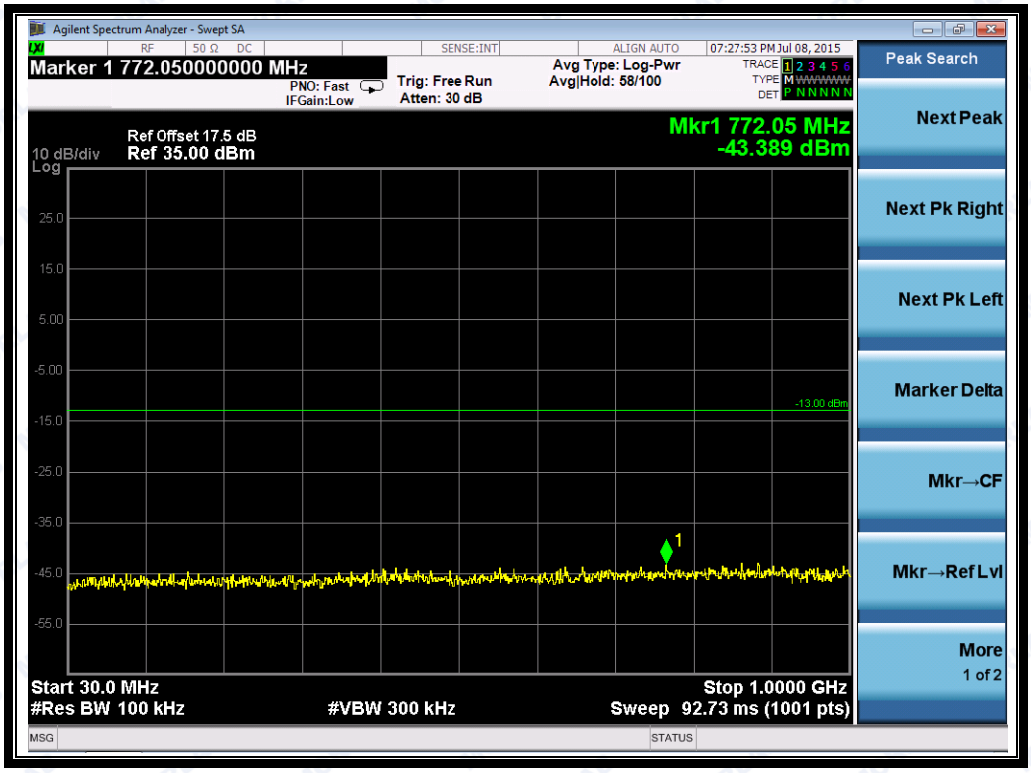
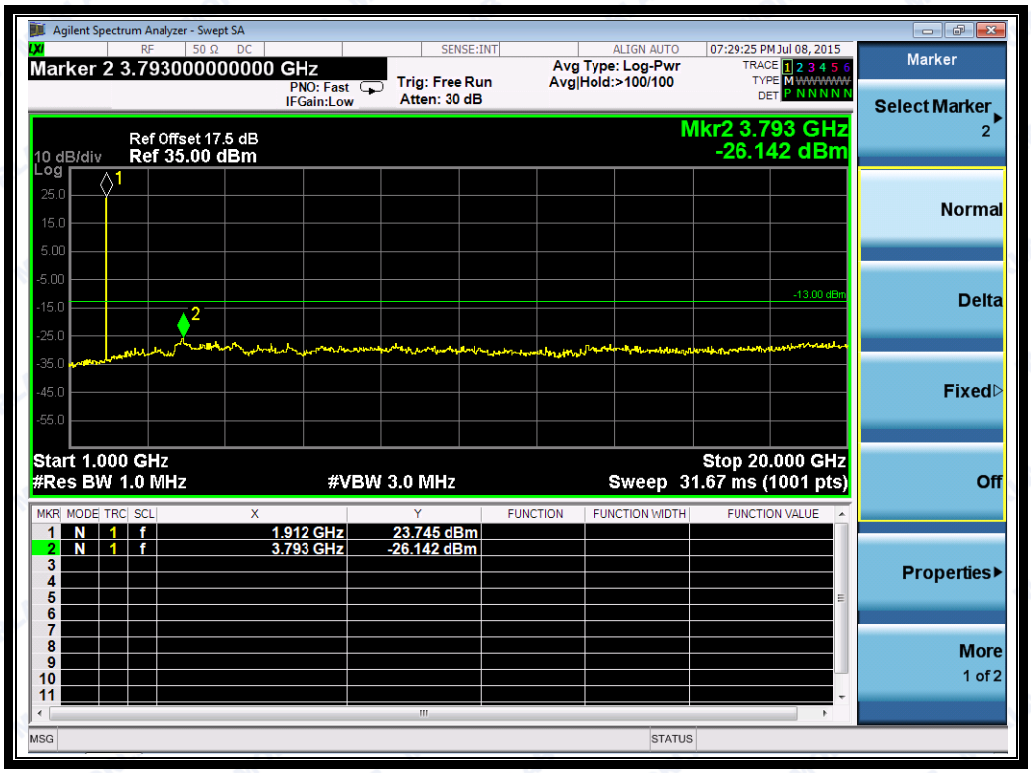
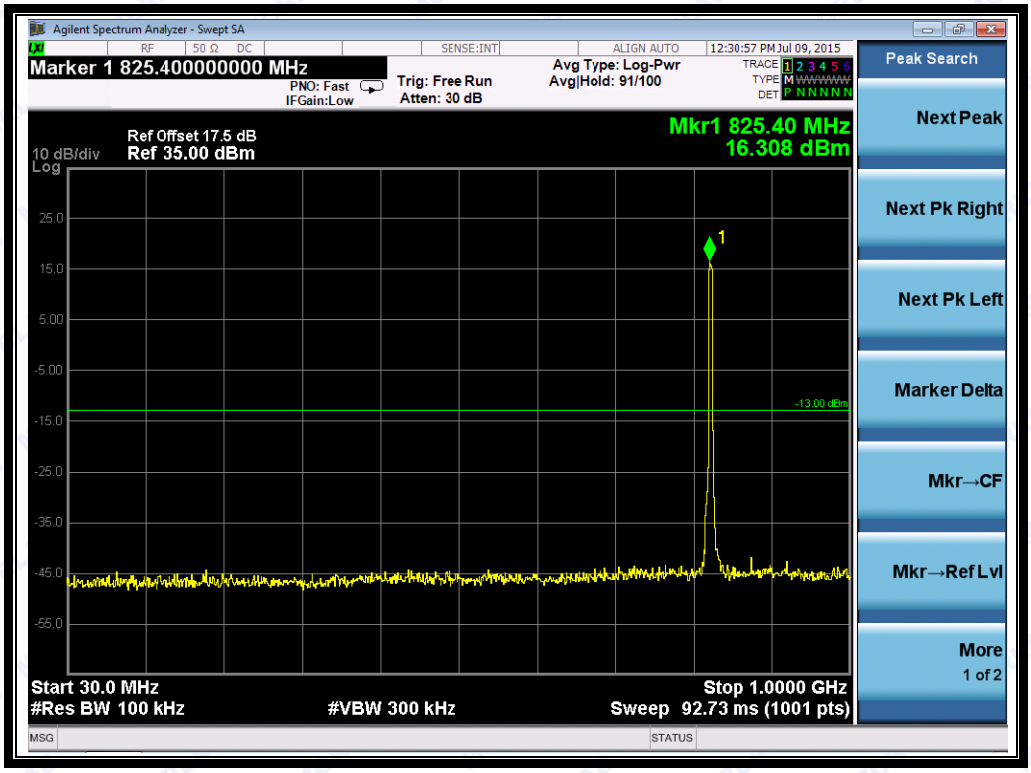


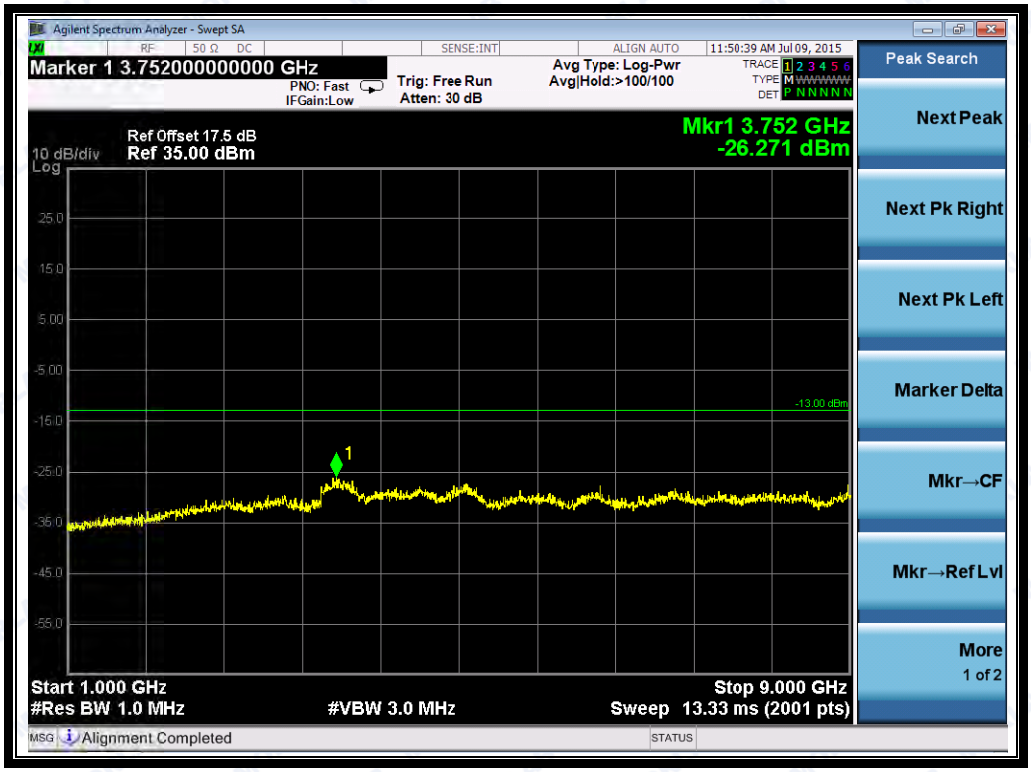
(Plot J3: HSDPA1900MHz Channel = 9538, 30MHz to 1GHz)



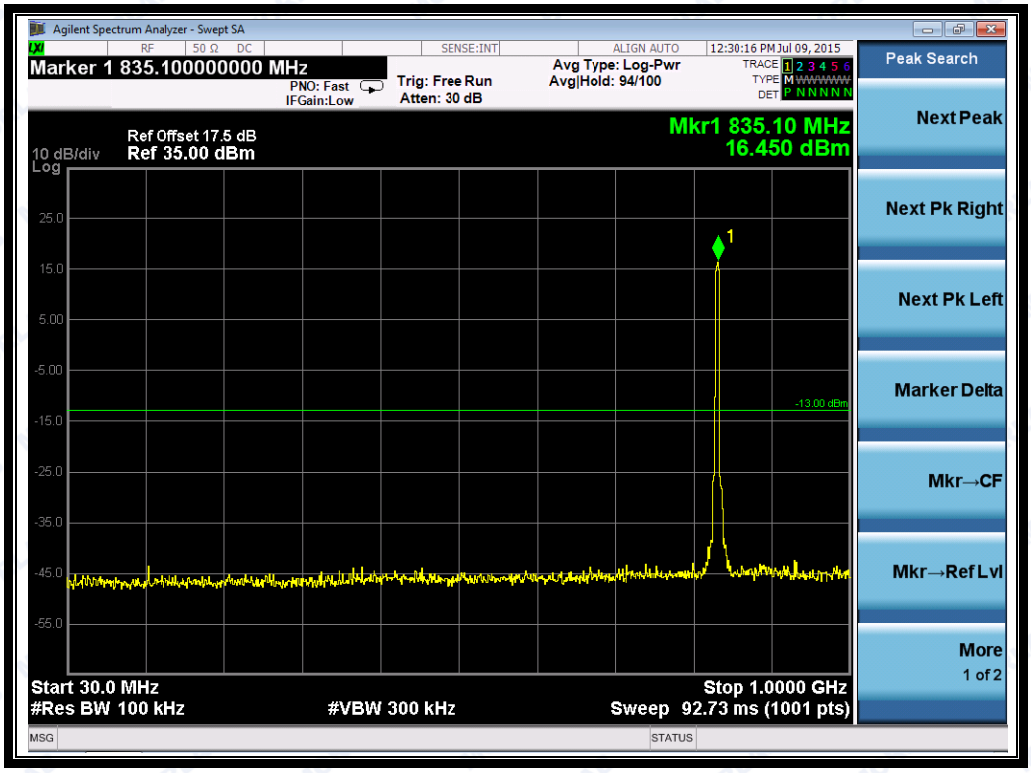
(Plot J3.1: HSDPA1900MHz Channel = 9538 1GHz to 20GHz)



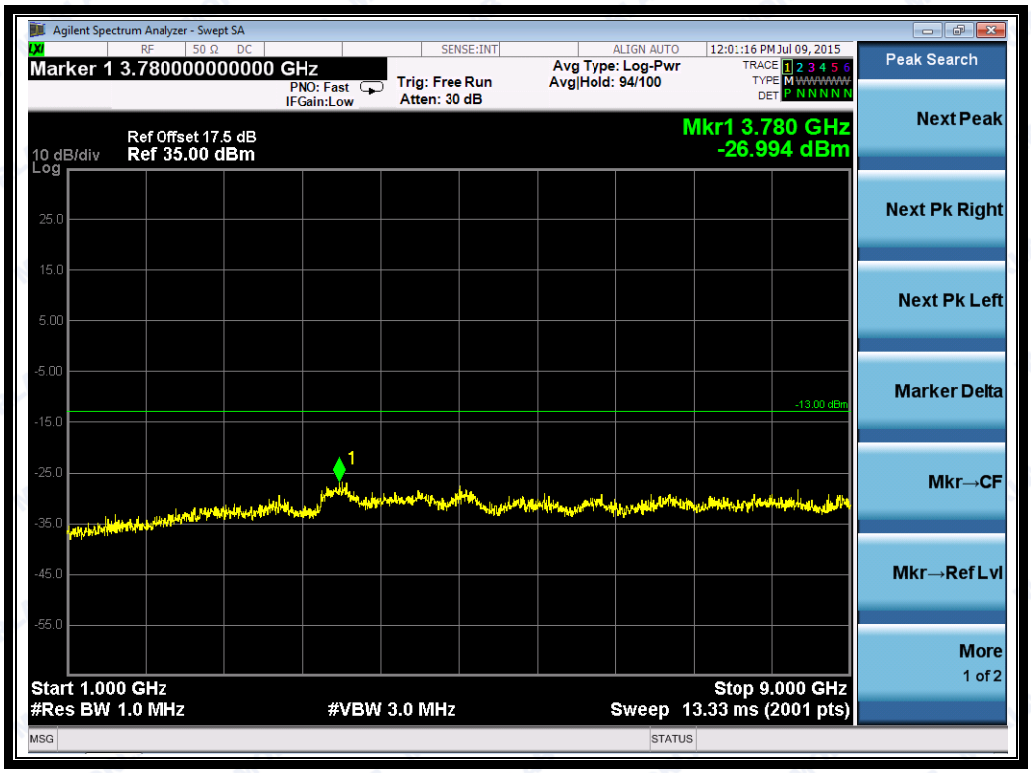
(Plot K1: HSUPA 850MHz Channel = 4132, 30MHz to 1GHz)



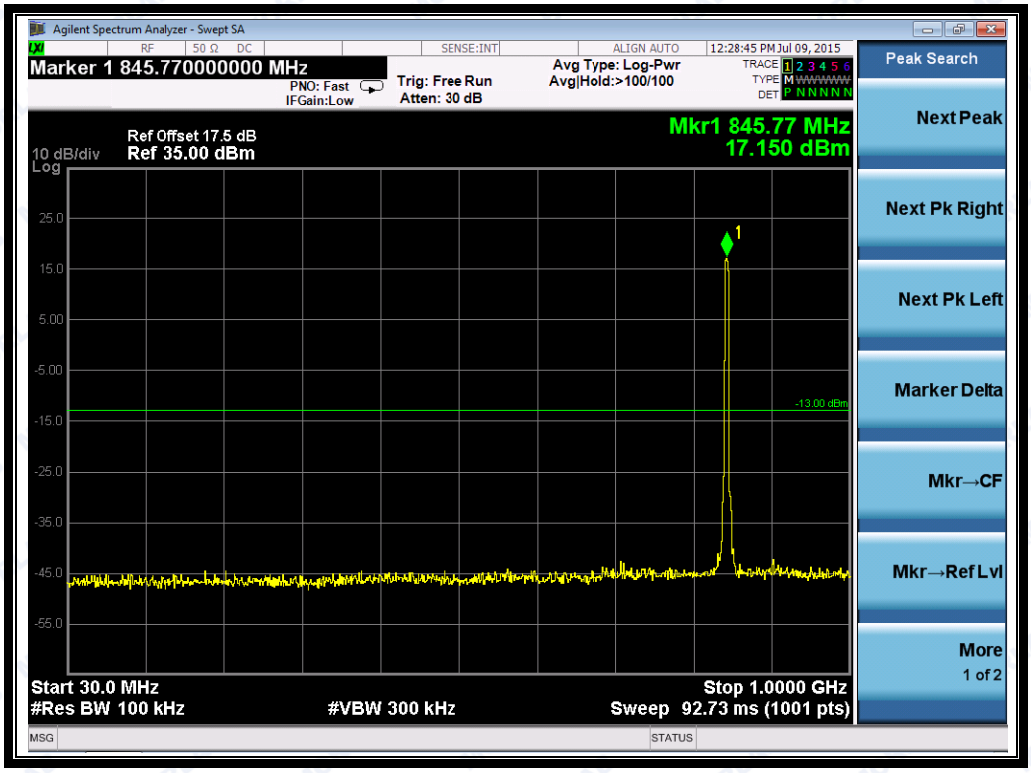
(Plot K1.1: HSUPA 850MHz Channel = 4132, 1GHz to 9GHz)



(Plot K2: HSUPA 850MHz Channel = 4175, 30MHz to 1GHz)

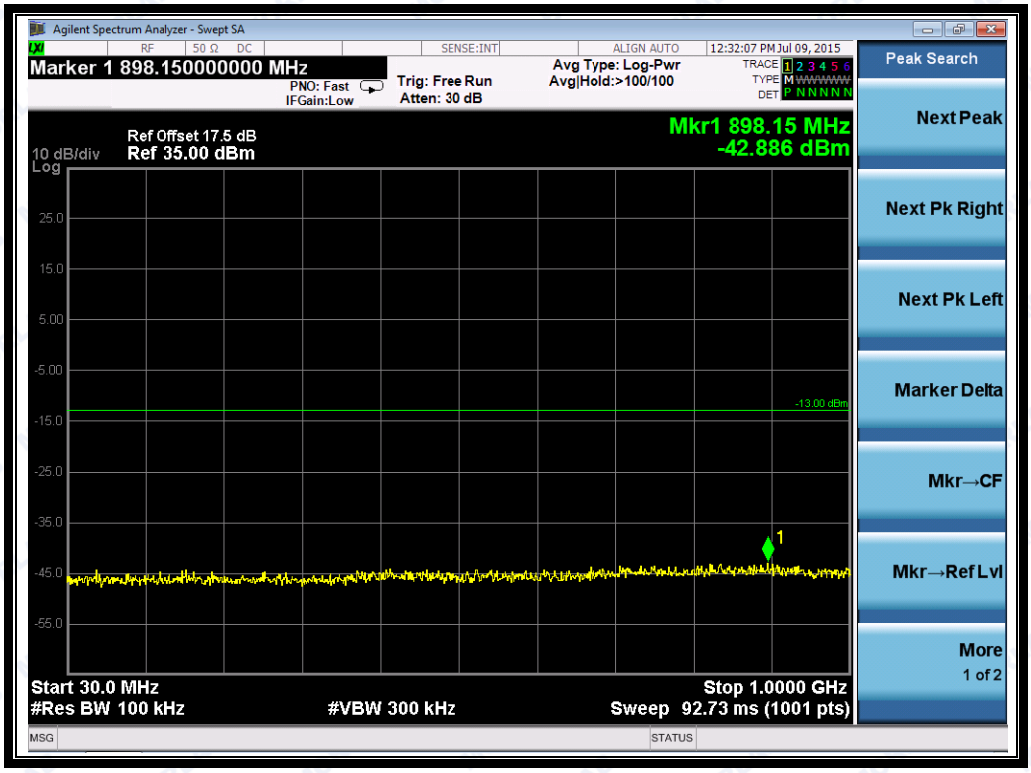


(Plot K2.1: HSUPA 850MHz Channel = 4175, 1GHz to 9GHz)

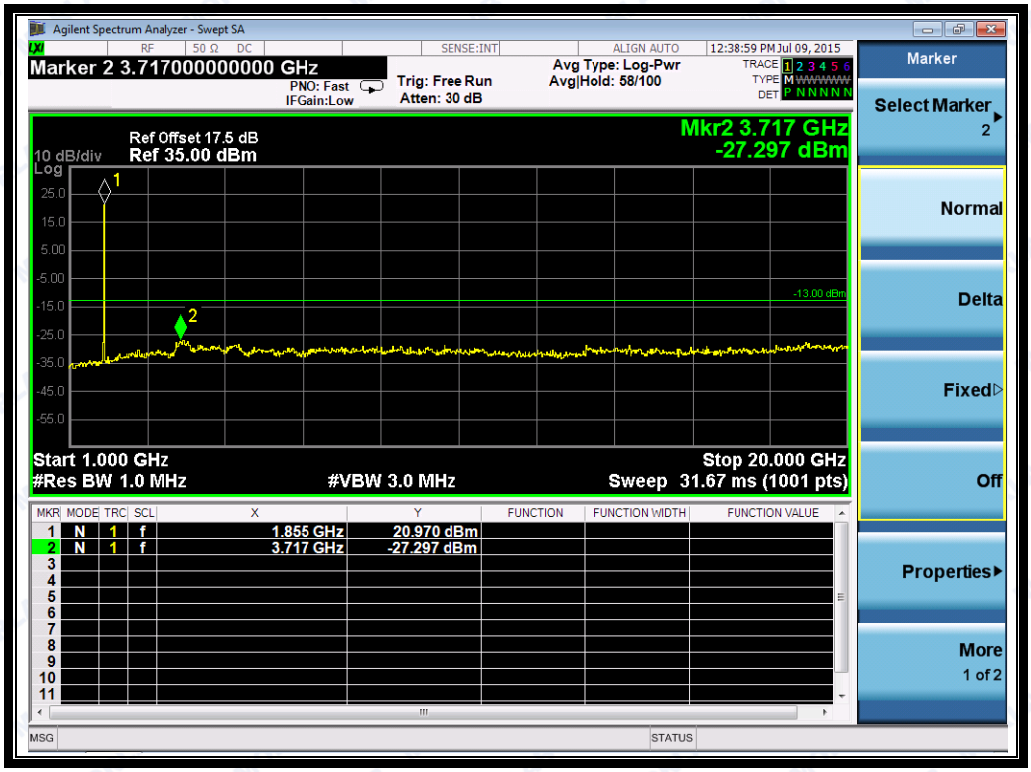


(Plot K3: HSUPA 850MHz Channel = 4233, 30MHz to 1GHz)

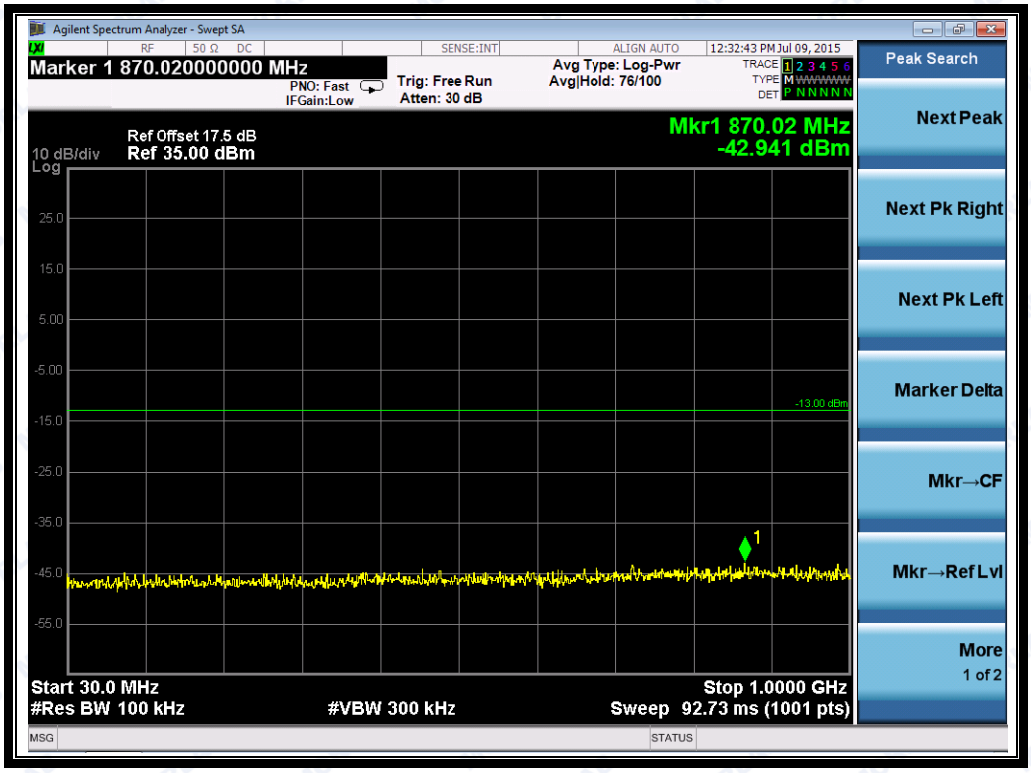
(Plot K3.1: HSUPA 850MHz Channel = 4233, 1GHz to 9GHz)



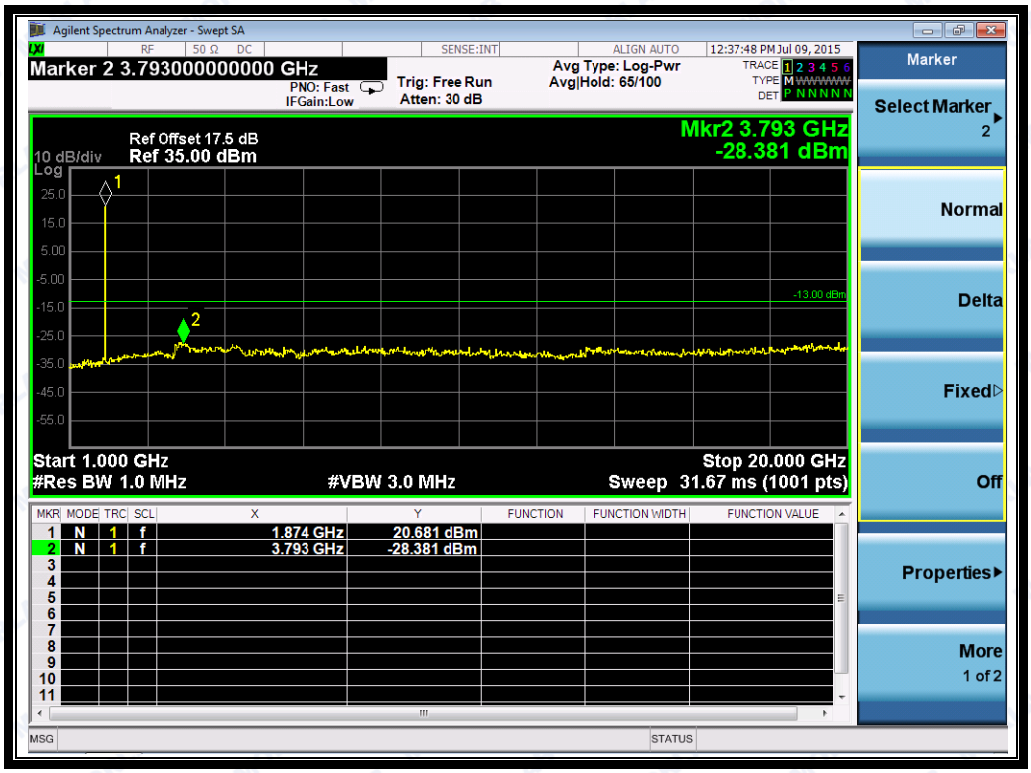
(Plot L1: HSUPA 1900MHz Channel = 9262, 30MHz to 1GHz)



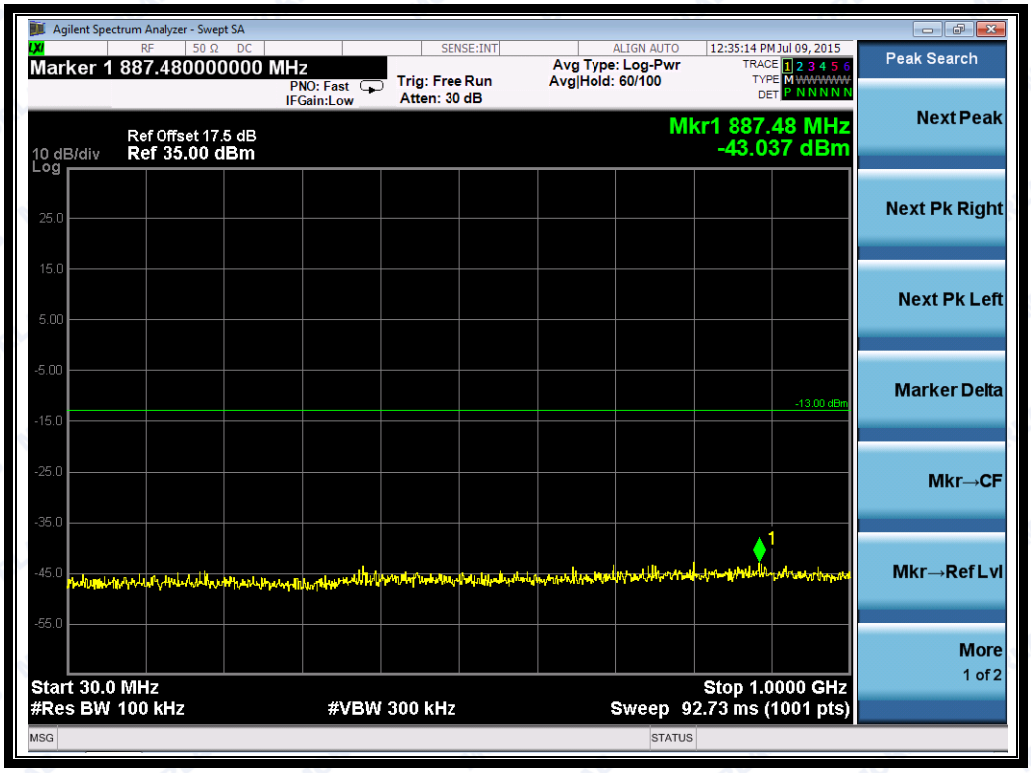
(Plot L1.1: HSUPA 1900MHz Channel = 9262, 1GHz to 20GHz)



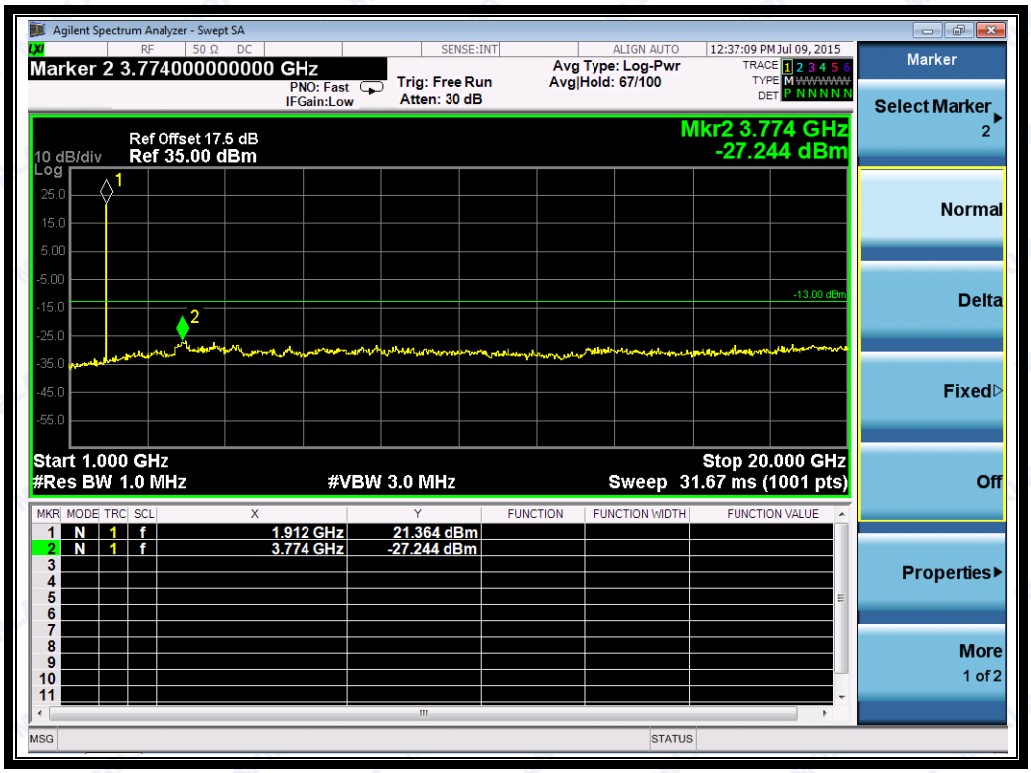
(Plot L2: HSUPA 1900MHz Channel = 9400, 30MHz to 1GHz)



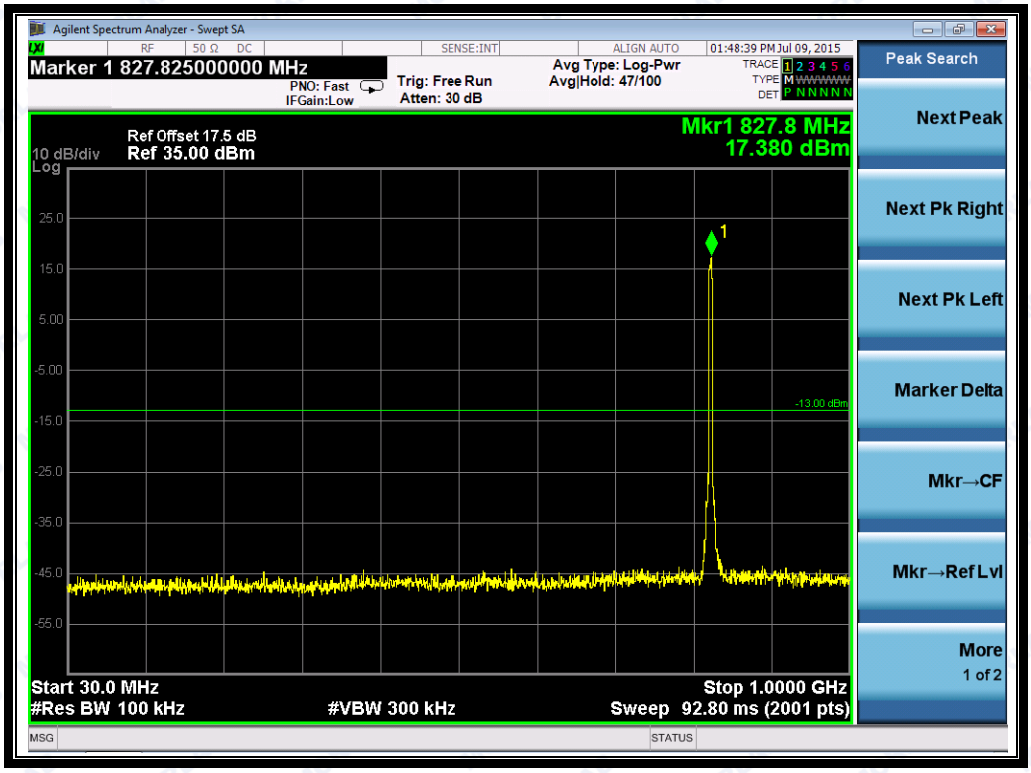
(Plot L2.1: HSUPA1900MHz Channel = 9400, 1GHz to 20GHz)



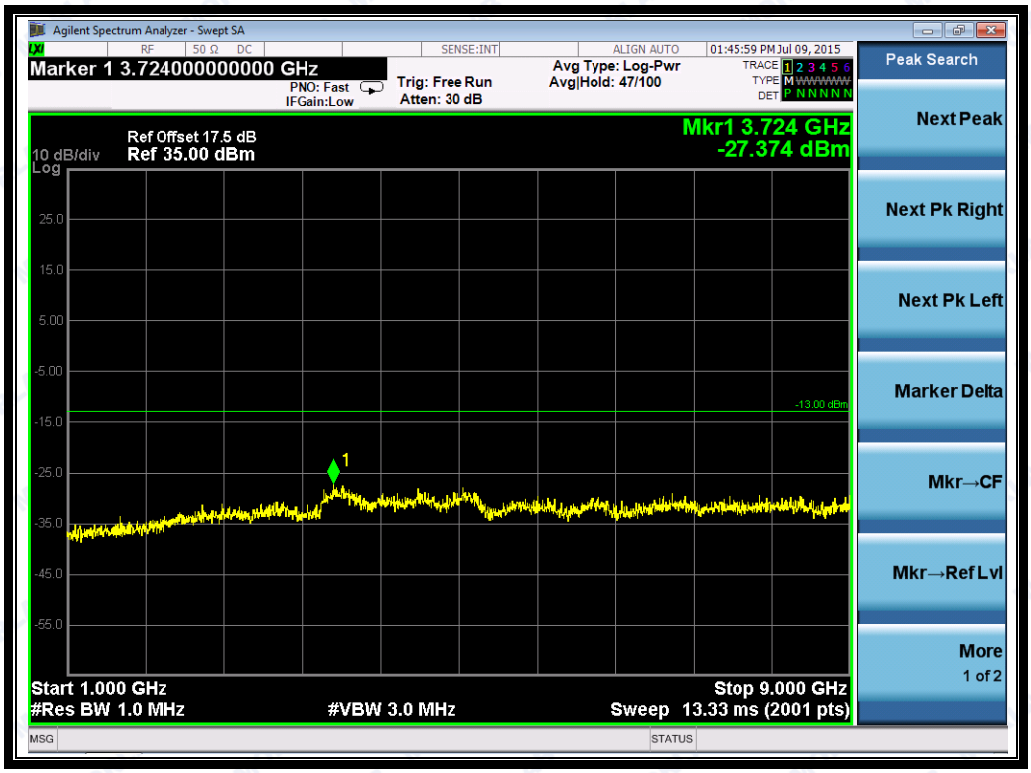
(Plot L3: HSUPA1900MHz Channel = 9538, 30MHz to 1GHz)



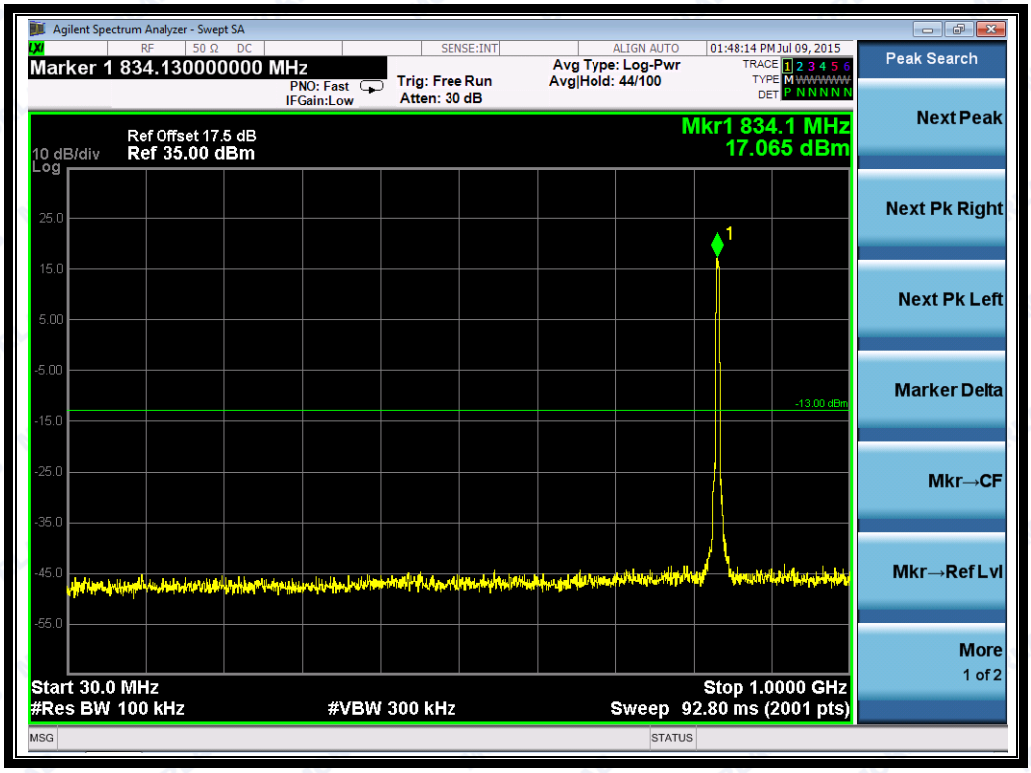
(Plot L3.1: HSUPA1900MHz Channel = 9538 1GHz to 20GHz)



(Plot M1: HSPA+ 850MHz Channel = 4132, 30MHz to 1GHz)

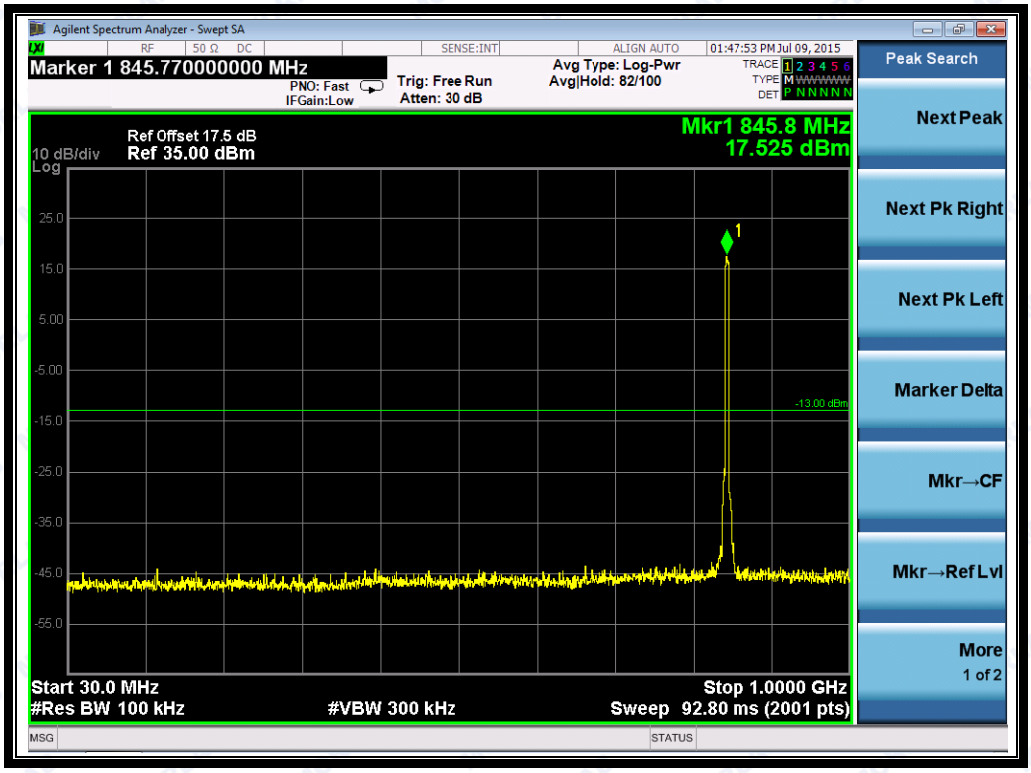


(Plot M1.1: HSPA+ 850MHz Channel = 4132, 1GHz to 9GHz)

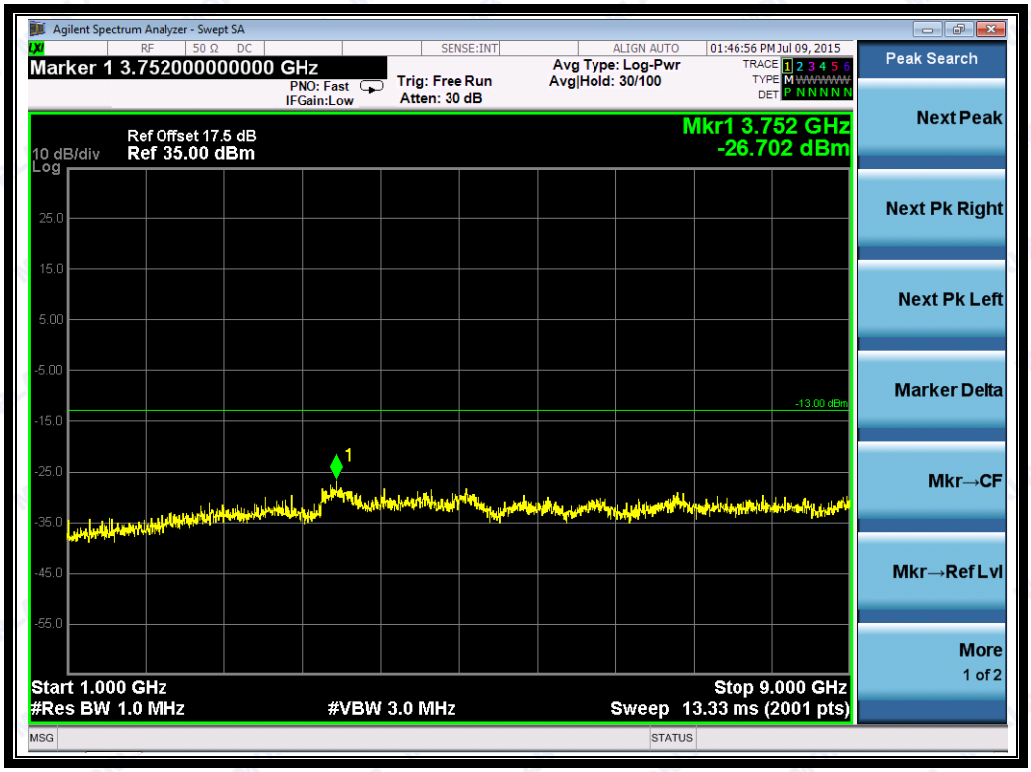


(Plot M2: HSPA+ 850MHz Channel = 4175, 30MHz to 1GHz)

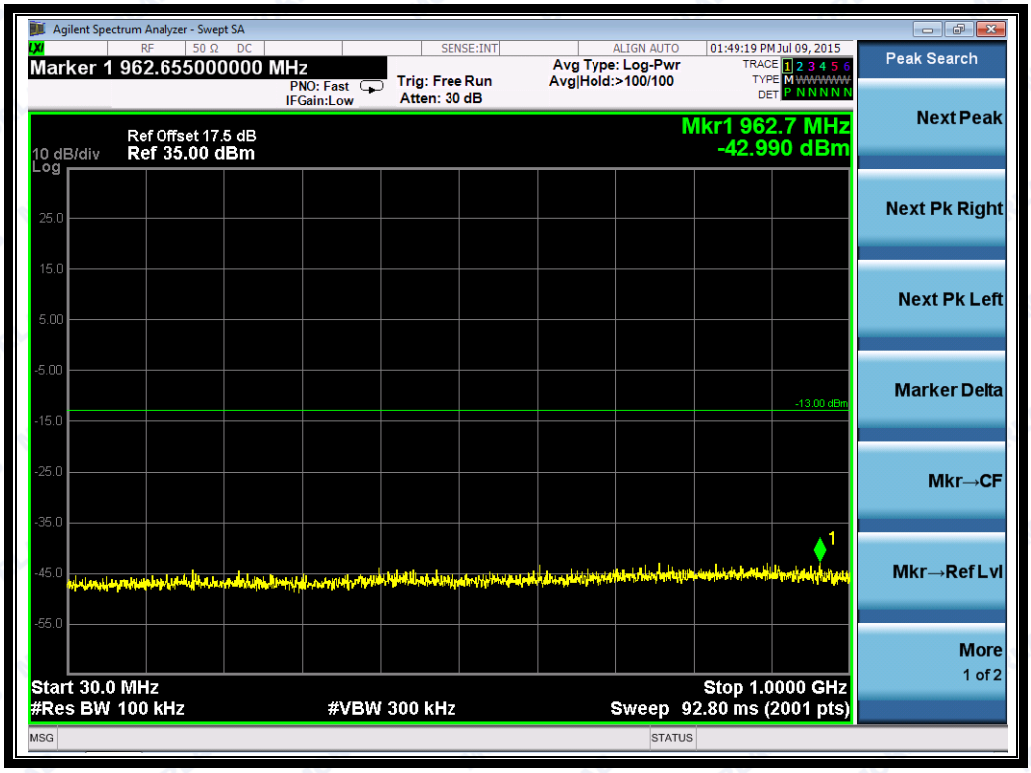
(Plot M2.1: HSPA+ 850MHz Channel = 4175, 1GHz to 9GHz)



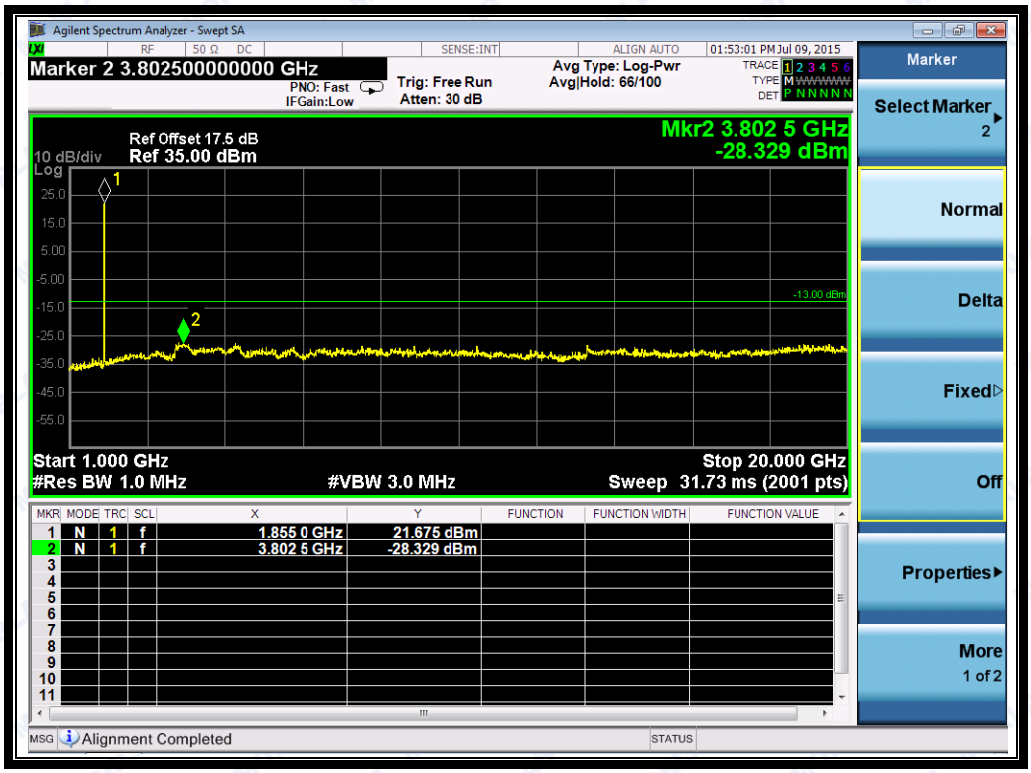
(Plot M3: HSPA+ 850MHz Channel = 4233, 30MHz to 1GHz)



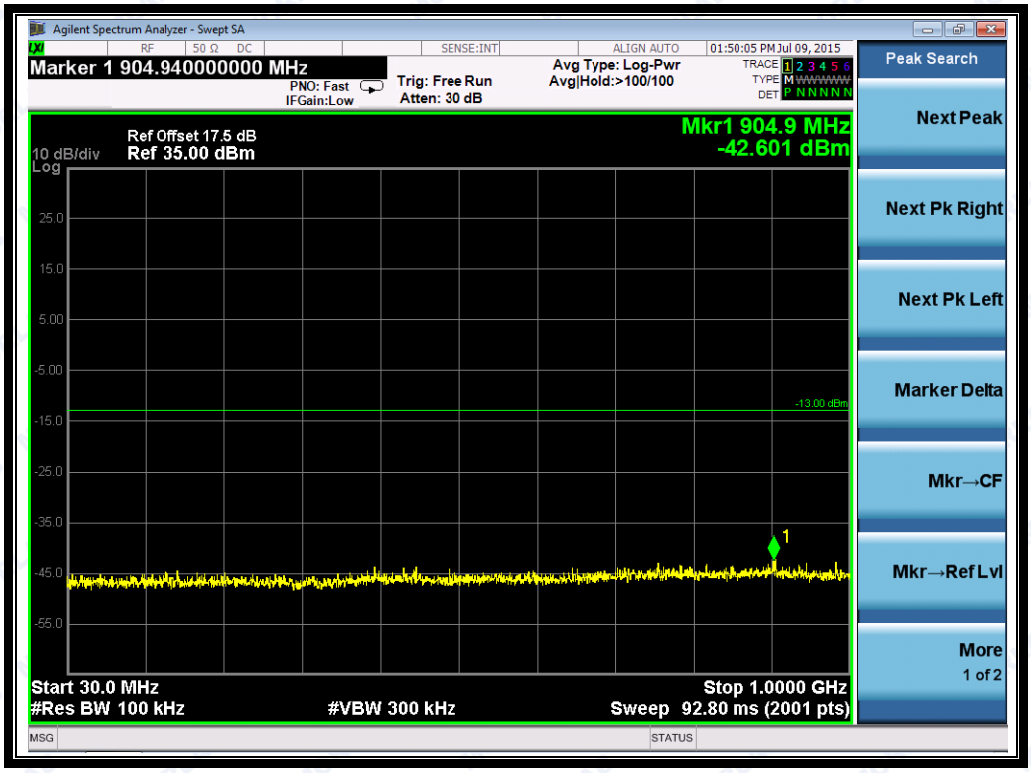
(Plot M3.1: HSPA+ 850MHz Channel = 4233, 1GHz to 9GHz)



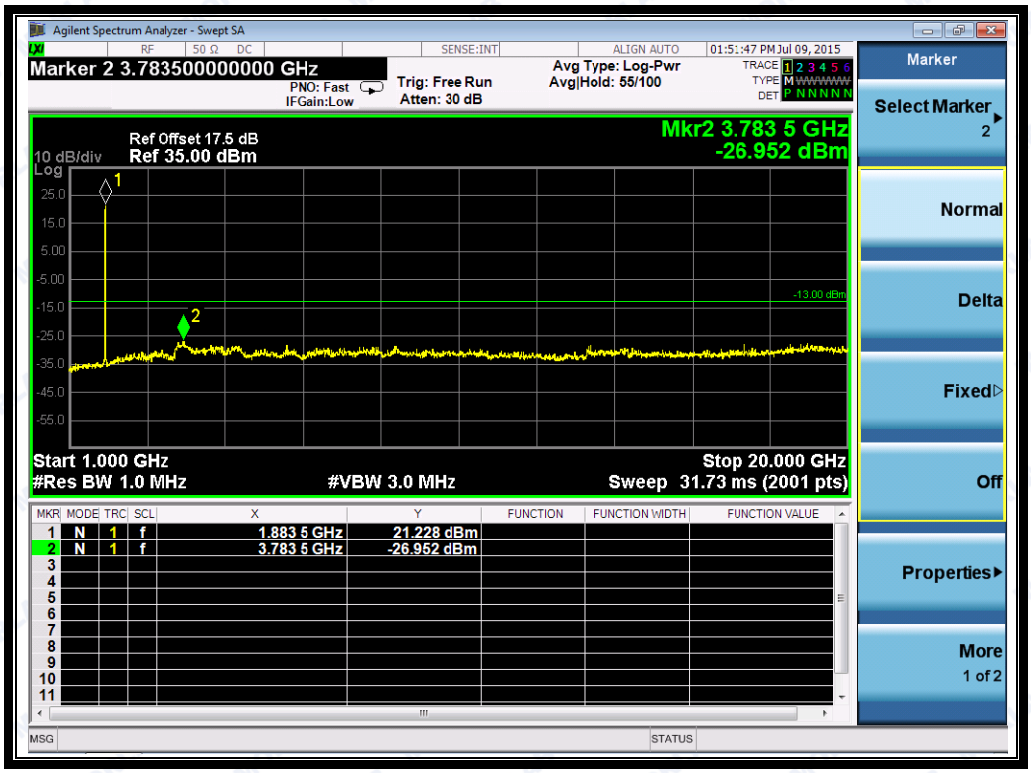
(Plot N1: HSPA+ 1900MHz Channel = 9262, 30MHz to 1GHz)



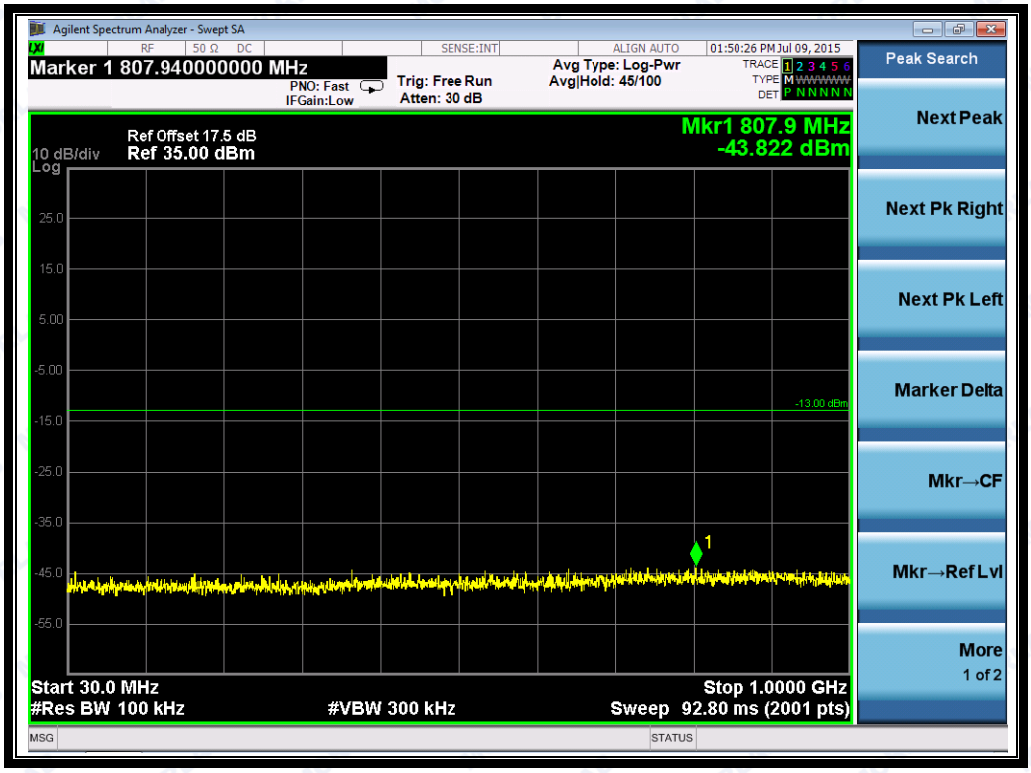
(Plot N1.1: HSPA+ 1900MHz Channel = 9262, 1GHz to 20GHz)



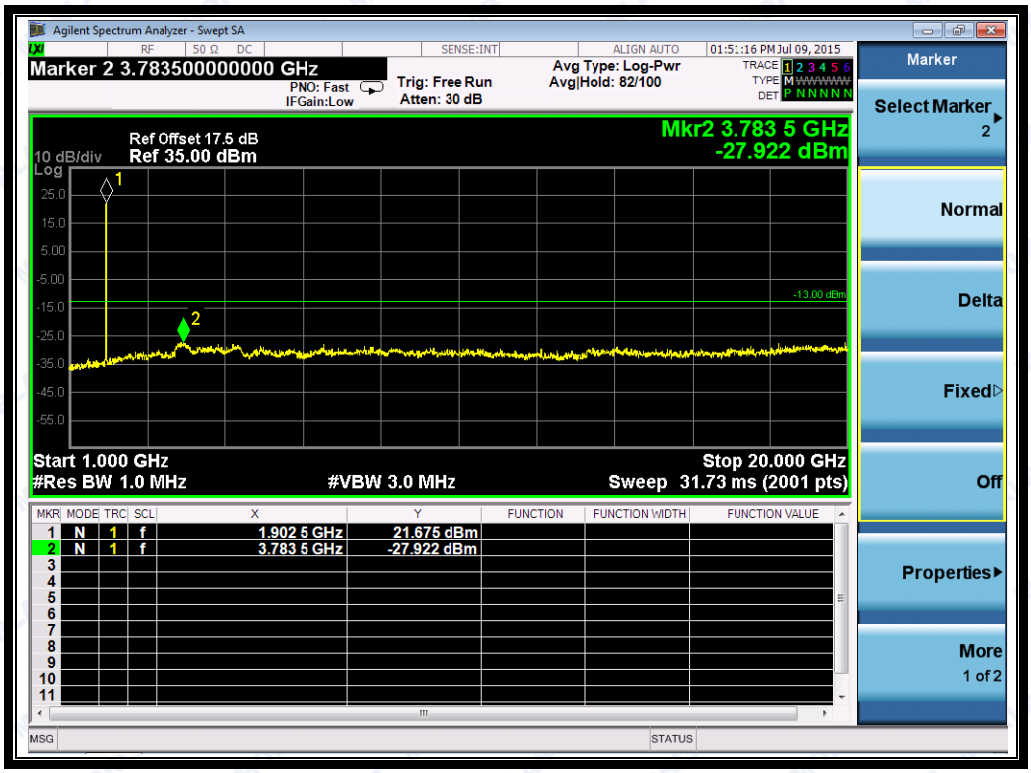
(Plot N2: HSPA+ 1900MHz Channel = 9400, 30MHz to 1GHz)



(Plot N2.1: HSPA+ 1900MHz Channel = 9400, 1GHz to 20GHz)



(Plot N3: HSPA+ 1900MHz Channel = 9538, 30MHz to 1GHz)



(Plot N3.1: HSPA+ 1900MHz Channel = 9538 1GHz to 20GHz)

2.6 Band Edge

2.6.1 Requirement

According to FCC section 22.917(b) and FCC section 24.238(b) in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

2.6.2 Test Description

See section 2.1.2 of this report.

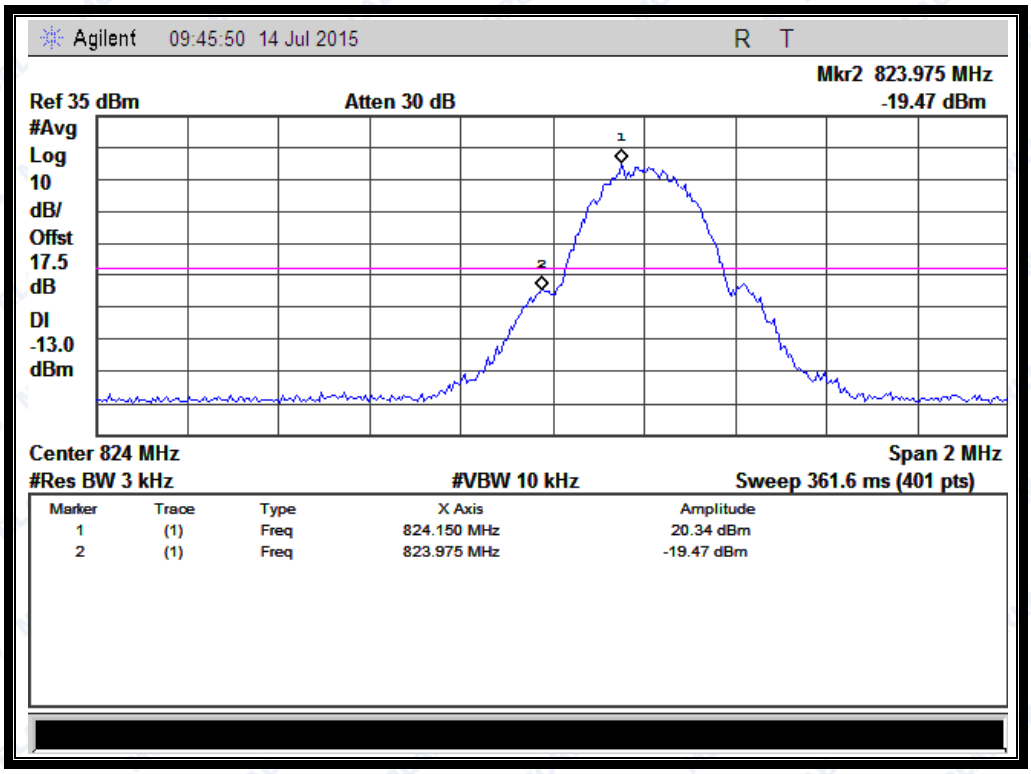
2.6.3 Test Result

The lowest and highest channels are tested to verify the band edge emissions.

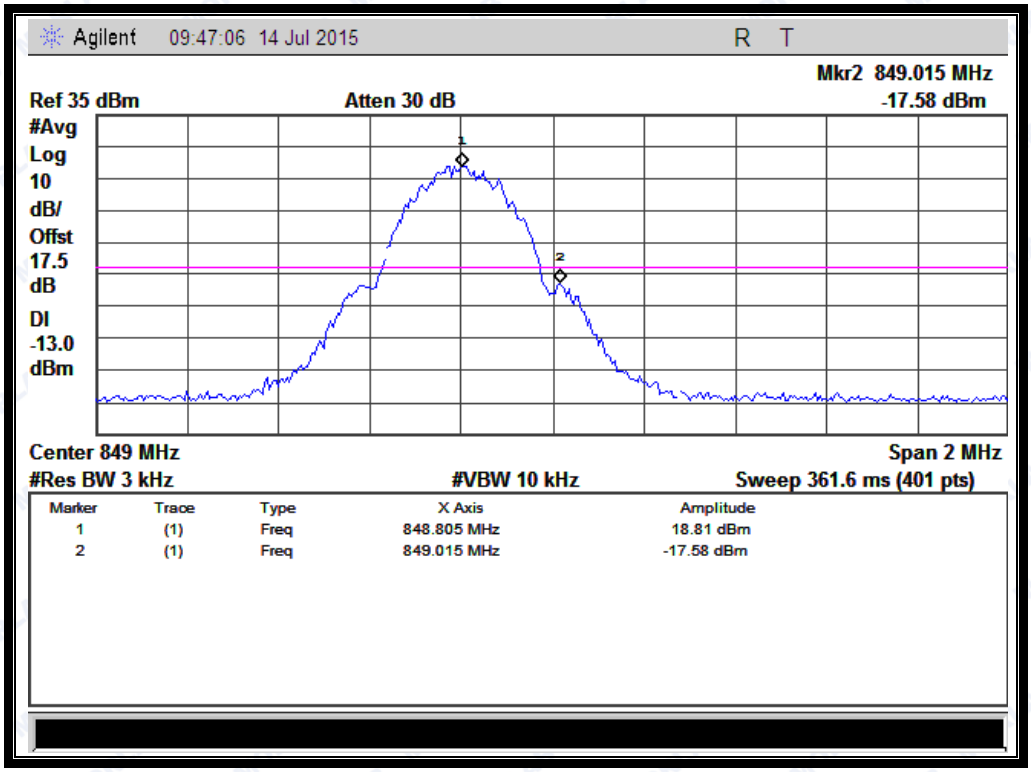
Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-19.47	Plat A1	-13	PASS
	251	848.8	-17.58	Plot A2		PASS
GSM 1900MHz	512	1850.2	-21.58	Plat B1	-13	PASS
	810	1909.8	-19.88	Plot B2		PASS
EGPRS 850MHz	128	824.2	-19.64	Plat C1	-13	PASS
	251	848.8	-17.47	Plot C2		PASS
EGPRS 1900MHz	512	1850.2	-21.57	Plat D1	-13	PASS
	810	1909.8	-22.03	Plot D2		PASS
WCDMA 850MHz	4132	826.4	-22.61	Plat E1	-13	PASS
	4233	846.6	-26.02	Plot E2		PASS
WCDMA 1900MHz	9262	1852.4	-24.38	Plat F1	-13	PASS
	9538	1907.6	-20.97	Plot F2		PASS
HSDPA 850MHz	4132	826.4	-23.10	Plat G1	-13	PASS
	4233	846.6	-25.11	Plot G2		PASS
HSDPA 1900MHz	9262	1852.4	-23.78	Plat H1	-13	PASS
	9538	1907.6	-19.31	Plot H2		PASS
HSUPA 850MHz	4132	826.4	-25.00	Plat I1	-13	PASS
	4233	846.6	-26.80	Plot I2		PASS
HSUPA 1900MHz	9262	1852.4	-25.67	Plat J1	-13	PASS
	9538	1907.6	-21.41	Plot J2		PASS
HSPA+ 850MHz	4132	826.4	-24.25	Plat K1	-13	PASS
	4233	846.6	-26.61	Plot K2		PASS
HSPA + 1900MHz	9262	1852.4	-26.43	Plat L1	-13	PASS
	9538	1907.6	-22.98	Plot L2		PASS

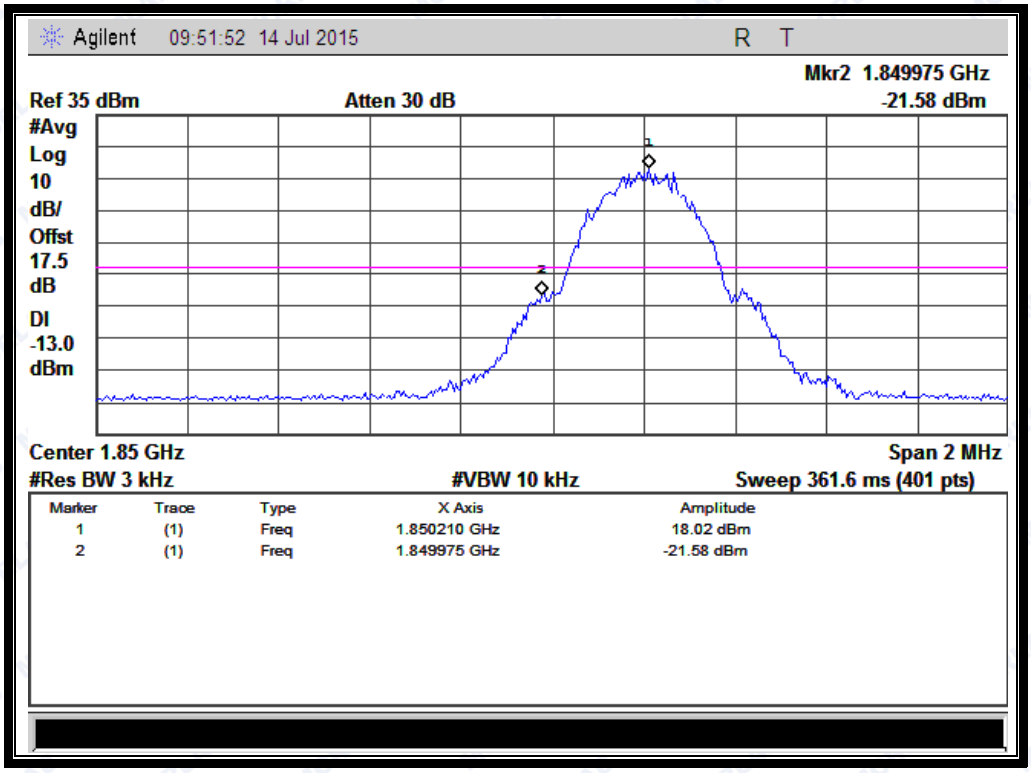
Test Plots:



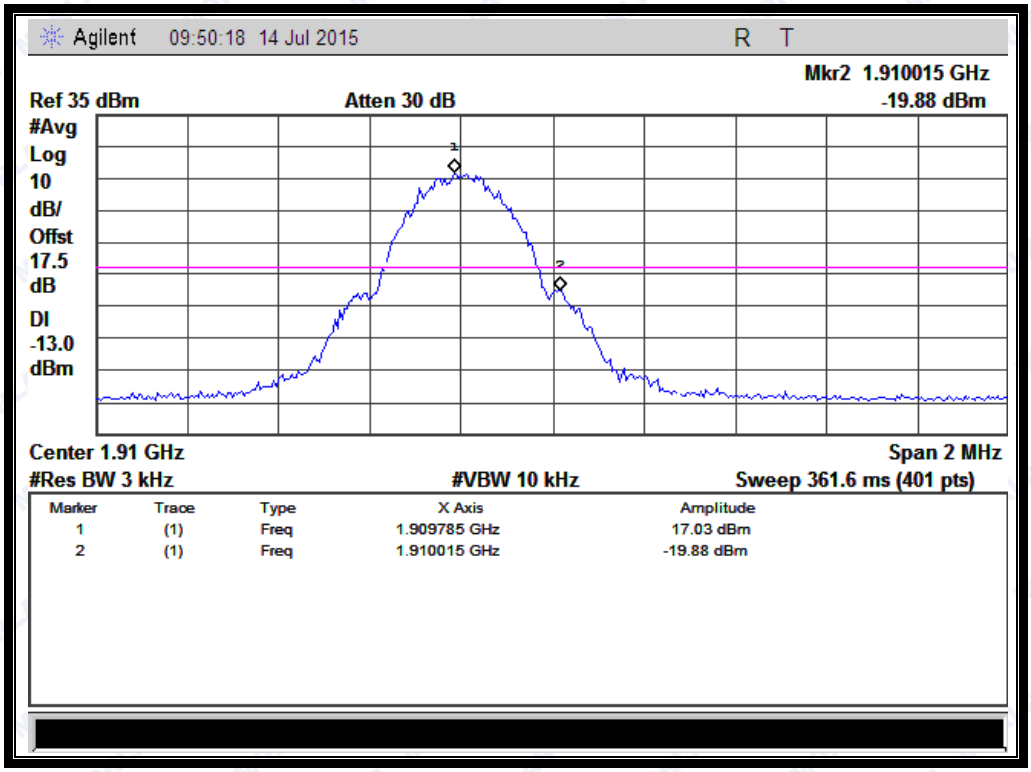
(Plot A1: GSM 850 Channel = 128)



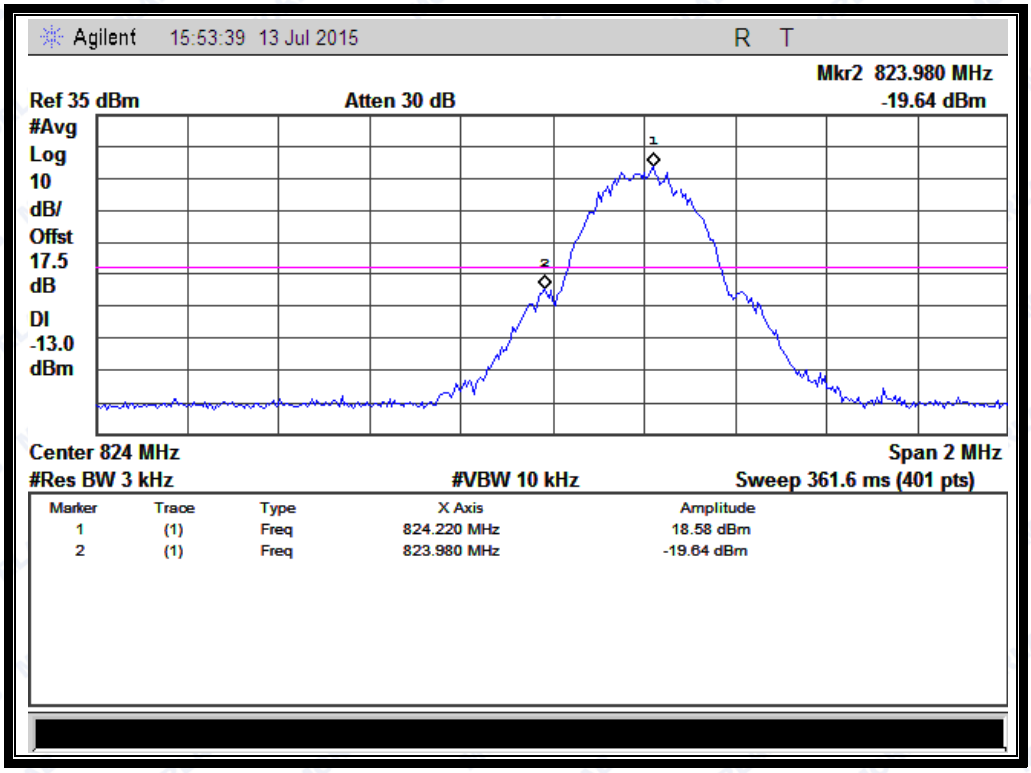
(Plot A2: GSM 850 Channel = 251)



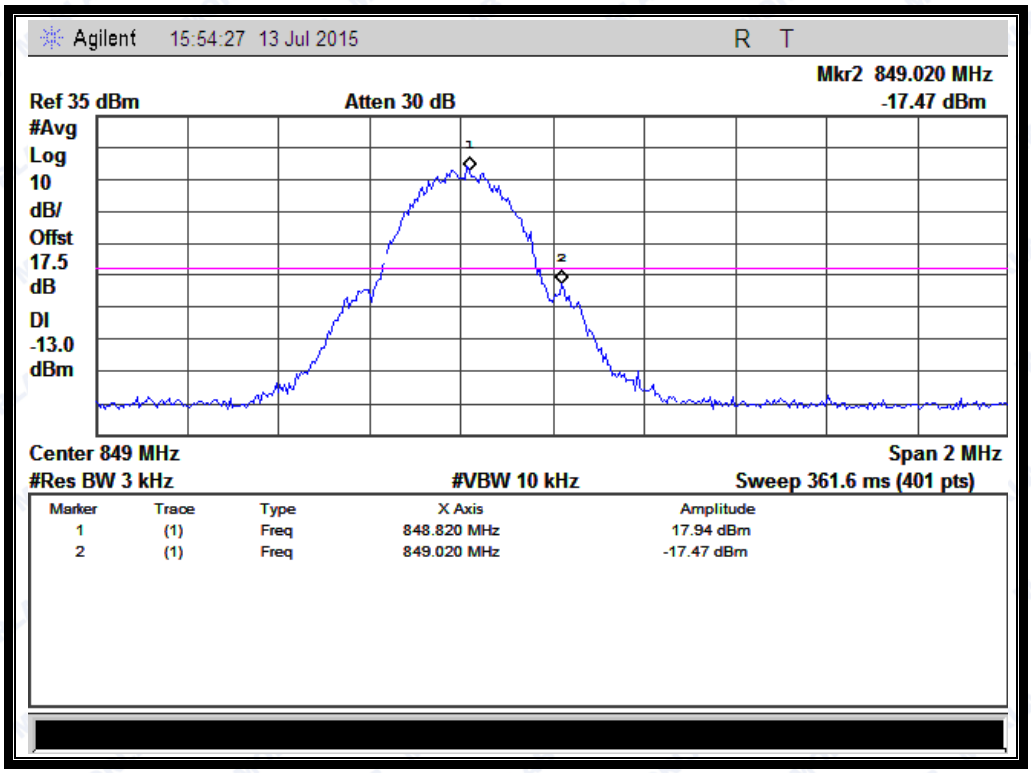
(Plot B1: GSM 1900 Channel = 512)



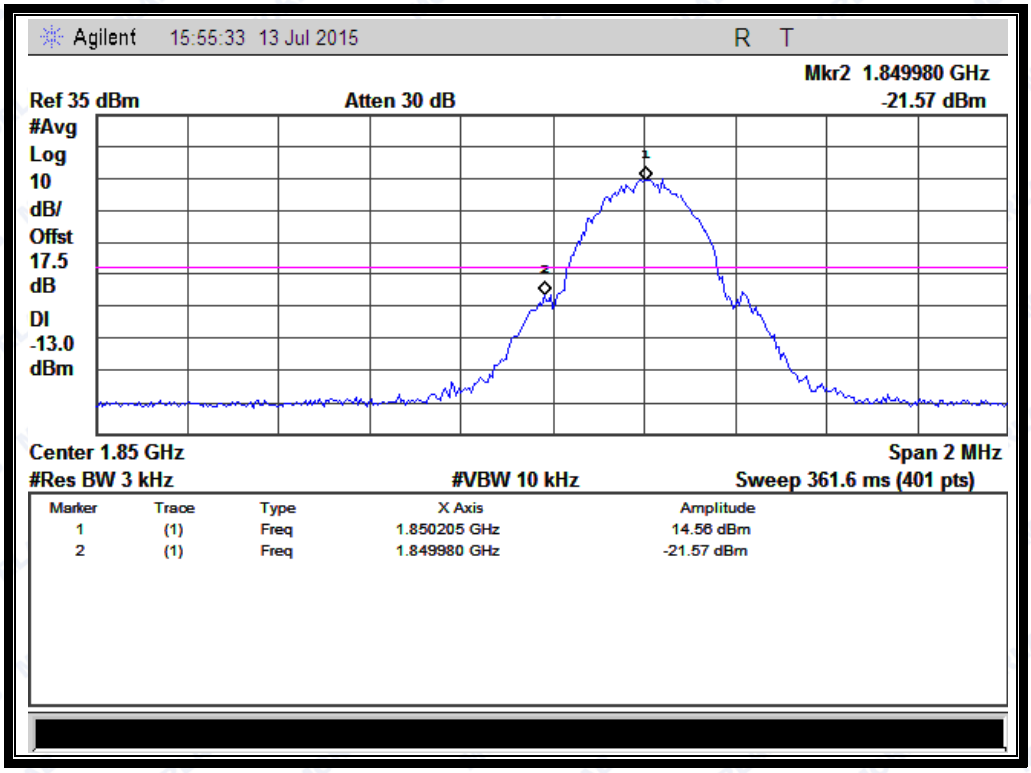
(Plot B2: GSM 1900 Channel = 810)



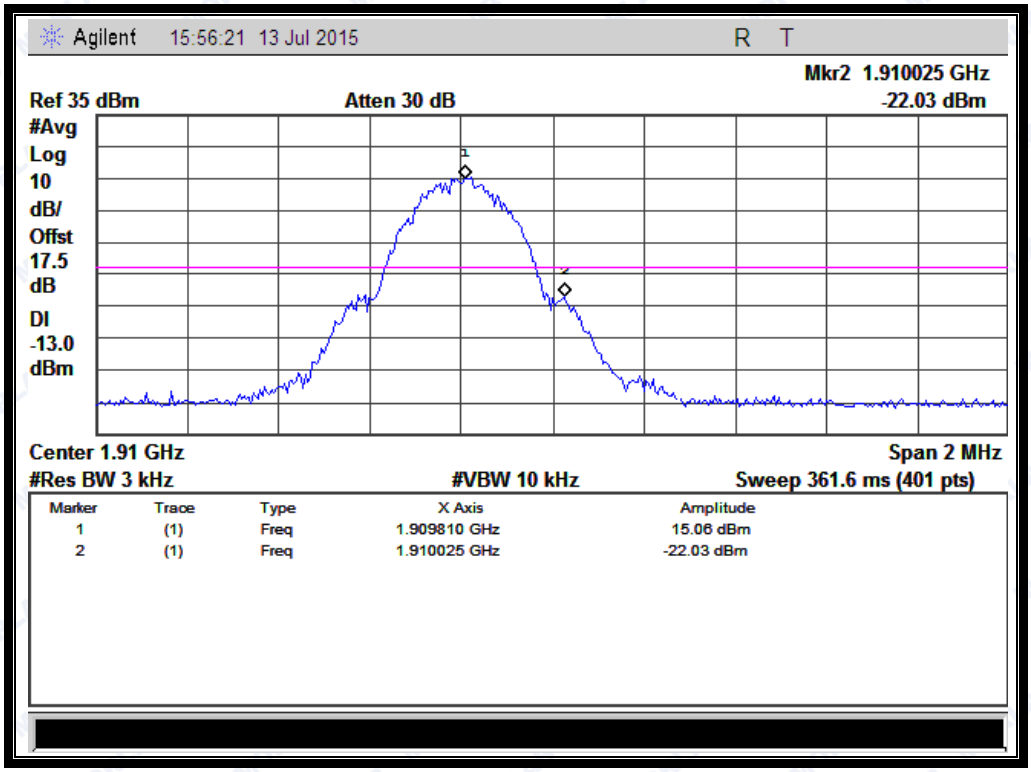
(Plot C1: EGPRS 850 Channel = 128)



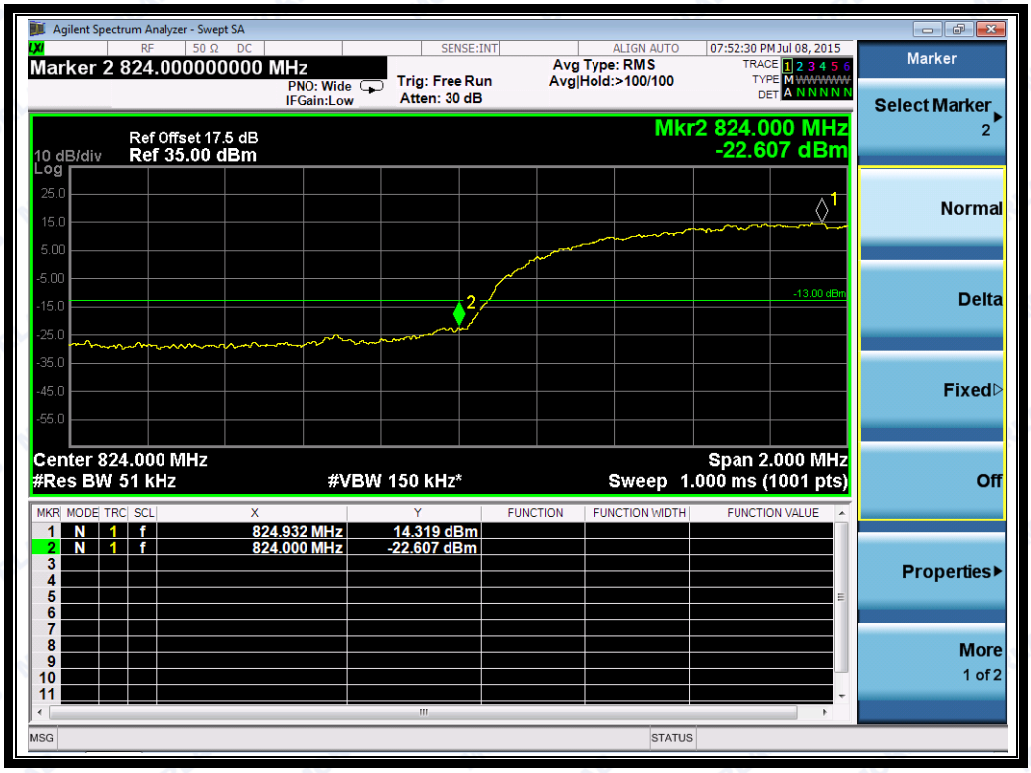
(Plot C2: EGPRS 850 Channel = 251)



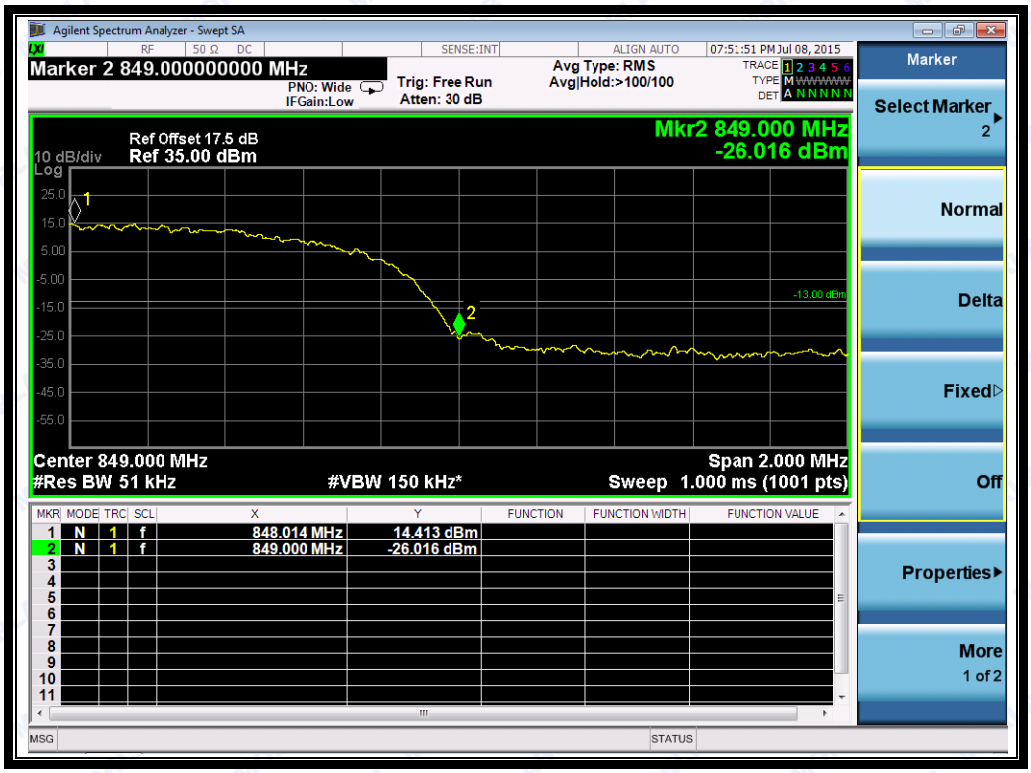
(Plot D1: EGPRS 1900 Channel = 512)



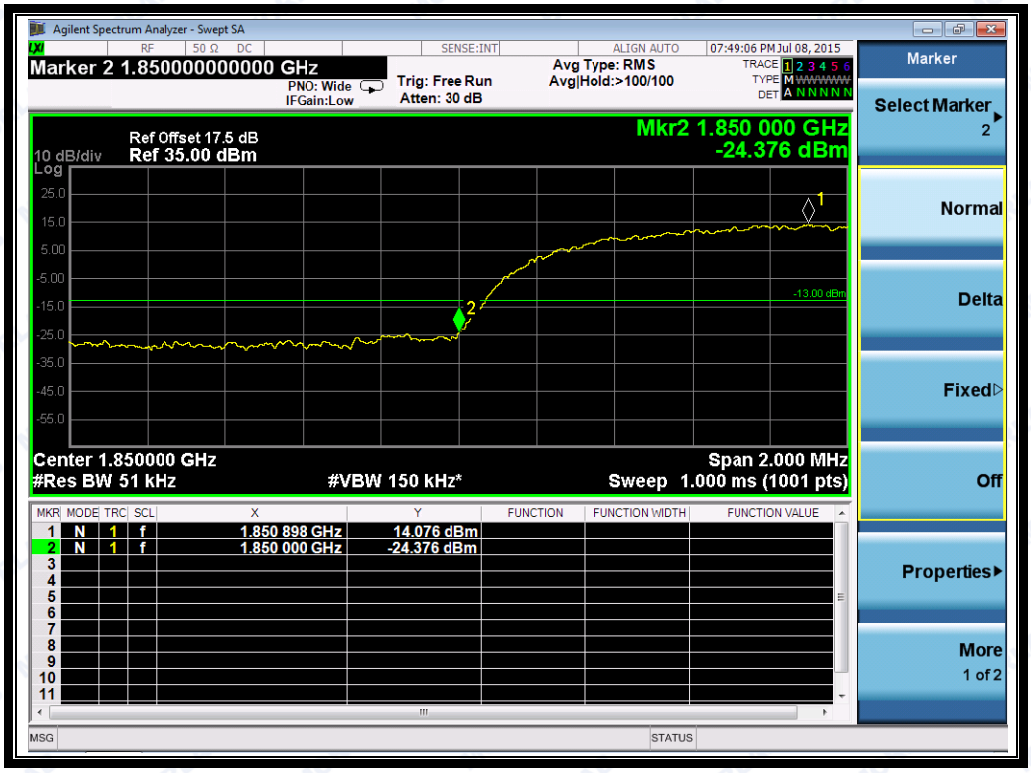
(Plot D2: EGPRS 1900 Channel = 810)



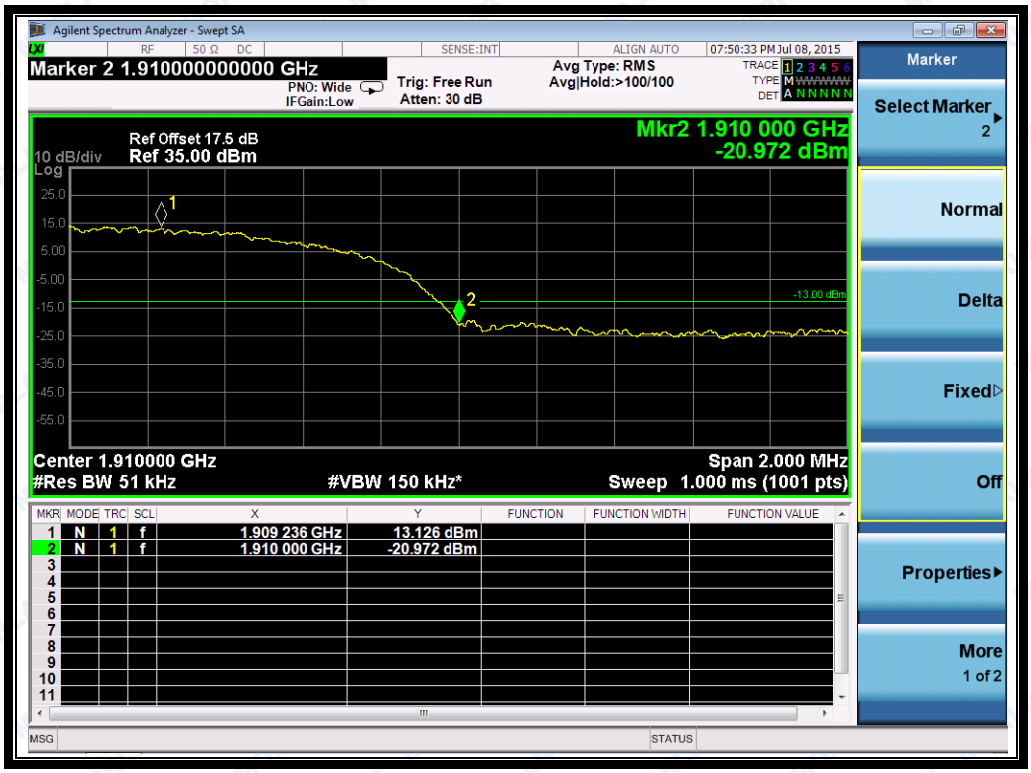
(Plot E1: WCDMA 850 Channel = 4132)



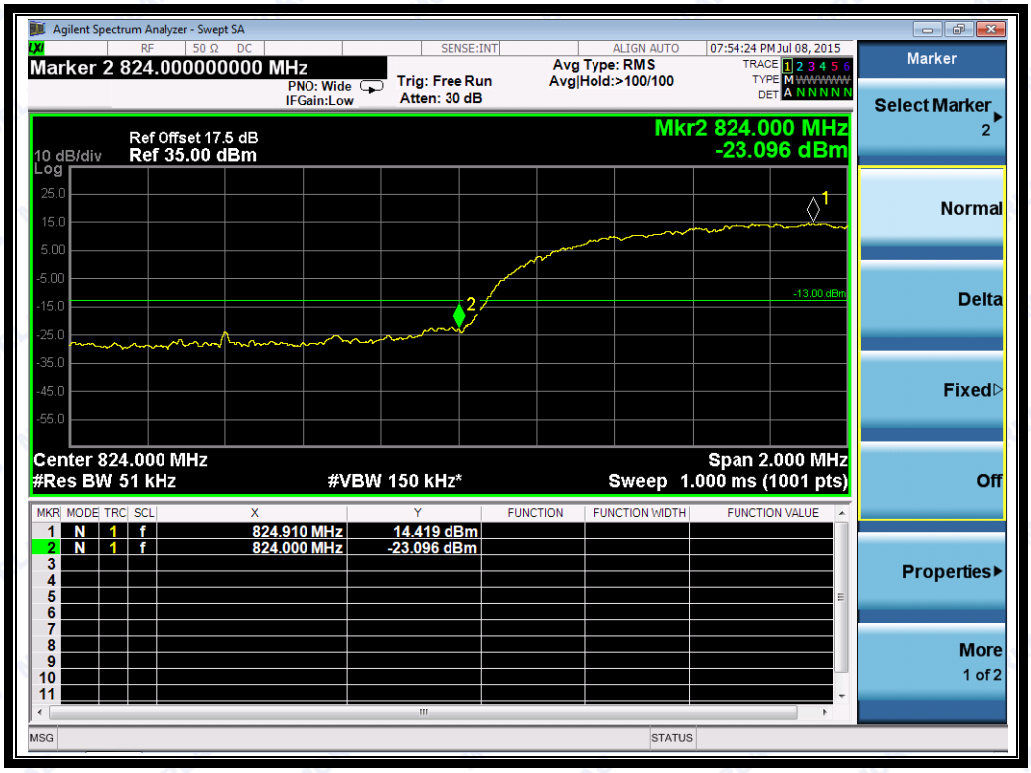
(Plot E2: WCDMA 850 Channel = 4233)



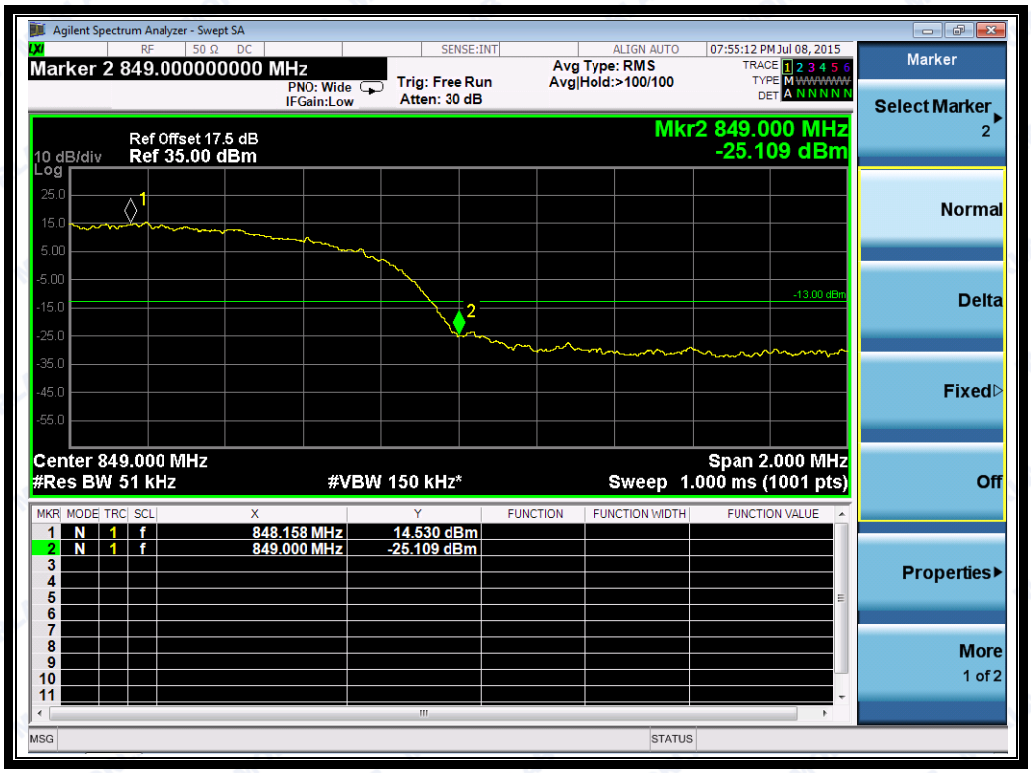
(Plot F1: WCDMA 1900 Channel = 9262)



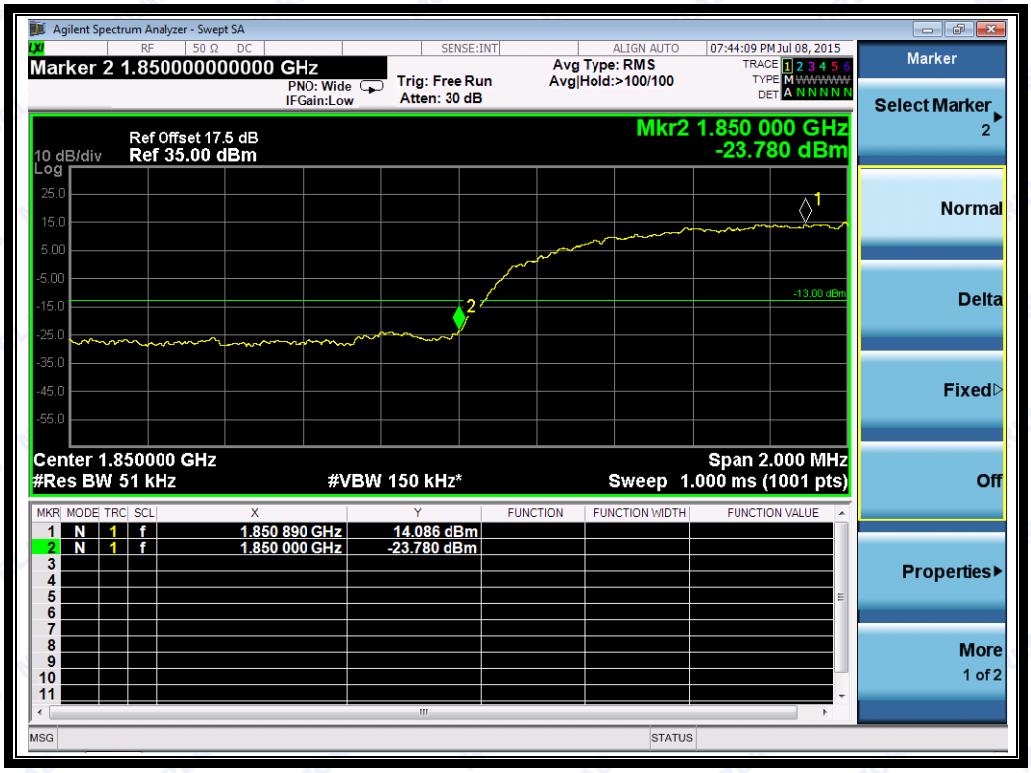
(Plot F2: WCDMA 1900 Channel = 9538)



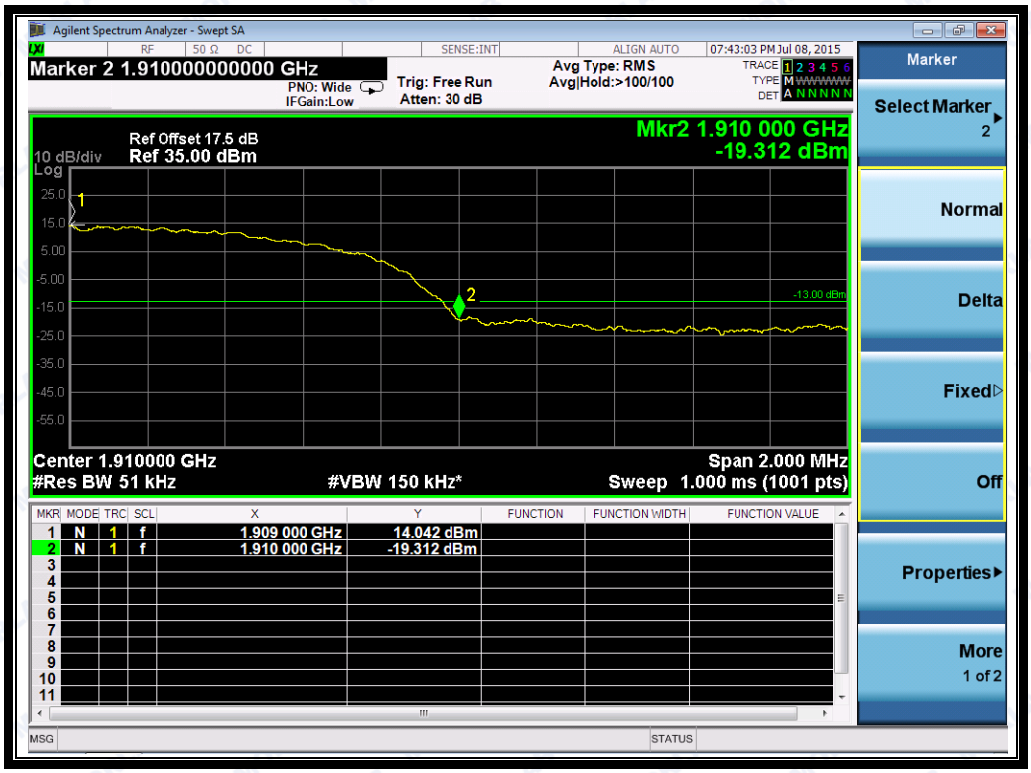
(Plot G1: HSDPA 850 Channel = 4132)



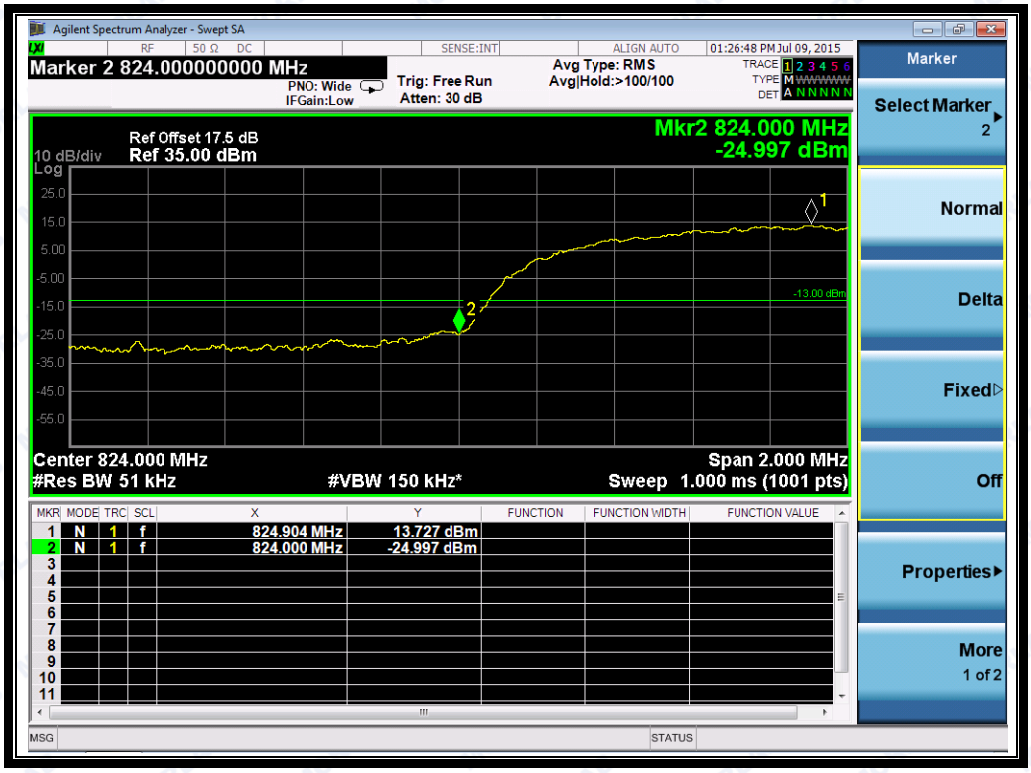
(Plot G2: HSDPA 850 Channel = 4233)



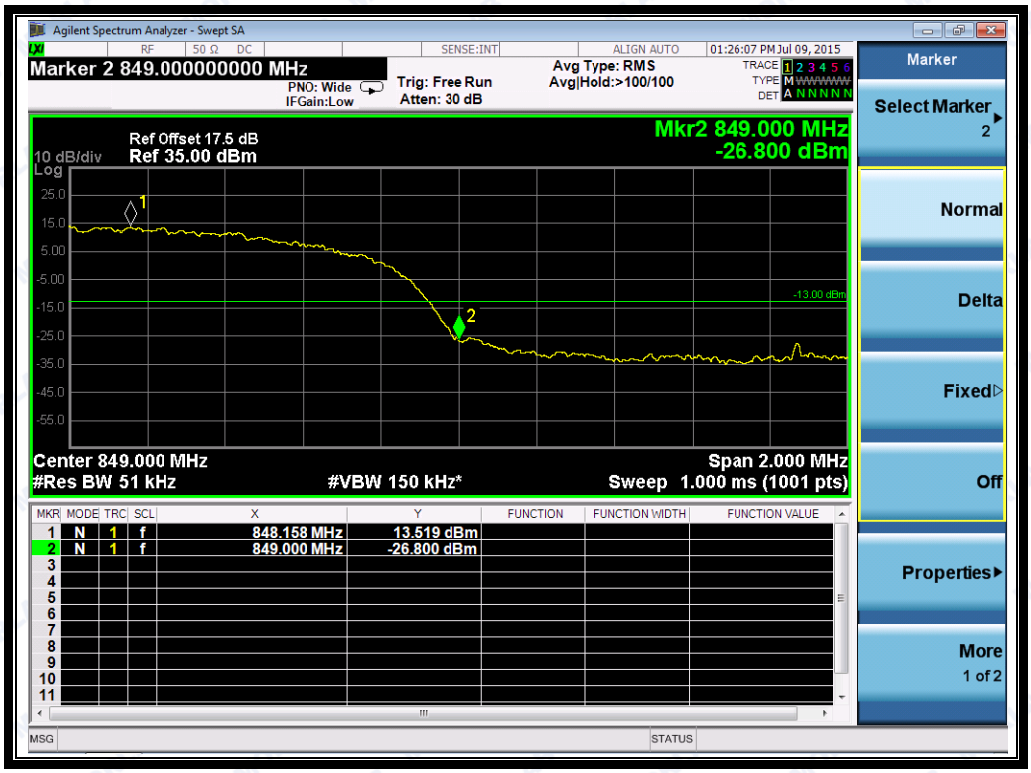
(Plot H1: HSDPA 1900 Channel = 9262)



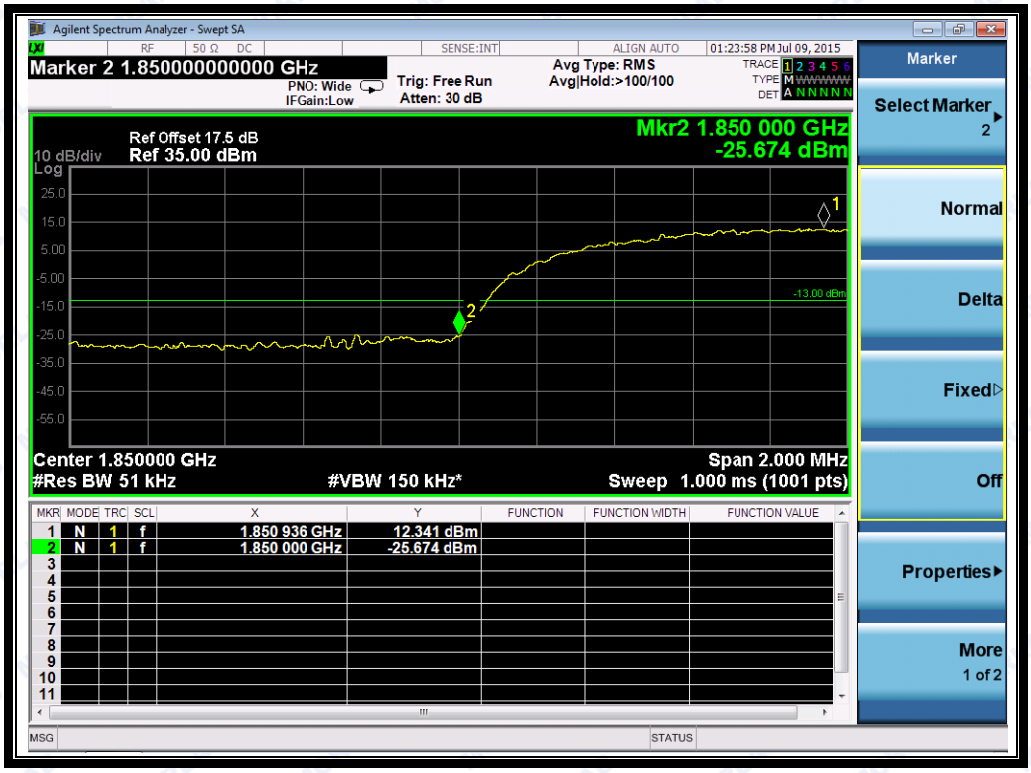
(Plot H2: HSDPA 1900 Channel = 9538)



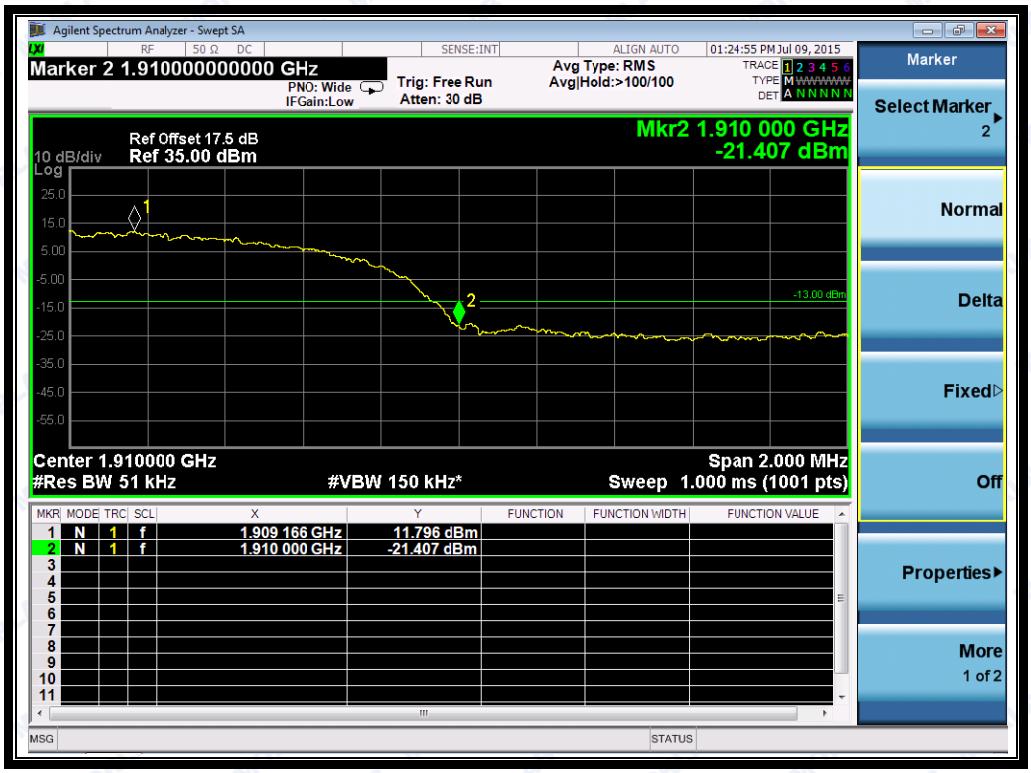
(Plot I1: HSUPA 850 Channel = 4132)



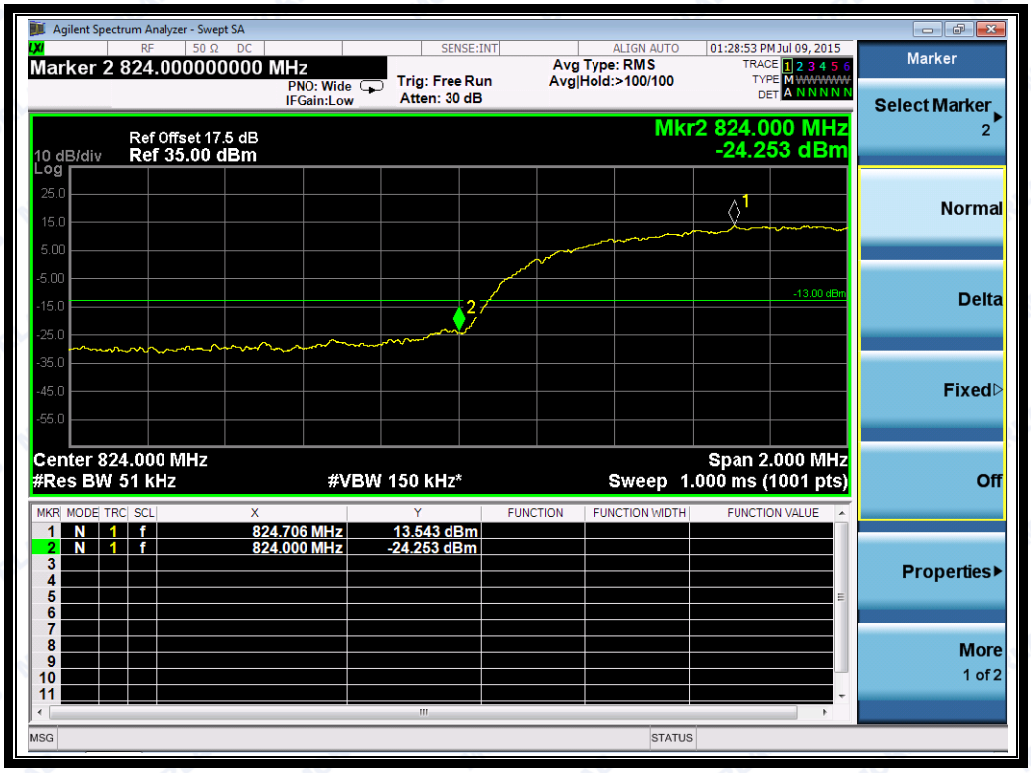
(Plot I2: HSUPA 850 Channel = 4233)



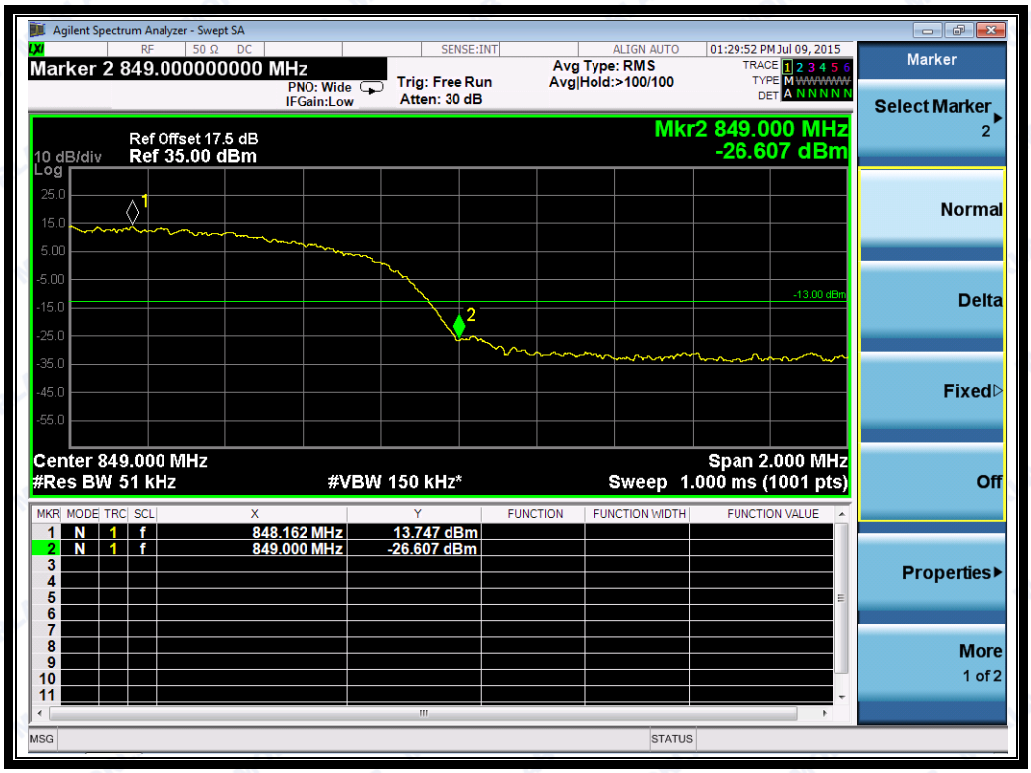
(Plot J1: HSUPA 1900 Channel = 9262)



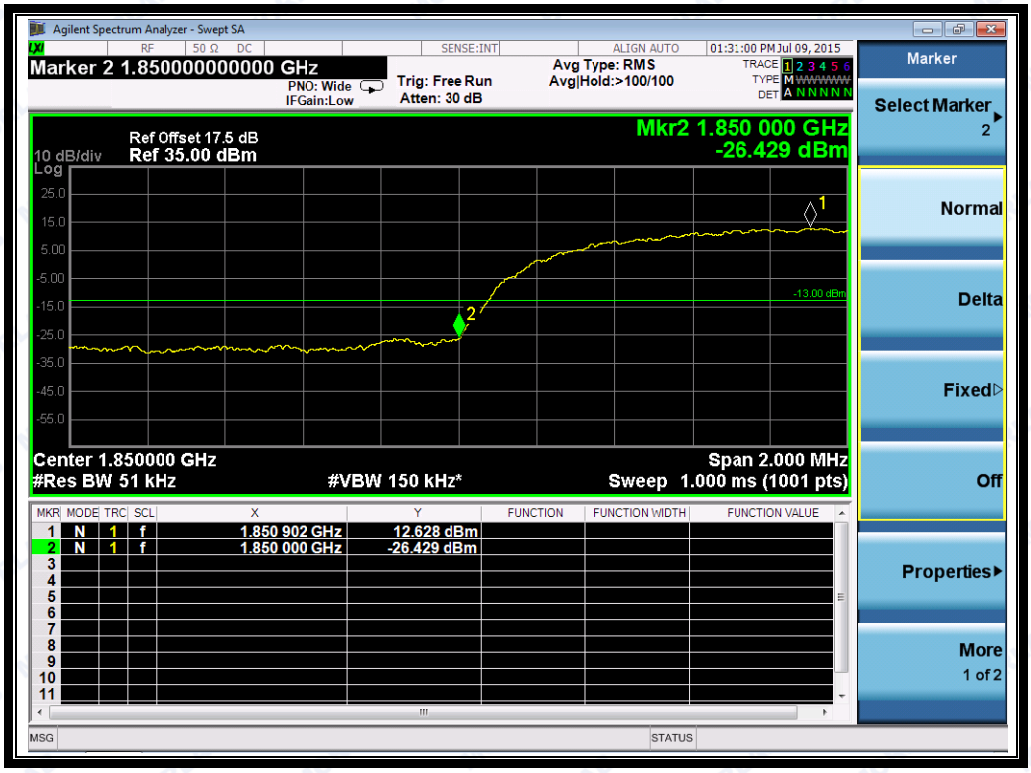
(Plot J2: HSUPA 1900 Channel = 9538)



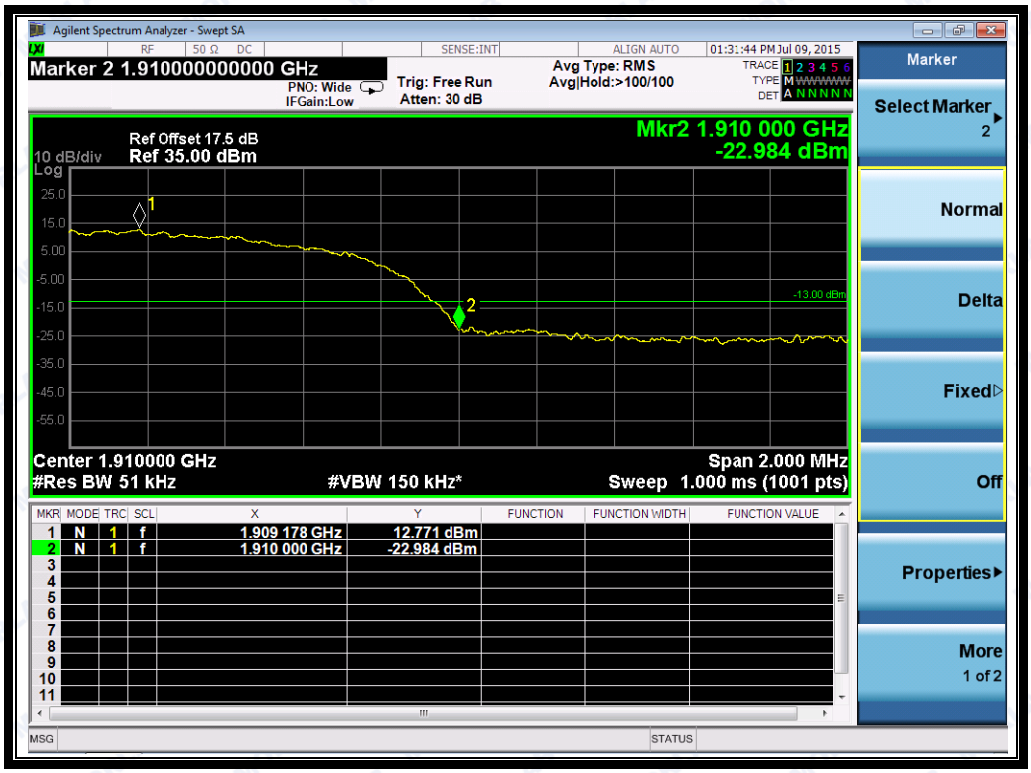
(Plot K1: HSPA+ 850 Channel = 4132)



(Plot K2: HSPA+ 850 Channel = 4233)



(Plot L1: HSPA+ 1900 Channel = 9262)



(Plot L2: HSPA+ 1900 Channel = 9538)

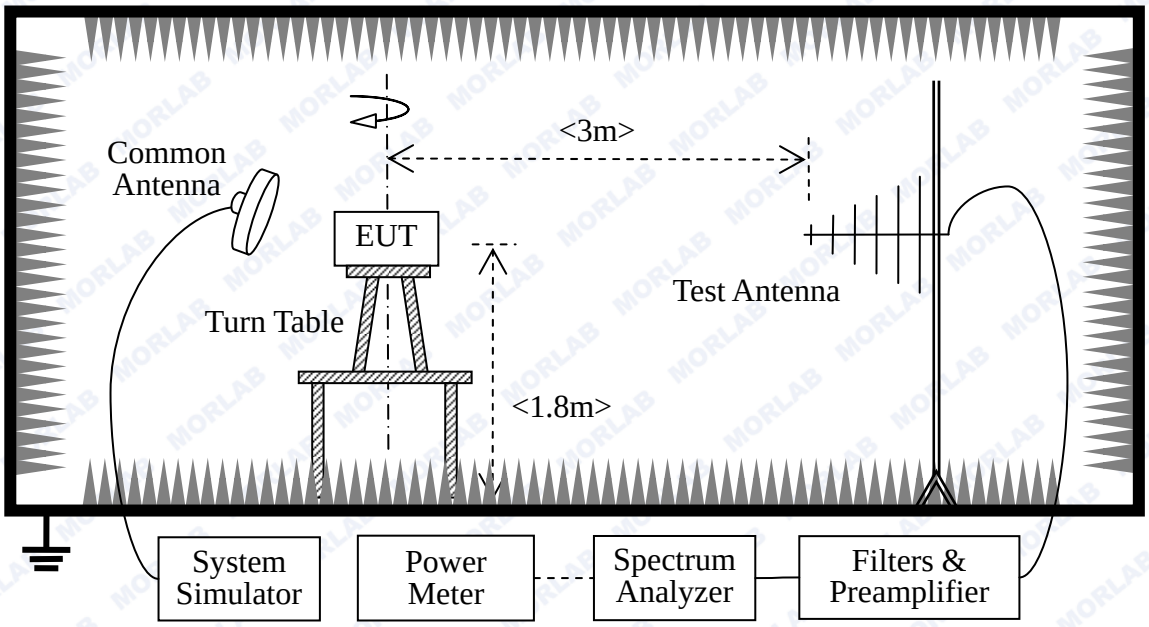
2.7 Transmitter Radiated Power (EIRP/ERP)

2.7.1 Requirement

According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts, and FCC section 24.232, the broadband PCS mobile station is limited to 2 Watts e.i.r.p. peak power.

2.7.2 Test Description

Test Setup:



The EUT, which is powered by the Battery charged with the AC Adapter, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. GSM850MHz band Power Control Level (PCL) = 5/19 and Power Class = 4, GSM1900MHz band Power Control Level (PCL) = 0/15 and Power Class = 1), and only the test result of the maximum output power was recorded.

- GSM Maximum RF output power: GSM 850 32.56dBm, GSM 1900 30.12dBm. WCDMA 850 24.89 dBm, WCDMA 1900 23.82 dBm .Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

- Minimum RF power: GSM 850 1.8dBm, GSM 1900 0.4dBm, WCDMA 850 0.5dBm, WCDMA 1900 0.2dBm.

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), and it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2015.02.26	2016.02.25
Spectrum Analyzer	Agilent	E7405A	US44210471	2015.02.26	2016.02.25
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2015.02.26	2016.02.25
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2015.02.26	2016.02.25
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25
Substitution Antenna	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25
Pre-AMPs	lucix	S10M100L3802	S020180L3203	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C836.5-25-X	NA	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C1747.5-75-X2	NA	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C1880-60-X2	NA	2015.02.26	2016.02.25

2.7.3 Test Result

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

$A_{SUBST} = P_{SUBST_TX} - P_{SUBST_RX} - L_{SUBST_CABLES} + G_{SUBST_TX_ANT}$

$A_{TOT} = L_{CABLES} + A_{SUBST}$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

$G_{SUBST_TX_ANT}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT}.

GSM Model Test Verdict:

Band	Channel	Frequency (MHz)	PCL	Measured ERP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 850MHz	128	824.20	5	31.15	1.30	Plot A	38.5	7	PASS
	190	836.60	5	31.22	1.32				PASS
	251	848.80	5	31.14	1.30				PASS
GPRS 850MHz	128	824.20	5	30.56	1.14	Plot B Note 1	38.5	7	PASS
	190	836.60	5	30.79	1.20				PASS
	251	848.80	5	30.19	1.04				PASS
EGPRS 850MHz	128	824.20	5	30.17	1.04	Plot C Note 1	38.5	7	PASS
	190	836.60	5	30.58	1.14				PASS
	251	848.80	5	30.02	1.00				PASS

Band	Channel	Frequency (MHz)	PCL	Measured EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 1900MHz	512	1850.2	0	31.07	1.28	Plot D	33	2	PASS
	661	1880.0	0	31.25	1.33				PASS
	810	1909.8	0	31.89	1.55				PASS
GPRS 1900MHz	512	1850.2	0	30.85	1.22	Plot E Note 1	33	2	PASS
	661	1880.0	0	30.63	1.16				PASS
	810	1909.8	0	30.20	1.05				PASS
EGPRS 1900MHz	512	1850.2	0	31.13	1.30	Plot F Note 1	33	2	PASS
	661	1880.0	0	31.29	1.35				PASS
	810	1909.8	0	31.41	1.38				PASS

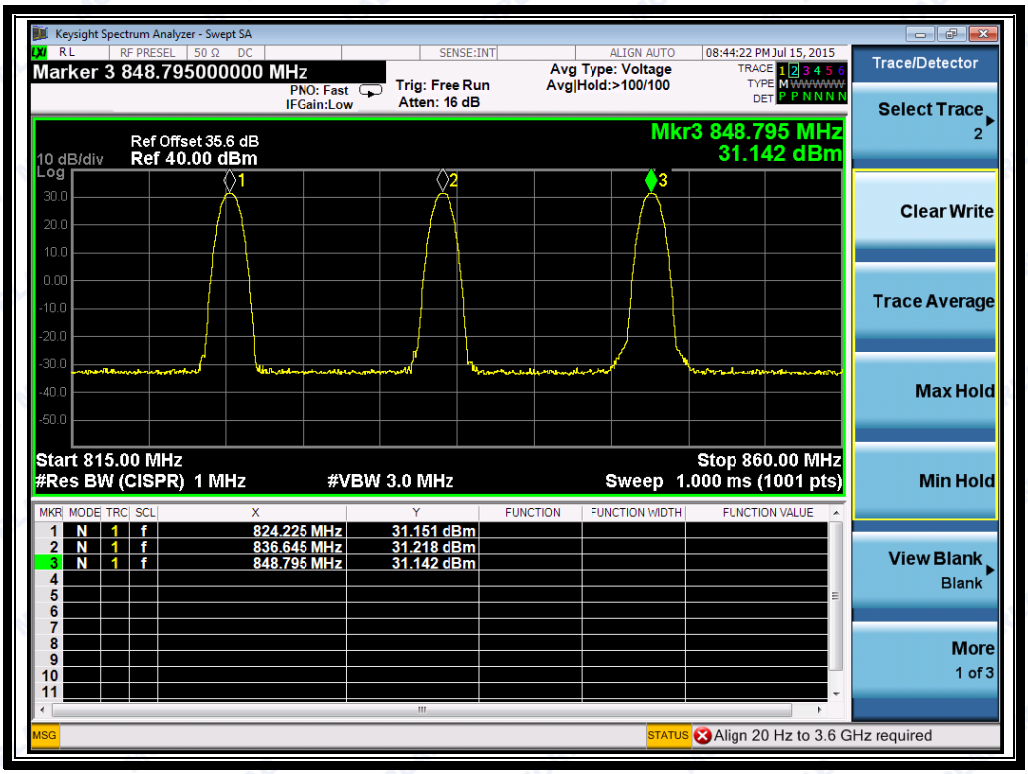
Note 1: For the GPRS and EGPRS model, all the slots were tested and just the worst data was record in this report.

WCDMA Model Test Verdict:

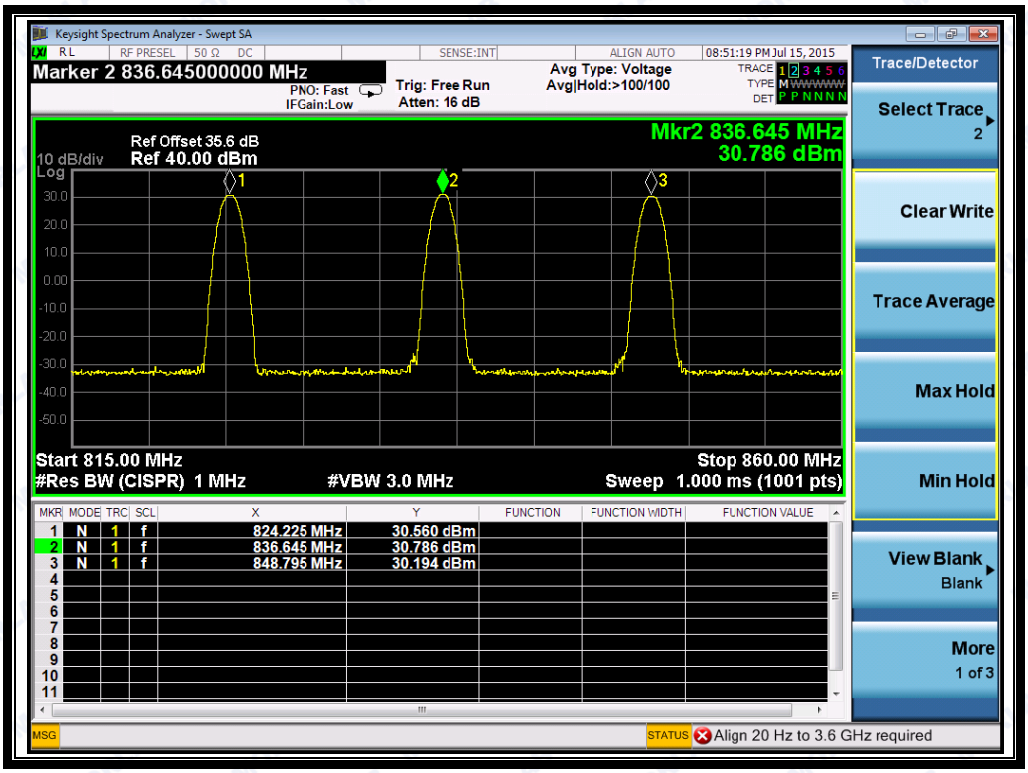
Band	Channel	Frequency (MHz)	Measured ERP			Limit		Verdict
			dBm	W	Refer to Plot	dBm	W	
WCDMA 850MHz	4132	826.4	25.23	0.33	Plot G	38.5	7	PASS
	4175	835.0	25.53	0.36				PASS
	4233	846.6	26.50	0.45				PASS
HSDPA 850MHz	4132	826.4	25.34	0.34	Plot H	38.5	7	PASS
	4175	835.0	25.72	0.37				PASS
	4233	846.6	25.72	0.37				PASS
HSUPA 850MHz	4132	826.4	25.37	0.34	Plot I	38.5	7	PASS
	4175	835.0	25.31	0.34				PASS
	4233	846.6	25.92	0.39				PASS
HSPA+ 850MHz	4132	826.4	25.26	0.34	Plot J	38.5	7	PASS
	4175	835.0	25.74	0.37				PASS
	4233	846.6	25.32	0.34				PASS

Band	Channel	Frequency (MHz)	Measured EIRP			Limit		Verdict
			dBm	W	Refer to Plot	dBm	W	
WCDMA 1900MHz	9262	1852.4	26.79	0.48	Plot K	33	2	PASS
	9400	1880.0	25.99	0.40				PASS
	9538	1907.6	27.08	0.51				PASS
HSDPA 1900MHz	9262	1852.4	27.61	0.58	Plot L	33	2	PASS
	9400	1880.0	27.22	0.53				PASS
	9538	1907.6	27.65	0.58				PASS
HSUPA 1900MHz	9262	1852.4	26.81	0.48	Plot M	33	2	PASS
	9400	1880.0	27.14	0.52				PASS
	9538	1907.6	27.53	0.57				PASS
HSPA+ 1900MHz	9262	1852.4	27.22	0.53	Plot N	33	2	PASS
	9400	1880.0	26.34	0.43				PASS
	9538	1907.6	26.52	0.45				PASS

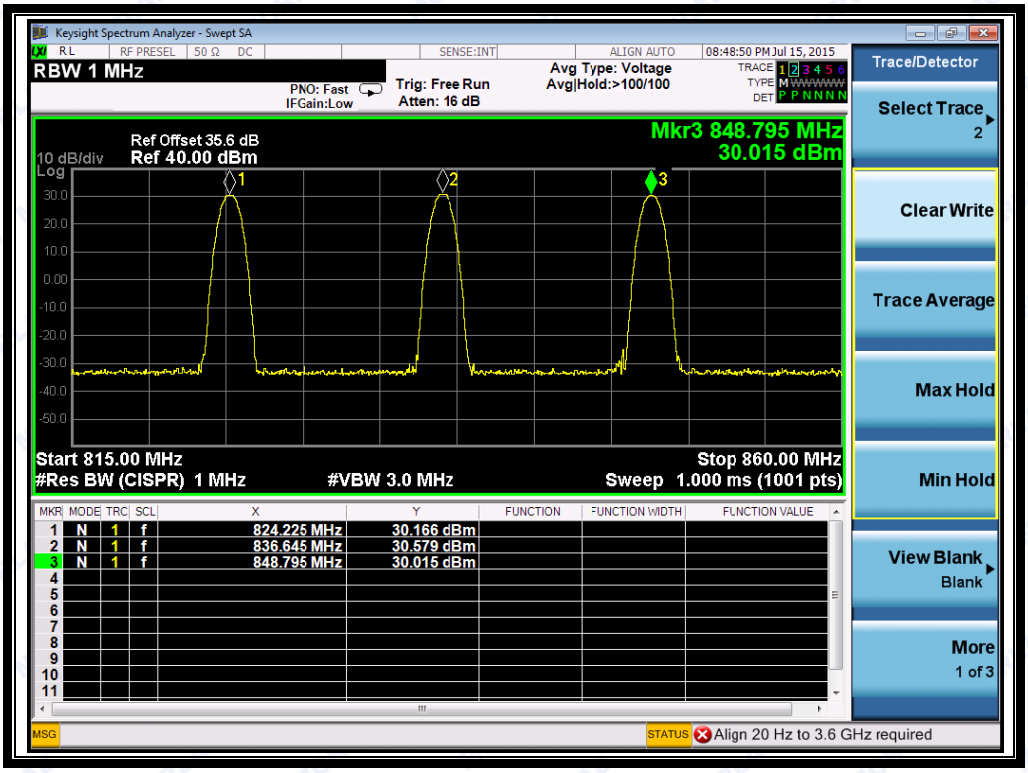
Test Plots:



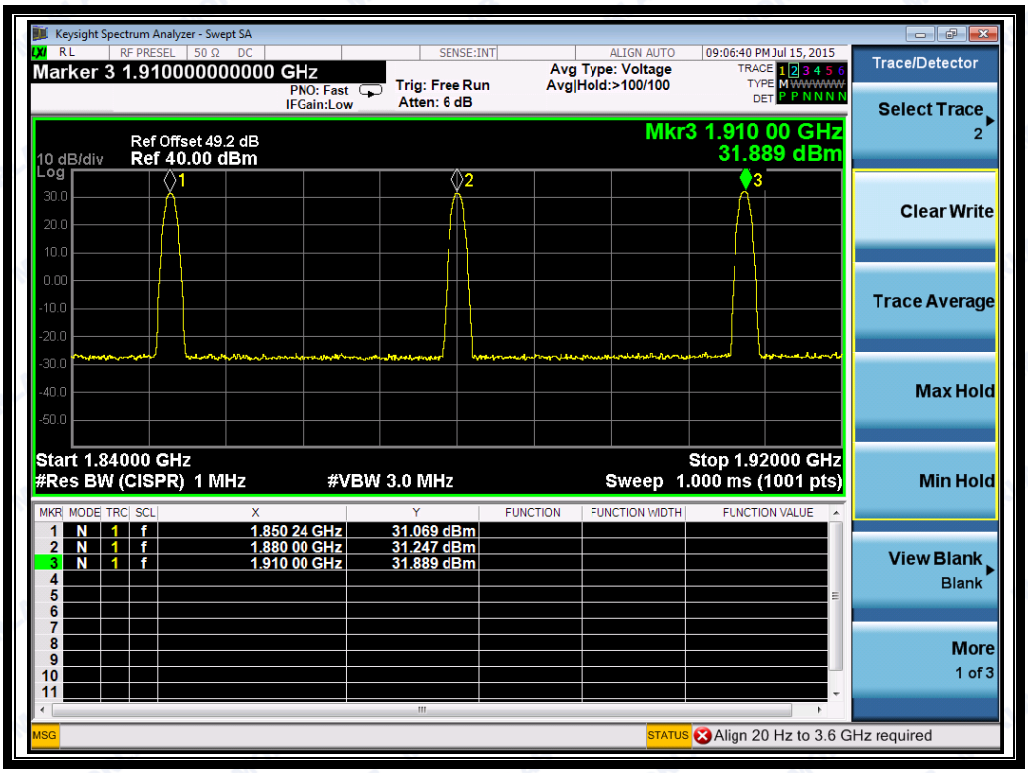
(Plot A:GSM 850MHz Channel = 128, 190, 251)



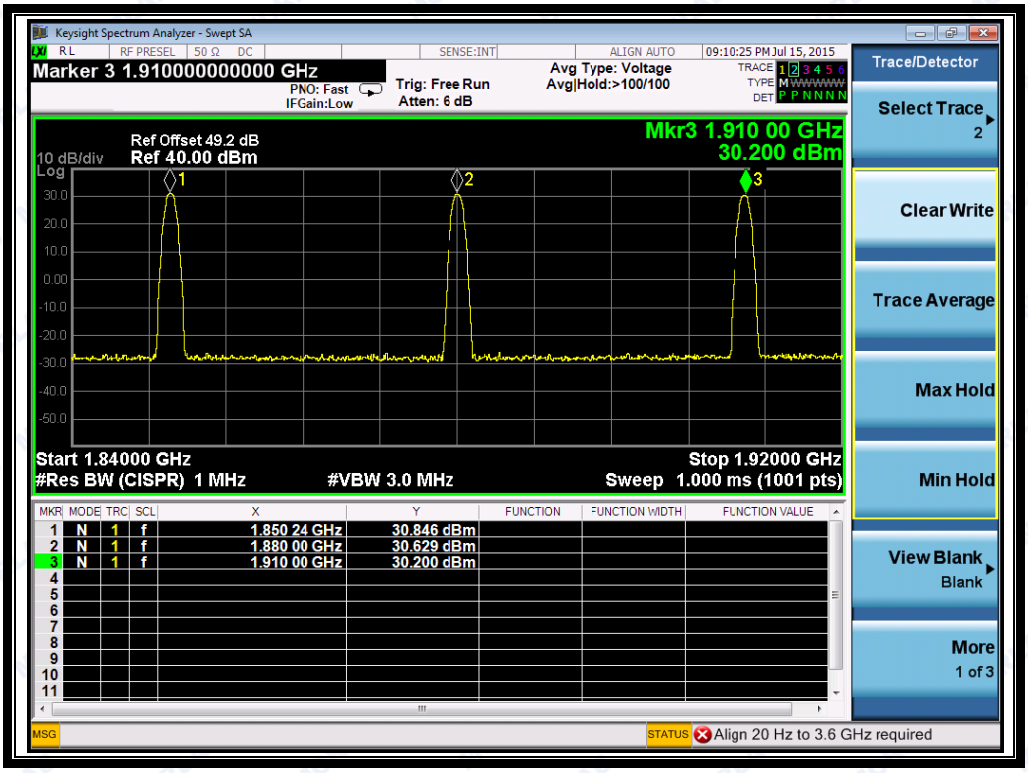
(Plot B:GPRS 850MHz Channel = 128, 190, 251)



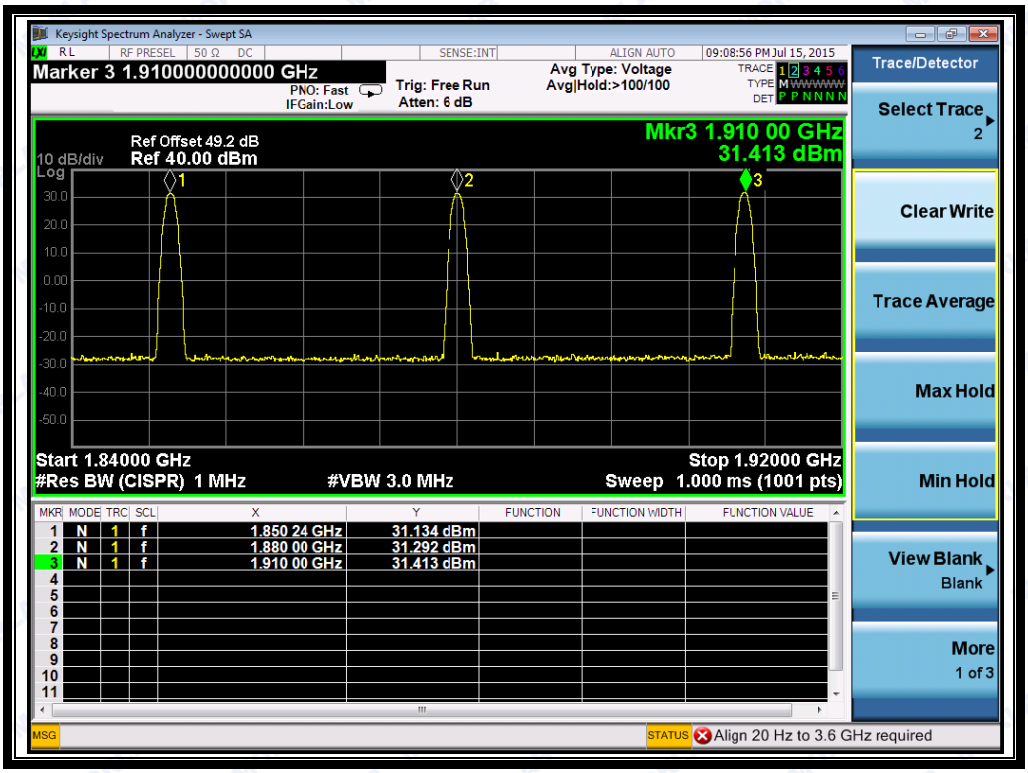
(Plot C: EGPRS 850MHz Channel = 128, 190, 251)



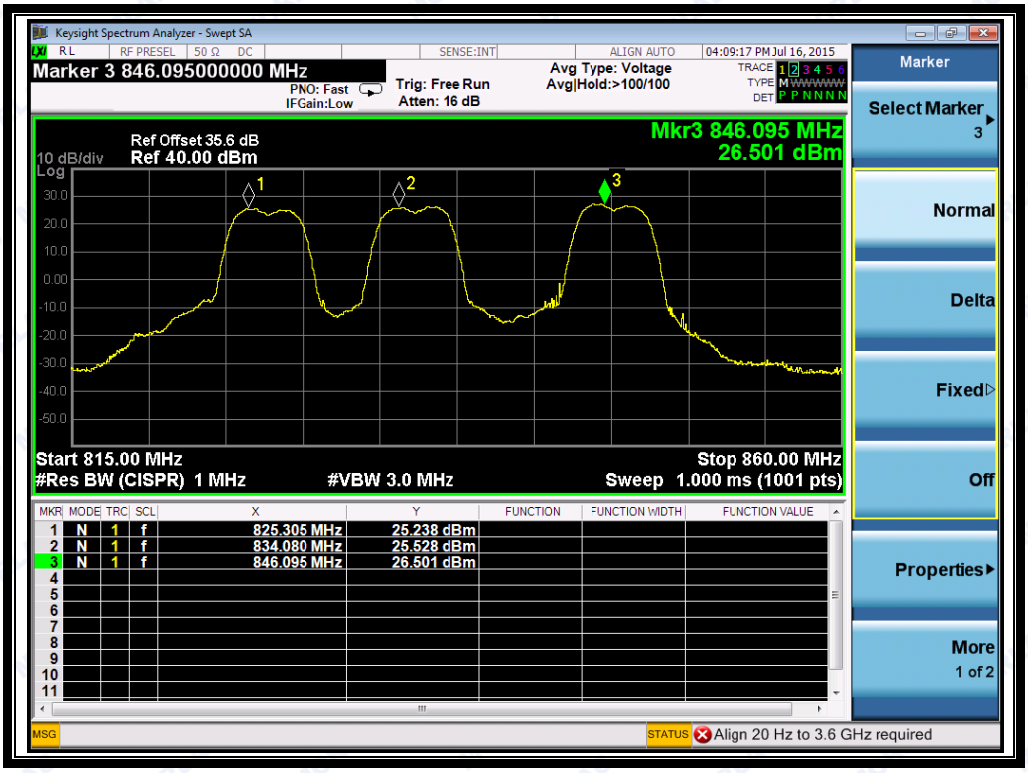
(Plot D: GSM 1900MHz Channel = 512, 661, 810)



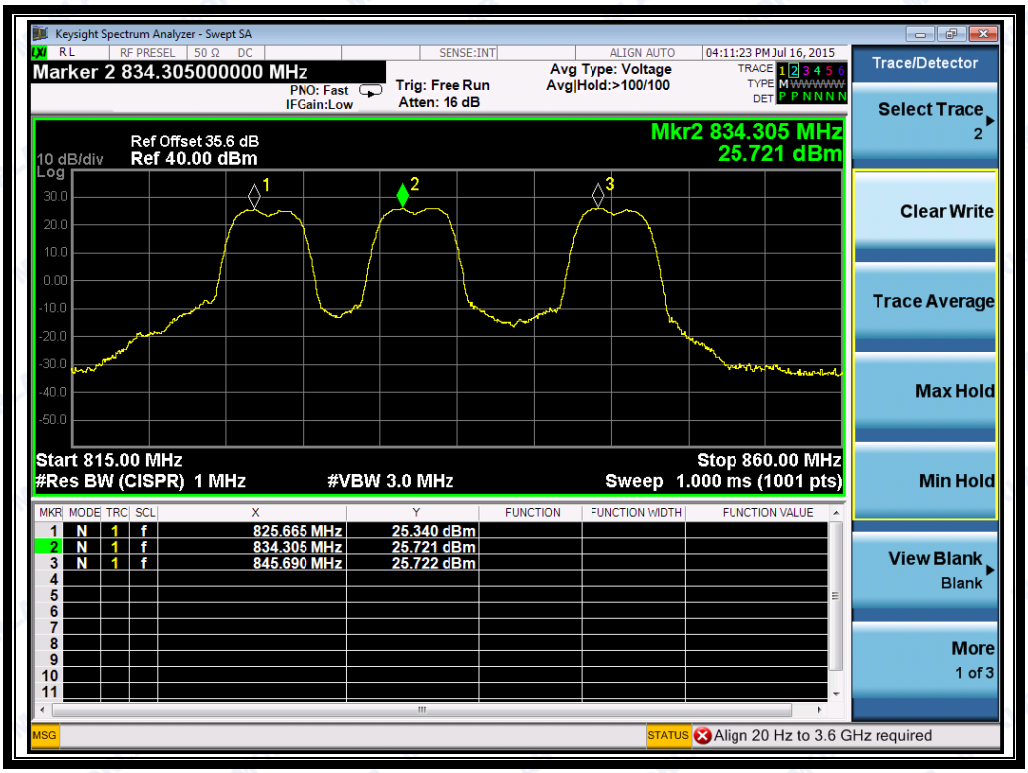
(Plot E: GPRS 1900MHz Channel = 512, 661, 810)



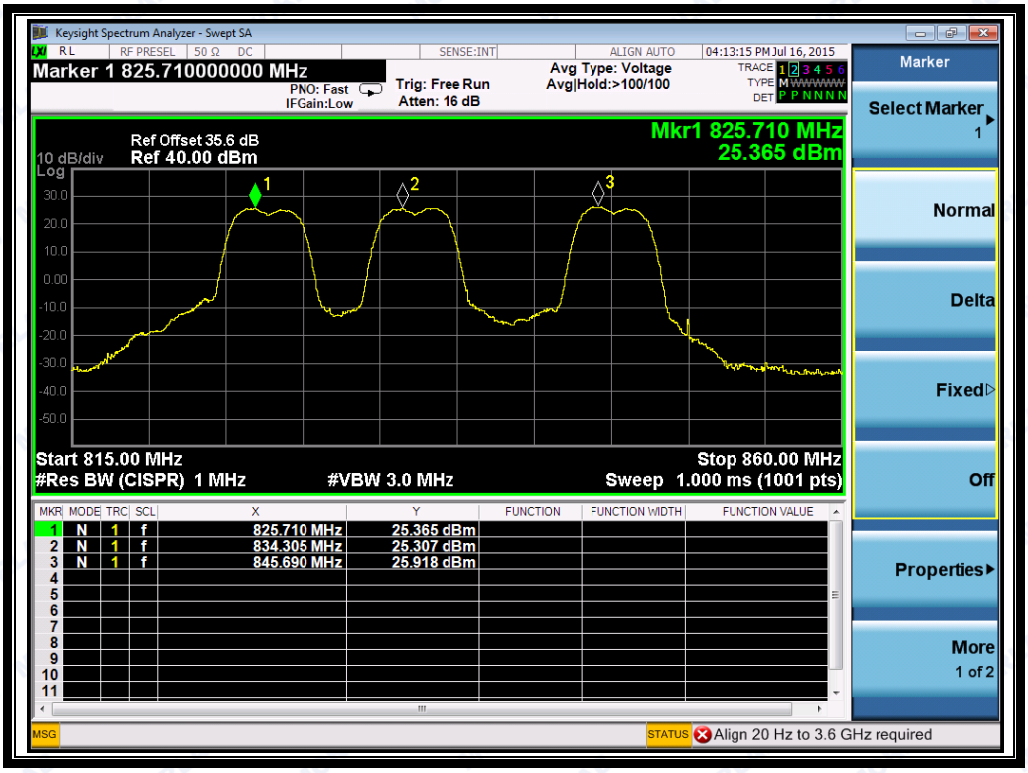
(Plot F: EGPRS 1900MHz Channel = 512, 661, 810)



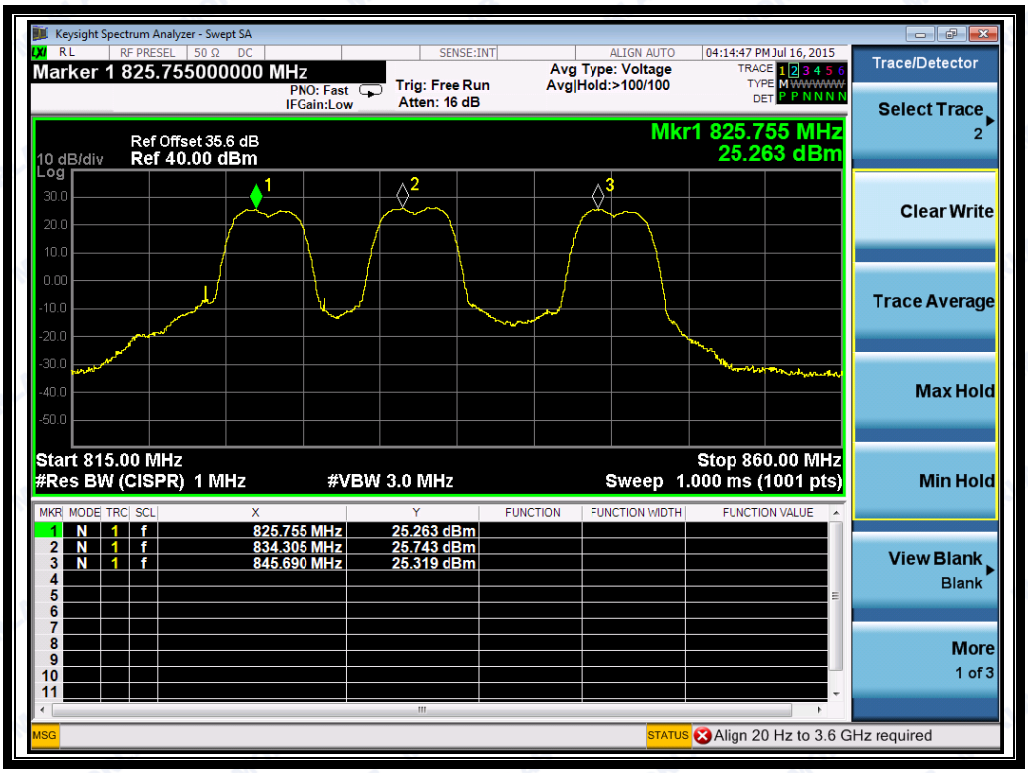
(Plot G: WCDMA 850 MHz Channel = 4132, 4175, 4233)



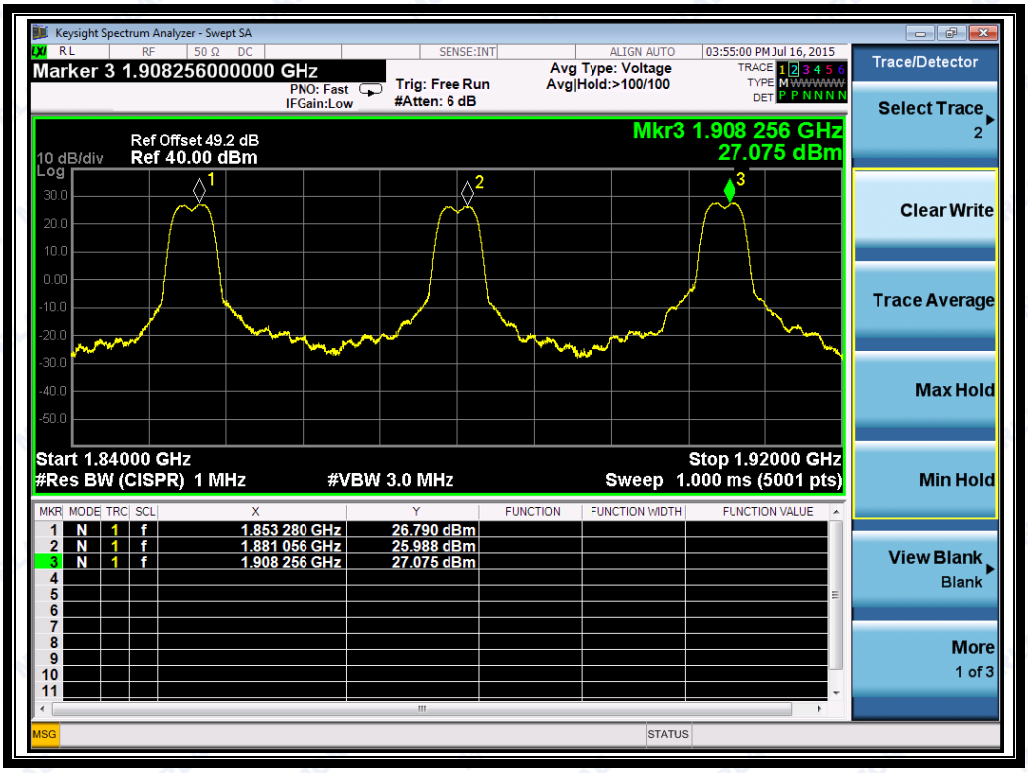
(Plot H: HSDPA 850 MHz Channel = 4132, 4175, 4233)



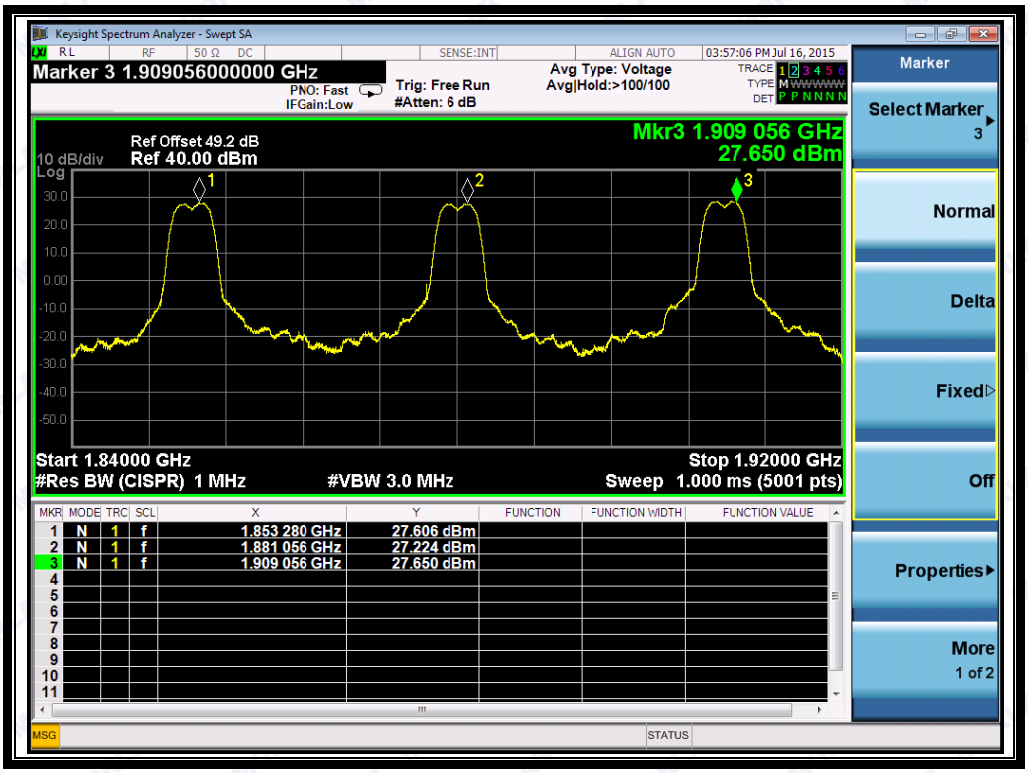
(Plot I: HSUPA 850 MHz Channel = 4132, 4175, 4233)



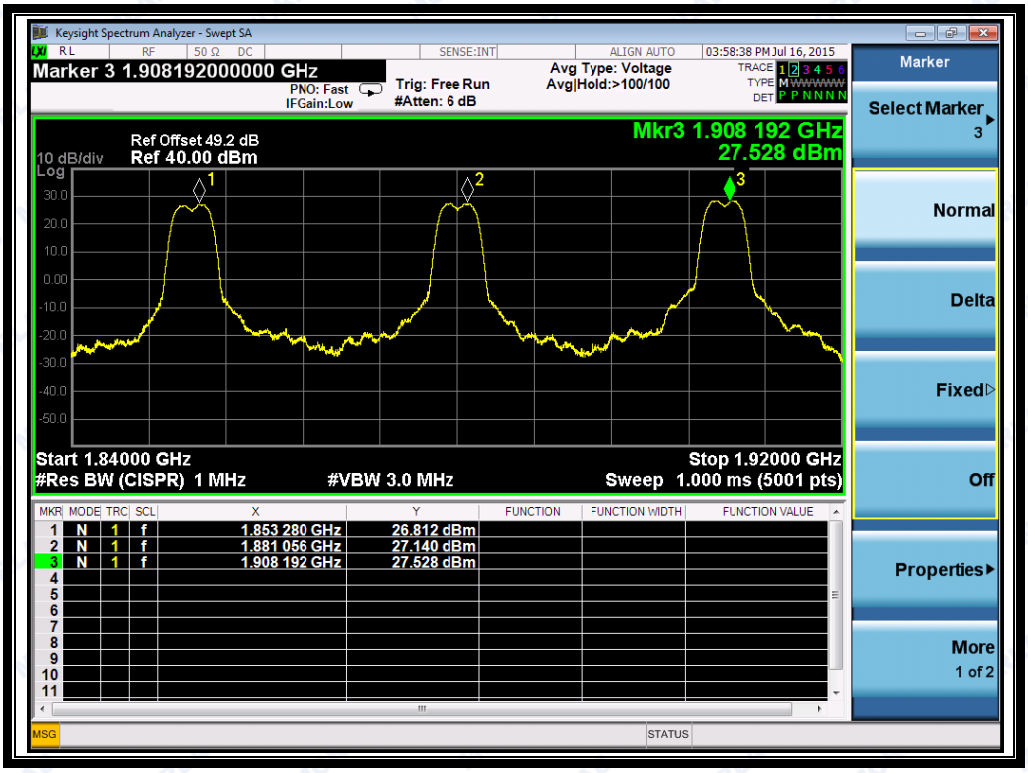
(Plot J: HSPA+ 850 MHz Channel = 4132, 4175, 4233)



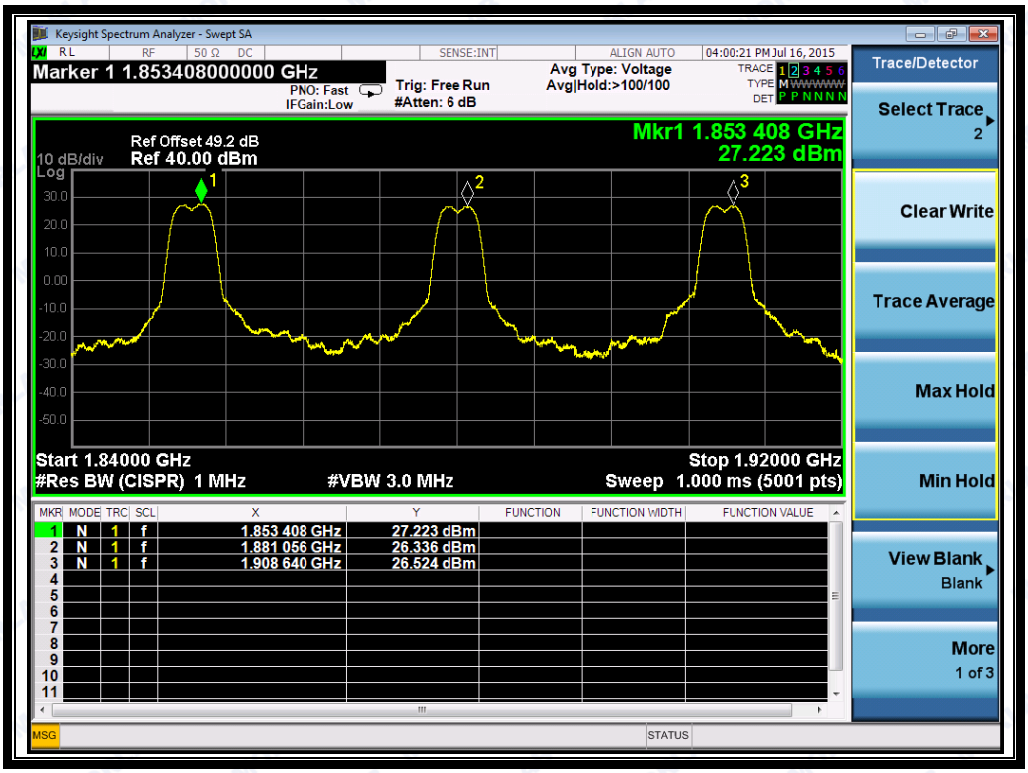
(Plot K: WCDMA 1900 MHz Channel = 9262, 9400, 9538)



(Plot L: HSDPA1900 MHz Channel = 9262, 9400, 9538)



(Plot M: HSUPA1900 MHz Channel = 9262, 9400, 9538)



(Plot N: HSPA+ 1900 MHz Channel = 9262, 9400, 9538)

2.8 Radiated Out of Band Emissions

2.8.1 Requirement

According to FCC section 22.917(a) and 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.

The spurious emission with frequency band 1900 according to FCC section 2.1057.

2.8.2 Test Description

See section 2.7.2 of this report.

Equipment List:

Description	Manufacturer	Model	Serial No.	Cal.Date	Cal.Due
System Simulator	Agilent	E5515C	GB43130131	2015.02.26	2016.02.25
Spectrum Analyzer	Agilent	E7405A	US44210471	2015.02.26	2016.02.25
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2015.02.26	2016.02.25
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2015.02.26	2016.02.25
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25
Substitution Antenna	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25
Pre-AMPs	lucix	S10M100L3802	S020180L3203	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C836.5-25-X	NA	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C1747.5-75-X2	NA	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C1880-60-X2	NA	2015.02.26	2016.02.25

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.8.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

1. Test Verdict:

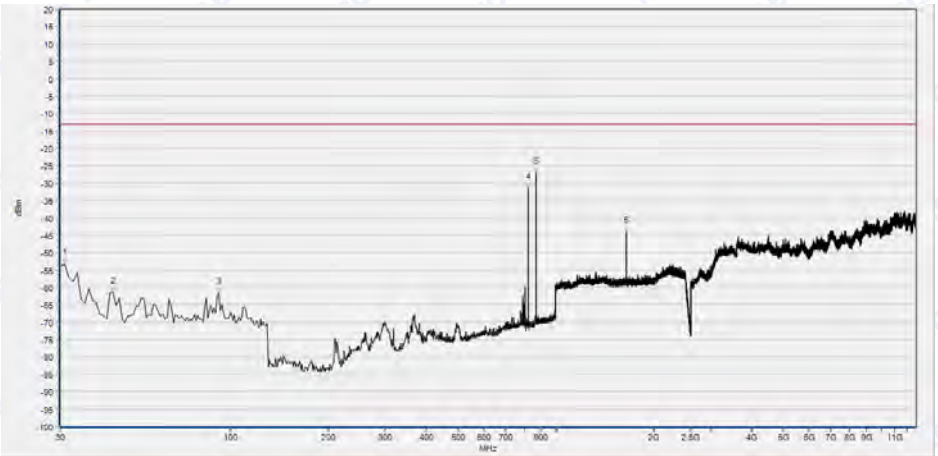
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
GSM 850MHz	128	824.2	< -25	< -25	Plot A1/A2	-13	PASS
	190	836.6	< -25	< -25	Plot A3/A4		PASS
	251	848.8	< -25	< -25	Plot A5/A6		PASS
GSM 1900MHz	512	1850.2	< -25	< -25	Plot B1/B2	-13	PASS
	661	1880.0	< -25	< -25	Plot B3/B4		PASS
	810	1909.8	< -25	< -25	Plot B5/B6		PASS
EGPRS 850MHz	128	824.2	< -25	< -25	Plot C1/C2	-13	PASS
	190	836.6	< -25	< -25	Plot C3/C4		PASS
	251	848.8	< -25	< -25	Plot C5/C6		PASS
EGPRS 1900MHz	512	1850.2	< -25	< -25	Plot D1/D2	-13	PASS
	661	1880.0	< -25	< -25	Plot D3/D4		PASS
	810	1909.8	< -25	< -25	Plot D5/D6		PASS
WCDMA 850MHz	4132	826.4	< -25	< -25	Plot E1/E2	-13	PASS
	4175	835.0	< -25	< -25	Plot E3/E4		PASS
	4233	846.6	< -25	< -25	Plot E5/E6		PASS
WCDMA 1900MHz	9262	1852.4	< -25	< -25	Plot F1/F2	-13	PASS
	9400	1880.0	< -25	< -25	Plot F3/F4		PASS
	9538	1907.6	< -25	< -25	Plot F5/F6		PASS
HSDPA 850MHz	4132	826.4	< -25	< -25	Plot G1/G2	-13	PASS
	4175	835.0	< -25	< -25	Plot G3/G4		PASS
	4233	846.6	< -25	< -25	Plot G5/G6		PASS
HSDPA 1900MHz	9262	1852.4	< -25	< -25	Plot H1/H2	-13	PASS
	9400	1880.0	< -25	< -25	Plot H3/H4		PASS
	9538	1907.6	< -25	< -25	Plot H5/H6		PASS
HSUPA 850MHz	4132	826.4	< -25	< -25	Plot I1/I2	-13	PASS
	4175	835.0	< -25	< -25	Plot I3/I4		PASS
	4233	846.6	< -25	< -25	Plot I5/I6		PASS
HSUPA 1900MHz	9262	1852.4	< -25	< -25	Plot J1/J2	-13	PASS
	9400	1880.0	< -25	< -25	Plot H3/J4		PASS
	9538	1907.6	< -25	< -25	Plot J5/J6		PASS
HSPA+ 850MHz	4132	826.4	< -25	< -25	Plot K1/K2	-13	PASS
	4175	835.0	< -25	< -25	Plot K3/K4		PASS
	4233	846.6	< -25	< -25	Plot K5/K6		PASS

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
HSPA+ 1900MHz	9262	1852.4	< -25	< -25	Plot L1/L2	-13	PASS
	9400	1880.0	< -25	< -25	Plot L3/L4		PASS
	9538	1907.6	< -25	< -25	Plot L5/L6		PASS

2. Test Plots for the Whole Measurement Frequency Range:

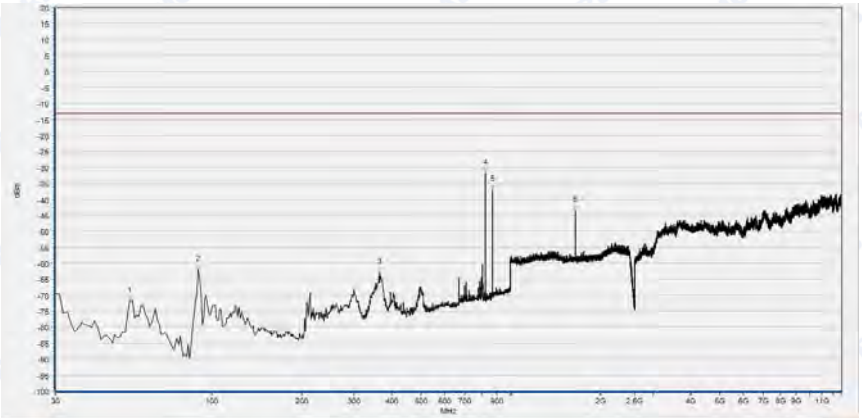
Note1: the power of the EUT transmitting frequency should be ignored.

Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.



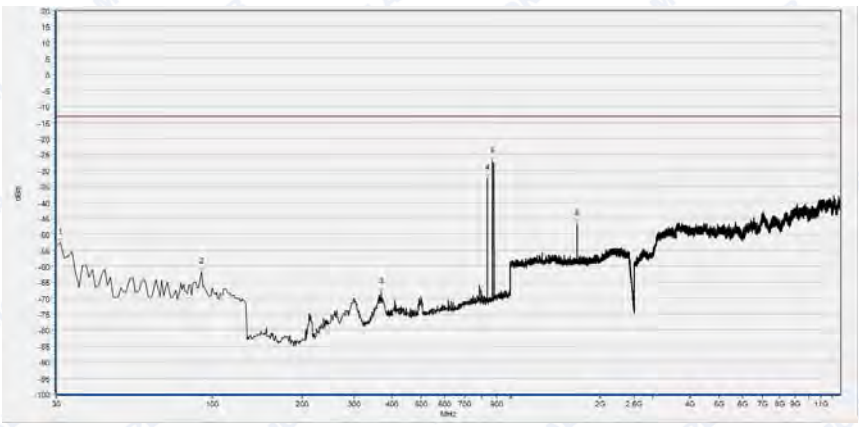
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
30.970	-53.24	-13.00	82.3	Horizontal	PASS
43.580	-61.55	-13.00	143.6	Horizontal	PASS
92.080	-61.76	-13.00	51.8	Horizontal	PASS
824.430	-31.62	-13.00	82.3	Horizontal	N.A
869.050	-27.20	-13.00	64.1	Horizontal	N.A
1648.579	-44.05	-13.00	329.4	Horizontal	PASS

(Plot A1:GSM 850MHz Channel = 128, Test Antenna Horizontal)



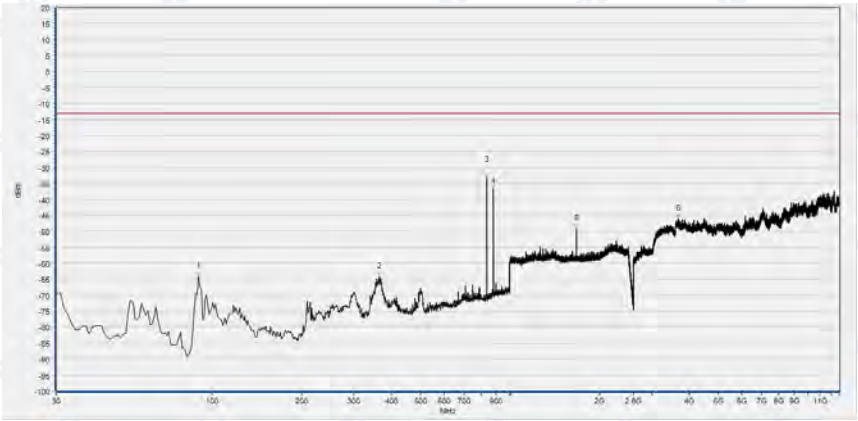
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-71.94	-13.00	351.0	Vertical	PASS
90.140	-61.90	-13.00	198.6	Vertical	PASS
365.620	-62.98	-13.00	283.8	Vertical	PASS
824.430	-31.81	-13.00	271.5	Vertical	N.A
869.050	-37.07	-13.00	198.6	Vertical	N.A
1649.220	-43.57	-13.00	316.4	Vertical	PASS

(Plot A2:GSM 850MHz Channel = 128, Test Antenna Vertical)



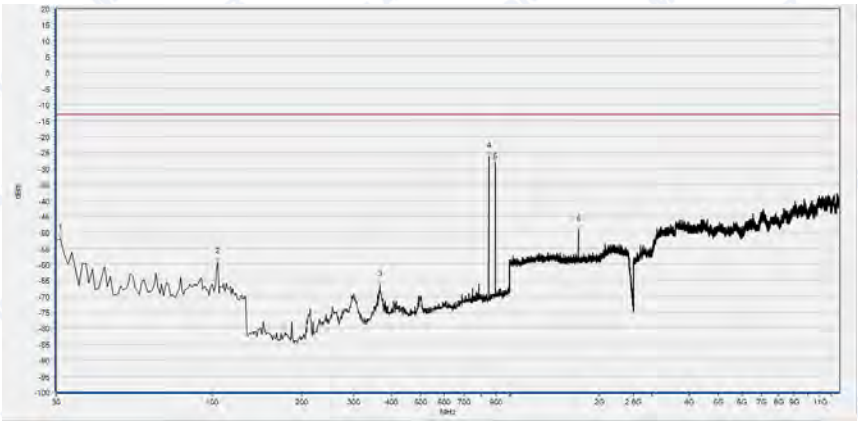
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
30.970	-52.64	-13.00	315.0	Horizontal	PASS
92.080	-61.85	-13.00	82.6	Horizontal	PASS
369.500	-68.03	-13.00	235.4	Horizontal	PASS
836.070	-32.62	-13.00	88.9	Horizontal	N.A
869.050	-27.18	-13.00	64.4	Horizontal	N.A
1673.549	-46.74	-13.00	39.9	Horizontal	PASS

(Plot A3:GSM850MHz Channel = 190, Test Antenna Horizontal)



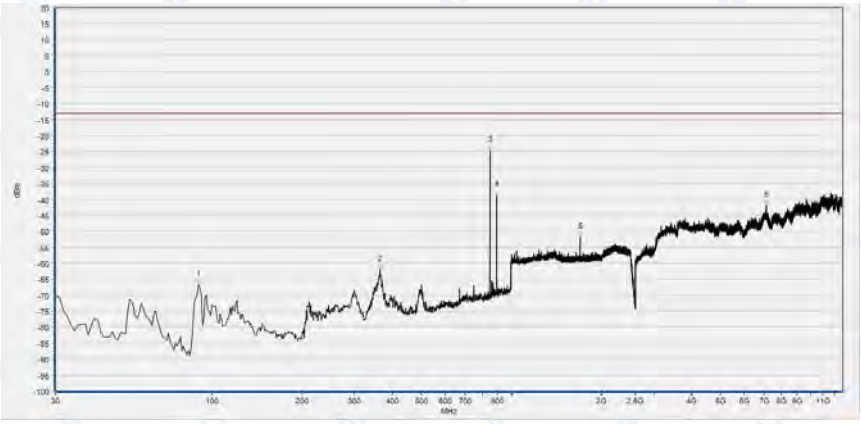
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
90.140	-64.25	-13.00	278.3	Vertical	PASS
365.620	-64.24	-13.00	284.2	Vertical	PASS
837.040	-33.16	-13.00	266.0	Vertical	N.A
881.660	-36.84	-13.00	100.9	Vertical	N.A
1673.549	-49.27	-13.00	1.6	Vertical	PASS
3670.558	-46.08	-13.00	170.8	Vertical	PASS

(Plot A4:GSM 850MHz Channel = 190, Test Antenna Vertical)



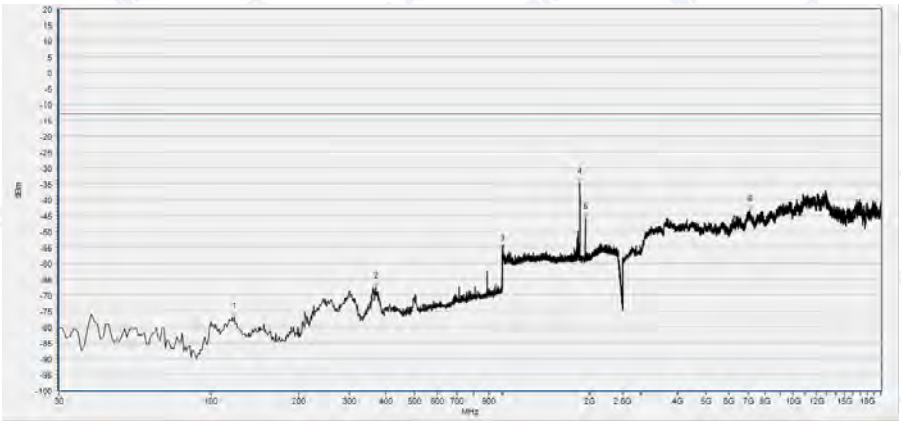
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
30.970	-51.89	-13.00	241.4	Horizontal	PASS
104.690	-59.33	-13.00	33.5	Horizontal	PASS
366.590	-66.53	-13.00	241.4	Horizontal	PASS
848.680	-26.16	-13.00	125.4	Horizontal	N.A
893.300	-28.06	-13.00	70.4	Horizontal	N.A
1697.879	-49.24	-13.00	22.2	Horizontal	PASS

(Plot A5: GSM 850MHz Channel = 251, Test Antenna Horizontal)



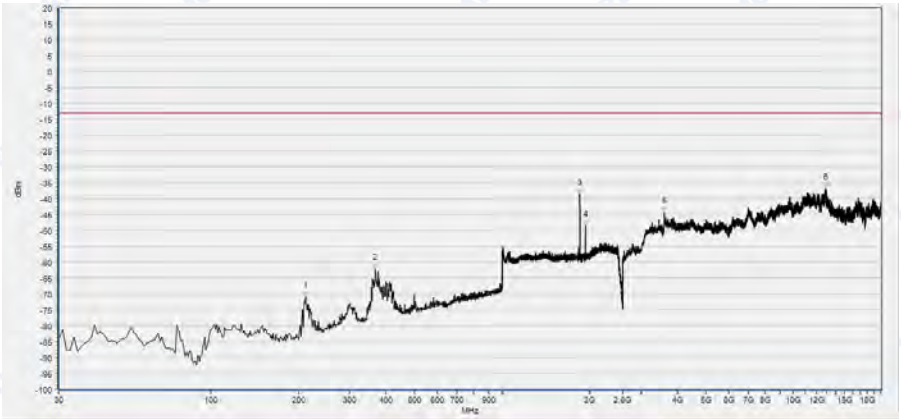
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
90.140	-66.68	-13.00	125.5	Vertical	PASS
364.650	-61.95	-13.00	302.6	Vertical	PASS
848.680	-24.60	-13.00	296.3	Vertical	N.A
894.270	-38.67	-13.00	198.8	Vertical	N.A
1698.519	-51.80	-13.00	310.0	Vertical	PASS
7109.265	-42.01	-13.00	107.6	Vertical	PASS

(Plot A6: GSM 850MHz Channel = 251, Test Antenna Vertical)



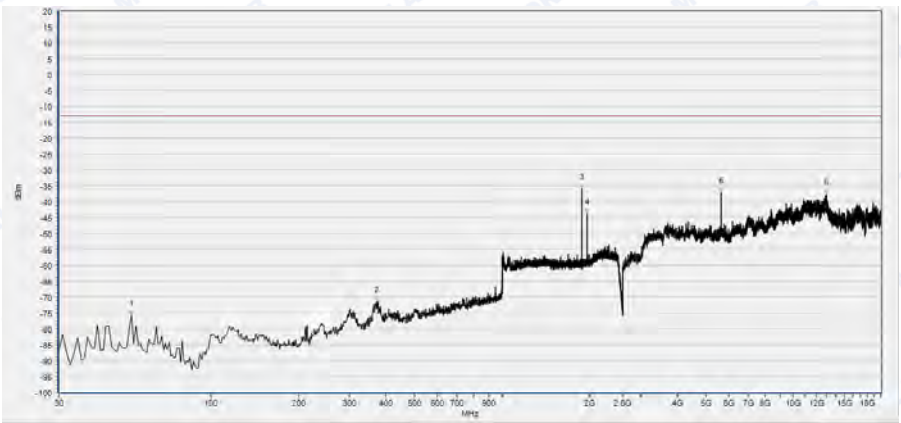
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
120.210	-77.18	-13.00	52.1	Horizontal	PASS
368.530	-67.62	-13.00	64.4	Horizontal	PASS
1004.482	-55.80	-13.00	73.8	Horizontal	PASS
1850.900	-34.71	-13.00	127.4	Horizontal	N.A
1930.932	-45.81	-13.00	73.8	Horizontal	N.A
7093.181	-43.34	-13.00	309.9	Horizontal	PASS

(Plot B1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



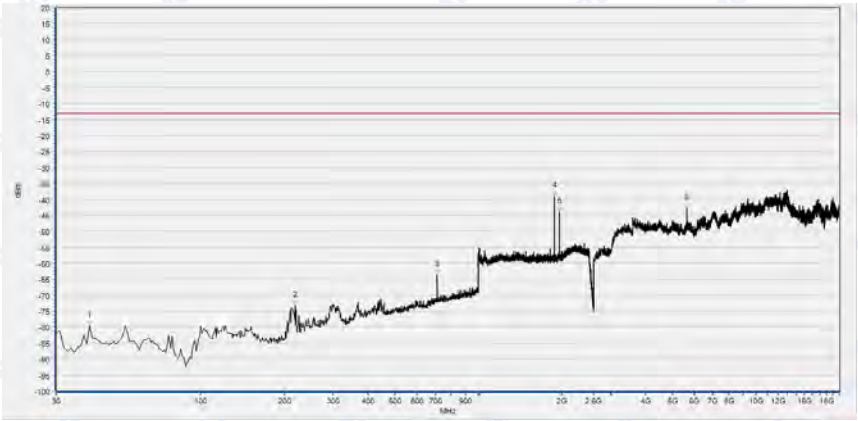
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
211.390	-71.04	-13.00	27.6	Vertical	PASS
367.560	-62.12	-13.00	58.1	Vertical	PASS
1850.900	-38.54	-13.00	165.8	Vertical	N.A
1930.932	-48.47	-13.00	41.9	Vertical	N.A
3612.548	-44.22	-13.00	340.0	Vertical	PASS
12931.151	-37.01	-13.00	46.6	Vertical	PASS

(Plot B2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



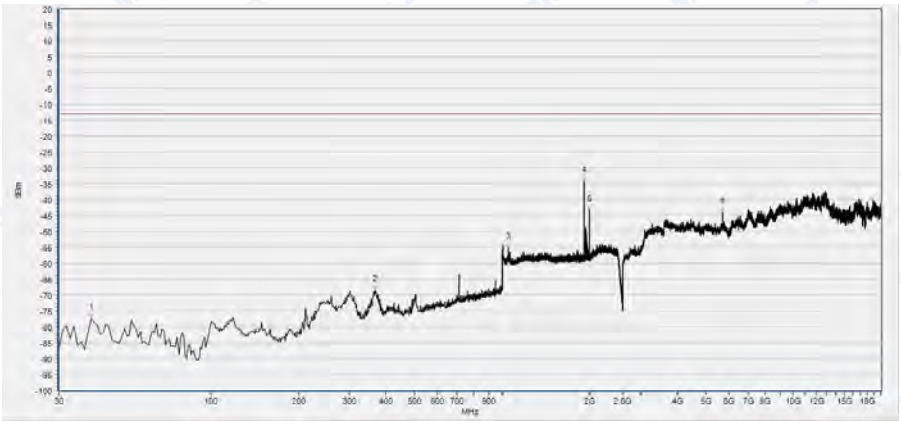
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-75.73	-13.00	105.4	Horizontal	PASS
371.440	-71.47	-13.00	227.9	Horizontal	PASS
1880.352	-36.02	-13.00	103.8	Horizontal	N.A
1960.384	-43.88	-13.00	62.5	Horizontal	N.A
5640.807	-37.26	-13.00	173.7	Horizontal	PASS
12975.450	-37.73	-13.00	315.4	Horizontal	PASS

(Plot B3: GSM 1900MHz Channel = 661, Test Antenna Horizontal)



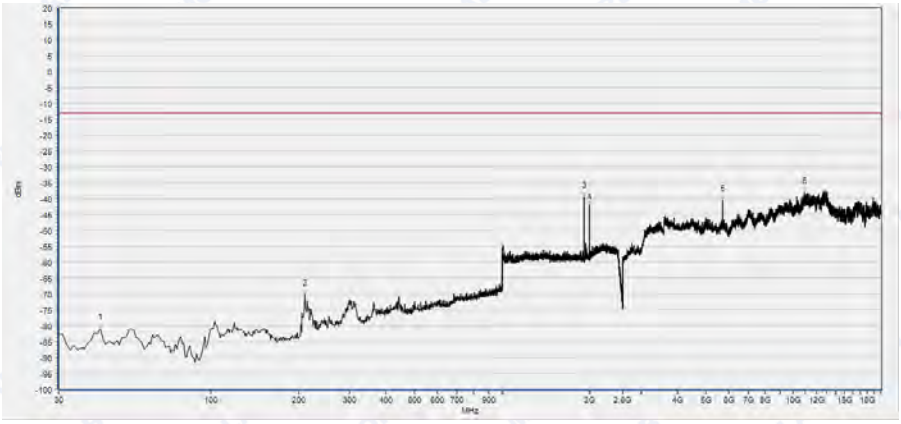
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
39.700	-79.71	-13.00	205.0	Vertical	PASS
218.180	-73.13	-13.00	89.0	Vertical	PASS
710.940	-63.57	-13.00	290.5	Vertical	PASS
1880.352	-38.96	-13.00	2.0	Vertical	N.A
1960.384	-44.01	-13.00	224.1	Vertical	N.A
5640.807	-42.87	-13.00	160.4	Vertical	PASS

(Plot B4: GSM 1900MHz Channel = 661, Test Antenna Vertical)



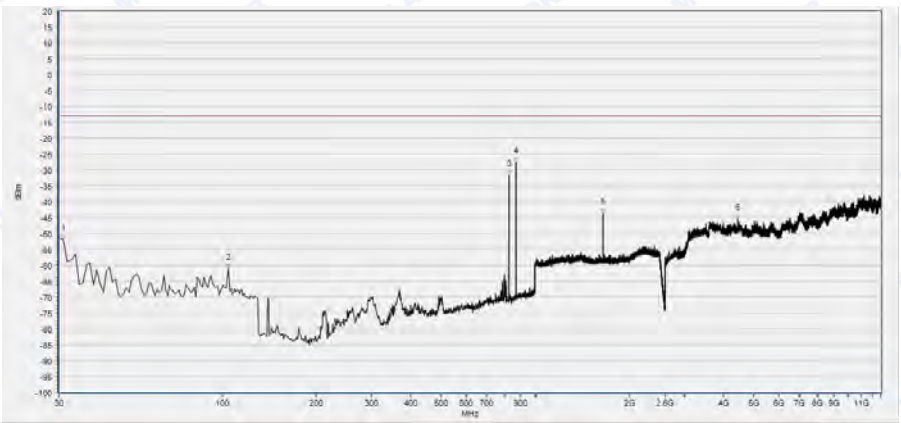
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-77.38	-13.00	155.9	Horizontal	PASS
365.620	-68.69	-13.00	222.8	Horizontal	PASS
1052.501	-55.32	-13.00	255.0	Horizontal	PASS
1910.444	-34.30	-13.00	6.1	Horizontal	N.A
1989.836	-43.26	-13.00	334.6	Horizontal	N.A
5729.405	-44.04	-13.00	203.1	Horizontal	PASS

(Plot B5: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



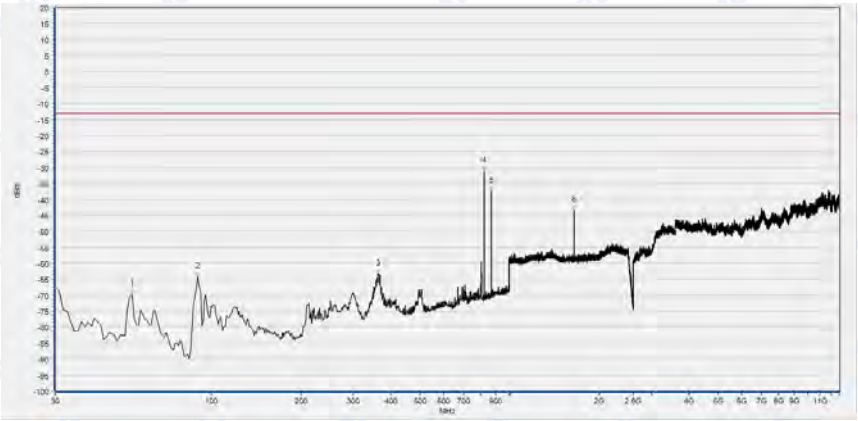
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
41.640	-80.86	-13.00	39.5	Vertical	PASS
210.420	-70.20	-13.00	33.5	Vertical	PASS
1910.444	-39.51	-13.00	0.0	Vertical	N.A
1989.836	-42.07	-13.00	224.1	Vertical	N.A
5729.405	-40.49	-13.00	174.5	Vertical	PASS
10937.698	-38.09	-13.00	326.9	Vertical	PASS

(Plot B6: GSM 1900MHz Channel = 810, Test Antenna Vertical)



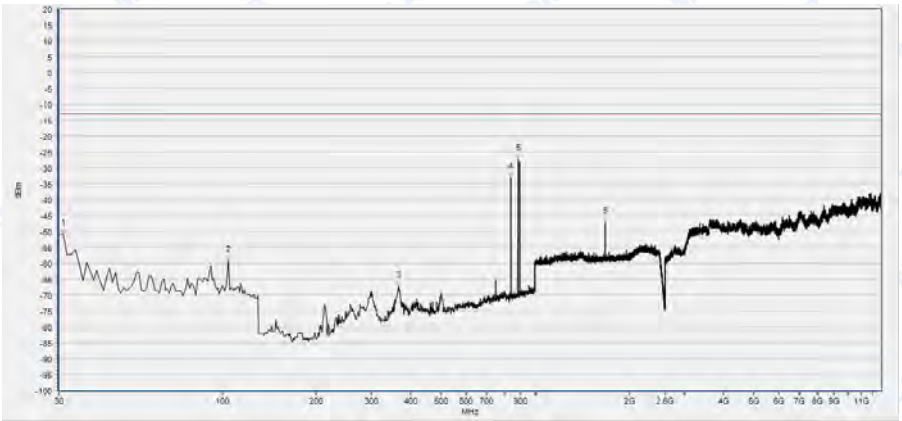
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
30.970	-51.94	-13.00	278.2	Horizontal	PASS
104.690	-61.19	-13.00	100.8	Horizontal	PASS
824.430	-31.62	-13.00	107.2	Horizontal	N.A
869.050	-27.52	-13.00	241.4	Horizontal	N.A
1648.579	-43.50	-13.00	316.4	Horizontal	PASS
4442.099	-45.43	-13.00	118.0	Horizontal	PASS

(Plot C1: EGPRS 850MHz Channel = 128, Test Antenna Horizontal)



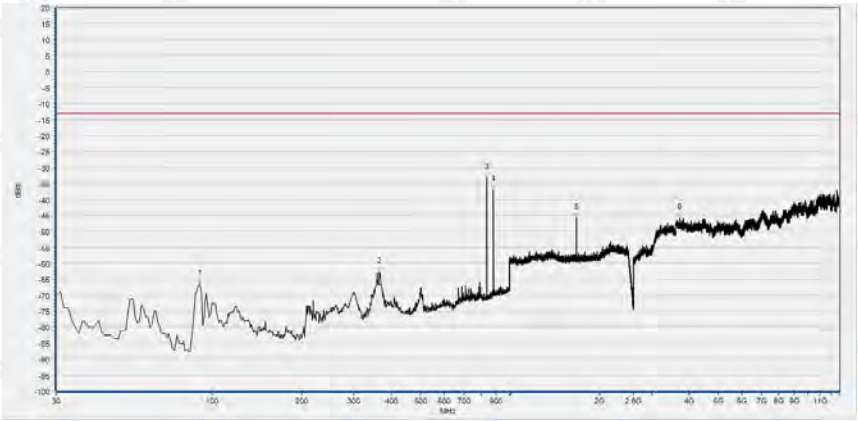
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
54.250	-69.90	-13.00	27.6	Vertical	PASS
90.140	-64.29	-13.00	235.4	Vertical	PASS
362.710	-63.42	-13.00	308.7	Vertical	PASS
824.430	-31.09	-13.00	265.9	Vertical	N.A
869.050	-37.39	-13.00	155.9	Vertical	N.A
1649.220	-43.41	-13.00	311.6	Vertical	PASS

(Plot C2: EGPRS 850MHz Channel = 128, Test Antenna Vertical)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
30.970	-51.05	-13.00	277.8	Horizontal	PASS
104.690	-59.25	-13.00	106.8	Horizontal	PASS
366.590	-67.29	-13.00	222.8	Horizontal	PASS
836.070	-33.13	-13.00	106.8	Horizontal	N.A
881.660	-27.41	-13.00	51.8	Horizontal	N.A
1673.549	-47.25	-13.00	37.1	Horizontal	PASS

(Plot C3: EGPRS 850MHz Channel = 190, Test Antenna Horizontal)

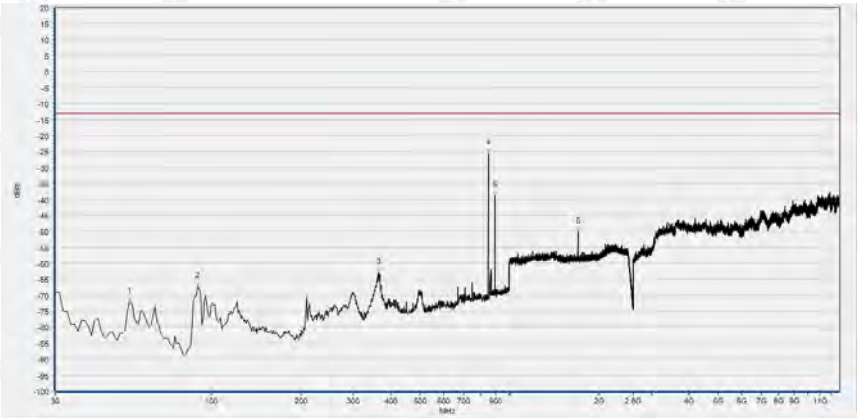


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
91.110	-66.45	-13.00	174.1	Vertical	PASS
365.620	-62.66	-13.00	302.4	Vertical	PASS
836.070	-33.18	-13.00	290.5	Vertical	N.A
881.660	-36.91	-13.00	204.6	Vertical	N.A
1673.549	-45.61	-13.00	304.9	Vertical	PASS
3724.086	-45.71	-13.00	85.2	Vertical	PASS

(Plot C4: EGPRS 850MHz Channel = 190, Test Antenna Vertical)

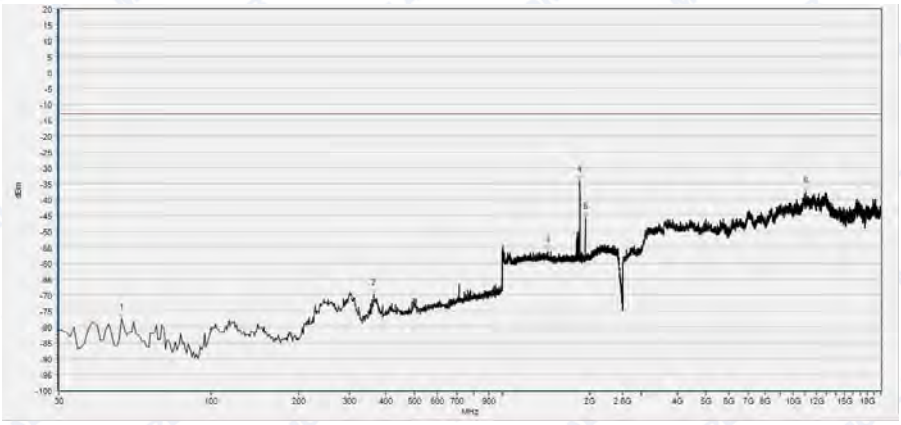
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
30.970	-72.96	-13.00	339.2	Horizontal	PASS
64.920	-75.85	-13.00	198.7	Horizontal	PASS
368.530	-67.58	-13.00	235.4	Horizontal	PASS
848.680	-27.12	-13.00	137.7	Horizontal	N.A
893.300	-28.10	-13.00	64.1	Horizontal	N.A
1697.879	-49.85	-13.00	317.5	Horizontal	PASS

(Plot C5: EGPRS 850MHz Channel = 251, Test Antenna Horizontal)



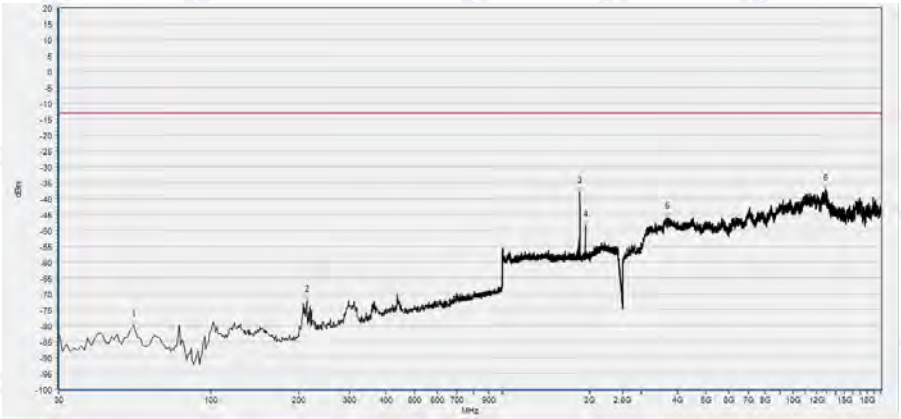
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-72.03	-13.00	198.7	Vertical	PASS
90.140	-67.25	-13.00	9.5	Vertical	PASS
364.650	-62.94	-13.00	327.0	Vertical	PASS
848.680	-25.53	-13.00	155.9	Vertical	N.A
893.300	-38.82	-13.00	198.7	Vertical	N.A
1697.879	-50.12	-13.00	346.5	Vertical	PASS

(Plot C6: EGPRS 850MHz Channel = 251, Test Antenna Vertical)



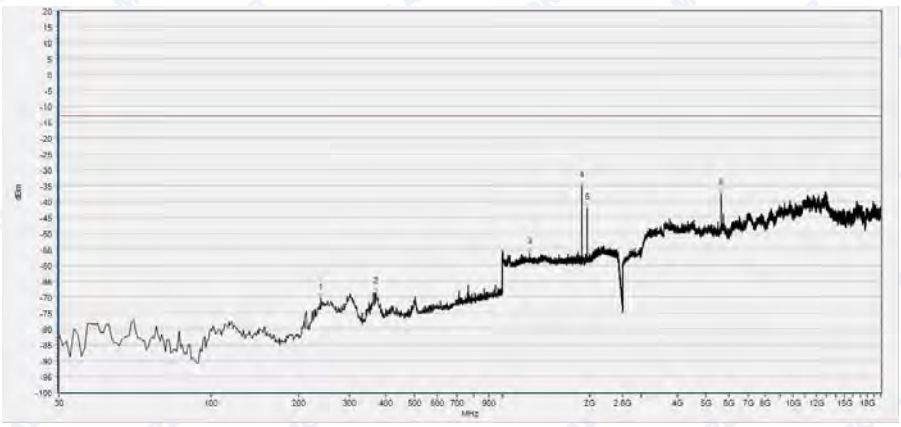
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
49.400	-77.41	-13.00	88.6	Horizontal	PASS
362.710	-69.81	-13.00	58.1	Horizontal	PASS
1436.014	-56.29	-13.00	68.2	Horizontal	PASS
1850.900	-34.16	-13.00	126.7	Horizontal	N.A
1930.932	-45.83	-13.00	224.1	Horizontal	N.A
11080.087	-37.72	-13.00	326.9	Horizontal	PASS

(Plot D1: EGPRS 1900MHz Channel = 512, Test Antenna Horizontal)



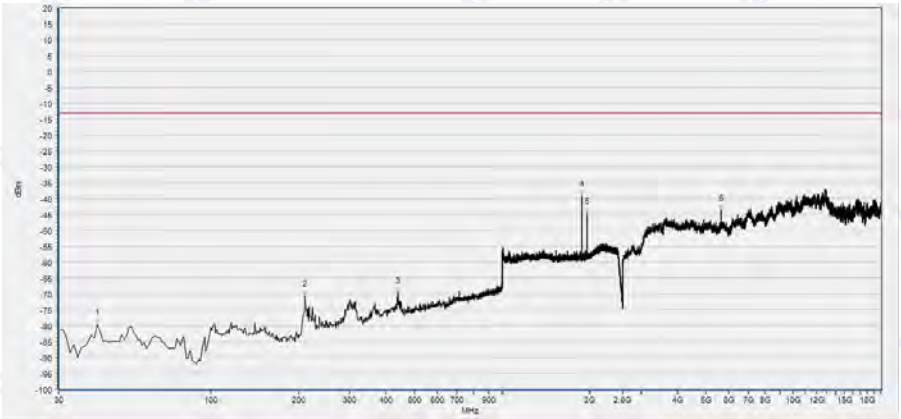
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
54.250	-80.01	-13.00	76.4	Vertical	PASS
213.330	-72.15	-13.00	174.1	Vertical	PASS
1850.900	-37.91	-13.00	334.2	Vertical	N.A
1930.932	-48.60	-13.00	41.5	Vertical	N.A
3701.146	-45.88	-13.00	20.9	Vertical	PASS
12896.345	-37.03	-13.00	33.5	Vertical	PASS

(Plot D2: EGPRS 1900MHz Channel = 512, Test Antenna Vertical)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
238.550	-70.53	-13.00	277.8	Horizontal	PASS
368.530	-68.62	-13.00	210.5	Horizontal	PASS
1243.297	-56.20	-13.00	0.2	Horizontal	PASS
1880.352	-35.24	-13.00	8.1	Horizontal	N.A
1960.384	-42.20	-13.00	47.1	Horizontal	N.A
5640.807	-37.58	-13.00	360.0	Horizontal	PASS

(Plot D3: EGPRS 1900MHz Channel = 661, Test Antenna Horizontal)

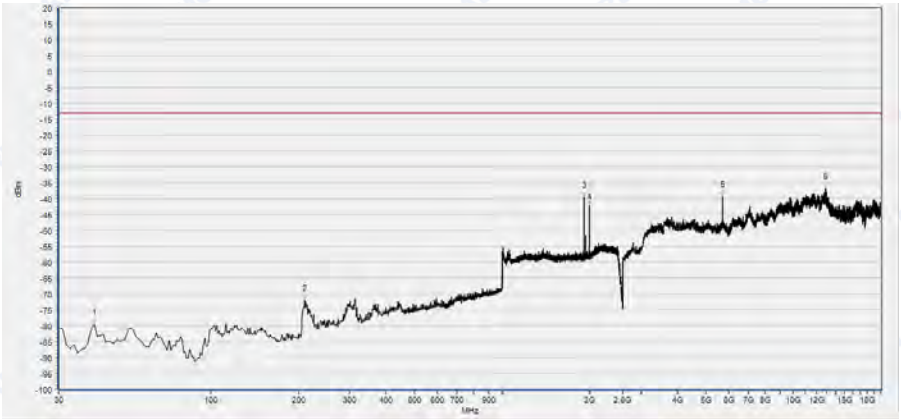


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
40.670	-79.61	-13.00	21.3	Vertical	PASS
210.420	-70.47	-13.00	228.8	Vertical	PASS
439.340	-69.50	-13.00	119.1	Vertical	PASS
1880.352	-38.99	-13.00	1.9	Vertical	N.A
1960.384	-44.45	-13.00	42.2	Vertical	N.A
5640.807	-43.57	-13.00	186.4	Vertical	PASS

(Plot D4: EGPRS 1900MHz Channel = 661, Test Antenna Vertical)

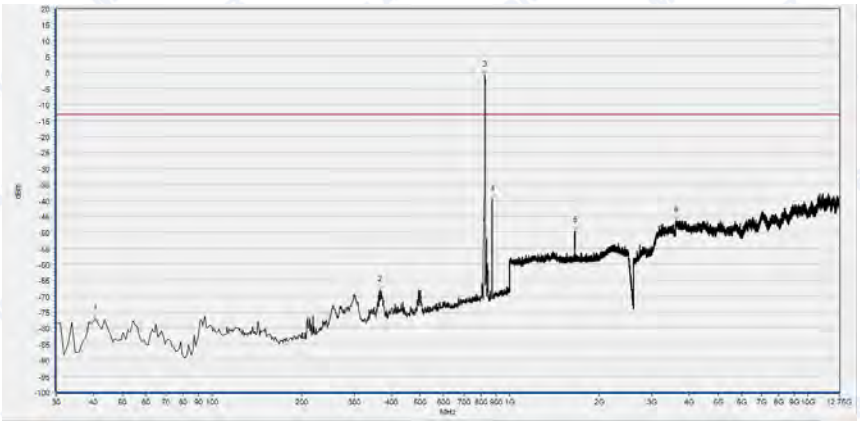
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
244.370	-71.54	-13.00	253.4	Horizontal	PASS
366.590	-67.95	-13.00	198.7	Horizontal	PASS
1909.804	-34.57	-13.00	17.7	Horizontal	N.A
1990.476	-43.25	-13.00	335.0	Horizontal	N.A
5729.405	-36.45	-13.00	360.0	Horizontal	PASS
12946.972	-37.13	-13.00	110.2	Horizontal	PASS

(Plot D5: EGPRS 1900MHz Channel = 810, Test Antenna Horizontal)



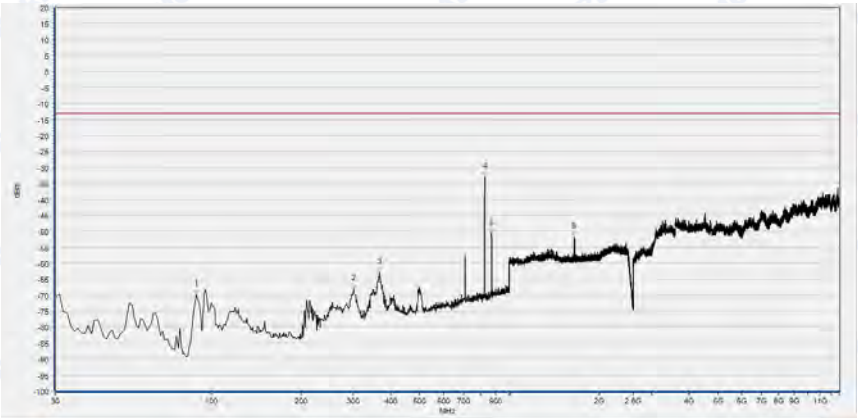
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
39.700	-79.60	-13.00	253.6	Vertical	PASS
209.450	-71.90	-13.00	82.6	Vertical	PASS
1910.444	-39.44	-13.00	0.0	Vertical	N.A
1990.476	-42.03	-13.00	224.1	Vertical	N.A
5729.405	-39.40	-13.00	187.1	Vertical	PASS
12883.688	-36.68	-13.00	98.2	Vertical	PASS

(Plot D6: EGPRS 1900MHz Channel = 810, Test Antenna Vertical)



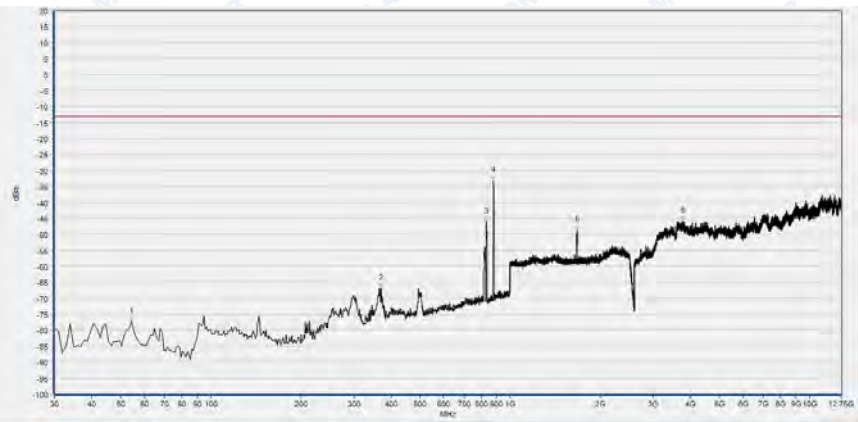
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
40.670	-77.03	-13.00	204.6	Horizontal	PASS
367.560	-68.03	-13.00	137.3	Horizontal	PASS
825.400	-0.74	-13.00	125.0	Horizontal	N.A
872.930	-39.76	-13.00	1.0	Horizontal	N.A
1654.982	-49.57	-13.00	41.9	Horizontal	PASS
3613.339	-46.34	-13.00	196.7	Horizontal	PASS

(Plot E1: WCDMA 850MHz Channel = 4132, Test Antenna Horizontal)



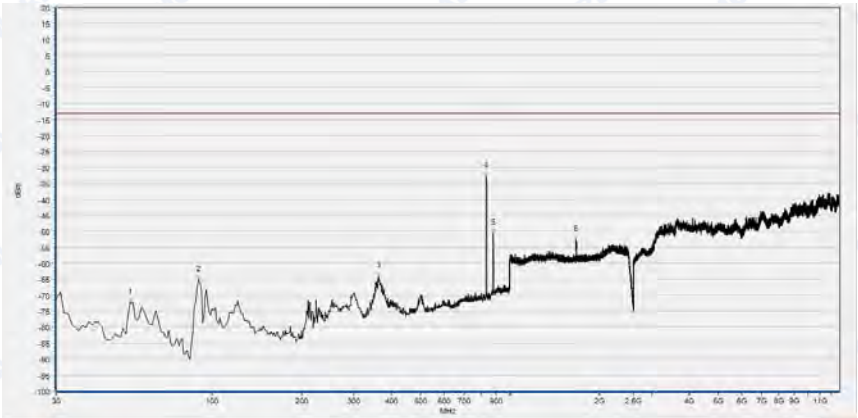
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
89.170	-69.89	-13.00	167.8	Vertical	PASS
300.630	-68.01	-13.00	9.1	Vertical	PASS
367.560	-62.87	-13.00	320.7	Vertical	PASS
827.340	-33.06	-13.00	320.7	Vertical	N.A
870.990	-50.55	-13.00	204.6	Vertical	N.A
1651.140	-51.68	-13.00	321.6	Vertical	PASS

(Plot E2: WCDMA 850MHz Channel = 4132, Test Antenna Vertical)



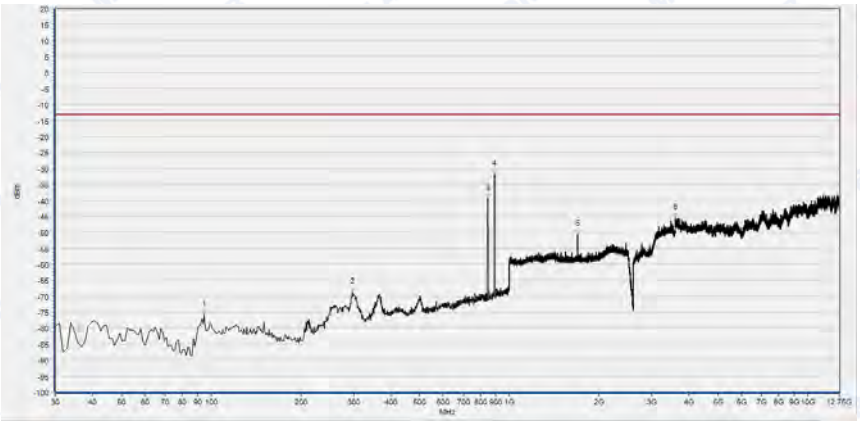
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
54.250	-77.41	-13.00	290.6	Horizontal	PASS
370.470	-67.03	-13.00	113.1	Horizontal	PASS
833.160	-46.03	-13.00	113.1	Horizontal	N.A
880.690	-33.18	-13.00	15.7	Horizontal	N.A
1672.269	-48.86	-13.00	48.2	Horizontal	PASS
3784.997	-45.93	-13.00	332.6	Horizontal	PASS

(Plot E3: WCDMA 850MHz Channel = 4175, Test Antenna Horizontal)



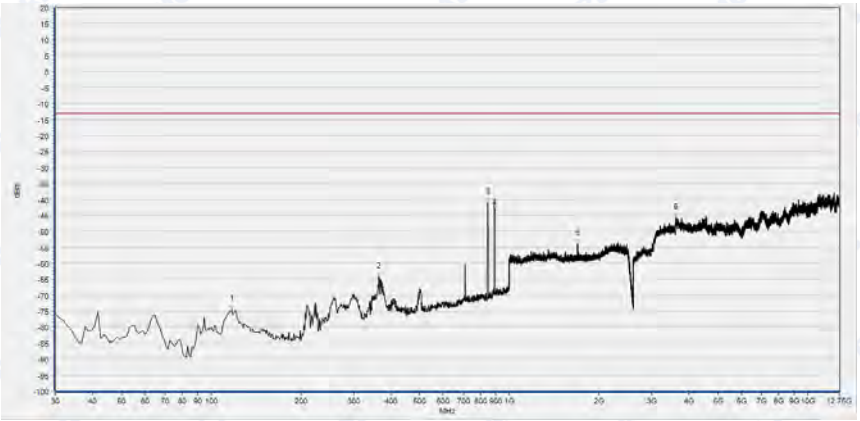
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-72.25	-13.00	359.4	Vertical	PASS
90.140	-65.22	-13.00	351.8	Vertical	PASS
361.740	-63.98	-13.00	309.5	Vertical	PASS
833.160	-32.63	-13.00	137.7	Vertical	N.A
879.720	-50.57	-13.00	107.2	Vertical	N.A
1669.068	-52.57	-13.00	158.0	Vertical	PASS

(Plot E4: WCDMA 850MHz Channel = 4175, Test Antenna Vertical)



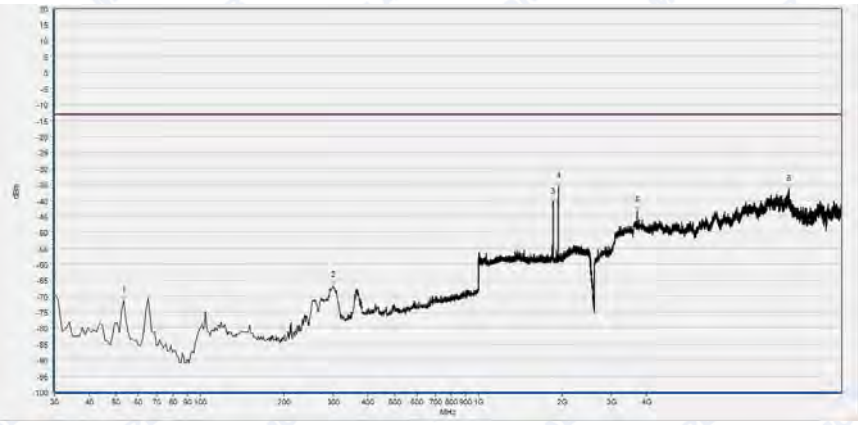
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
94.990	-75.77	-13.00	100.4	Horizontal	PASS
296.750	-68.78	-13.00	253.3	Horizontal	PASS
844.800	-39.41	-13.00	112.7	Horizontal	N.A
890.390	-31.95	-13.00	2.6	Horizontal	N.A
1690.836	-50.72	-13.00	33.7	Horizontal	PASS
3604.110	-45.48	-13.00	254.5	Horizontal	PASS

(Plot E5: WCDMA 850MHz Channel = 4233, Test Antenna Horizontal)



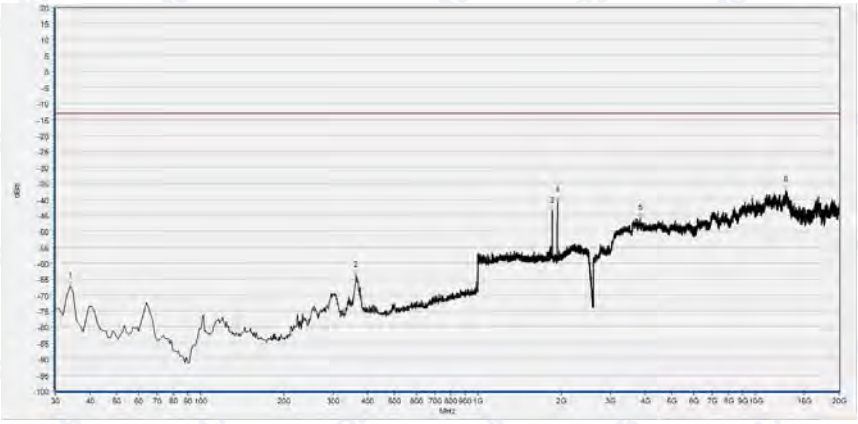
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
117.300	-74.47	-13.00	180.4	Vertical	PASS
365.620	-64.29	-13.00	192.6	Vertical	PASS
845.770	-41.01	-13.00	235.4	Vertical	N.A
890.390	-40.92	-13.00	45.8	Vertical	N.A
1691.477	-53.97	-13.00	100.3	Vertical	PASS
3607.801	-45.66	-13.00	247.8	Vertical	PASS

(Plot E6: WCDMA 850MHz Channel = 4233, Test Antenna Vertical)



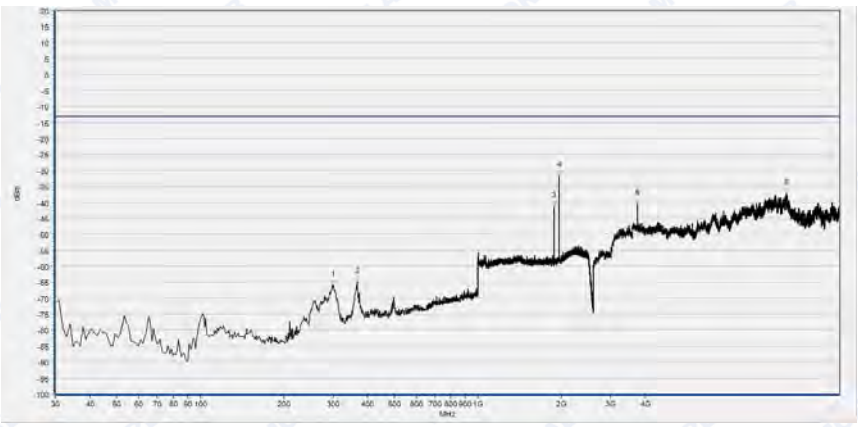
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-71.34	-13.00	76.7	Horizontal	PASS
300.630	-66.67	-13.00	247.4	Horizontal	PASS
1851.541	-40.66	-13.00	144.1	Horizontal	N.A
1933.493	-35.55	-13.00	74.2	Horizontal	N.A
3704.310	-43.33	-13.00	227.6	Horizontal	PASS
12965.957	-36.54	-13.00	342.5	Horizontal	PASS

(Plot F1: WCDMA 1900MHz Channel = 9262, Test Antenna Horizontal)



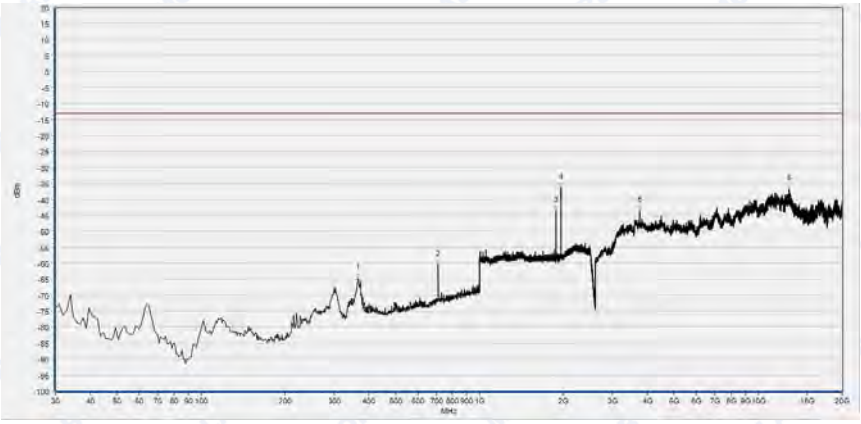
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-67.17	-13.00	235.4	Vertical	PASS
363.680	-63.90	-13.00	1.0	Vertical	PASS
1851.541	-43.77	-13.00	322.0	Vertical	N.A
1933.493	-40.70	-13.00	42.7	Vertical	N.A
3837.207	-45.87	-13.00	261.2	Vertical	PASS
12867.867	-37.20	-13.00	96.8	Vertical	PASS

(Plot F2: WCDMA 1900MHz Channel = 9262, Test Antenna Vertical)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
301.600	-65.90	-13.00	247.3	Horizontal	PASS
367.560	-64.89	-13.00	45.9	Horizontal	PASS
1878.431	-41.15	-13.00	150.9	Horizontal	N.A
1959.744	-31.68	-13.00	233.4	Horizontal	N.A
3761.266	-40.25	-13.00	225.1	Horizontal	PASS
12886.852	-37.19	-13.00	113.2	Horizontal	PASS

(Plot F3: WCDMA 1900MHz Channel = 9400, Test Antenna Horizontal)

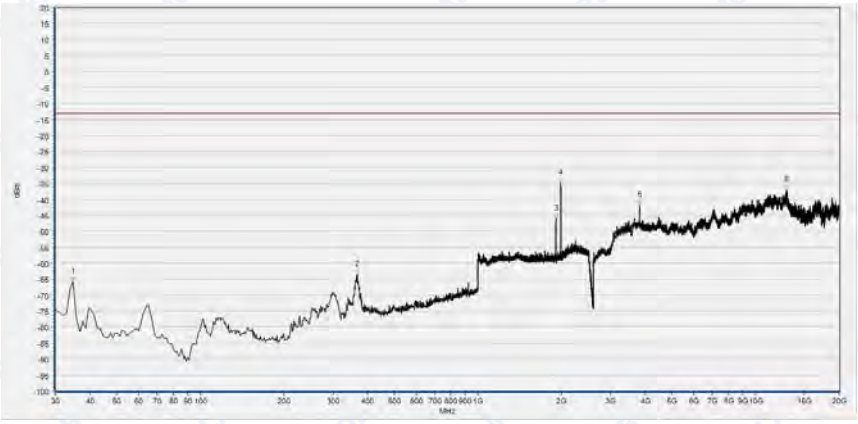


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
366.590	-64.75	-13.00	51.8	Vertical	PASS
710.940	-60.54	-13.00	320.7	Vertical	PASS
1878.431	-43.43	-13.00	314.9	Vertical	N.A
1961.024	-36.25	-13.00	327.9	Vertical	N.A
3761.266	-43.52	-13.00	162.9	Vertical	PASS
12893.181	-36.67	-13.00	15.7	Vertical	PASS

(Plot F4: WCDMA 1900MHz Channel = 9400, Test Antenna Vertical)

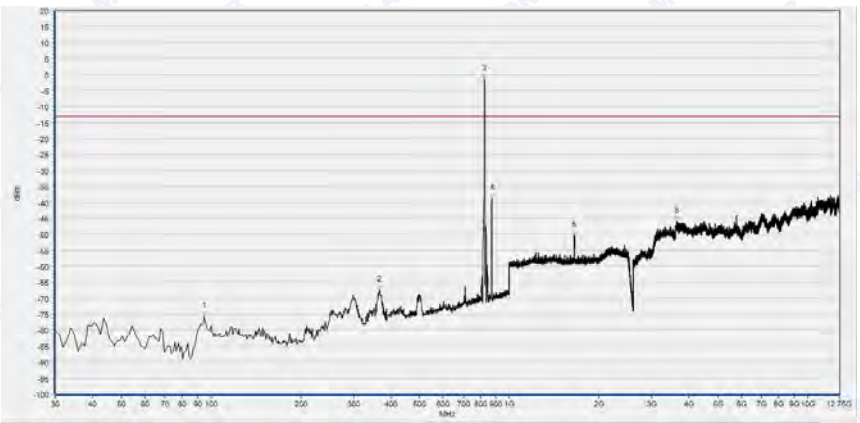
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-76.70	-13.00	15.3	Horizontal	PASS
118.270	-70.12	-13.00	360.0	Horizontal	PASS
710.940	-61.53	-13.00	113.1	Horizontal	PASS
1908.523	-42.66	-13.00	136.0	Horizontal	N.A
1986.635	-33.14	-13.00	307.9	Horizontal	N.A
3815.057	-38.16	-13.00	215.7	Horizontal	PASS

(Plot F5: WCDMA 1900MHz Channel = 9538, Test Antenna Horizontal)



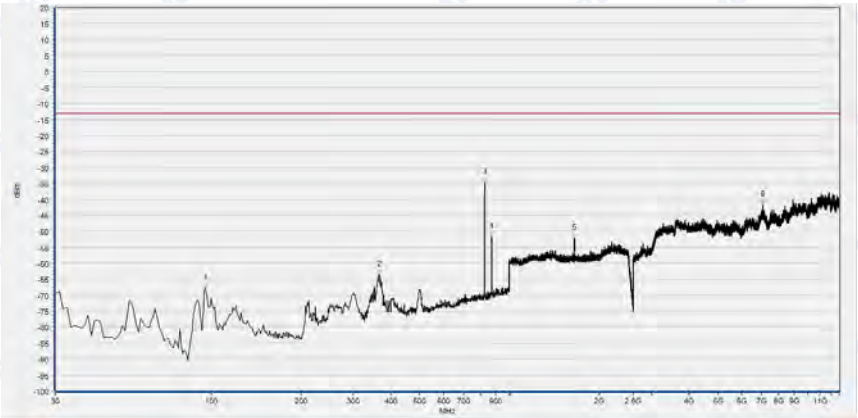
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
34.850	-65.77	-13.00	137.3	Vertical	PASS
367.560	-63.51	-13.00	9.5	Vertical	PASS
1908.523	-46.19	-13.00	322.3	Vertical	N.A
1986.635	-35.07	-13.00	224.5	Vertical	N.A
3818.221	-41.92	-13.00	173.7	Vertical	PASS
12886.852	-37.25	-13.00	135.5	Vertical	PASS

(Plot F6: WCDMA 1900MHz Channel = 9538, Test Antenna Vertical)



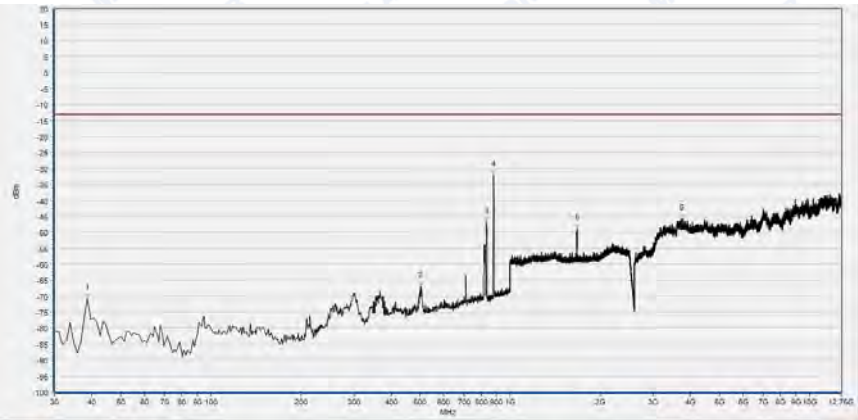
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
94.990	-75.69	-13.00	119.4	Horizontal	PASS
367.560	-67.42	-13.00	119.4	Horizontal	PASS
825.400	-1.51	-13.00	119.4	Horizontal	N.A
872.930	-38.84	-13.00	58.5	Horizontal	N.A
1649.860	-50.42	-13.00	28.9	Horizontal	PASS
3635.488	-45.93	-13.00	76.3	Horizontal	PASS

(Plot G1: HSDPA 850MHz Channel = 4132, Test Antenna Horizontal)



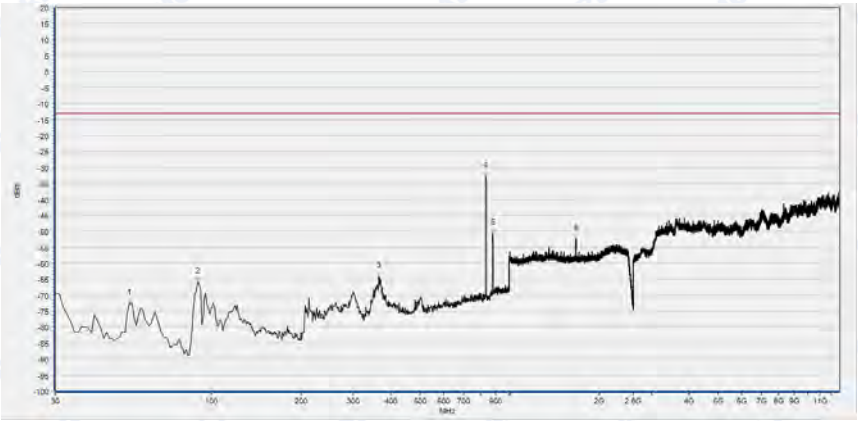
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
95.960	-67.86	-13.00	33.6	Vertical	PASS
367.560	-63.61	-13.00	296.5	Vertical	PASS
827.340	-34.65	-13.00	290.5	Vertical	N.A
871.960	-51.74	-13.00	205.0	Vertical	N.A
1651.781	-52.14	-13.00	334.2	Vertical	PASS
7092.653	-41.74	-13.00	339.3	Vertical	PASS

(Plot G2: HSDPA 850MHz Channel = 4132, Test Antenna Vertical)



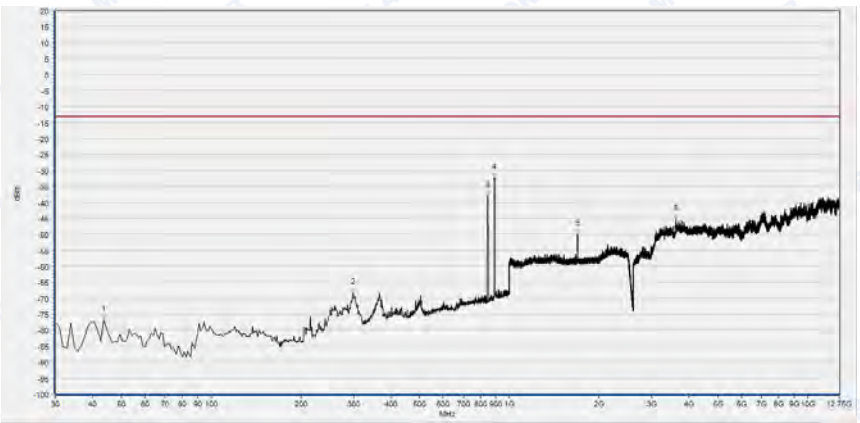
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-70.69	-13.00	101.2	Horizontal	PASS
501.420	-67.01	-13.00	101.2	Horizontal	PASS
833.160	-46.79	-13.00	119.1	Horizontal	N.A
880.690	-32.09	-13.00	241.4	Horizontal	N.A
1670.988	-48.94	-13.00	41.9	Horizontal	PASS
3731.469	-45.70	-13.00	196.4	Horizontal	PASS

(Plot G3: HSDPA 850MHz Channel = 4175, Test Antenna Horizontal)



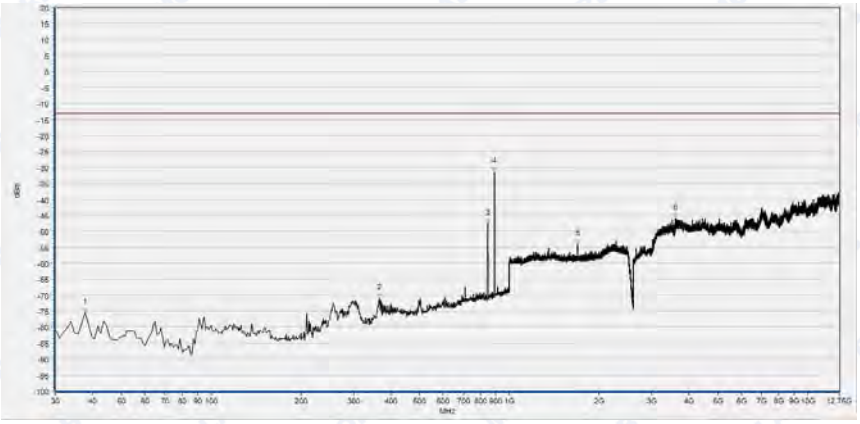
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-72.58	-13.00	100.8	Vertical	PASS
90.140	-65.85	-13.00	228.8	Vertical	PASS
365.620	-64.10	-13.00	302.1	Vertical	PASS
834.130	-32.75	-13.00	131.0	Vertical	N.A
878.750	-50.65	-13.00	155.5	Vertical	N.A
1672.909	-52.38	-13.00	143.4	Vertical	PASS

(Plot G4: HSDPA 850MHz Channel = 4175, Test Antenna Vertical)



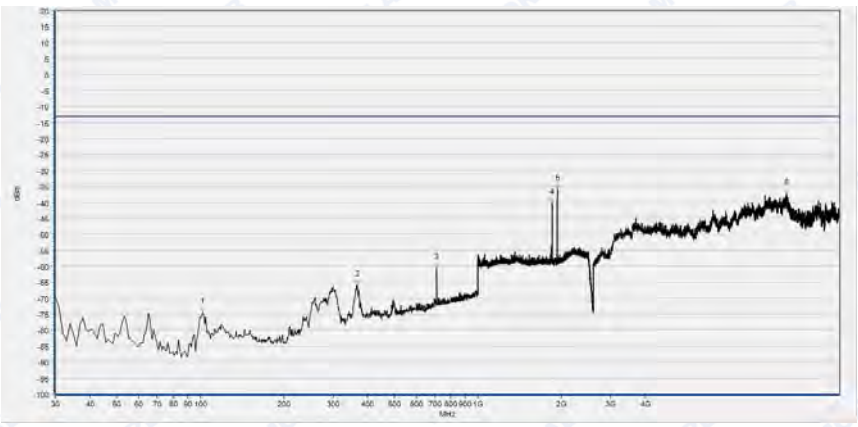
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
43.580	-76.67	-13.00	235.4	Horizontal	PASS
299.660	-68.28	-13.00	265.9	Horizontal	PASS
844.800	-37.97	-13.00	119.4	Horizontal	N.A
890.390	-32.37	-13.00	204.9	Horizontal	N.A
1695.318	-50.05	-13.00	35.6	Horizontal	PASS
3617.030	-45.27	-13.00	203.8	Horizontal	PASS

(Plot G5: HSDPA 850MHz Channel = 4233, Test Antenna Horizontal)



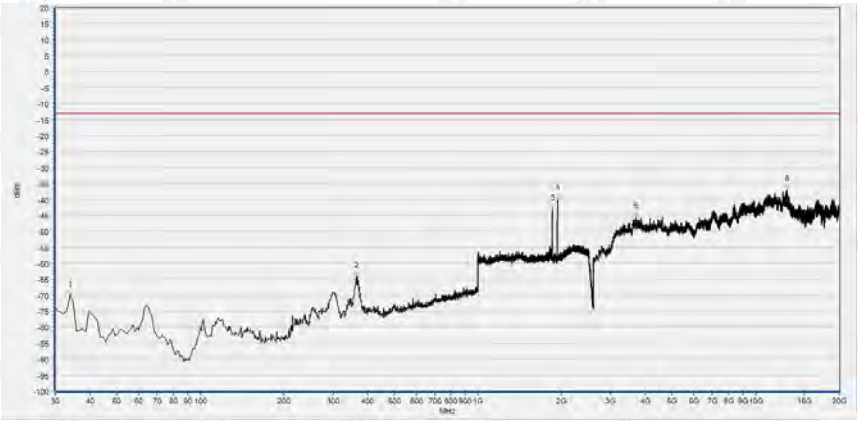
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
37.760	-75.39	-13.00	192.3	Vertical	PASS
367.560	-70.93	-13.00	222.8	Vertical	PASS
844.800	-47.58	-13.00	51.7	Vertical	N.A
891.360	-31.43	-13.00	1.0	Vertical	N.A
1691.477	-53.97	-13.00	192.1	Vertical	PASS
3604.110	-45.90	-13.00	273.1	Vertical	PASS

(Plot G6: HSDPA 850MHz Channel = 4233, Test Antenna Vertical)



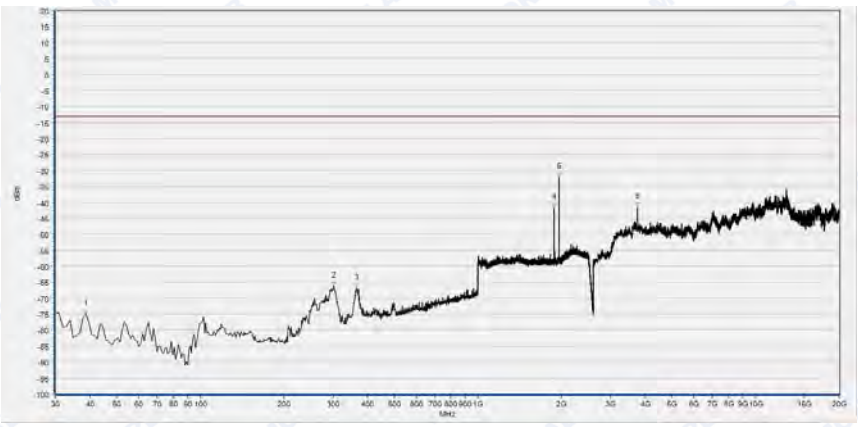
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
101.780	-74.42	-13.00	180.4	Horizontal	PASS
367.560	-65.74	-13.00	33.6	Horizontal	PASS
710.940	-60.54	-13.00	198.6	Horizontal	PASS
1850.900	-40.21	-13.00	139.3	Horizontal	N.A
1932.853	-35.94	-13.00	237.2	Horizontal	N.A
12950.136	-37.11	-13.00	330.2	Horizontal	PASS

(Plot H1: HSDPA 1900MHz Channel = 9262, Test Antenna Horizontal)



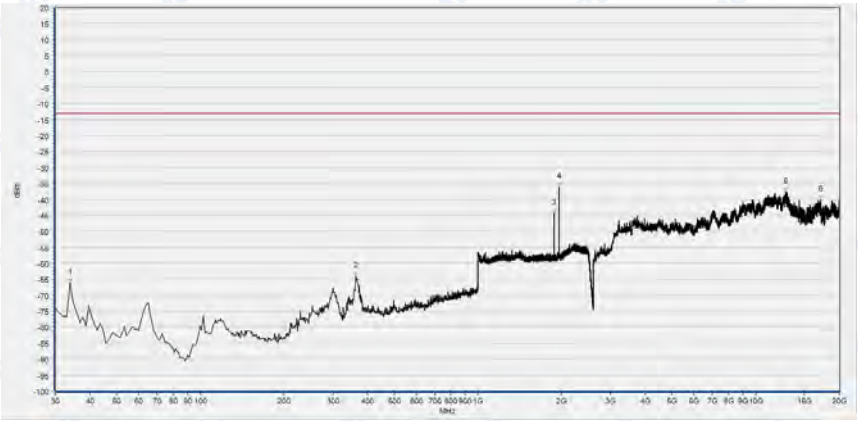
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-69.97	-13.00	94.6	Vertical	PASS
365.620	-63.92	-13.00	57.8	Vertical	PASS
1852.821	-43.10	-13.00	328.7	Vertical	N.A
1932.213	-40.24	-13.00	42.6	Vertical	N.A
3701.146	-45.56	-13.00	33.6	Vertical	PASS
12972.286	-36.87	-13.00	262.6	Vertical	PASS

(Plot H2: HSDPA 1900MHz Channel = 9262, Test Antenna Vertical)



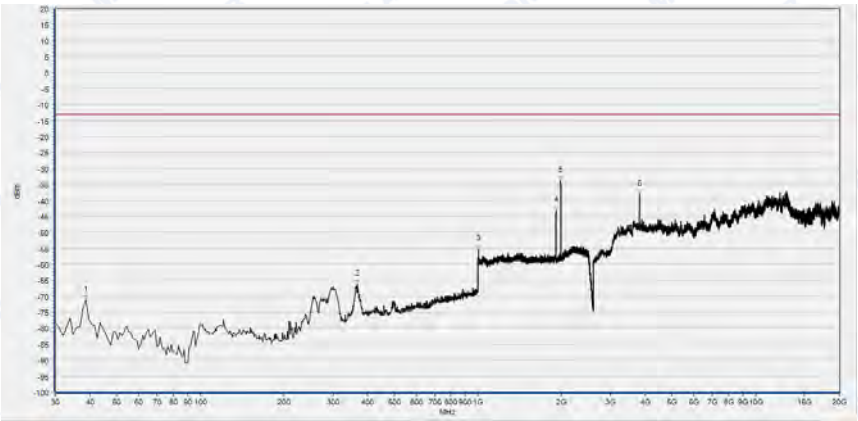
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-75.07	-13.00	149.6	Horizontal	PASS
302.570	-66.33	-13.00	265.9	Horizontal	PASS
366.590	-66.88	-13.00	52.1	Horizontal	PASS
1878.431	-41.63	-13.00	148.9	Horizontal	N.A
1959.744	-32.07	-13.00	276.2	Horizontal	N.A
3758.101	-41.41	-13.00	226.1	Horizontal	PASS

(Plot H3: HSDPA 1900MHz Channel = 9400, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-66.19	-13.00	235.1	Vertical	PASS
362.710	-64.12	-13.00	355.4	Vertical	PASS
1878.431	-44.31	-13.00	314.9	Vertical	N.A
1961.024	-36.14	-13.00	221.2	Vertical	N.A
12874.195	-37.58	-13.00	204.9	Vertical	PASS
17101.582	-40.08	-13.00	153.3	Vertical	PASS

(Plot H4: HSDPA 1900MHz Channel = 9400, Test Antenna Vertical)

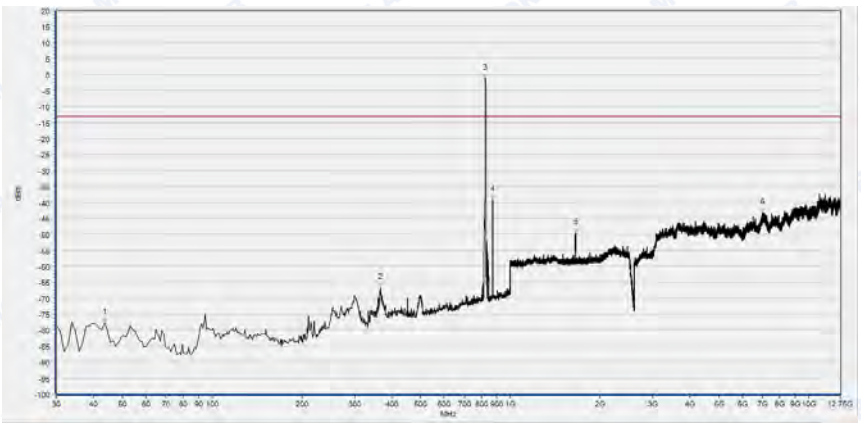


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-71.23	-13.00	27.6	Horizontal	PASS
368.530	-66.29	-13.00	52.2	Horizontal	PASS
1005.762	-55.22	-13.00	328.3	Horizontal	PASS
1908.523	-43.24	-13.00	243.1	Horizontal	N.A
1987.915	-33.91	-13.00	132.6	Horizontal	N.A
3815.057	-38.17	-13.00	216.8	Horizontal	PASS

(Plot H5: HSDPA 1900MHz Channel = 9538, Test Antenna Horizontal)

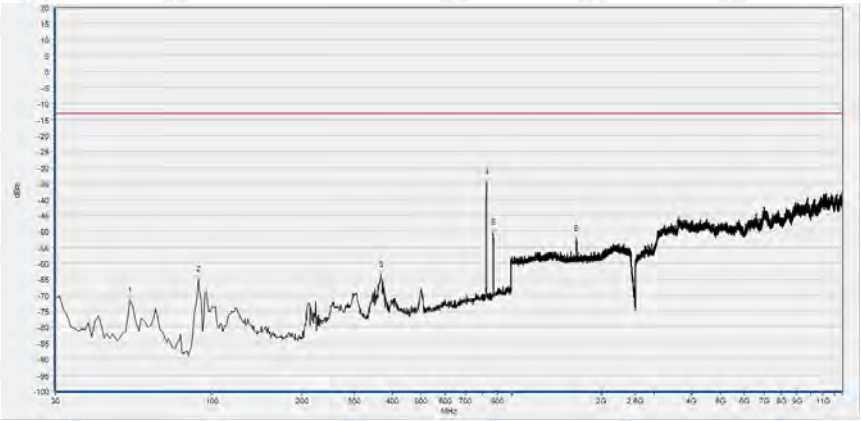
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-70.40	-13.00	355.6	Vertical	PASS
365.620	-64.34	-13.00	359.5	Vertical	PASS
1907.883	-47.20	-13.00	322.3	Vertical	N.A
1987.275	-35.51	-13.00	225.2	Vertical	N.A
3818.221	-41.27	-13.00	160.4	Vertical	PASS
12899.509	-37.75	-13.00	300.2	Vertical	PASS

(Plot H6: HSDPA 1900MHz Channel = 9538, Test Antenna Vertical)



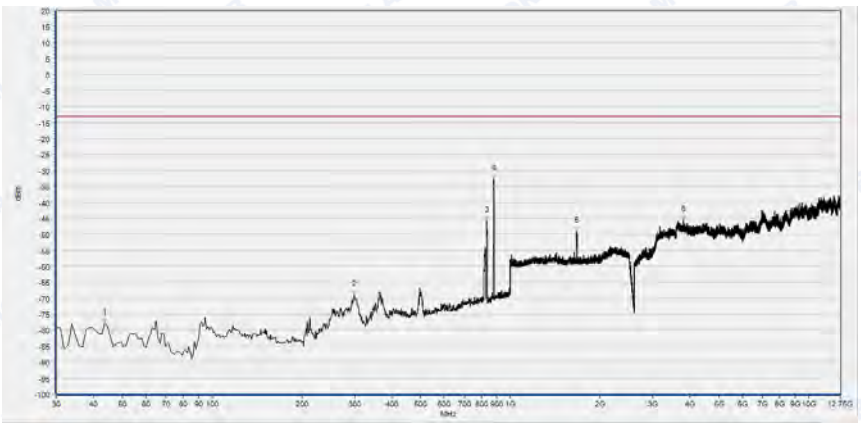
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
43.580	-77.74	-13.00	296.5	Horizontal	PASS
367.560	-66.70	-13.00	119.1	Horizontal	PASS
824.430	-1.19	-13.00	70.4	Horizontal	N.A
871.960	-39.28	-13.00	210.9	Horizontal	N.A
1654.342	-49.53	-13.00	29.3	Horizontal	PASS
7015.130	-43.15	-13.00	260.4	Horizontal	PASS

(Plot I1: HSUPA 850MHz Channel = 4132, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-71.89	-13.00	70.1	Vertical	PASS
90.140	-65.13	-13.00	278.0	Vertical	PASS
366.590	-63.78	-13.00	326.7	Vertical	PASS
827.340	-34.71	-13.00	302.5	Vertical	N.A
870.990	-50.51	-13.00	326.7	Vertical	N.A
1650.500	-52.68	-13.00	326.4	Vertical	PASS

(Plot I2: HSUPA 850MHz Channel = 4132, Test Antenna Vertical)

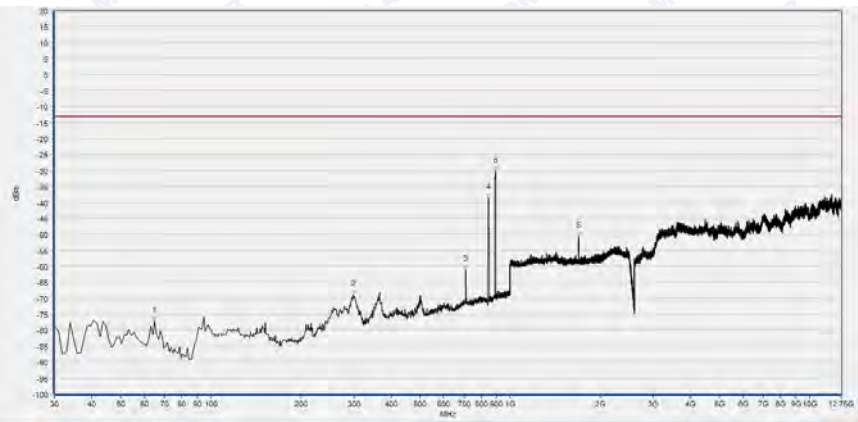


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
43.580	-77.85	-13.00	284.0	Horizontal	PASS
299.660	-68.88	-13.00	113.1	Horizontal	PASS
833.160	-45.67	-13.00	82.3	Horizontal	N.A
878.750	-32.64	-13.00	9.1	Horizontal	N.A
1668.427	-49.12	-13.00	36.8	Horizontal	PASS
3808.993	-45.50	-13.00	128.7	Horizontal	PASS

(Plot I3: HSUPA 850MHz Channel = 4175, Test Antenna Horizontal)

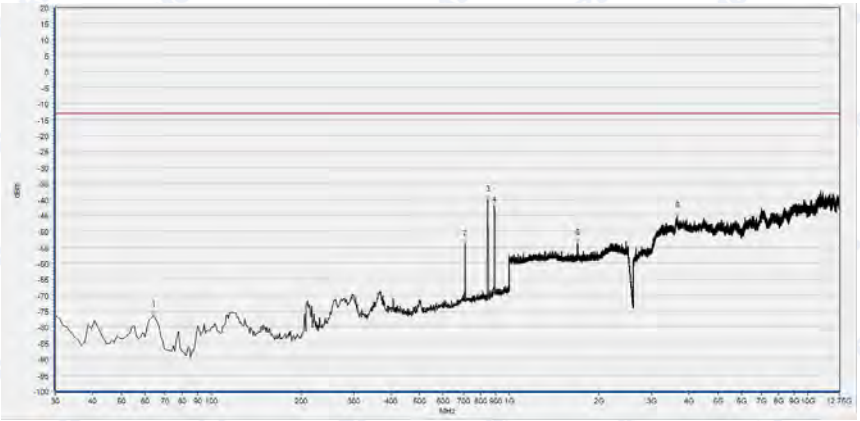
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
54.250	-69.64	-13.00	45.8	Vertical	PASS
90.140	-65.85	-13.00	296.5	Vertical	PASS
370.470	-64.19	-13.00	284.2	Vertical	PASS
834.130	-32.85	-13.00	125.0	Vertical	N.A
879.720	-51.30	-13.00	210.9	Vertical	N.A
1667.787	-51.39	-13.00	150.1	Vertical	PASS

(Plot I4: HSUPA 850MHz Channel = 4175, Test Antenna Vertical)



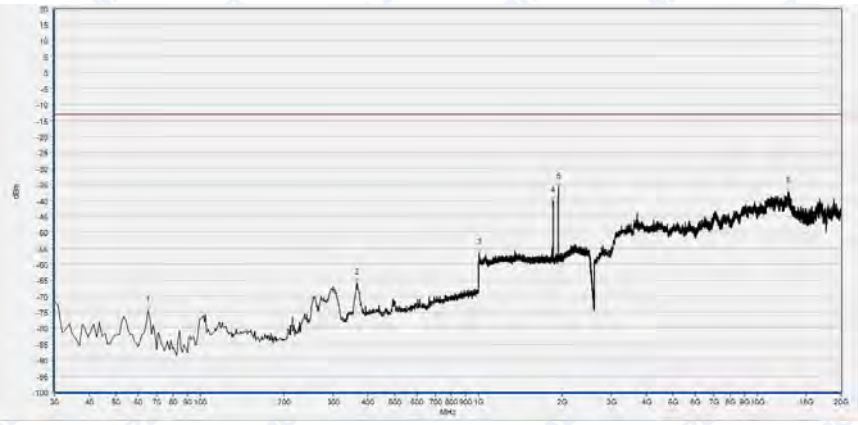
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
64.920	-77.17	-13.00	5.1	Horizontal	PASS
299.660	-68.84	-13.00	259.6	Horizontal	PASS
710.940	-61.11	-13.00	296.5	Horizontal	PASS
845.770	-38.46	-13.00	82.2	Horizontal	N.A
893.300	-30.20	-13.00	210.9	Horizontal	N.A
1690.836	-50.56	-13.00	38.5	Horizontal	PASS

(Plot I5: HSUPA 850MHz Channel = 4233, Test Antenna Horizontal)



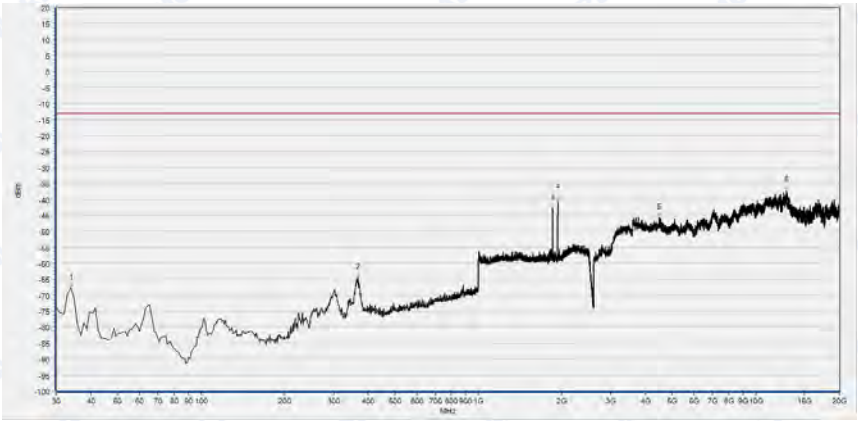
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
63.950	-76.42	-13.00	358.0	Vertical	PASS
710.940	-54.06	-13.00	21.2	Vertical	PASS
844.800	-40.00	-13.00	210.9	Vertical	N.A
890.390	-41.87	-13.00	137.3	Vertical	N.A
1691.477	-53.66	-13.00	19.6	Vertical	PASS
3665.021	-45.30	-13.00	75.6	Vertical	PASS

(Plot I6: HSUPA 850MHz Channel = 4233, Test Antenna Vertical)



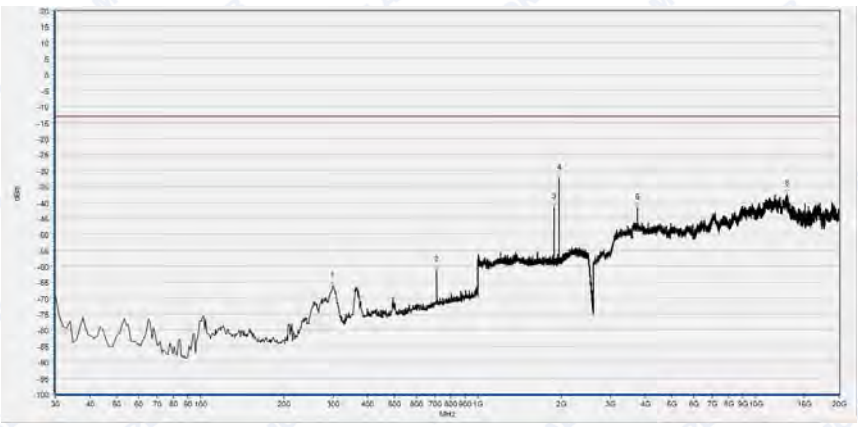
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
64.920	-74.61	-13.00	278.3	Horizontal	PASS
364.650	-65.77	-13.00	39.9	Horizontal	PASS
1003.842	-56.46	-13.00	315.6	Horizontal	PASS
1851.541	-40.00	-13.00	137.1	Horizontal	N.A
1932.213	-35.86	-13.00	348.0	Horizontal	N.A
12890.016	-37.10	-13.00	118.7	Horizontal	PASS

(Plot J1: HSUPA 1900MHz Channel = 9262, Test Antenna Horizontal)



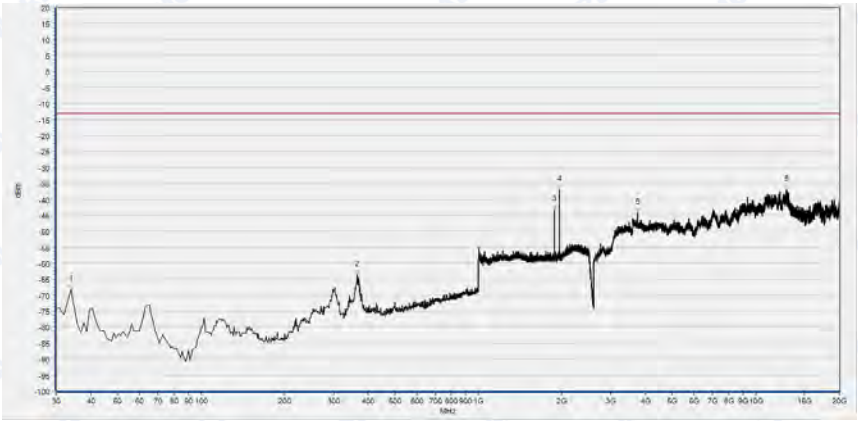
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-67.92	-13.00	339.3	Vertical	PASS
367.560	-64.38	-13.00	58.1	Vertical	PASS
1851.541	-42.85	-13.00	328.3	Vertical	N.A
1932.853	-40.67	-13.00	281.1	Vertical	N.A
4495.363	-45.69	-13.00	122.1	Vertical	PASS
12883.688	-37.29	-13.00	273.8	Vertical	PASS

(Plot J2: HSUPA 1900MHz Channel = 9262, Test Antenna Vertical)



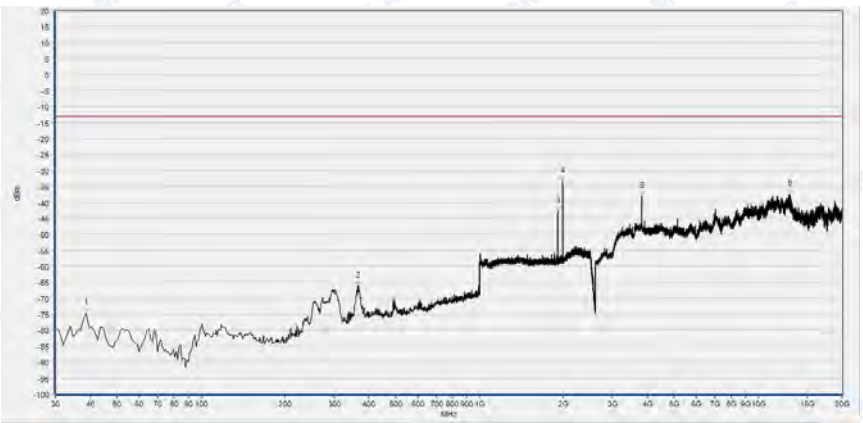
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
299.660	-66.29	-13.00	265.6	Horizontal	PASS
710.940	-61.37	-13.00	174.1	Horizontal	PASS
1878.431	-41.43	-13.00	138.6	Horizontal	N.A
1961.024	-32.47	-13.00	217.1	Horizontal	N.A
3758.101	-41.72	-13.00	226.6	Horizontal	PASS
12959.629	-37.48	-13.00	9.8	Horizontal	PASS

(Plot J3: HSUPA 1900MHz Channel = 9400, Test Antenna Horizontal)



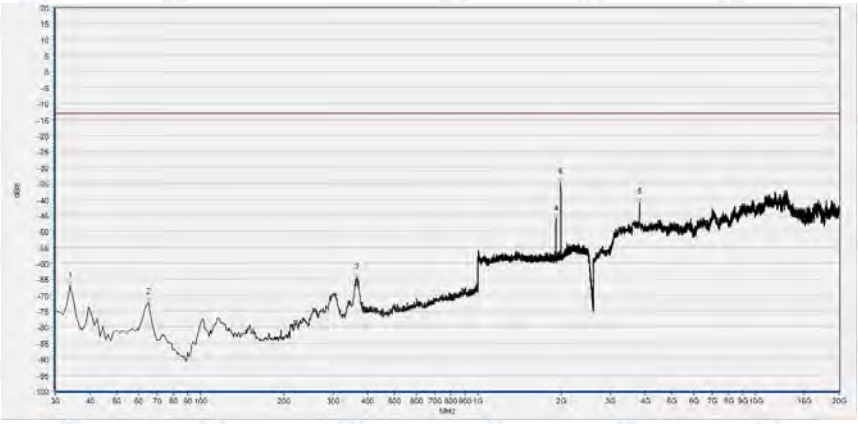
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-68.32	-13.00	155.9	Vertical	PASS
364.650	-63.63	-13.00	5.1	Vertical	PASS
1878.431	-43.32	-13.00	321.7	Vertical	N.A
1960.384	-36.95	-13.00	223.0	Vertical	N.A
3758.101	-44.05	-13.00	151.7	Vertical	PASS
12886.852	-36.90	-13.00	357.0	Vertical	PASS

(Plot J4: HSUPA 1900MHz Channel = 9400, Test Antenna Vertical)



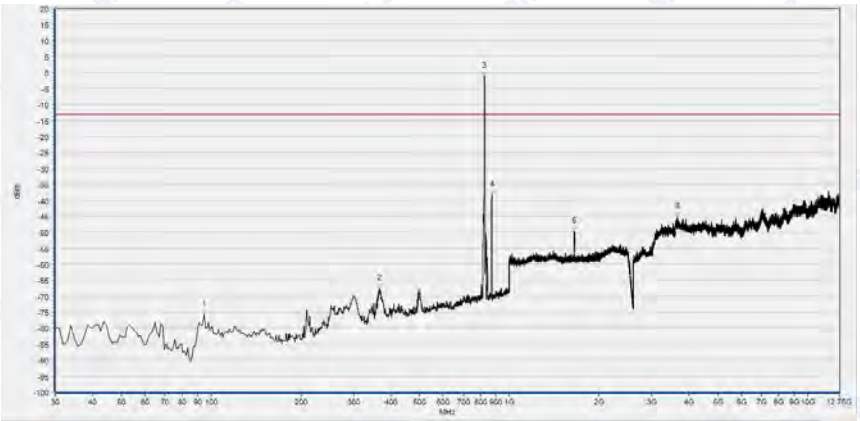
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-74.85	-13.00	70.0	Horizontal	PASS
364.650	-66.22	-13.00	45.5	Horizontal	PASS
1908.523	-42.69	-13.00	143.1	Horizontal	N.A
1985.994	-33.48	-13.00	271.0	Horizontal	N.A
3818.221	-38.10	-13.00	199.3	Horizontal	PASS
12997.600	-37.38	-13.00	17.2	Horizontal	PASS

(Plot J5: HSUPA 1900MHz Channel = 9538, Test Antenna Horizontal)



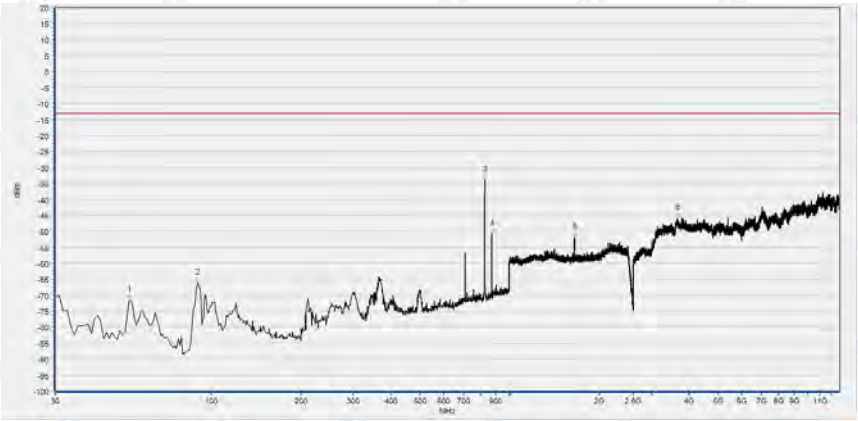
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-67.26	-13.00	21.3	Vertical	PASS
64.920	-72.21	-13.00	58.1	Vertical	PASS
364.650	-64.57	-13.00	358.0	Vertical	PASS
1908.523	-46.06	-13.00	315.6	Vertical	N.A
1987.915	-34.74	-13.00	328.7	Vertical	N.A
3818.221	-41.03	-13.00	147.7	Vertical	PASS

(Plot J6: HSUPA 1900MHz Channel = 9538, Test Antenna Vertical)



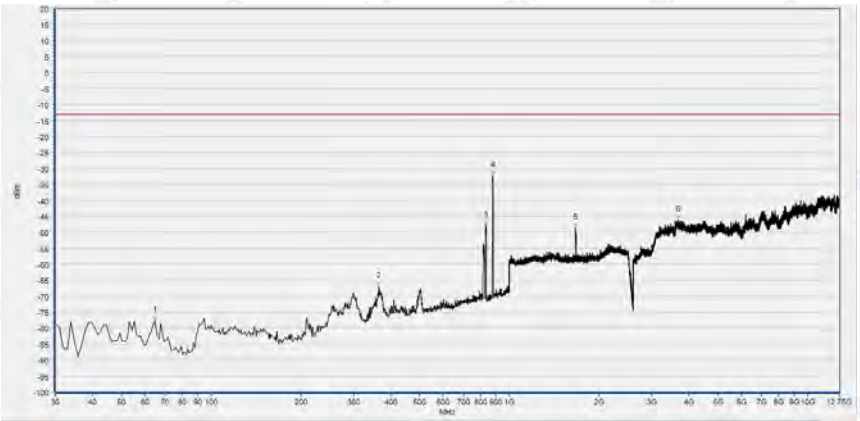
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
94.990	-75.83	-13.00	100.5	Horizontal	PASS
367.560	-67.69	-13.00	112.8	Horizontal	PASS
825.400	-1.30	-13.00	94.6	Horizontal	N.A
872.930	-38.29	-13.00	216.9	Horizontal	N.A
1651.140	-49.78	-13.00	40.2	Horizontal	PASS
3655.792	-45.19	-13.00	357.8	Horizontal	PASS

(Plot K1: HSPA+ 850MHz Channel = 4132, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
53.280	-71.35	-13.00	204.6	Vertical	PASS
90.140	-66.36	-13.00	106.8	Vertical	PASS
827.340	-34.02	-13.00	320.7	Vertical	N.A
872.930	-50.82	-13.00	106.8	Vertical	N.A
1651.781	-51.96	-13.00	329.0	Vertical	PASS
3666.867	-45.84	-13.00	257.5	Vertical	PASS

(Plot K2: HSPA+ 850MHz Channel = 4132, Test Antenna Vertical)

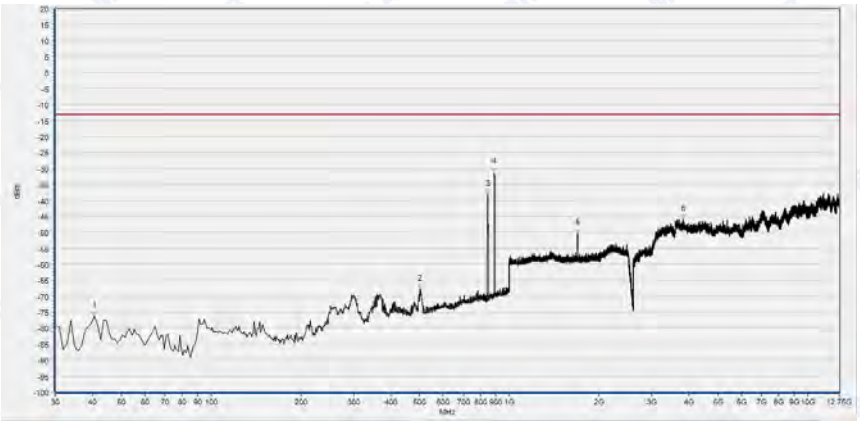


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
64.920	-77.70	-13.00	314.7	Horizontal	PASS
365.620	-66.87	-13.00	119.1	Horizontal	PASS
833.160	-47.92	-13.00	100.9	Horizontal	N.A
881.660	-32.21	-13.00	235.1	Horizontal	N.A
1668.427	-48.59	-13.00	40.9	Horizontal	PASS
3674.250	-46.15	-13.00	358.9	Horizontal	PASS

(Plot K3: HSPA+ 850MHz Channel = 4175, Test Antenna Horizontal)

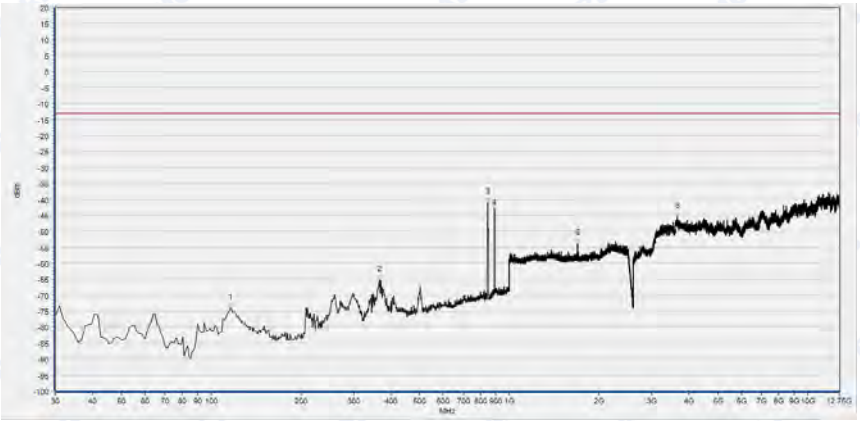
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
54.250	-72.30	-13.00	180.1	Vertical	PASS
91.110	-65.10	-13.00	278.0	Vertical	PASS
371.440	-63.66	-13.00	290.3	Vertical	PASS
834.130	-29.79	-13.00	143.7	Vertical	N.A
881.660	-50.36	-13.00	339.0	Vertical	N.A
1669.068	-51.75	-13.00	271.8	Vertical	PASS

(Plot K4: HSPA+ 850MHz Channel = 4175, Test Antenna Vertical)



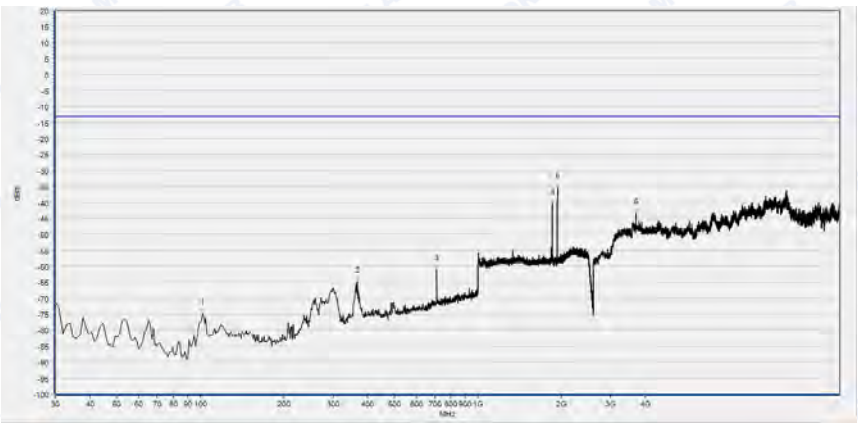
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
40.670	-76.27	-13.00	253.7	Horizontal	PASS
500.450	-67.92	-13.00	107.2	Horizontal	PASS
844.800	-38.17	-13.00	119.1	Horizontal	N.A
890.390	-31.32	-13.00	216.9	Horizontal	N.A
1691.477	-50.31	-13.00	47.8	Horizontal	PASS
3827.450	-45.94	-13.00	324.4	Horizontal	PASS

(Plot K5: HSPA+ 850MHz Channel = 4233, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
116.330	-74.05	-13.00	186.3	Vertical	PASS
367.560	-65.12	-13.00	216.8	Vertical	PASS
844.800	-40.92	-13.00	216.8	Vertical	N.A
890.390	-42.81	-13.00	137.2	Vertical	N.A
1690.836	-53.85	-13.00	20.2	Vertical	PASS
3657.638	-45.48	-13.00	360.0	Vertical	PASS

(Plot K6: HSPA+ 850MHz Channel = 4233, Test Antenna Vertical)

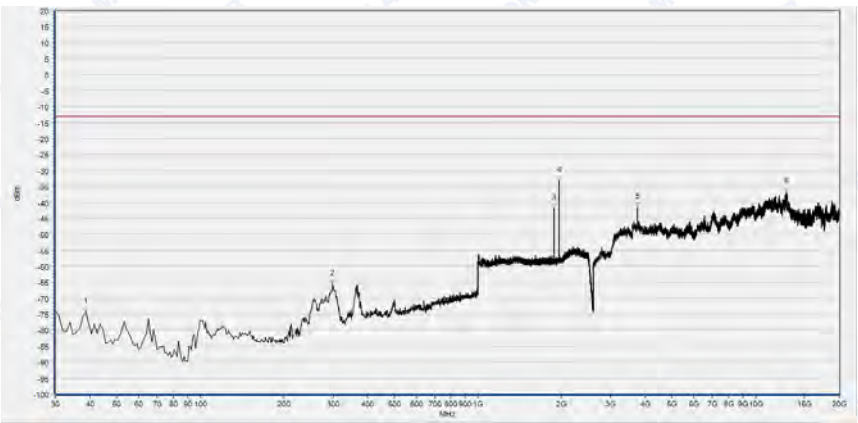


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
101.780	-74.71	-13.00	229.1	Horizontal	PASS
367.560	-64.62	-13.00	39.9	Horizontal	PASS
710.940	-60.99	-13.00	33.6	Horizontal	PASS
1853.461	-40.43	-13.00	139.3	Horizontal	N.A
1933.493	-35.26	-13.00	28.5	Horizontal	N.A
3707.474	-43.18	-13.00	195.6	Horizontal	PASS

(Plot L1: HSPA+ 1900MHz Channel = 9262, Test Antenna Horizontal)

Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-67.28	-13.00	33.6	Vertical	PASS
364.650	-63.56	-13.00	2.6	Vertical	PASS
1851.541	-43.75	-13.00	322.3	Vertical	N.A
1932.853	-40.89	-13.00	276.6	Vertical	N.A
3609.384	-45.35	-13.00	33.6	Vertical	PASS
12905.837	-37.01	-13.00	33.6	Vertical	PASS

(Plot L2: HSPA+ 1900MHz Channel = 9262, Test Antenna Vertical)

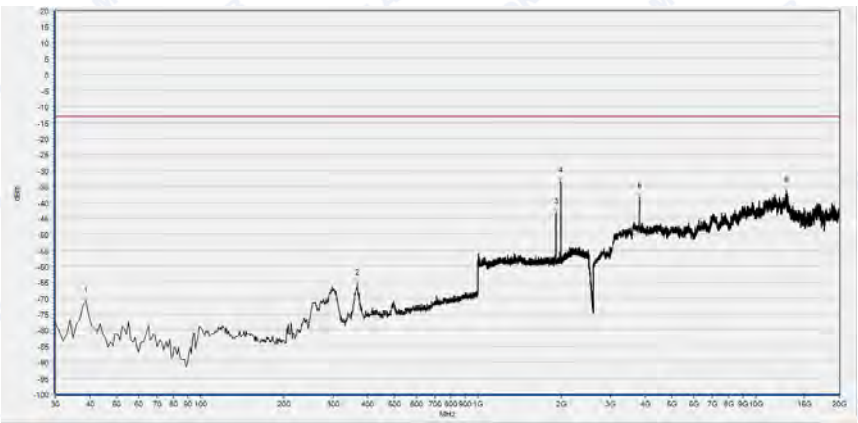


Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-74.34	-13.00	321.0	Horizontal	PASS
299.660	-65.63	-13.00	253.7	Horizontal	PASS
1878.431	-41.84	-13.00	143.0	Horizontal	N.A
1959.744	-33.30	-13.00	74.2	Horizontal	N.A
3761.266	-41.47	-13.00	236.9	Horizontal	PASS
12934.315	-36.68	-13.00	160.3	Horizontal	PASS

(Plot L3: HSPA+ 1900MHz Channel = 9400, Test Antenna Horizontal)

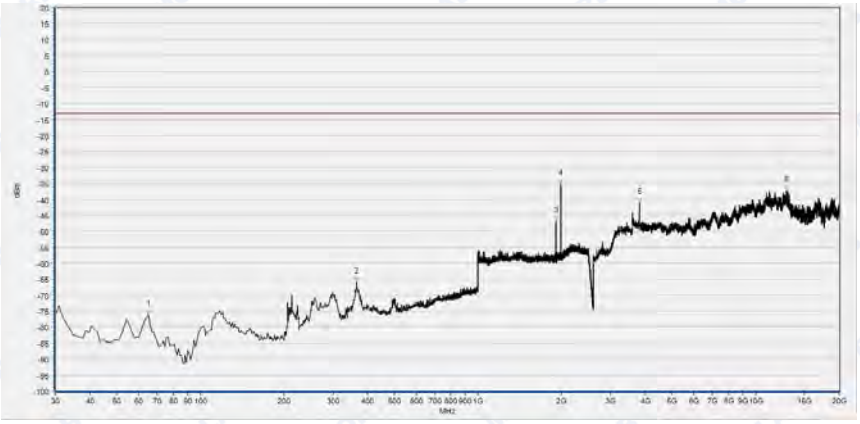
Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
33.880	-67.66	-13.00	192.3	Vertical	PASS
367.560	-64.15	-13.00	355.6	Vertical	PASS
1878.431	-44.32	-13.00	320.9	Vertical	N.A
1960.384	-37.15	-13.00	225.7	Vertical	N.A
3840.371	-44.99	-13.00	325.9	Vertical	PASS
12950.136	-36.73	-13.00	8.2	Vertical	PASS

(Plot L4: HSPA+ 1900MHz Channel = 9400, Test Antenna Vertical)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
38.730	-71.00	-13.00	247.7	Horizontal	PASS
367.560	-65.36	-13.00	46.2	Horizontal	PASS
1908.523	-43.27	-13.00	141.9	Horizontal	N.A
1987.275	-33.43	-13.00	297.8	Horizontal	N.A
3818.221	-38.35	-13.00	186.4	Horizontal	PASS
12890.016	-36.30	-13.00	71.8	Horizontal	PASS

(Plot L5: HSPA+ 1900MHz Channel = 9538, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Degree	Antenna	Verdict
64.920	-76.19	-13.00	359.4	Vertical	PASS
365.620	-65.82	-13.00	186.4	Vertical	PASS
1908.523	-46.80	-13.00	322.3	Vertical	N.A
1988.555	-35.25	-13.00	227.1	Vertical	N.A
3815.057	-41.05	-13.00	156.3	Vertical	PASS
12905.837	-37.29	-13.00	354.3	Vertical	PASS

(Plot L6: HSPA+ 1900MHz Channel = 9538, Test Antenna Vertical)

***** END OF REPORT *****