Report No.: SZ11030032W02

FCC TEST REPORT

Issued to

UN Cells Limited

For

Mobile Phone

Model Name:	Chairman
Trade Name:	SCI Innovations Limited
Brand Name:	UN Cells
FCC ID :	ZTBCHMN-01
Standard:	47 CFR Part 22 Subpart H
	47 CFR Part 24 Subpart E
Test date:	Jun 19, 2011 –Sep22, 2011
Issue date:	Oct 24, 2011

By

Shenzhen Morlab Communications Technology Co., Ltd.

Tested by Zhang Yan	*Approved by*	*Reviewed by* Peng Huarui
Zhang Yan	Wu Xuewen	Peng Huarui
Date 2011.10.24	*Date* 2011.10.24	*Date* 2011.10.24

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TABLE OF CONTENTS

Change History		
Issue	Date	Reason for change
1.0	Oct 24, 2011	First edition

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type ..... :	Mobile Phone
Serial No. ..... :	(n.a, marked #1 by test site)
Hardware Version ..... :	V4.4
Software Version ..... :	Chairman_GAPPS-eng 2.2 MAIN eng.duy.20110614.170756 test-keys
Applicant ..... :	UN Cells Limited 16C Hurst End, Folly Lane, Newport Pagnell, Buckinghamshire MK16 9HS, United Kingdom
Manufacturer ..... :	Flextronics (SBS) Munkas ut 28, PO Box 33, HU-8660 Tab, Hungary
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)
Modulation Type..... :	GPRS/GSM Mode with GMSK Modulation EDGE Mode with 8PSK Modulation WCDMA Mode with QPSK Modulation
Emission Designators ..... :	GSM:265KGXW, EGPRS:260KG7W WCDMA:4M14F9W HSDPA Mode with QPSK Modulation HSUPA Mode with QPSK Modulation

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<=n<=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<=n<=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<=n<=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<=n<=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: 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 for 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

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	2.1049	20dB Occupied Bandwidth	PASS
3	2.1055 22.355 24.235	Frequency Stability	PASS
4	2.1051 2.1057 22.917 24.238	Conducted Out of Band Emissions	PASS
5	2.1051 2.1057 22.917 24.238	Band Edge	PASS
6	22.913 24.232	Transmitter Radiated Power (EIPR/ERP)	PASS
7	2.1053 2.1057 22.917 24.238	Radiated Out of Band Emissions	PASS

NOTE：Measurement method according to TIA/EIA 603.C-2004

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 3/F, Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen, 518055 P. R. China. 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 741109.

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 REQUIREMENTS

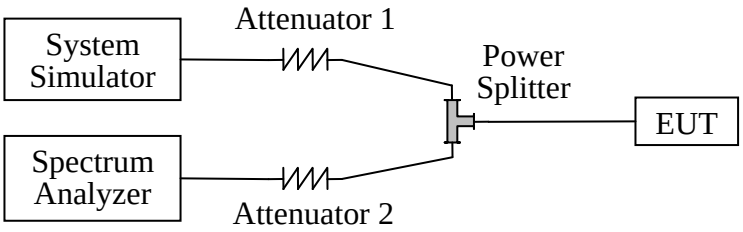
2.1 Conducted RF Output Power

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.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2010.09
Spectrum Analyzer	Agilent	E7405A	US44210471	2010.09
Power Splitter	Weinschel	1506A	NW521	(n.a.)
Attenuator 1	Resnet	20dB	(n.a.)	(n.a.)
Attenuator 2	Resnet	3dB	(n.a.)	(n.a.)

2.1.3 Test Result

Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT. For the GSM 850MHz operates at PCL=5 (where Power Class is 4), the rated conducted RF output power is 33dBm, and For the GSM 1900MHz operates at PCL=0 (where Power Class is 1), For the WCDMA 850MHz operates at All up bit, the rated conducted RF output power is 33dBm, and For the WCDMA 1900MHz operates at All up bit, the rated conducted RF output power is 30dBm.

1. Test Verdict:

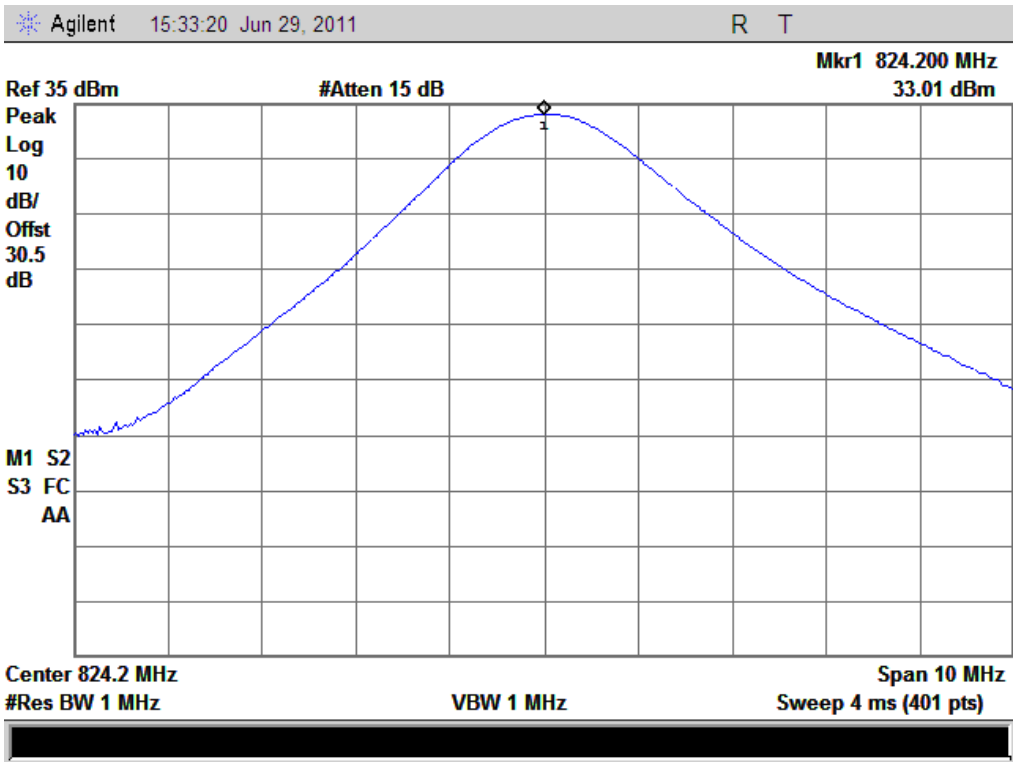
Band	Channel	Frequency (MHz)	Measured Output Power		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 850MHz	128	824.2	33.01	Plot A1 to A3	35	PASS
	190	836.6	32.85			PASS
	251	848.8	32.64			PASS
GSM 1900MHz	512	1850.2	26.92	Plot B1 to B3	32	PASS
	661	1880.0	26.5			PASS
	810	1909.8	26.07			PASS
GPRS 850MHz	128	824.2	26.55	Plot C1 to C3 1down link 4up link	35	PASS
	190	836.6	26.54			PASS
	251	848.8	26.5			PASS
GPRS 1900MHz	512	1850.2	29.31	Plot D1 to D3 1down link 4up link	32	PASS
	661	1880.0	29.97			PASS
	810	1909.8	29.84			PASS
GPRS 850MHz	128	824.2	27.67	Plot E1 to E3 2down link 3up link	35	PASS
	190	836.6	27.56			PASS
	251	848.8	27.54			PASS
GPRS 1900MHz	512	1850.2	30.26	Plot F1 to F3 2down link 3up link	32	PASS
	661	1880.0	29.40			PASS
	810	1909.8	29.26			PASS
GPRS 850MHz	128	824.2	29.49	Plot G1 to G3 3down link 2up link	35	PASS
	190	836.6	29.60			PASS
	251	848.8	29.44			PASS
GPRS 1900MHz	512	1850.2	29.12	Plot H1 to H3 3down link 2up link	32	PASS
	661	1880.0	29.47			PASS
	810	1909.8	29.29			PASS
GPRS 850MHz	128	824.2	30.53	Plot I1 to I3 4down link 1up link	35	PASS
	190	836.6	30.67			PASS
	251	848.8	30.62			PASS
GPRS 1900MHz	512	1850.2	29.19	Plot J1 to J3 4down link	32	PASS
	661	1880.0	29.87			PASS

Band	Channel	Frequency (MHz)	Measured Output Power		Limit	Verdict
			dBm	Refer to Plot	dBm	
	810	1909.8	29.76	1up link		PASS
EGPRS 850MHz	128	824.2	31.08	Plot K1 to K3 1down link 4up link	35	PASS
	190	836.6	31.44			PASS
	251	848.8	31.32			PASS
EGPRS 1900MHz	512	1850.2	27.70	Plot L1 to L3 1down link 4up link	32	PASS
	661	1880.0	28.31			PASS
	810	1909.8	28.20			PASS
EGPRS 850MHz	128	824.2	31.18	Plot M1 to M3 2down link 3up link	35	PASS
	190	836.6	31.34			PASS
	251	848.8	31.32			PASS
EGPRS 1900MHz	512	1850.2	29.00	Plot N1 to N3 2down link 3up link	32	PASS
	661	1880.0	29.58			PASS
	810	1909.8	29.44			PASS
EGPRS 850MHz	128	824.2	32.22	Plot O1 to O3 3down link 2up link	35	PASS
	190	836.6	32.40			PASS
	251	848.8	32.33			PASS
EGPRS 1900MHz	512	1850.2	28.94	Plot P1 to P3 3down link 2up link	32	PASS
	661	1880.0	29.56			PASS
	810	1909.8	29.45			PASS
EGPRS 850MHz	128	824.2	32.45	Plot Q1 to Q3 4down link 1up link	35	PASS
	190	836.6	32.62			PASS
	251	848.8	32.56			PASS
EGPRS 1900MHz	512	1850.2	29.31	Plot R1 to R3 4down link 1up link	32	PASS
	661	1880.0	29.95			PASS
	810	1909.8	29.81			PASS

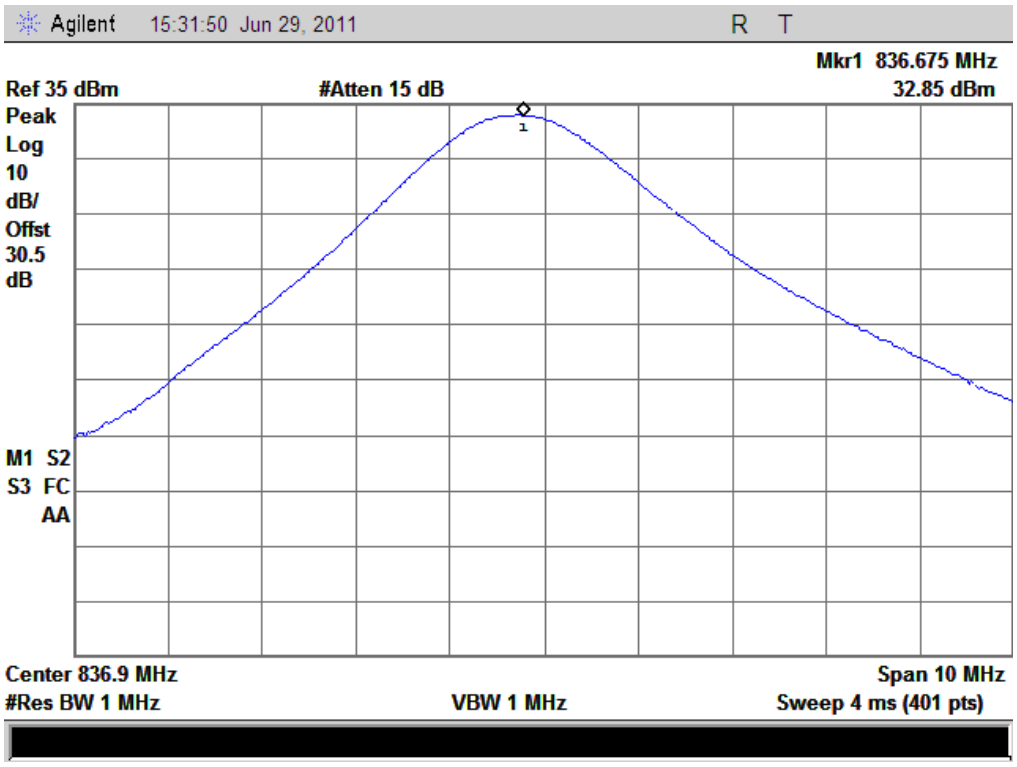
Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4357	4400	4458	9662	9800	9938
	subtest	dBm			dBm		
5.2(WCDMA)	non	22.55	21.98	22.00	21.50	22.09	21.97
HSDPA	1	21.81	21.44	21.48	20.75	21.06	20.53
	2	21.61	21.58	21.50	20.58	20.99	20.48
	3	21.25	21.07	20.97	20.21	20.43	20.28
	4	21.22	21.10	20.92	20.30	20.42	20.23
HSUPA	1	22.34	21.86	21.91	21.52	21.97	21.79
	2	20.45	20.01	19.93	19.61	19.87	19.69
	3	21.21	20.99	20.86	20.65	20.90	20.66
	4	20.35	20.05	20.04	19.72	19.92	19.63

	5	22.41	21.81	21.94	21.42	21.88	21.84

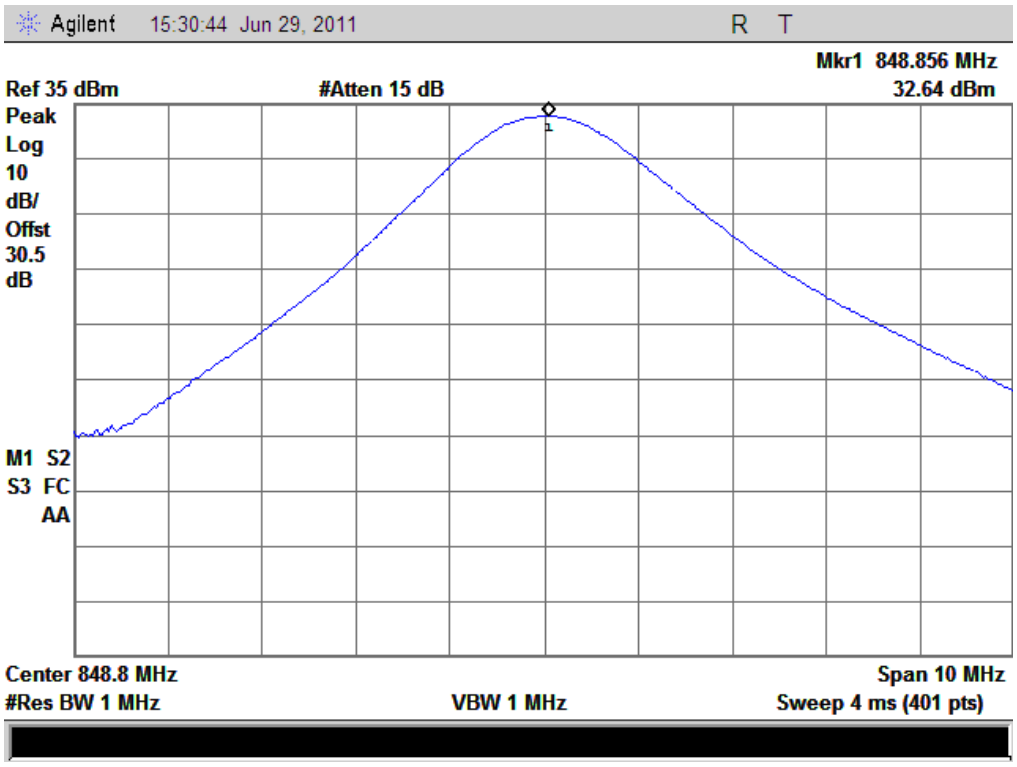
2. Test Plots:



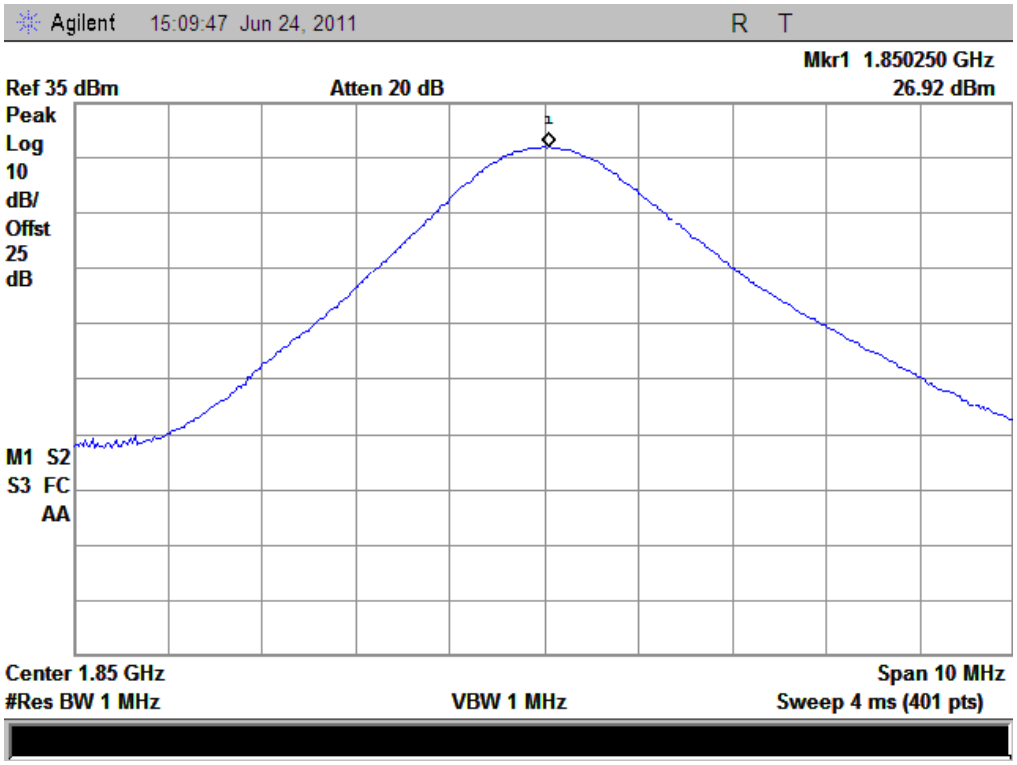
(Plot A1: GSM 850MHz Channel = 128)



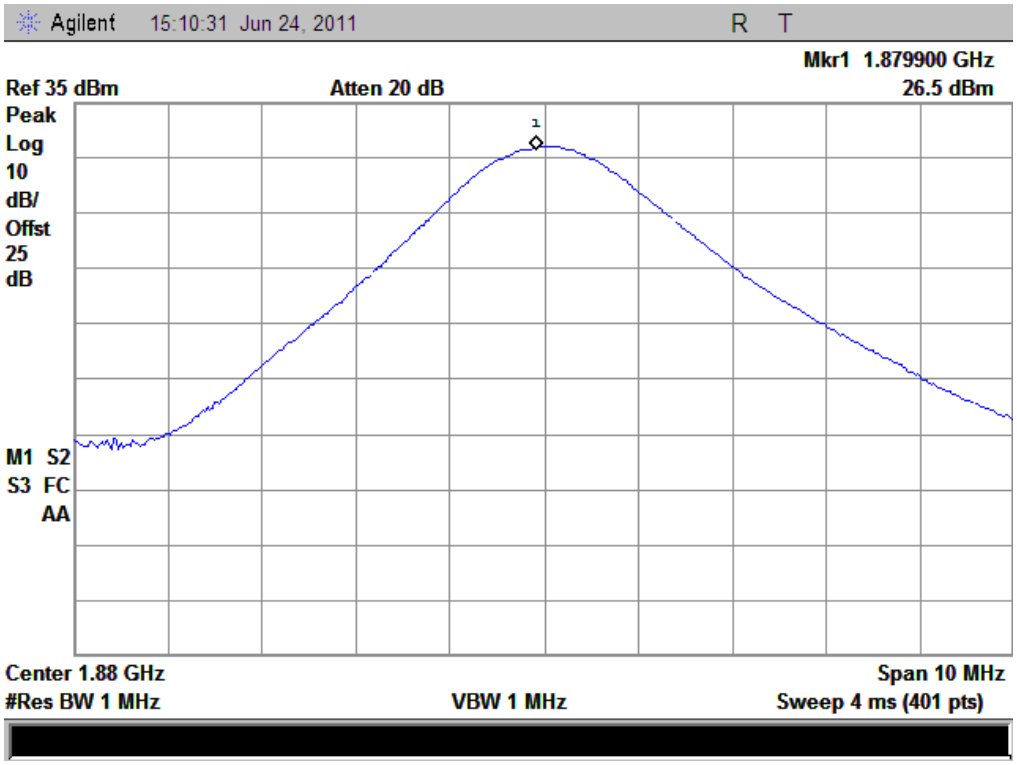
(Plot A2: GSM 850MHz Channel = 190)



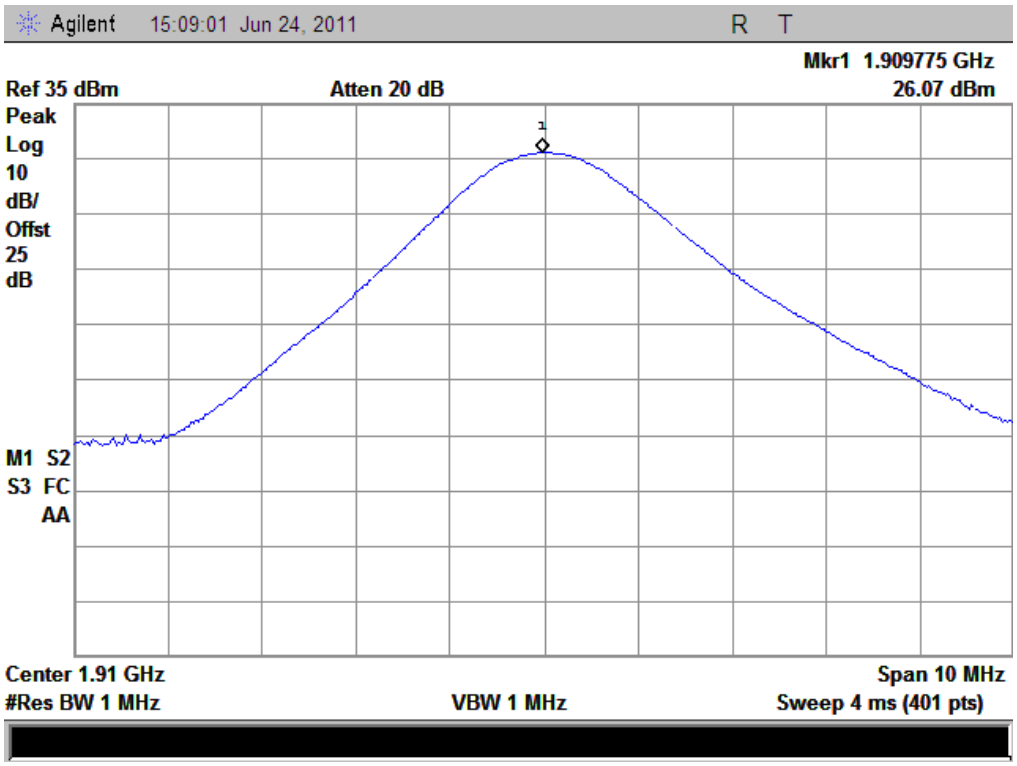
(Plot A3: GSM 850MHz Channel = 251)



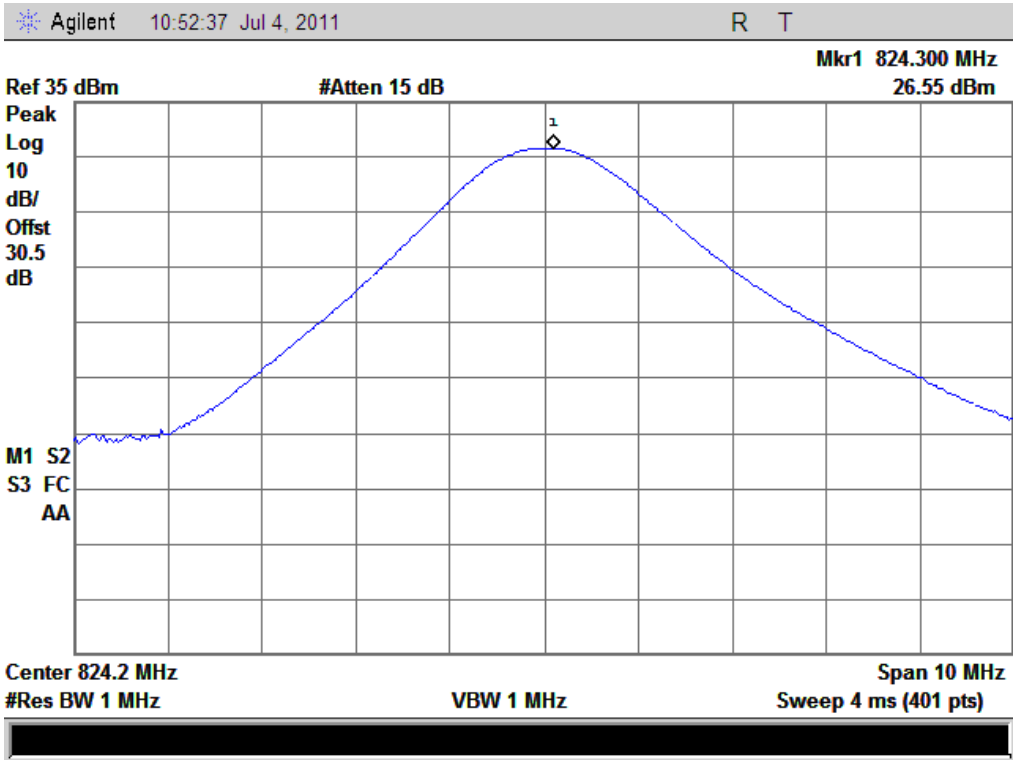
(Plot B1: GSM 1900MHz Channel = 512)



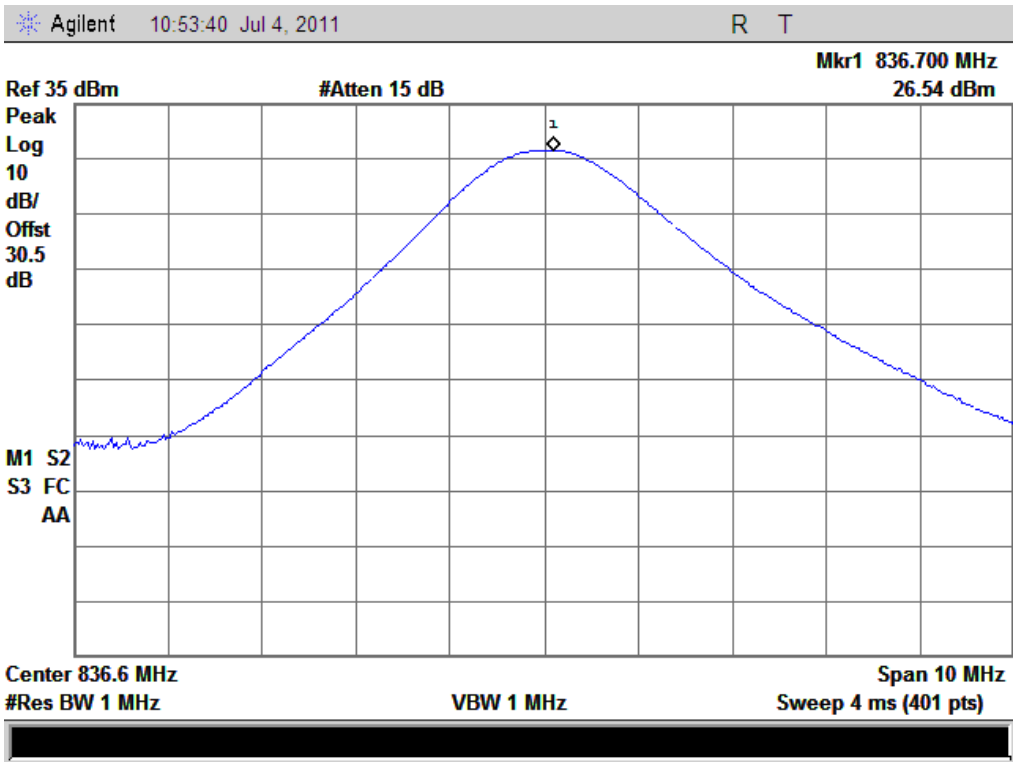
(Plot B2: GSM 1900MHz Channel = 661)



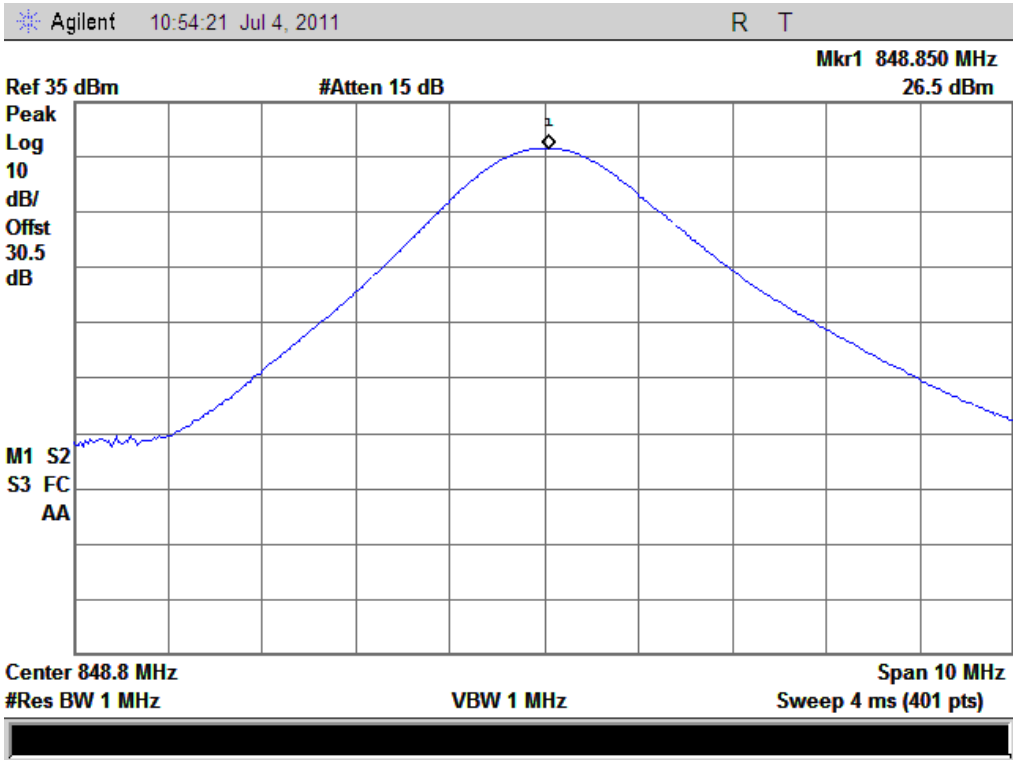
(Plot B3: GSM 1900MHz Channel = 810)



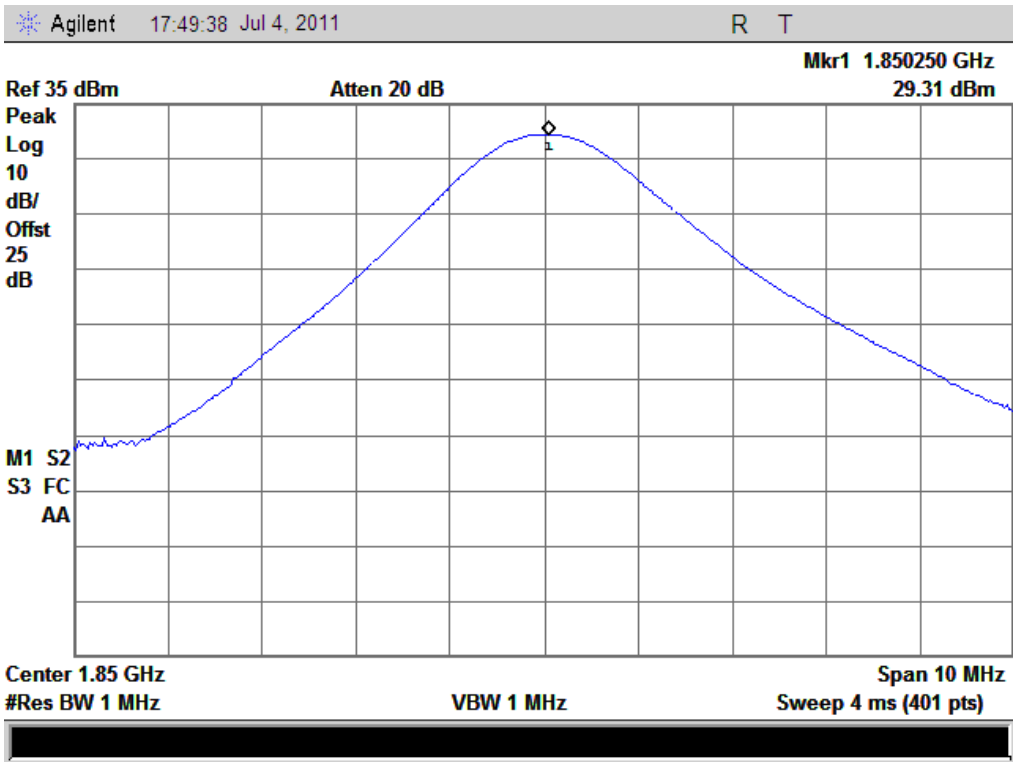
(Plot C1: GPRS 850MHz Channel = 128)



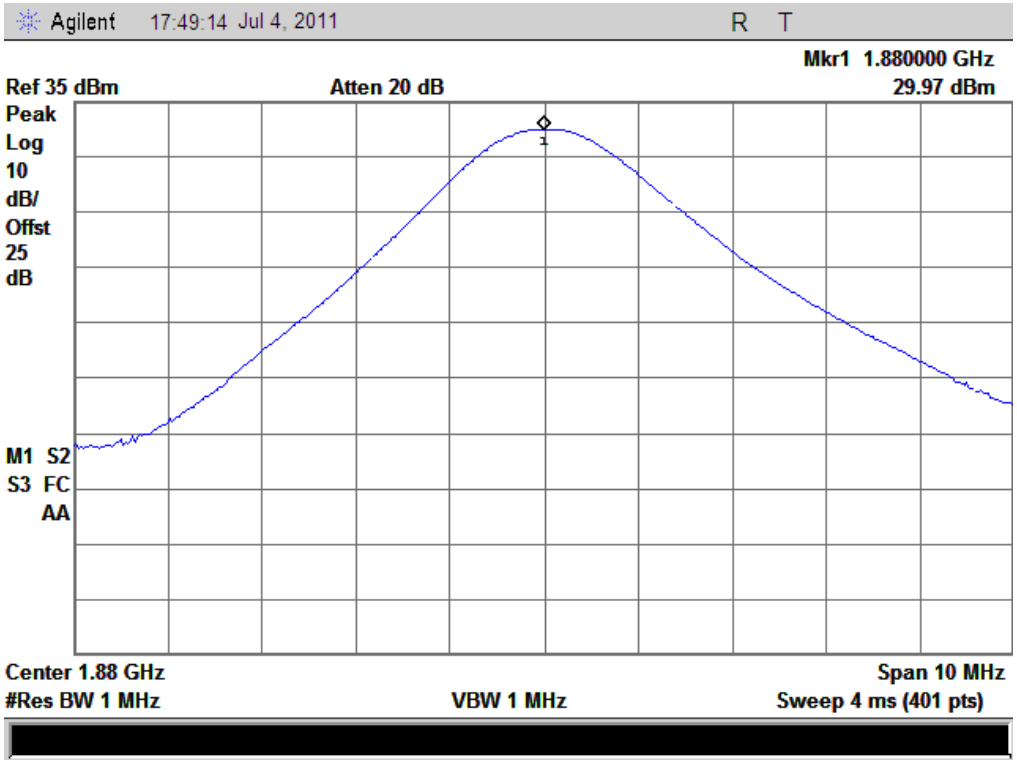
(Plot C2: GPRS 850MHz Channel = 190)



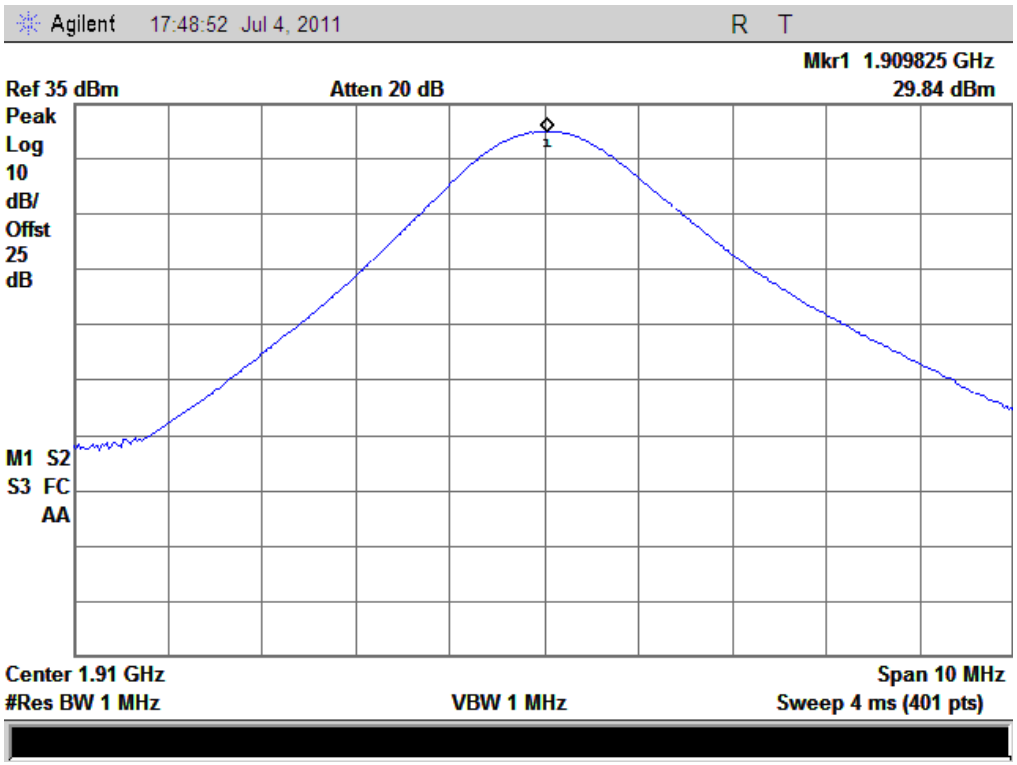
(Plot C3: GPRS 850MHz Channel = 251)



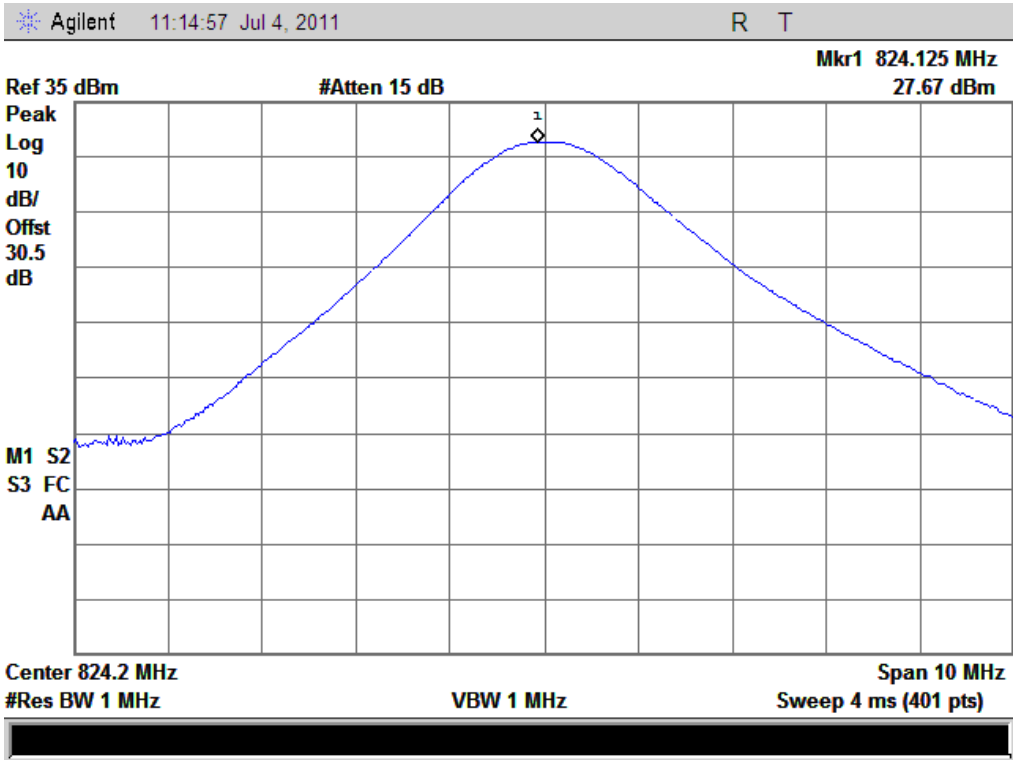
(Plot D1: GPRS 1900MHz Channel = 512)



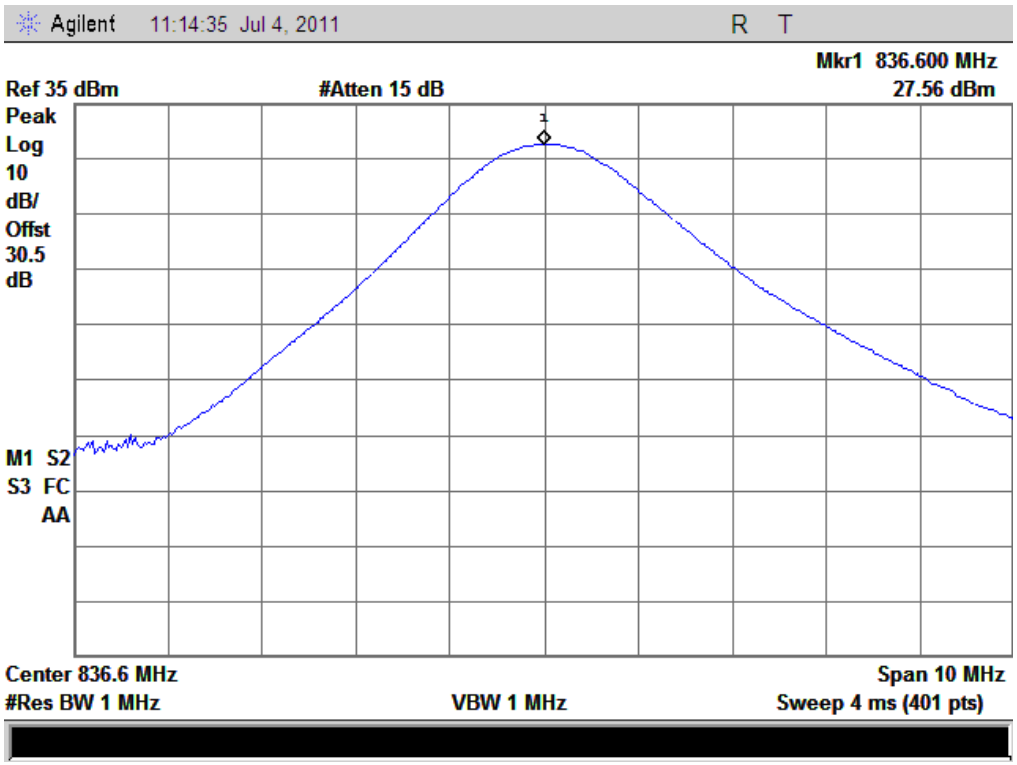
(Plot D2: GPRS 1900MHz Channel = 661)



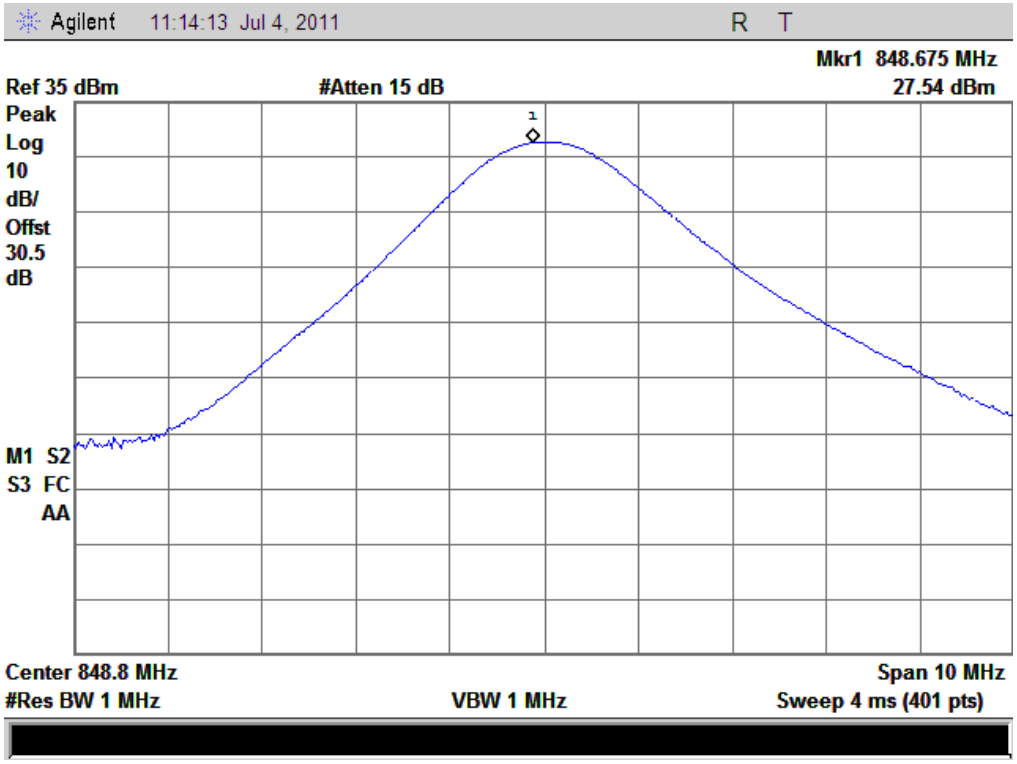
(Plot D3: GPRS 1900MHz Channel = 810)



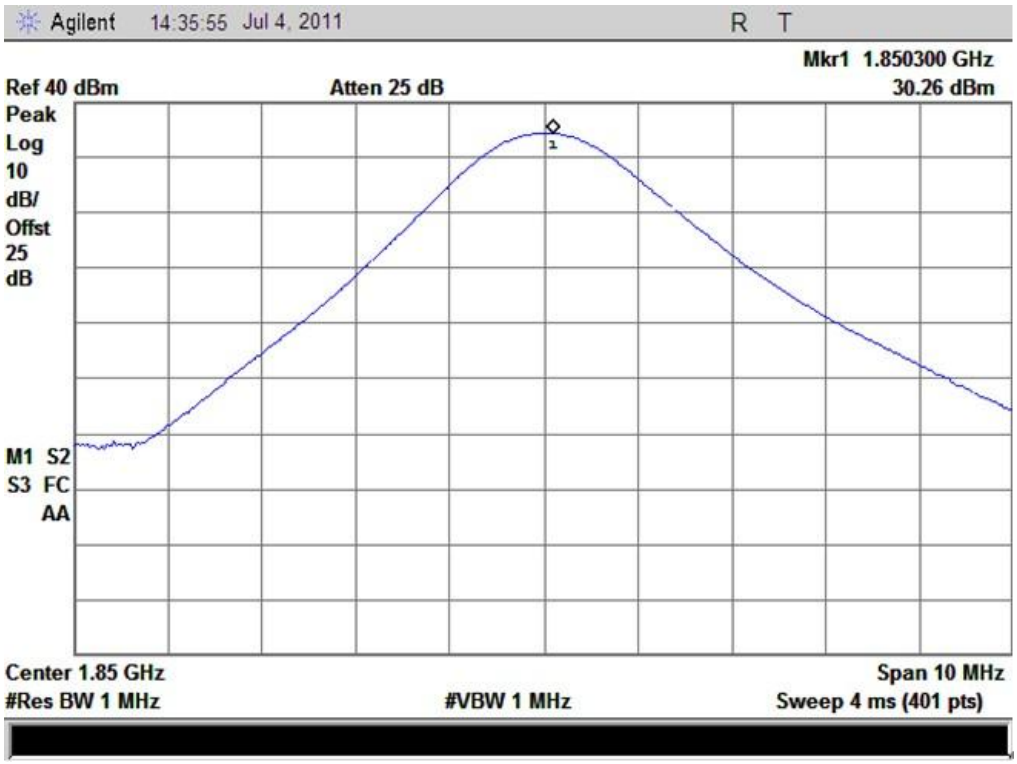
(Plot E1: GPRS 850MHz Channel = 128)



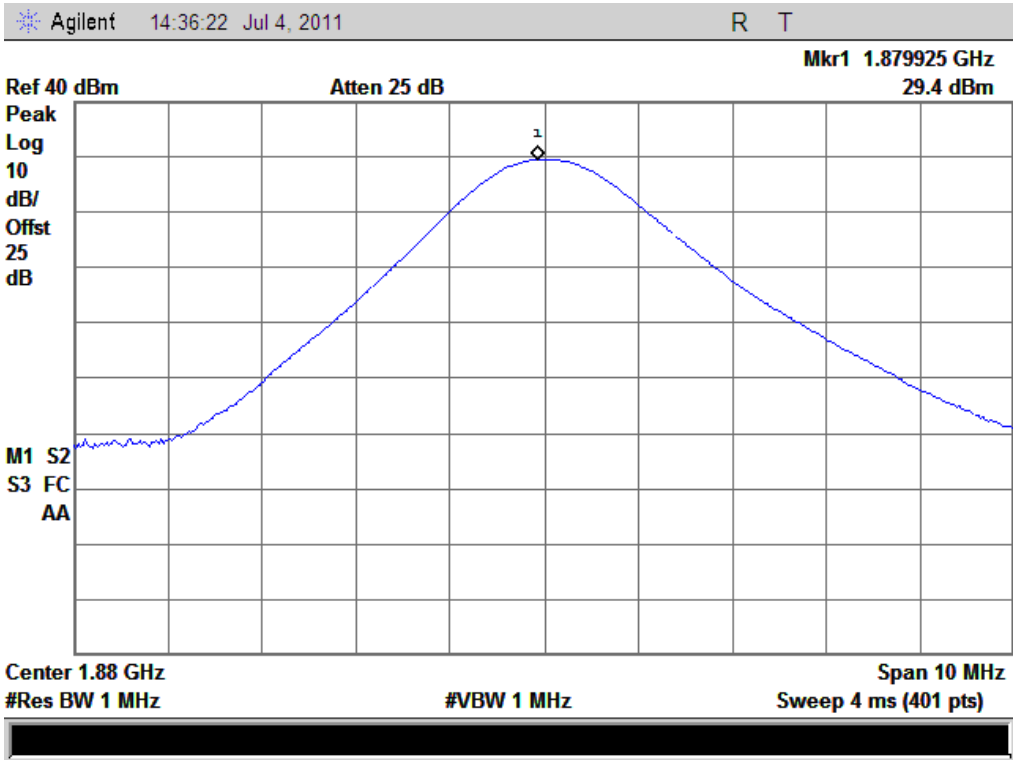
(Plot E2: GPRS 850MHz Channel = 190)



(Plot E3: GPRS 850MHz Channel = 251)



(Plot F1: GPRS 1900MHz Channel = 512)



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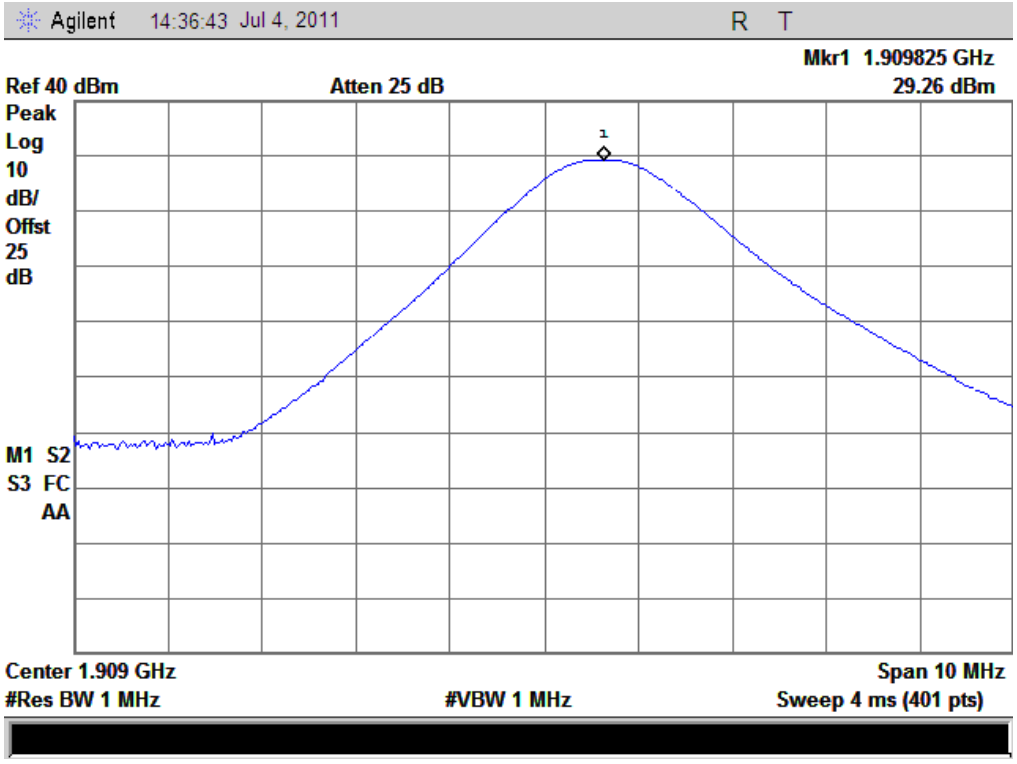

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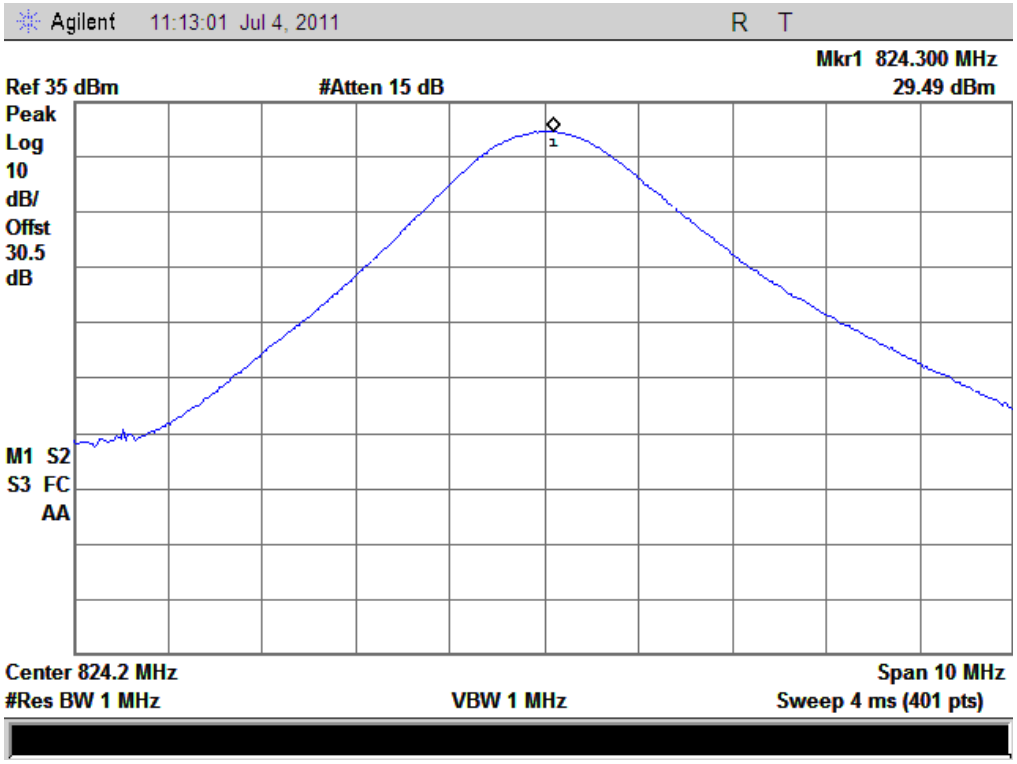
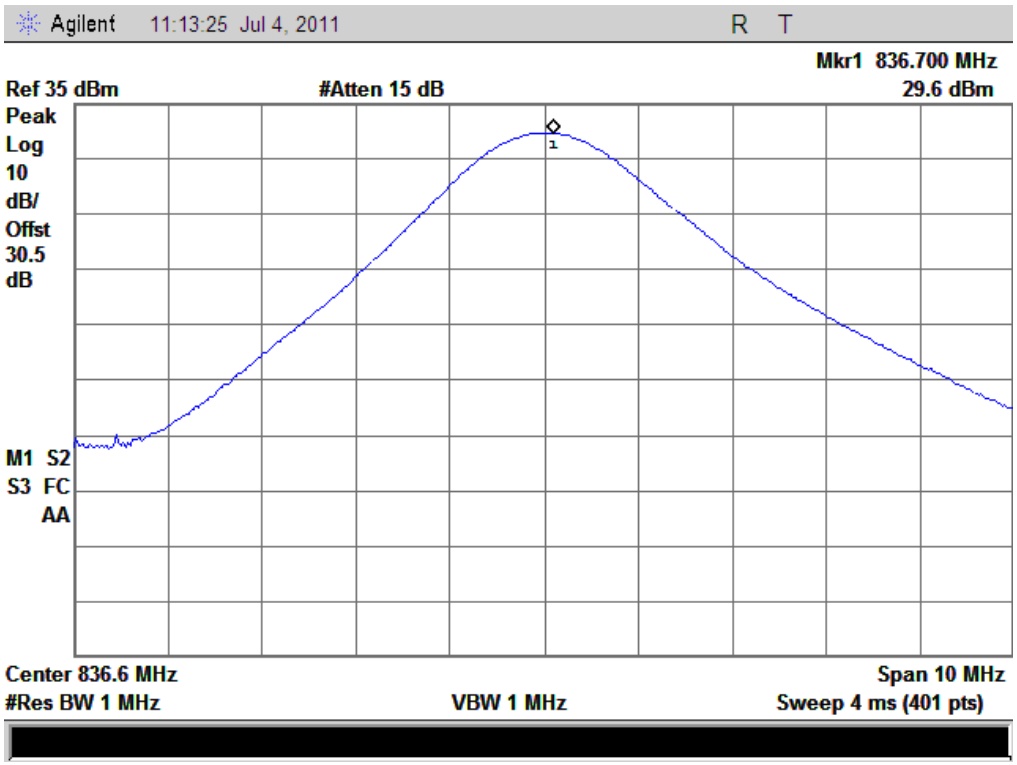
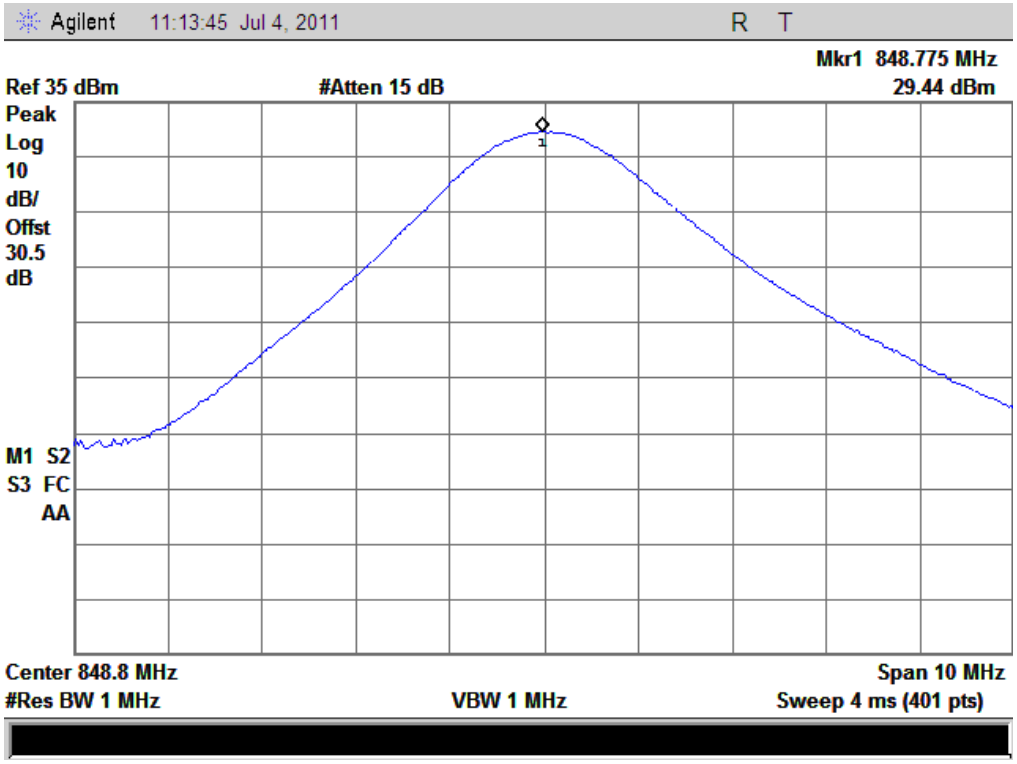


(Plot G1: GPRS 850MHz Channel = 128)



(Plot G2: GPRS 850MHz Channel = 190)



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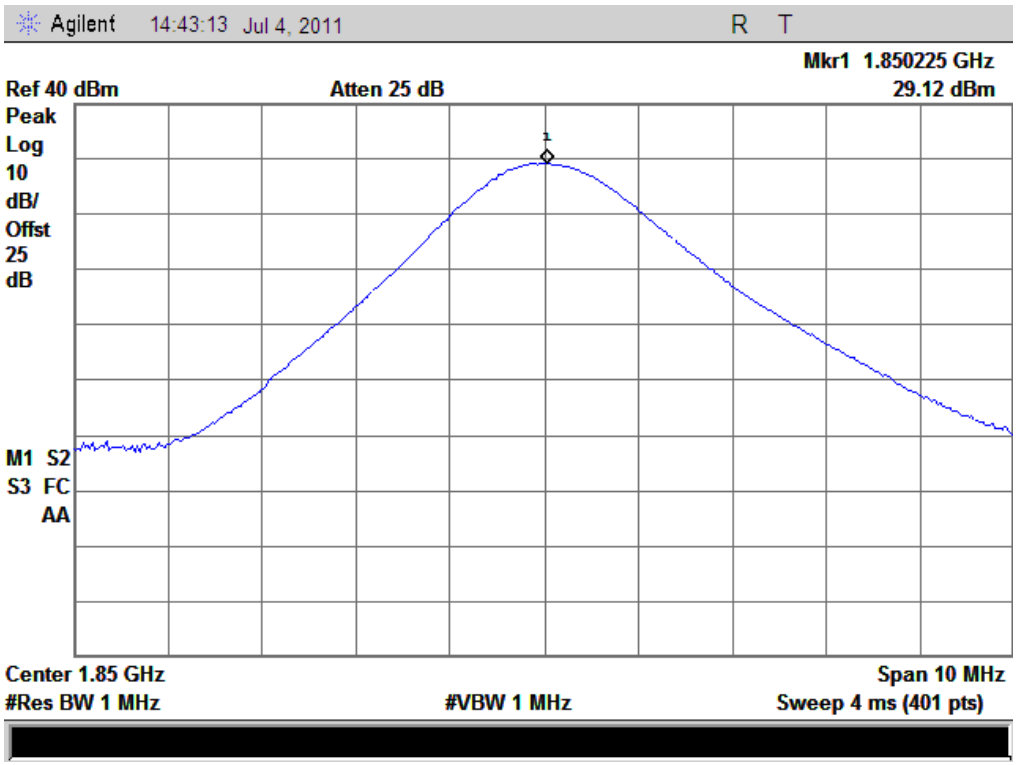
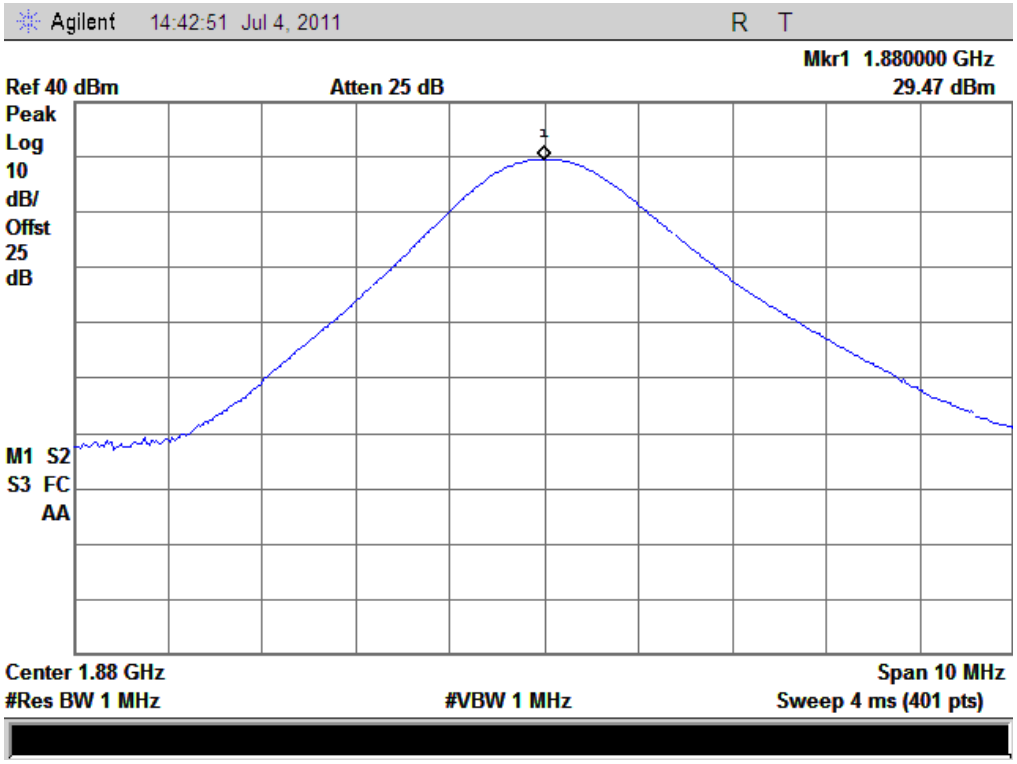


(Plot H1: GPRS 1900MHz Channel = 512)



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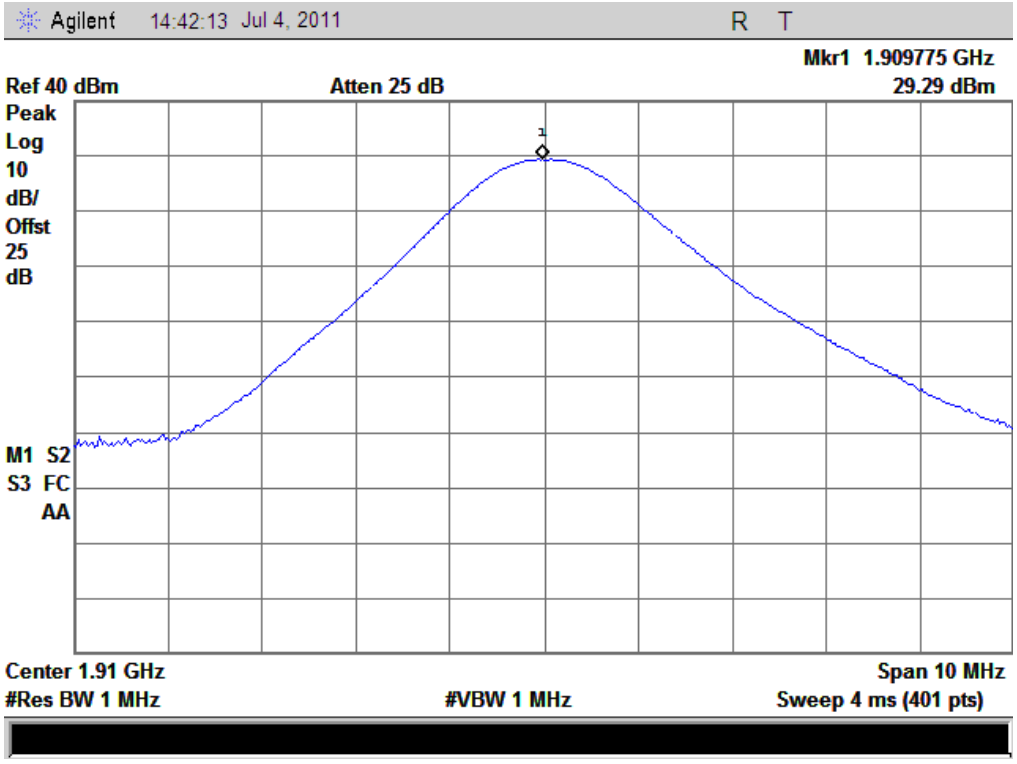

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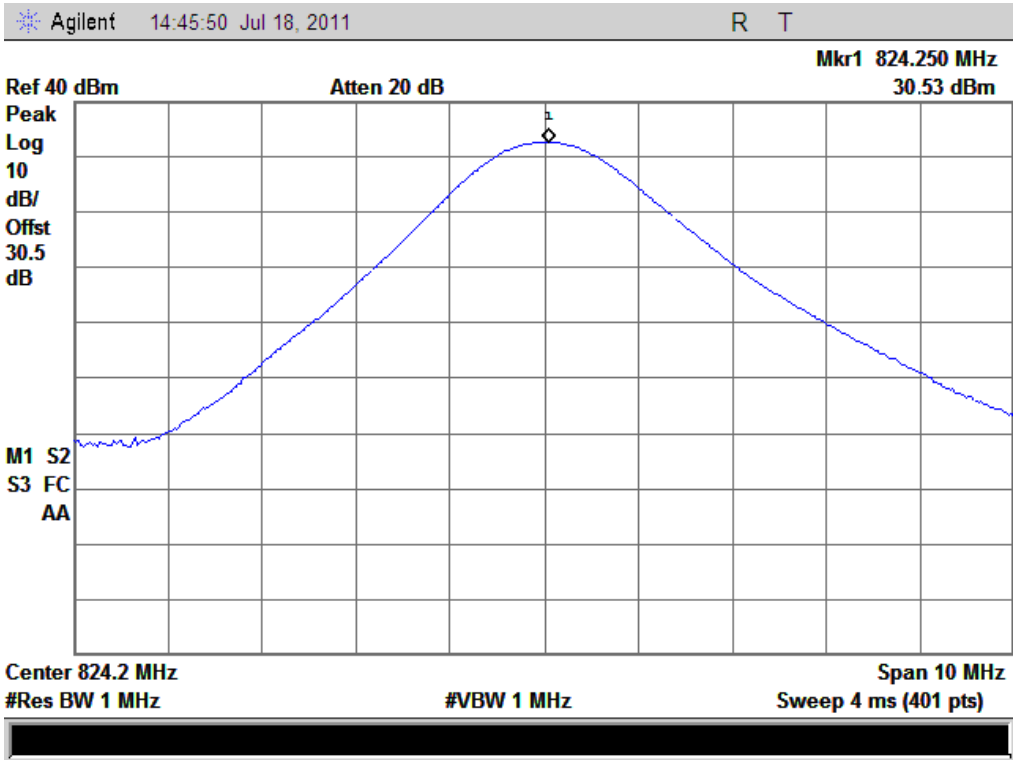
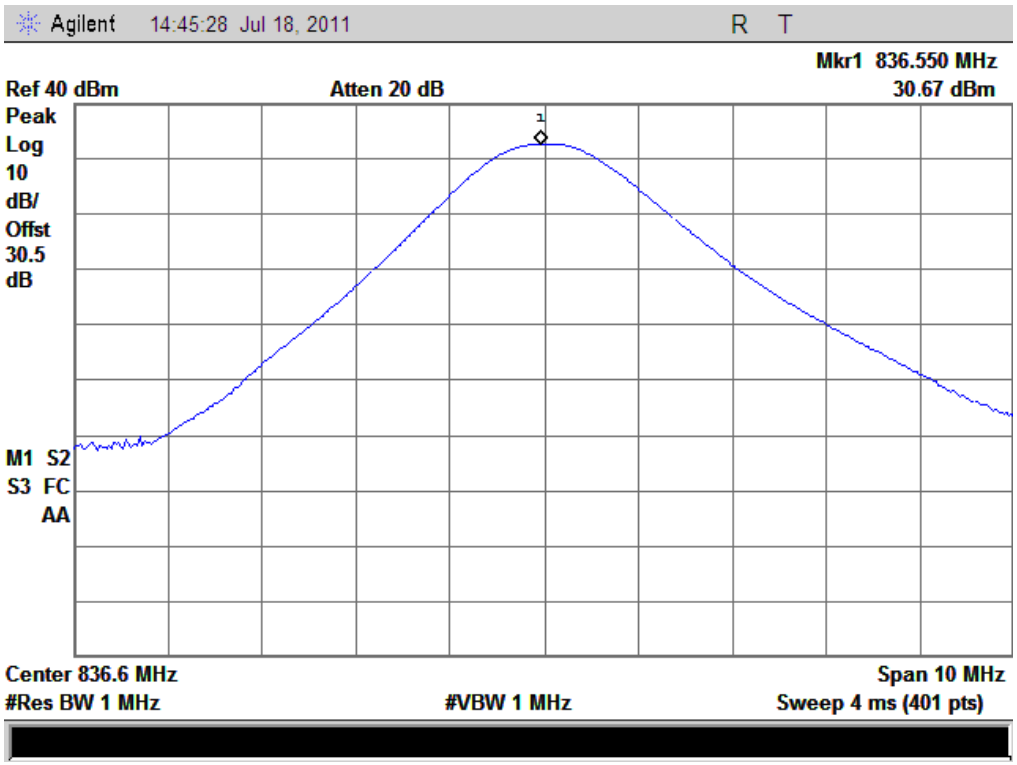
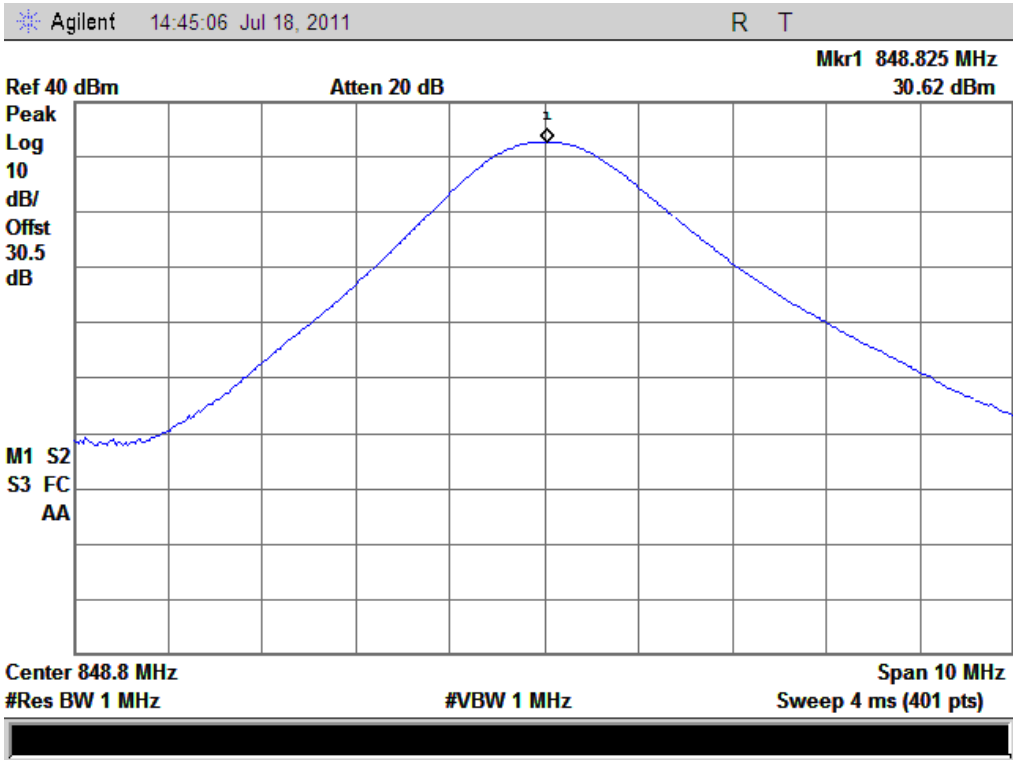


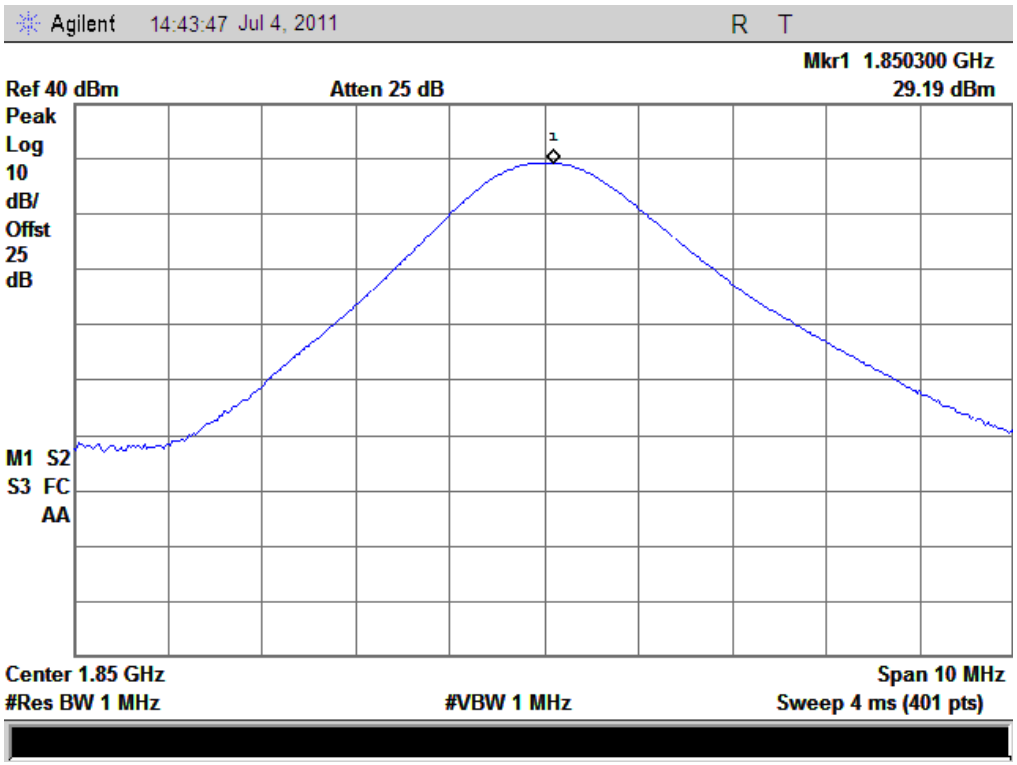
(Plot I 1 : GPRS 850MHz Channel = 128)



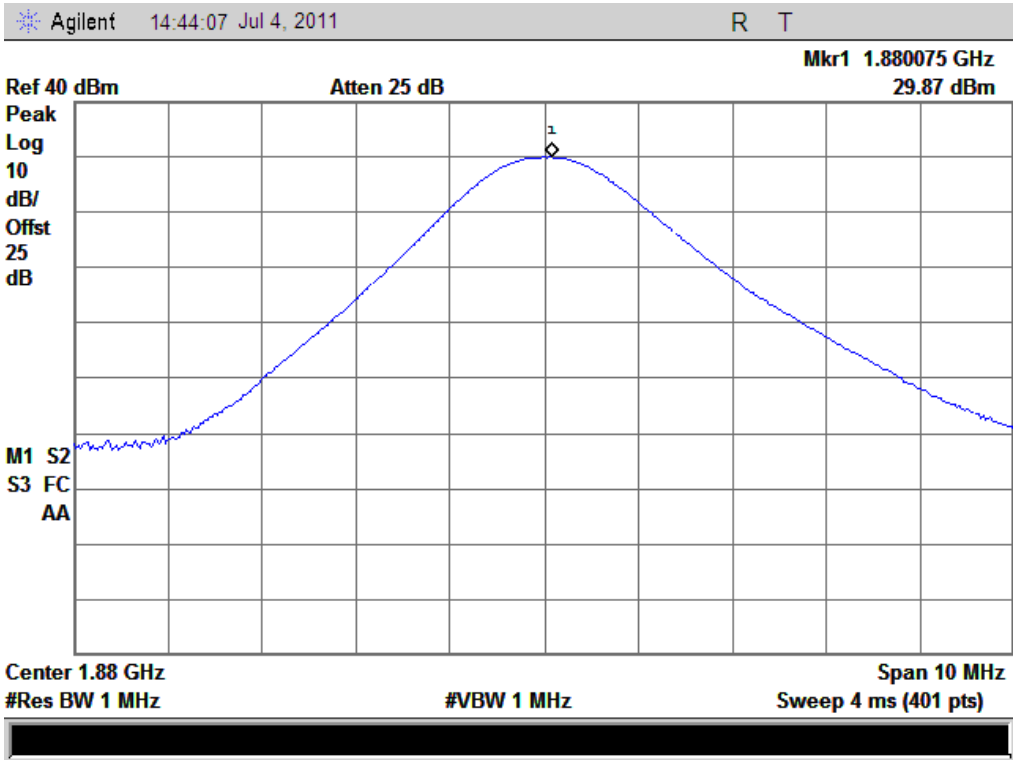
(Plot I 2 : GPRS 850MHz Channel = 190)



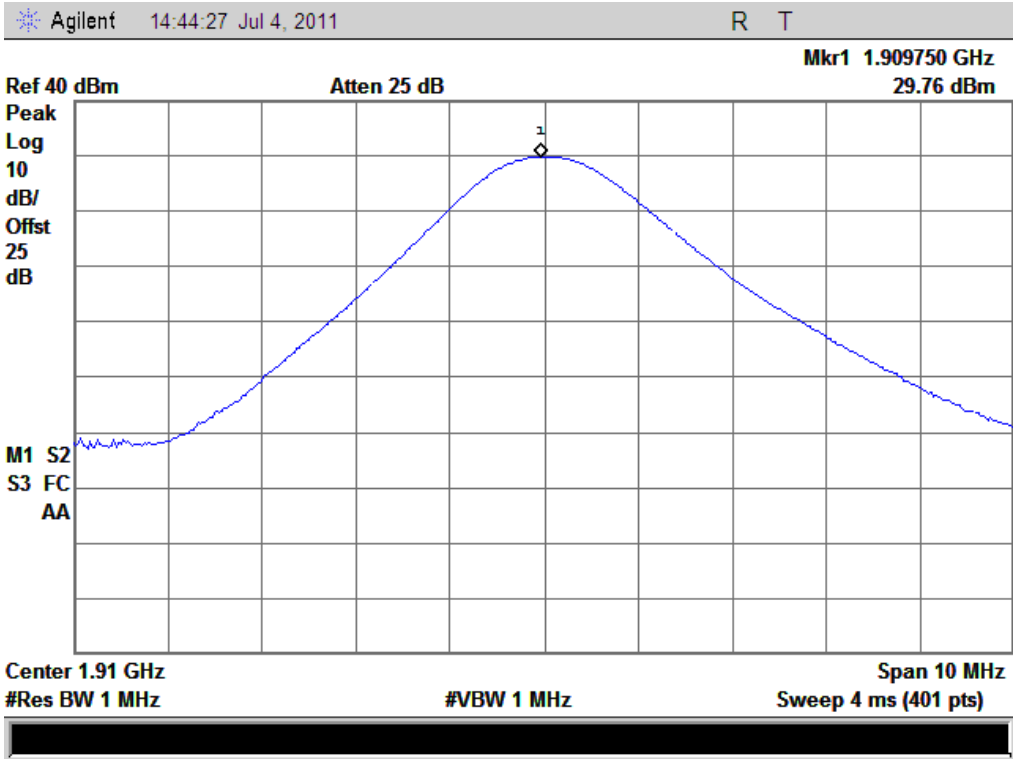
(Plot I 3 : GPRS 850MHz Channel = 251)



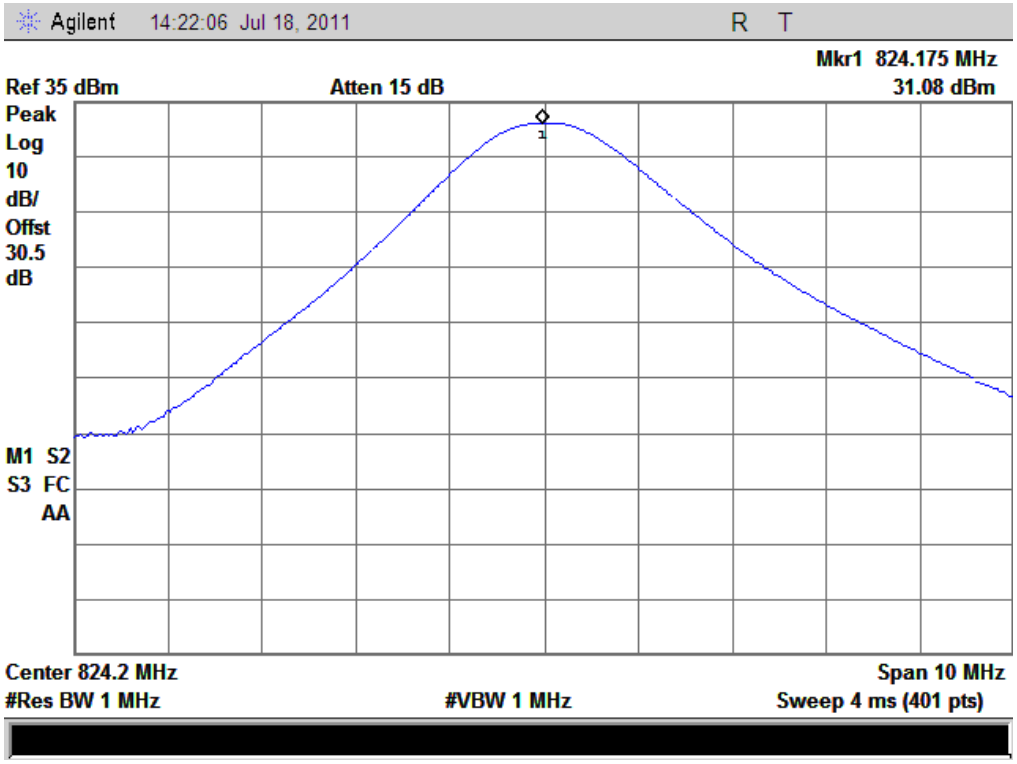
(Plot J 1: GPRS 1900MHz Channel = 512)



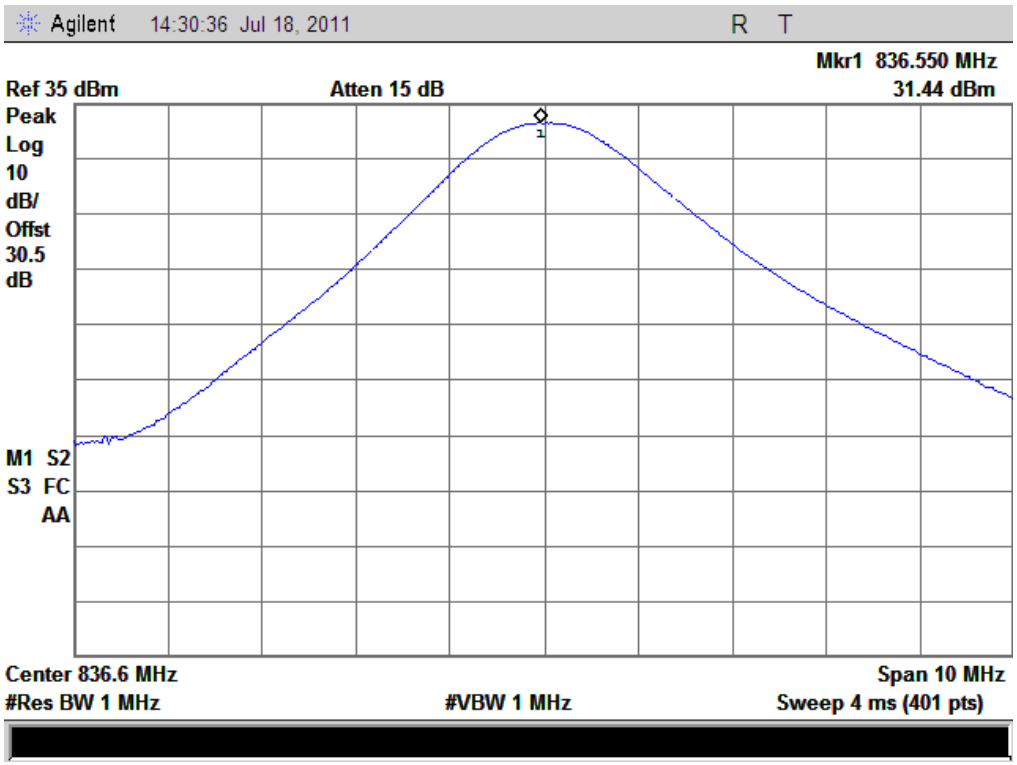
(Plot J 2: GPRS 1900MHz Channel =661)



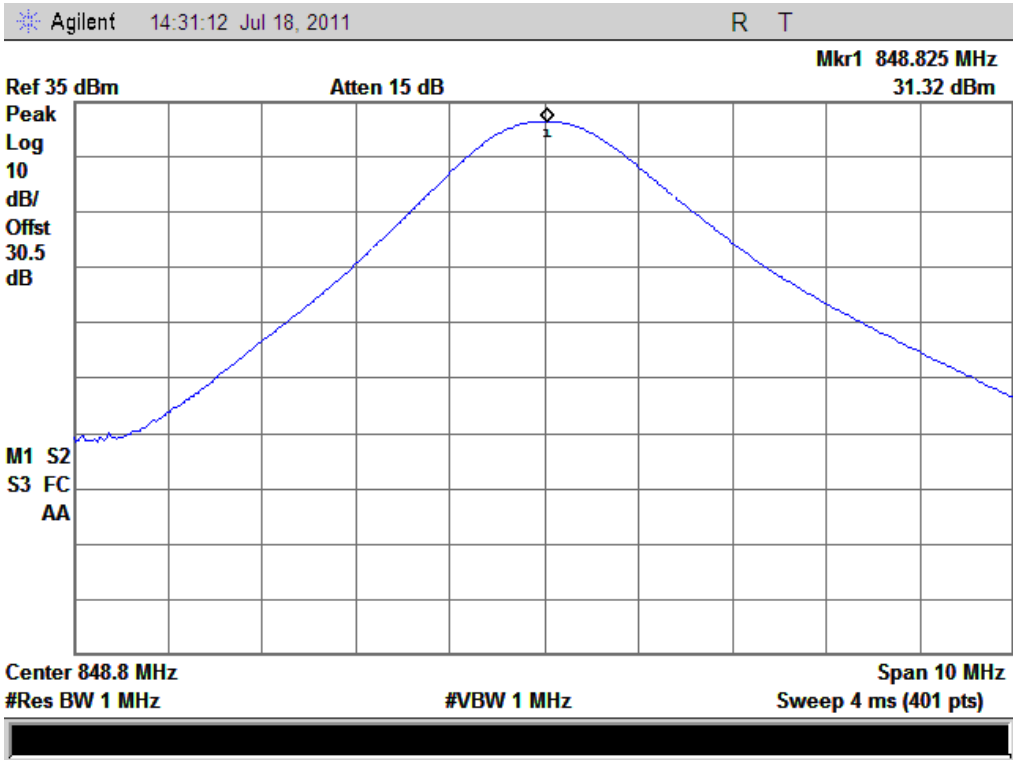
(Plot J 3: GPRS 1900MHz Channel = 810)



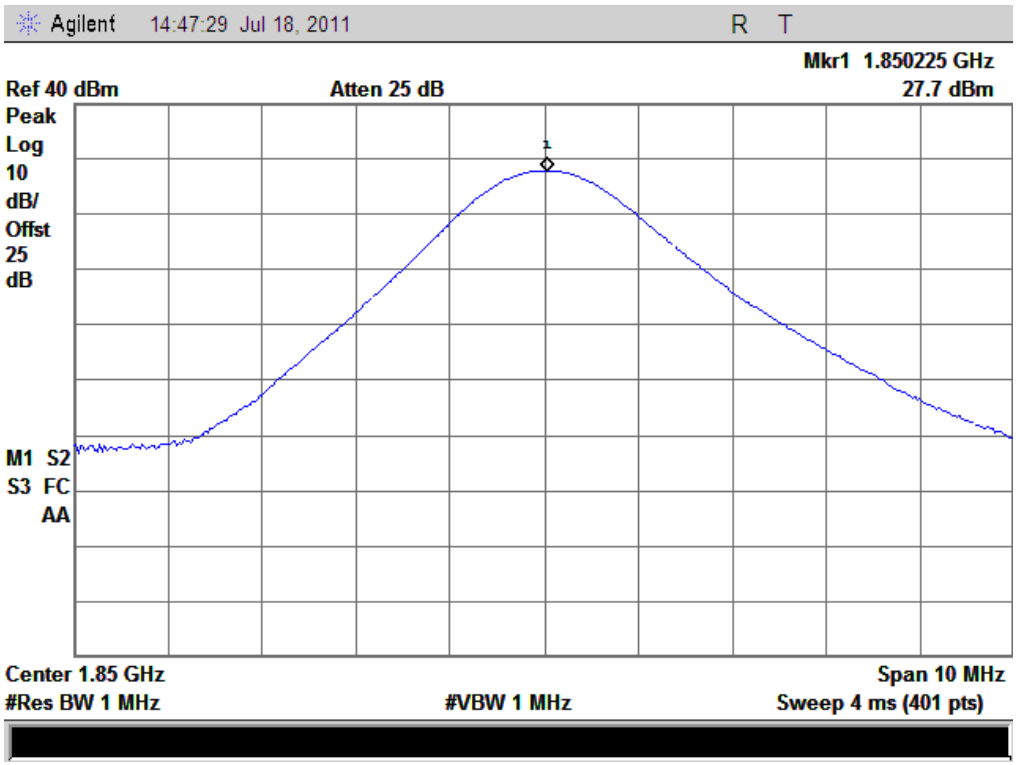
(Plot K 1: EGPRS 850MHz Channel = 128)



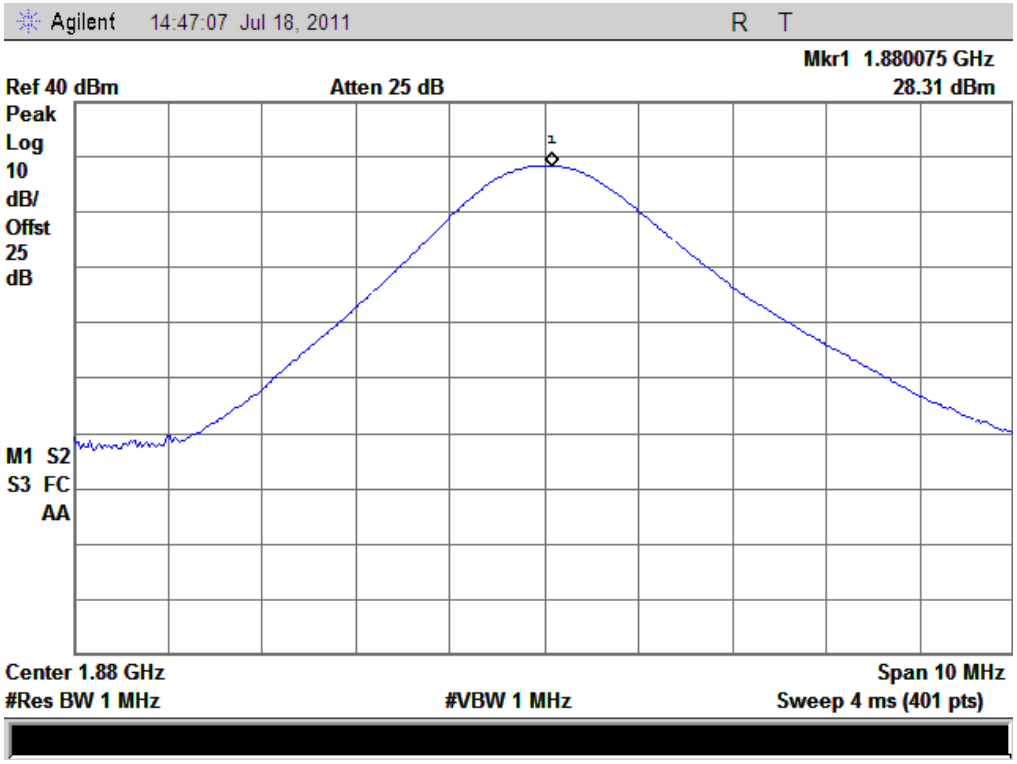
(Plot K 2: EGPRS 850MHz Channel = 190)



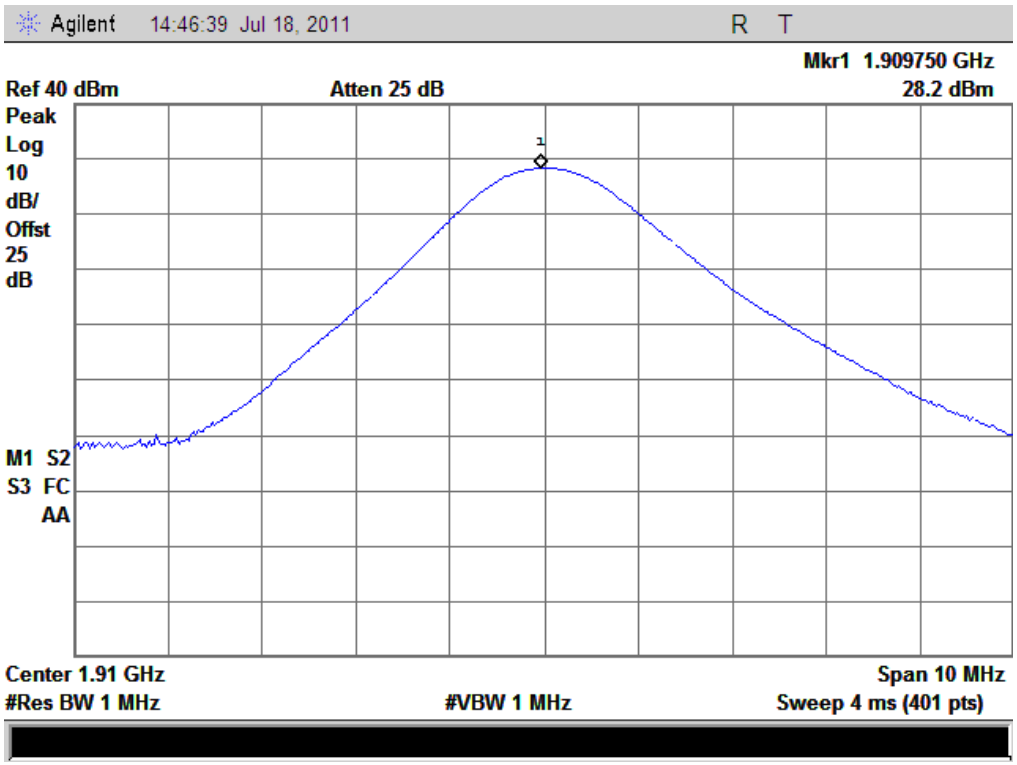
(Plot K 3: EGPRS 850MHz Channel = 251)



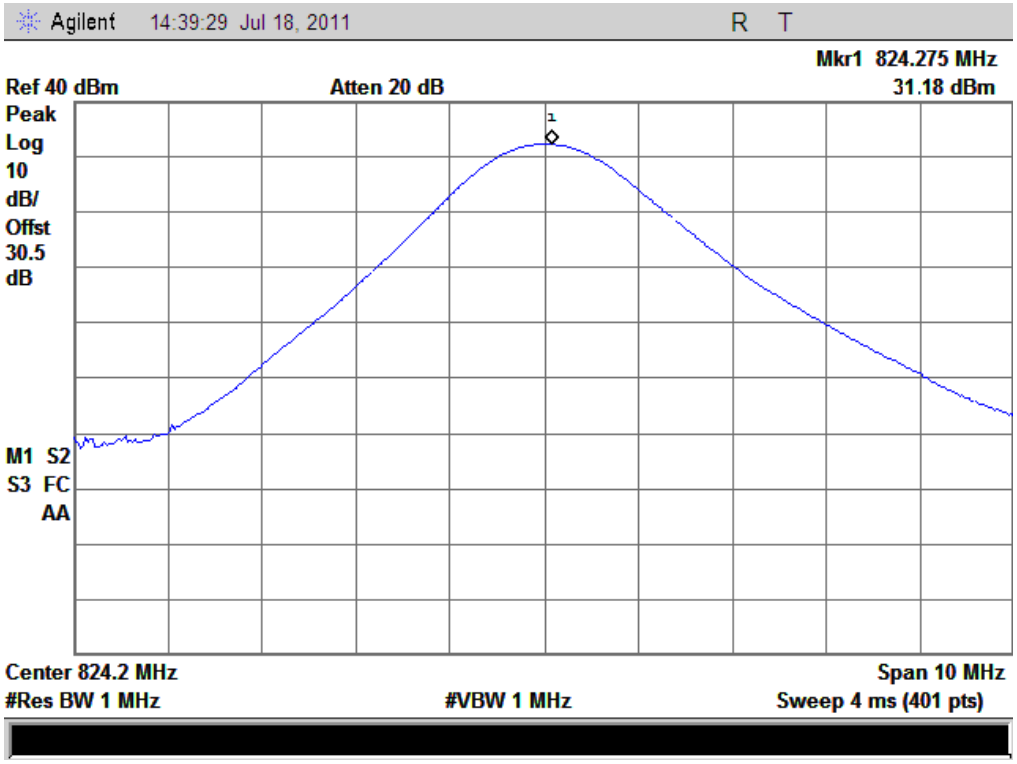
(Plot L 1: EGPRS 1900MHz Channel = 512)



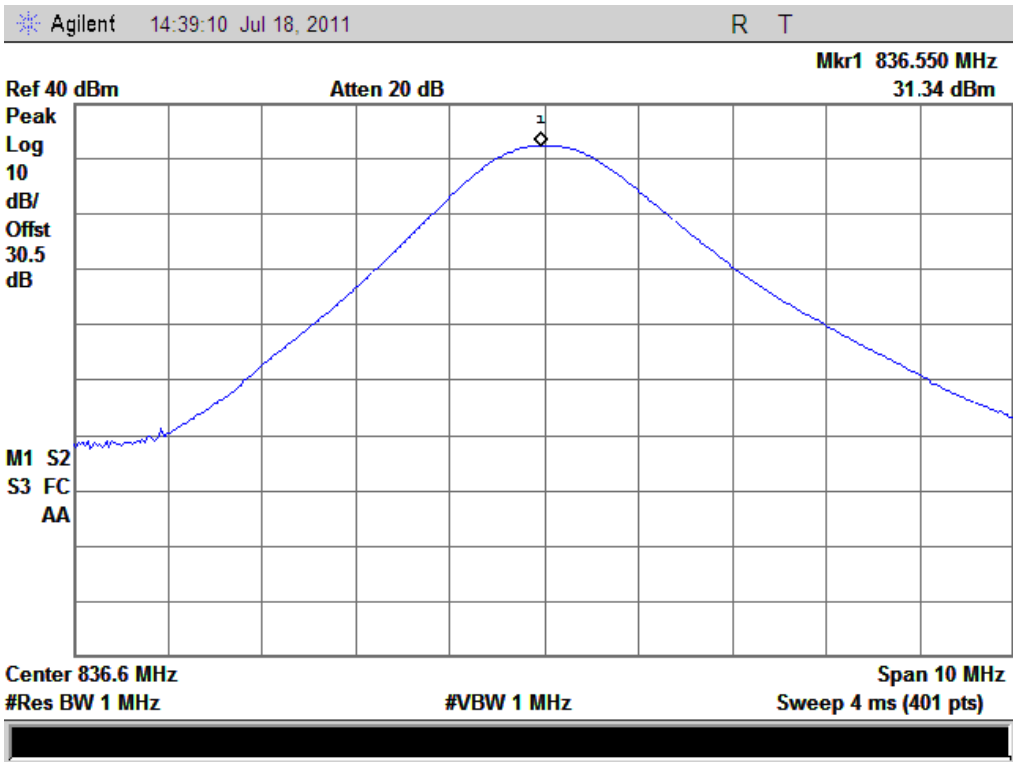
(Plot L 2: EGPRS 1900MHz Channel = 661)



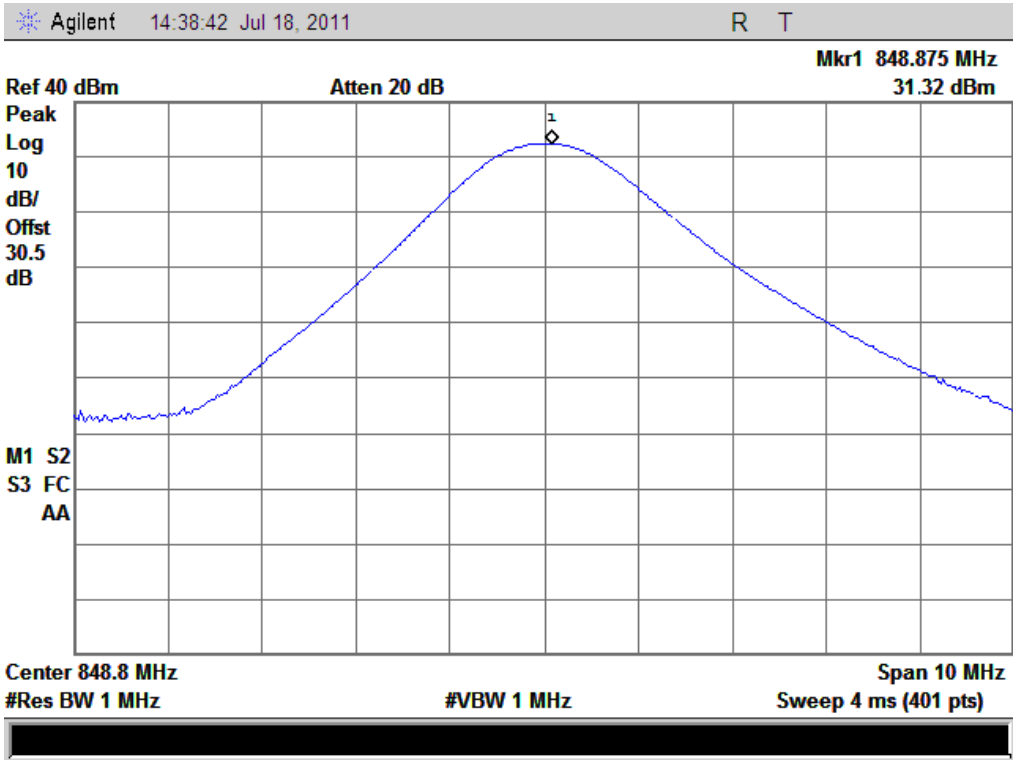
(Plot L 3: EGPRS 1900MHz Channel = 810)



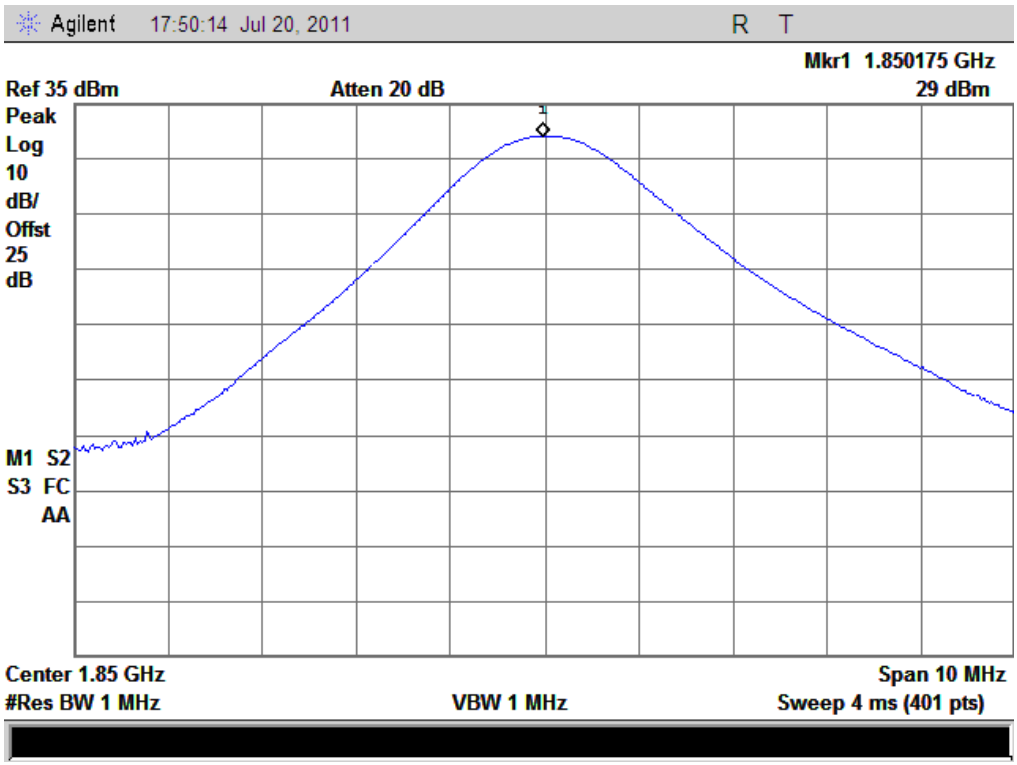
(Plot M 1: EGPRS 850MHz Channel = 128)



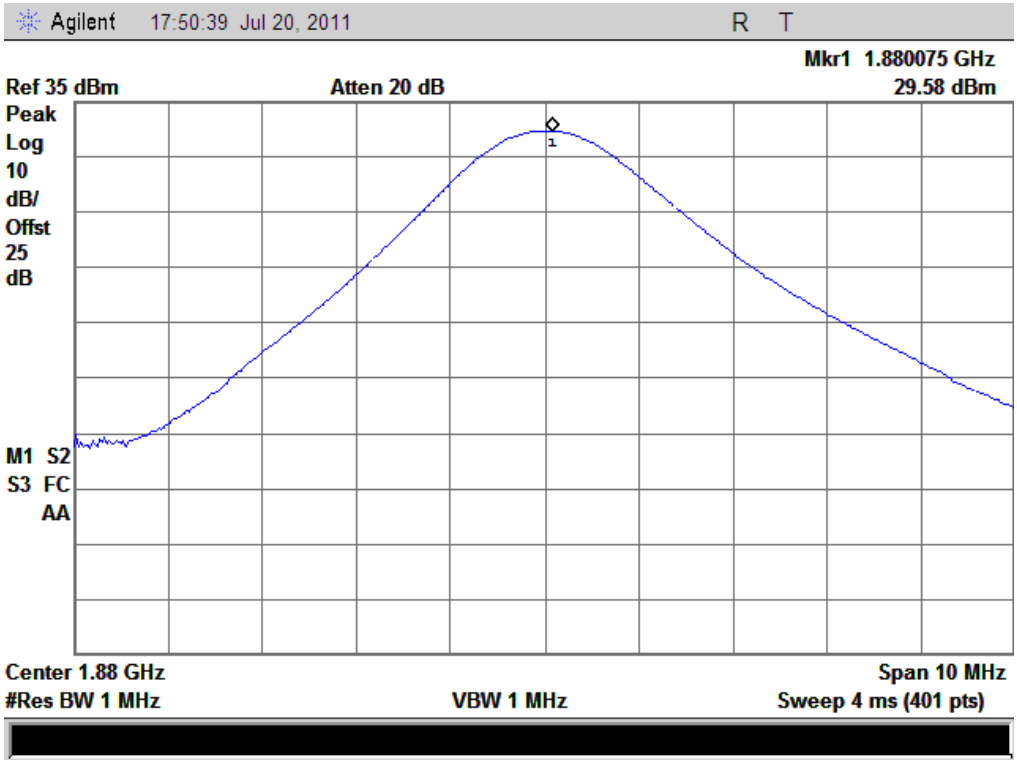
(Plot M 2: EGPRS 850MHz Channel = 190)



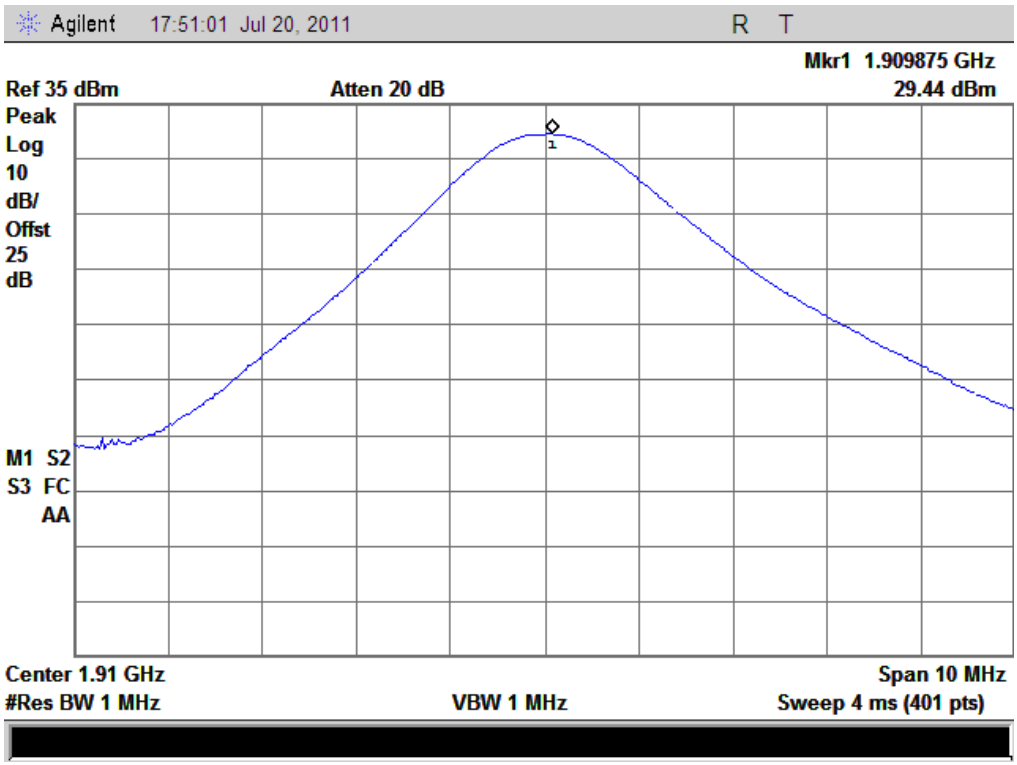
(Plot M 3: EGPRS 850MHz Channel = 251)



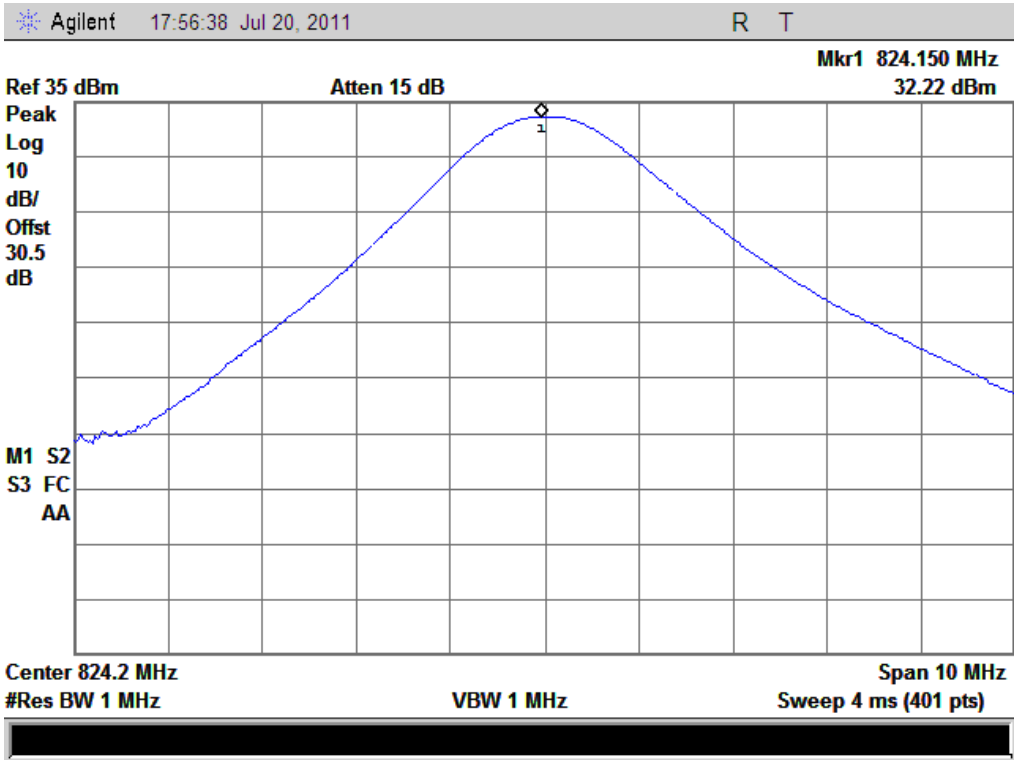
(Plot N 1: EGPRS 1900MHz Channel = 512)



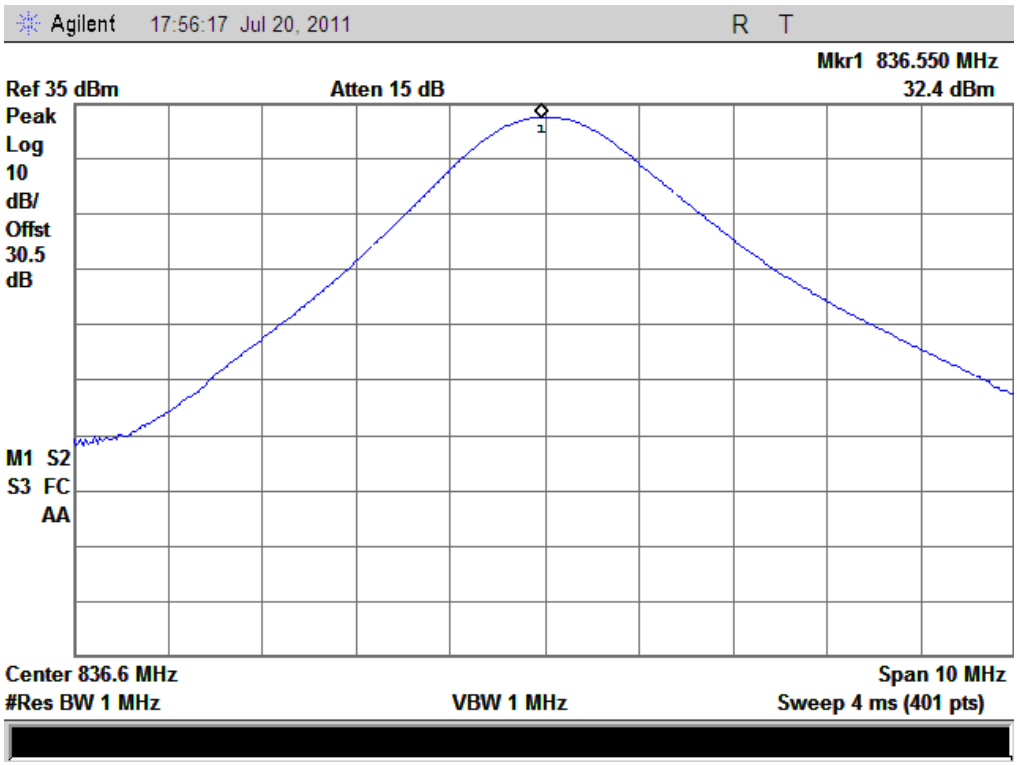
(Plot N 2: EGPRS 1900MHz Channel = 661)



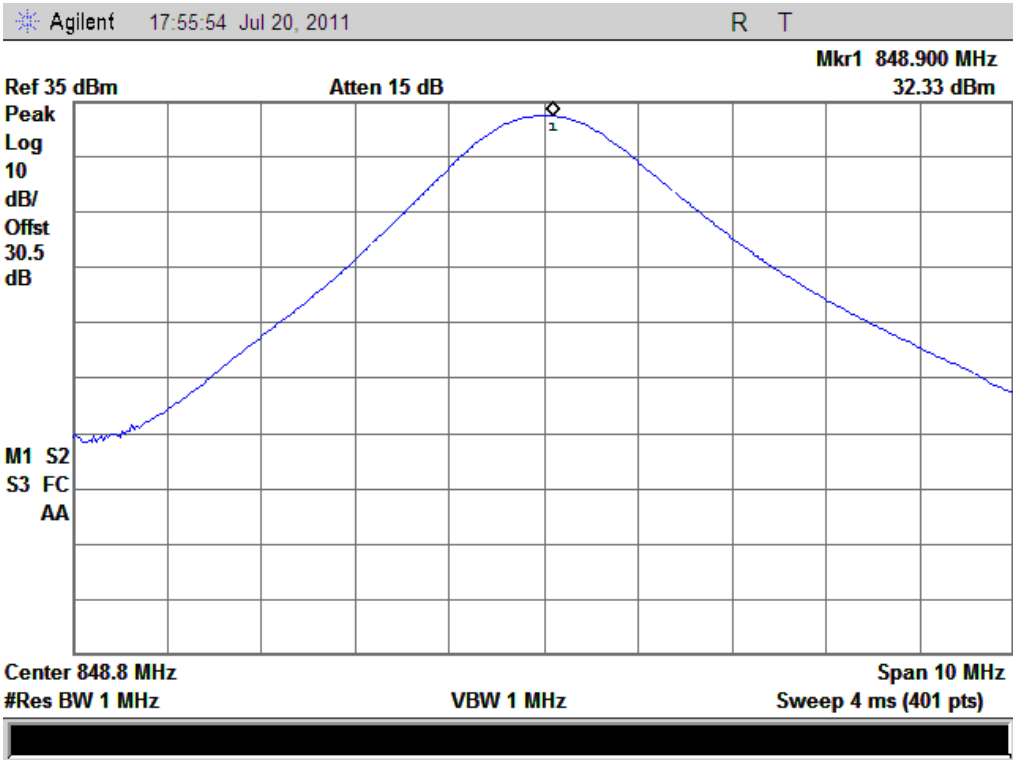
(Plot N 3: EGPRS 1900MHz Channel = 810)



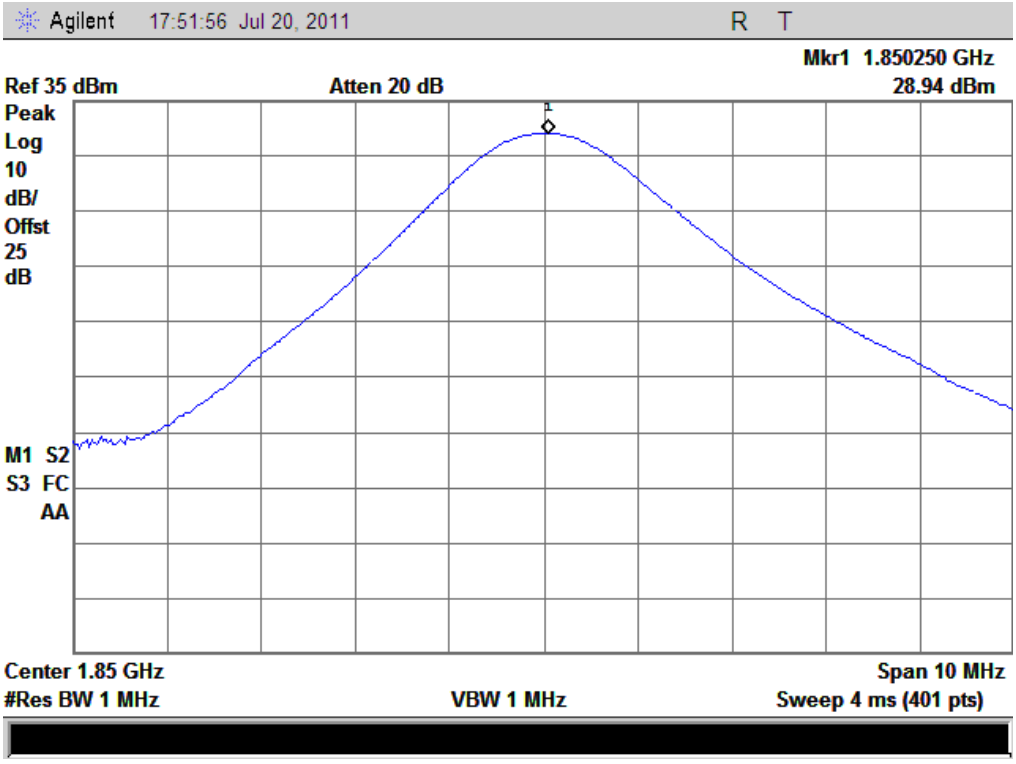
(Plot O 1: EGPRS 850MHz Channel = 128)



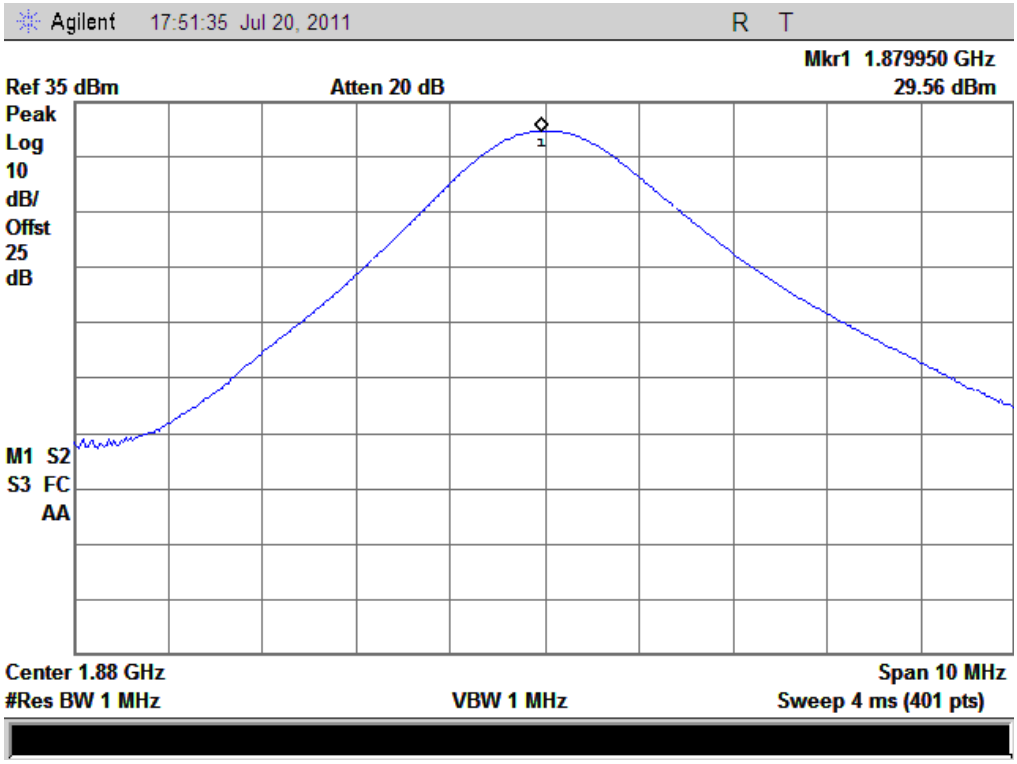
(Plot O 2: EGPRS 850MHz Channel = 190)



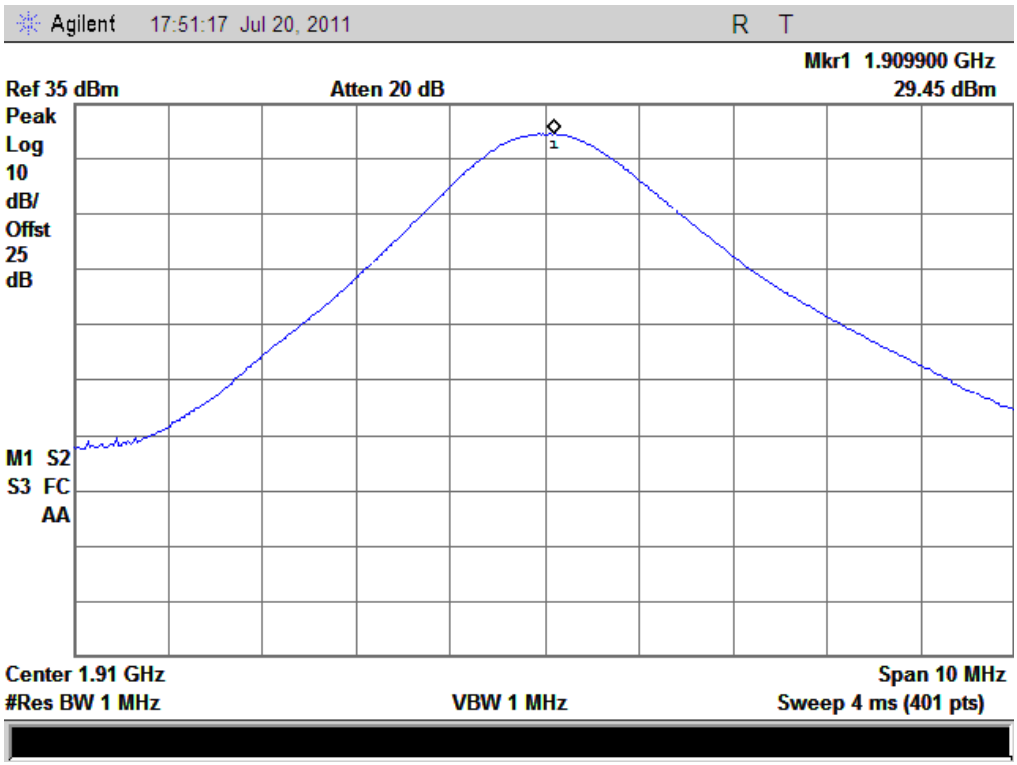
(Plot O 3: EGPRS 850MHz Channel = 251)



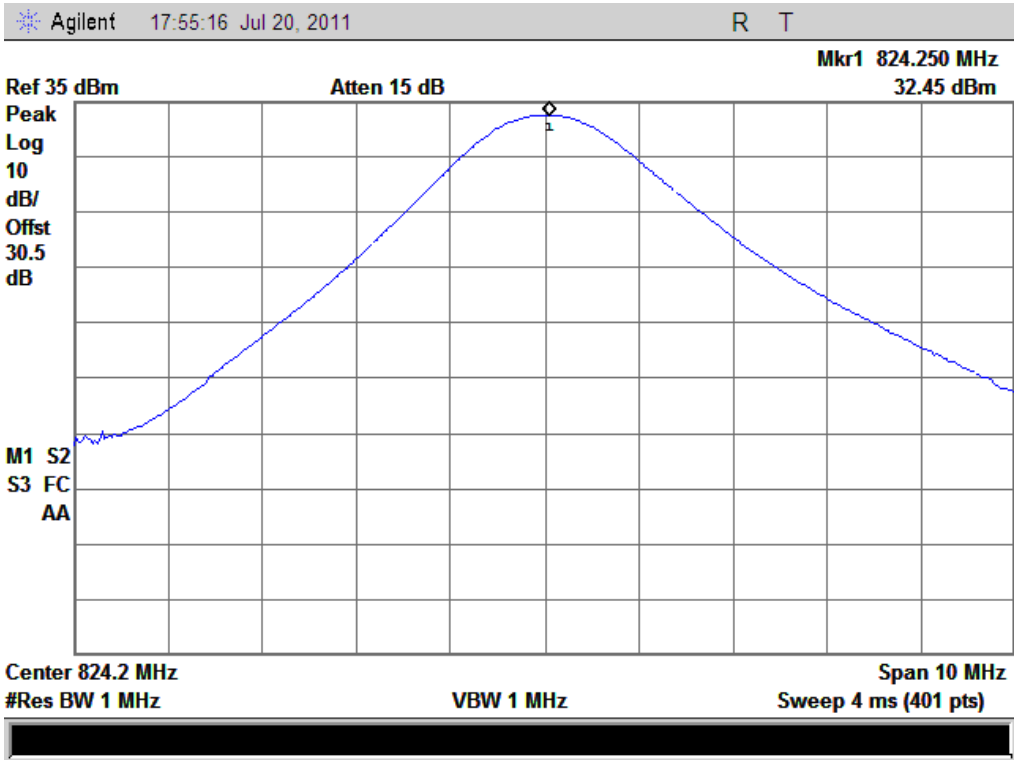
(Plot P 1: EGPRS 1900MHz Channel = 512)



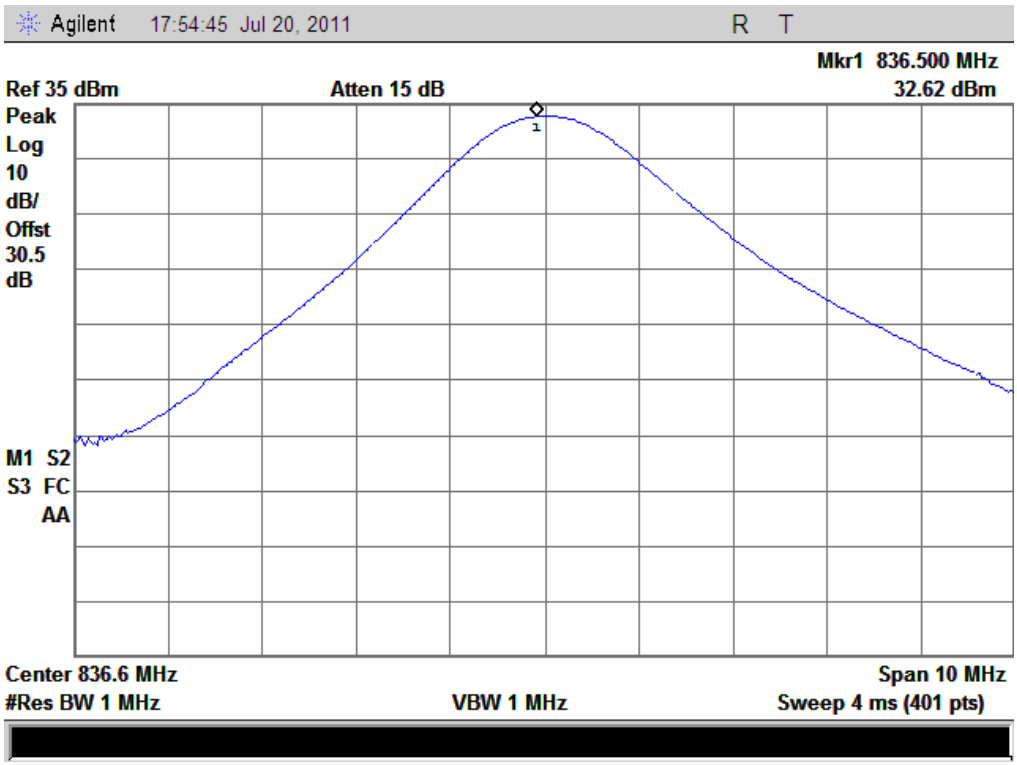
(Plot P 2: EGPRS 1900MHz Channel = 661)



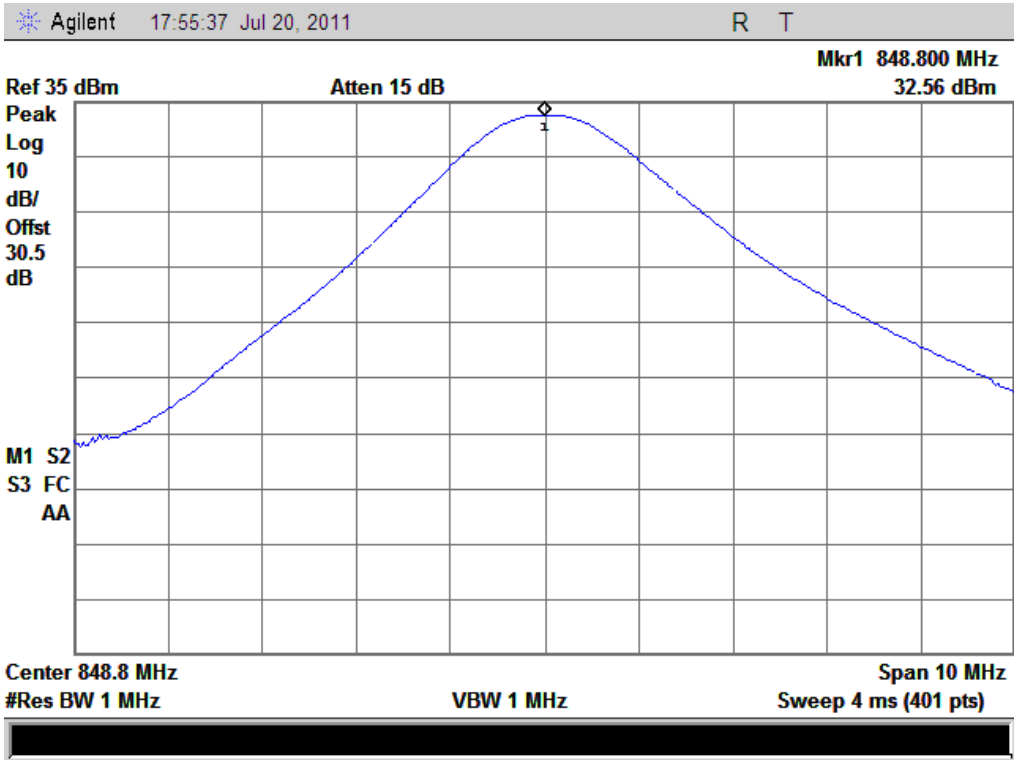
(Plot P 3: EGPRS 1900MHz Channel = 810)



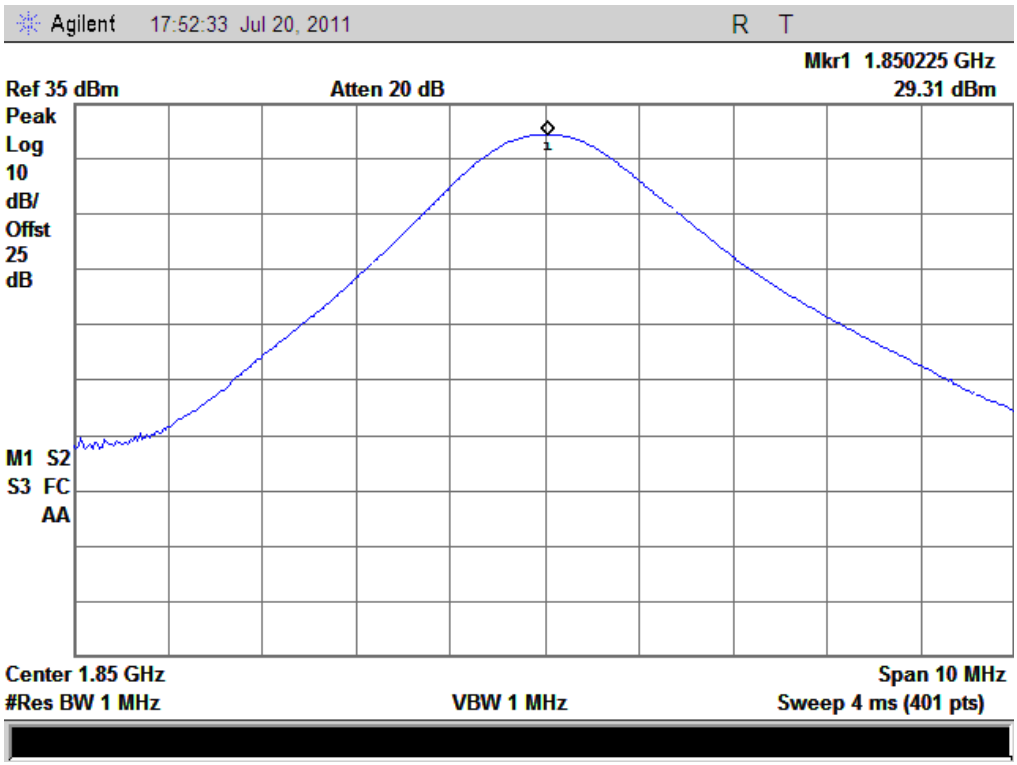
(Plot Q1: EGPRS 850MHz Channel = 128)



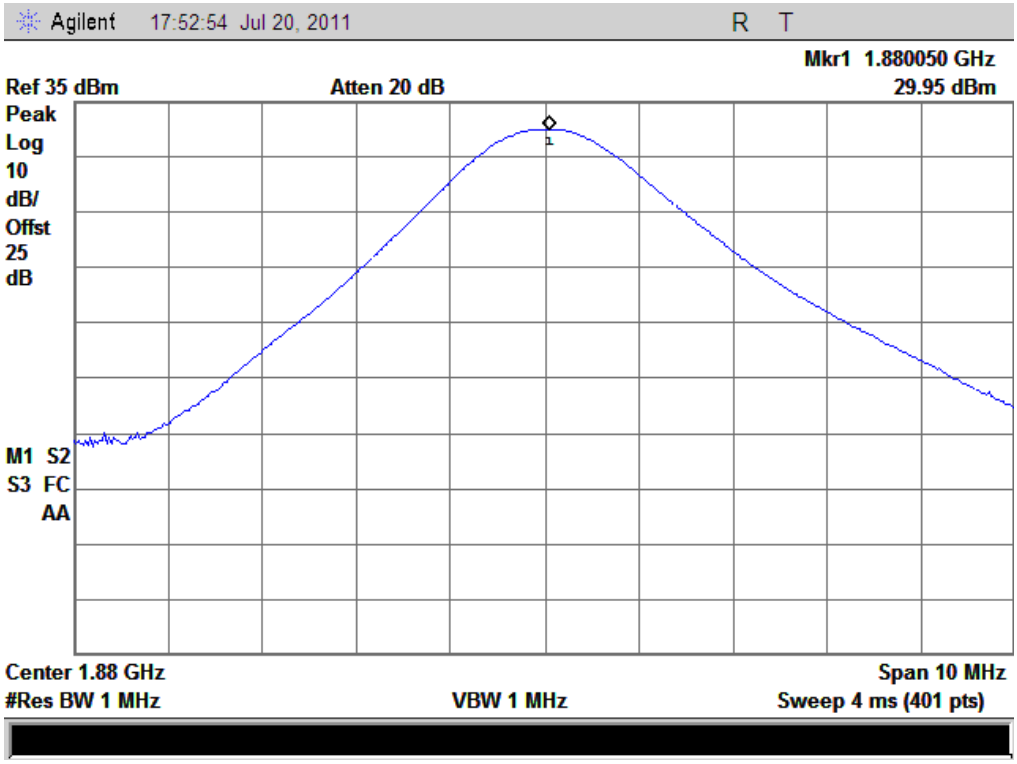
(Plot Q 2: EGPRS 850MHz Channel = 190)



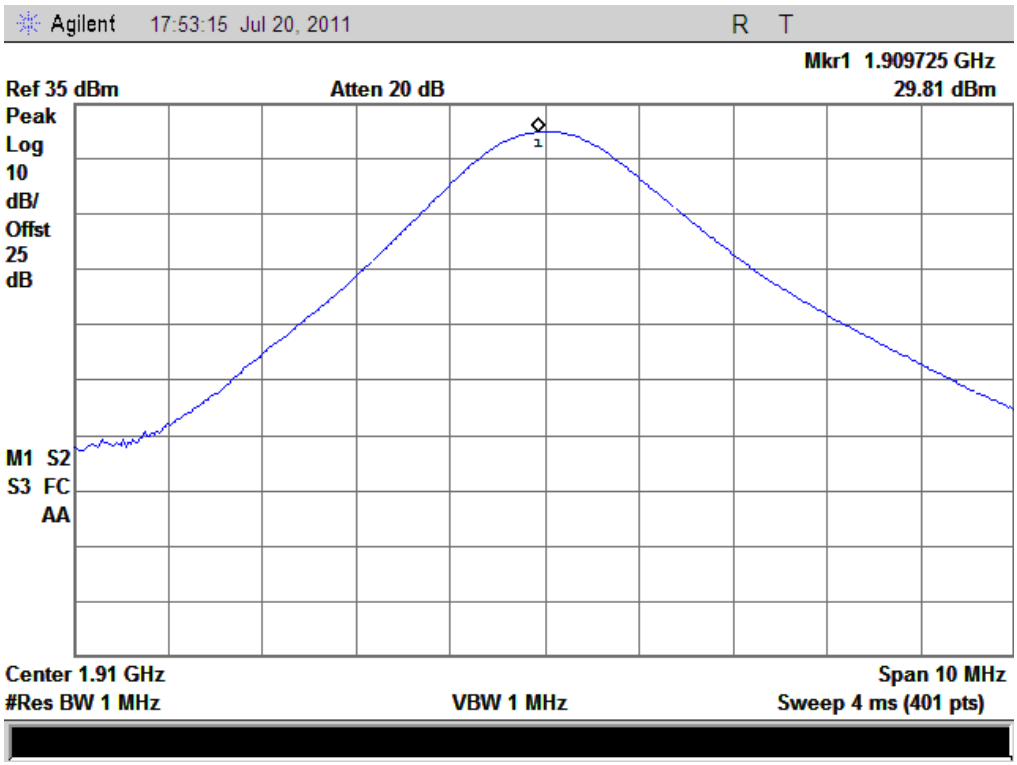
(Plot Q3: EGPRS 850MHz Channel = 251)



(Plot R 1: EGPRS 1900MHz Channel = 512)



(Plot R 2: EGPRS 1900MHz Channel = 661)



(Plot R 3: EGPRS 1900MHz Channel = 810)

2.2 99% Occupied Bandwidth

2.2.1 Definition

According to FCC section 2.1049, 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,.

2.2.2 Test Description

See section 2.1.2 of this report.

2.2.3 Test Verdict

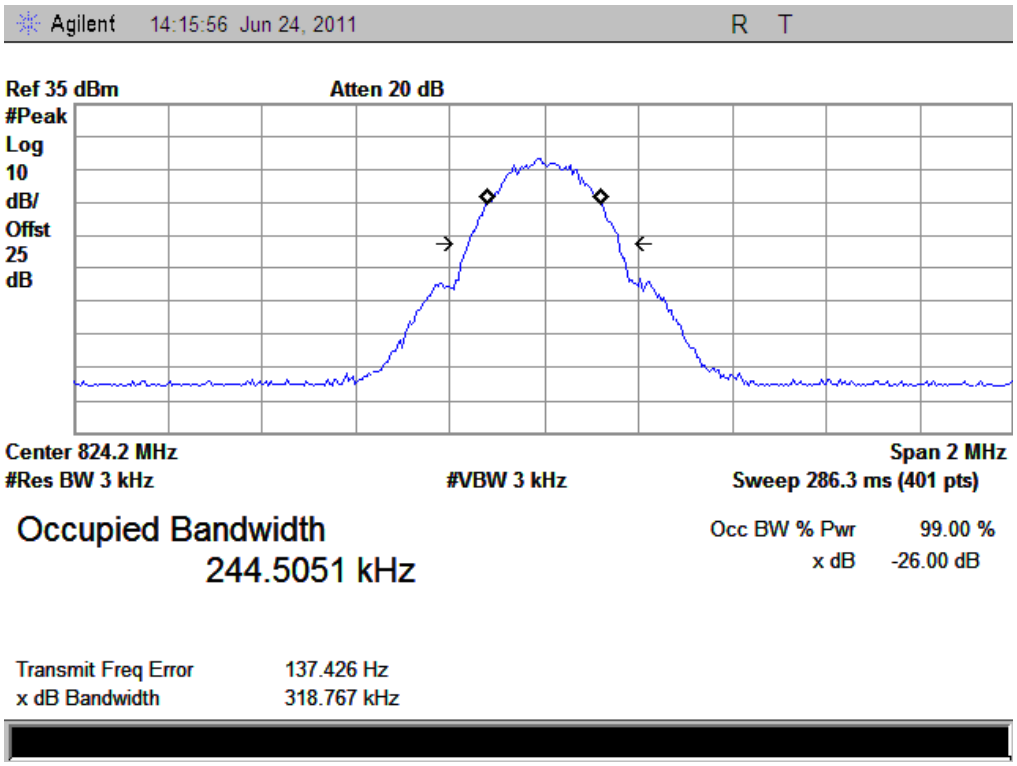
Here the lowest, middle and highest channels are tested to record the 99% occupied bandwidth, it's about GSM, and WCDMA.

1. Test Verdict:

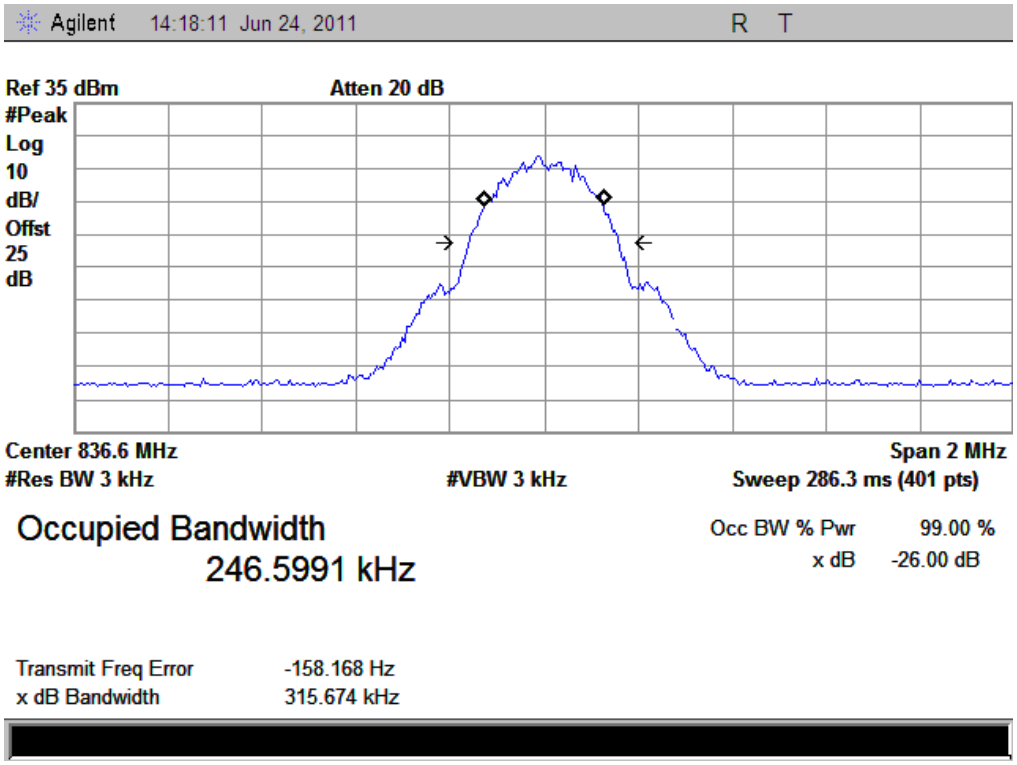
Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth	Refer to Plot
GSM 850MHz	128	824.2	244.5051	Plot A
	190	836.6	246.5991	Plot B
	251	848.8	247.6615	Plot C
GSM 1900MHz	512	1850.2	245.9510	Plot D
	661	1880.0	245.0761	Plot E
	810	1909.8	252.5005	Plot F
EDGE 850MHz	128	824.2	247.5588	Plot G
	190	836.6	246.8642	Plot H
	251	848.8	246.9617	Plot I
EDGE 1900MHz	512	1850.2	245.5534	Plot J
	661	1880.0	247.0796	Plot K
	810	1909.8	243.7747	Plot L
WCDMA 850MHz	4400	835	4.1278	Plot M
WCDMA 1900MHz	9800	1880	4.1419	Plot N
HSDPA 850MHz	4400	835	4.1793	Plot O
HSDPA	9800	1880	4.1755	Plot P

Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth	Refer to Plot
1900MHz				
HSUPA 850MHz	4400	835	4.1922	Plot Q
HSUPA 1900MHz	9800	1880	4.1834	Plot R

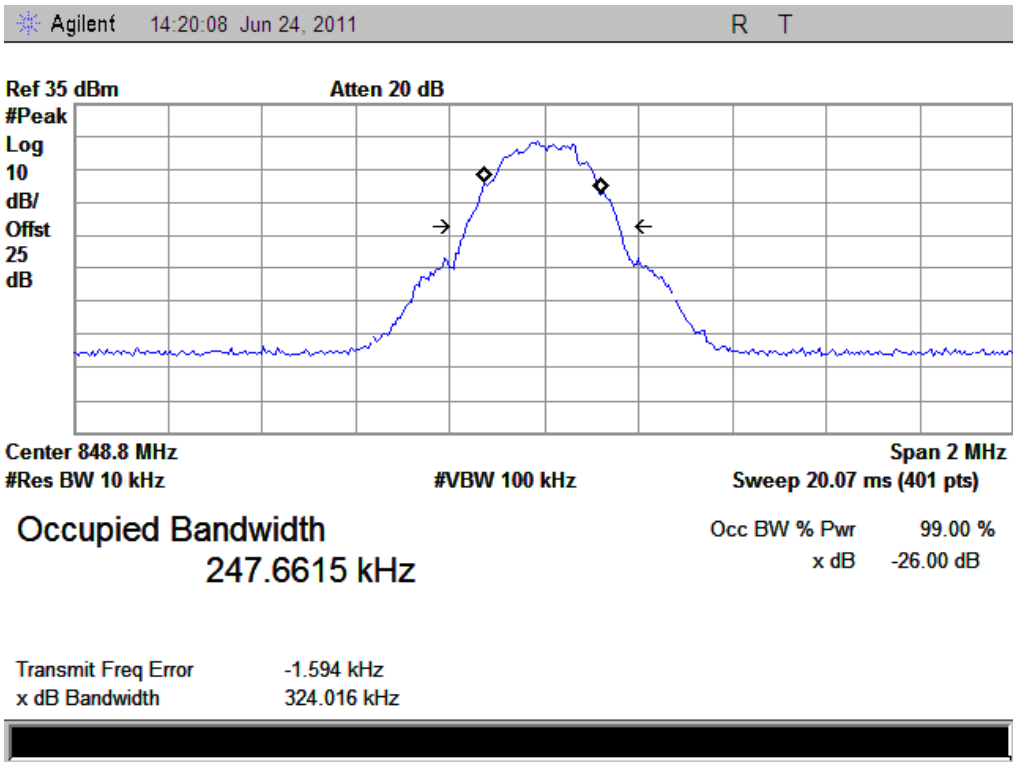
2. Test Plots:



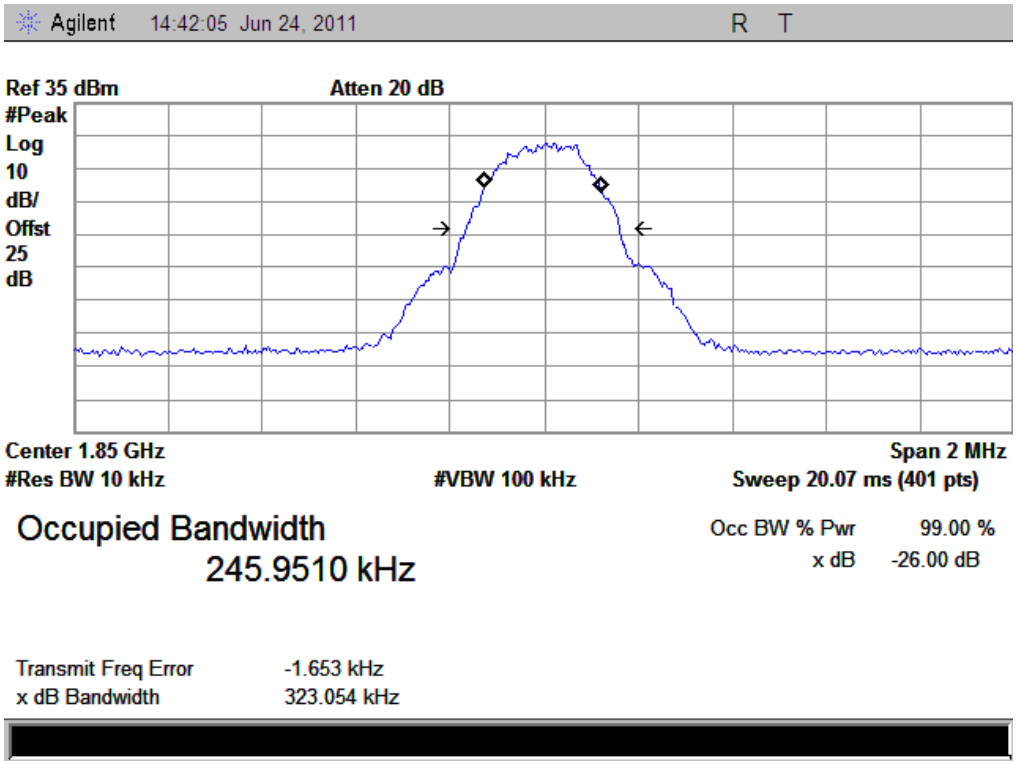
(Plot A: GSM 850MHz Channel = 128)



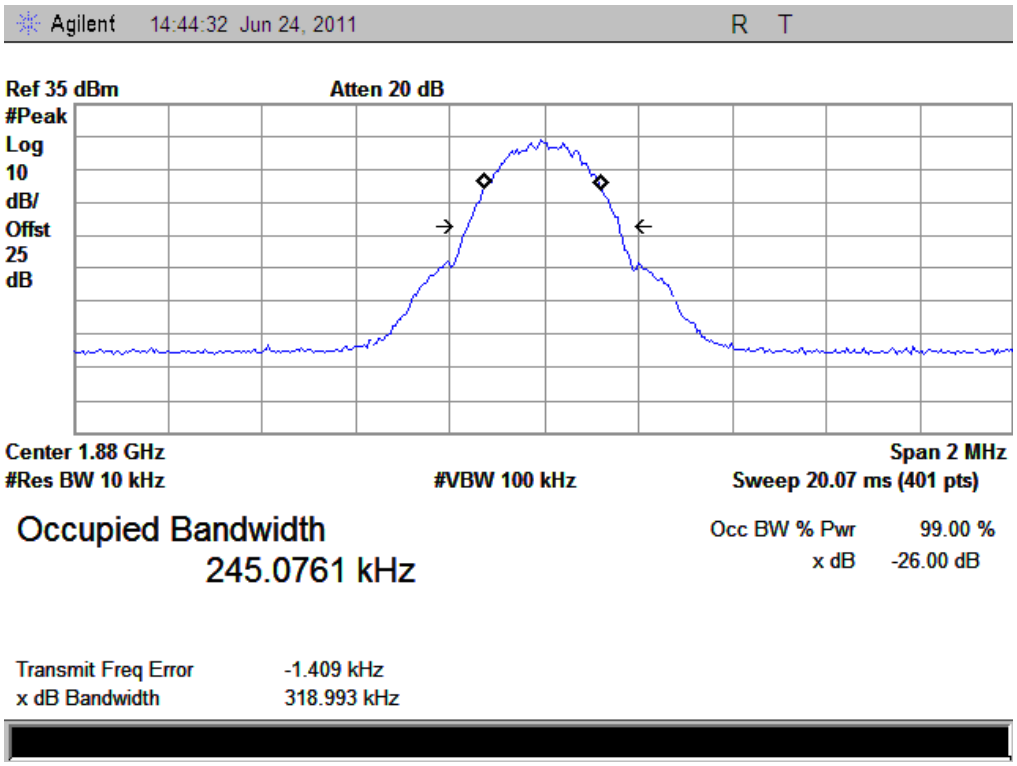
(Plot B: GSM 850MHz Channel = 190)



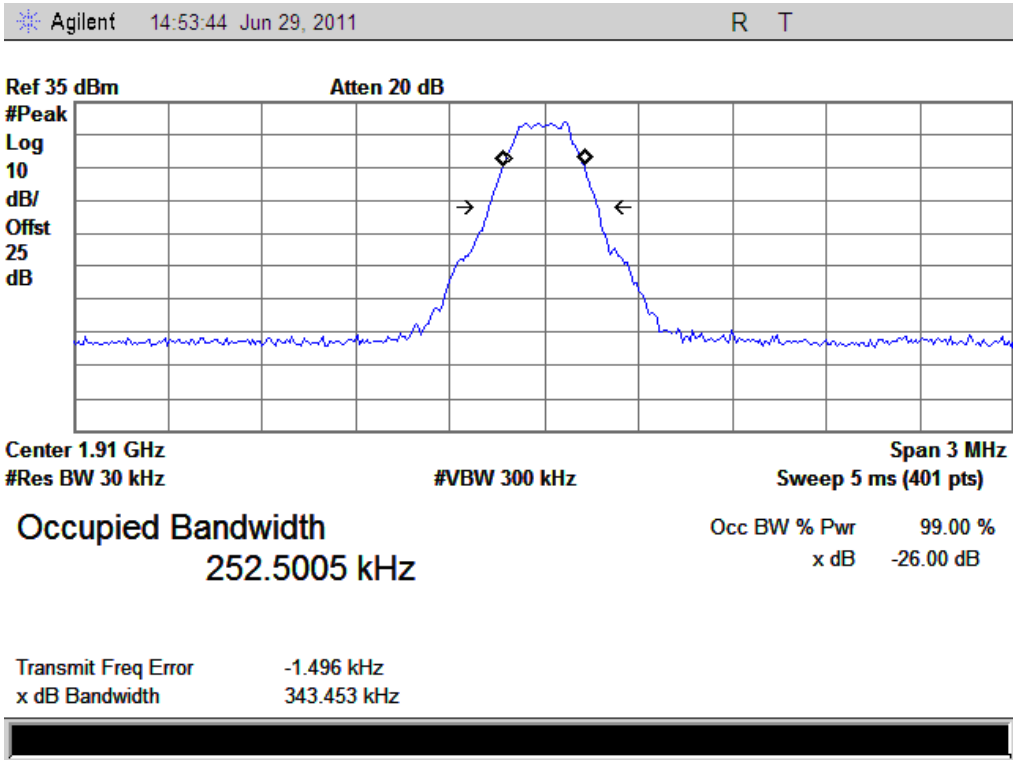
(Plot C: GSM 850MHz Channel = 251)



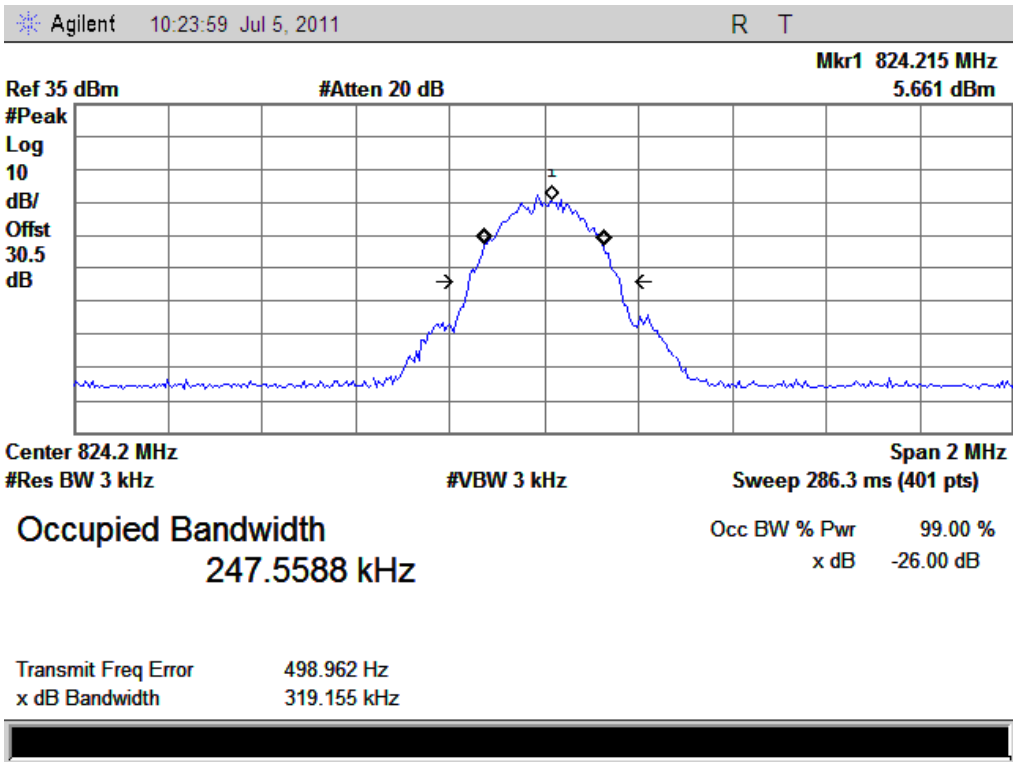
(Plot D: GSM 1900MHz Channel = 512)



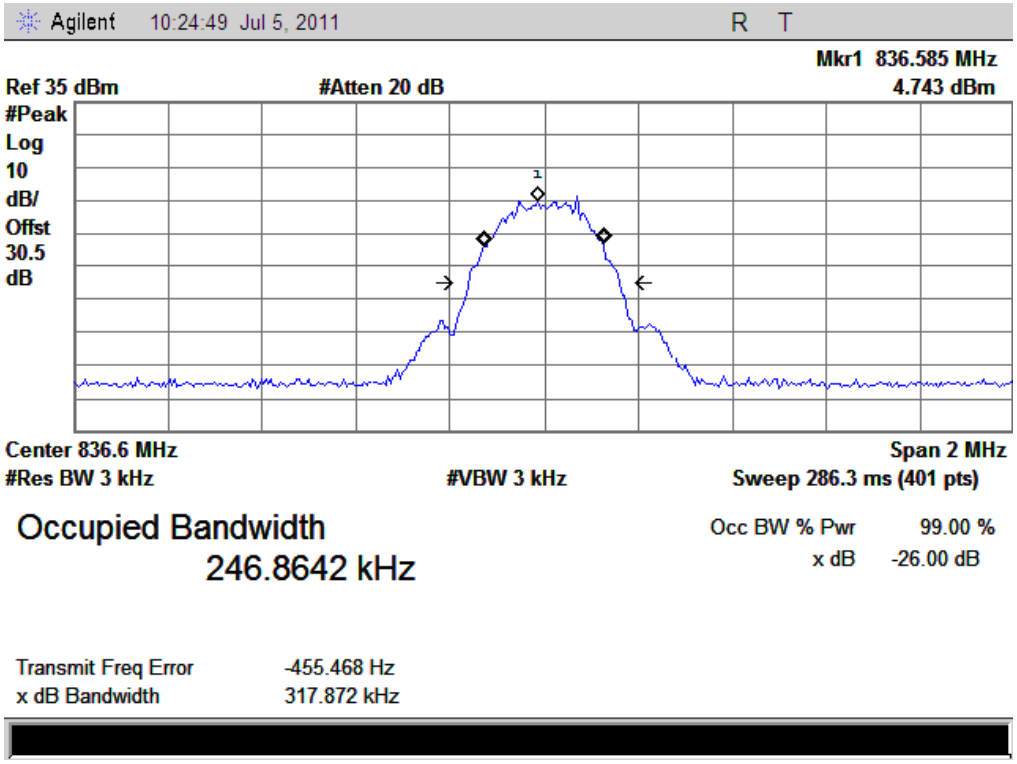
(Plot E: GSM 1900MHz Channel = 661)



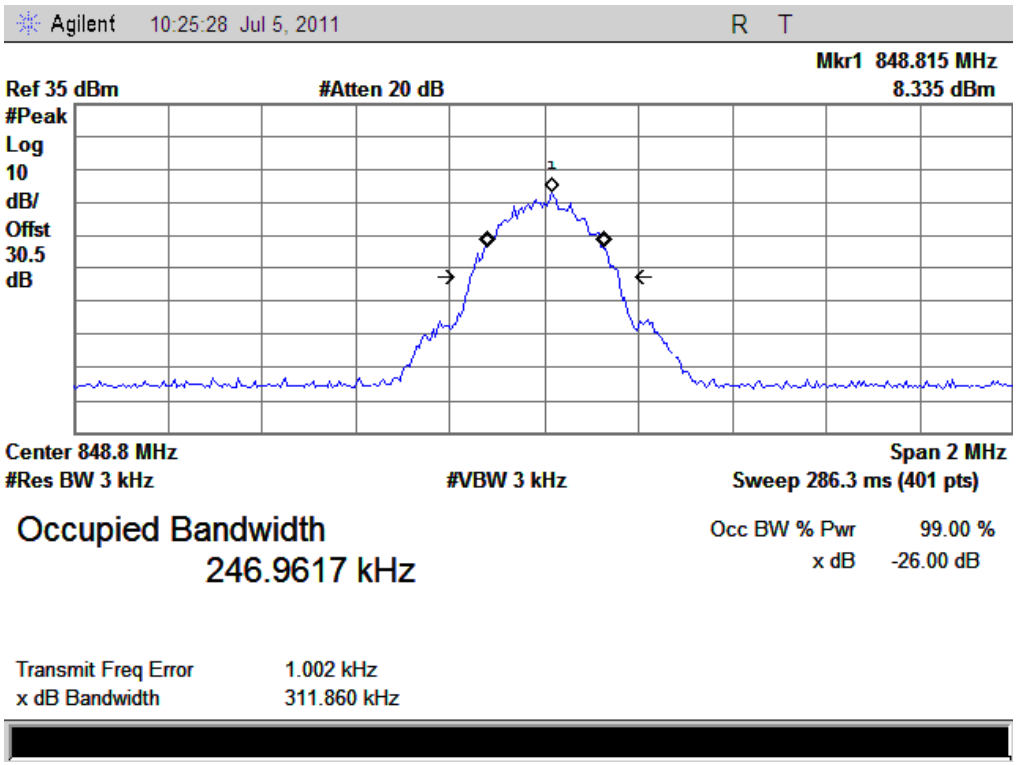
(Plot F: GSM 1900MHz Channel = 810)



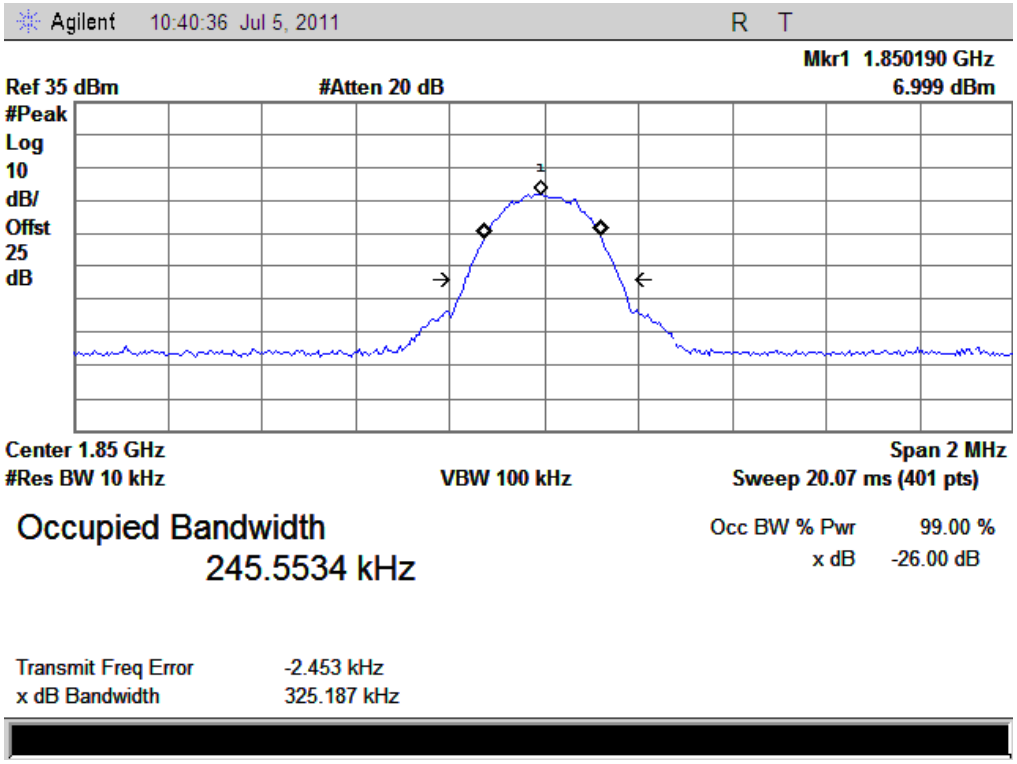
(Plot G: EDGE 850MHz Channel = 128)



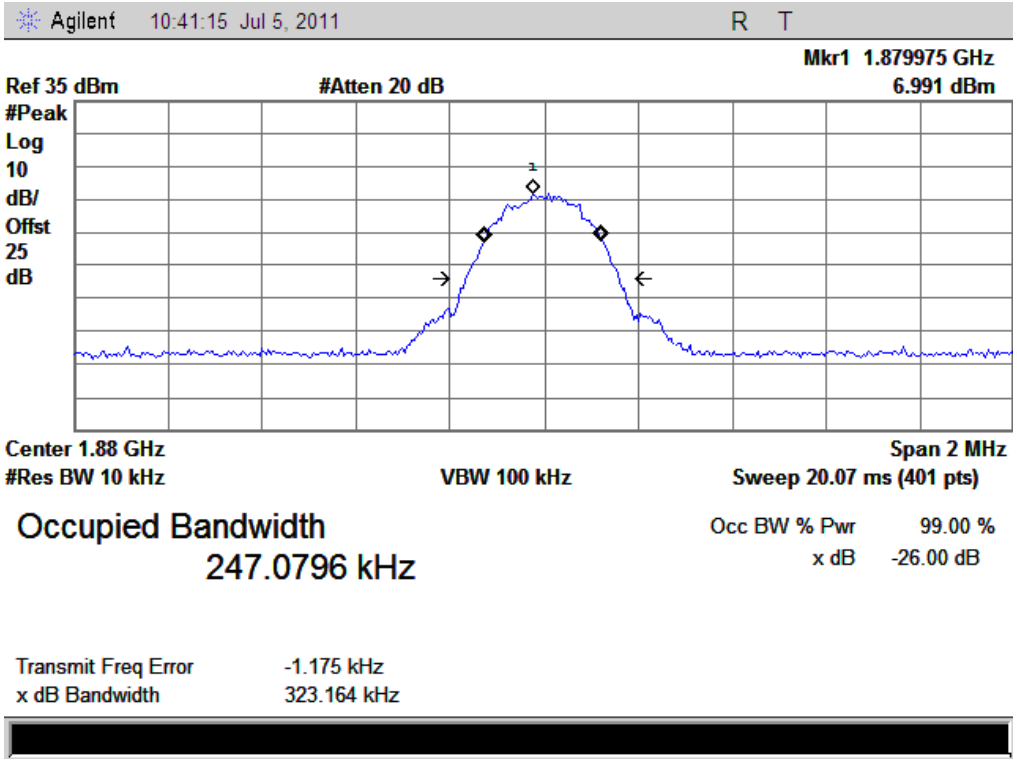
(Plot H: EDGE 850MHz Channel = 190)



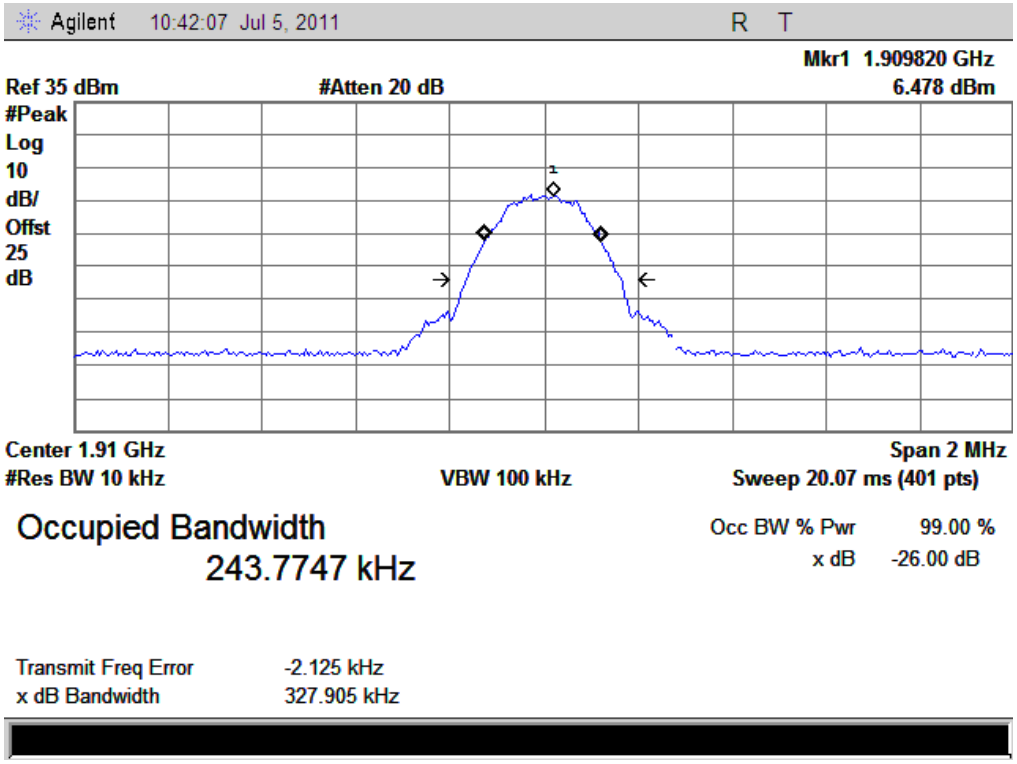
(Plot I: EDGE 850MHz Channel = 251)



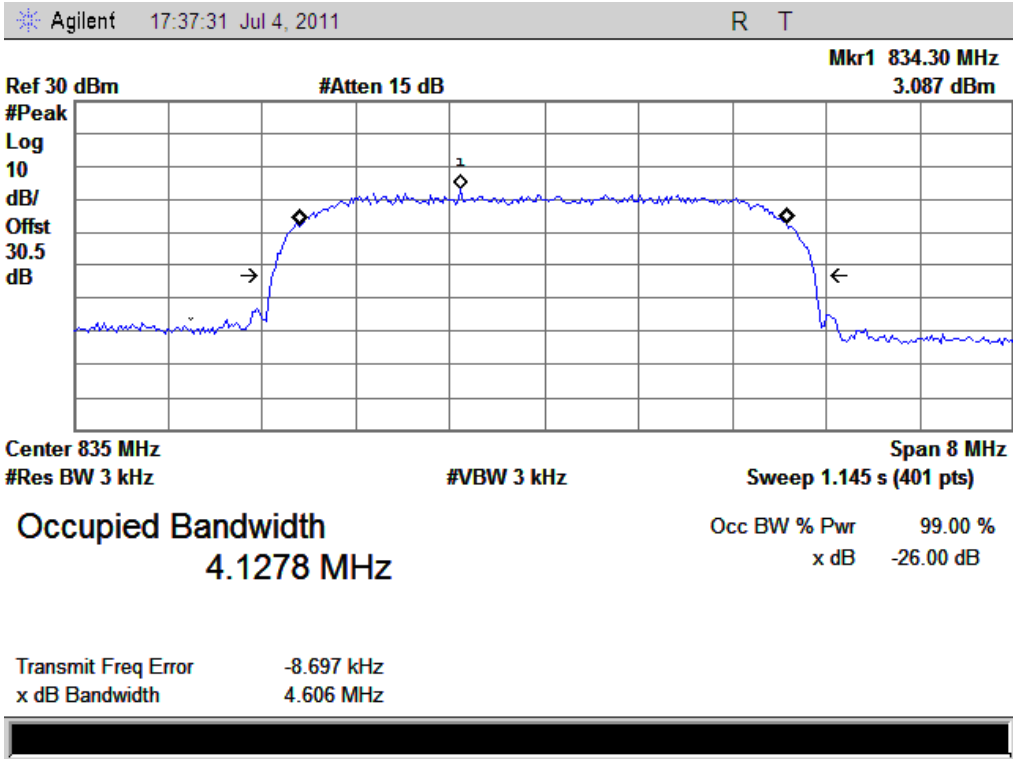
(Plot J: EDGE 1900MHz Channel = 512)



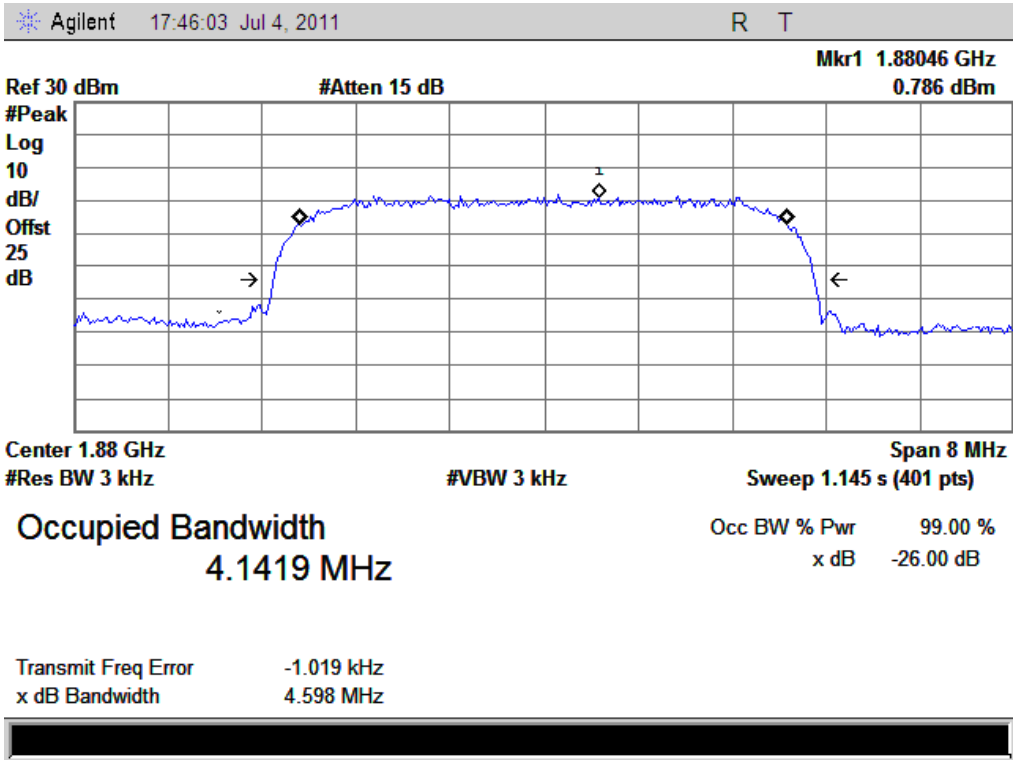
(Plot K: EDGE 1900MHz Channel = 661)



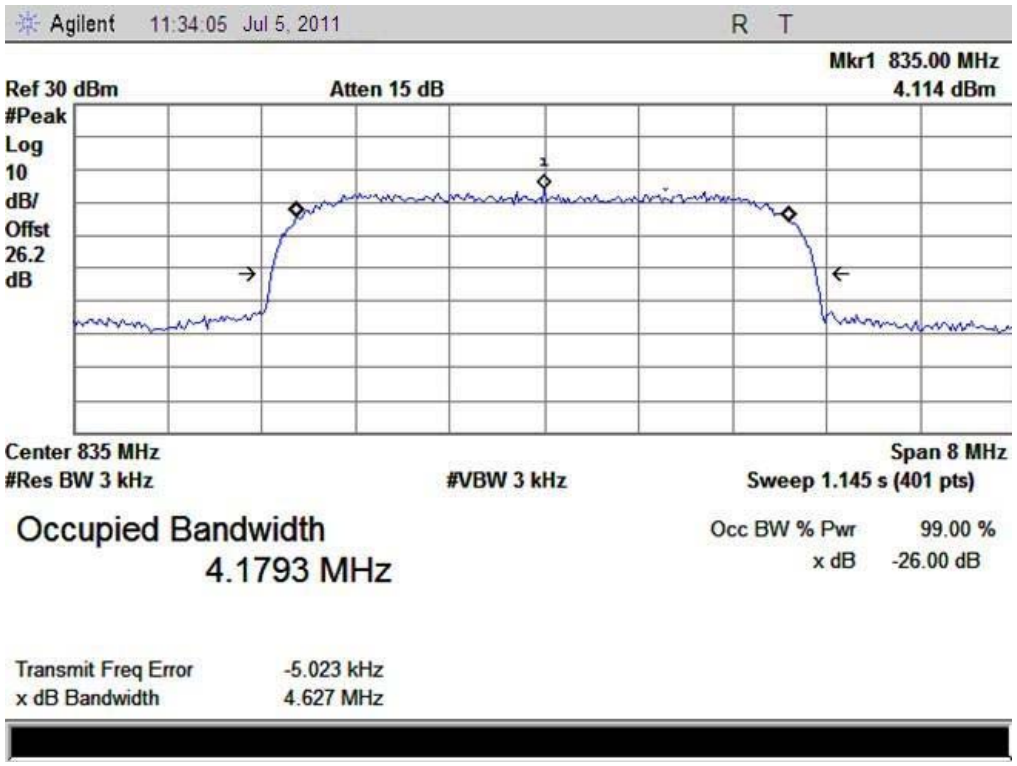
(Plot L: EDGE 1900MHz Channel = 810)



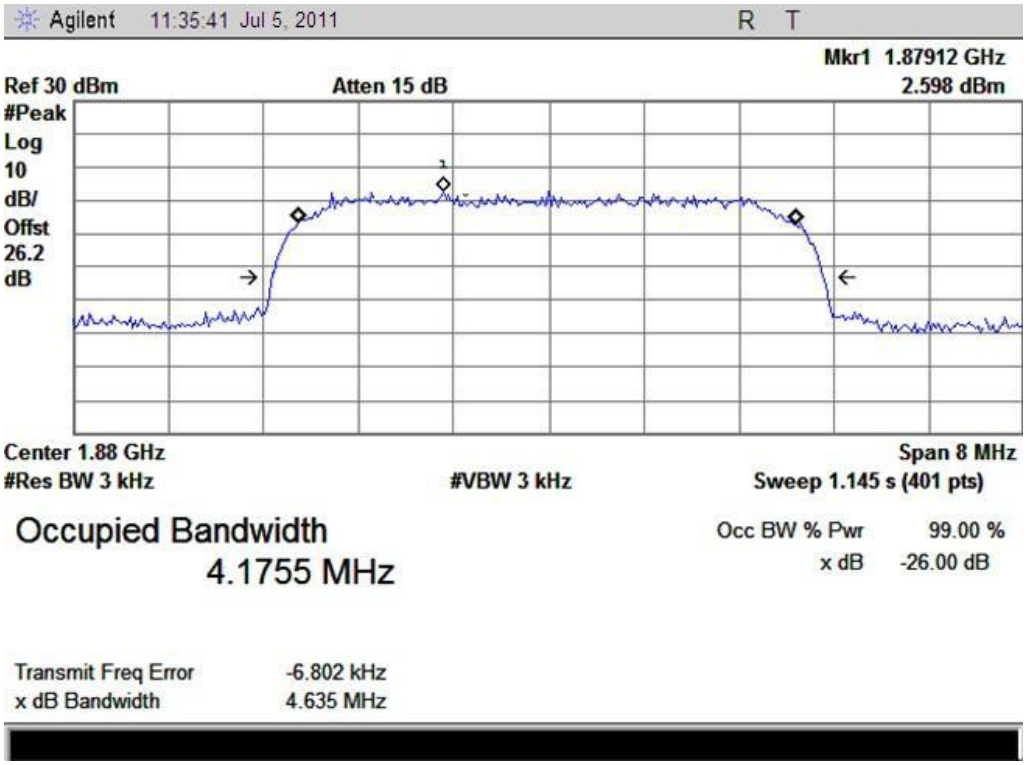
(Plot M: WCDMA 850MHz Channel = 4400)



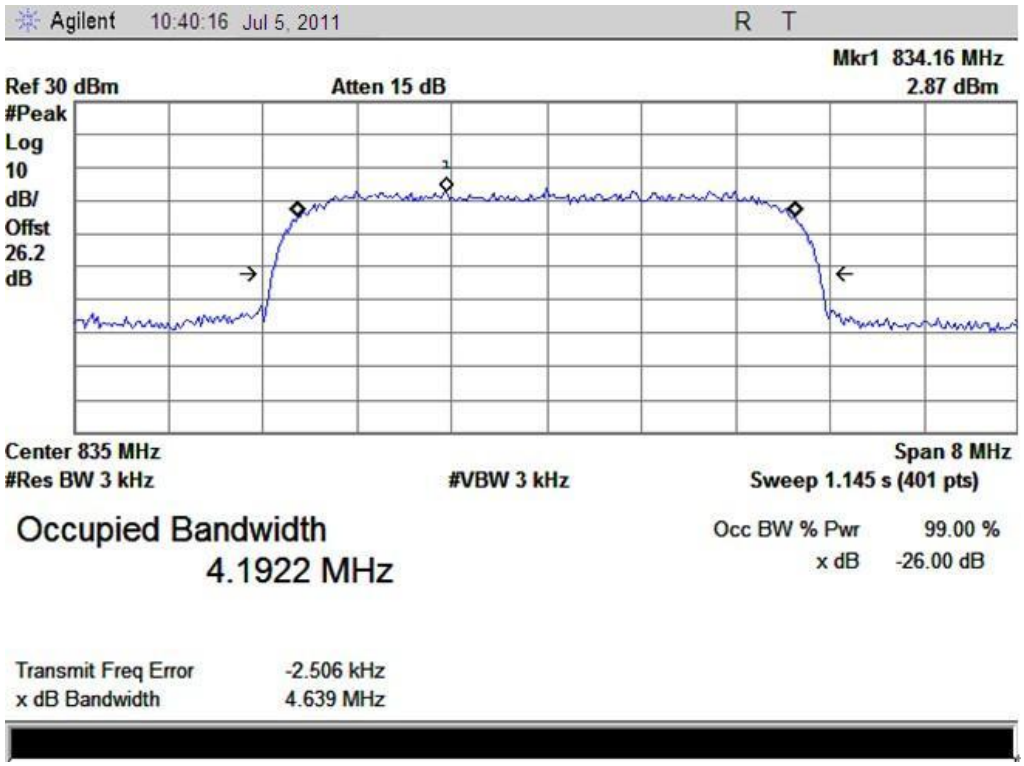
(Plot N: WCDMA 1900MHz Channel = 9800)



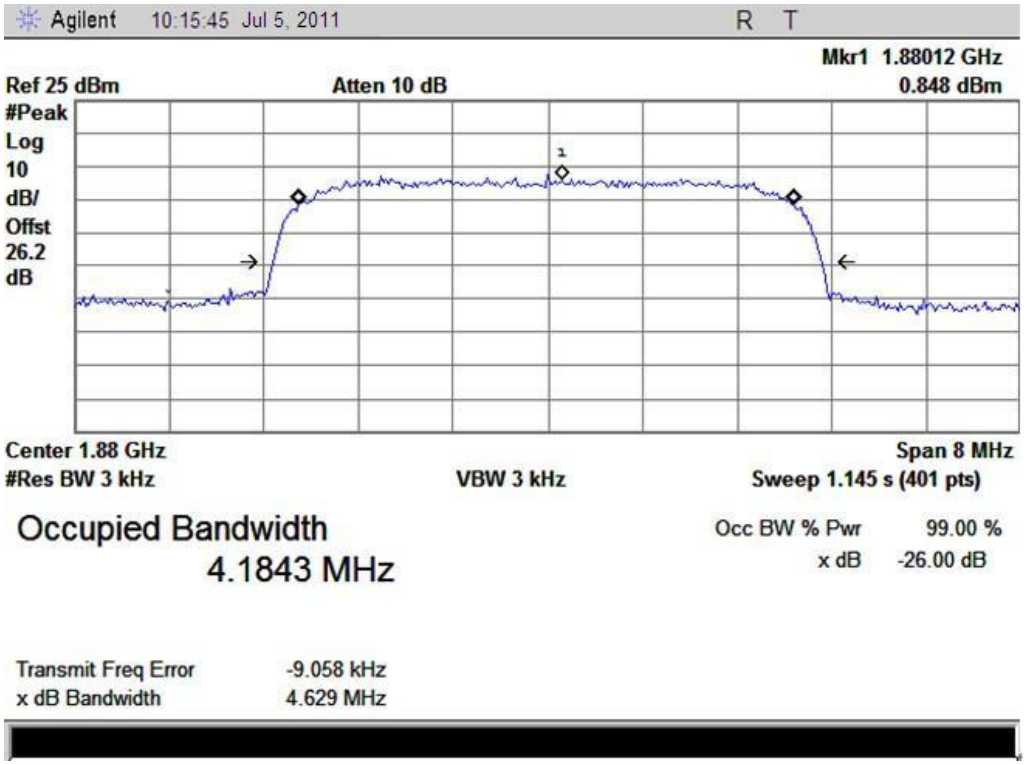
(Plot O: HSDPA 850MHz Channel = 4400)



(Plot P: HSDPA1900MHz Channel = 9800)



(Plot Q: HSUPA 850MHz Channel = 4400)



(Plot R: HSUPA1900MHz Channel = 9800)

2.3 Frequency Stability

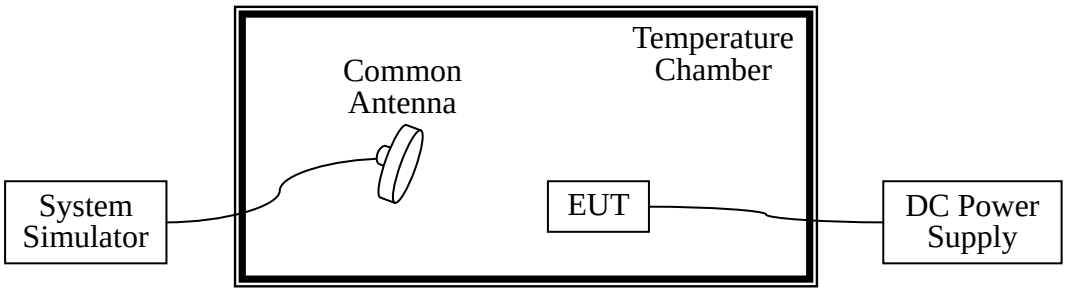
2.3.1 Requirement

According to FCC section 22.355 and FCC section 24.235, 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:

(a) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.
(b) 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.

2.3.2 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
System Simulator	Agilent	E5515C	GB43130131	2010.09
DC Power Supply	Good Will	GPS-3030DD	EF920938	2010.09
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2010.09

2.3.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.7VDC, 4.2VDC and 3.4VDC, which are specified by the applicant; the normal temperature here used is 25°C. The frequency

deviation limit of GSM 850MHz band is ±2.5ppm, and GSM 1900MHz is ±1ppm

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	
3.7	-30	5.78	±2060.5	-5.66	±2091.5	5.05	±2122	PASS
	-20	-10.17		9.70		7.49		
	-10	23.28		-10.06		0.19		
	0	-3.03		21.06		34.30		
	+10	-3.03		13.07		45.99		
	+20	-10.39		-12.76		-16.51		
	+30	17.75		-2.05		19.46		
	+40	5.31		-3.77		-6.80		
	+50	-12.19		5.39		7.58		
4.2	+25	20.74		9.65		3.11		
3.4	+25	23.29		-0.70		-4.93		

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	
3.7	-30	-11.03	±1850.2	21.02	±1880.0	26.47	±1909.8	PASS
	-20	-2.06		43.08		37.73		
	-10	12.88		20.65		-5.51		
	0	-21.75		-3.32		22.29		
	+10	-18.76		42.75		41.22		
	+20	32.54		-2.32		-8.03		
	+30	-18.89		23.12		-11.01		
	+40	44.49		11.33		0.52		
	+50	40.72		-17.55		25.40		
4.2	+25	16.15		38.10		-6.06		
3.4	+25	52.34		-12.06		-2.86		

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	
3.7	-30	-13.10	±2060.5	-12.80	±2091.5	-11.49	±2122	PASS
	-20	27.28		-14.67		-12.90		
	-10	-2.15		0.84		12.66		
	0	40.06		9.35		5.05		
	+10	1.99		-10.10		3.02		
	+20	-19.86		-16.11		10.76		
	+30	39.56		17.76		-16.51		
	+40	46.60		15.64		-2.10		
	+50	39.98		3.67		-12.99		
4.2	+25	-11.71		12.95		-7.53		
3.4	+25	-17.70		6.23		6.78		

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	
3.7	-30	-13.67	±1850.2	23.62	±1880.0	24.03	±1909.8	PASS
	-20	0.52		7.23		-6.98		
	-10	1.25		-24.78		4.55		
	0	2.47		-1.26		-0.20		
	+10	-10.76		-18.68		26.30		
	+20	-2.11		-21.61		35.26		
	+30	13.33		14.58		-26.78		
	+40	5.33		-0.68		19.54		
	+50	-2.56		36.87		-16.67		
4.2	+25	17.60		3.88		26.79		
3.4	+25	-8.09		13.12		19.93		

WCDMA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4357 (826.4MHz)		Channel = 4400 (835MHz)		Channel = 4458 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.7	-30	15.16	±826.4	-13.39	±835	-9.81	±846.6	PASS
	-20	-17.02		-4.75		-23.82		
	-10	10.82		18.85		26.39		
	0	13.98		5.05		30.98		
	+10	-2.66		19.62		-2.65		
	+20	32.07		30.40		18.30		
	+30	-7.98		13.45		-12.57		
	+40	26.21		1.31		28.93		
	+50	11.10		-12.52		19.66		
4.2	+25	-6.18		30.62		22.19		
3.4	+25	18.66		-18.00		-18.70		

WCDMA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9662 (1852.4MHz)		Channel = 9800 (1880.0MHz)		Channel = 9938 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	27.29	±1852.4	19.25	±1880.0	-18.99	±1907.6	PASS
	-20	-7.32		2.49		13.60		
	-10	-3.40		-10.71		24.81		
	0	16.47		-7.77		-13.07		
	+10	30.18		21.97		17.42		
	+20	-2.62		11.87		-10.39		
	+30	16.31		-0.59		17.47		
	+40	0.32		21.45		27.84		
	+50	-13.55		-5.71		-2.53		
4.2	+25	23.21		14.58		20.95		
3.4	+25	22.00		26.37		-23.22		

HSDPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4357 (826.4MHz)		Channel = 4400 (835MHz)		Channel = 4458 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.7	-30	8.78	±826.4	21.77	±835	-3.87	±846.6	PASS
	-20	-1.49		-1.93		14.41		
	-10	17.14		18.67		21.57		
	0	-23.61		27.46		-24.37		
	+10	32.03		-8.56		-13.96		
	+20	23.83		20.65		35.23		
	+30	13.31		12.88		-8.31		
	+40	-14.01		-14.75		-13.95		
	+50	34.55		23.37		26.37		
4.2	+25	-3.57		7.93		7.90		
3.4	+25	17.51		-31.21		1.78		

HSDPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9662 (1852.4MHz)		Channel = 9800 (1880.0MHz)		Channel = 9938 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	1.80	±1852.4	15.66	±1880	2.61	±1907.6	PASS
	-20	-17.26		1.75		-8.38		
	-10	12.78		-7.00		-13.02		
	0	11.87		21.02		-8.51		
	+10	-16.65		26.48		5.64		
	+20	20.12		-4.81		-3.85		
	+30	-3.01		34.31		9.57		
	+40	21.71		8.36		27.54		
	+50	14.37		-25.88		-12.52		
4.2	+25	-11.21		29.43		-2.83		
3.4	+25	10.60		-2.27		14.42		

HSUPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4357 (826.4MHz)		Channel = 4400 (835MHz)		Channel = 4458 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.7	-30	-20.54	±826.4	-9.75	±835	23.99	±846.6	PASS
	-20	8.22		18.54		7.43		
	-10	0.00		32.04		7.00		
	0	-13.77		22.67		-7.32		
	+10	-0.10		15.41		-4.91		
	+20	13.82		-6.64		21.35		
	+30	-15.25		24.25		-5.94		
	+40	-11.79		9.63		13.78		
	+50	-0.44		23.76		28.45		
4.2	+25	0.01		-4.57		29.11		
3.4	+25	1.54		5.25		-7.70		

HSUPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9662 (1852.4MHz)		Channel = 9800 (1880.0MHz)		Channel = 9938 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	14.55	±1852.4	30.18	±1880	-12.97	±1907.6	PASS
	-20	7.15		19.36		12.35		
	-10	8.69		-5.91		29.57		
	0	2.01		7.29		-6.20		
	+10	-4.75		-4.52		-12.61		
	+20	16.38		31.70		-13.09		
	+30	-1.76		33.66		-0.38		
	+40	23.52		1.15		-11.85		
	+50	13.79		-7.94		-5.91		
4.2	+25	-7.08		6.81		25.48		
3.4	+25	22.58		-1.83		-15.78		

2.4 Conducted Out of Band Emissions

2.4.1 Requirement

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

2.4.2 Test Description

See section 2.1.2 of this report.

2.4.3 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:

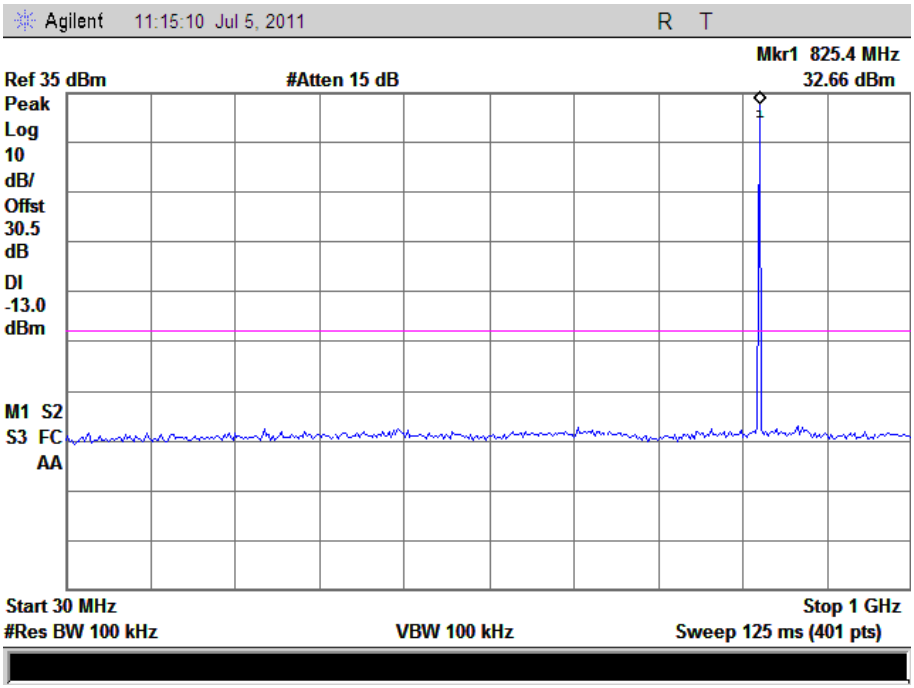
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-26.34	Plot A1toA1.1	-13	PASS
	190	836.6	-26.93	Plot A2toA2.1		PASS
	251	848.8	-28.82	Plot A3toA3.1		PASS
GSM 1900MHz	512	1850.2	-51.71	Plot B1toB1.1	-13	PASS
	661	1880.0	-50.84	Plot B2toB2.1		PASS
	810	1909.8	--51.68	Plot B3toB3.1		PASS
EDGE 850MHz	128	824.2	-29.88	Plot C1toC1.1	-13	PASS
	190	836.6	-26.42	Plot C2toC2.1		PASS
	251	848.8	-28.32	Plot C3toC3.1		PASS
EDGE	512	1850.2	-48.4	Plot	-13	PASS

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
1900MHz				D1toD1.1		
	661	1880.0	-47.88	Plot D2toD2.1		PASS
	810	1909.8	-48.05	Plot D3toD3.1		PASS
WCDMA 850MHz	4357	826.4	-40.25	Plot E1toE1.1	-13	PASS
	4400	835	-43.75	Plot E2toE2.1		PASS
	4458	846.6	-39.52	Plot E3toE3.1		PASS
WCDMA 1900MHz	9662	1852.4	-48.04	Plot F1toF1.1	-13	PASS
	9800	1880	-37.82	Plot F2toF2.1		PASS
	9938	1907.6	-37.98	Plot F3to3.1		PASS
HSDPA 850MHz	4357	826.4	-34	Plot G1toG1.1	-13	PASS
	4400	835	-33.62	Plot G2toG2.1		PASS
	4458	846.6	-34.32	Plot G3toG3.1		PASS
HSDPA 1900MHz	9662	1852.4	-36.98	Plot H1toH1.1	-13	PASS
	9800	1880	-36.92	Plot H2toH2.1		PASS
	9938	1907.6	-36.94	Plot H3toH3.1		PASS
HSUPA 850MHz	4357	826.4	-34.46	Plot I1toI1.1	-13	PASS
	4400	835	-35.26	Plot I2toI2.1		PASS
	4458	846.6	-34.35	Plot I3toI3.1		PASS
HSUPA 1900MHz	9662	1852.4	-36.67	Plot J1toJ1.1	-13	PASS
	9800	1880	-37.42	Plot		PASS

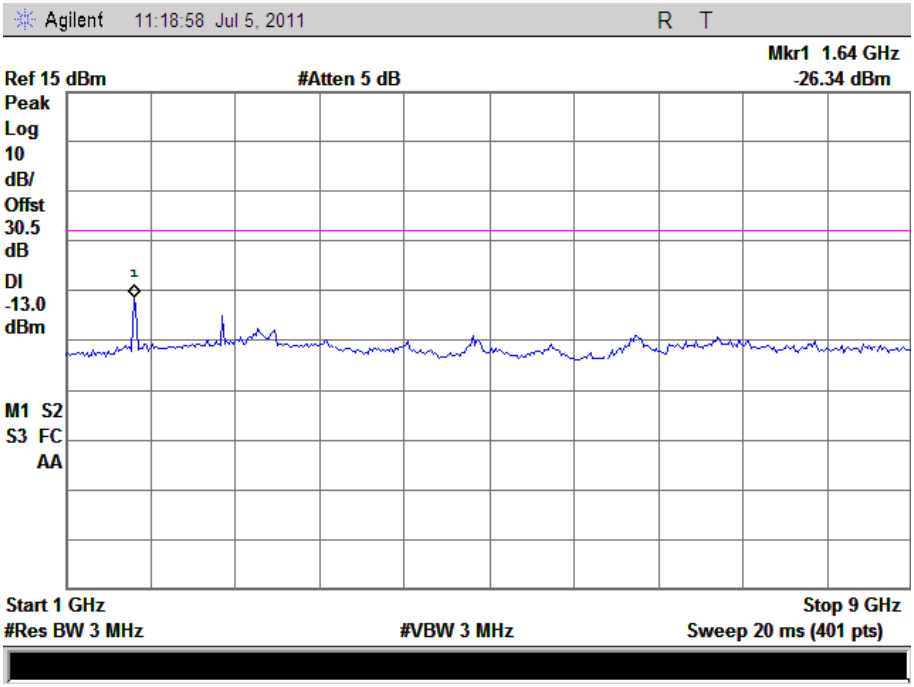
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
				J2toJ2.1		
	9938	1907.6	-36.92	Plot J3toJ3.1		PASS

2. Test Plots for the Whole Measurement Frequency Range:

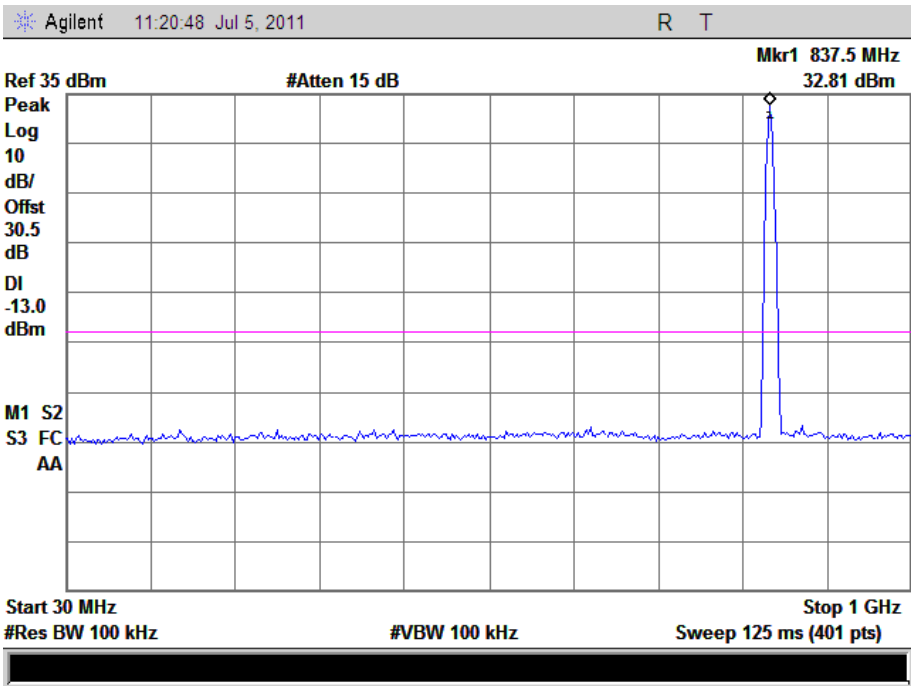
Note: the power of the EUT transmitting frequency should be ignored.



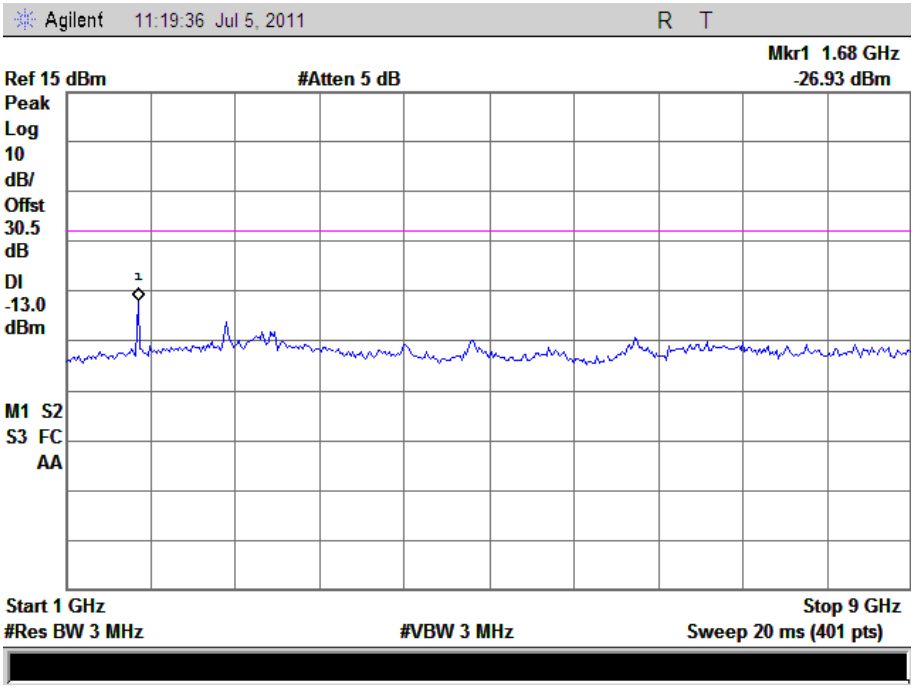
(Plot A1: GSM 850MHz Channel = 128, 30MHz to 1GHz)



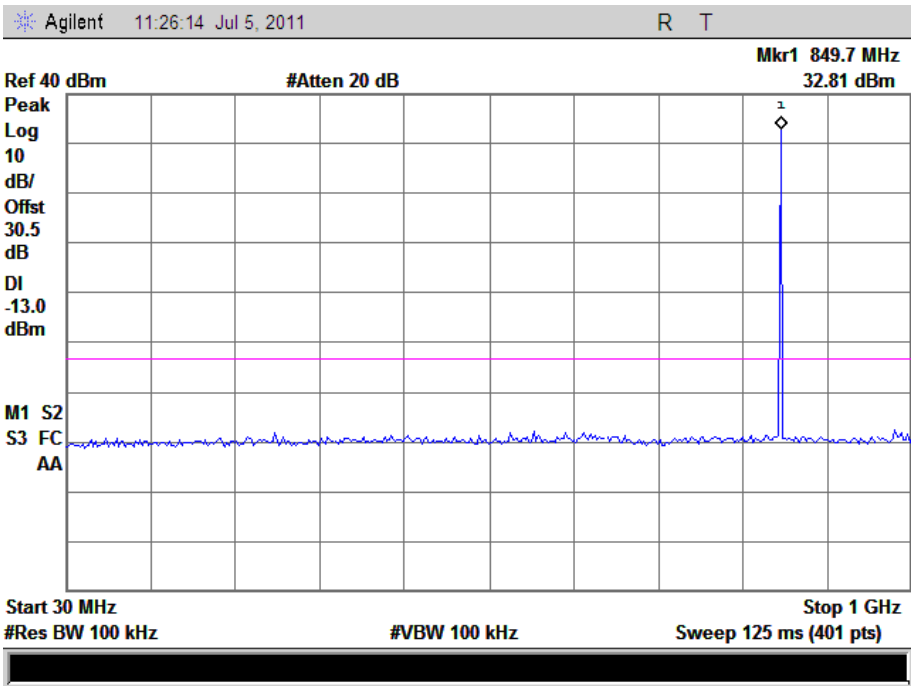
(Plot A1.1: GSM 850MHz Channel = 128, 1GHz to 9GHz)



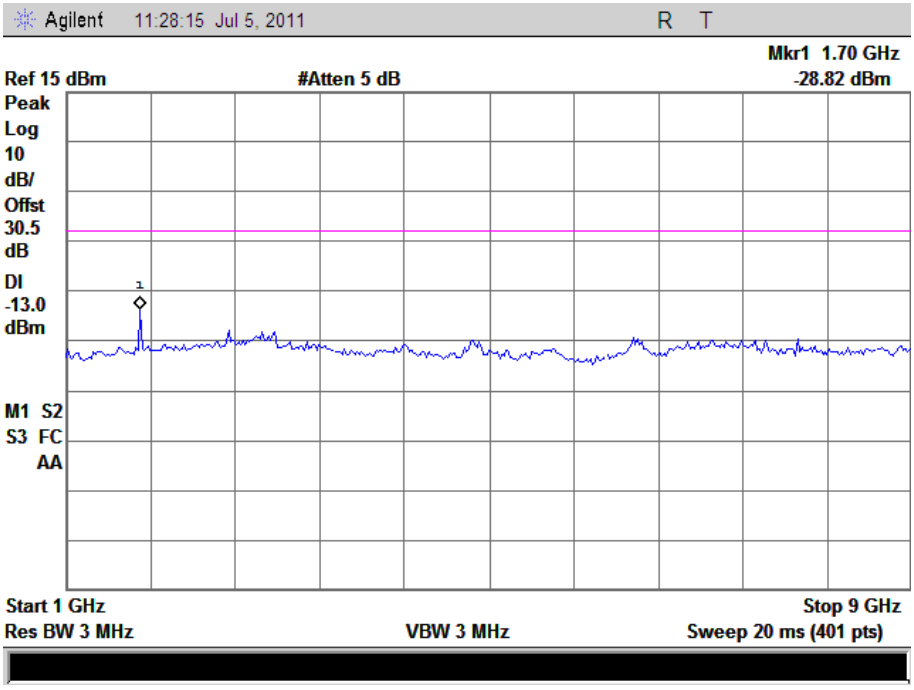
(Plot A2: GSM 850MHz Channel = 190, 30MHz to 1GHz)



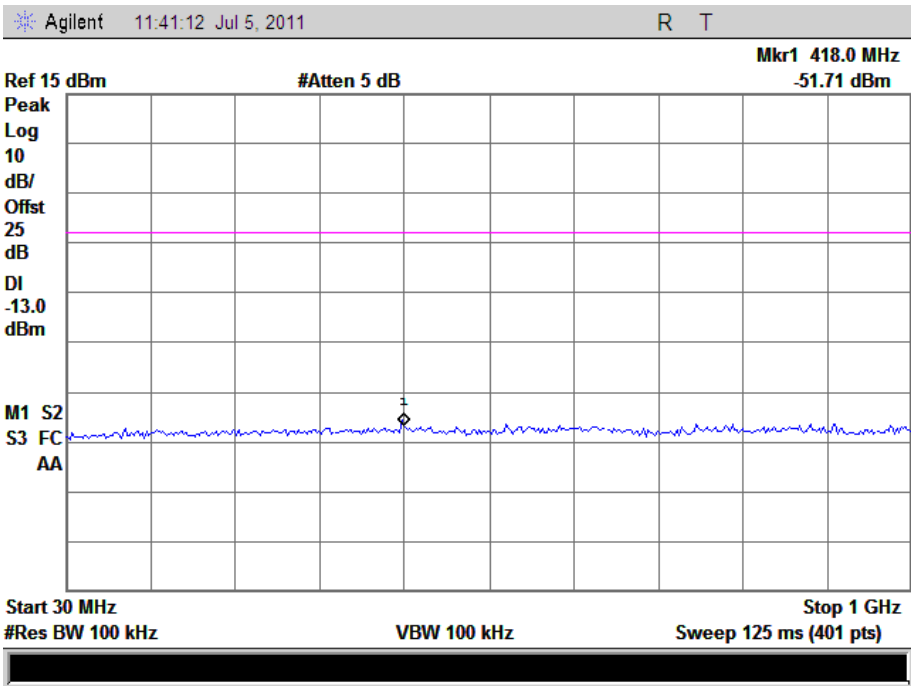
(Plot A2.1: GSM 850MHz Channel = 190, 1GHz to 9GHz)



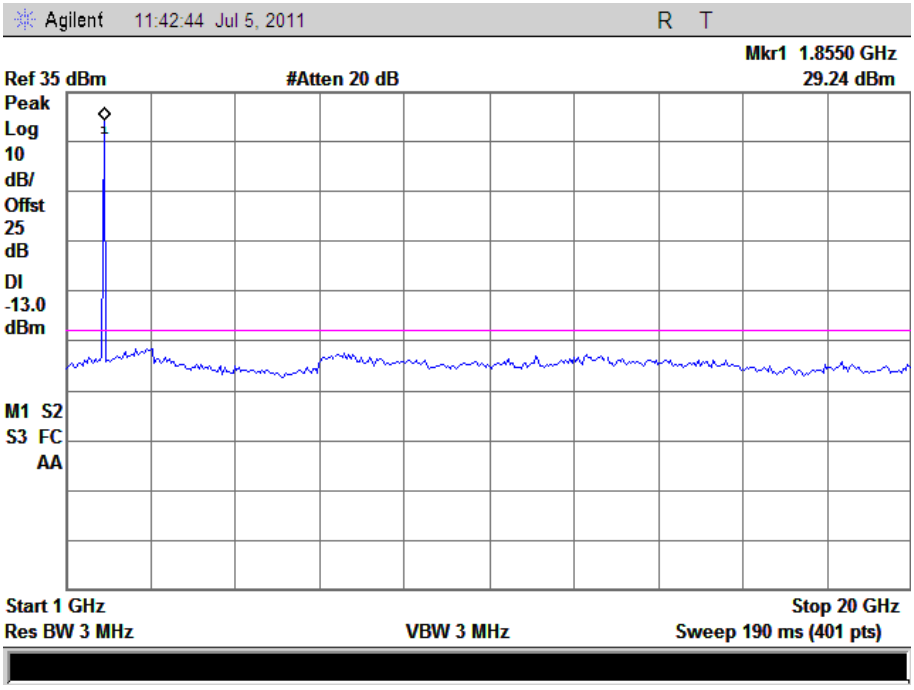
(Plot A3: GSM 850MHz Channel = 251, 30MHz to 1GHz)



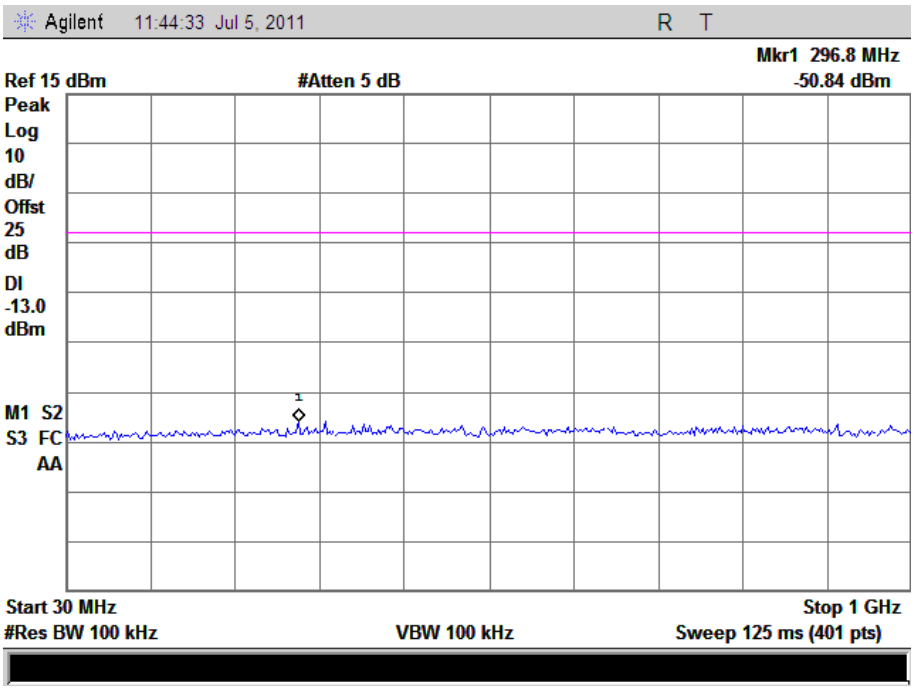
(Plot A3.1: GSM 850MHz Channel = 251, 1GHz to 9GHz)



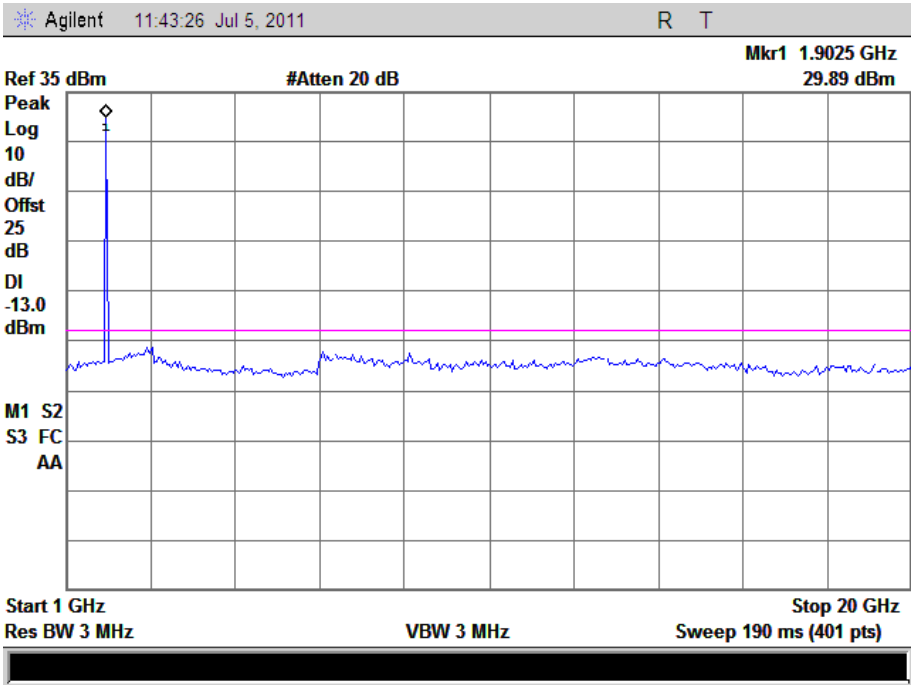
(Plot B1: GSM 1900MHz Channel = 512, 30MHz to 1GHz)



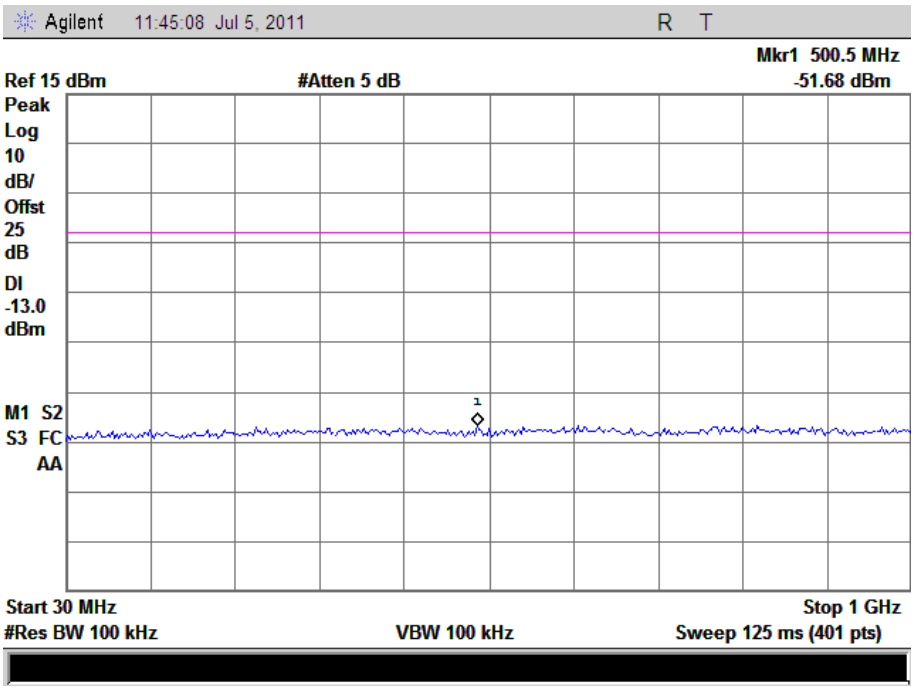
(Plot B1.1: GSM 1900MHz Channel = 512, 1GHz to 20GHz)



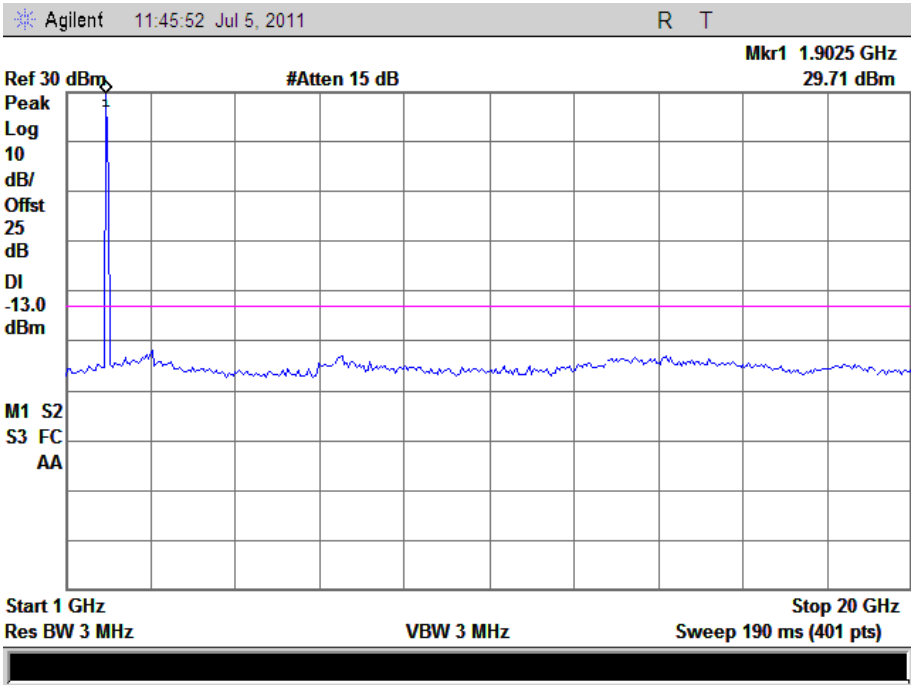
(Plot B2: GSM 1900MHz Channel = 661, 30MHz to 1GHz)



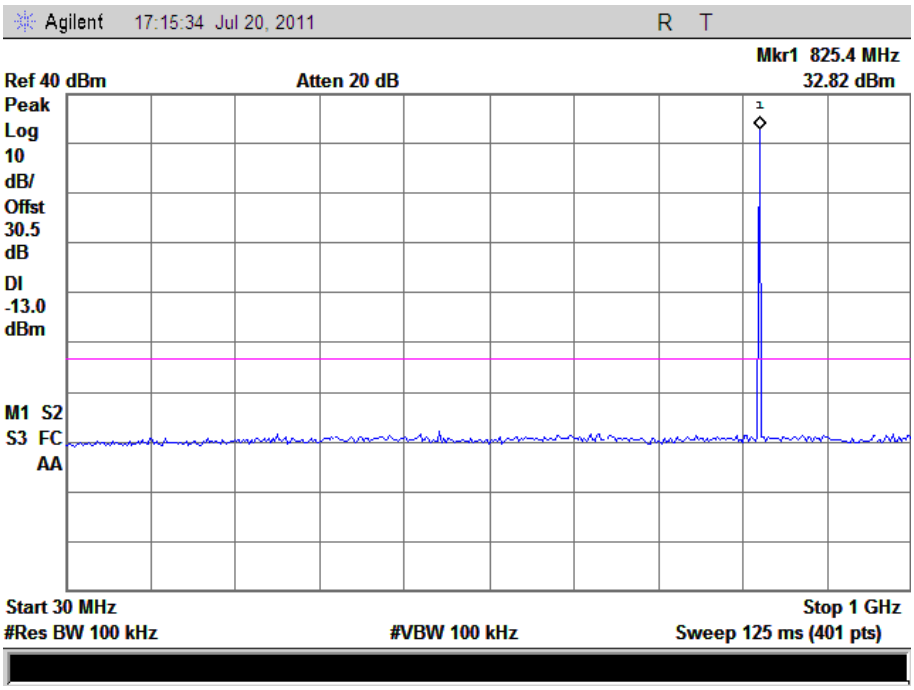
(Plot B2.1: GSM 1900MHz Channel = 661, 1GHz to 20GHz)



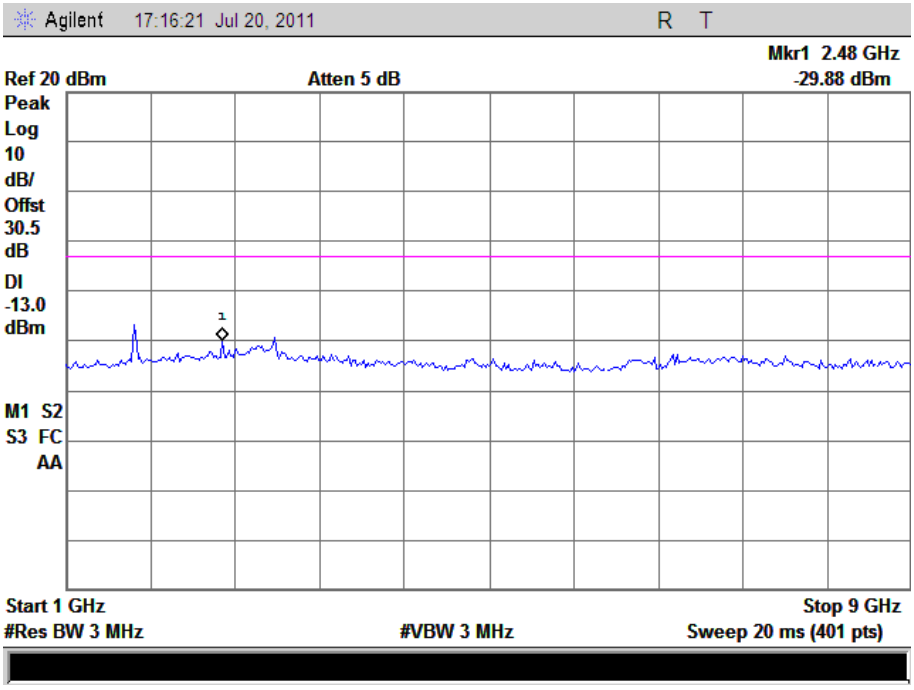
(Plot B3: GSM 1900MHz Channel = 810, 30MHz to 1GHz)



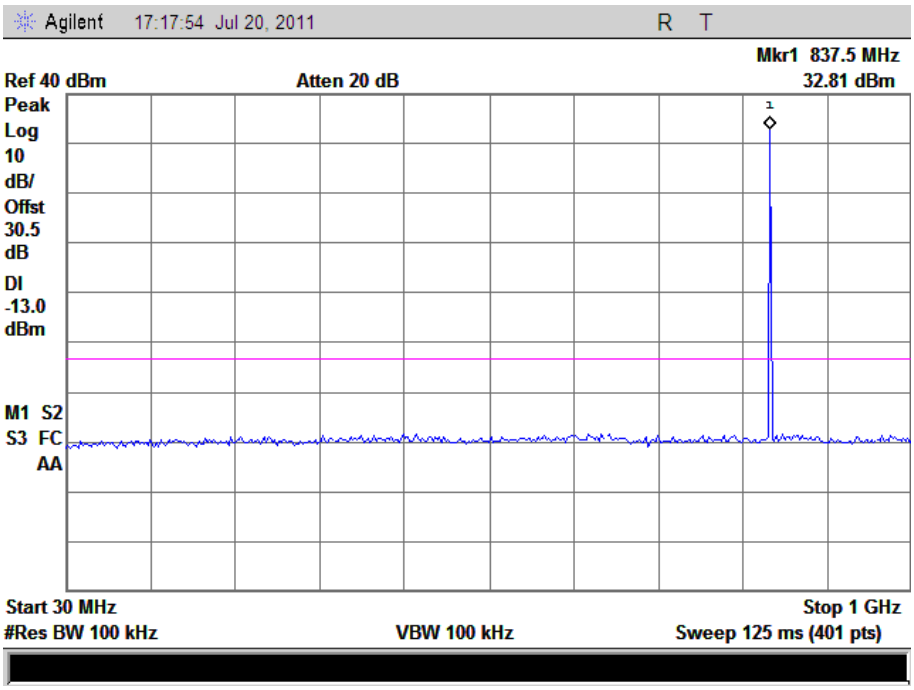
(Plot B3.1: GSM 1900MHz Channel = 810, 1GHz to 20GHz)



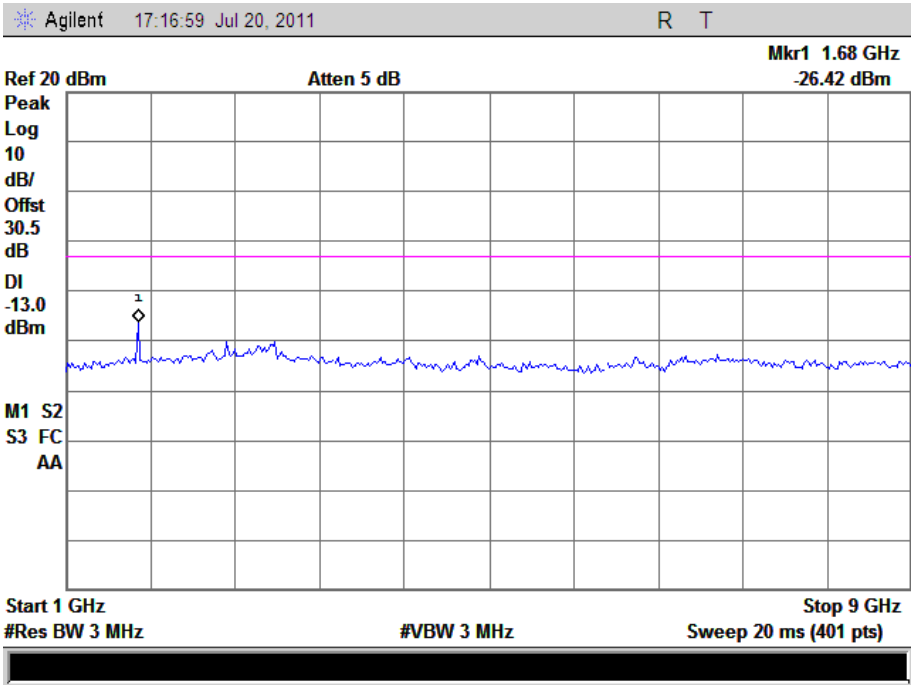
(Plot C1: EDGE 850MHz Channel = 128, 30MHz to 1GHz)



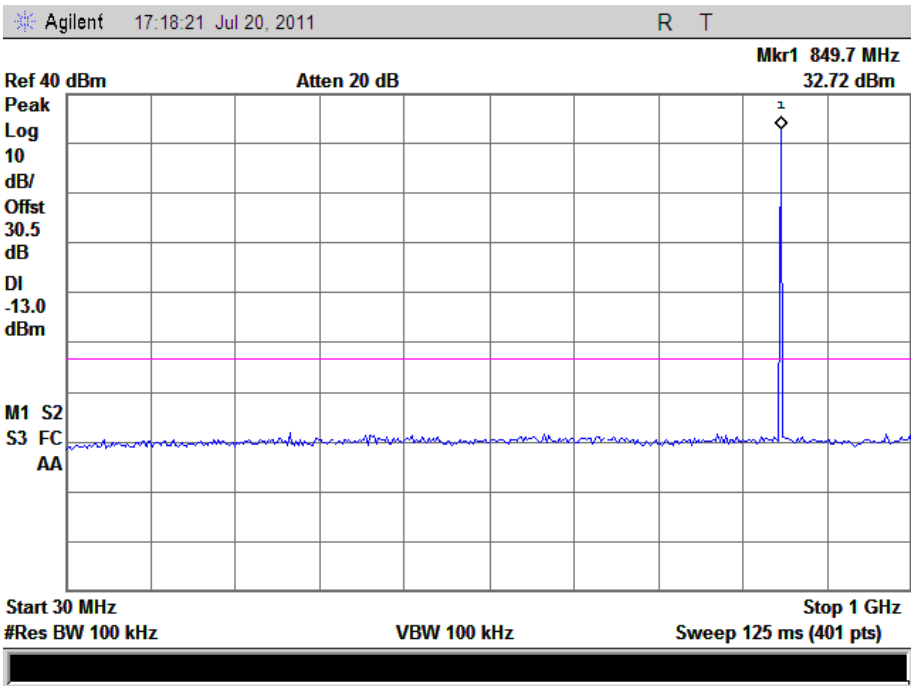
(Plot C1.1: EDGE 850MHz Channel = 128, 1GHz to 9GHz)



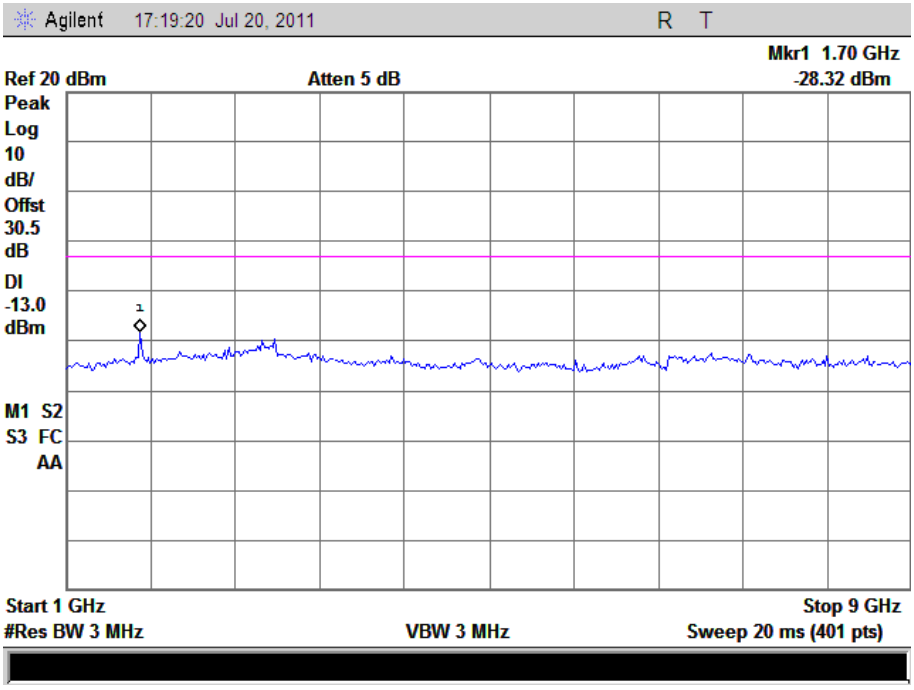
(Plot C2: EDGE 850MHz Channel = 190, 30MHz to 1GHz)



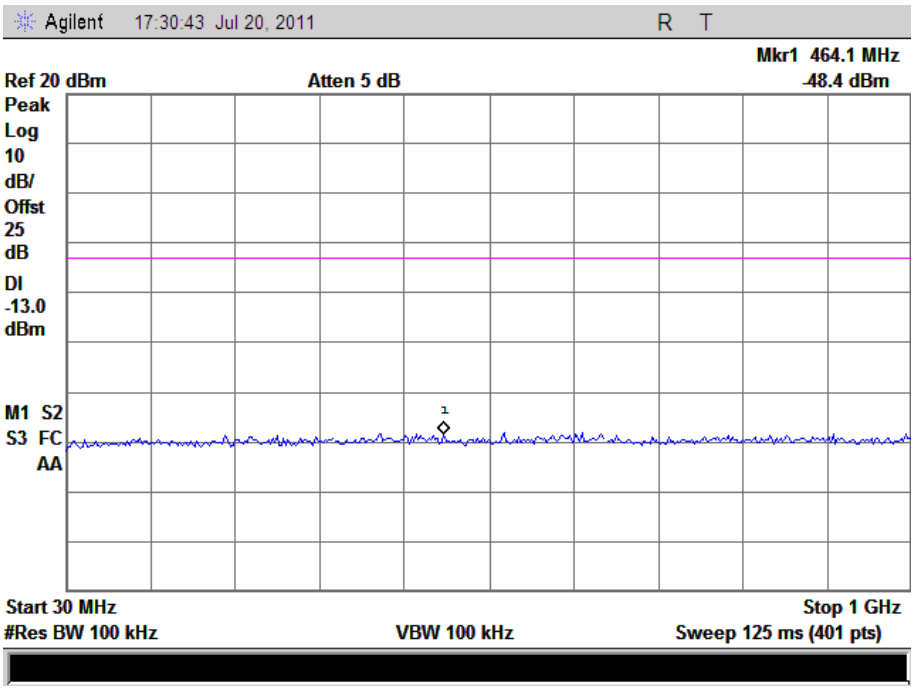
(Plot C2.1: EDGE 850MHz Channel = 190, 1GHz to 9GHz)



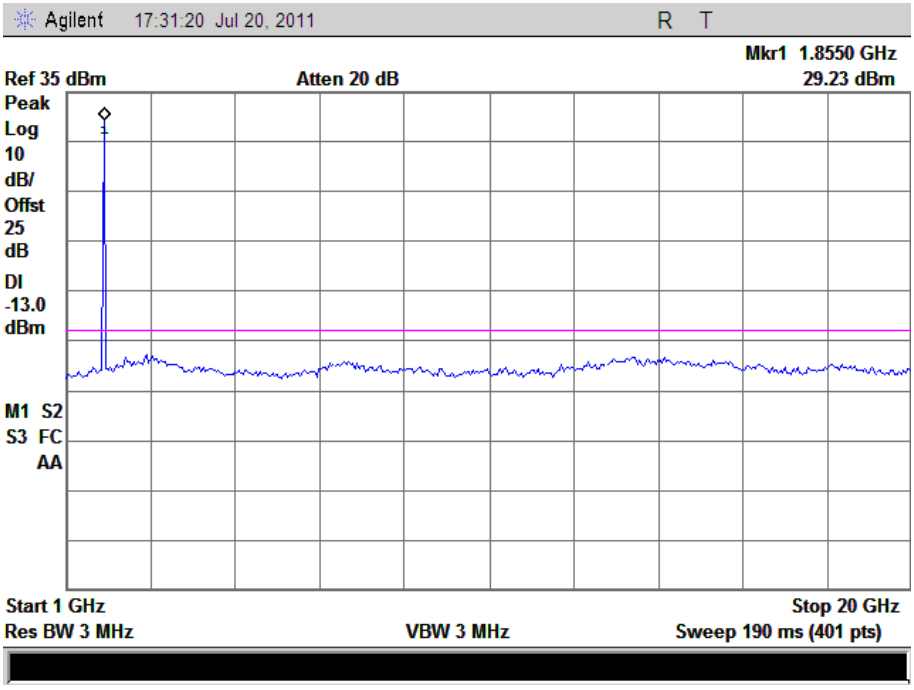
(Plot C3: EDGE 850MHz Channel = 251, 30MHz to 1GHz)



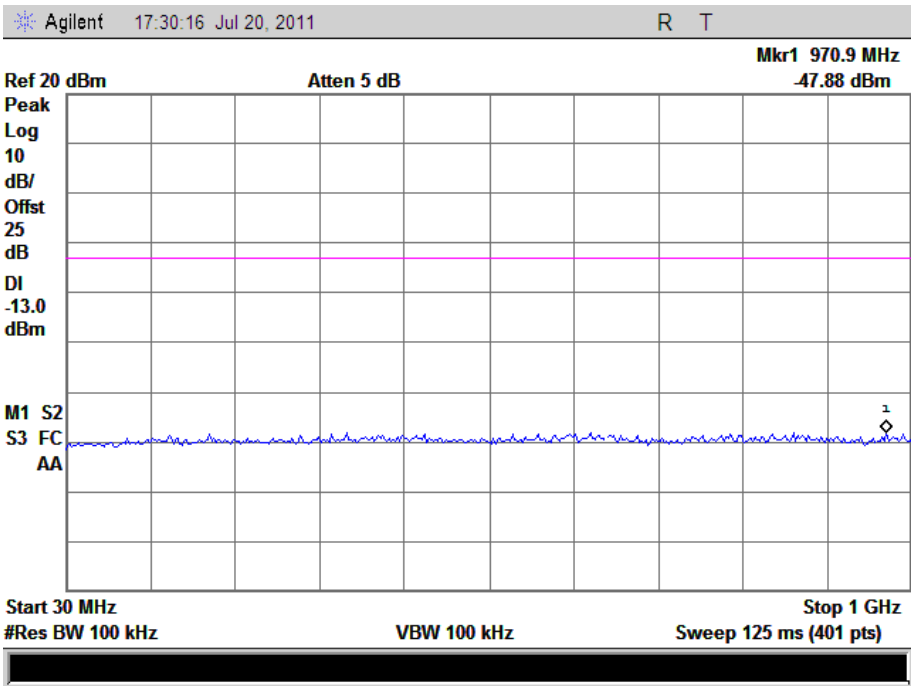
(Plot C3.1: EDGE 850MHz Channel = 251, 1GHz to 9GHz)



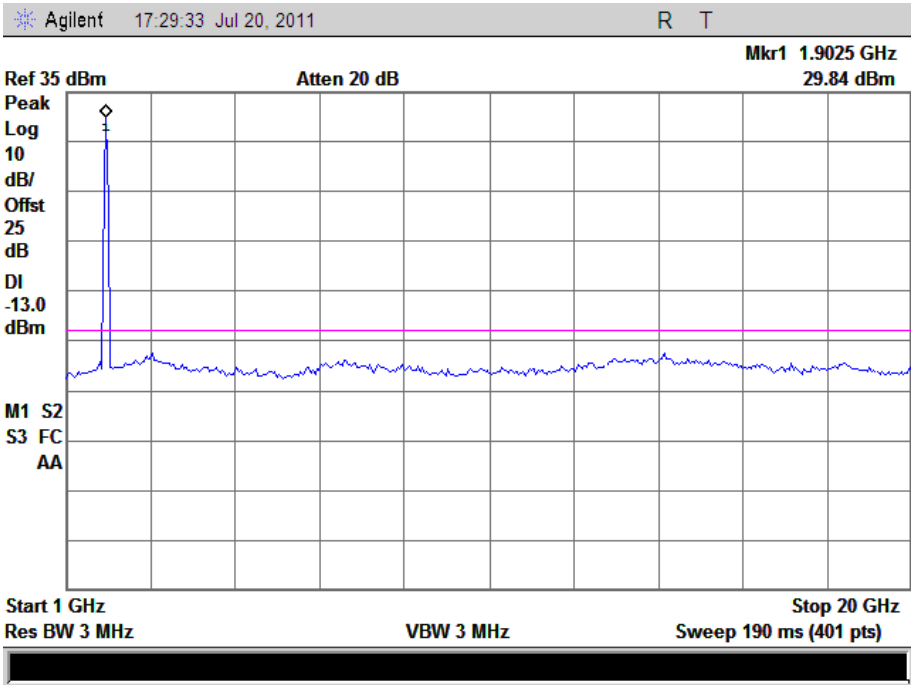
(Plot D1: EDGE 1900MHz Channel = 512, 30MHz to 1GHz)



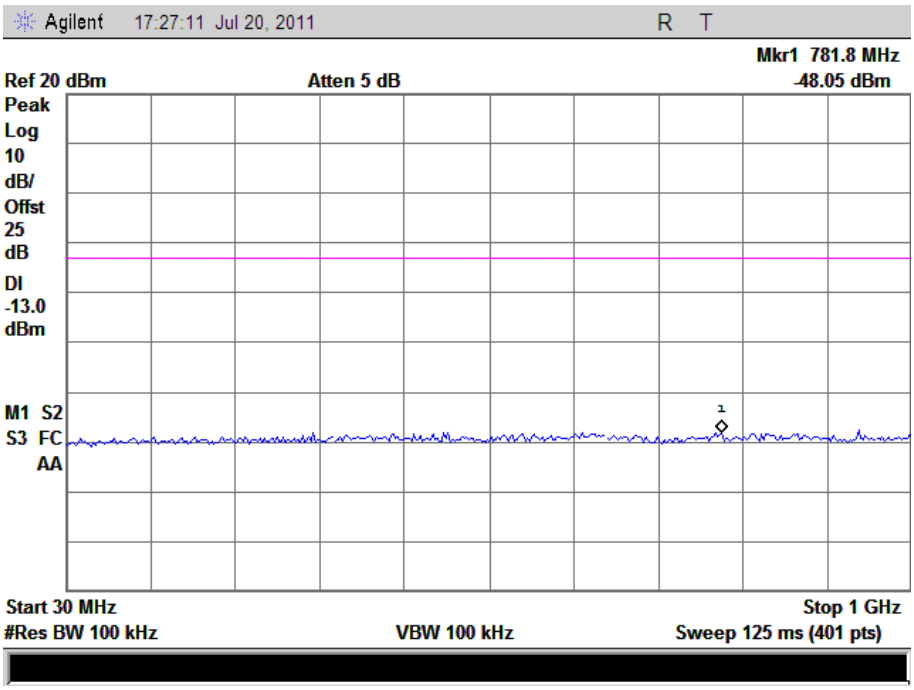
(Plot D1.1: EDGE 850MHz Channel = 512, 1GHz to 20GHz)



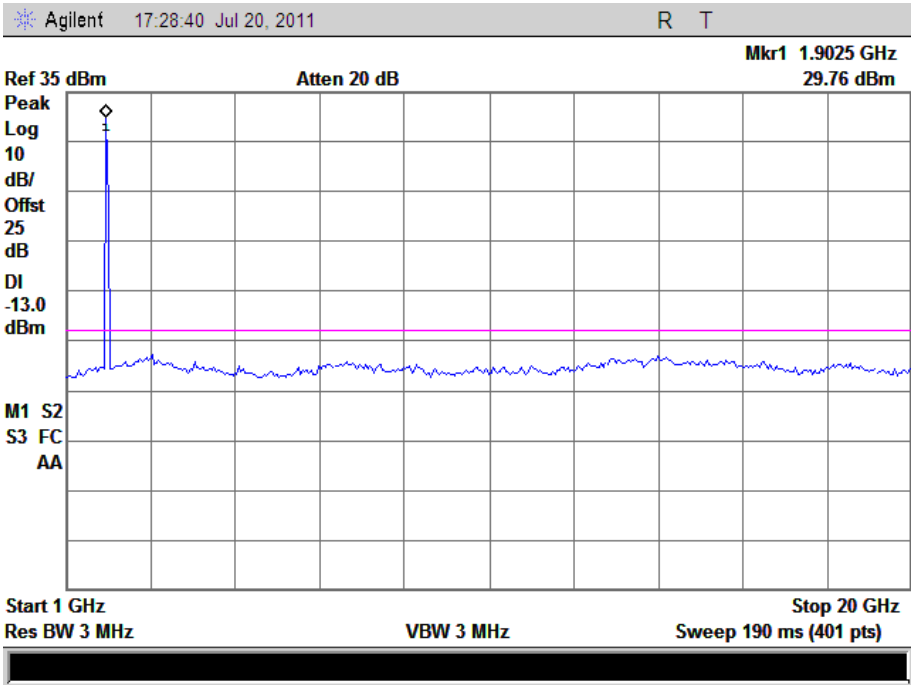
(Plot D2: EDGE 1900MHz Channel = 661, 30MHz to 1GHz)



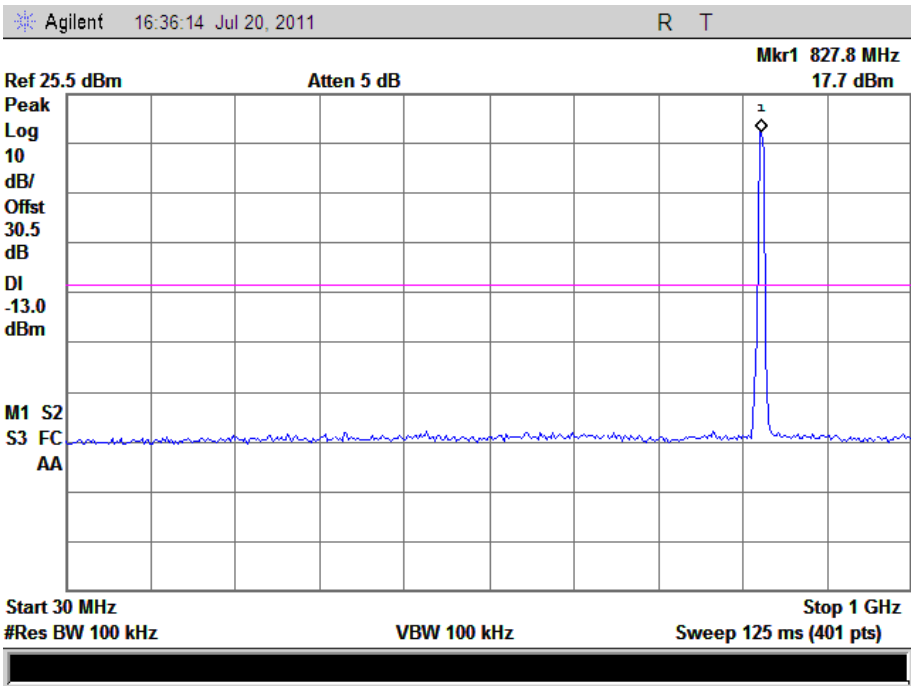
(Plot D2.1: EDGE 1900MHz Channel = 661,1GHz to 20GHz)



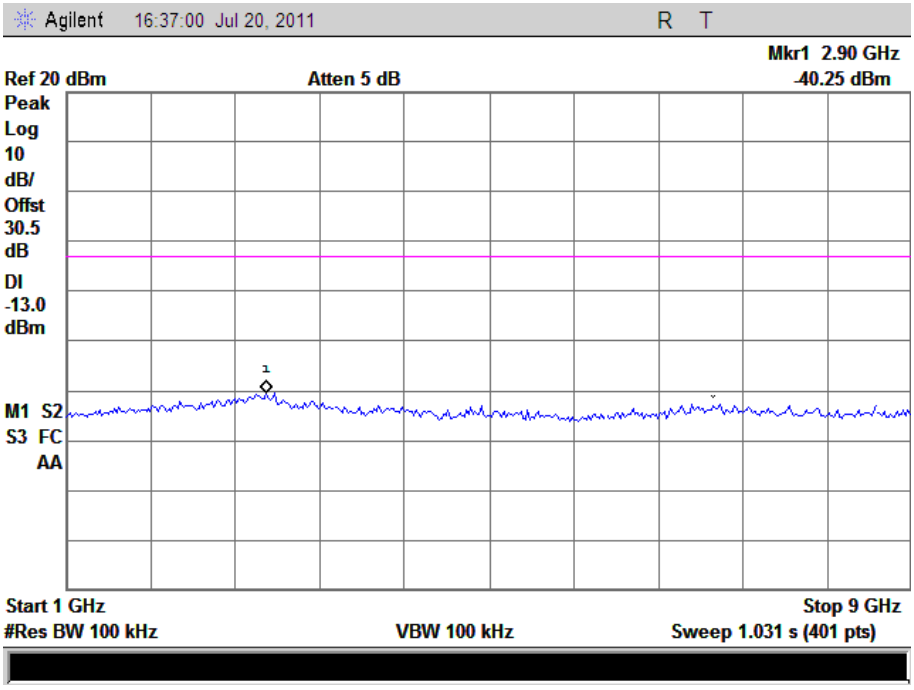
(Plot D3: EDGE 1900MHz Channel = 810, 30MHz to 1GHz)



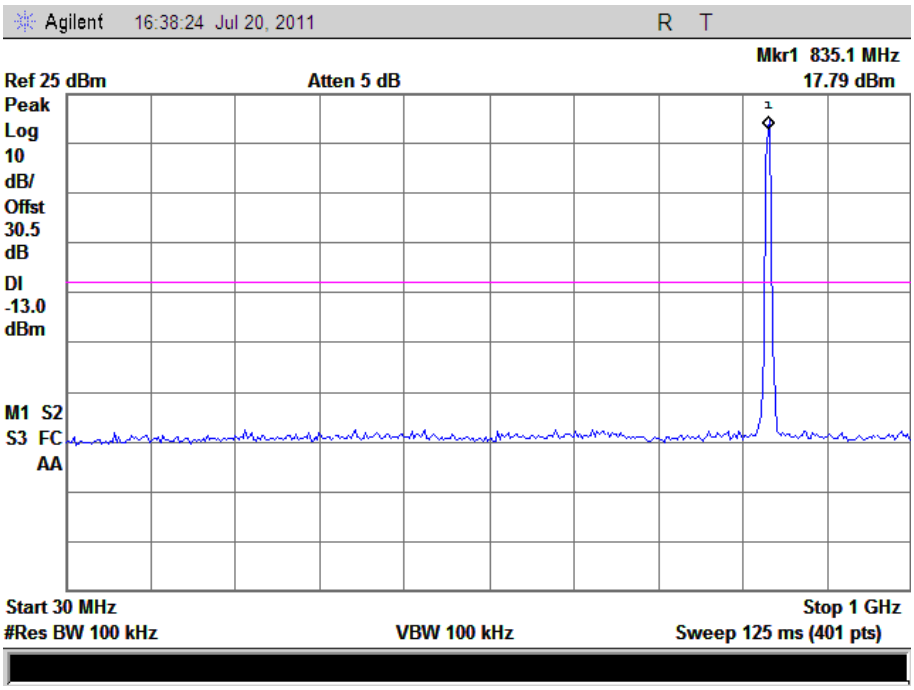
(Plot D3.1: EDGE 1900MHz Channel = 810, 1GHz to 20GHz)



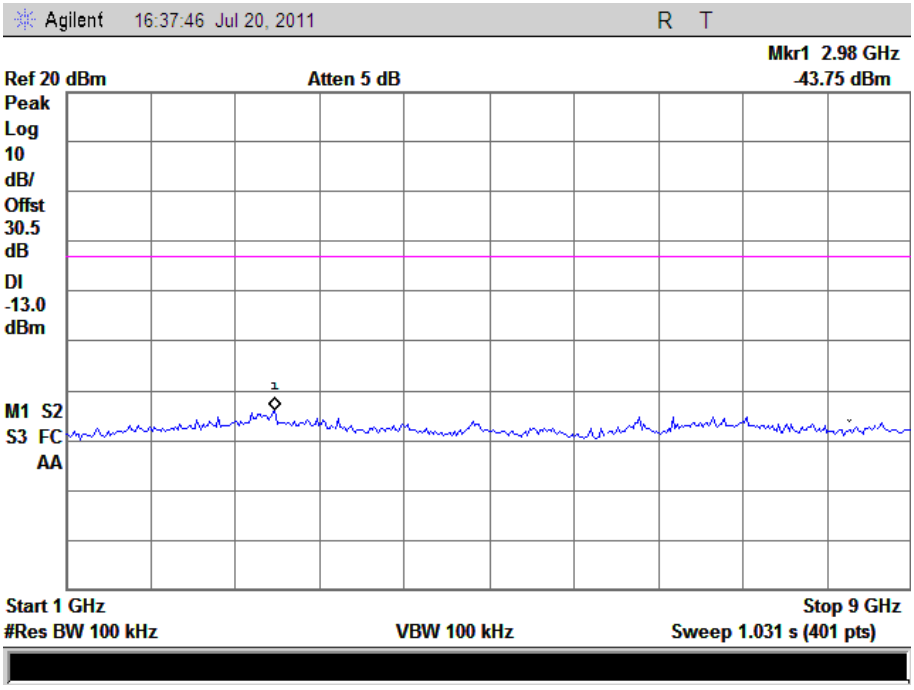
(Plot E1: WCDMA850MHz Channel = 4357, 30MHz to 1GHz)



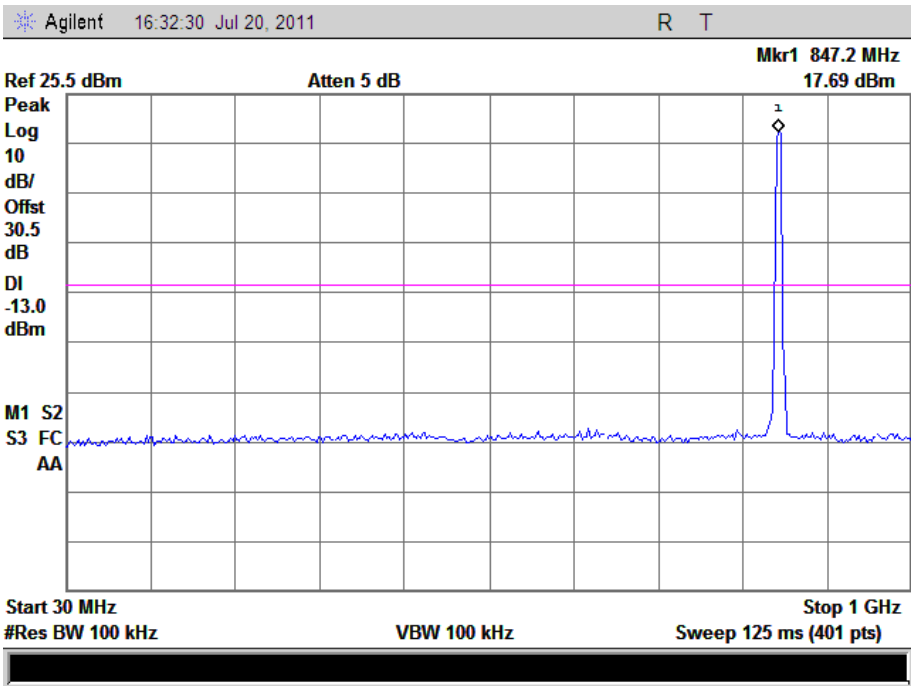
(Plot E1.1: WCDMA850MHz Channel = 4357, 1GHz to 9GHz)



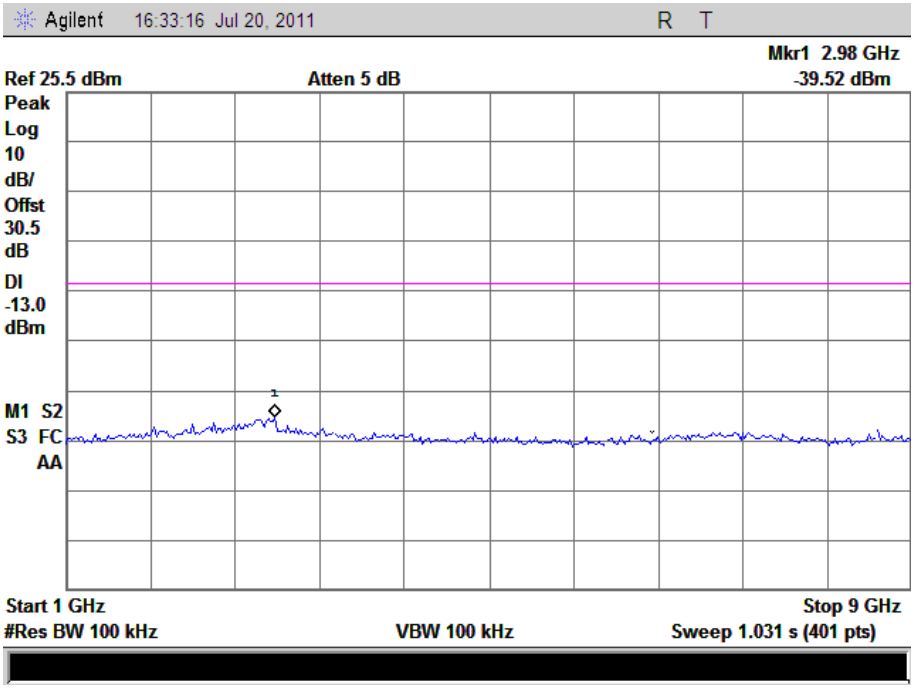
(Plot E2: WCDMA850MHz Channel = 4400, 30MHz to 1GHz)



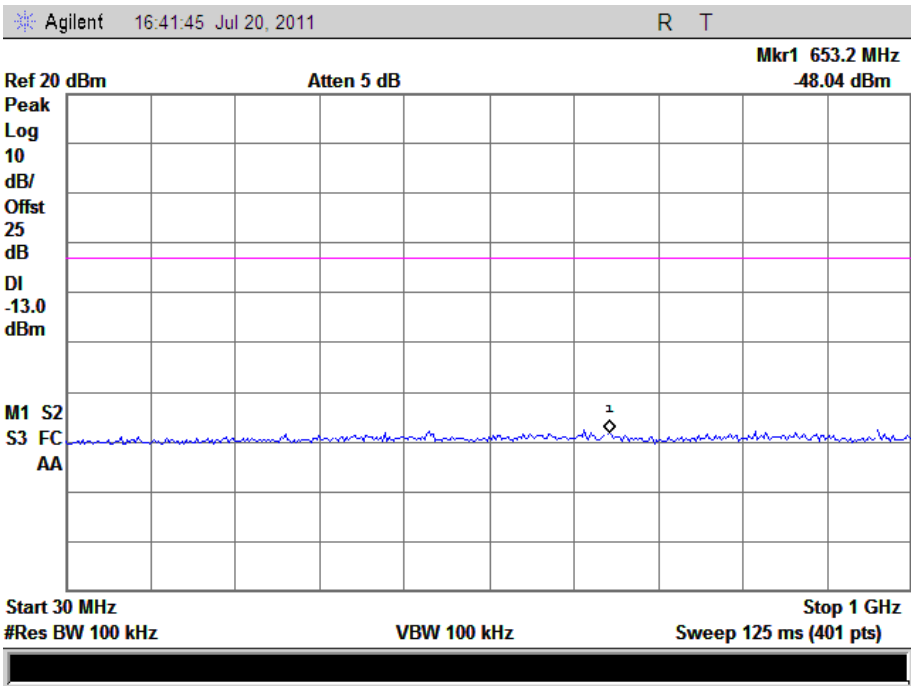
(Plot E2.1: WCDMA850MHz Channel = 4400, 1GHz to 9GHz)



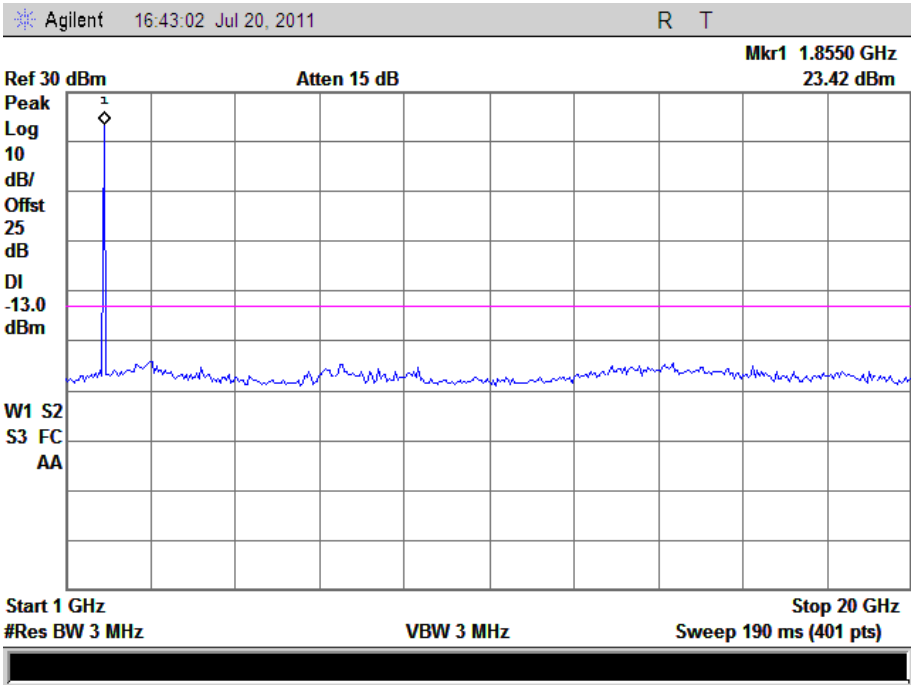
(Plot E3: WCDMA850MHz Channel = 4458, 30MHz to 1GHz)



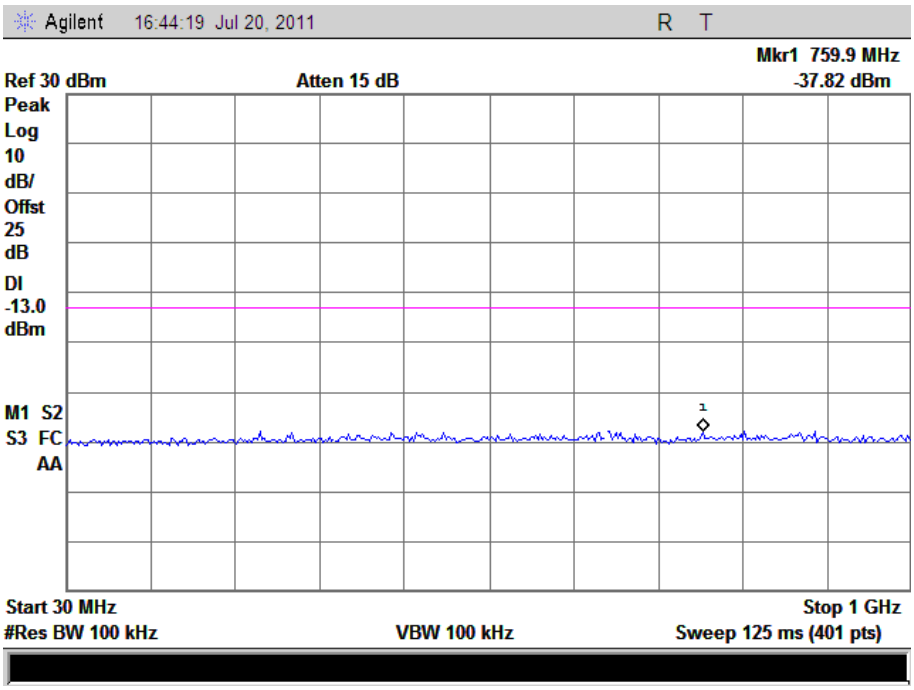
(Plot E3.1: WCDMA850MHz Channel = 4458, 1GHz to 20GHz)



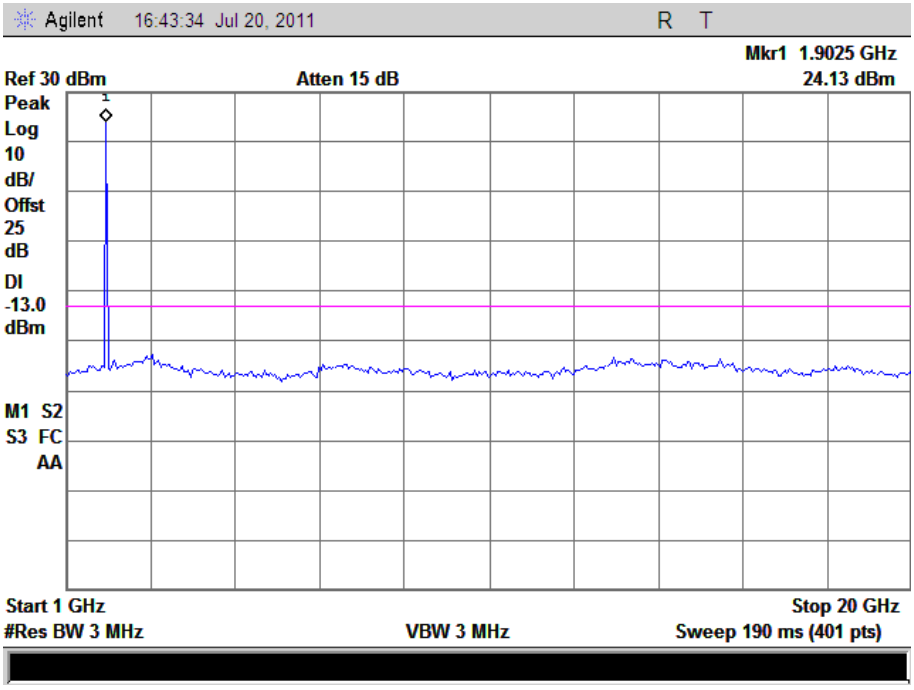
(Plot F1: WCDMA1900MHz Channel = 9662, 30MHz to 1GHz)



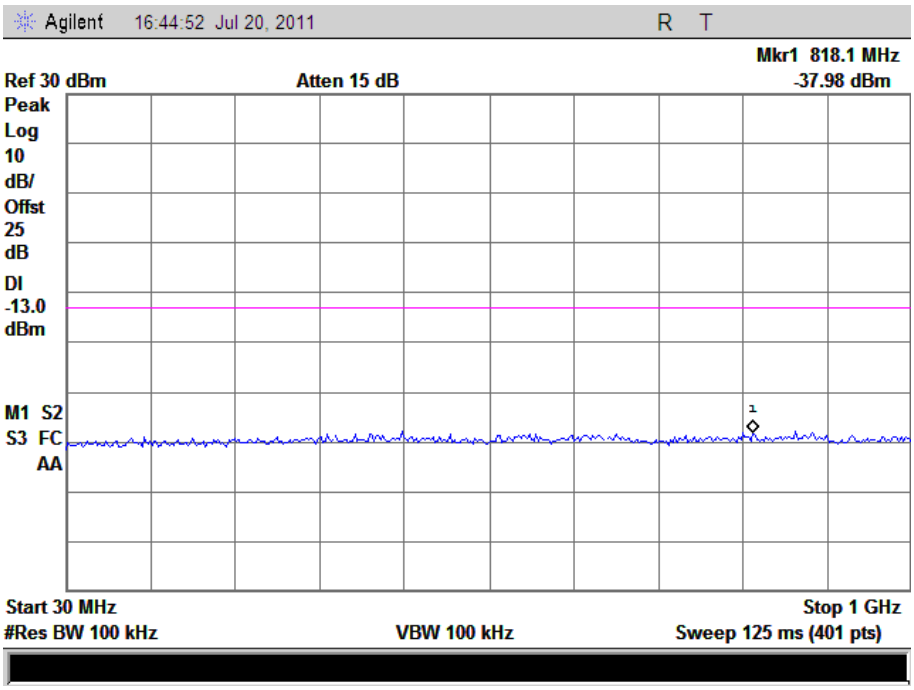
(Plot F1.1: WCDMA1900MHz Channel = 9662, 1GHz to 20GHz)



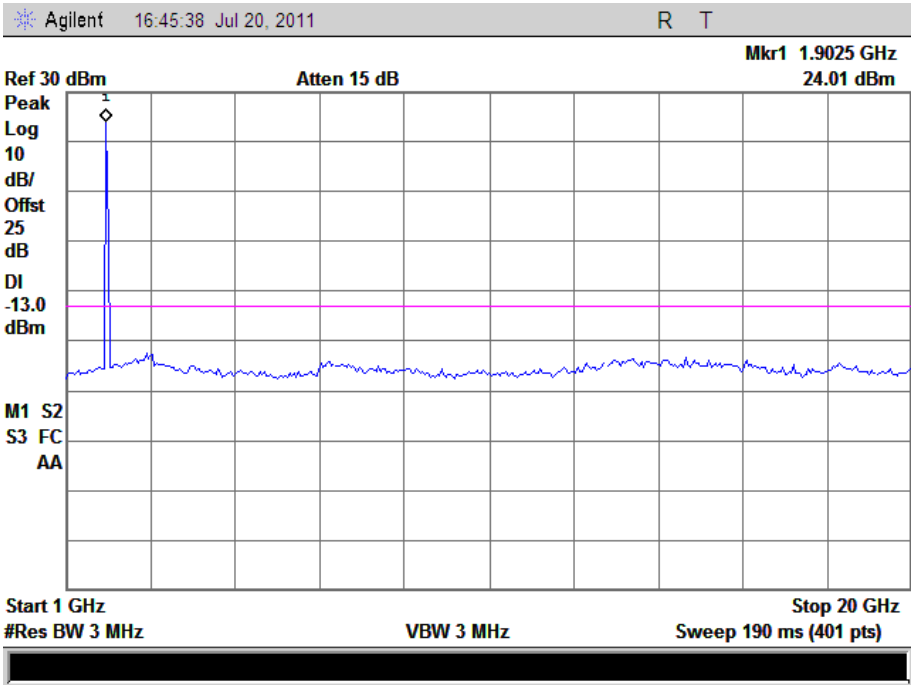
(Plot F2: WCDMA1900MHz Channel = 9800, 30MHz to 1GHz)



(Plot F2.1: WCDMA1900MHz Channel = 9800, 1GHz to 20GHz)



(Plot F3: WCDMA1900MHz Channel = 9938, 30MHz to 1GHz)



(Plot F3.1: WCDMA1900MHz Channel = 9938 1GHz to 20GHz)

2.5 Band Edge

2.5.1 Requirement

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

2.5.2 Test Description

See section 2.1.2 of this report.

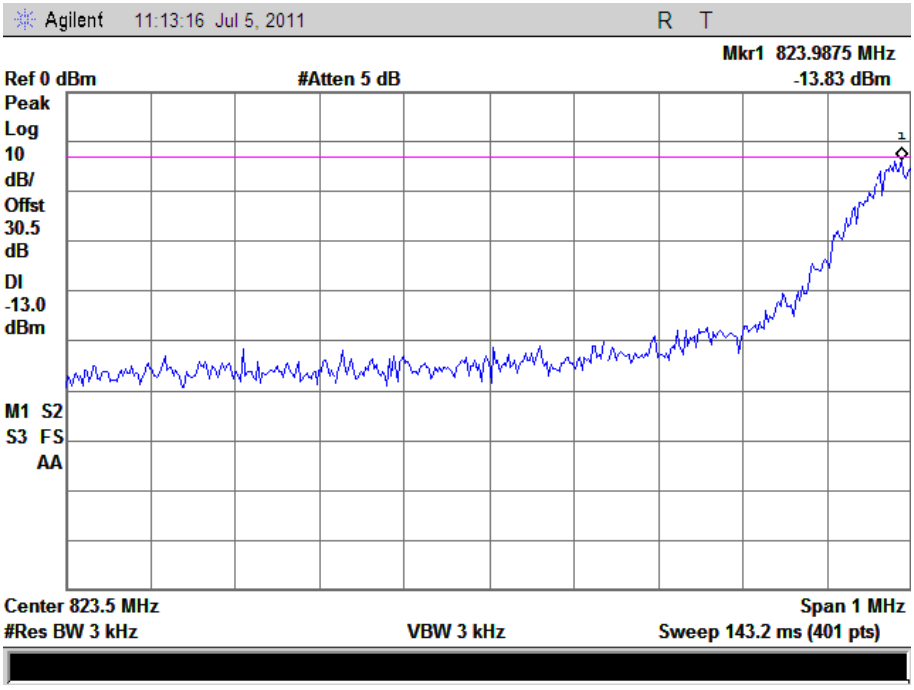
2.5.3 Test Result

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

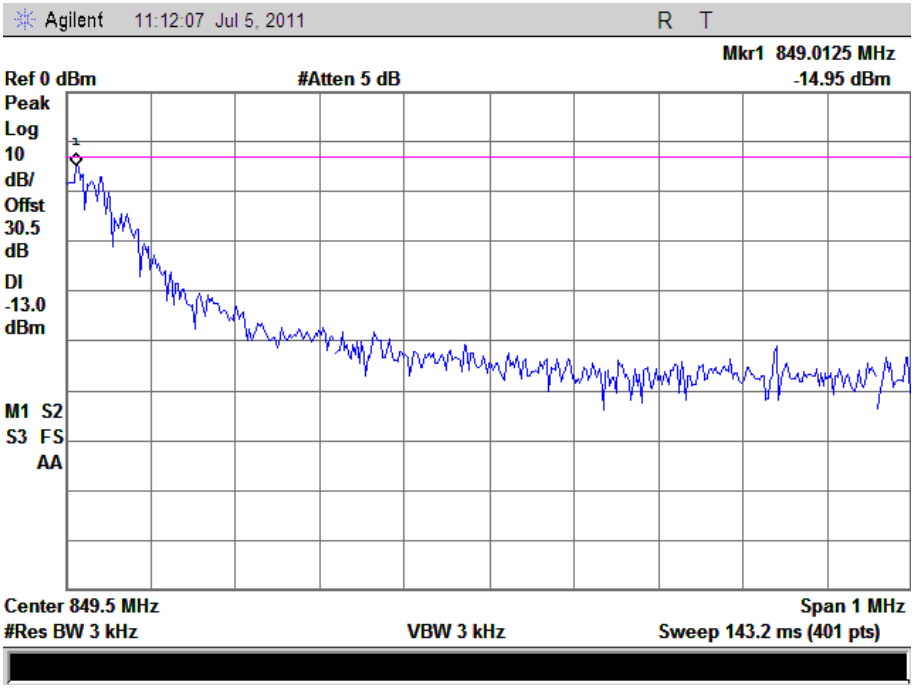
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-13.83	Plat A	-13	PASS
	251	848.8	-14.95	Plot B		PASS
GSM 1900MHz	512	1850.2	-17.4	Plat C	-13	PASS
	810	1909.8	-15.08	Plot D		PASS
EDGE 850MHz	128	824.2	-13.34	Plat E	-13	PASS
	251	848.8	-15.47	Plot F		PASS
EDGE 1900MHz	512	1850.2	-19.54	Plat G	-13	PASS
	810	1909.8	-16.47	Plot H		PASS
WCDMA 850MHz	4357	826.4	-22.7	Plat I	-13	PASS
	4458	846.6	-27.61	Plot J		PASS
WCDMA 1900MHz	9662	1852.4	-21.96	Plat K	-13	PASS
	9938	1907.6	-24.59	Plot L		PASS
HSDPA 850MHz	4357	826.4	-25.03	Plat M	-13	PASS
	4458	846.6	-24.79	Plot N		PASS
HSDPA 1900MHz	9662	1852.4	-24.4	Plat O	-13	PASS
	9938	1907.6	-24.17	Plot P		PASS
HSUPA 850MHz	4357	826.4	-25.31	Plat Q	-13	PASS
	4458	846.6	-24.92	Plot R		PASS
HSUPA 1900MHz	9662	1852.4	-24.65	Plat S	-13	PASS
	9938	1907.6	-24.1	Plot T		PASS

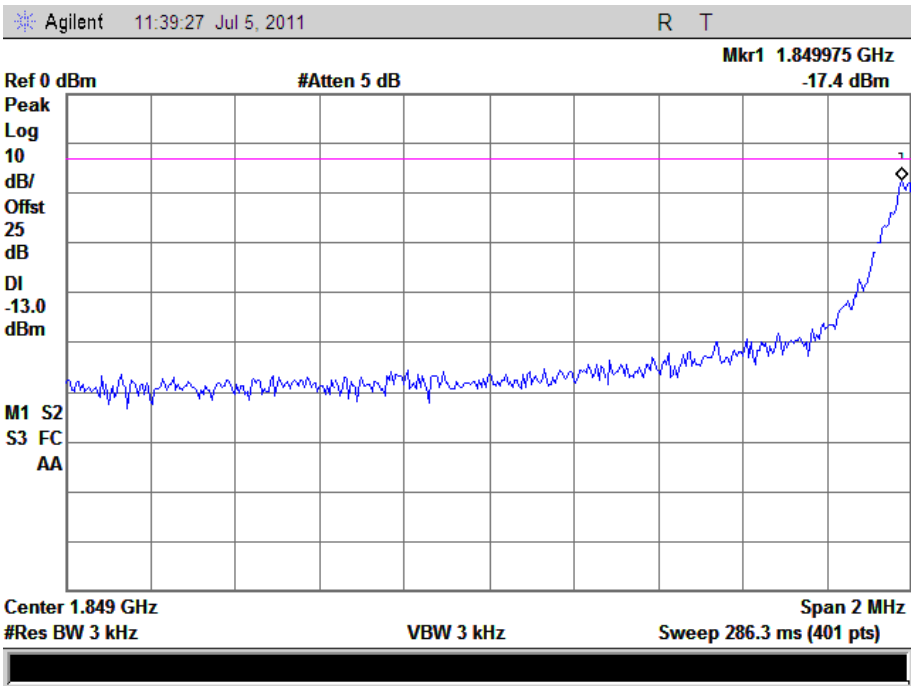
2. Test Plots:



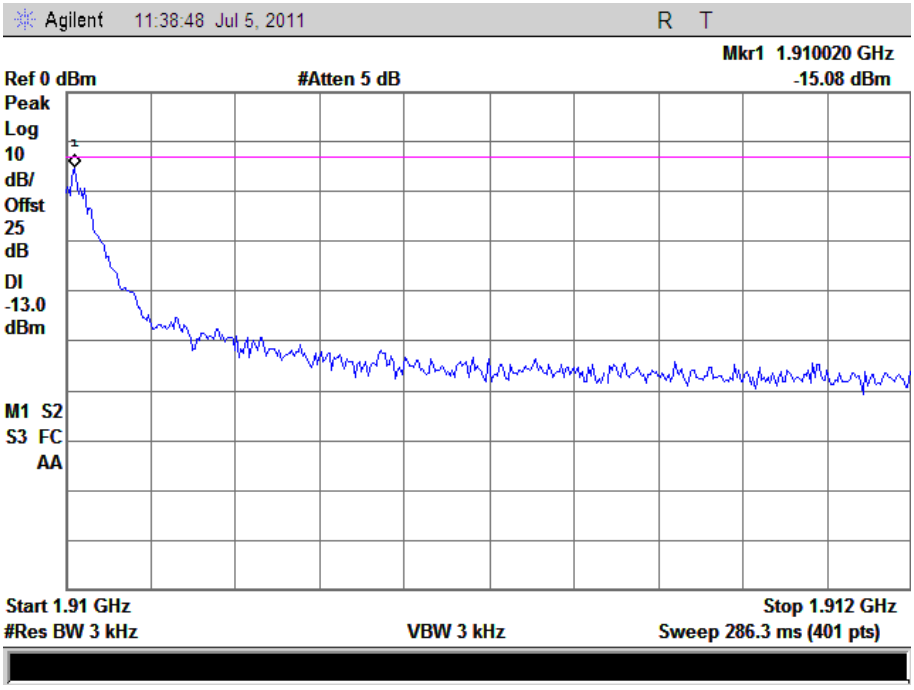
(Plot A: GSM 850 Channel = 128)



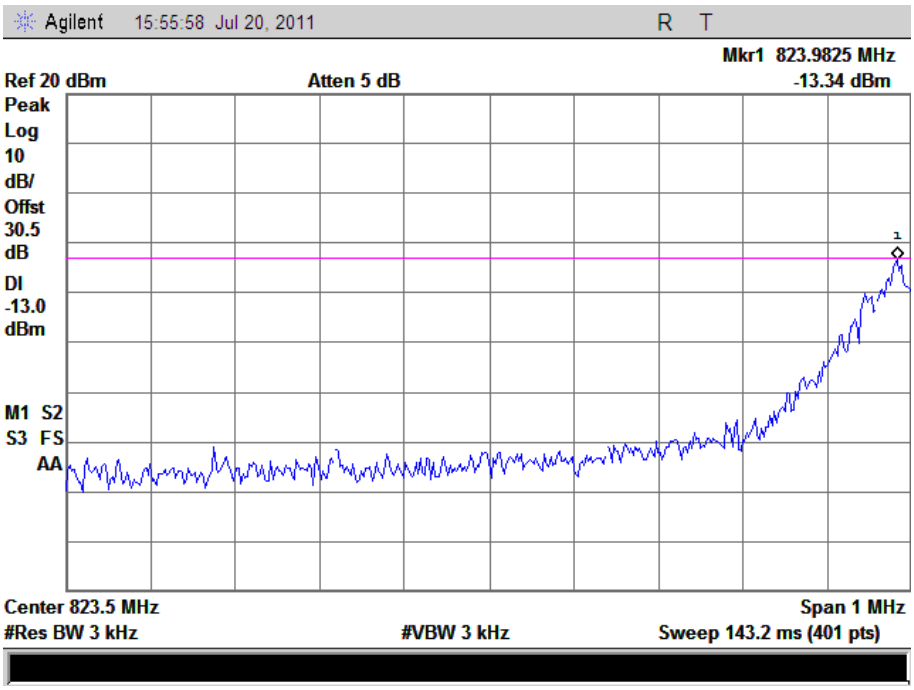
(Plot B: GSM 850 Channel = 251)



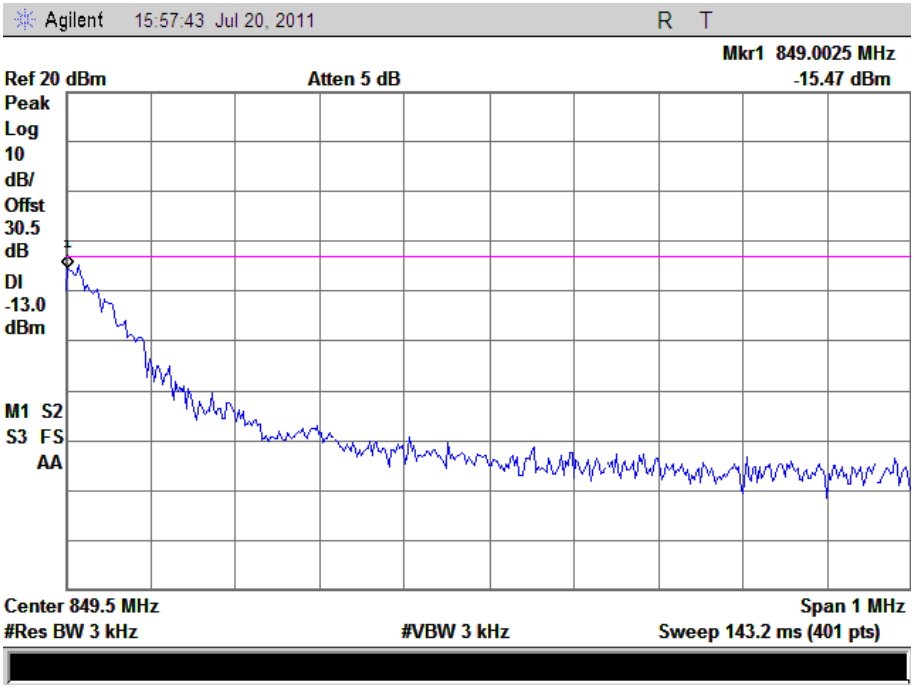
(Plot C: GSM 1900 Channel = 512)



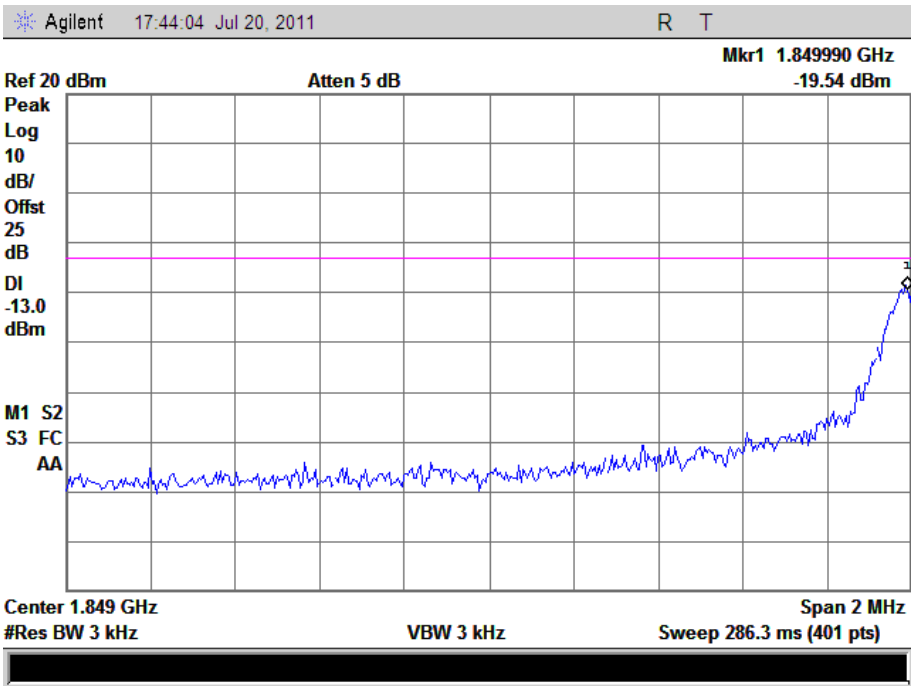
(Plot D: GSM 1900 Channel = 810)



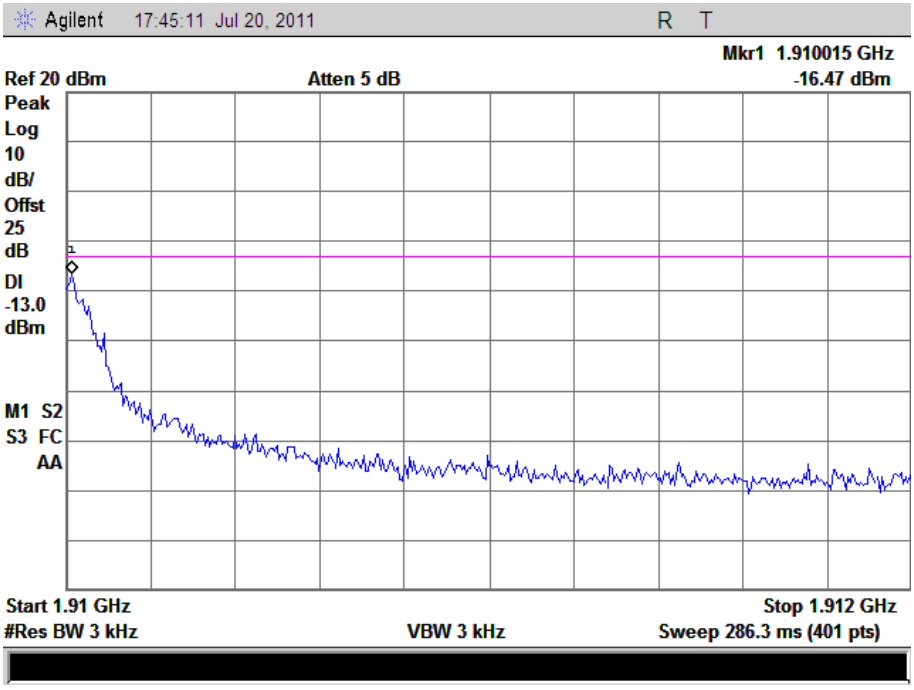
(Plot E: EDGE 850 Channel = 128)



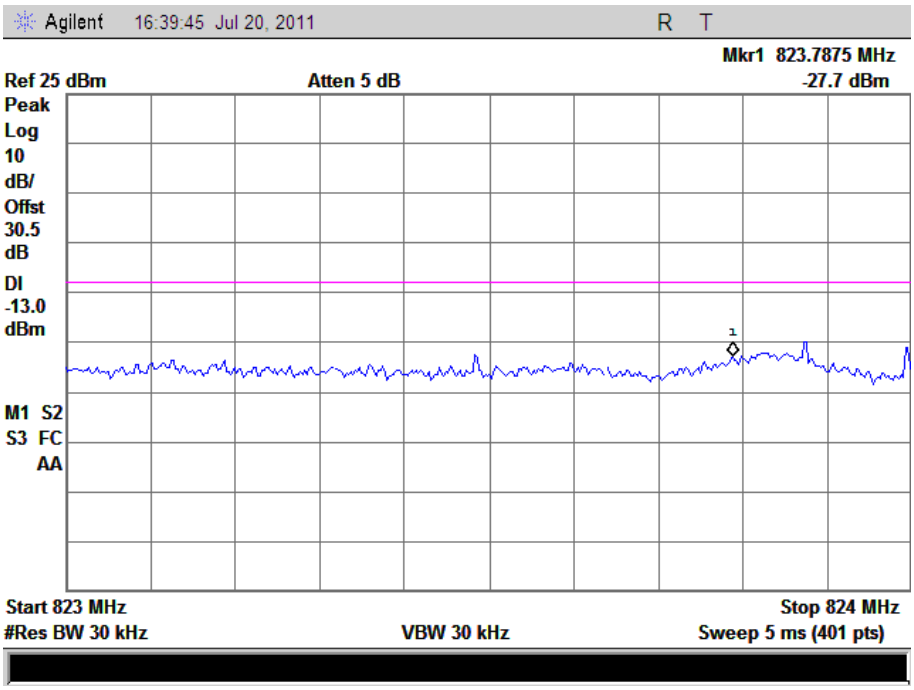
(Plot F: EDGE 850 Channel = 251)



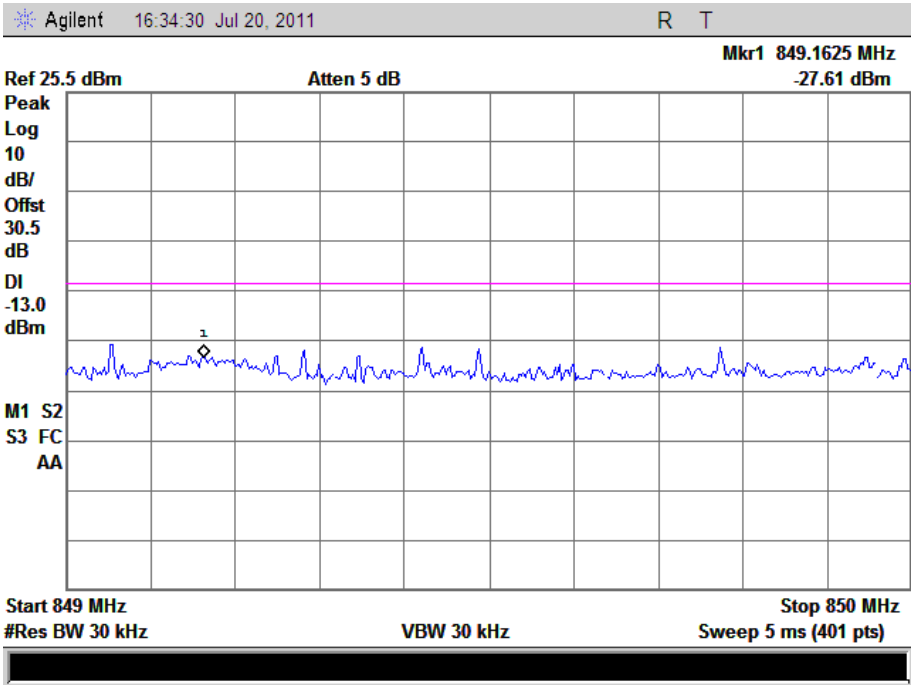
(Plot G: EDGE 1900 Channel = 512)



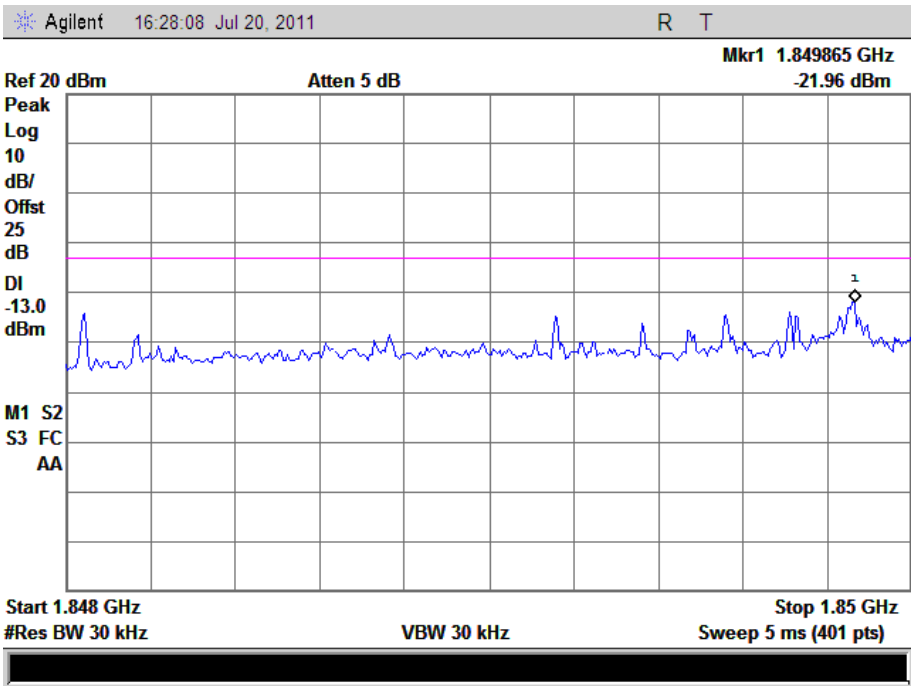
(Plot H: EDGE 1900 Channel = 810)



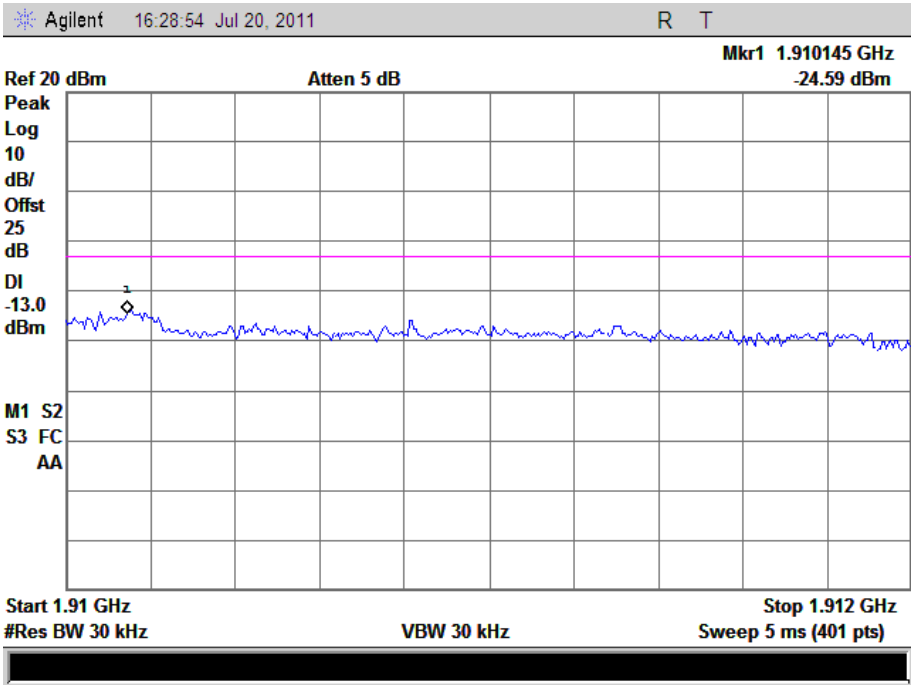
(Plot I: WCDMA 850 Channel = 4357)



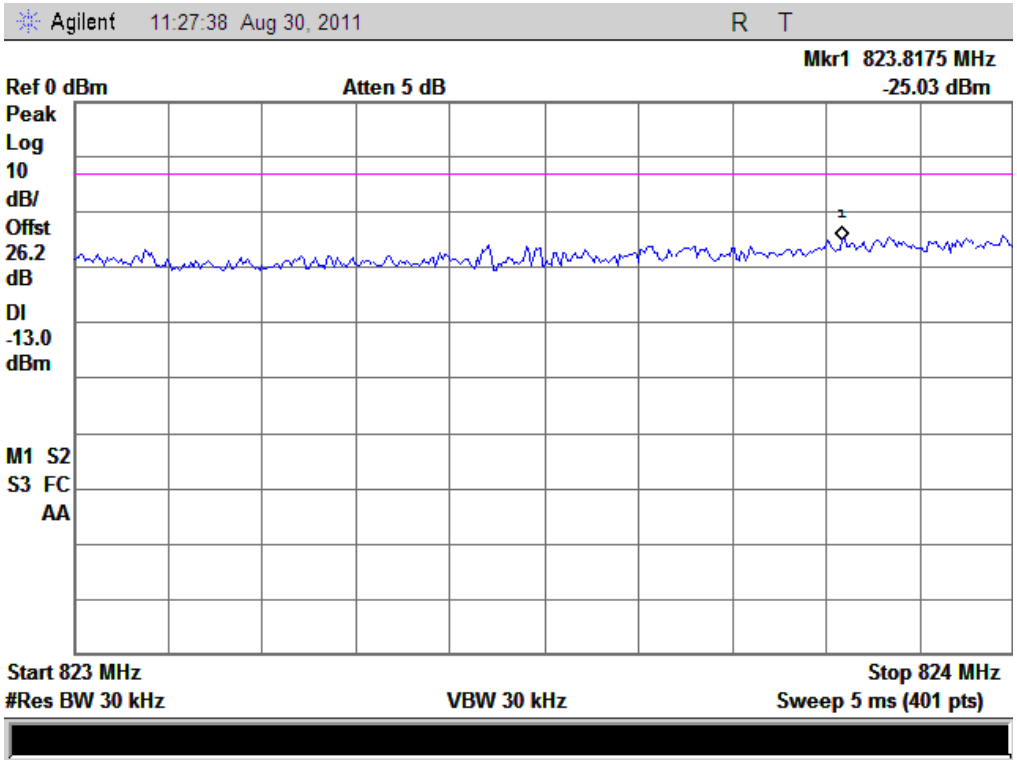
(Plot J: WCDMA 850 Channel = 4458)



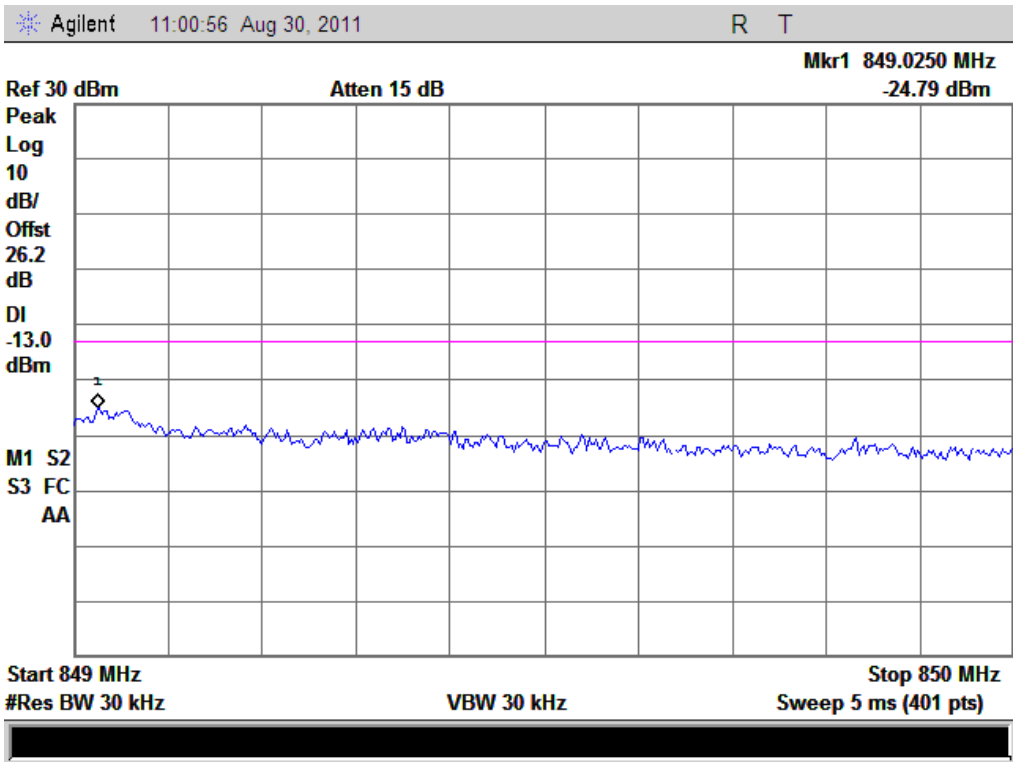
(Plot K: WCDMA 1900 Channel = 9662)



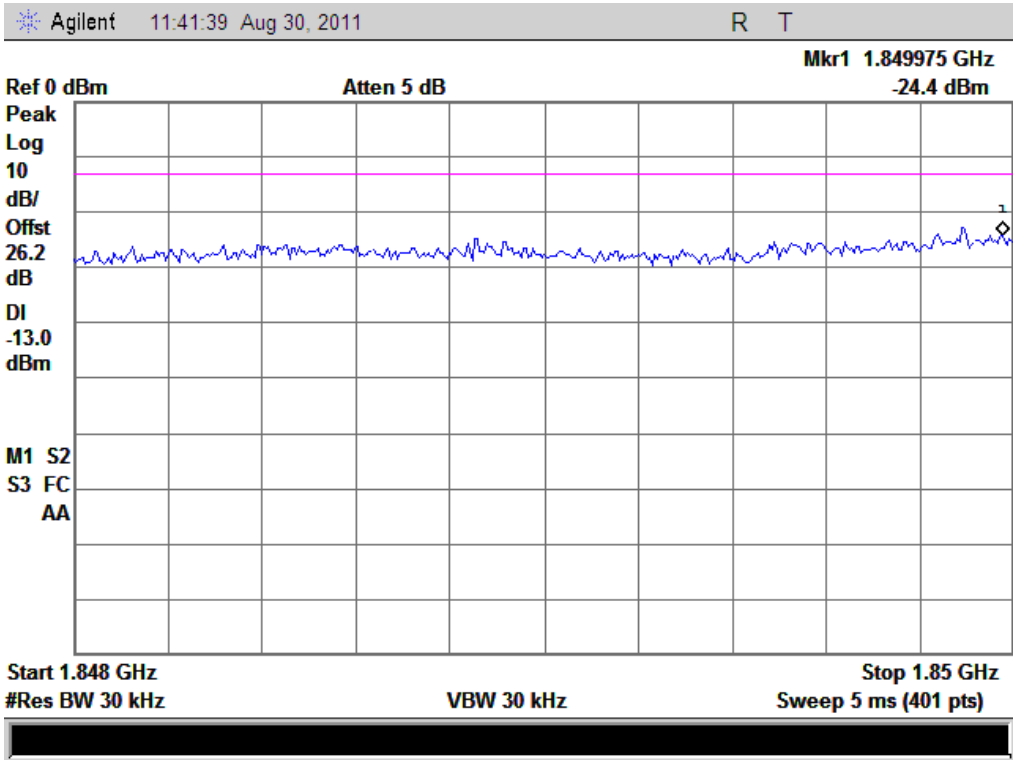
(Plot L: WCDMA 1900 Channel = 9938)



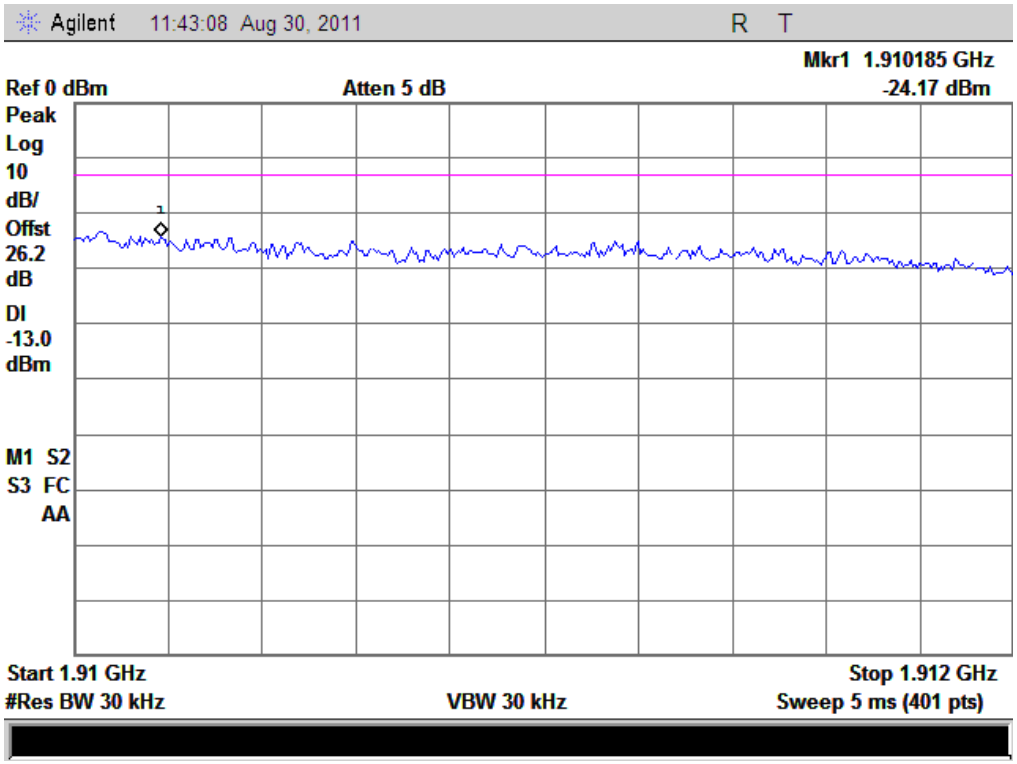
(Plot M : HSDPA 850 Channel = 4357)



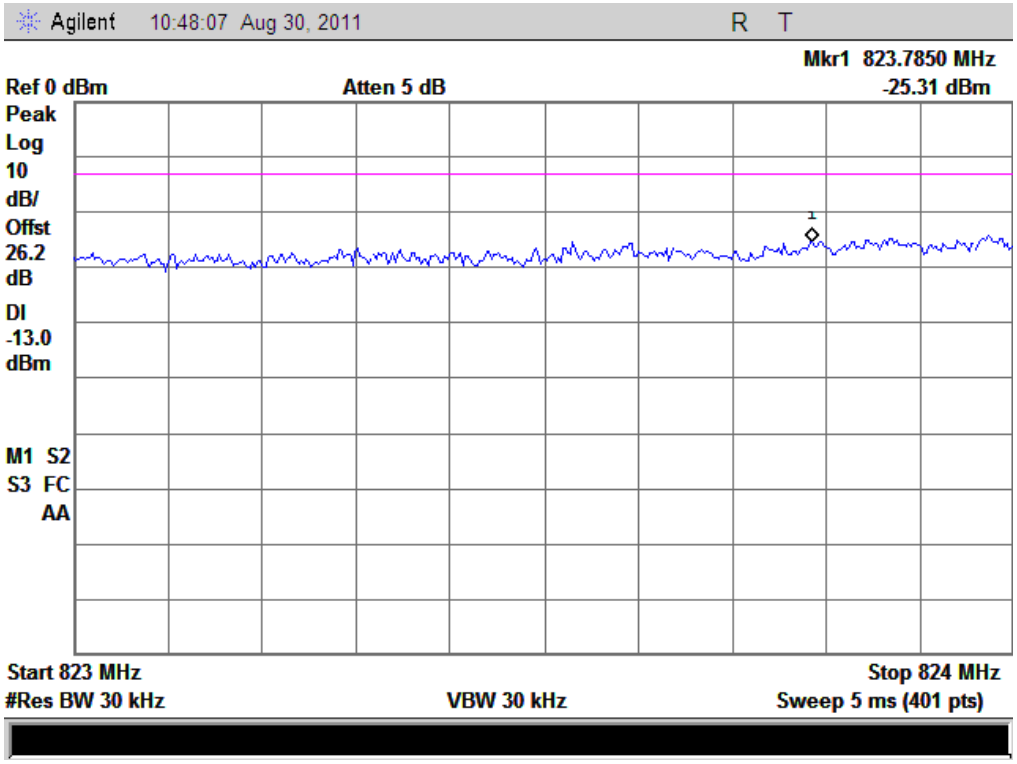
(Plot N : HSDPA850 Channel = 4458)



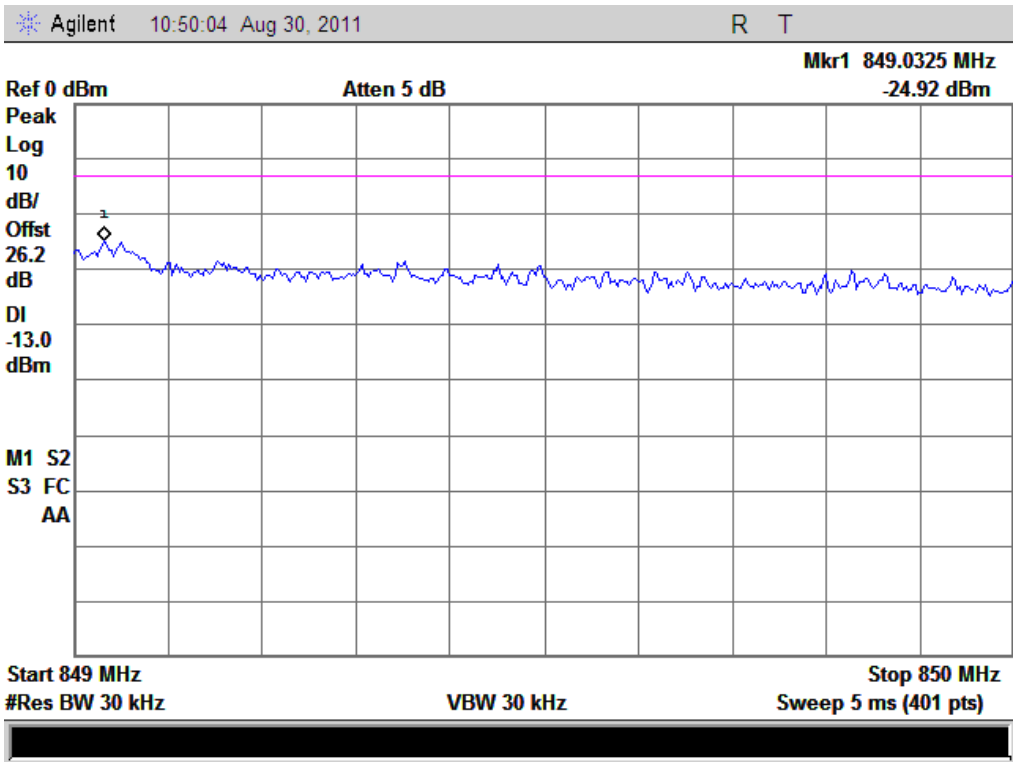
(Plot O : HSDPA 1900 Channel = 9662)



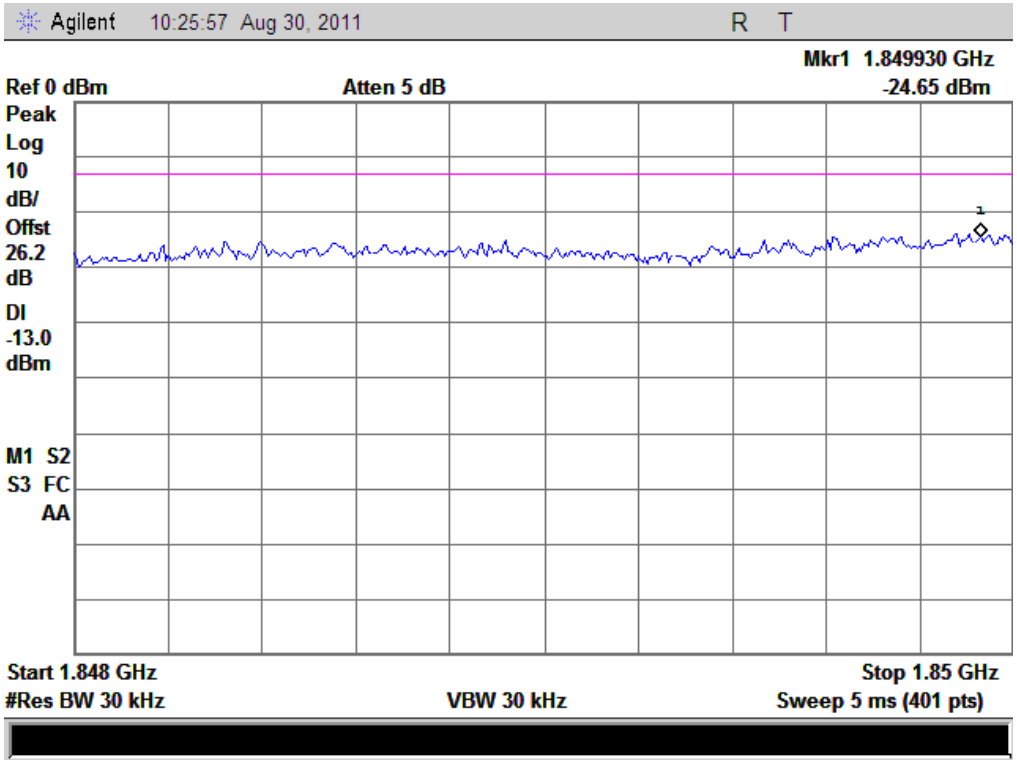
(Plot P: HSDPA 1900 Channel = 9938)



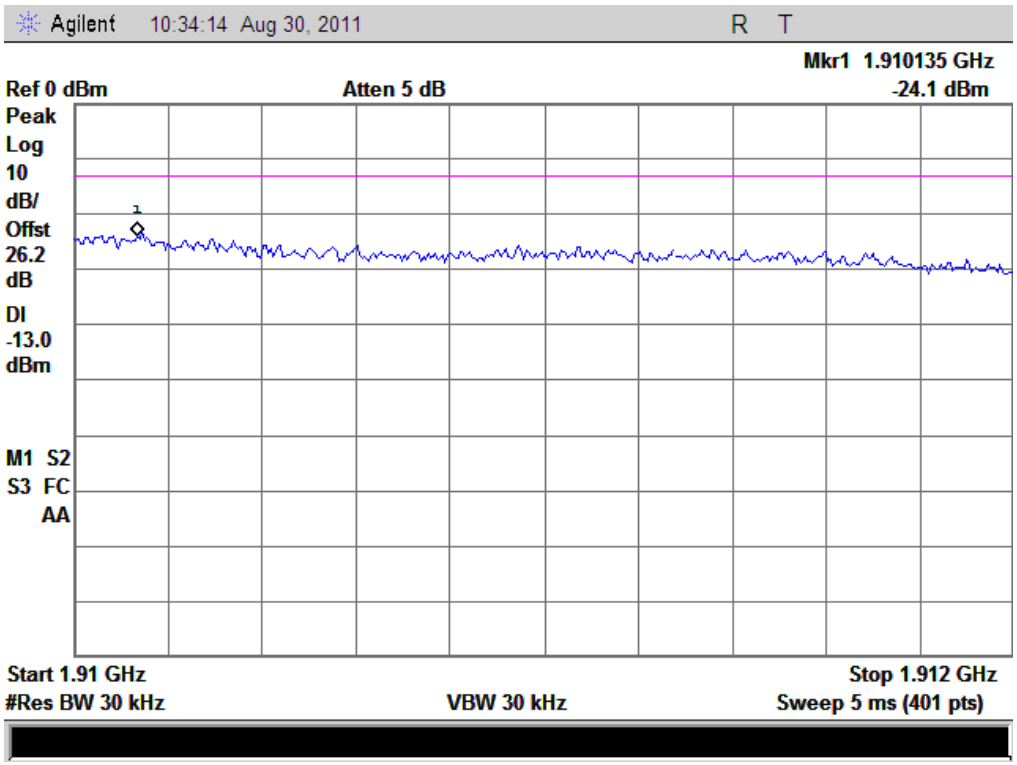
(Plot Q: HSUPA 850 Channel = 4357)



(Plot R: HSUPA850 Channel = 4458)



(Plot S: HSUPA 1900 Channel = 9662)



(Plot T: HSUPA 1900 Channel = 9938)

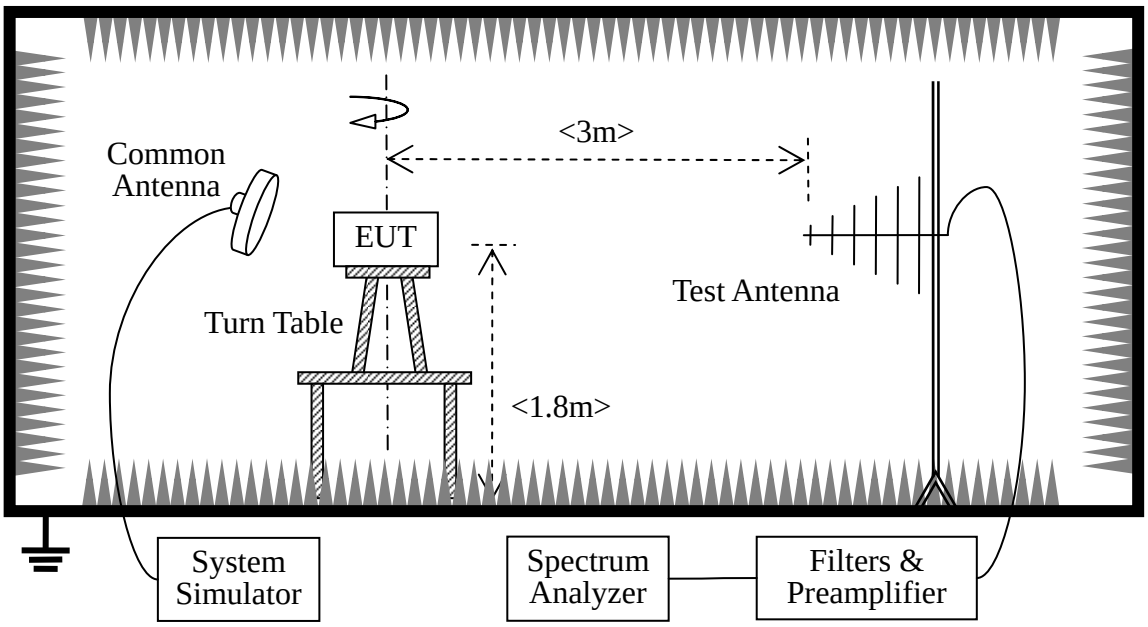
2.6 Transmitter Radiated Power (EIRP/ERP)

2.6.1 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 2Watts e.i.r.p. peak power.

2.6.2 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.

-Maximum RF output power: GSM850 33.21dBm, GSM 1900 29.13dBm, Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

- Minimum RF power: GSM850 4.0dBm, GSM 1900 0.2dBm

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

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2010.09
Spectrum Analyzer	Agilent	E7405A	US44210471	2010.09
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2010.09
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2010.09
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2010.09

2.6.3 Test Result

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

The substitution corrections are obtained as described below:

$A_{SUBST} = P_{SUBST\_TX} - P_{SUBST\_RX} - L_{SUBST\_CABLES} + G_{SUBST\_TX\_ANT}$

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

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

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

$G_{SUBST\_TX\_ANT}$ is substitution antenna gain.

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

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

1. Test Verdict:

Band	Channel	Frequency (MHz)	PCL	Measured ERP/EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 850MHz	128	824.20	5	31.67	1.47	Plot A	38.45	7	PASS
	190	836.60	5	31.36	1.37				PASS
	251	848.80	5	31.59	1.44				PASS
GSM 1900MHz	512	1850.2	0	31.41	1.38	Plot B	33	2	PASS
	661	1880.0	0	32.27	1.69				PASS
	810	1909.8	0	31.56	1.43				PASS
GPRS 850MHz	128	824.20	5	30.19	1.04	Plot C 1down link 4up link	38.45	7	PASS
	190	836.60	5	29.74	0.94				PASS
	251	848.80	5	29.08	0.81				PASS
GPRS 1900MHz	512	1850.2	0	31.73	1.49	Plot D 1down link 4up link	33	2	PASS
	661	1880.0	0	32.01	1.59				PASS
	810	1909.8	0	30.62	1.15				PASS
GPRS 850MHz	128	824.20	5	28.56	0.72	Plot E 2down link 3up link	38.45	7	PASS
	190	836.60	5	27.87	0.61				PASS
	251	848.80	5	27.99	0.63				PASS
GPRS 1900MHz	512	1850.2	0	32.56	1.80	Plot F 2down link 3up link	33	2	PASS
	661	1880.0	0	32.24	1.67				PASS
	810	1909.8	0	31.23	1.33				PASS
GPRS 850MHz	128	824.20	5	28.92	0.78	Plot G 3down link 2up link	38.45	7	PASS
	190	836.60	5	28.29	0.67				PASS
	251	848.80	5	27.76	0.60				PASS
GPRS 1900MHz	512	1850.2	0	23.52	0.22	Plot H 3down link 2up link	33	2	PASS
	661	1880.0	0	23.66	0.23				PASS
	810	1909.8	0	21.09	0.13				PASS
GPRS 850MHz	128	824.20	5	28.99	0.79	Plot I 4down link 1up link	38.45	7	PASS
	190	836.60	5	28.49	0.71				PASS
	251	848.80	5	28.33	0.68				PASS
GPRS 1900MHz	512	1850.2	0	23.28	0.21	Plot J 4down link 1up link	33	2	PASS
	661	1880.0	0	23.06	0.20				PASS
	810	1909.8	0	19.98	0.10				PASS
EGPRS 850MHz	128	824.20	5	35.92	3.90	Plot K 1down link 4up link	38.45	7	PASS
	190	836.60	5	34.76	2.99				PASS
	251	848.80	5	35.04	3.19				PASS
EGPRS 1900MHz	512	1850.2	0	28.95	0.79	Plot L 1down link 4up link	33	2	PASS
	661	1880.0	0	29.94	0.99				PASS
	810	1909.8	0	28.33	0.68				PASS
EGPRS	128	824.20	5	35.67	3.69	Plot M	38.45	7	PASS

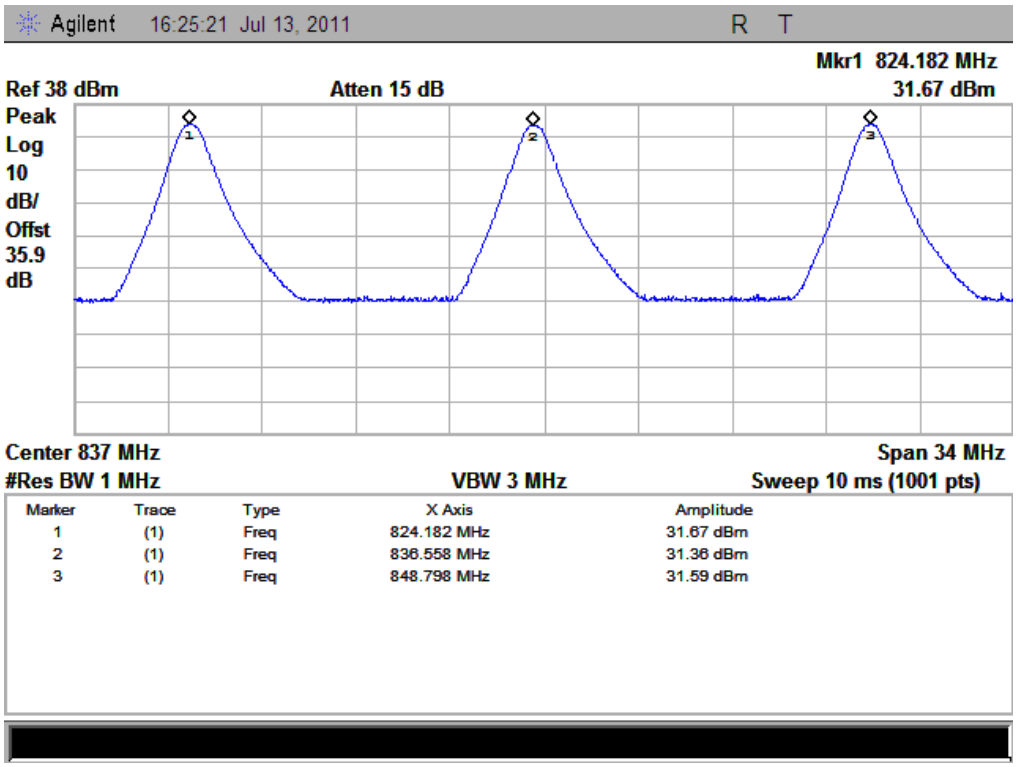
Band	Channel	Frequency (MHz)	PCL	Measured ERP/EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
850MHz	190	836.60	5	34.55	2.85	2down link			PASS
	251	848.80	5	34.92	3.10	3up link			PASS
EGPRS 1900MHz	512	1850.2	0	28.96	0.79	Plot N	33	2	PASS
	661	1880.0	0	29.62	0.92	2down link			PASS
	810	1909.8	0	28.23	0.67	3up link			PASS
EGPRS 850MHz	128	824.20	5	35.4	3.47	Plot O	38.45	7	PASS
	190	836.60	5	34.48	2.80	3down link			PASS
	251	848.80	5	34.87	3.07	2up link			PASS
EGPRS 1900MHz	512	1850.2	0	28.94	0.78	Plot P	33	2	PASS
	661	1880.0	0	29.59	0.91	3down link			PASS
	810	1909.8	0	28.23	0.67	2up link			PASS
EGPRS 850MHz	128	824.20	5	34.66	2.92	Plot Q	38.45	7	PASS
	190	836.60	5	33.46	2.22	4down link			PASS
	251	848.80	5	33.87	2.44	1up link			PASS
EGPRS 1900MHz	512	1850.2	0	27.94	0.62	Plot R	33	2	PASS
	661	1880.0	0	28.52	0.71	4down link			PASS
	810	1909.8	0	26.87	0.49	1up link			PASS

Band	Channel	Frequency (MHz)	Measured ERP		Limit		Verdict
			dBm	W	dBm	W	
WCDMA 850MHz	4132	826.4	19.4	0.087096	38.5	7	PASS
	4175	835	20.98	0.125314			PASS
	4233	846.6	21.42	0.138676			PASS
WCDMA 1900MHz	9262	1852.4	26.34	0.430527	33	2	PASS
	9400	1880	26.48	0.444631			PASS
	9538	1907.6	25.97	0.395367			PASS
HSDPA 850MHz	4132	826.4	19.33	0.085704	38.5	7	PASS
	4175	835	21.27	0.133968			PASS
	4233	846.6	21.46	0.139959			PASS
HSDPA 1900MHz	9262	1852.4	20.59	0.114551	33	2	PASS
	9400	1880	25.95	0.393550			PASS
	9538	1907.6	26.5	0.446684			PASS
HSUPA 850MHz	4132	826.4	19.58	0.090782	38.5	7	PASS
	4175	835	21.52	0.141906			PASS
	4233	846.6	21.59	0.144212			PASS
HSUPA 1900MHz	9262	1852.4	26.26	0.422669	33	2	PASS
	9400	1880	26	0.398107			PASS

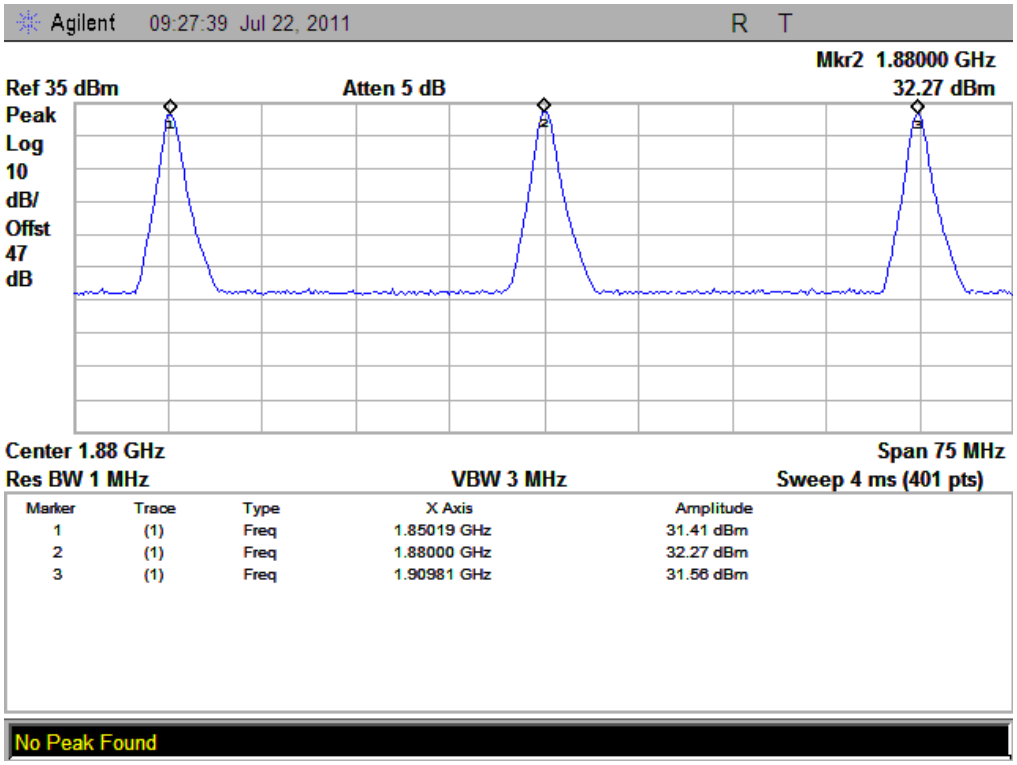
Band	Channel	Frequency (MHz)	Measured ERP		Limit		Verdict
			dBm	W	dBm	W	
	9538	1907.6	26.46	0.442588			PASS

Note: For the WCDMA and HSDPA, HSUPA test band, the measured output power was calculated by the reading of the Power Meter and calibration

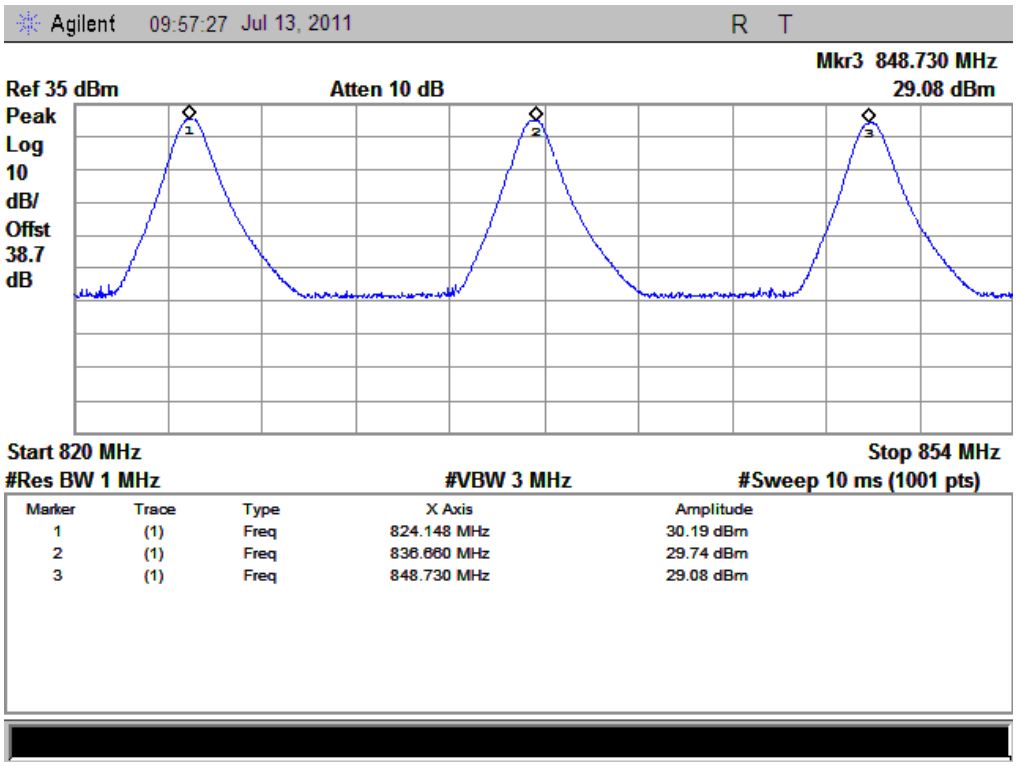
2. Test Plots:



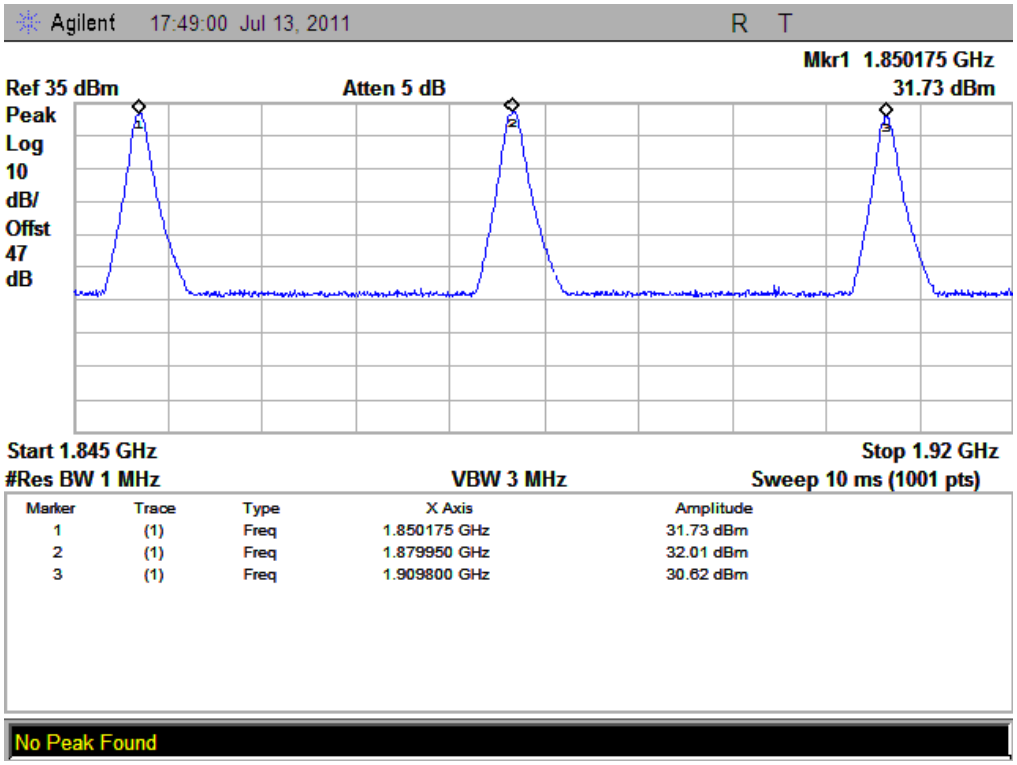
(Plot A: GSM 850MHz Channel = 128, 190, 251)



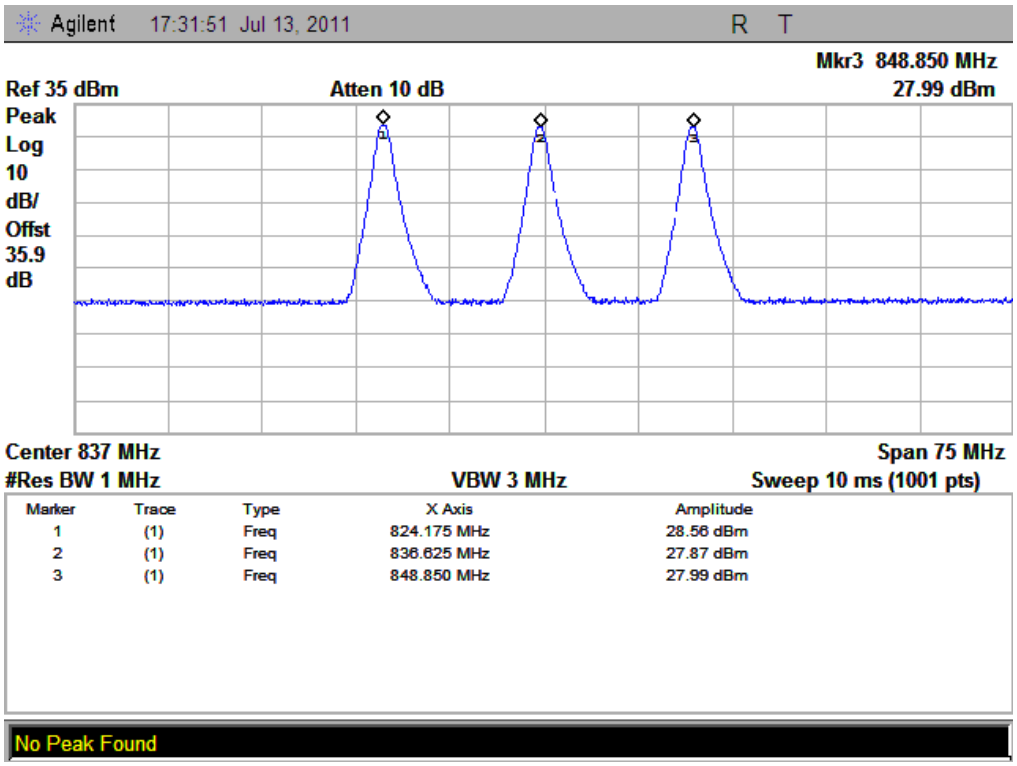
(Plot B: GSM 1900MHz Channel = 512, 661, 810)



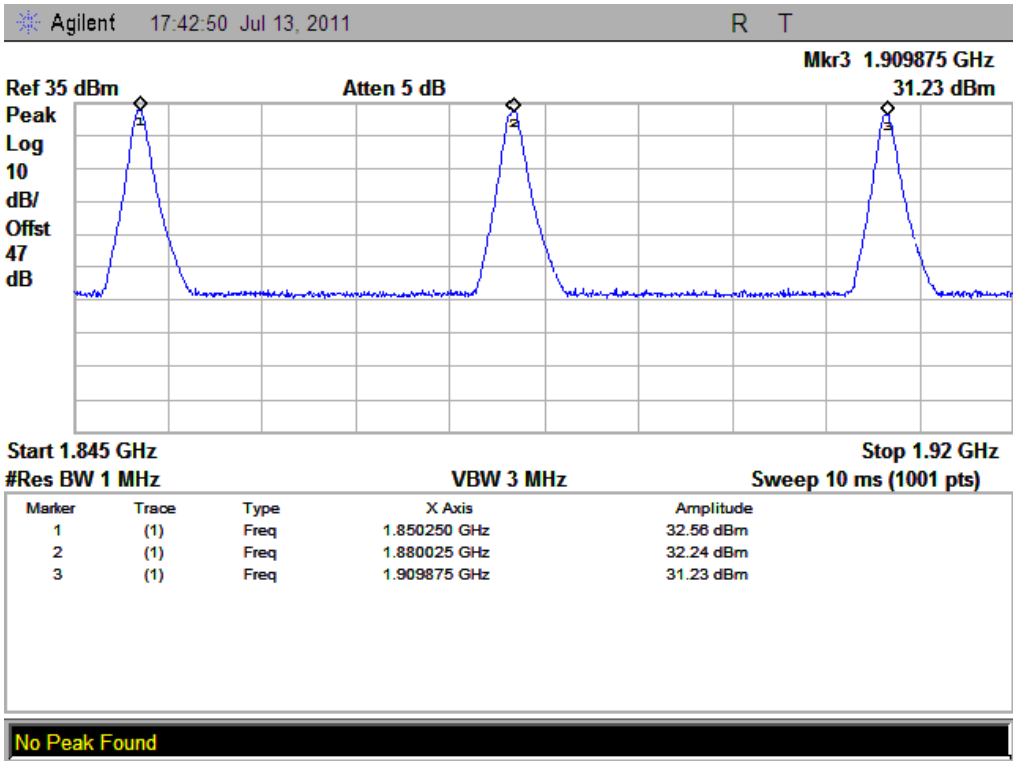
(Plot C: GPRS 850MHz Channel = 128, 190, 251)



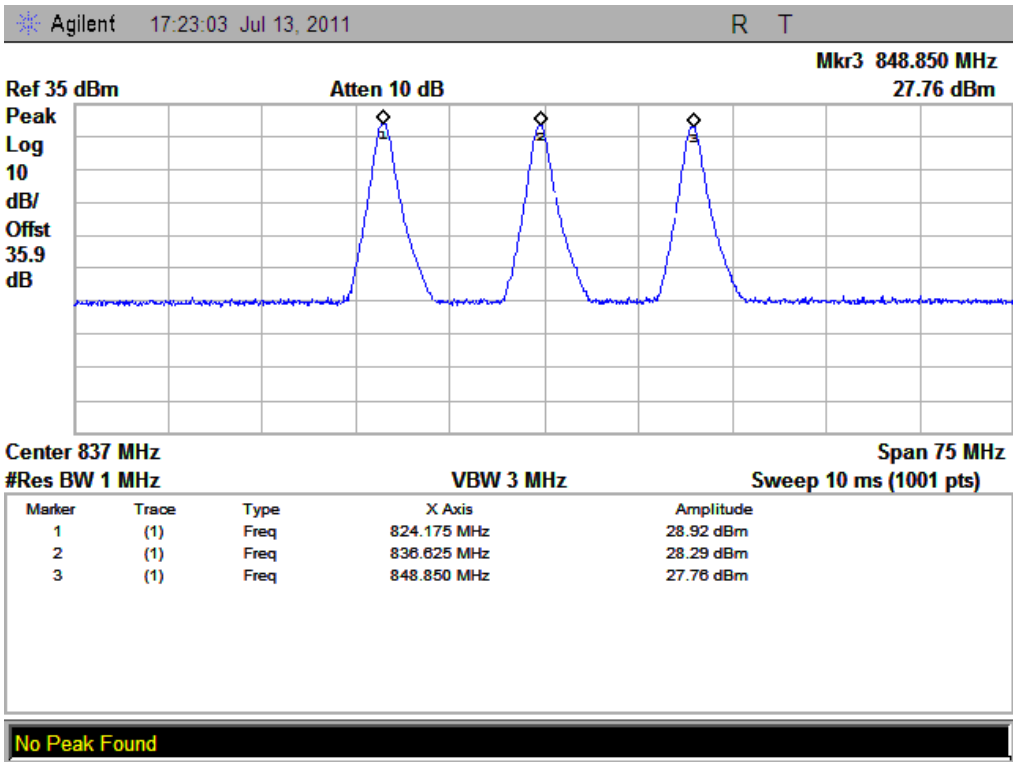
(Plot D: GPRS 1900MHz Channel = 512, 661, 810)



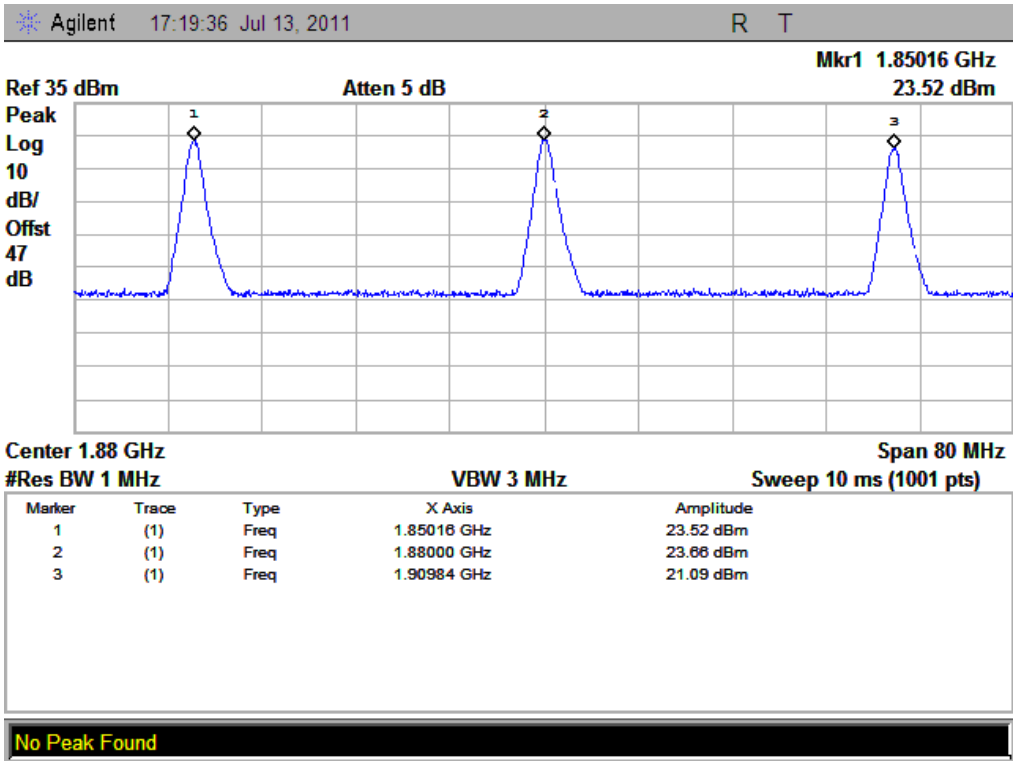
(Plot E: GPRS 850MHz Channel = 128, 190, 251)



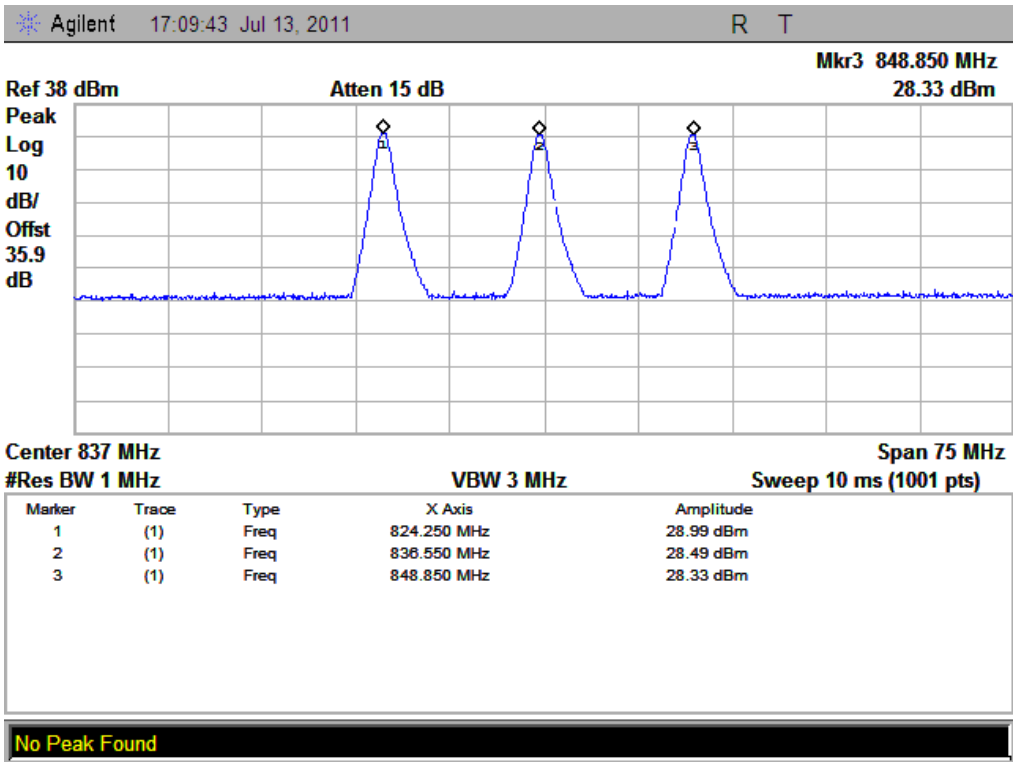
(Plot F: GPRS 1900MHz Channel = 512, 661, 810)



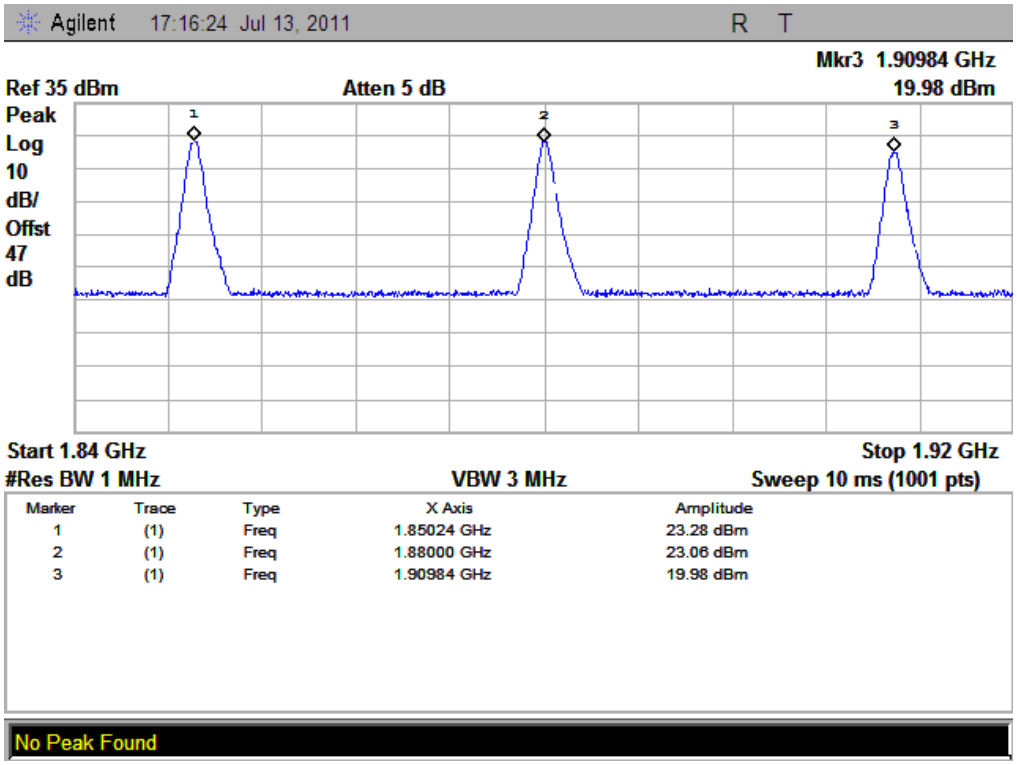
(Plot G: GPRS 850MHz Channel = 128, 190, 251)



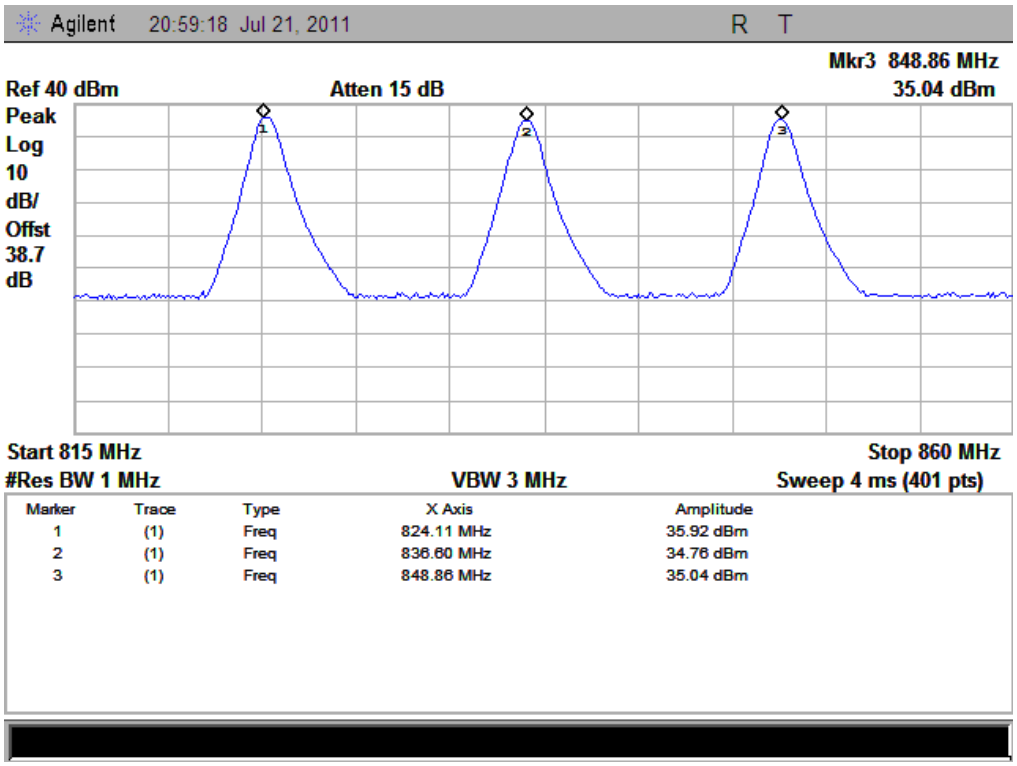
(Plot H: GPRS 1900MHz Channel = 512, 661, 810)



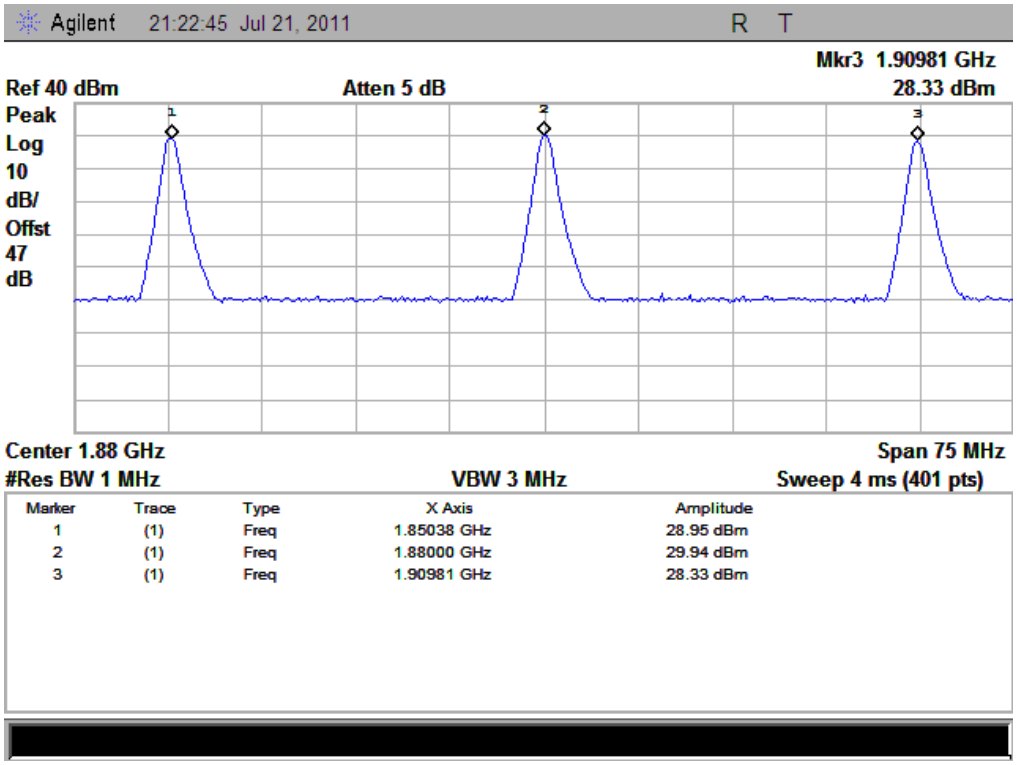
(Plot I: GPRS 850MHz Channel = 128, 190, 251)



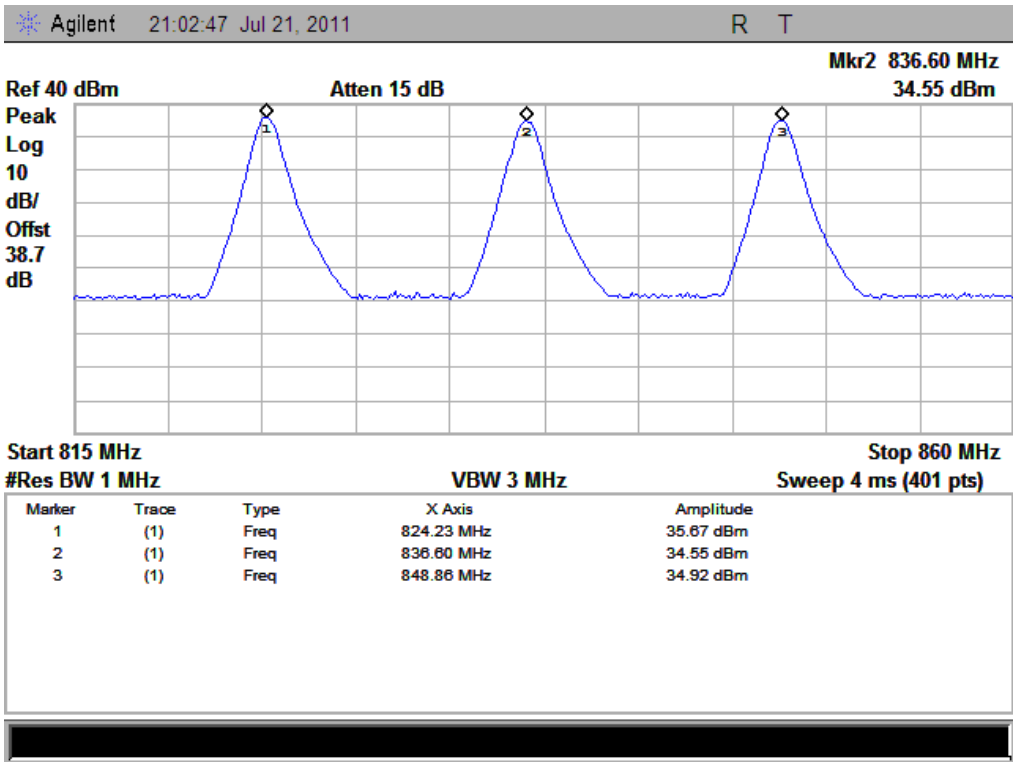
(Plot J: GPRS 1900MHz Channel = 512, 661, 810)



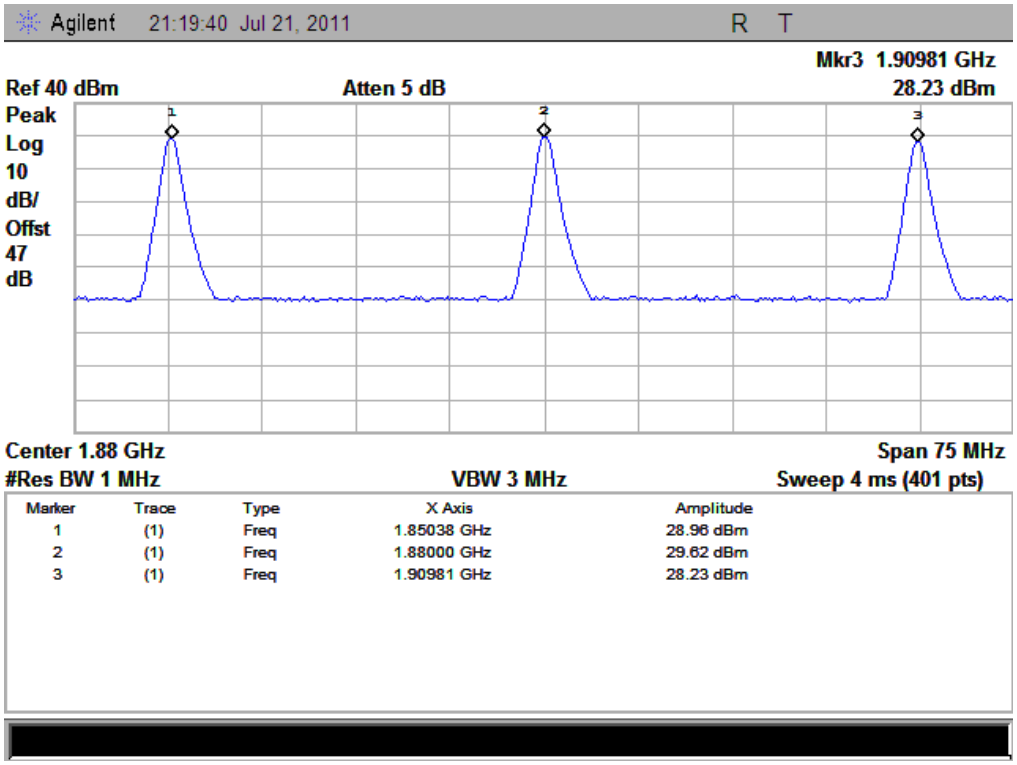
(Plot K: EDGE 850MHz Channel = 128, 190, 251)



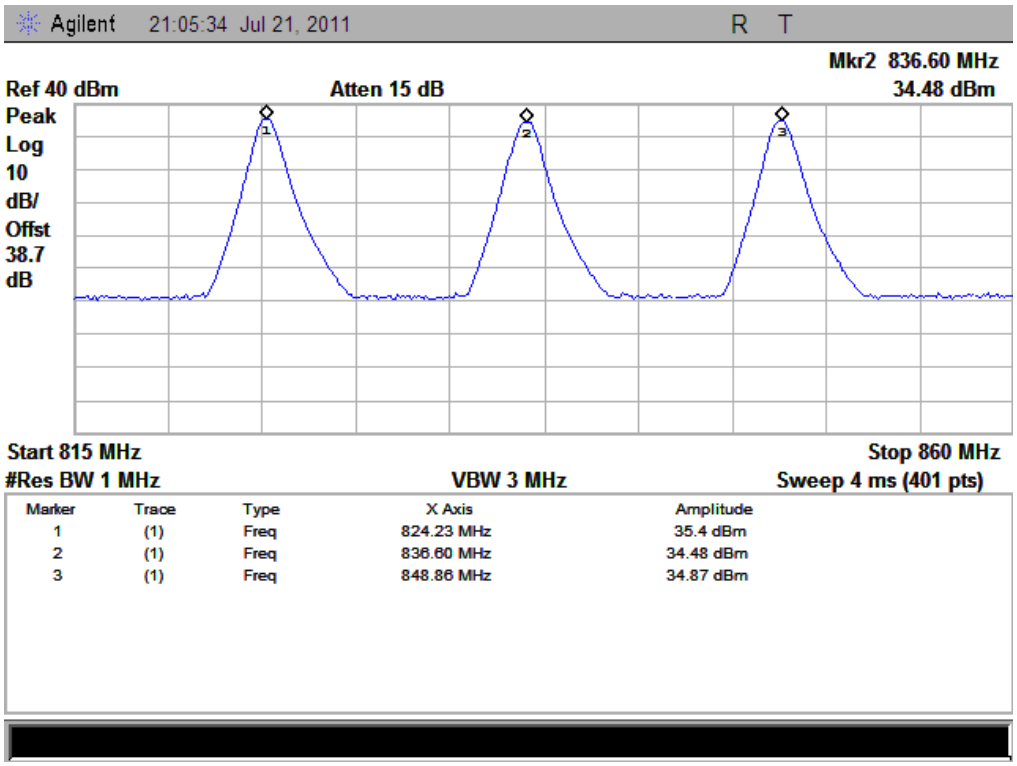
(Plot L: EDGE 1900MHz Channel = 512, 661, 810)



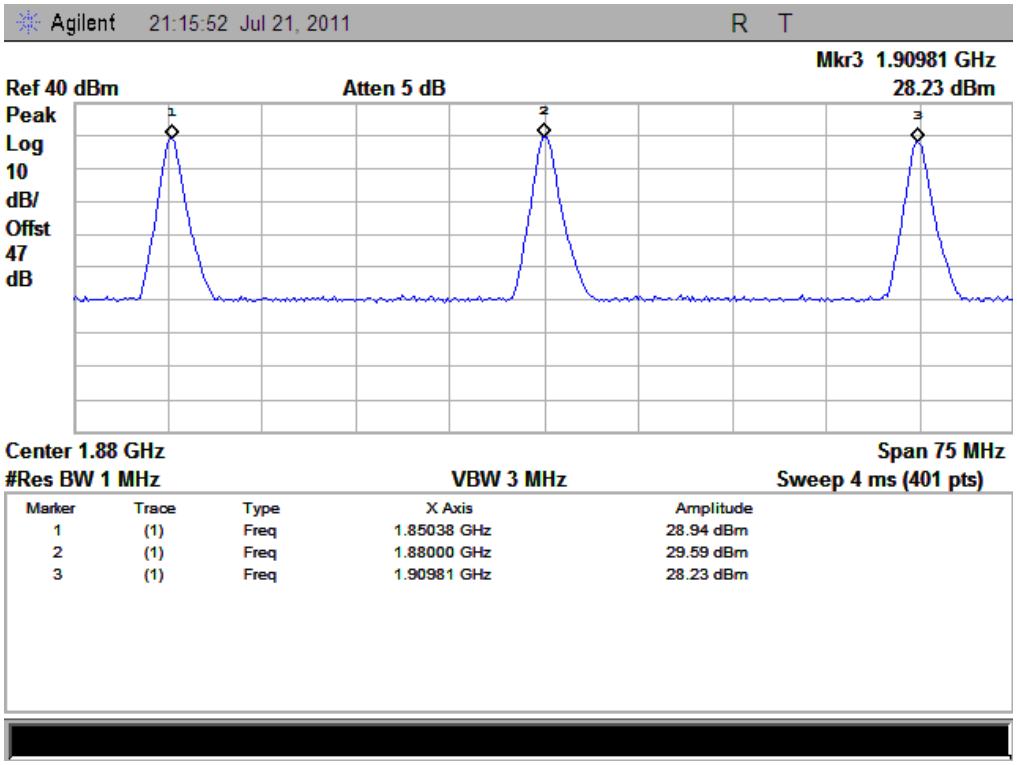
(Plot M: EDGE 850MHz Channel = 128, 190, 251)



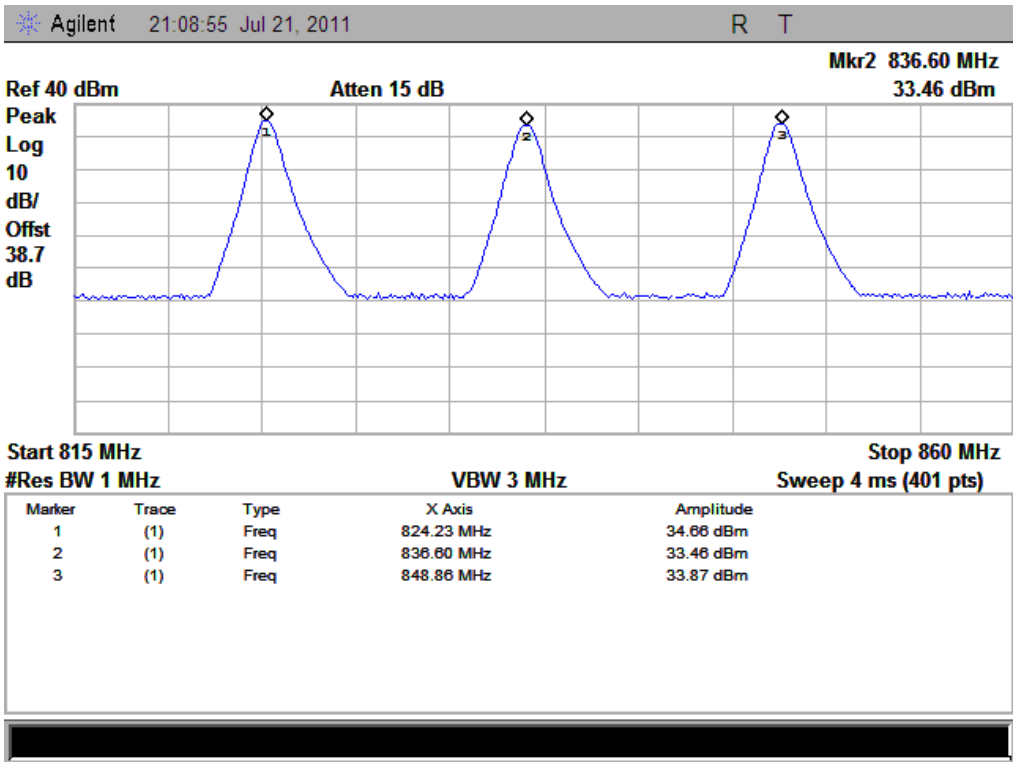
(Plot N: EDGE 1900MHz Channel = 512, 661, 810)



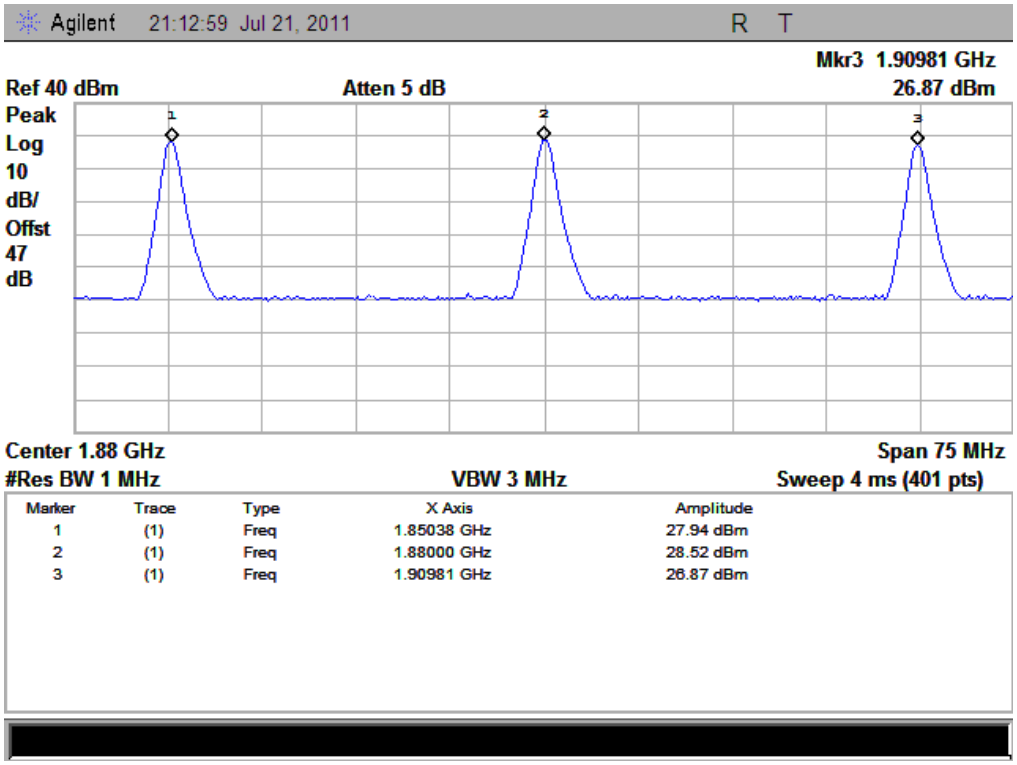
(Plot O: EDGE 850MHz Channel = 128, 190, 251)



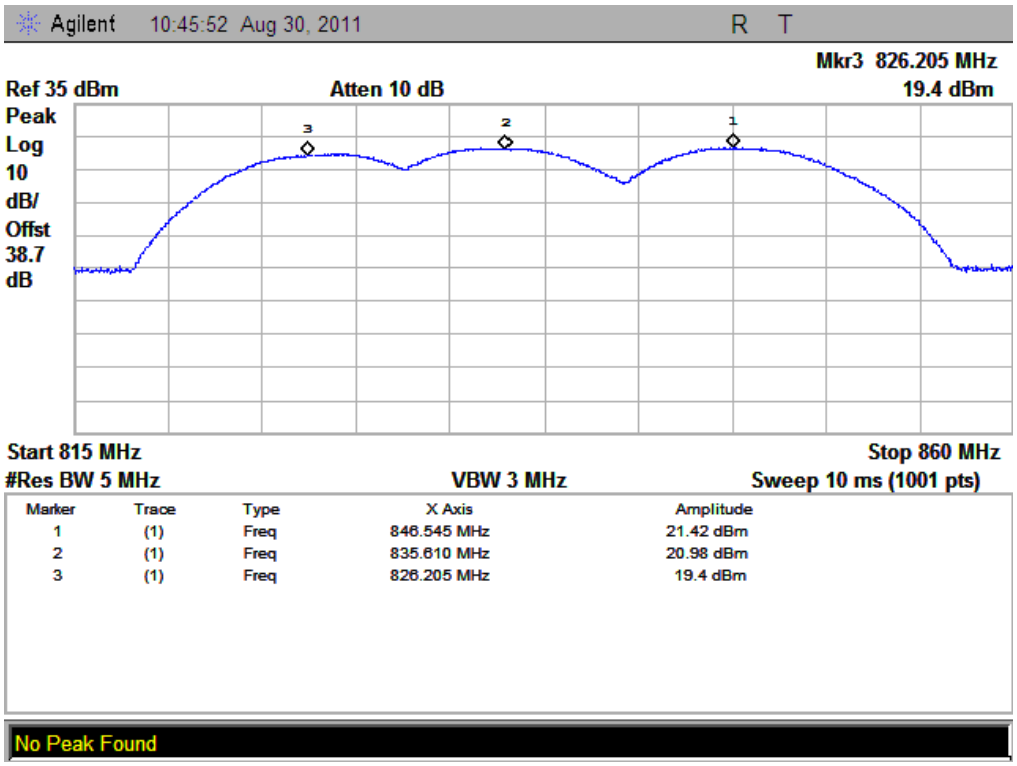
(Plot P: EDGE 1900MHz Channel = 512, 661, 810)



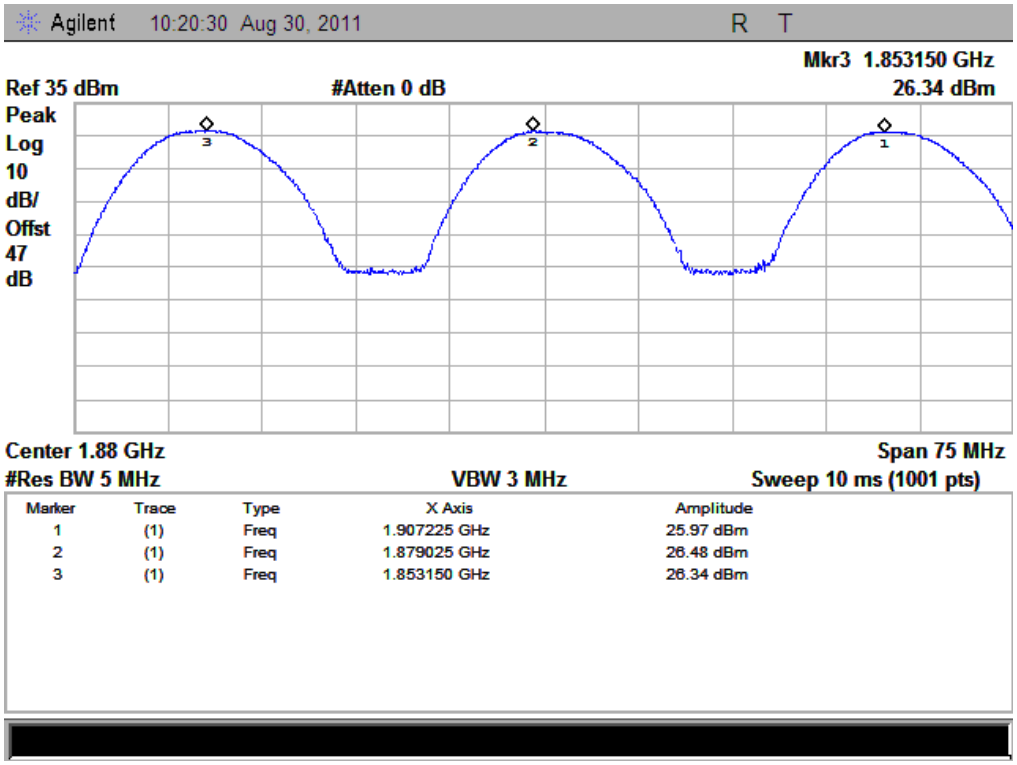
(Plot Q: EDGE 850MHz Channel = 128, 190, 251)



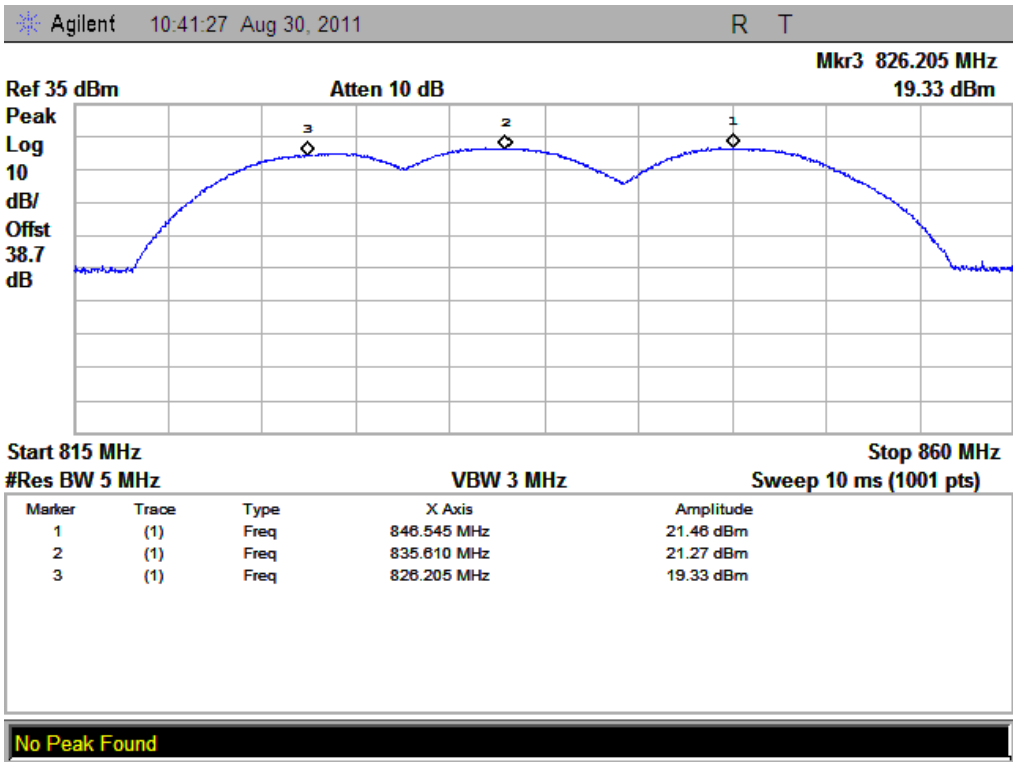
(Plot R: EDGE 1900MHz Channel = 512, 661, 810)



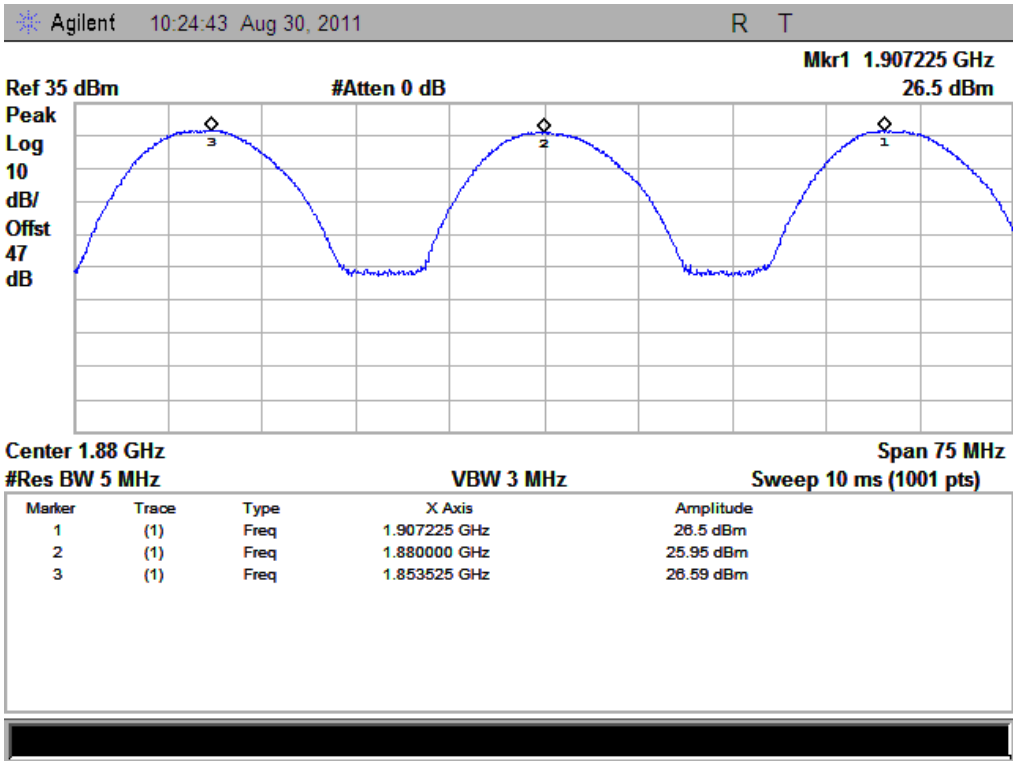
(WCDMA 850MHz Channel = 4132、4175、4458)



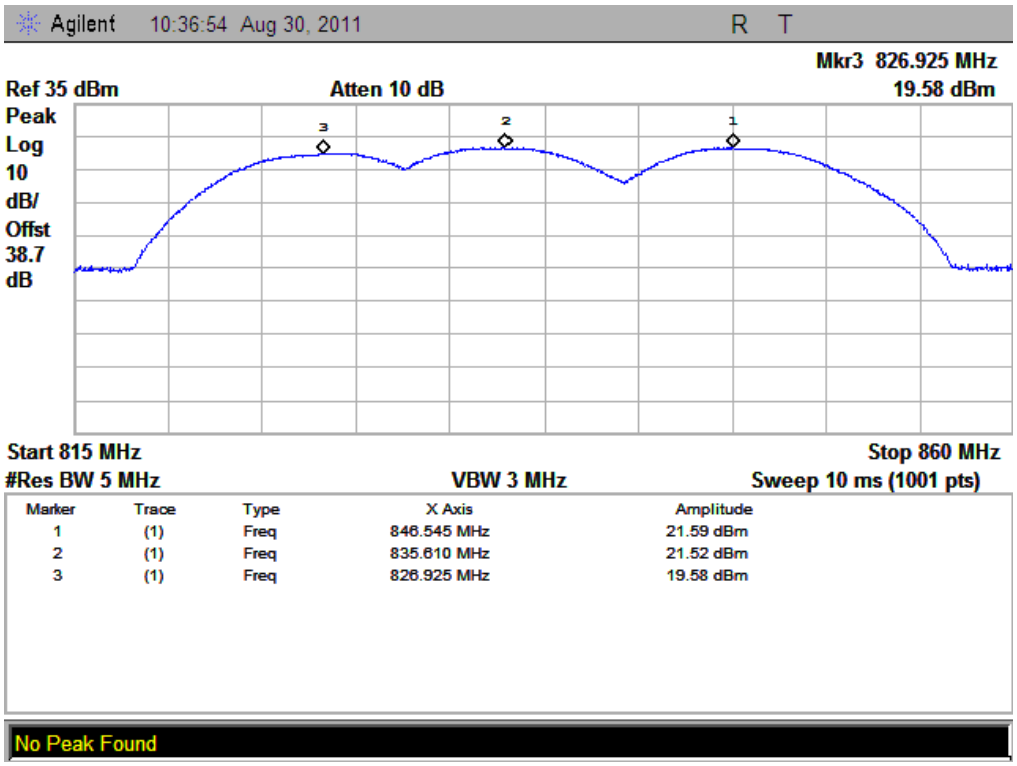
(WCDMA 1900MHz Channel = 9262、9400、9538)



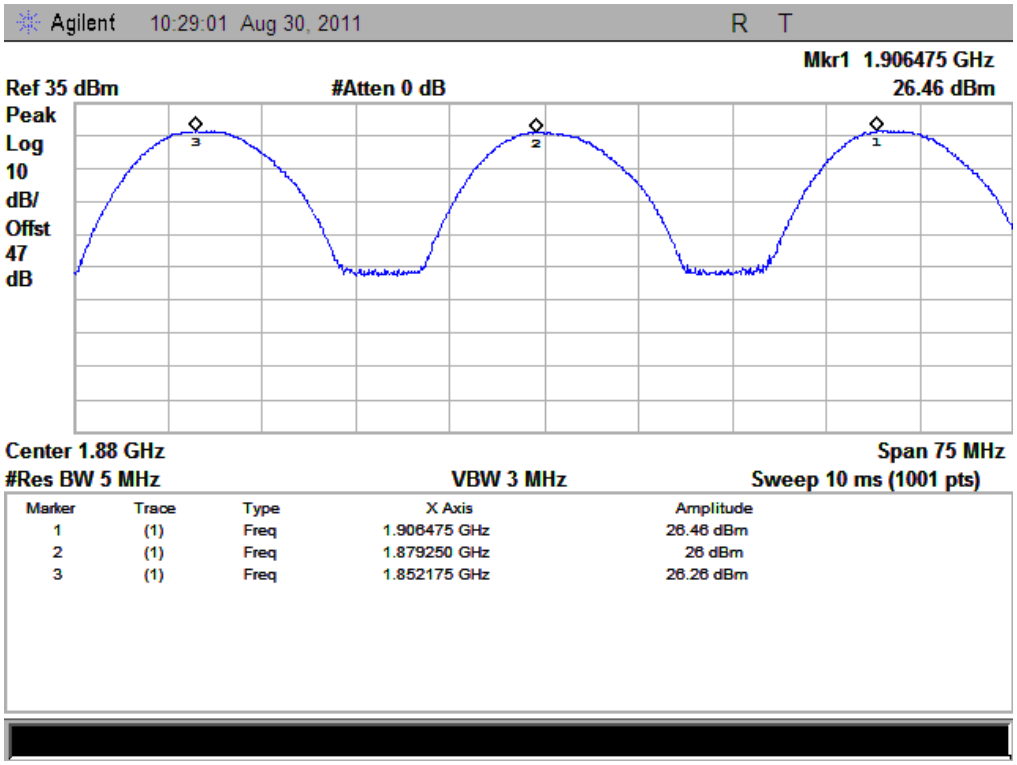
(HSDPA 850MHz Channel = 4132、4175、4458)



(HSDPA1900MHz Channel = 9262、9400、9538)



(HSUPA 850MHz Channel = 4132、4175、4458)



(HSUPA1900MHz Channel = 9262、9400、9538)

2.7 Radiated Out of Band Emissions

2.7.1 Requirement

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

2.7.2 Test Description

See section 2.6.2 of this report.

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

2.7.3 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.

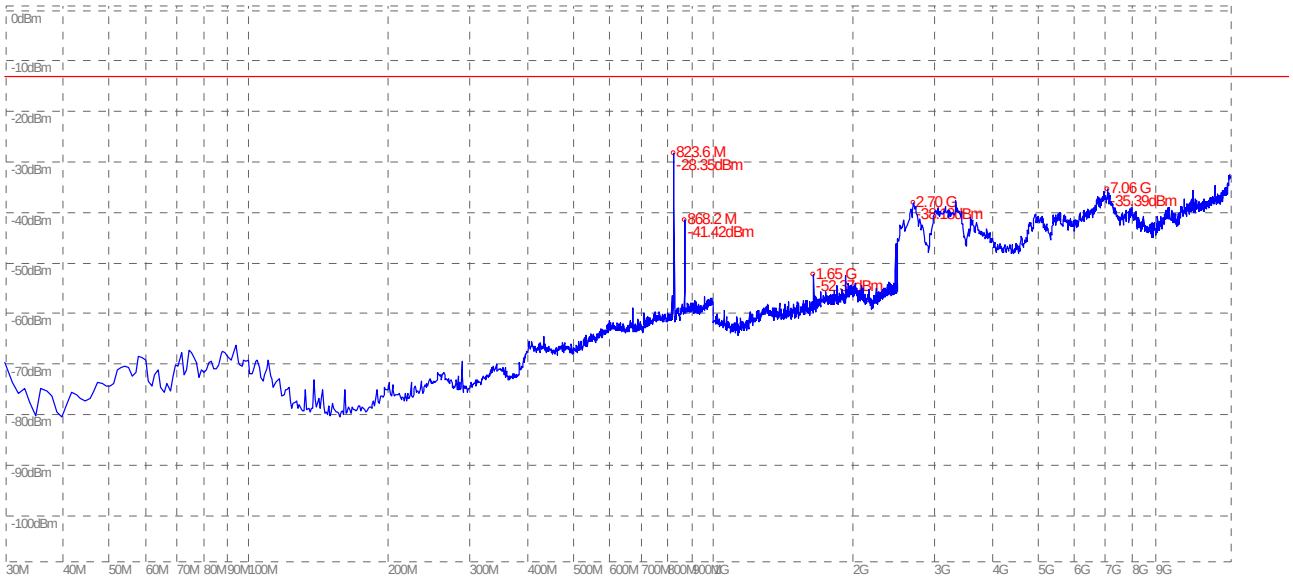
1. Test Verdict:

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	-35.39	-48.76	Plot A.1/A.2	-13	PASS
	190	836.6	-35.02	-49.12	Plot A.3/A.4		PASS
	251	848.8	-34.71	-46.19	Plot A.5/A.6		PASS
GSM 1900MHz	512	1850.2	-24.98	< -25	Plot B.1/B.2	-13	PASS
	661	1880.0	-26.02	-25.52	Plot B.3/B.4		PASS
	810	1909.8	-25.68	-25.92	Plot B.5/B.6		PASS
EDGE 850MHz	128	824.2	-36.41	-38.79	Plot C.1/C.2	-13	PASS
	190	836.6	-36.24	-36.09	Plot C.3/C.4		PASS
	251	848.8	-36.41	-35.97	Plot C.5/C.6		PASS
EDGE 1900MHz	512	1850.2	-26.17	-25.23	Plot D.1/D.2	-13	PASS
	661	1880.0	-27.09	-26.17	Plot D.3/D.4		PASS
	810	1909.8	-26.24	-36.30	Plot D.5/D.6		PASS
WCDMA	4357	826.4	-24.19	-56.65	Plot E.1/E.2	-13	PASS

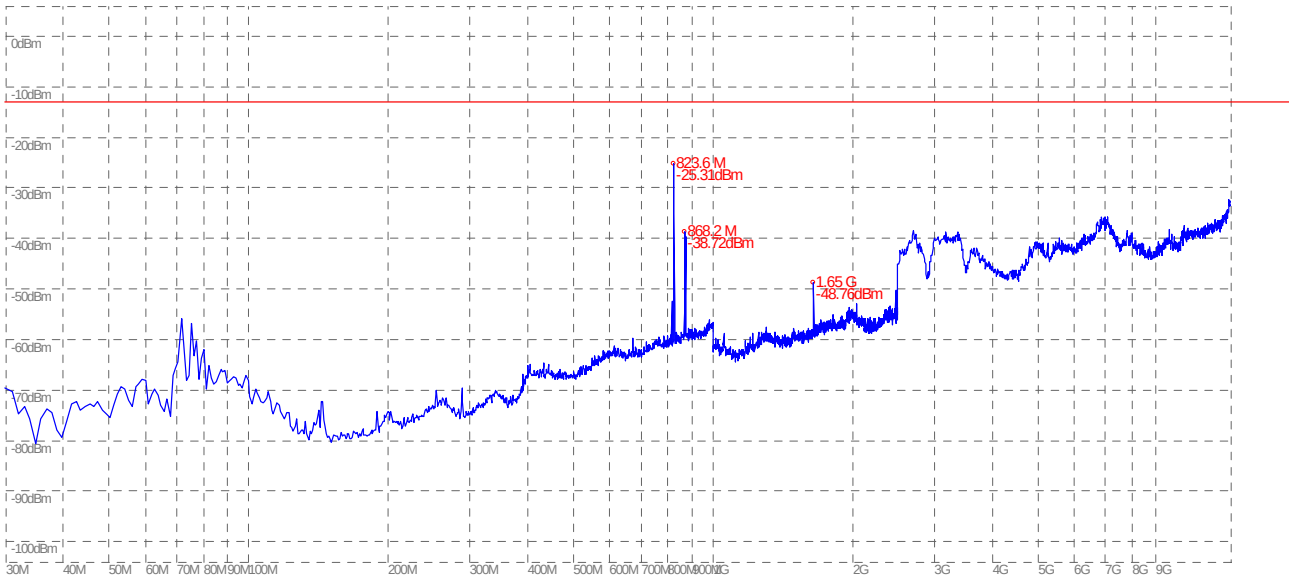
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
850MHz	4400	835	-52.05	-51.15	Plot E.3/E.4		PASS
	4458	846.6	-47.70	-36.96	Plot E.5/E.6		PASS
WCDMA 1900MHz	9662	1852.4	< -25	< -25	Plot F.1/F.2	-13	PASS
	9800	1880	< -25	< -25	Plot F.3/F.4		PASS
	9938	1907.6	< -25	< -25	Plot F.5/F.6		PASS
HSDPA 850MHz	4357	826.4	< -25	< -25	Plot G.1/G.2	-13	PASS
	4400	835	< -25	< -25	Plot G.3/G.4		PASS
	4458	846.6	< -25	< -25	Plot G.5/G.6		PASS
HSDPA 1900MHz	9662	1852.4	< -25	< -25	Plot H.1/H.2	-13	PASS
	9800	1880	< -25	< -25	Plot H.3/H.4		PASS
	9938	1907.6	< -25	< -25	Plot H.5/H.6		PASS
HSUPA 850MHz	4357	826.4	< -25	< -25	Plot I.1/I.2	-13	PASS
	4400	835	< -25	< -25	Plot I.3/I.4		PASS
	4458	846.6	< -25	< -25	Plot I.5/I.6		PASS
HSUPA 1900MHz	9662	1852.4	< -25	< -25	Plot J.1/J.2	-13	PASS
	9800	1880	< -25	< -25	Plot J.3/J.4		PASS
	9938	1907.6	< -25	< -25	Plot J.5/J.6		PASS

2. Test Plots for the Whole Measurement Frequency Range:

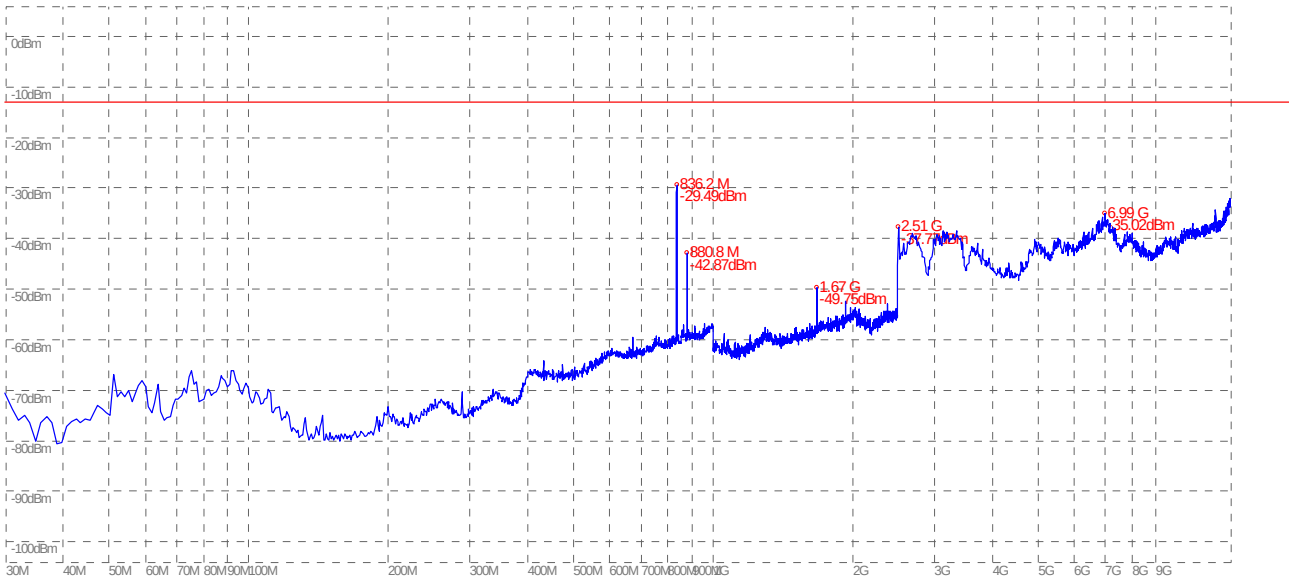
Note: the power of the EUT transmitting frequency should be ignored.



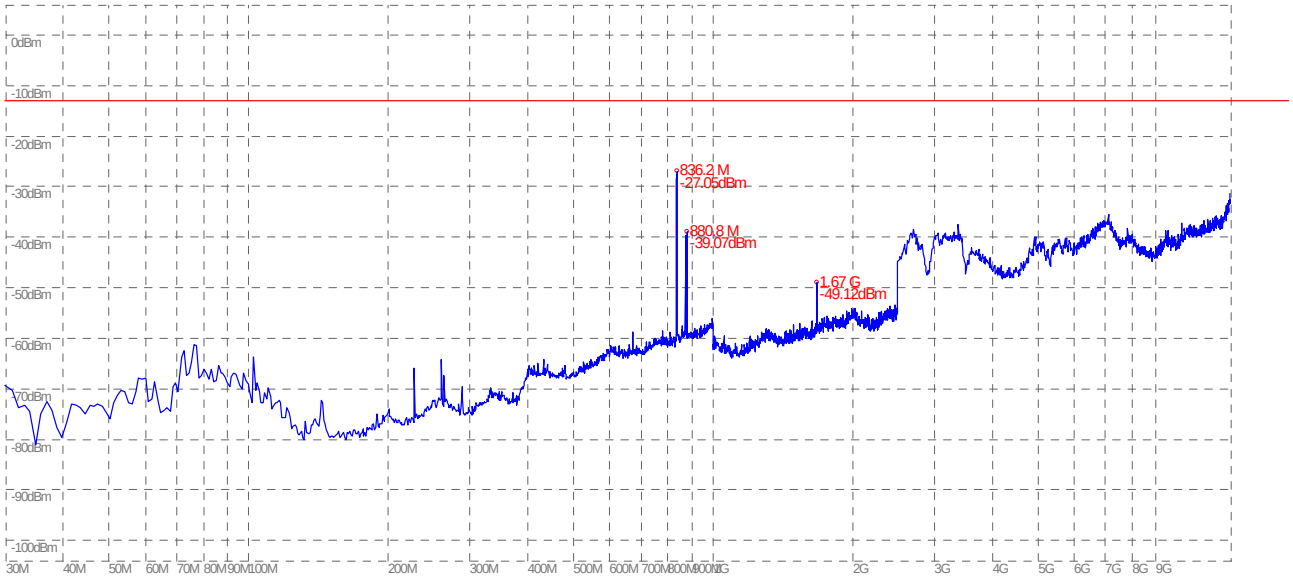
(Plot A.1: GSM 850MHz Channel = 128, Test Antenna Horizontal)



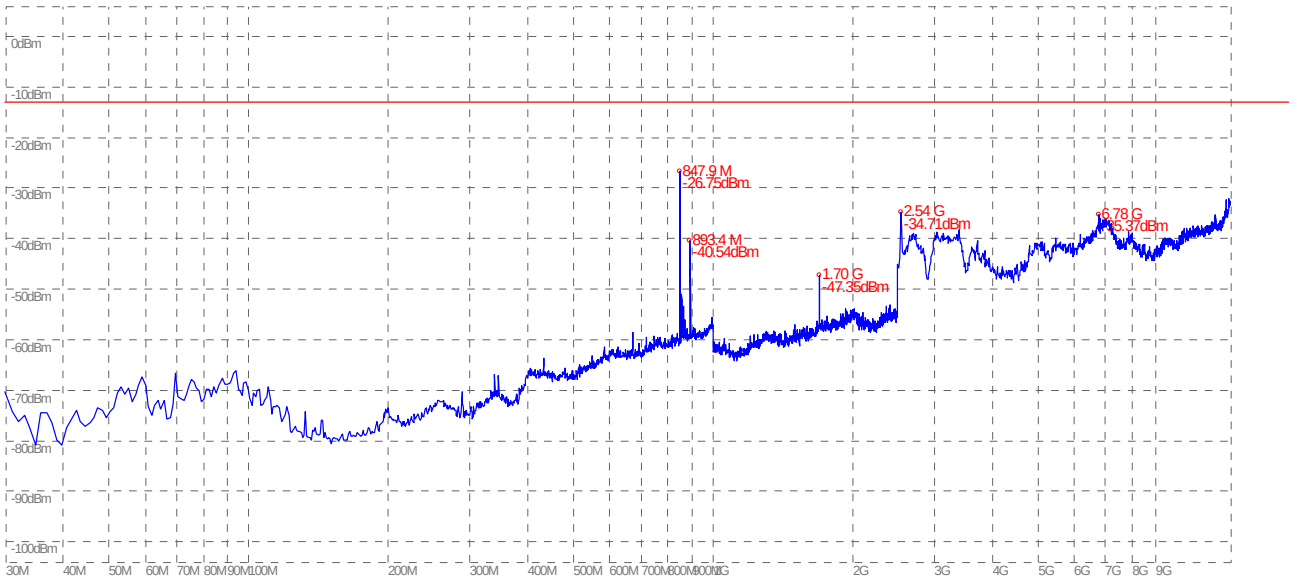
(Plot A.2: GSM 850MHz Channel = 128, Test Antenna Vertical)



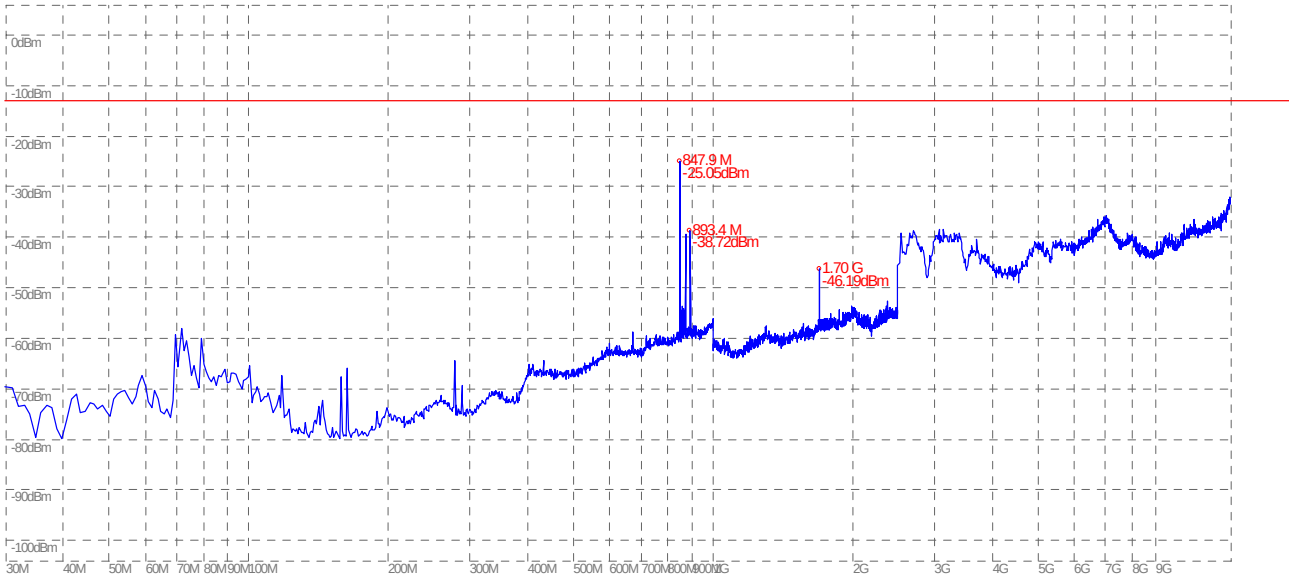
(Plot A.3: GSM 850MHz Channel = 190, Test Antenna Horizontal)



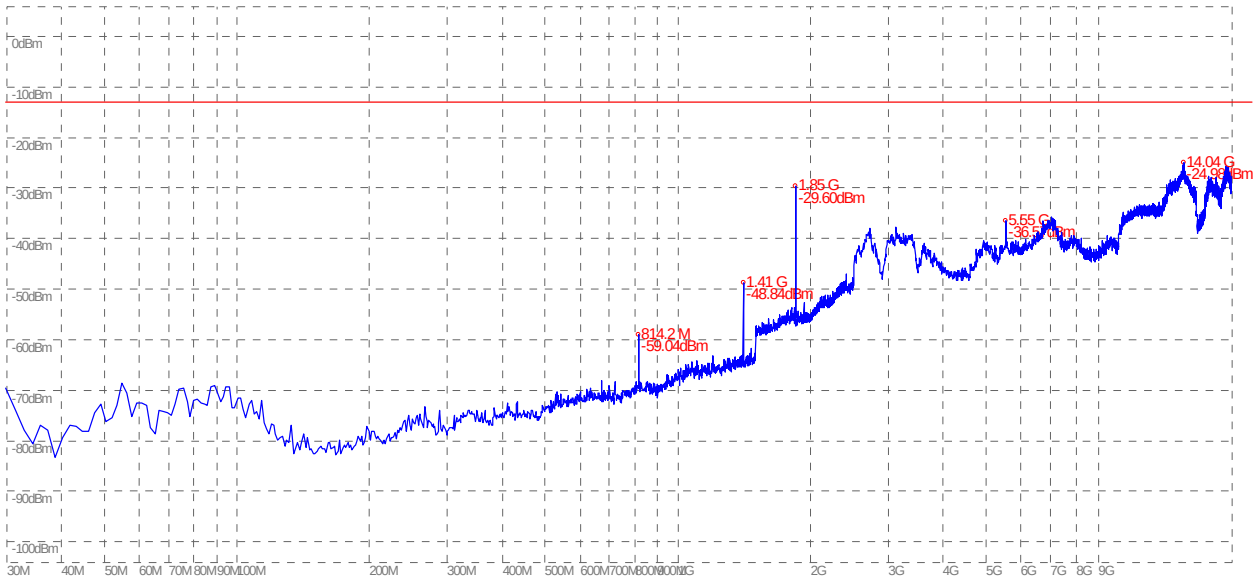
(Plot A.4: GSM 850MHz Channel = 190, Test Antenna Vertical)



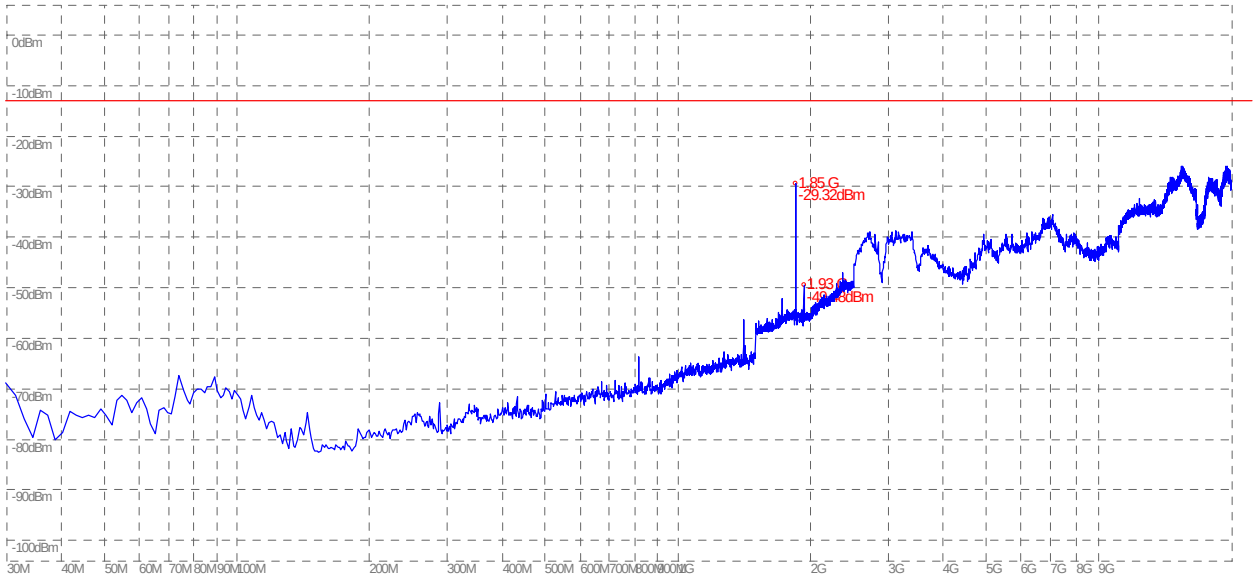
(Plot A.5: GSM 850MHz Channel = 251, Test Antenna Horizontal)



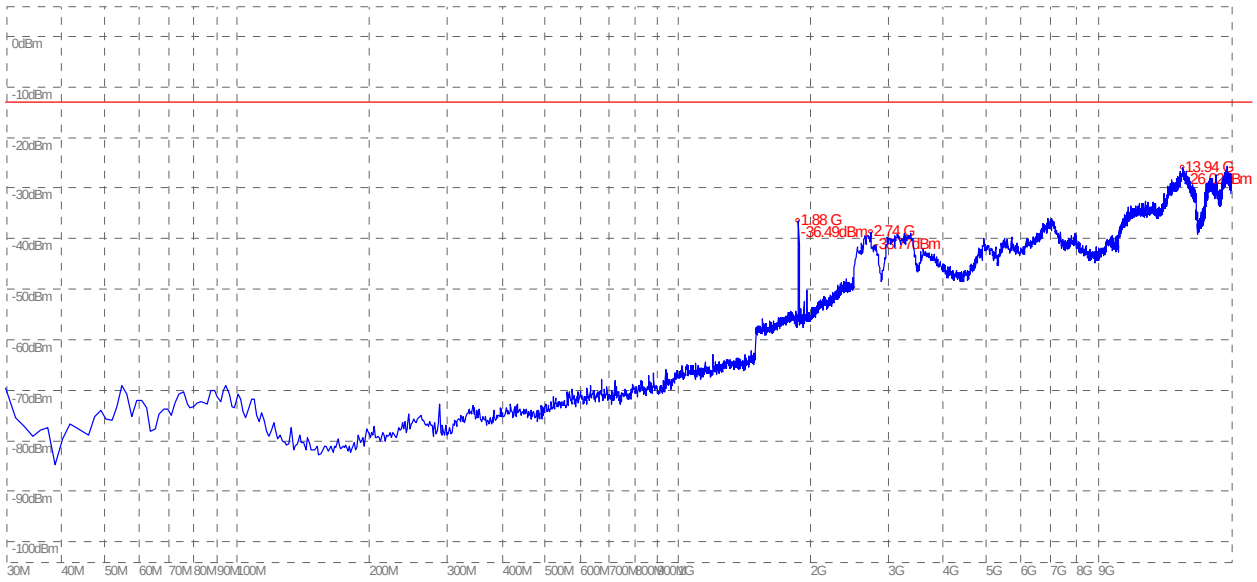
(Plot A.6: GSM 850MHz Channel = 251, Test Antenna Vertical)



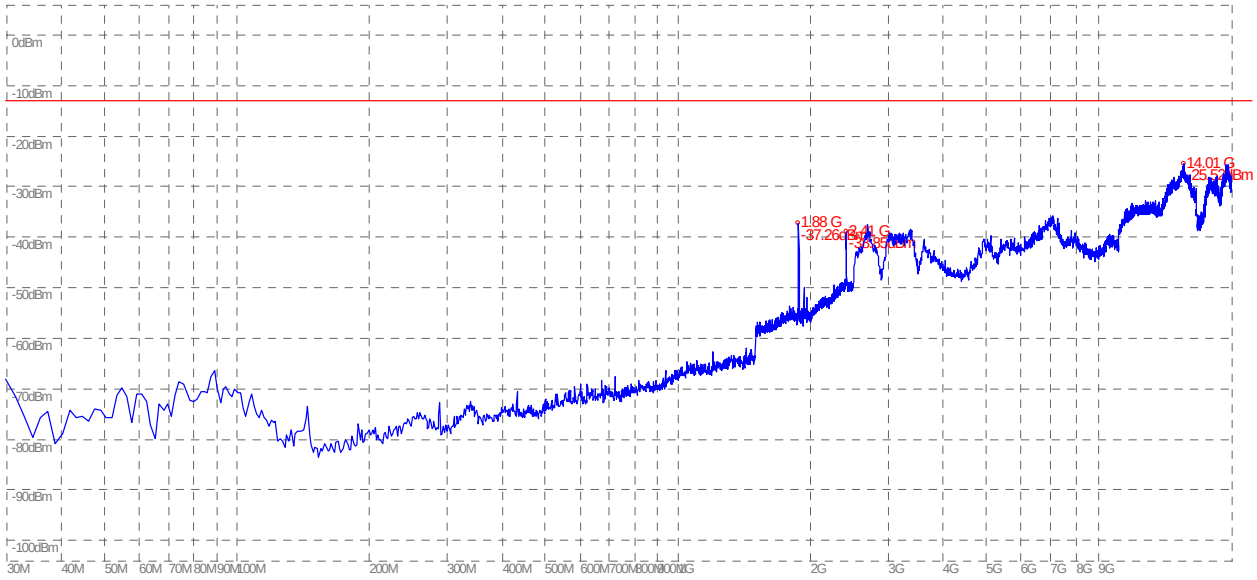
(Plot B.1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



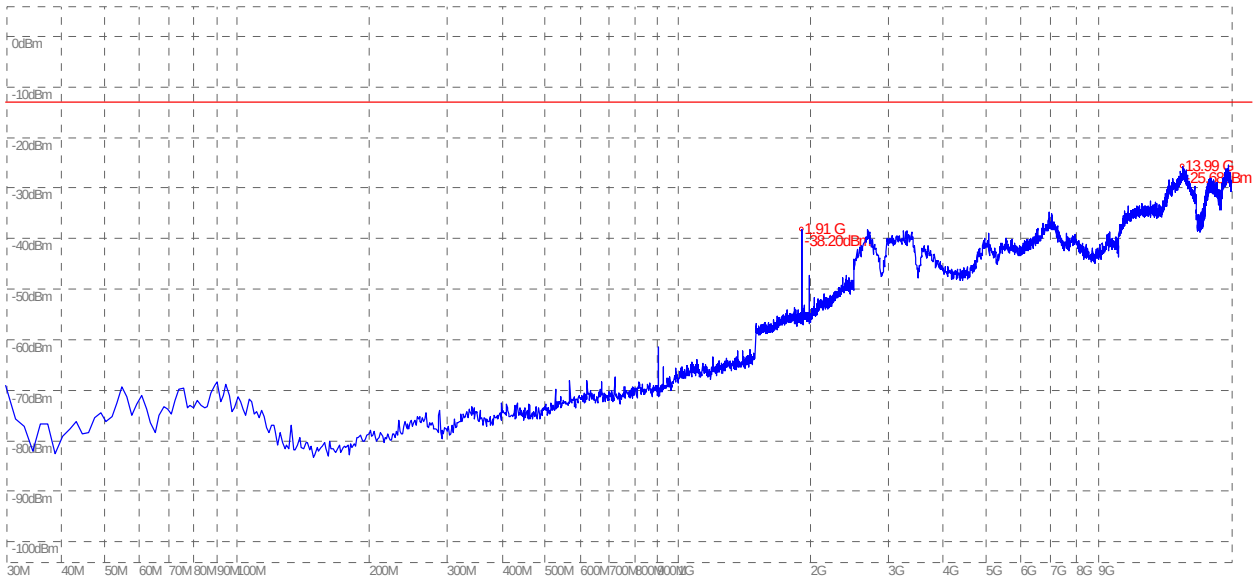
(Plot B.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



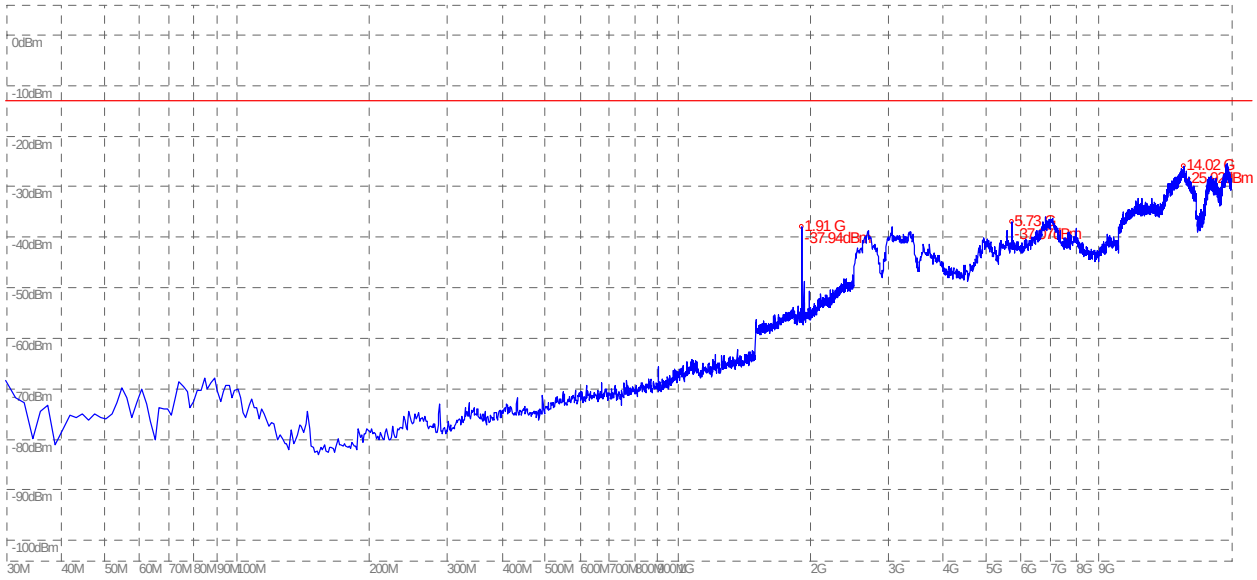
(Plot B.3: GSM 1900MHz Channel = 661, Test Antenna Horizontal)



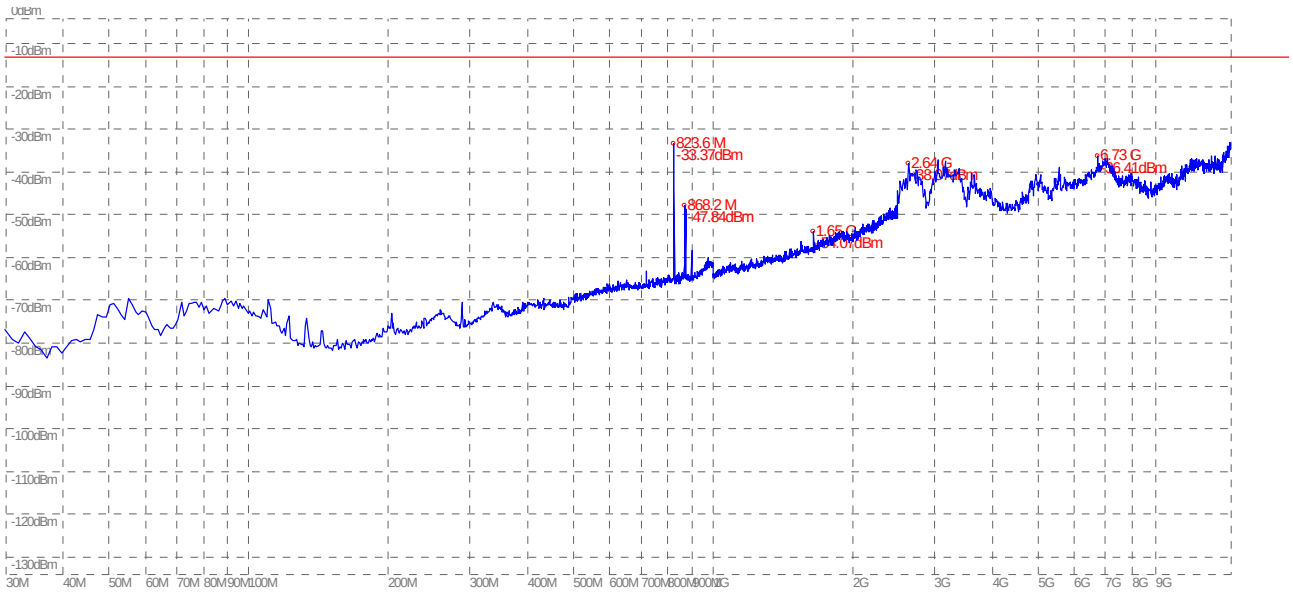
(Plot B.4: GSM 1900MHz Channel = 661, Test Antenna Vertical)



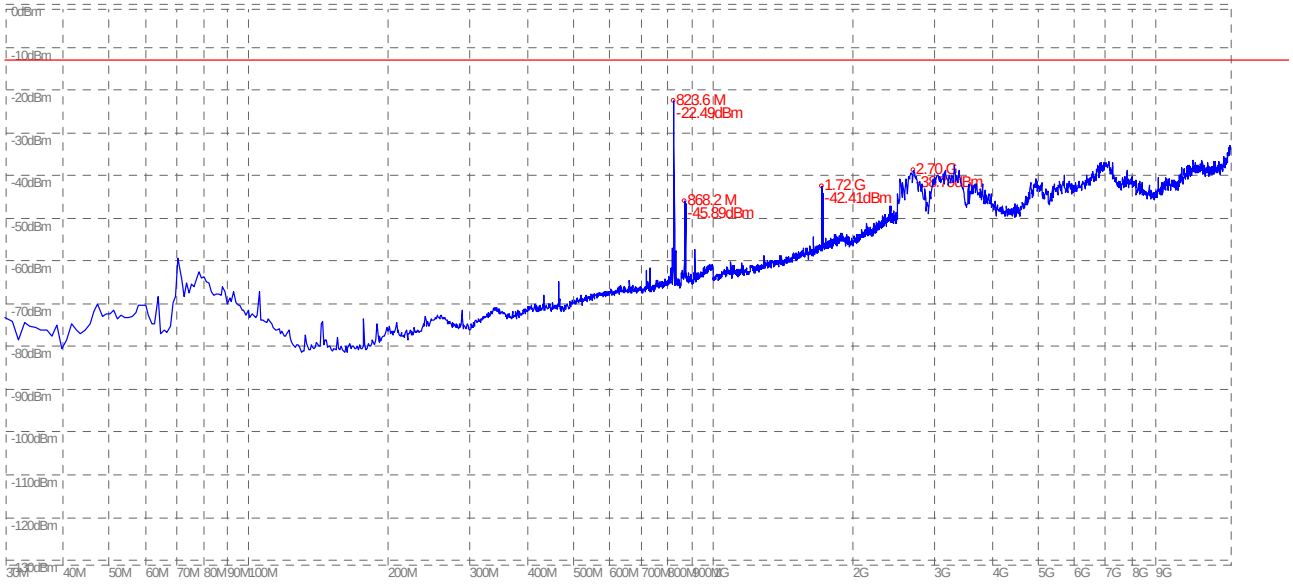
(Plot B.5: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



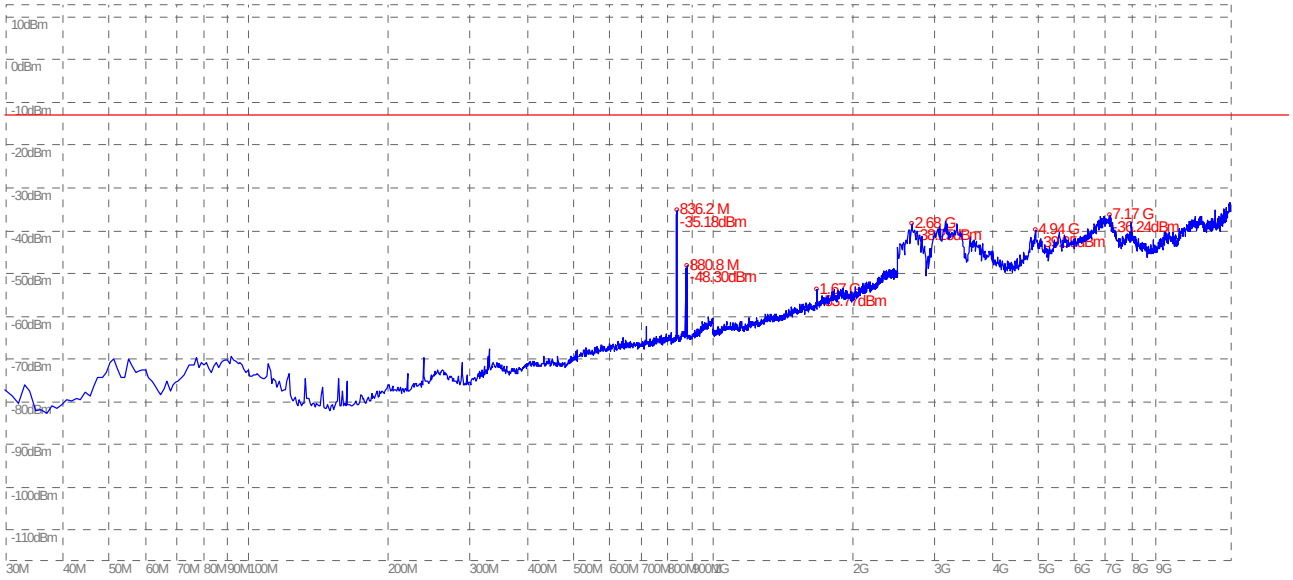
(PlotB.6: GSM 1900MHz Channel = 810, Test Antenna Vertical)



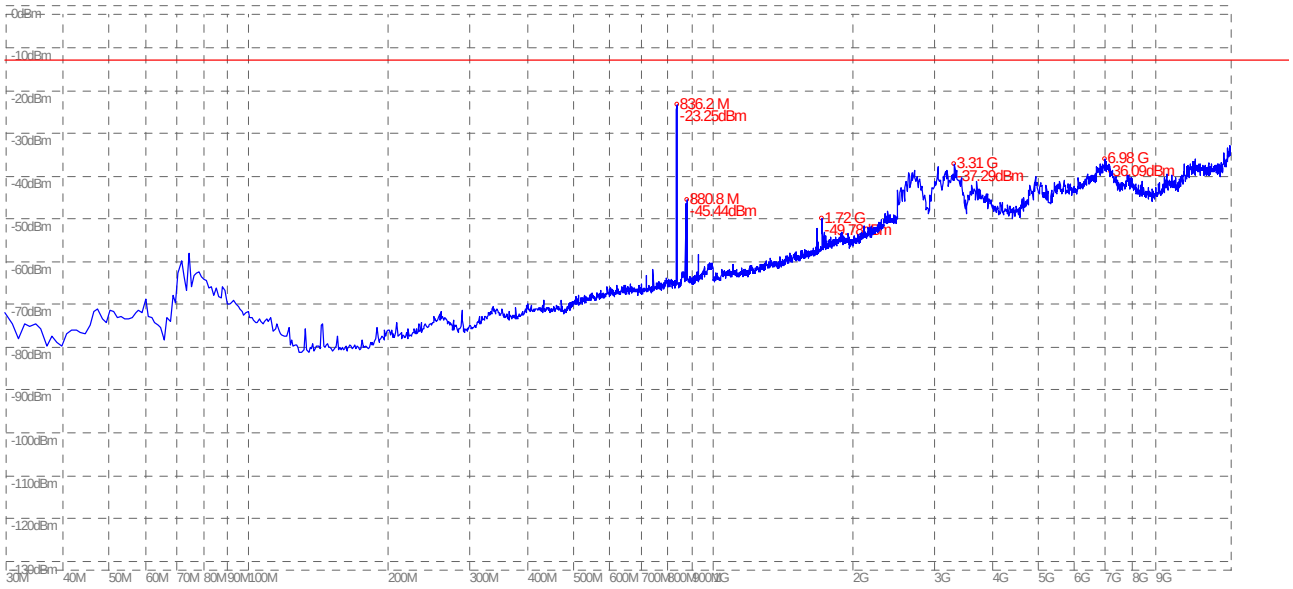
(Plot C.1: EGPRS 850MHz Channel = 128, Test Antenna Horizontal)



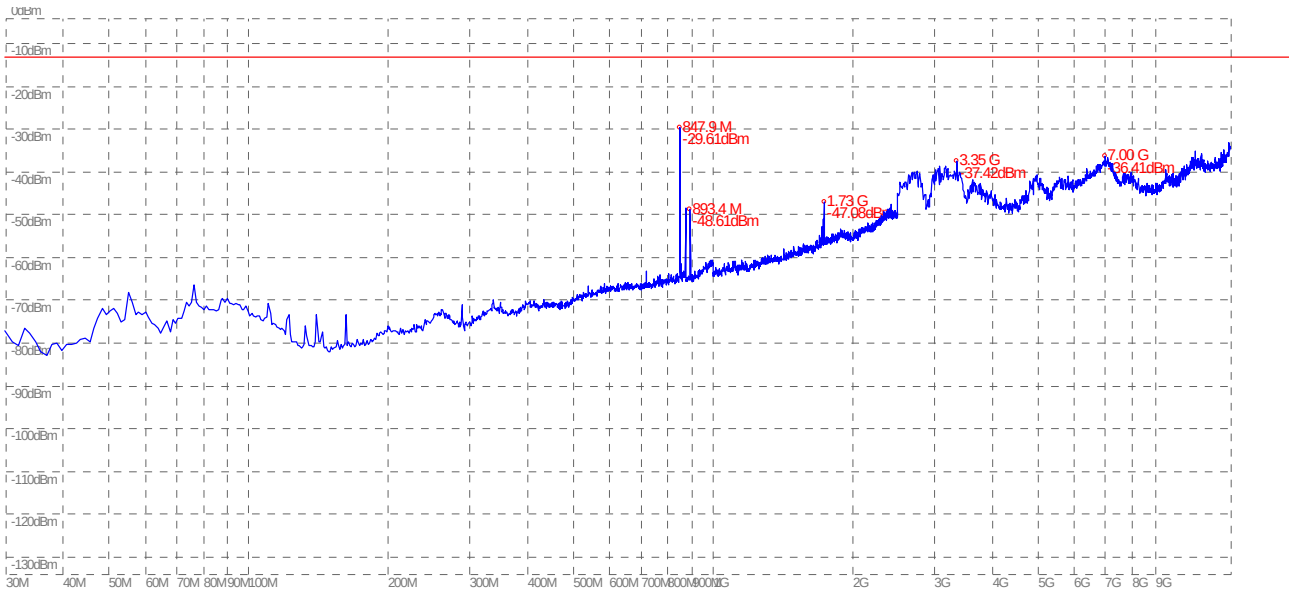
(Plot C.2: EGPRS 850MHz Channel = 128, Test Antenna Vertical)



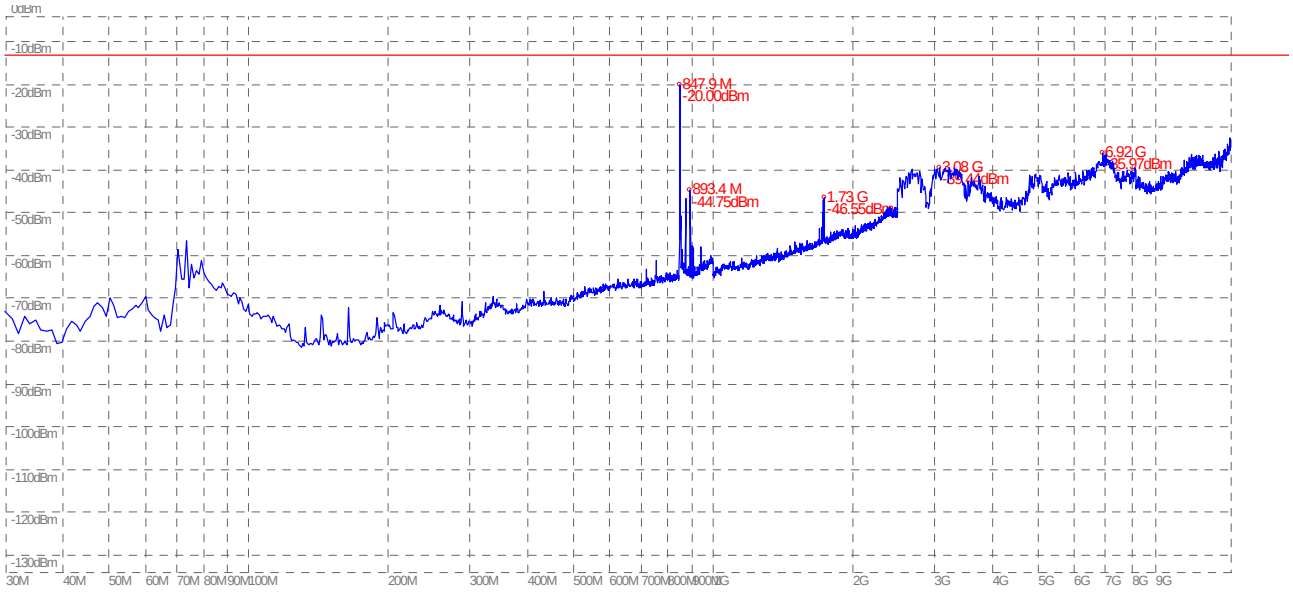
(Plot C.3: EGPRS 850MHz Channel = 190, Test Antenna Horizontal)



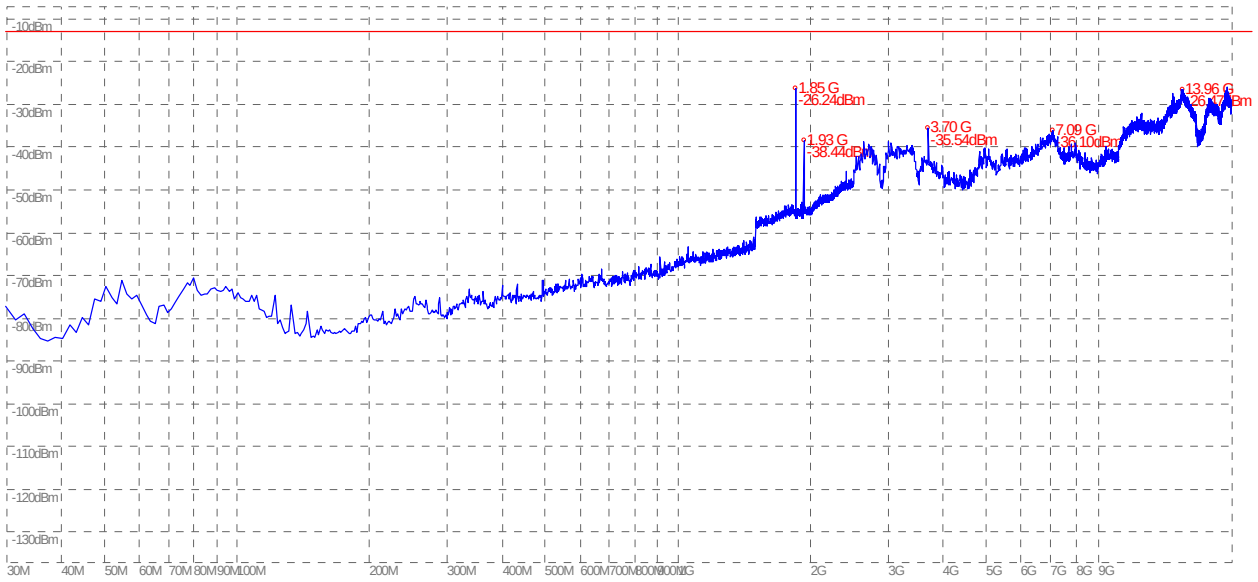
(Plot C.4: EGPRS 850MHz Channel = 190, Test Antenna Vertical)



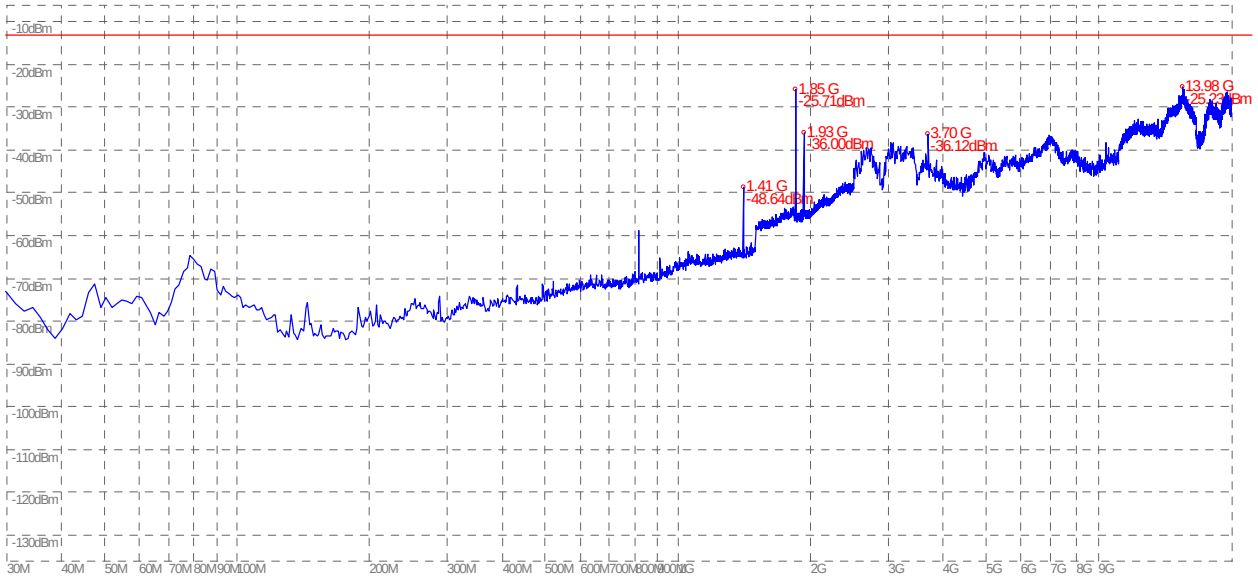
(Plot C.5: EGPRS 850MHz Channel = 251, Test Antenna Horizontal)



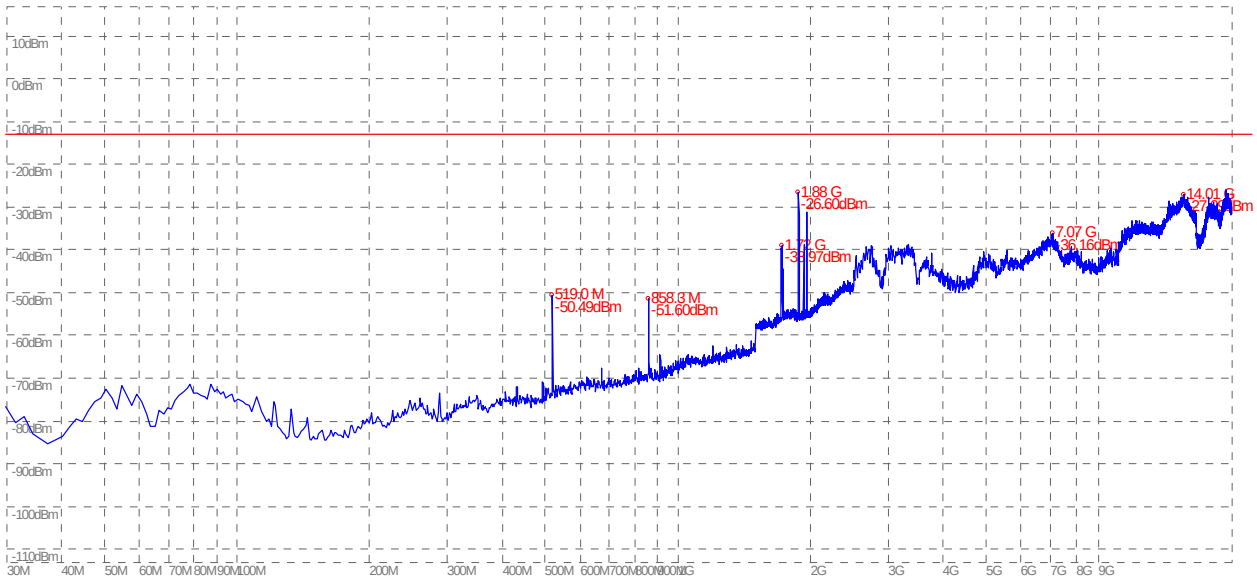
(Plot C.6: EGPRS 850MHz Channel = 251, Test Antenna Vertical)



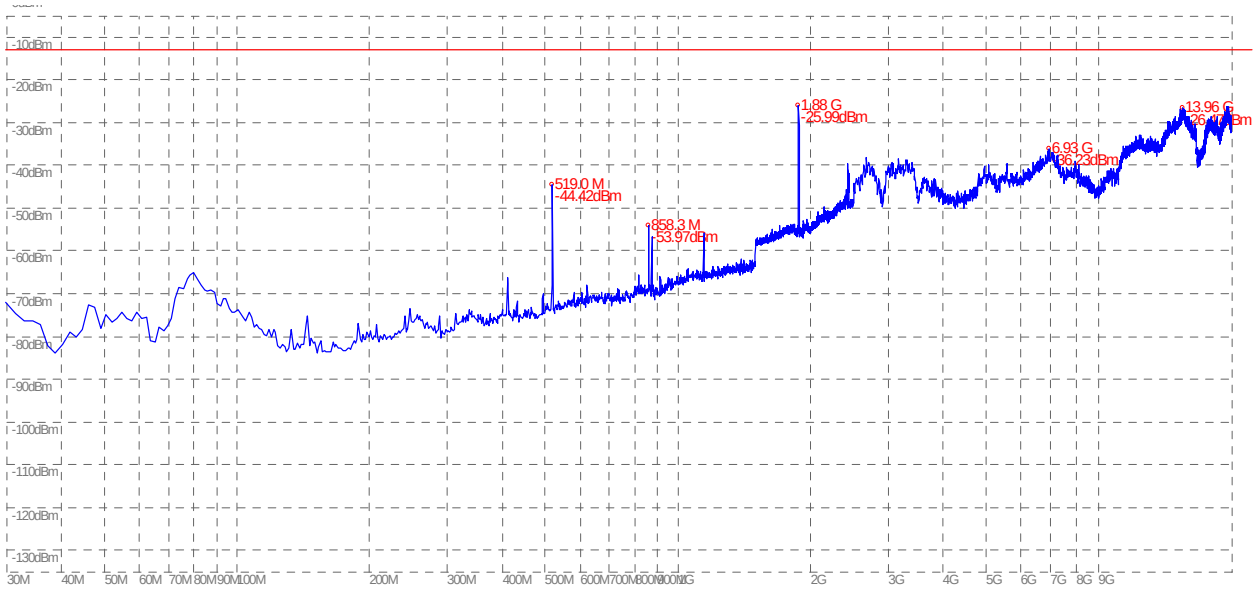
(Plot D.1: EGPRS 1900MHz Channel = 512, Test Antenna Horizontal)



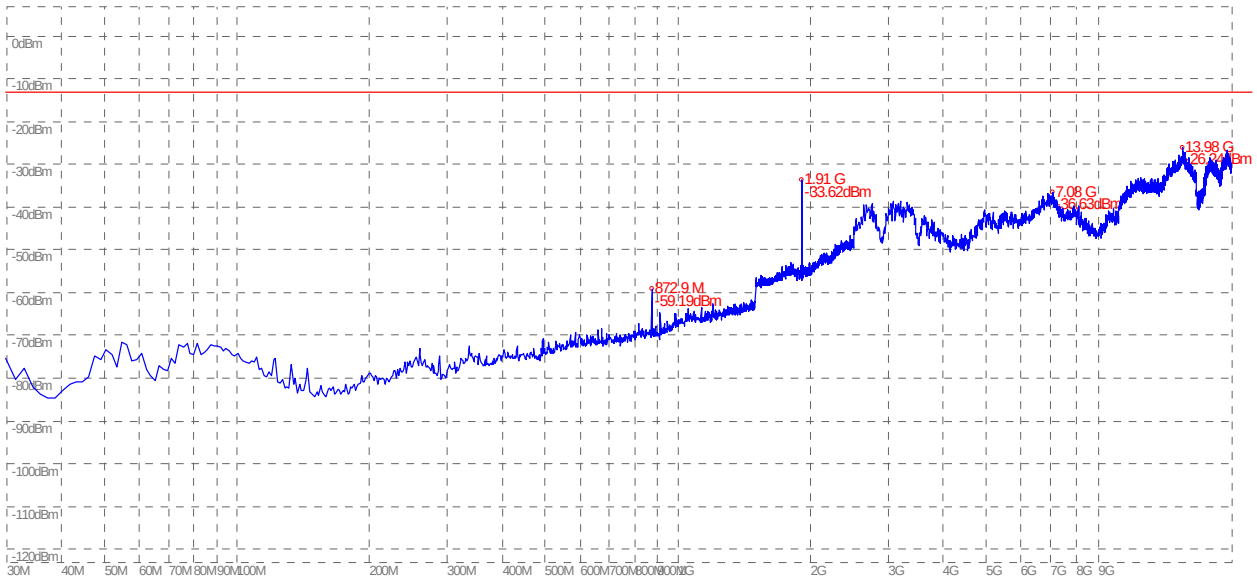
(Plot D.2: EGPRS 1900MHz Channel = 512, Test Antenna Vertical)



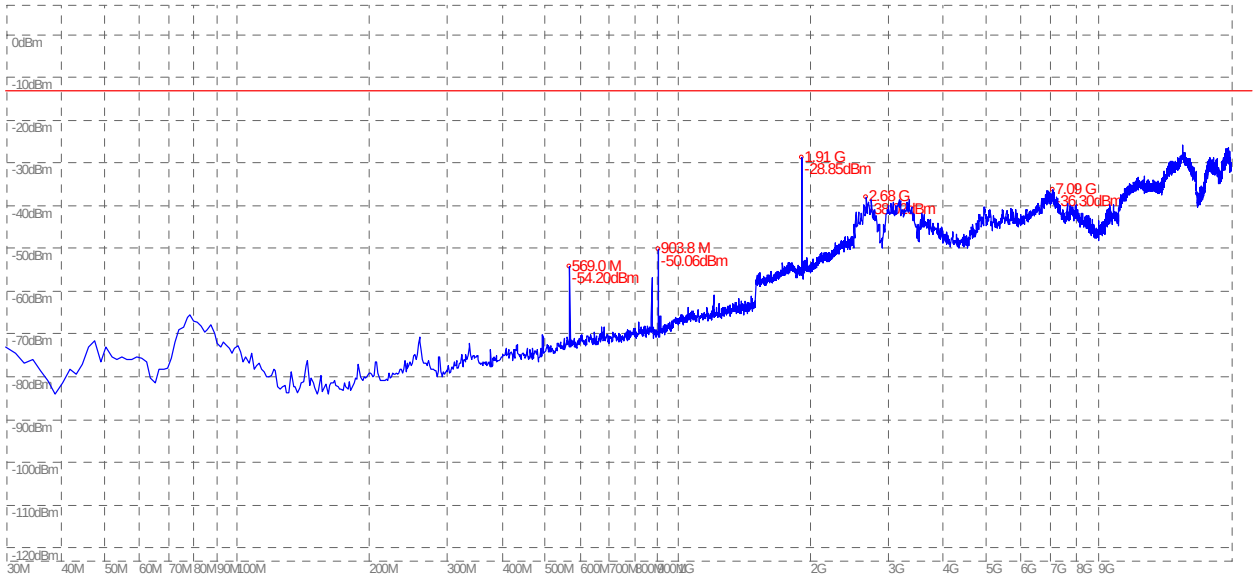
(Plot D.3: EGPRS 1900MHz Channel = 661, Test Antenna Horizontal)



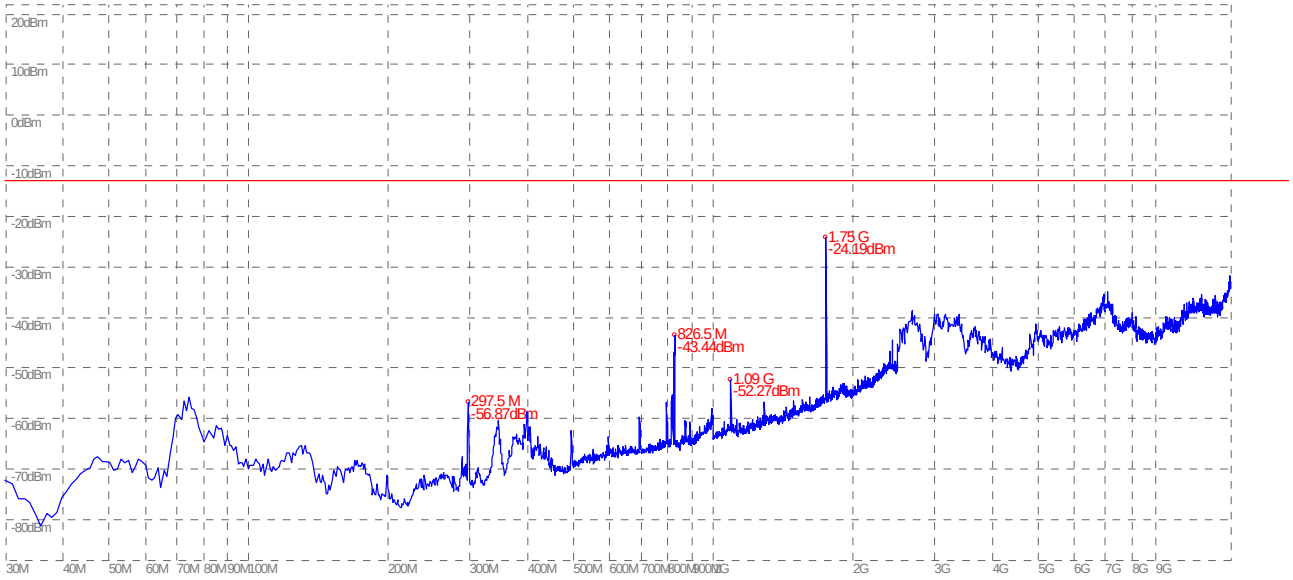
(Plot D.4: EGPRS 1900MHz Channel = 661, Test Antenna Vertical)



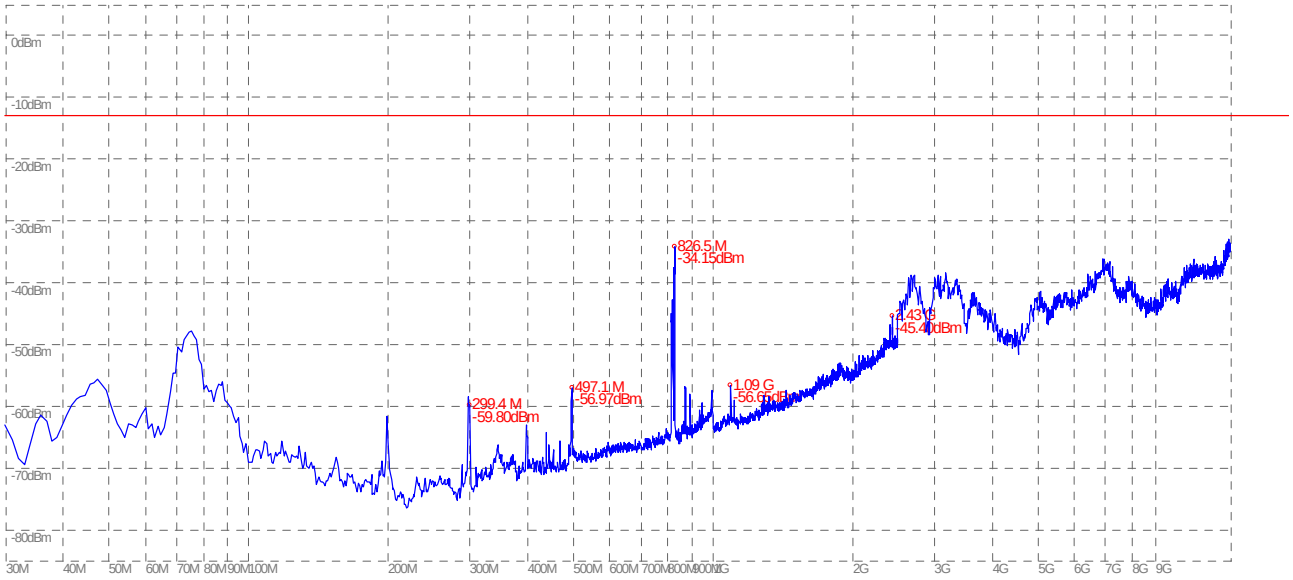
(Plot D.5: EGPRS 1900MHz Channel = 810, Test Antenna Horizontal)



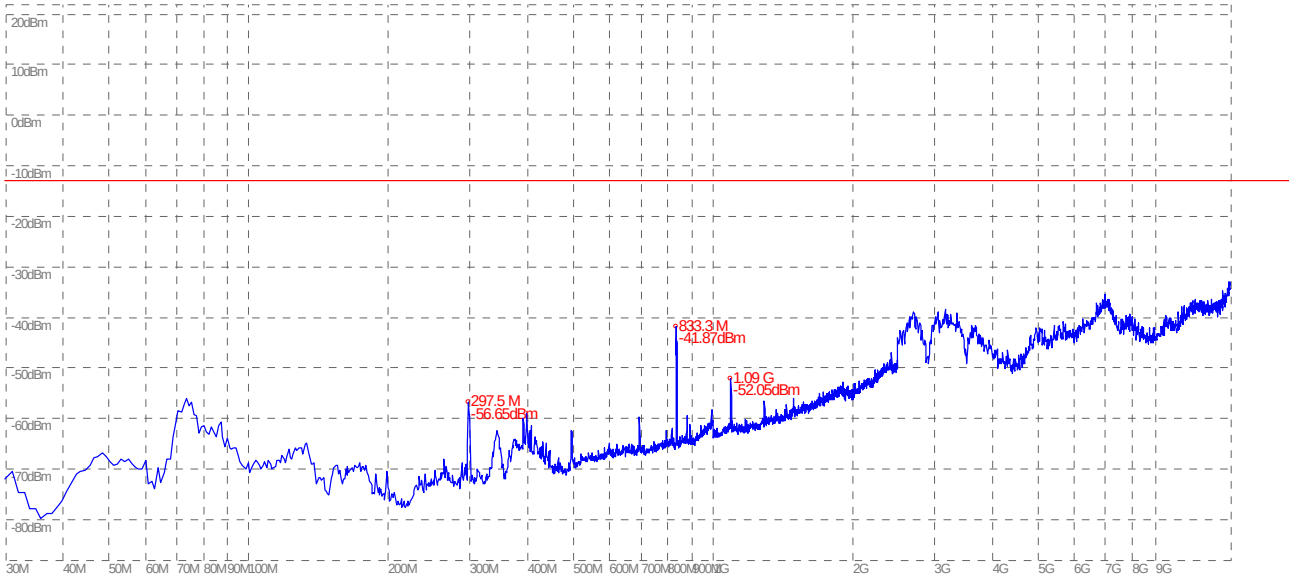
(Plot D.6: EGPRS 1900MHz Channel = 810, Test Antenna Vertical)



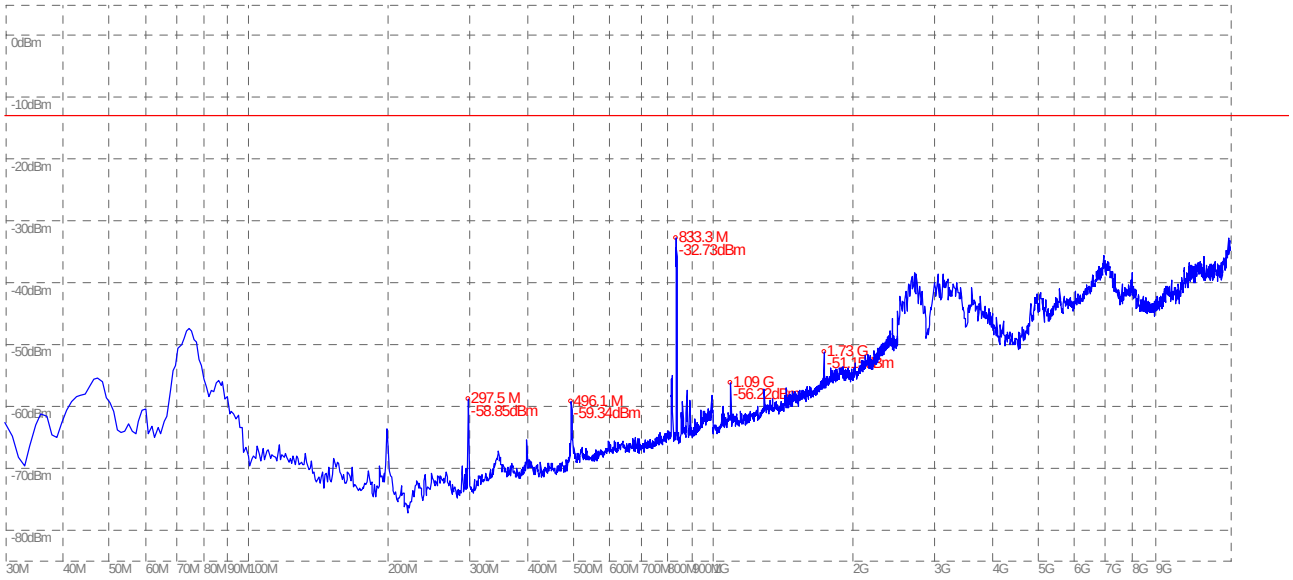
(Plot E.1: WCDMA 850MHz Channel = 4357, Test Antenna Horizontal)



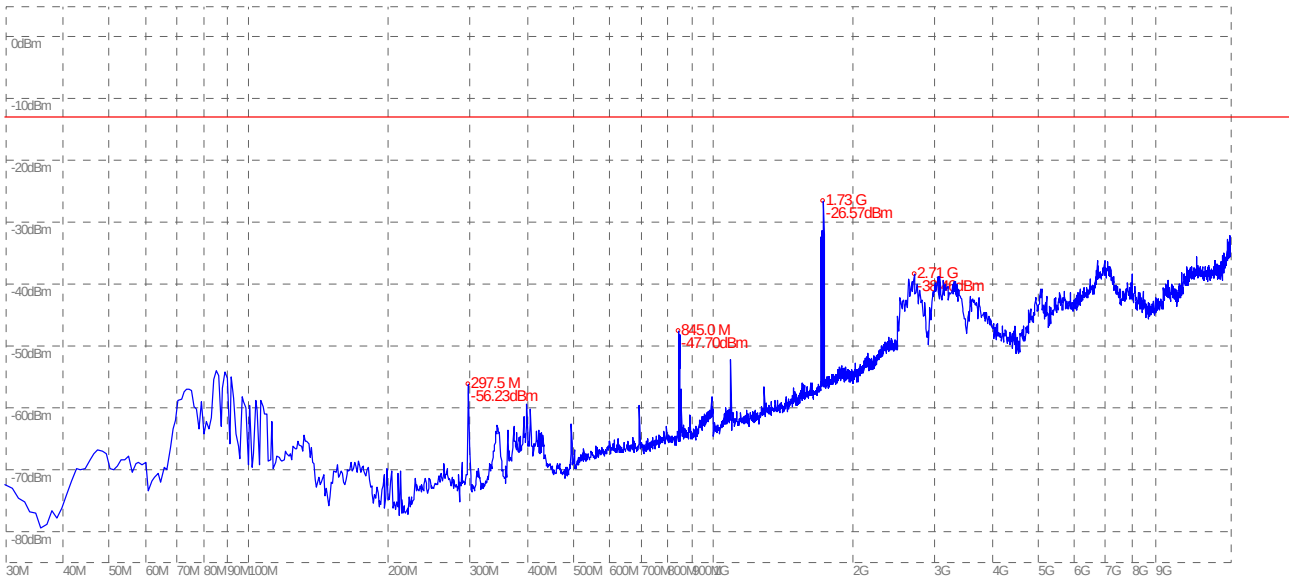
(Plot E.2: WCDMA 850MHz Channel = 4357, Test Antenna Vertical)



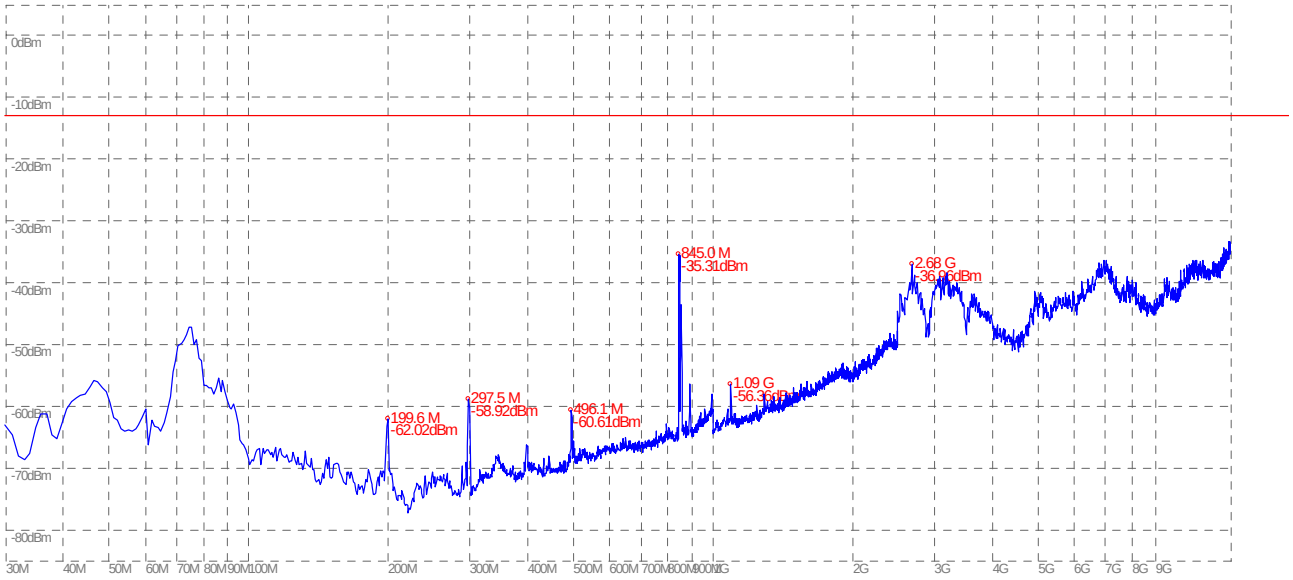
(Plot E.3: WCDMA 850MHz Channel = 4400, Test Antenna Horizontal)



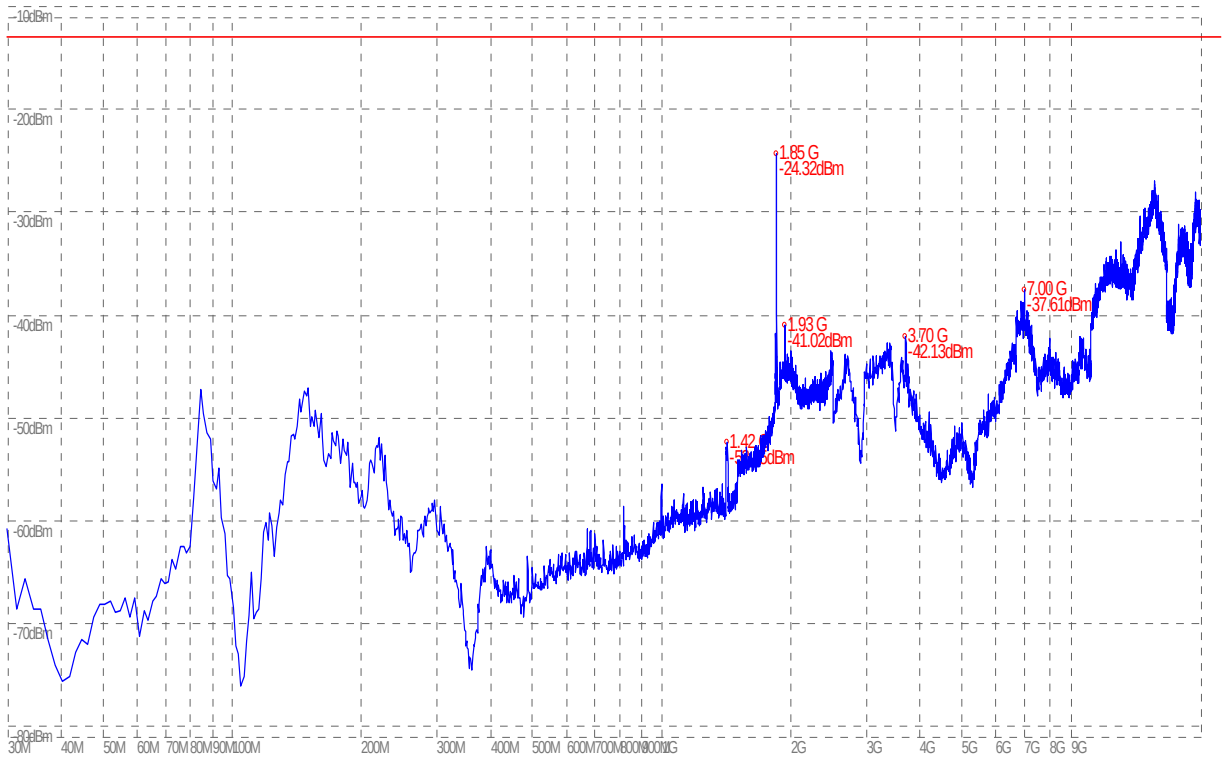
(Plot E.4: WCDMA 850MHz Channel = 4400, Test Antenna Vertical)



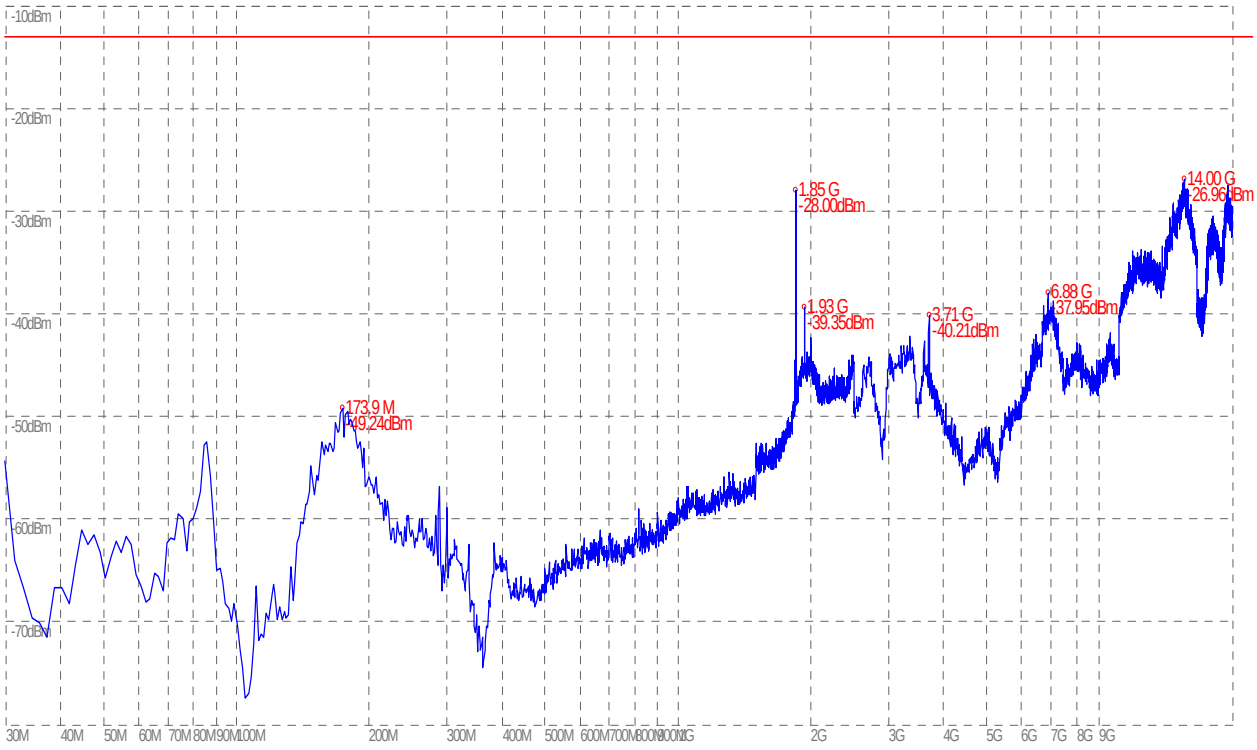
(Plot E.5: WCDMA 850MHz Channel = 4458, Test Antenna Horizontal)



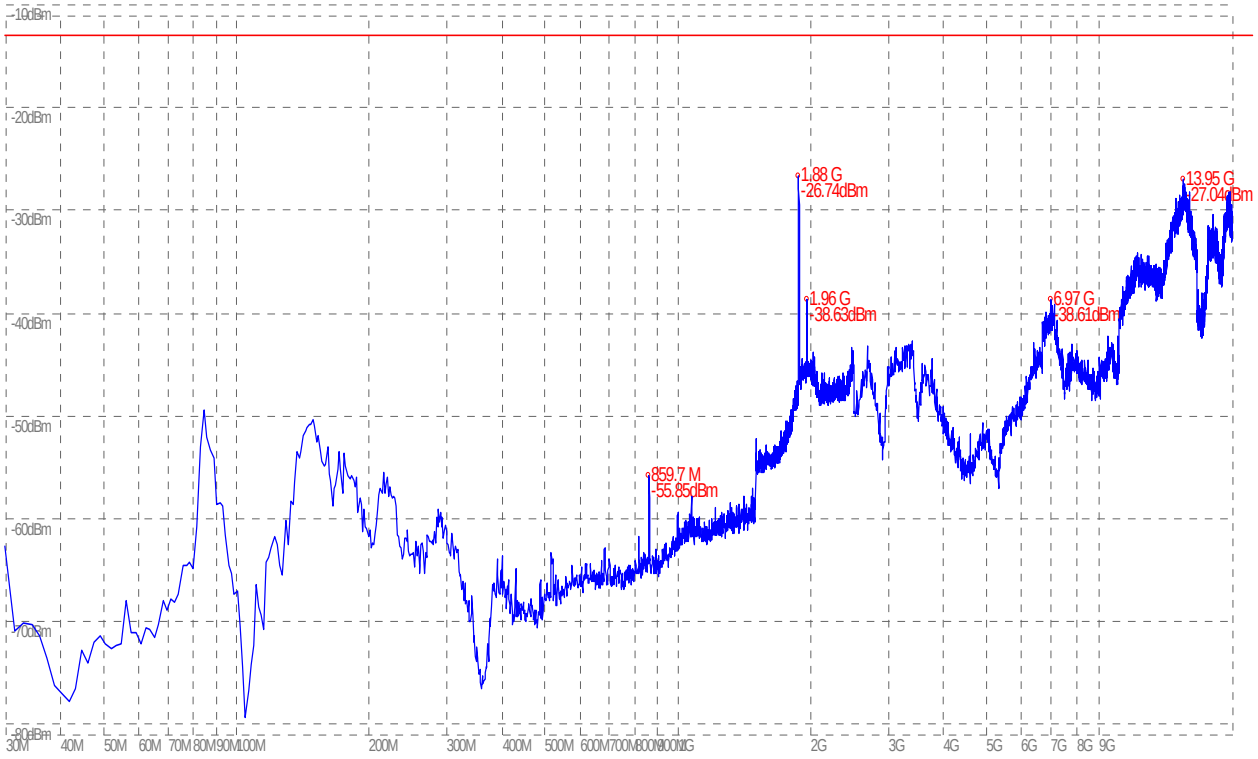
(Plot E.6: WCDMA 850MHz Channel = 4458, Test Antenna Vertical)



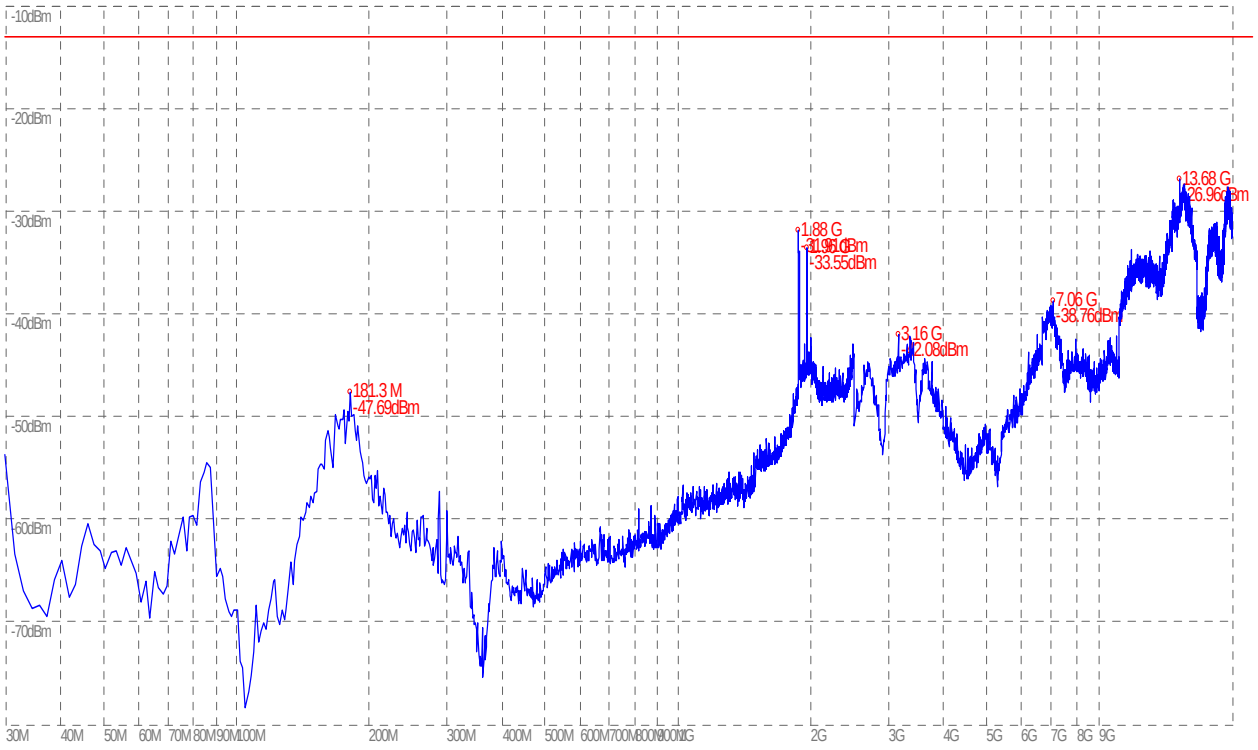
(Plot F.1: WCDMA 1900MHz Channel = 9662, Test Antenna Horizontal)



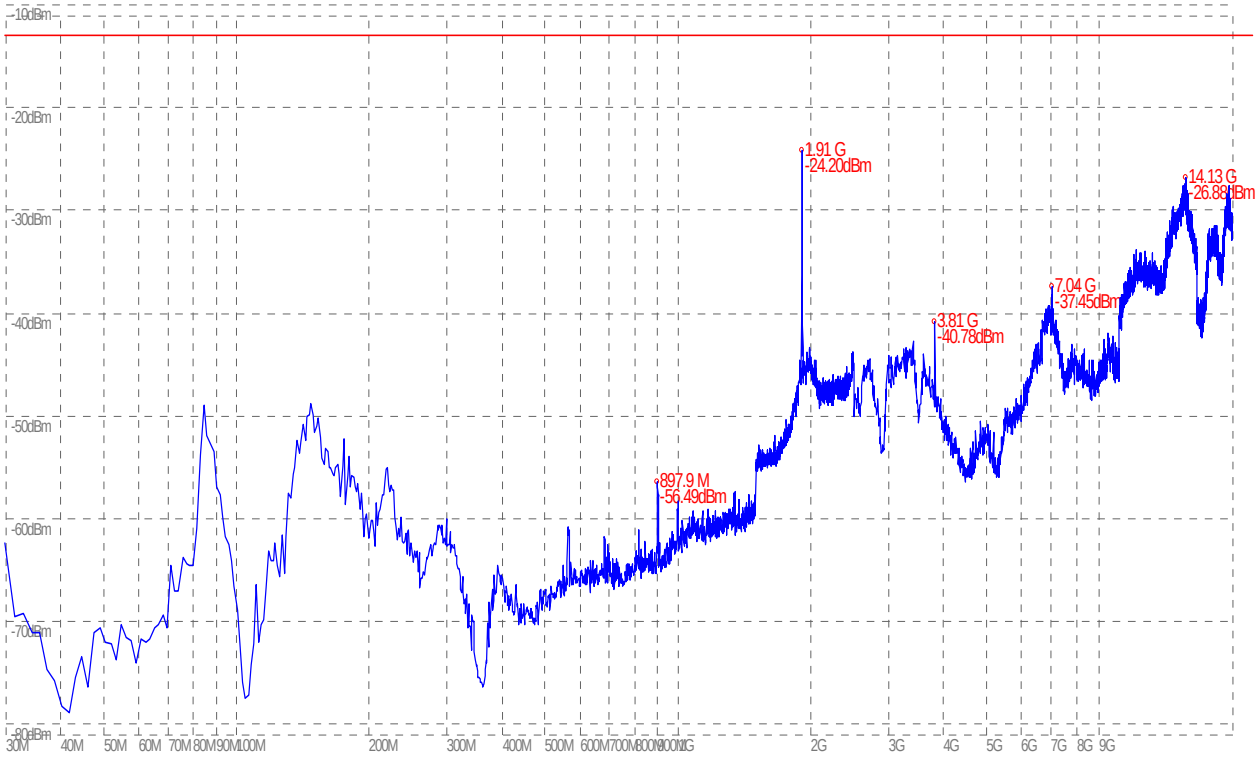
(Plot F.2: WCDMA 1900MHz Channel = 9662, Test Antenna Vertical)



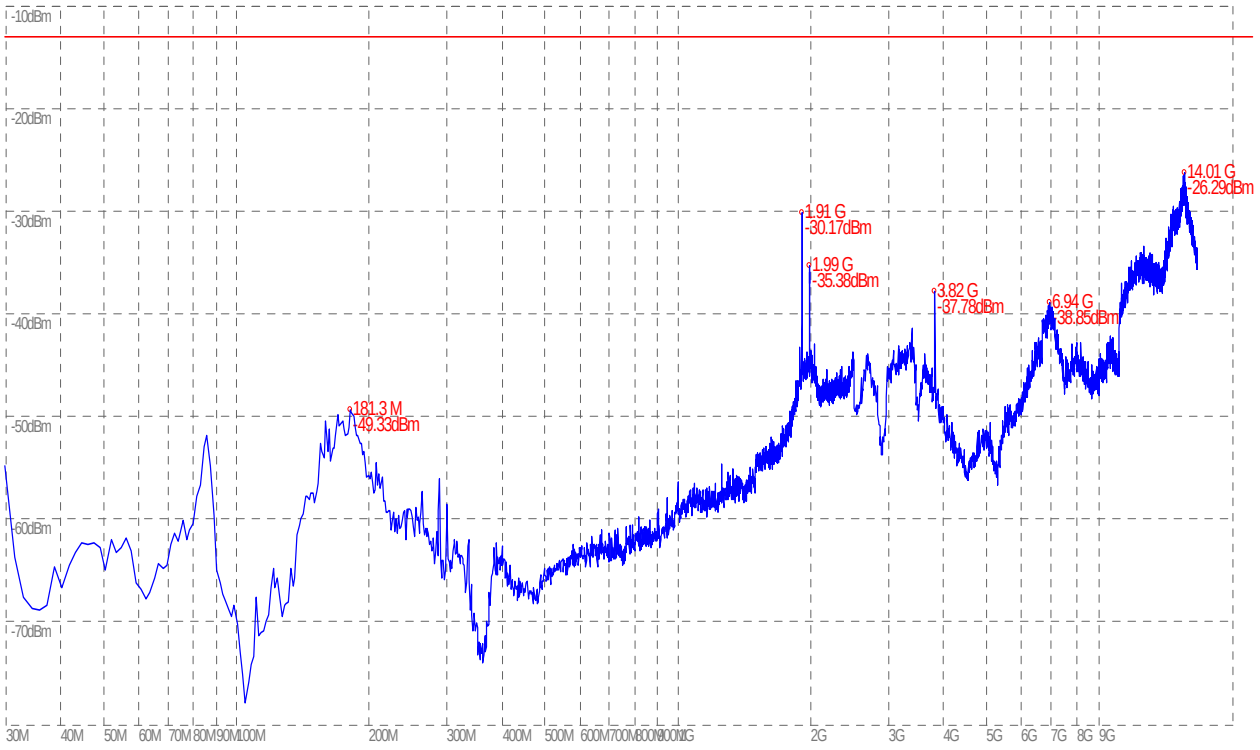
(Plot F.3: WCDMA 1900MHz Channel = 9800, Test Antenna Horizontal)



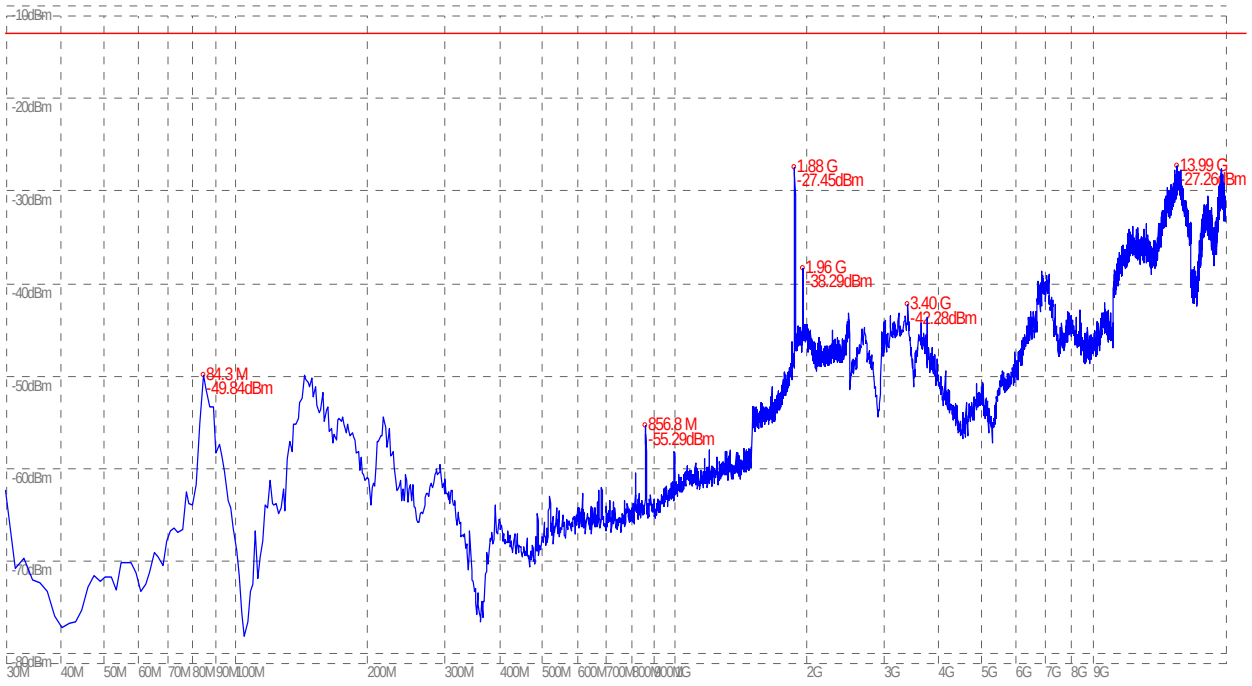
(Plot F.4: WCDMA 1900MHz Channel = 9800, Test Antenna Vertical)



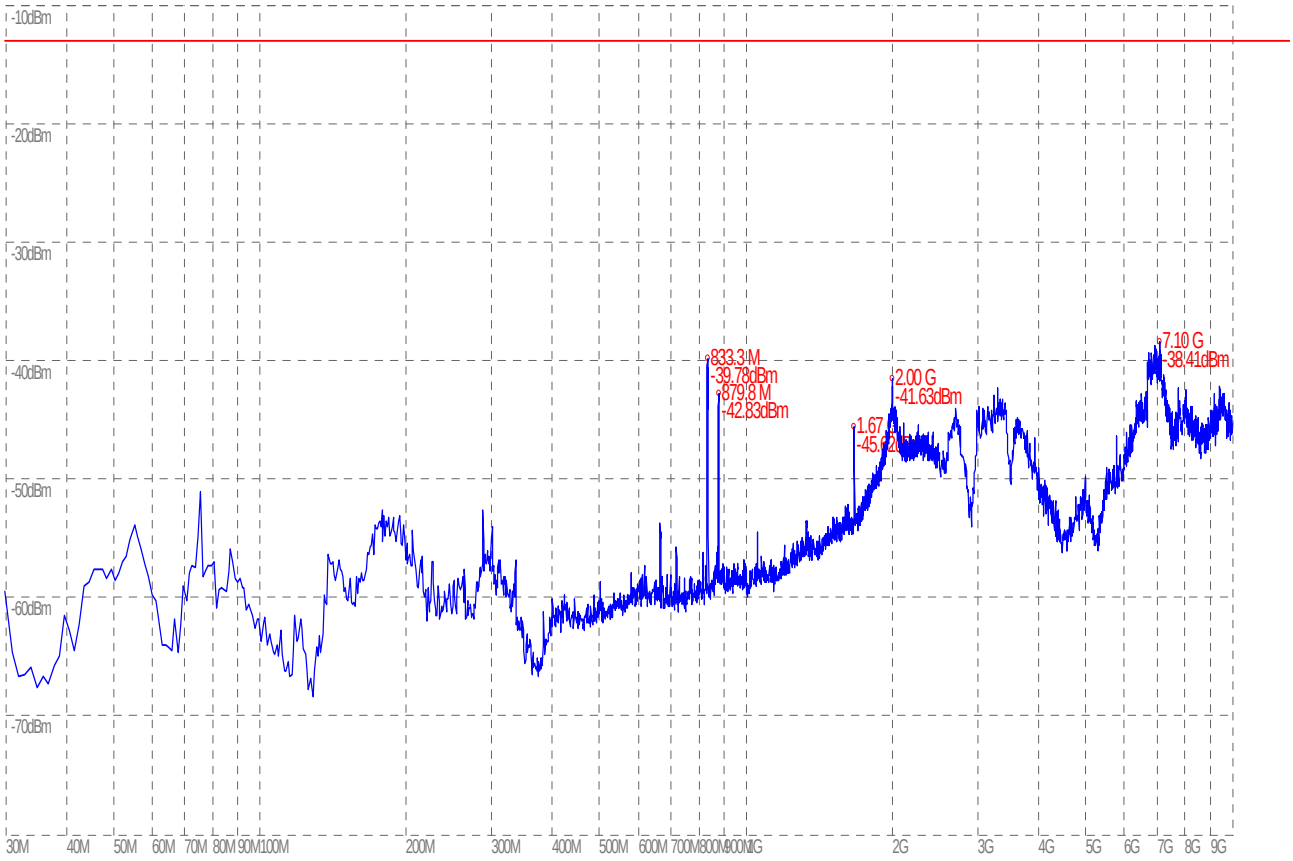
(Plot F.5: WCDMA 1900MHz Channel = 9938, Test Antenna Horizontal)



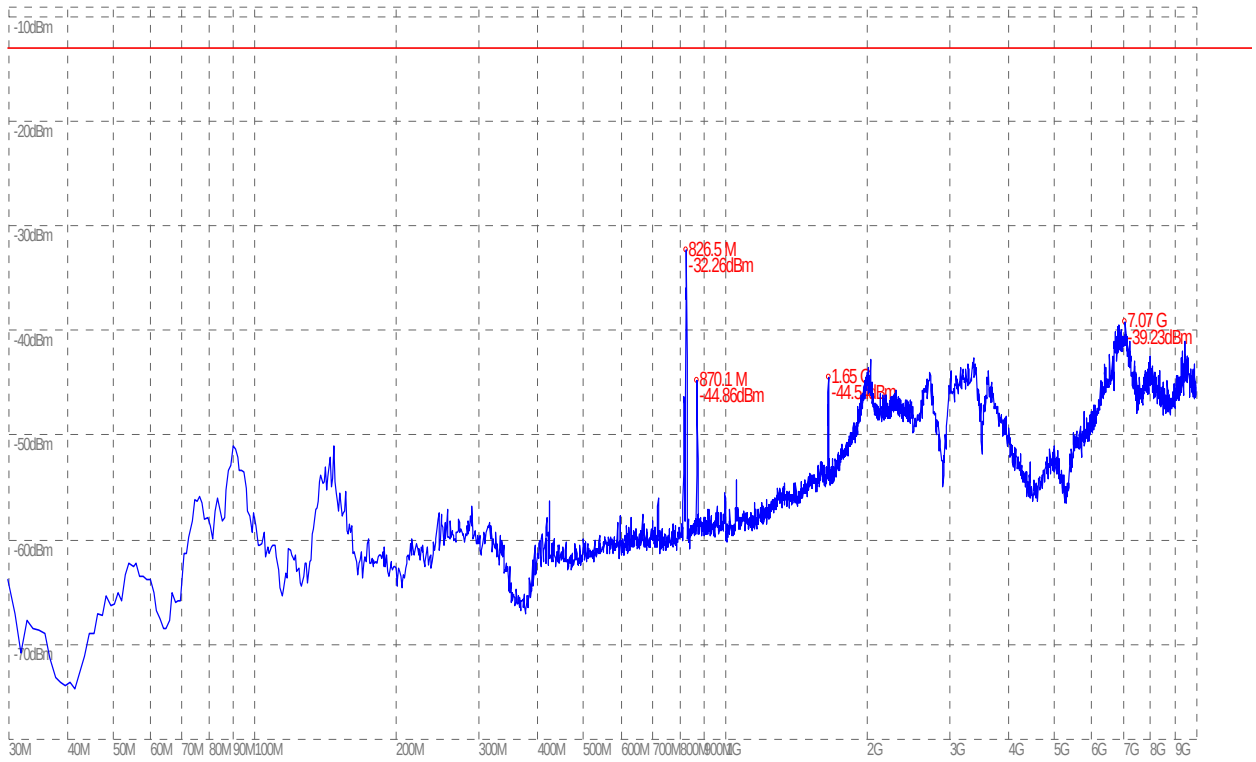
(Plot F.6: WCDMA 1900MHz Channel = 9938, Test Antenna Vertical)



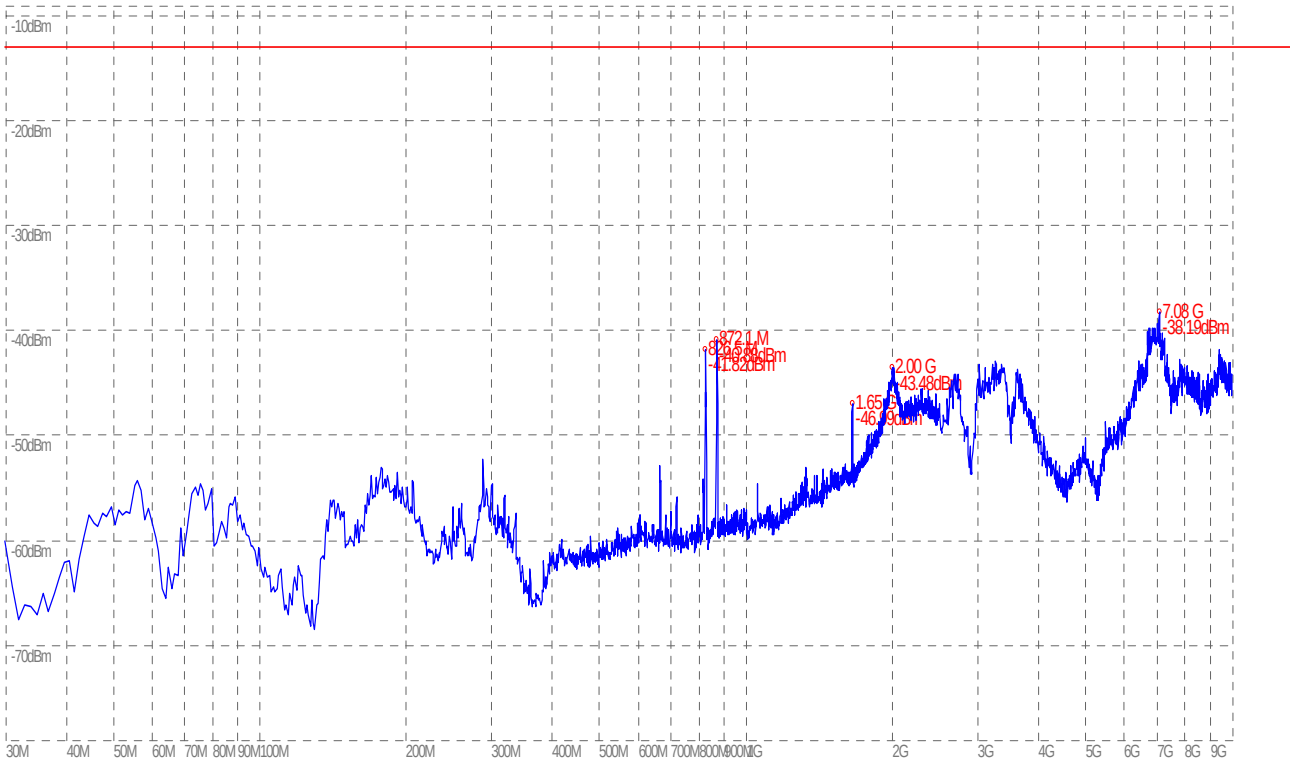
(Plot G.1: HSDPA 850MHz Channel = 4357, Test Antenna Horizontal)



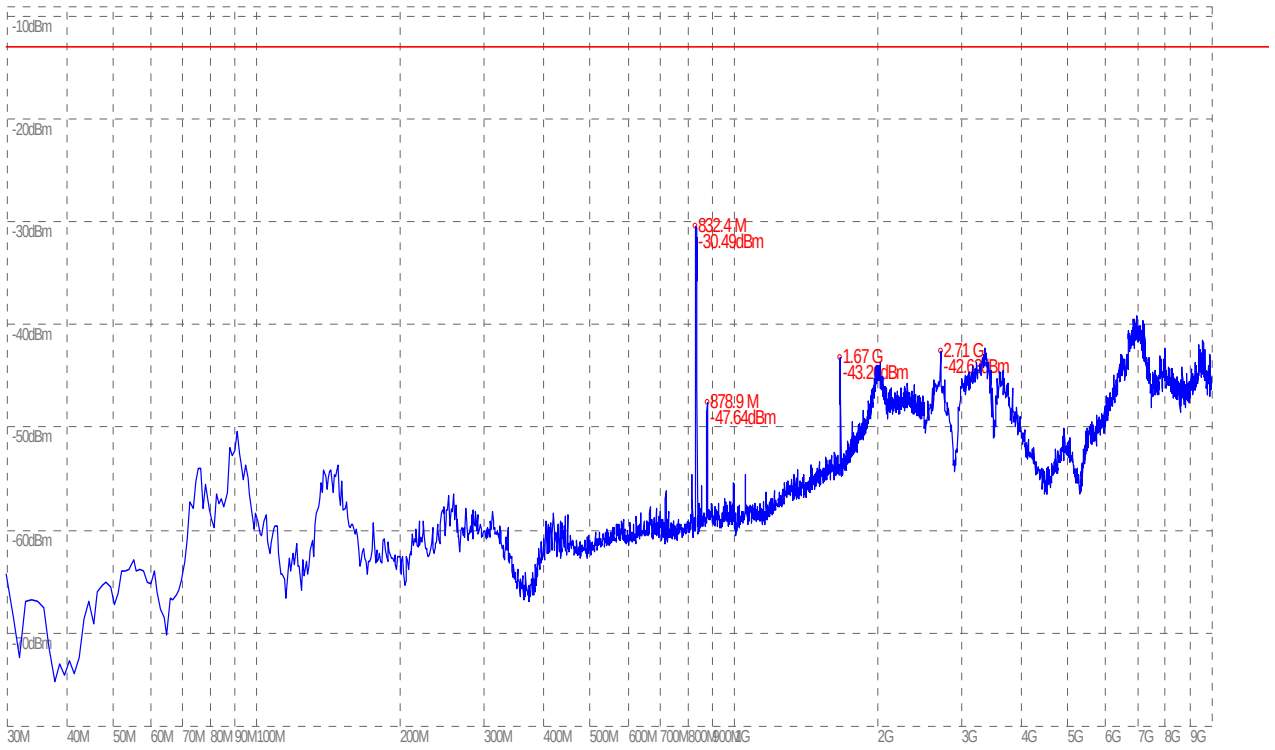
(Plot G.2: HSDPA 850MHz Channel = 4357, Test Antenna Vertical)



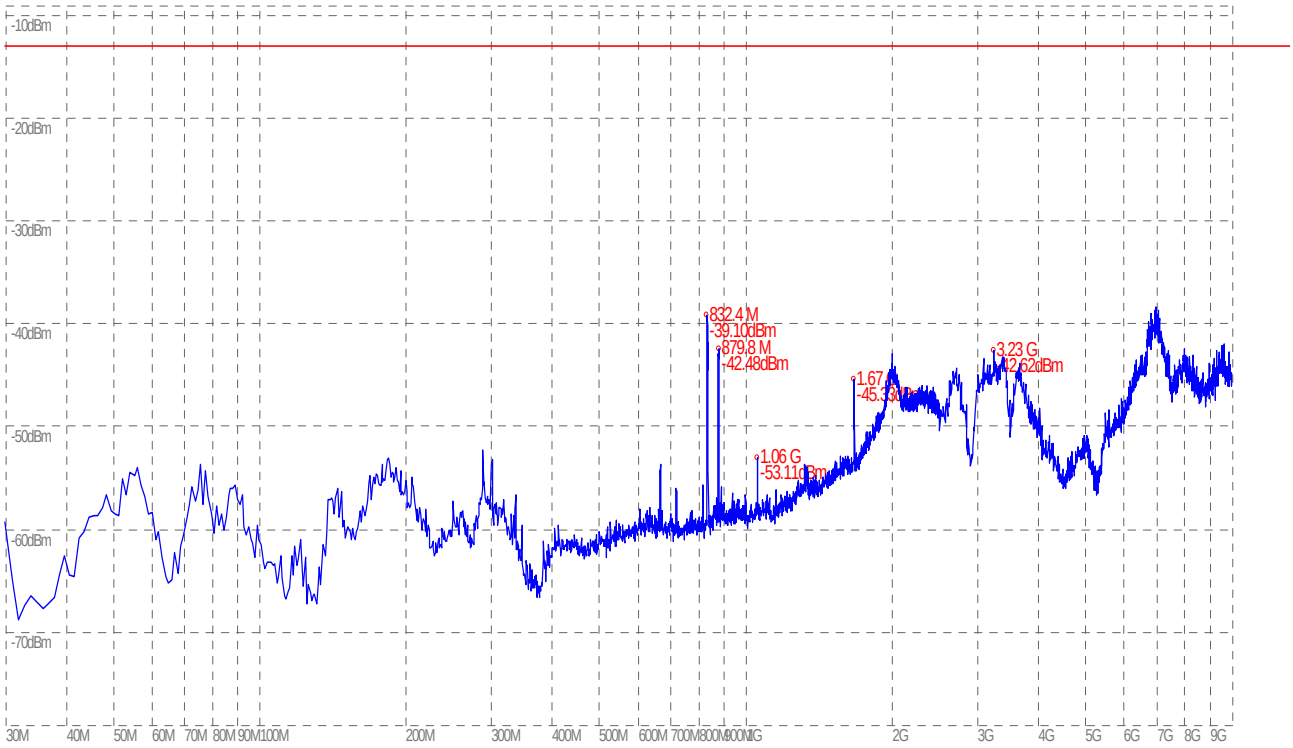
(Plot G.3: HSDPA 850MHz Channel = 4400, Test Antenna Horizontal)



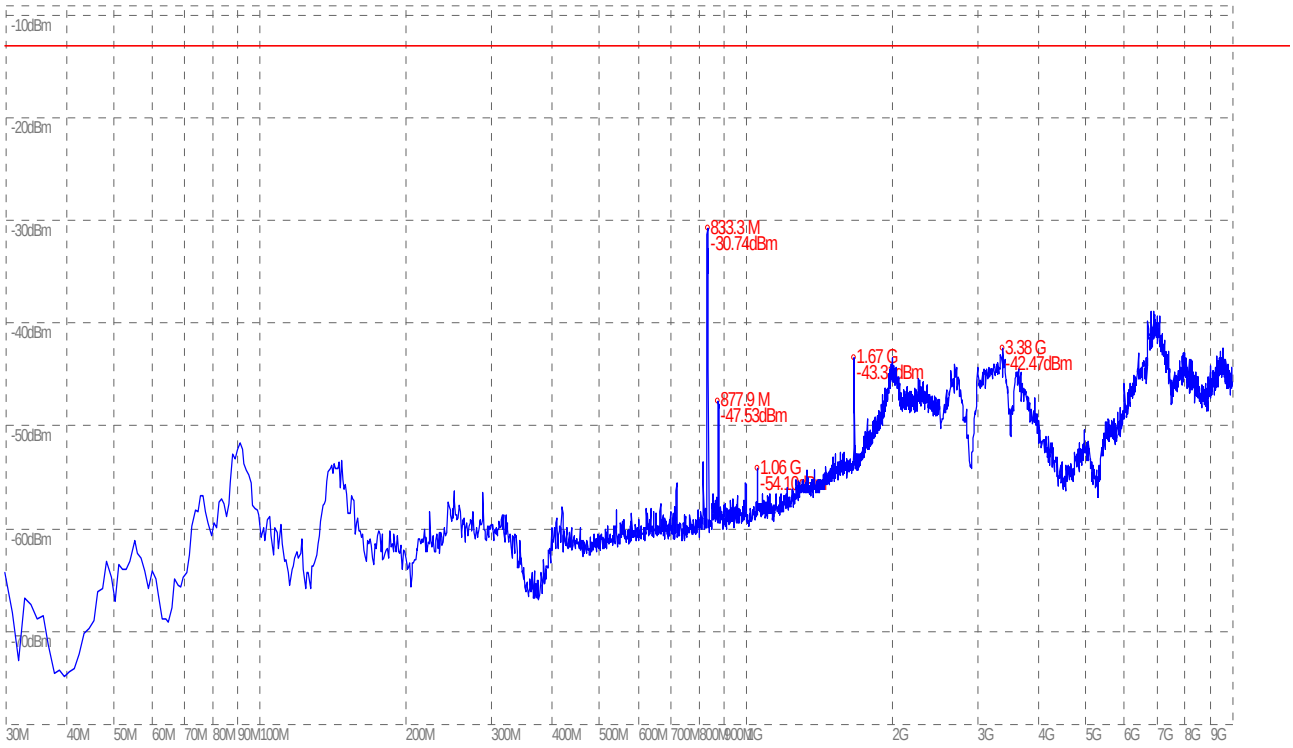
(Plot G.4: HSDPA 850MHz Channel = 4400, Test Antenna Vertical)



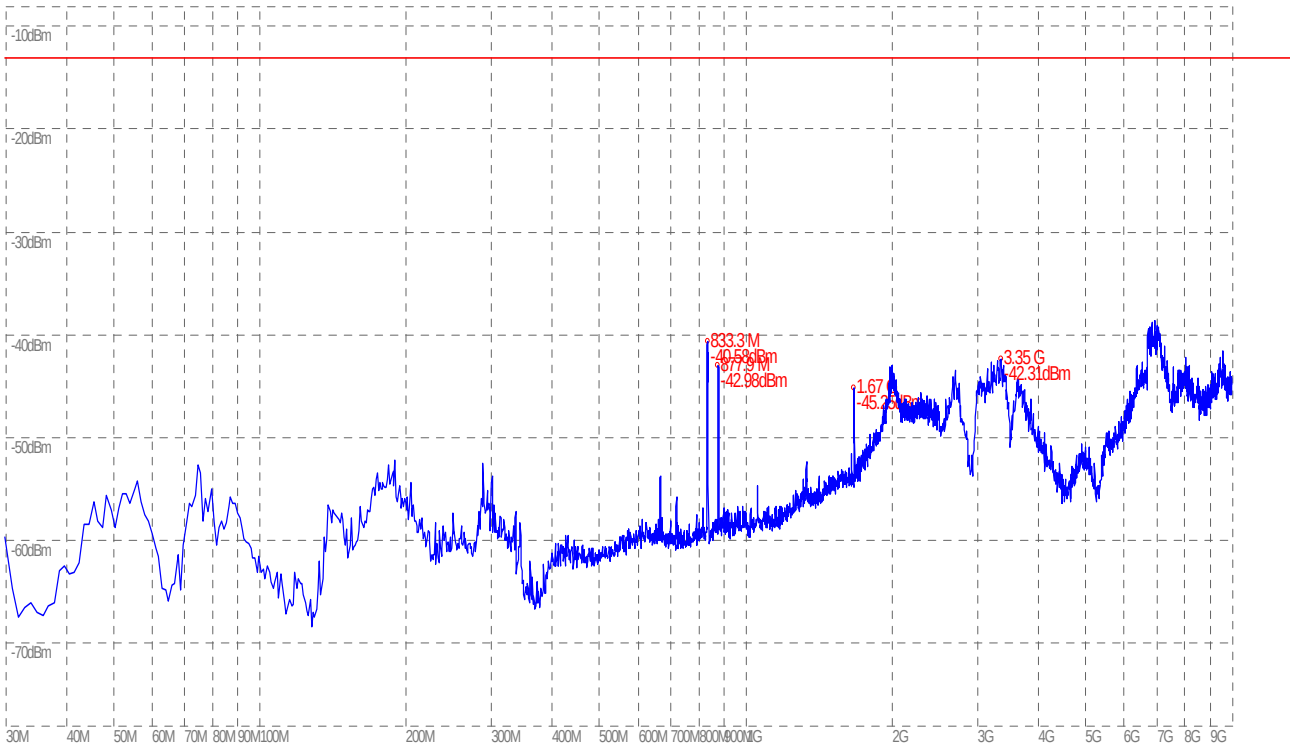
(Plot G.5: HSDPA 850MHz Channel = 4458, Test Antenna Horizontal)



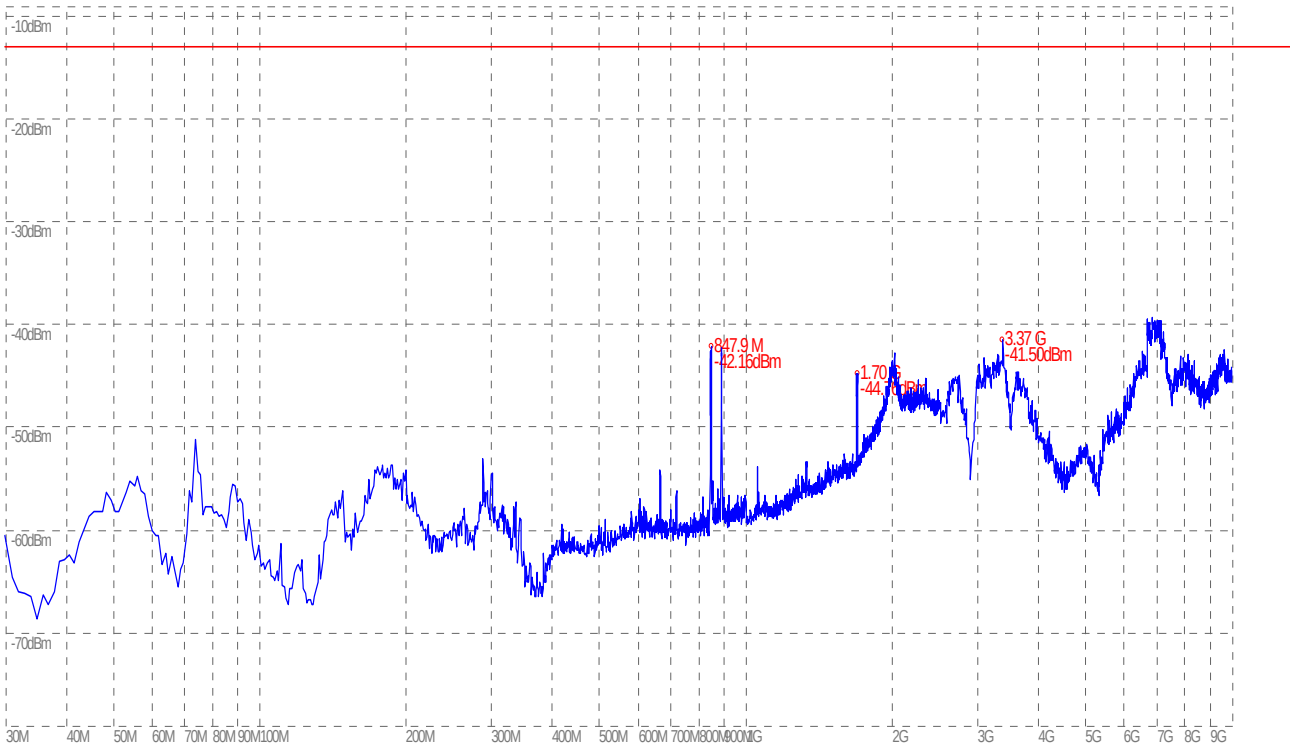
(Plot G.6: HSDPA 850MHz Channel = 4458, Test Antenna Vertical)



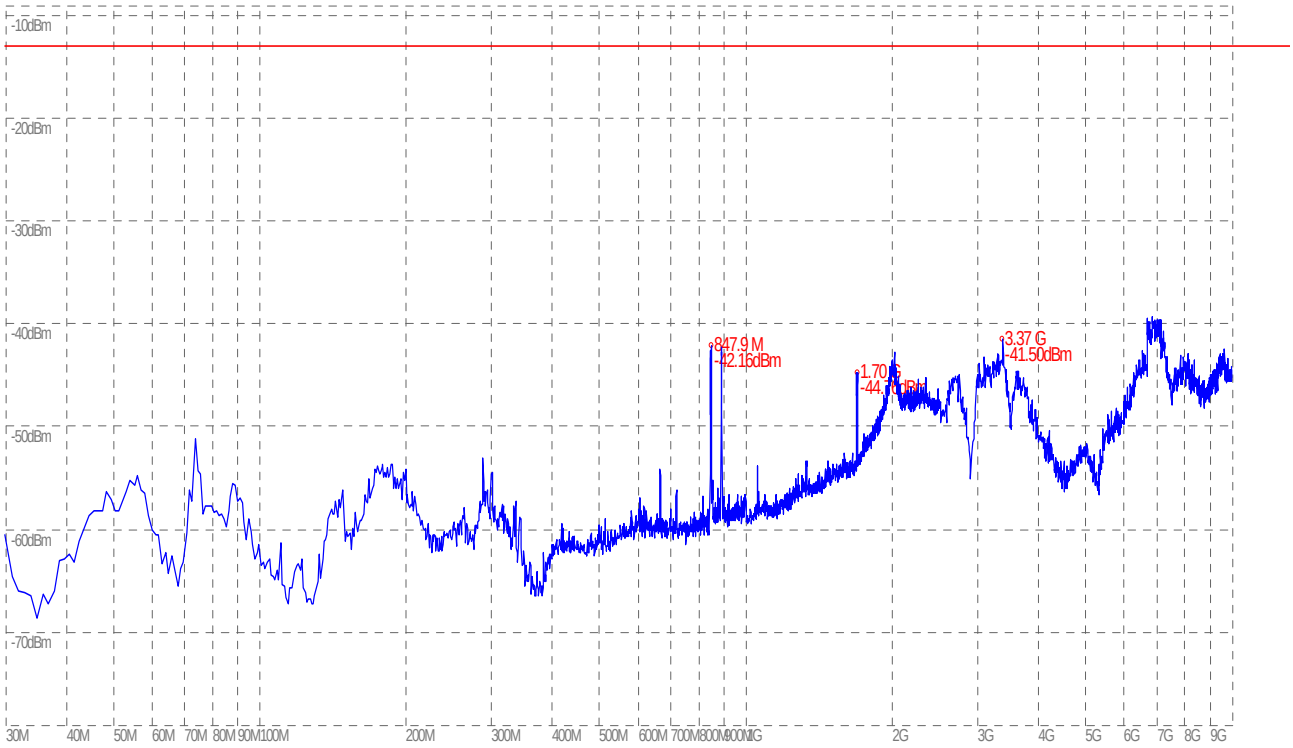
(Plot H.1: HSDPA 1900 MHz Channel = 9662, Test Antenna Horizontal)



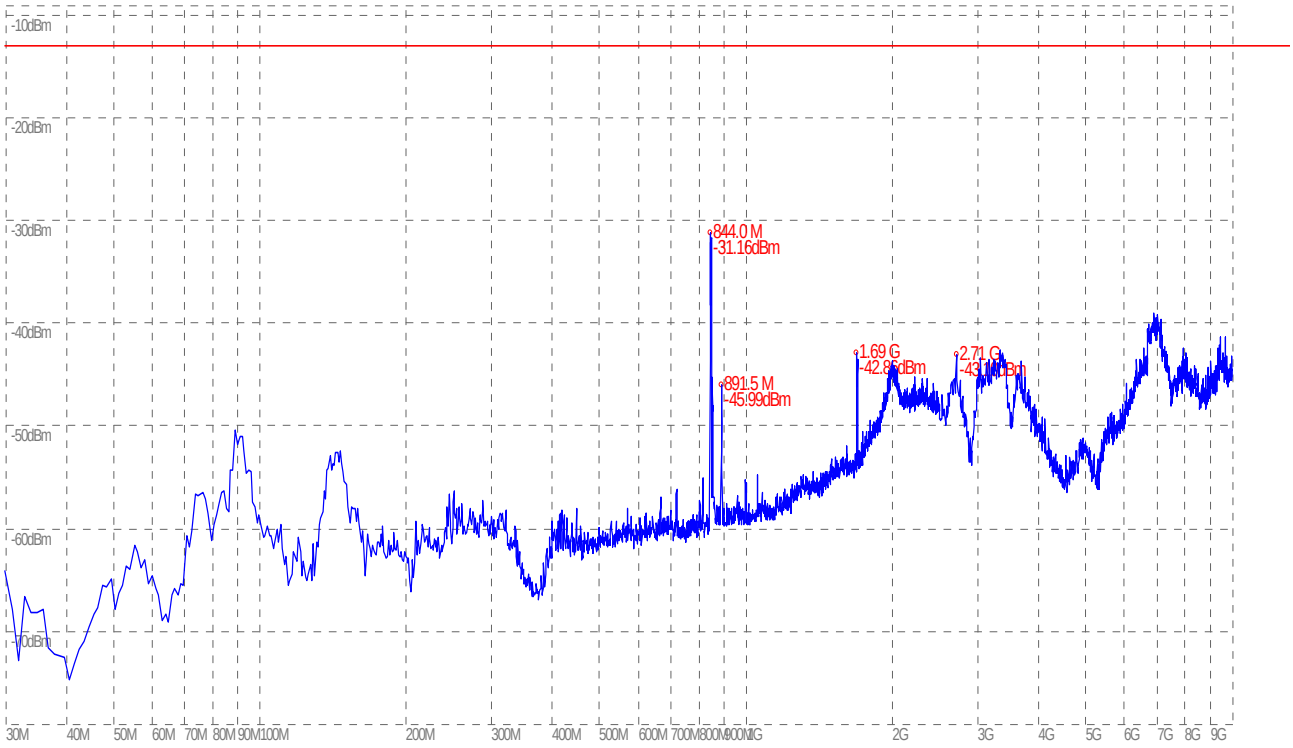
(Plot H.2: HSDPA 1900 MHz Channel = 9662, Test Antenna Vertical)



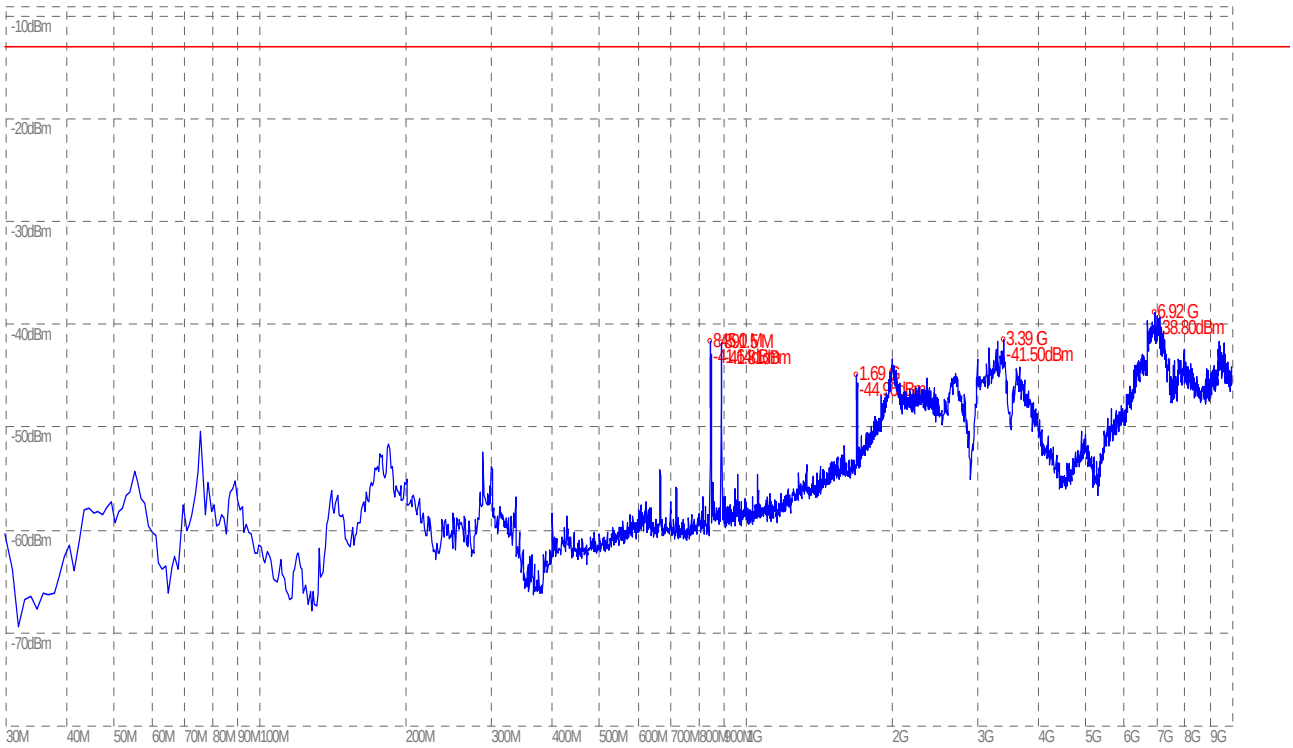
(Plot H.3: HSDPA 1900 MHz Channel = 9800, Test Antenna Horizontal)



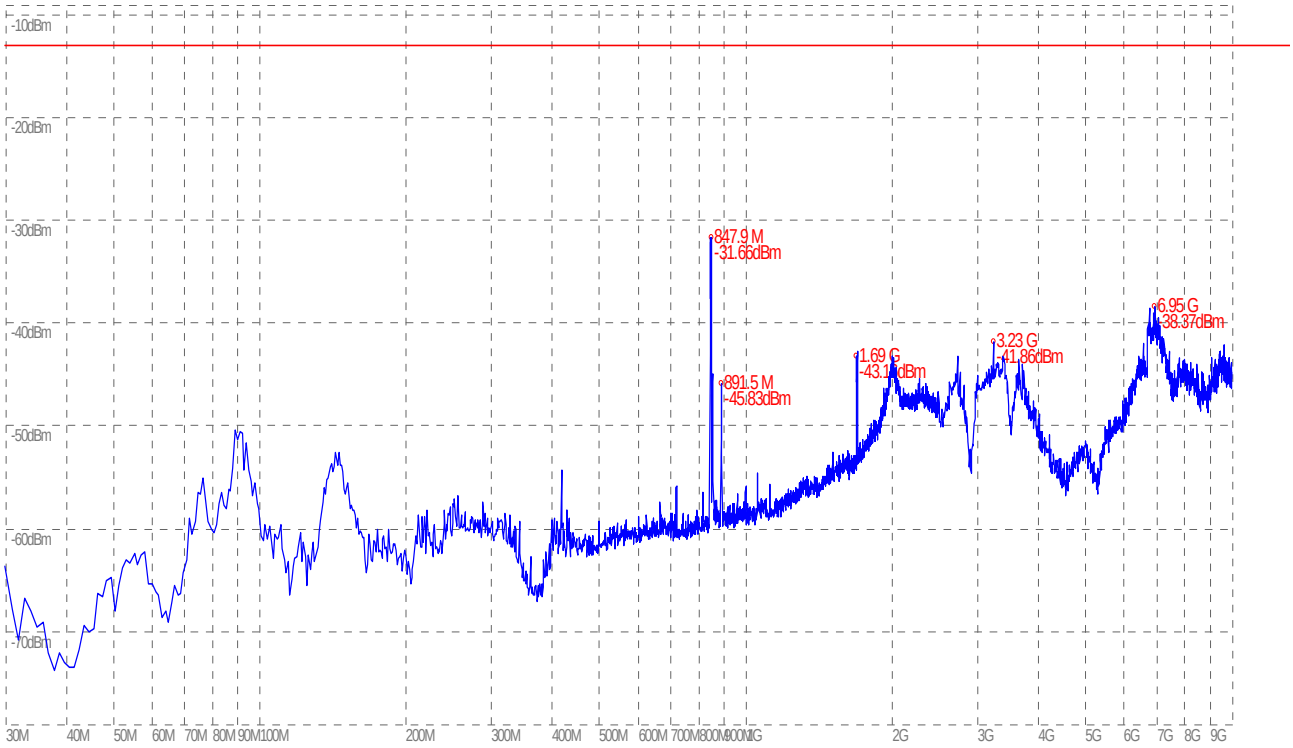
(Plot H.4: HSDPA 1900 MHz Channel = 9800, Test Antenna Vertical)



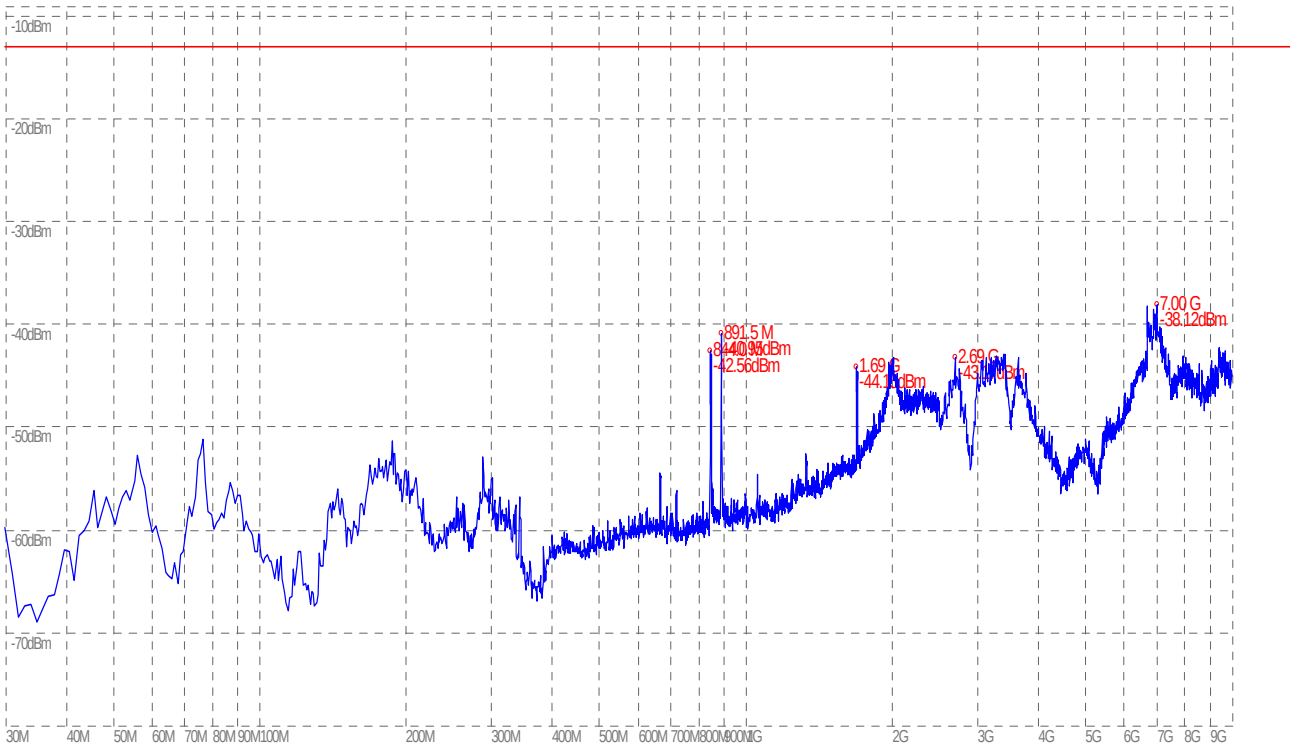
(Plot H.5: HSDPA 1900 MHz Channel = 9938, Test Antenna Horizontal)



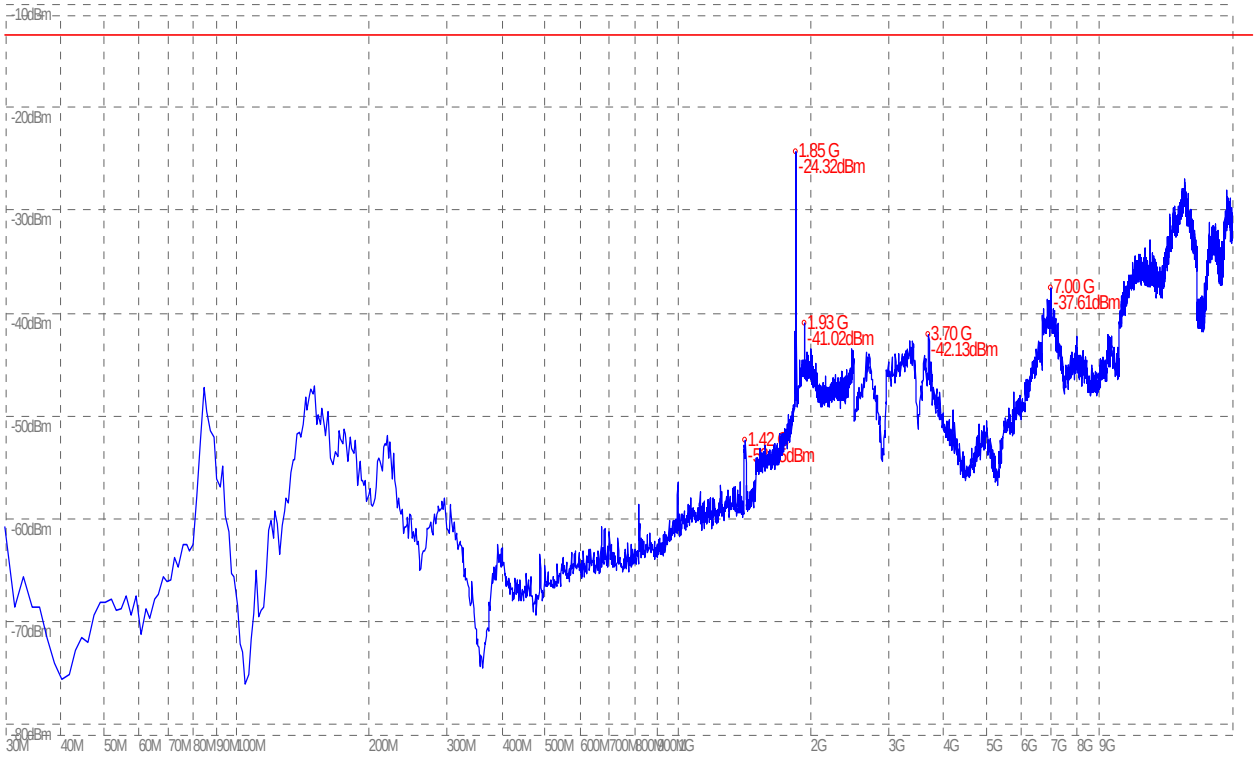
(Plot H.6: HSDPA 1900 MHz Channel = 9938, Test Antenna Vertical)



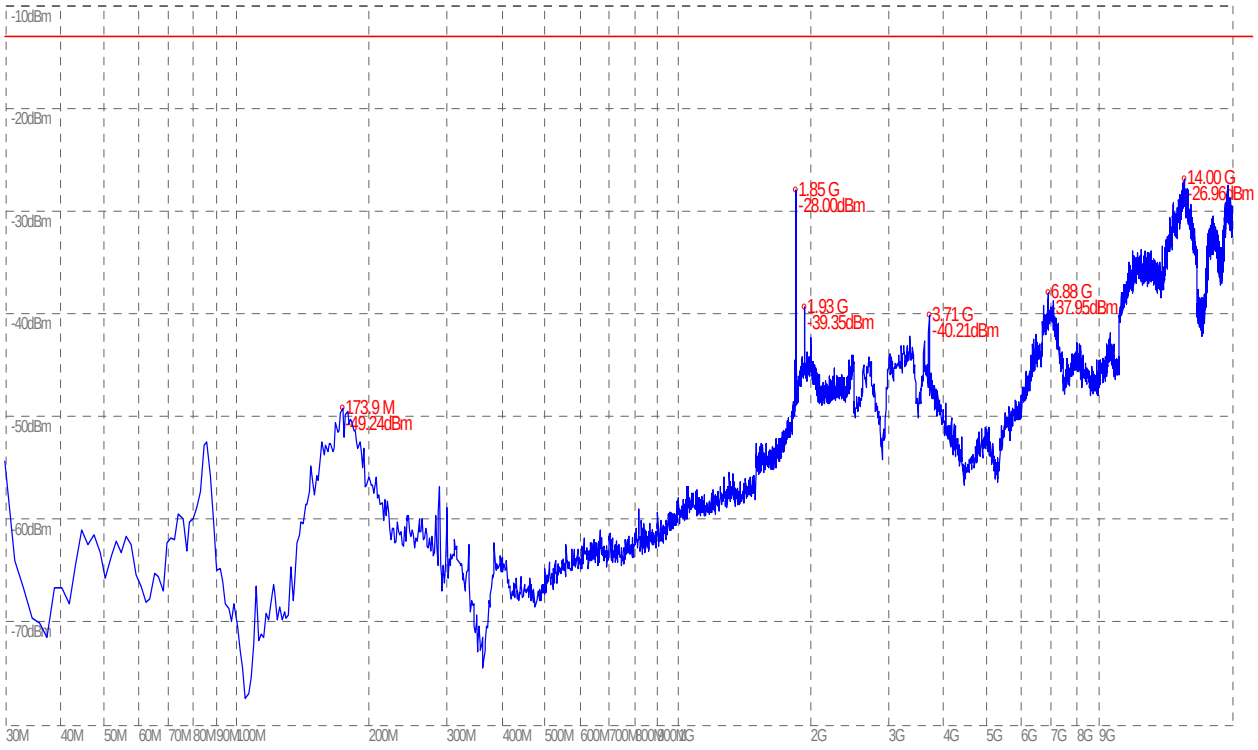
(Plot I.1: HSUPA 850MHz Channel = 4357, Test Antenna Horizontal)



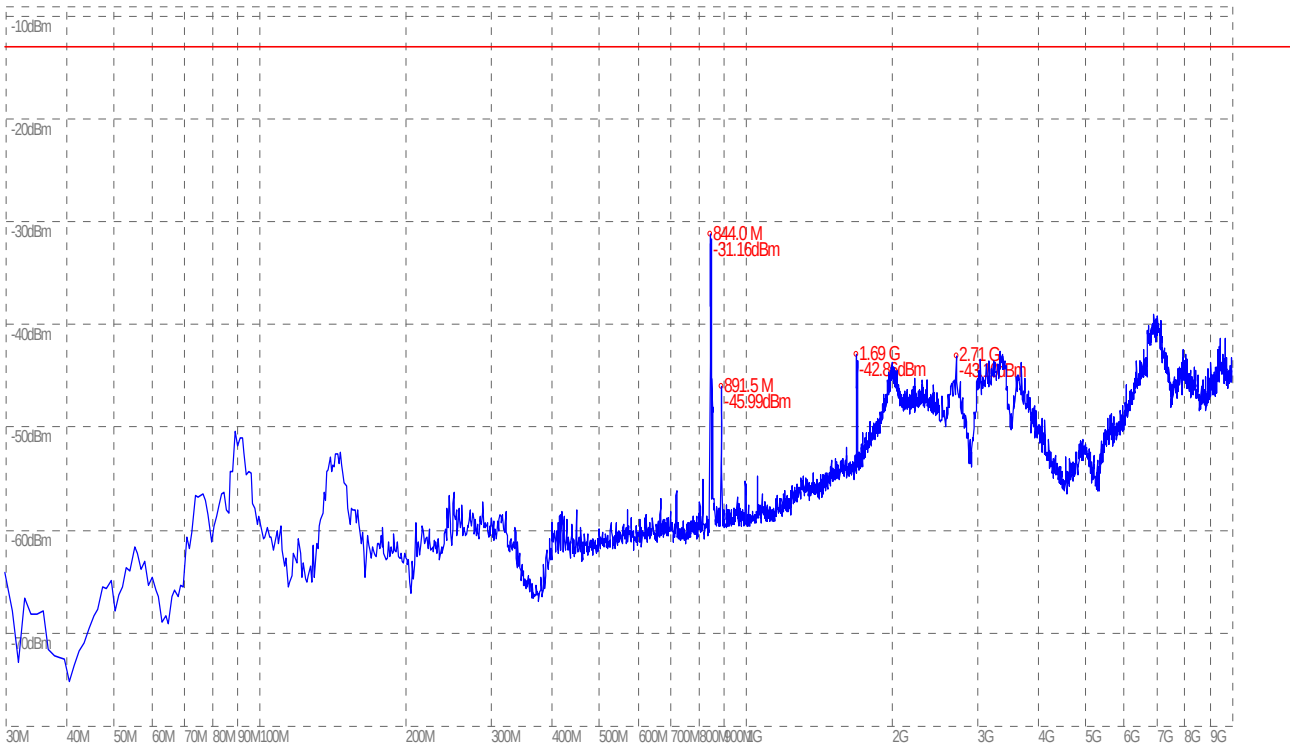
(Plot I.2: HSUPA 850 MHz Channel = 4357, Test Antenna Vertical)



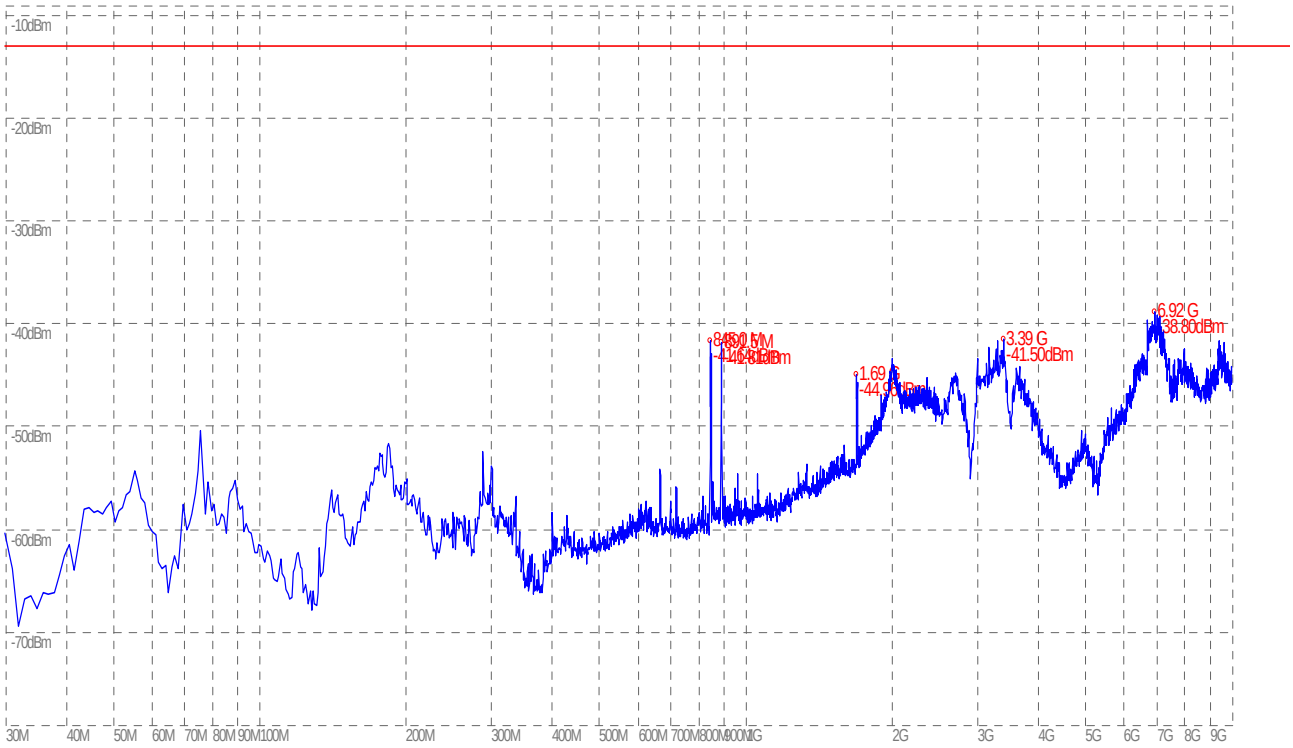
(Plot I.3: HSUPA 850MHz Channel = 4400, Test Antenna Horizontal)



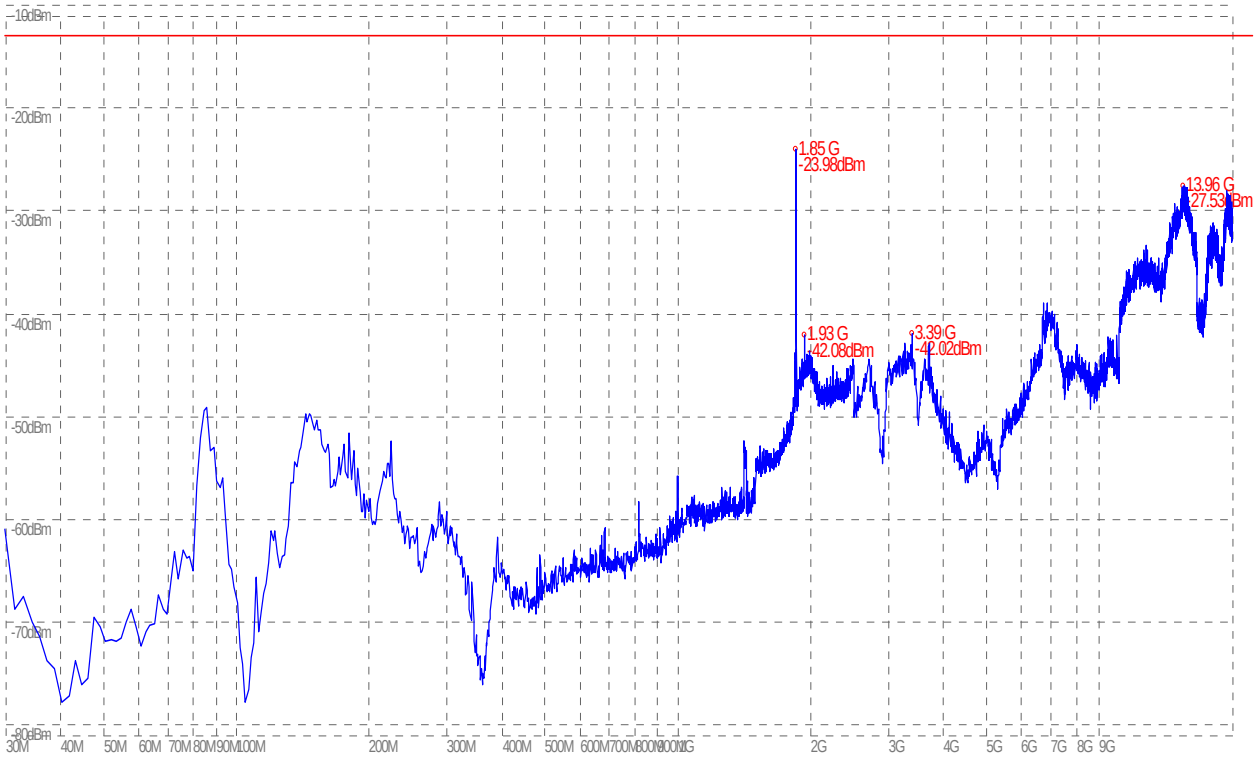
(Plot I.4: HSUPA 850MHz Channel = 4400, Test Antenna Vertical)



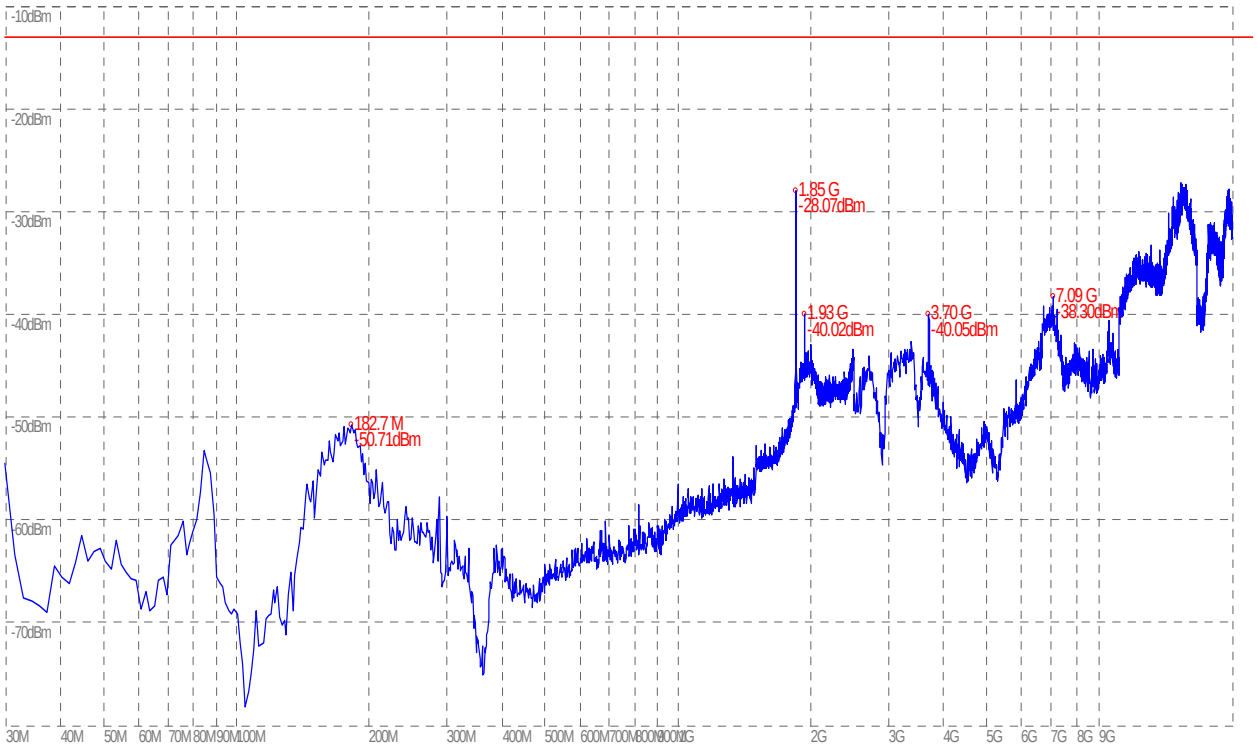
(Plot I.5: HSUPA 850MHz Channel = 4458, Test Antenna Horizontal)



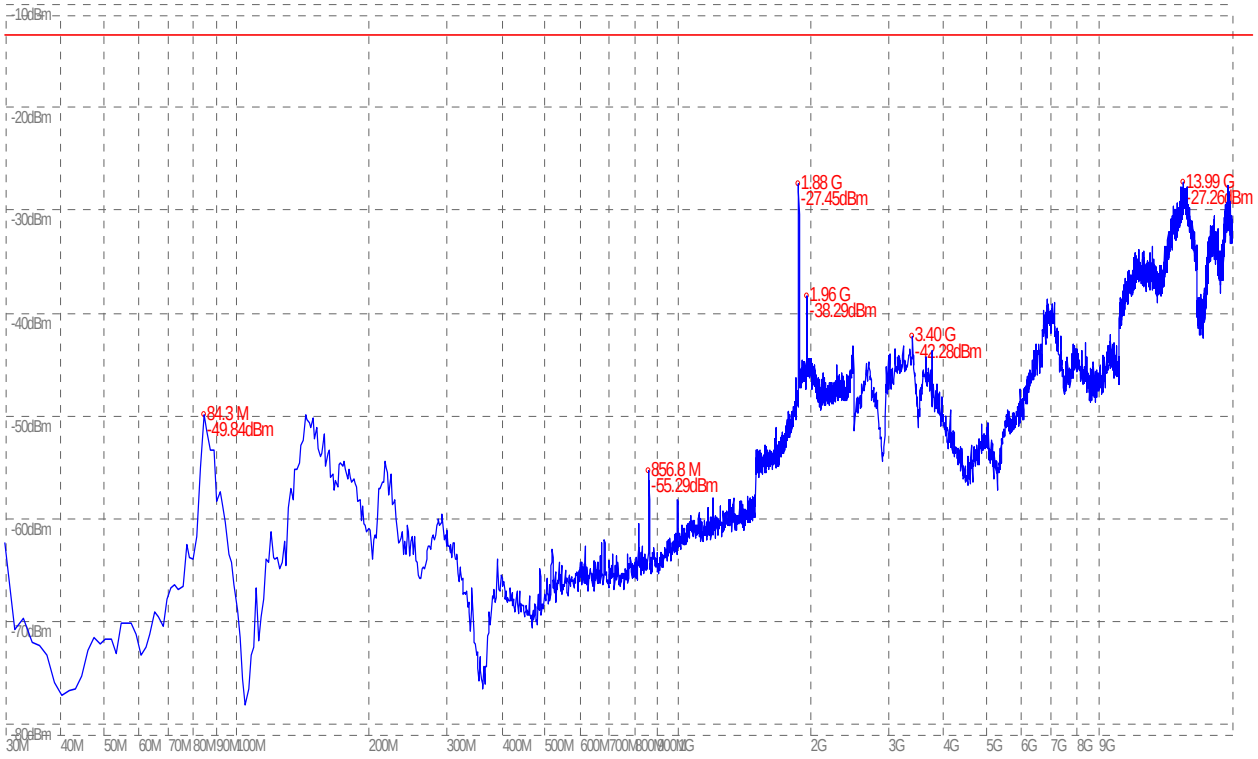
(Plot I.6: HSUPA 850MHz Channel = 4458, Test Antenna Vertical)



(Plot J.1: HSUPA 1900 MHz Channel = 9662, Test Antenna Horizontal)

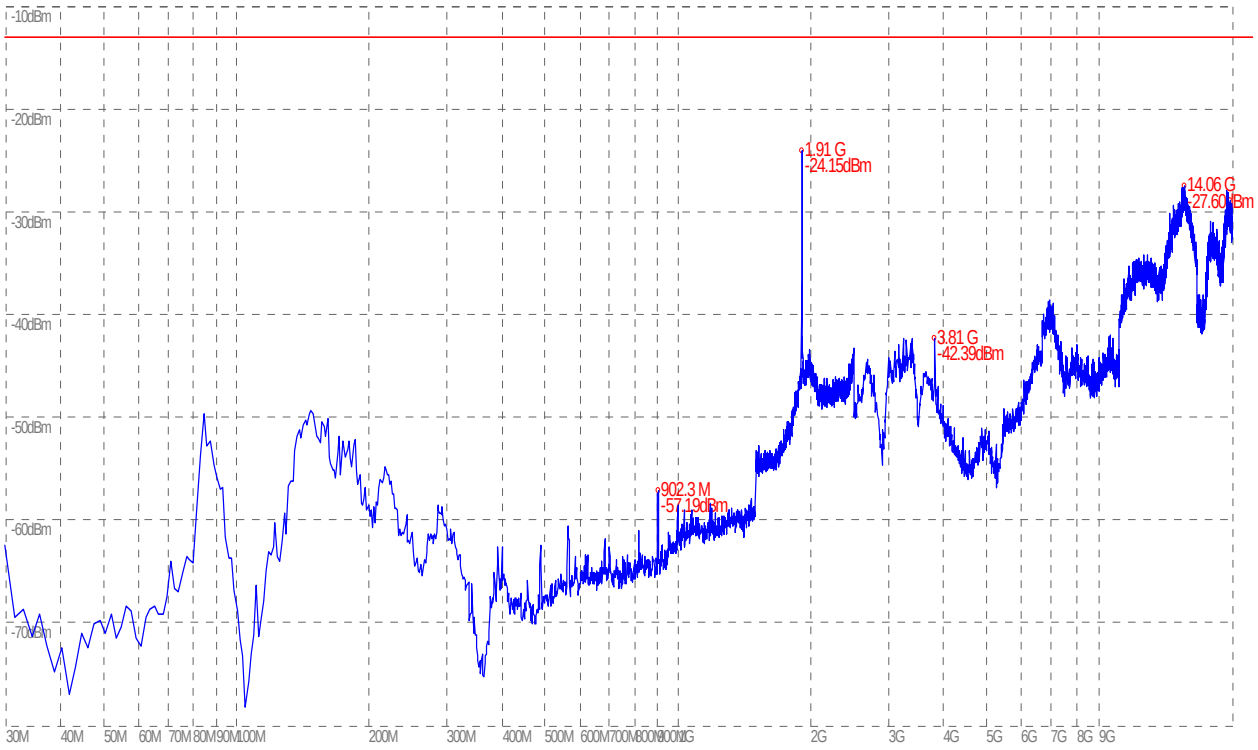


(Plot J.2: HSUPA 1900 MHz Channel = 9662, Test Antenna Vertical)

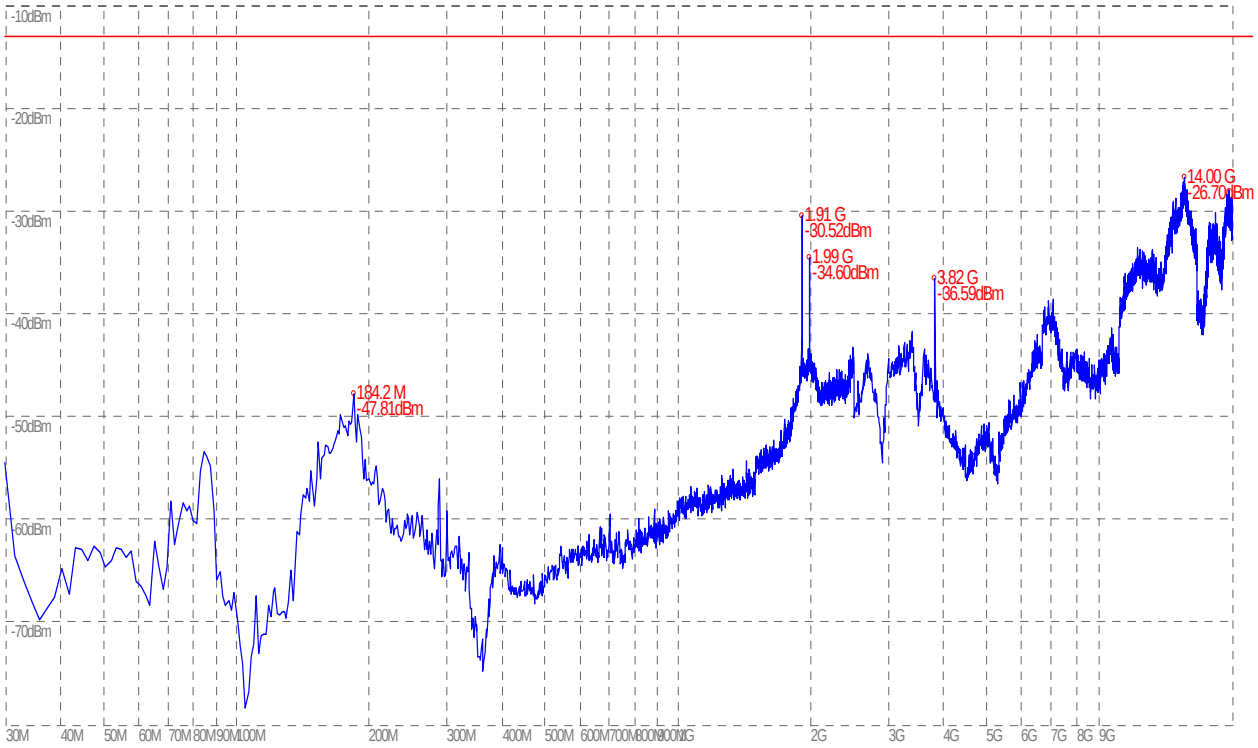


(Plot J.3: HSUPA 1900 MHz Channel = 9800, Test Antenna Horizontal)

(Plot J.4: HSUPA 1900 MHz Channel = 9800, Test Antenna Vertical)



(Plot J.5: HSUPA 1900 MHz Channel = 9938, Test Antenna Horizontal)



(Plot J.6: HSUPA 1900 MHz Channel = 9938, Test Antenna Vertical)

** END OF REPORT **