



Report No.:SZ11100087W01



FCC RF TEST REPORT

Issued to

Qingdao Haier Telecom Co.Ltd

For

Mobile Phone

Model Name : HW-N80W
 Trade Name : Haier /ekt
 Brand Name : Haier /ekt
 FCC ID : SG71110HW-N80W
 Standard : 7 CFR Part 2
 47 CFR Part 22 Subpart H
 47 CFR Part 24 Subpart E
 Test date : 2011-11-3 to 2011-11-23
 Issue date : 2011-11-24

Shenzhen MORLAB Communication Technology Co., Ltd.



Tested by Zhang Yan
Zhang Yan

Approved by Wu Xuewen
Wu Xuewen

Review by Peng Huarui
Peng Huarui

Date 2011.11.24

Date 2011.11.24

Date 2011.11.24



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Change History		
Issue	Date	Reason for change
1.0	Nov 23, 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.....: S046M001P200
Software Version: HW-N80W-H01-S00-EN
Applicant: Qingdao Haier Telecom Co.Ltd
No.1 Haier Road, Hi-tech Zone,Qingdao266101,P.R.China
Manufacturer: Qingdao Haier Telecom Co.,Ltd
No.1 Haier Road, Hi-tech Zone,Qingdao266101,P.R.China
Frequency Range.....: GSM 850MHz:
Tx: 824.20 - 848.80MHz (at intervals of 200kHz);
Rx: 869.20 - 893.80MHz (at intervals of 200kHz)
GSM 1900MHz:
Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz);
Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz)
WCDMA 850MHz
Tx: 826.4- 846.6MHz (at intervals of 200kHz);
Rx: 871.4 – 891.6MHz (at intervals of 200kHz)
WCDMA 1900MHz
Tx: 1852.4 – 1907.6MHz (at intervals of 200kHz);
Rx: 1932.4 – 1987.6MHz (at intervals of 200kHz)
Modulation Type: GPRS/GSM Mode with GMSK Modulation
EDGE Mode with 8PSK Modulation
WCDMA Mode with QPSK Modulation
HSDPA Mode with QPSK Modulation
HSUPA Mode with QPSK Modulation
Emission Designators.....: GSM:251KGXW, EGPRS:249KG7W
WCDMA:4M19F9W

Note 1: The transmitter (Tx) frequency arrangement of the Cellular 850MHz band used by the EUT can be represented with the formula $F(n)=824.2+0.2*(n-128)$, $128 \leq n \leq 251$; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately 128 (824.2MHz), 190 (836.6MHz) and 251 (848.8MHz).

Note 2: The transmitter (Tx) frequency arrangement of the PCS 1900MHz band used by the EUT can be represented with the formula $F(n)=1850.2+0.2*(n-512)$, $512 \leq n \leq 810$; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 512 (1850.2MHz), 661 (1880.0MHz) and 810 (1909.8MHz).

Note 3: Note 4: 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 ANSI/TIA-603-D 2010.

1.3. Facilities and Accreditations

1.3.1. Facilities

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

All measurement facilities used to collect the measurement data are located at 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

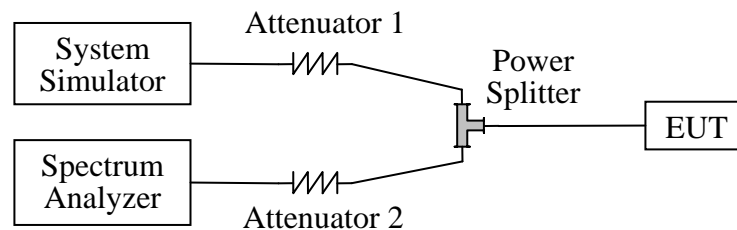
2.1. Conducted RF Output Power

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

A. 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.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2011.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2011.05
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

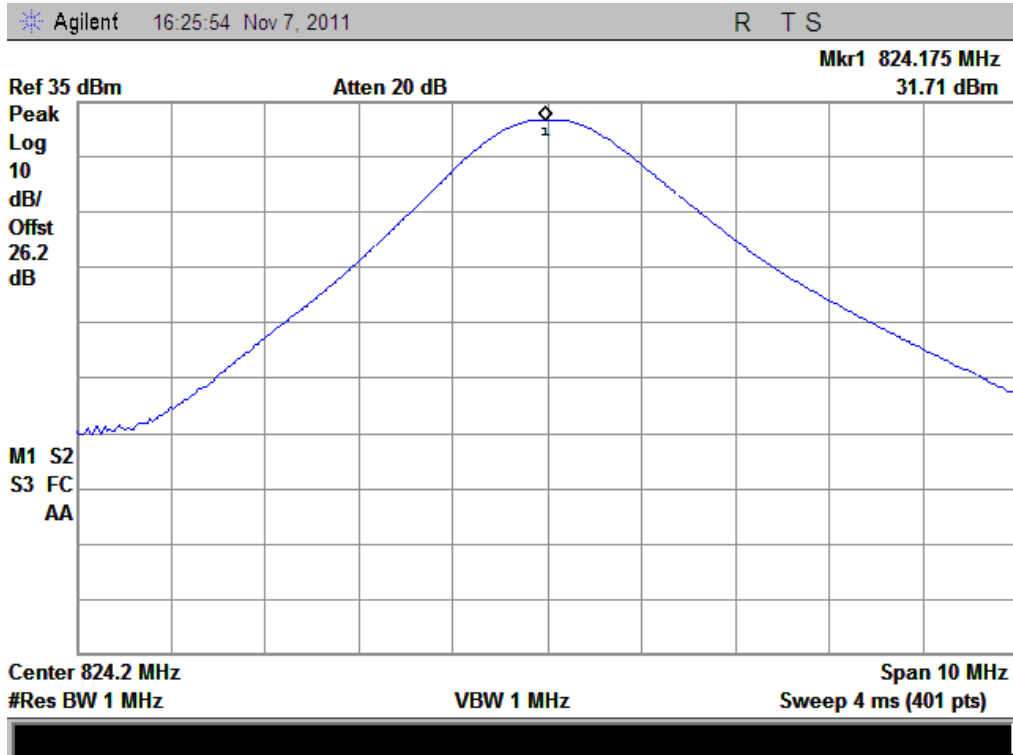
Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT. For the GSM 850MHz operates at PCL=5 (where Power Class is 4), the rated conducted RF output power is 33dBm, and For the GSM 1900MHz operates at PCL=0 (where Power Class is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

A. Test Verdict:

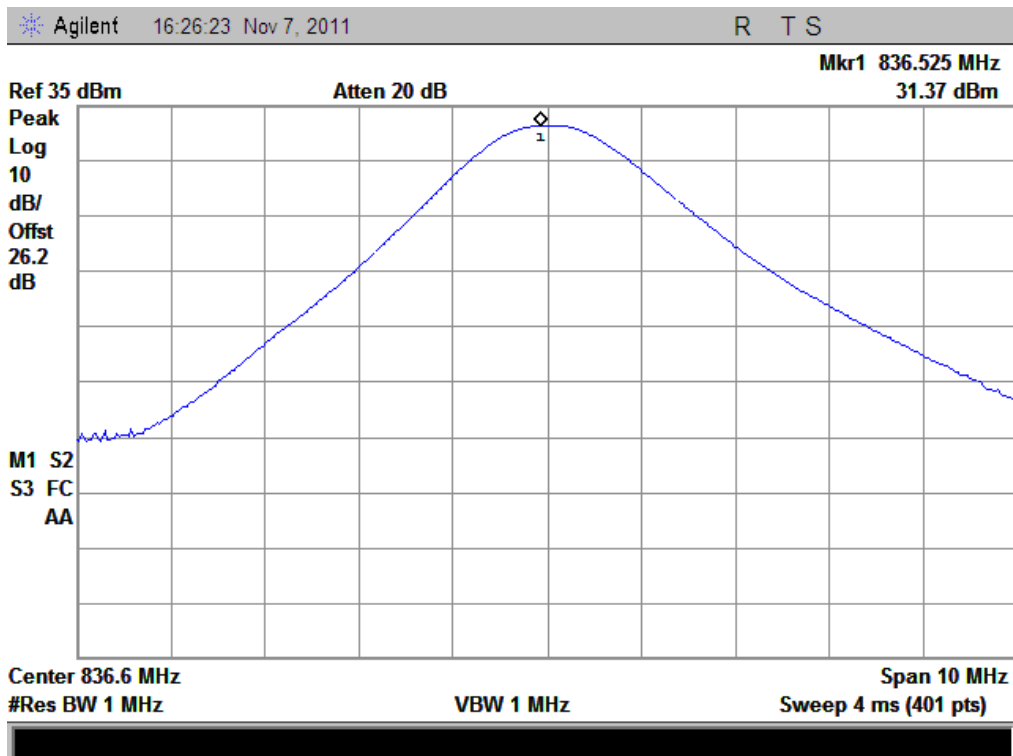
Band	Channel	Frequency (MHz)	Measured Output Power		Limit dBm	Verdict
			dBm	Refer to Plot		
GSM 850MHz	128	824.2	31.71	Plot A1 to A3	35	PASS
	190	836.6	31.37			PASS
	251	848.8	30.78			PASS
GSM 1900MHz	512	1850.2	29.92	Plot B1 to B3	32	PASS
	661	1880.0	28.55			PASS
	810	1909.8	28.49			PASS
GPRS 850MHz	128	824.2	31.68	Plot C1 to C3 ^{Note 1}	35	PASS
	190	836.6	31.36			PASS
	251	848.8	30.57			PASS
GPRS 1900MHz	512	1850.2	28.44	Plot D1 to D3 ^{Note 1}	32	PASS
	661	1880.0	29.33			PASS
	810	1909.8	29.81			PASS
EGPRS 850MHz	128	824.2	31.65	Plot E1 to E3 ^{Note 1}	35	PASS
	190	836.6	31.35			PASS
	251	848.8	30.54			PASS
EGPRS 1900MHz	512	1850.2	28.49	Plot F1 to F3 ^{Note 1}	32	PASS
	661	1880.0	29.07			PASS
	810	1909.8	29.71			PASS

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	23.40	23.14	23.55	21.70	22.79	21.46
HSDPA	1	23.31	23.11	23.41	21.65	22.67	21.33
	2	23.27	23.09	23.47	21.61	22.63	21.32
	3	22.82	22.73	22.97	21.12	22.23	20.85
	4	22.74	22.71	22.93	21.13	22.20	20.89
HSUPA	1	23.33	23.12	23.46	21.63	22.65	21.41
	2	21.38	21.11	21.46	19.68	20.88	19.51
	3	22.34	22.13	22.51	20.56	21.85	20.56
	4	21.37	21.10	21.50	19.61	20.83	19.43
	5	23.31	23.13	23.51	21.57	22.64	21.39

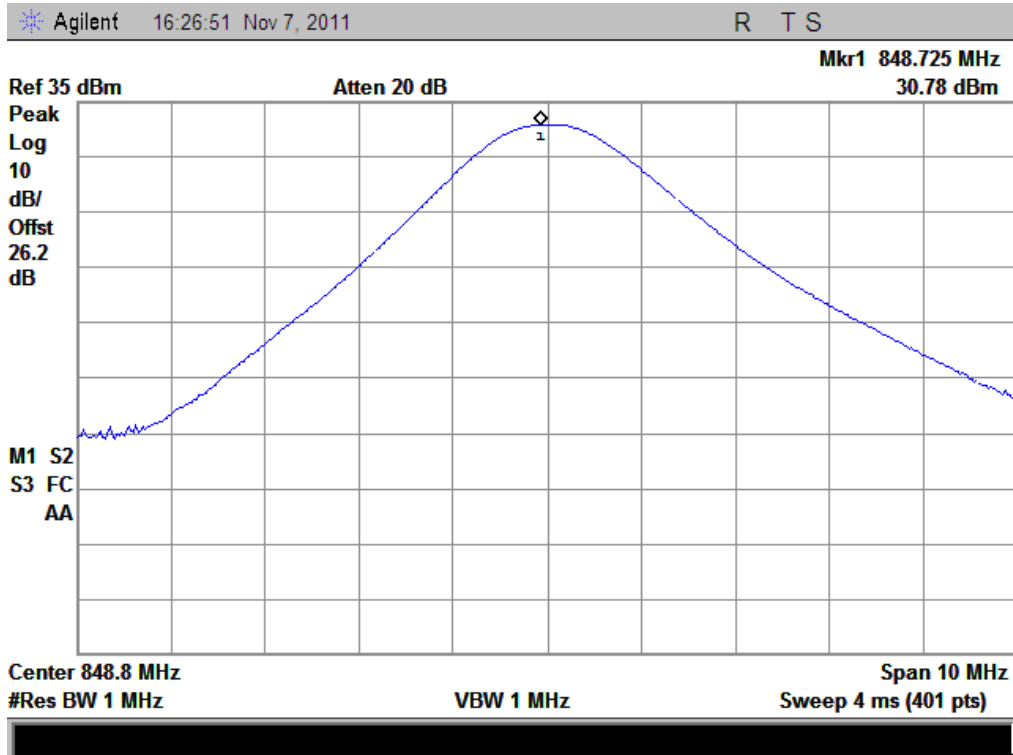
Note 1: For the GPRS model, all the slots were tested and just the worst data was record in this report.

B. Test Plots:


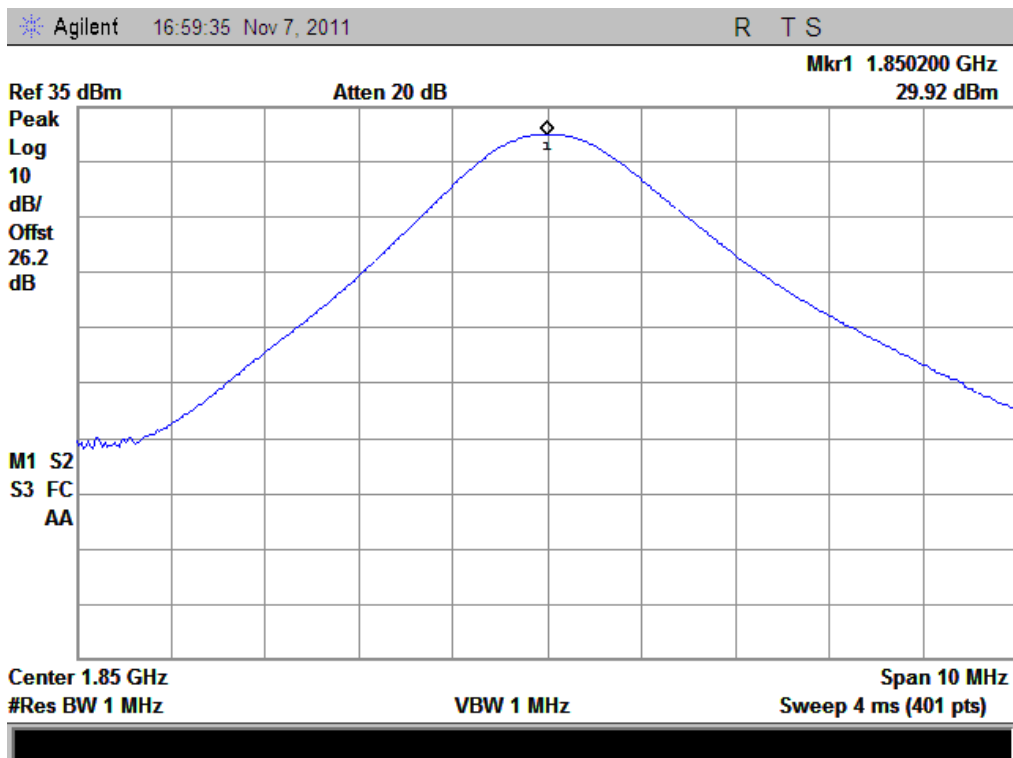
Plot A1: GSM 850MHz Channel = 128



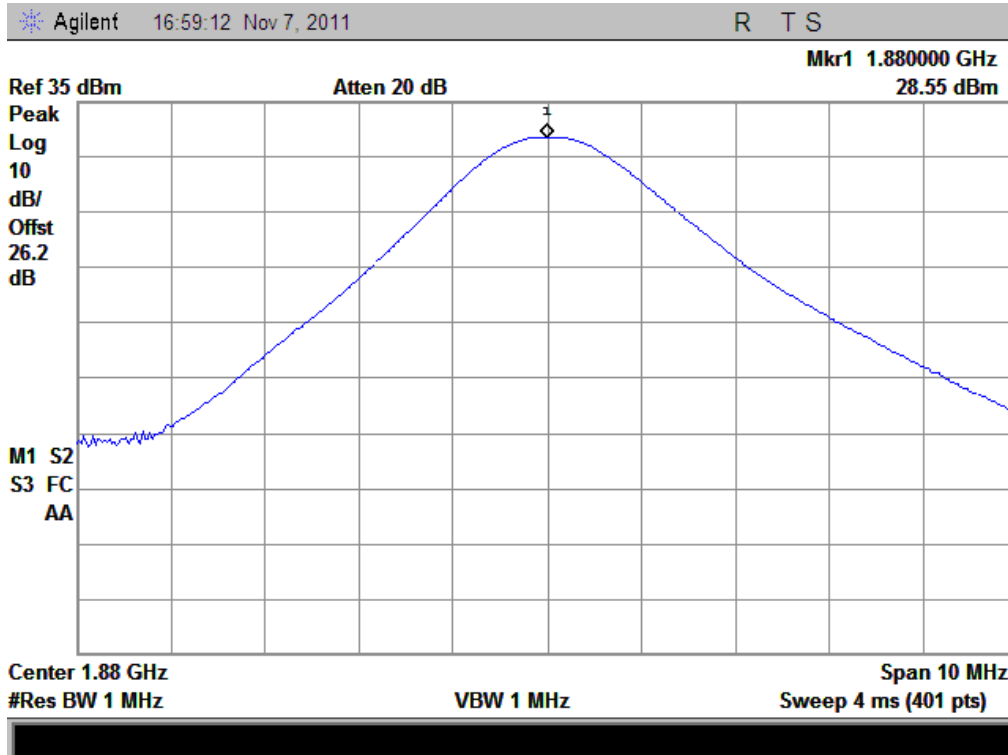
Plot A2: GSM 850MHz Channel = 190



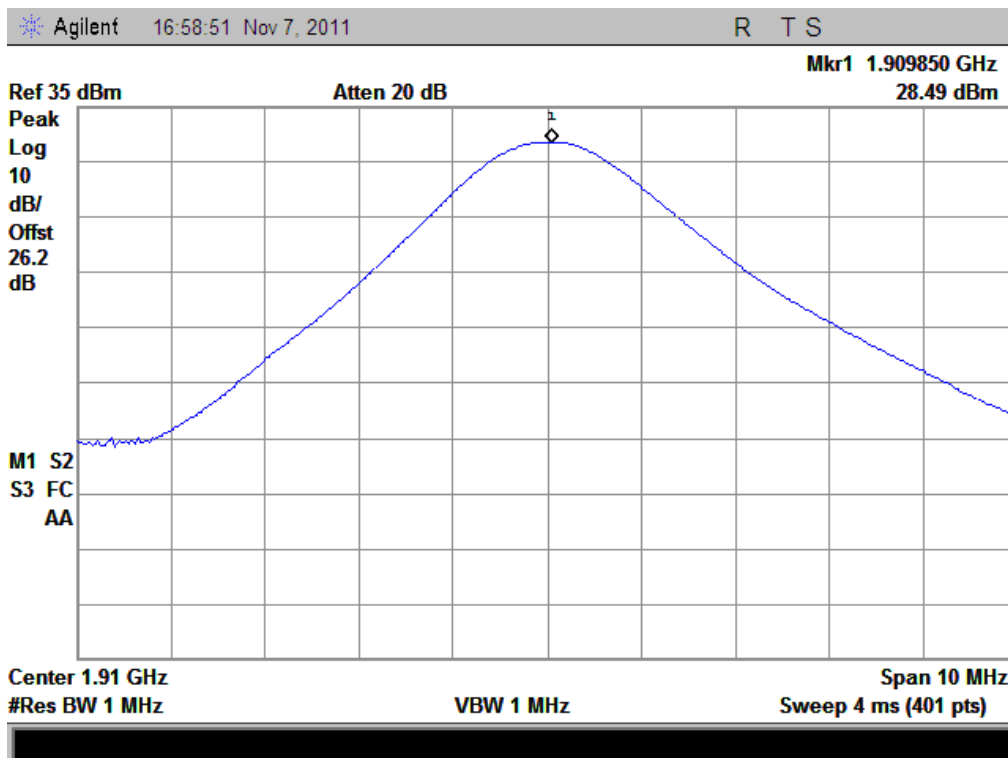
Plot A3: GSM 850MHz Channel = 251



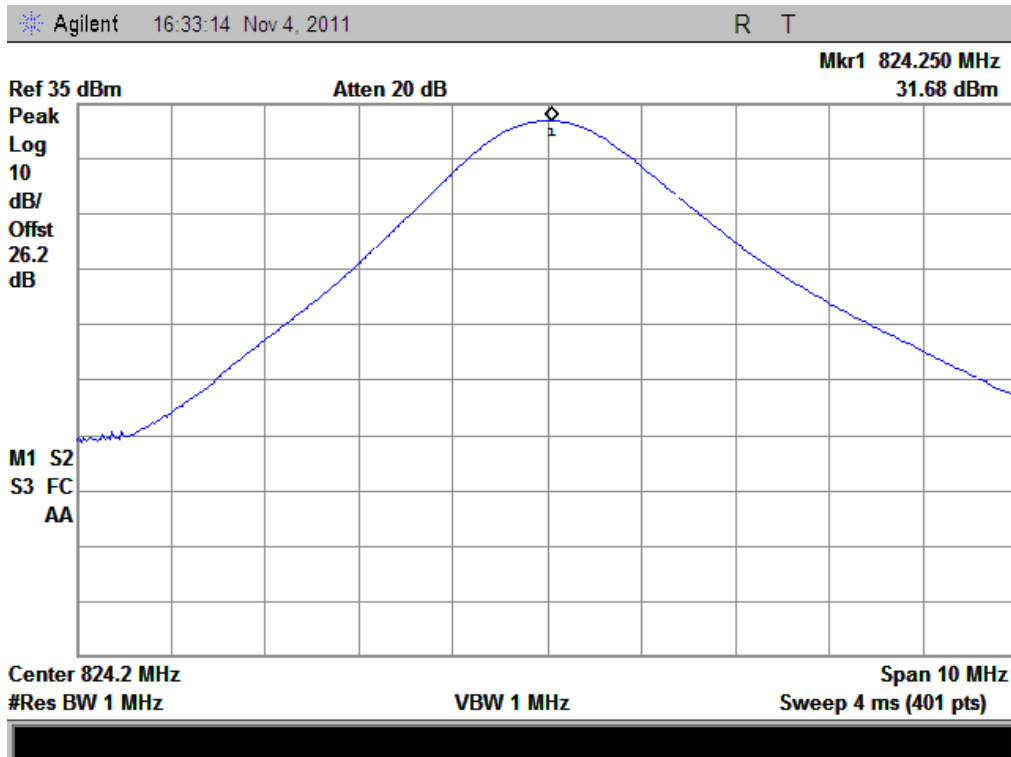
Plot B1: GSM 1900MHz Channel = 512



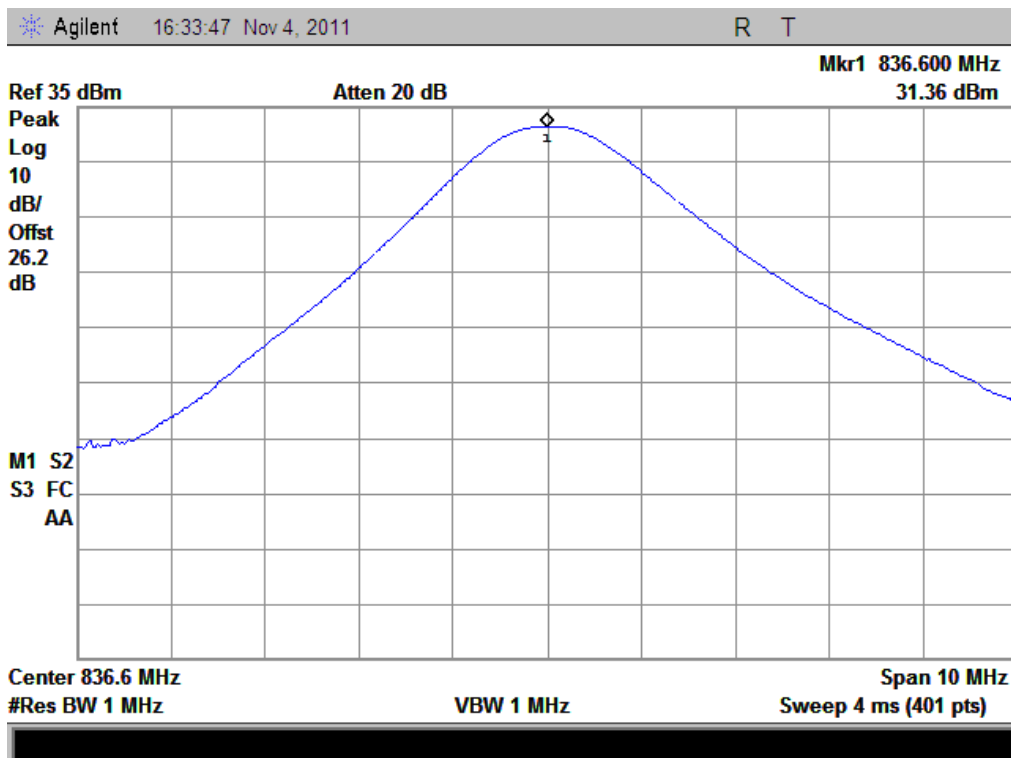
Plot B2: GSM 1900MHz Channel = 661



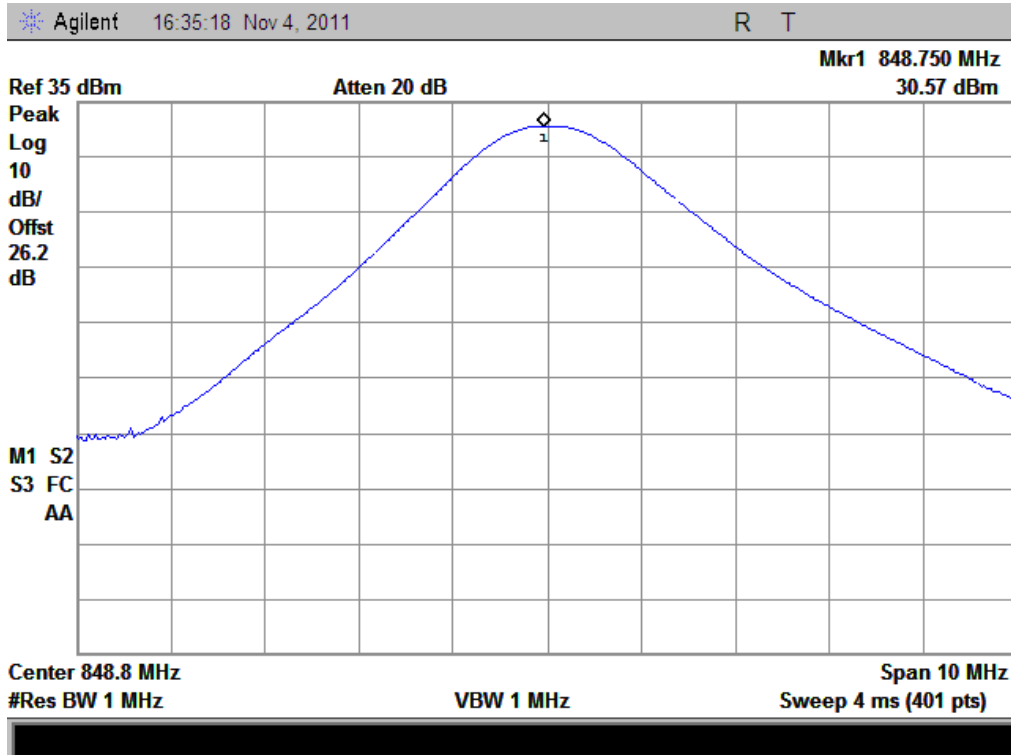
Plot B3: GSM 1900MHz Channel = 810



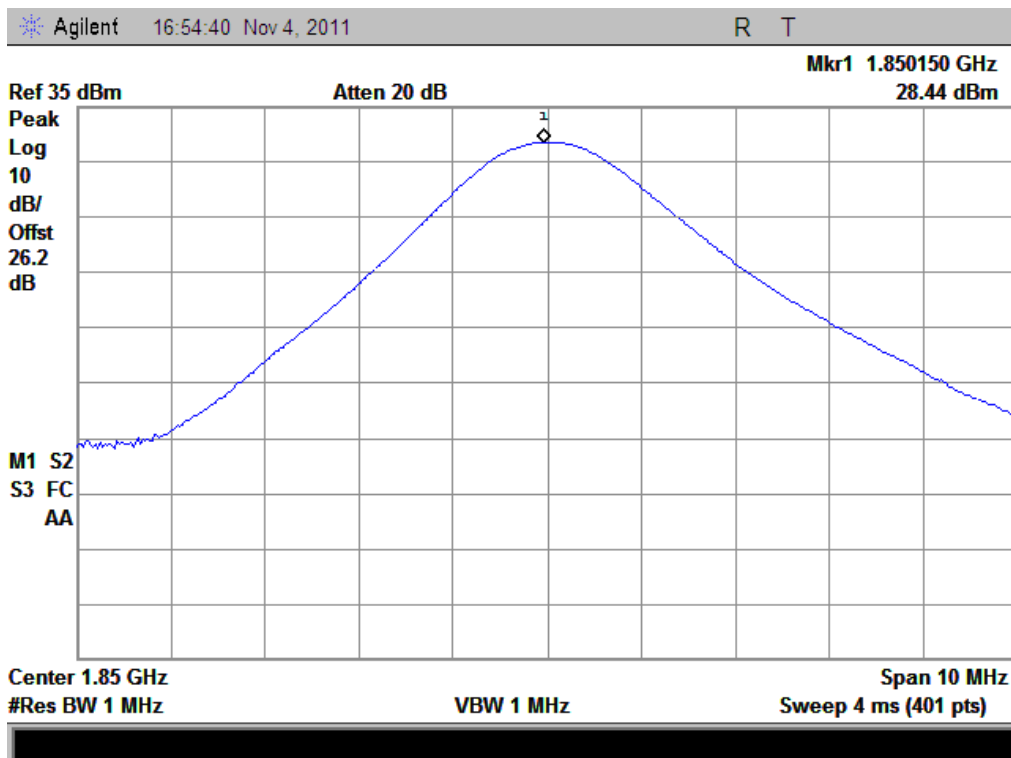
Plot C1: GPRS 850MHz Channel = 128



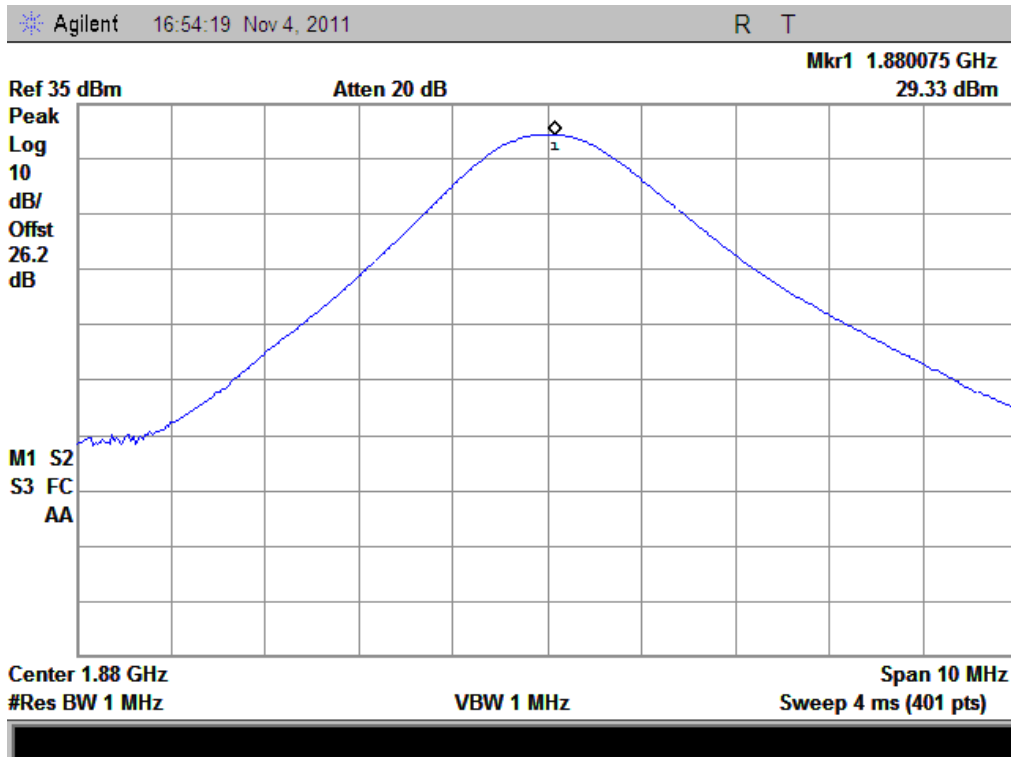
Plot C2: GPRS 850MHz Channel = 190



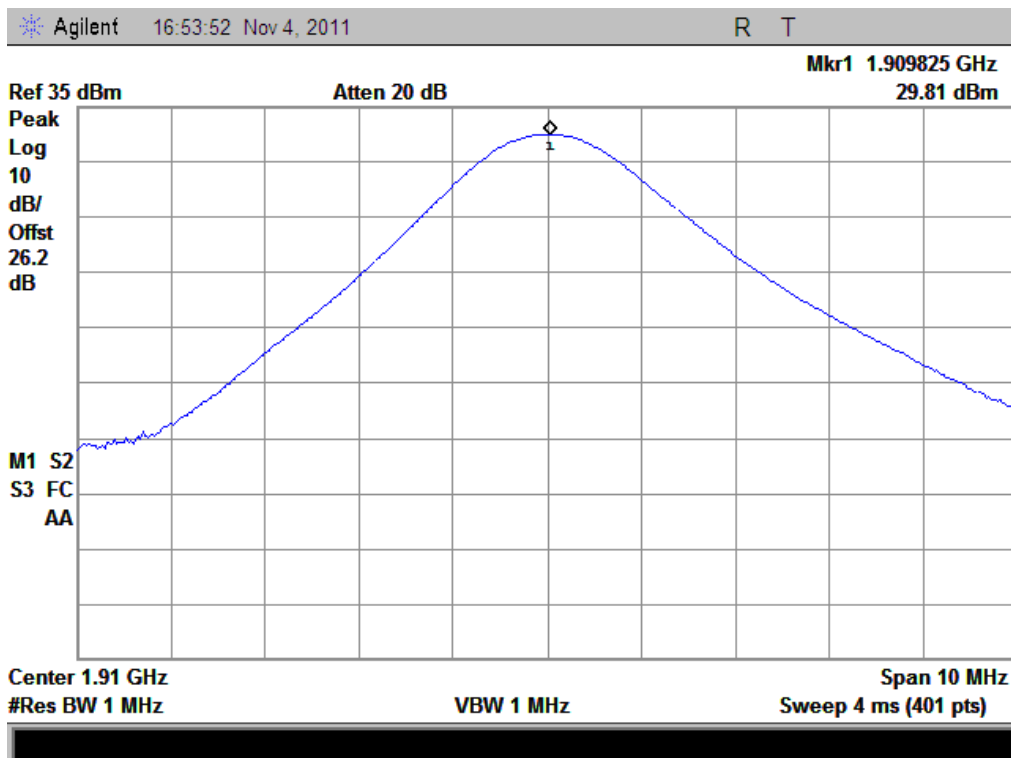
Plot C3: GPRS850MHz Channel = 251



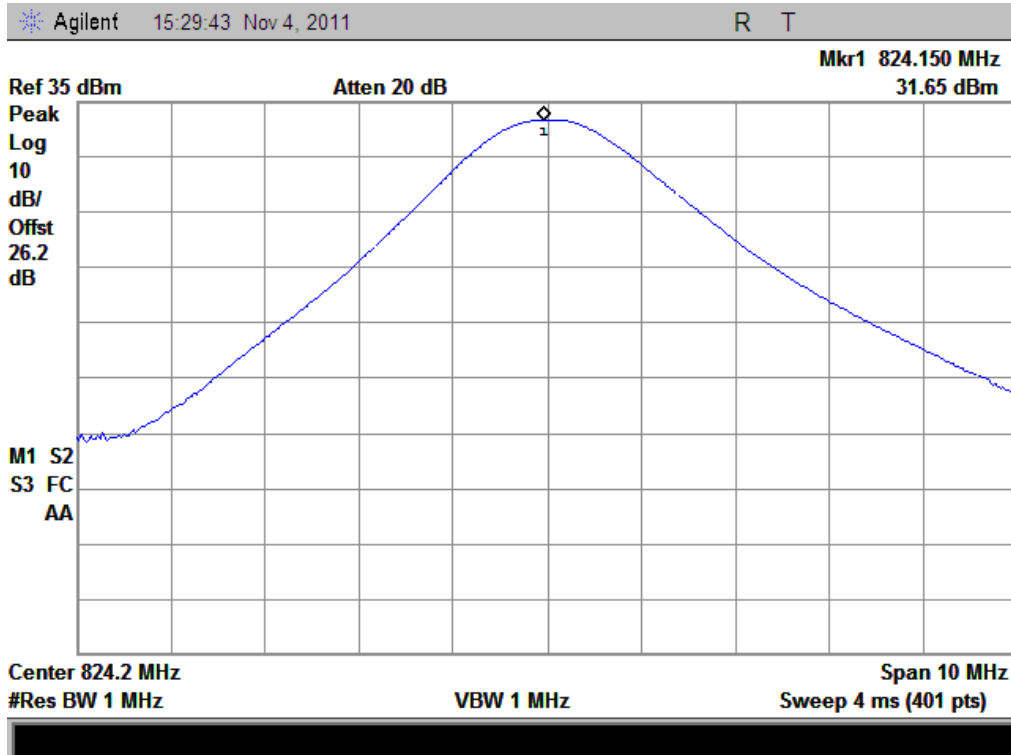
Plot D1: GPRS 1900MHz Channel = 512



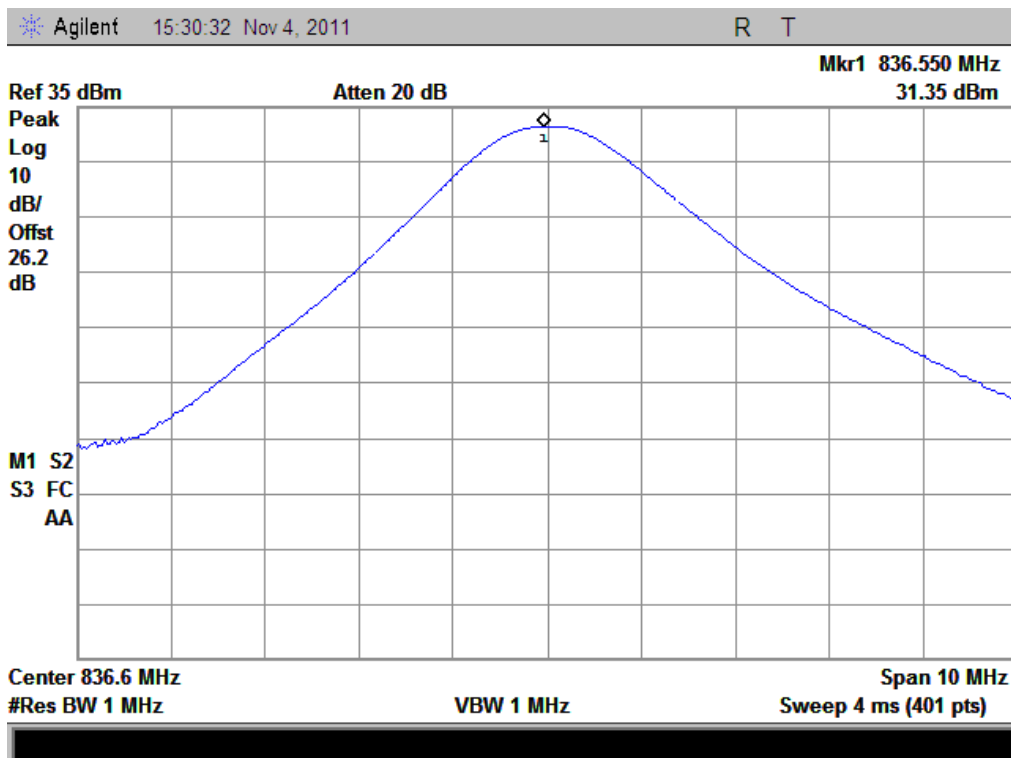
Plot D2: GPRS1900MHz Channel = 661



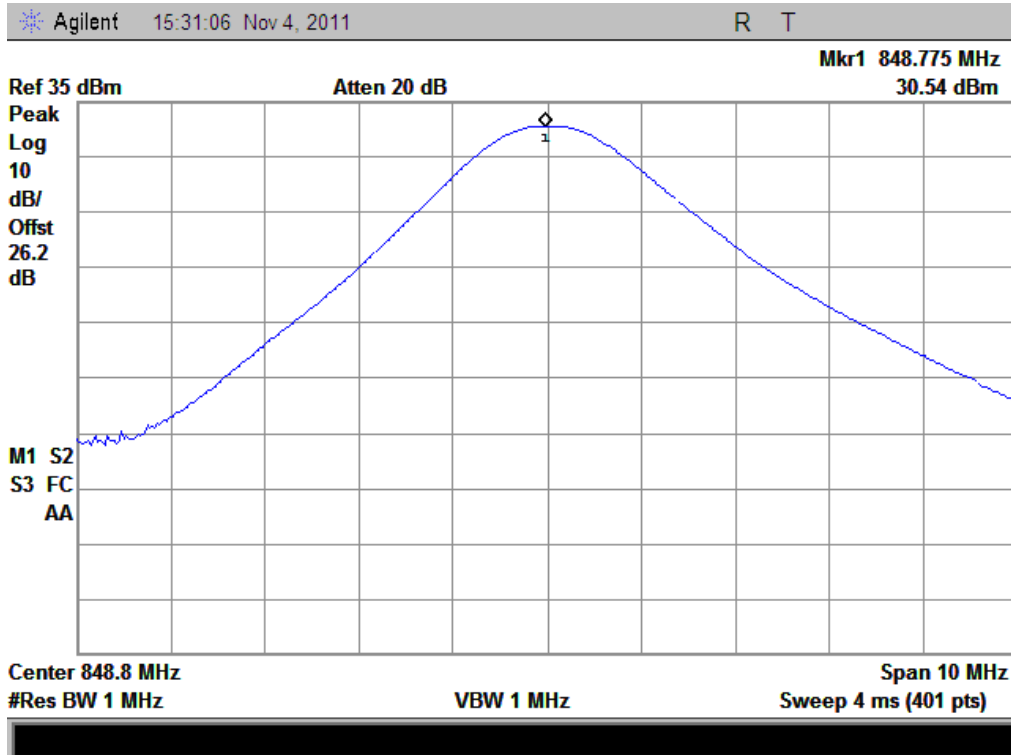
Plot D3: GPRS 1900MHz Channel = 810



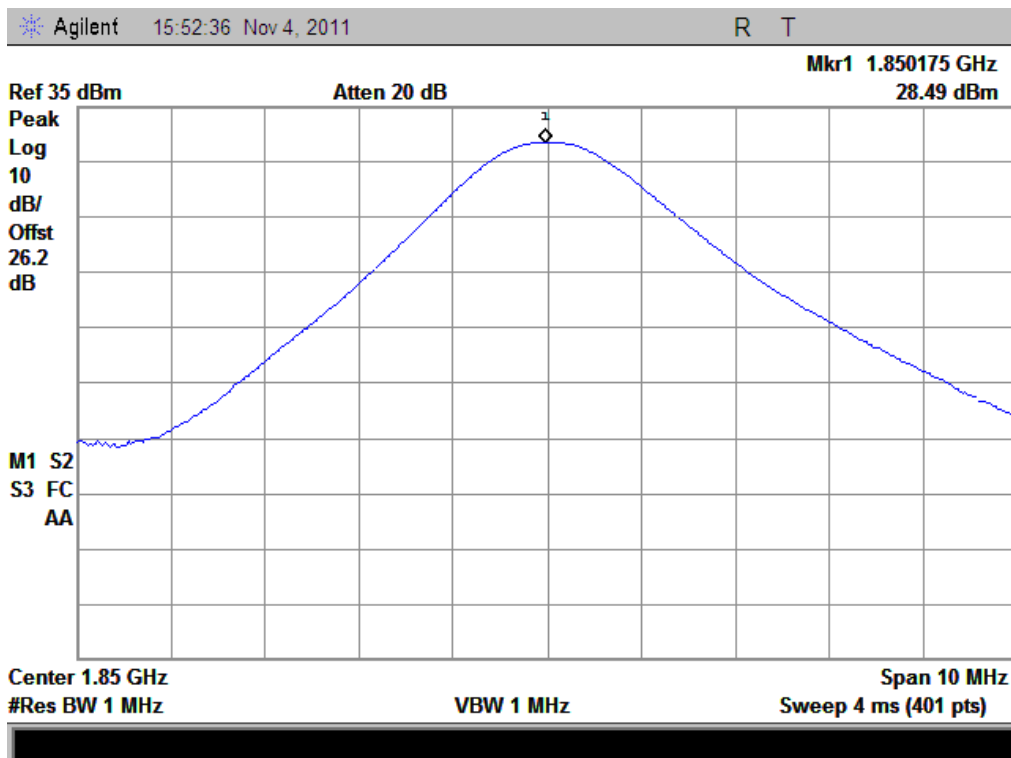
Plot E1: EGPRS 850MHz Channel = 128



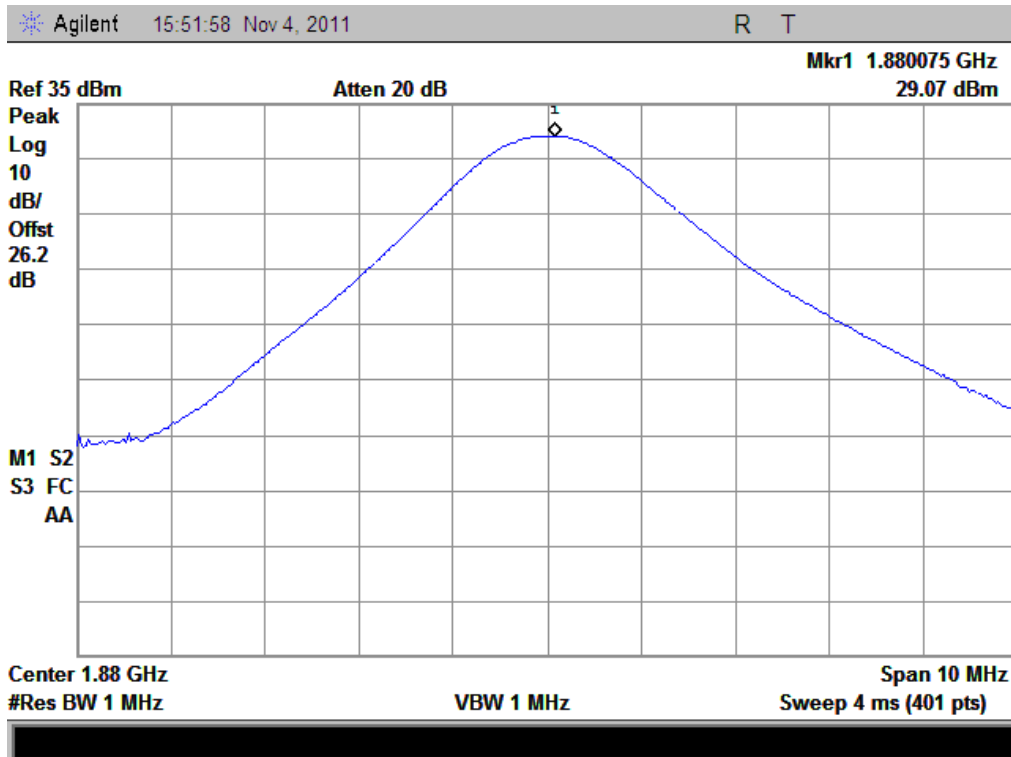
Plot E2: EGPRS 850MHz Channel = 190



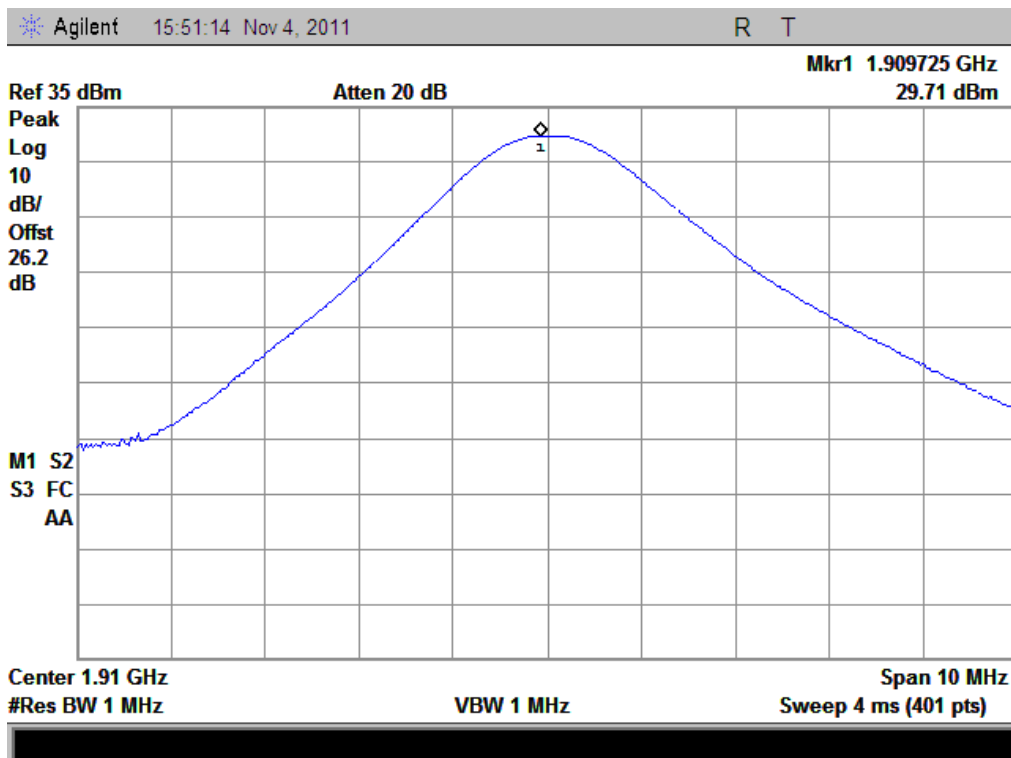
Plot E3: EGPRS 850MHz Channel = 251



Plot F1: EGPRS 1900MHz Channel = 512



Plot F2: EGPRS 1900MHz Channel = 661



Plot F3: EGPRS 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

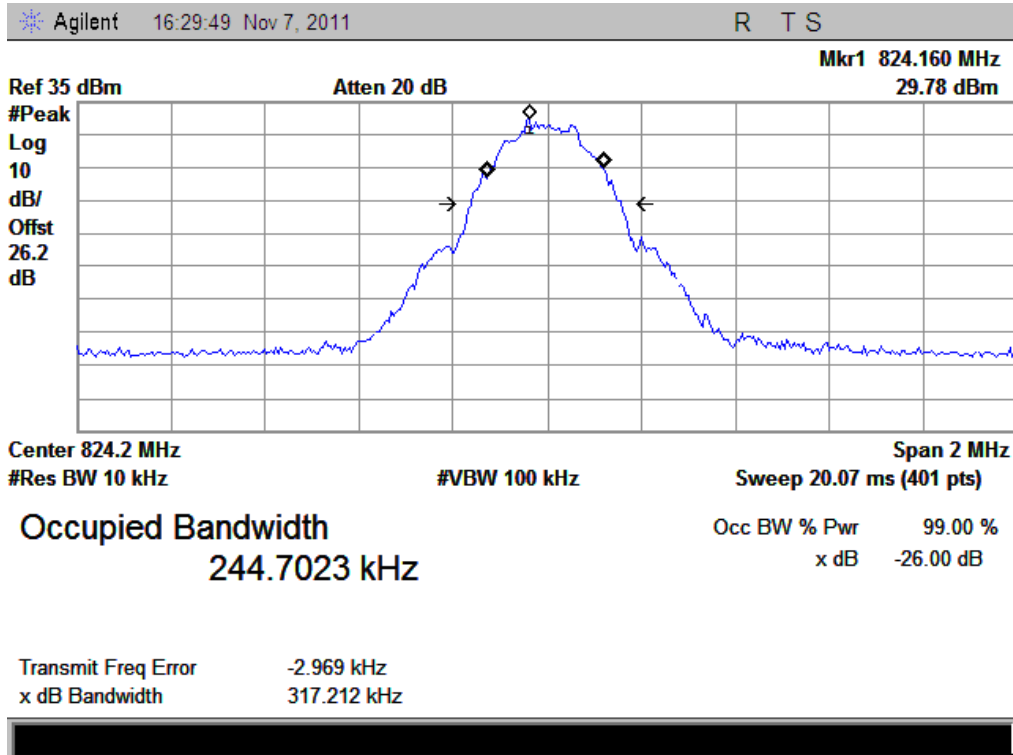
See section 2.1.2 of this report.

2.2.3. Test Verdict

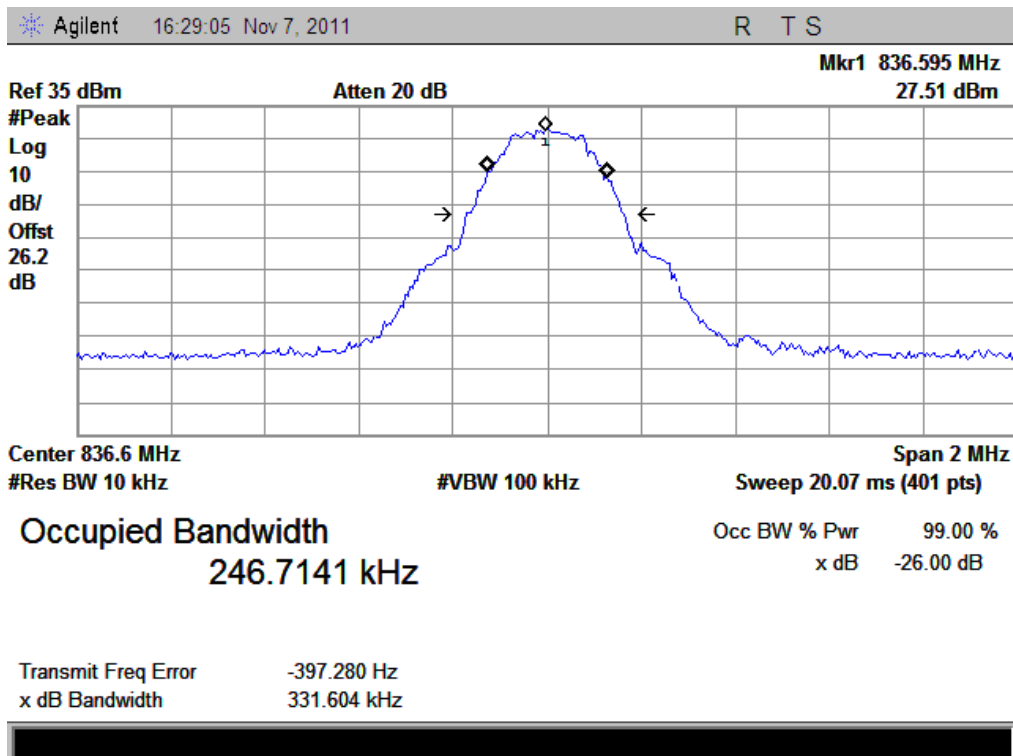
Here the lowest, middle and highest channels are tested to record the 99% occupied bandwidth

A. Test Verdict:

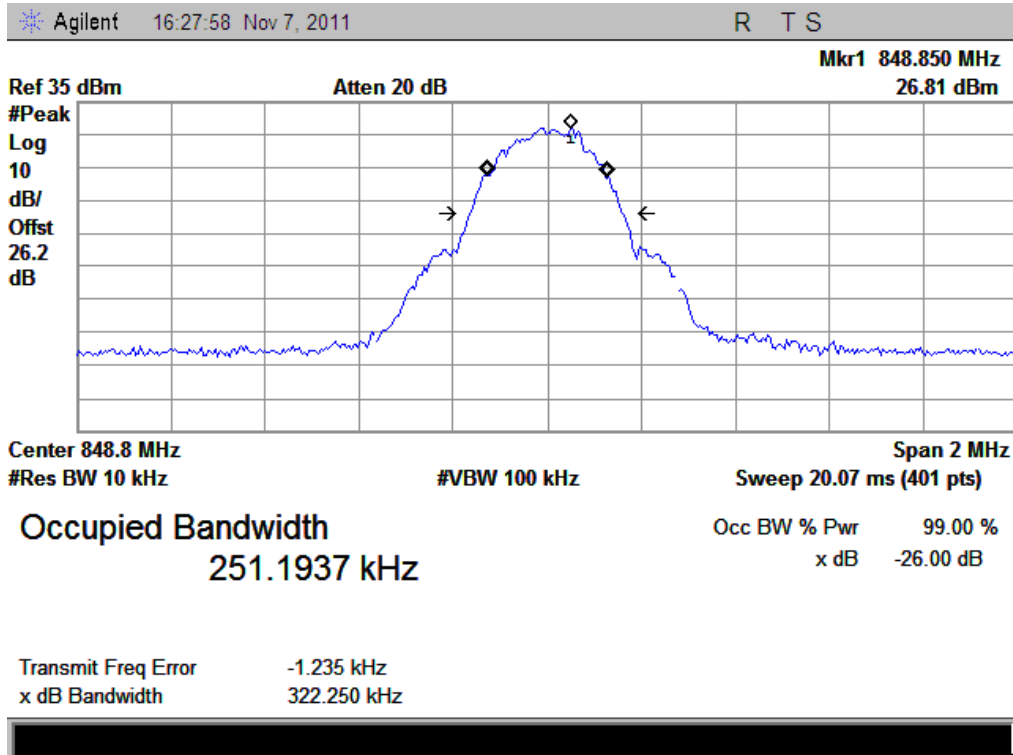
Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth (kHz)	Refer to Plot
GSM 850MHz	128	824.2	244.7023	Plot A
	190	836.6	246.7141	Plot B
	251	848.8	251.1937	Plot C
GSM 1900MHz	512	1850.2	241.9938	Plot D
	661	1880.0	245.5976	Plot E
	810	1909.8	244.7730	Plot F
EDGE 850MHz	128	824.2	245.0207	Plot G
	190	836.6	248.6769	Plot H
	251	848.8	246.5196	Plot I
EDGE 1900MHz	512	1850.2	247.4125	Plot J
	661	1880.0	243.1415	Plot K
	810	1909.8	247.2746	Plot L
WCDMA 850MHz	4175	835	4.1782	Plot M
WCDMA 1900MHz	9400	1880	4.1642	Plot N
HSDPA 850MHz	4175	835	4.1532	Plot O
HSDPA 1900MHz	9400	1880	4.1847	Plot P
HSUPA 850MHz	4175	835	4.1673	Plot Q
HSUPA 1900MHz	9400	1880	4.1904	Plot R

B. Test Plots:


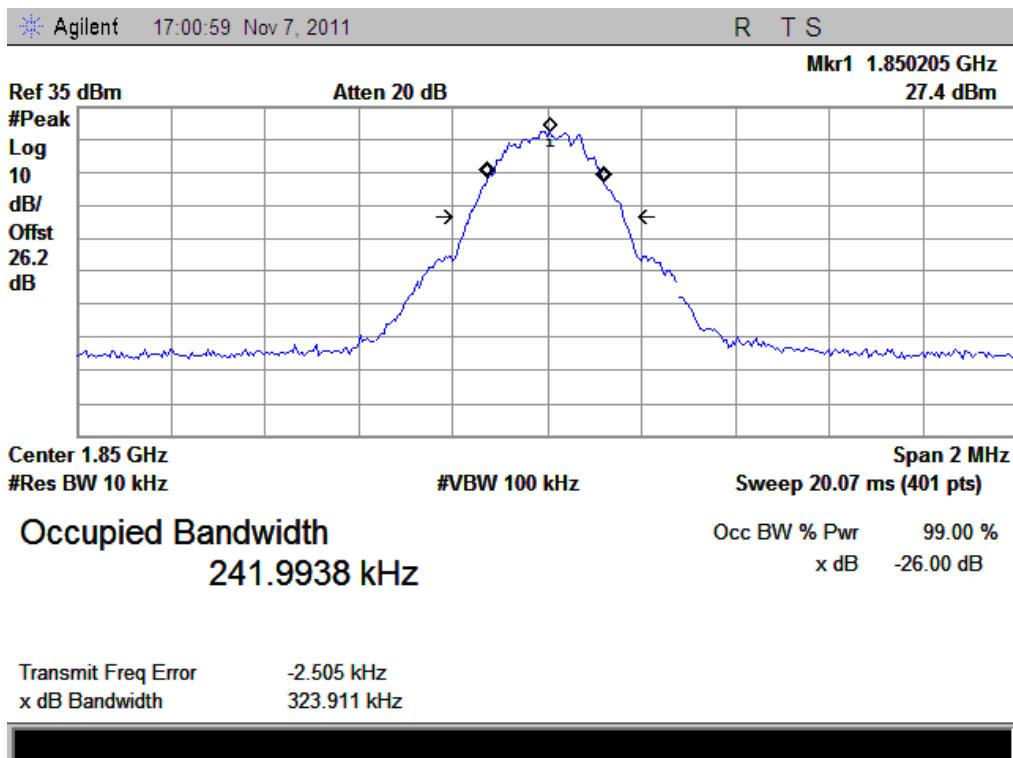
(Plot A: GSM 850MHz Channel = 128)



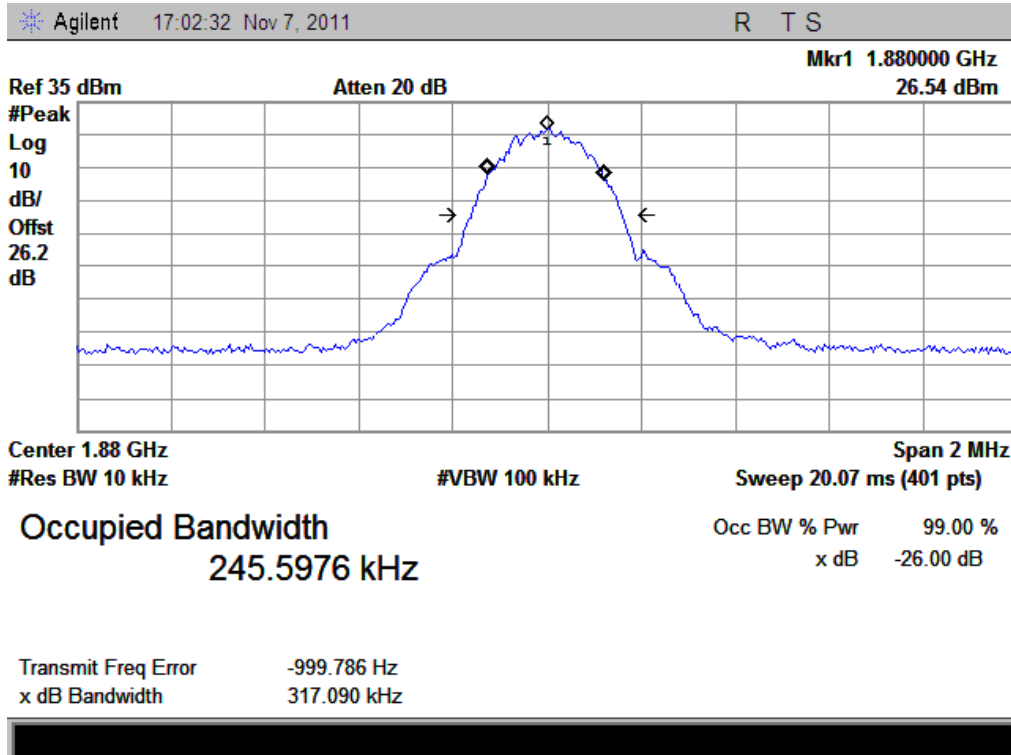
(Plot B: GSM 850MHz Channel = 190)



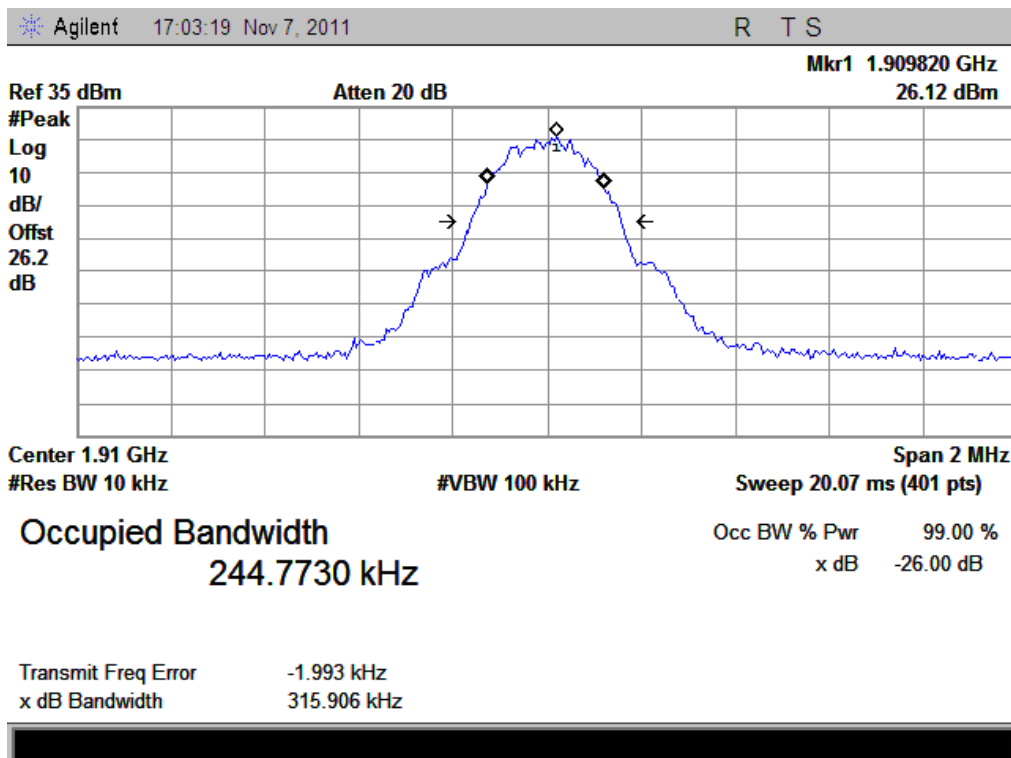
(Plot C: GSM 850MHz Channel = 251)



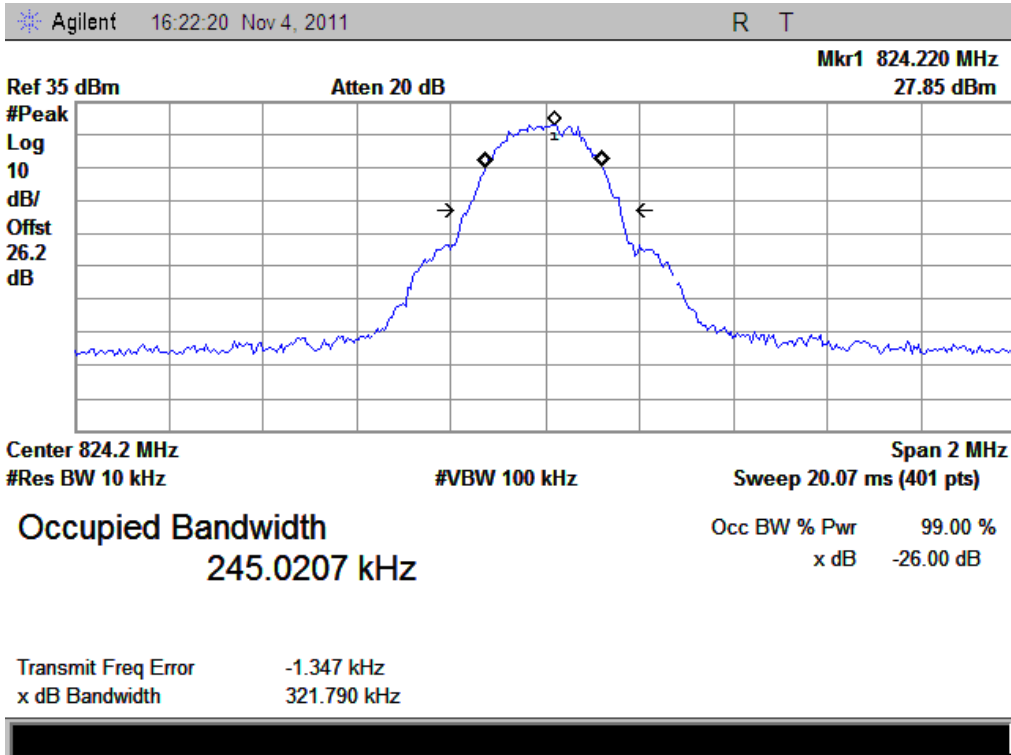
(Plot D: GSM 1900MHz Channel = 512)



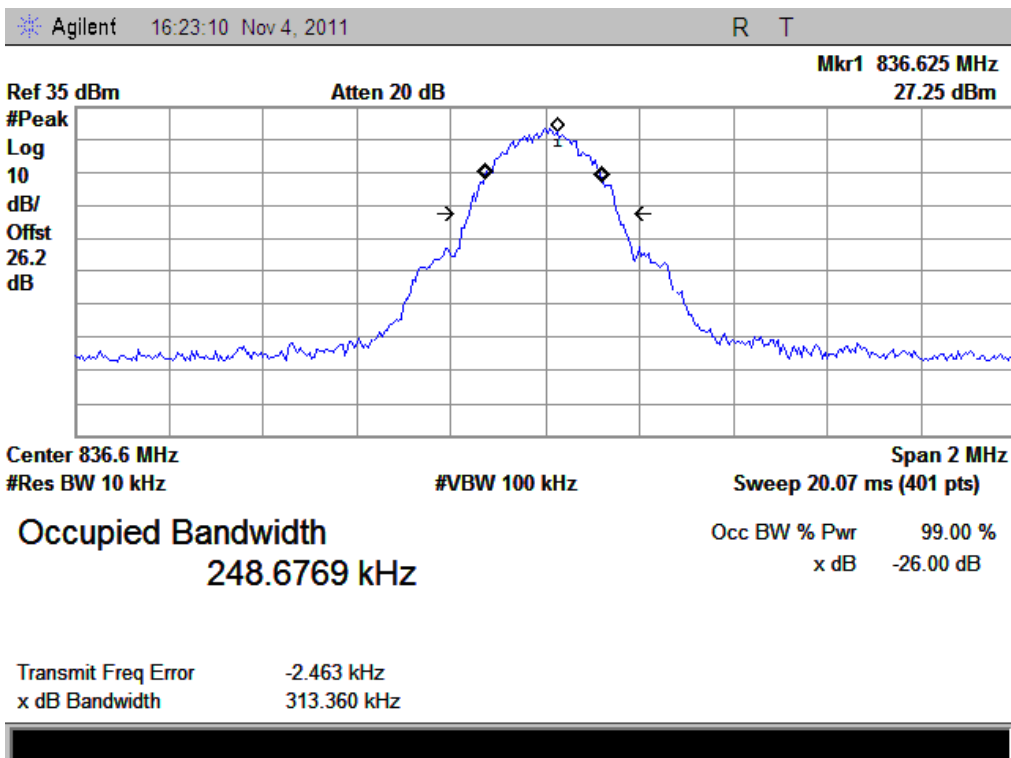
(Plot E: GSM 1900MHz Channel = 661)



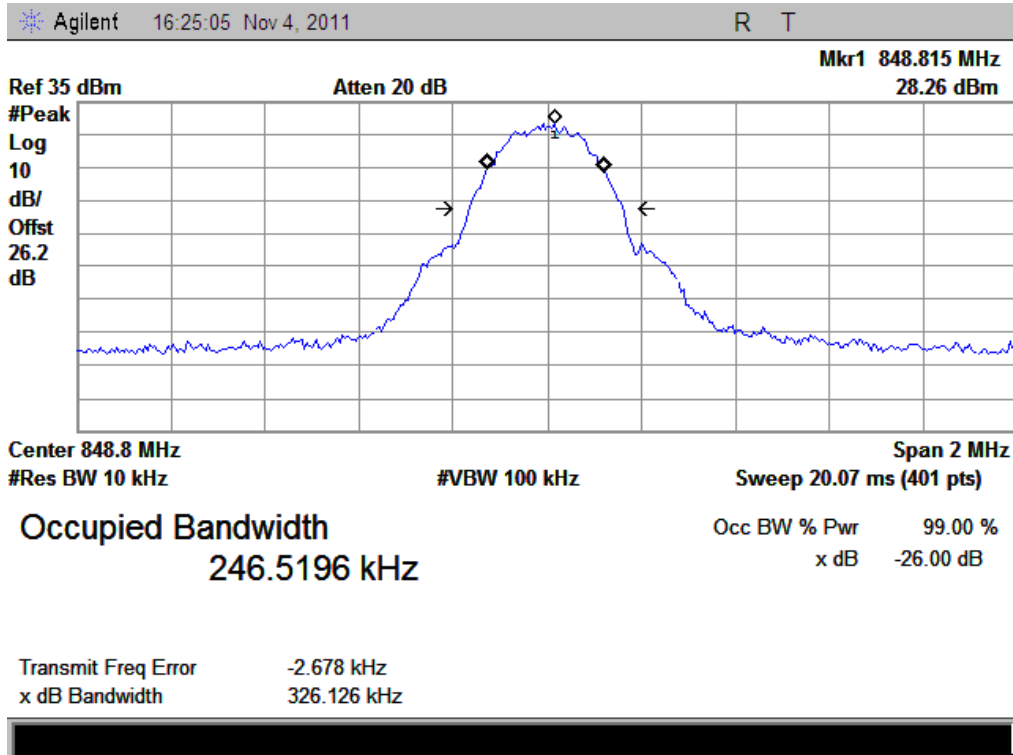
(Plot F: GSM 1900MHz Channel = 810)



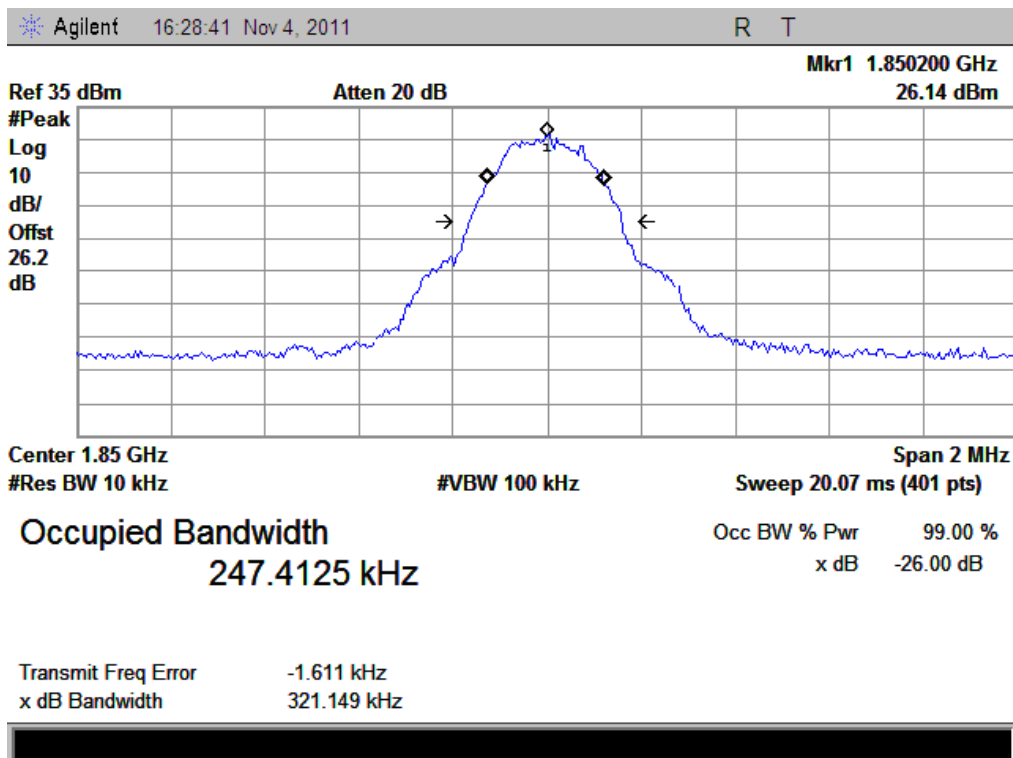
(Plot G: EGPRS 850MHz Channel = 128)



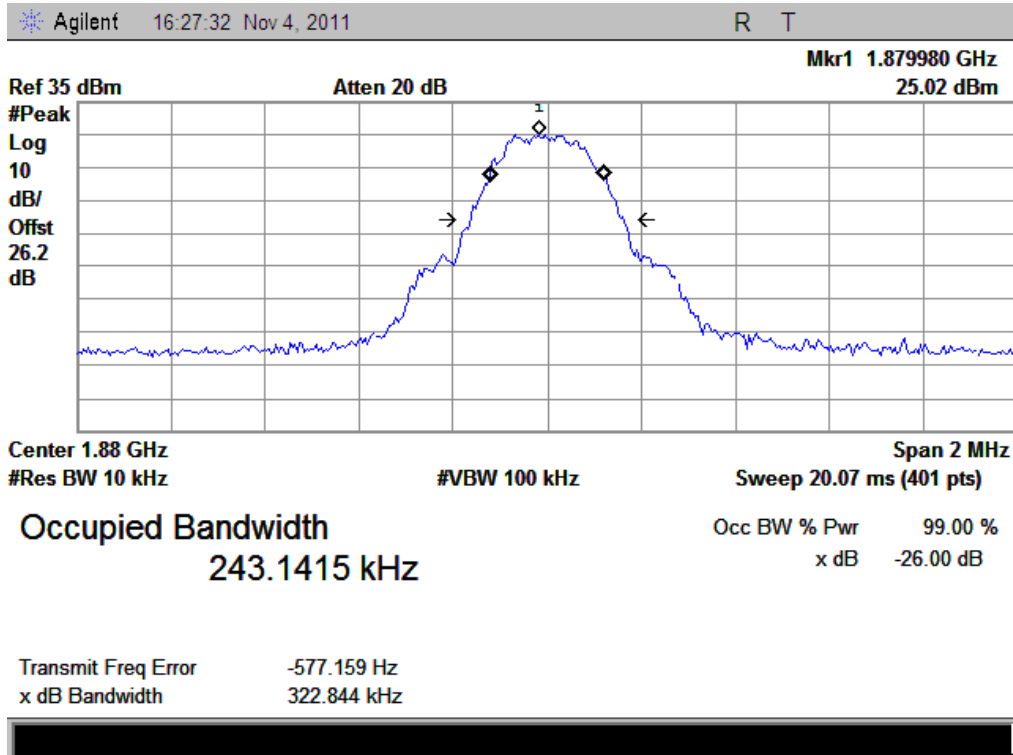
(Plot H: EGPRS 850MHz Channel = 190)



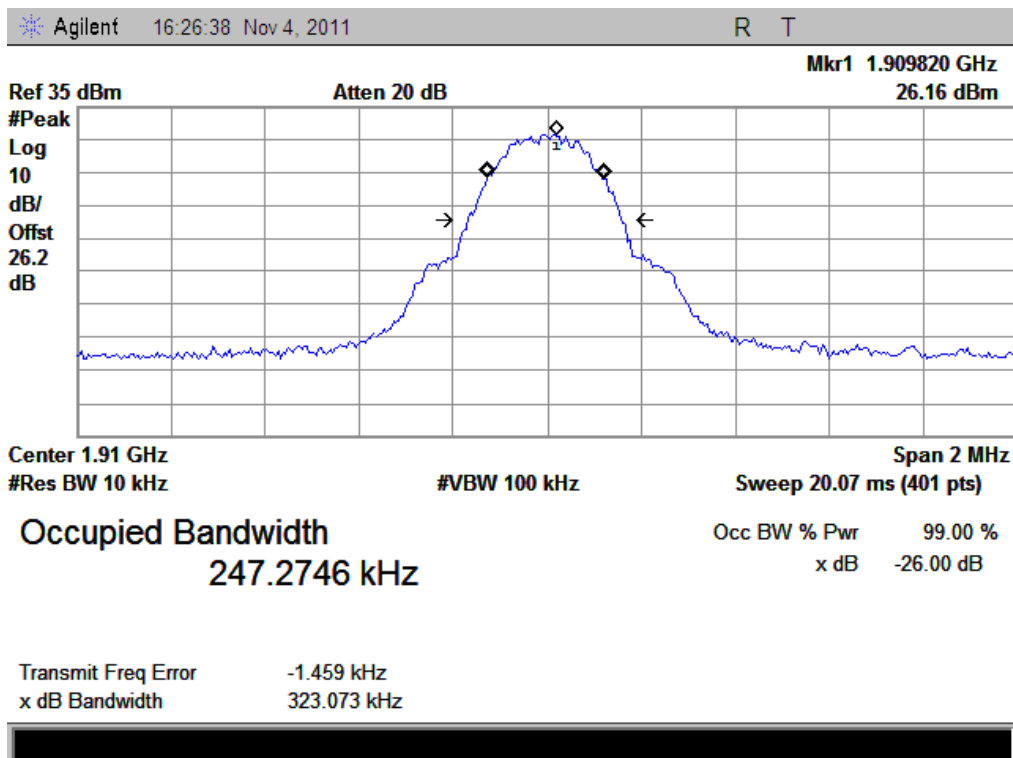
(Plot I: EGPRS 850MHz Channel = 251)



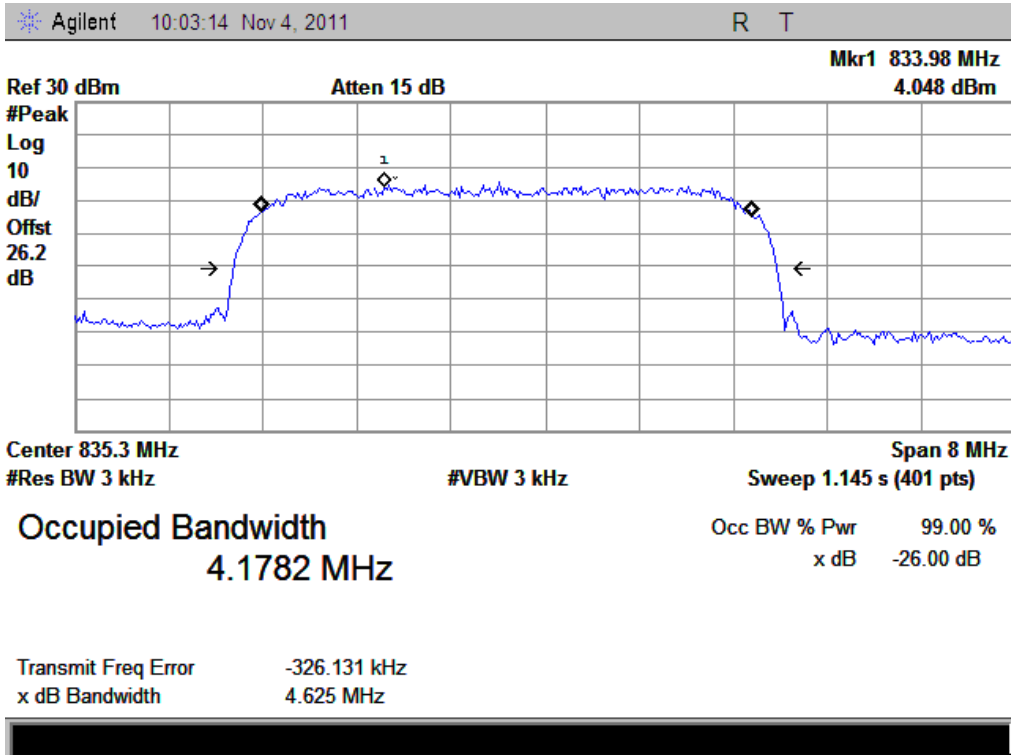
(Plot J: EGPRS 1900MHz Channel = 512)



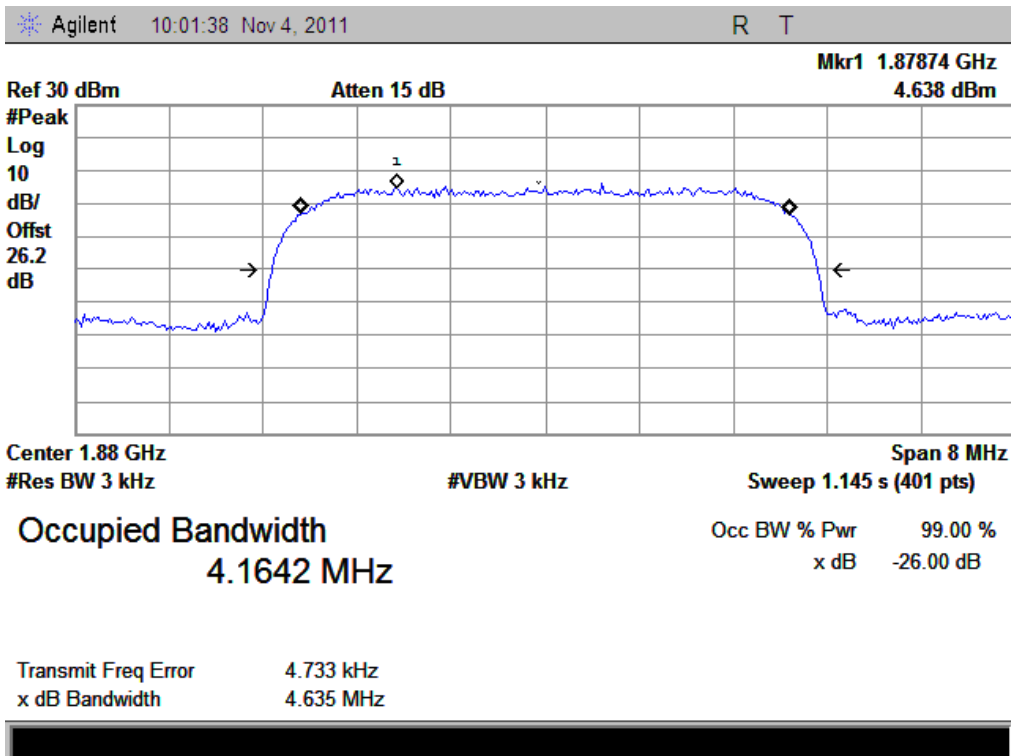
(Plot K: EGPRS 1900MHz Channel = 661)



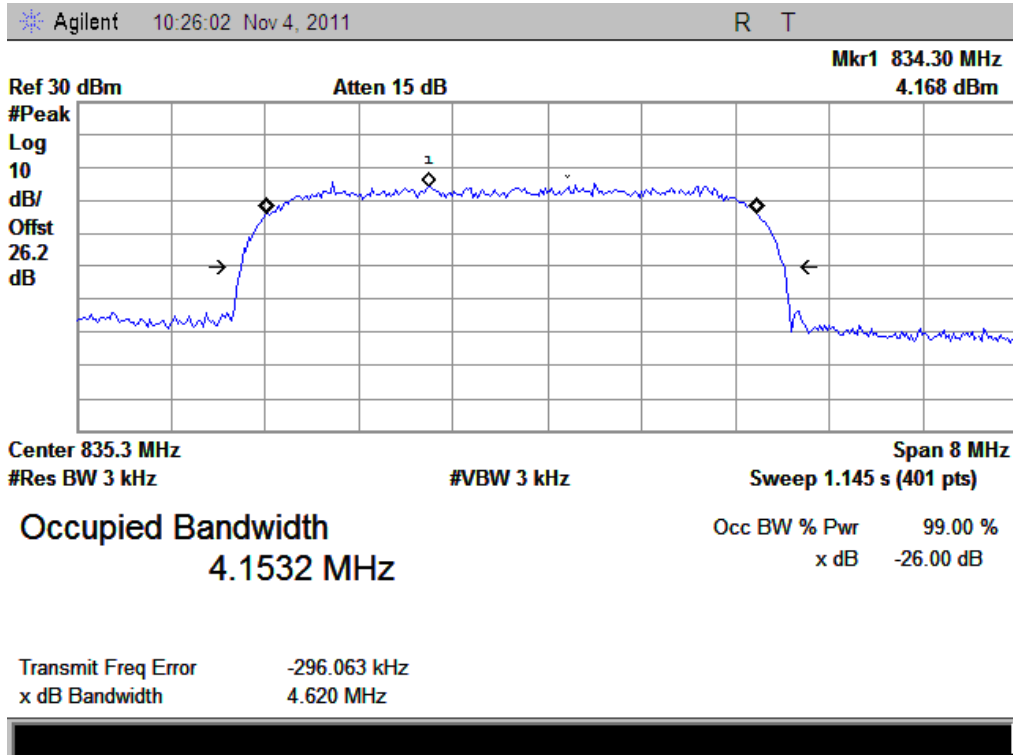
(Plot L: EGPRS 1900MHz Channel = 810)



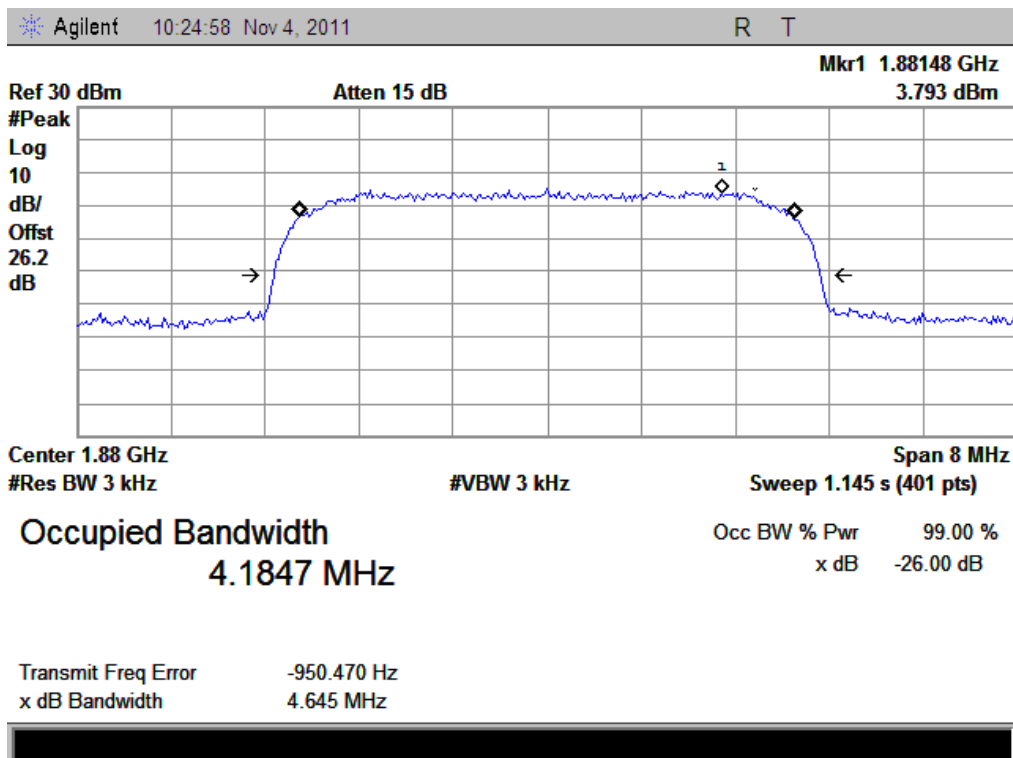
(Plot M: WCDMA 850MHz Channel = 4175)



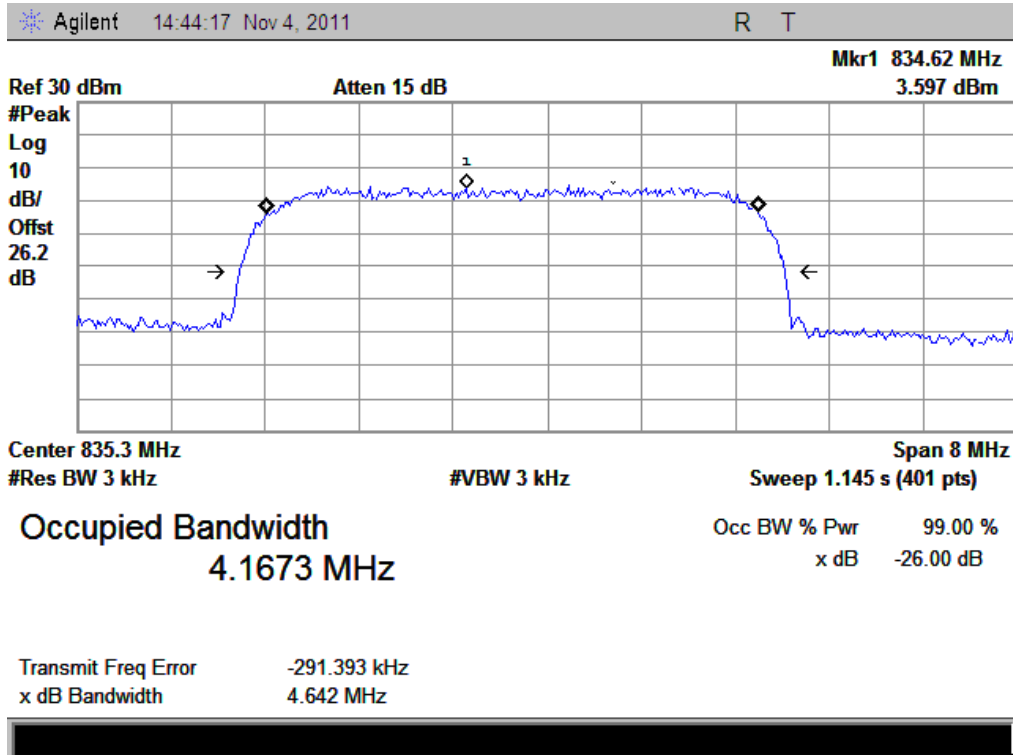
(Plot N: WCDMA 1900MHz Channel = 9400)



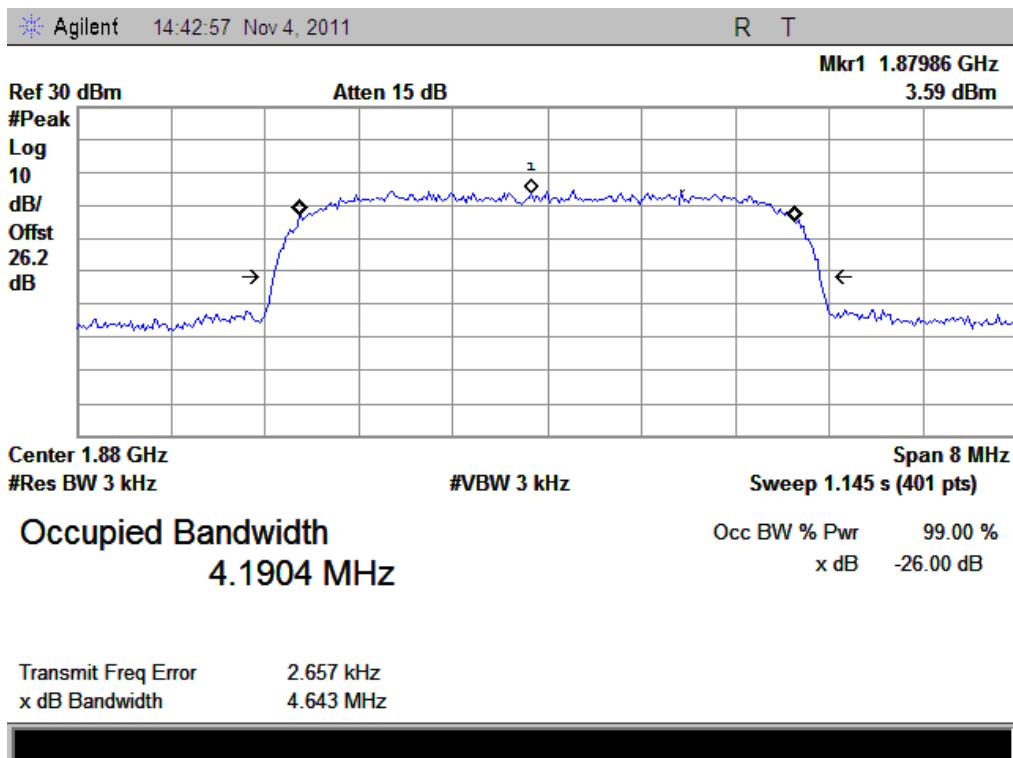
(Plot O: HSDPA 850MHz Channel = 4175)



(Plot P: HSDPA 1900MHz Channel =9400)



(Plot Q: HSUPA 850MHz Channel = 4175)



(Plot R: HSDPA 1900MHz Channel = 9400)

2.3. Frequency Stability

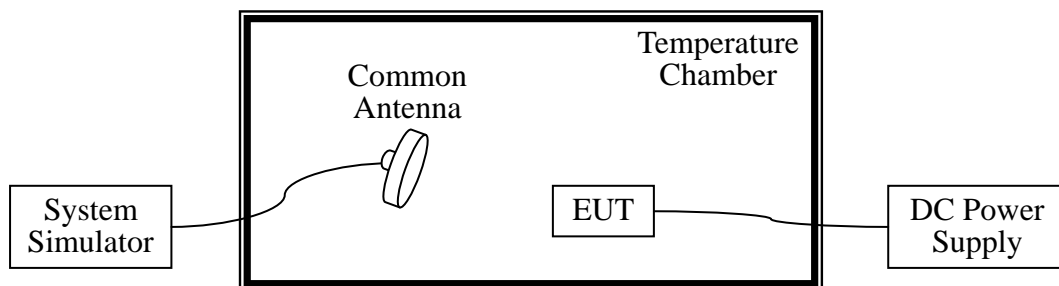
2.3.1. Requirement

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 $+50^{\circ}\text{C}$ 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

A. 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.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2011.05
DC Power Supply	Good Will	GPS-3030DD	EF920938	2011.05
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2011.05

2.3.3. Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.7VDC, 4.2VDC and 3.5VDC, which are specified by the applicant; the normal temperature here used is 25°C . The frequency deviation limit of GSM 850MHz band is $\pm 2.5\text{ppm}$, and GSM 1900MHz is $\pm 1\text{ppm}$

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	
GSM 850 MHz	3.7	-30	27.12	±2060.5	27.82	±2091.5	25.74	±2122	
		-20	26.83		29.70		25.74		
		-10	23.28		28.12		31.14		
		0	25.11		21.06		25.17		
		+10	-23.13		13.07		25.47		
		+20	-10.39		-12.76		-7.61		
		+30	17.75		-2.05		6.09		
		+40	5.31		-33.77		15.49		
		+50	-12.19		5.39		10.19		
	4.2	+25	20.74	19.65	8.71				
3.6	+25	-27.28	-26.96	-25.27					
GSM 1900 MHz	3.7	-30	29.30	±1850.2	27.82	±1880.0	29.47	±1909.8	
		-20	29.22		29.45		29.30		
	-10	25.19	28.17	27.12					
GSM 1900 MHz	3.7	0	29.37	±1850.2	-3.20	±1880.0	11.82	±1909.8	
		+10	13.97		20.04		19.77		
		+20	22.42		-14.29		-22.73		
		+30	18.57		-27.62		-22.22		
		+40	-19.93		-17.97		22.21		
		+50	23.76		-18.23		-22.22		
		4.2	+25		-21.20		27.16		22.63
		3.6	+25		-19.17		-15.31		-15.15

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	
EDGE 850 MHz	3.7	-30	27.12	±2060.5	27.82	±2091.5	25.74	±2122	
		-20	26.83		29.70		25.74		
		-10	23.28		28.12		31.14		
		0	25.11		21.06		25.17		
		+10	-23.13		13.07		25.47		
		+20	-10.39		-12.76		-7.61		
		+30	17.75		-2.05		6.09		
		+40	5.31		-33.77		15.49		
		+50	-12.19		5.39		10.19		
	4.2	+25	20.74	19.65	8.71				
3.6	+25	-27.28	-26.96	-25.27					
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	
EDGE 1900 MHz	3.7	-30	29.30	±1850.2	27.82	±1880.0	29.47	±1909.8	
		-20	29.22		29.45		29.30		
		-10	25.19		28.17		27.12		
		0	29.37		-3.20		11.82		
		+10	13.97		20.04		19.77		
		+20	22.42		-14.29		-22.73		
		+30	18.57		-27.62		-22.22		
		+40	-19.93		-17.97		22.21		
		+50	23.76		-18.23		-22.22		
	4.2	+25	-21.20	27.16	22.63				
3.6	+25	-19.17	-15.31	-15.15					

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	
WCDMA 850 MHz	3.7	-30	27.12	±2060.5	27.82	±2091.5	25.74	±2122	
		-20	26.83		29.70		25.74		
		-10	23.28		28.12		31.14		
		0	25.11		21.06		25.17		
		+10	-23.13		13.07		25.47		
		+20	-10.39		-12.76		-7.61		
		+30	17.75		-2.05		6.09		
		+40	5.31		-33.77		15.49		
	+50	-12.19	5.39	10.19					
	4.2	+25	20.74	19.65	8.71				
3.6	+25	-27.28	-26.96	-25.27					
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	
WCDMA 1900 MHz	3.7	-30	29.30	±1850.2	27.82	±1880.0	29.47	±1909.8	
		-20	29.22		29.45		29.30		
		-10	25.19		28.17		27.12		
		0	29.37		-3.20		11.82		
		+10	13.97		20.04		19.77		
		+20	22.42		-14.29		-22.73		
		+30	18.57		-27.62		-22.22		
		+40	-19.93		-17.97		22.21		
	+50	23.76	-18.23	-22.22					
	4.2	+25	-21.20	27.16	22.63				
3.6	+25	-19.17	-15.31	-15.15					

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	
HSDPA 850 MHz	3.7	-30	27.12	±2060.5	27.82	±2091.5	25.74	±2122	
		-20	26.83		29.70		25.74		
		-10	23.28		28.12		31.14		
		0	25.11		21.06		25.17		
		+10	-23.13		13.07		25.47		
		+20	-10.39		-12.76		-7.61		
		+30	17.75		-2.05		6.09		
		+40	5.31		-33.77		15.49		
	+50	-12.19	5.39	10.19					
	4.2	+25	20.74	19.65	8.71				
3.6	+25	-27.28	-26.96	-25.27					
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	
HSDPA 1900 MHz	3.7	-30	29.30	±1850.2	27.82	±1880.0	29.47	±1909.8	
		-20	29.22		29.45		29.30		
		-10	25.19		28.17		27.12		
		0	29.37		-3.20		11.82		
		+10	13.97		20.04		19.77		
		+20	22.42		-14.29		-22.73		
		+30	18.57		-27.62		-22.22		
		+40	-19.93		-17.97		22.21		
	+50	23.76	-18.23	-22.22					
	4.2	+25	-21.20	27.16	22.63				
3.6	+25	-19.17	-15.31	-15.15					

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	
HSUPA 850 MHz	3.7	-30	27.12	±2060.5	27.82	±2091.5	25.74	±2122	
		-20	26.83		29.70		25.74		
		-10	23.28		28.12		31.14		
		0	25.11		21.06		25.17		
		+10	-23.13		13.07		25.47		
		+20	-10.39		-12.76		-7.61		
		+30	17.75		-2.05		6.09		
		+40	5.31		-33.77		15.49		
	+50	-12.19	5.39	10.19					
	4.2	+25	20.74	19.65	8.71				
3.6	+25	-27.28	-26.96	-25.27					
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	
HSUPA 1900 MHz	3.7	-30	29.30	±1850.2	27.82	±1880.0	29.47	±1909.8	
		-20	29.22		29.45		29.30		
		-10	25.19		28.17		27.12		
		0	29.37		-3.20		11.82		
		+10	13.97		20.04		19.77		
		+20	22.42		-14.29		-22.73		
		+30	18.57		-27.62		-22.22		
		+40	-19.93		-17.97		22.21		
	+50	23.76	-18.23	-22.22					
	4.2	+25	-21.20	27.16	22.63				
3.6	+25	-19.17	-15.31	-15.15					

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.

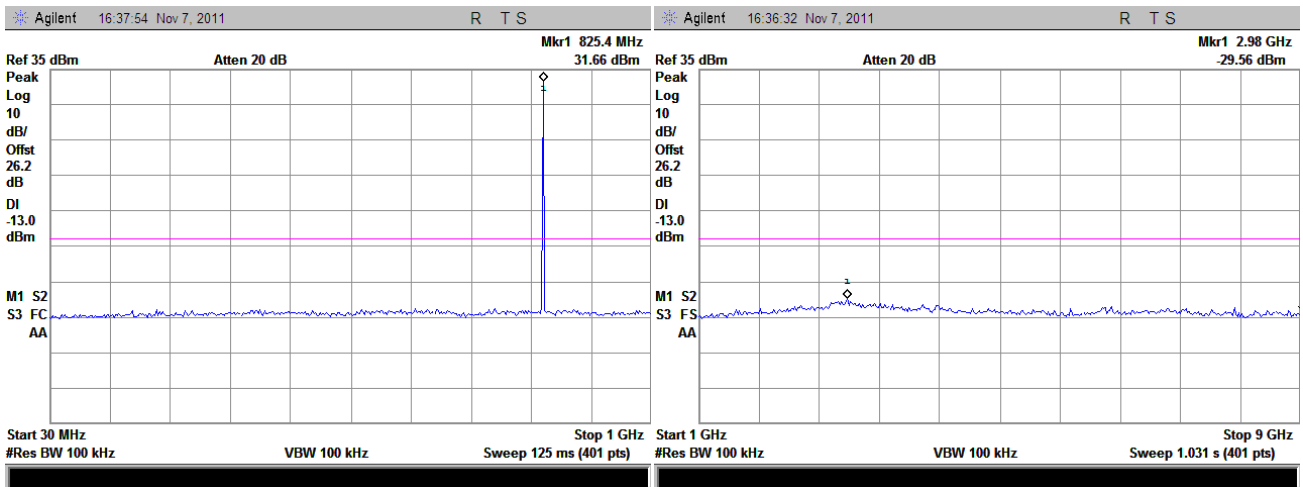
Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	<-25	Plot A1toA1.1	-13	PASS
	190	836.6	<-25	Plot A2toA2.1		PASS
	251	848.8	<-25	Plot A3toA3.1		PASS
GSM 1900MHz	512	1850.2	<-25	Plot B1toB1.1	-13	PASS
	661	1880.0	<-25	Plot B2toB2.1		PASS
	810	1909.8	<-25	Plot B3toB3.1		PASS
EDGE 850MHz	128	824.2	<-25	Plot C1toC1.1	-13	PASS
	190	836.6	<-25	Plot C2toC2.1		PASS
	251	848.8	<-25	Plot C3toC3.1		PASS
EDGE 1900MHz	512	1850.2	<-25	Plot D1toD1.1	-13	PASS
	661	1880.0	<-25	Plot D2toD2.1		PASS
	810	1909.8	<-25	Plot D3toD3.1		PASS
WCDMA 850MHz	4132	826.4	<-25	Plot E1toE1.1	-13	PASS
	4175	835	<-25	Plot E2toE2.1		PASS
	4233	846.6	<-25	Plot E3toE3.1		PASS
WCDMA 1900MHz	9262	1852.4	<-25	Plot F1toF1.1	-13	PASS
	9400	1880	<-25	Plot F2toF2.1		PASS
	9538	1907.6	<-25	Plot F3toF3.1		PASS
HSDPA 850MHz	4132	826.4	<-25	Plot G1toG1.1	-13	PASS
	4175	835	<-25	Plot G2toG2.1		PASS
	4233	846.6	<-25	Plot G3toG3.1		PASS
HSDPA	9262	1852.4	<-25	Plot H1toH1.1	-13	PASS

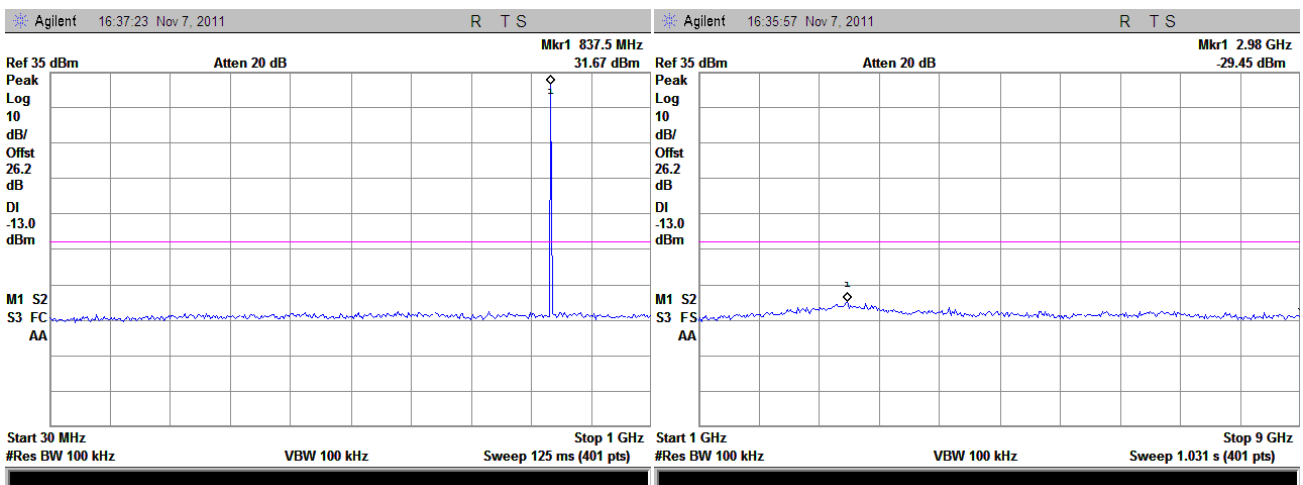
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
1900MHz	9400	1880	<-25	Plot H2toH2.1		PASS
	9538	1907.6	<-25	Plot H3toH3.1		PASS
HSUPA 850MHz	4132	826.4	<-25	Plot I1toI1.1	-13	PASS
	4175	835	<-25	Plot I2toI2.1		PASS
	4233	846.6	<-25	Plot I3toI3.1		PASS
HSUPA 1900MHz	9262	1852.4	<-25	Plot J1toJ1.1	-13	PASS
	9400	1880	<-25	Plot J2toJ2.1		PASS
	9538	1907.6	<-25	Plot J3toJ3.1		PASS

Test Plots for the Whole Measurement Frequency Range:

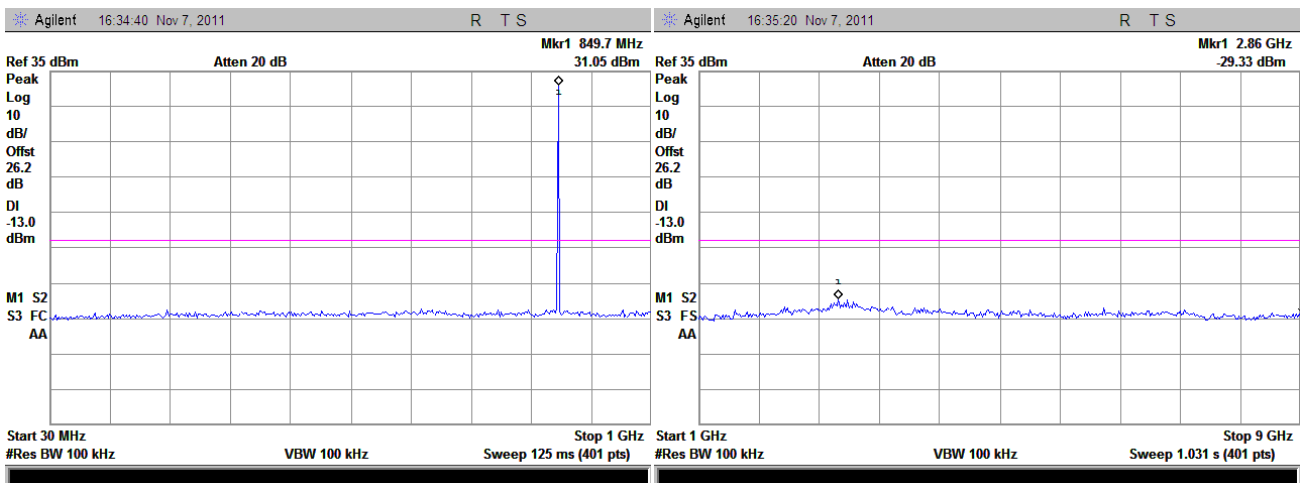
Note: the power of the EUT transmitting frequency should be ignored.



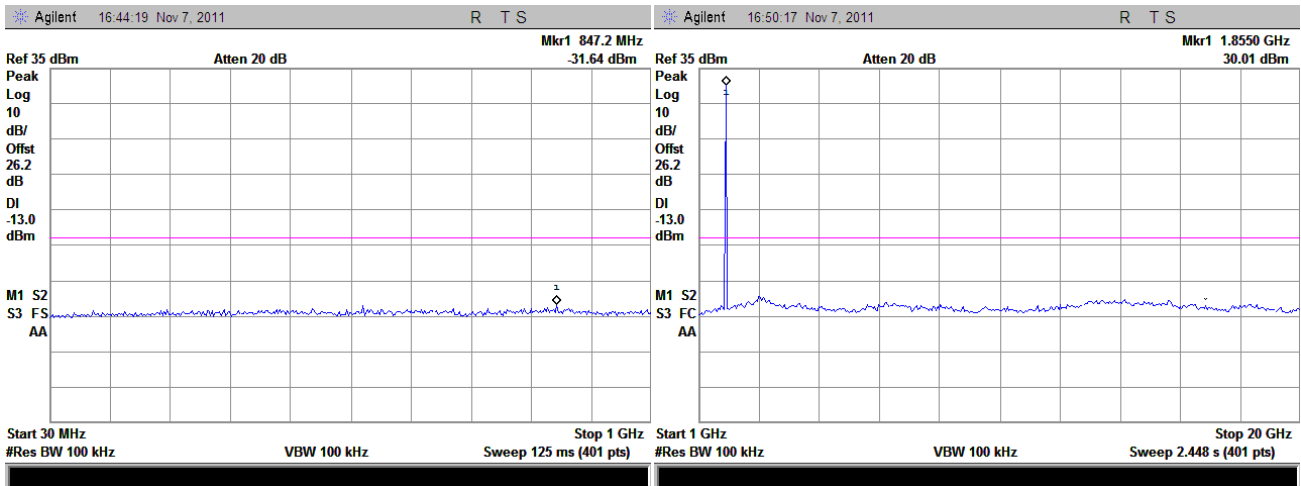
(Plot A1 to A1.1: GSM 850MHz Channel = 128,30MHz to 9GHz)



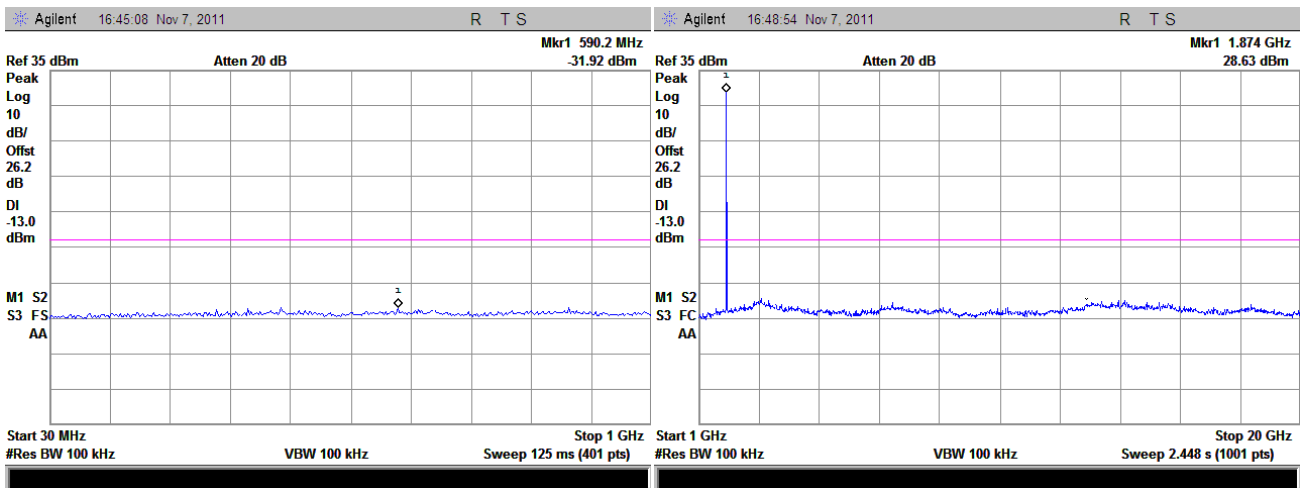
(Plot A2 to A2.1 : GSM 850MHz Channel = 190, 30 MHz to 9GHz)



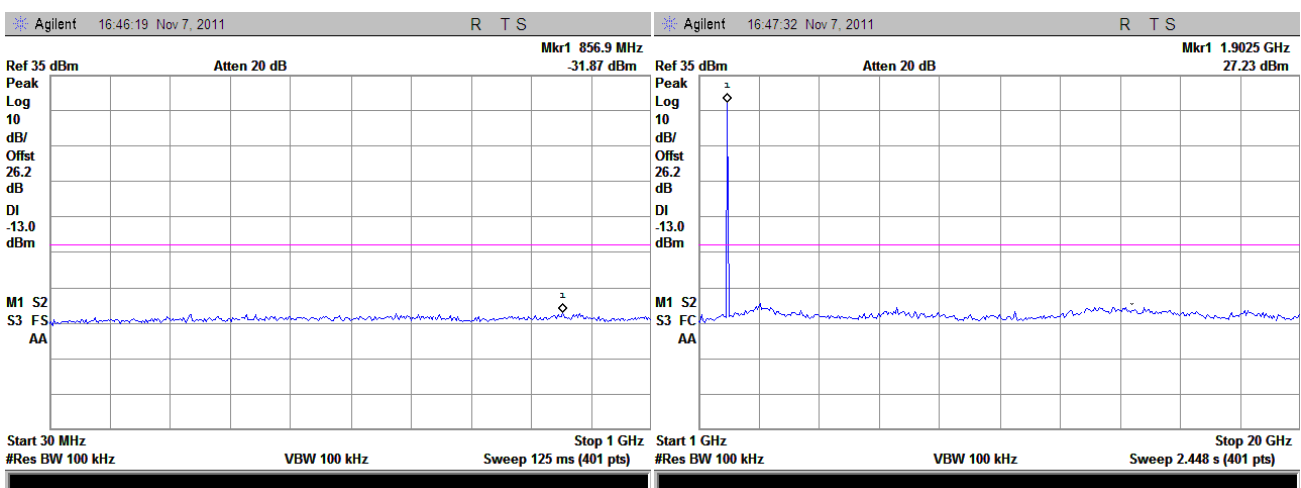
(Plot A3 to A3.1: GSM 850MHz Channel = 251, 30MHz to 1GHz)



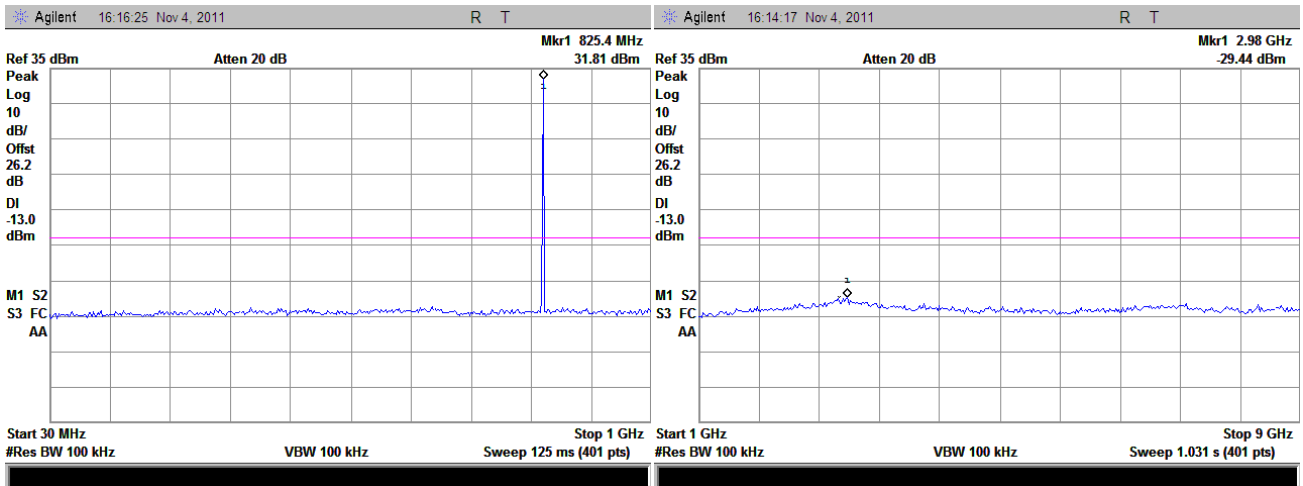
(Plot B1to B1.1: GSM 1900MHz Channel = 512, 30 MHz to 20GHz)



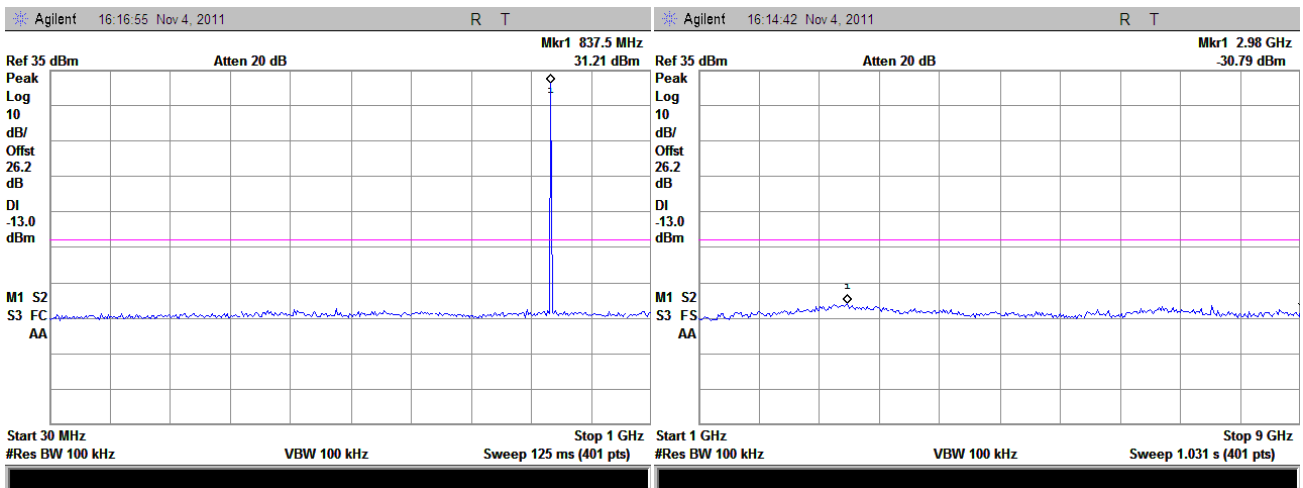
(Plot B2to B2.1: GSM 1900MHz Channel = 661, 30 MHz to 20GHz)



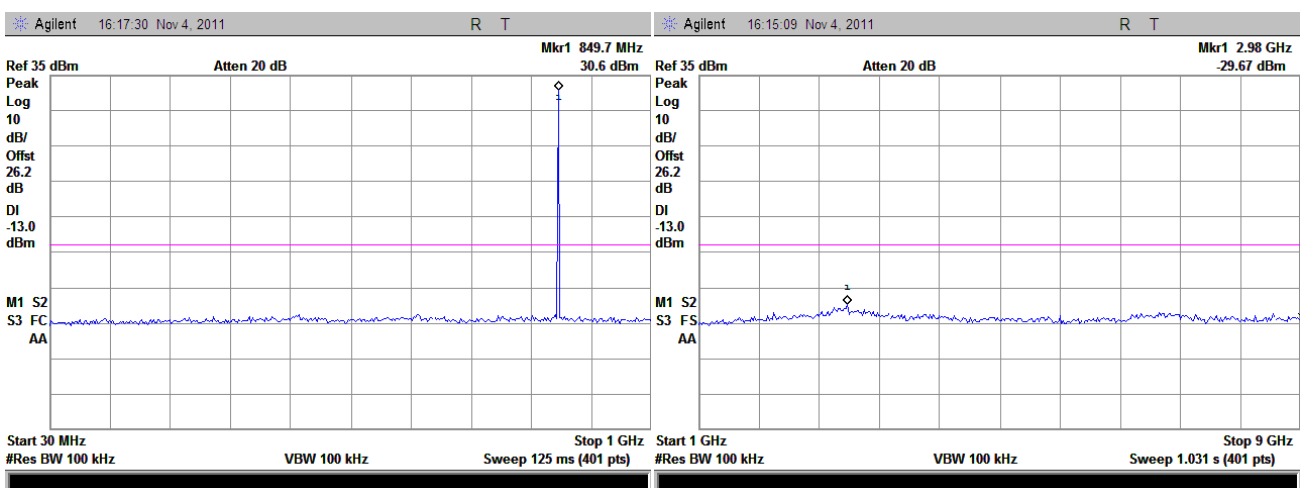
(Plot B3to B3.1: GSM 1900MHz Channel = 810, 30 MHz to 20GHz)



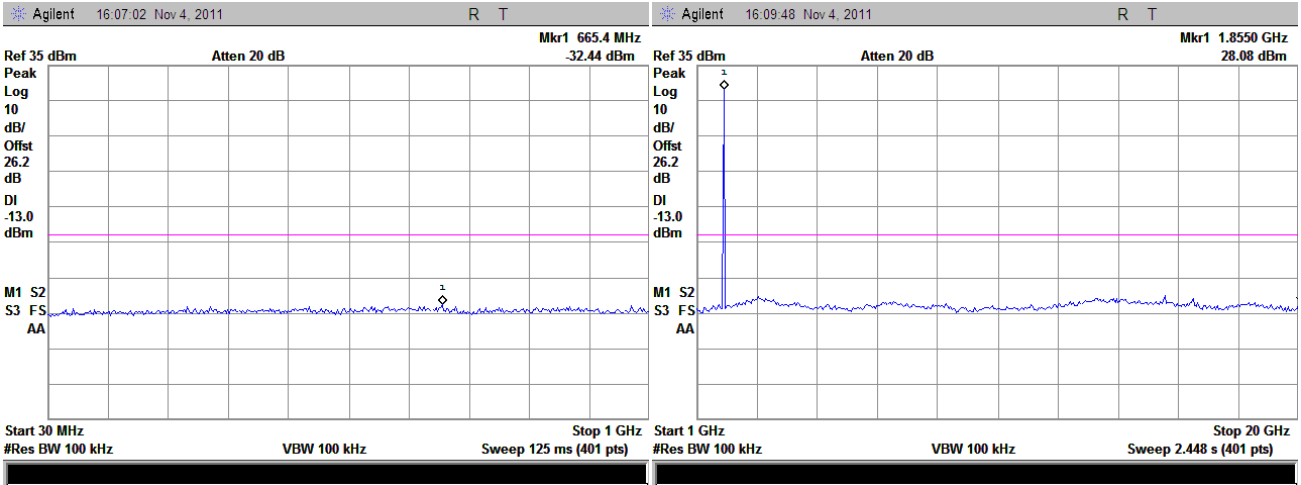
(Plot C1 to C1.1: EGPRS 850MHz Channel = 128,30MHz to 9GHz)



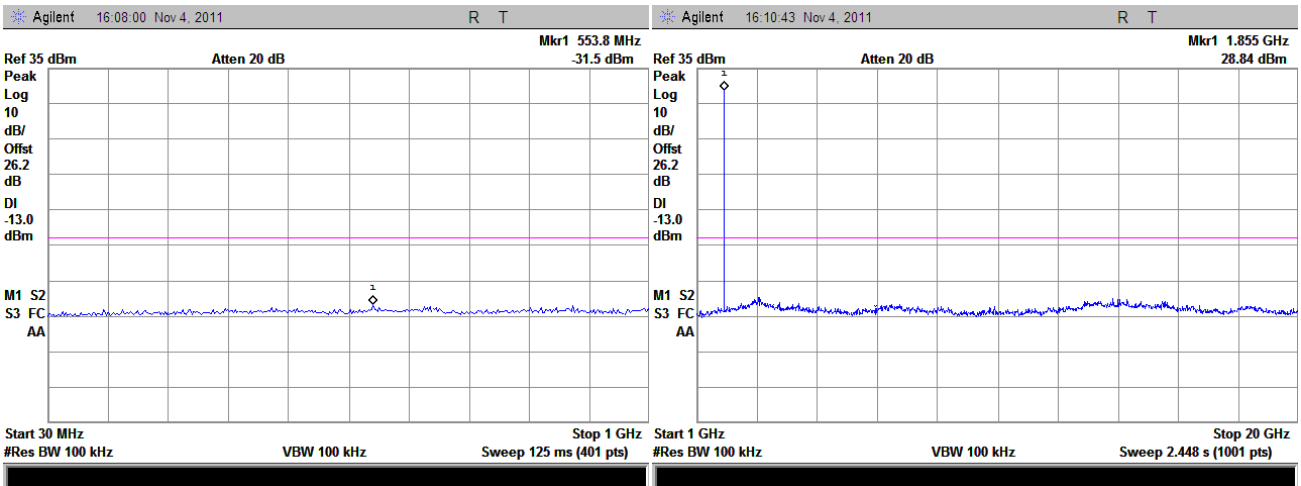
(Plot C2 to C2.1: EGPRS 850MHz Channel = 190,30MHz to 9GHz)



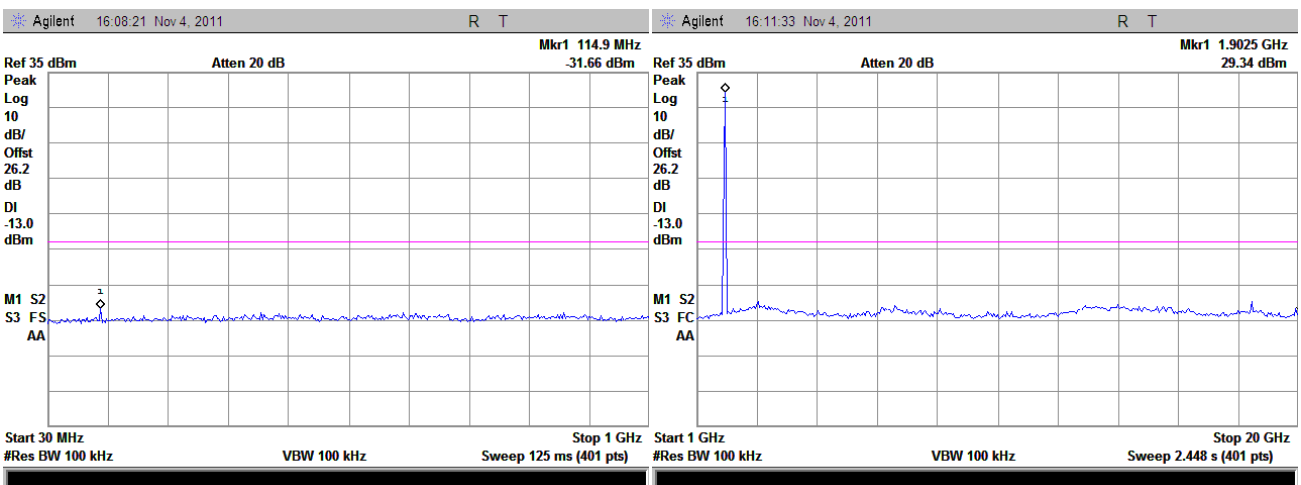
(Plot C3 to C3.1: EGPRS 850MHz Channel = 251,30MHz to 9GHz)



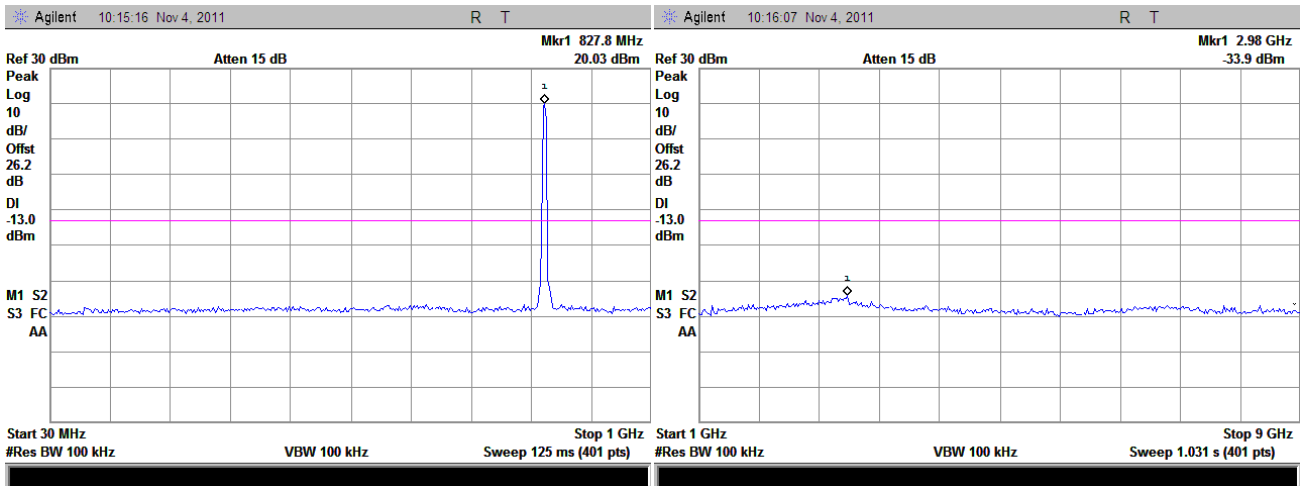
(Plot D1 to D1.1: EGPRS1900MHz Channel =512, 30MHz to 20GHz)



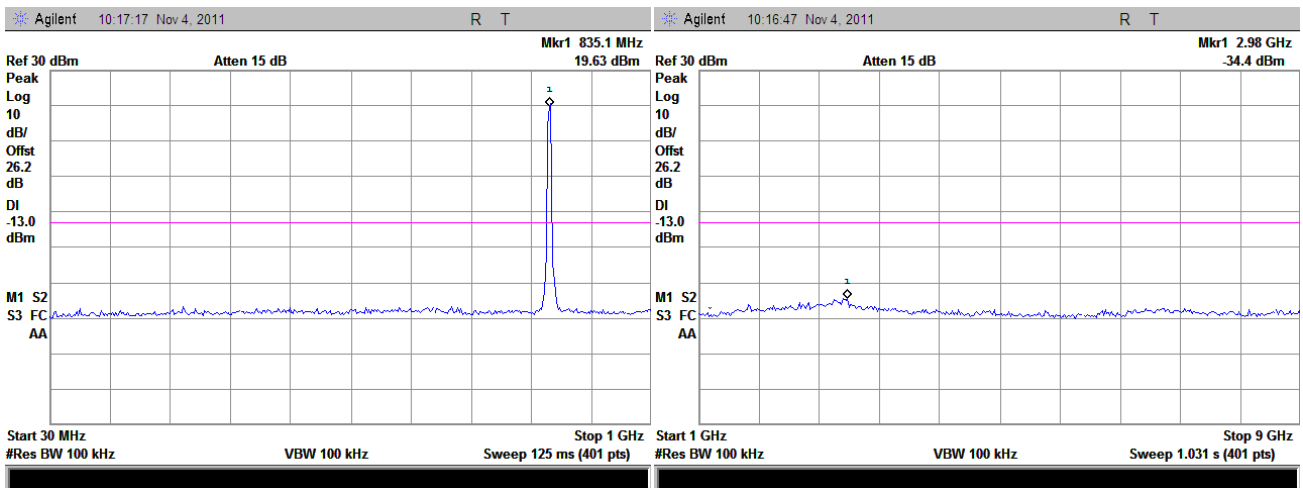
(Plot D2 to D2.1: EGPRS1900MHz Channel =661, 30MHz to 20GHz)



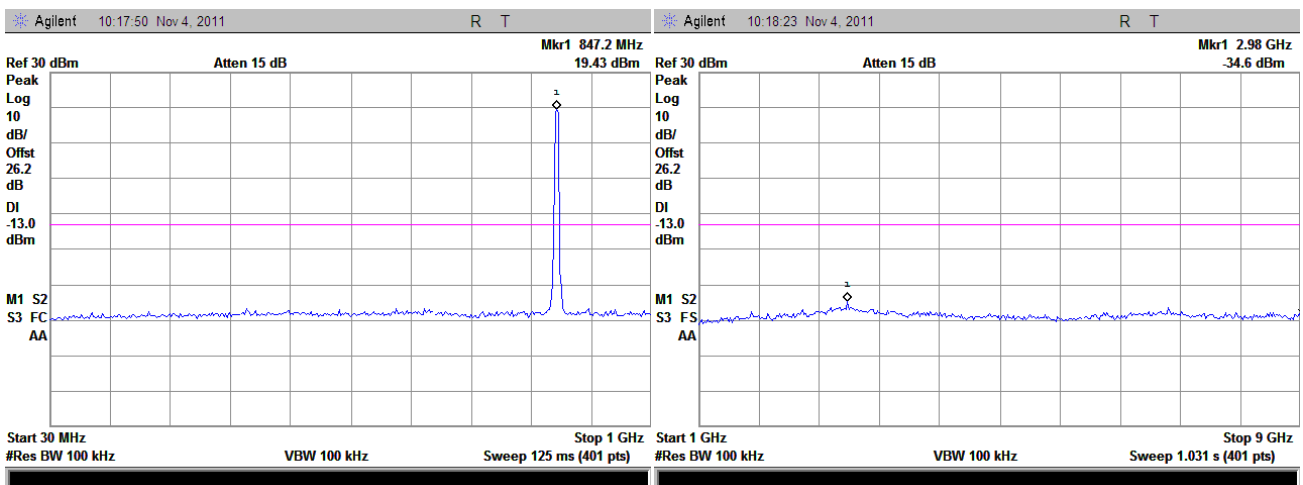
(Plot D3 to D3.1: EGPRS1900MHz Channel =810, 30MHz to 20GHz)



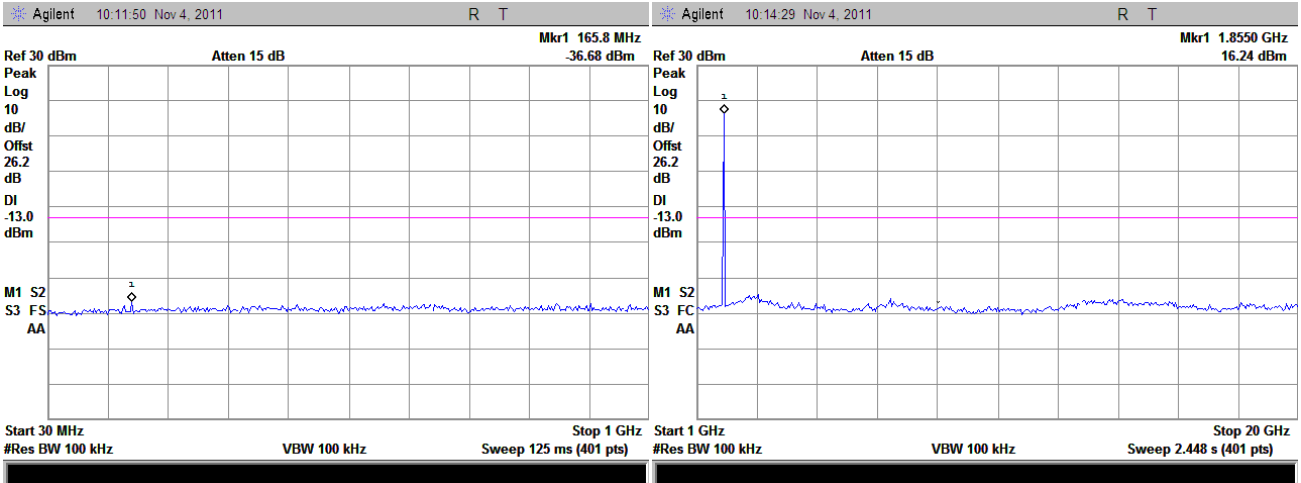
(Plot E1 to E1.1: WCDMA 850MHz Channel =4132, 30MHz to 9GHz)



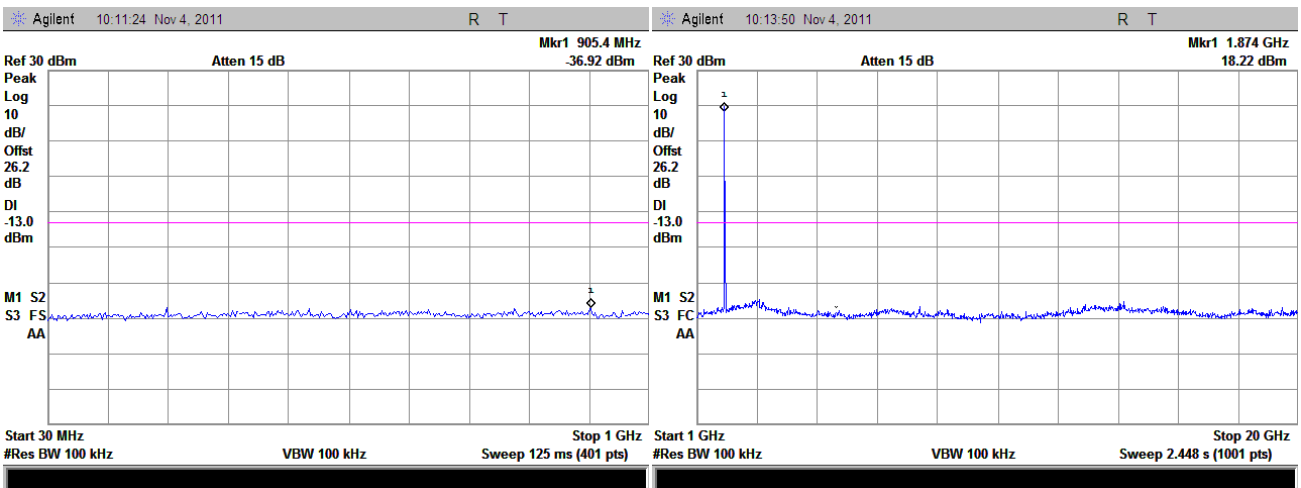
(Plot E2 to E2.1: WCDMA 850MHz Channel =4175, 30MHz to 9GHz)



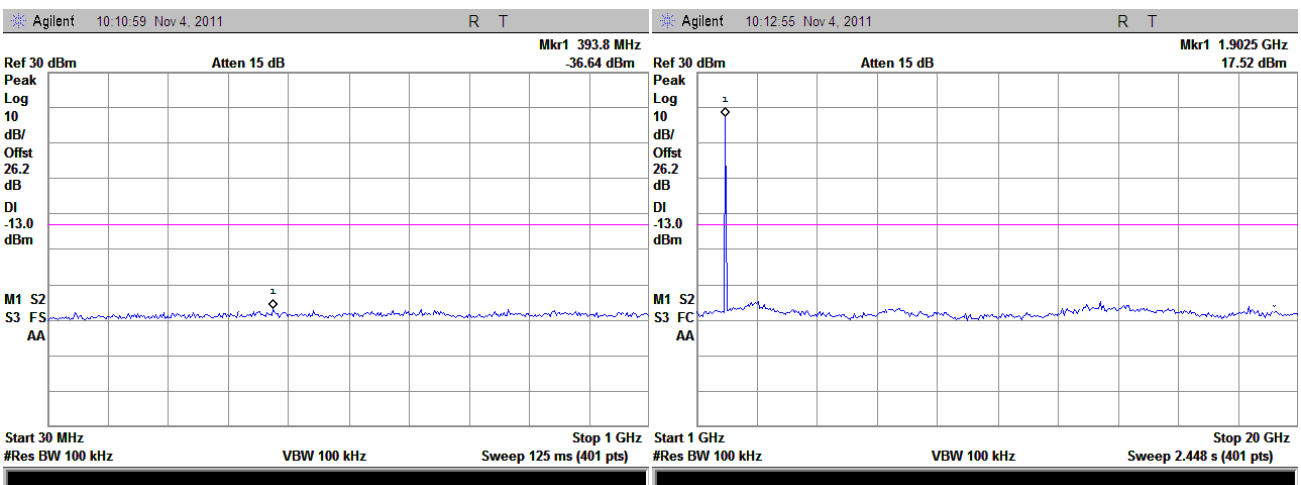
(Plot E3 to E3.1: WCDMA 850MHz Channel =4233, 30MHz to 9GHz)



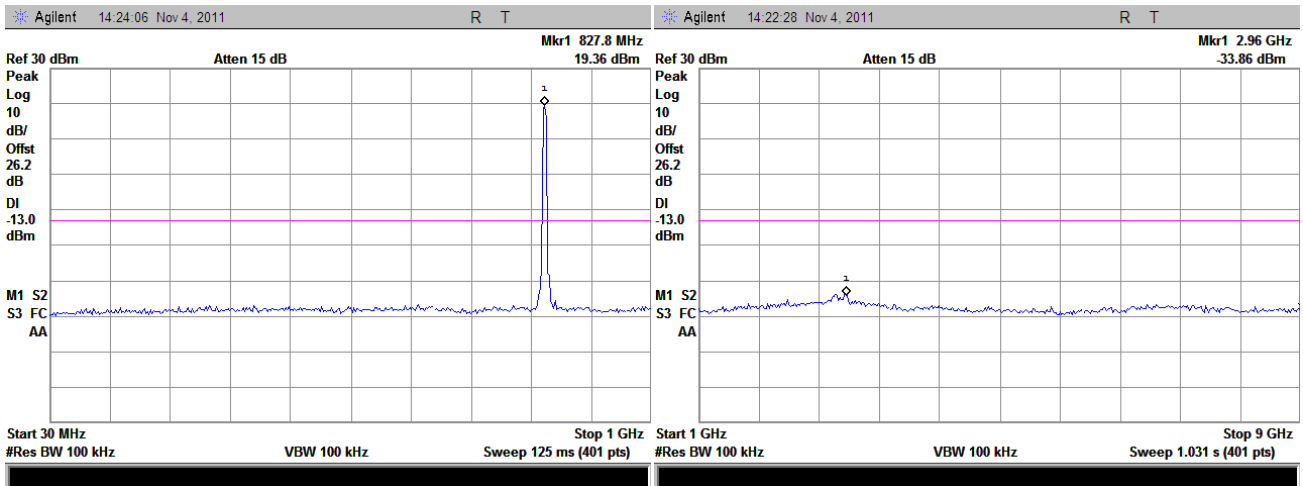
(Plot F1 to F1.1: WCDMA 1900MHz Channel =9262, 30MHz to 20GHz)



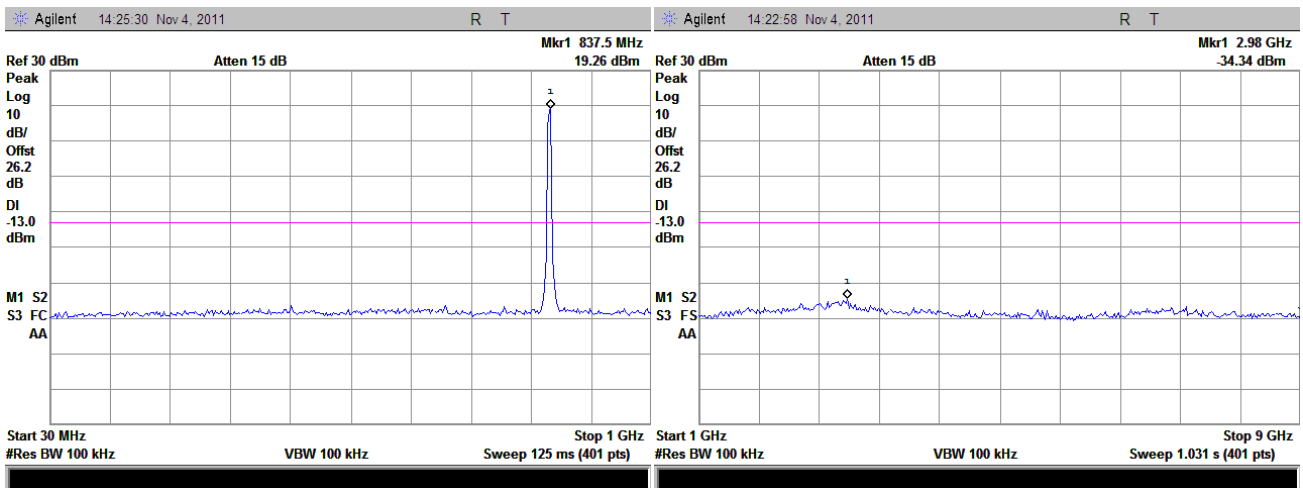
(Plot F2 to F2.1: WCDMA 1900MHz Channel =9400, 30MHz to 20GHz)



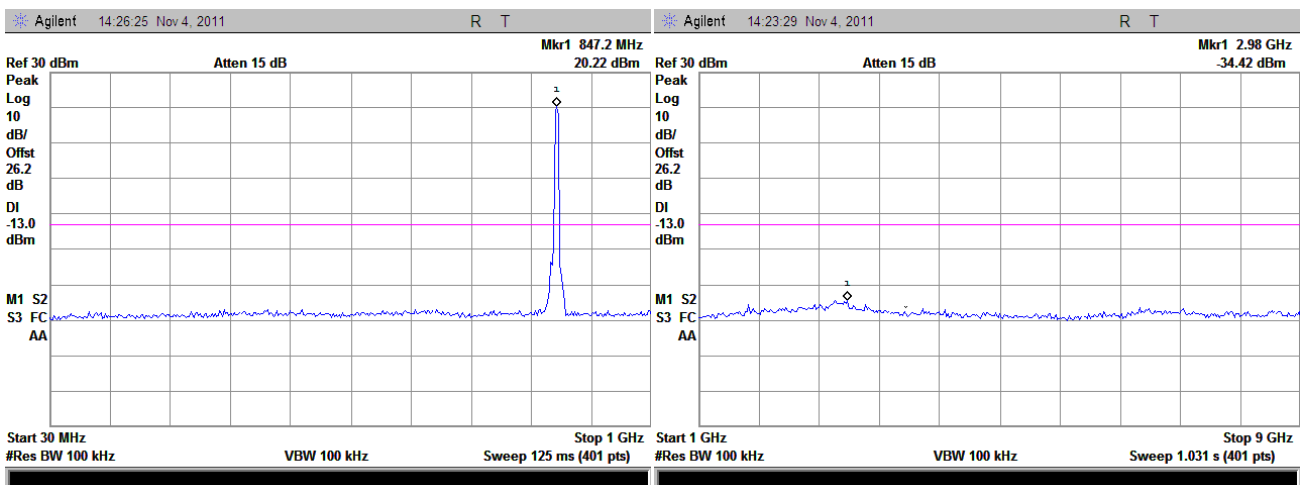
(Plot F3 to F3.1: WCDMA 1900MHz Channel =9538, 30MHz to 20GHz)



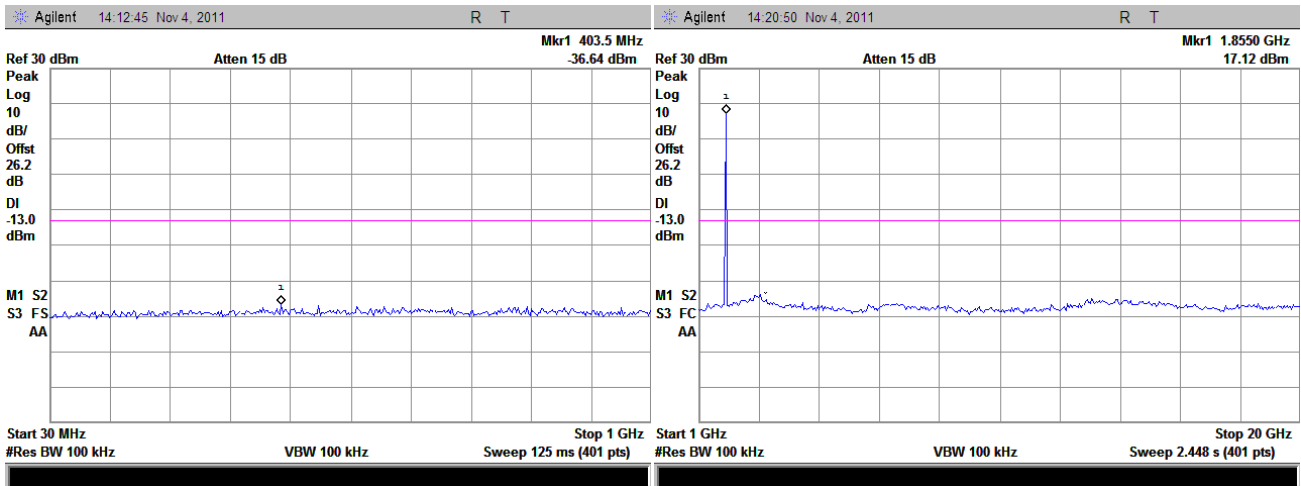
(Plot G1 to G1.1: HSDPA 850MHz Channel =4132, 30MHz to 9GHz)



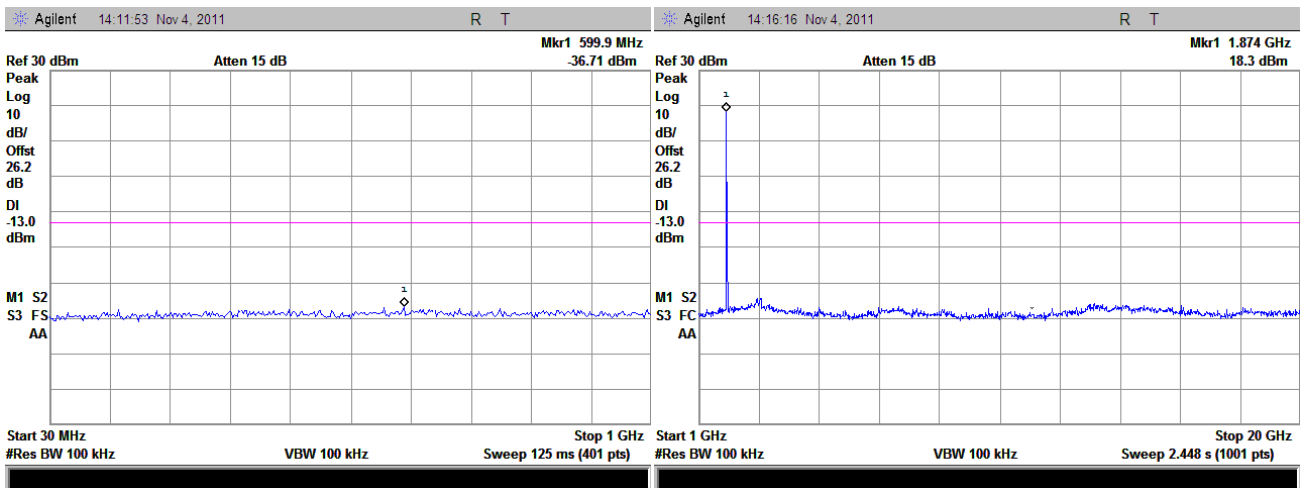
(Plot G2 to G2.1: HSDPA 850MHz Channel =4175, 30MHz to 9GHz)



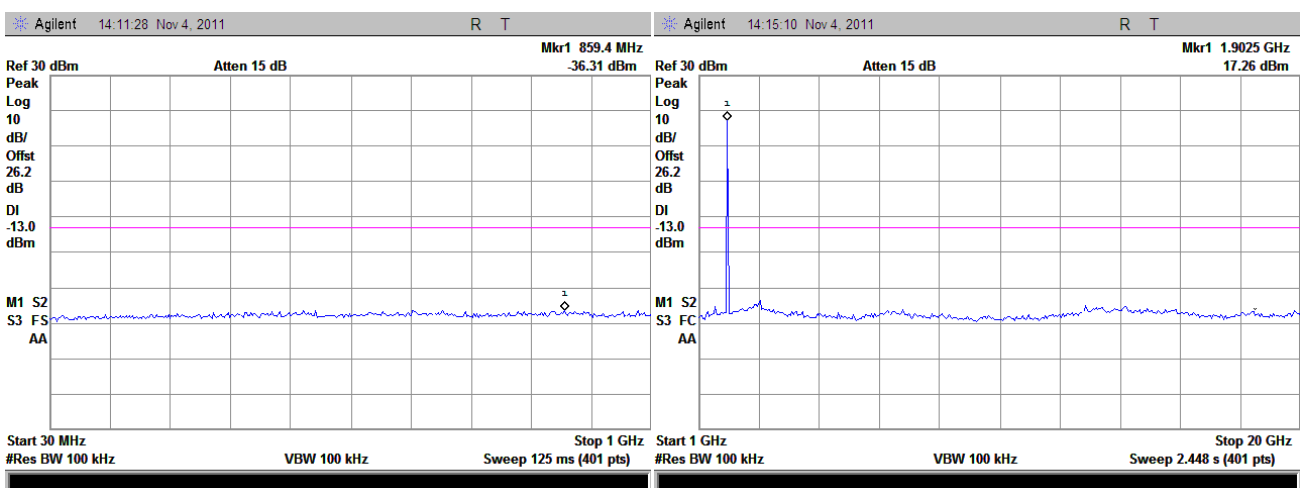
(Plot G3 to G3.1: HSDPA 850MHz Channel =4233, 30MHz to 9GHz)



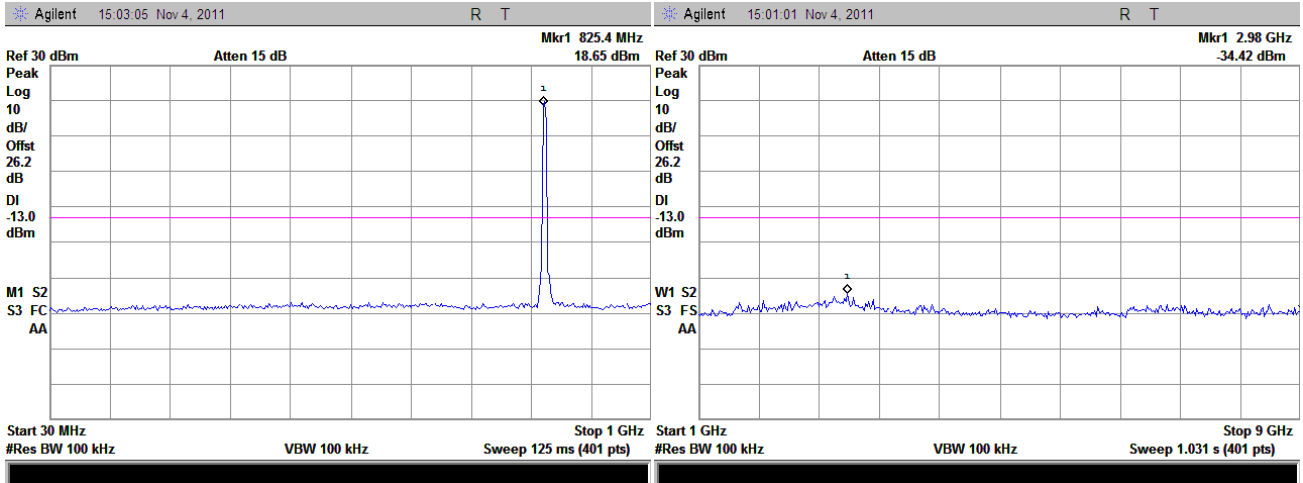
(Plot H1 to H1.1: HSDPA 1900MHz Channel =9262, 30MHz to 20GHz)



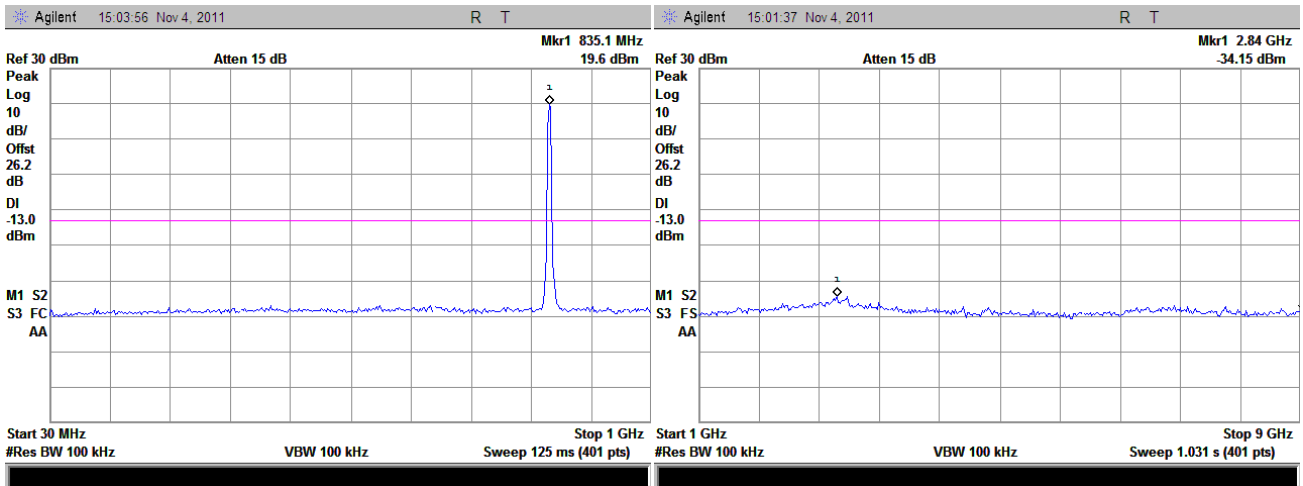
(Plot H2 to H2.1: HSDPA 1900MHz Channel =9400, 30MHz to 20GHz)



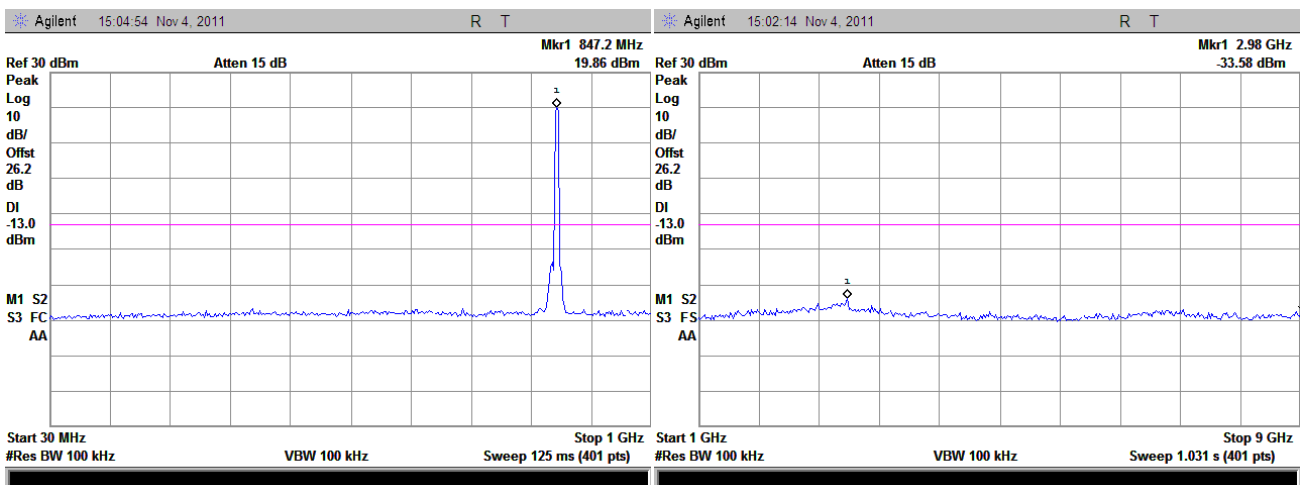
(Plot H3 to H3.1: HSDPA 1900MHz Channel =9538, 30MHz to 20GHz)



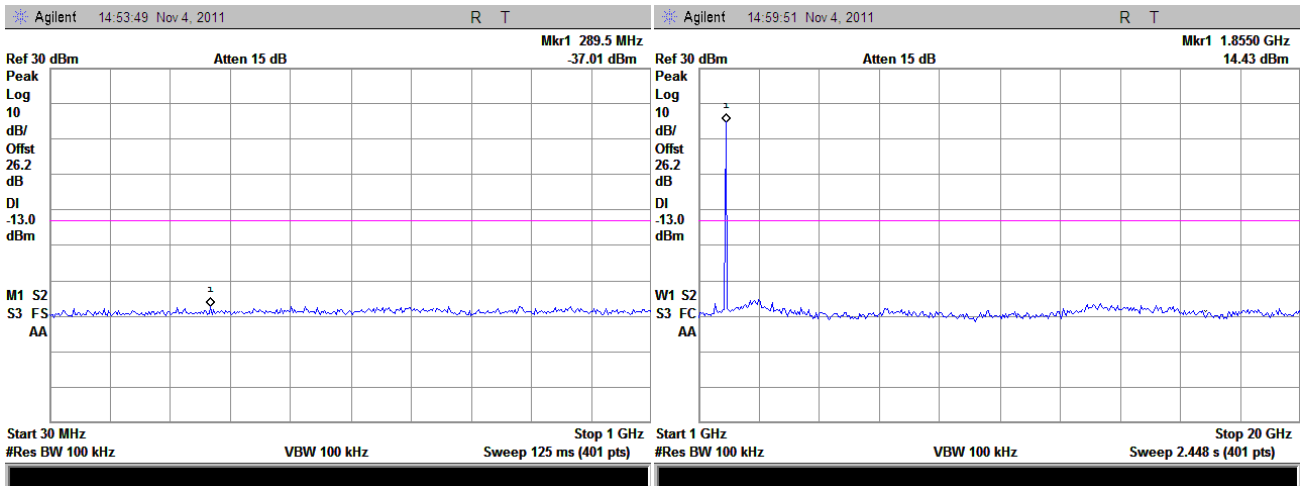
(Plot I1 to I1.1: HSUPA 850MHz Channel =4132, 30MHz to 9GHz)



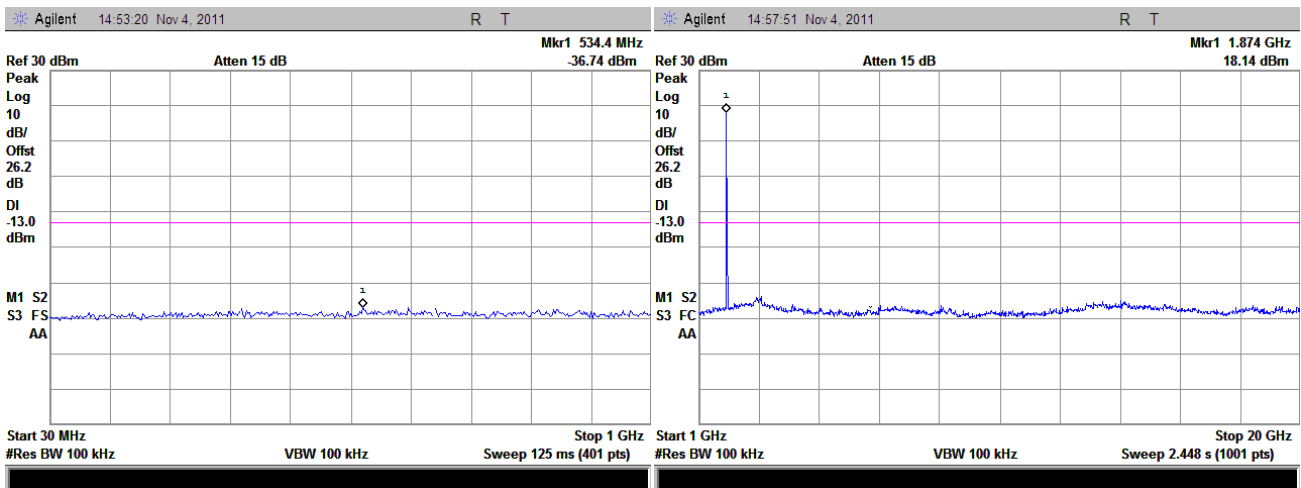
(Plot I2 to I2.1: HSUPA 850MHz Channel =4175, 30MHz to 9GHz)



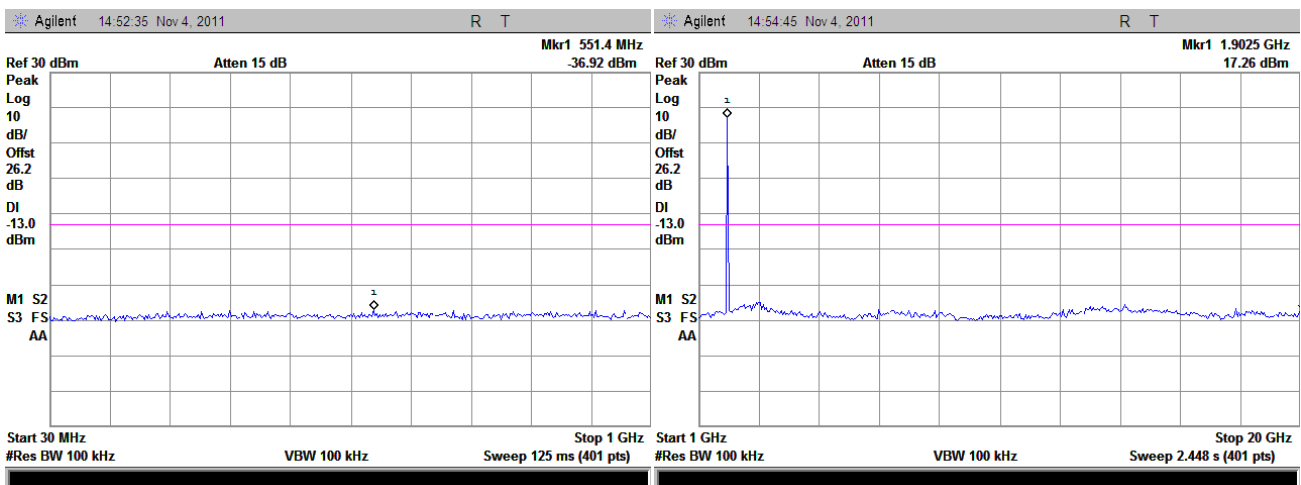
(Plot I3 to I3.1: HSUPA 850MHz Channel =4233, 30MHz to 9GHz)



(Plot J1 to J1.1: HSUPA 1900MHz Channel =9262, 30MHz to 20GHz)



(Plot J2 to J2.1: HSDPA 1900MHz Channel =9400, 30MHz to 20GHz)



(Plot J3 to J3.1: HSDPA 1900MHz Channel =9538, 30MHz 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

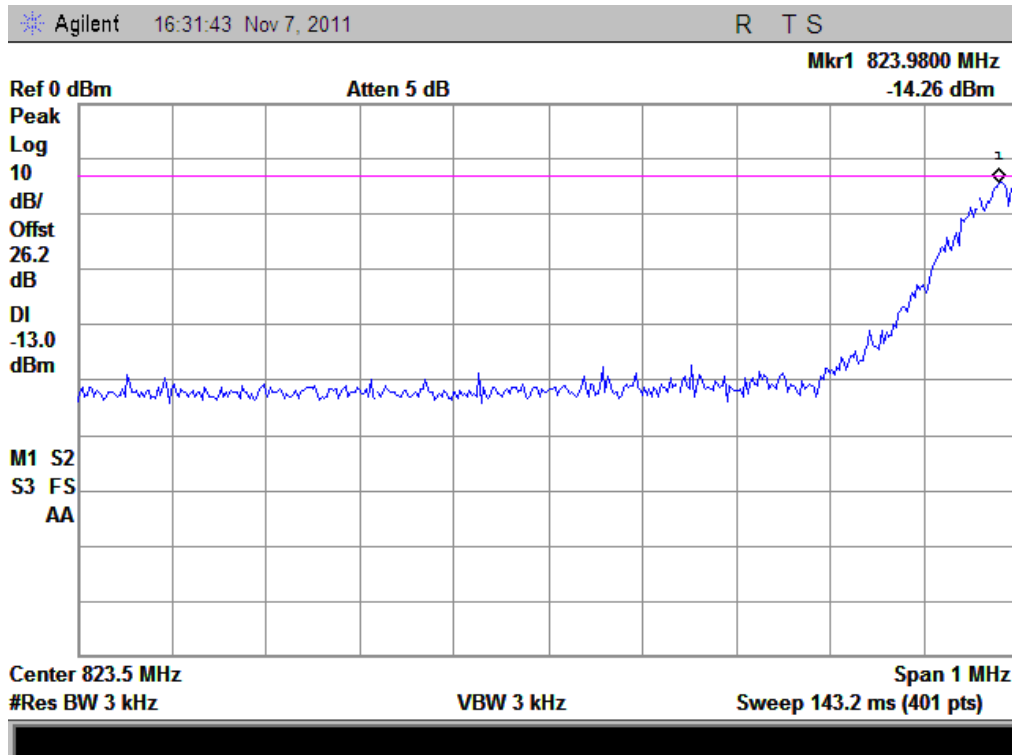
See section 2.1.2 of this report.

2.5.3. Test Result

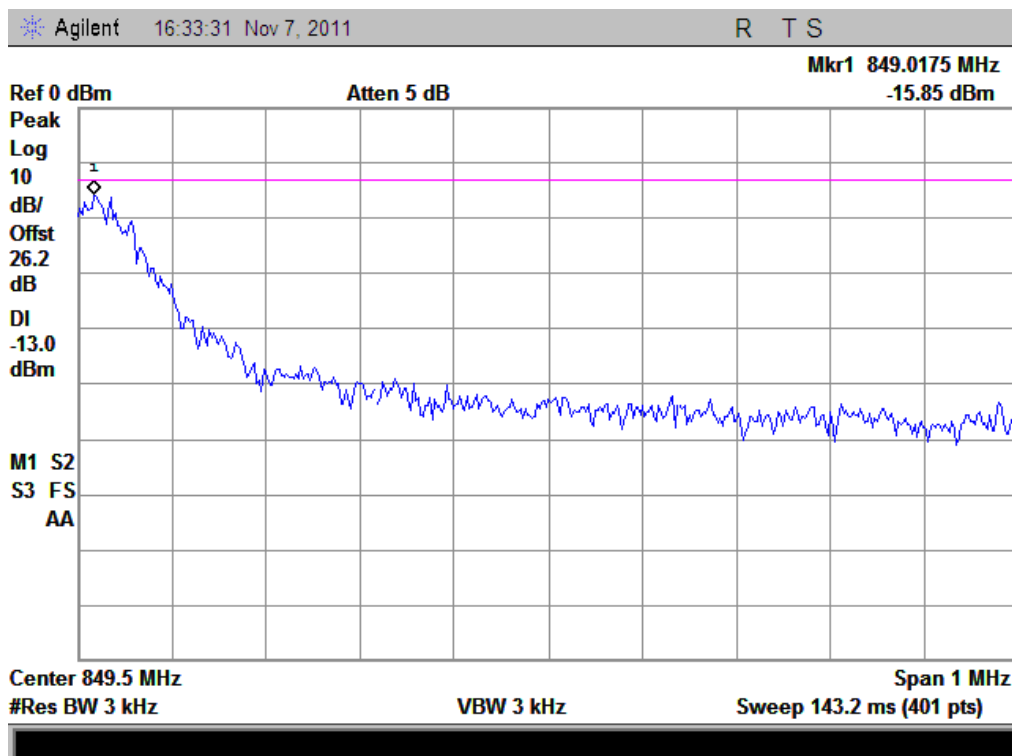
The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

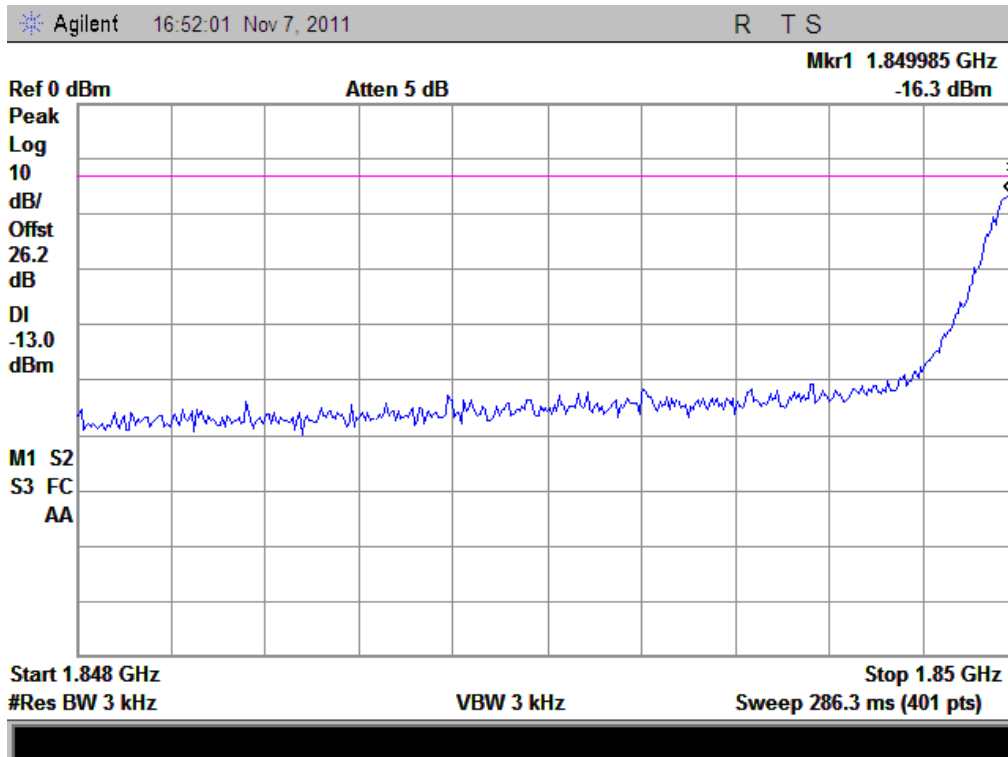
Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-14.26	Plat A	-13	PASS
	251	848.8	-15.85	Plot B		PASS
GSM 1900MHz	512	1850.2	-16.30	Plat C	-13	PASS
	810	1909.8	-15.16	Plot D		PASS
EDGE 850MHz	128	824.2	-14.58	Plat E	-13	PASS
	251	848.8	-15.40	Plot F		PASS
EDGE 1900MHz	512	1850.2	-17.88	Plat G	-13	PASS
	810	1909.8	-16.14	Plot H		PASS
WCDMA 850MHz	4132	826.4	-26.08	Plat I	-13	PASS
	4233	846.6	-25.89	Plot J		PASS
WCDMA 1900MHz	9262	1852.4	-24.45	Plat K	-13	PASS
	9538	1907.6	-24.94	Plot L		PASS
HSDPA 850MHz	4132	826.4	-24.63	Plat M	-13	PASS
	4233	846.6	-26.95	Plot N		PASS
HSDPA 1900MHz	9262	1852.4	-22.14	Plat O	-13	PASS
	9538	1907.6	-24.85	Plot P		PASS
HSUPA 850MHz	4132	826.4	-24.92	Plat Q	-13	PASS
	4233	846.6	-25.96	Plot R		PASS
HSUPA 1900MHz	9262	1852.4	-21.29	Plat S	-13	PASS
	9538	1907.6	-25.29	Plot T		PASS

B. Test Plots:


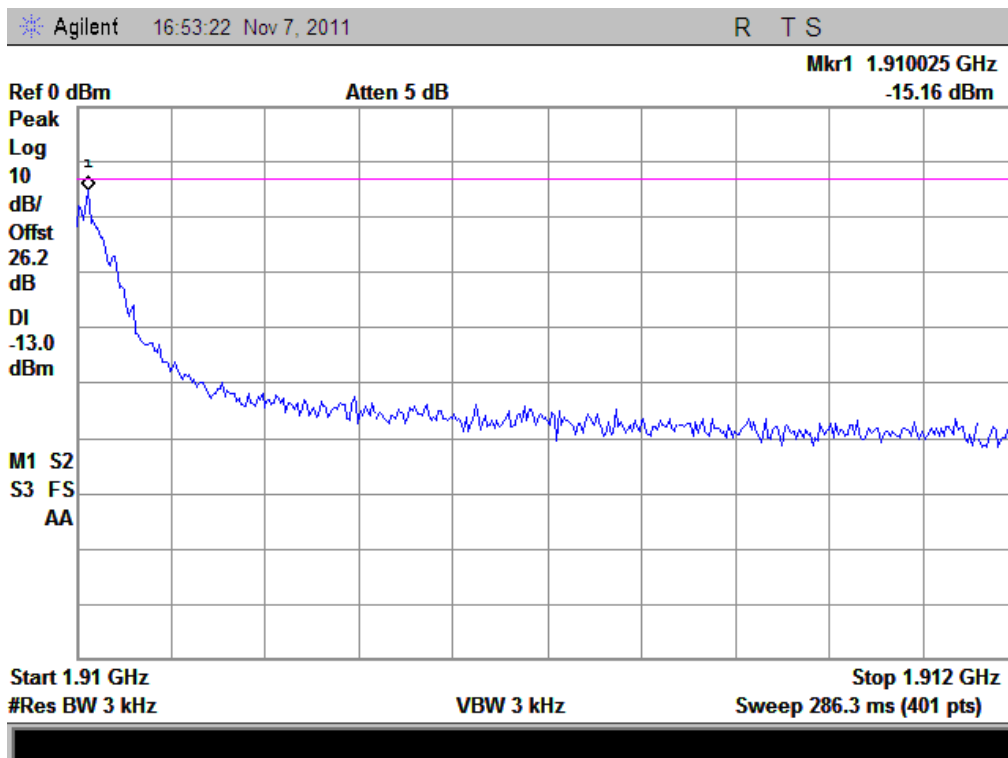
(Plot A: Channel = 128)



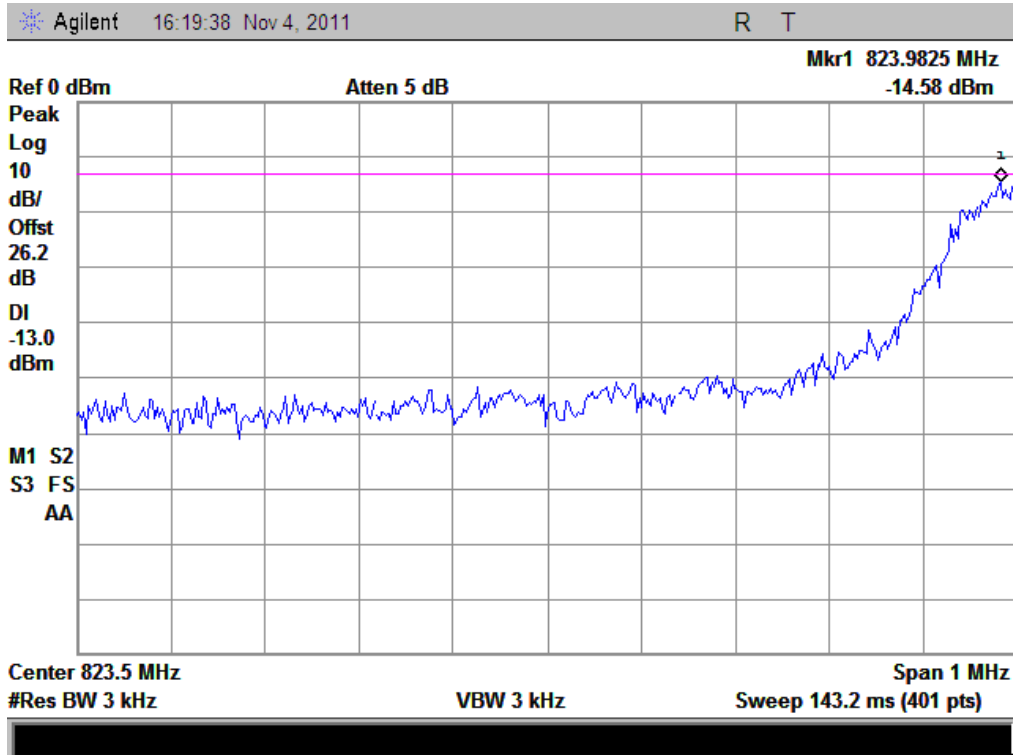
(Plot B: Channel = 251)



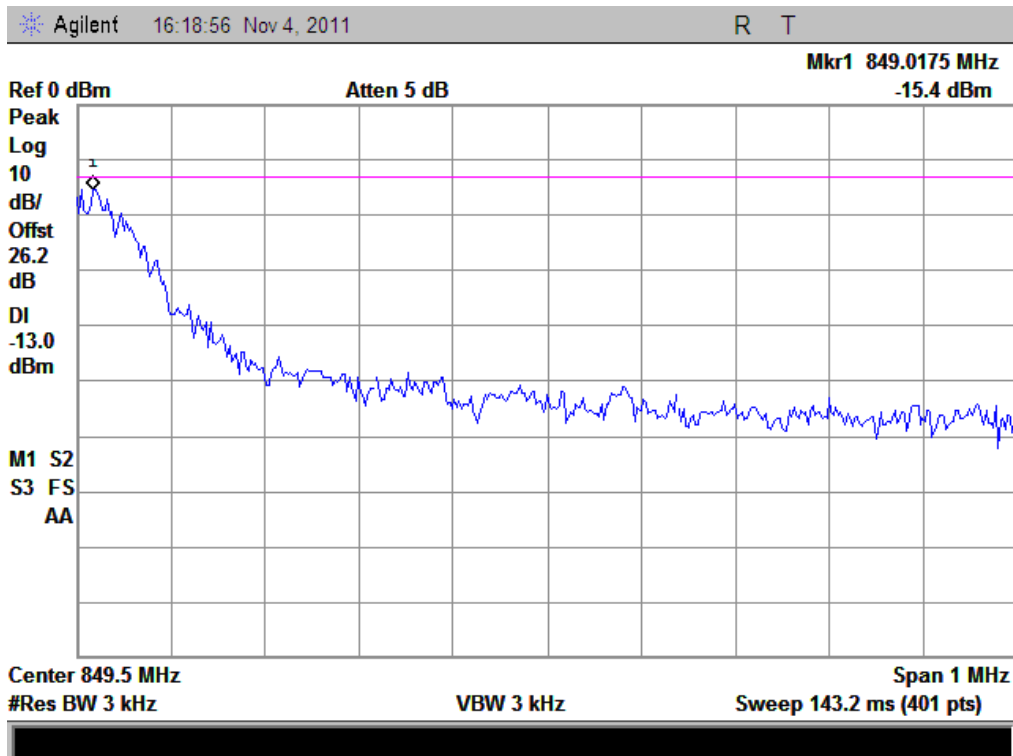
(Plot C: Channel = 512)



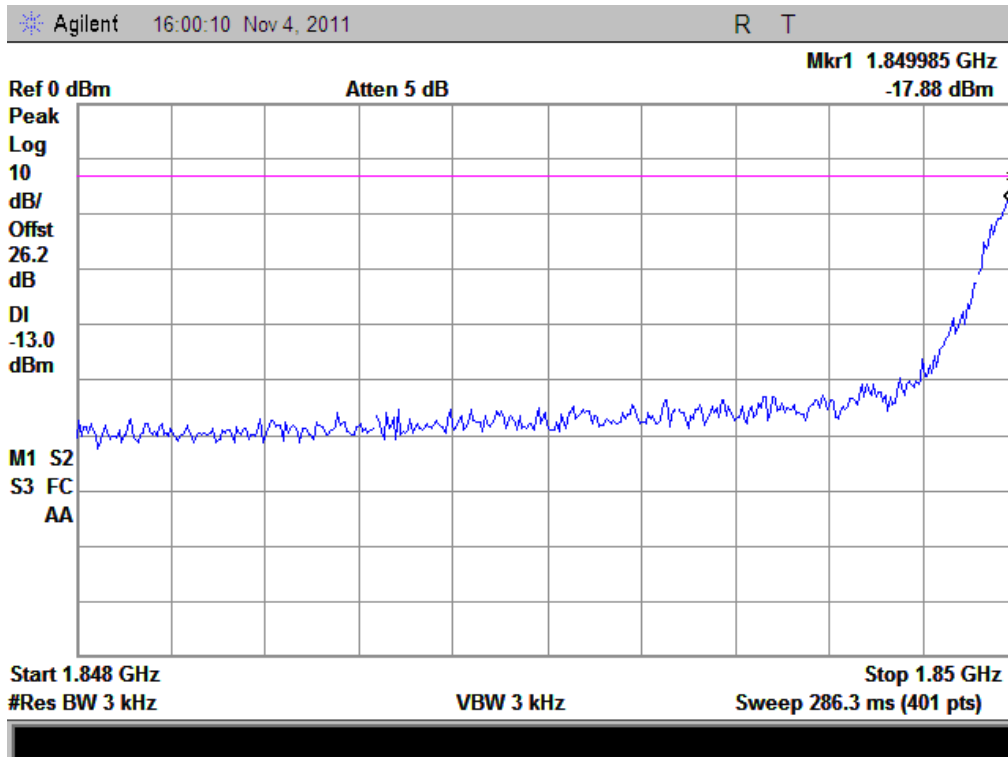
(Plot D: Channel = 810)



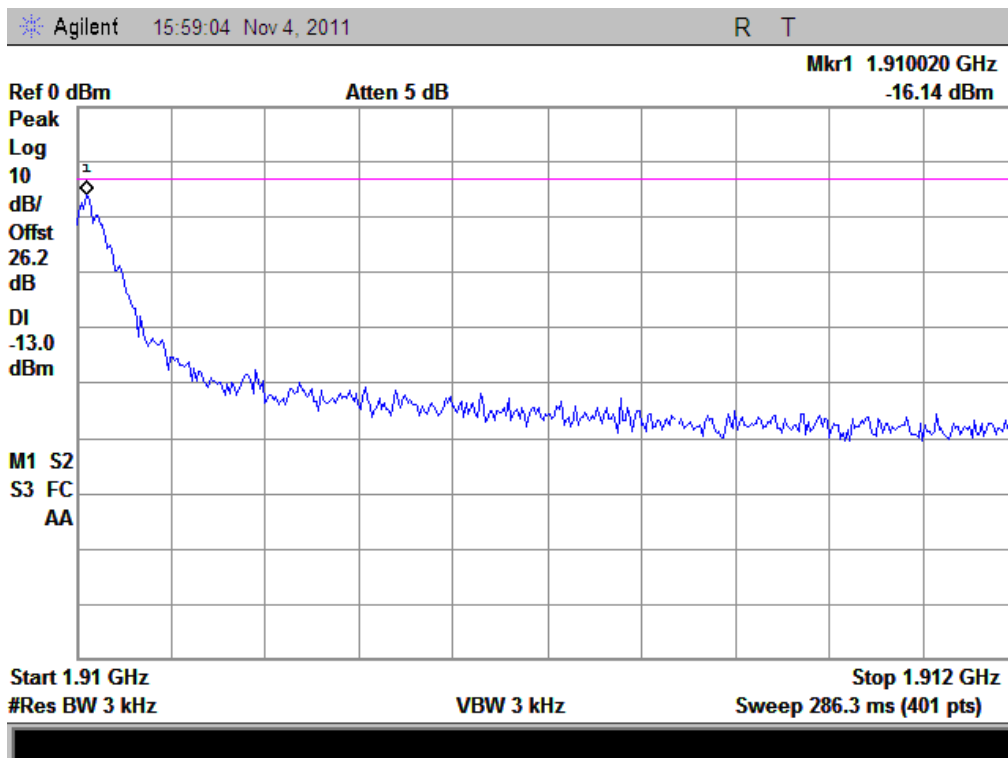
(Plot E: Channel = 128)



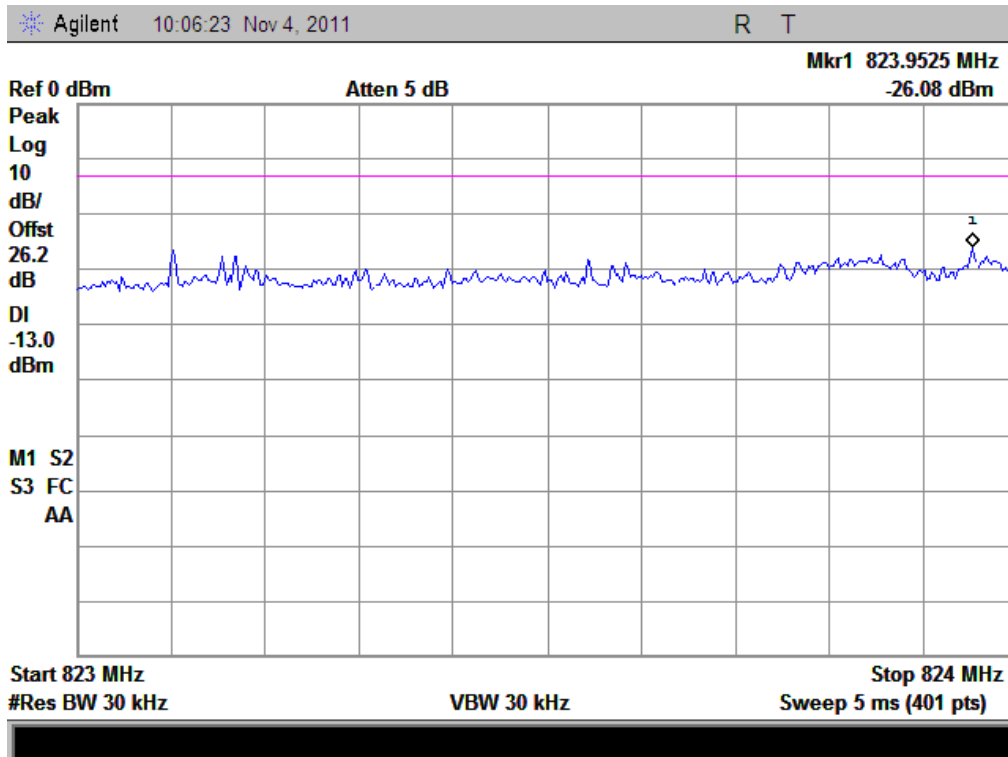
(Plot F: Channel = 251)



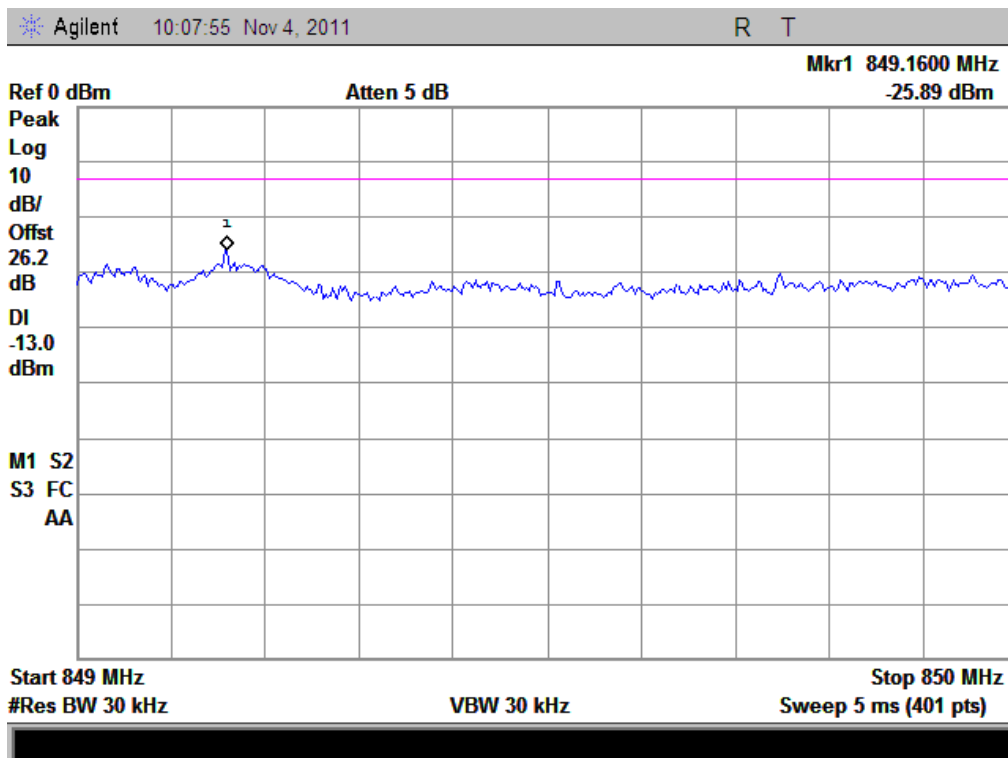
(Plot G: Channel = 512)



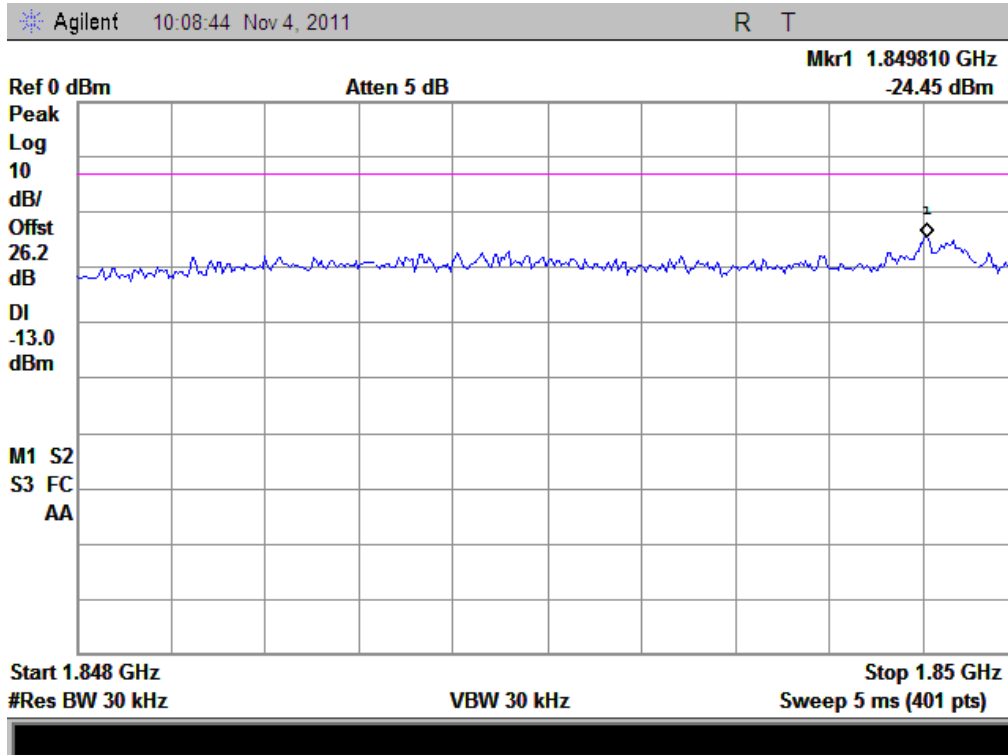
(Plot H: Channel = 810)



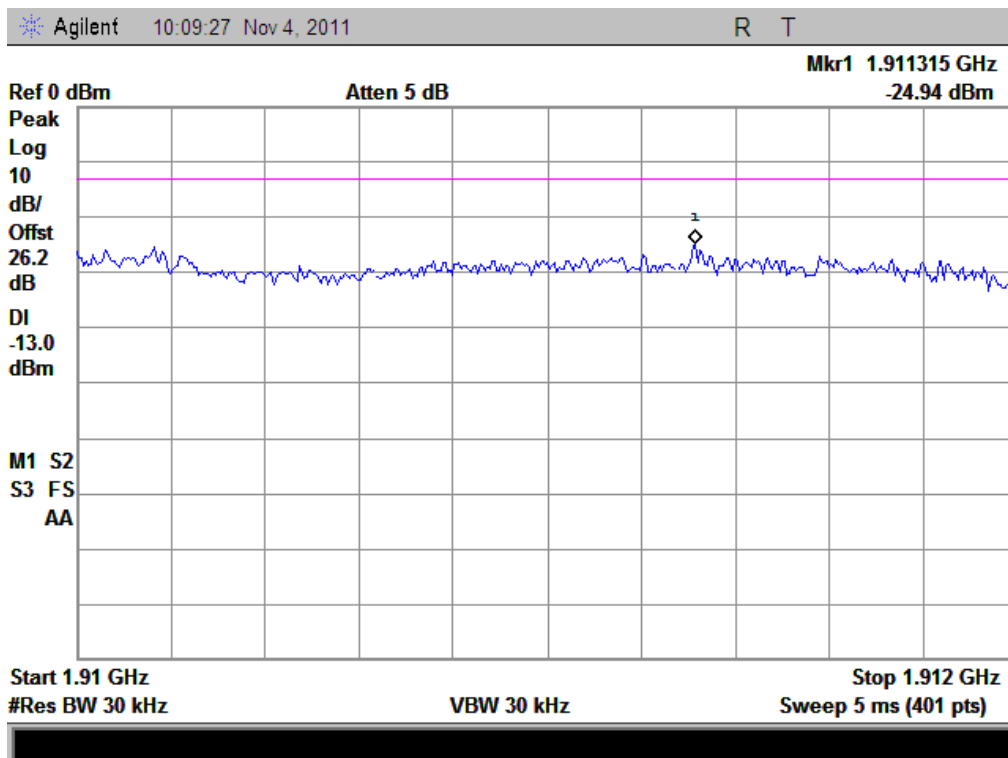
(Plot I: Channel = 4132)



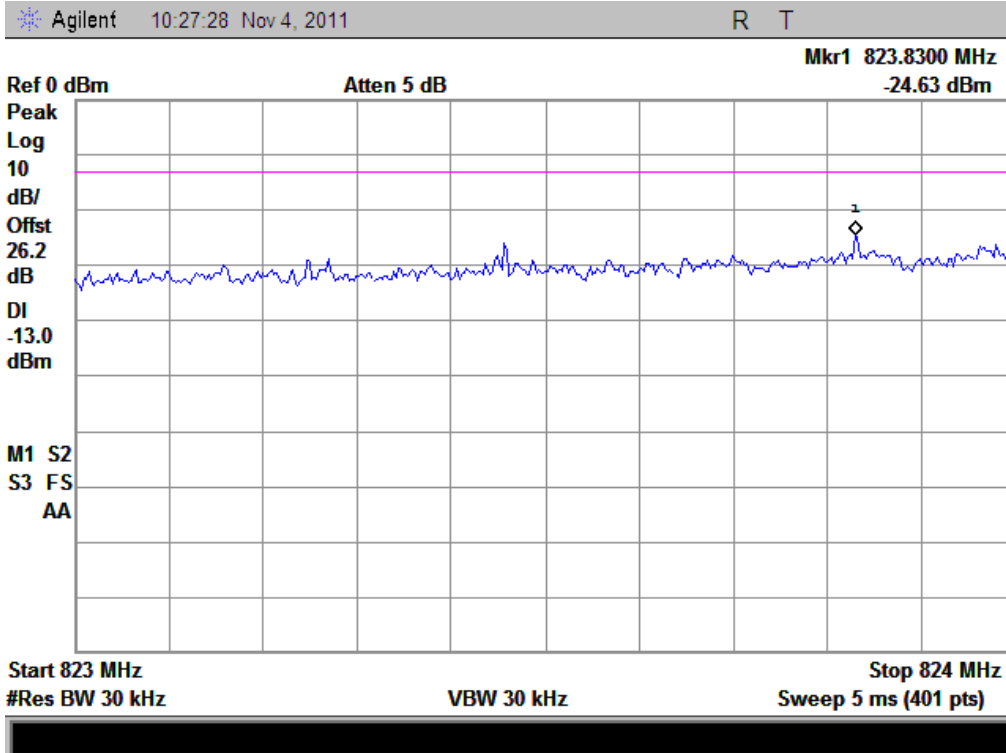
(Plot J: Channel = 4233)



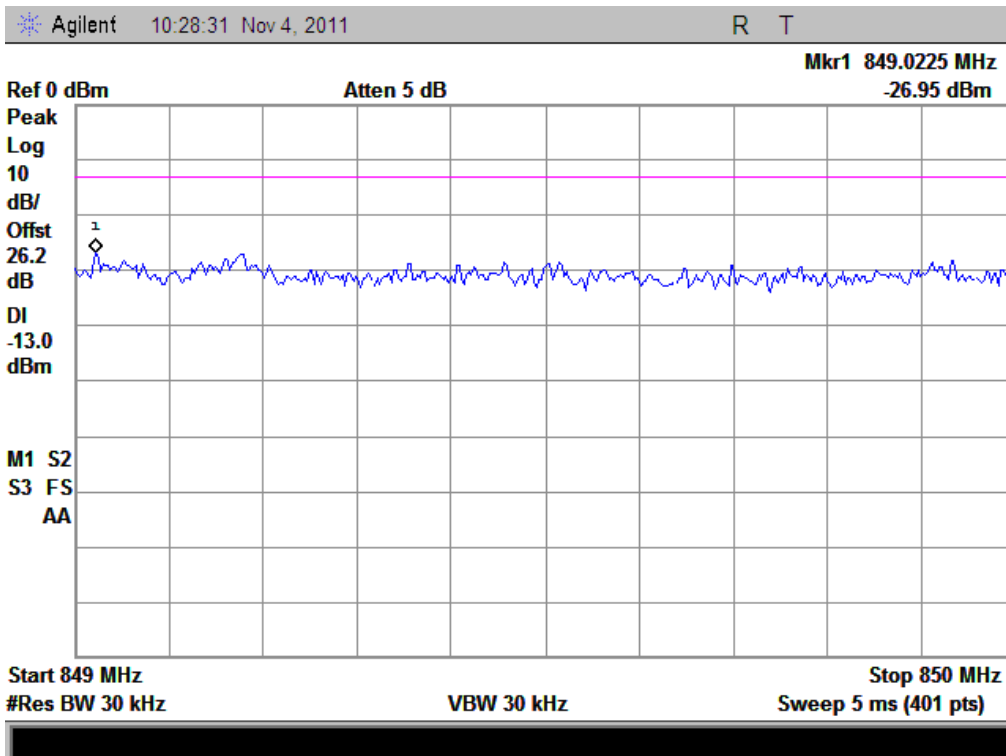
(Plot K: Channel = 9262)



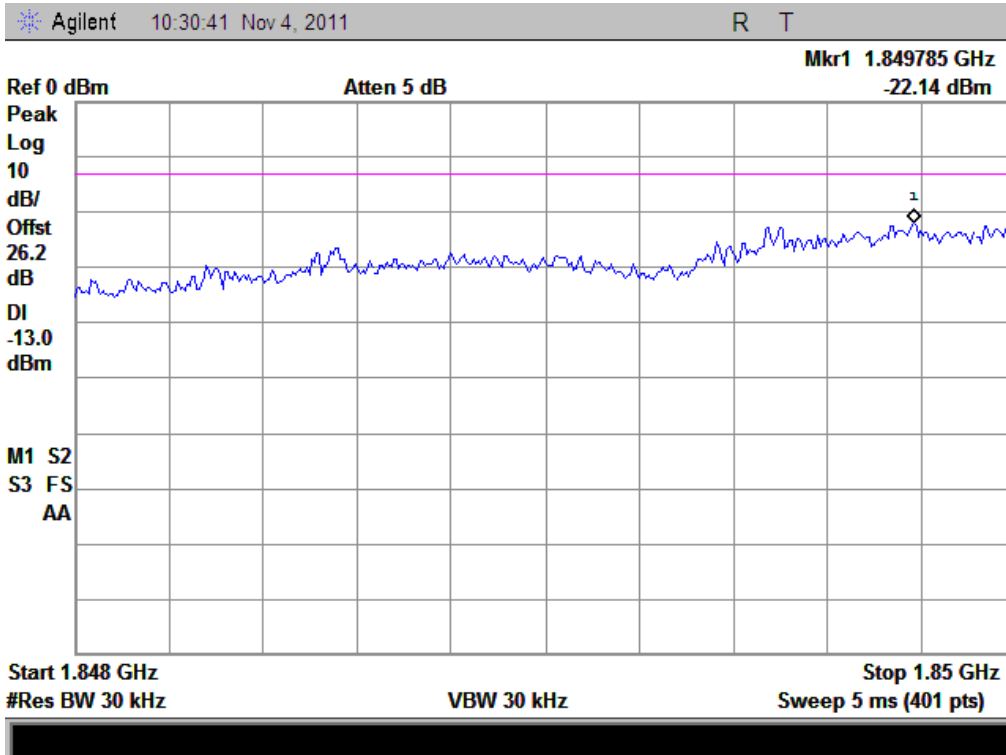
(Plot L: Channel = 9538)



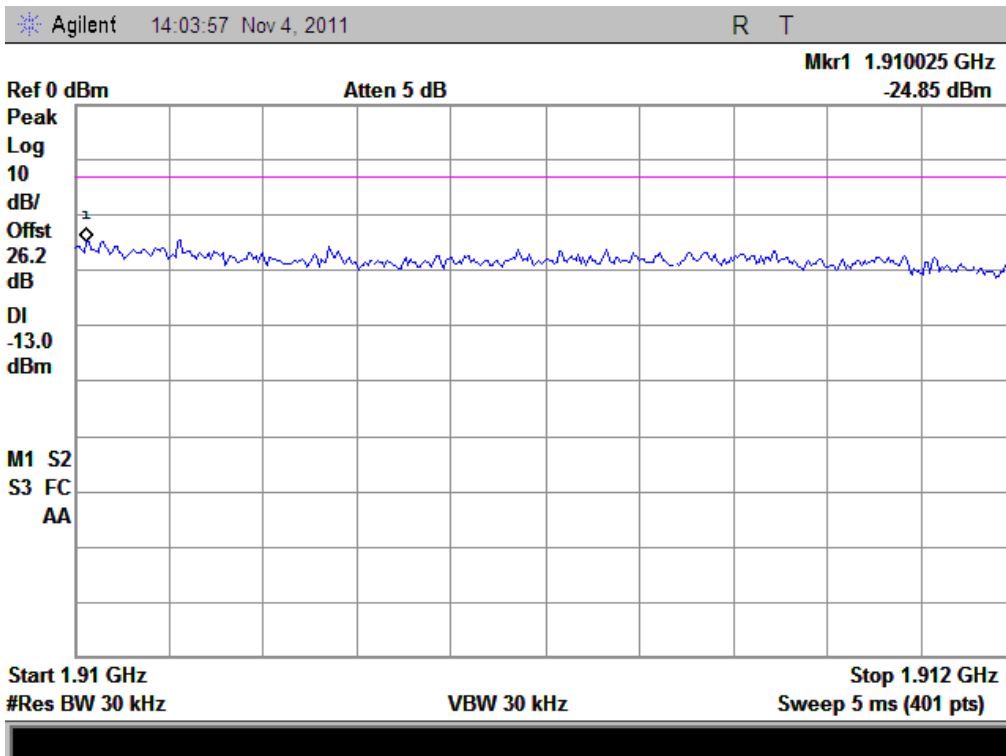
(Plot M: Channel = 4132)



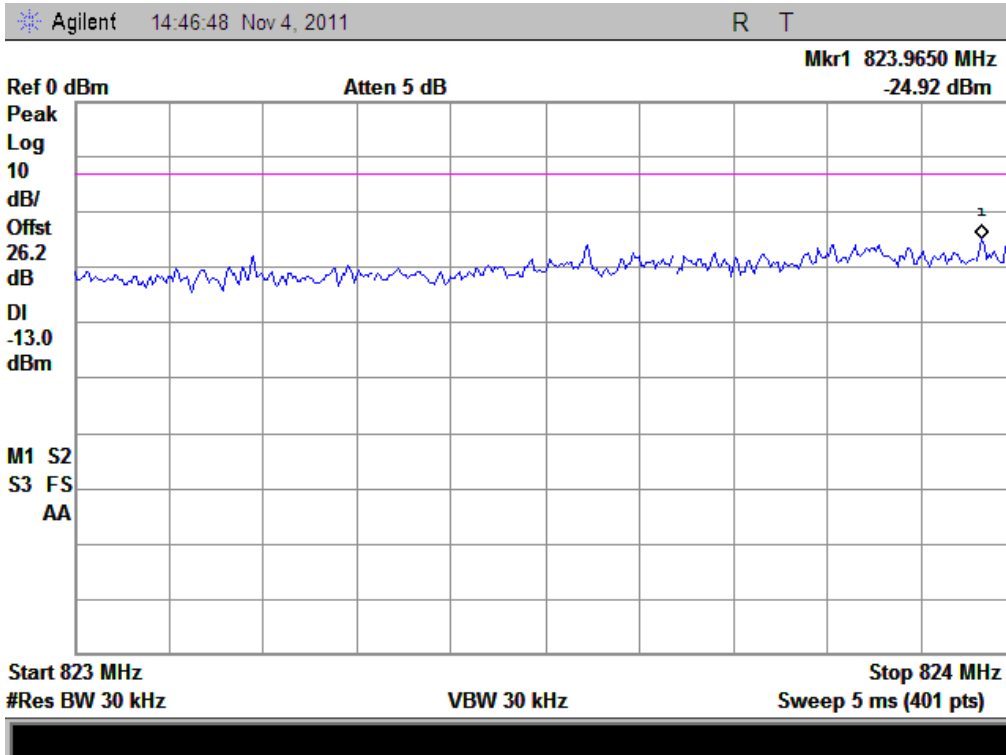
(Plot N: Channel = 4233)



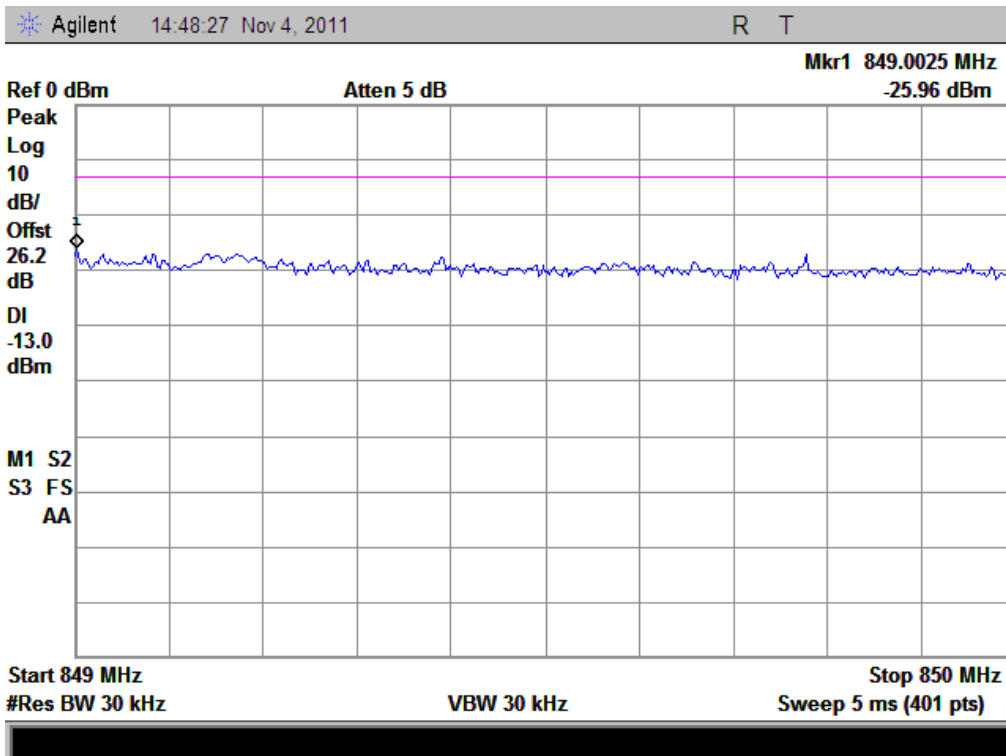
(Plot O: Channel = 9262)



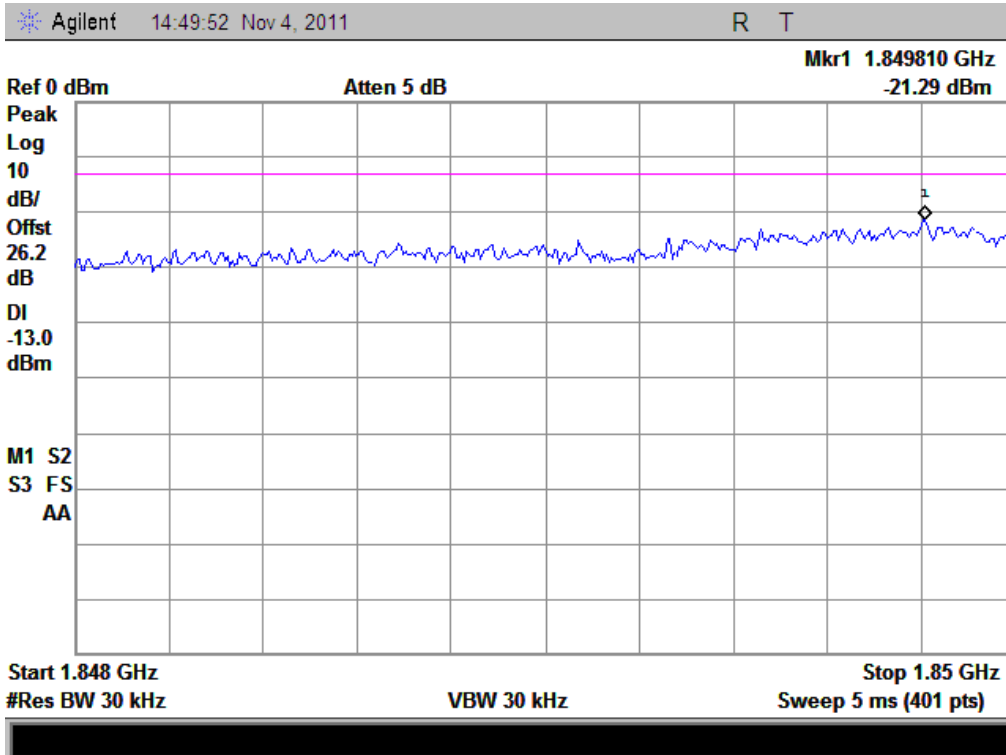
(Plot P: Channel = 9538)



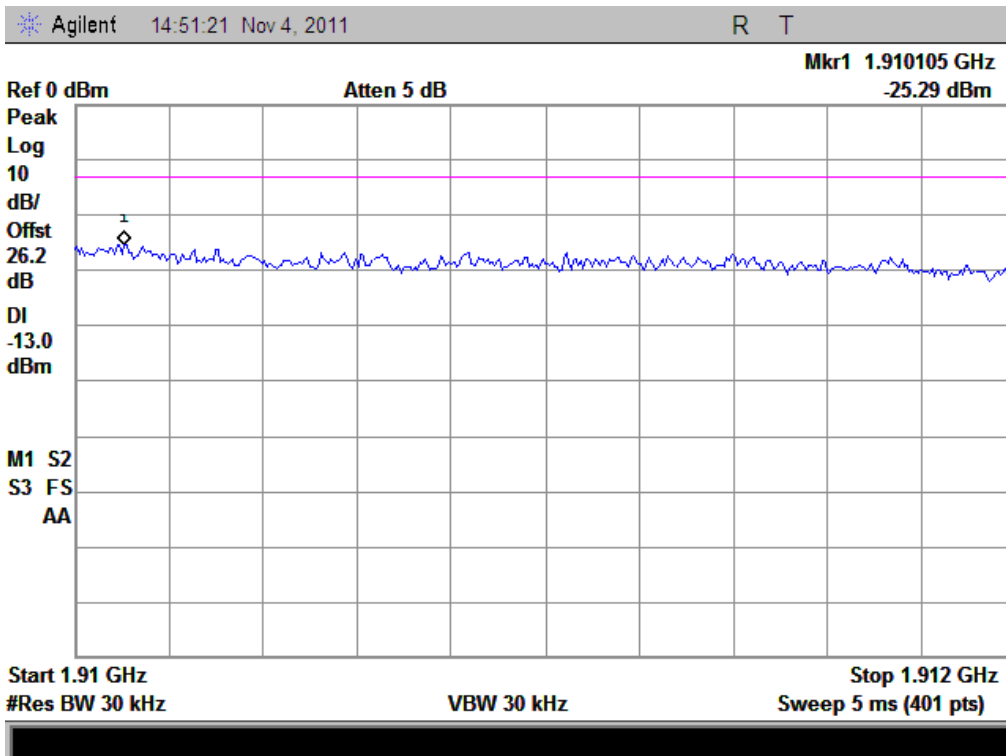
(Plot Q: Channel = 4132)



(Plot R: Channel = 4233)



(Plot S: Channel = 9262)



(Plot T: Channel = 9538)

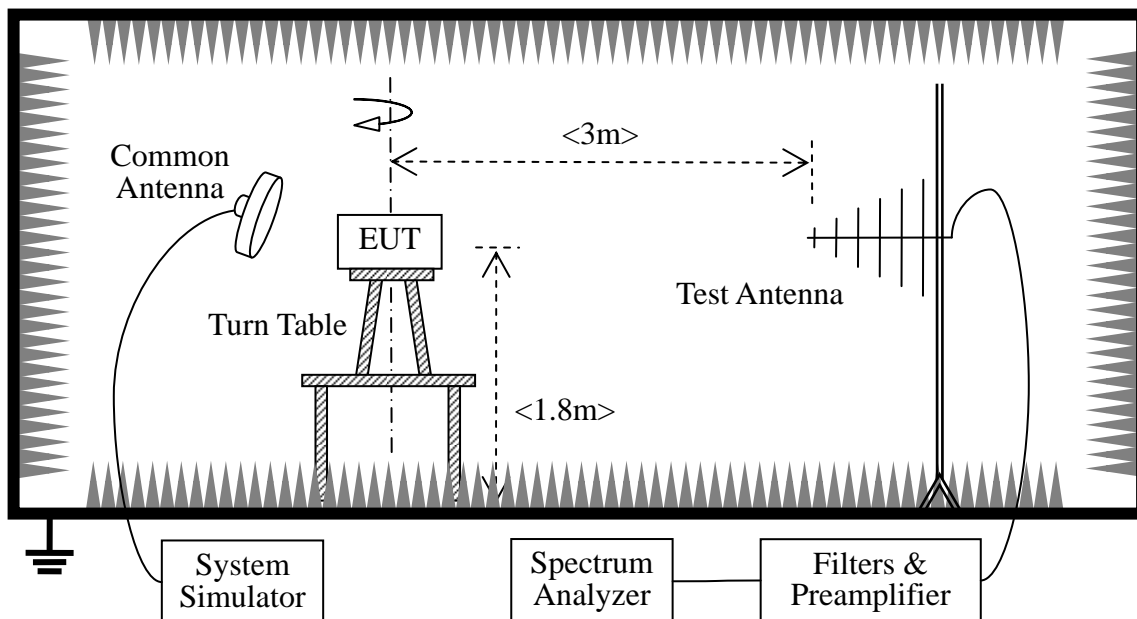
2.6. Transmitter Radiated Power (EIRP/ERP)

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

A. 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 31.82dBm, GSM 1900 29.26dBm, Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

- Minimum RF power: GSM850 -4.2dBm, GSM 1900 -10.16dBm

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.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2011.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2011.05
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2011.05
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2011.05
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2011.05

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:

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

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

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

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

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

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

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

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

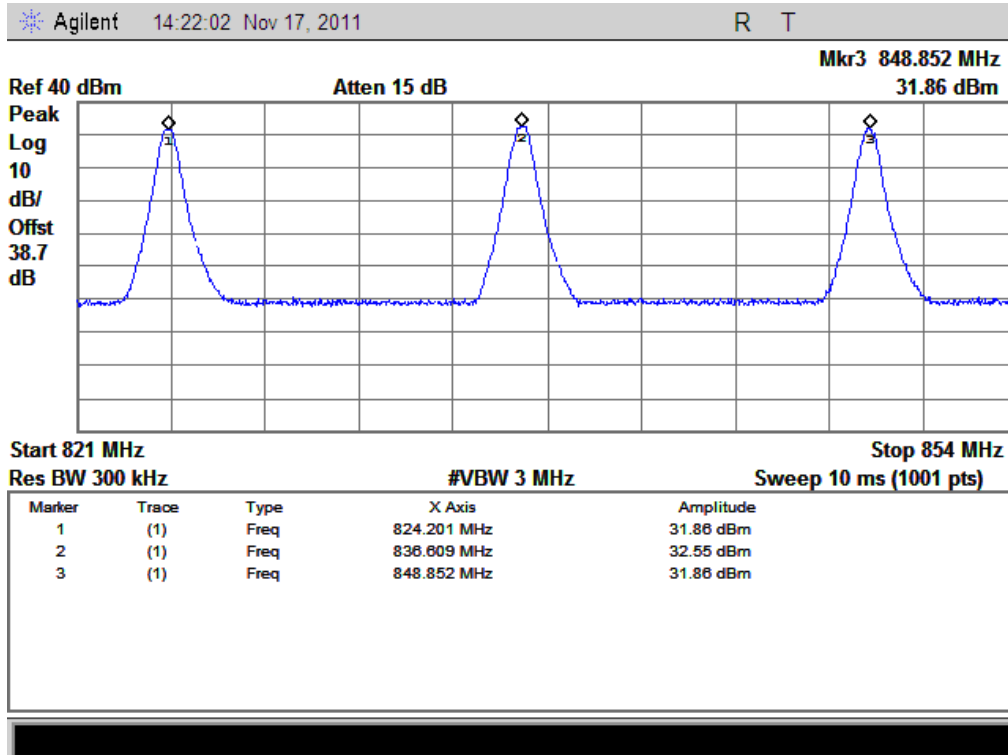
During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT} .

A. Test Verdict:

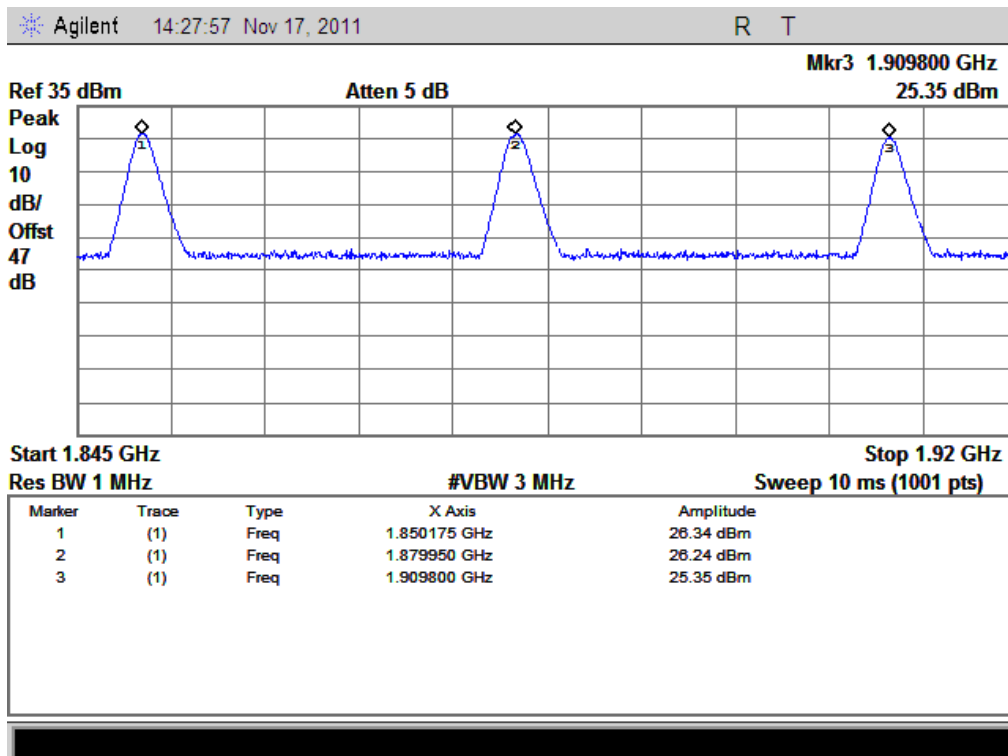
Band	Channel	Frequency (MHz)	PCL	Measured ERP/EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 850MHz	128	824.20	5	31.86	1.534617	Plot A	38.45	7	PASS
	190	836.60	5	32.55	1.798871				PASS
	251	848.80	5	31.86	1.534617				PASS
GSM 1900MH z	512	1850.2	0	26.34	0.430527	Plot B	33	2	PASS
	661	1880.0	0	26.24	0.420727				PASS
	810	1909.8	0	25.35	0.342768				PASS
GPRS 850MHz	128	824.20	5	32.43	1.749847	Plot C ^{Note 1}	38.45	7	PASS
	190	836.60	5	34.4	2.754229				PASS
	251	848.80	5	32.97	1.981527				PASS
GPRS 1900MH z	512	1850.2	0	28.19	0.659174	Plot D ^{Note 1}	33	2	PASS
	661	1880.0	0	28.28	0.672977				PASS
	810	1909.8	0	26	0.398107				PASS
EDGE 850MHz	128	824.20	5	33.58	2.280342	Plot E ^{Note 1}	38.45	7	PASS
	190	836.60	5	32.63	1.832314				PASS
	251	848.80	5	30.9	1.230269				PASS
EDGE 1900MH z	512	1850.2	0	24.48	0.280543	Plot F ^{Note 1}	33	2	PASS
	661	1880.0	0	28.22	0.663743				PASS
	810	1909.8	0	27.77	0.598412				PASS

Band	Channel	Frequency (MHz)	Measured ERP		Limit		Verdict
			dBm	W	dBm	W	
WCDMA 850MHz	4132	826.4	23.57	0.22751	38.5	7	PASS
	4175	835	24.66	0.292415			PASS
	4233	846.6	26.03	0.400867			PASS
WCDMA 1900MHz	9262	1852.4	21.29	0.134586	33	2	PASS
	9400	1880	20.87	0.12218			PASS
	9538	1907.6	20.33	0.107895			PASS
HSDPA 850MHz	4132	826.4	23.58	0.228034	38.5	7	PASS
	4175	835	23.4	0.218776			PASS
	4233	846.6	23.92	0.246604			PASS
HSDPA 1900MHz	9262	1852.4	20.42	0.110154	33	2	PASS
	9400	1880	22.28	0.169044			PASS
	9538	1907.6	19.58	0.090782			PASS
HSUPA 850MHz	4132	826.4	23.61	0.229615	38.5	7	PASS
	4175	835	23.12	0.205116			PASS
	4233	846.6	23.56	0.226986			PASS
HSUPA 1900MHz	9262	1852.4	20.33	0.107895	33	2	PASS
	9400	1880	21.98	0.157761			PASS
	9538	1907.6	19.49	0.08892			PASS

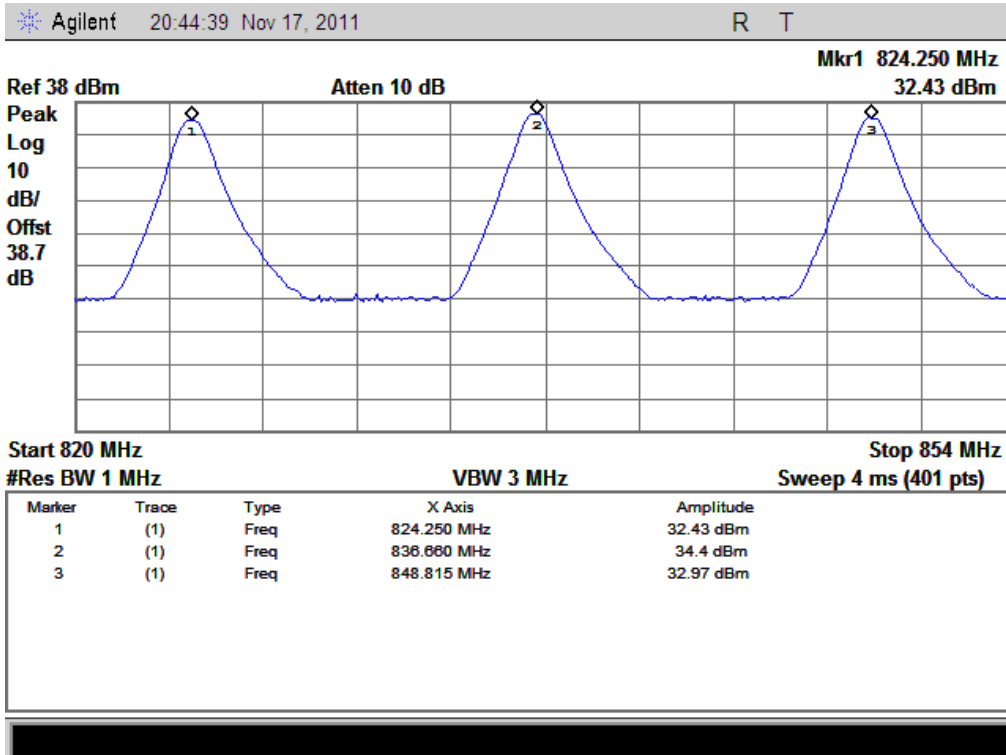
Note 1: For the GPRS model, all the slots were tested and just the worst data was record in this report

B. Test Plots:


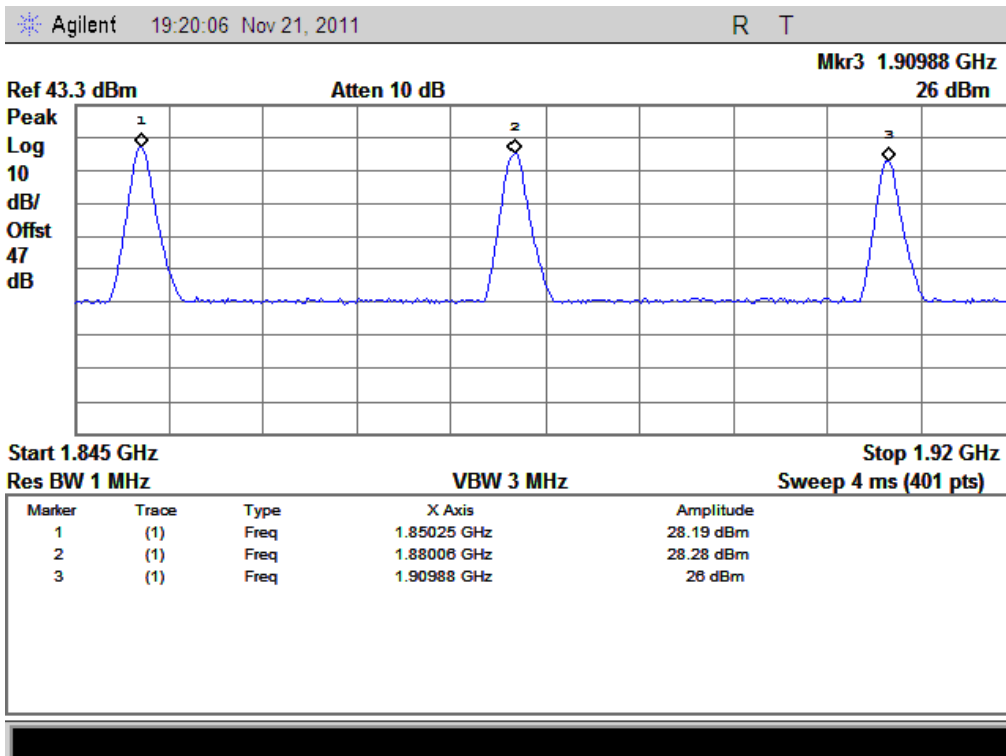
(Plot A: GSM 850MHz Channel = 128,190,251)



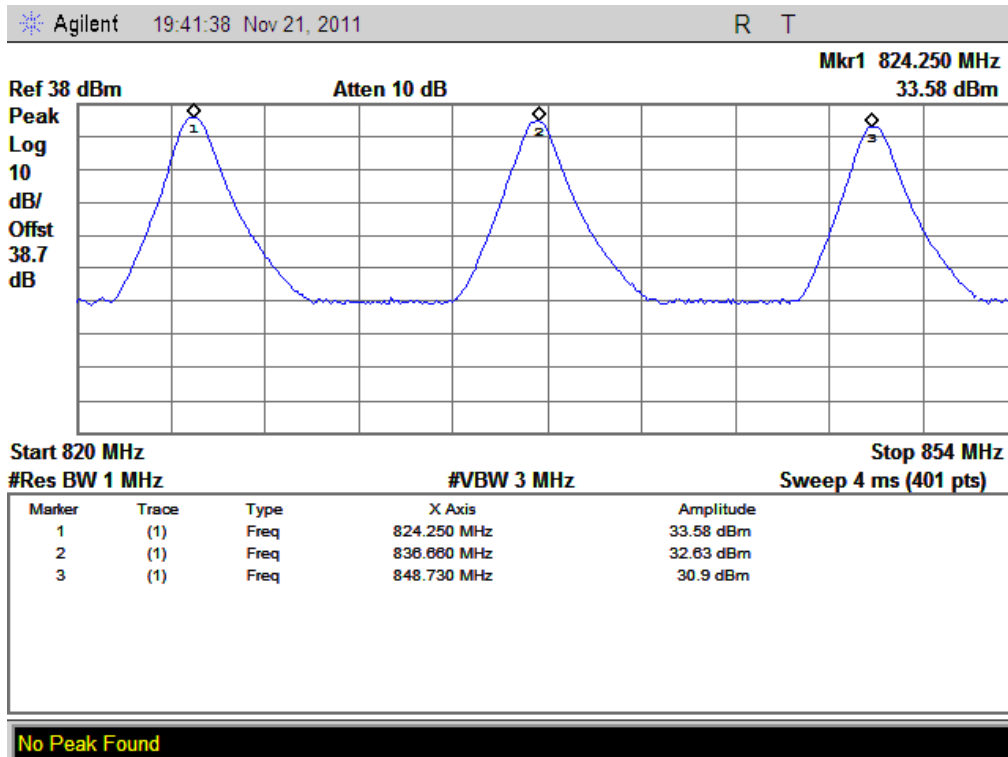
(Plot B: GSM 1900MHz Channel = 512, 661, 810)



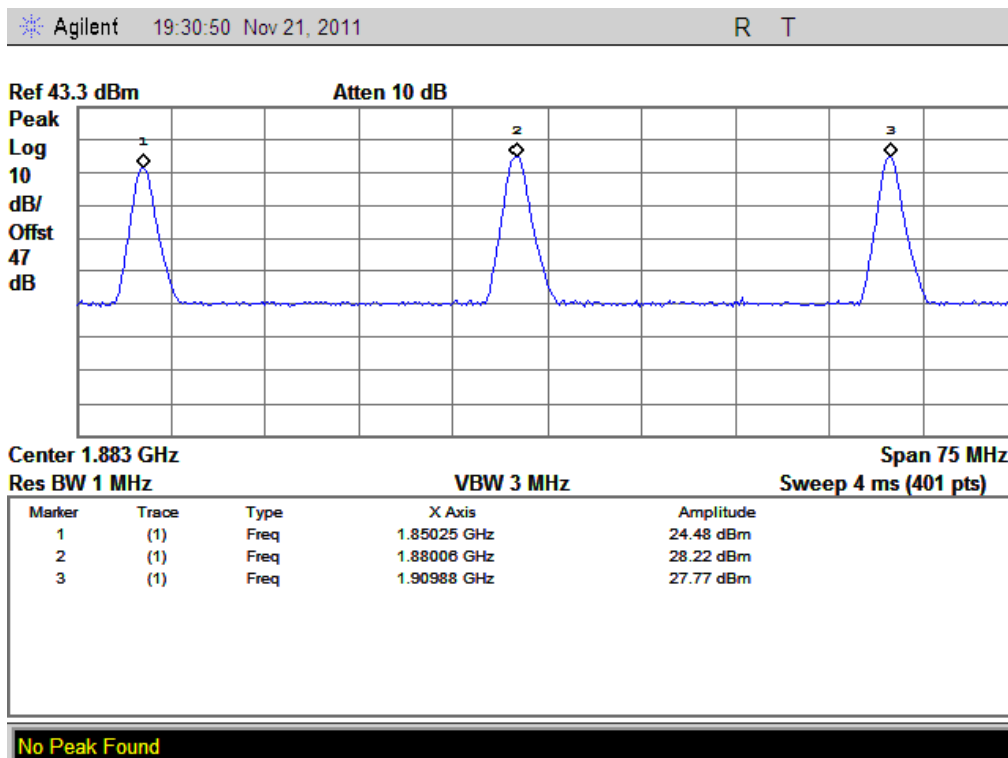
(Plot C: GPRS 850MHz Channel = 128,190,251)



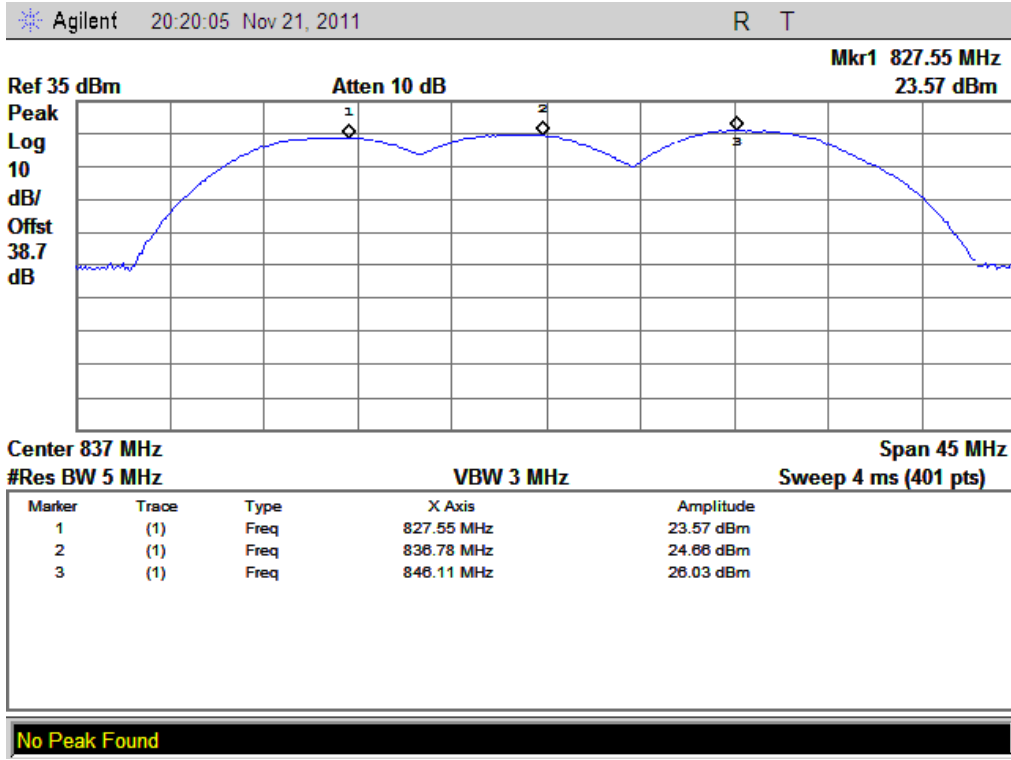
(Plot D: GPRS 1900MHz Channel = 512, 661, 810)



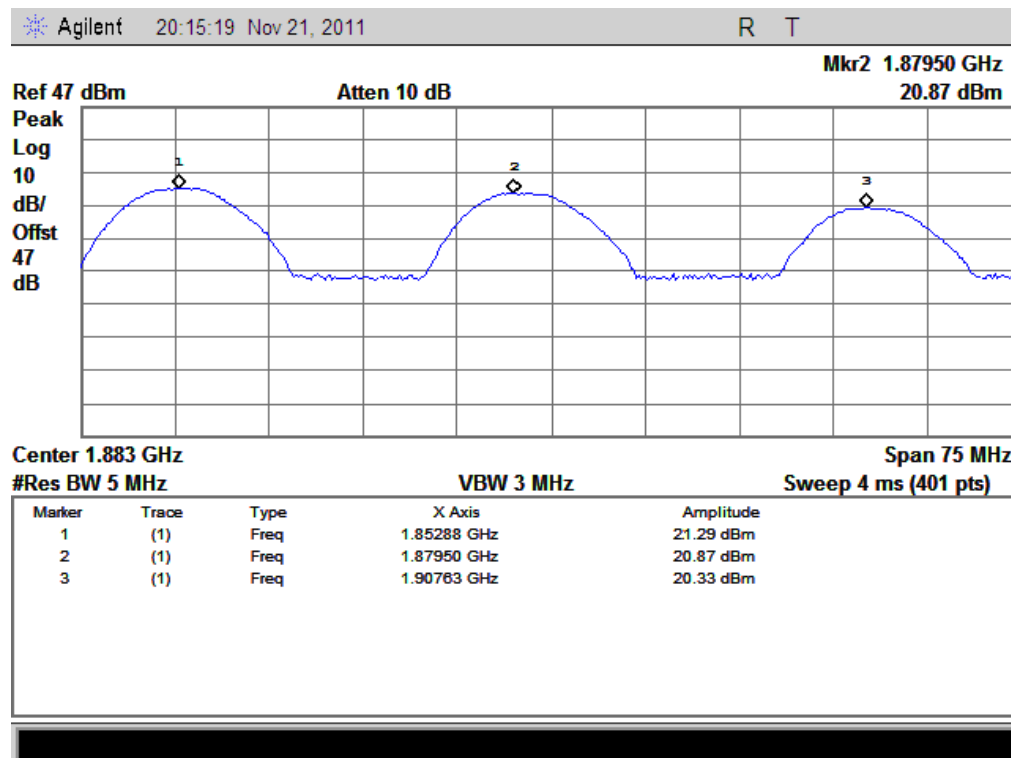
(Plot E: EGPRS 850MHz Channel = 128,190,251)



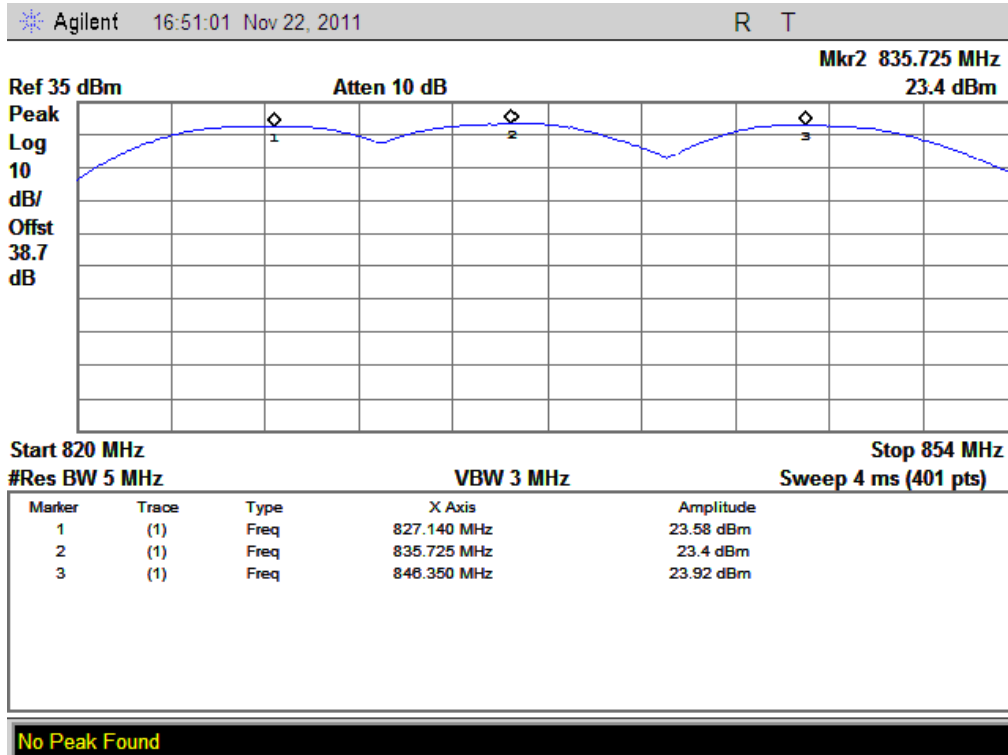
(Plot F: EGPRS 1900MHz Channel = 512, 661, 810)



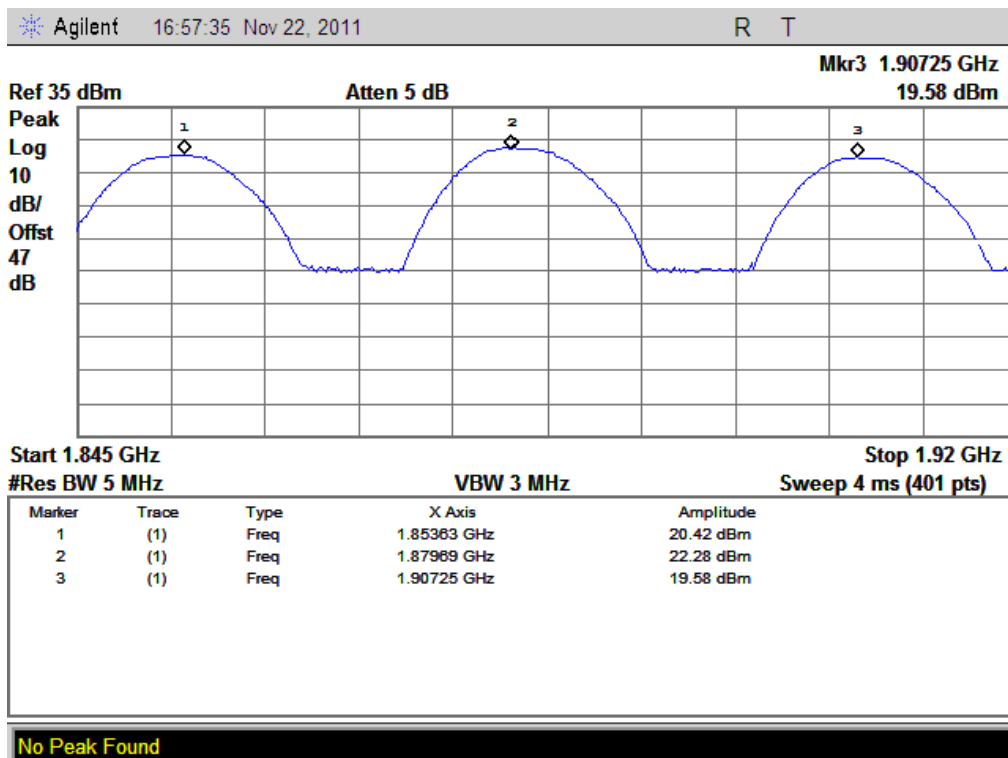
(Plot G: WCDMA 850MHz Channel = 4132, 4175, 4233)



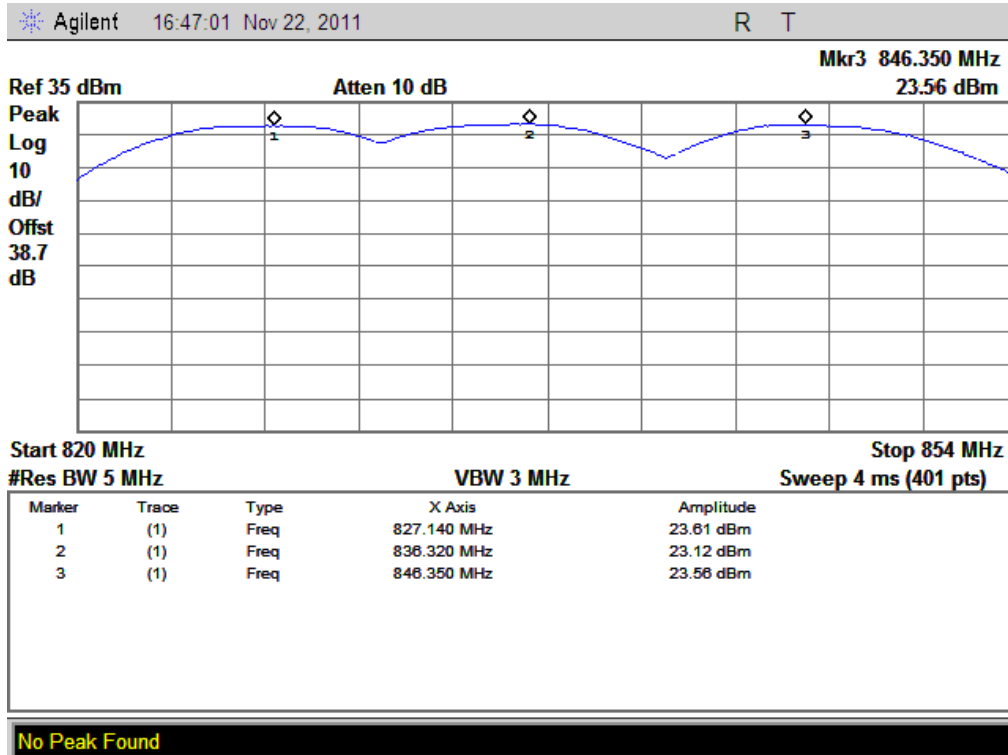
(Plot H: WCDMA 1900MHz Channel = 9262, 9400, 9538)



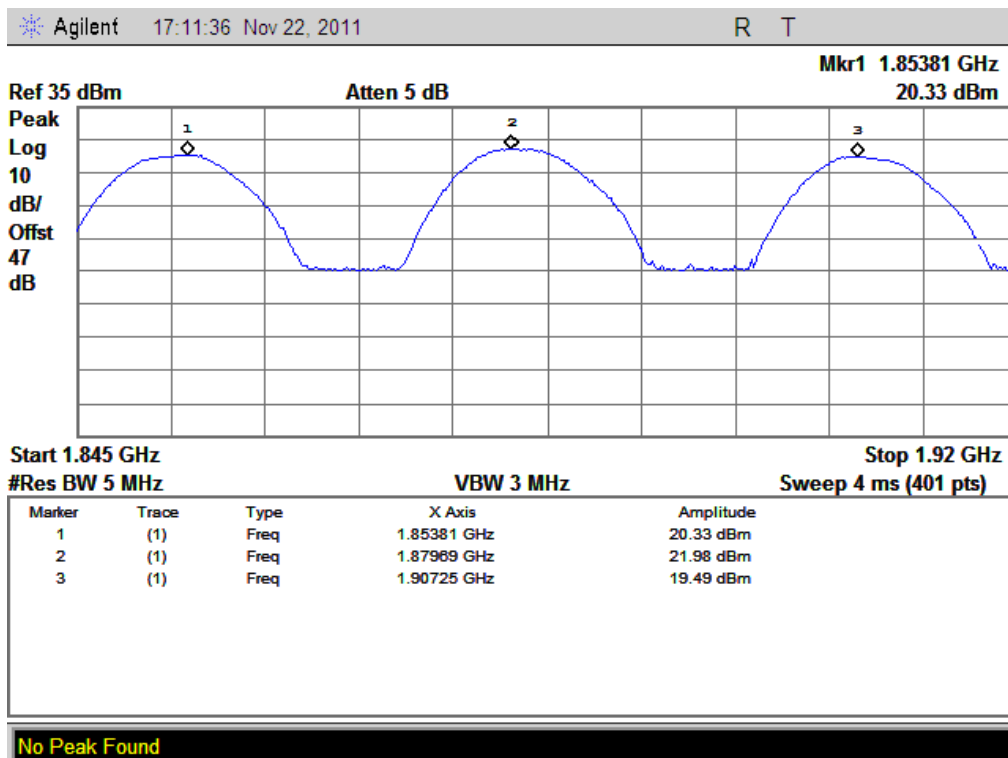
(Plot I: HSDPA 850MHz Channel = 4132, 4175, 4233)



(Plot J: HSDPA 1900MHz Channel = 9262, 9400, 9538)



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



(Plot L: HSUPA 1900MHz 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.

A. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
GSM 850MHz	128	824.2	< -25	< -25	Plot A.1/A.2	-13	PASS
	190	836.6	< -25	< -25	Plot A.3/A.4		PASS
	251	848.8	< -25	< -25	Plot A.5/A.6		PASS
GSM 1900MHz	512	1850.2	< -25	< -25	Plot B.1/B.2	-13	PASS
	661	1880.0	< -25	< -25	Plot B.3/B.4		PASS
	810	1909.8	< -25	< -25	Plot B.5/B.6		PASS
EDGE 850MHz	128	824.2	< -25	< -25	Plot C.1/C.2	-13	PASS
	190	836.6	< -25	< -25	Plot C.3/C.4		PASS
	251	848.8	< -25	< -25	Plot C.5/C.6		PASS
EDGE 1900MHz	512	1850.2	< -25	< -25	Plot D.1/D.2	-13	PASS
	661	1880.0	< -25	< -25	Plot D.3/D.4		PASS
	810	1909.8	< -25	< -25	Plot D.5/D.6		PASS
WCDMA 850MHz	4357	826.4	< -25	< -25	Plot E.1/E.2	-13	PASS
	4400	835	< -25	< -25	Plot E.3/E.4		PASS
	4458	846.6	< -25	< -25	Plot E.5/E.6		PASS
WCDMA	9662	1852.4	< -25	< -25	Plot F.1/F.2	-13	PASS

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
1900MHz	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

B. 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)



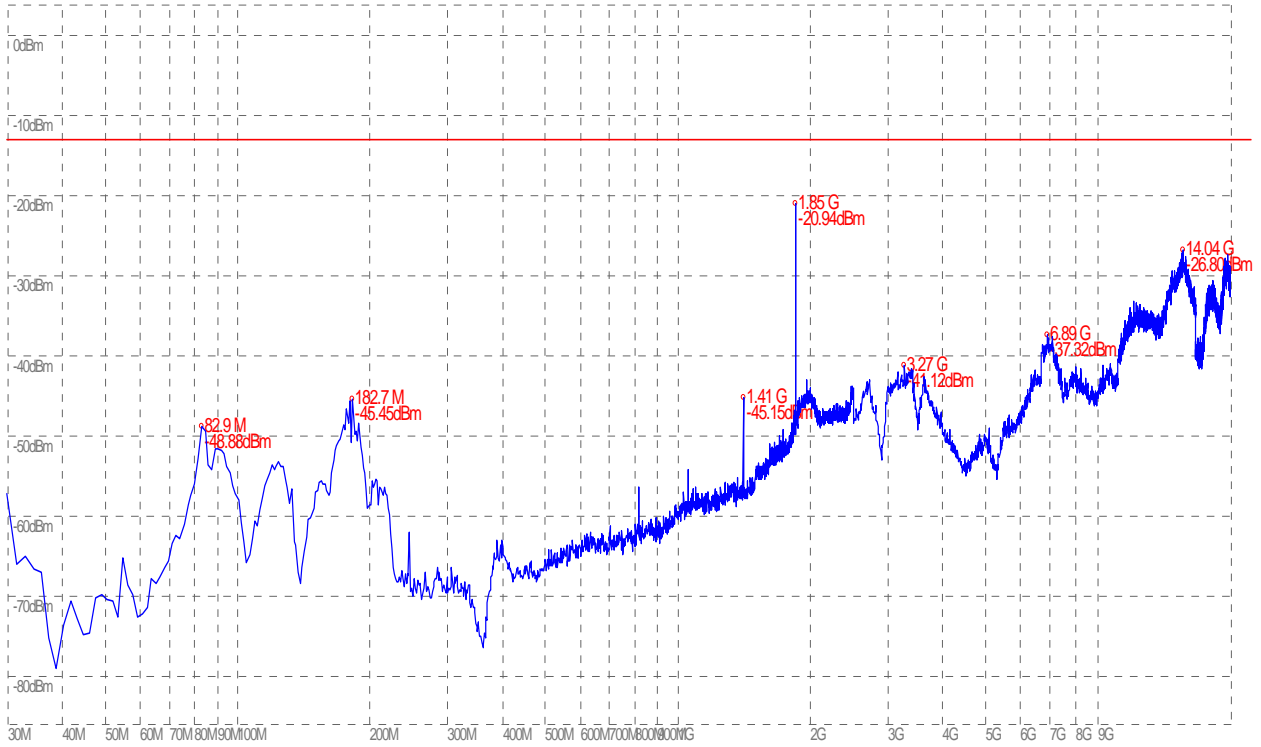
(Plot A.4: GSM 850MHz Channel = 190, Test Antenna Vertical)



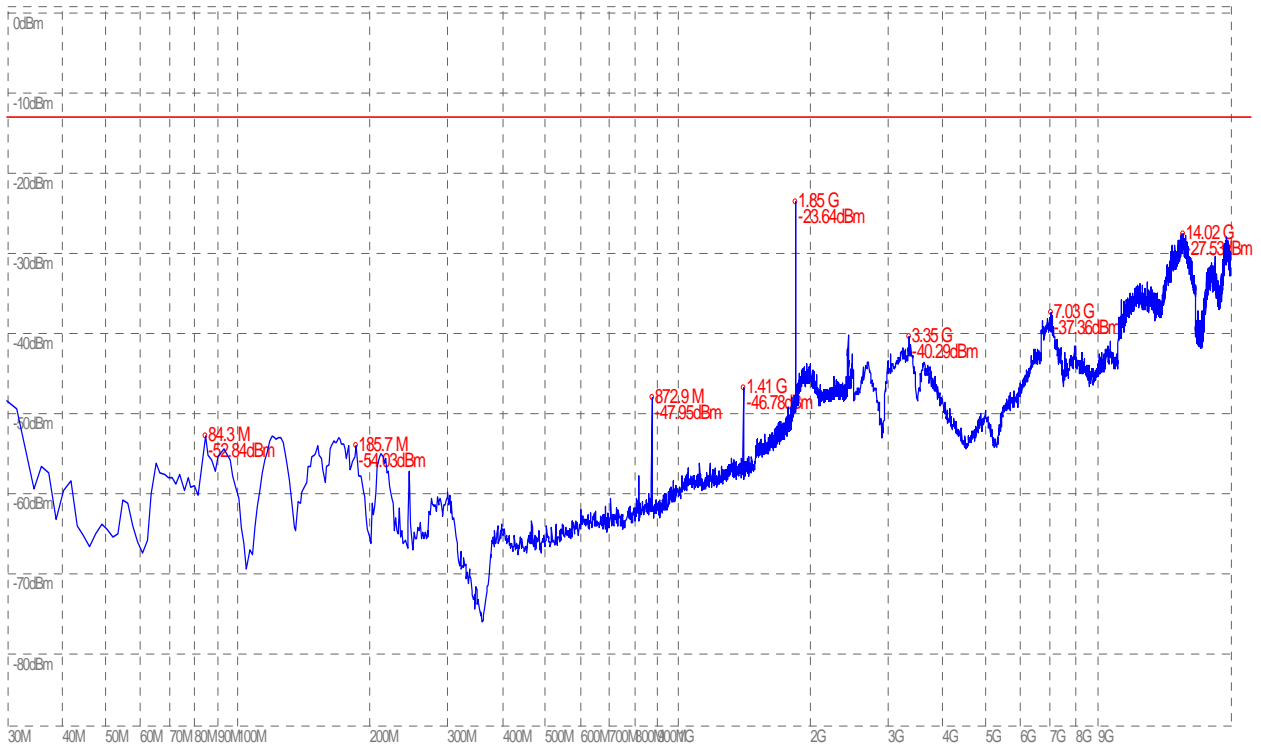
(Plot A.5: GSM 850MHz Channel = 251, Test Antenna Horizontal)



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



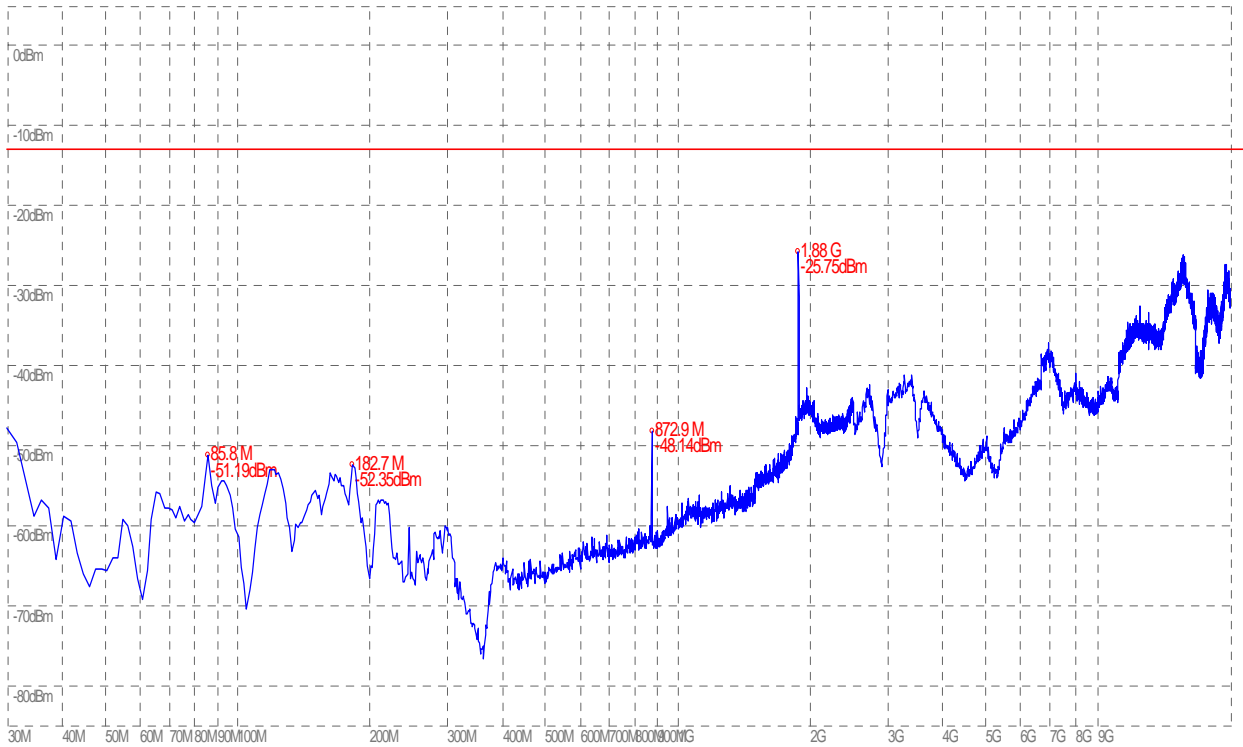
(Plot B.1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



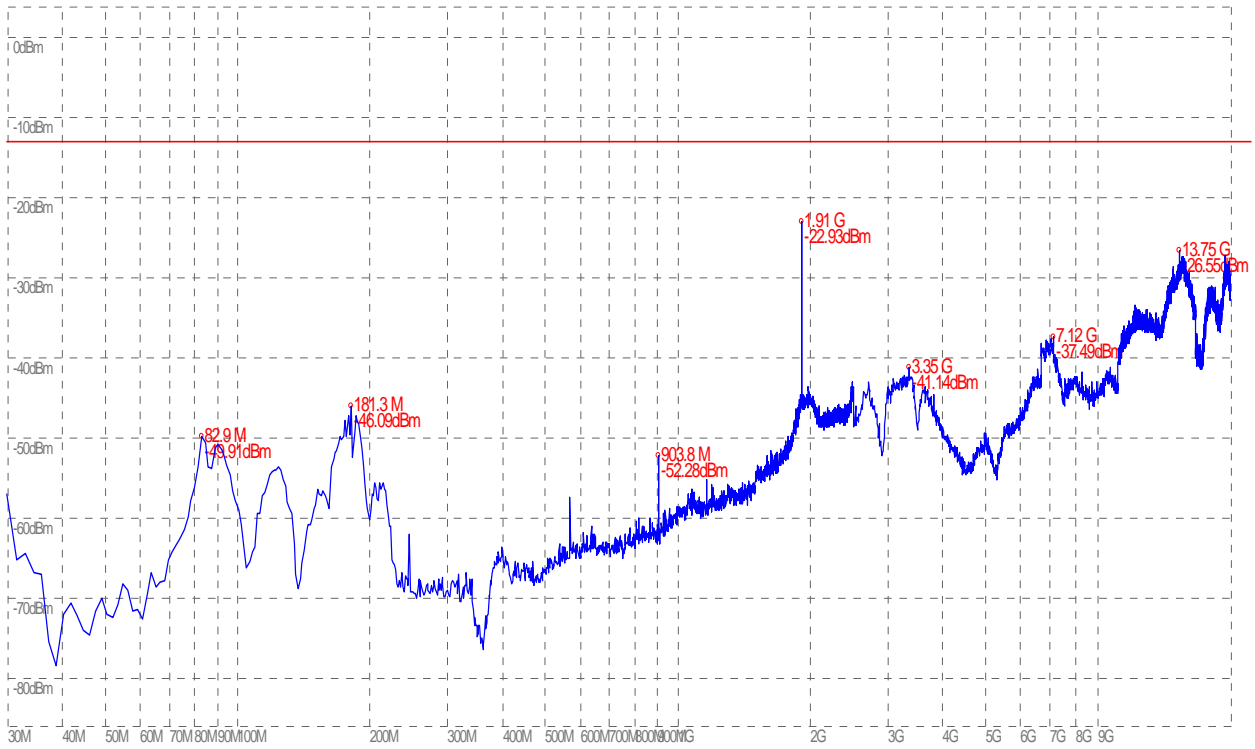
(Plot B.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



(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)



(Plot B 6: GSM 1900MHz Channel = 810, Test Antenna Vertical)



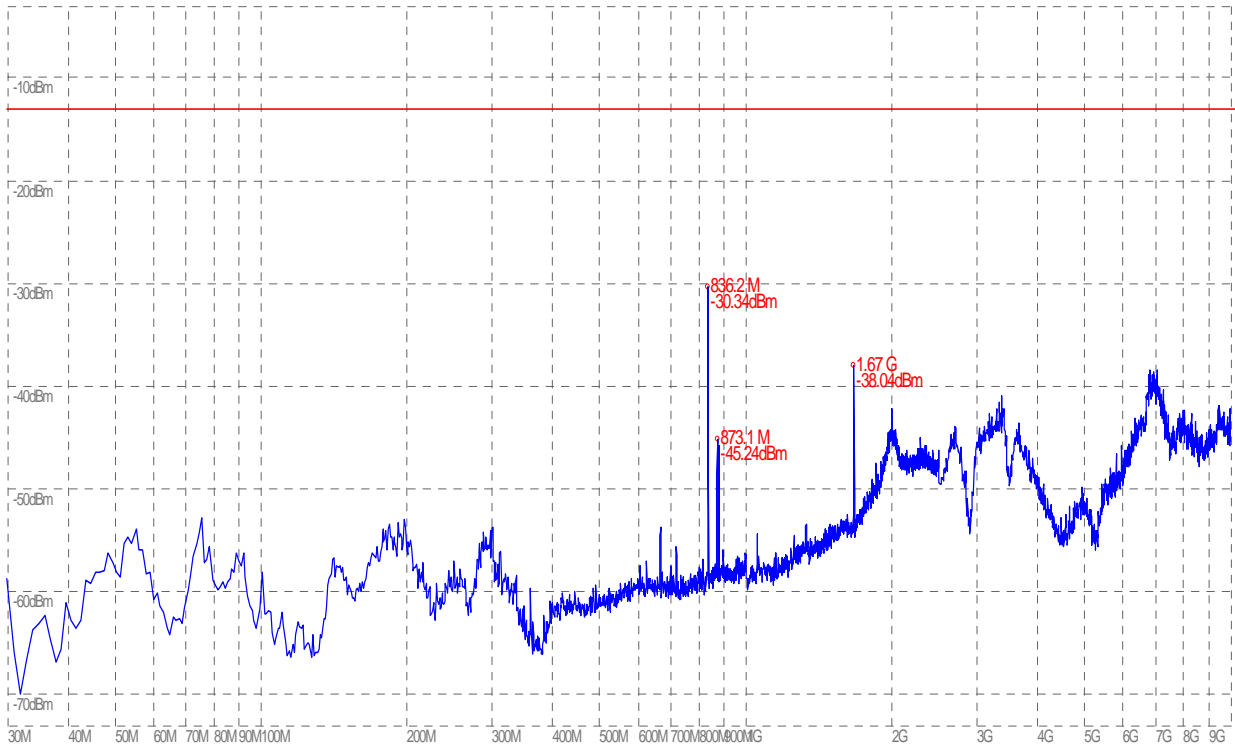
(Plot C1 : EGPRS 850MHz Channel = 128, Test Antenna Horizontal)



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



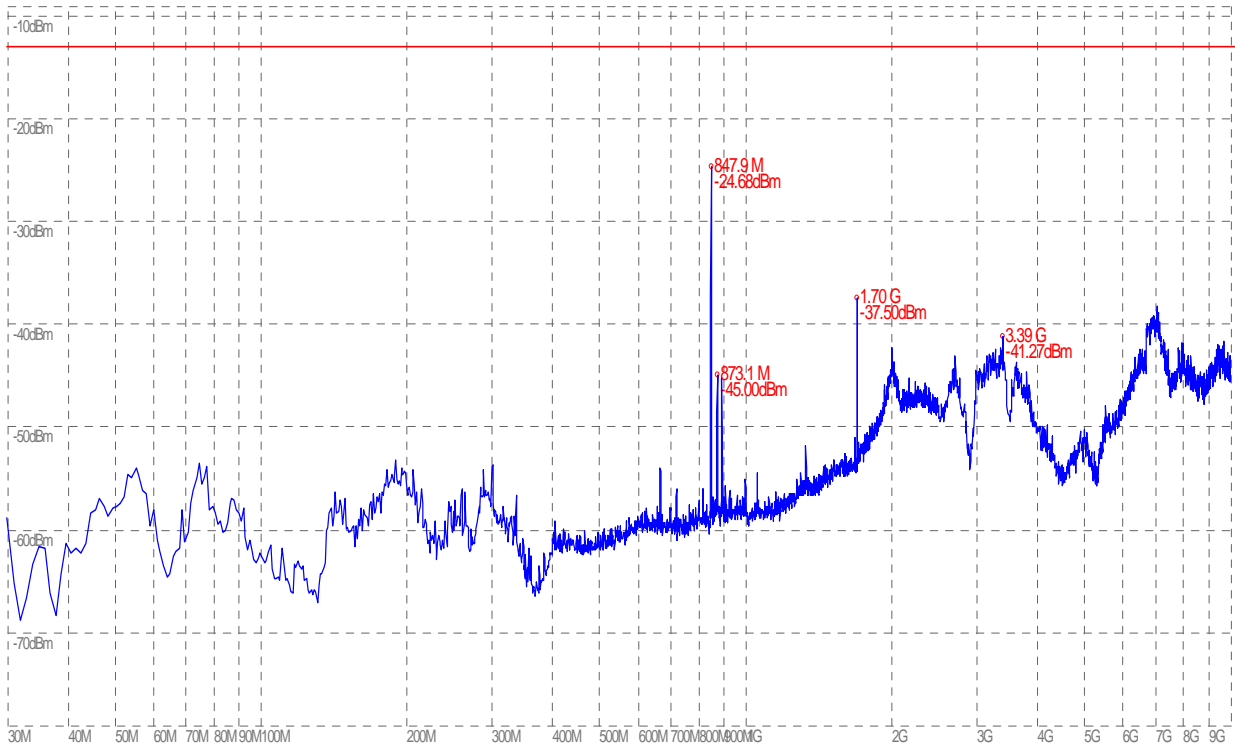
(Plot C 3: EGPRS 850MHz Channel = 190 Test Antenna Horizontal)



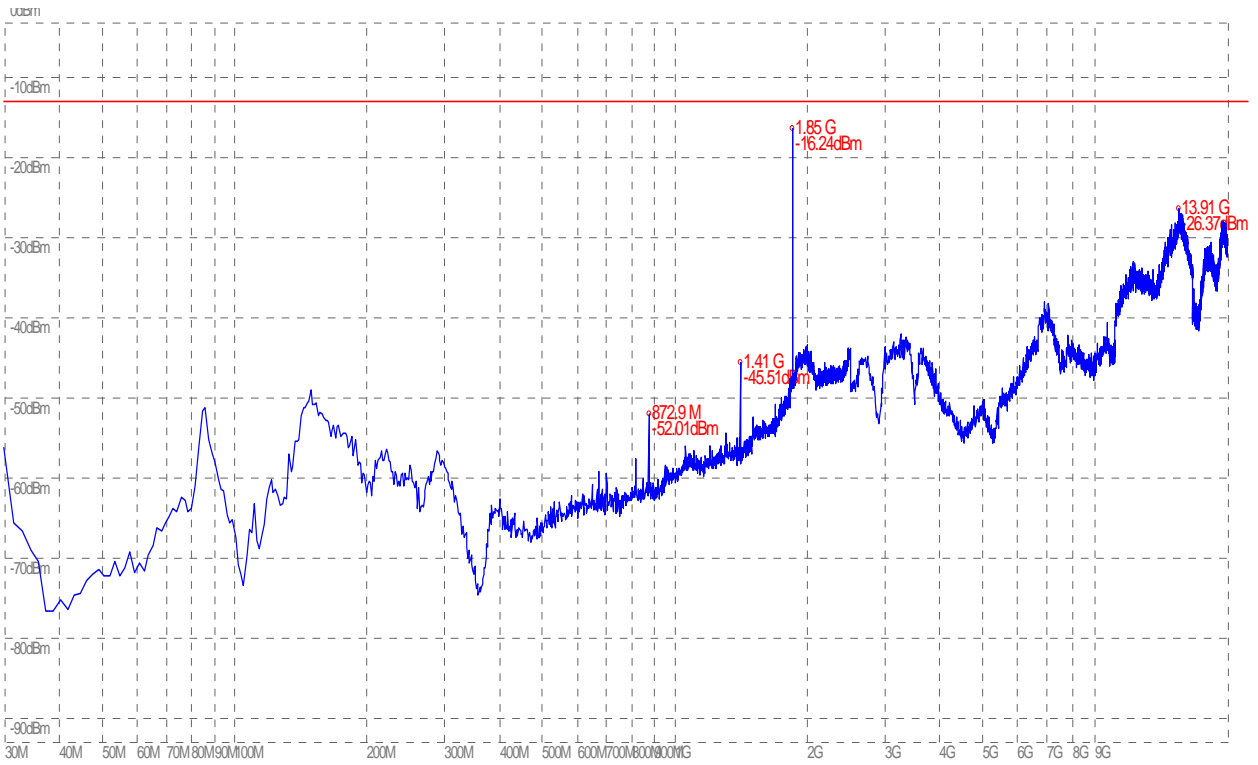
(Plot C 4: EGPRS 850MHz Channel = 190 Test Antenna Vertical)



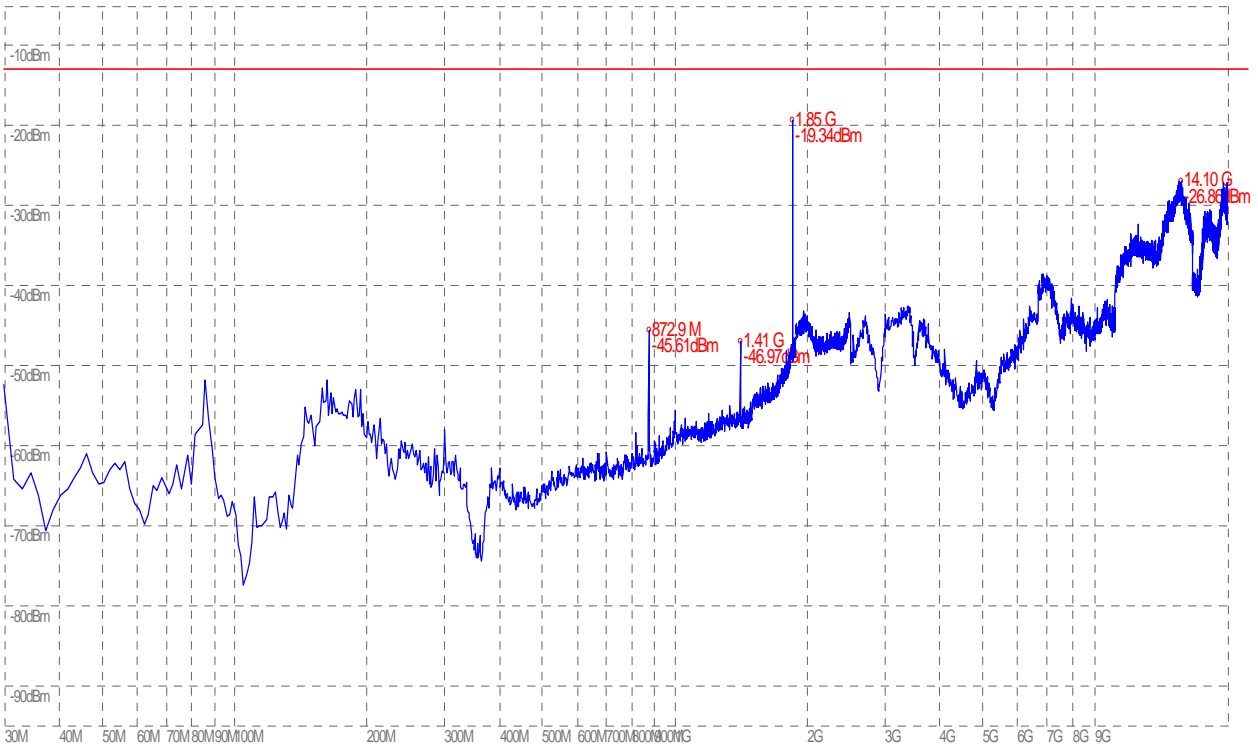
(Plot C 5 : EGPRS 850MHz Channel = 251, Test Antenna Horizontal)



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



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



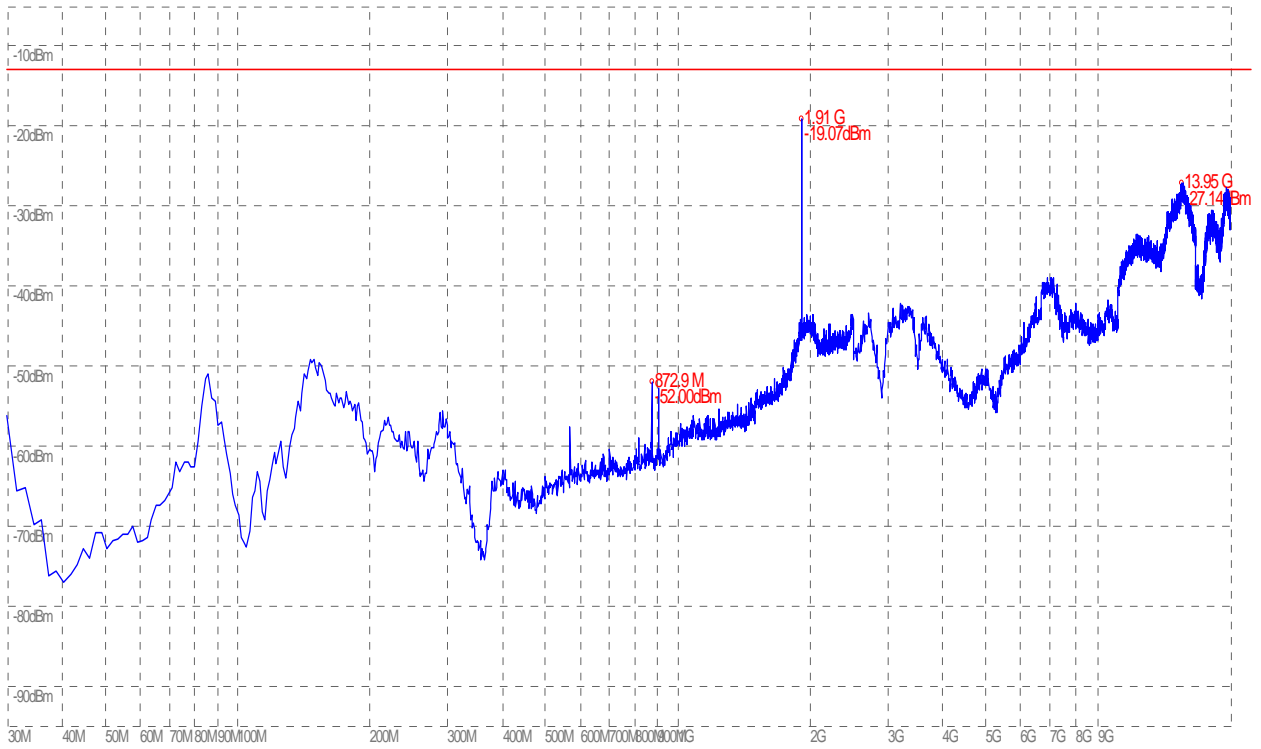
(Plot D.2: EGPRS 1900MHz Channel = 512, Test Antenna Vertical)



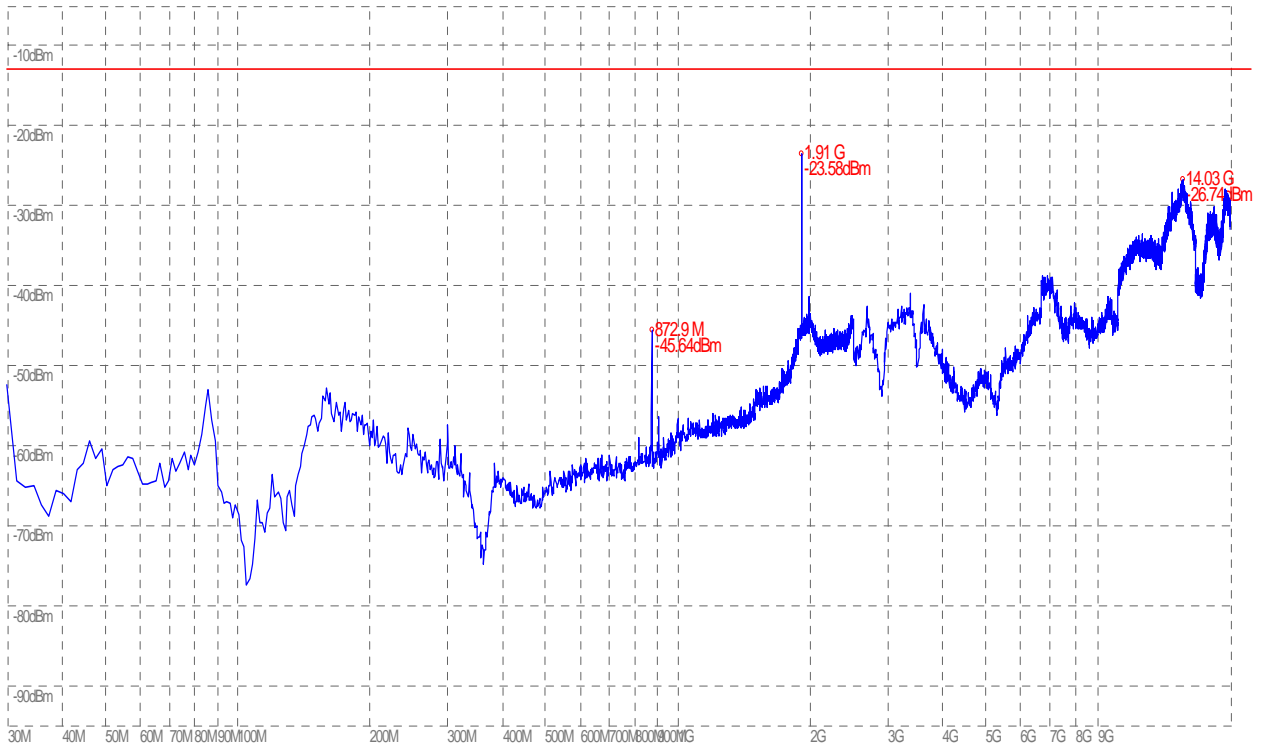
(Plot D3 : EGPRS 1900MHz Channel = 661, Test Antenna Horizontal)



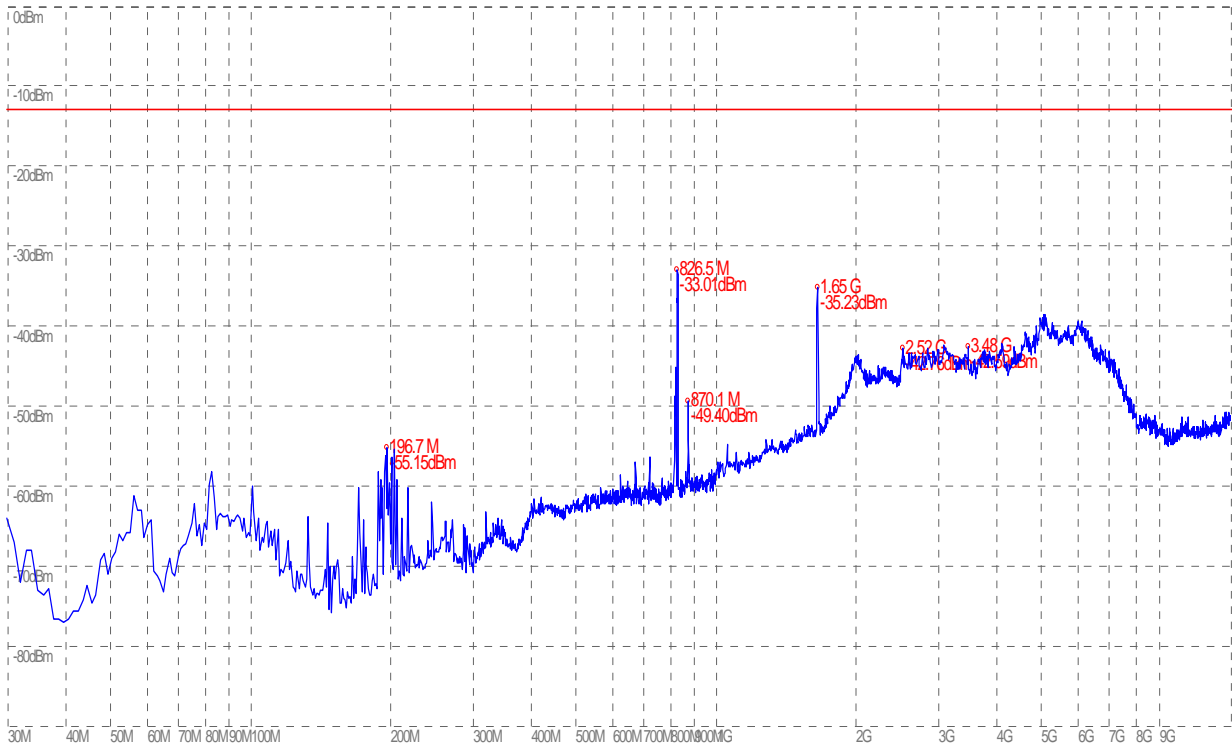
(Plot D4 : EGPRS 1900MHz Channel = 661, Test Antenna Vertical)



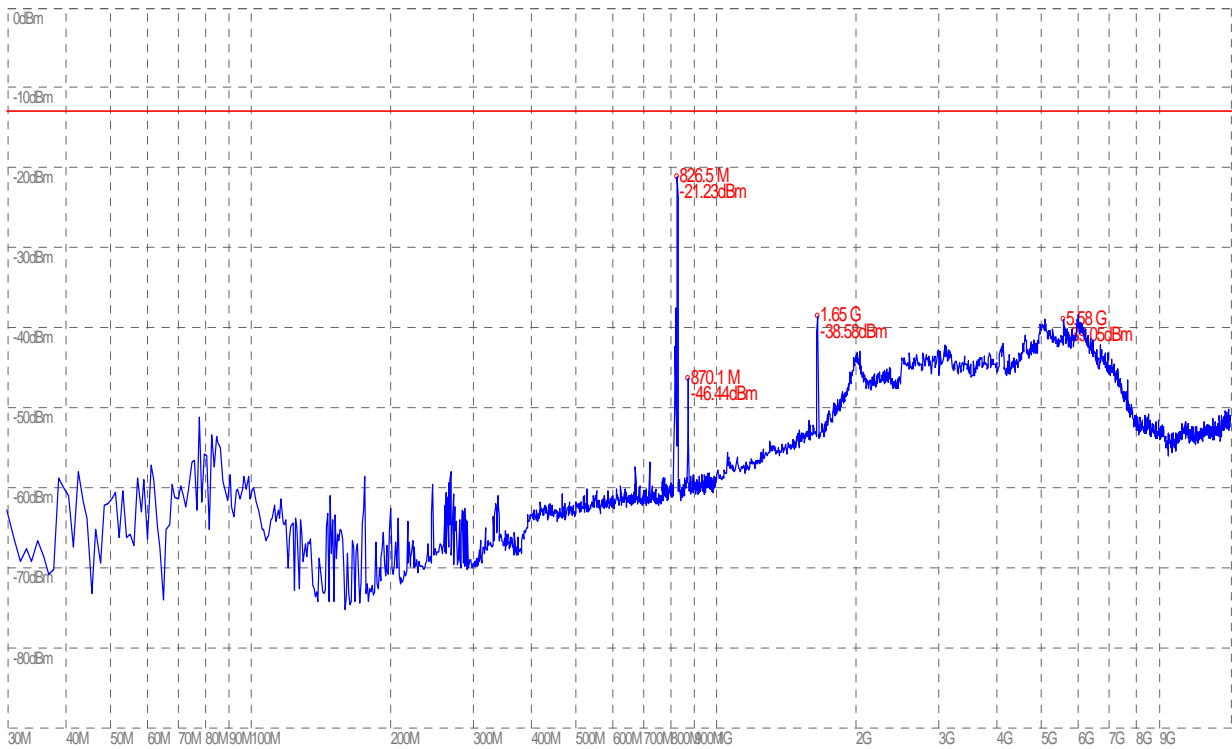
(Plot D5 : EGPRS 1900MHz Channel = 810, Test Antenna Horizontal)



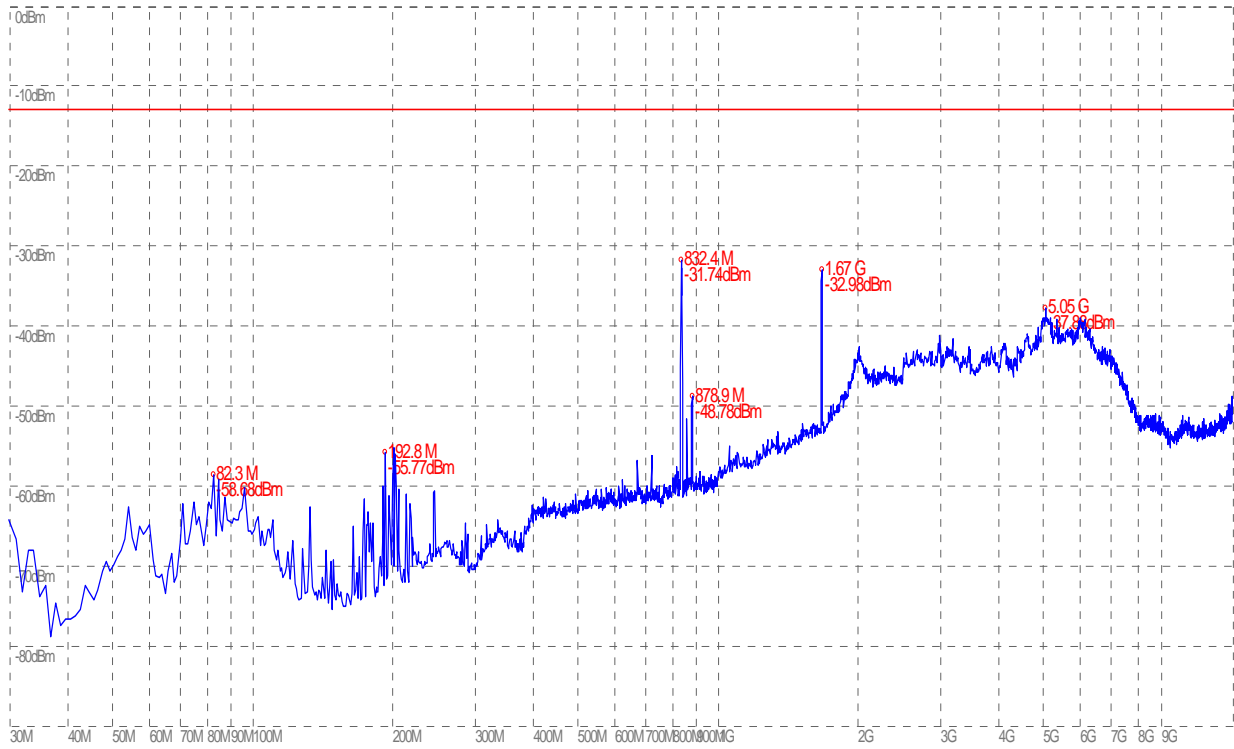
(Plot D6 : EGPRS 1900MHz Channel = 810, Test Antenna Vertical)



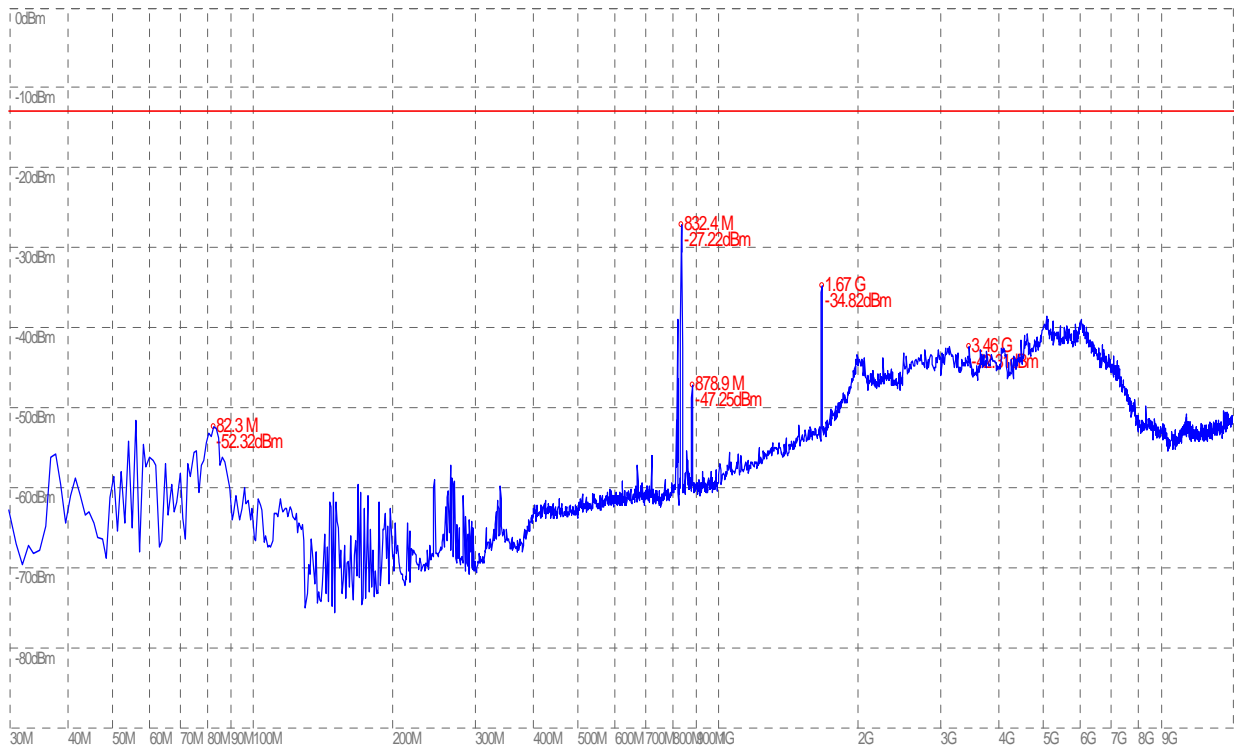
(Plot E.1: WCDMA 850MHz Channel = 4132, Test Antenna Horizontal)



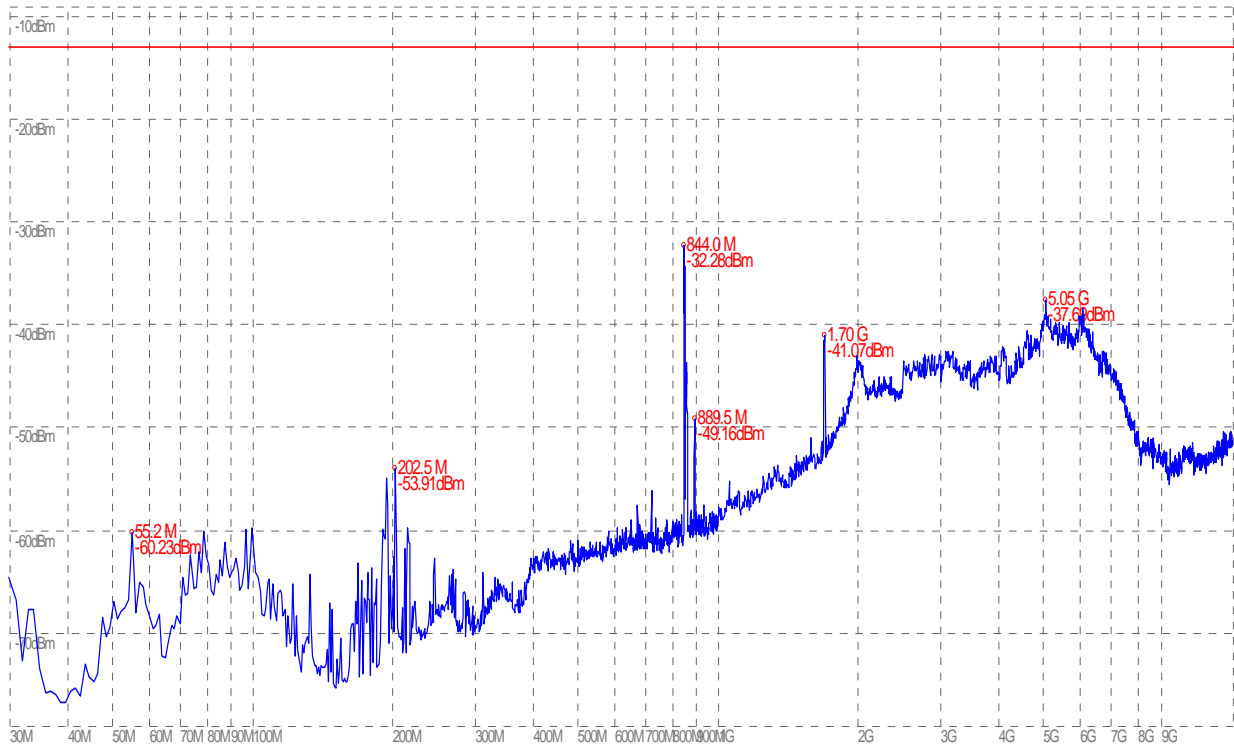
(Plot E.2: WCDMA 850MHz Channel = 4132, Test Antenna Vertical)



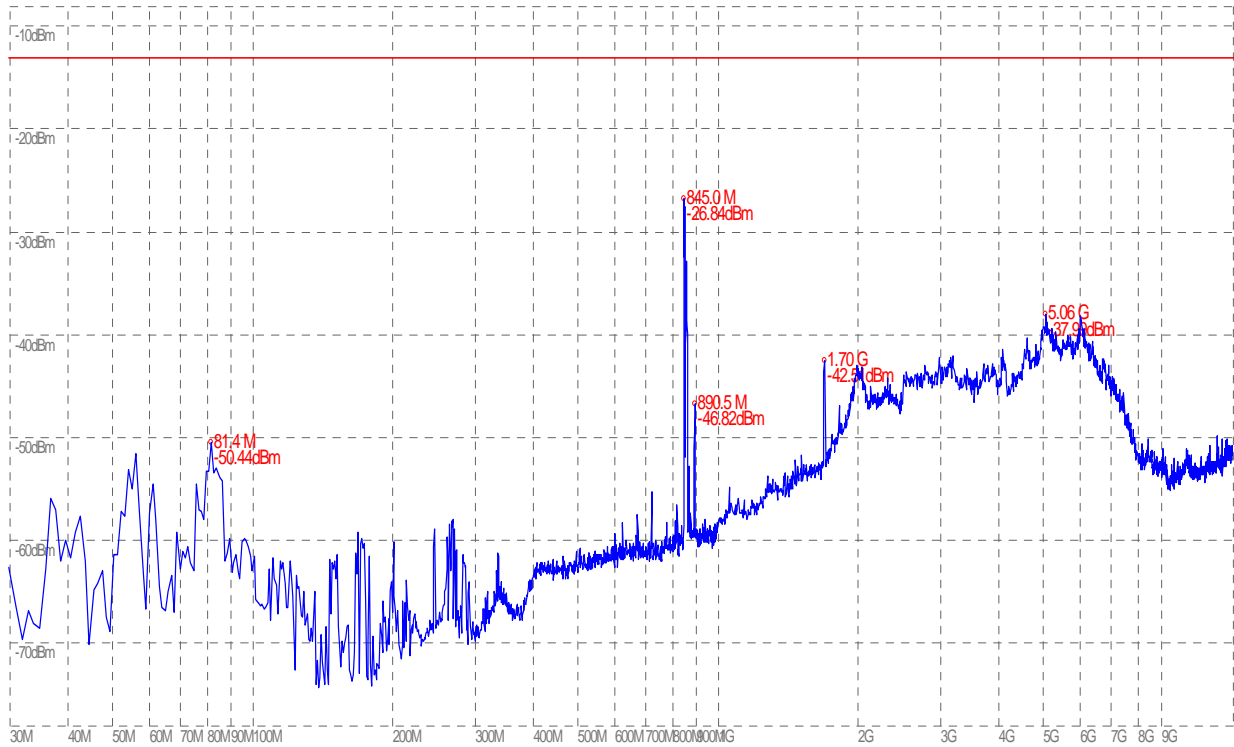
(Plot E.3: WCDMA 850MHz Channel = 4175, Test Antenna Horizontal)



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



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



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



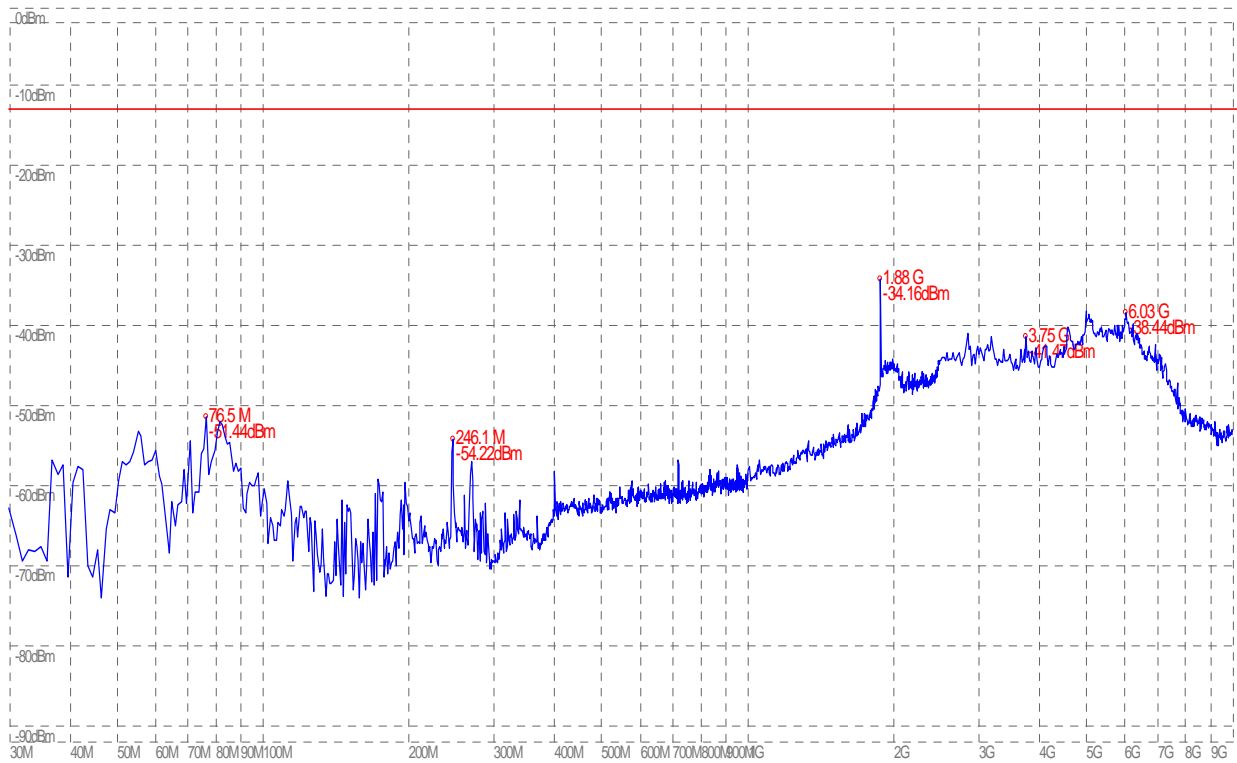
(Plot F.1: WCDMA 1900MHz Channel = 9262, Test Antenna Horizontal)



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



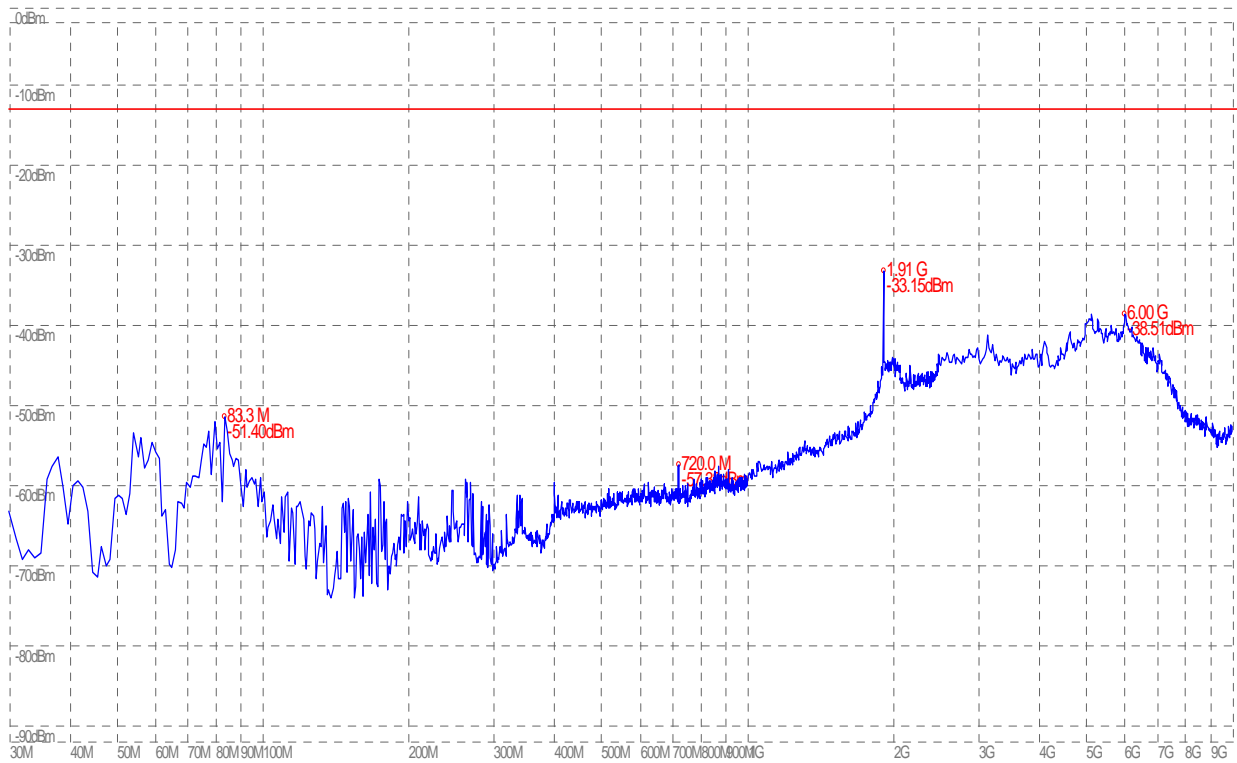
(Plot F.3: WCDMA 1900MHz Channel = 9400, Test Antenna Horizontal)



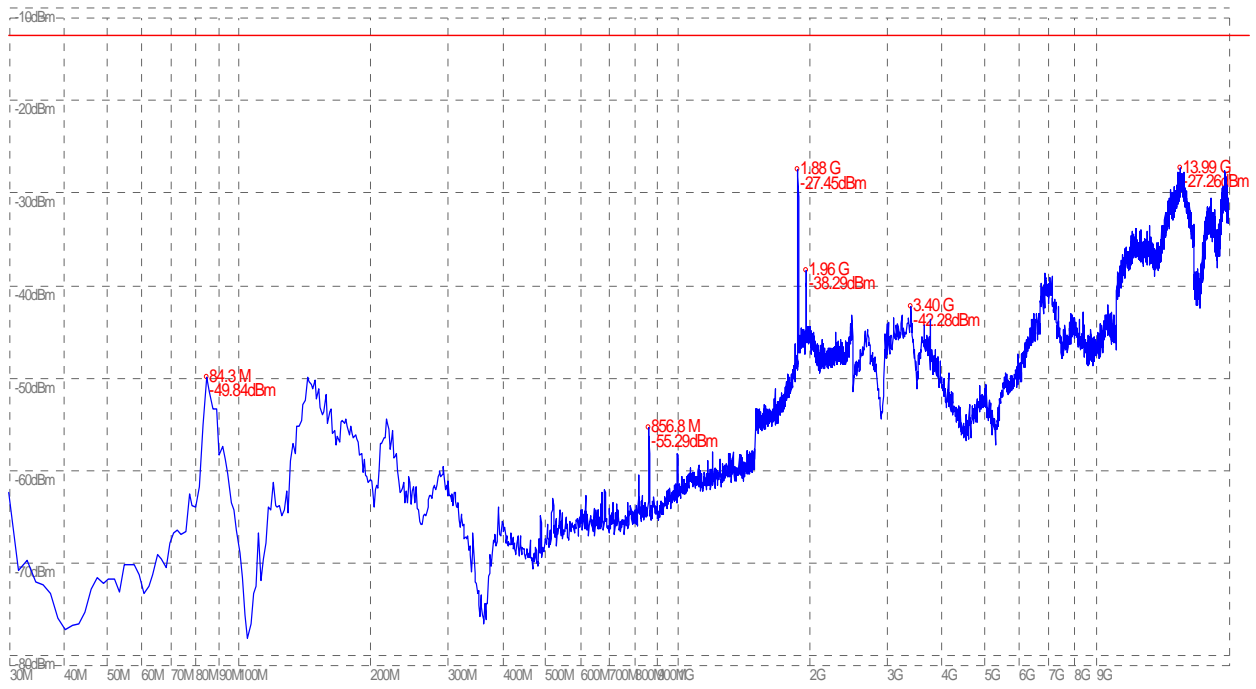
(Plot F.4: WCDMA 1900MHz Channel = 9400, Test Antenna Vertical)



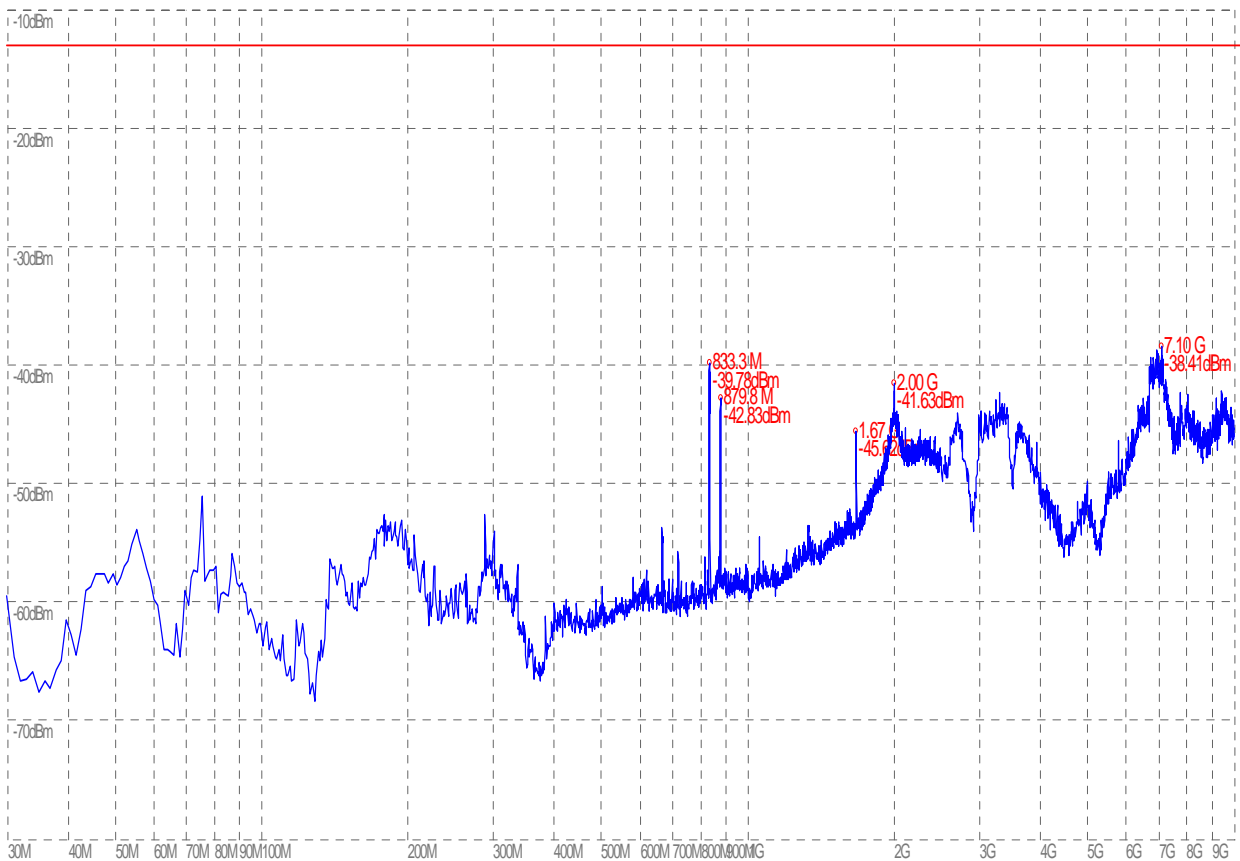
(Plot F.5: WCDMA 1900MHz Channel = 9538, Test Antenna Horizontal)



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



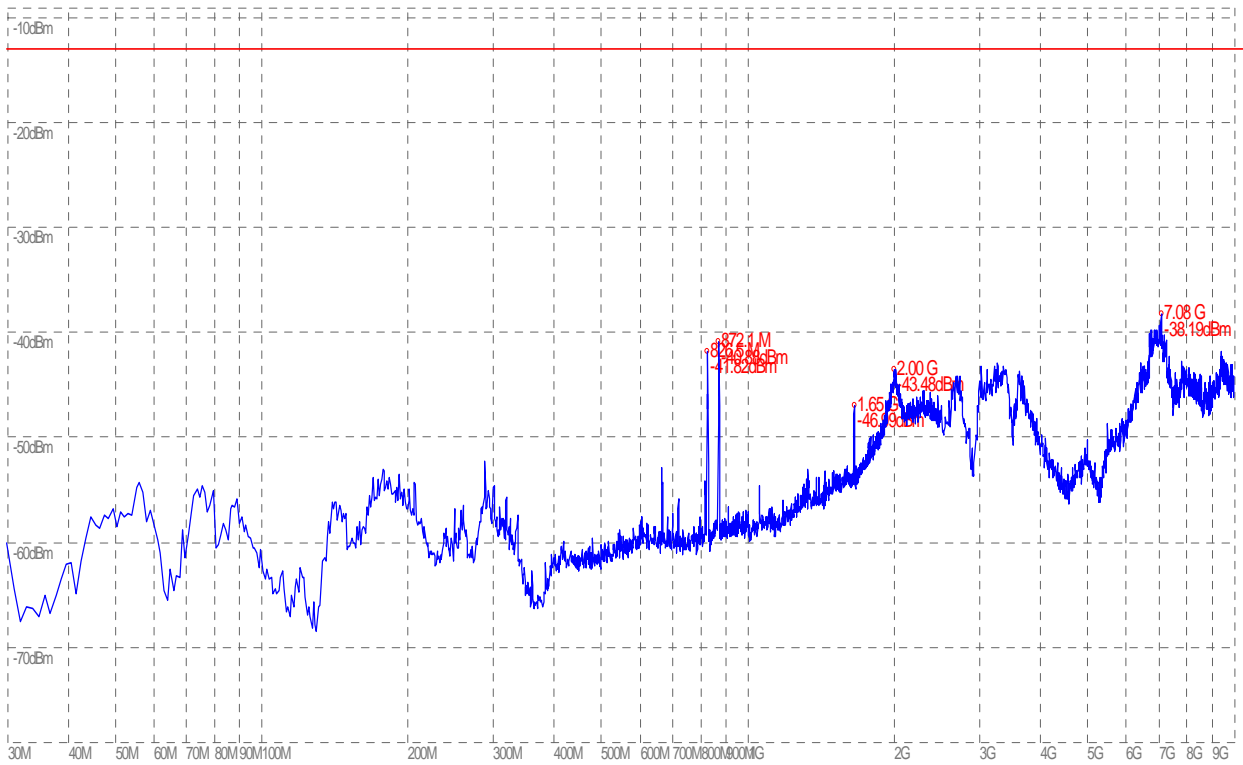
(Plot G.1: HSDPA 850MHz Channel = 4132 Test Antenna Horizontal)



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



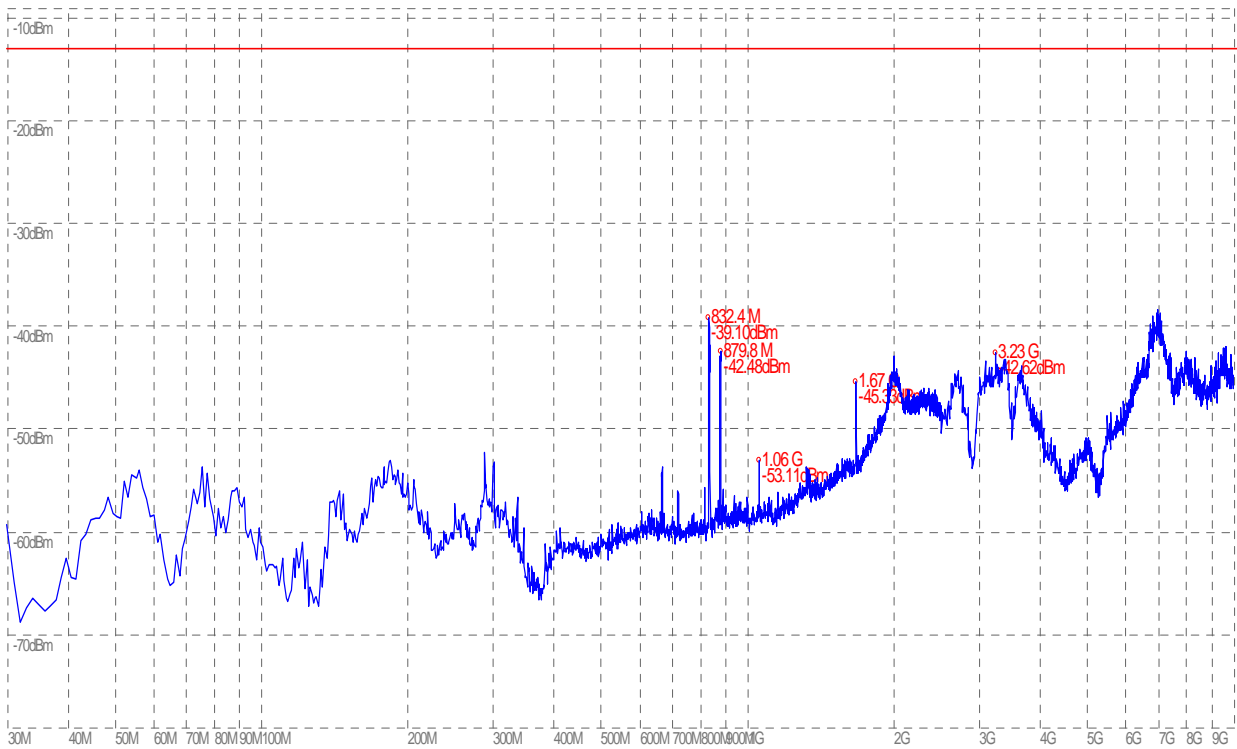
(Plot G.3: HSDPA 850MHz Channel = 4175, Test Antenna Horizontal)



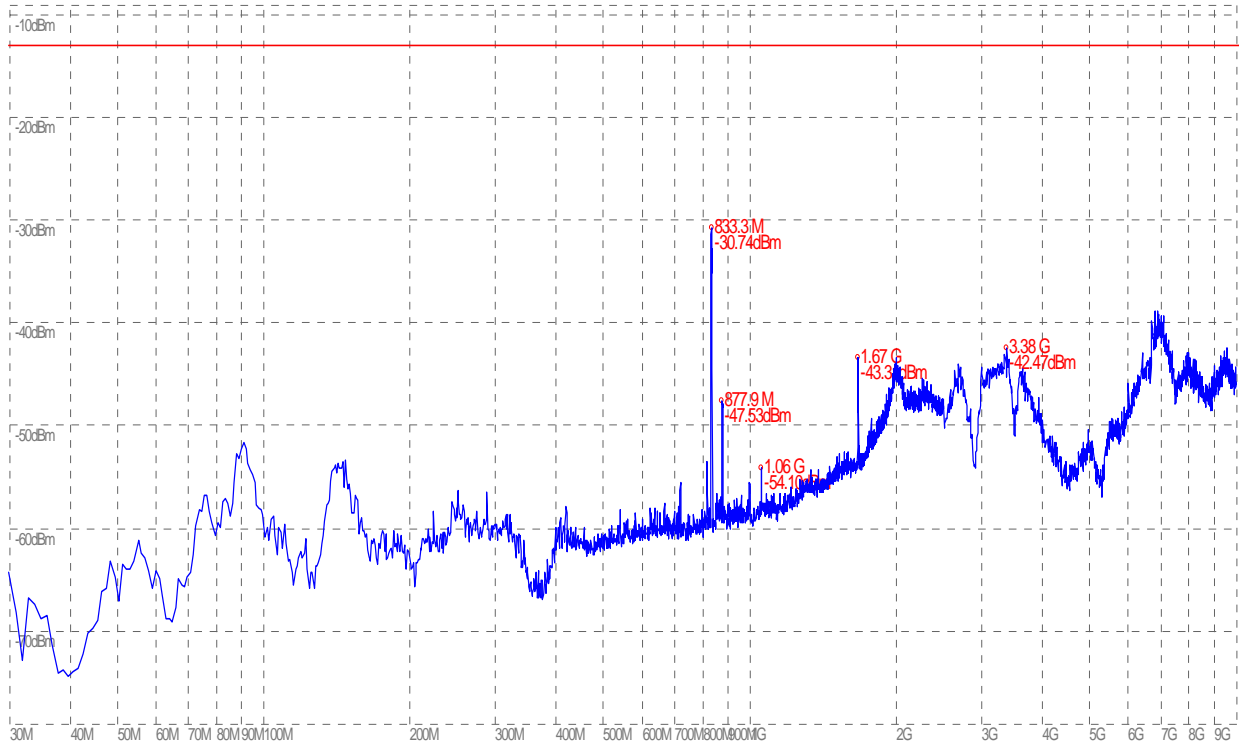
(Plot G.4: HSDPA 850MHz Channel = 4175, Test Antenna Vertical)



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



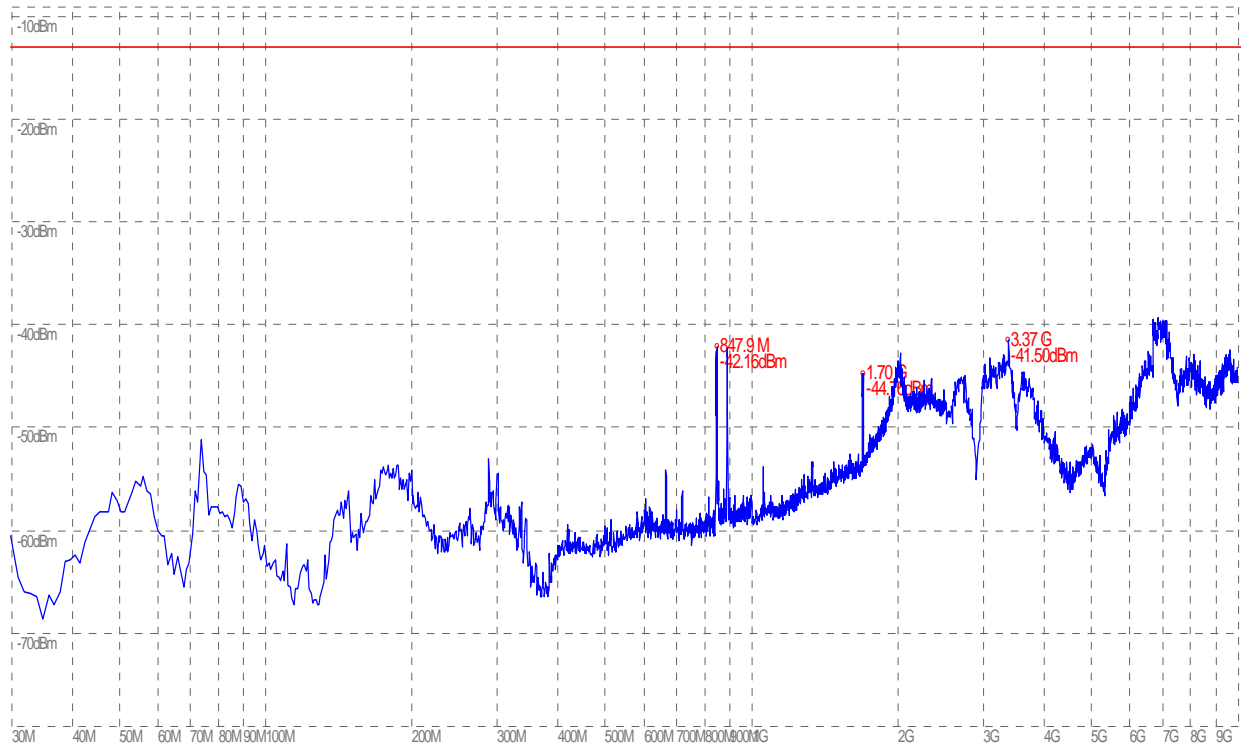
(Plot G.6: HSDPA 850MHz Channel = 4233, Test Antenna Vertical)



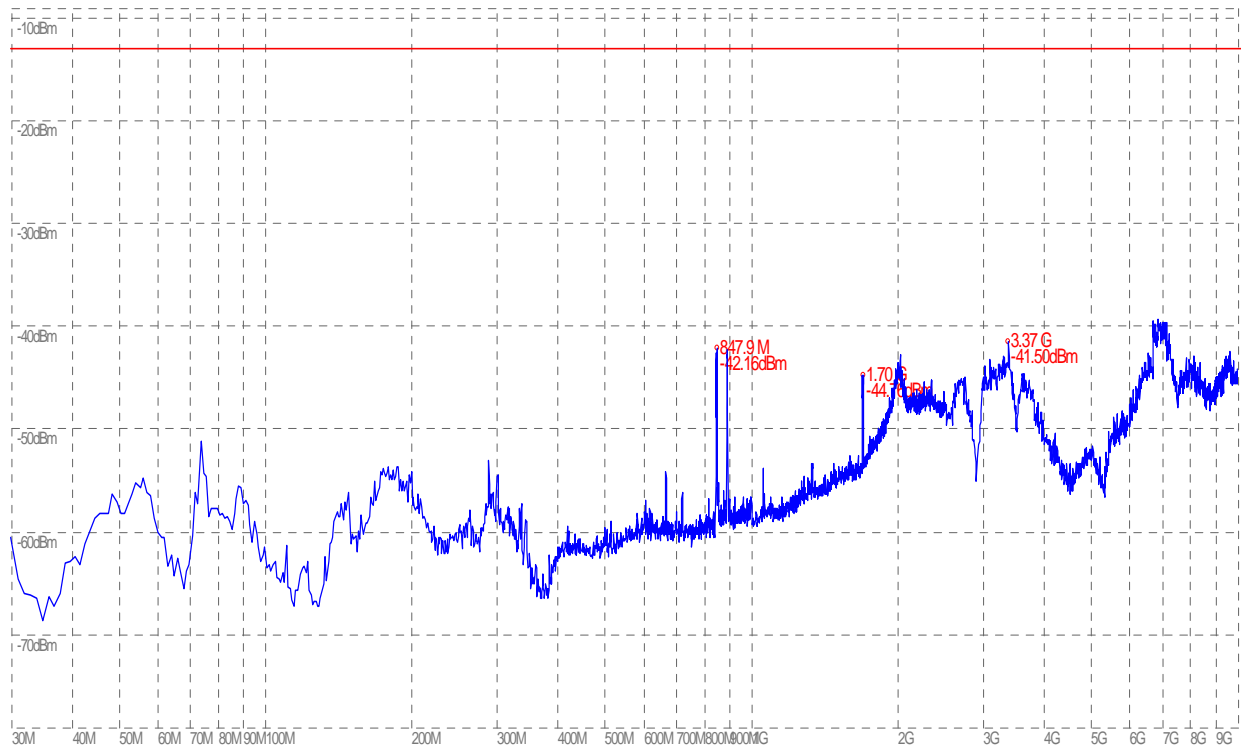
(Plot H.1: HSDPA 1900 MHz Channel = 9262, Test Antenna Horizontal)



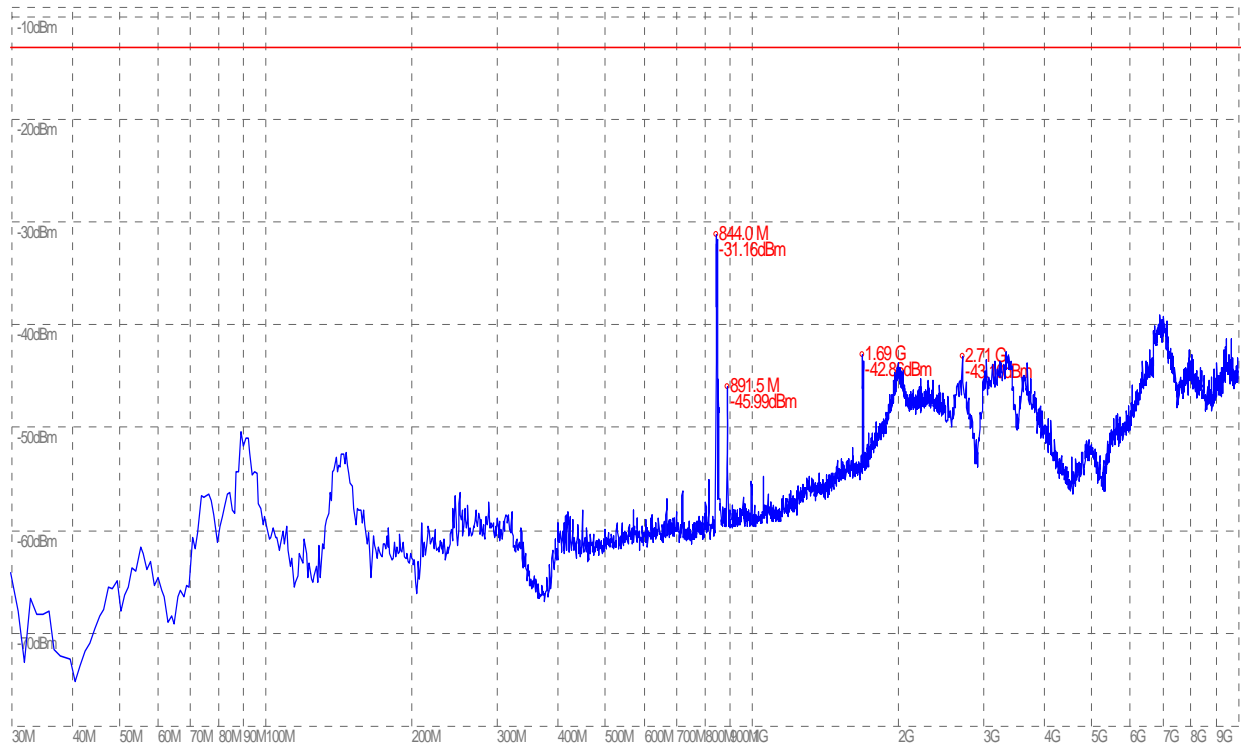
(Plot H.2: HSDPA 1900 MHz Channel = 9262, Test Antenna Vertical)



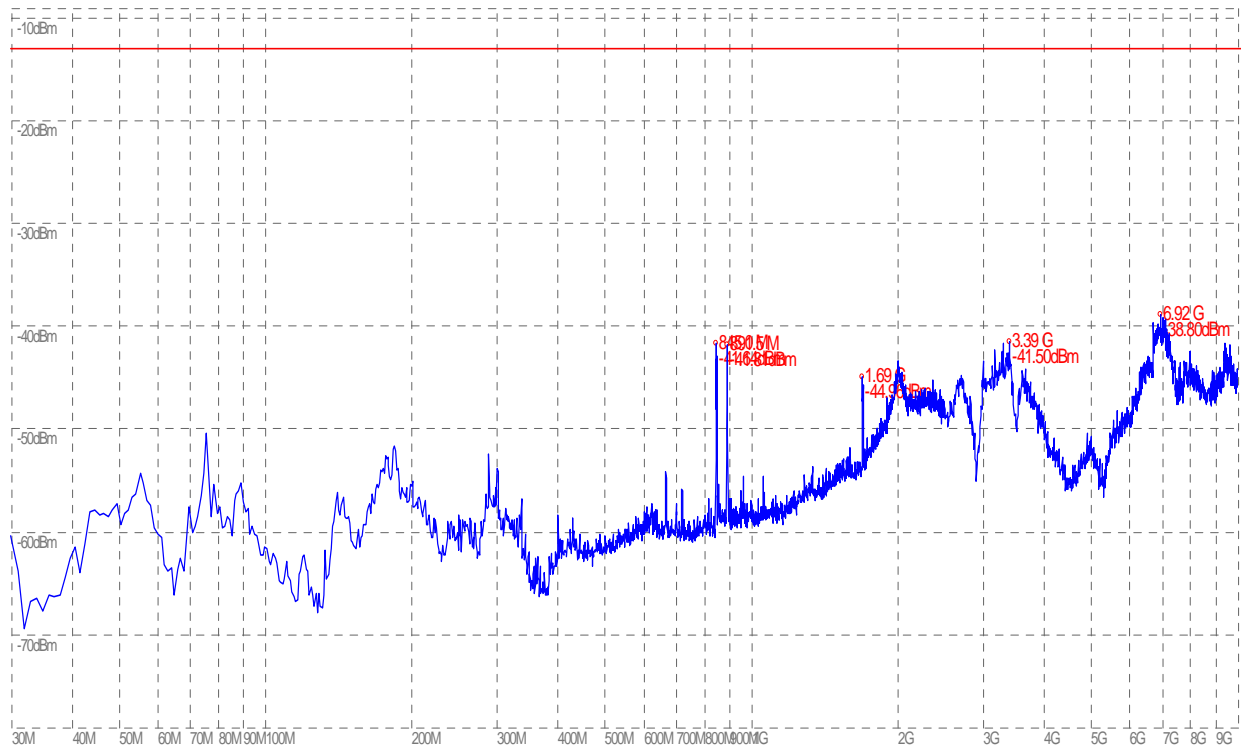
(Plot H.3: HSDPA 1900 MHz Channel = 9400, Test Antenna Horizontal)



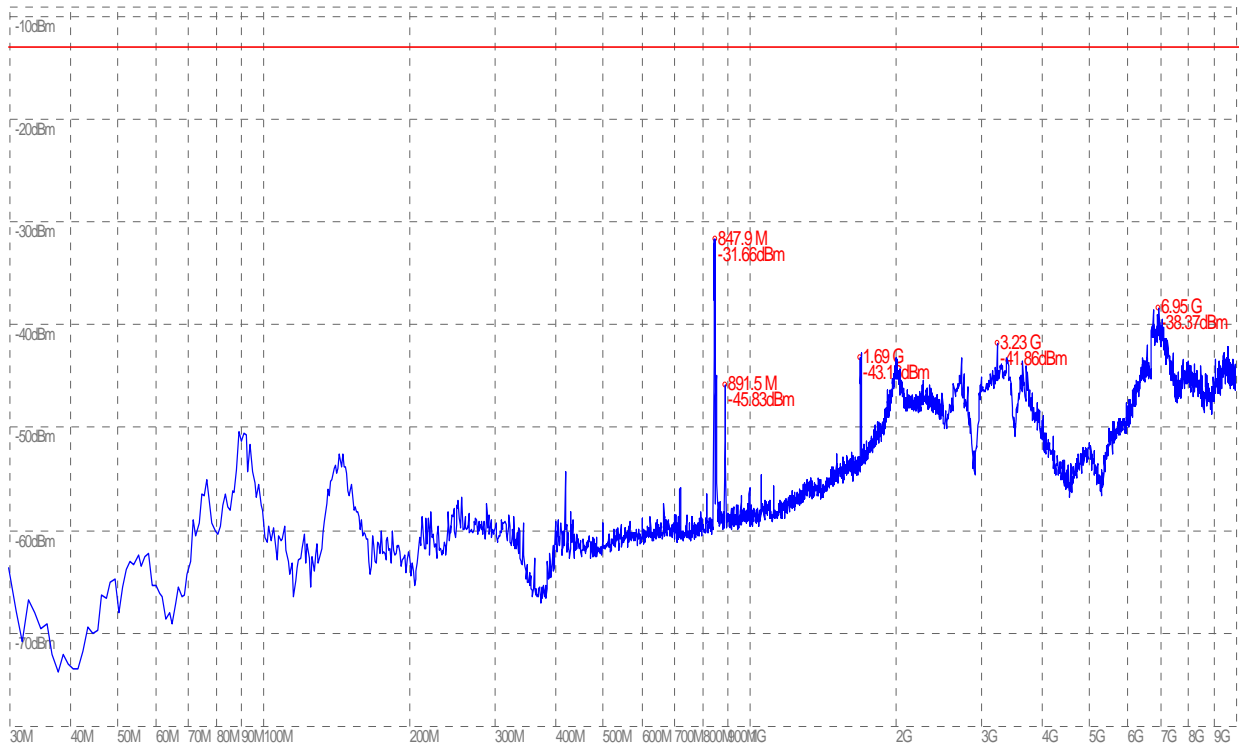
(Plot H.4: HSDPA 1900 MHz Channel = 9400, Test Antenna Vertical)



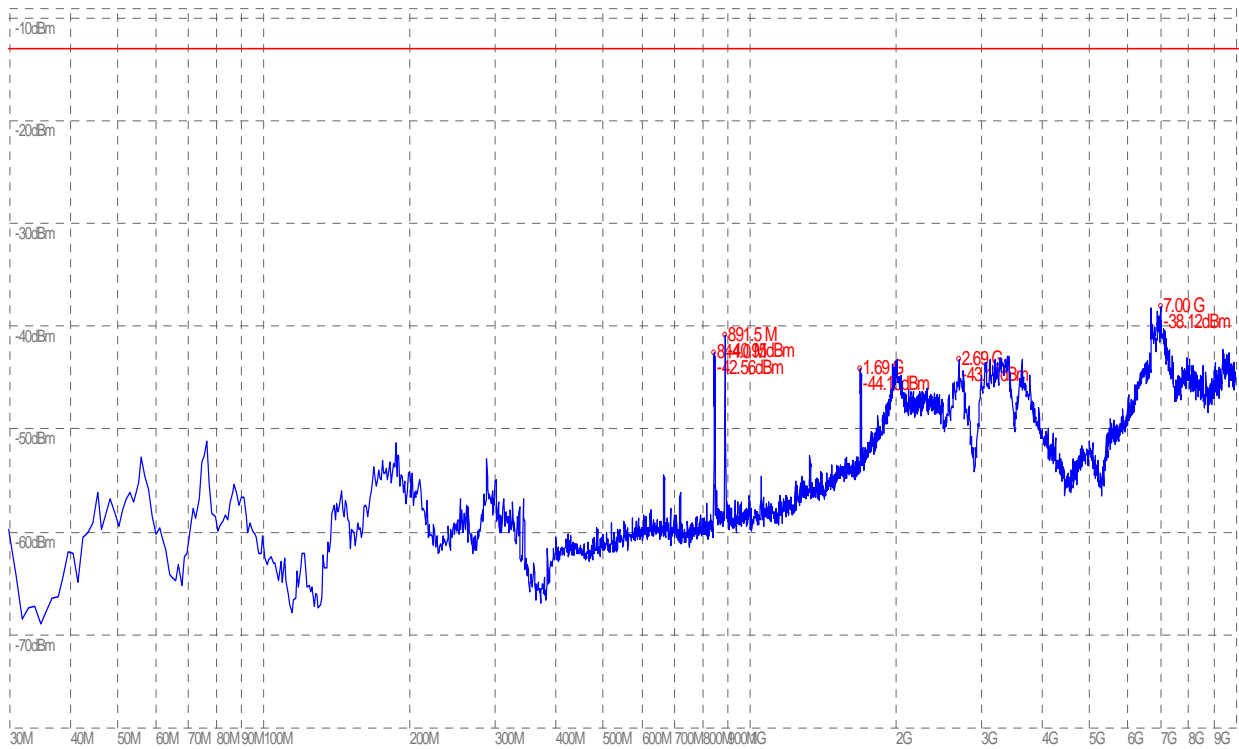
(Plot H.5: HSDPA 1900 MHz Channel = 9538, Test Antenna Horizontal)



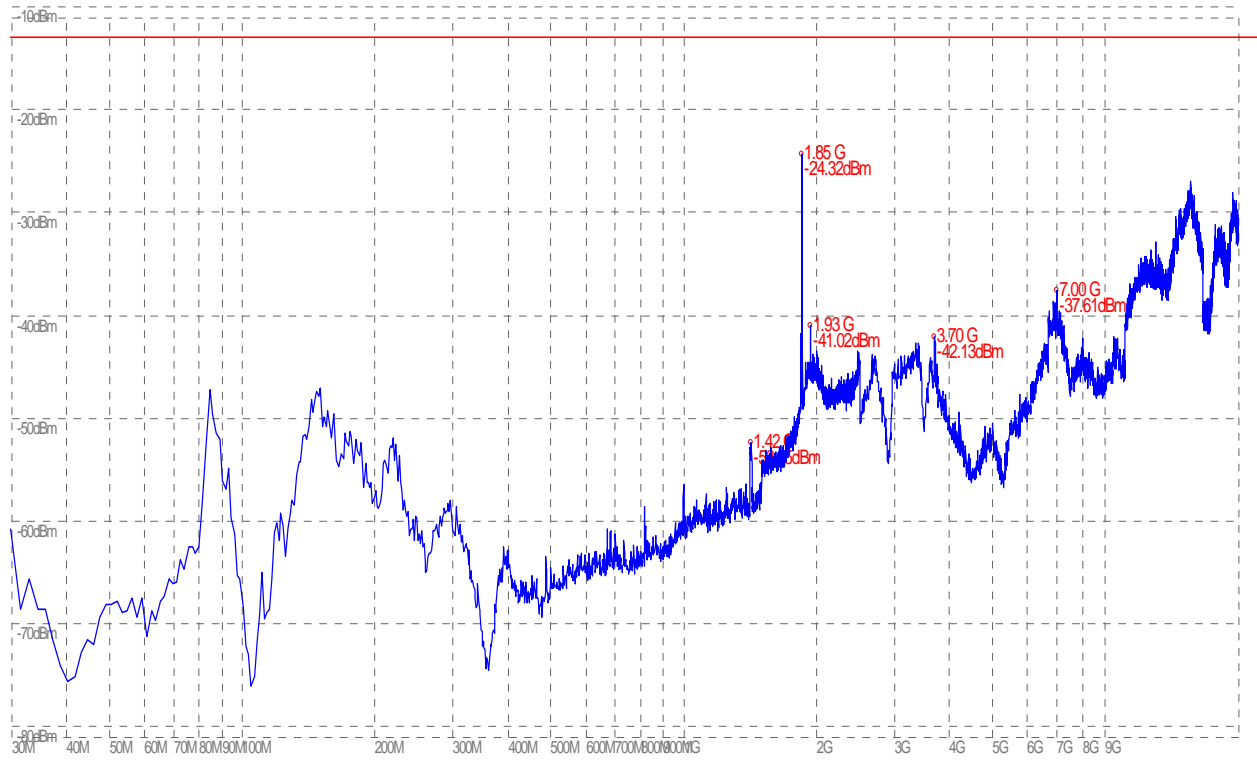
(Plot H.6: HSDPA 1900 MHz Channel = 9538 Test Antenna Vertical)



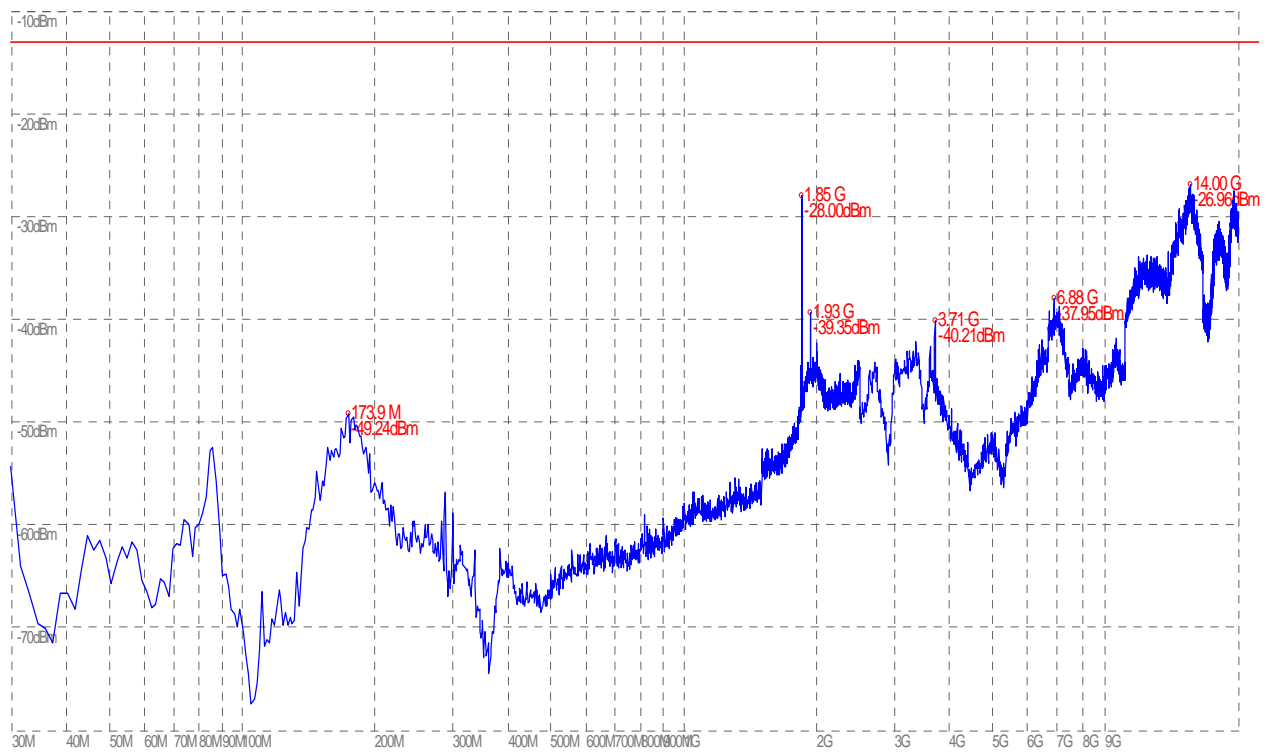
(Plot I.1: HSUPA 850MHz Channel = 4132, Test Antenna Horizontal)



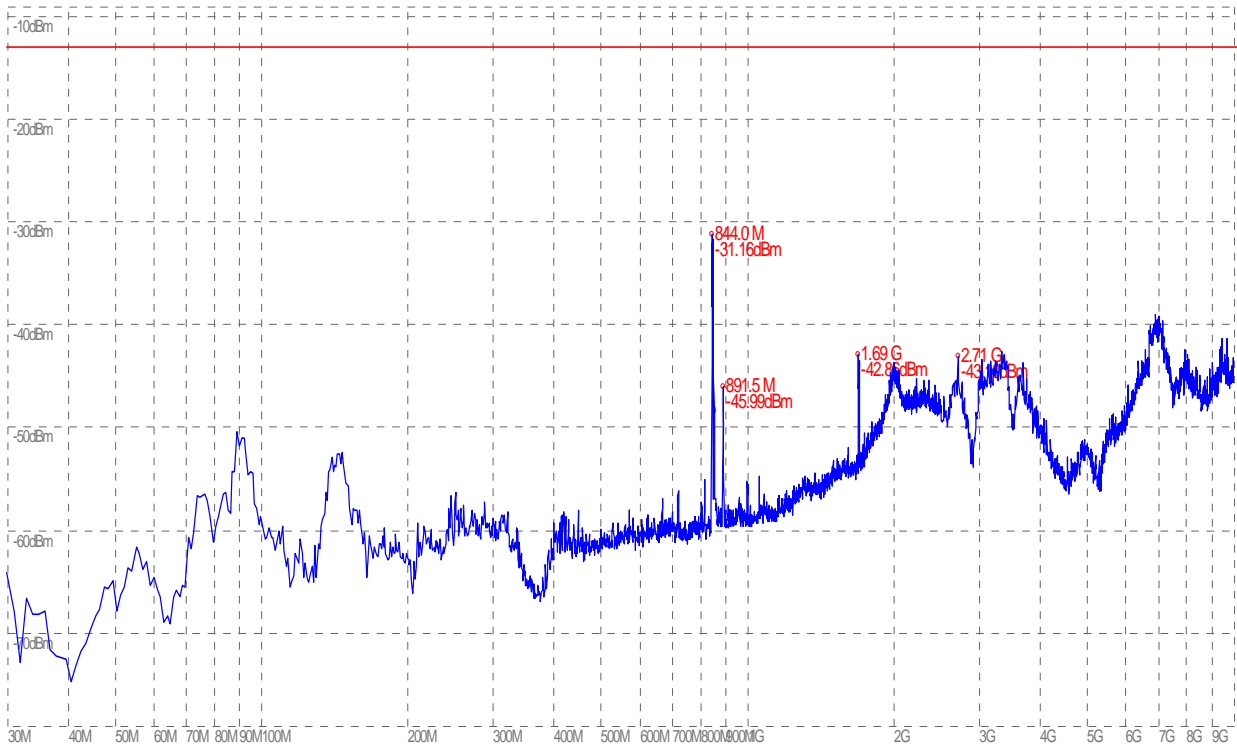
(Plot I.2: HSUPA 850 MHz Channel = 4132, Test Antenna Vertical)



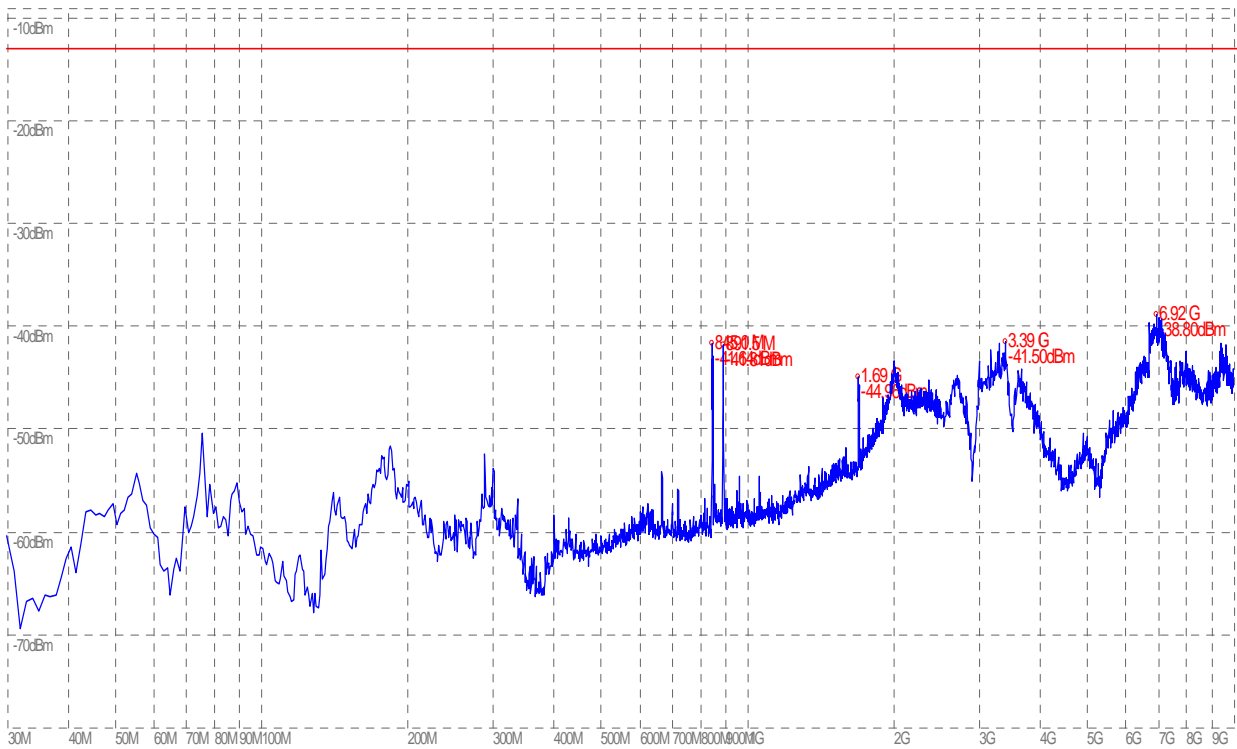
(Plot I.3: HSUPA 850MHz Channel = 4175, Test Antenna Horizontal)



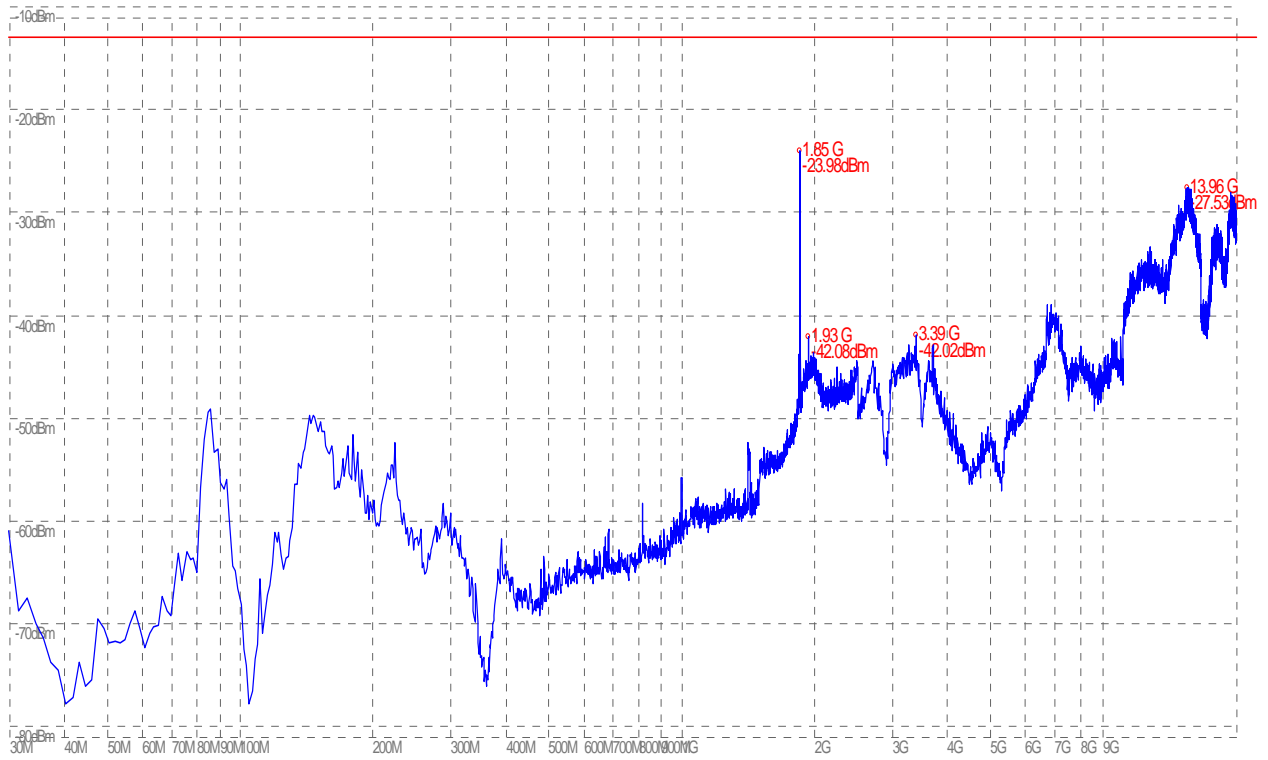
(Plot I.4: HSUPA 850MHz Channel = 4175, Test Antenna Vertical)



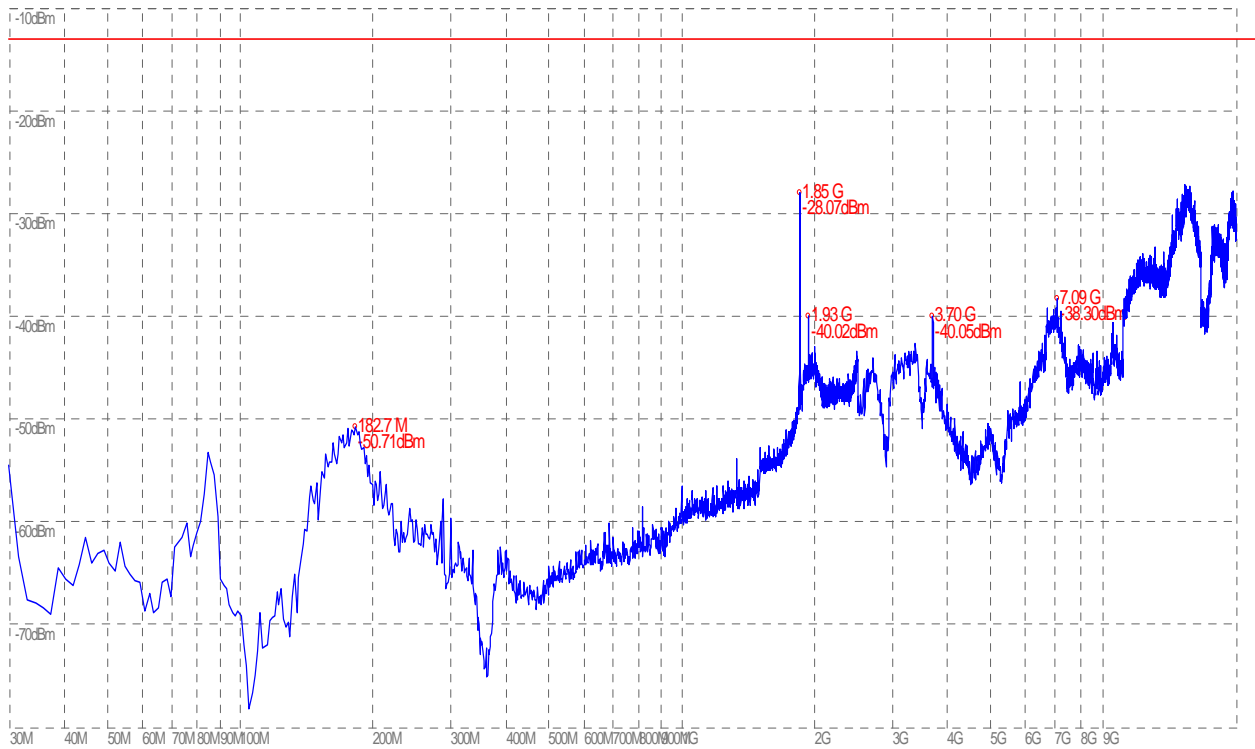
(Plot I.5: HSUPA 850MHz Channel = 4233, Test Antenna Horizontal)



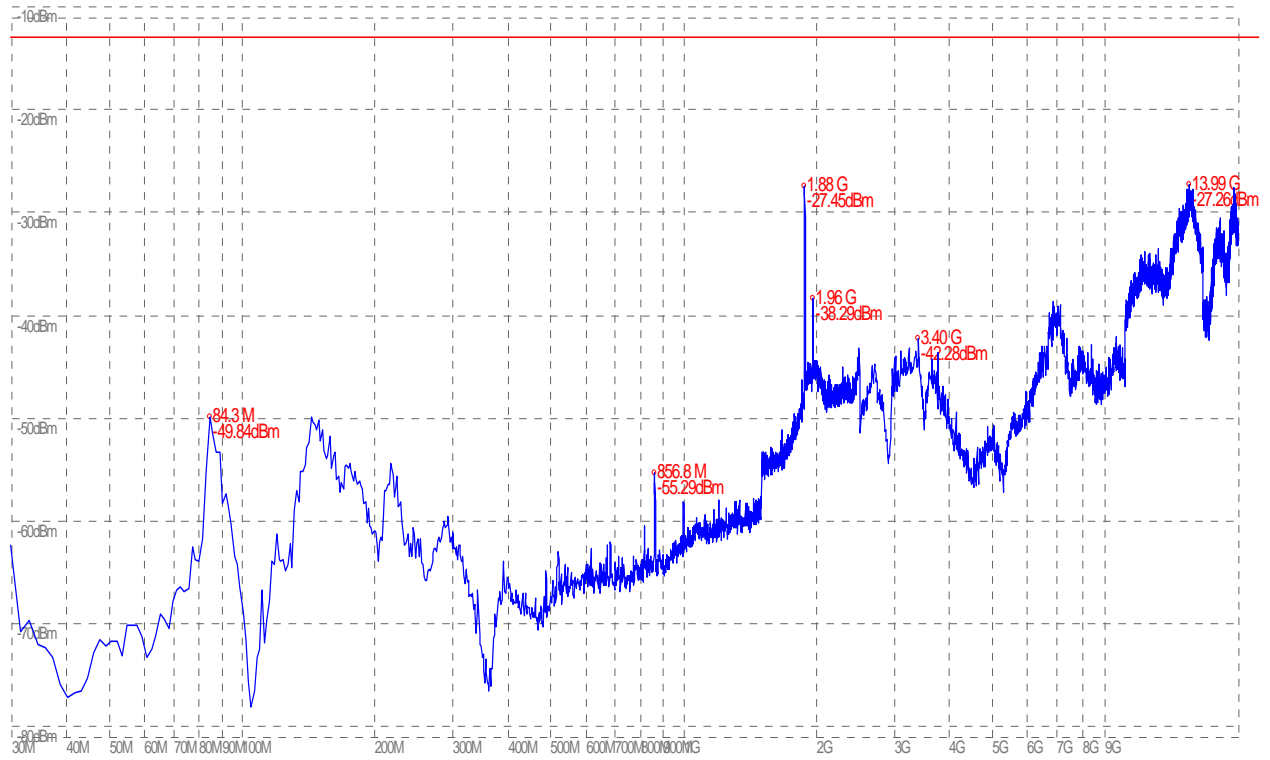
(Plot I.6: HSUPA 850MHz Channel = 4233, Test Antenna Vertical)



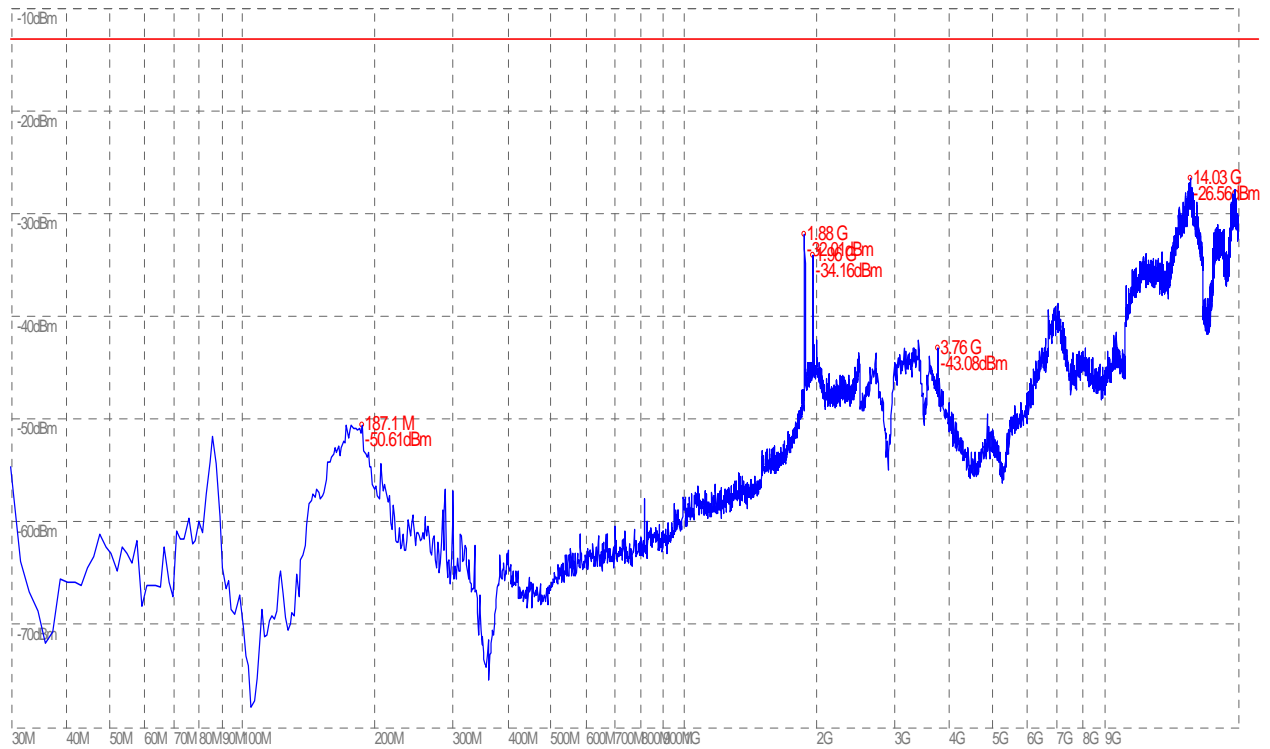
(Plot J.1: HSUPA 1900 MHz Channel = 9262, Test Antenna Horizontal)



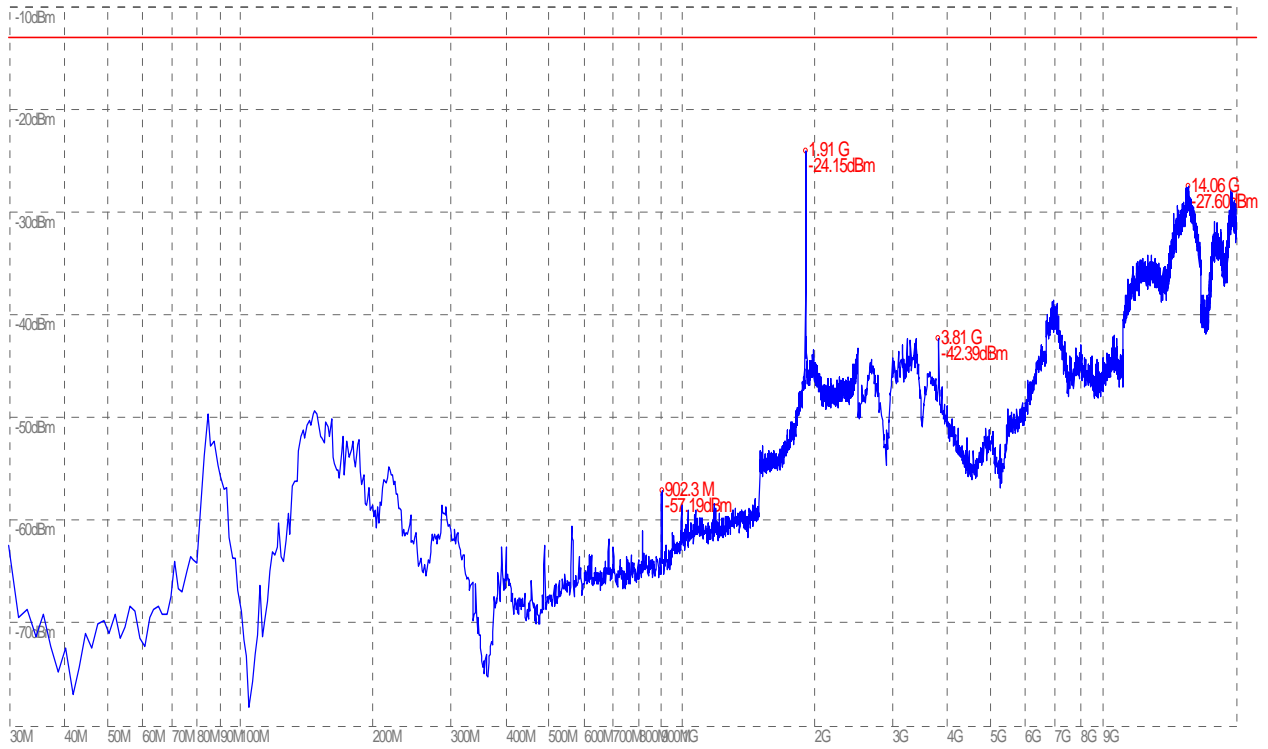
(Plot J.2: HSUPA 1900 MHz Channel = 9262, Test Antenna Vertical)



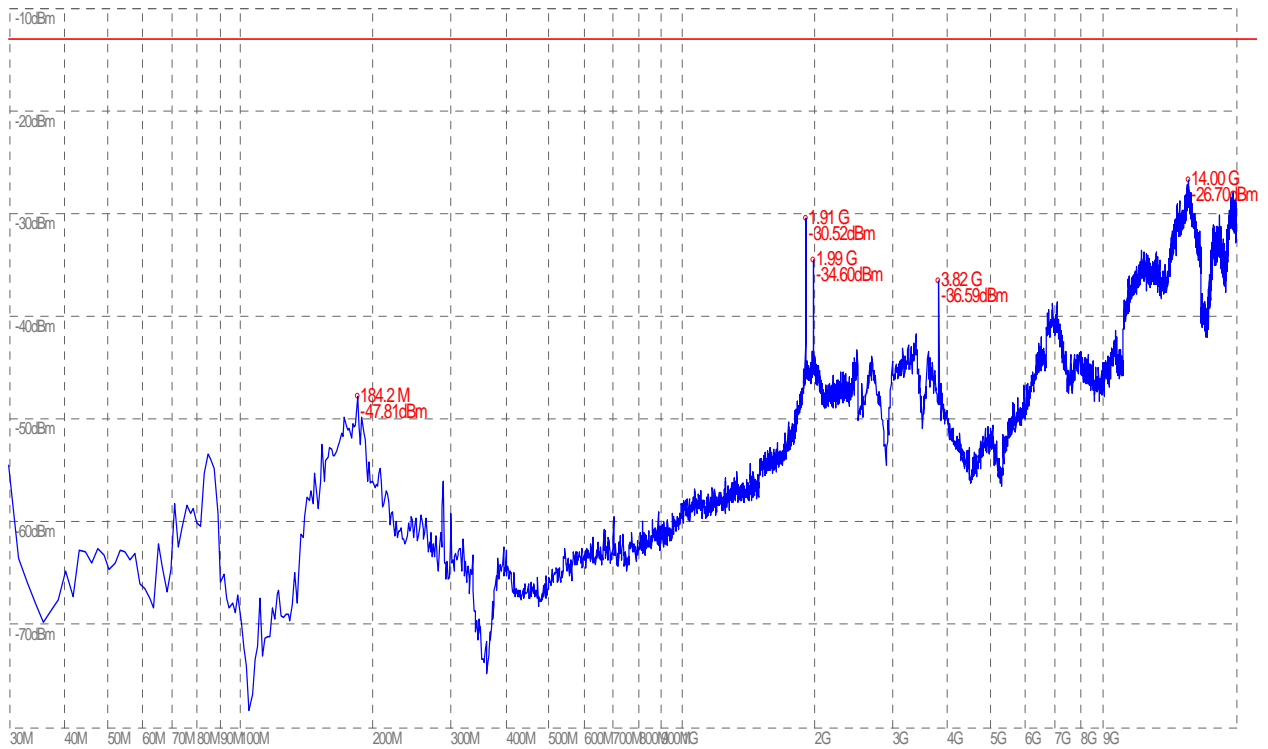
(Plot J.3: HSUPA 1900 MHz Channel = 9400, Test Antenna Horizontal)



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



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



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

** END OF REPORT **