

Report No.: SZ13090100W01



FCC TEST REPORT



Issued to

**GUANGDONG OPPO MOBILE
TELECOMMUNICATIONS CORP., LTD**

For

Mobile Phone

Model Name: OPPO N1
Trade Name: OPPO
Brand Name: OPPO
FCC ID : R9C-N1
Standard: 47 CFR Part 22 Subpart H
47 CFR Part 24 Subpart E
47 CFR Part 27 Subpart L
Test date: 2013-9-19 to 2013-10-22
Issue date: 2013-10-22

By

Shenzhen Morlab Communications Technology Co., Ltd.

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Nie Quan
(Test Engineer)

Date 2013.10.22



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Zeng Dexin
(Chief Engineer)
Date 2013.10.22

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Date 2013.10.22



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Change History		
Issue	Date	Reason for change
1.0	Oct 22, 2013	First edition

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type: Mobile Phone
 Serial No.....: (n.a, marked #1 by test site)
 Hardware Version: 213055
 Software Version: N1_11_130911
 Applicant: GUANGDONG OPPO MOBILE TELECOMMUNICATIONS
 CORP.,LTD
 NO.18 HAIBIN ROAD, WUSHA, CHANG'AN, DONGGUAN,
 GUANGDONG, CHINA
 Manufacturer: GUANGDONG OPPO MOBILE TELECOMMUNICATIONS
 CORP.,LTD
 NO.18 HAIBIN ROAD, WUSHA, CHANG'AN, DONGGUAN,
 GUANGDONG, CHINA
 Frequency Range.....: GSM 850MHz:
 Tx: 824.20 - 848.80MHz (at intervals of 200kHz);
 Rx: 869.20 - 893.80MHz (at intervals of 200kHz)
 GSM 1900MHz:
 Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz);
 Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz)
 WCDMA 850MHz
 Tx: 826.4 - 846.6MHz (at intervals of 200kHz);
 Rx: 871.4 - 891.6MHz (at intervals of 200kHz)
 WCDMA 1900MHz
 Tx: 1852.4 - 1907.6MHz (at intervals of 200kHz);
 Rx: 1932.4 - 1987.6MHz (at intervals of 200kHz)
 WCDMA 1700MHz
 Tx: 1712.4 - 1752.6MHz (at intervals of 200kHz);
 Rx: 2112.4 - 2152.6MHz (at intervals of 200kHz)
 Modulation Type.....: GSM,GPRS Mode with GMSK Modulation
 EDGE Mode with 8PSK Modulation
 WCDMA Mode with QPSK Modulation
 HSDPA Mode with QPSK Modulation
 HSUPA Mode with QPSK Modulation
 HSPA+ Mode with QPSK Modulation
 Multislot Class.....: GPRS: Multislot Class12,EGPRS: Multislot Class12
 Antenna Type.....: PIFA Antenna
 Emission Designators: GSM 850:253KGXW,GSM 1900:248KGXW
 EGPRS850:247KG7W, EGPRS1900:251KG7W,

WCDMA 850:4M19F9W ,WCDMA1900:4M18F9W
WCDMA1700:4M18F9W

- Note 1:* The transmitter (Tx) frequency arrangement of the Cellular 850MHz band used by the EUT can be represented with the formula $F(n)=824.2+0.2*(n-128)$, $128 \leq n \leq 251$; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately 128 (824.2MHz), 190 (836.6MHz) and 251 (848.8MHz).
- Note 2:* The transmitter (Tx) frequency arrangement of the PCS 1900MHz band used by the EUT can be represented with the formula $F(n)=1850.2+0.2*(n-512)$, $512 \leq n \leq 810$; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 512 (1850.2MHz), 661 (1880.0MHz) and 810 (1909.8MHz).
- Note 3:* The transmitter (Tx) frequency arrangement of the WCDMA 850MHz band used by the EUT can be represented with the formula $F(n)=826.4+0.2*(n-4132)$, $4132 \leq n \leq 4233$; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 4132 (826.4MHz), 4175(835MHz) and 4233 (846.6MHz).
- Note 4:* The transmitter (Tx) frequency arrangement of the WCDMA 1900MHz band used by the EUT can be represented with the formula $F(n)=1852.4+0.2*(n-9262)$, $9262 \leq n \leq 9538$; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 9262 (1852.4MHz), 9400 (1880MHz) and 9538 (1907.6MHz).
- Note 5:* The transmitter (Tx) frequency arrangement of the WCDMA 1700MHz band used by the EUT can be represented with the formula $F(n)=1712.4+0.2*(n-1312)$, $1312 \leq n \leq 1513$; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 1312 (1712.4MHz), 1412 (1732.4MHz) and 1513 (1752.6MHz).
- Note 6:* For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2, Part 22 and Part 24,27for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 2 (10-1-09 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-09 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-09 Edition)	Personal Communications Services
4	47 CFR Part 27 (10-1-09 Edition)	Miscellaneous Wireless Communications Services

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	2.1046	Conducted RF Output Power	PASS
2.	24.232(d) ,27.50(d)(5)	Peak to average radio	PASS
2	2.1049,22.917 24.238, 27.53(g)	99% Occupied Bandwidth	PASS
3	2.1055,22.355 24.235,27.54	Frequency Stability	PASS
4	2.1051,2.1057 22.917,24.238, 27.53(g)	Conducted Out of Band Emissions	PASS
5	2.1051,2.1057 22.917,24.238 27.53(g)(h)	Band Edge	PASS
6	22.913,24.232 27.50(d)(4)	Transmitter Radiated Power (EIPR/ERP)	PASS
7	2.1053,2.1057 22.917,24.238 27.53(g)	Radiated Out of Band Emissions	PASS

NOTE: Measurement method according to TIA/EIA 603.D-2010

1.3 Facilities and Accreditations

1.3.1 Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, No.8 LongChang Road,Block 67, BaoAn District, ShenZhen, GuangDong Province,P. R. China 518101. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 695796.

1.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR PART 2, PART 22H & 24E 27L REQUIREMENTS

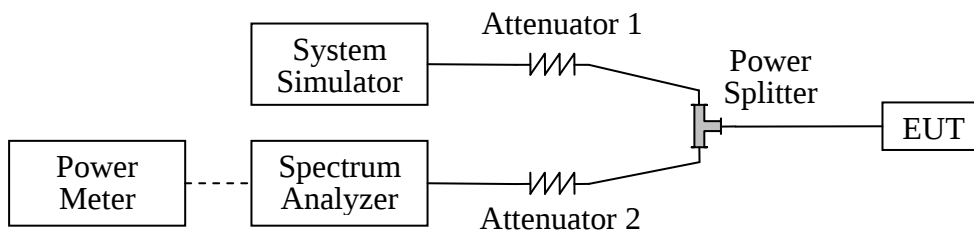
2.1 Conducted RF Output Power

2.1.1 Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

2.1.2 Test Description

1. Test Setup:



The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

The Power Meter was just used for the Conducted RF Output Power test of WCDMA Model.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2013.05	2014.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2013.05	2014.05
Power Meter	Agilent	E4418B	GB43318055	2013.05	2014.05
Power Sensor	Agilent	8482A	MY41091706	2013.05	2014.05
Power Splitter	Weinschel	1506A	NW521	2013.05	2014.05
Attenuator 1	Resnet	20dB	(n.a.)	2013.05	2014.05
Attenuator 2	Resnet	3dB	(n.a.)	2013.05	2014.05

2.1.3 Test Results

Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT.

1. GSM Model Test Verdict:

Band	Channel	Frequency (MHz)	Measured Output Power		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 850MHz	128	824.2	32.11	Plot A1 to A3	35	PASS
	190	836.6	32.36			PASS
	251	848.8	32.17			PASS
GSM 1900MHz	512	1850.2	29.61	Plot B1 to B3	32	PASS
	661	1880.0	29.15			PASS
	810	1909.8	28.66			PASS
GPRS 850MHz	128	824.2	31.62	Plot C1 to C3 ^{Note 1}	35	PASS
	190	836.6	31.55			PASS
	251	848.8	31.34			PASS
GPRS 1900MHz	512	1850.2	27.57	Plot D1 to D3 ^{Note 1}	32	PASS
	661	1880.0	27.36			PASS
	810	1909.8	26.95			PASS
EGPRS 850MHz	128	824.2	31.59	Plot E1 to E3 ^{Note 1}	35	PASS
	190	836.6	31.47			PASS
	251	848.8	31.28			PASS
EGPRS 1900MHz	512	1850.2	27.48	Plot F1 to F3 ^{Note 1}	32	PASS
	661	1880.0	27.27			PASS
	810	1909.8	26.89			PASS

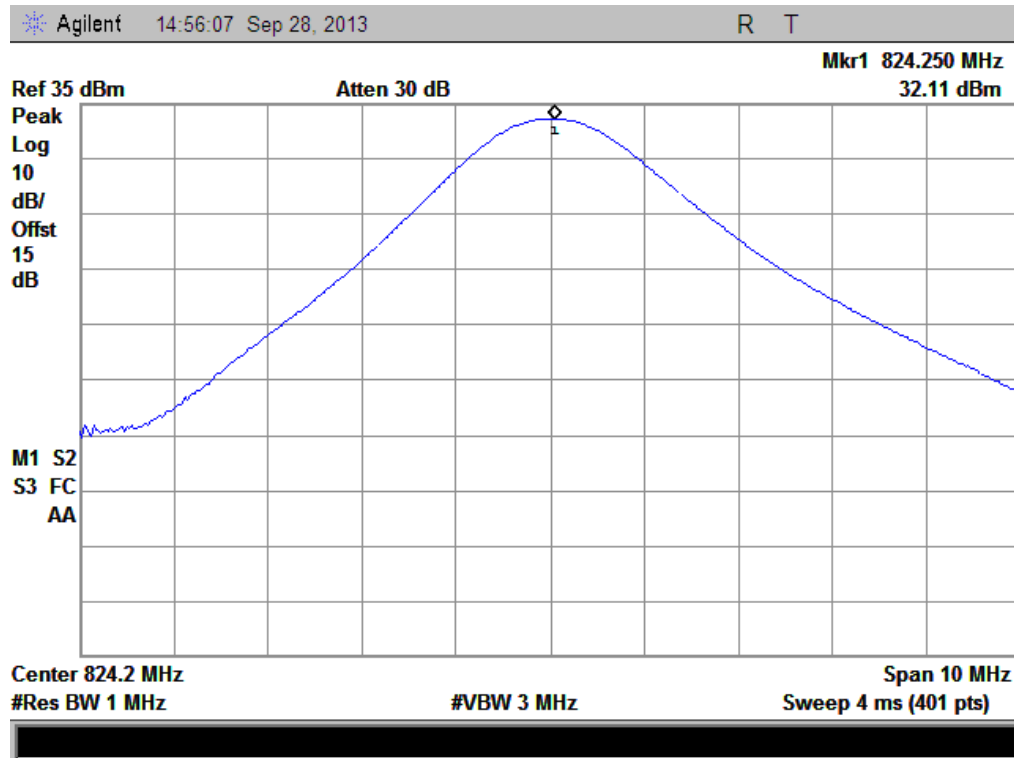
Note 1: For the GPRS and EGPRS model, all the slots were tested and just the worst data was record in this report.

2. WCDMA Model Test Verdict:

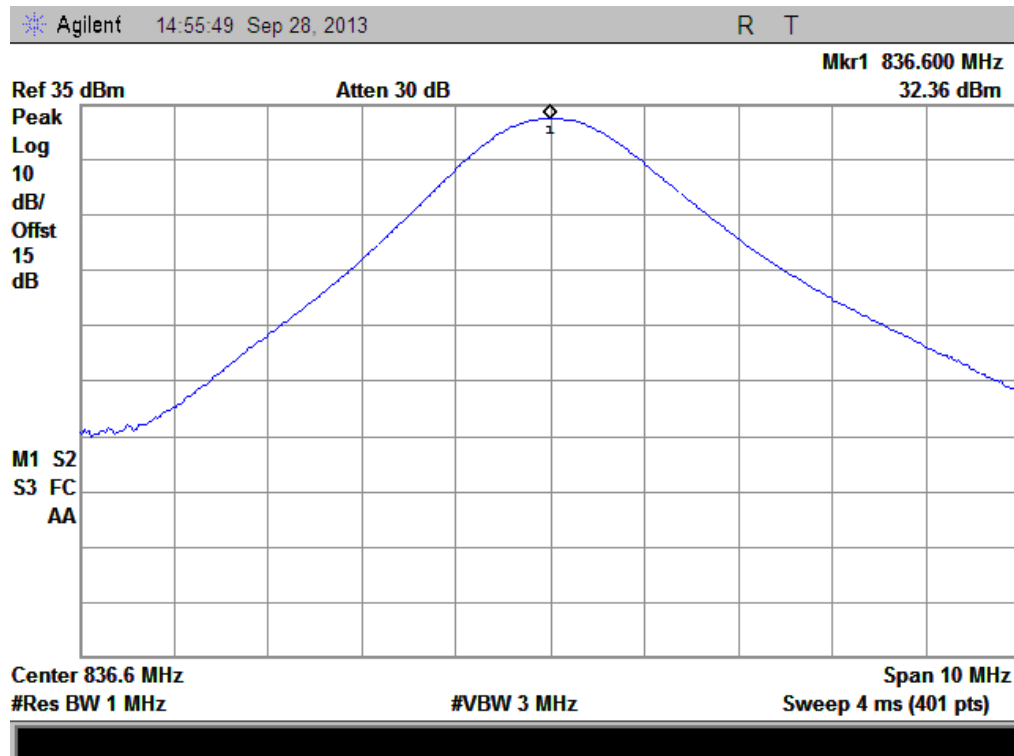
Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	23.72	23.33	23.01	23.21	22.91	22.18
HSDPA	1	23.63	23.35	23.00	23.19	22.87	22.16
	2	23.58	23.36	22.97	23.20	22.88	22.14
	3	23.08	22.86	22.37	22.76	22.38	21.68
	4	23.06	22.87	22.35	22.74	22.35	21.66
HSUPA	1	23.65	23.41	22.98	23.20	22.86	22.15
	2	21.65	21.40	20.97	21.20	20.86	20.14
	3	22.63	22.41	21.98	22.20	21.87	21.16
	4	21.64	21.42	20.98	21.22	20.87	20.15
	5	23.65	23.43	22.98	23.23	22.86	22.15
HSPA+	1	23.67	23.40	22.94	23.24	22.86	22.13
Note:	The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA /HSPA+ was tested by power meter.						

Item	band	WCDMA 1700		
	ARFCN	1312	1412	1513
	subtest	dBm		
5.2(WCDMA)	non	23.65	23.59	23.63
HSDPA	1	23.63	23.55	23.62
	2	23.61	23.54	23.61
	3	23.17	23.06	23.13
	4	23.12	23.09	23.17
HSUPA	1	23.62	23.53	23.61
	2	21.65	21.55	21.63
	3	22.63	22.54	22.64
	4	21.61	21.56	21.59
	5	23.61	23.53	23.62
HSPA+	1	23.61	23.52	23.59
Note	The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA /HSPA+ was tested by power meter.			

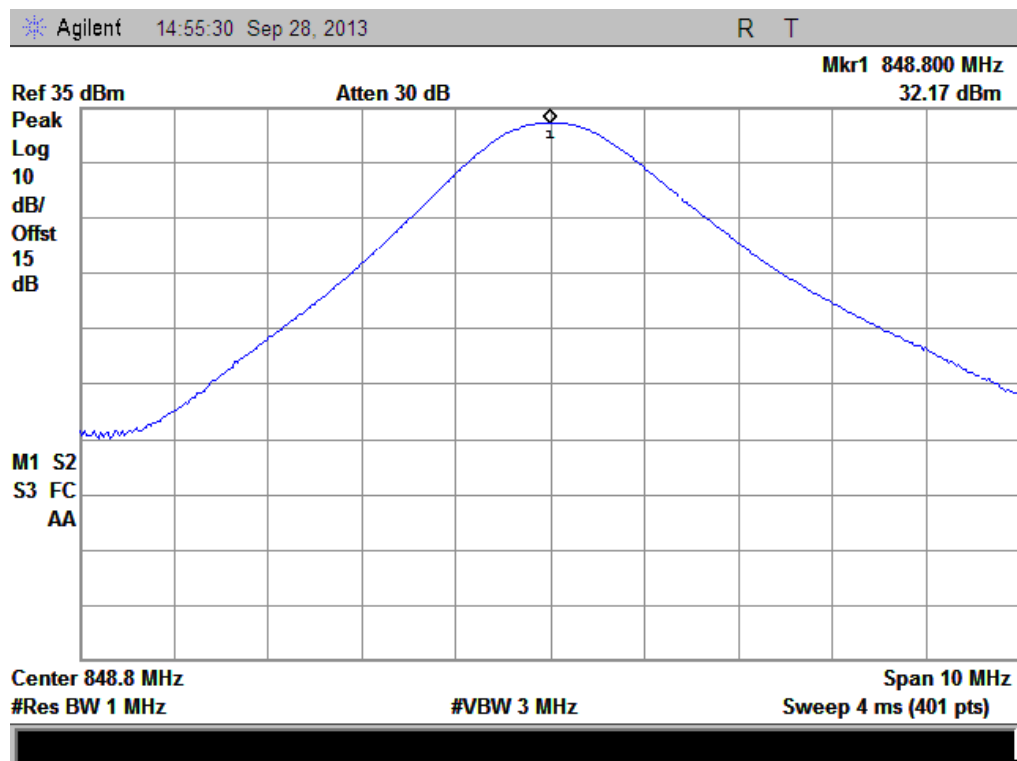
3. GSM Model Test Plots:



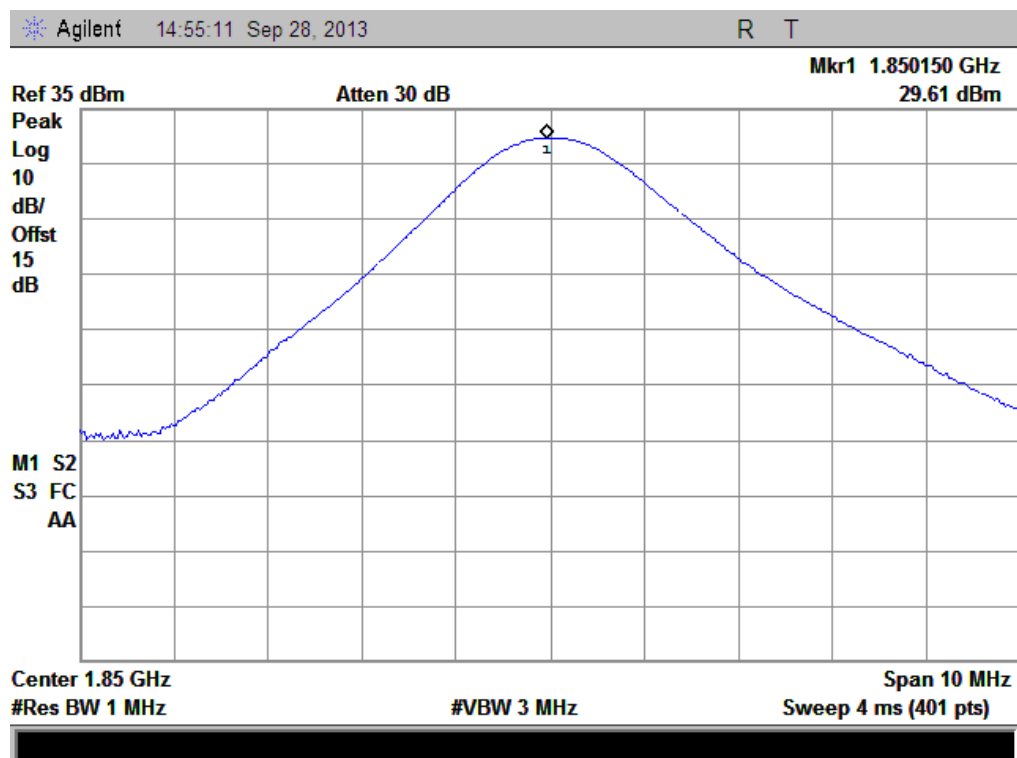
(Plot A1: GSM 850MHz Channel = 128)



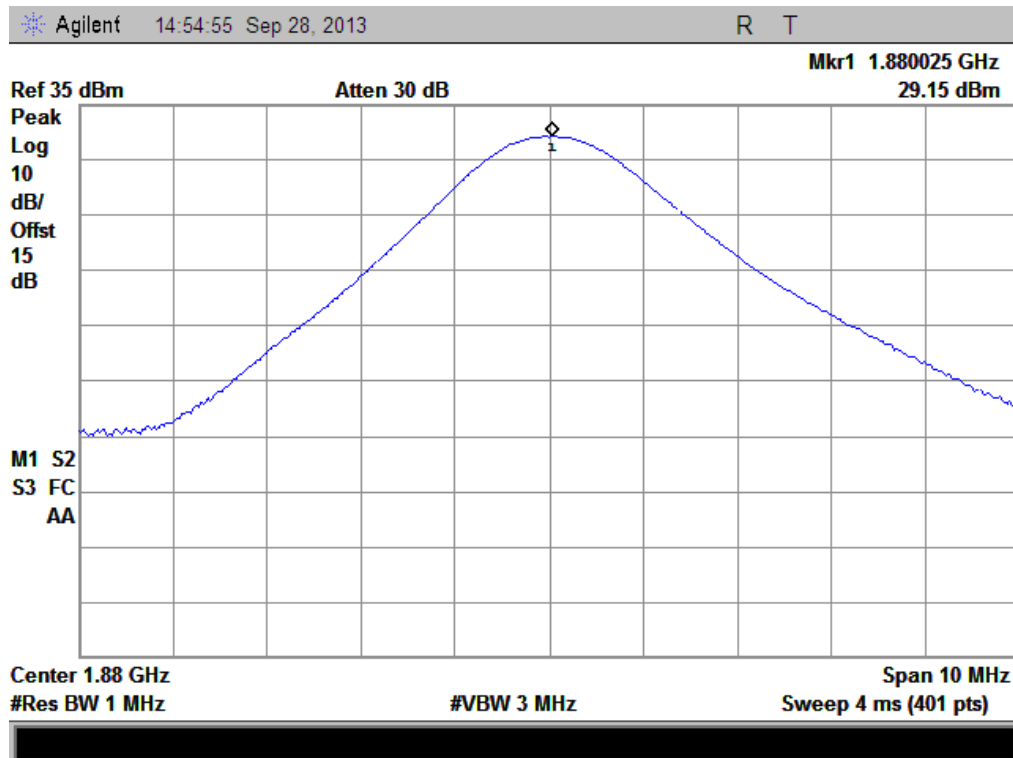
(Plot A2: GSM 850MHz Channel = 190)



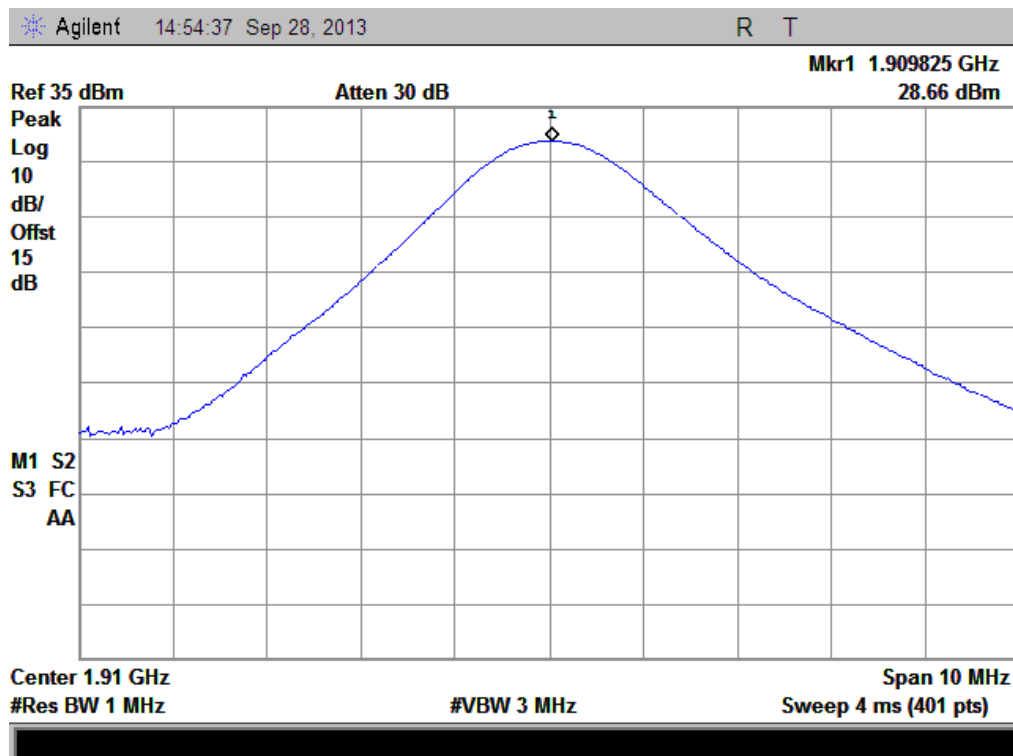
(Plot A3: GSM 850MHz Channel = 251)



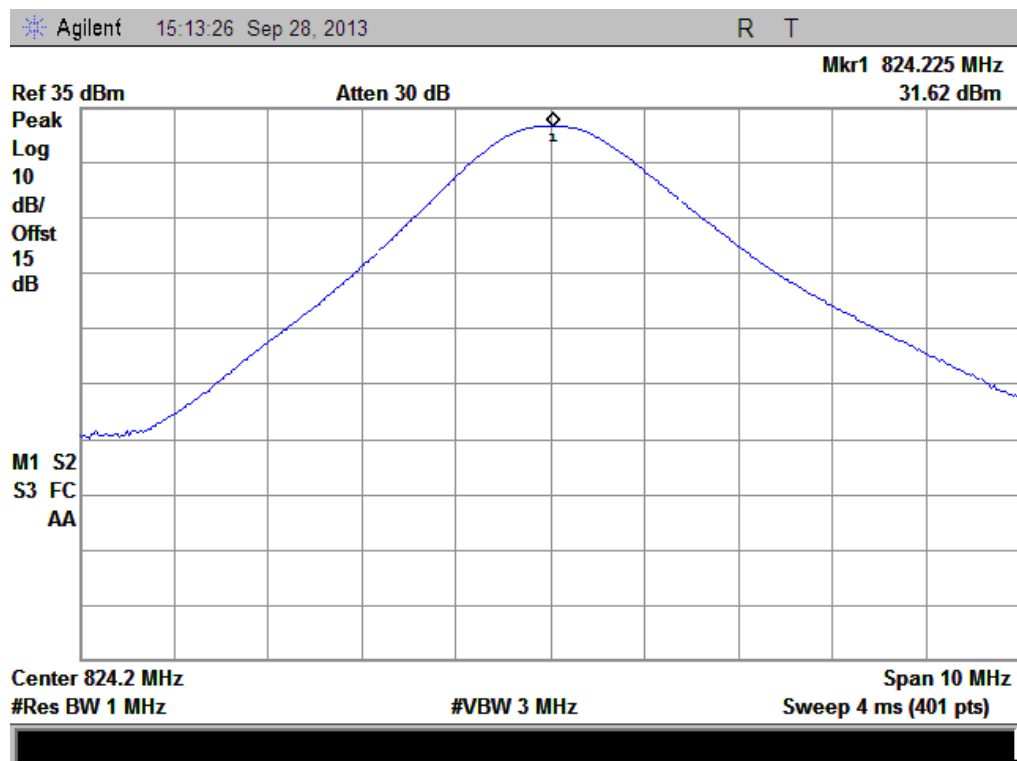
(Plot B1: GSM 1900MHz Channel = 512)



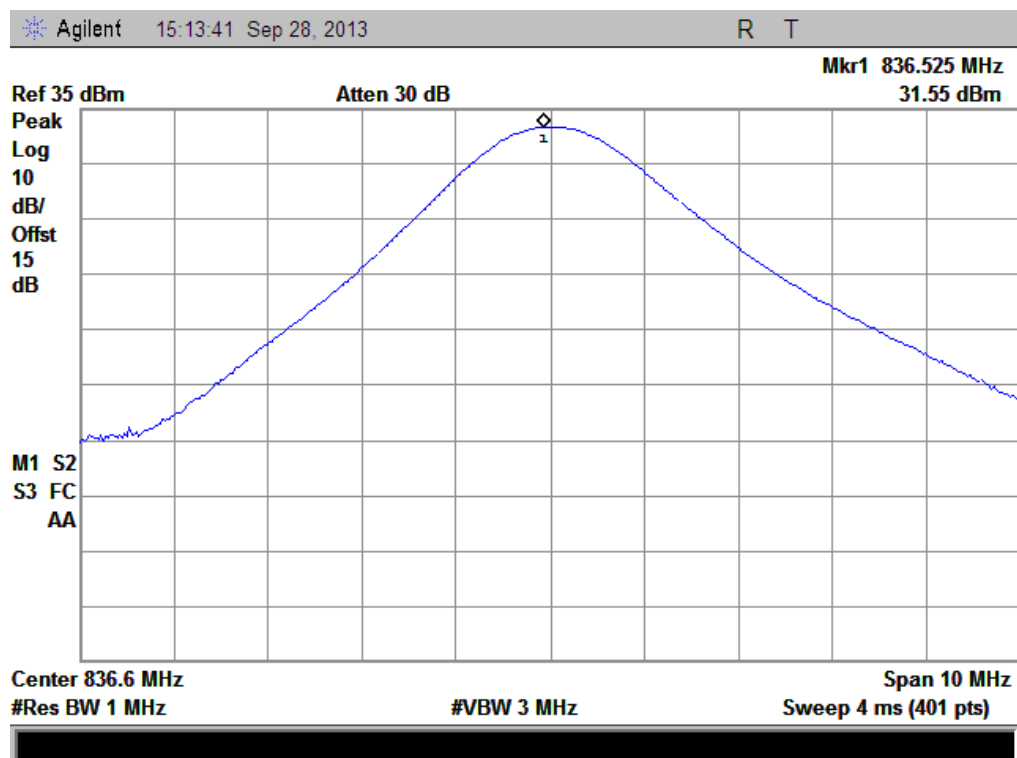
(Plot B2: GSM 1900MHz Channel = 661)



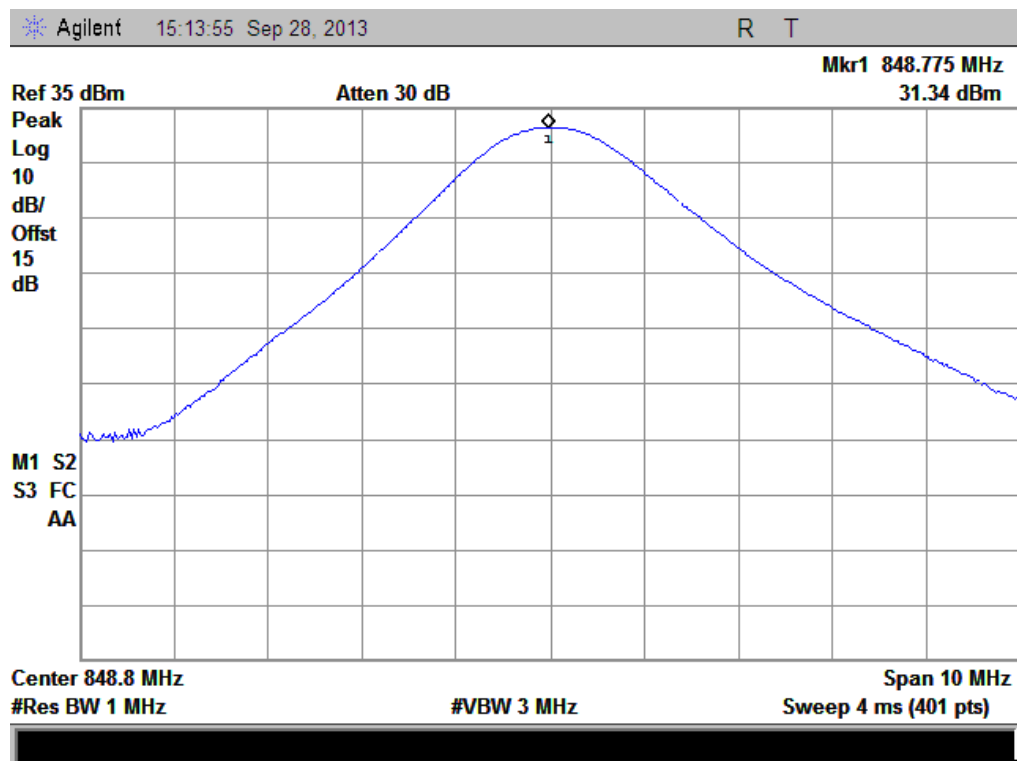
(Plot B3: GSM 1900Hz Channel = 810)



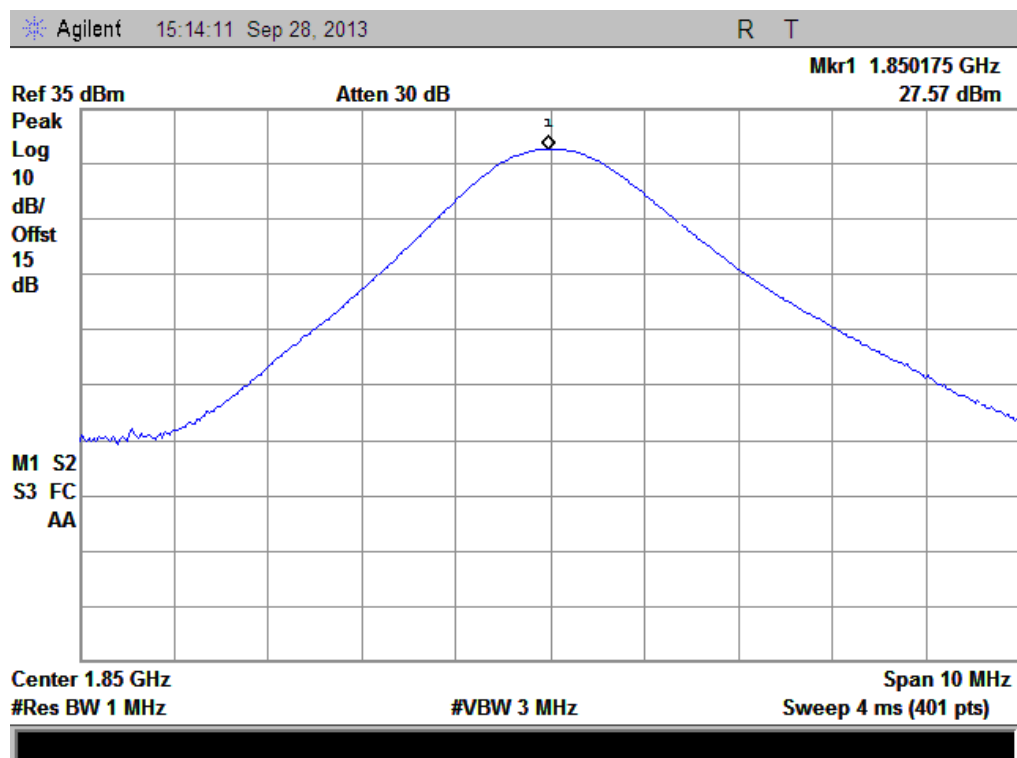
(Plot C 1: GPRS 850MHz Channel = 128)



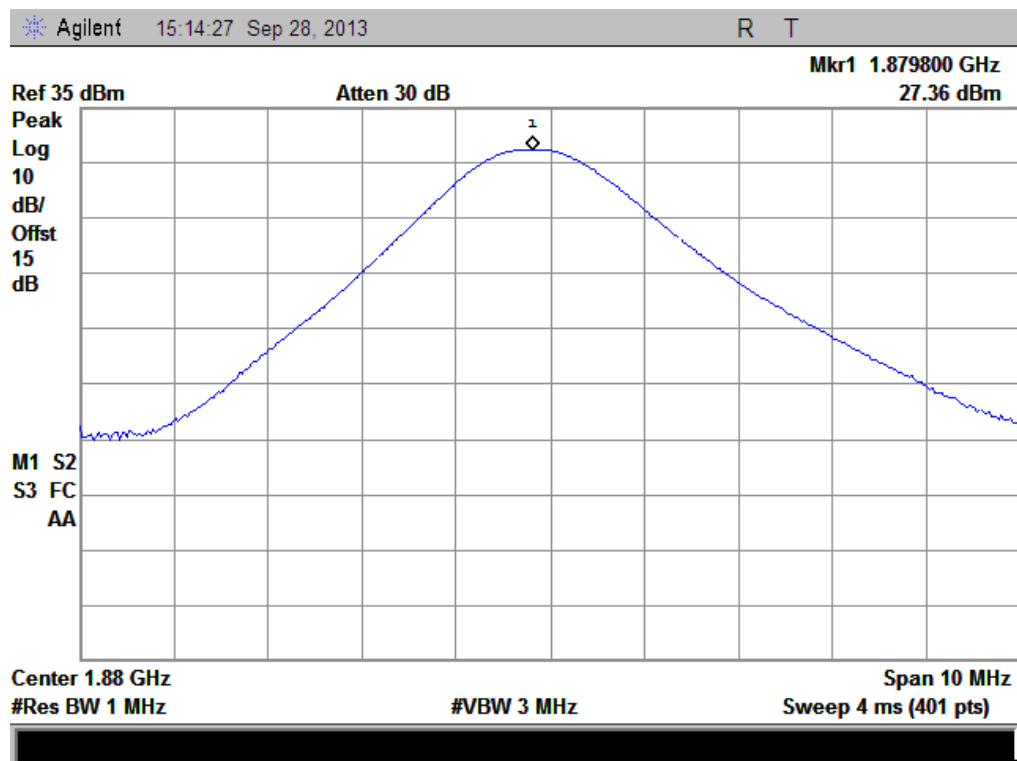
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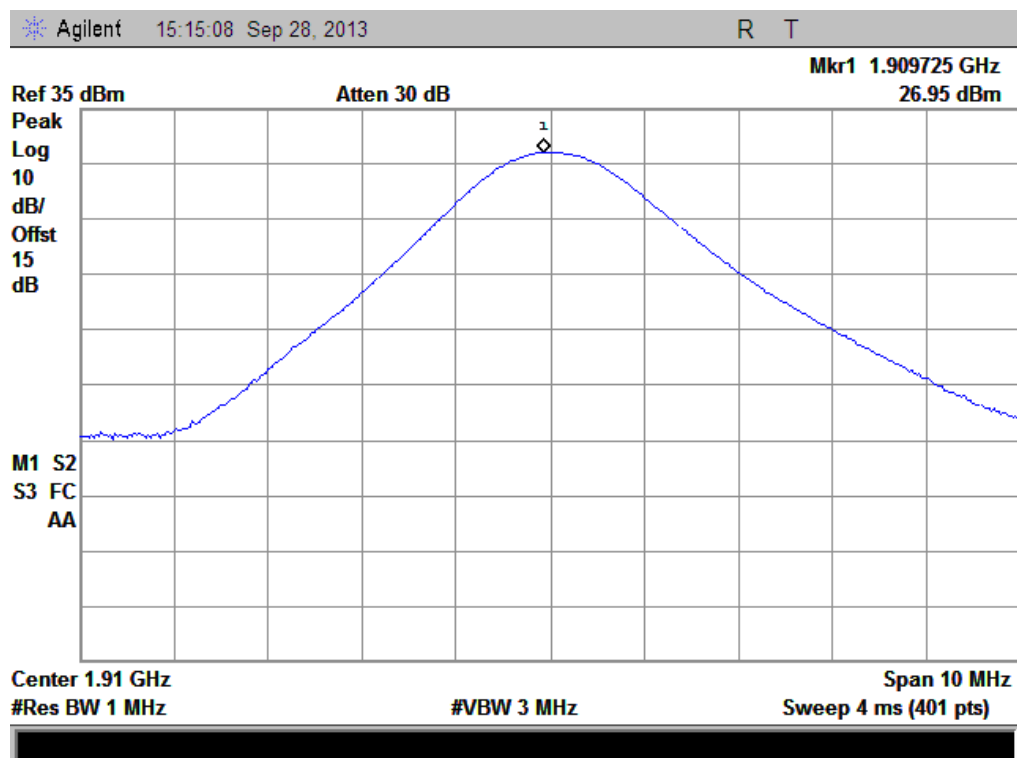
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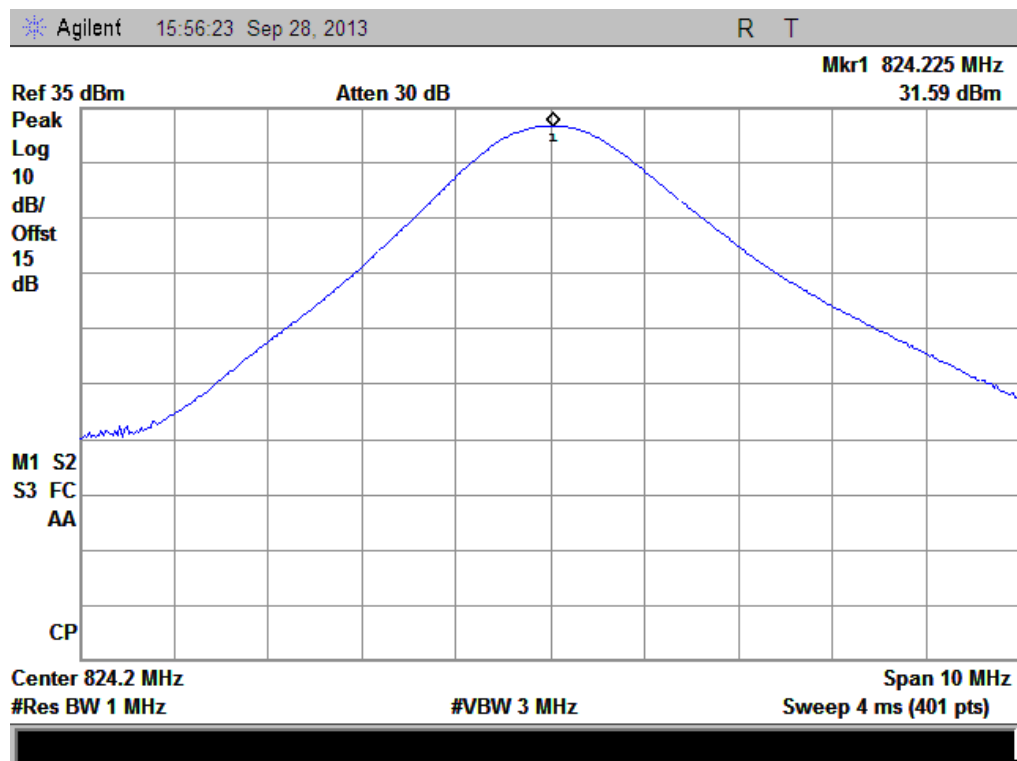
(Plot D 1: GPRS 1900MHz Channel = 512)



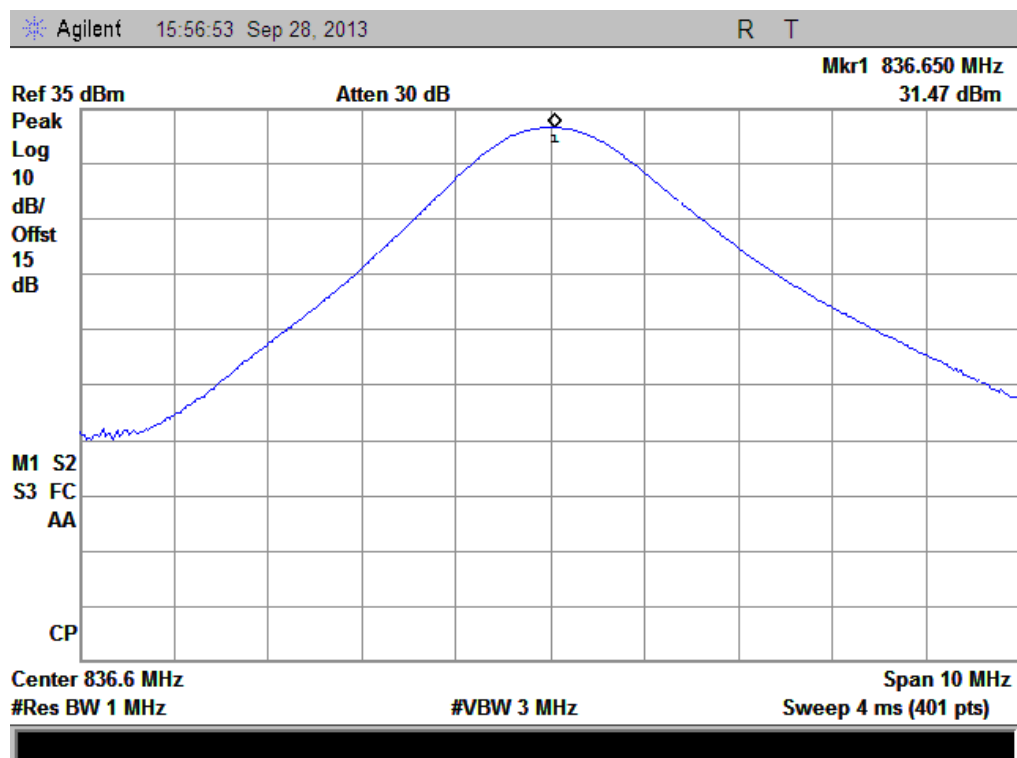
(Plot D 2: GPRS 1900MHz Channel = 661)



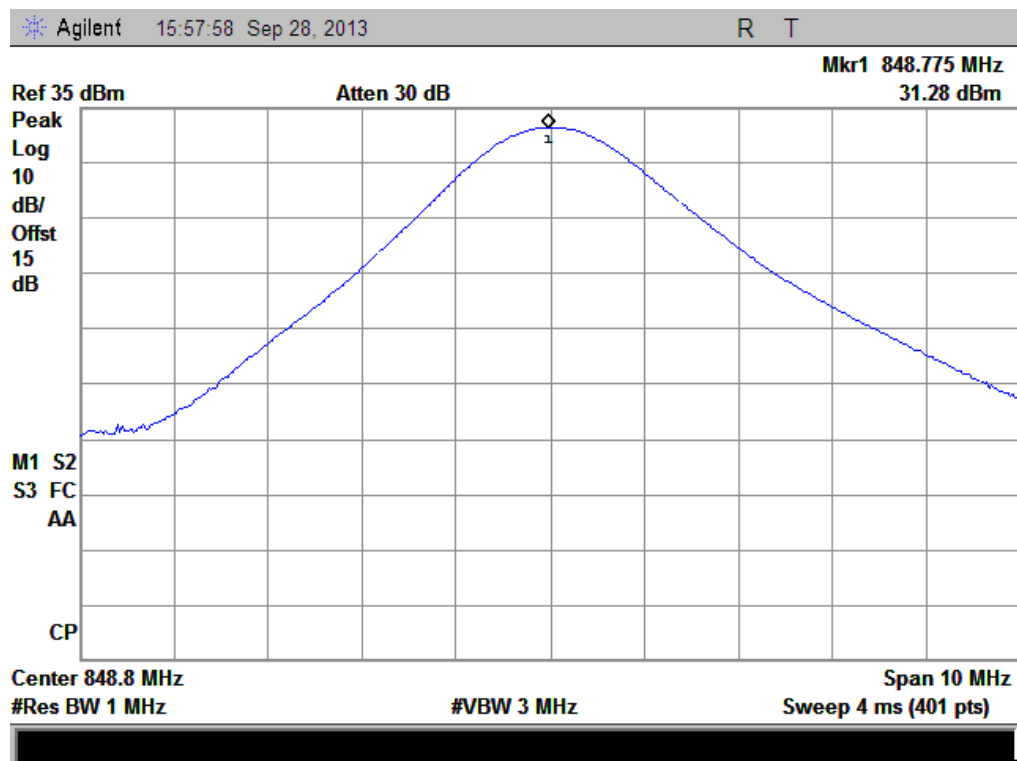
(Plot D 3: GPRS 1900MHz Channel = 810)



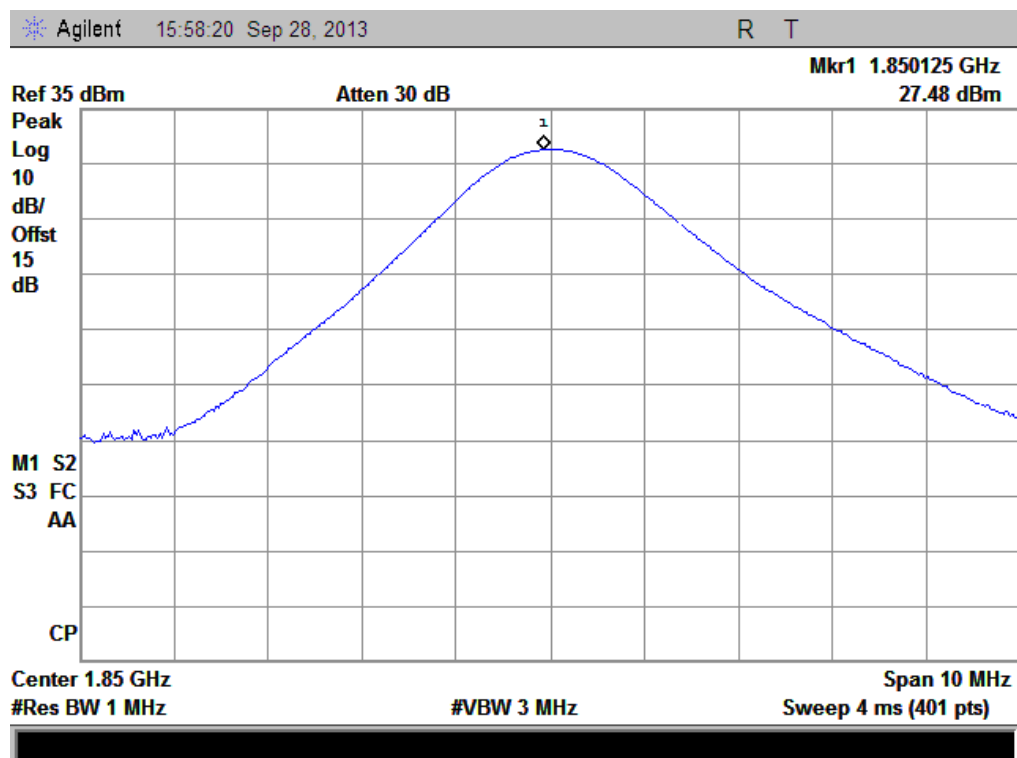
(Plot E1: EGPRS 850MHz Channel = 128)



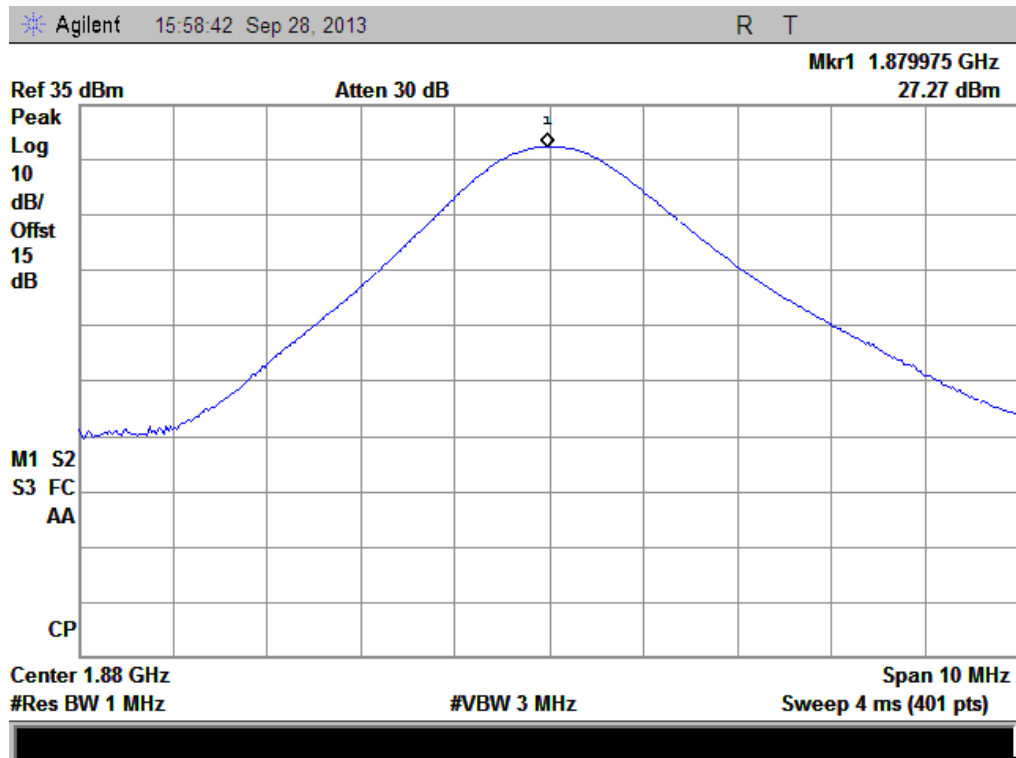
(Plot E2: EGPRS 850MHz Channel = 190)



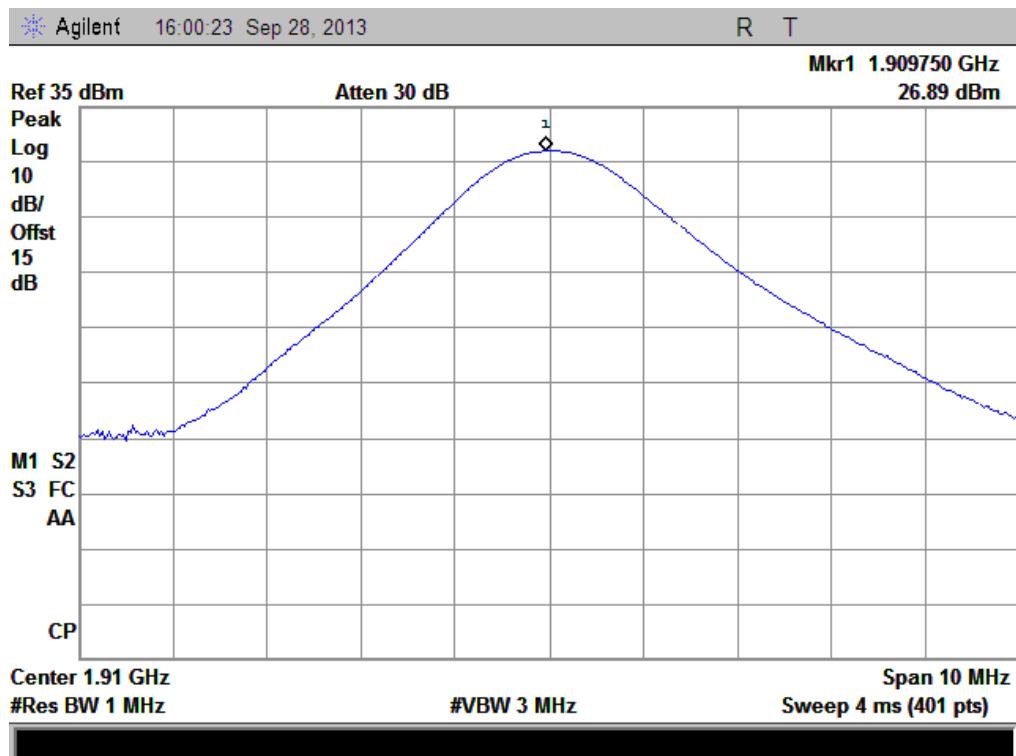
(Plot E3: EGPRS 850MHz Channel = 251)



(Plot F1: EGPRS 1900MHz Channel = 512)



(Plot F2: EGPRS 1900MHz Channel = 661)



(Plot F3: EGPRS 1900Hz Channel = 810)

2.2 Peak to Average Ratio

2.2.1 Definition

According to FCC section 2.1049 and FCC 24.232(d), 27.50(d) the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

2.2.2 Test Description

See section 2.1.2 of this report.

2.2.3 Test Verdict

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

Test procedures:

A. For GSM/EGPRS operating mode:

- Set RBW=1MHz, VBW=1MHz, peak detector in spectrum analyzer.
- Set EUT in maximum output power, and triggered the bust signal.
- Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average ratio.

B. For UMTS operating mode:

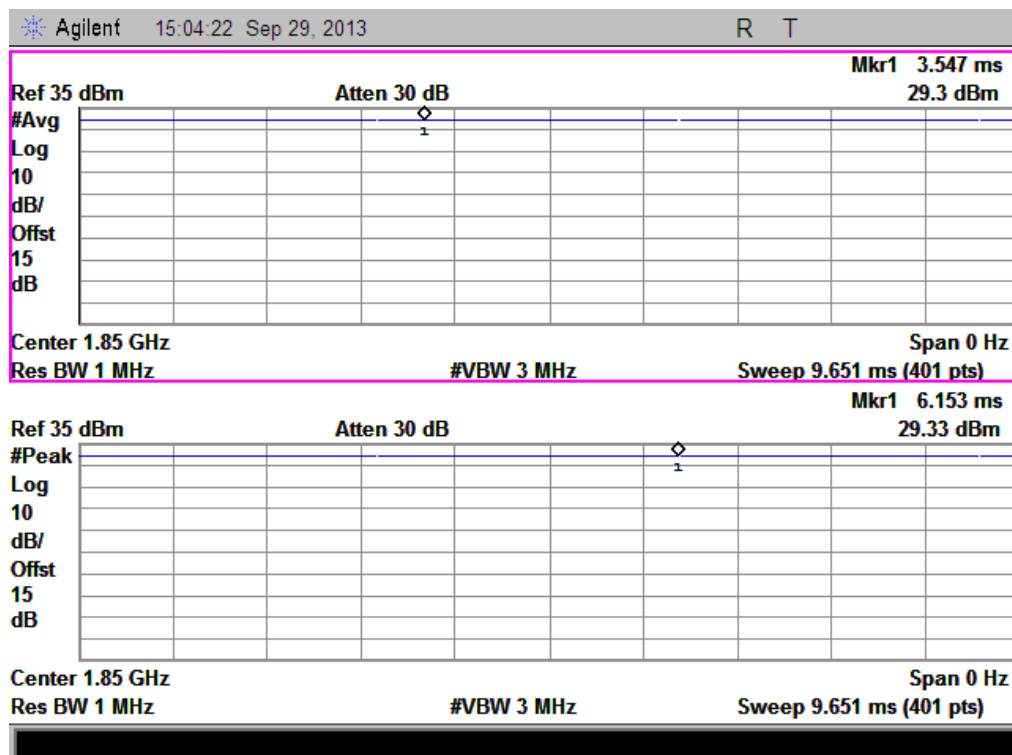
- Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
- The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

1. Test Verdict:

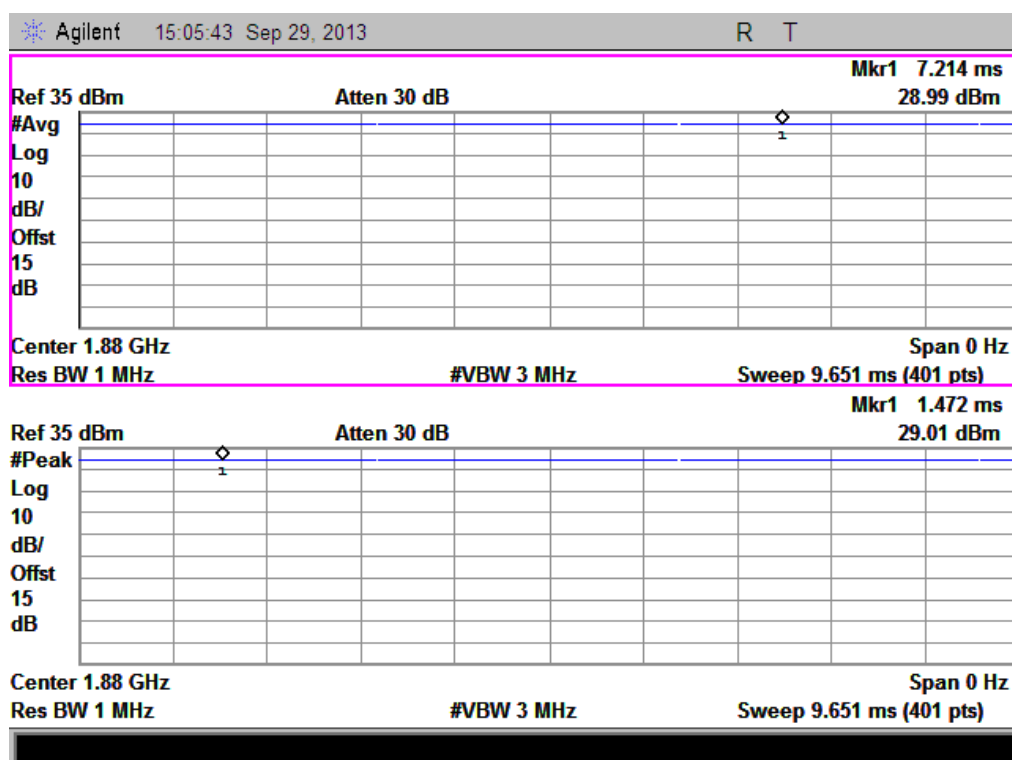
Band	Channel	Frequency (MHz)	Peak to Average ratio		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 1900MHz	512	1850.2	0.03	Plot A1 to A3	13	PASS
	661	1880.0	0.02			PASS
	810	1909.8	0.01			PASS
EGPRS 1900MHz	512	1850.2	0.03	Plot B1 to B3	13	PASS
	661	1880.0	0.03			PASS
	810	1909.8	0.01			PASS
WCDMA 1900MHz	9262	1852.4	5.40	Plot C1 to C3	13	PASS
	9400	1880	2.96			PASS
	9538	1907.6	2.80			PASS
HSDPA 1900MHz	9262	1852.4	3.04	Plot D1 to D3	13	PASS
	9400	1880	2.97			PASS
	9538	1907.6	2.81			PASS
HSUPA	9262	1852.4	3.07	Plot E1 to E3	13	PASS



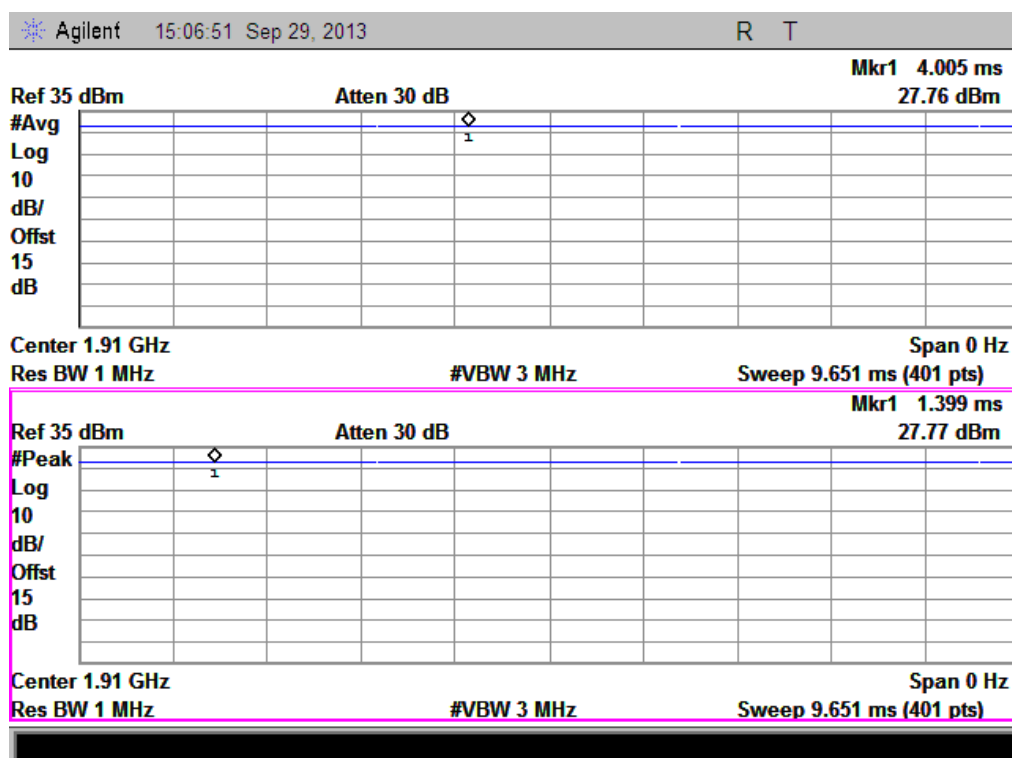
Band	Channel	Frequency (MHz)	Peak to Average ratio		Limit dBm	Verdict
			dBm	Refer to Plot		
1900MHz	9400	1880	2.98			PASS
	9538	1907.6	2.82			PASS
HSPA+ 1900MHz	9262	1852.4	3.10	Plot F1 toF3	13	PASS
	9400	1880	2.96			PASS
	9538	1907.6	2.80			PASS
WCDMA 1700MHz	1312	1712.4	3.10	Plot G1 toG3	13	PASS
	1412	1732.4	2.91			PASS
	1513	1752.6	2.96			PASS
HSDPA 1700MHz	1312	1712.4	3.19	Plot H1 toH3	13	PASS
	1412	1732.4	2.97			PASS
	1513	1752.6	3.03			PASS
HSUPA 1700MHz	1312	1712.4	3.17	Plot I1 toI3	13	PASS
	1412	1732.4	2.96			PASS
	1513	1752.6	3.01			PASS
HSPA+ 1700MHz	1312	1712.4	3.17	Plot J1 toJ3	13	PASS
	1412	1732.4	2.99			PASS
	1513	1752.6	3.05			PASS



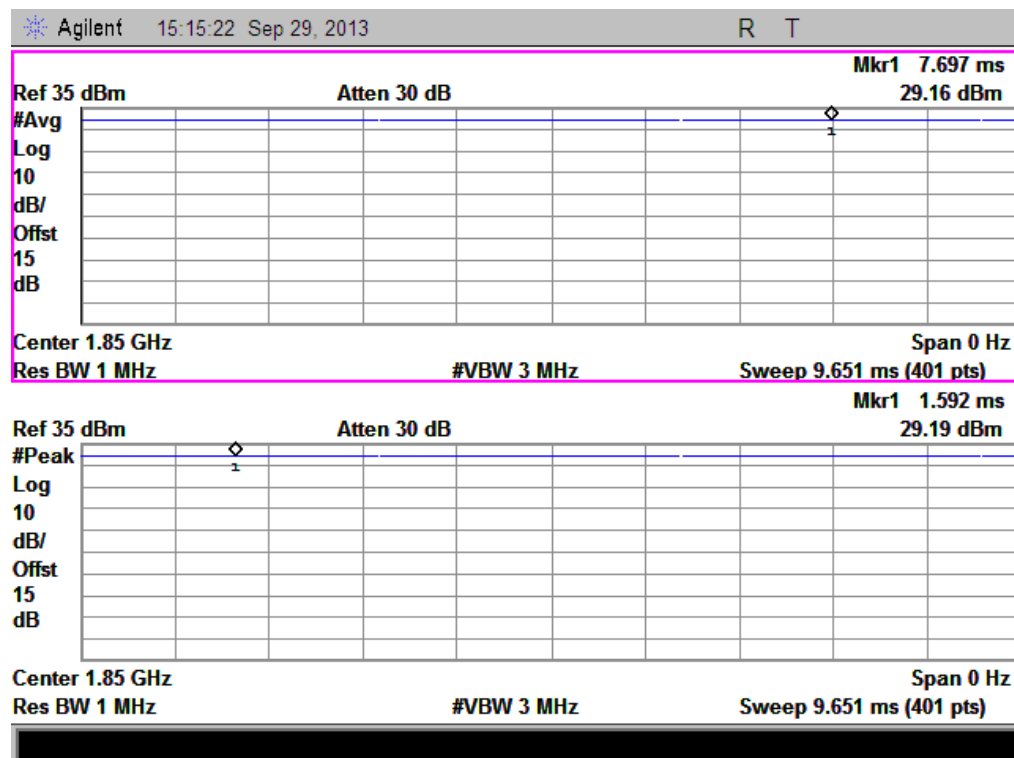
(Plot A1: GSM 1900 MHz Channel = 512)



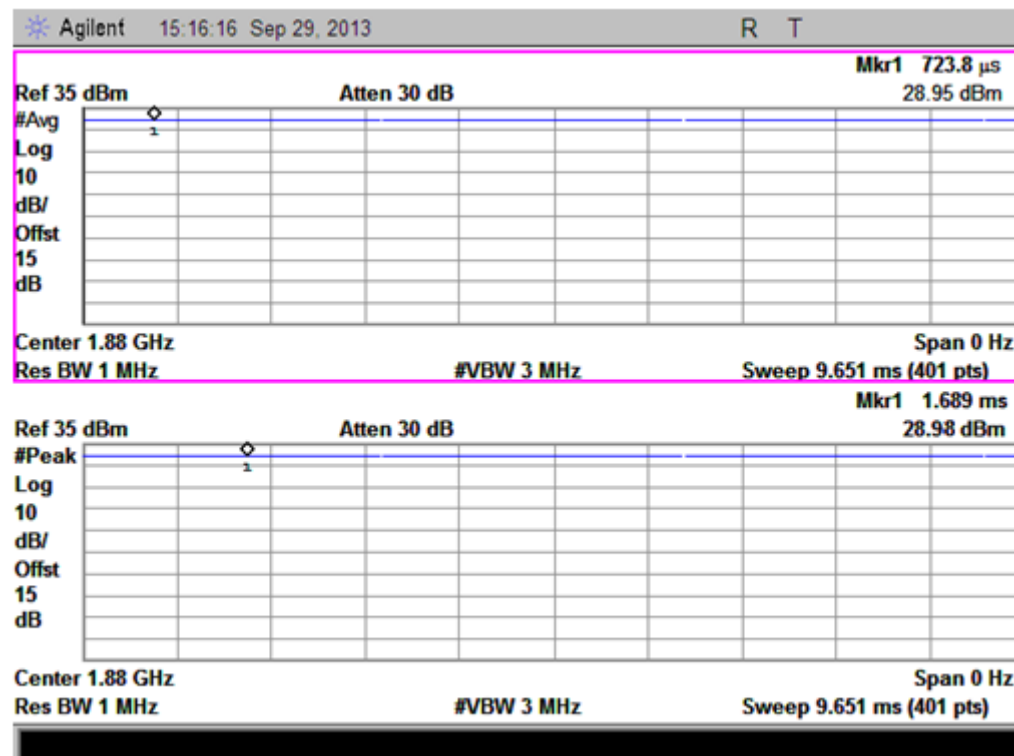
(Plot A2: GSM 1900 MHz Channel = 661)



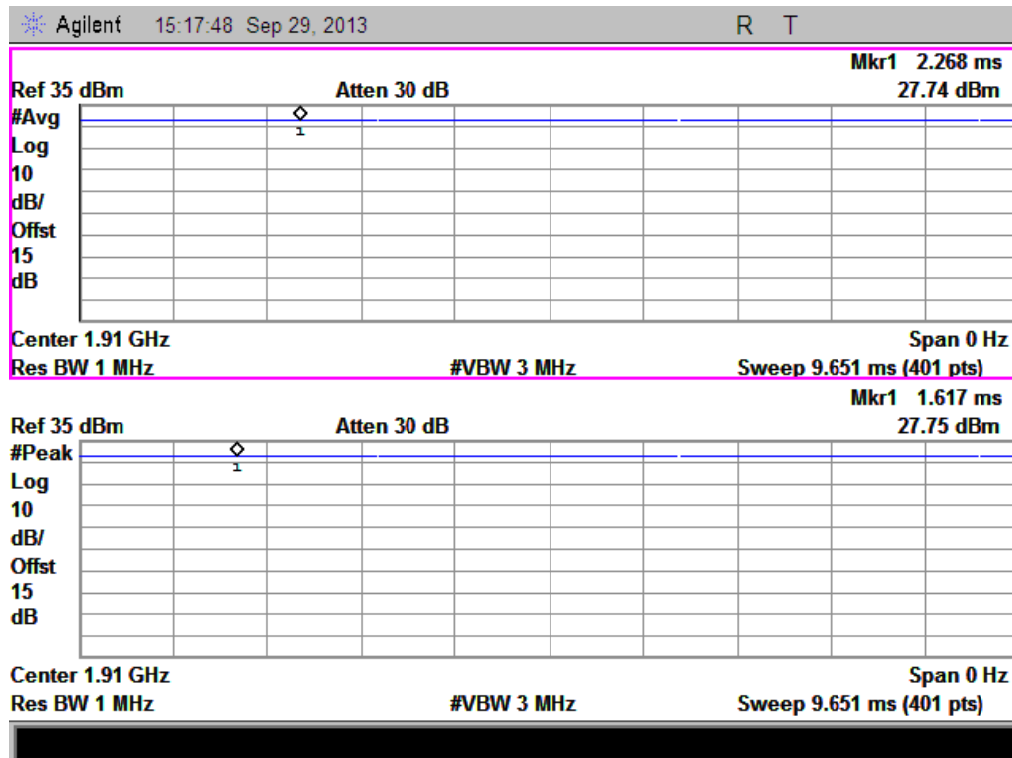
(Plot A3: GSM 1900MHz Channel = 810)



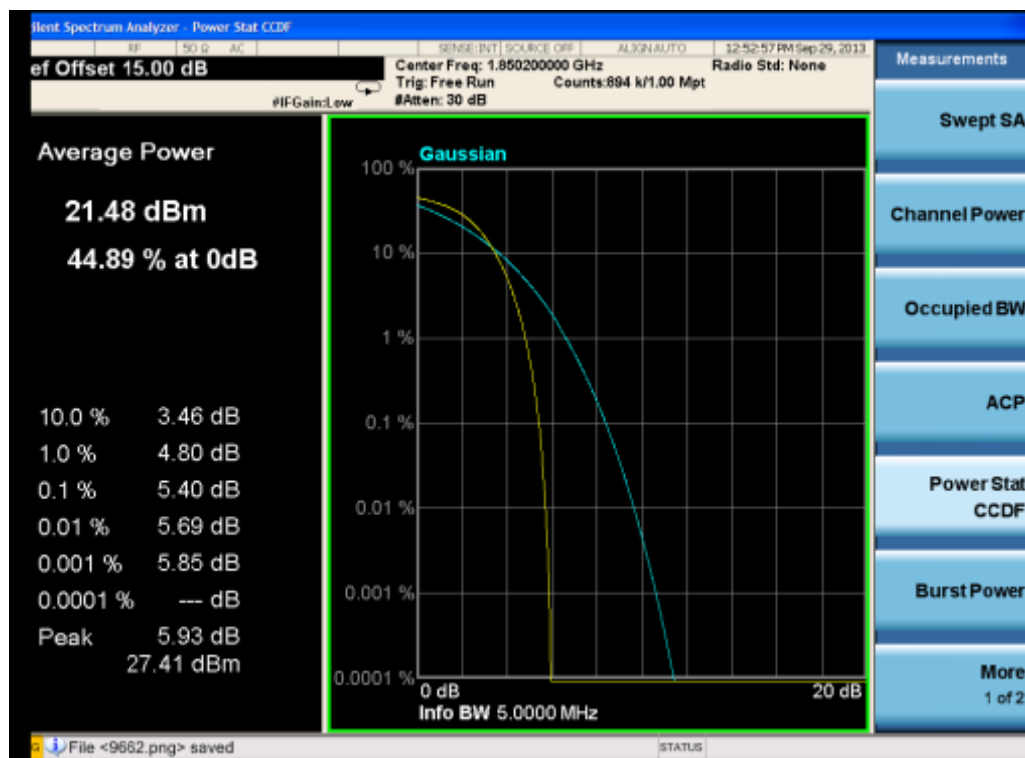
(Plot B1: EGPRS 1900MHz Channel = 512)



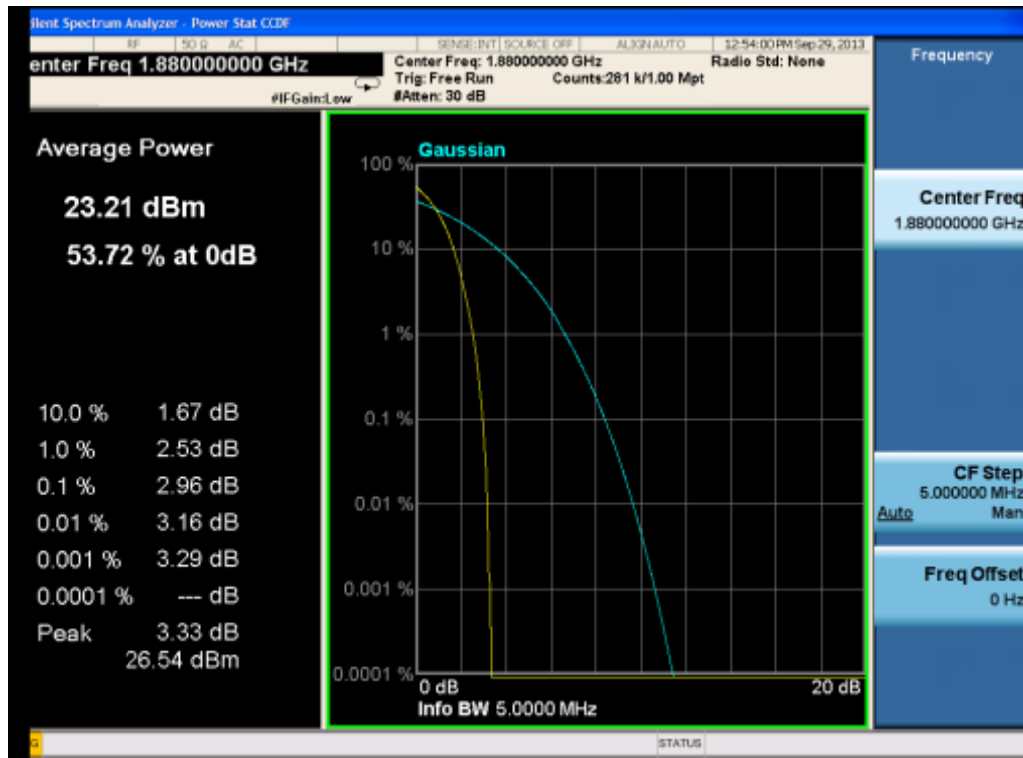
(Plot B2: EGPRS 1900MHz Channel = 661)



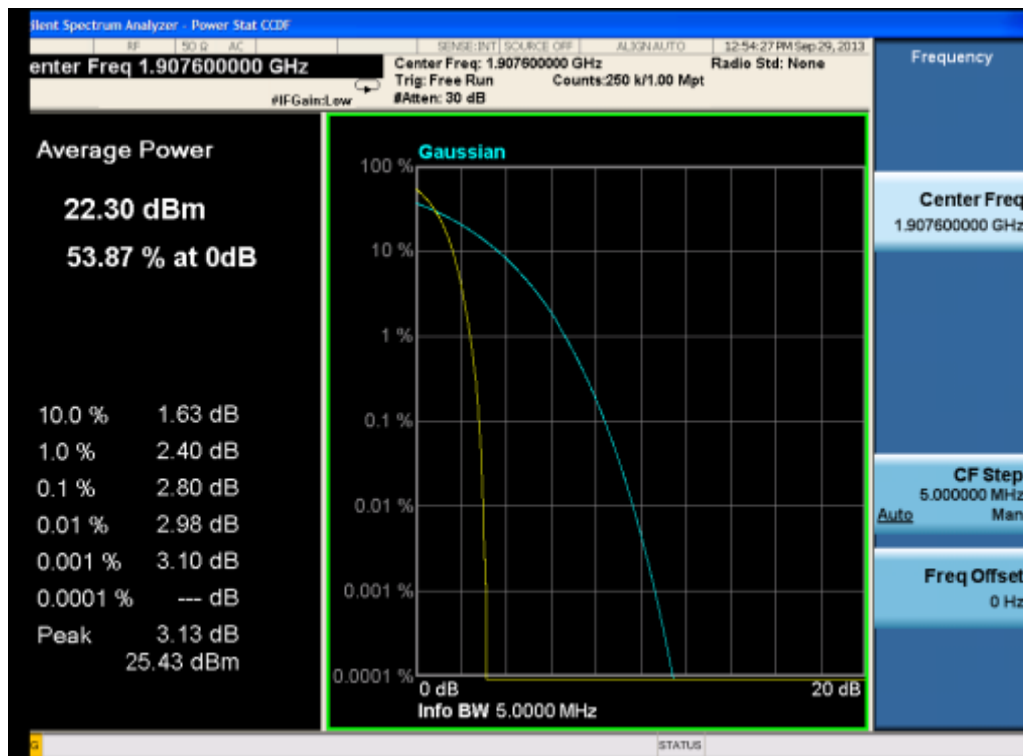
(Plot B3: EGPRS 1900MHz Channel = 810)



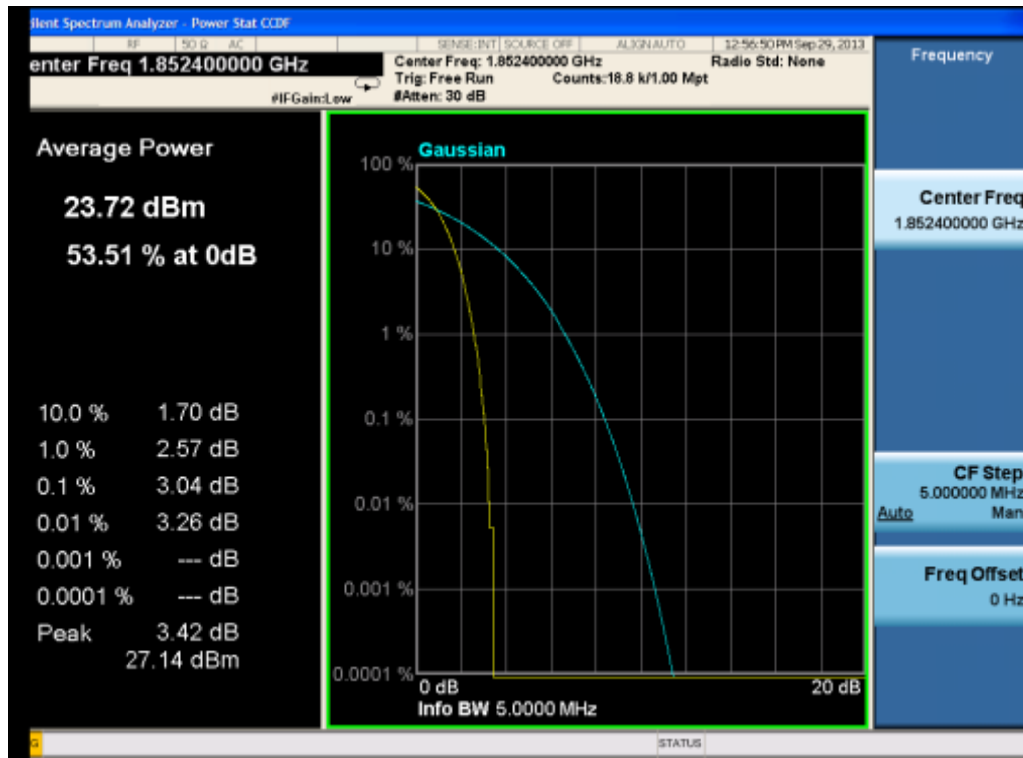
(Plot C1: WCDMA 1900MHz Channel = 9262)



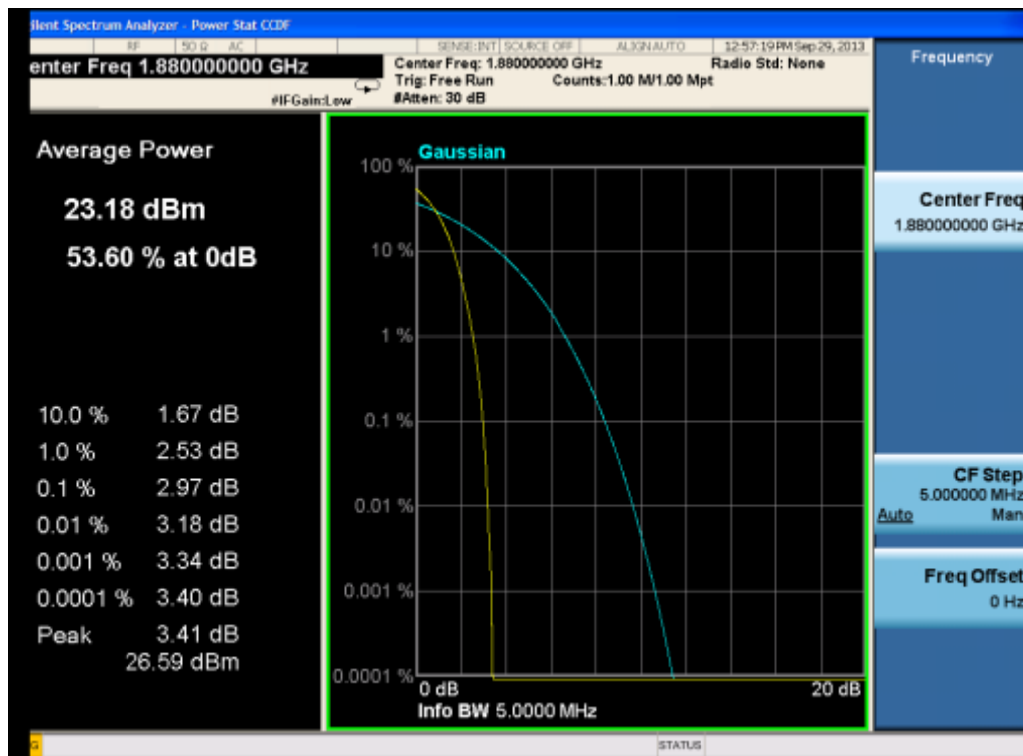
(Plot C2: WCDMA 1900MHz Channel = 9400)



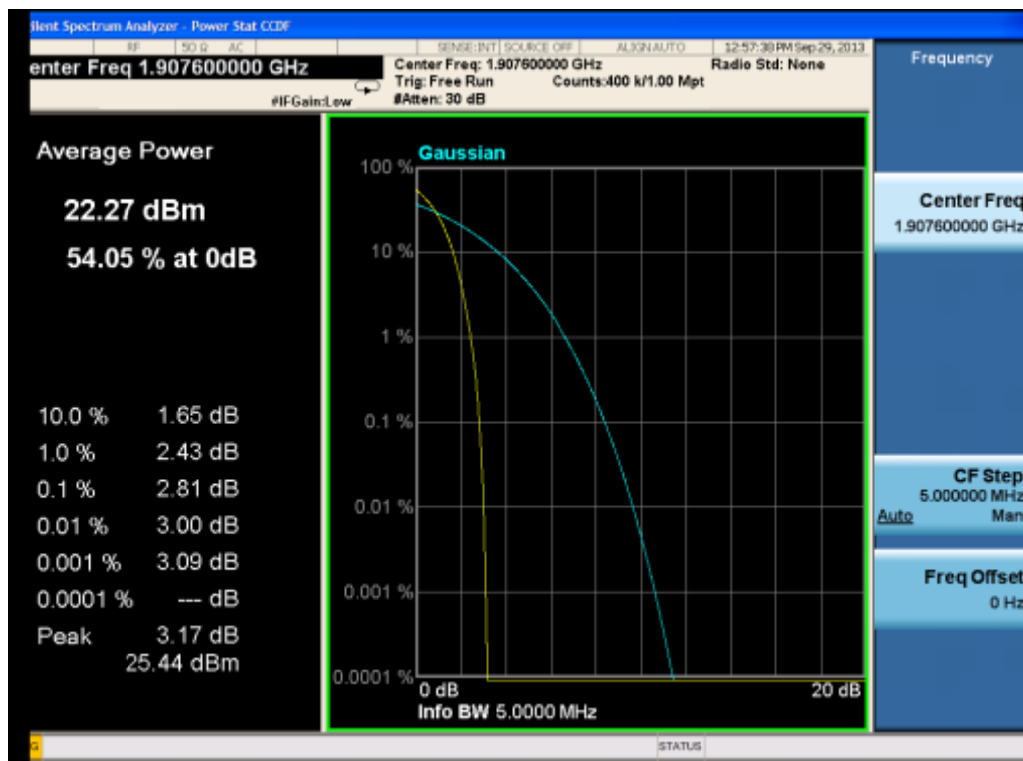
(Plot C3: WCDMA 1900MHz Channel = 9538)



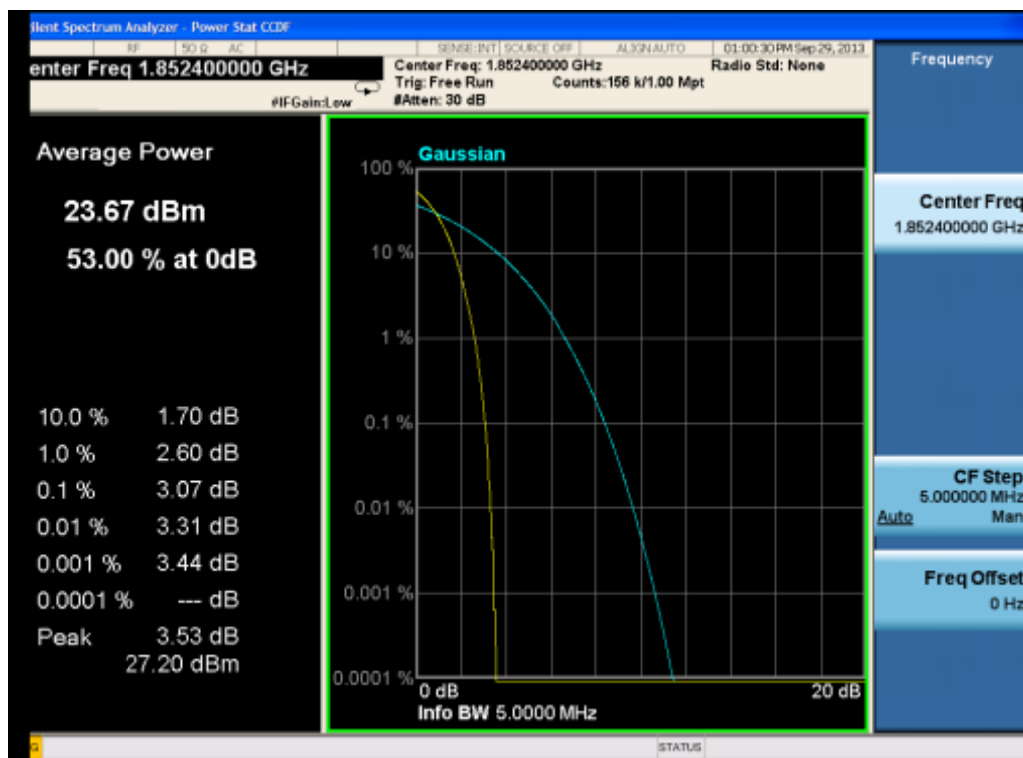
(Plot D1: HSDPA 1900MHz Channel = 9262)



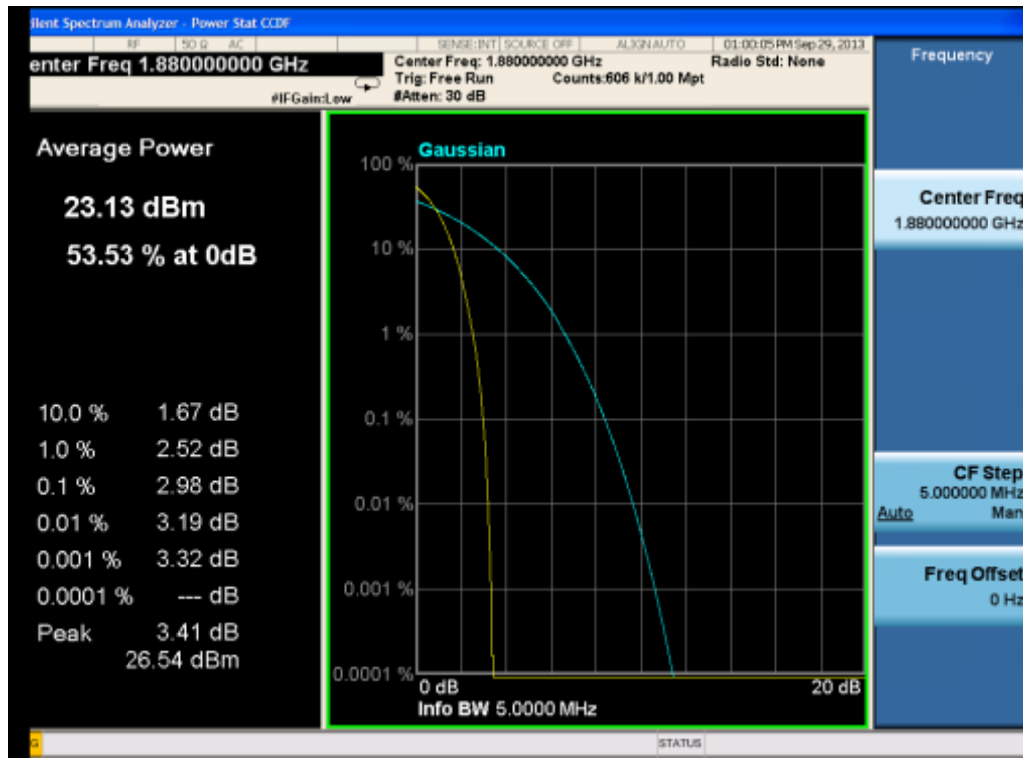
(Plot D2: HSDPA 1900MHz Channel = 9400)



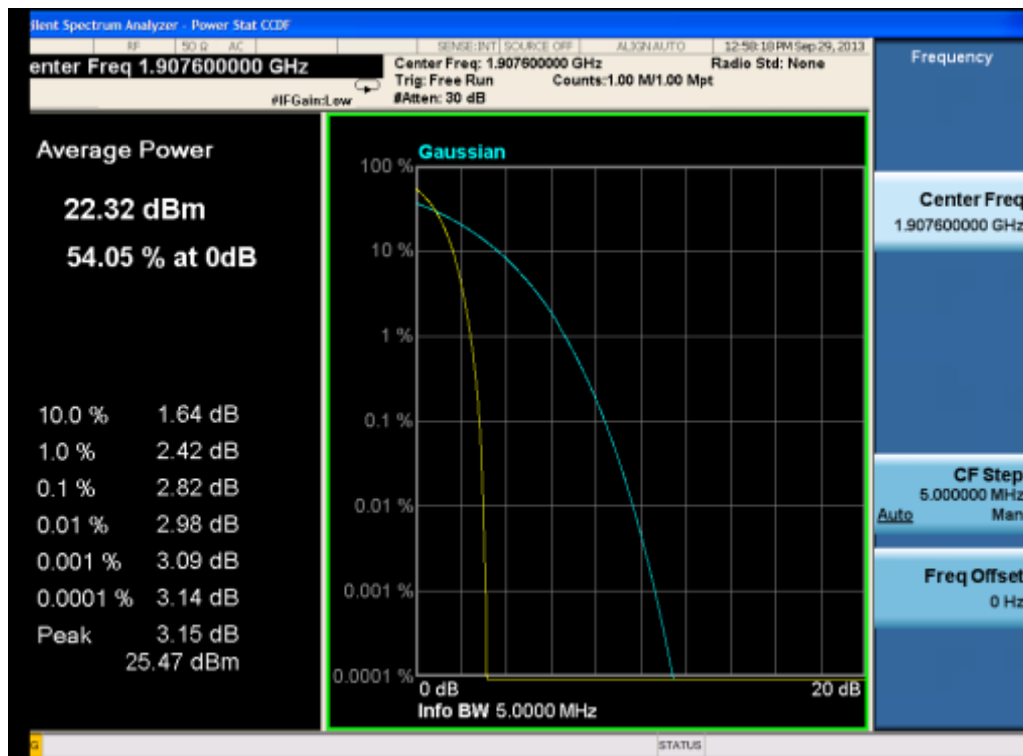
(Plot D3: HSDPA 1900MHz Channel = 9538)



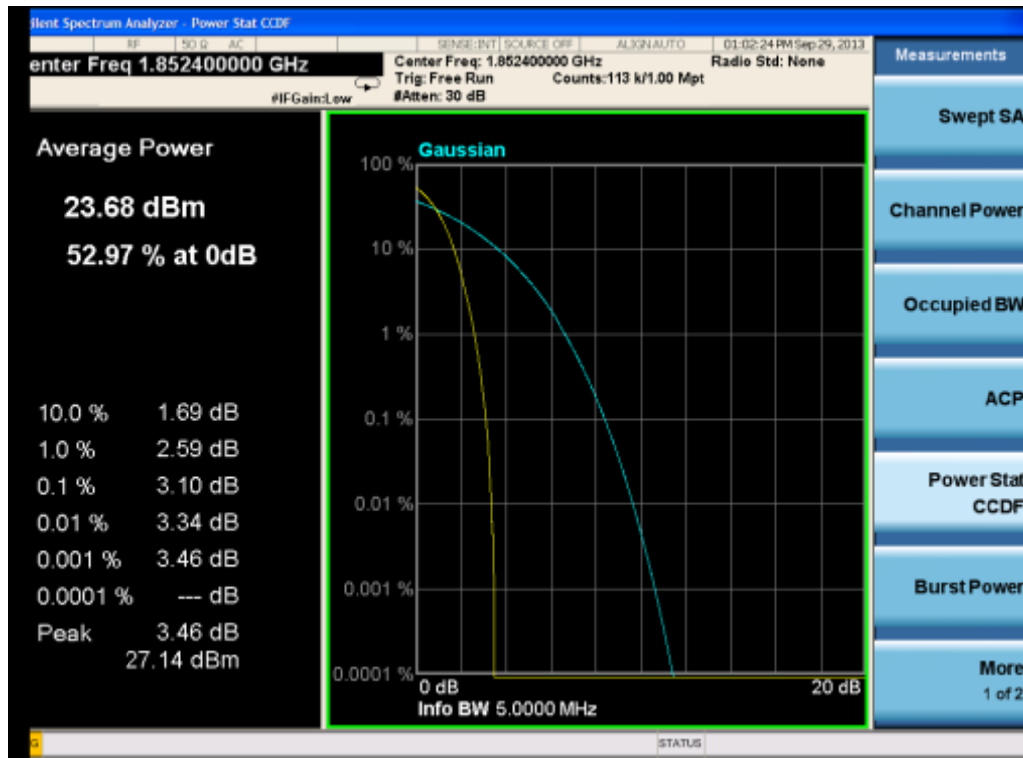
(Plot E1: HSUPA 1900MHz Channel = 9262)



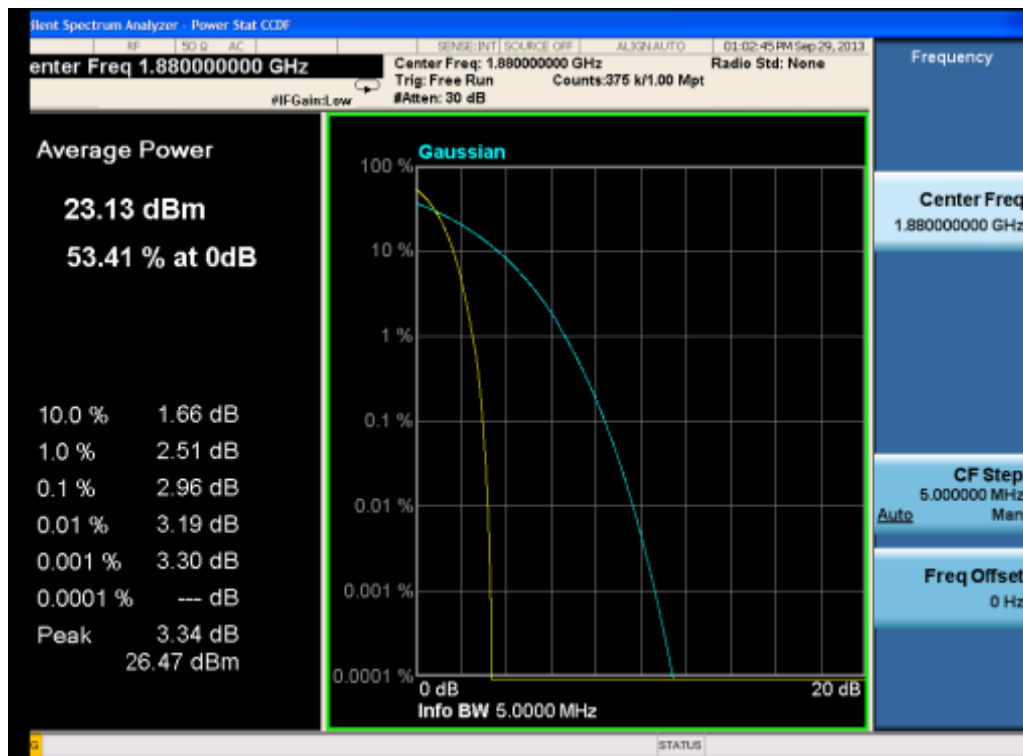
(Plot E2: HSUPA 1900MHz Channel = 9400)



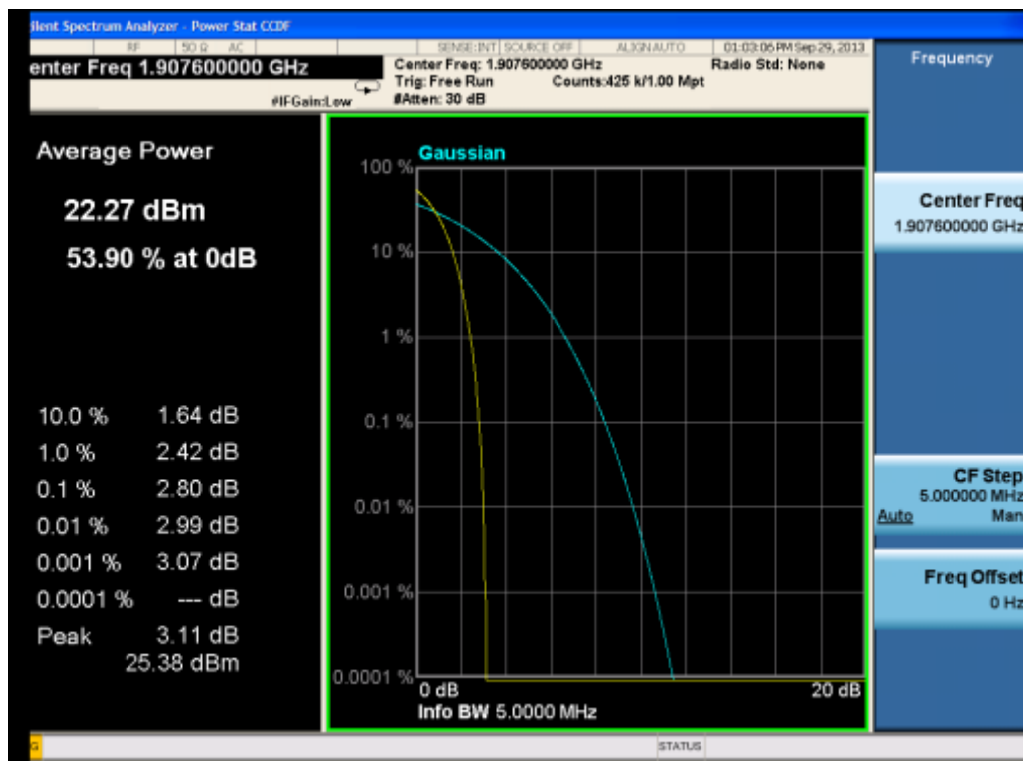
(Plot E3: HSUPA 1900MHz Channel = 9538)



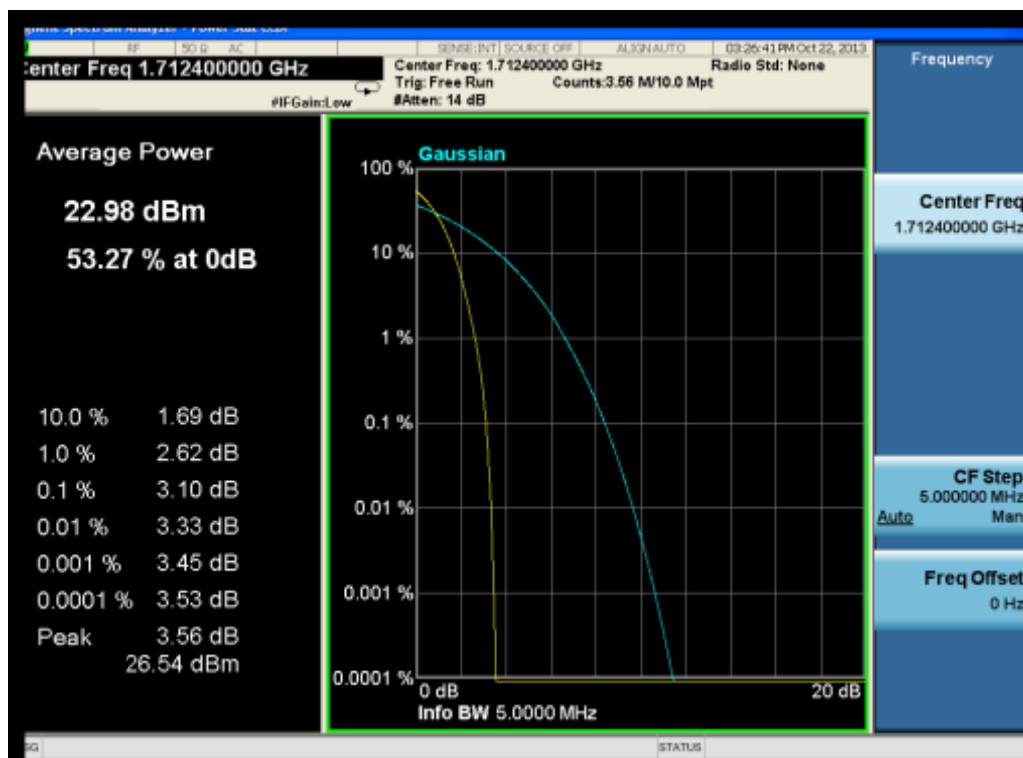
(Plot F1: HSPA+ 1900MHz Channel = 9262)



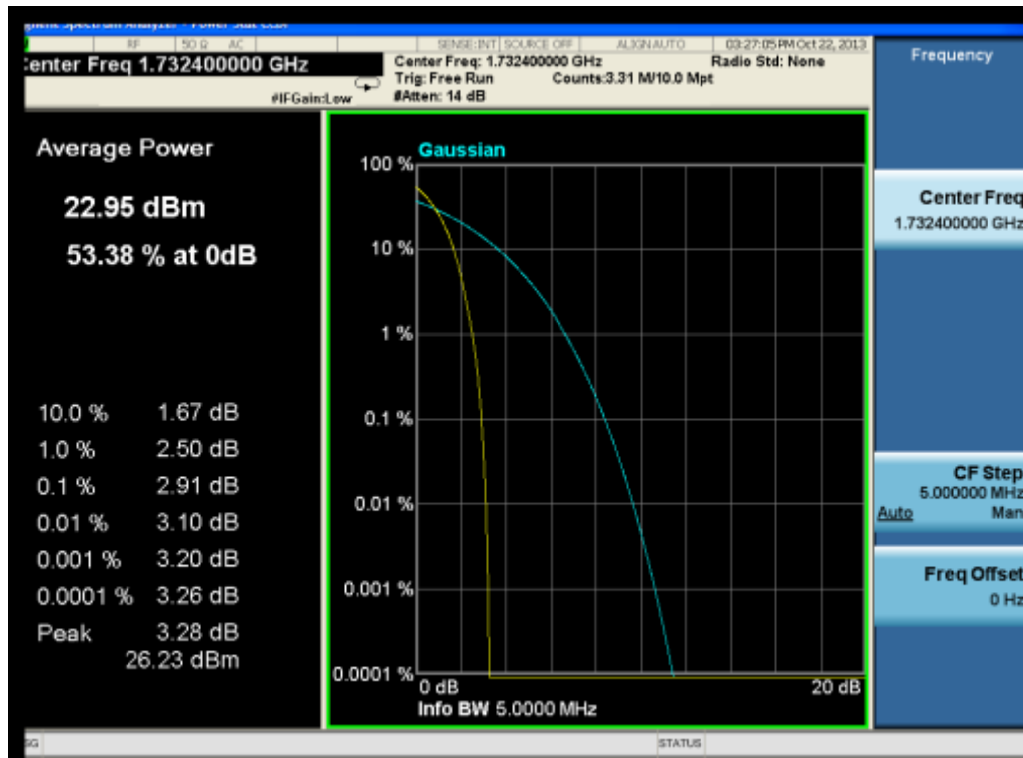
(Plot F2: HSPA+ 1900MHz Channel = 9400)



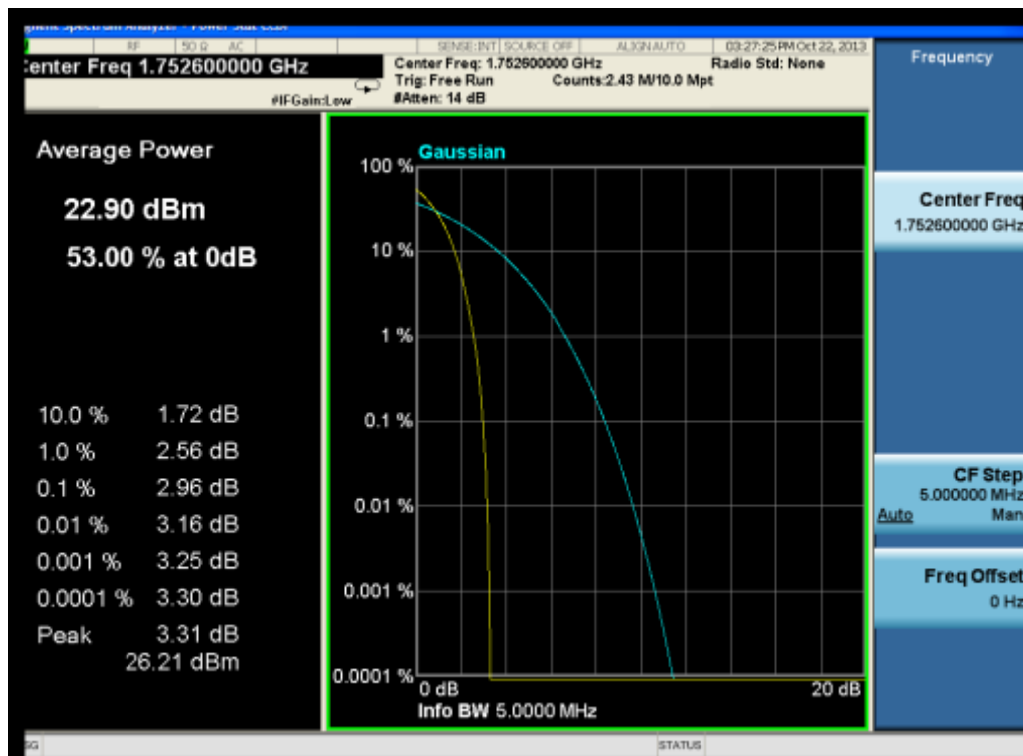
(Plot F3: HSPA+ 1900MHz Channel = 9538)



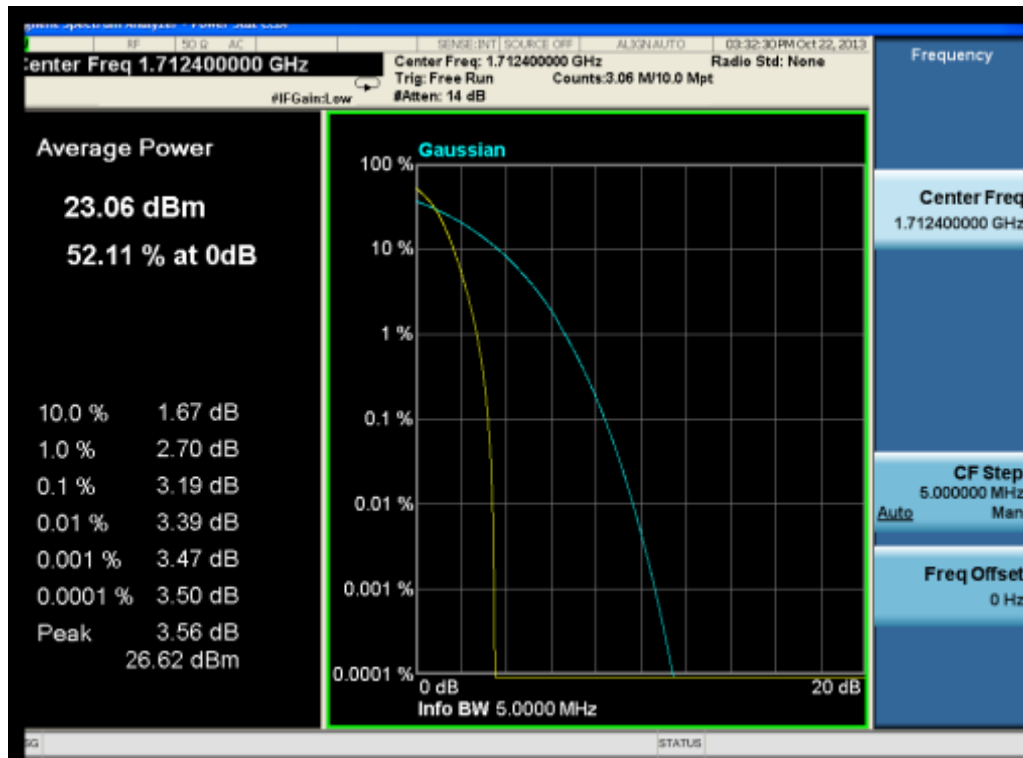
(Plot G1: WCDMA 1700MHz Channel = 1312)



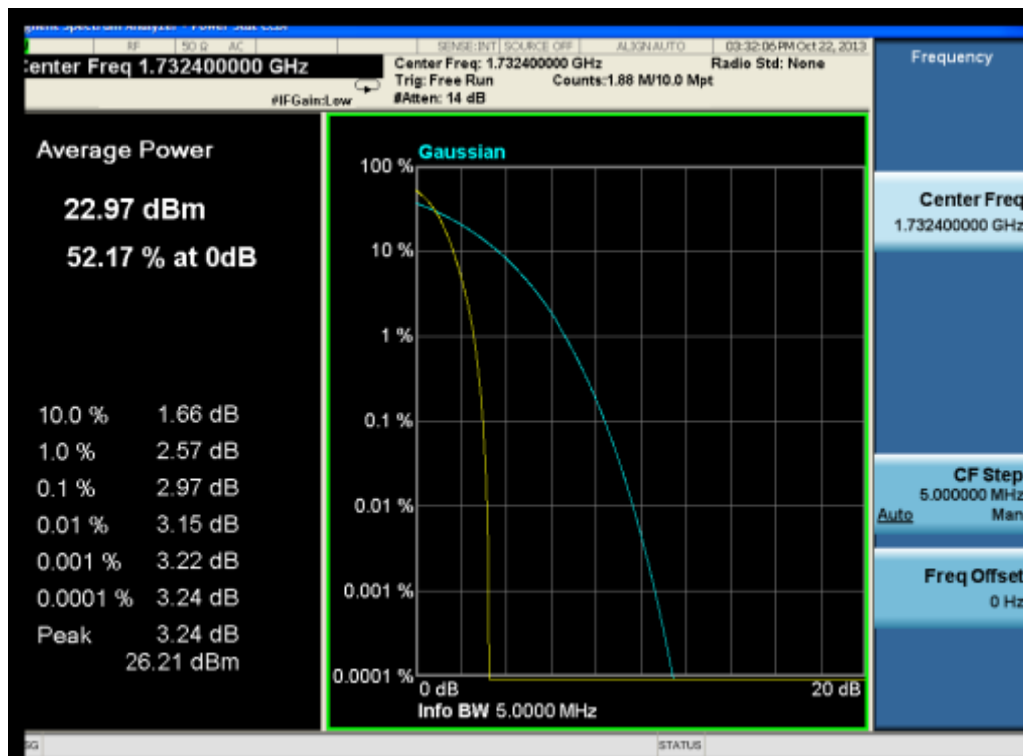
(Plot G2: WCDMA 1700MHz Channel = 1412)



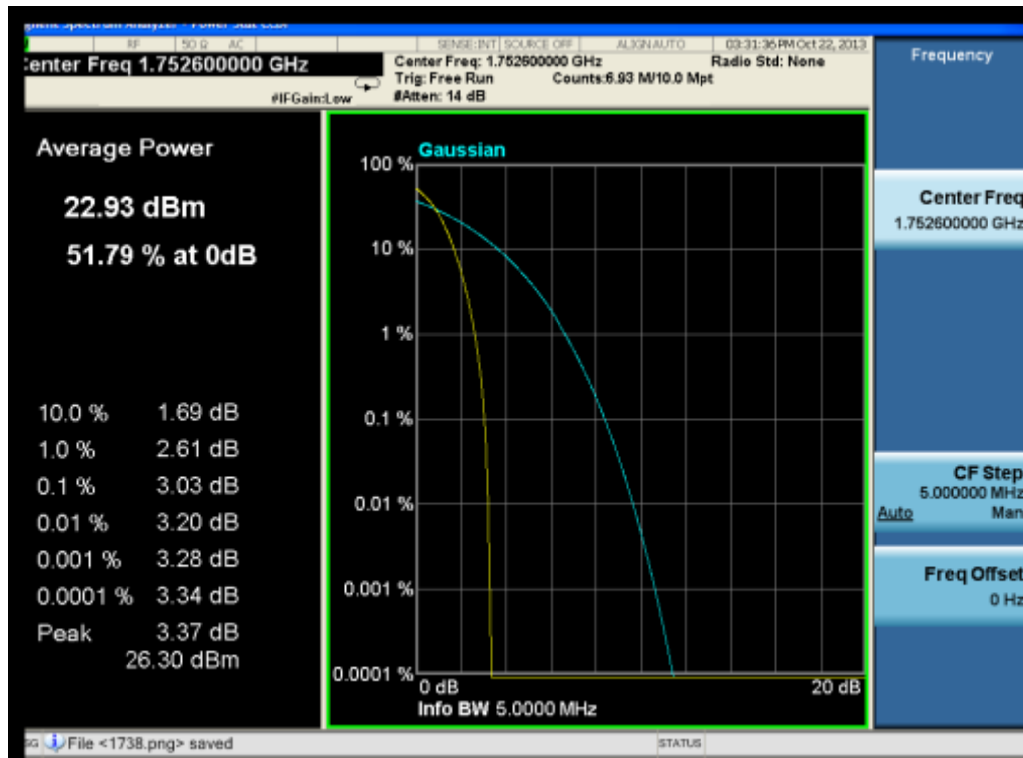
(Plot G3: WCDMA 1700MHz Channel = 1513)



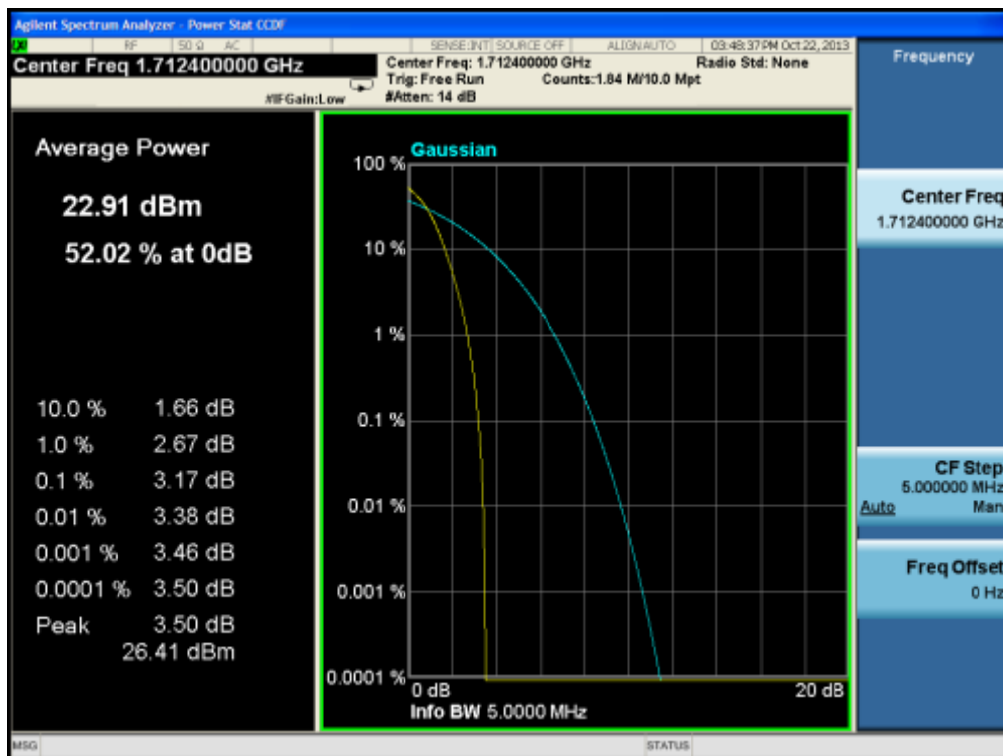
(Plot H1: HSDPA 1700MHz Channel = 1312)



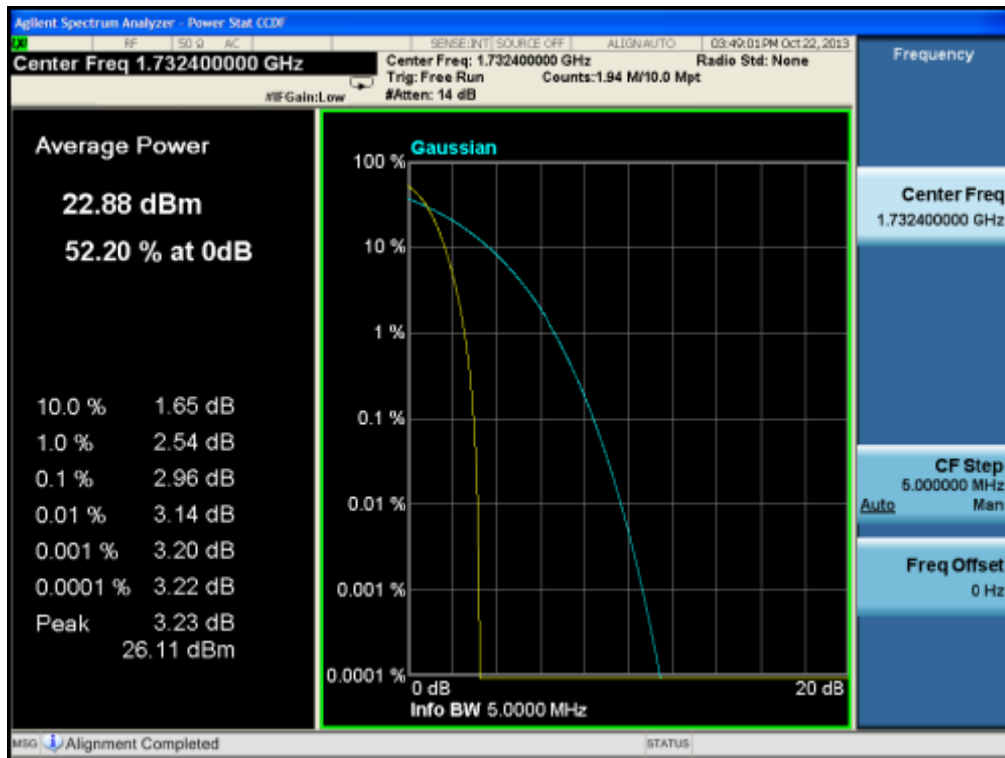
(Plot H2: HSDPA 1700MHz Channel = 1412)



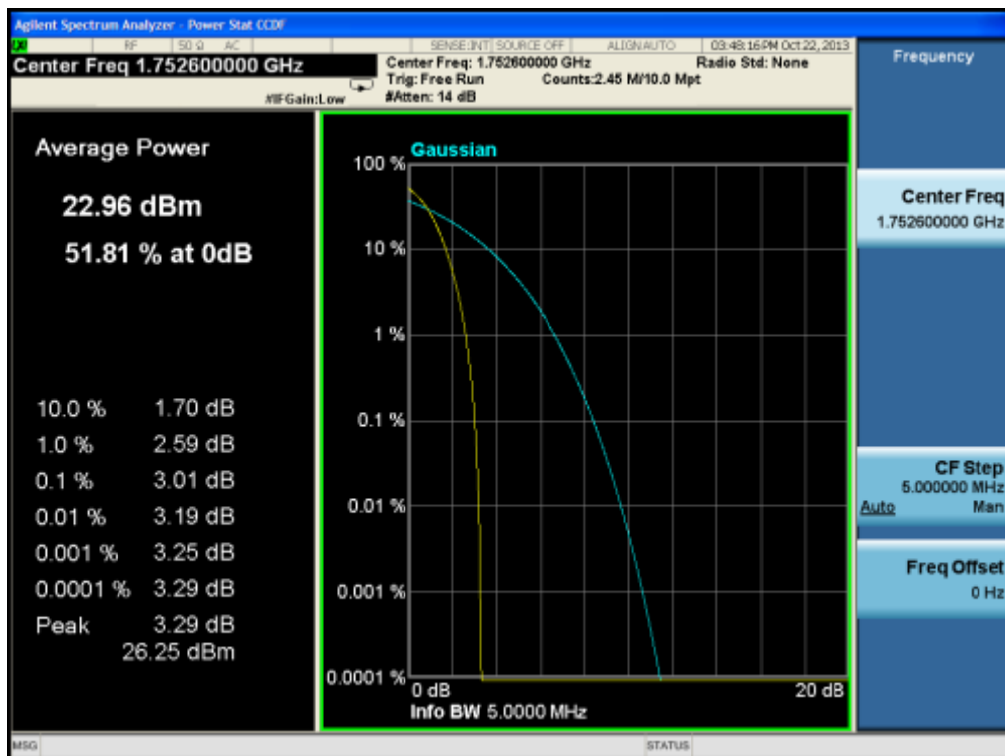
(Plot H3: HSDPA 1700MHz Channel = 1513)



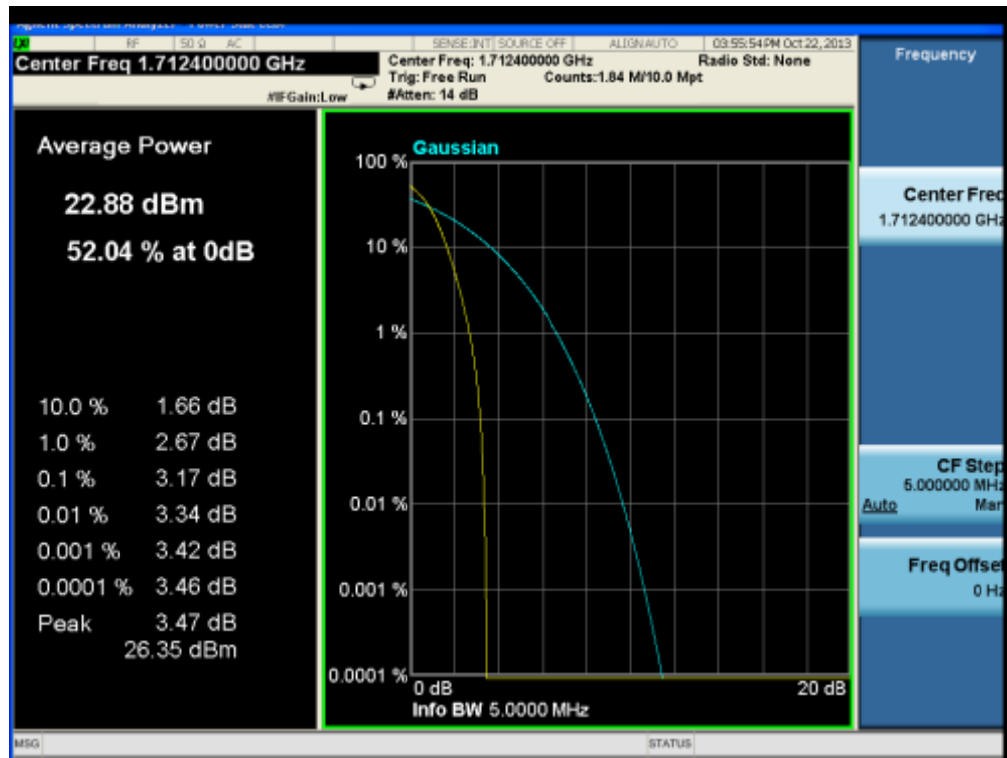
(Plot I1: HSUPA 1700MHz Channel = 1312)



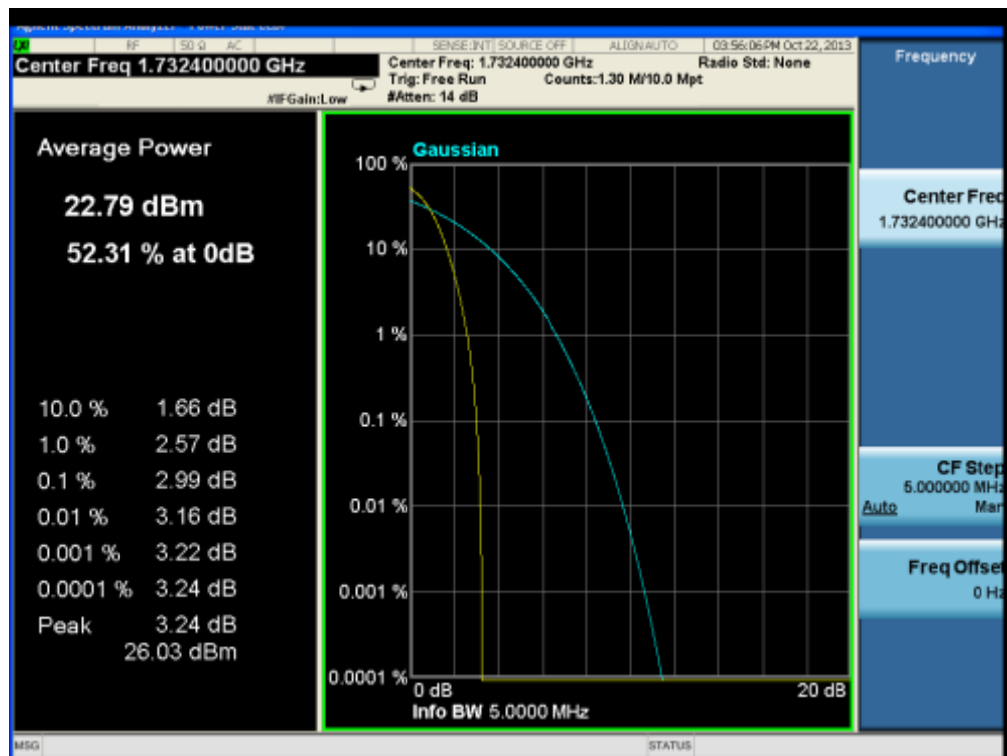
(Plot I2: HSUPA 1700MHz Channel = 1412)



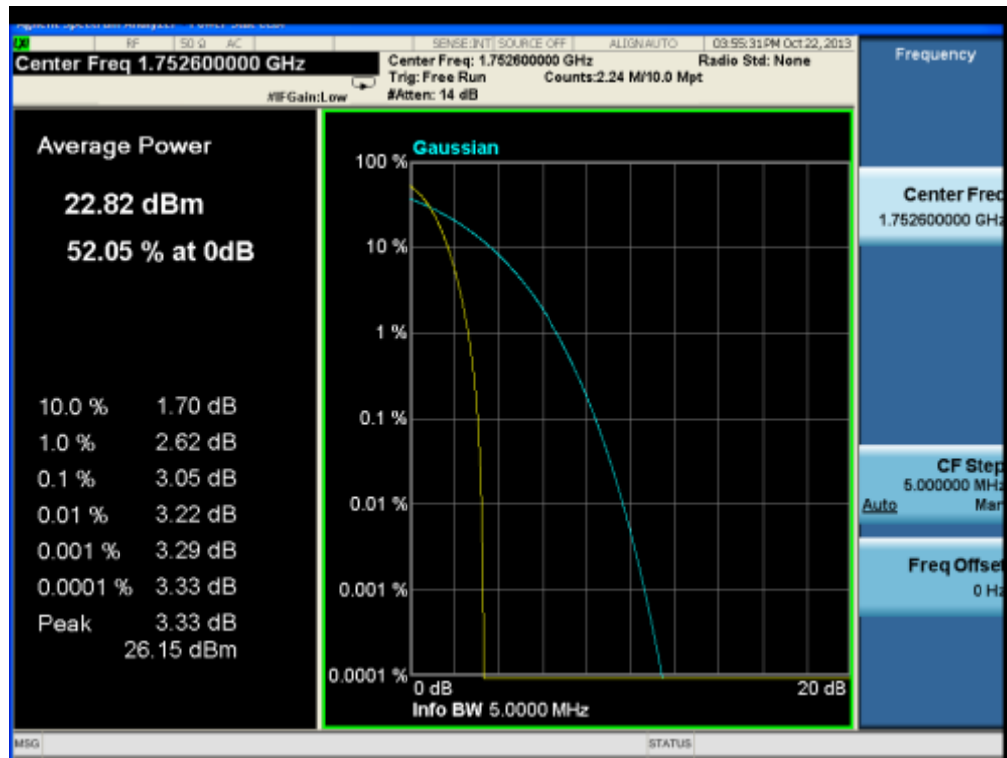
(Plot I3: HSUPA 1700MHz Channel = 1513)



(Plot J1: HSPA+ 1700MHz Channel = 1312)



(Plot J2: HSPA+ 1700MHz Channel = 1412)



(Plot J3: HSPA+ 1700MHz Channel = 1513)

2.3 99% Occupied Bandwidth

2.3.1 Definition

According to FCC section 2.1049 and FCC § 22.917 & 24.238 and 27.53(g), the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth,

2.3.2 Test Description

See section 2.1.2 of this report.

2.3.3 Test Verdict

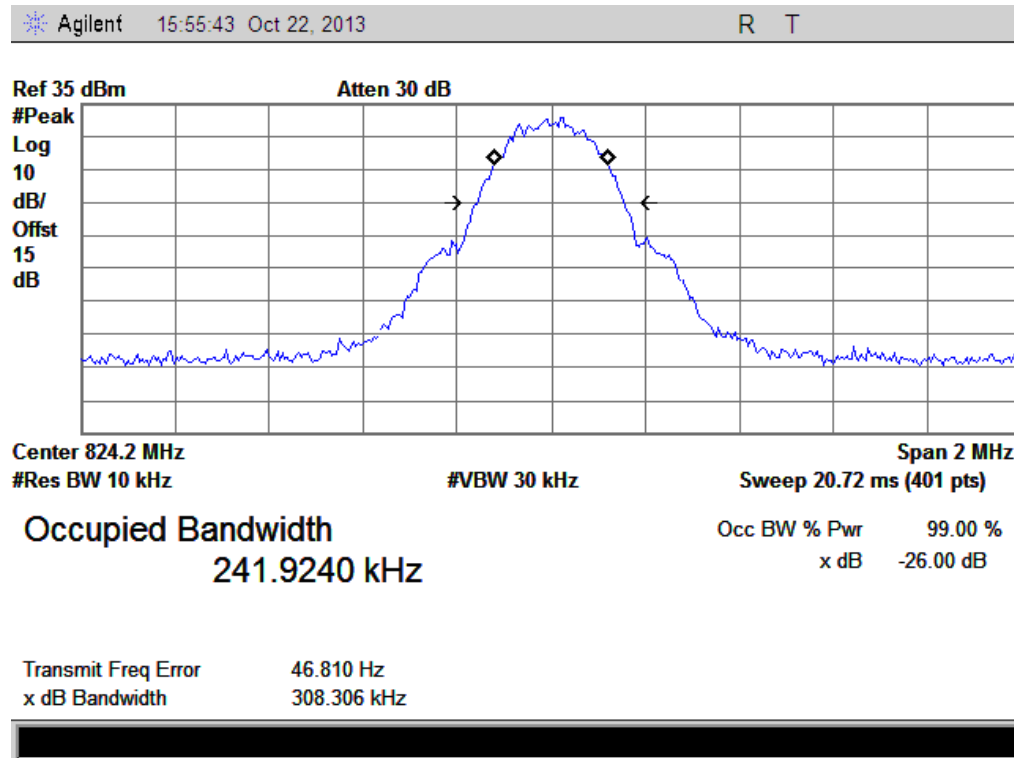
Here the lowest, middle and highest channels are selected to perform testing to verify the 99% occupied bandwidth.

2. Test Verdict:

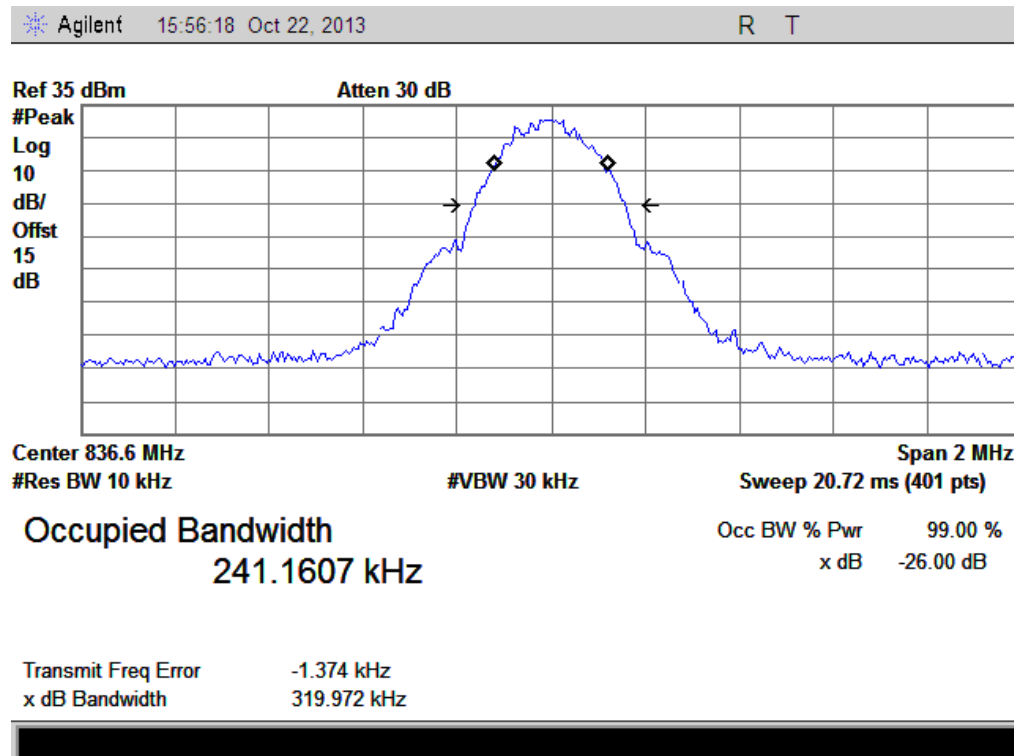
Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
EDGE 850MHz	128	824.2	308.306 KHz	241.9240 KHz	Plot A
	190	836.6	319.972 KHz	241.1607 KHz	Plot B
	251	848.8	321.701 KHz	247.4238 KHz	Plot C
EDGE 1900MHz	512	1850.2	328.302 KHz	251.2195 KHz	Plot D
	661	1880.0	306.875 KHz	245.5280 KHz	Plot E
	810	1909.8	324.605 KHz	248.8242 KHz	Plot F
WCDMA 850MHz	4132	826.4	4.697MHz	4.1732MHz	Plot G
	4175	835	4.731MHz	4.1790MHz	Plot H
	4233	846.6	4.691MHz	4.1700MHz	Plot I
WCDMA 1900MHz	9262	1852.4	4.689MHz	4.1747MHz	Plot J
	9400	1880	4.705MHz	4.1796MHz	Plot K
	9538	1907.6	4.731MHz	4.1735MHz	Plot L
HSDPA 850MHz	4132	826.4	4.706MHz	4.1911MHz	Plot M
	4175	835	4.737MHz	4.1811MHz	Plot N
	4233	846.6	4.690MHz	4.1588MHz	Plot O
HSDPA 1900MHz	9262	1852.4	4.708MHz	4.1620MHz	Plot P
	9400	1880	4.699MHz	4.1743MHz	Plot Q
	9538	1907.6	4.727MHz	4.1649MHz	Plot R
HSUPA 850MHz	4132	826.4	4.713MHz	4.1834MHz	Plot S
	4175	835	4.727MHz	4.1788MHz	Plot T
	4233	846.6	4.719MHz	4.1700MHz	Plot U
HSUPA 1900MHz	9262	1852.4	4.713MHz	4.1759MHz	Plot V

Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
	9400	1880	4.707MHz	4.1670MHz	Plot W
	9538	1907.6	4.716MHz	4.1654MHz	Plot X
HSPA+ 850MHz	4132	826.4	4.699MHz	4.1716MHz	Plot Y
	4175	835	4.731MHz	4.1887MHz	Plot Z
	4233	846.6	4.683MHz	4.1609MHz	Plot A1
HSPA+ 1900MHz	9262	1852.4	4.729MHz	4.1621MHz	Plot B1
	9400	1880	4.693MHz	4.1718MHz	Plot C1
	9538	1907.6	4.724MHz	4.1634MHz	Plot D1
GSM 850MHz	128	824.2	317.168 KHz	247.8298 KHz	Plot E1
	190	836.6	311.857 KHz	245.4729 KHz	Plot F1
	251	848.8	316.018 KHz	252.6624 KHz	Plot G1
GSM 1900MHz	512	1850.2	313.929 KHz	244.3946 KHz	Plot H1
	661	1880.0	320.060 KHz	242.1035 KHz	Plot I1
	810	1909.8	322.021 KHz	246.0187 KHz	Plot J1
WCDMA 1700MHz	1312	1712.4	4.667MHz	4.1578MHz	Plot K1
	1412	1732.4	4.662MHz	4.1847MHz	Plot L1
	1513	1752.6	4.656MHz	4.1572MHz	Plot M1
HSDPA 1700MHz	1312	1712.4	4.661MHz	4.1650MHz	Plot N1
	1412	1732.4	4.672MHz	4.1623MHz	Plot O1
	1513	1752.6	4.665MHz	4.1657MHz	Plot P1
HSUPA 1700MHz	1312	1712.4	4.656MHz	4.1621MHz	Plot Q1
	1412	1732.4	4.675MHz	4.1738MHz	Plot R1
	1513	1752.6	4.672MHz	4.1602MHz	Plot S1
HSPA+ 1700MHz	1312	1712.4	4.661MHz	4.1558MHz	Plot T1
	1412	1732.4	4.673MHz	4.1741MHz	Plot U1
	1513	1752.6	4.670MHz	4.1766MHz	Plot V1
GPRS 850MHz	128	824.2	316.990 KHz	248.0522 KHz	Plot W1
	190	836.6	320.371 KHz	250.1977 KHz	Plot X1
	251	848.8	312.044 KHz	246.0000 KHz	Plot Y1
GPRS 1900MHz	512	1850.2	320.520 KHz	247.6597 KHz	Plot Z1
	661	1880.0	318.948 KHz	243.5890 KHz	Plot A2
	810	1909.8	315.277 KHz	246.8856 KHz	Plot B2

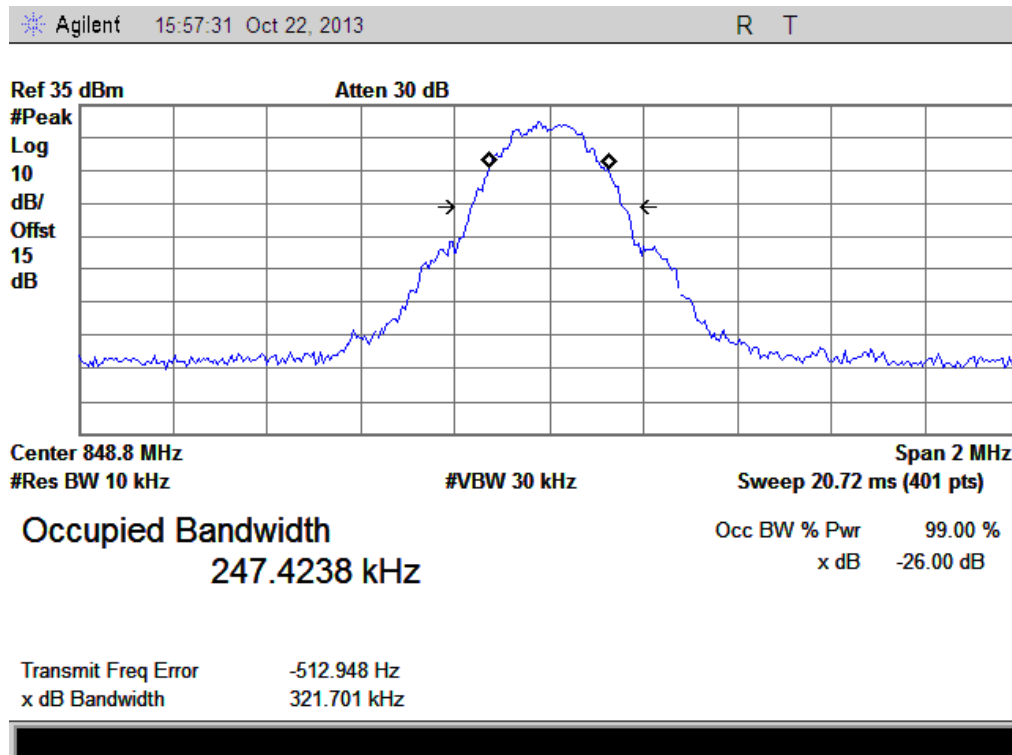
3. Test Plots:



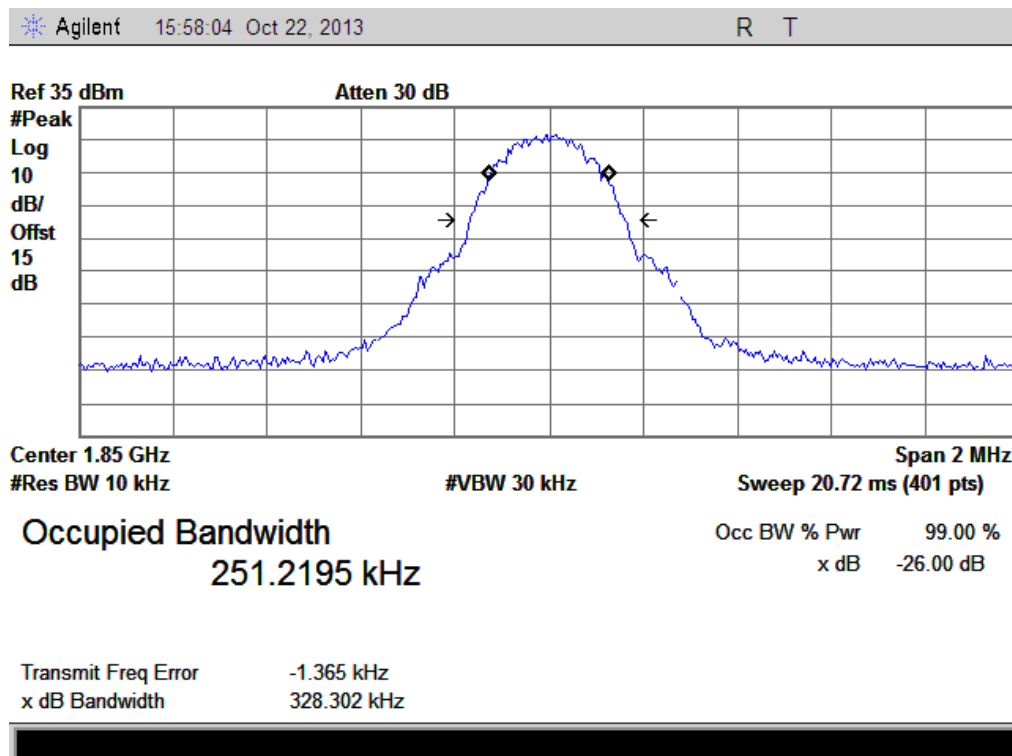
(Plot A: EGPRS 850MHz Channel = 128)



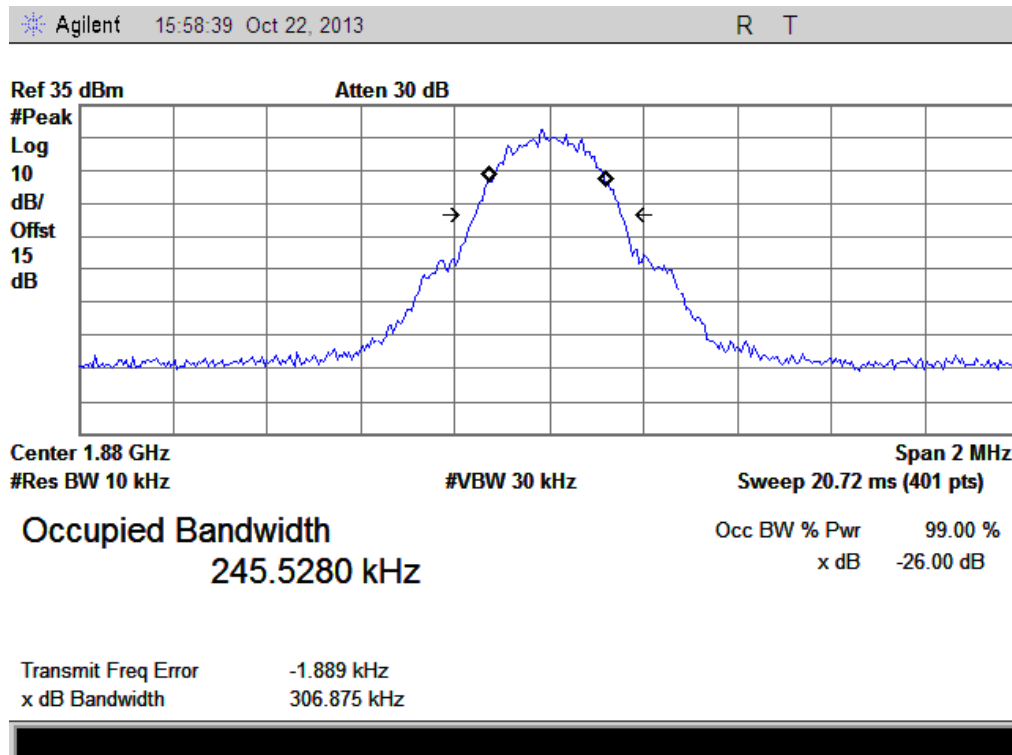
(Plot B: EGPRS 850MHz Channel = 190)



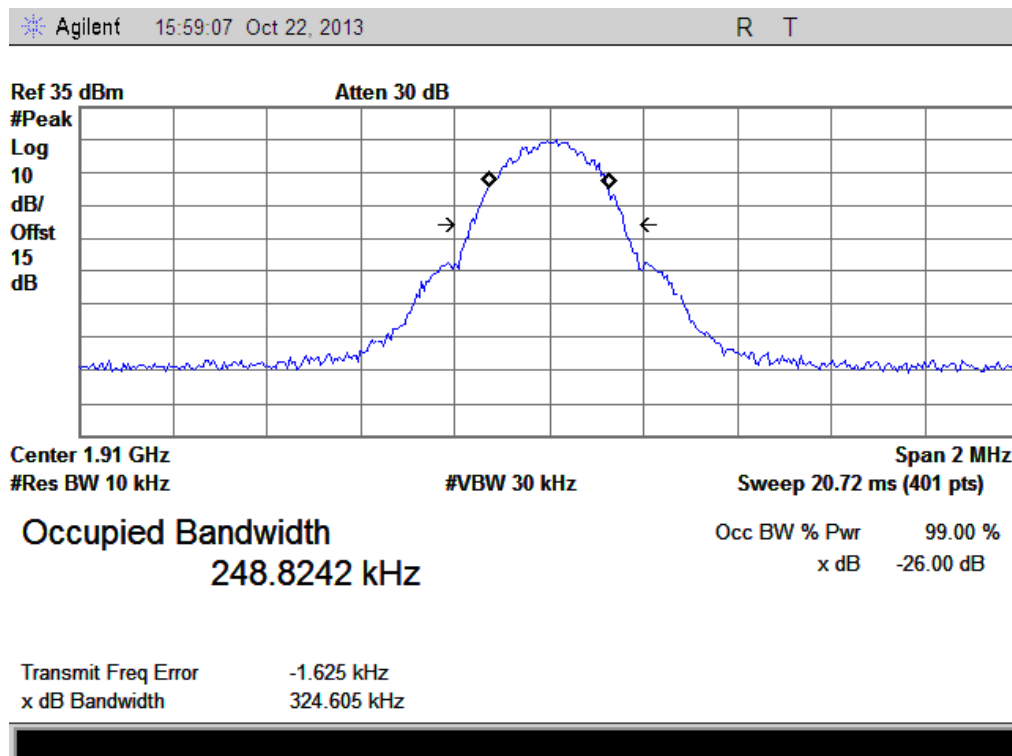
(Plot C: EGPRS 850MHz Channel = 251)



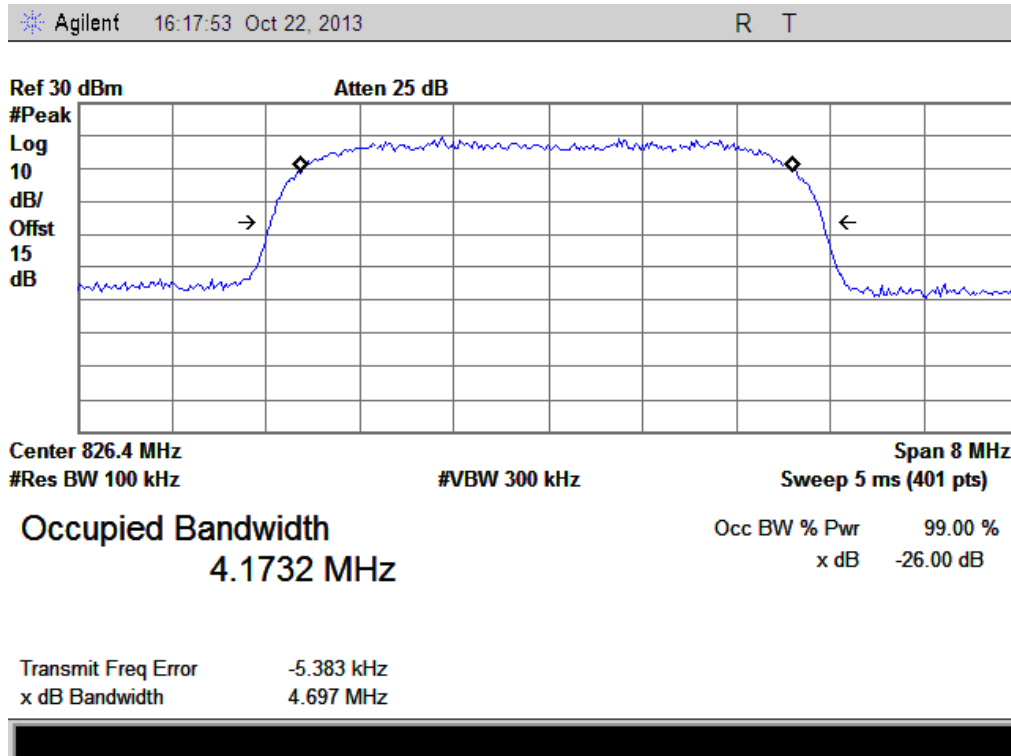
(Plot D: EGPRS1900MHz Channel = 512)



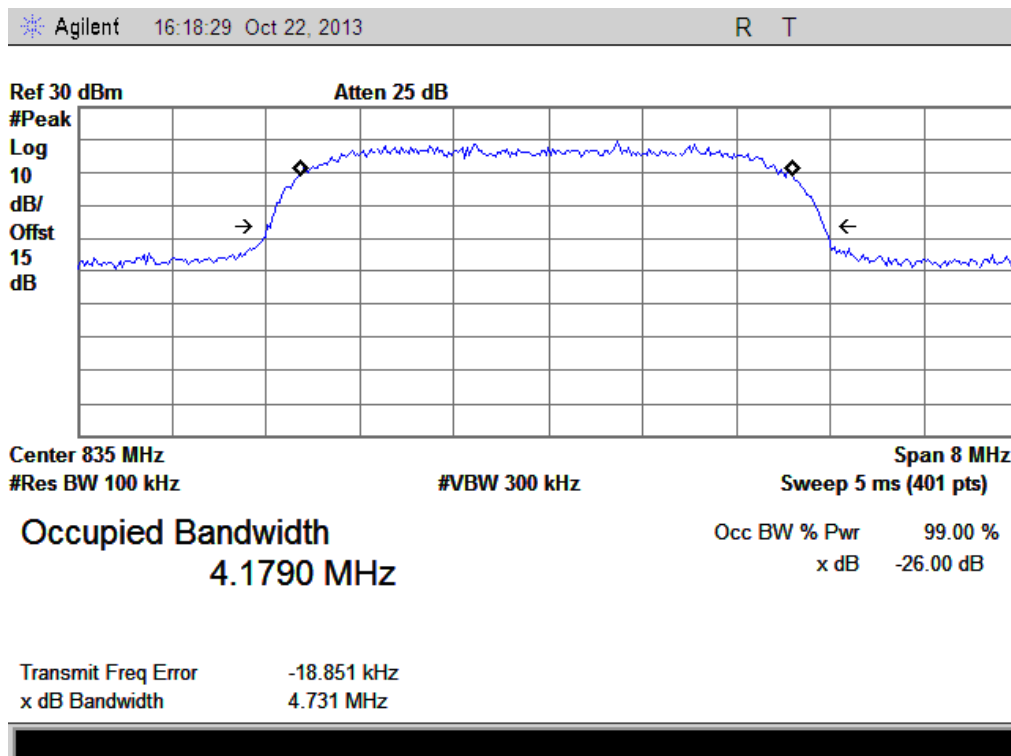
(Plot E: EGPRS1900MHz Channel = 661)



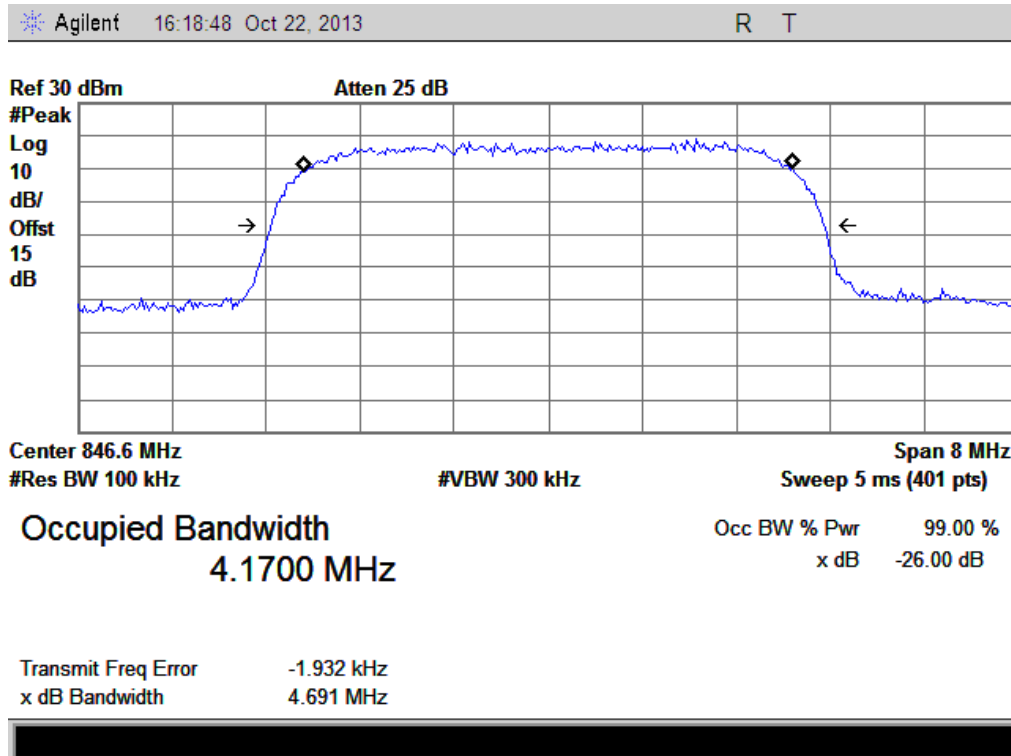
(Plot F: EGPRS 1900MHz Channel = 810)



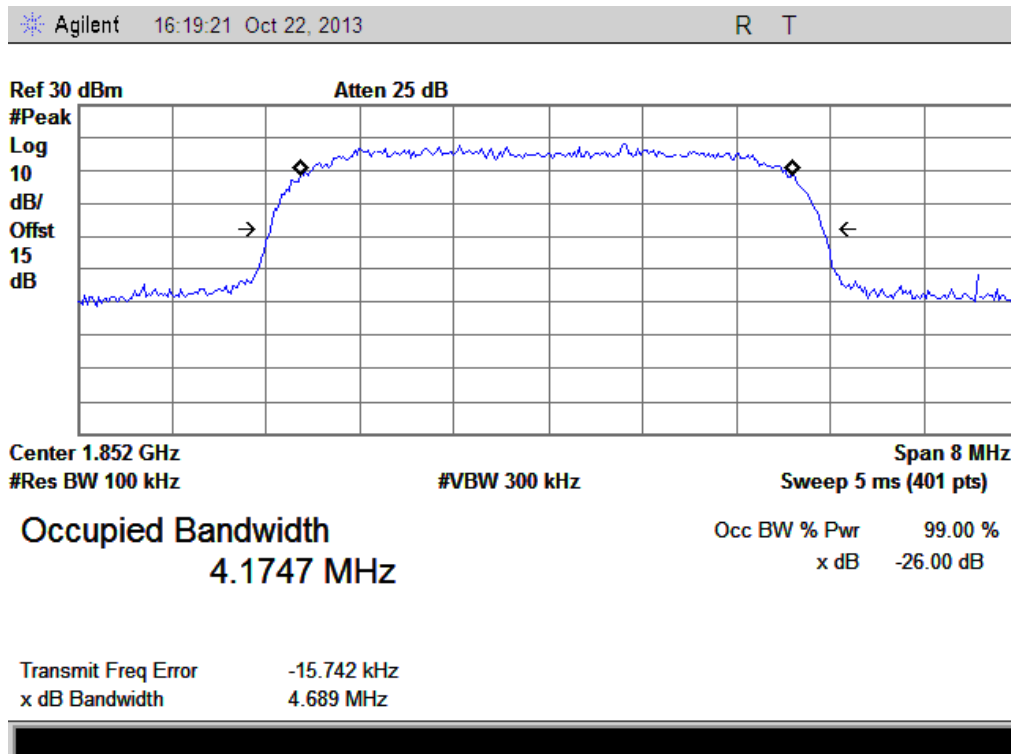
(Plot G: WCDMA 850MHz Channel = 4132)



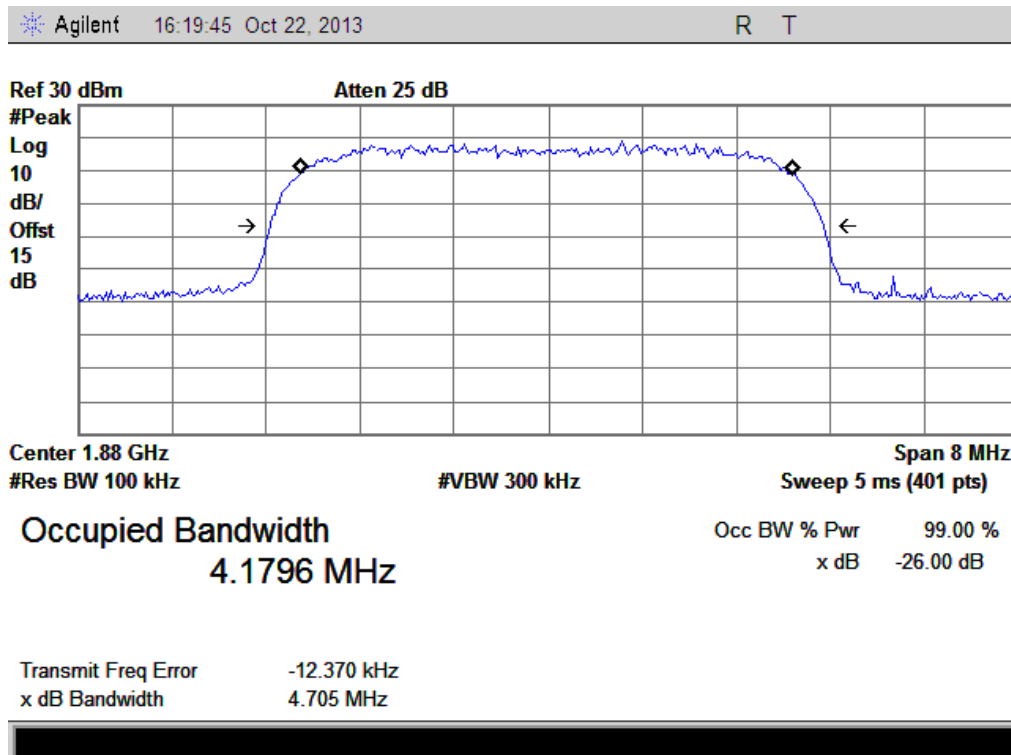
(Plot H: WCDMA 850 MHz Channel = 4175)



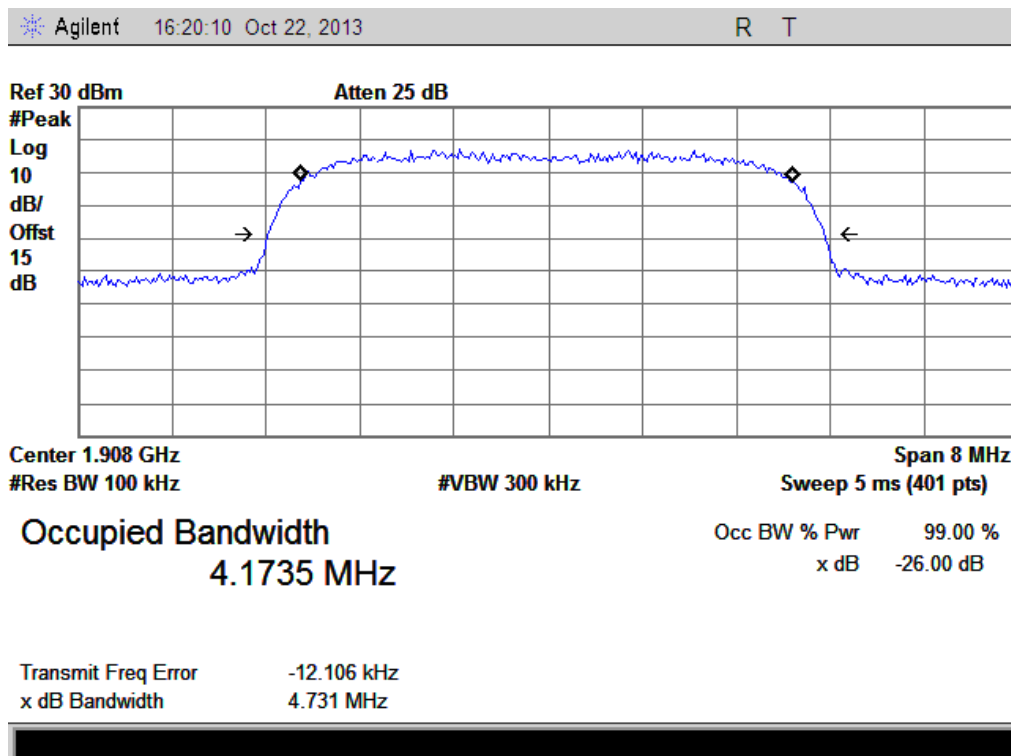
(Plot I: WCDMA 850MHz Channel = 4233)



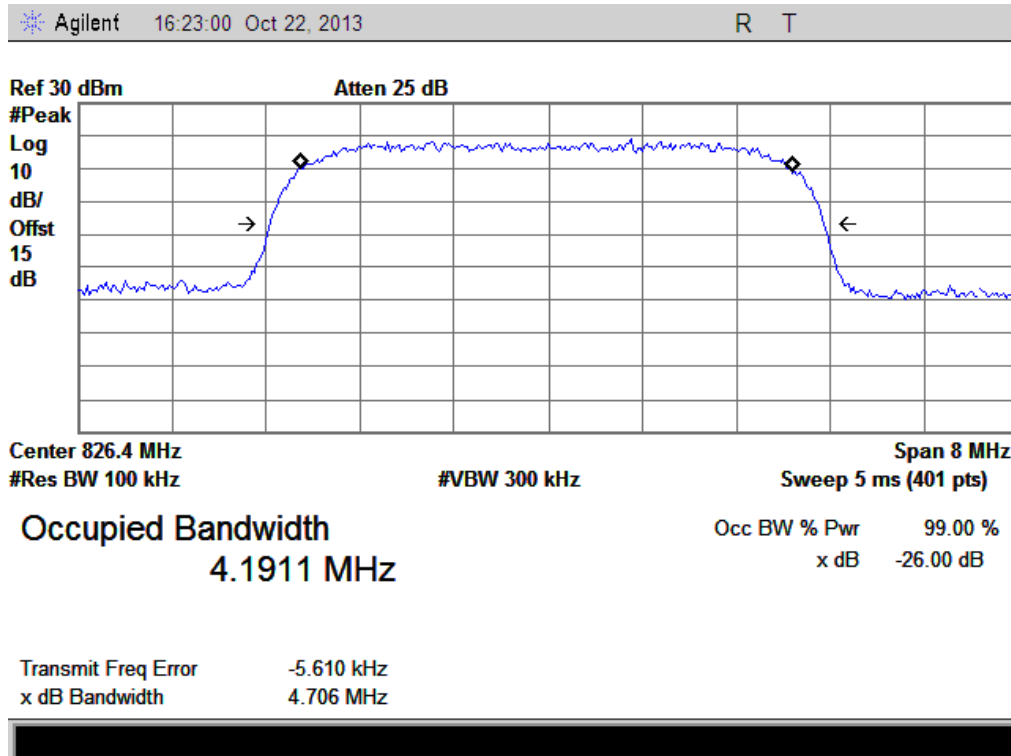
(Plot J: WCDMA 1900MHz Channel = 9262)



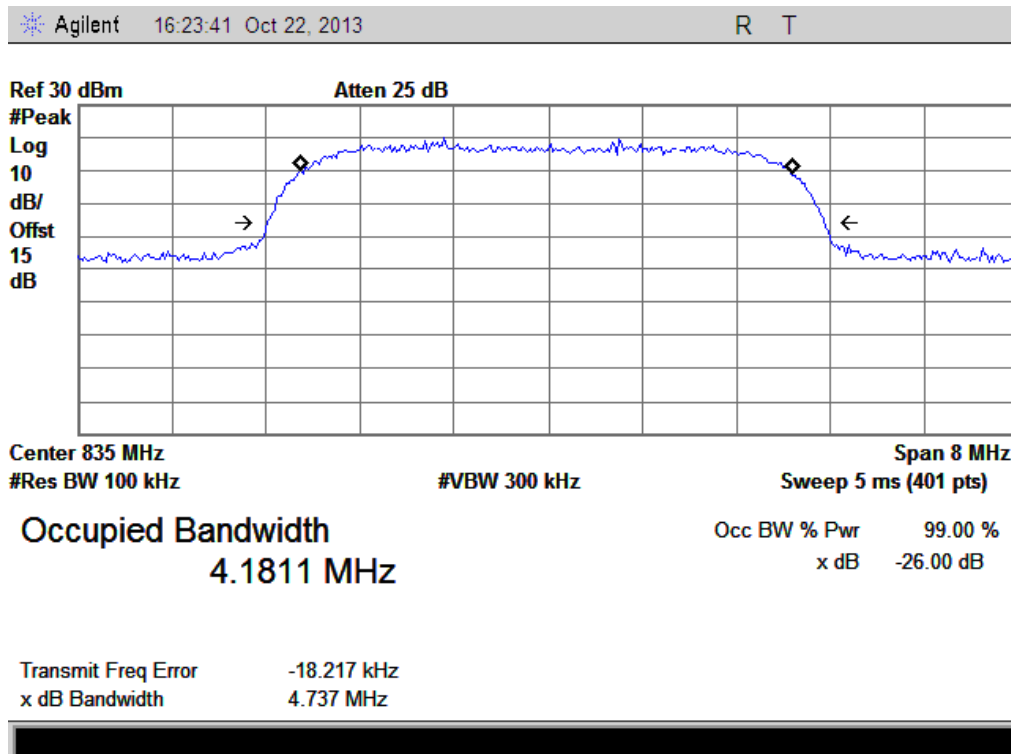
(Plot K: WCDMA 1900 MHz Channel = 9400)



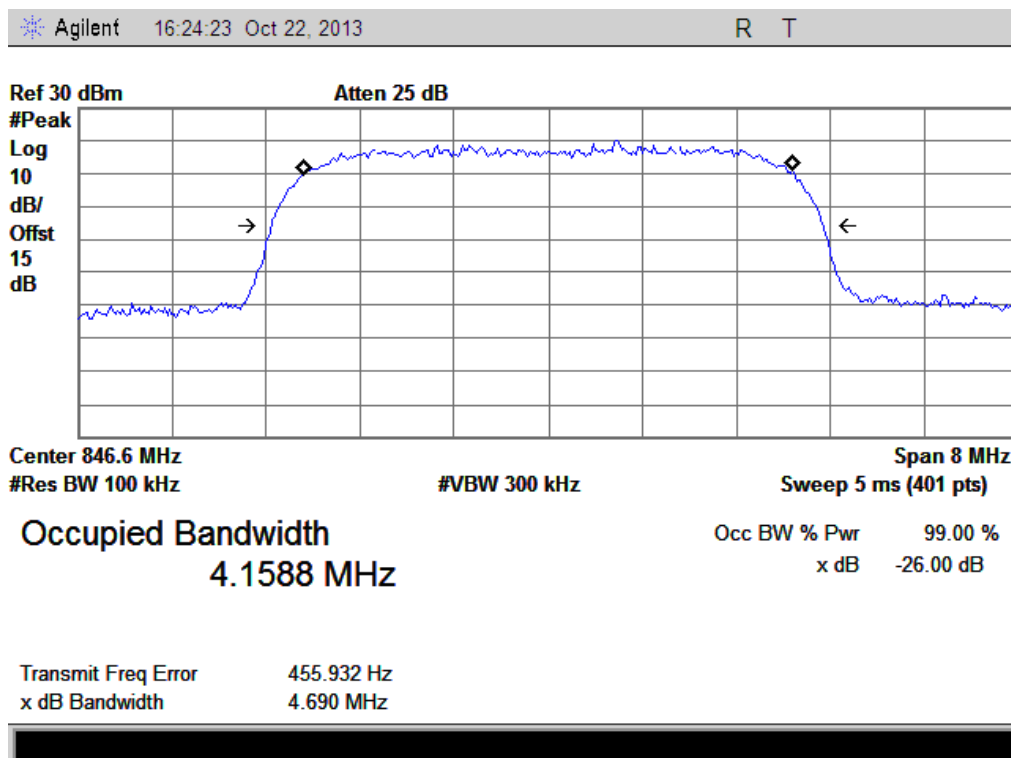
(Plot L: WCDMA1900MHz Channel = 9538)



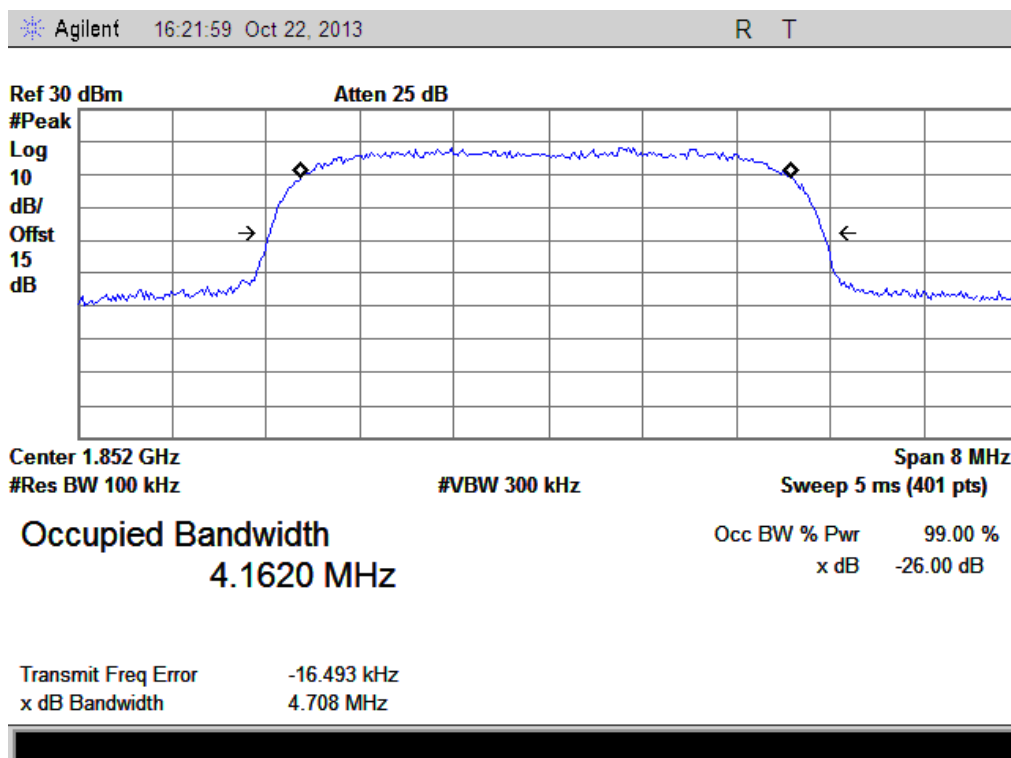
(Plot M: HSDPA 850MHz Channel = 4132)



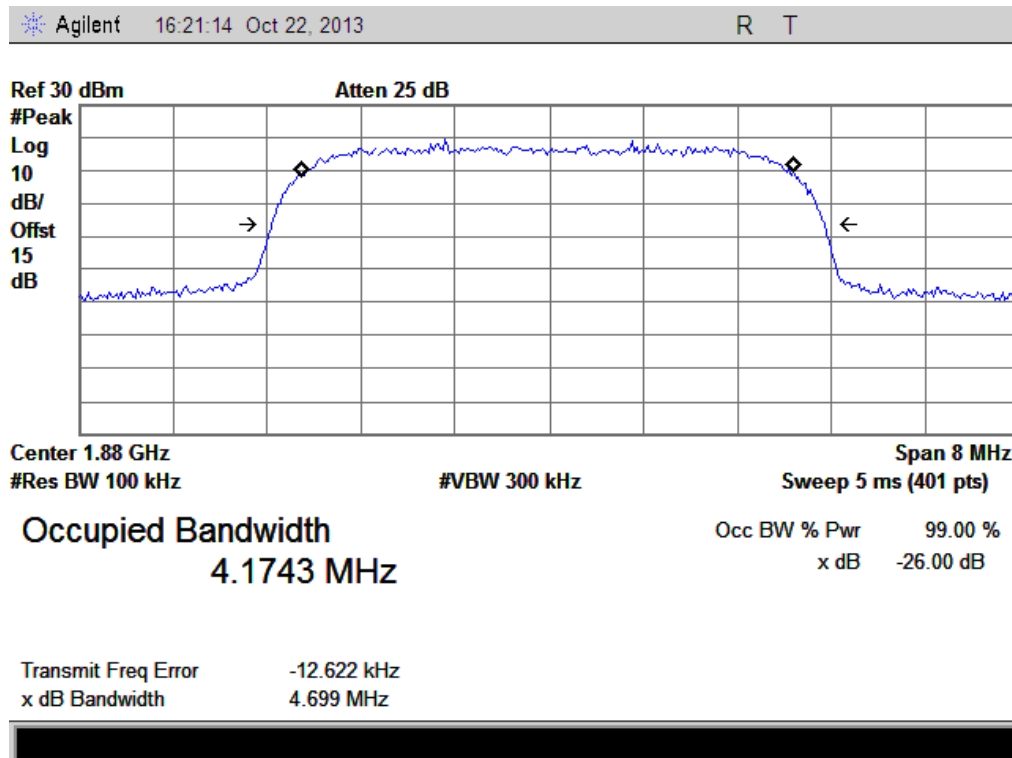
(Plot N: HSDPA850 MHz Channel = 4175)



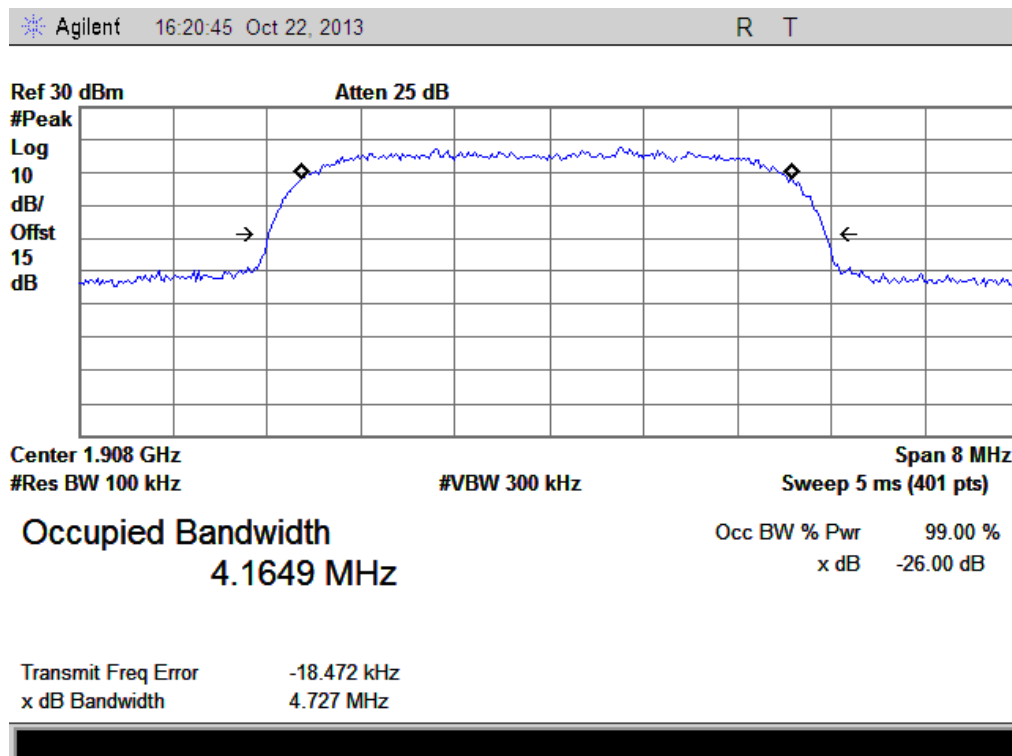
(Plot O: HSDPA 850 MHz Channel = 4233)



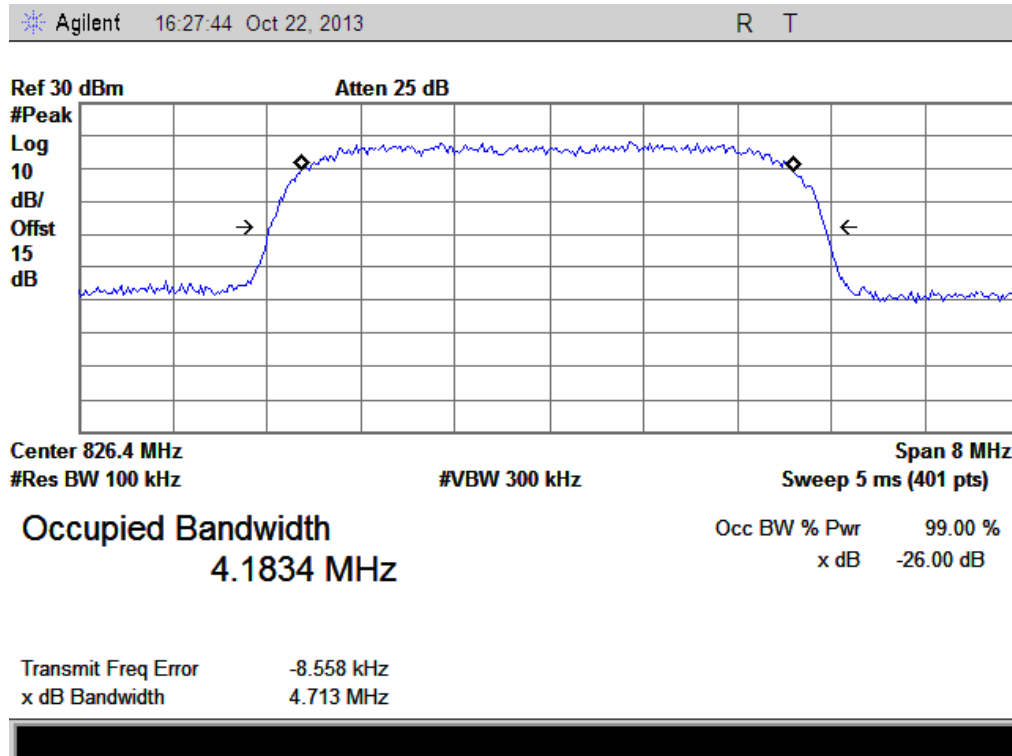
(Plot P: HSDPA1900 MHz Channel = 9262)



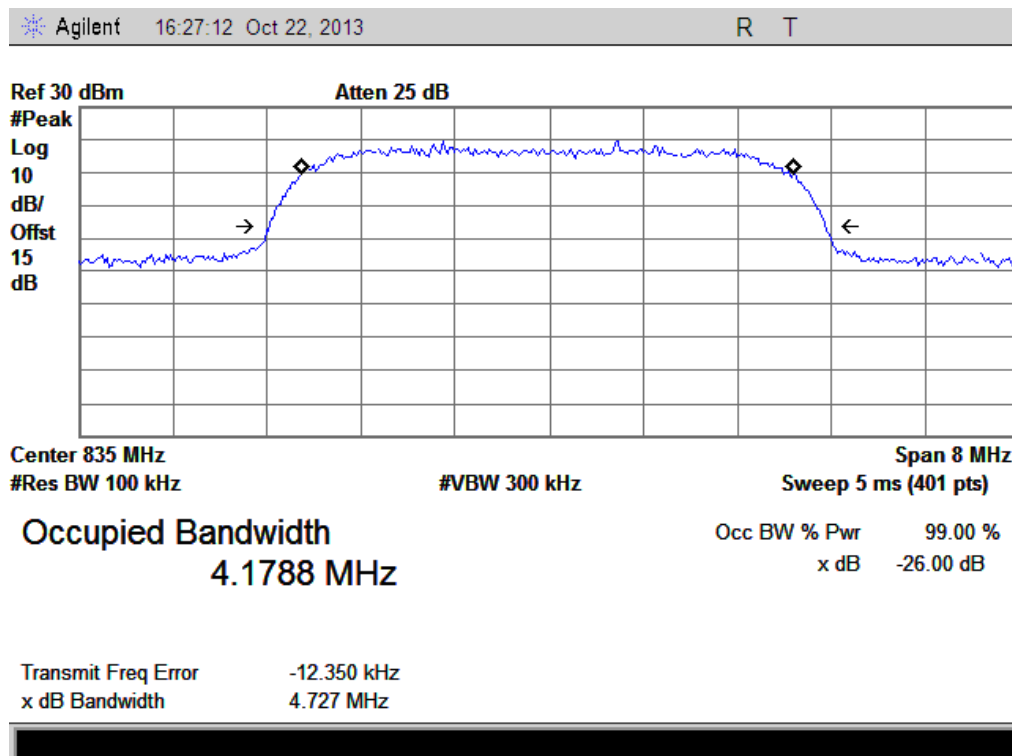
(Plot Q: HSDPA1900 MHz Channel = 9400)



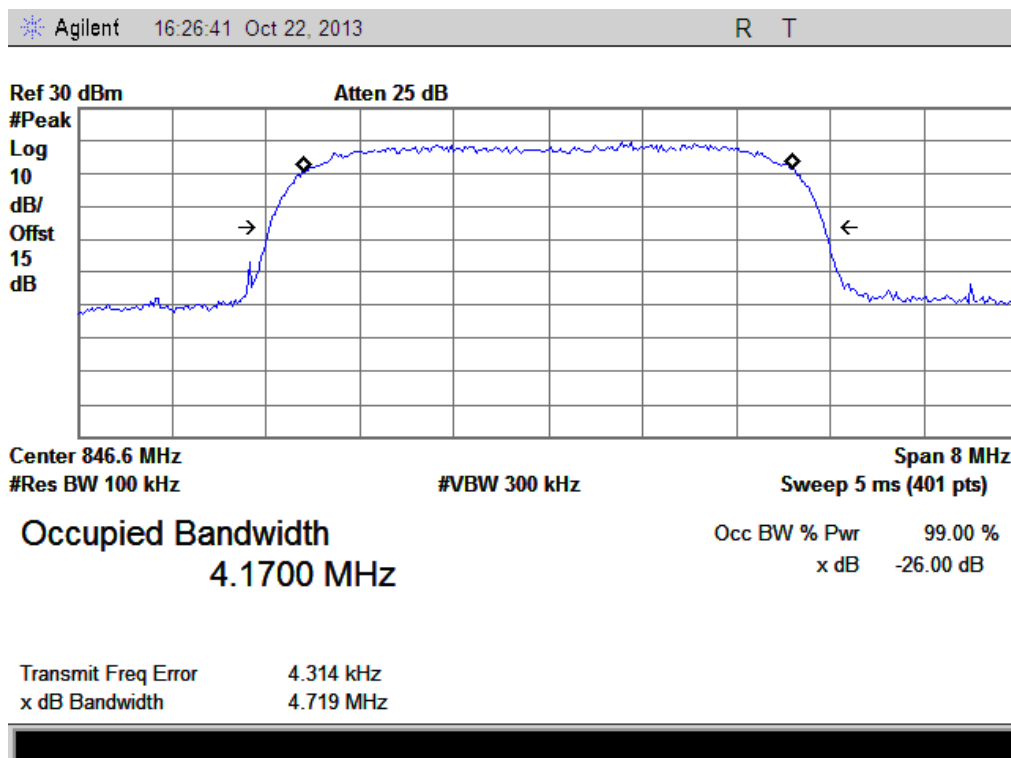
(Plot R: HSDPA 1900 MHz Channel = 9538)



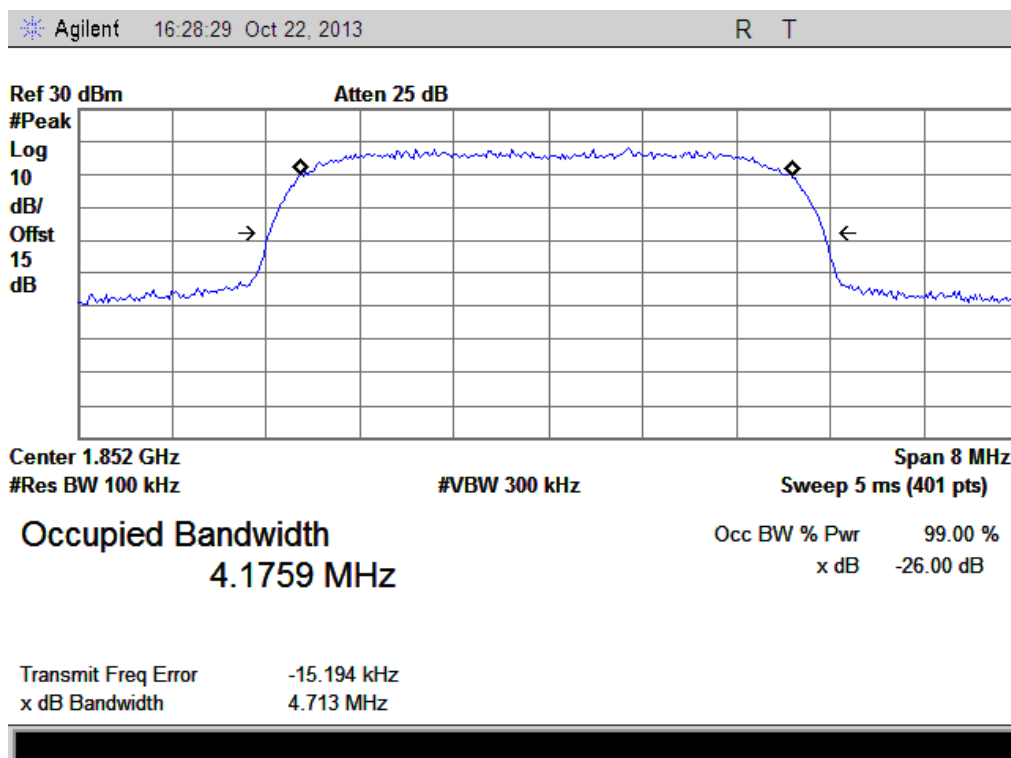
(Plot S: HSUPA850 MHz Channel = 4132)



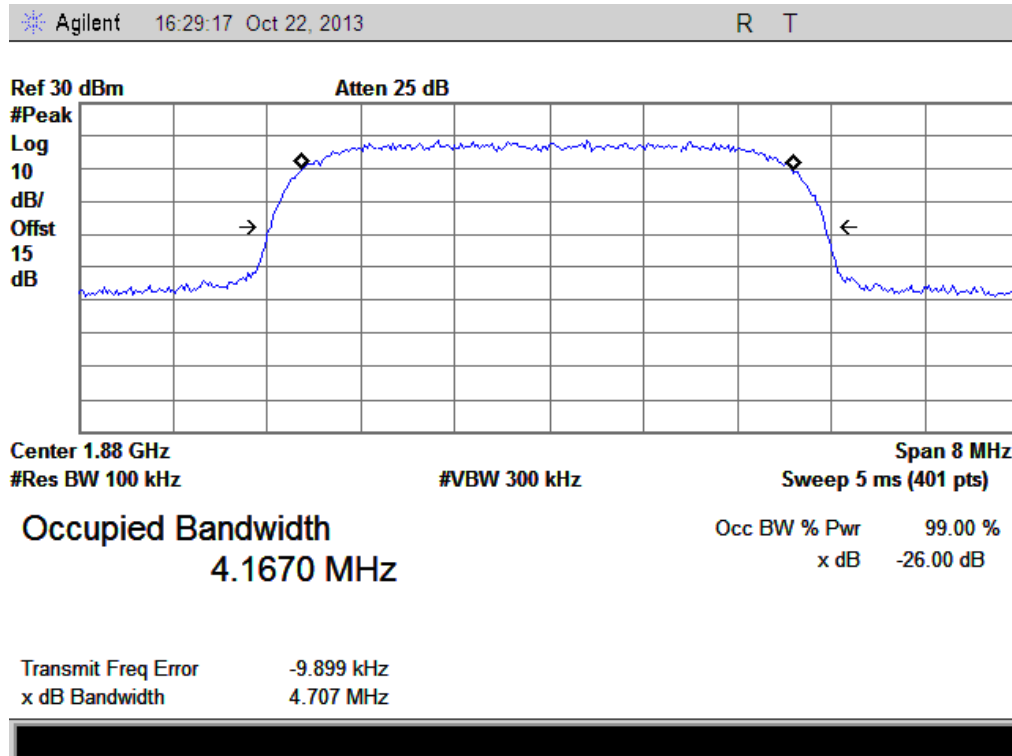
(Plot T: HSUPA850 MHz Channel = 4175)



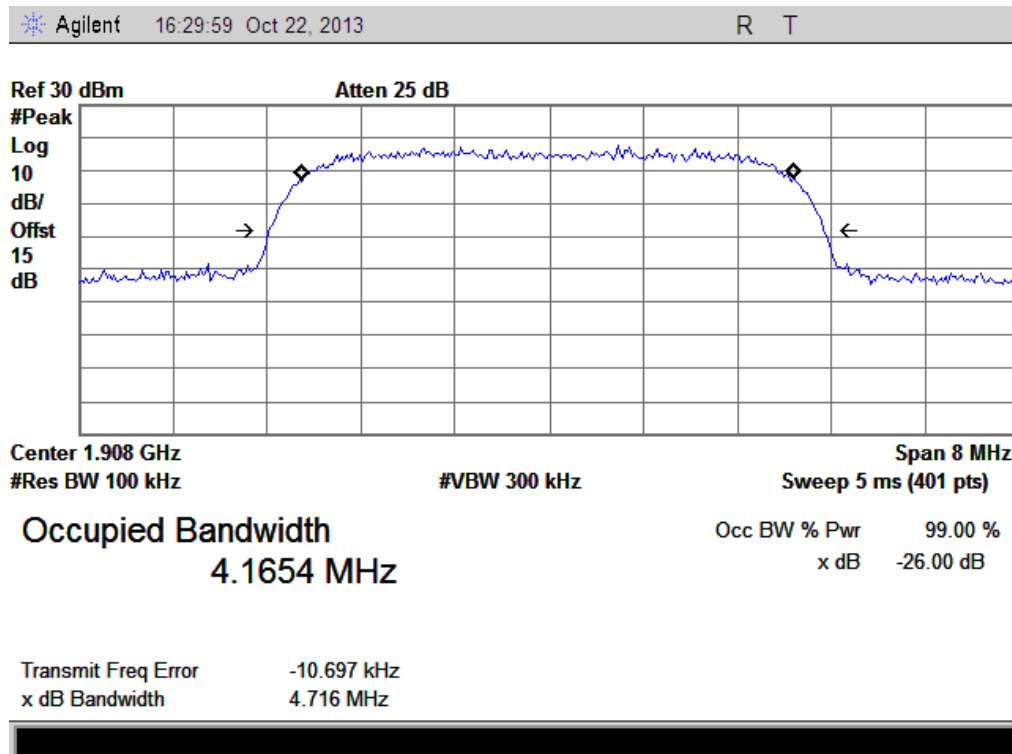
(Plot U: HSUPA850 MHz Channel = 4233)



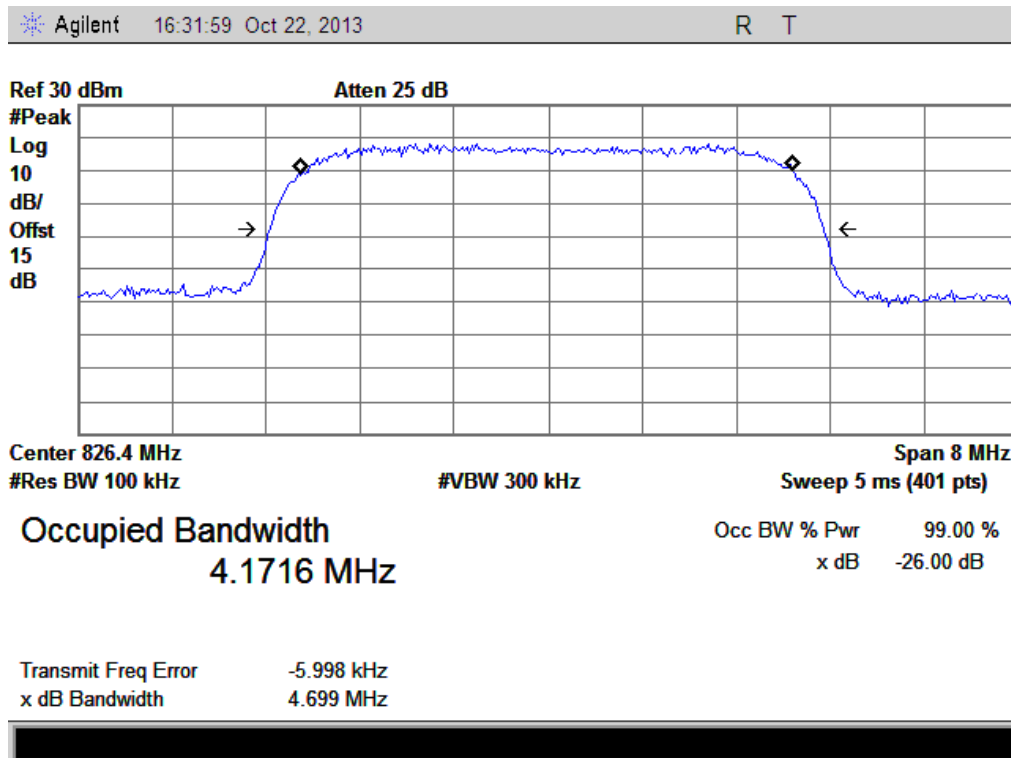
(Plot V: HSUPA1900 MHz Channel = 9262)



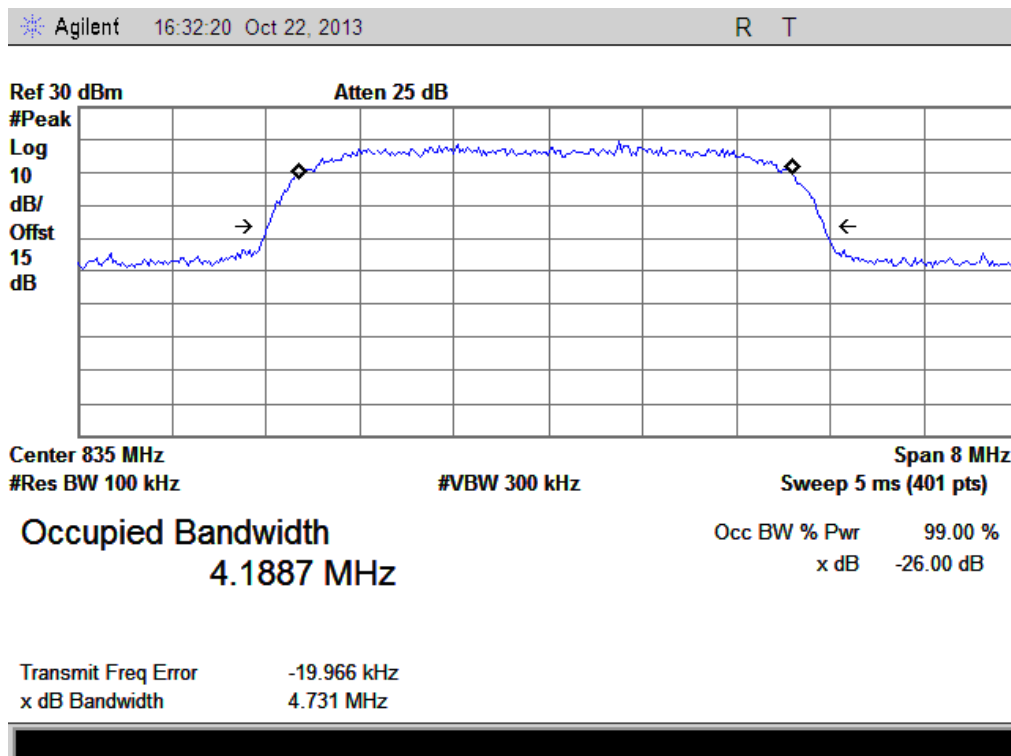
(Plot W: HSUPA1900 MHz Channel = 9400)



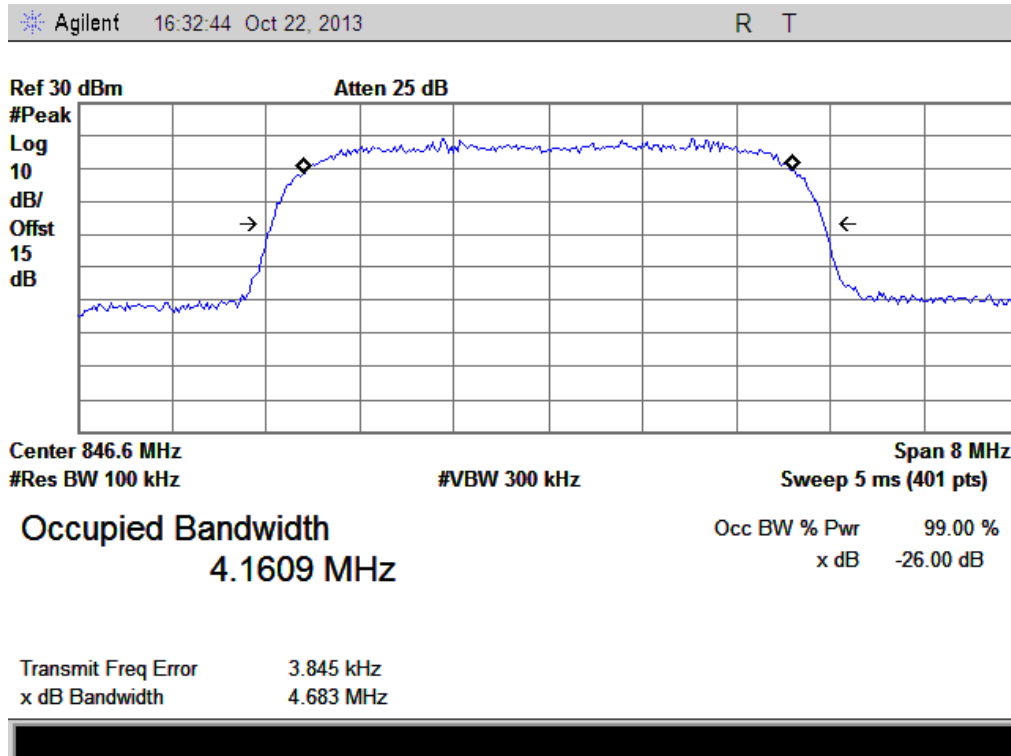
(Plot X: HSUPA1900 MHz Channel = 9538)



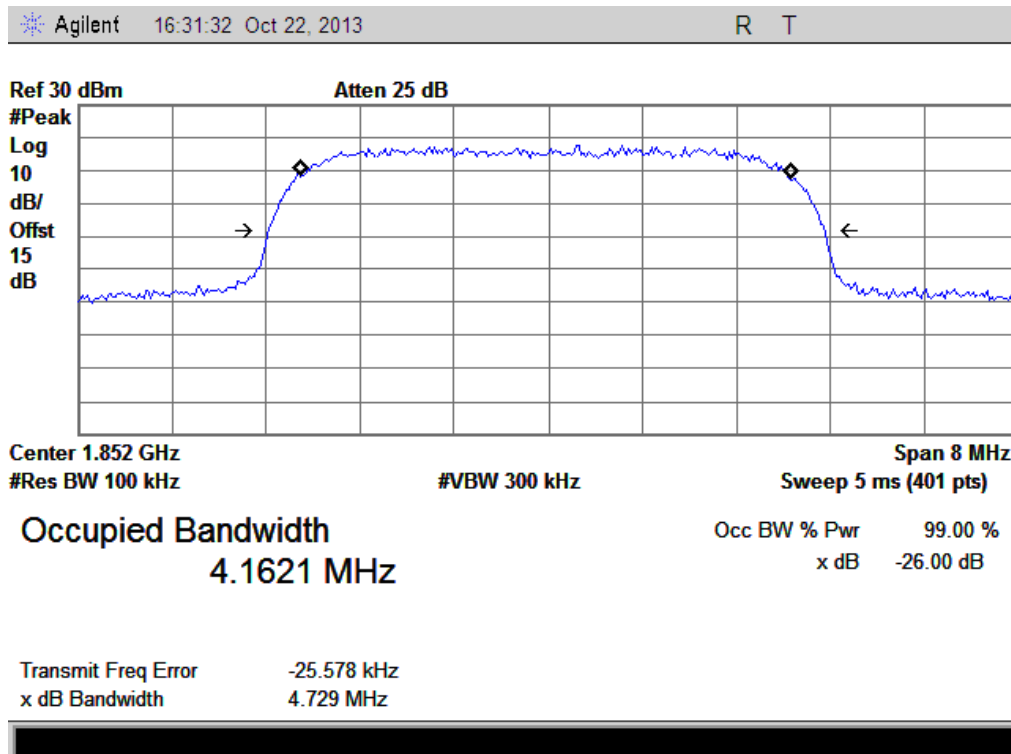
(Plot Y: HSPA+ 850 MHz Channel = 4132)



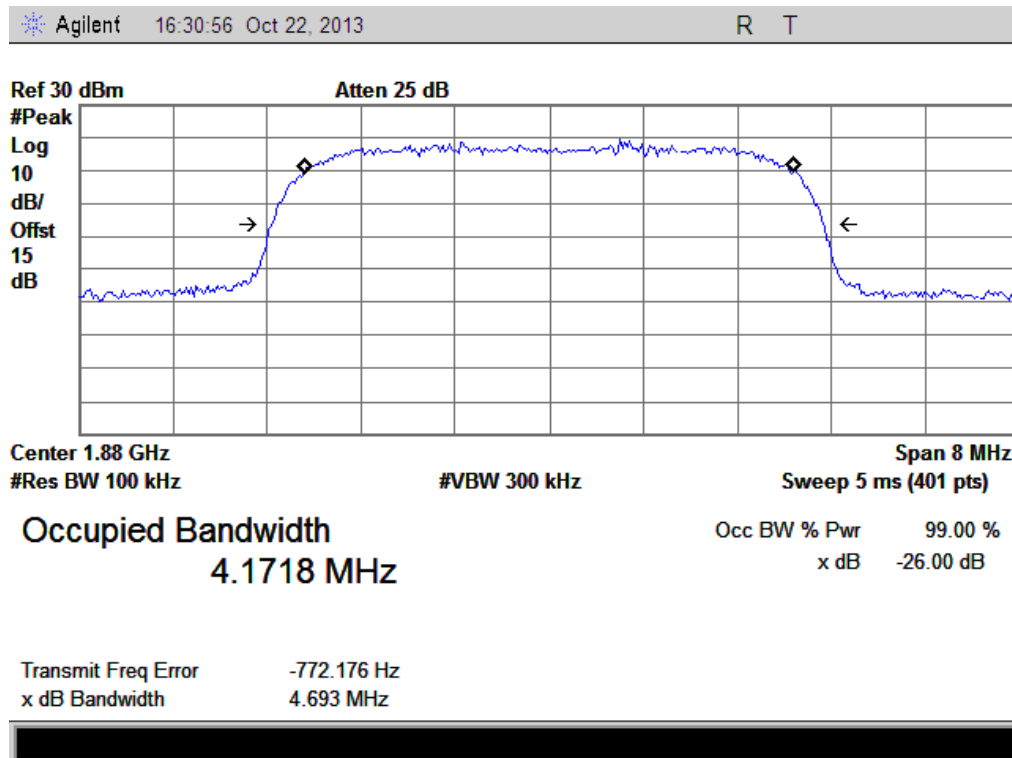
(Plot Z: HSPA+850 MHz Channel = 4175)



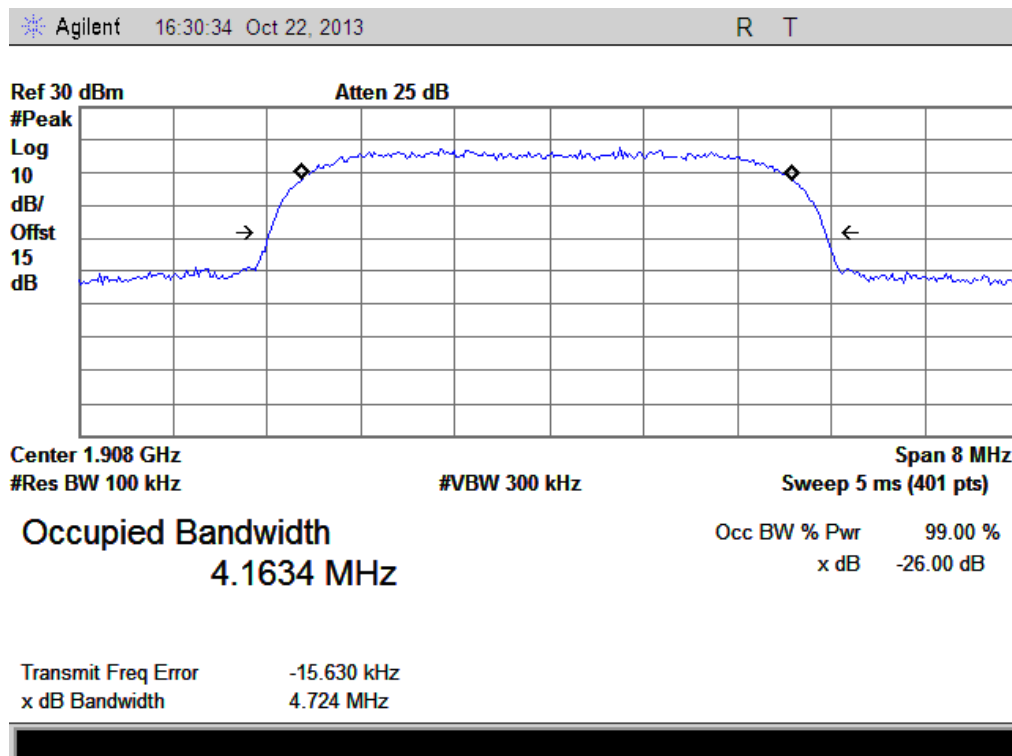
(Plot A1: HSPA+ 850 MHz Channel = 4233)



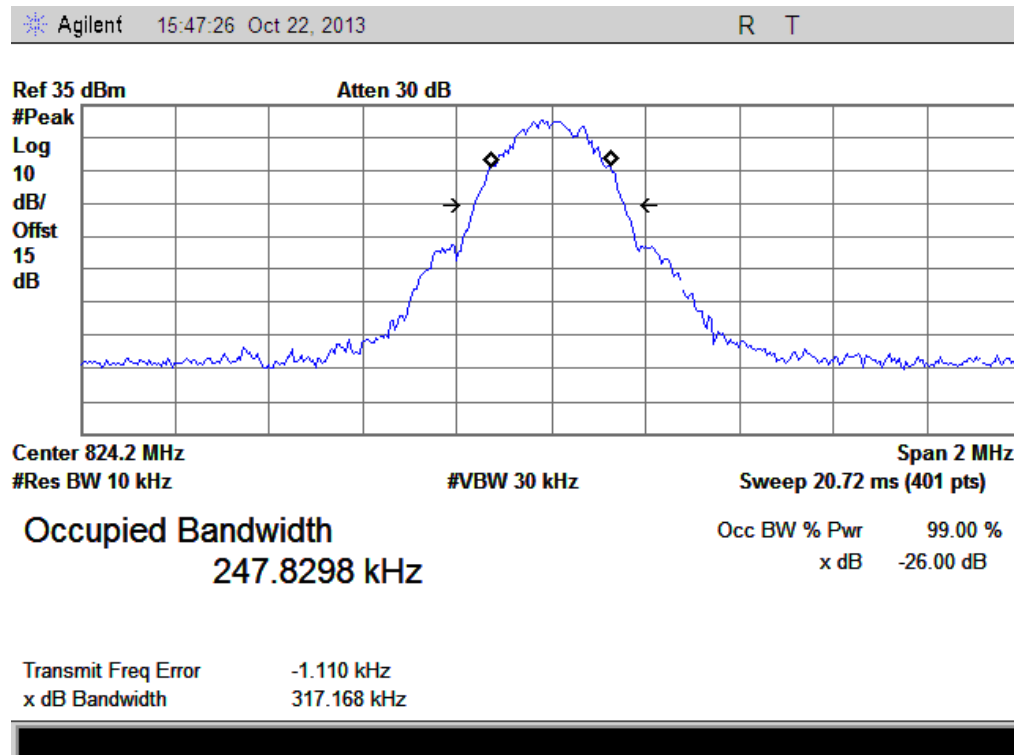
(Plot B1: HSPA+1900 MHz Channel = 9262)



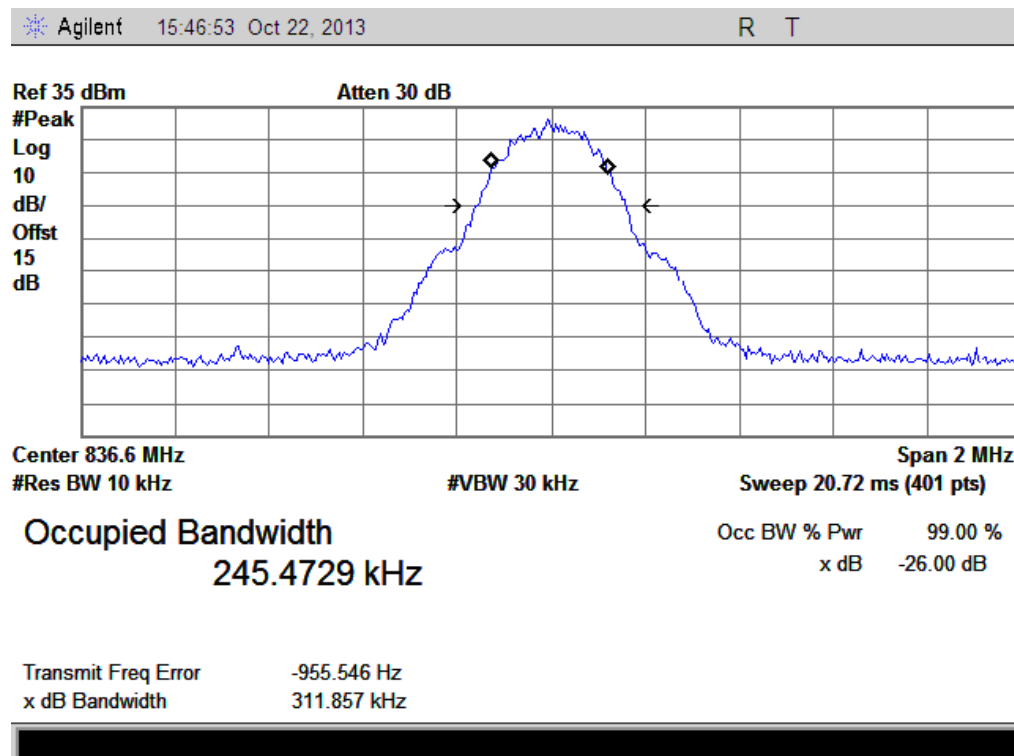
(Plot C1: HSPA+1900 MHz Channel = 9400)



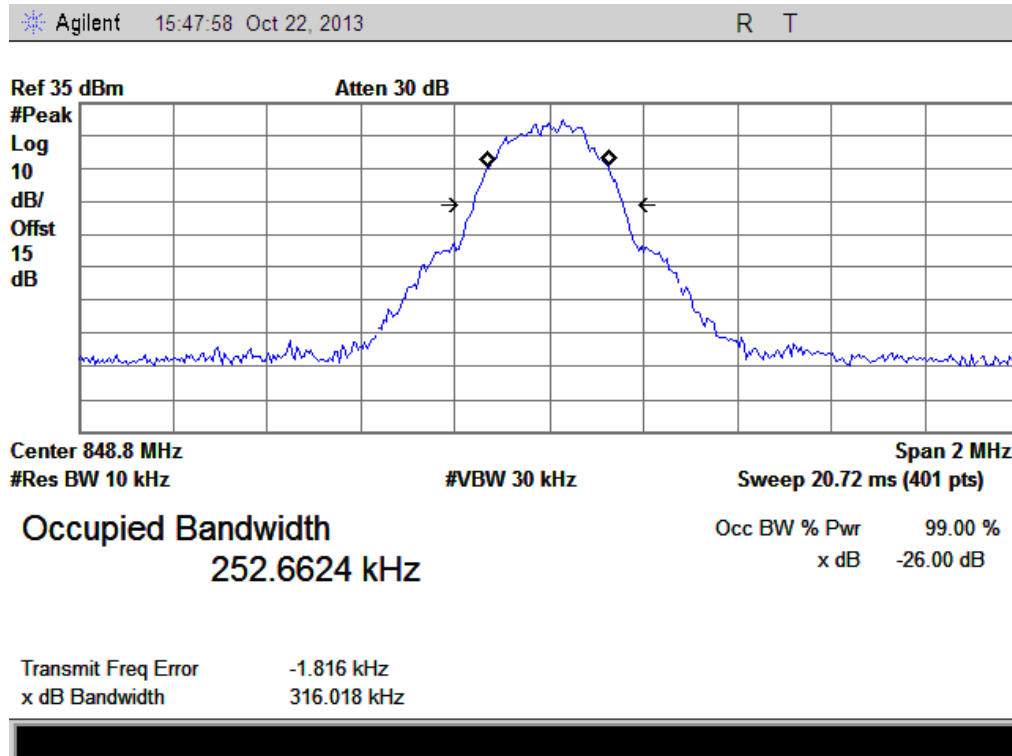
(Plot D1: HSPA+1900 MHz Channel = 9538)



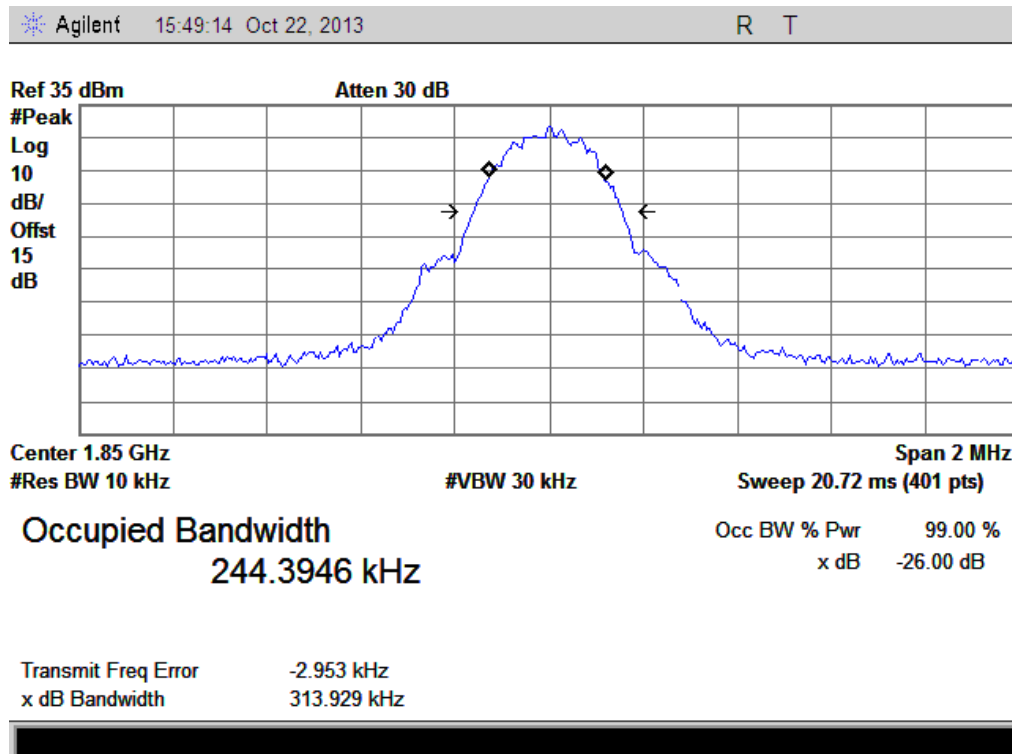
(Plot E1: GSM 850MHz Channel = 128)



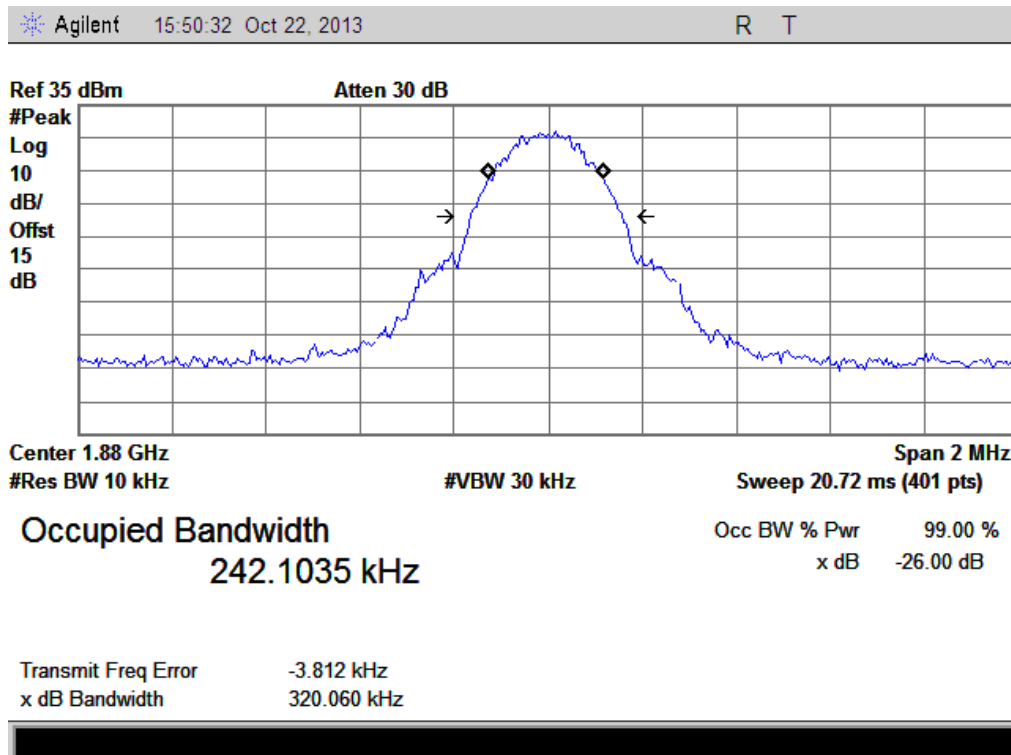
(Plot F1: GSM 850MHz Channel = 190)



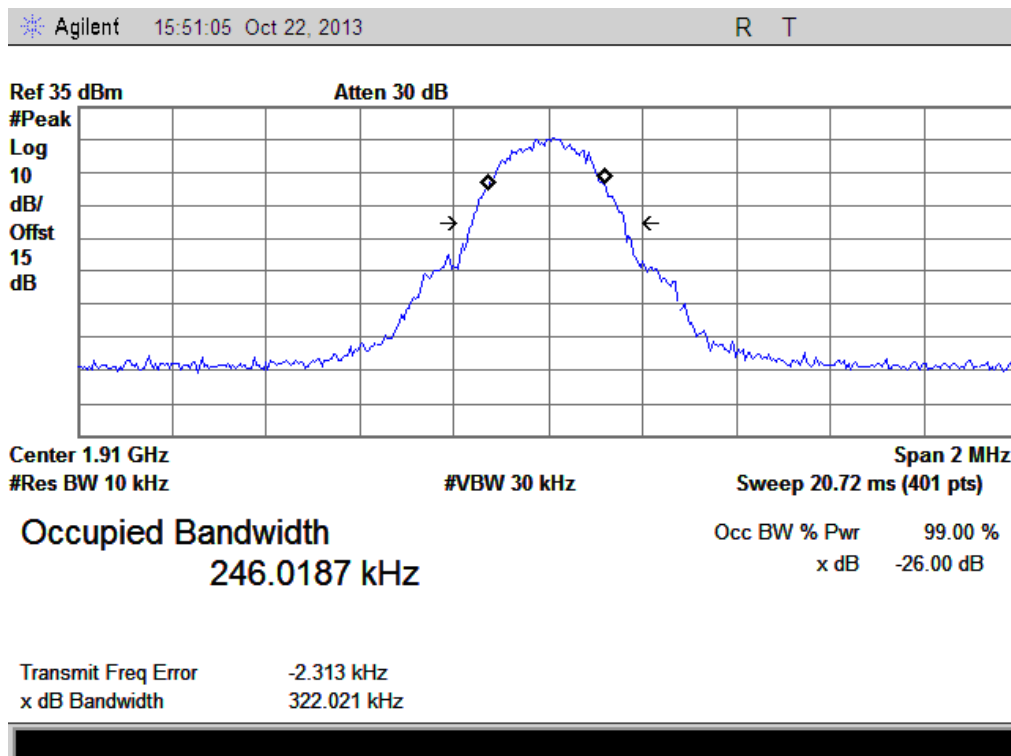
(Plot G1: GSM 850MHz Channel = 251)



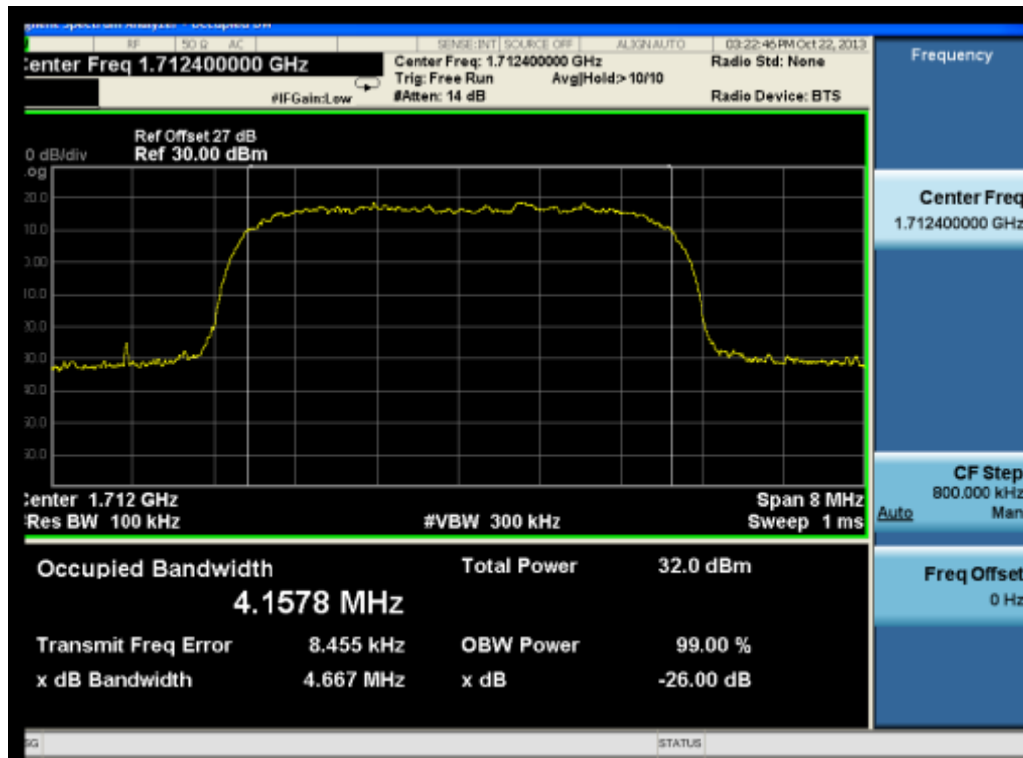
(Plot H1: GSM 1900MHz Channel = 512)



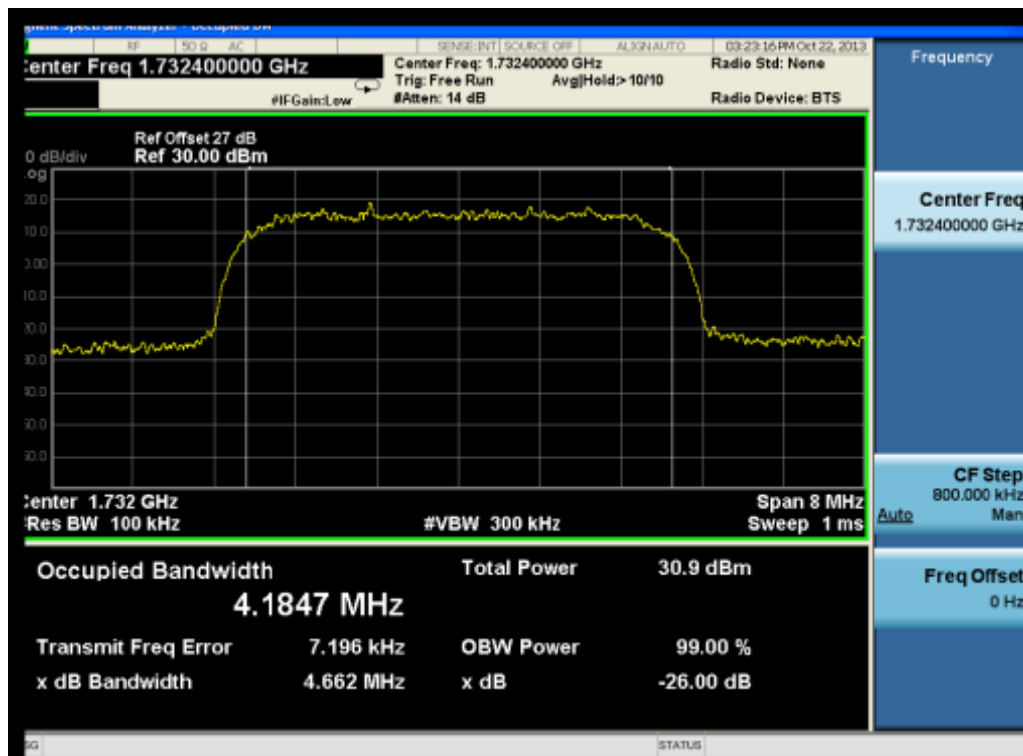
(Plot I1: GSM 1900MHz Channel = 661)



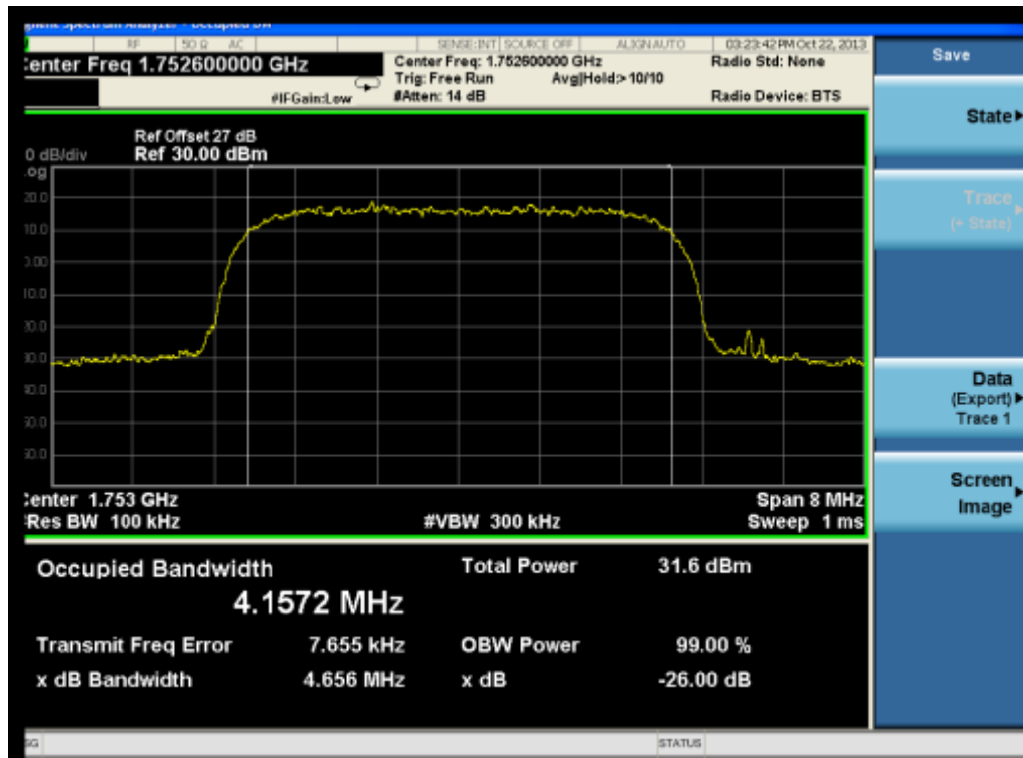
(Plot J1: GSM 1900MHz Channel = 810)



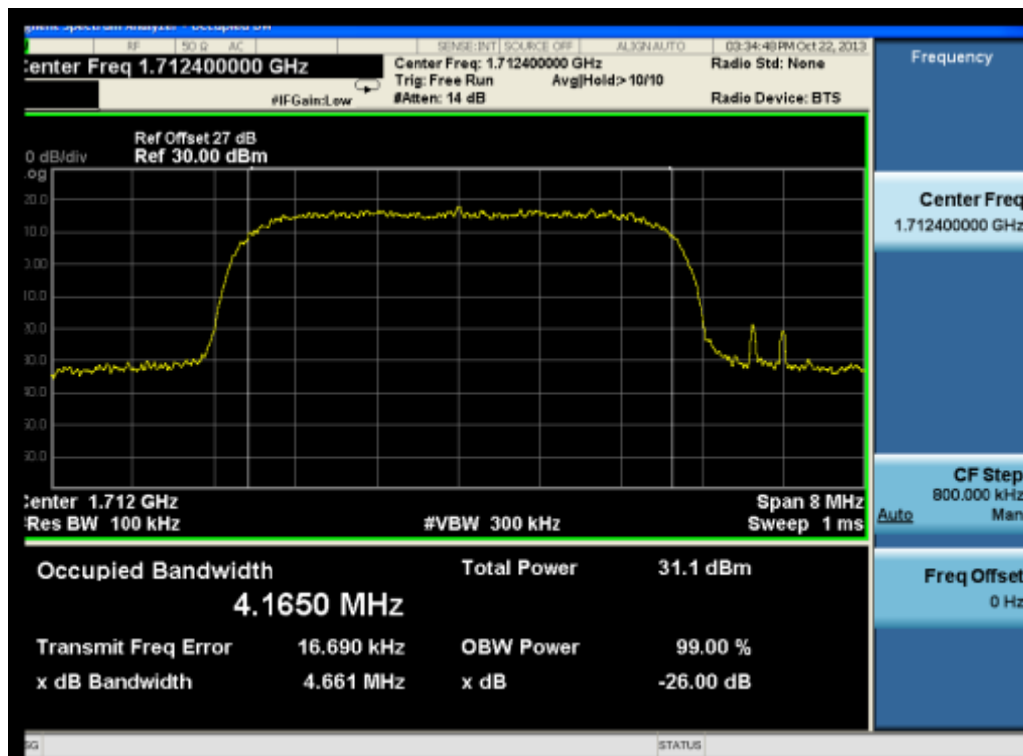
(Plot K1: WCDMA 1700MHz Channel = 1312)



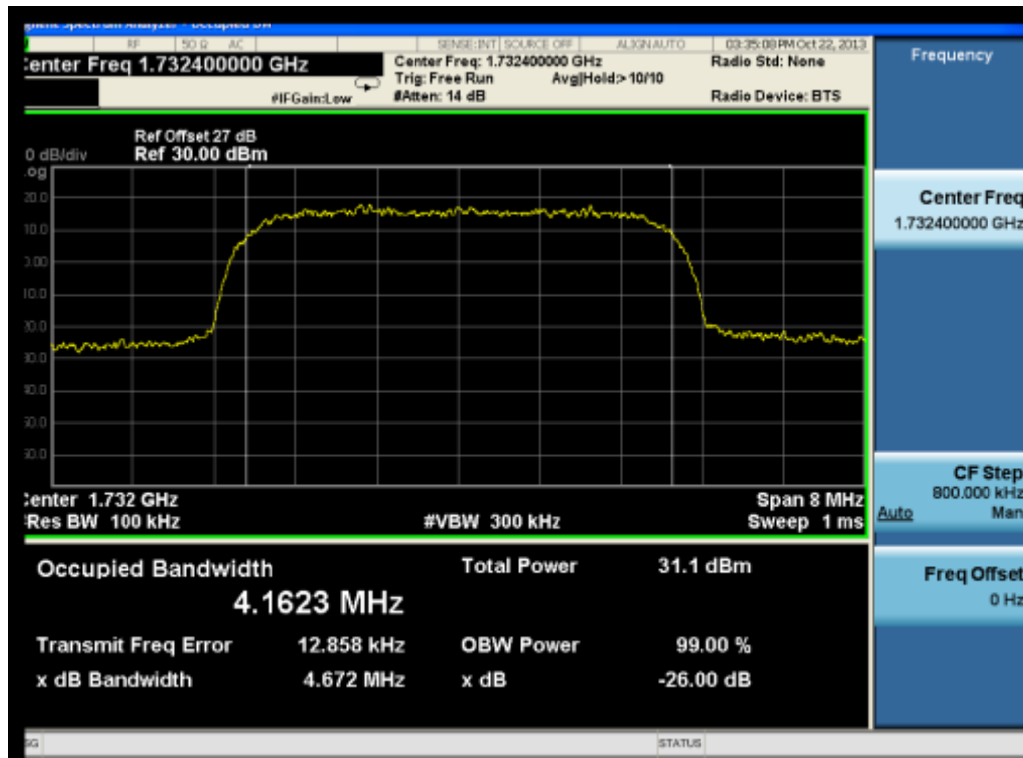
(Plot L1: WCDMA 1700 MHz Channel = 1412)



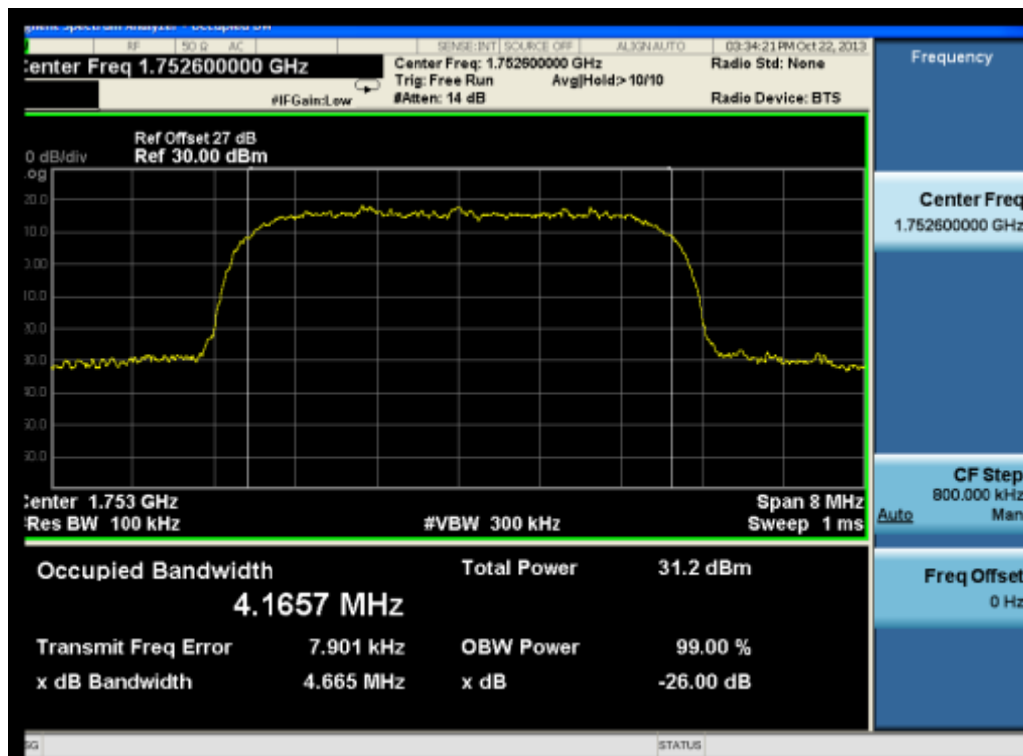
(Plot M1: WCDMA 1700MHz Channel = 1513)



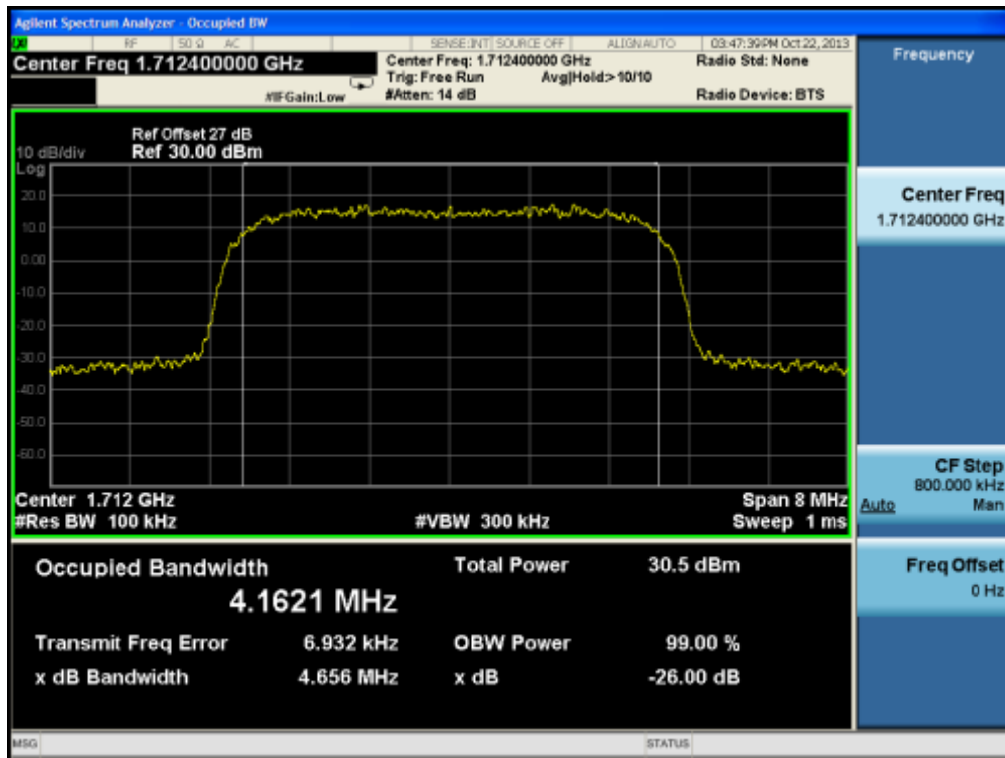
(Plot N1: HSDPA 1700MHz Channel = 1312)



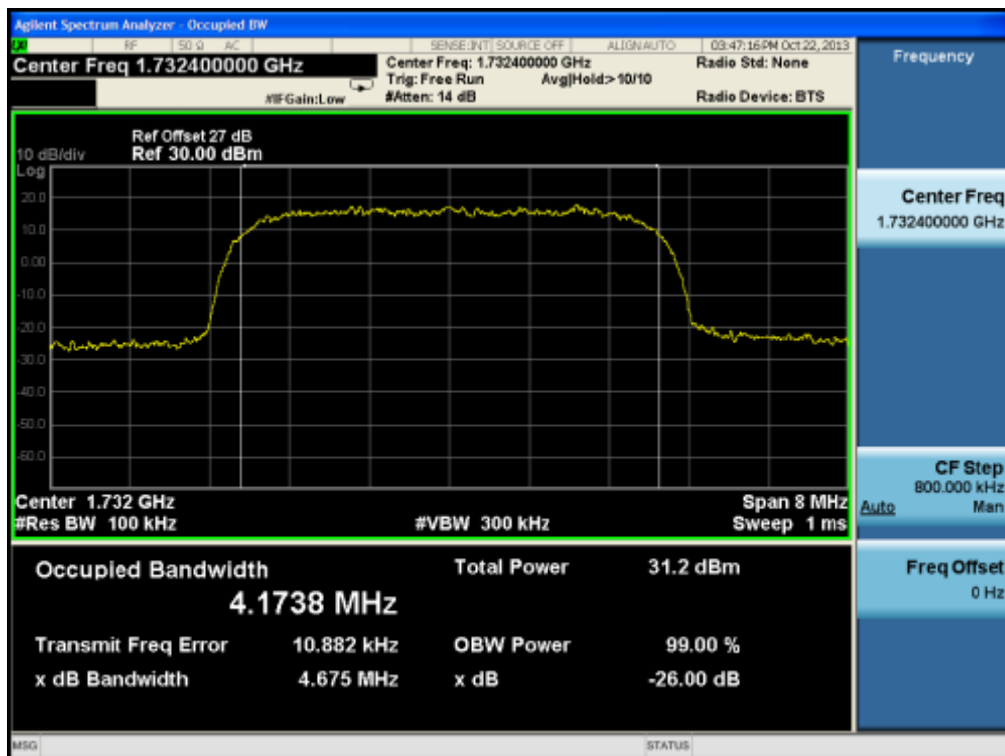
(Plot O1: HSDPA 1700 MHz Channel = 1412)



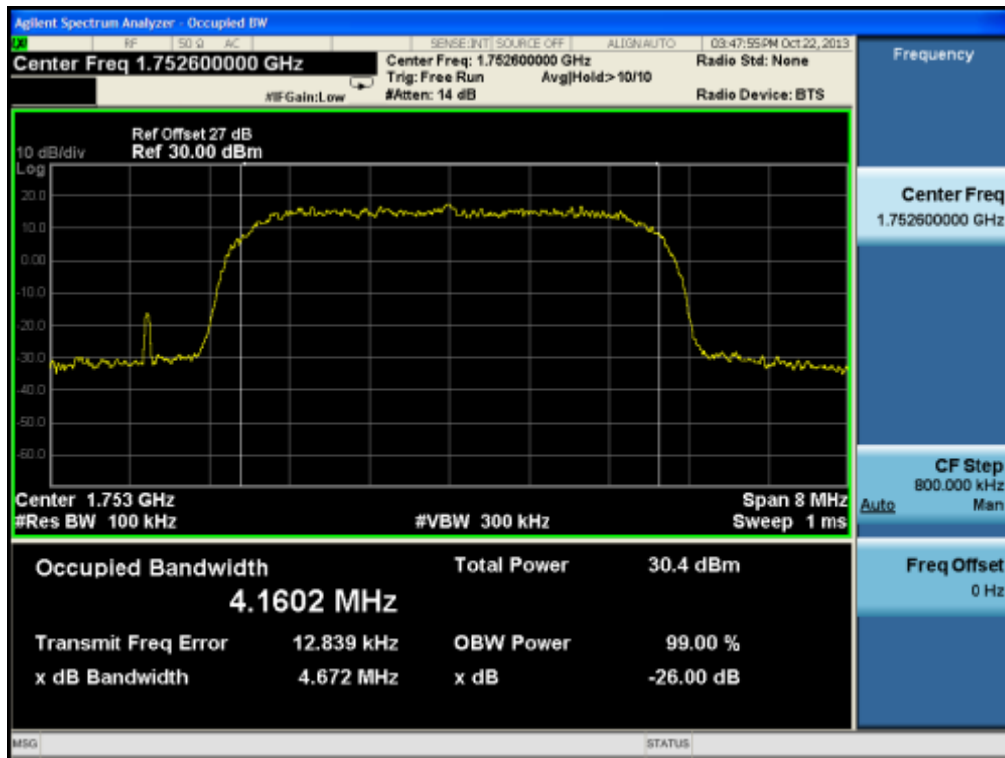
(Plot P1: HSDPA 1700MHz Channel = 1513)



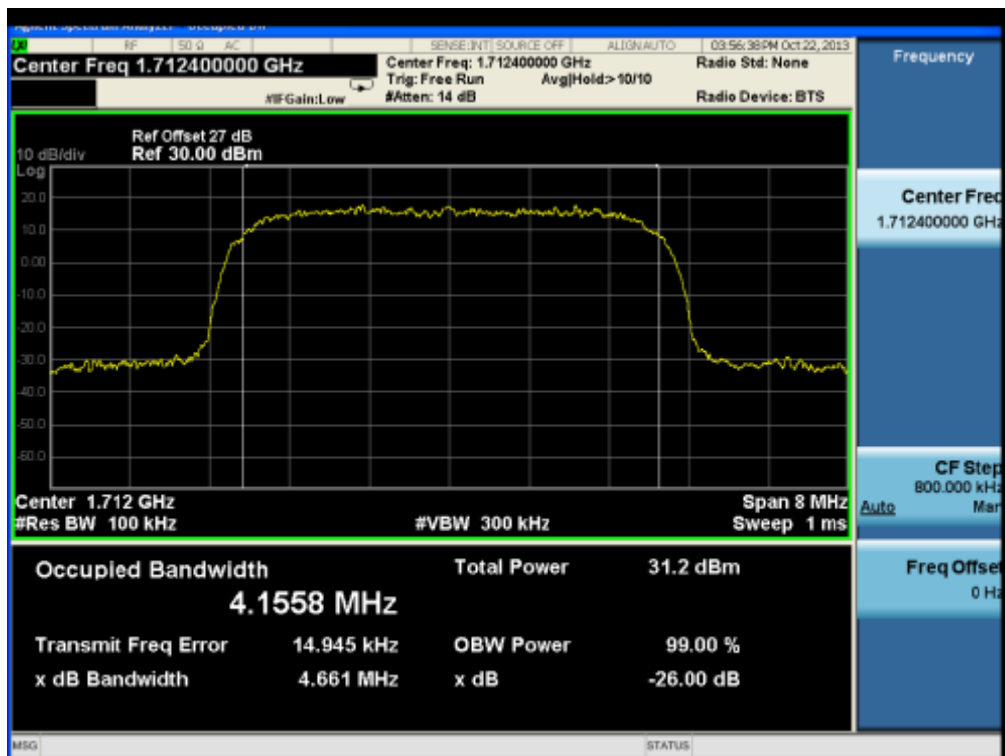
(Plot Q1: HSUPA 1700MHz Channel = 1312)



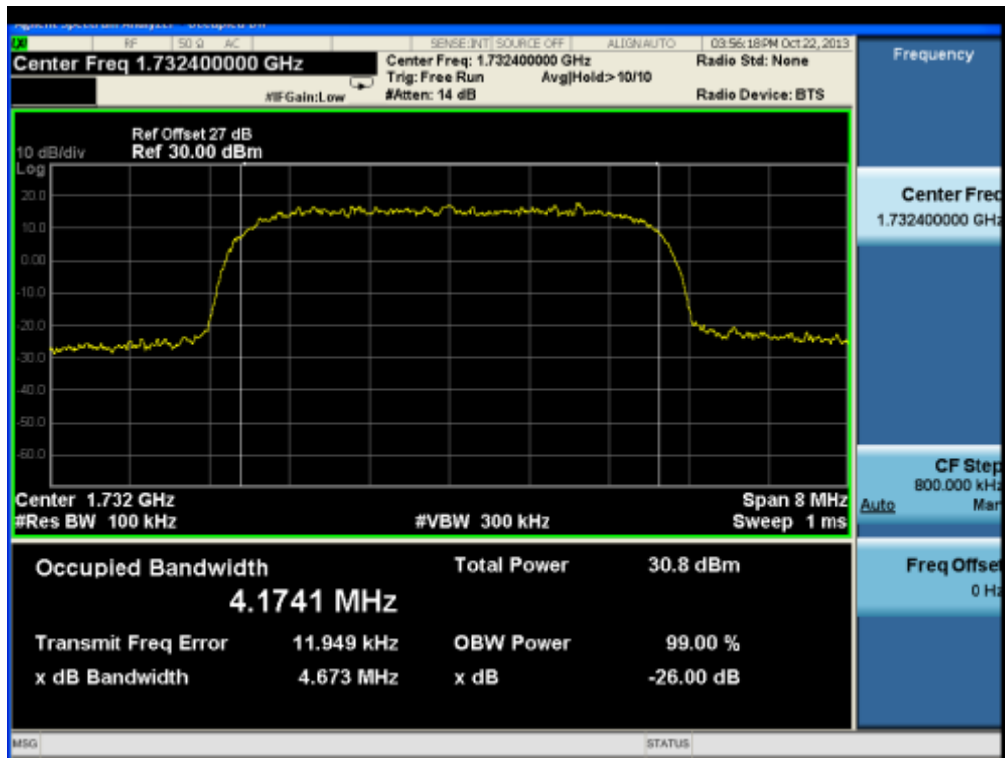
(Plot R1: HSUPA1700 MHz Channel = 1412)



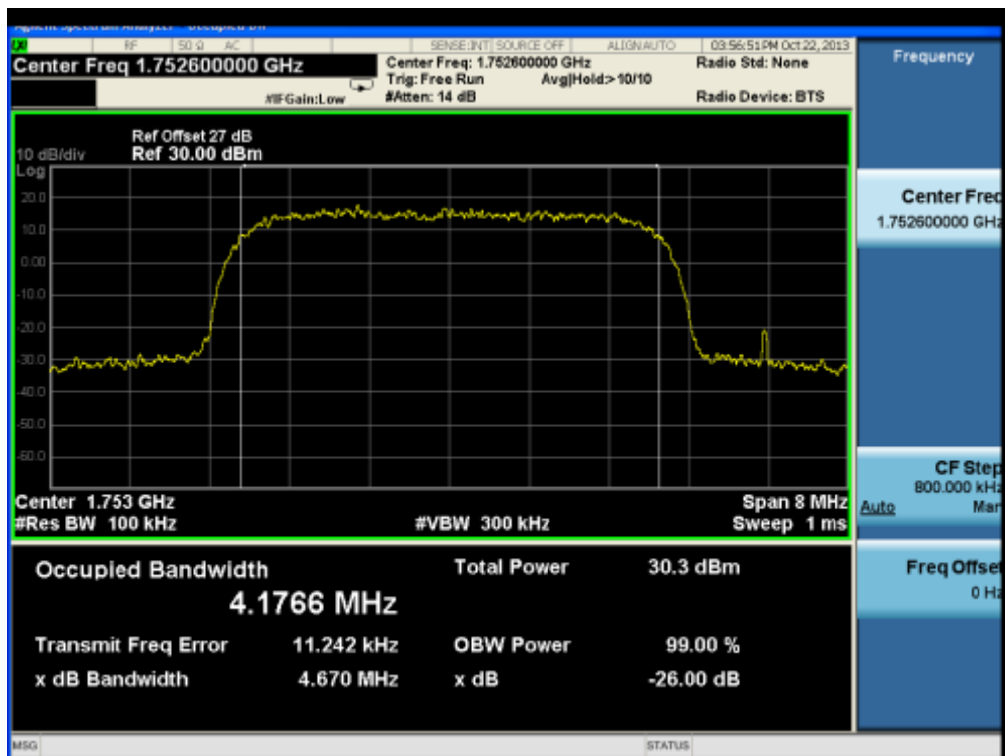
(Plot S1: HSUPA 1700 MHz Channel = 1513)



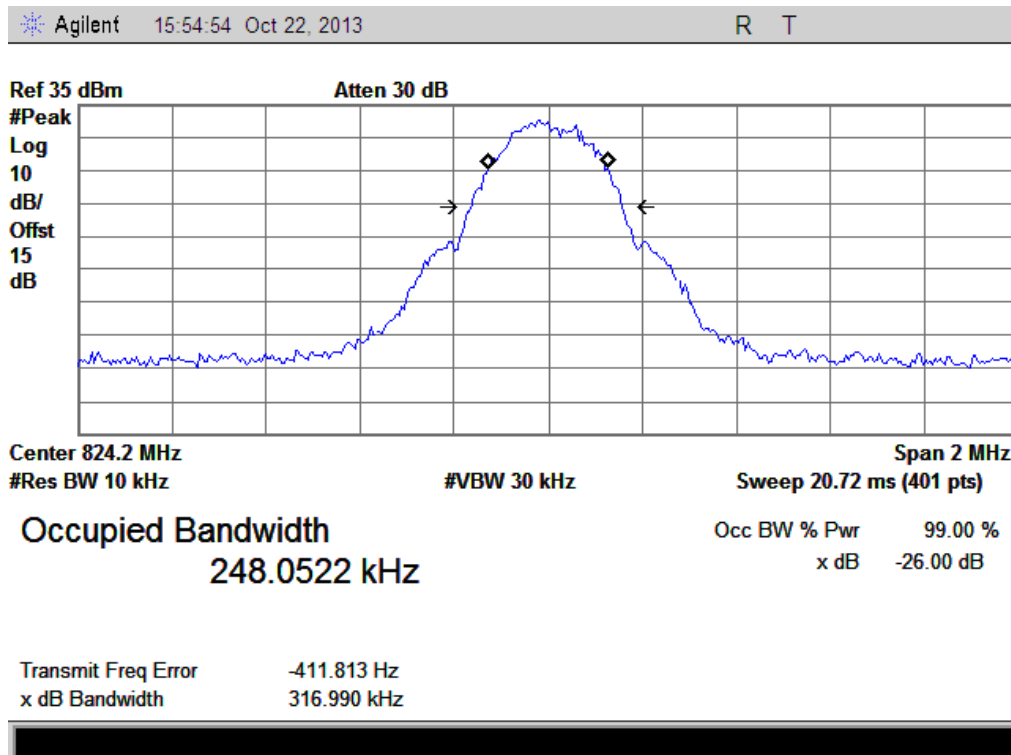
(Plot T1: HSPA+1700 MHz Channel = 1312)



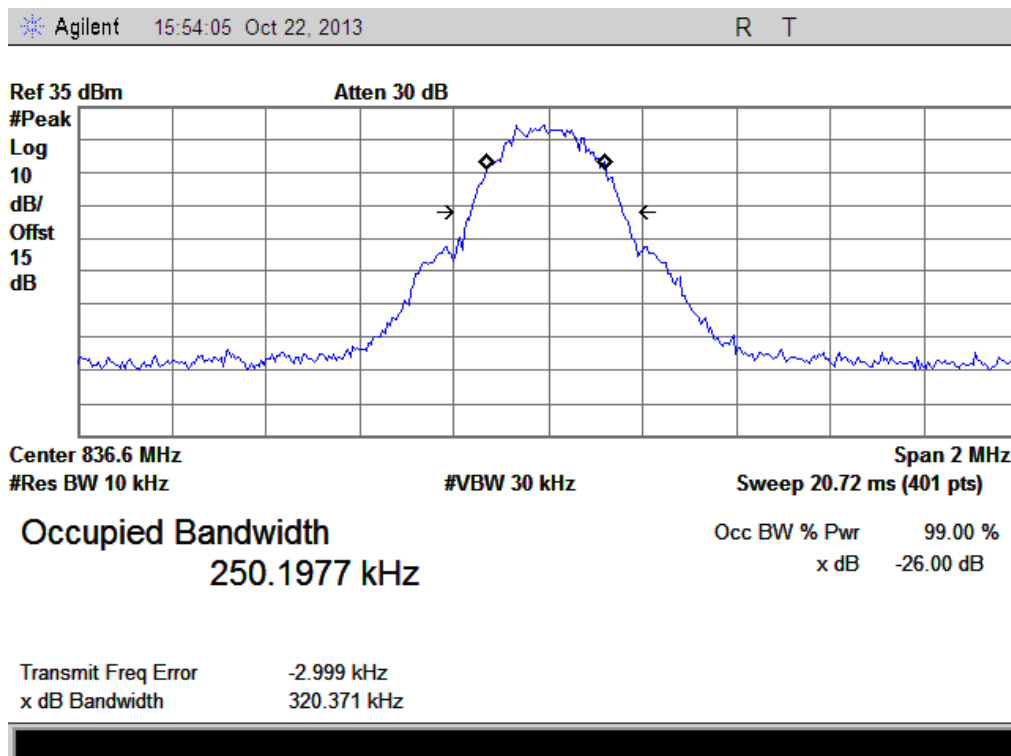
(Plot U1: HSPA+1700 MHz Channel = 1412)



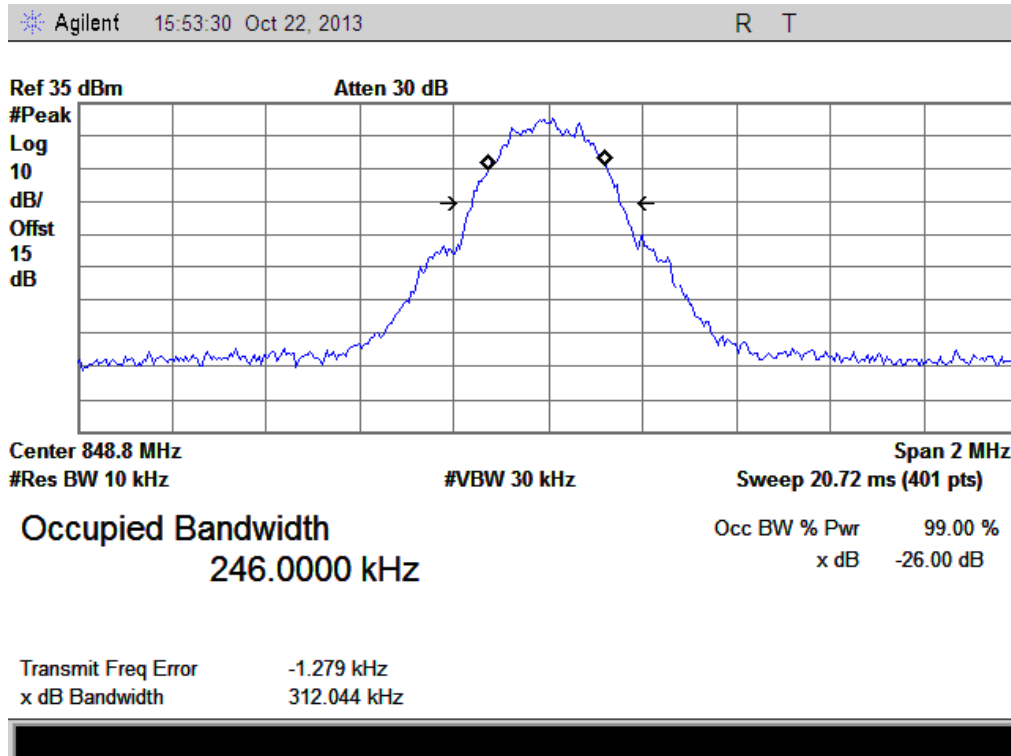
(Plot V1: HSPA+1700 MHz Channel = 1513)



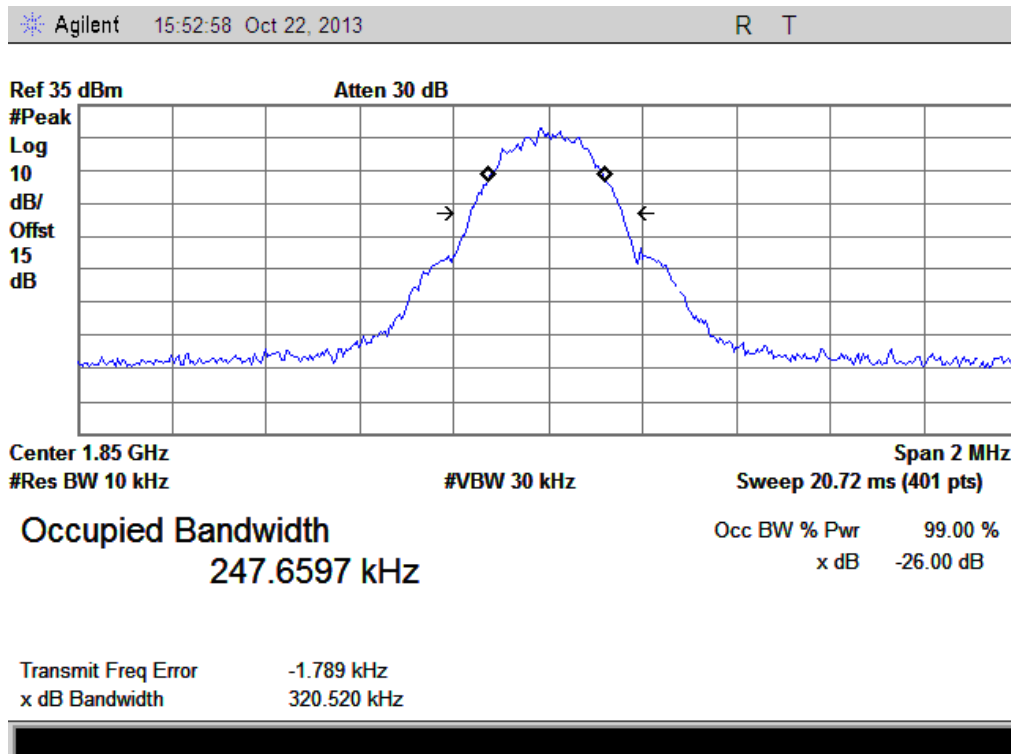
(Plot W1: GPRS 850MHz Channel = 128)



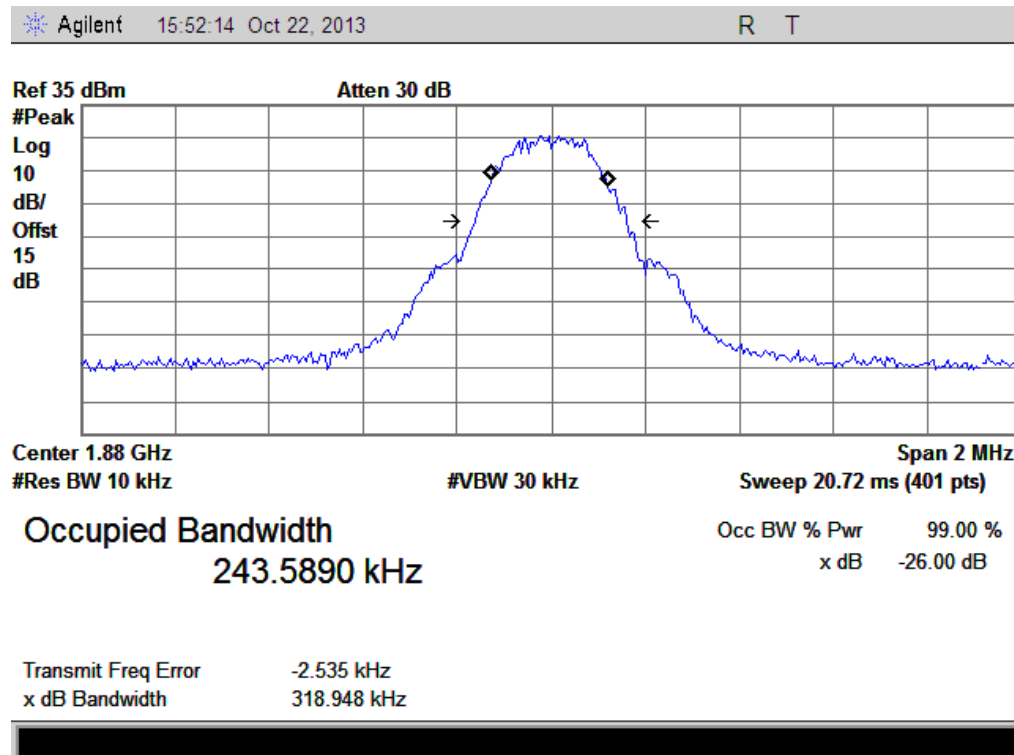
(Plot X1: GPRS 850MHz Channel = 190)



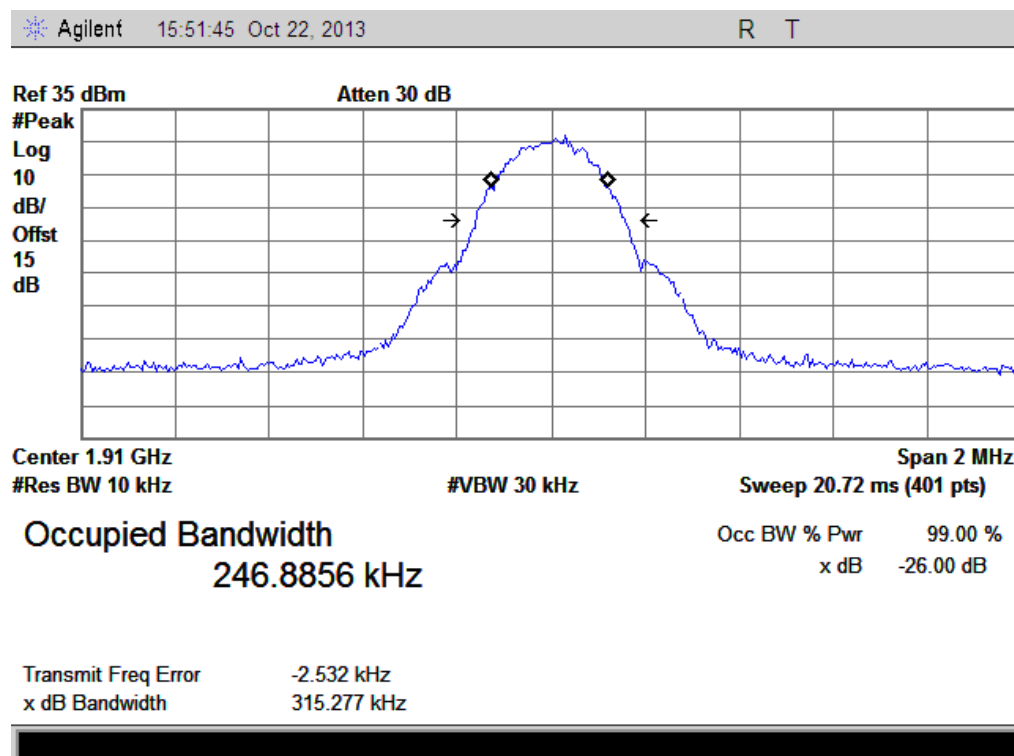
(Plot Y1: GPRS850MHz Channel = 251)



(Plot Z1: GPRS 1900MHz Channel = 512)



(Plot A2: GPRS 1900MHz Channel = 661)



(Plot B2: GPRS 1900MHz Channel = 810)

2.4 Frequency Stability

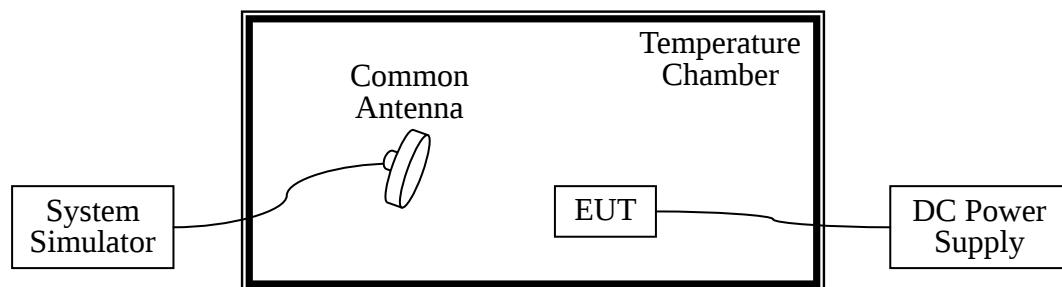
2.4.1 Requirement

According to FCC section 22.355 and FCC section 24.235, section 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- The temperature is varied from -30°C to $+50^{\circ}\text{C}$ at intervals of not more than 10°C .
- For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

2.4.2 Test Description

1. Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS via a Common Antenna.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2013.05	2014.05
DC Power Supply	Good Will	GPS-3030DD	EF920938	2013.05	2014.05
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2013.05	2014.05

2.4.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.8 VDC, 4.2VDC and 3.6VDC, which are specified by the applicant; the normal temperature here used is 25°C . The frequency

deviation limit of 850MHz band is $\pm 2.5\text{ppm}$, and 1900MHz is $\pm 1\text{ppm}$, 1700MHz $\pm 1\text{ppm}$.

1. GSM 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-20.35	±2060.5	23.12	±2091.5	18.27	±2122	PASS
	-20	27.81		12.23		-12.83		
	-10	-2.65		-16.66		16.16		
	0	30.16		32.11		5.05		
	+10	21.99		-25.03		3.02		
	+20	-19.16		-18.19		10.77		
	+30	36.26		18.36		-17.51		
	+40	43.63		16.64		-2.10		
	+55	36.28		23.27		-12.79		
4.2	+25	-15.73		27.95		-7.73		
3.6	+25	-18.75		37.23		7.78		

2. GSM 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	17.21	±1850.2	21.63	±1880.0	30.25	±1909.8	PASS
	-20	38.28		-21.28		-17.78		
	-10	-2.15		-13.16		-16.28		
	0	40.06		-18.38		19.32		
	+10	1.99		-21.61		25.31		
	+20	-19.86		15.52		30.26		
	+30	39.56		-0.68		-29.21		
	+40	46.60		33.27		19.33		
	+55	39.98		23.82		-19.27		
4.2	+25	38.28		23.82		26.29		
3.6	+25	-8.09		15.32		18.97		

3. EDGE 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-32.10	±2060.5	25.12	±2091.5	8.51	±2122	PASS
	-20	38.28		11.33		-12.90		
	-10	-2.15		-17.55		12.66		
	0	40.06		38.10		5.05		
	+10	1.99		-22.06		3.02		
	+20	-19.86		-16.11		10.76		
	+30	39.56		17.76		-16.51		
	+40	46.60		15.64		-2.10		
	+55	39.98		3.67		-12.99		
4.2	+25	-15.71		13.95		-7.53		
3.6	+25	-17.70		6.23		6.78		

4. EDGE 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-13.77	±1850.2	23.62	±1880.0	2.47	±1909.8	PASS
	-20	0.62		7.23		-11.76		
	-10	1.65		-24.78		-12.21		
	0	2.47		-1.26		13.33		
	+10	-10.76		-18.68		5.33		
	+20	-2.11		-21.61		35.26		
	+30	13.33		14.58		-26.78		
	+40	5.33		-0.68		19.54		
	+55	-2.56		36.87		-16.67		
4.2	+25	17.60		3.88		26.79		
3.6	+25	-8.09		13.12		19.93		

5. WCDMA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	17.29	±2066	11.87	±2087.5	-1.20	±2116.5	PASS
	-20	-7.32		-0.59		-19.38		
	-10	-3.40		21.45		7.57		
	0	16.47		13.45		4.22		
	+10	30.18		1.31		-17.39		
	+20	32.07		-12.52		11.90		
	+30	-7.98		30.62		6.63		
	+40	26.21		13.45		28.93		
	+55	11.10		-12.52		19.66		
4.2	+25	-6.18	±2066	30.62	±2087.5	22.19	±2116.5	PASS
3.6	+25	18.66		-18.00		-18.70		

6. WCDMA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-4.75	±1852.4	-13.47	±1880.0	-8.99	±1907.6	PASS
	-20	18.85		12.18		23.60		
	-10	5.05		-14.06		14.81		
	0	19.62		18.79		-3.07		
	+10	30.40		22.39		17.42		
	+20	13.45		37.27		-10.39		
	+30	1.31		2.37		17.47		
	+40	-12.52		-13.47		27.84		
	+55	-13.55		-5.71		-2.53		
4.2	+25	23.21	±1852.4	14.58	±1880.0	20.95	±1907.6	PASS
3.6	+25	22.00		26.37		-23.22		

7. HSDPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	27.46	±2066	-24.37	±2087.5	15.81	±2116.5	PASS
	-20	-8.56		-13.96		14.41		
	-10	20.65		35.23		21.57		
	0	12.88		-8.31		-24.37		
	+10	-14.75		-13.95		-13.96		
	+20	8.78		-24.37		35.23		
	+30	-1.49		12.88		-8.31		
	+40	17.14		-14.75		-13.95		
	+55	-23.61		23.37		26.37		
4.2	+25	32.03		7.93		7.90		
3.6	+25	17.51		-31.21		1.78		

8. HSDPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	11.87	±1852.4	-3.01	±1880	2.61	±1907.6	PASS
	-20	-16.65		21.71		-8.38		
	-10	20.12		14.37		-13.02		
	0	-3.01		-11.21		-8.51		
	+10	21.71		10.60		5.64		
	+20	20.12		-4.81		-3.85		
	+30	-15.01		34.31		9.57		
	+40	22.71		8.36		27.54		
	+55	16.32		-25.88		-12.52		
4.2	+25	-11.28		29.43		-2.83		
3.6	+25	10.33		-2.27		14.42		

9. HSUPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	25.52	±2066	13.5	±2087.5	13.55	±2116.5	PASS
	-20	-16.20		-19.33		27.42		
	-10	-12.61		-11.79		37.01		
	0	-13.09		-0.44		-7.32		
	+10	-0.38		0.01		-4.91		
	+20	-11.85		-6.64		21.35		
	+30	29.57		24.25		-5.94		
	+40	-11.79		9.63		13.78		
	+55	-0.44		23.76		28.45		
4.2	+25	1.71		-4.57		29.11		
3.6	+25	1.54		5.25		-7.70		

10. HSUPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	31.57	±1852.4	-11.79	±1880	8.69	±1907.6	PASS
	-20	27.13		-0.44		2.01		
	-10	7.62		0.01		-4.75		
	0	2.31		13.82		16.38		
	+10	-4.73		-15.25		-1.76		
	+20	16.22		-11.79		23.52		
	+30	-1.55		-0.44		-0.38		
	+40	23.16		1.15		-11.85		
	+55	13.79		-7.94		-5.91		
4.2	+25	-7.08		6.81		25.48		
3.6	+25	22.58		-1.83		-15.78		

11. HSPA+ 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	26.32	±2066	13.5	±2087.5	17.51	±2116.5	PASS
	-20	-17.20		-17.71		22.32		
	-10	-12.61		-2.44		31.05		
	0	-13.09		0.01		-17.22		
	+10	-0.38		-16.31		-14.51		
	+20	-11.85		-11.79		21.35		
	+30	29.57		-0.44		-5.94		
	+40	-11.79		0.01		13.78		
	+55	-0.44		23.76		28.45		
4.2	+25	8.71		-4.57		29.11		
3.6	+25	11.54		15.25		-6.75		

12. HSPA+ 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	12.11	±1852.4	-15.31	±1880	3.31	±1907.6	PASS
	-20	20.15		-11.79		-5.73		
	-10	11.61		-0.44		18.22		
	0	3.31		0.01		-33.55		
	+10	-5.73		-15.31		3.31		
	+20	18.22		-11.79		-5.73		
	+30	-33.55		-0.44		19.21		
	+40	27.16		0.01		-31.05		
	+55	23.79		-6.64		22.36		
4.2	+25	-37.01		24.25		3.31		
3.6	+25	22.58		9.63		-17.08		

13. WCDMA 1700MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 1312 (1712.4MHz)		Channel = 1412 (1732.4MHz)		Channel = 1513 (1752.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	17.29	±4281	11.87	±4331	-9.81	±4381.5	PASS
	-20	-7.32		-0.59		-23.82		
	-10	-3.40		21.45		26.39		
	0	16.47		13.45		30.98		
	+10	30.18		1.31		-2.65		
	+20	32.07		-12.52		18.30		
	+30	-7.98		30.62		-12.57		
	+40	26.21		13.45		28.93		
	+50	11.10		-12.52		19.66		
4.2	+25	-6.18	±4281	30.62	±4331	22.19	±4381.5	PASS
3.6	+25	18.66		-18.00		-18.70		

14. HSDPA 1700MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 1312 (1712.4MHz)		Channel = 1412 (1732.4MHz)		Channel = 1513 (1752.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	16.22	±4281	13.81	±4331	-23.81	±4381.5	PASS
	-20	-17.31		-20.51		26.31		
	-10	-13.20		22.15		29.08		
	0	12.57		19.35		-12.62		
	+10	31.18		21.31		19.30		
	+20	28.07		-17.52		18.30		
	+30	-17.98		28.62		-19.53		
	+40	23.25		17.25		28.93		
	+50	17.10		-19.52		19.66		
4.2	+25	-16.18	±4281	30.62	±4331	22.19	±4381.5	PASS
3.6	+25	12.65		-18.00		-18.70		

15. HSUPA 1700MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 1312 (1712.4MHz)		Channel = 1412 (1732.4MHz)		Channel = 1513 (1752.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	-4.75	±4281	-18.56	±4331	-21.01	±4381.5	PASS
	-20	18.85		-13.47		-19.32		
	-10	5.05		12.18		22.35		
	0	19.62		-14.06		31.18		
	+10	30.40		18.79		-22.05		
	+20	13.45		22.39		19.33		
	+30	1.31		37.27		-12.57		
	+40	-12.52		2.37		28.93		
	+50	16.10		-11.52		15.62		
4.2	+25	-6.18	±4281	-5.41	±4331	22.19	±4381.5	PASS
3.6	+25	18.66		12.65		-17.75		

16. HSPA+ 1700MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 1312 (1712.4MHz)		Channel = 1412 (1732.4MHz)		Channel = 1513 (1752.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	12.51	±4281	31.07	±4331	-6.57	±4381.5	PASS
	-20	23.84		28.79		38.42		
	-10	53.59		3.28		12.94		
	0	44.56		27.29		49.17		
	+10	-6.88		-4.29		64.85		
	+20	55.91		10.89		-1.72		
	+30	59.30		9.50		56.31		
	+40	11.35		43.76		3.94		
	+50	21.93		60.11		3.99		
4.2	+25	48.98	±4281	53.02	±4331	15.36	±4381.5	PASS
3.6	+25	11.59		47.73		11.03		

2.5 Conducted Out of Band Emissions

2.5.1 Requirement

According to FCC section 22.917(a) and FCC section 24.238(a), 27.53(g) the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10*\log(P)$ dB. This calculated to be -13dBm.

2.5.2 Test Description

See section 2.1.2 of this report.

2.5.3 Test Result

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

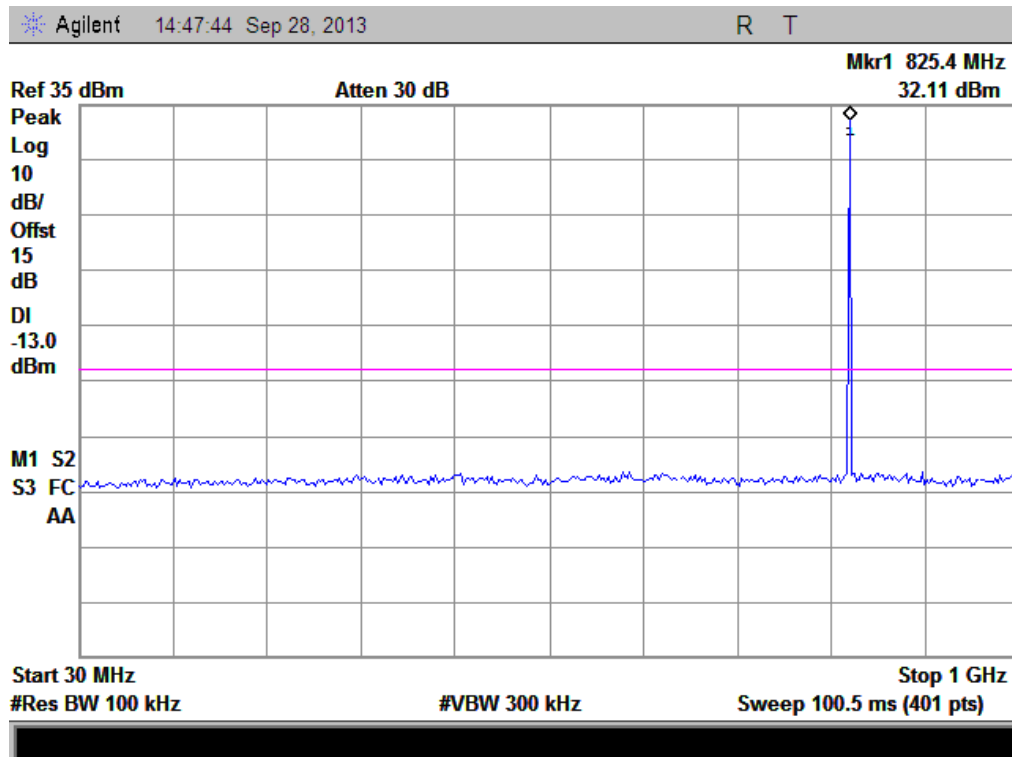
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-20.13	Plot A1toA1.1	-13	PASS
	190	836.6	-20.11	Plot A2toA2.1		PASS
	251	848.8	-19.46	Plot A3toA3.1		PASS
GSM 1900MHz	512	1850.2	-24.36	Plot B1toB1.1	-13	PASS
	661	1880.0	-24.88	Plot B2toB2.1		PASS
	810	1909.8	-23.54	Plot B3toB3.1		PASS
EDGE 850MHz	128	824.2	-19.83	Plot C1toC1.1	-13	PASS
	190	836.6	-20.89	Plot C2toC2.1		PASS
	251	848.8	-20.66	Plot C3toC3.1		PASS
EDGE 1900MHz	512	1850.2	-19.52	Plot D1toD1.1	-13	PASS
	661	1880.0	-19.98	Plot D2toD2.1		PASS
	810	1909.8	-18.55	Plot D3toD3.1		PASS
WCDMA 850MHz	4132	826.4	-23.23	Plot E1toE1.1	-13	PASS
	4175	835	-23.48	Plot E2toE2.1		PASS
	4233	846.6	-24.39	Plot E3toE3.1		PASS
WCDMA 1900MHz	9262	1852.4	-23.41	Plot F1toF1.1	-13	PASS
	9400	1880	-24.69	Plot F2toF2.1		PASS
	9538	1907.6	-23.87	Plot F3toF3.1		PASS
HSDPA	4132	826.4	-24.83	Plot G1toG1.1	-13	PASS

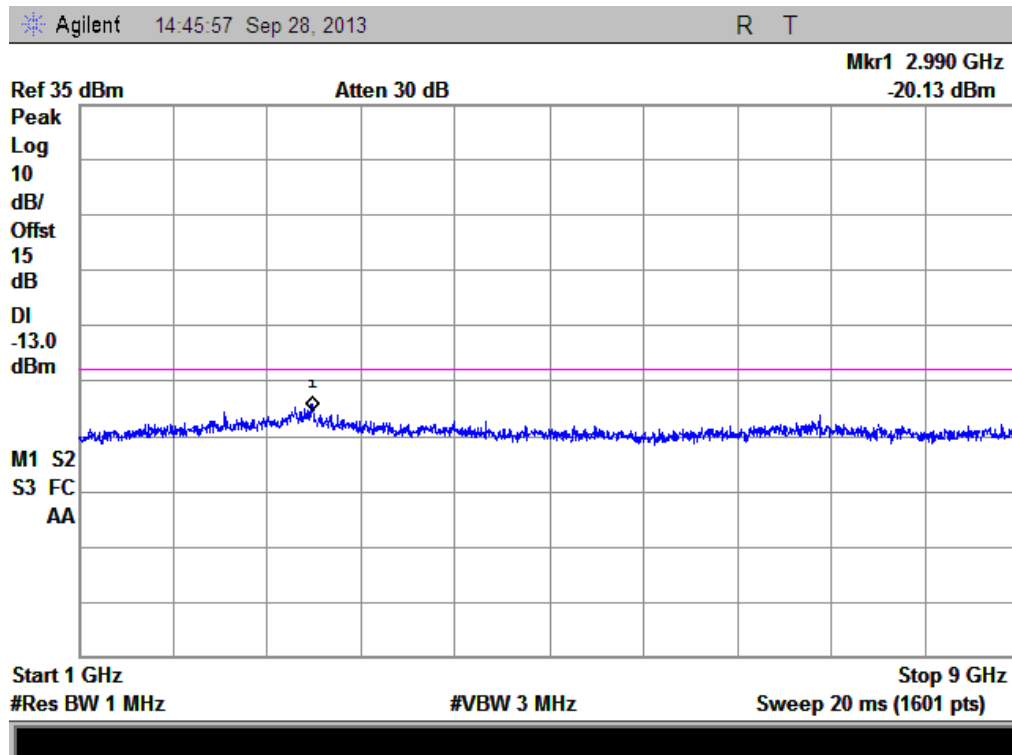
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
850MHz	4175	835	-24.71	Plot G2toG2.1		PASS
	4233	846.6	< -25	Plot G3toG3.1		PASS
HSDPA 1900MHz	9262	1852.4	-23.87	Plot H1toH1.1	-13	PASS
	9400	1880	-23.97	Plot H2toH2.1		PASS
	9538	1907.6	-23.98	Plot H3toH3.1		PASS
HSUPA 850MHz	4132	826.4	-23.64	Plot I1toI1.1	-13	PASS
	4175	835	-24.52	Plot I2toI2.1		PASS
	4233	846.6	< -25	Plot I3toI3.1		PASS
HSUPA 1900MHz	9262	1852.4	-22.38	Plot J1toJ1.1	-13	PASS
	9400	1880	-22.76	Plot J2toJ2.1		PASS
	9538	1907.6	-22.18	Plot J3toJ3.1		PASS
HSPA+ 850MHz	4132	826.4	-24.29	Plot K1toK1.1	-13	PASS
	4175	835	< -25	Plot K2toK2.1		PASS
	4233	846.6	-24.61	Plot K3toK3.1		PASS
HSPA+ 1900MHz	9262	1852.4	-22.38	Plot L1toL1.1	-13	PASS
	9400	1880	-23.97	Plot L2toL2.1		PASS
	9538	1907.6	-22.03	Plot L3toL3.1		PASS
WCDMA 1700MHz	1312	1712.4	< -25	Plot M1toM1.1	-13	PASS
	1412	1732.4	< -25	Plot M2toM2.1		PASS
	1513	1752.6	< -25	Plot M3toM3.1		PASS
HSDPA 1700MHz	1312	1712.4	< -25	Plot N1toN1.1	-13	PASS
	1412	1732.4	< -25	Plot N2toN2.1		PASS
	1513	1752.6	< -25	Plot N3toN3.1		PASS
HSUPA 1700MHz	1312	1712.4	< -25	Plot O1toO1.1	-13	PASS
	1412	1732.4	< -25	Plot O2toO2.1		PASS
	1513	1752.6	< -25	Plot O3toO3.1		PASS
HSPA+ 1700MHz	1312	1712.4	< -25	Plot P1toP1.1	-13	PASS
	1412	1732.4	< -25	Plot P2toP2.1		PASS
	1513	1752.6	< -25	Plot P3toP3.1		PASS

2. Test Plots for the Whole Measurement Frequency Range:

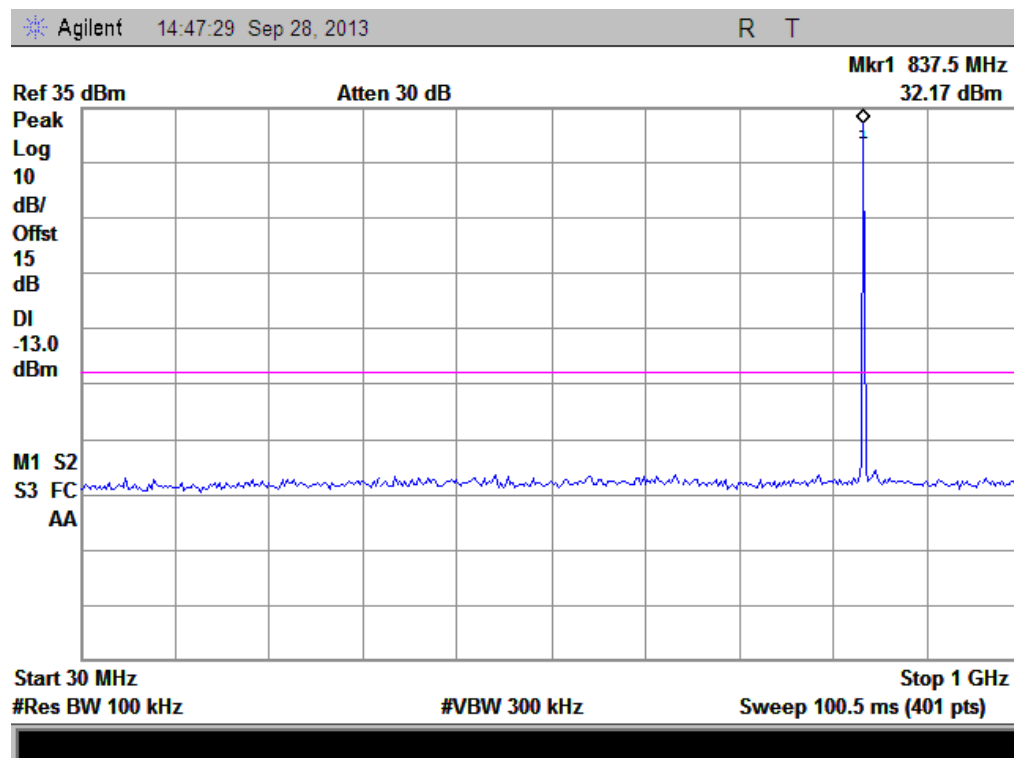
Note: the power of the EUT transmitting frequency should be ignored.



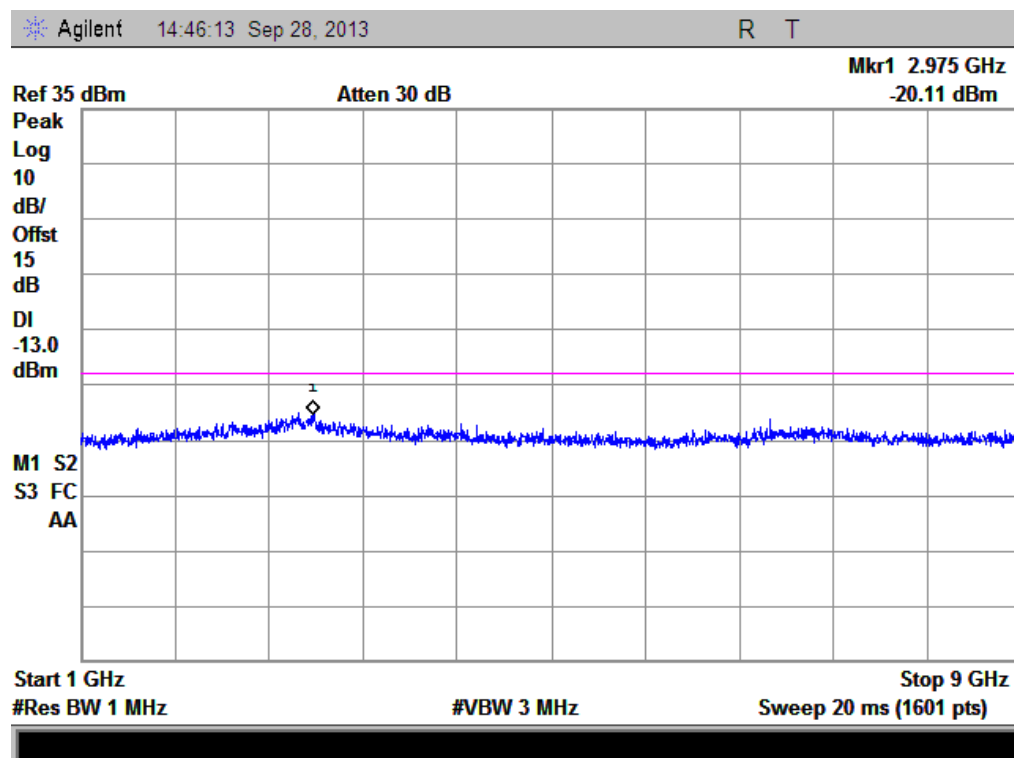
(Plot A1: GSM 850MHz Channel = 128, 30MHz to 1GHz)



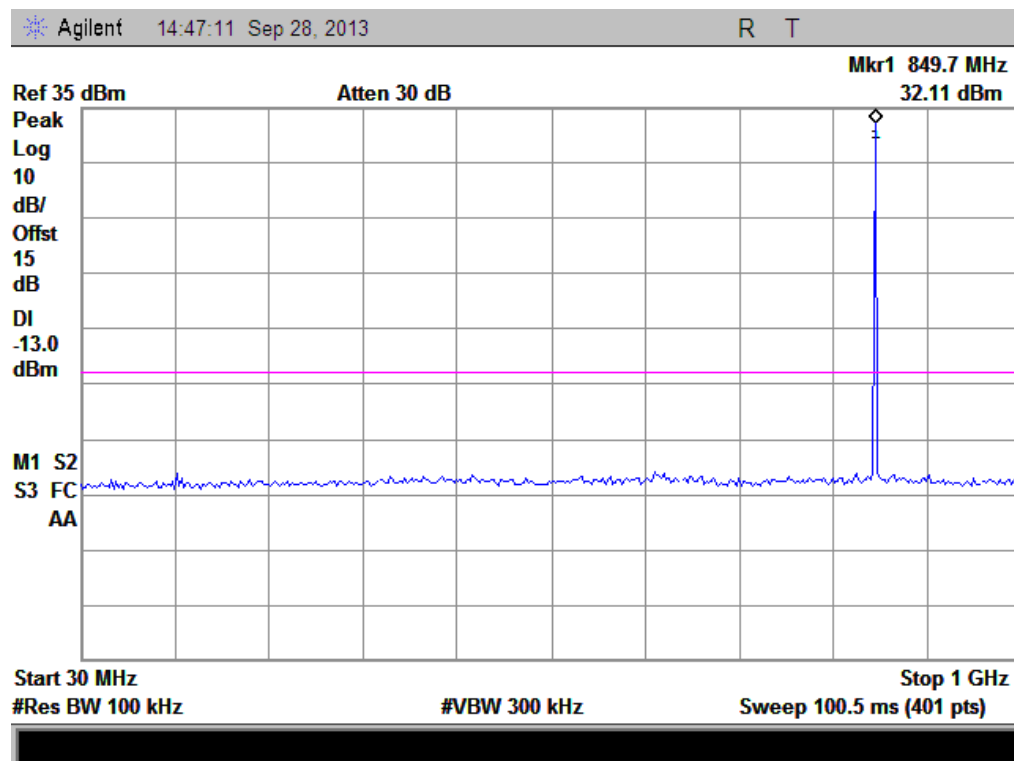
(Plot A1.1: GSM 850MHz Channel = 128, 1GHz to 9GHz)



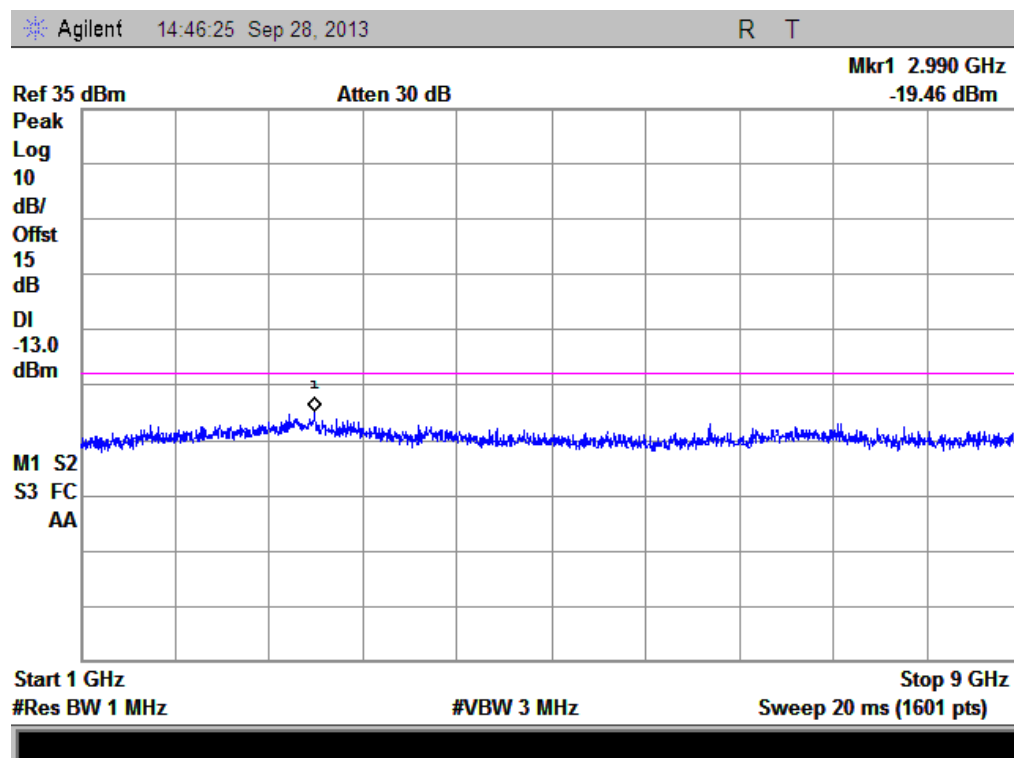
(Plot A2: GSM 850MHz Channel = 190, 30MHz to 1GHz)



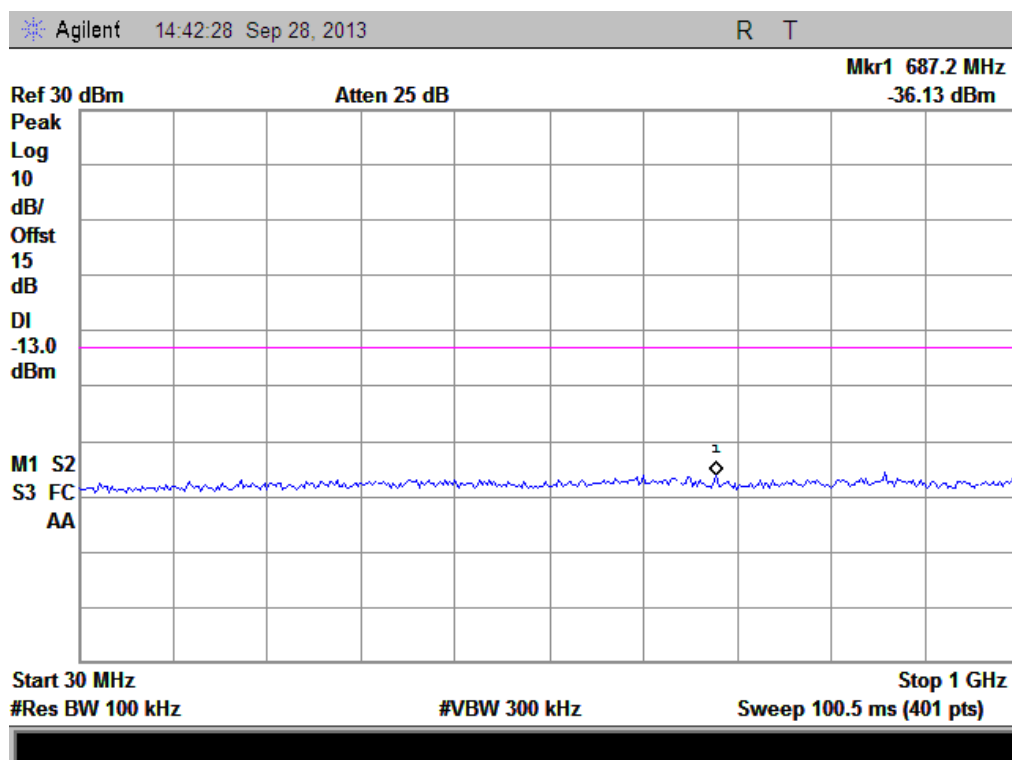
(Plot A2.1: GSM 850MHz Channel = 190, 1GHz to 9GHz)



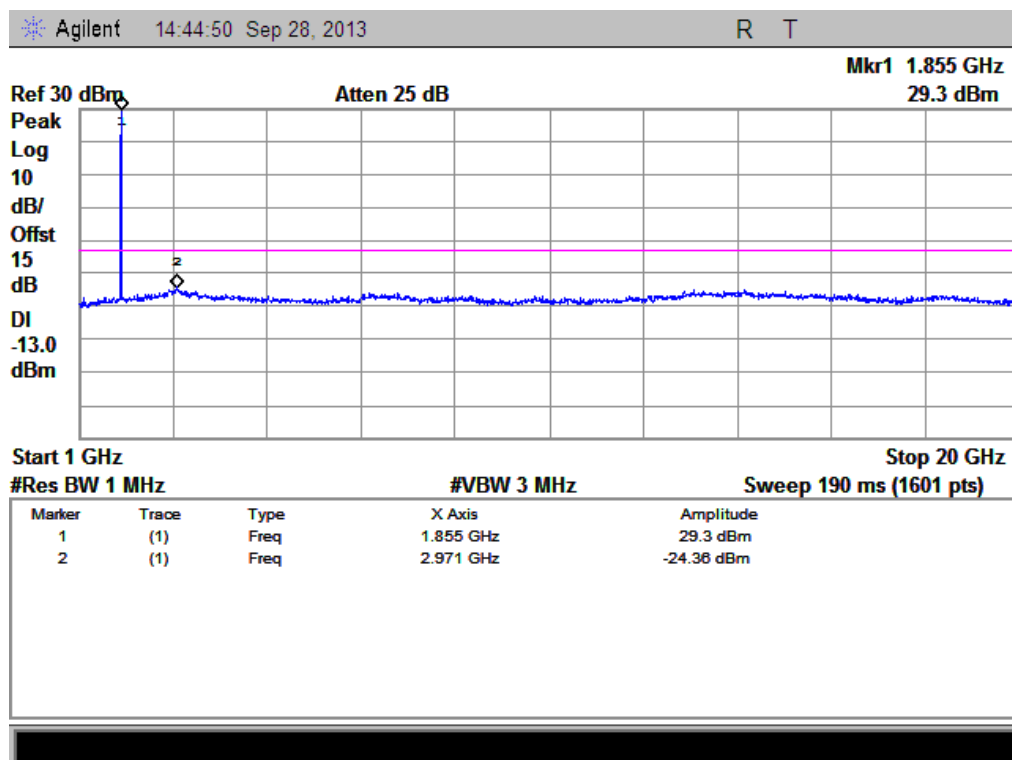
(Plot A3: GSM 850MHz Channel = 251, 30MHz to 1GHz)



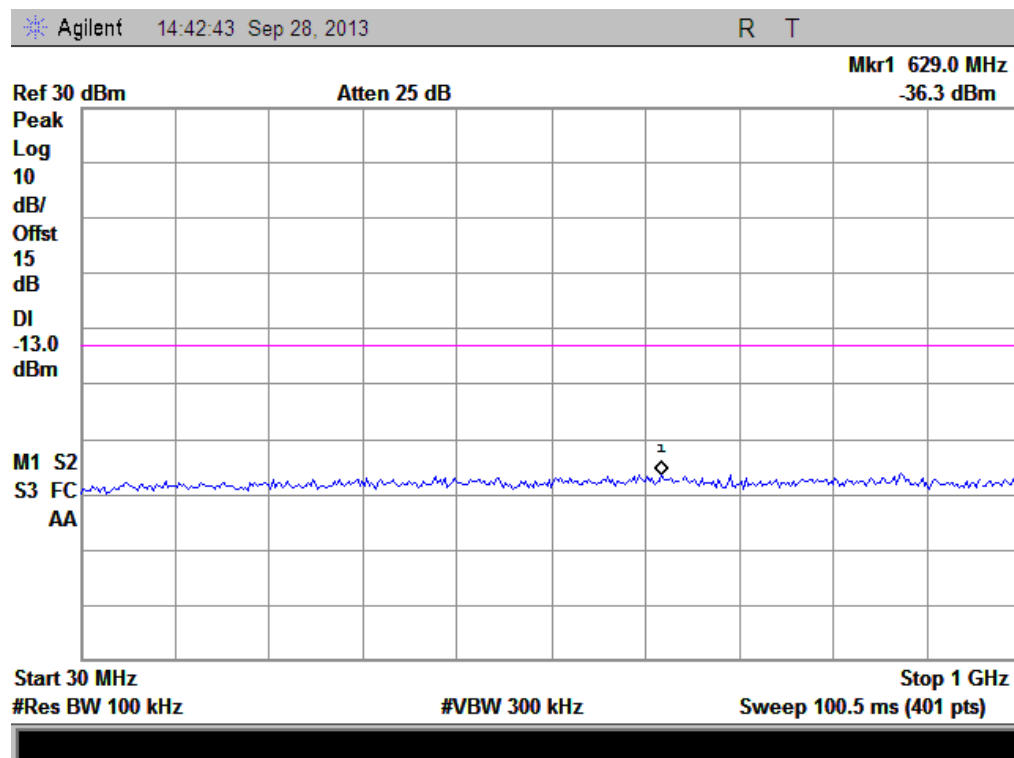
(Plot A3.1: GSM 850MHz Channel = 251, 1GHz to 9GHz)



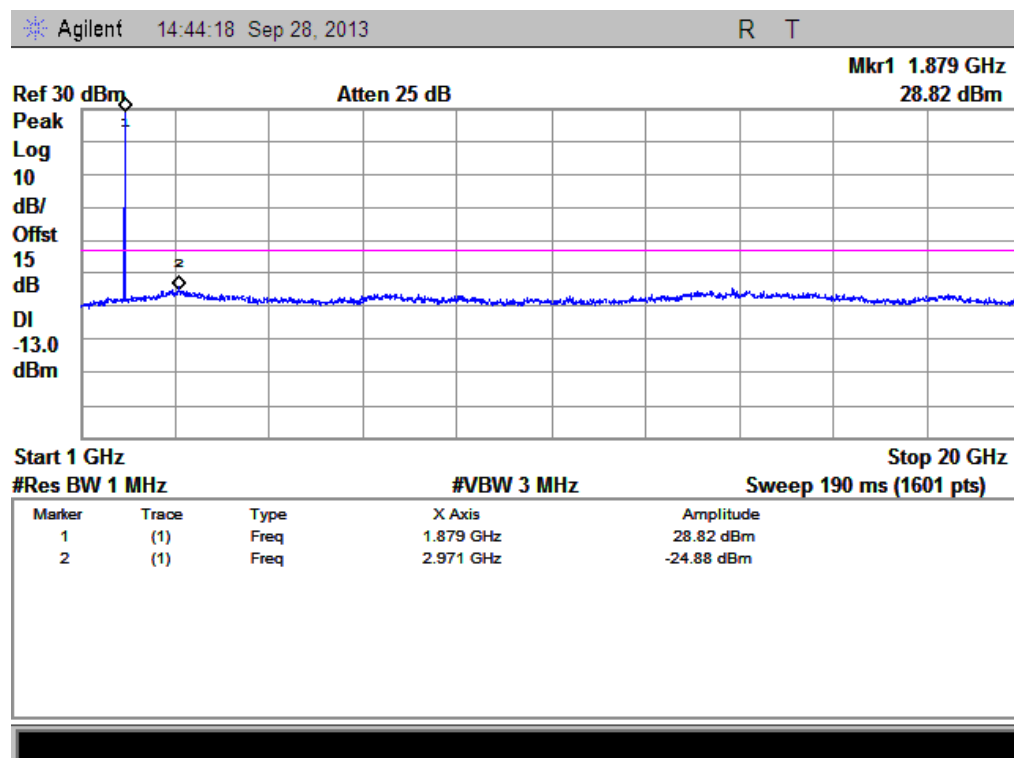
(Plot B1: GSM 1900MHz Channel = 512, 30MHz to 1GHz)



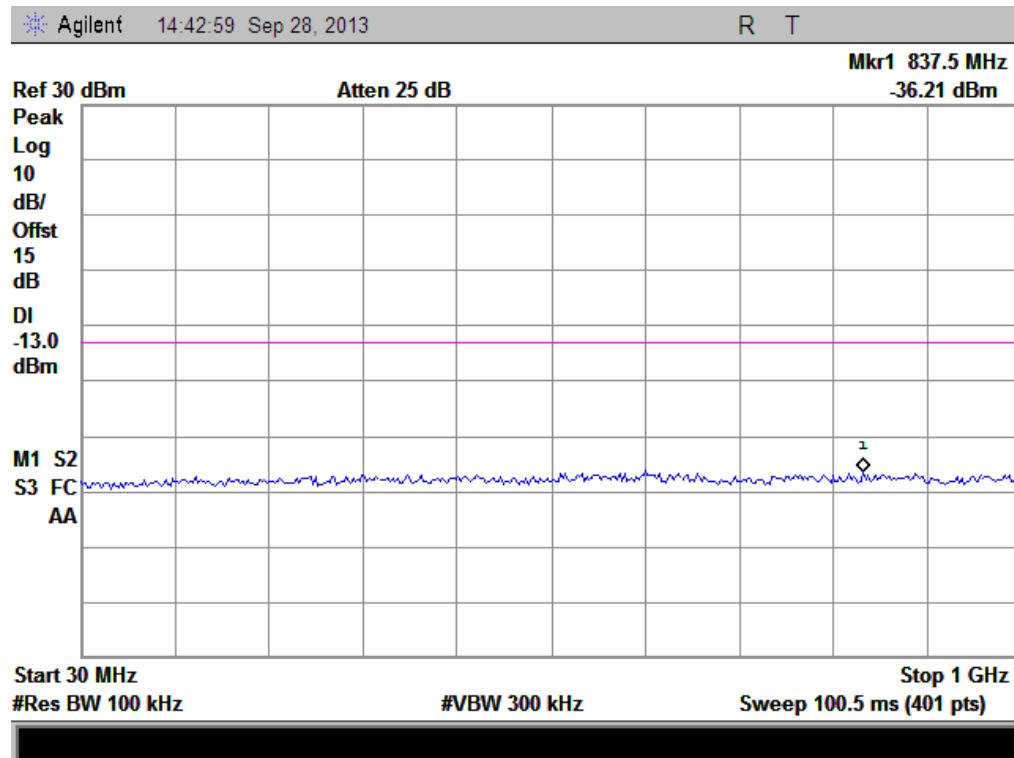
(Plot B1.1: GSM 1900MHz Channel = 512, 1GHz to 20GHz)



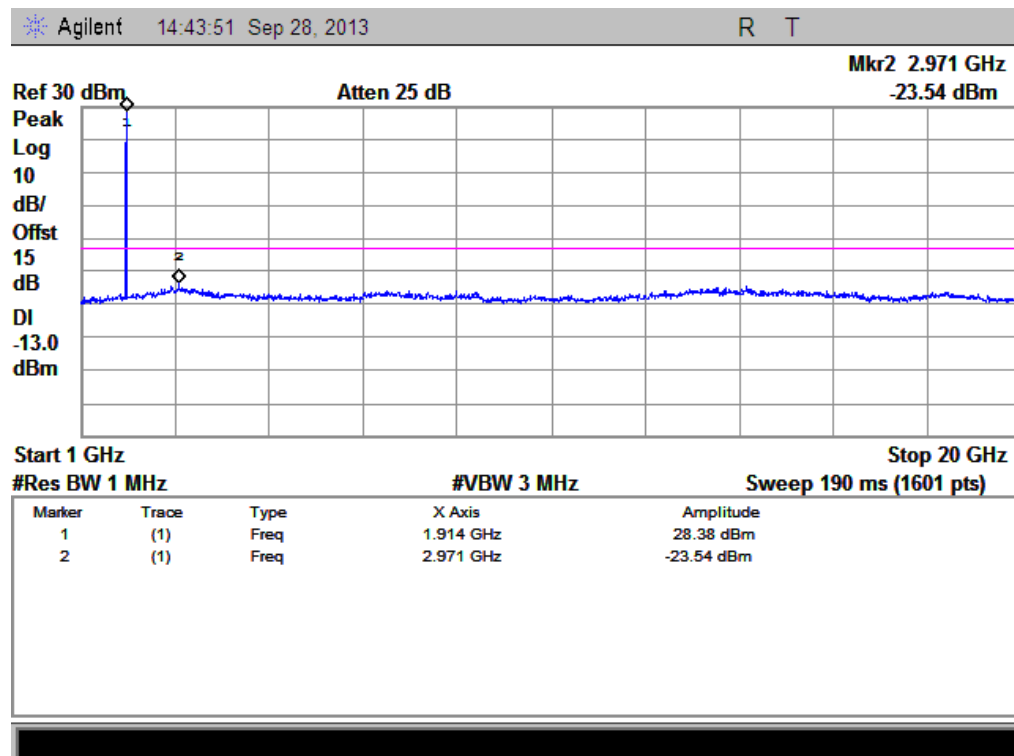
(Plot B2: GSM 1900MHz Channel = 661, 30MHz to 1GHz)



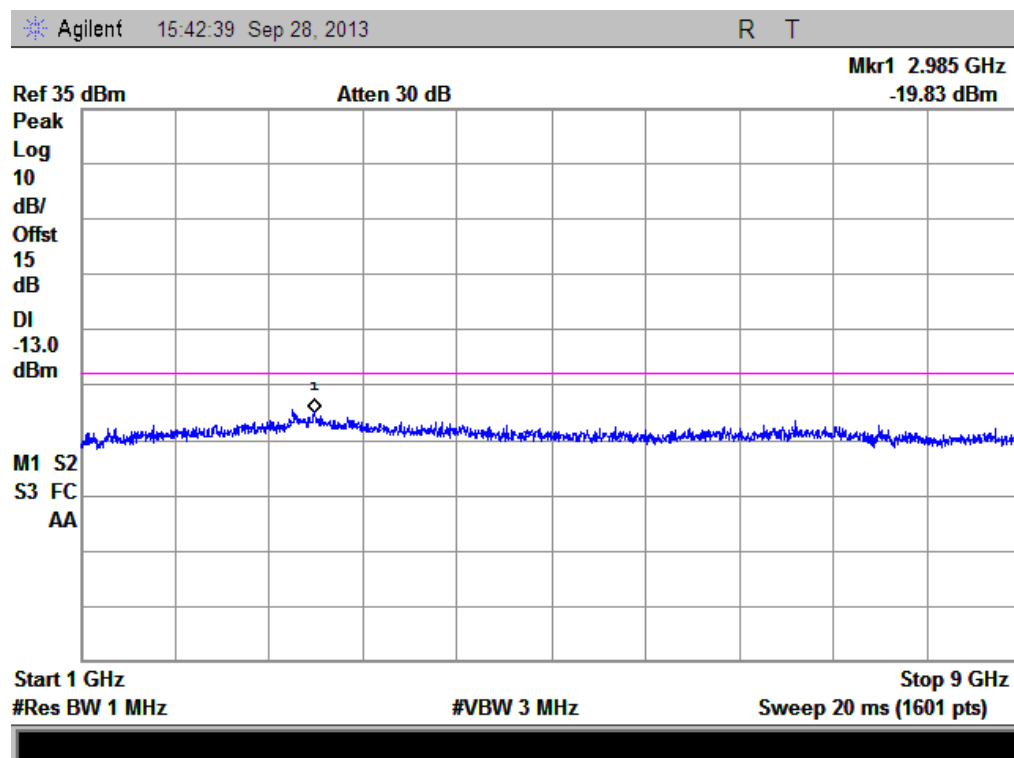
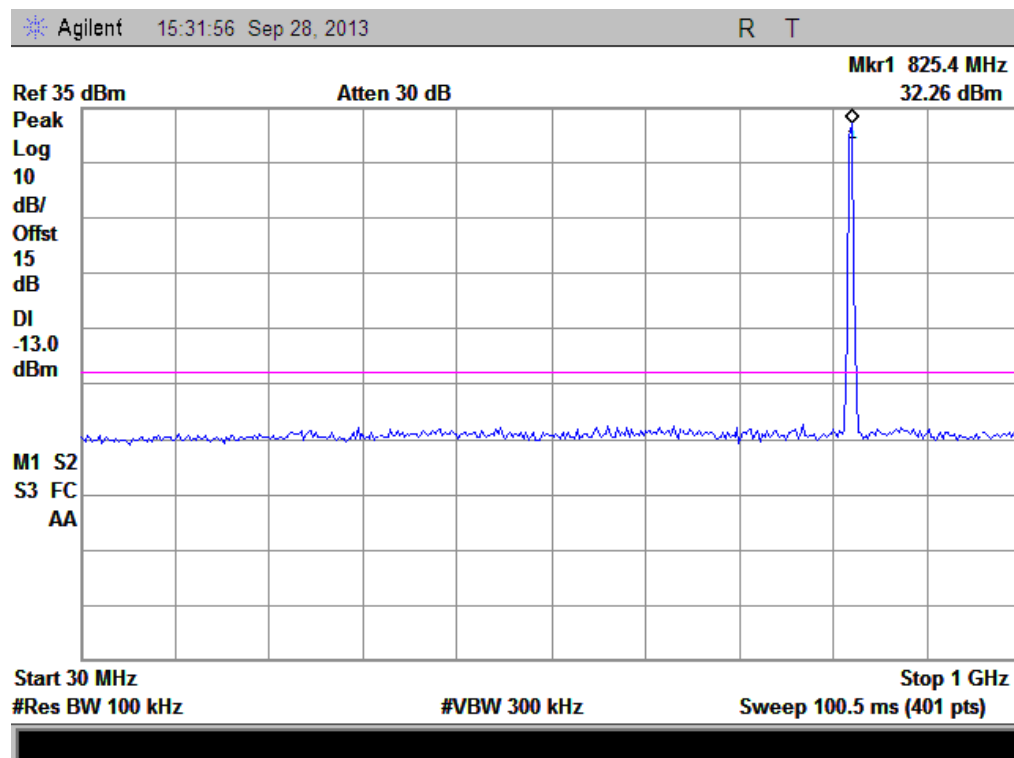
(Plot B2.1: GSM 1900MHz Channel = 661, 1GHz to 20GHz)

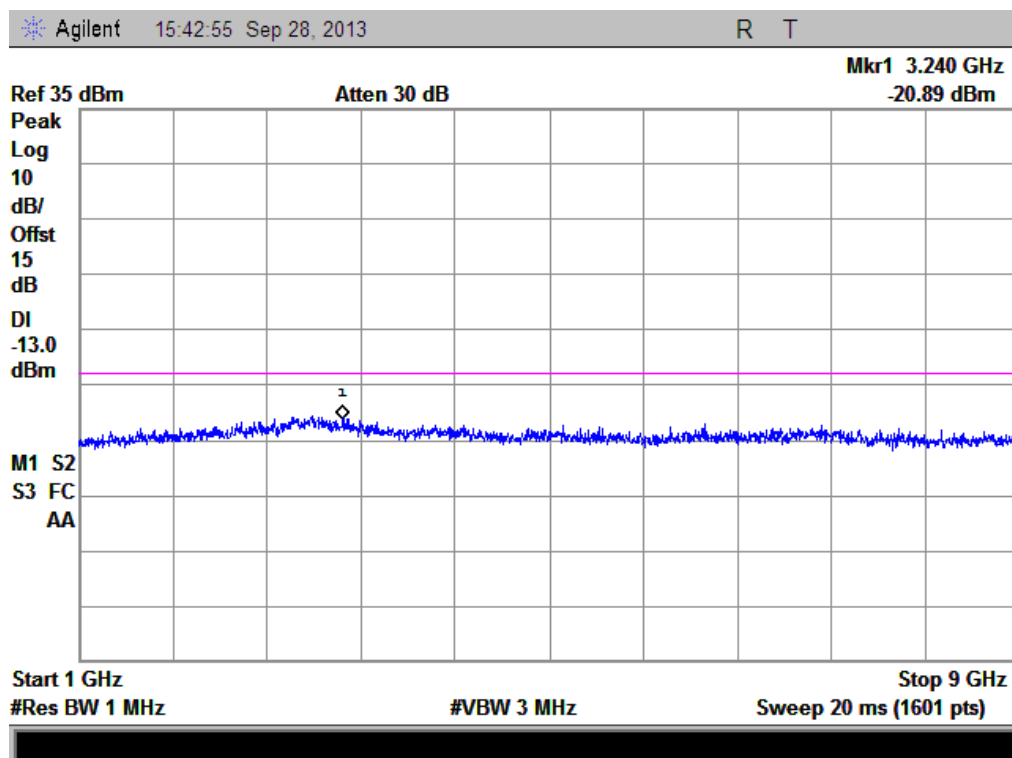
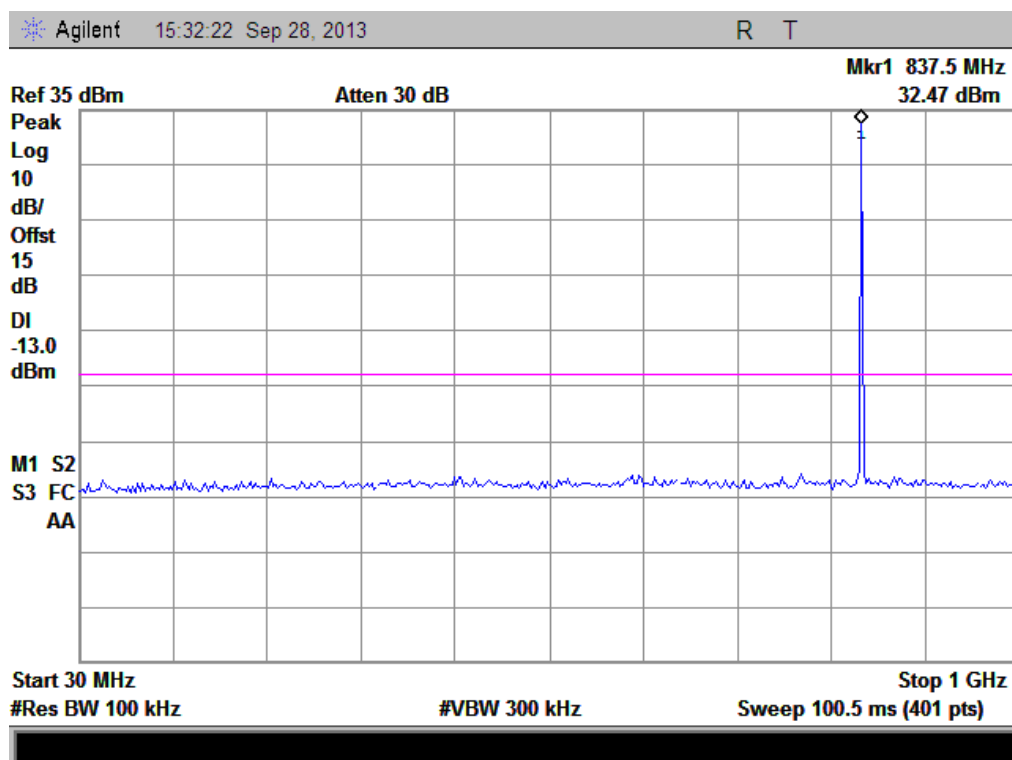


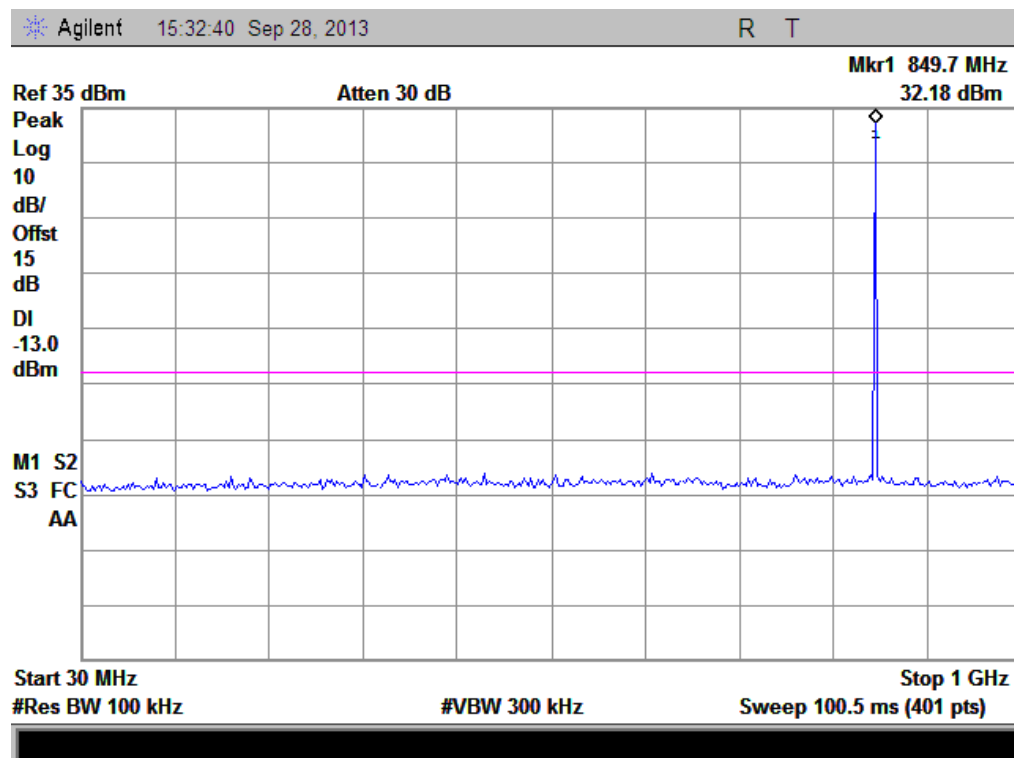
(Plot B3: GSM 1900MHz Channel = 810, 30MHz to 1GHz)



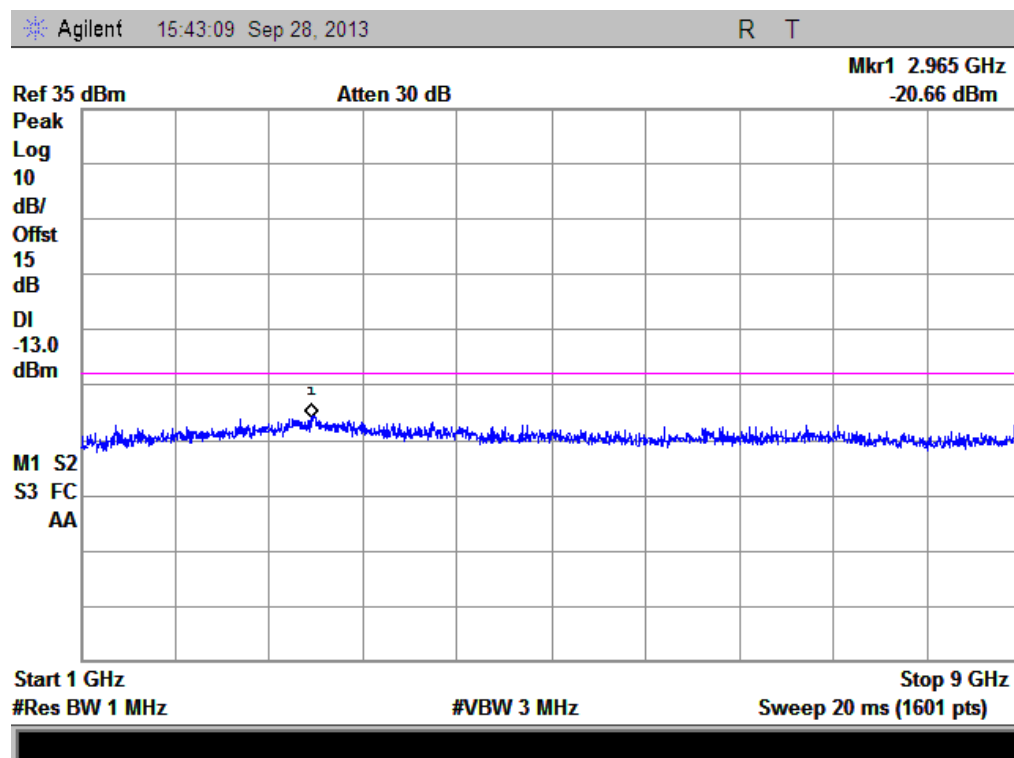
(Plot B3.1: GSM 1900MHz Channel = 810, 1GHz to 20GHz)



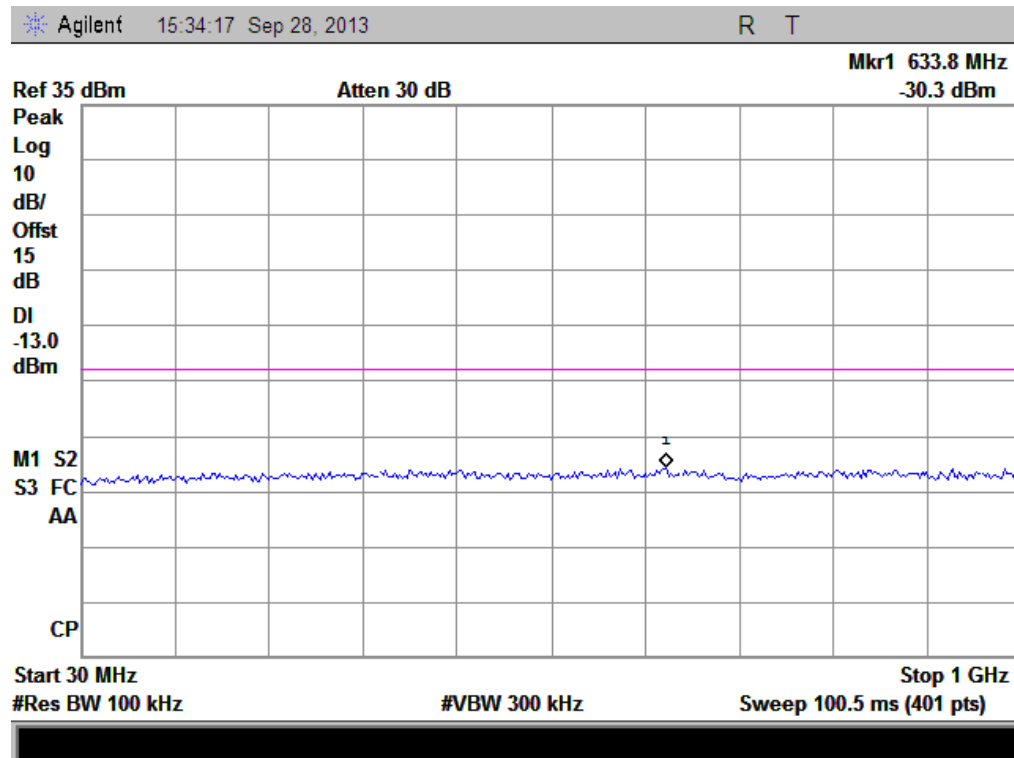




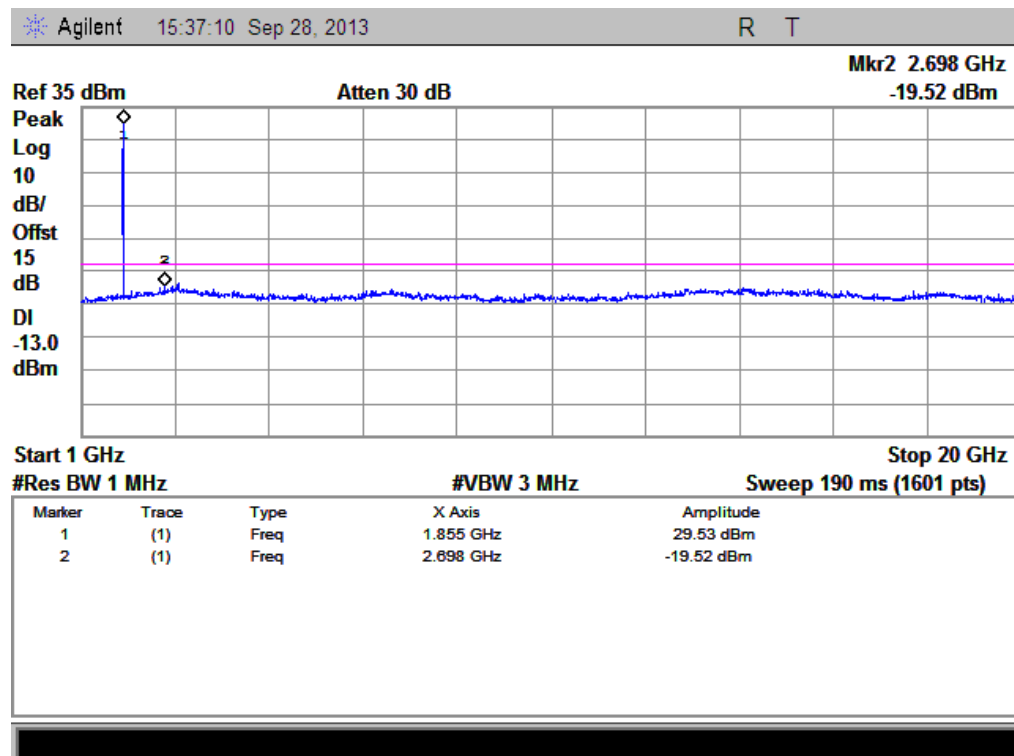
(Plot C3: EDGE 850MHz Channel = 251, 30MHz to 1GHz)



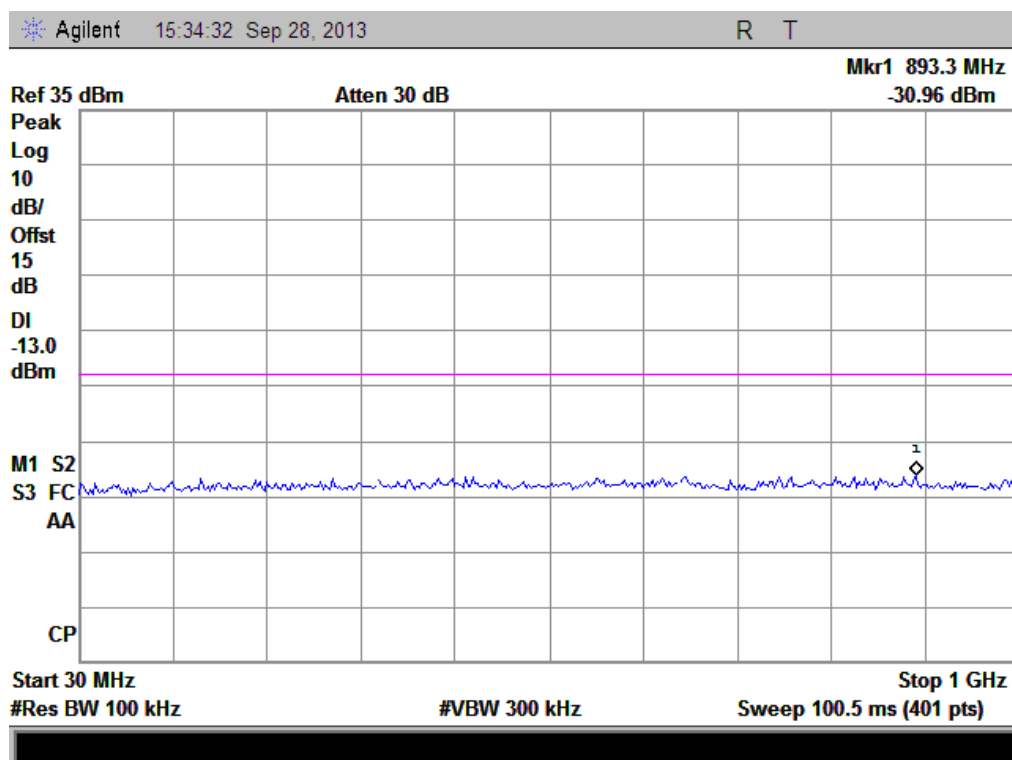
(Plot C3.1: EDGE 850MHz Channel = 251, 1GHz to 9GHz)



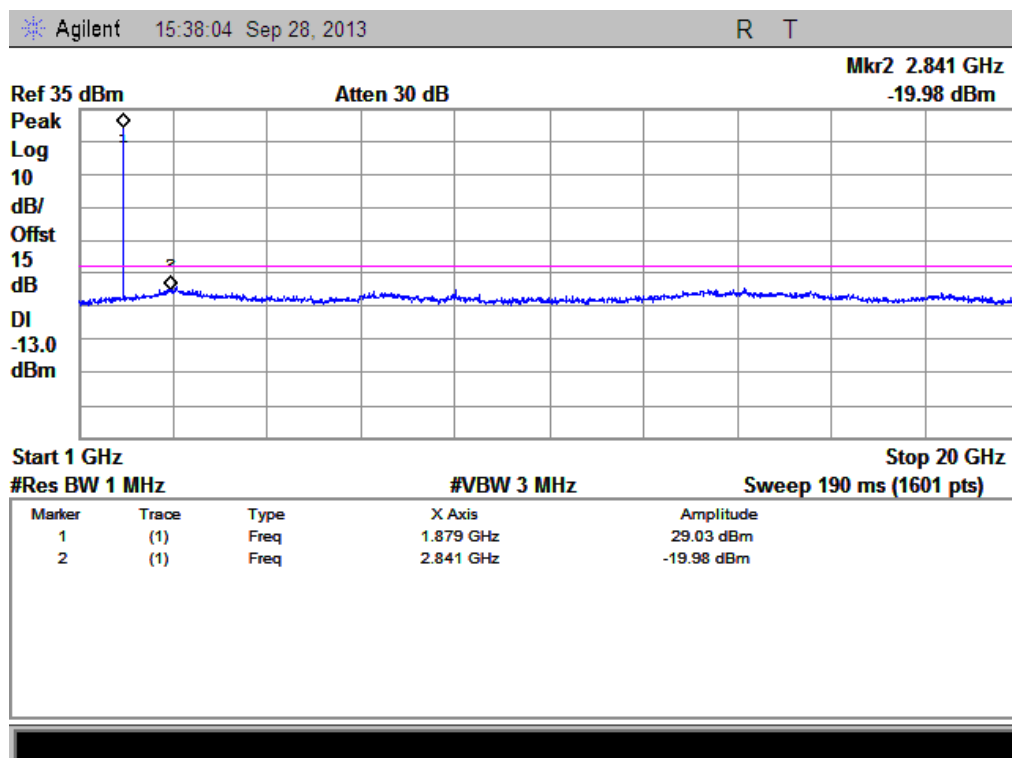
(Plot D1: EDGE 1900MHz Channel = 512, 30MHz to 1GHz)



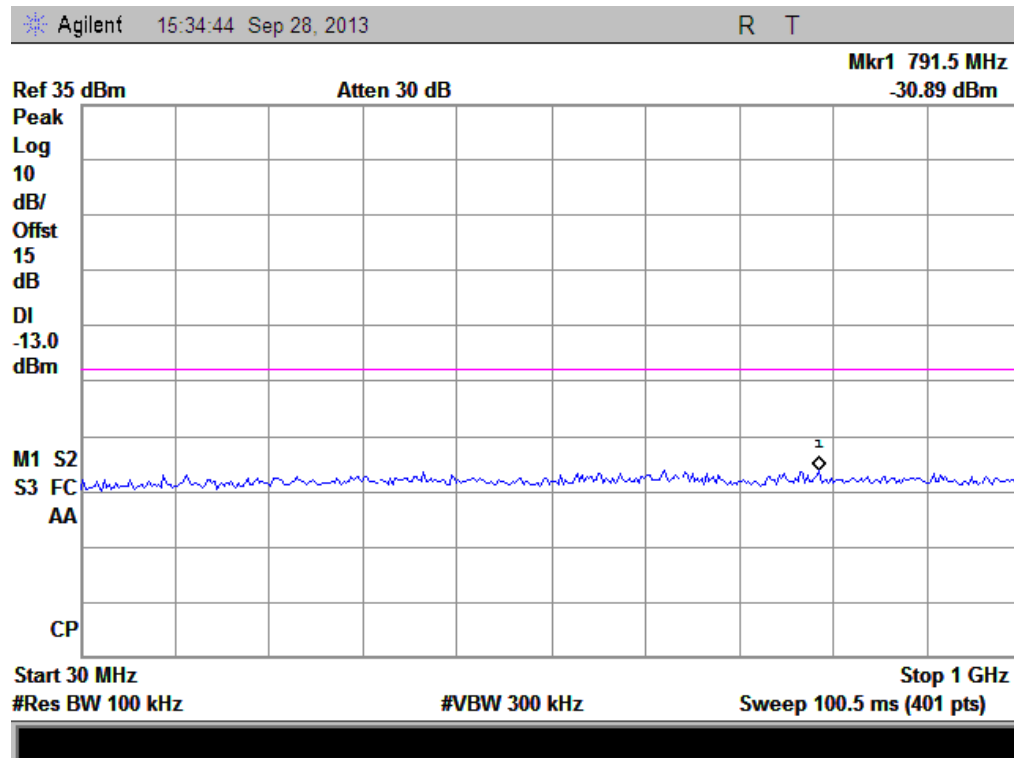
(Plot D1.1: EDGE 1900MHz Channel = 512, 1GHz to 20GHz)



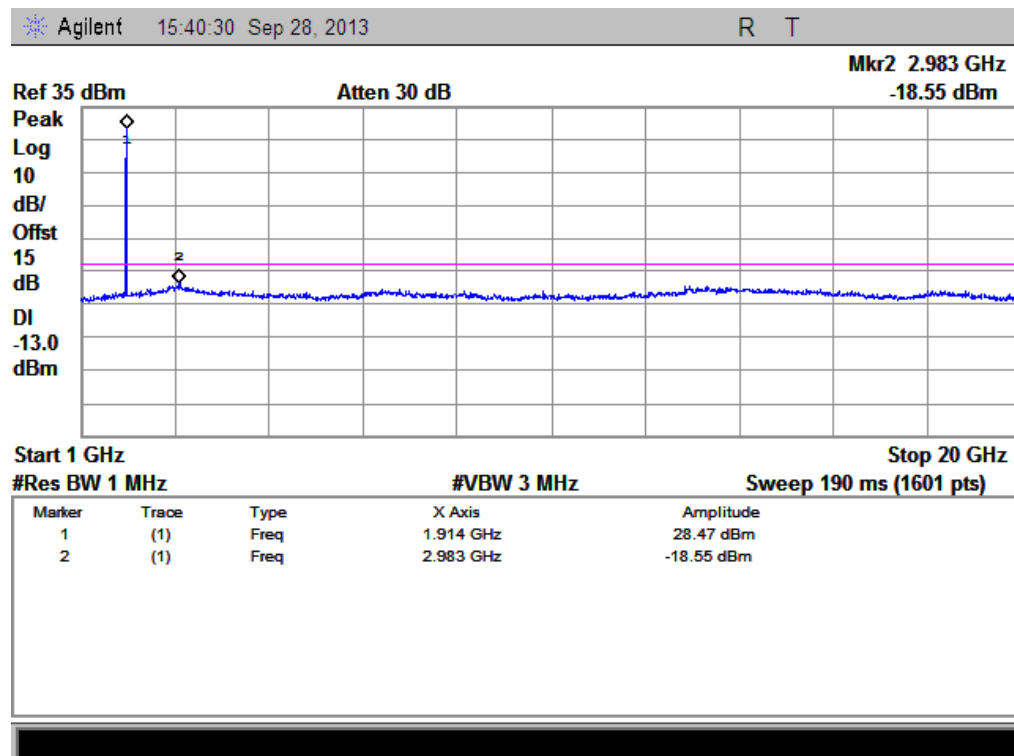
(Plot D2: EDGE 1900MHz Channel = 661, 30MHz to 1GHz)



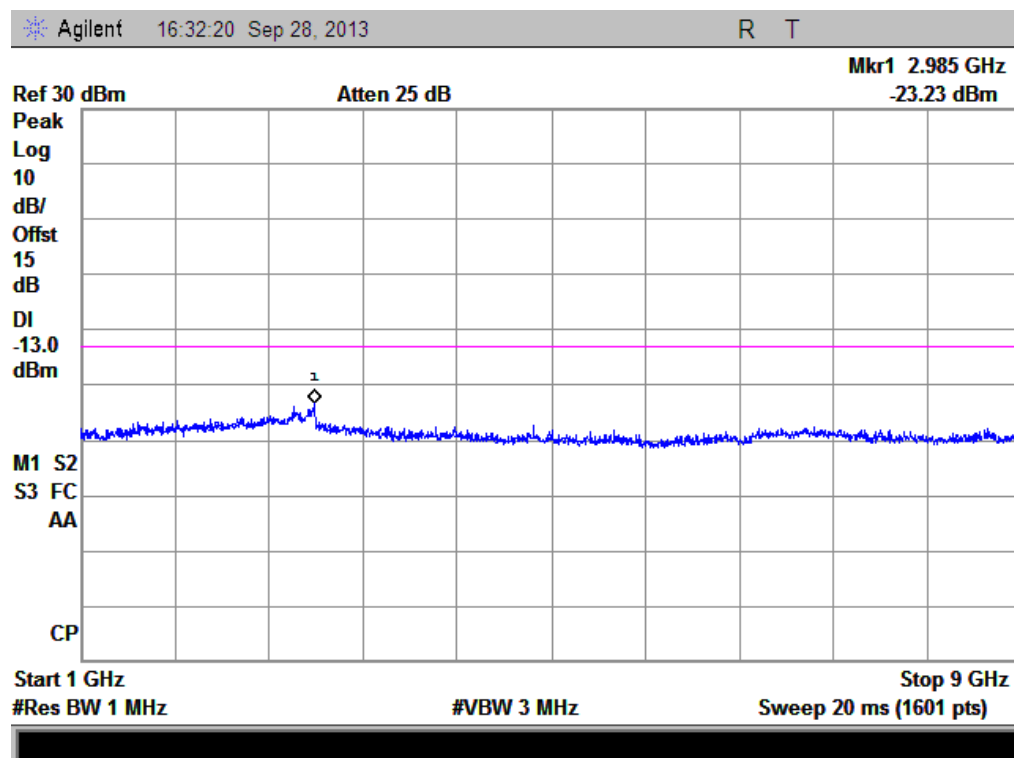
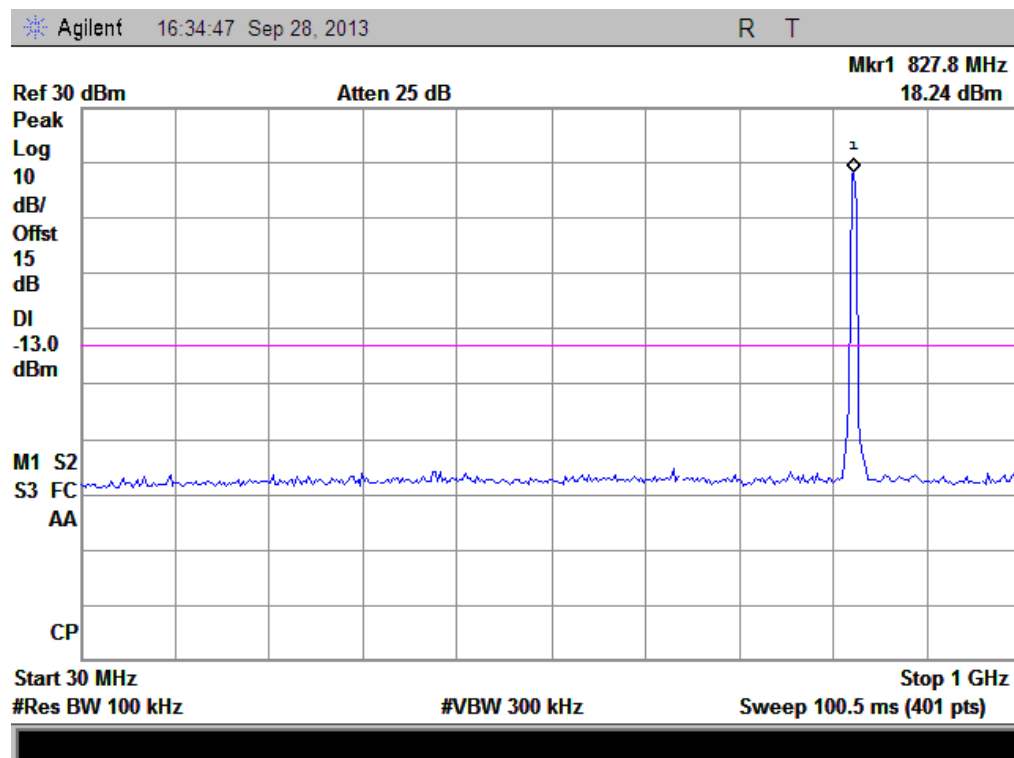
(Plot D2.1: EDGE 1900MHz Channel = 661, 1GHz to 20GHz)

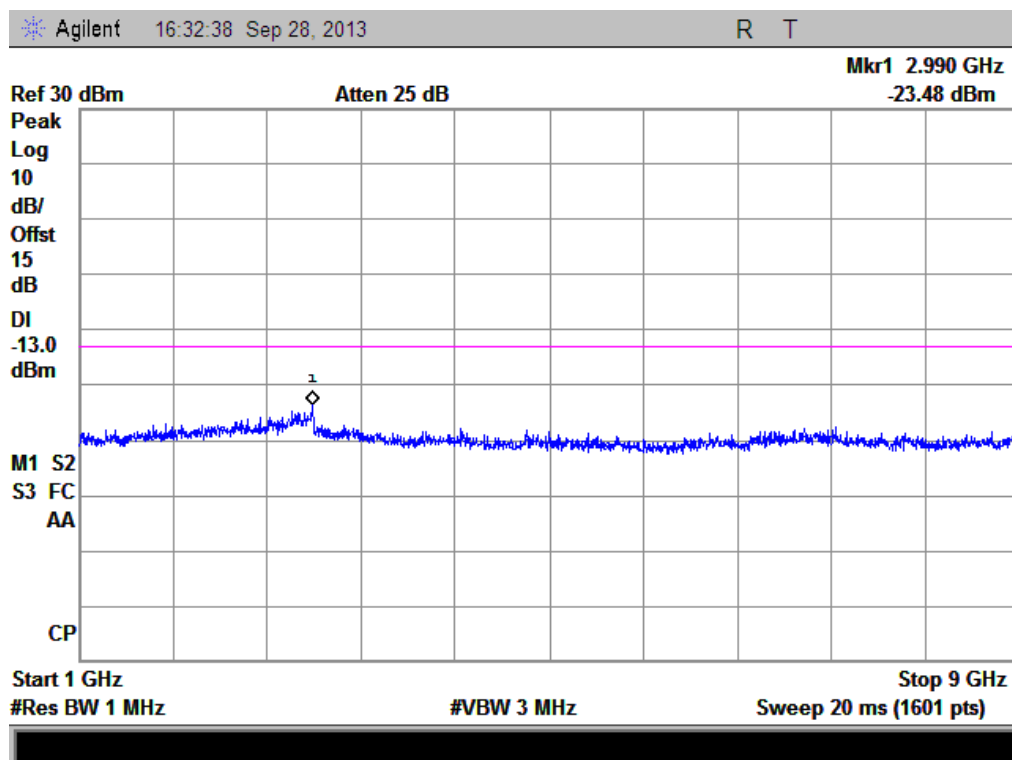
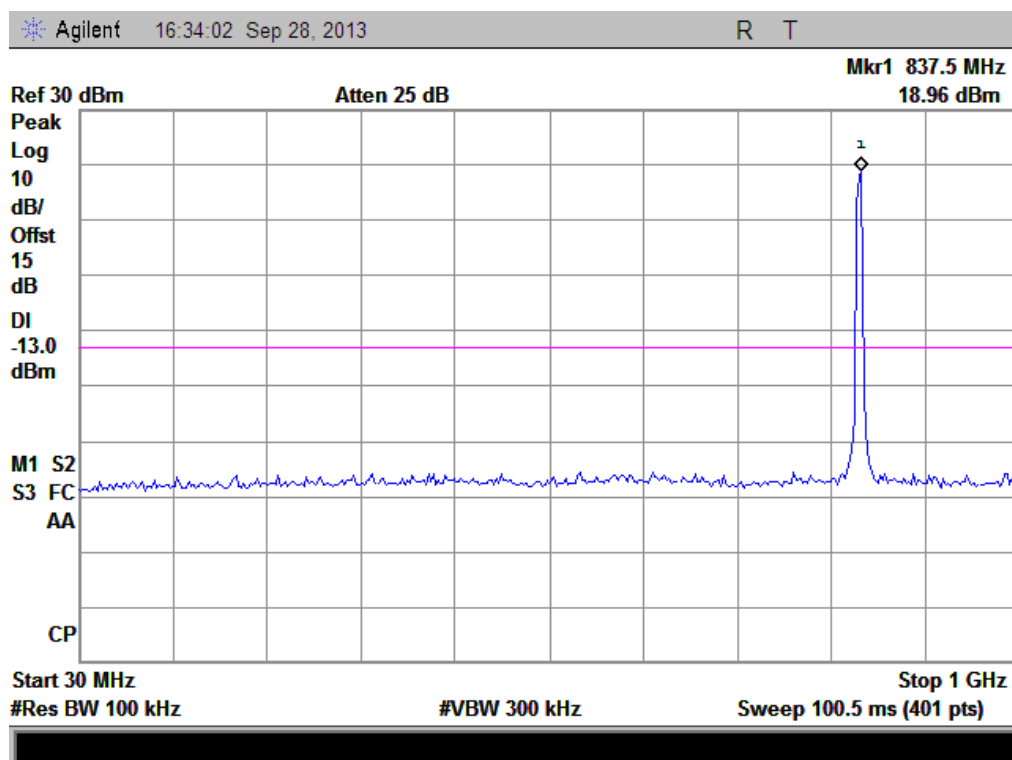


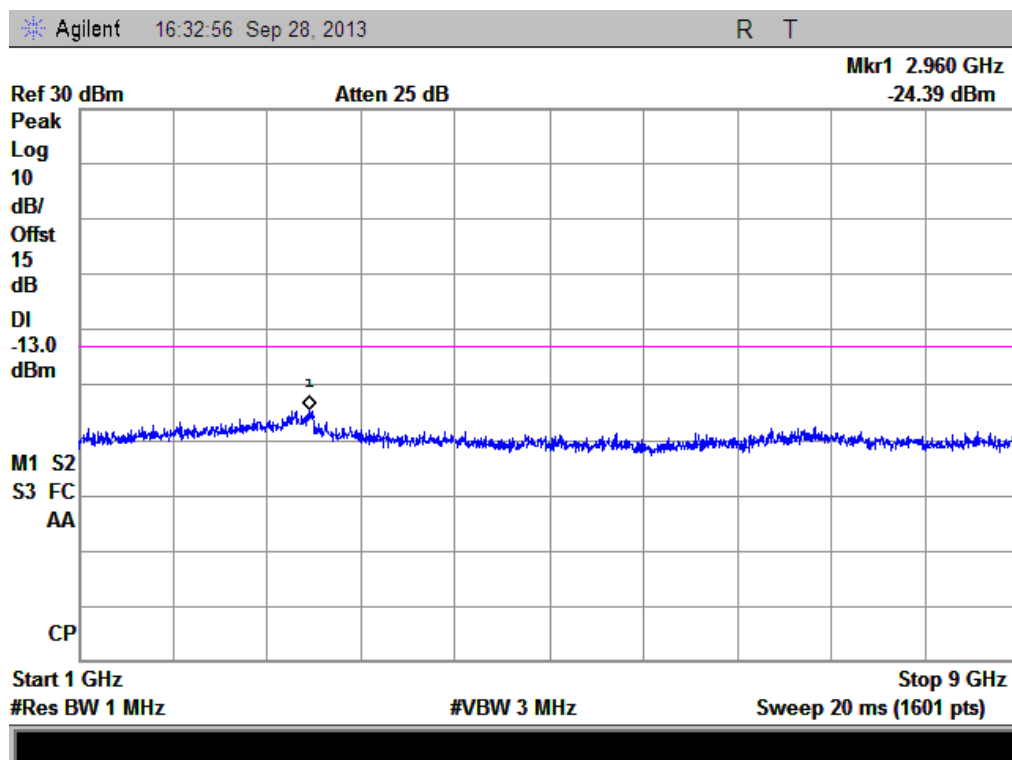
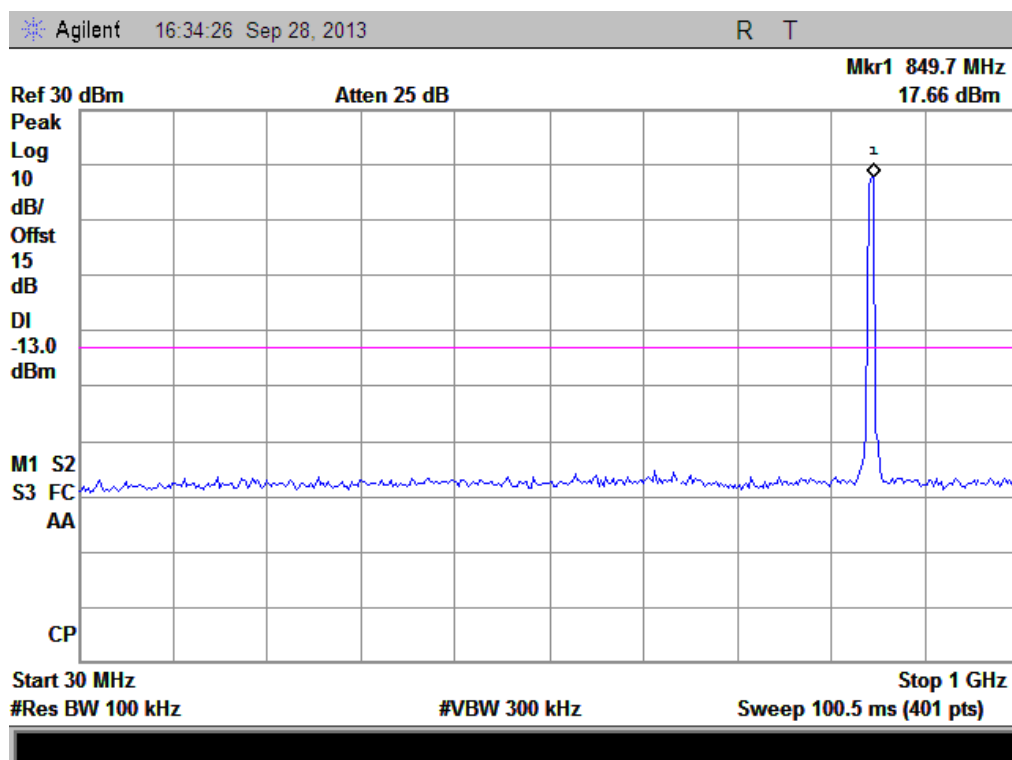
(Plot D3: EDGE 1900MHz Channel = 810, 30MHz to 1GHz)

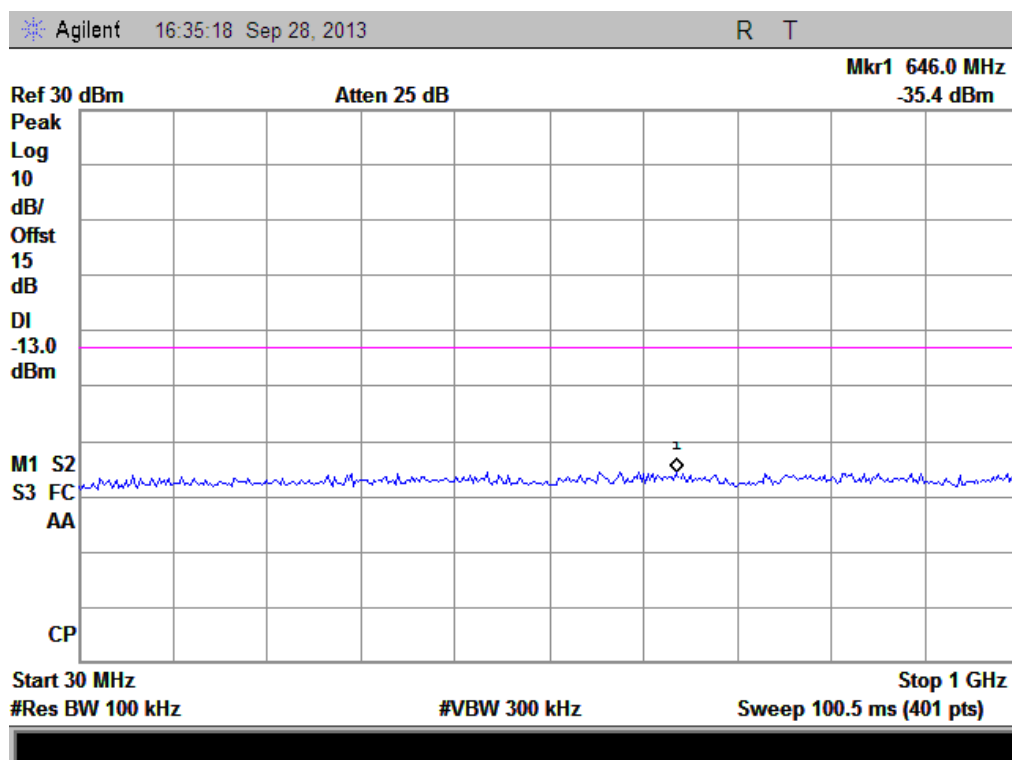


(Plot D3.1: EDGE 1900MHz Channel = 810, 1GHz to 20GHz)

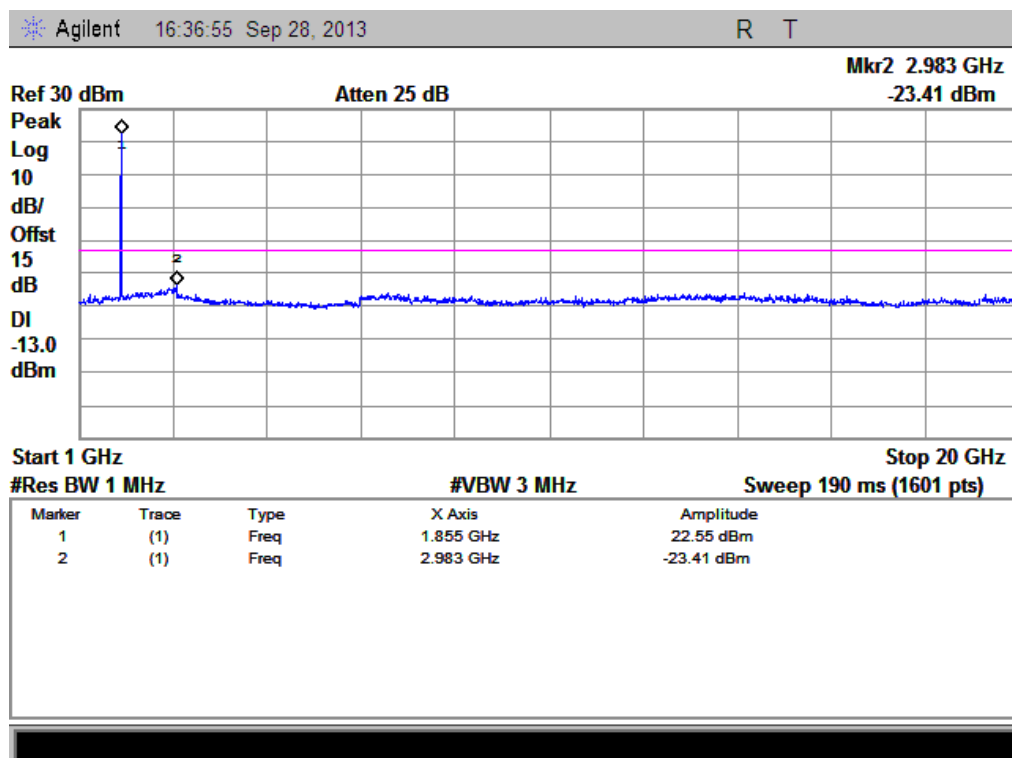




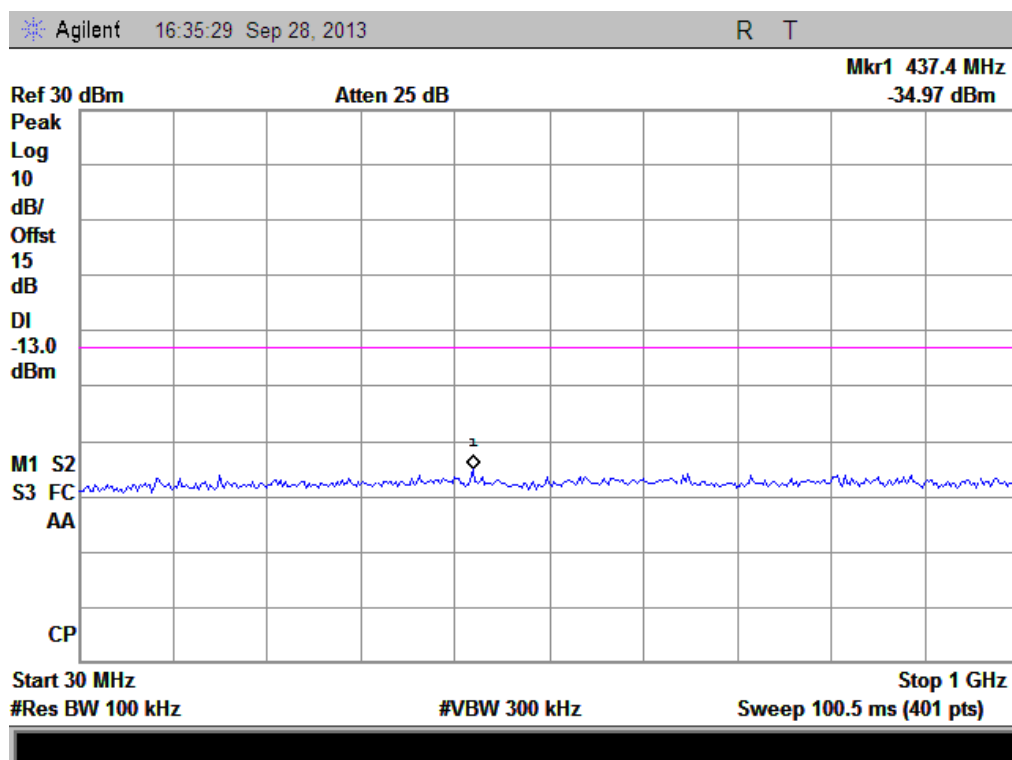




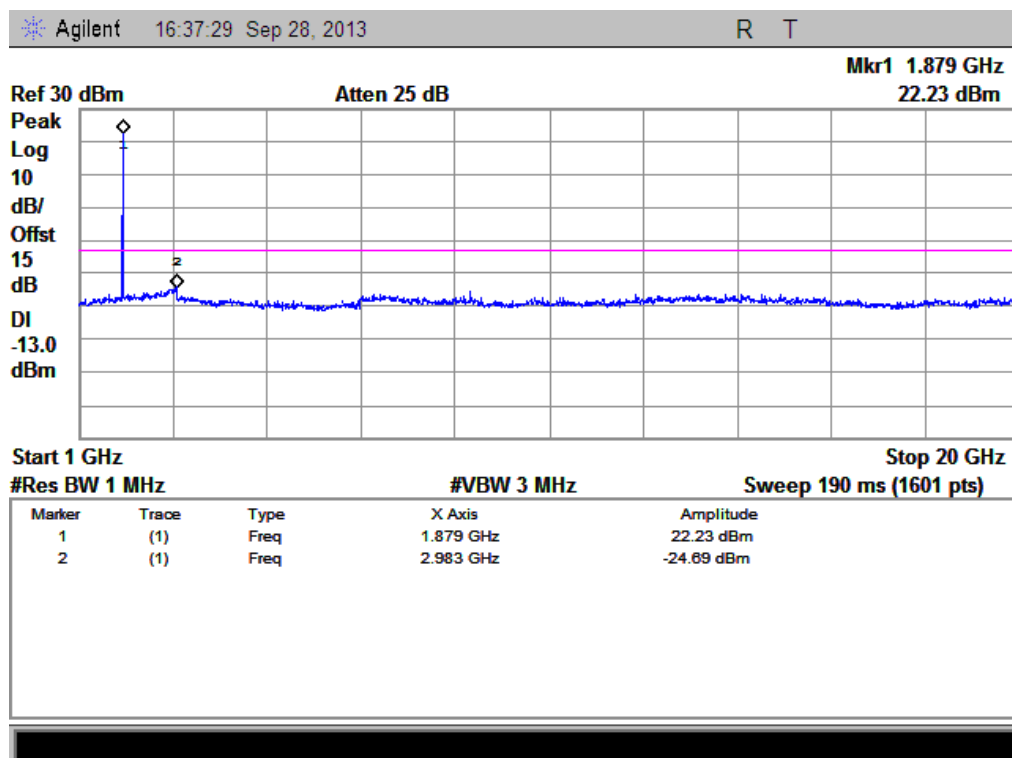
(Plot F1: WCDMA1900MHz Channel = 9262, 30MHz to 1GHz)



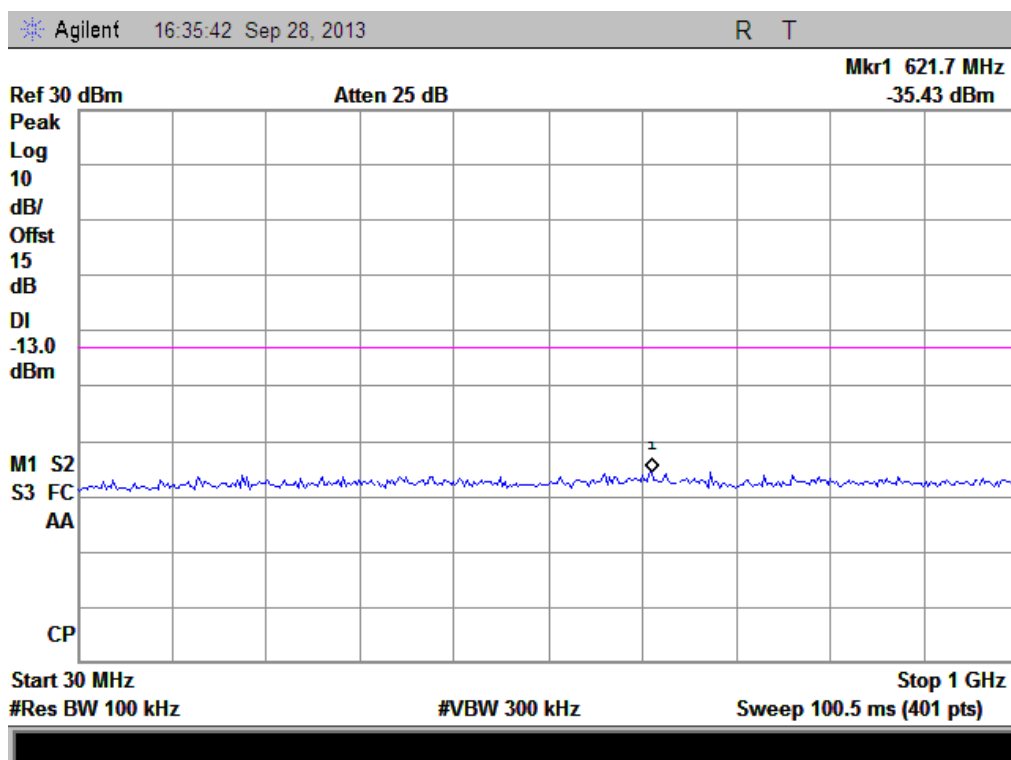
(Plot F1.1: WCDMA1900MHz Channel = 9262, 1GHz to 20GHz)



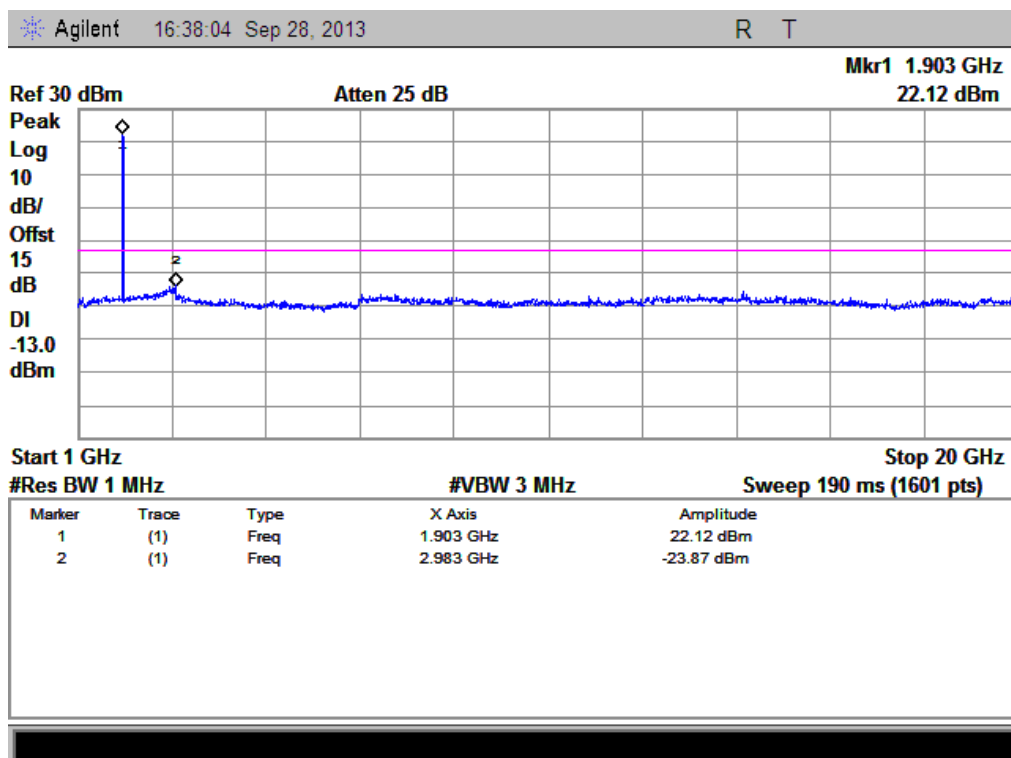
(Plot F2: WCDMA1900MHz Channel = 9400, 30MHz to 1GHz)



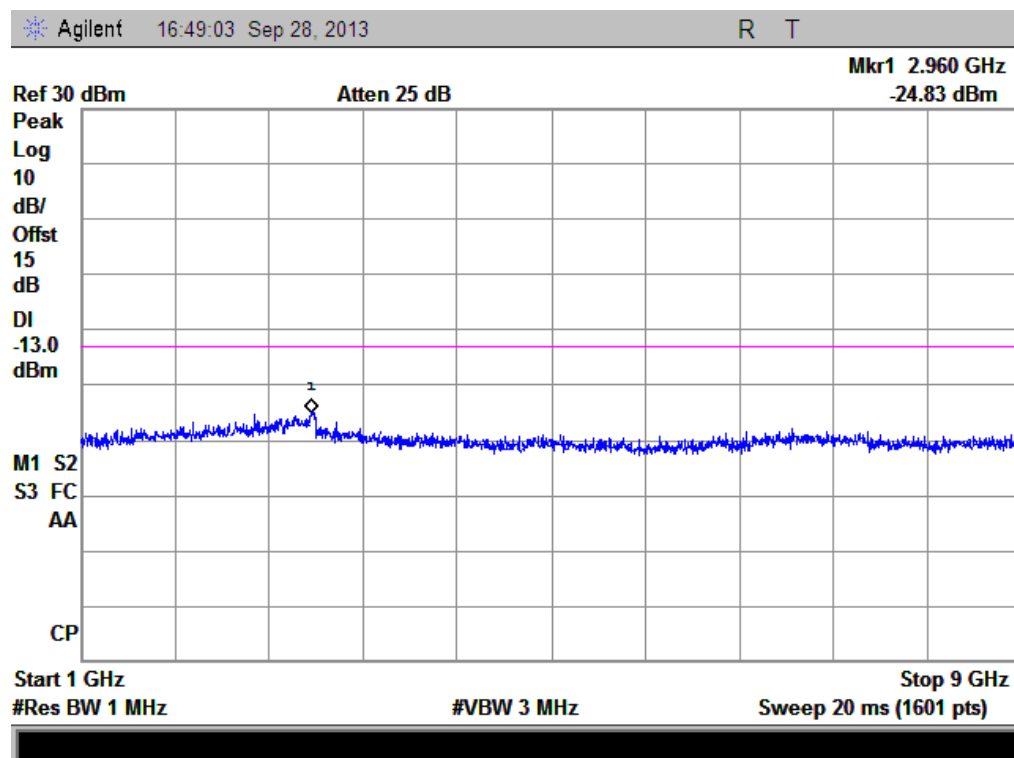
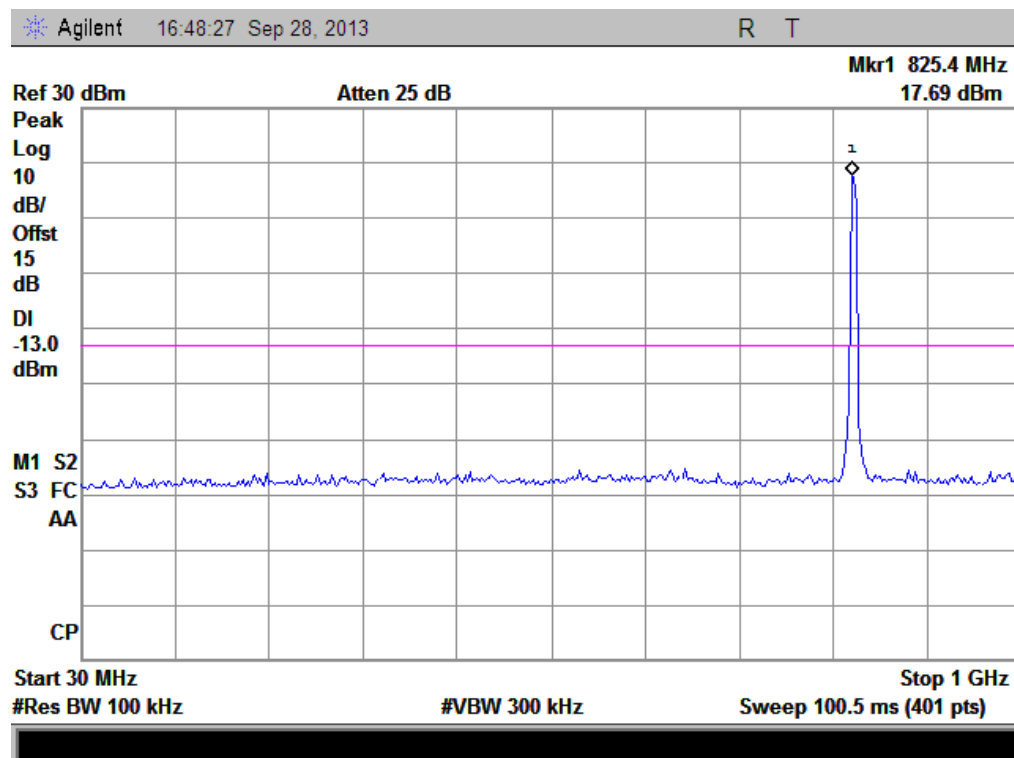
(Plot F2.1: WCDMA1900MHz Channel = 9400, 1GHz to 20GHz)

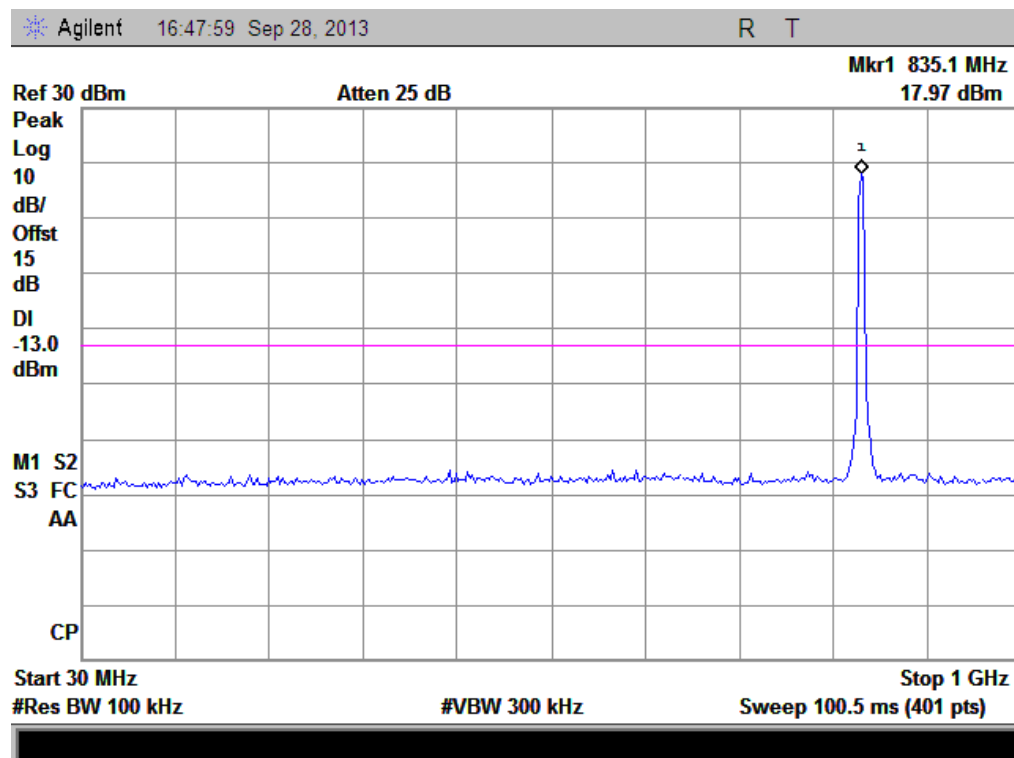


(Plot F3: WCDMA1900MHz Channel = 9538, 30MHz to 1GHz)

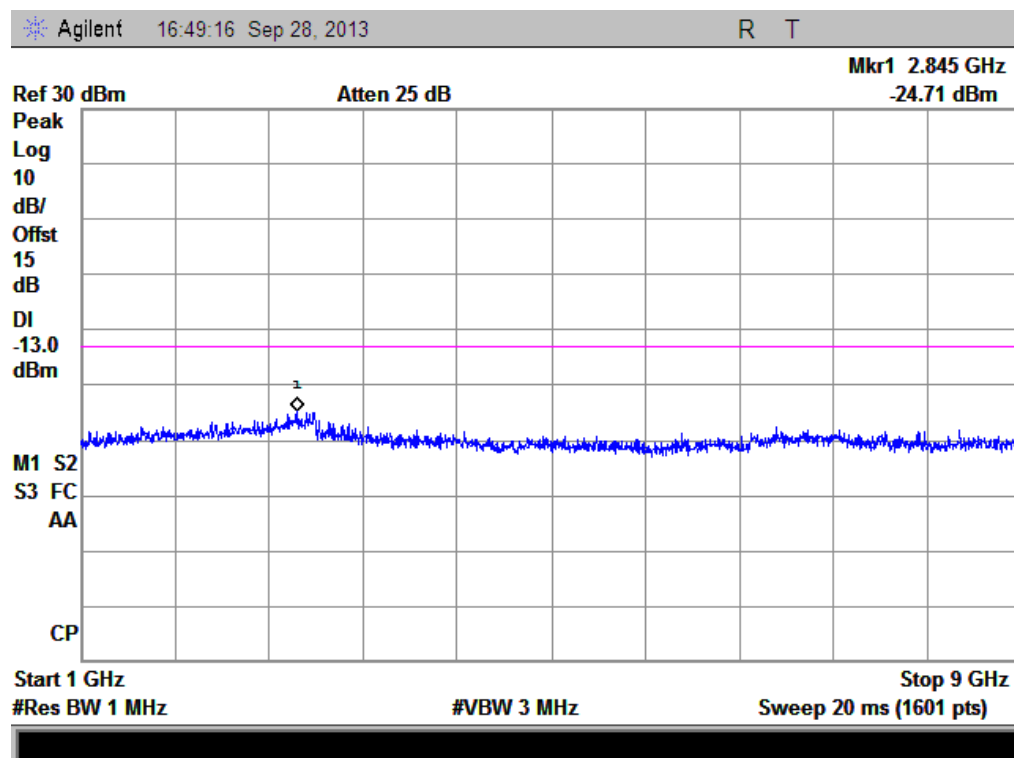


(Plot F3.1: WCDMA1900MHz Channel = 9538 1GHz to 20GHz)

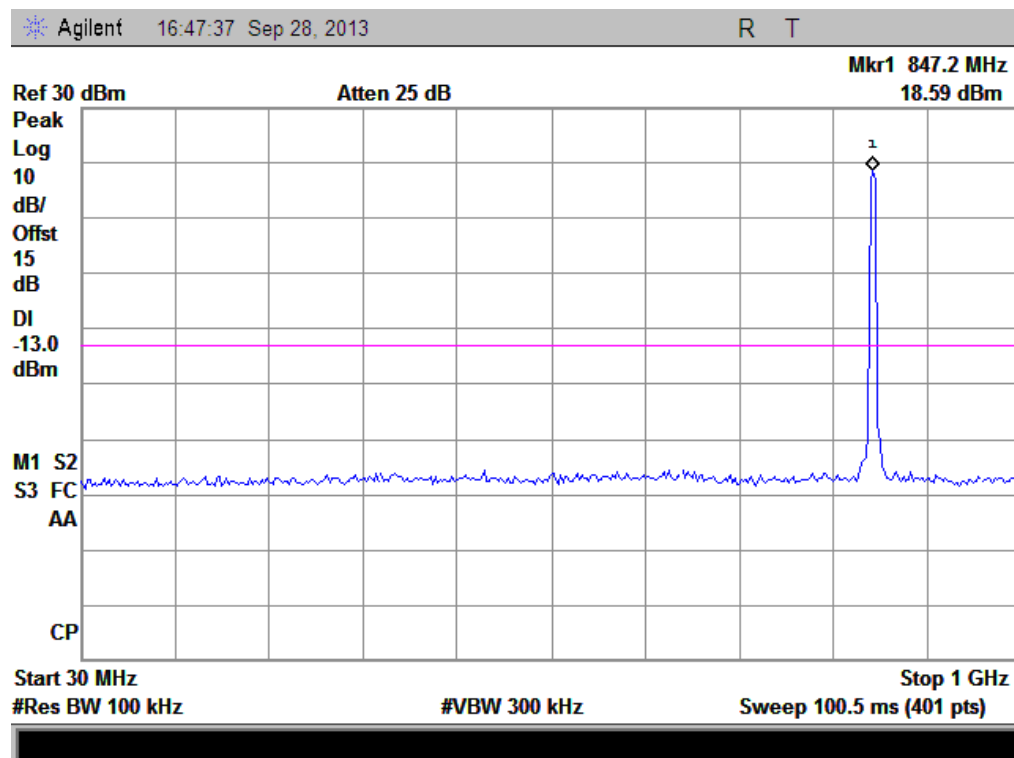




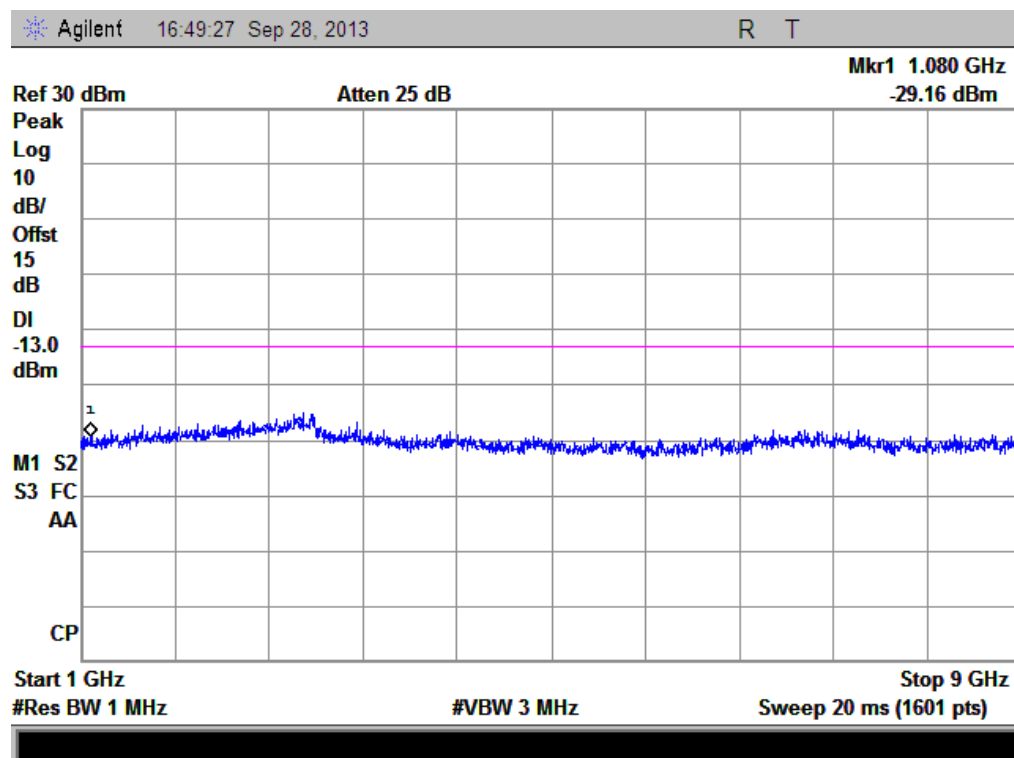
(Plot G2: HSDPA 850MHz Channel = 4175, 30MHz to 1GHz)



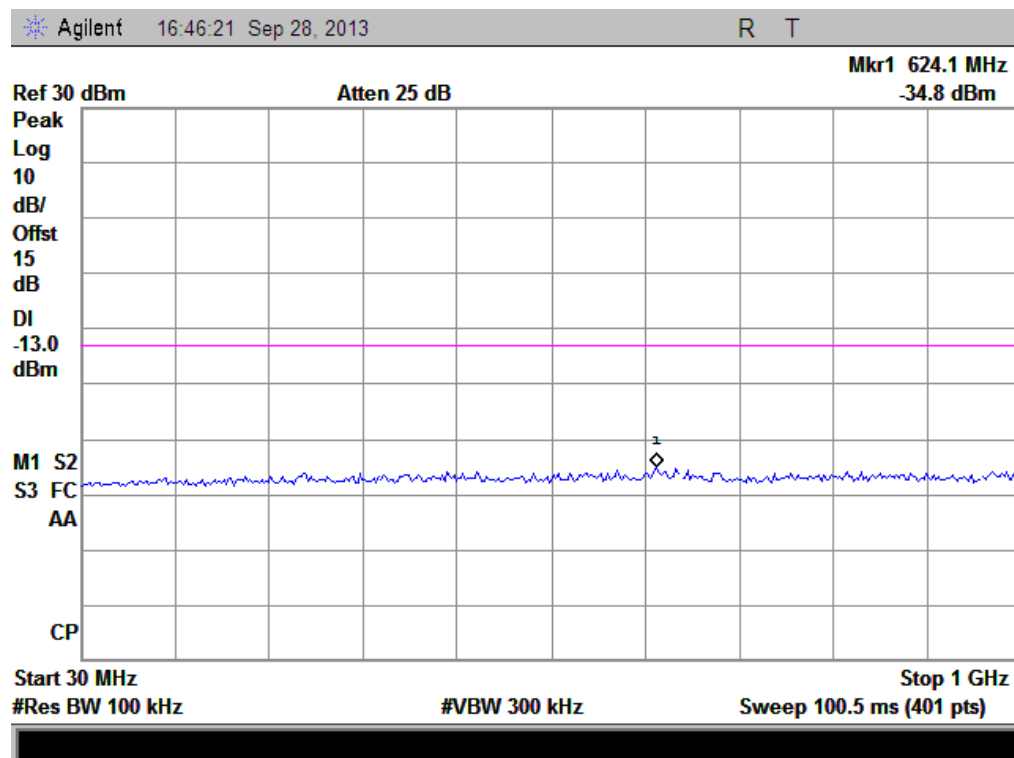
(Plot G2.1: HSDPA 850MHz Channel = 4175, 1GHz to 9GHz)



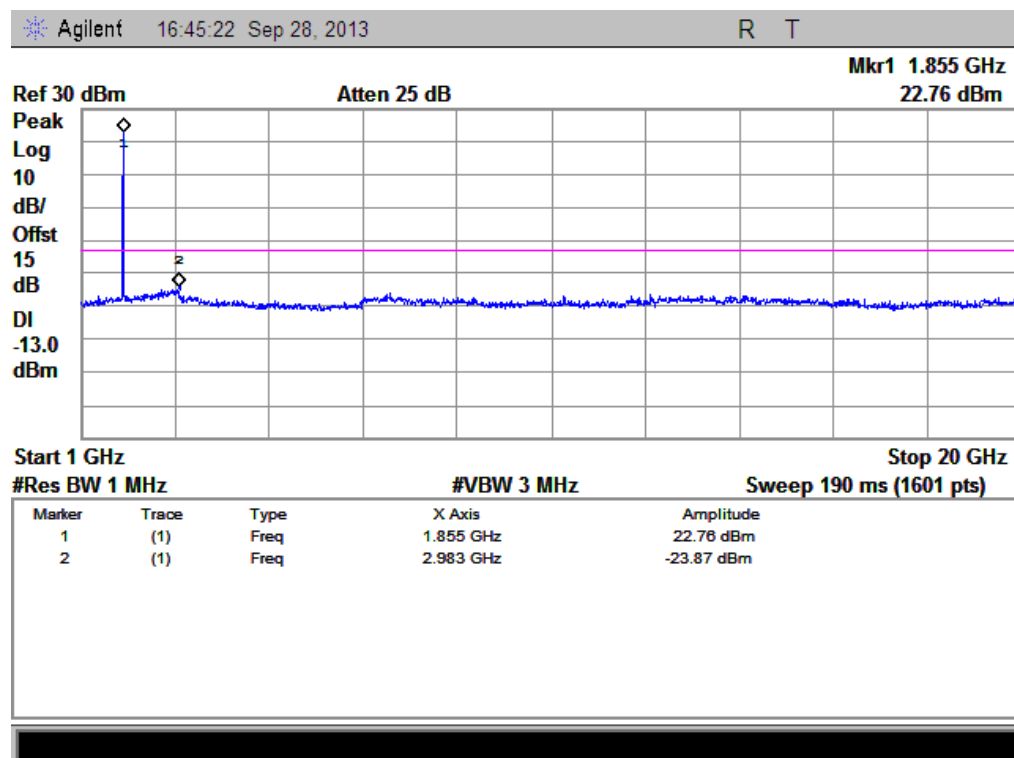
(Plot G3: HSDPA850MHz Channel = 4233, 30MHz to 1GHz)



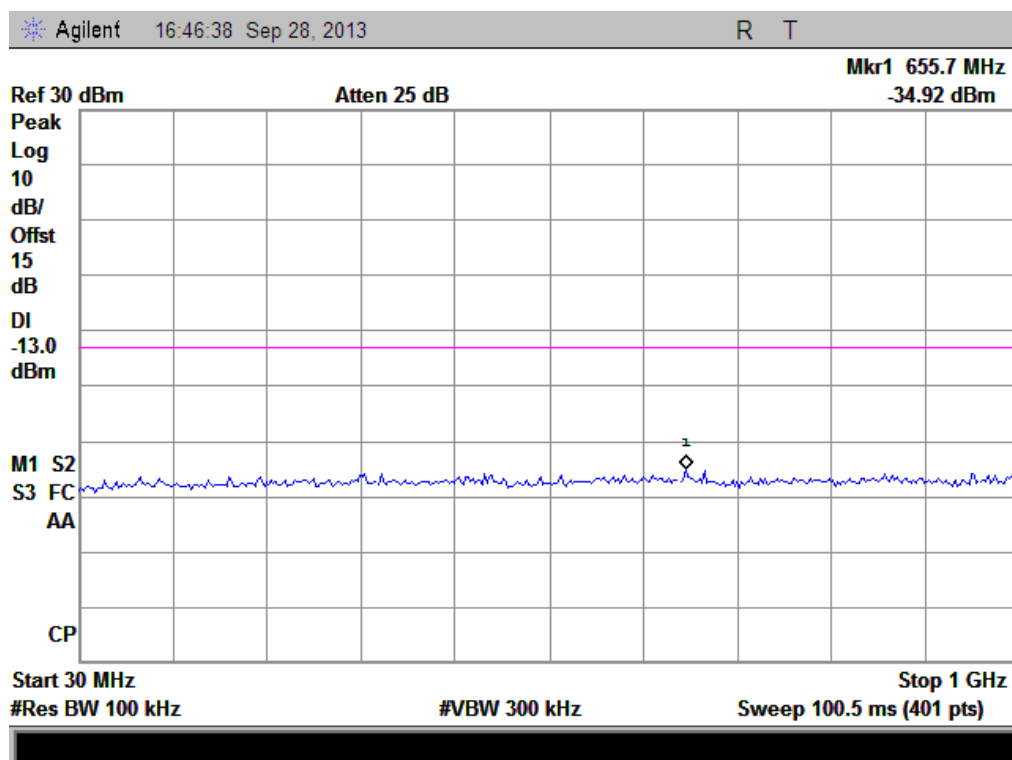
(Plot G3.1: HSDPA850MHz Channel = 4233, 1GHz to 9GHz)



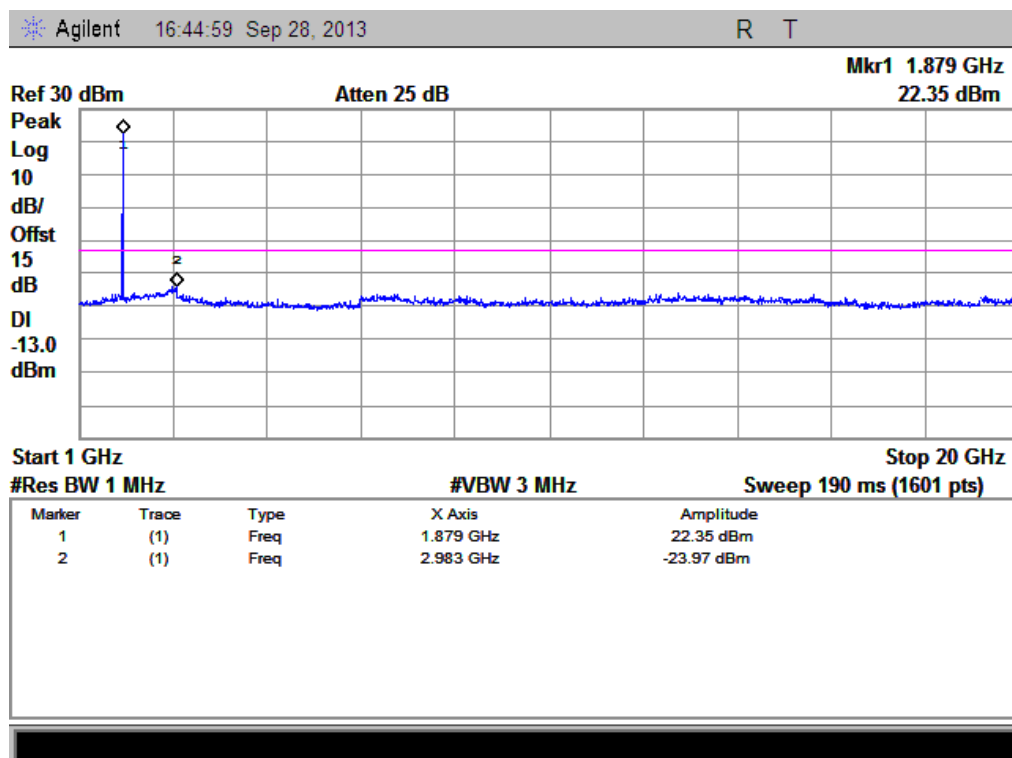
(Plot H1: HSDPA1900MHz Channel = 9262, 30MHz to 1GHz)



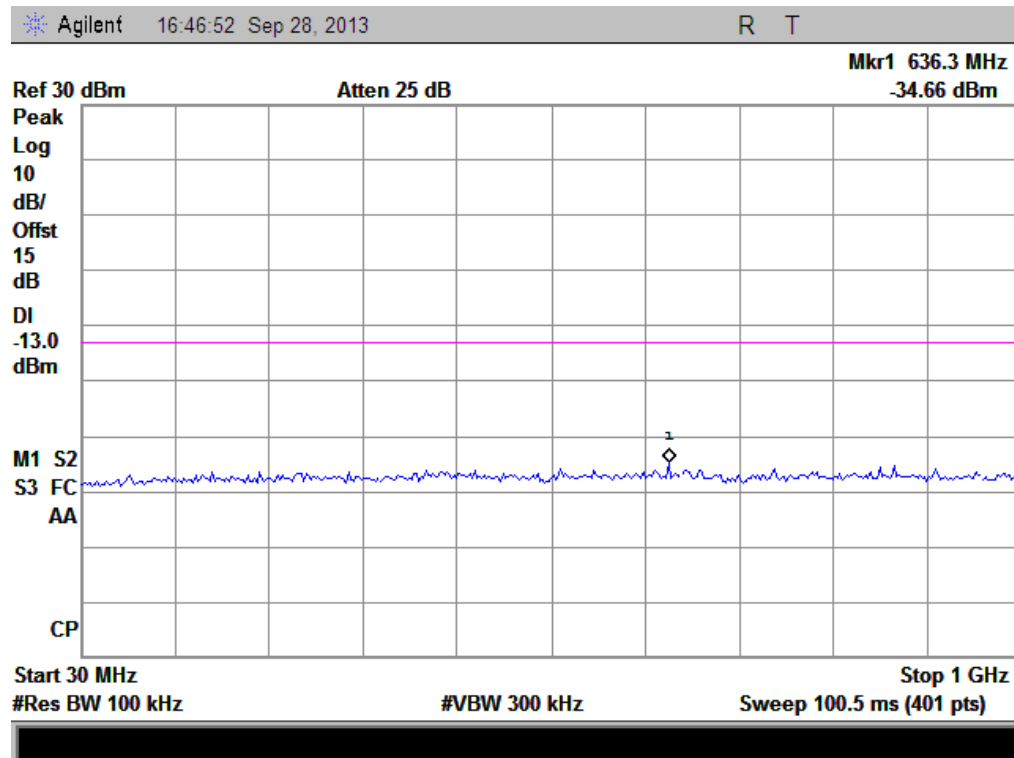
(Plot H1.1: HSDPA1900MHz Channel = 9262, 1GHz to 20GHz)



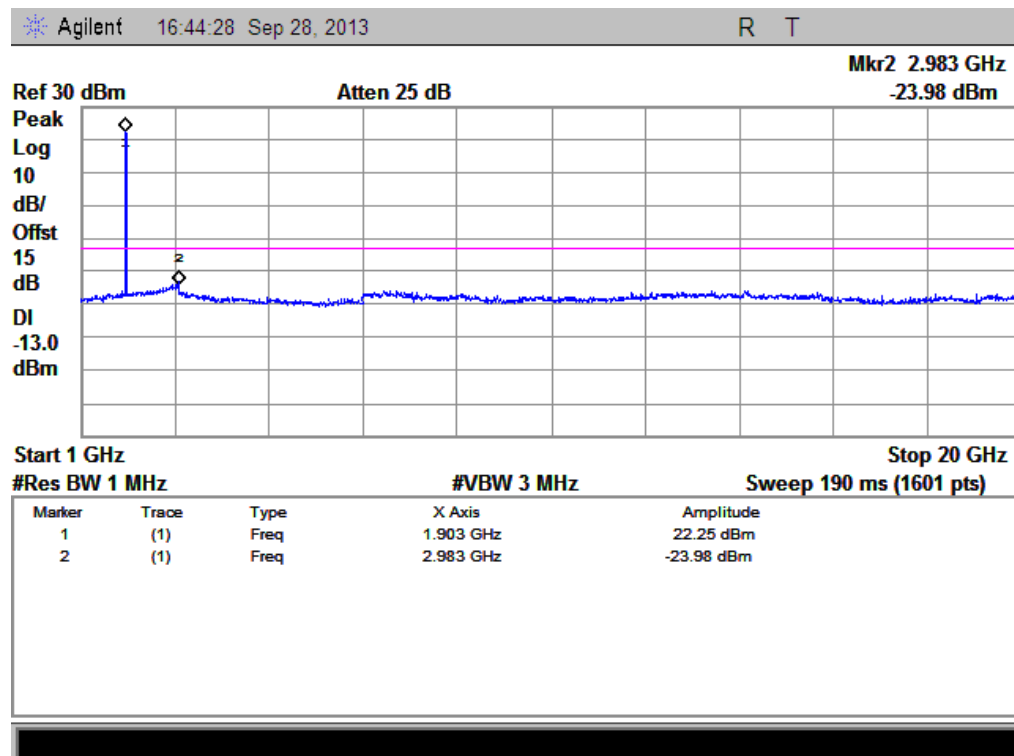
(Plot H2: HSDPA1900MHz Channel = 9400, 30MHz to 1GHz)



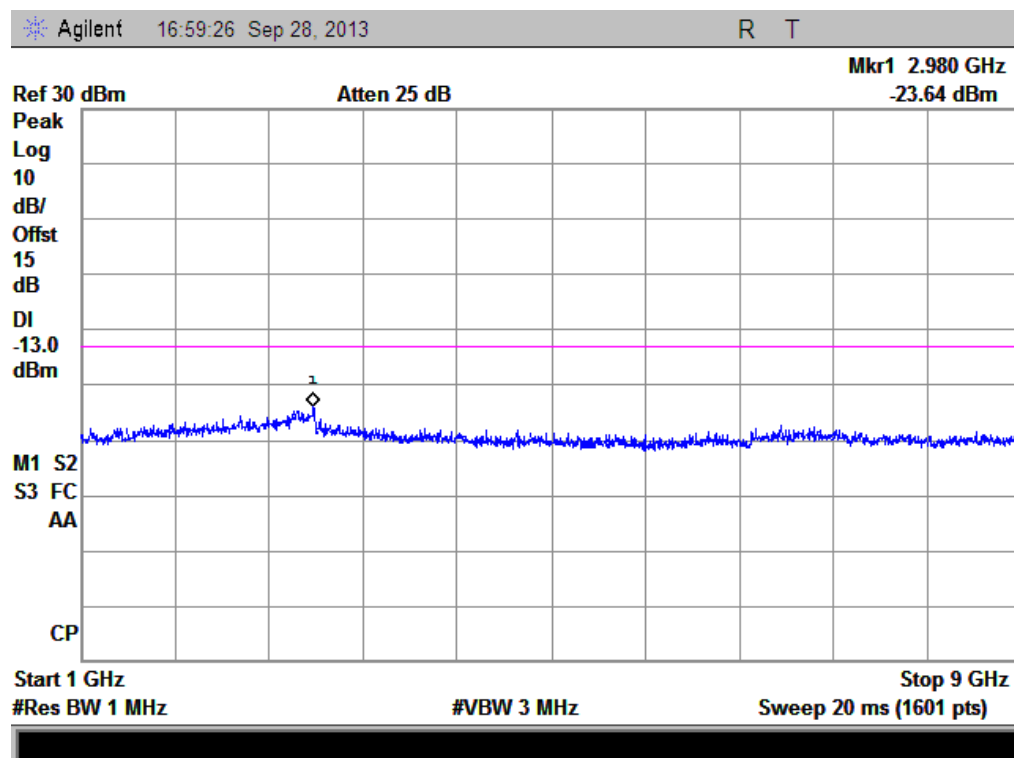
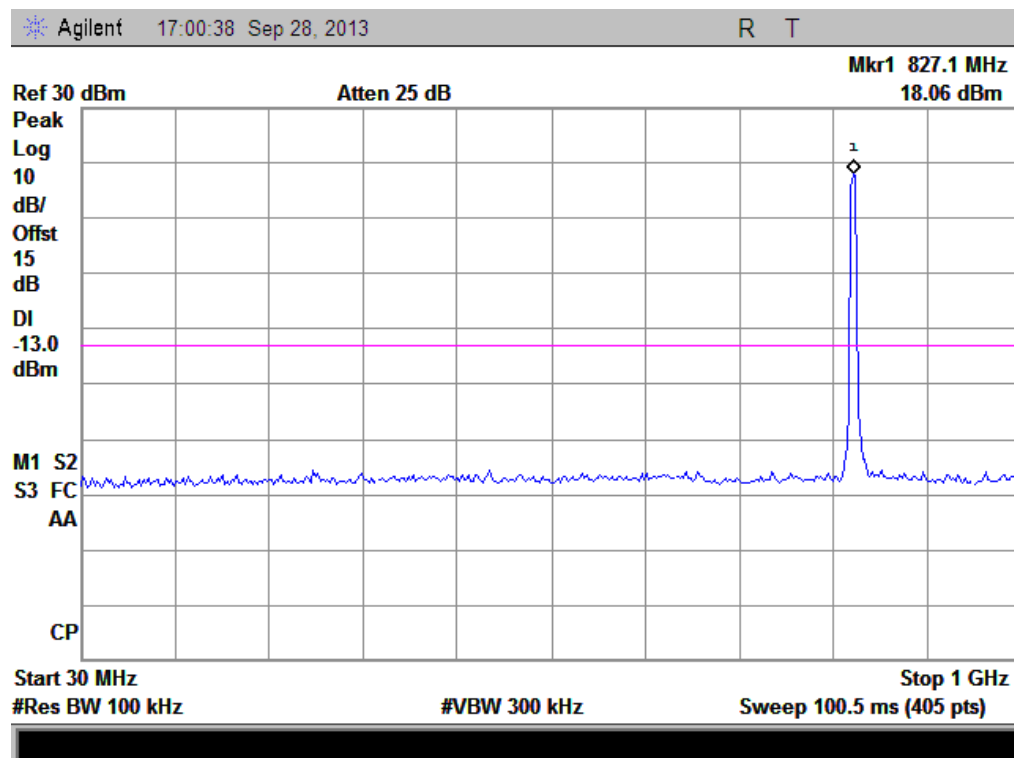
(Plot H2.1: HSDPA1900MHz Channel = 9400, 1GHz to 20GHz)

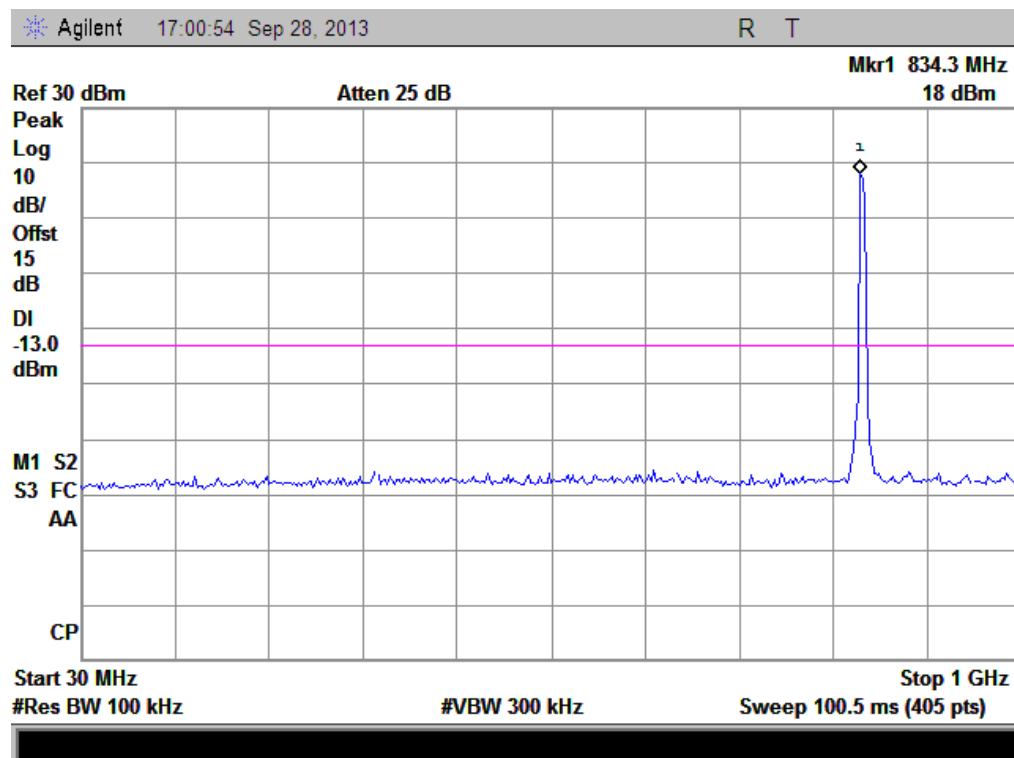


(Plot H3: HSDPA1900MHz Channel = 9538, 30MHz to 1GHz)

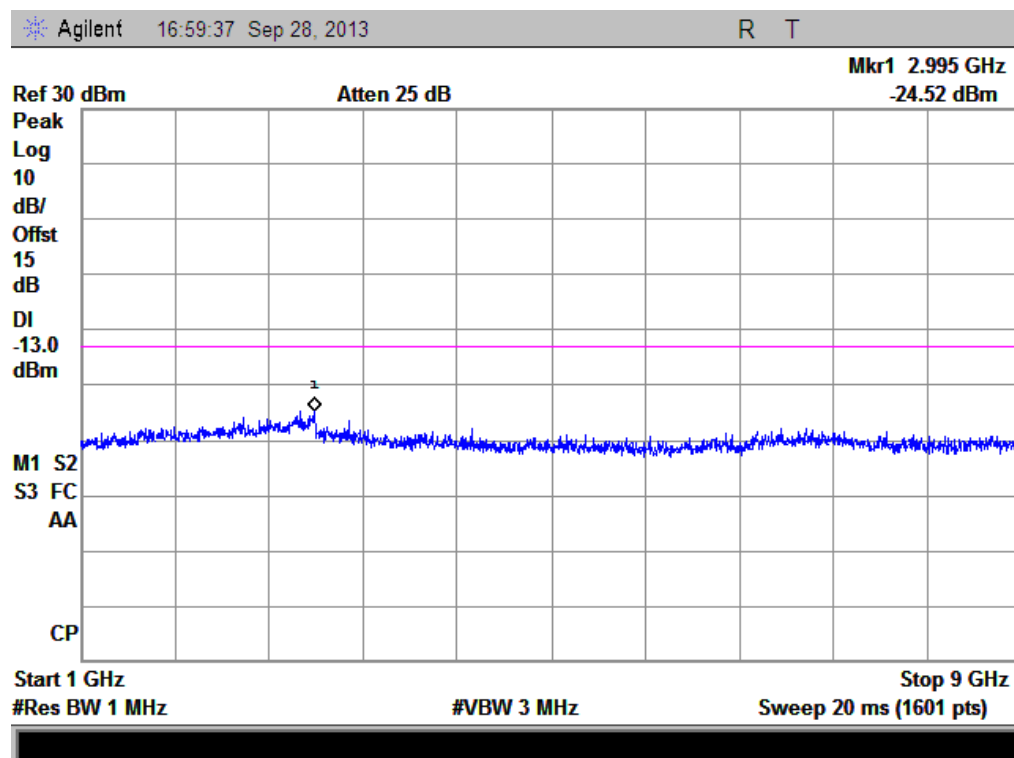


(Plot H3.1: HSDPA1900MHz Channel = 9538 1GHz to 20GHz)

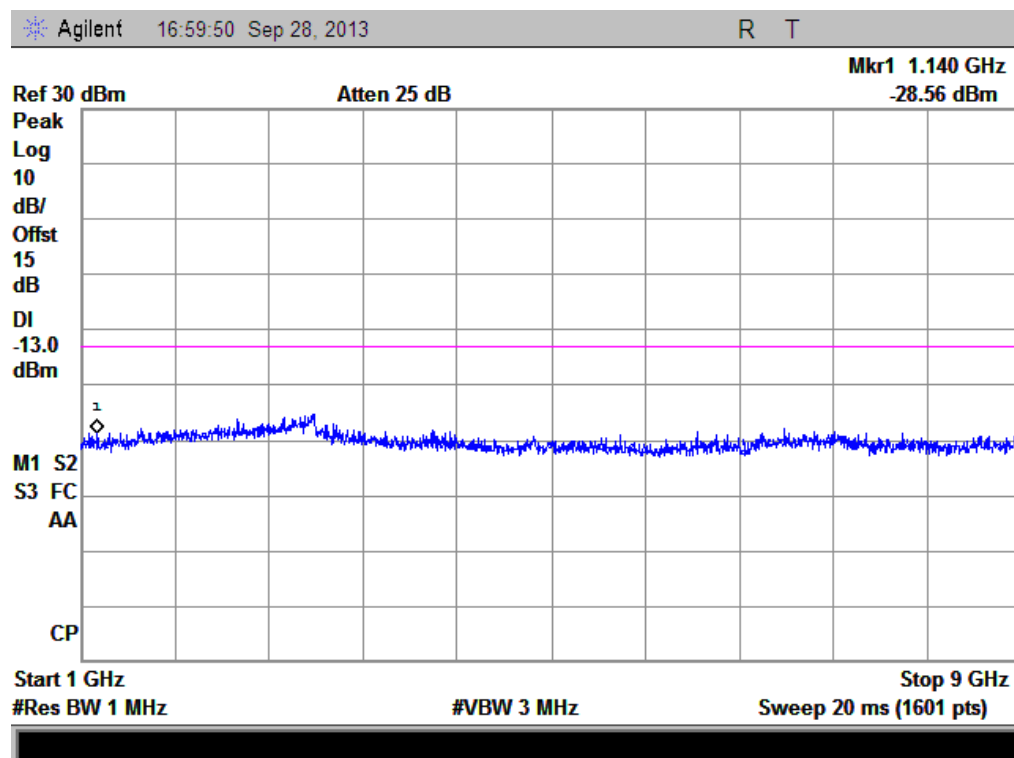
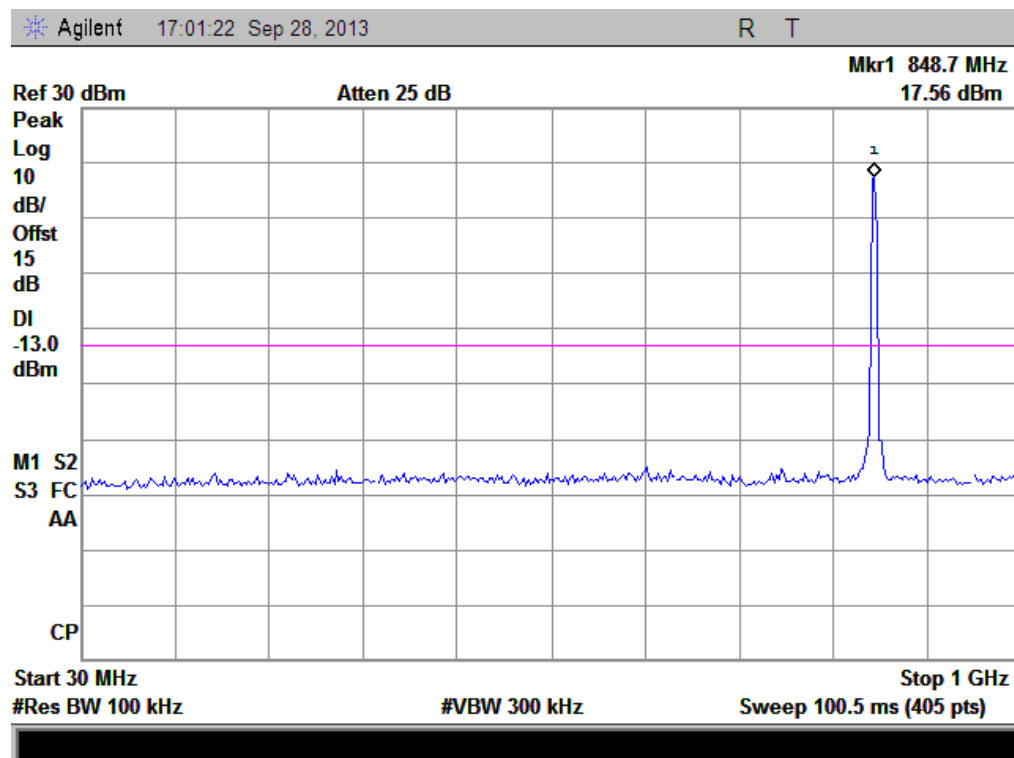


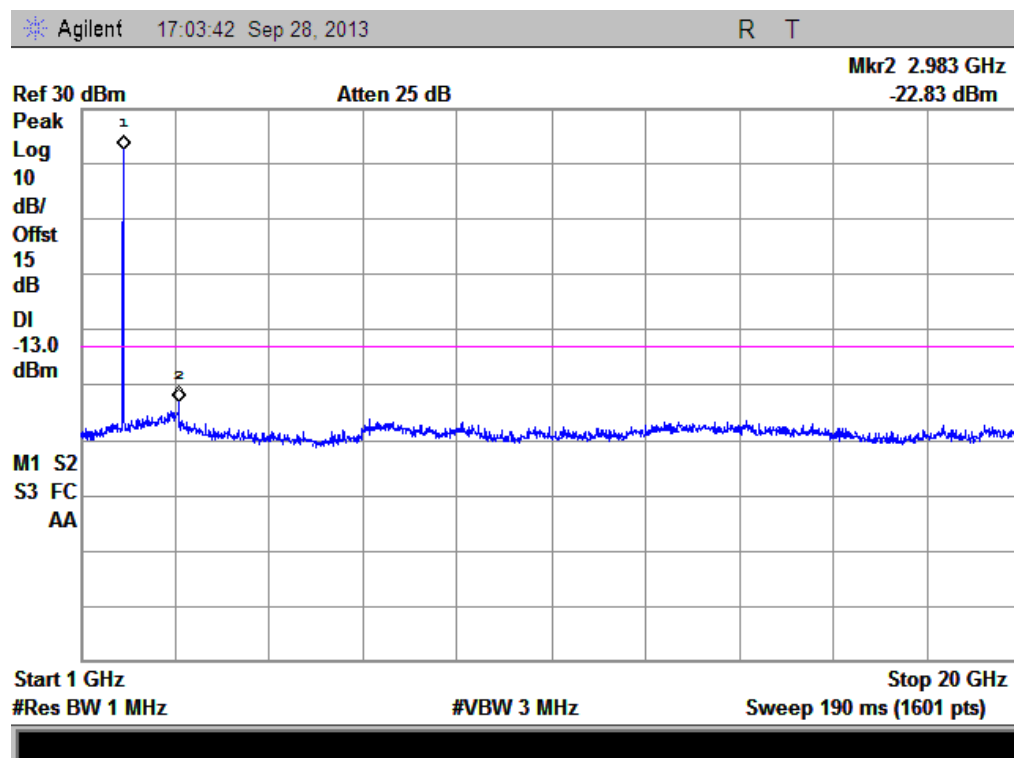
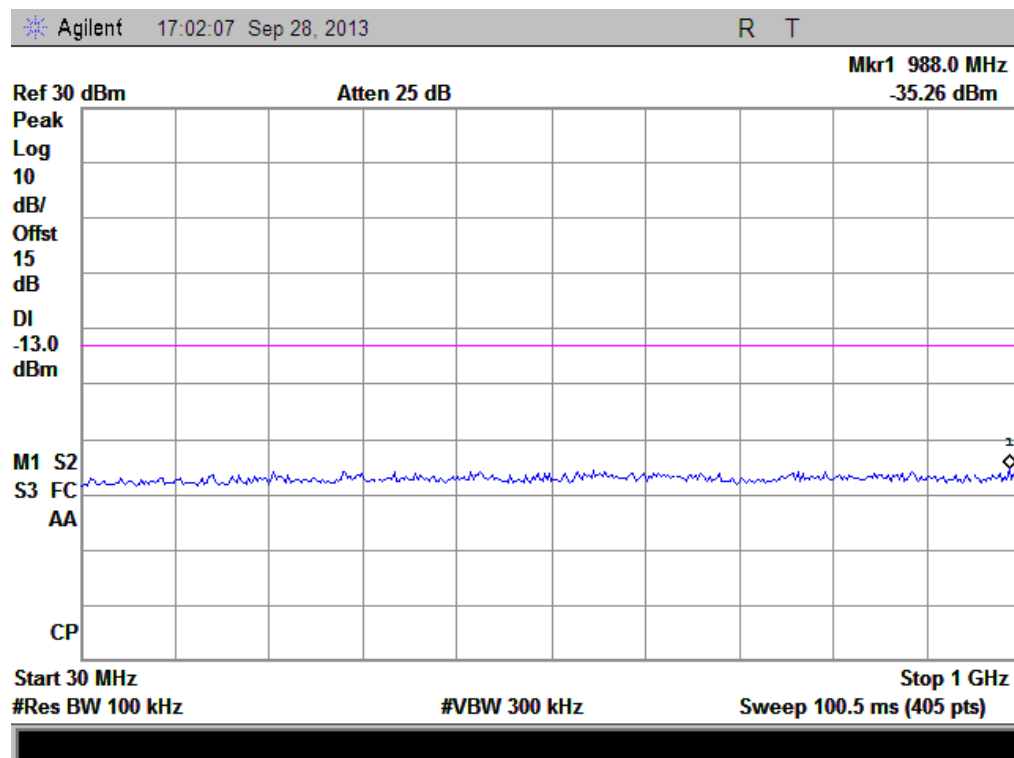


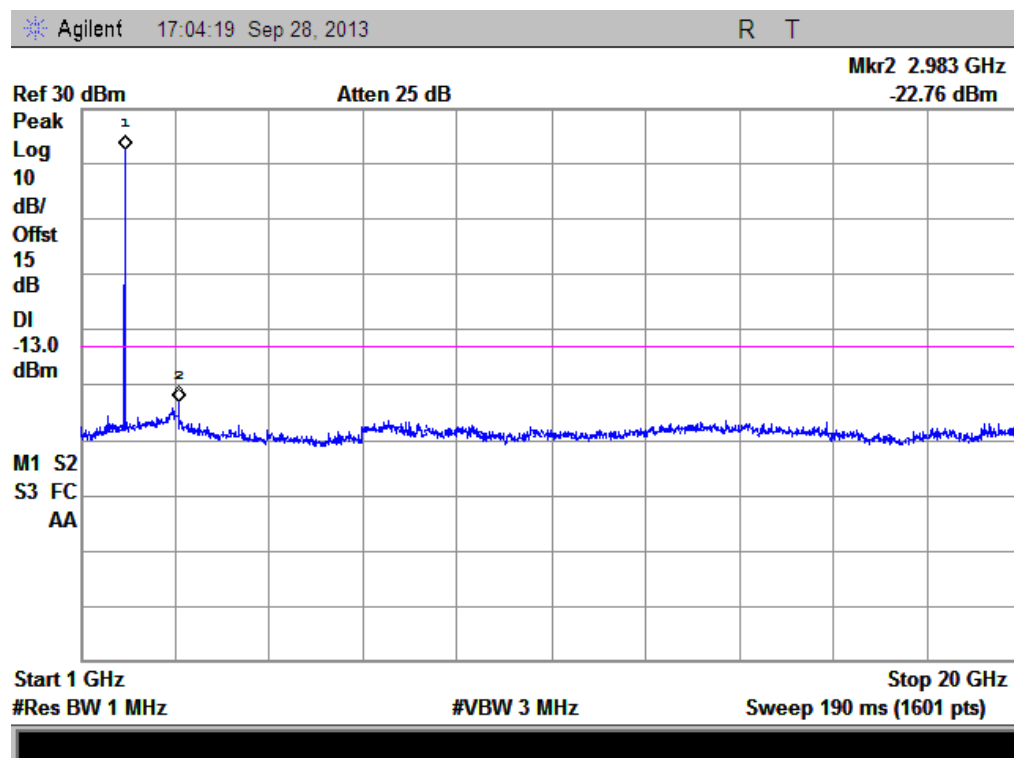
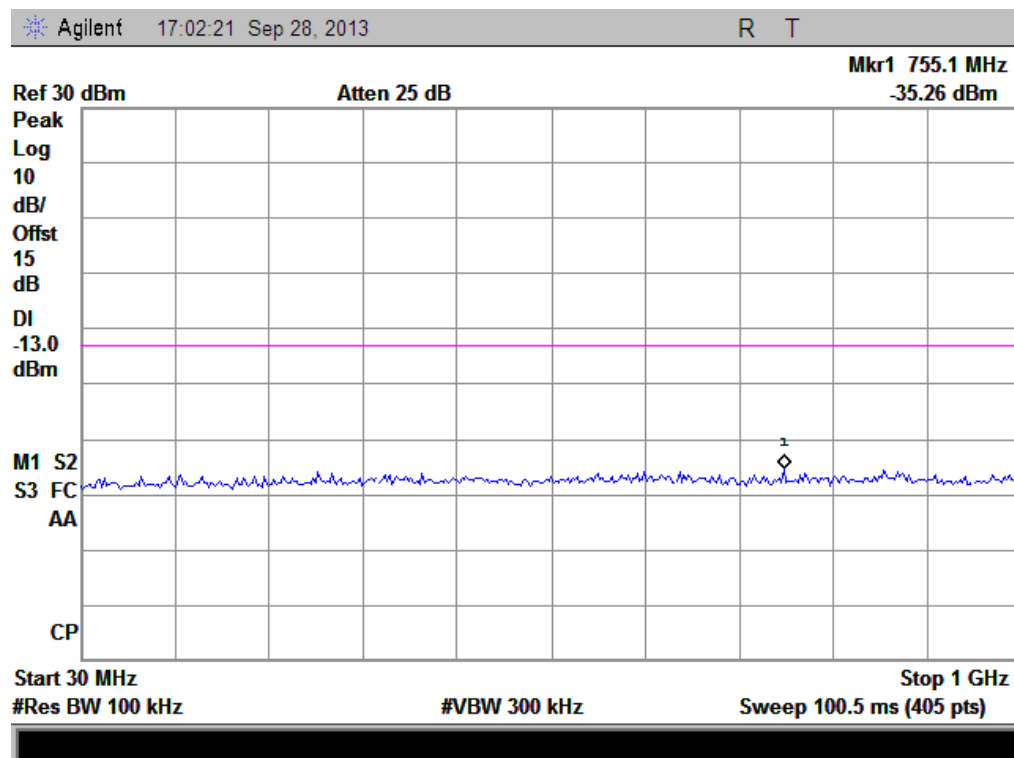
(Plot I 2: HSUPA 850MHz Channel = 4175, 30MHz to 1GHz)

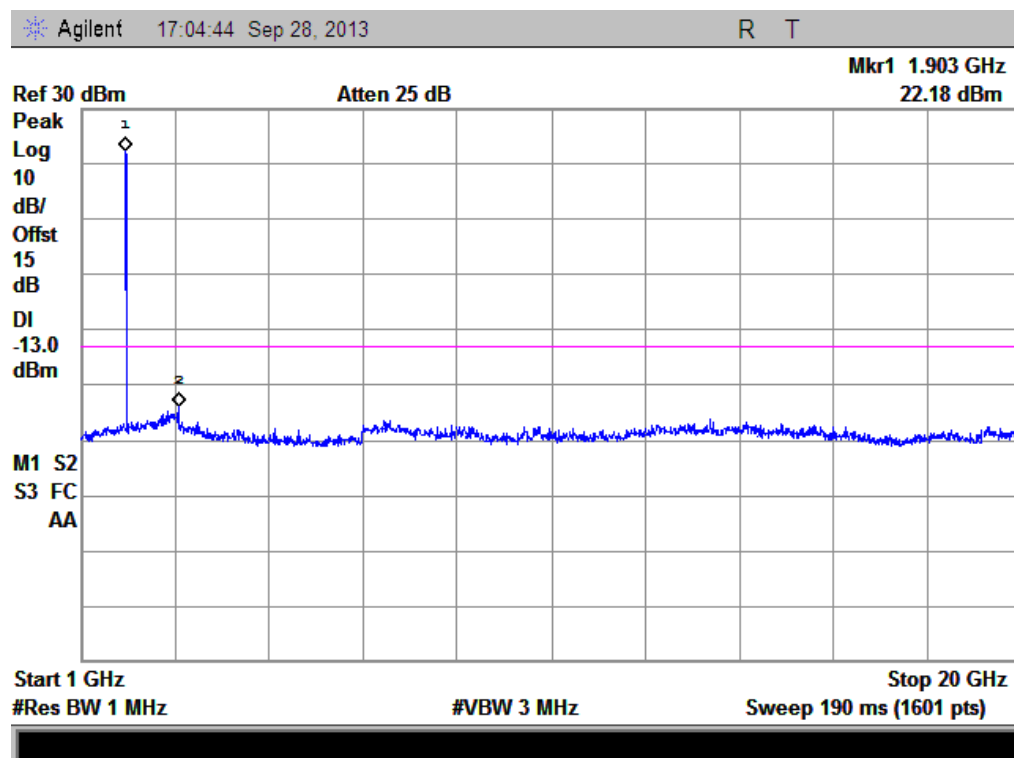
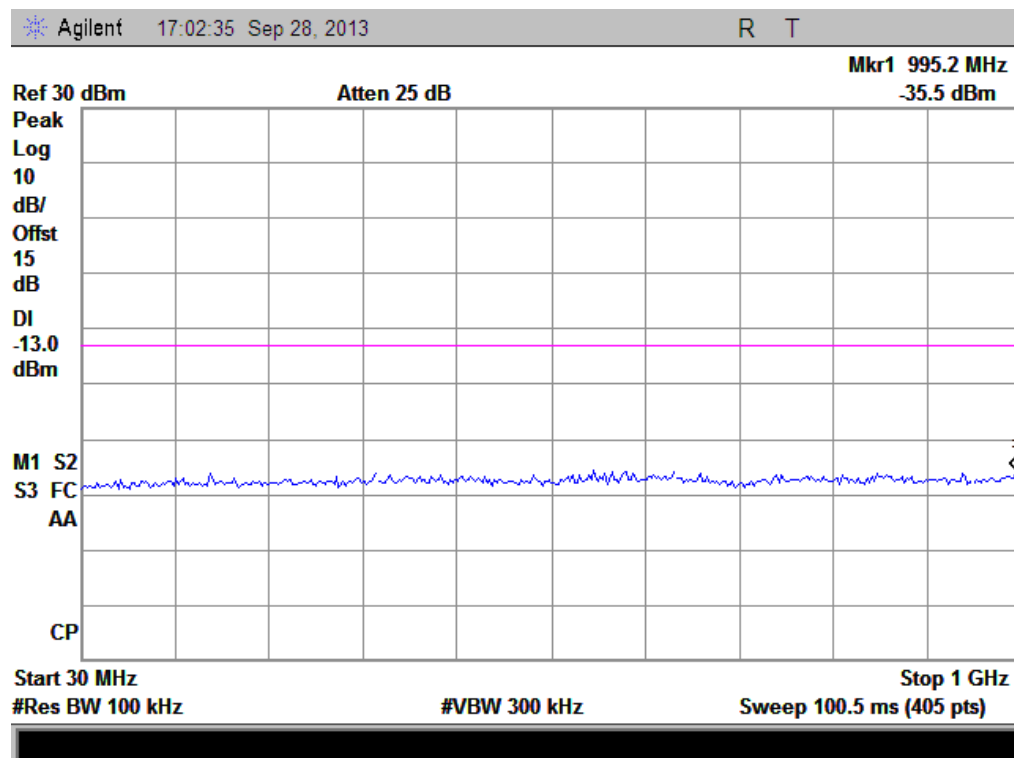


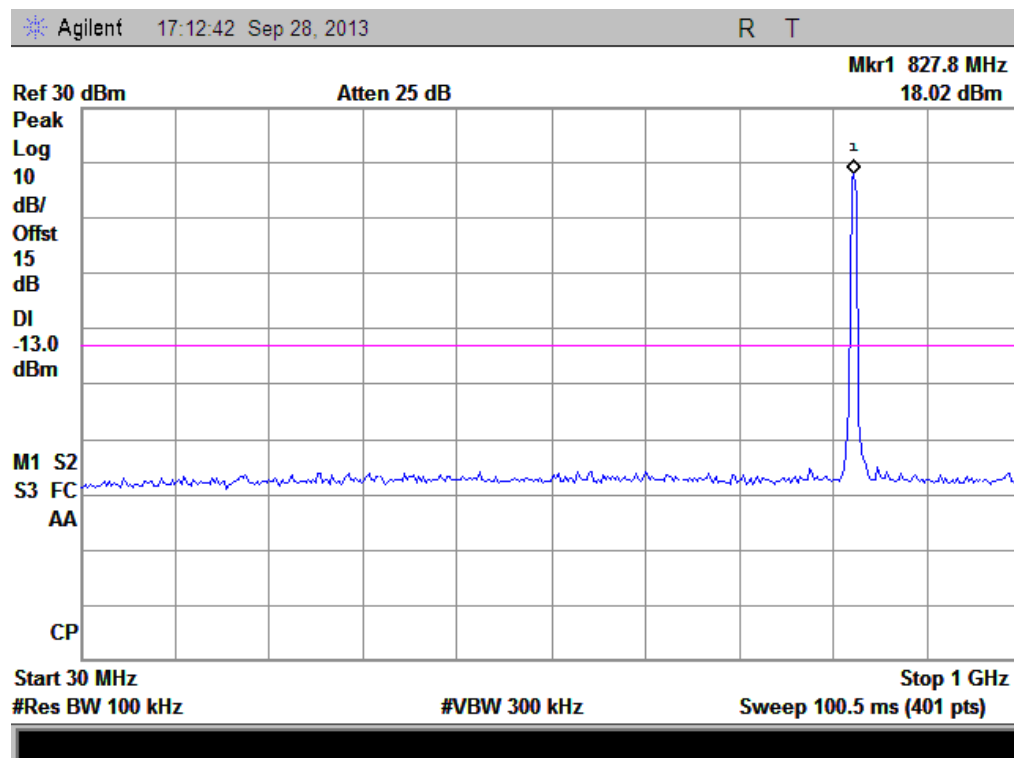
(Plot I2.1: HSUPA 850MHz Channel = 4175, 1GHz to 9GHz)



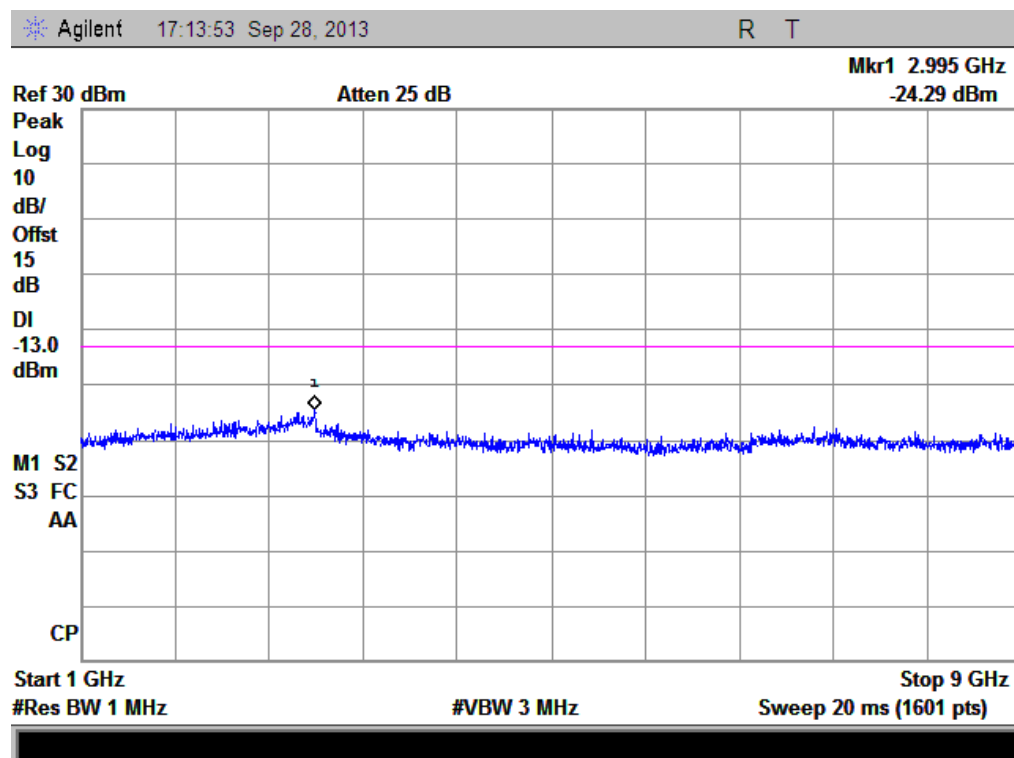




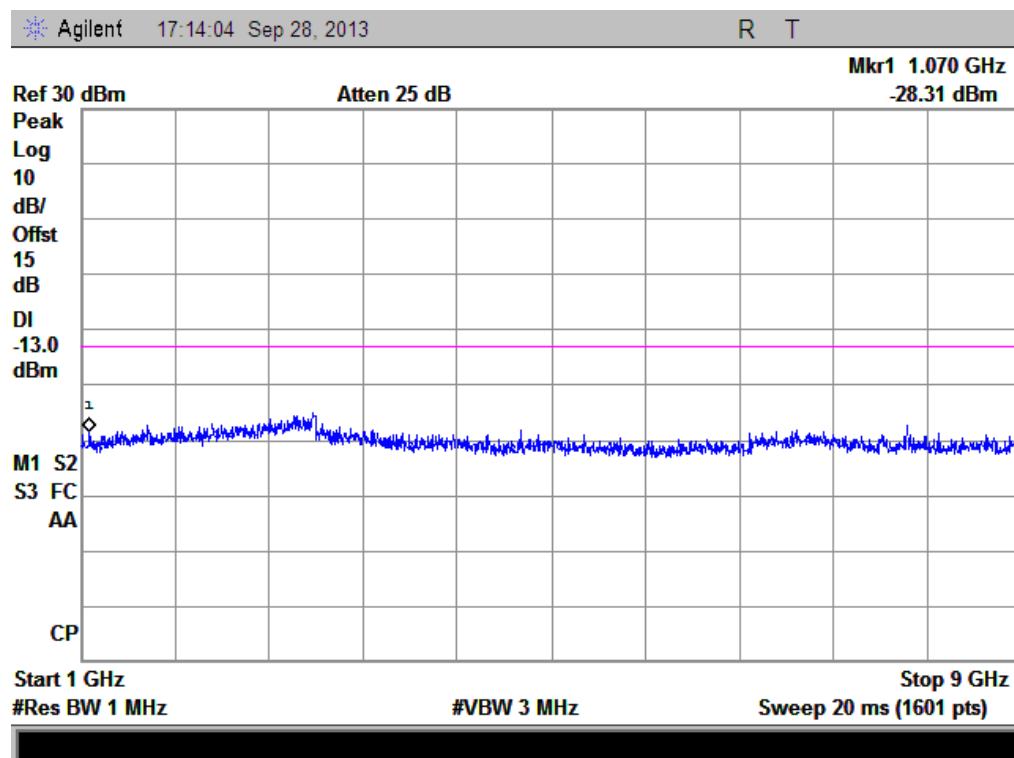
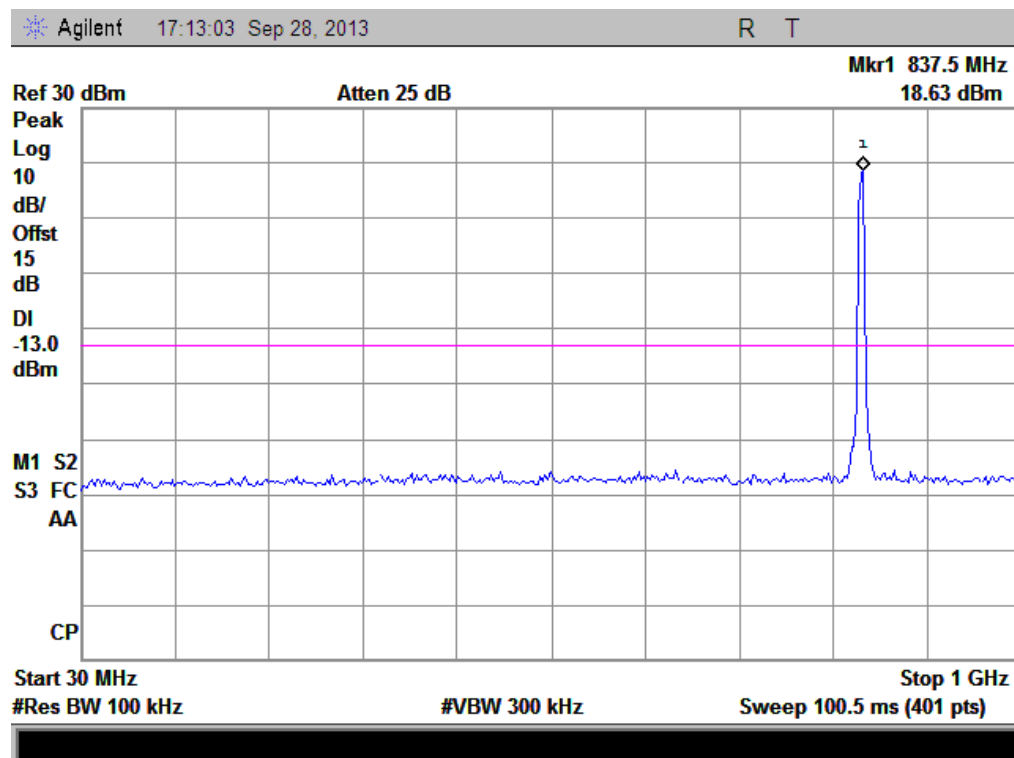


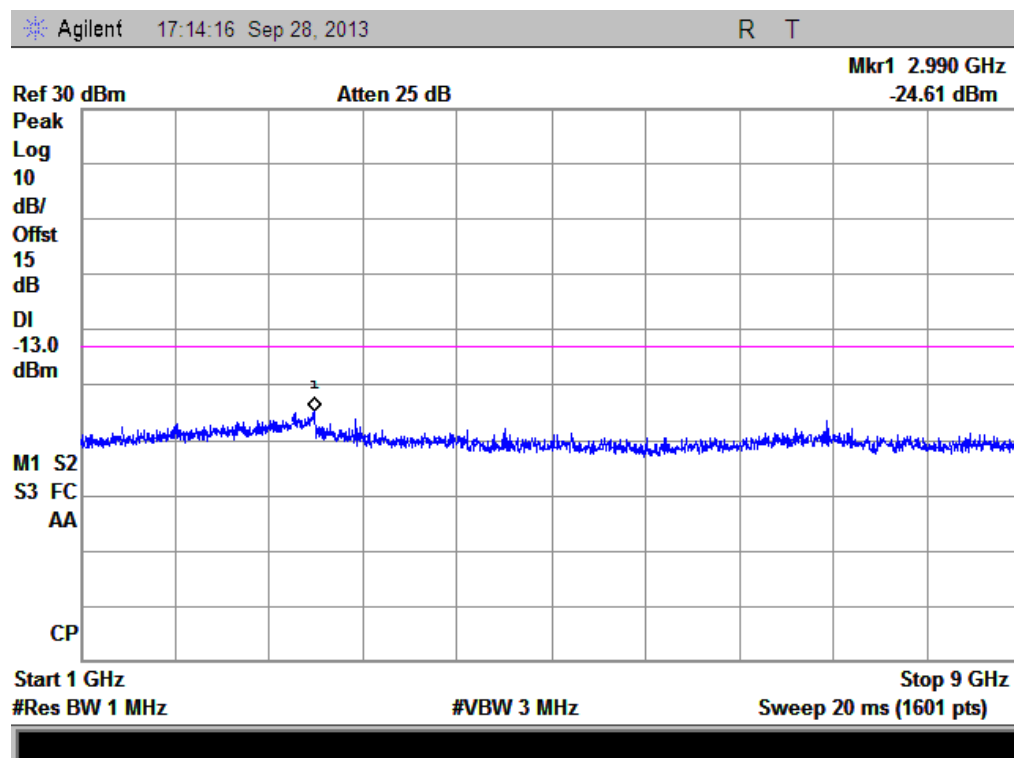
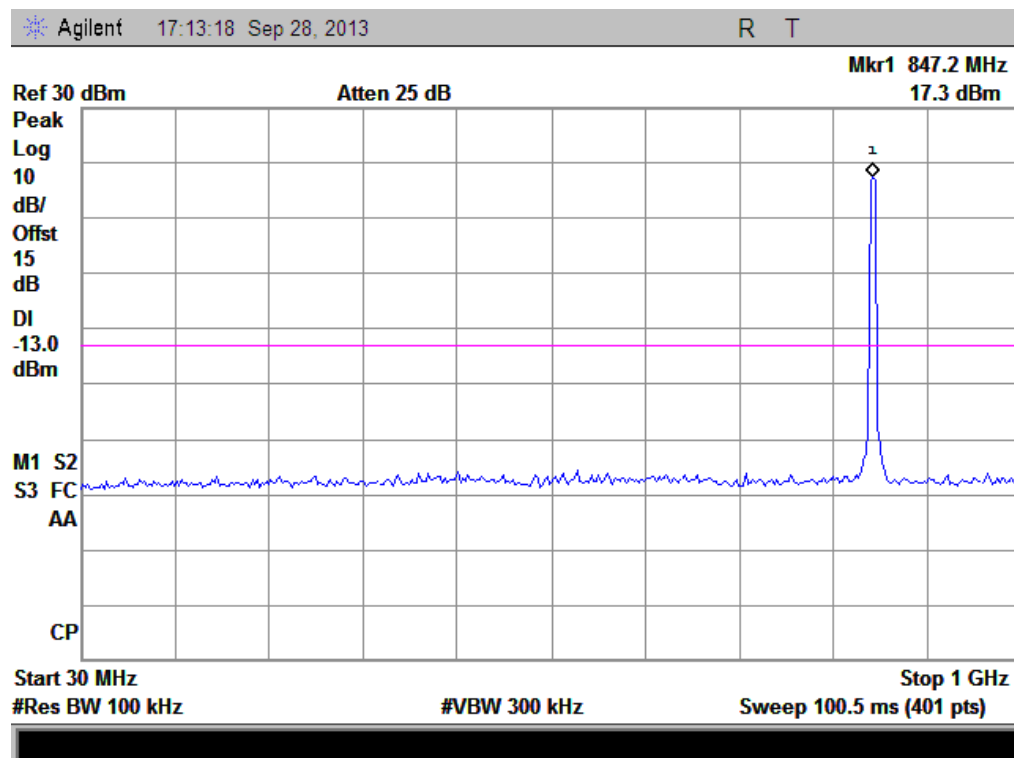


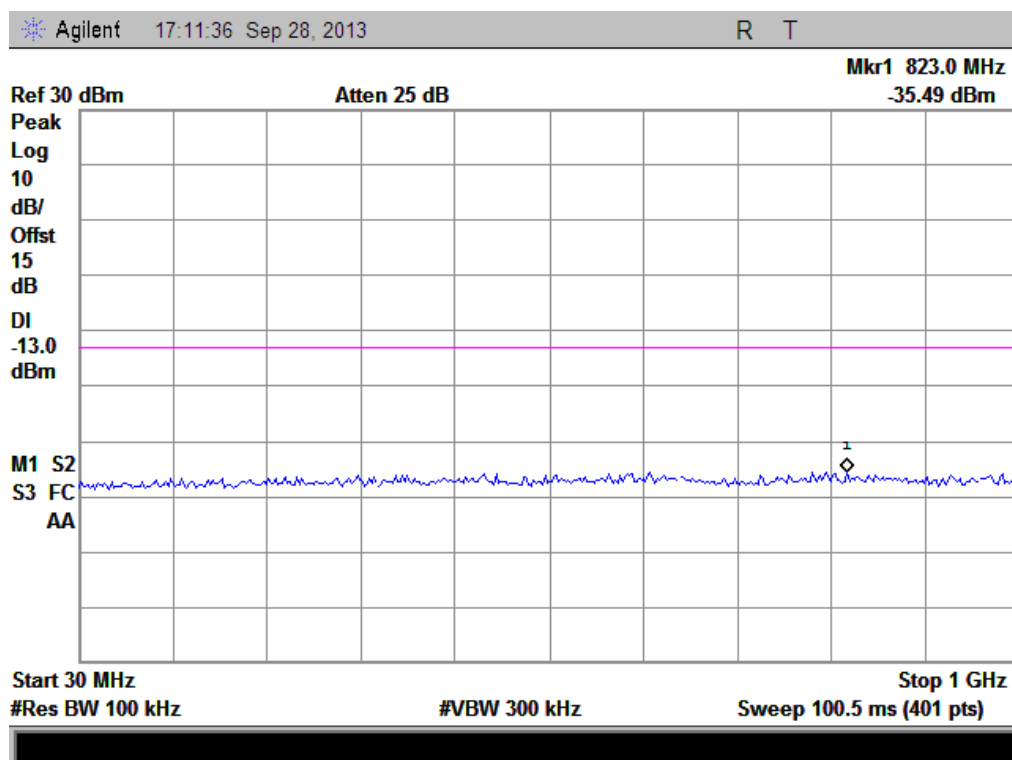
(Plot K 1: HSPA+ 850MHz Channel = 4132, 30MHz to 1GHz)



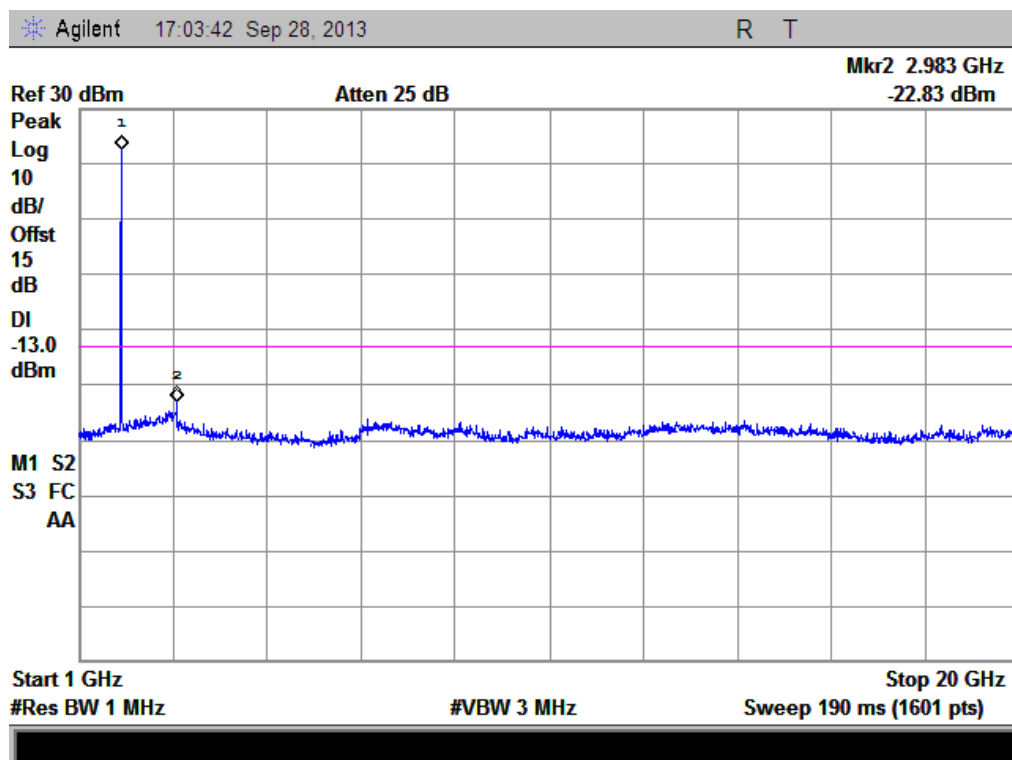
(Plot K1.1: HSPA+ 850MHz Channel = 4132, 1GHz to 9GHz)



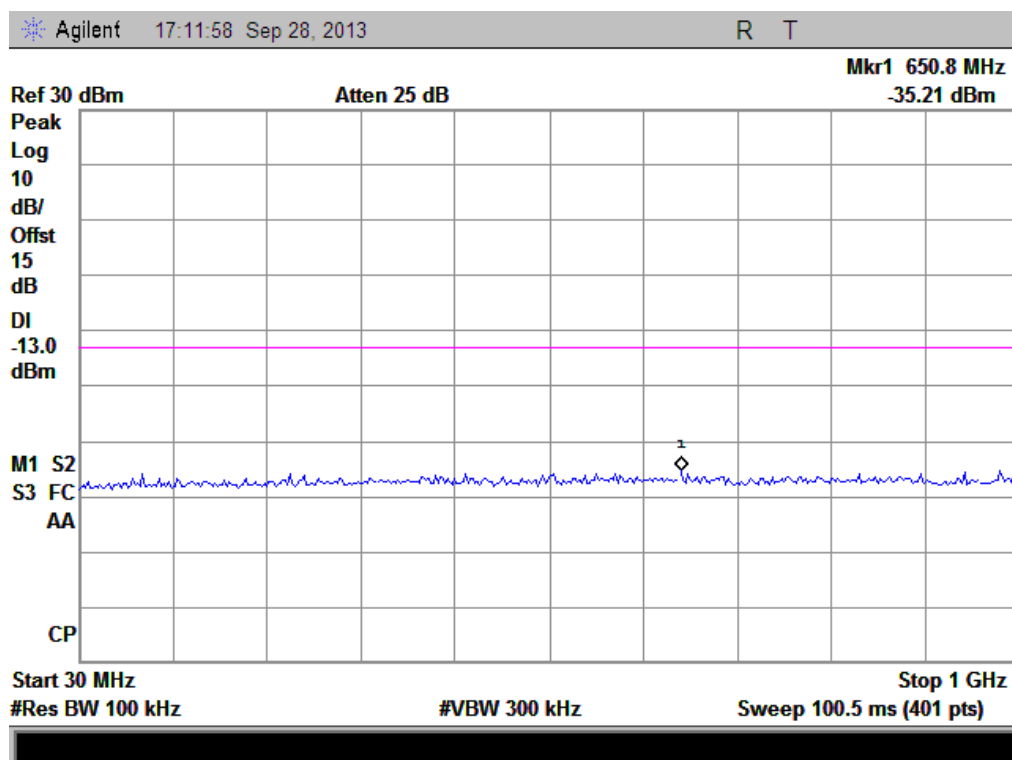




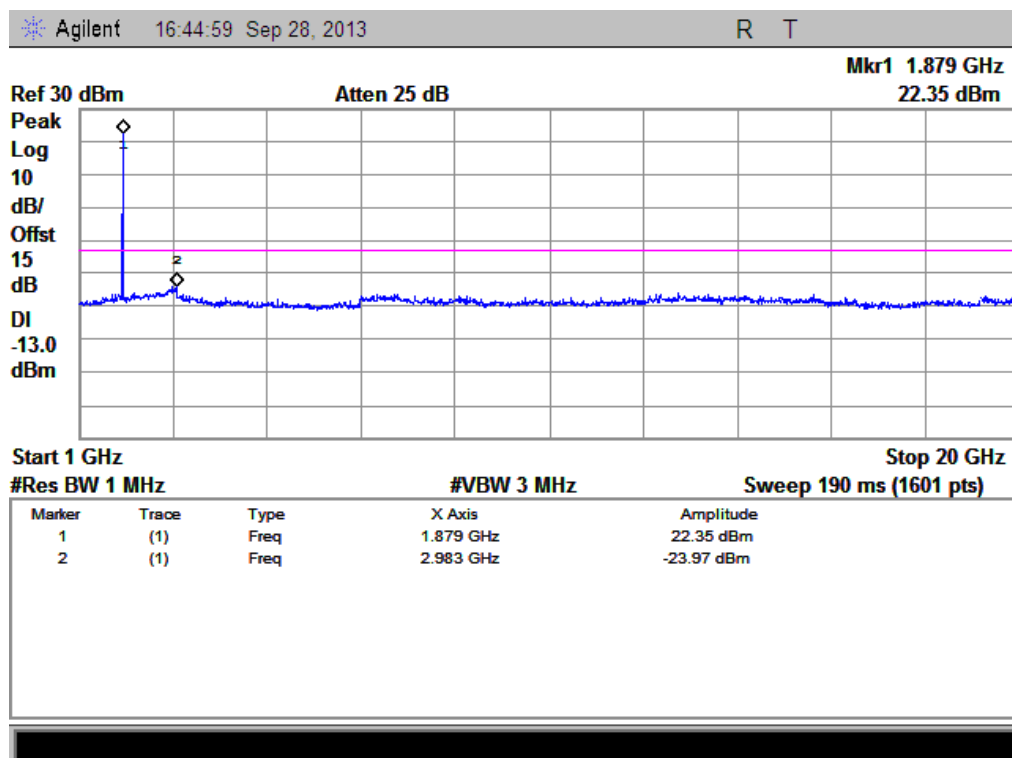
(Plot L 1: HSPA+1900MHz Channel = 9262, 30MHz to 1GHz)



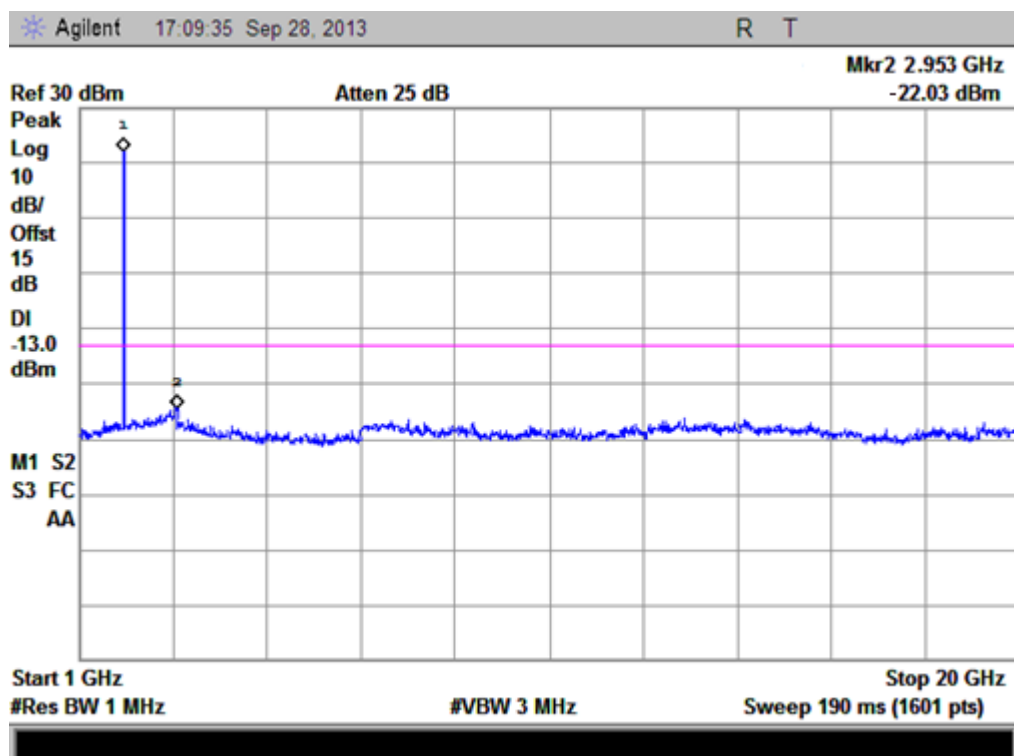
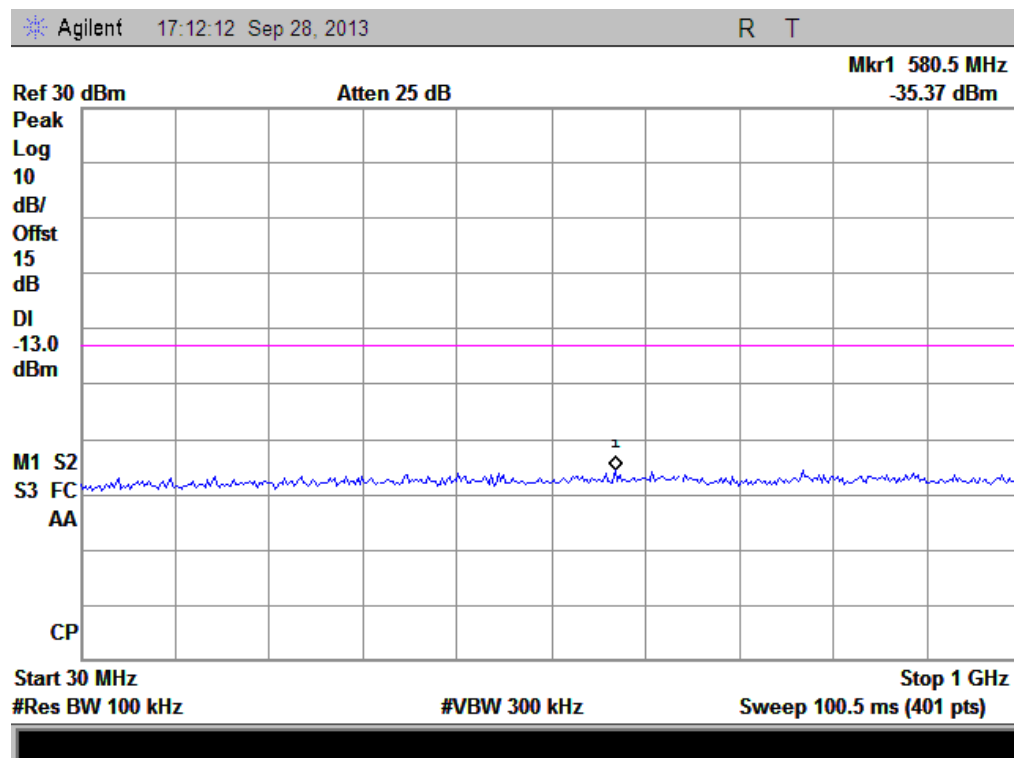
(Plot L1.1: HSPA+1900MHz Channel = 9262, 1GHz to 20GHz)

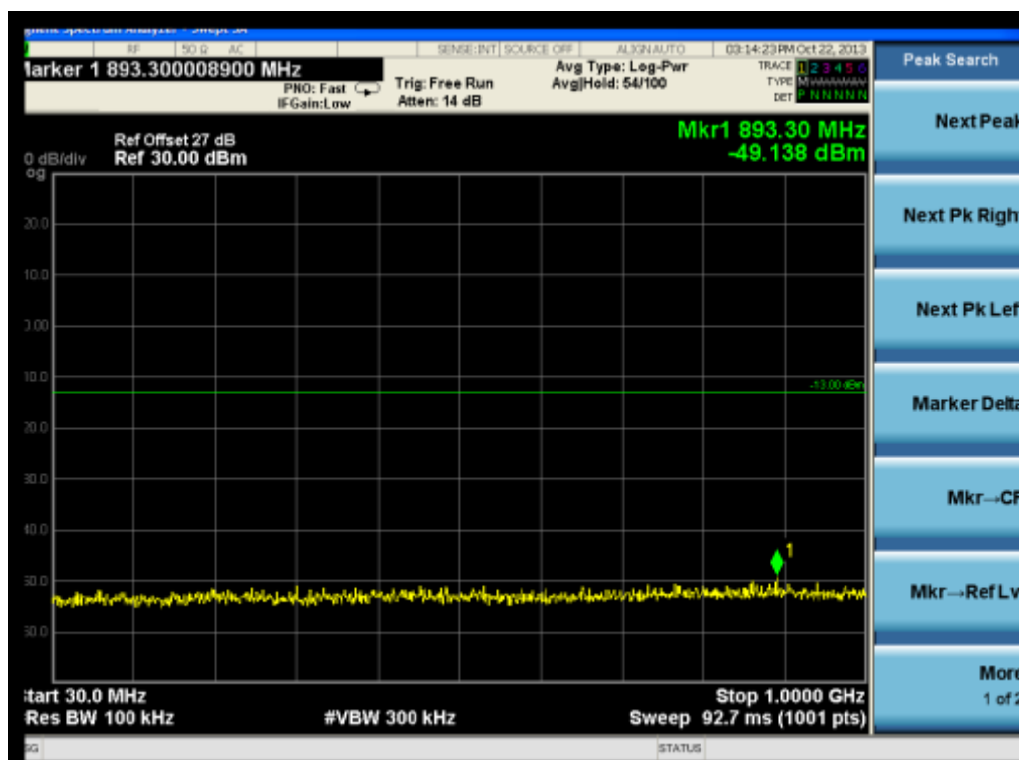


(Plot L 2: HSPA+1900MHz Channel = 9400, 30MHz to 1GHz)

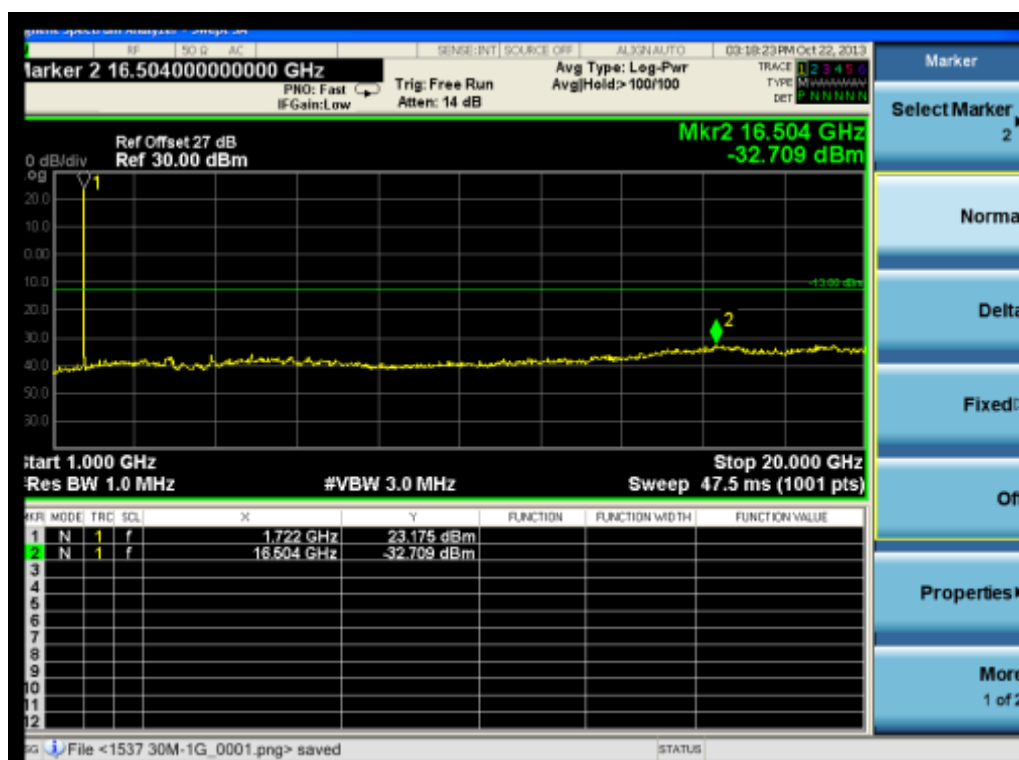


(Plot L2.1: HSPA+1900MHz Channel = 9400, 1GHz to 20GHz)

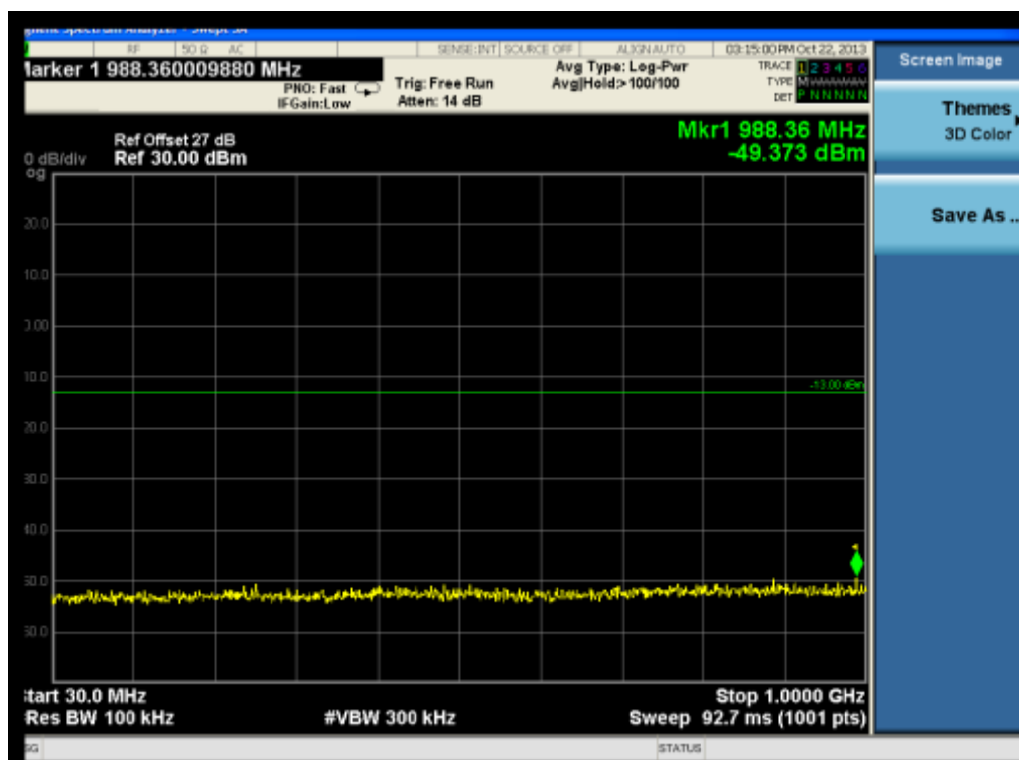




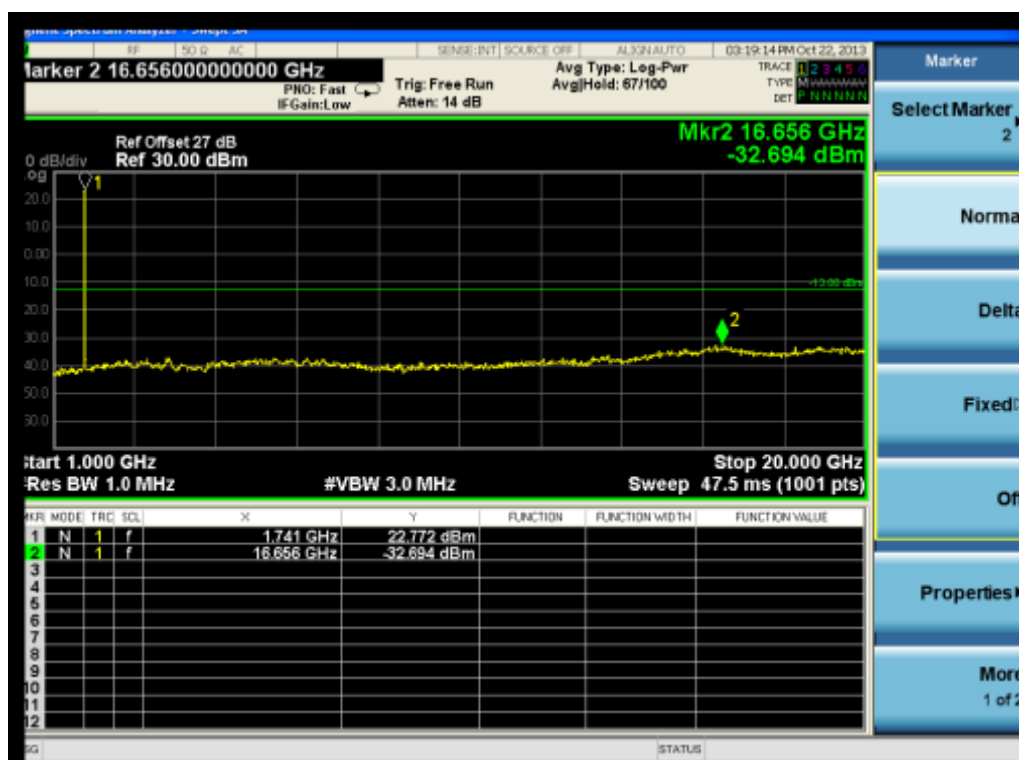
(Plot M1: WCDMA1700MHz Channel = 1312, 30MHz to 1GHz)



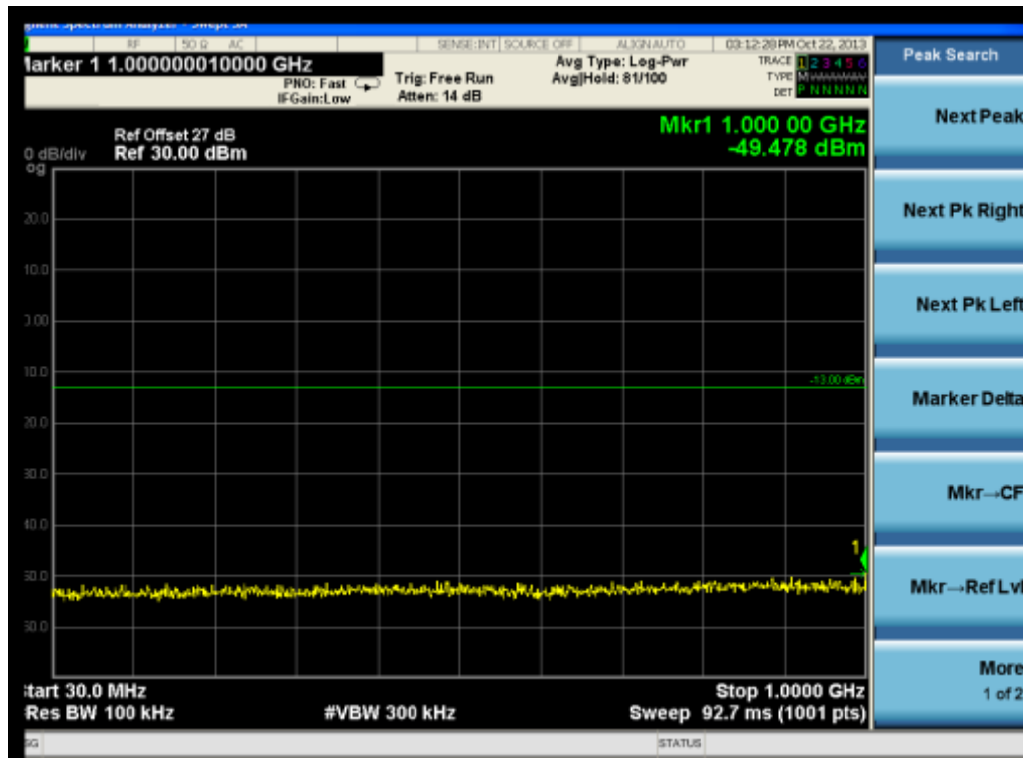
(Plot M 1.1: WCDMA1700MHz Channel = 1312, 1GHz to 20GHz)



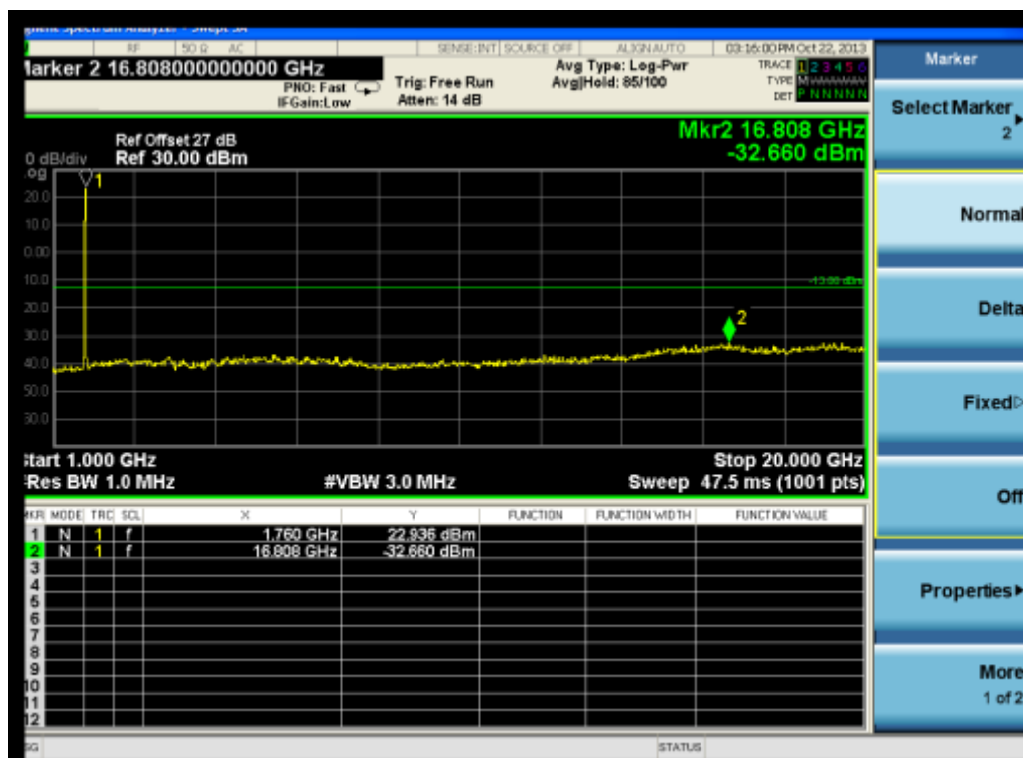
(Plot M2: WCDMA1700MHz Channel = 1412, 30MHz to 1GHz)



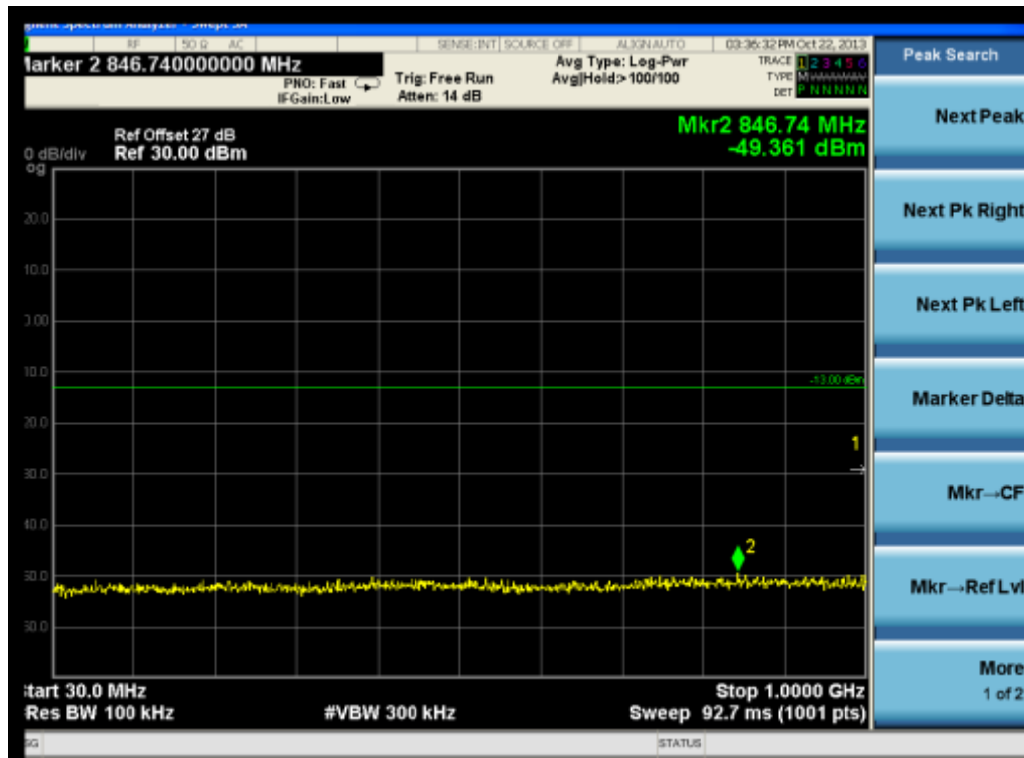
(Plot M2.1: WCDMA1700MHz Channel = 1412, 1GHz to 20GHz)



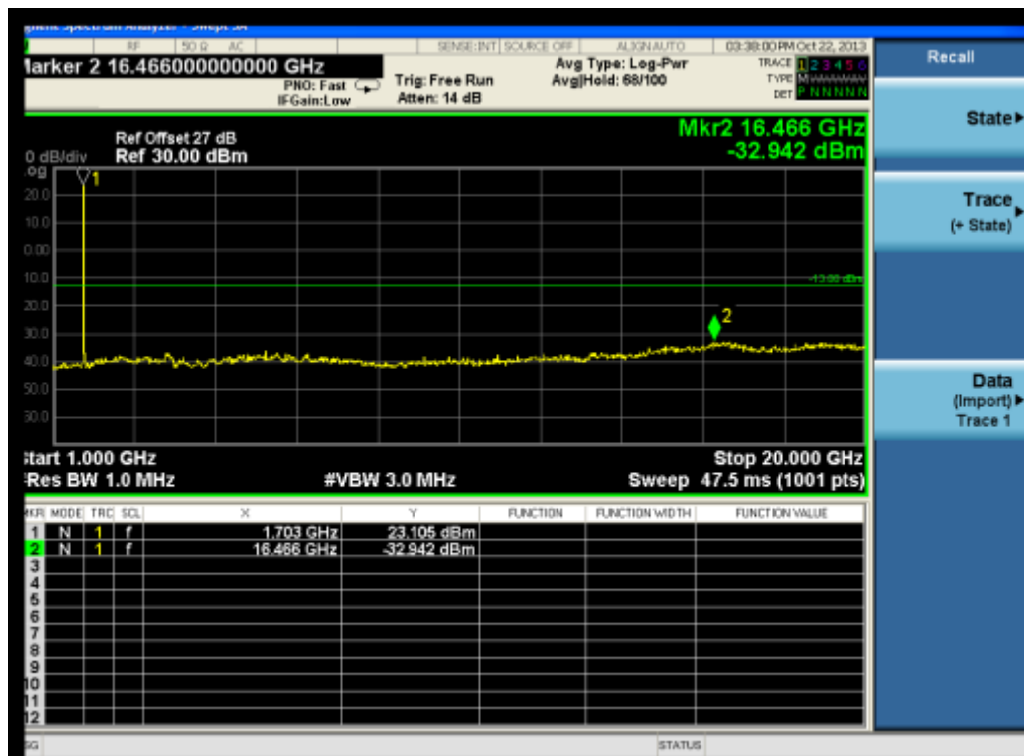
(Plot M3: WCDMA1700MHz Channel = 1513, 30MHz to 1GHz)



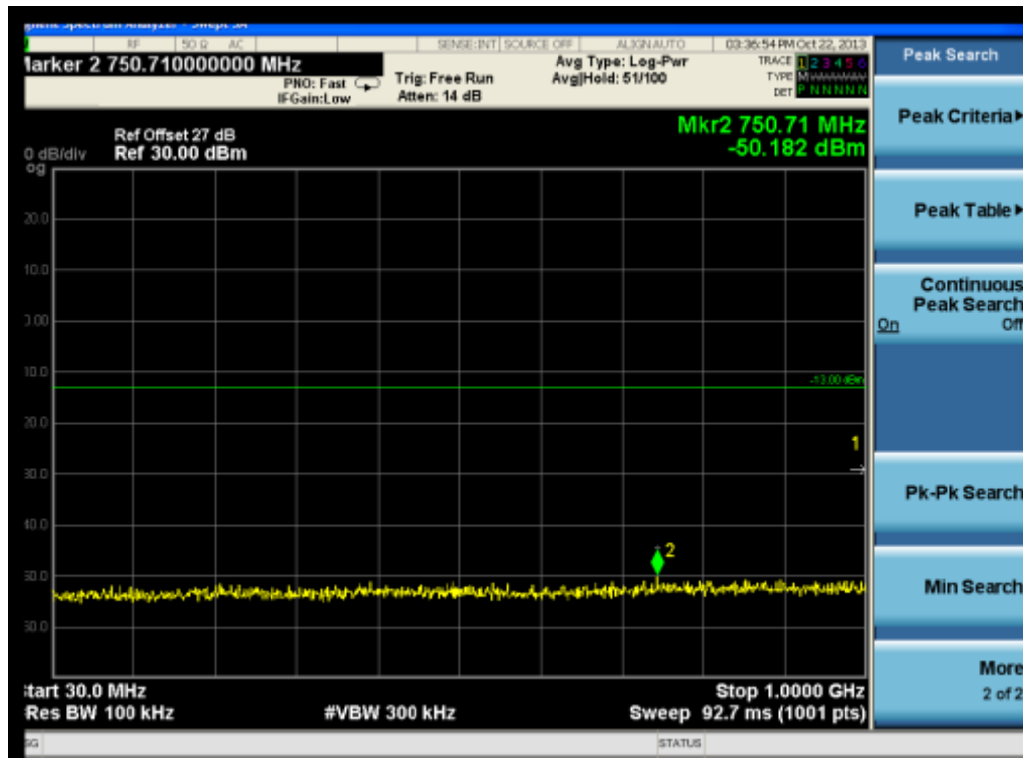
(Plot M3.1: WCDMA1700MHz Channel = 1513, 1GHz to 20GHz)



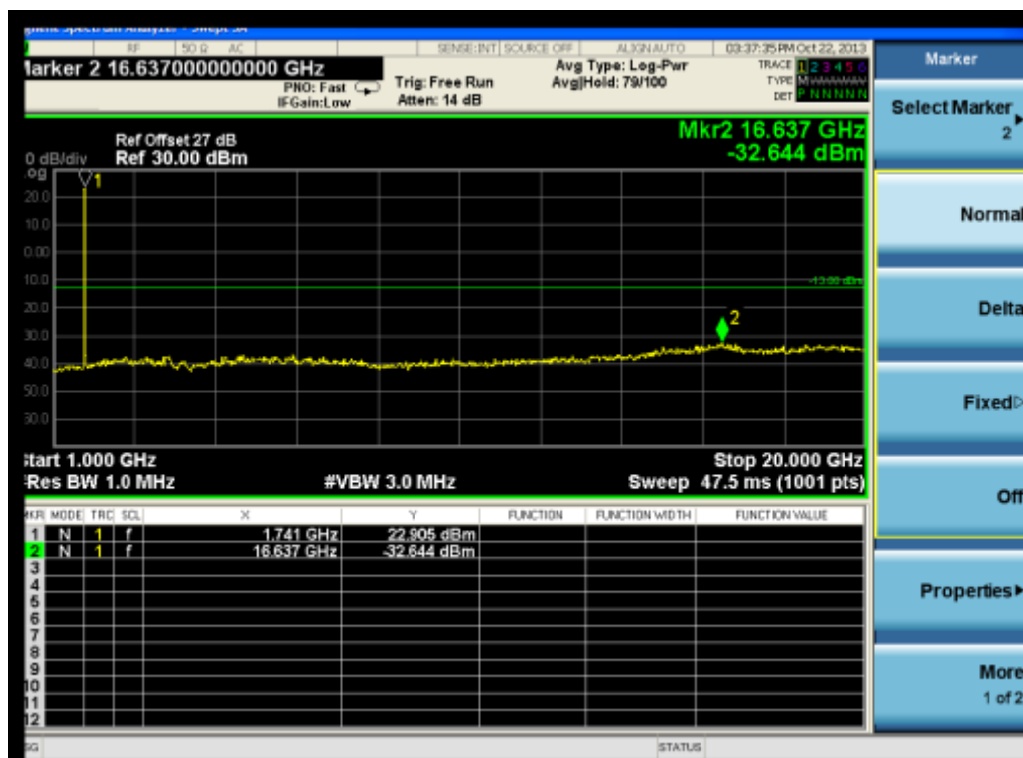
(Plot N1: HSDPA1700MHz Channel = 1312, 30MHz to 1GHz)



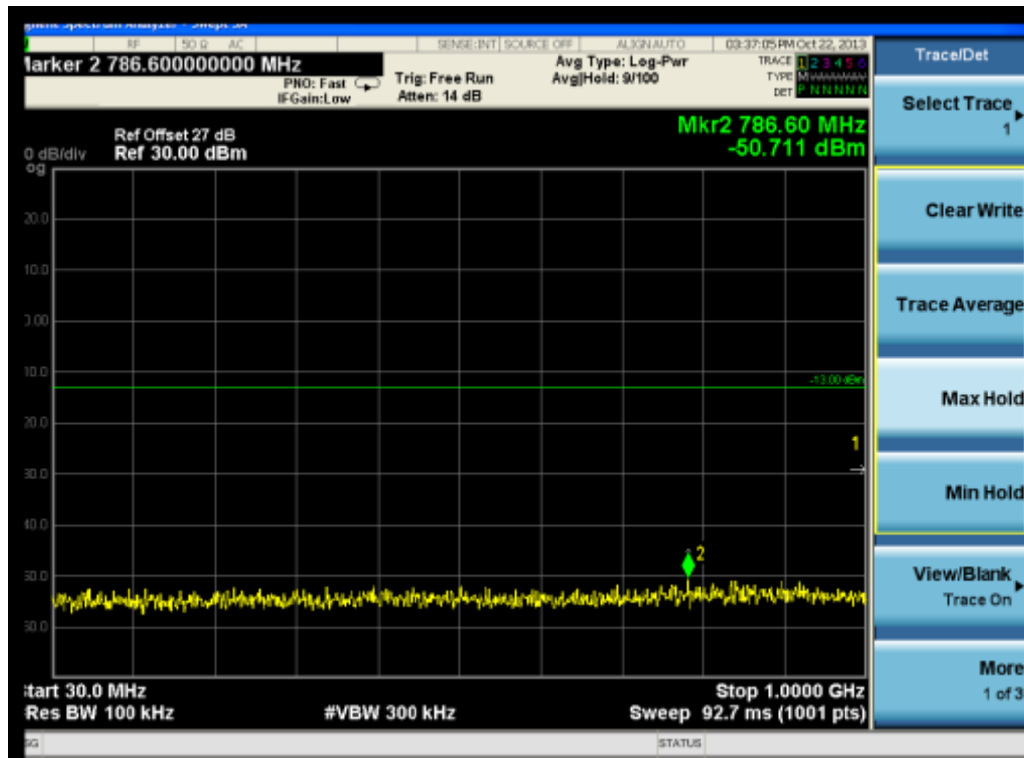
(Plot N1.1: HSDPA1700MHz Channel = 1312, 1GHz to 20GHz)



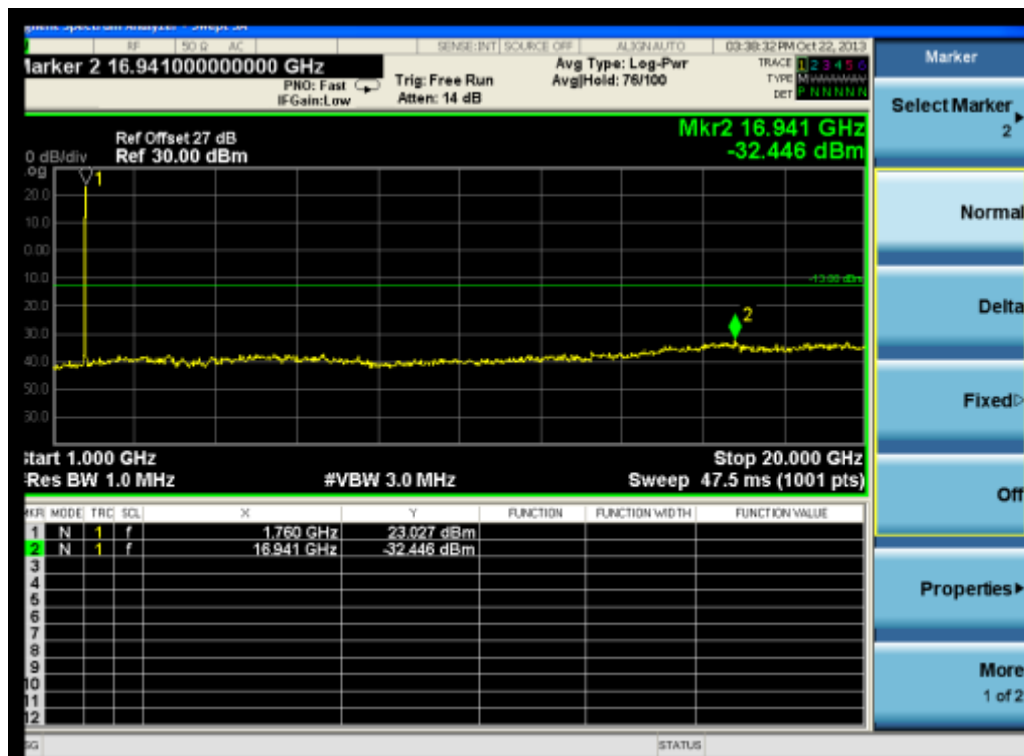
(Plot N2: HSDPA1700MHz Channel = 1412, 30MHz to 1GHz)



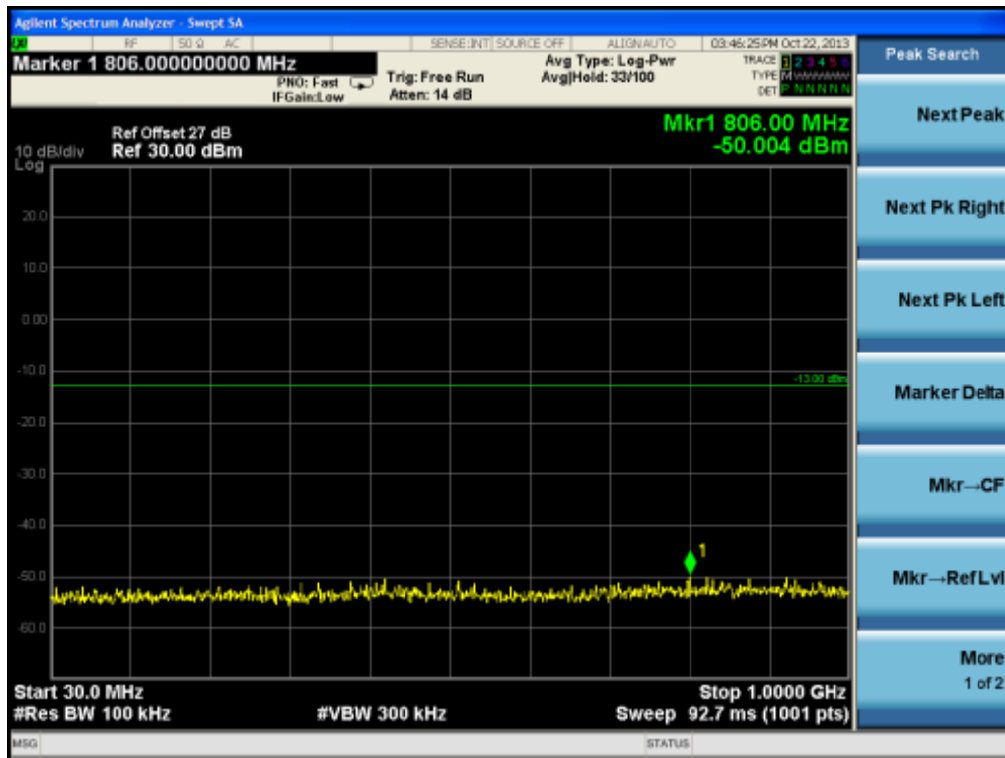
(Plot N2.1: HSDPA1700MHz Channel = 1412, 1GHz to 20GHz)



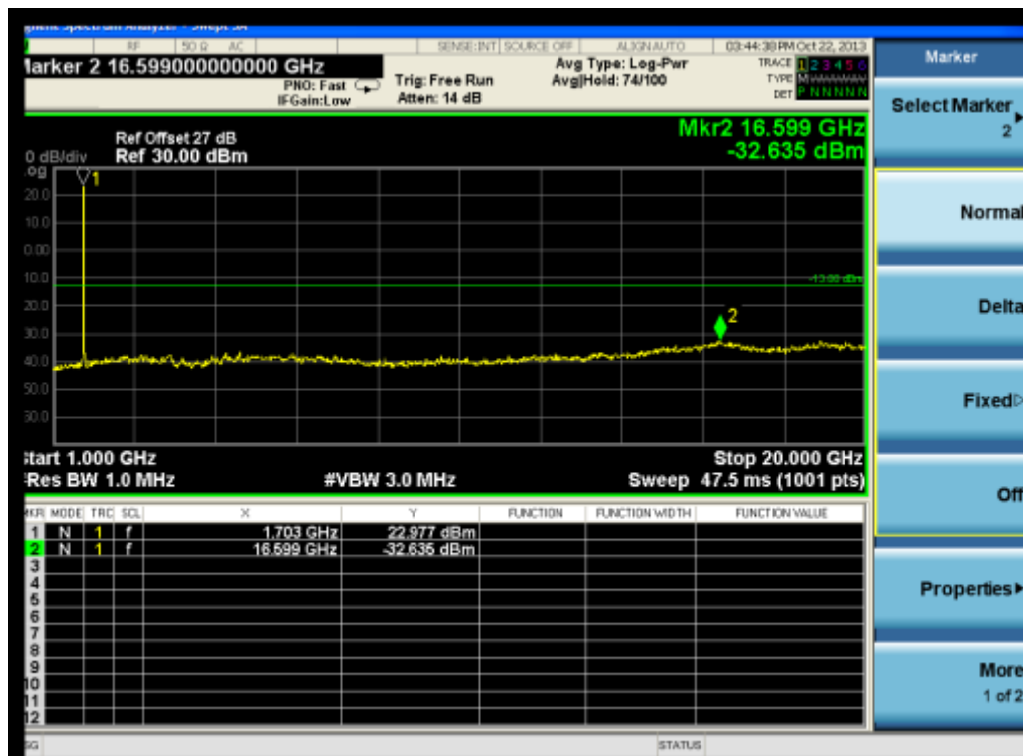
(Plot N3: HSDPA1700MHz Channel = 1513, 30MHz to 1GHz)



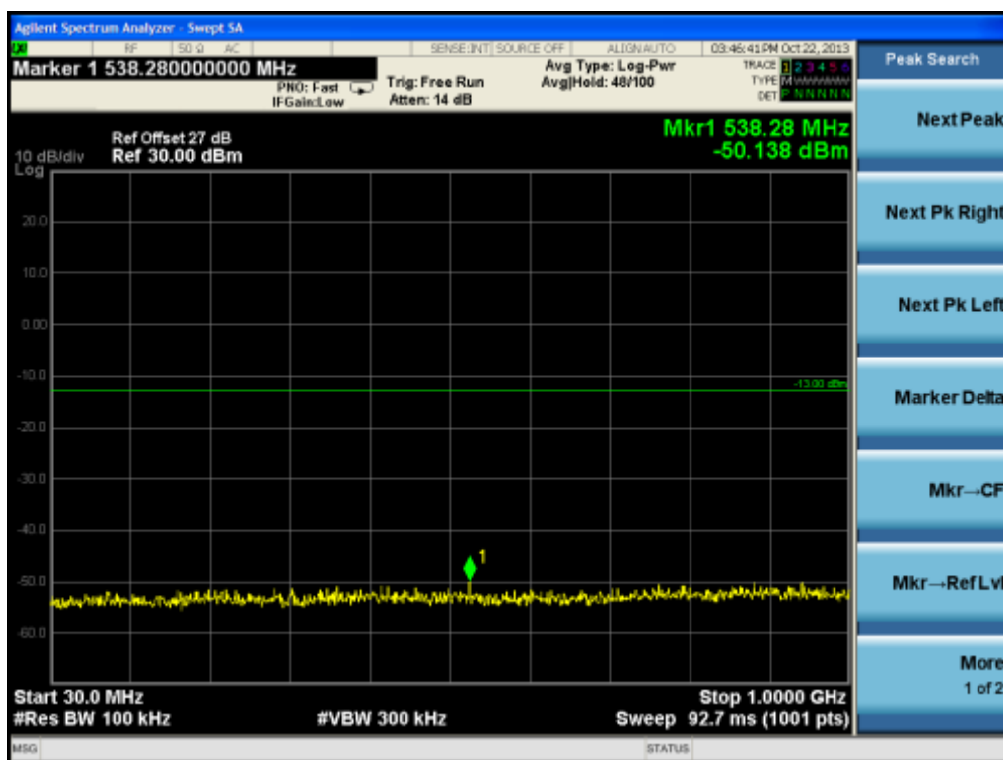
(Plot N3.1: HSDPA1700MHz Channel = 1513 1GHz to 20GHz)



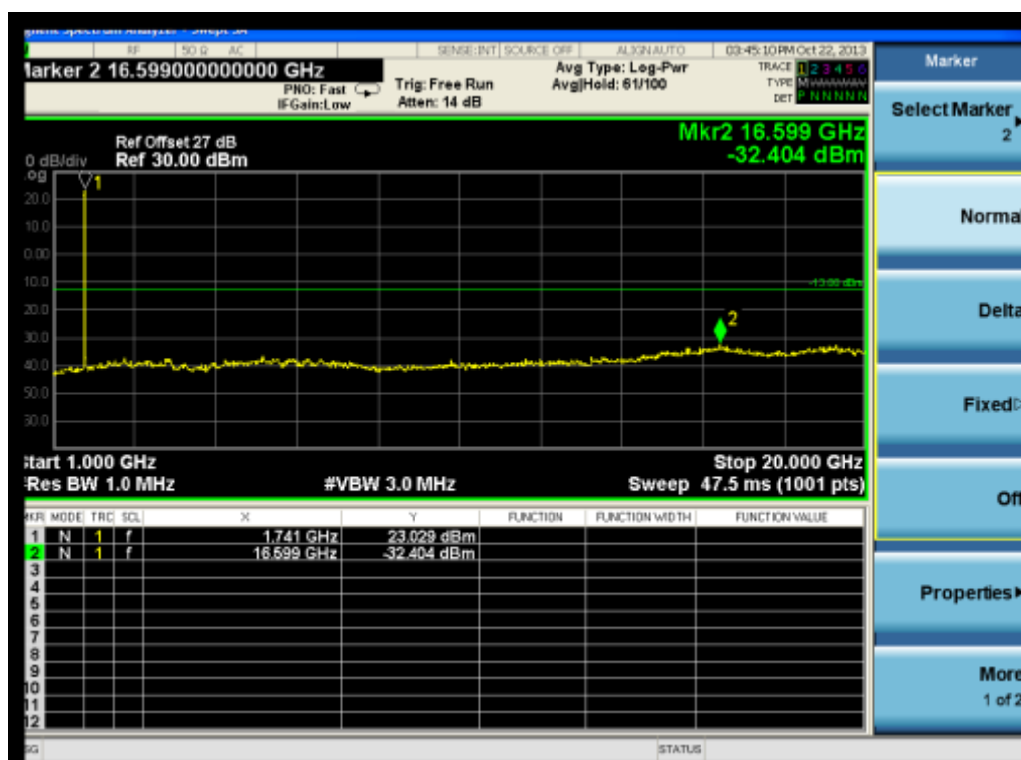
(Plot O1: HSUPA 1700MHz Channel = 1312, 30MHz to 1GHz)



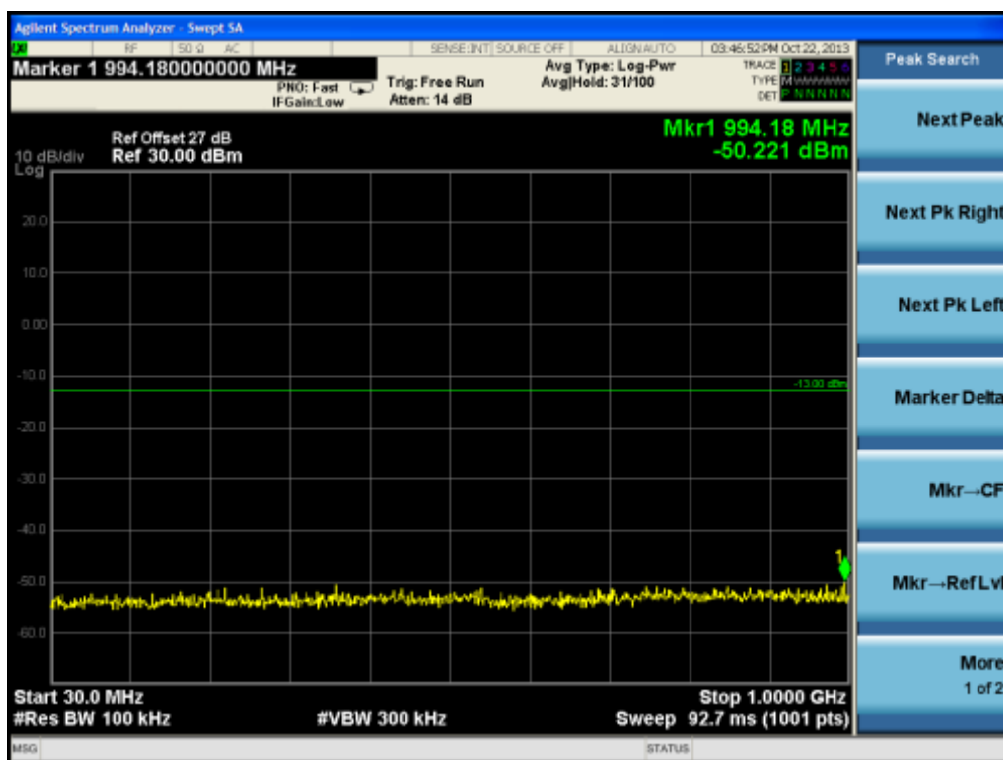
(Plot O1.1: HSUPA 1700MHz Channel = 1312, 1GHz to 20GHz)



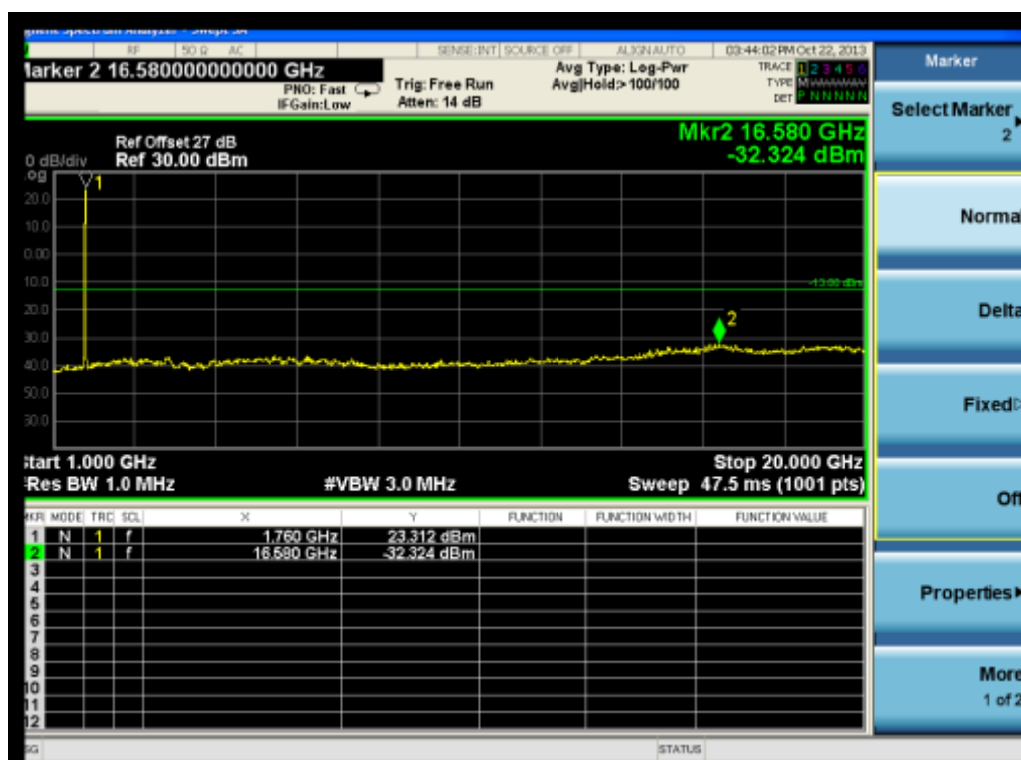
(Plot O2: HSUPA 1700MHz Channel = 1412, 30MHz to 1GHz)



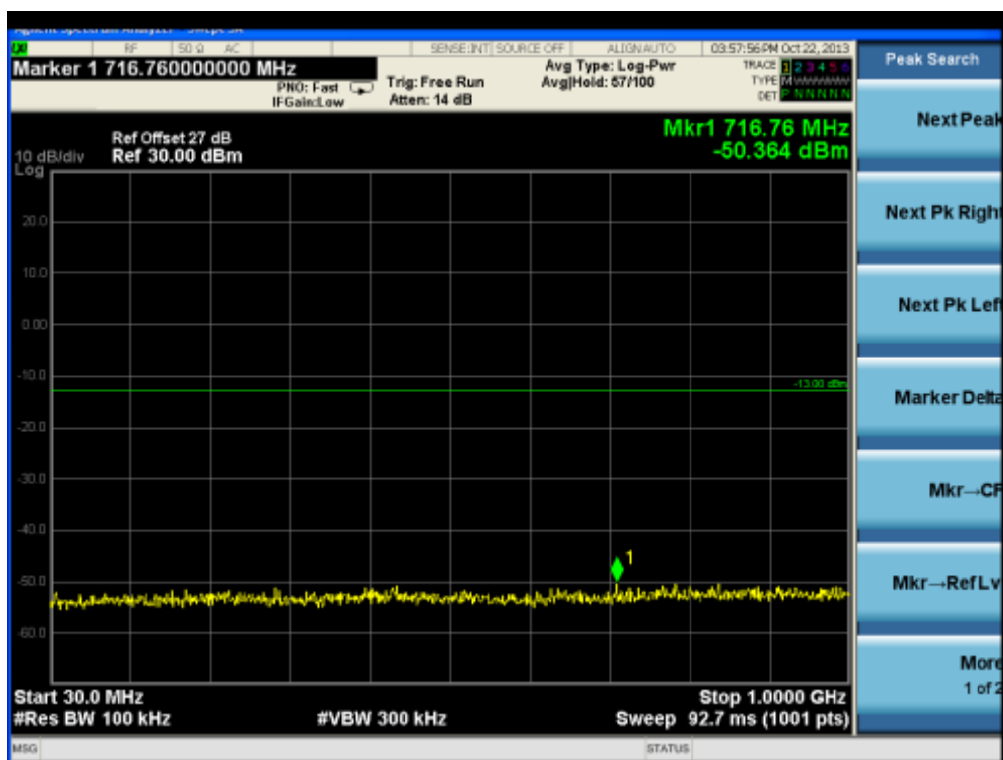
(Plot O2.1: HSUPA 1700MHz Channel = 1412, 1GHz to 20GHz)



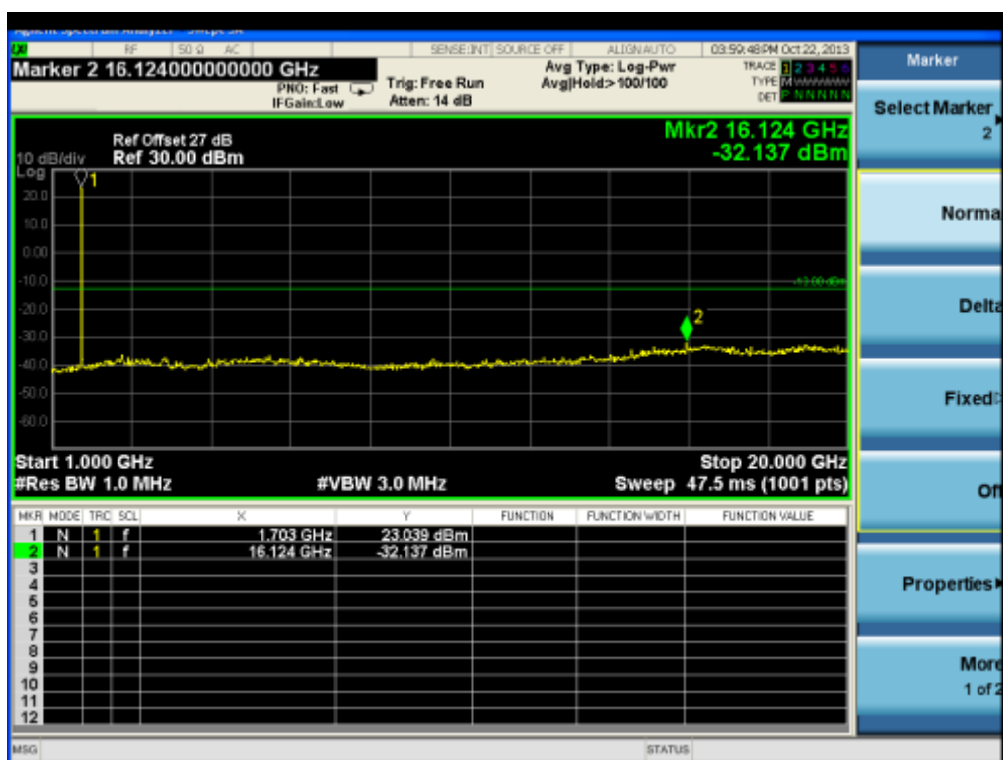
(Plot O3: HSUPA1700MHz Channel = 1513, 30MHz to 1GHz)



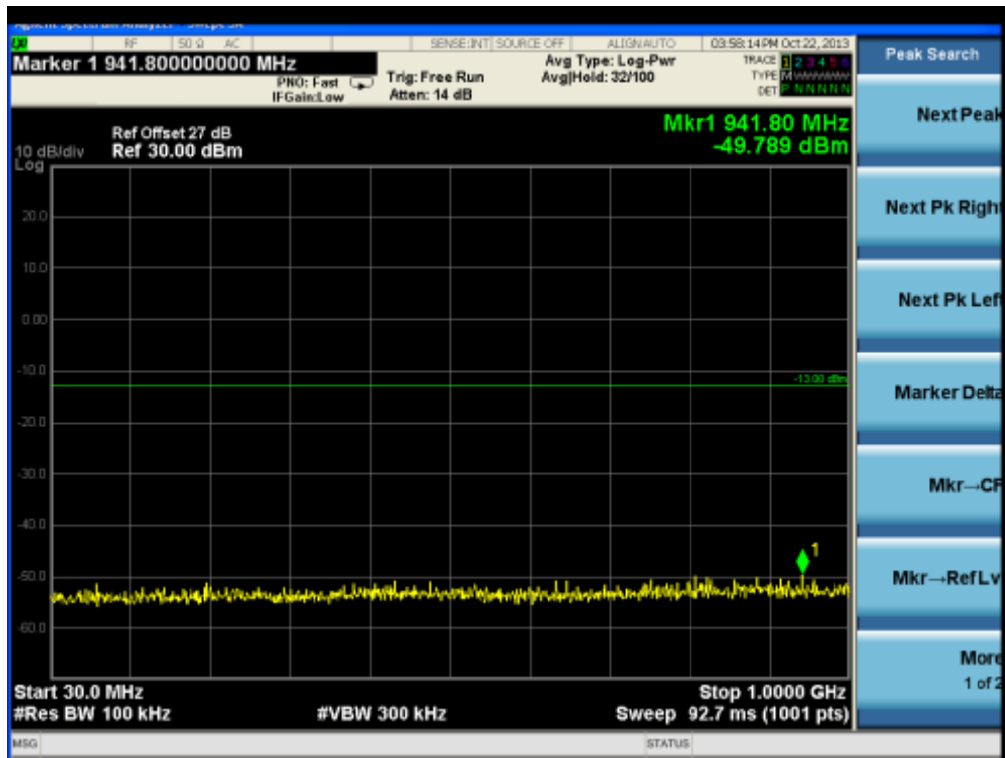
(Plot O3.1: HSUPA1700MHz Channel = 1513, 1GHz to 20GHz)



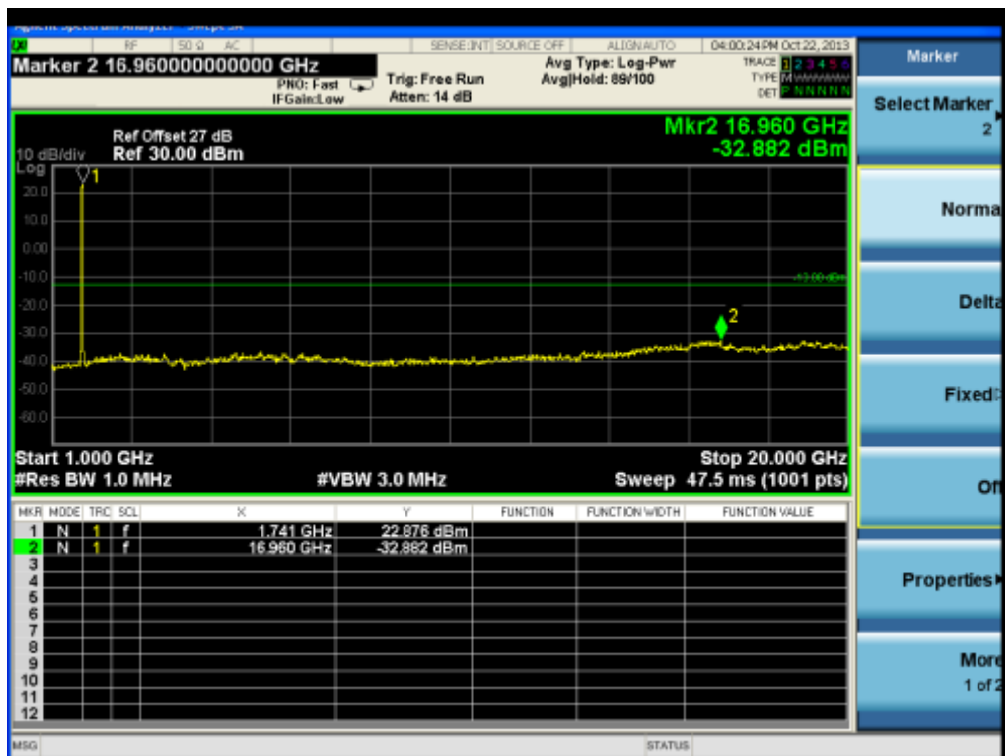
(Plot P1: HSPA+1700MHz Channel = 1312, 30MHz to 1GHz)



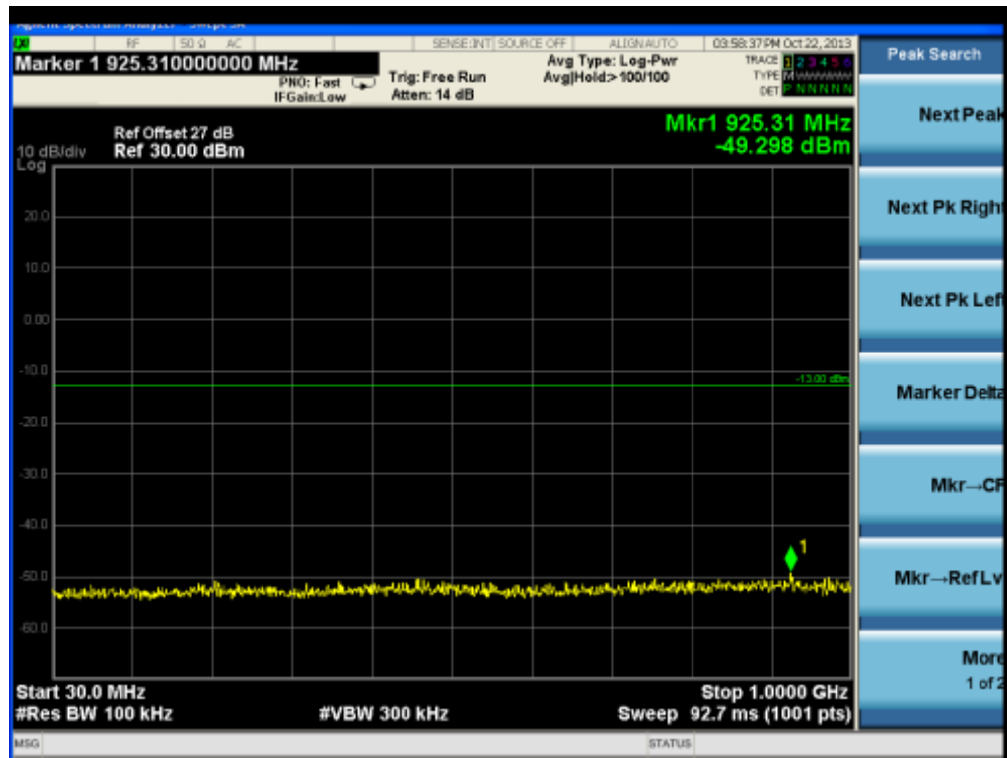
(Plot P1.1: HSPA+1700MHz Channel = 1312, 1GHz to 20GHz)



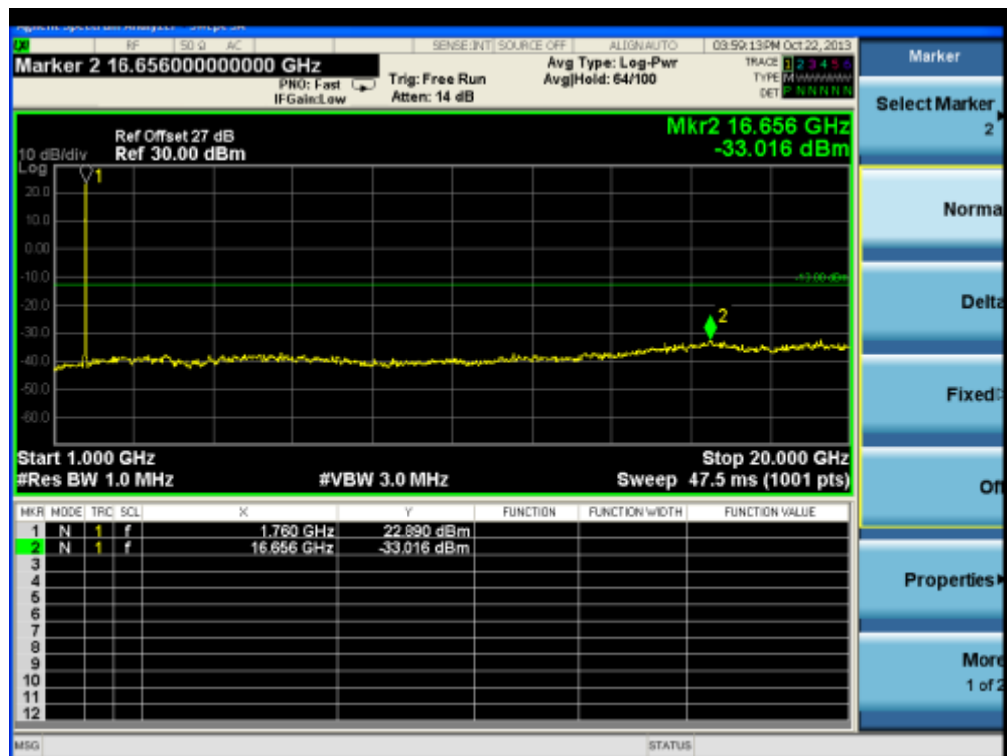
(Plot P2: HSPA+1700MHz Channel = 1412, 30MHz to 1GHz)



(Plot P2.1: HSPA+1700MHz Channel = 1412, 1GHz to 20GHz)



(Plot P3: HSPA+1700MHz Channel = 1513, 30MHz to 1GHz)



(Plot P3.1: HSPA+1700MHz Channel = 1513 1GHz to 20GHz)

2.6 Band Edge

2.6.1 Requirement

According to FCC section 22.917(b) and FCC section 24.238(b), 27.53(g)(h) 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

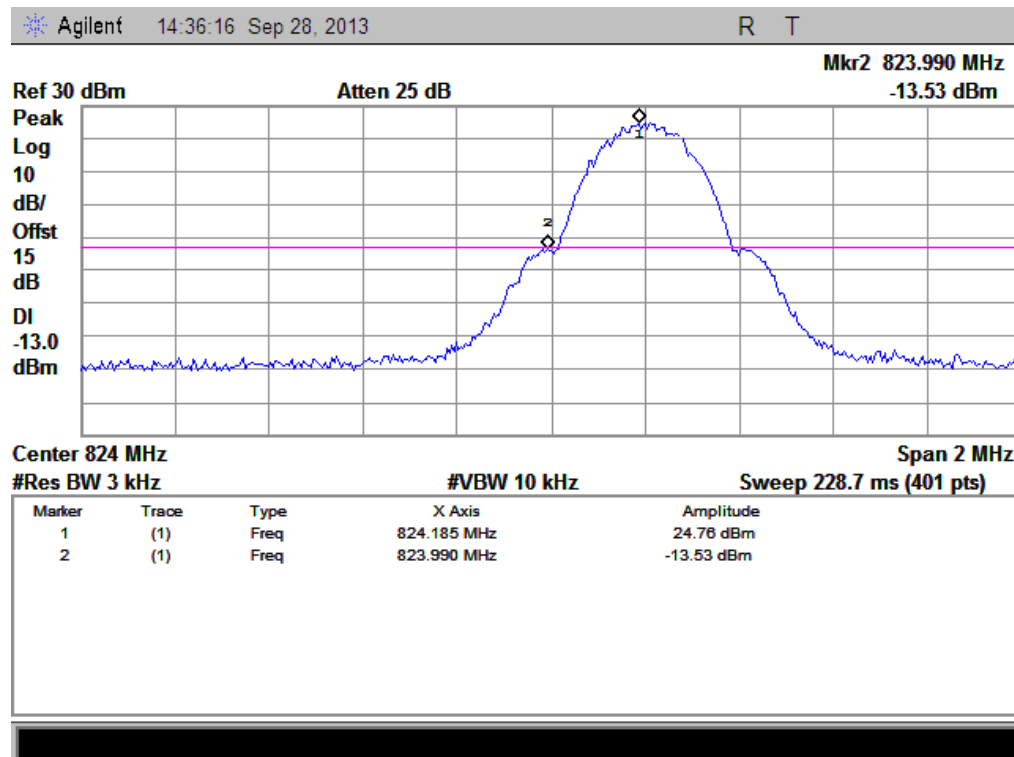
The lowest and highest channels are tested to verify the band edge emissions.

1. Test Verdict:

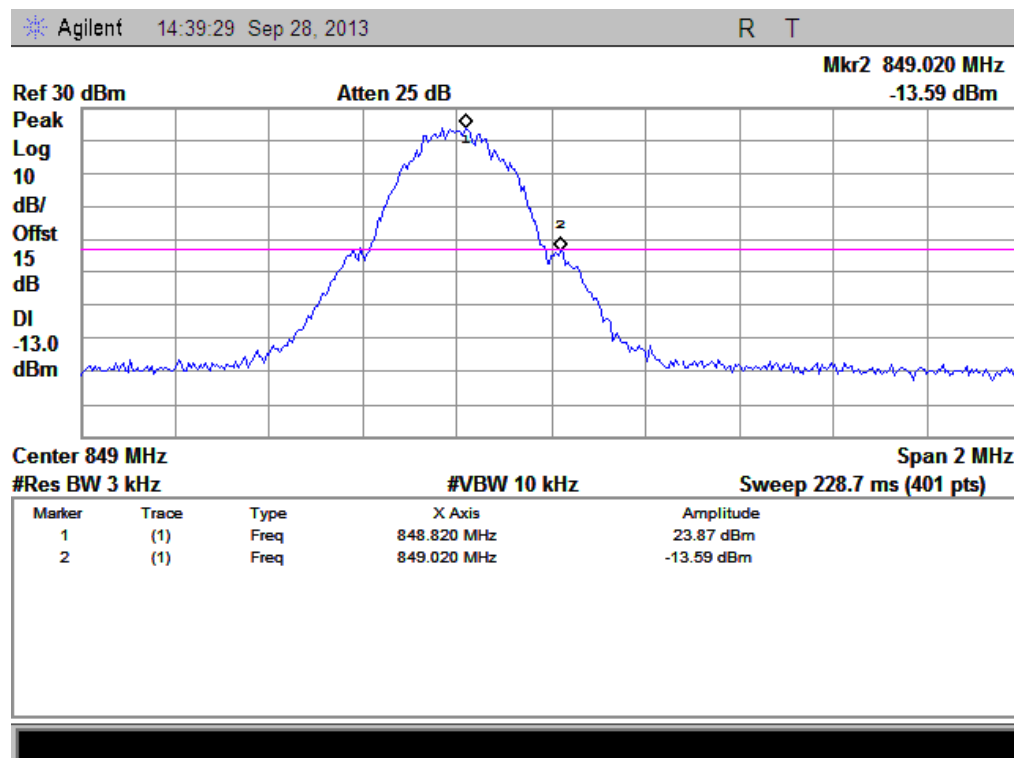
Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-13.53	Plat A	-13	PASS
	251	848.8	-13.59	Plot B		PASS
GSM 1900MHz	512	1850.2	-14.88	Plat C	-13	PASS
	810	1909.8	-15.22	Plot D		PASS
EDGE 850MHz	128	824.2	-13.02	Plat E	-13	PASS
	251	848.8	-13.35	Plot F		PASS
EDGE 1900MHz	512	1850.2	-15.69	Plat G	-13	PASS
	810	1909.8	-16.06	Plot H		PASS
WCDMA 850MHz	4132	826.4	-21.97	Plat I	-13	PASS
	4233	846.6	-23.70	Plot J		PASS
WCDMA 1900MHz	9262	1852.4	-22.25	Plat K	-13	PASS
	9538	1907.6	-22.36	Plot L		PASS
HSDPA 850MHz	4132	826.4	-23.03	Plat M	-13	PASS
	4233	846.6	-23.72	Plot N		PASS
HSDPA 1900MHz	9262	1852.4	-22.78	Plat O	-13	PASS
	9538	1907.6	-23.11	Plot P		PASS
HSUPA 850MHz	4132	826.4	-23.03	Plat Q	-13	PASS
	4233	846.6	-23.72	Plot R		PASS
HSUPA	9262	1852.4	-22.78	Plat S	-13	PASS

1900MHz	9538	1907.6	-23.11	Plot T		PASS
HSPA+	4132	826.4	-22.45	Plat U	-13	PASS
850MHz	4233	846.6	-24.26	Plot V		PASS
HSPA+	9262	1852.4	-22.19	Plat W	-13	PASS
1900MHz	9538	1907.6	-22.94	Plot X		PASS
WCDMA	1312	1712.4	-23.47	Plat Y	-13	PASS
1700MHz	1513	1752.6	-23.19	Plat Z		PASS
HSDPA	1312	1712.4	-27.12	Plot A1	-13	PASS
1700MHz	1513	1752.6	-23.93	Plat B1		PASS
HSUPA	1312	1712.4	-27.93	Plot C1	-13	PASS
1700MHz	1513	1752.6	-26.56	Plat D1		PASS
HSPA+	1312	1712.4	-26.73	Plot E1	-13	PASS
1700MHz	1513	1752.6	-26.31	Plat F1		PASS

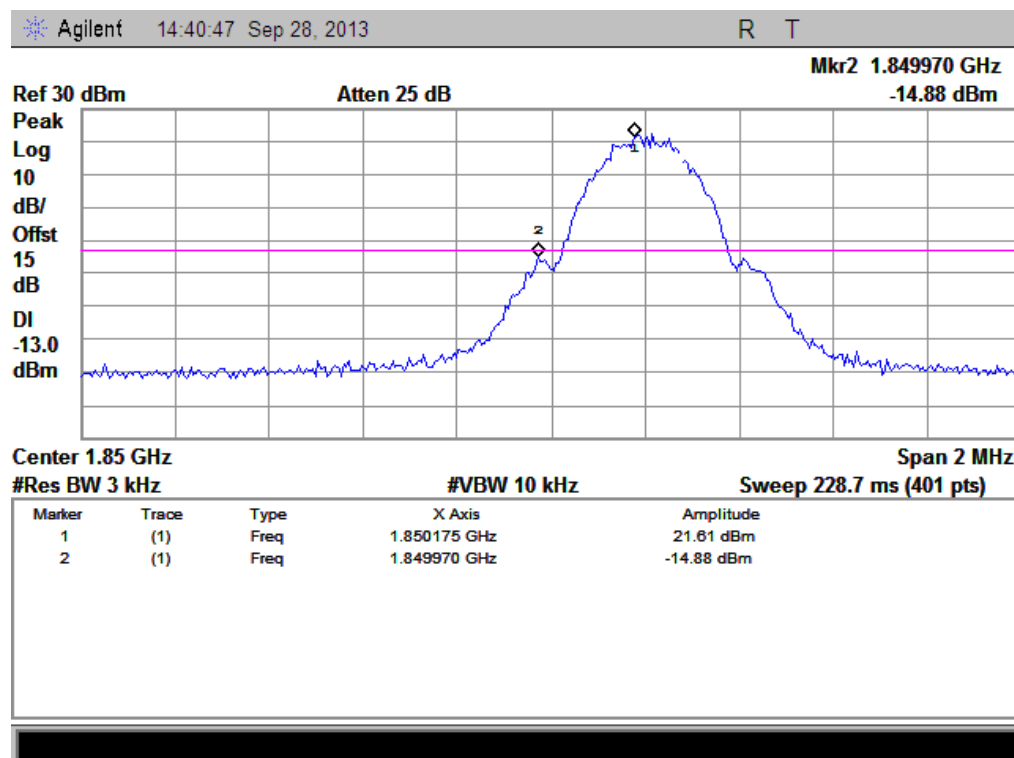
2. Test Plots:



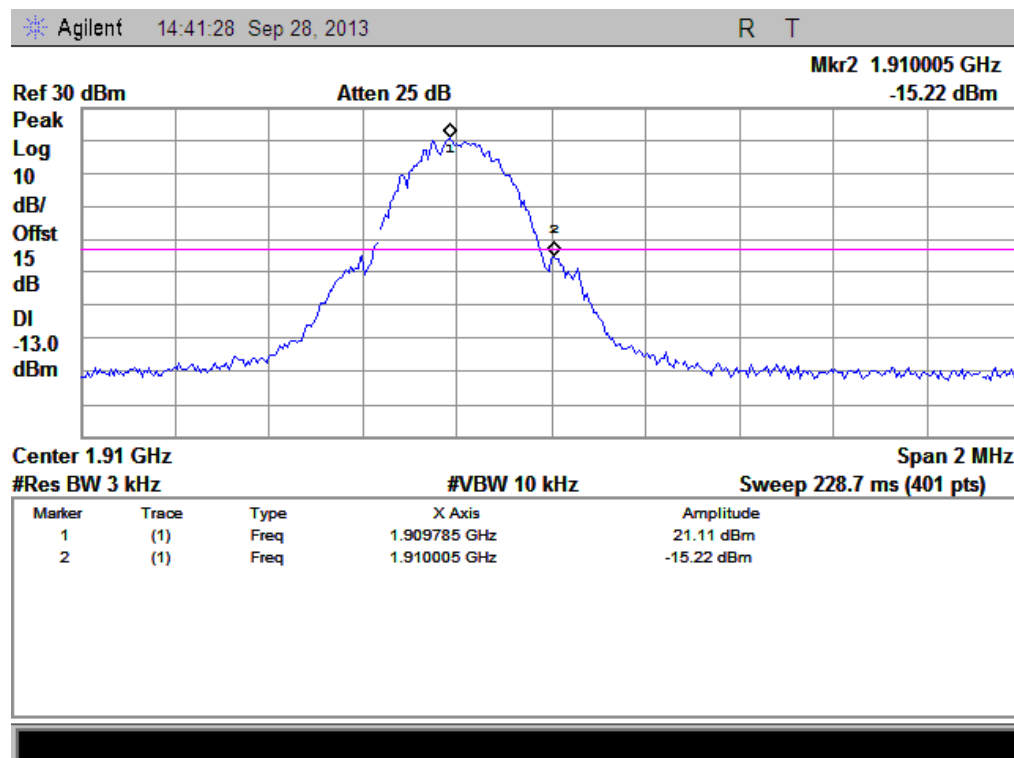
(Plot A: GSM 850 Channel = 128)



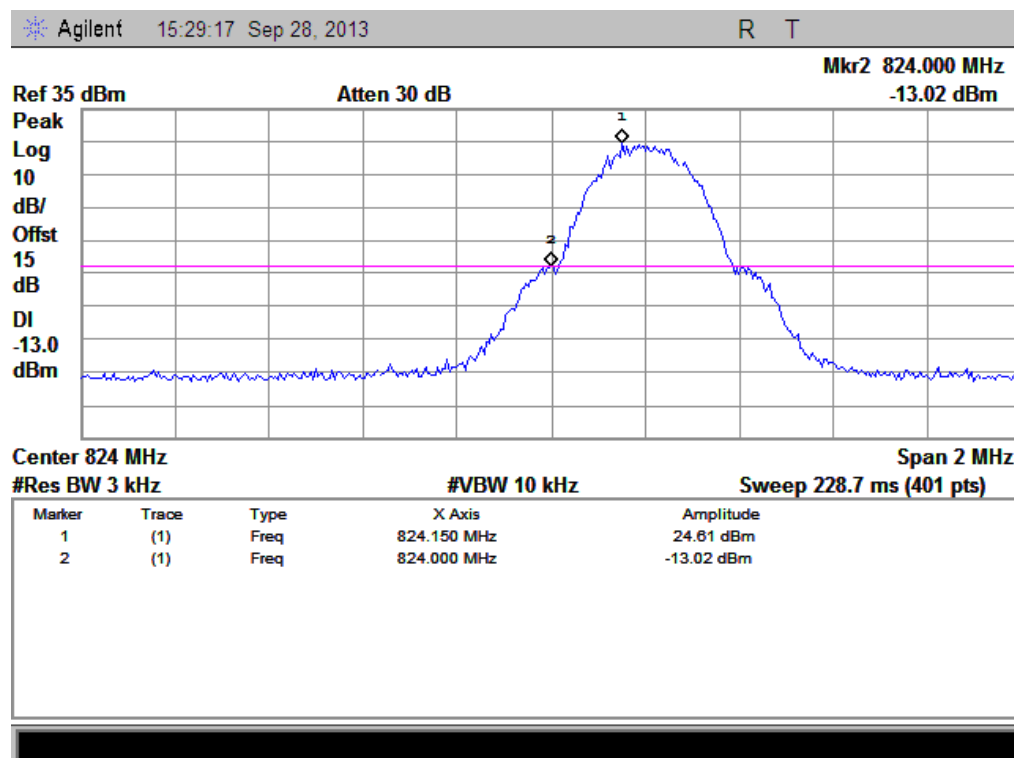
(Plot B: GSM 850 Channel = 251)



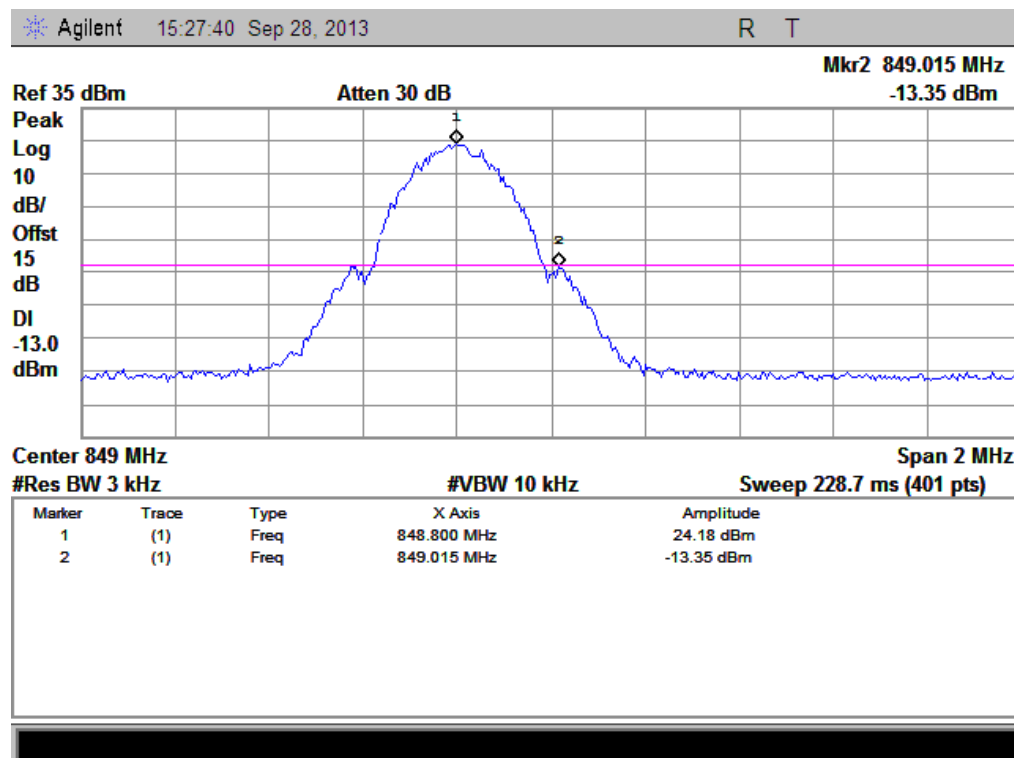
(Plot C: GSM 1900 Channel = 512)



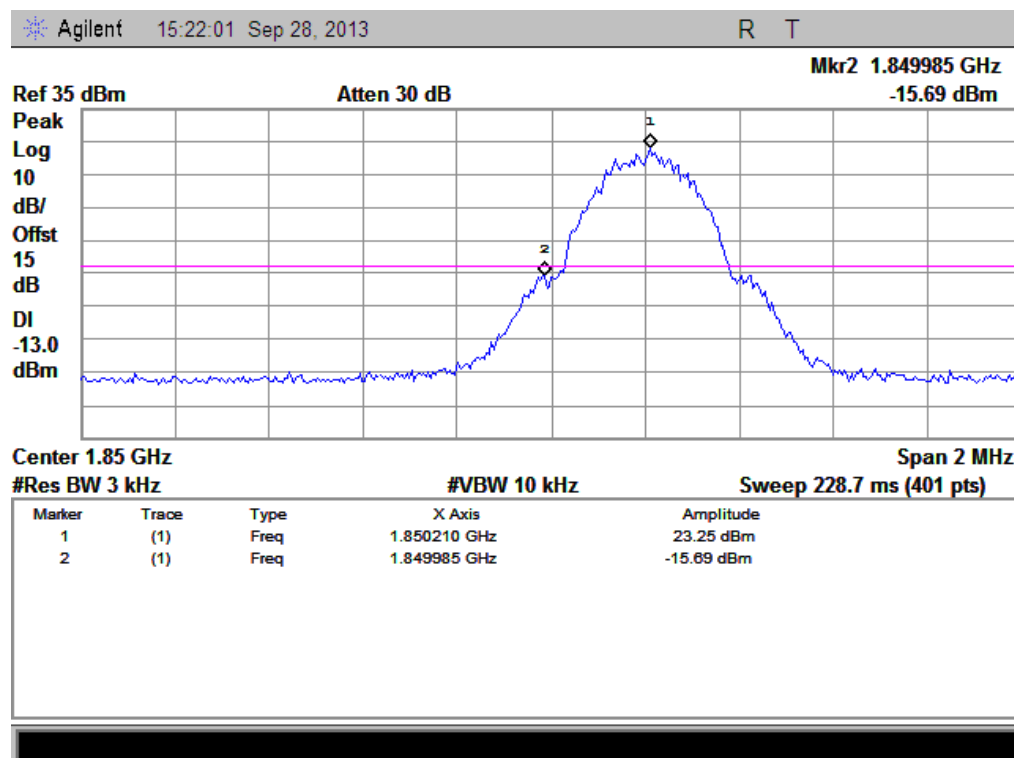
(Plot D: GSM 1900 Channel = 810)



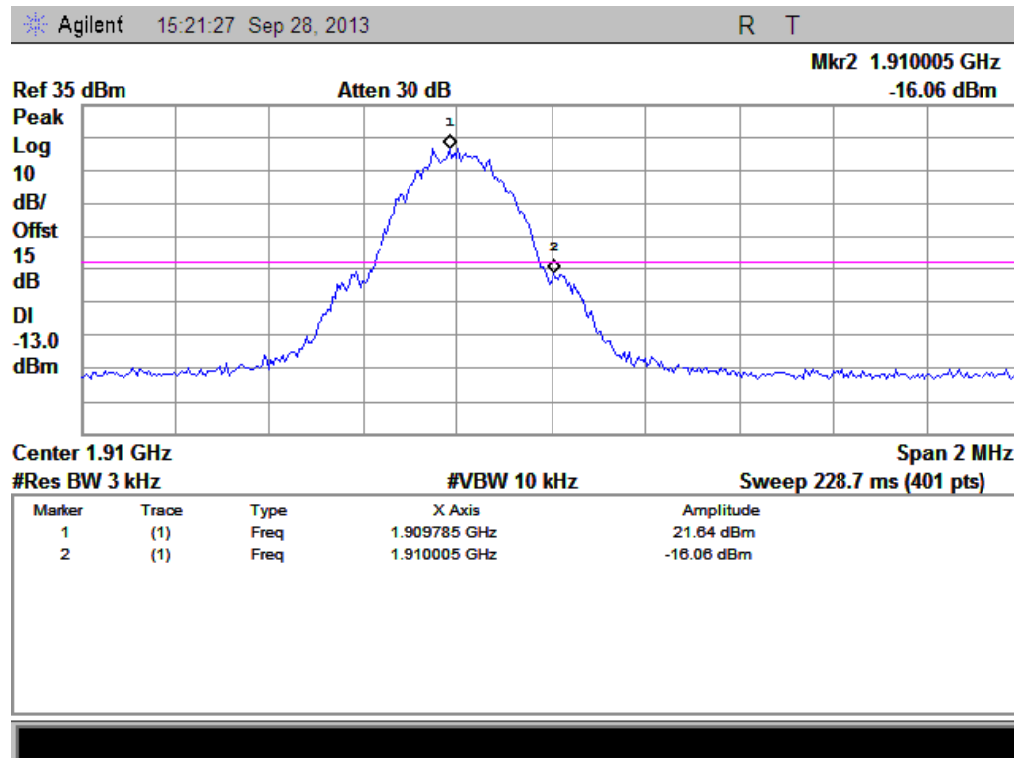
(Plot E: EGPRS 850 Channel = 128)



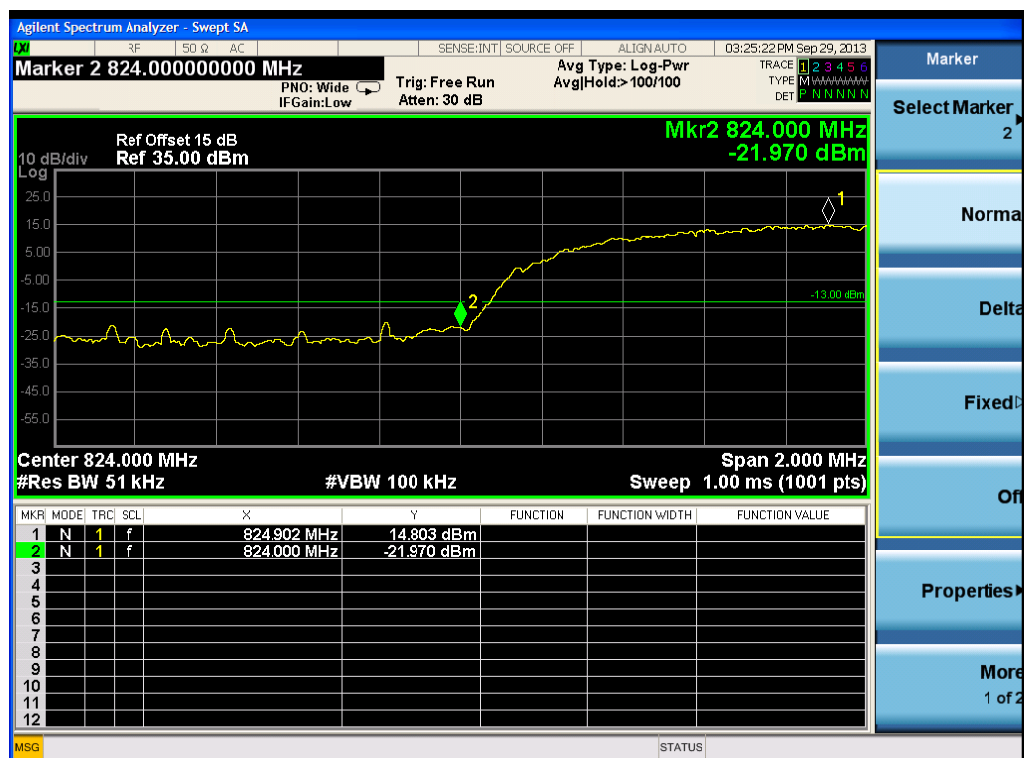
(Plot F: EGPRS 850 Channel = 251)



(Plot G: EGPRS 1900 Channel = 512)



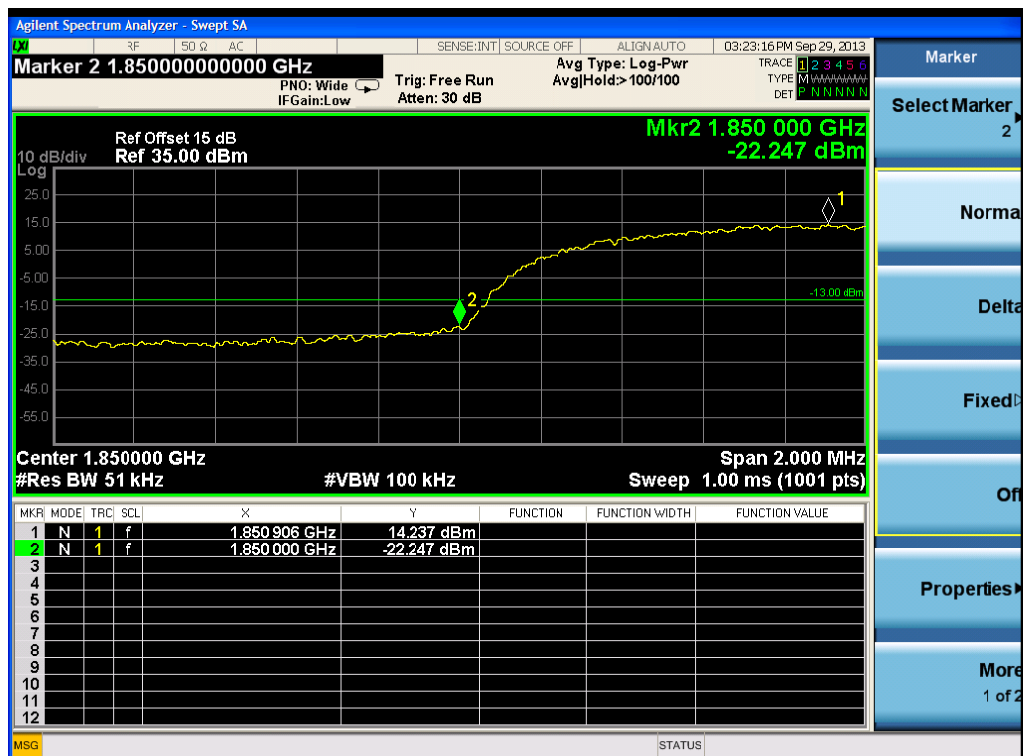
(Plot H: EGPRS 1900 Channel = 810)



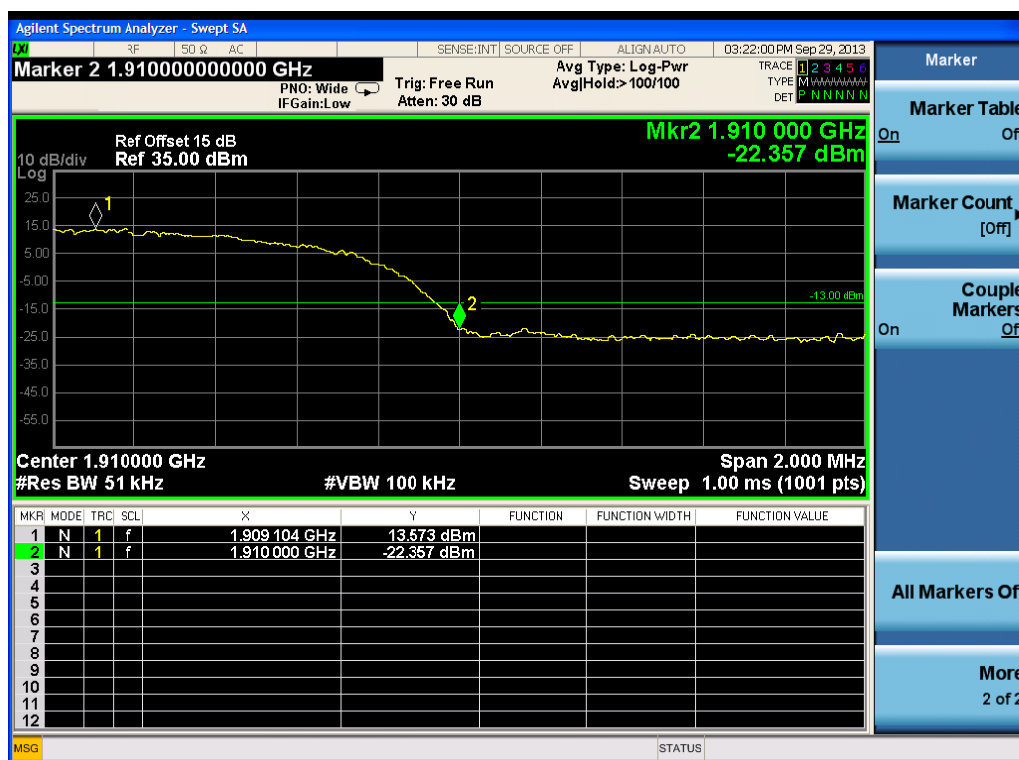
(Plot I: WCDMA 850 Channel = 4132)



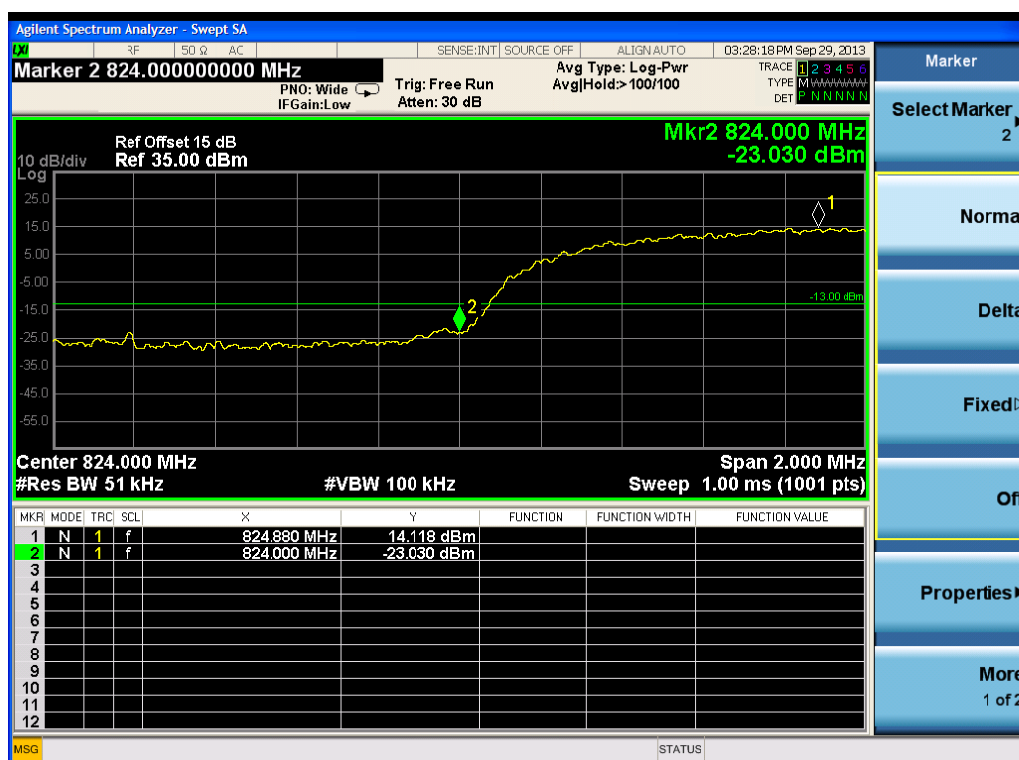
(Plot J: WCDMA 850 Channel = 4233)



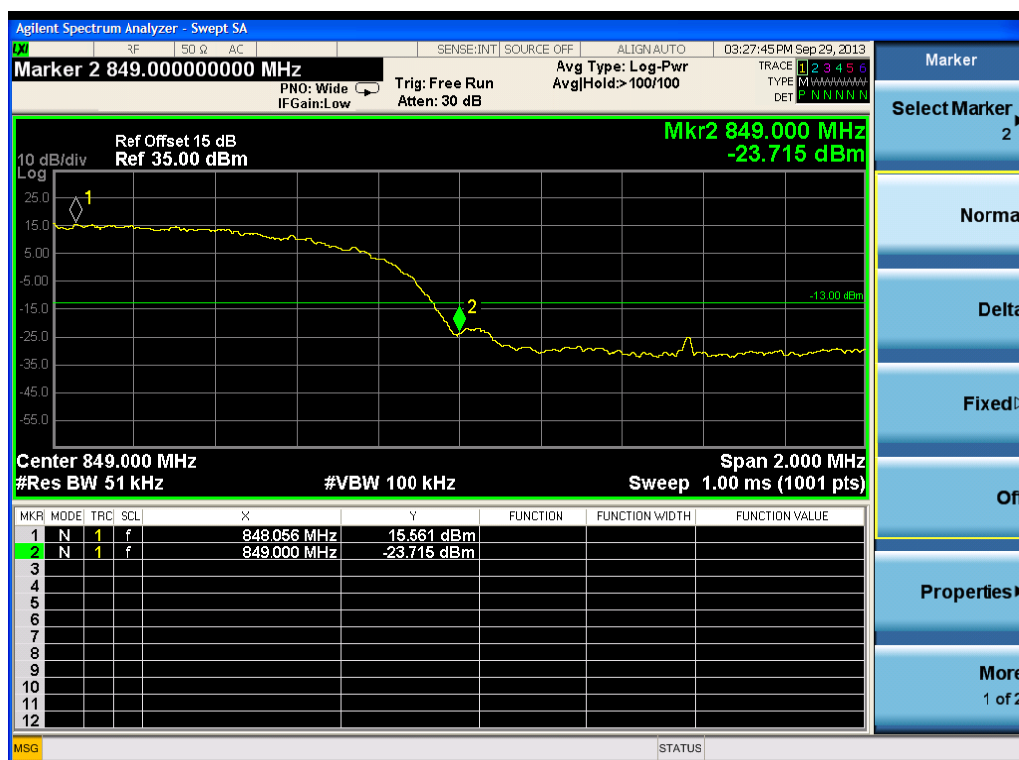
(Plot K: WCDMA 1900 Channel = 9262)



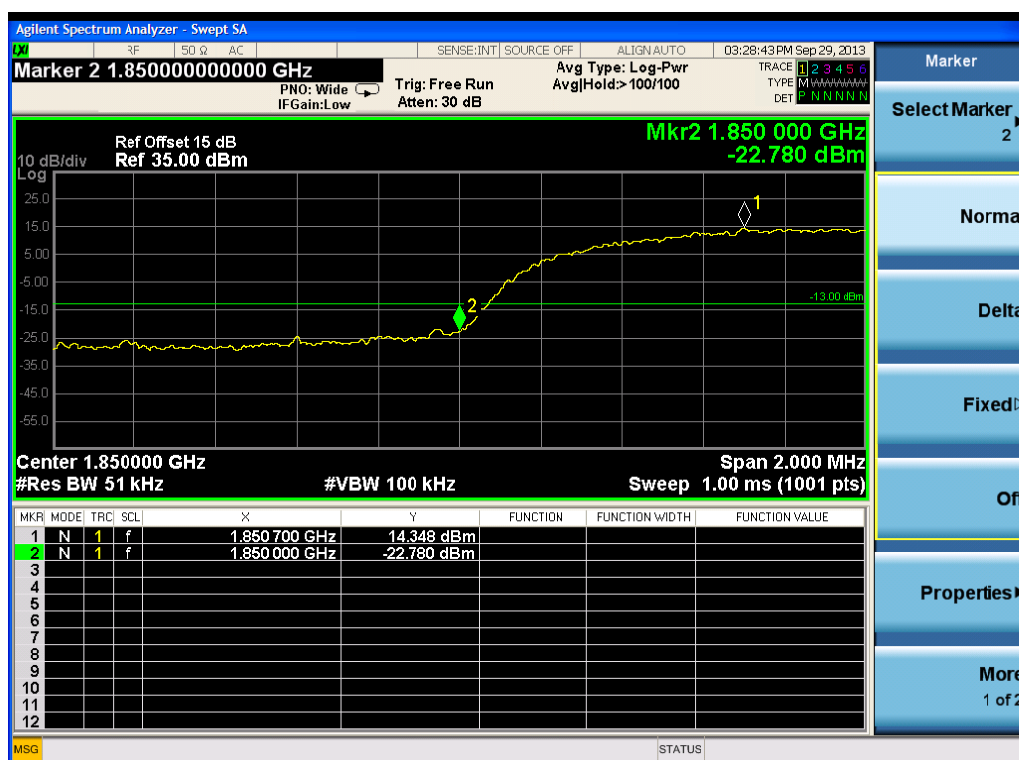
(Plot L: WCDMA 1900 Channel = 9538)



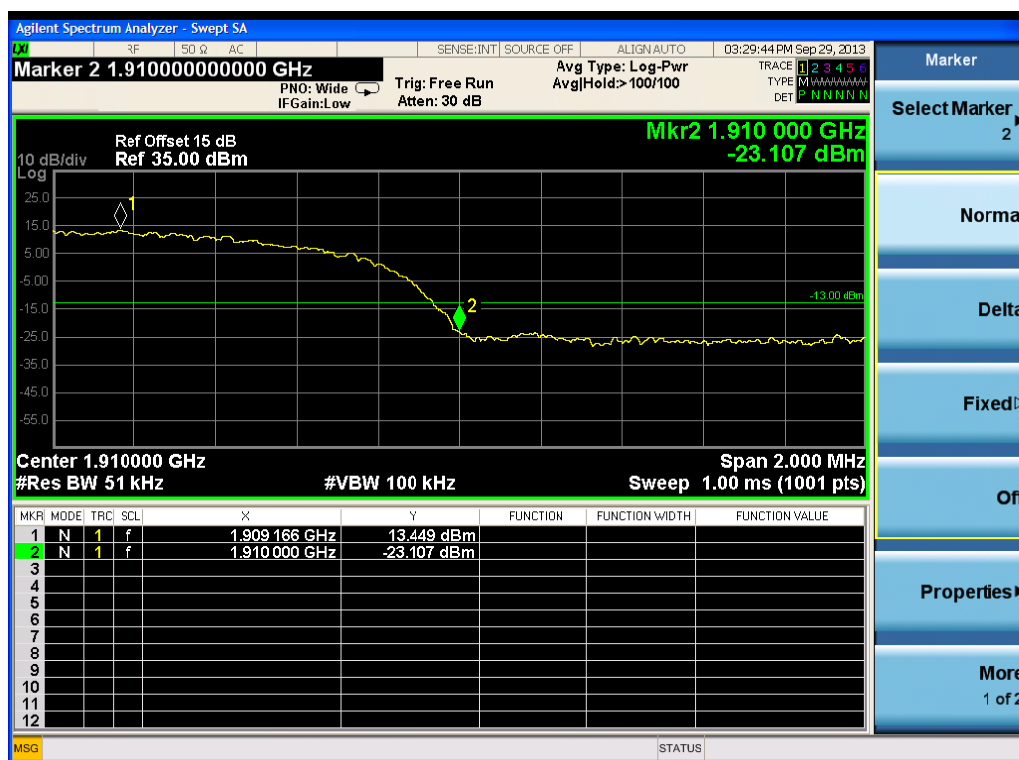
(Plot M: HSDPA 850 Channel = 4132)



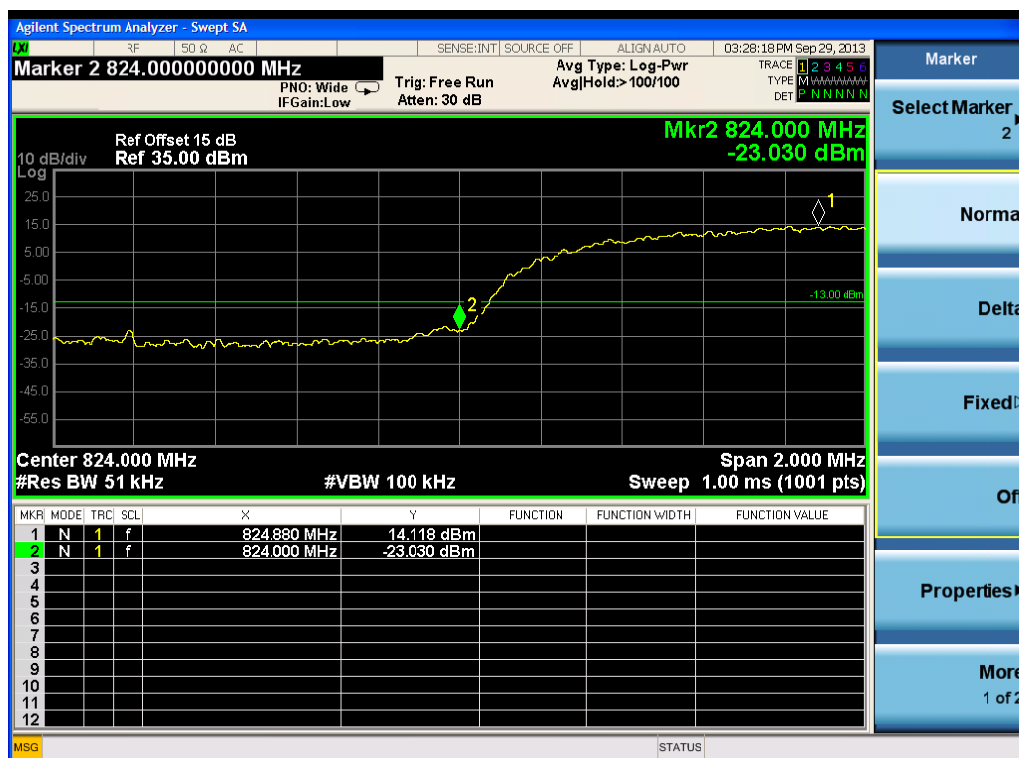
(Plot N: HSDPA850 Channel = 4233)



(Plot O: HSDPA 1900 Channel = 9262)



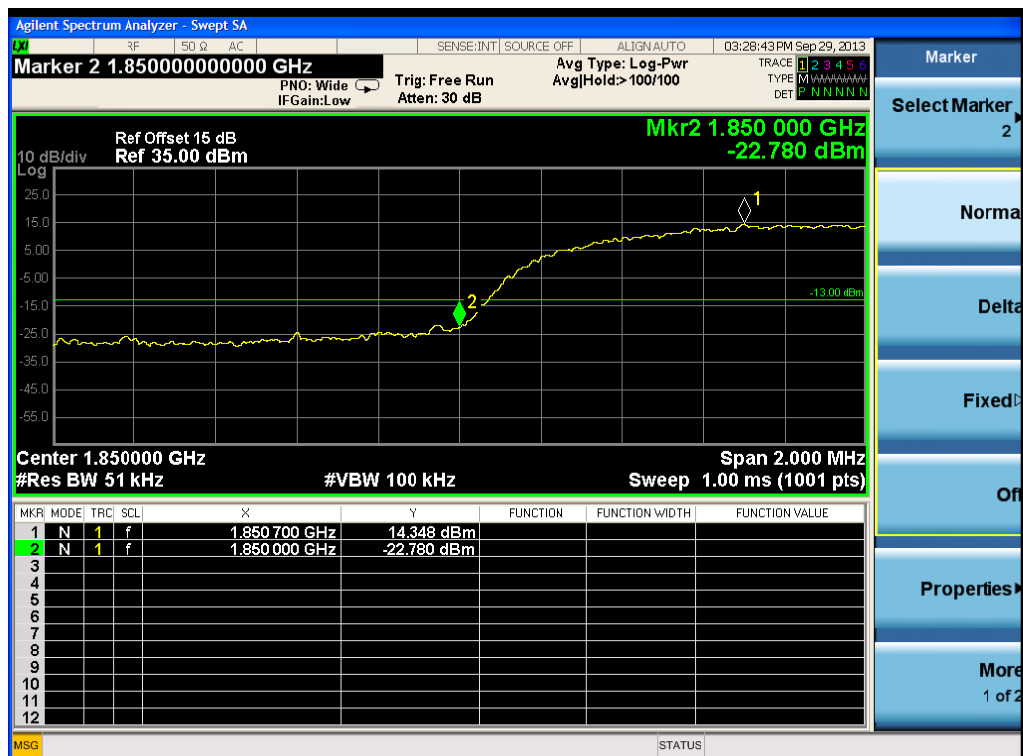
(Plot P: HSDPA 1900 Channel = 9538)



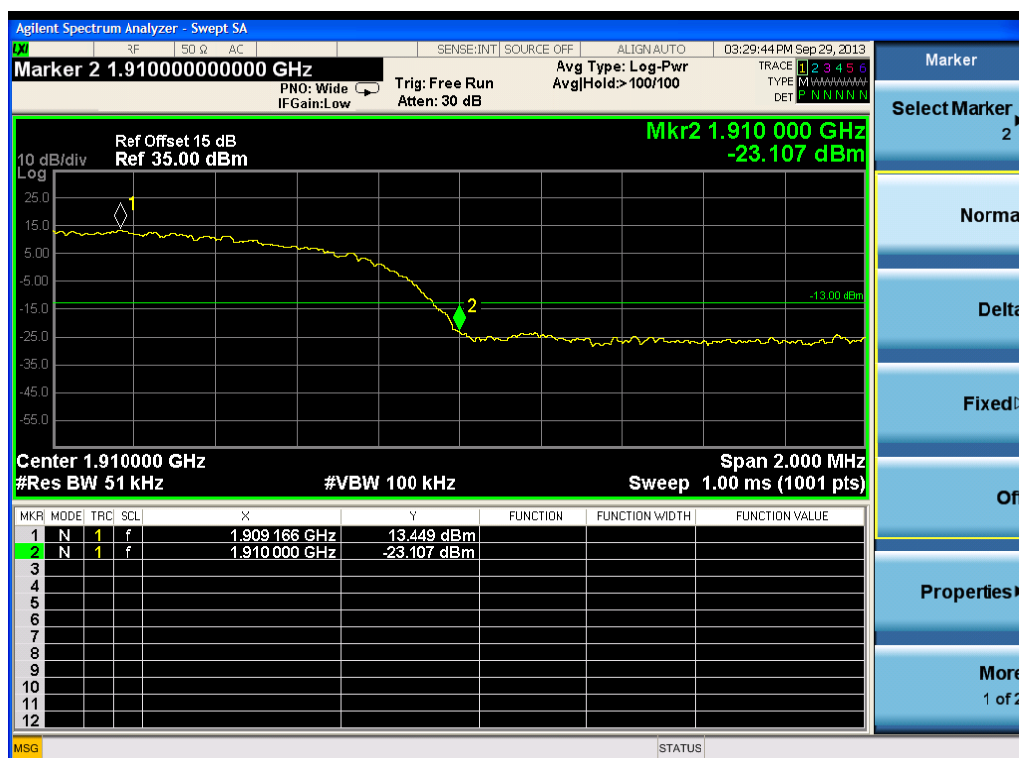
(Plot Q: HSUPA 850 Channel = 4132)



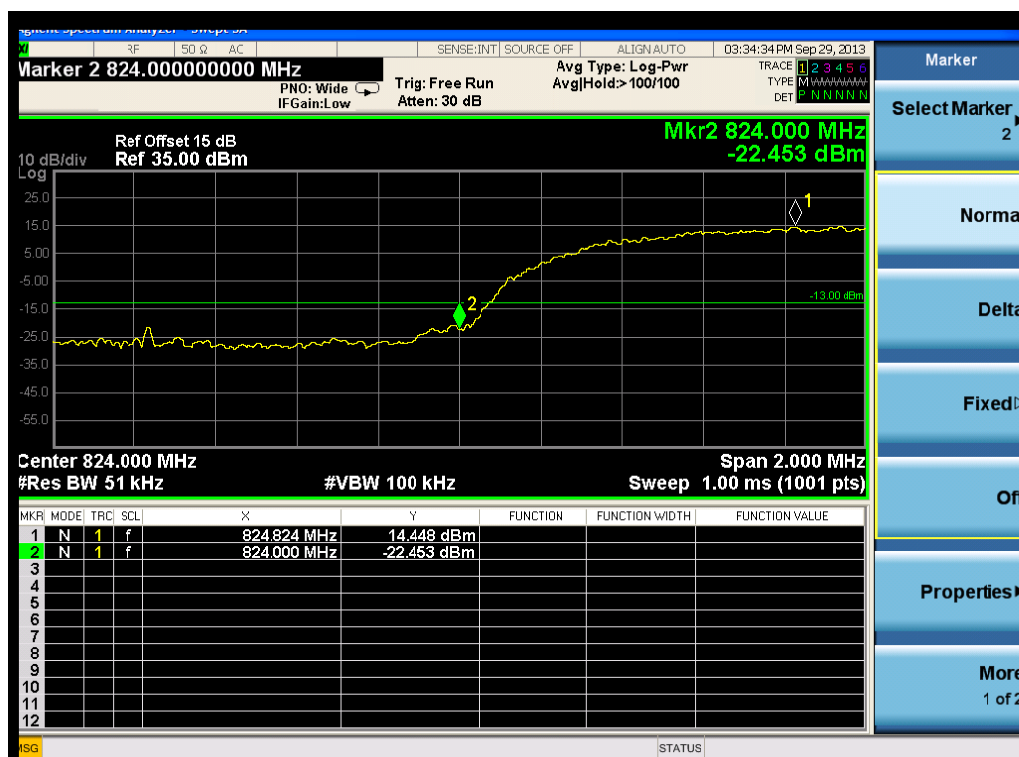
(Plot R: HSUPA850 Channel = 4233)



(Plot S: HSUPA 1900 Channel = 9262)



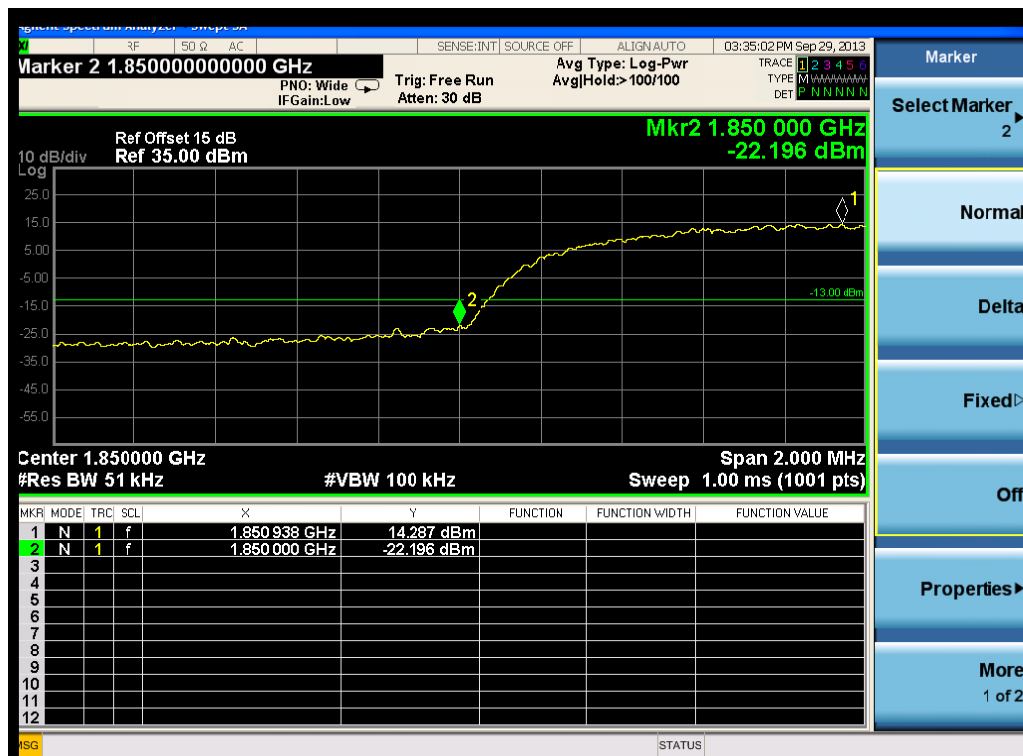
(Plot T: HSUPA 1900 Channel = 9538)



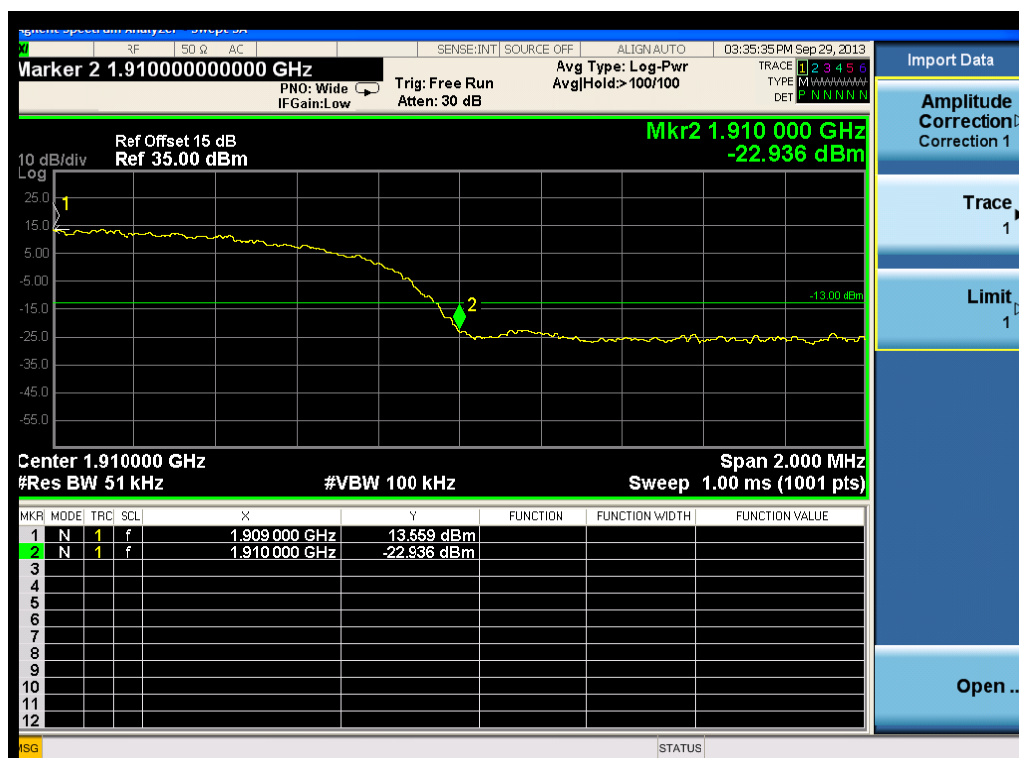
(Plot U: HSPA+ 850 Channel = 4132)



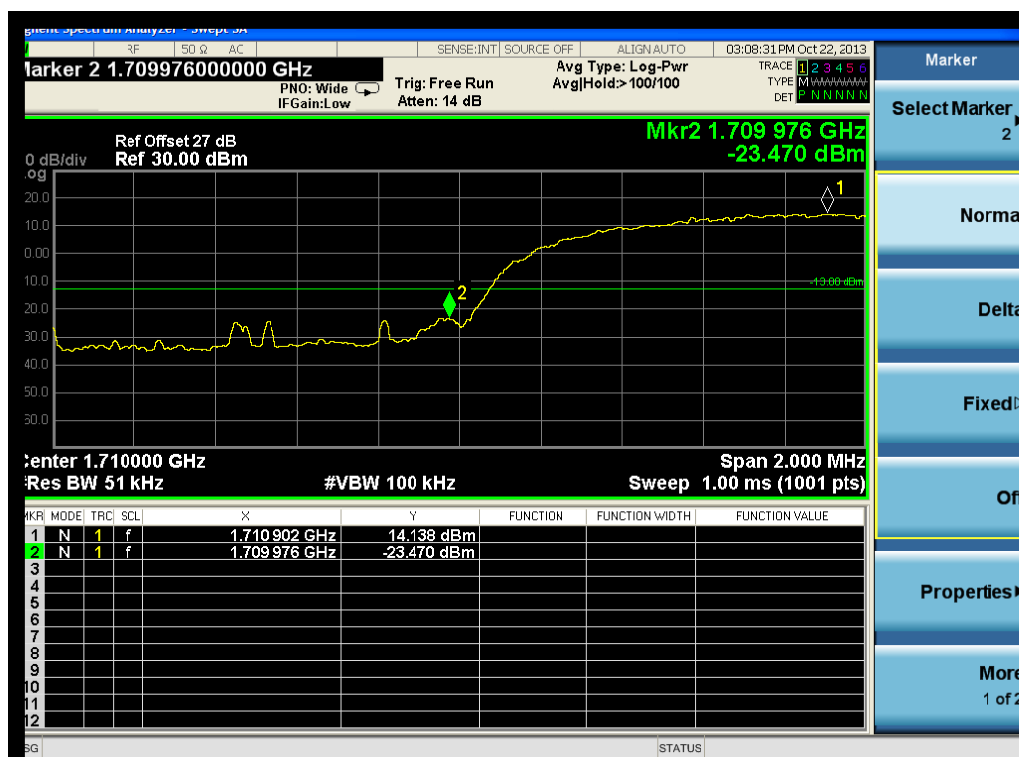
(Plot V: HSPA+ 850 Channel = 4233)



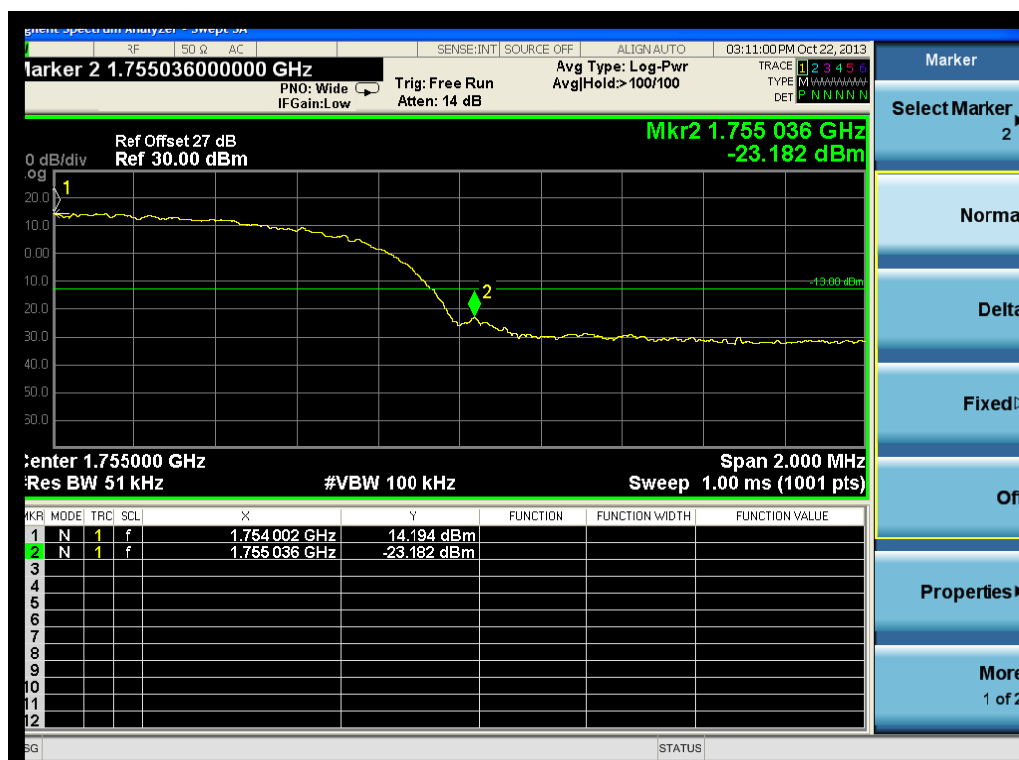
(Plot W: HSPA+ 1900 Channel = 9262)



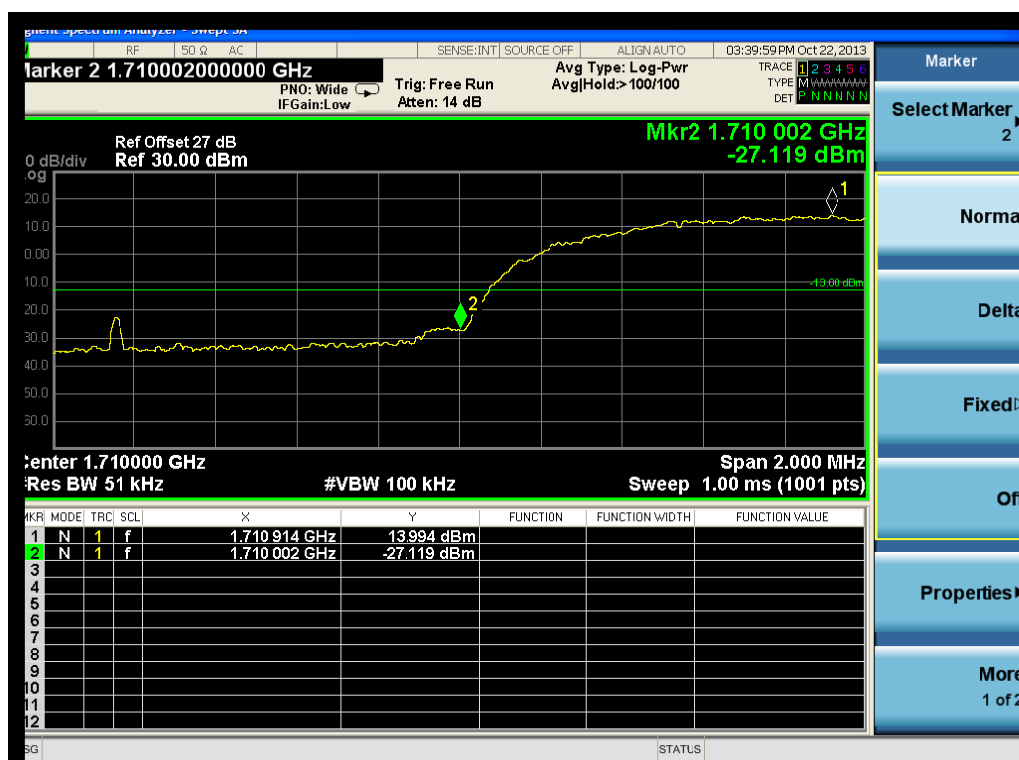
(Plot X: HSPA+ 1900 Channel = 9538)



(Plot Y: WCDMA 1700 Channel = 1312)



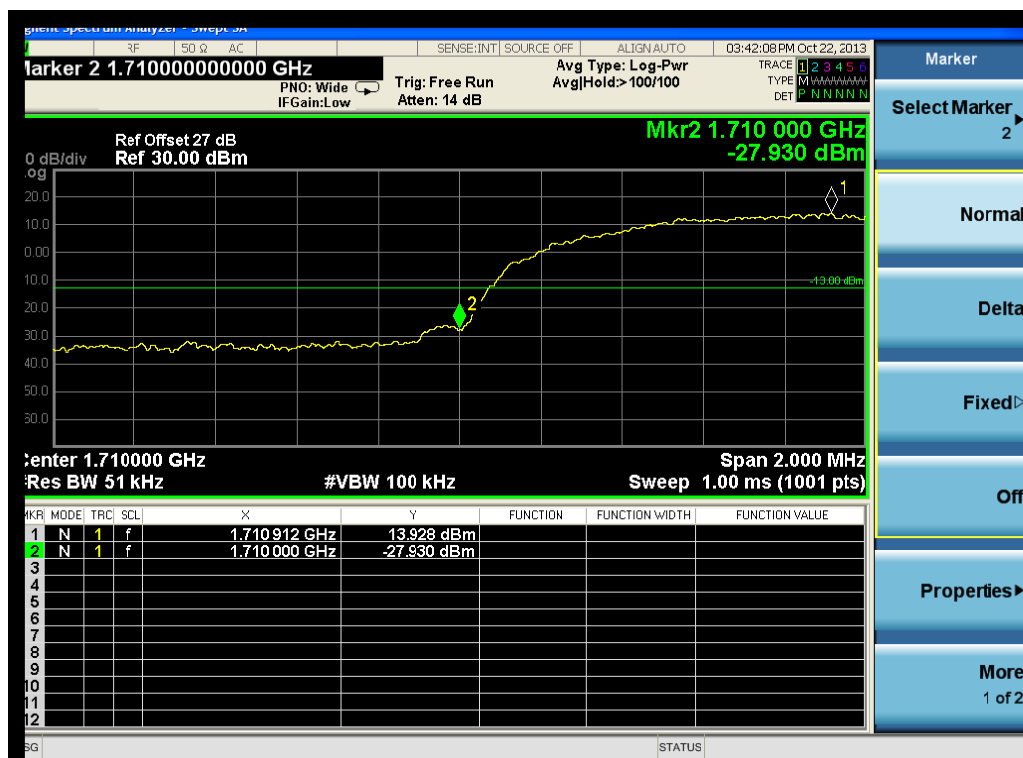
(Plot Z: WCDMA 1700 Channel = 1513)



(Plot A1: HSDPA 1700 Channel = 1312)



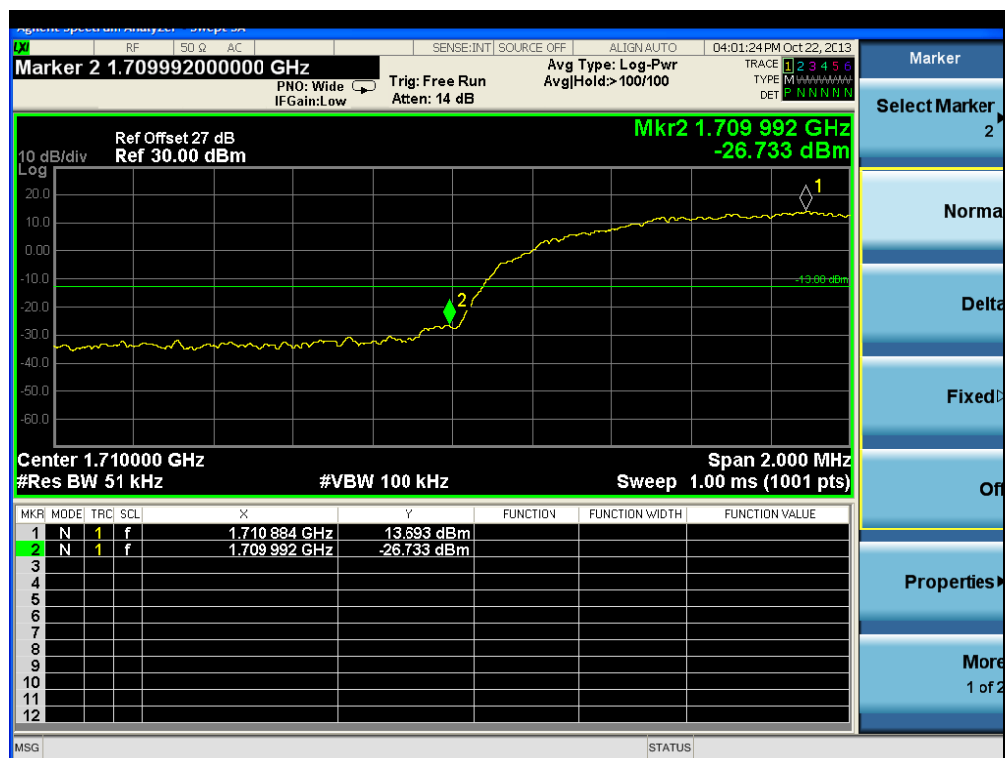
(Plot B1: HSDPA 1700 Channel = 1513)



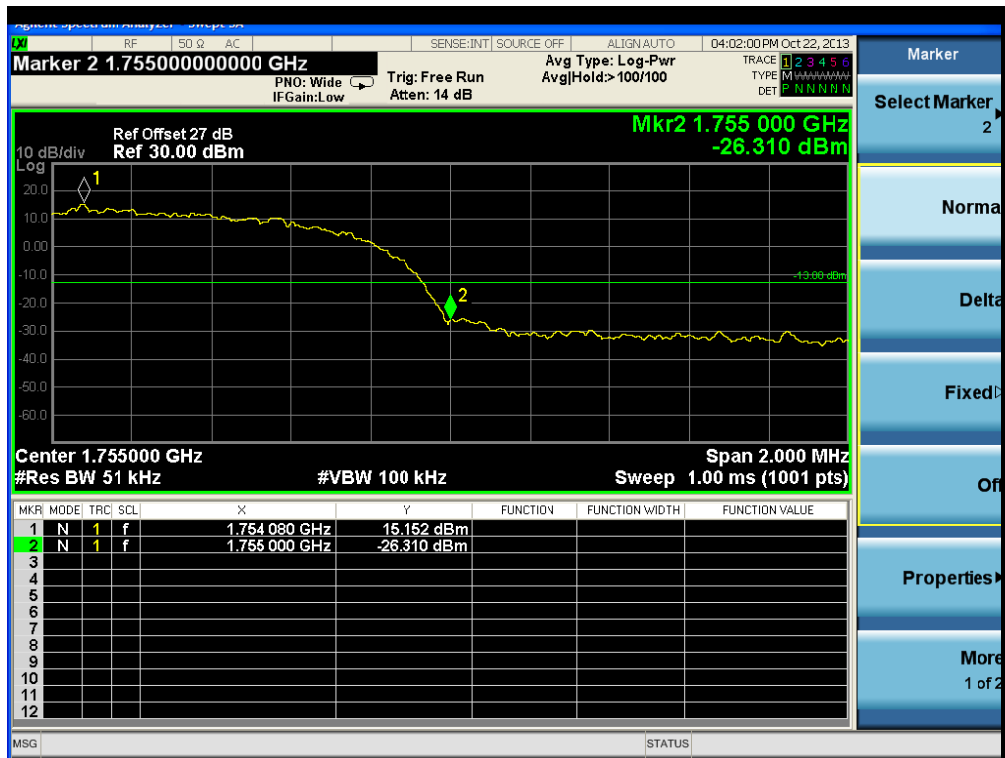
(Plot C1: HSUPA 1700 Channel = 1312)



(Plot D1: HSUPA1700 Channel = 1513)



(Plot E1: HSPA+ 1700 Channel = 1312)



(Plot F1: HSPA+ 1700 Channel = 1513)

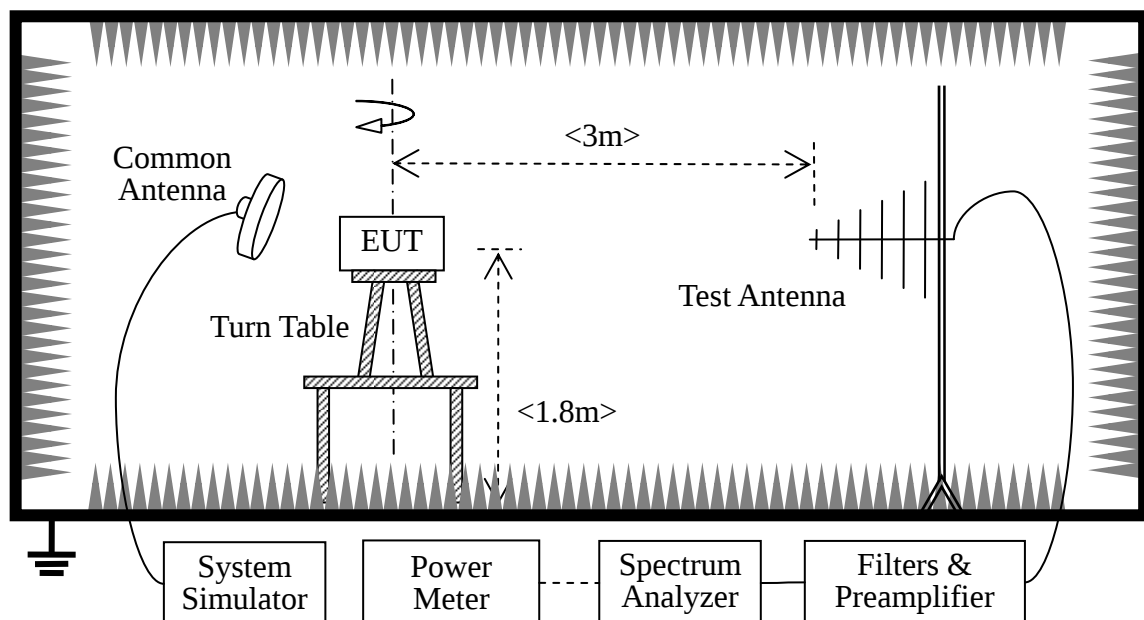
2.7 Transmitter Radiated Power (EIRP/ERP)

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. FCC section 27.50, AWS 1700 test transmitters must not exceed 1Watts

2.7.2 Test Description

1. 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 33.52dBm, GSM 1900 28.38dBm, EGPRS 850 33.50dBm, EGPRS 28.51.WCDMA 850 22.83dBm, WCDMA 1900 23.68 dBm, WCDMA1700 23.71 dBm Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

- Minimum RF power: GSM 850 3.1dBm, GSM 1900 0.3dBm, EGPRS 850 3.1dBm, EGPRS 1900 0.21dBm ,WCDMA 850 0.39dBm ,WCDMA 1900 0.5dBm WCDMA 1700 0.5dBm.

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.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2013.05	2014.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2013.05	2014.05
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2013.05	2014.05
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2013.05	2014.05
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2013.05	2014.05
Substitution Antenna	Schwarzbeck	BBHA 9120C	9120C-384	2013.05	2014.05
Pre-AMPs	lucix	S10M100L3802	S020180L3203	2013.05	2014.05
Notch Filter	COM-MW	ZBSF-C836.5-25-X	NA	2013.05	2014.05
Notch Filter	COM-MW	ZBSF-C1747.5-75-X2	NA	2013.05	2014.05
Notch Filter	COM-MW	ZBSF-C1880-60-X2	NA	2013.05	2014.05

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:

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

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

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

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ 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} .

1. 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	33.44	2.208	Plot A	38.5	7	PASS
	190	836.60	5	33.28	2.128				PASS
	251	848.80	5	33.02	2.004				PASS
GPRS 850MHz	128	824.20	5	33.51	2.244	Plot B ^{Note 1}	38.5	7	PASS
	190	836.60	5	33.46	2.218				PASS
	251	848.80	5	33.05	2.018				PASS
EGPRS 850MHz	128	824.20	5	33.99	2.506	Plot C ^{Note 1}	38.5	7	PASS
	190	836.60	5	33.21	2.094				PASS
	251	848.80	5	33.50	2.239				PASS

Band	Channel	Frequency (MHz)	PCL	Measured EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 1900MHz	512	1850.2	0	28.28	0.673	Plot D	33	2	PASS
	661	1880.0	0	28.27	0.671				PASS
	810	1909.8	0	28.33	0.681				PASS
GPRS 1900MHz	512	1850.2	0	27.28	0.535	Plot E ^{Note 1}	33	2	PASS
	661	1880.0	0	27.16	0.519				PASS
	810	1909.8	0	26.85	0.484				PASS
EGPRS 1900MHz	512	1850.2	0	27.31	0.538	Plot F ^{Note 1}	33	2	PASS
	661	1880.0	0	27.23	0.528				PASS
	810	1909.8	0	26.85	0.484				PASS

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

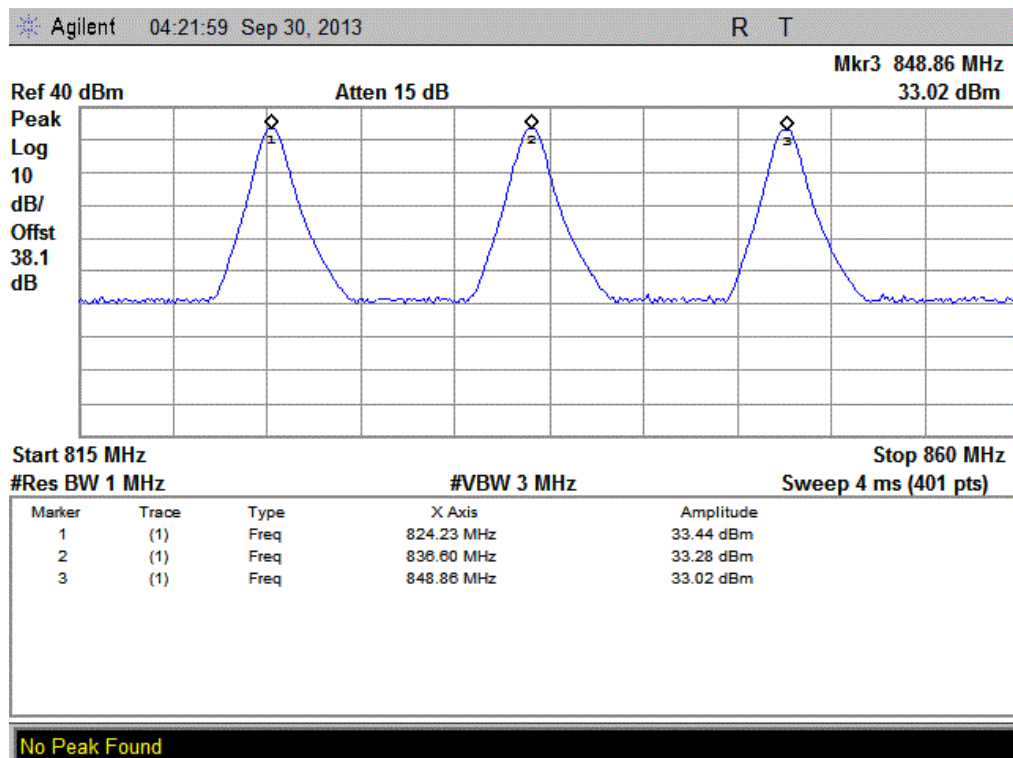
2. WCDMA Model Test Verdict:

Band	Channel	Frequency (MHz)	Measured ERP			Limit		Verdict
			dBm	W	Refer to Plot	dBm	W	
WCDMA 850MHz	4132	826.4	29.51	0.893	Plot G	38.5	7	PASS
	4175	835	28.79	0.757				PASS
	4233	846.6	29.09	0.811				PASS
HSDPA 850MHz	4132	826.4	29.75	0.944	Plot H	38.5	7	PASS
	4175	835	28.84	0.766				PASS
	4233	846.6	29.26	0.843				PASS
HSUPA 850MHz	4132	826.4	29.45	0.881	Plot I	38.5	7	PASS
	4175	835	28.82	0.762				PASS
	4233	846.6	29.26	0.843				PASS
HSPA+ 850MHz	4132	826.4	29.66	0.925	Plot J	38.5	7	PASS
	4175	835	28.56	0.718				PASS
	4233	846.6	29.14	0.820				PASS

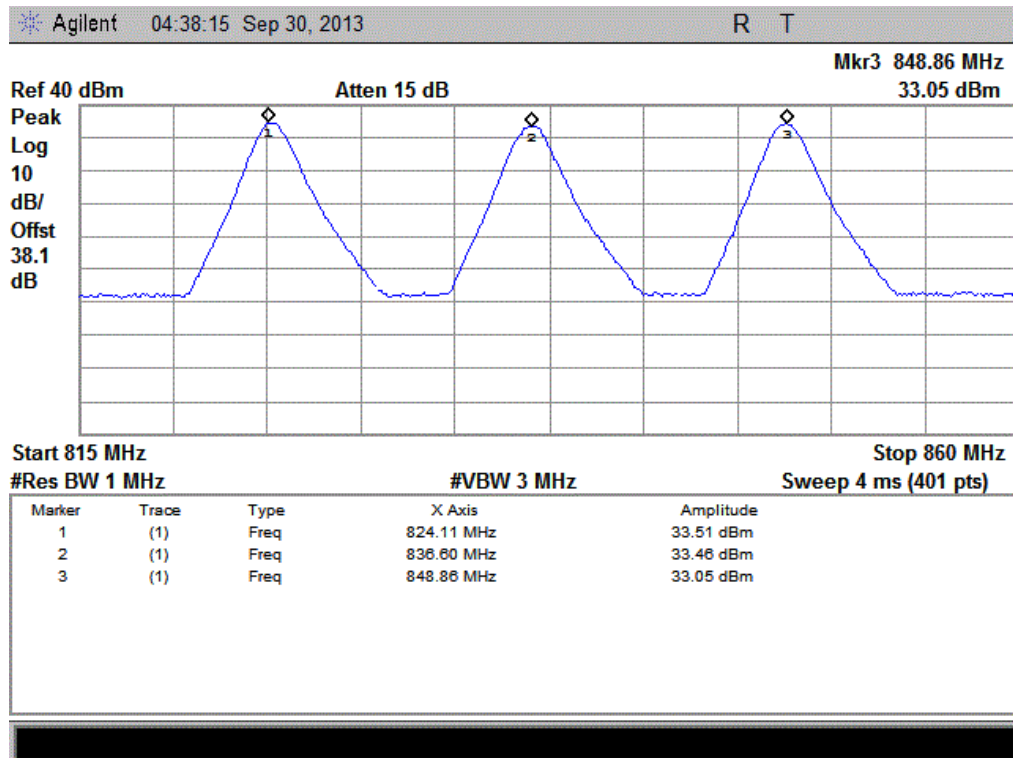
Band	Channel	Frequency (MHz)	Measured EIRP			Limit		Verdict
			dBm	W		dBm	W	
WCDMA 1900MHz	9262	1852.4	27.17	0.521	Plot K	33	2	PASS
	9400	1880	26.45	0.442				PASS
	9538	1907.6	27.40	0.550				PASS
HSDPA 1900MHz	9262	1852.4	26.85	0.484	Plot L	33	2	PASS
	9400	1880	26.49	0.446				PASS
	9538	1907.6	27.34	0.542				PASS
HSUPA 1900MHz	9262	1852.4	27.12	0.515	Plot M	33	2	PASS
	9400	1880	26.40	0.437				PASS
	9538	1907.6	27.43	0.553				PASS
HSPA+ 1900MHz	9262	1852.4	26.89	0.489	Plot N	33	2	PASS
	9400	1880	26.54	0.451				PASS
	9538	1907.6	27.36	0.545				PASS

Band	Channel	Frequency (MHz)	Measured EIRP			Limit		Verdict
			dBm	W		dBm	W	
WCDMA 1700MHz	1312	1712.4	29.92	0.982	Plot O	30	1	PASS
	1412	1732.4	29.13	0.818				PASS
	1513	1752.6	29.66	0.925				PASS
HSDPA 1700MHz	1312	1712.4	29.78	0.951	Plot P	30	1	PASS
	1412	1732.4	29.24	0.839				PASS
	1513	1752.6	29.79	0.953				PASS
HSUPA 1700MHz	1312	1712.4	29.12	0.817	Plot Q	30	1	PASS
	1412	1732.4	29.48	0.887				PASS
	1513	1752.6	29.72	0.938				PASS
HSPA+ 1700MHz	1312	1712.4	26.89	0.489	Plot R	30	1	PASS
	1412	1732.4	26.54	0.451				PASS
	1513	1752.6	27.36	0.545				PASS

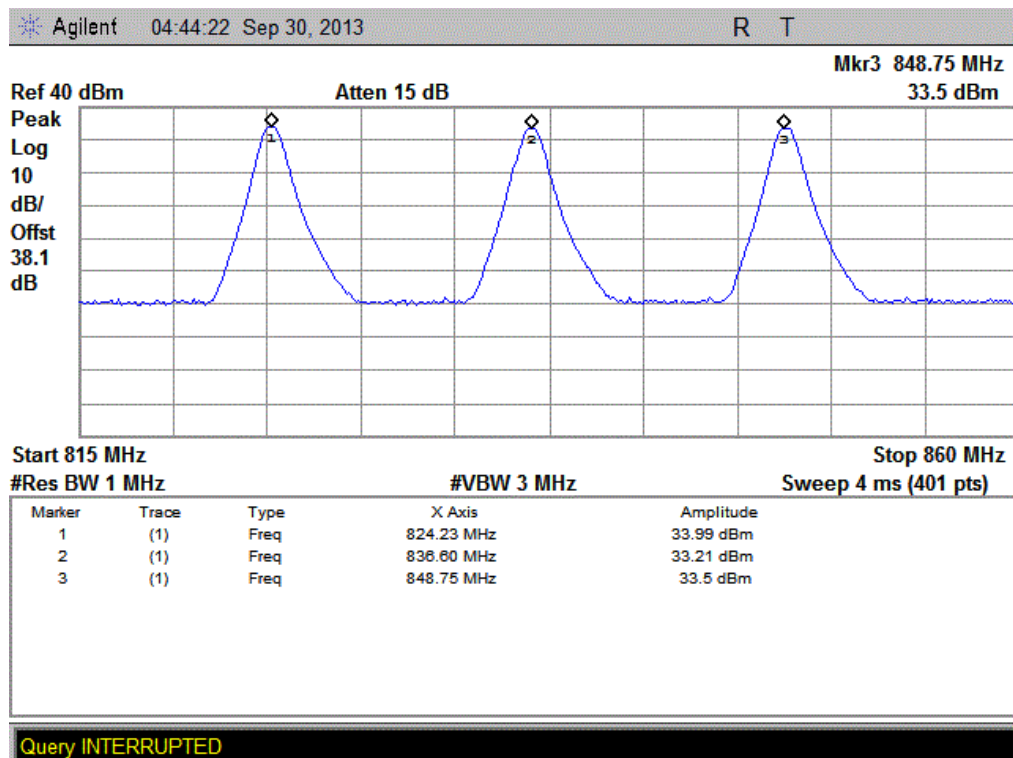
3. Test Plots:



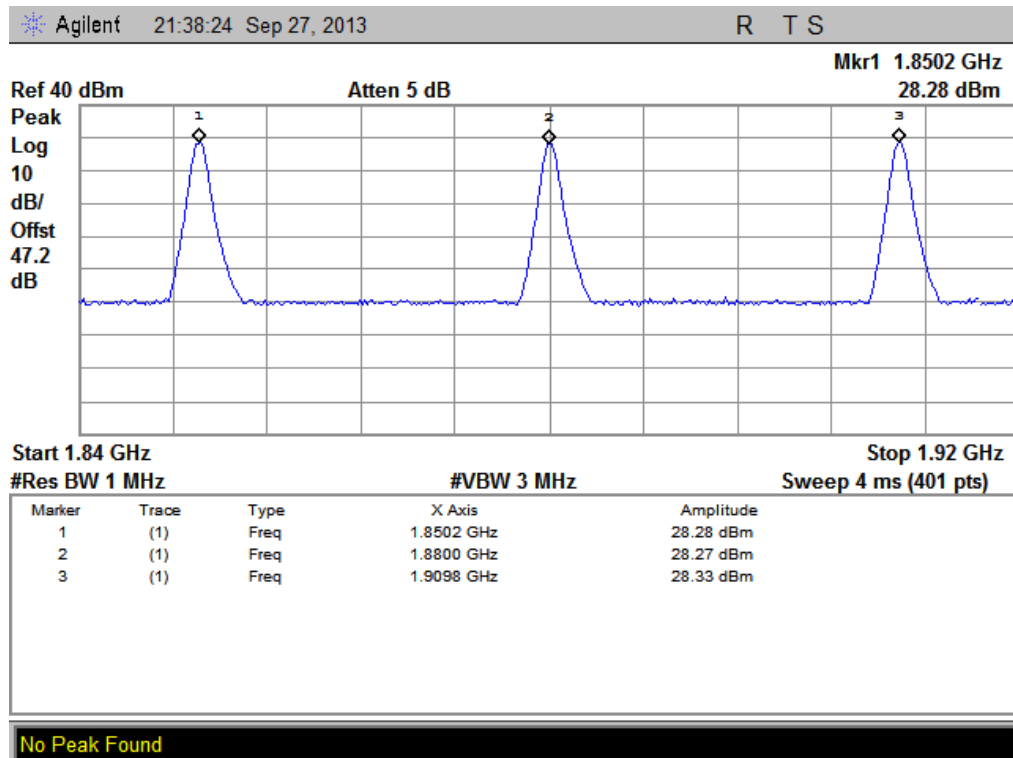
(Plot A: GSM 850MHz Channel = 128, 190, 251)



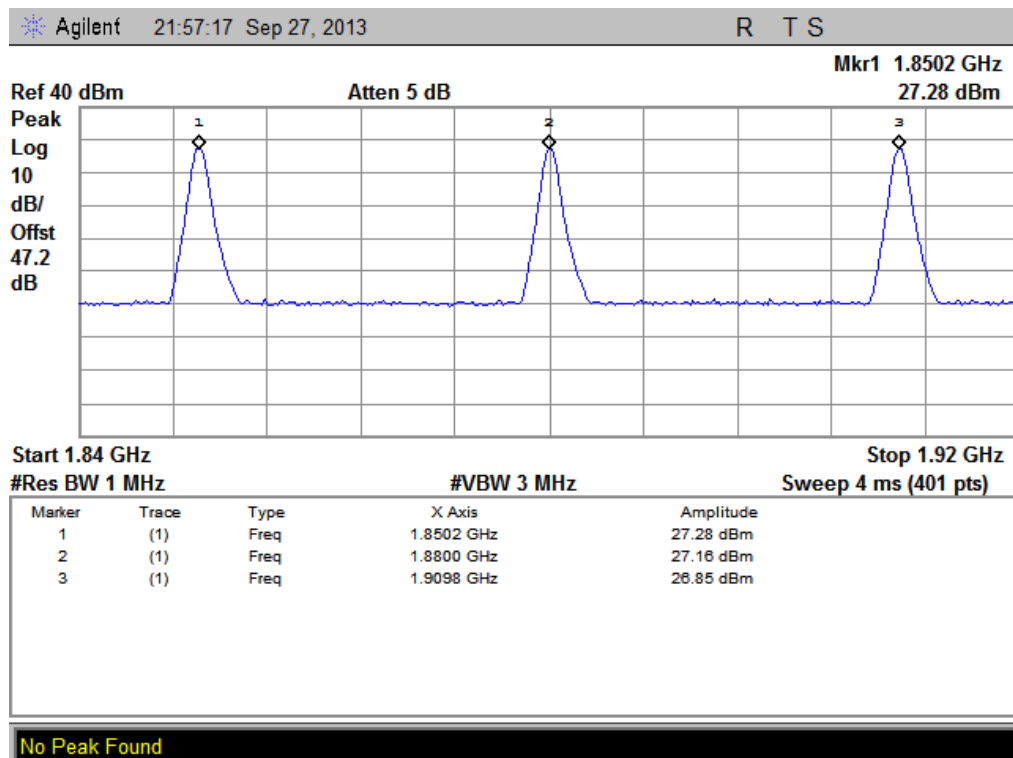
(Plot B: GPRS 850MHz Channel = 128, 190, 251)



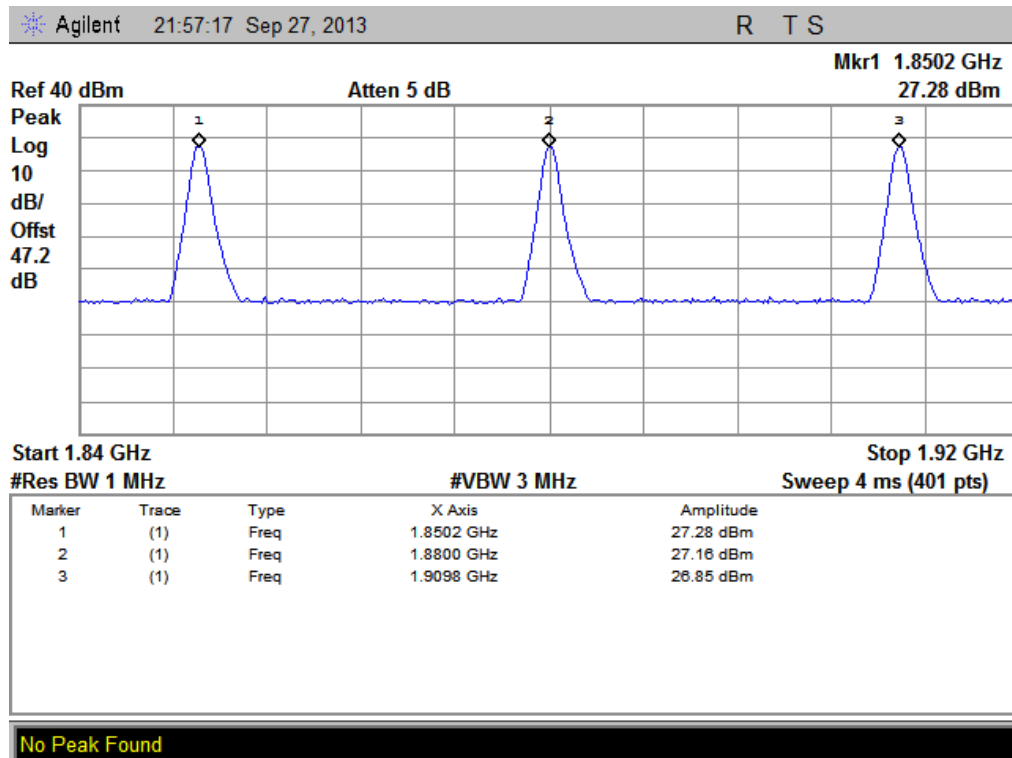
(Plot C: EGPRS 850MHz Channel = 128, 190, 251)



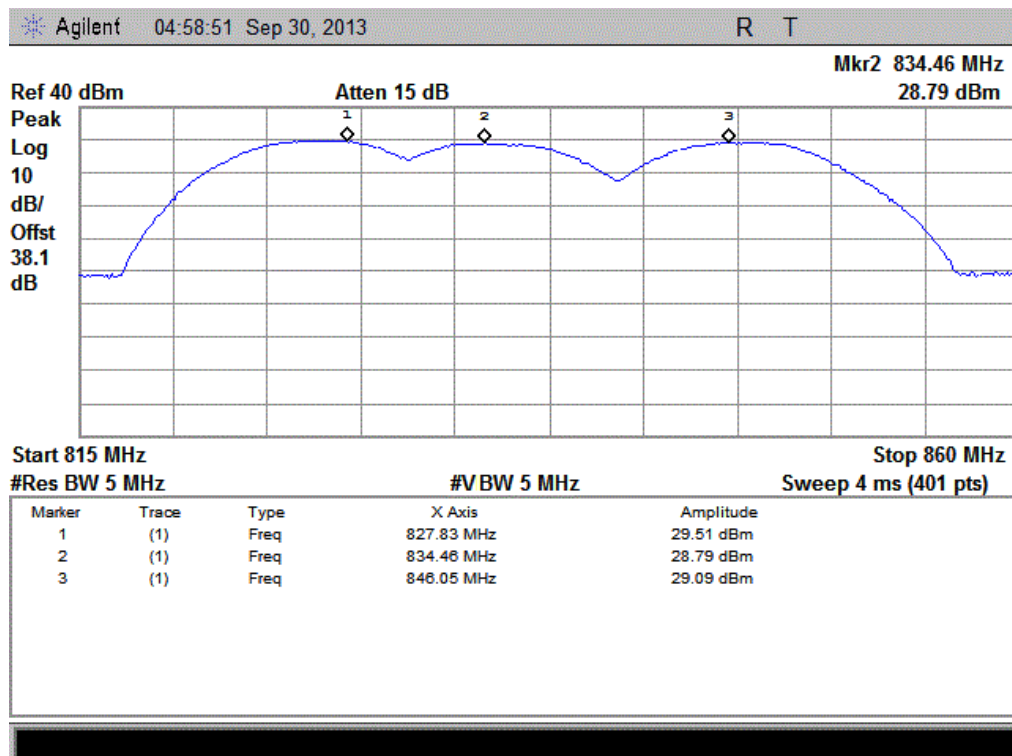
(Plot D: GSM 1900MHz Channel = 512, 661, 810)



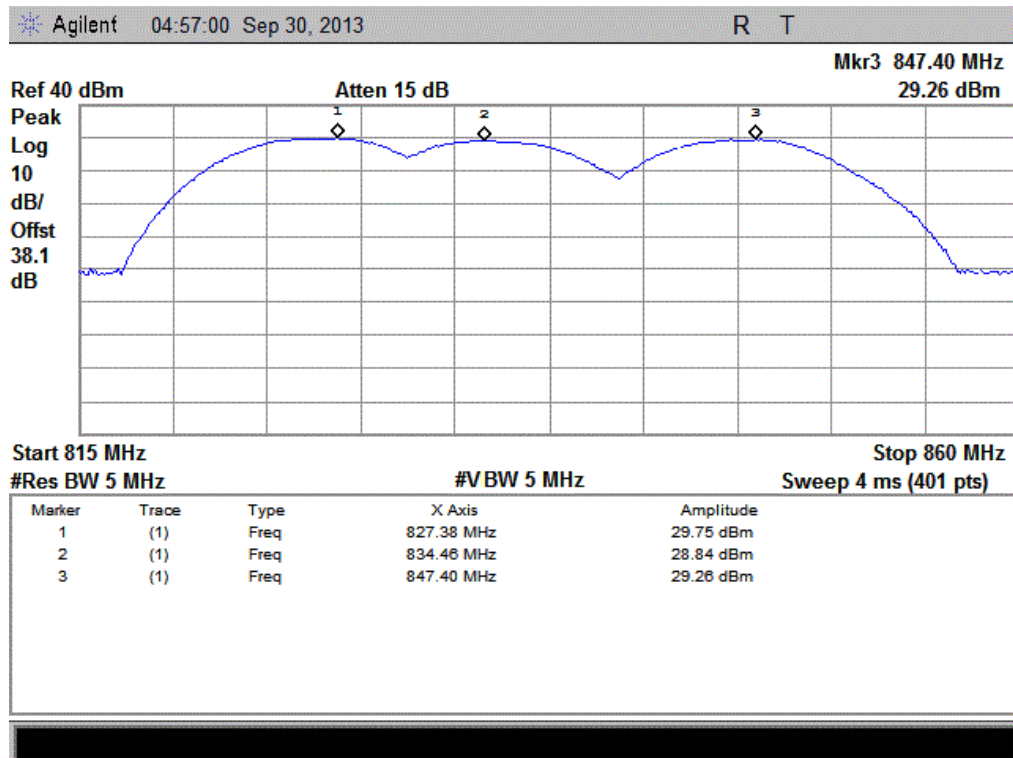
(Plot E: GPRS 1900MHz Channel = 512, 661, 810)



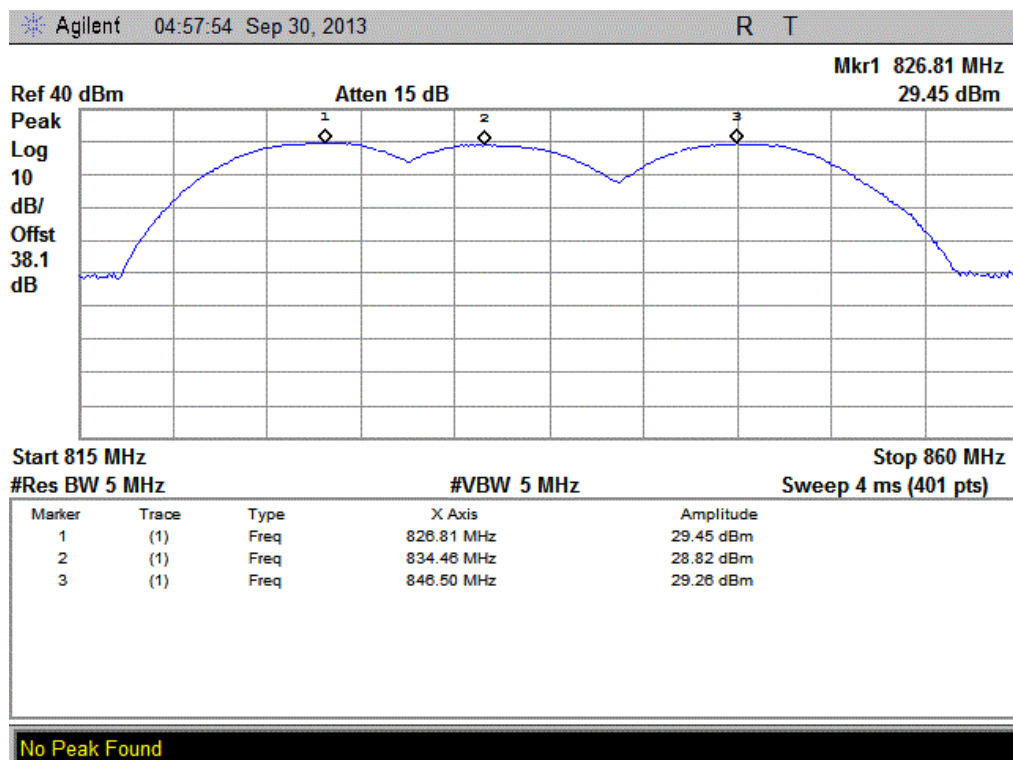
(Plot F: EGPRS 1900MHz Channel = 512, 661, 810)



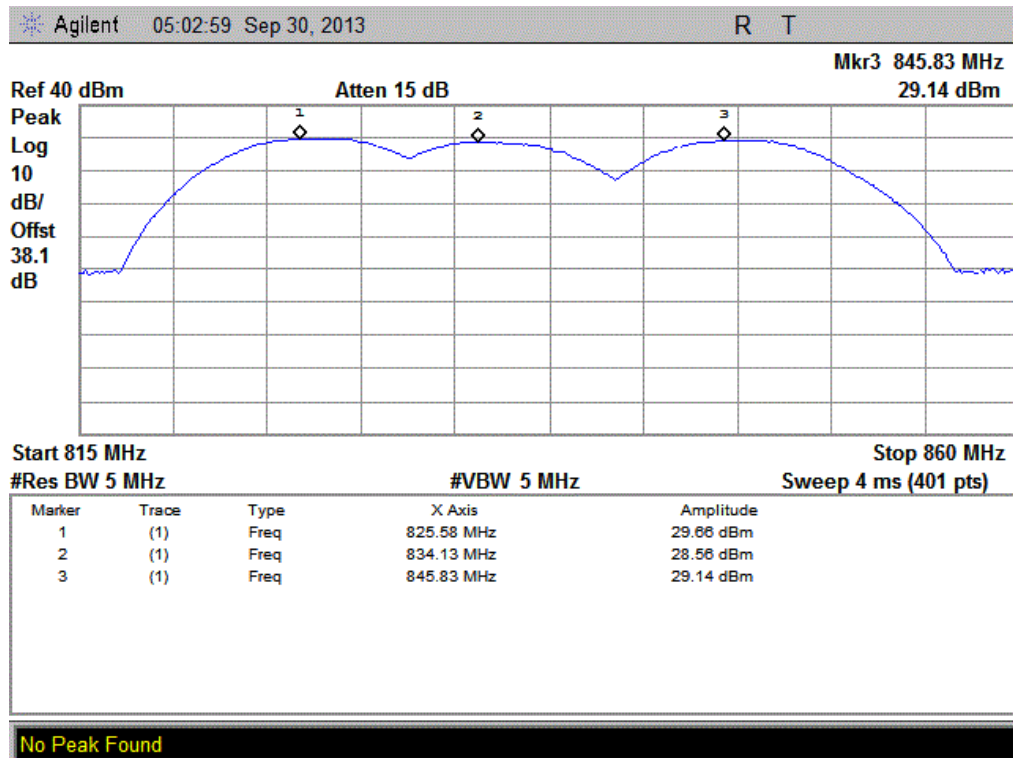
(Plot G: WCDMA 850 MHz Channel = 4132, 4175, 4233)



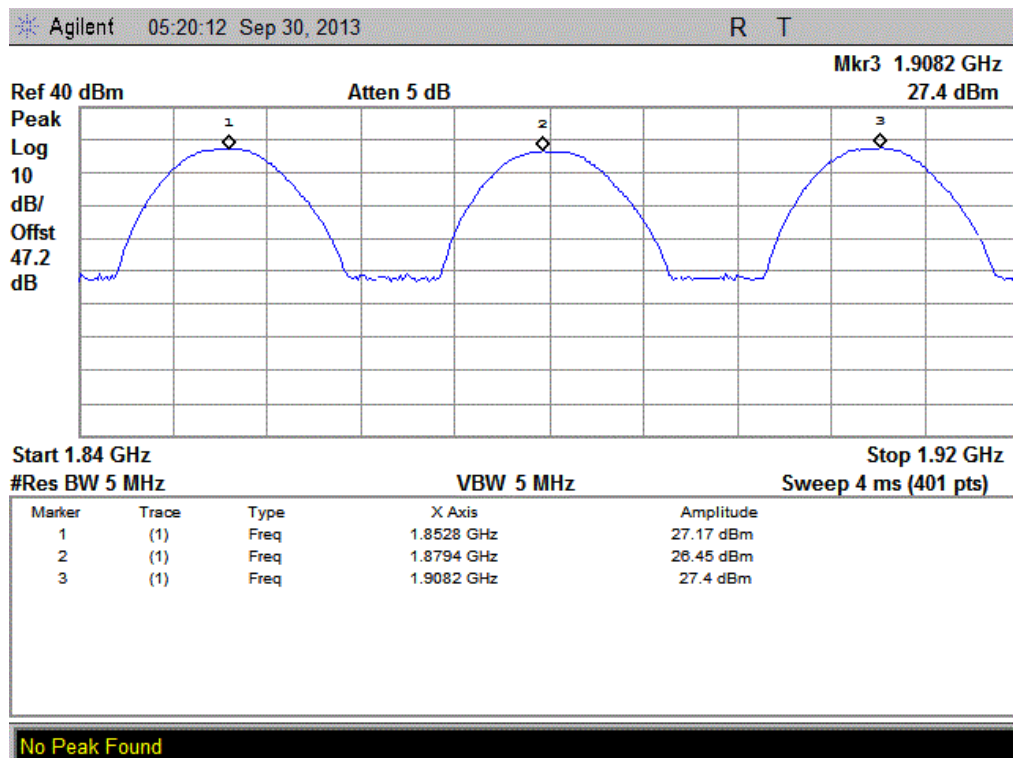
(Plot H: HSDPA 850 MHz Channel = 4132, 4175, 4233)



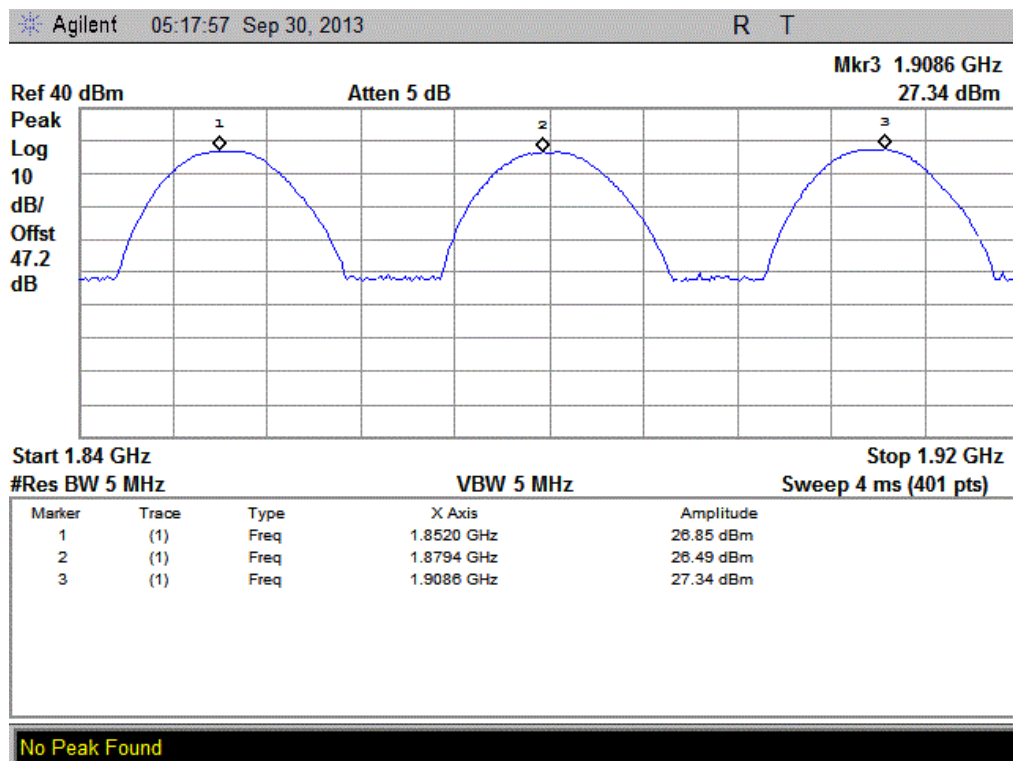
(Plot I: HSUPA 850 MHz Channel = 4132, 4175, 4233)



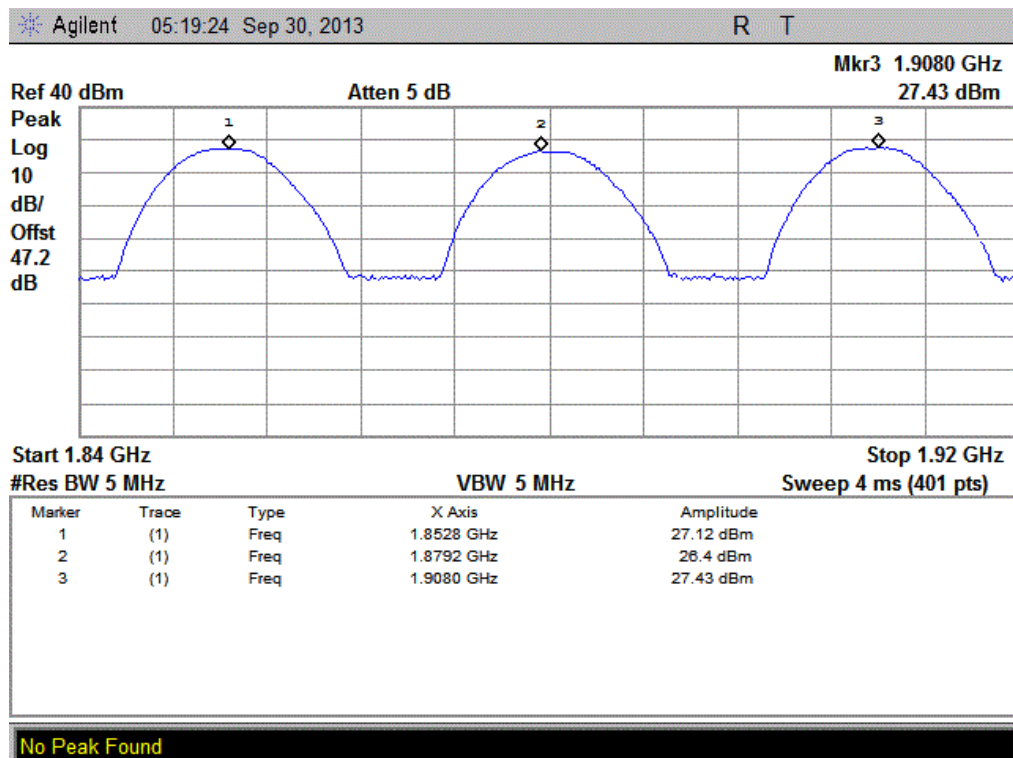
(Plot J: HSPA+ 850 MHz Channel = 4132, 4175, 4233)



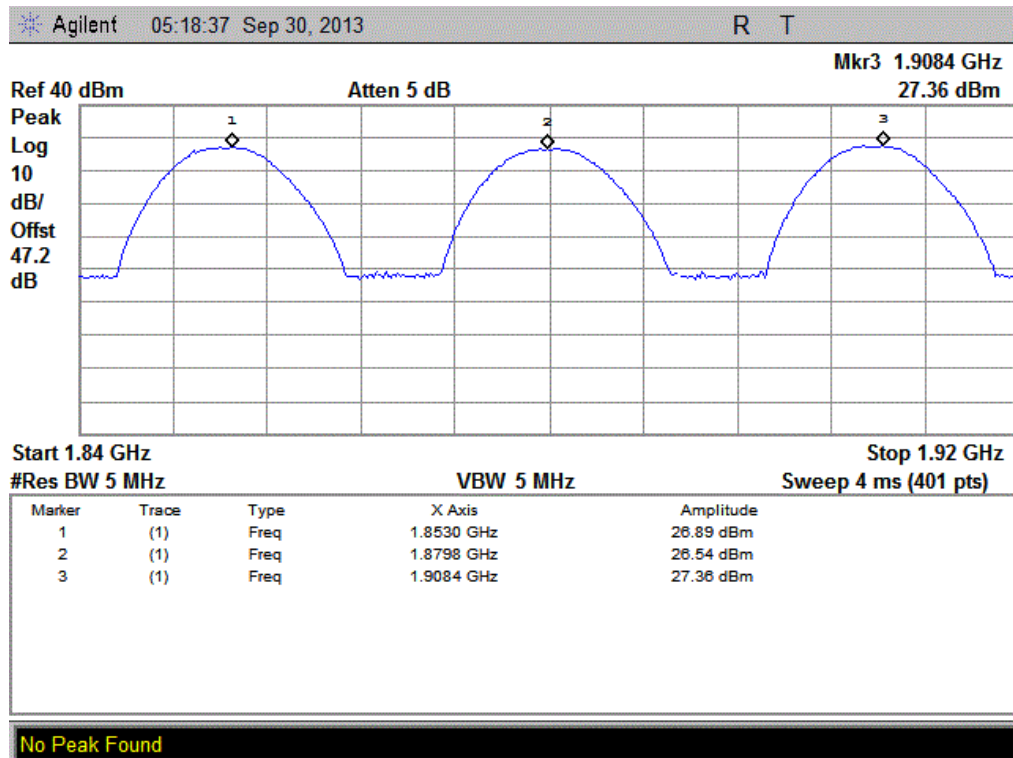
(Plot K: WCDMA 1900 MHz Channel = 9262, 9400, 9538)



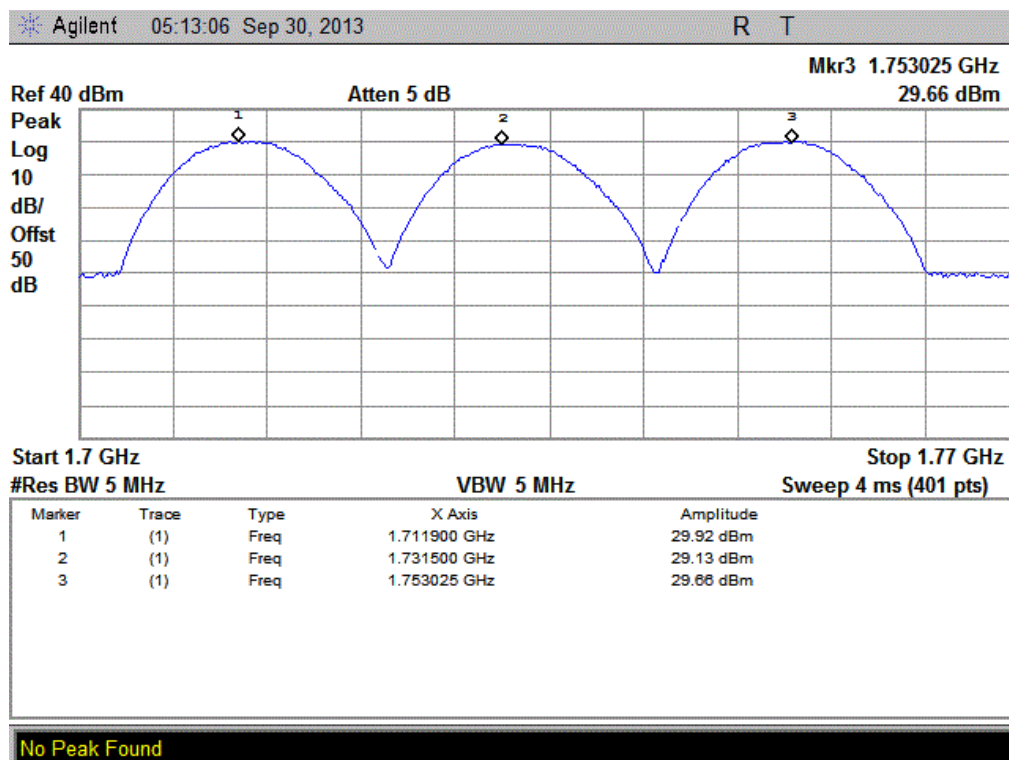
(Plot L: HSDPA1900 MHz Channel = 9262, 9400, 9538)



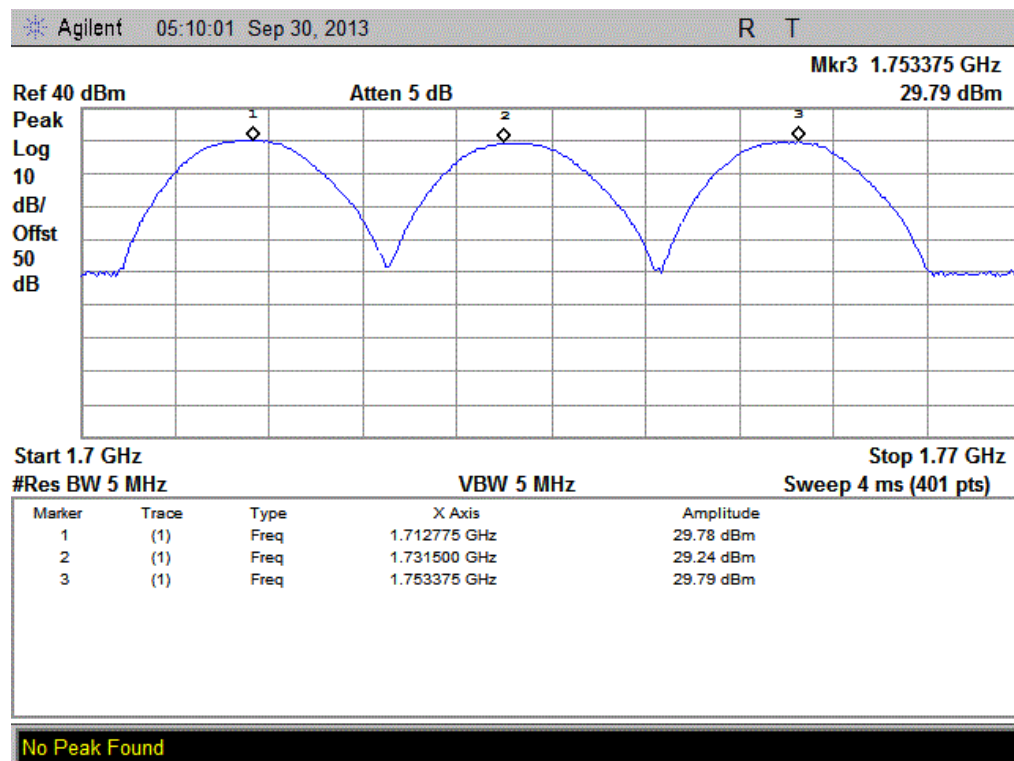
(Plot M: HSUPA1900 MHz Channel = 9262, 9400, 9538)



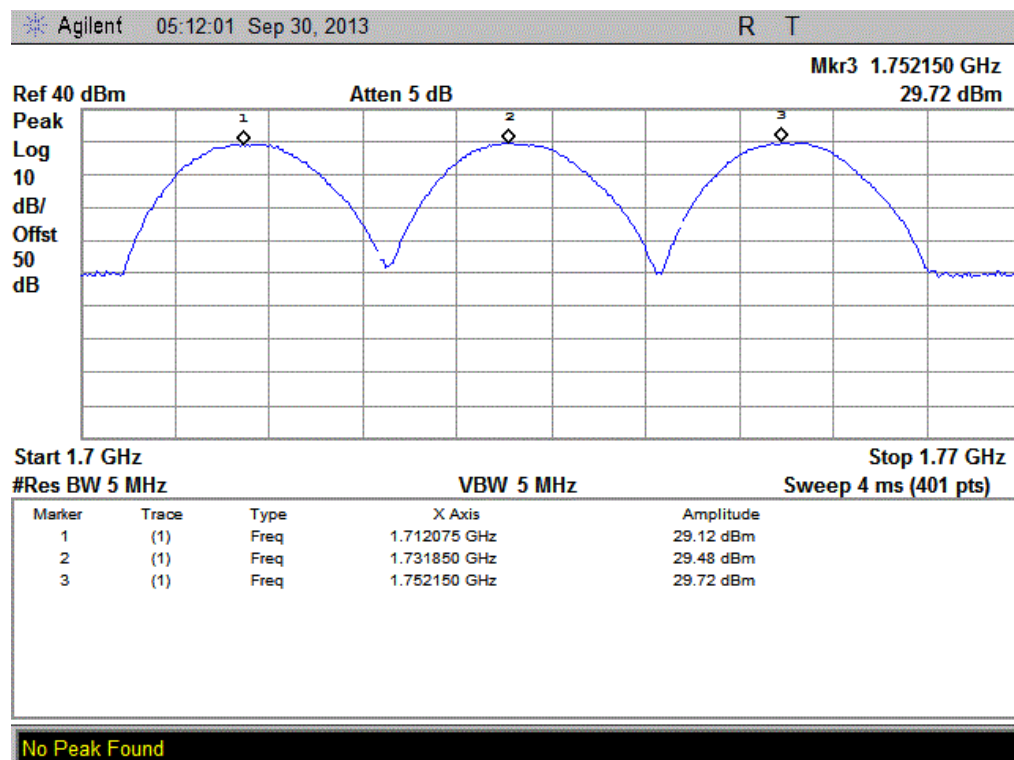
(Plot N: HSPA+1900 MHz Channel = 9262, 9400, 9538)



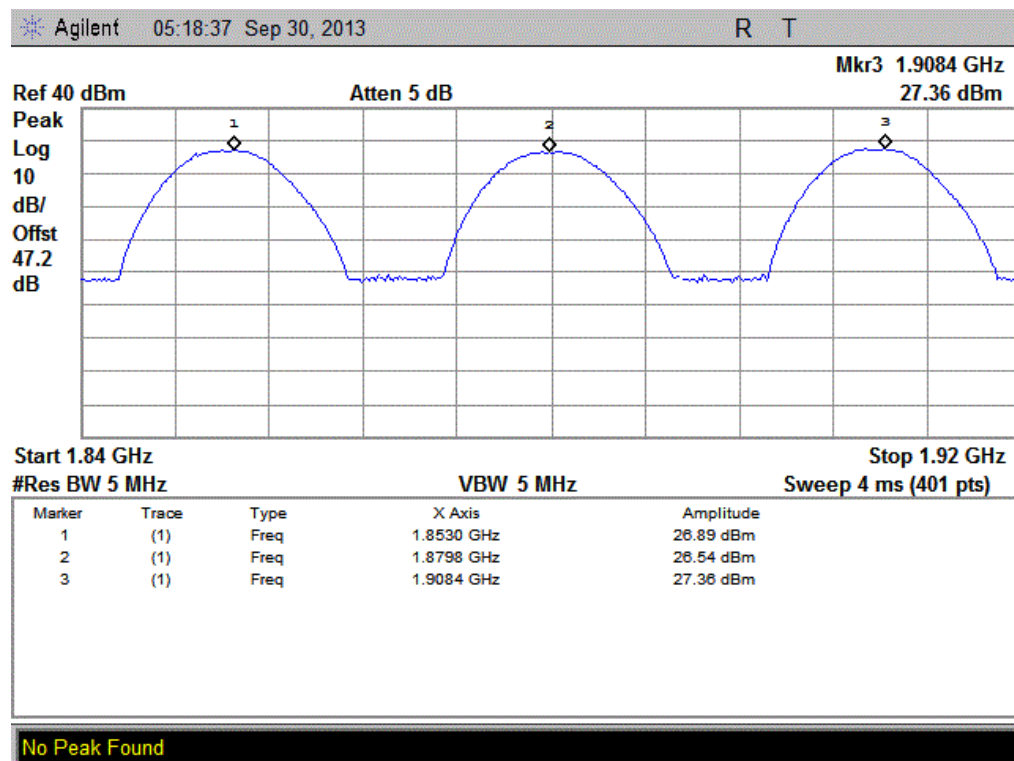
(Plot O: WCDMA 1700MHz Channel = 1312, 1412, 1513)



(Plot P: HSDPA 1700MHz Channel = 1312, 1412, 1513)



(Plot Q: HSUPA 1700MHz Channel = 1312, 1412, 1513)



(Plot R: HSPA+ 1700MHz Channel = 1312, 1412, 1513)

2.8 Radiated Out of Band Emissions

2.8.1 Requirement

According to FCC section 22.917(a) and section 24.238(a), 27.53(g) 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	2013.05	2014.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2013.05	2014.05
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2013.05	2014.05
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2013.05	2014.05
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2013.05	2014.05
Substitution Antenna	Schwarzbeck	BBHA 9120C	9120C-384	2013.05	2014.05
Pre-AMPs	lucix	S10M100L3802	S020180L3203	2013.05	2014.05
Notch Filter	COM-MW	ZBSF-C836.5-25-X	NA	2013.05	2014.05
Notch Filter	COM-MW	ZBSF-C1747.5-75-X2	NA	2013.05	2014.05
Notch Filter	COM-MW	ZBSF-C1880-60-X2	NA	2013.05	2014.05

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:

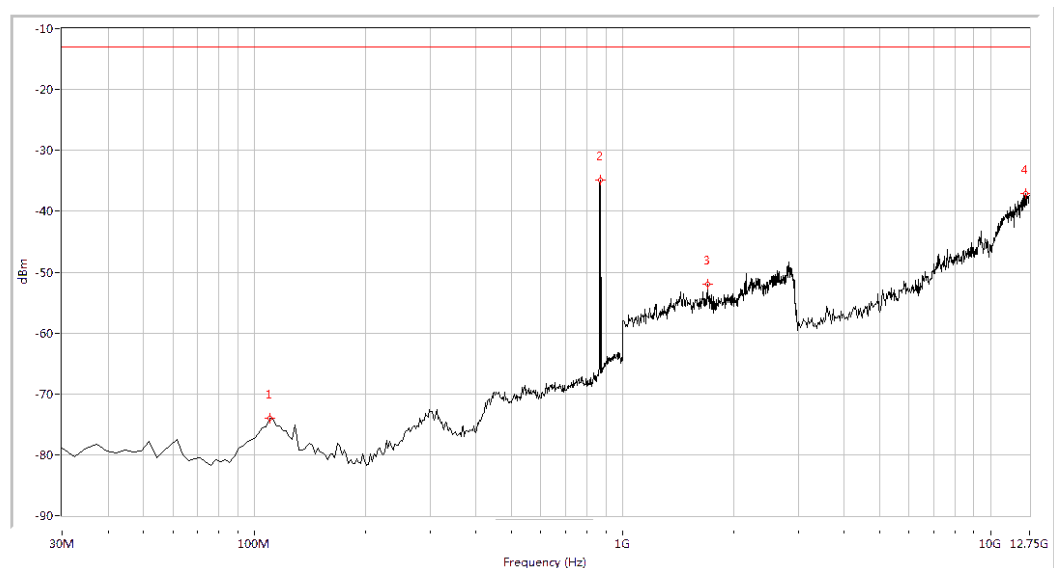
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
GSM 850MHz	128	824.2	< -25	< -25	Plot A.1/A.2	-13	PASS
	190	836.6	< -25	< -25	Plot A.3/A.4		PASS
	251	848.8	< -25	< -25	Plot A.5/A.6		PASS
GSM 1900MHz	512	1850.2	< -25	< -25	Plot B.1/B.2	-13	PASS
	661	1880.0	< -25	< -25	Plot B.3/B.4		PASS
	810	1909.8	< -25	< -25	Plot B.5/B.6		PASS
EDGE 850MHz	128	824.2	< -25	< -25	Plot C.1/C.2	-13	PASS
	190	836.6	< -25	< -25	Plot C.3/C.4		PASS
	251	848.8	< -25	< -25	Plot C.5/C.6		PASS
EDGE 1900MHz	512	1850.2	< -25	< -25	Plot D.1/D.2	-13	PASS
	661	1880.0	< -25	< -25	Plot D.3/D.4		PASS
	810	1909.8	< -25	< -25	Plot D.5/D.6		PASS
WCDMA 850MHz	4132	826.4	< -25	< -25	Plot E.1/E.2	-13	PASS
	4175	835	< -25	< -25	Plot E.3/E.4		PASS
	4233	846.6	< -25	< -25	Plot E.5/E.6		PASS
WCDMA 1900MHz	9262	1852.4	< -25	< -25	Plot F.1/F.2	-13	PASS
	9400	1880	< -25	< -25	Plot F.3/F.4		PASS
	9538	1907.6	< -25	< -25	Plot F.5/F.6		PASS
HSDPA 850MHz	4132	826.4	< -25	< -25	Plot G.1/G.2	-13	PASS
	4175	835	< -25	< -25	Plot G.3/G.4		PASS
	4233	846.6	< -25	< -25	Plot G.5/G.6		PASS
HSDPA 1900MHz	9262	1852.4	< -25	< -25	Plot H.1/H.2	-13	PASS
	9400	1880	< -25	< -25	Plot H.3/H.4		PASS
	9538	1907.6	< -25	< -25	Plot H.5/H.6		PASS
HSUPA 850MHz	4132	826.4	< -25	< -25	Plot I.1/I.2	-13	PASS
	4175	835	< -25	< -25	Plot I.3/I.4		PASS
	4233	846.6	< -25	< -25	Plot I.5/I.6		PASS
HSUPA 1900MHz	9262	1852.4	< -25	< -25	Plot J.1/J.2	-13	PASS
	9400	1880	< -25	< -25	Plot J.3/J.4		PASS
	9538	1907.6	< -25	< -25	Plot J.5/J.6		PASS
HSPA+ 850MHz	4132	826.4	< -25	< -25	Plot K.1/K.2	-13	PASS
	4175	835	< -25	< -25	Plot K.3/K.4		PASS
	4233	846.6	< -25	< -25	Plot K.5/K.6		PASS
HSPA+ 1900MHz	9662	1852.4	< -25	< -25	Plot L.1/L.2	-13	PASS
	9800	1880	< -25	< -25	Plot L.3/L.4		PASS
	9938	1907.6	< -25	< -25	Plot L.5/L.6		PASS
WCDMA	1312	1712.4	< -25	< -25	Plot M.1/M.2	-13	PASS

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
1700MHz	1412	1732.4	< -25	< -25	Plot M.3/M.4		PASS
	1513	1752.6	< -25	< -25	Plot M.5/M.6		PASS
HSDPA 1700MHz	1312	1712.4	< -25	< -25	Plot N.1/N.2	-13	PASS
	1412	1732.4	< -25	< -25	Plot N.3/N.4		PASS
	1513	1752.6	< -25	< -25	Plot N.5/N.6		PASS
HSPA+ 1700MHz	1312	1712.4	< -25	< -25	Plot O.1/O.2	-13	PASS
	1412	1732.4	< -25	< -25	Plot O.3/O.4		PASS
	1513	1752.6	< -25	< -25	Plot O.5/O.6		PASS
HSPA+ 1700MHz	1312	1712.4	< -25	< -25	Plot P.1/P.2	-13	PASS
	1412	1732.4	< -25	< -25	Plot P.3/P.4		PASS
	1513	1752.6	< -25	< -25	Plot P.5/P.6		PASS

2. Test Plots for the Whole Measurement Frequency Range:

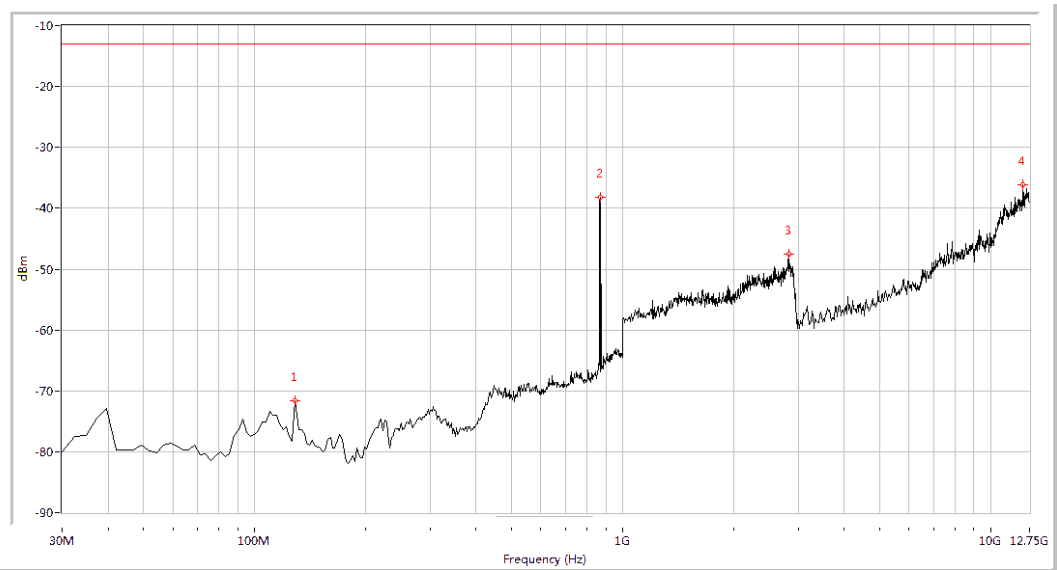
Note1: the power of the EUT transmitting frequency should be ignored.

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.



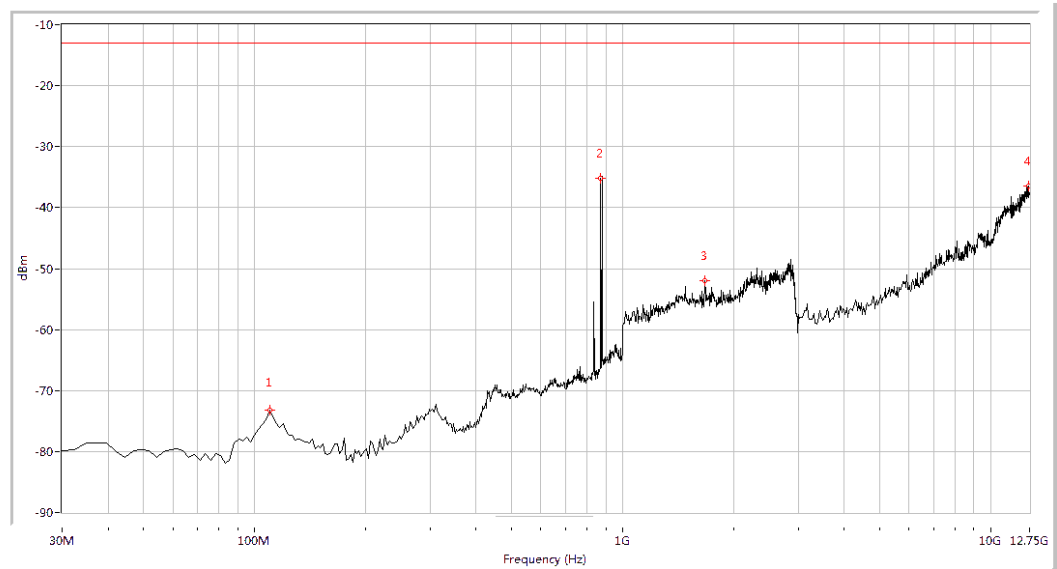
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.93	-13.0	60.9	15.6	Horizontal	PASS
871.796	-34.92	-13.0	21.9	126.3	Horizontal	PASS
1698.254	-52.04	-13.0	39.0	325.7	Horizontal	PASS
12409.60	-37.03	-13.0	24.0	98.0	Horizontal	PASS

(Plot A.1: GSM 850MHz Channel = 128, Test Antenna Horizontal)



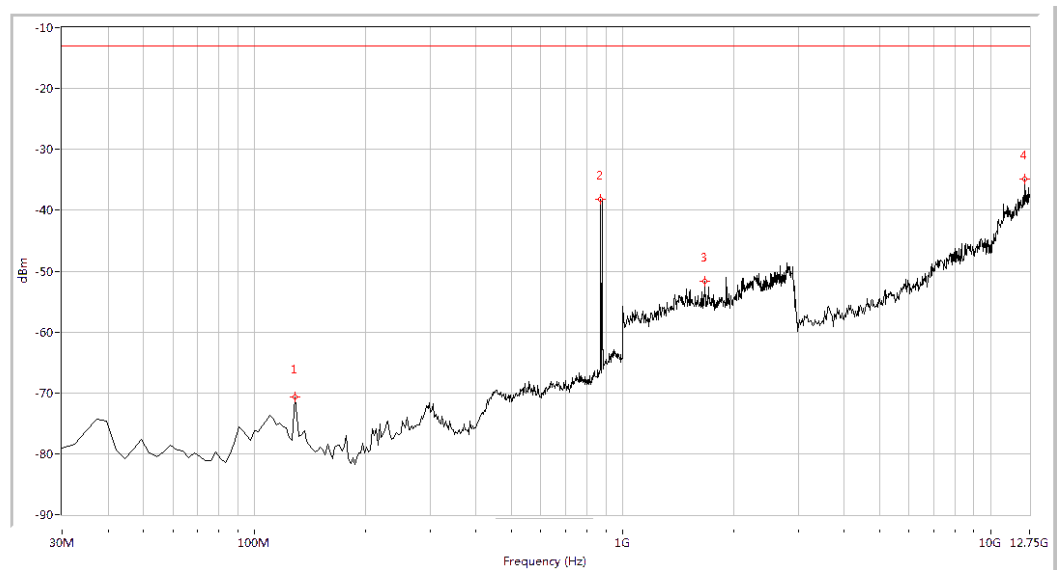
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-71.60	-13.0	58.6	163.5	Vertical	PASS
871.796	-38.22	-13.0	25.2	214.9	Vertical	PASS
2825.436	-47.52	-13.0	34.5	15.3	Vertical	PASS
12239.401	-36.10	-13.0	23.1	187.8	Vertical	PASS

(Plot A.2: GSM 850MHz Channel = 128, Test Antenna Vertical)



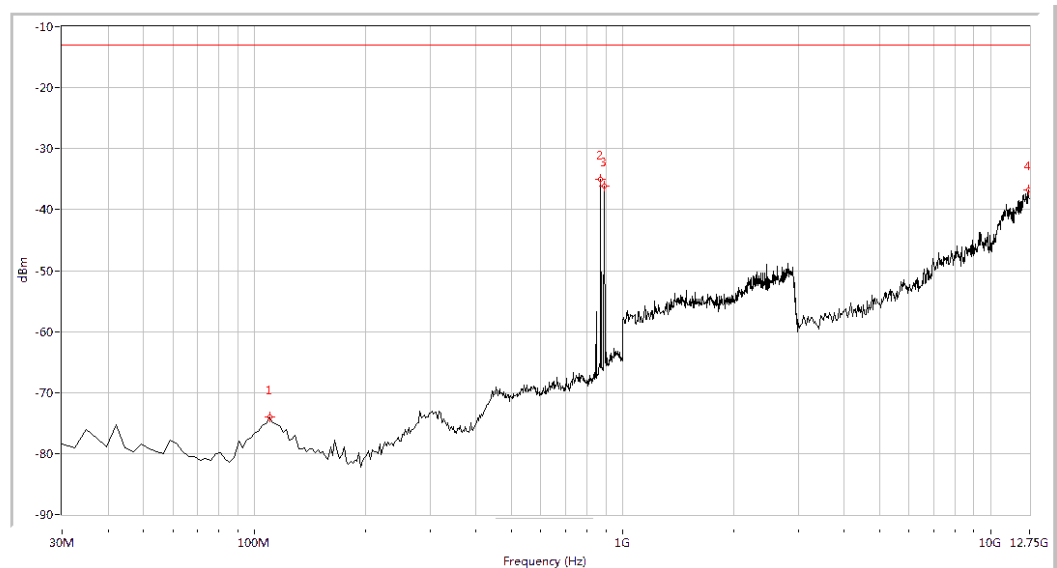
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.23	-13.0	60.2	152.4	Horizontal	PASS
871.796	-35.11	-13.0	22.1	25.0	Horizontal	PASS
1673.317	-52.04	-13.0	39.0	321.1	Horizontal	PASS
12677.057	-36.49	-13.0	23.5	158.6	Horizontal	PASS

(Plot A.3: GSM 850MHz Channel = 190, Test Antenna Horizontal)



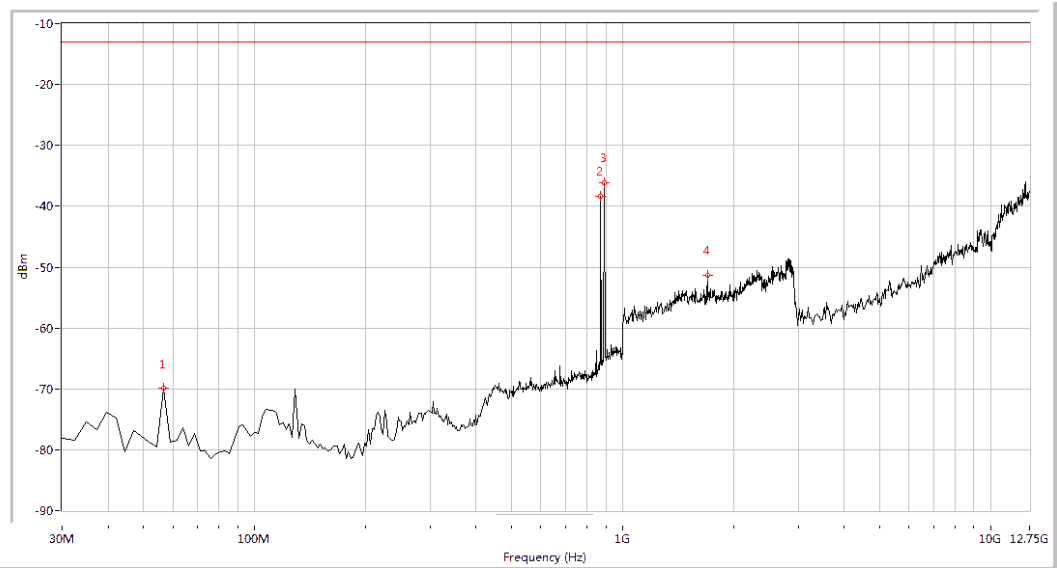
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-70.62	-13.0	57.6	61.2	Vertical	PASS
871.796	-38.24	-13.0	25.2	135.7	Vertical	PASS
1673.317	-51.69	-13.0	38.7	51.0	Vertical	PASS
12385.287	-34.81	-13.0	21.8	342.6	Vertical	PASS

(Plot A.4: GSM 850MHz Channel = 190, Test Antenna Vertical)



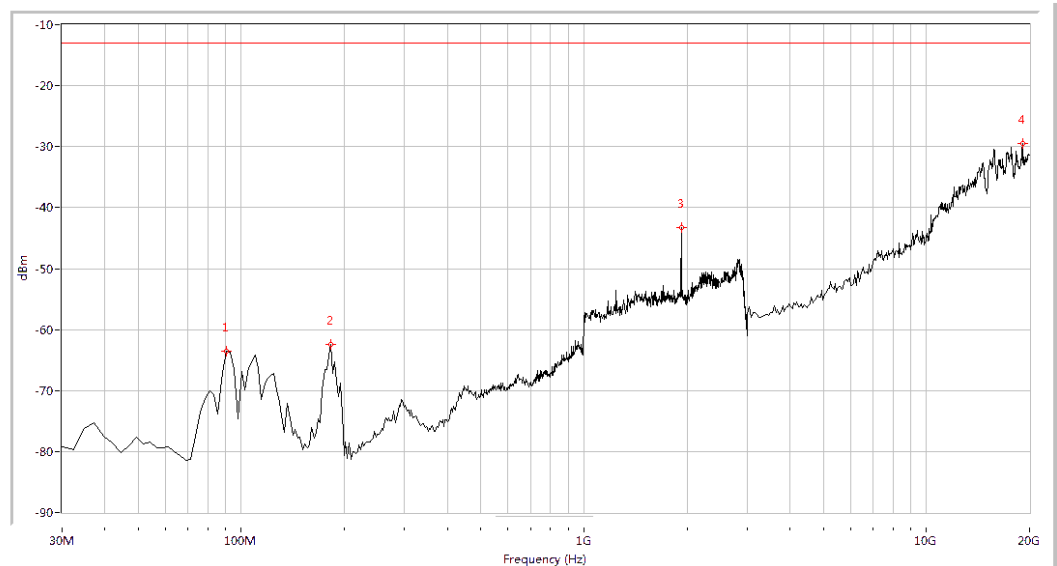
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-74.08	-13.0	61.1	321.5	Horizontal	PASS
871.796	-35.04	-13.0	22.0	126.4	Horizontal	PASS
891.147	-36.09	-13.0	23.1	98.0	Horizontal	PASS
12652.743	-36.78	-13.0	23.8	23.6	Horizontal	PASS

(Plot A.5: GSM 850MHz Channel = 251, Test Antenna Horizontal)



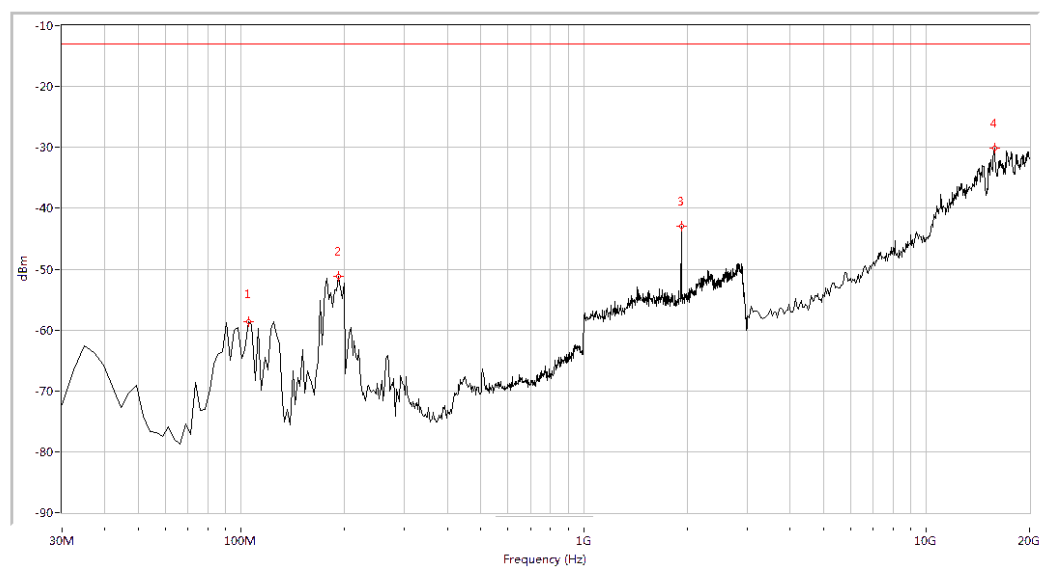
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
56.608	-69.88	-13.0	56.9	15.1	Vertical	PASS
871.796	-38.34	-13.0	25.3	245.6	Vertical	PASS
891.147	-36.10	-13.0	23.1	324.9	Vertical	PASS
1698.254	-51.30	-13.0	38.3	71.0	Vertical	PASS

(Plot A.6: GSM 850MHz Channel = 251, Test Antenna Vertical)



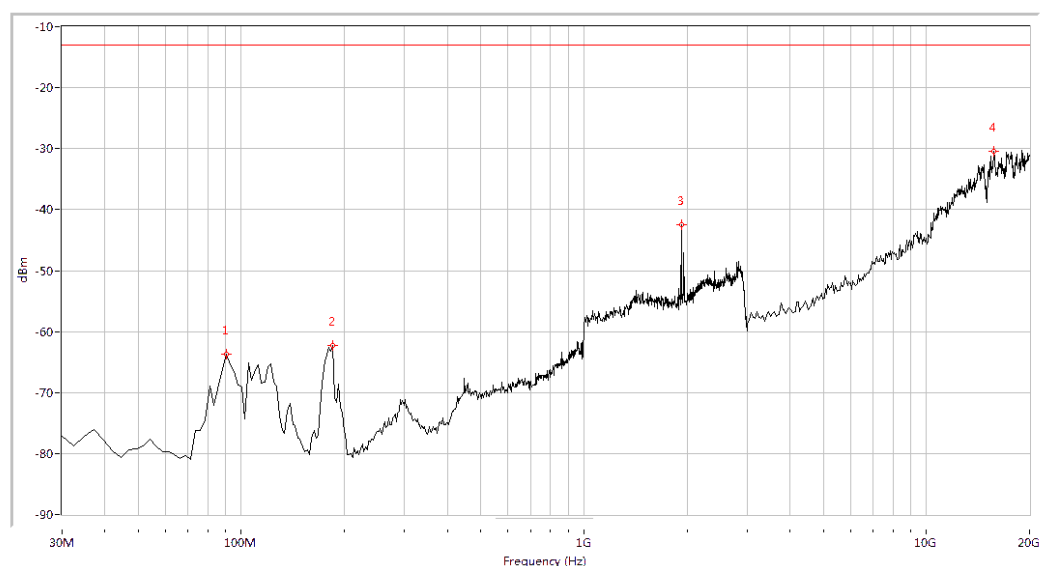
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-63.55	-13.0	50.5	156.2	Horizontal	PASS
182.394	-62.38	-13.0	49.4	85.0	Horizontal	PASS
1927.681	-43.35	-13.0	30.3	246.4	Horizontal	PASS
1906.732	-29.46	-13.0	16.5	321.8	Horizontal	PASS

(Plot B.1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



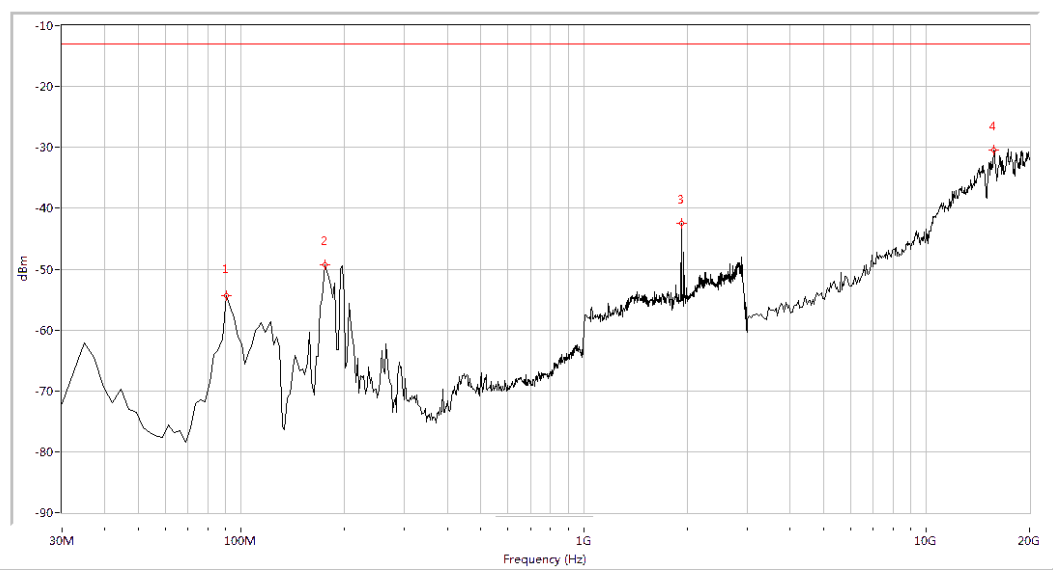
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-58.67	-13.0	45.7	156.5	Vertical	PASS
192.070	-51.11	-13.0	38.1	15.9	Vertical	PASS
1927.681	-42.87	-13.0	29.9	325.4	Vertical	PASS
15802.993	-30.07	-13.0	17.1	128.7	Vertical	PASS

(Plot B.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



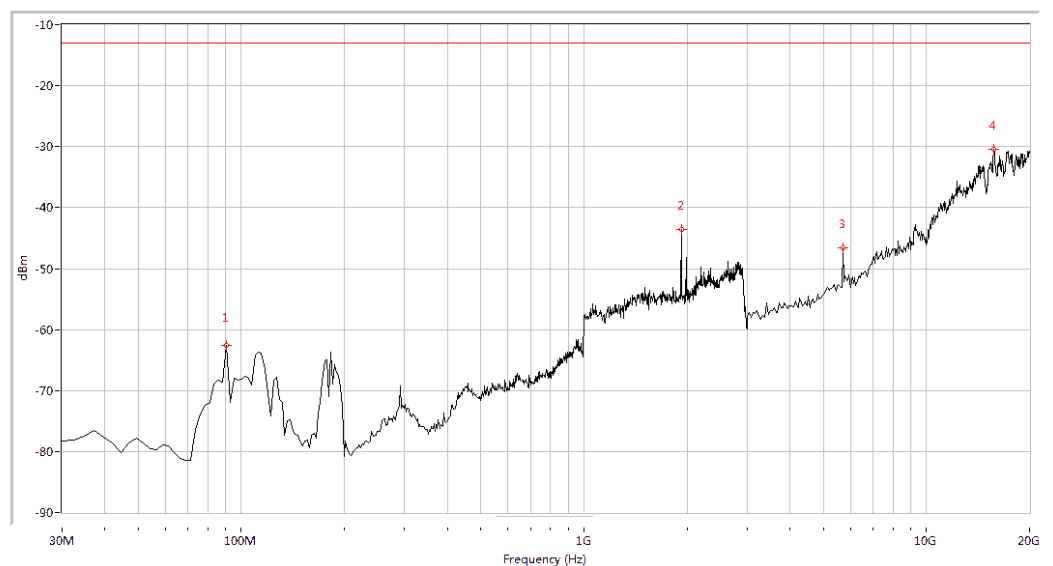
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-63.76	-13.0	50.8	159.4	Horizontal	PASS
184.813	-62.35	-13.0	49.3	56.0	Horizontal	PASS
1927.681	-42.52	-13.0	29.5	325.7	Horizontal	PASS
15760.599	-30.50	-13.0	17.5	241.9	Horizontal	PASS

(Plot B.3: GSM 1900MHz Channel = 661, Test Antenna Horizontal)



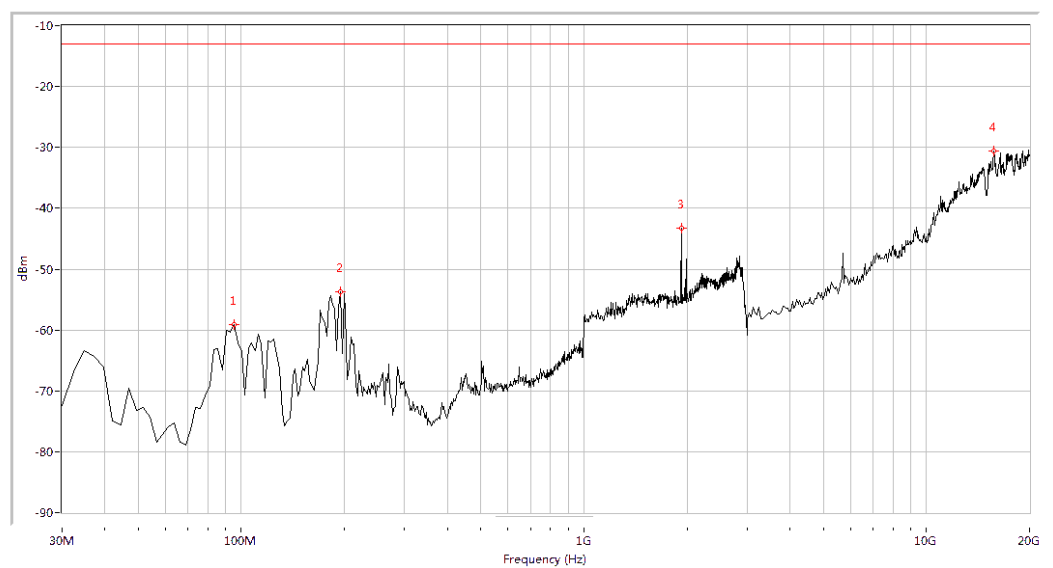
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-54.38	-13.0	41.4	125.4	Vertical	PASS
175.137	-49.22	-13.0	36.2	35.0	Vertical	PASS
1927.681	-42.48	-13.0	29.5	87.6	Vertical	PASS
15760.599	-30.42	-13.0	17.4	325.8	Vertical	PASS

(Plot B.4: GSM 1900MHz Channel = 661, Test Antenna Vertical)



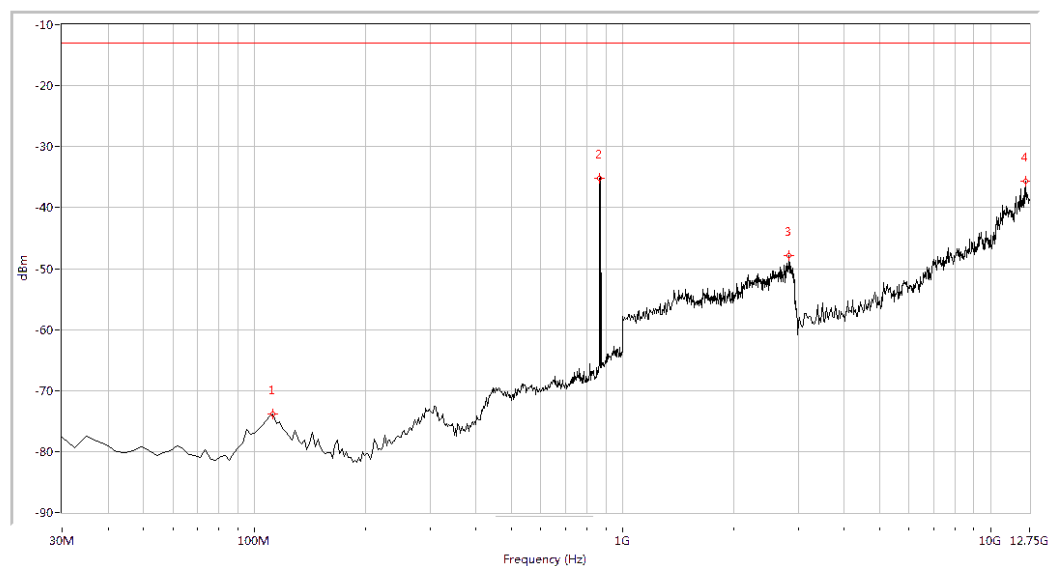
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-62.53	-13.0	49.5	162.1	Horizontal	PASS
1927.681	-43.61	-13.0	30.6	25.0	Horizontal	PASS
5713.217	-46.52	-13.0	33.5	181.8	Horizontal	PASS
15718.204	-30.51	-13.0	17.5	215.9	Horizontal	PASS

(Plot B.5: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



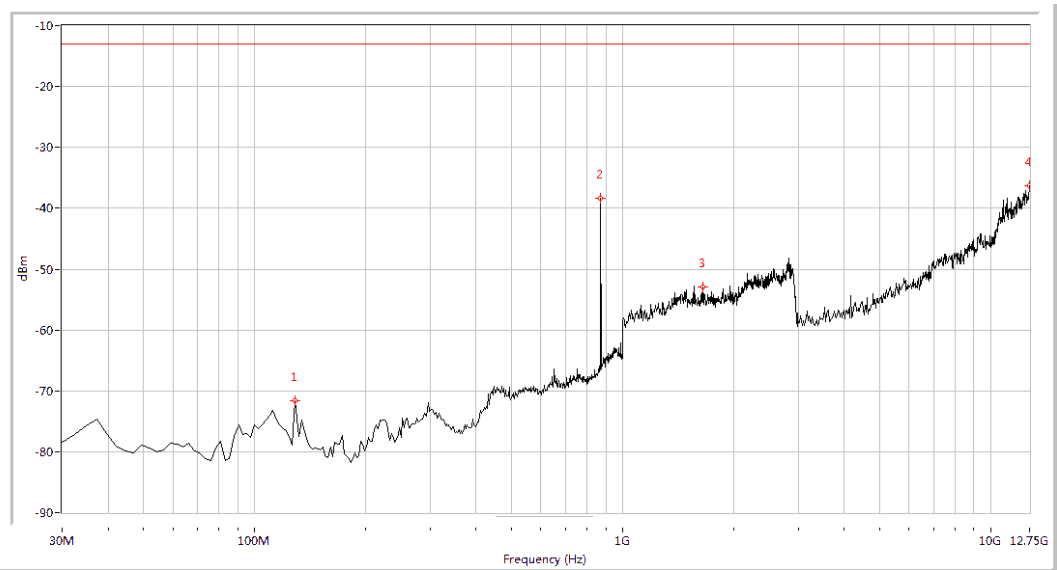
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
95.312	-59.15	-13.0	46.1	263.4	Vertical	PASS
194.489	-53.65	-13.0	40.6	35.6	Vertical	PASS
1927.681	-43.21	-13.0	30.2	153.2	Vertical	PASS
15718.204	-30.65	-13.0	17.6	84.7	Vertical	PASS

(PlotB.6: GSM 1900MHz Channel = 810, Test Antenna Vertical)



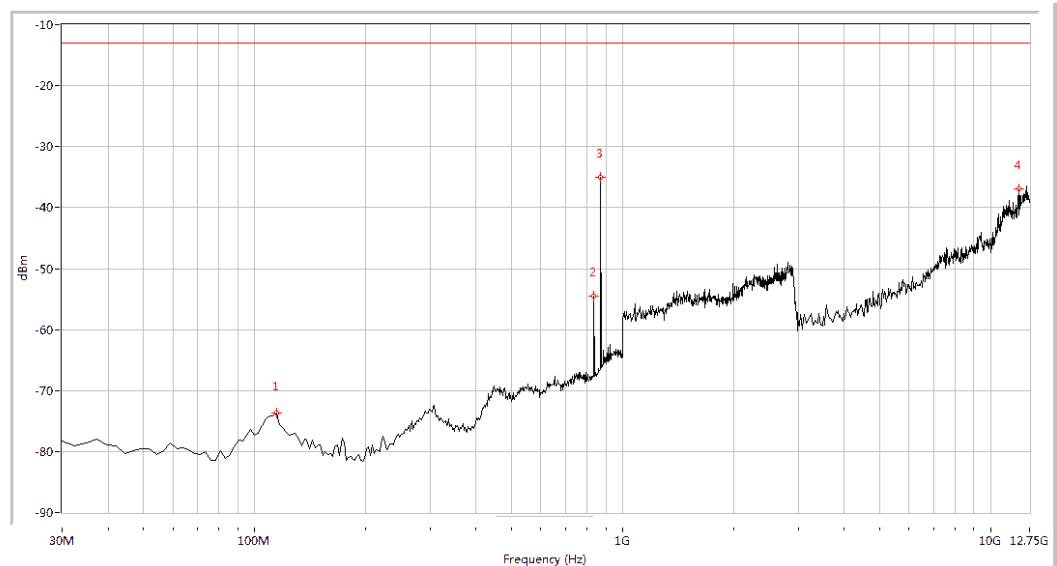
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.76	-13.0	60.8	84.0	Horizontal	PASS
866.958	-35.13	-13.0	22.1	125.4	Horizontal	PASS
2835.411	-47.91	-13.0	34.9	315.2	Horizontal	PASS
12409.601	-35.62	-13.0	22.6	152.8	Horizontal	PASS

(Plot C.1: EGPRS 850MHz Channel = 128, Test Antenna Horizontal)



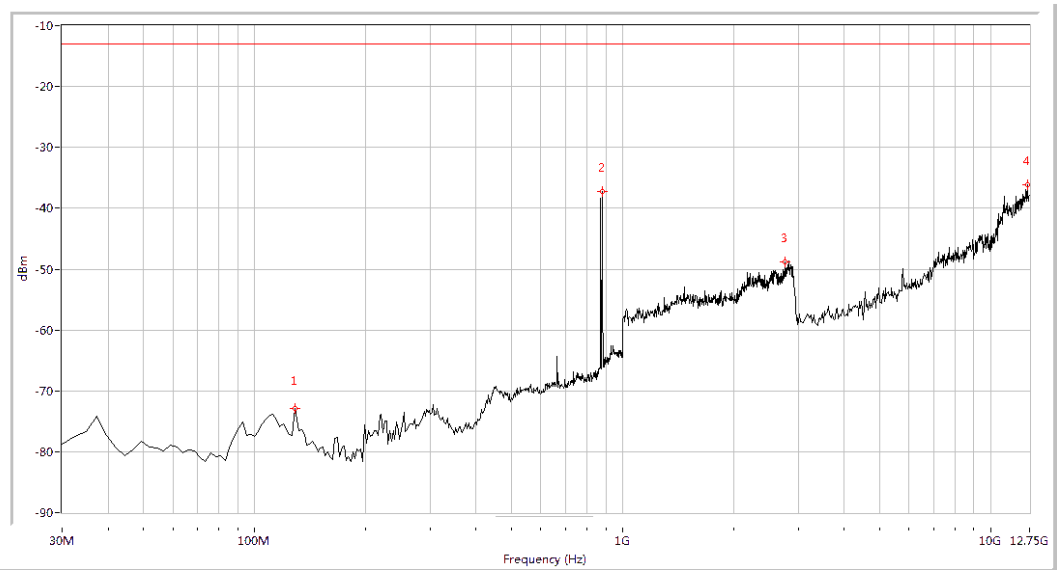
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-71.57	-13.0	58.6	156.4	Vertical	PASS
871.796	-38.38	-13.0	25.4	25.7	Vertical	PASS
1648.379	-53.00	-13.0	40.0	86.0	Vertical	PASS
12725.686	-36.31	-13.0	23.3	325.6	Vertical	PASS

(Plot C.2: EGPRS 850MHz Channel = 128, Test Antenna Vertical)



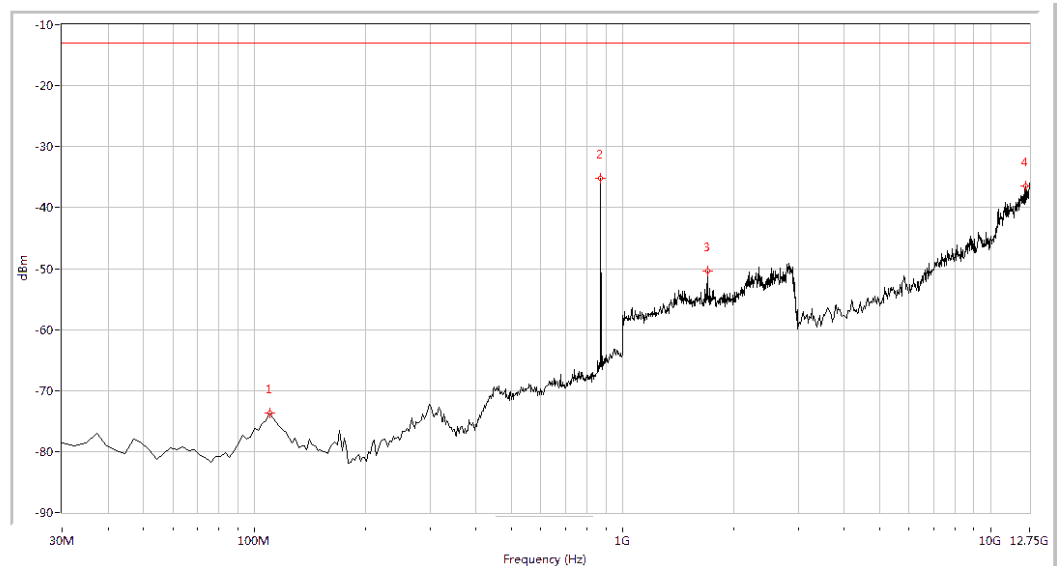
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
114.663	-73.70	-13.0	60.7	156.4	Horizontal	PASS
835.511	-54.57	-13.0	41.6	125.0	Horizontal	PASS
871.796	-35.08	-13.0	22.1	56.9	Horizontal	PASS
11899.002	-37.00	-13.0	24.0	322.6	Horizontal	PASS

(Plot C.3: EGPRS 850MHz Channel = 190, Test Antenna Horizontal)



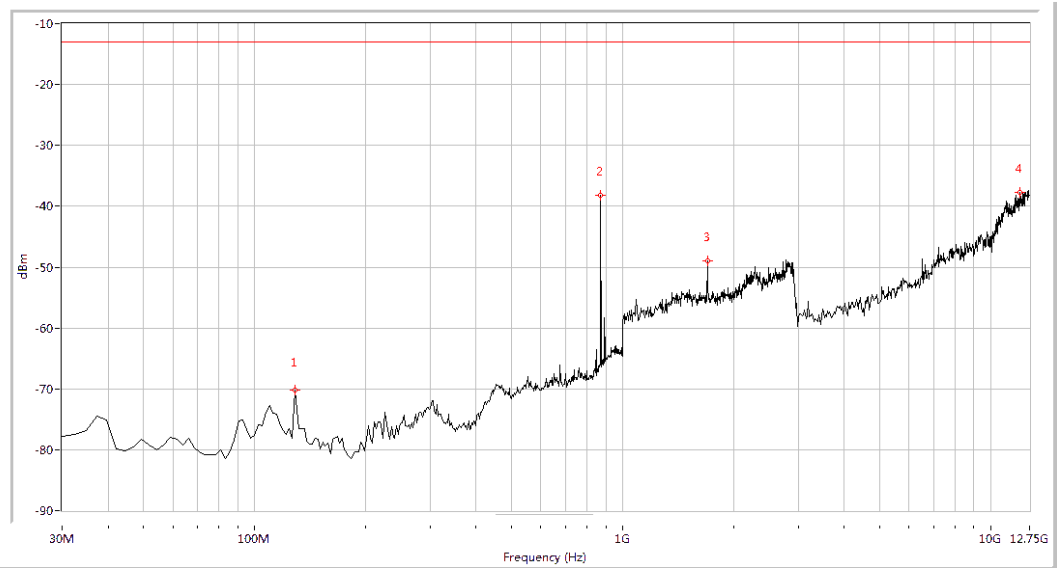
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-72.85	-13.0	59.9	15.6	Vertical	PASS
879.052	-37.30	-13.0	24.3	320.0	Vertical	PASS
2765.586	-48.80	-13.0	35.8	158.7	Vertical	PASS
12604.115	-36.07	-13.0	23.1	215.4	Vertical	PASS

(Plot C.4: EGPRS 850MHz Channel = 190, Test Antenna Vertical)



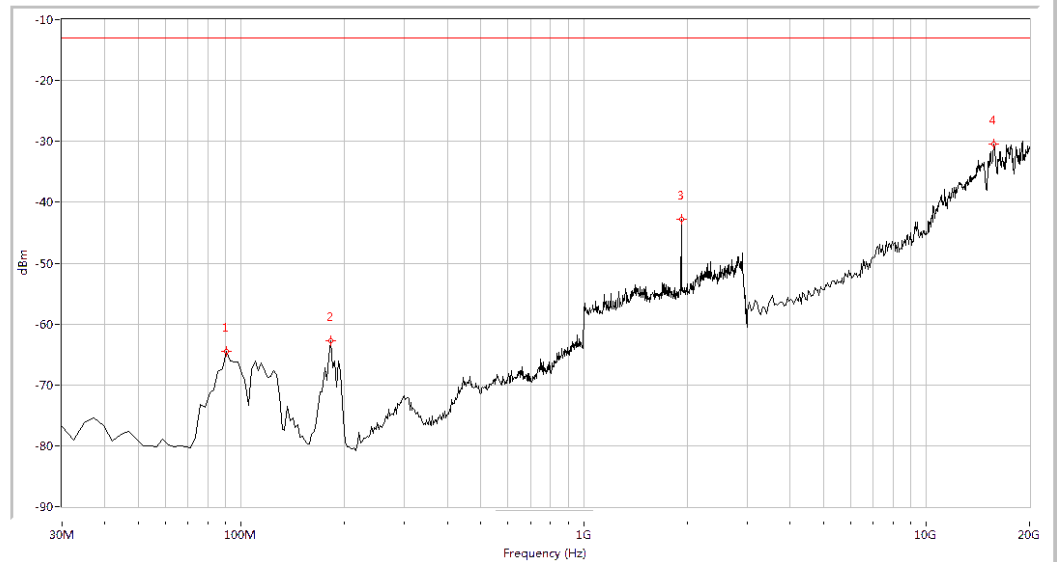
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.76	-13.0	60.8	25.0	Horizontal	PASS
871.796	-35.15	-13.0	22.1	162.3	Horizontal	PASS
1698.254	-50.33	-13.0	37.3	341.9	Horizontal	PASS
12409.60	-36.44	-13.0	23.4	89.4	Horizontal	PASS

(Plot C.5: EGPRS 850MHz Channel = 251, Test Antenna Horizontal)



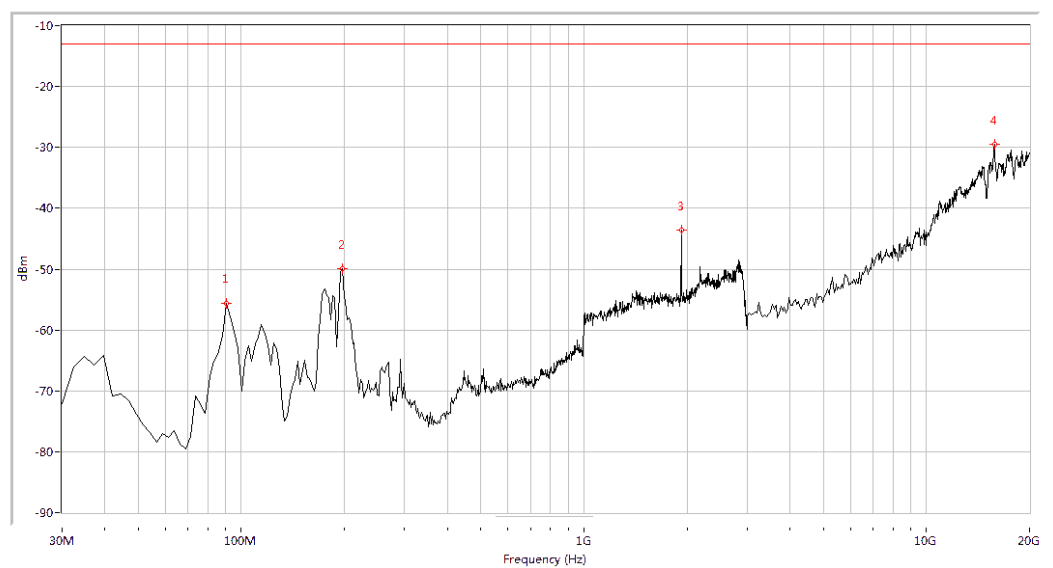
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-70.17	-13.0	57.2	162.4	Vertical	PASS
871.796	-38.24	-13.0	25.2	13.2	Vertical	PASS
1698.254	-49.04	-13.0	36.0	85.0	Vertical	PASS
12020.574	-37.65	-13.0	24.7	341.6	Vertical	PASS

(Plot C.6: EGPRS 850MHz Channel = 251, Test Antenna Vertical)



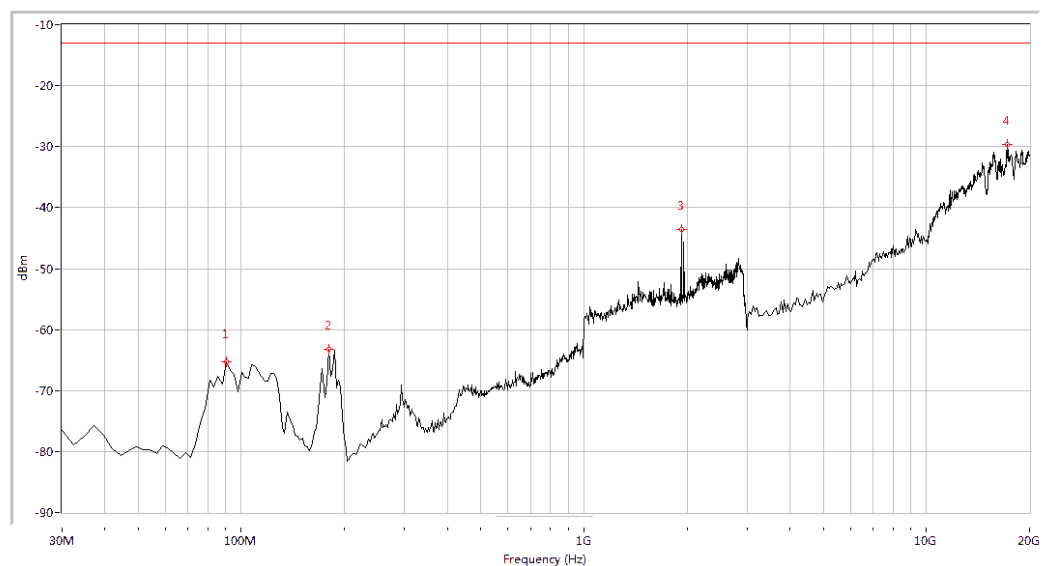
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-64.51	-13.0	51.5	125.6	Horizontal	PASS
182.394	-62.76	-13.0	49.8	65.0	Horizontal	PASS
1927.681	-42.79	-13.0	29.8	185.7	Horizontal	PASS
15760.599	-30.41	-13.0	17.4	317.8	Horizontal	PASS

(Plot D.1: EGPRS 1900MHz Channel = 512, Test Antenna Horizontal)



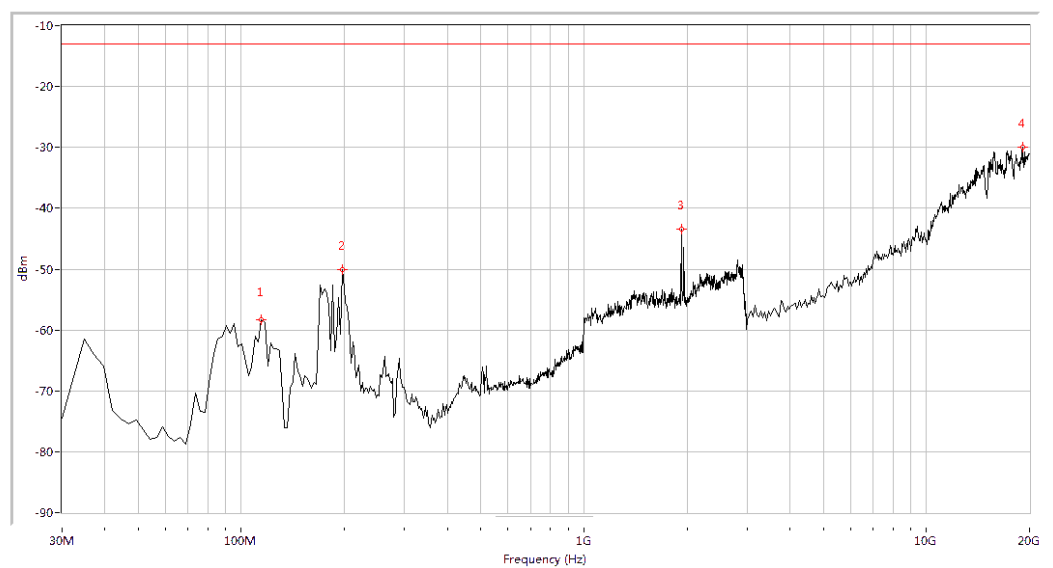
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-55.60	-13.0	42.6	125.4	Vertical	PASS
196.908	-49.92	-13.0	36.9	241.9	Vertical	PASS
1927.681	-43.54	-13.0	30.5	321.6	Vertical	PASS
15802.993	-29.47	-13.0	16.5	98.0	Vertical	PASS

(Plot D.2: EGPRS 1900MHz Channel = 512, Test Antenna Vertical)



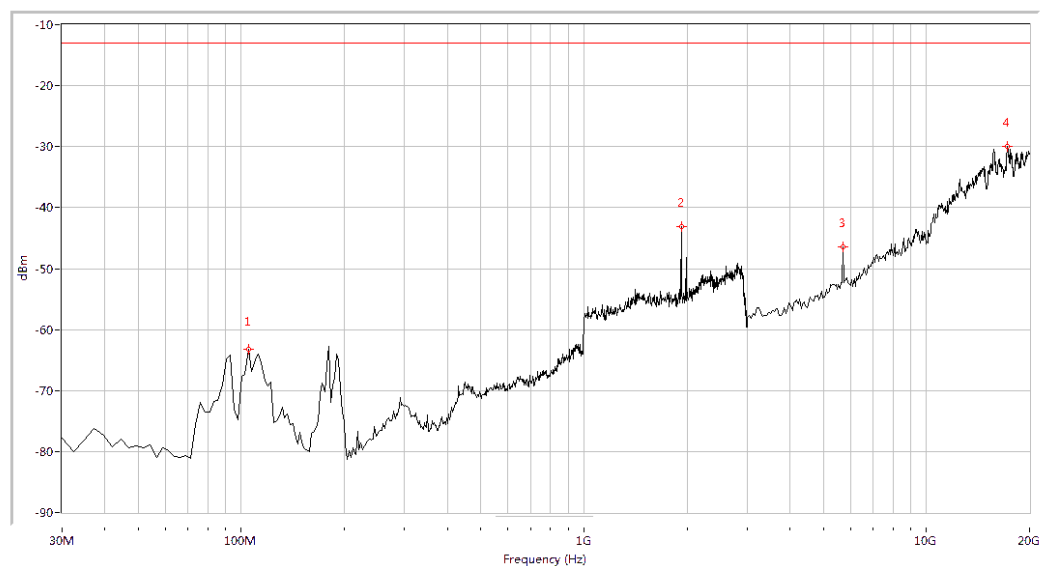
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-65.28	-13.0	52.3	98.0	Horizontal	PASS
179.975	-63.25	-13.0	50.2	153.6	Horizontal	PASS
1927.681	-43.57	-13.0	30.6	25.7	Horizontal	PASS
17201.995	-29.69	-13.0	16.7	194.4	Horizontal	PASS

(Plot D.3: EGPRS 1900MHz Channel = 661, Test Antenna Horizontal)



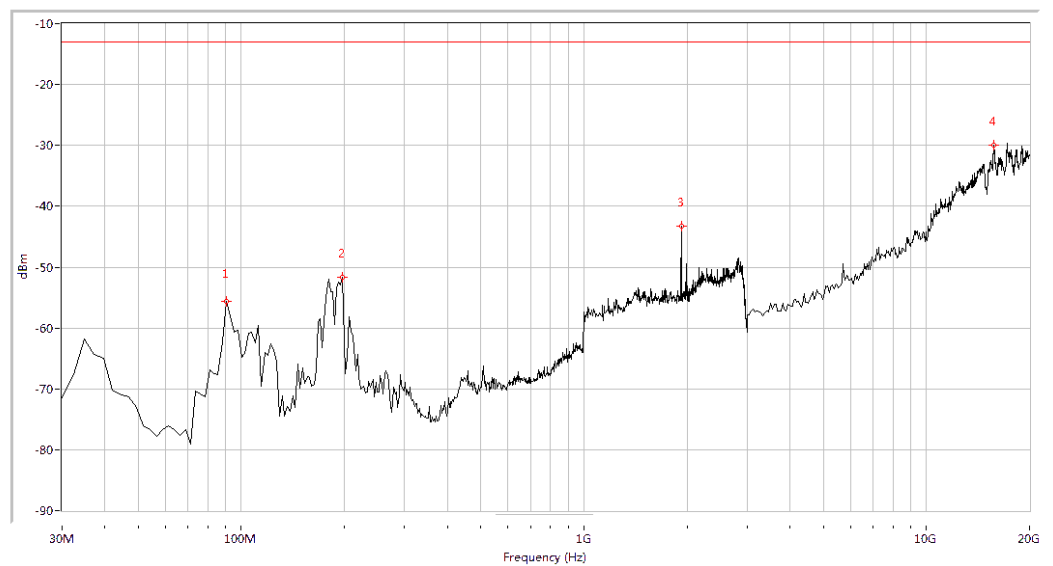
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
114.663	-58.29	-13.0	45.3	153.5	Vertical	PASS
196.908	-50.04	-13.0	37.0	23.1	Vertical	PASS
1927.681	-43.50	-13.0	30.5	85.0	Vertical	PASS
19109.726	-29.94	-13.0	16.9	326.4	Vertical	PASS

(Plot D.4: EGPRS 1900MHz Channel = 661, Test Antenna Vertical)



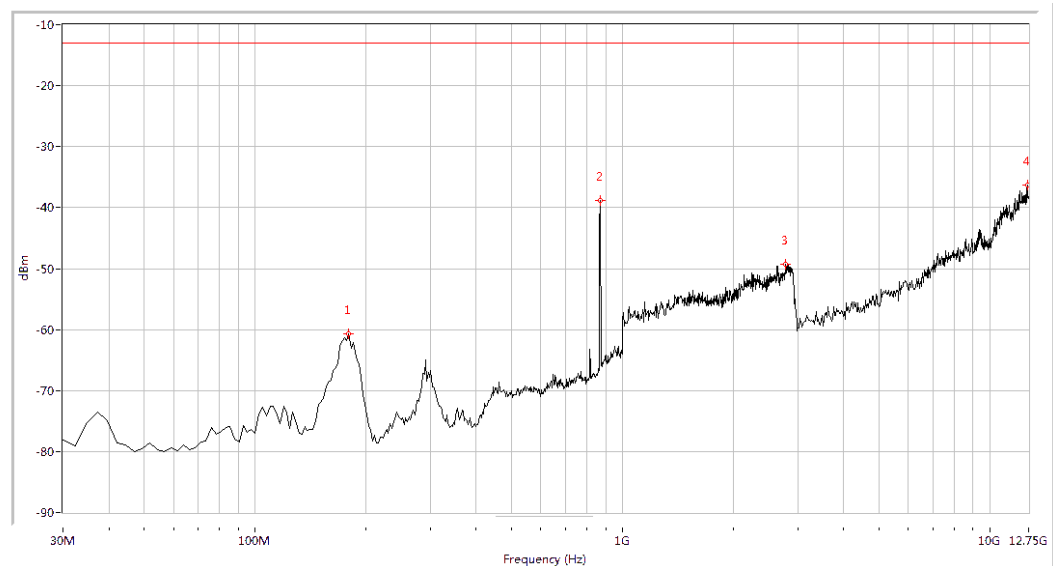
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-63.22	-13.0	50.2	156.4	Horizontal	PASS
1927.681	-43.19	-13.0	30.2	351.9	Horizontal	PASS
5713.217	-46.47	-13.0	33.5	148.6	Horizontal	PASS
17244.389	-29.92	-13.0	16.9	26.8	Horizontal	PASS

(Plot D.5: EGPRS 1900MHz Channel = 810, Test Antenna Horizontal)



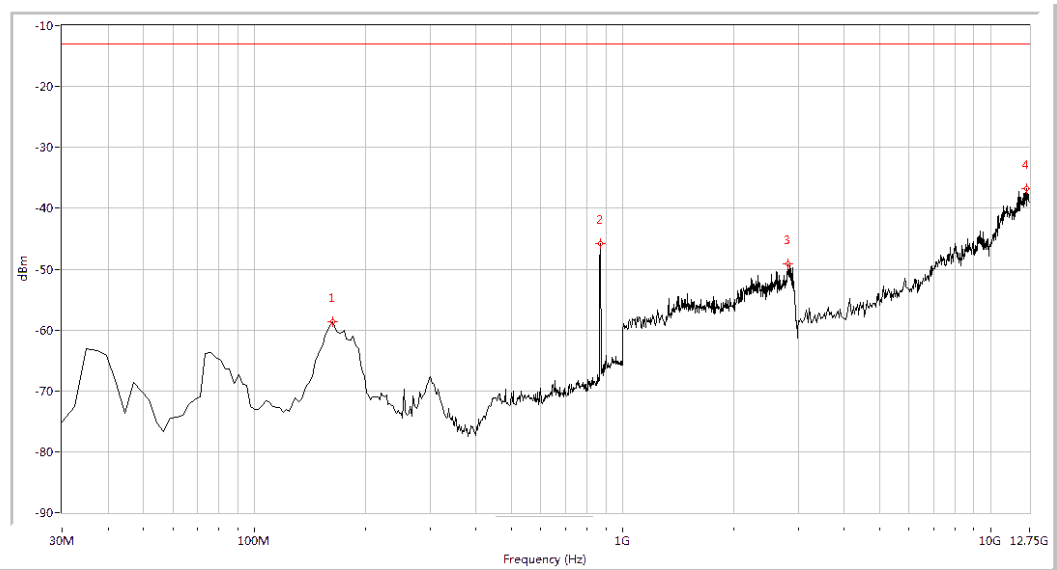
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-55.65	-13.0	42.7	153.6	Vertical	PASS
196.908	-51.70	-13.0	38.7	245.8	Vertical	PASS
1927.681	-43.20	-13.0	30.2	16.0	Vertical	PASS
15760.599	-29.92	-13.0	16.9	65.1	Vertical	PASS

(Plot D.6: EGPRS 1900MHz Channel = 810, Test Antenna Vertical)



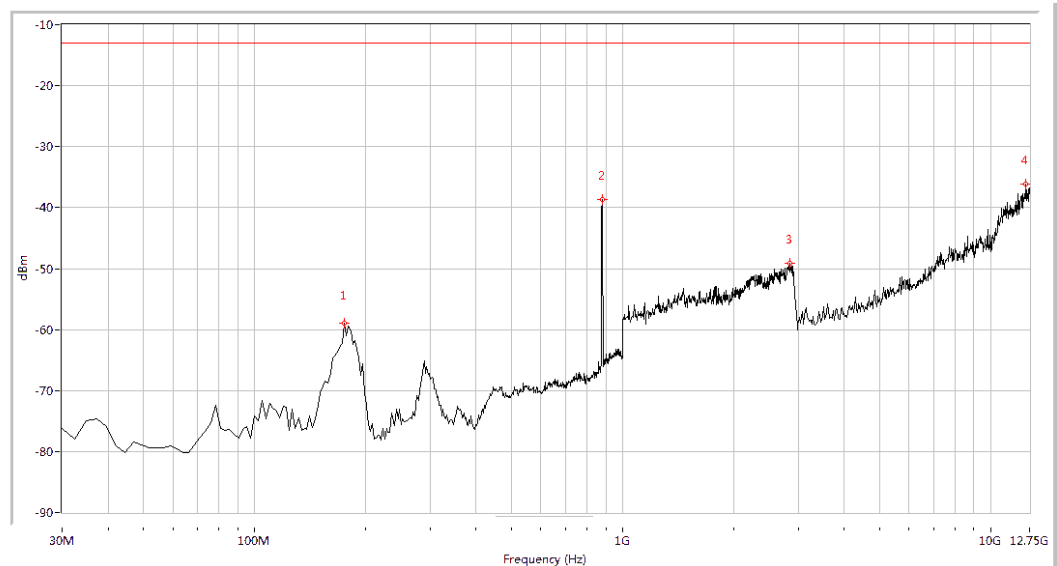
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
179.975	-60.72	-13.0	47.7	144.1	Horizontal	PASS
869.377	-38.88	-13.0	25.9	215.5	Horizontal	PASS
2785.536	-49.32	-13.0	36.3	15.7	Horizontal	PASS
12652.743	-36.26	-13.0	23.3	81.9	Horizontal	PASS

(Plot E.1: WCDMA 850MHz Channel = 4132, Test Antenna Horizontal)



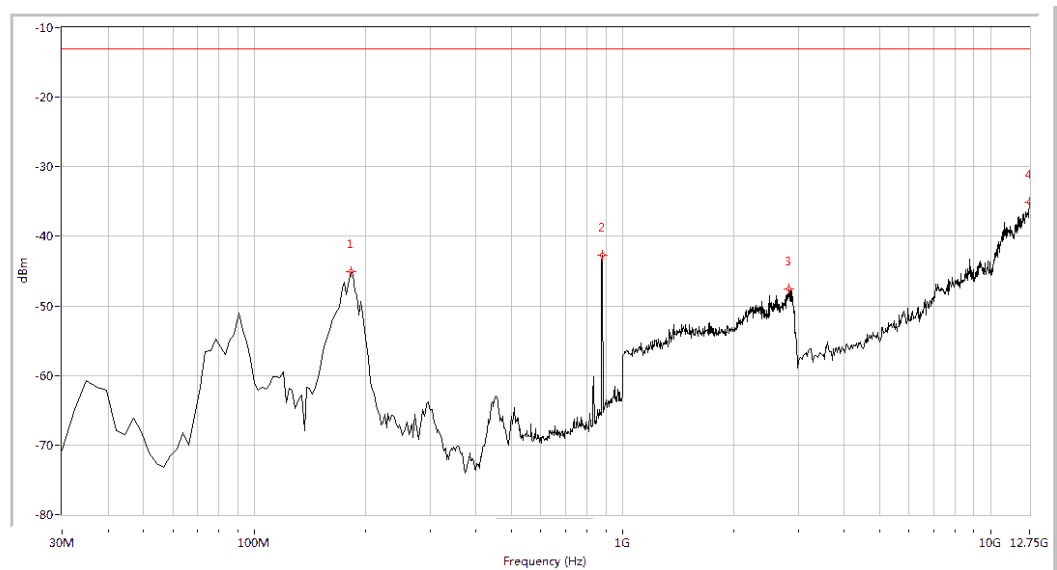
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-58.61	-13.0	45.6	57.4	Vertical	PASS
869.377	-45.86	-13.0	32.9	127.6	Vertical	PASS
2815.461	-49.19	-13.0	36.2	6.5	Vertical	PASS
12555.486	-36.75	-13.0	23.8	52.0	Vertical	PASS

(Plot E.2: WCDMA 850MHz Channel = 4132, Test Antenna Vertical)



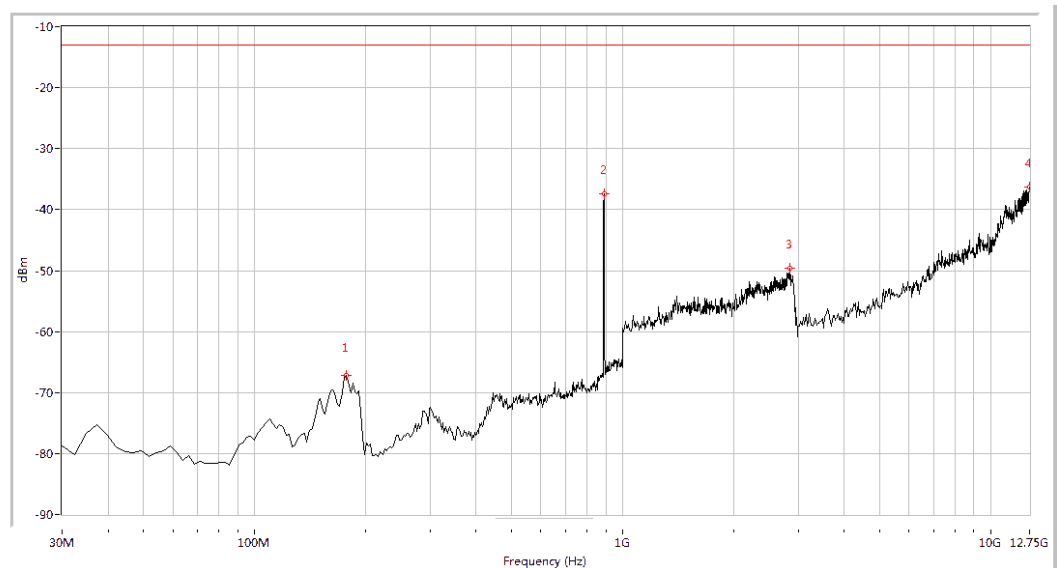
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
175.137	-58.97	-13.0	46.0	156.9	Horizontal	PASS
879.052	-38.62	-13.0	25.6	245.0	Horizontal	PASS
2850.374	-49.14	-13.0	36.1	184.3	Horizontal	PASS
12482.544	-36.19	-13.0	23.2	315.7	Horizontal	PASS

(Plot E.3: WCDMA 850MHz Channel = 4175, Test Antenna Horizontal)



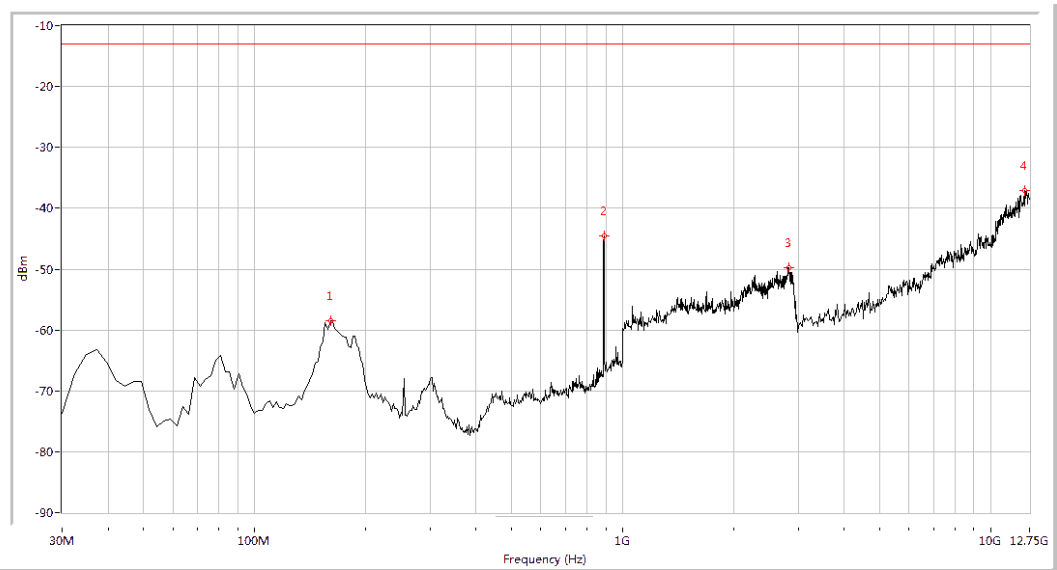
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
182.394	-45.13	-13.0	32.1	82.3	Vertical	PASS
879.052	-42.69	-13.0	29.7	135.5	Vertical	PASS
2835.411	-47.53	-13.0	34.5	284.4	Vertical	PASS
12725.686	-35.06	-13.0	22.1	128.4	Vertical	PASS

(Plot E.4: WCDMA 850MHz Channel = 4175, Test Antenna Vertical)



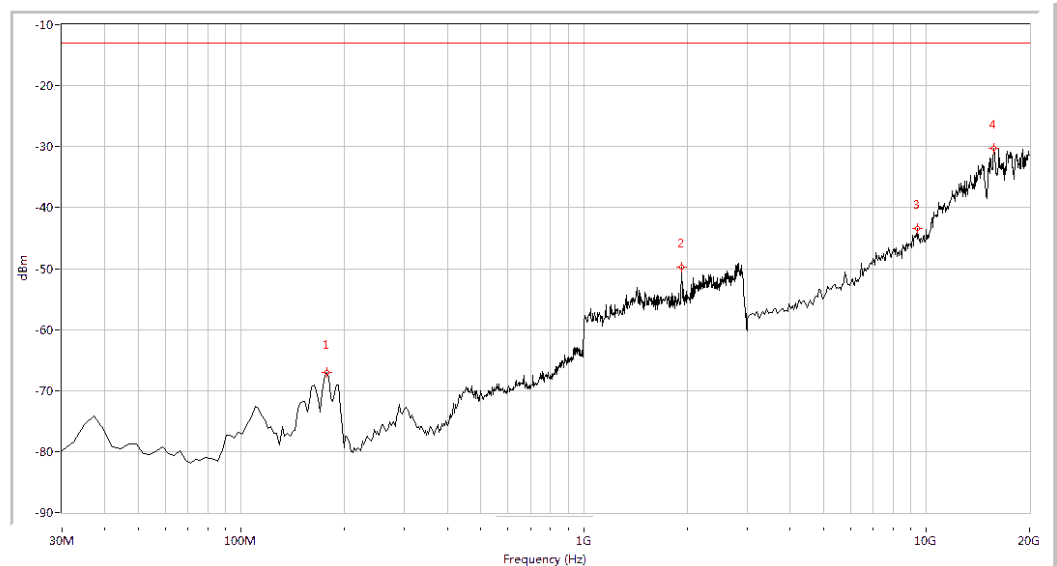
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.26	-13.0	54.3	9.2	Horizontal	PASS
891.147	-37.33	-13.0	24.3	235.4	Horizontal	PASS
2850.374	-49.56	-13.0	36.6	124.8	Horizontal	PASS
12725.686	-36.24	-13.0	23.2	8	Horizontal	PASS

(Plot E.5: WCDMA 850MHz Channel = 4233, Test Antenna Horizontal)



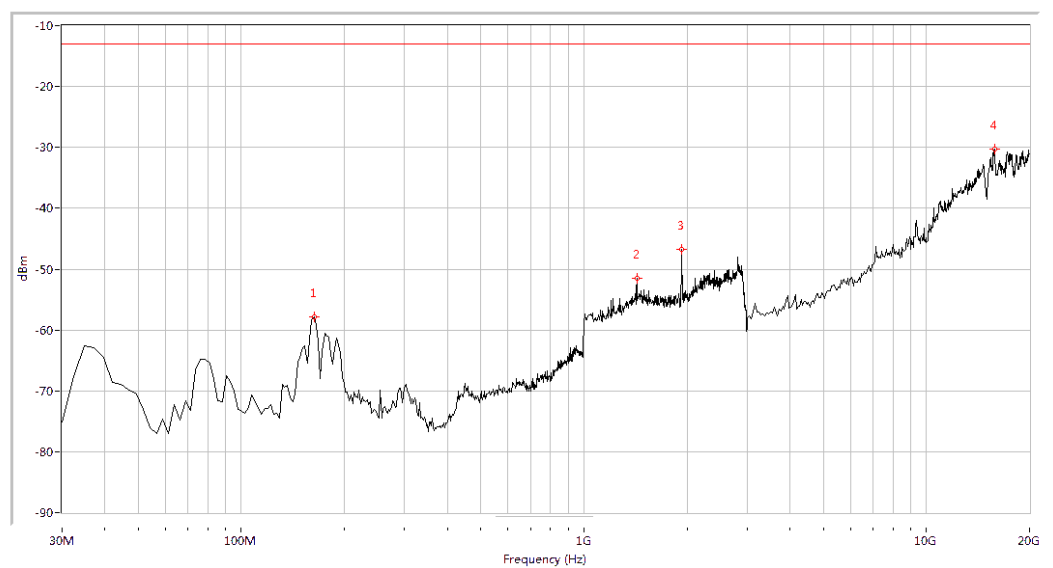
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-58.51	-13.0	45.5	215.6	Vertical	PASS
891.147	-44.50	-13.0	31.5	57.2	Vertical	PASS
2825.436	-49.72	-13.0	36.7	125.0	Vertical	PASS
12385.287	-37.17	-13.0	24.2	81.4	Vertical	PASS

(Plot E.6: WCDMA 850MHz Channel = 4233, Test Antenna Vertical)



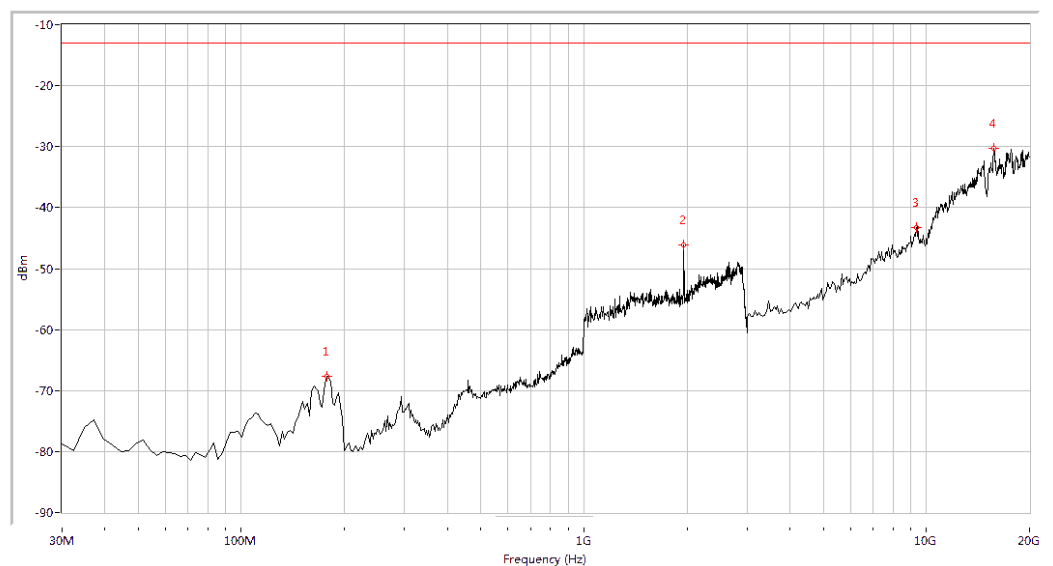
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.04	-13.0	54.0	128.5	Horizontal	PASS
1932.668	-49.82	-13.0	36.8	32.4	Horizontal	PASS
9443.890	-43.35	-13.0	30.4	7.9	Horizontal	PASS
15760.599	-30.28	-13.0	17.3	324.9	Horizontal	PASS

(Plot F.1: WCDMA 1900MHz Channel = 9262, Test Antenna Horizontal)



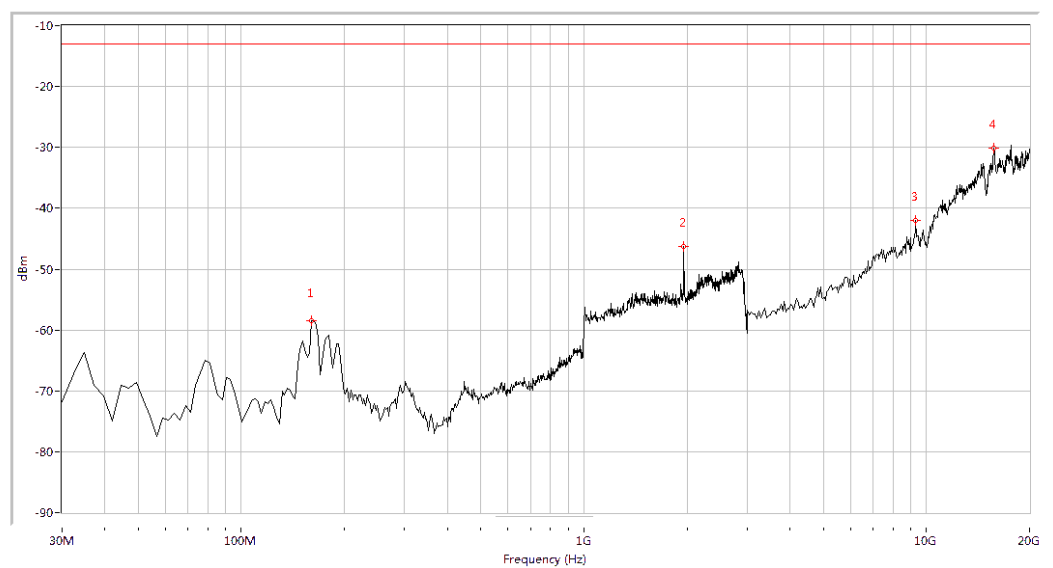
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-57.85	-13.0	44.8	54.5	Vertical	PASS
1428.928	-51.50	-13.0	38.5	128.8	Vertical	PASS
1932.668	-46.77	-13.0	33.8	24.1	Vertical	PASS
15802.993	-30.33	-13.0	17.3	154.9	Vertical	PASS

(Plot F.2: WCDMA 1900MHz Channel = 9262, Test Antenna Vertical)



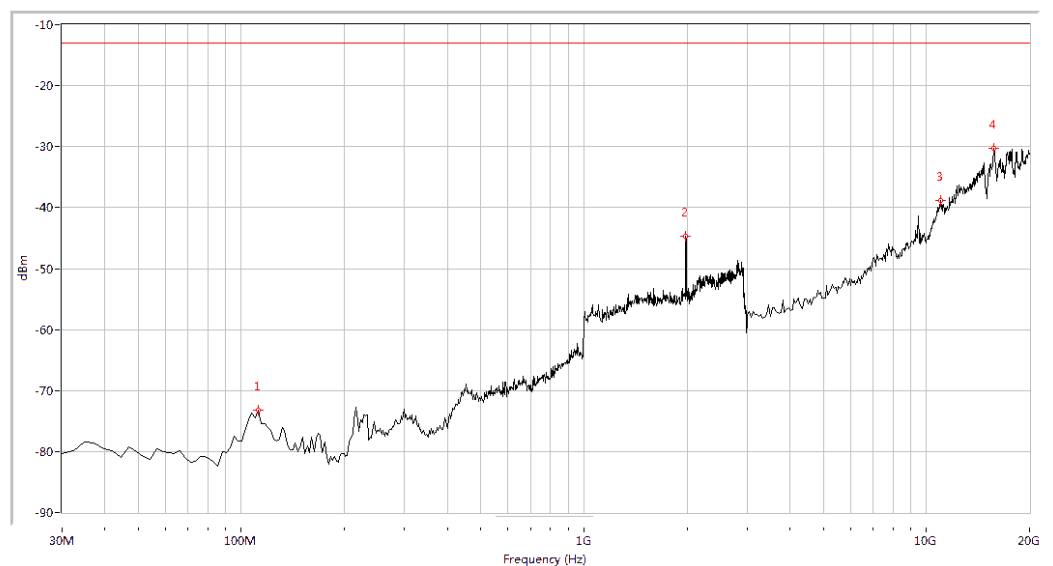
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.71	-13.0	54.7	14.5	Horizontal	PASS
1957.606	-46.17	-13.0	33.2	321.4	Horizontal	PASS
9359.102	-43.26	-13.0	30.3	241.0	Horizontal	PASS
15760.599	-30.31	-13.0	17.3	85.9	Horizontal	PASS

(Plot F.3: WCDMA 1900MHz Channel = 9400, Test Antenna Horizontal)



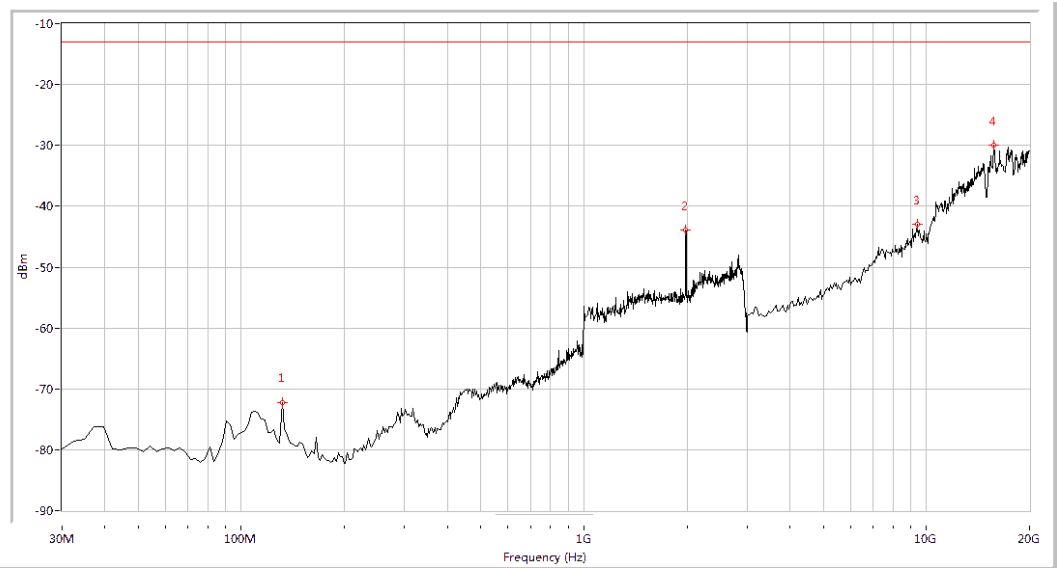
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-58.51	-13.0	45.5	15.7	Vertical	PASS
1957.606	-46.29	-13.0	33.3	241.4	Vertical	PASS
9316.708	-41.99	-13.0	29.0	320.0	Vertical	PASS
15760.599	-30.04	-13.0	17.0	142.1	Vertical	PASS

(Plot F.4: WCDMA 1900MHz Channel = 9400, Test Antenna Vertical)



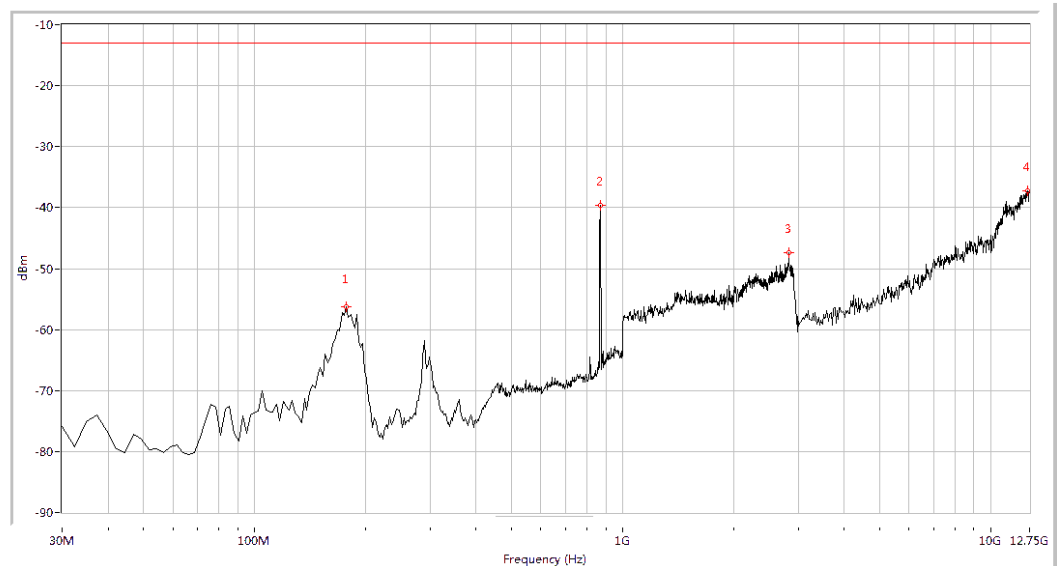
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.23	-13.0	60.2	68.2	Horizontal	PASS
1982.544	-44.69	-13.0	31.7	124.7	Horizontal	PASS
10970.075	-38.81	-13.0	25.8	352.0	Horizontal	PASS
15760.599	-30.33	-13.0	17.3	247.1	Horizontal	PASS

(Plot F.5: WCDMA 1900MHz Channel = 9538, Test Antenna Horizontal)



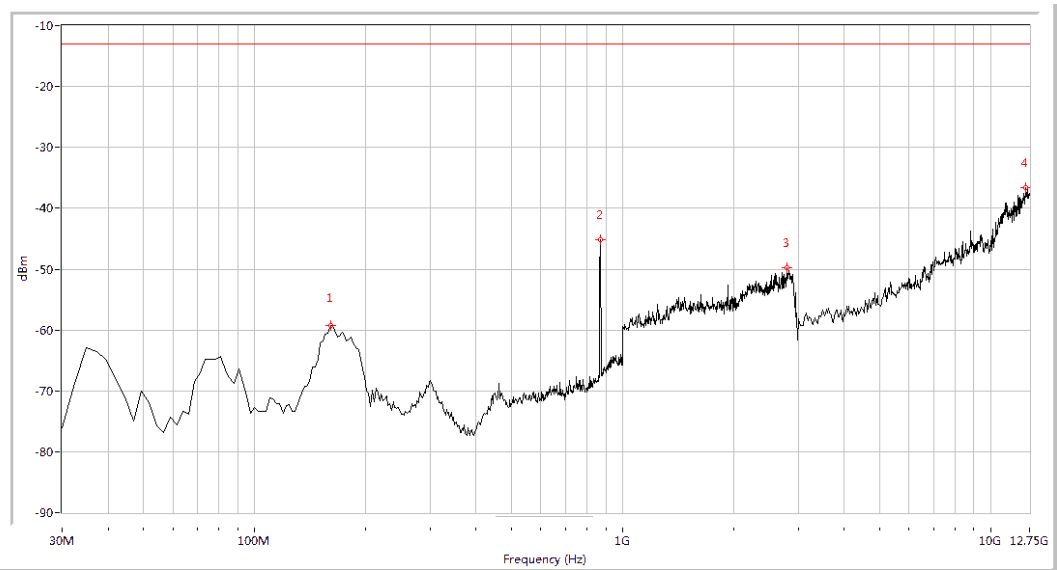
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
131.596	-72.22	-13.0	59.2	58.4	Vertical	PASS
1982.544	-43.88	-13.0	30.9	124.5	Vertical	PASS
9443.890	-42.90	-13.0	29.9	38.7	Vertical	PASS
15760.599	-29.94	-13.0	16.9	241.8	Vertical	PASS

(Plot F.6: WCDMA 1900MHz Channel = 9538, Test Antenna Vertical)



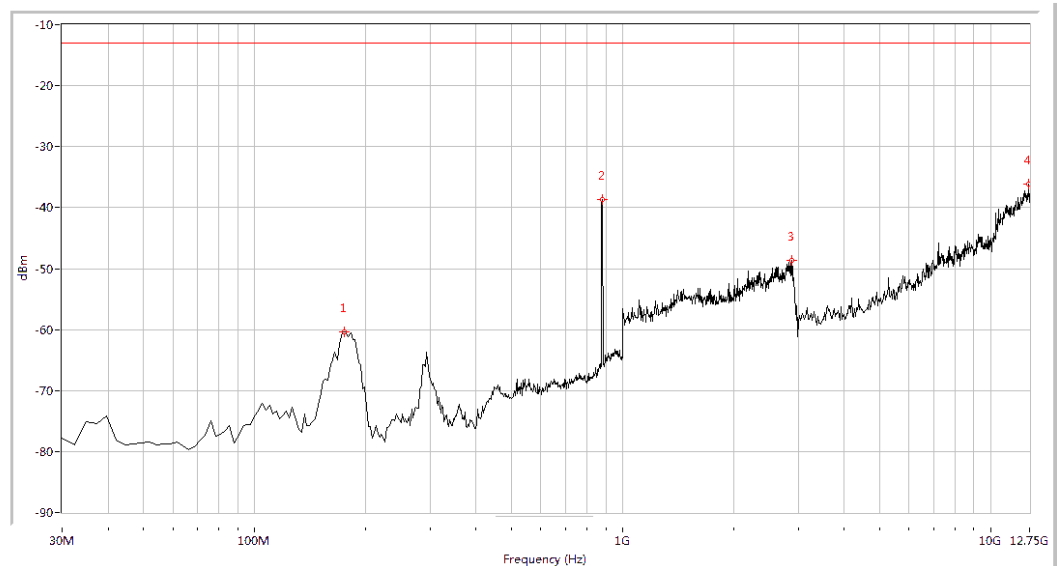
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-56.25	-13.0	43.3	54.2	Horizontal	PASS
869.377	-39.68	-13.0	26.7	323.0	Horizontal	PASS
2830.424	-47.36	-13.0	34.4	148.5	Horizontal	PASS
12628.429	-37.22	-13.0	24.2	245.6	Horizontal	PASS

(Plot G.1: HSDPA 850MHz Channel = 4132, Test Antenna Horizontal)



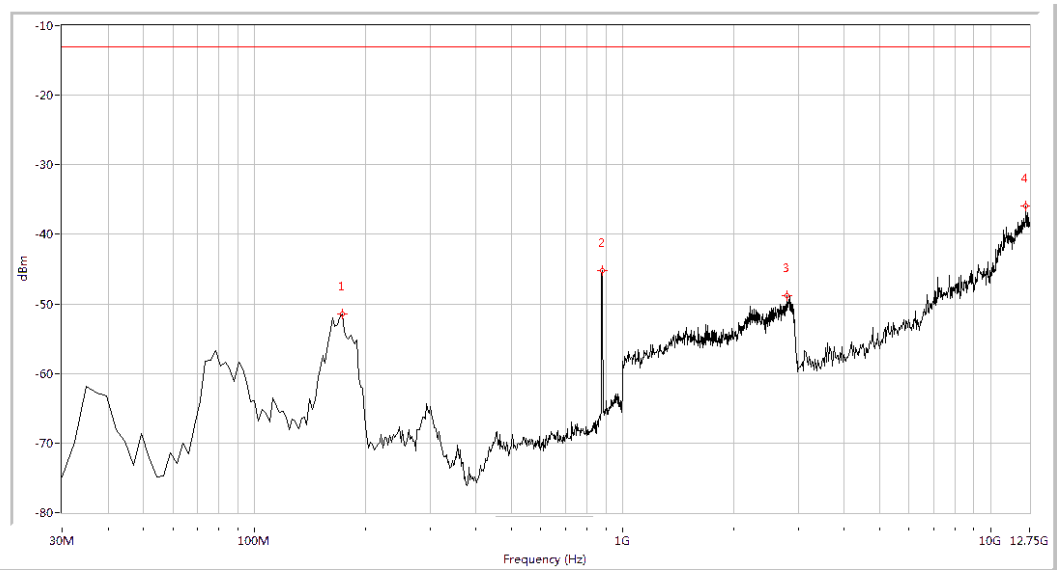
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-59.23	-13.0	46.2	235.6	Vertical	PASS
869.377	-45.14	-13.0	32.1	241.3	Vertical	PASS
2800.499	-49.70	-13.0	36.7	62.5	Vertical	PASS
12458.229	-36.62	-13.0	23.6	98.7	Vertical	PASS

(Plot G.2: HSDPA 850MHz Channel = 4132, Test Antenna Vertical)



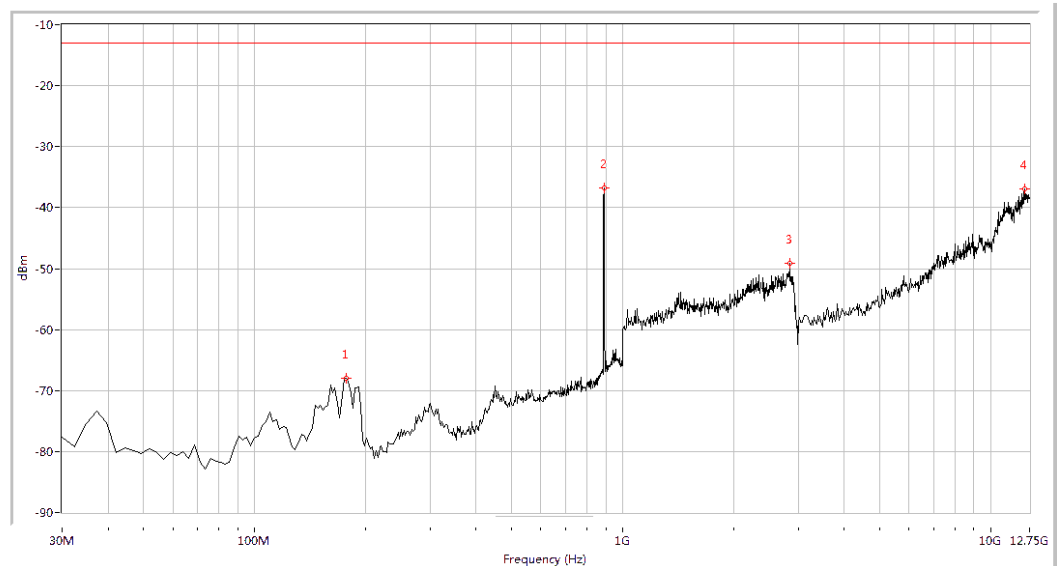
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
175.137	-60.43	-13.0	47.4	332.3	Horizontal	PASS
879.052	-38.70	-13.0	25.7	152.4	Horizontal	PASS
2875.312	-48.61	-13.0	35.6	15.8	Horizontal	PASS
12701.372	-36.06	-13.0	23.1	82.7	Horizontal	PASS

(Plot G.3: HSDPA 850MHz Channel = 4175, Test Antenna Horizontal)



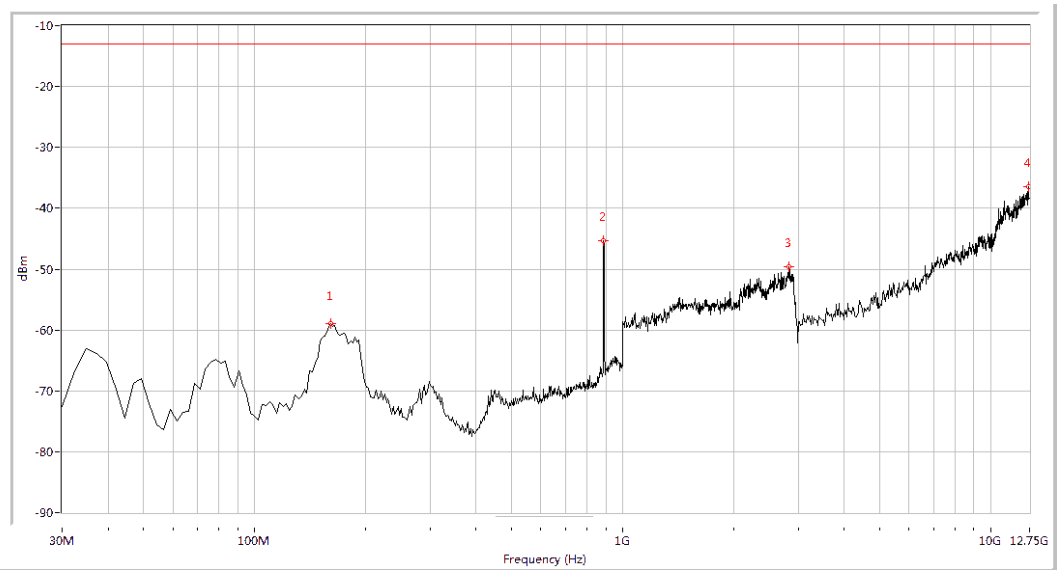
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
172.718	-51.41	-13.0	38.4	356.0	Vertical	PASS
879.052	-45.27	-13.0	32.3	245.1	Vertical	PASS
2795.511	-48.75	-13.0	35.8	148.4	Vertical	PASS
12482.544	-35.97	-13.0	23.0	241.6	Vertical	PASS

(Plot G.4: HSDPA 850MHz Channel = 4175, Test Antenna Vertical)



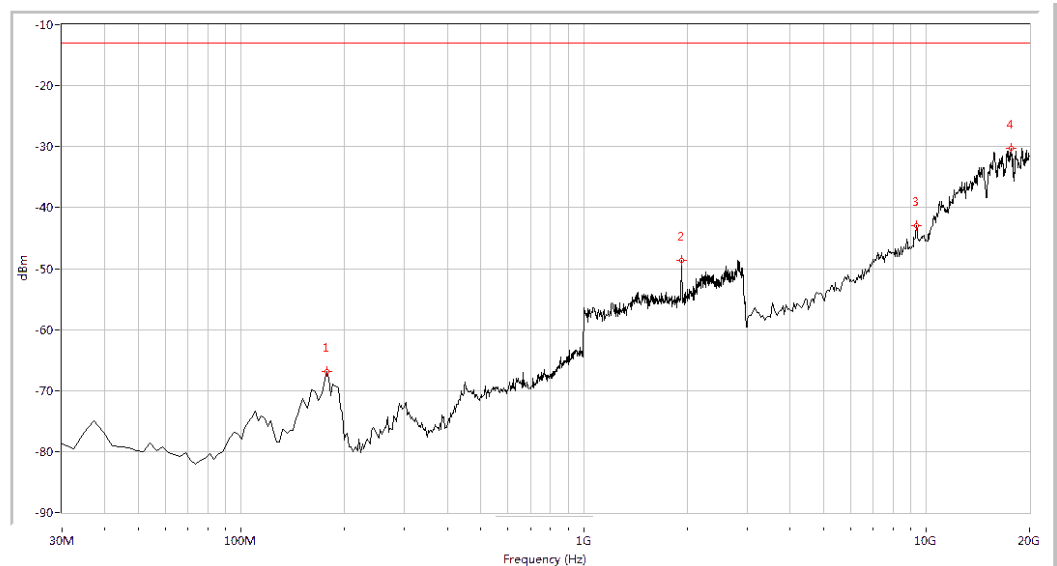
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.94	-13.0	54.9	54.1	Horizontal	PASS
891.147	-36.84	-13.0	23.8	263.4	Horizontal	PASS
2845.387	-49.16	-13.0	36.2	152.0	Horizontal	PASS
12360.973	-36.90	-13.0	23.9	147.5	Horizontal	PASS

(Plot G.5: HSDPA 850MHz Channel = 4233, Test Antenna Horizontal)



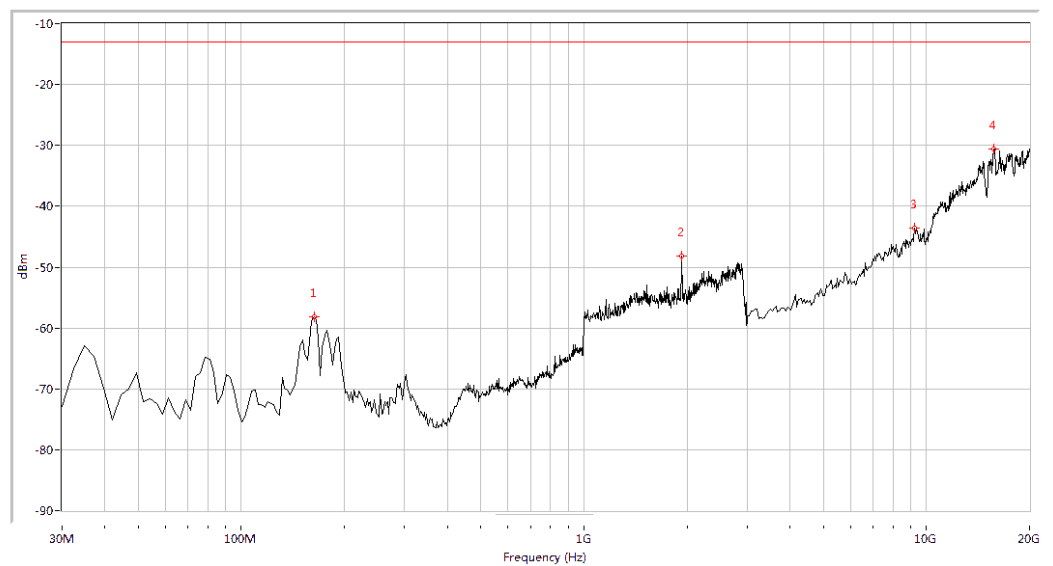
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-58.98	-13.0	46.0	254.0	Vertical	PASS
888.728	-45.32	-13.0	32.3	54.2	Vertical	PASS
2825.436	-49.58	-13.0	36.6	123.5	Vertical	PASS
12652.743	-36.50	-13.0	23.5	247.6	Vertical	PASS

(Plot G.6: HSDPA 850MHz Channel = 4233, Test Antenna Vertical)



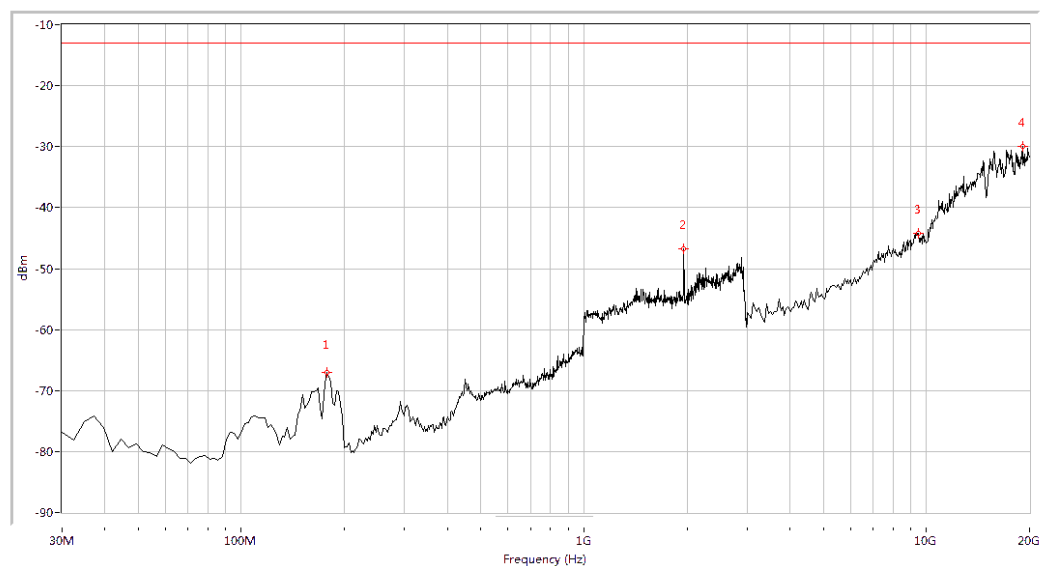
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-66.91	-13.0	53.9	54.5	Horizontal	PASS
1932.668	-48.64	-13.0	35.6	85.0	Horizontal	PASS
9359.102	-42.91	-13.0	29.9	310.4	Horizontal	PASS
17710.723	-30.29	-13.0	17.3	157.1	Horizontal	PASS

(Plot H.1: HSDPA 1900 MHz Channel = 9262, Test Antenna Horizontal)



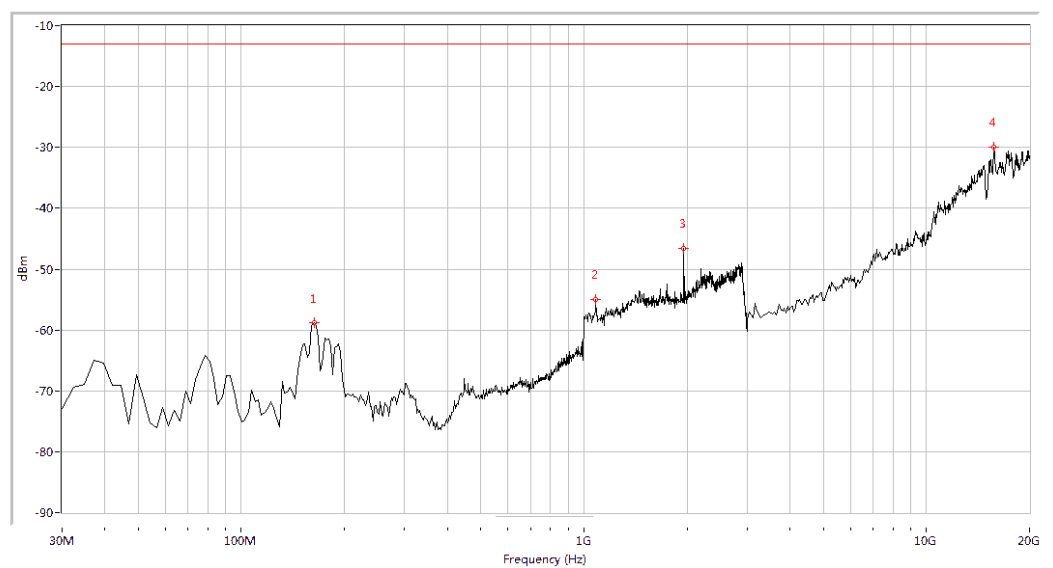
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-58.09	-13.0	45.1	248.8	Vertical	PASS
1932.668	-48.14	-13.0	35.1	121.0	Vertical	PASS
9231.920	-43.66	-13.0	30.7	145.4	Vertical	PASS
15760.599	-30.64	-13.0	17.6	52.0	Vertical	PASS

(Plot H.2: HSDPA 1900 MHz Channel = 9262, Test Antenna Vertical)



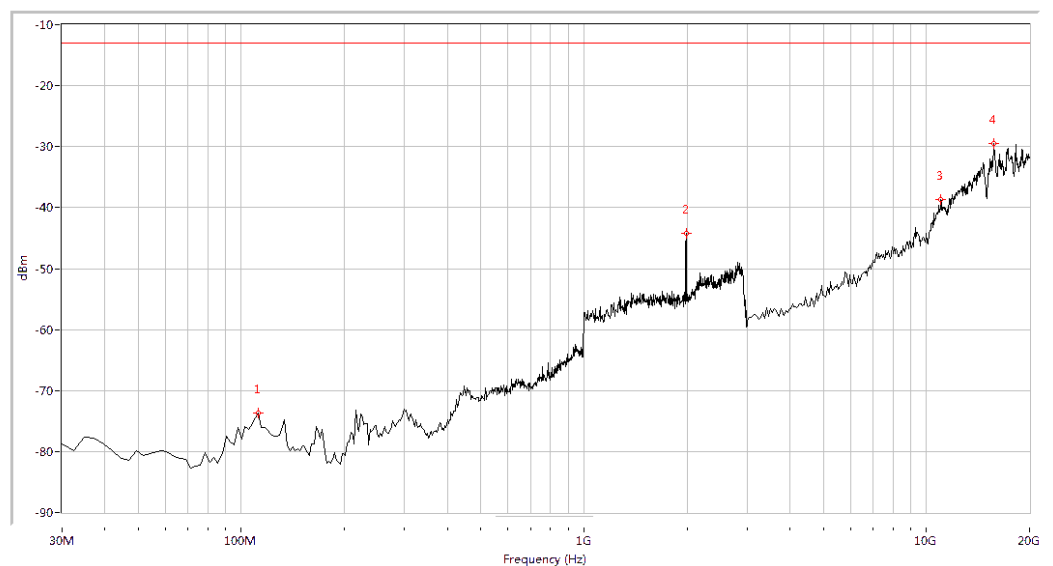
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.09	-13.0	54.1	328.6	Horizontal	PASS
1957.606	-46.68	-13.0	33.7	159.1	Horizontal	PASS
9486.284	-44.16	-13.0	31.2	85.0	Horizontal	PASS
19109.726	-30.00	-13.0	17.0	154.2	Horizontal	PASS

(Plot H.3: HSDPA 1900 MHz Channel = 9400, Test Antenna Horizontal)



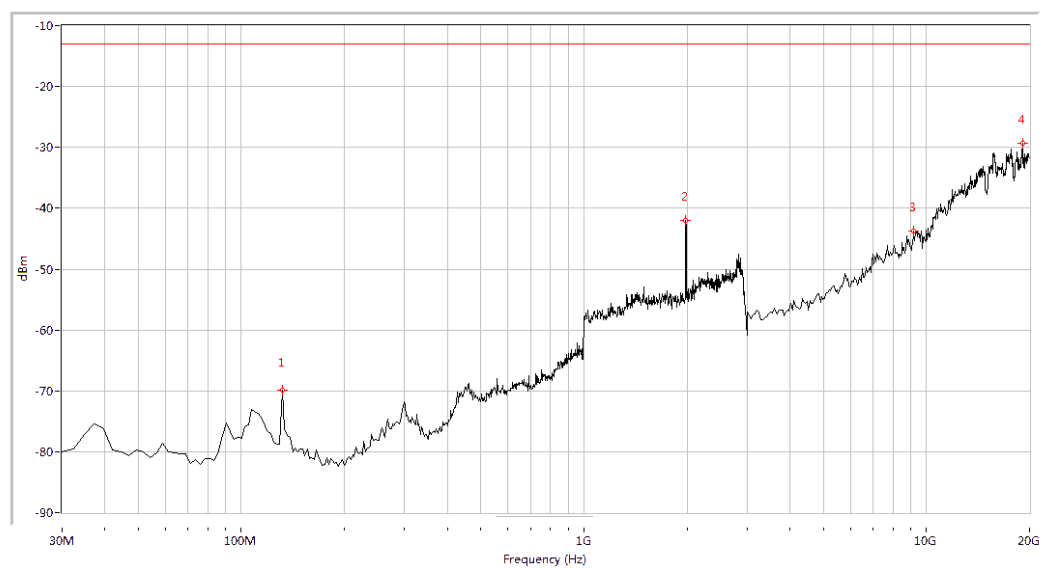
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-58.71	-13.0	45.7	17.5	Vertical	PASS
1084.788	-54.92	-13.0	41.9	210.0	Vertical	PASS
1957.606	-46.53	-13.0	33.5	39.4	Vertical	PASS
15760.599	-29.89	-13.0	16.9	142.4	Vertical	PASS

(Plot H.4: HSDPA 1900 MHz Channel = 9400, Test Antenna Vertical)



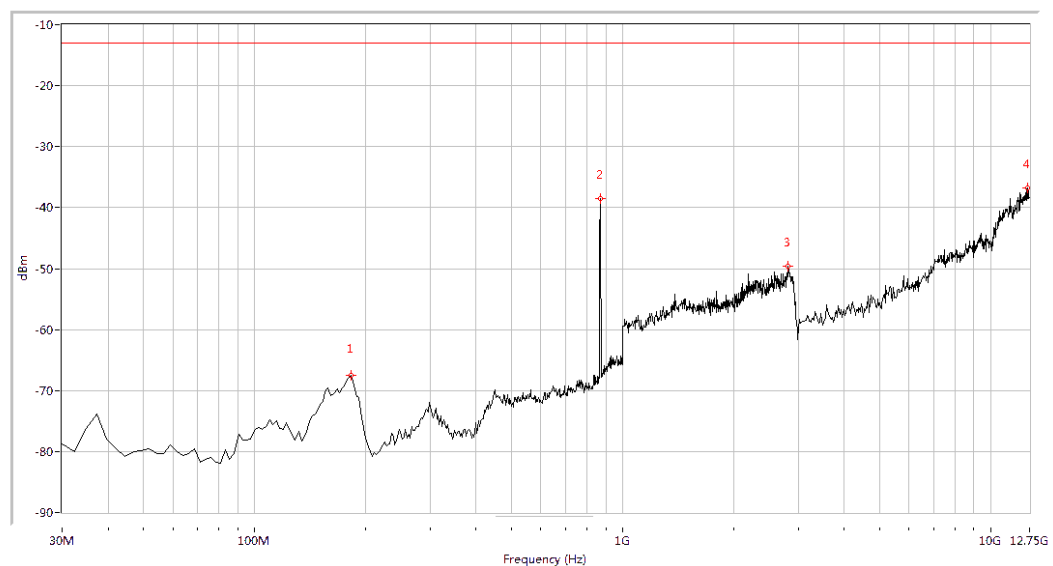
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.61	-13.0	60.6	148.4	Horizontal	PASS
1987.531	-44.23	-13.0	31.2	58.1	Horizontal	PASS
11012.469	-38.74	-13.0	25.7	258.3	Horizontal	PASS
15760.599	-29.50	-13.0	16.5	95.0	Horizontal	PASS

(Plot H.5: HSDPA 1900 MHz Channel = 9538, Test Antenna Horizontal)



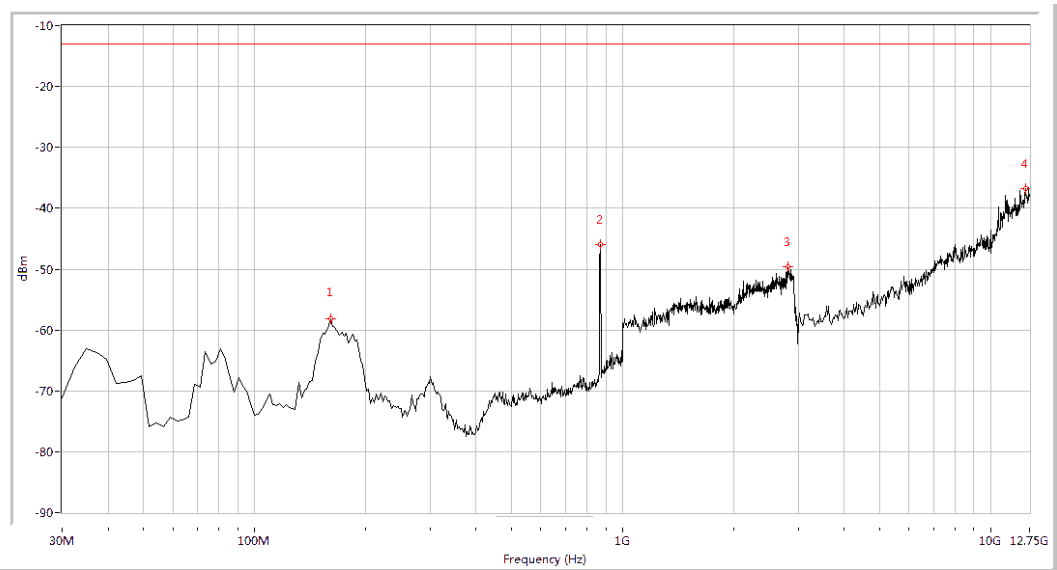
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
131.596	-69.88	-13.0	56.9	274.5	Vertical	PASS
1982.544	-42.07	-13.0	29.1	321.6	Vertical	PASS
9189.526	-43.78	-13.0	30.8	172.1	Vertical	PASS
19067.332	-29.34	-13.0	16.3	98.0	Vertical	PASS

(Plot H.6: HSDPA 1900 MHz Channel = 9538, Test Antenna Vertical)



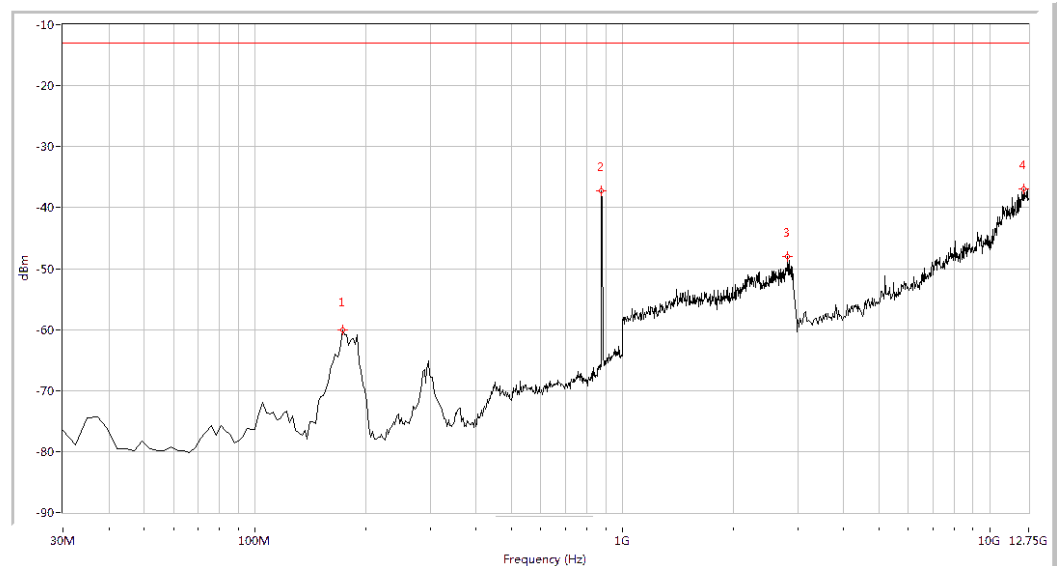
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
182.394	-67.52	-13.0	54.5	127.8	Horizontal	PASS
869.377	-38.57	-13.0	25.6	52.6	Horizontal	PASS
2805.486	-49.53	-13.0	36.5	78.4	Horizontal	PASS
12628.429	-36.85	-13.0	23.8	158.5	Horizontal	PASS

(Plot I.1: HSUPA 850MHz Channel = 4132, Test Antenna Horizontal)



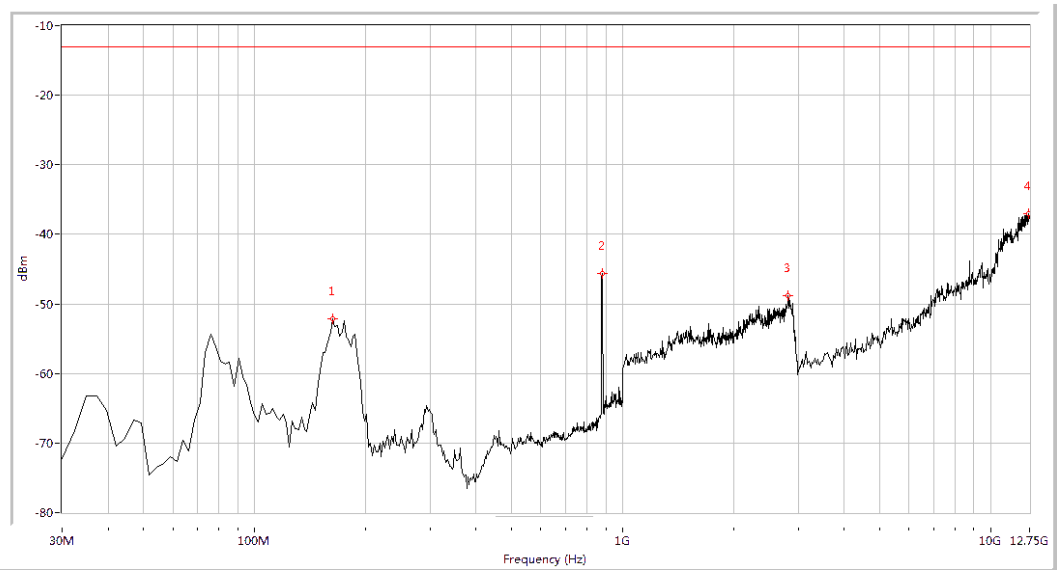
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-58.11	-13.0	45.1	12.5	Vertical	PASS
869.377	-45.99	-13.0	33.0	243.8	Vertical	PASS
2810.474	-49.56	-13.0	36.6	81.0	Vertical	PASS
12433.915	-36.79	-13.0	23.8	96.4	Vertical	PASS

(Plot I.2: HSUPA 850 MHz Channel = 4132, Test Antenna Vertical)



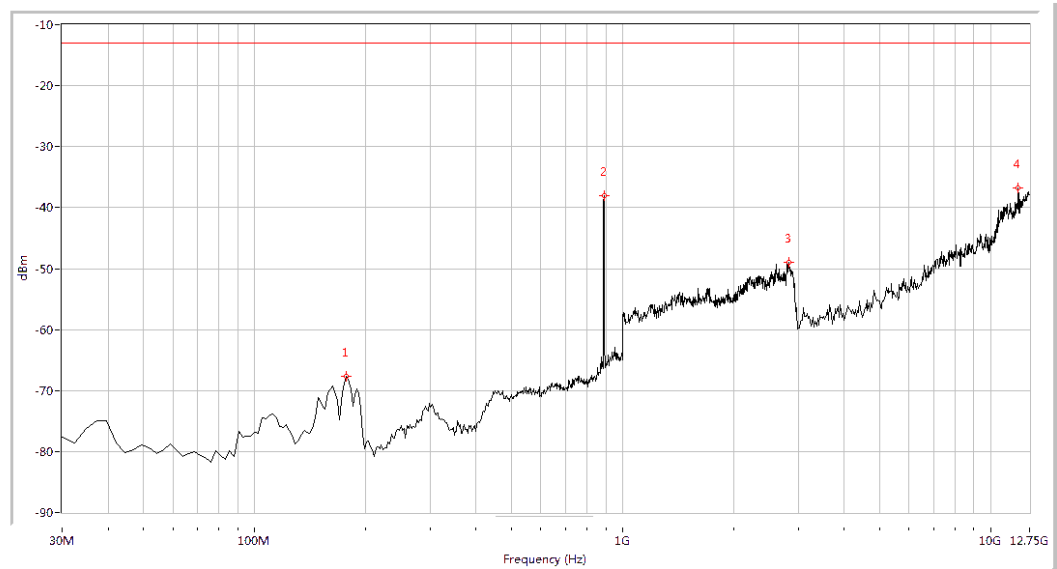
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
172.718	-60.12	-13.0	47.1	14.8	Horizontal	PASS
876.633	-37.29	-13.0	24.3	157.4	Horizontal	PASS
2820.449	-48.00	-13.0	35.0	216.2	Horizontal	PASS
12385.287	-36.90	-13.0	23.9	32.5	Horizontal	PASS

(Plot I.3: HSUPA 850MHz Channel = 4175, Test Antenna Horizontal)



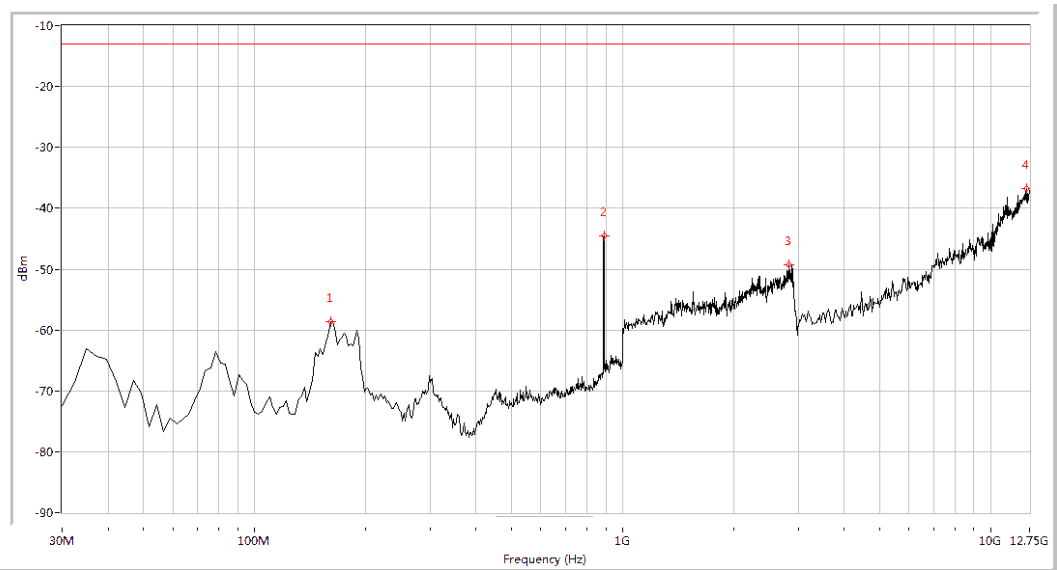
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-52.20	-13.0	39.2	15.3	Vertical	PASS
879.052	-45.59	-13.0	32.6	147.6	Vertical	PASS
2810.474	-48.85	-13.0	35.8	238.9	Vertical	PASS
12701.372	-36.99	-13.0	24.0	168.2	Vertical	PASS

(Plot I.4: HSUPA 850MHz Channel = 4175, Test Antenna Vertical)



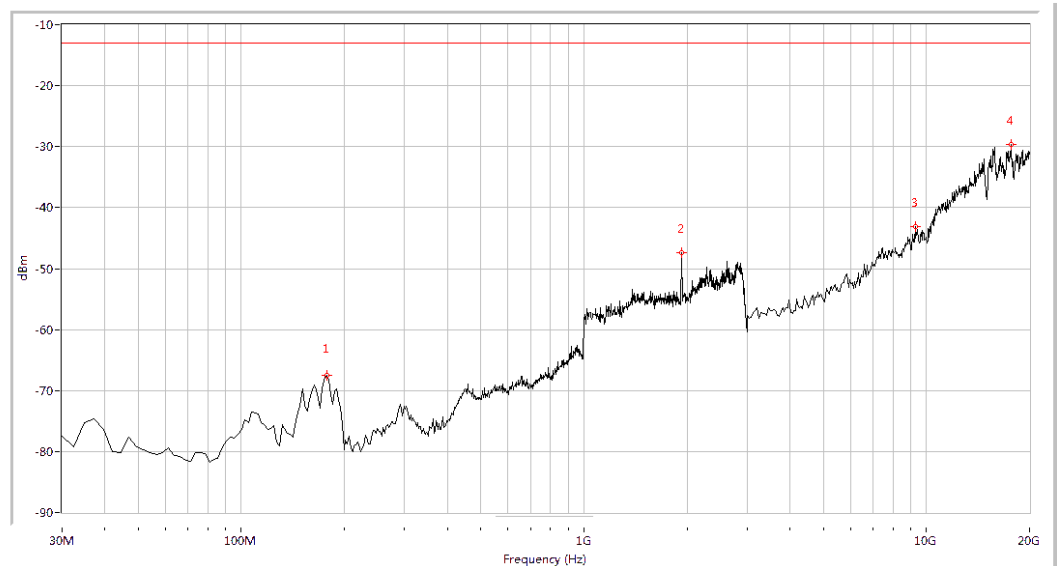
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.65	-13.0	54.7	12.4	Horizontal	PASS
891.147	-37.99	-13.0	25.0	85.1	Horizontal	PASS
2830.424	-48.91	-13.0	35.9	127.0	Horizontal	PASS
11874.688	-36.84	-13.0	23.8	321.5	Horizontal	PASS

(Plot I.5: HSUPA 850MHz Channel = 4233, Test Antenna Horizontal)



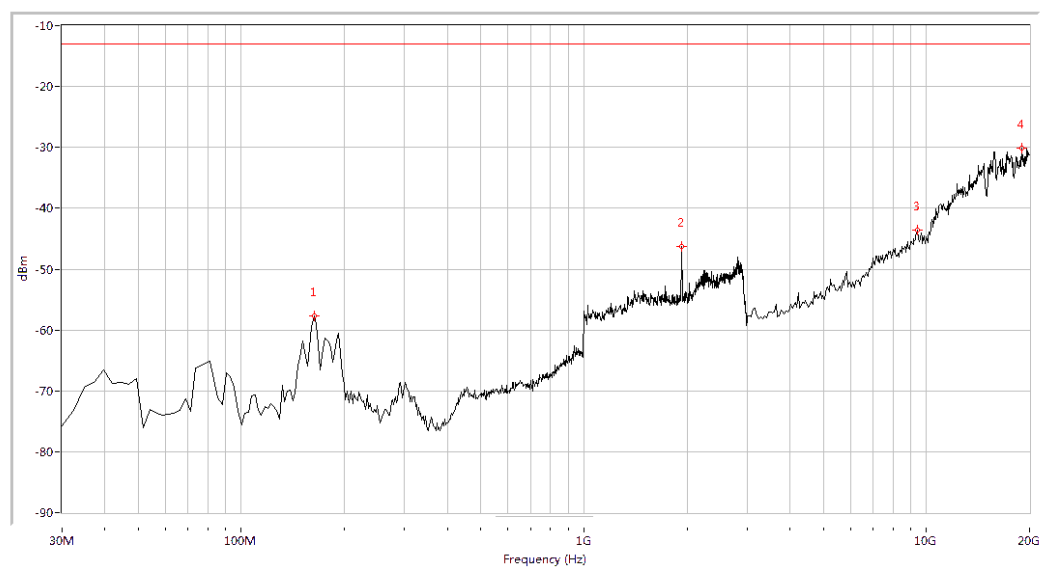
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-58.61	-13.0	45.6	85.4	Vertical	PASS
891.147	-44.54	-13.0	31.5	245.6	Vertical	PASS
2825.436	-49.37	-13.0	36.4	157.1	Vertical	PASS
12506.858	-36.75	-13.0	23.7	331.0	Vertical	PASS

(Plot I.6: HSUPA 850MHz Channel = 4233, Test Antenna Vertical)



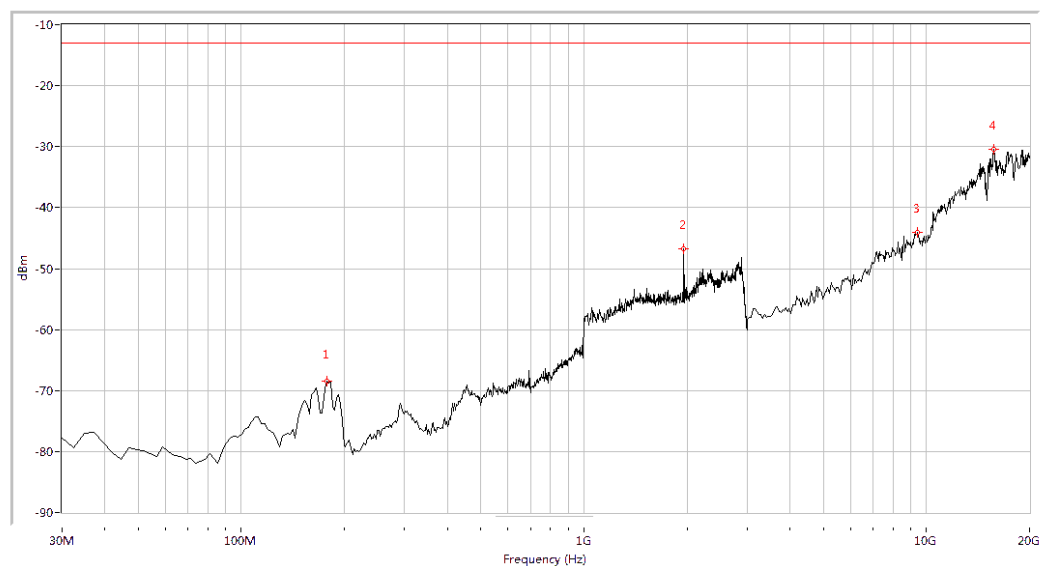
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.57	-13.0	54.6	41.5	Horizontal	PASS
1932.668	-47.44	-13.0	34.4	157.8	Horizontal	PASS
9274.314	-43.04	-13.0	30.0	241.1	Horizontal	PASS
17625.935	-29.64	-13.0	16.6	85.0	Horizontal	PASS

(Plot J.1: HSUPA 1900 MHz Channel = 9262, Test Antenna Horizontal)



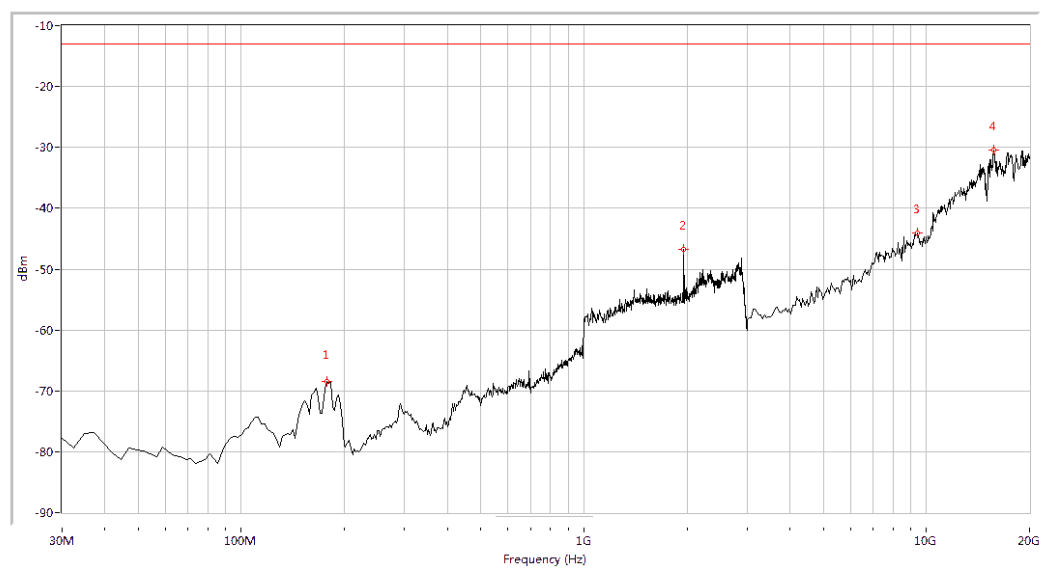
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-57.76	-13.0	44.8	17.8	Vertical	PASS
1932.668	-46.25	-13.0	33.2	248.4	Vertical	PASS
9443.890	-43.60	-13.0	30.6	15.0	Vertical	PASS
18982.544	-30.12	-13.0	17.1	325.5	Vertical	PASS

(Plot J.2: HSUPA 1900 MHz Channel = 9262, Test Antenna Vertical)



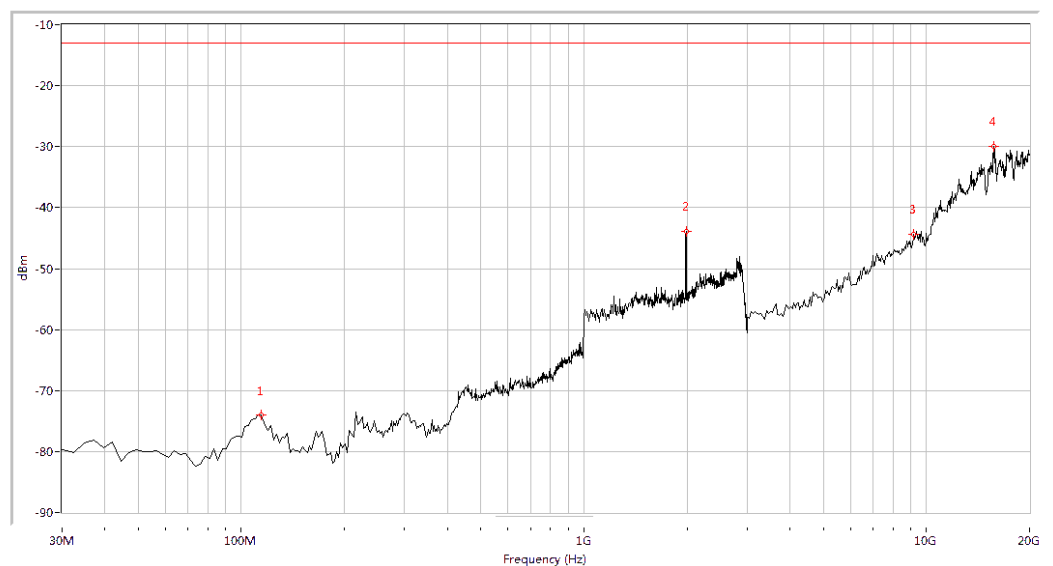
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-68.40	-13.0	55.4	0.0	Horizontal	PASS
1957.606	-46.81	-13.0	33.8	0.0	Horizontal	PASS
9443.890	-43.99	-13.0	31.0	0.0	Horizontal	PASS
15718.204	-30.44	-13.0	17.4	0.0	Horizontal	PASS

(Plot J.3: HSUPA 1900 MHz Channel = 9400, Test Antenna Horizontal)



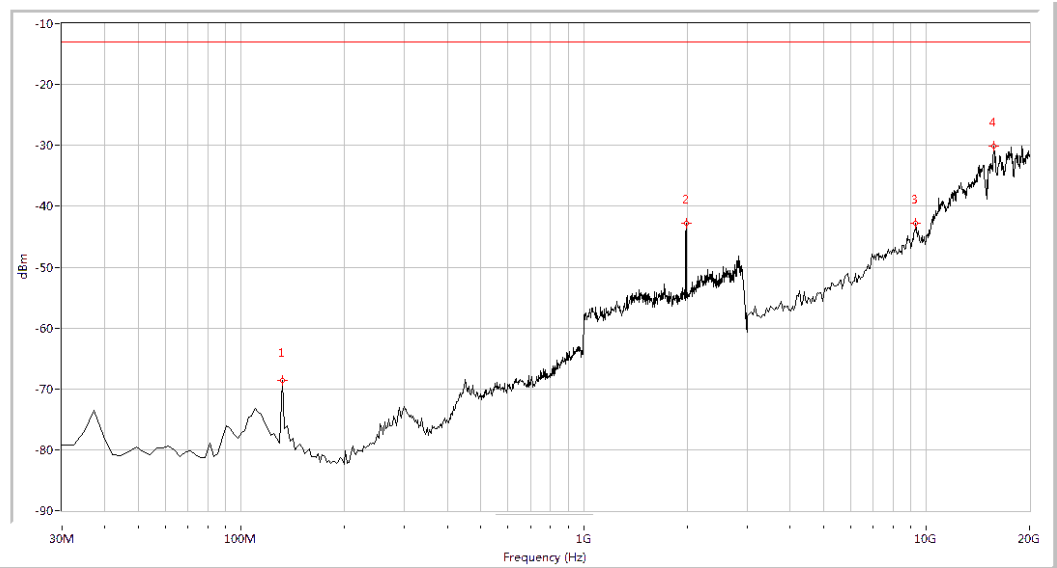
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-68.40	-13.0	55.4	0.0	Horizontal	PASS
1957.606	-46.81	-13.0	33.8	0.0	Horizontal	PASS
9443.890	-43.99	-13.0	31.0	0.0	Horizontal	PASS
15718.204	-30.44	-13.0	17.4	0.0	Horizontal	PASS

(Plot J.4: HSUPA 1900 MHz Channel = 9400, Test Antenna Vertical)



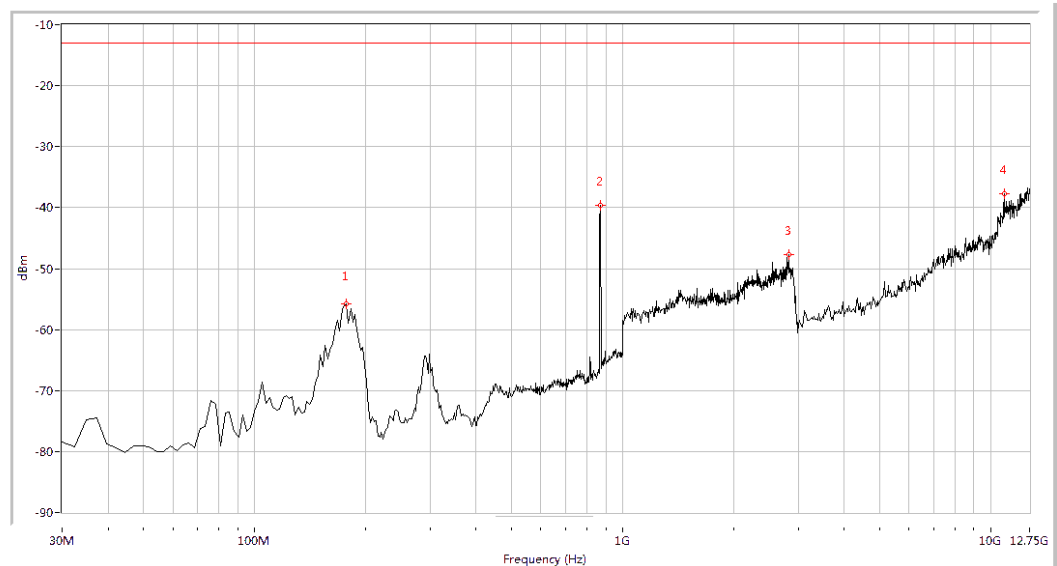
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
114.663	-74.07	-13.0	61.1	241.5	Horizontal	PASS
1987.531	-43.84	-13.0	30.8	58.0	Horizontal	PASS
9189.526	-44.43	-13.0	31.4	148.4	Horizontal	PASS
15760.599	-29.89	-13.0	16.9	357.0	Horizontal	PASS

(Plot J.5: HSUPA 1900 MHz Channel = 9538, Test Antenna Horizontal)



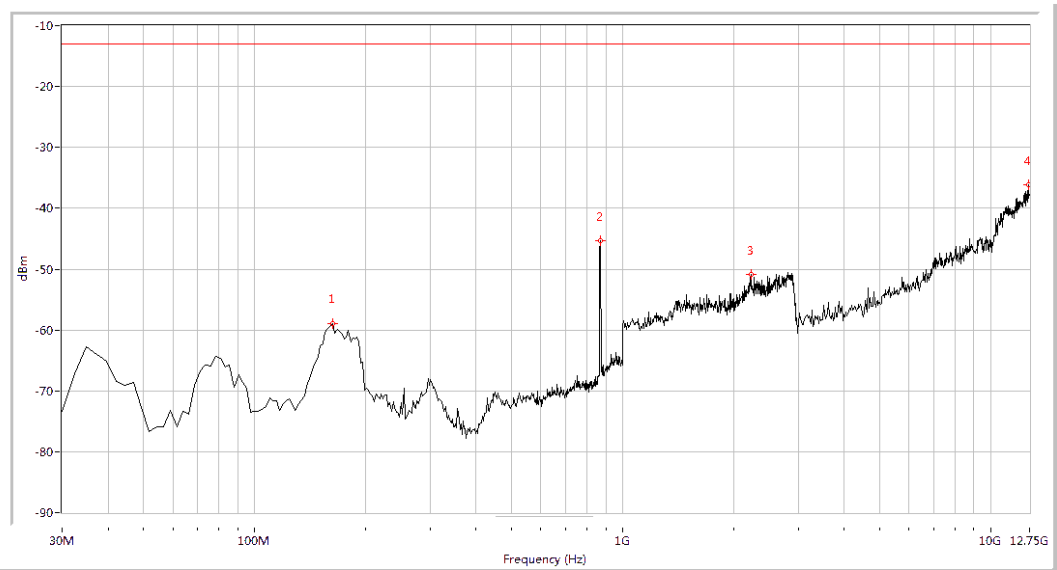
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
131.596	-68.67	-13.0	55.7	32.4	Vertical	PASS
1987.531	-42.79	-13.0	29.8	163.9	Vertical	PASS
9316.708	-42.79	-13.0	29.8	254.1	Vertical	PASS
15718.204	-30.06	-13.0	17.1	87.3	Vertical	PASS

(Plot J.6: HSUPA 1900 MHz Channel = 9538, Test Antenna Vertical)



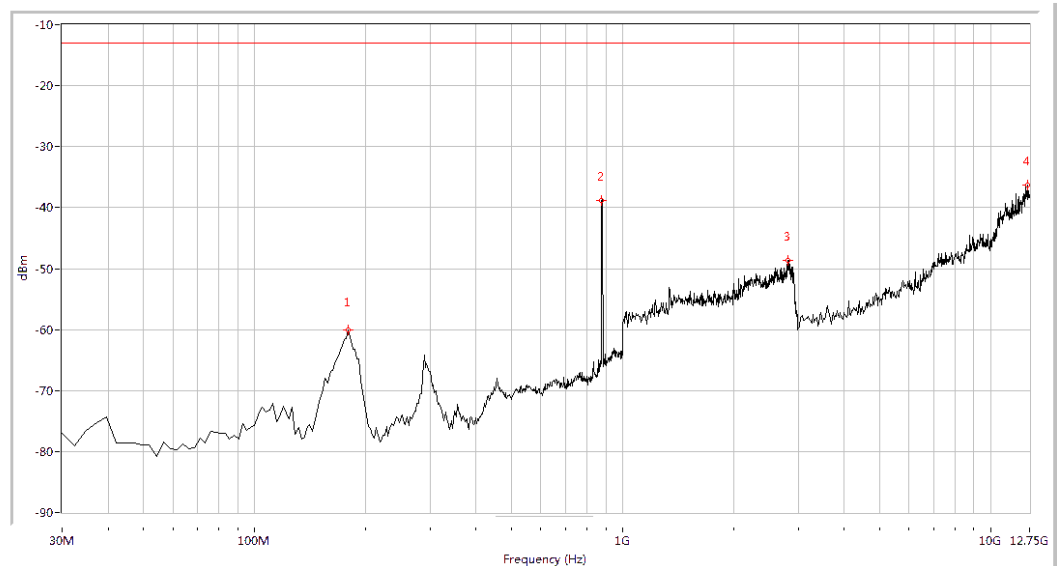
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-55.74	-13.0	42.7	145.2	Horizontal	PASS
871.796	-39.67	-13.0	26.7	217.5	Horizontal	PASS
2830.424	-47.71	-13.0	34.7	85.6	Horizontal	PASS
10877.805	-37.74	-13.0	24.7	246.9	Horizontal	PASS

(Plot K.1: HSPA+ 850MHz Channel = 4132, Test Antenna Horizontal)



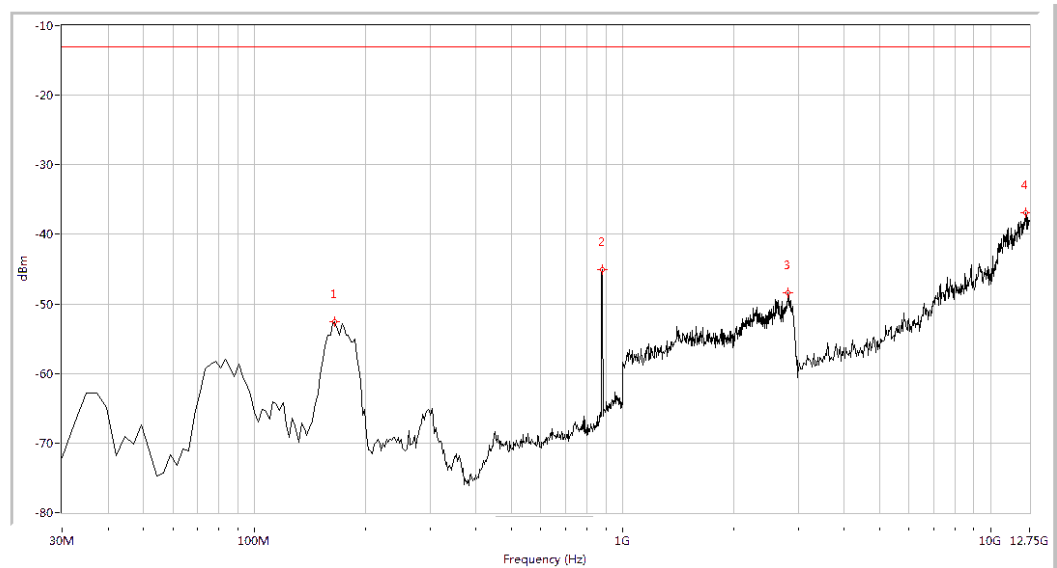
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-58.99	-13.0	46.0	54.6	Vertical	PASS
869.377	-45.32	-13.0	32.3	335.2	Vertical	PASS
2231.920	-50.87	-13.0	37.9	99.5	Vertical	PASS
12652.743	-36.21	-13.0	23.2	15.0	Vertical	PASS

(Plot K.2: HSPA+ 850 MHz Channel = 4132, Test Antenna Vertical)



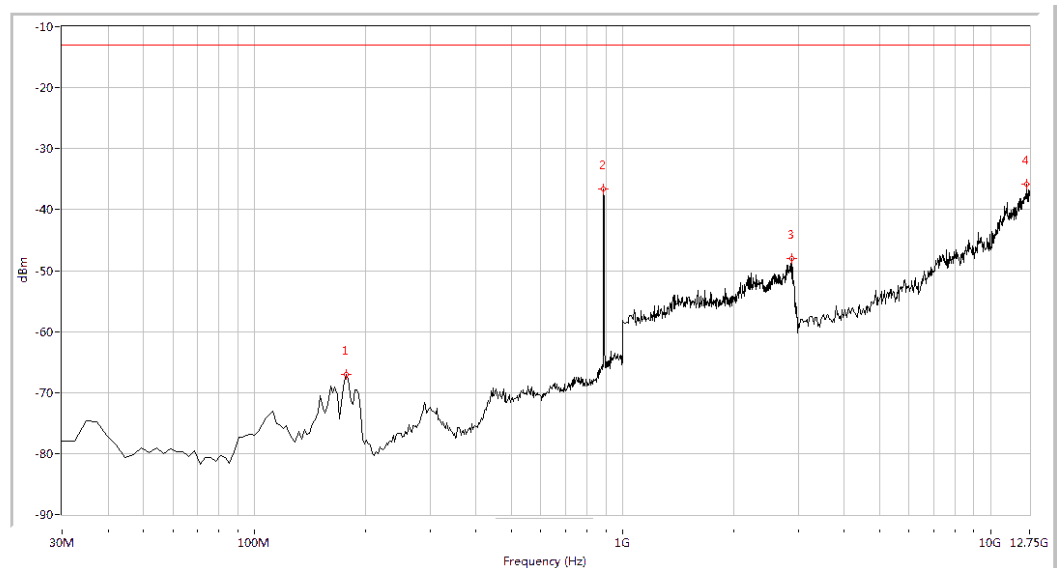
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
179.975	-59.99	-13.0	47.0	154	Horizontal	PASS
876.633	-38.78	-13.0	25.8	24	Horizontal	PASS
2805.486	-48.73	-13.0	35.7	284.2	Horizontal	PASS
12579.800	-36.26	-13.0	23.3	157.5	Horizontal	PASS

(Plot K.3: HSPA+ 850MHz Channel = 4175, Test Antenna Horizontal)



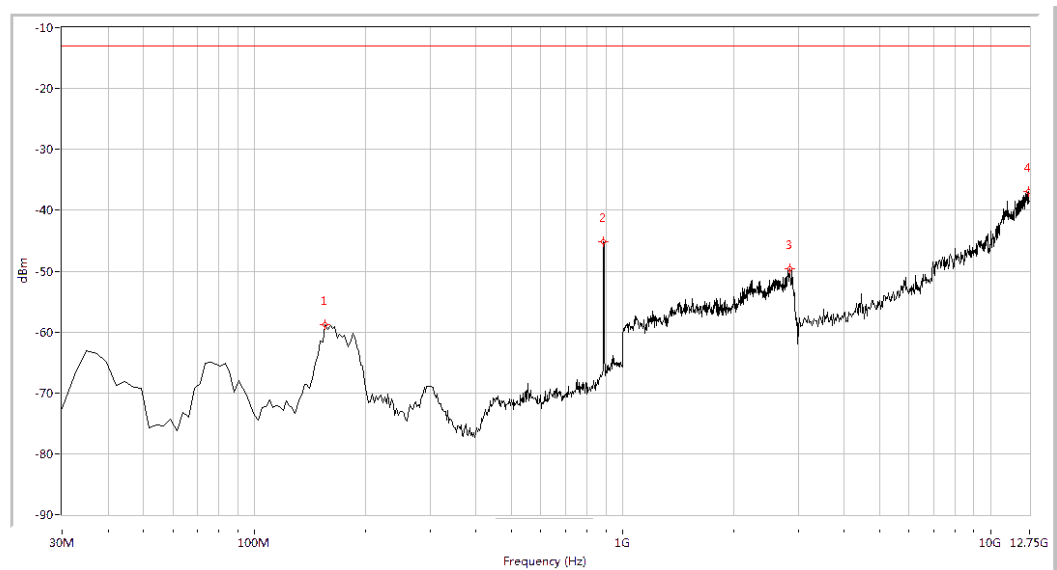
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
165.461	-52.49	-13.0	39.5	125.1	Vertical	PASS
879.052	-45.14	-13.0	32.1	28.3	Vertical	PASS
2820.449	-48.43	-13.0	35.4	313.5	Vertical	PASS
12482.544	-36.87	-13.0	23.9	167.8	Vertical	PASS

(Plot K.4: HSPA+ 850MHz Channel = 4175, Test Antenna Vertical)



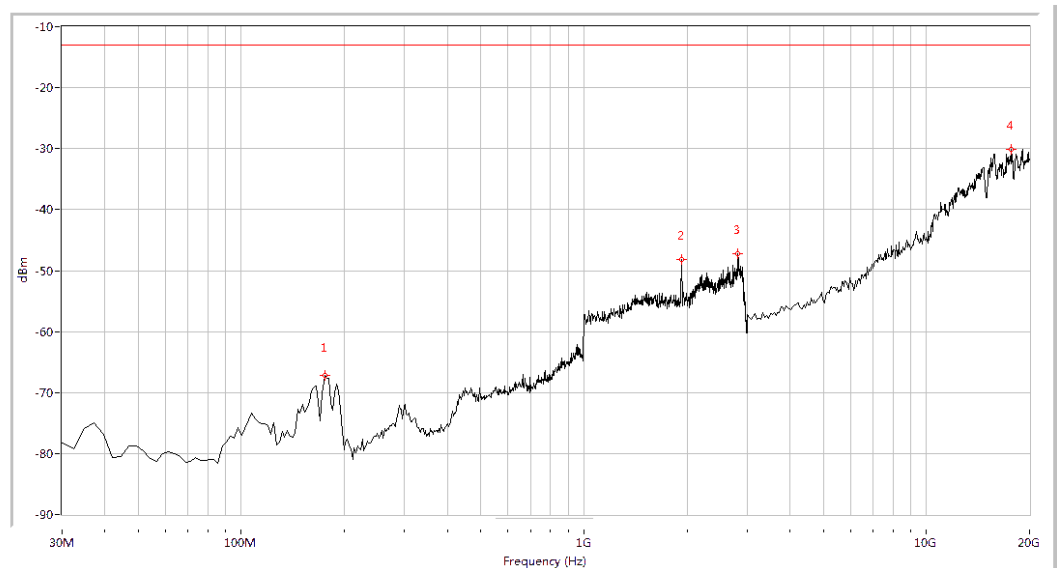
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.08	-13.0	54.1	52.4	Horizontal	PASS
888.728	-36.69	-13.0	23.7	127.5	Horizontal	PASS
2885.287	-48.05	-13.0	35.1	32.0	Horizontal	PASS
12531.172	-35.81	-13.0	22.8	168.1	Horizontal	PASS

(Plot K.5: HSPA+ 850MHz Channel = 4233, Test Antenna Horizontal)



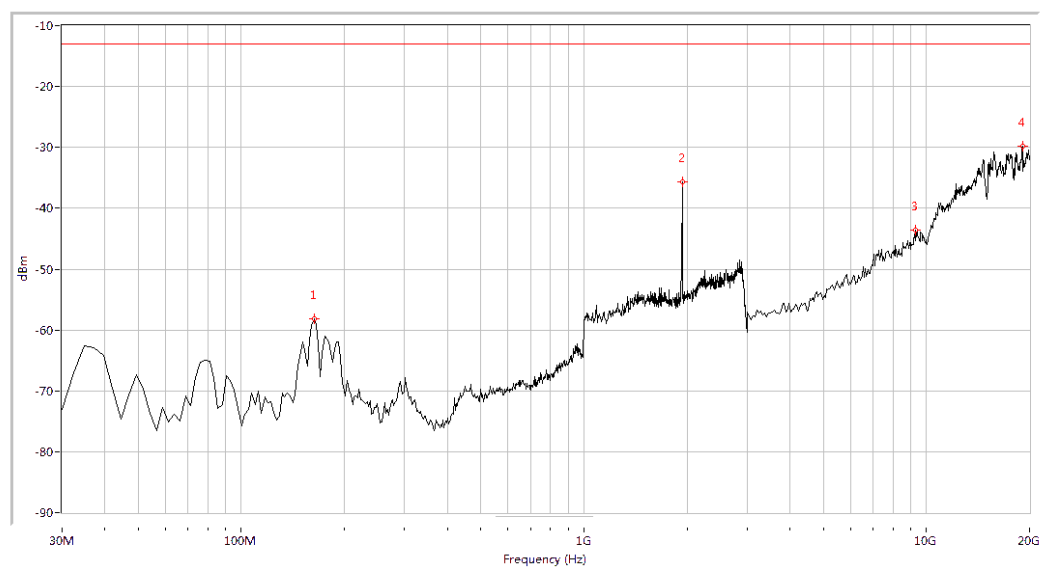
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
155.786	-58.85	-13.0	45.9	54.5	Vertical	PASS
888.728	-45.15	-13.0	32.1	127.0	Vertical	PASS
2840.399	-49.65	-13.0	36.7	315.4	Vertical	PASS
12652.743	-37.01	-13.0	24.0	81.7	Vertical	PASS

(Plot K.6: HSPA+ 850MHz Channel = 4233, Test Antenna Vertical)



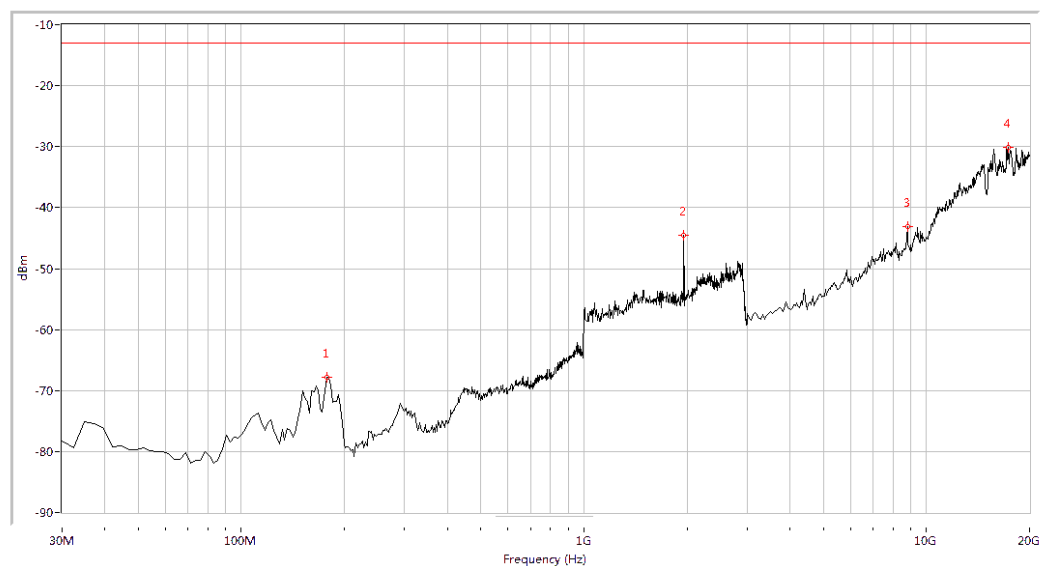
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
175.137	-67.26	-13.0	54.3	124.5	Horizontal	PASS
1927.681	-48.14	-13.0	35.1	51.1	Horizontal	PASS
2815.461	-47.25	-13.0	34.3	18.9	Horizontal	PASS
17710.723	-30.13	-13.0	17.1	241.8	Horizontal	PASS

(Plot L.1: HSPA+ 1900 MHz Channel = 9262, Test Antenna Horizontal)



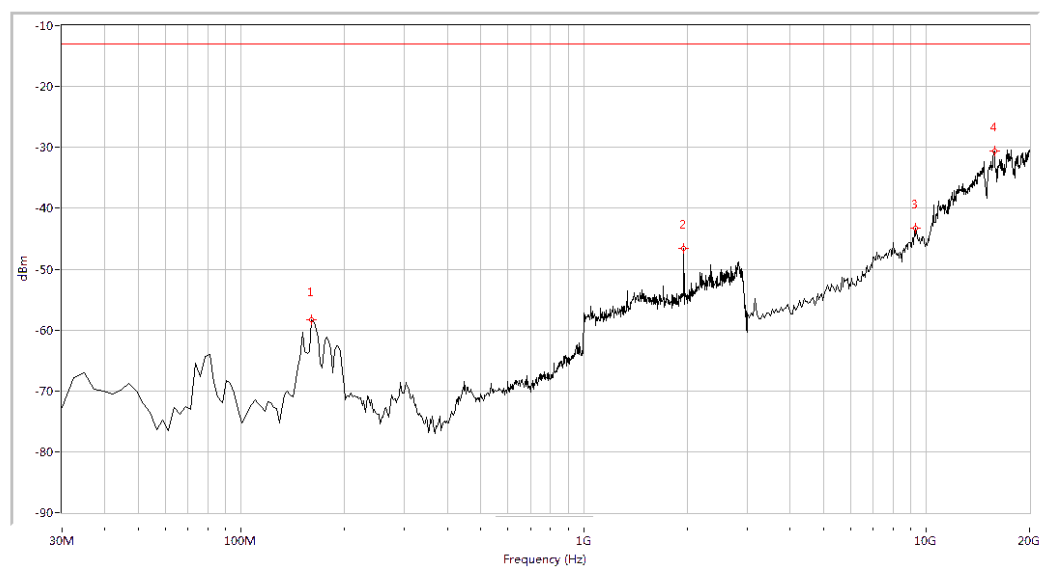
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
163.042	-58.22	-13.0	45.2	153.5	Vertical	PASS
1937.656	-35.67	-13.0	22.7	152.3	Vertical	PASS
9274.314	-43.62	-13.0	30.6	12.7	Vertical	PASS
19067.332	-29.85	-13.0	16.8	324.9	Vertical	PASS

(Plot L.2: HSPA+ 1900 MHz Channel = 9262, Test Antenna Vertical)



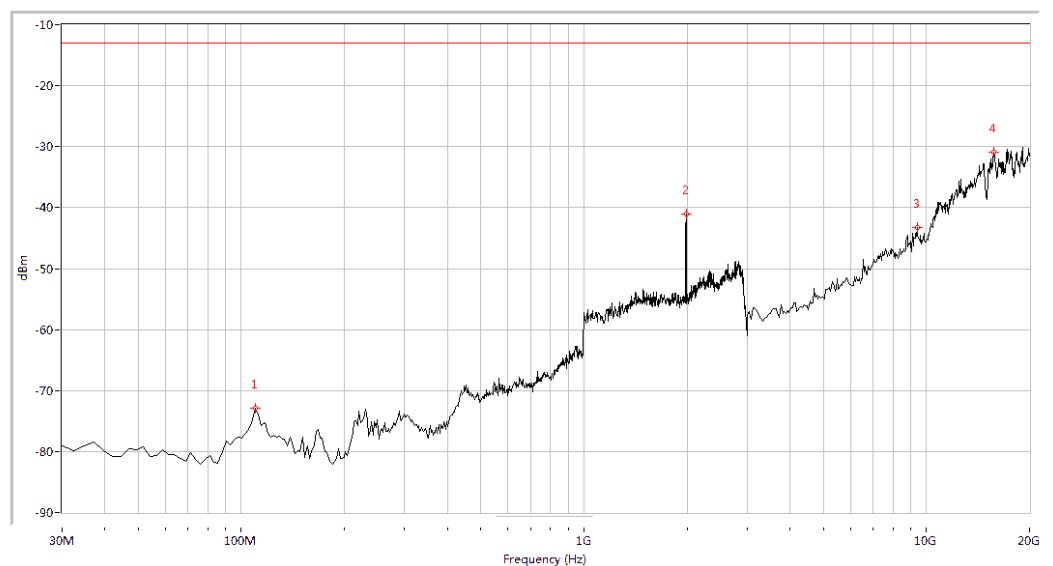
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
177.556	-67.80	-13.0	54.8	74.0	Horizontal	PASS
1957.606	-44.48	-13.0	31.5	246.4	Horizontal	PASS
8807.980	-43.03	-13.0	30.0	153.9	Horizontal	PASS
17286.783	-30.11	-13.0	17.1	91.6	Horizontal	PASS

(Plot L.3: HSPA+ 1900 MHz Channel = 9400, Test Antenna Horizontal)



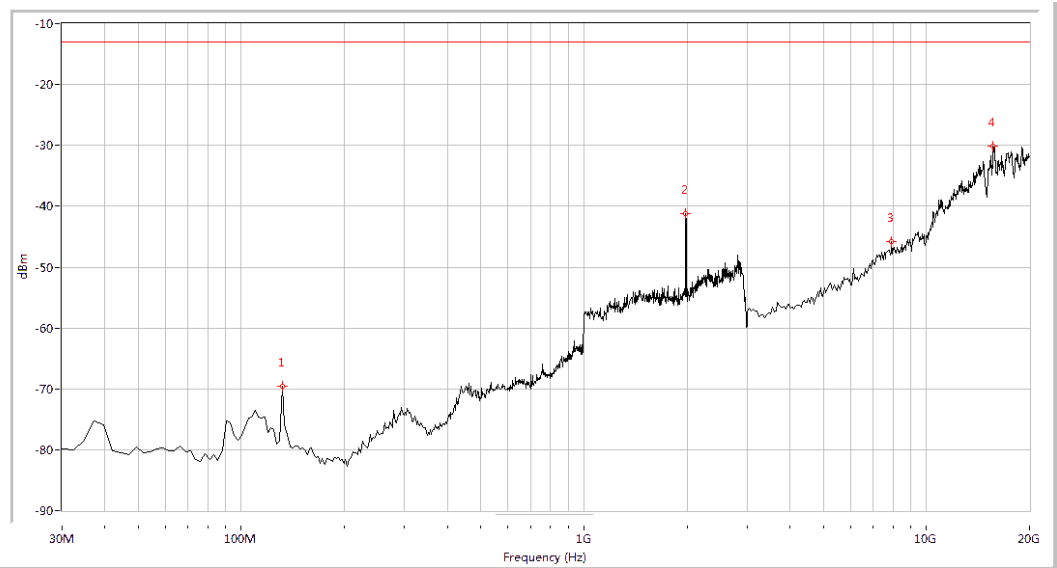
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
160.623	-58.25	-13.0	45.3	13.2	Vertical	PASS
1957.606	-46.57	-13.0	33.6	241.4	Vertical	PASS
9274.314	-43.24	-13.0	30.2	221.5	Vertical	PASS
15802.993	-30.54	-13.0	17.5	162.3	Vertical	PASS

(Plot L.4: HSPA+ 1900 MHz Channel = 9400, Test Antenna Vertical)



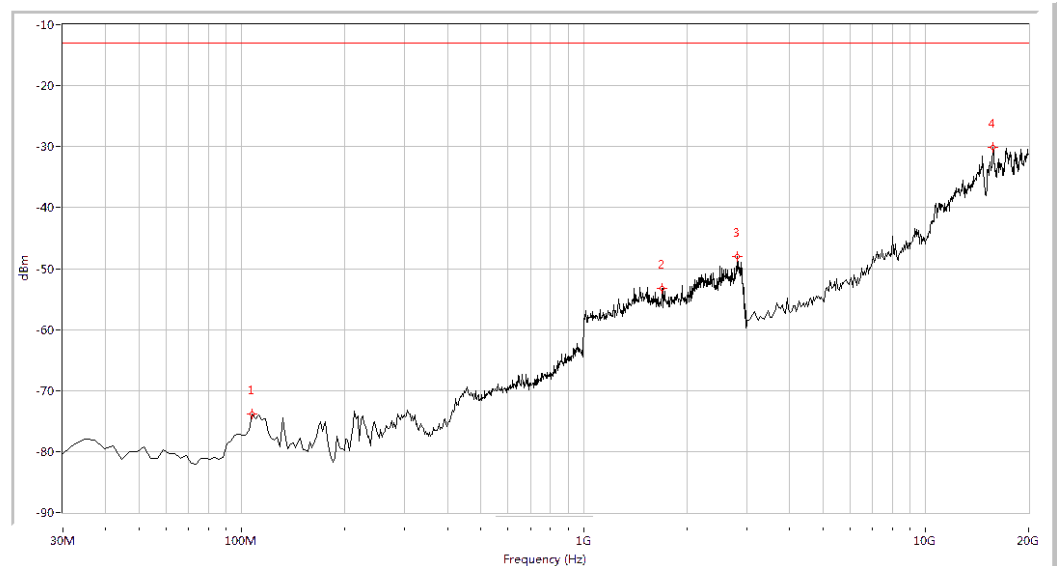
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-72.82	-13.0	59.8	243.1	Horizontal	PASS
1987.531	-41.07	-13.0	28.1	85.4	Horizontal	PASS
9401.496	-43.34	-13.0	30.3	126.3	Horizontal	PASS
15760.599	-30.92	-13.0	17.9	38.0	Horizontal	PASS

(Plot L.5: HSPA+ 1900 MHz Channel = 9538, Test Antenna Horizontal)



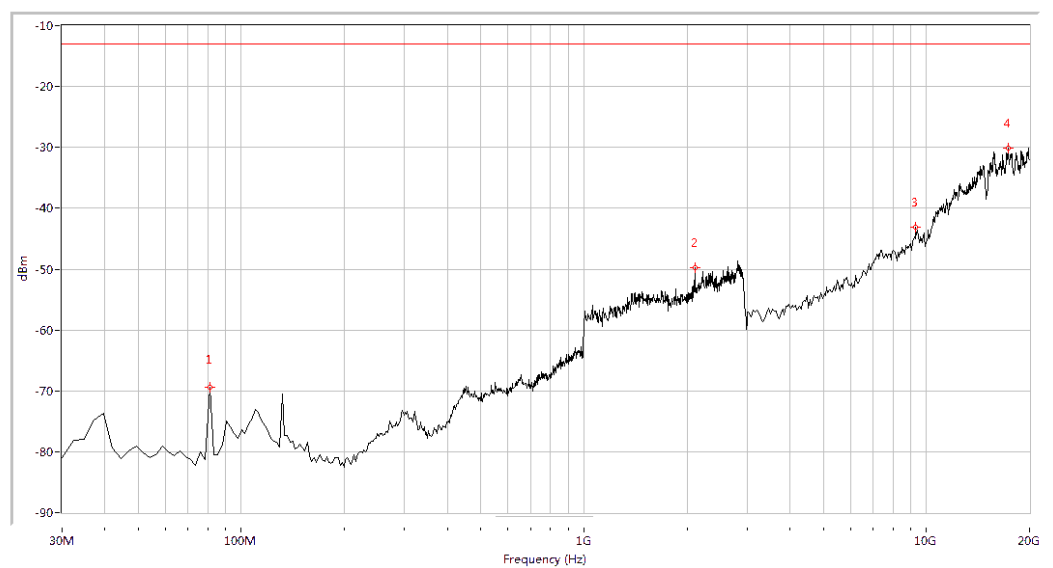
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
131.596	-69.56	-13.0	56.6	85.1	Vertical	PASS
1982.544	-41.20	-13.0	28.2	124.0	Vertical	PASS
7917.706	-45.81	-13.0	32.8	68.9	Vertical	PASS
15675.810	-30.08	-13.0	17.1	314.5	Vertical	PASS

(Plot L.6: HSPA+ 1900 MHz Channel = 9538, Test Antenna Vertical)



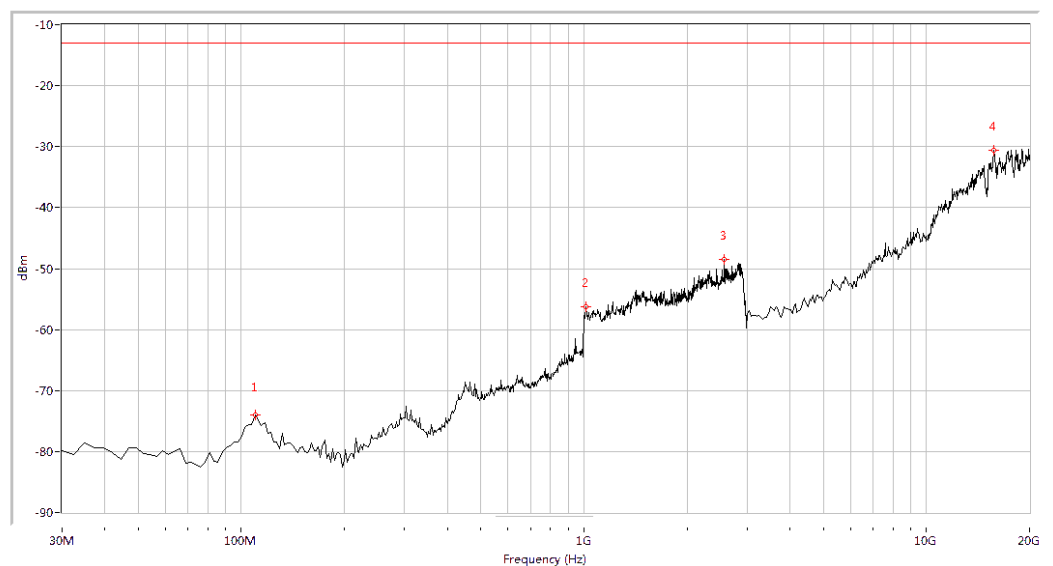
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
107.406	-73.80	-13.0	60.8	324.2	Horizontal	PASS
1698.254	-53.30	-13.0	40.3	172.0	Horizontal	PASS
2810.474	-48.00	-13.0	35.0	246.1	Horizontal	PASS
15760.599	-30.16	-13.0	17.2	98.4	Horizontal	PASS

(Plot M.1: WCDMA 1700MHz Channel = 1312, Test Antenna Horizontal)



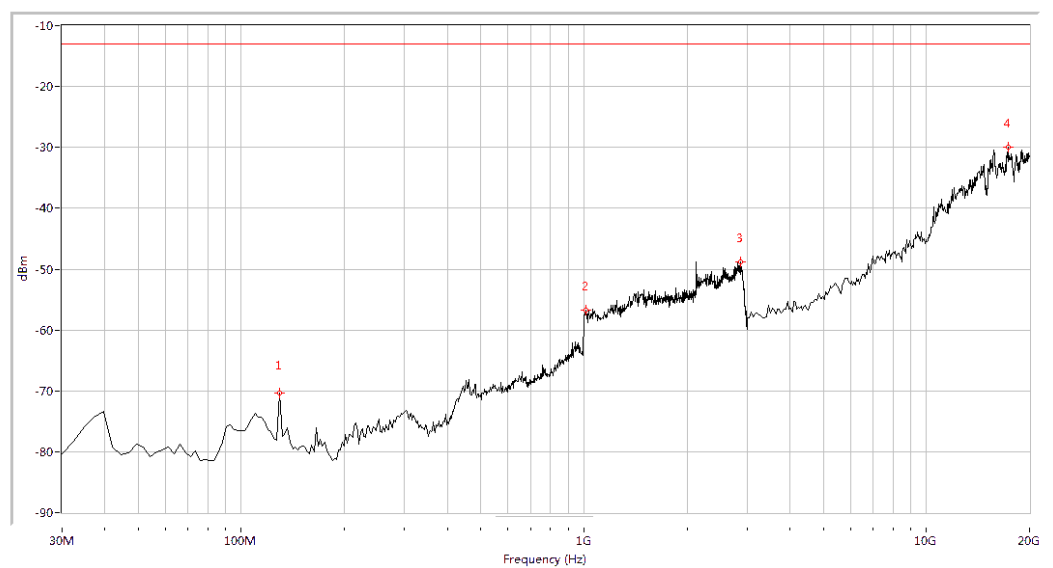
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
80.798	-69.42	-13.0	56.4	157.0	Vertical	PASS
2112.219	-49.78	-13.0	36.8	15.2	Vertical	PASS
9316.708	-43.14	-13.0	30.1	242.4	Vertical	PASS
17286.783	-30.10	-13.0	17.1	28.6	Vertical	PASS

(Plot M.2: WCDMA 1700MHz Channel = 1312, Test Antenna Vertical)



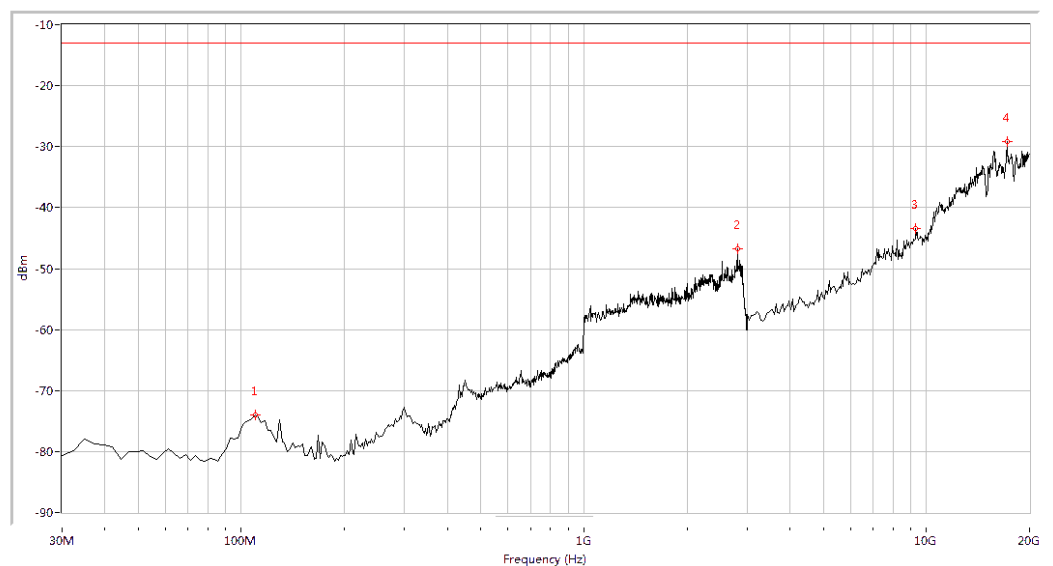
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.94	-13.0	60.9	54.4	Horizontal	PASS
1014.963	-56.24	-13.0	43.2	65.0	Horizontal	PASS
2576.060	-48.46	-13.0	35.5	127.2	Horizontal	PASS
15760.599	-30.66	-13.0	17.7	84.9	Horizontal	PASS

(Plot M.3: WCDMA 1700MHz Channel = 1412, Test Antenna Horizontal)



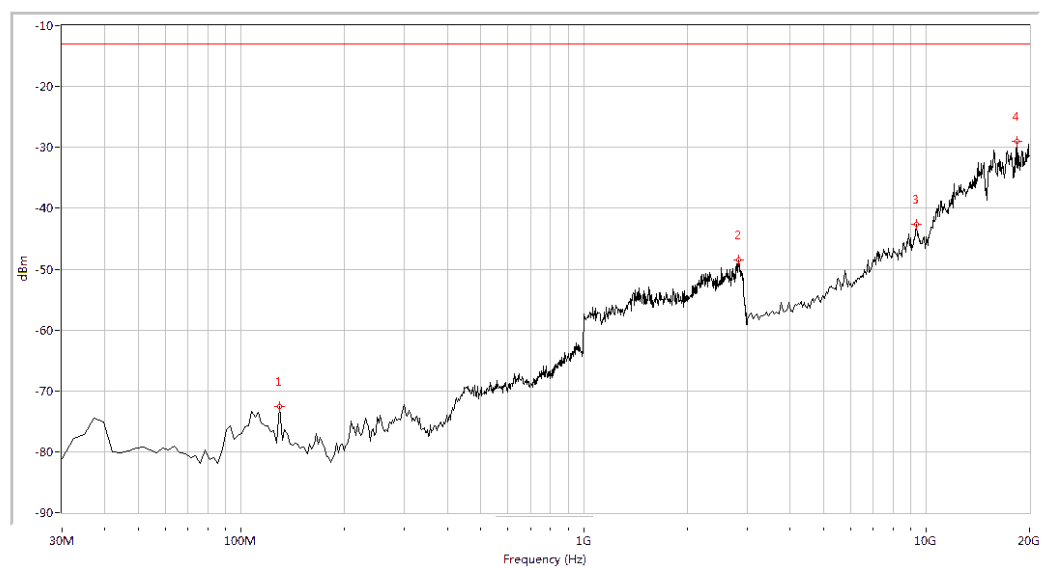
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-70.29	-13.0	57.3	15.5	Vertical	PASS
1014.963	-56.79	-13.0	43.8	123.6	Vertical	PASS
2860.349	-48.86	-13.0	35.9	351.0	Vertical	PASS
17286.783	-29.89	-13.0	16.9	55.7	Vertical	PASS

(Plot M.4: WCDMA 1700MHz Channel = 1412, Test Antenna Vertical)



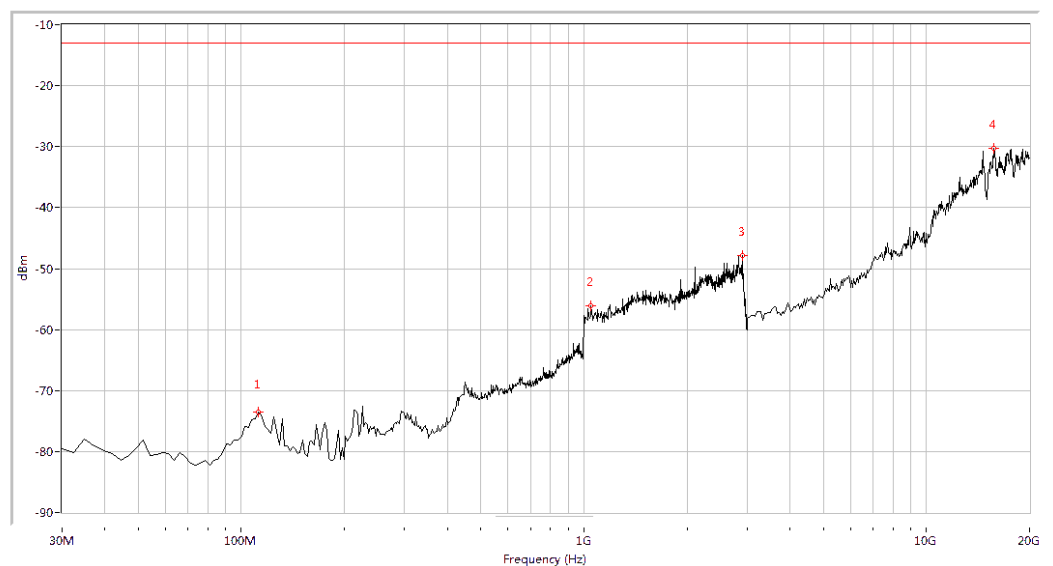
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.99	-13.0	61.0	153.2	Horizontal	PASS
2810.474	-46.79	-13.0	33.8	98.4	Horizontal	PASS
9316.708	-43.47	-13.0	30.5	15.0	Horizontal	PASS
17201.995	-29.16	-13.0	16.2	126.8	Horizontal	PASS

(Plot M.5: WCDMA 1700MHz Channel = 1513, Test Antenna Horizontal)



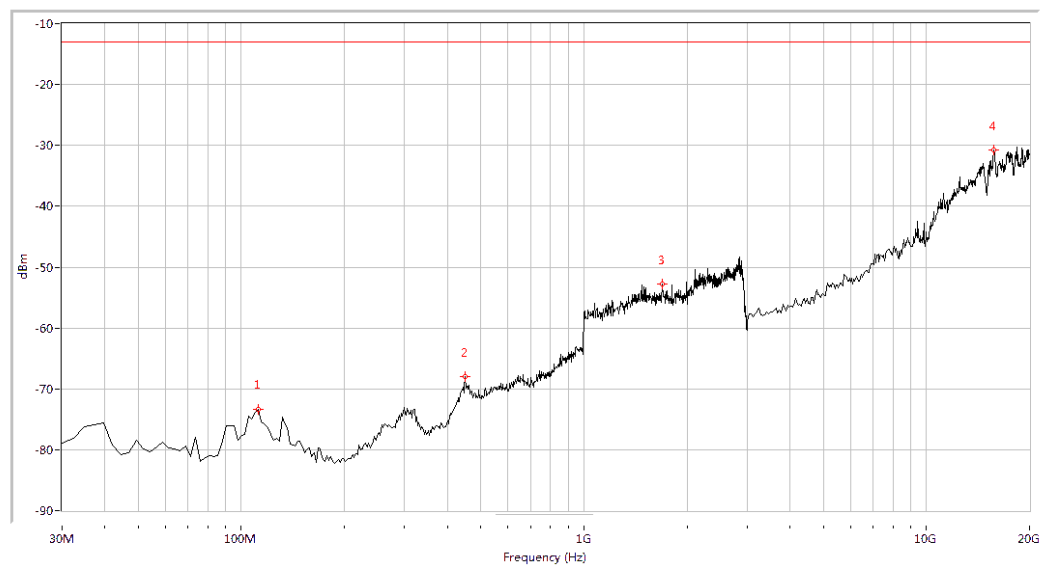
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-72.60	-13.0	59.6	61.5	Vertical	PASS
2825.436	-48.47	-13.0	35.5	216.8	Vertical	PASS
9359.102	-42.61	-13.0	29.6	72.0	Vertical	PASS
18346.633	-28.94	-13.0	15.9	164.3	Vertical	PASS

(Plot M.6: WCDMA 1700MHz Channel = 1513, Test Antenna Vertical)



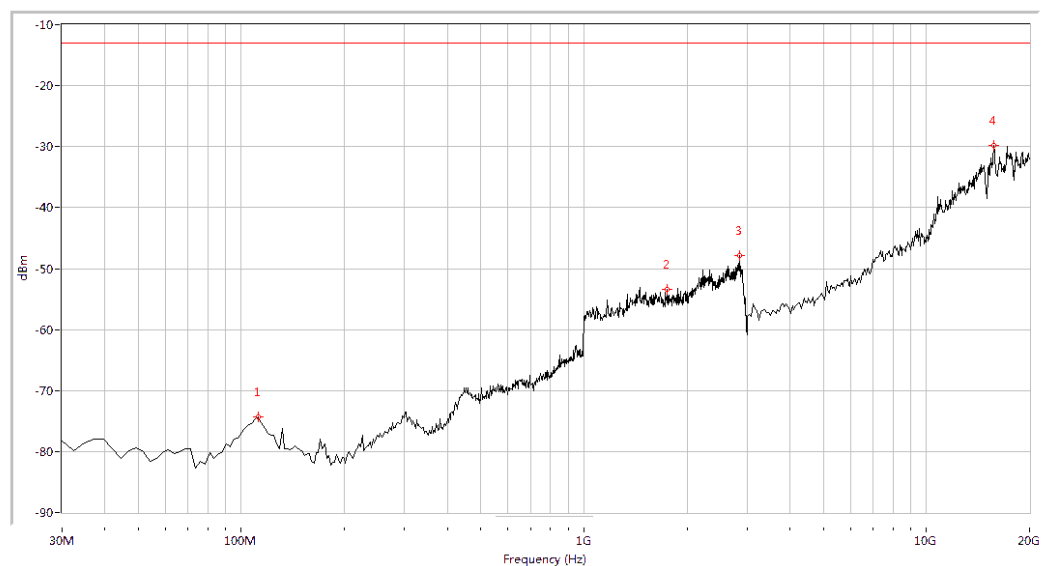
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.46	-13.0	60.5	241.0	Horizontal	PASS
1049.875	-56.16	-13.0	43.2	352.4	Horizontal	PASS
2900.249	-47.79	-13.0	34.8	89.7	Horizontal	PASS
15760.599	-30.31	-13.0	17.3	132.6	Horizontal	PASS

(Plot N.1: HSDPA 1700MHz Channel = 1312, Test Antenna Horizontal)



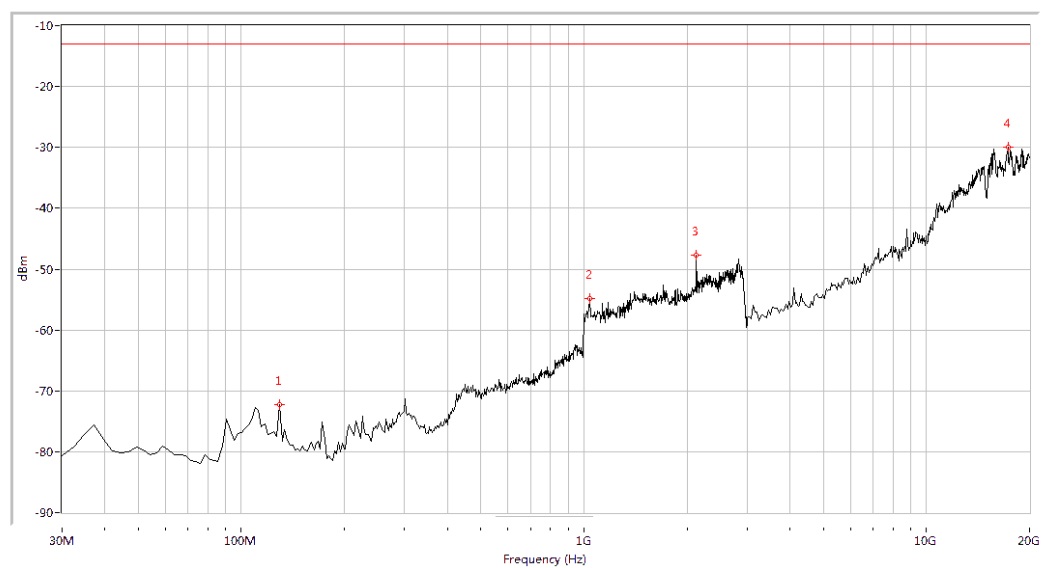
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.40	-13.0	60.4	124.1	Vertical	PASS
450.898	-67.97	-13.0	55.0	244.0	Vertical	PASS
1698.254	-52.84	-13.0	39.8	28.5	Vertical	PASS
15760.599	-30.81	-13.0	17.8	334.6	Vertical	PASS

(Plot N.2: HSDPA 1700MHz Channel = 1312, Test Antenna Vertical)



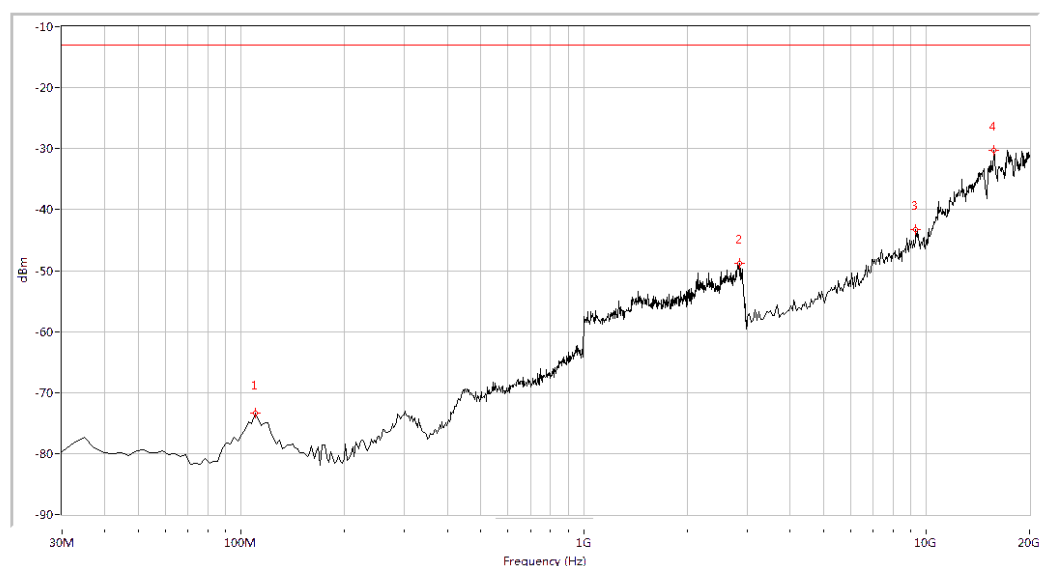
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-74.25	-13.0	61.3	65.1	Horizontal	PASS
1753.117	-53.33	-13.0	40.3	123.5	Horizontal	PASS
2845.387	-47.91	-13.0	34.9	89.4	Horizontal	PASS
15760.599	-29.82	-13.0	16.8	315.0	Horizontal	PASS

(Plot N.3: HSDPA 1700MHz Channel = 1412, Test Antenna Horizontal)



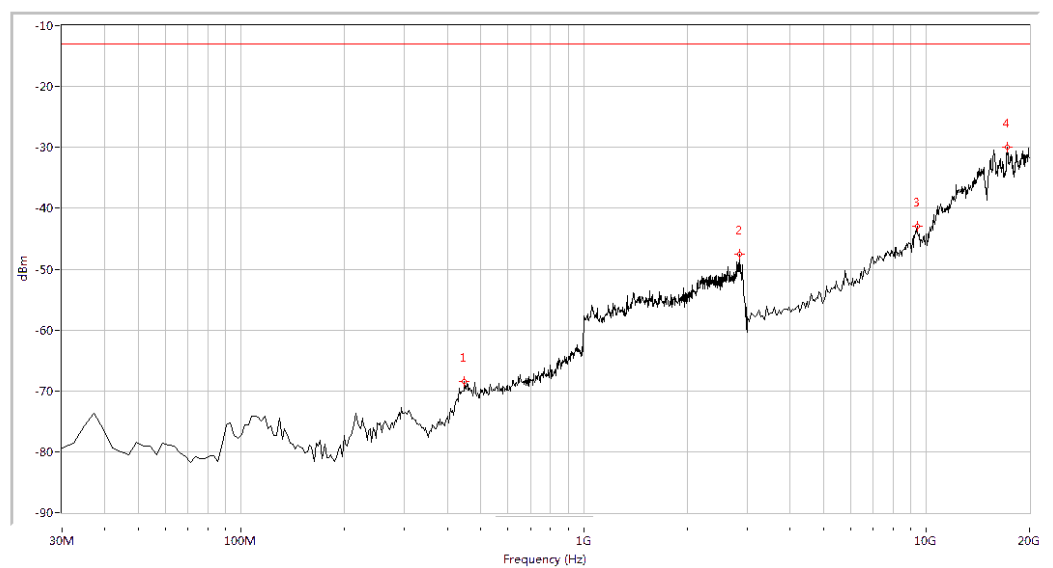
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-72.33	-13.0	59.3	51.5	Vertical	PASS
1039.900	-54.91	-13.0	41.9	123.7	Vertical	PASS
2132.170	-47.74	-13.0	34.7	216.8	Vertical	PASS
17329.177	-29.98	-13.0	17.0	35.0	Vertical	PASS

(Plot N.4: HSDAP 1700MHz Channel = 1412, Test Antenna Vertical)



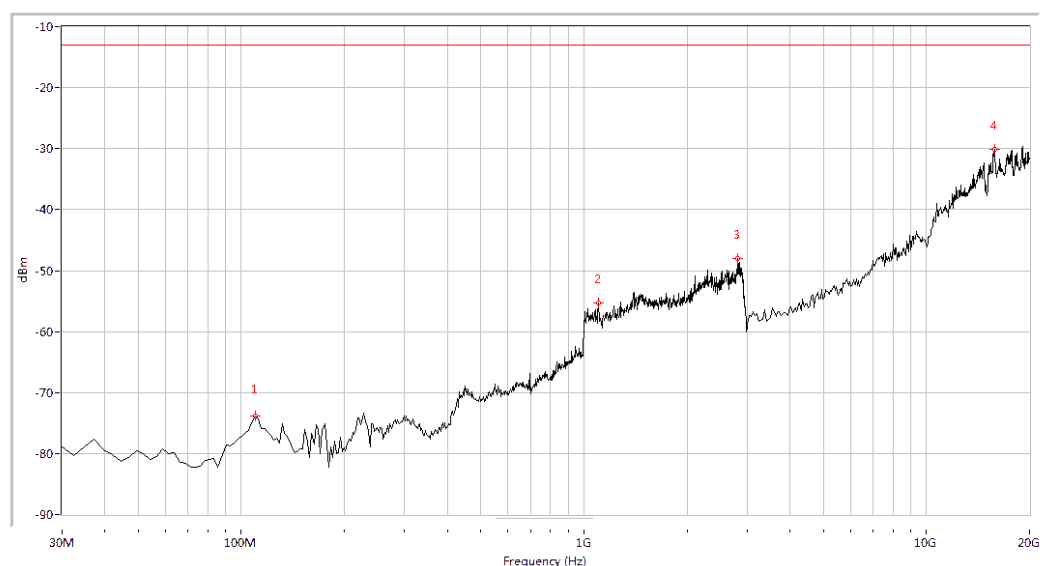
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.31	-13.0	60.3	156.2	Horizontal	PASS
2840.399	-48.78	-13.0	35.8	316.4	Horizontal	PASS
9316.708	-43.27	-13.0	30.3	52.0	Horizontal	PASS
15760.599	-30.35	-13.0	17.3	142.9	Horizontal	PASS

(Plot N.5: HSDPA 1700MHz Channel = 1513, Test Antenna Horizontal)



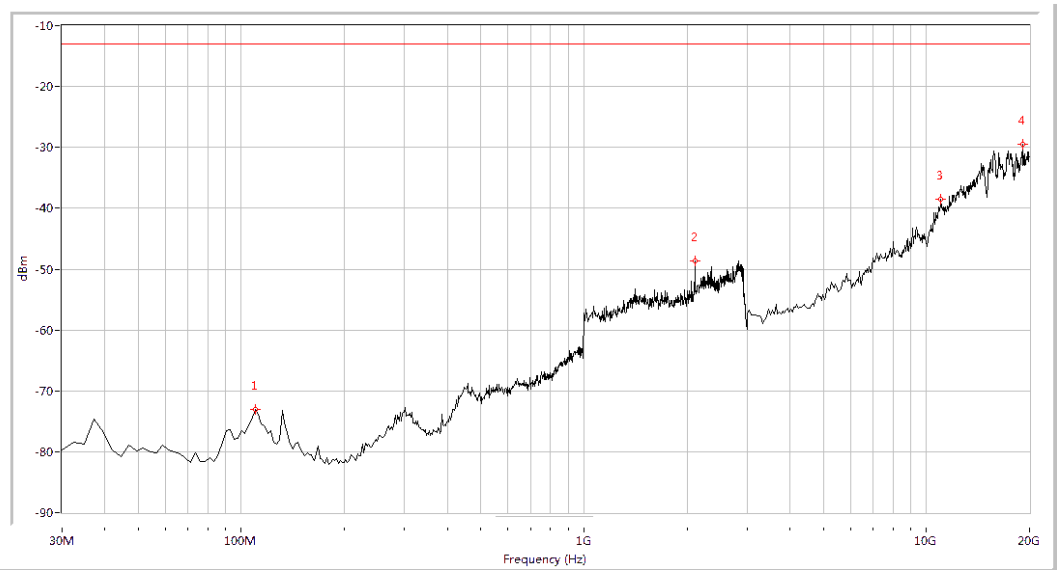
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
448.479	-68.39	-13.0	55.4	25.4	Vertical	PASS
2855.362	-47.61	-13.0	34.6	162.9	Vertical	PASS
9401.496	-42.90	-13.0	29.9	94.0	Vertical	PASS
17201.995	-29.97	-13.0	17.0	126.3	Vertical	PASS

(Plot N.6: HSDPA 1700MHz Channel = 1513, Test Antenna Vertical)



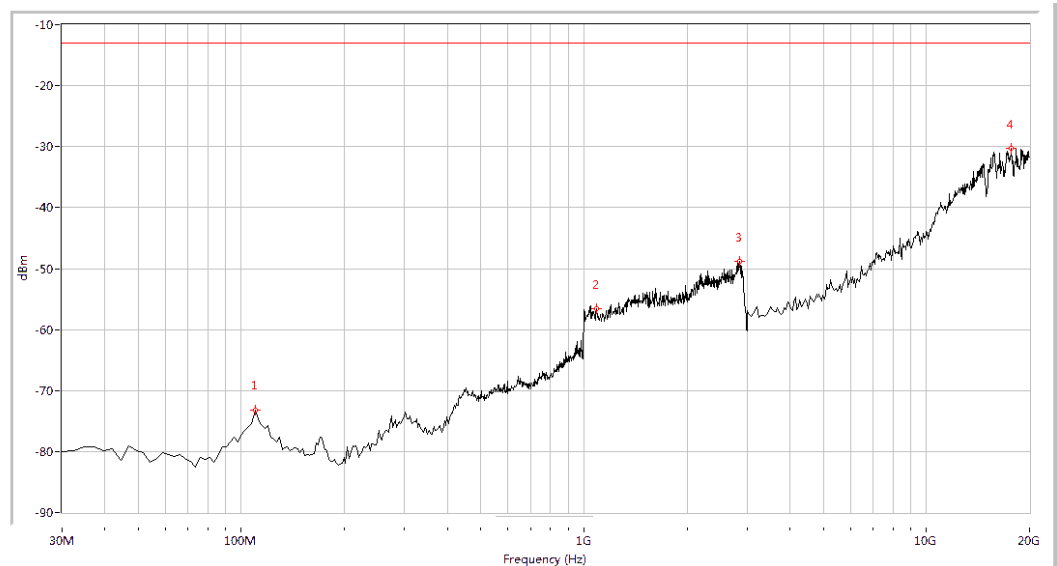
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.78	-13.0	60.8	231.0	Horizontal	PASS
1104.738	-55.29	-13.0	42.3	84.3	Horizontal	PASS
2820.449	-48.05	-13.0	35.0	128.6	Horizontal	PASS
15802.993	-30.06	-13.0	17.1	61.7	Horizontal	PASS

(Plot O.1: HSUPA 1700MHz Channel = 1312, Test Antenna Horizontal)



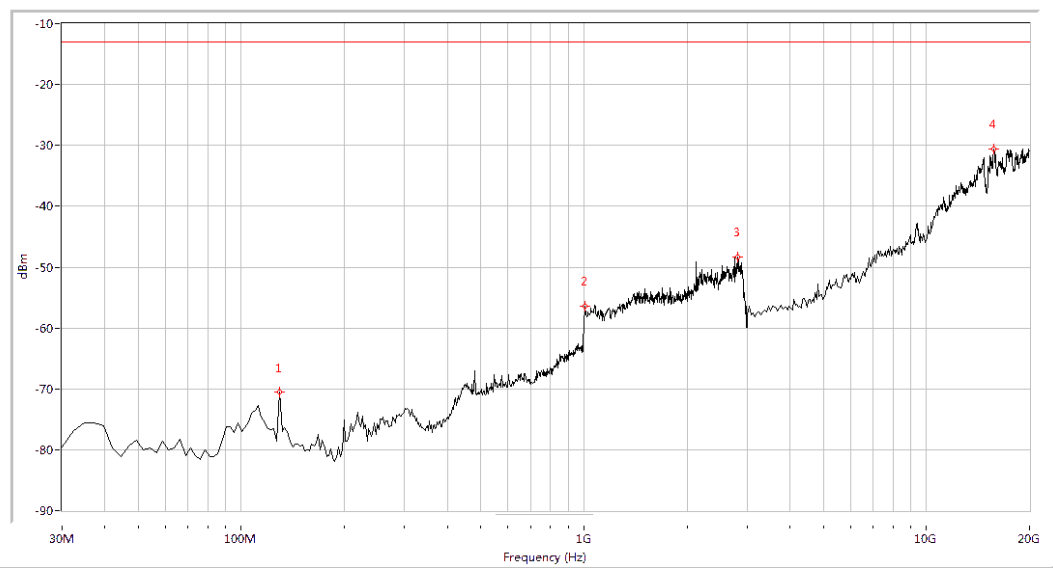
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.07	-13.0	60.1	0.0	Vertical	PASS
2112.219	-48.69	-13.0	35.7	0.0	Vertical	PASS
11012.469	-38.54	-13.0	25.5	0.0	Vertical	PASS
19109.726	-29.54	-13.0	16.5	0.0	Vertical	PASS

(Plot O.2: HSUPA 1700MHz Channel = 1312, Test Antenna Vertical)



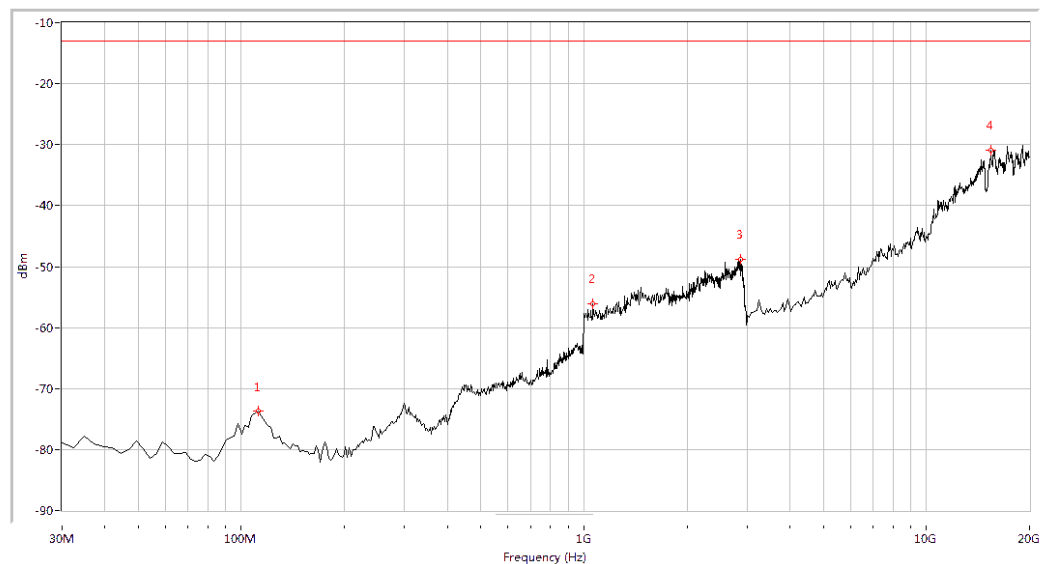
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.14	-13.0	60.1	51.0	Horizontal	PASS
1089.776	-56.53	-13.0	43.5	124.6	Horizontal	PASS
2855.362	-48.88	-13.0	35.9	316.5	Horizontal	PASS
17710.723	-30.32	-13.0	17.3	46.9	Horizontal	PASS

(Plot O.3: HSUPA 1700MHz Channel = 1412, Test Antenna Horizontal)



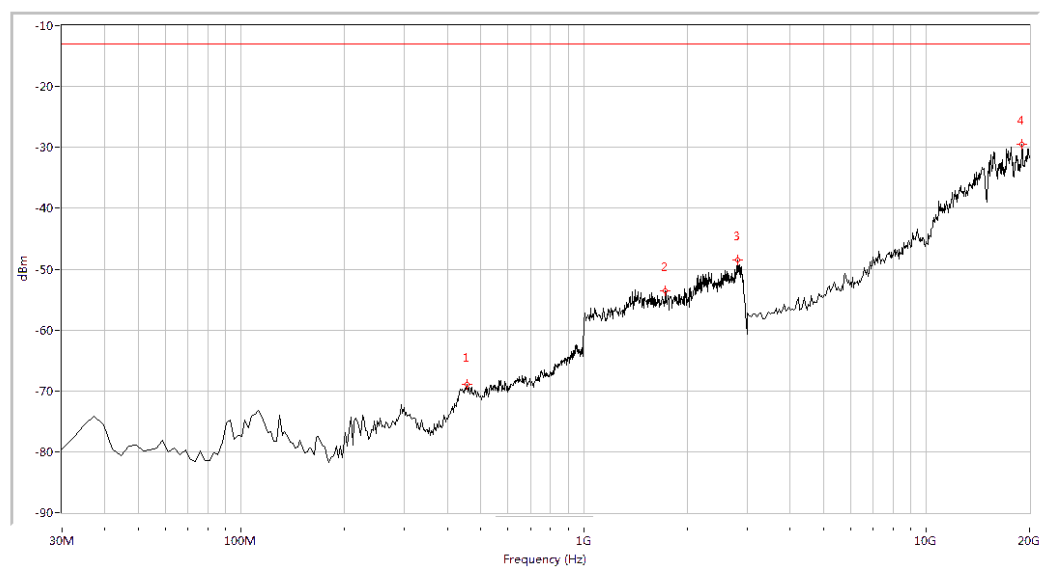
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-70.53	-13.0	57.5	12.5	Vertical	PASS
1009.975	-56.36	-13.0	43.4	246.+	Vertical	PASS
2820.449	-48.31	-13.0	35.3	266.5	Vertical	PASS
15760.599	-30.63	-13.0	17.6	21.4	Vertical	PASS

(Plot O.4: HSUPA 1700MHz Channel =1412, Test Antenna Vertical)



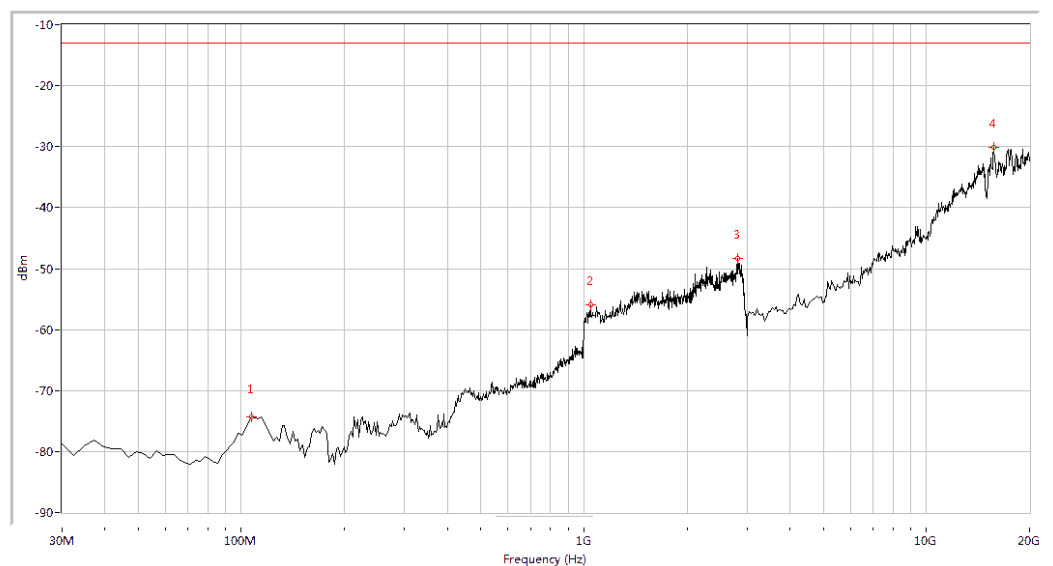
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.66	-13.0	60.7	152.5	Horizontal	PASS
1064.838	-56.10	-13.0	43.1	62.3	Horizontal	PASS
2865.337	-48.79	-13.0	35.8	98.0	Horizontal	PASS
15379.052	-30.97	-13.0	18.0	315.7	Horizontal	PASS

(Plot O.5: HSUPA 1700MHz Channel = 1513, Test Antenna Horizontal)



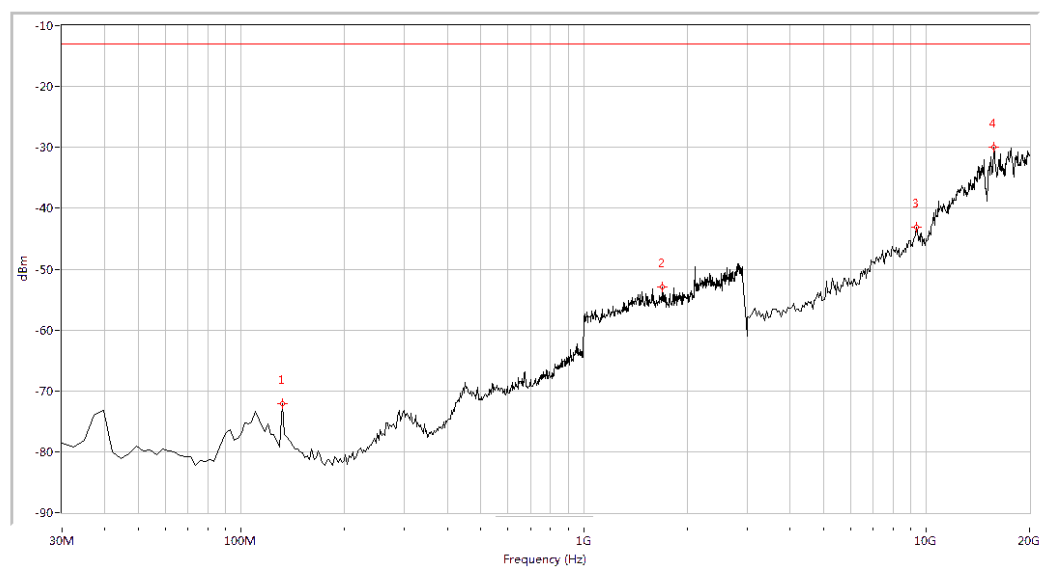
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
455.736	-68.86	-13.0	55.9	126.4	Vertical	PASS
1728.180	-53.62	-13.0	40.6	118.0	Vertical	PASS
2815.461	-48.53	-13.0	35.5	98.6	Vertical	PASS
19024.938	-29.44	-13.0	16.4	315.7	Vertical	PASS

(Plot O.6: HSUPA 1700MHz Channel = 1513, Test Antenna Vertical)



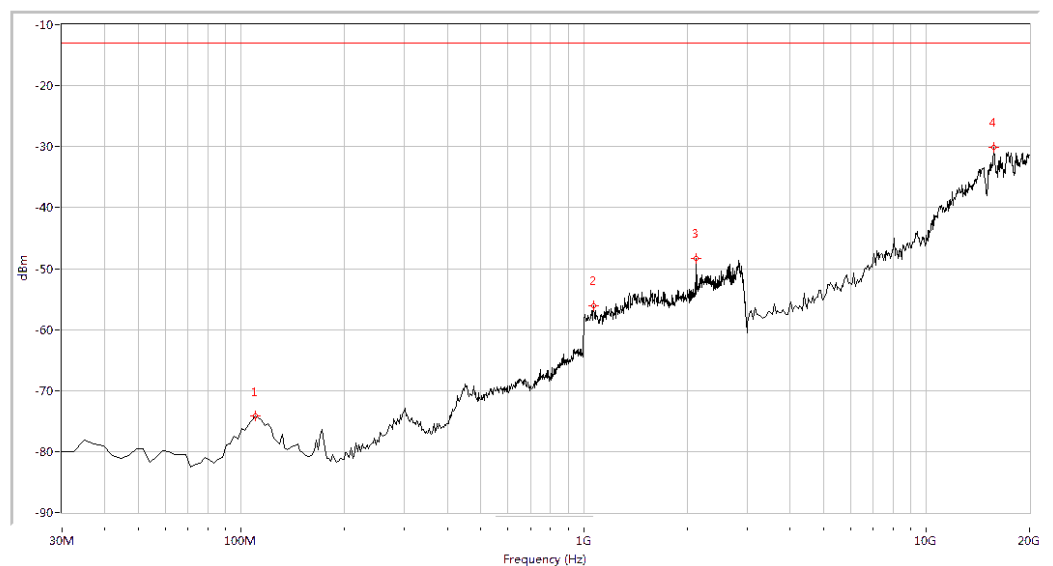
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
107.406	-74.32	-13.0	61.3	241.0	Horizontal	PASS
1044.888	-55.94	-13.0	42.9	253.5	Horizontal	PASS
2820.449	-48.26	-13.0	35.3	87.4	Horizontal	PASS
15718.204	-30.12	-13.0	17.1	146.1	Horizontal	PASS

(Plot P.1: HSPA+ 1700 MHz Channel = 1312, Test Antenna Horizontal)



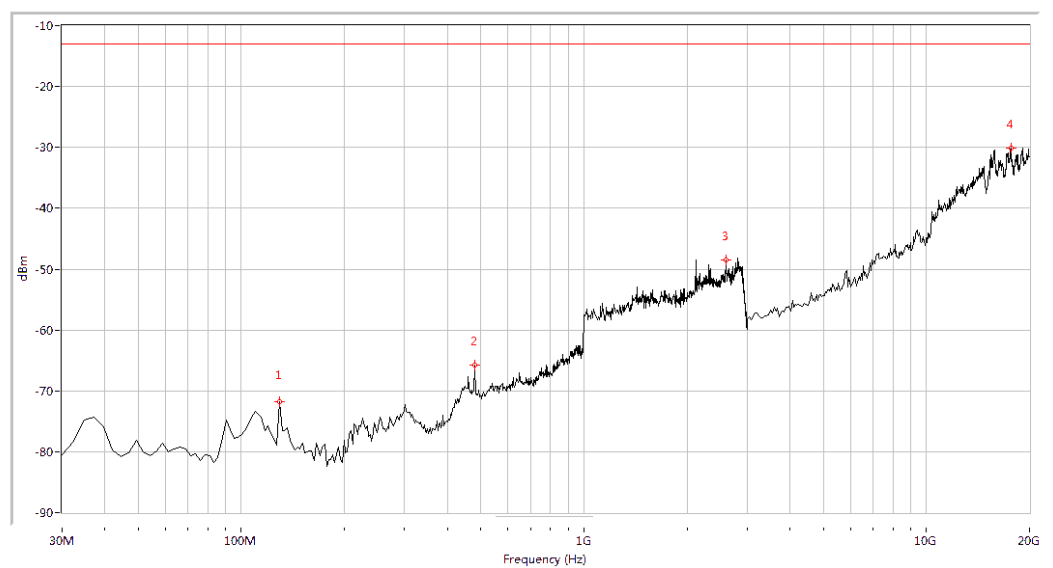
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
131.596	-72.10	-13.0	59.1	342.0	Vertical	PASS
1698.254	-52.99	-13.0	40.0	15.2	Vertical	PASS
9359.102	-43.19	-13.0	30.2	241.6	Vertical	PASS
15760.599	-30.01	-13.0	17.0	157.4	Vertical	PASS

(Plot P.2: HSPA+ 1700 MHz Channel = 1312, Test Antenna Vertical)



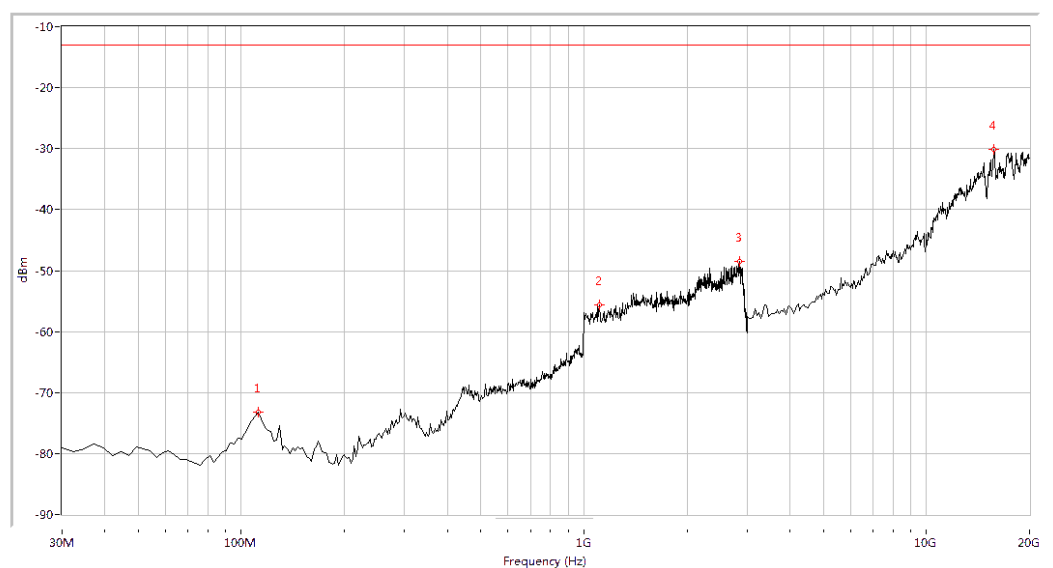
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-74.14	-13.0	61.1	158.0	Horizontal	PASS
1069.825	-56.17	-13.0	43.2	21.6	Horizontal	PASS
2132.170	-48.40	-13.0	35.4	321.7	Horizontal	PASS
15718.204	-30.06	-13.0	17.1	98.4	Horizontal	PASS

(Plot P.3: HSPA+ 1700 MHz Channel = 1412, Test Antenna Horizontal)



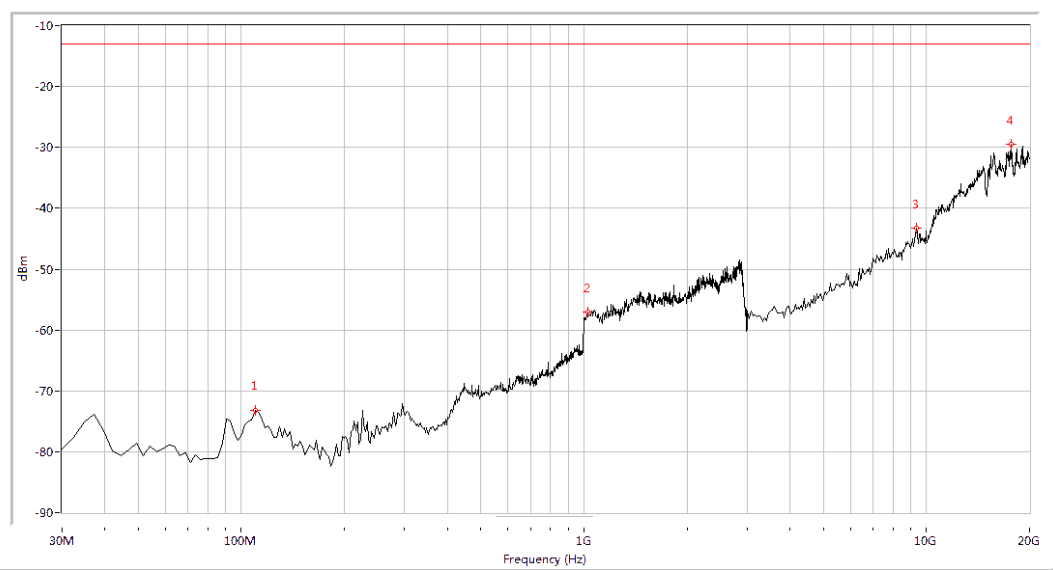
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
129.177	-71.83	-13.0	58.8	26.5	Vertical	PASS
479.925	-65.83	-13.0	52.8	123.8	Vertical	PASS
2600.998	-48.48	-13.0	35.5	0.0	Vertical	PASS
17668.329	-30.16	-13.0	17.2	0.0	Vertical	PASS

(Plot P.4: HSPA+ 1700 MHz Channel = 1412, Test Antenna Vertical)



Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
112.244	-73.27	-13.0	60.3	152.4	Horizontal	PASS
1109.726	-55.62	-13.0	42.6	321.9	Horizontal	PASS
2850.374	-48.45	-13.0	35.5	215.6	Horizontal	PASS
15760.599	-30.15	-13.0	17.2	81.0	Horizontal	PASS

(Plot P.5: HSPA+ 1700 MHz Channel = 1513, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
109.825	-73.29	-13.0	60.3	25.4	Vertical	PASS
1024.938	-57.04	-13.0	44.0	127.9	Vertical	PASS
9359.102	-43.26	-13.0	30.3	95.0	Vertical	PASS
17625.935	-29.55	-13.0	16.6	256.1	Vertical	PASS

(Plot P.6: HSPA+ 1700 MHz Channel = 1513, Test Antenna Vertical)

**** END OF REPORT ****