5. WCDMA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	17.11	±2066	12.21	±2087.5	-1.10	±2116.5	PASS
	-20	-7.51		-0.62		-18.48		
	-10	-3.43		22.45		7.67		
	0	16.47		13.25		4.32		
	+10	30.18		1.31		-17.33		
	+20	31.07		-12.22		11.90		
	+30	-7.98		30.62		6.63		
	+40	26.31		13.45		29.93		
	+55	12.10		-12.42		19.76		
4.2	+25	-6.17		31.12		23.89		
3.45	+25	18.56		-17.80		-18.12		

6. WCDMA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-4.12	±1852.4	-11.67	±1880.0	-1.29	±1907.6	PASS
	-20	19.15		12.28		25.60		
	-10	5.35		-14.36		15.11		
	0	18.92		18.59		-3.17		
	+10	31.40		21.39		18.12		
	+20	13.55		38.27		-10.39		
	+30	2.31		2.37		17.47		
	+40	-12.52		-13.47		28.84		
	+55	-13.65		-5.81		-2.53		
4.2	+25	24.23		14.68		21.05		
3.45	+25	23.12		25.37		-25.11		

7. HSDPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	28.46	±2066	-24.87	±2087.5	17.11	±2116.5	PASS
	-20	-8.66		-14.06		14.41		
	-10	20.85		37.23		21.57		
	0	12.78		-8.41		-24.37		
	+10	-14.75		-13.95		-13.96		
	+20	8.78		-24.37		35.11		
	+30	-1.49		12.88		-8.31		
	+40	17.14		-14.75		-13.95		
	+55	-23.61		23.37		25.37		
4.2	+25	33.03		7.93		7.98		
3.45	+25	17.14		-31.21		1.98		

8. HSDPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	11.57	±1852.4	-3.54	±1880	2.50	±1907.6	PASS
	-20	-16.05		22.71		-8.48		
	-10	20.42		15.37		-14.02		
	0	-3.11		-12.21		-9.01		
	+10	21.71		10.60		5.64		
	+20	20.12		-4.81		-3.85		
	+30	-15.01		35.11		9.57		
	+40	23.71		8.46		28.32		
	+55	16.42		-24.88		-12.42		
4.2	+25	-11.25		29.53		-2.83		
3.45	+25	11.53		-2.17		14.32		

9. HSUPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	27.12	±2066	14.51	±2087.5	15.05	±2116.5	PASS
	-20	-15.40		-19.43		27.52		
	-10	-12.71		-12.79		38.71		
	0	-14.09		-0.44		-7.32		
	+10	-0.37		0.01		-4.91		
	+20	-11.85		-6.64		21.35		
	+30	28.57		24.25		-5.94		
	+40	-11.89		9.73		13.78		
	+55	-0.45		25.76		28.55		
4.2	+25	2.78		-4.67		29.31		
3.45	+25	3.65		5.65		-6.60		

10. HSUPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	33.54	±1852.4	-11.69	±1880	7.17	±1907.6	PASS
	-20	28.13		-0.74		2.12		
	-10	7.82		0.11		-4.85		
	0	2.41		14.82		17.08		
	+10	-4.73		-15.25		-1.86		
	+20	16.22		-11.79		23.52		
	+30	-1.55		-0.44		-0.48		
	+40	24.16		1.25		-12.05		
	+55	14.79		-7.84		-5.81		
4.2	+25	-8.08		6.72		26.38		
3.45	+25	22.78		-1.72		-15.45		

11. HSPA+ 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	27.55	±2066	13.31	±2087.5	13.45	±2116.5	PASS
	-20	-14.40		-19.33		27.52		
	-10	-12.71		-12.79		37.71		
	0	-14.09		-0.44		-7.32		
	+10	-0.37		0.01		-4.91		
	+20	-11.85		-6.64		21.35		
	+30	28.57		24.25		-5.94		
	+40	-11.89		9.73		13.78		
	+55	-0.45		25.76		28.55		
4.2	+25	1.78		-4.67		29.98		
3.45	+25	1.35		6.35		-7.93		

12. HSPA+ 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	32.67	±1852.4	-12.19	±1880	7.29	±1907.6	PASS
	-20	28.23		-0.82		2.12		
	-10	7.82		0.21		-4.85		
	0	2.41		15.82		17.08		
	+10	-4.73		-15.25		-1.86		
	+20	16.22		-11.79		23.52		
	+30	-1.55		-0.44		-0.48		
	+40	24.16		1.25		-12.05		
	+55	14.79		-7.84		-5.81		
4.2	+25	-8.08		6.71		26.38		
3.45	+25	22.38		-1.22		-16.38		

2.5 Conducted Out of Band Emissions

2.5.1 Requirement

According to FCC section 22.917(a) and FCC section 24.238(a) the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

2.5.2 Test Description

See section 2.1.2 of this report.

2.5.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

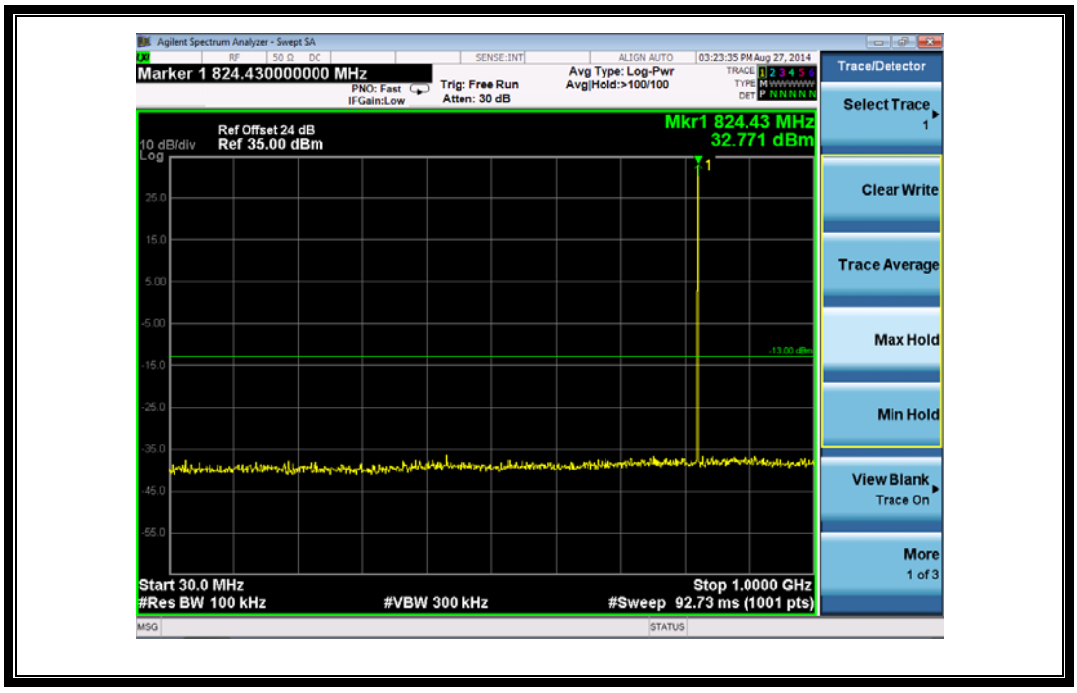
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-20.464	Plot A1toA1.1	-13	PASS
	190	836.6	-20.599	Plot A2toA2.1		PASS
	251	848.8	-20.295	Plot A3toA3.1		PASS
GSM 1900MHz	512	1850.2	-19.443	Plot B1toB1.1	-13	PASS
	661	1880.0	-20.042	Plot B2toB2.1		PASS
	810	1909.8	-19.885	Plot B3toB3.1		PASS
EDGE 850MHz	128	824.2	-20.037	Plot C1toC1.1	-13	PASS
	190	836.6	-20.675	Plot C2toC2.1		PASS
	251	848.8	-19.618	Plot C3toC3.1		PASS
EDGE 1900MHz	512	1850.2	-20.756	Plot D1toD1.1	-13	PASS
	661	1880.0	-19.588	Plot D2toD2.1		PASS
	810	1909.8	-19.829	Plot D3toD3.1		PASS
WCDMA 850MHz	4132	826.4	-20.746	Plot E1toE1.1	-13	PASS
	4175	835	-20.498	Plot E2toE2.1		PASS
	4233	846.6	-21.077	Plot E3toE3.1		PASS
WCDMA 1900MHz	9262	1852.4	-20.285	Plot F1toF1.1	-13	PASS
	9400	1880	-20.572	Plot F2toF2.1		PASS
	9538	1907.6	-20.856	Plot F3toF3.1		PASS
HSDPA	4132	826.4	<-25	Plot G1toG1.1	-13	PASS

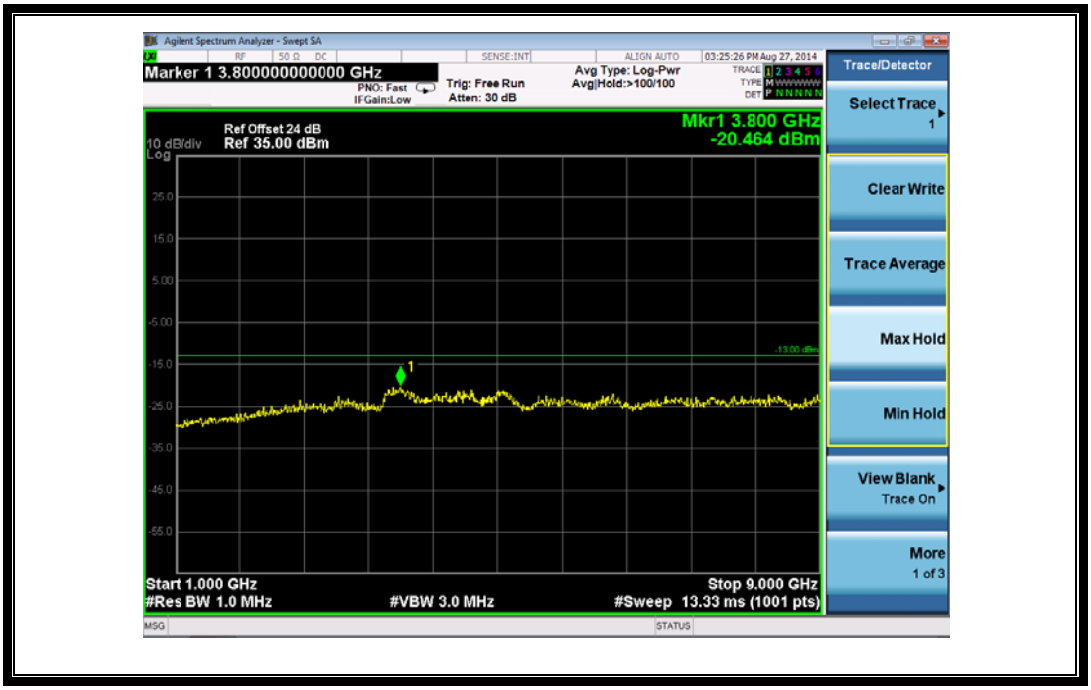
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
850MHz	4175	835	-19.259	Plot G2toG2.1		PASS
	4233	846.6	-19.979	Plot G3toG3.1		PASS
HSDPA 1900MHz	9262	1852.4	-22.519	Plot H1toH1.1	-13	PASS
	9400	1880	-23.001	Plot H2toH2.1		PASS
	9538	1907.6	-20.561	Plot H3toH3.1		PASS
HSUPA 850MHz	4132	826.4	-20.407	Plot I1toI1.1	-13	PASS
	4175	835	-20.323	Plot I2toI2.1		PASS
	4233	846.6	-20.955	Plot I3toI3.1		PASS
HSUPA 1900MHz	9262	1852.4	-21.468	Plot J1toJ1.1	-13	PASS
	9400	1880	-20.449	Plot J2toJ2.1		PASS
	9538	1907.6	-19.253	Plot J3toJ3.1		PASS
HSPA+ 850MHz	4132	826.4	-21.288	Plot K1toK1.1	-13	PASS
	4175	835	-21.317	Plot K2toK2.1		PASS
	4233	846.6	-20.393	Plot K3toK3.1		PASS
HSPA+ 1900MHz	9262	1852.4	-19.828	Plot L1toL1.1	-13	PASS
	9400	1880	-20.429	Plot L2toL2.1		PASS
	9538	1907.6	-21.209	Plot L3toL3.1		PASS

2. Test Plots for the Whole Measurement Frequency Range:

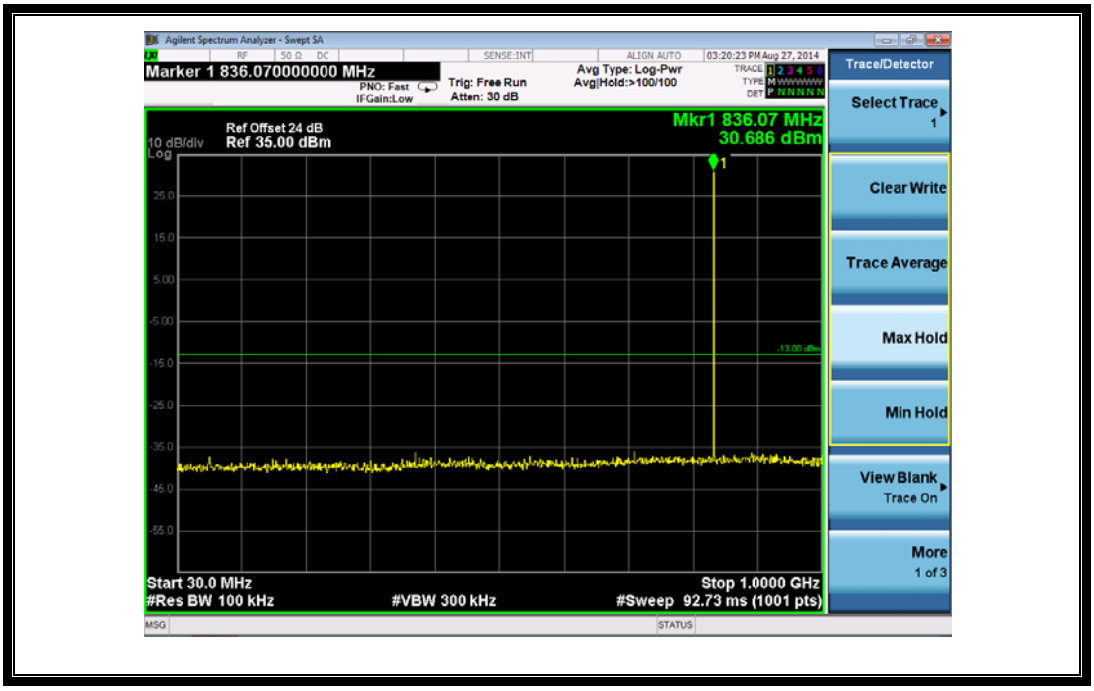
Note: the power of the EUT transmitting frequency should be ignored.



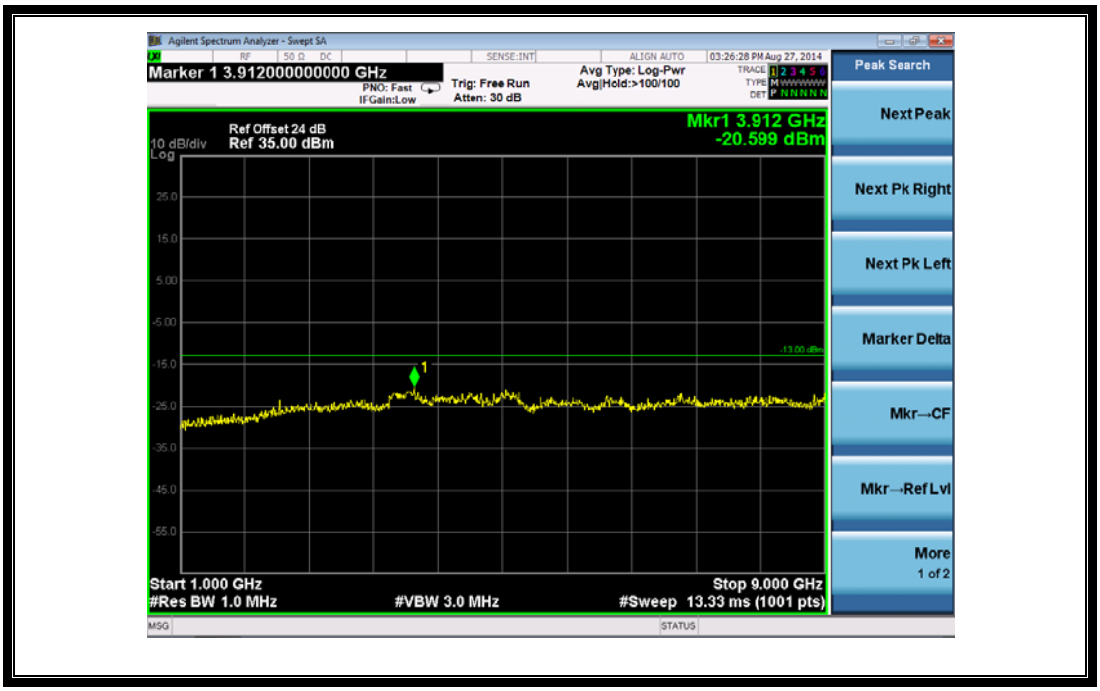
(Plot A1:GSM 850MHz Channel = 128, 30MHz to 1GHz)



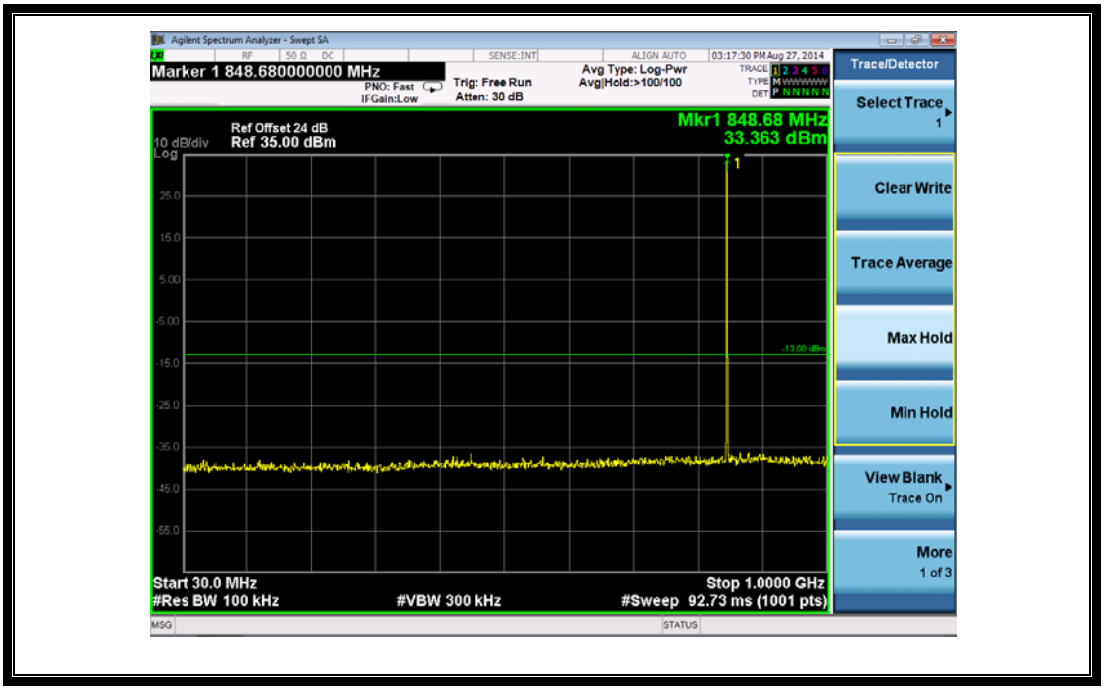
(Plot A1.1: GSM 850MHz Channel = 128, 1GHz to 9GHz)



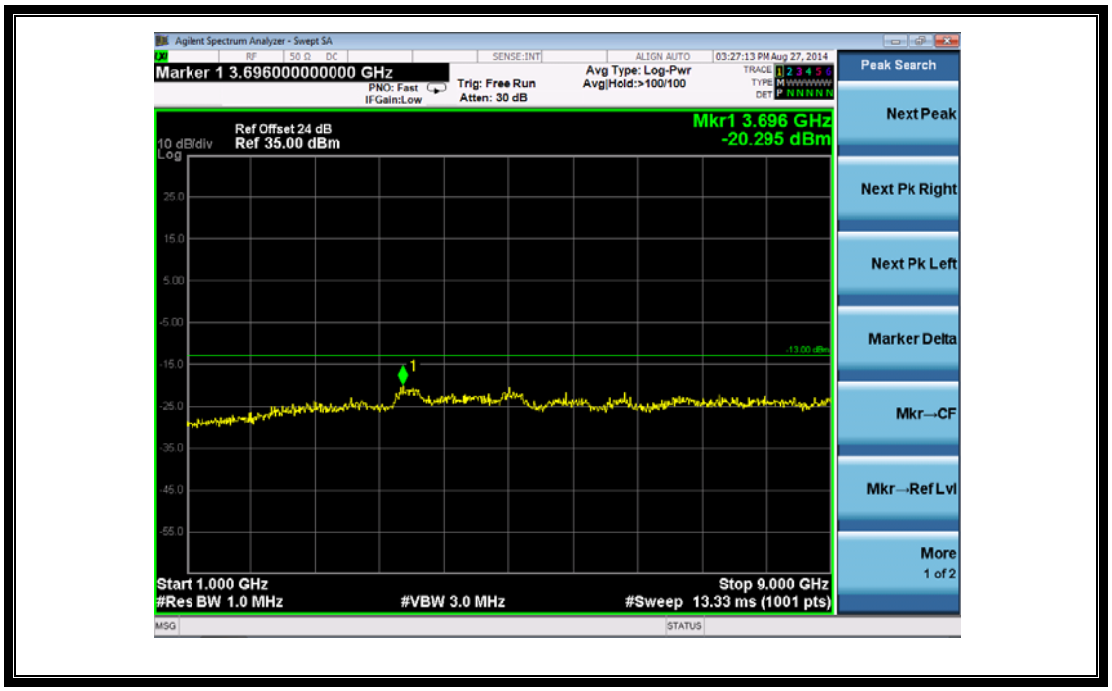
(Plot A2:GSM 850MHz Channel = 190, 30MHz to 1GHz)



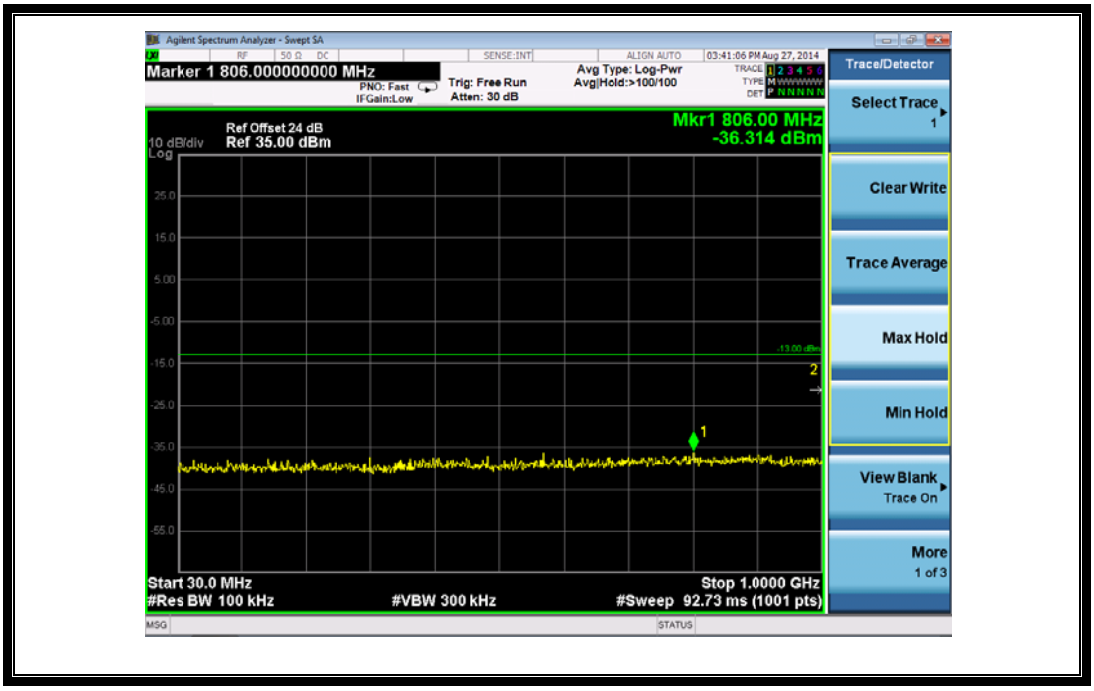
(Plot A2.1: GSM 850MHz Channel = 190, 1GHz to 9GHz)



(Plot A3:GSM 850MHz Channel = 251, 30MHz to 1GHz)

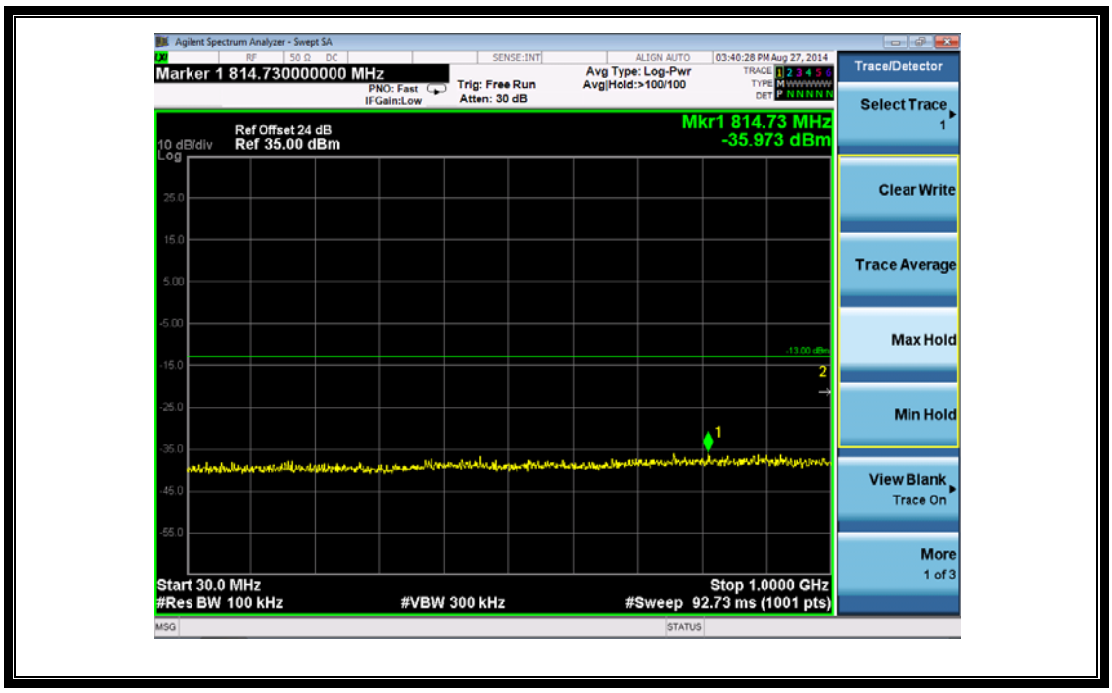


(Plot A3.1: GSM 850MHz Channel = 251, 1GHz to 9GHz)

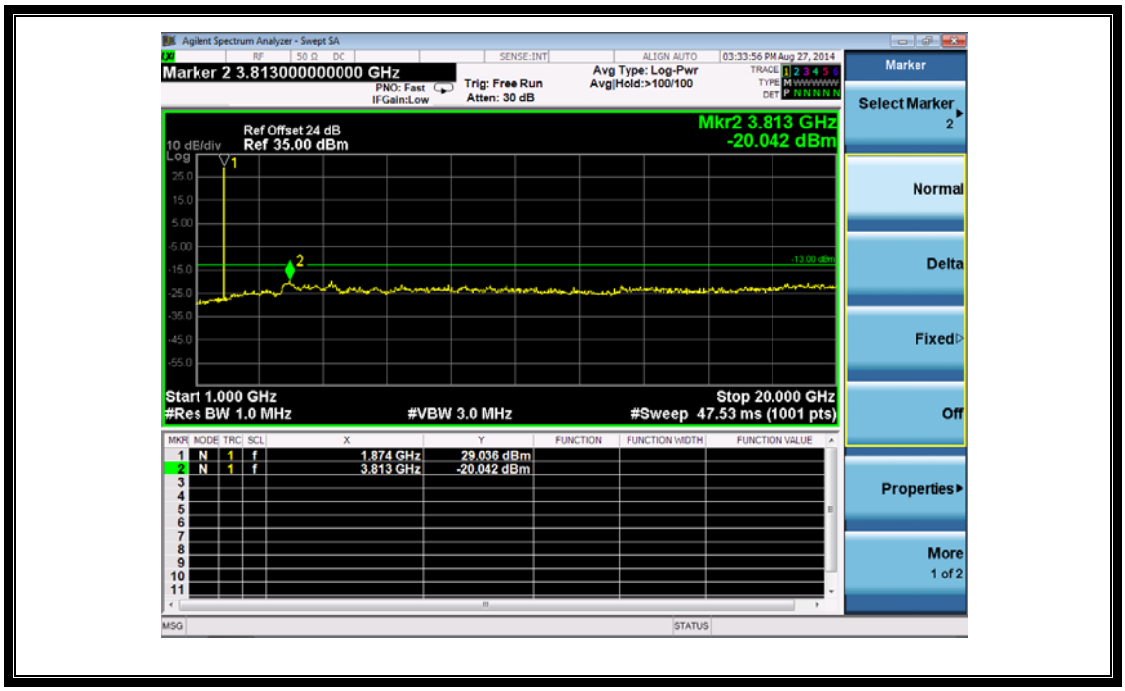


(Plot B1: GSM 1900MHz Channel = 512, 30MHz to 1GHz)

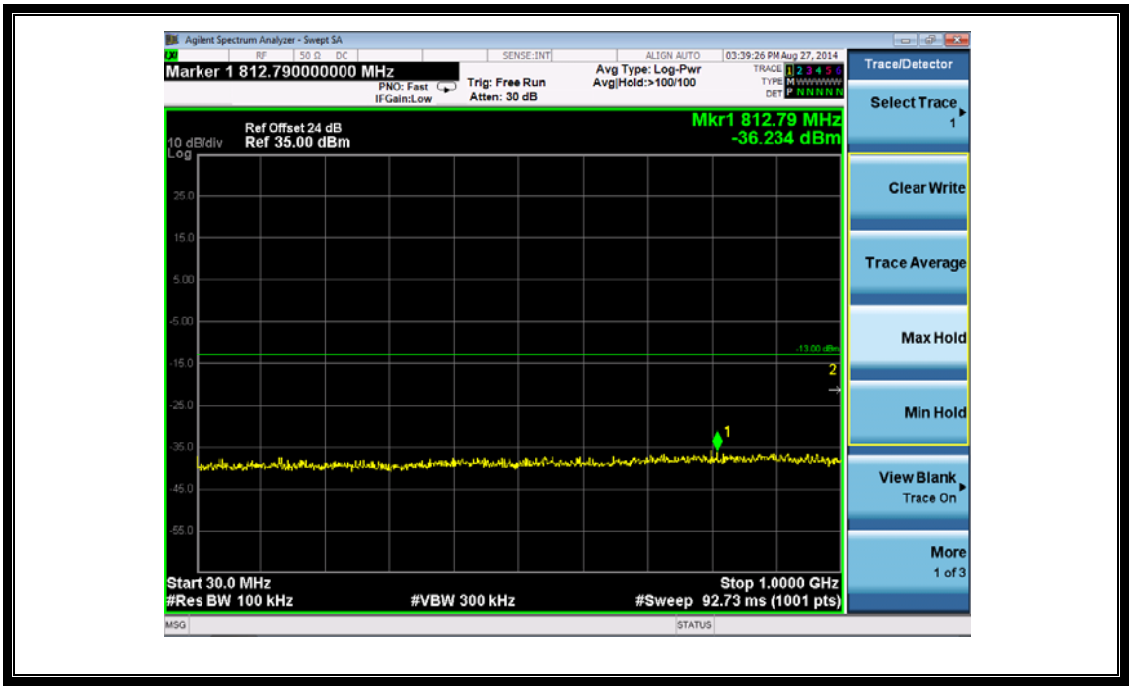
(Plot B1.1: GSM 1900MHz Channel = 512, 1GHz to 20GHz)



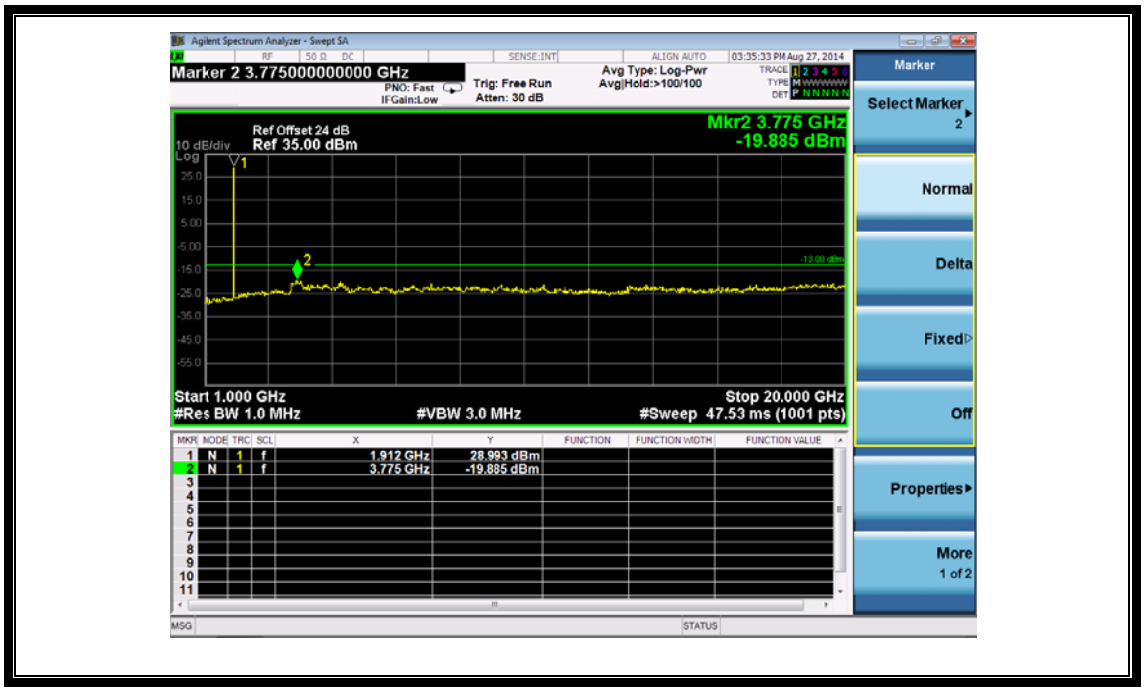
(Plot B2: GSM 1900MHz Channel = 661, 30MHz to 1GHz)



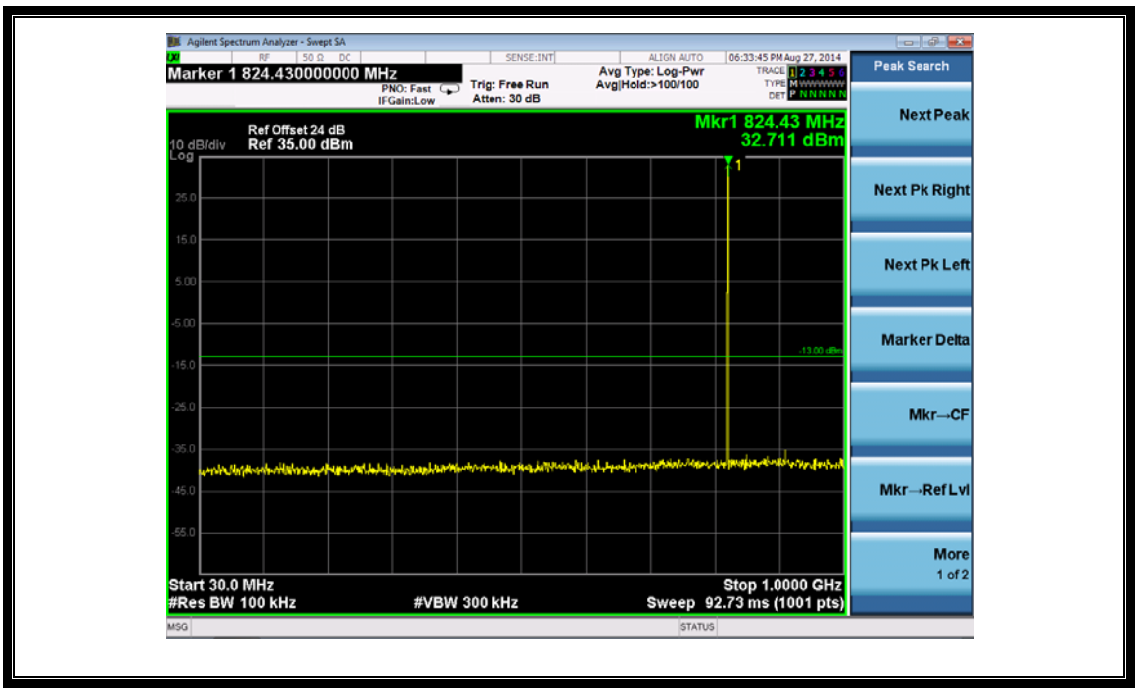
(Plot B2.1: GSM 1900MHz Channel = 661, 1GHz to 20GHz)



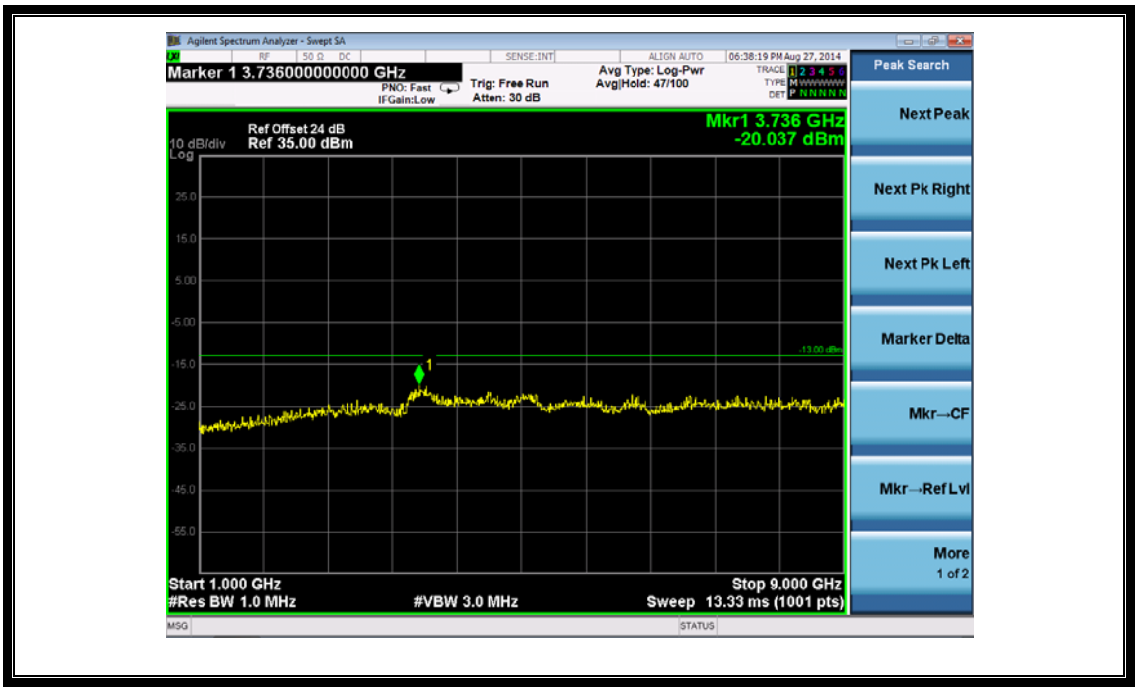
(Plot B3: GSM 1900MHz Channel = 810, 30MHz to 1GHz)



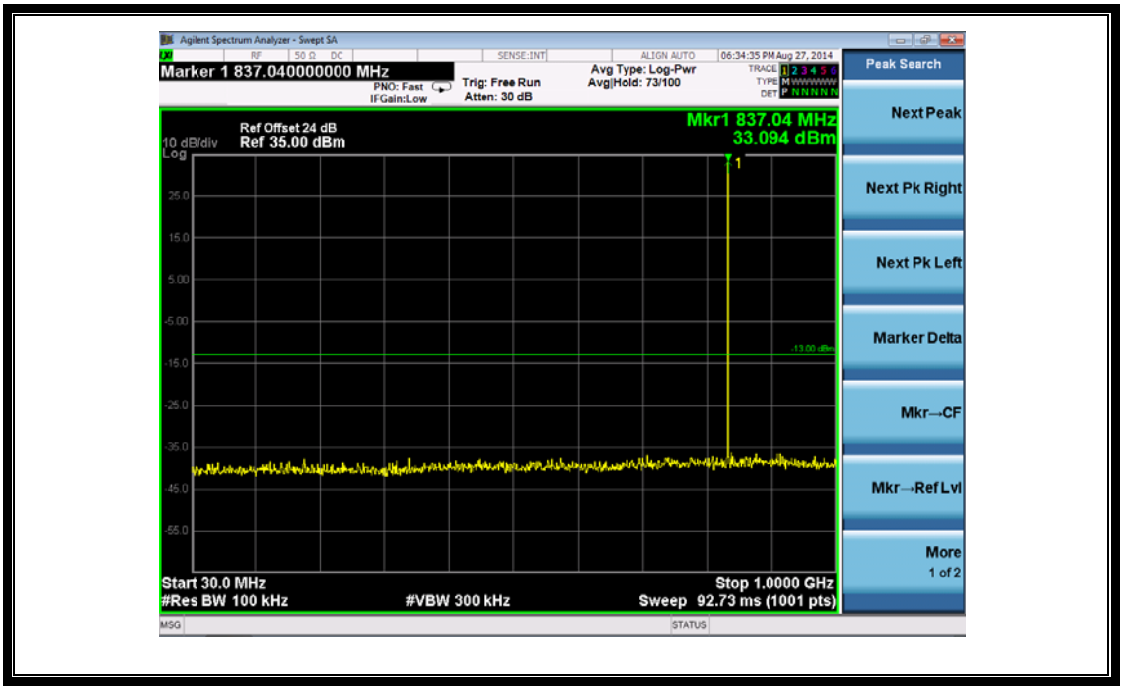
(Plot B3.1: GSM 1900MHz Channel = 810, 1GHz to 20GHz)



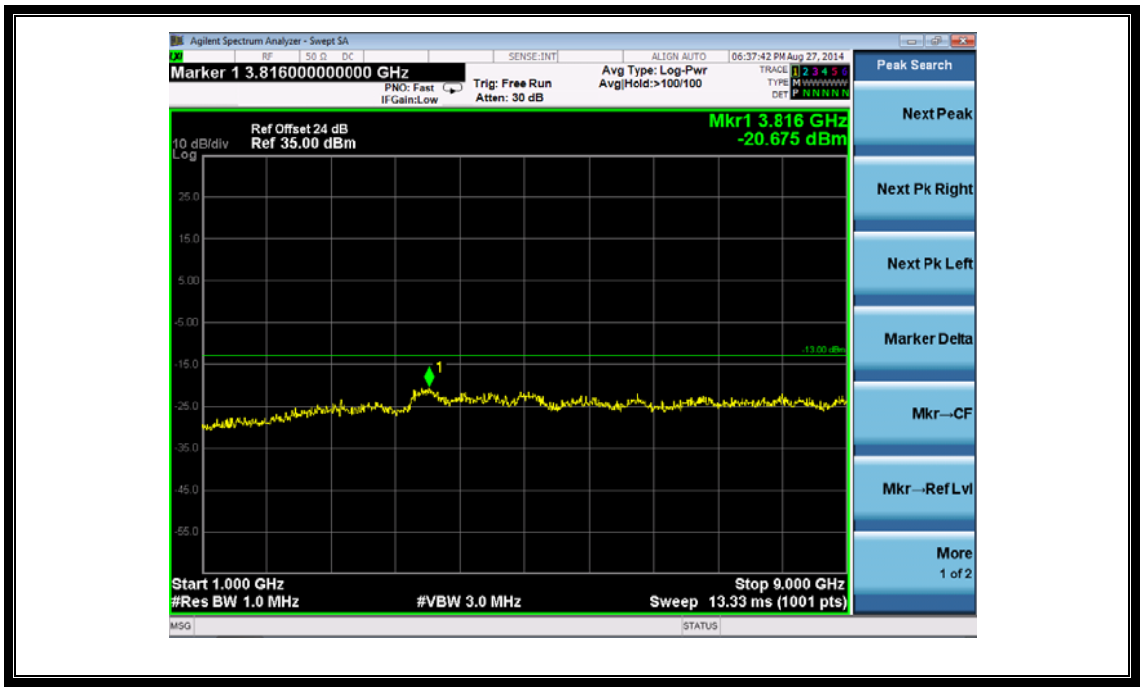
(Plot C1: EDGE 850MHz Channel = 128, 30MHz to 1GHz)



(Plot C1.1: EDGE 850MHz Channel = 128, 1GHz to 9GHz)



(Plot C2: EDGE 850MHz Channel = 190, 30MHz to 1GHz)

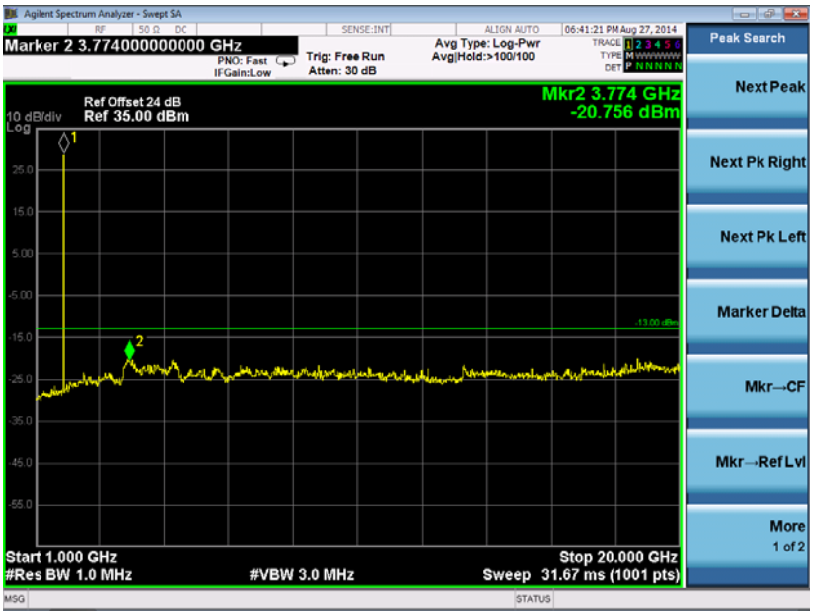


(Plot C2.1: EDGE 850MHz Channel = 190, 1GHz to 9GHz)

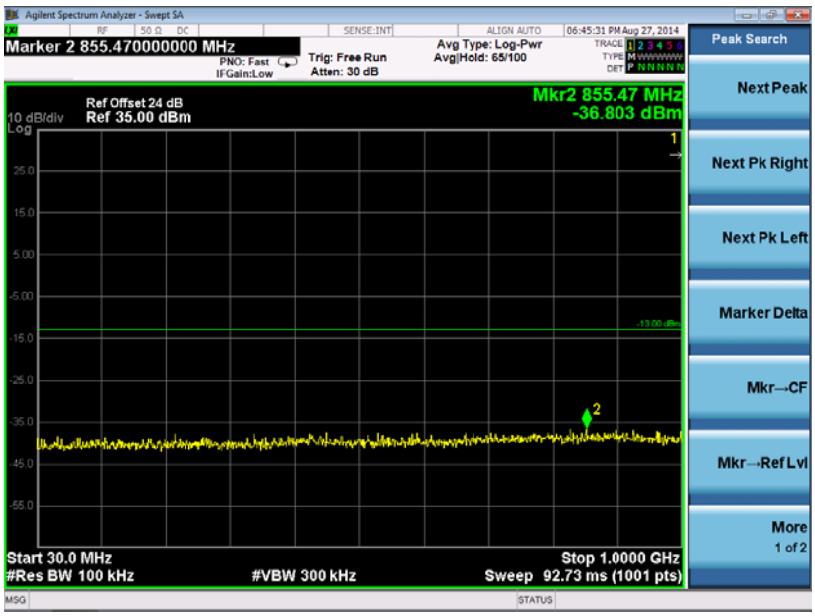
(Plot C3: EDGE 850MHz Channel = 251, 30MHz to 1GHz)

(Plot C3.1: EDGE 850MHz Channel = 251, 1GHz to 9GHz)

(Plot D1: EDGE 1900MHz Channel = 512, 30MHz to 1GHz)

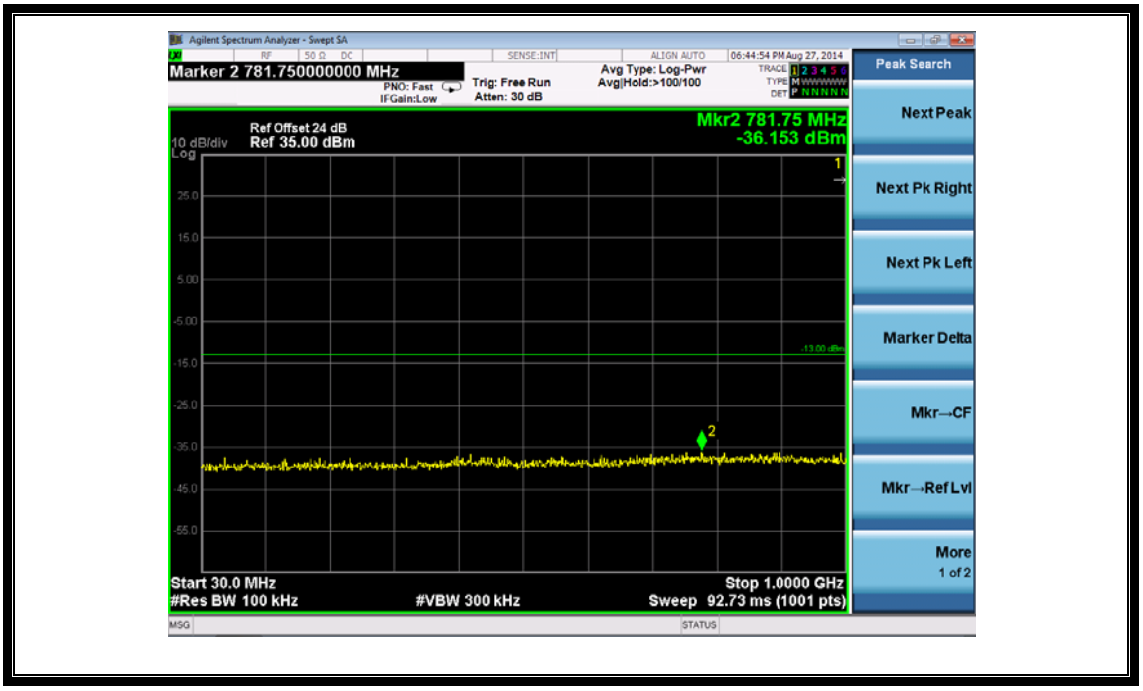


(Plot D1.1: EDGE 1900MHz Channel = 512, 1GHz to 20GHz)

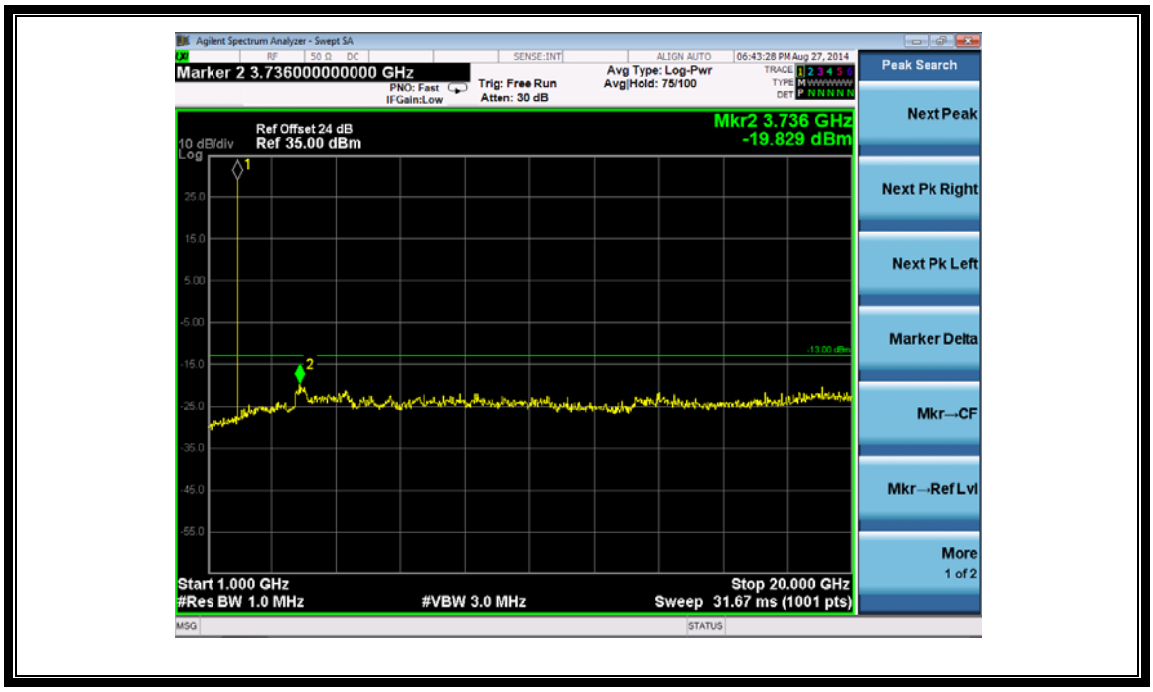


(Plot D2: EDGE 1900MHz Channel = 661, 30MHz to 1GHz)

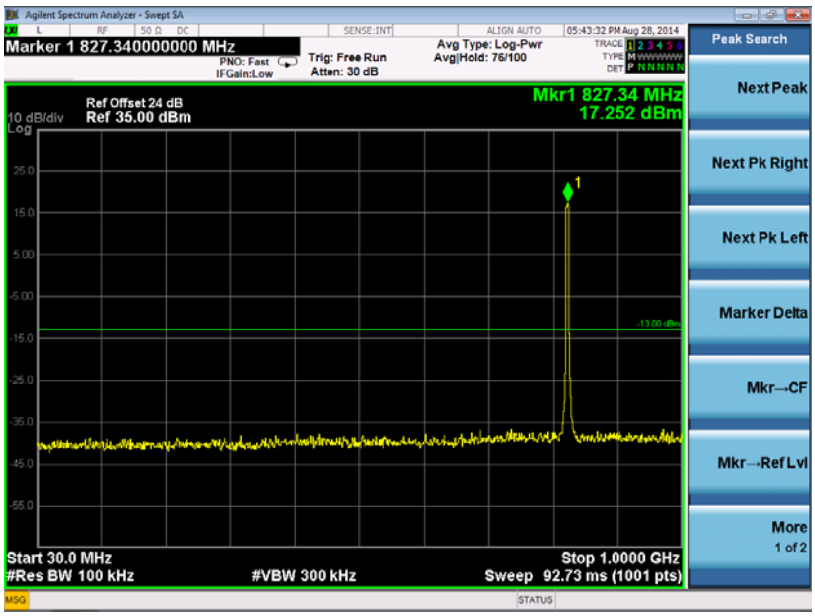
(Plot D2.1: EDGE 1900MHz Channel = 661,1GHz to 20GHz)



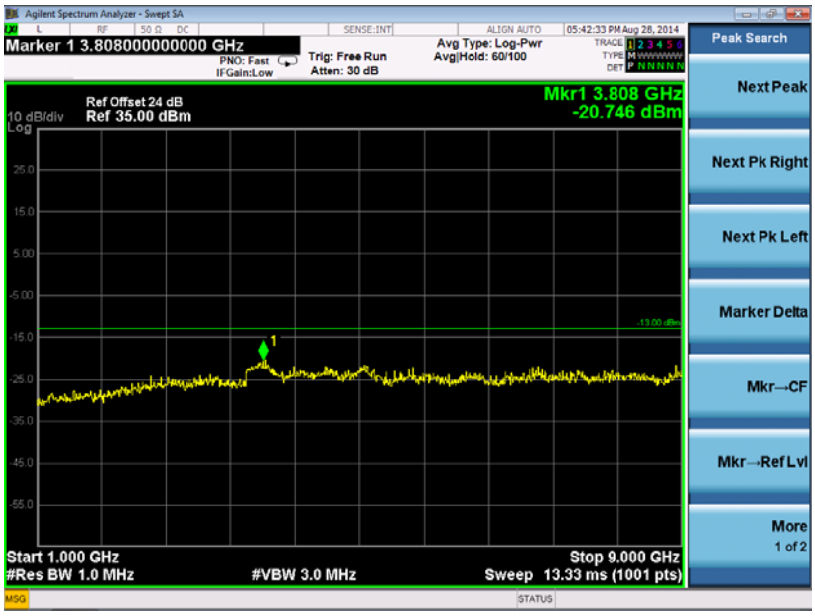
(Plot D3: EDGE 1900MHz Channel = 810, 30MHz to 1GHz)



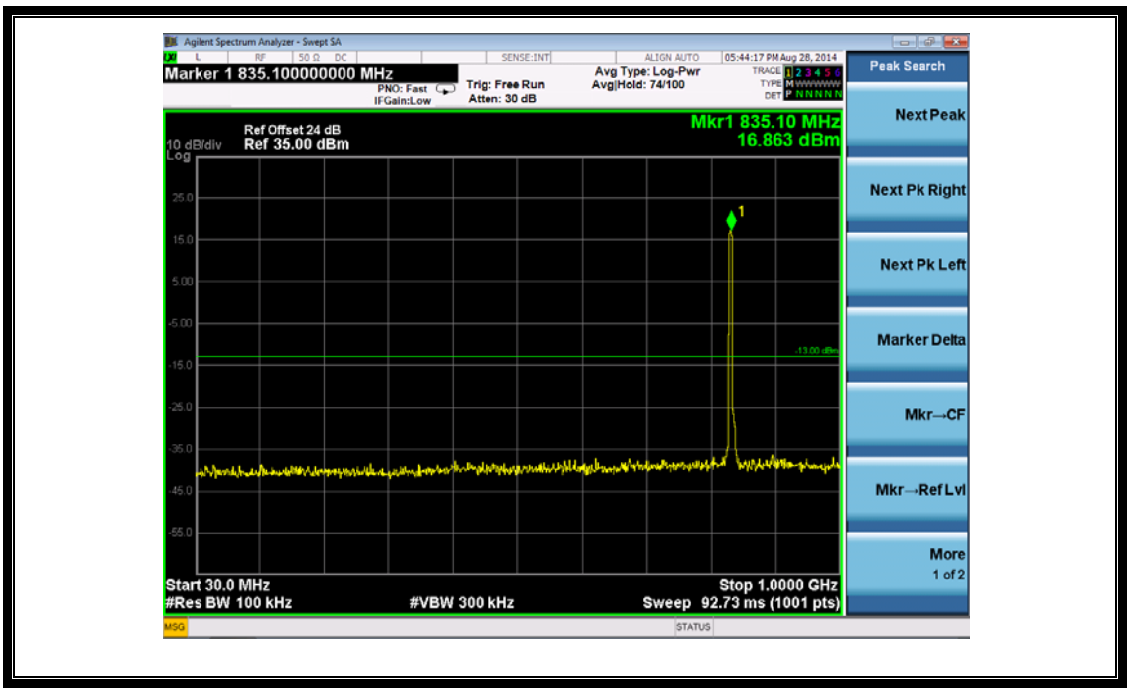
(Plot D3.1: EDGE 1900MHz Channel = 810, 1GHz to 20GHz)



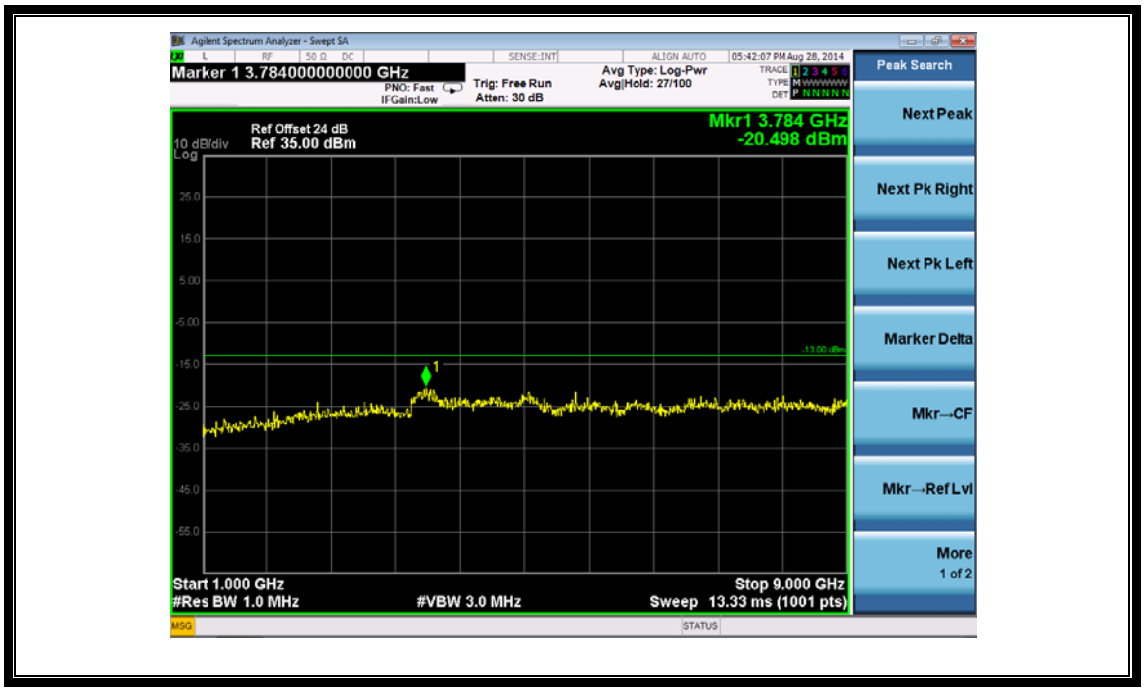
(Plot E1: WCDMA850MHz Channel = 4132, 30MHz to 1GHz)



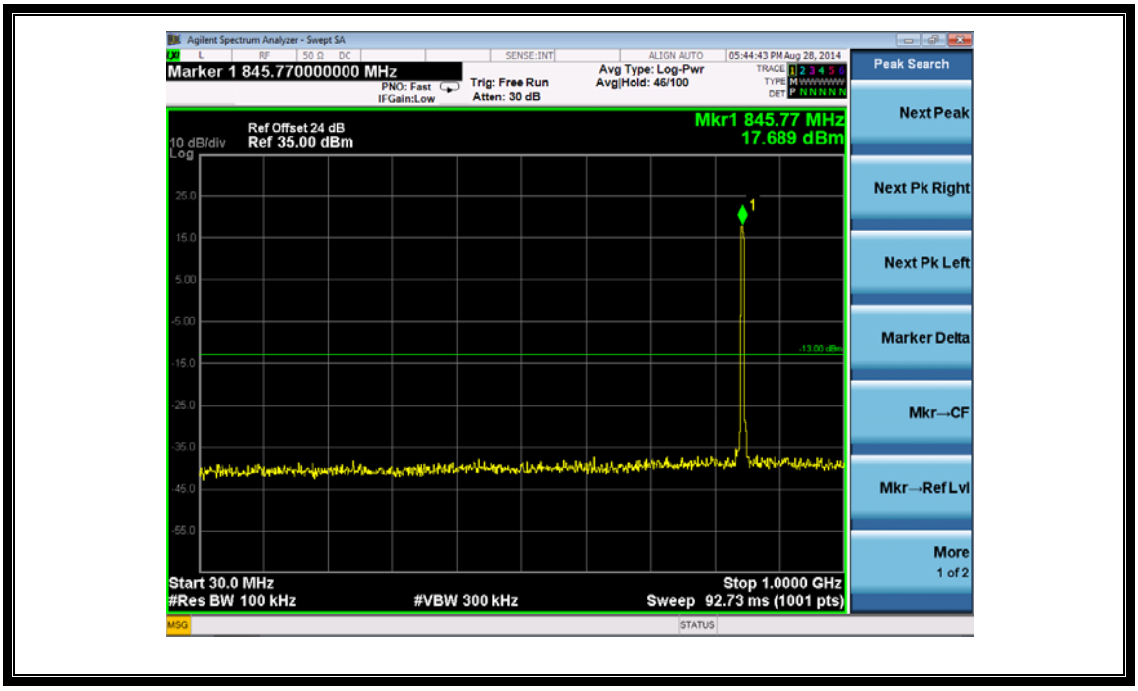
(Plot E1.1: WCDMA850MHz Channel = 4132, 1GHz to 9GHz)



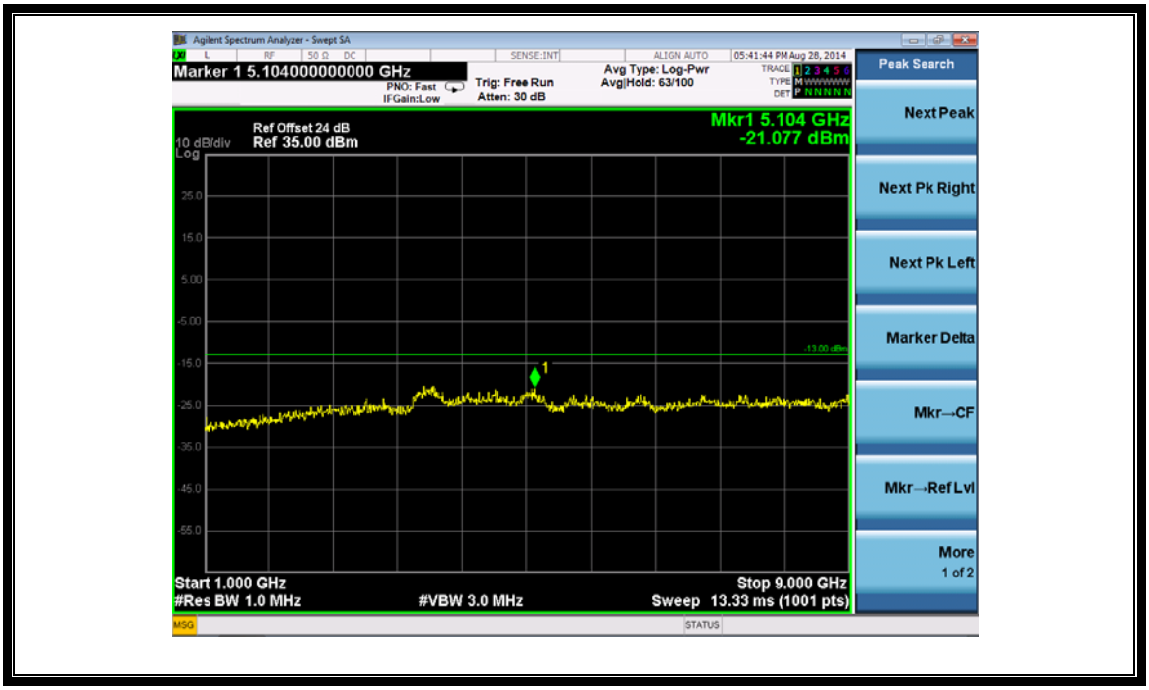
(Plot E2: WCDMA850MHz Channel = 4175, 30MHz to 1GHz)



(Plot E2.1: WCDMA850MHz Channel = 4175, 1GHz to 9GHz)

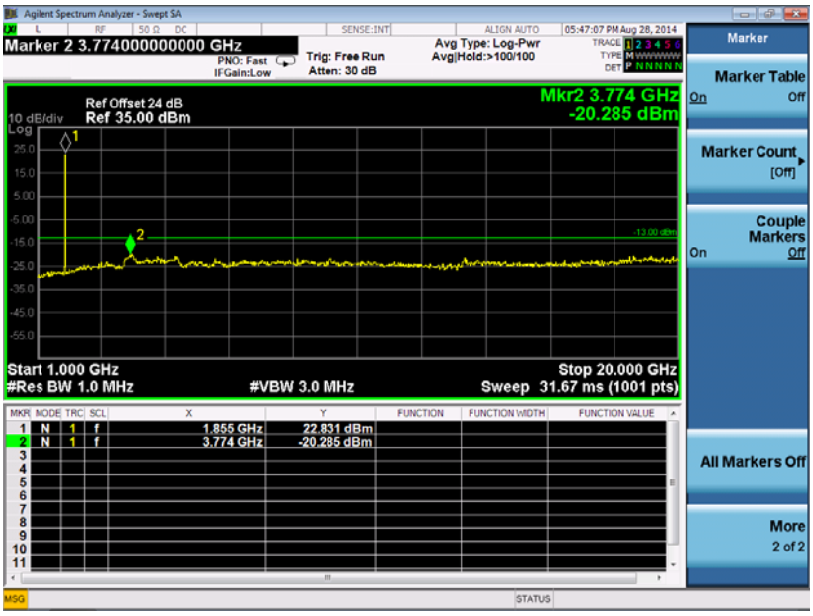


(Plot E3: WCDMA850MHz Channel = 4233, 30MHz to 1GHz)

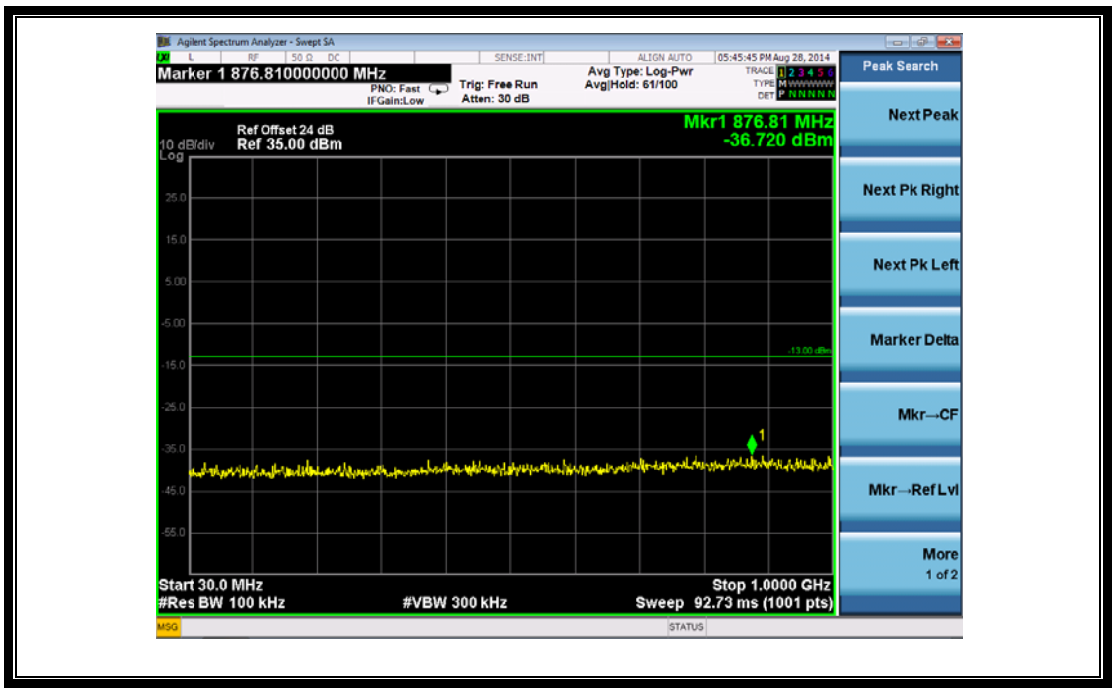


(Plot E3.1: WCDMA850MHz Channel = 4233, 1GHz to 9GHz)

(Plot F1:WCDMA1900MHz Channel = 9262, 30MHz to 1GHz)

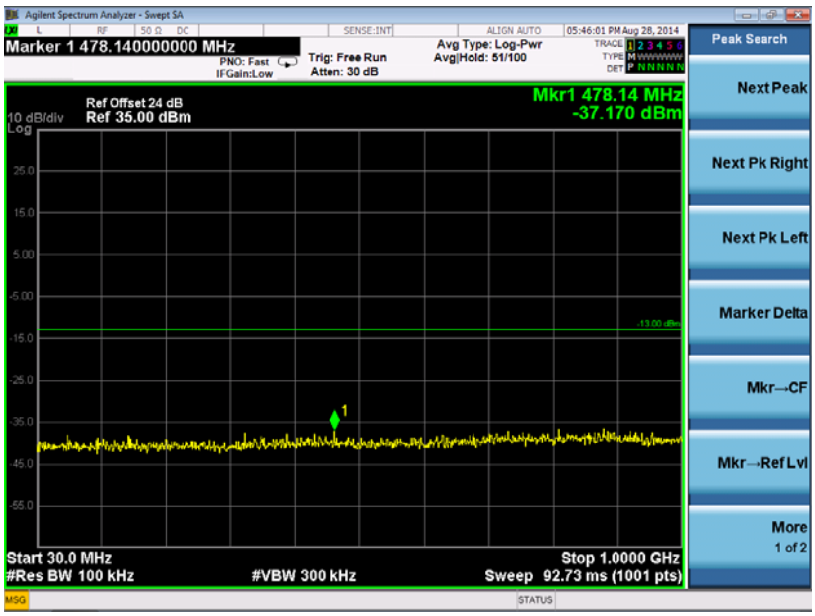


(Plot F1.1: WCDMA1900MHz Channel = 9262, 1GHz to 20GHz)

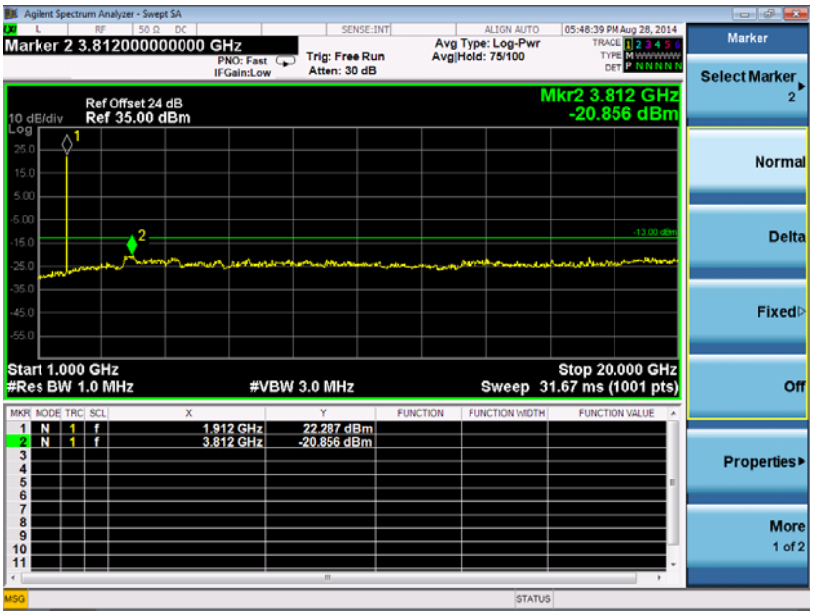


(Plot F2:WCDMA1900MHz Channel = 9400, 30MHz to 1GHz)

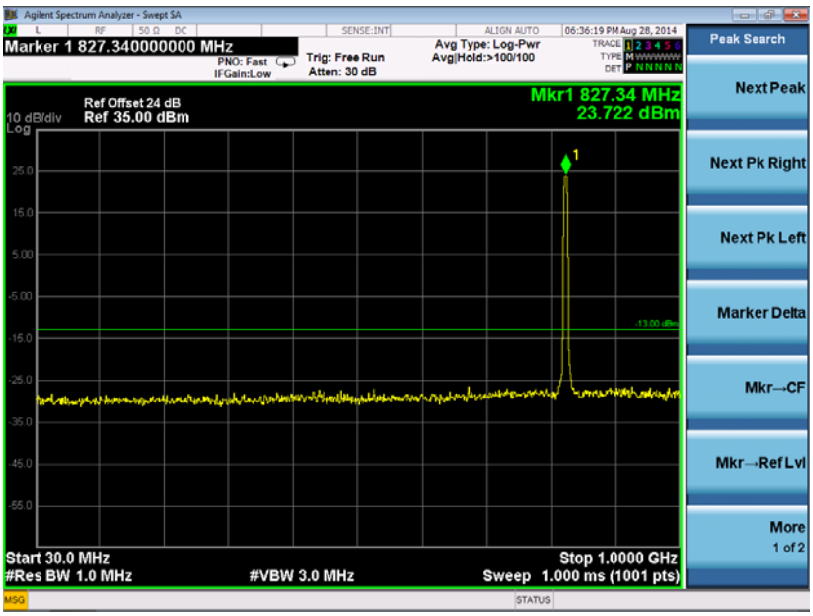
(Plot F2.1: WCDMA1900MHz Channel = 9400, 1GHz to 20GHz)



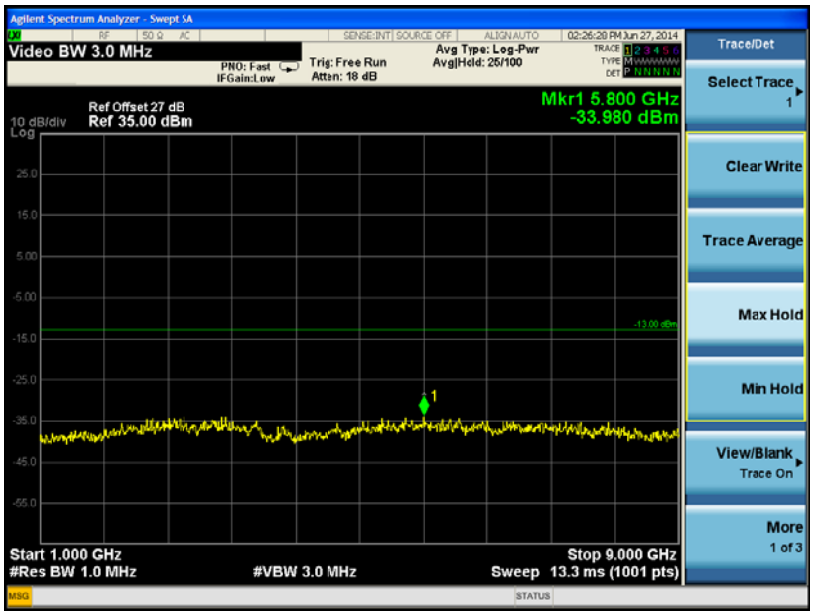
(Plot F3:WCDMA1900MHz Channel = 9538, 30MHz to 1GHz)



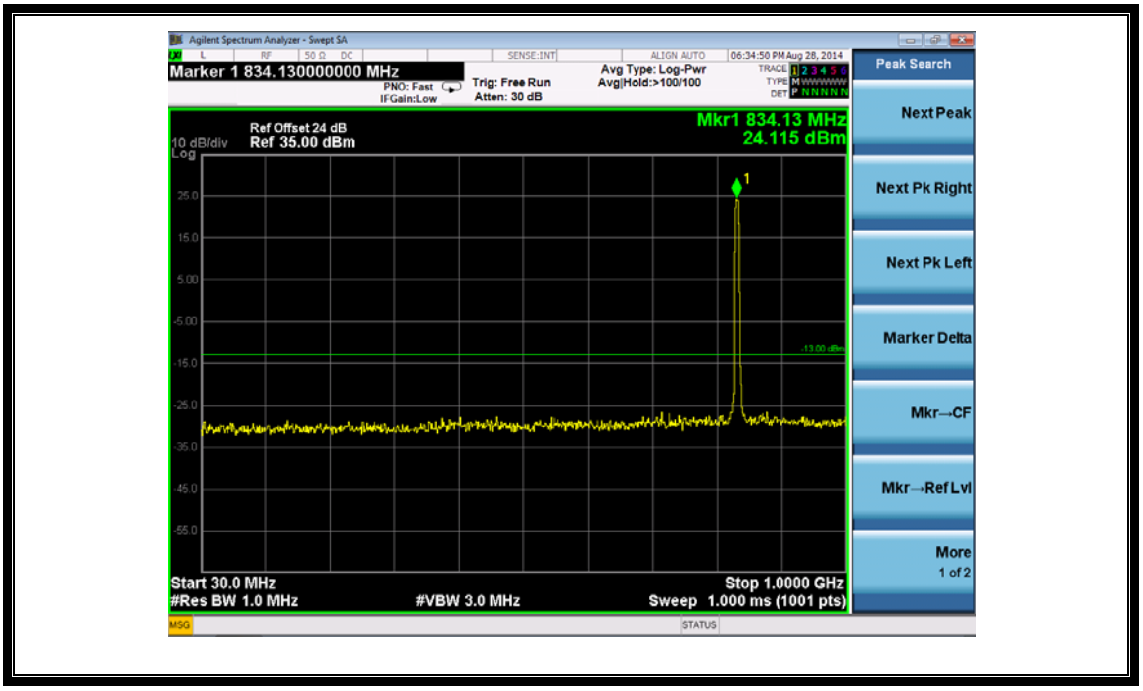
(Plot F3.1: WCDMA1900MHz Channel = 9538 1GHz to 20GHz)



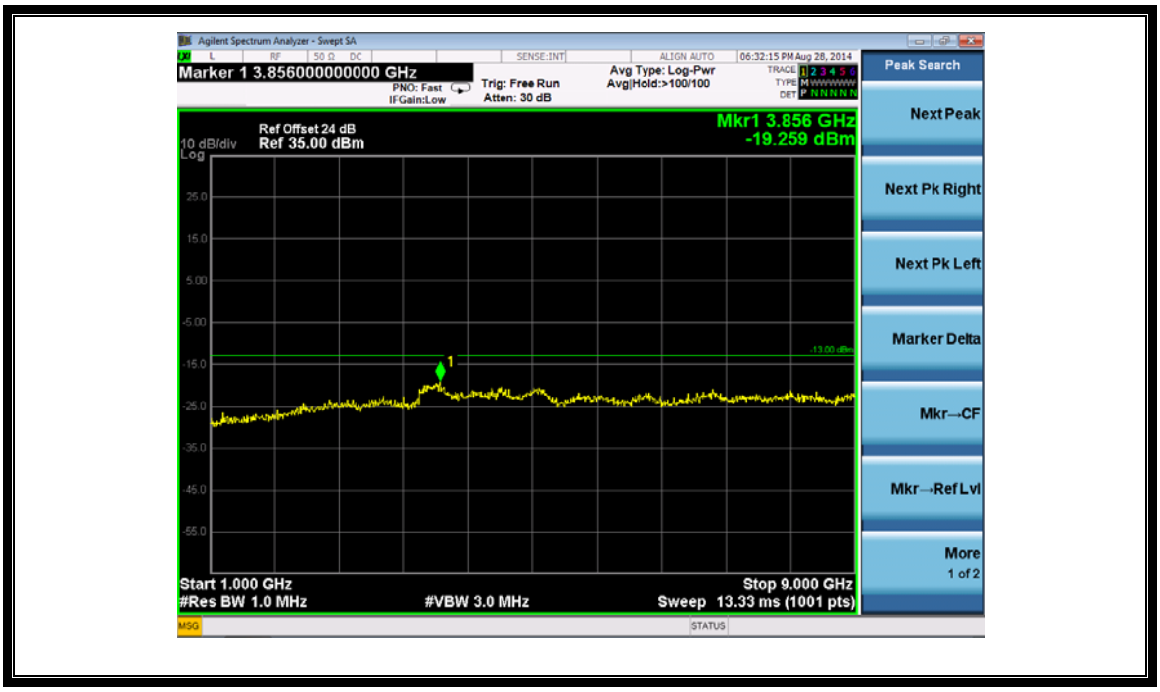
(Plot G1: HSDPA 850MHz Channel = 4132, 30MHz to 1GHz)



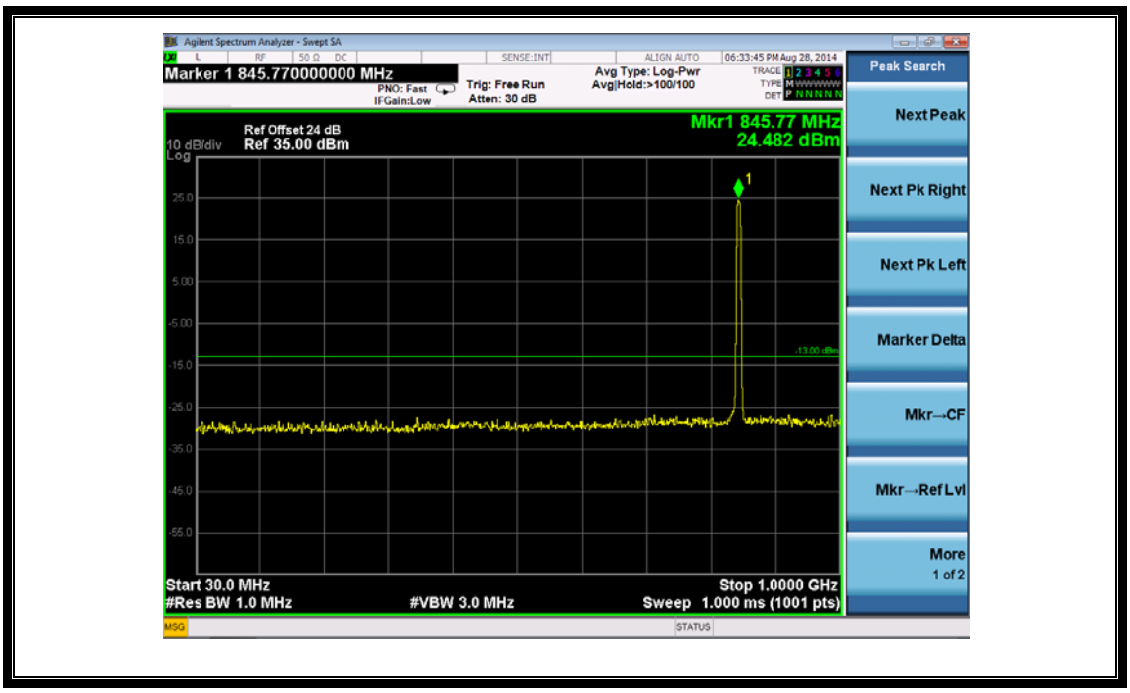
(Plot G1.1: HSDPA 850MHz Channel = 4132, 1GHz to 9GHz)



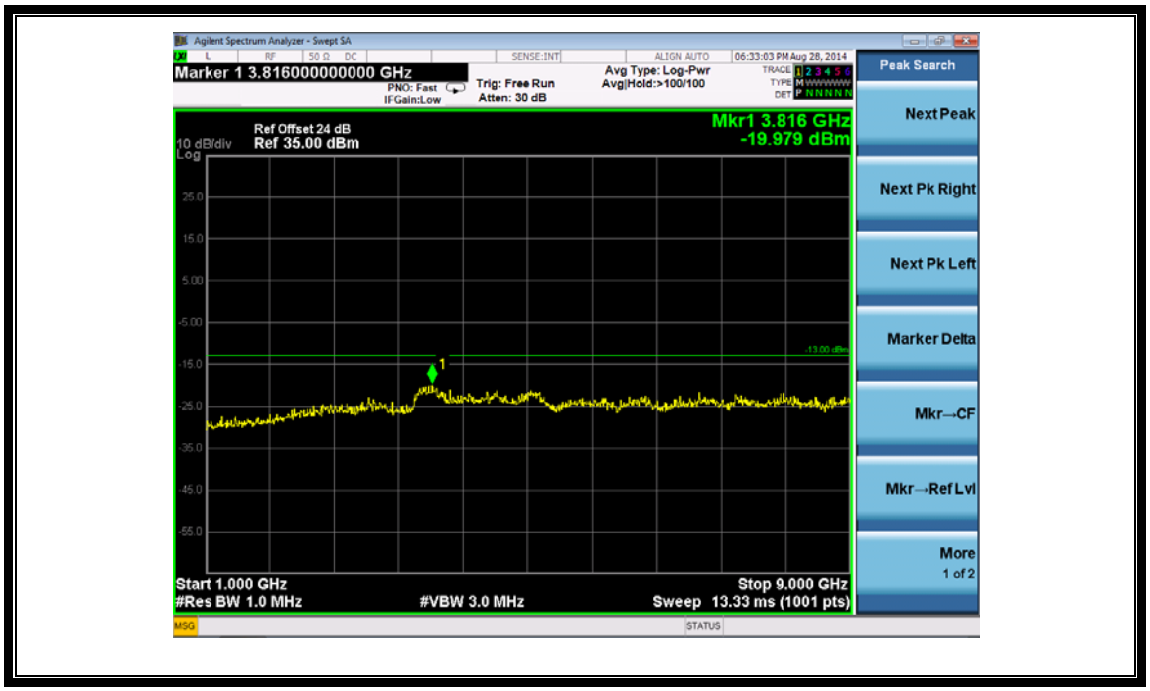
(Plot G2: HSDPA 850MHz Channel = 4175, 30MHz to 1GHz)



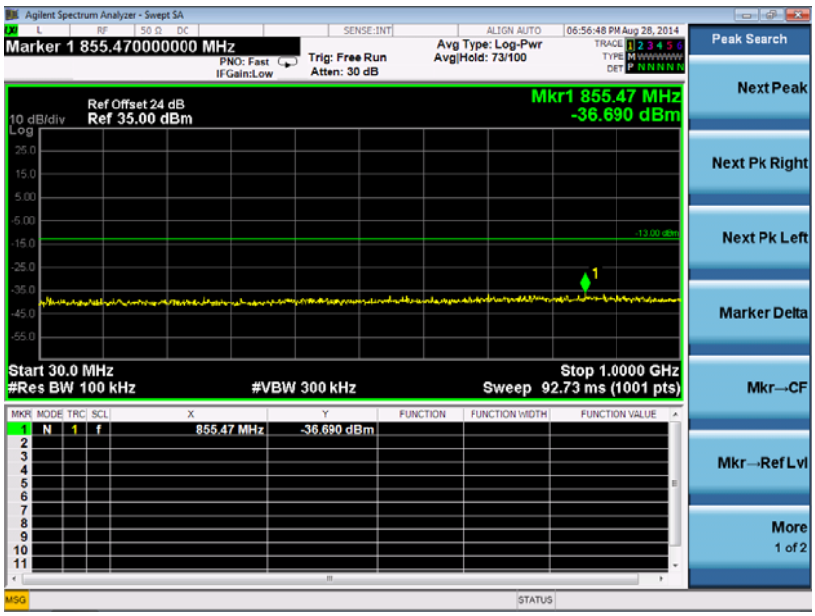
(Plot G2.1: HSDPA 850MHz Channel = 4175, 1GHz to 9GHz)



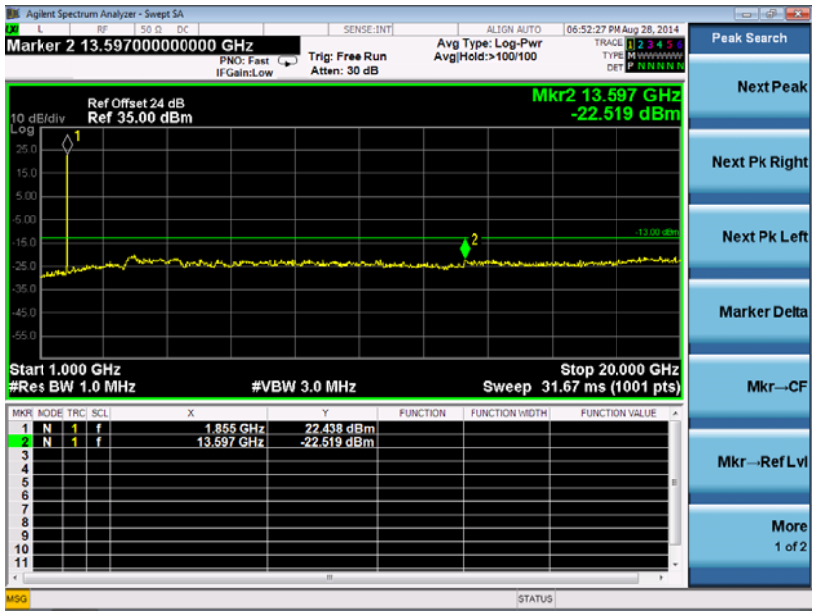
(Plot G3: HSDPA850MHz Channel = 4233, 30MHz to 1GHz)



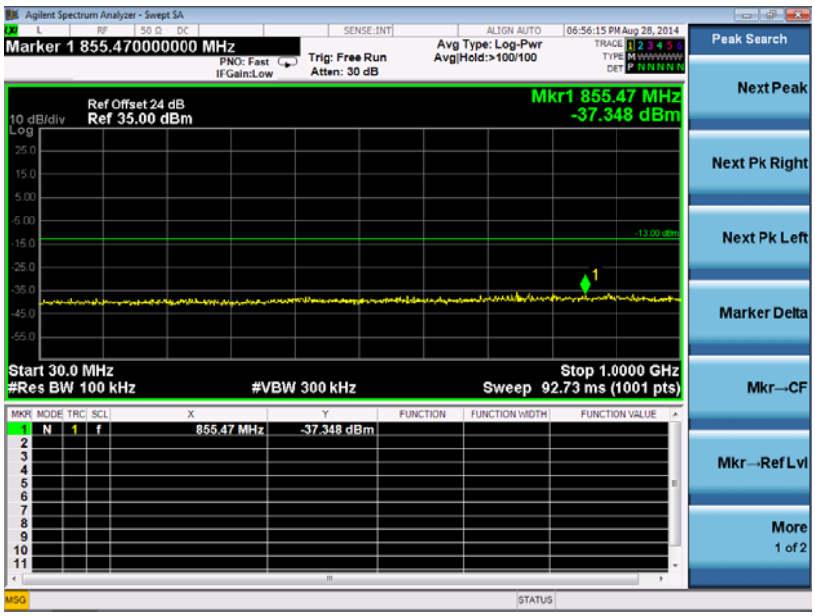
(Plot G3.1: HSDPA850MHz Channel = 4233, 1GHz to 9GHz)



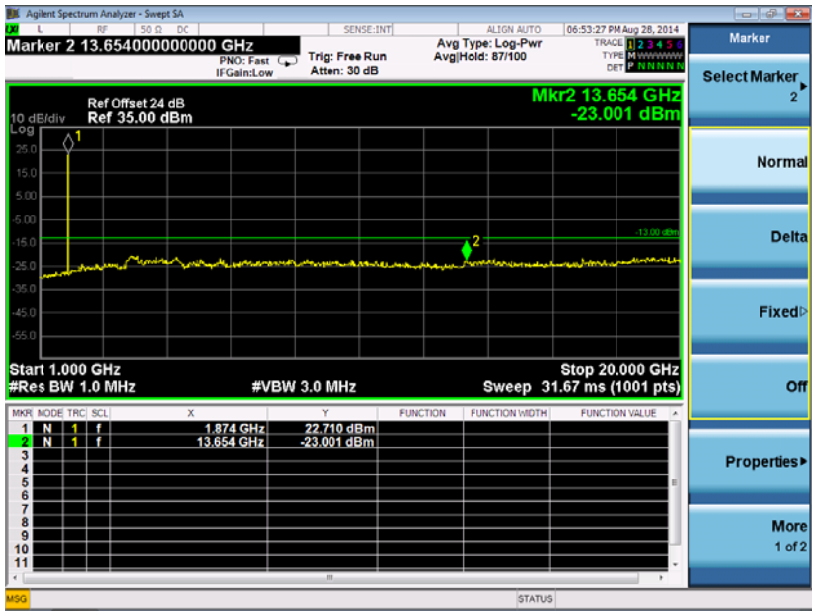
(Plot H1: HSDPA1900MHz Channel = 9262, 30MHz to 1GHz)



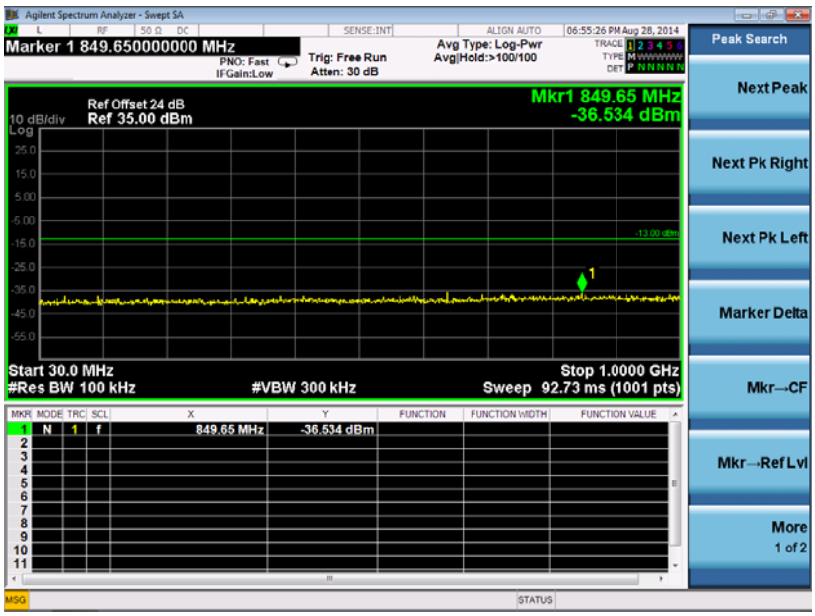
(Plot H1.1: HSDPA1900MHz Channel = 9262, 1GHz to 20GHz)



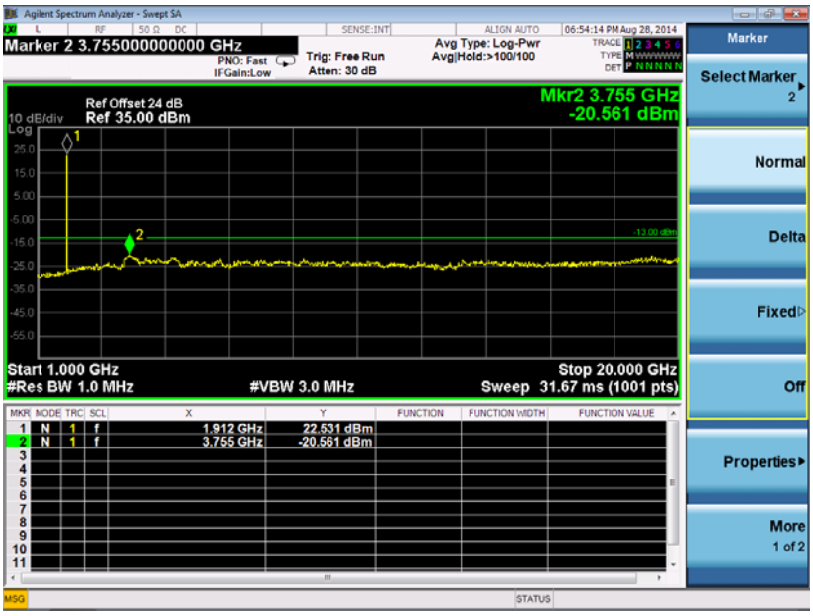
(Plot H2: HSDPA1900MHz Channel = 9400, 30MHz to 1GHz)



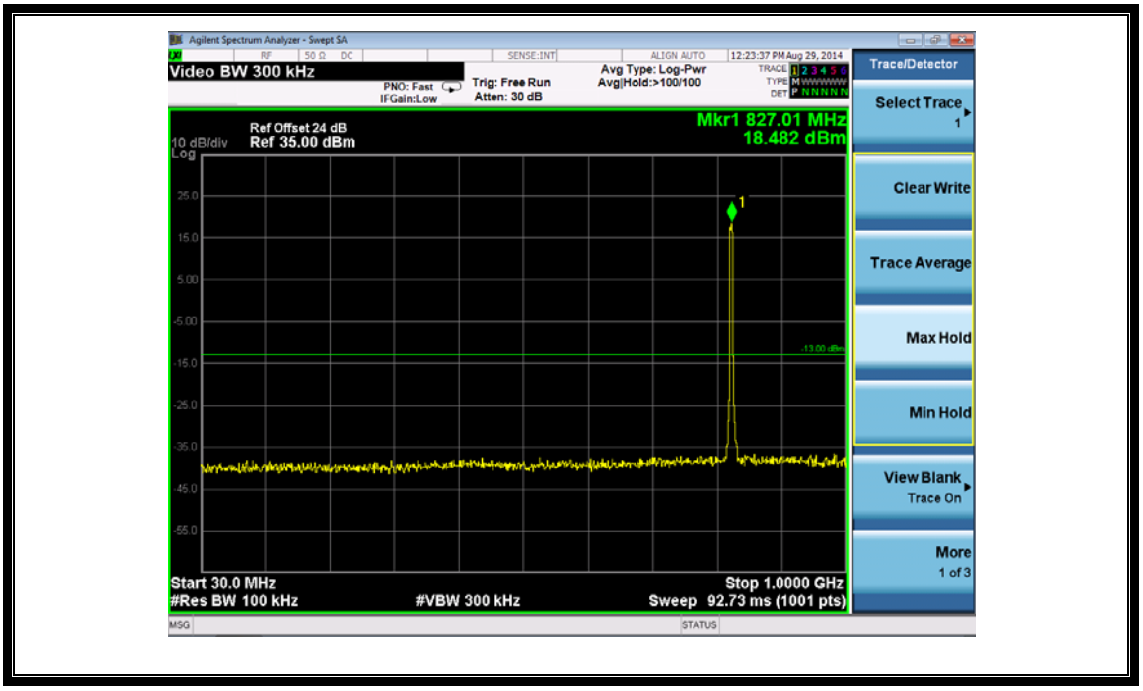
(Plot H2.1: HSDPA1900MHz Channel = 9400, 1GHz to 20GHz)



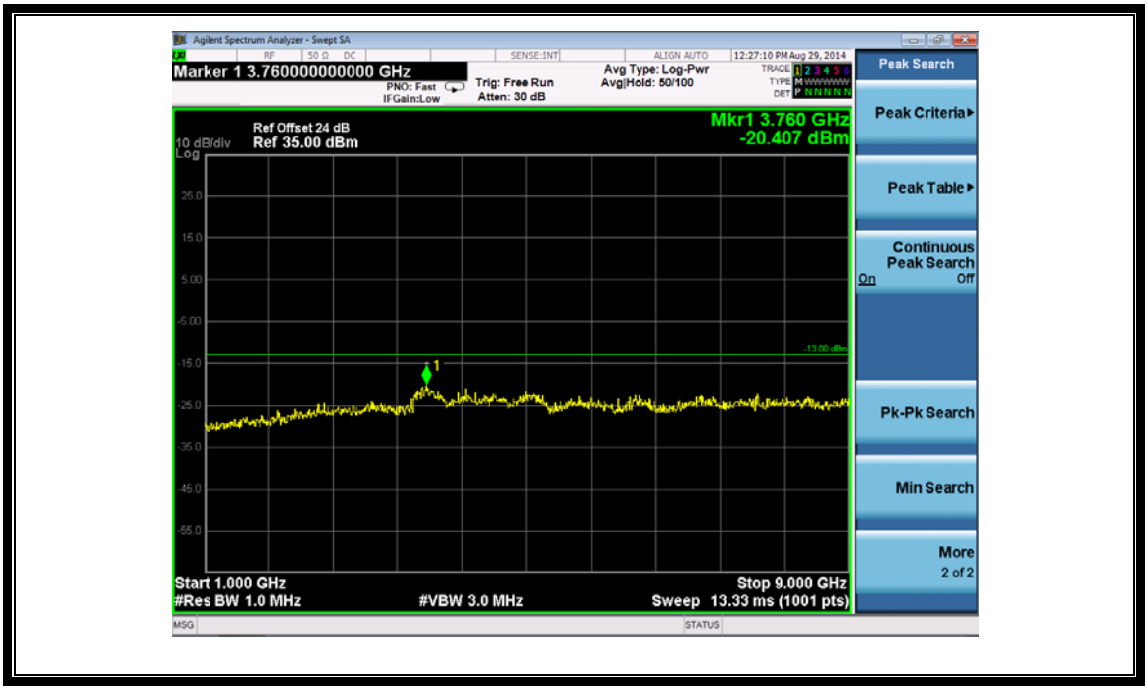
(Plot H3: HSDPA1900MHz Channel = 9538, 30MHz to 1GHz)



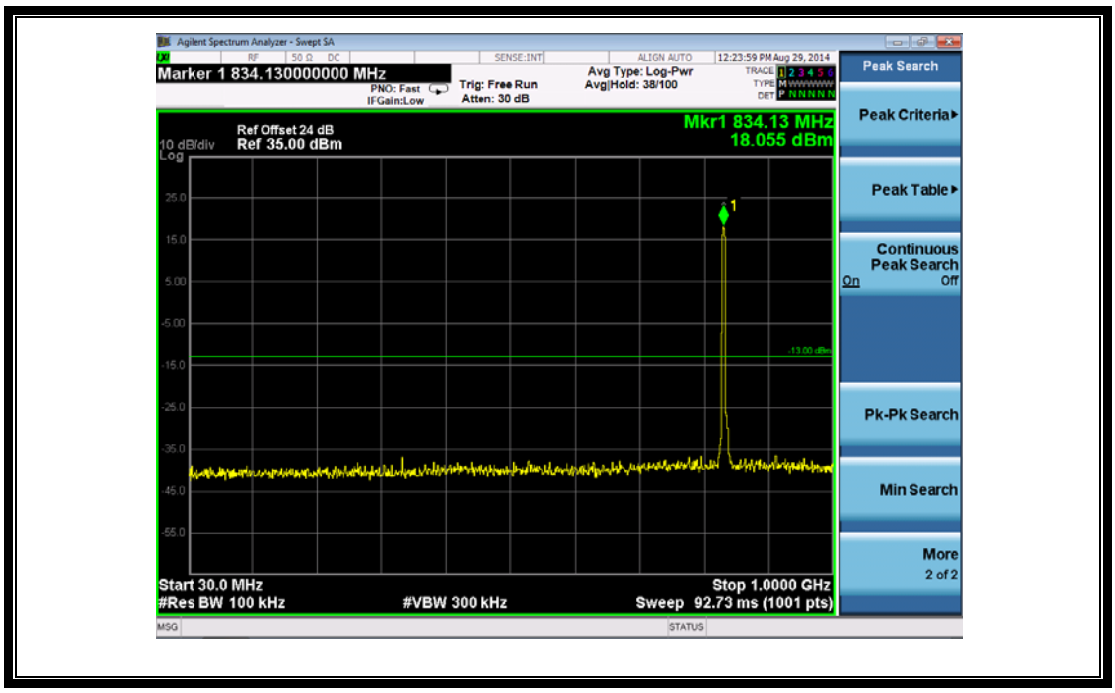
(Plot H3.1: HSDPA1900MHz Channel = 9538 1GHz to 20GHz)



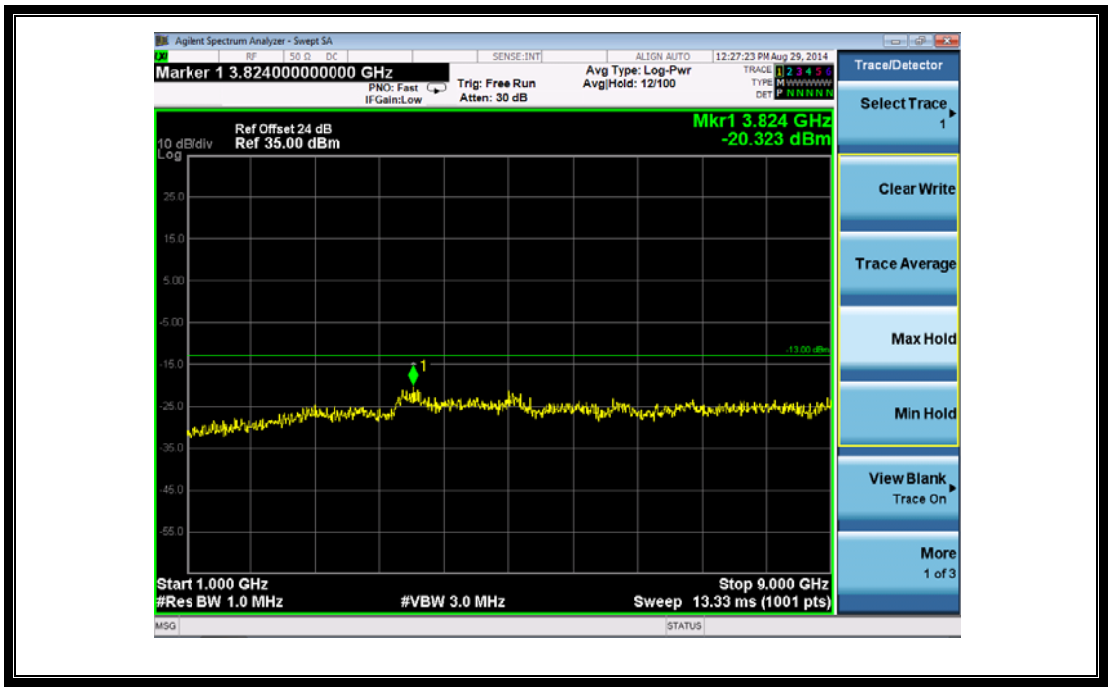
(Plot I 1:HSUPA 850MHz Channel = 4132, 30MHz to 1GHz)



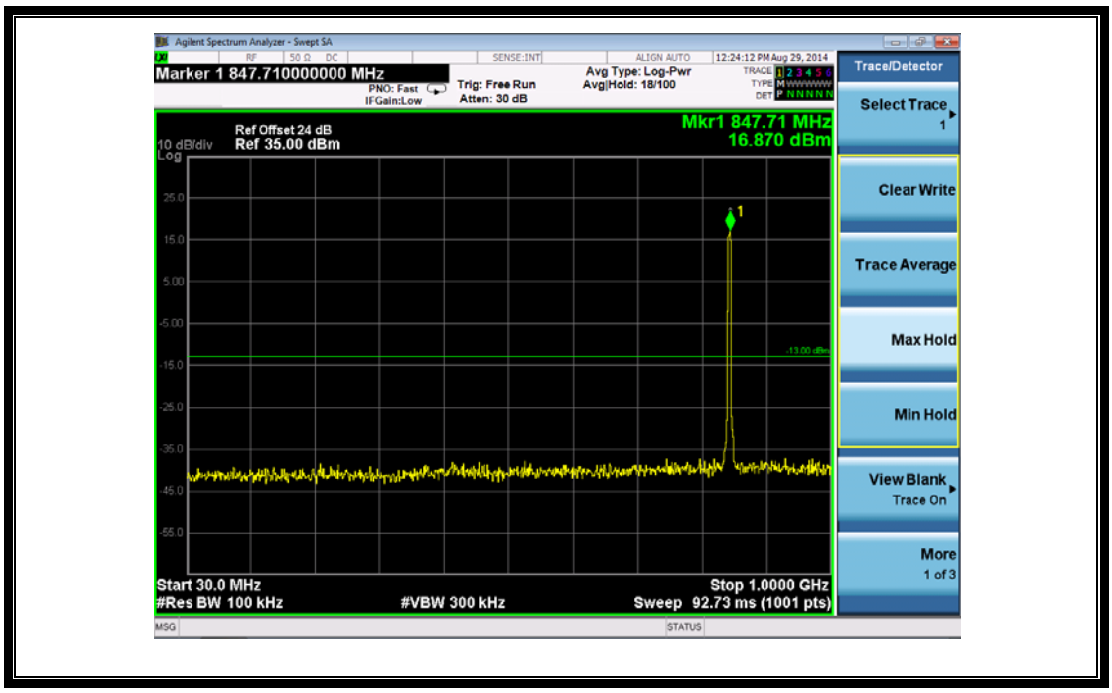
(Plot I1.1: HSUPA 850MHz Channel = 4132, 1GHz to 9GHz)



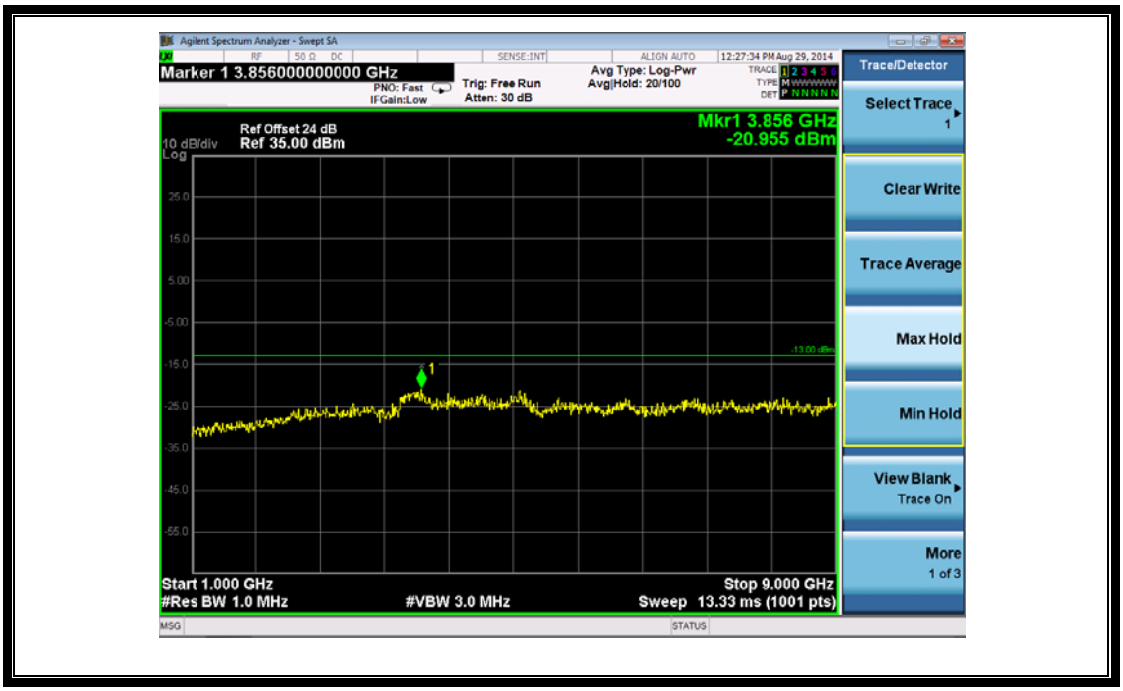
(Plot I 2:HSUPA 850MHz Channel = 4175, 30MHz to 1GHz)



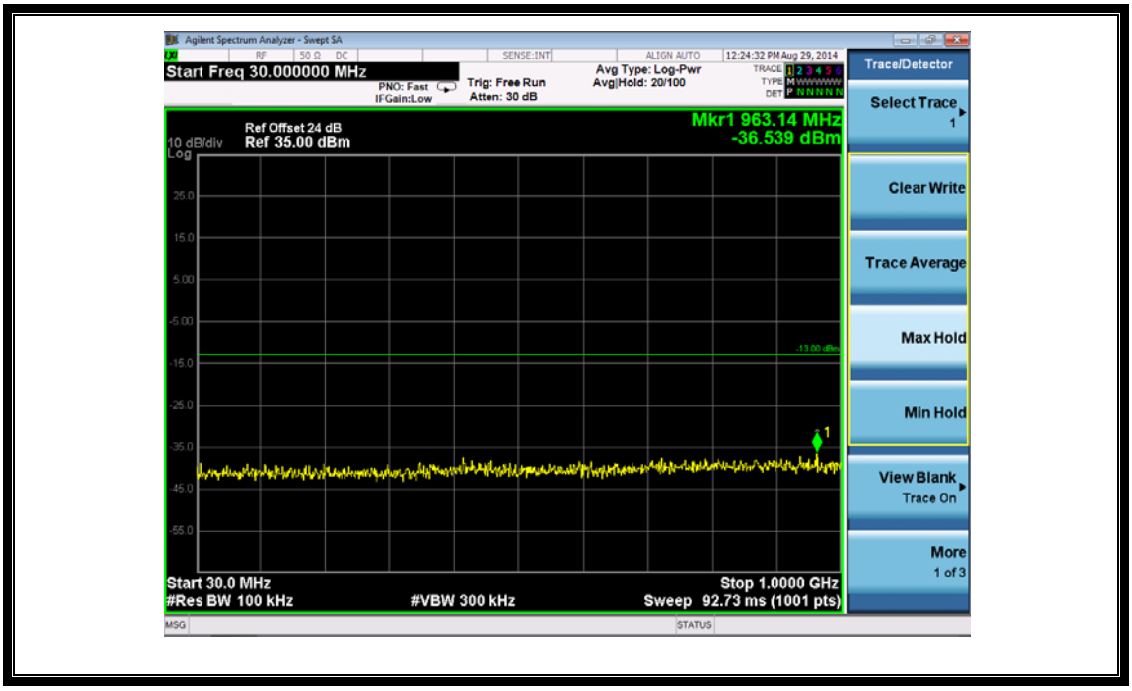
(Plot I2.1: HSUPA 850MHz Channel = 4175, 1GHz to 9GHz)



(Plot I 3:HSUPA850MHz Channel = 4233, 30MHz to 1GHz)

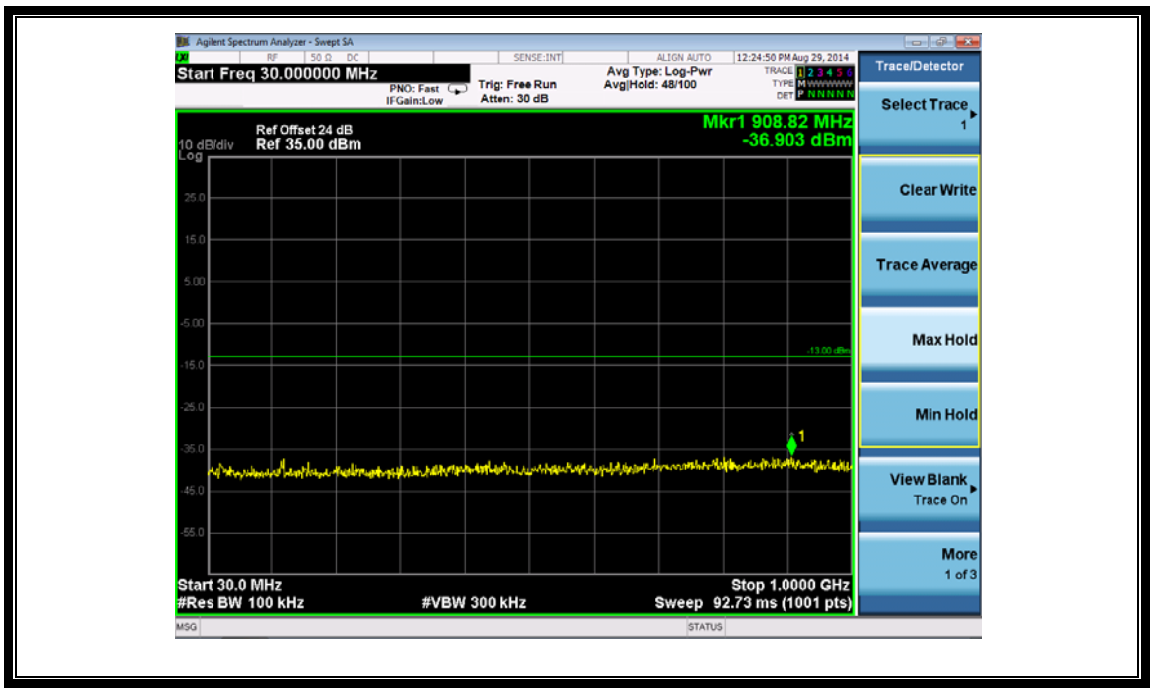


(Plot I3.1: HSUPA850MHz Channel = 4233, 1GHz to 9GHz)



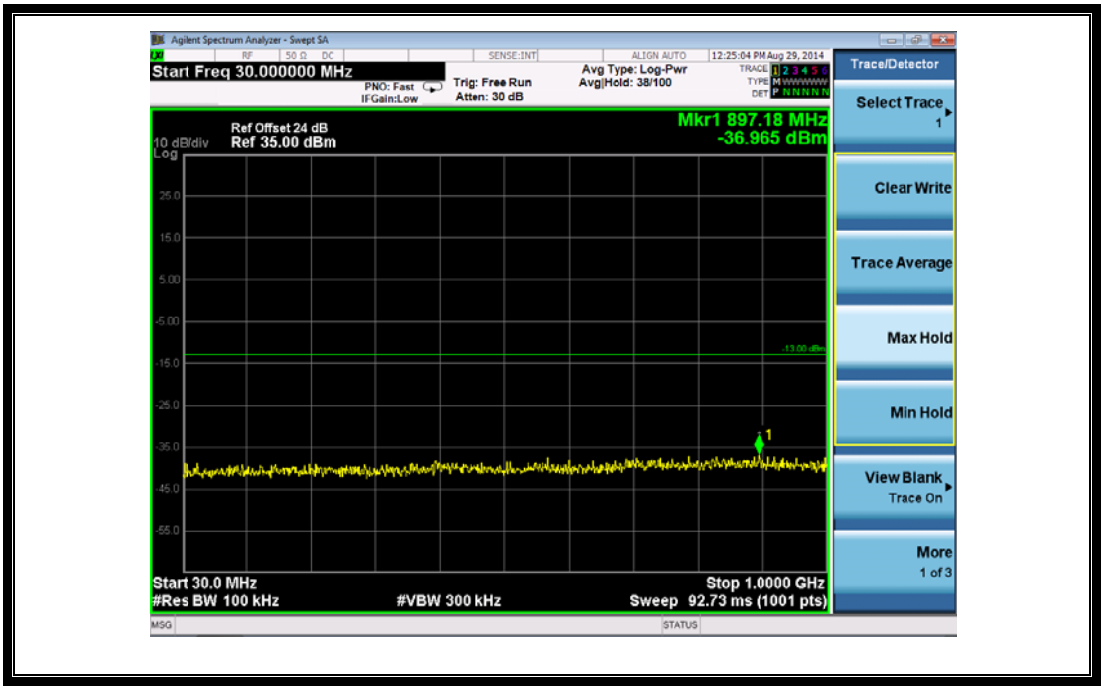
(Plot J 1: HSUPA1900MHz Channel = 9262, 30MHz to 1GHz)

(Plot J1.1: HSUPA1900MHz Channel = 9262, 1GHz to 20GHz)



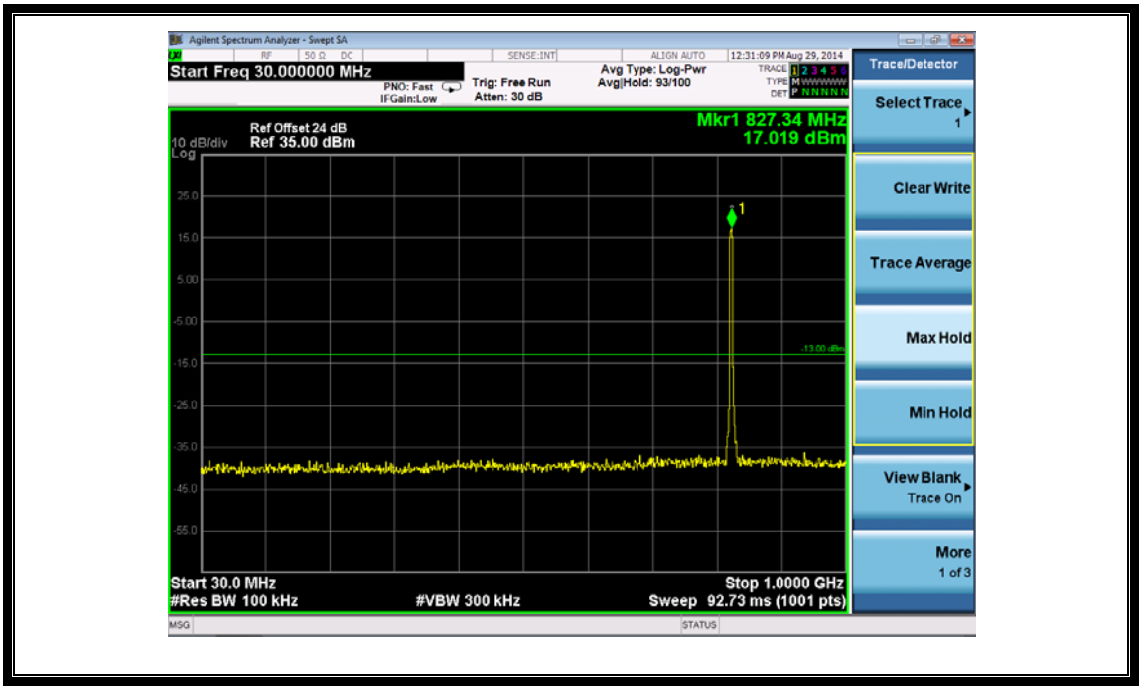
(Plot J 2: HSUPA1900MHz Channel = 9400, 30MHz to 1GHz)

(Plot J2.1: HSUPA1900MHz Channel = 9400, 1GHz to 20GHz)

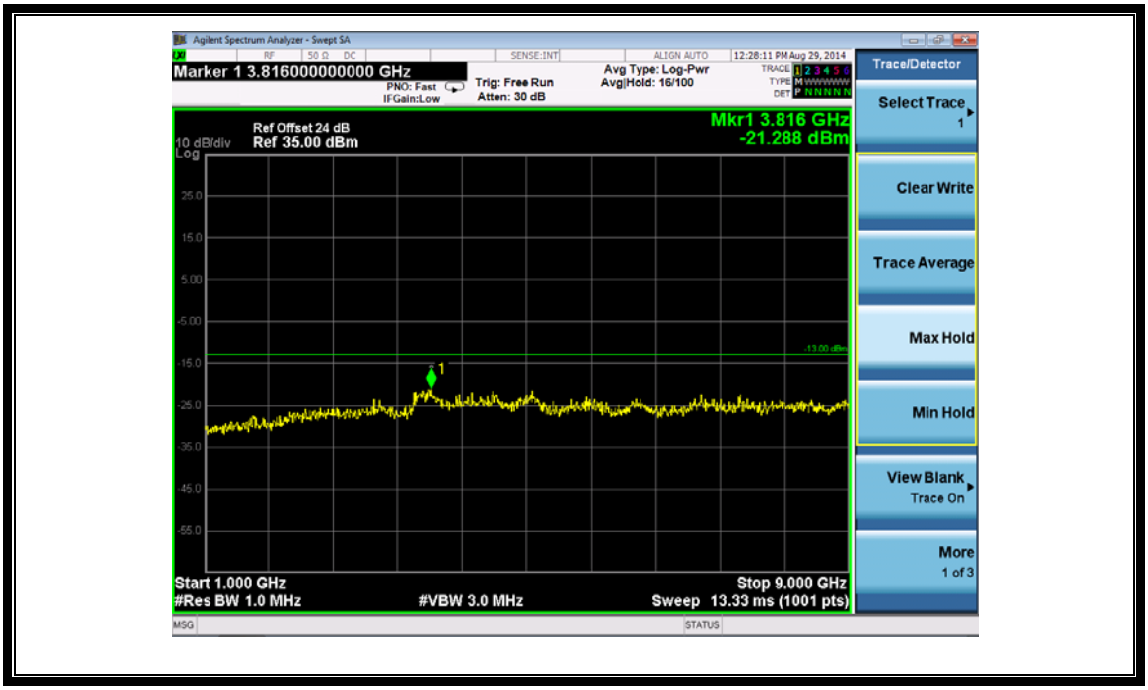


(Plot J 3: HSUPA1900MHz Channel = 9538, 30MHz to 1GHz)

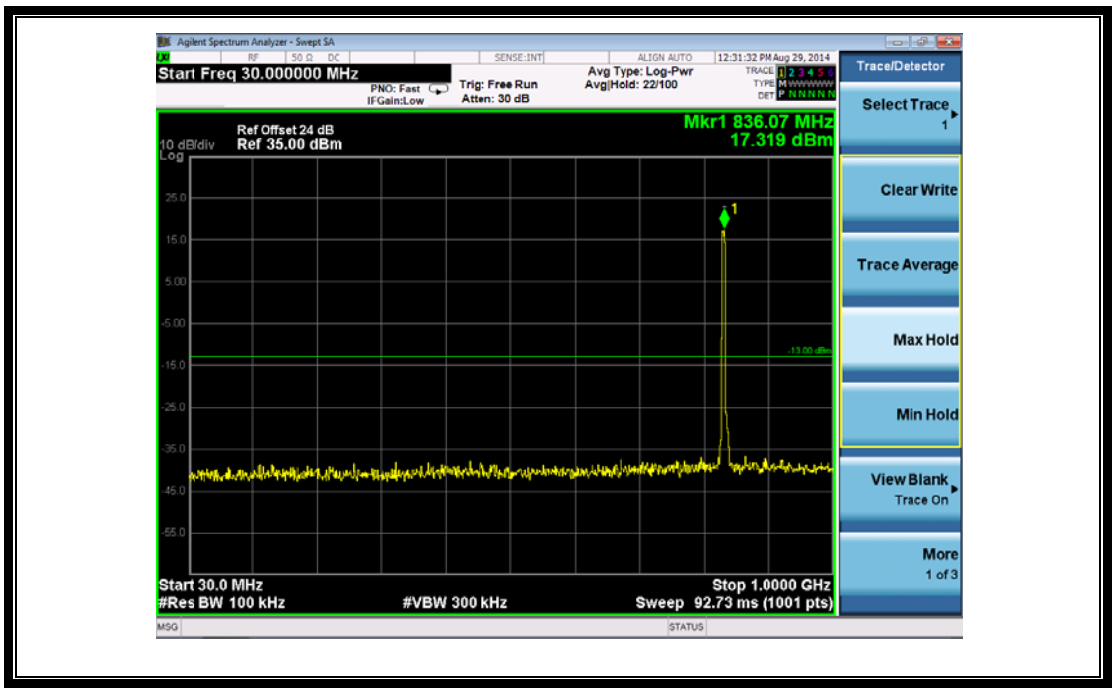
(Plot J3.1: HSUPA1900MHz Channel = 9538 1GHz to 20GHz)



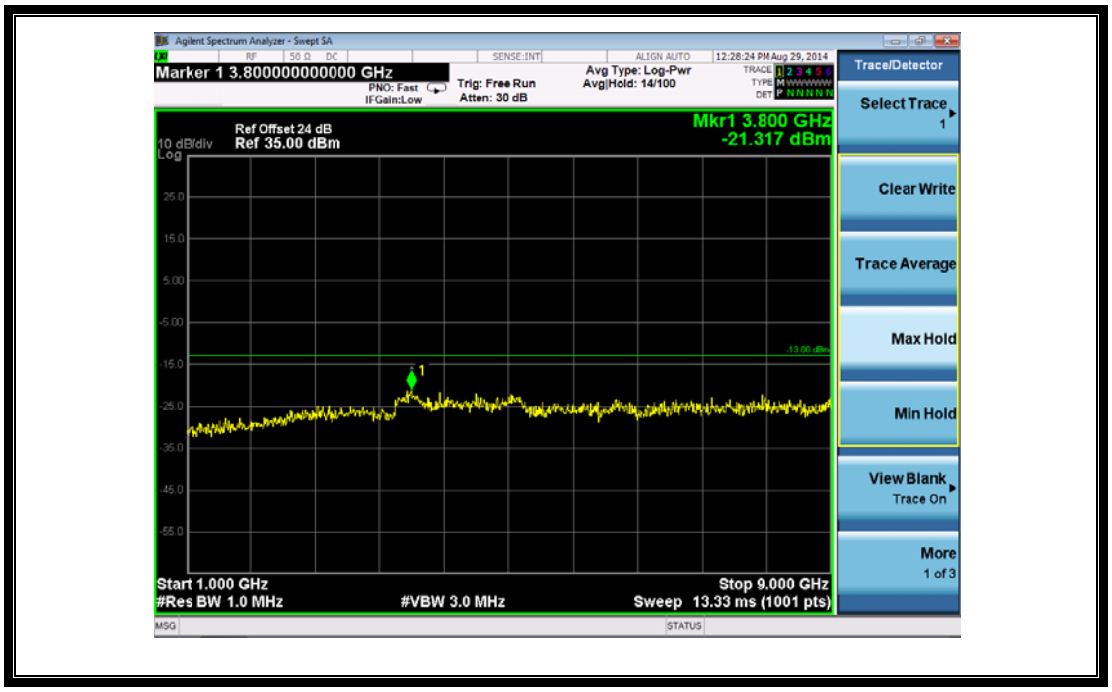
(Plot K 1: HSPA+ 850MHz Channel = 4132, 30MHz to 1GHz)



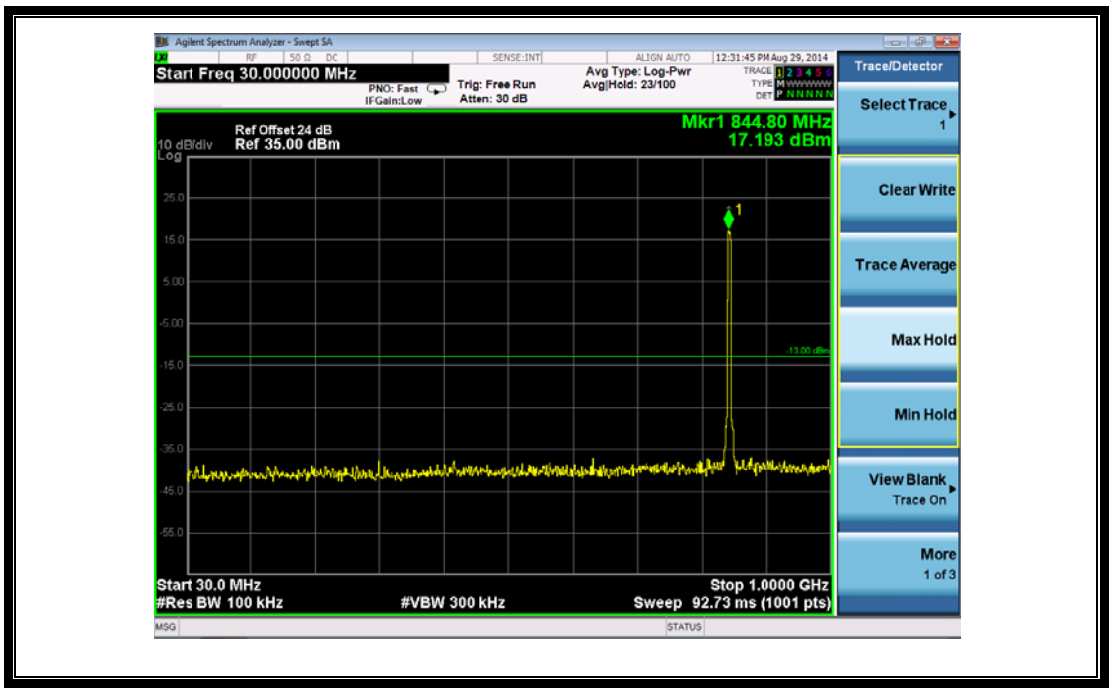
(Plot K1.1: HSPA+ 850MHz Channel = 4132, 1GHz to 9GHz)



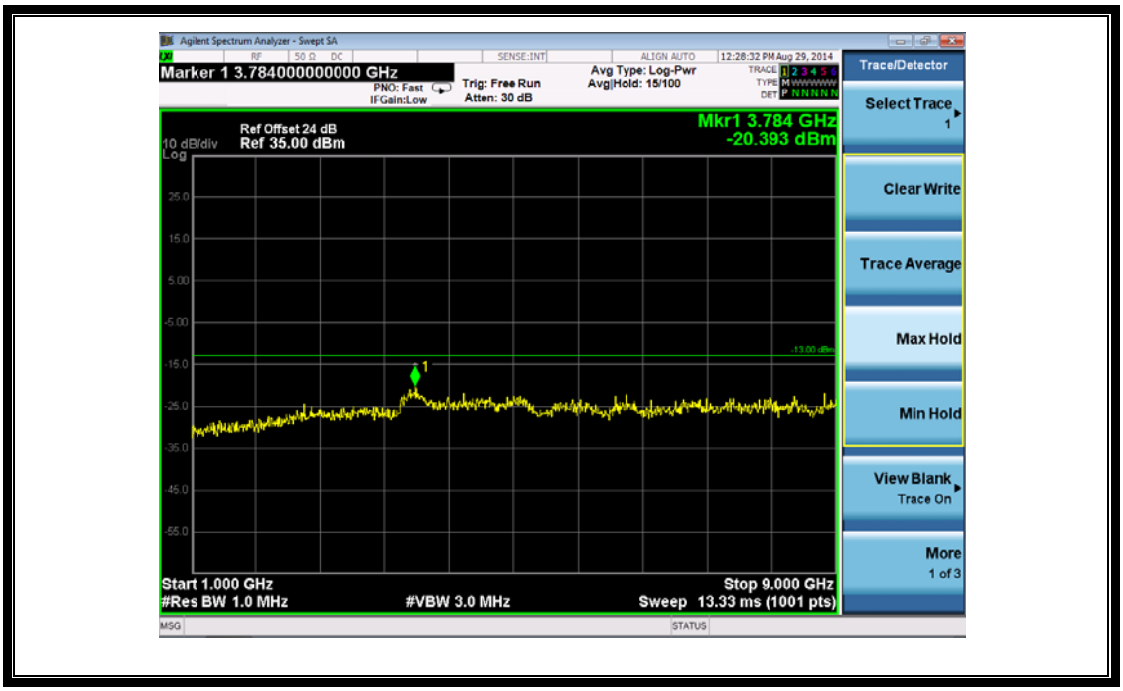
(Plot K 2: HSPA+ 850MHz Channel = 4175, 30MHz to 1GHz)



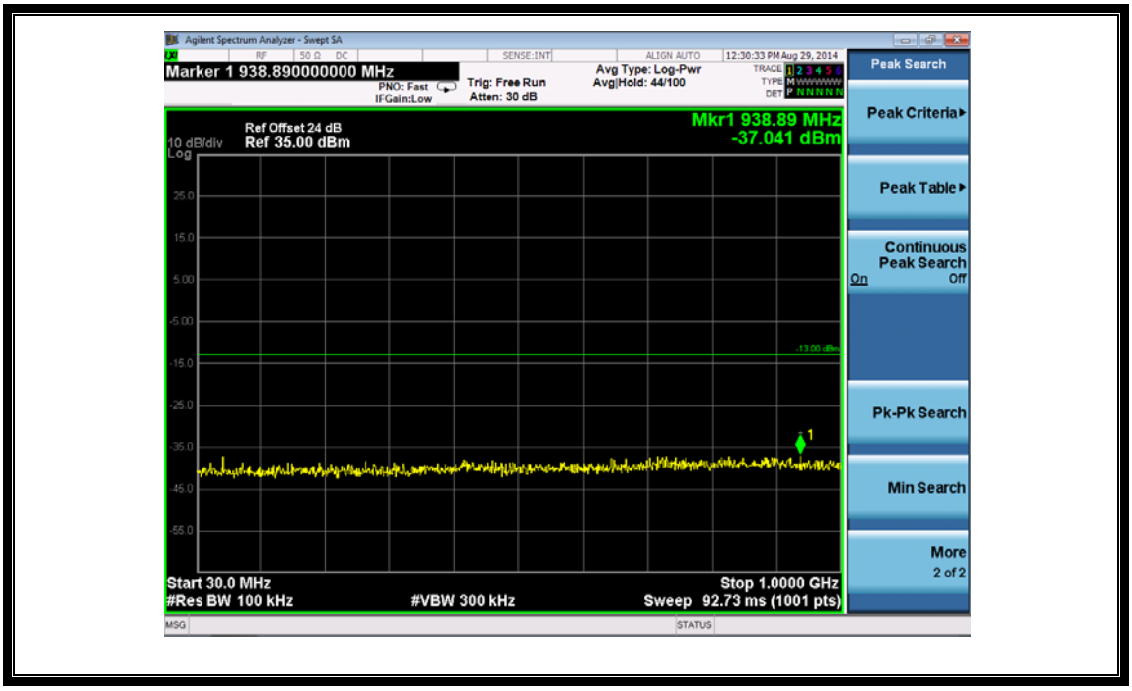
(Plot K2.1: HSPA+ 850MHz Channel = 4175, 1GHz to 9GHz)



(Plot K 3: HSPA+ 850MHz Channel = 4233, 30MHz to 1GHz)



(Plot K3.1: HSPA+ 850MHz Channel = 4233, 1GHz to 9GHz)



(Plot K 1: HSPA+ 1900MHz Channel = 9262, 30MHz to 1GHz)

(Plot K1.1: HSPA+ 1900MHz Channel = 9262, 1GHz to 20GHz)