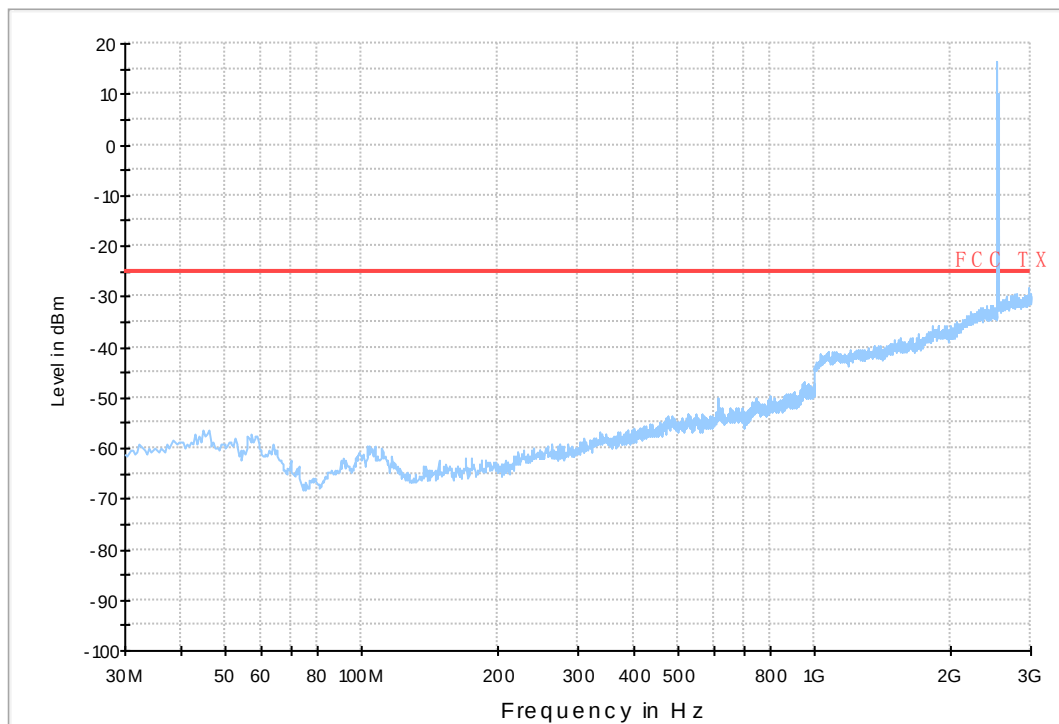


7.1.2 Test Band = BAND7_ANT2

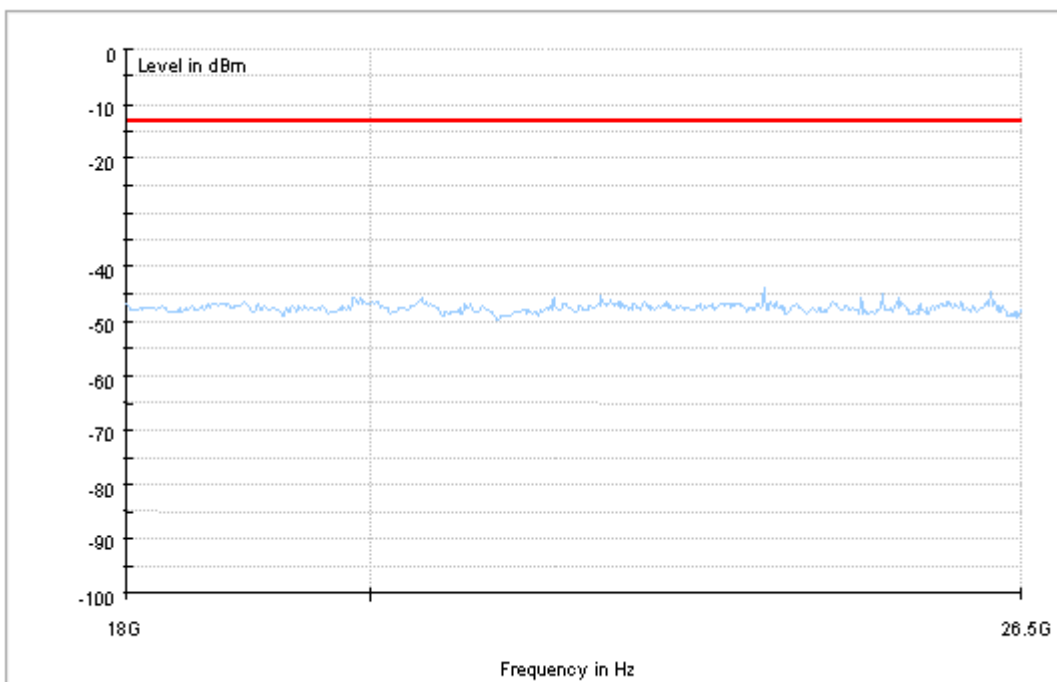
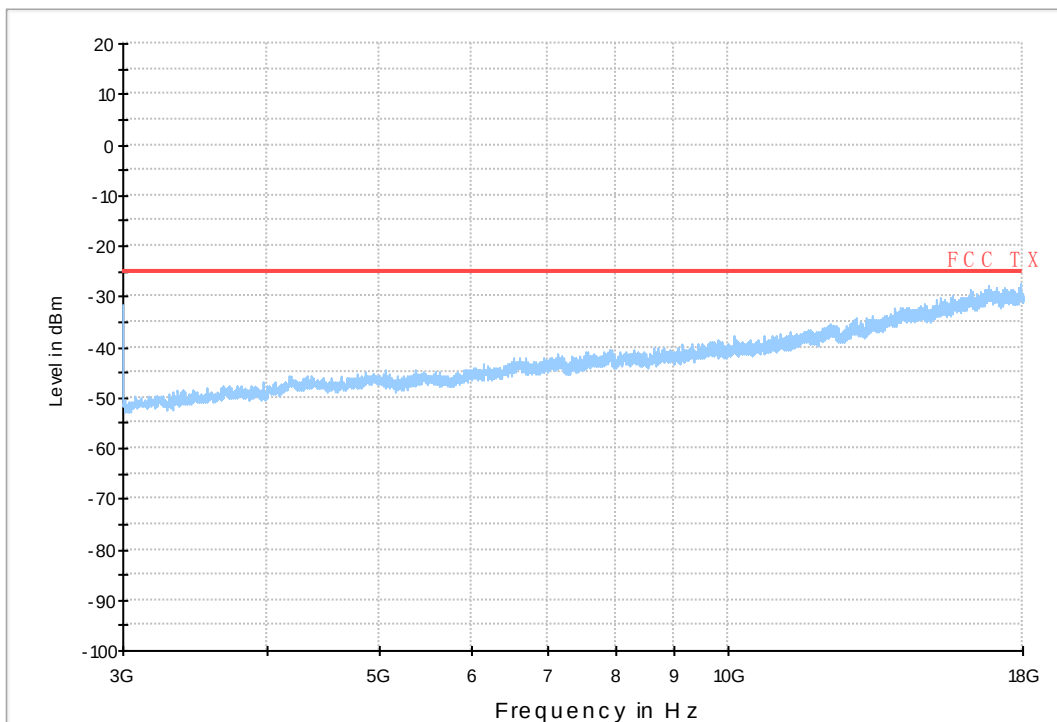
7.1.2.1 Test Bandwidth = 5



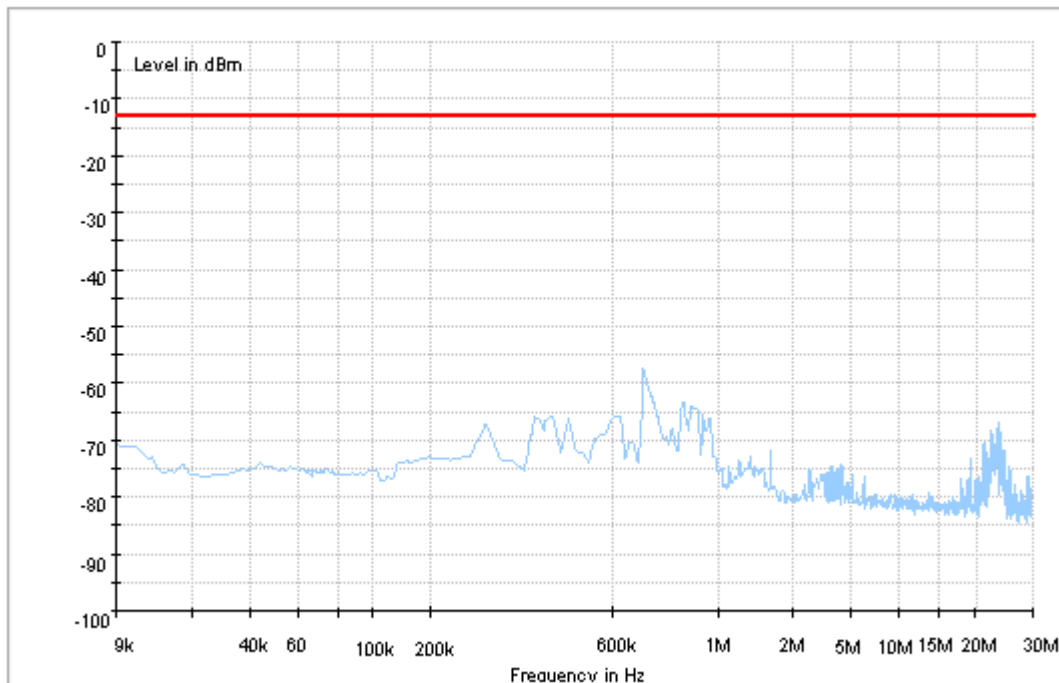
RSE-TX-DIRECTOR LTE 7 38 41_L



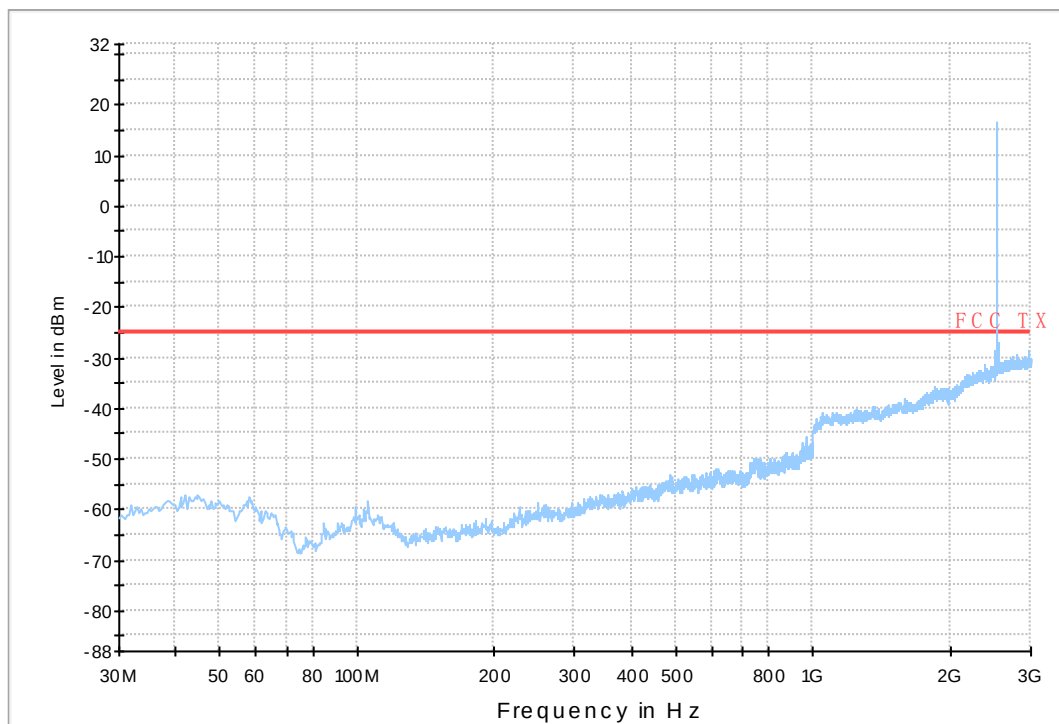
RSE-TX-DIRECTOR LTE7 38 41_H



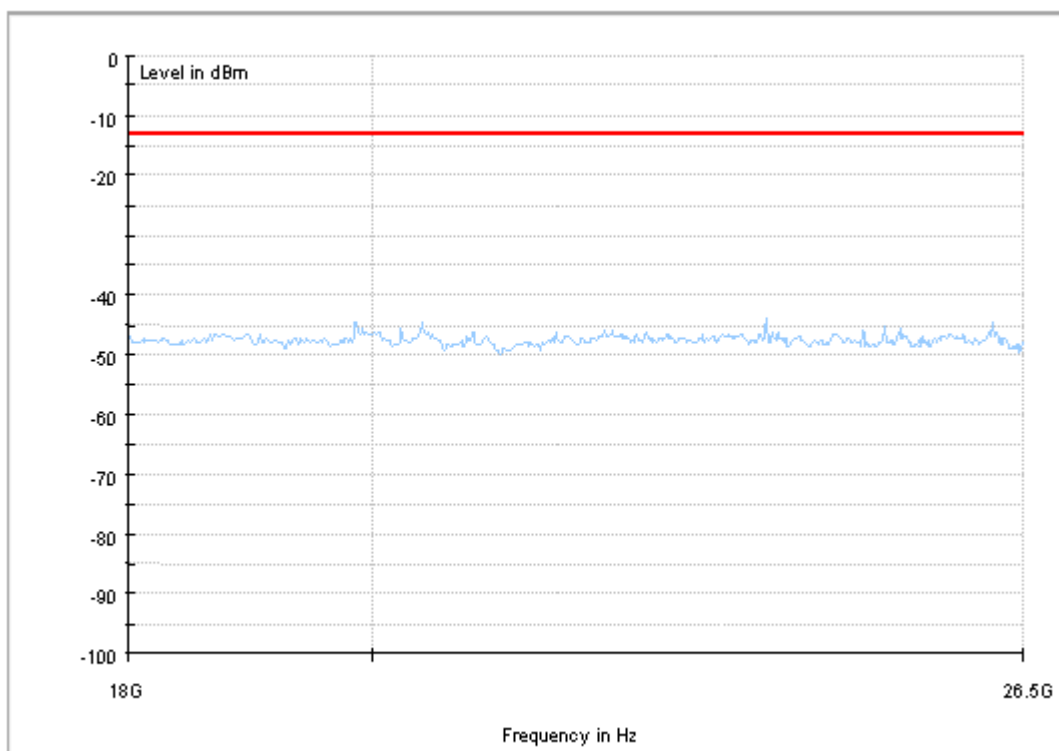
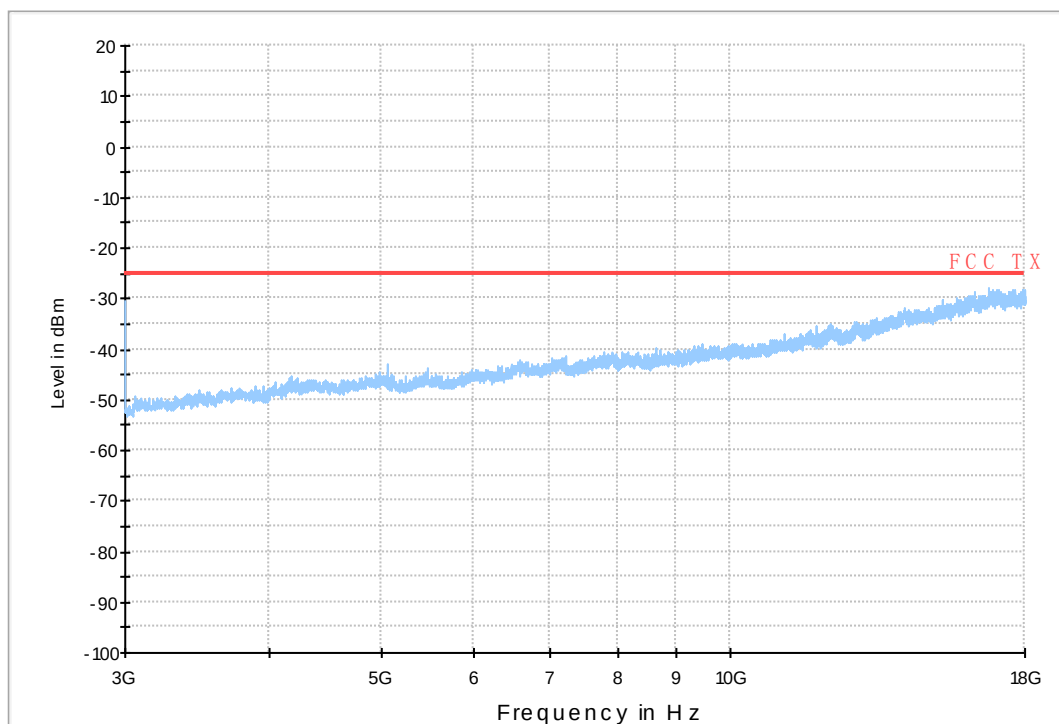
7.1.2.2 Test Bandwidth = 20



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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	1.63	0.00065	PASS
					VN	-4.88	-0.00195	PASS
					VH	-5.01	-0.002	PASS
			MCH	TN	VL	-2.3	-0.00091	PASS
					VN	2.82	0.00111	PASS
					VH	-2.56	-0.00101	PASS
			HCH	TN	VL	-0.76	-0.0003	PASS
					VN	-1.63	-0.00063	PASS
					VH	0.76	0.0003	PASS
		10	LCH	TN	VL	-1.43	-0.00057	PASS
					VN	-2.57	-0.00103	PASS
					VH	0.43	0.00017	PASS
			MCH	TN	VL	-1.6	-0.00063	PASS
					VN	-0.11	-0.00004	PASS
					VH	0.14	0.00006	PASS
			HCH	TN	VL	-0.79	-0.00031	PASS
					VN	-1.27	-0.0005	PASS
					VH	-4.63	-0.00181	PASS
		15	LCH	TN	VL	-0.97	-0.00039	PASS
					VN	-1.66	-0.00066	PASS
					VH	-1.59	-0.00063	PASS
			MCH	TN	VL	-1.5	-0.00059	PASS
					VN	-1.97	-0.00078	PASS
					VH	0	0	PASS
			HCH	TN	VL	-1.37	-0.00053	PASS
					VN	0.43	0.00017	PASS
					VH	2.02	0.00079	PASS
		20	LCH	TN	VL	0.03	0.00001	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-0.01	0	PASS
					VH	-0.21	-0.00008	PASS
			MCH	TN	VL	-1.19	-0.00047	PASS
					VN	0.44	0.00017	PASS
					VH	-0.94	-0.00037	PASS
			HCH	TN	VL	-0.8	-0.00031	PASS
					VN	-1.03	-0.0004	PASS
					VH	-0.23	-0.00009	PASS
	LTE/TM2	5	LCH	TN	VL	-3.49	-0.00139	PASS
					VN	0.54	0.00022	PASS
					VH	0.34	0.00014	PASS
			MCH	TN	VL	-3.99	-0.00157	PASS
					VN	-1.24	-0.00049	PASS
					VH	-0.16	-0.00006	PASS
			HCH	TN	VL	-2.57	-0.001	PASS
					VN	2.85	0.00111	PASS
					VH	-0.24	-0.00009	PASS
		10	LCH	TN	VL	1.02	0.00041	PASS
					VN	-1.22	-0.00049	PASS
					VH	-0.54	-0.00022	PASS
			MCH	TN	VL	-2.96	-0.00117	PASS
					VN	2.98	0.00118	PASS
					VH	0.36	0.00014	PASS
			HCH	TN	VL	-0.74	-0.00029	PASS
					VN	-0.09	-0.00004	PASS
					VH	-1.24	-0.00048	PASS
		15	LCH	TN	VL	-1.82	-0.00073	PASS
					VN	-0.39	-0.00016	PASS
					VH	-0.63	-0.00025	PASS
			MCH	TN	VL	0.89	0.00035	PASS
					VN	-9.53	-0.00376	PASS
					VH	-0.07	-0.00003	PASS
			HCH	TN	VL	0.97	0.00038	PASS
					VN	-2.19	-0.00085	PASS
					VH	-2.1	-0.00082	PASS
		20	LCH	TN	VL	0.27	0.00011	PASS
					VN	-3.09	-0.00123	PASS
					VH	0.36	0.00014	PASS
			MCH	TN	VL	0.27	0.00011	PASS
					VN	0.27	0.00011	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-0.73	-0.00029	PASS
					VH	-1.95	-0.00077	PASS
			HCH	TN	VL	-0.86	-0.00034	PASS
					VN	0.13	0.00005	PASS
					VH	1.07	0.00042	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	-2.05	-0.00082	PASS
					-20	-5.14	-0.00205	PASS
					-10	-3.6	-0.00144	PASS
					0	0.03	0.00001	PASS
					10	0.64	0.00026	PASS
					20	-1	-0.0004	PASS
					30	-2.8	-0.00112	PASS
					40	-2.42	-0.00097	PASS
					50	1.5	0.0006	PASS
			MCH	VN	-30	-0.96	-0.00038	PASS
					-20	-3.72	-0.00147	PASS
					-10	-1.39	-0.00055	PASS
					0	-0.33	-0.00013	PASS
					10	-4.71	-0.00186	PASS
					20	-3.16	-0.00125	PASS
					30	-1.6	-0.00063	PASS
					40	-2.89	-0.00114	PASS
					50	0.72	0.00028	PASS
			HCH	VN	-30	-1.02	-0.0004	PASS
					-20	-1.9	-0.00074	PASS
					-10	-0.06	-0.00002	PASS
					0	1.24	0.00048	PASS
					10	1.93	0.00075	PASS
					20	-3.69	-0.00144	PASS
					30	-6.15	-0.0024	PASS
					40	0.11	0.00004	PASS
					50	-5.36	-0.00209	PASS
		10	LCH	VN	-30	-2.39	-0.00095	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-0.33	-0.00013	PASS
					-10	-3.09	-0.00123	PASS
					0	1.7	0.00068	PASS
					10	-1.5	-0.0006	PASS
					20	-2.2	-0.00088	PASS
					30	3.69	0.00147	PASS
					40	1.12	0.00045	PASS
					50	-2.59	-0.00103	PASS
			MCH	VN	-30	-1.69	-0.00067	PASS
					-20	-1.59	-0.00063	PASS
					-10	-0.01	0	PASS
					0	-1.32	-0.00052	PASS
					10	-0.04	-0.00002	PASS
					20	-2.65	-0.00105	PASS
					30	0.92	0.00036	PASS
					40	0.11	0.00004	PASS
					50	-0.62	-0.00024	PASS
			HCH	VN	-30	1.54	0.0006	PASS
					-20	-4.85	-0.00189	PASS
					-10	0.06	0.00002	PASS
					0	1.49	0.00058	PASS
					10	-2.45	-0.00096	PASS
					20	0.74	0.00029	PASS
					30	2.95	0.00115	PASS
					40	1.12	0.00044	PASS
					50	-0.09	-0.00004	PASS
		15	LCH	VN	-30	-3.38	-0.00135	PASS
					-20	-3.73	-0.00149	PASS
					-10	0.33	0.00013	PASS
					0	-4.29	-0.00171	PASS
					10	-2.65	-0.00106	PASS
					20	-4.05	-0.00162	PASS
					30	-0.46	-0.00018	PASS
					40	-2.33	-0.00093	PASS
					50	-3.81	-0.00152	PASS
			MCH	VN	-30	-0.86	-0.00034	PASS
					-20	-2.32	-0.00092	PASS
					-10	-0.5	-0.0002	PASS
					0	0.3	0.00012	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-0.14	-0.00006	PASS
					20	-0.17	-0.00007	PASS
					30	0.94	0.00037	PASS
					40	-2.2	-0.00087	PASS
					50	-1.29	-0.00051	PASS
			HCH	VN	-30	-2.36	-0.00092	PASS
					-20	-0.27	-0.00011	PASS
					-10	0.09	0.00004	PASS
					0	0.17	0.00007	PASS
					10	-0.39	-0.00015	PASS
					20	-4.03	-0.00157	PASS
					30	-2.8	-0.00109	PASS
					40	0.01	0	PASS
					50	1.03	0.0004	PASS
		20	LCH	VN	-30	0.29	0.00012	PASS
					-20	-0.36	-0.00014	PASS
					-10	-0.07	-0.00003	PASS
					0	-1.1	-0.00044	PASS
					10	-1.75	-0.0007	PASS
					20	1.44	0.00057	PASS
					30	-2.1	-0.00084	PASS
					40	-0.34	-0.00014	PASS
					50	-0.36	-0.00014	PASS
			MCH	VN	-30	-0.5	-0.0002	PASS
					-20	-1.29	-0.00051	PASS
					-10	-0.11	-0.00004	PASS
					0	1.02	0.0004	PASS
					10	-1.17	-0.00046	PASS
					20	-0.62	-0.00024	PASS
					30	1.7	0.00067	PASS
					40	0.04	0.00002	PASS
					50	-0.59	-0.00023	PASS
			HCH	VN	-30	-2.53	-0.00099	PASS
					-20	-0.72	-0.00028	PASS
					-10	-0.5	-0.0002	PASS
					0	-0.31	-0.00012	PASS
					10	-0.13	-0.00005	PASS
					20	-0.67	-0.00026	PASS
					30	-2.29	-0.00089	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2	5			40	0.26	0.0001	PASS
					50	-3.05	-0.00119	PASS
			LCH	VN	-30	4.01	0.0016	PASS
					-20	-2.92	-0.00117	PASS
					-10	-6.85	-0.00274	PASS
					0	-2.62	-0.00105	PASS
					10	-6.38	-0.00255	PASS
					20	0.94	0.00038	PASS
					30	1.12	0.00045	PASS
					40	0.97	0.00039	PASS
					50	0.6	0.00024	PASS
			MCH	VN	-30	0.94	0.00037	PASS
					-20	2.37	0.00093	PASS
					-10	-1.42	-0.00056	PASS
					0	-0.5	-0.0002	PASS
					10	-0.74	-0.00029	PASS
					20	1.36	0.00054	PASS
					30	-3.81	-0.0015	PASS
					40	-1.23	-0.00049	PASS
					50	0.23	0.00009	PASS
			HCH	VN	-30	0.24	0.00009	PASS
					-20	-2.03	-0.00079	PASS
					-10	1.66	0.00065	PASS
					0	2.86	0.00111	PASS
					10	-7.01	-0.00273	PASS
					20	-1.1	-0.00043	PASS
					30	-2.05	-0.0008	PASS
					40	-3.63	-0.00141	PASS
					50	1.56	0.00061	PASS
		10	LCH	VN	-30	1.19	0.00048	PASS
					-20	-2.39	-0.00095	PASS
					-10	1.32	0.00053	PASS
					0	-2.89	-0.00115	PASS
					10	-1.07	-0.00043	PASS
					20	-0.36	-0.00014	PASS
					30	0.37	0.00015	PASS
					40	-0.73	-0.00029	PASS
					50	0.73	0.00029	PASS
			MCH	VN	-30	0.93	0.00037	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	1.13	0.00045	PASS
					-10	-1.24	-0.00049	PASS
					0	-1.82	-0.00072	PASS
					10	-1.85	-0.00073	PASS
					20	-2.46	-0.00097	PASS
					30	0.2	0.00008	PASS
					40	-0.17	-0.00007	PASS
					50	-3.88	-0.00153	PASS
			HCH	VN	-30	0.49	0.00019	PASS
					-20	-1.83	-0.00071	PASS
					-10	0.62	0.00024	PASS
					0	0	0	PASS
					10	-3.18	-0.00124	PASS
					20	-2.75	-0.00107	PASS
					30	2.3	0.0009	PASS
					40	-0.57	-0.00022	PASS
					50	-1.24	-0.00048	PASS
		15	LCH	VN	-30	-3.86	-0.00154	PASS
					-20	-4.25	-0.00169	PASS
					-10	-0.11	-0.00004	PASS
					0	0.26	0.0001	PASS
					10	-0.86	-0.00034	PASS
					20	0.17	0.00007	PASS
					30	-0.6	-0.00024	PASS
					40	-2.43	-0.00097	PASS
					50	-3.3	-0.00132	PASS
			MCH	VN	-30	-1.33	-0.00052	PASS
					-20	0.51	0.0002	PASS
					-10	-1.34	-0.00053	PASS
					0	-0.82	-0.00032	PASS
					10	-3.89	-0.00153	PASS
					20	-23.72	-0.00936	PASS
					30	-18.54	-0.00731	PASS
					40	-12.83	-0.00506	PASS
					50	-11.2	-0.00442	PASS
			HCH	VN	-30	7.98	0.00311	PASS
					-20	6.81	0.00266	PASS
					-10	6.29	0.00245	PASS
					0	3	0.00117	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	4.66	0.00182	PASS
					20	1.5	0.00059	PASS
					30	1.43	0.00056	PASS
					40	1.59	0.00062	PASS
					50	1.42	0.00055	PASS
		20	LCH	VN	-30	-2.29	-0.00091	PASS
					-20	0.79	0.00031	PASS
					-10	-0.04	-0.00002	PASS
					0	-3.22	-0.00128	PASS
					10	-1.62	-0.00065	PASS
					20	-3.4	-0.00135	PASS
					30	0.14	0.00006	PASS
					40	-0.36	-0.00014	PASS
					50	-4.53	-0.0018	PASS
			MCH	VN	-30	-4.03	-0.00159	PASS
					-20	-0.62	-0.00024	PASS
					-10	0.27	0.00011	PASS
					0	-0.4	-0.00016	PASS
					10	0.51	0.0002	PASS
					20	-1.47	-0.00058	PASS
					30	-2.3	-0.00091	PASS
					40	-3.3	-0.0013	PASS
					50	-0.96	-0.00038	PASS
			HCH	VN	-30	-2.9	-0.00113	PASS
					-20	-0.49	-0.00019	PASS
					-10	-0.21	-0.00008	PASS
					0	-3.45	-0.00135	PASS
					10	-1.77	-0.00069	PASS
					20	-3.55	-0.00139	PASS
					30	-1.85	-0.00072	PASS
					40	-3.38	-0.00132	PASS
					50	-3.72	-0.00145	PASS

END