

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN AUTO 08:06:45 AM Dec 01, 2014

Start Freq 9.000 kHz PNO: Close Trig: Free Run Avg Type: Log-Pwr AvgHold: 77/100 TRACE 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB TYPE M P P P P P P DET P P P P P P P

Ref Offset 6.7 dB Mkr1 10.128 kHz
Ref 13.70 dBm -67.833 dBm

10 dB/div Log

3.70
-6.30
-16.3
-26.3
-36.3
-46.3
-56.3
-66.3
-76.3

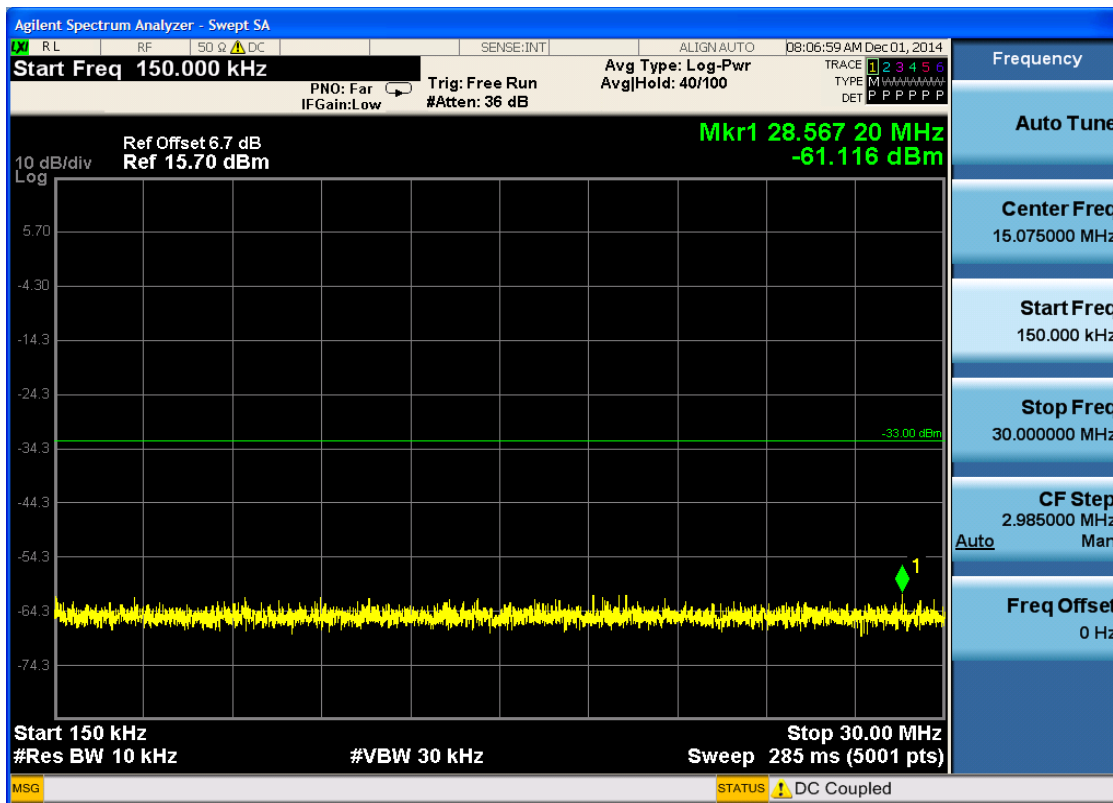
-43.00 dBm

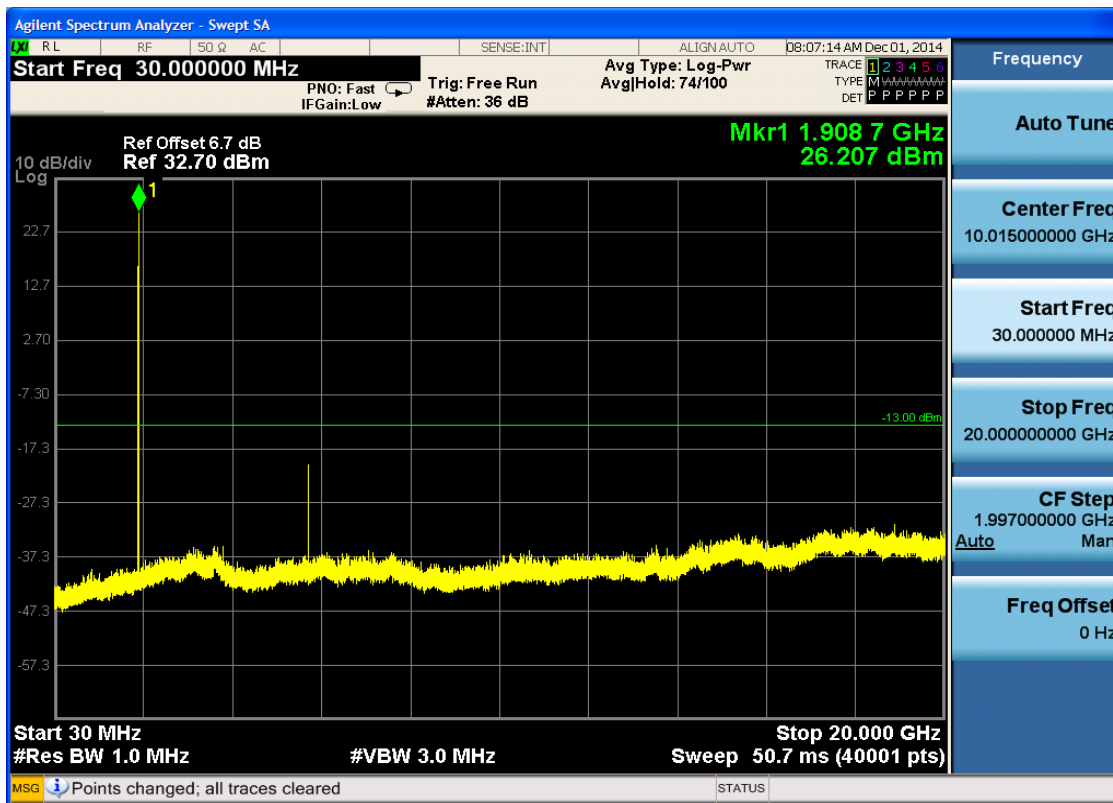
1

Start 9.00 kHz Stop 150.00 kHz
#Res BW 1.0 kHz #VBW 10 kHz Sweep 130 ms (1001 pts)

MSG STATUS DC Coupled

Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Man
Auto
Freq Offset
0 Hz

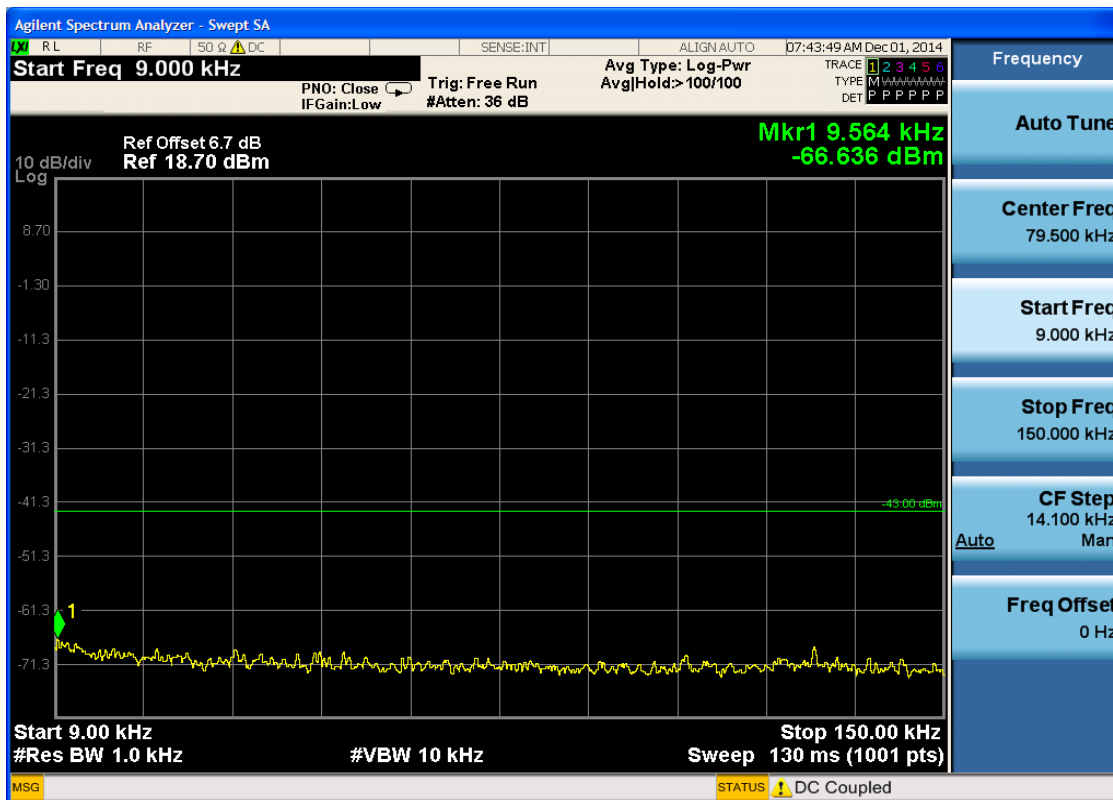




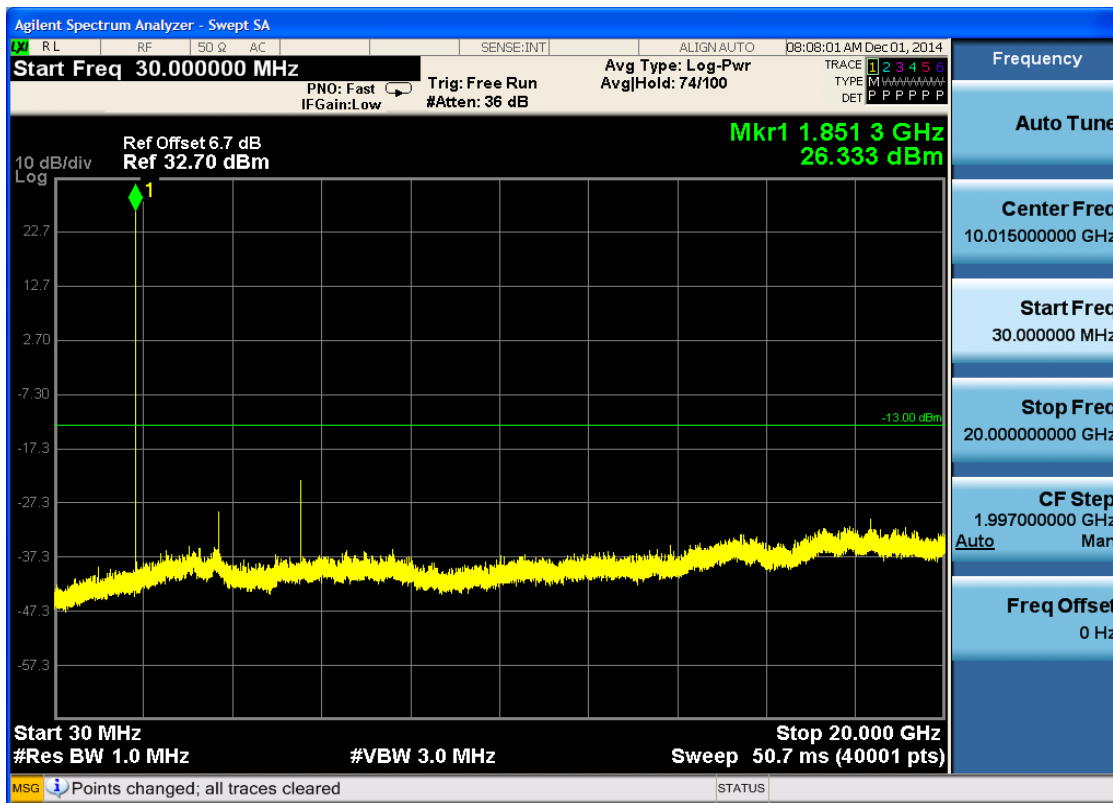


6.1.4.2.2 Test Modulation = QPSK (4096 bits)

6.1.4.2.2.1 Test Channel = LCH

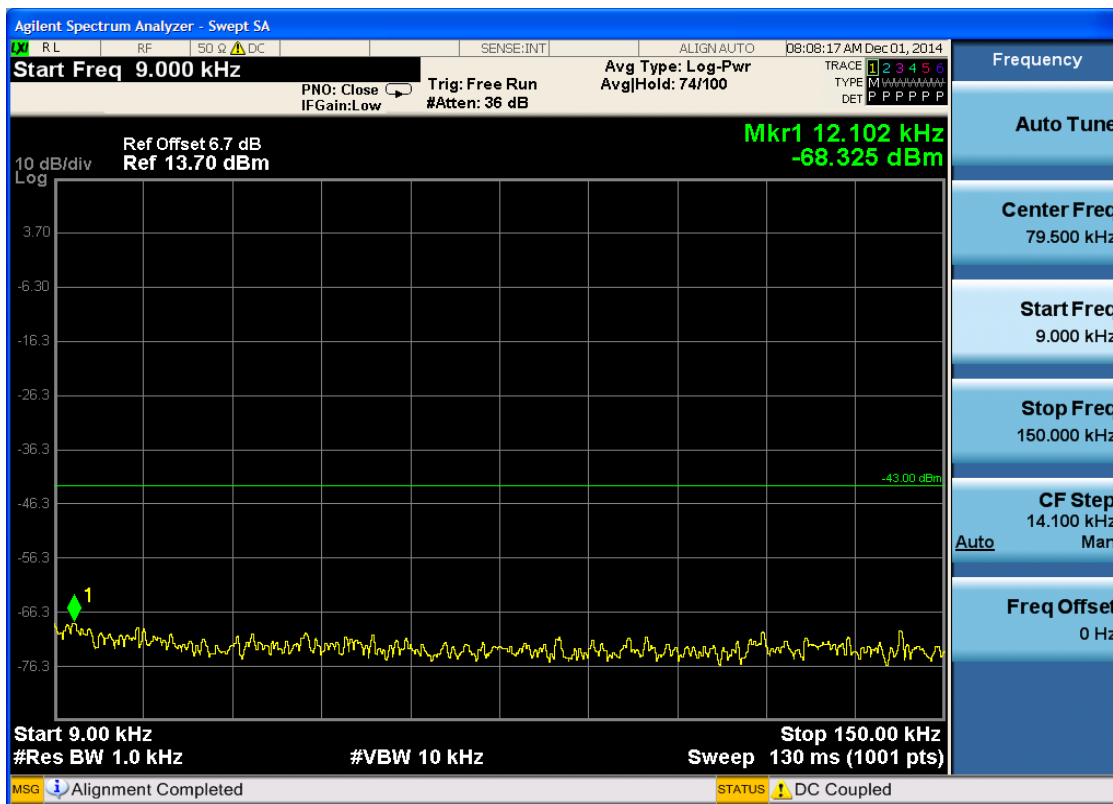




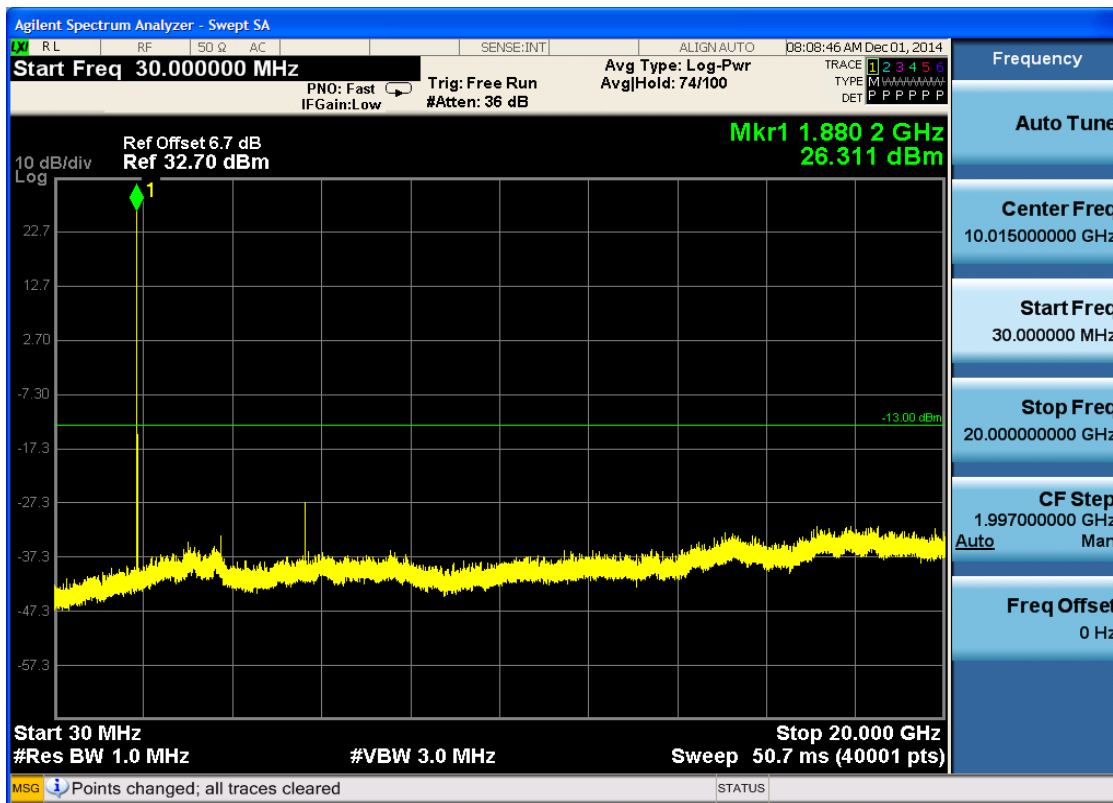


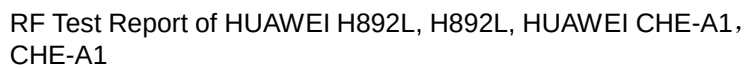


6.1.4.2.2.2 Test Channel = MCH









Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN AUTO 08:09:02 AM Dec 01, 2014

Start Freq 9.000 kHz PNO: Close Trig: Free Run Avg Type: Log-Pwr TRACE 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB AvgHold: 77/100 TYPE M P P P P P P
DET P P P P P P P

Ref Offset 6.7 dB Mkr1 14.499 kHz
Ref 14.70 dBm -68.730 dBm

10 dB/div Log

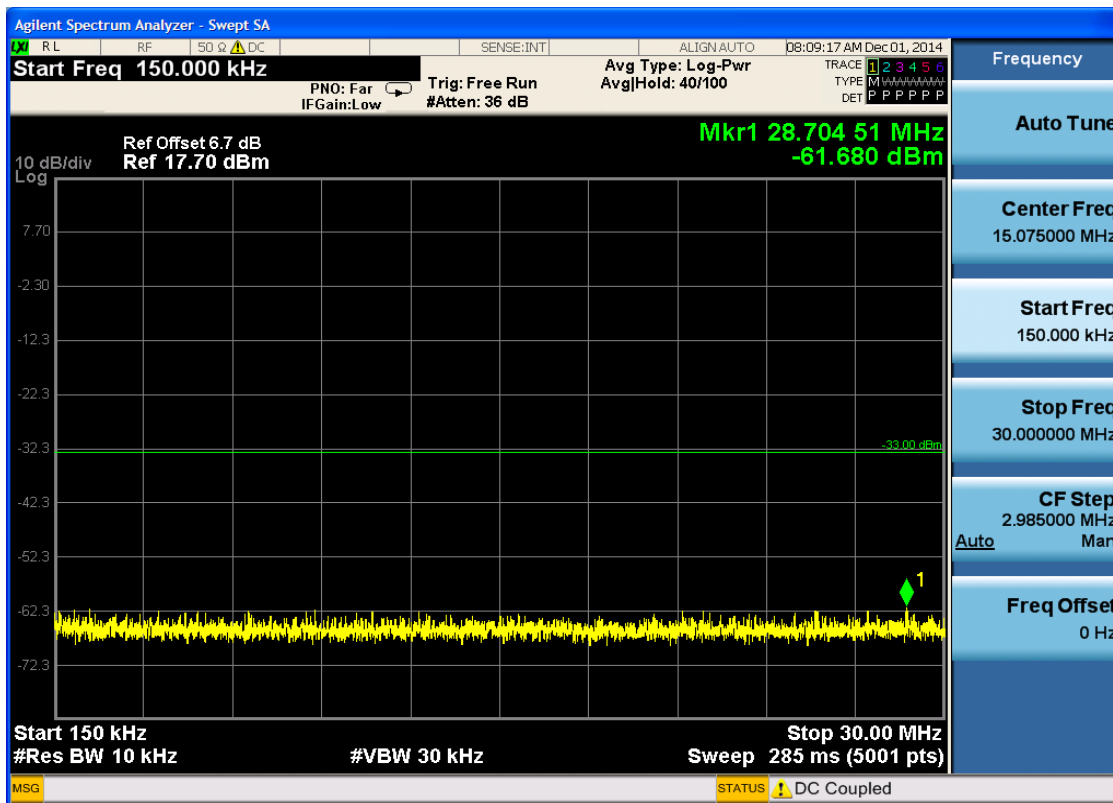
4.70
-5.30
-15.3
-25.3
-35.3
-45.3
-55.3
-65.3
-75.3

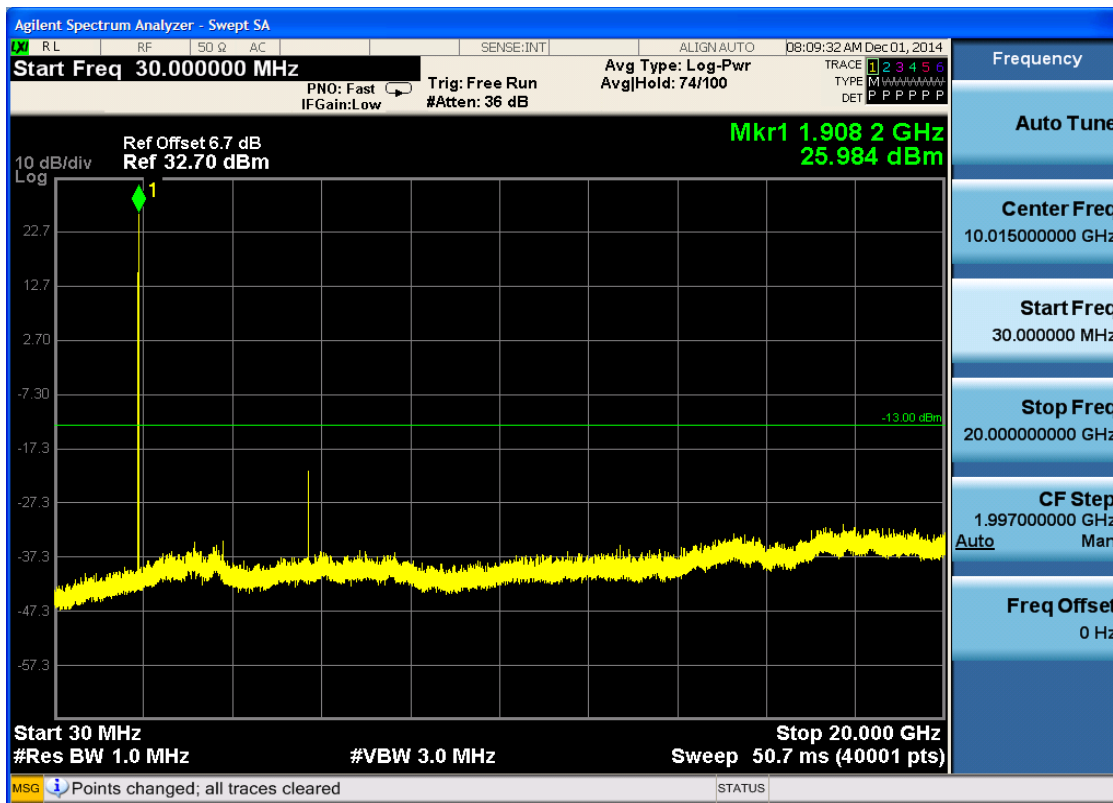
-43.00 dBm

Start 9.00 kHz Stop 150.00 kHz
#Res BW 1.0 kHz #VBW 10 kHz Sweep 130 ms (1001 pts)

MSG STATUS DC Coupled

Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Man
Auto
Freq Offset
0 Hz

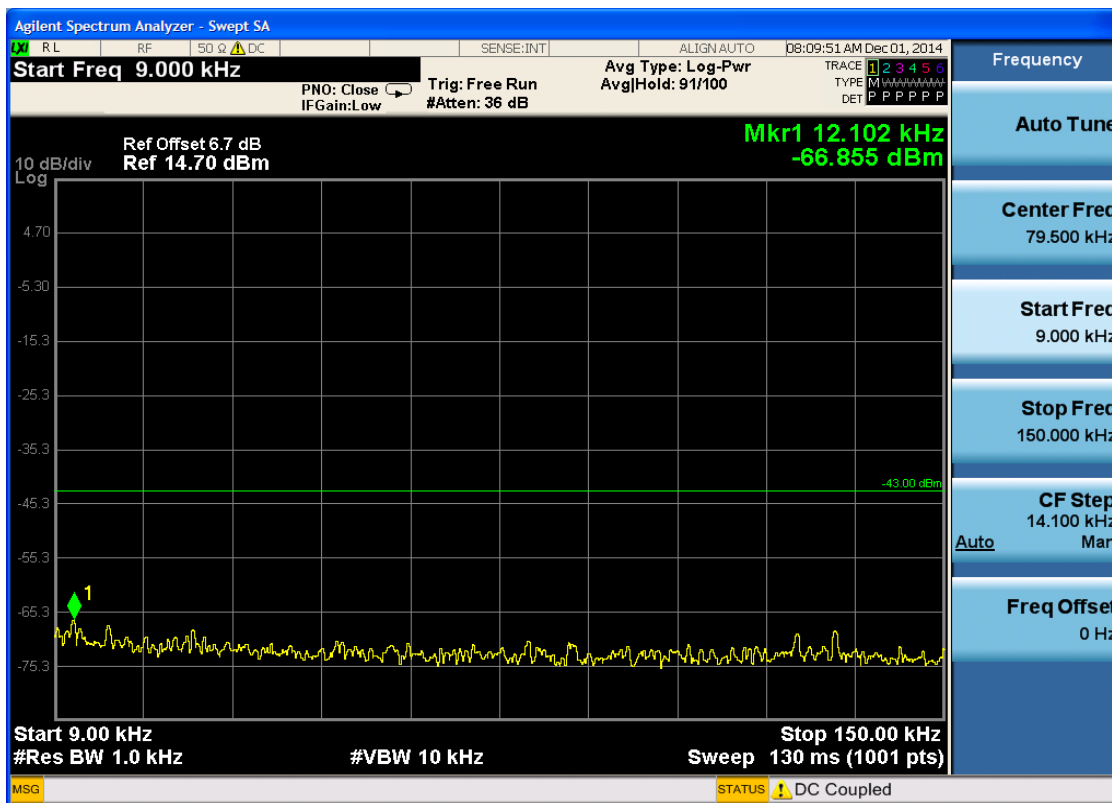


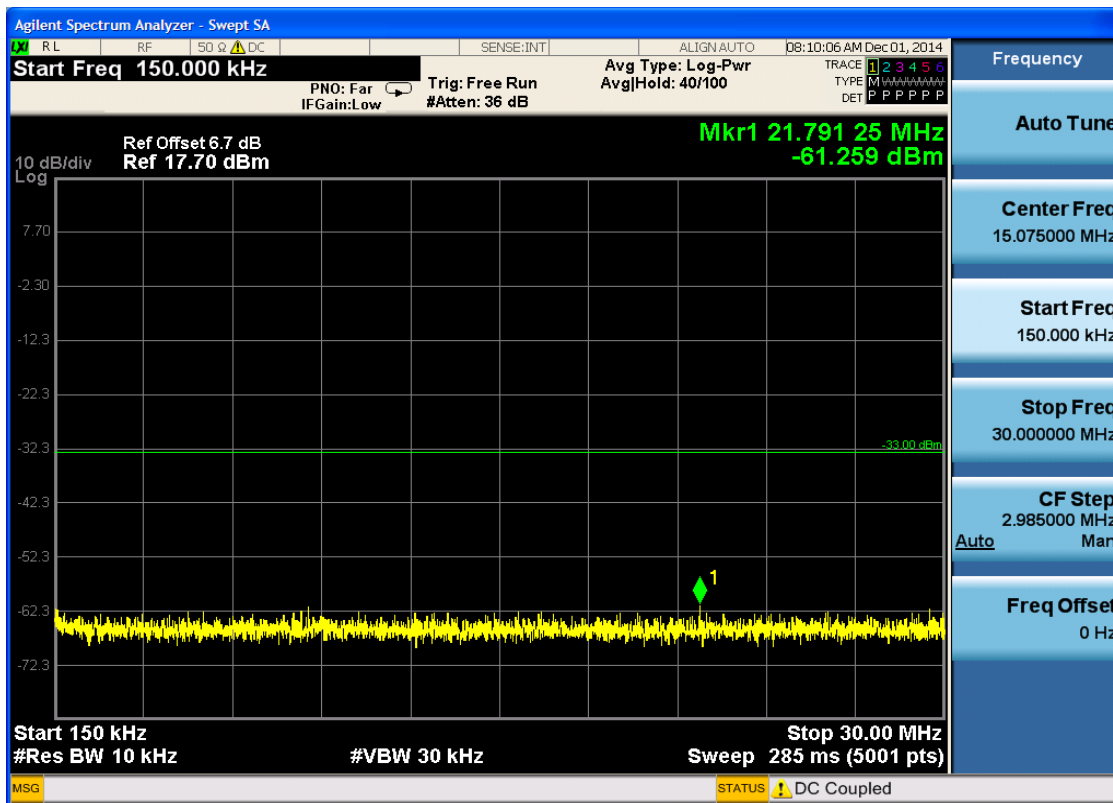


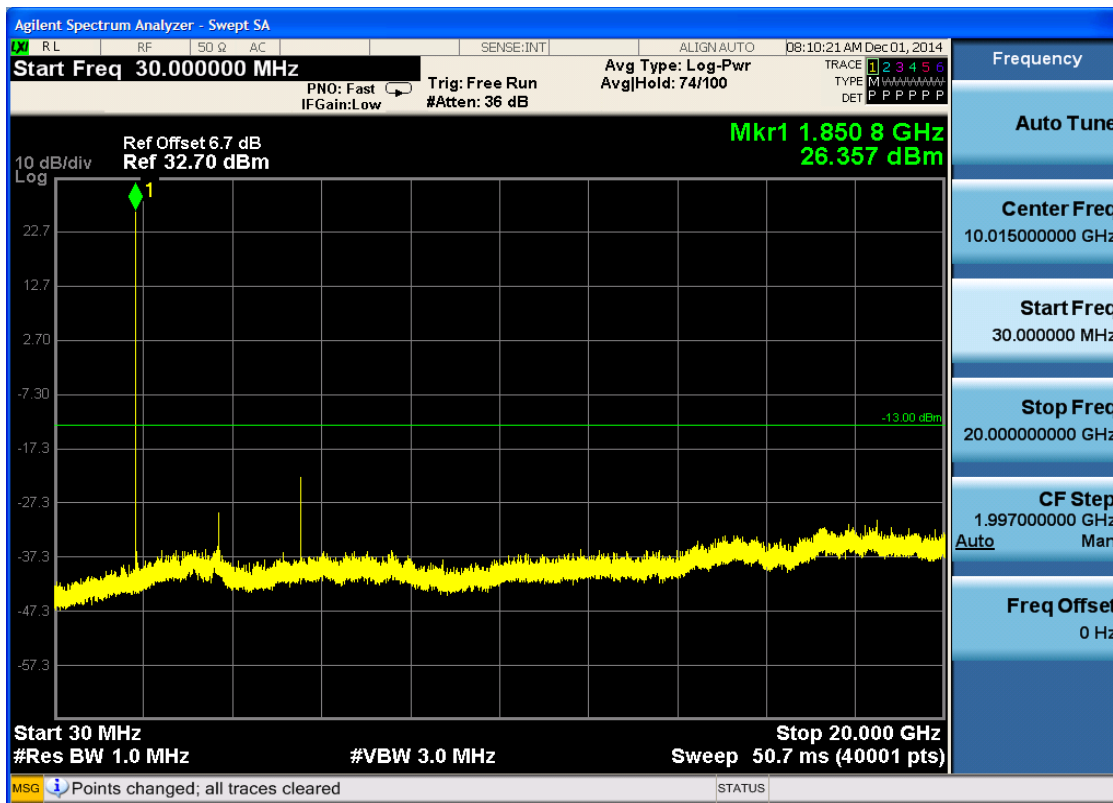


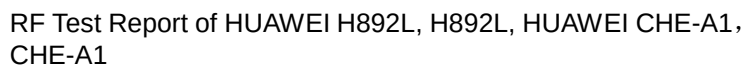
6.1.4.2.3 Test Modulation = 8-PSK (12288 bits)

6.1.4.2.3.1 Test Channel = LCH









Agilent Spectrum Analyzer - Swept SA

☒ R L RF 50 Ω Δ DC SENSE:INT ALIGN:AUTO 08:10:37 AM Dec 01, 2014

Start Freq 9.000 kHz PNO: Close ☐ Trig: Free Run Avg Type: Log-Pwr TRACE 1 2 3 4 5 6
 IF Gain: Low #Atten: 36 dB AvgHold: 77100 TYPE M W W W W W W W W W
 DET P P P P P P

Ref Offset 6.7 dB **Mkr1 9.282 kHz**
 Ref 11.70 dBm **-69.136 dBm**

10 dB/div
 Log

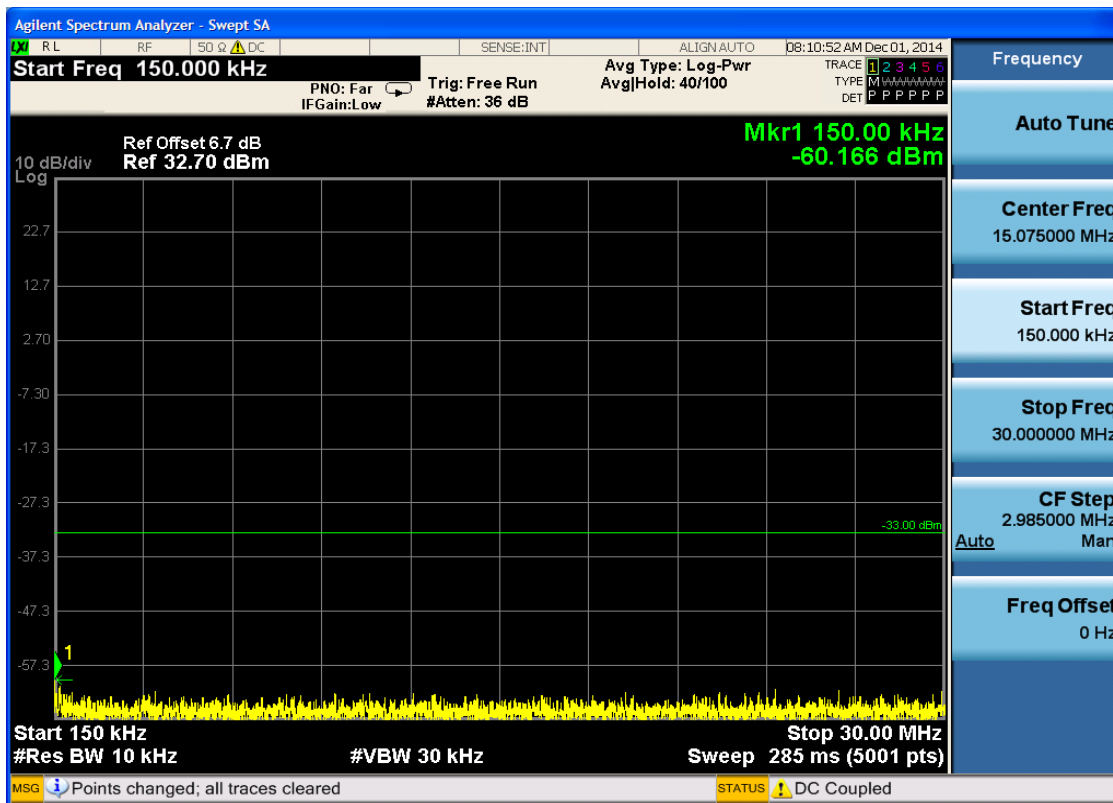
1.70
 -8.30
 -18.3
 -28.3
 -38.3
 -48.3
 -58.3
 -68.3
 -78.3

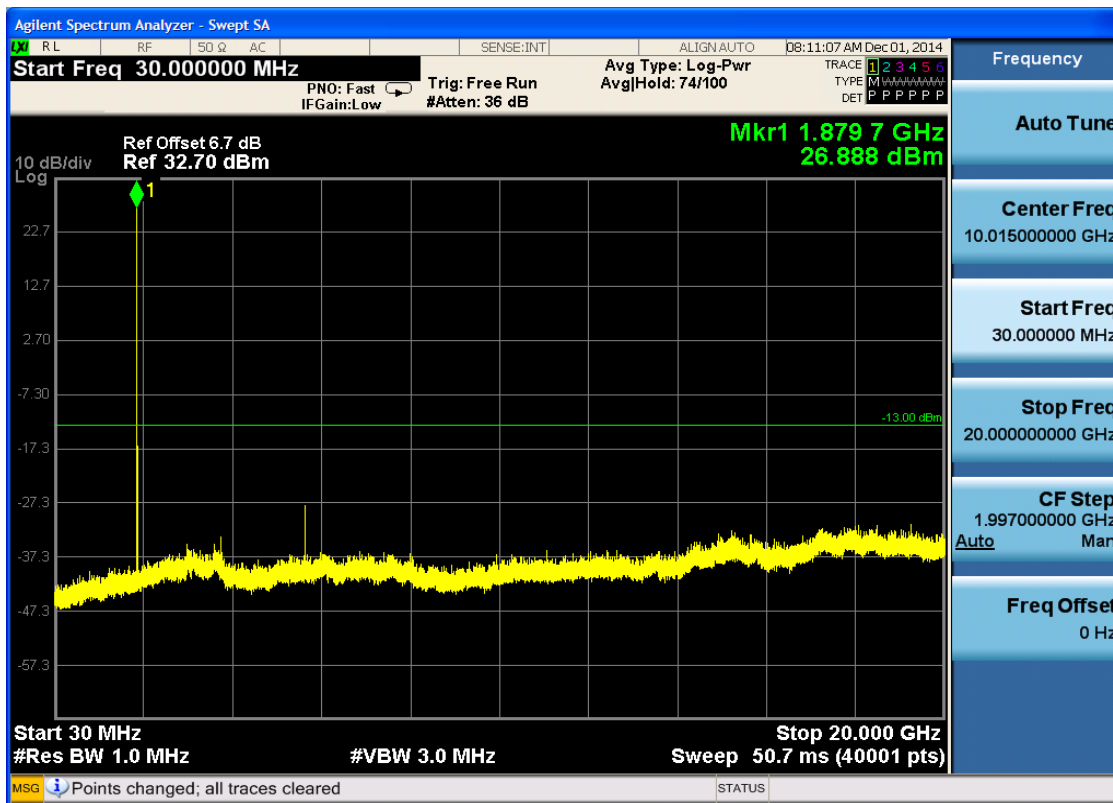
-43.00 dBm

Start 9.00 kHz **Stop 150.00 kHz**
#Res BW 1.0 kHz **#VBW 10 kHz** **Sweep 130 ms (1001 pts)**

MSG STATUS Δ DC Coupled

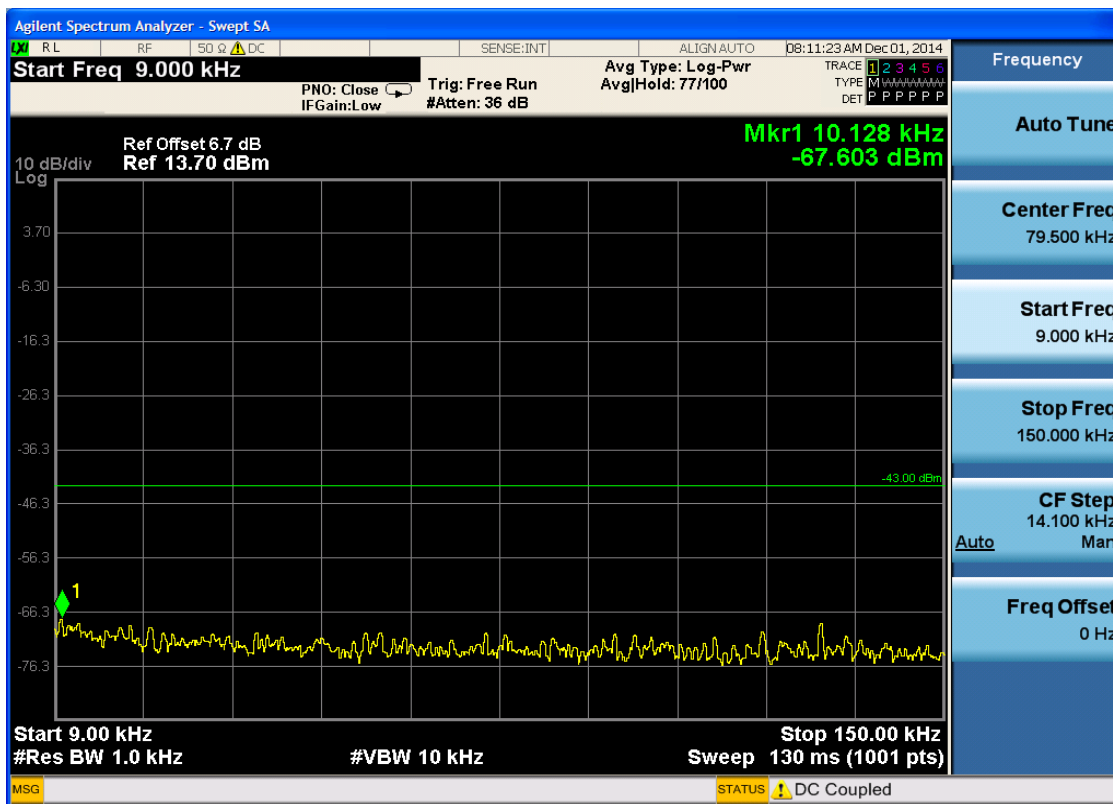
Frequency
 Auto Tune
 Center Freq 79.500 kHz
 Start Freq 9.000 kHz
 Stop Freq 150.000 kHz
 CF Step 14.100 kHz
 Auto Man
 Freq Offset 0 Hz

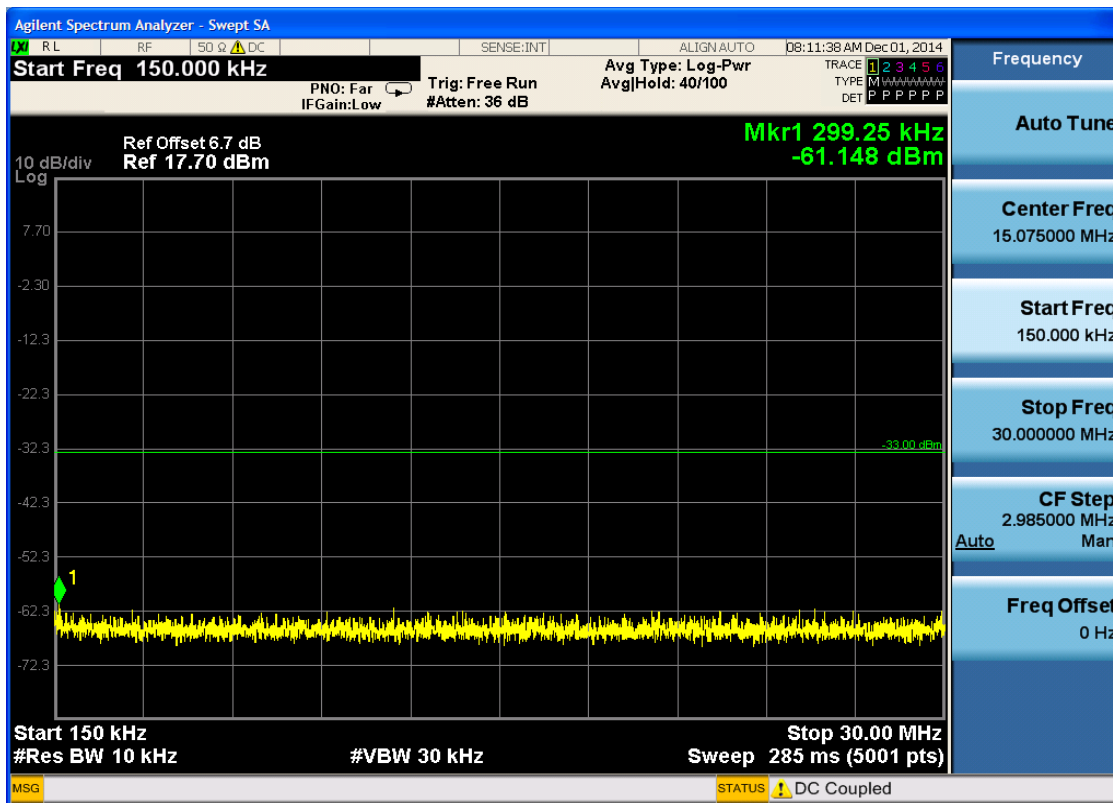


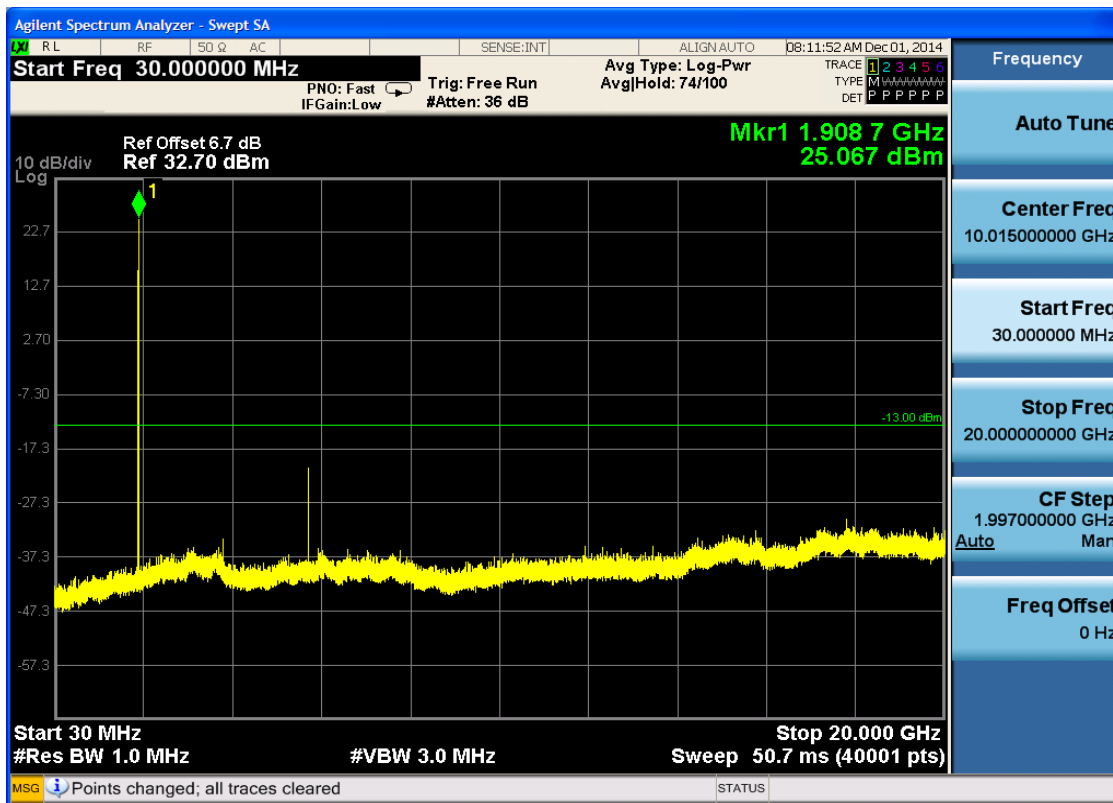




6.1.4.2.3.3 Test Channel = HCH







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

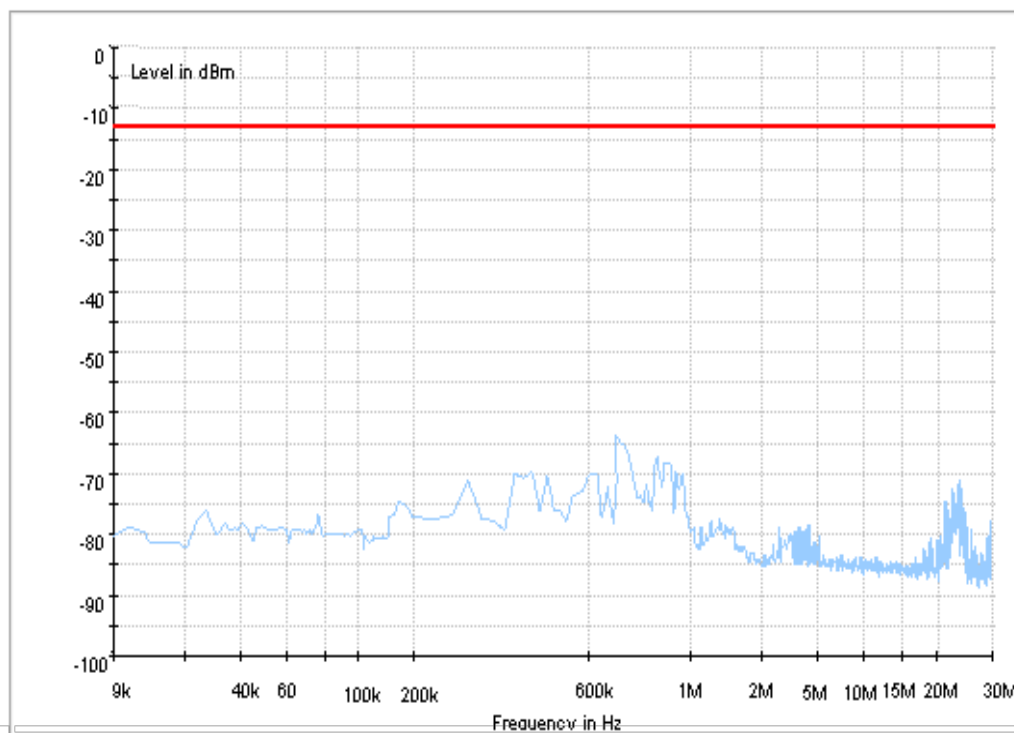
30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

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

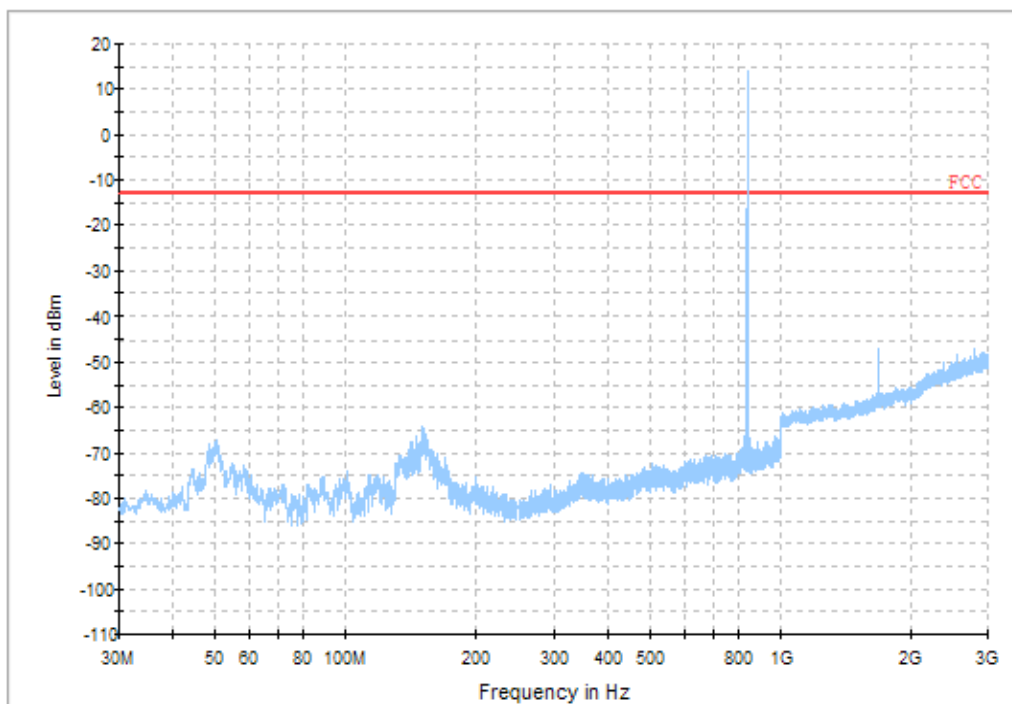
Part I - Test Plots

7.1 For CDMA/1X

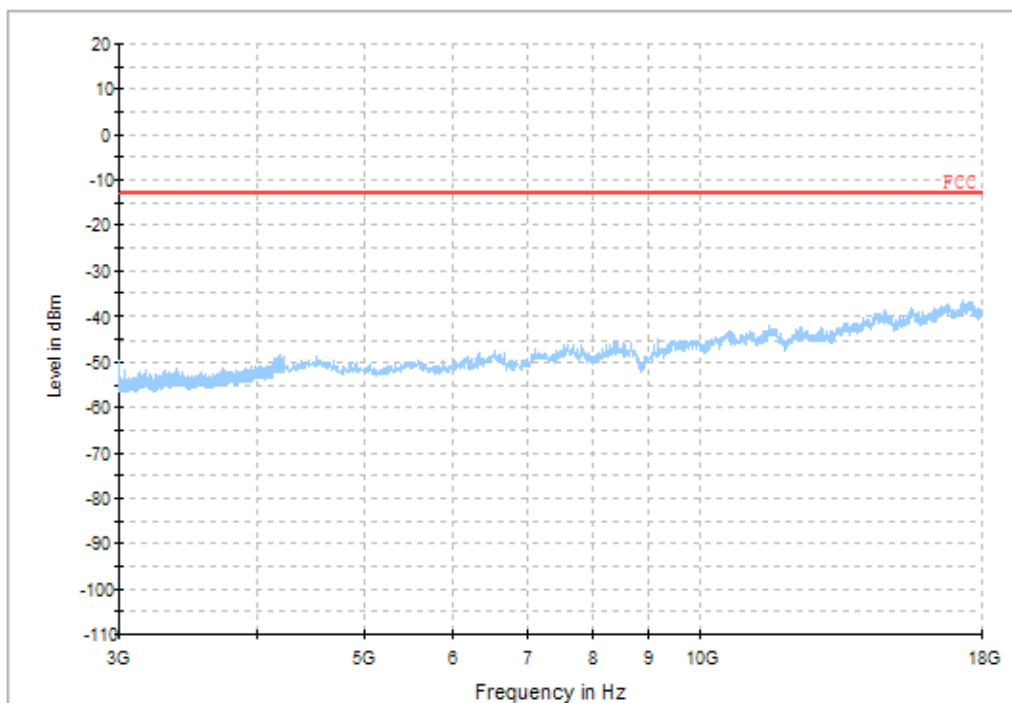
7.1.1 Test Band = BC0



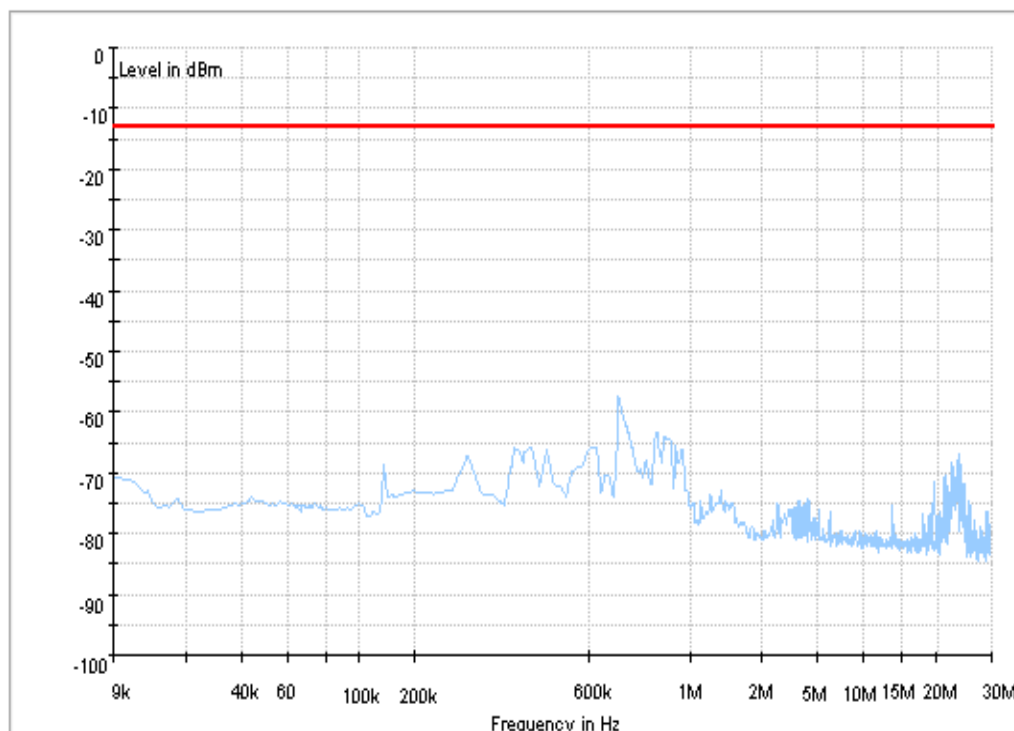
Copy of FCC PART22 CDMA800_L



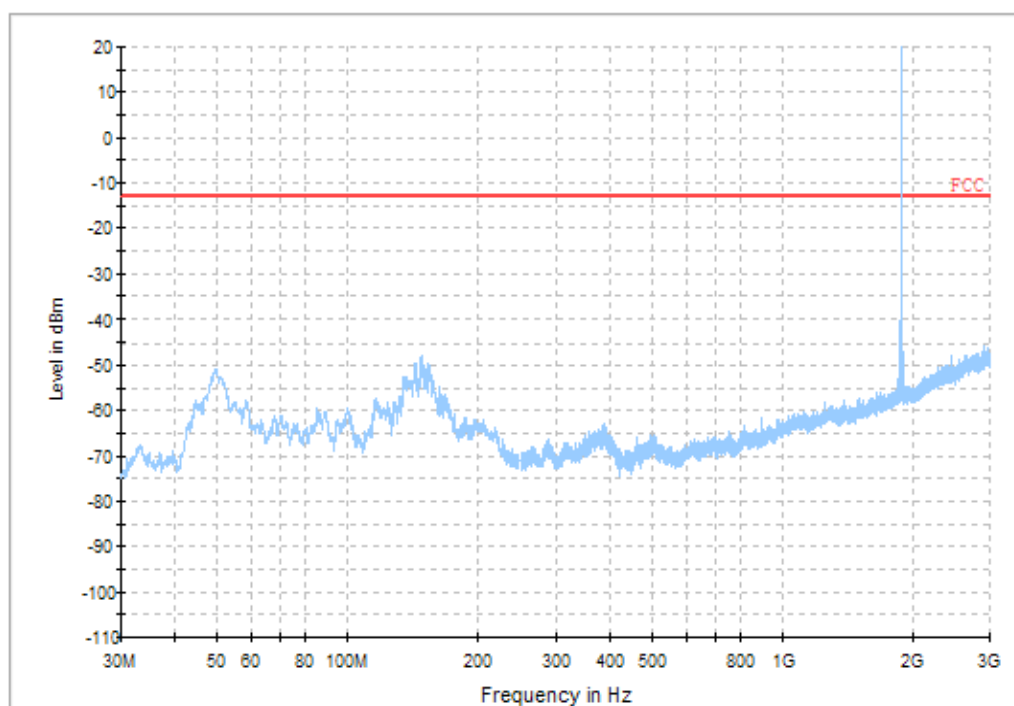
Copy of FCC PART22 CDMA800_H



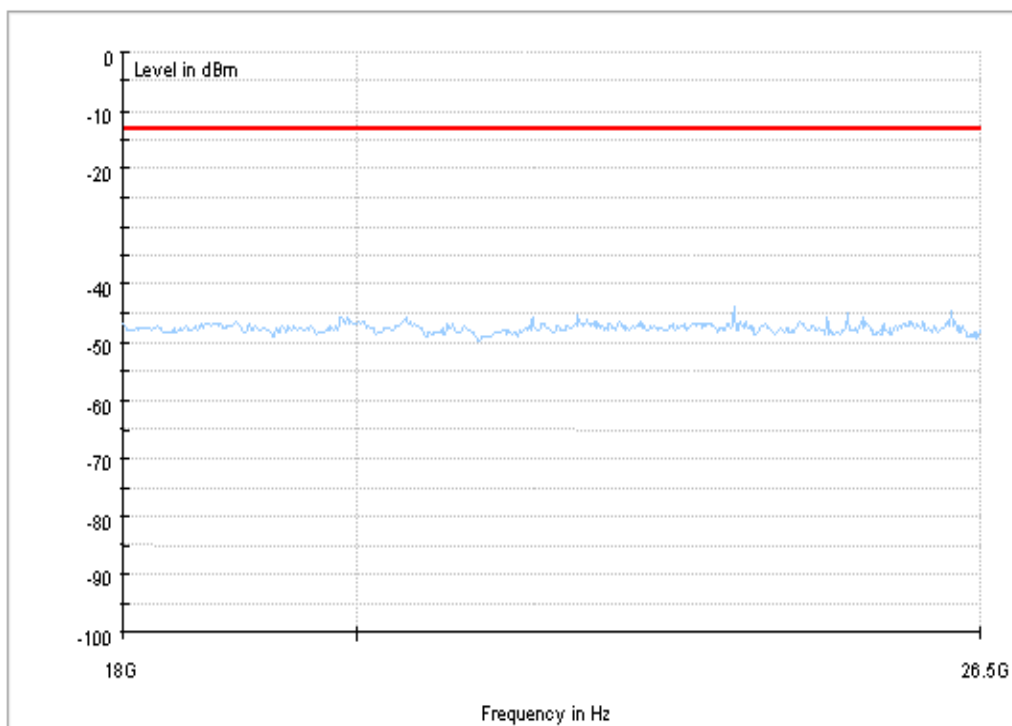
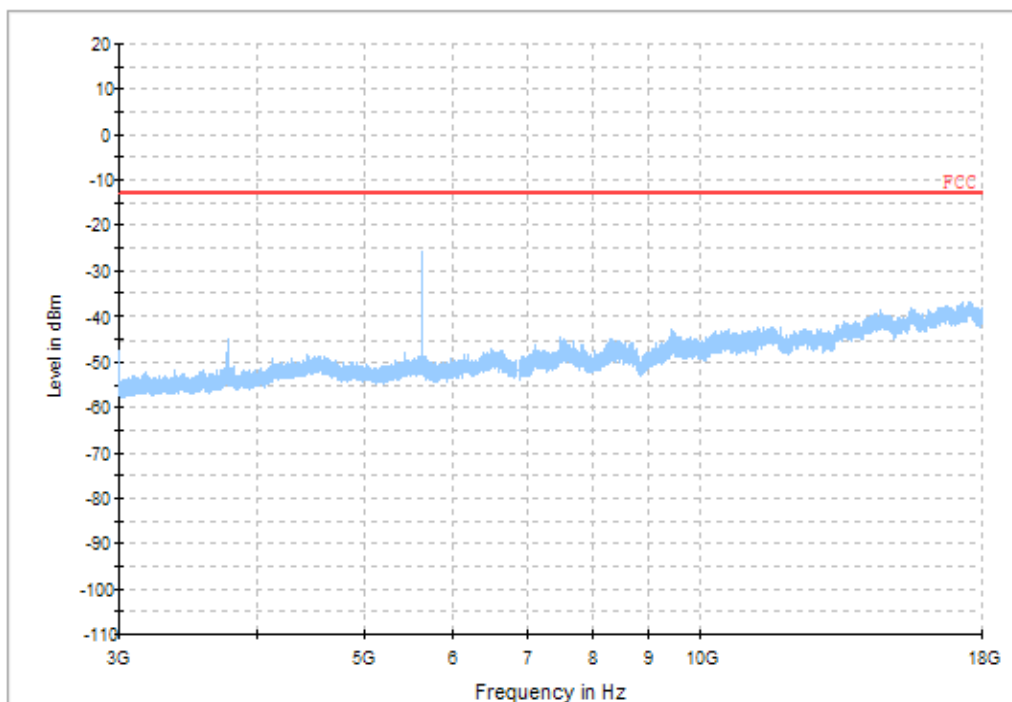
7.1.2 Test Band = BC1



Copy of FCC PART24 CDMA1900_L

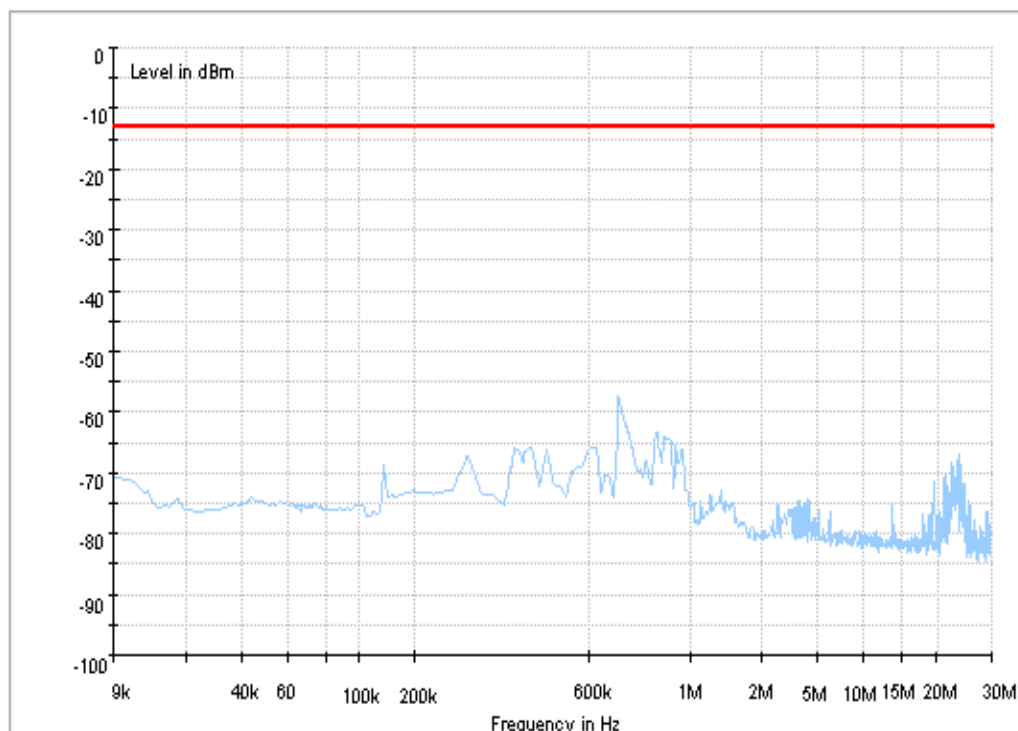


Copy of FCC PART24 CDMA1900_H

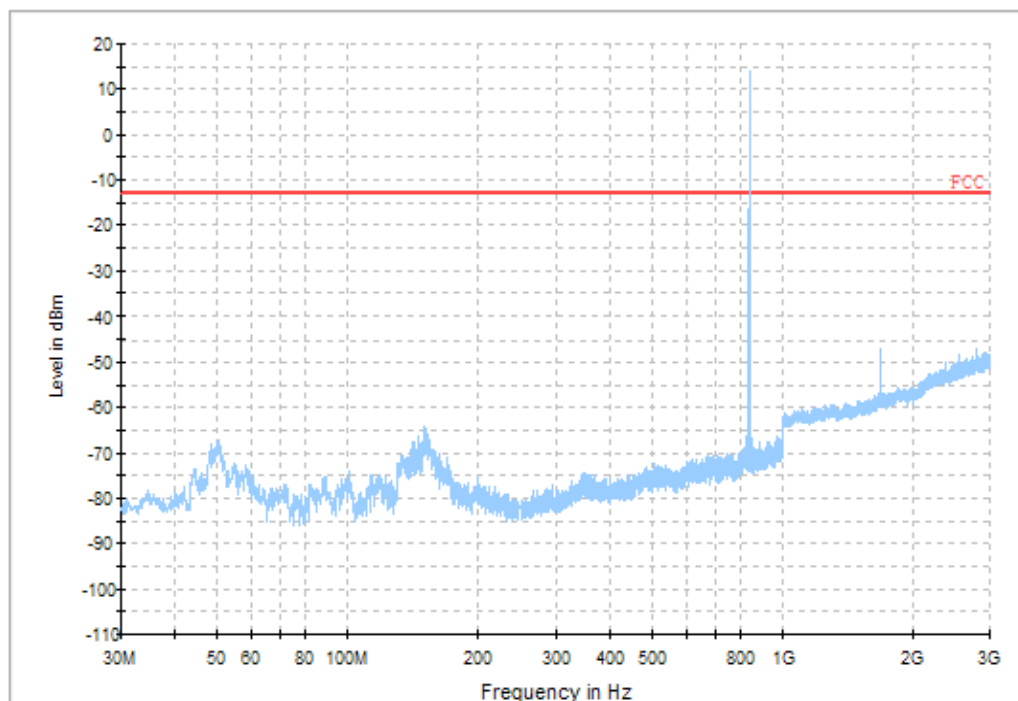


7.2 For CDMA/EV-DO/Subtype0

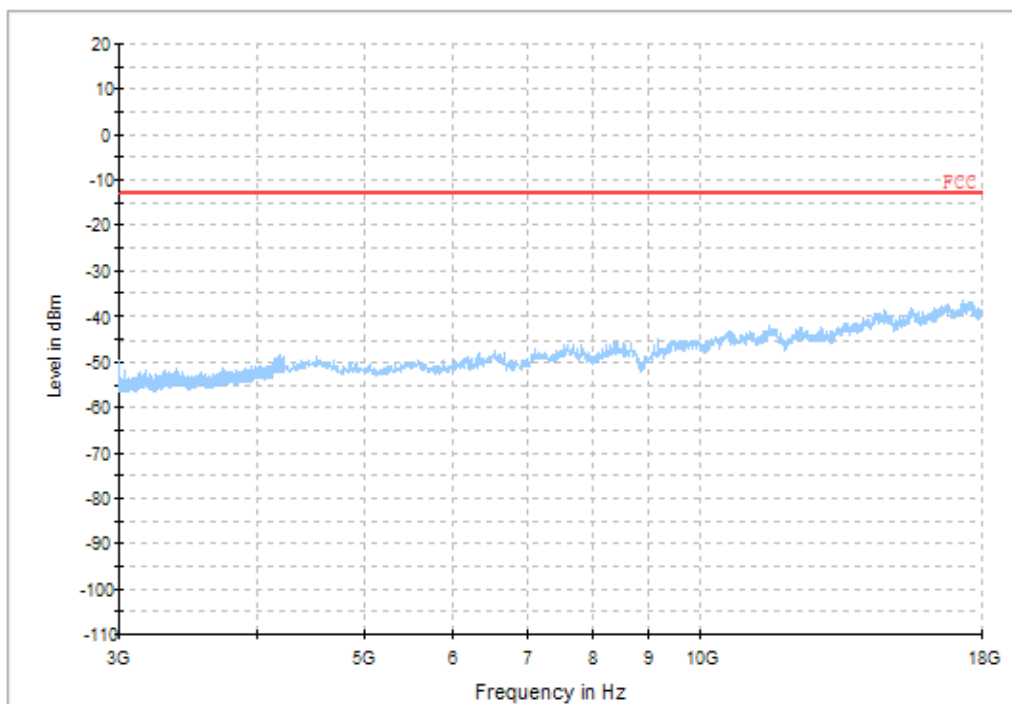
7.2.1 Test Band = BC0



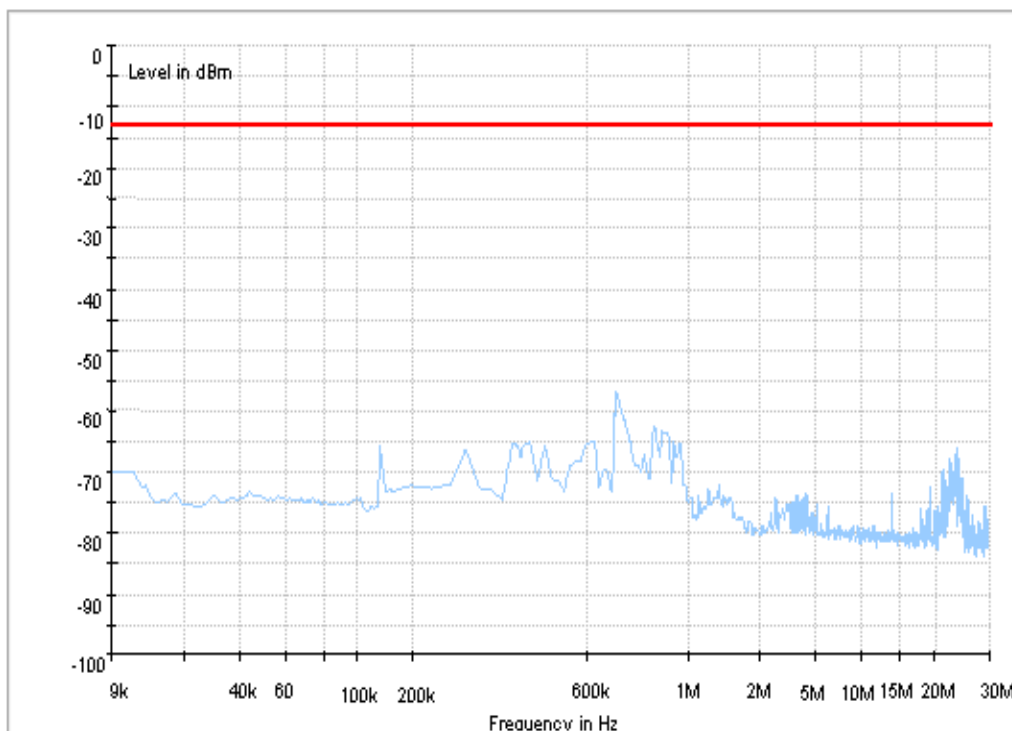
Copy of FCC PART22 CDMA800_L



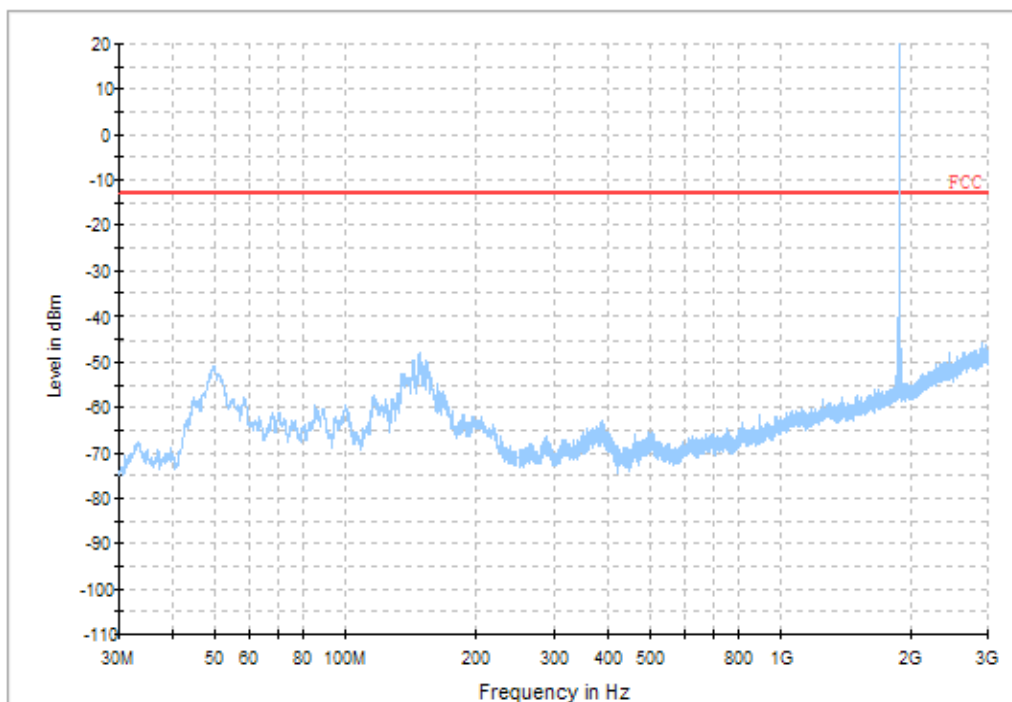
Copy of FCC PART22 CDMA800_H



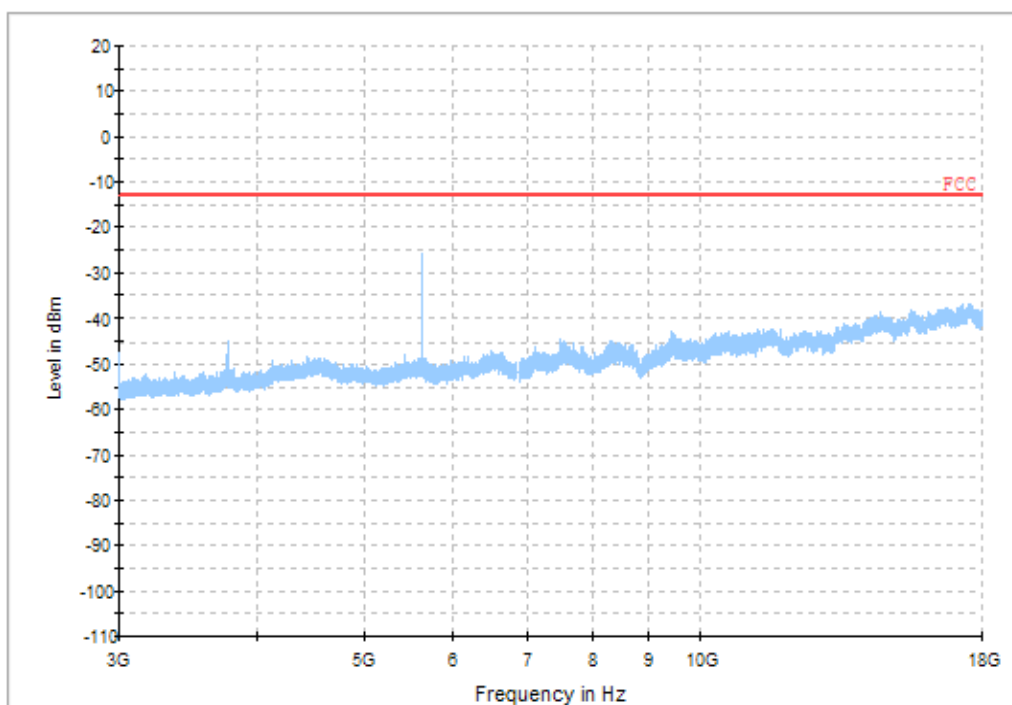
7.2.2 Test Band = BC1

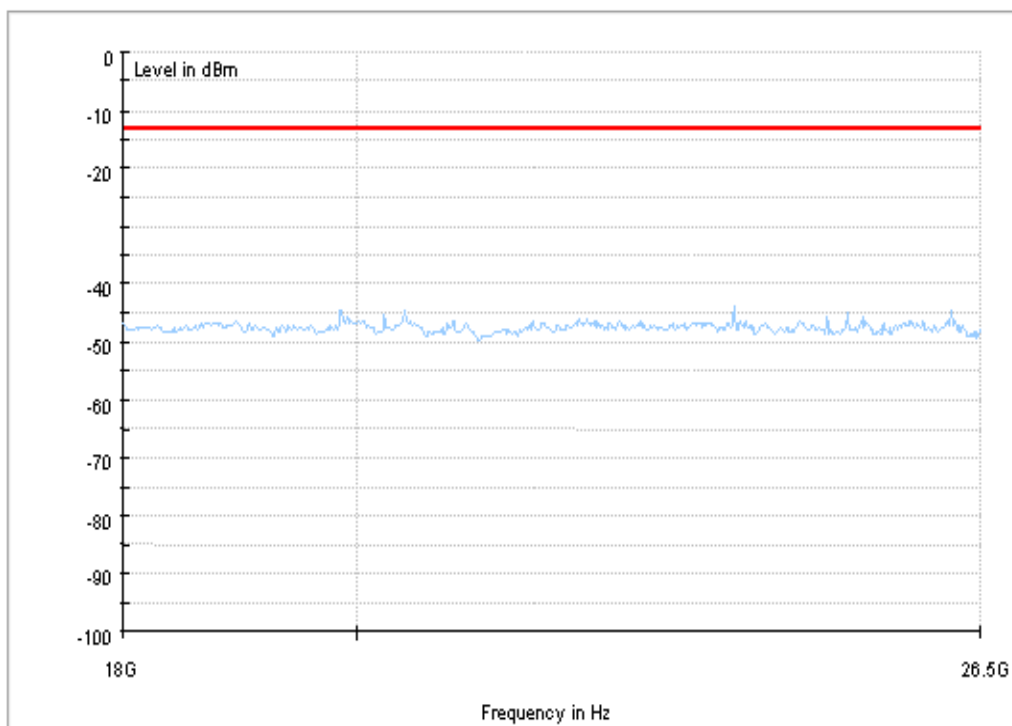


Copy of FCC PART24 CDMA1900_L



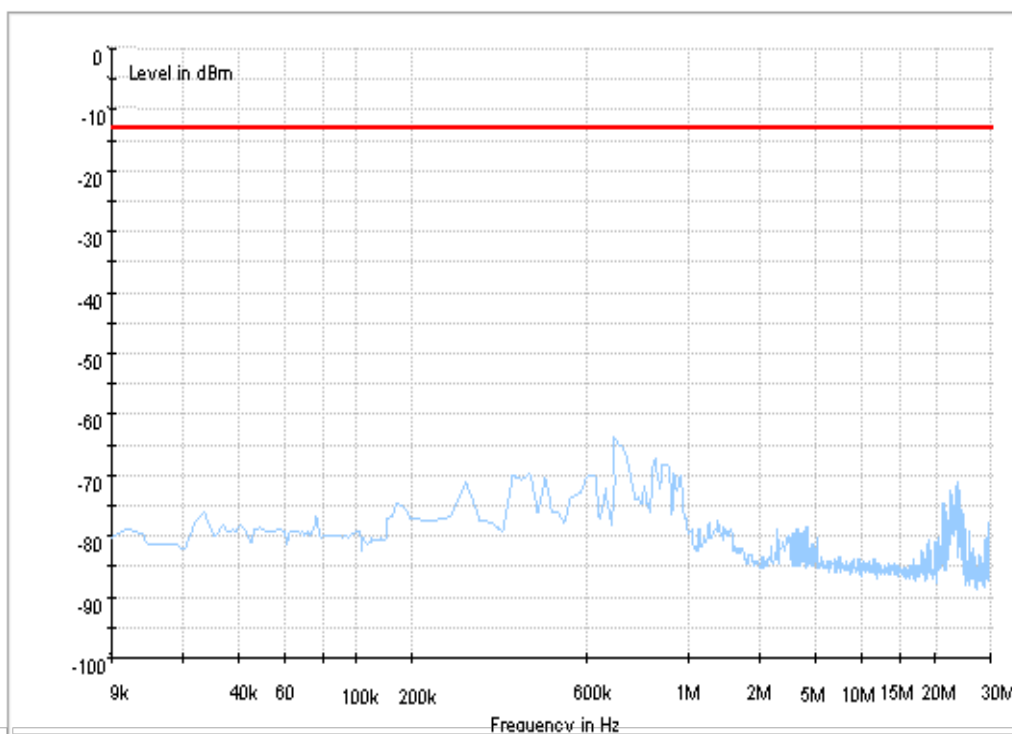
Copy of FCC PART24 CDMA1900_H



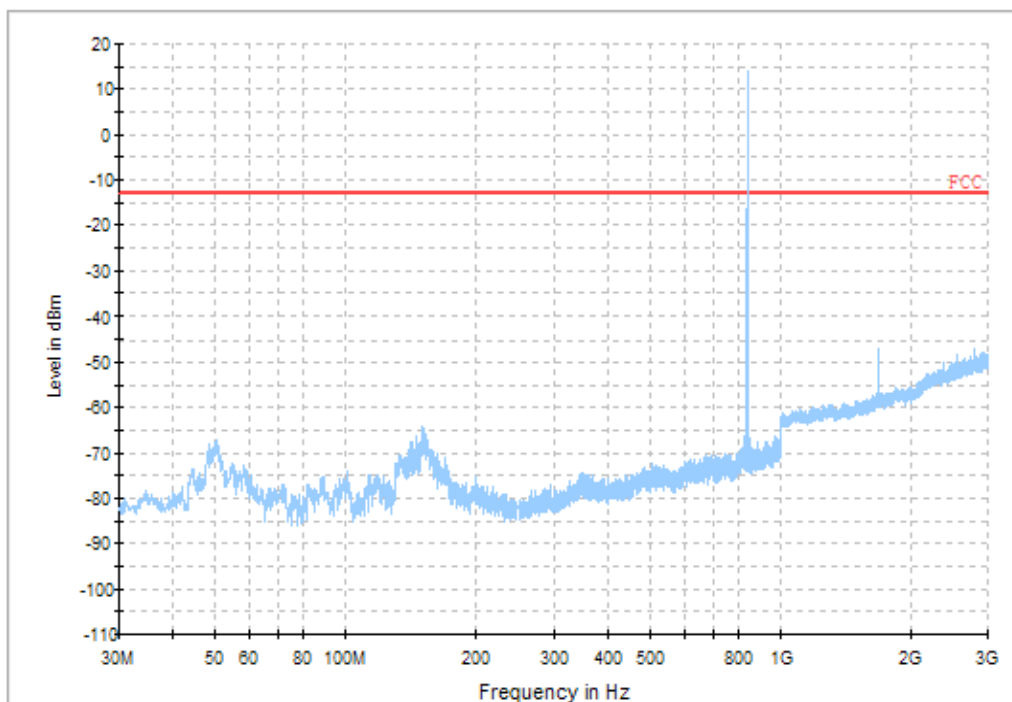


7.3 For CDMA/EV-DO/Subtype2

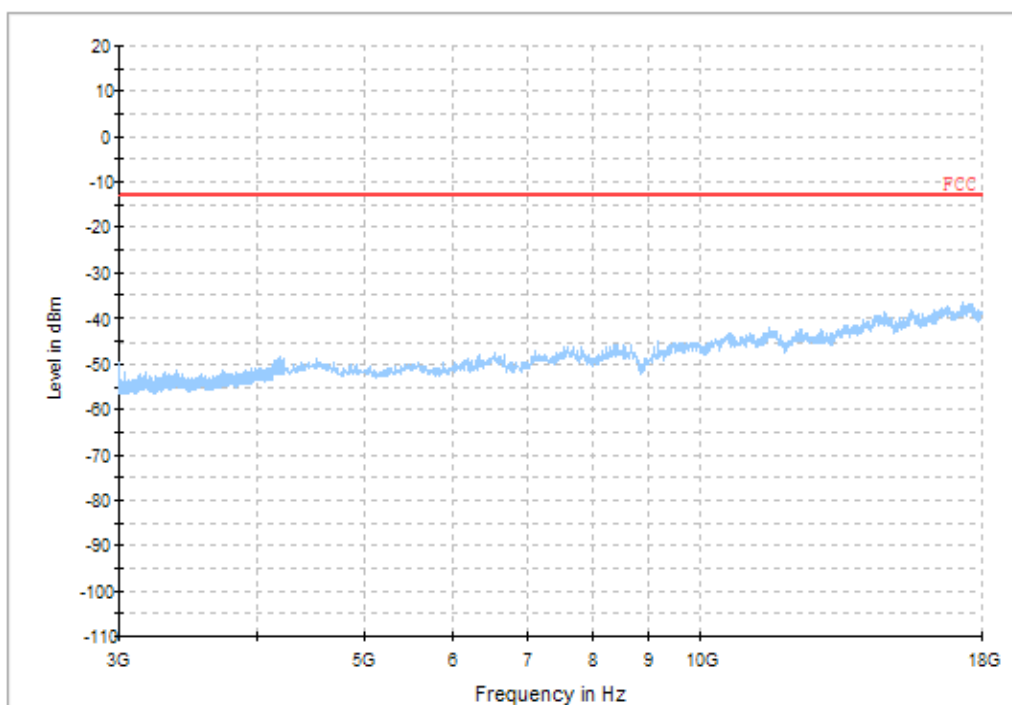
7.3.1 Test Band = BC0



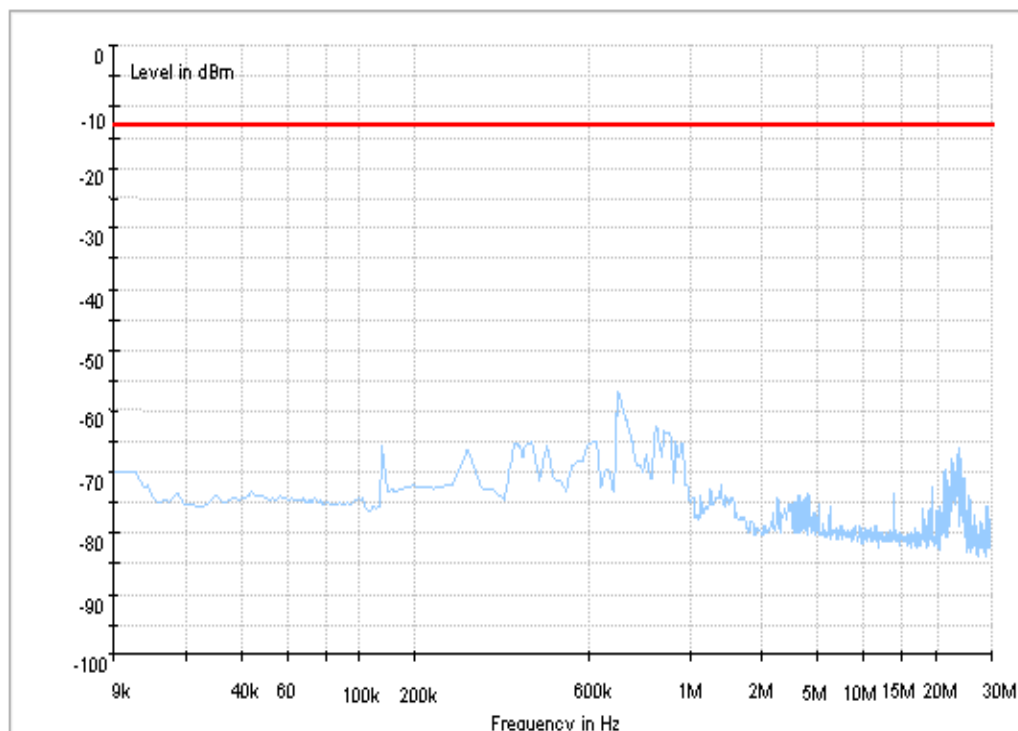
Copy of FCC PART22 CDMA800_L



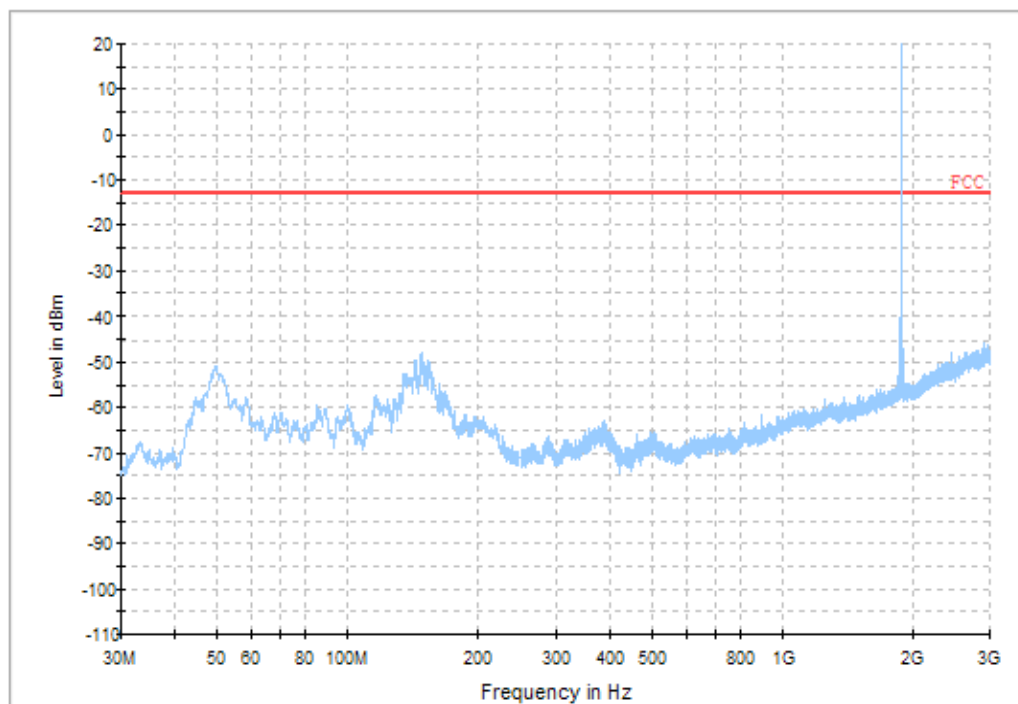
Copy of FCC PART22 CDMA800_H



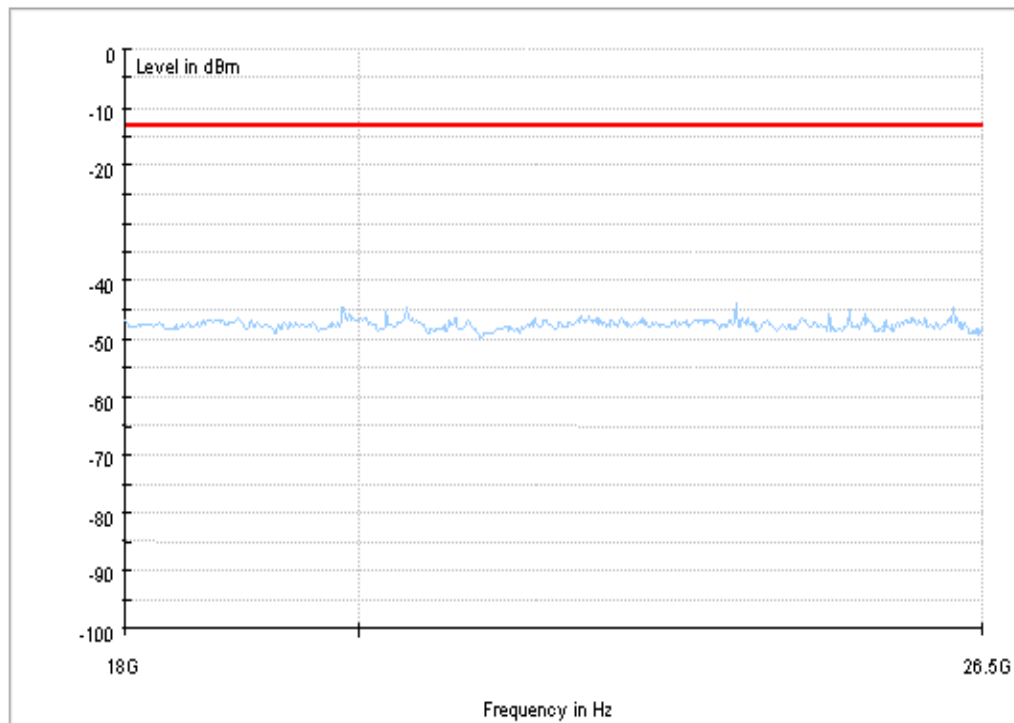
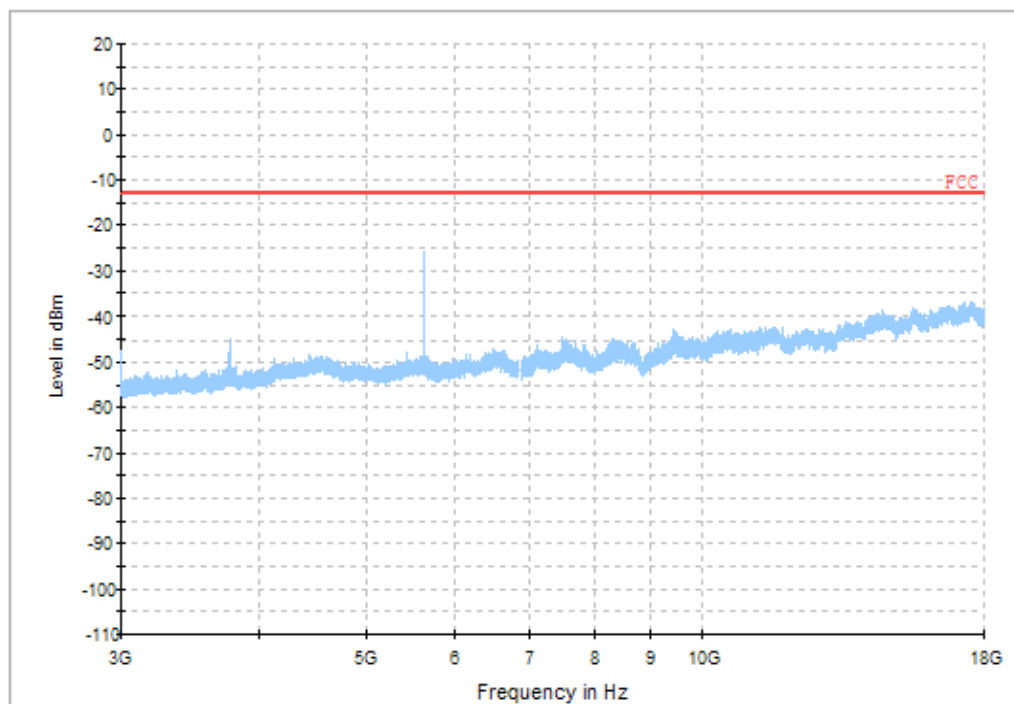
7.3.2 Test Band = BC1



Copy of FCC PART24 CDMA1900_L



Copy of FCC PART24 CDMA1900_H



8Appendix_H: Frequency Stability

8.1 For CDMA/1X

8.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BC0	CDMA/1X/TM1	LCH	TN	VL	-0.0732	-0.00009	PASS
				VN	0.0732	0.00009	PASS
				VH	0.2197	0.00027	PASS
		MCH	TN	VL	-0.5127	-0.00061	PASS
				VN	-0.1465	-0.00018	PASS
				VH	-0.1465	-0.00018	PASS
		HCH	TN	VL	-0.4395	-0.00052	PASS
				VN	-0.2197	-0.00026	PASS
				VH	-0.2197	-0.00026	PASS
	CDMA/1X/TM3	LCH	TN	VL	-0.293	-0.00036	PASS
				VN	-0.0732	-0.00009	PASS
				VH	0.0732	0.00009	PASS
		MCH	TN	VL	-0.5127	-0.00061	PASS
				VN	-0.7324	-0.00088	PASS
				VH	0.293	0.00035	PASS
		HCH	TN	VL	-0.5859	-0.00069	PASS
				VN	-0.293	-0.00035	PASS
				VH	-0.4395	-0.00052	PASS
BC0	CDMA/EV-DO/Subtype0	LCH	TN	VL	-0.07	-0.00008	PASS
				VN	-1.03	-0.00125	PASS
				VH	-2.71	-0.00142	PASS
		MCH	TN	VL	-0.66	-0.00079	PASS
				VN	-0.22	-0.00026	PASS
				VH	0.15	0.00018	PASS
		HCH	TN	VL	-2.49	-0.00294	PASS
				VN	-1.17	-0.00138	PASS
				VH	-2.12	-0.0025	PASS
	CDMA/EV-DO/Subtype2	LCH	TN	VL	13.84	0.01678	PASS
				VN	-26.07	-0.03161	PASS
				VH	4.25	0.00515	PASS



Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		MCH	TN	VL	-14.58	-0.01743	PASS
				VN	-2.71	-0.00142	PASS
				VH	0.15	0.00018	PASS
		HCH	TN	VL	-3.74	-0.00441	PASS
				VN	-0.44	-0.00052	PASS
				VH	3.15	0.00371	PASS
BC1	CDMA/1X/TM1	LCH	TN	VL	-1.7578	-0.00095	PASS
				VN	-1.3184	-0.00071	PASS
				VH	-1.6113	-0.00087	PASS
		MCH	TN	VL	2.4902	0.00132	PASS
				VN	3.0762	0.00164	PASS
				VH	2.6367	0.0014	PASS
		HCH	TN	VL	-1.4648	-0.00077	PASS
				VN	-1.6113	-0.00084	PASS
				VH	-1.6846	-0.00088	PASS
	CDMA/1X/TM3	LCH	TN	VL	-1.8311	-0.00099	PASS
				VN	-1.9043	-0.00103	PASS
				VH	-2.0508	-0.00111	PASS
		MCH	TN	VL	2.4902	0.00132	PASS
				VN	2.417	0.00129	PASS
				VH	2.7832	0.00148	PASS
		HCH	TN	VL	-2.5635	-0.00134	PASS
				VN	-1.9043	-0.001	PASS
				VH	-1.9043	-0.001	PASS
BC1	CDMA/EV-DO/Subtype0	LCH	TN	VL	4.03	0.00218	PASS
				VN	2.71	0.00146	PASS
				VH	4.76	0.00257	PASS
		MCH	TN	VL	4.98	0.00265	PASS
				VN	2.42	0.00129	PASS
				VH	1.39	0.00074	PASS
		HCH	TN	VL	-3.88	-0.00203	PASS
				VN	-5.93	-0.00311	PASS
				VH	-7.25	-0.0038	PASS
	CDMA/EV-DO/Subtype2	LCH	TN	VL	14.79	0.00799	PASS
				VN	-8.28	-0.00447	PASS
				VH	4.1	0.00221	PASS
		MCH	TN	VL	2.86	0.00152	PASS
				VN	-0.15	-0.00008	PASS
				VH	6.88	0.00366	PASS
		HCH	TN	VL	-9.16	-0.0048	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				VN	-5.49	-0.00288	PASS
				VH	1.9	0.001	PASS

8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BC0	CDMA/1X/TM1	LCH	VN	-30	-0.3662	-0.00044	PASS
				-20	-0.1465	-0.00018	PASS
				-10	-0.2197	-0.00027	PASS
				0	-0.1465	-0.00018	PASS
				10	0.0732	0.00009	PASS
				20	-0.1465	-0.00018	PASS
				30	-0.2197	-0.00027	PASS
				40	-0.0732	-0.00009	PASS
				50	-2.71	-0.00142	PASS
		MCH	VN	-30	-0.4395	-0.00053	PASS
				-20	-2.71	-0.00142	PASS
				-10	-2.71	-0.00142	PASS
				0	-0.5859	-0.0007	PASS
				10	-0.2197	-0.00026	PASS
				20	0.1465	0.00018	PASS
				30	-0.293	-0.00035	PASS
				40	-0.2197	-0.00026	PASS
				50	0.1465	0.00018	PASS
		HCH	VN	-30	-0.8057	-0.00095	PASS
				-20	-2.71	-0.00142	PASS
				-10	-0.0732	-0.00009	PASS
				0	-0.293	-0.00035	PASS
				10	-0.3662	-0.00043	PASS
				20	-2.71	-0.00142	PASS
				30	-0.0732	-0.00009	PASS
				40	-0.2197	-0.00026	PASS
				50	-0.0732	-0.00009	PASS
	CDMA/1X/TM3	LCH	VN	-30	-0.3662	-0.00044	PASS
				-20	-0.3662	-0.00044	PASS
				-10	-0.293	-0.00036	PASS
				0	-0.3662	-0.00044	PASS
				10	-0.5127	-0.00062	PASS
				20	-0.5127	-0.00062	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				30	0.0732	0.00009	PASS
				40	-0.4395	-0.00053	PASS
				50	-0.4395	-0.00053	PASS
		MCH	VN	-30	-0.5127	-0.00061	PASS
				-20	-0.1465	-0.00018	PASS
				-10	-0.5127	-0.00061	PASS
				0	-0.5859	-0.0007	PASS
				10	-0.4395	-0.00053	PASS
				20	-0.4395	-0.00053	PASS
				30	0.1465	0.00018	PASS
				40	-0.5127	-0.00061	PASS
				50	-0.4395	-0.00053	PASS
		HCH	VN	-30	-0.5859	-0.00069	PASS
				-20	-0.293	-0.00035	PASS
				-10	0.293	0.00035	PASS
				0	-0.6592	-0.00078	PASS
				10	-0.5127	-0.0006	PASS
				20	-0.8057	-0.00095	PASS
				30	-0.0732	-0.00009	PASS
				40	-0.5859	-0.00069	PASS
				50	-0.3662	-0.00043	PASS
BC0	CDMA/EV-DO/Subtype0	LCH	VN	-30	-0.88	-0.00107	PASS
				-20	0.51	0.00062	PASS
				-10	-2.34	-0.00284	PASS
				0	0.29	0.00035	PASS
				10	-0.29	-0.00035	PASS
				20	-0.37	-0.00045	PASS
				30	0.59	0.00072	PASS
				40	1.98	0.0024	PASS
				50	-0.59	-0.00072	PASS
		MCH	VN	-30	0.15	0.00018	PASS
				-20	2.05	0.00245	PASS
				-10	1.9	0.00227	PASS
				0	0.29	0.00035	PASS
				10	-0.88	-0.00105	PASS
				20	0.66	0.00079	PASS
				30	0.81	0.00097	PASS
				40	1.76	0.0021	PASS
				50	0.22	0.00026	PASS
		HCH	VN	-30	0.22	0.00026	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-20	0.73	0.00086	PASS
				-10	-0.29	-0.00034	PASS
				0	0.66	0.00078	PASS
				10	-0.59	-0.0007	PASS
				20	0.29	0.00034	PASS
				30	-1.54	-0.00182	PASS
				40	-0.37	-0.00044	PASS
				50	-0.29	-0.00034	PASS
	CDMA/EV-DO/Subtype2	LCH	VN	-30	-33.47	-0.04058	PASS
				-20	-13.18	-0.01598	PASS
				-10	6.88	0.00834	PASS
				0	0.81	0.00098	PASS
				10	-2.12	-0.00257	PASS
				20	2.12	0.00257	PASS
				30	6.88	0.00834	PASS
				40	19.85	0.02407	PASS
				50	-14.21	-0.01723	PASS
		MCH	VN	-30	-16.04	-0.01917	PASS
				-20	-7.4	-0.00885	PASS
				-10	-0.88	-0.00105	PASS
				0	3.37	0.00403	PASS
				10	-32.59	-0.03896	PASS
				20	-1.03	-0.00123	PASS
				30	4.76	0.00569	PASS
				40	5.49	0.00656	PASS
				50	-1.83	-0.00219	PASS
		HCH	VN	-30	-15.97	-0.01883	PASS
				-20	-8.42	-0.00993	PASS
				-10	21.68	0.02556	PASS
				0	1.25	0.00147	PASS
				10	-36.84	-0.04343	PASS
				20	-10.25	-0.01208	PASS
				30	6.37	0.00751	PASS
				40	-6.96	-0.0082	PASS
				50	-25.78	-0.03039	PASS
BC1	CDMA/1X/TM1	LCH	VN	-30	-2.1973	-0.00119	PASS
				-20	-1.6846	-0.00091	PASS
				-10	-1.8311	-0.00099	PASS
				0	-2.0508	-0.00111	PASS
				10	-1.4648	-0.00079	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				20	-1.5381	-0.00083	PASS
				30	-1.7578	-0.00095	PASS
				40	-1.4648	-0.00079	PASS
				50	-2.124	-0.00115	PASS
		MCH	VN	-30	2.3438	0.00125	PASS
				-20	2.9297	0.00156	PASS
				-10	3.2227	0.00171	PASS
				0	2.9297	0.00156	PASS
				10	2.7832	0.00148	PASS
				20	3.1494	0.00168	PASS
				30	3.5889	0.00191	PASS
				40	3.0029	0.0016	PASS
				50	3.0029	0.0016	PASS
		HCH	VN	-30	-1.6846	-0.00088	PASS
				-20	-1.6113	-0.00084	PASS
				-10	-2.0508	-0.00107	PASS
				0	-1.3916	-0.00073	PASS
				10	-1.8311	-0.00096	PASS
				20	-1.5381	-0.00081	PASS
				30	-1.8311	-0.00096	PASS
				40	-2.4902	-0.0013	PASS
				50	-1.9775	-0.00104	PASS
	CDMA/1X/TM3	LCH	VN	-30	-2.2705	-0.00123	PASS
				-20	-1.6113	-0.00087	PASS
				-10	-1.9775	-0.00107	PASS
				0	-1.9775	-0.00107	PASS
				10	-2.0508	-0.00111	PASS
				20	-1.8311	-0.00099	PASS
				30	-1.9775	-0.00107	PASS
				40	-1.9043	-0.00103	PASS
				50	-1.8311	-0.00099	PASS
		MCH	VN	-30	2.5635	0.00136	PASS
				-20	2.8564	0.00152	PASS
				-10	2.5635	0.00136	PASS
				0	2.417	0.00129	PASS
				10	2.8564	0.00152	PASS
				20	2.6367	0.0014	PASS
				30	2.71	0.00144	PASS
				40	3.0029	0.0016	PASS
				50	3.0029	0.0016	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		HCH	VN	-30	-2.417	-0.00127	PASS
				-20	-2.1973	-0.00115	PASS
				-10	-2.1973	-0.00115	PASS
				0	-2.2705	-0.00119	PASS
				10	-1.8311	-0.00096	PASS
				20	-1.9043	-0.001	PASS
				30	-1.9043	-0.001	PASS
				40	-1.9043	-0.001	PASS
				50	-2.3438	-0.00123	PASS
BC1	CDMA/EV-DO/Subtype0	LCH	VN	-30	0.51	0.00028	PASS
				-20	-1.1	-0.00059	PASS
				-10	0.15	0.00008	PASS
				0	0.88	0.00048	PASS
				10	0.07	0.00004	PASS
				20	1.32	0.00071	PASS
				30	-0.73	-0.00039	PASS
				40	1.98	0.00107	PASS
				50	-0.88	-0.00048	PASS
		MCH	VN	-30	3.96	0.00211	PASS
				-20	3	0.0016	PASS
				-10	2.56	0.00136	PASS
				0	1.83	0.00097	PASS
				10	0.88	0.00047	PASS
				20	4.39	0.00234	PASS
				30	1.17	0.00062	PASS
				40	1.76	0.00094	PASS
				50	4.1	0.00218	PASS
		HCH	VN	-30	-6.96	-0.00365	PASS
				-20	-4.91	-0.00257	PASS
				-10	-4.91	-0.00257	PASS
				0	-4.25	-0.00223	PASS
				10	-3.08	-0.00161	PASS
				20	-6.3	-0.0033	PASS
				30	-2.71	-0.00142	PASS
				40	-3.74	-0.00196	PASS
				50	-4.39	-0.0023	PASS
	CDMA/EV-DO/Subtype2	LCH	VN	-30	-2.56	-0.00138	PASS
				-20	-10.91	-0.00589	PASS
				-10	-10.91	-0.00589	PASS
				0	-2.71	-0.00142	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				10	-12.08	-0.00653	PASS
				20	10.25	0.00554	PASS
				30	-3.59	-0.00194	PASS
				40	-1.25	-0.00068	PASS
				50	2.42	0.00131	PASS
		MCH	VN	-30	5.13	0.00273	PASS
				-20	-1.39	-0.00074	PASS
				-10	3.08	0.00164	PASS
				0	-8.57	-0.00456	PASS
				10	11.06	0.00588	PASS
				20	3.52	0.00187	PASS
				30	-6.23	-0.00331	PASS
				40	0.07	0.00004	PASS
				50	5.71	0.00304	PASS
		HCH	VN	-30	-1.83	-0.00096	PASS
				-20	-14.43	-0.00756	PASS
				-10	-13.92	-0.00729	PASS
				0	-12.23	-0.00641	PASS
				10	-0.22	-0.00012	PASS
				20	-2.78	-0.00146	PASS
				30	-4.1	-0.00215	PASS
				40	-5.49	-0.00288	PASS
				50	-0.29	-0.00015	PASS

END