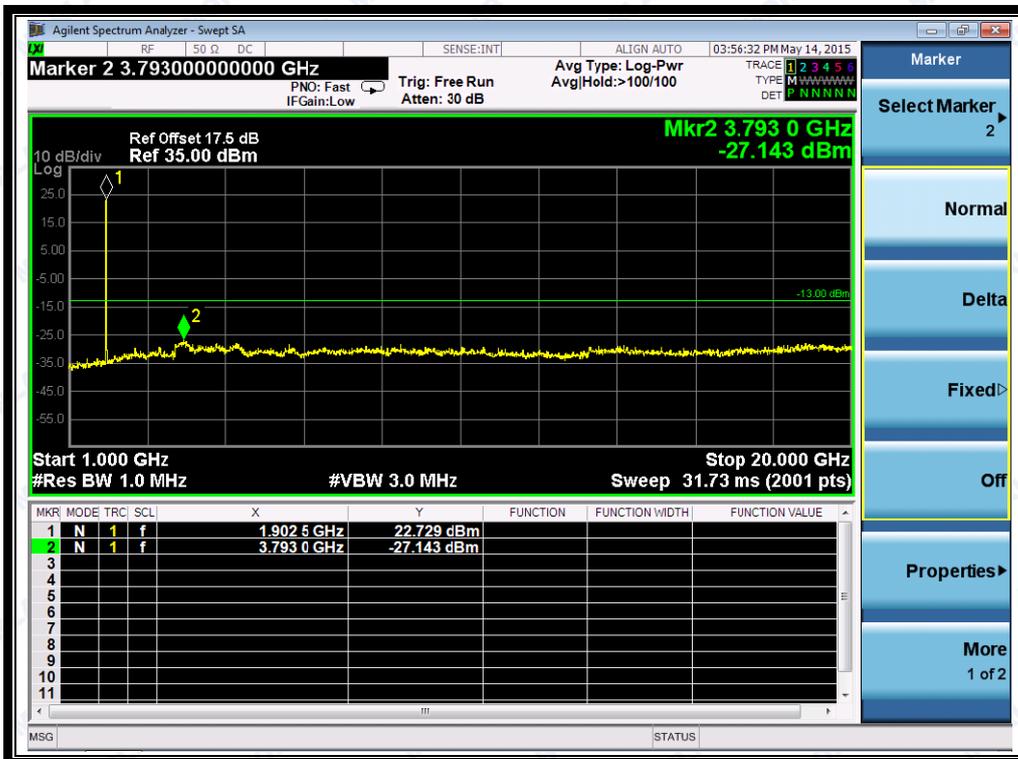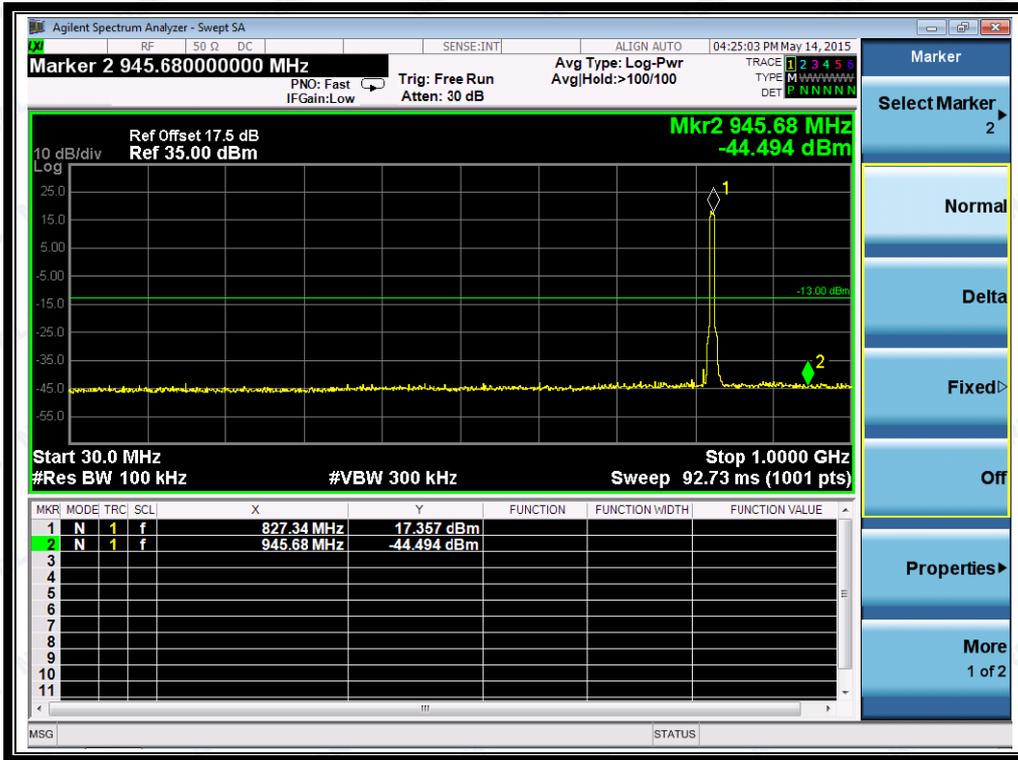(Plot J3: HSDPA1900MHz Channel = 9538, 30MHz to 1GHz)
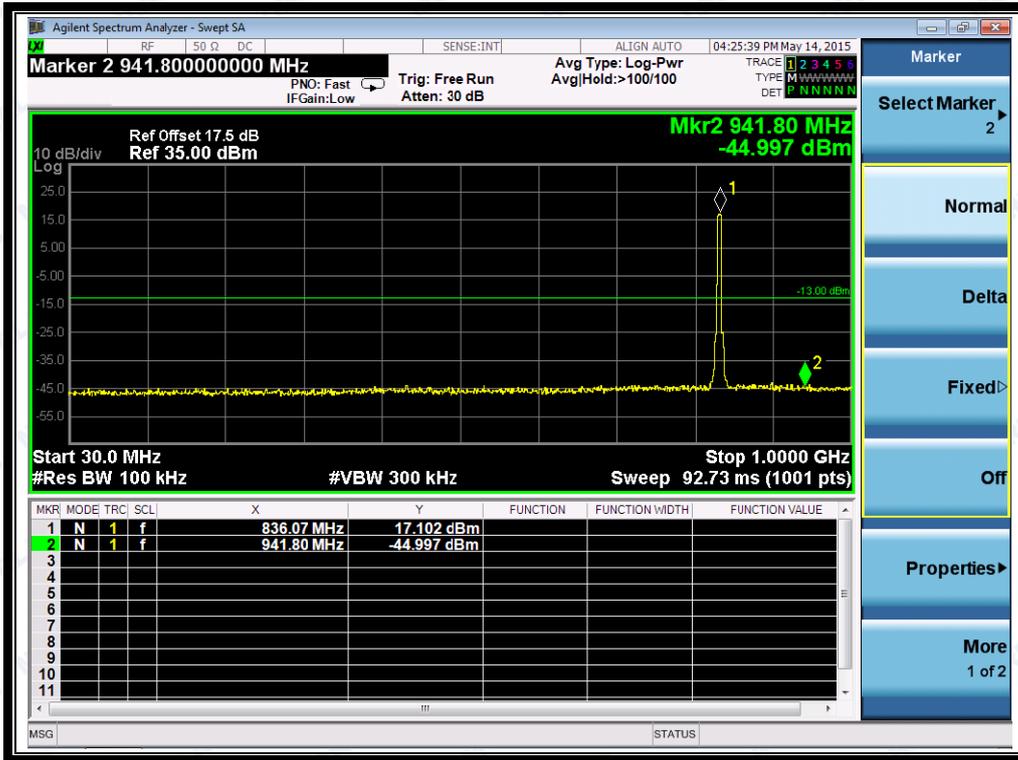

(Plot J3.1: HSDPA1900MHz Channel = 9538 1GHz to 20GHz)

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

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

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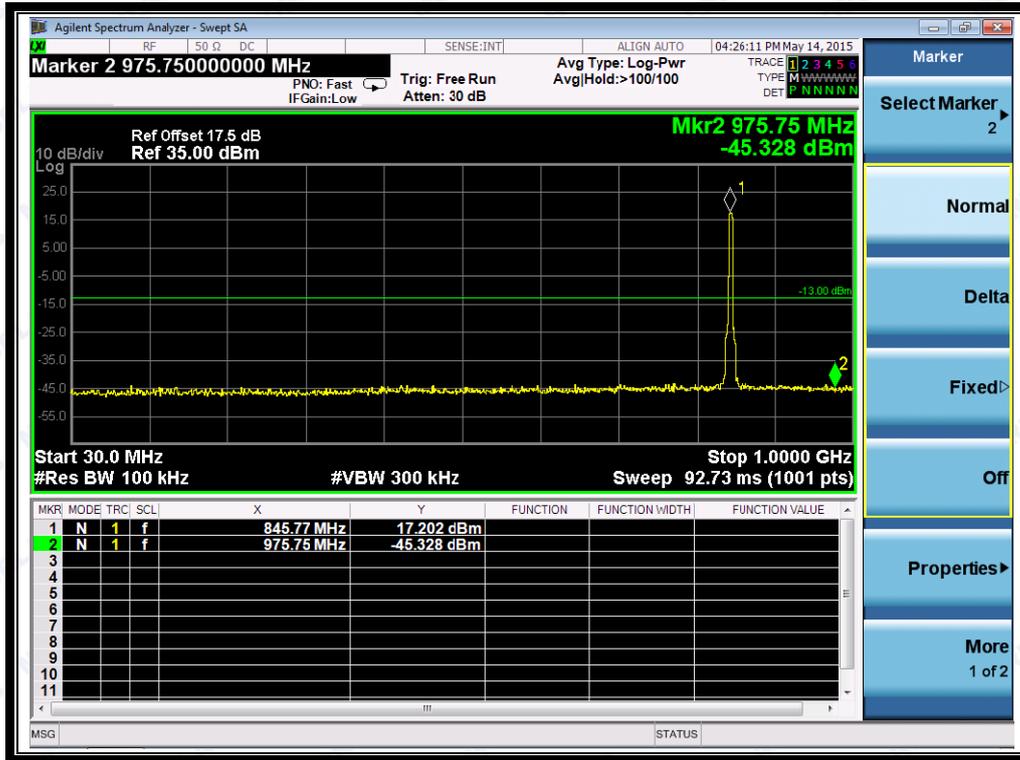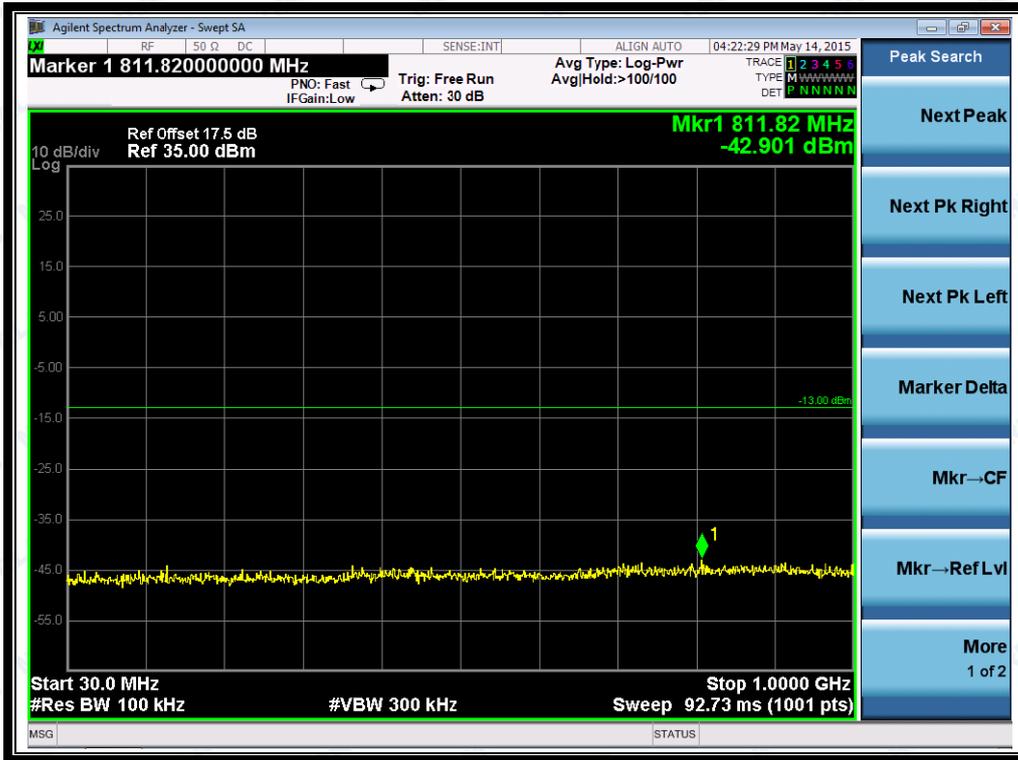(Plot K2:　HSUPA 850MHz Channel = 4175, 30MHz to 1GHz)

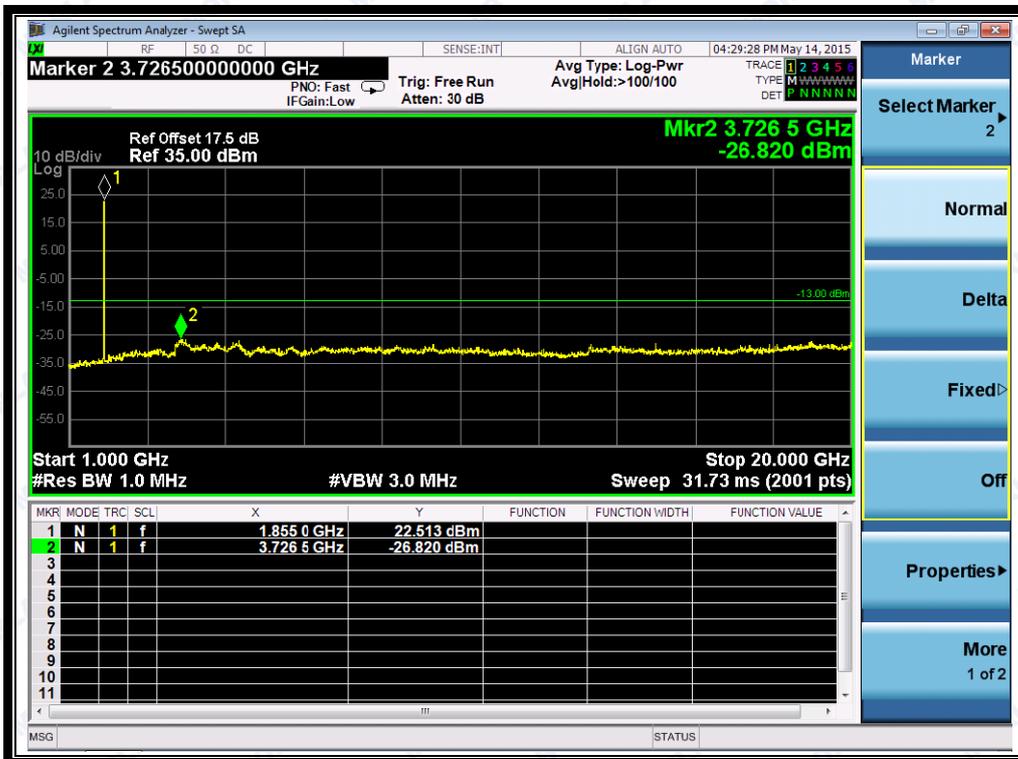(Plot K2.1: HSUPA 850MHz Channel = 4175, 1GHz to 9GHz)

(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)

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(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)

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

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

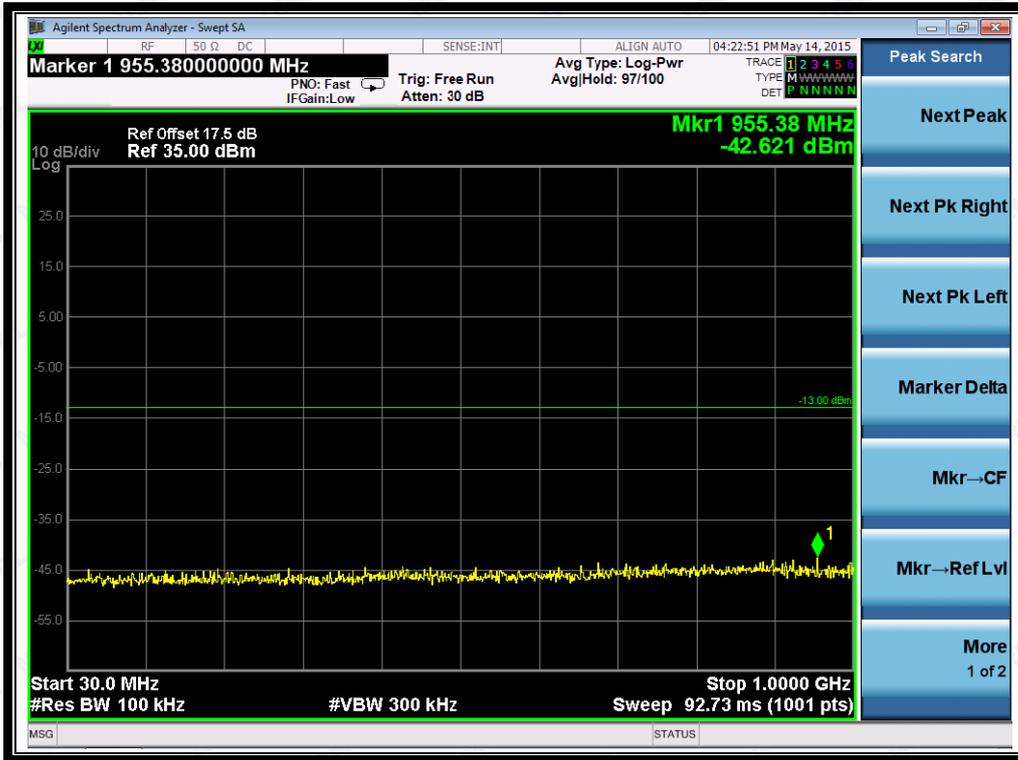(Plot M3: HSPA+ 850MHz Channel = 4233, 30MHz to 1GHz)

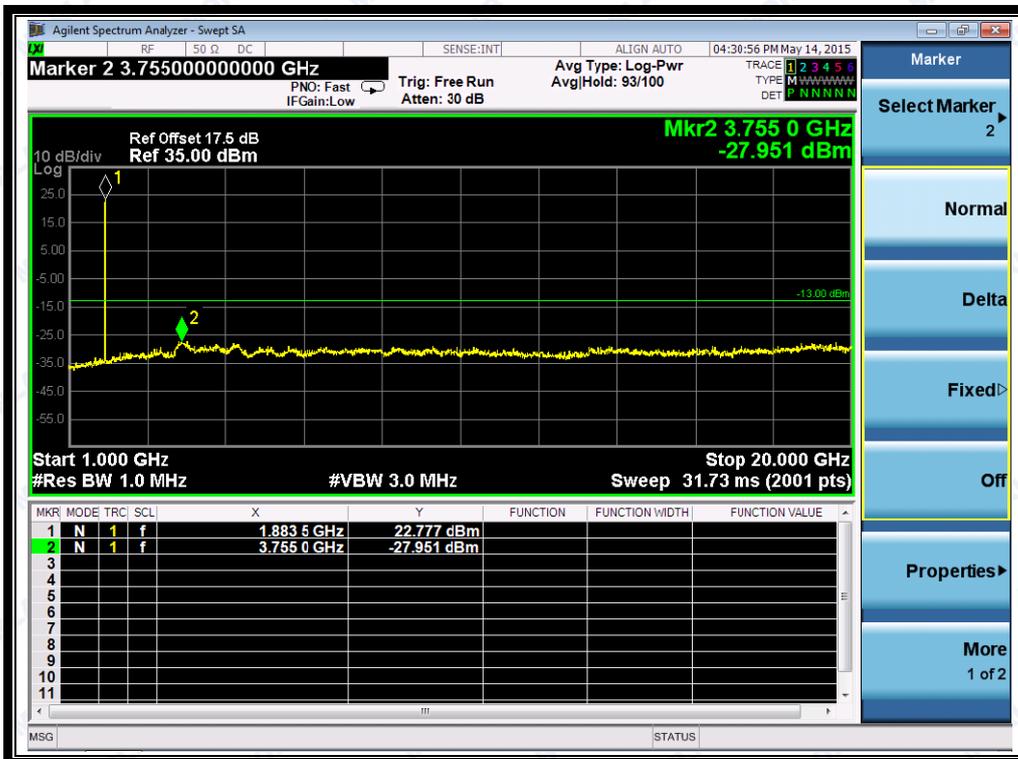(Plot M3.1: HSPA+ 850MHz Channel = 4233, 1GHz to 9GHz)
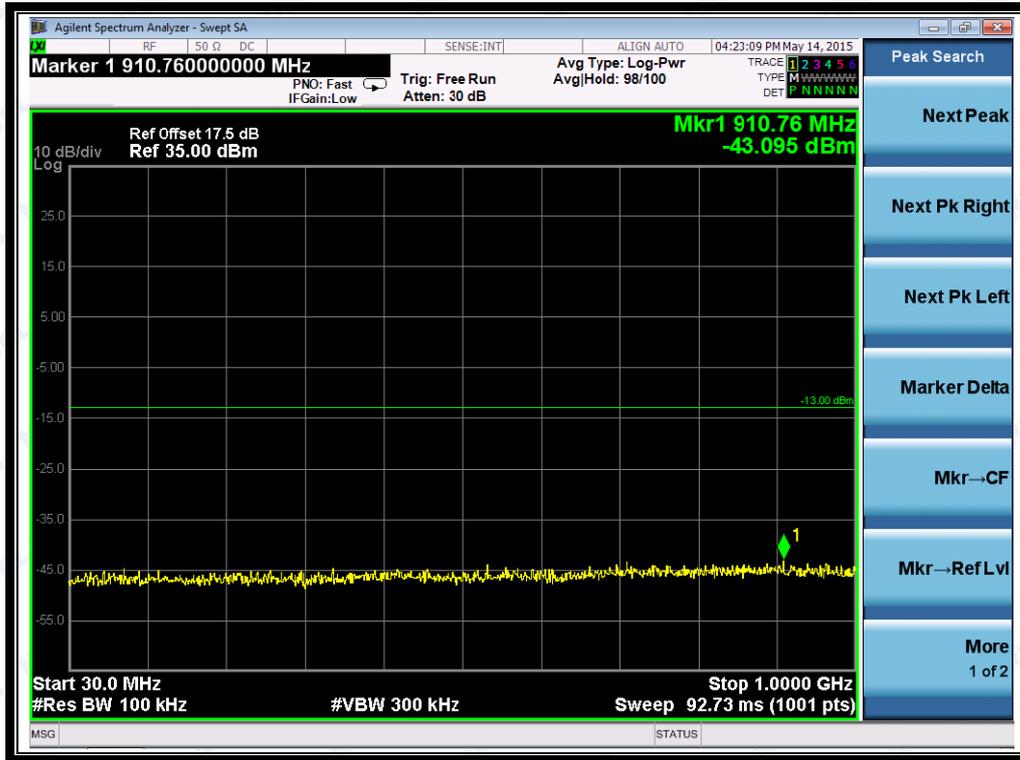
(Plot N1: HSPA+ 1900MHz Channel = 9262, 30MHz to 1GHz)
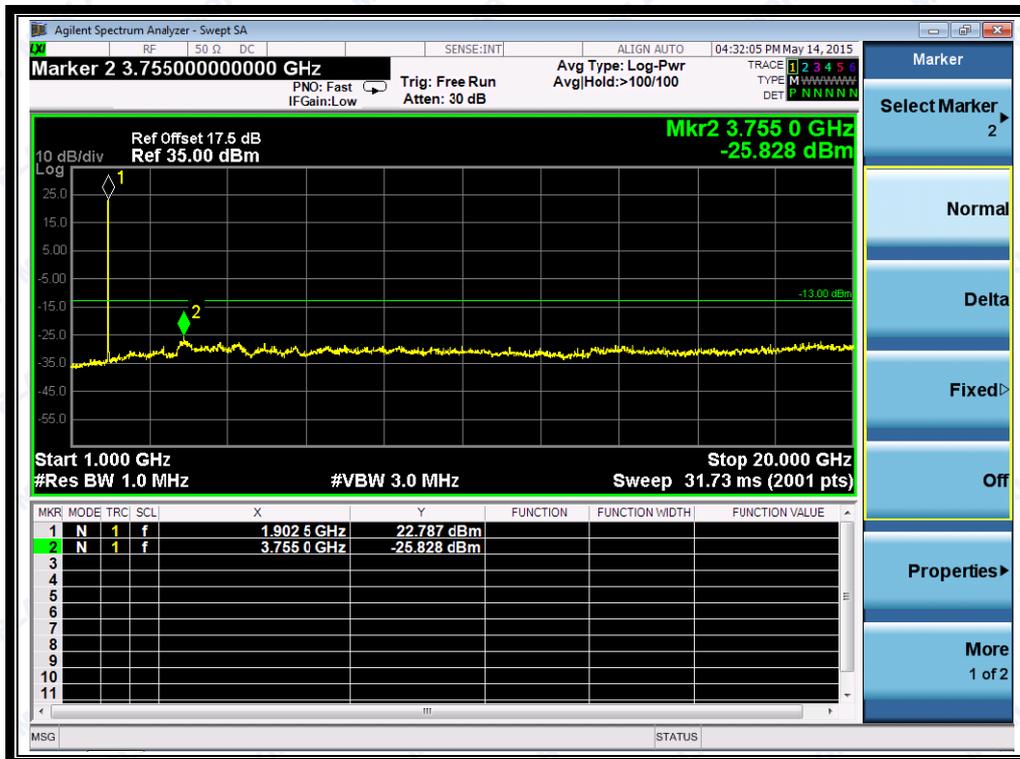

(Plot N1.1: HSPA+ 1900MHz Channel = 9262, 1GHz to 20GHz)

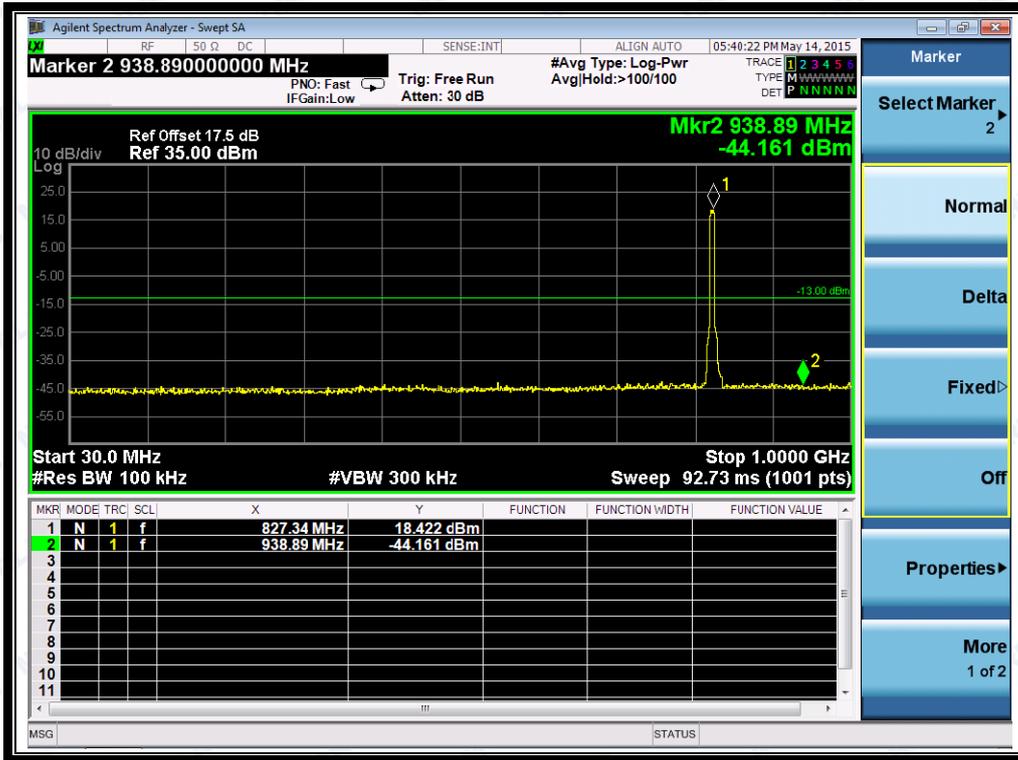(Plot N2:   HSPA+ 1900MHz Channel = 9400, 30MHz to 1GHz)

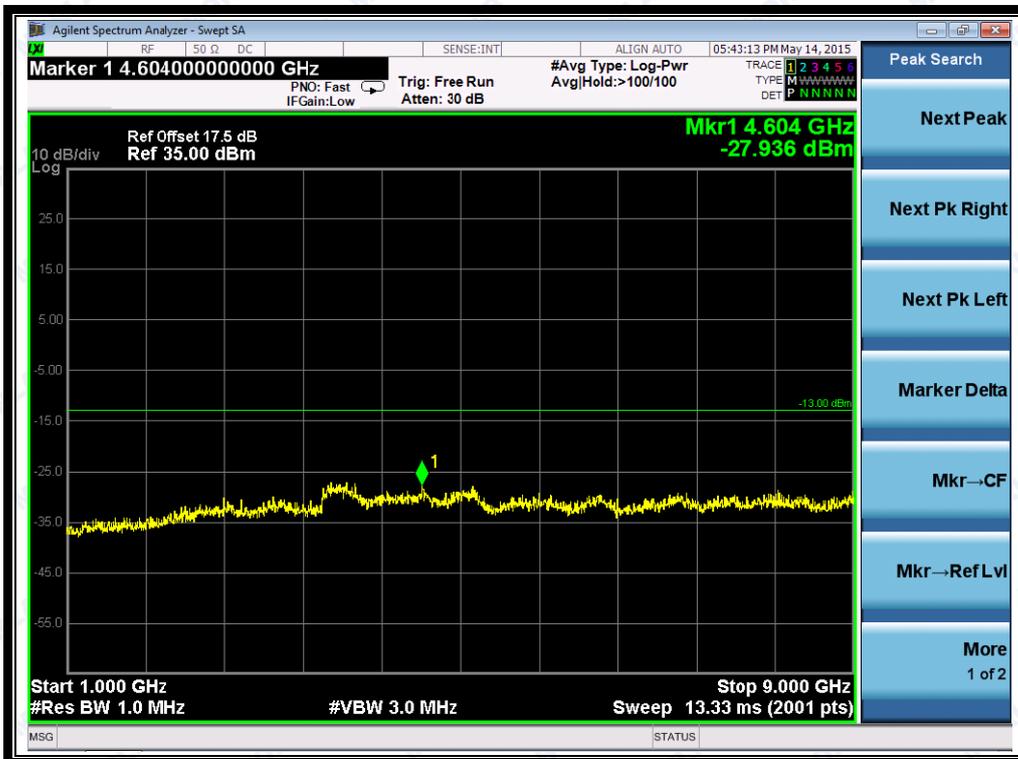(Plot N2.1: HSPA+ 1900MHz Channel = 9400, 1GHz to 20GHz)

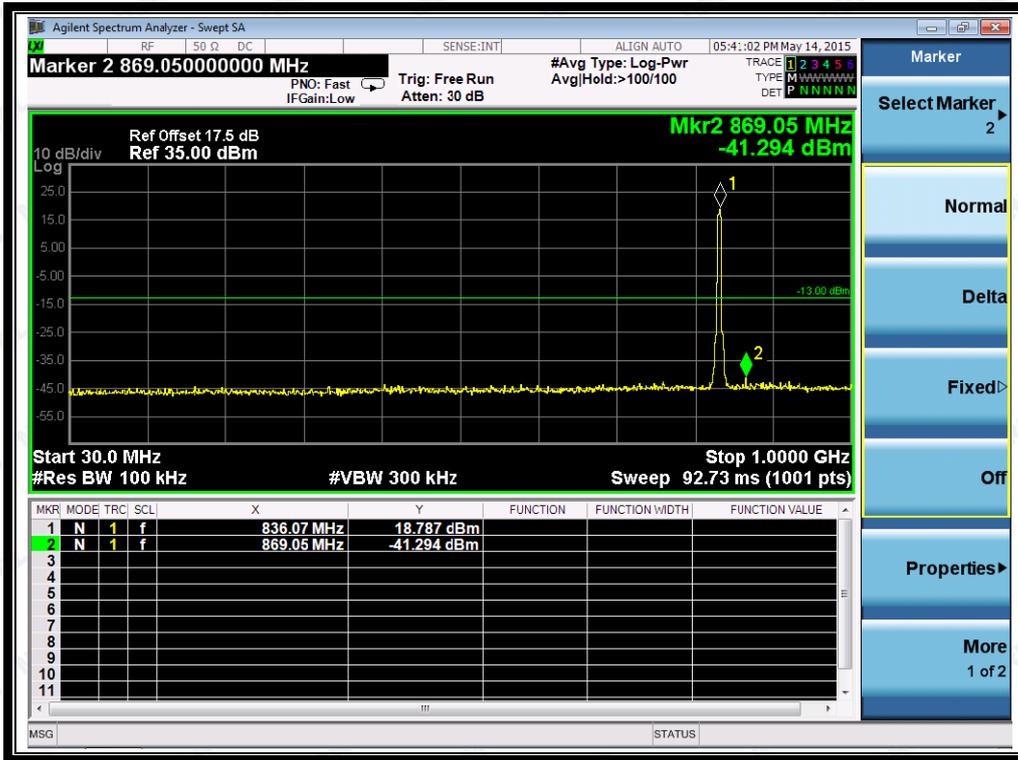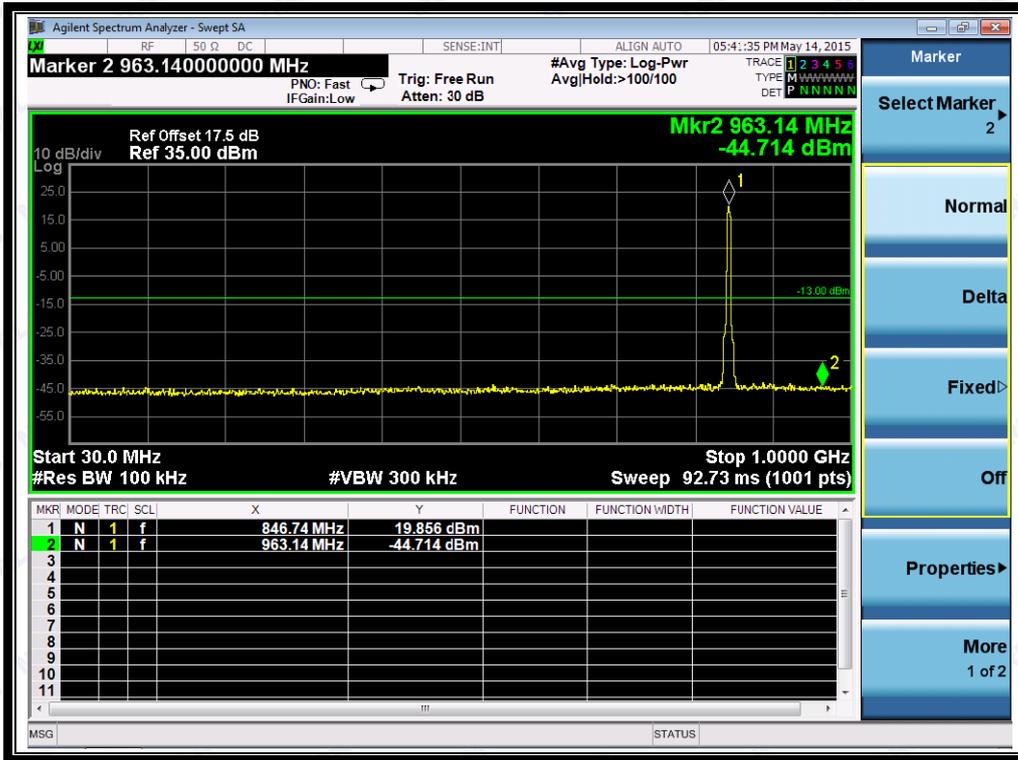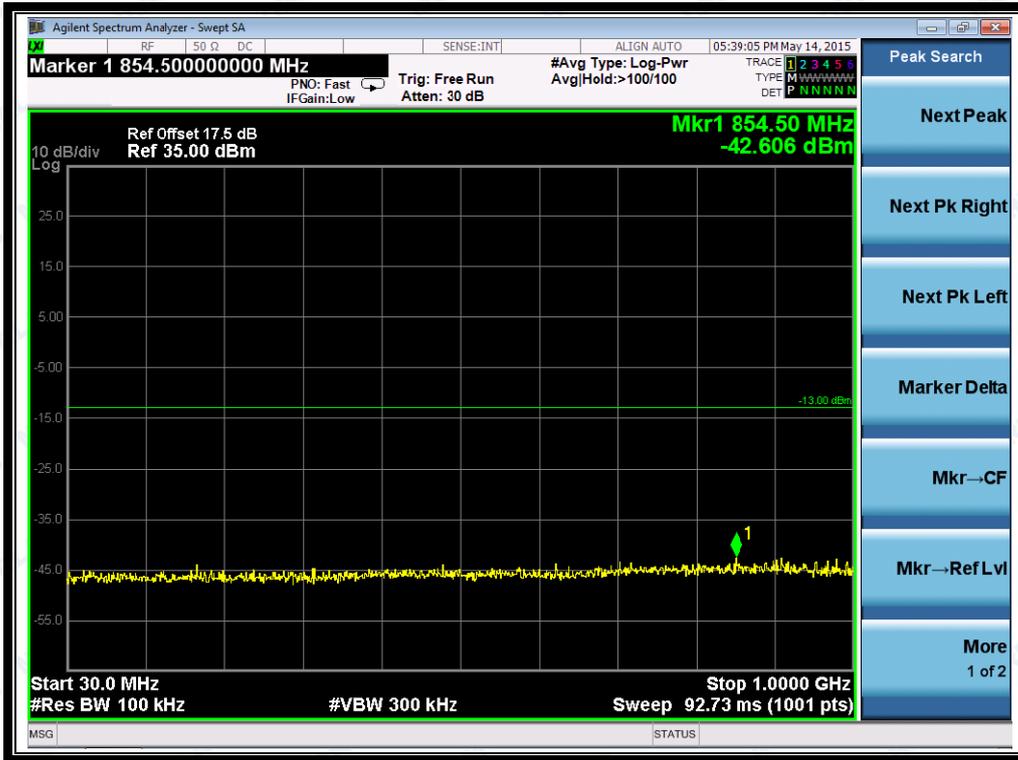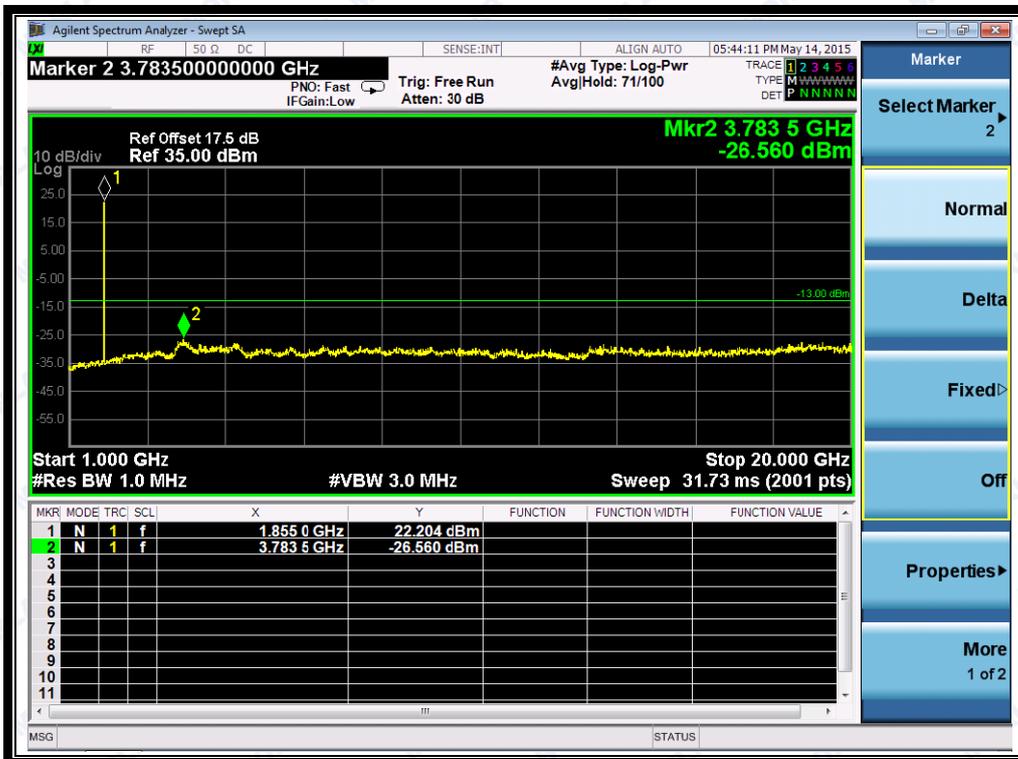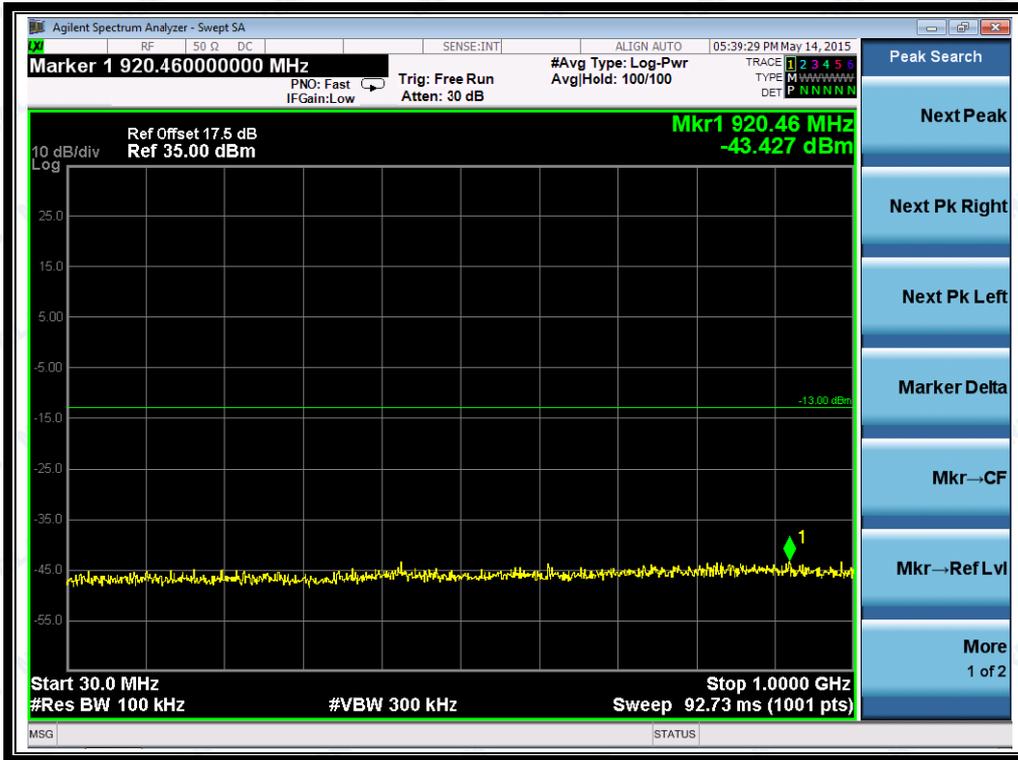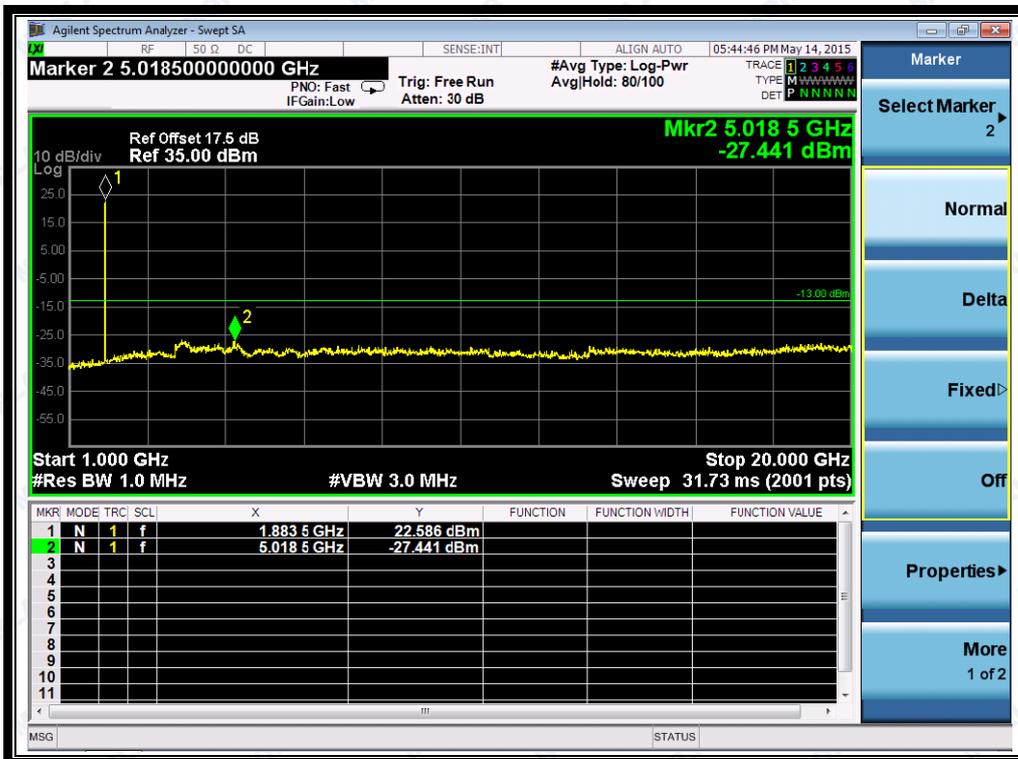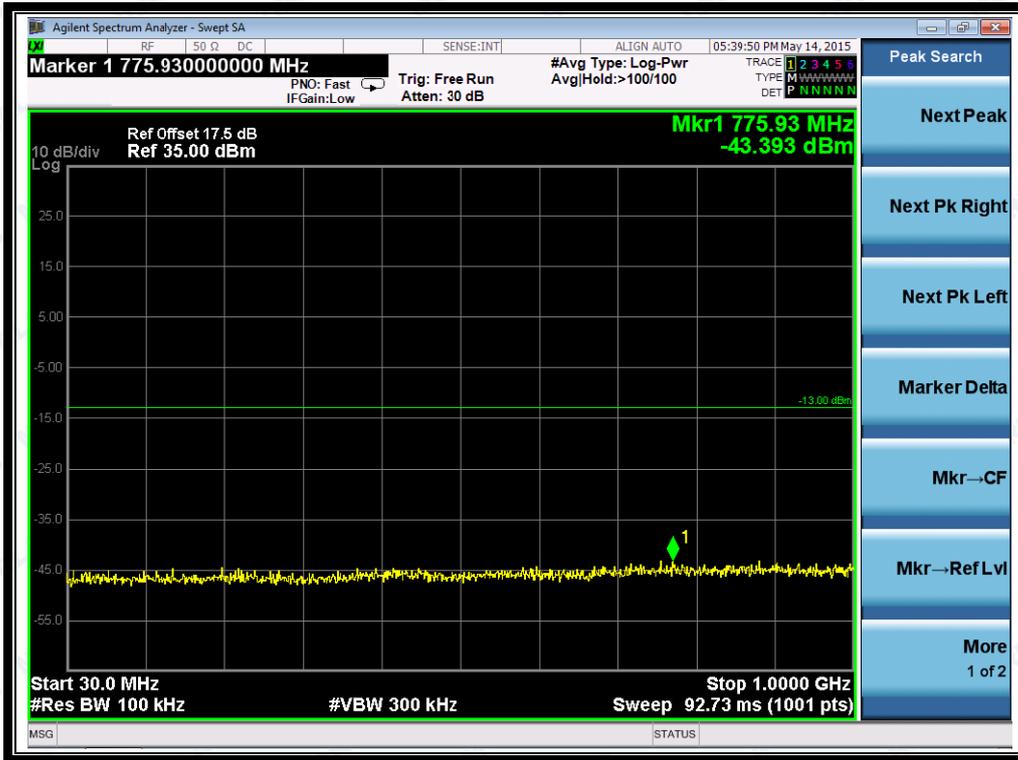(Plot N3: HSPA+ 1900MHz Channel = 9538, 30MHz to 1GHz)
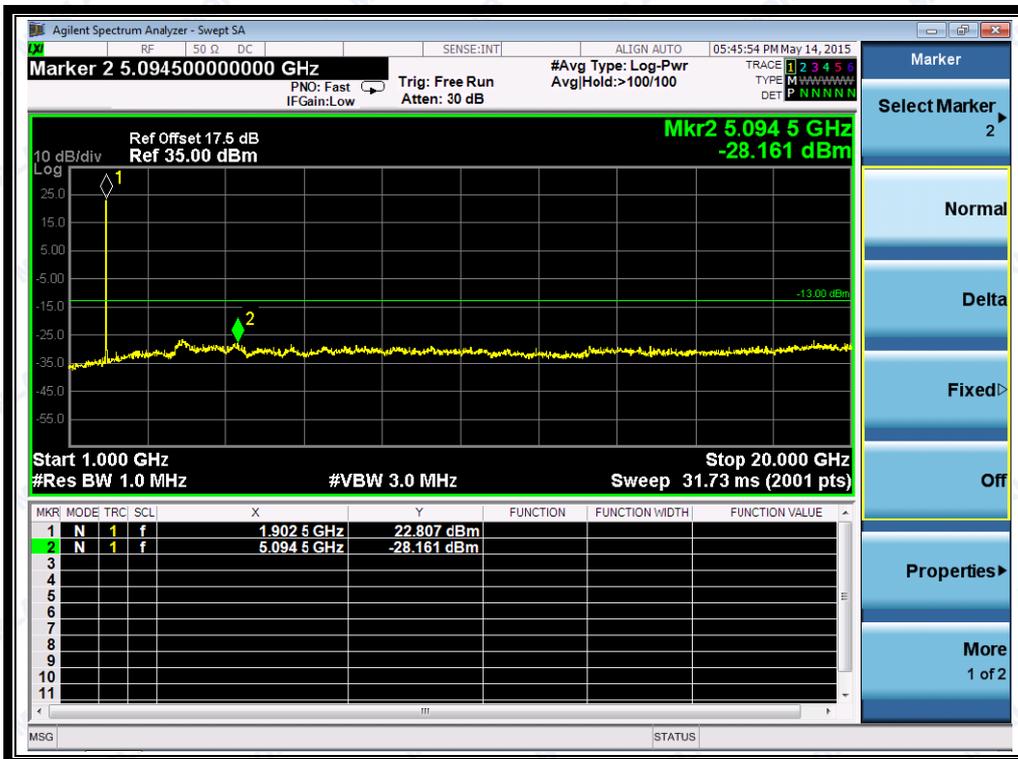
(Plot N3.1: HSPA+ 1900MHz Channel = 9538 1GHz to 20GHz)

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	-18.99	Plat A1	-13	PASS
	251	848.8	-18.90	Plot A2		PASS
GSM 1900MHz	512	1850.2	-24.55	Plat B1	-13	PASS
	810	1909.8	-25.45	Plot B2		PASS
EGPRS 850MHz	128	824.2	-26.48	Plat C1	-13	PASS
	251	848.8	-27.52	Plot C2		PASS
EGPRS 1900MHz	512	1850.2	-30.18	Plat D1	-13	PASS
	810	1909.8	-27.77	Plot D2		PASS
WCDMA 850MHz	4132	826.4	-30.19	Plat E1	-13	PASS
	4233	846.6	-30.19	Plot E2		PASS
WCDMA 1900MHz	9262	1852.4	-32.20	Plat F1	-13	PASS
	9538	1907.6	-32.45	Plot F2		PASS
HSDPA 850MHz	4132	826.4	-30.82	Plat G1	-13	PASS
	4233	846.6	-30.15	Plot G2		PASS
HSDPA 1900MHz	9262	1852.4	-31.71	Plat H1	-13	PASS
	9538	1907.6	-33.05	Plot H2		PASS
HSUPA 850MHz	4132	826.4	-30.82	Plat I1	-13	PASS
	4233	846.6	-30.99	Plot I2		PASS
HSUPA 1900MHz	9262	1852.4	-31.53	Plat J1	-13	PASS
	9538	1907.6	-34.25	Plot J2		PASS
HSPA+ 850MHz	4132	826.4	-31.21	Plat K1	-13	PASS
	4233	846.6	-30.53	Plot K2		PASS
HSPA + 1900MHz	9262	1852.4	-31.64	Plat L1	-13	PASS
	9538	1907.6	-34.54	Plot L2		PASS

Test Plots:
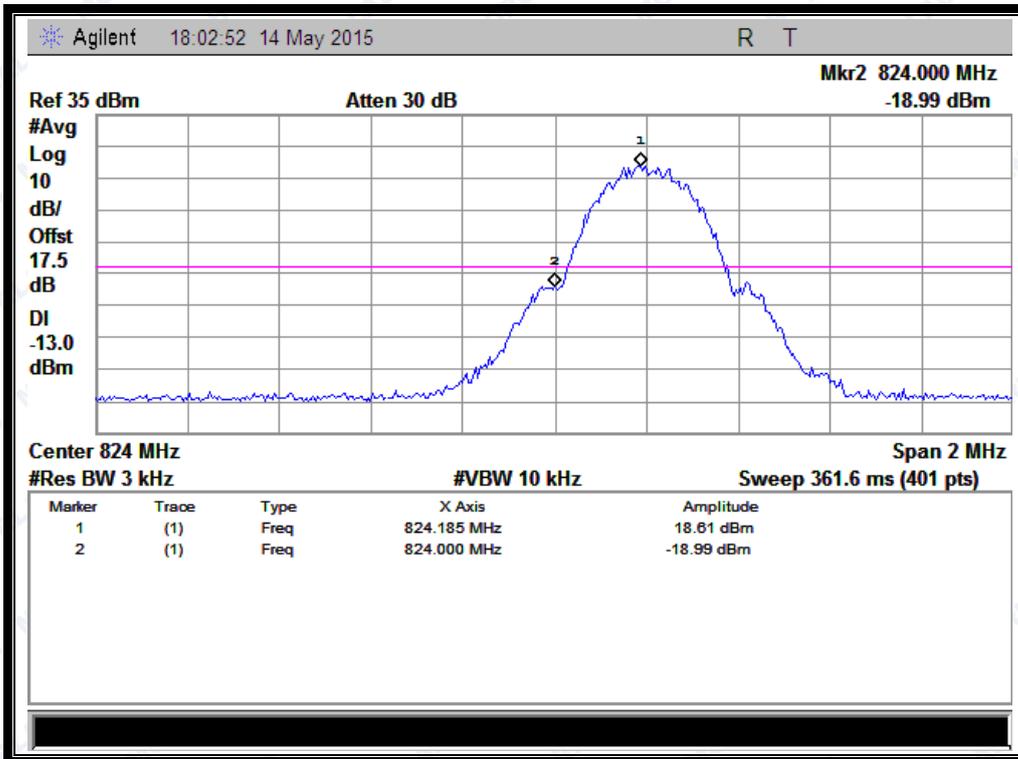
(Plot A1:   GSM 850 Channel = 128)
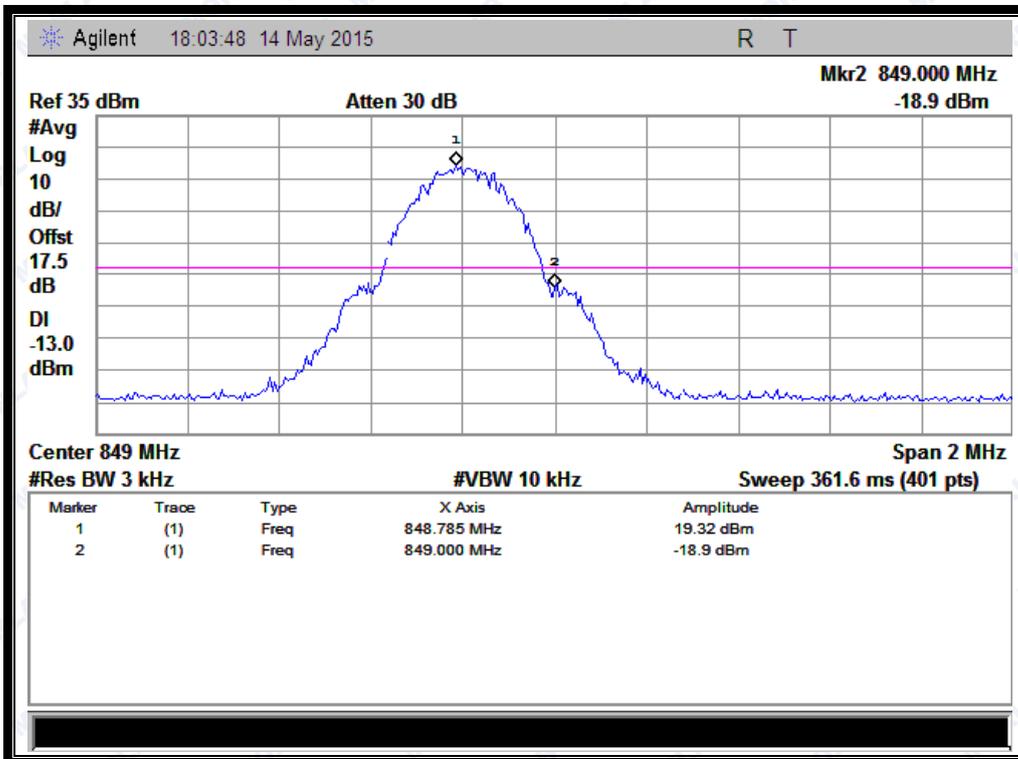
(Plot A2:   GSM 850 Channel = 251)

Agilent   18:06:15 14 May 2015   R   T

Mkr2 1.850000 GHz
-24.55 dBm

Ref 35 dBm   Atten 30 dB

#Avg
Log
10
dB/
Offst
17.5
dB

DI
-13.0
dBm

Center 1.85 GHz   Span 2 MHz
#Res BW 3 kHz   #VBW 10 kHz   Sweep 361.6 ms (401 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.850200 GHz	16.21 dBm
2	(1)	Freq	1.850000 GHz	-24.55 dBm
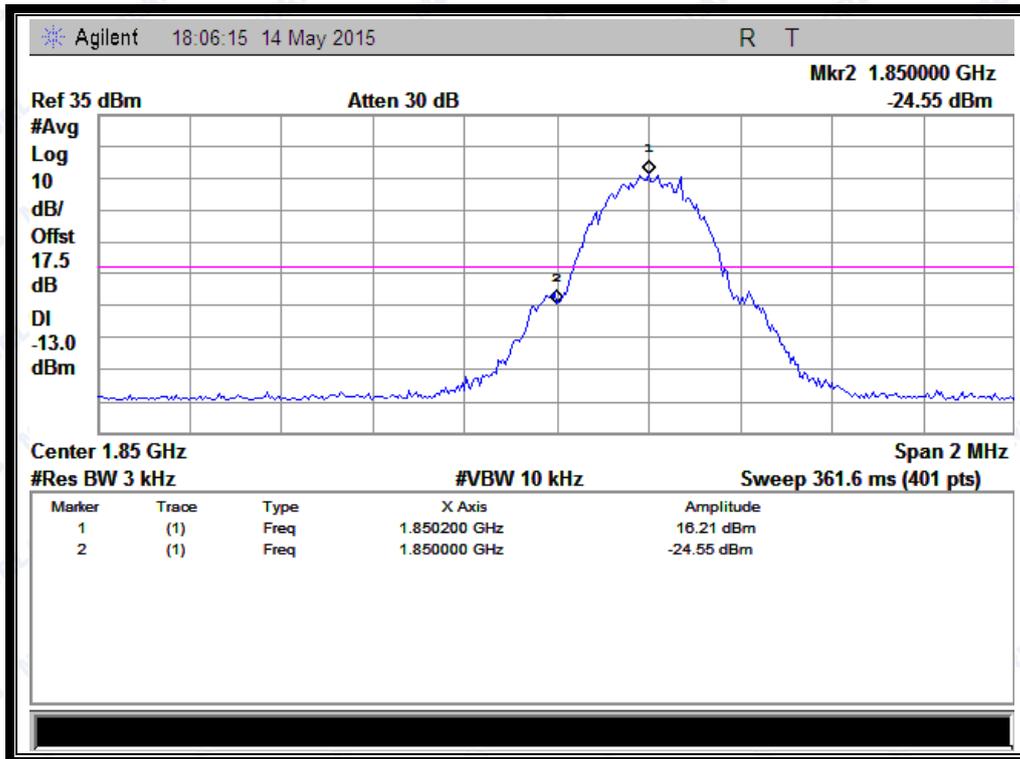
(Plot B1:   GSM 1900 Channel = 512)

Agilent   18:05:10 14 May 2015   R   T

Mkr2 1.910000 GHz
-25.45 dBm

Ref 35 dBm   Atten 30 dB

#Avg
Log
10
dB/
Offst
17.5
dB

DI
-13.0
dBm

Center 1.91 GHz   Span 2 MHz
#Res BW 3 kHz   #VBW 10 kHz   Sweep 361.6 ms (401 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.909785 GHz	16.67 dBm
2	(1)	Freq	1.910000 GHz	-25.45 dBm
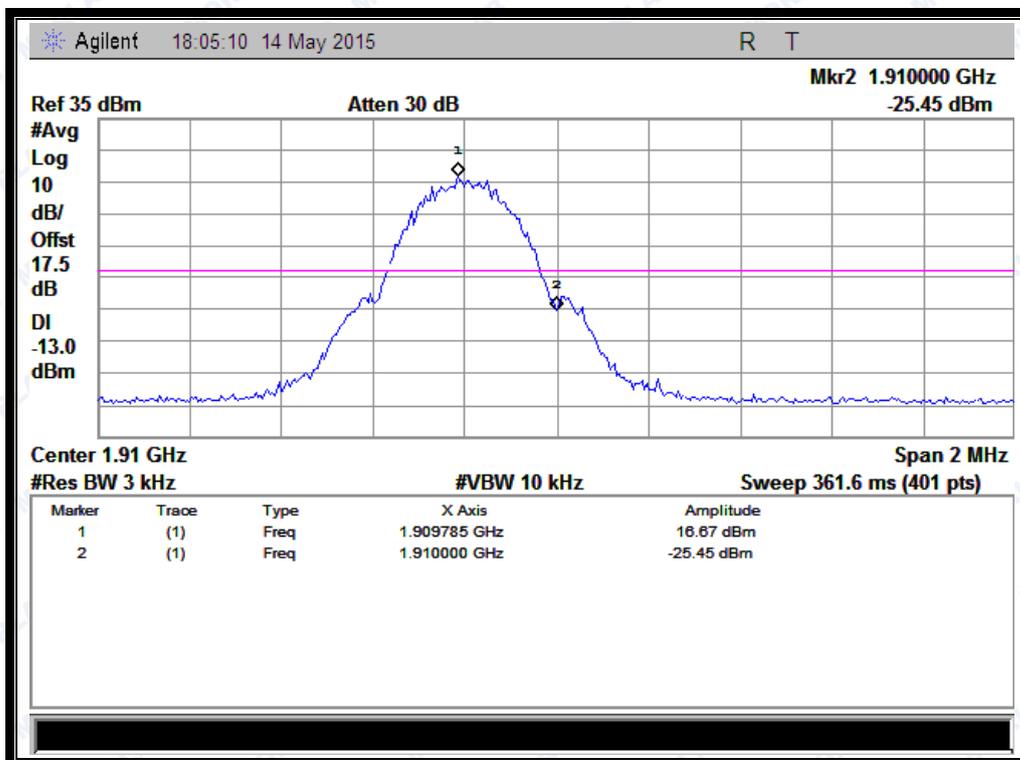
(Plot B2:   GSM 1900 Channel = 810)
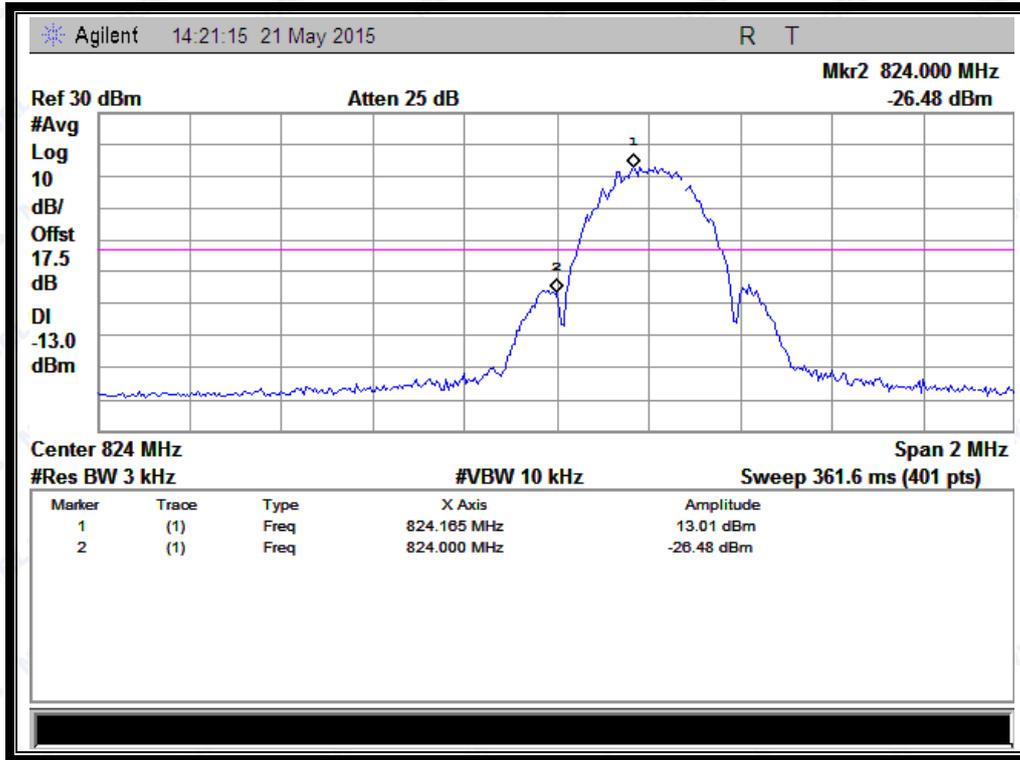
(Plot C1:   EGPRS 850 Channel = 128)
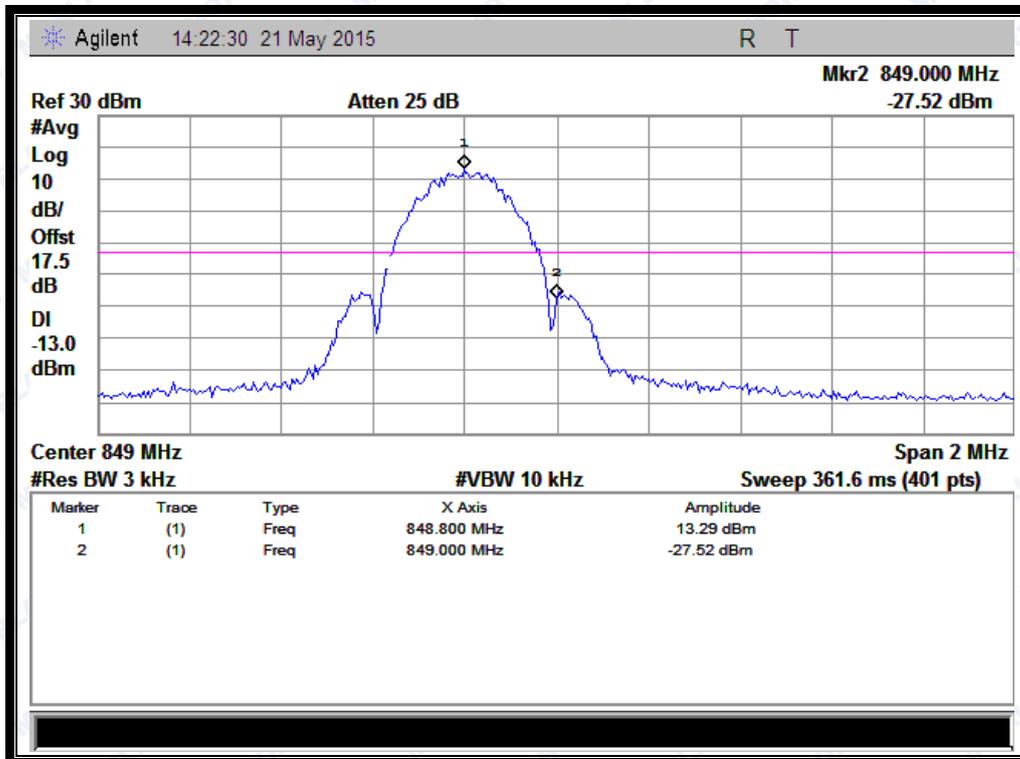
(Plot C2:   EGPRS 850 Channel = 251)
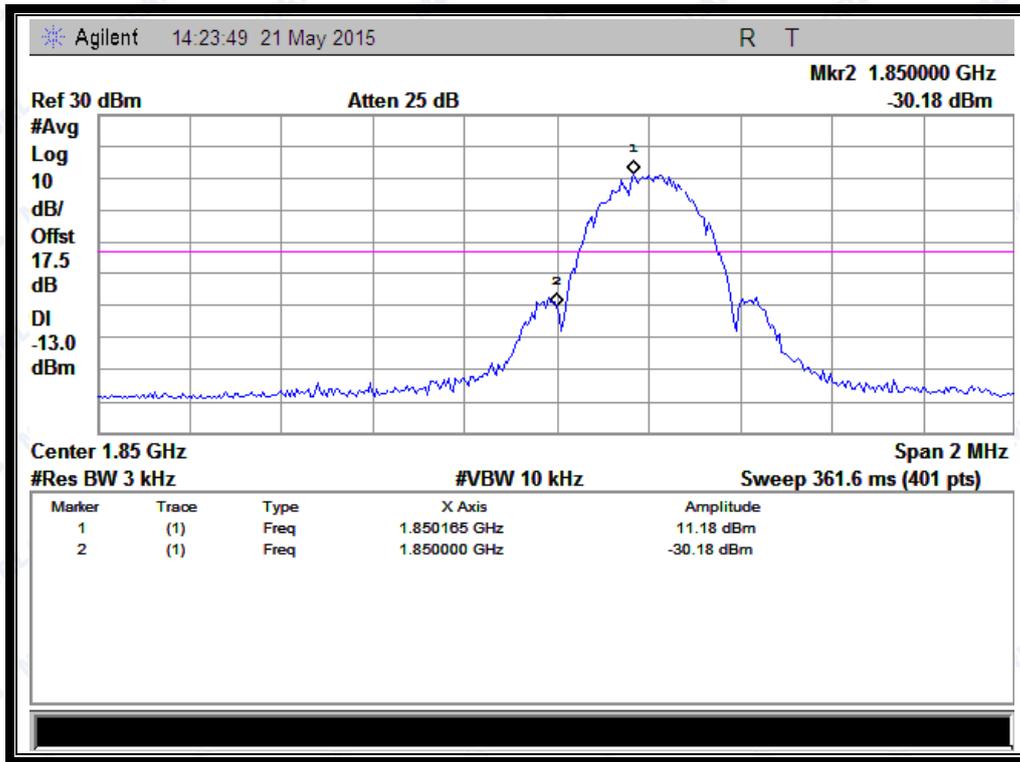
(Plot D1: EGPRS 1900 Channel = 512)
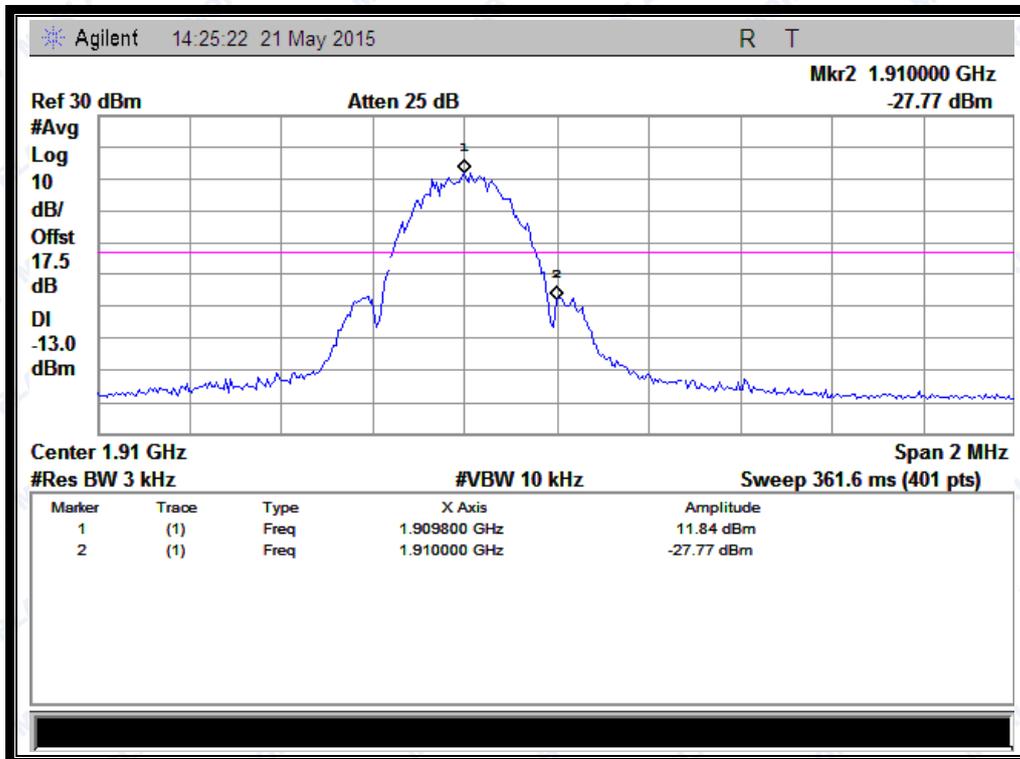
(Plot D2: EGPRS 1900 Channel = 810)
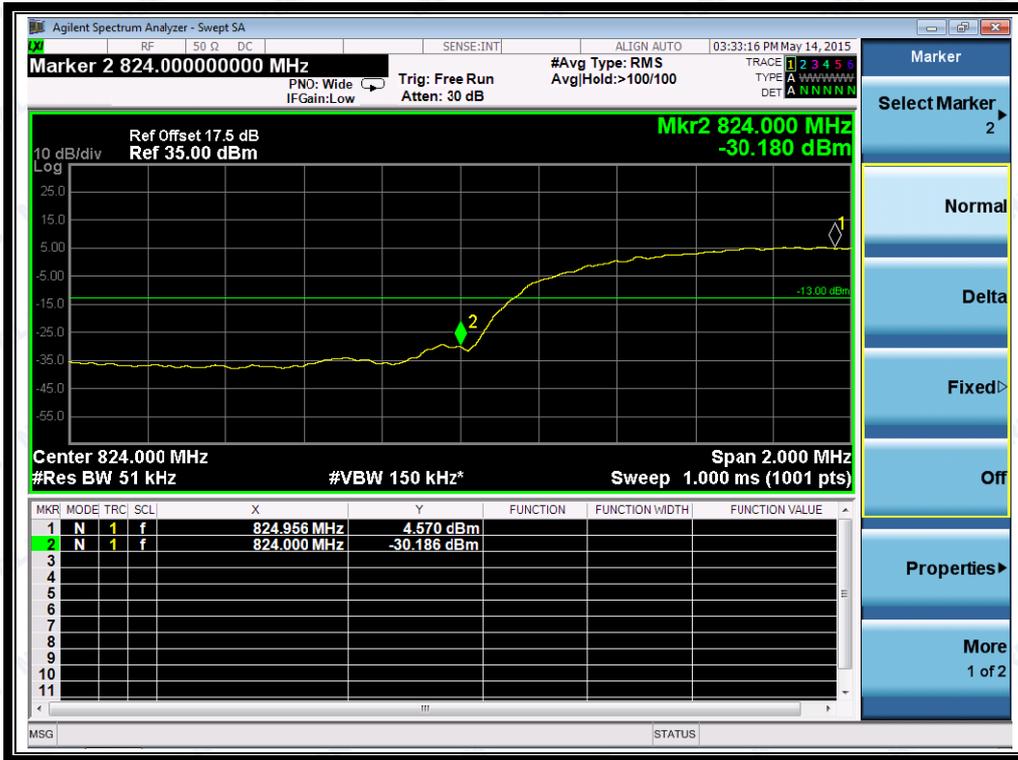
(Plot E1:   WCDMA 850 Channel = 4132)

(Plot E2:   WCDMA 850 Channel = 4233)
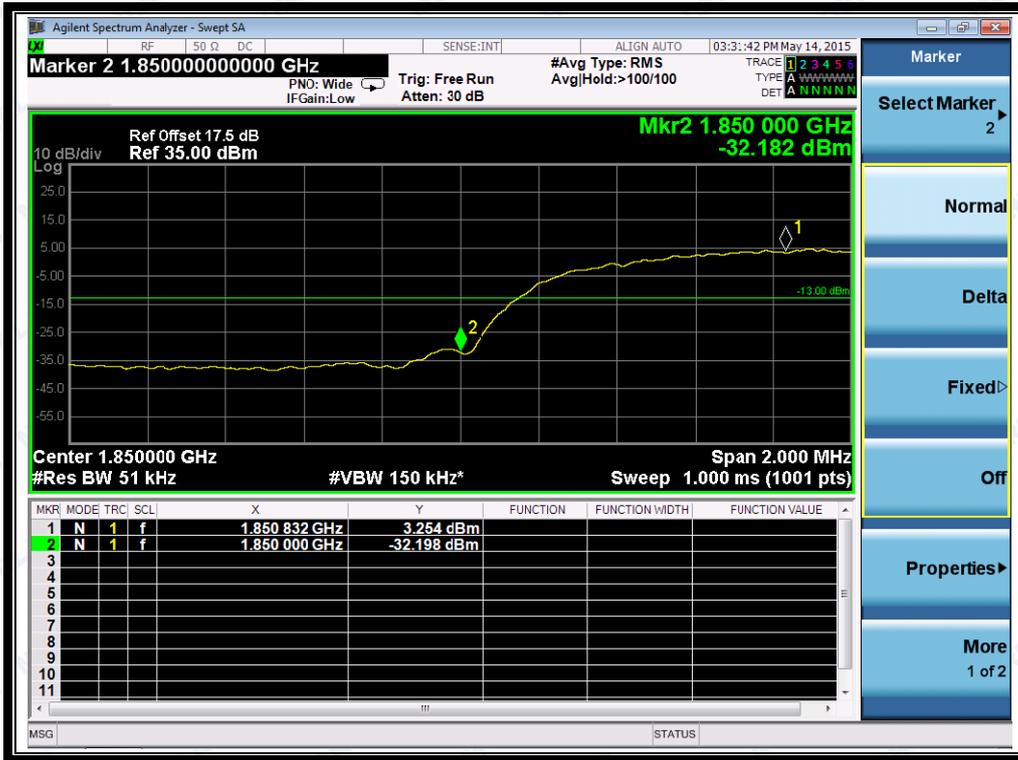
(Plot F1:   WCDMA 1900 Channel = 9262)

(Plot F2:   WCDMA 1900 Channel = 9538)
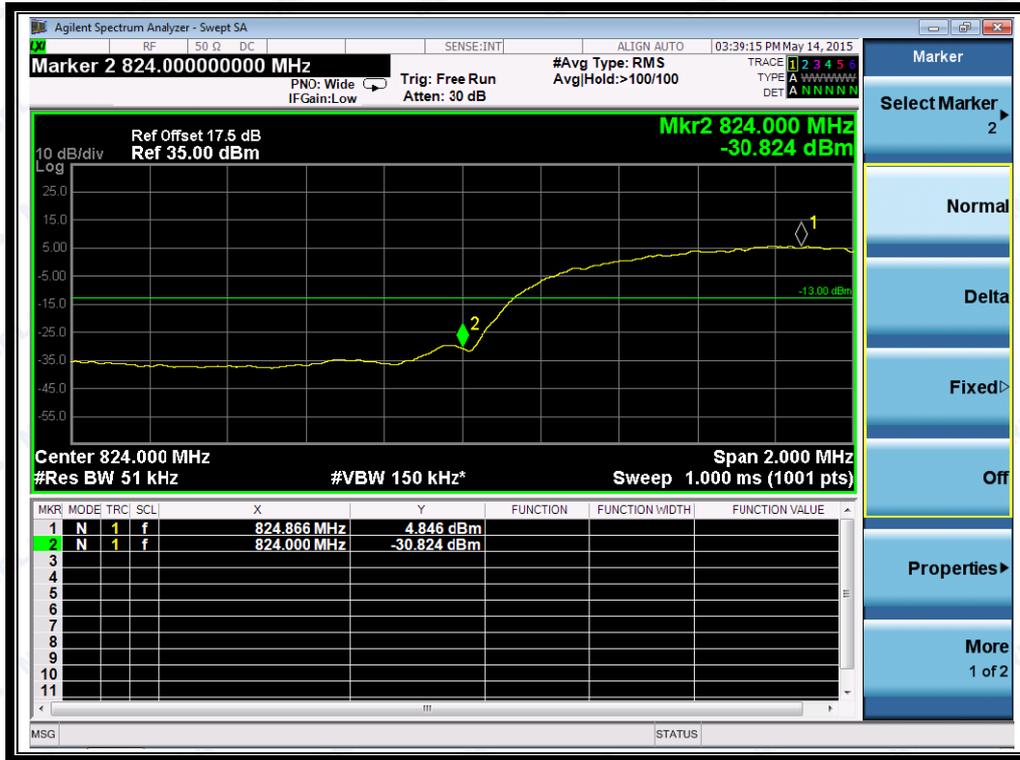
(Plot G1:   HSDPA 850 Channel = 4132)
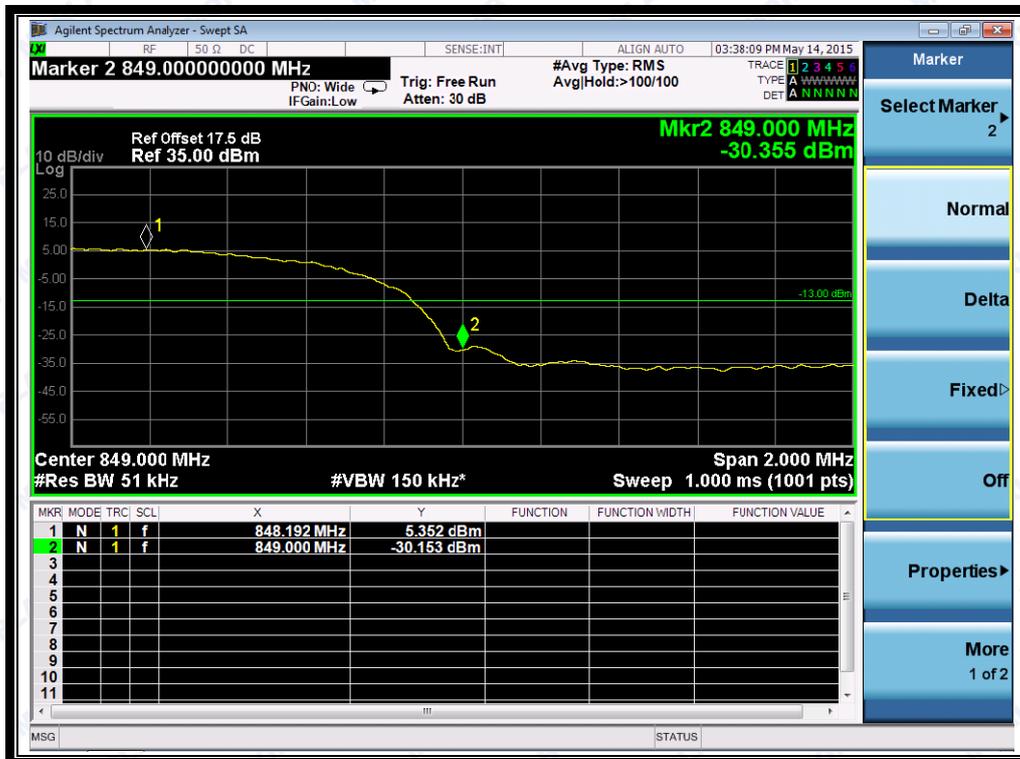
(Plot G2:   HSDPA 850 Channel = 4233)
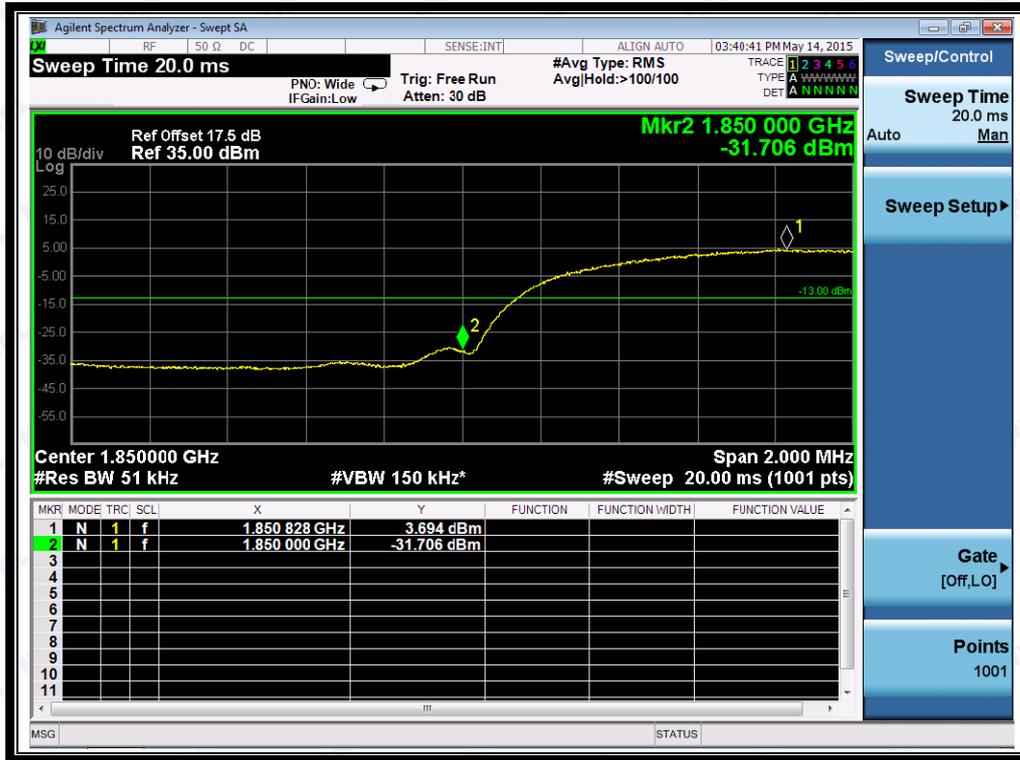
(Plot H1:   HSDPA 1900 Channel = 9262)

(Plot H2:   HSDPA 1900 Channel = 9538)
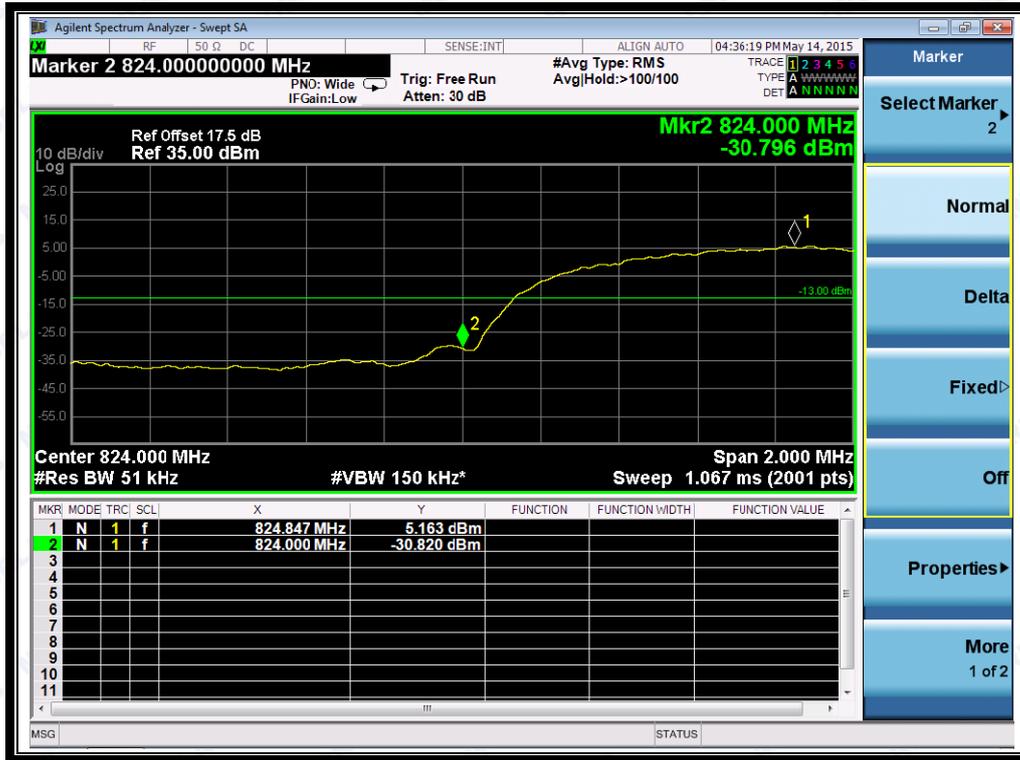
(Plot I1:   HSUPA 850 Channel = 4132)

(Plot I2:   HSUPA 850 Channel = 4233)
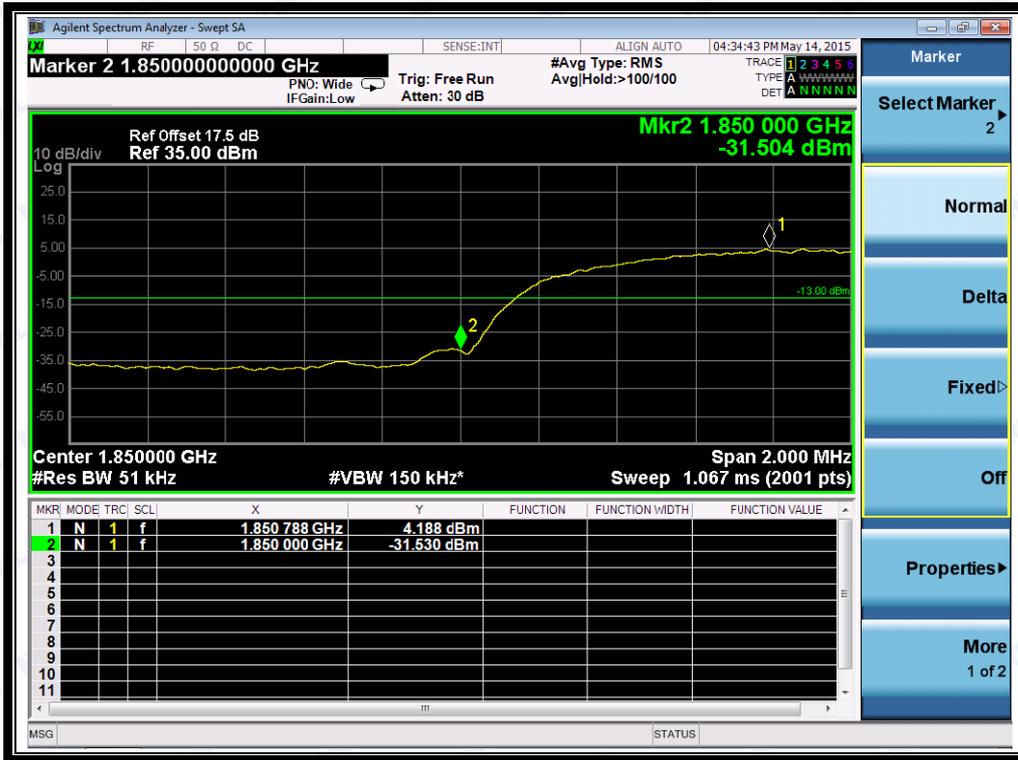
(Plot J1: HSUPA 1900 Channel = 9262)

(Plot J2: HSUPA 1900 Channel = 9538)
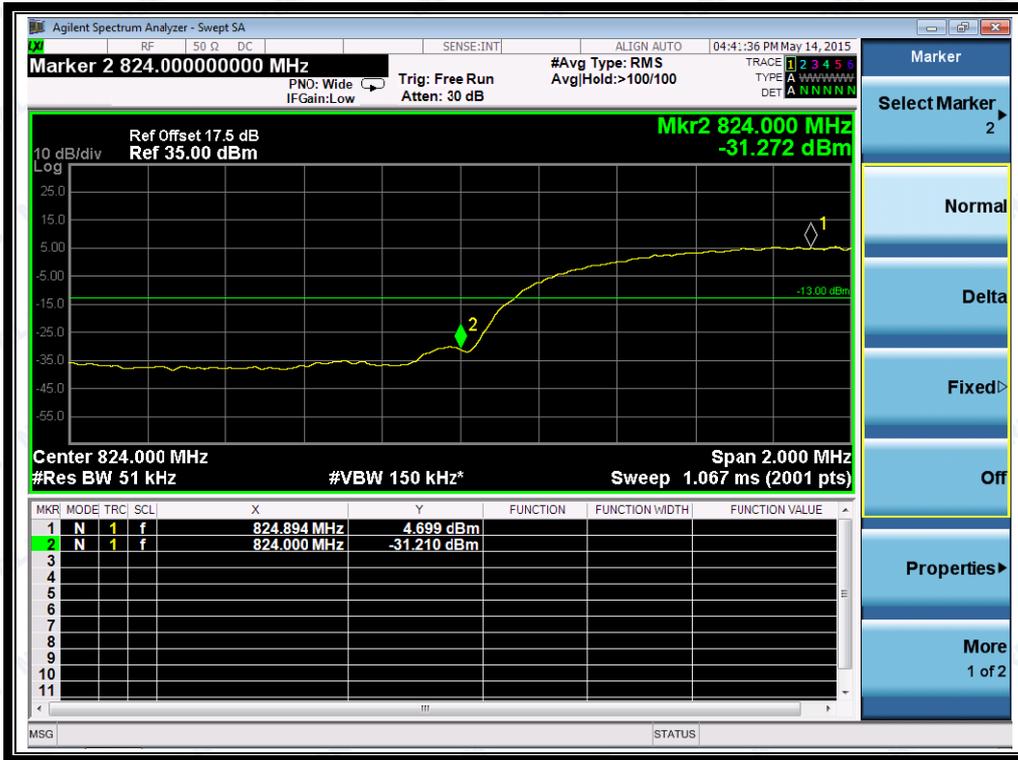
(Plot K1:   HSPA+ 850 Channel = 4132)

(Plot K2:   HSPA+ 850 Channel = 4233)
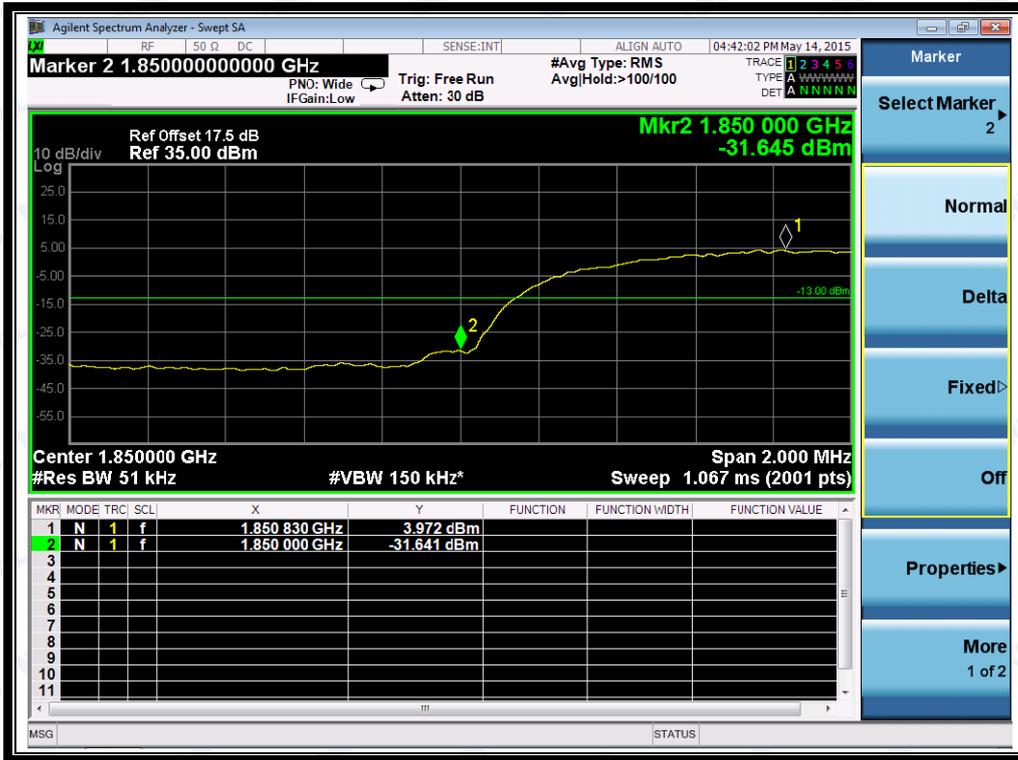
(Plot L1:   HSPA+ 1900 Channel = 9262)

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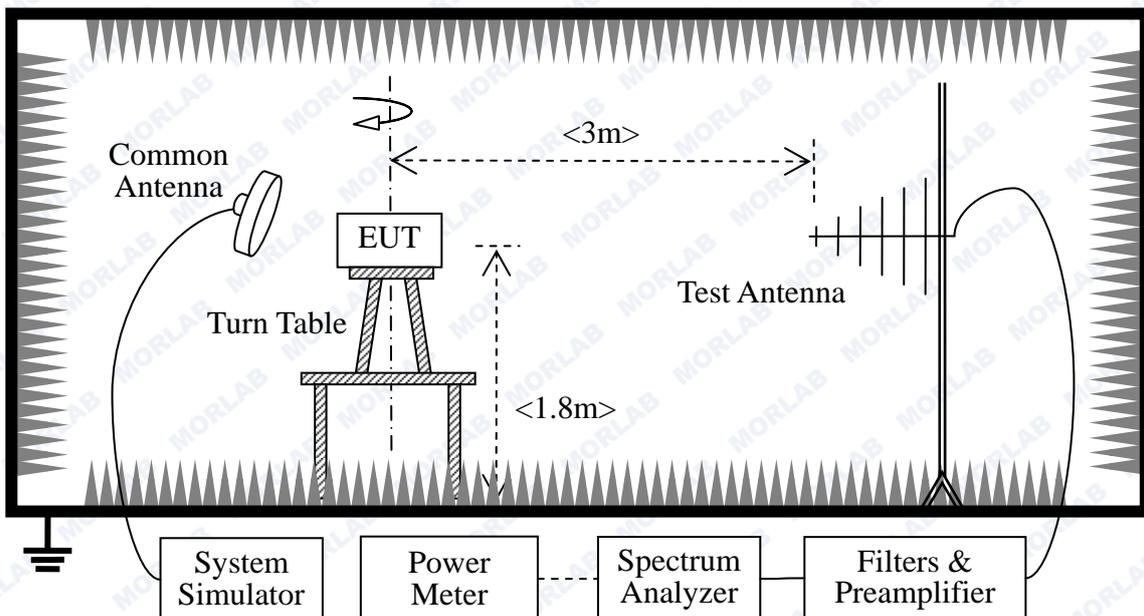
The EUT, which is powered by the Battery charged with the AC Adapter, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

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 33.35dBm, GSM 1900 29.56dBm. WCDMA 850 24.01 dBm, WCDMA 1900 23.92 dBm .Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

- Minimum RF power: GSM 850 2.4dBm, GSM 1900 0.5dBm, WCDMA 850 0.27dBm, WCDMA 1900 0.6dBm.

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.

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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	32.39	1.734	Plot A	38.5	7	PASS
	190	836.60	5	32.42	1.746				PASS
	251	848.80	5	32.98	1.986				PASS
GPRS 850MHz	128	824.20	5	32.62	1.828	Plot B [Note 1]	38.5	7	PASS
	190	836.60	5	32.28	1.690				PASS
	251	848.80	5	32.65	1.841				PASS
EGPRS 850MHz	128	824.20	5	32.53	1.791	Plot C [Note 1]	38.5	7	PASS
	190	836.60	5	32.19	1.656				PASS
	251	848.80	5	32.85	1.928				PASS

Band	Channel	Frequency (MHz)	PCL	Measured EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 1900MHz	512	1850.2	0	28.76	0.752	Plot D	33	2	PASS
	661	1880.0	0	28.89	0.774				PASS
	810	1909.8	0	28.05	0.638				PASS
GPRS 1900MHz	512	1850.2	0	28.75	0.750	Plot E [Note 1]	33	2	PASS
	661	1880.0	0	28.08	0.643				PASS
	810	1909.8	0	28.45	0.700				PASS
EGPRS 1900MHz	512	1850.2	0	28.90	0.776	Plot F [Note 1]	33	2	PASS
	661	1880.0	0	28.47	0.703				PASS
	810	1909.8	0	29.14	0.820				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	29.05	0.804	Plot G	38.5	7	PASS
	4175	835.0	28.61	0.726				PASS
	4233	846.6	27.76	0.597				PASS
HSDPA 850MHz	4132	826.4	28.61	0.726	Plot H	38.5	7	PASS
	4175	835.0	28.62	0.728				PASS
	4233	846.6	27.68	0.586				PASS
HSUPA 850MHz	4132	826.4	28.78	0.755	Plot I	38.5	7	PASS
	4175	835.0	28.49	0.706				PASS
	4233	846.6	27.32	0.540				PASS
HSPA+ 850MHz	4132	826.4	28.79	0.757	Plot J	38.5	7	PASS
	4175	835.0	28.58	0.721				PASS
	4233	846.6	27.41	0.551				PASS

Band	Channel	Frequency (MHz)	Measured EIRP			Limit		Verdict
			dBm	W	Refer to Plot	dBm	W	
WCDMA 1900MHz	9262	1852.4	24.58	0.287	Plot K	33	2	PASS
	9400	1880.0	25.71	0.372				PASS
	9538	1907.6	25.08	0.322				PASS
HSDPA 1900MHz	9262	1852.4	24.70	0.295	Plot L	33	2	PASS
	9400	1880.0	25.43	0.349				PASS
	9538	1907.6	25.00	0.316				PASS
HSUPA 1900MHz	9262	1852.4	24.45	0.279	Plot M	33	2	PASS
	9400	1880.0	25.53	0.357				PASS
	9538	1907.6	25.02	0.318				PASS
HSPA+ 1900MHz	9262	1852.4	25.39	0.346	Plot N	33	2	PASS
	9400	1880.0	25.86	0.385				PASS
	9538	1907.6	26.15	0.412				PASS

Test Plots:


```
☀ Agilent        06:01:22  May 17, 2015              R   T  S

                                                    Mkr1  824.23 MHz
Ref 40 dBm                    Atten 15 dB                  32.39 dBm
Peak
Log
10
dB/
Offst
38.1
dB

Start 815 MHz                                       Stop 860 MHz
#Res BW 1 MHz                 VBW 3 MHz        Sweep 4 ms (401 pts)

  Marker    Trace    Type      X Axis          Amplitude
    1        (1)     Freq     824.23 MHz       32.39 dBm
    2        (1)     Freq     836.60 MHz       32.42 dBm
    3        (1)     Freq     848.86 MHz       32.98 dBm

No Peak Found
```

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


```
☀ Agilent        03:57:49  May 17, 2015              R   T  S

                                                    Mkr1  824.23 MHz
Ref 40 dBm                    Atten 15 dB                  32.62 dBm
Peak
Log
10
dB/
Offst
38.1
dB

Center 837.5 MHz                                    Span 45 MHz
#Res BW 1 MHz                 VBW 3 MHz        Sweep 4 ms (401 pts)

  Marker    Trace    Type      X Axis          Amplitude
    1        (1)     Freq     824.23 MHz       32.62 dBm
    2        (1)     Freq     836.60 MHz       32.28 dBm
    3        (1)     Freq     848.75 MHz       32.65 dBm
```

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

(Plot C: EGPRS 850MHz Channel = 128, 190, 251)
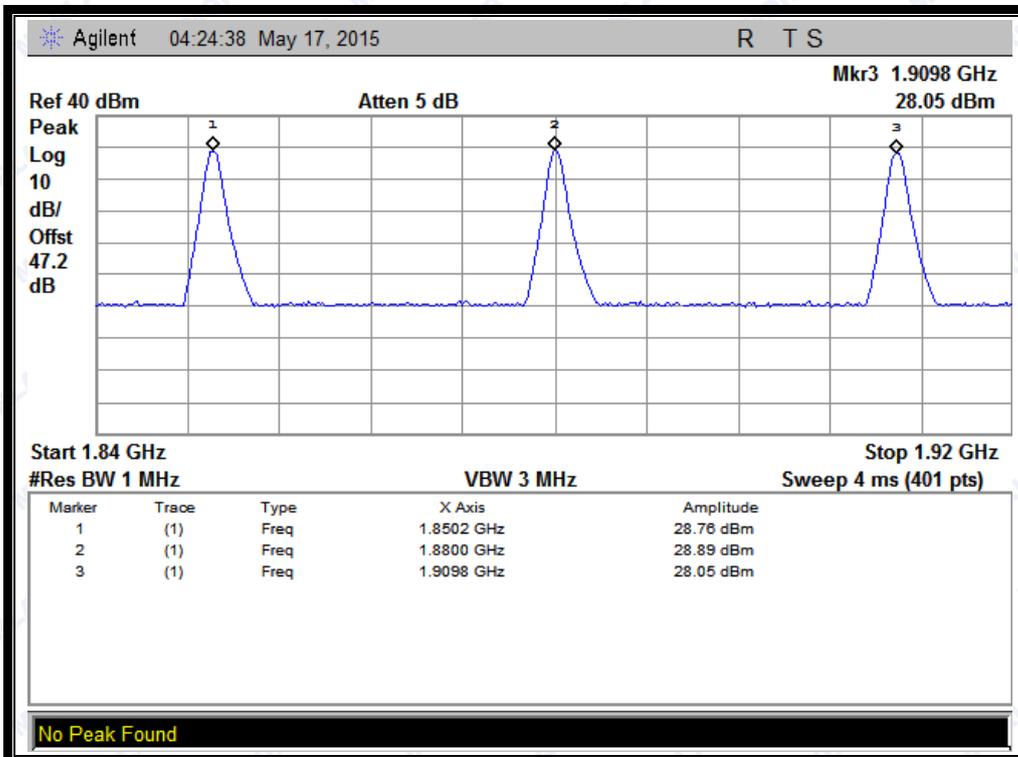
(Plot D: GSM 1900MHz Channel = 512, 661, 810)
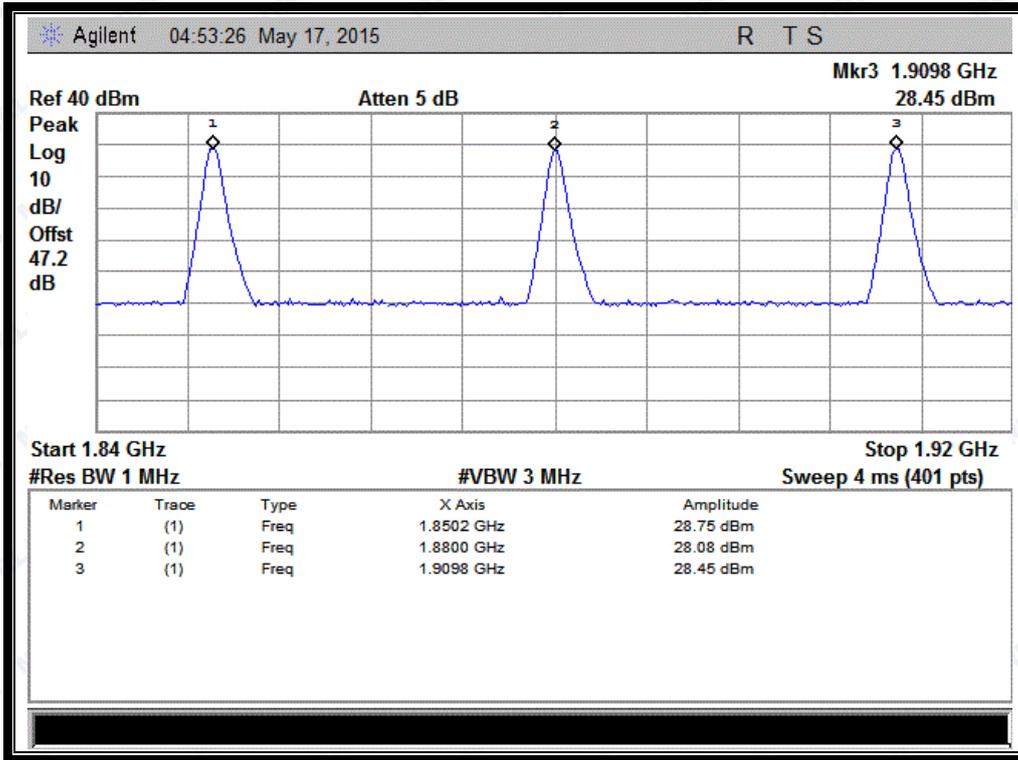
(Plot E: GPRS 1900MHz Channel = 512, 661, 810)

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

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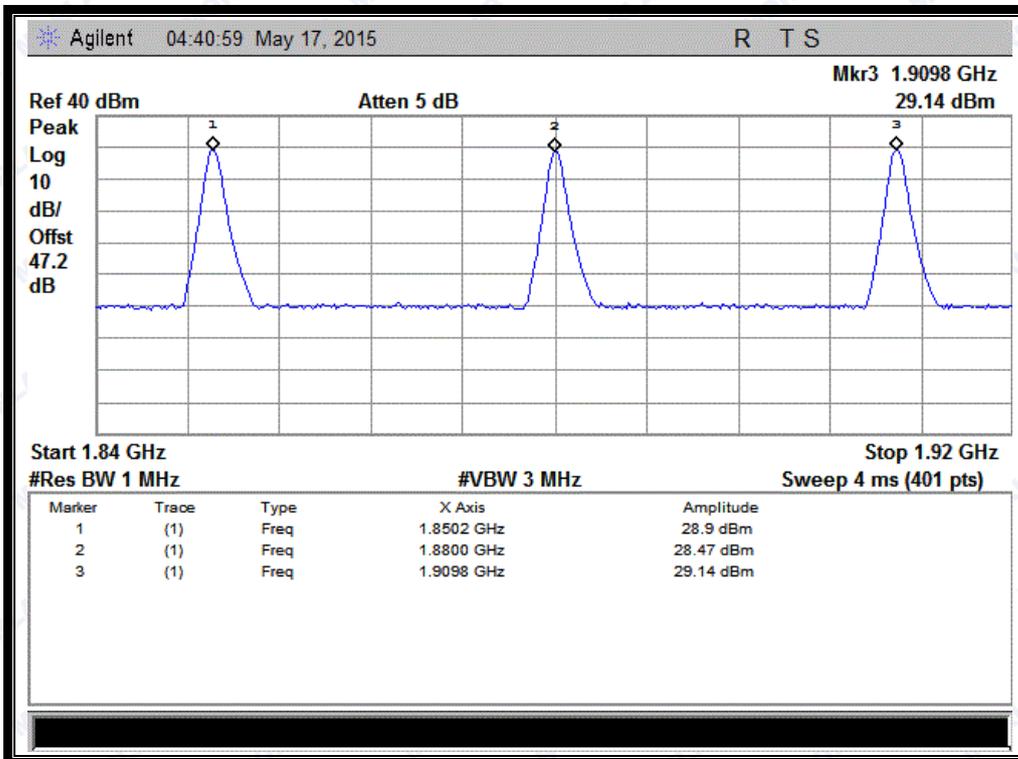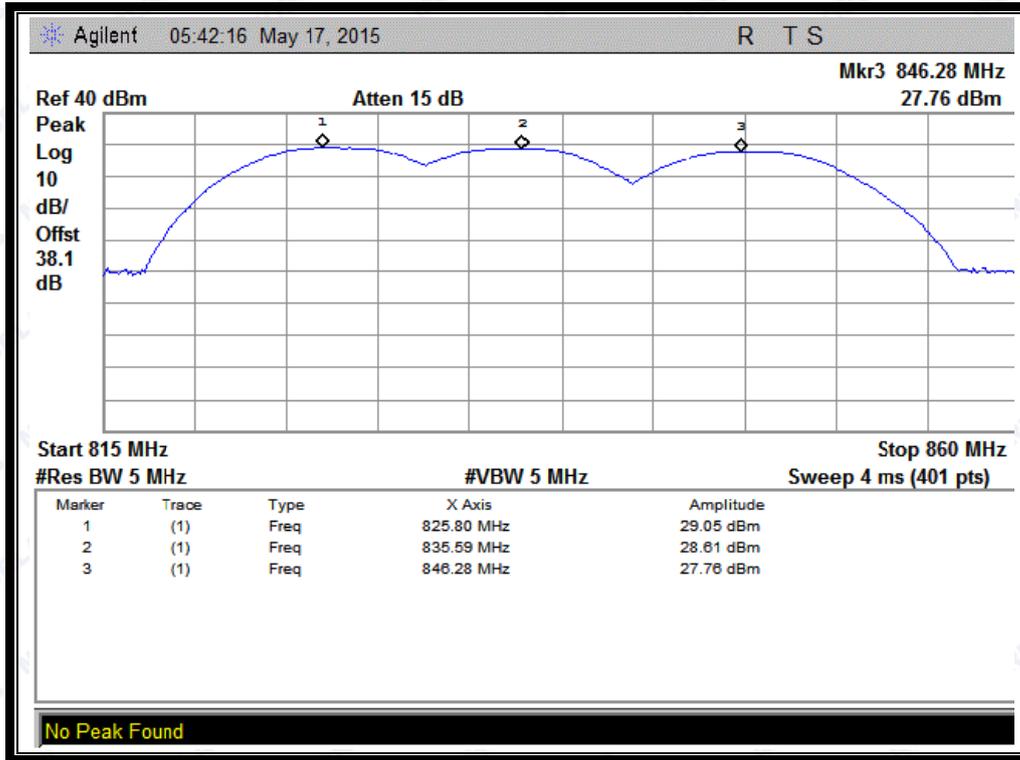
(Plot G: WCDMA 850 MHz Channel = 4132, 4175, 4233)
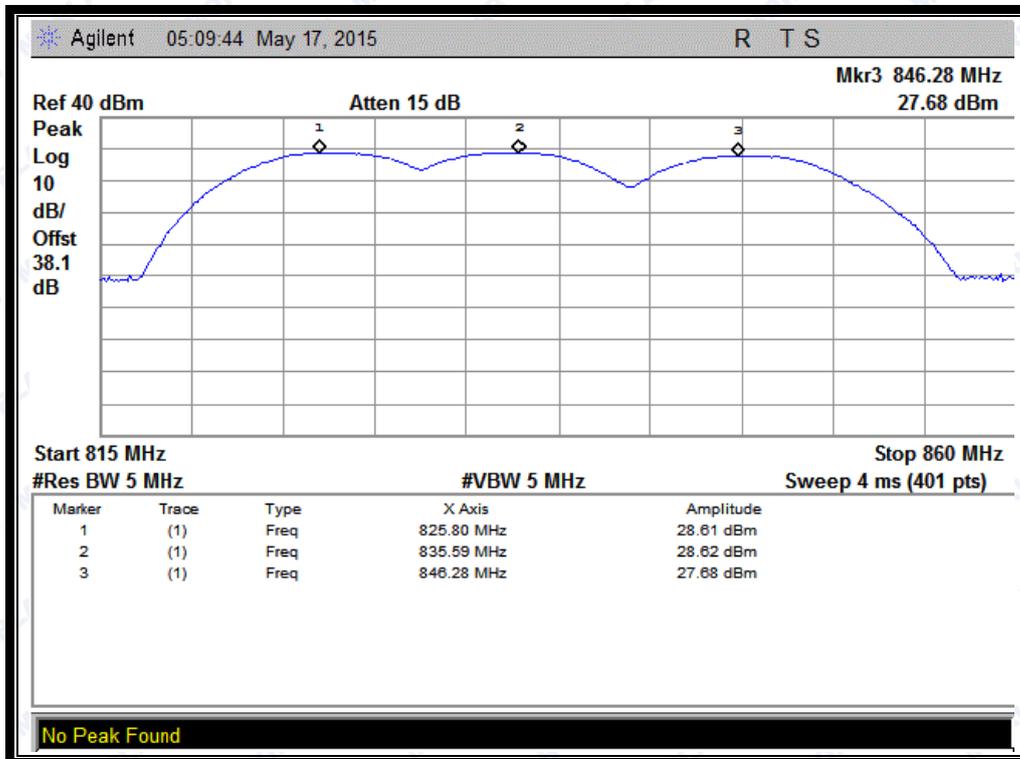
(Plot H: HSDPA 850 MHz Channel = 4132, 4175, 4233)
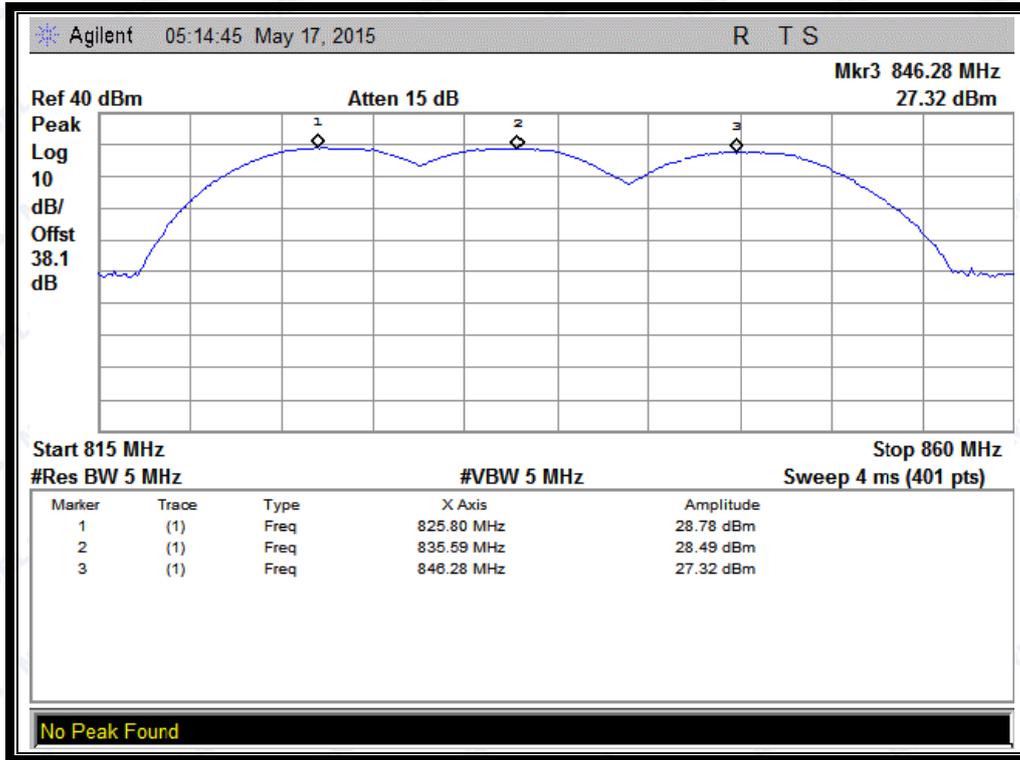
(Plot I: HSUPA 850 MHz Channel = 4132, 4175, 4233)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	825.80 MHz	28.78 dBm
2	(1)	Freq	835.59 MHz	28.49 dBm
3	(1)	Freq	846.28 MHz	27.32 dBm

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

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	825.80 MHz	28.79 dBm
2	(1)	Freq	835.59 MHz	28.58 dBm
3	(1)	Freq	846.28 MHz	27.41 dBm

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

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

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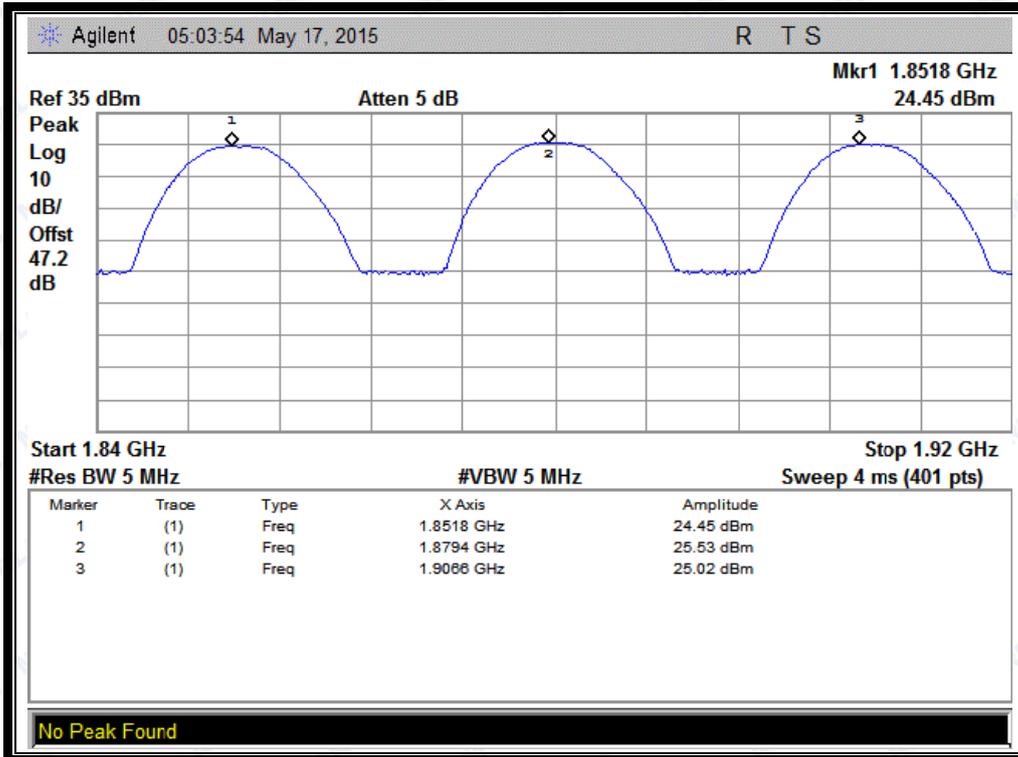
(Plot M: HSUPA1900 MHz Channel = 9262, 9400, 9538)
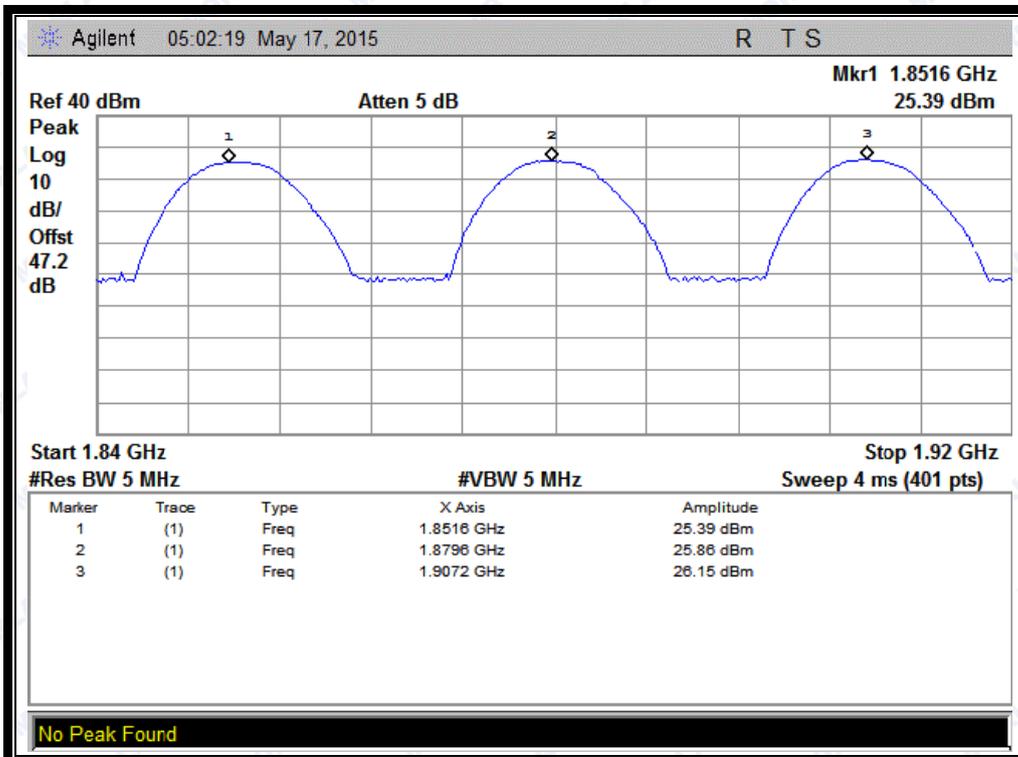
(Plot N: HSPA+ 1900 MHz Channel = 9262, 9400, 9538)

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

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Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
	4233	846.6	< -25	< -25	Plot K5/K6	-13	PASS
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)	Margin	Degree	Antenna	Verdict
199.327	-70.32	-13.0	57.3	238.3	Horizontal	PASS
823.416	-55.41	-13.0	42.4	158.3	Horizontal	N.A
866.958	-32.45	-13.0	19.4	207.0	Horizontal	N.A
1648.379	-42.19	-13.0	29.2	259.0	Horizontal	PASS
2471.322	-39.81	-13.0	26.8	252.0	Horizontal	PASS
9710.723	-43.57	-13.0	30.6	8.0	Horizontal	PASS
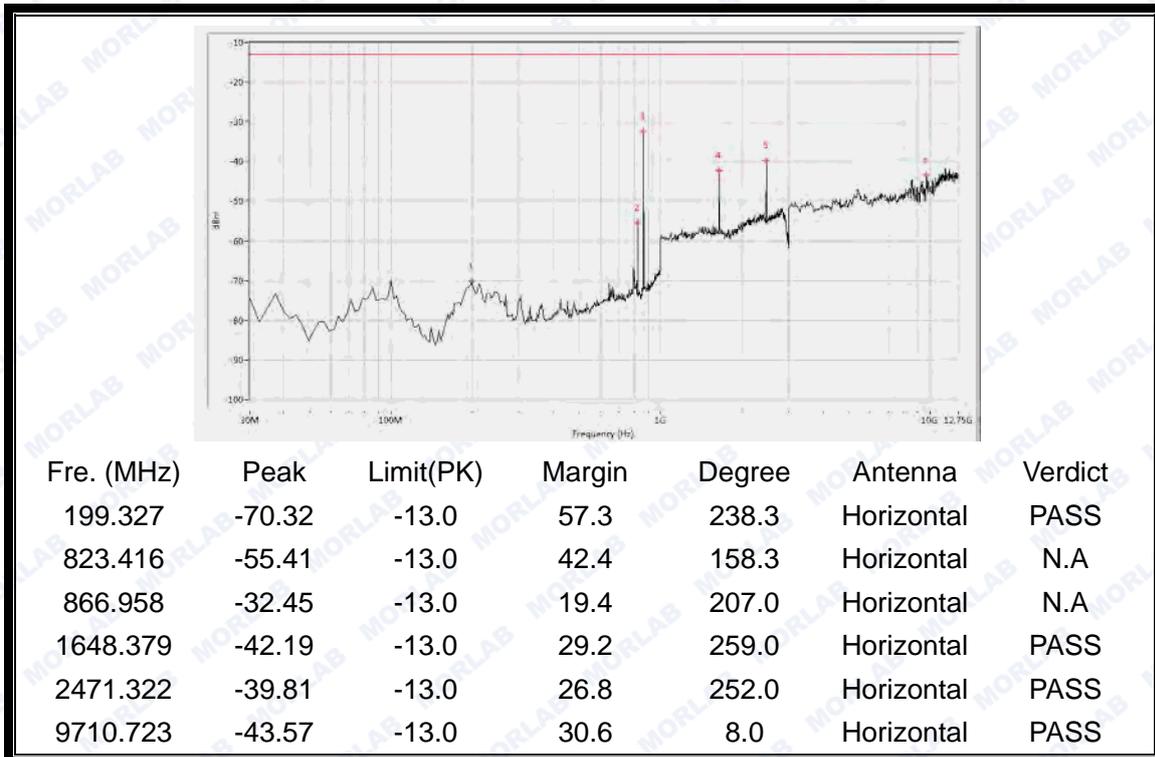
(Plot A1: GSM 850MHz Channel = 128, Test Antenna Horizontal)
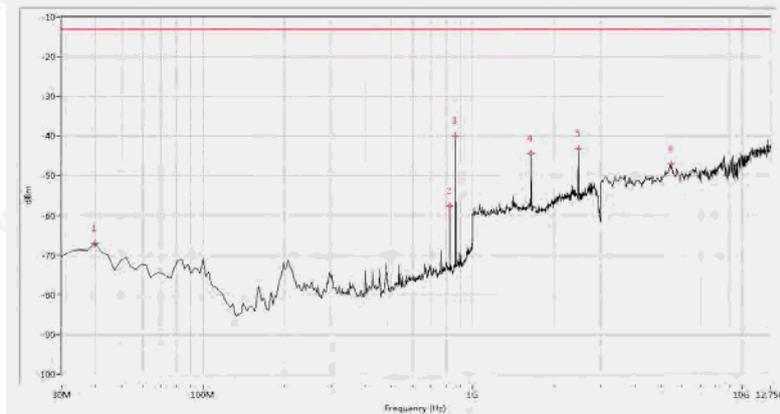
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-67.05	-13.0	54.0	328.7	Vertical	PASS
823.416	-57.52	-13.0	44.5	97.3	Vertical	N.A
866.958	-39.88	-13.0	26.9	334.3	Vertical	N.A
1648.379	-44.46	-13.0	31.5	31.7	Vertical	PASS
2471.322	-43.10	-13.0	30.1	267.6	Vertical	PASS
5455.736	-47.02	-13.0	34.0	226.0	Vertical	PASS

(Plot A2:   GSM 850MHz Channel = 128, Test Antenna Vertical)
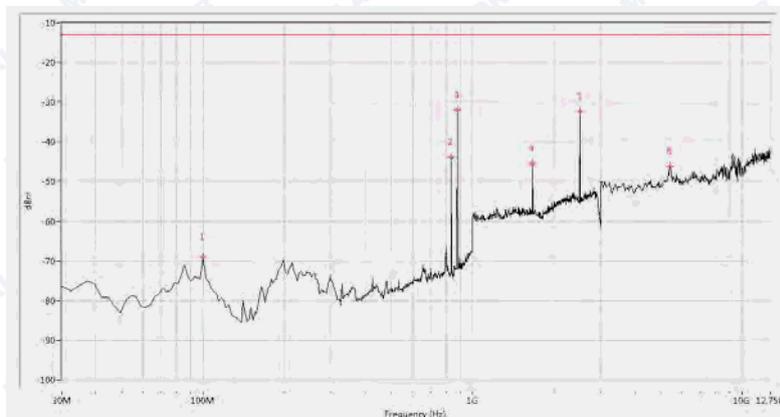
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-69.06	-13.0	56.1	242.8	Horizontal	PASS
835.511	-43.86	-13.0	30.9	159.1	Horizontal	N.A
879.052	-31.90	-13.0	18.9	38.1	Horizontal	N.A
1673.317	-45.47	-13.0	32.5	161.5	Horizontal	PASS
2506.234	-32.21	-13.0	19.2	298.3	Horizontal	PASS
5407.107	-46.23	-13.0	33.2	349.1	Horizontal	PASS

(Plot A3:   GSM850MHz Channel = 190, Test Antenna Horizontal)
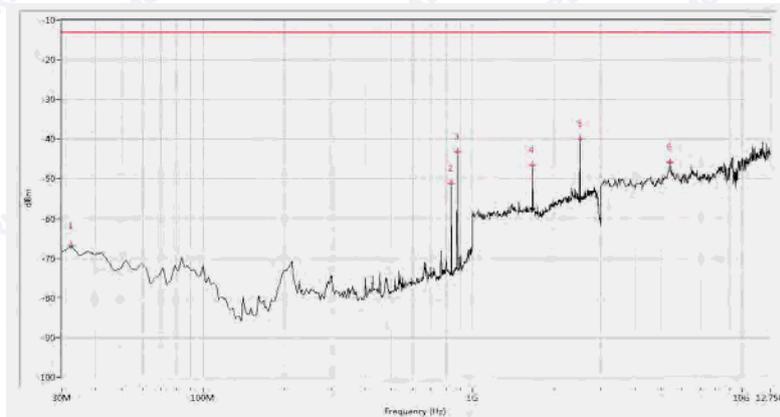
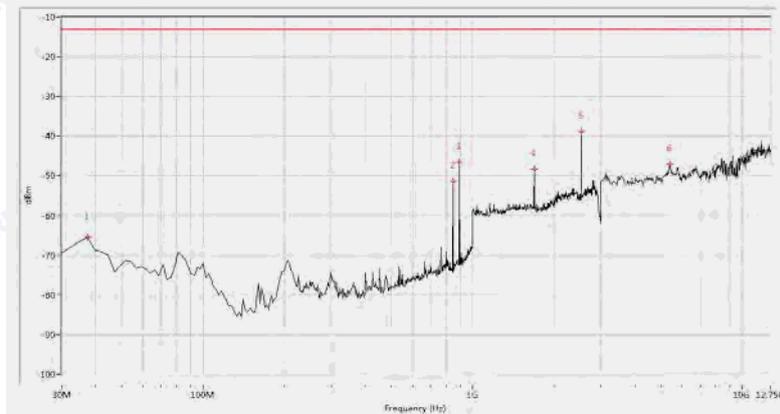| Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
32.419	-66.84	-13.0	53.8	339.7	Vertical	PASS
835.511	-51.09	-13.0	38.1	73.4	Vertical	N.A
879.052	-43.18	-13.0	30.2	154.8	Vertical	N.A
1673.317	-46.49	-13.0	33.5	42.9	Vertical	PASS
2506.234	-39.97	-13.0	27.0	269.5	Vertical	PASS
5407.107	-45.84	-13.0	32.8	110.9	Vertical	PASS

(Plot A4: GSM 850MHz Channel = 190, Test Antenna Vertical)
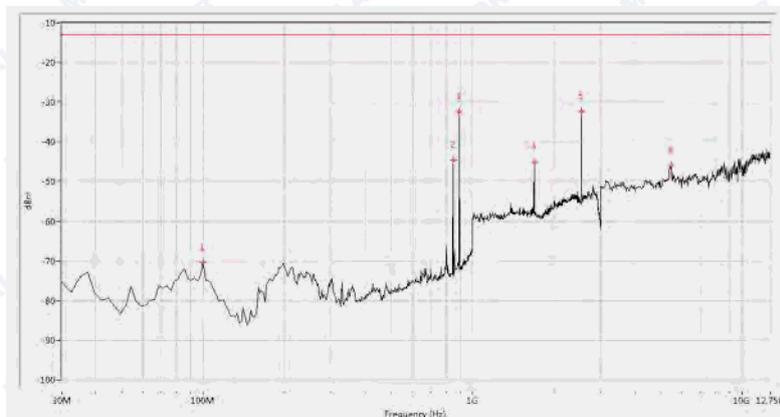
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-70.37	-13.0	57.4	47.3	Horizontal	PASS
847.606	-44.50	-13.0	31.5	348.9	Horizontal	N.A
891.147	-32.51	-13.0	19.5	203.6	Horizontal	N.A
1698.254	-45.03	-13.0	32.0	261.7	Horizontal	PASS
2541.147	-32.20	-13.0	19.2	286.2	Horizontal	PASS
5455.736	-46.04	-13.0	33.0	149.6	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-65.35	-13.0	52.3	27.2	Vertical	PASS
847.606	-51.40	-13.0	38.4	335.2	Vertical	N.A
891.147	-46.56	-13.0	33.6	256.4	Vertical	N.A
1698.254	-48.39	-13.0	35.4	42.1	Vertical	PASS
2541.147	-38.81	-13.0	25.8	273.3	Vertical	PASS
5407.107	-47.04	-13.0	34.0	125.4	Vertical	PASS

(Plot A6:   GSM 850MHz Channel = 251, Test Antenna Vertical)
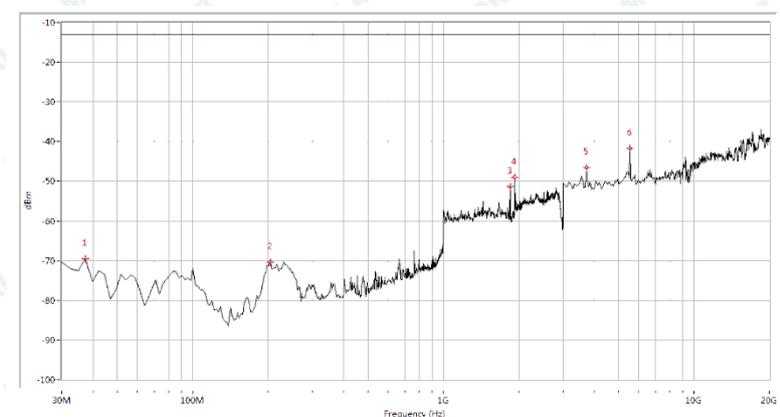
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-69.46	-13.0	56.5	359.7	Horizontal	PASS
204.165	-70.50	-13.0	57.5	-0.0	Horizontal	PASS
1847.880	-51.31	-13.0	38.3	302.3	Horizontal	N.A
1927.681	-48.99	-13.0	36.0	32.1	Horizontal	N.A
3720.698	-46.56	-13.0	33.6	192.1	Horizontal	PASS
5543.641	-41.73	-13.0	28.7	192.1	Horizontal	PASS

(Plot B1:   GSM 1900MHz Channel = 512, Test Antenna Horizontal)
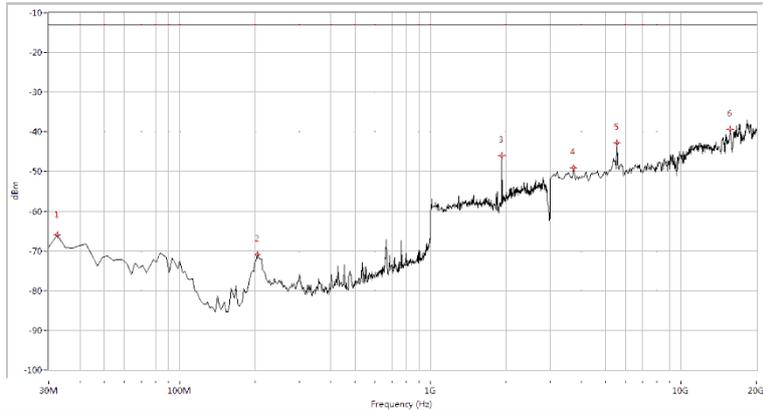
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
32.419	-65.92	-13.0	52.9	110.6	Vertical	PASS
204.165	-70.91	-13.0	57.9	295.6	Vertical	PASS
1927.681	-45.91	-13.0	32.9	331.1	Vertical	N.A
3720.698	-49.02	-13.0	36.0	341.3	Vertical	PASS
5543.641	-42.71	-13.0	29.7	341.3	Vertical	PASS
15718.204	-39.40	-13.0	26.4	-0.0	Vertical	PASS

(Plot B2: GSM 1900MHz Channel = 512, Test Antenna Vertical)
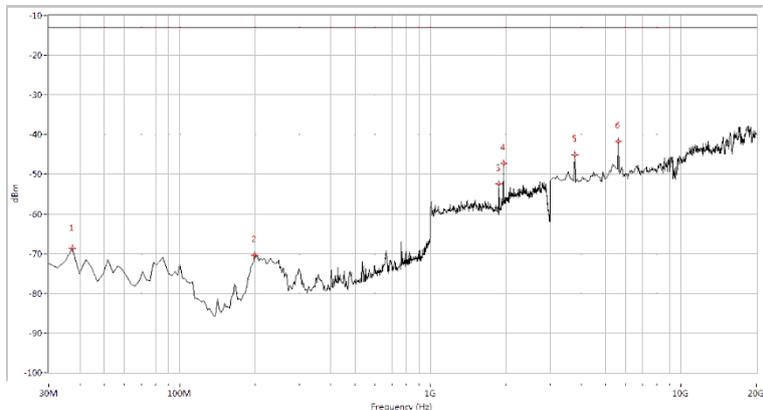
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-68.55	-13.0	55.5	79.7	Horizontal	PASS
199.327	-70.49	-13.0	57.5	167.9	Horizontal	PASS
1877.805	-52.47	-13.0	39.5	309.3	Horizontal	N.A
1957.606	-47.17	-13.0	34.2	224.1	Horizontal	N.A
3763.092	-45.12	-13.0	32.1	288.0	Horizontal	PASS
5628.429	-41.73	-13.0	28.7	147.4	Horizontal	PASS

(Plot B3: GSM 1900MHz Channel = 661, Test Antenna Horizontal)
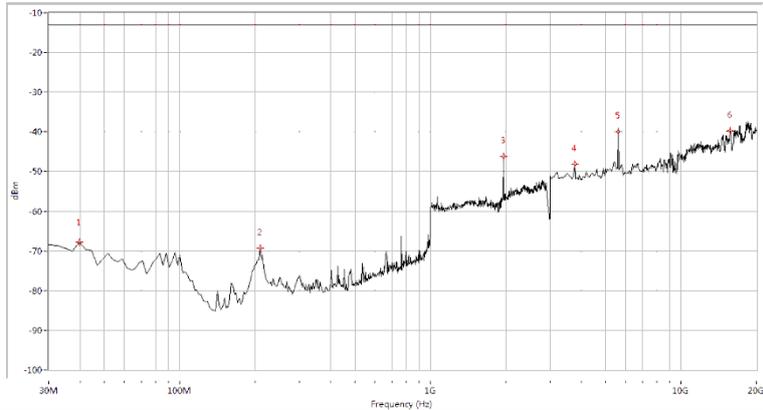
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-67.72	-13.0	54.7	40.2	Vertical	PASS
209.002	-69.32	-13.0	56.3	60.7	Vertical	PASS
1957.606	-46.17	-13.0	33.2	-0.0	Vertical	N.A
3763.092	-48.19	-13.0	35.2	360.0	Vertical	PASS
5628.429	-39.96	-13.0	27.0	269.5	Vertical	PASS
15718.204	-39.81	-13.0	26.8	105.1	Vertical	PASS

(Plot B4:   GSM 1900MHz Channel = 661, Test Antenna Vertical)
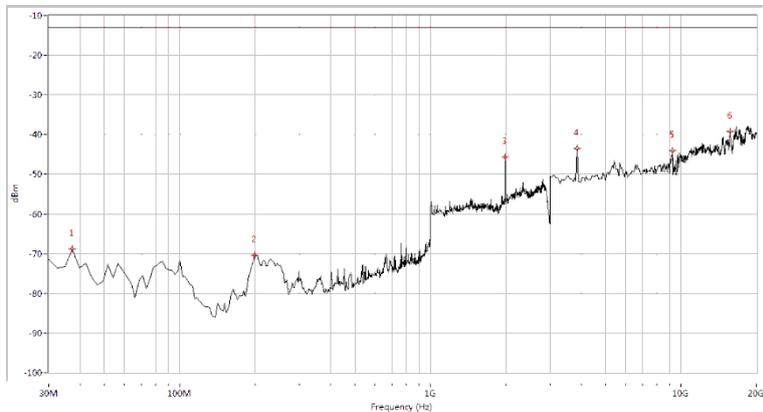
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-68.77	-13.0	55.8	187.7	Horizontal	PASS
199.327	-70.35	-13.0	57.4	-0.0	Horizontal	PASS
1987.531	-45.67	-13.0	32.7	283.6	Horizontal	N.A
3847.880	-43.48	-13.0	30.5	300.4	Horizontal	PASS
9231.920	-44.12	-13.0	31.1	250.1	Horizontal	PASS
15675.810	-39.32	-13.0	26.3	106.1	Horizontal	PASS

(Plot B5:   GSM 1900MHz Channel = 810, Test Antenna Horizontal)
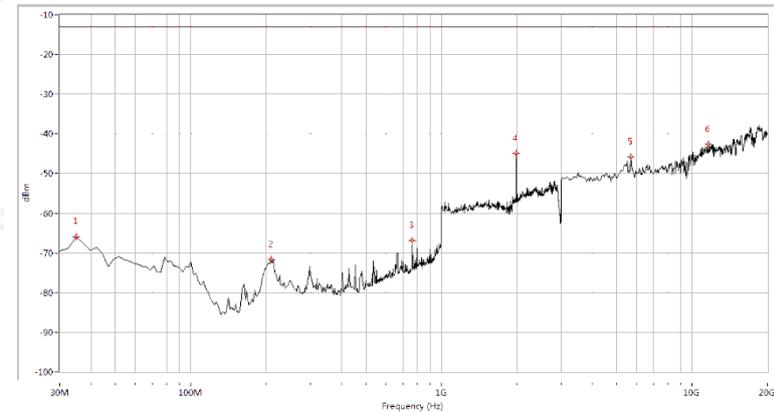
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-65.91	-13.0	52.9	151.5	Vertical	PASS
209.002	-71.58	-13.0	58.6	35.8	Vertical	PASS
765.362	-66.85	-13.0	53.9	9.4	Vertical	PASS
1987.531	-44.97	-13.0	32.0	-0.0	Vertical	N.A
5713.217	-45.75	-13.0	32.8	341.2	Vertical	PASS
11648.379	-42.66	-13.0	29.7	360.0	Vertical	PASS

(Plot B6:   GSM 1900MHz Channel = 810, Test Antenna Vertical)
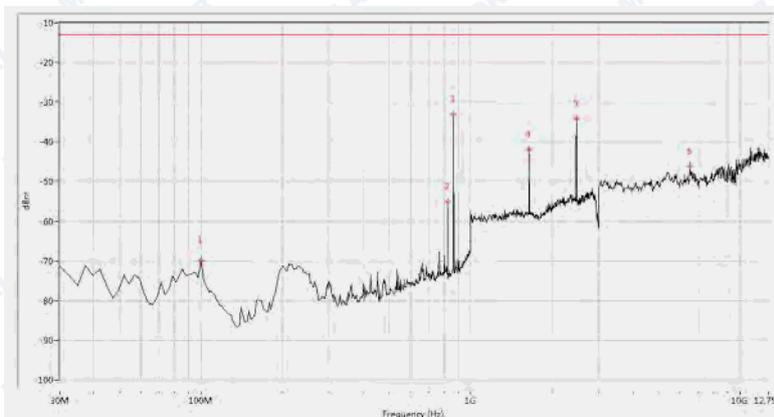
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-69.93	-13.0	56.9	246.0	Horizontal	PASS
823.416	-55.14	-13.0	42.1	2.1	Horizontal	N.A
866.958	-33.22	-13.0	20.2	262.7	Horizontal	N.A
1648.379	-41.82	-13.0	28.8	289.3	Horizontal	PASS
2471.322	-33.97	-13.0	21.0	302.7	Horizontal	PASS
6525.561	-46.19	-13.0	33.2	147.0	Horizontal	PASS

(Plot C1:   EGPRS 850MHz Channel = 128, Test Antenna Horizontal)
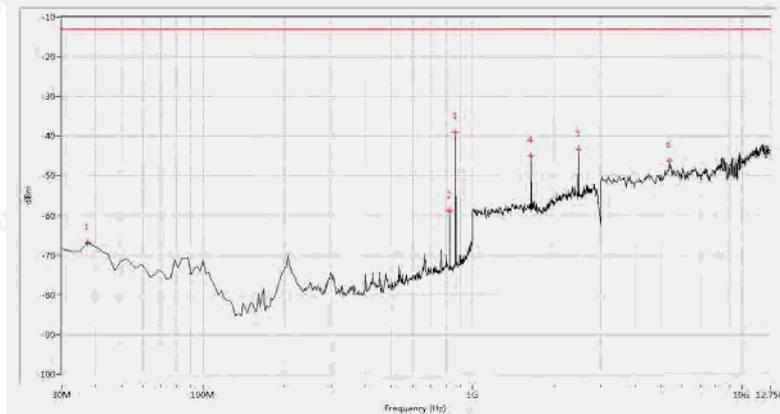
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-66.78	-13.0	53.8	1.8	Vertical	PASS
823.416	-58.77	-13.0	45.8	122.9	Vertical	N.A
866.958	-39.05	-13.0	26.0	144.9	Vertical	N.A
1648.379	-44.96	-13.0	32.0	161.7	Vertical	PASS
2471.322	-43.40	-13.0	30.4	275.8	Vertical	PASS
5382.793	-46.25	-13.0	33.2	30.6	Vertical	PASS

(Plot C2:　EGPRS 850MHz Channel = 128, Test Antenna Vertical)
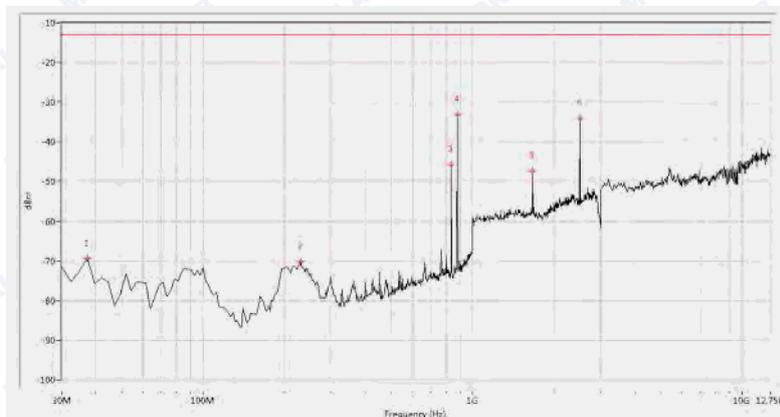
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-69.33	-13.0	56.3	16.4	Horizontal	PASS
230.773	-70.32	-13.0	57.3	200.7	Horizontal	PASS
835.511	-45.62	-13.0	32.6	1.8	Horizontal	N.A
879.052	-33.18	-13.0	20.2	238.6	Horizontal	N.A
1673.317	-47.47	-13.0	34.5	225.6	Horizontal	PASS
2506.234	-34.07	-13.0	21.1	319.2	Horizontal	PASS

(Plot C3:　EGPRS 850MHz Channel = 190, Test Antenna Horizontal)
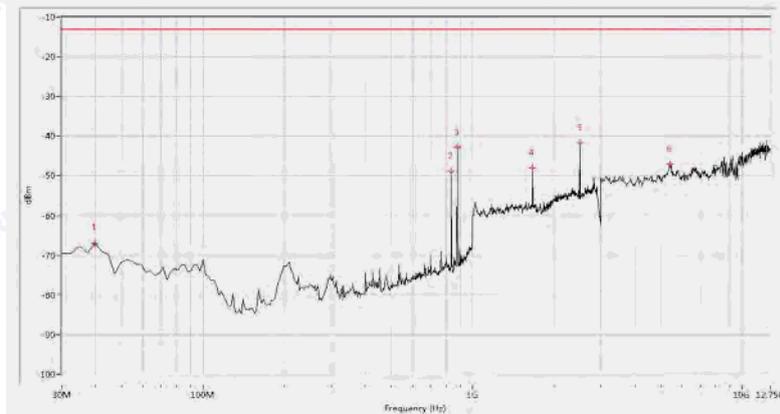
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-67.08	-13.0	54.1	269.5	Vertical	PASS
835.511	-48.91	-13.0	35.9	87.9	Vertical	N.A
879.052	-42.72	-13.0	29.7	157.5	Vertical	N.A
1673.317	-47.99	-13.0	35.0	34.7	Vertical	PASS
2506.234	-41.65	-13.0	28.6	265.7	Vertical	PASS
5407.107	-47.08	-13.0	34.1	76.5	Vertical	PASS

(Plot C4:   EGPRS 850MHz Channel = 190, Test Antenna Vertical)
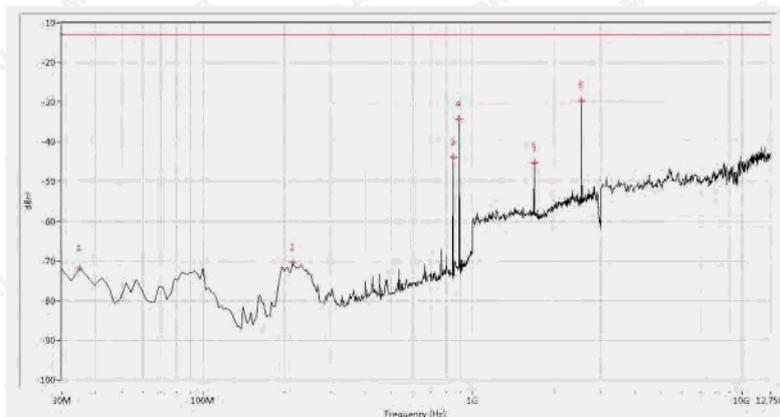
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-71.86	-13.0	58.9	136.2	Horizontal	PASS
216.259	-70.49	-13.0	57.5	66.7	Horizontal	PASS
847.606	-43.85	-13.0	30.8	208.4	Horizontal	N.A
891.147	-34.18	-13.0	21.2	257.1	Horizontal	N.A
1698.254	-45.35	-13.0	32.4	182.1	Horizontal	PASS
2541.147	-29.59	-13.0	16.6	282.2	Horizontal	PASS

(Plot C5:   EGPRS 850MHz Channel = 251, Test Antenna Horizontal)
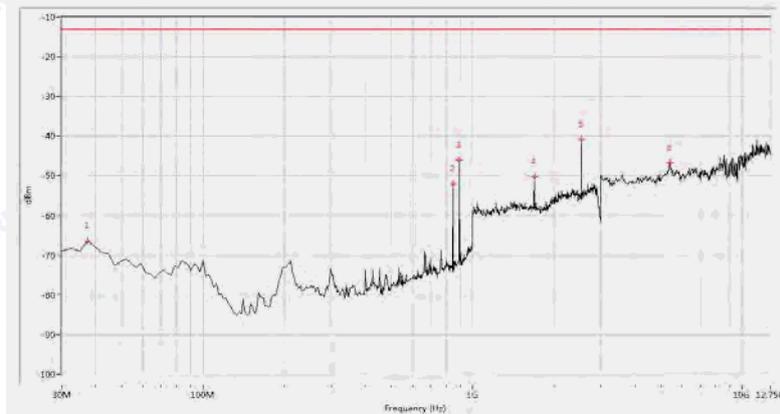
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-66.49	-13.0	53.5	24.3	Vertical	PASS
847.606	-52.09	-13.0	39.1	339.1	Vertical	N.A
891.147	-45.96	-13.0	33.0	260.6	Vertical	N.A
1698.254	-50.22	-13.0	37.2	28.7	Vertical	PASS
2541.147	-40.86	-13.0	27.9	269.4	Vertical	PASS
5407.107	-46.75	-13.0	33.7	184.4	Vertical	PASS

(Plot C6:   EGPRS 850MHz Channel = 251, Test Antenna Vertical)
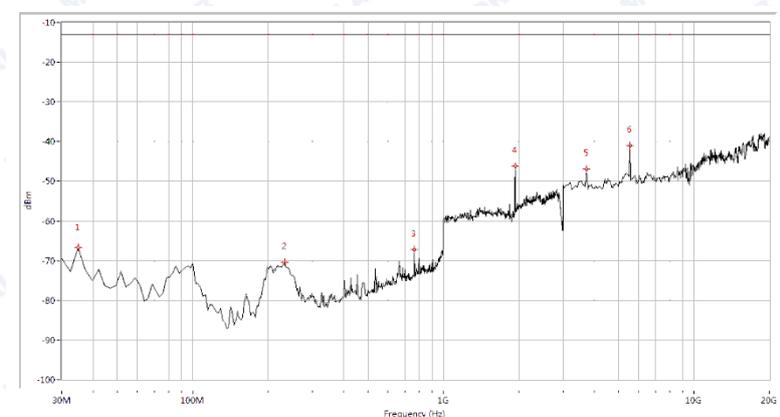
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-66.64	-13.0	53.6	259.1	Horizontal	PASS
233.192	-70.37	-13.0	57.4	183.6	Horizontal	PASS
765.362	-67.14	-13.0	54.1	269.9	Horizontal	PASS
1932.668	-46.27	-13.0	33.3	296.2	Horizontal	N.A
3720.698	-46.92	-13.0	33.9	282.2	Horizontal	PASS
5543.641	-40.94	-13.0	27.9	0.7	Horizontal	PASS

(Plot D1:   EGPRS 1900MHz Channel = 512, Test Antenna Horizontal)
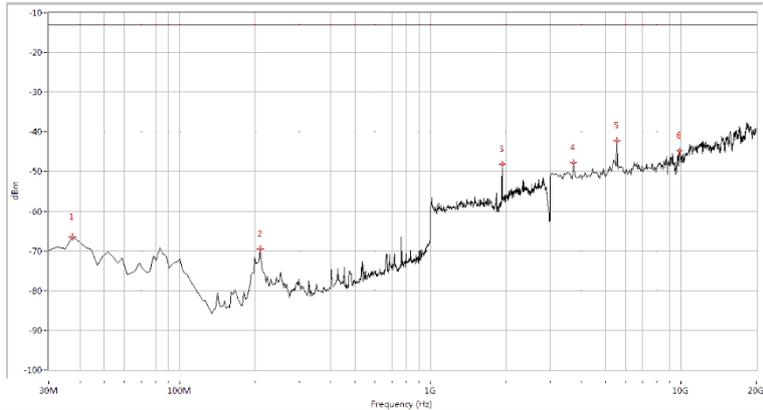
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-66.57	-13.0	53.6	6.6	Vertical	PASS
209.002	-69.47	-13.0	56.5	360.0	Vertical	PASS
1932.668	-48.11	-13.0	35.1	242.3	Vertical	N.A
3720.698	-47.70	-13.0	34.7	4.3	Vertical	PASS
5543.641	-42.29	-13.0	29.3	330.7	Vertical	PASS
9867.830	-44.82	-13.0	31.8	137.7	Vertical	PASS

(Plot D2:   EGPRS 1900MHz Channel = 512, Test Antenna Vertical)
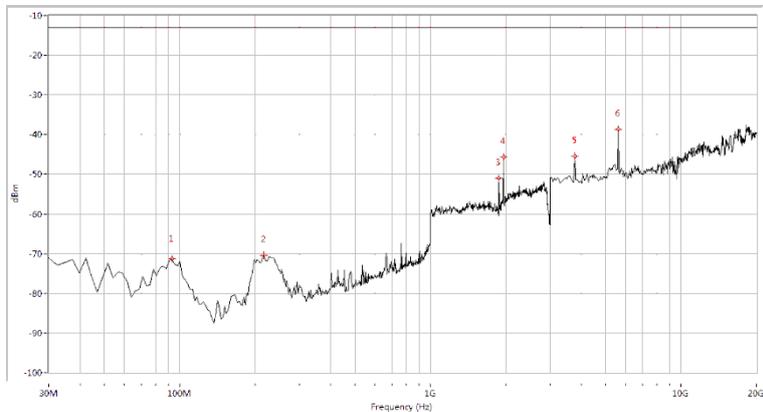
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
92.893	-71.25	-13.0	58.3	255.0	Horizontal	PASS
216.259	-70.48	-13.0	57.5	65.6	Horizontal	PASS
1877.805	-50.93	-13.0	37.9	295.9	Horizontal	N.A
1957.606	-45.72	-13.0	32.7	312.3	Horizontal	N.A
3763.092	-45.41	-13.0	32.4	299.5	Horizontal	PASS
5628.429	-38.73	-13.0	25.7	358.5	Horizontal	PASS

(Plot D3:   EGPRS 1900MHz Channel = 661, Test Antenna Horizontal)
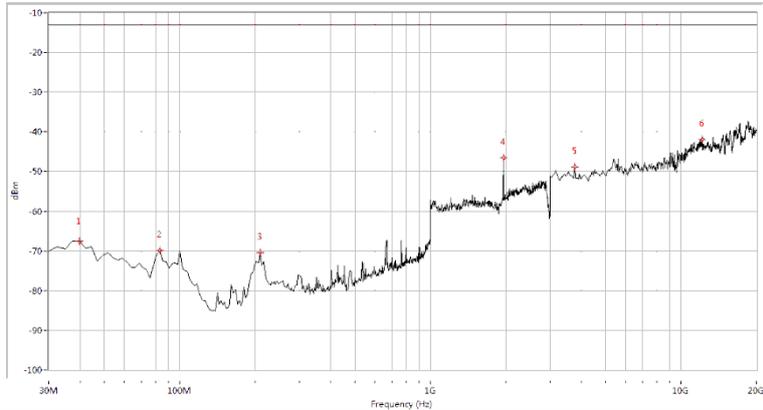
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-67.56	-13.0	54.6	172.7	Vertical	PASS
83.217	-69.90	-13.0	56.9	359.9	Vertical	PASS
209.002	-70.39	-13.0	57.4	146.3	Vertical	PASS
1957.606	-46.55	-13.0	33.5	299.6	Vertical	N.A
3763.092	-48.91	-13.0	35.9	360.0	Vertical	PASS
12157.107	-41.91	-13.0	28.9	60.0	Vertical	PASS

(Plot D4:　　EGPRS 1900MHz Channel = 661, Test Antenna Vertical)
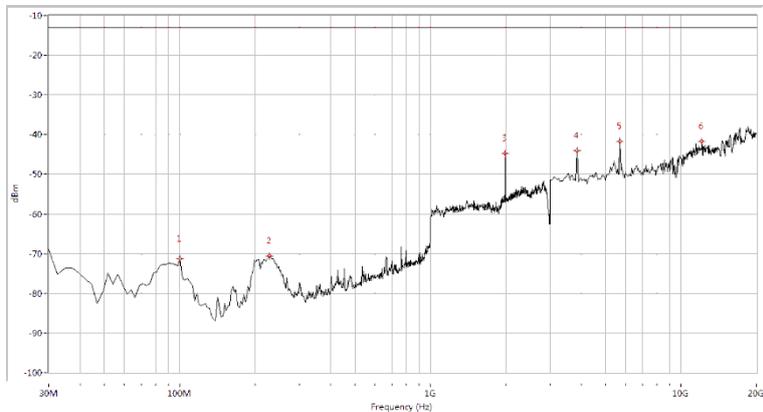
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-71.35	-13.0	58.3	297.8	Horizontal	PASS
228.354	-70.51	-13.0	57.5	354.1	Horizontal	PASS
1987.531	-44.70	-13.0	31.7	233.4	Horizontal	N.A
3847.880	-44.03	-13.0	31.0	246.1	Horizontal	PASS
5713.217	-41.66	-13.0	28.7	7.7	Horizontal	PASS
12114.713	-41.79	-13.0	28.8	40.3	Horizontal	PASS

(Plot D5:　　EGPRS 1900MHz Channel = 810, Test Antenna Horizontal)
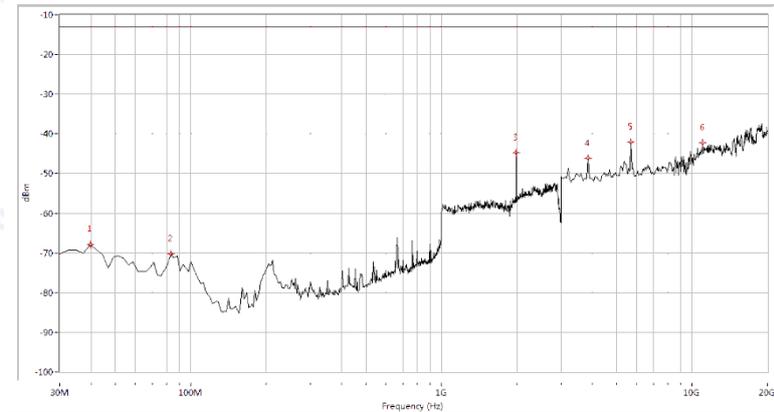
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-68.00	-13.0	55.0	198.2	Vertical	PASS
83.217	-70.21	-13.0	57.2	150.5	Vertical	PASS
1987.531	-44.83	-13.0	31.8	310.7	Vertical	N.A
3847.880	-46.25	-13.0	33.2	223.0	Vertical	PASS
5713.217	-42.10	-13.0	29.1	255.0	Vertical	PASS
11054.863	-42.27	-13.0	29.3	60.4	Vertical	PASS

(Plot D6:   EGPRS 1900MHz Channel = 810, Test Antenna Vertical)
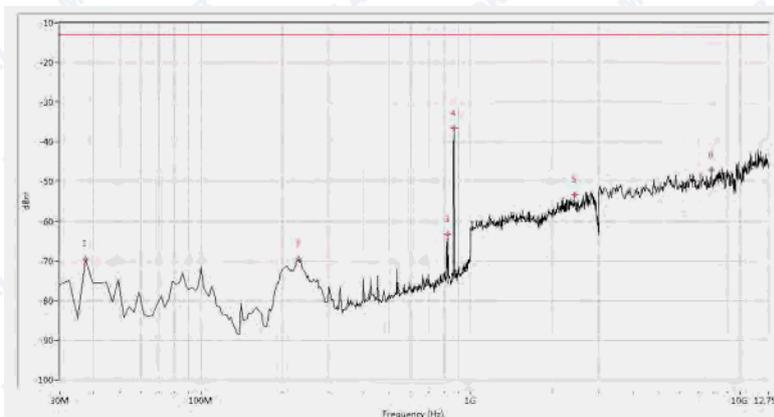
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-69.59	-13.0	56.6	346.5	Horizontal	PASS
230.773	-69.52	-13.0	56.5	258.7	Horizontal	PASS
825.835	-63.28	-13.0	50.3	95.8	Horizontal	N.A
869.377	-36.63	-13.0	23.6	156.4	Horizontal	N.A
2436.409	-53.26	-13.0	40.3	263.5	Horizontal	PASS
7814.214	-47.09	-13.0	34.1	185.3	Horizontal	PASS

(Plot E1:   WCDMA 850MHz Channel = 4132, Test Antenna Horizontal)
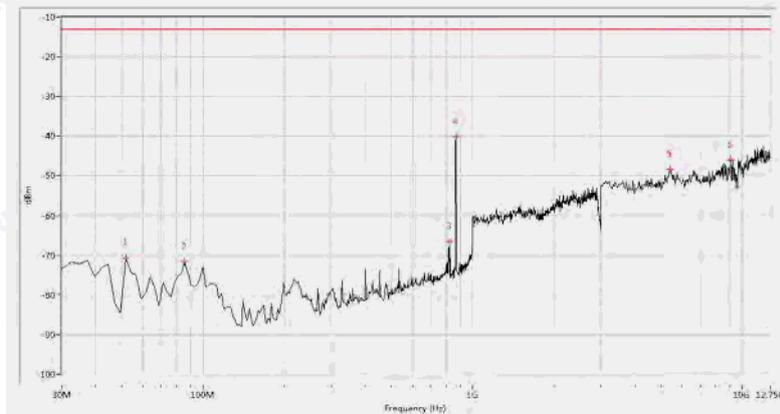
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
51.771	-70.72	-13.0	57.7	349.7	Vertical	PASS
85.636	-71.71	-13.0	58.7	152.8	Vertical	PASS
825.835	-66.45	-13.0	53.4	84.2	Vertical	N.A
869.377	-40.11	-13.0	27.1	63.9	Vertical	N.A
5407.107	-48.30	-13.0	35.3	94.2	Vertical	PASS
9078.554	-46.00	-13.0	33.0	147.5	Vertical	PASS

(Plot E2:   WCDMA 850MHz Channel = 4132, Test Antenna Vertical)
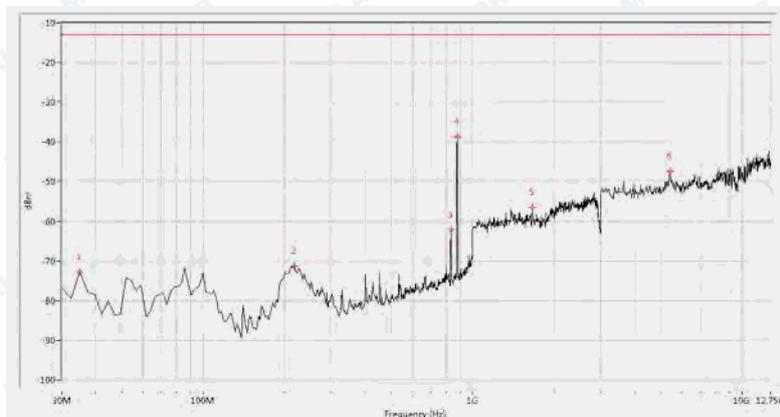
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-72.78	-13.0	59.8	95.7	Horizontal	PASS
218.678	-71.31	-13.0	58.3	48.3	Horizontal	PASS
833.092	-62.20	-13.0	49.2	164.8	Horizontal	N.A
879.052	-38.66	-13.0	25.7	105.6	Horizontal	N.A
1668.329	-56.56	-13.0	43.6	42.9	Horizontal	PASS
5407.107	-47.46	-13.0	34.5	254.3	Horizontal	PASS

(Plot E3:   WCDMA 850MHz Channel = 4175, Test Antenna Horizontal)
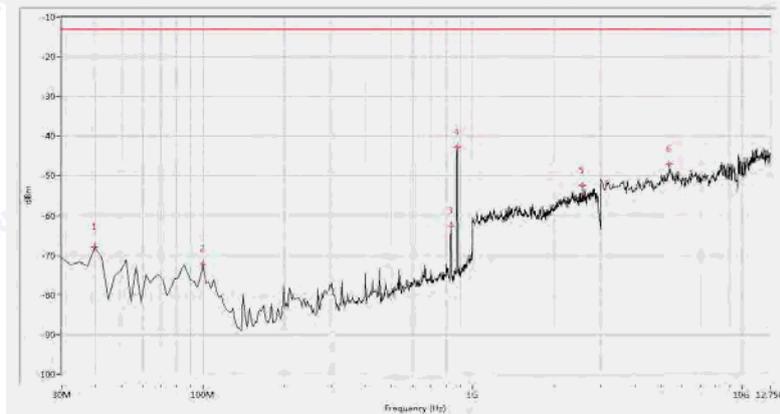
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-68.00	-13.0	55.0	69.5	Vertical	PASS
100.150	-72.29	-13.0	59.3	168.5	Vertical	PASS
835.511	-62.61	-13.0	49.6	52.3	Vertical	N.A
879.052	-42.88	-13.0	29.9	169.9	Vertical	N.A
2556.110	-52.47	-13.0	39.5	0.0	Vertical	PASS
5382.793	-47.02	-13.0	34.0	360.0	Vertical	PASS

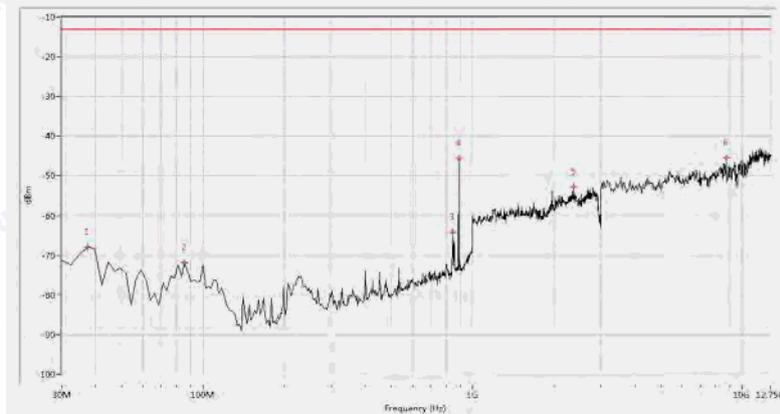(Plot E4: WCDMA 850MHz Channel = 4175, Test Antenna Vertical)
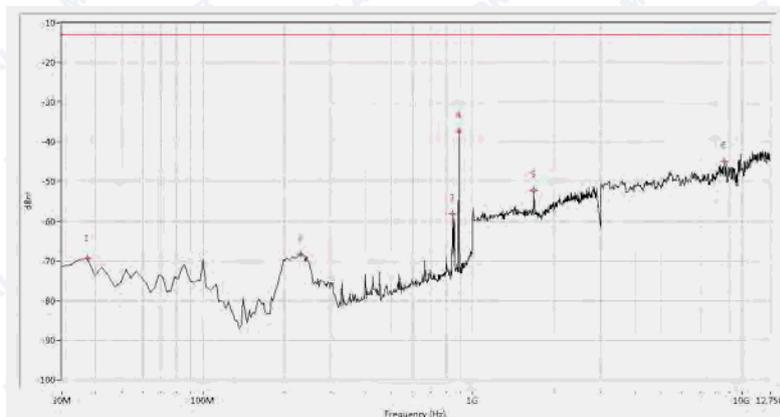
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-69.26	-13.0	56.3	360.0	Horizontal	PASS
230.773	-68.32	-13.0	55.3	15.7	Horizontal	PASS
845.187	-58.13	-13.0	45.1	164.6	Horizontal	N.A
888.728	-37.22	-13.0	24.2	360.0	Horizontal	N.A
1693.267	-52.33	-13.0	39.3	71.5	Horizontal	PASS
8567.955	-44.96	-13.0	32.0	255.0	Horizontal	PASS

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

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Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-67.97	-13.0	55.0	2.7	Vertical	PASS
85.636	-71.89	-13.0	58.9	105.1	Vertical	PASS
845.187	-64.21	-13.0	51.2	278.5	Vertical	N.A
888.728	-45.63	-13.0	32.6	164.4	Vertical	N.A
2376.559	-52.71	-13.0	39.7	198.5	Vertical	PASS
8738.155	-45.49	-13.0	32.5	266.6	Vertical	PASS

(Plot E6:   WCDMA 850MHz Channel = 4233, Test Antenna Vertical)
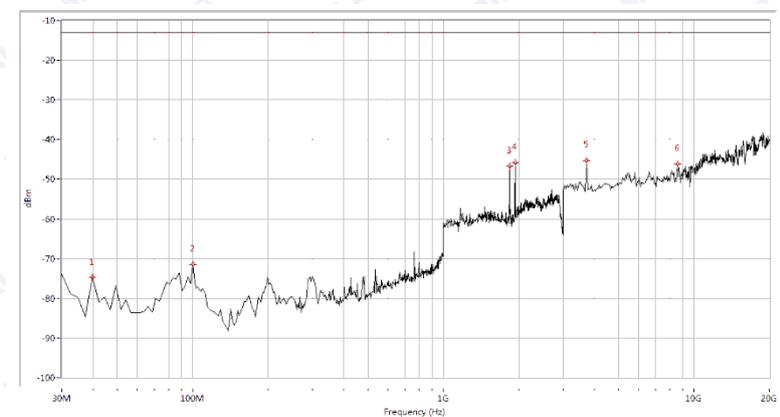
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-74.66	-13.0	61.7	318.4	Horizontal	PASS
100.150	-71.55	-13.0	58.5	96.7	Horizontal	PASS
1837.905	-46.62	-13.0	33.6	182.0	Horizontal	N.A
1932.668	-45.87	-13.0	32.9	24.7	Horizontal	N.A
3720.698	-45.30	-13.0	32.3	95.6	Horizontal	PASS
8596.010	-46.21	-13.0	33.2	121.0	Horizontal	PASS

(Plot F1:   WCDMA 1900MHz Channel = 9262, Test Antenna Horizontal)
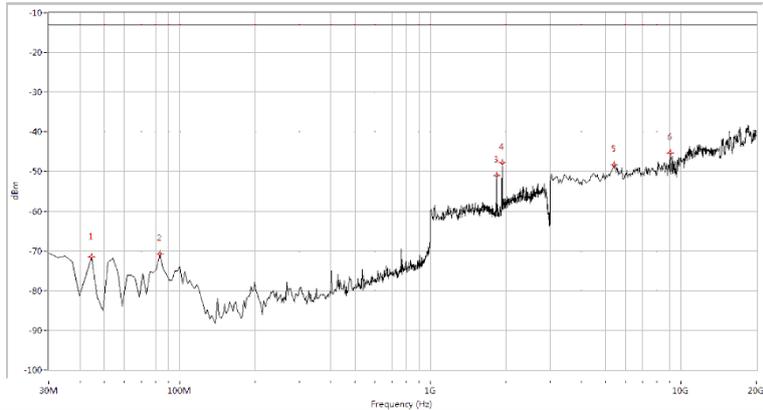
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
44.514	-71.54	-13.0	58.5	197.7	Vertical	PASS
83.217	-70.78	-13.0	57.8	269.0	Vertical	PASS
1837.905	-50.93	-13.0	37.9	253.9	Vertical	N.A
1932.668	-47.73	-13.0	34.7	3.0	Vertical	N.A
5416.459	-48.28	-13.0	35.3	222.1	Vertical	PASS
9062.344	-45.31	-13.0	32.3	216.8	Vertical	PASS

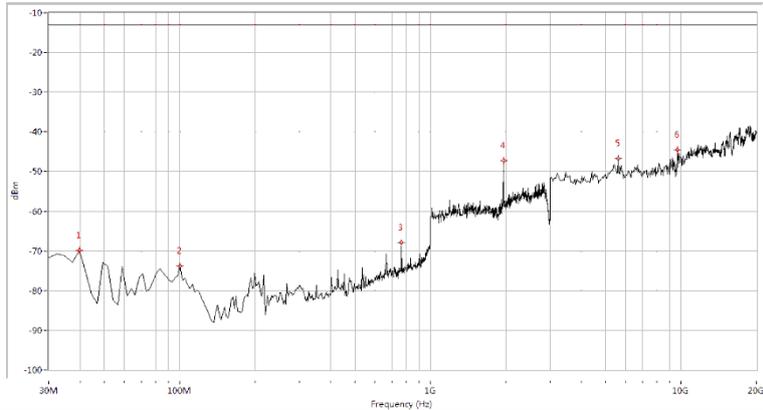(Plot F2:   WCDMA 1900MHz Channel = 9262, Test Antenna Vertical)
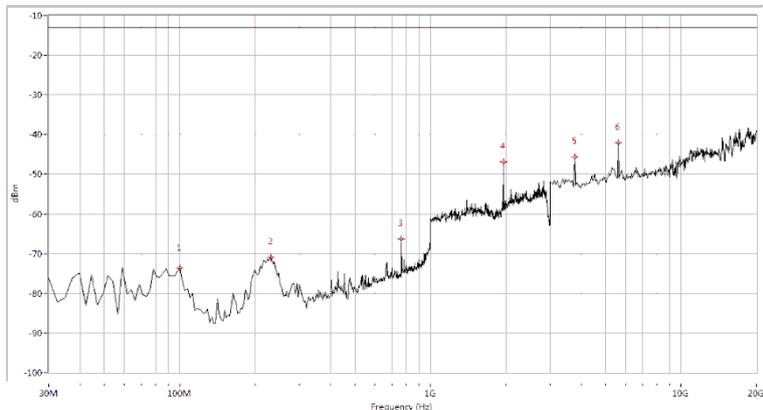
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-73.61	-13.0	60.6	321.5	Horizontal	PASS
230.773	-70.97	-13.0	58.0	164.7	Horizontal	PASS
765.362	-66.25	-13.0	53.2	30.4	Horizontal	PASS
1957.606	-46.90	-13.0	33.9	125.4	Horizontal	N.A
3763.092	-45.69	-13.0	32.7	97.6	Horizontal	PASS
5628.429	-42.09	-13.0	29.1	20.0	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-69.95	-13.0	56.9	196.8	Vertical	PASS
100.150	-73.84	-13.0	60.8	29.5	Vertical	PASS
765.362	-67.89	-13.0	54.9	269.2	Vertical	PASS
1957.606	-47.23	-13.0	34.2	73.1	Vertical	N.A
5628.429	-46.63	-13.0	33.6	36.5	Vertical	PASS
9698.254	-44.65	-13.0	31.7	48.4	Vertical	PASS

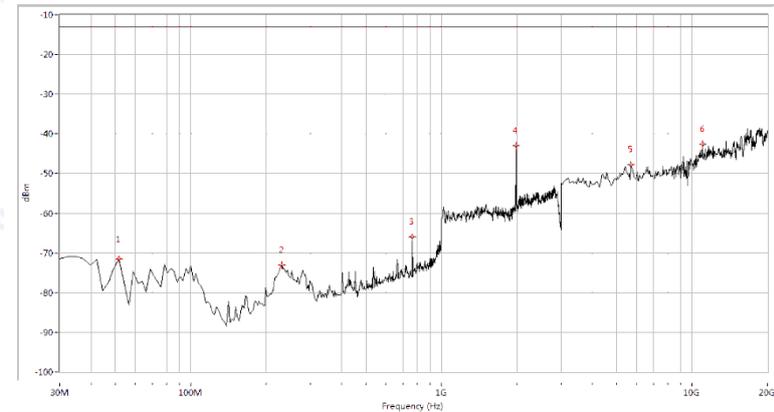(Plot F4:   WCDMA 1900MHz Channel = 9400, Test Antenna Vertical)
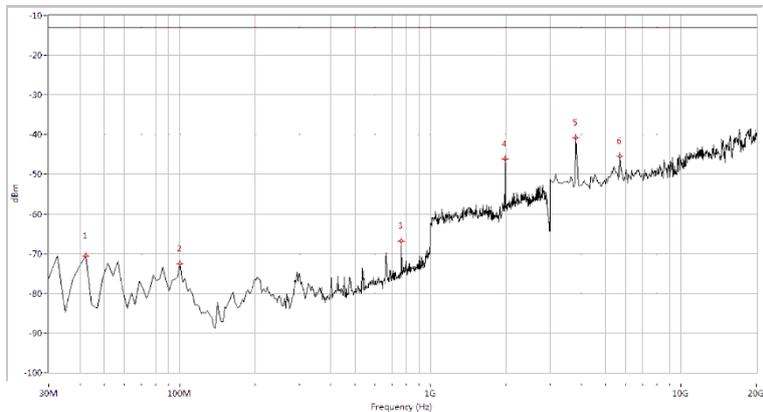
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-70.67	-13.0	57.7	4.2	Horizontal	PASS
100.150	-72.60	-13.0	59.6	38.6	Horizontal	PASS
765.362	-66.92	-13.0	53.9	258.5	Horizontal	PASS
1987.531	-46.13	-13.0	33.1	359.8	Horizontal	N.A
3805.486	-40.83	-13.0	27.8	235.3	Horizontal	PASS
5713.217	-45.48	-13.0	32.5	250.5	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
51.771	-71.42	-13.0	58.4	342.1	Vertical	PASS
230.773	-73.02	-13.0	60.0	268.4	Vertical	PASS
765.362	-65.97	-13.0	53.0	173.4	Vertical	PASS
1987.531	-43.04	-13.0	30.0	52.8	Vertical	N.A
5713.217	-47.81	-13.0	34.8	95.6	Vertical	PASS
11012.469	-42.58	-13.0	29.6	111.0	Vertical	PASS

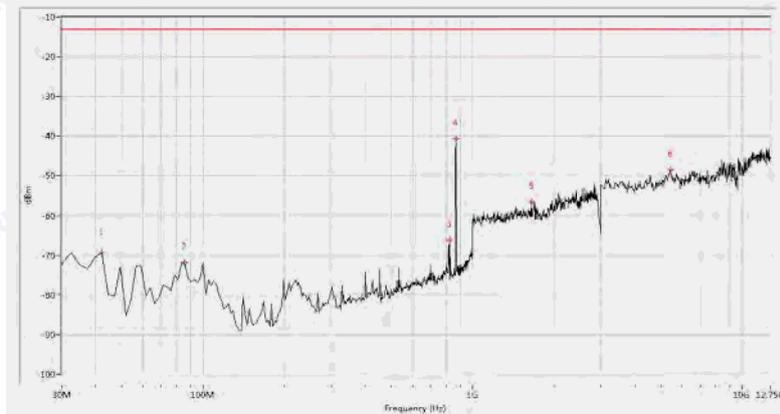(Plot F6:   WCDMA 1900MHz Channel = 9538, Test Antenna Vertical)
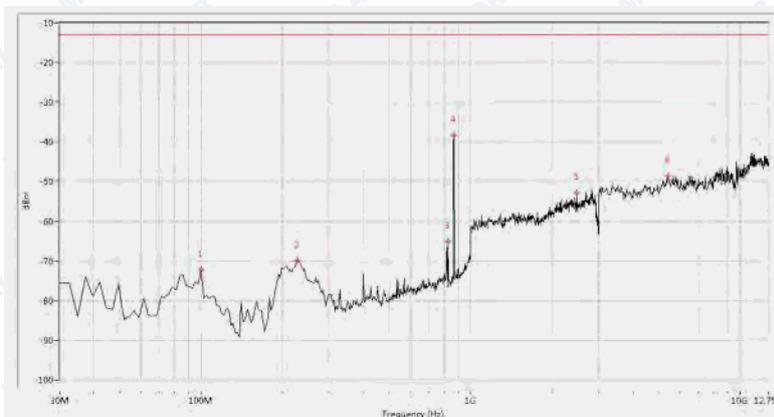
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-72.25	-13.0	59.2	91.4	Horizontal	PASS
228.354	-69.90	-13.0	56.9	-0.0	Horizontal	PASS
825.835	-65.03	-13.0	52.0	191.5	Horizontal	N.A
869.377	-38.26	-13.0	25.3	360.0	Horizontal	N.A
2476.309	-52.78	-13.0	39.8	202.2	Horizontal	PASS
5407.107	-48.64	-13.0	35.6	306.0	Horizontal	PASS

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

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Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-69.35	-13.0	56.4	345.8	Vertical	PASS
85.636	-71.79	-13.0	58.8	95.6	Vertical	PASS
825.835	-66.10	-13.0	53.1	264.5	Vertical	N.A
869.377	-40.68	-13.0	27.7	158.3	Vertical	N.A
1653.367	-56.60	-13.0	43.6	67.4	Vertical	PASS
5431.421	-48.56	-13.0	35.6	57.6	Vertical	PASS

(Plot G2:   HSDPA 850MHz Channel = 4132, Test Antenna Vertical)
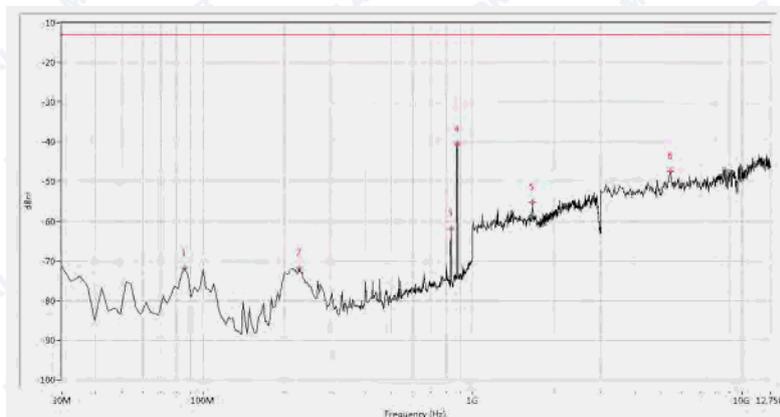
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-71.93	-13.0	58.9	94.8	Horizontal	PASS
228.354	-71.79	-13.0	58.8	197.9	Horizontal	PASS
835.511	-61.90	-13.0	48.9	326.7	Horizontal	N.A
879.052	-40.46	-13.0	27.5	152.8	Horizontal	N.A
1673.317	-55.22	-13.0	42.2	247.1	Horizontal	PASS
5431.421	-47.48	-13.0	34.5	0.5	Horizontal	PASS

(Plot G3:   HSDPA 850MHz Channel = 4175, Test Antenna Horizontal)
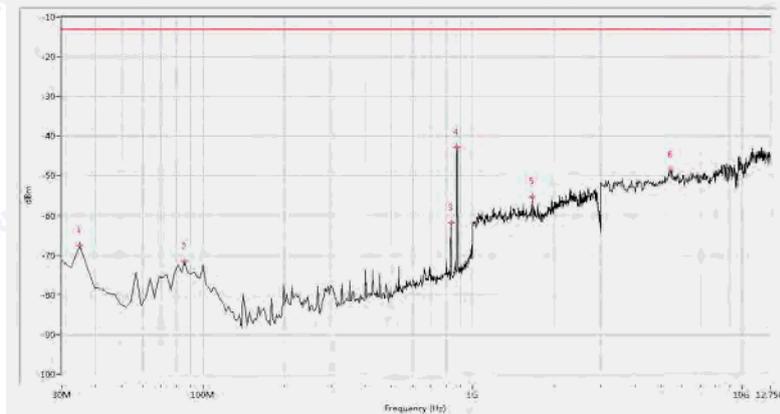
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-67.63	-13.0	54.6	63.4	Vertical	PASS
85.636	-71.74	-13.0	58.7	195.8	Vertical	PASS
835.511	-61.91	-13.0	48.9	264.7	Vertical	N.A
876.633	-42.78	-13.0	29.8	23.5	Vertical	N.A
1668.329	-55.32	-13.0	42.3	269.5	Vertical	PASS
5431.421	-48.43	-13.0	35.4	86.4	Vertical	PASS

(Plot G4:   HSDPA 850MHz Channel = 4175, Test Antenna Vertical)
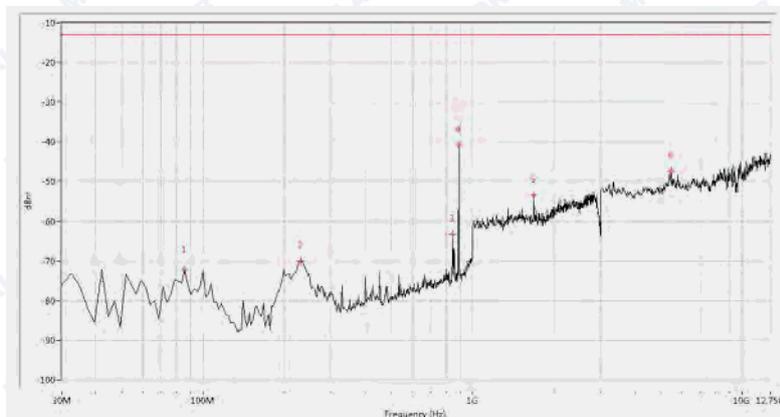
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-72.17	-13.0	59.2	169.4	Horizontal	PASS
230.773	-70.10	-13.0	57.1	65.4	Horizontal	PASS
845.187	-63.35	-13.0	50.4	89.2	Horizontal	N.A
891.147	-40.89	-13.0	27.9	136.8	Horizontal	N.A
1693.267	-53.48	-13.0	40.5	91.1	Horizontal	PASS
5455.736	-47.38	-13.0	34.4	0.0	Horizontal	PASS

(Plot G5:   HSDPA 850MHz Channel = 4233, Test Antenna Horizontal)
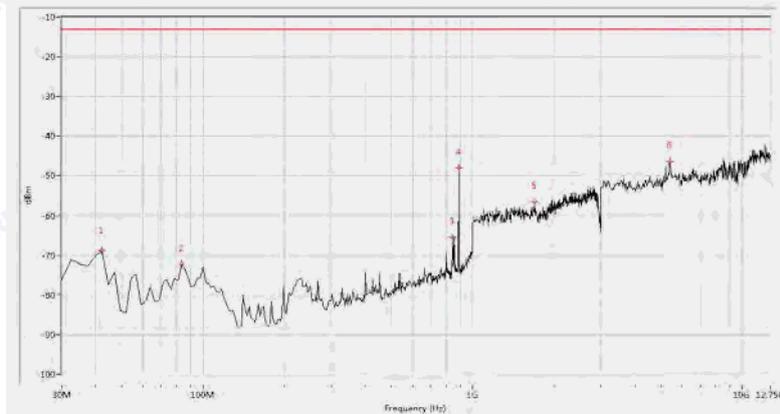
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-68.80	-13.0	55.8	210.7	Vertical	PASS
83.217	-72.24	-13.0	59.2	263.2	Vertical	PASS
845.187	-65.51	-13.0	52.5	256.9	Vertical	N.A
891.147	-47.98	-13.0	35.0	263.6	Vertical	N.A
1703.242	-56.46	-13.0	43.5	219.3	Vertical	PASS
5407.107	-46.43	-13.0	33.4	17.7	Vertical	PASS

(Plot G6:   HSDPA 850MHz Channel = 4233, Test Antenna Vertical)
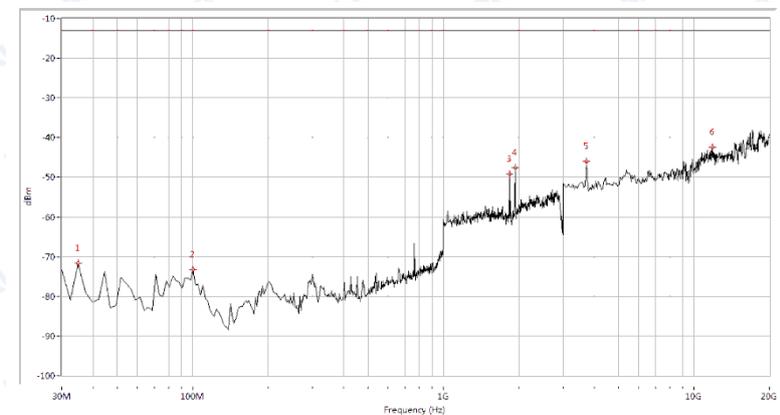
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-71.58	-13.0	58.6	107.2	Horizontal	PASS
100.150	-73.19	-13.0	60.2	46.9	Horizontal	PASS
1837.905	-49.19	-13.0	36.2	194.9	Horizontal	N.A
1932.668	-47.56	-13.0	34.6	102.0	Horizontal	N.A
3720.698	-46.00	-13.0	33.0	138.6	Horizontal	PASS
11817.955	-42.39	-13.0	29.4	334.8	Horizontal	PASS

(Plot H1:   HSDPA 1900MHz Channel = 9262, Test Antenna Horizontal)
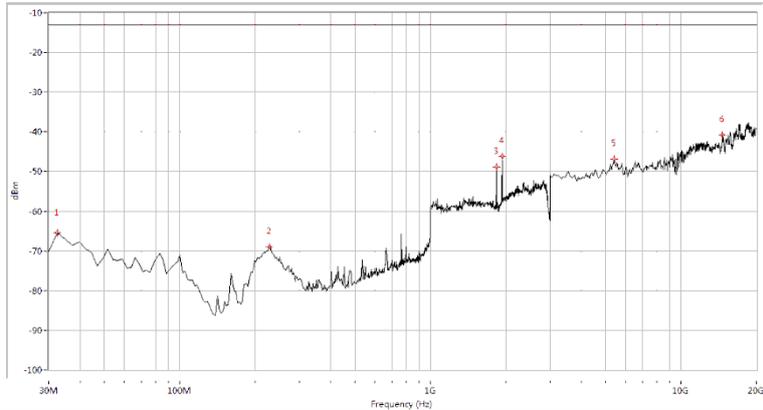
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
32.419	-65.48	-13.0	52.5	159.4	Vertical	PASS
228.354	-69.02	-13.0	56.0	137.4	Vertical	PASS
1837.905	-48.82	-13.0	35.8	221.9	Vertical	N.A
1932.668	-46.11	-13.0	33.1	147.5	Vertical	N.A
5416.459	-46.89	-13.0	33.9	360.0	Vertical	PASS
14615.960	-40.84	-13.0	27.8	120.6	Vertical	PASS

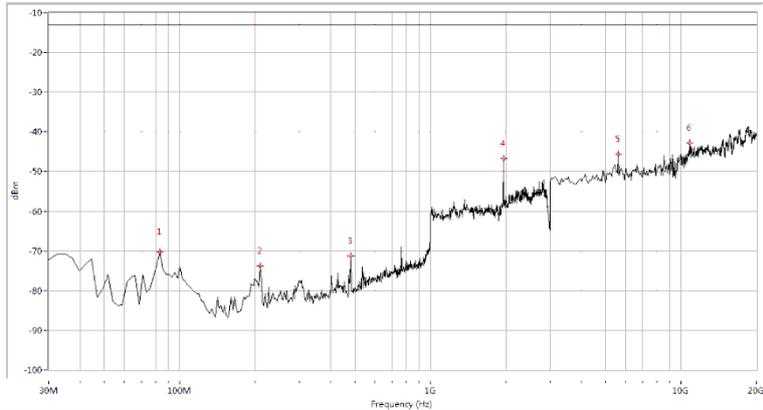(Plot H2: HSDPA 1900MHz Channel = 9262, Test Antenna Vertical)
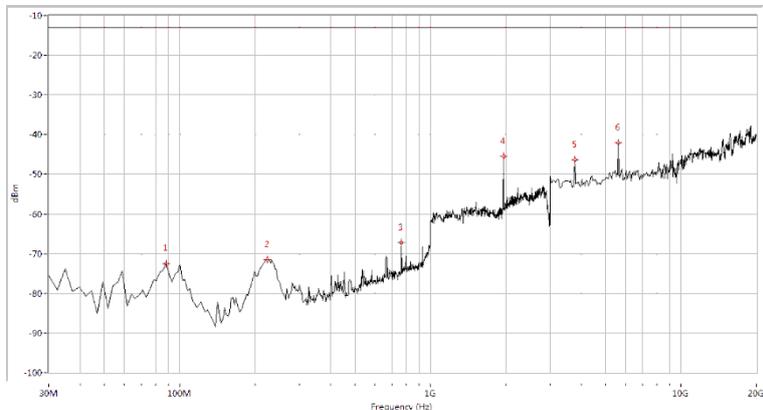
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
88.055	-72.50	-13.0	59.5	187.5	Horizontal	PASS
223.516	-71.44	-13.0	58.4	21.1	Horizontal	PASS
765.362	-67.19	-13.0	54.2	263.1	Horizontal	PASS
1957.606	-45.55	-13.0	32.6	86.9	Horizontal	N.A
3763.092	-46.28	-13.0	33.3	195.6	Horizontal	PASS
5628.429	-42.17	-13.0	29.2	195.6	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
83.217	-70.32	-13.0	57.3	36.4	Vertical	PASS
209.002	-73.74	-13.0	60.7	52.8	Vertical	PASS
479.925	-71.22	-13.0	58.2	164.2	Vertical	PASS
1957.606	-46.79	-13.0	33.8	269.9	Vertical	N.A
5628.429	-45.70	-13.0	32.7	0.2	Vertical	PASS
10842.893	-42.87	-13.0	29.9	248.6	Vertical	PASS

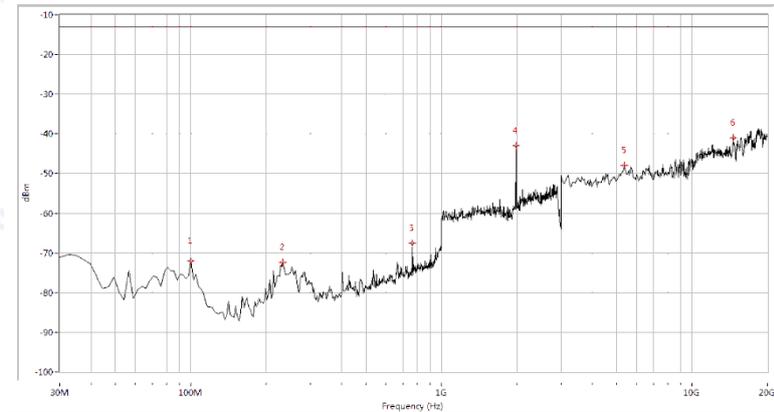(Plot H4:   HSDPA 1900MHz Channel = 9400, Test Antenna Vertical)
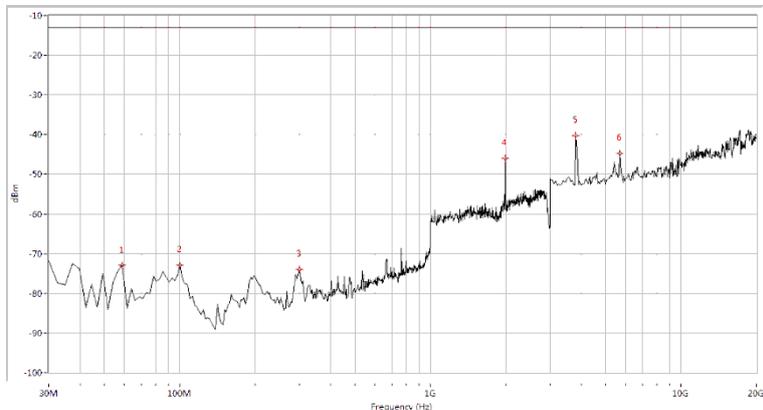
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
59.027	-72.87	-13.0	59.9	72.3	Horizontal	PASS
100.150	-72.93	-13.0	59.9	-0.0	Horizontal	PASS
300.923	-73.98	-13.0	61.0	354.3	Horizontal	PASS
1987.531	-46.02	-13.0	33.0	257.6	Horizontal	N.A
3805.486	-40.37	-13.0	27.4	195.3	Horizontal	PASS
5713.217	-44.70	-13.0	31.7	274.5	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-72.09	-13.0	59.1	132.4	Vertical	PASS
233.192	-72.32	-13.0	59.3	70.0	Vertical	PASS
765.362	-67.50	-13.0	54.5	123.7	Vertical	PASS
1987.531	-43.00	-13.0	30.0	0.5	Vertical	N.A
5374.065	-47.98	-13.0	35.0	146.5	Vertical	PASS
14573.566	-40.92	-13.0	27.9	16.1	Vertical	PASS

(Plot H6:   HSDPA 1900MHz Channel = 9538, Test Antenna Vertical)
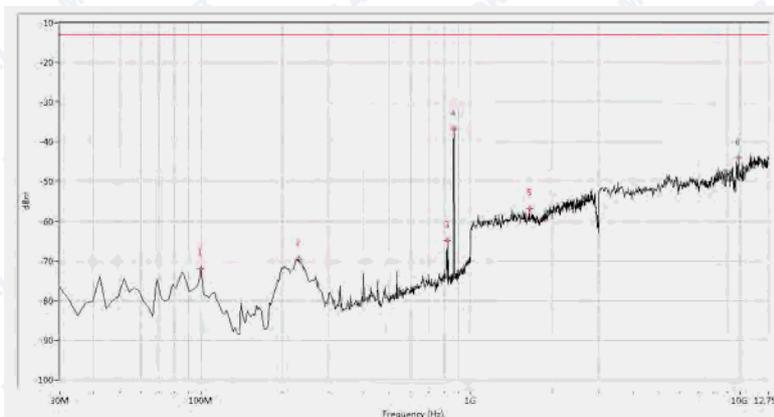
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-71.93	-13.0	58.9	69.4	Horizontal	PASS
230.773	-69.57	-13.0	56.6	153.4	Horizontal	PASS
825.835	-64.87	-13.0	51.9	52.8	Horizontal	N.A
869.377	-36.79	-13.0	23.8	305.7	Horizontal	N.A
1653.367	-56.95	-13.0	44.0	268.9	Horizontal	PASS
9856.608	-44.05	-13.0	31.0	196.4	Horizontal	PASS

(Plot I1:   HSUPA 850MHz Channel = 4132, Test Antenna Horizontal)
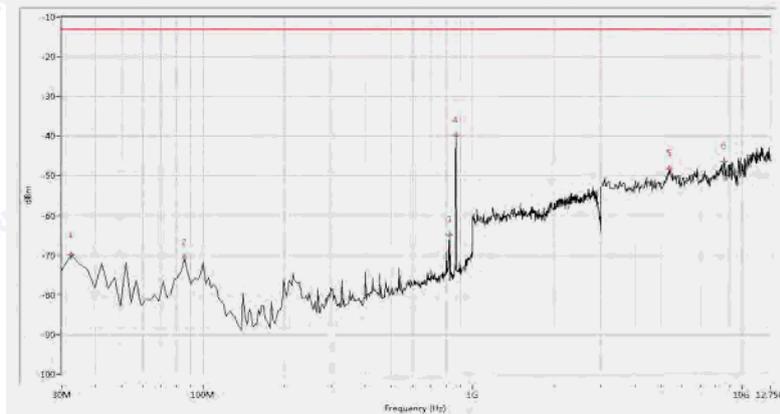
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
32.419	-69.96	-13.0	57.0	199.4	Vertical	PASS
85.636	-70.68	-13.0	57.7	341.7	Vertical	PASS
825.835	-64.95	-13.0	52.0	166.1	Vertical	N.A
869.377	-39.79	-13.0	26.8	75.7	Vertical	N.A
5358.479	-48.19	-13.0	35.2	71.9	Vertical	PASS
8567.955	-46.41	-13.0	33.4	355.6	Vertical	PASS

(Plot I2: HSUPA 850MHz Channel = 4132, Test Antenna Vertical)
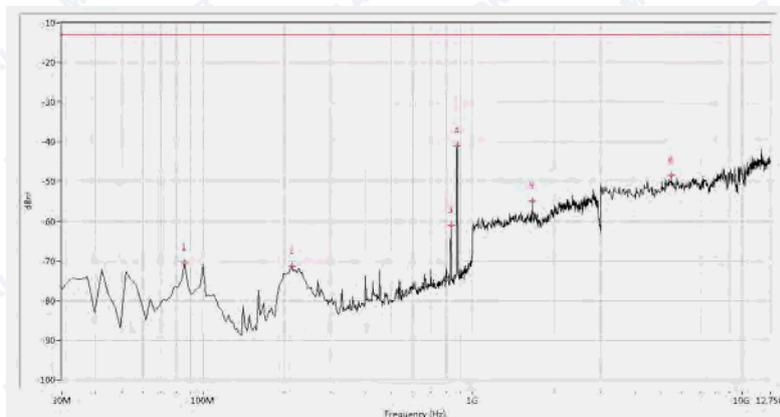
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-70.66	-13.0	57.7	266.2	Horizontal	PASS
213.840	-71.38	-13.0	58.4	15.7	Horizontal	PASS
833.092	-60.94	-13.0	47.9	190.1	Horizontal	N.A
879.052	-41.00	-13.0	28.0	288.9	Horizontal	N.A
1668.329	-54.87	-13.0	41.9	256.9	Horizontal	PASS
5480.050	-48.49	-13.0	35.5	288.9	Horizontal	PASS

(Plot I3: HSUPA 850MHz Channel = 4175, Test Antenna Horizontal)
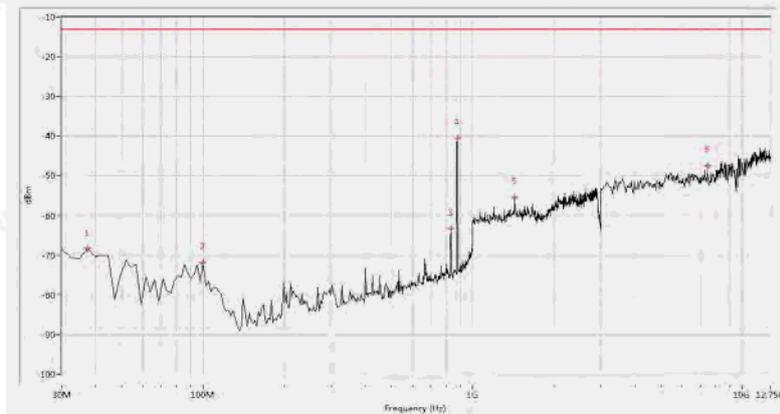
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-68.24	-13.0	55.2	63.8	Vertical	PASS
100.150	-71.85	-13.0	58.8	48.5	Vertical	PASS
835.511	-63.34	-13.0	50.3	195.4	Vertical	N.A
879.052	-40.47	-13.0	27.5	246.7	Vertical	N.A
1433.915	-55.51	-13.0	42.5	0.0	Vertical	PASS
7449.501	-47.50	-13.0	34.5	10.9	Vertical	PASS

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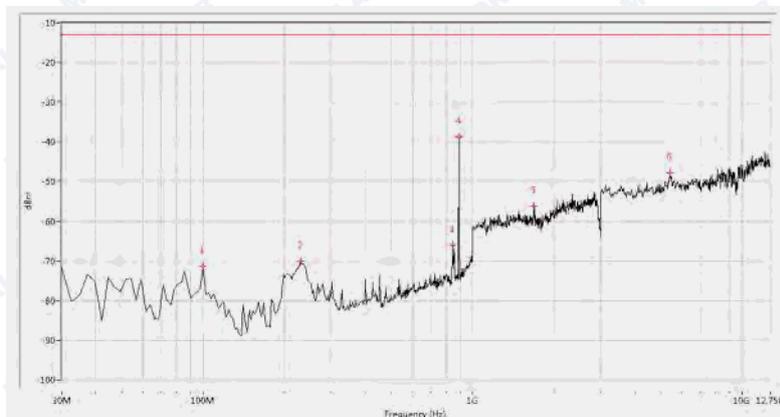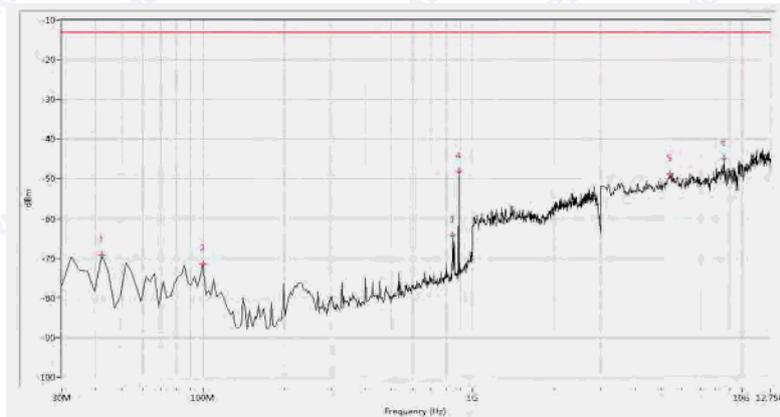

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-71.35	-13.0	58.4	167.5	Horizontal	PASS
230.773	-70.11	-13.0	57.1	65.8	Horizontal	PASS
845.187	-65.89	-13.0	52.9	256.8	Horizontal	N.A
888.728	-38.64	-13.0	25.6	139.4	Horizontal	N.A
1693.267	-56.22	-13.0	43.2	54.6	Horizontal	PASS
5407.107	-47.83	-13.0	34.8	28.2	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-69.19	-13.0	56.2	169.4	Vertical	PASS
100.150	-71.46	-13.0	58.5	263.8	Vertical	PASS
845.187	-64.25	-13.0	51.2	152.0	Vertical	N.A
888.728	-48.09	-13.0	35.1	0.8	Vertical	N.A
5407.107	-48.90	-13.0	35.9	21.4	Vertical	PASS
8567.955	-44.98	-13.0	32.0	86.4	Vertical	PASS

(Plot I6:   HSUPA 850MHz Channel = 4233, Test Antenna Vertical)
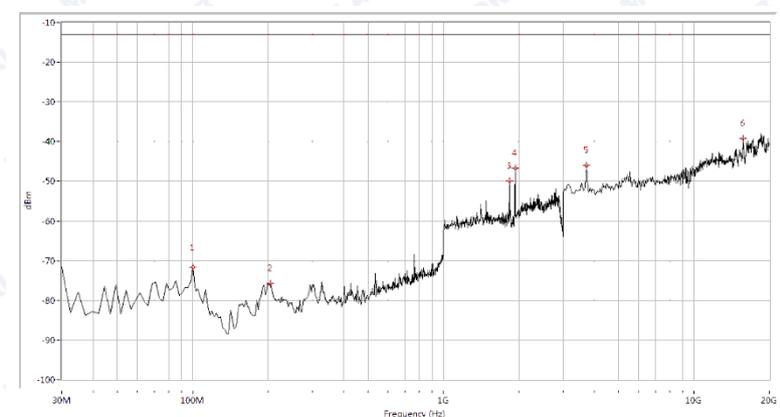
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-71.58	-13.0	58.6	189.1	Horizontal	PASS
204.165	-75.80	-13.0	62.8	16.8	Horizontal	PASS
1837.905	-49.84	-13.0	36.8	284.8	Horizontal	N.A
1932.668	-46.66	-13.0	33.7	157.2	Horizontal	N.A
3720.698	-45.97	-13.0	33.0	178.6	Horizontal	PASS
15718.204	-39.22	-13.0	26.2	3.4	Horizontal	PASS

(Plot J1:   HSUPA 1900MHz Channel = 9262, Test Antenna Horizontal)
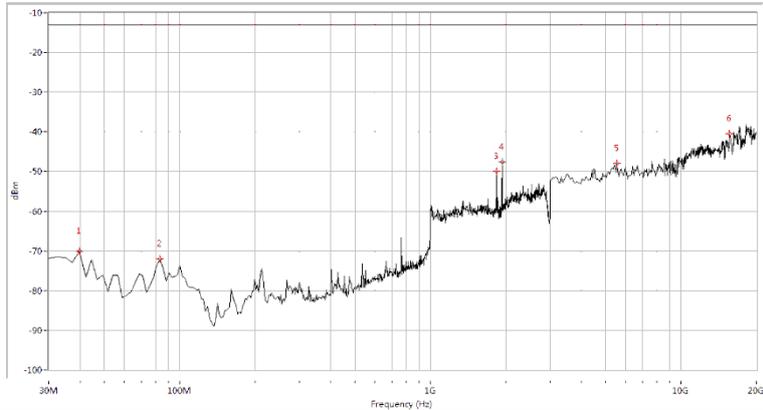
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-70.07	-13.0	57.1	207.8	Vertical	PASS
83.217	-72.03	-13.0	59.0	360.0	Vertical	PASS
1837.905	-49.85	-13.0	36.8	160.9	Vertical	N.A
1932.668	-47.68	-13.0	34.7	151.2	Vertical	N.A
5543.641	-47.90	-13.0	34.9	167.5	Vertical	PASS
15633.416	-40.45	-13.0	27.5	270.6	Vertical	PASS

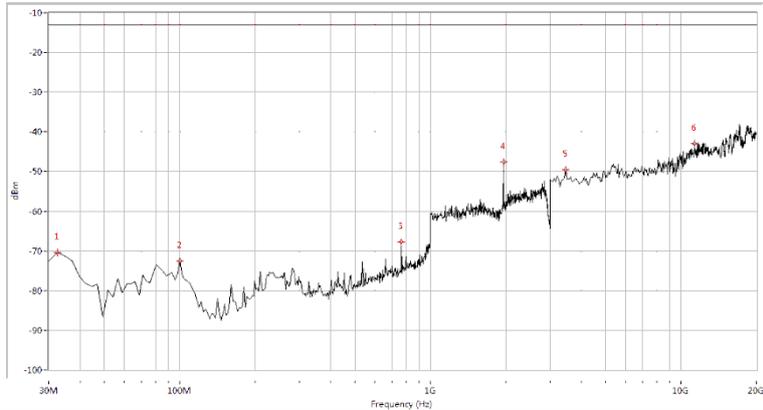(Plot J2:   HSUPA 1900MHz Channel = 9262, Test Antenna Vertical)
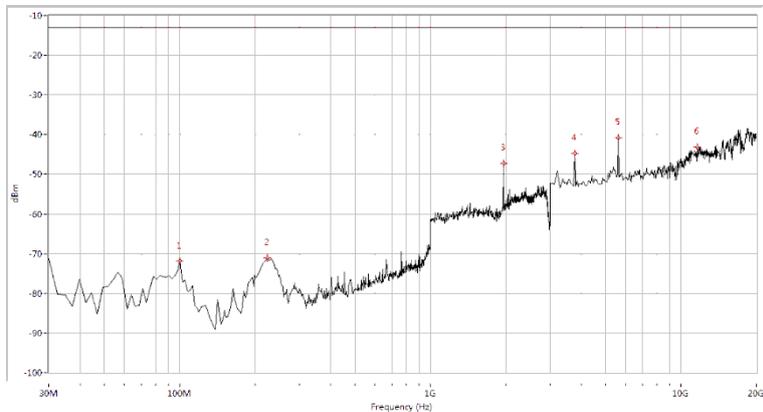
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-71.82	-13.0	58.8	118.1	Horizontal	PASS
223.516	-71.04	-13.0	58.0	8.8	Horizontal	PASS
1957.606	-47.17	-13.0	34.2	13.1	Horizontal	N.A
3763.092	-44.68	-13.0	31.7	268.7	Horizontal	PASS
5628.429	-40.85	-13.0	27.9	199.0	Horizontal	PASS
11648.379	-43.11	-13.0	30.1	357.8	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
32.419	-70.42	-13.0	57.4	352.8	Vertical	PASS
100.150	-72.56	-13.0	59.6	201.0	Vertical	PASS
765.362	-67.77	-13.0	54.8	194.5	Vertical	PASS
1957.606	-47.54	-13.0	34.5	16.5	Vertical	N.A
3466.334	-49.49	-13.0	36.5	24.3	Vertical	PASS
11351.621	-42.95	-13.0	30.0	3.5	Vertical	PASS

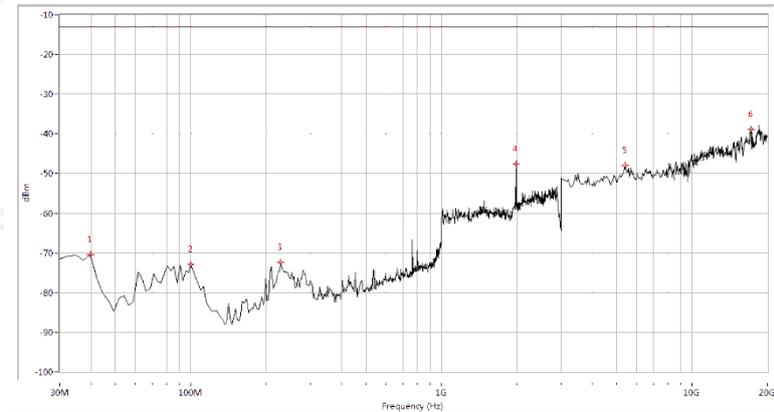(Plot J4: HSUPA 1900MHz Channel = 9400, Test Antenna Vertical)
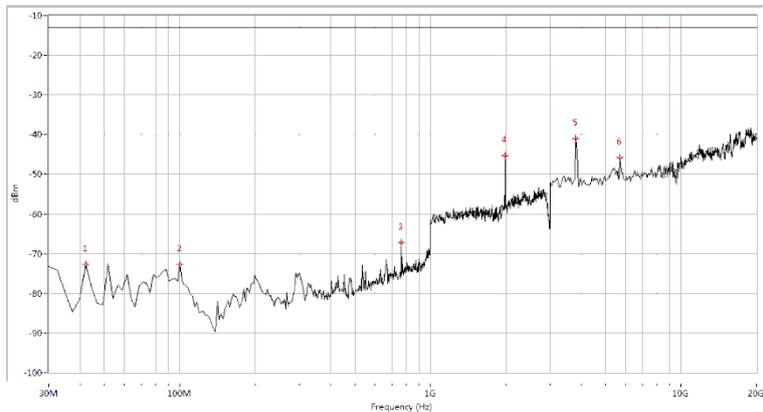
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-72.72	-13.0	59.7	207.1	Horizontal	PASS
100.150	-72.67	-13.0	59.7	126.0	Horizontal	PASS
765.362	-67.29	-13.0	54.3	263.3	Horizontal	PASS
1987.531	-45.32	-13.0	32.3	213.9	Horizontal	N.A
3805.486	-41.01	-13.0	28.0	157.5	Horizontal	PASS
5713.217	-45.77	-13.0	32.8	209.6	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-70.40	-13.0	57.4	82.3	Vertical	PASS
100.150	-72.89	-13.0	59.9	142.6	Vertical	PASS
228.354	-72.46	-13.0	59.5	191.3	Vertical	PASS
1982.544	-47.63	-13.0	34.6	122.8	Vertical	N.A
5416.459	-47.90	-13.0	34.9	348.0	Vertical	PASS
17159.601	-38.91	-13.0	25.9	352.3	Vertical	PASS

(Plot J6:   HSUPA 1900MHz Channel = 9538, Test Antenna Vertical)
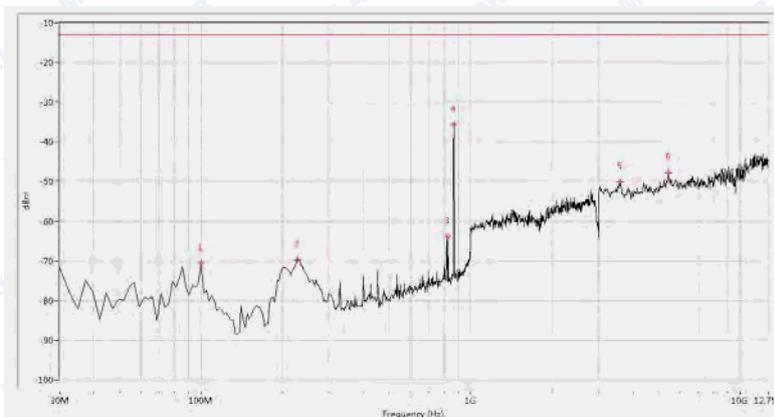
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
100.150	-70.62	-13.0	57.6	185.3	Horizontal	PASS
228.354	-69.66	-13.0	56.7	317.5	Horizontal	PASS
825.835	-63.88	-13.0	50.9	191.3	Horizontal	N.A
871.796	-35.67	-13.0	22.7	-0.0	Horizontal	N.A
3583.541	-50.18	-13.0	37.2	12.4	Horizontal	PASS
5431.421	-47.85	-13.0	34.8	5.8	Horizontal	PASS

(Plot K1:   HSPA+ 850MHz Channel = 4132, Test Antenna Horizontal)
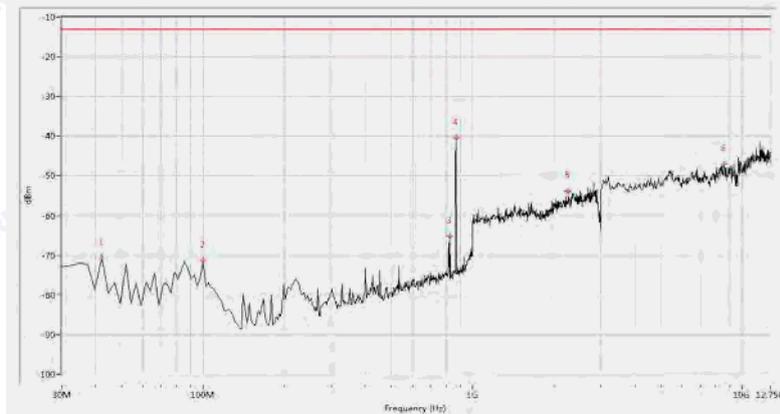
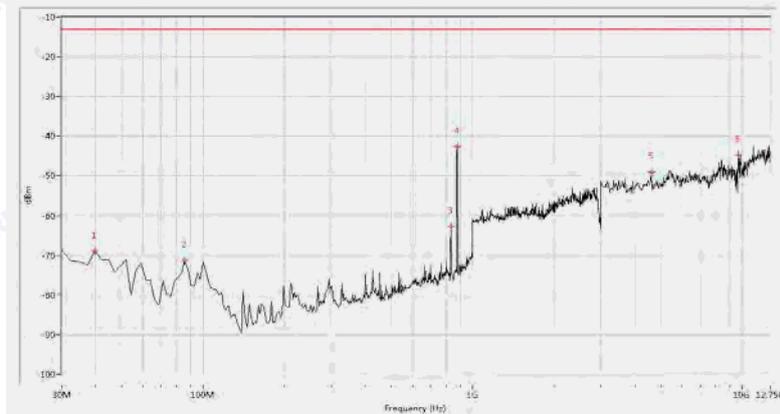| Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-70.56	-13.0	57.6	125.8	Vertical	PASS
100.150	-71.38	-13.0	58.4	214.0	Vertical	PASS
825.835	-65.29	-13.0	52.3	224.4	Vertical	N.A
871.796	-40.39	-13.0	27.4	76.3	Vertical	N.A
2261.845	-53.79	-13.0	40.8	178.3	Vertical	PASS
8567.955	-47.11	-13.0	34.1	101.6	Vertical	PASS

(Plot K2:   HSPA+ 850MHz Channel = 4132, Test Antenna Vertical)
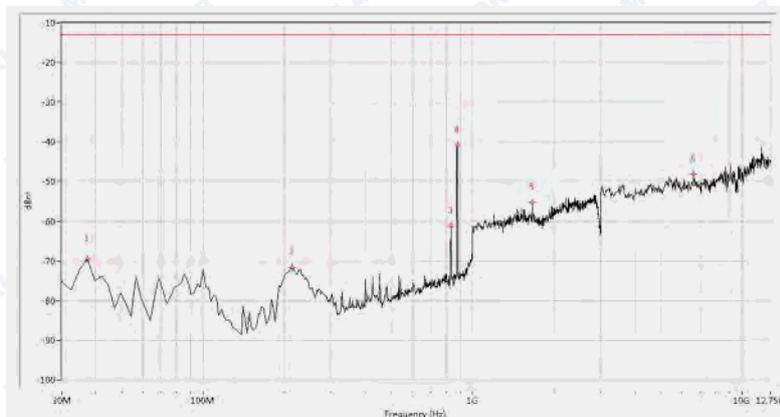
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-69.48	-13.0	56.5	190.9	Horizontal	PASS
213.840	-71.61	-13.0	58.6	229.2	Horizontal	PASS
835.511	-61.13	-13.0	48.1	40.6	Horizontal	N.A
879.052	-40.76	-13.0	27.8	129.1	Horizontal	N.A
1668.329	-55.26	-13.0	42.3	-0.0	Horizontal	PASS
6622.818	-48.22	-13.0	35.2	308.9	Horizontal	PASS

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

Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-68.93	-13.0	55.9	137.7	Vertical	PASS
85.636	-71.29	-13.0	58.3	215.9	Vertical	PASS
833.092	-62.76	-13.0	49.8	69.6	Vertical	N.A
879.052	-42.54	-13.0	29.5	236.8	Vertical	N.A
4604.738	-49.12	-13.0	36.1	81.2	Vertical	PASS
9710.723	-44.69	-13.0	31.7	276.6	Vertical	PASS

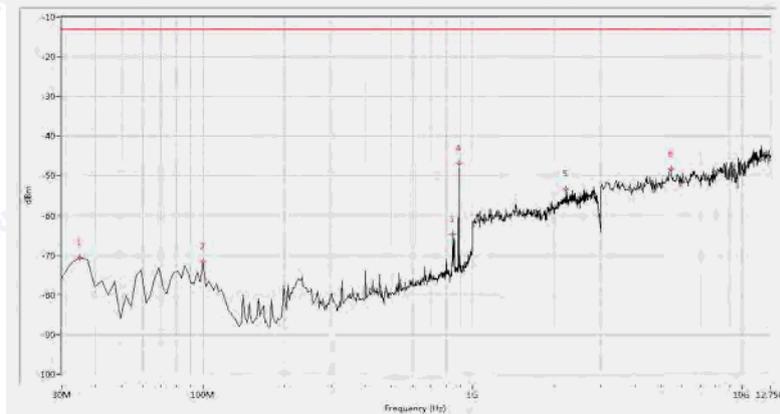(Plot K4:   HSPA+ 850MHz Channel = 4175, Test Antenna Vertical)
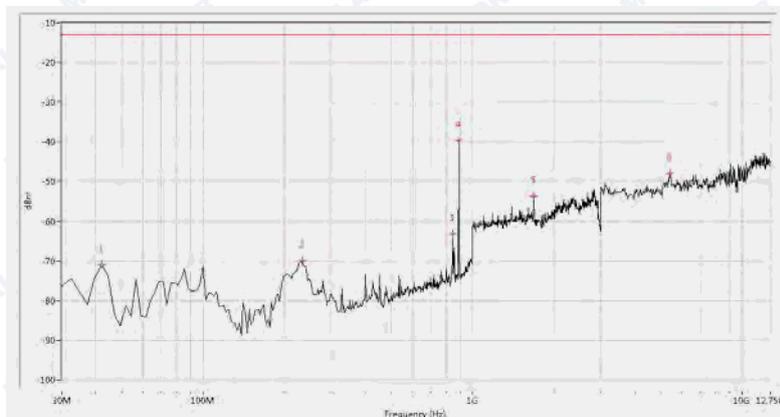
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-70.91	-13.0	57.9	177.1	Horizontal	PASS
233.192	-69.84	-13.0	56.8	87.1	Horizontal	PASS
845.187	-63.17	-13.0	50.2	212.5	Horizontal	N.A
888.728	-39.55	-13.0	26.6	66.3	Horizontal	N.A
1693.267	-53.66	-13.0	40.7	50.7	Horizontal	PASS
5407.107	-47.99	-13.0	35.0	230.7	Horizontal	PASS

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

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Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
34.838	-70.54	-13.0	57.5	89.6	Vertical	PASS
100.150	-71.72	-13.0	58.7	131.3	Vertical	PASS
845.187	-64.79	-13.0	51.8	228.5	Vertical	N.A
888.728	-46.93	-13.0	33.9	57.0	Vertical	N.A
2226.933	-53.35	-13.0	40.3	57.0	Vertical	PASS
5455.736	-48.31	-13.0	35.3	302.2	Vertical	PASS

(Plot K6:   HSPA+ 850MHz Channel = 4233, Test Antenna Vertical)
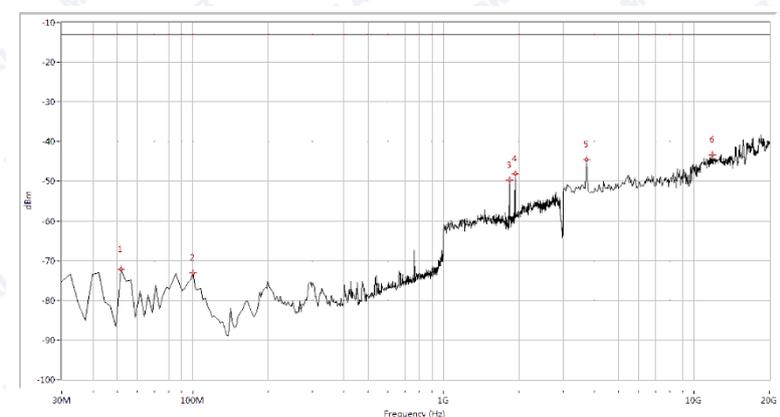
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
51.771	-72.22	-13.0	59.2	154.5	Horizontal	PASS
100.150	-73.04	-13.0	60.0	24.2	Horizontal	PASS
1837.905	-49.81	-13.0	36.8	358.0	Horizontal	N.A
1932.668	-48.16	-13.0	35.2	179.4	Horizontal	N.A
3720.698	-44.63	-13.0	31.6	166.8	Horizontal	PASS
11817.955	-43.36	-13.0	30.4	45.4	Horizontal	PASS

(Plot L1:   HSPA+ 1900MHz Channel = 9262, Test Antenna Horizontal)
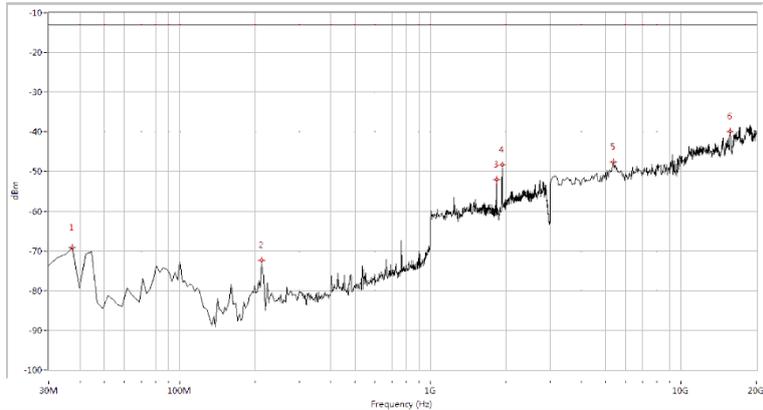
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
37.257	-69.20	-13.0	56.2	171.6	Vertical	PASS
211.421	-72.34	-13.0	59.3	203.6	Vertical	PASS
1837.905	-52.07	-13.0	39.1	198.4	Vertical	N.A
1932.668	-48.34	-13.0	35.3	11.1	Vertical	N.A
5374.065	-47.59	-13.0	34.6	164.1	Vertical	PASS
15675.810	-40.01	-13.0	27.0	45.5	Vertical	PASS

(Plot L2:   HSPA+ 1900MHz Channel = 9262, Test Antenna Vertical)
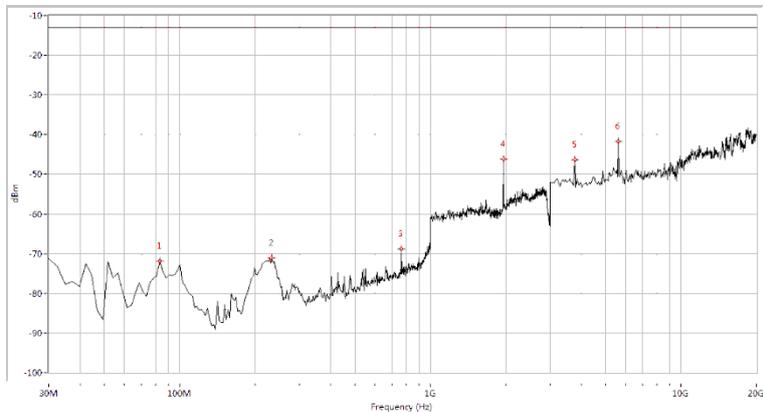
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
83.217	-71.91	-13.0	58.9	271.7	Horizontal	PASS
233.192	-71.14	-13.0	58.1	261.6	Horizontal	PASS
765.362	-68.78	-13.0	55.8	280.9	Horizontal	PASS
1957.606	-46.13	-13.0	33.1	305.9	Horizontal	N.A
3763.092	-46.33	-13.0	33.3	98.3	Horizontal	PASS
5628.429	-41.69	-13.0	28.7	23.5	Horizontal	PASS

(Plot L3:   HSPA+ 1900MHz Channel = 9400, Test Antenna Horizontal)
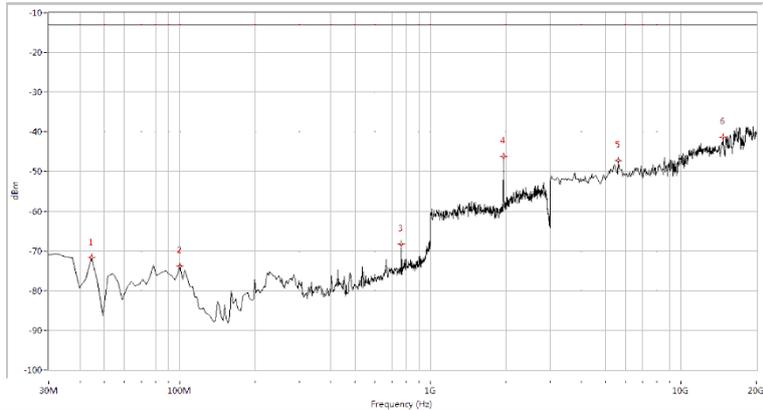
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
44.514	-71.57	-13.0	58.6	66.3	Vertical	PASS
100.150	-73.79	-13.0	60.8	282.8	Vertical	PASS
765.362	-68.31	-13.0	55.3	276.2	Vertical	PASS
1957.606	-46.26	-13.0	33.3	179.0	Vertical	N.A
5628.429	-47.24	-13.0	34.2	55.9	Vertical	PASS
14700.748	-41.40	-13.0	28.4	360.0	Vertical	PASS

(Plot L4: HSPA+ 1900MHz Channel = 9400, Test Antenna Vertical)
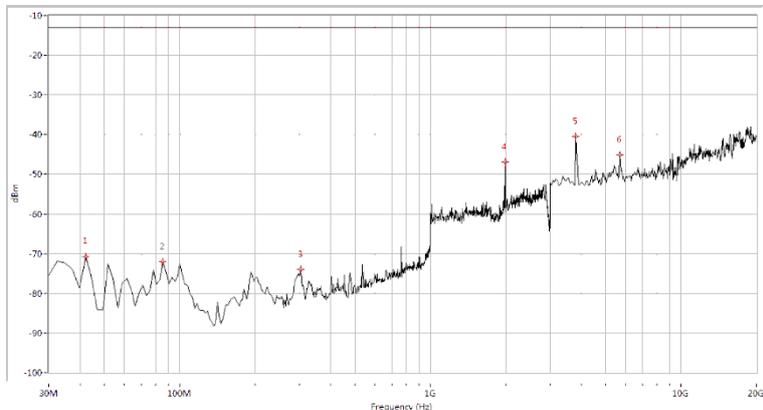
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
42.095	-70.72	-13.0	57.7	148.2	Horizontal	PASS
85.636	-71.94	-13.0	58.9	239.0	Horizontal	PASS
303.342	-73.95	-13.0	61.0	323.0	Horizontal	PASS
1987.531	-46.83	-13.0	33.8	360.0	Horizontal	N.A
3805.486	-40.40	-13.0	27.4	19.8	Horizontal	PASS
5713.217	-45.12	-13.0	32.1	360.0	Horizontal	PASS

(Plot L5: HSPA+ 1900MHz Channel = 9538, Test Antenna Horizontal)
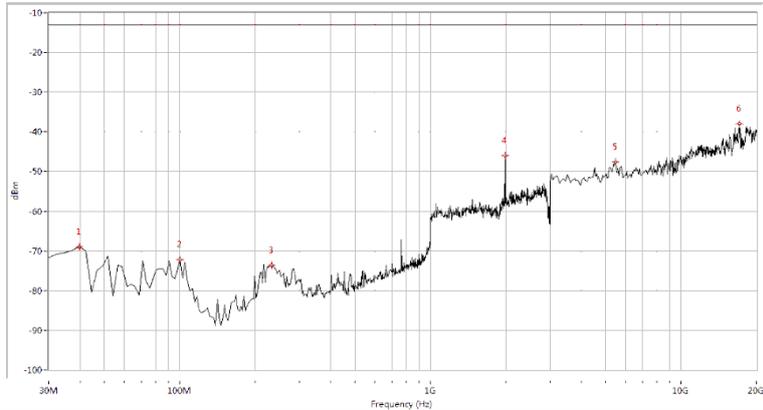
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
39.676	-68.91	-13.0	55.9	81.1	Vertical	PASS
100.150	-72.26	-13.0	59.3	206.9	Vertical	PASS
233.192	-73.63	-13.0	60.6	217.0	Vertical	PASS
1987.531	-45.98	-13.0	33.0	62.2	Vertical	N.A
5458.853	-47.55	-13.0	34.5	70.3	Vertical	PASS
17117.207	-37.92	-13.0	24.9	58.4	Vertical	PASS

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

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

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