



RF TEST REPORT

Report No.: SET2013-01317
Product: WCDMA/GSM Module
FCC ID: SKH-SCV123
Applicant: Shenzhen Strong Rising Electronics Co.,Ltd
Address: Room 610-611, Building 13, Shangsha Creative Science&Tech Park, Futian District, Shenzhen, China
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Test Report

Product.....: WCDMA/GSM Module

Model No.: SEW290

Brand Name: N/A

Trade Name.....: N/A

Applicant: Shenzhen Strong Rising Electronics Co.,Ltd

Applicant Address: Room 610-611, Building 13, Shangsha Creative Science&Tech Park, Futian District, Shenzhen, China

Manufacturer.....: Shenzhen Strong Rising Electronics Co.,Ltd

Manufacturer Address.....: Room 610-611, Building 13, Shangsha Creative Science&Tech Park, Futian District, Shenzhen, China

Test Standards.....: 47 CFR Part 2(10-1-09 Edition) Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
47 CFR Part 22(10-1-09 Edition) Public Mobile Services
47 CFR Part 24(10-1-09 Edition)Personal Communications Services

Test Result: PASS

Tested by: Lu Lei Apr 12, 2013
Lu Lei, Test Engineer

Reviewed by.....: Shuangwen Zhang Apr. 12, 2013
Shuangwen Zhang, Senior Engineer

Product.....: Wu Li'an Apr 12, 2013
Wu Li'an, Manager



Table of Contents

1.	GENERAL INFORMATION	4
1.1	EUT Description	4
1.2	Test Standards and Results	6
1.3	Facilities and Accreditations	7
2.	47 CFR PART 2, PART 22H & 24E REQUIREMENTS	8
2.1	Conducted RF Output Power	8
2.2	Peak to Average Ratio.....	20
2.3	99% Occupied Bandwidth	24
2.4	Frequency Stability.....	39
2.5	Conducted Out of Band Emissions	45
2.6	Band Edge	74
2.7	Transmitter Radiated Power (EIRP/ERP)	84
2.8	Radiated Out of Band Emissions	91

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type	WCDMA/GSM Module
Serial No.....	(n.a, marked #1 by test site)
FCC ID	SKH-SCV123
Hardware Version	SPW9S-V4
Software Version	wup_2.00.008
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)
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
Multislot Class.....	GPRS: Multislot Class12,EGPRS: Class12
Antenna Type.....	Refer to Note 6 and 7
Emission Designators	GSM850:247KGXW, GSM1900:250KGXW, GPRS850:250KGXW,GPRS1900:248KGXW EGPRS850:246KG7W, EGPRS1900:247KG7W, WCDMA850:4M19F9W,HSDPA850:4M21F9W, HSUPA850:4M19F9W,

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

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

Note 3: The transmitter (Tx) frequency arrangement of the WCDMA 850MHz band used by the EUT can be represented with the formula $F(n)=826.4+0.2*(n-4132)$, $4132 \leq n \leq 4233$; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately

4132 (826.4MHz), 4175(835MHz) and 4233 (846.6MHz).

Note 4: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 5: According to the designer, Shenzhen Strong Rising Electronics Co.,Ltd., we hereby declare that there's no difference between the model SPW270, SPW290, STW290, PCI270, PCI290, SEV550, SEV750, SEV850, MU270, MU290, MC550, MC750, MC850, SEW270, SEW291, SEW702, STV680 and SEW290 are accordant in both hardware and software.

Note 6: The external antenna must be matched properly to achieve best performance regarding radiated power, DC-power consumption, modulation accuracy and harmonic suppression. Antenna matching networks are not included on the SEW290 Module PCB and should be placed in the host application.

Note 7: During the spurious emission and ERP/EIRP tests, an antenna was used via a UHL Type Connector, whose maximum antenna gain was 2dBi for Band 850 and 2dBi for Band 1900.

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	24.232(d)	Peak to average ratio	PASS
3	2.1049 22.917 24.238	99% Occupied Bandwidth	PASS
4	2.1055 22.355 24.235	Frequency Stability	PASS
5	2.1051 2.1057 22.917 24.238	Conducted Out of Band Emissions	PASS
6	2.1051 2.1057 22.917 24.238	Band Edge	PASS
7	22.913 24.232	Transmitter Radiated Power (EIPR/ERP)	PASS
8	2.1053 2.1057 22.917 24.238	Radiated Out of Band Emissions	PASS

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



1.3 Facilities and Accreditations

1.3.1 Test Facilities

CNAS-Lab Code: L1659

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd., is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659. A 12.8*6.8*6.4 (m) fully anechoic chamber was used for the radiated spurious emissions test.

FCC-Registration No.: 406086

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 406086, Renewal date Nov. 19, 2011, valid time is until Nov. 18, 2014.

1.3.2 Test Environment Conditions

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

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

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

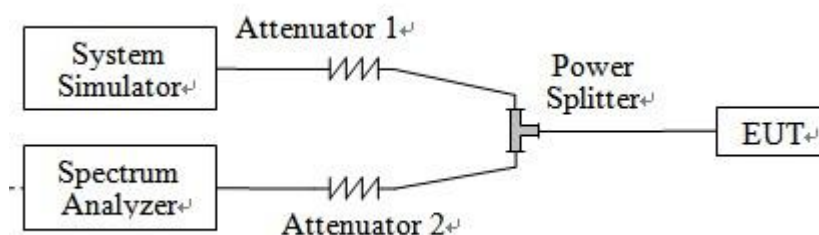
2.1 Conducted RF Output Power

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 USB, 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	R&S	CMU200	1100.008.02	2012.06.10
Spectrum Analyzer	Agilent	E7405A	US44210471	2012.06.10
Power Meter	Agilent	E4418B	GB43318055	2012.06.10
Power Splitter	Weinschel	1506A	NW521	2012.06.10
Attenuator 1	Resnet	20dB	(n.a.)	2012.06.10
Attenuator 2	Resnet	3dB	(n.a.)	2012.06.10

The Cal. Interval was one year.

2.1.3 Test Results

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

1. GSM Model Test Verdict:

Band	Channel	Frequency (MHz)	Measured Output Power		Limit dBm	Verdict
			dBm	Refer to Plot		
GSM 850MHz	128	824.2	31.76	Plot A1 to A3	35	PASS
	190	836.6	31.63			PASS
	251	848.8	31.72			PASS
GSM 1900MHz	512	1850.2	28.43	Plot B1 to B3	32	PASS
	661	1880.0	28.18			PASS
	810	1909.8	28.16			PASS
GPRS 850MHz	128	824.2	31.50	Plot C1 to C3	35	PASS
	190	836.6	31.40			PASS
	251	848.8	31.56			PASS
GPRS 1900MHz	512	1850.2	27.65	Plot D1 to D3	32	PASS
	661	1880.0	27.37			PASS
	810	1909.8	27.31			PASS
EDGE 850MHz	128	824.2	27.45	Plot E1 to E3	35	PASS
	190	836.6	27.35			PASS
	251	848.8	27.61			PASS
EDGE 1900MHz	512	1850.2	24.16	Plot F1 to F3	32	PASS
	661	1880.0	24.42			PASS
	810	1909.8	24.17			PASS

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

2. WCDMA Model Test Verdict:

Item	band	WCDMA 850		
	ARFCN	4132	4175	4233
	subtest	dBm		
5.2(WCDMA)	Non	22.41	22.21	22.25
HSDPA	1	21.68	21.69	21.67
	2	21.57	21.47	21.55
	3	20.85	20.67	20.75
	4	20.87	20.68	20.73
HSUPA	1	21.67	21.49	21.61
	2	19.73	19.77	19.53
	3	20.50	20.48	20.42

	4	19.42	19.51	19.49
	5	21.36	21.48	21.38

Note 2: The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA was tested by power meter.

3. GSM Model Test Plots:

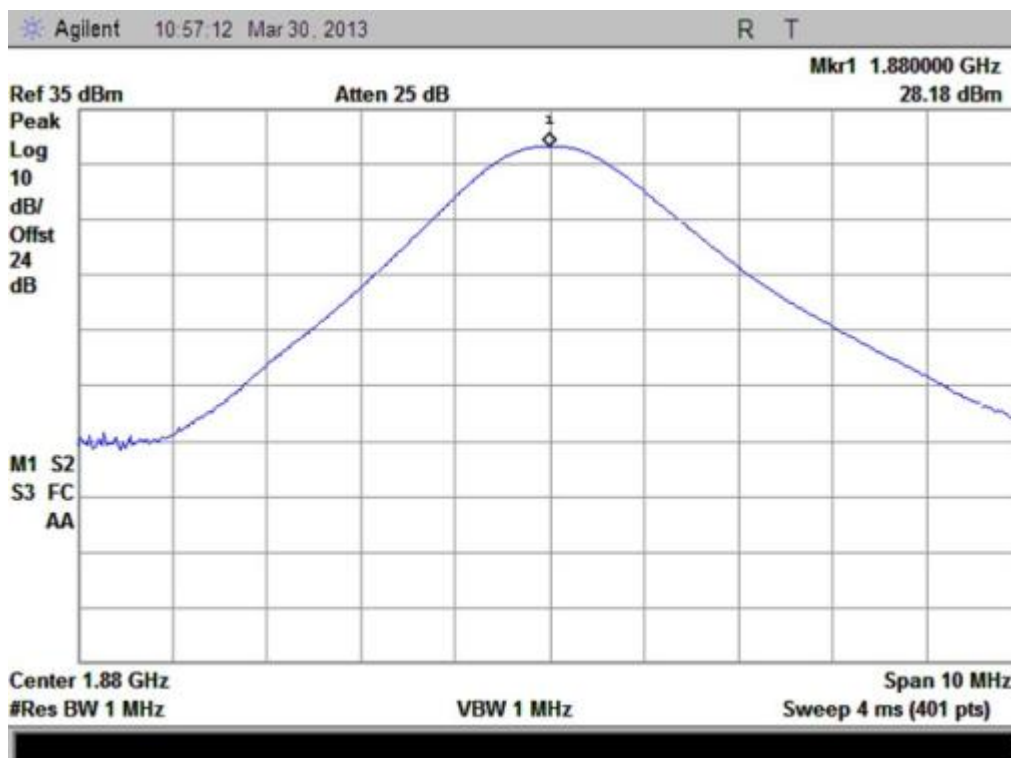


(Plot A1: GSM 850MHz Channel = 128)





(Plot B1: GSM 1900MHz Channel = 512)



(Plot B2: GSM 1900MHz Channel = 661)



(Plot B3: GSM 1900MHz Channel = 810)

4. GPRS Model Test Plots:



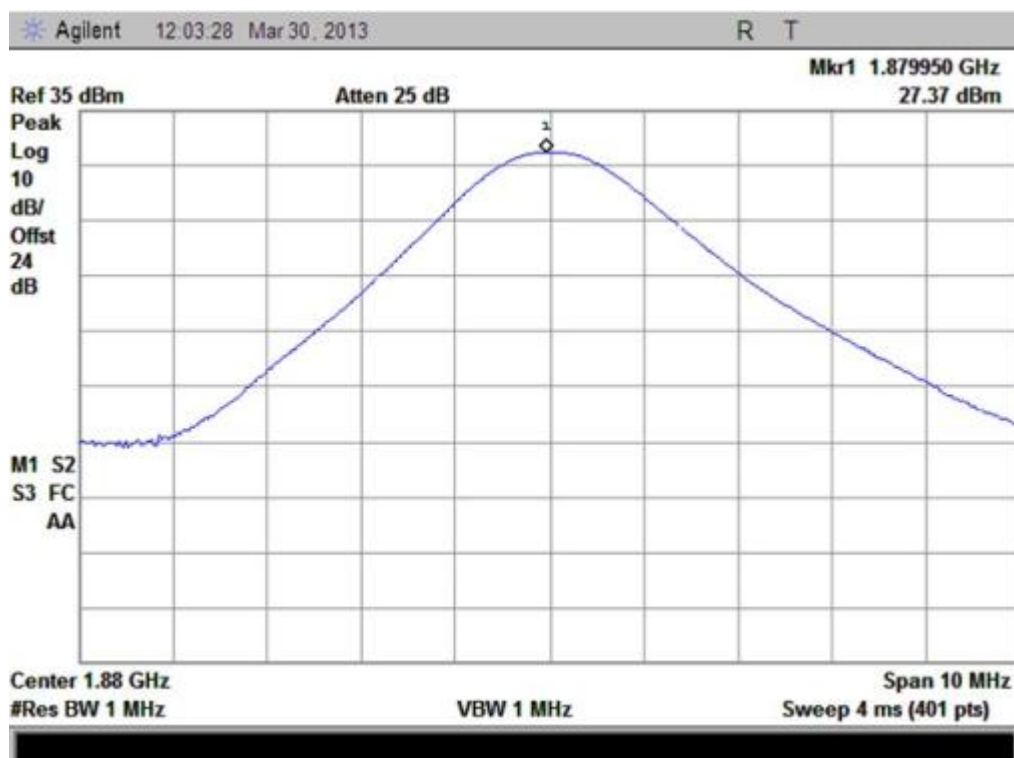
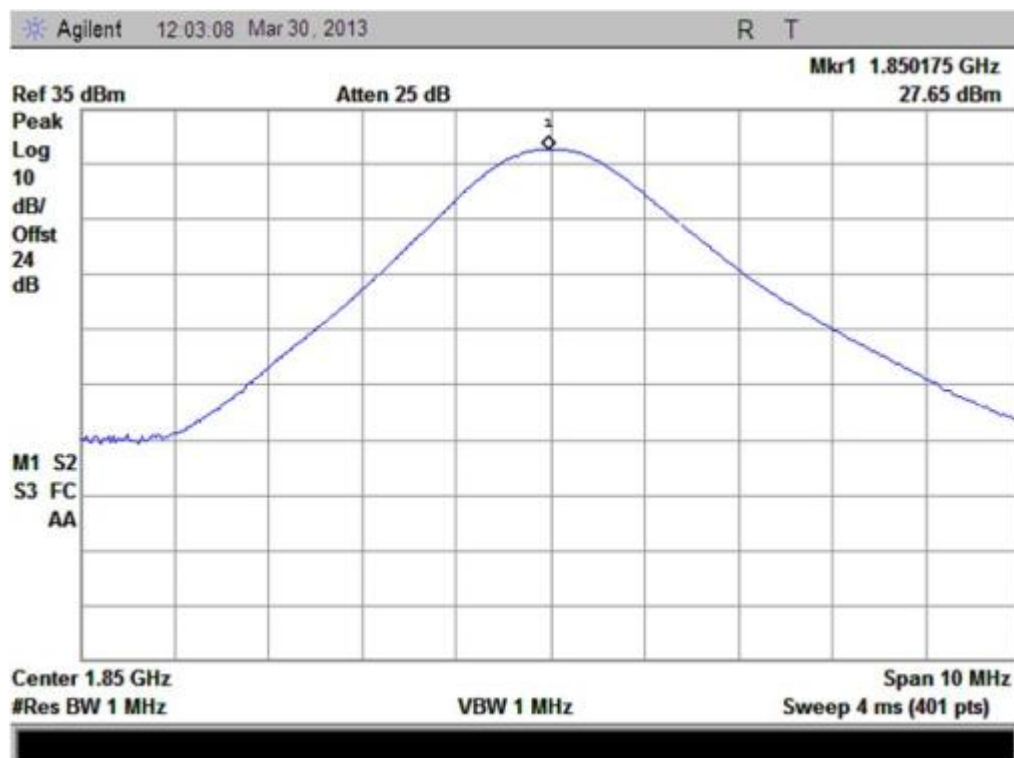
(Plot C1: GPRS 850MHz Channel = 128)

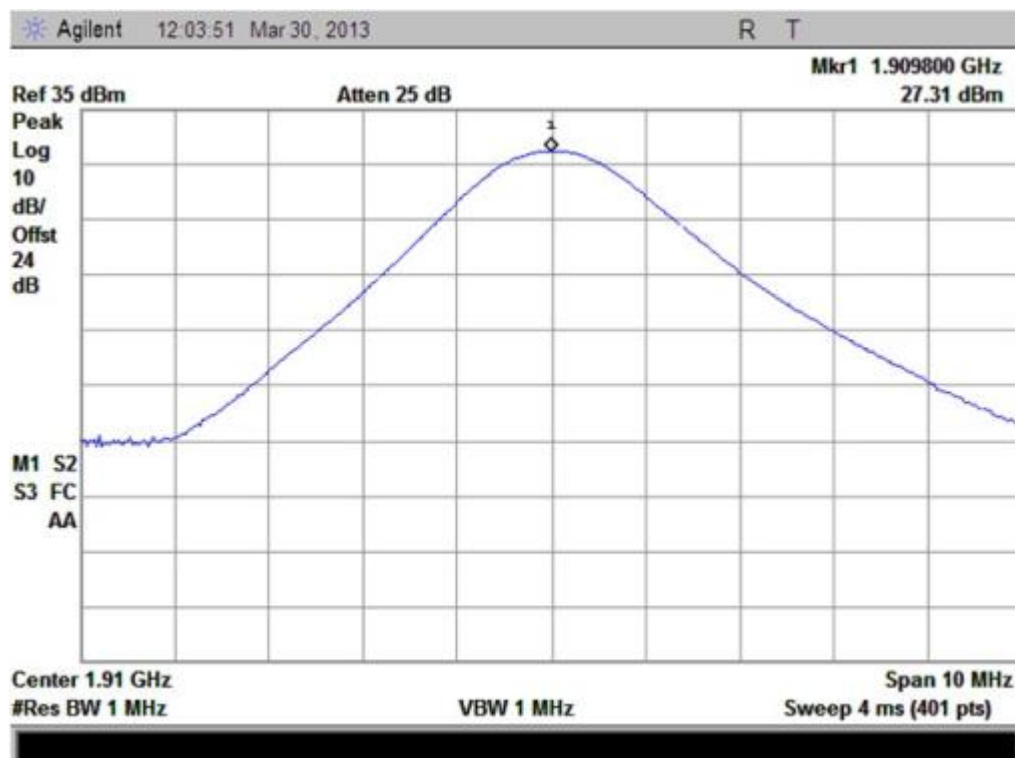


(Plot C2: GPRS 850MHz Channel = 190)



(Plot C3: GPRS 850MHz Channel = 251)

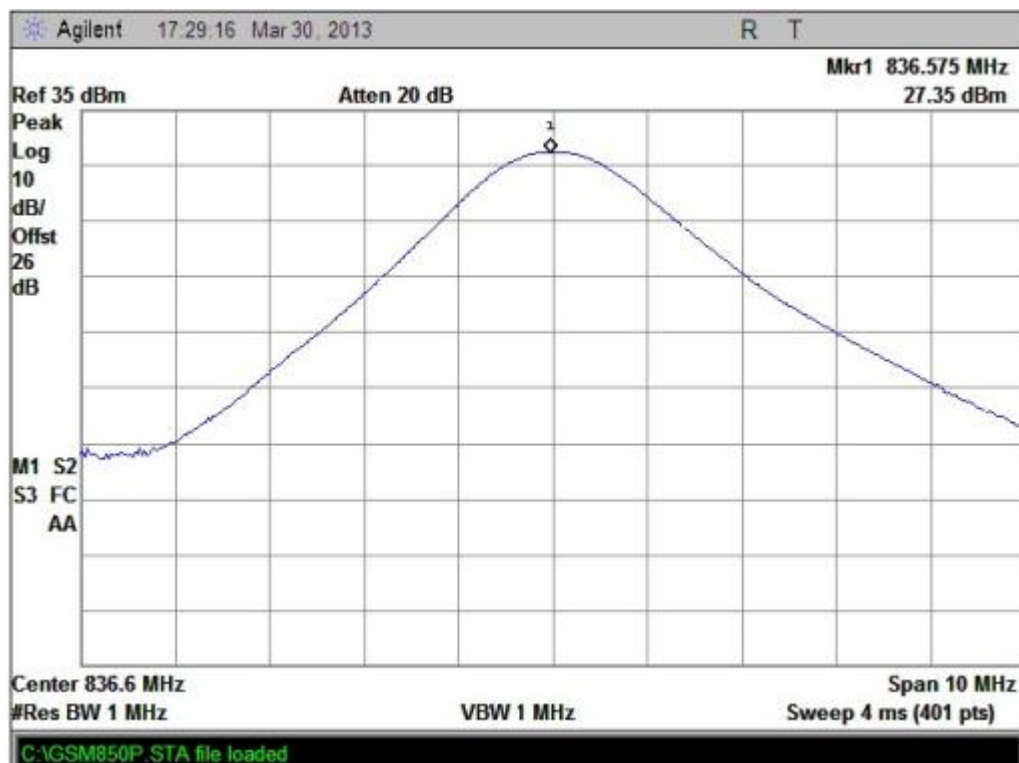




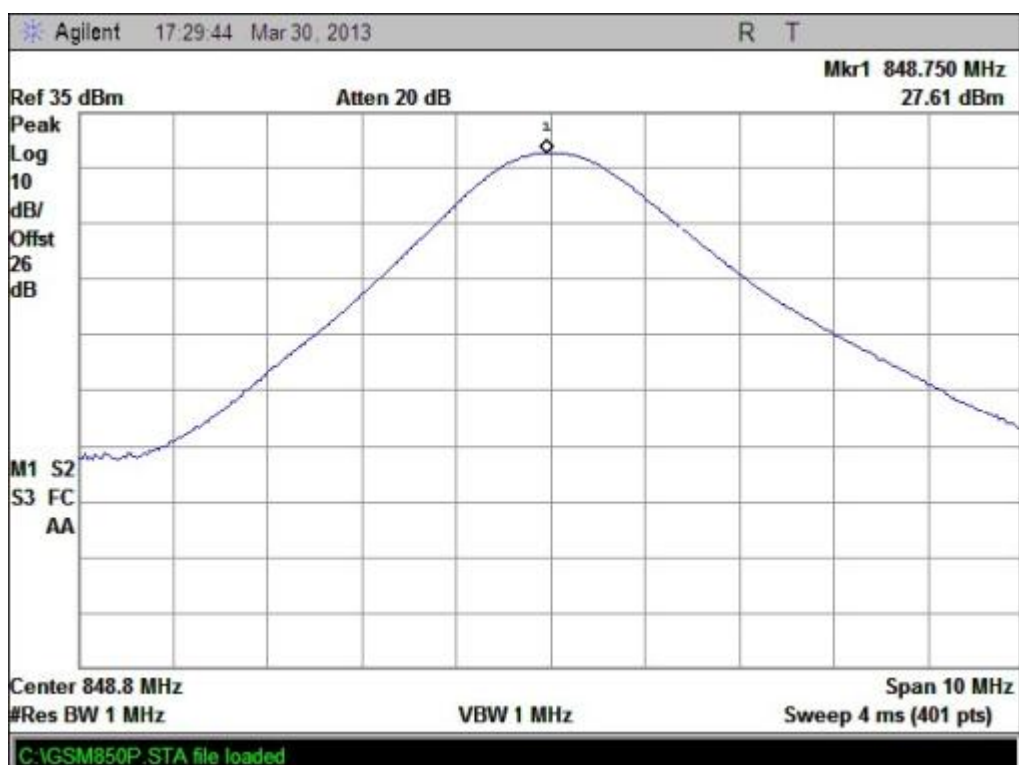
(Plot D3: GPRS 1900Hz Channel = 810)



(Plot E1: EDGE 850MHz Channel = 128)



(Plot E2: EDGE 850MHz Channel = 190)



(Plot E3: EDGE 850MHz Channel = 251)



(Plot F1: EDGE 1900MHz Channel = 512)



(Plot F2: EDGE 1900MHz Channel = 661)



(Plot F3: EDGE 1900MHz Channel = 810)

2.2 Peak to Average Ratio

2.2.1 Definition

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

2.2.2 Test Description

See section 2.1.2 of this report.

2.2.3 Test Verdict

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

Test procedures:

A. For GSM/EGPRS operating mode:

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

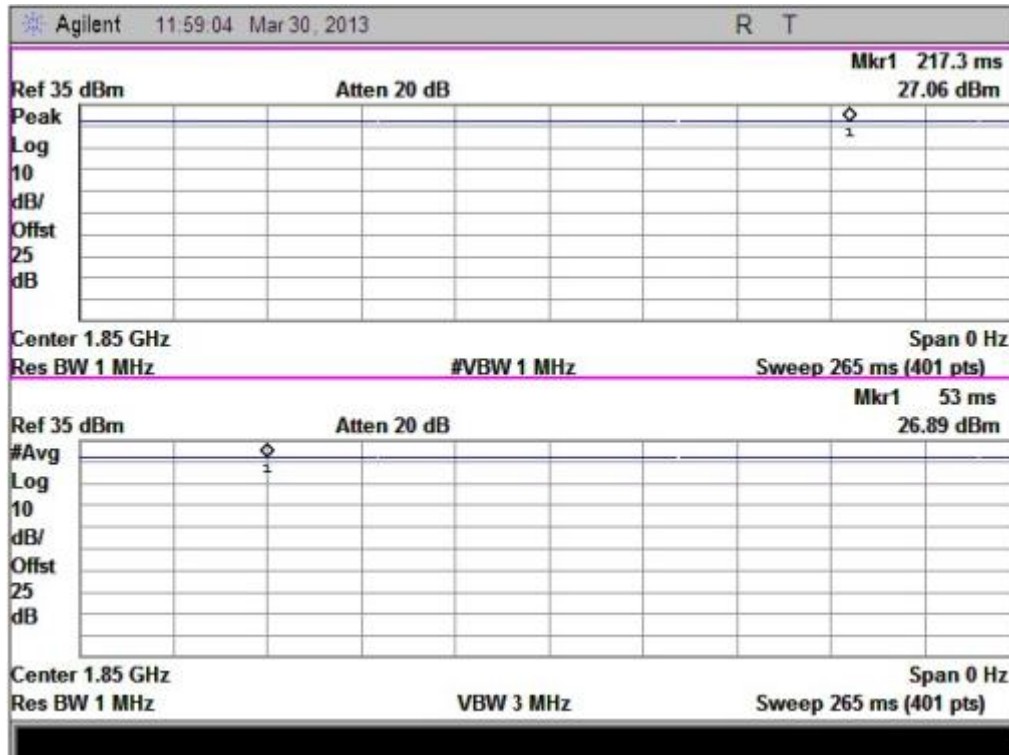
B. For UMTS operating mode:

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

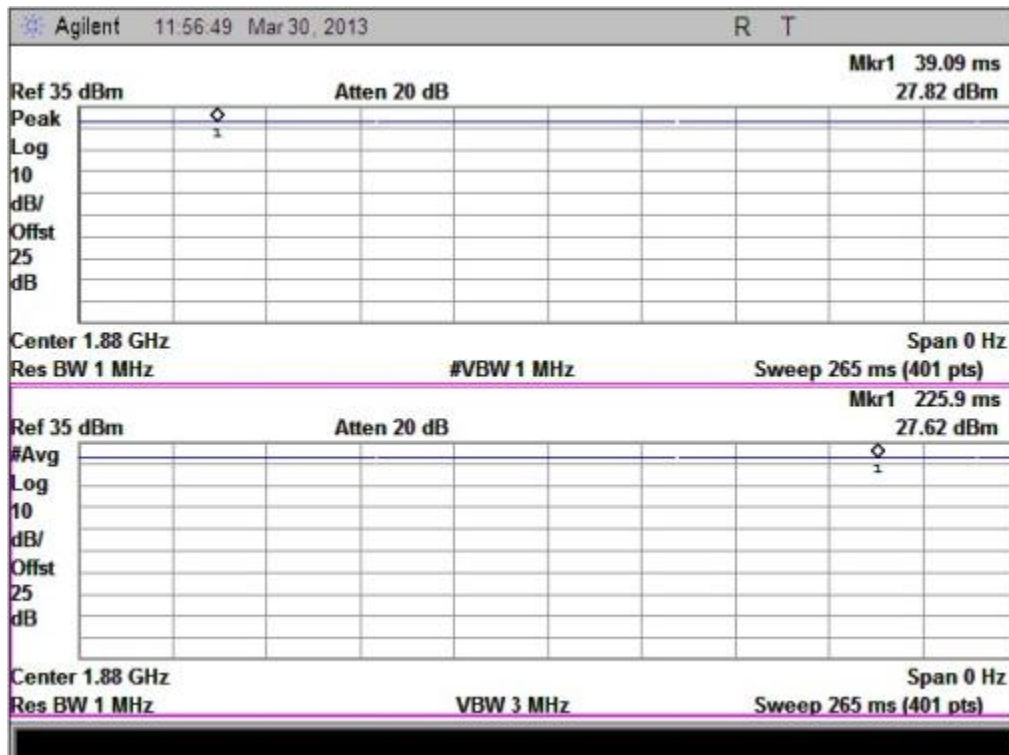
1. Test Verdict:

Band	Channel	Frequency (MHz)	Peak to Average ratio		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 1900MHz	512	1850.2	0.17	Plot A1 to A3	13	PASS
	661	1880.0	0.20			PASS
	810	1909.8	0.27			PASS
EGPRS 1900MHz	512	1850.2	0.06	Plot B1 to B3	13	PASS
	661	1880.0	0.01			PASS
	810	1909.8	0.01			PASS

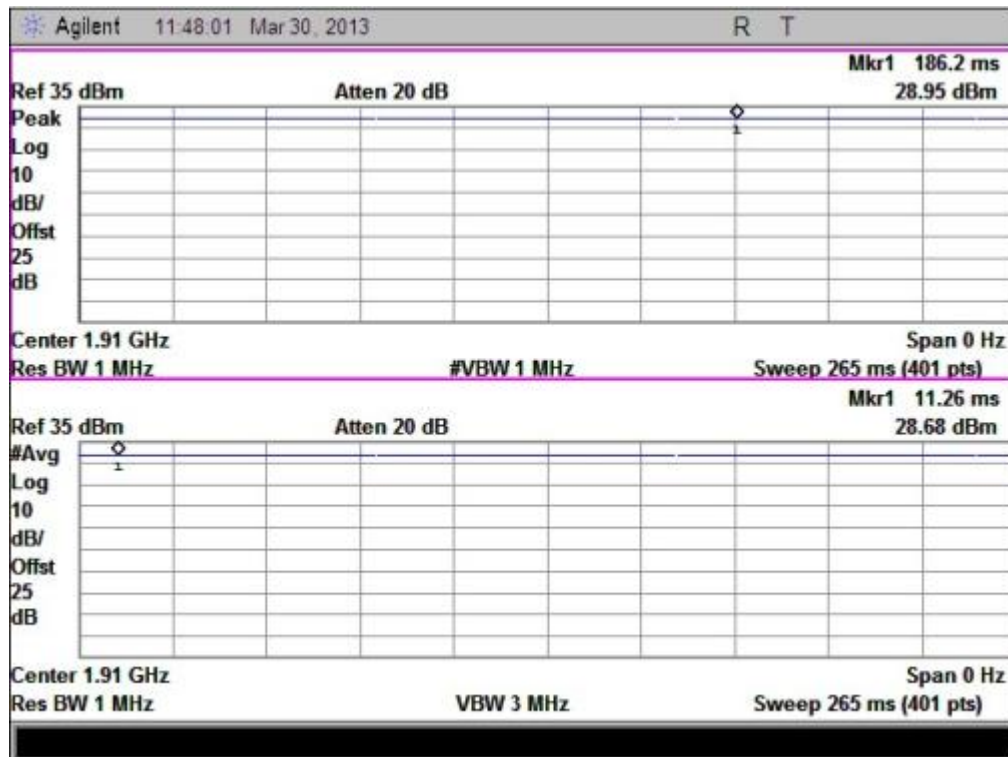
2. Test plots:



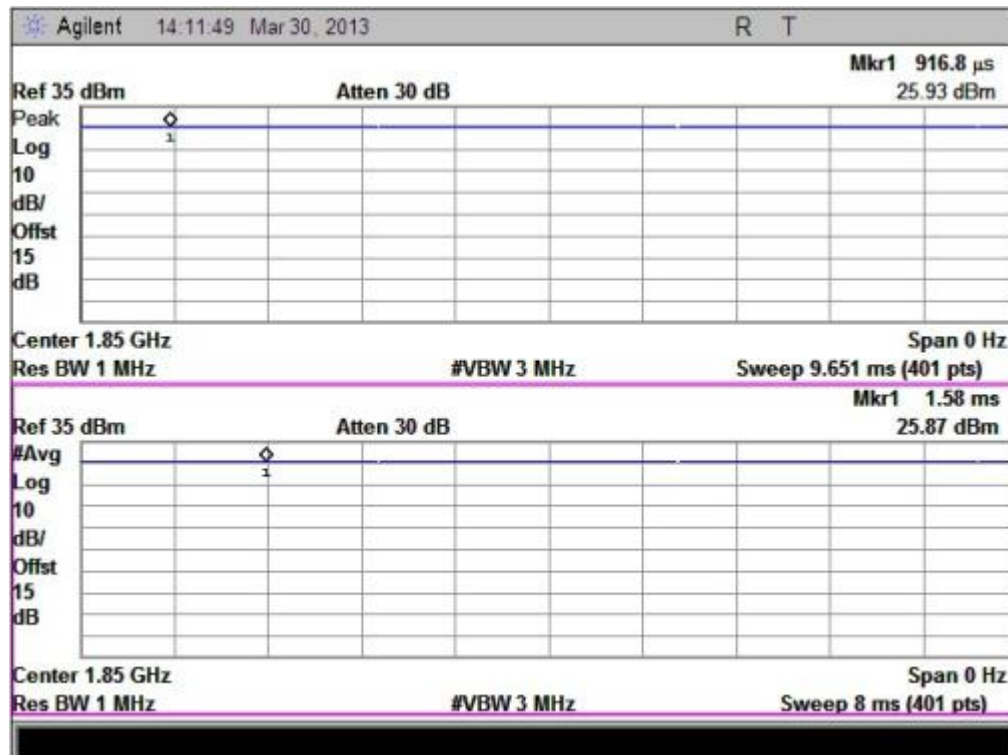
(Plot A1: GSM 1900 MHz Channel = 512)



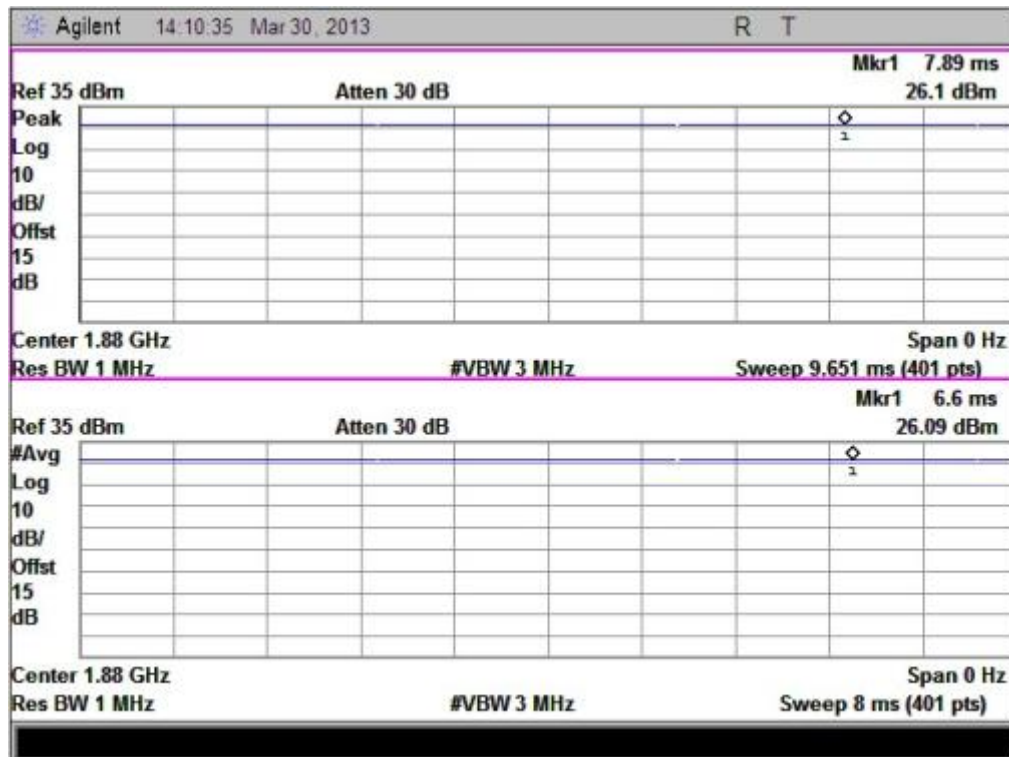
(Plot A2: GSM 1900 MHz Channel = 661)



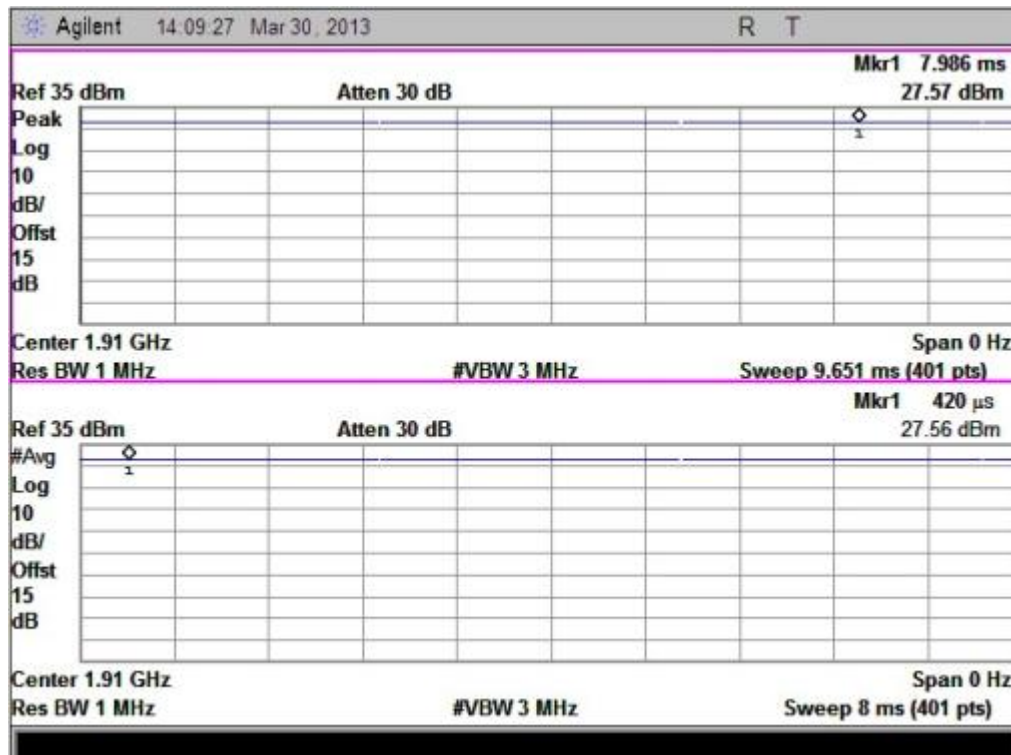
(Plot A3: GSM 1900 MHz Channel = 810)



(Plot B1: EDGE 1900 MHz Channel = 512)



(Plot B2:EDGE 1900 MHz Channel = 661)



(Plot B3:EDGE 1900 MHz Channel = 810)

2.3 99% Occupied Bandwidth

2.3.1 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,

2.3.2 Test Description

See section 2.1.2 of this report.

2.3.3 Test Verdict

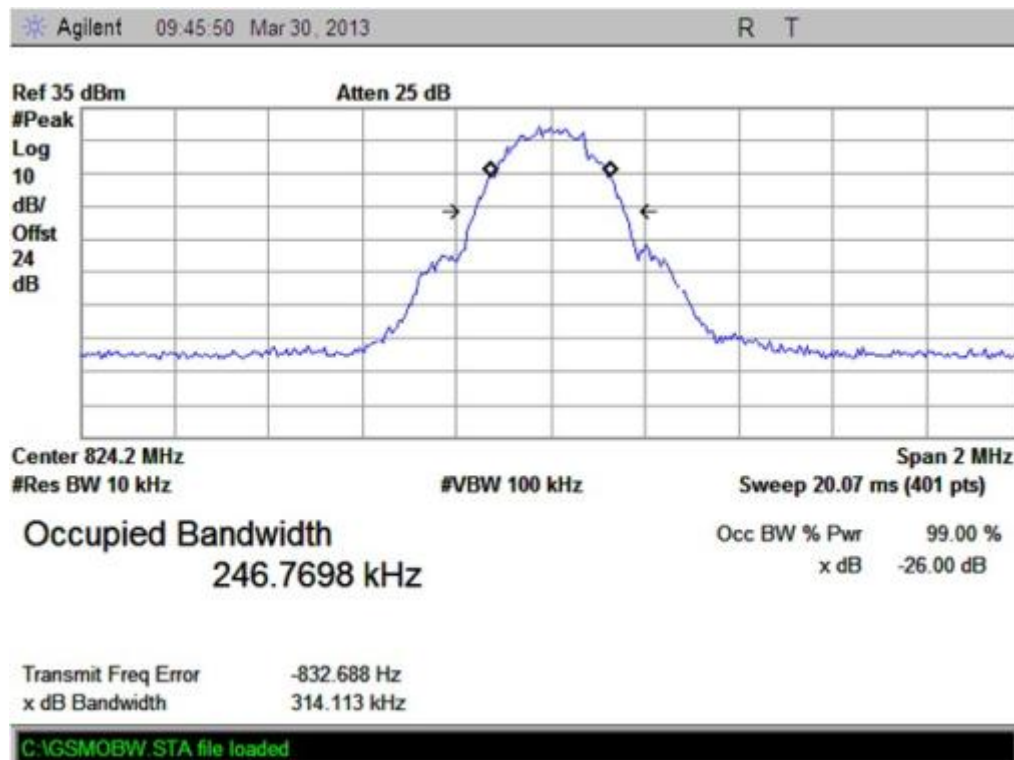
Here the lowest, middle and highest channels are selected to perform testing to verify the 99% occupied bandwidth.

1. Test Verdict:

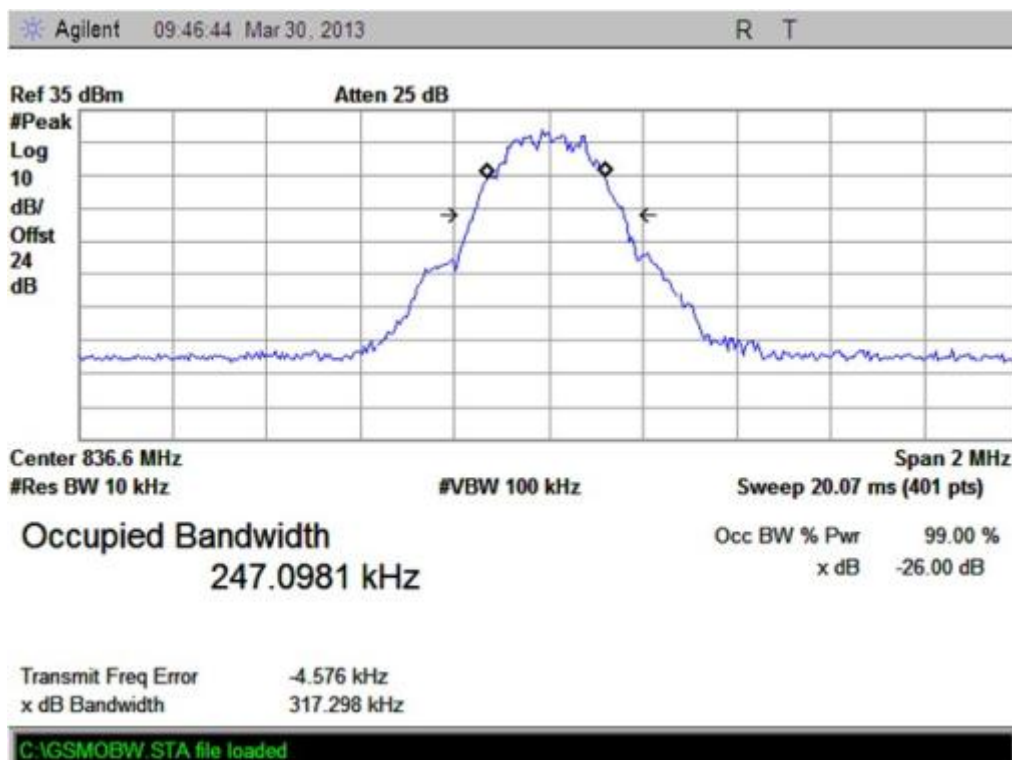
Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
GSM 850MHz	128	824.2	314.113 kHz	246.7698 kHz	Plot 1
	190	836.6	317.298 kHz	247.0981 kHz	Plot 2
	251	848.8	316.950 kHz	245.9076 kHz	Plot 3
GSM 1900MHz	512	1850.2	323.721 kHz	249.7750 kHz	Plot 4
	661	1880.0	330.565 kHz	248.4672 kHz	Plot 5
	810	1909.8	325.987 kHz	249.6080 kHz	Plot 6
GPRS 850MHz	128	824.2	322.163 kHz	245.1542 kHz	Plot 7
	190	836.6	324.111 kHz	250.2657 kHz	Plot 8
	251	848.8	323.506 kHz	249.1315 kHz	Plot 9
GPRS 1900MHz	512	1850.2	323.133 kHz	248.0741 kHz	Plot 10
	661	1880.0	319.378 kHz	245.2423 kHz	Plot 11
	810	1909.8	317.550 kHz	246.9551 kHz	Plot 12
EDGE 850MHz	128	824.2	318.560 kHz	245.7255 kHz	Plot 13
	190	836.6	326.862 kHz	245.0246 kHz	Plot 14
	251	848.8	321.132 kHz	246.3316 kHz	Plot 15
EDGE 1900MHz	512	1850.2	328.617 kHz	246.7867 kHz	Plot 16
	661	1880.0	319.795 kHz	246.2455 kHz	Plot 17

Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
	810	1909.8	322.654 kHz	246.0221 kHz	Plot 18
WCDMA 850MHz	4132	826.4	4.725 MHz	4.1912 MHz	Plot 19
	4175	835	4.702 MHz	4.1768 MHz	Plot 20
	4233	846.6	4.728 MHz	4.1759 MHz	Plot 21
HSDPA 850MHz	4132	826.4	4.725 MHz	4.2096 MHz	Plot 22
	4175	835	4.705 MHz	4.1953 MHz	Plot 23
	4233	846.6	4.719 MHz	4.1878 MHz	Plot 24
HSUPA 850MHz	4132	826.4	4.712 MHz	4.1943 MHz	Plot 25
	4175	835	4.717 MHz	4.1929 MHz	Plot 26
	4233	846.6	4.715 MHz	4.1865 MHz	Plot 27

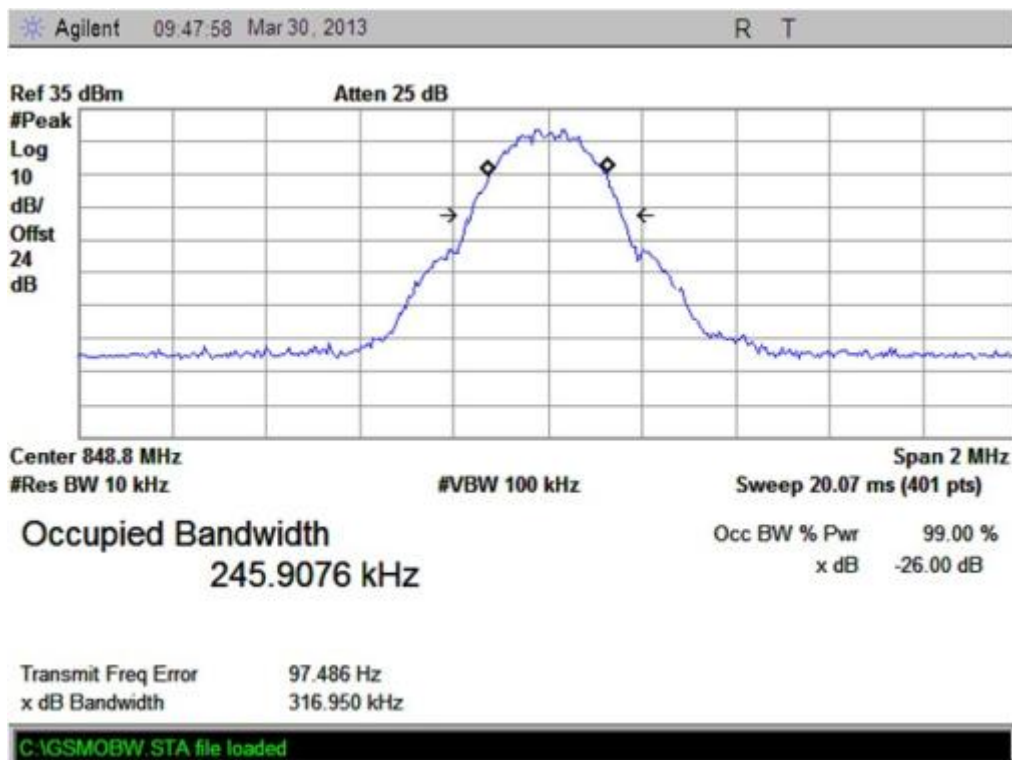
2. Test Plots:



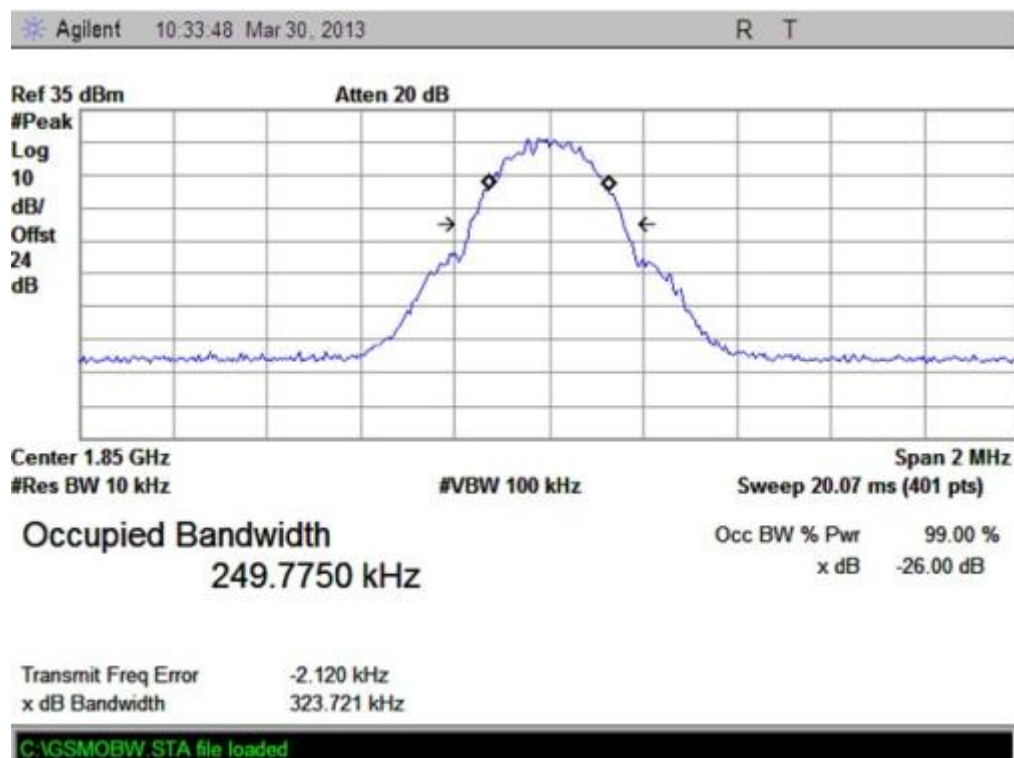
(Plot 1: GSM 850MHz Channel = 128)



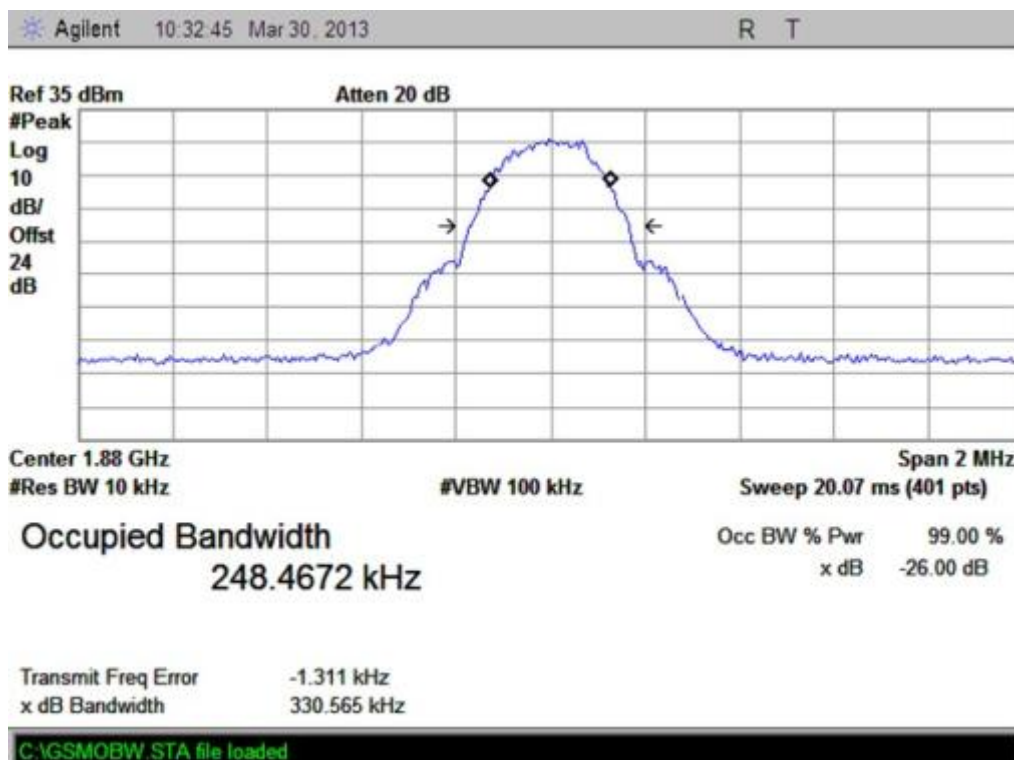
(Plot 2: GSM 850MHz Channel = 190)



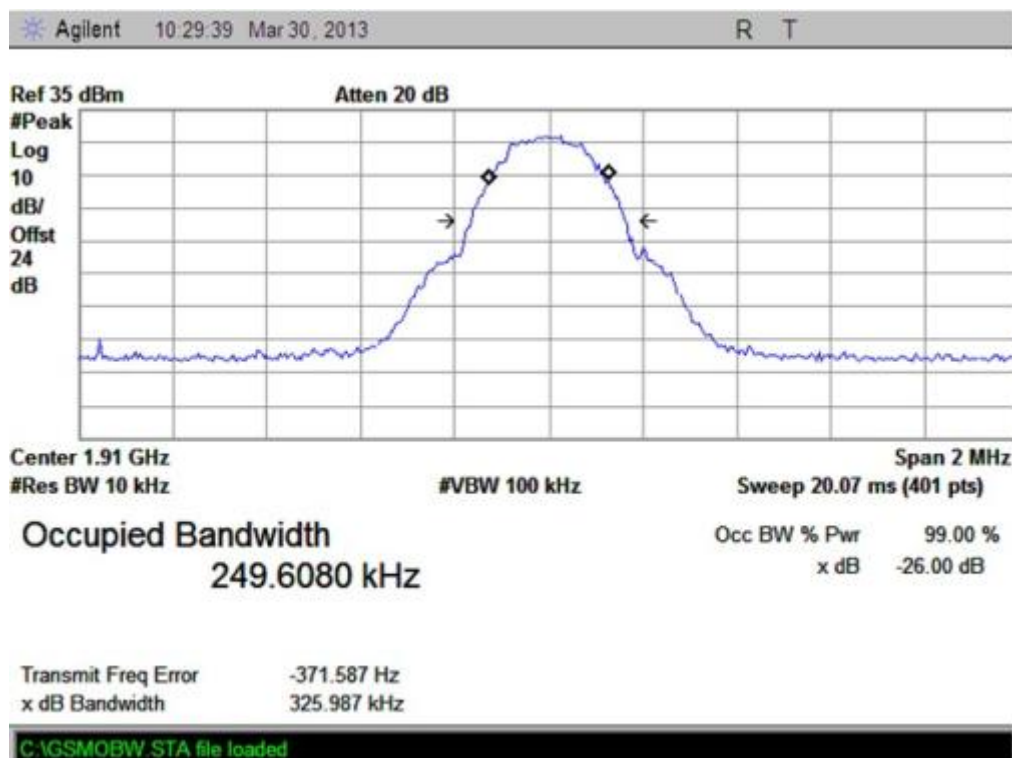
(Plot 3: GSM 850MHz Channel = 251)



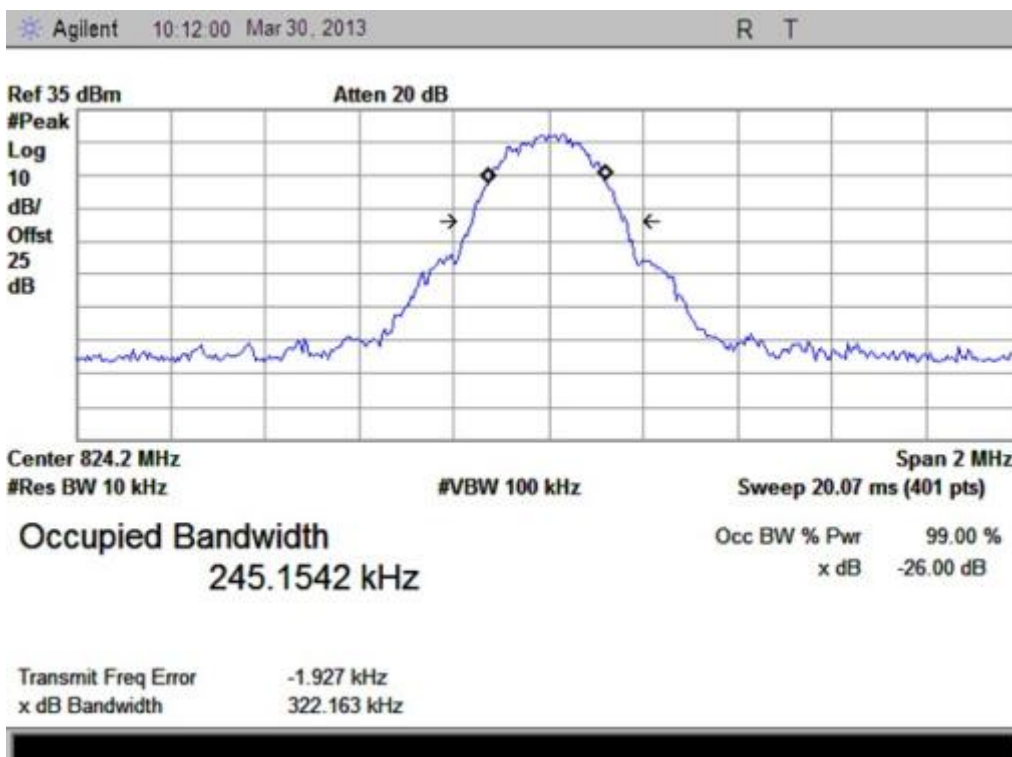
(Plot 4: GSM 1900MHz Channel = 512)



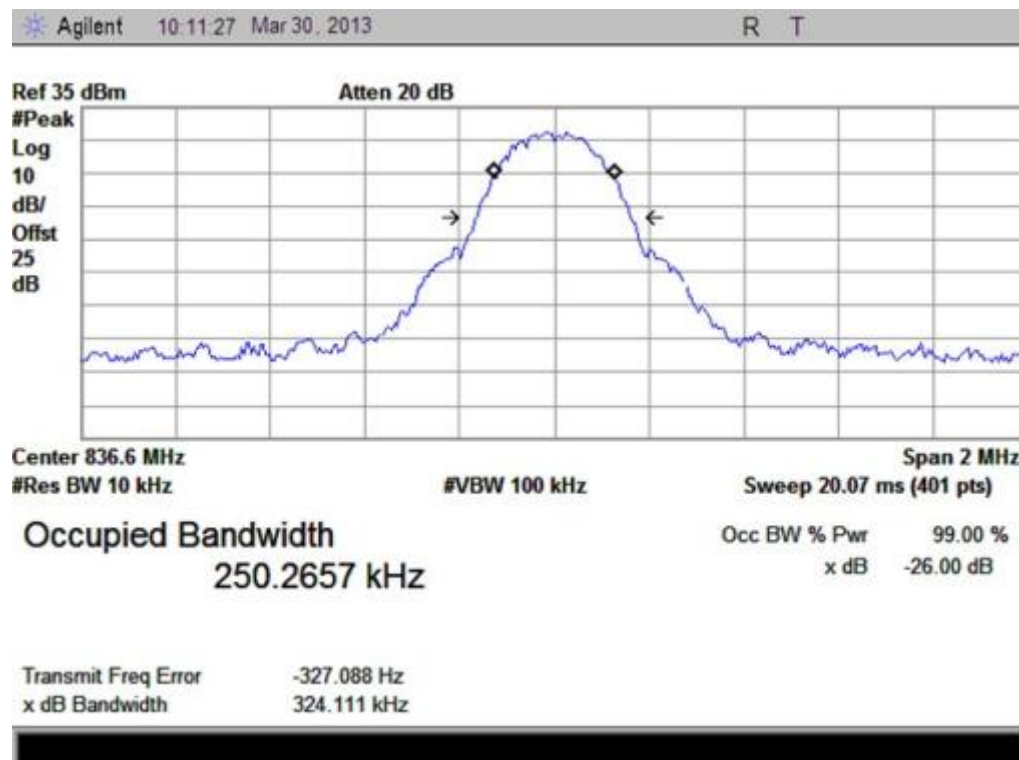
(Plot 5: GSM 1900MHz Channel = 661)



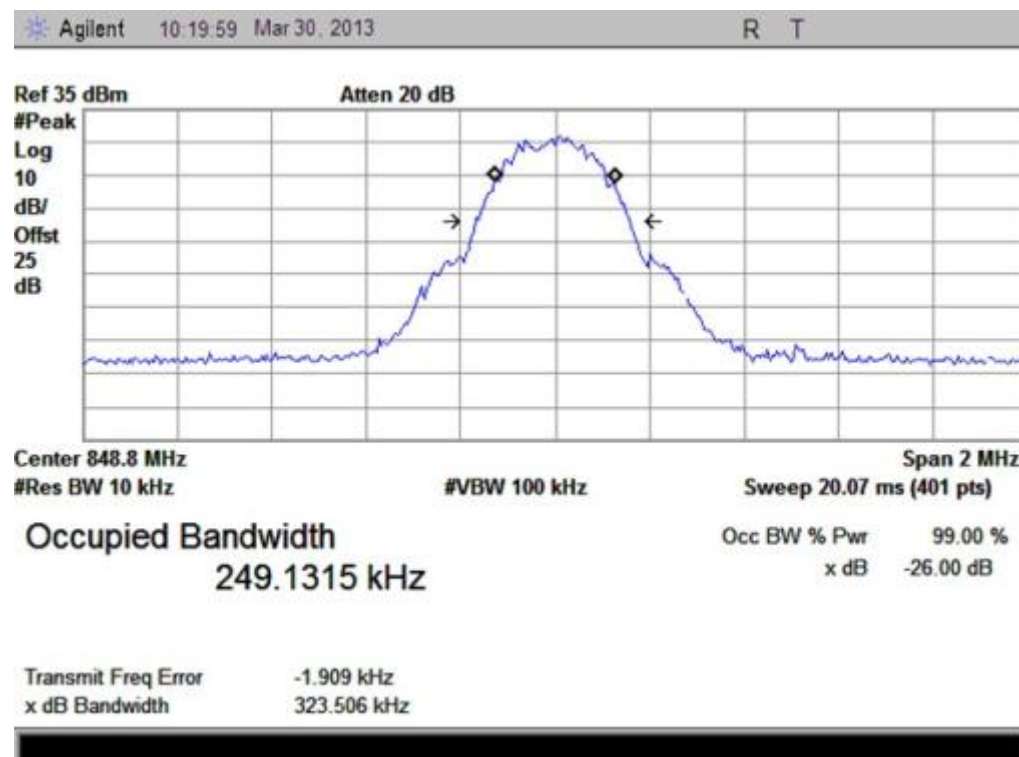
(Plot 6: GSM 1900MHz Channel = 810)



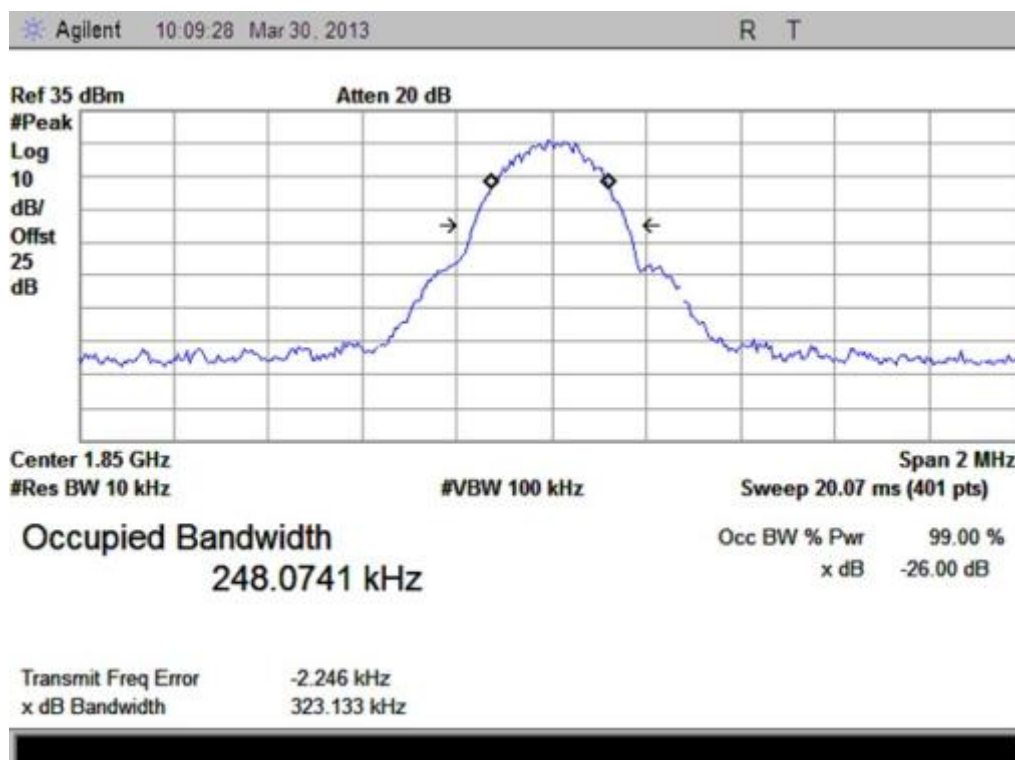
(Plot 7: GPRS 850MHz Channel = 128)



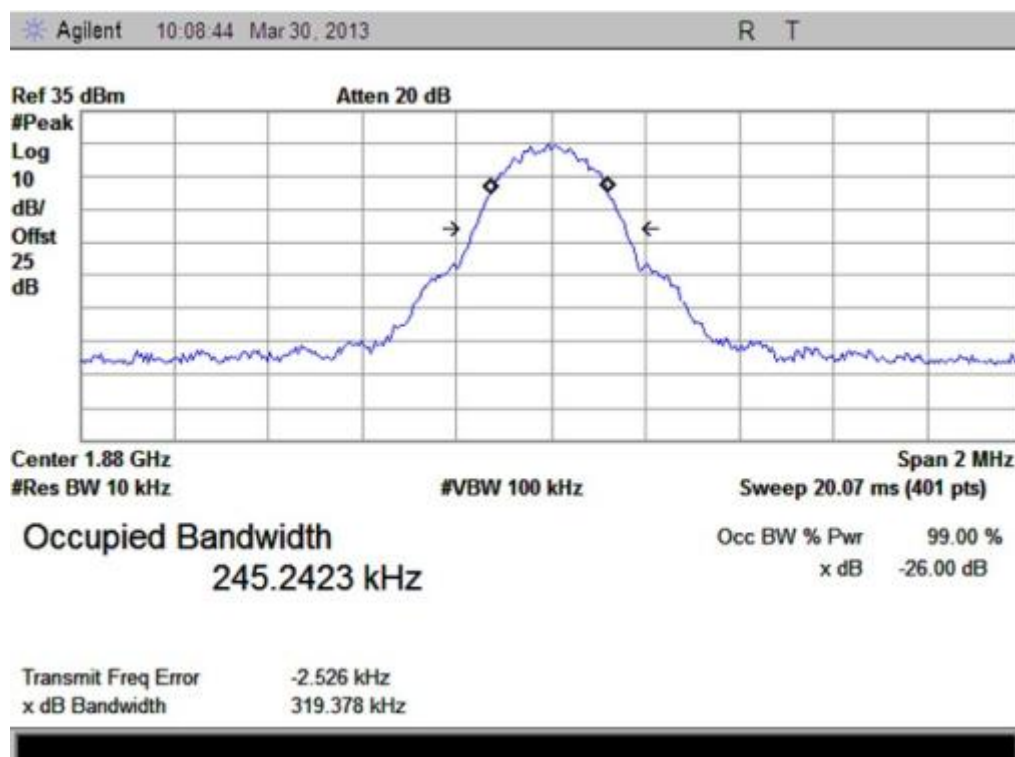
(Plot 8: GPRS 850MHz Channel = 190)



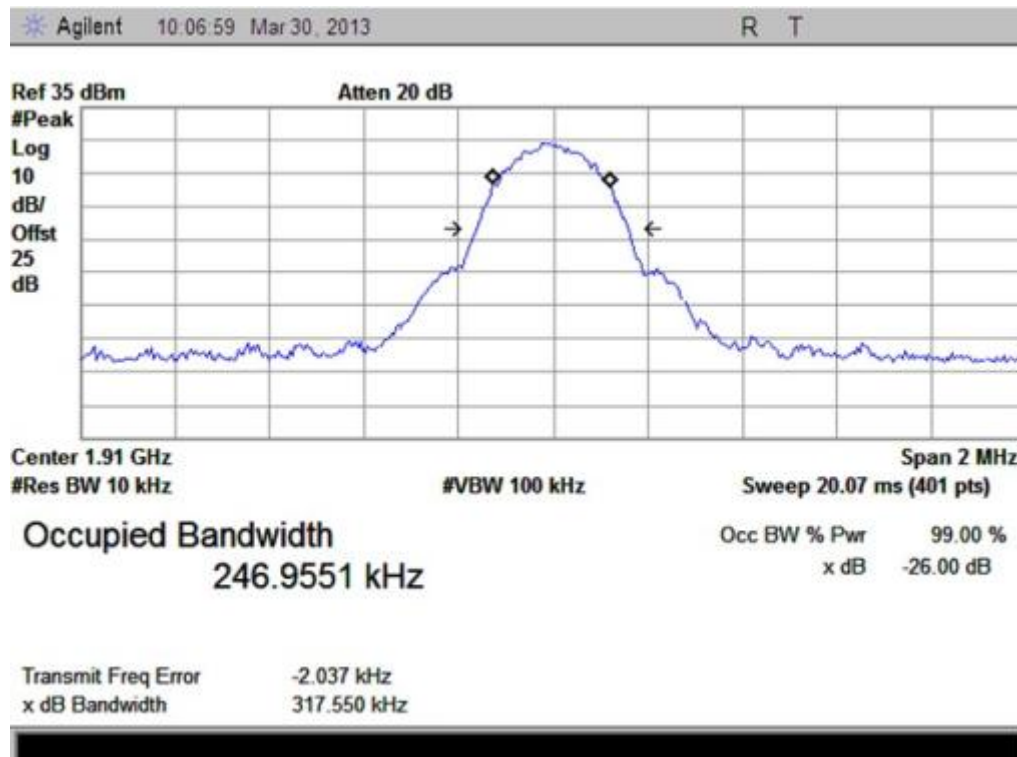
(Plot 9: GPRS 850MHz Channel = 251)



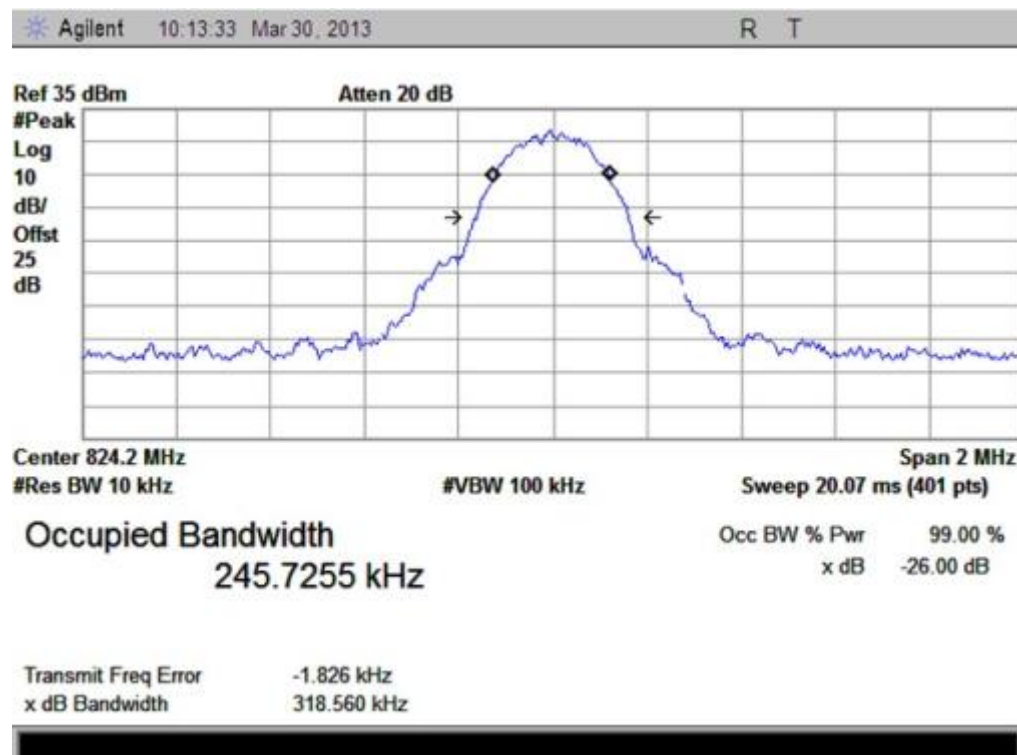
(Plot 10: GPRS 1900MHz Channel = 512)



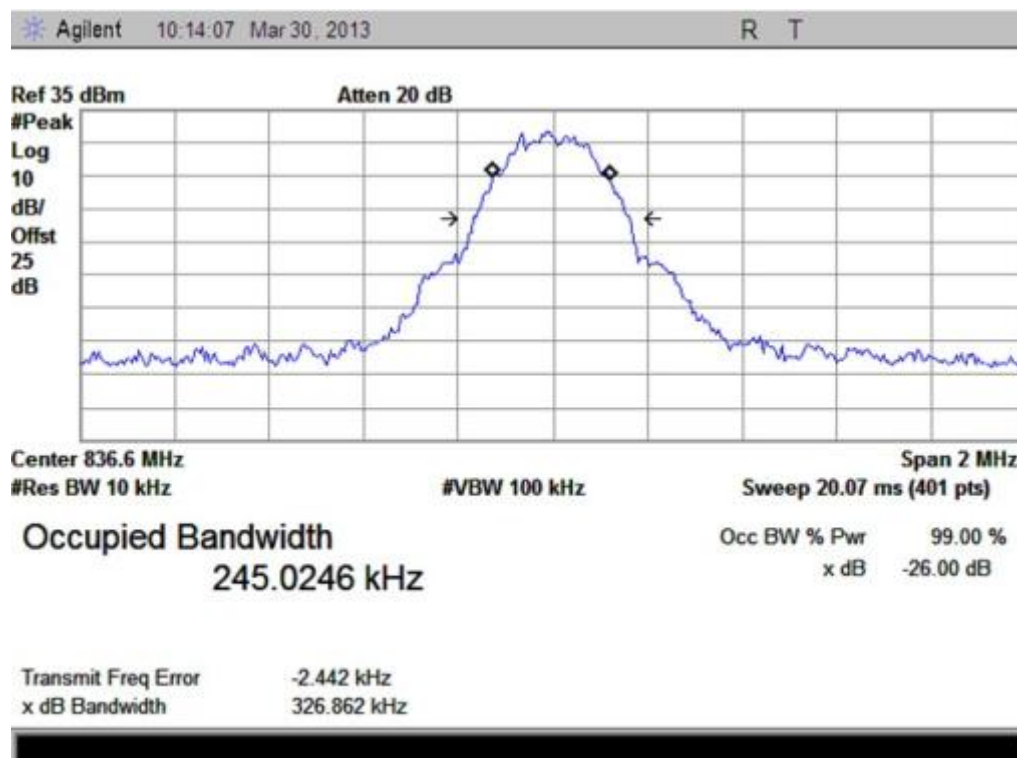
(Plot 11: GPRS 1900MHz Channel = 661)



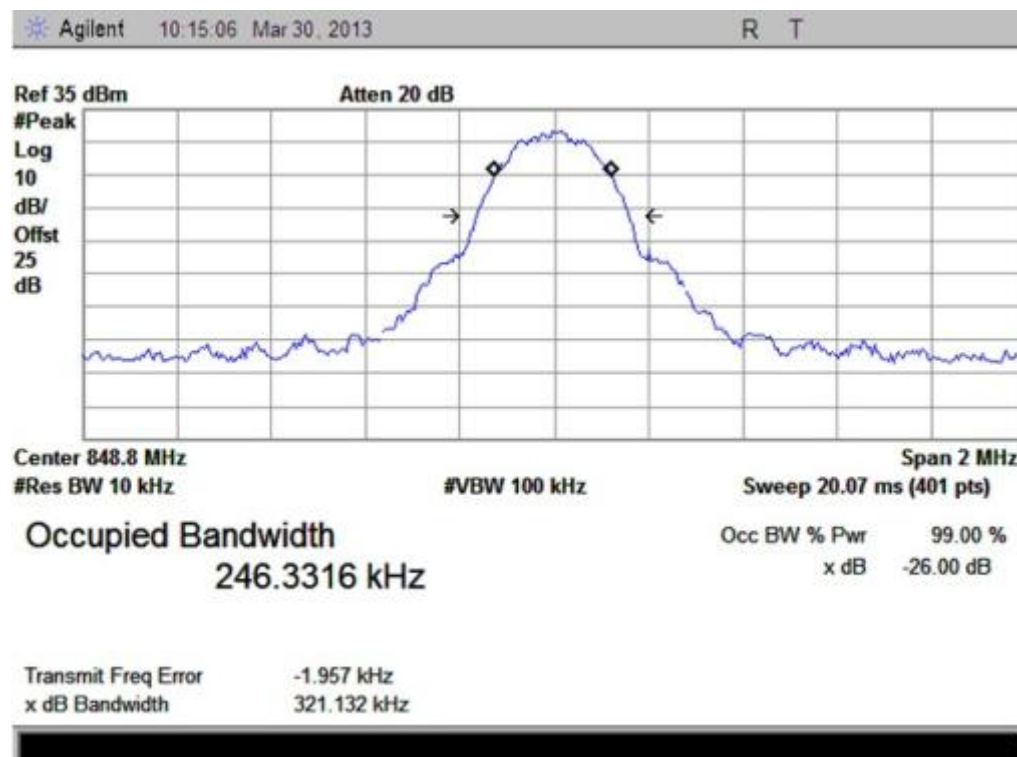
(Plot 12: GPRS 1900MHz Channel = 810)



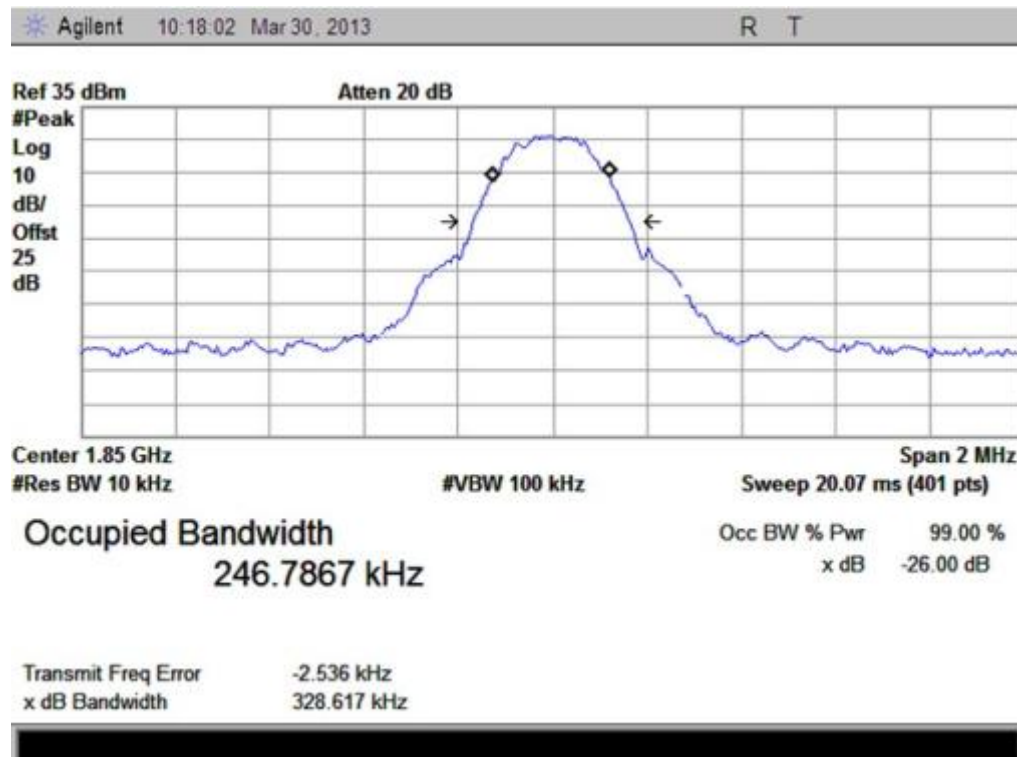
(Plot 13: EDGE 850MHz Channel = 128)



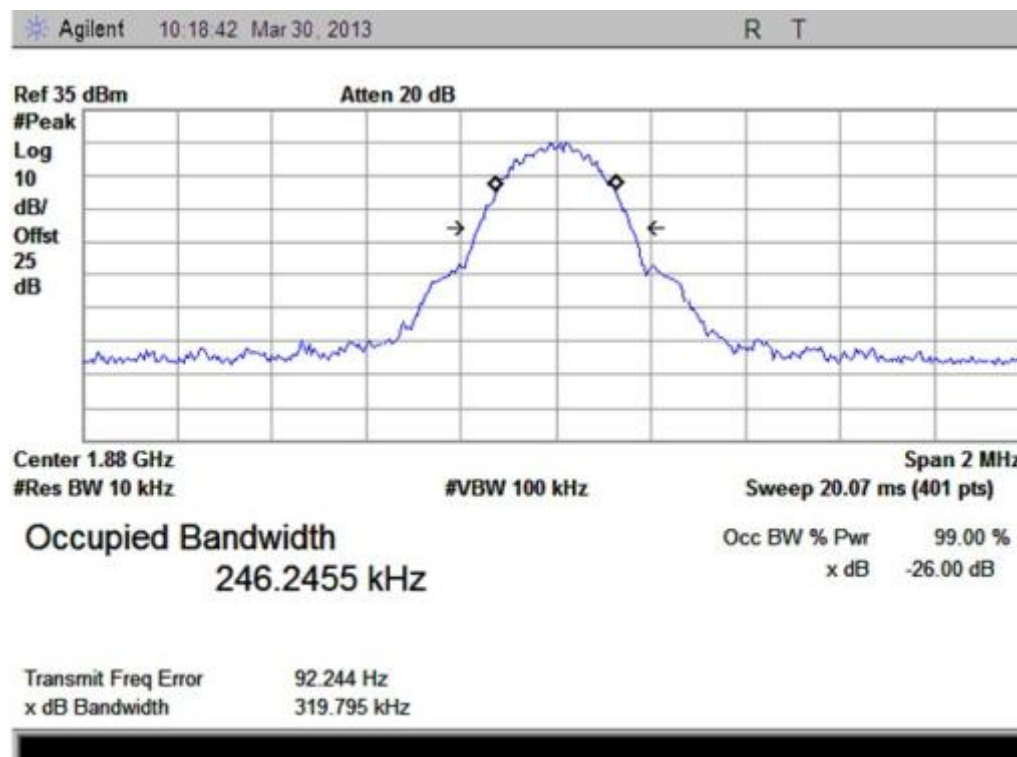
(Plot 14: EDGE 850MHz Channel = 190)



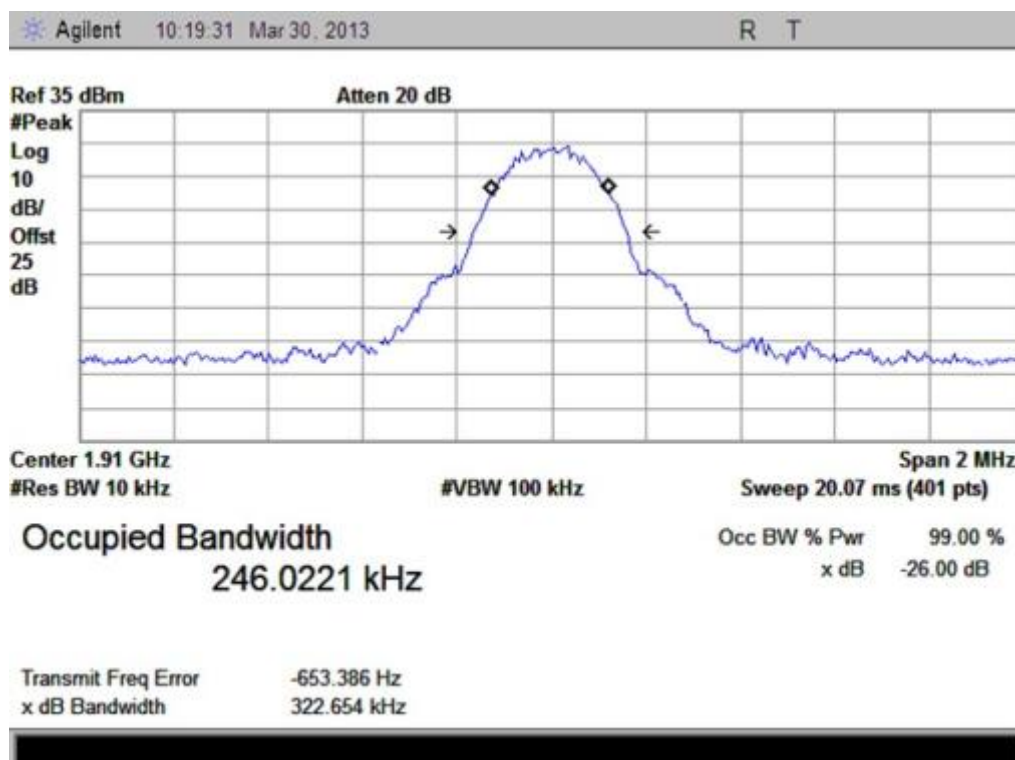
(Plot 15: EDGE 850MHz Channel = 251)



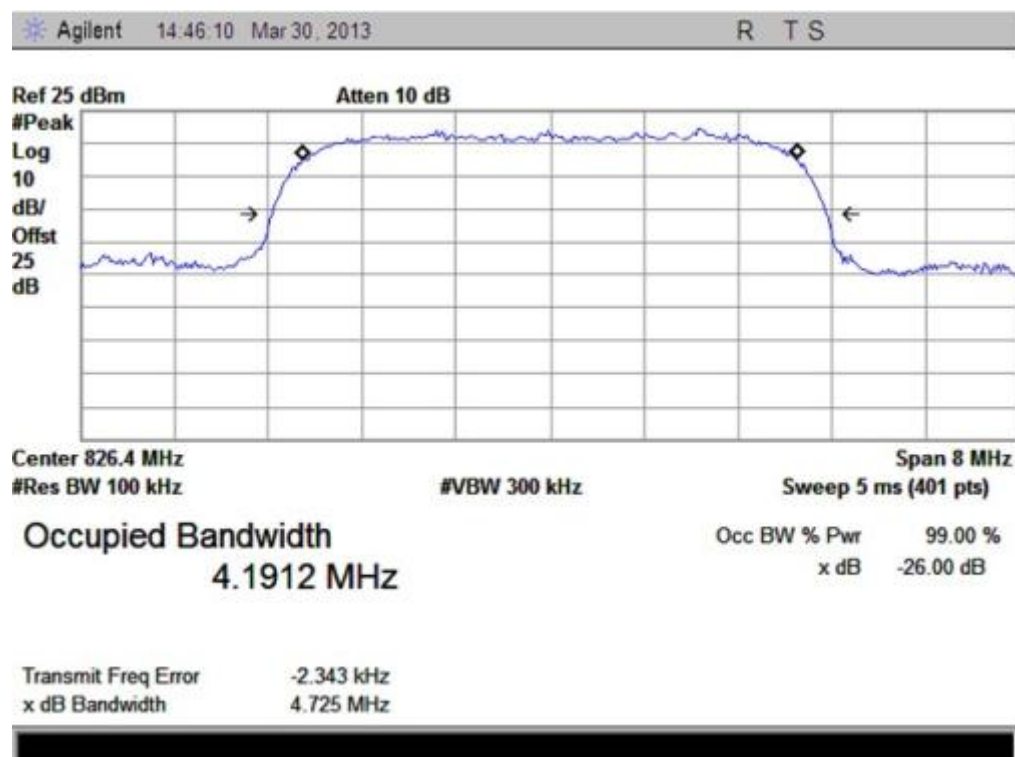
(Plot 16: EDGE 1900MHz Channel = 512)



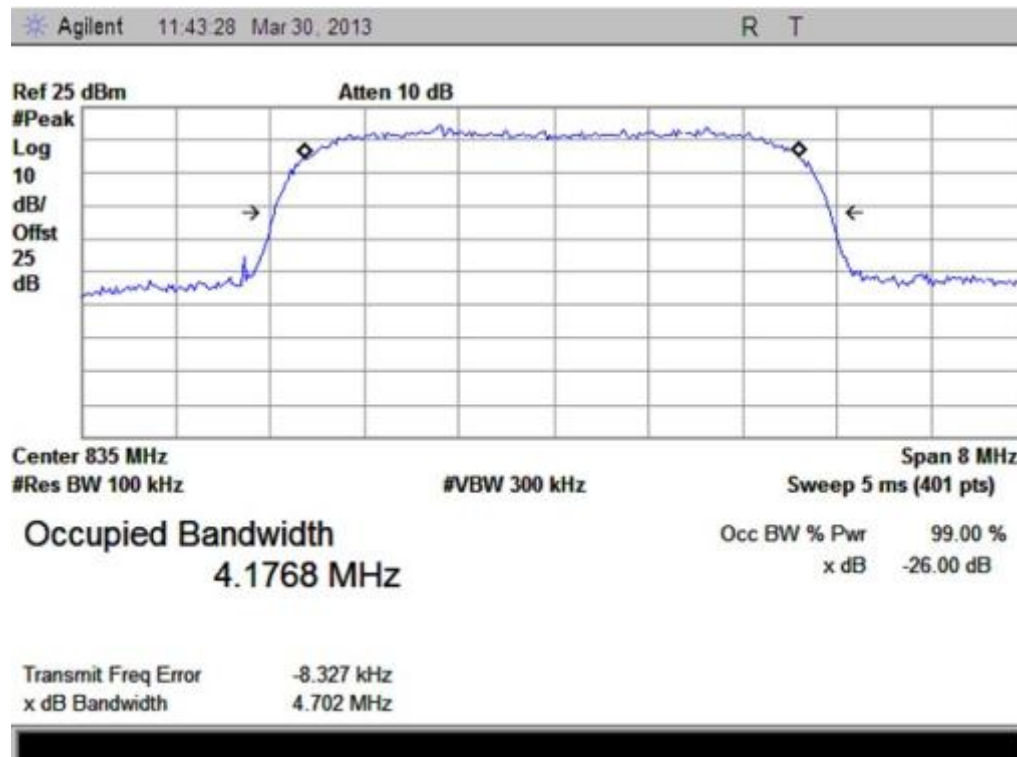
(Plot 17: EDGE 1900MHz Channel = 661)



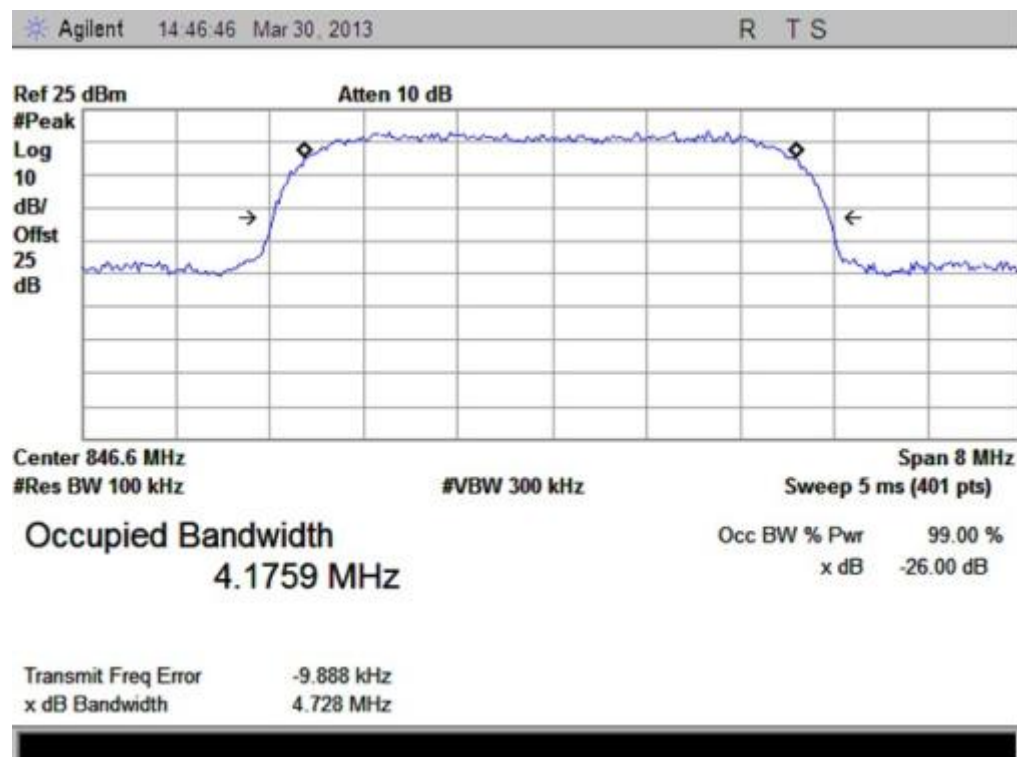
(Plot 18: EDGE 1900MHz Channel = 810)



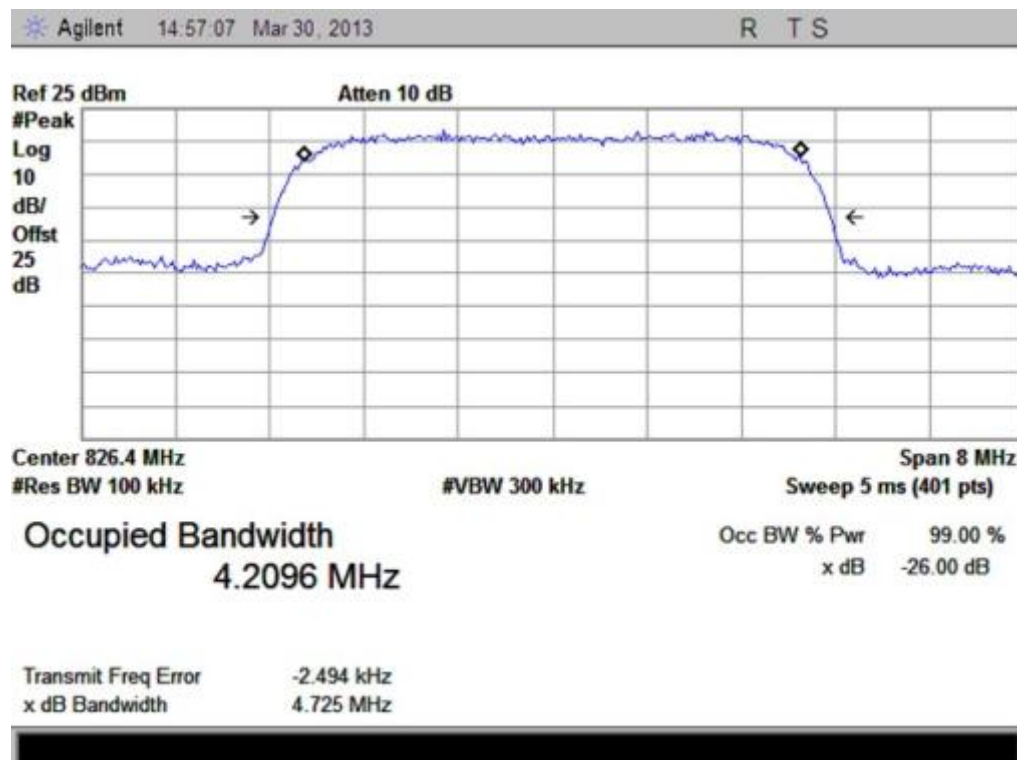
(Plot 19: WCDMA 850MHz Channel = 4132)



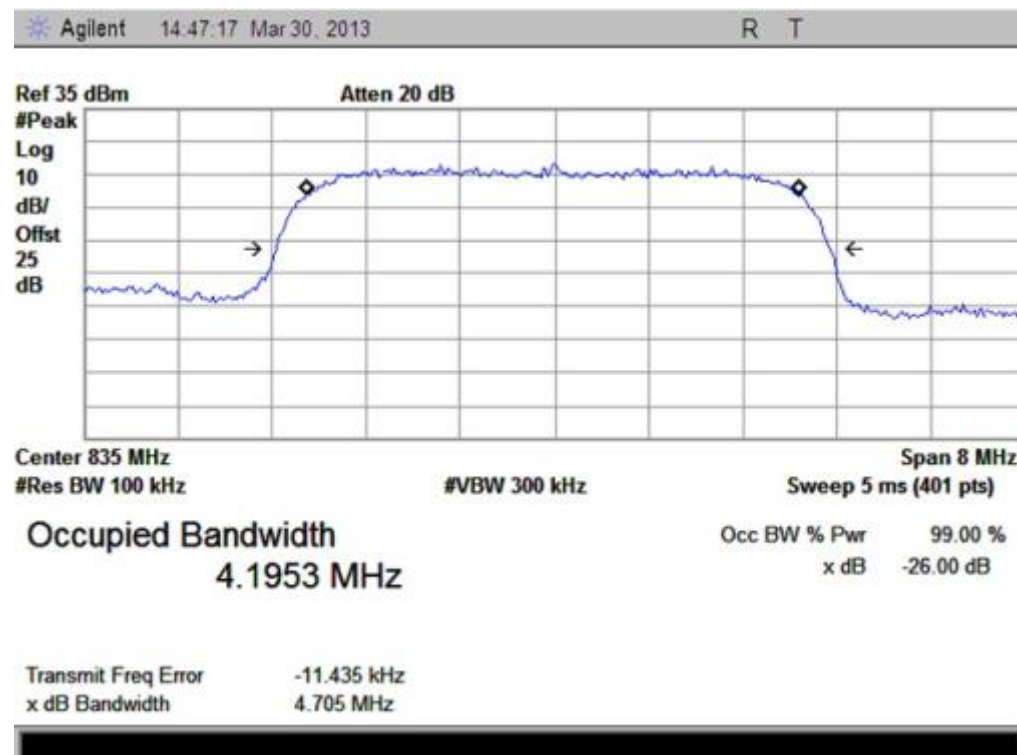
(Plot 20: WCDMA 850MHz Channel = 4175)



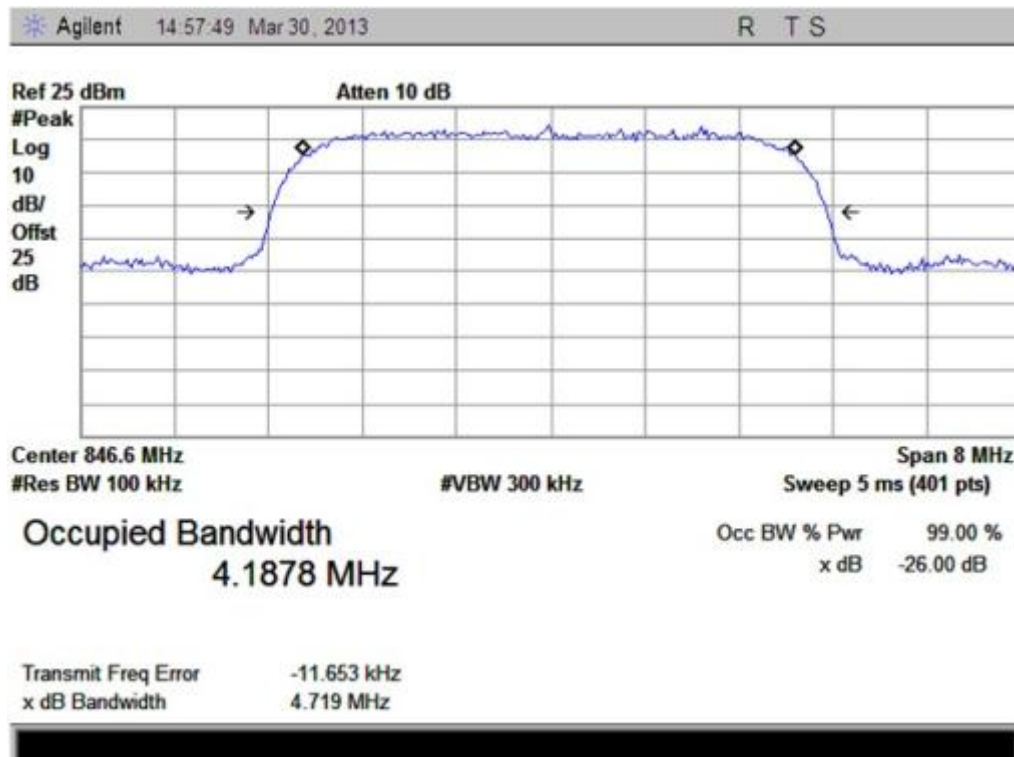
(Plot 21: WCDMA 850MHz Channel = 4233)



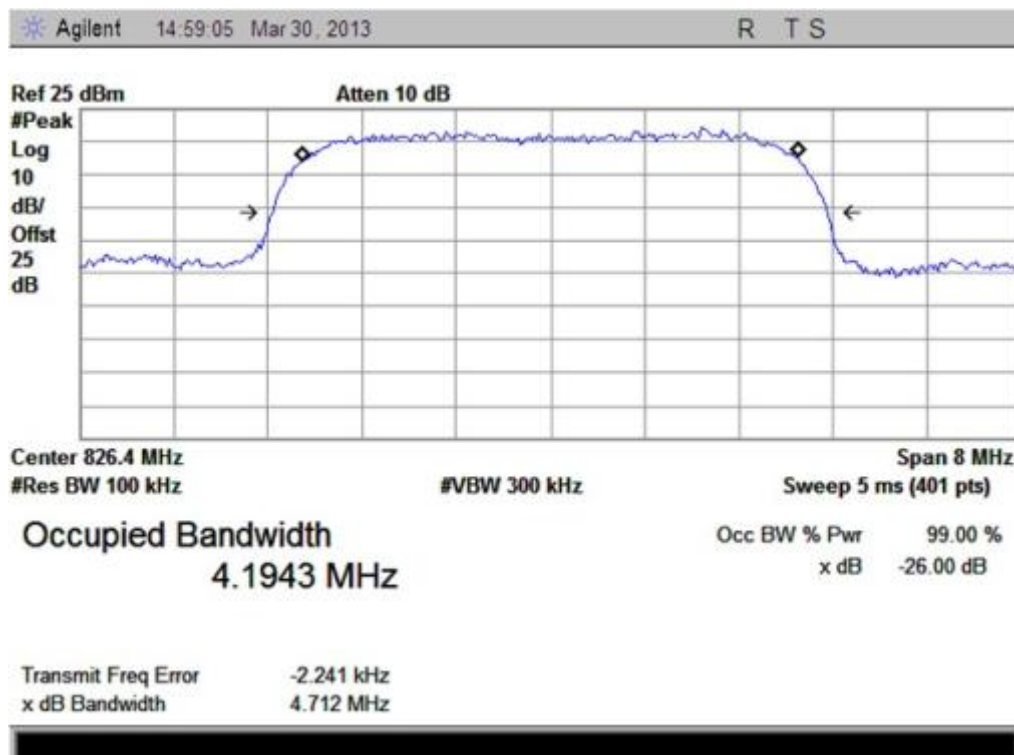
(Plot 22: HSDPA 850MHz Channel = 4132)



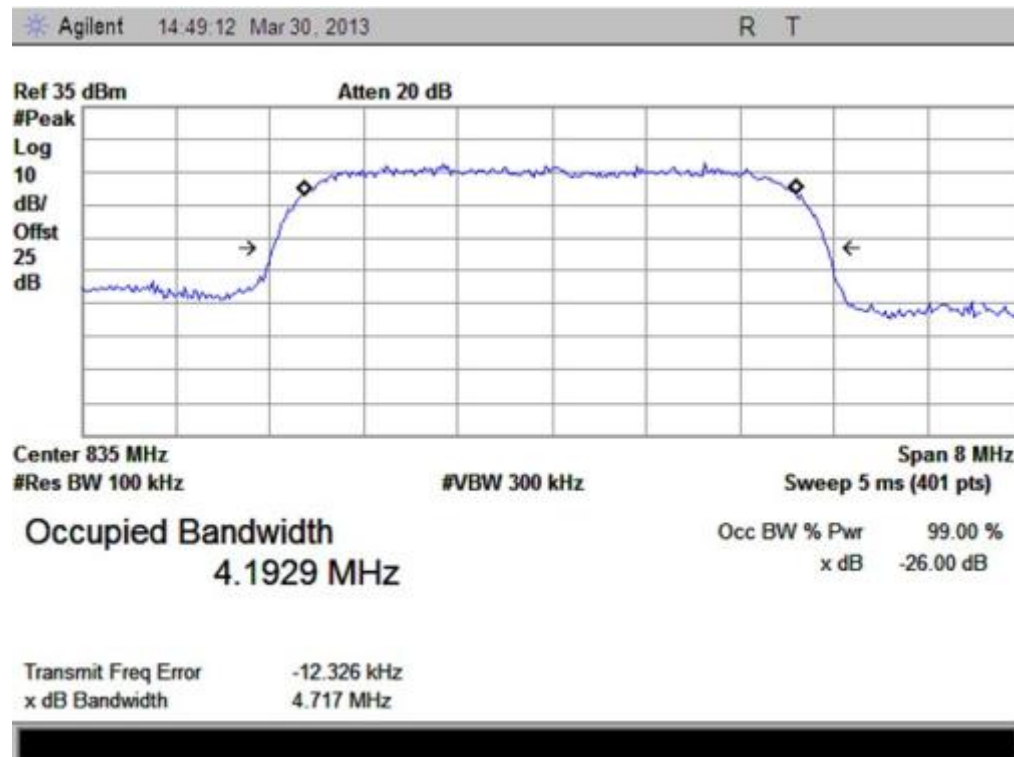
(Plot 23: HSDPA 850MHz Channel = 4175)



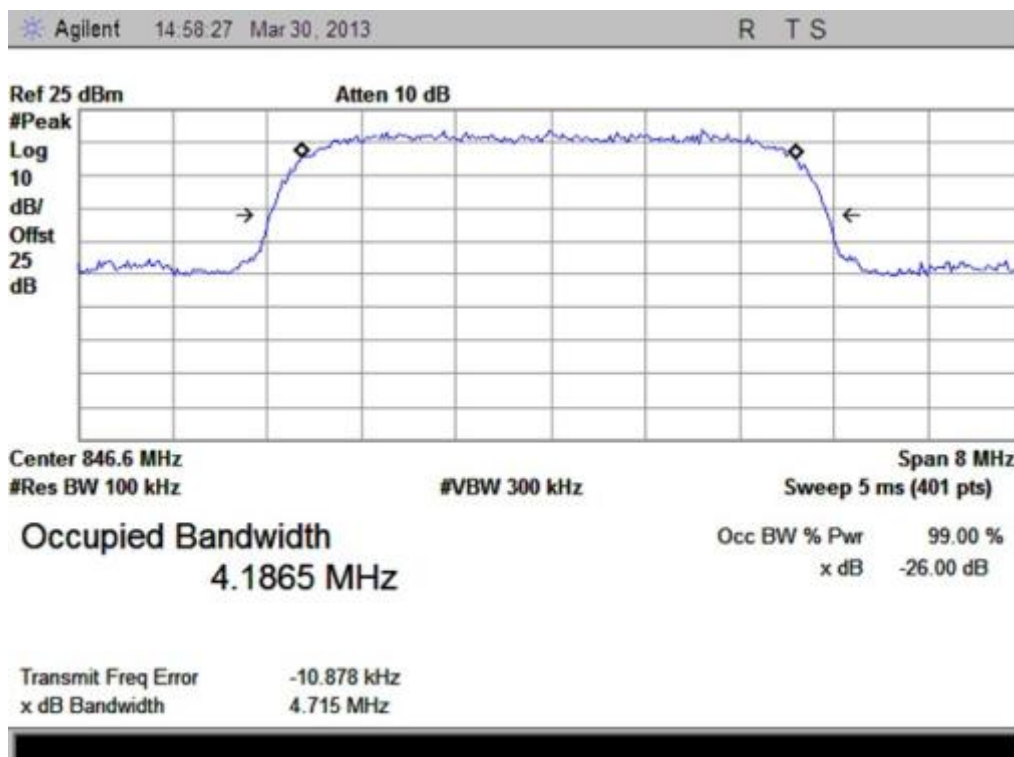
(Plot 24: HSDPA 850MHz Channel = 4233)



(Plot 25: HSUPA 850MHz Channel = 4132)



(Plot 26: HSUPA 850MHz Channel = 4175)



(Plot 27: HSUPA 850MHz Channel = 4233)

2.4 Frequency Stability

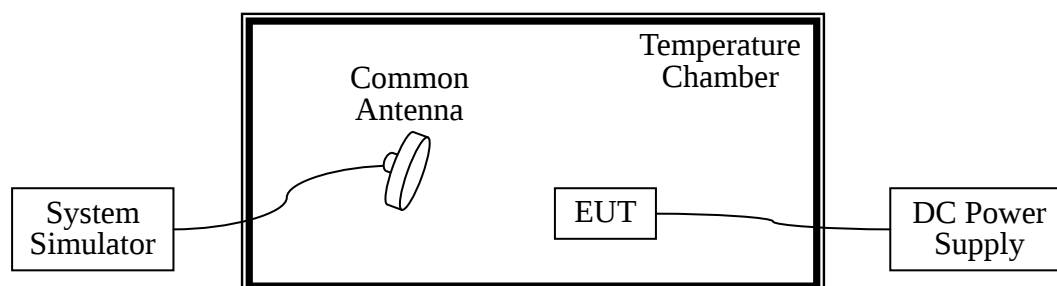
2.4.1 Requirement

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.

2.4.2 Test Description

1. Test Setup:



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

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2012.06.10
DC Power Supply	Good Will	GPS-3030DD	EF920938	2012.06.10
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2012.06.10

The Cal. Interval was one year.

2.4.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.8VDC, 4.2VDC and 3.4VDC, which are specified by the applicant; the normal temperature here used is 25°C. The frequency deviation limit of 850MHz band is $\pm 2.0\text{ppm}$, and 1900MHz is $\pm 1\text{ppm}$

1. GSM 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	12.72	±2060.5	-9.62	±2091.5	5.05	±2122	PASS
	-20	-11.17		19.70		8.41		
	-10	17.28		-11.06		1.19		
	0	-23.03		21.06		34.30		
	+10	-13.02		13.05		17.11		
	+20	-10.39		-12.76		-15.51		
	+30	24.75		-2.05		19.46		
	+40	25.31		-30.77		-26.80		
	+50	-22.19		15.39		17.58		
4.2	+25	23.74		19.65		23.11		
3.4	+25	20.28		-20.70		-17.93		

2. GSM 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-10.39	±1850.2	38.28	±1880.0	27.27	±1909.8	PASS
	-20	27.75		-2.15		9.49		
	-10	5.31		40.06		-12.90		
	0	-22.19		1.99		12.66		
	+10	23.74		-19.86		5.05		
	+20	-10.39		-2.32		3.02		
	+30	-18.89		23.12		-13.01		
	+40	44.49		11.33		0.51		
	+50	40.72		-17.55		21.45		
4.2	+25	16.15		38.10		-16.04		
3.4	+25	32.34		-22.06		-21.86		

3. GPRS 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-3.10	±2060.5	22.72	±2091.5	27.51	±2122	PASS
	-20	38.28		17.35		-19.07		
	-10	-2.15		-17.82		13.67		
	0	40.06		31.16		25.05		
	+10	1.99		-27.56		33.02		
	+20	-19.86		-19.13		19.71		
	+30	39.56		17.72		-16.57		
	+40	46.60		15.63		-32.17		
	+55	39.98		33.65		-12.92		
4.2	+25	-15.71		13.92		-27.51		
3.4	+25	-17.70		26.21		26.73		

4. GPRS 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-14.67	±1850.2	23.62	±1880.0	2.47	±1909.8	PASS
	-20	21.33		7.23		-11.76		
	-10	21.62		-24.78		-12.21		
	0	12.45		-1.26		13.33		
	+10	-14.76		-18.68		5.33		
	+20	-22.17		-21.61		35.26		
	+30	14.39		14.58		-26.78		
	+40	25.32		-0.68		19.54		
	+55	-22.52		36.87		-16.67		
4.2	+25	19.62		3.88		26.79		
3.4	+25	-18.31		13.12		19.93		

5. EDGE 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-3.10	±2060.5	23.12	±2091.5	8.51	±2122	PASS
	-20	38.28		11.33		-12.90		
	-10	-2.15		-17.55		12.66		
	0	40.06		38.10		5.05		
	+10	1.99		-22.06		3.02		
	+20	-19.86		-16.11		10.76		
	+30	39.56		17.76		-16.51		
	+40	46.60		15.64		-2.10		
	+55	39.98		3.67		-12.99		
4.2	+25	-15.71		13.95		-7.53		
3.4	+25	-17.70		6.23		6.78		

6. EDGE 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-13.77	±1850.2	23.62	±1880.0	2.47	±1909.8	PASS
	-20	0.62		7.23		-11.76		
	-10	1.65		-24.78		-12.21		
	0	2.47		-1.26		13.33		
	+10	-10.76		-18.68		5.33		
	+20	-2.11		-21.61		35.26		
	+30	13.33		14.58		-26.78		
	+40	5.33		-0.68		19.54		
	+55	-2.56		36.87		-16.67		
4.2	+25	17.60		3.88		26.79		
3.4	+25	-8.09		13.12		19.93		

7. WCDMA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	17.29	±2066	11.87	±2087.5	-1.20	±2116.5	PASS
	-20	-7.32		-0.59		-19.38		
	-10	-3.40		21.45		7.57		
	0	16.47		13.45		4.22		
	+10	30.18		1.31		-17.39		
	+20	32.07		-12.52		11.90		
	+30	-7.98		30.62		6.63		
	+40	26.21		13.45		28.93		
	+55	11.10		-12.52		19.66		
4.2	+25	-6.18		30.62		22.19		
3.4	+25	18.66		-18.13		-18.70		

8. HSDPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	21.46	±2066	-20.37	±2087.5	15.81	±2116.5	PASS
	-20	-8.56		-13.96		14.41		
	-10	20.65		35.23		21.57		
	0	12.88		-8.31		-24.37		
	+10	-14.75		-13.95		-13.96		
	+20	8.78		-24.37		35.23		
	+30	-1.49		12.88		-8.31		
	+40	17.14		-14.75		-13.95		
	+55	-23.61		23.37		26.37		
4.2	+25	22.03		7.93		7.90		
3.4	+25	17.51		-31.21		1.78		

9. HSUPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	25.52	±2066	13.52	±2087.5	13.55	±2116.5	PASS
	-20	-16.20		-19.33		27.42		
	-10	-12.61		-11.79		37.01		
	0	-13.09		-0.44		-7.32		
	+10	-0.38		0.71		-4.91		
	+20	-11.85		-6.64		21.35		
	+30	29.57		24.25		-5.94		
	+40	-11.79		9.63		13.78		
	+55	-0.94		23.76		28.45		
4.2	+25	11.71		-4.57		29.11		
3.4	+25	17.54		5.25		-17.70		

2.5 Conducted Out of Band Emissions

2.5.1 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.

2.5.2 Test Description

See section 2.1.2 of this report.

2.5.3 Test Result

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

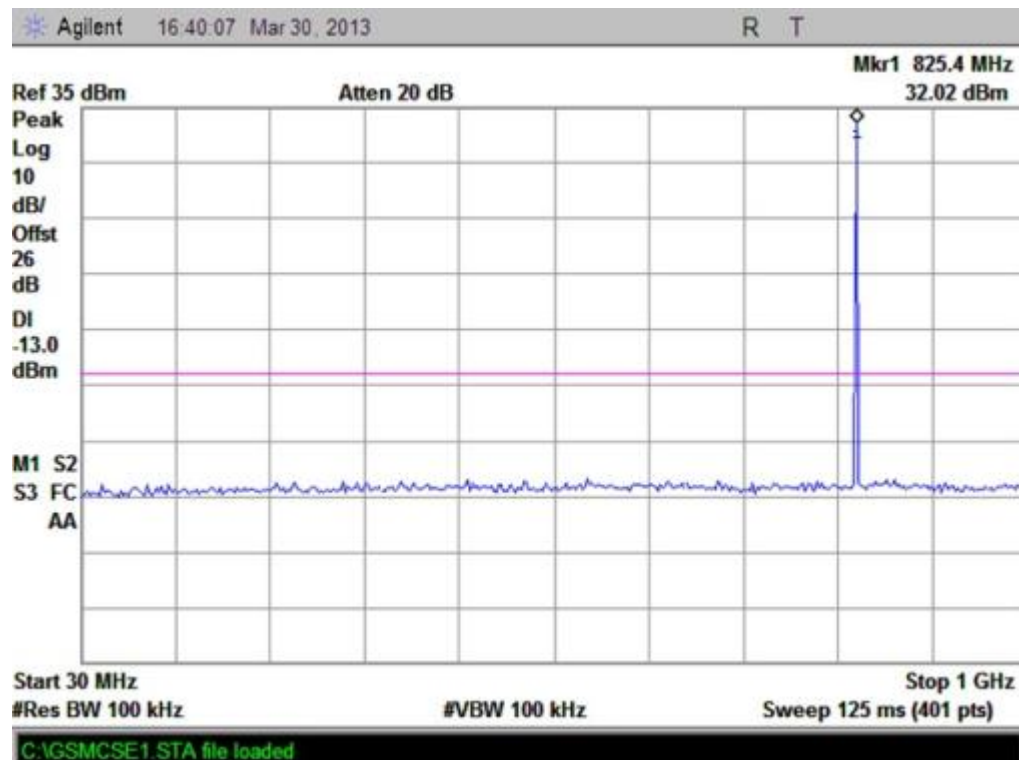
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-21.59	Plot A1toA2	-13	PASS
	190	836.6	-21.48	Plot A3toA4		PASS
	251	848.8	-21.36	Plot A5toA6		PASS
GSM 1900MHz	512	1850.2	-21.04	Plot B1toB2	-13	PASS
	661	1880.0	-23.92	Plot B3toB4		PASS
	810	1909.8	-22.50	Plot B5toB6		PASS
GPRS 850MHz	128	824.2	-20.60	Plot C1toC2	-13	PASS
	190	836.6	-21.16	Plot C3toC4		PASS
	251	848.8	-20.74	Plot C5toC6		PASS
GPRS 1900MHz	512	1850.2	-20.44	Plot D1toD2	-13	PASS
	661	1880.0	-20.32	Plot D3toD4		PASS
	810	1909.8	-20.89	Plot D5toD6		PASS
EDGE 850MHz	128	824.2	-21.89	Plot E1toE2	-13	PASS
	190	836.6	-23.99	Plot E3toE4		PASS
	251	848.8	-21.65	Plot E5toE6		PASS
EDGE 1900MHz	512	1850.2	-22.00	Plot F1toF2	-13	PASS
	661	1880.0	-21.60	Plot F3toF4		PASS
	810	1909.8	-25.85	Plot F5toF6		PASS

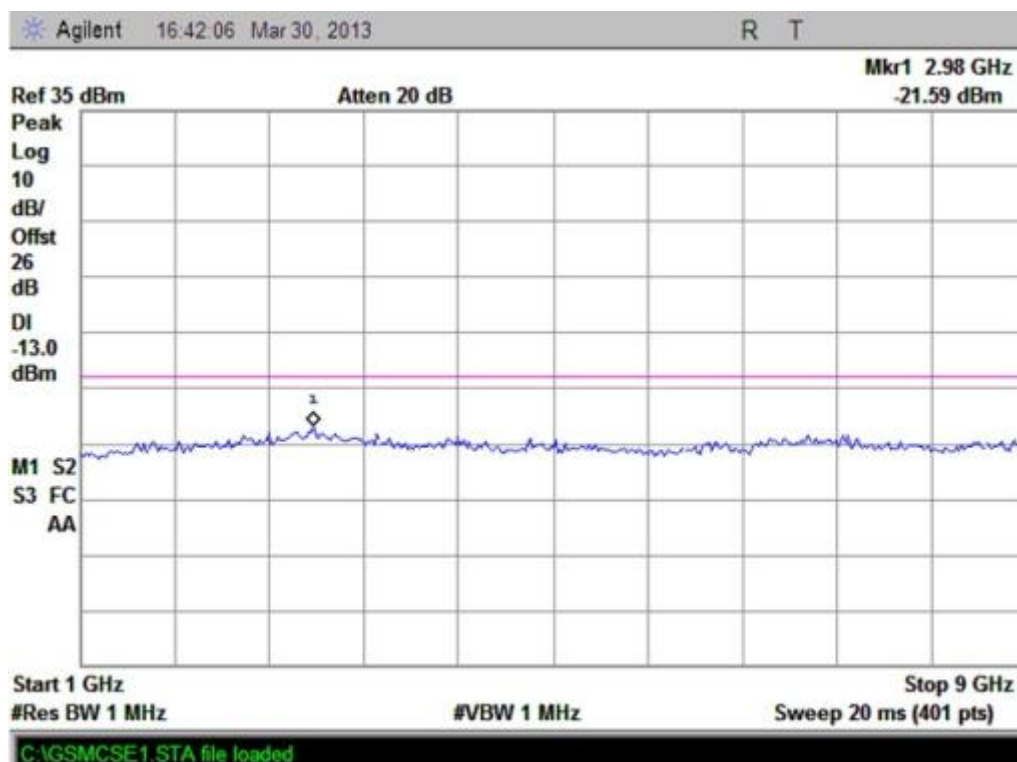
WCDMA 850MHz	4132	826.4	-22.69	Plot G1toG2	-13	PASS
	4175	835	-21.38	Plot G3toG4		PASS
	4233	846.6	-22.28	Plot G5toG6		PASS
HSDPA 850MHz	4132	826.4	-21.79	Plot H1toH2	-13	PASS
	4175	835	-20.86	Plot H3toH4		PASS
	4233	846.6	-21.04	Plot H5toH6		PASS
HSUPA 850MHz	4132	826.4	-21.70	Plot I1toI2	-13	PASS
	4175	835	-21.51	Plot I3toI4		PASS
	4233	846.6	-22.39	Plot I5toI6		PASS

2. Test Plots for the Whole Measurement Frequency Range:

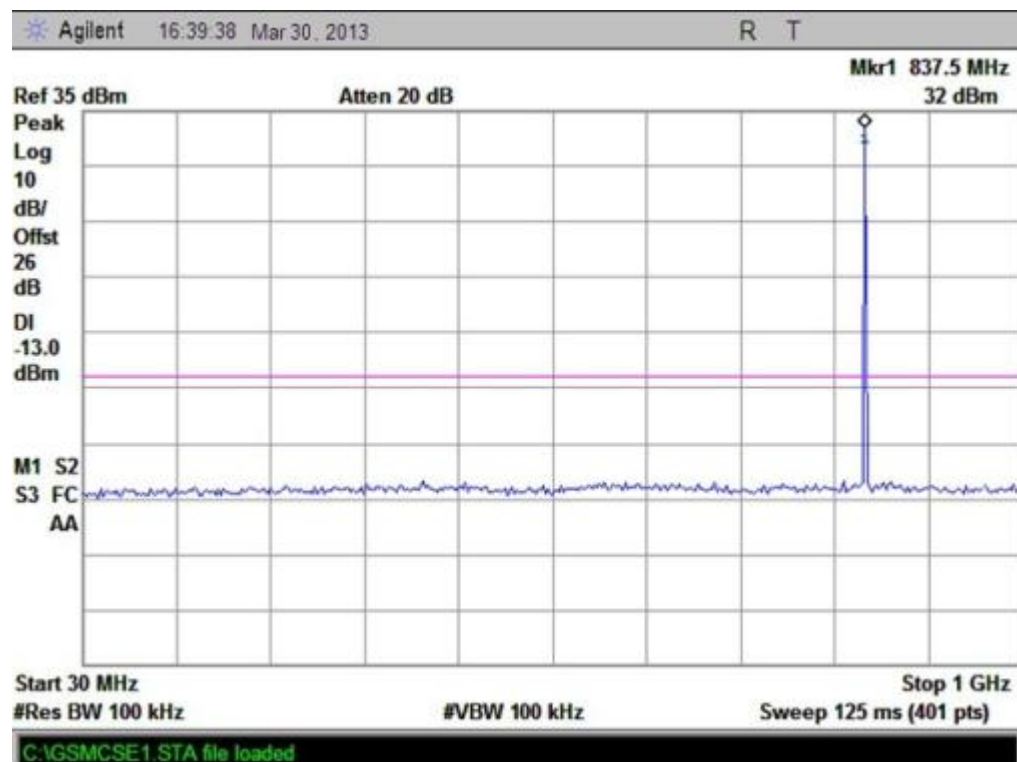
Note: the power of the EUT transmitting frequency should be ignored.



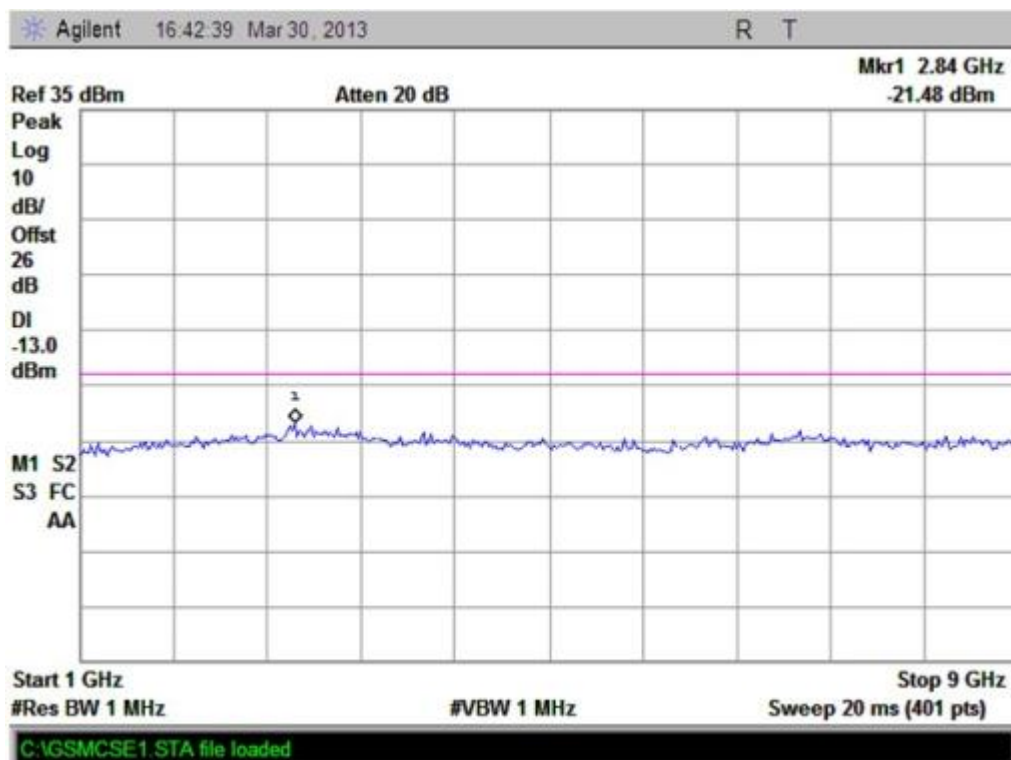
(Plot A1: GSM 850MHz Channel = 128, 30MHz to 1GHz)



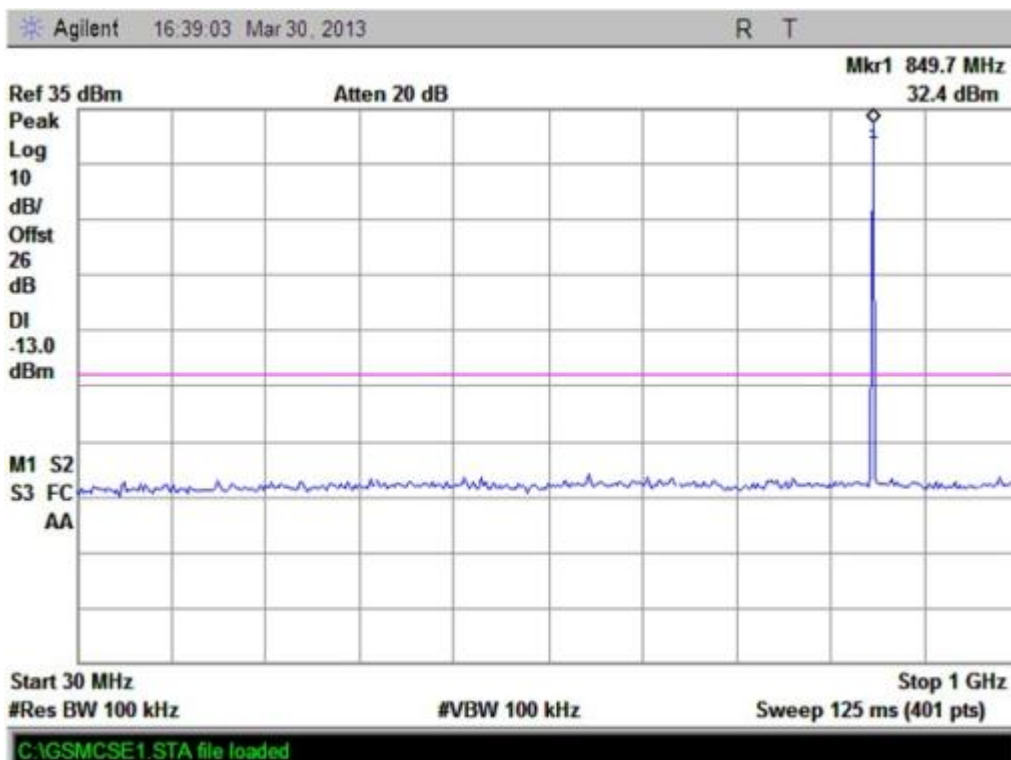
(Plot A2: GSM 850MHz Channel = 128, 1GHz to 9GHz)



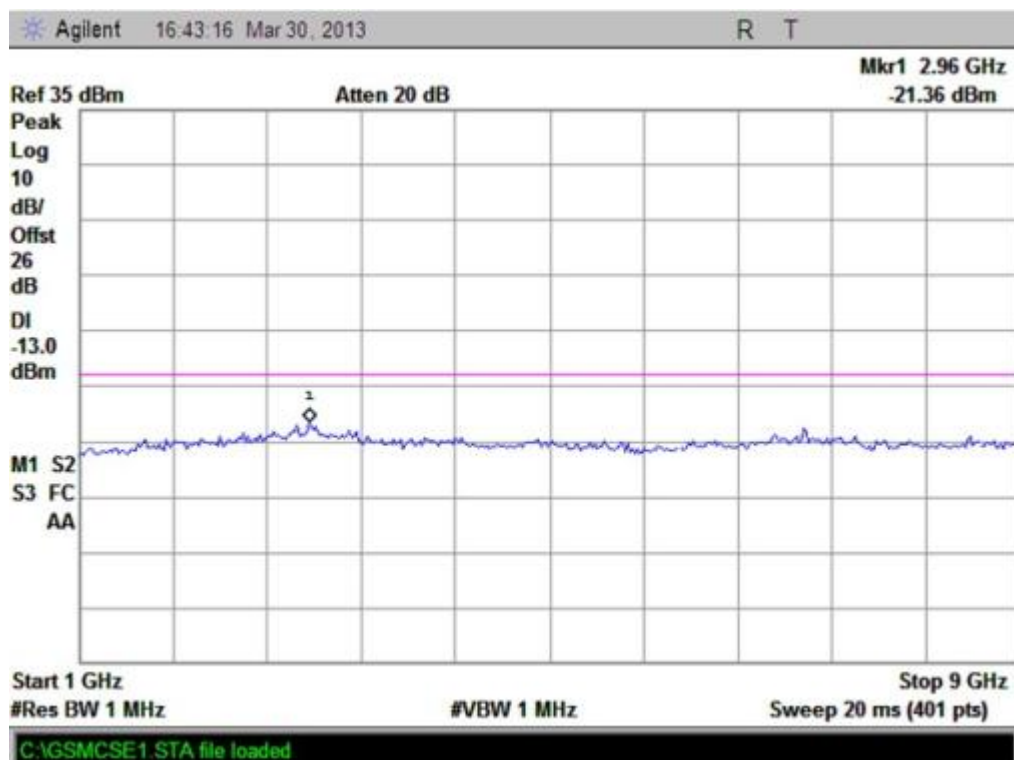
(Plot A3: GSM 850MHz Channel = 190, 30MHz to 1GHz)



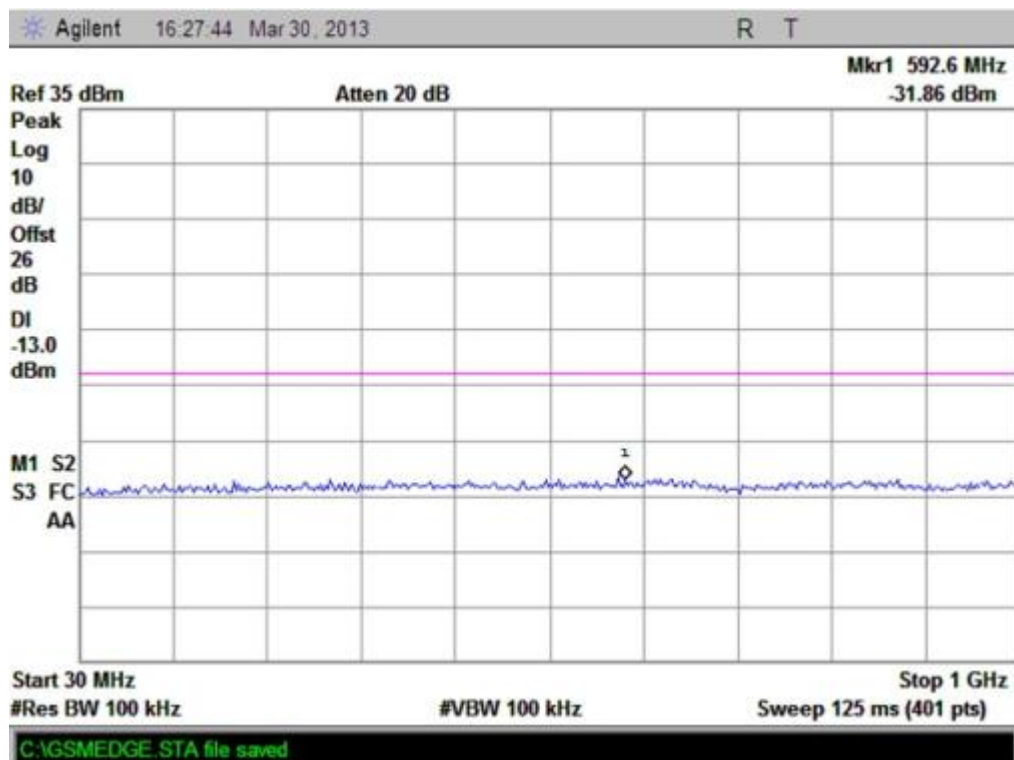
(Plot A4: GSM 850MHz Channel = 190, 1GHz to 9GHz)



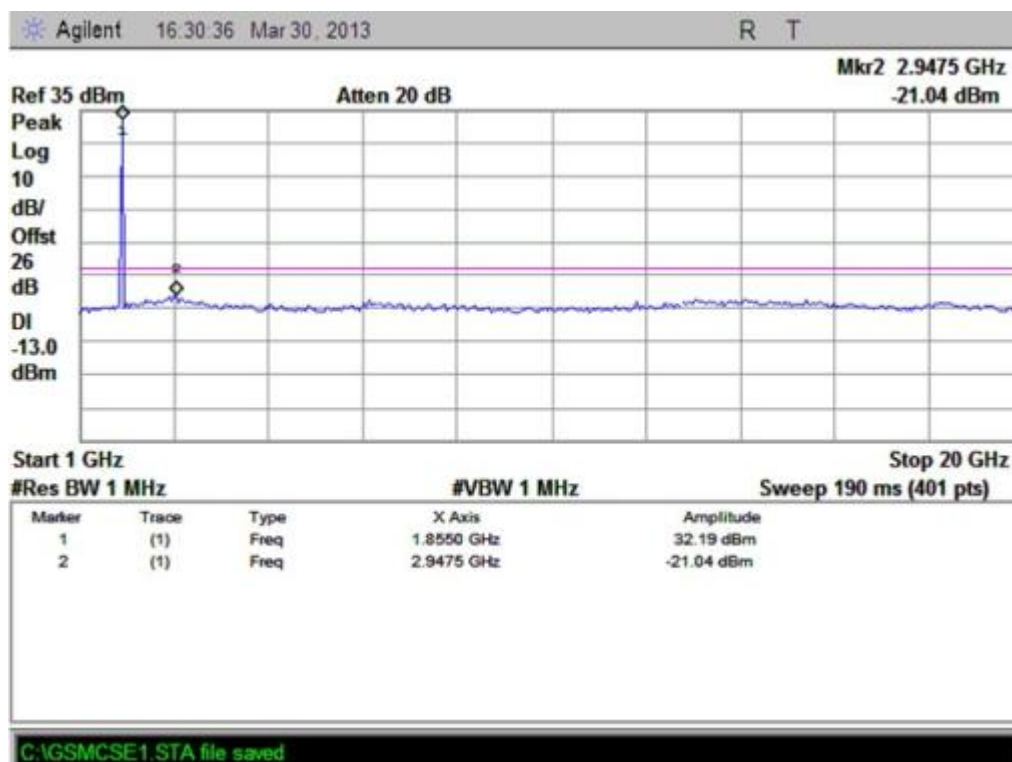
(Plot A5: GSM 850MHz Channel = 251, 30MHz to 1GHz)



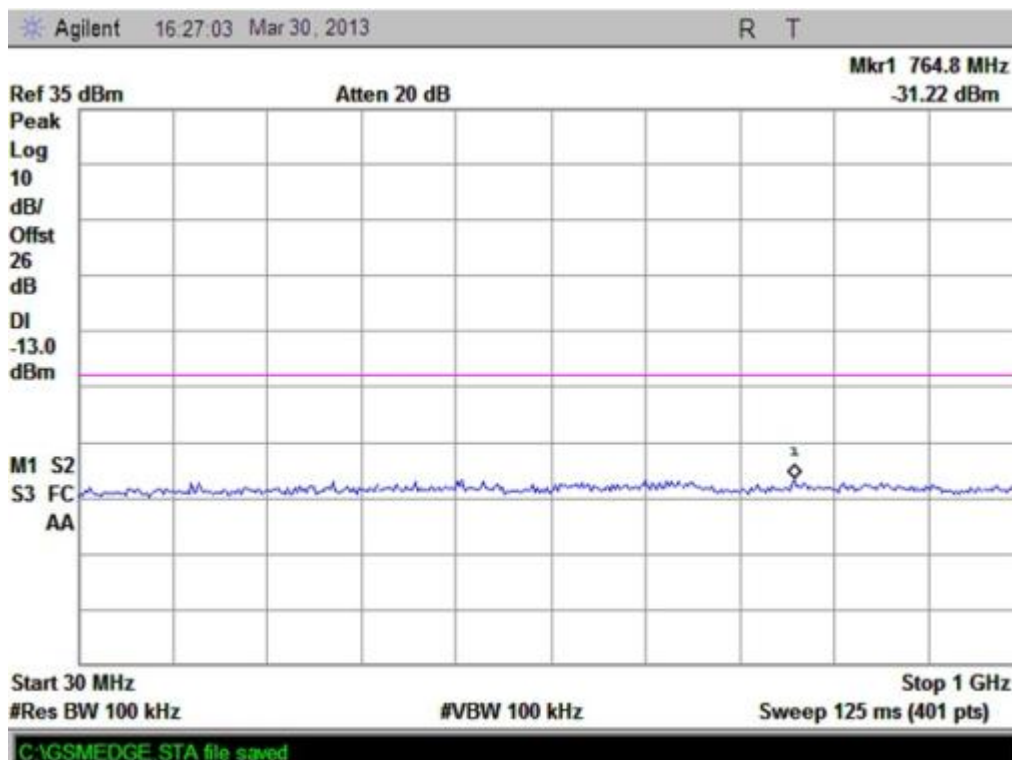
(Plot A6: GSM 850MHz Channel = 251, 1GHz to 9GHz)



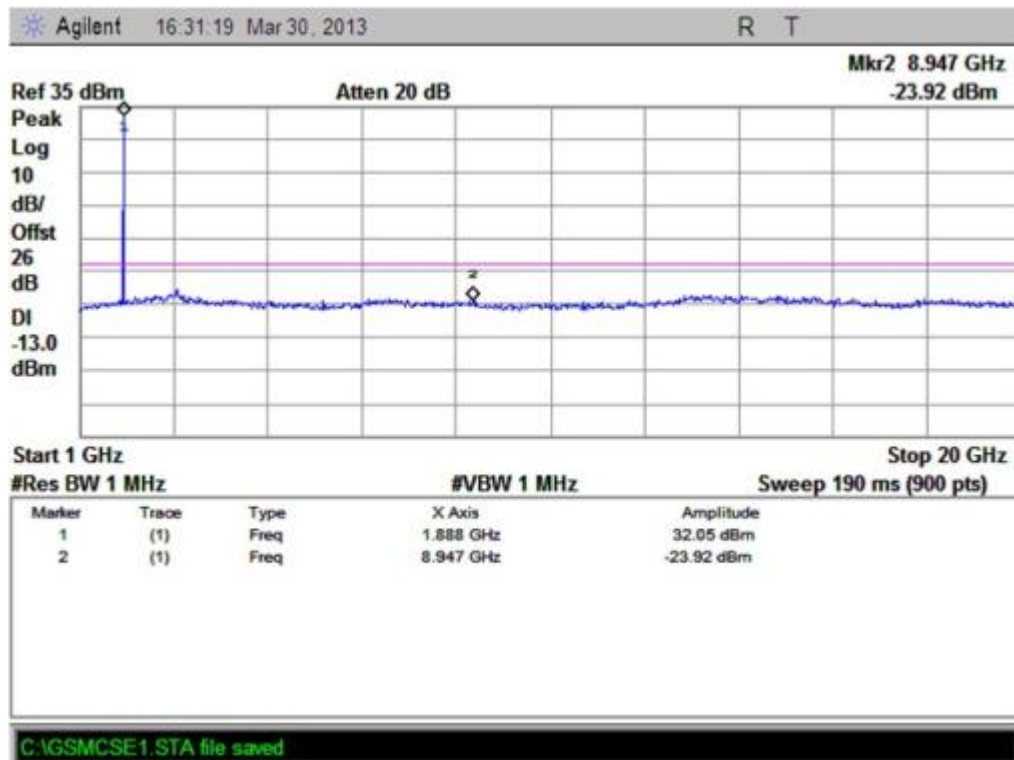
(Plot B1: GSM 1900MHz Channel = 512, 30MHz to 1GHz)



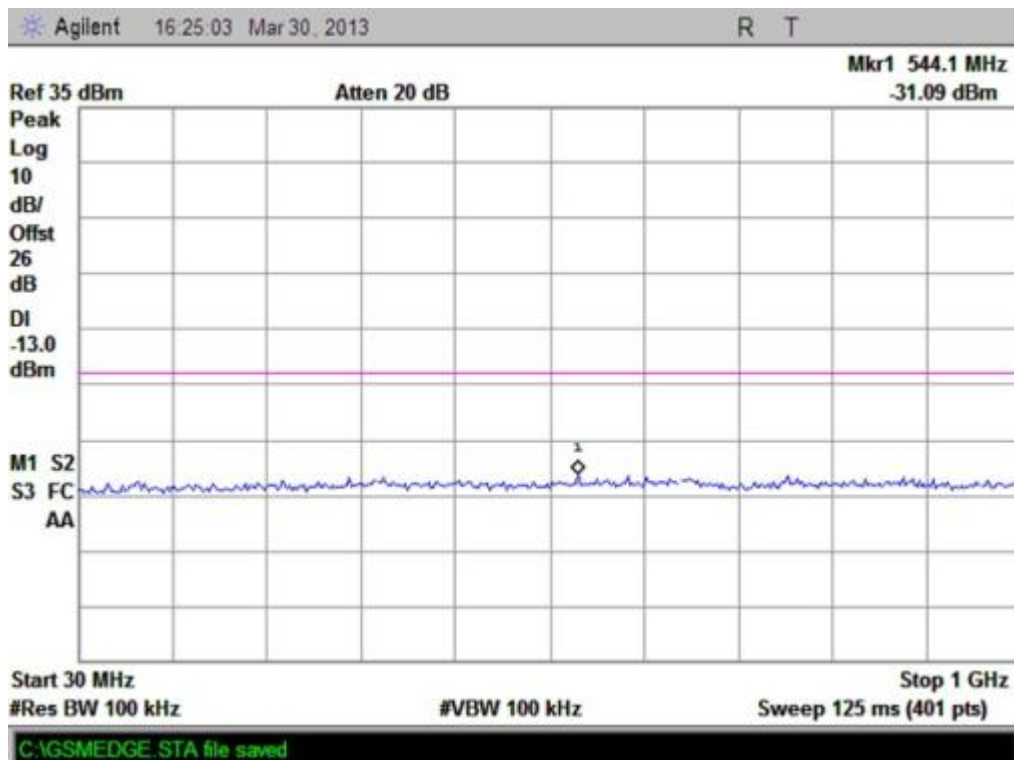
(Plot B2: GSM 1900MHz Channel = 512, 1GHz to 20GHz)



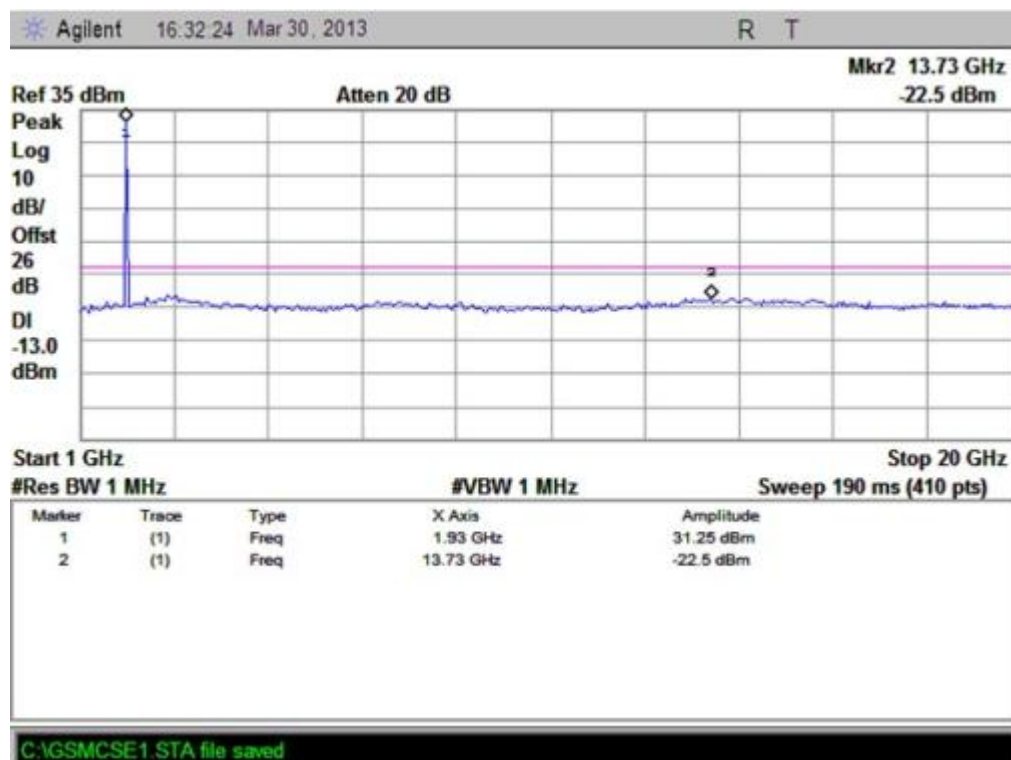
(Plot B3: GSM 1900MHz Channel = 661, 30MHz to 1GHz)



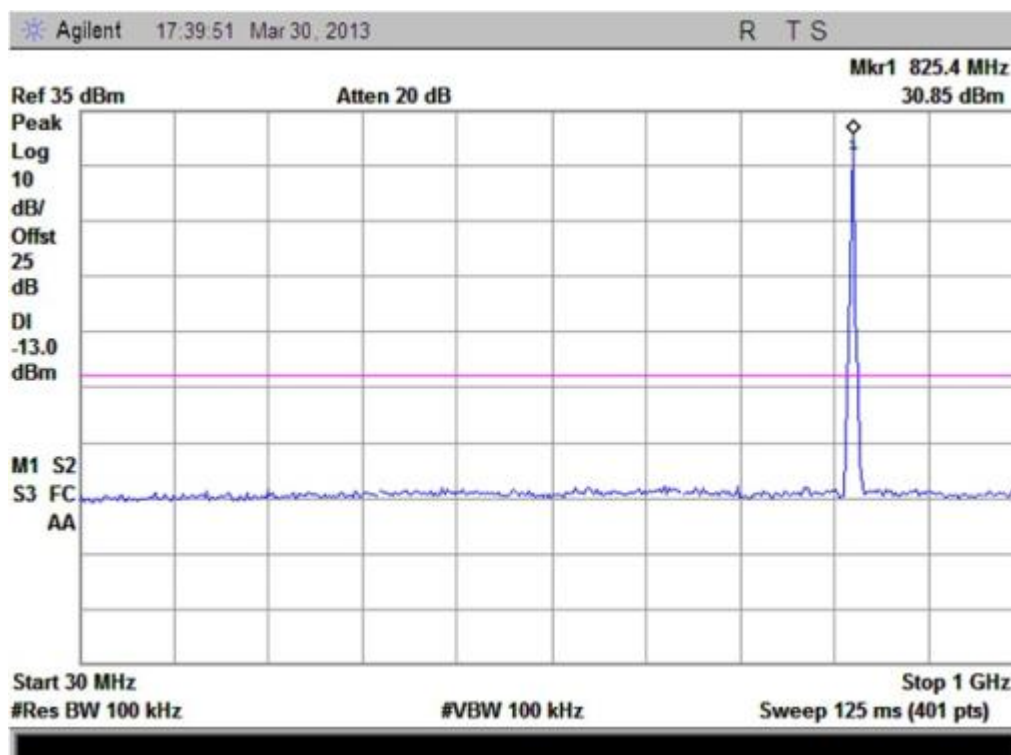
(Plot B4: GSM 1900MHz Channel = 661, 1GHz to 20GHz)



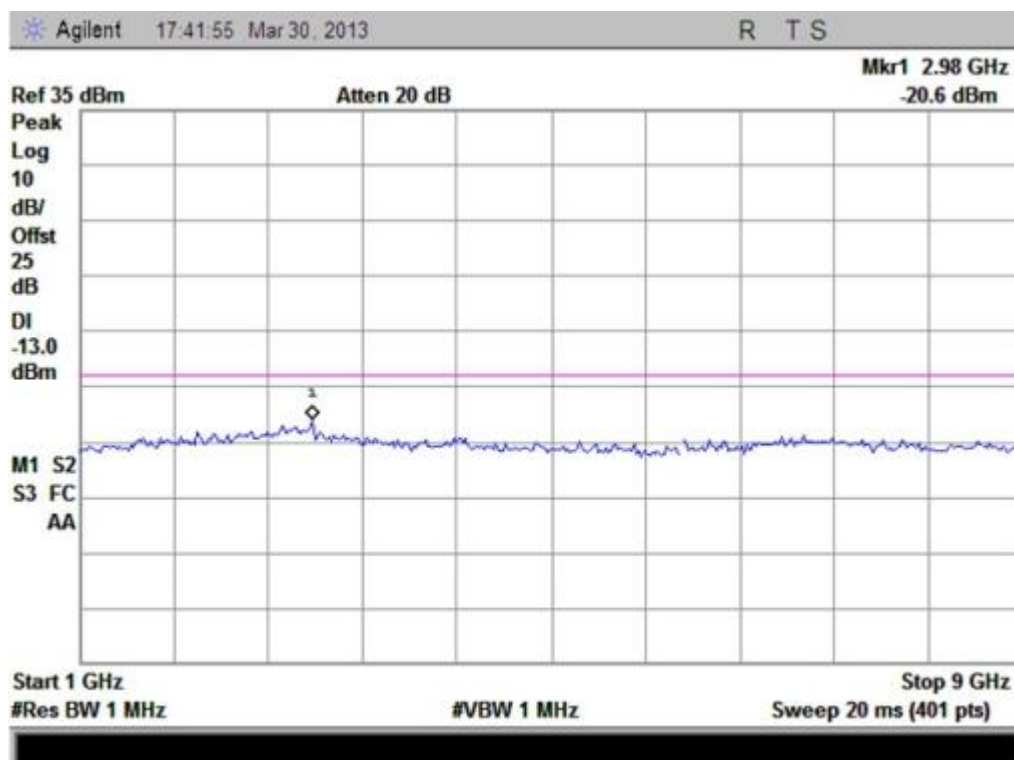
(Plot B5: GSM 1900MHz Channel = 810, 30MHz to 1GHz)



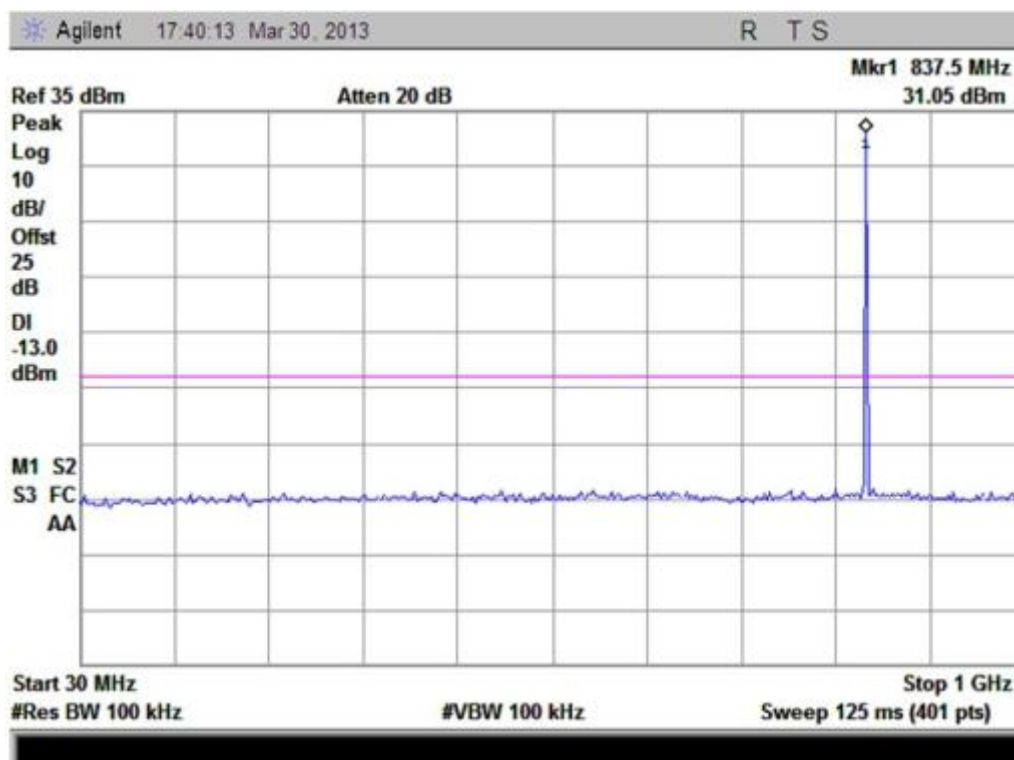
(Plot B6: GSM 1900MHz Channel = 810, 1GHz to 20GHz)



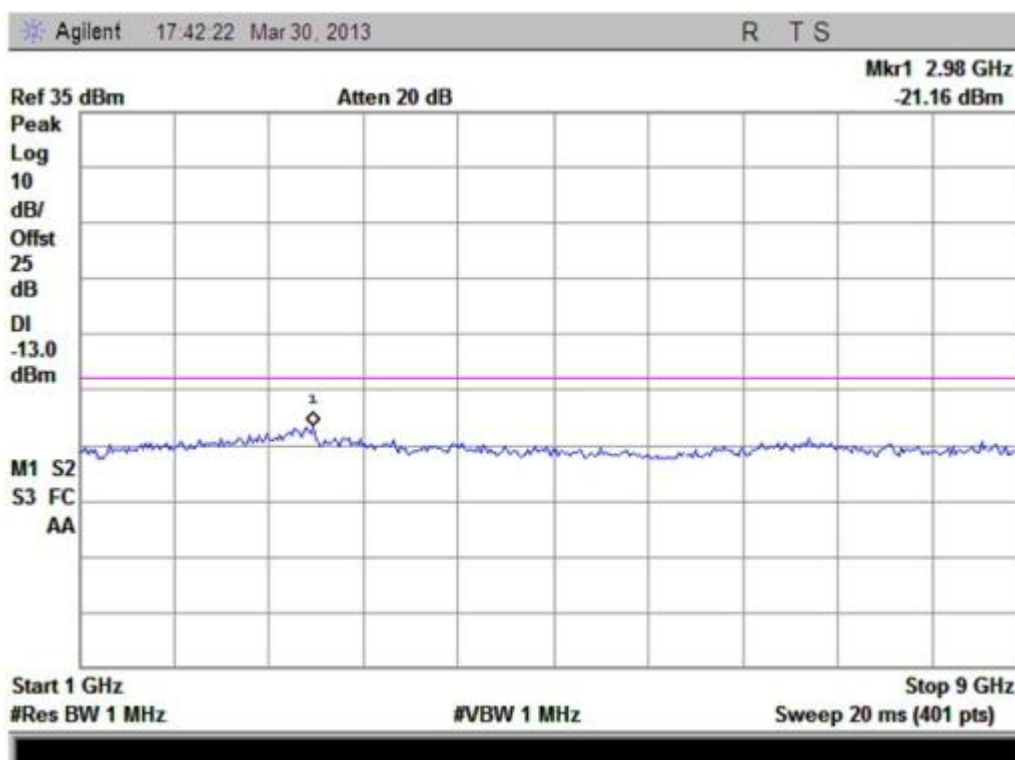
(Plot C1: GPRS 850MHz Channel = 128, 30MHz to 1GHz)



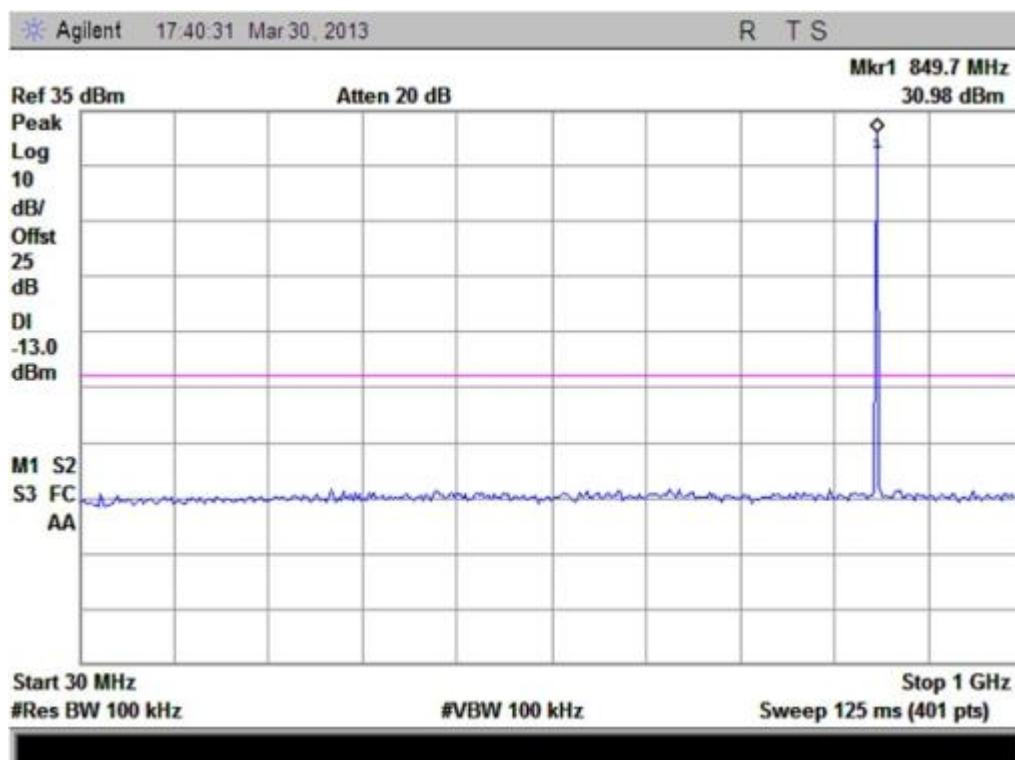
(Plot C2: GPRS 850MHz Channel = 128, 1GHz to 9GHz)



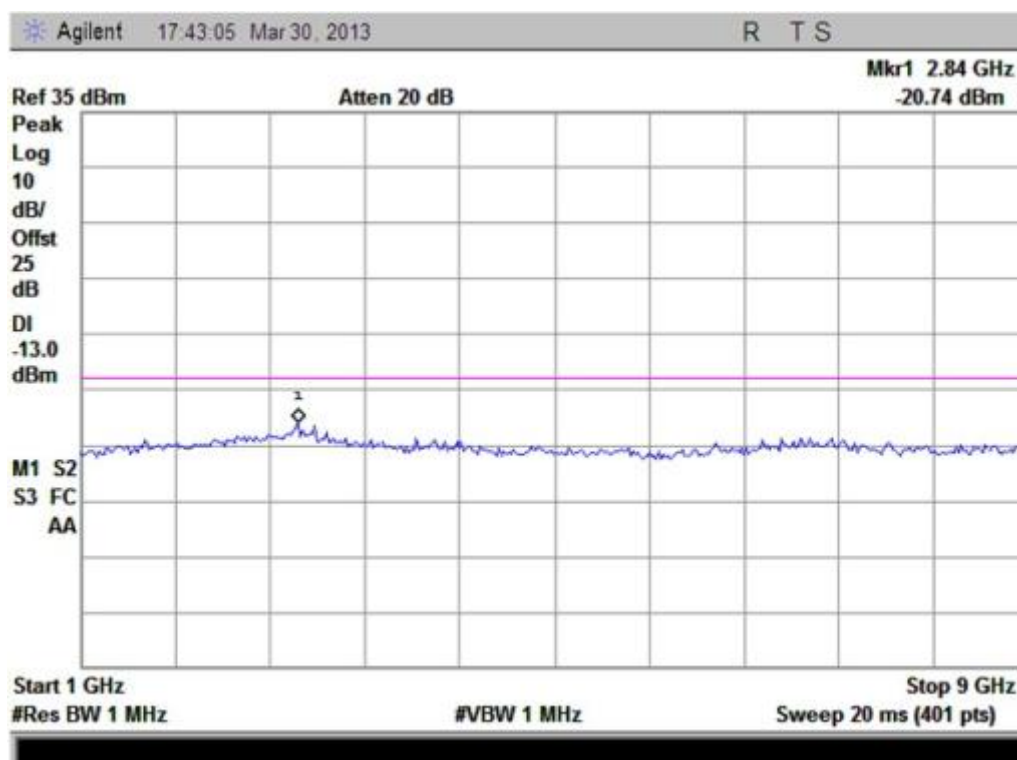
(Plot C3: GPRS 850MHz Channel = 190, 30MHz to 1GHz)



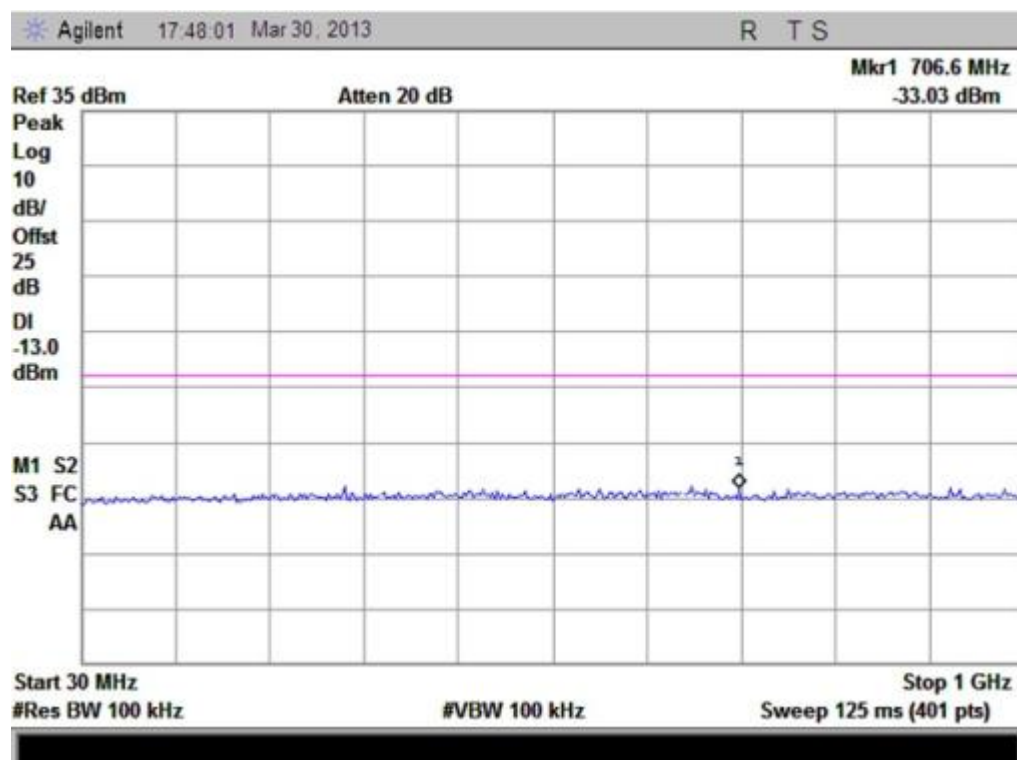
(Plot C4: GPRS 850MHz Channel = 190, 1GHz to 9GHz)



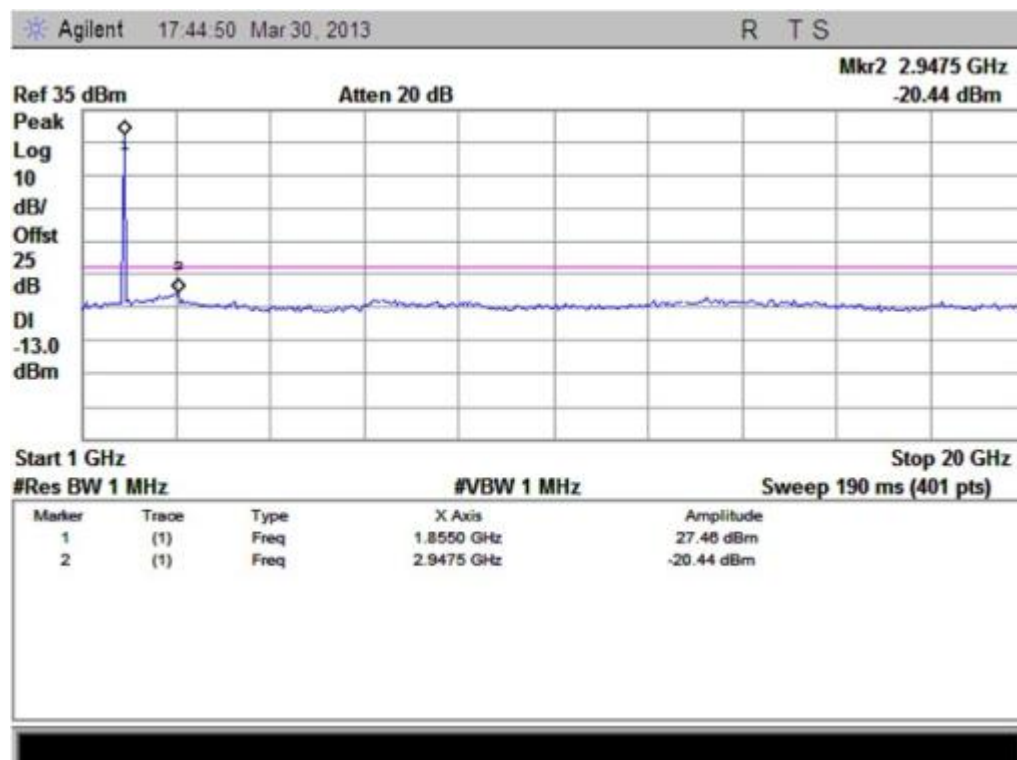
(Plot C5: GPRS 850MHz Channel = 251, 30MHz to 1GHz)



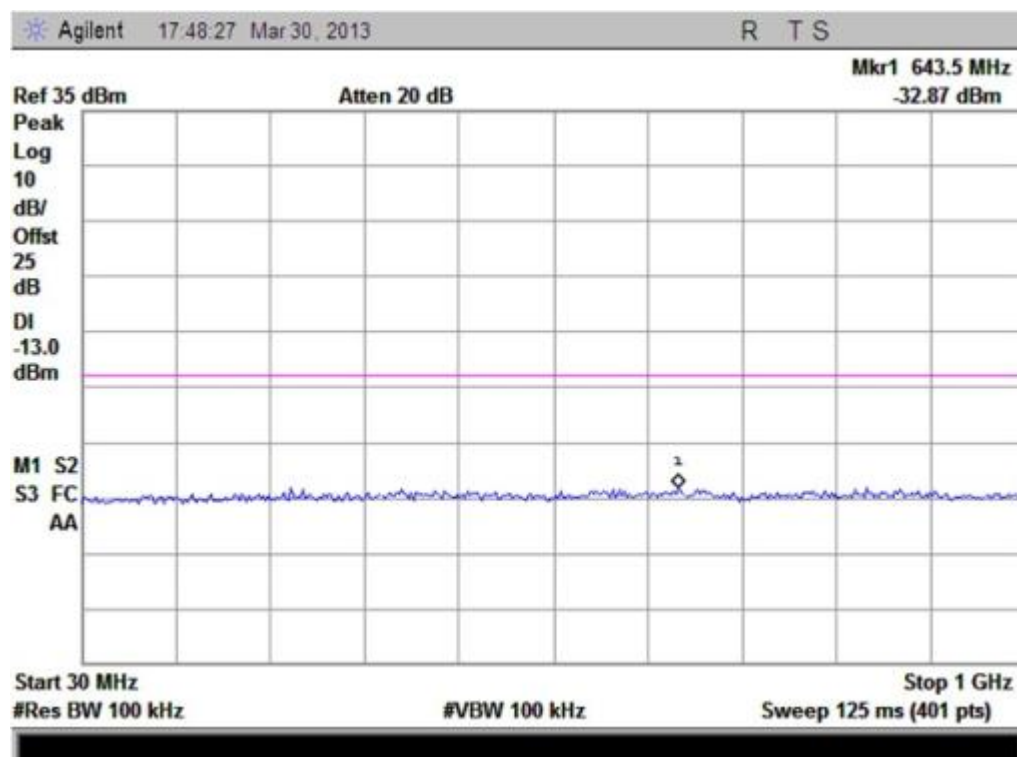
(Plot C6: GPRS 850MHz Channel = 251, 1GHz to 9GHz)



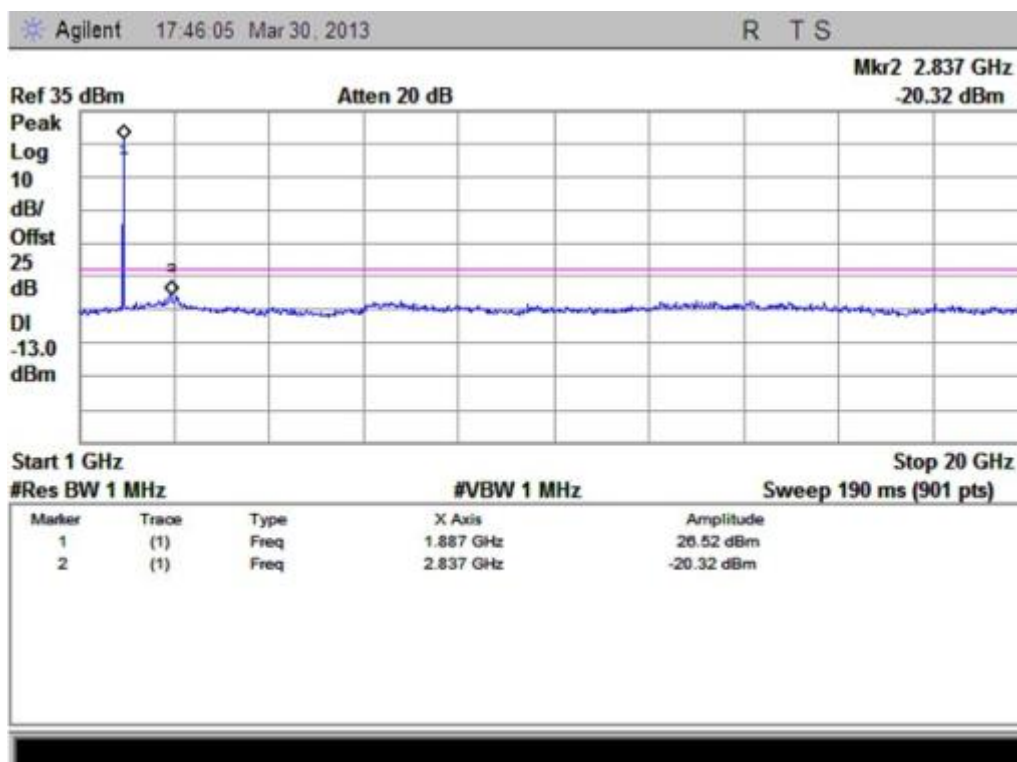
(Plot D1: GPRS 1900MHz Channel = 512, 30MHz to 1GHz)



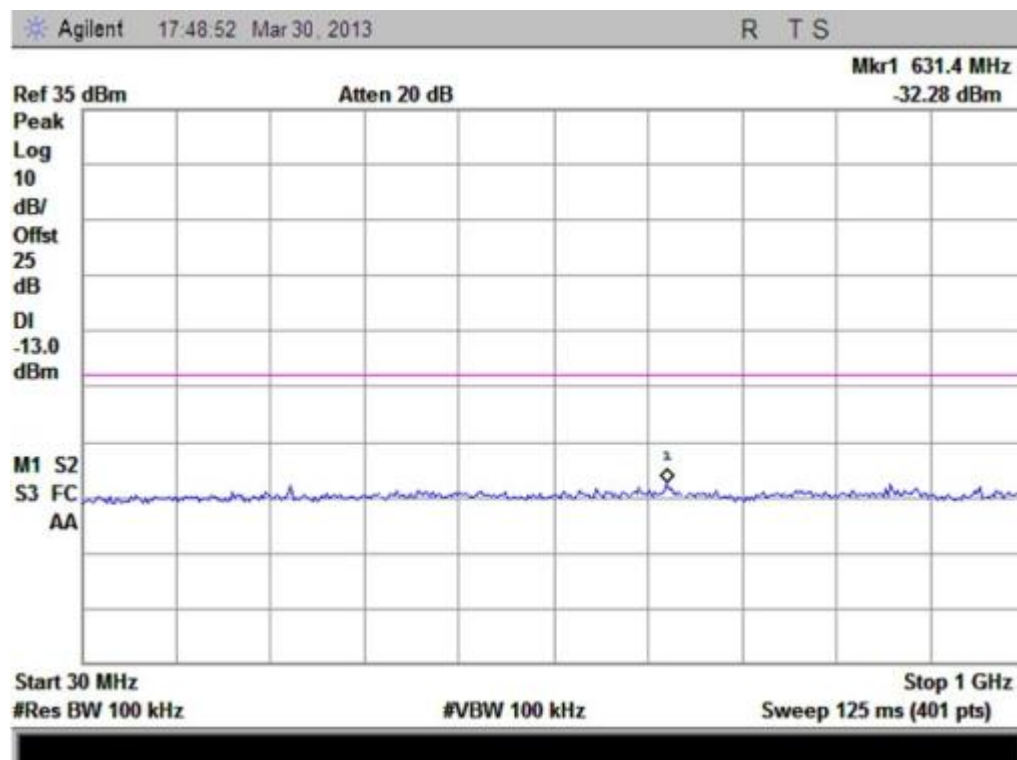
(Plot D2: GPRS 1900MHz Channel = 512, 1GHz to 20GHz)



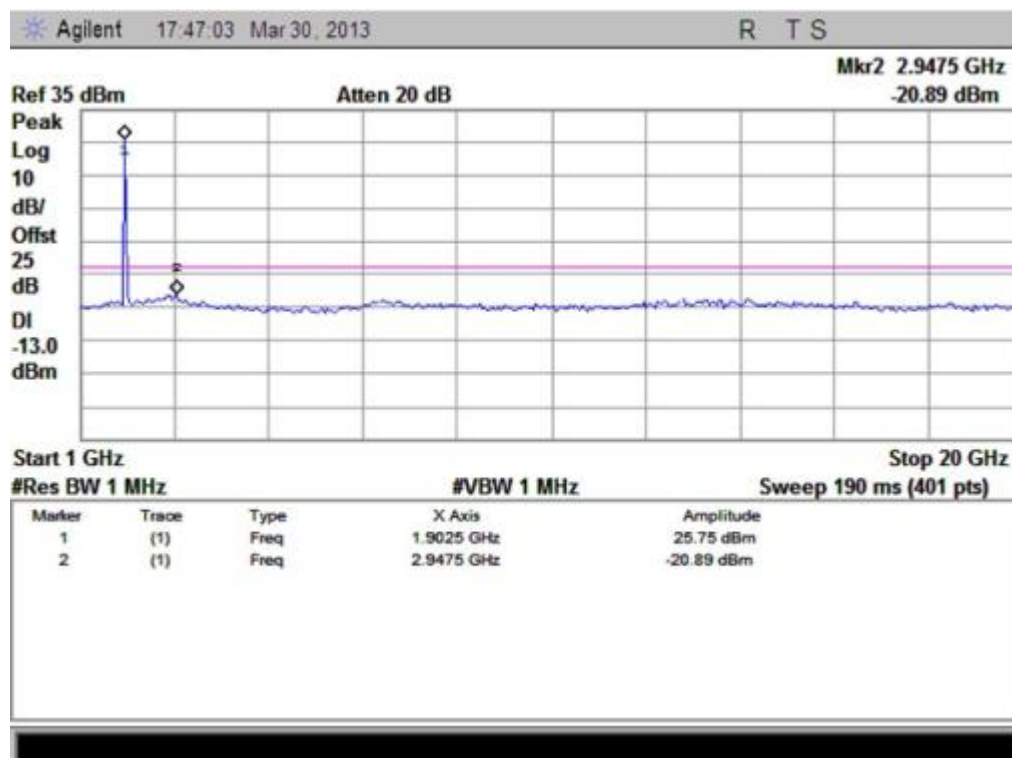
(Plot D3: GPRS 1900MHz Channel = 661, 30MHz to 1GHz)



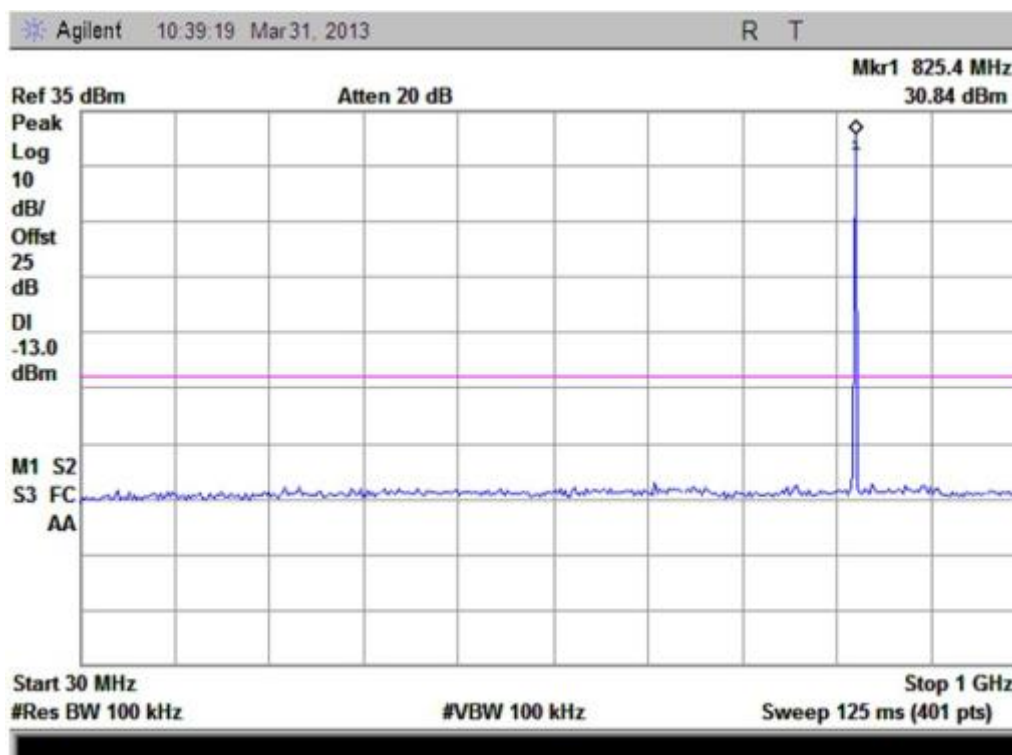
(Plot D4: GPRS 1900MHz Channel = 661, 1GHz to 20GHz)



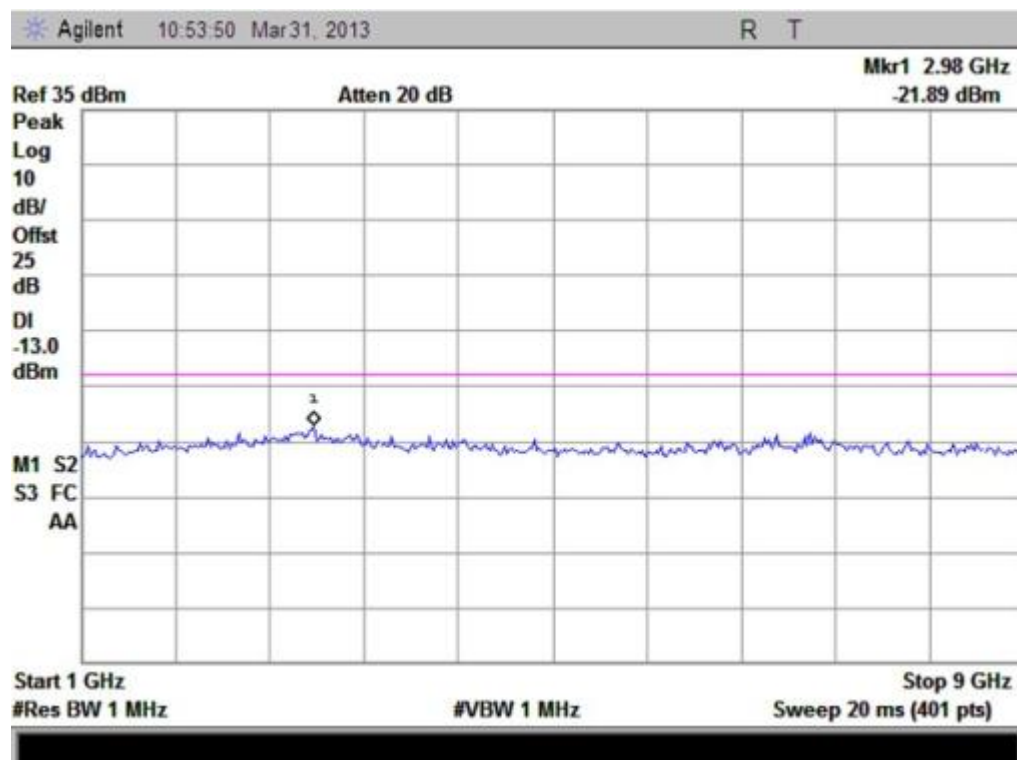
(Plot D5: GPRS 1900MHz Channel = 810, 30MHz to 1GHz)



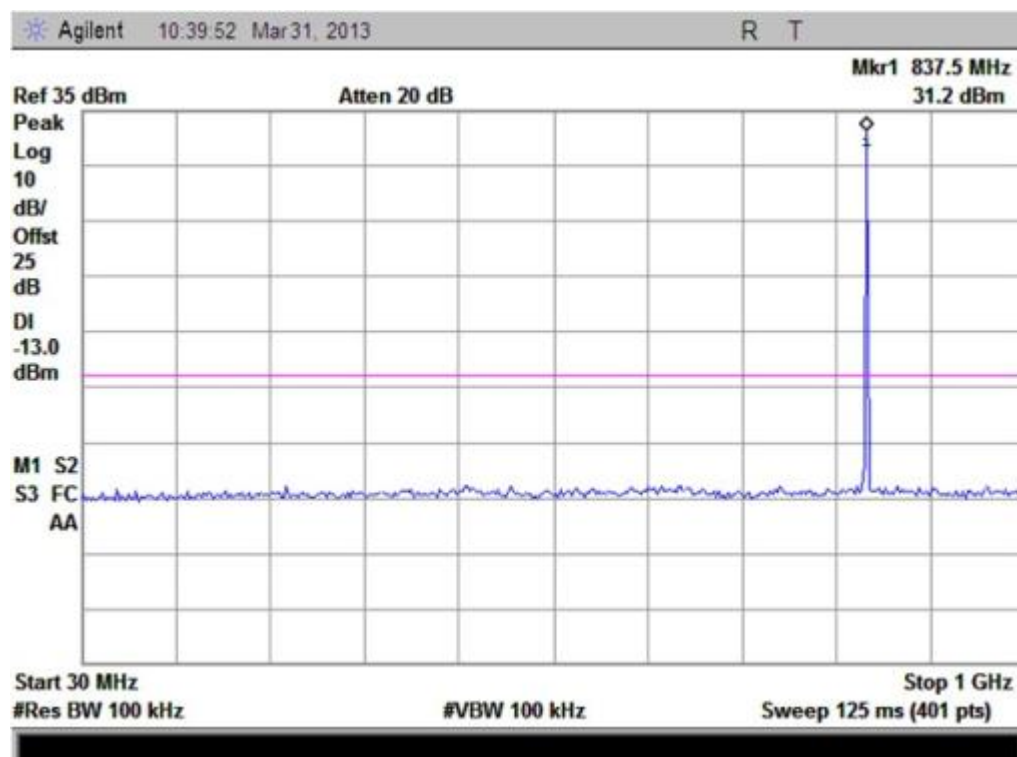
(Plot D6: GPRS 1900MHz Channel = 810, 1GHz to 20GHz)



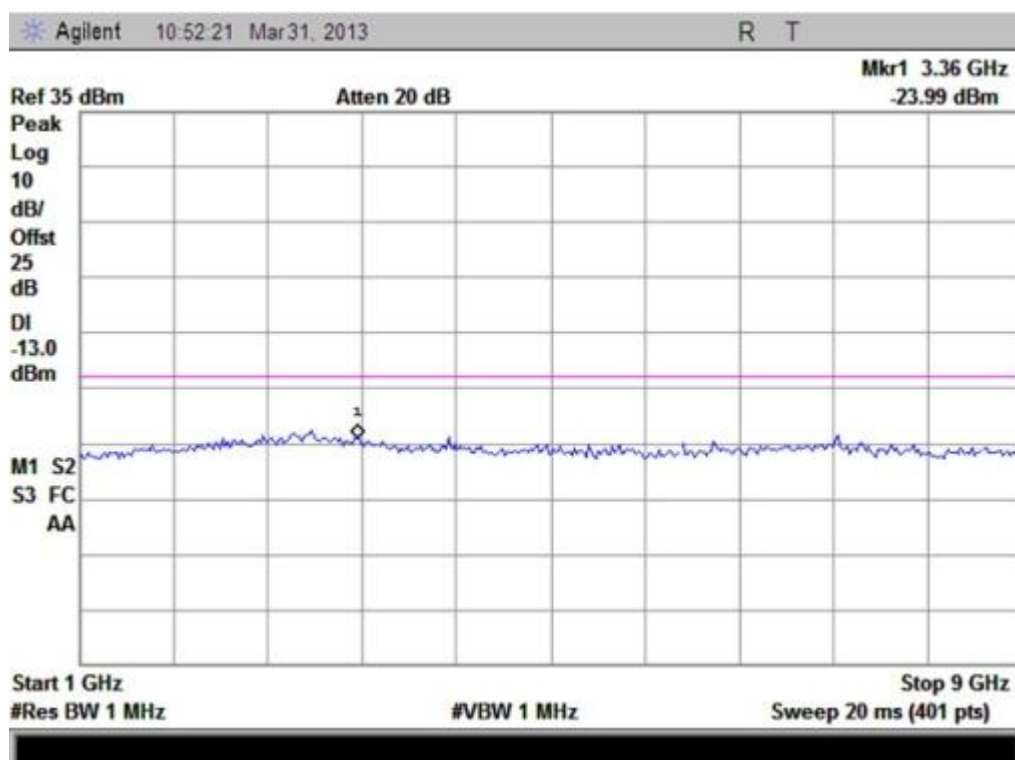
(Plot E1: EDGE 850MHz Channel = 128, 30MHz to 1GHz)



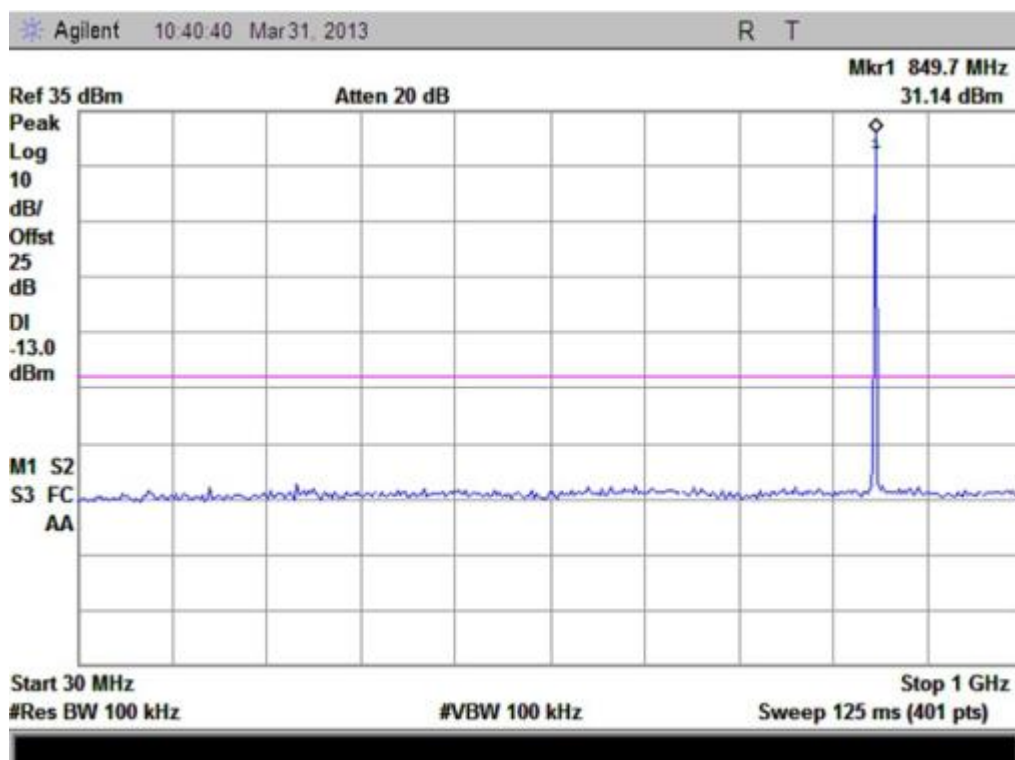
(Plot E2: EDGE 850MHz Channel = 128, 1GHz to 9GHz)



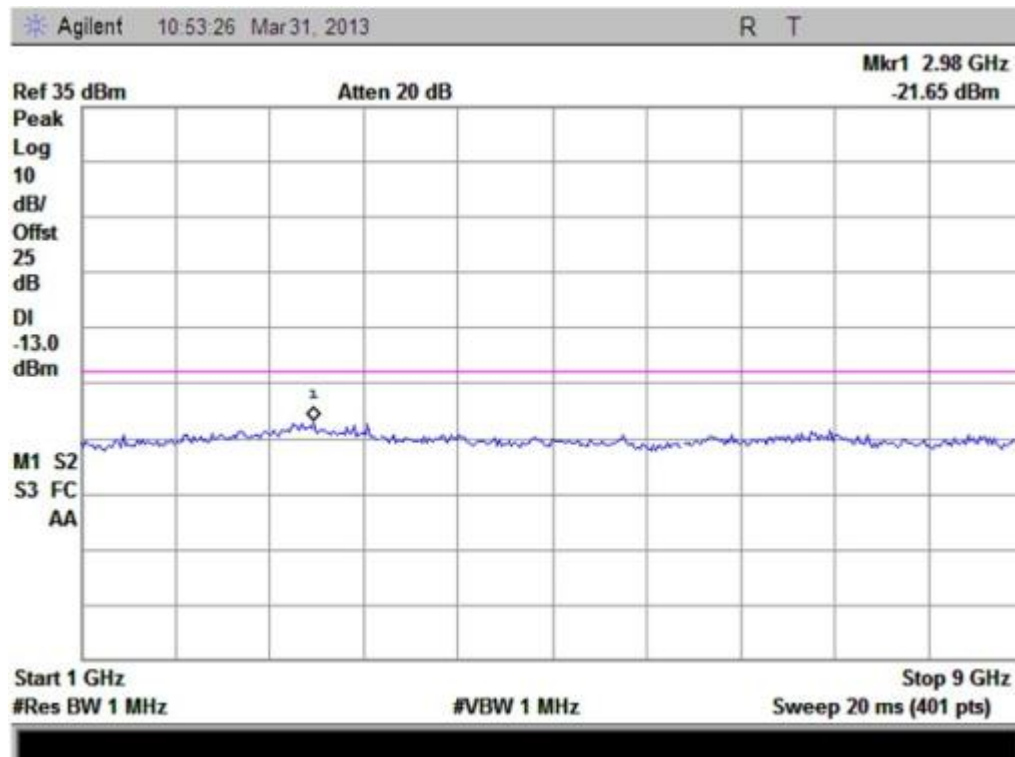
(Plot E3: EDGE 850MHz Channel = 190, 30MHz to 1GHz)



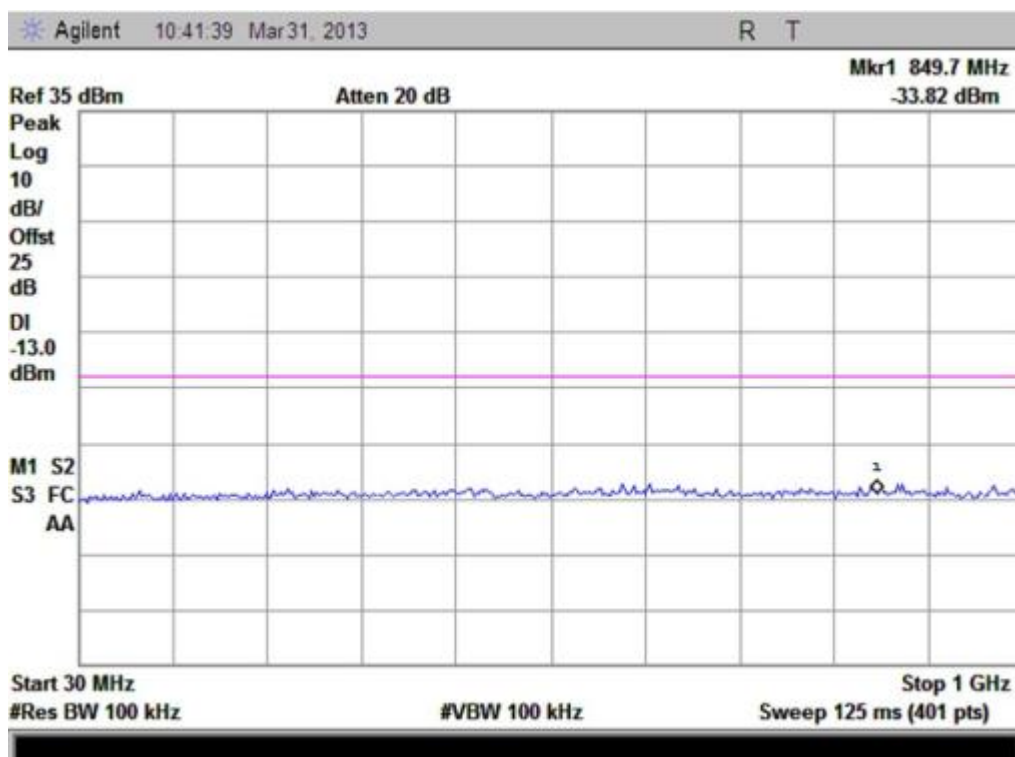
(Plot E4: EDGE 850MHz Channel = 190, 1GHz to 9GHz)



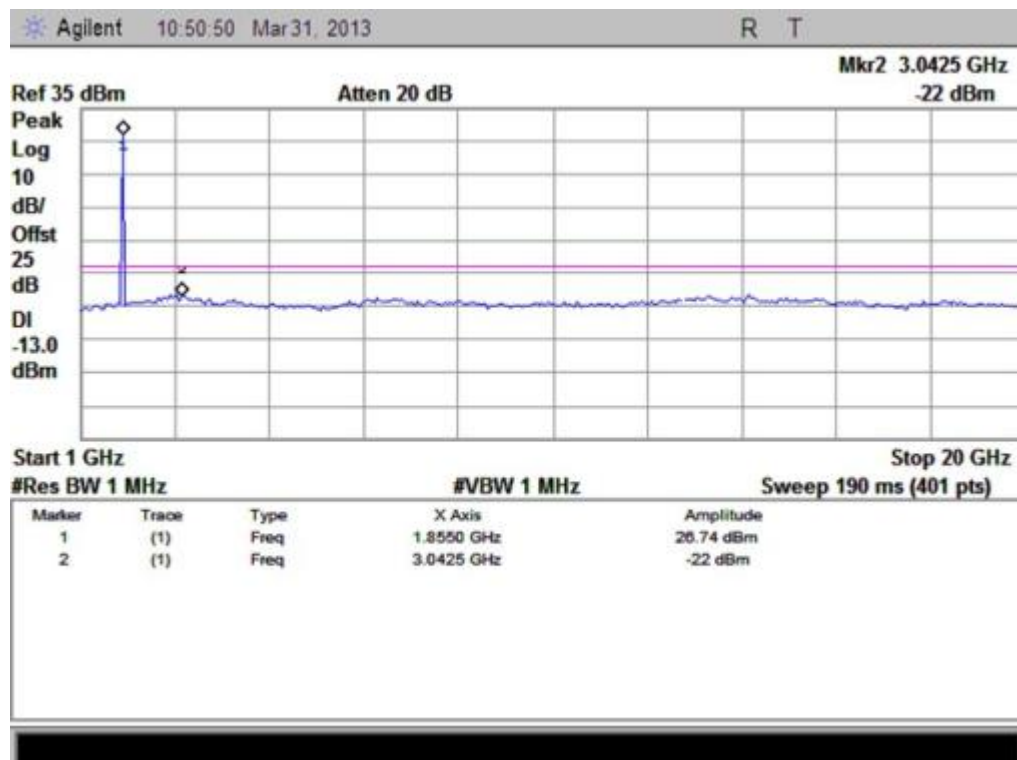
(Plot E5: EDGE 850MHz Channel = 251, 30MHz to 1GHz)



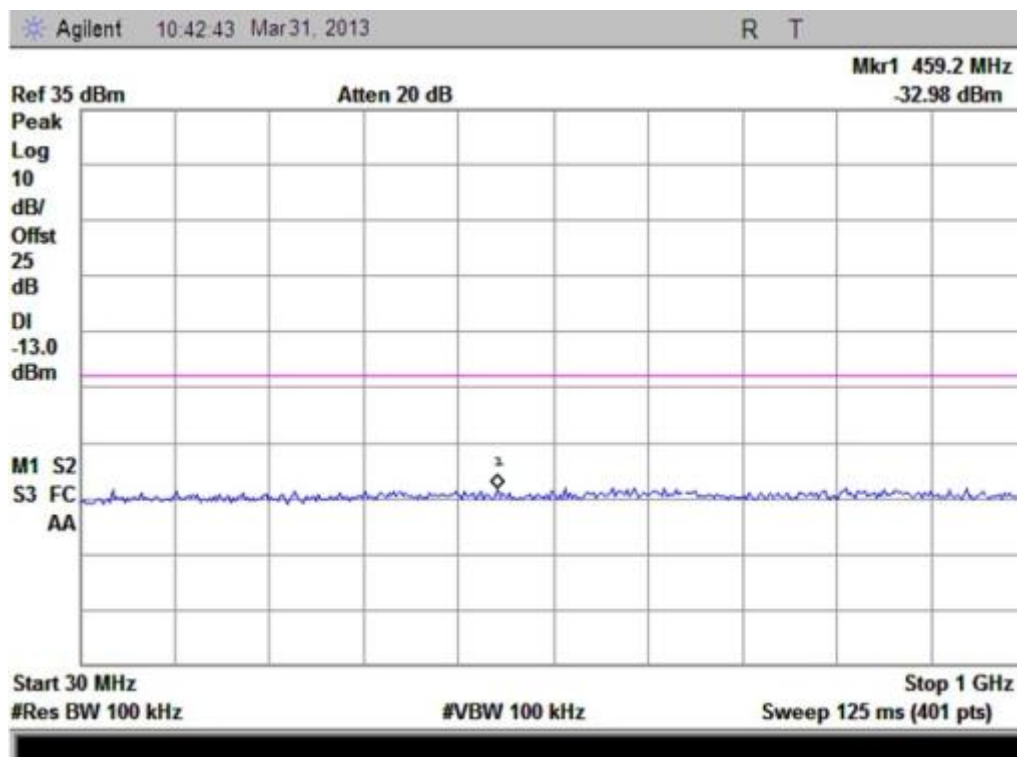
(Plot E6: EDGE 850MHz Channel = 251, 1GHz to 9GHz)



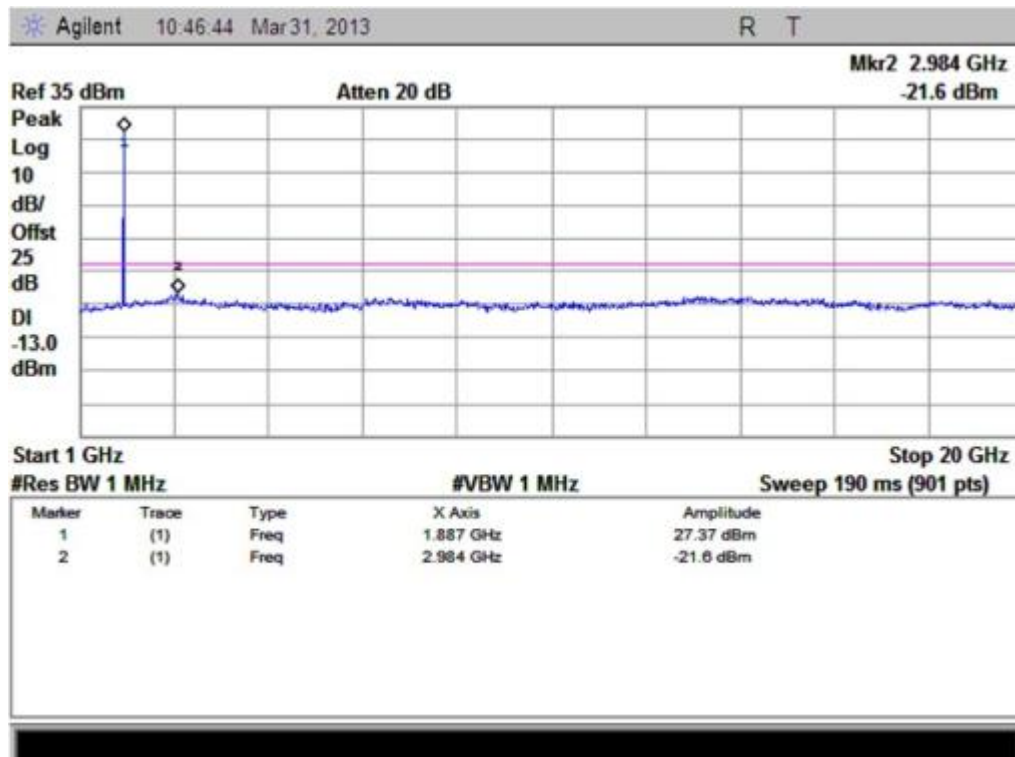
(Plot F1: EDGE 1900MHz Channel = 512, 30MHz to 1GHz)



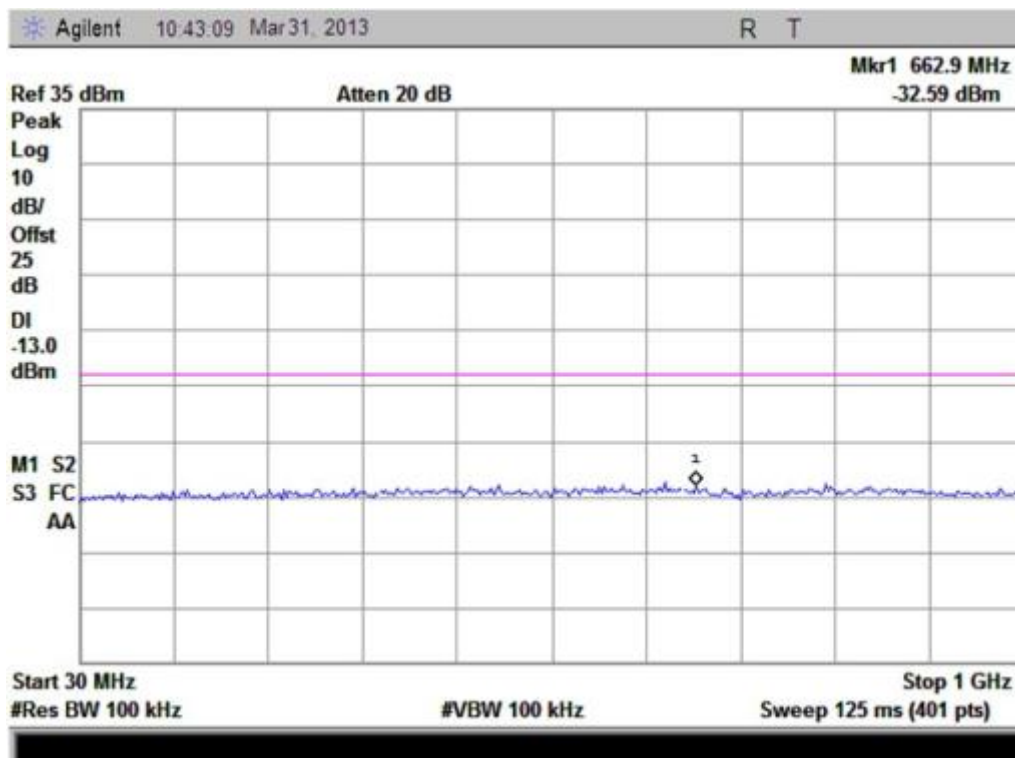
(Plot F2: EDGE 1900MHz Channel = 512, 1GHz to 20GHz)



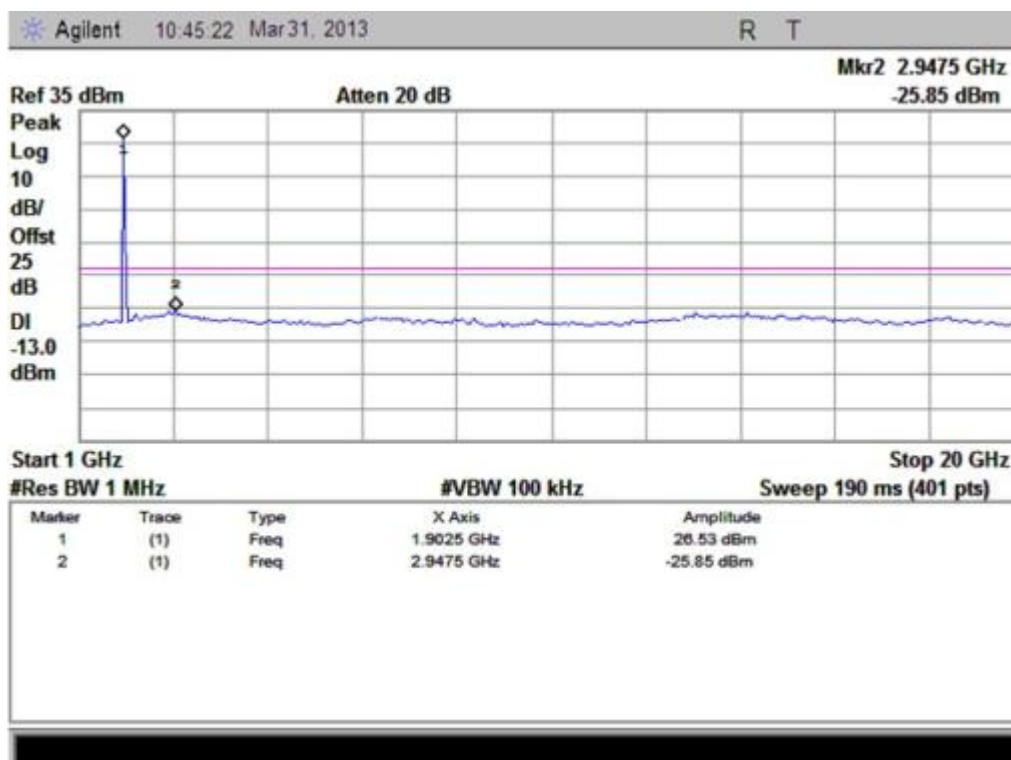
(Plot F3: EDGE 1900MHz Channel = 661, 30MHz to 1GHz)



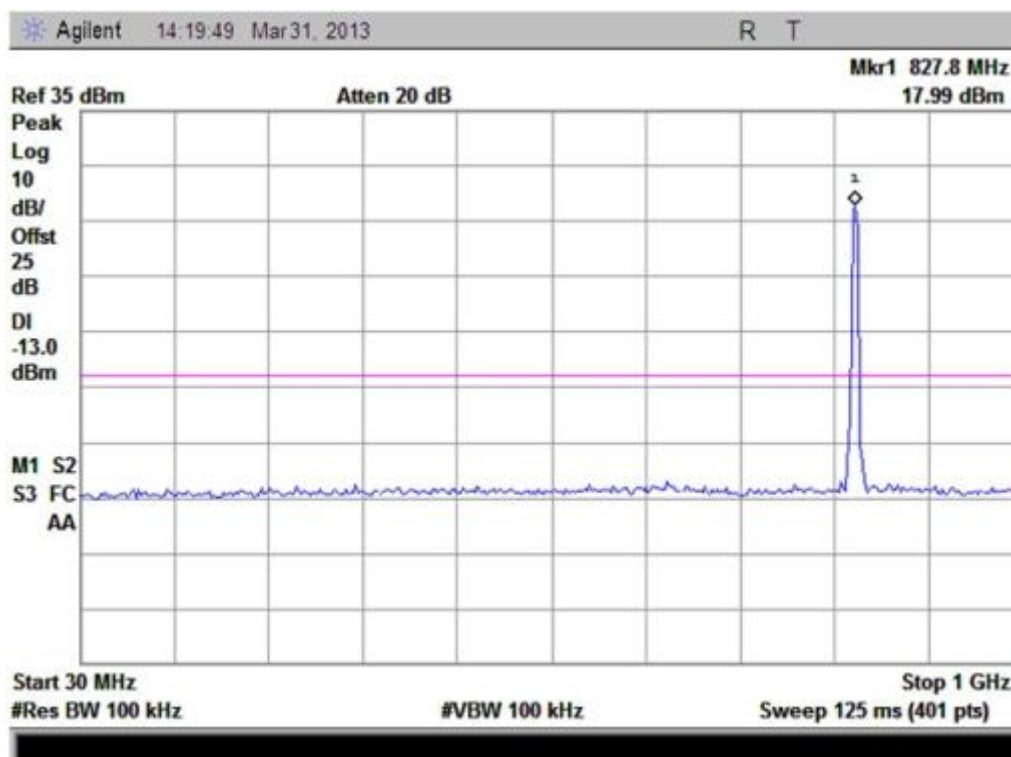
(Plot F4: EDGE 1900MHz Channel = 661, 1GHz to 20GHz)



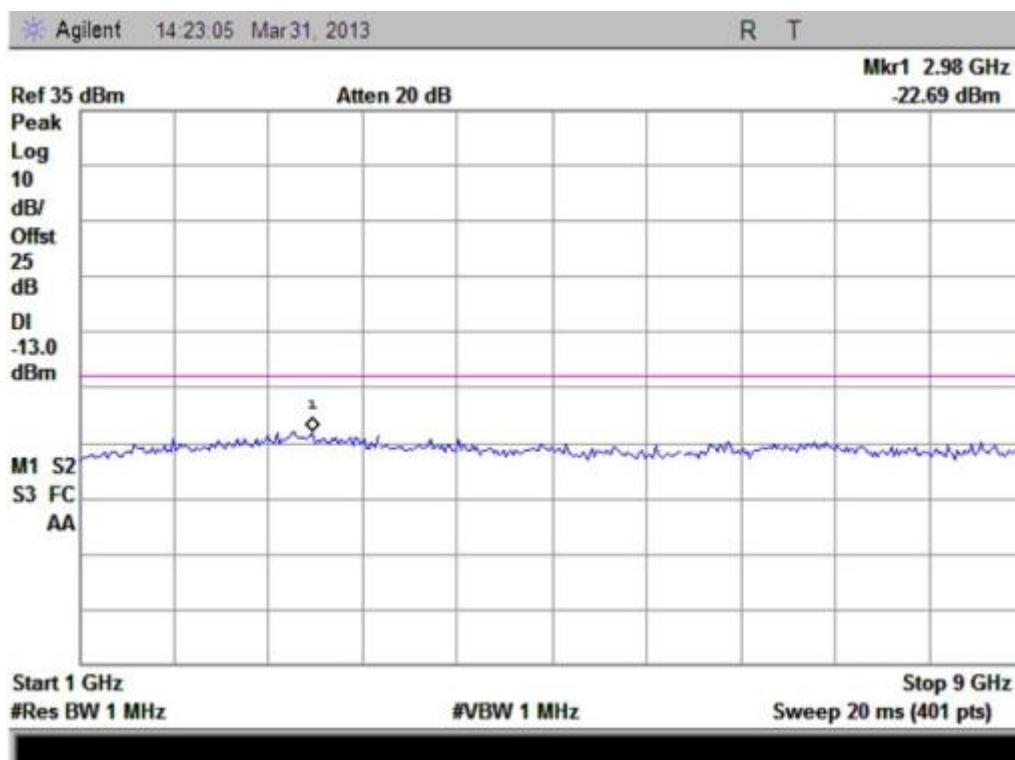
(Plot F5: EDGE 1900MHz Channel = 810, 30MHz to 1GHz)



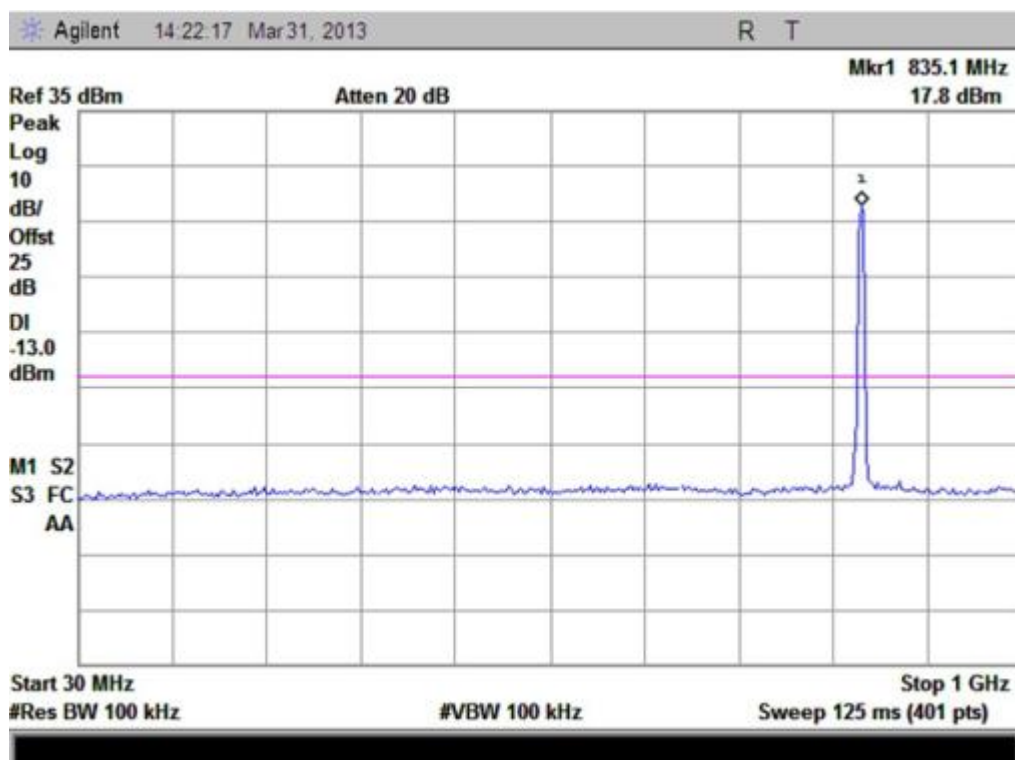
(Plot F6: EDGE 1900MHz Channel = 810, 1GHz to 20GHz)



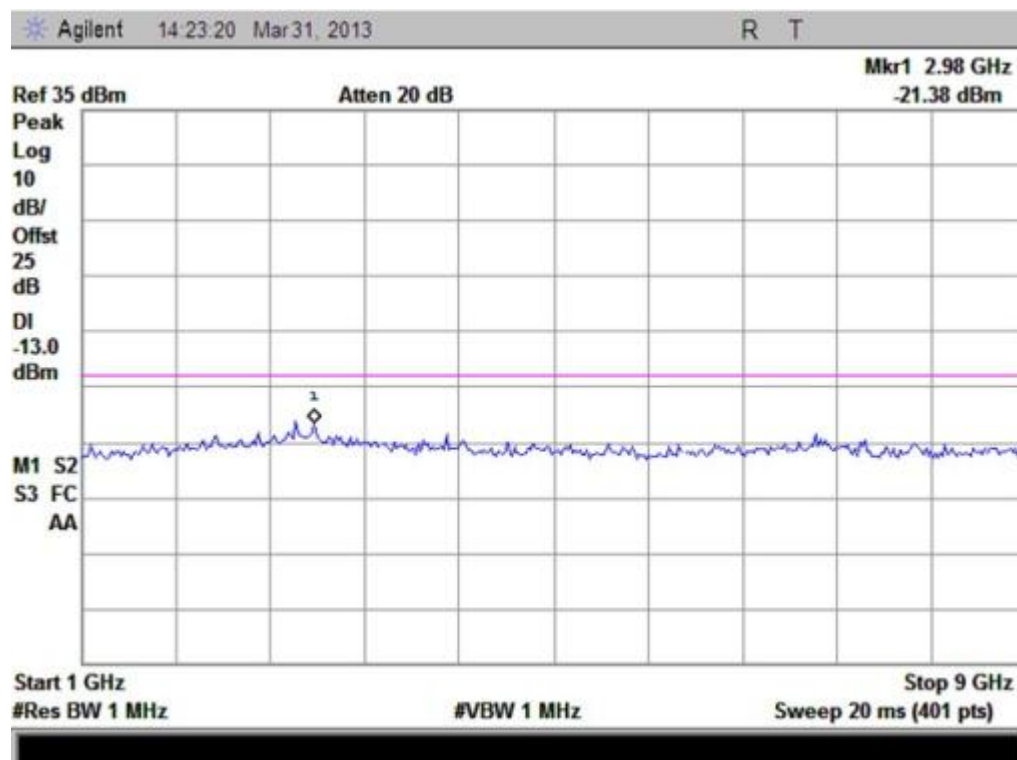
(Plot G1: WCDMA 850MHz Channel = 4132, 30MHz to 1GHz)



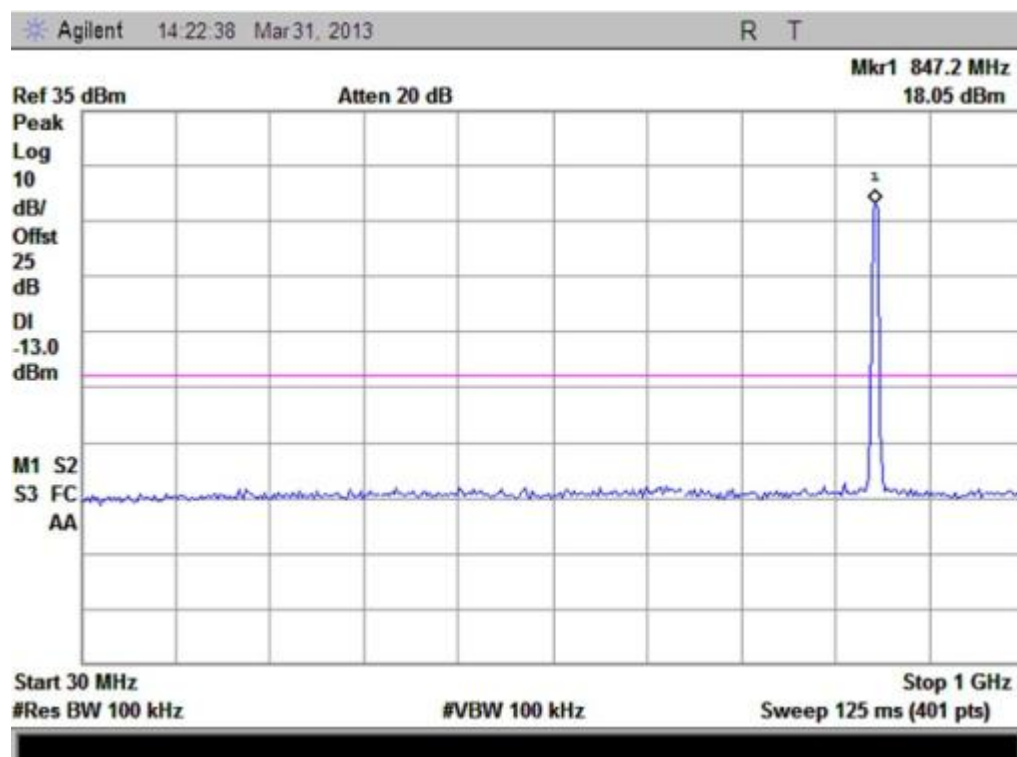
(Plot G2: WCDMA 850MHz Channel = 4132, 1GHz to 9GHz)



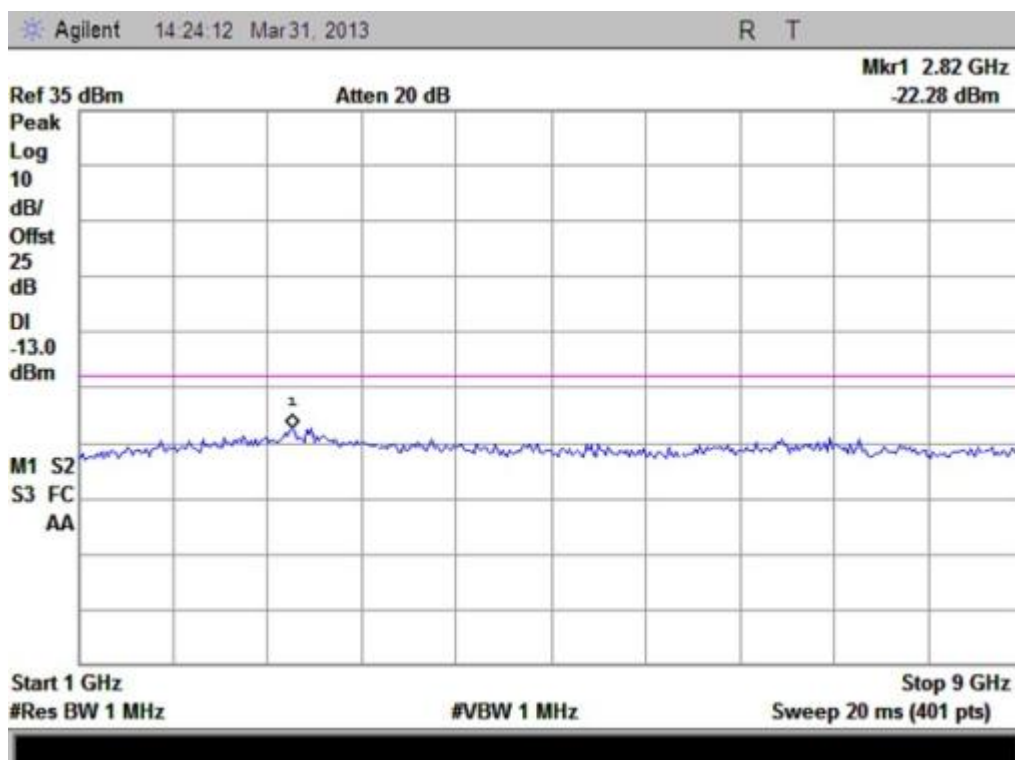
(Plot G3: WCDMA 850MHz Channel = 4175, 30MHz to 1GHz)



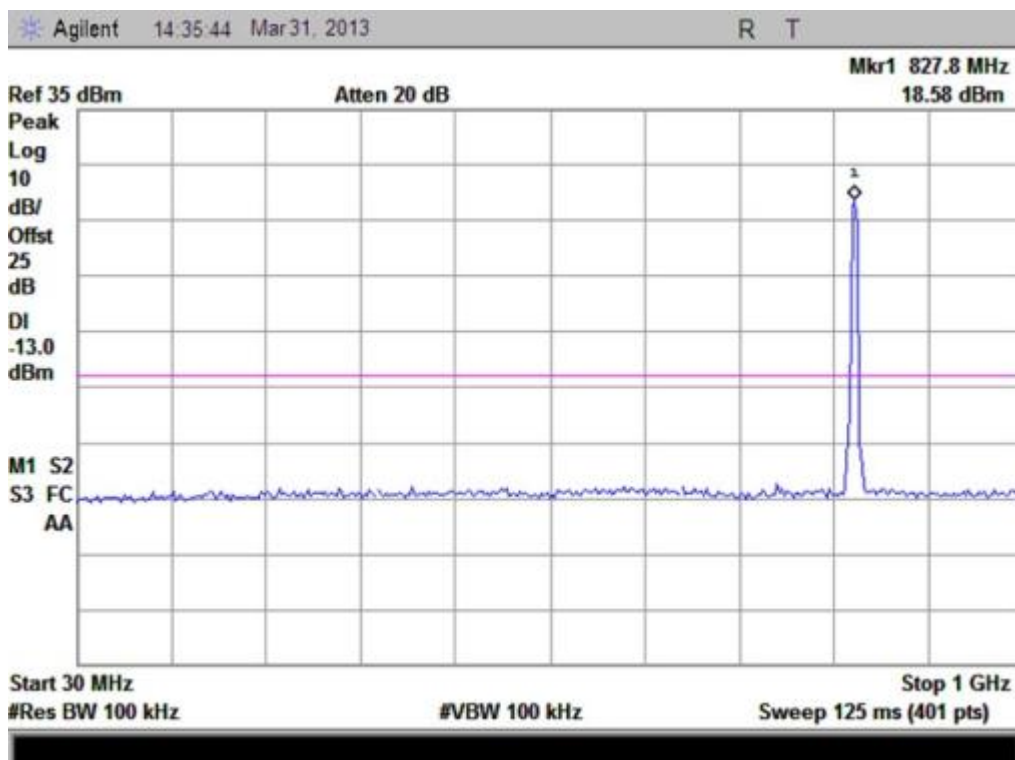
(Plot G4: WCDMA 850MHz Channel = 4175, 1GHz to 9GHz)



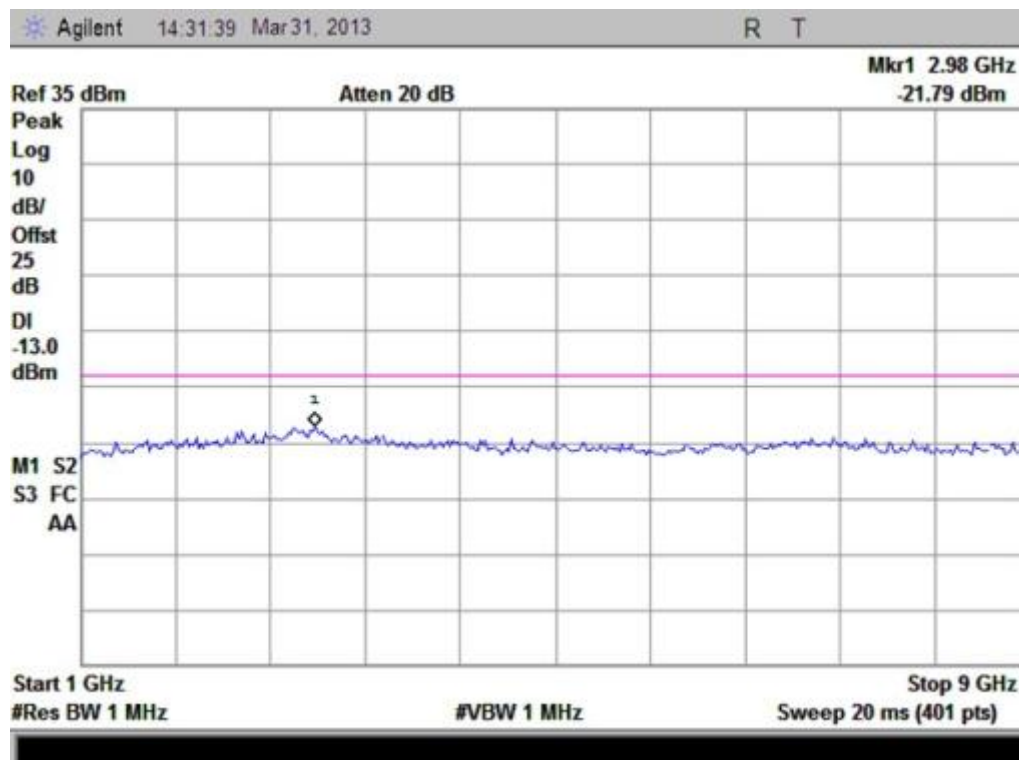
(Plot G5: WCDMA 850MHz Channel = 4233, 30MHz to 1GHz)



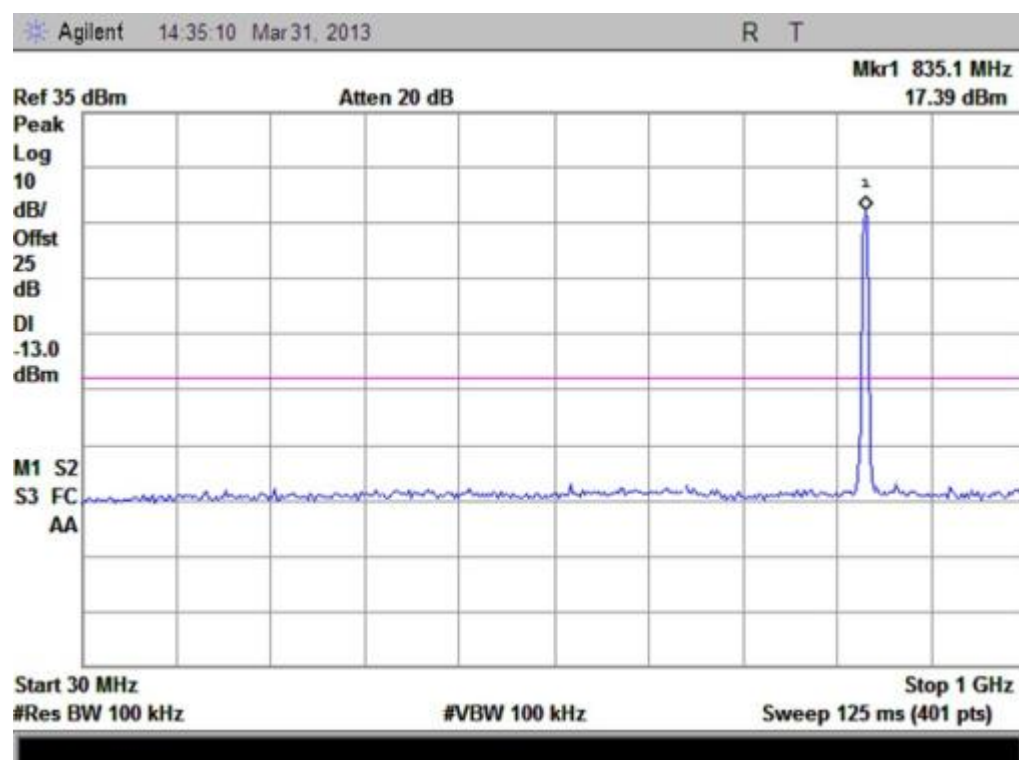
(Plot G6: WCDMA 850MHz Channel = 4233, 1GHz to 9GHz)



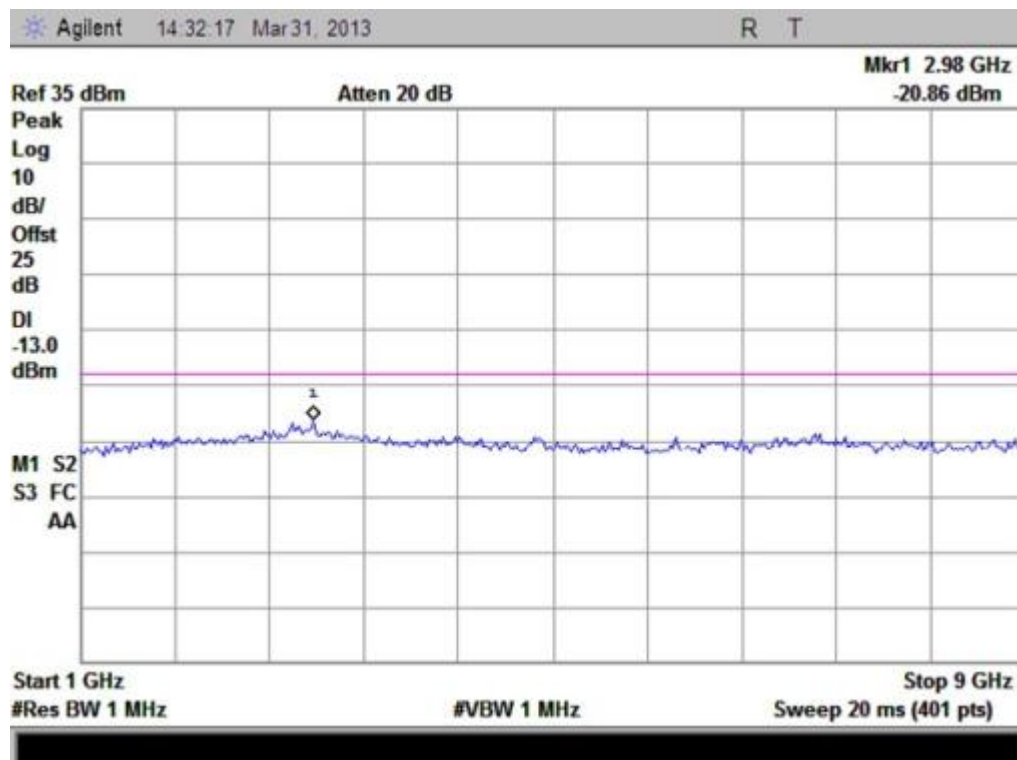
(Plot H1: HSDPA 850MHz Channel = 4132, 30MHz to 1GHz)



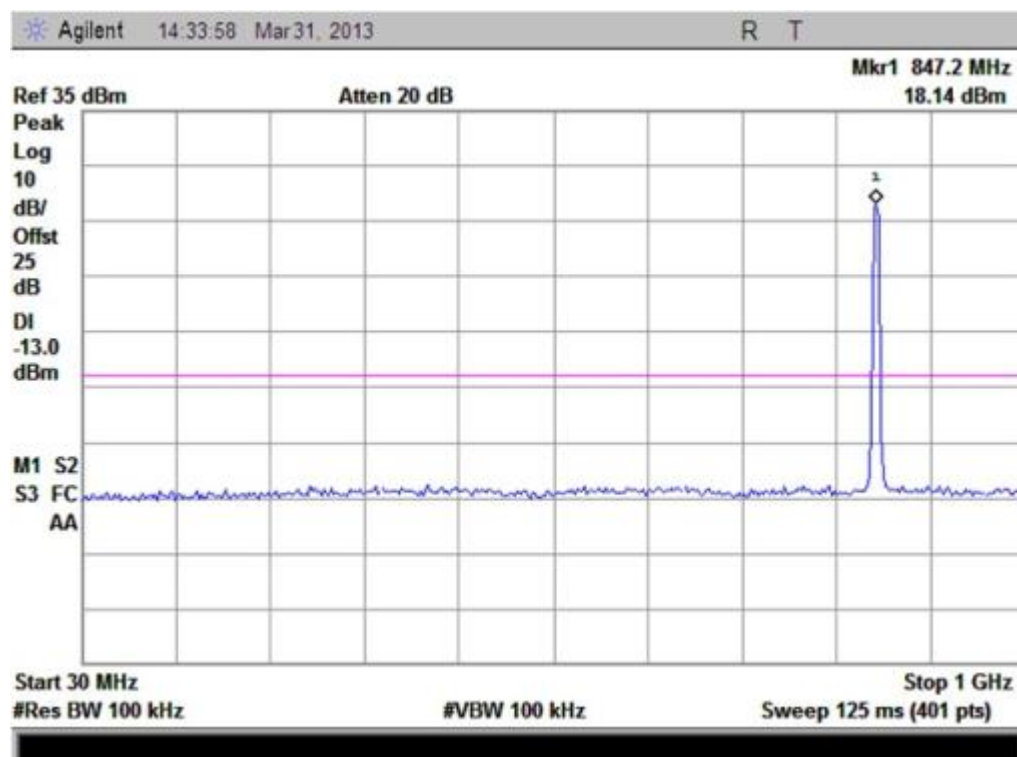
(Plot H2: HSDPA 850MHz Channel = 4132, 1GHz to 9GHz)



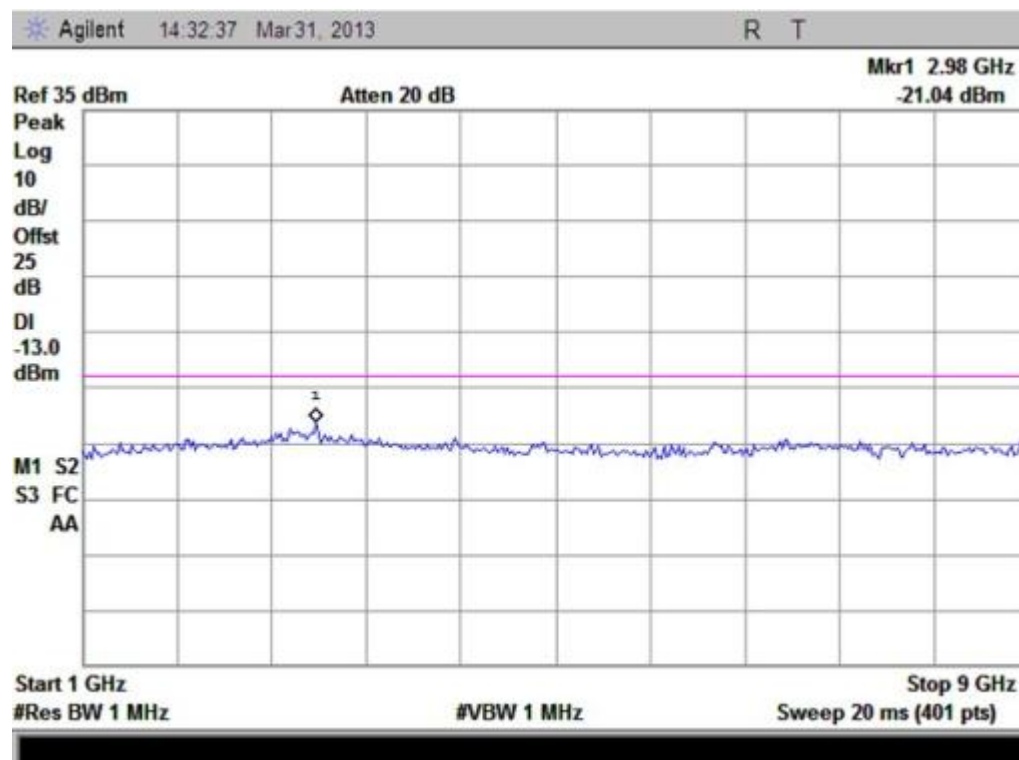
(Plot H3: HSDPA 850MHz Channel = 4175, 30MHz to 1GHz)



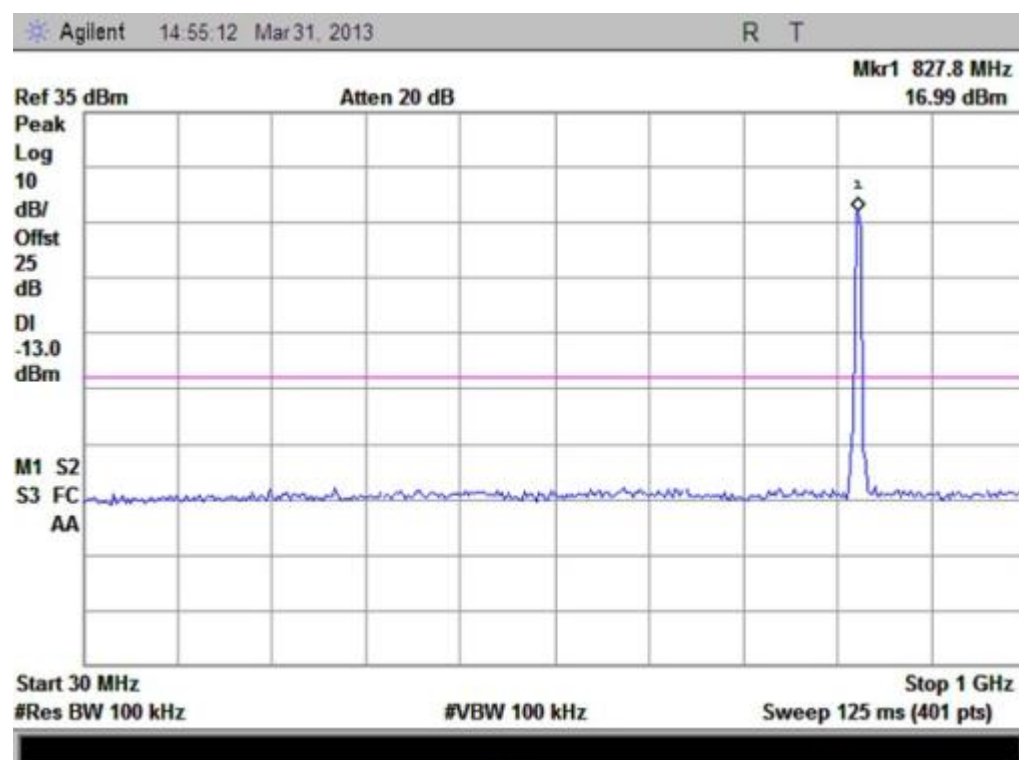
(Plot H4: HSDPA 850MHz Channel = 4175, 1GHz to 9GHz)



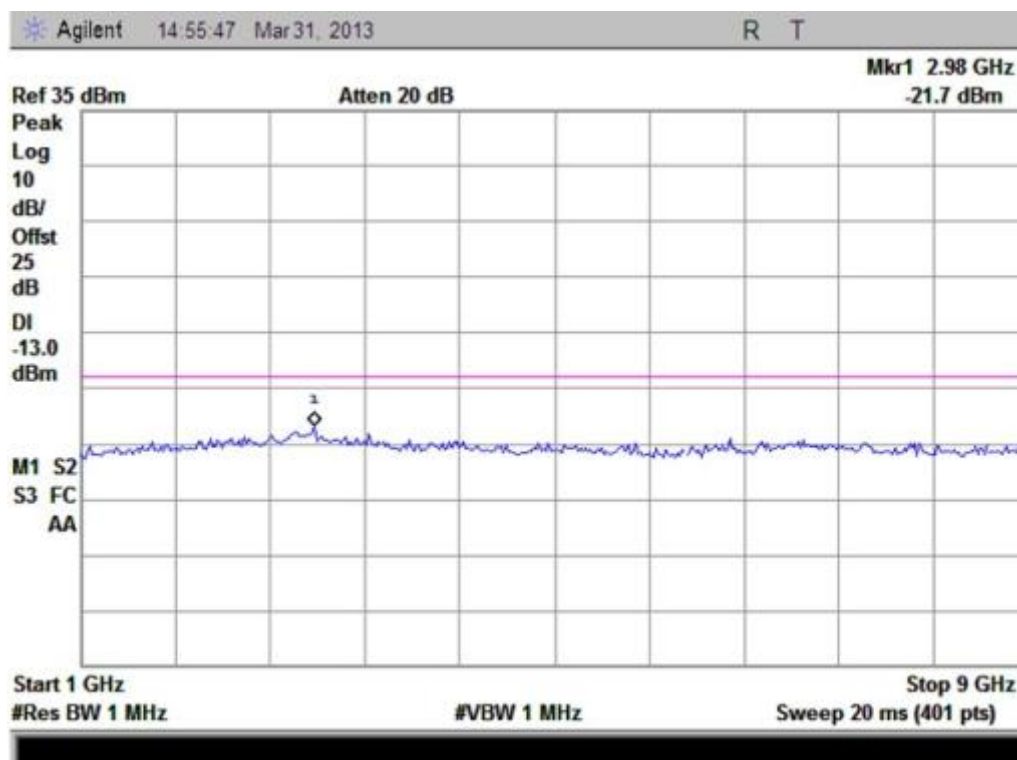
(Plot H5: HSDPA 850MHz Channel = 4233, 30MHz to 1GHz)



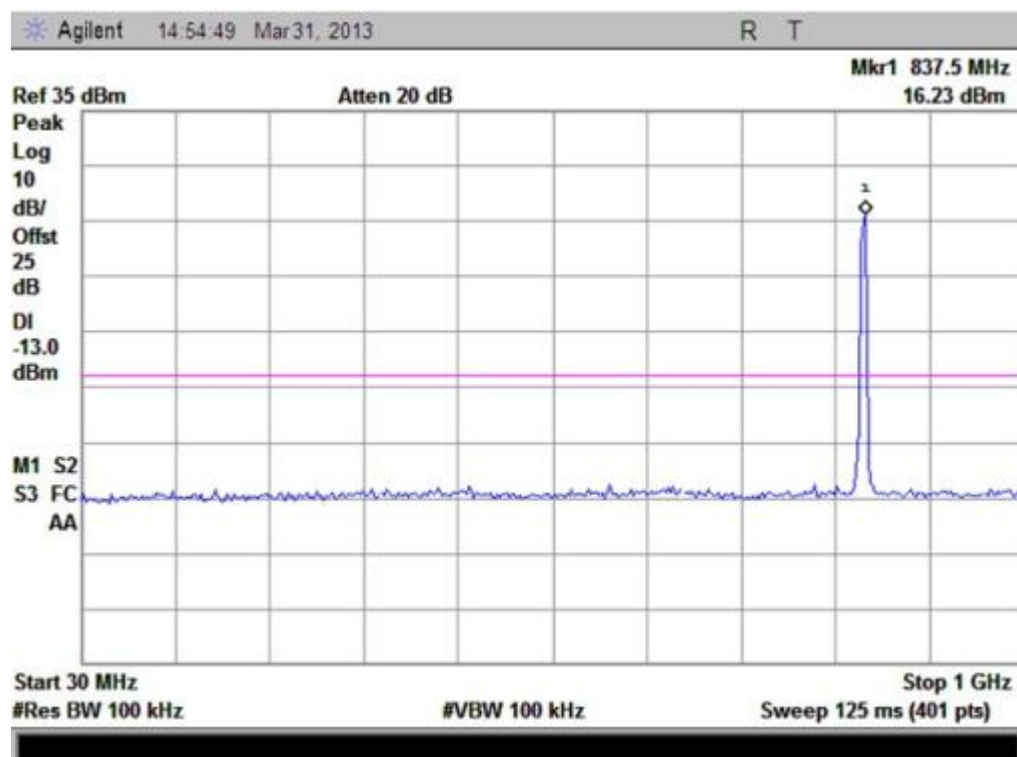
(Plot H6: HSDPA 850MHz Channel = 4233, 1GHz to 9GHz)



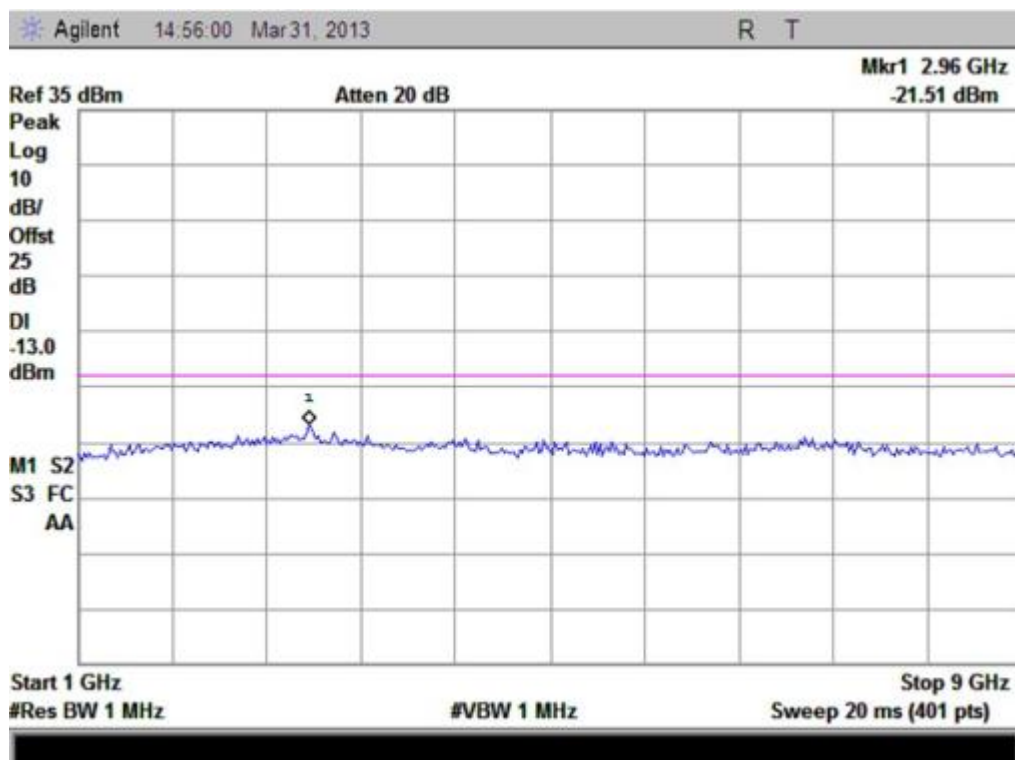
(Plot I1: HSUPA 850MHz Channel = 4132, 30MHz to 1GHz)



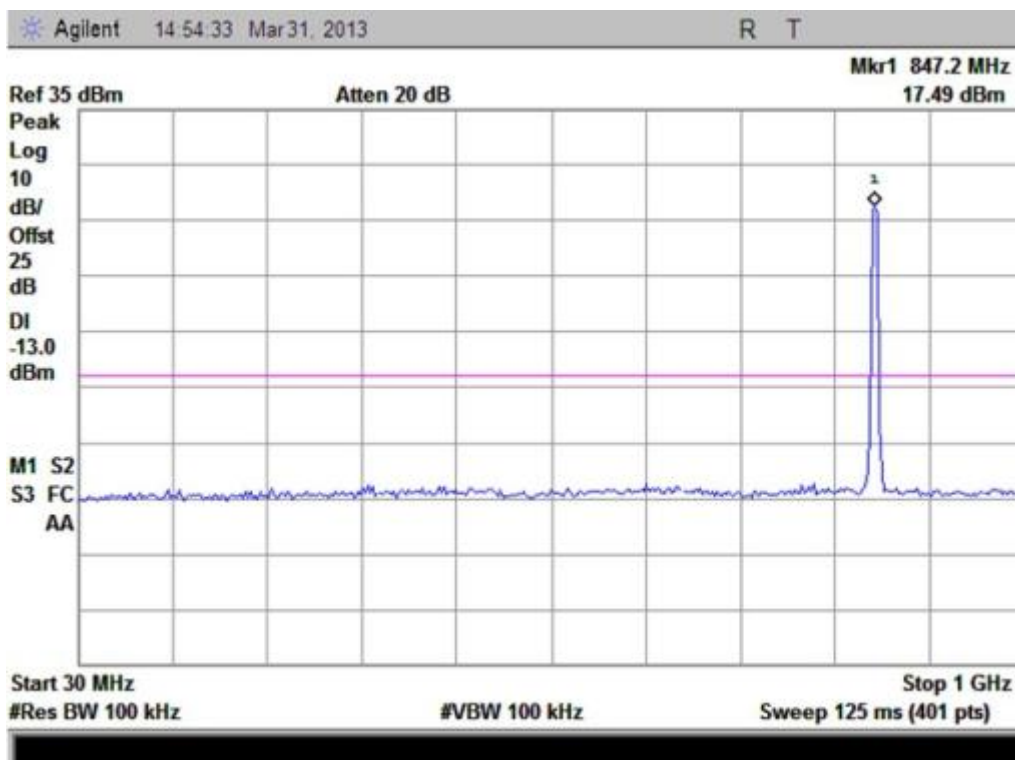
(Plot I2: HSUPA 850MHz Channel = 4132, 1GHz to 9GHz)



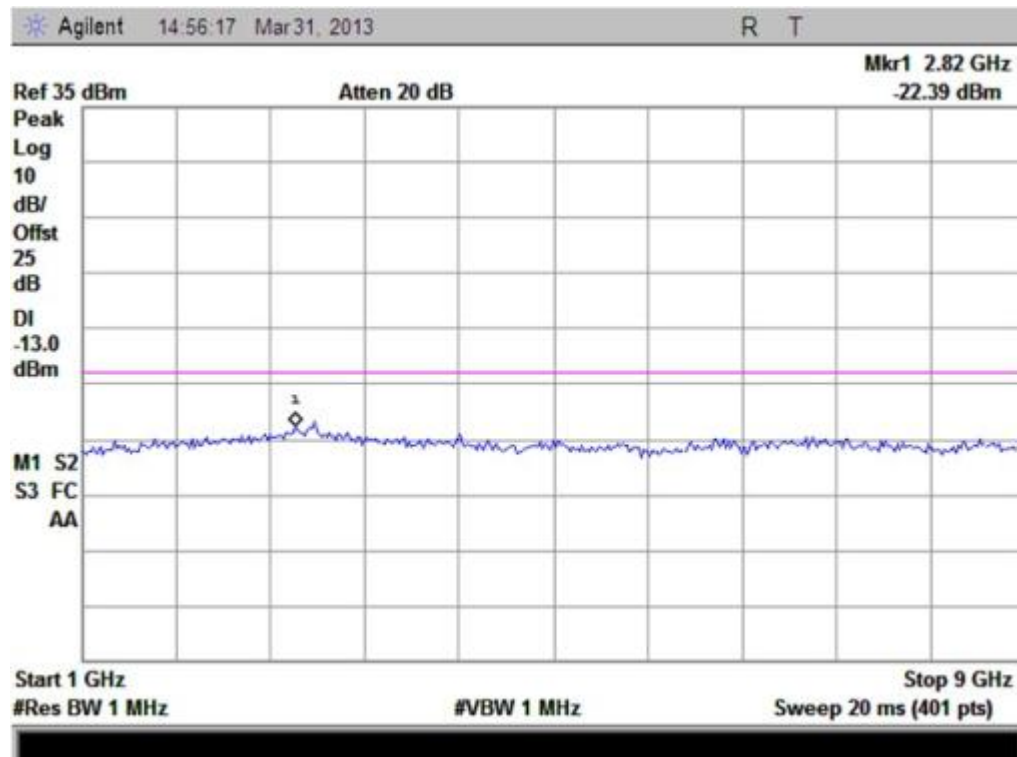
(Plot I3: HSUPA 850MHz Channel = 4175, 30MHz to 1GHz)



(Plot I4: HSUPA 850MHz Channel = 4175, 1GHz to 9GHz)



(Plot I5: HSUPA 850MHz Channel = 4233, 30MHz to 1GHz)



(Plot I6: HSUPA 850MHz Channel = 4233, 1GHz to 9GHz)

2.6 Band Edge

2.6.1 Requirement

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

2.6.2 Test Description

See section 2.1.2 of this report.

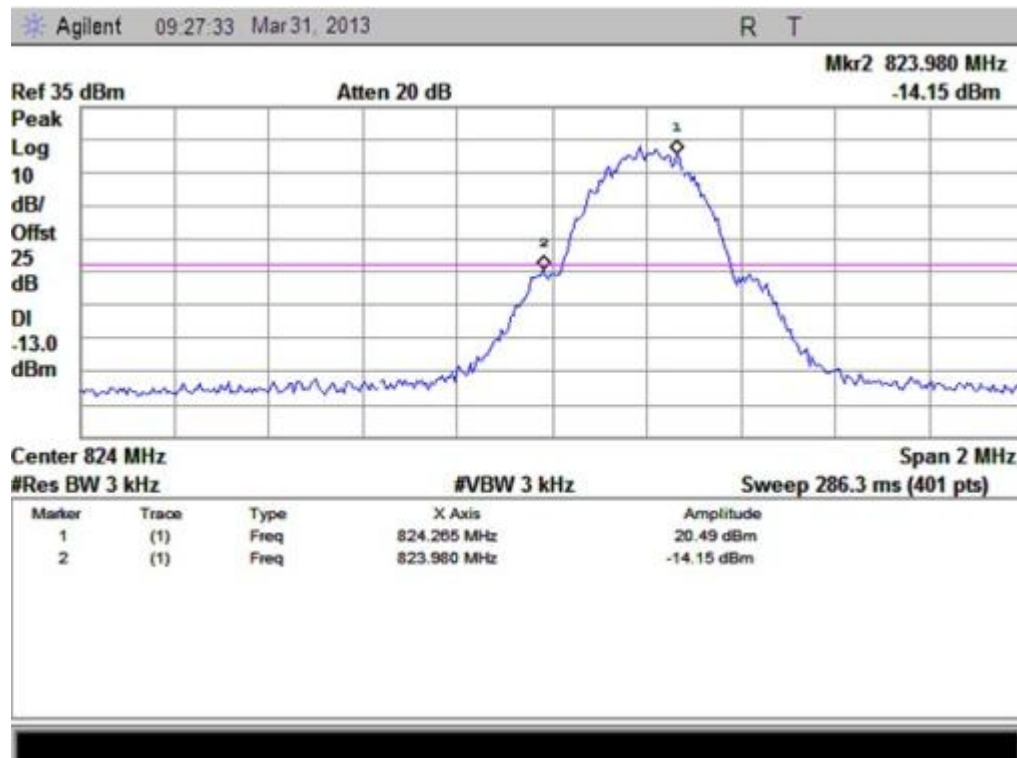
2.6.3 Test Result

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

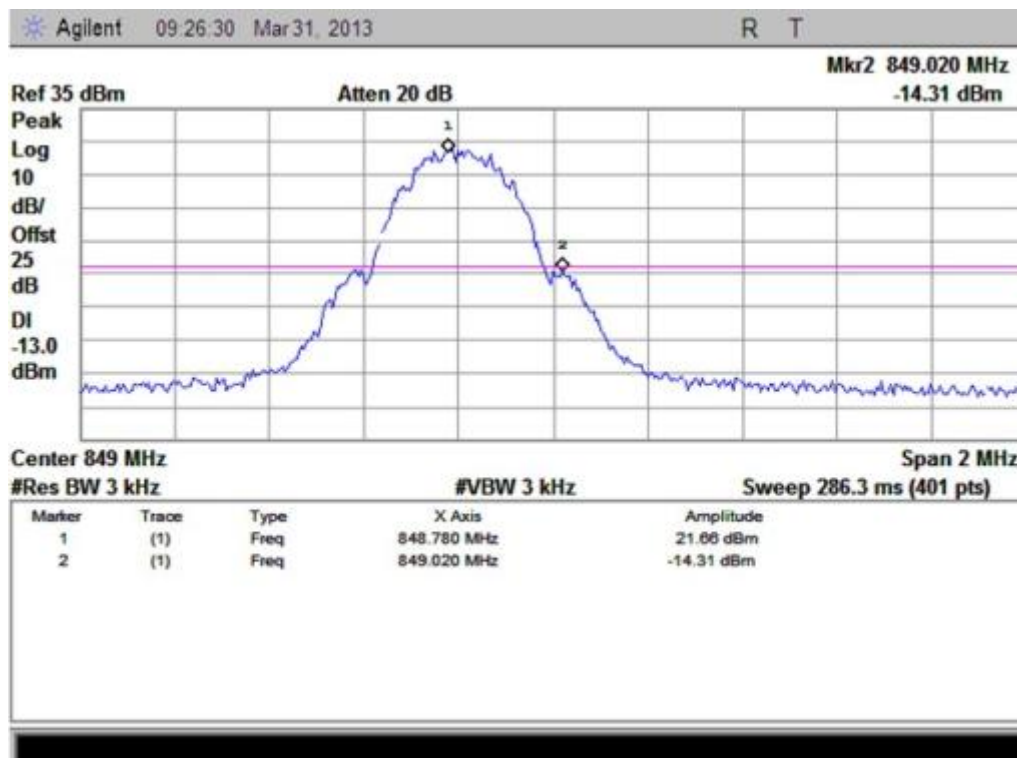
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-14.15	Plot 1	-13	PASS
	251	848.8	-14.31	Plot 2		PASS
GSM 1900MHz	512	1850.2	-16.98	Plot 3	-13	PASS
	810	1909.8	-17.08	Plot 4		PASS
GPRS 850MHz	128	824.2	-14.25	Plot 5	-13	PASS
	251	848.8	-13.41	Plot 6		PASS
GPRS 1900MHz	512	1850.2	-16.63	Plot 7	-13	PASS
	810	1909.8	-17.65	Plot 8		PASS
EDGE 850MHz	128	824.2	-13.84	Plot 9	-13	PASS
	251	848.8	-15.23	Plot 10		PASS
EDGE 1900MHz	512	1850.2	-13.60	Plot 11	-13	PASS
	810	1909.8	-15.77	Plot 12		PASS
WCDMA 850MHz	4132	826.4	-17.94	Plot 13	-13	PASS
	4233	846.6	-18.41	Plot 14		PASS
HSDPA 850MHz	4132	826.4	-14.02	Plot 15	-13	PASS
	4233	846.6	-14.03	Plot 16		PASS
HSUPA 850MHz	4132	826.4	-14.20	Plot 17	-13	PASS
	4233	846.6	-17.07	Plot 18		PASS

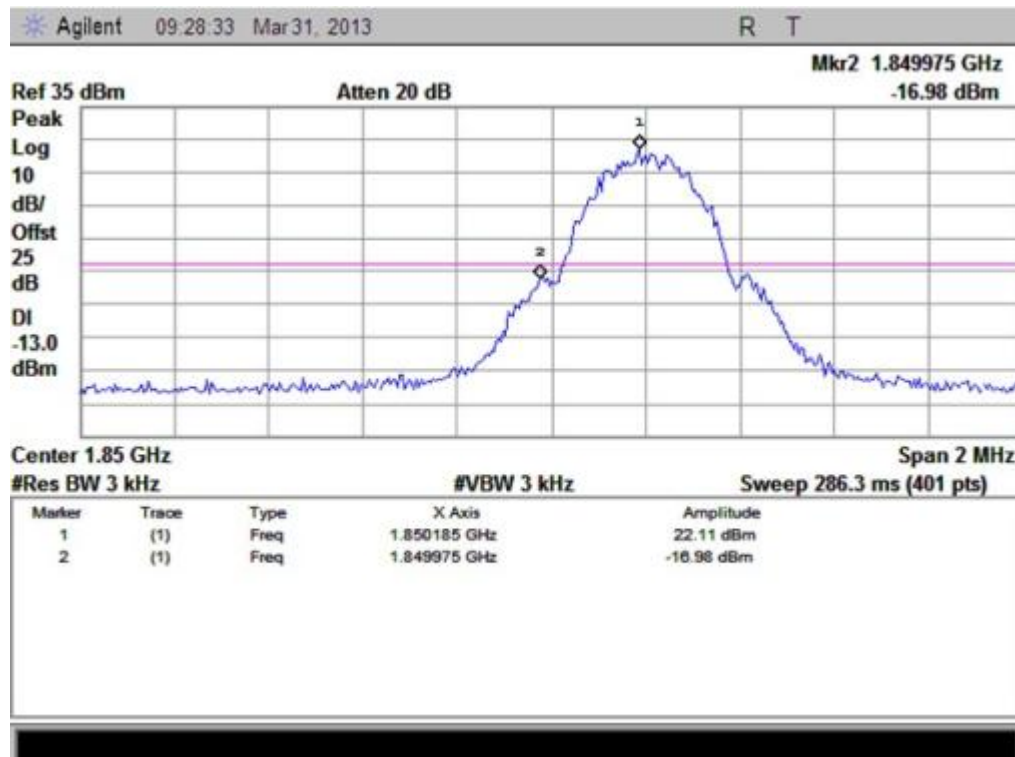
2. Test Plots:



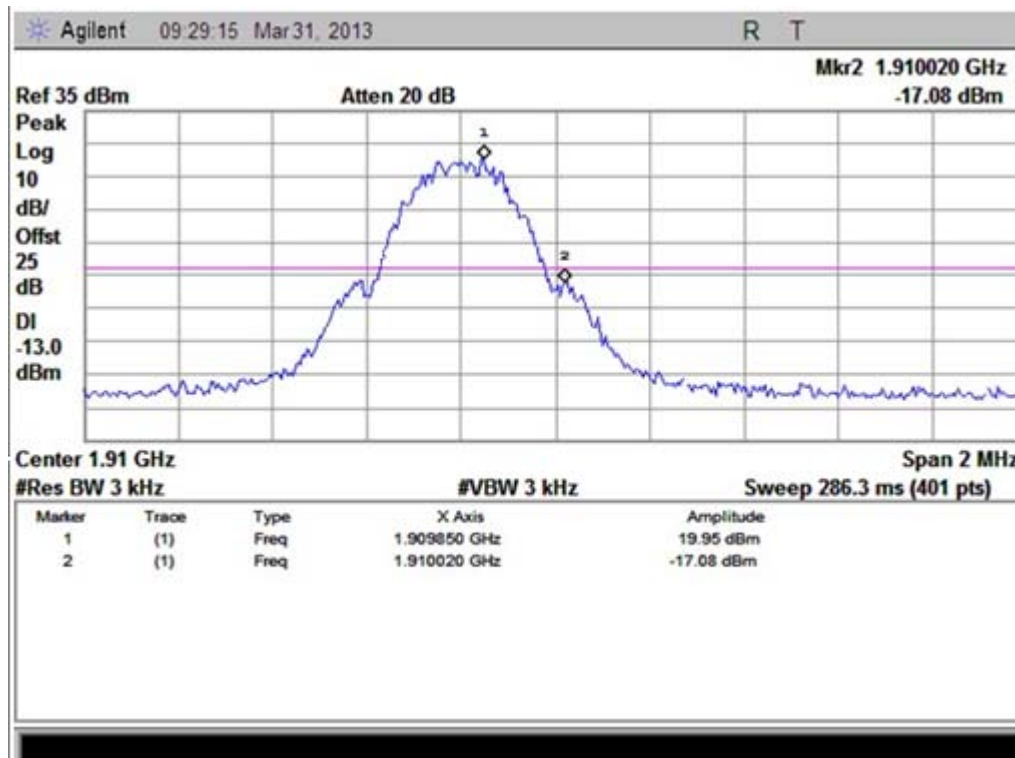
(Plot 1: GSM 850 Channel = 128)



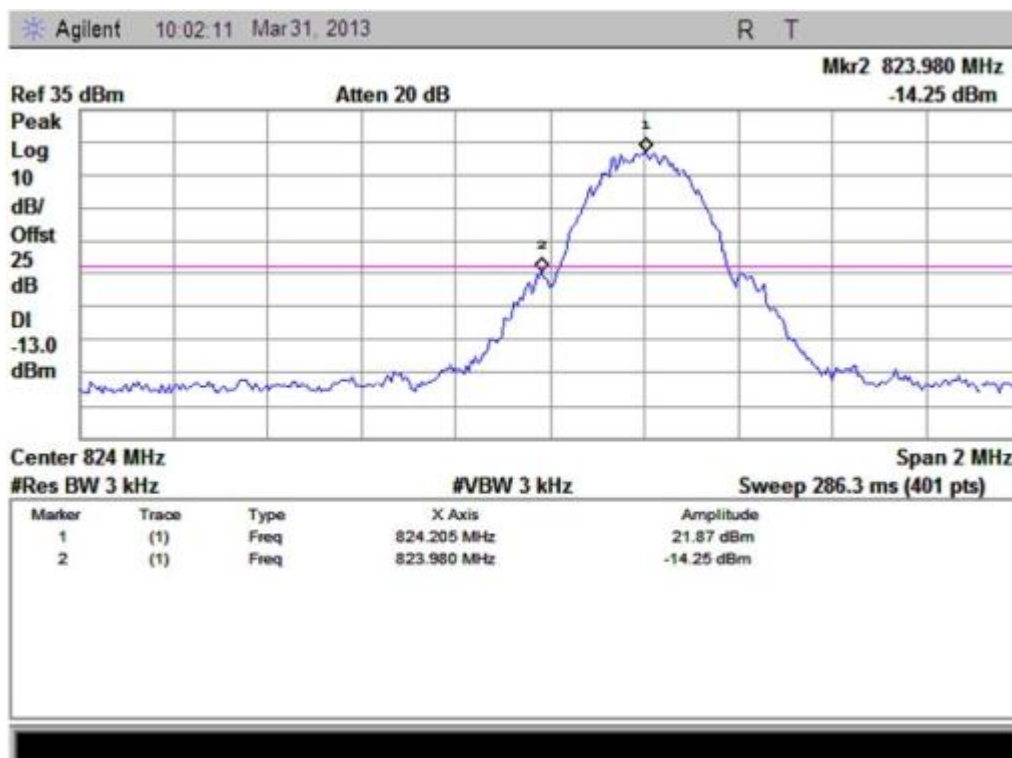
(Plot 2: GSM 850 Channel = 251)



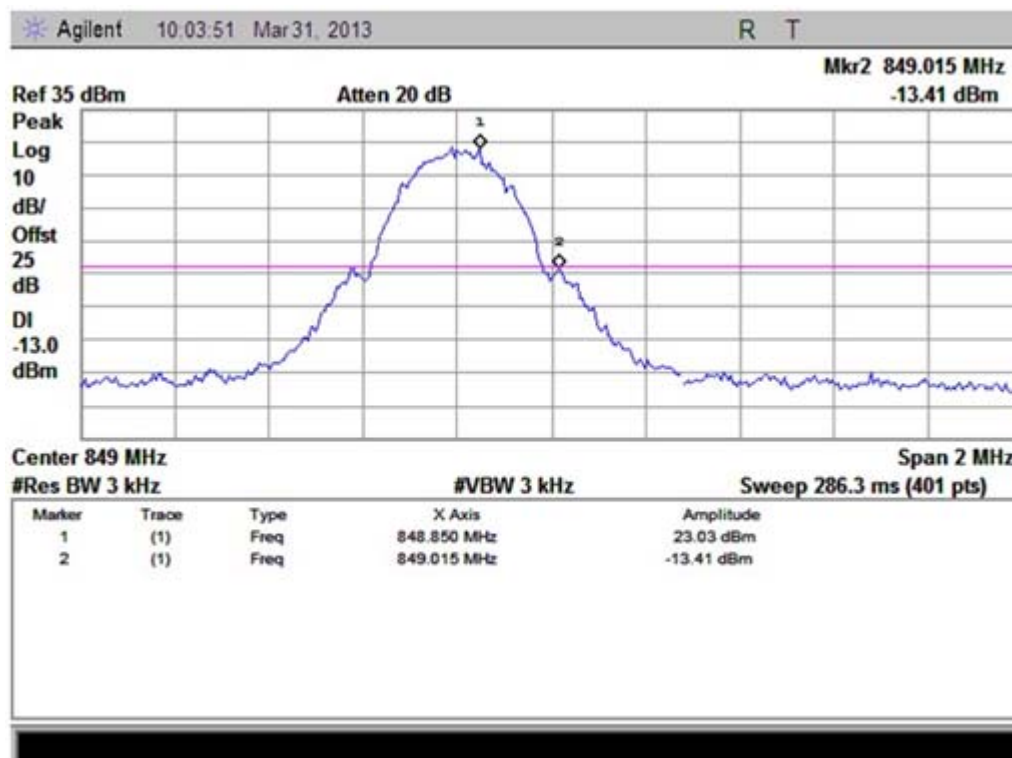
(Plot 3: GSM 1900 Channel = 512)



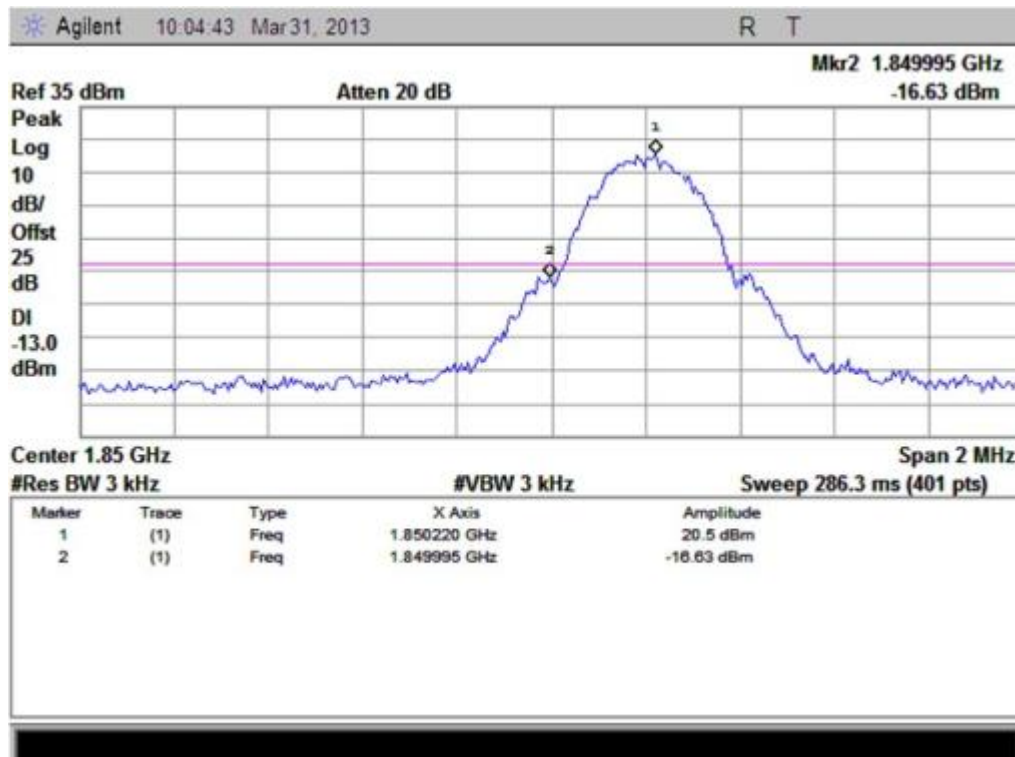
(Plot 4: GSM 1900 Channel = 810)



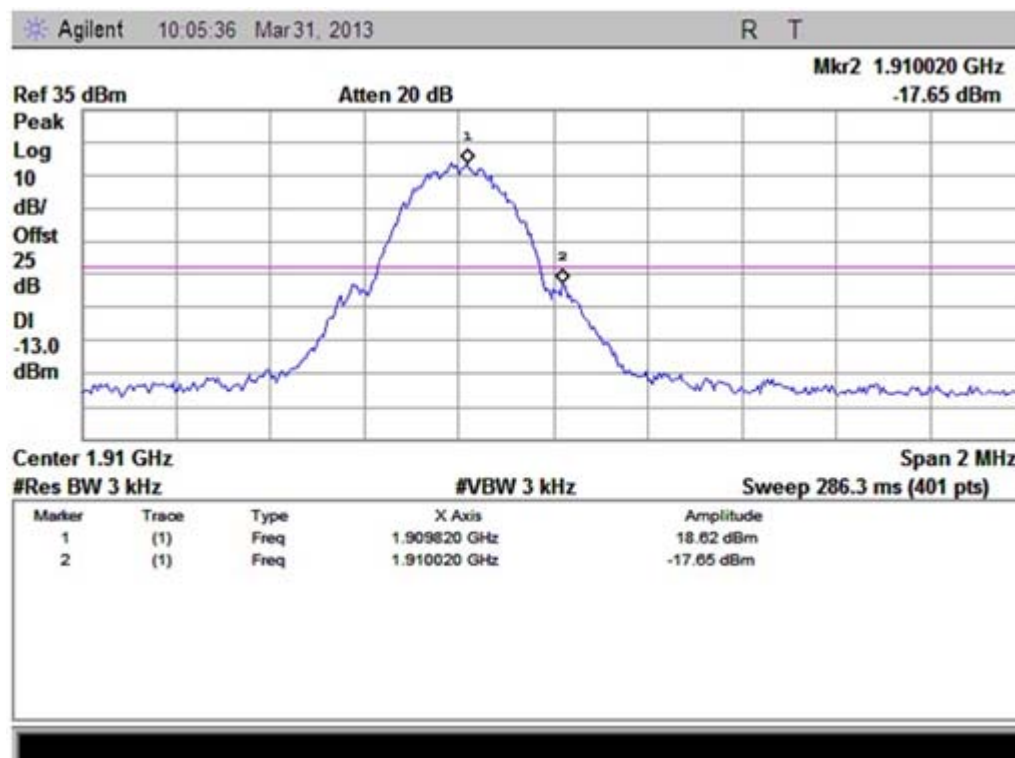
(Plot 5: GPRS 850 Channel = 128)



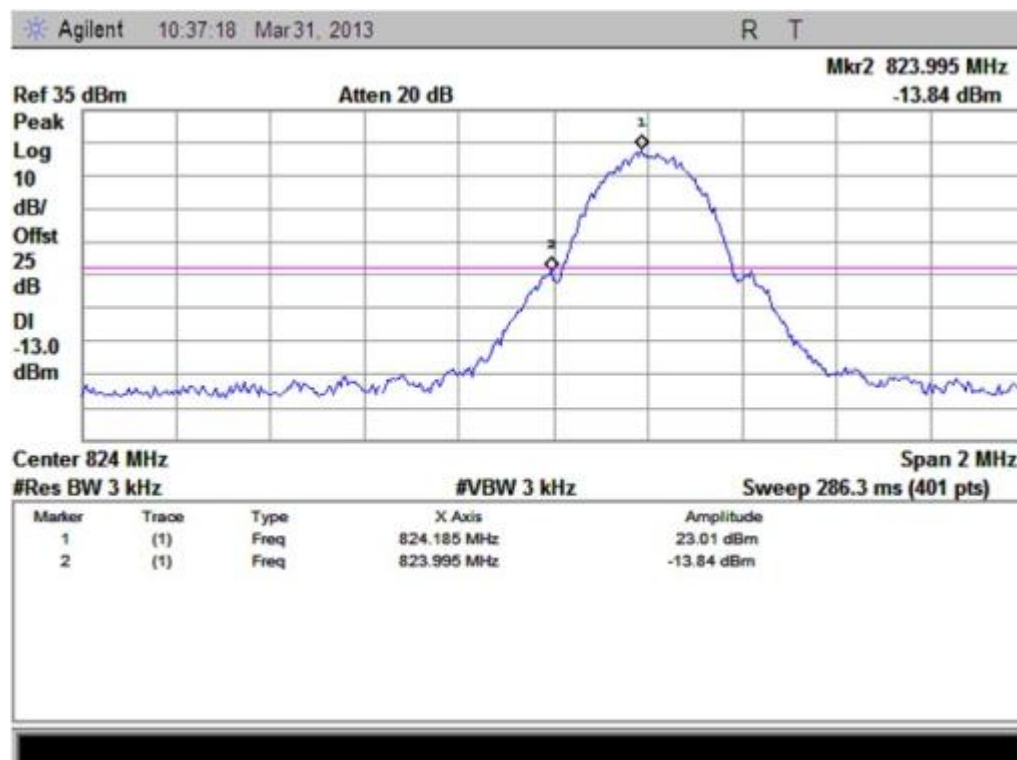
(Plot 6: GPRS 850 Channel = 251)



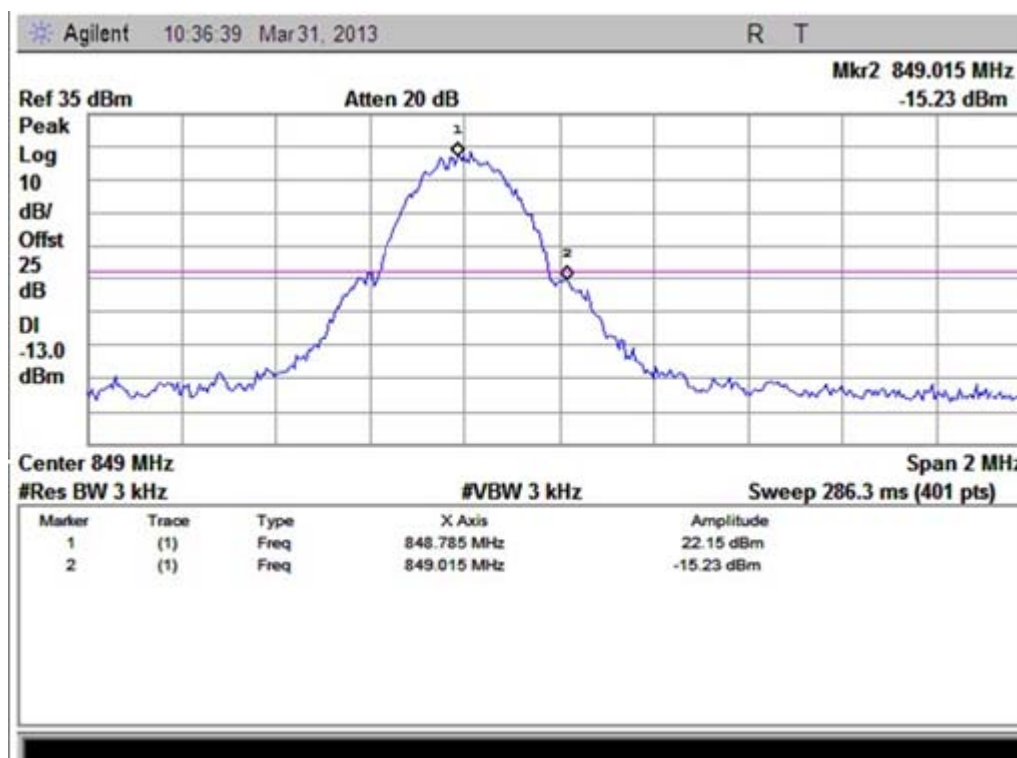
(Plot 7: GPRS 1900 Channel = 512)



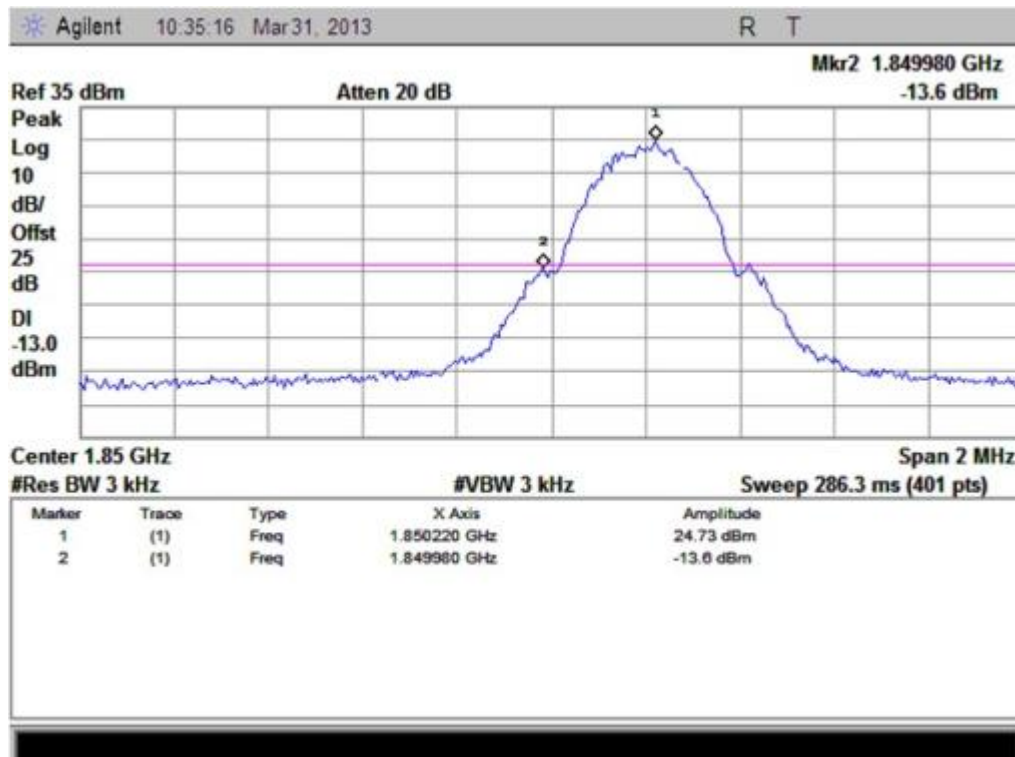
(Plot 8: GPRS 1900 Channel = 810)



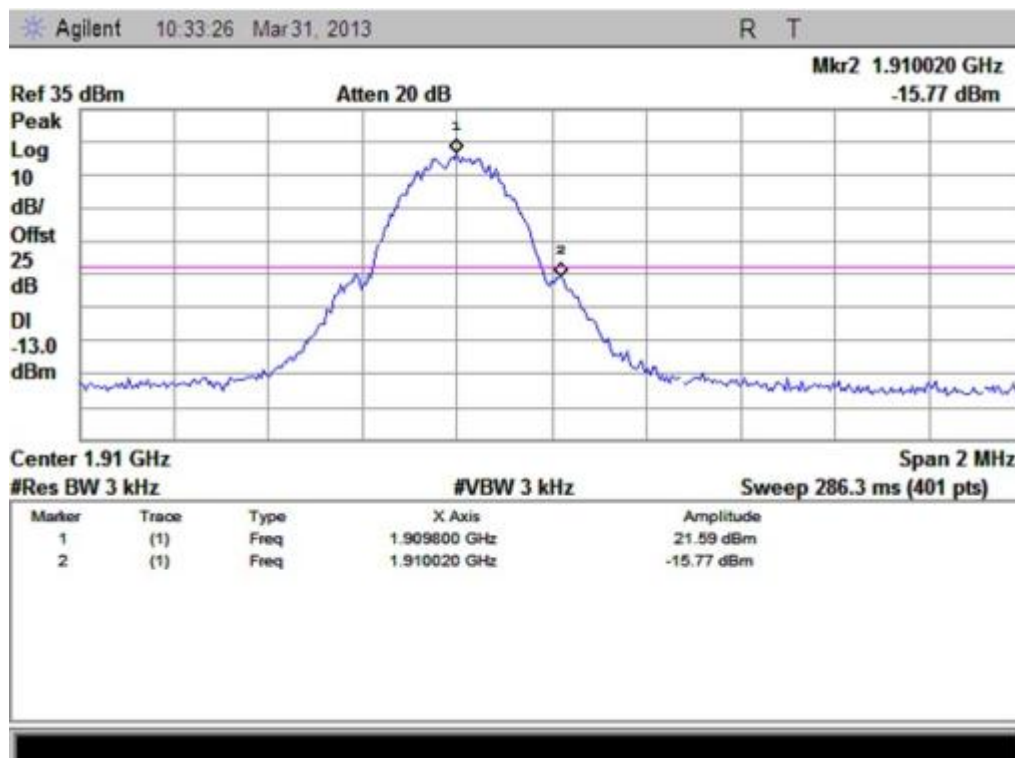
(Plot 9: EDGE 850 Channel = 128)



(Plot 10: EDGE 850 Channel = 251)



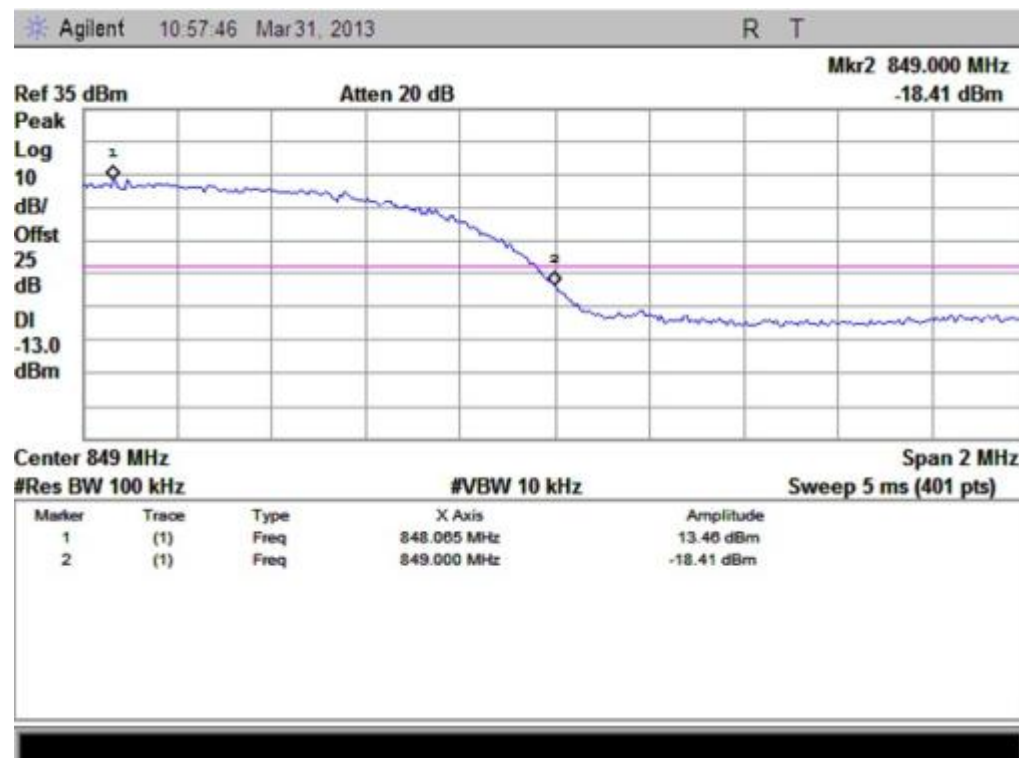
(Plot 11: EDGE 1900 Channel = 512)



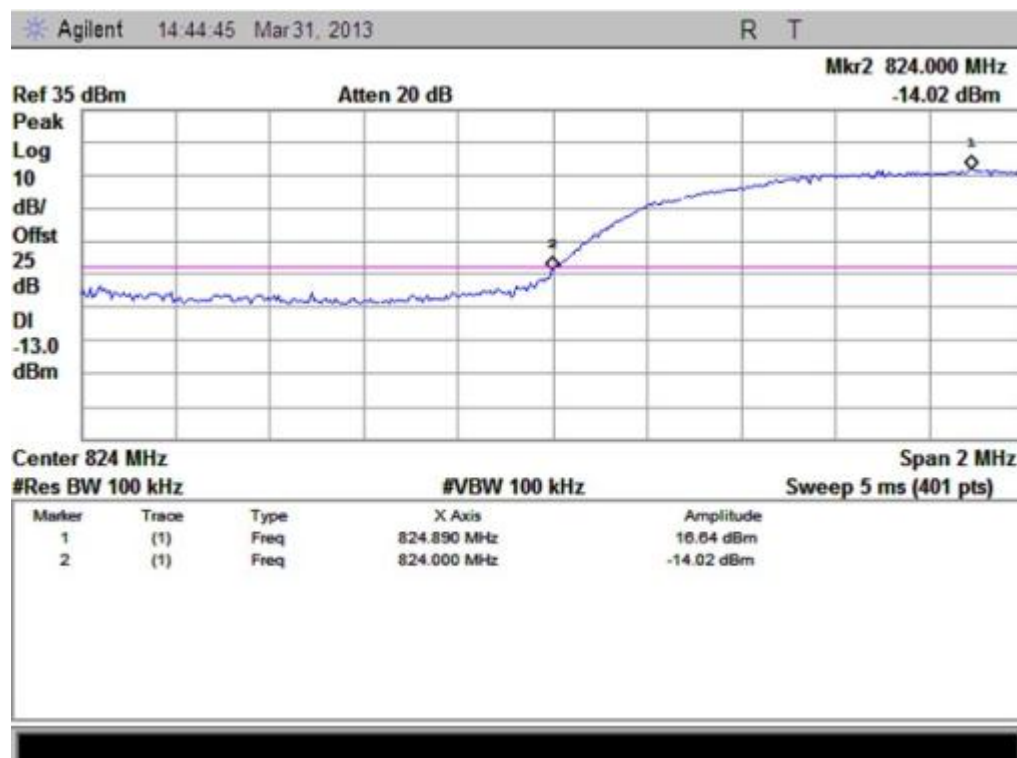
(Plot 12: EDGE 1900 Channel = 810)



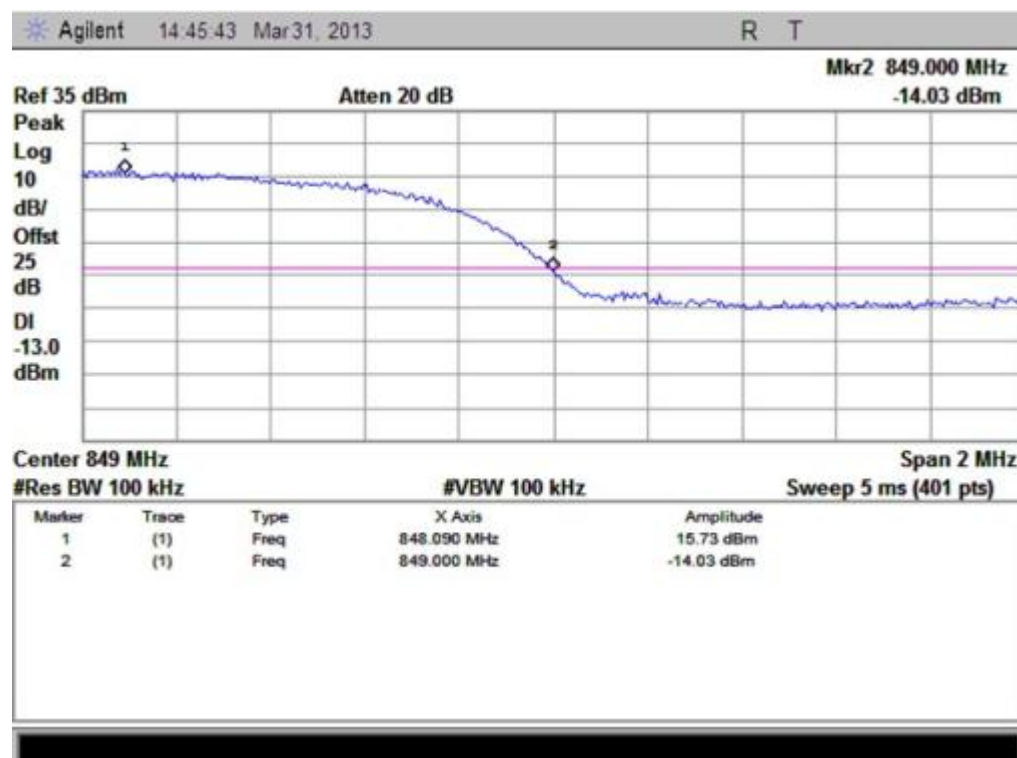
(Plot 13: WCDMA 850 Channel = 4132)



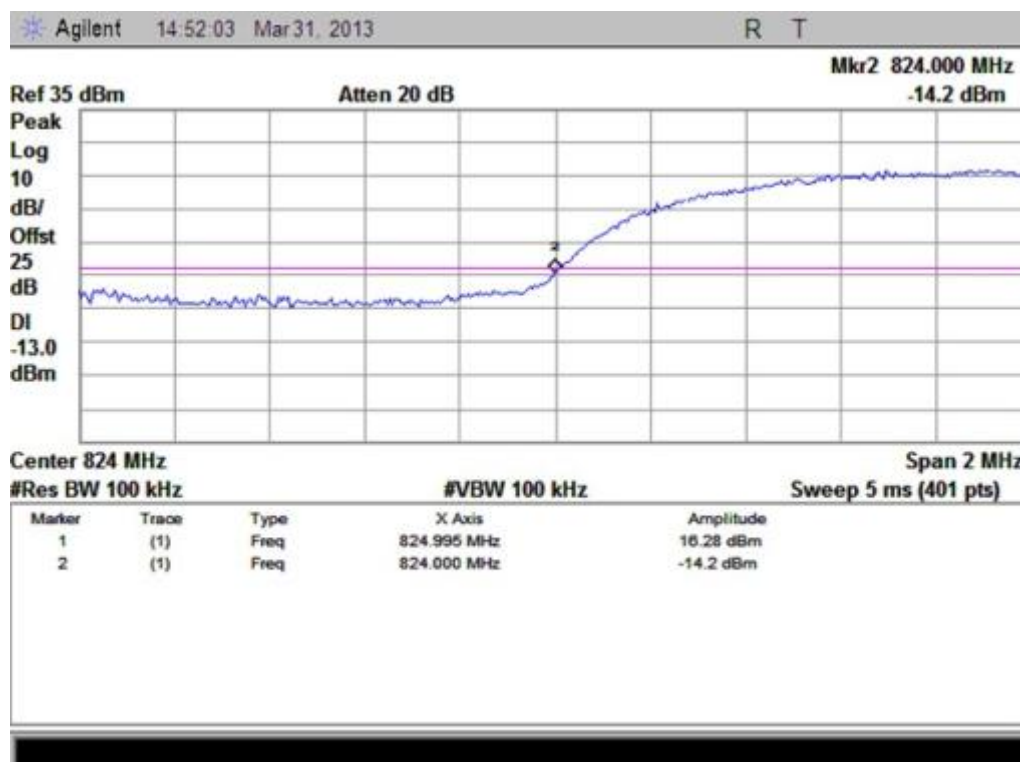
(Plot 14: WCDMA 850 Channel = 4233)



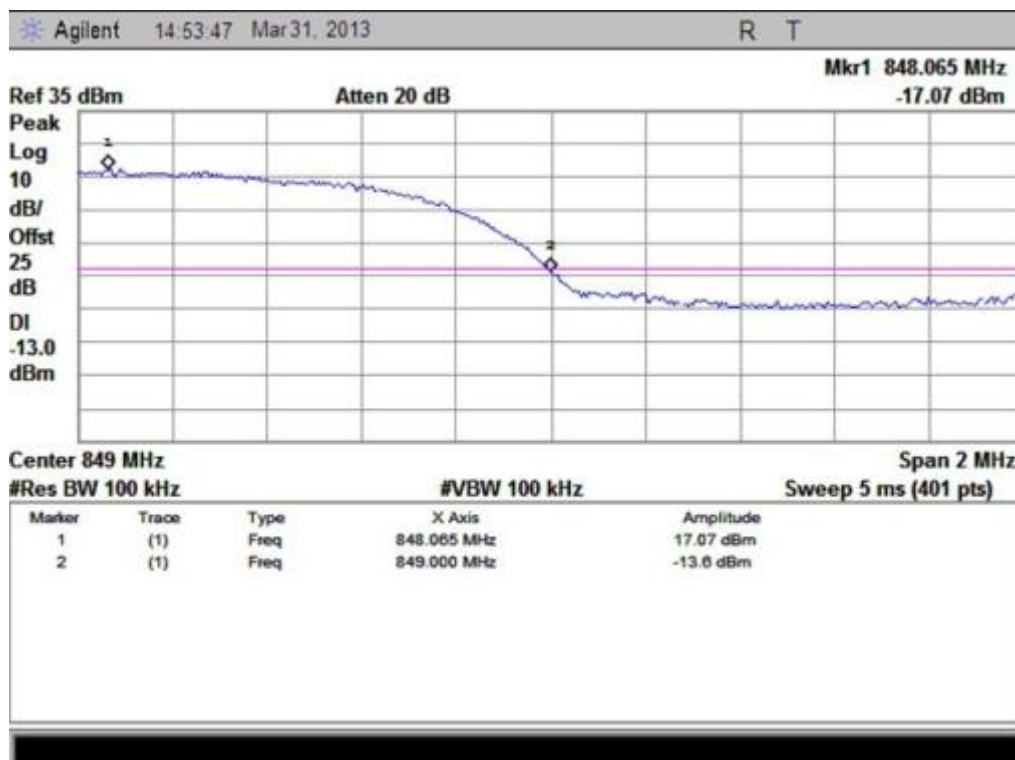
(Plot 15: HSDPA 850 Channel = 4132)



(Plot 16: HSDPA 850 Channel = 4233)



(Plot 17: HSUPA 850 Channel = 4132)



(Plot 18: HSUPA 850 Channel = 4233)

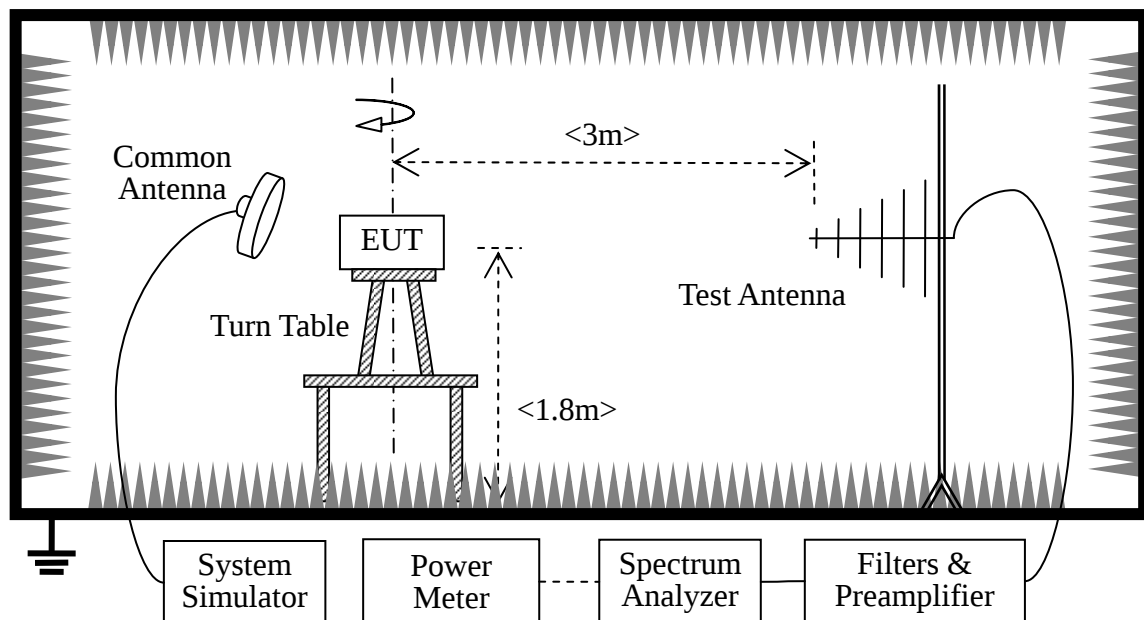
2.7 Transmitter Radiated Power (EIRP/ERP)

2.7.1 Requirement

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

2.7.2 Test Description

1. Test Setup:



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

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

- GSM Maximum RF output power: GSM850 31.76dBm, GSM1900 28.43dBm, WCDMA850 22.41dBm, Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

- Minimum RF power: GSM850 2.9dBm, GSM 1900 0.5dBm, WCDMA 850 2.09dBm.

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	R&S	CMU200	1100.008.02	2012.06.10
Spectrum Analyzer	Agilent	E7405A	US44210471	2012.06.10
Power Meter	Agilent	E4418B	GB43318055	2012.06.10
Full-Anechoic Chamber	Albatross~ Projects	12.8m*6.8m* 6.4m	A0412372	2012.06.10
Double ridge horn antenna	R&S	HF906	A0304225	2012.06.10
Ultra-wideband antenna	R&S	HL562	A0304224	2012.06.10
Horn Ant	ETS	3160-09	A0902607	2012.06.10

The Cal. Interval was one year.

2.7.3 Test Result

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

The substitution corrections are obtained as described below:

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

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

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

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

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

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

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

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

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



1. GSM Model Test Verdict:

Band	Channel	Frequency (MHz)	PCL	Measured ERP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 850MHz	128	824.20	5	26.42	0.439	Plot A	38.5	7	PASS
	190	836.60	5	27.07	0.509				PASS
	251	848.80	5	27.17	0.521				PASS
GPRS 850MHz	128	824.20	5	26.88	0.488	Plot B ^{Note 1}	38.5	7	PASS
	190	836.60	5	26.88	0.488				PASS
	251	848.80	5	27.25	0.531				PASS
EDGE 850MHz	128	824.20	5	26.45	0.442	Plot C ^{Note 1}	38.5	7	PASS
	190	836.60	5	26.24	0.421				PASS
	251	848.80	5	26.67	0.465				PASS

Band	Channel	Frequency (MHz)	PCL	Measured EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
GSM 1900MHz	512	1850.2	0	27.16	0.520	Plot D	33	2	PASS
	661	1880.0	0	26.96	0.500				PASS
	810	1909.8	0	27.27	0.533				PASS
GPRS 1900MHz	512	1850.2	0	26.14	0.411	Plot E ^{Note 1}	33	2	PASS
	661	1880.0	0	25.80	0.380				PASS
	810	1909.8	0	26.99	0.500				PASS
EDGE 1900MHz	512	1850.2	0	25.84	0.384	Plot F ^{Note 1}	33	2	PASS
	661	1880.0	0	25.04	0.319				PASS
	810	1909.8	0	26.85	0.484				PASS

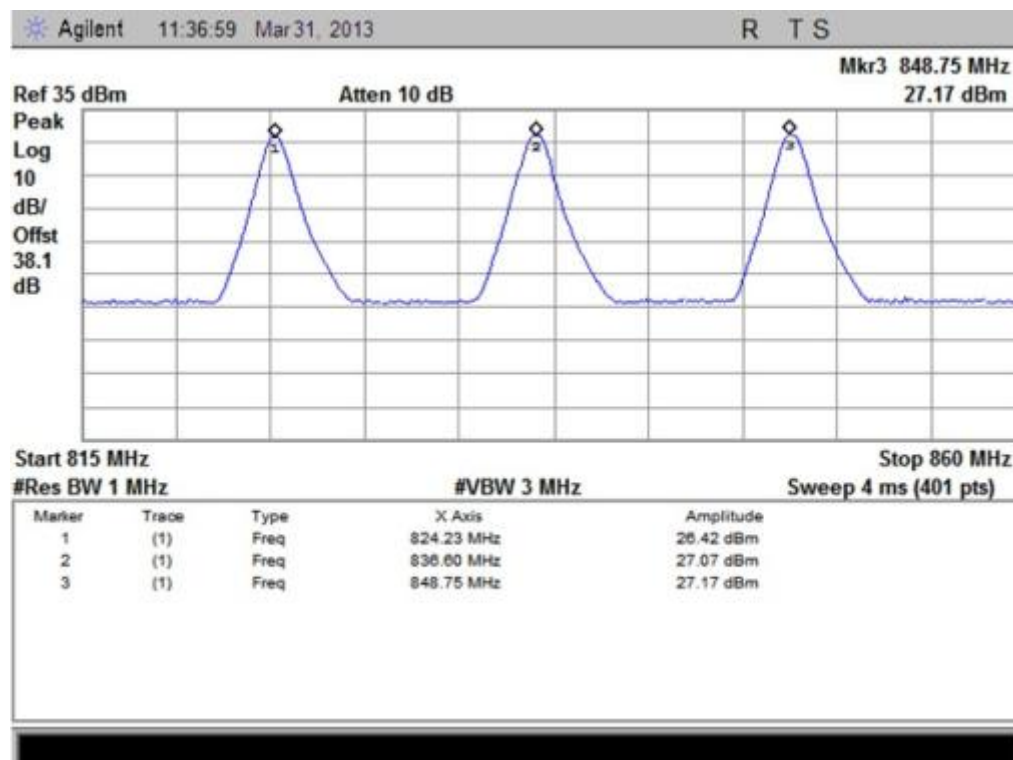
Note 1: For the GPRS and EDGE mode, all the slots were tested and just the worst data was record in this report.

2. WCDMA Model Test Verdict:

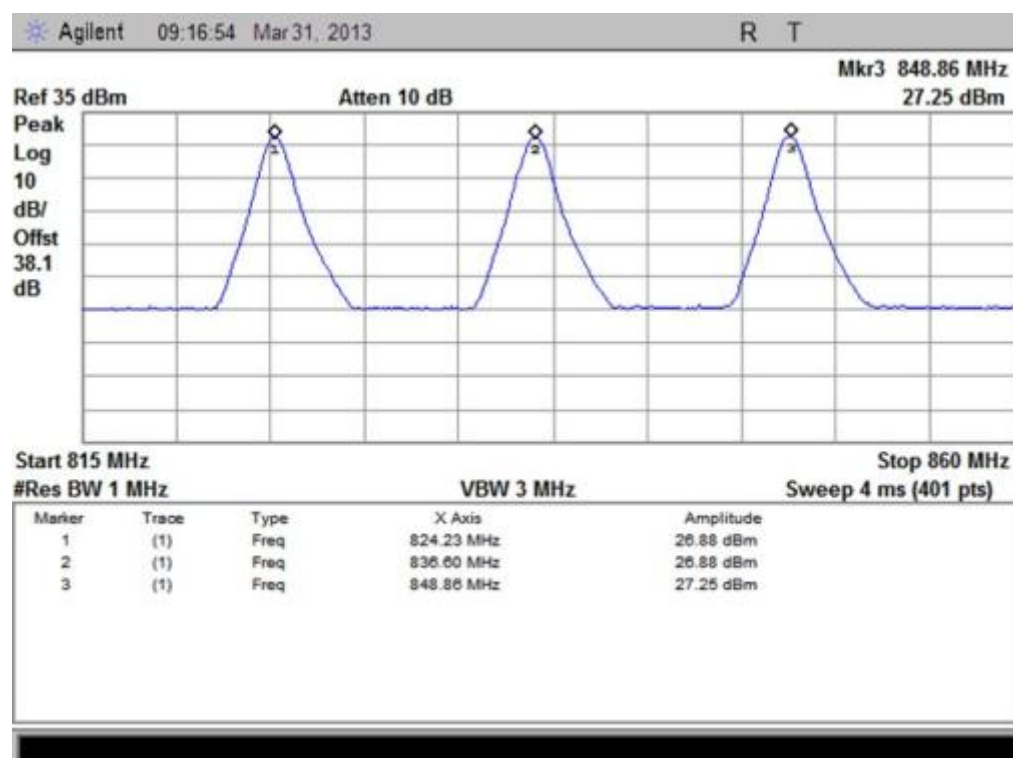
Band	Channel	Frequency (MHz)	Measured ERP		Limit		Verdict
			dBm	W	dBm	W	
WCDMA 850MHz	4132	826.4	20.86	0.122	38.5	7	PASS
	4175	835	21.17	0.131			PASS
	4233	846.6	21.09	0.129			PASS
HSDPA 850MHz	4132	826.4	21.32	0.136	38.5	7	PASS
	4175	835	21.15	0.130			PASS
	4233	846.6	21.07	0.128			PASS
HSUPA 850MHz	4132	826.4	20.92	0.124	38.5	7	PASS
	4175	835	20.71	0.118			PASS
	4233	846.6	21.03	0.127			PASS

Note2: For the WCDMA and HSDPA test band, the measured output power was calculated by the reading of the Power Meter.

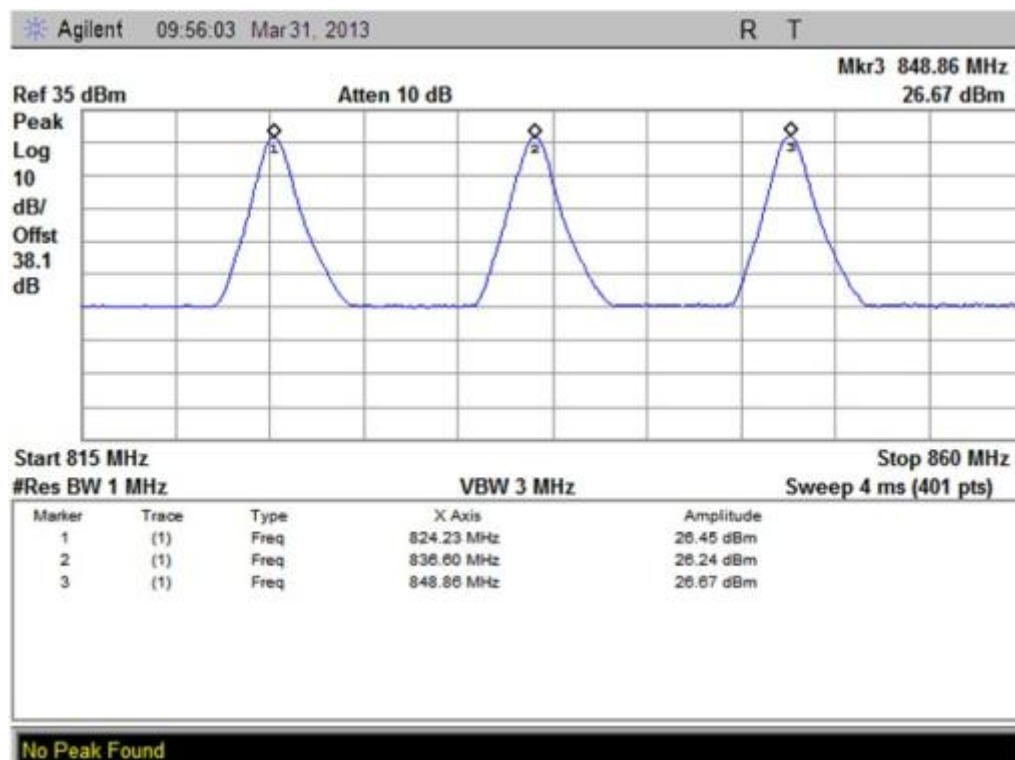
3. Test Plots:



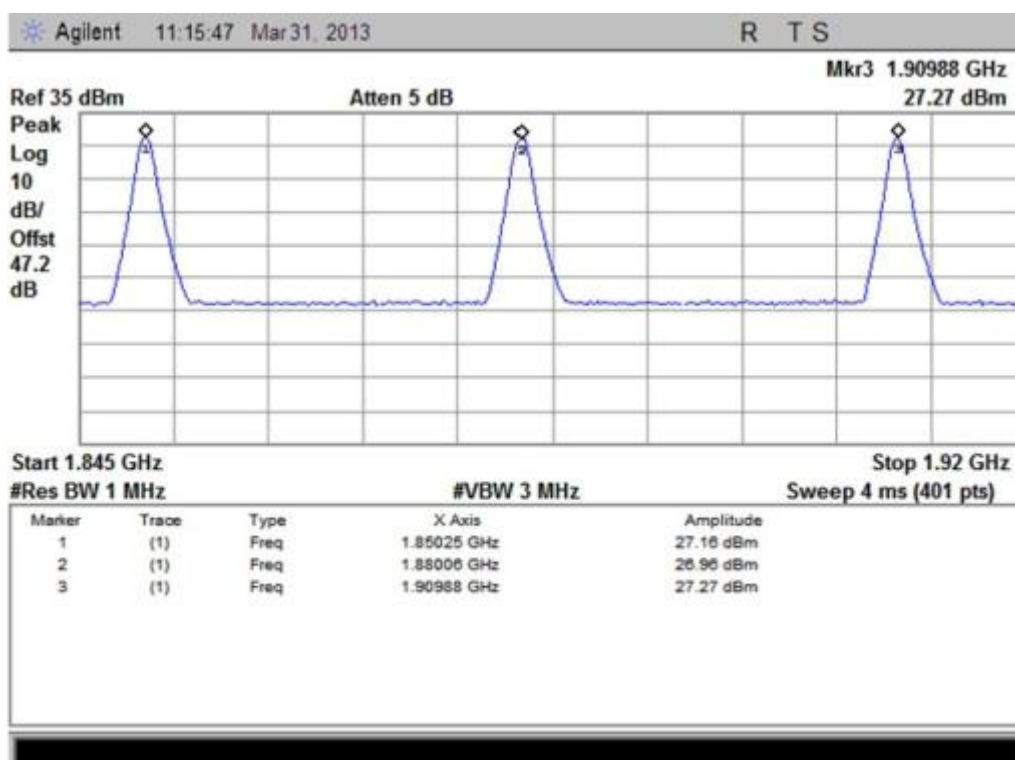
(Plot A: GSM 850MHz Channel = 128, 190, 251)



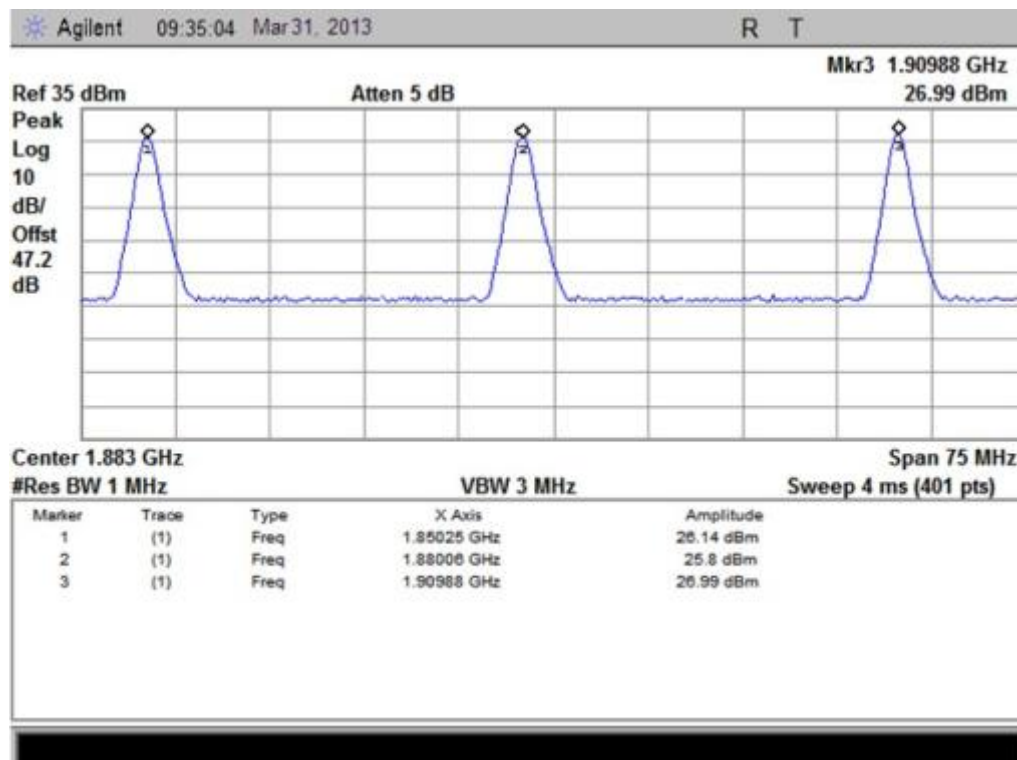
(Plot B: GPRS 850MHz Channel = 128, 190, 251)



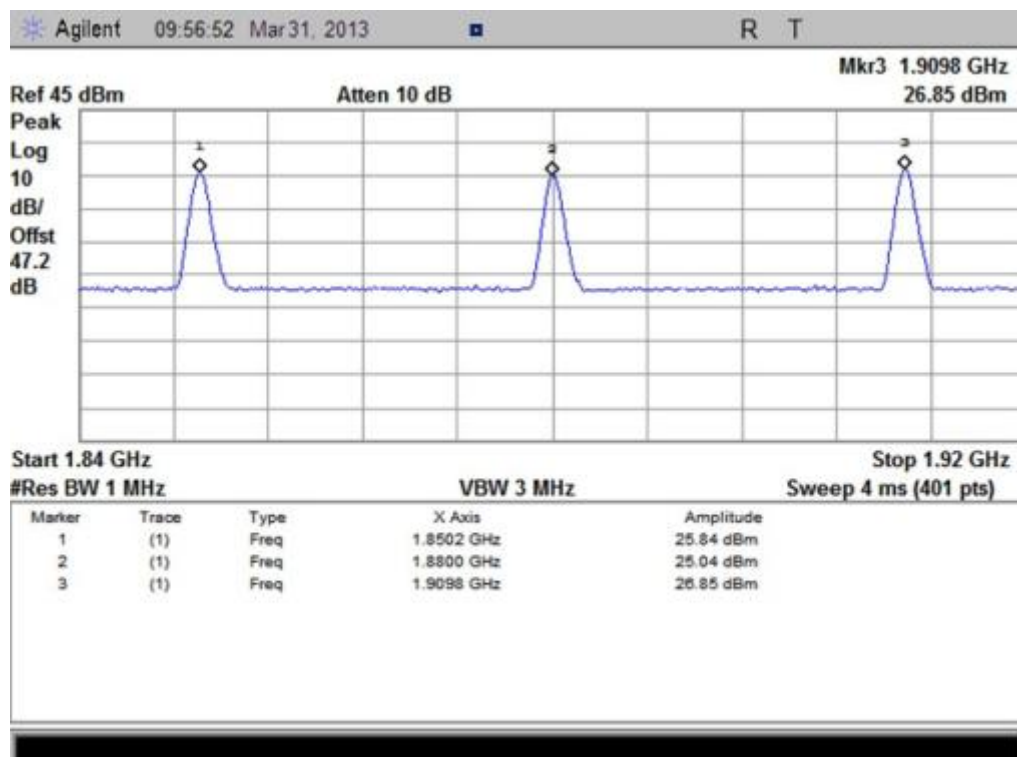
(Plot C: EDGE 850MHz Channel = 128, 190, 251)



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



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



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

2.8 Radiated Out of Band Emissions

2.8.1 Requirement

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

2.8.2 Test Description

See section 2.7.2 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.

2.8.3 Test Result

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

1. Test Verdict:

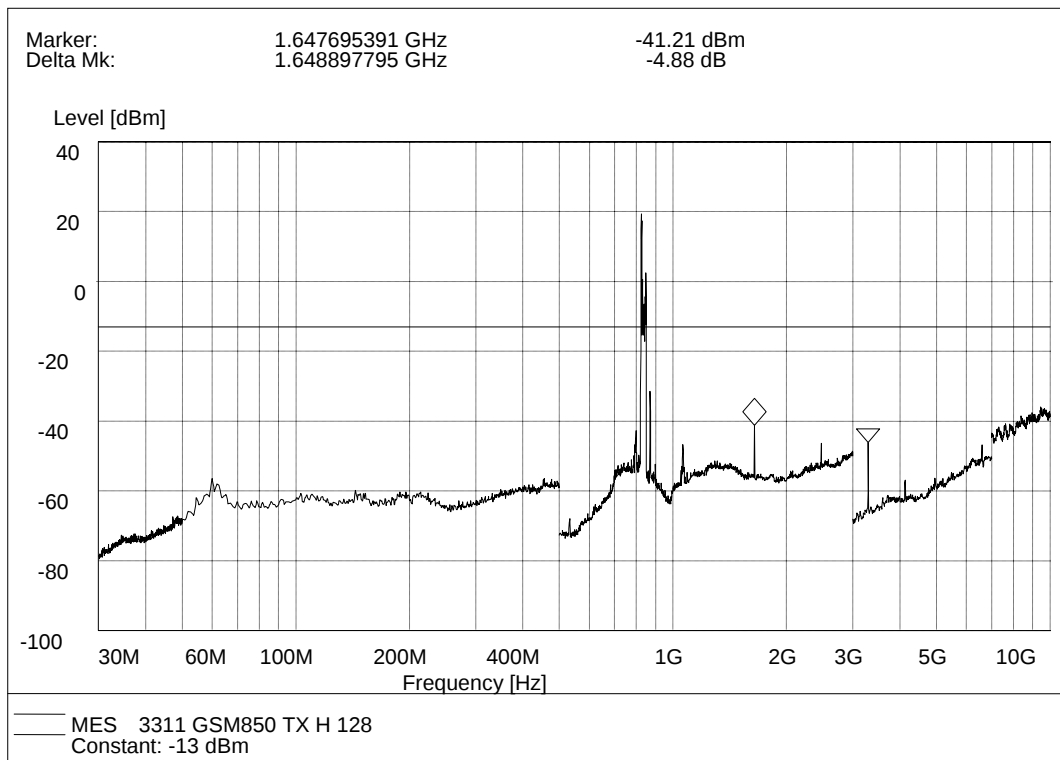
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
GSM 850MHz	128	824.2	< -25	< -25	Plot A.1/A.2	-13	PASS
	190	836.6	< -25	< -25	Plot A.3/A.4		PASS
	251	848.8	< -25	< -25	Plot A.5/A.6		PASS
GSM 1900MHz	512	1850.2	< -25	< -25	Plot B.1/B.2	-13	PASS
	661	1880.0	< -25	< -25	Plot B.3/B.4		PASS
	810	1909.8	< -25	< -25	Plot B.5/B.6		PASS
GPRS 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
GPRS 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

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
EDGE 850MHz	128	824.2	< -25	< -25	Plot E.1/E.2	-13	PASS
	190	836.6	< -25	< -25	Plot E.3/E.4		PASS
	251	848.8	< -25	< -25	Plot E.5/E.6		PASS
EDGE 1900MHz	512	1850.2	< -25	< -25	Plot F.1/F.2	-13	PASS
	661	1880.0	< -25	< -25	Plot F.3/F.4		PASS
	810	1909.8	< -25	< -25	Plot F.5/F.6		PASS
WCDMA 850MHz	4132	826.4	< -25	< -25	Plot G.1/G.2	-13	PASS
	4175	835	< -25	< -25	Plot G.3/G.4		PASS
	4233	846.6	< -25	< -25	Plot G.5/G.6		PASS
HSDPA 850MHz	4132	826.4	< -25	< -25	Plot H.1/H.2	-13	PASS
	4175	835	< -25	< -25	Plot H.3/H.4		PASS
	4233	846.6	< -25	< -25	Plot H.5/H.6		PASS
HSUPA 850MHz	4132	826.4	< -25	< -25	Plot I.1/I.2	-13	PASS
	4175	835	< -25	< -25	Plot I.3/I.4		PASS
	4233	846.6	< -25	< -25	Plot I.5/I.6		PASS

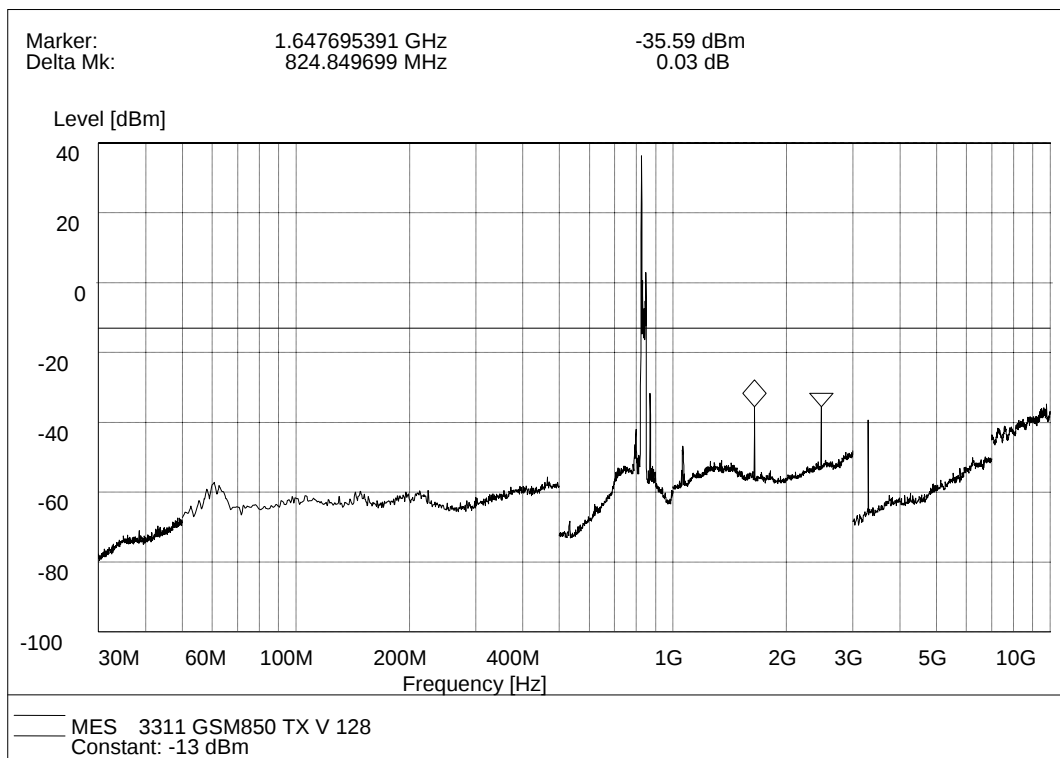
2. Test Plots for the Whole Measurement Frequency Range:

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

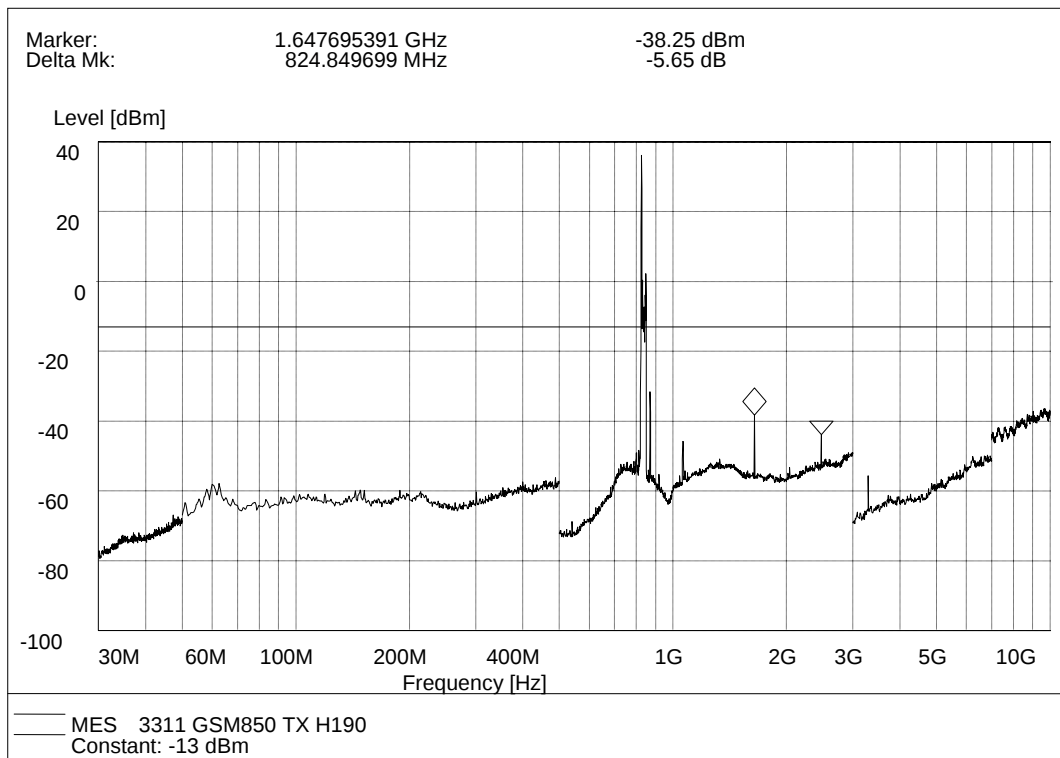
Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.



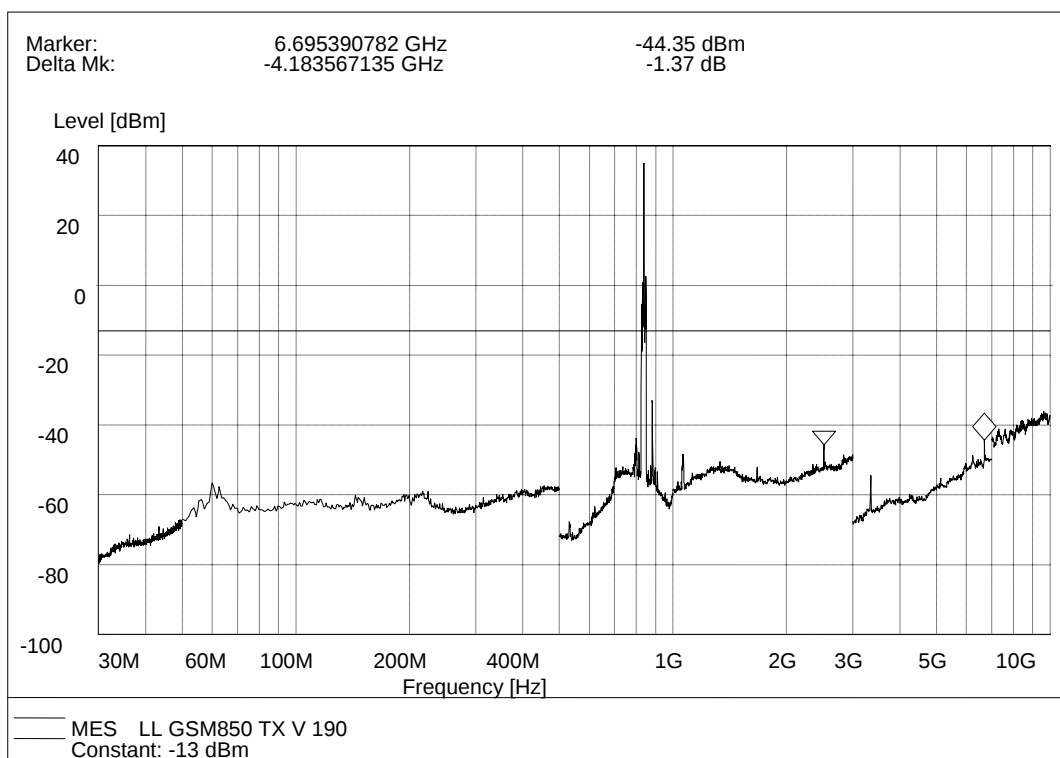
(Plot A.1: GSM 850MHz Channel = 128, Test Antenna Horizontal)



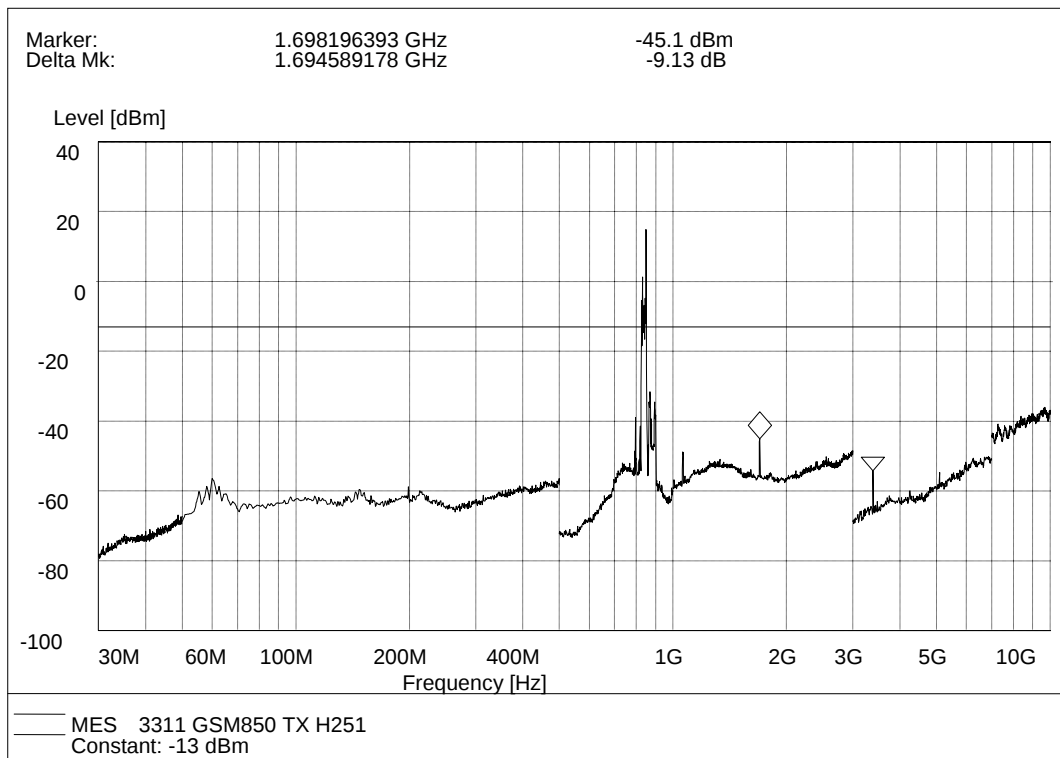
(Plot A.2: GSM 850MHz Channel = 128, Test Antenna Vertical)



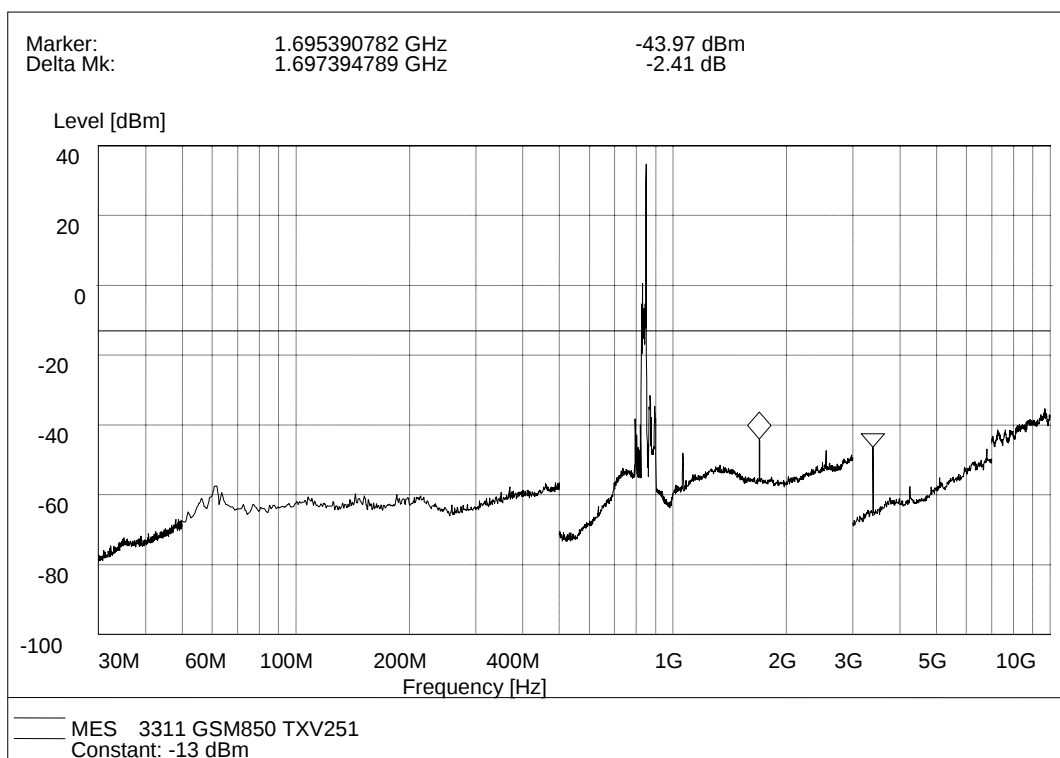
(Plot A.3: GSM 850MHz Channel = 190, Test Antenna Horizontal)



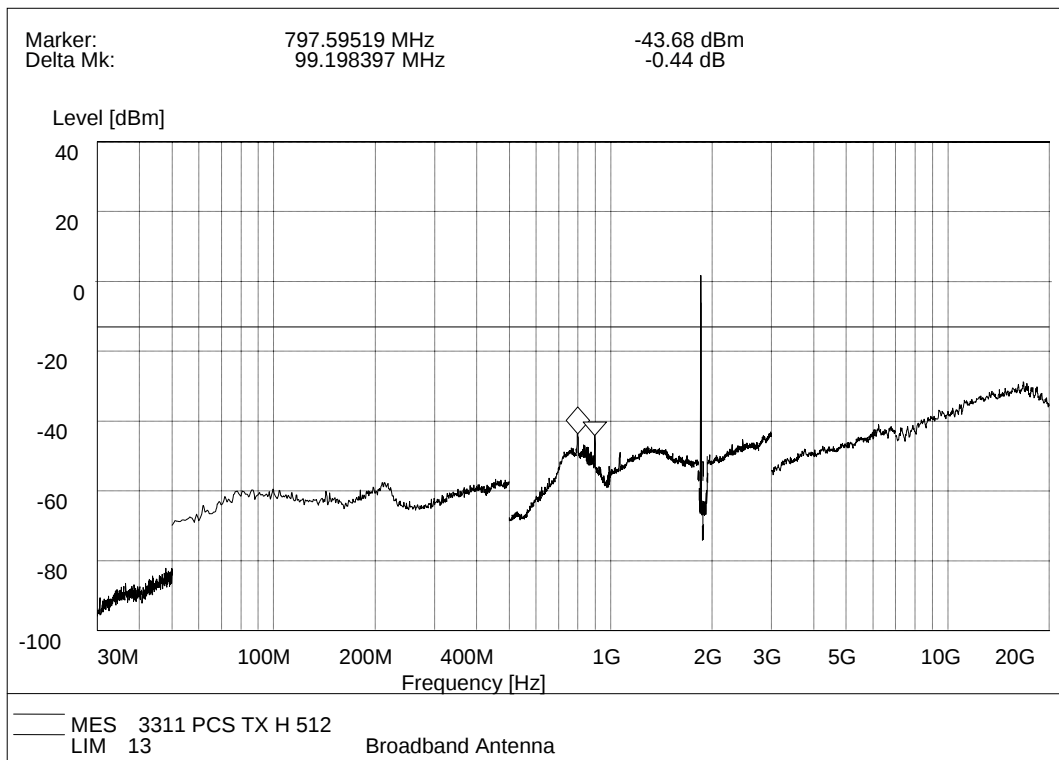
(Plot A.4: GSM 850MHz Channel = 190, Test Antenna Vertical)



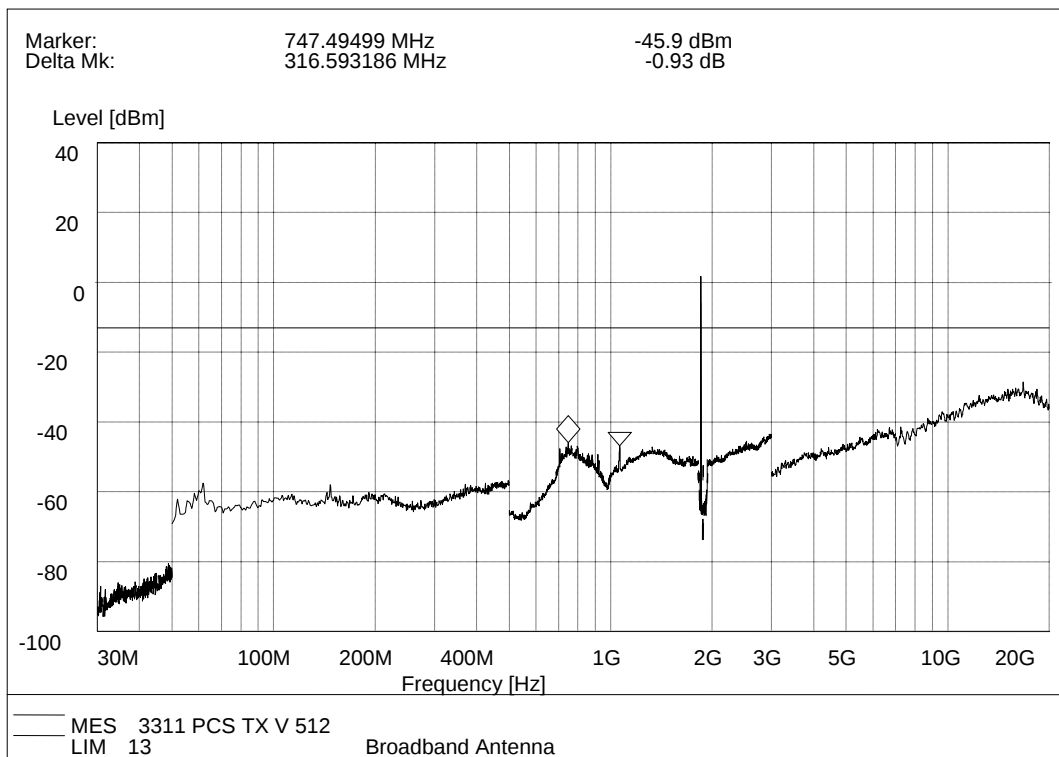
(Plot A.5: GSM 850MHz Channel = 251, Test Antenna Horizontal)



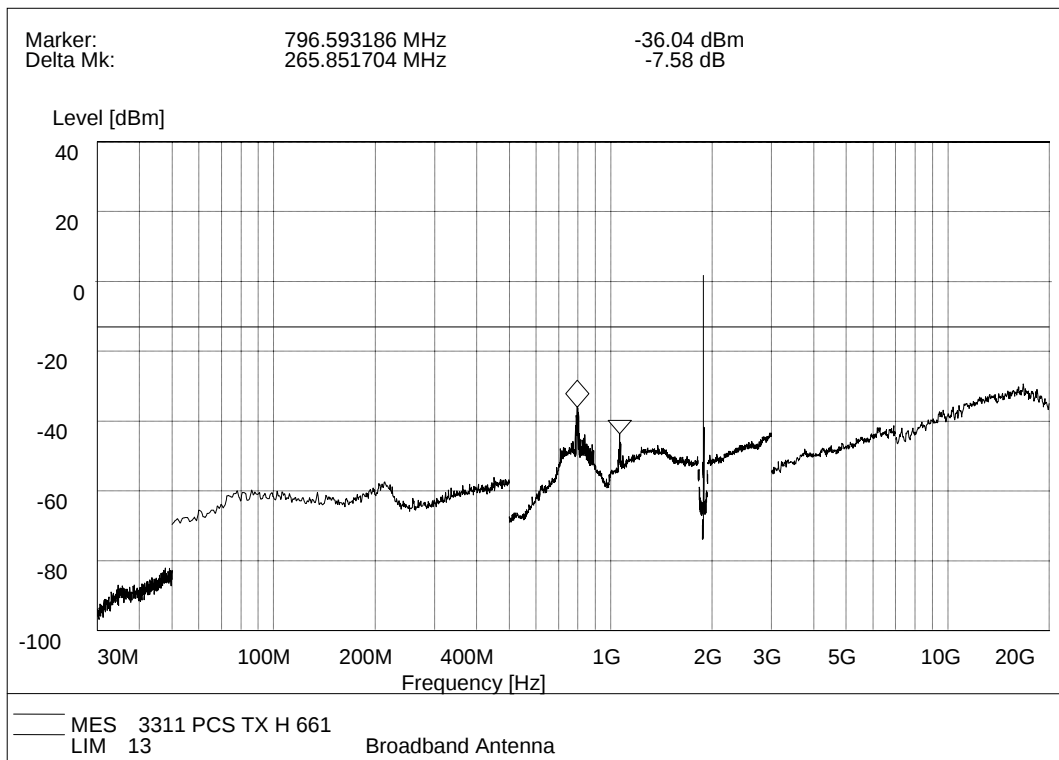
(Plot A.6: GSM 850MHz Channel = 251, Test Antenna Vertical)



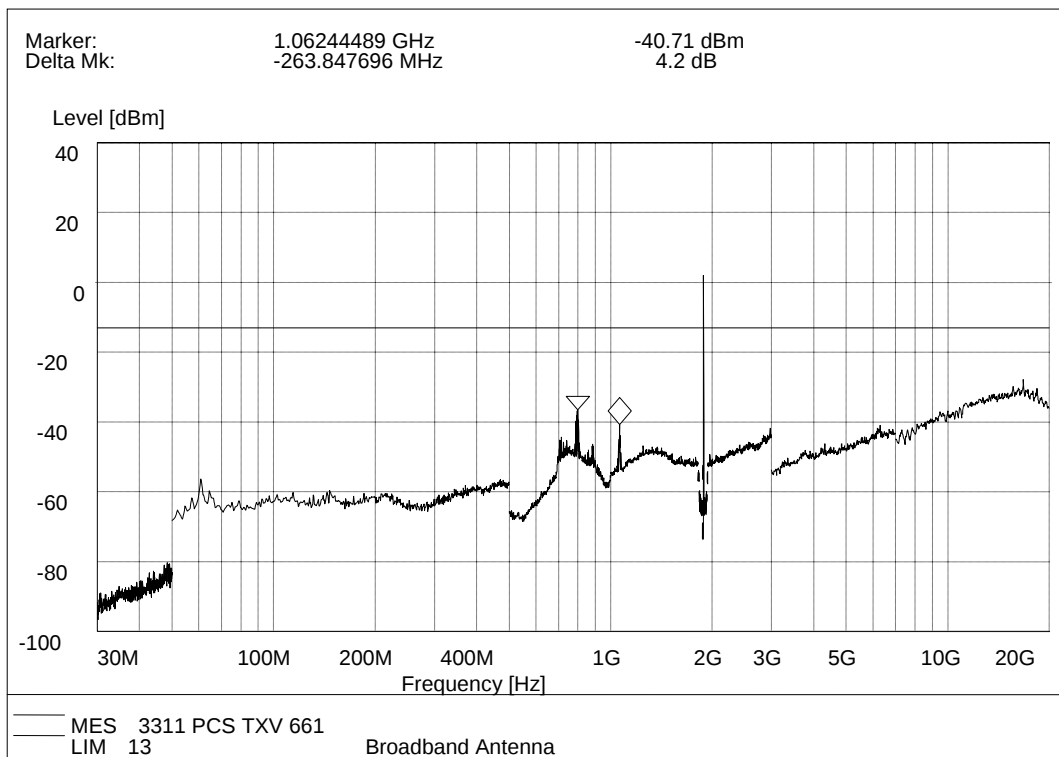
(Plot B.1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



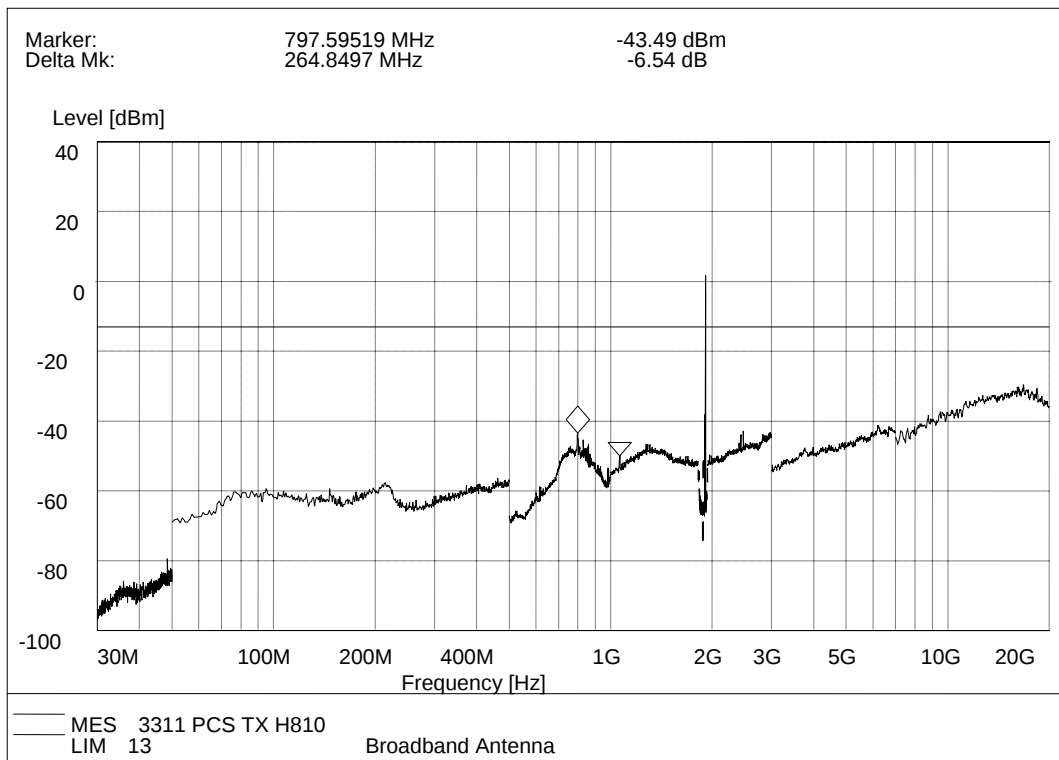
(Plot B.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



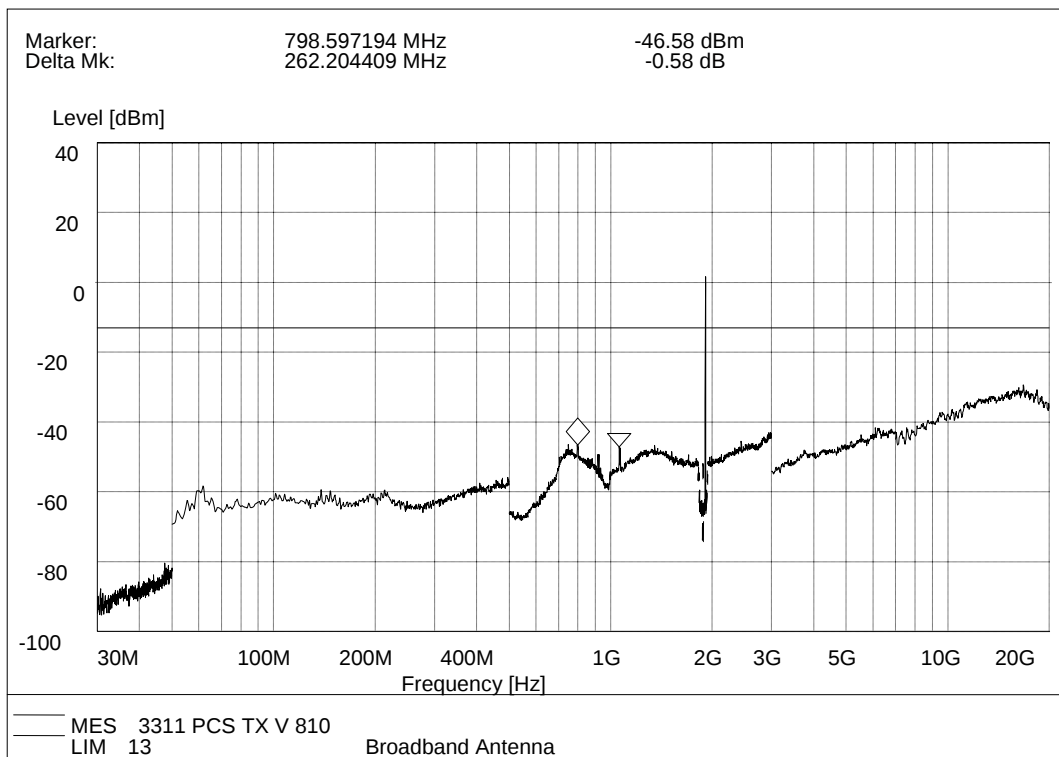
(Plot B.3: GSM 1900MHz Channel = 661, Test Antenna Horizontal)



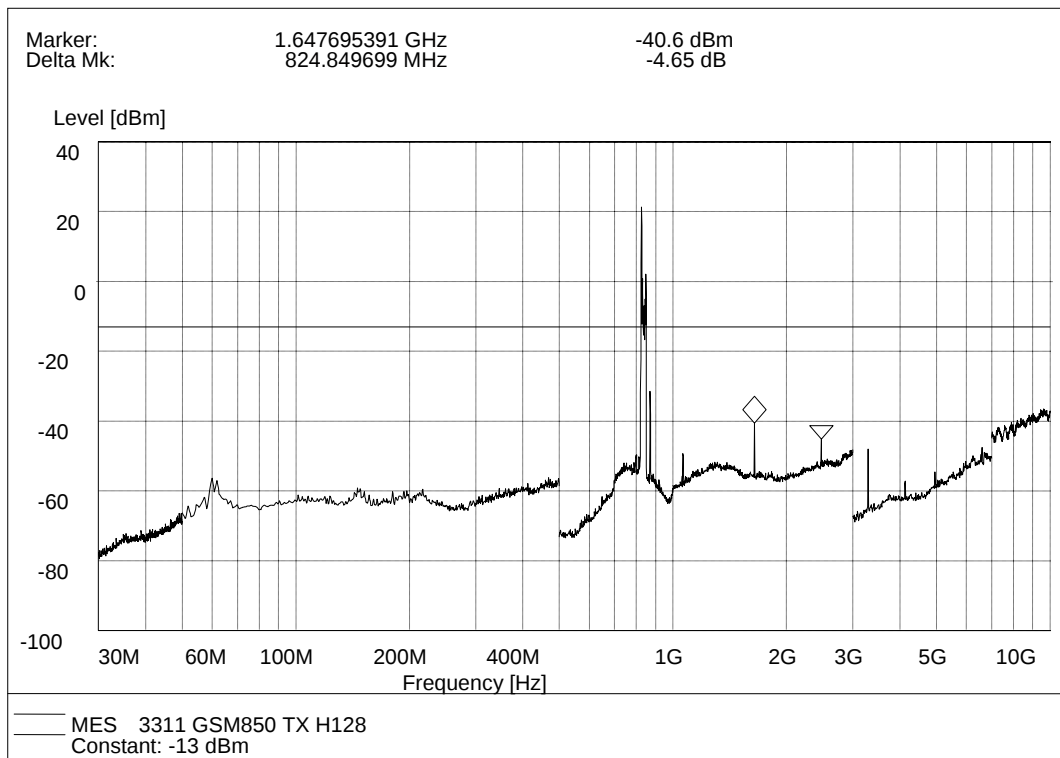
(Plot B.4: GSM 1900MHz Channel = 661, Test Antenna Vertical)



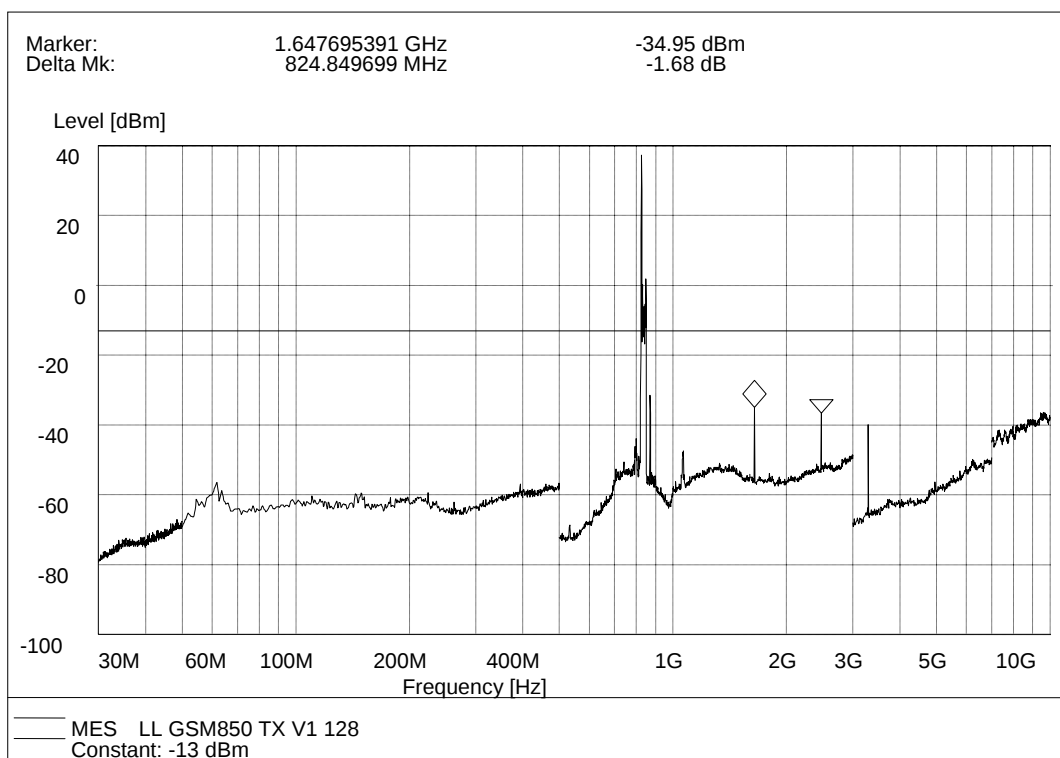
(Plot B.5: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



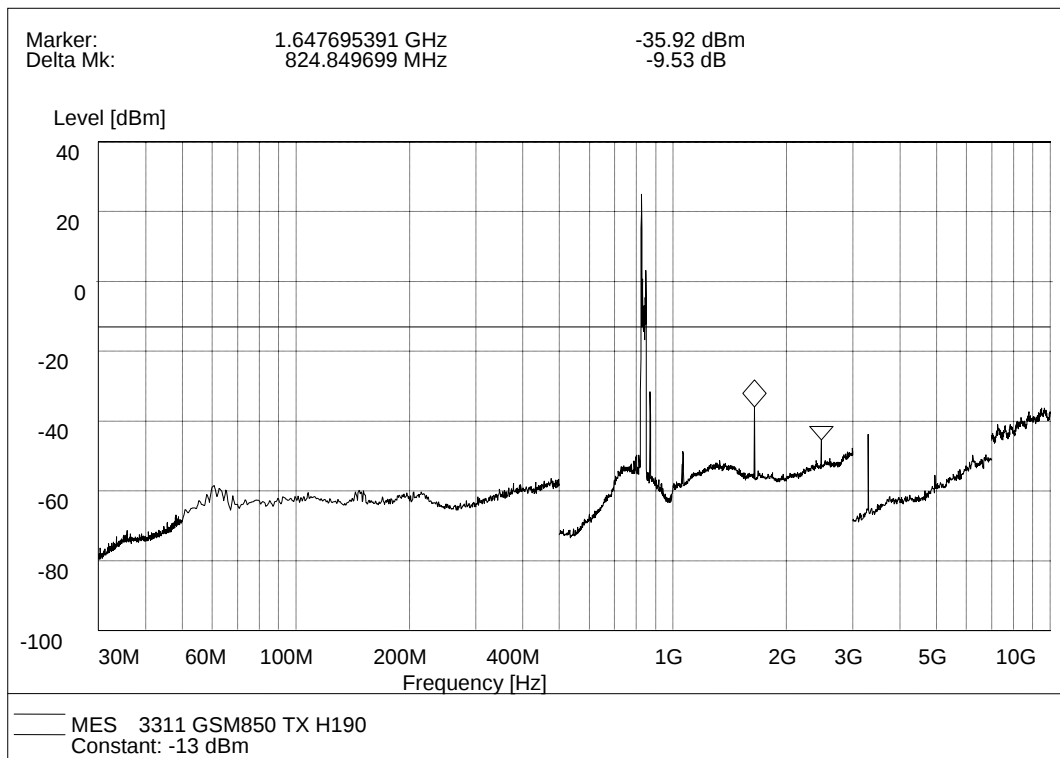
(PlotB.6: GSM 1900MHz Channel = 810, Test Antenna Vertical)



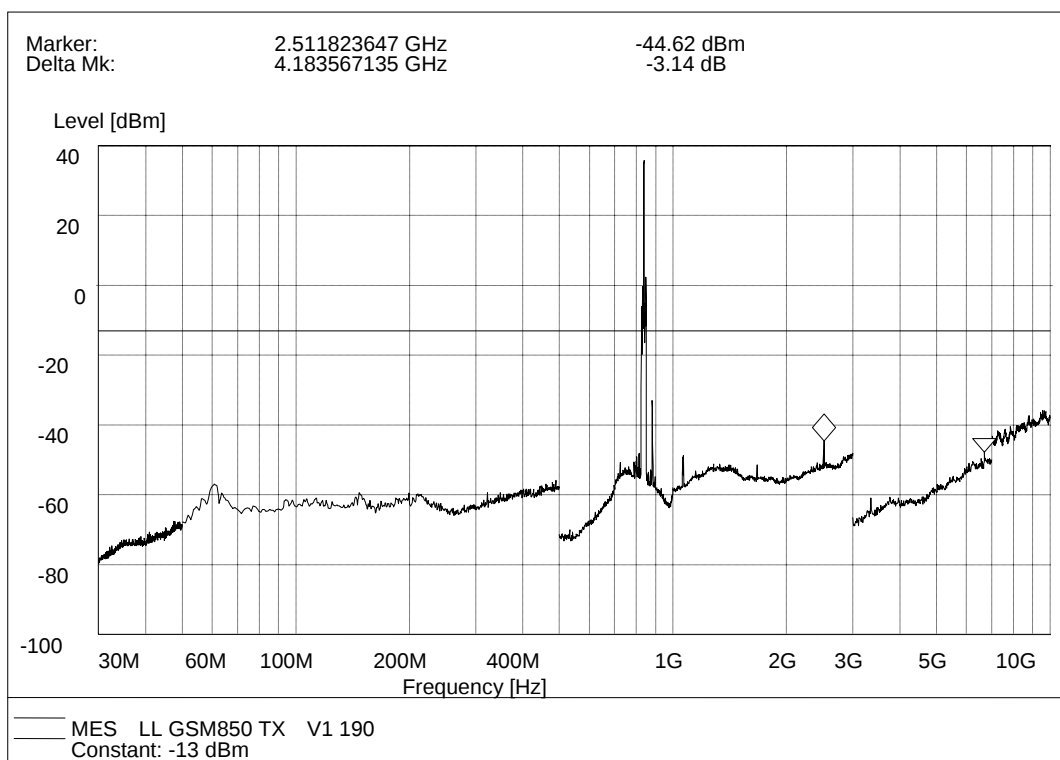
(Plot C.1: GPRS 850MHz Channel = 128, Test Antenna Horizontal)



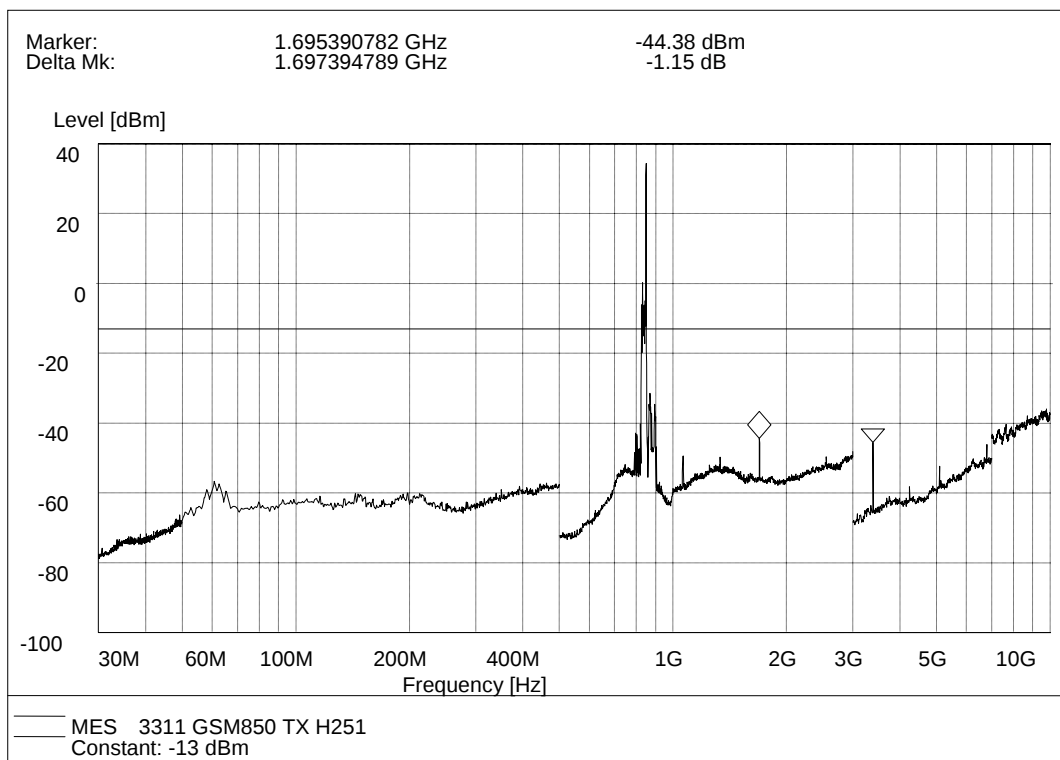
(PlotC.2: GPRS 850MHz Channel = 128, Test Antenna Vertical)



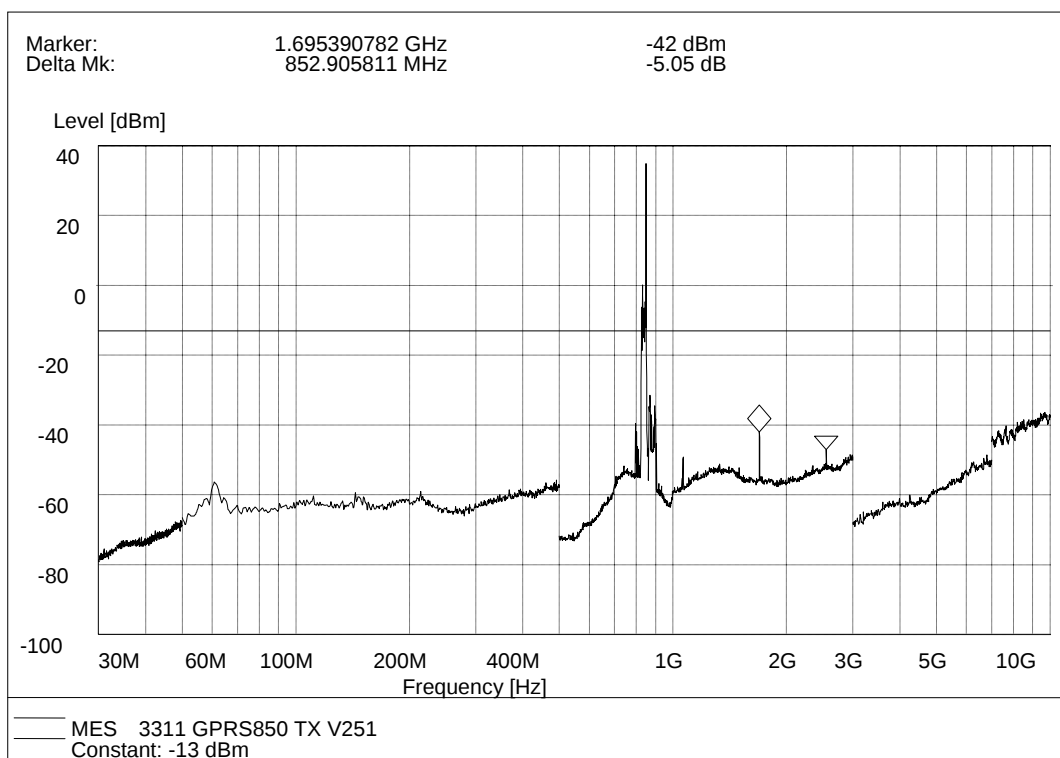
(Plot C.3: GPRS 850MHz Channel = 190, Test Antenna Horizontal)



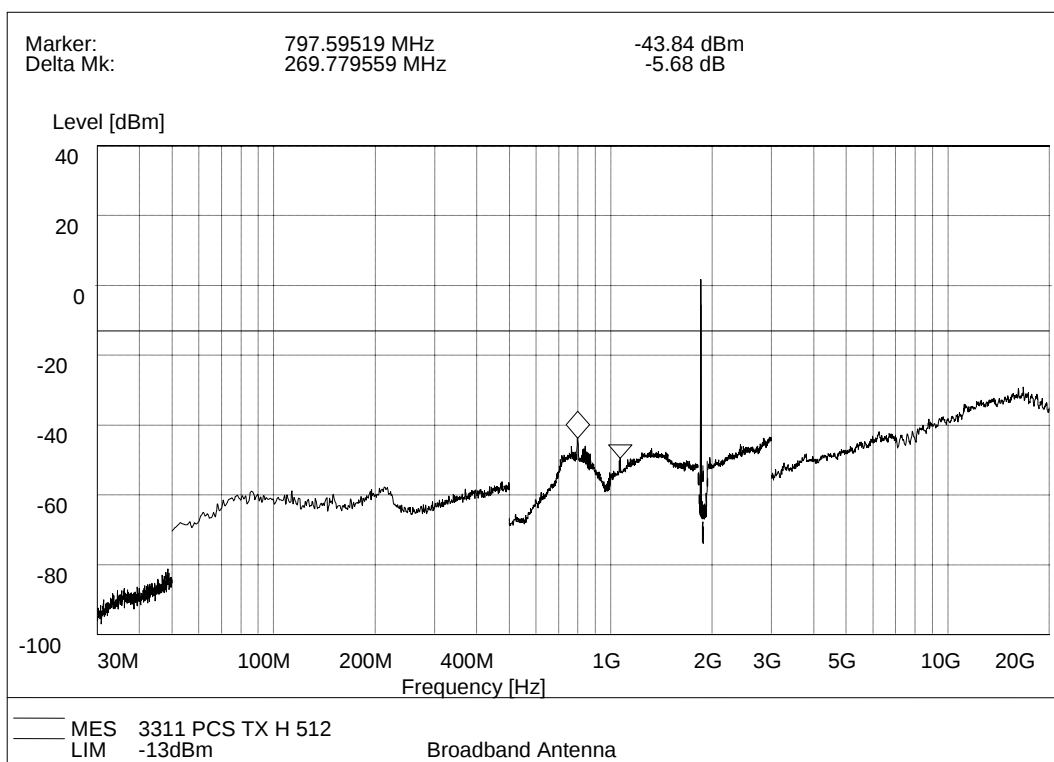
(PlotC.4: GPRS 850MHz Channel = 190, Test Antenna Vertical)



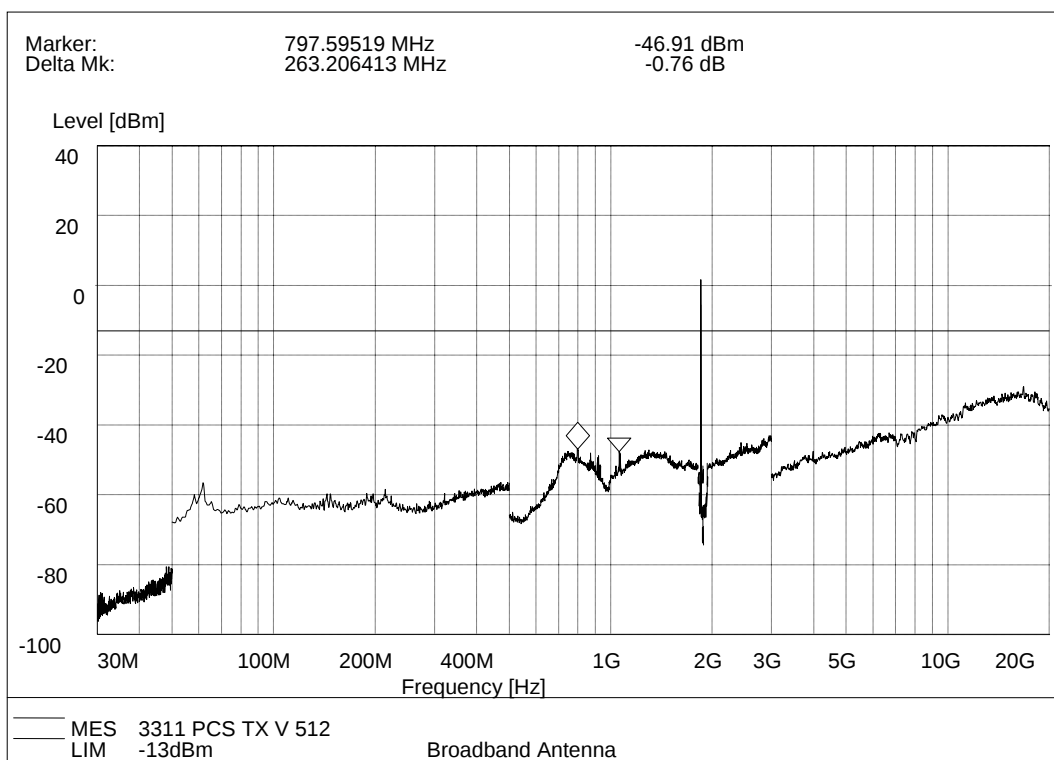
(Plot C.5: GPRS 850MHz Channel = 251, Test Antenna Horizontal)



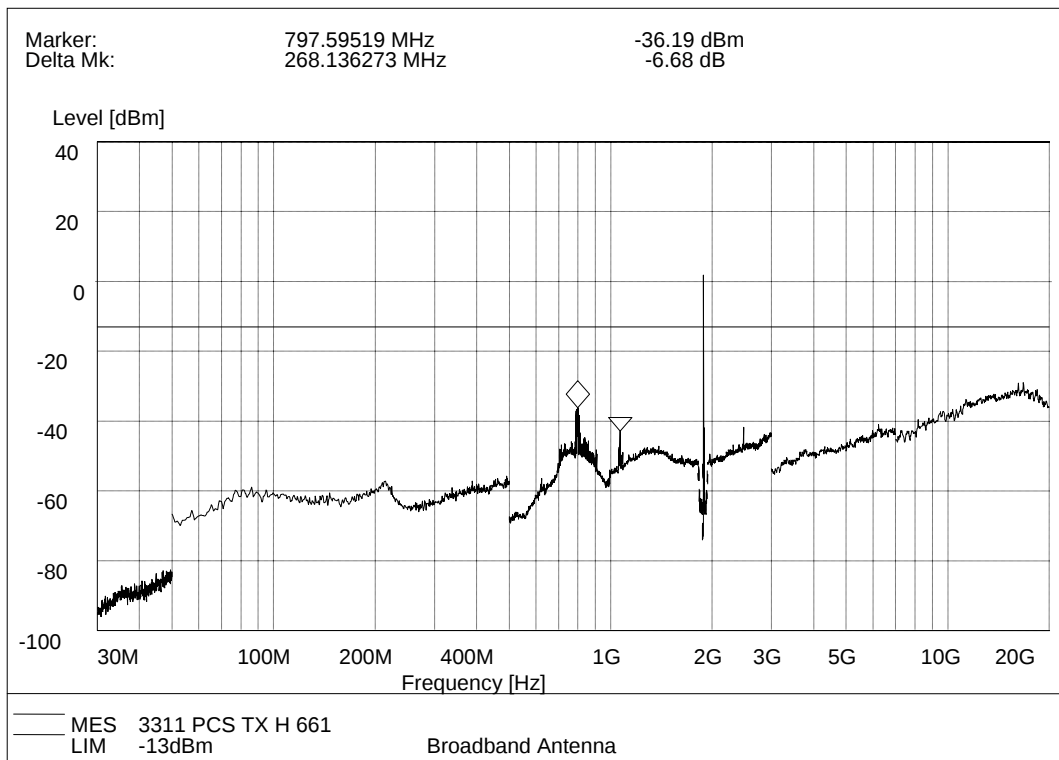
(PlotC.6: GPRS 850MHz Channel = 251, Test Antenna Vertical)



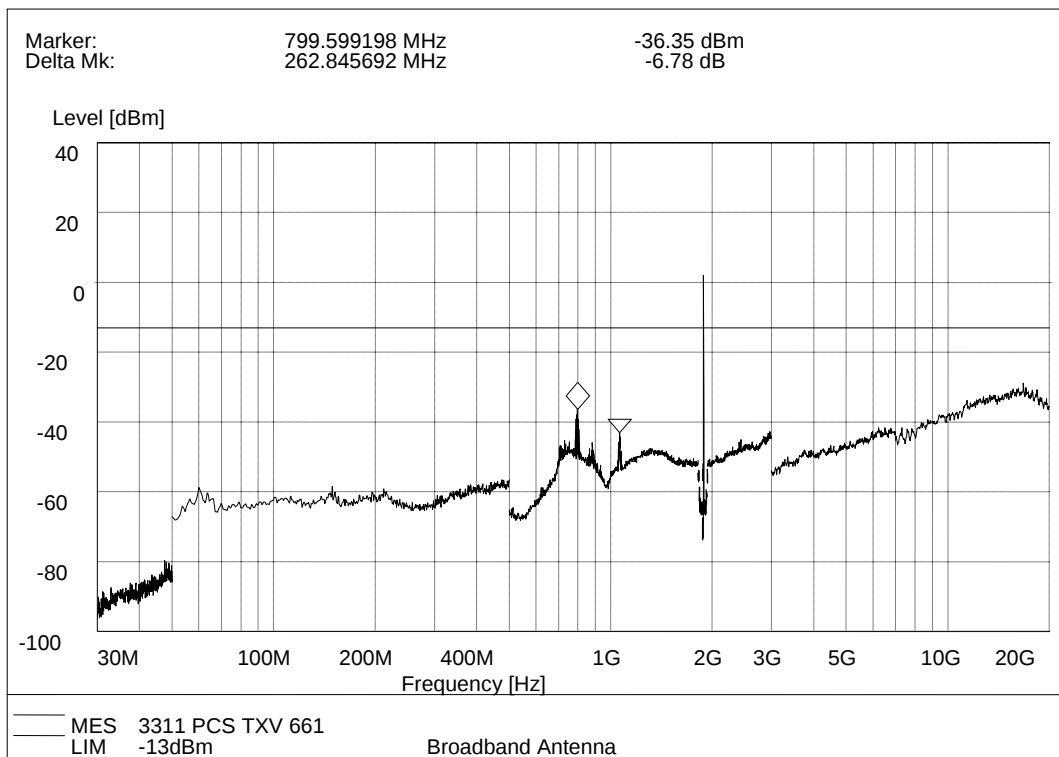
(Plot D.1: GPRS 1900MHz Channel = 512, Test Antenna Horizontal)



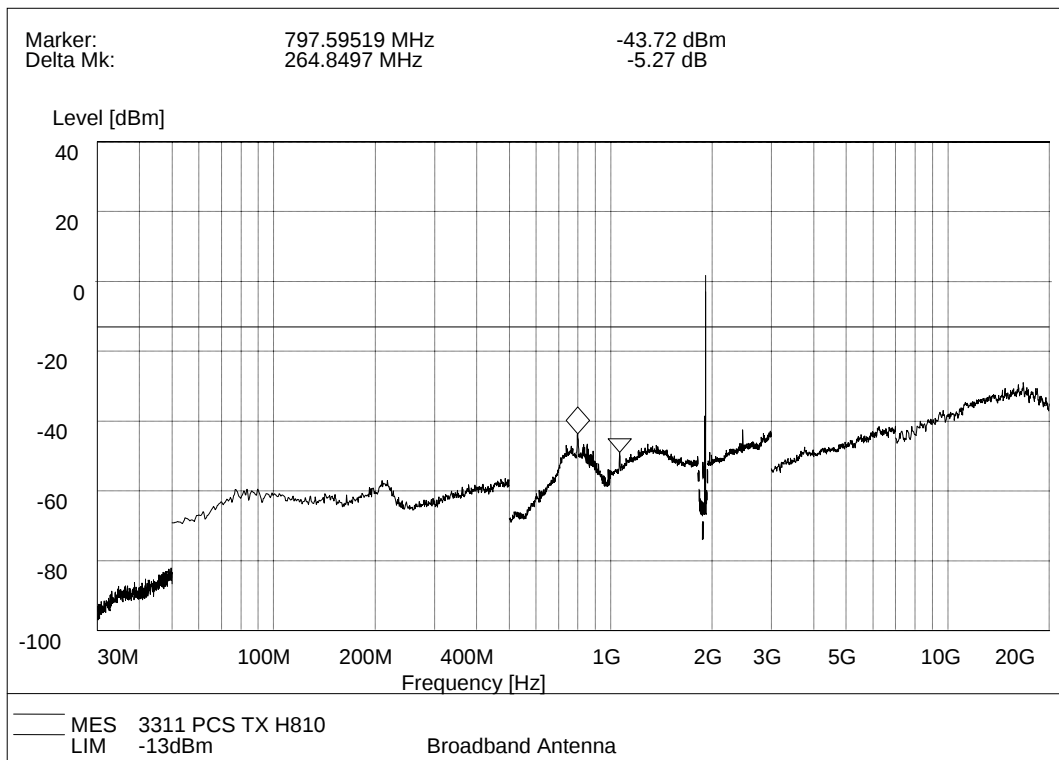
(PlotD.2: GPRS 1900MHz Channel = 512, Test Antenna Vertical)



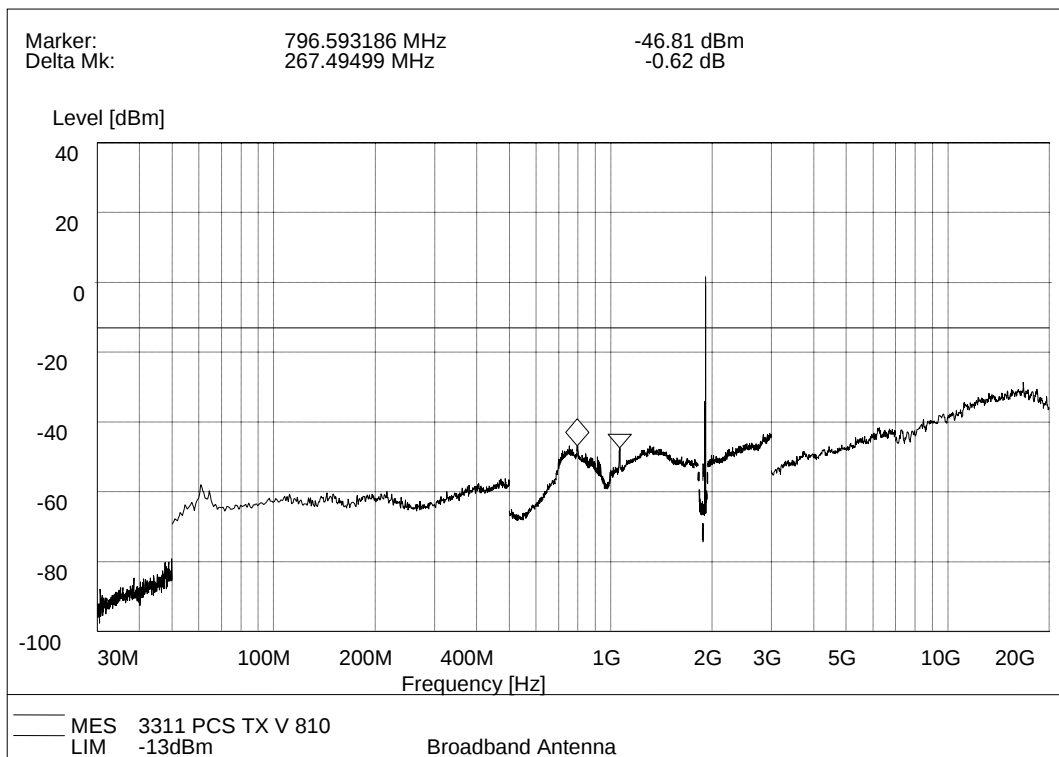
(Plot D.3: GPRS 1900MHz Channel = 661, Test Antenna Horizontal)



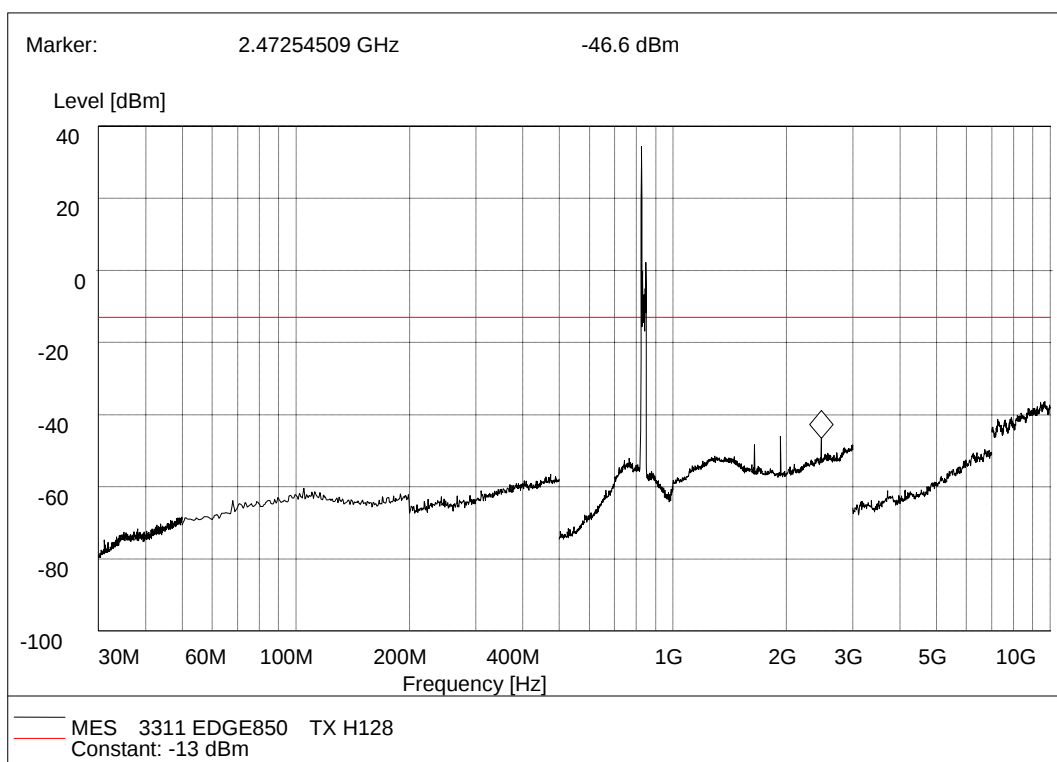
(PlotD.4: GPRS 1900MHz Channel = 661, Test Antenna Vertical)



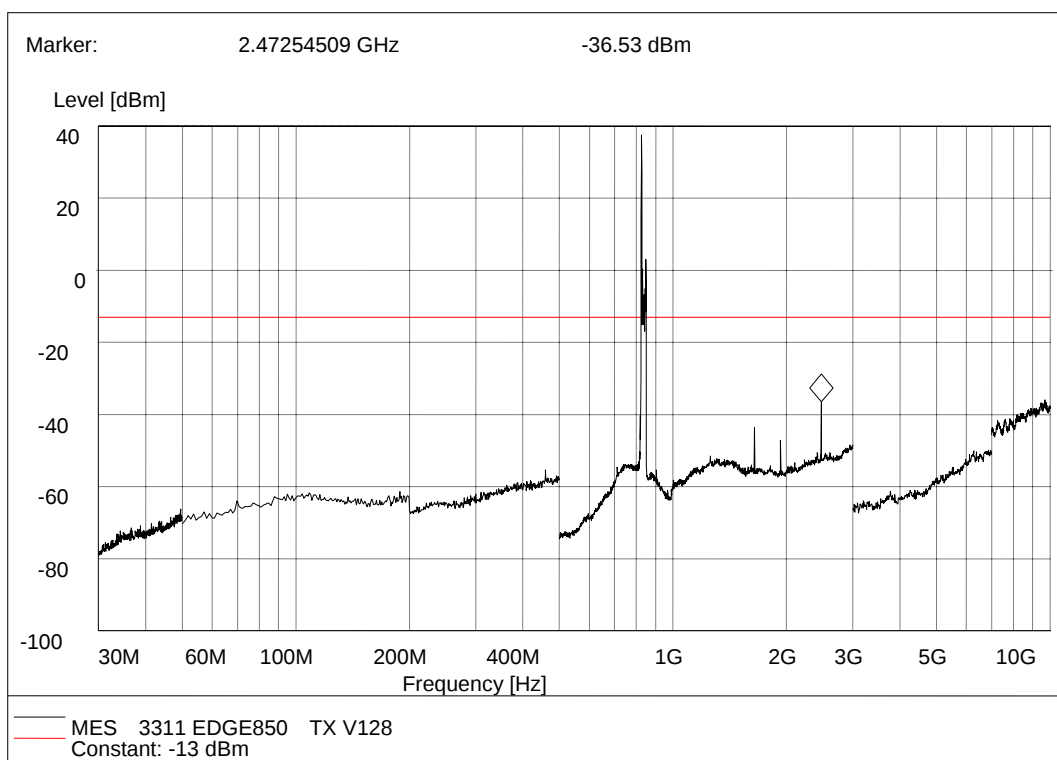
(Plot D.5: GPRS 1900MHz Channel = 810, Test Antenna Horizontal)



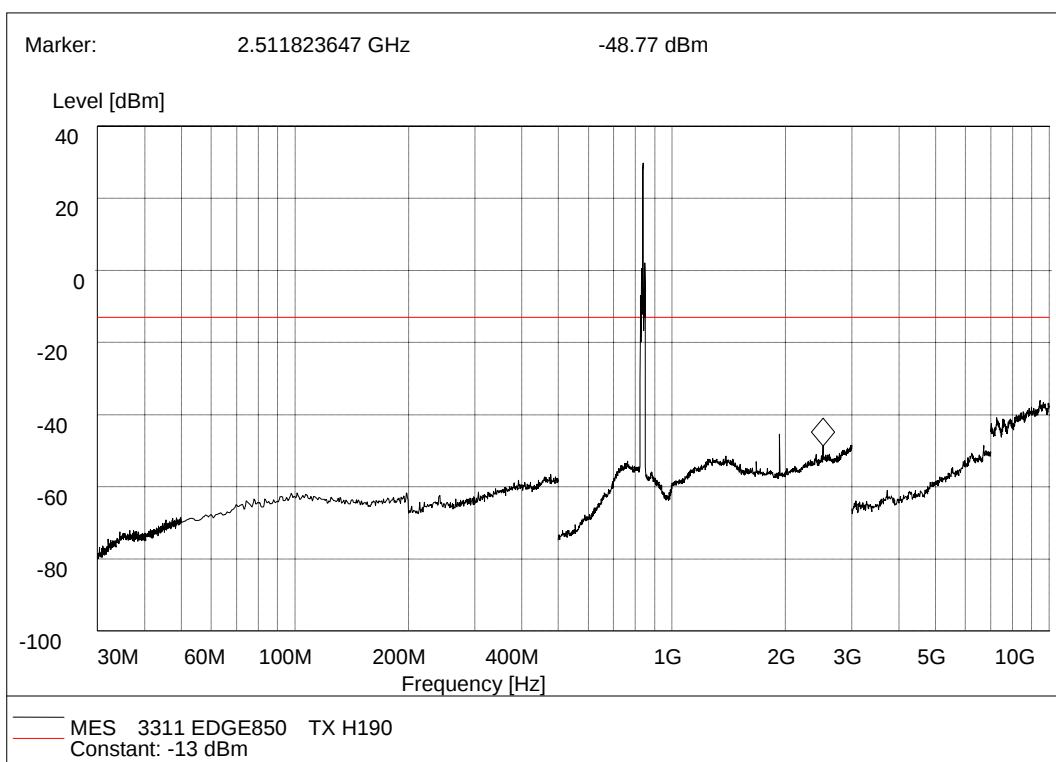
(PlotD.6: GPRS 1900MHz Channel = 810, Test Antenna Vertical)



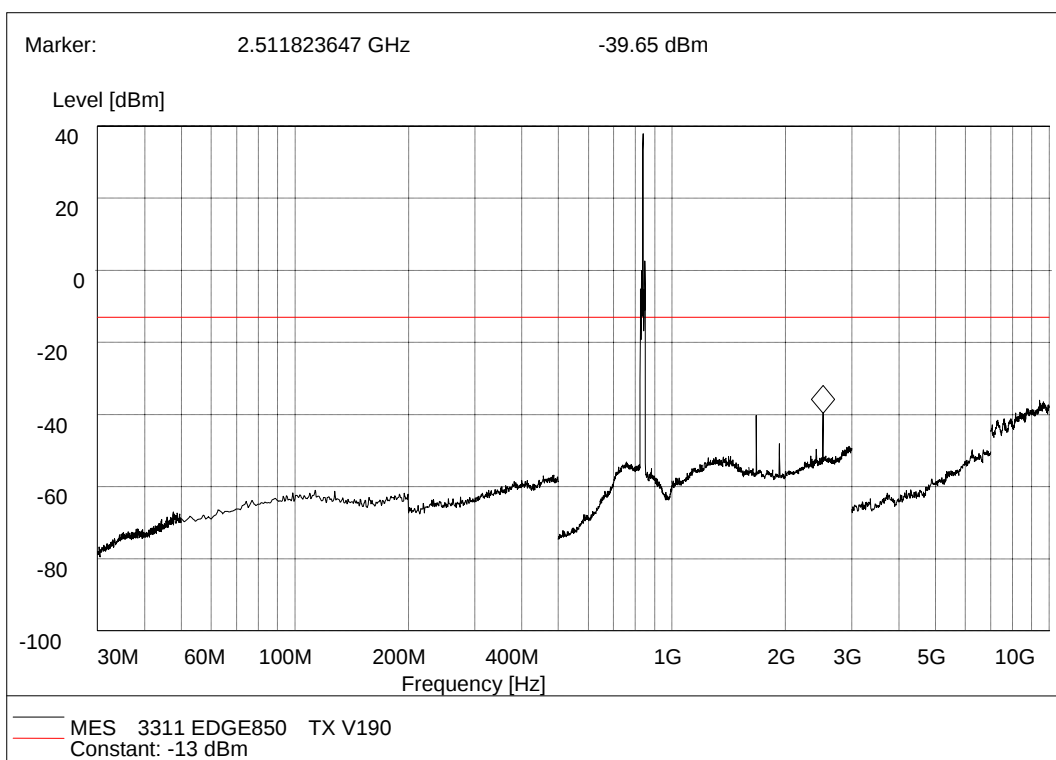
(Plot E.1: EDGE 850MHz Channel = 128, Test Antenna Horizontal)



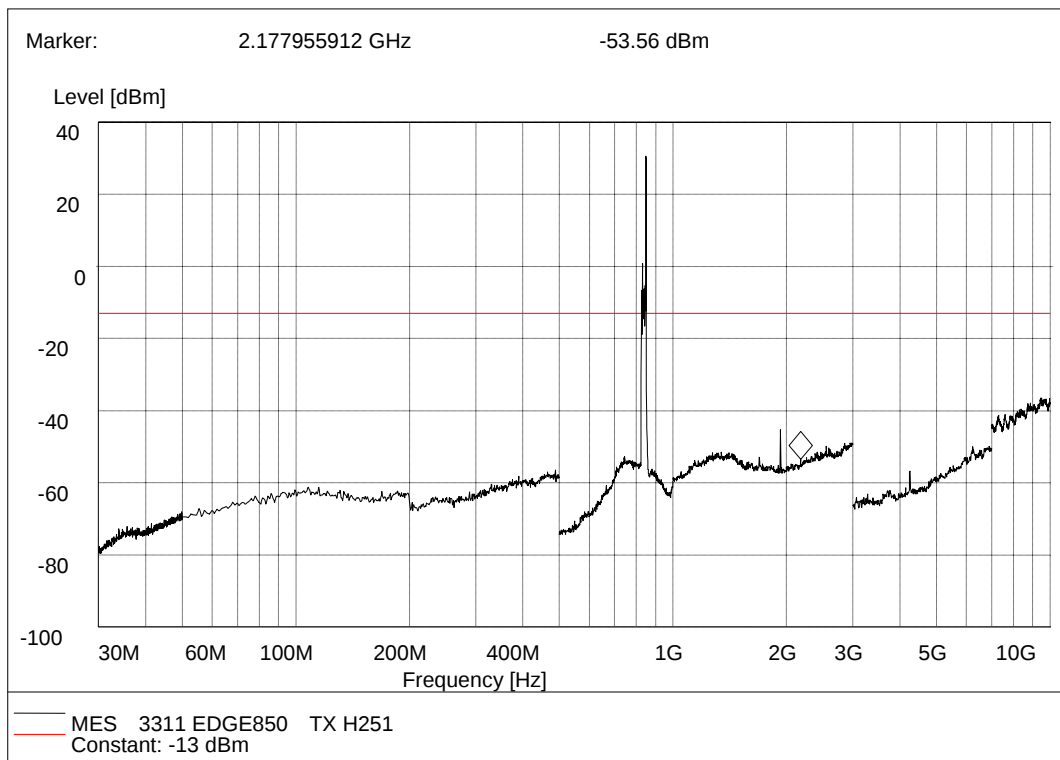
(Plot E.2: EDGE 850MHz Channel = 128, Test Antenna Vertical)



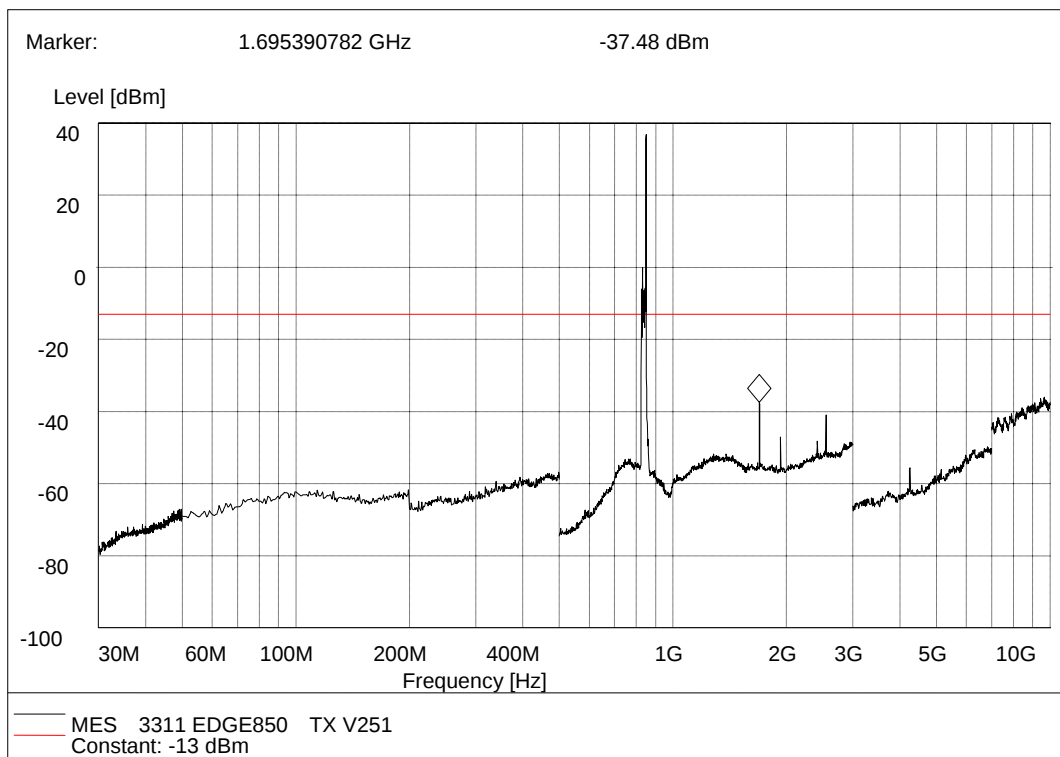
(Plot E.3: EDGE 850MHz Channel = 190, Test Antenna Horizontal)



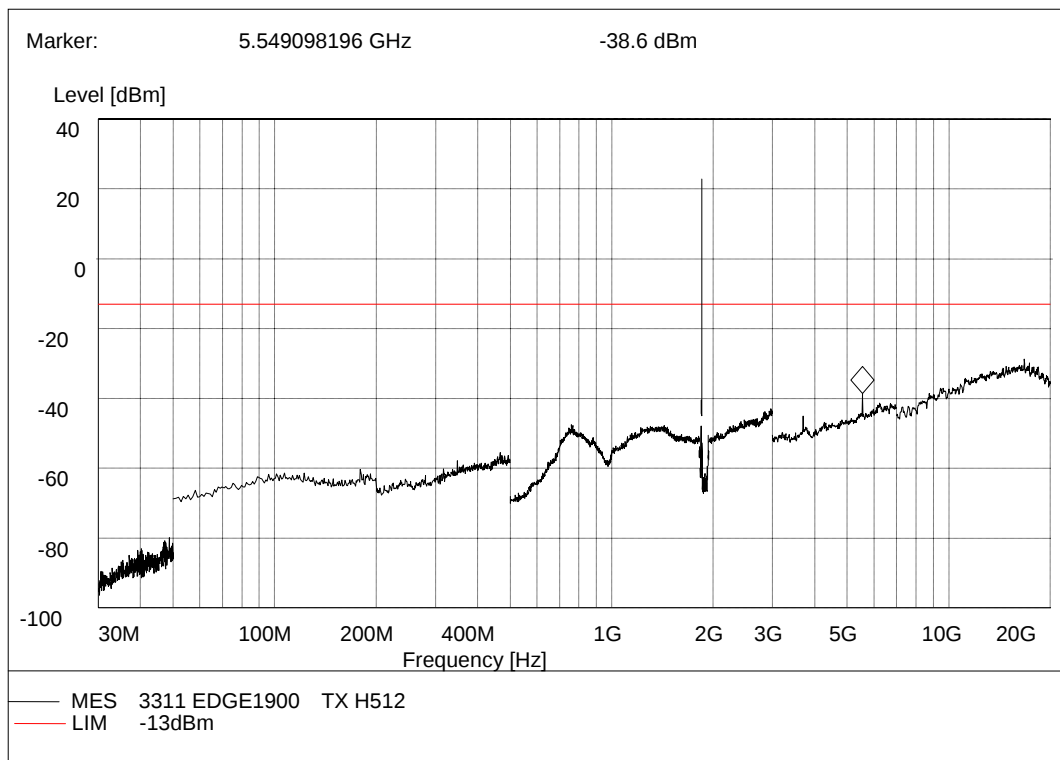
(Plot E.4: EDGE 850MHz Channel = 190, Test Antenna Vertical)



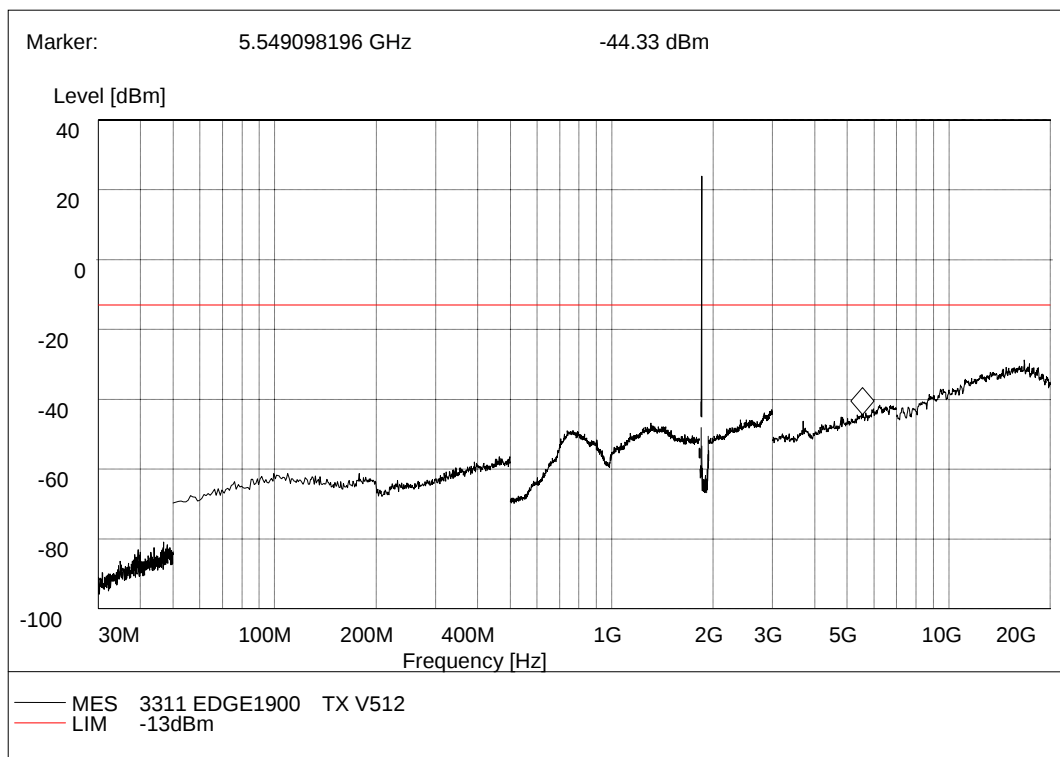
(Plot E.5: EDGE 850MHz Channel = 251, Test Antenna Horizontal)



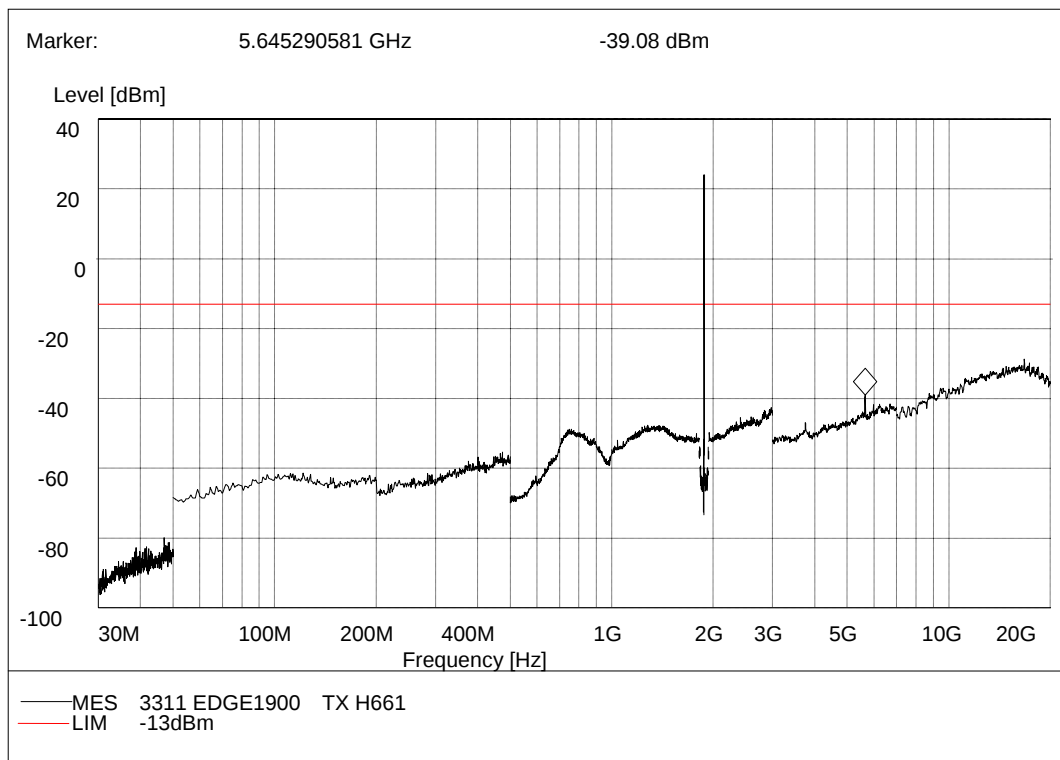
(Plot E.6: EDGE 850MHz Channel = 251, Test Antenna Vertical)



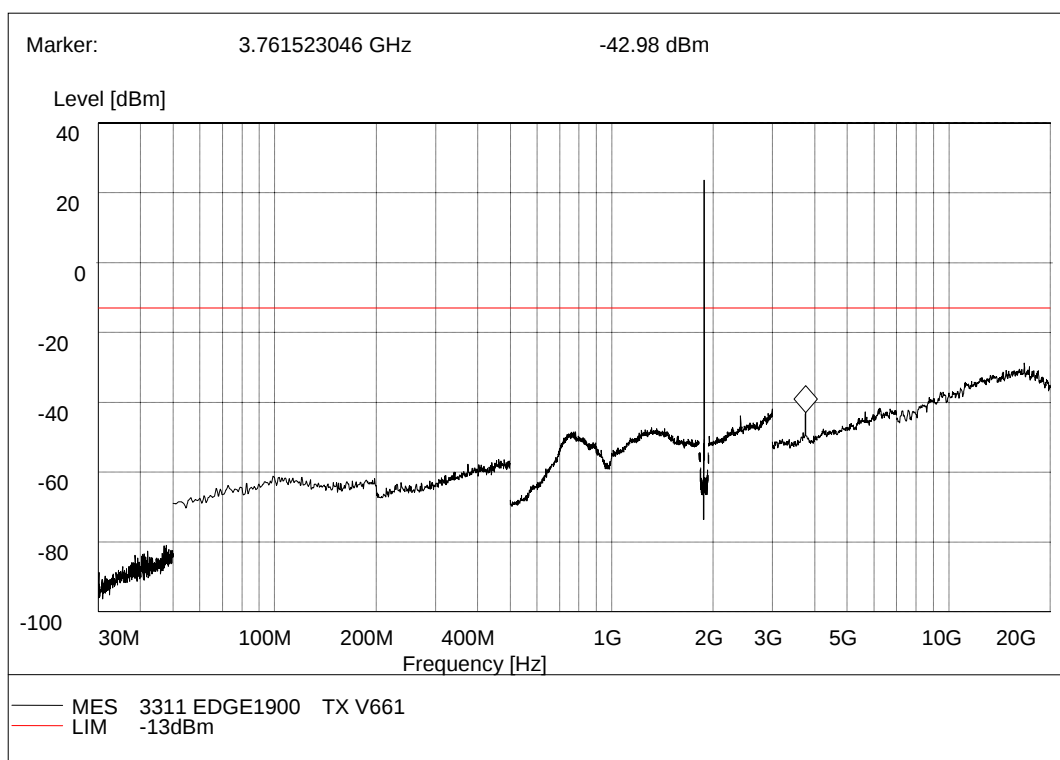
(Plot F.1: EDGE 1900MHz Channel = 512, Test Antenna Horizontal)



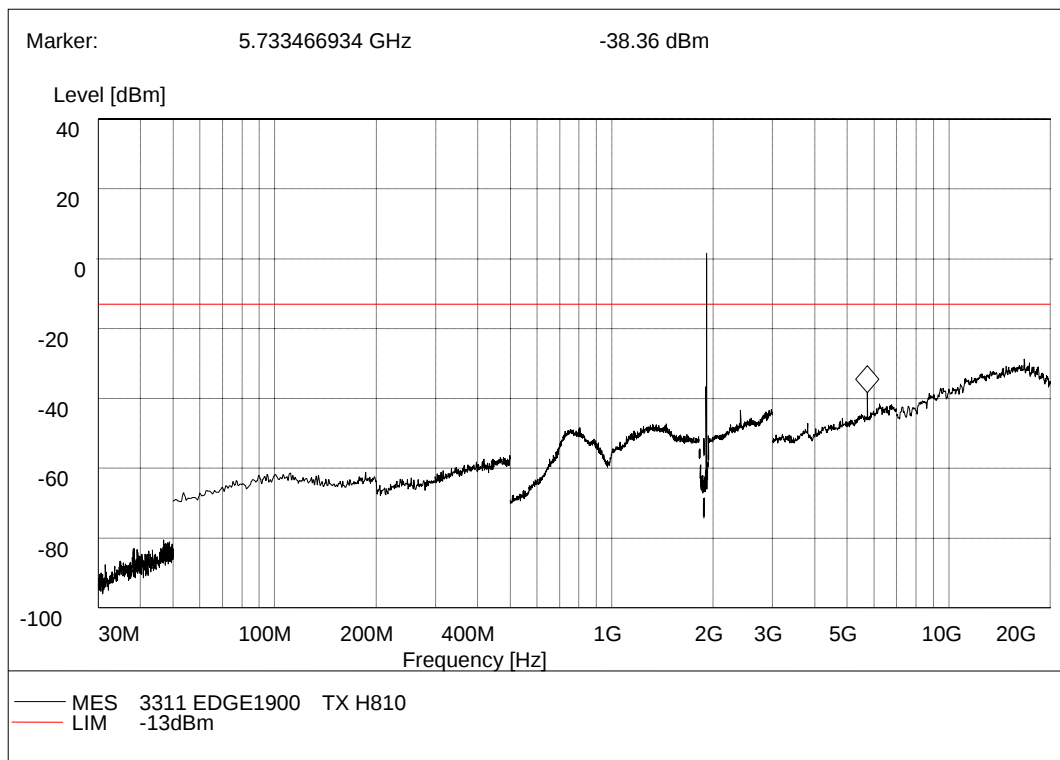
(Plot F.2: EDGE 1900MHz Channel = 512, Test Antenna Vertical)



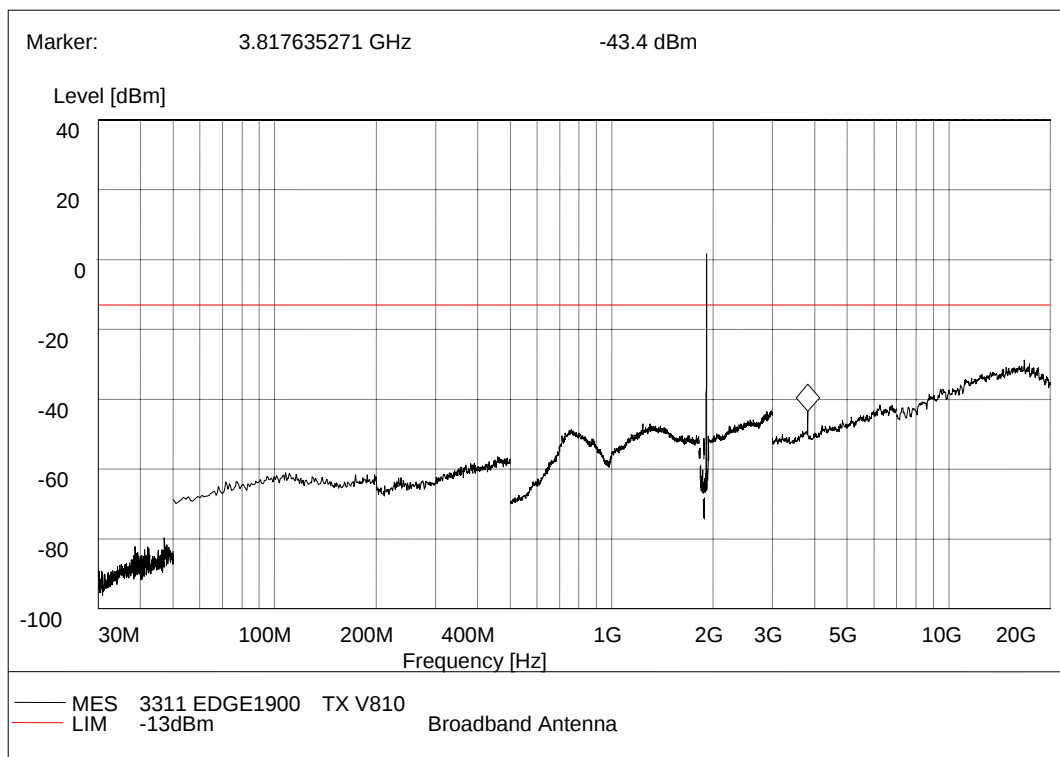
(Plot F.3: EDGE 1900MHz Channel = 661, Test Antenna Horizontal)



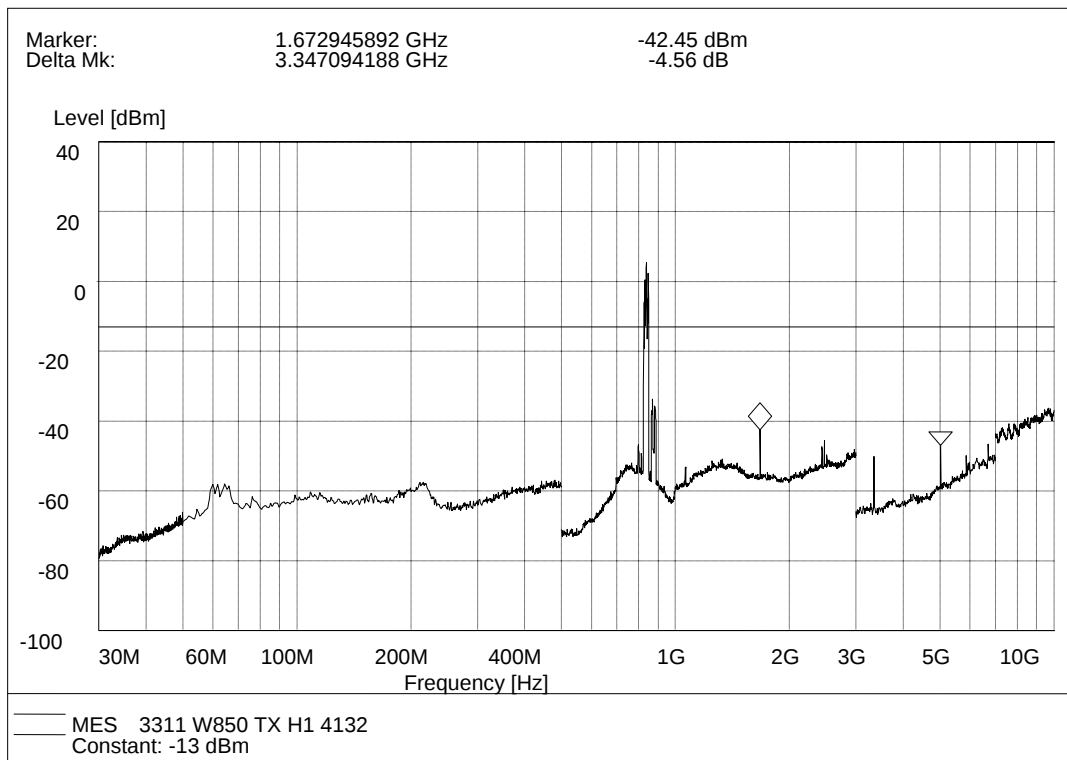
(Plot F.4: EDGE 1900MHz Channel = 661, Test Antenna Vertical)



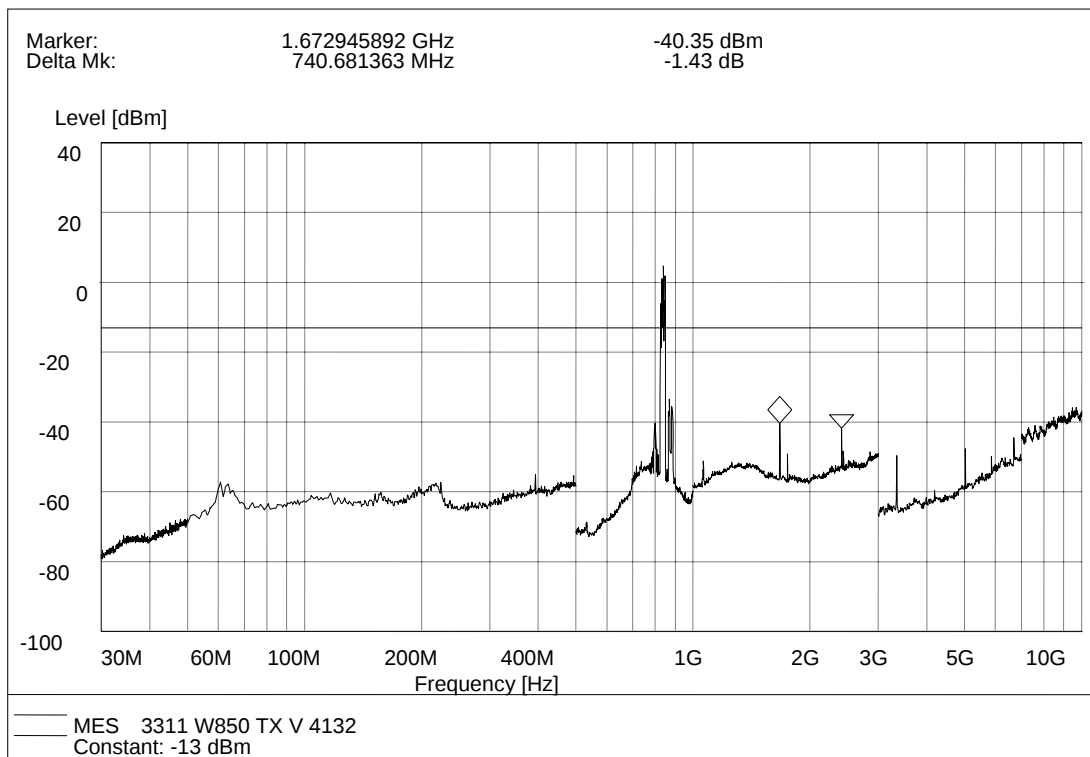
(Plot F.5: EDGE 1900MHz Channel = 810, Test Antenna Horizontal)



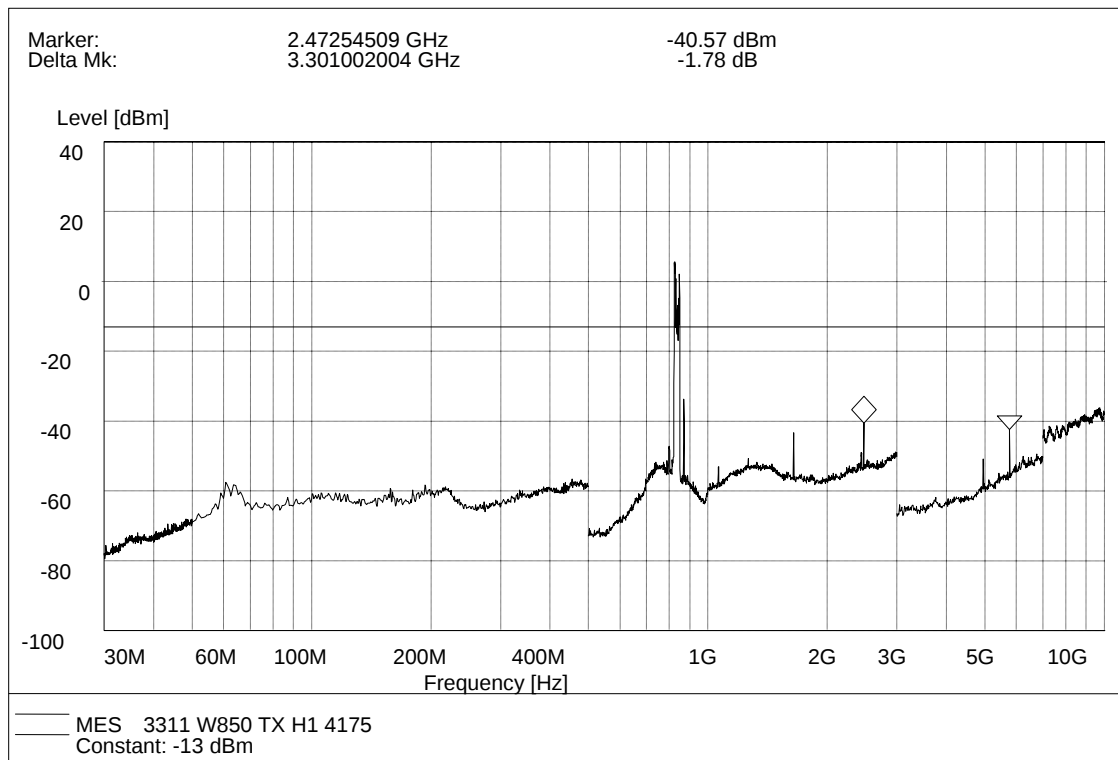
(Plot F.6: EDGE 1900MHz Channel = 810, Test Antenna Vertical)



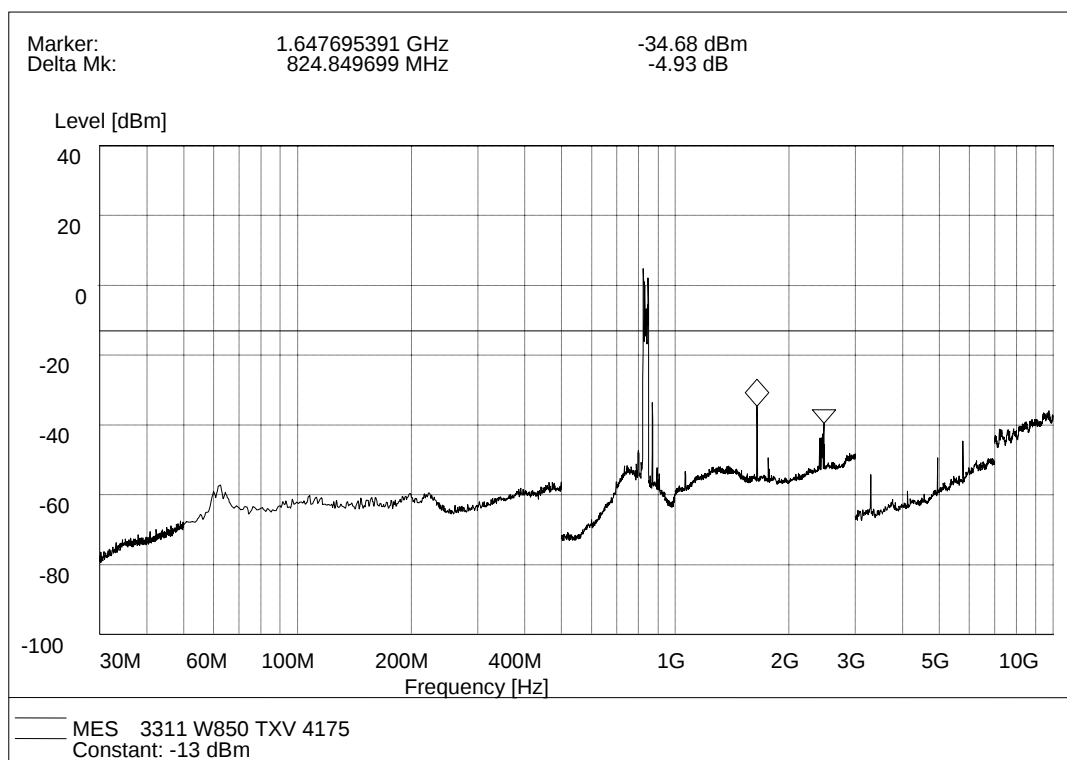
(Plot G.1: WCDMA 850MHz Channel = 4132, Test Antenna Horizontal)



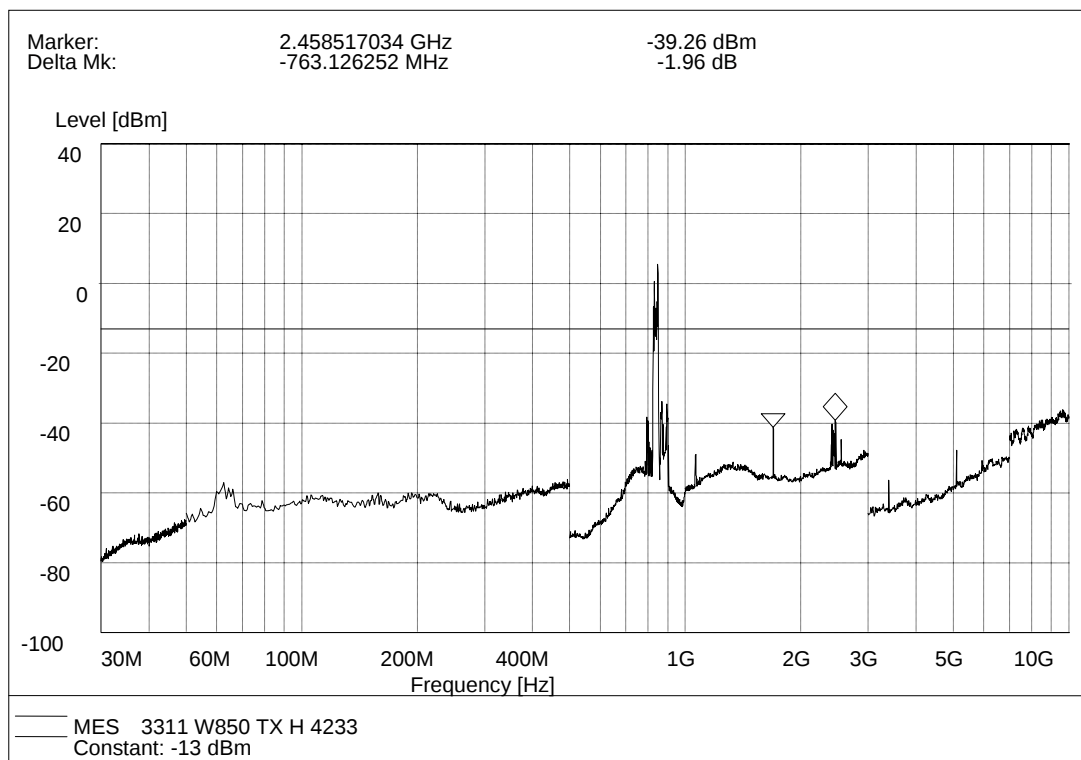
(Plot G.2: WCDMA 1900MHz Channel = 4132, Test Antenna Vertical)



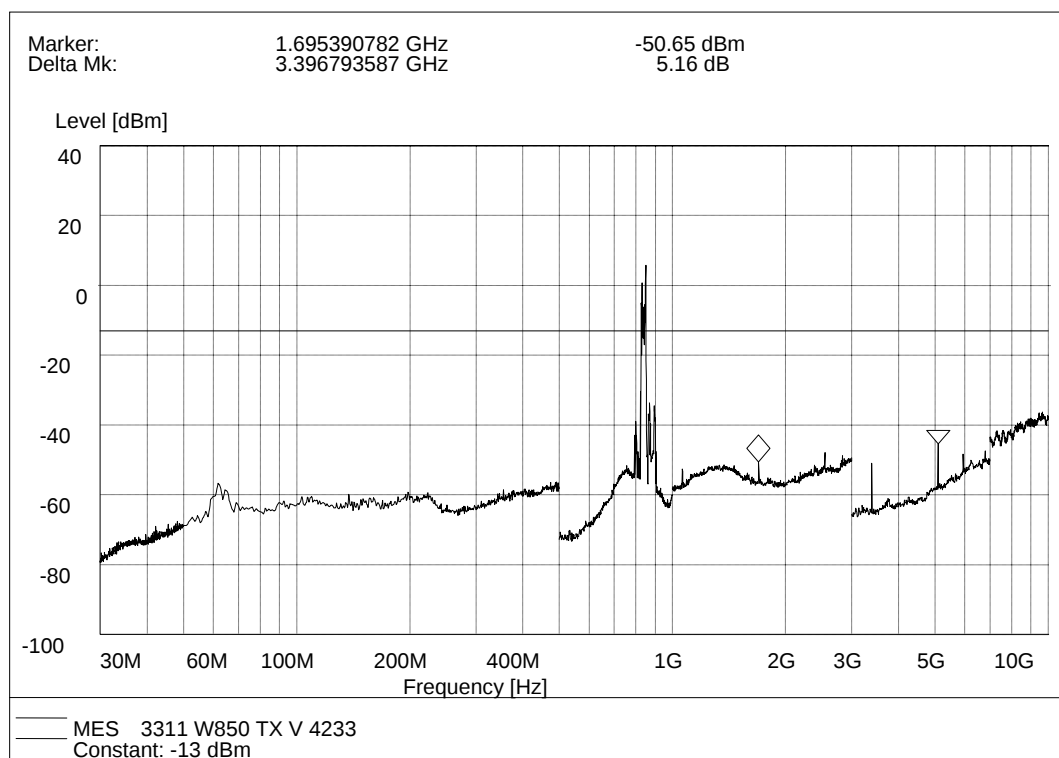
(Plot G.3: WCDMA 850MHz Channel = 4175, Test Antenna Horizontal)



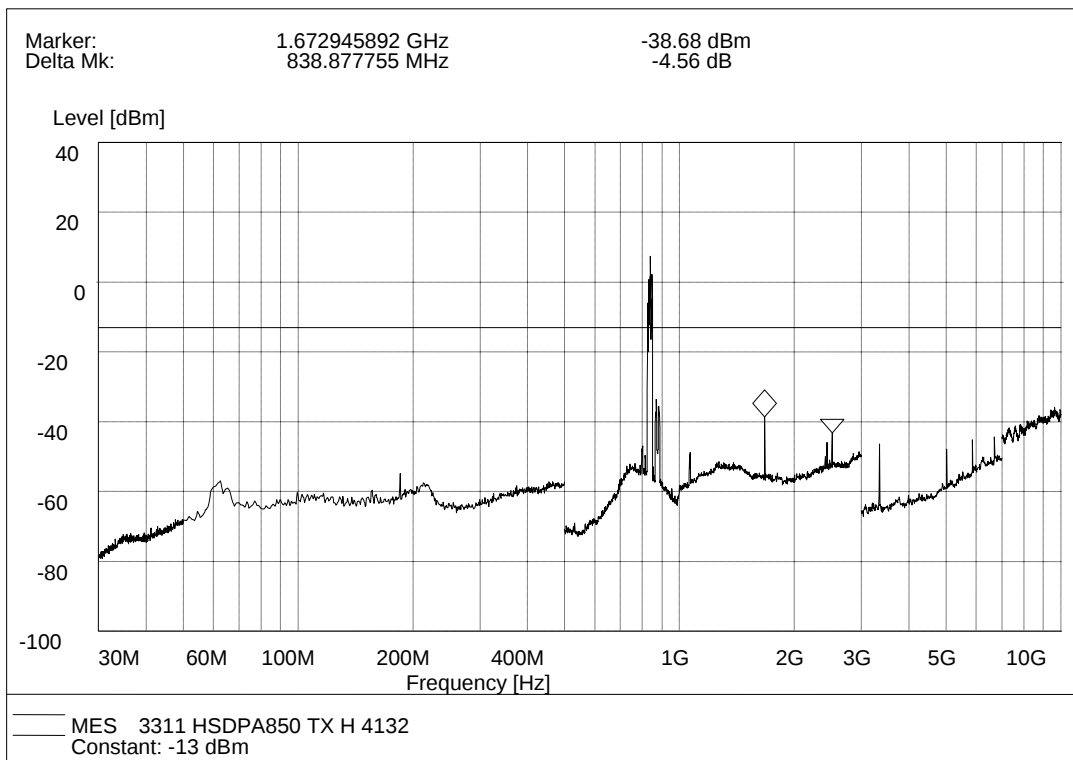
(Plot G.4: WCDMA 1900MHz Channel = 4175, Test Antenna Vertical)



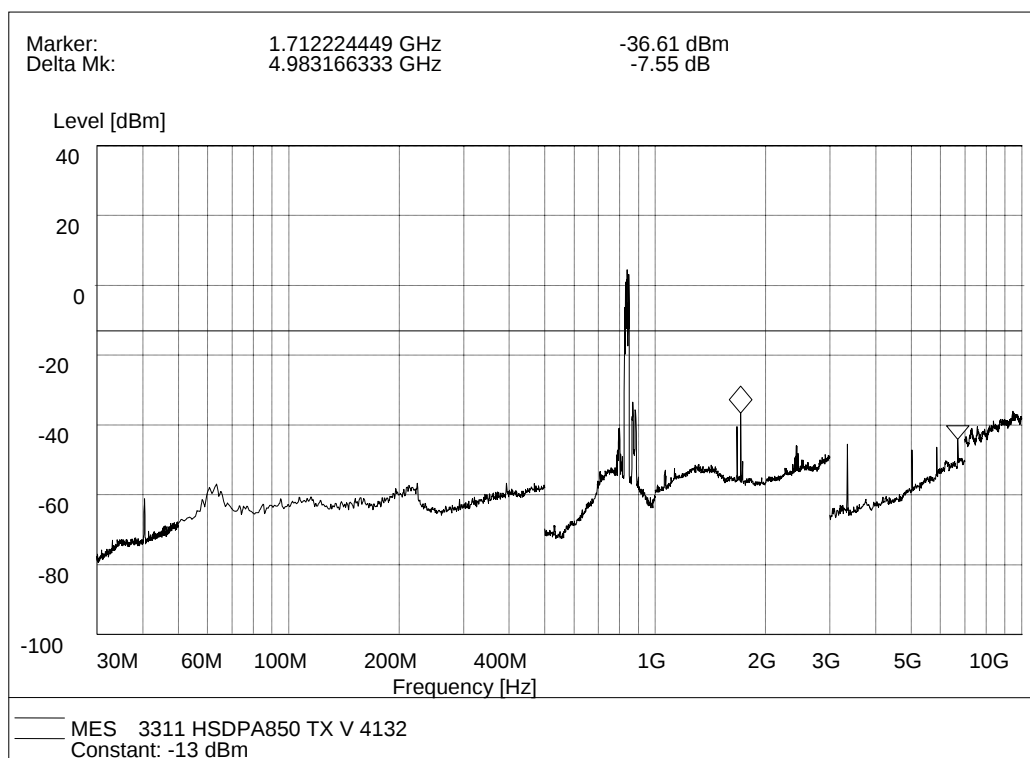
(Plot G.5: WCDMA 850MHz Channel = 4233, Test Antenna Horizontal)



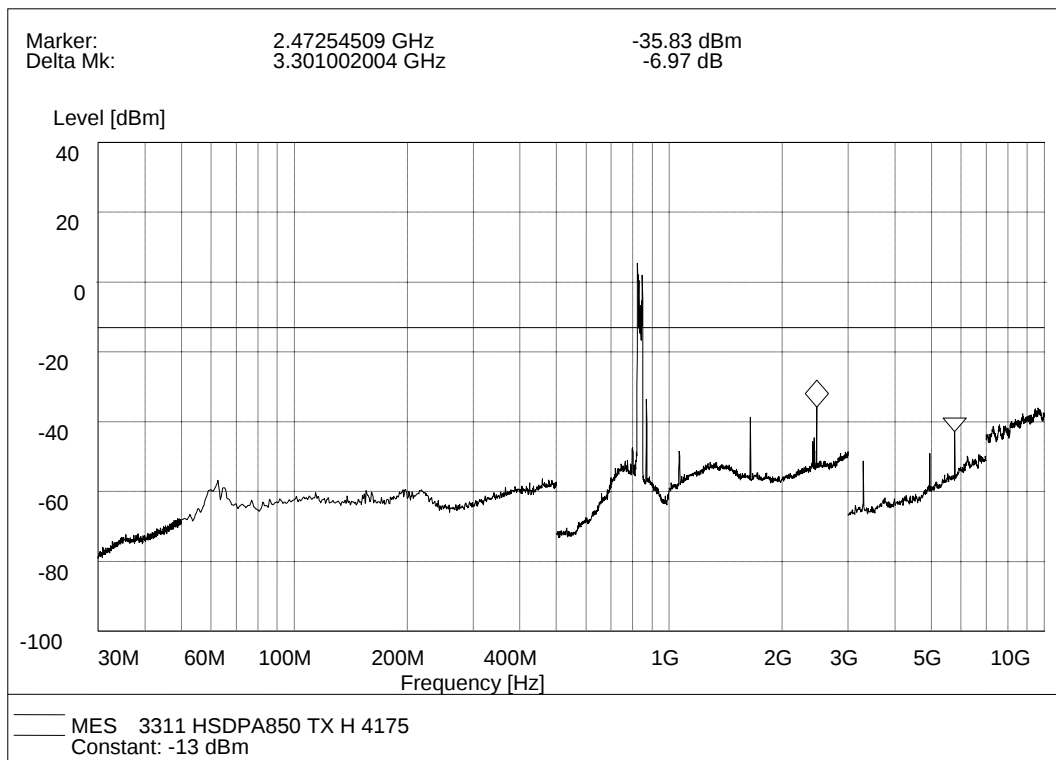
(Plot G.6: WCDMA 850MHz Channel = 4233, Test Antenna Vertical)



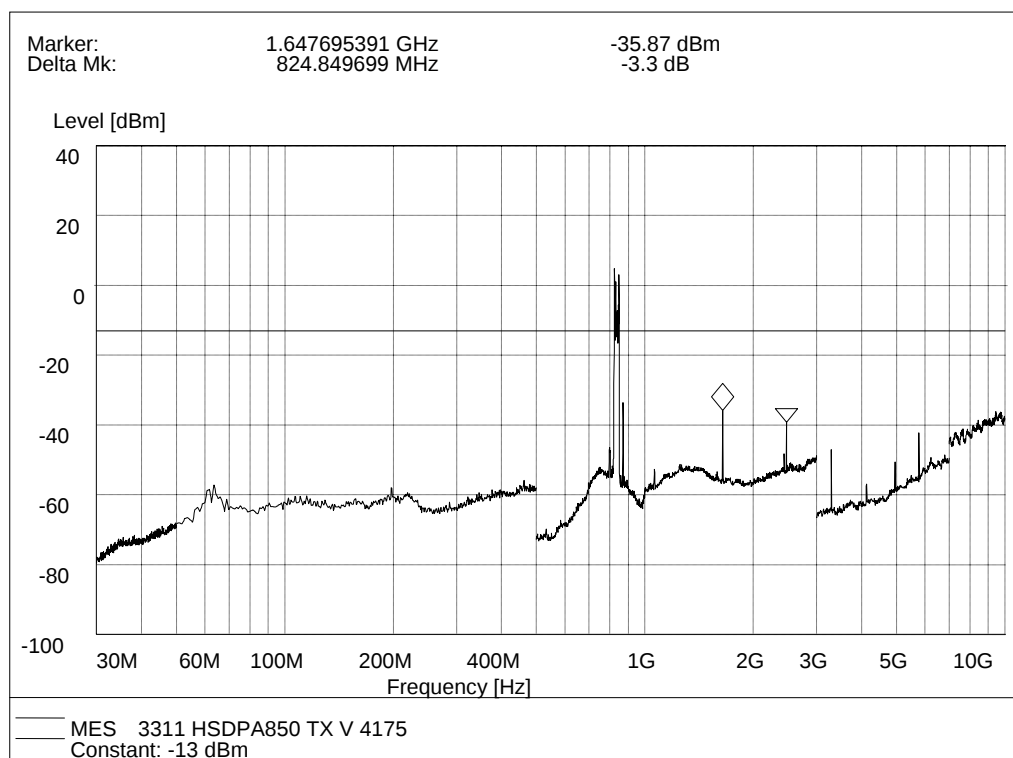
(Plot H.1: HSDPA 850MHz Channel = 4132, Test Antenna Horizontal)



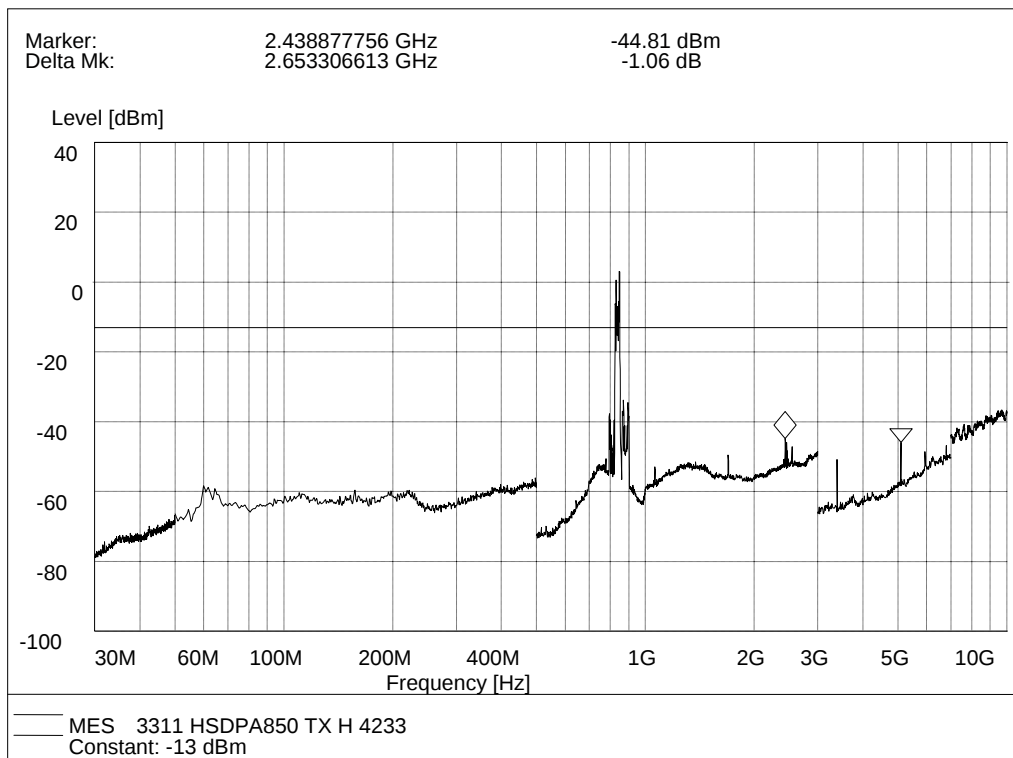
(Plot H.2: HSDPA 850MHz Channel = 4132, Test Antenna Vertical)



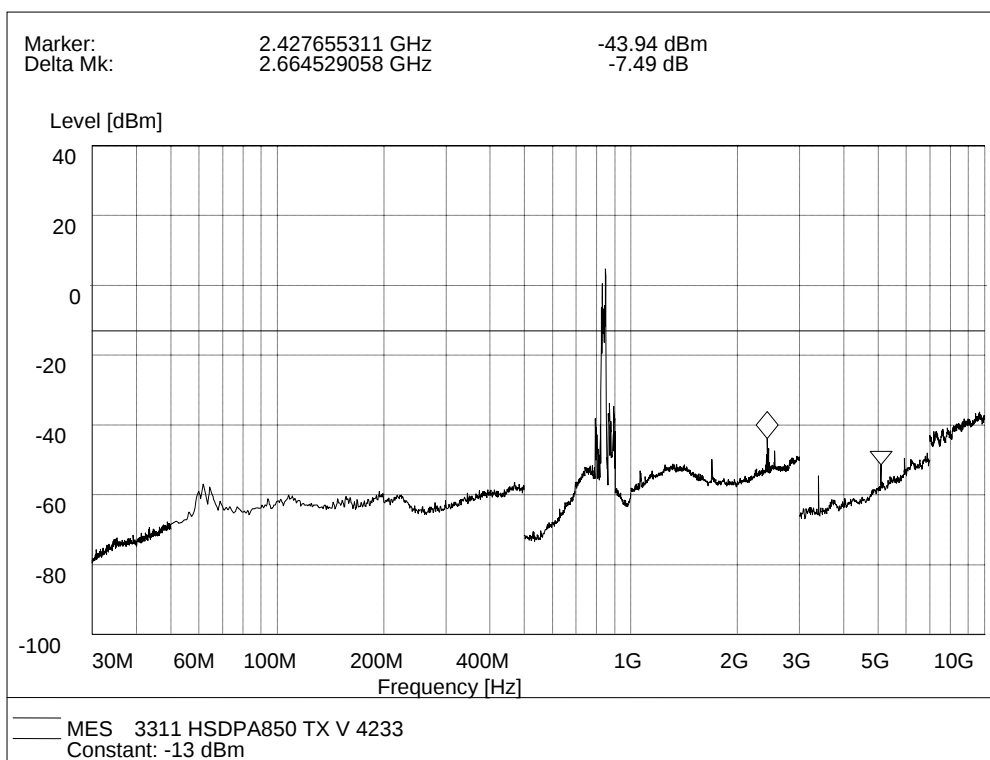
(Plot H.3: HSDPA 850MHz Channel = 4175, Test Antenna Horizontal)



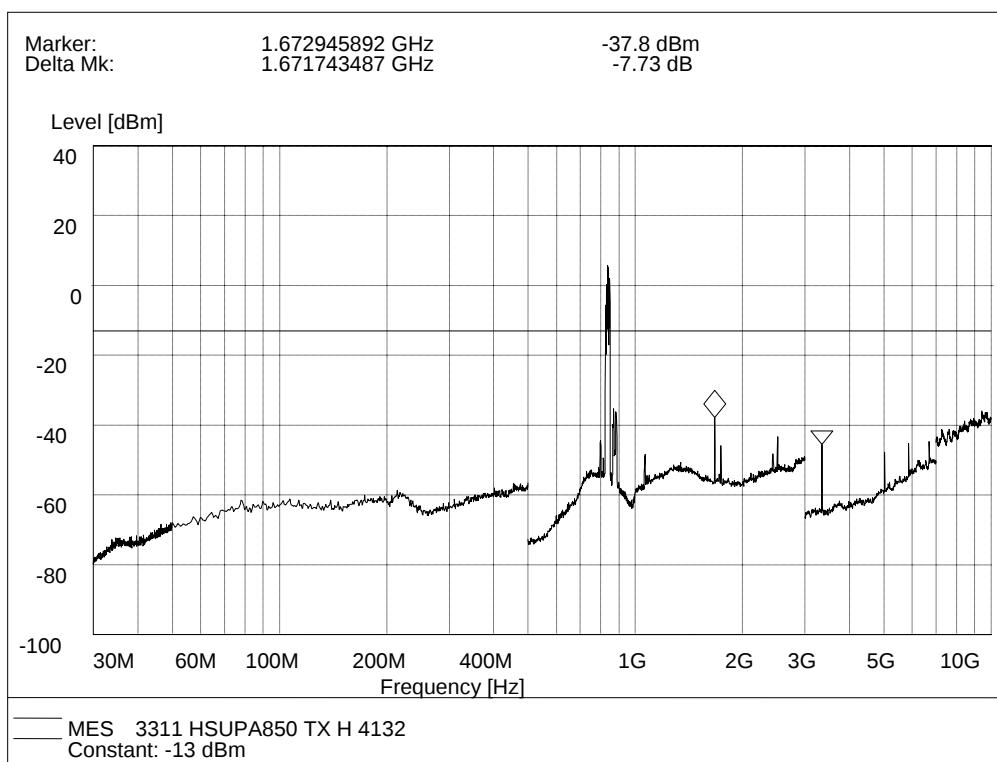
(Plot H.4: HSDPA 850MHz Channel = 4175, Test Antenna Vertical)



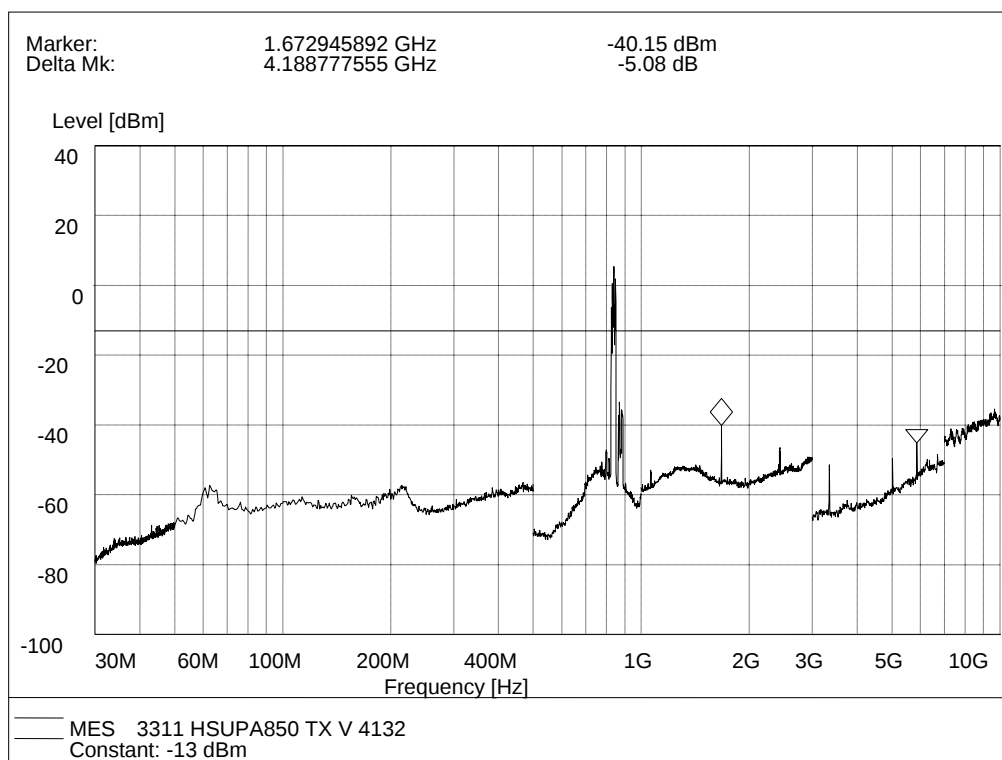
(Plot H.5: HSDPA 850MHz Channel = 4233, Test Antenna Horizontal)



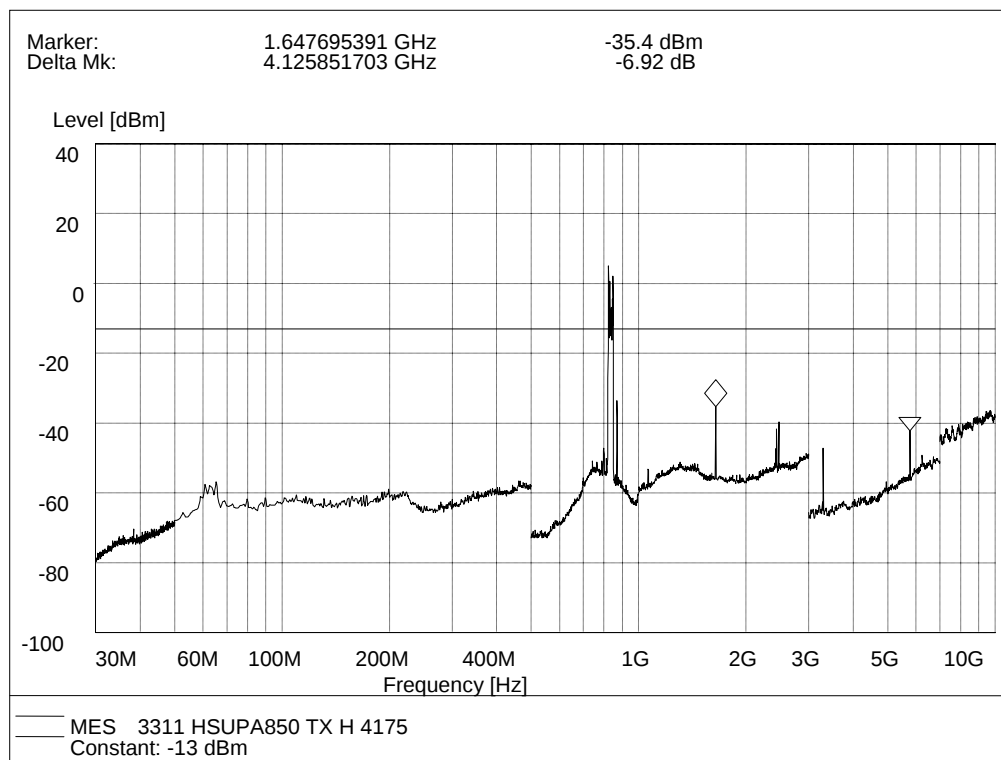
(Plot H.6: HSDPA 850MHz Channel = 4233, Test Antenna Vertical)



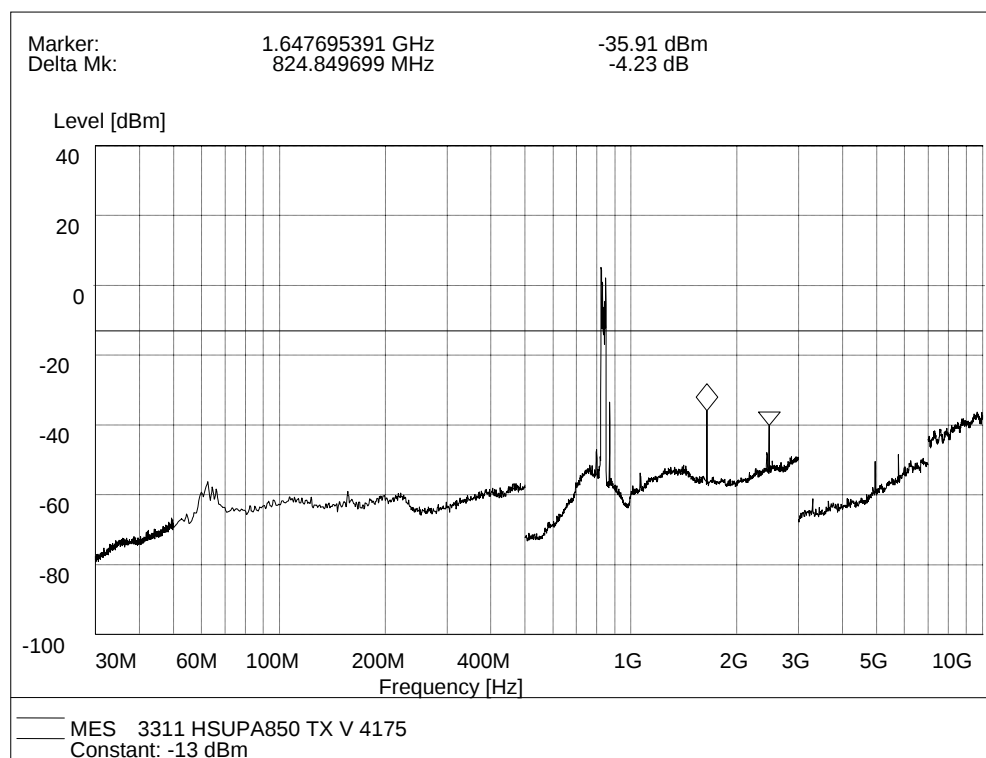
(Plot I.1: HSUPA 850MHz Channel = 4132, Test Antenna Horizontal)



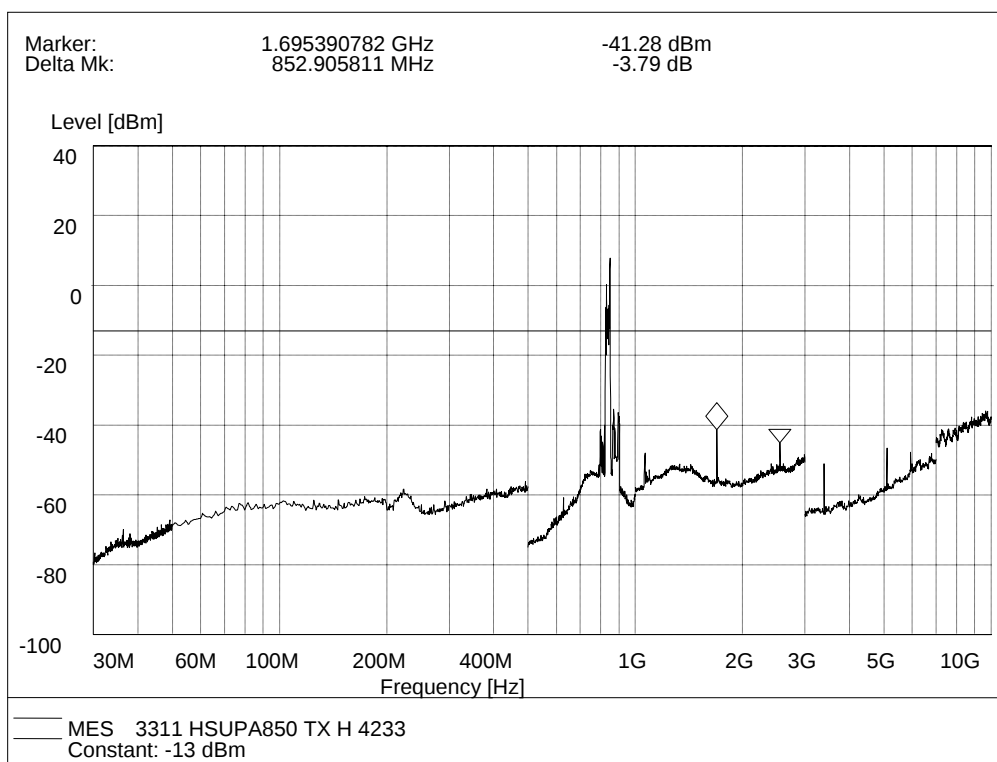
(Plot I.2: HSUPA 850MHz Channel = 4132, Test Antenna Vertical)



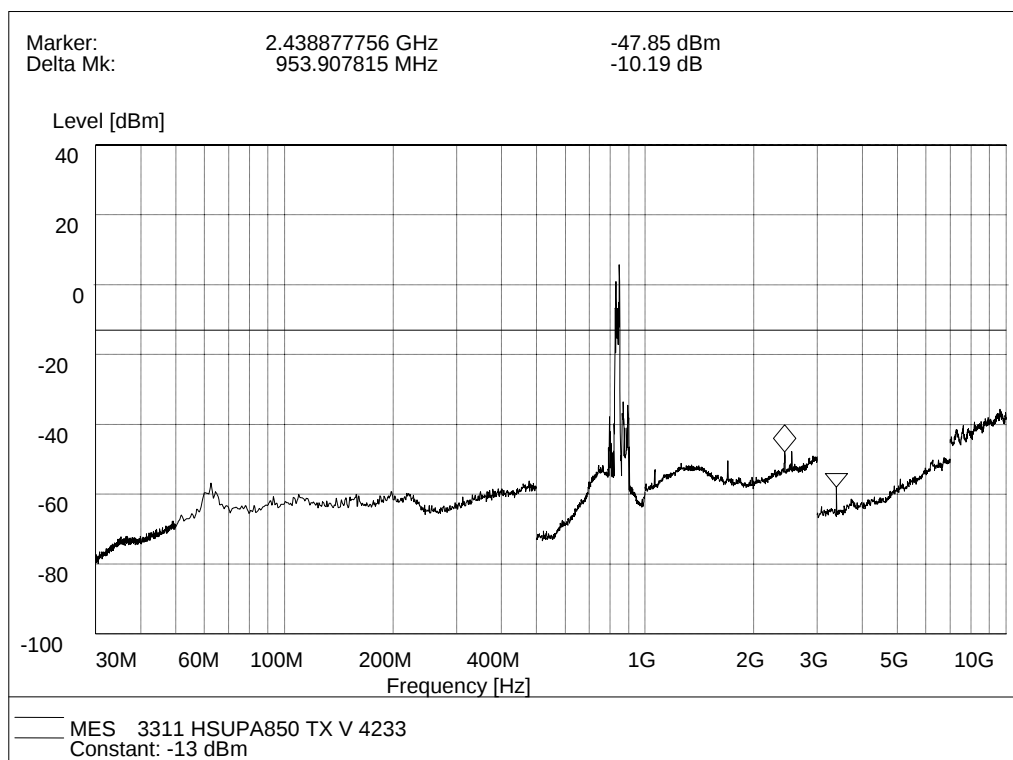
(Plot I.3: HSUPA 850MHz Channel = 4175, Test Antenna Horizontal)



(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)

** END OF REPORT **