RF TEST REPORT

Report No.：	SET2014-00495
Product：	GSM/WCDMA MOBILE PHONE
FCC ID:	CLNSS4020
Model No.：	M4 SS 4020
Applicant：	MFOURTEL MEXICO S.A. DE C.V.
Address：	Homero No. 136 – 101 Col. Chapultepec Morales, C.P. 11570, Delegación Miguel Hidalgo
Issued by：	CCIC-SET
Lab Location：	Electronic Testing Building, Shahe Road，Xili, Nanshan District, Shenzh China
	Tel：86 755 26627338 **Fax**：86 755 26627238

Test Report

Product .....:	GSM/WCDMA MOBILE PHONE
Brand Name.....:	N/A
Trade Name.....:	M4
Applicant.....:	MFOURTEL MEXICO S.A. DE C.V.
Applicant Address .....:	Homero No. 136 – 101 Col. Chapultepec Morales, C.P. 11570, Delegación Miguel Hidalgo
Manufacturer .....:	CK Telecom Limited
Manufacturer Address .....:	Technology Road.High-Tech Development Zone. Heyuan, Guangdong,P.R.China.
Test Standards .....:	47 CFR Part 2(10-1-12 Edition) Frequency Allocations and Radio Treaty Matters; General Rules and Regulations 47 CFR Part 22(10-1-12 Edition) Public Mobile Services 47 CFR Part 24(10-1-12 Edition)Personal Communications Services
Test Result.....:	PASS

Tested by ..... : 2014.01.20

Lu Lei，Test Engineer

Reviewed by ..... : 2014.01.20

Shuangwen Zhang, Senior Egineer

Approved by.....: 2014.01.20

Wu Li'an，Manager

Table of Contents

Change History		
Issue	Date	Reason for change
1.0	Jan.20 2014	First edition

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type.....:	GSM/WCDMA MOBILE PHONE
Serial No.....:	(n.a, marked #1 by test site)
Hardware Version .....:	QSLFW-V1.0
Software Version	M4_SS4020_S10_Ver200
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.....:	GSM,GPRS Mode with GMSK Modulation WCDMA Mode with QPSK Modulation HSDPA Mode with QPSK Modulation HSUPA Mode with QPSK Modulation
Multislot Class.....:	GPRS: Multislot Class12
Antenna Type.....:	FIFA
Emission Designators .....:	GSM 850:248KGXW,GSM 1900:244KGXW GPRS 850:248KGXW;GRPS 1900:248KGXW WCDMA 850:4M18F9W ,WCDMA1900:4M20F9W HSDPA 850: 4M18F9W;HSDPA1900: 4M20F9W HSUPA 850: 4M18F9W;HSUPA 1900: 4M18F9W

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<=n<=251; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately 128 (824.2MHz), 190 (836.6MHz) and 251 (848.8MHz).

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

Note 3: The transmitter (Tx) frequency arrangement of the WCDMA 850MHz band used by the EUT can be represented with the formula F(n)=826.4+0.2*(n-4132), 4132<=n<=4233; the lowest,

middle and highest channel numbers (ARFCHs) used and tested in this report are separately 4132 (826.4MHz), 4183(836.6MHz) and 4233 (846.6MHz).

Note 4: The transmitter (Tx) frequency arrangement of the WCDMA 1900MHz band used by the EUT can be represented with the formula F(n)=1852.4+0.2*(n-9262), 9262<=n<=9538; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 9262 (1852.4MHz), 9400 (1880MHz) and 9538 (1907.6MHz).

Note 5: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer

Note 6: The EUT does not support uplink function in EDGE mode.

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 (10-1-12 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-12 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-12 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	99% Occupied Bandwidth	PASS
3	2.1055 22.355 24.235	Frequency Stability	PASS
4	2.1051 2.1057 22.917 24.238	Conducted Out of Band Emissions	PASS
5	2.1051 2.1057 22.917 24.238	Band Edge	PASS
6	22.913 24.232	Transmitter Radiated Power (EIPR/ERP)	PASS
7	2.1053 2.1057 22.917 24.238	Radiated Out of Band Emissions	PASS

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

1.3 Facilities and Accreditations

1.3.1 Test Facilities

CNAS-Lab Code: L1659

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. CCIC 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 (℃):	15℃- 35℃
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86KPa-106KPa

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

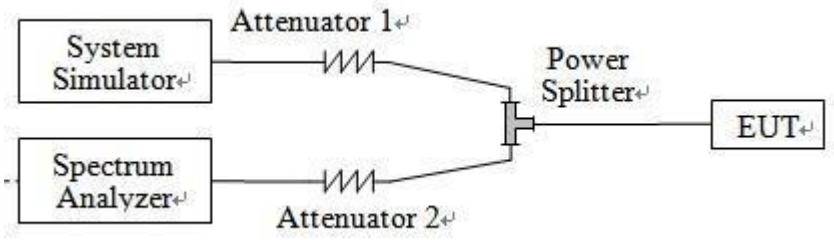
2.1 Conducted RF Output Power

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

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal.Due Date
System Simulator	Agilent	E5515C	MY47510547	2014.09.13
Spectrum Analyzer	R&S	FSP40	MY4510810	2014.06.09
Spectrum Analyzer	Agilent	E4407B	1164.4391.40	2014.06.09
Power Meter	Agilent	E4418B	GB43318055	2014.06.09
Power Splitter	Weinschel	1506A	NW521	2014.06.11
Attenuator 1	MCE/weinschel	10dB	BN3693	2014.06.11
Attenuator 2	Resnet	3dB	(n.a.)	2014.06.09

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:

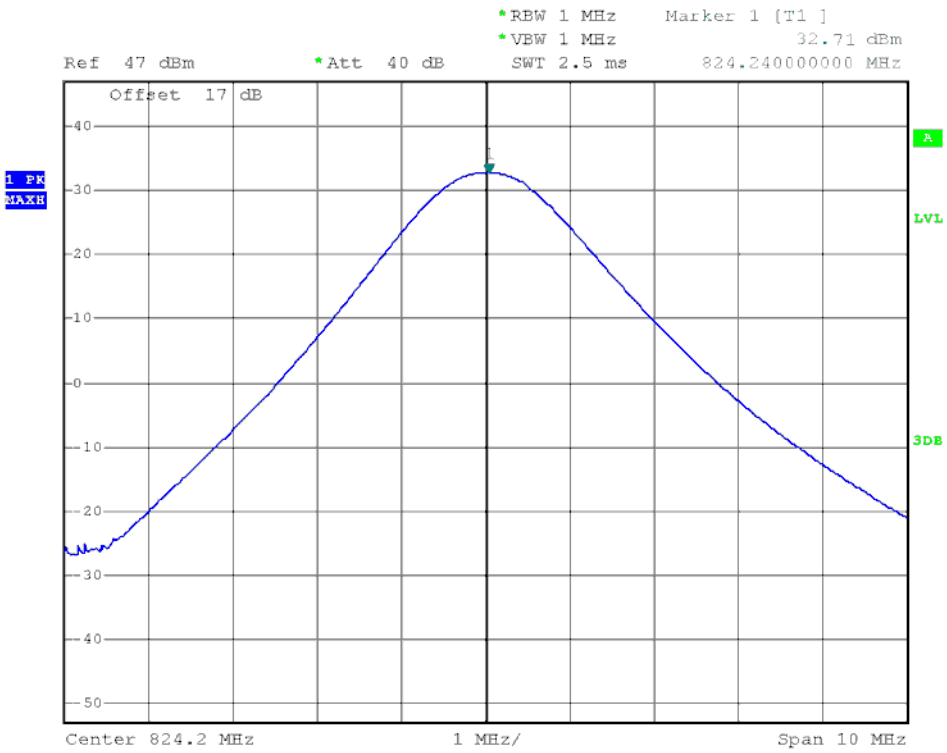
Band	Channel	Frequency (MHz)	Measured Output Power		Verdict
			dBm	Refer to Plot	
GSM 850MHz	128	824.2	32.71	Plot A1 to A3	PASS
	190	836.6	32.71		PASS
	251	848.8	32.66		PASS
GSM 1900MHz	512	1850.2	29.60	Plot B1 to B3	PASS
	661	1880.0	29.30		PASS
	810	1909.8	29.15		PASS
GPRS 850MHz	128	824.2	32.46	Plot C1 to C3[Note 1]	PASS
	190	836.6	32.54		PASS
	251	848.8	32.52		PASS
GPRS 1900MHz	512	1850.2	29.55	Plot D1 to D3[Note 1]	PASS
	661	1880.0	29.21		PASS
	810	1909.8	29.10		PASS

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

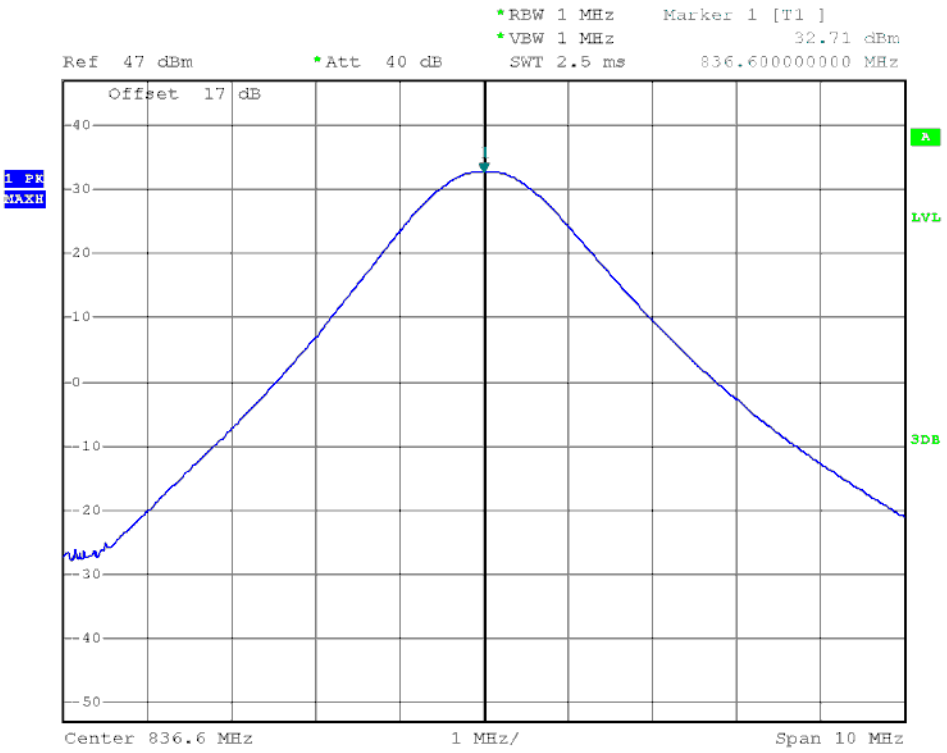
2. WCDMA Model Test Verdict:

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4183	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	23.52	23.18	23.44	23.23	23.09	23.31
HSDPA	1	22.45	22.40	22.39	22.34	22.28	22.38
	2	22.28	22.31	22.27	22.27	22.43	22.48
	3	21.85	21.99	21.96	21.84	21.85	21.88
	4	21.96	22.03	21.83	21.82	22.38	21.84
HSUPA	1	22.28	22.34	22.22	21.89	2219	22.31
	2	22.33	22.22	22.31	21.98	21.82	22.29
	3	22.29	22.19	22.37	22.33	22.17	22.07
	4	22.33	22.22	22.38	21.80	21.33	21.45
	5	22.09	22.27	22.19	22.13	22.21	22.23
Note:	The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA was tested by power meter.						

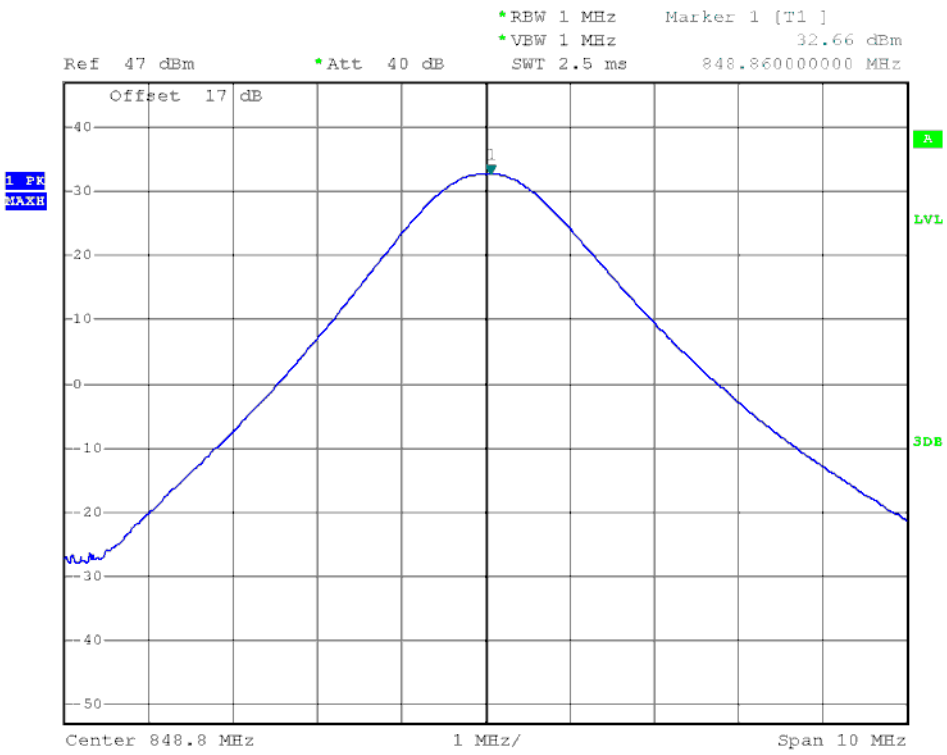
3. GSM Model Test Plots:



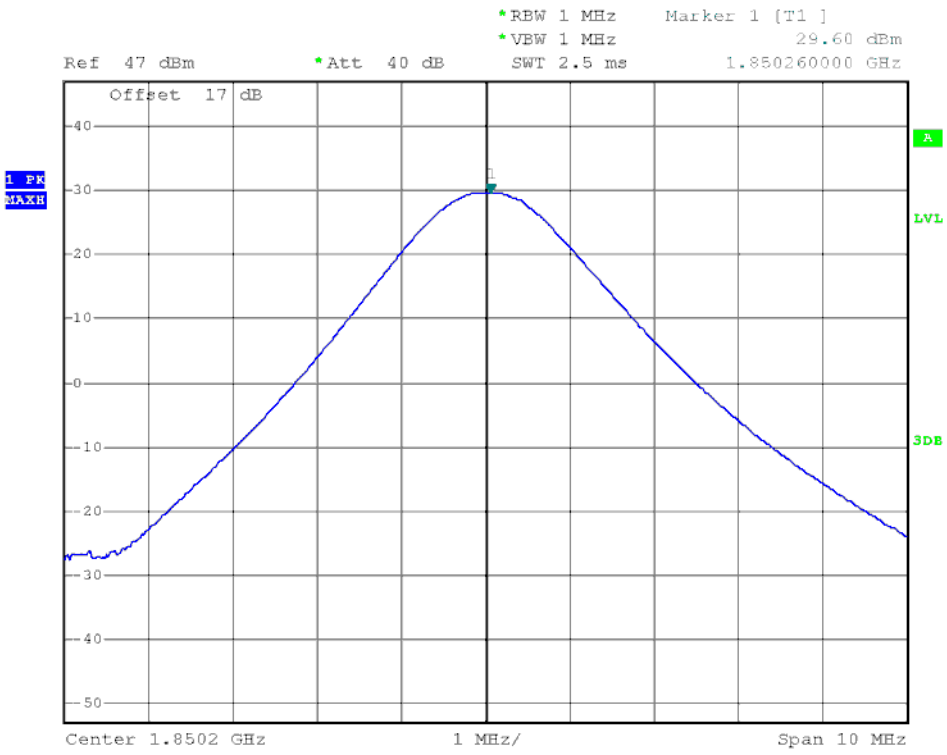
(Plot A1: GSM 850MHz Channel = 128)



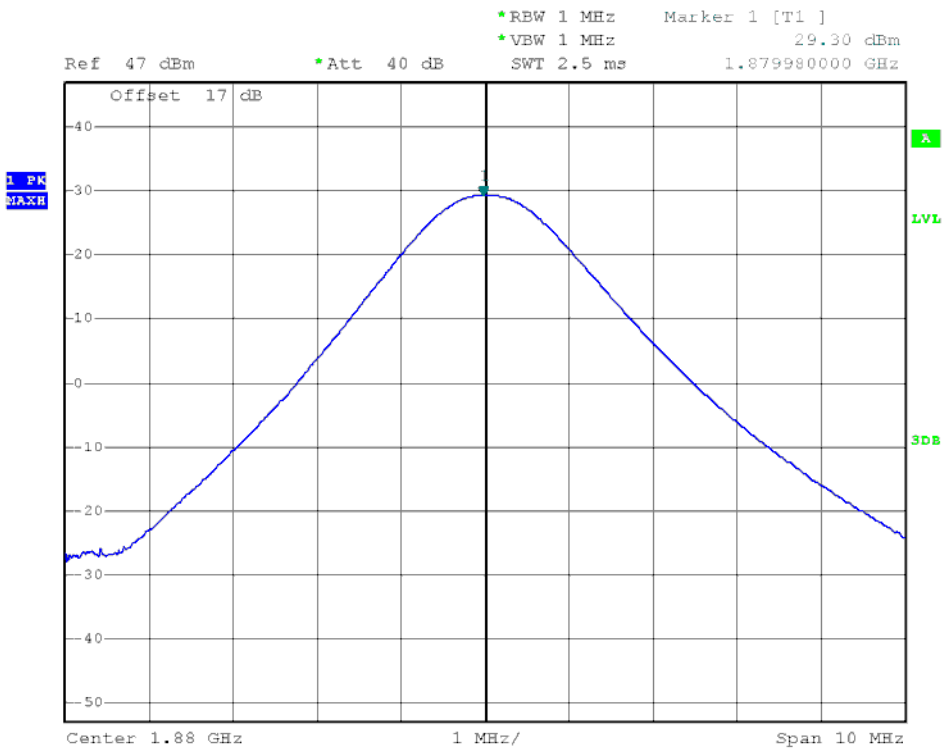
(Plot A2: GSM 850MHz Channel = 190)



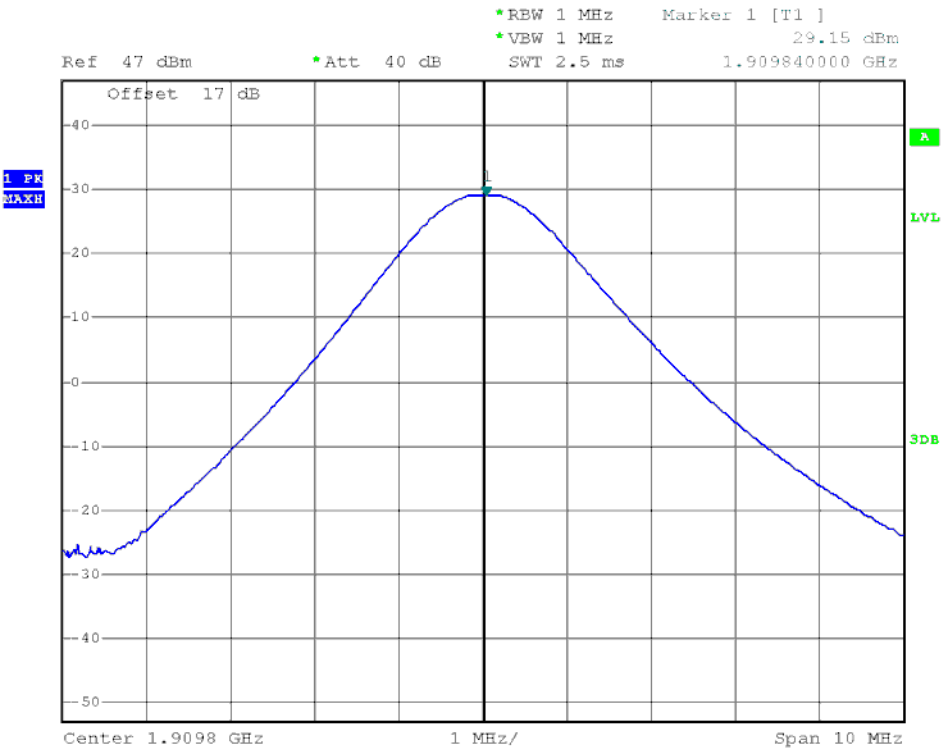
(Plot A3: GSM 850MHz Channel = 251)



(Plot B1: GSM 1900MHz Channel = 512)

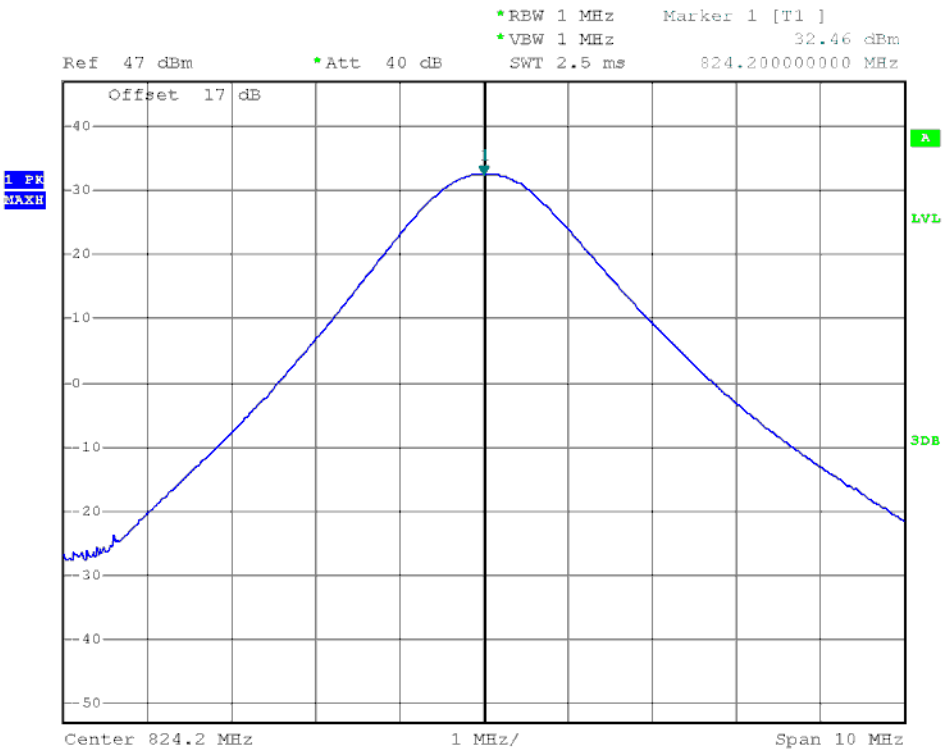


(Plot B2: GSM 1900MHz Channel = 661)

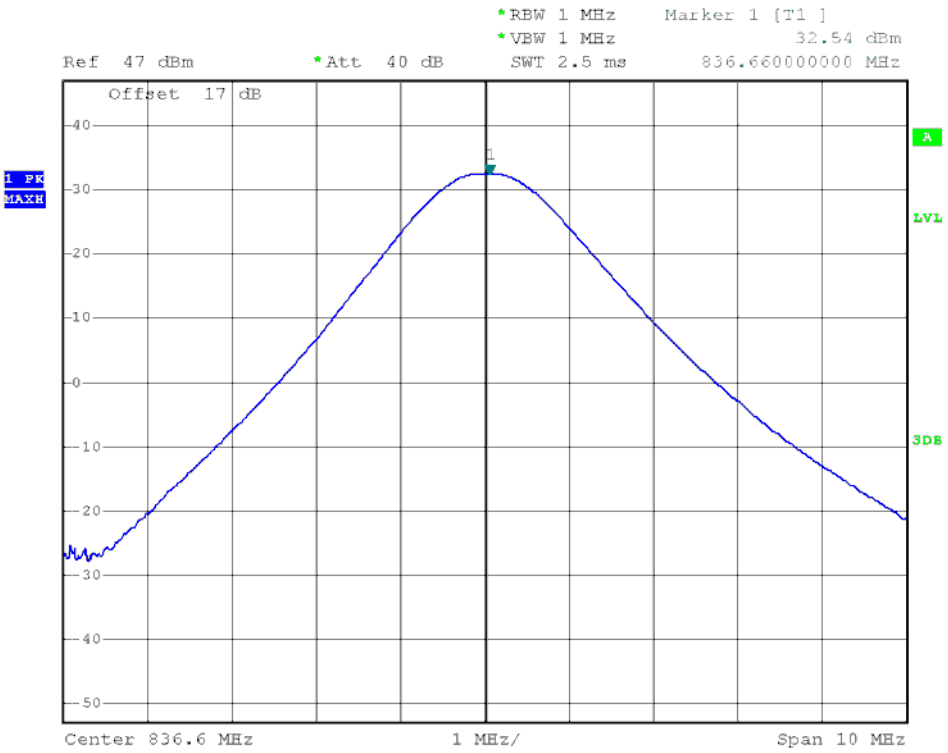


(Plot B3: GSM 1900MHz Channel = 810)

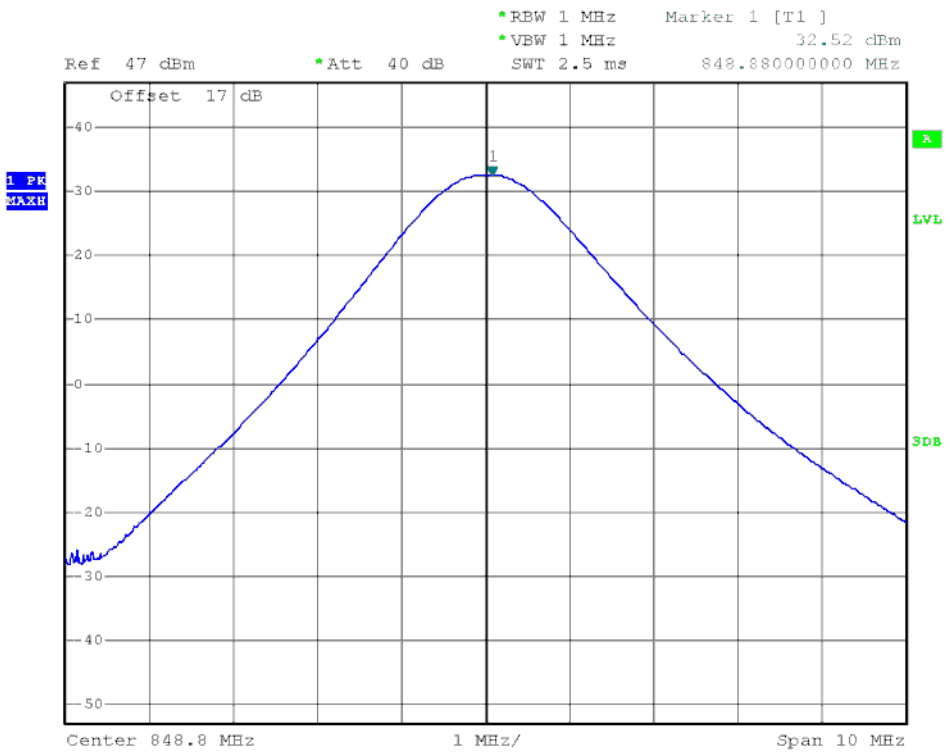
4. GPRS Model Test Plots:



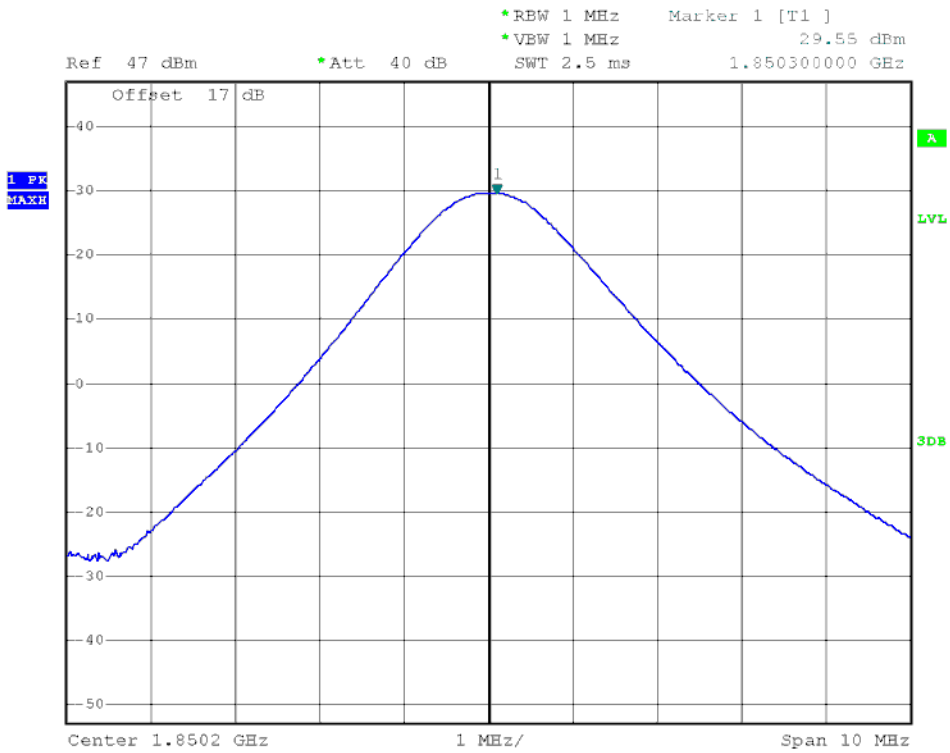
(Plot C1: GPRS 850MHz Channel = 128)



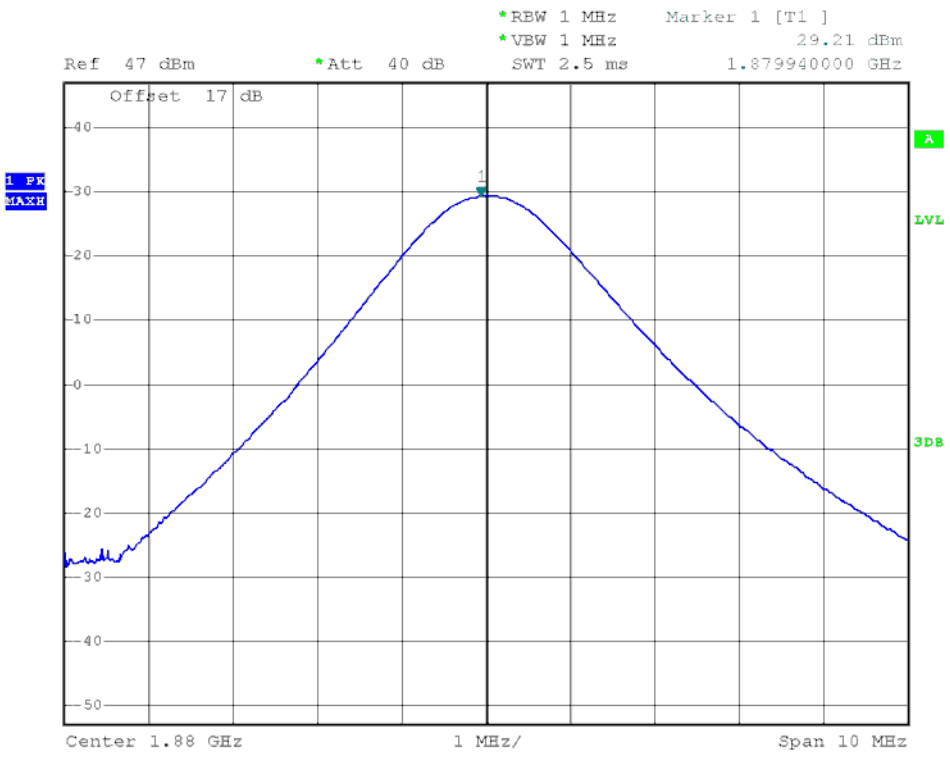
(Plot C2: GPRS 850MHz Channel = 190)



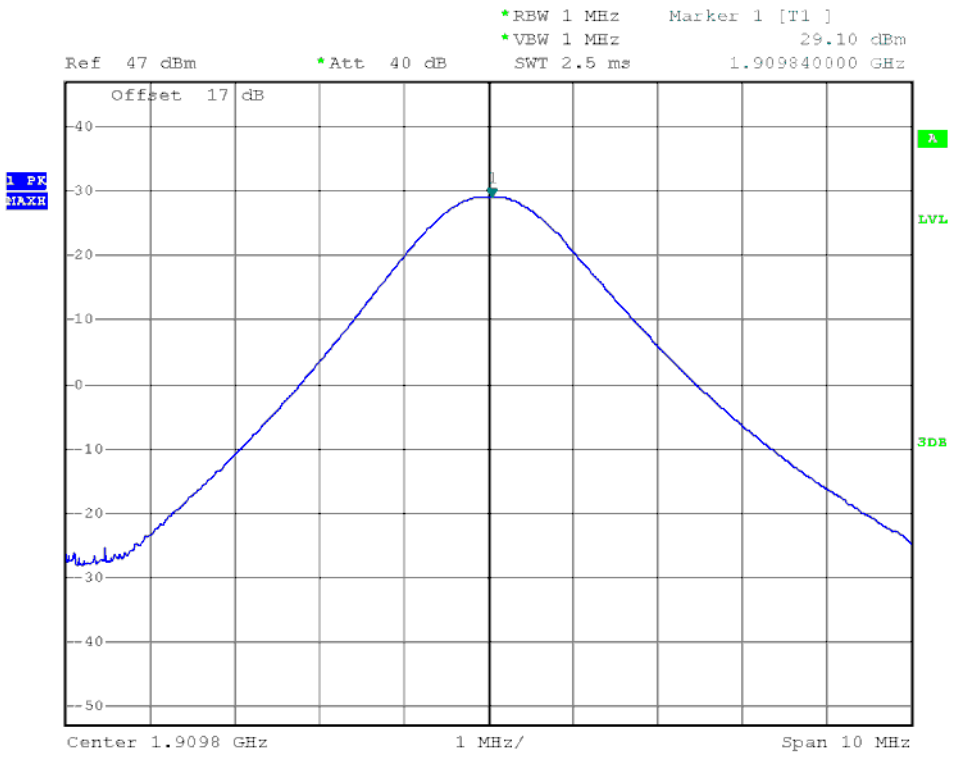
(Plot C3: GPRS 850MHz Channel = 251)



(Plot D1: GPRS 1900MHz Channel = 512)



(Plot D2: GPRS 1900MHz Channel = 661)



(Plot D3: GPRS 1900Hz Channel = 810)

2.2 Peak to Average Radio

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 operating mode:

a. Set RBW=1MHz, VBW=3MHz, peak detector in spectrum analyzer.

b. Set EUT in maximum output power, and triggered the bust signal.

c. Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average radio.

B. For UMTS operating mode:

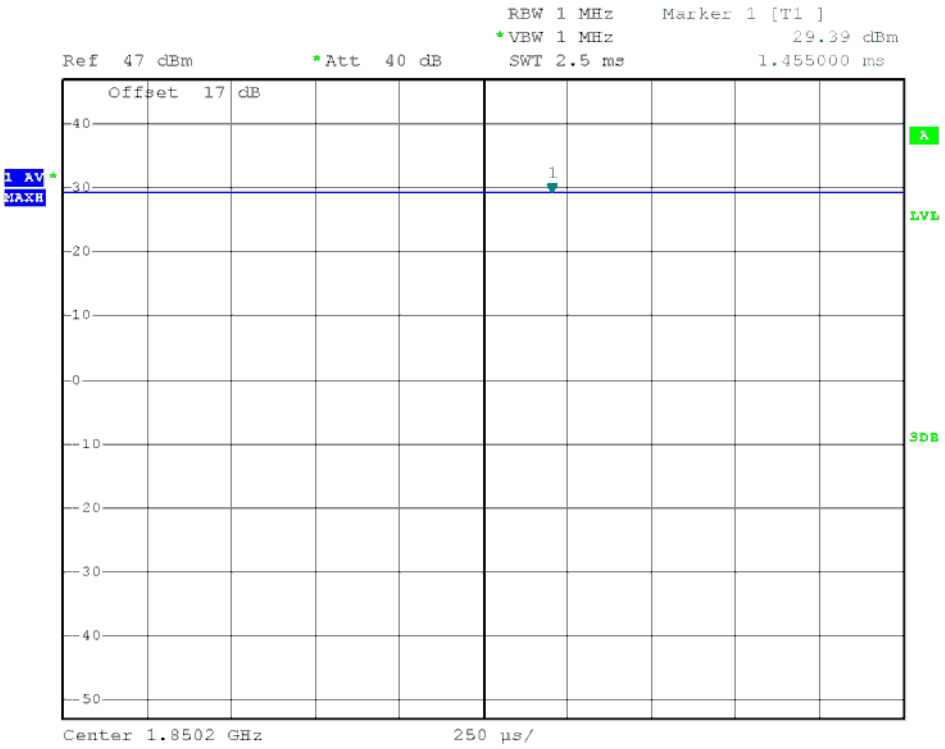
a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.

b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

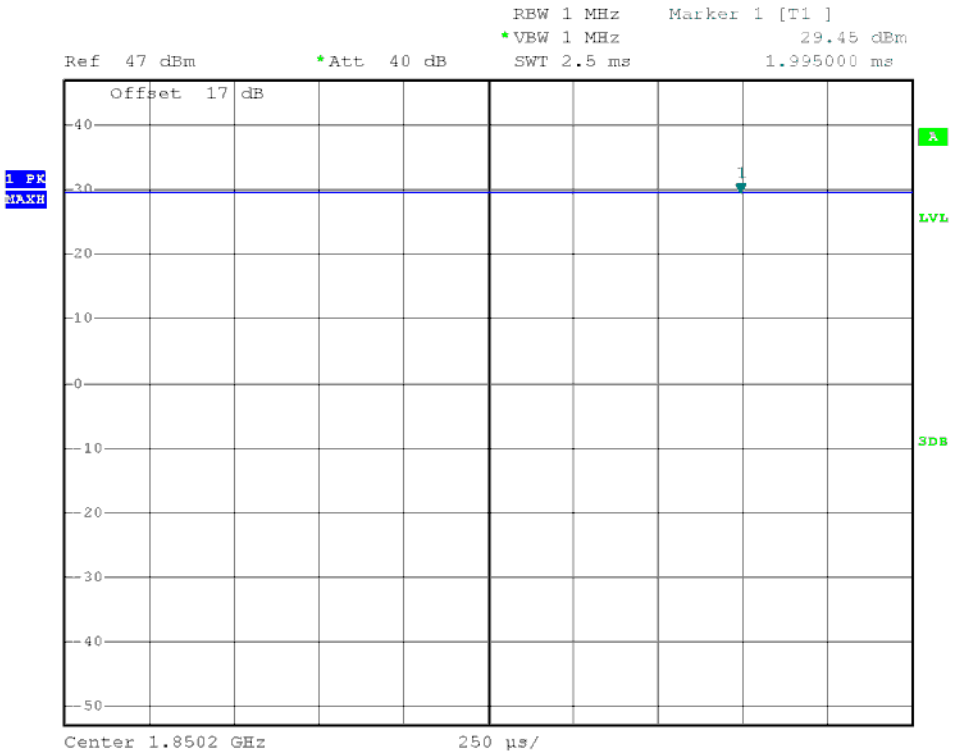
1. Test Verdict:

Band	Channel	Frequency (MHz)	Peak to Average radio		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 1900MHz	512	1850.2	0.06	Plot A1-1 to A3-2	13	PASS
	661	1880.0	0.05			PASS
	810	1909.8	0.07			PASS
WCDMA 1900MHz	9262	1852.4	3.21	Plot B1 toB3	13	PASS
	9400	1880.0	3.13			PASS
	9538	1907.6	3.11			PASS
HSDPA 1900MHz	9262	1852.4	3.22	Plot C1 toC3	13	PASS
	9400	1880.0	3.10			PASS
	9538	1907.6	3.09			PASS
HSUPA 1900MHz	9262	1852.4	3.21	Plot D1 toD3	13	PASS
	9400	1880.0	3.23			PASS
	9538	1907.6	3.15			PASS

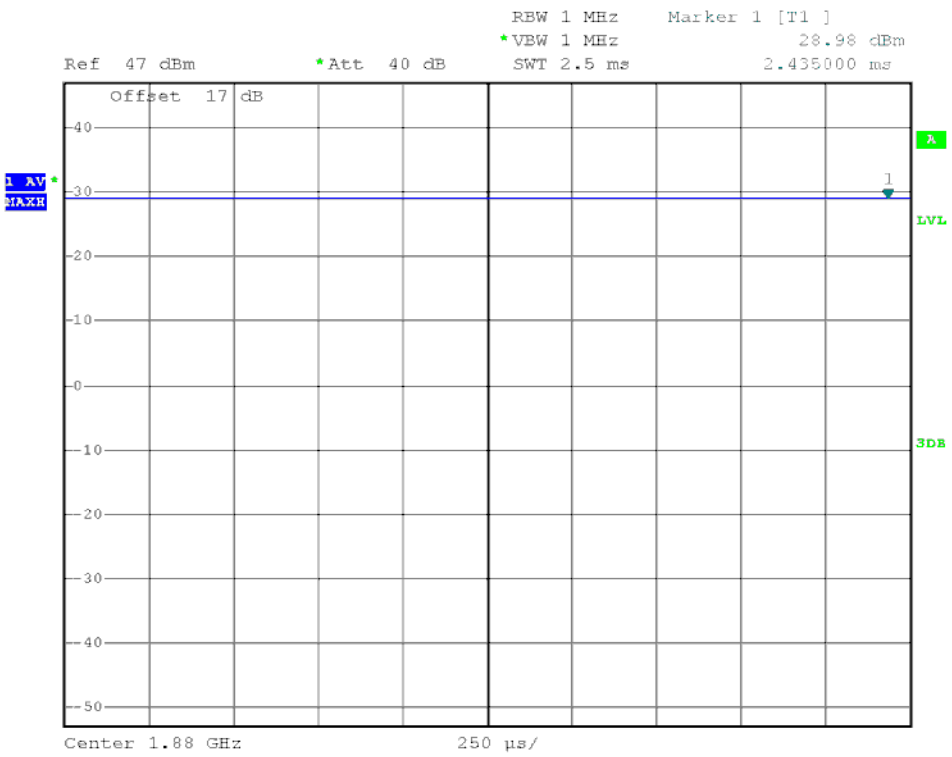
2. GSM Model Test Plots:



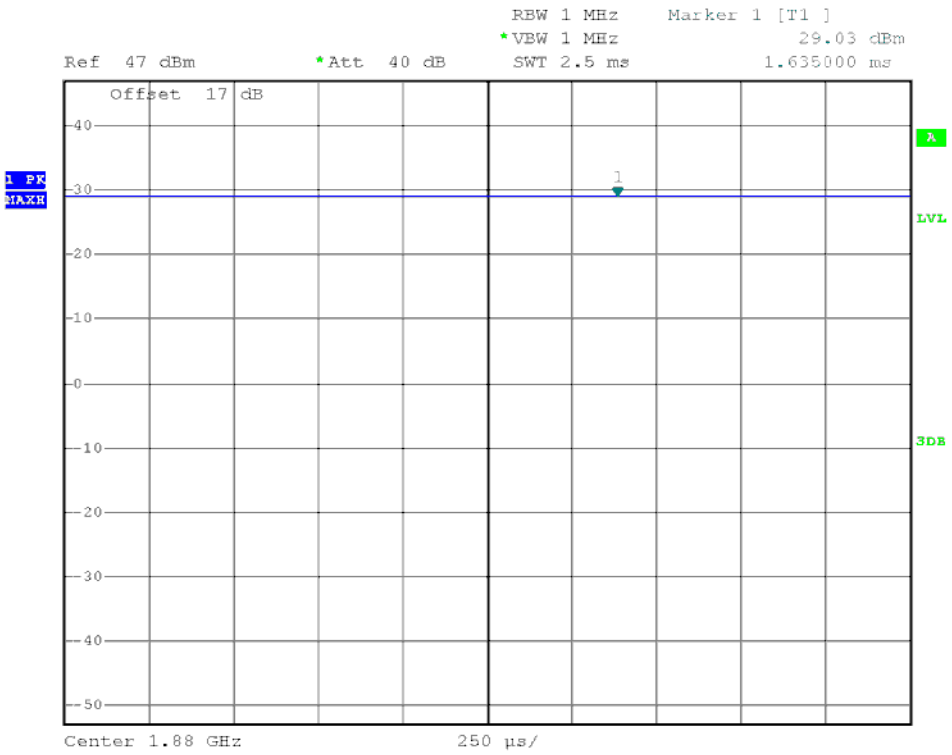
(Plot A1-1: GSM 1900 MHz Channel = 512)



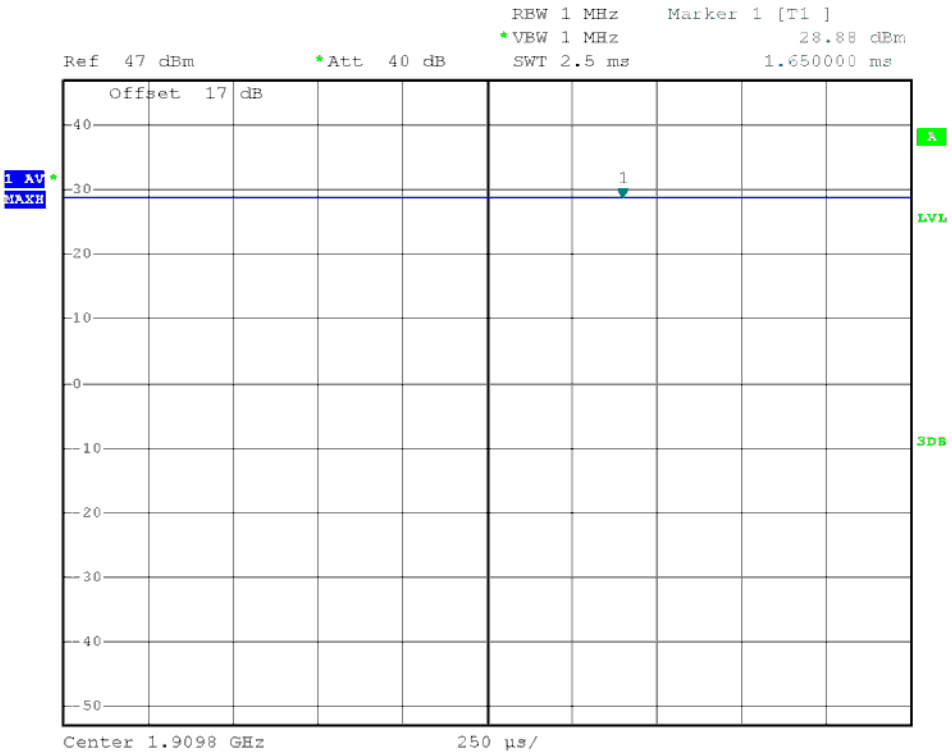
(Plot A1-2: GSM 1900 MHz Channel = 512)



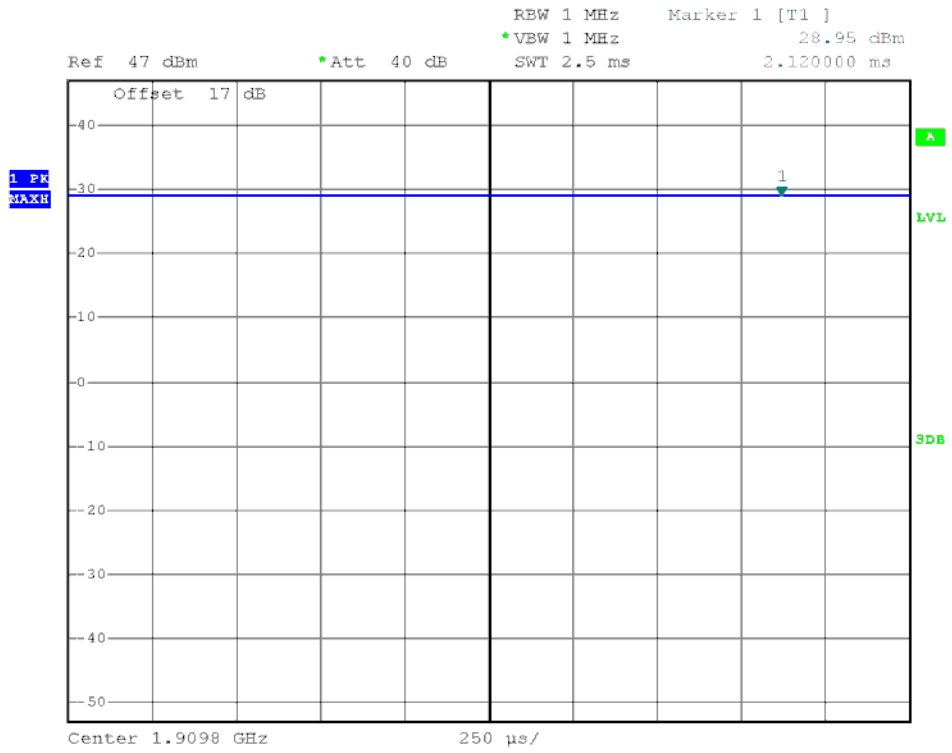
(Plot A2-1: GSM 1900 MHz Channel = 661)



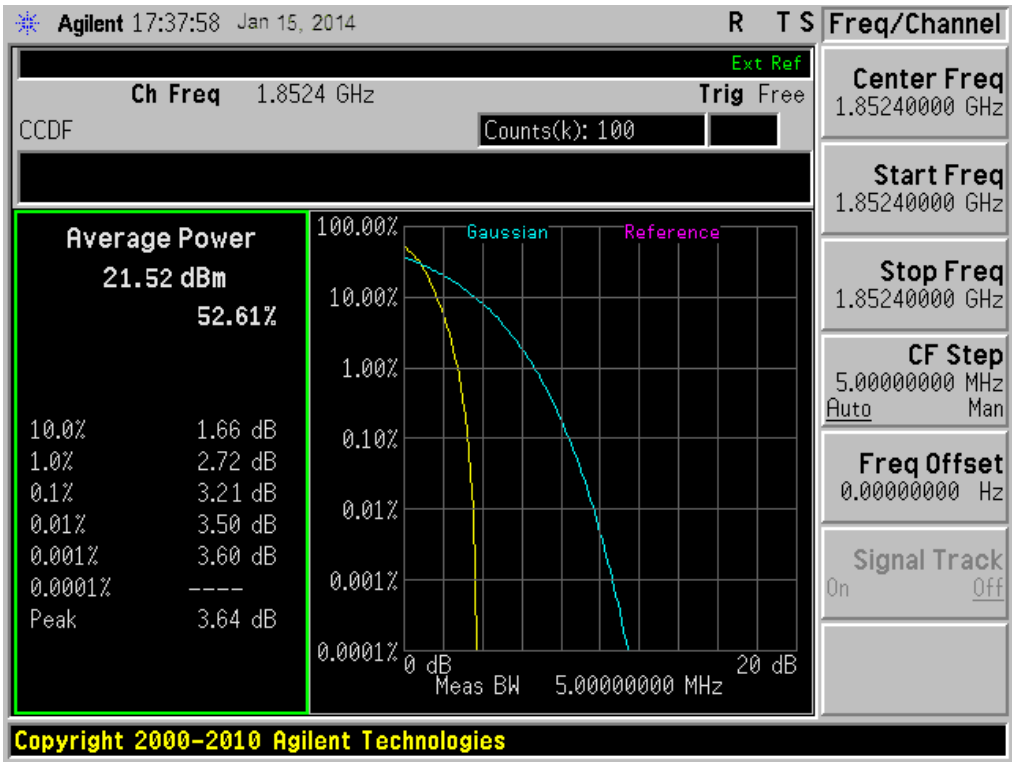
(Plot A2-2: GSM 1900 MHz Channel = 661)



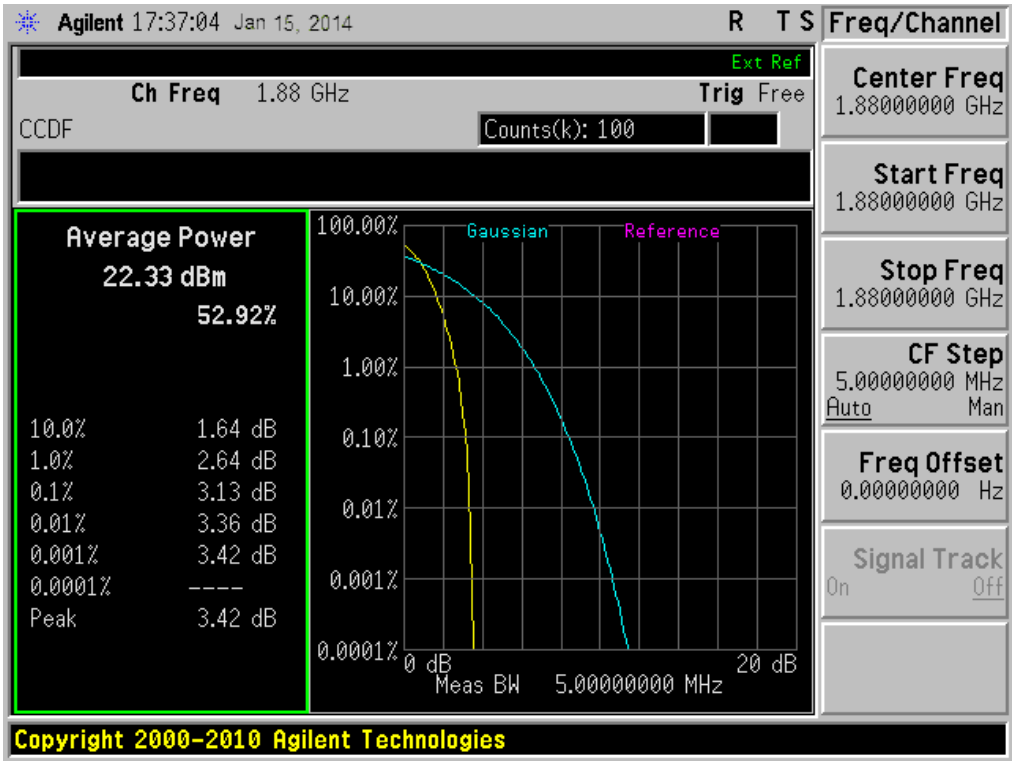
(Plot A3-1: GSM 1900MHz Channel = 810)



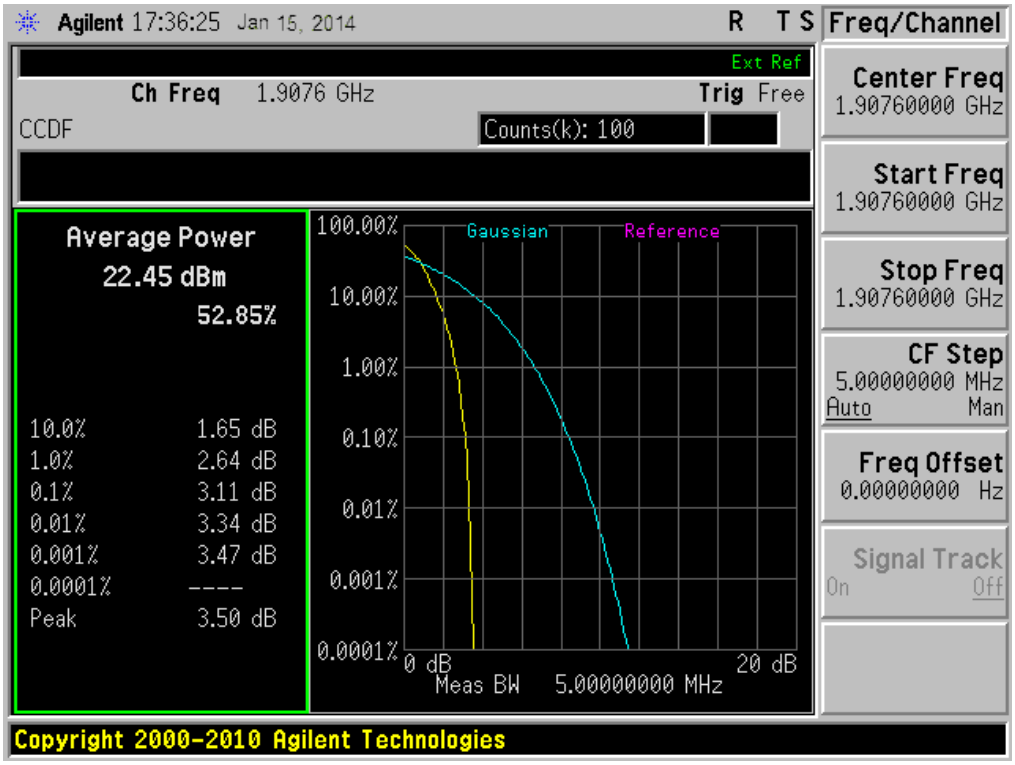
(Plot A3-2: GSM 1900MHz Channel = 810)



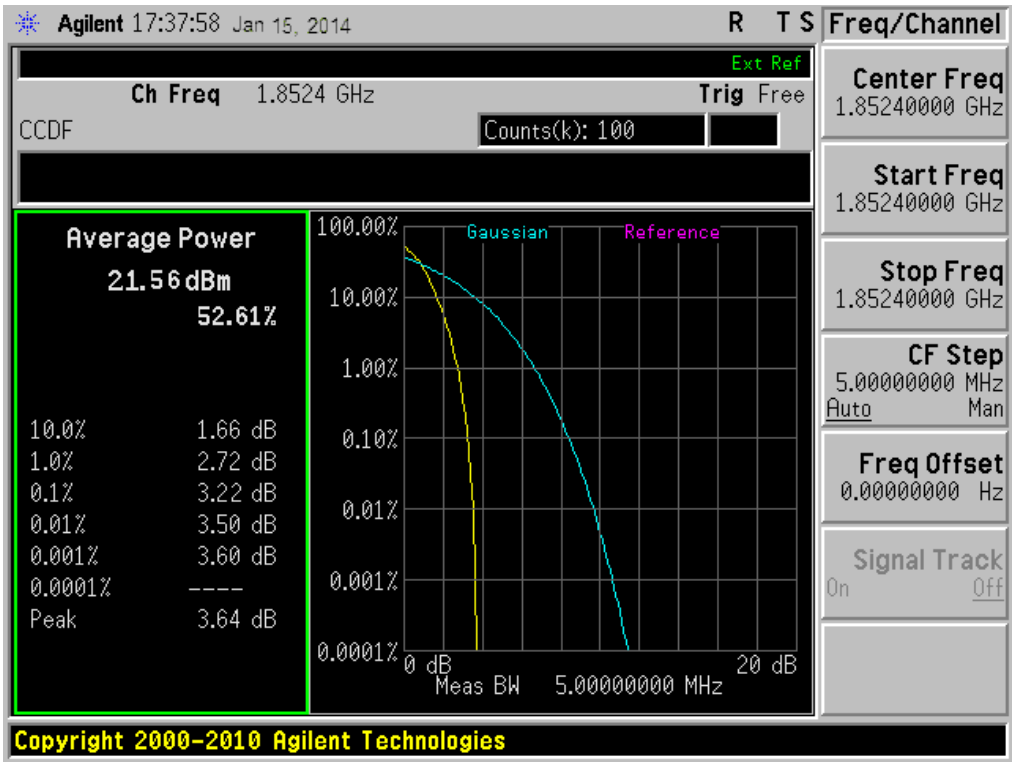
(Plot B1: WCDMA 1900MHz Channel = 9262)



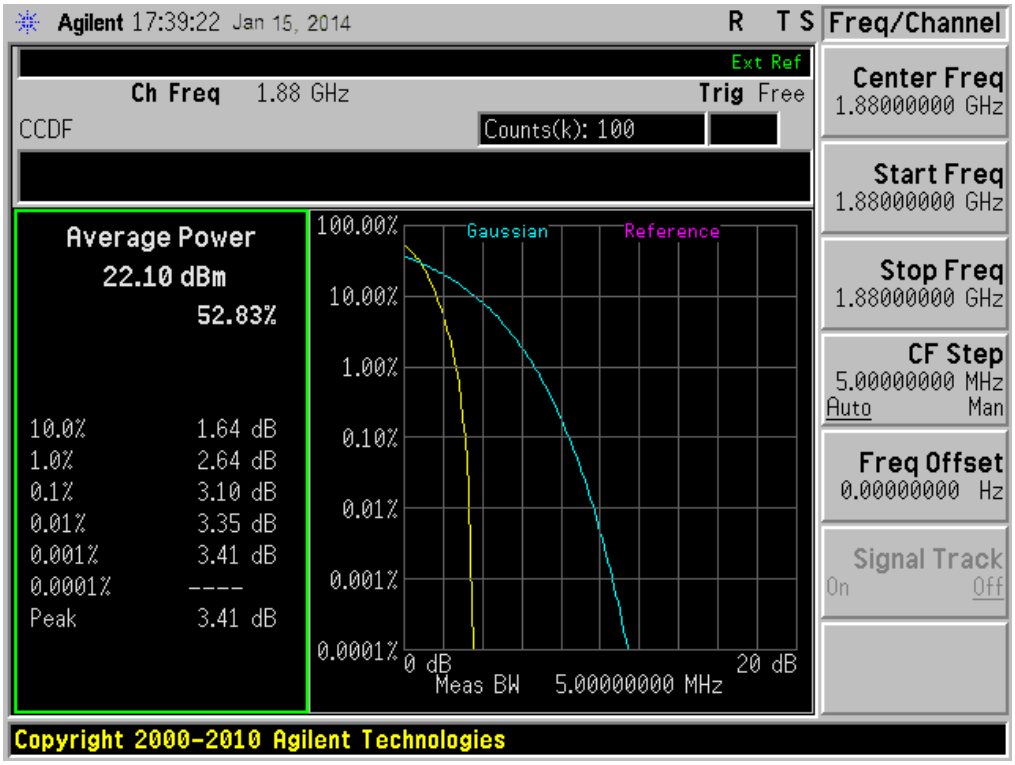
(Plot B2: WCDMA 1900MHz Channel = 9400)



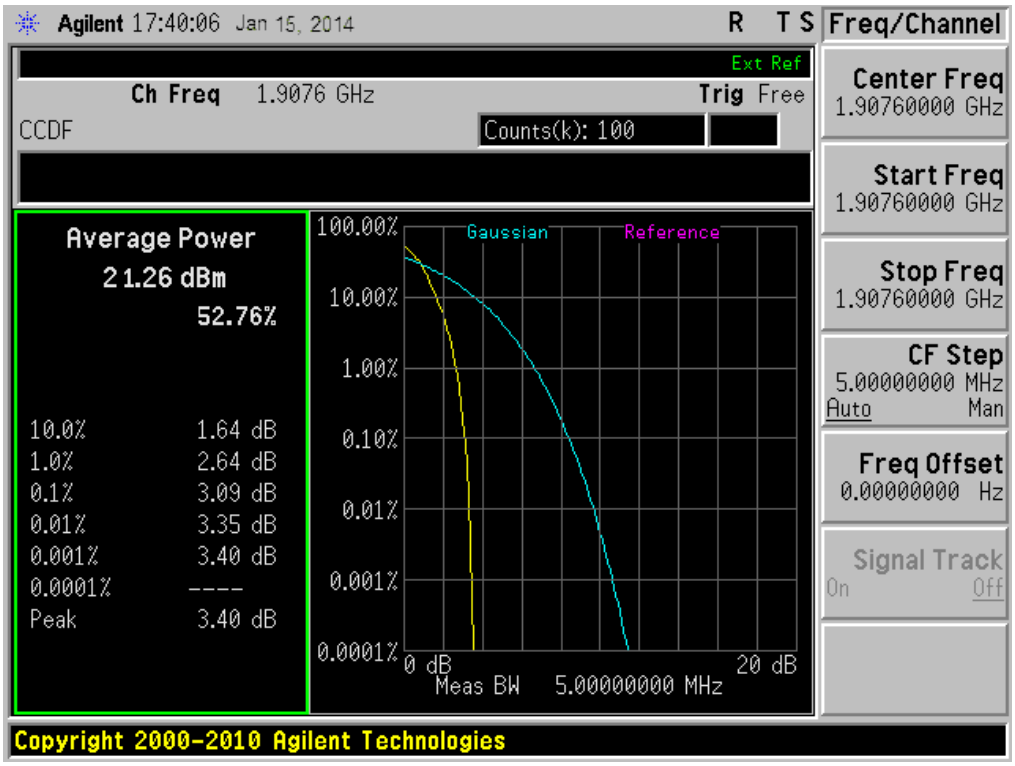
(Plot B3: WCDMA 1900MHz Channel = 9538)



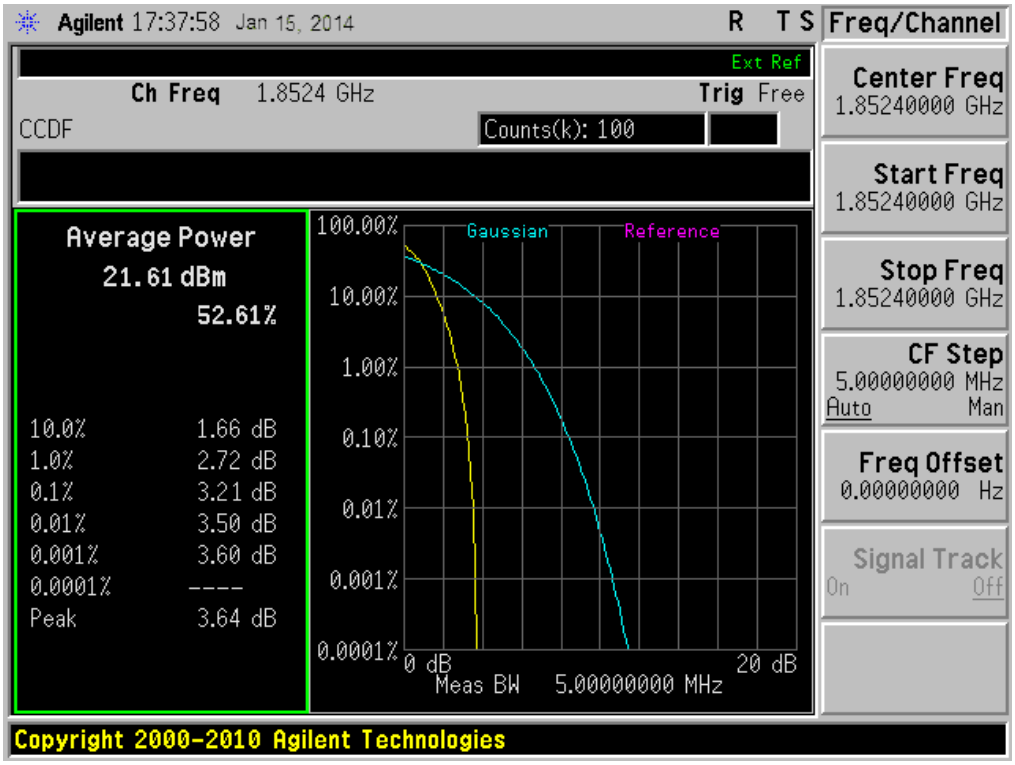
(Plot C1: HSDPA 1900MHz Channel = 9262)



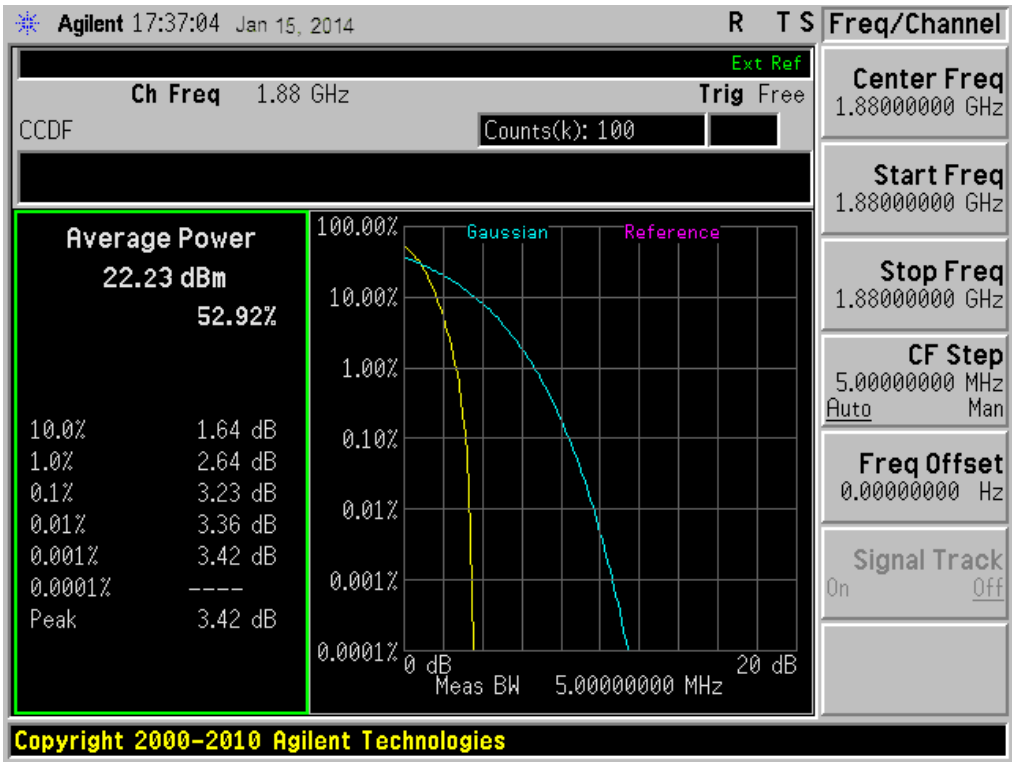
(Plot C2: HSDPA 1900MHz Channel = 9400)



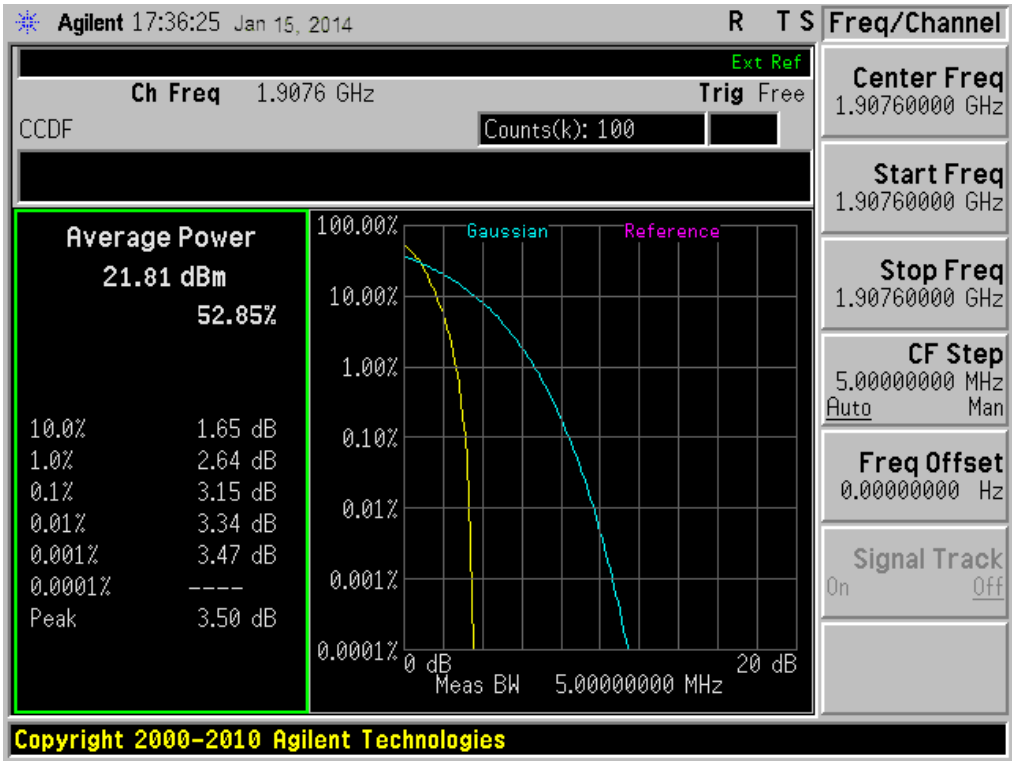
(Plot C3: HSDPA 1900MHz Channel = 9538)



(Plot D1: HSUPA 1900MHz Channel = 9262)



(Plot D2: HSUPA 1900MHz Channel = 9400)



(Plot D3: HSUPA 1900MHz Channel = 9538)

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

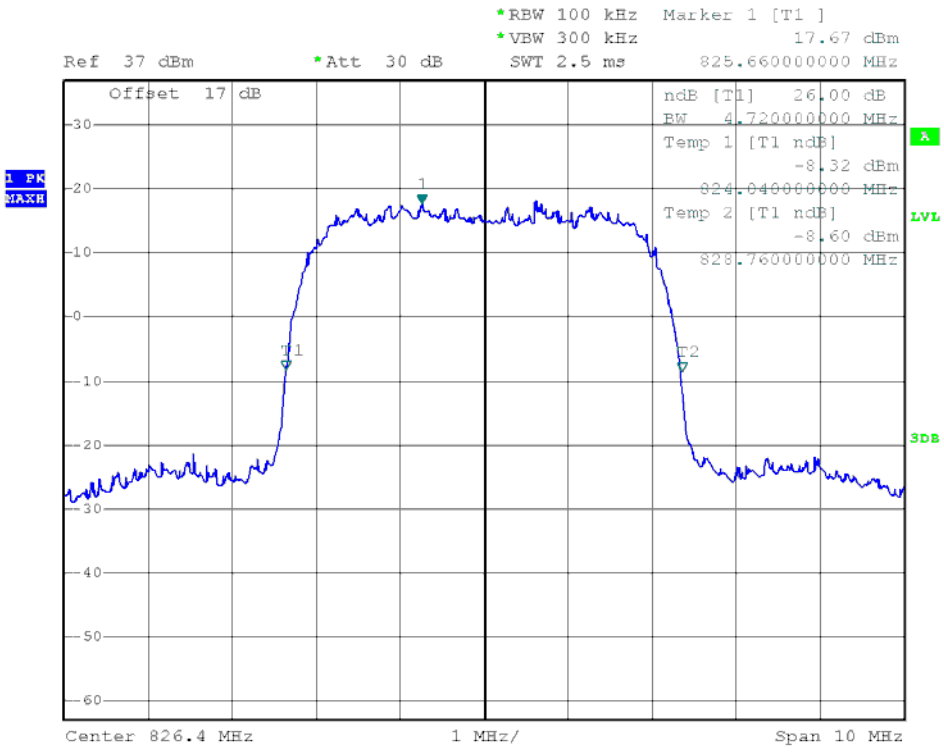
Here the lowest, middle and highest channels are selected to perform testing to verify the 99% occupied bandwidth.

1. Test Verdict:

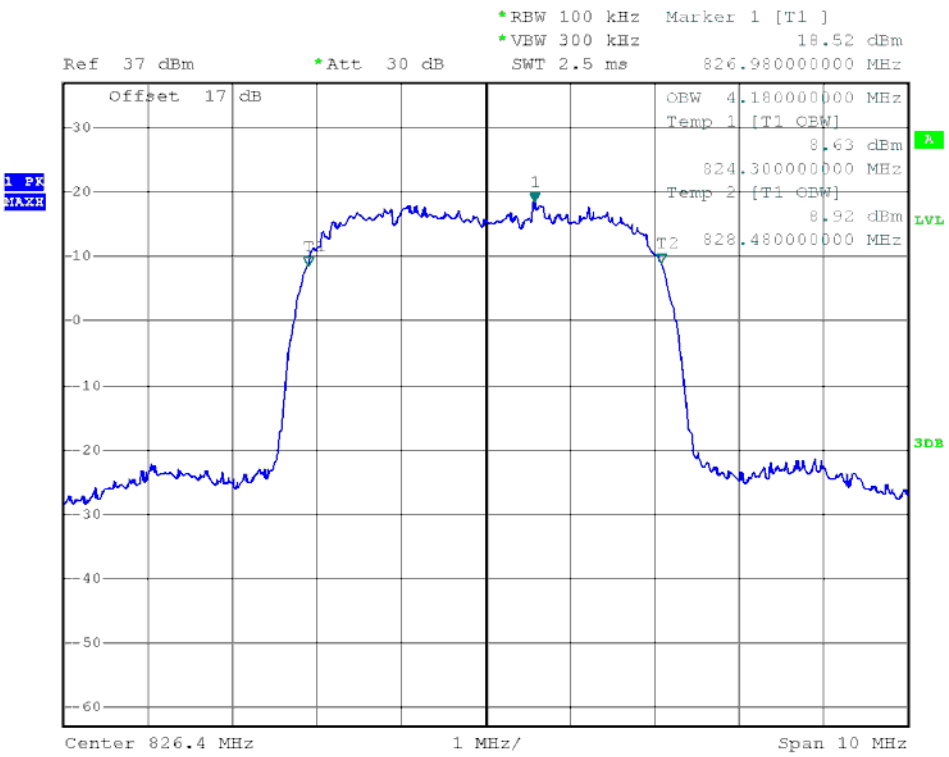
Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
WCDMA 850MHz	4132	826.4	4.72MHz	4.18MHz	Plot A1-A2
	4183	836.6	4.72MHz	4.16MHz	Plot B1-B2
	4233	846.6	4.70MHz	4.16MHz	Plot C1-C2
WCDMA 1900MHz	9262	1852.4	4.68MHz	4.16MHz	Plot D1-D2
	9400	1880	4.70MHz	4.18MHz	Plot E1-E2
	9538	1907.6	4.72MHz	4.20MHz	Plot F1-F2
HSDPA 850MHz	4132	826.4	4.70MHz	4.18MHz	Plot G1-G2
	4183	836.6	4.70MHz	4.16MHz	Plot H1-H2
	4233	846.6	4.68MHz	4.18MHz	Plot I1-I2
HSDPA 1900MHz	9262	1852.4	4.68MHz	4.16MHz	Plot J1-J2
	9400	1880	4.70MHz	4.20MHz	Plot K1-K2
	9538	1907.6	4.72MHz	4.20MHz	Plot L1-L2
HSUPA 850MHz	4132	826.4	4.68MHz	4.18MHz	Plot M1-M2
	4183	836.6	4.72MHz	4.18MHz	Plot N1-N2
	4233	846.6	4.70MHz	4.16MHz	Plot O1-O2
HSUPA 1900MHz	9262	1852.4	4.68MHz	4.16MHz	Plot P1-P2
	9400	1880	4.70MHz	4.18MHz	Plot Q1-Q2
	9538	1907.6	4.70MHz	4.18MHz	Plot R1-R2
GSM 850MHz	128	824.2	320KHz	248KHz	Plot S1-S2

Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
	190	836.6	316KHz	248KHz	Plot T1-T2
	251	848.8	316KHz	244KHz	Plot U1-U2
GSM 1900MHz	512	1850.2	320KHz	244KHz	Plot V1-V2
	661	1880.0	328KHz	244KHz	Plot W1-W2
	810	1909.8	320KHz	244KHz	Plot X1-X2
GPRS 850MHz	128	824.2	316KHz	240KHz	Plot Y1-Y2
	190	836.6	316KHz	248KHz	Plot Z1-Z2
	251	848.8	316KHz	244KHz	Plot a1-a2
GPRS 1900MHz	512	1850.2	320KHz	244KHz	Plot b1-b2
	661	1880.0	316KHz	248KHz	Plot c1-c2
	810	1909.8	320KHz	248KHz	Plot d1-d2

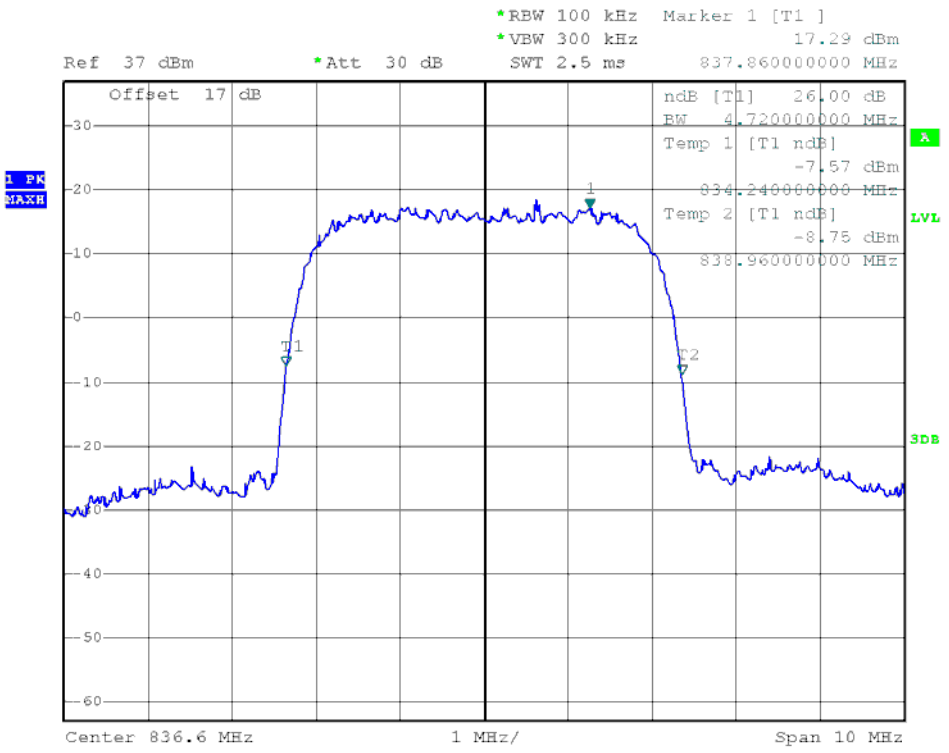
2. Test Plots:



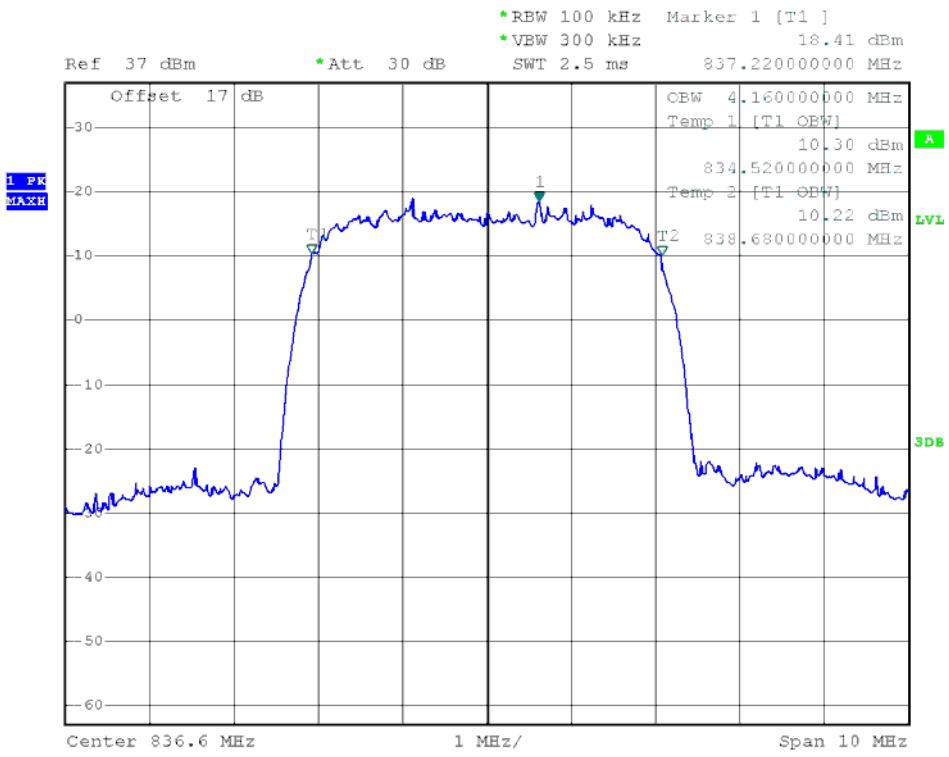
(Plot A1: WCDMA 850MHz Channel = 4132)



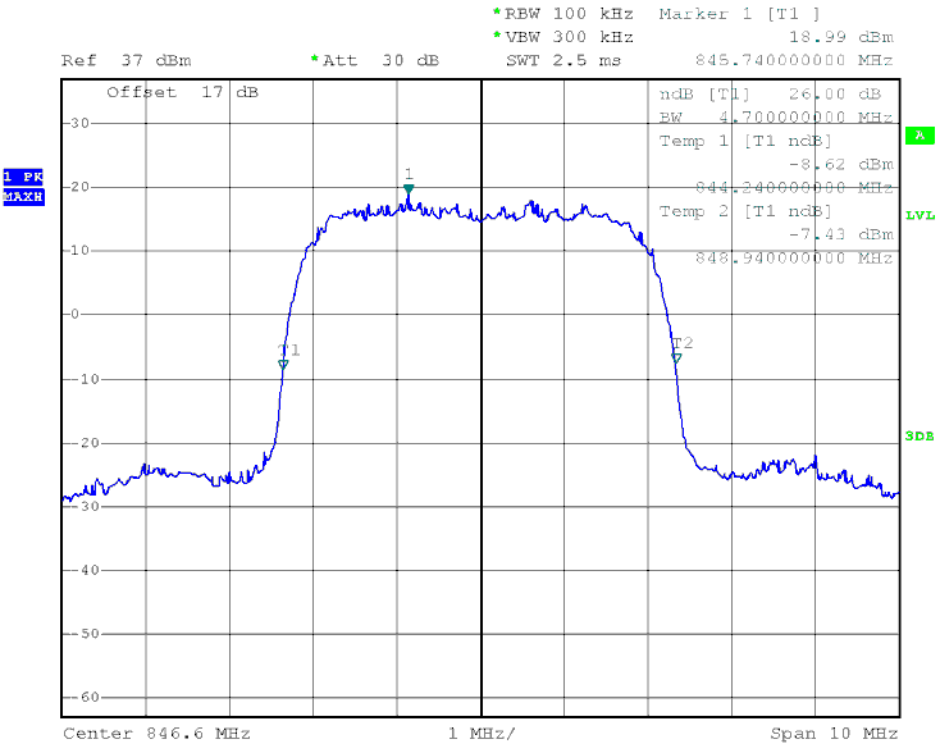
(Plot A2: WCDMA 850MHz Channel = 4132)



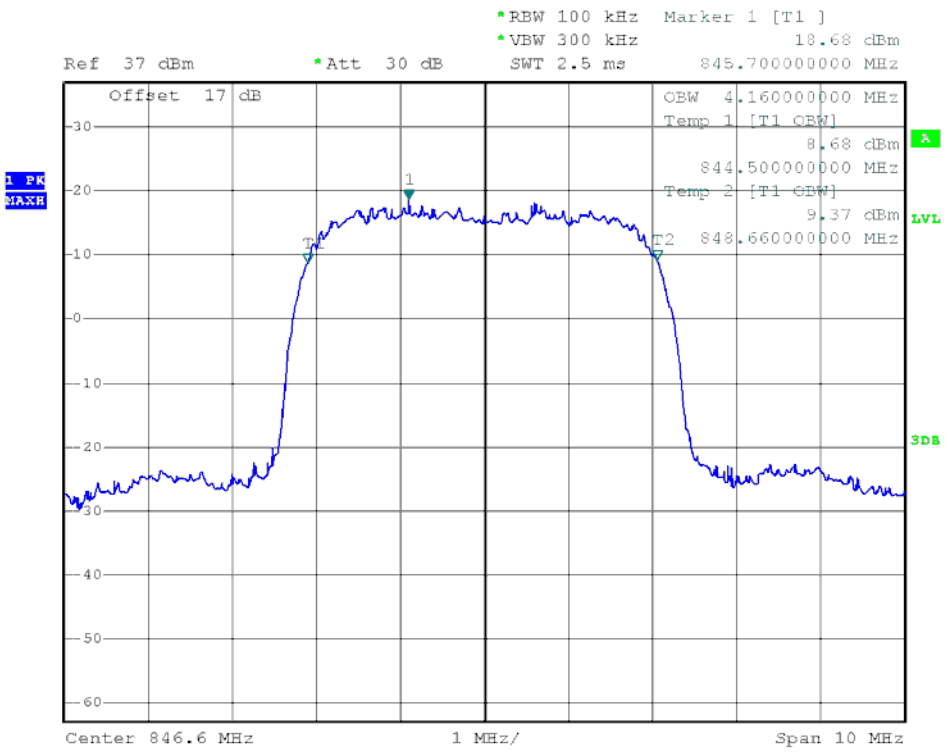
(Plot B1: WCDMA 850 MHz Channel = 4183)



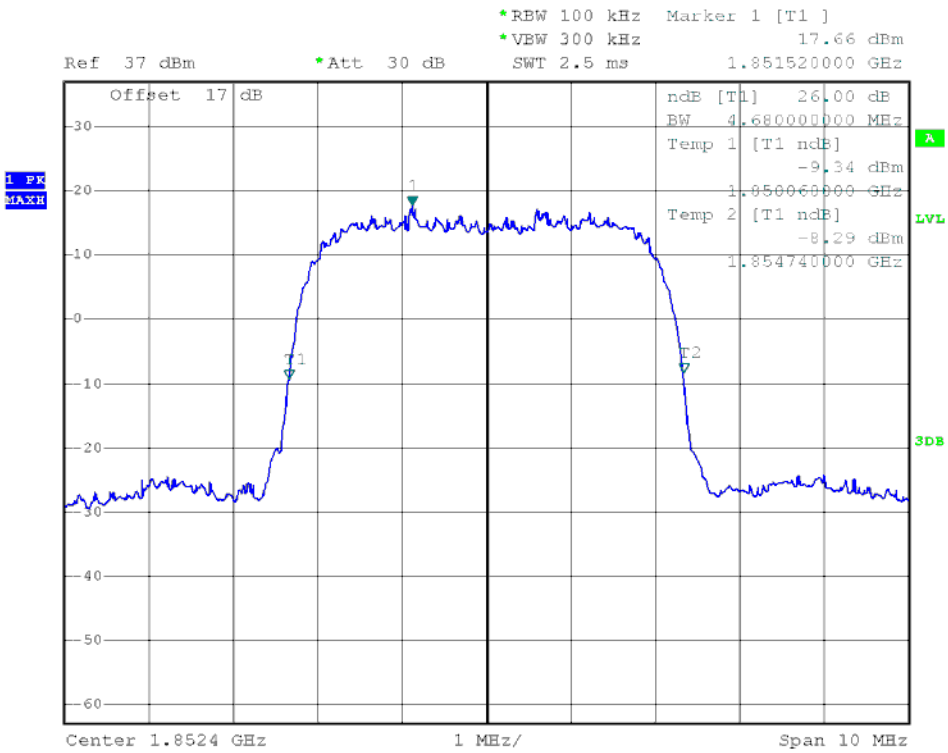
(Plot B2: WCDMA 850 MHz Channel = 4183)



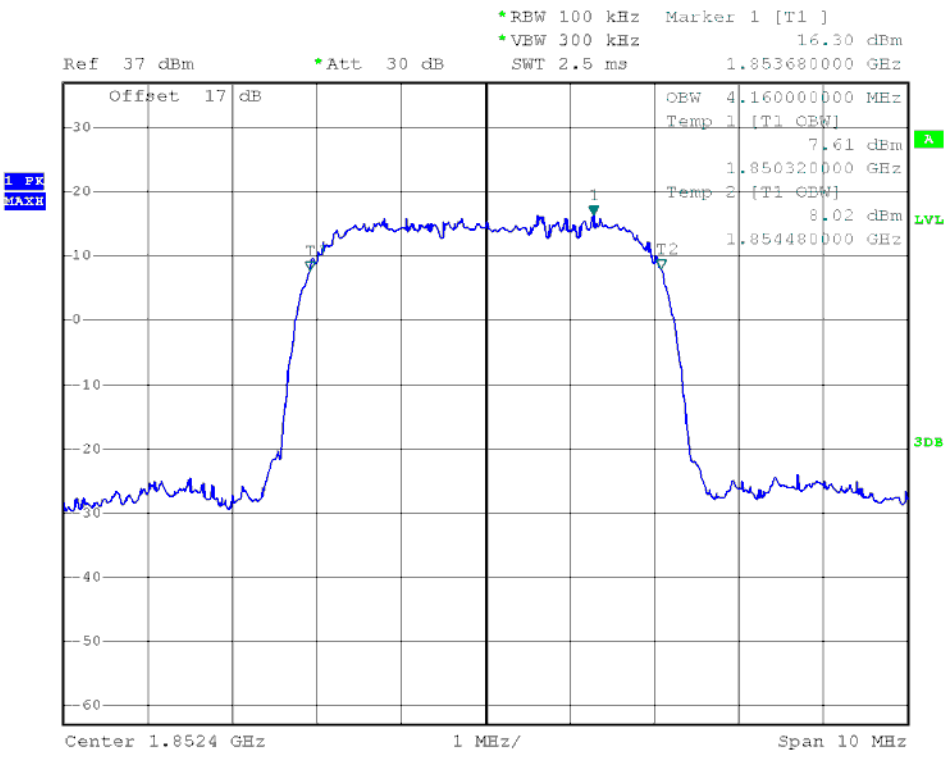
(Plot C1: WCDMA 850MHz Channel = 4233)



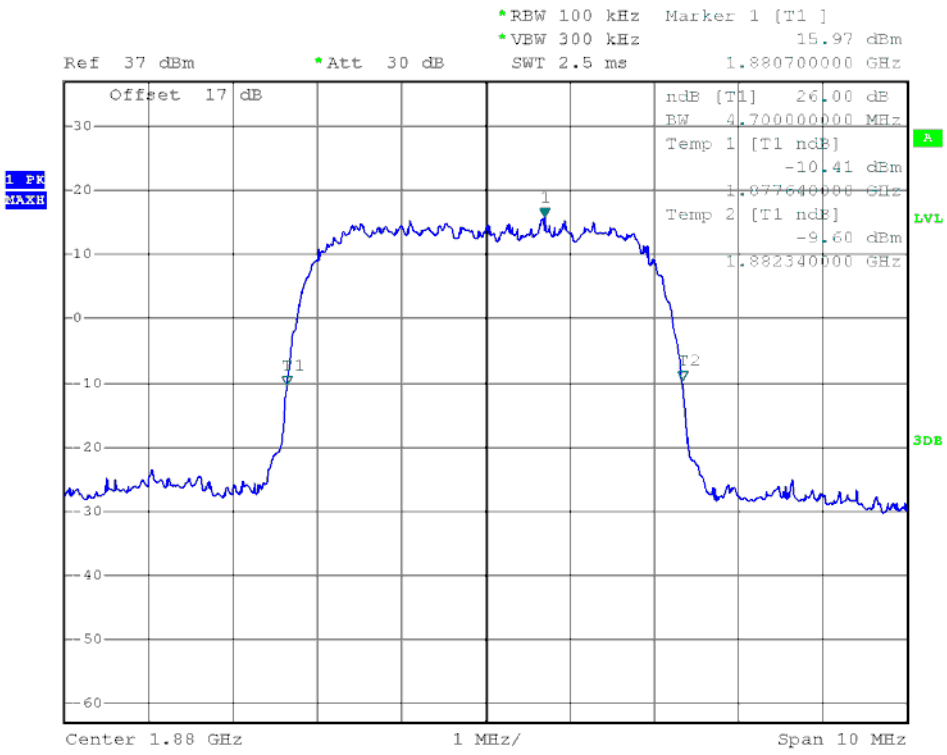
(Plot C2: WCDMA 850MHz Channel = 4233)



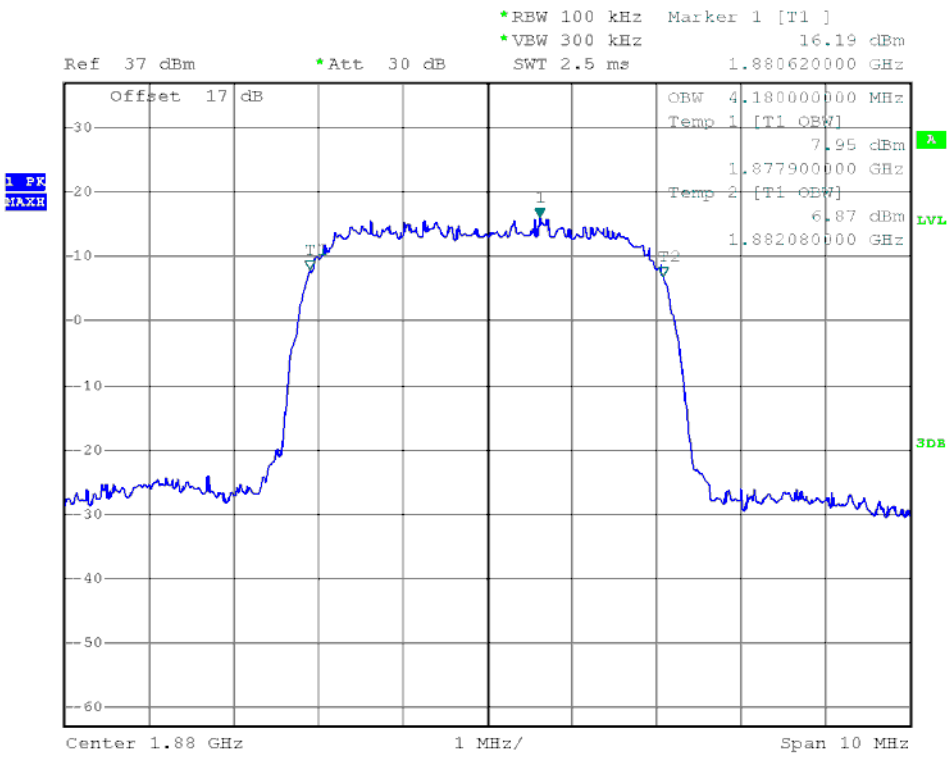
(Plot D1: WCDMA 1900MHz Channel = 9262)



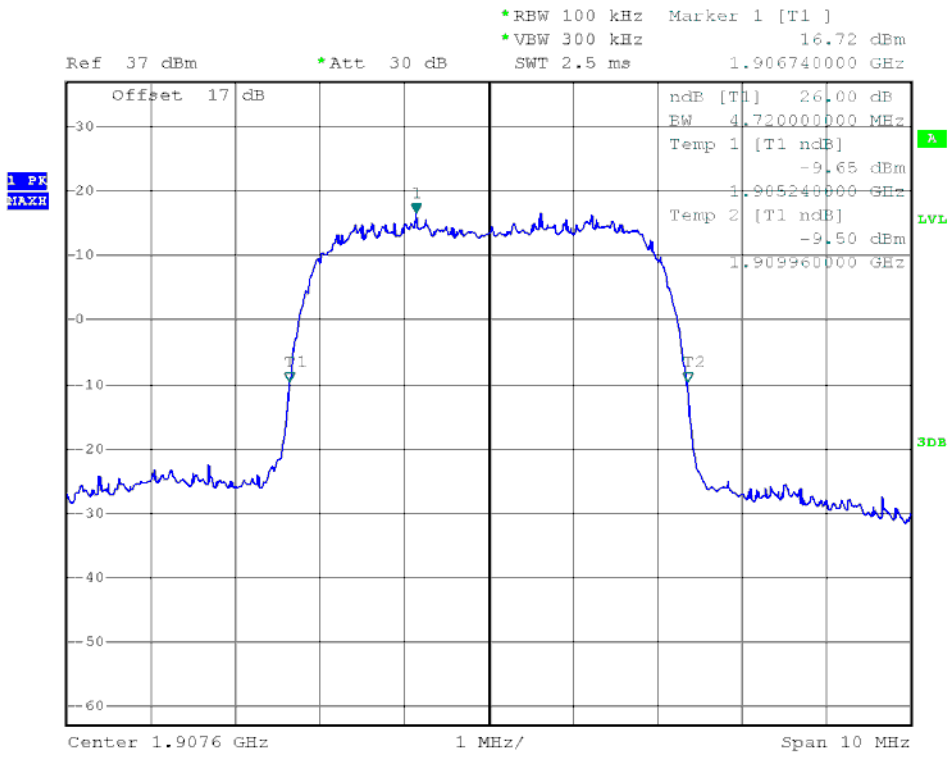
(Plot D2: WCDMA 1900MHz Channel = 9262)



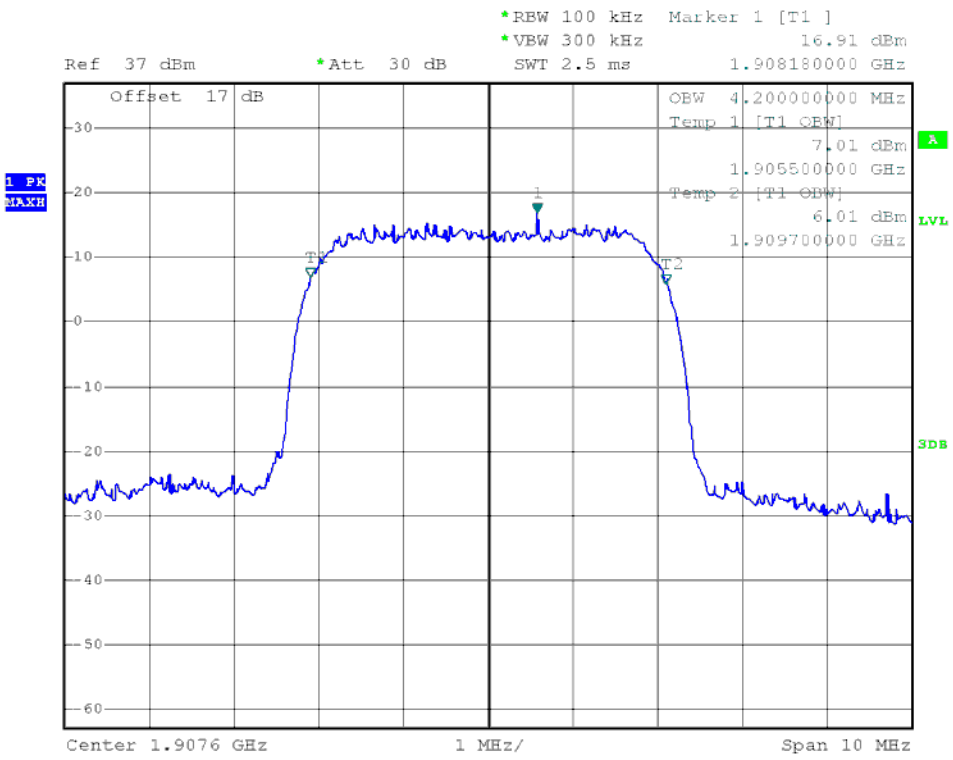
(Plot E1: WCDMA 1900 MHz Channel = 9400)



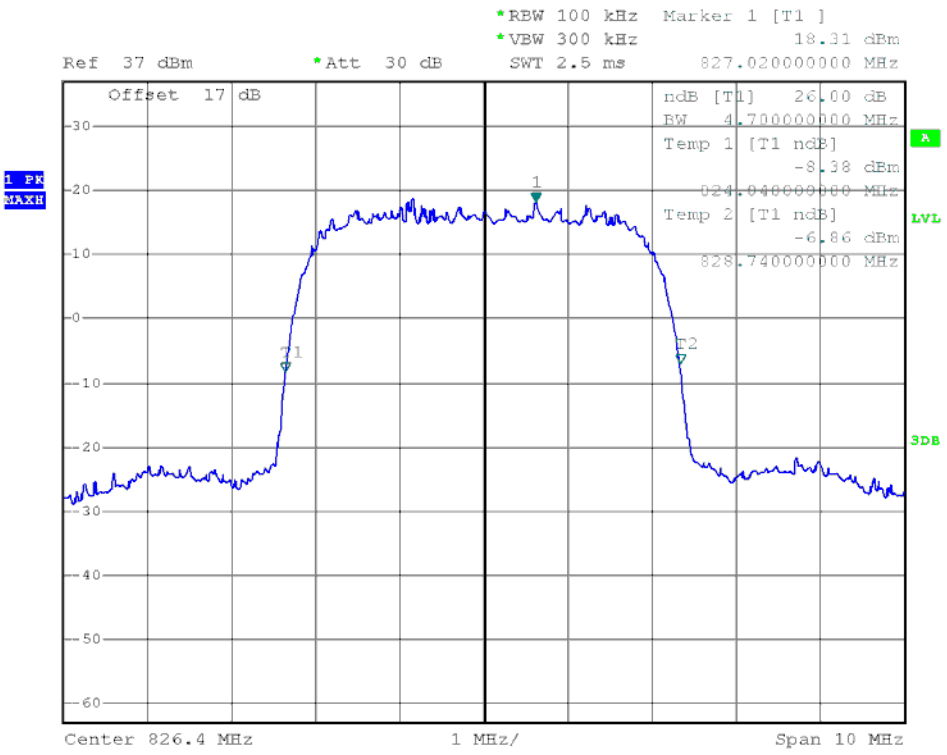
(Plot E2: WCDMA 1900 MHz Channel = 9400)



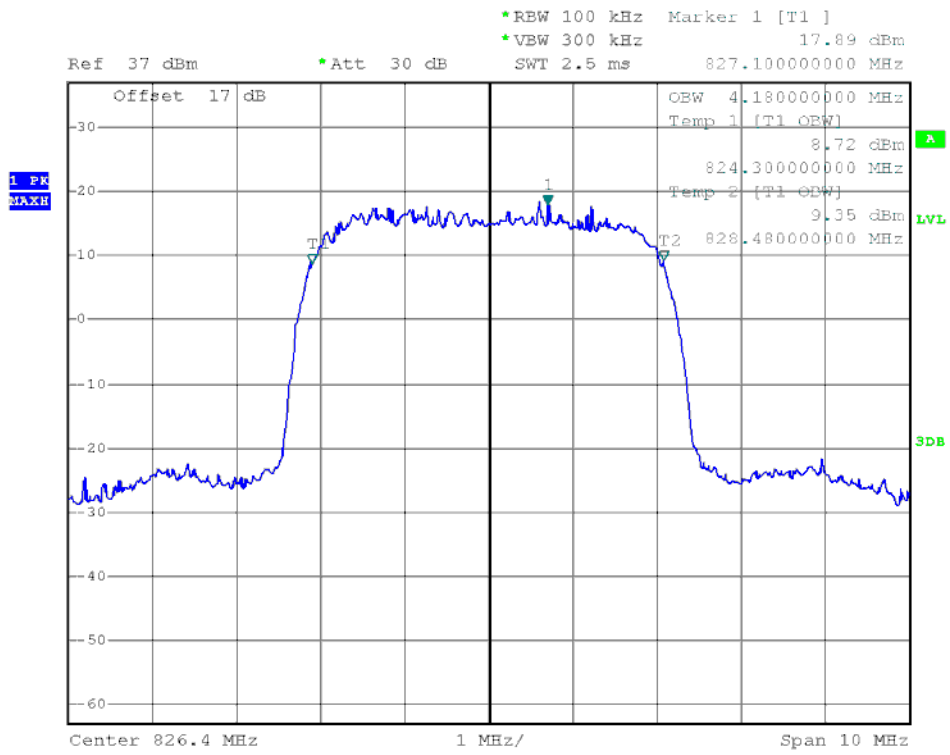
(Plot F1: WCDMA1900MHz Channel = 9538)



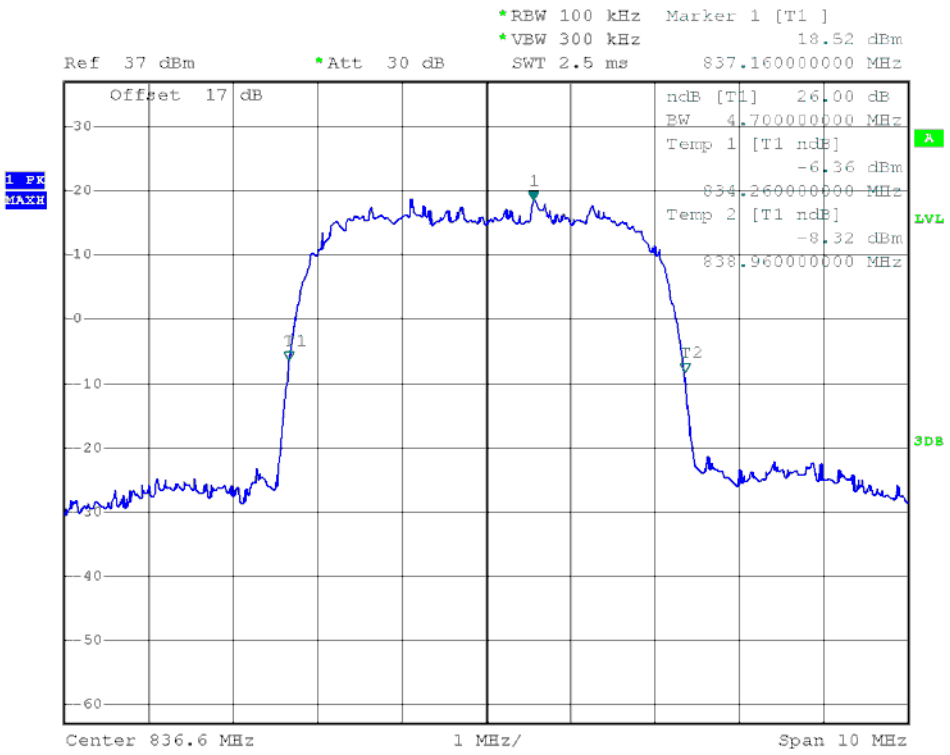
(Plot F2: WCDMA1900MHz Channel = 9538)



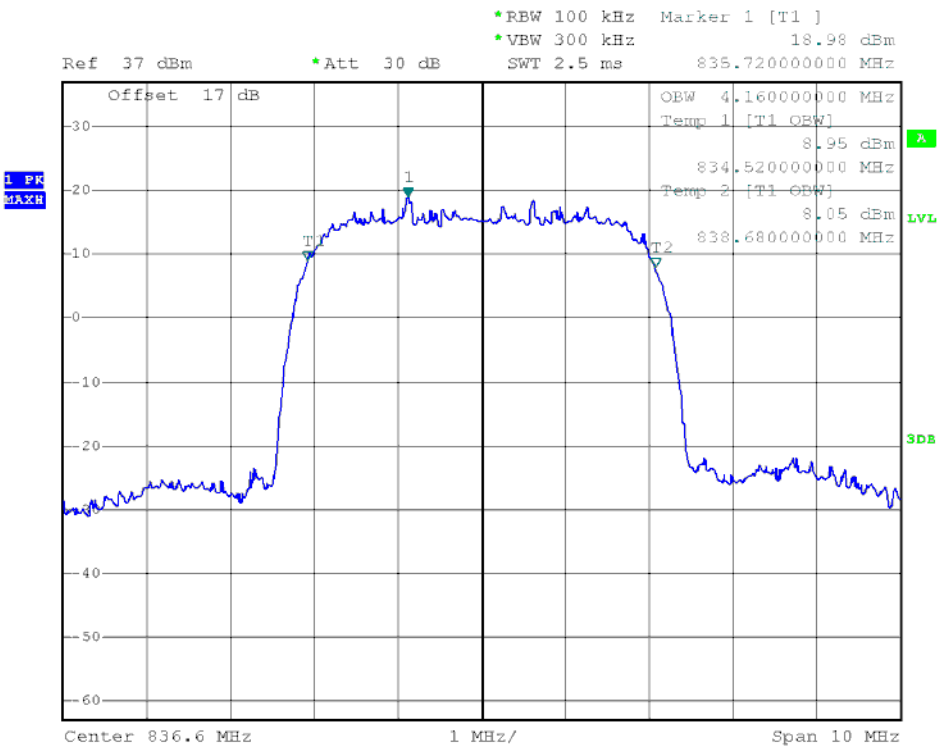
(Plot G1: HSDPA 850MHz Channel = 4132)



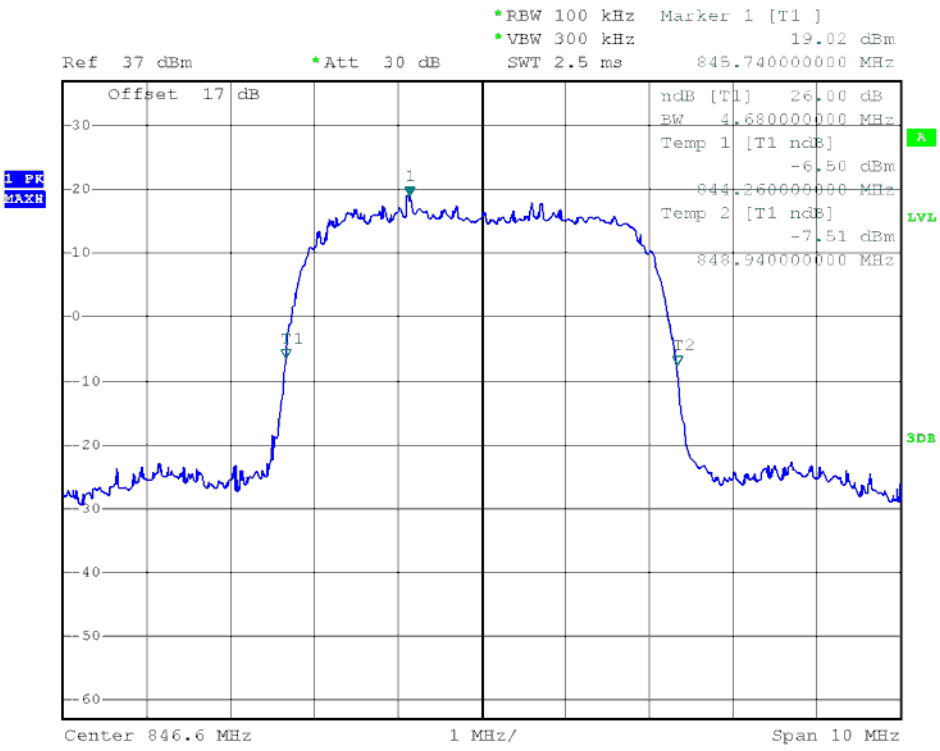
(Plot G2: HSDPA 850MHz Channel = 4132)



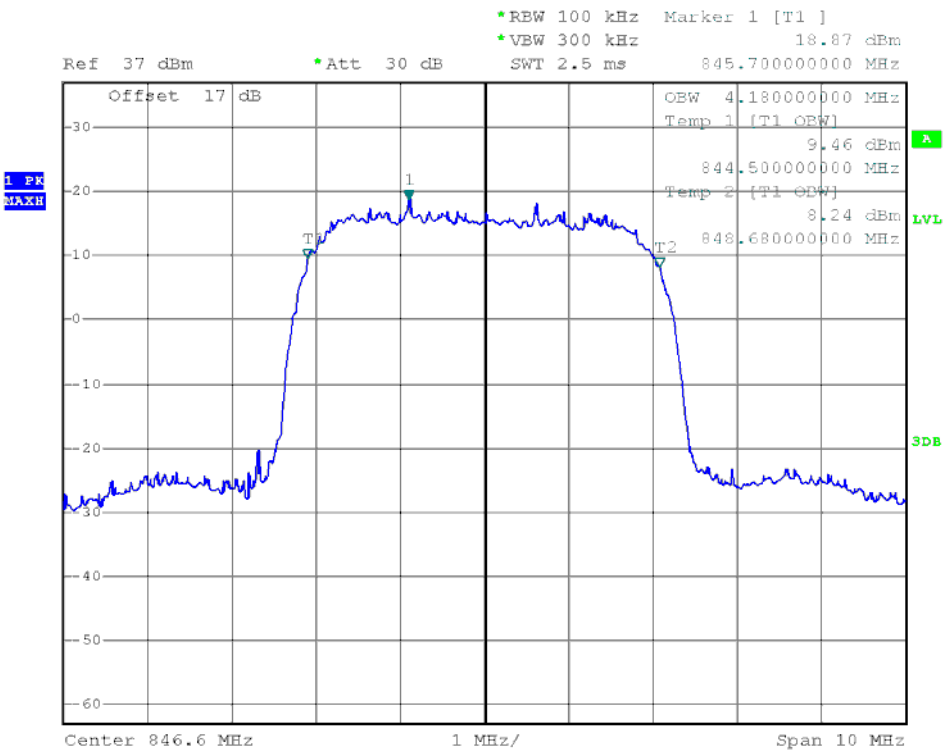
(Plot H1: HSDPA850 MHz Channel = 4183)



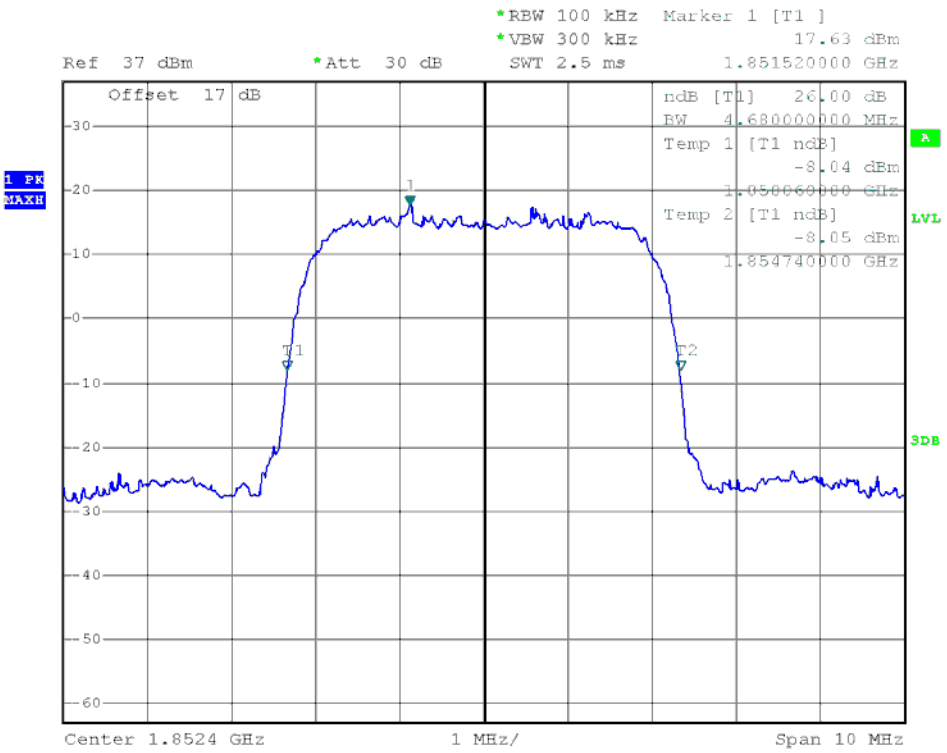
(Plot H2: HSDPA850 MHz Channel = 4183)



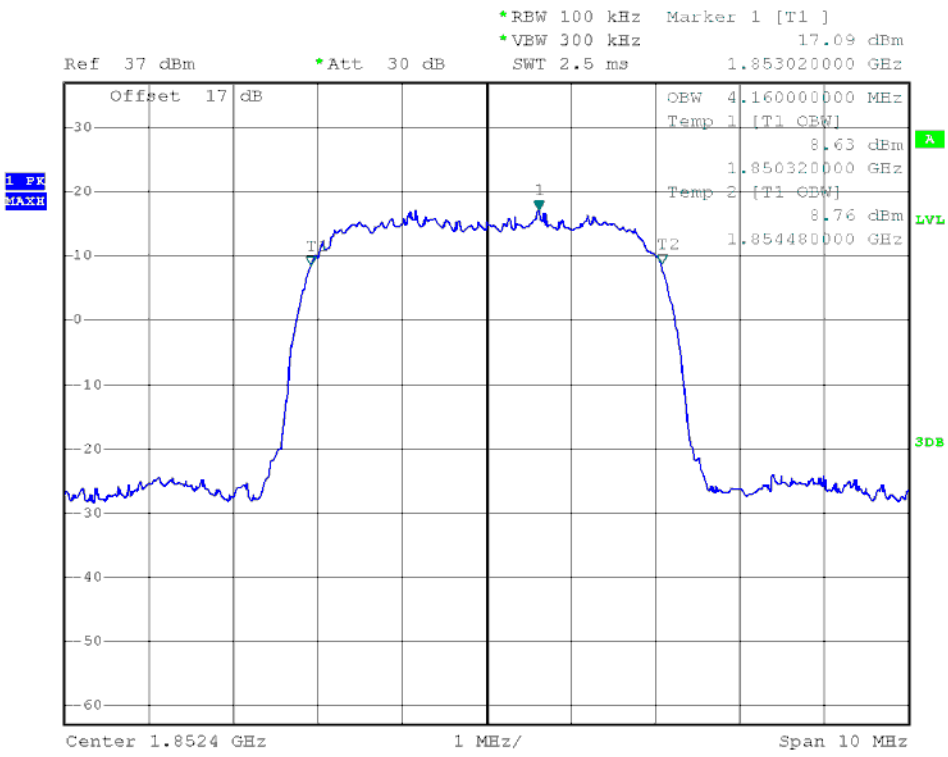
(Plot I1: HSDPA 850 MHz Channel = 4233)



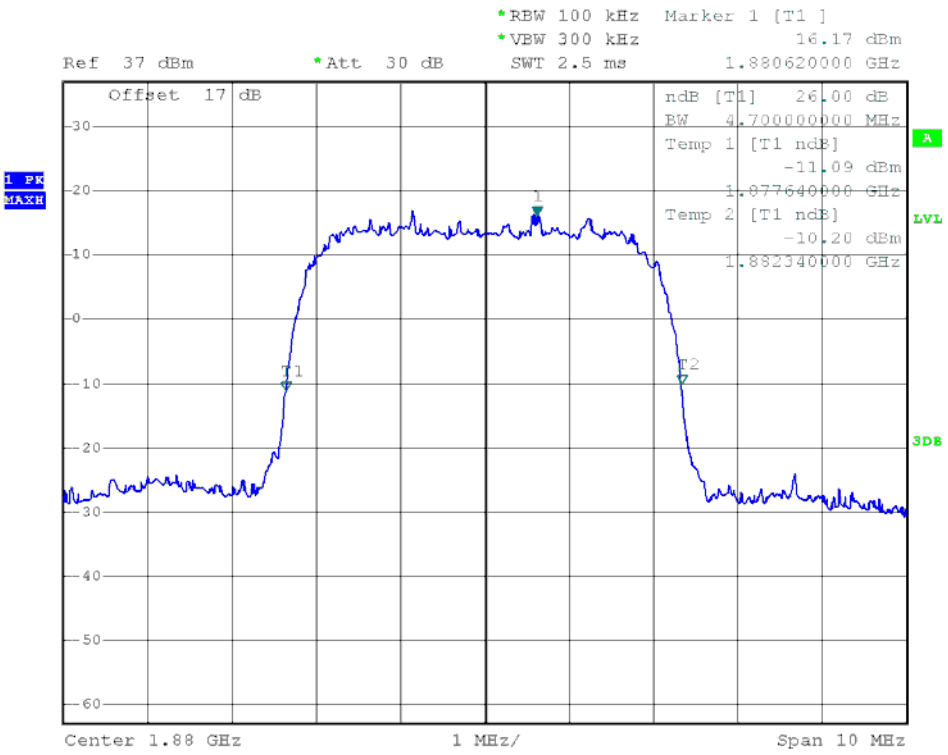
(Plot I2: HSDPA 850 MHz Channel = 4233)



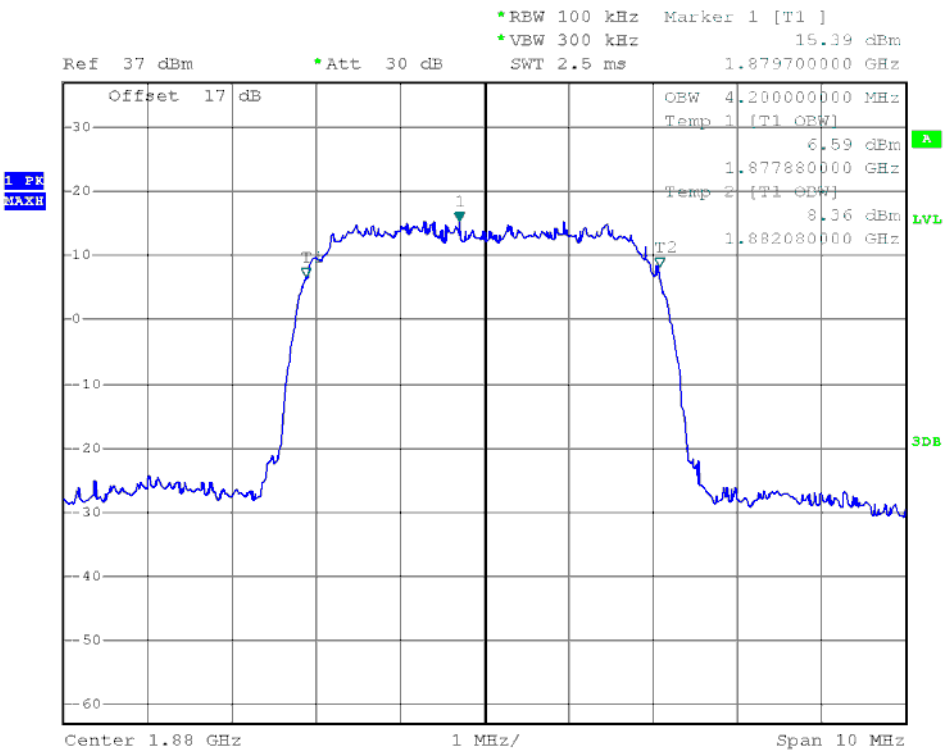
(Plot J1: HSDPA1900 MHz Channel = 9262)



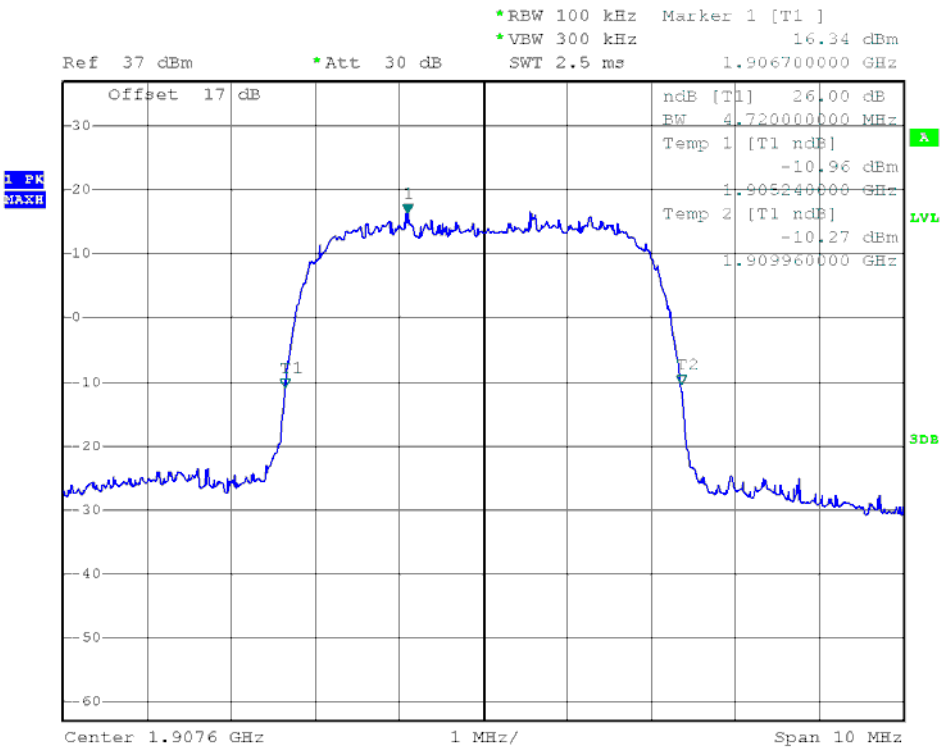
(Plot J2: HSDPA1900 MHz Channel = 9262)



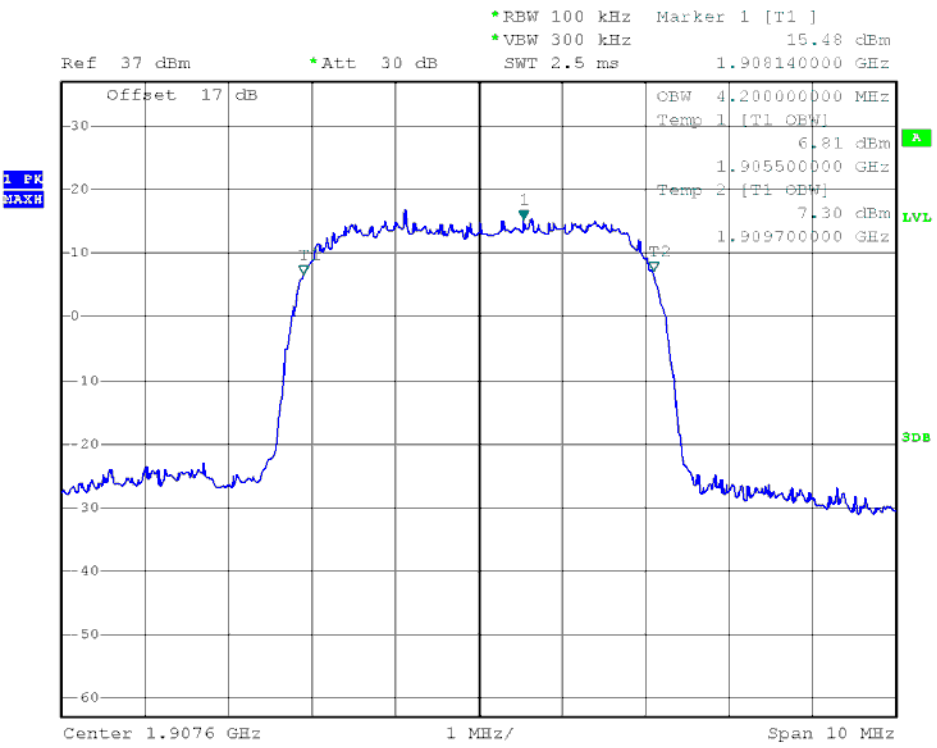
(Plot K1: HSDPA1900 MHz Channel = 9400)



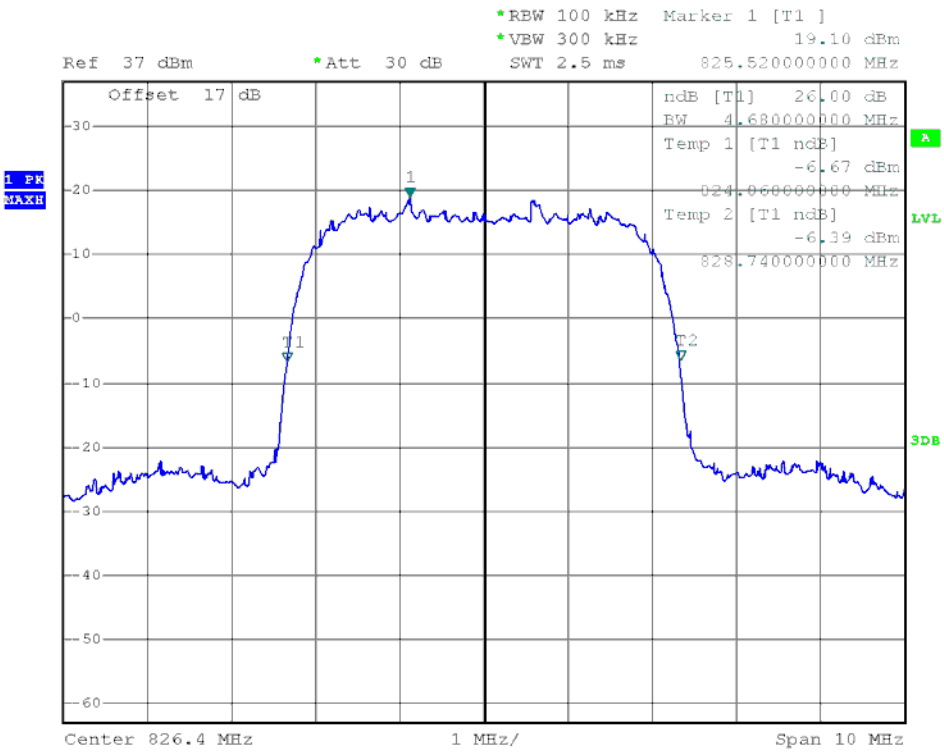
(Plot K2: HSDPA1900 MHz Channel = 9400)



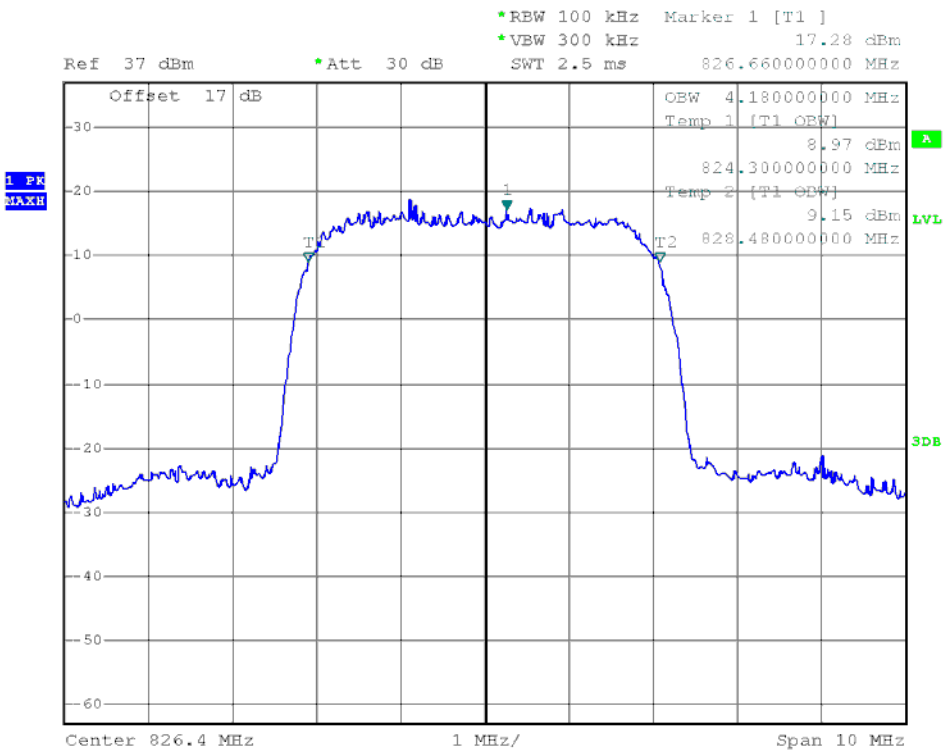
(Plot L1: HSDPA 1900 MHz Channel = 9538)



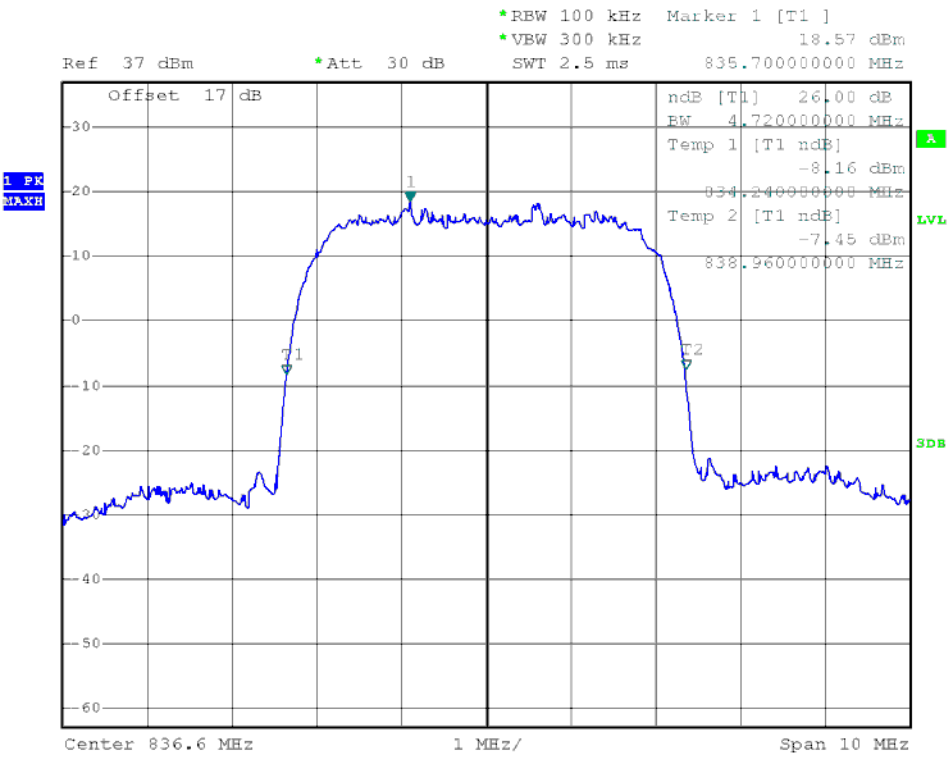
(Plot L2: HSDPA 1900 MHz Channel = 9538)



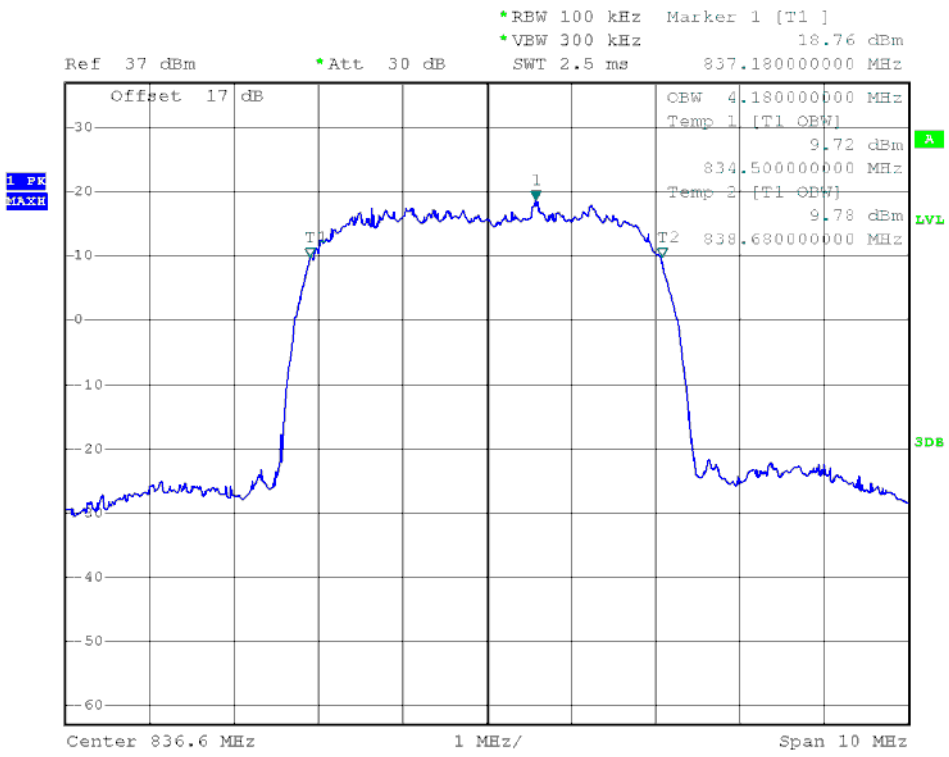
(Plot M1: HSUPA850 MHz Channel = 4132)



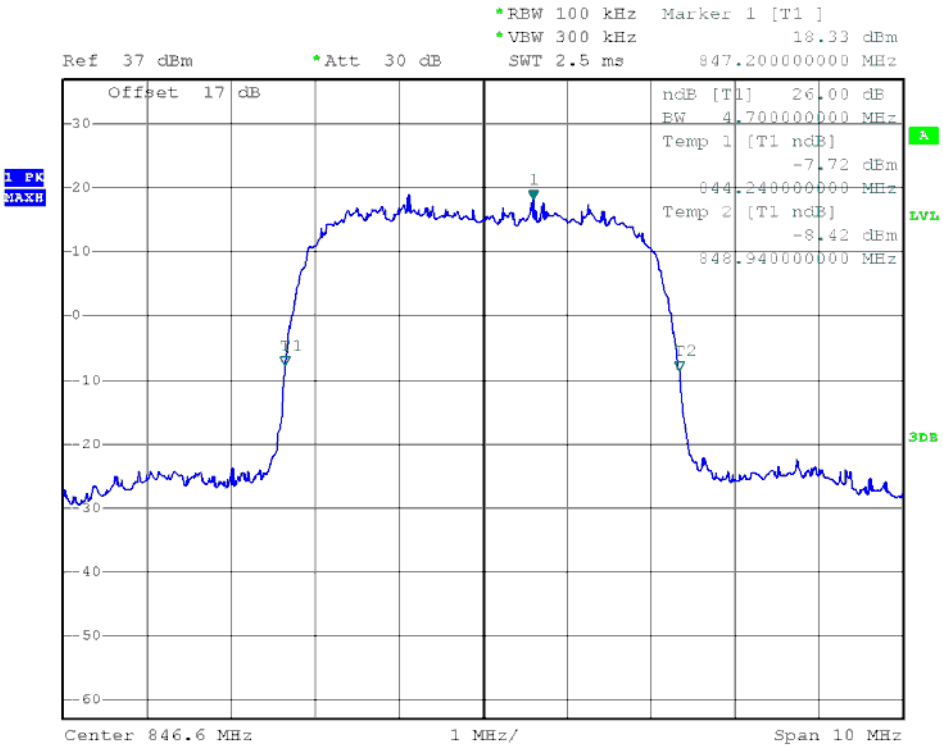
(Plot M2: HSUPA850 MHz Channel = 4132)



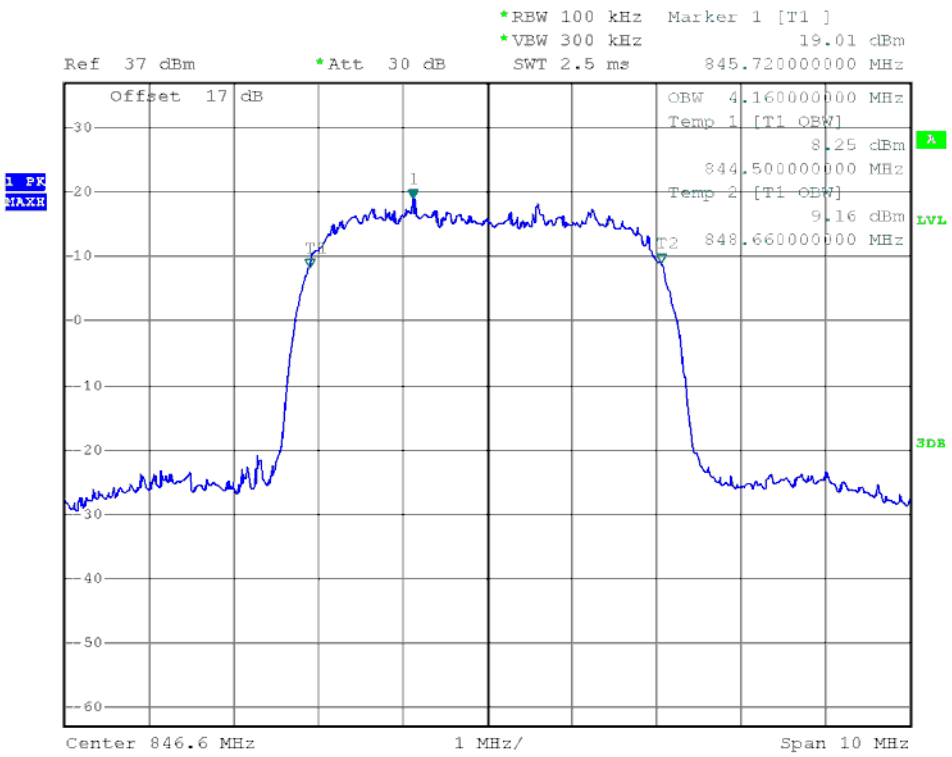
(Plot N1: HSUPA850 MHz Channel = 4183)



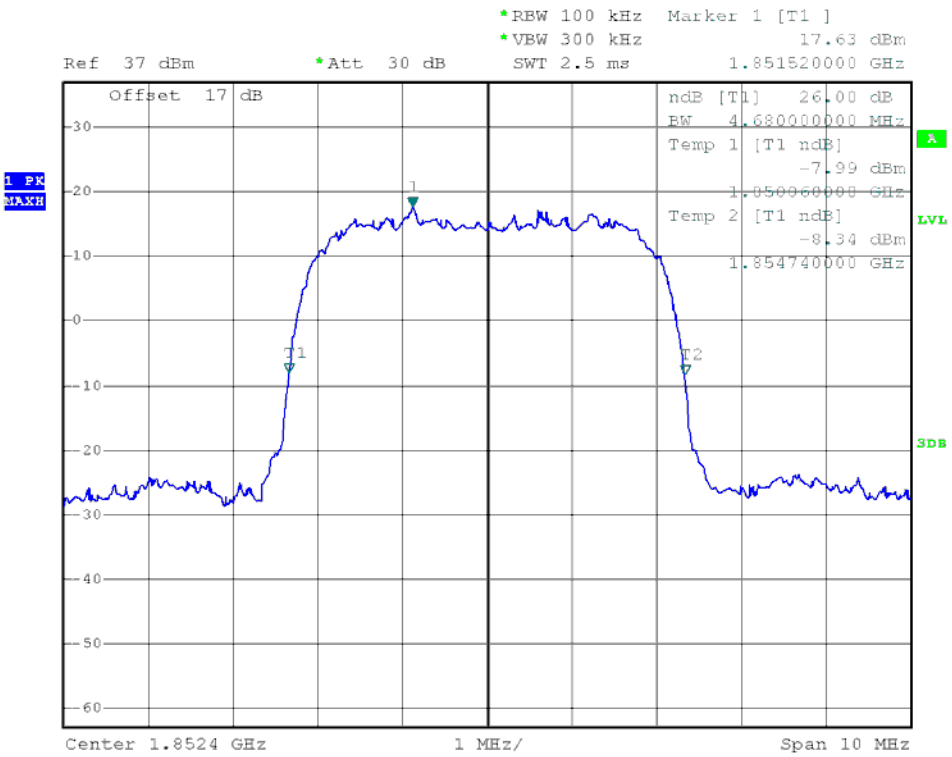
(Plot N2: HSUPA850 MHz Channel = 4183)



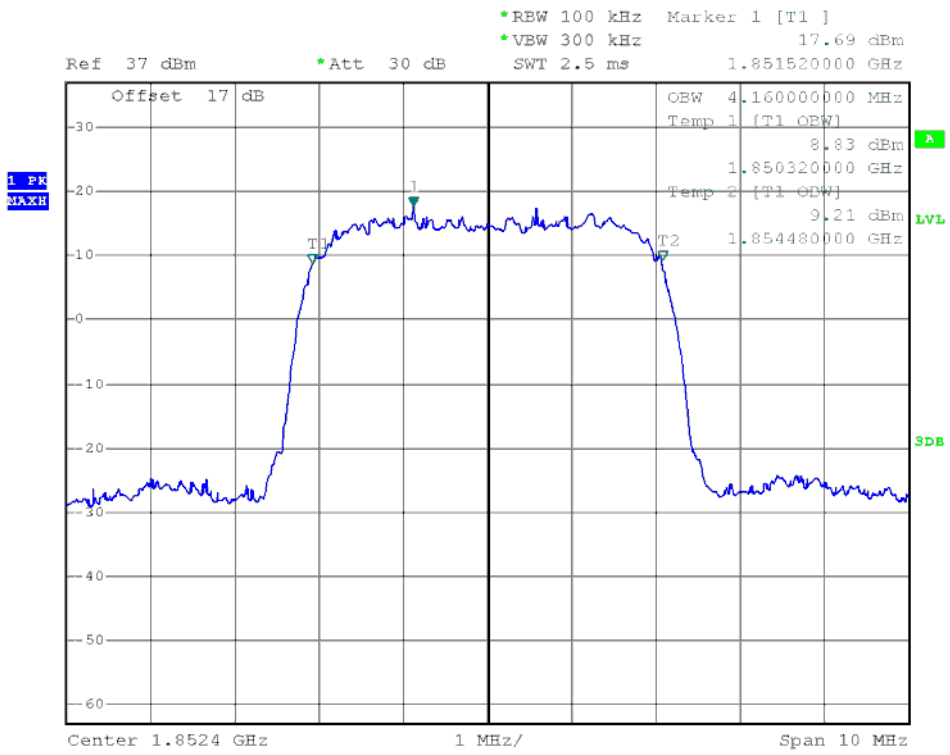
(Plot O1: HSUPA850 MHz Channel = 4233)



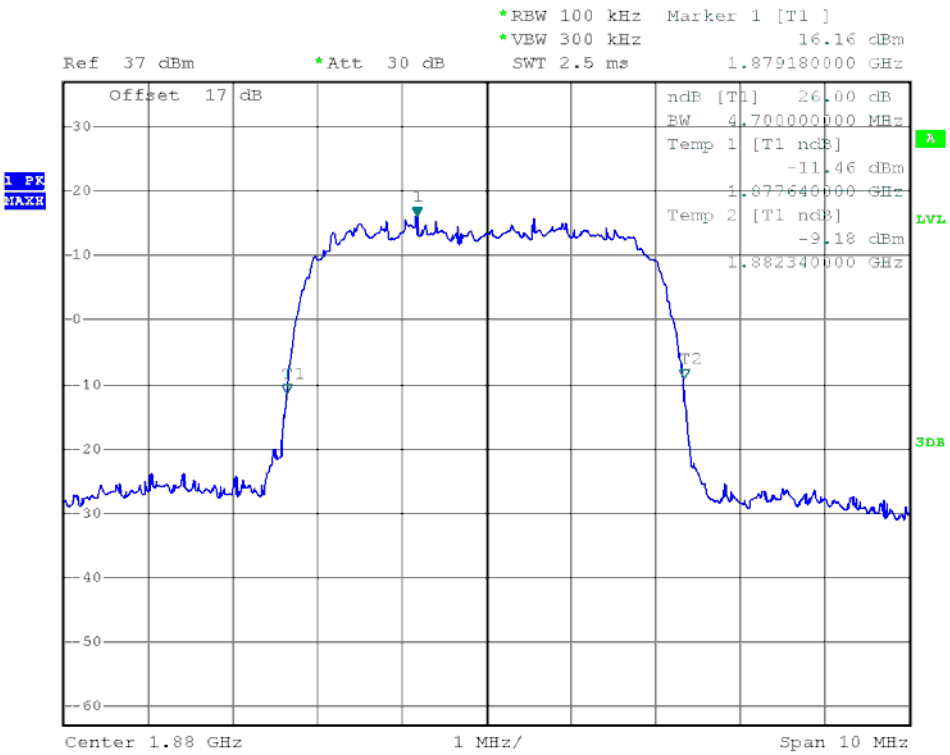
(Plot O2: HSUPA850 MHz Channel = 4233)



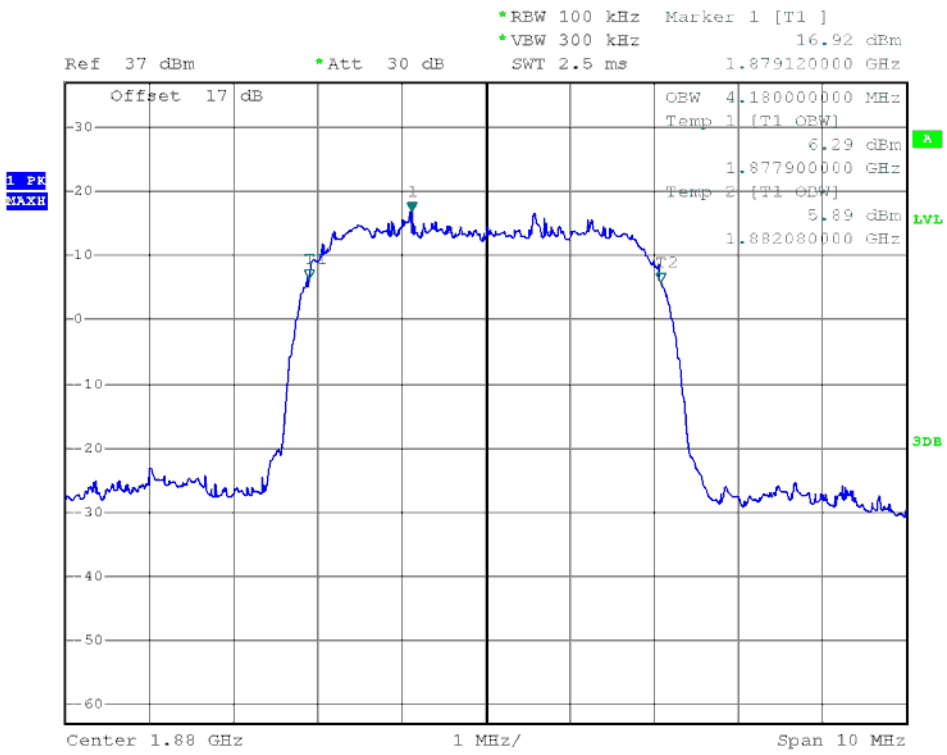
(Plot P1: HSUPA1900 MHz Channel = 9262)



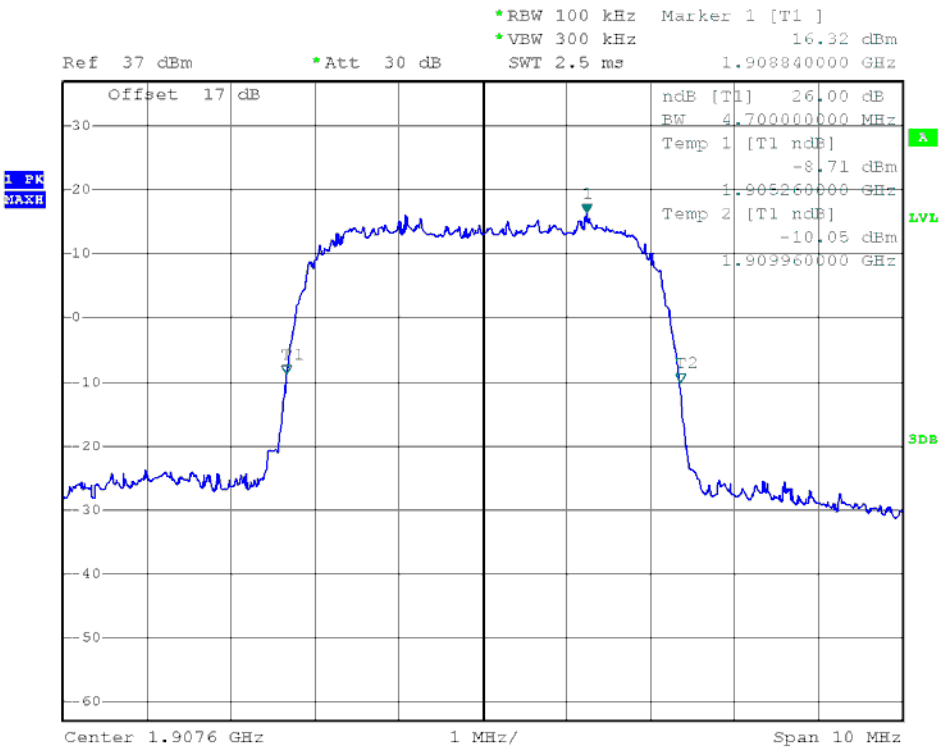
(Plot P2: HSUPA1900 MHz Channel = 9262)



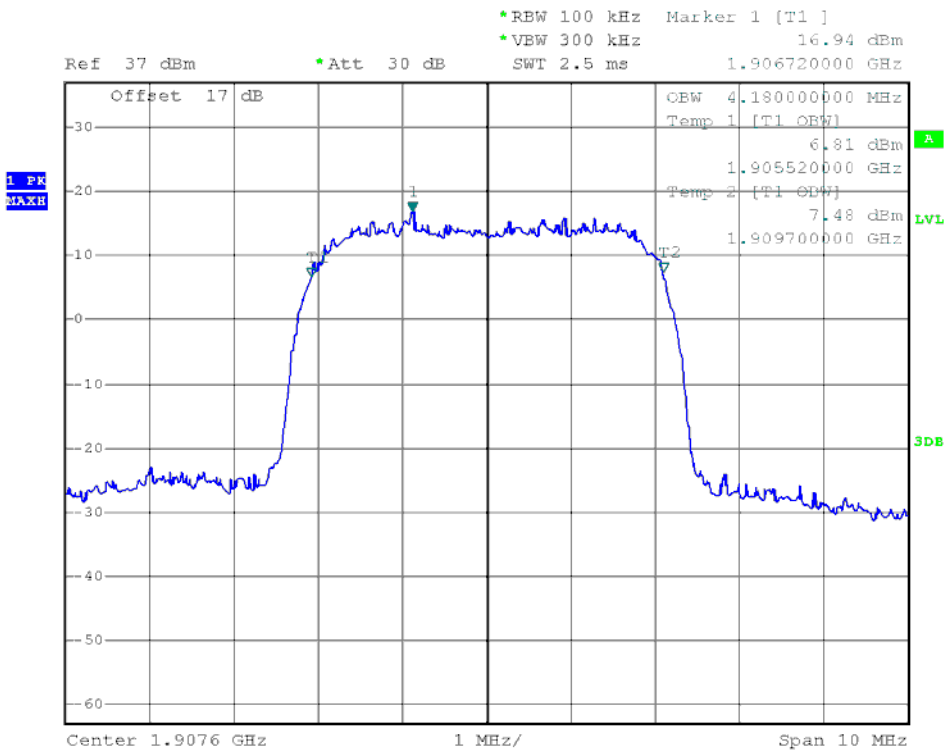
(Plot Q1: HSUPA1900 MHz Channel = 9400)



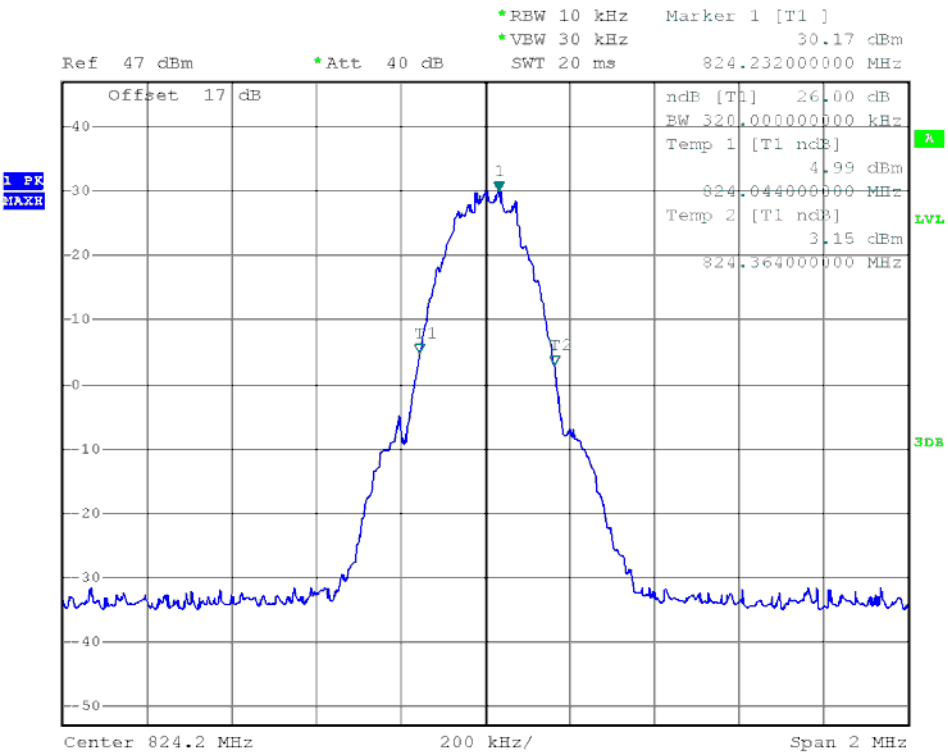
(Plot Q2: HSUPA1900 MHz Channel = 9400)



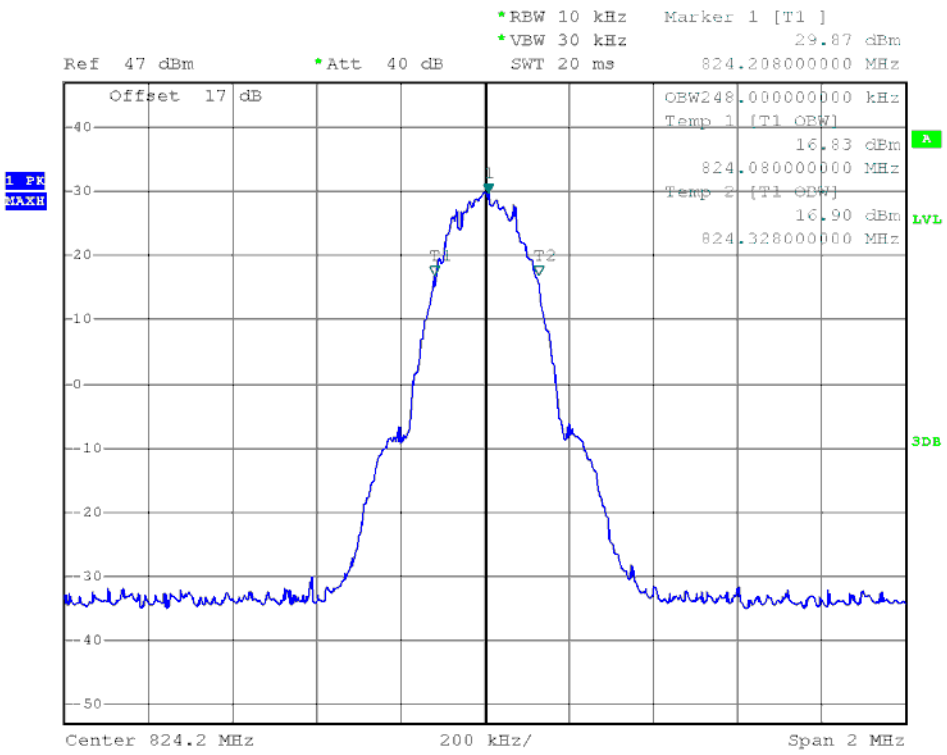
(Plot R1: HSUPA1900 MHz Channel = 9538)



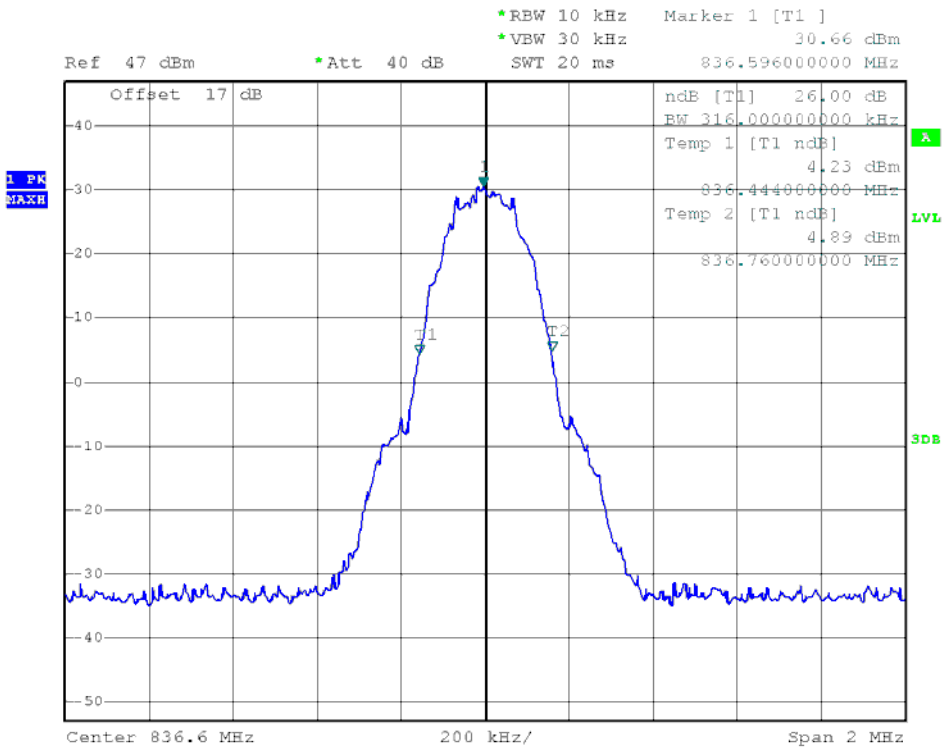
(Plot R2: HSUPA1900 MHz Channel = 9538)



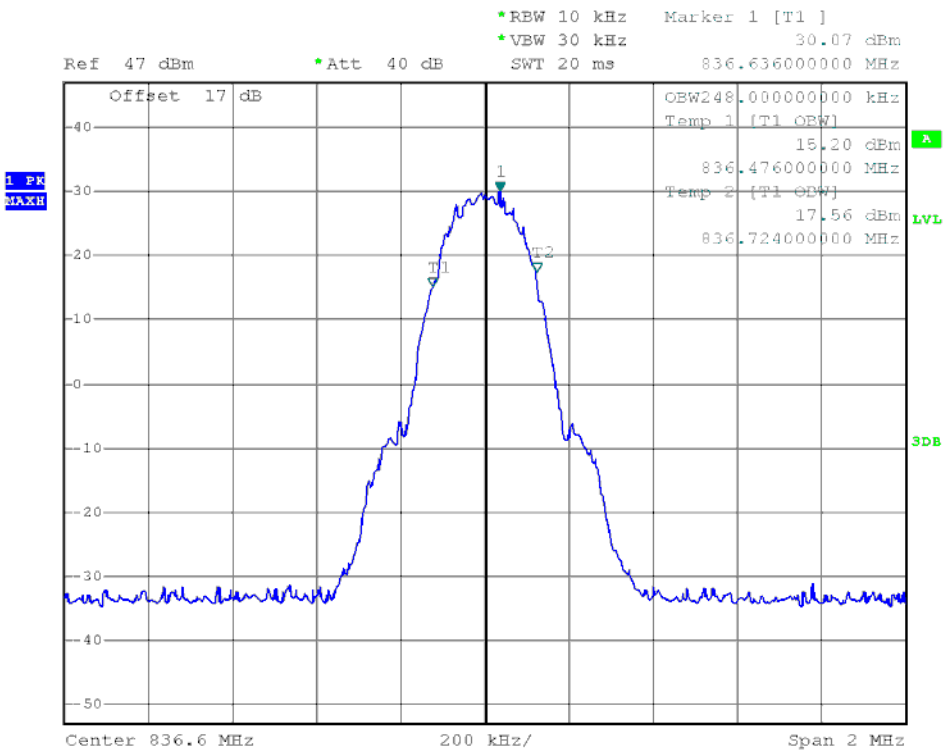
(Plot S1: GSM 850MHz Channel = 128)



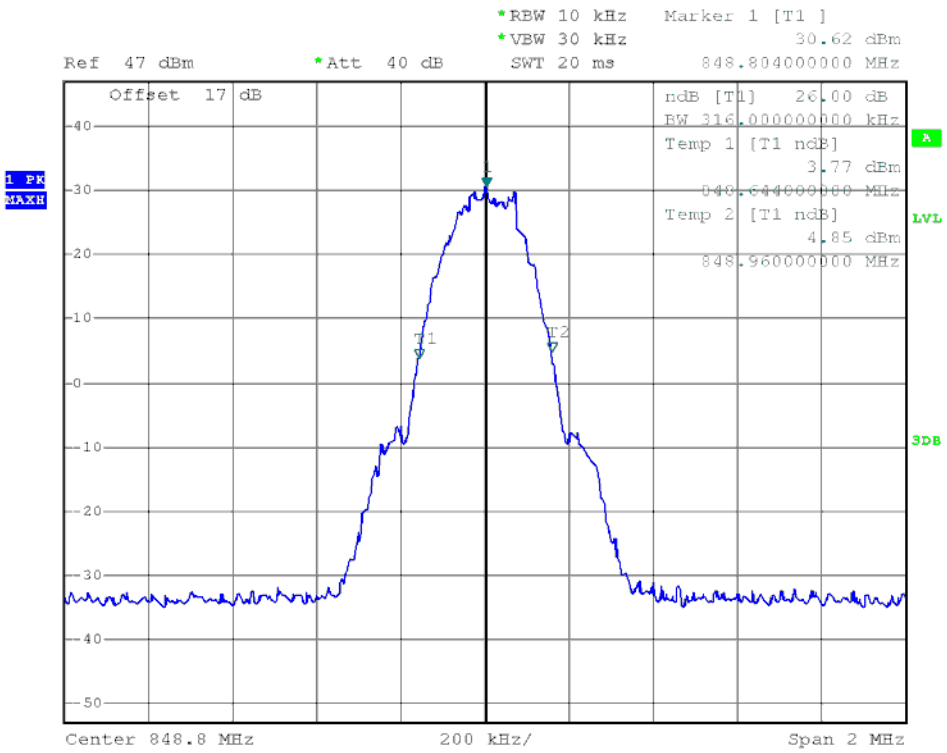
(Plot S2: GSM 850MHz Channel = 128)



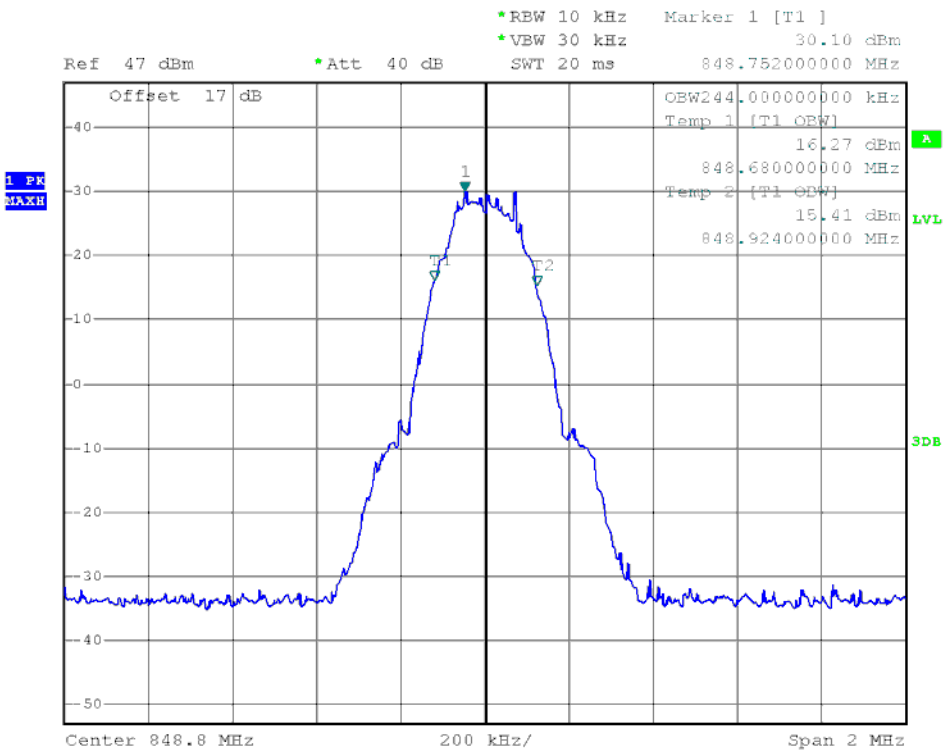
(Plot T1: GSM 850MHz Channel = 190)



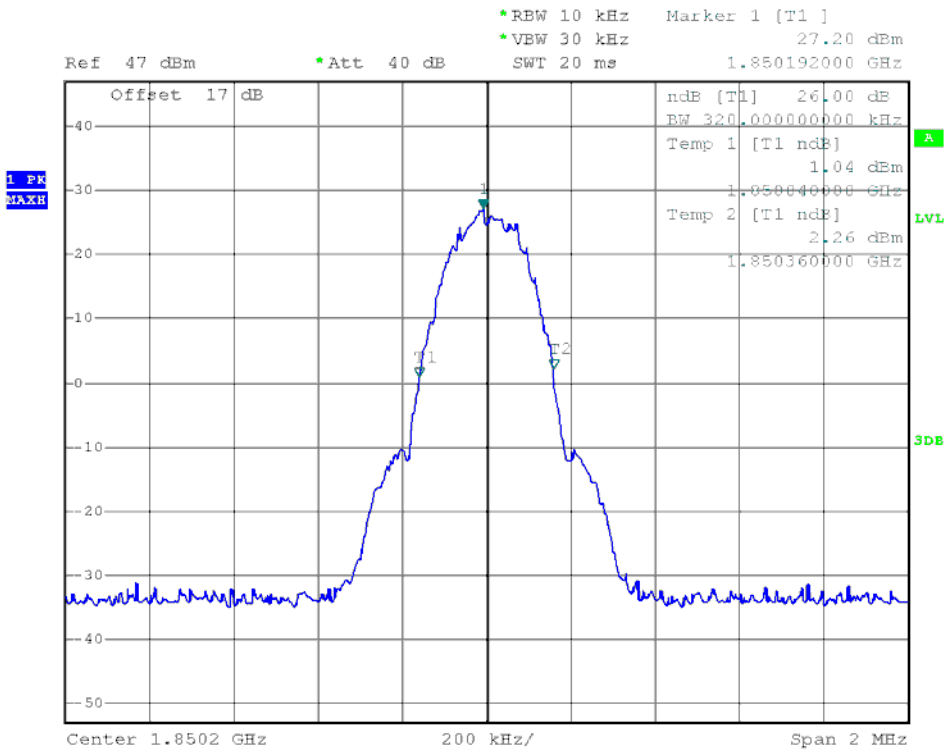
(Plot T2: GSM 850MHz Channel = 190)



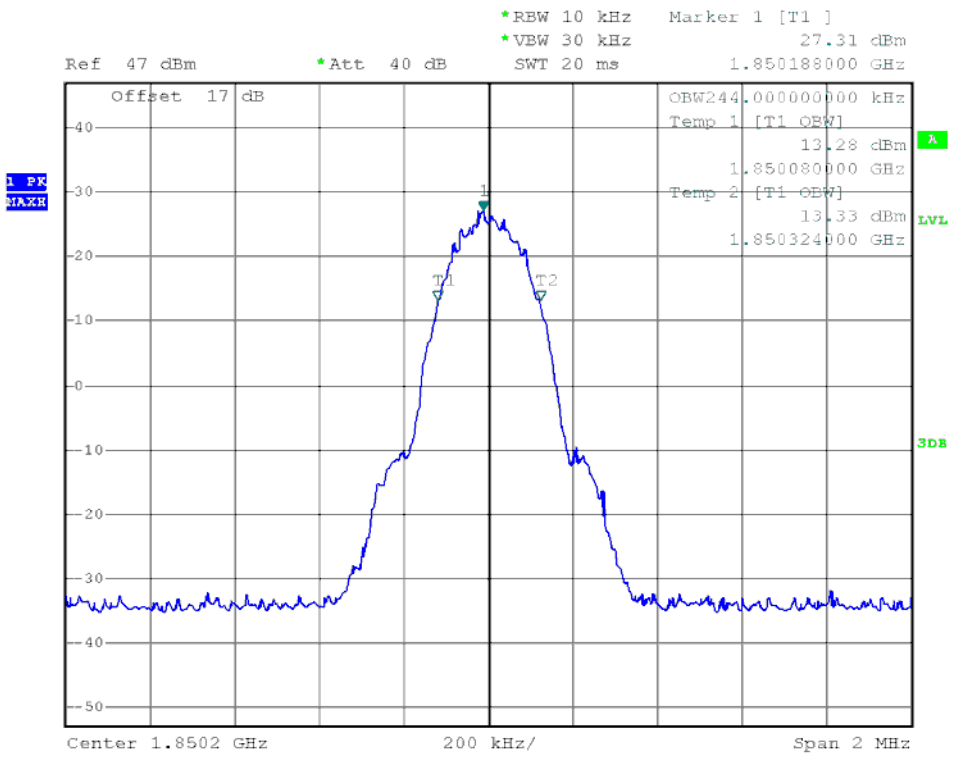
(Plot U1: GSM 850MHz Channel = 251)



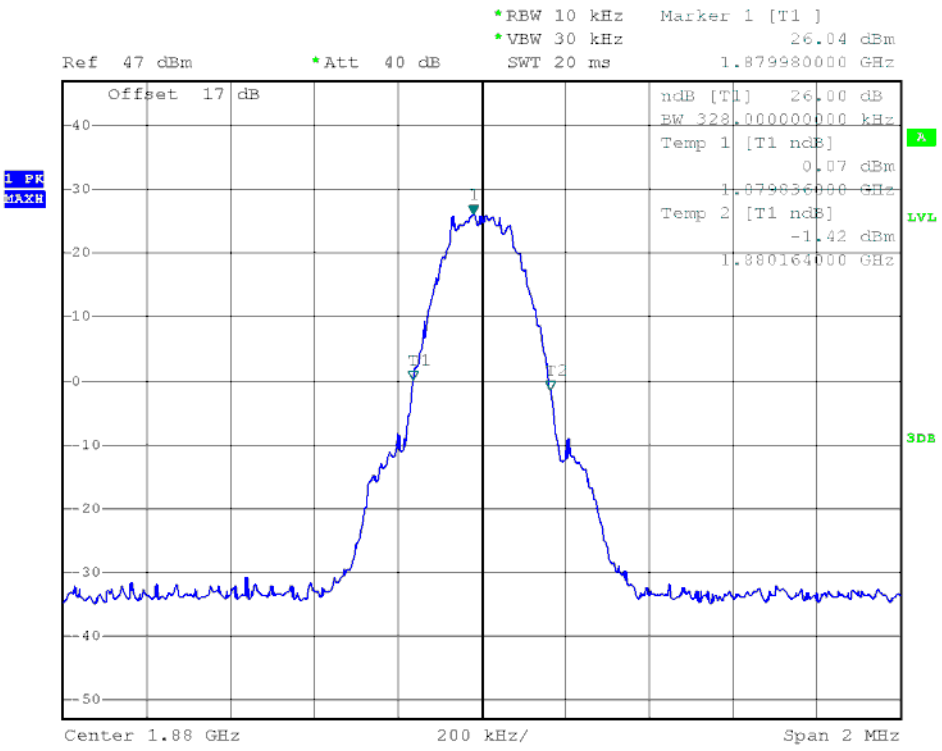
(Plot U2: GSM 850MHz Channel = 251)



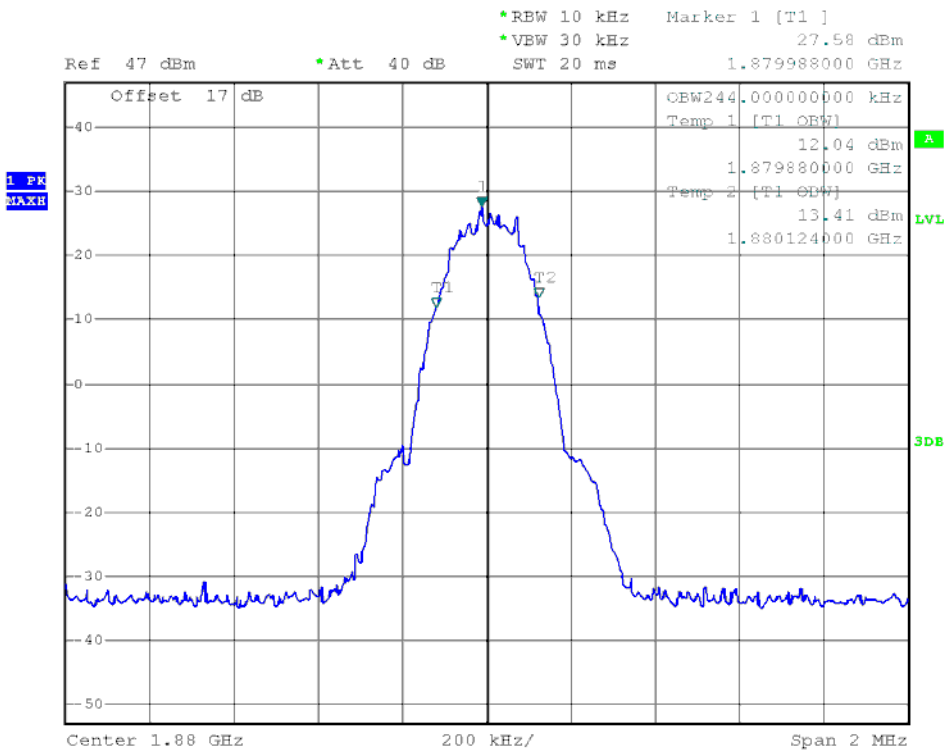
(Plot V1: GSM 1900MHz Channel = 512)



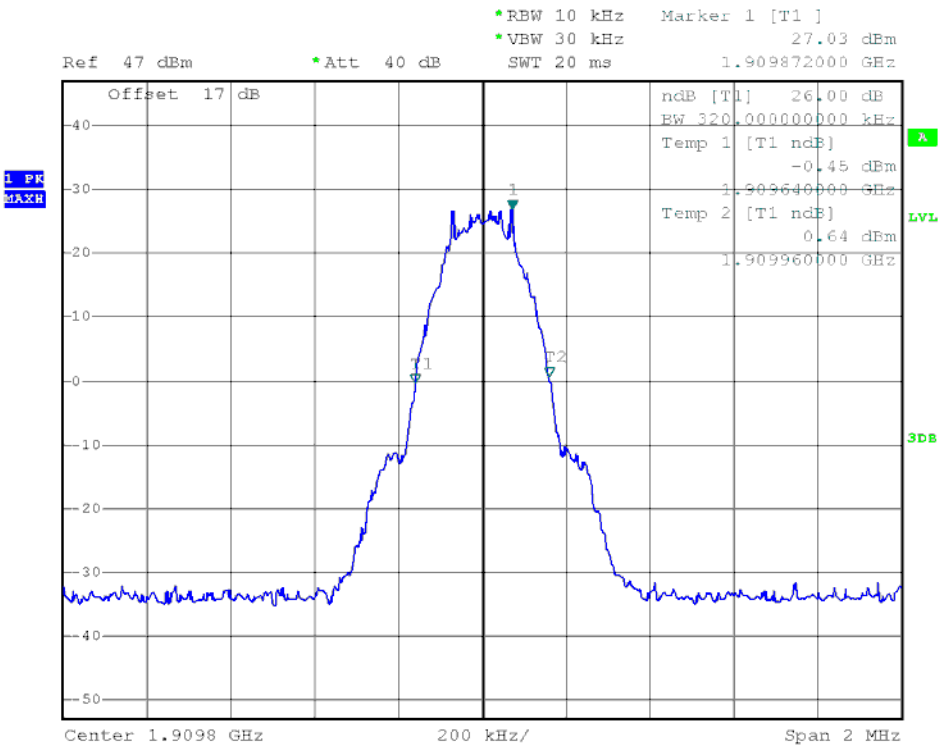
(Plot V2: GSM 1900MHz Channel = 512)



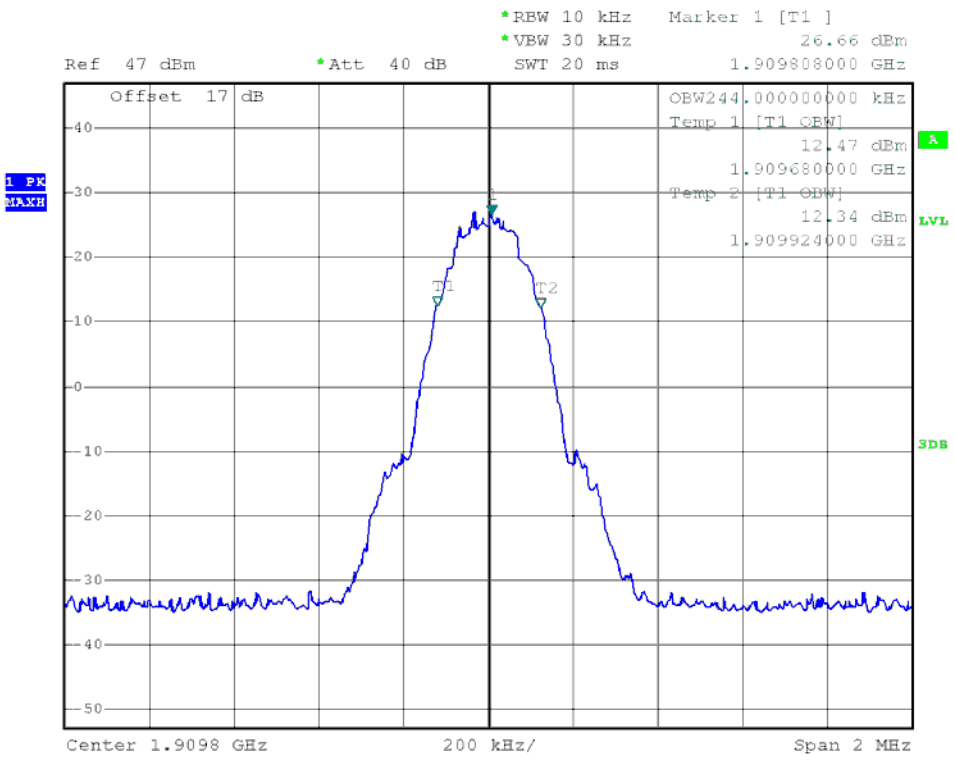
(Plot W1: GSM 1900MHz Channel = 661)



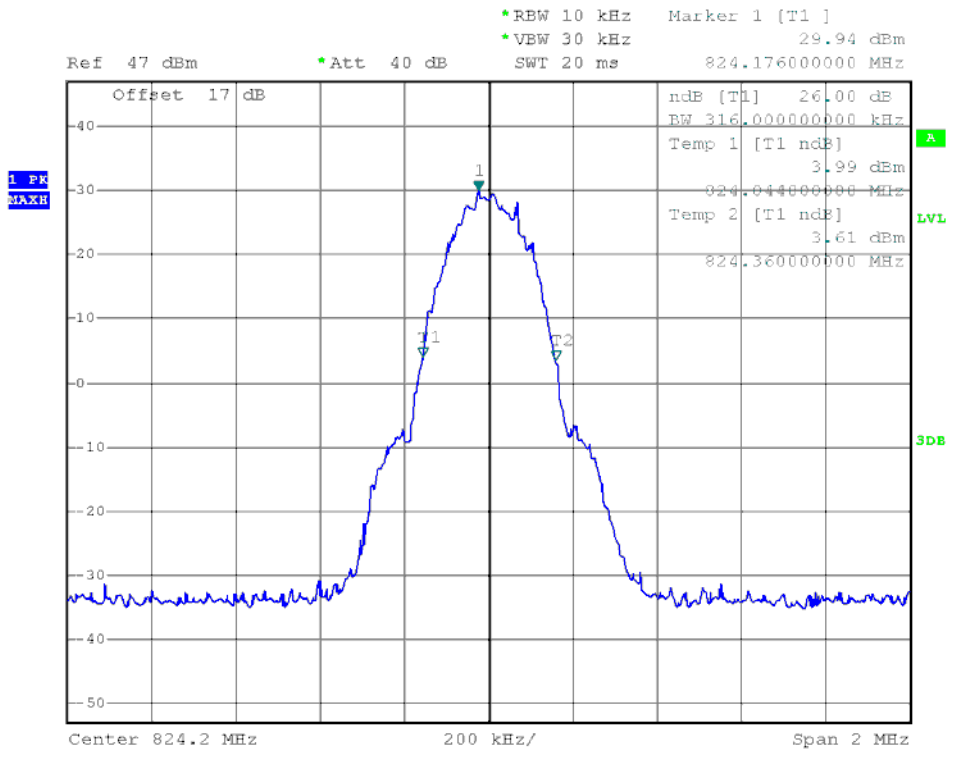
(Plot W2: GSM 1900MHz Channel = 661)



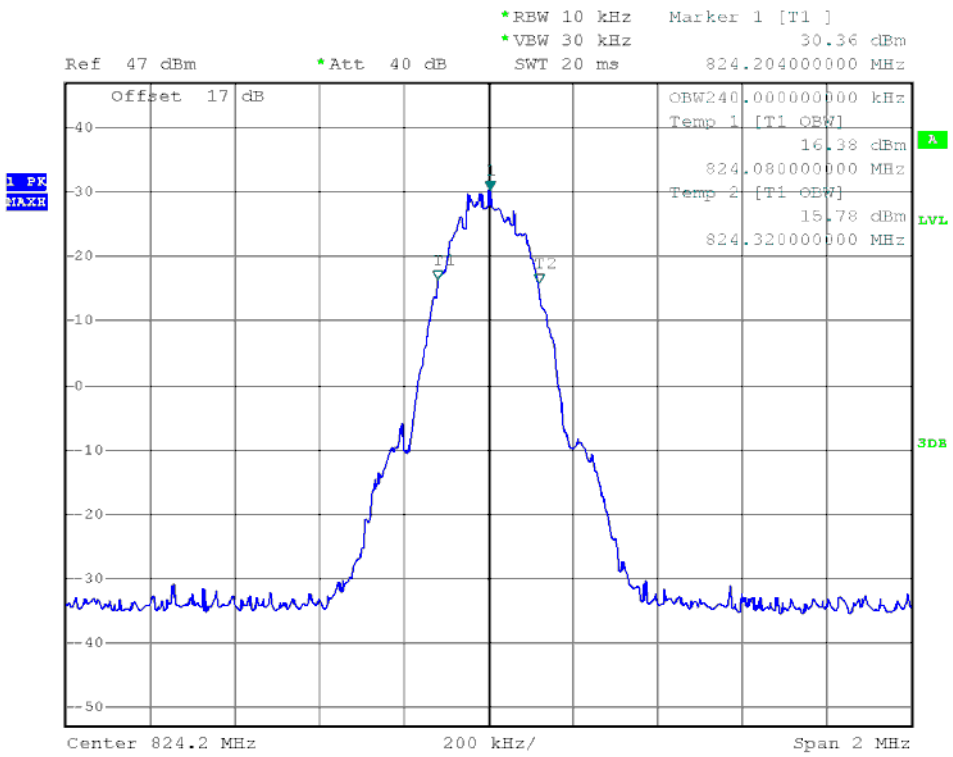
(Plot X1: GSM 1900MHz Channel = 810)



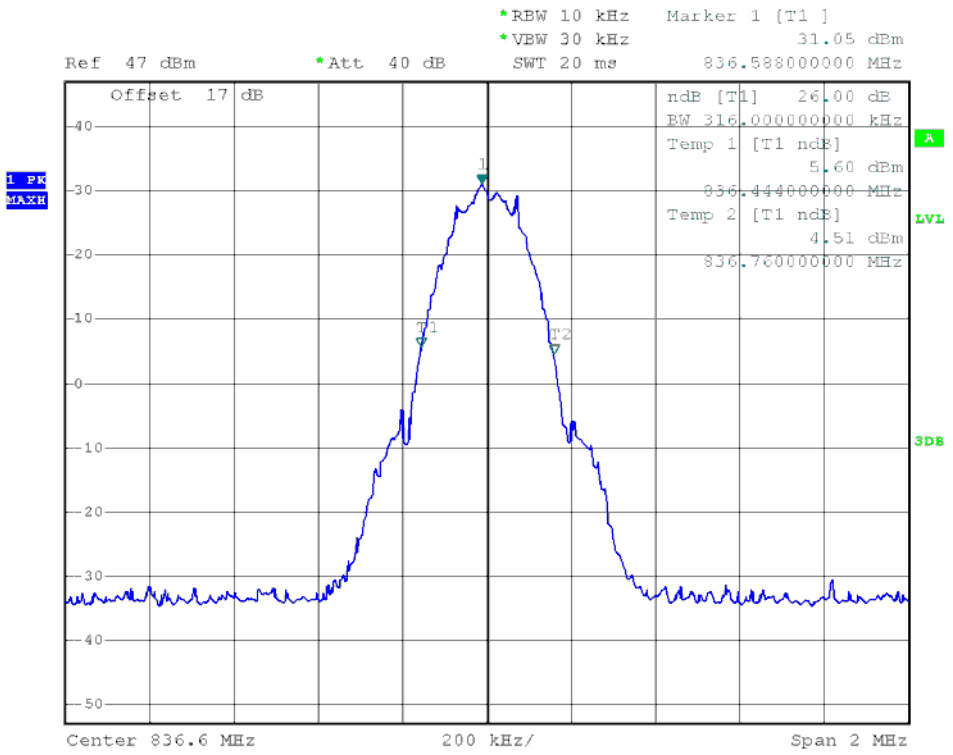
(Plot X2: GSM 1900MHz Channel = 810)



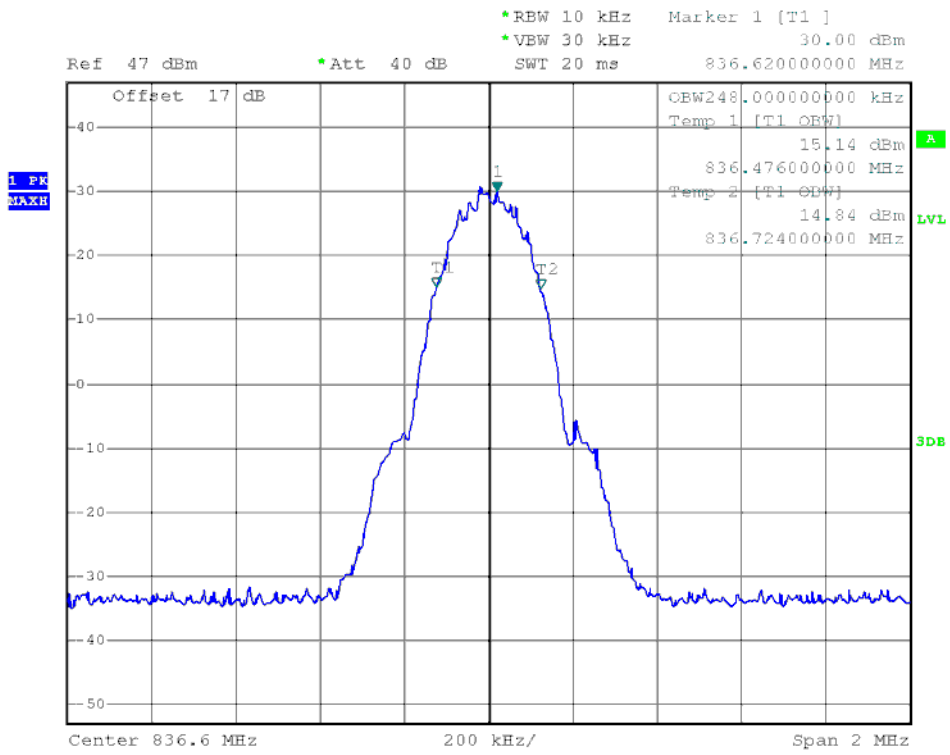
(Plot Y1: GPRS 850MHz Channel = 128)



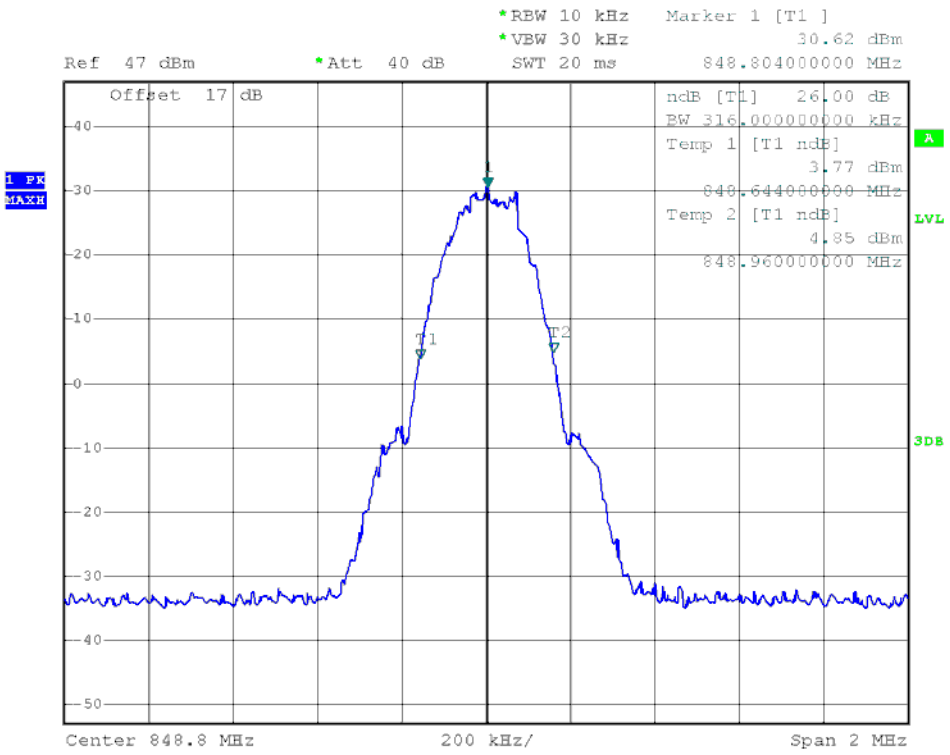
(Plot Y2: GPRS 850MHz Channel = 128)



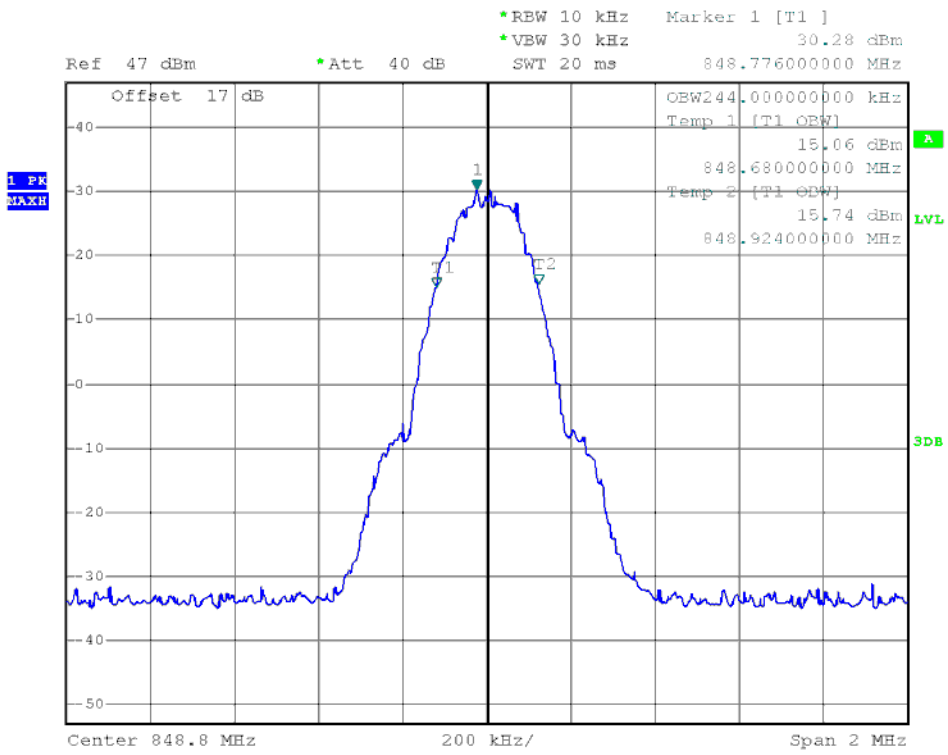
(Plot Z1: GPRS 850MHz Channel = 190)



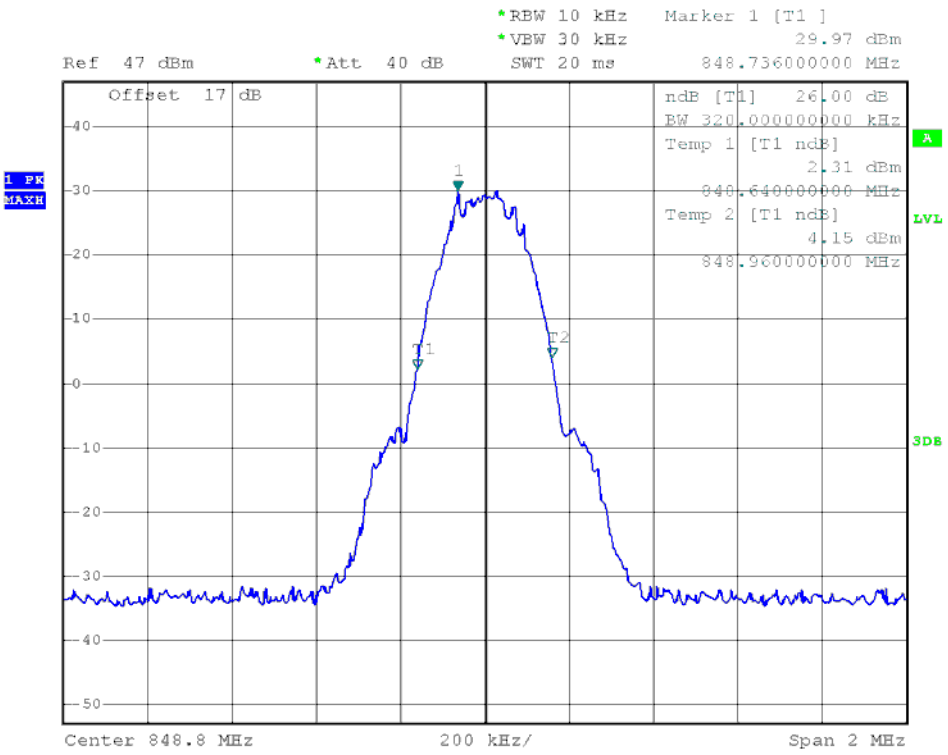
(Plot Z2: GPRS 850MHz Channel = 190)



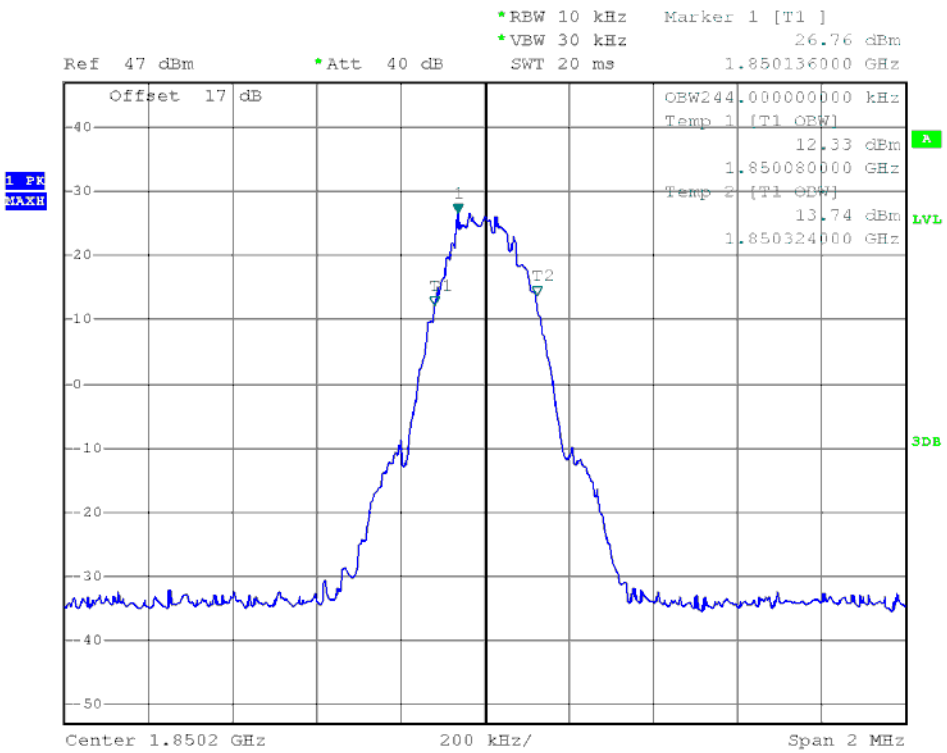
(Plot a1:GPRS850MHz Channel = 251)



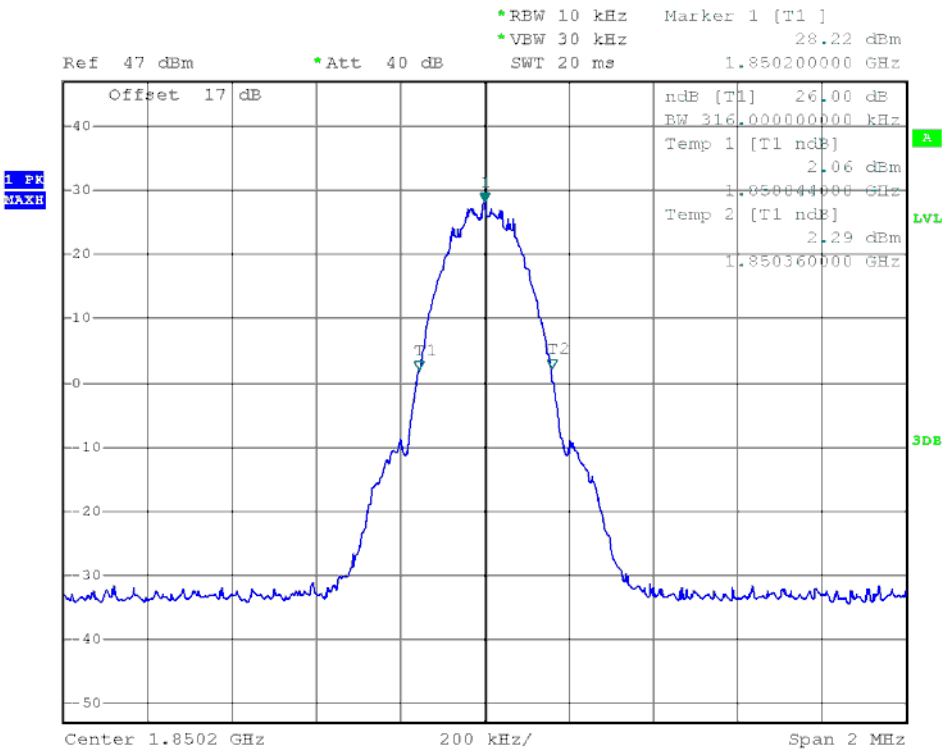
(Plot a2:GPRS850MHz Channel = 251)



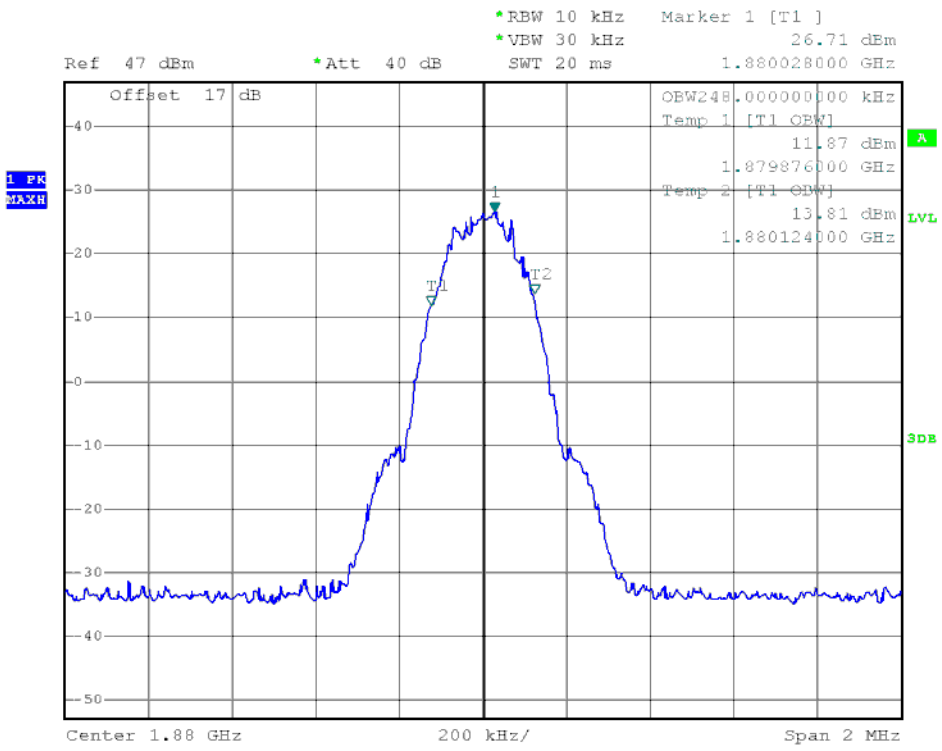
(Plot b1:GPRS 1900MHz Channel = 512)



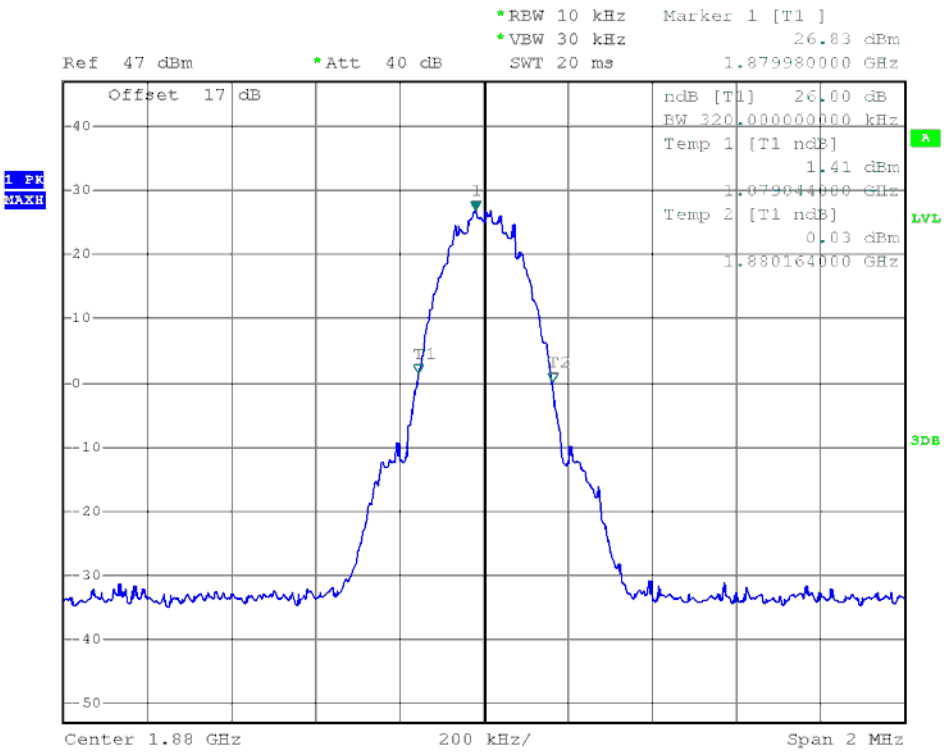
(Plot b2:GPRS 1900MHz Channel = 512)



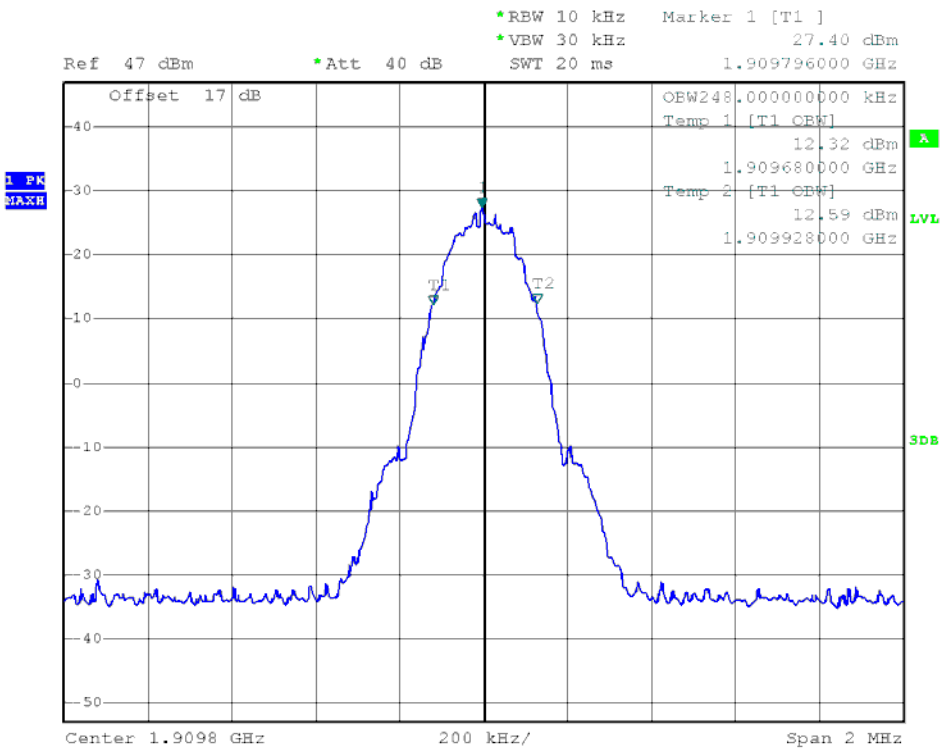
(Plot c1:GPRS 1900MHz Channel = 661)



(Plot c2:GPRS 1900MHz Channel = 661)



(Plot d1:GPRS 1900MHz Channel = 810)



(Plot d2:GPRS 1900MHz Channel = 810)

2.4 Frequency Stability

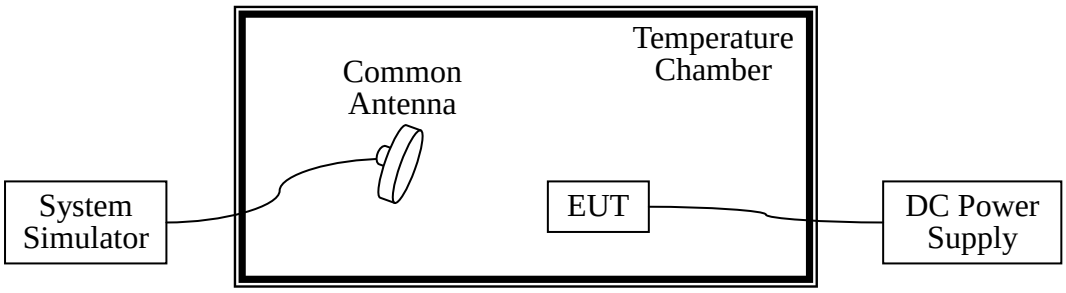
2.4.1 Requirement

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 ℃ to +50 ℃ at intervals of not more than 10 ℃.
(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. Due Data
System Simulator	Agilent	E5515C	GB43130131	2014.06.10
DC Power Supply	Good Will	GPS-3030DD	EF920938	2014.06.10
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2014.06.10

2.4.3 Test Verdict

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

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

1. GSM 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	24.89	±2060.5	4.43	±2091.5	5.30	±2122	PASS
	-20	38.66		-15.01		37.67		
	-10	41.47		34.03		-12.80		
	0	13.21		44.86		39.77		
	+10	10.35		51.87		45.48		
	+20	-12.03		51.00		9.68		
	+30	21.03		38.12		-12.23		
	+40	25.80		17.07		5.04		
	+50	27.93		29.71		2.61		
4.2	+25	3.71		42.55		42.18		
3.6	+25	25.57		53.57		48.27		

2. GSM 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-5.19	±1850.2	48.91	±1880.0	29.27	±1909.8	PASS
	-20	19.00		11.01		-8.57		
	-10	38.22		15.79		36.13		
	0	25.23		41.59		-14.70		
	+10	-1.45		-10.89		-8.71		
	+20	6.94		-7.13		-15.98		
	+30	21.13		29.44		21.63		
	+40	41.23		-10.34		-2.73		
	+50	30.96		15.41		8.69		
4.2	+25	-5.63		32.72		48.24		
3.6	+25	20.67		-9.80		36.41		

3. WCDMA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 4123 (826.4MHz)		Channel = 4183 (836.6MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	-4.32	±2066	27.18	±2091.5	5.05	±2116.5	PASS
	-20	35.25		30.07		7.49		
	-10	-19.21		5.48		0.19		
	0	27.75		-1.82		34.30		
	+10	-13.73		19.02		45.99		
	+20	-6.95		44.78		-16.51		
	+30	48.07		21.99		19.46		
	+40	42.00		17.67		-6.80		
	+55	38.85		-19.44		7.58		
4.2	+25	31.42		-6.76		3.11		
3.6	+25	4.49		14.09		-4.93		

4. WCDMA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	-0.97	±1852.4	51.25	±1880.0	1.12	±1907.6	PASS
	-20	35.71		51.56		8.81		
	-10	54.73		48.10		22.21		
	0	25.45		43.19		47.37		
	+10	18.46		6.50		14.85		
	+20	20.42		3.76		33.63		
	+30	0.36		7.11		38.27		
	+40	26.25		5.70		57.38		
	+55	24.14		-5.74		21.22		
4.2	+25	12.46		42.11		50.98		
3.6	+25	46.55		5.31		0.95		

5. HSDPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 4123 (826.4MHz)		Channel = 4183 (836.6MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	32.02	±2066	11.25	±2091.5	-19.81	±2116.5	PASS
	-20	-3.25		9.1		-8.65		
	-10	15.29		26.93		29.87		
	0	11.21		-22.7		-9.98		
	+10	-20.41		-8.3		-19.61		
	+20	11.72		32.29		-21.43		
	+30	-5.48		-4.32		8.89		
	+40	22.02		-18.83		-9.87		
	+55	-30.27		33.03		16.71		
4.2	+25	26.66		13.27		2.56		
3.6	+25	25.16		-5.87		-23.56		

6. HSDPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	40.74	±1852.4	39.64	±1880	4.24	±1907.6	PASS
	-20	44.81		36.49		50.42		
	-10	-2.51		7.98		23.49		
	0	7.95		-3.94		25.50		
	+10	29.51		-9.04		-15.21		
	+20	29.84		45.91		30.37		
	+30	13.40		-5.29		18.94		
	+40	56.48		40.47		9.91		
	+55	18.09		22.99		32.97		
4.2	+25	-17.00		30.91		50.69		
3.6	+25	6.75		-10.79		13.44		

7. HSUPA 850MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 4123 (826.4MHz)		Channel = 4183 (836.6MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limit	Hz	Limit	Hz	Limit	
3.8	-30	20.79	±2066	46.68	±2091.5	22.69	±2116.5	PASS
	-20	44.54		28.10		2.39		
	-10	10.45		-4.27		54.53		
	0	10.88		36.69		12.66		
	+10	52.76		13.61		50.37		
	+20	2.46		12.15		-5.39		
	+30	27.07		23.94		35.13		
	+40	-8.66		13.56		-0.53		
	+55	14.23		47.64		37.40		
4.2	+25	53.35		52.86		31.75		
3.6	+25	35.82		3.68		48.60		

8. HSUPA 1900MHz Band

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (℃)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880.0MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.8	-30	0.96	±1852.4	8.16	±1880	14.33	±1907.6	PASS
	-20	24.44		36.72		17.07		
	-10	53.46		57.55		32.92		
	0	23.70		-1.82		14.63		
	+10	8.80		40.78		43.06		
	+20	18.68		13.96		56.26		
	+30	6.60		35.78		38.25		
	+40	38.46		44.01		54.36		
	+55	4.47		24.16		52.56		
4.2	+25	15.78		42.99		24.27		
3.6	+25	53.33		26.70		53.43		

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.

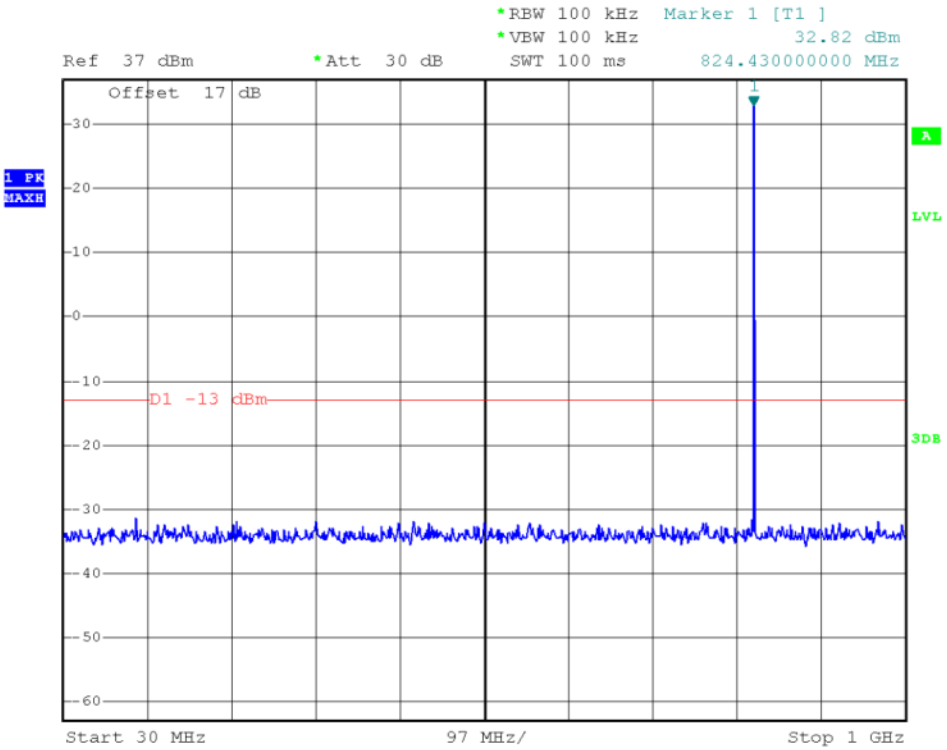
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-27.26	Plot A1toA1.1	-13	PASS
	190	836.6	-27.16	Plot A2toA2.1		PASS
	251	848.8	-28.18	Plot A3toA3.1		PASS
GSM 1900MHz	512	1850.2	-19.51	Plot B1toB1.1	-13	PASS
	661	1880.0	-19.46	Plot B2toB2.1		PASS
	810	1909.8	-19.71	Plot B3toB3.1		PASS
WCDMA 850MHz	4132	826.4	-28.55	Plot C1toC1.1	-13	PASS
	4183	836.6	-27.53	Plot C2toC2.1		PASS
	4233	846.6	-27.08	Plot C3toC3.1		PASS
WCDMA 1900MHz	9262	1852.4	-19.92	Plot D1toD1.1	-13	PASS
	9400	1880	-20.25	Plot D2toD2.1		PASS
	9538	1907.6	-19.78	Plot D3toD3.1		PASS
HSDPA 850MHz	4132	826.4	-27.23	Plot E1toE1.1	-13	PASS
	4183	836.6	-28.47	Plot E2toE2.1		PASS
	4233	846.6	-27.61	Plot E3toE3.1		PASS
HSDPA 1900MHz	9262	1852.4	-20.14	Plot F1toF1.1	-13	PASS
	9400	1880	-19.68	Plot F2toF2.1		PASS
	9538	1907.6	-19.93	Plot F3toF3.1		PASS
HSUPA	4132	826.4	-27.96	Plot G1toG1.1	-13	PASS

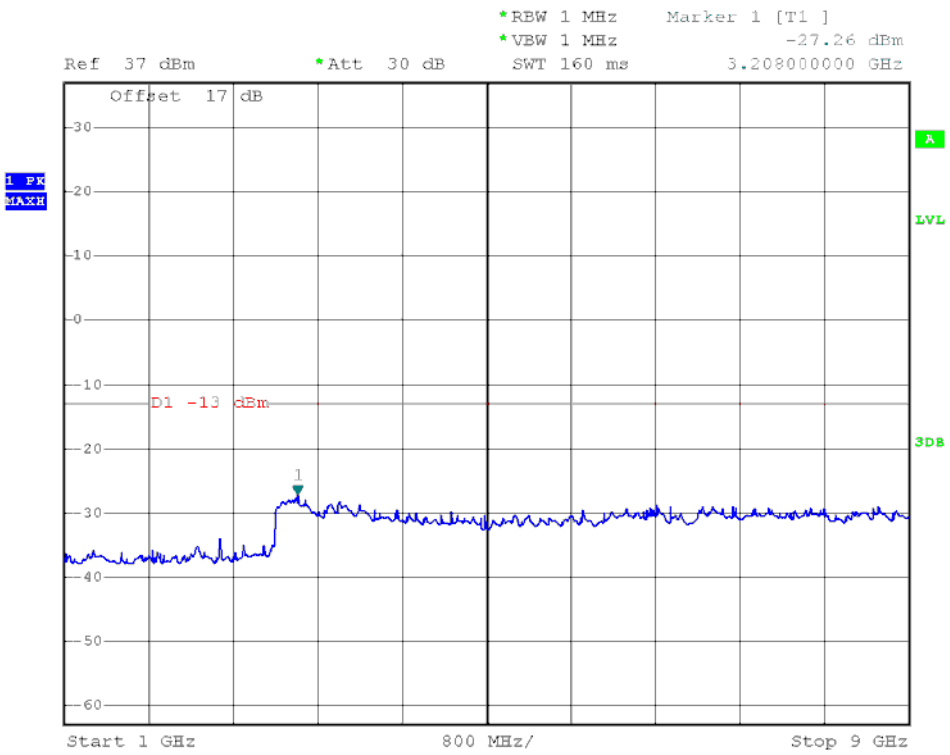
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
850MHz	4183	836.6	-27.61	PlotG2toG2.1		PASS
	4233	846.6	-27.42	Plot G3toG3.1		PASS
HSUPA 1900MHz	9262	1852.4	-20.21	Plot H1toH1.1	-13	PASS
	9400	1880	-19.71	Plot H2toH2.1		PASS
	9538	1907.6	-19.92	Plot H3toH3.1		PASS

2. Test Plots for the Whole Measurement Frequency Range:

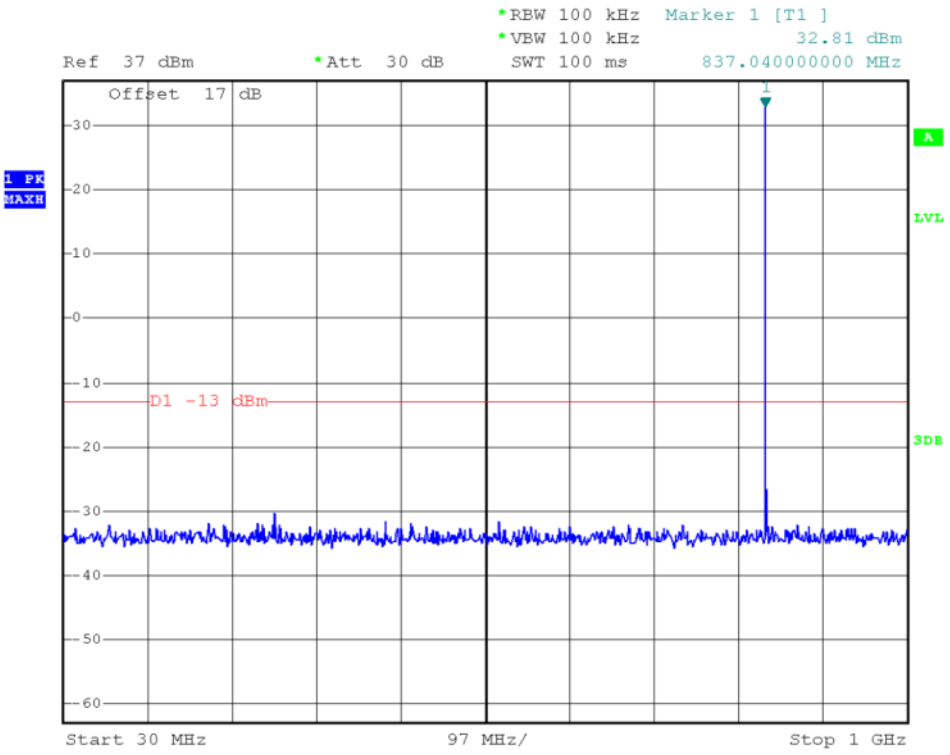
Note: the power of the EUT transmitting frequency should be ignored.



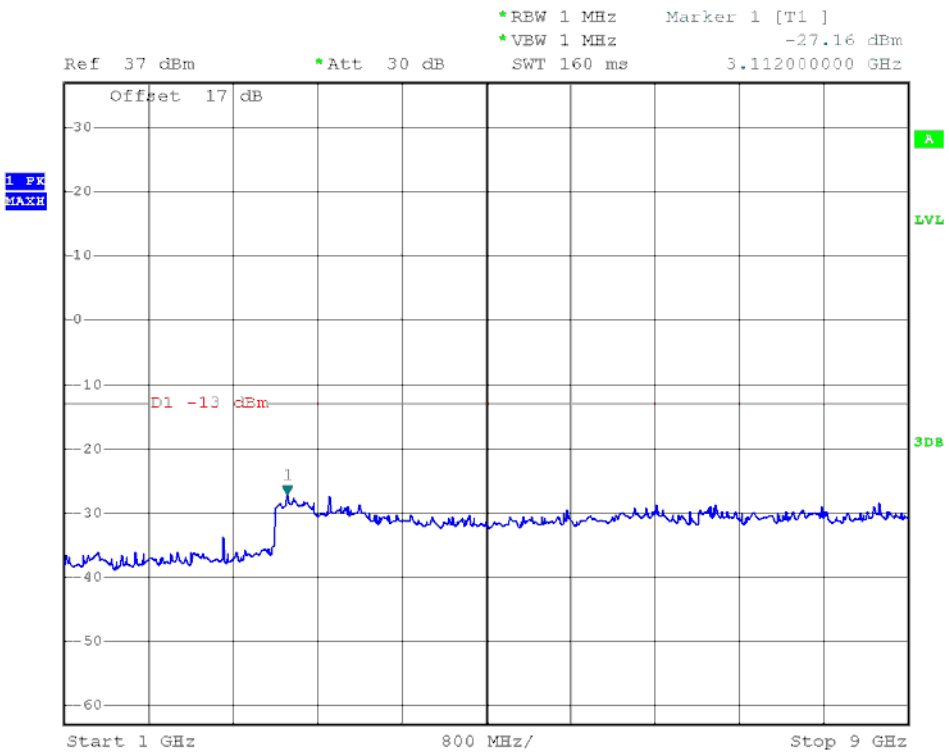
(Plot A1: GSM 850MHz Channel = 128, 30MHz to 1GHz)



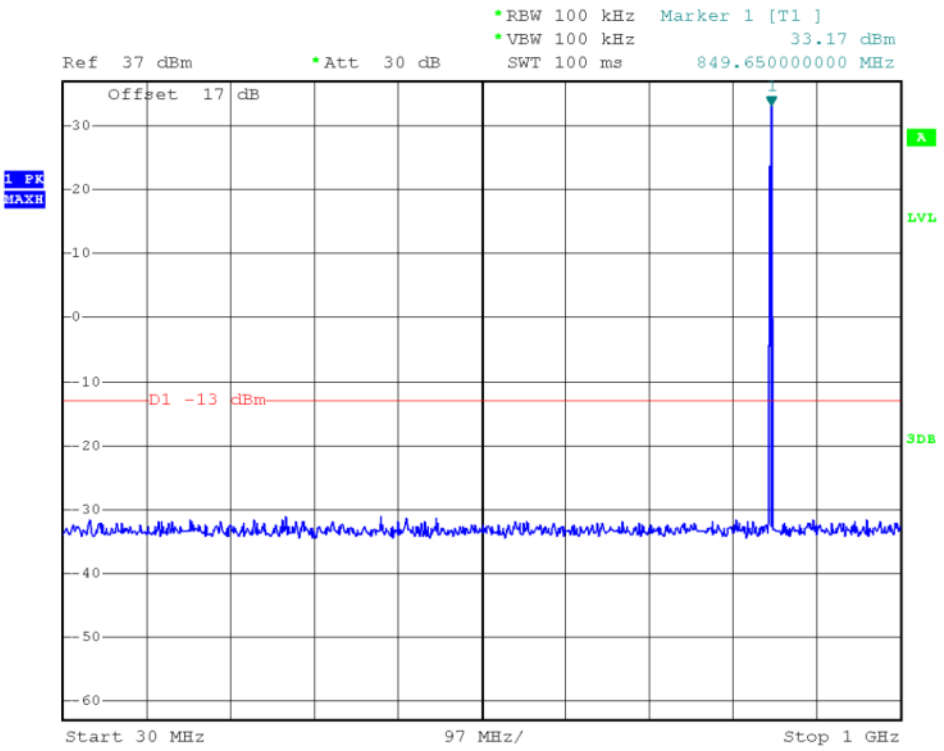
(Plot A1.1: GSM 850MHz Channel = 128, 1GHz to 9GHz)



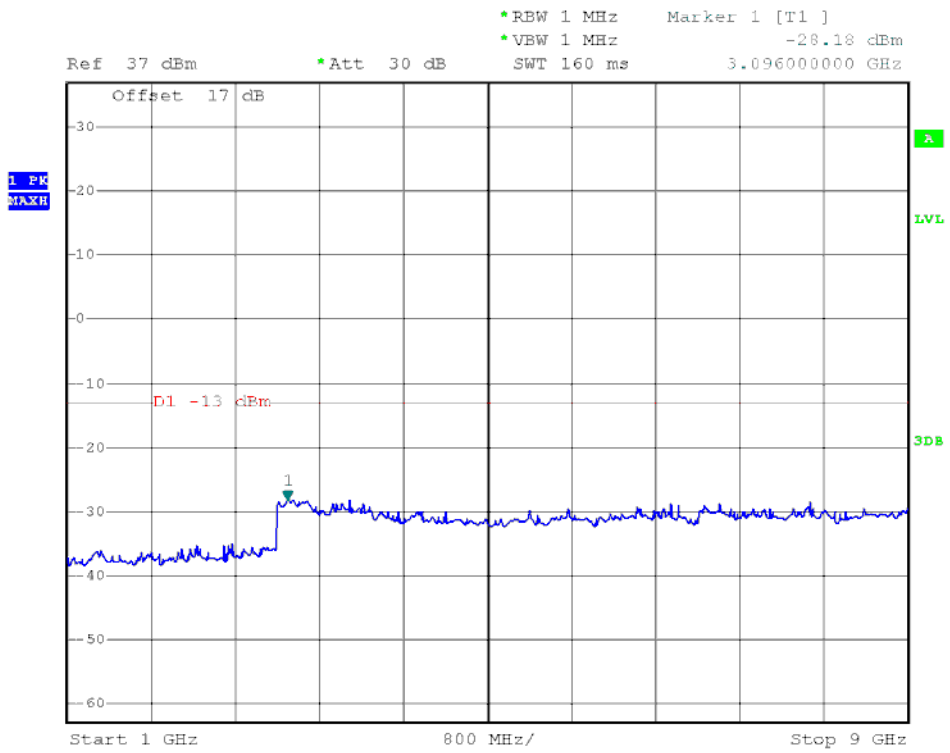
(Plot A2: GSM 850MHz Channel = 190, 30MHz to 1GHz)



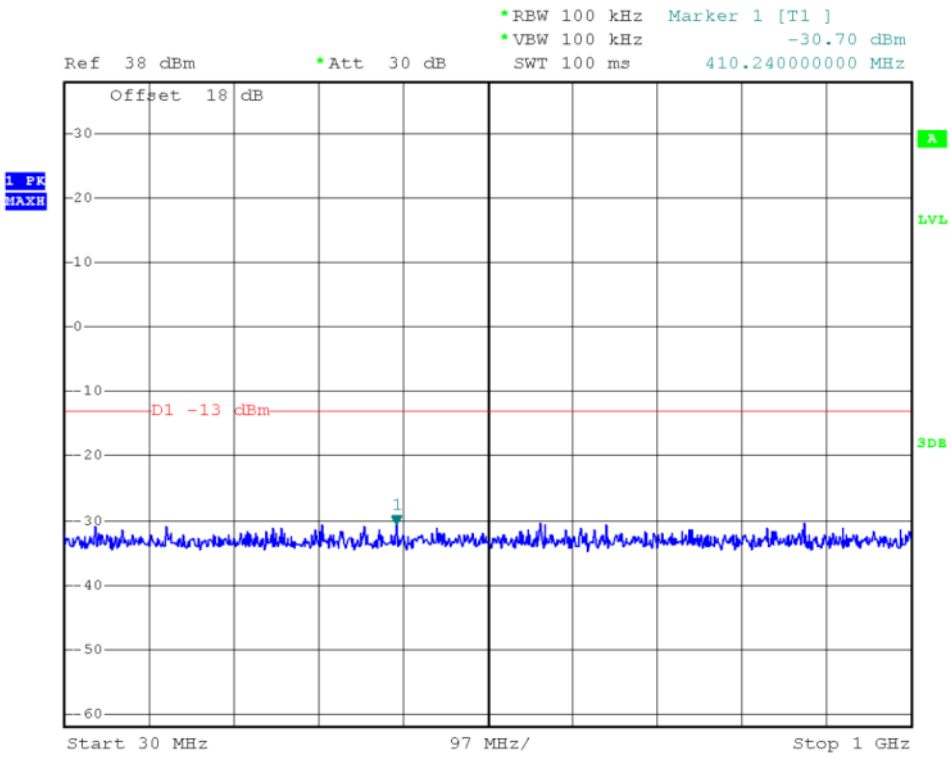
(Plot A2.1: GSM 850MHz Channel = 190, 1GHz to 9GHz)



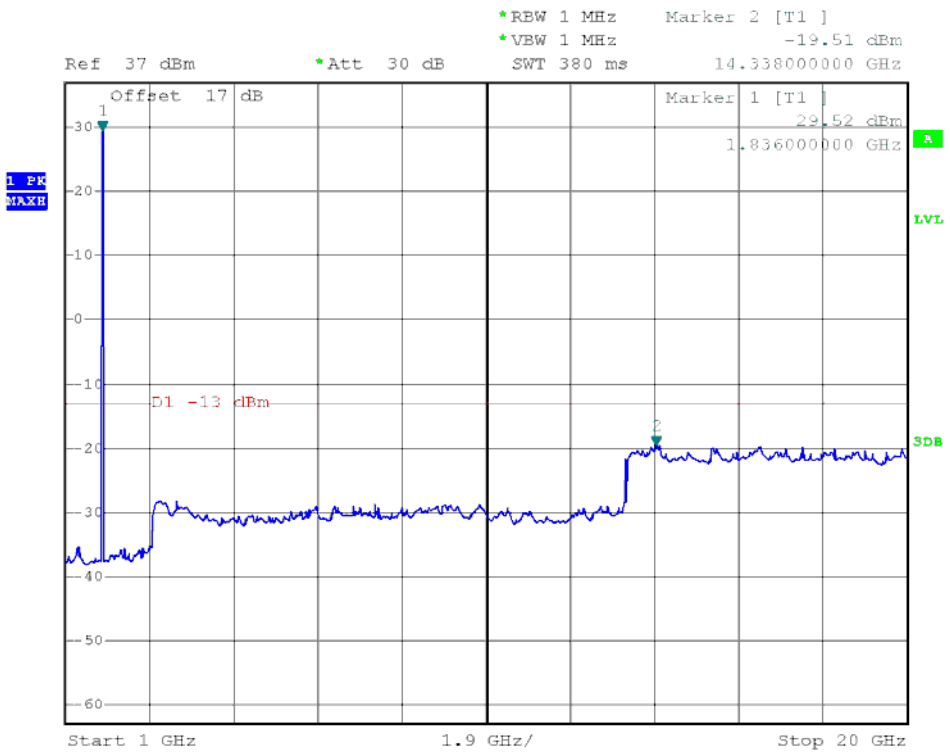
(Plot A3: GSM 850MHz Channel = 251, 30MHz to 1GHz)



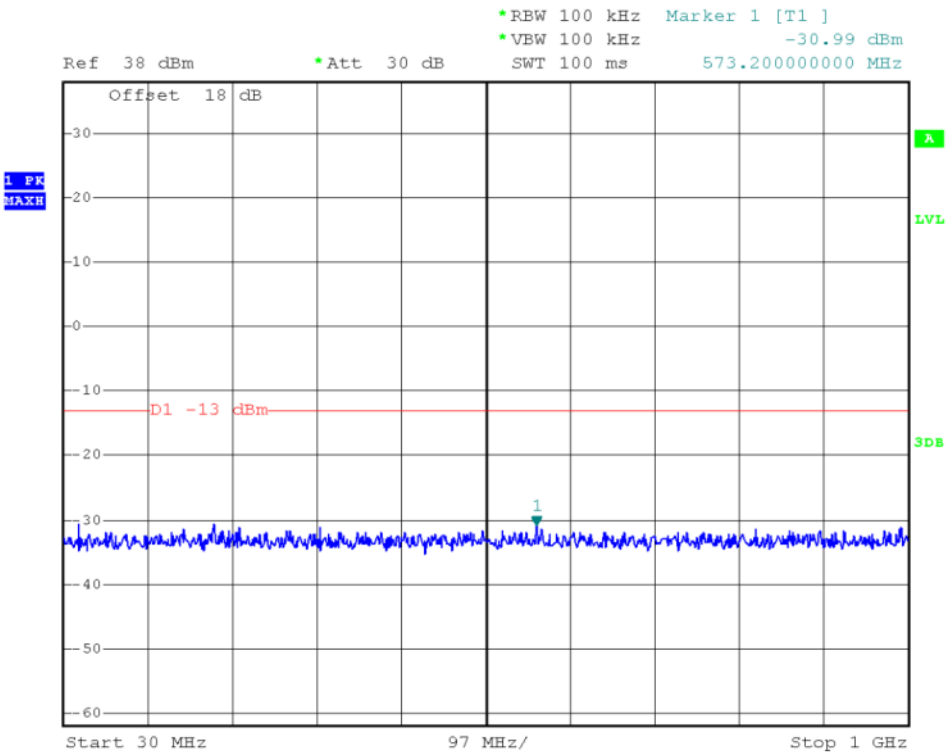
(Plot A3.1: GSM 850MHz Channel = 251, 1GHz to 9GHz)



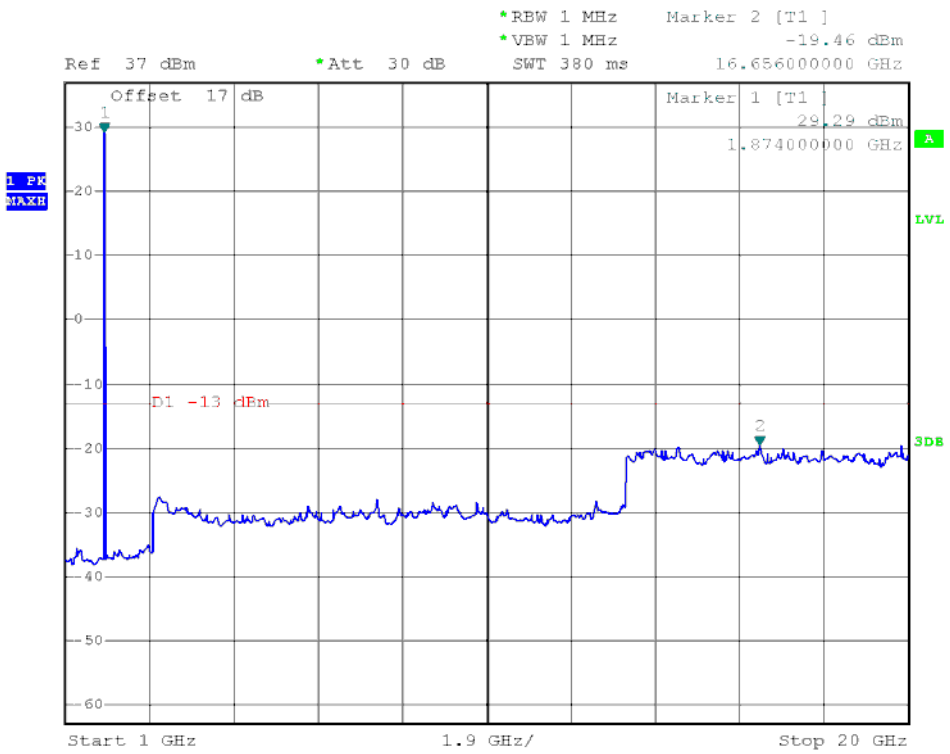
(Plot B1: GSM 1900MHz Channel = 512, 30MHz to 1GHz)



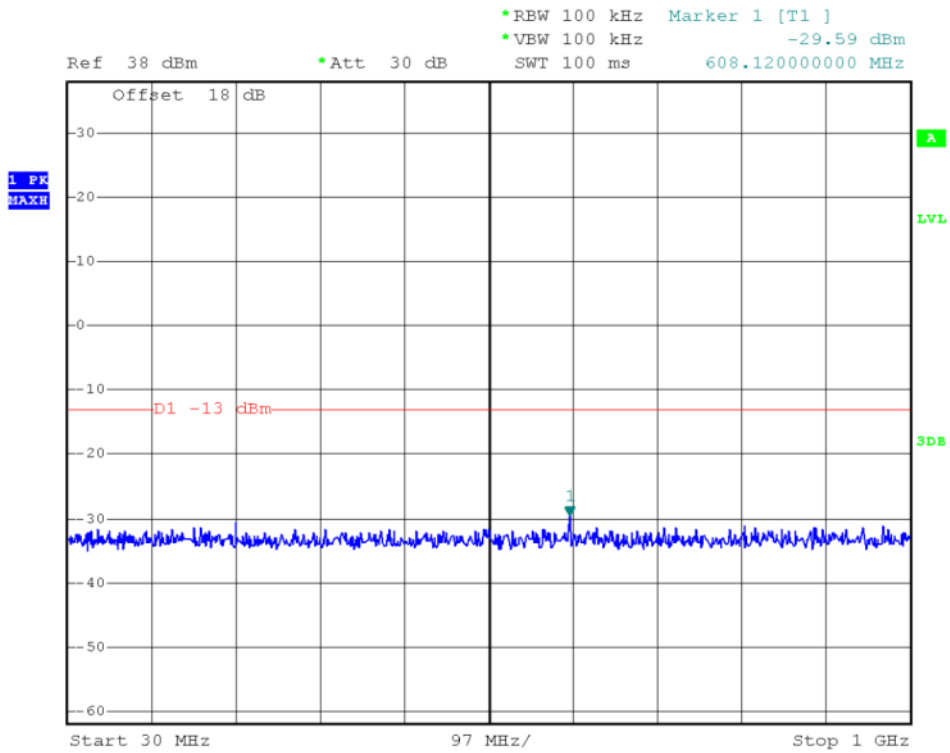
(Plot B1.1: GSM 1900MHz Channel = 512, 1GHz to 20GHz)



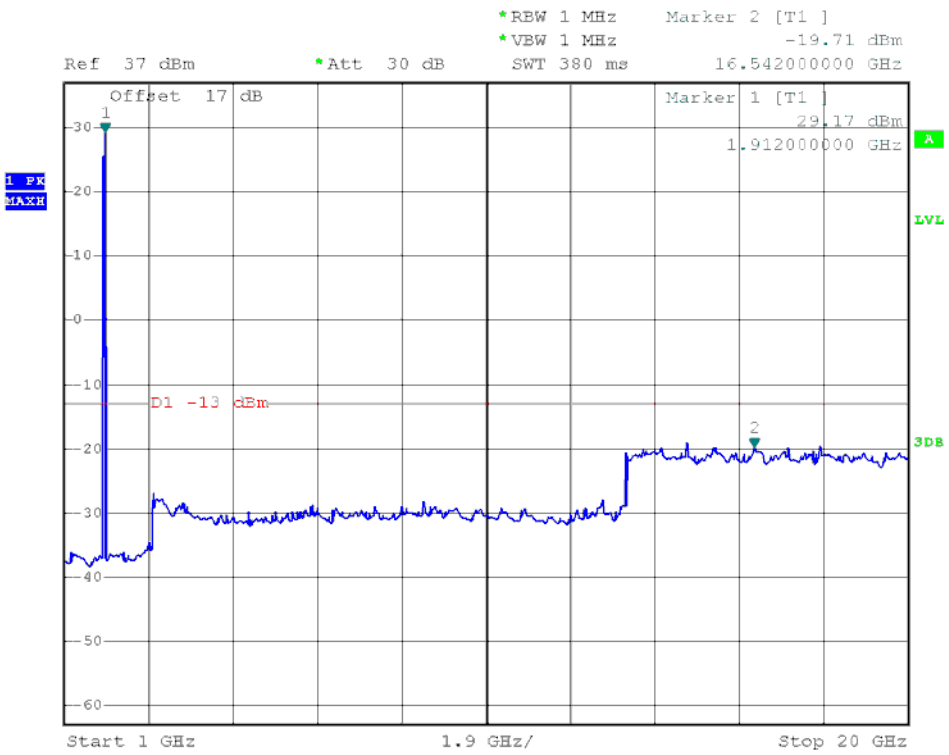
(Plot B2: GSM 1900MHz Channel = 661, 30MHz to 1GHz)



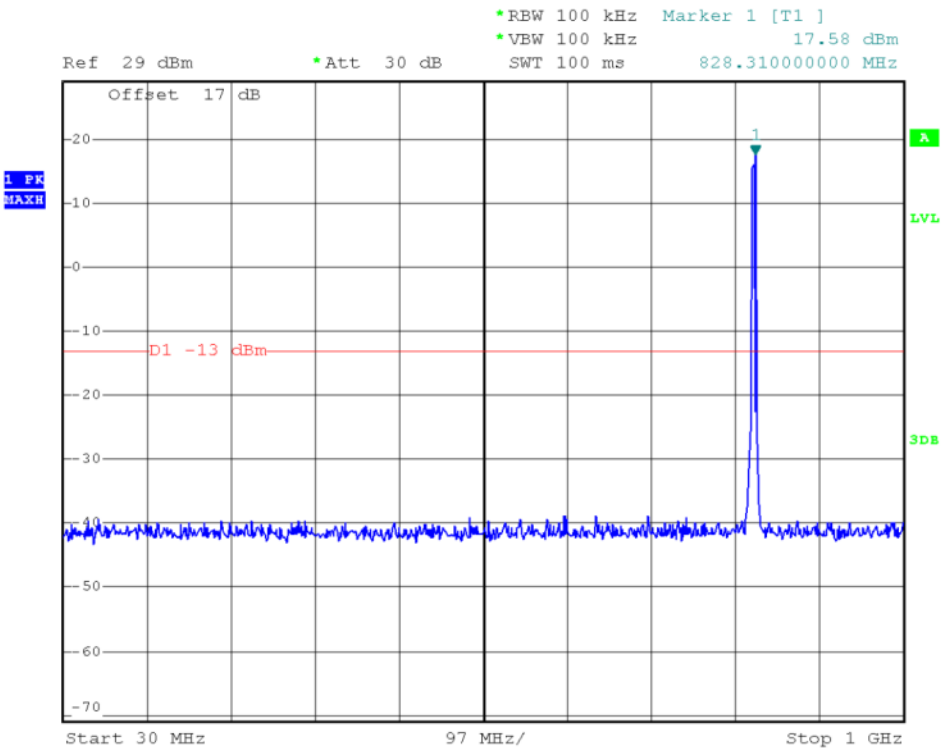
(Plot B2.1: GSM 1900MHz Channel = 661, 1GHz to 20GHz)



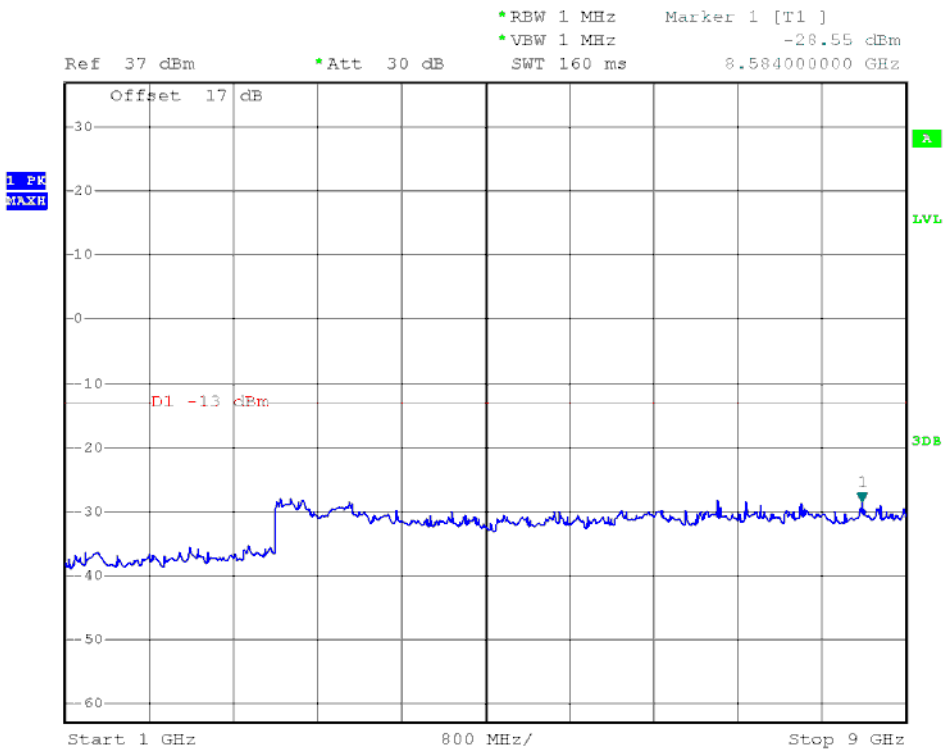
(Plot B3: GSM 1900MHz Channel = 810, 30MHz to 1GHz)



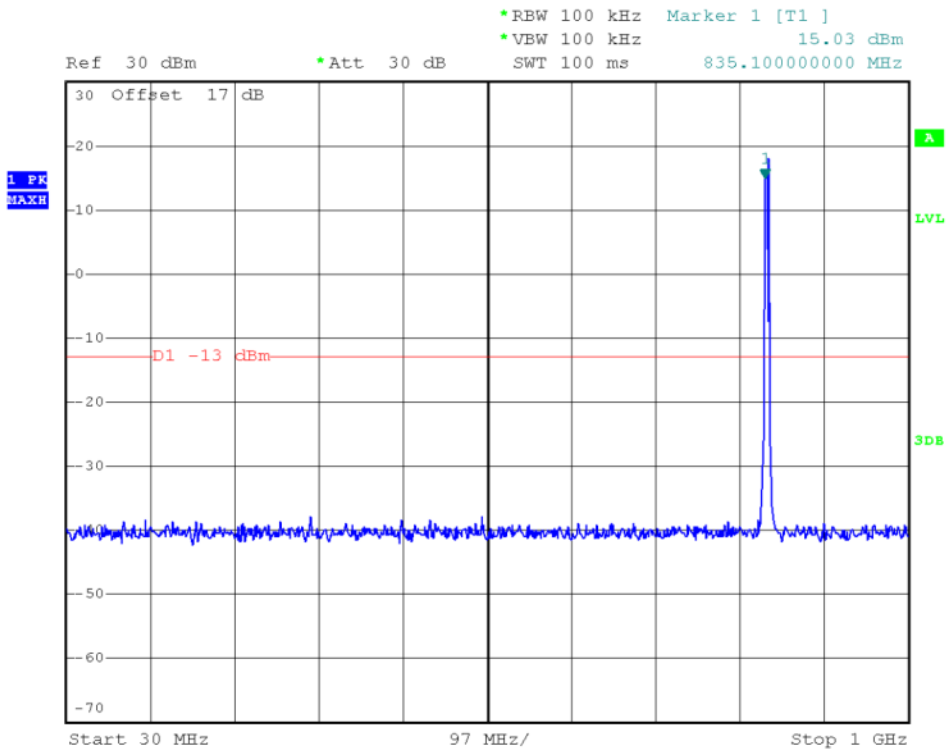
(Plot B3.1: GSM 1900MHz Channel = 810, 1GHz to 20GHz)



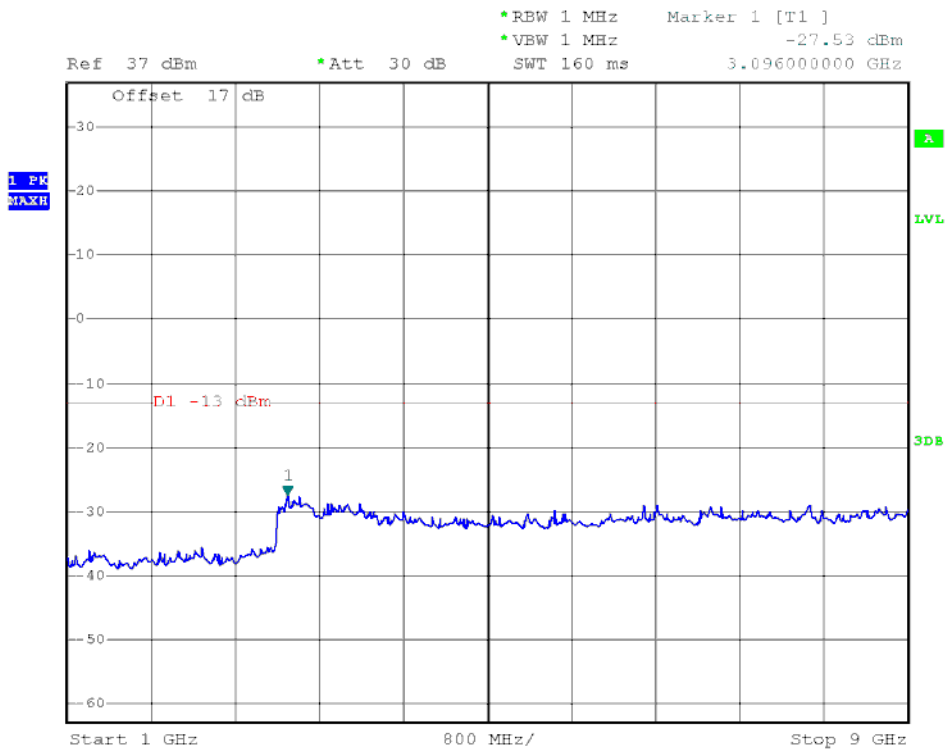
(Plot C1: WCDMA850MHz Channel = 4132, 30MHz to 1GHz)



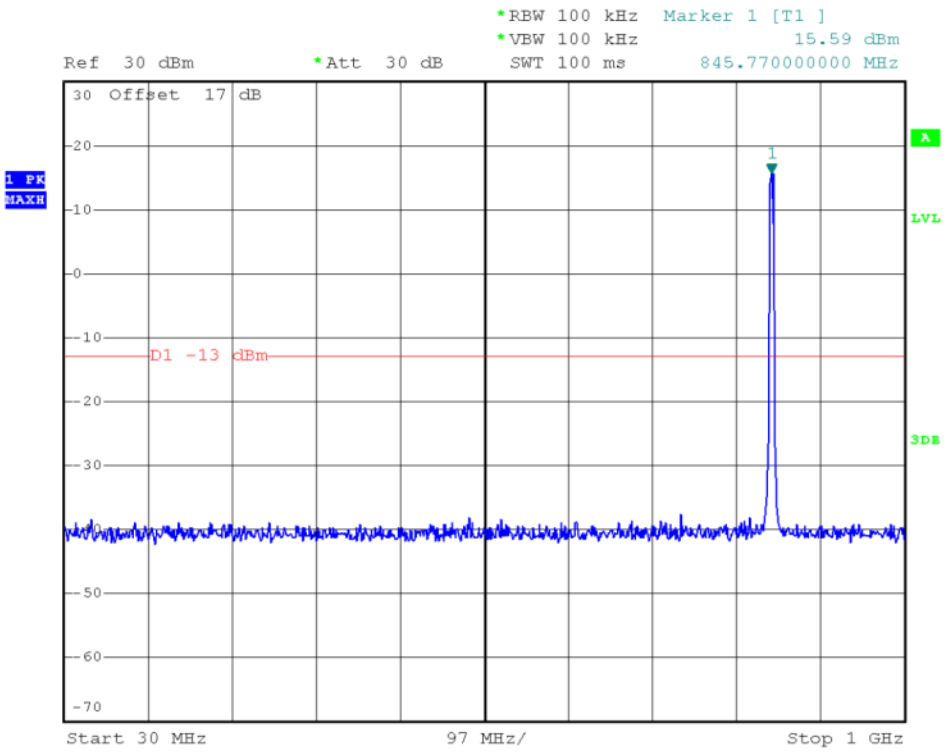
(Plot C1.1: WCDMA850MHz Channel = 4132, 1GHz to 9GHz)



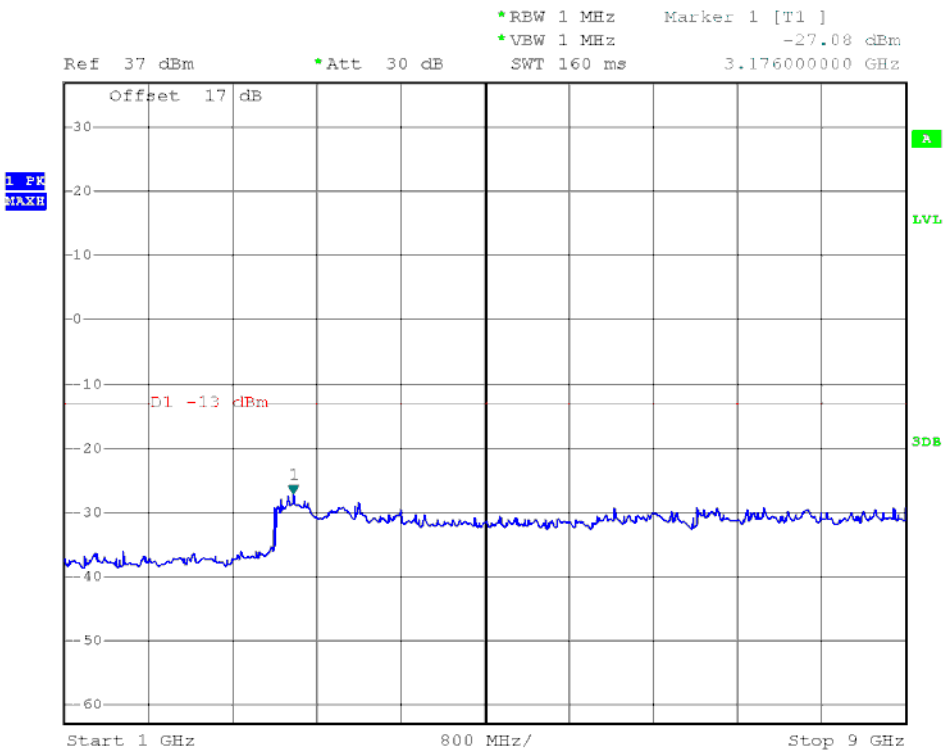
(Plot C2: WCDMA850MHz Channel = 4183, 30MHz to 1GHz)



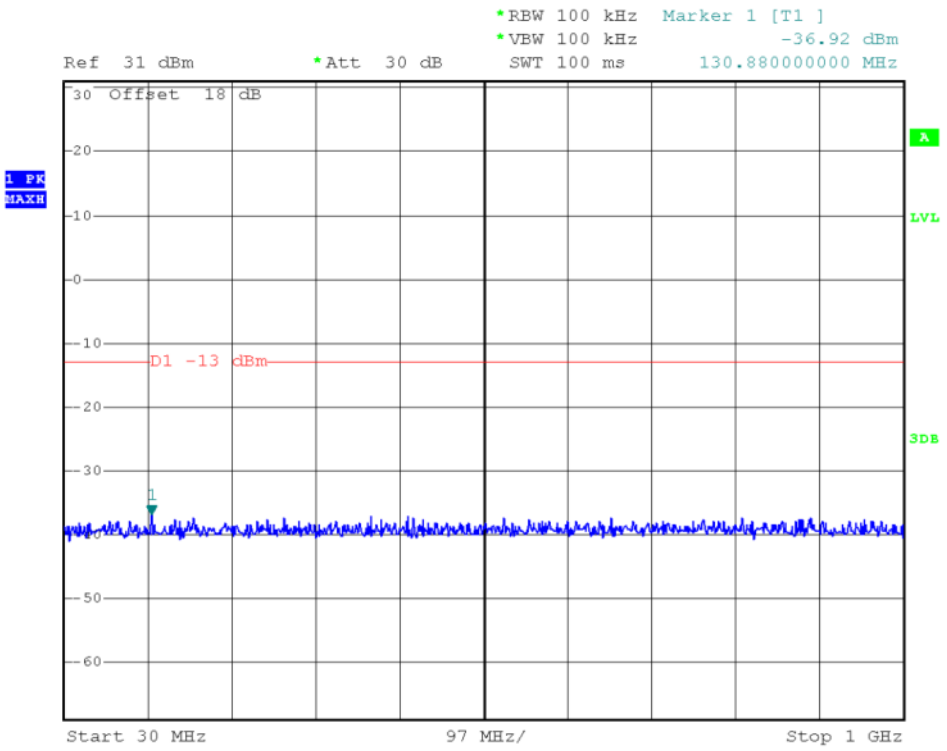
(Plot C2.1: WCDMA850MHz Channel = 4183, 1GHz to 9GHz)



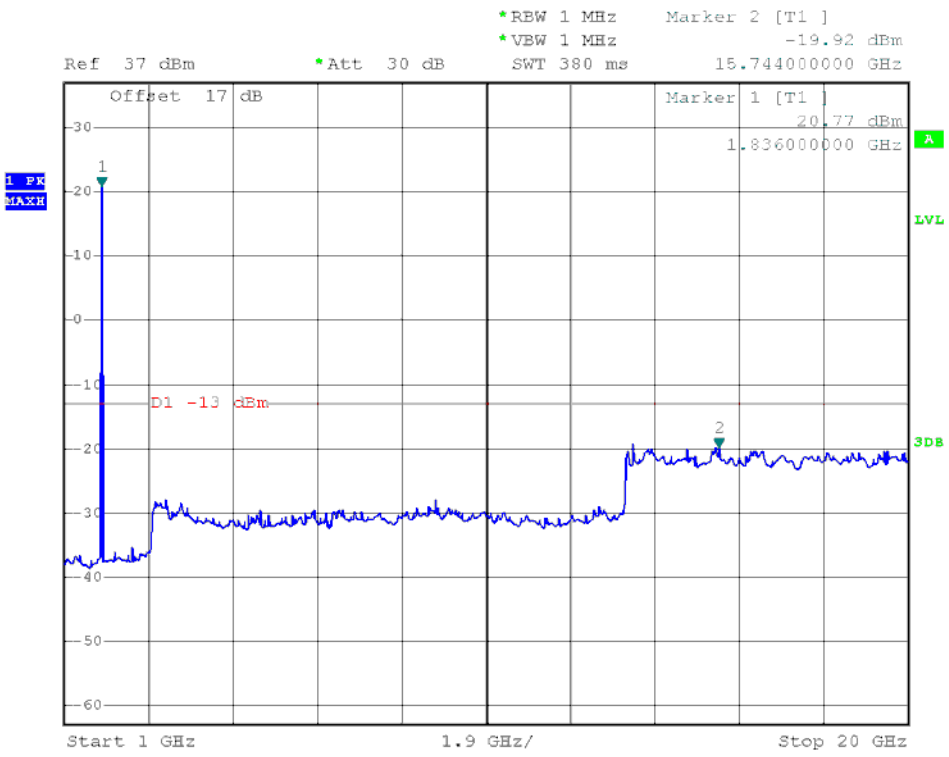
(Plot C3: WCDMA850MHz Channel = 4233, 30MHz to 1GHz)



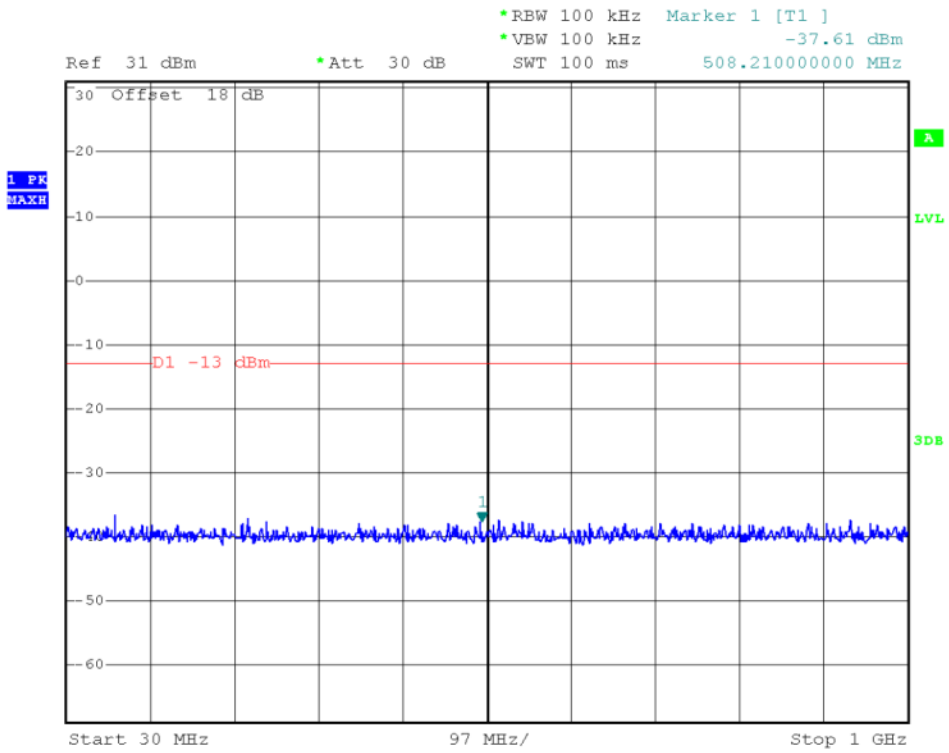
(Plot C3.1: WCDMA850MHz Channel = 4233, 1GHz to 9GHz)



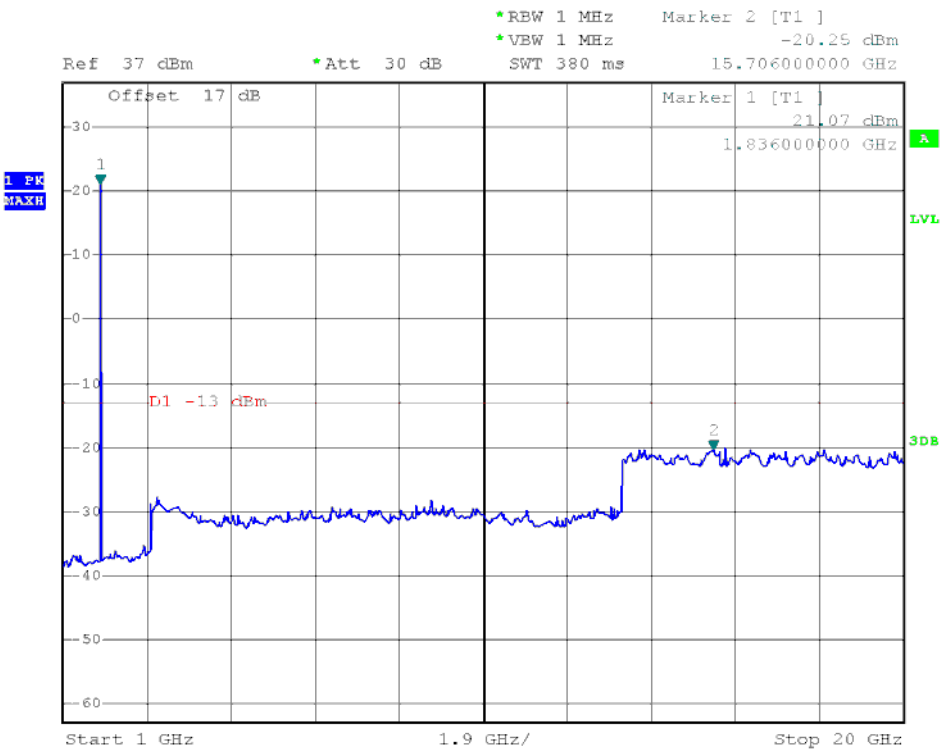
(Plot D1: WCDMA1900MHz Channel = 9262, 30MHz to 1GHz)



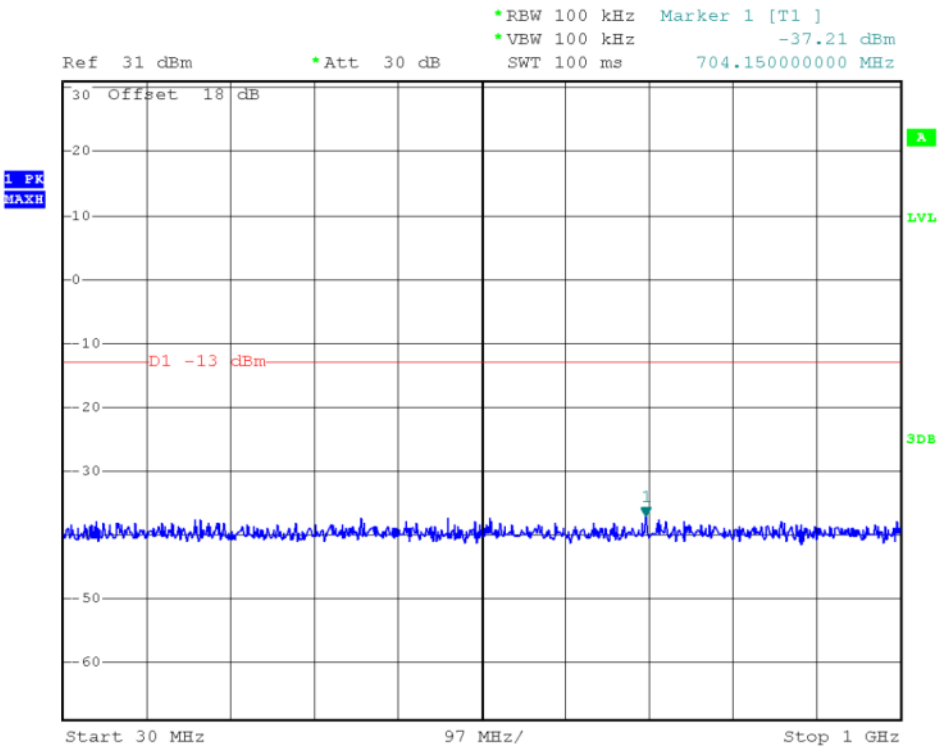
(Plot D1.1: WCDMA1900MHz Channel = 9262, 1GHz to 20GHz)



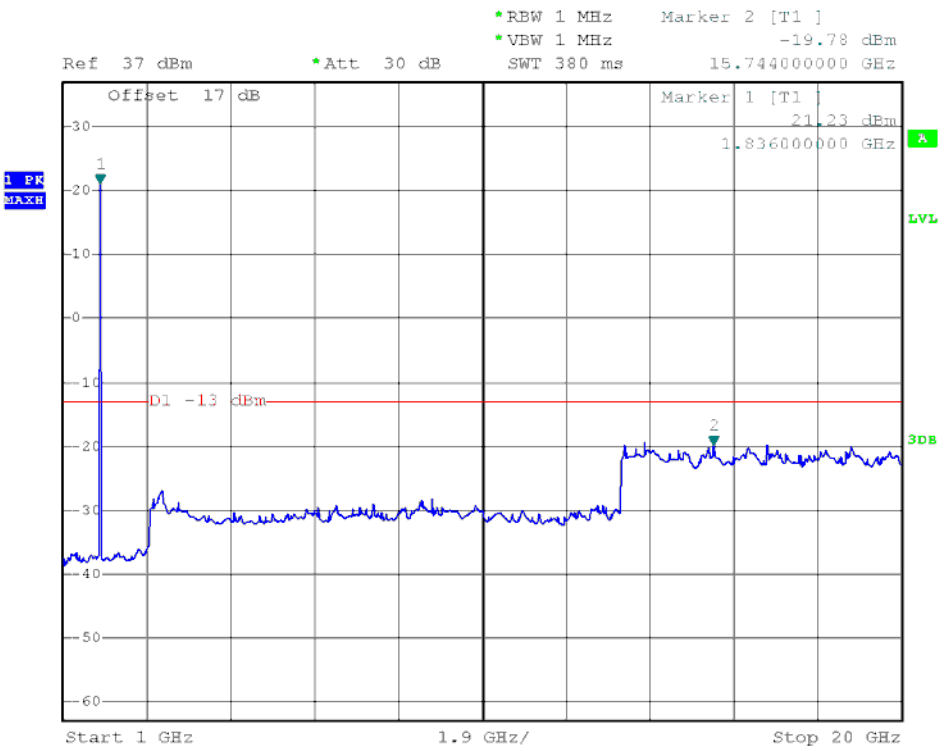
(Plot D2: WCDMA1900MHz Channel = 9400, 30MHz to 1GHz)



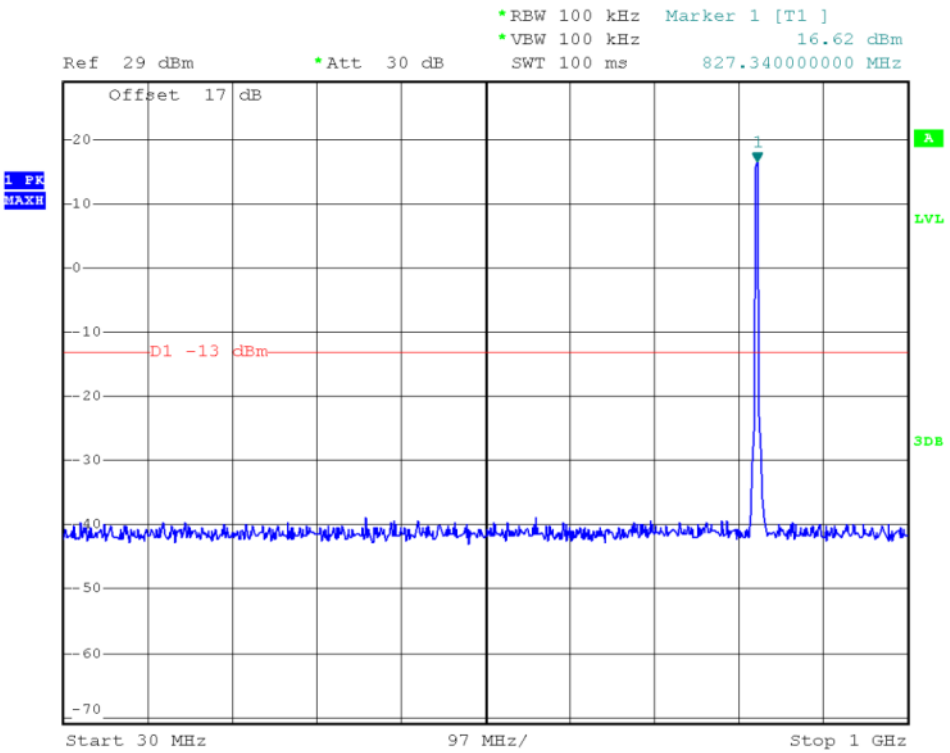
(Plot D2.1: WCDMA1900MHz Channel = 9400, 1GHz to 20GHz)



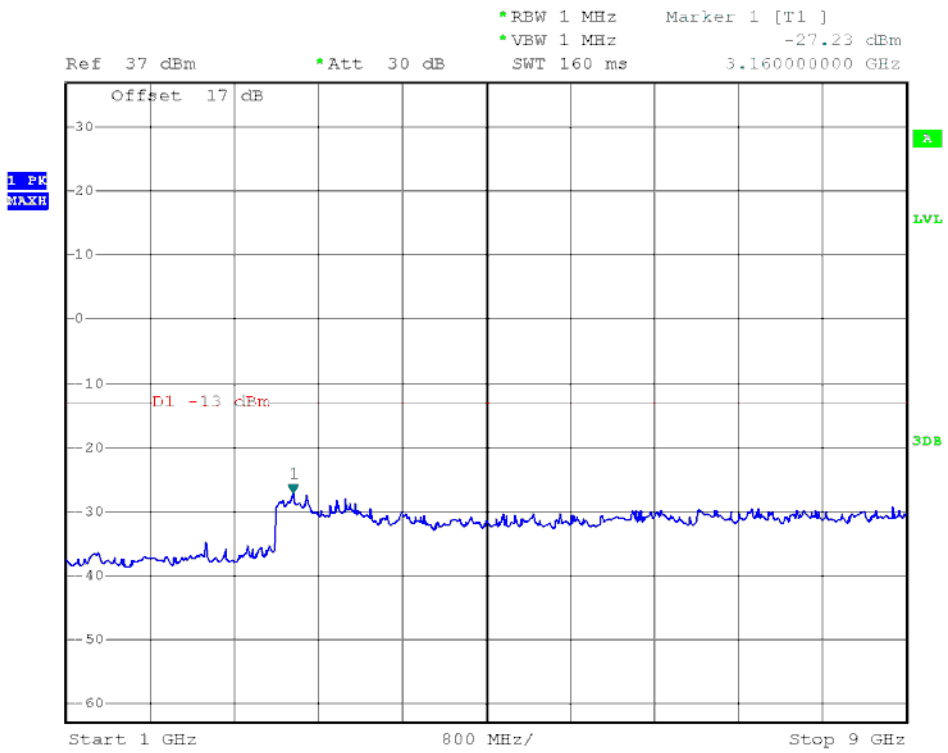
(Plot D3: WCDMA1900MHz Channel = 9538, 30MHz to 1GHz)



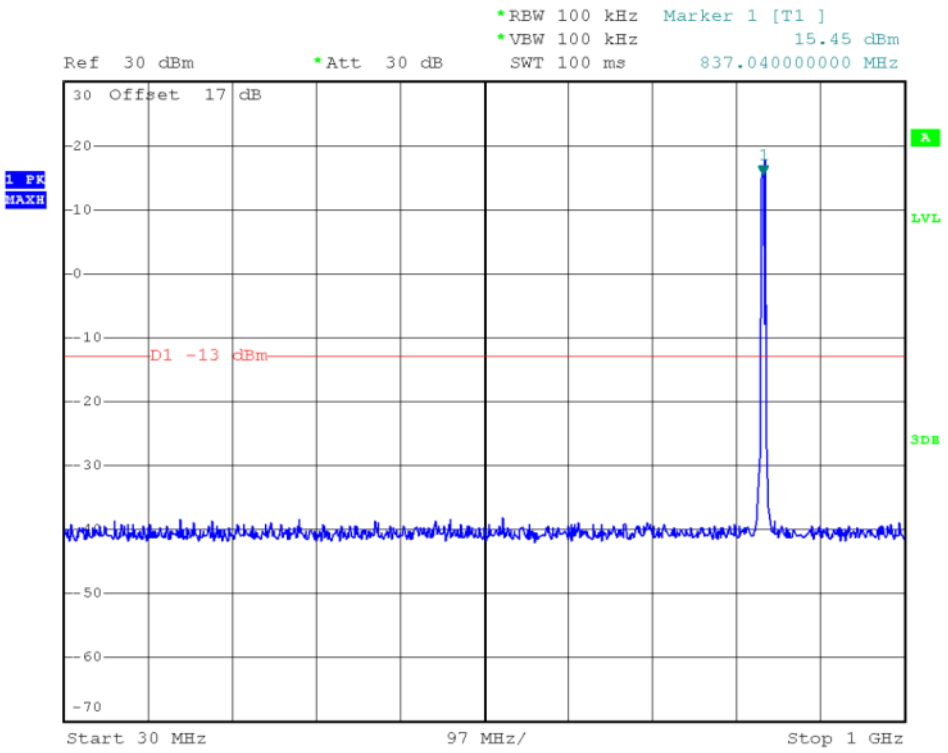
(Plot D3.1: WCDMA1900MHz Channel = 9538 1GHz to 20GHz)



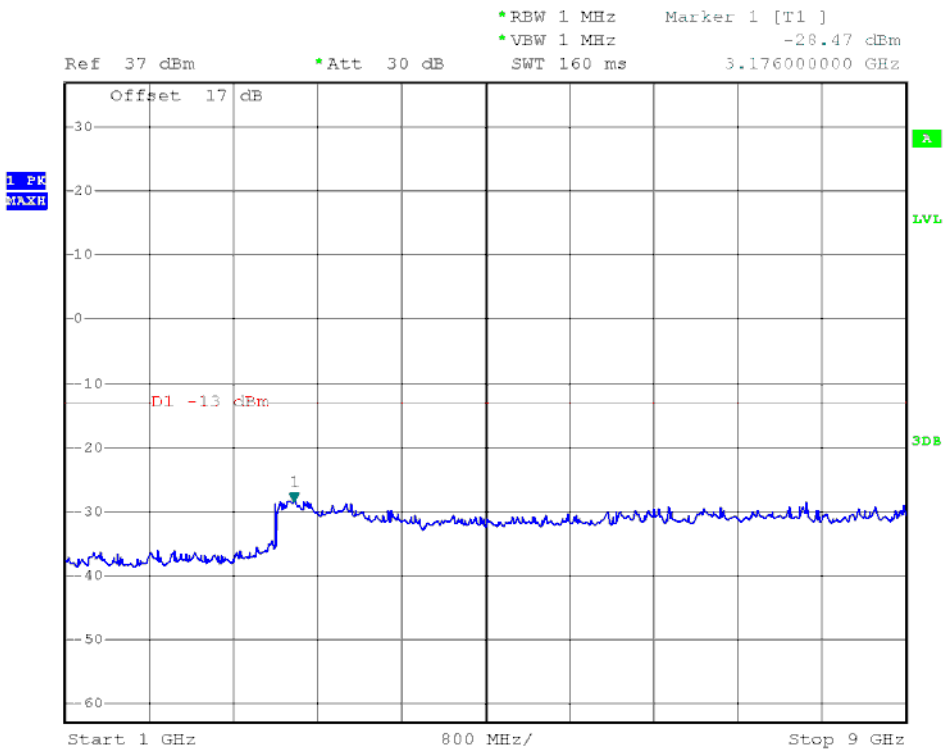
(Plot E1: HSDPA 850MHz Channel = 4132, 30MHz to 1GHz)



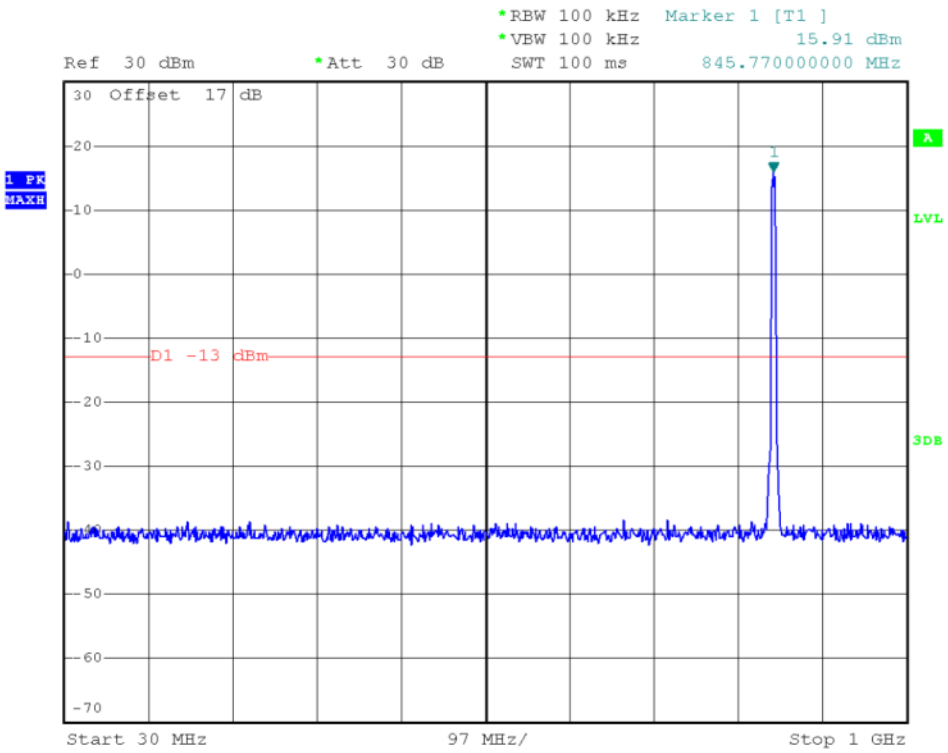
(Plot E1.1: HSDPA 850MHz Channel = 4132, 1GHz to 9GHz)



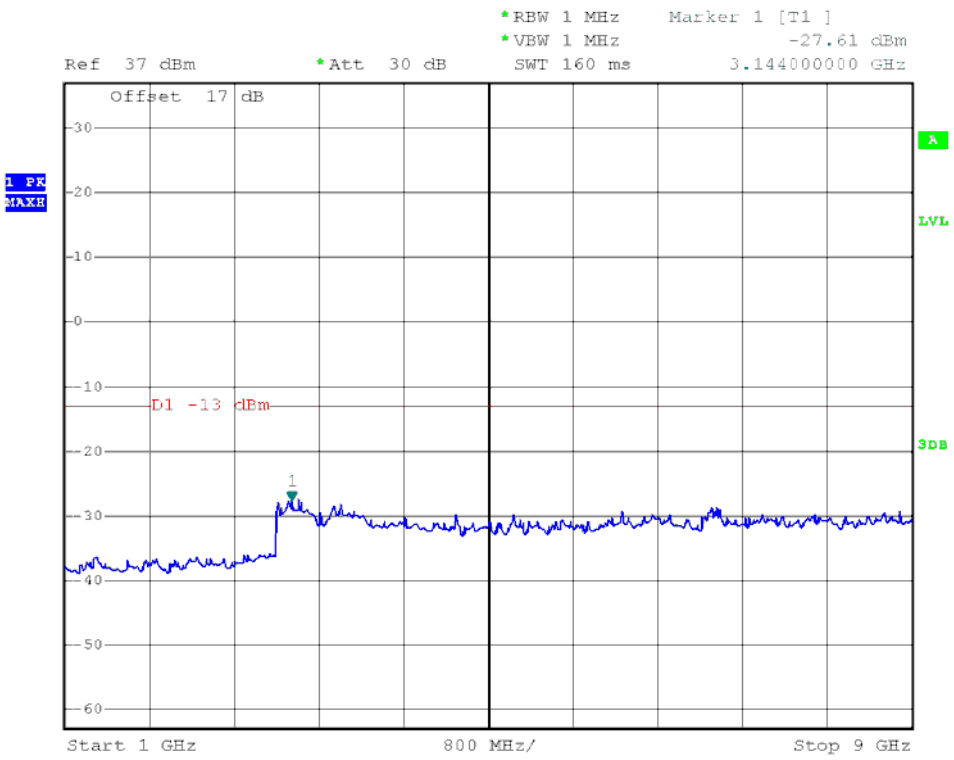
(Plot E2: HSDPA 850MHz Channel = 4183, 30MHz to 1GHz)



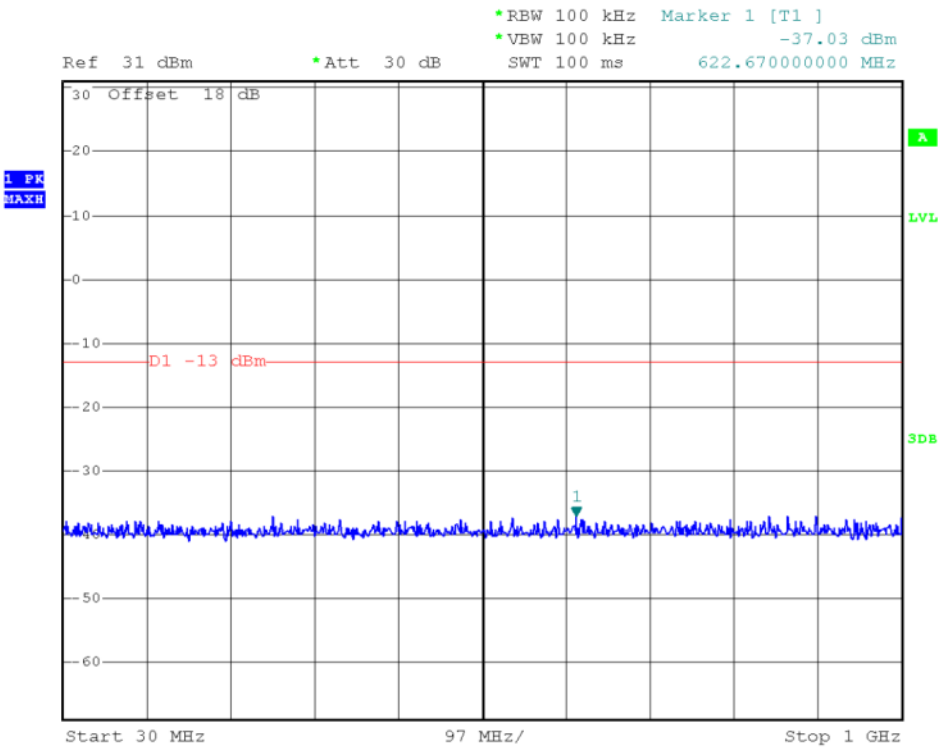
(Plot E2.1: HSDPA 850MHz Channel = 4183, 1GHz to 9GHz)



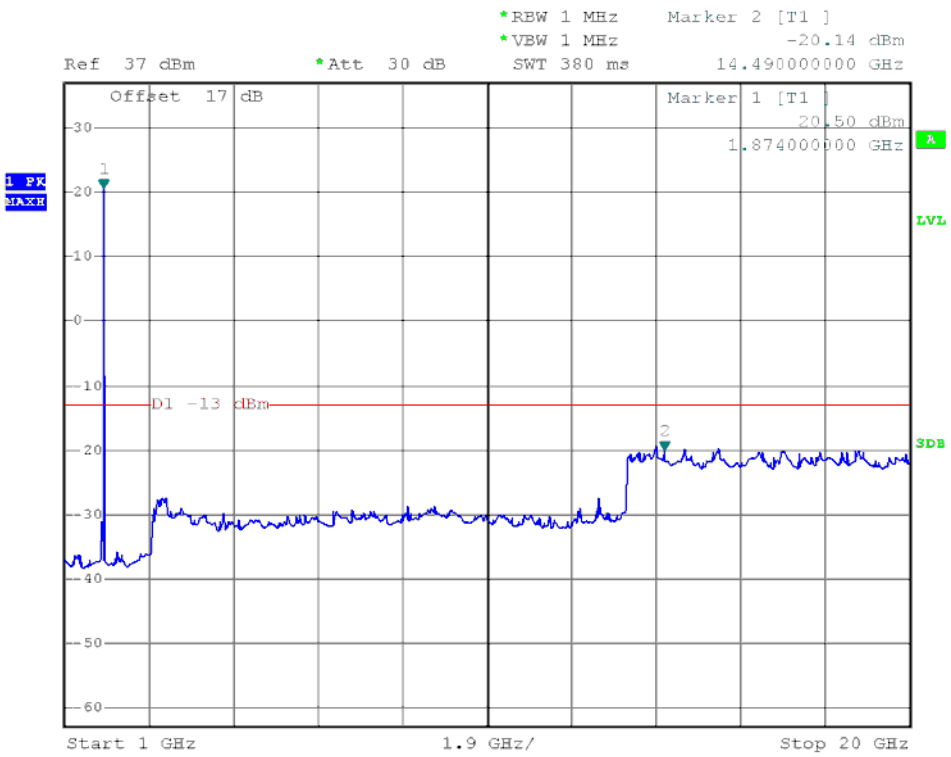
(Plot E3: HSDPA850MHz Channel = 4233, 30MHz to 1GHz)



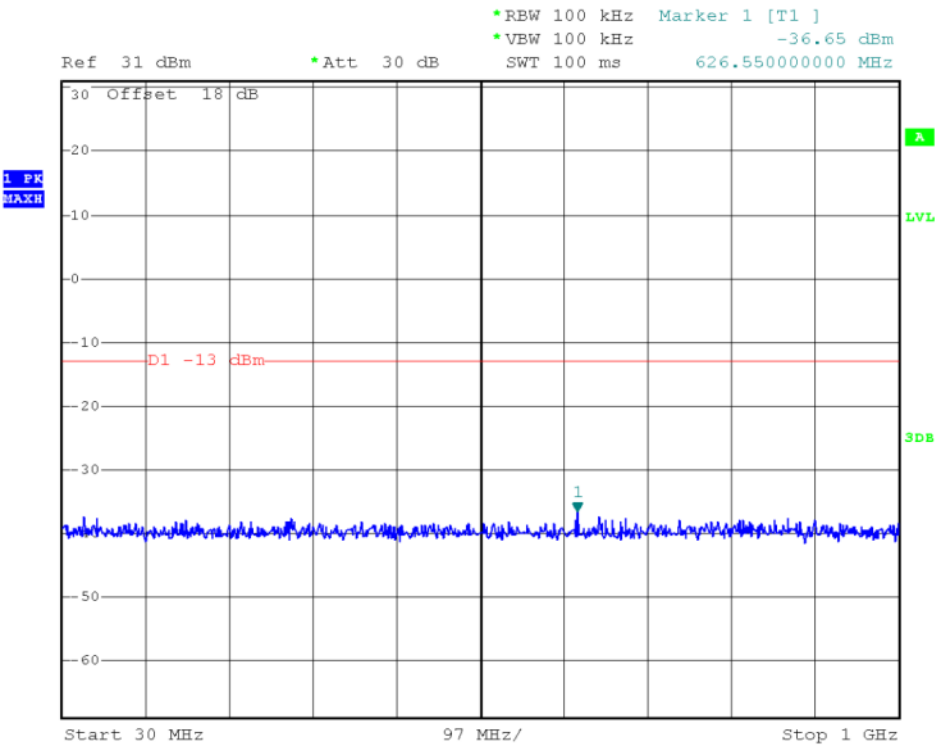
(Plot E3.1: HSDPA850MHz Channel = 4233, 1GHz to 9GHz)



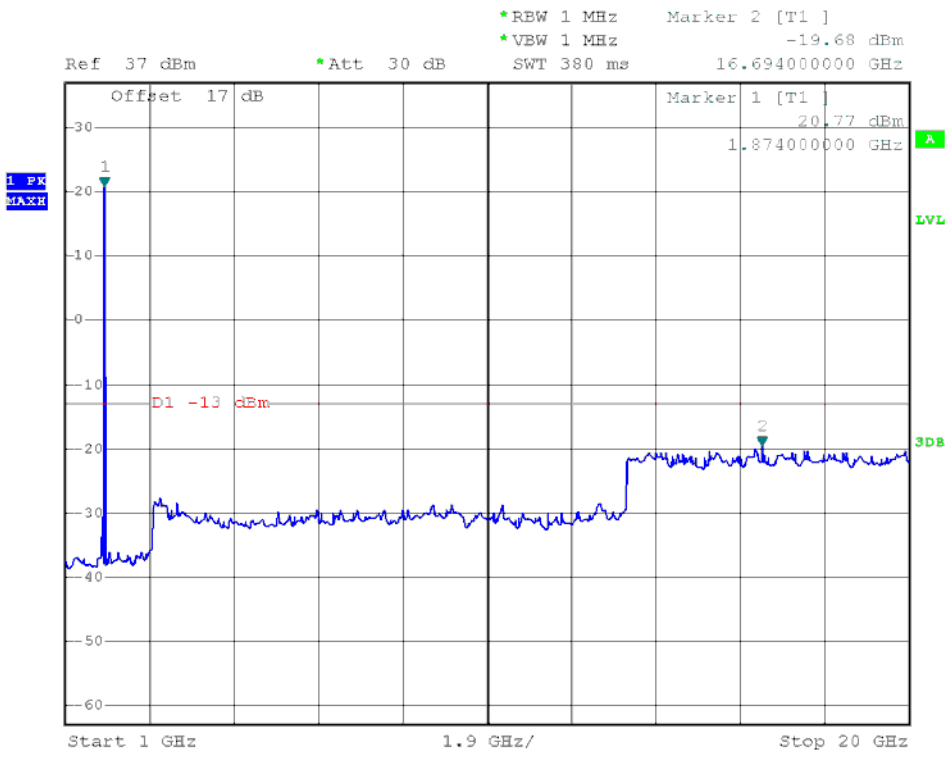
(Plot F1: HSDPA1900MHz Channel = 9262, 30MHz to 1GHz)



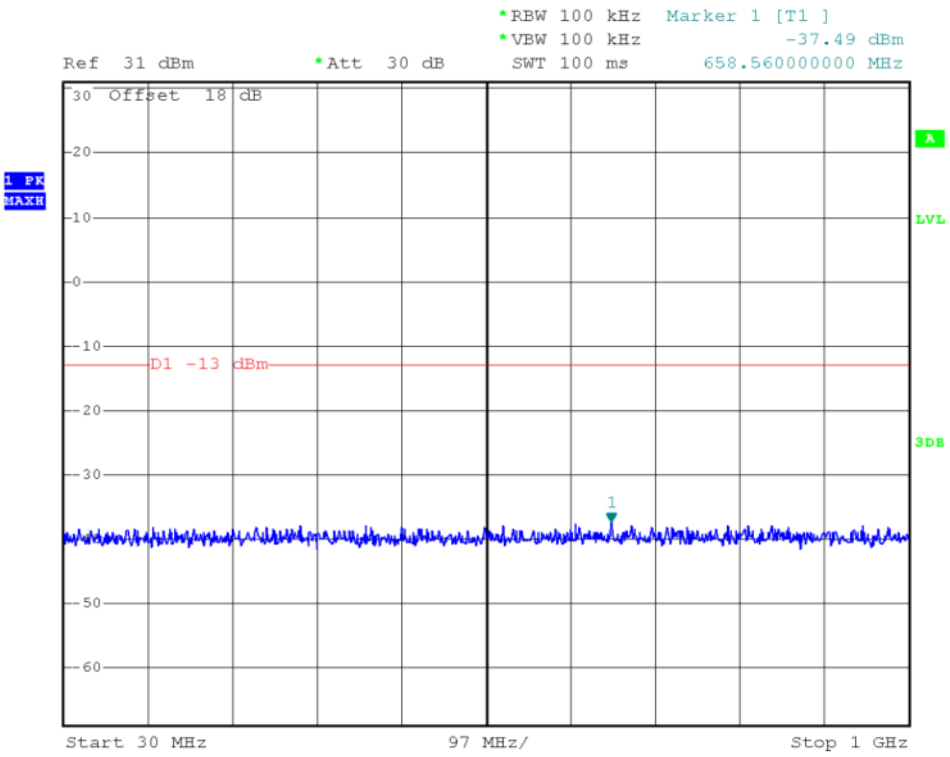
(Plot F1.1: HSDPA1900MHz Channel = 9262, 1GHz to 20GHz)



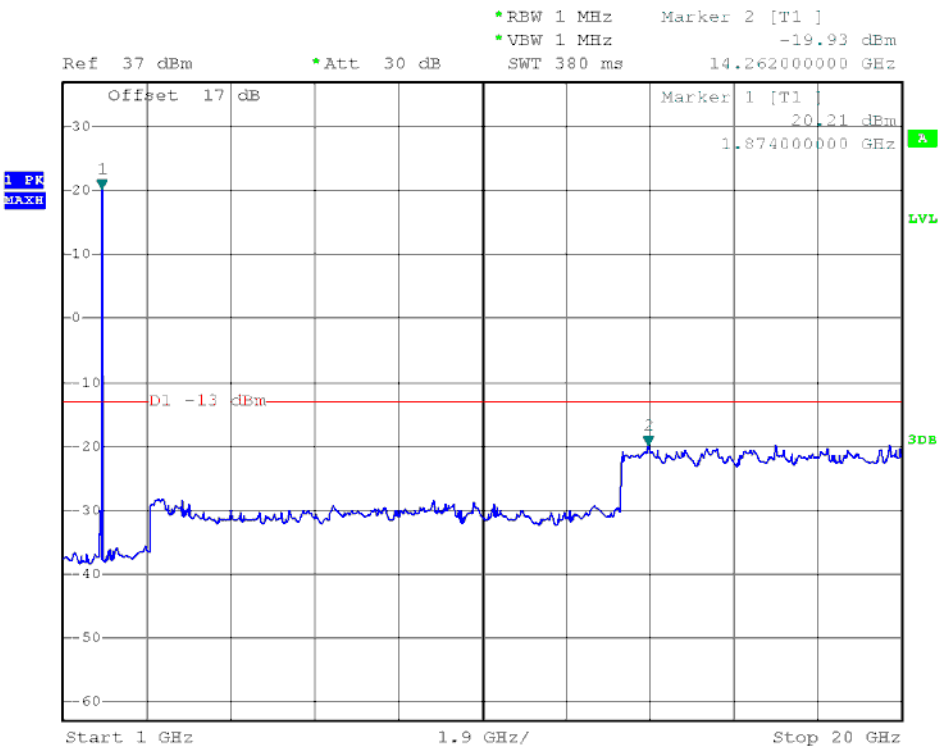
(Plot F2: HSDPA1900MHz Channel = 9400, 30MHz to 1GHz)



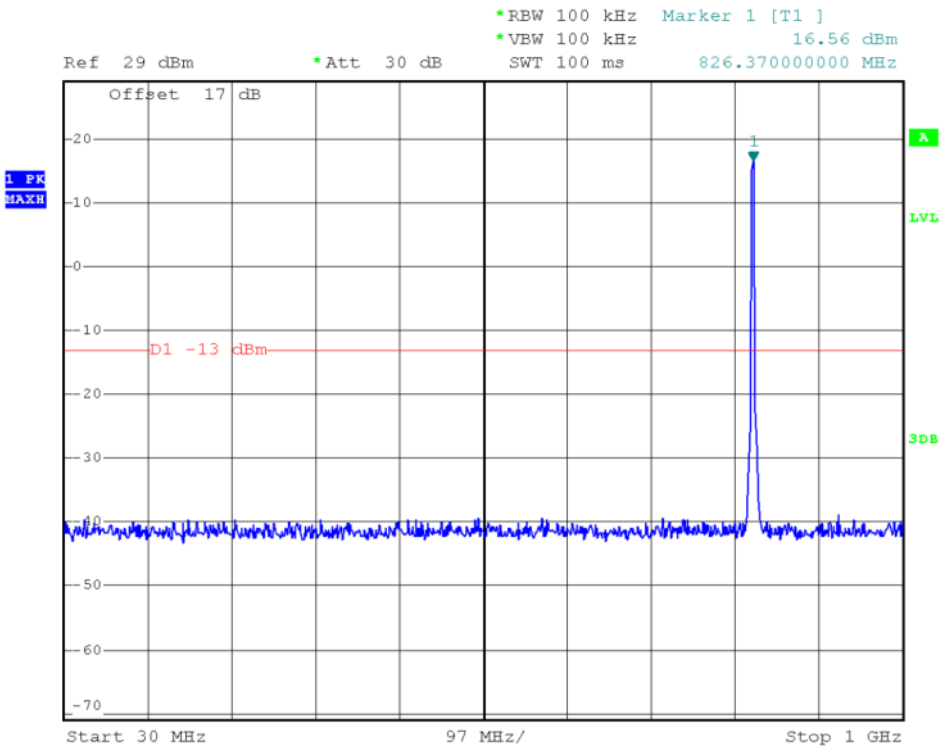
(Plot F2.1: HSDPA1900MHz Channel = 9400, 1GHz to 20GHz)



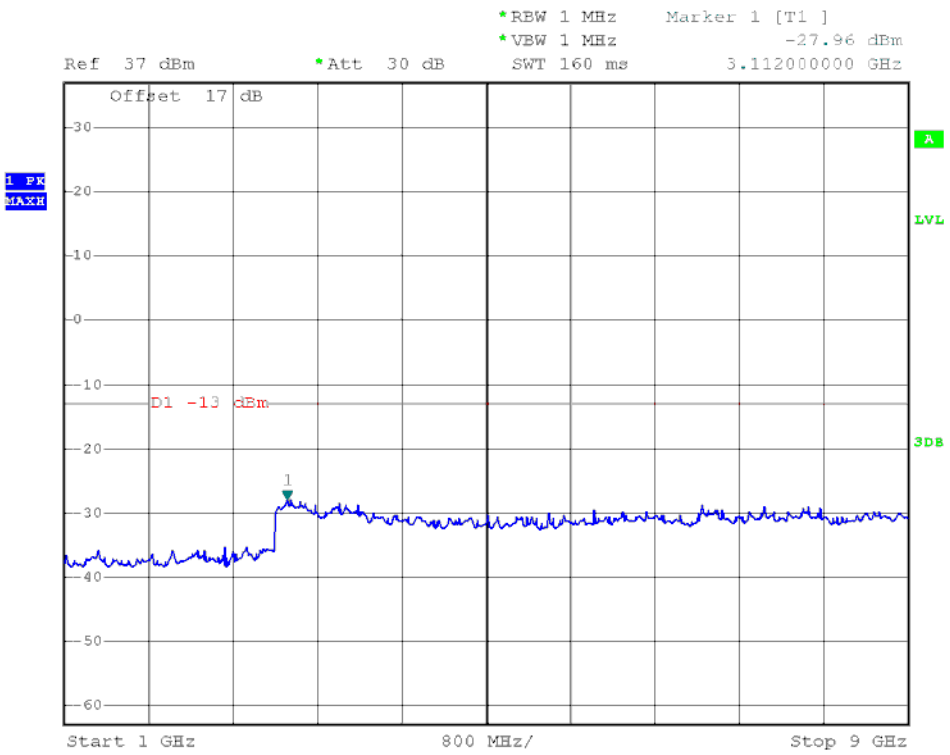
(Plot F3: HSDPA1900MHz Channel = 9538, 30MHz to 1GHz)



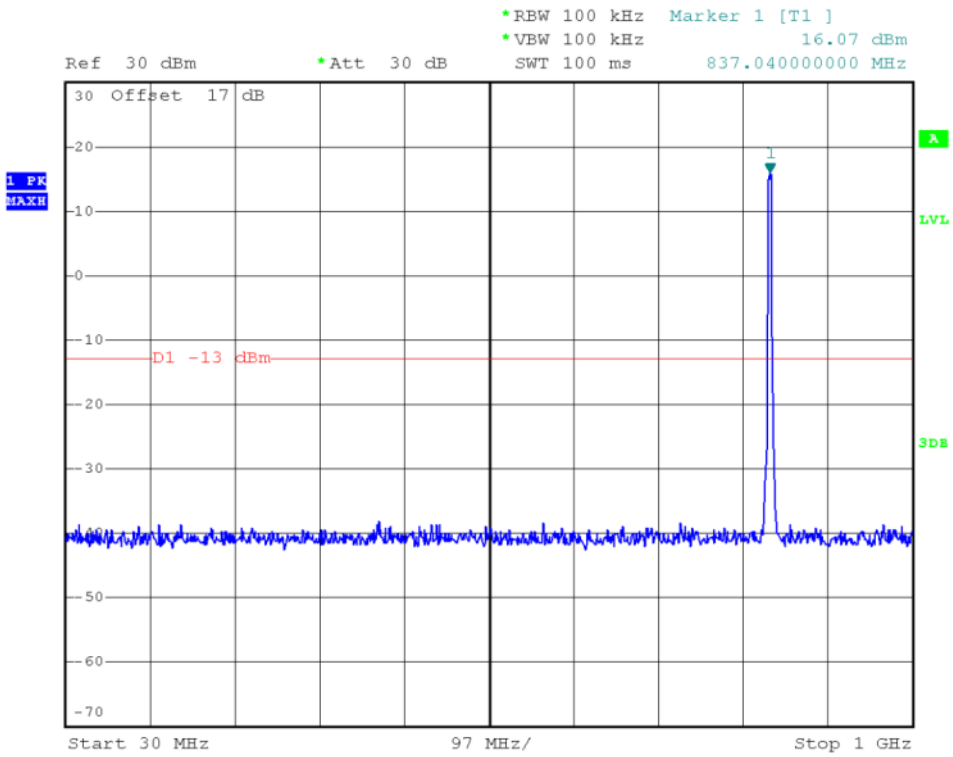
(Plot F3.1: HSDPA1900MHz Channel = 9538 1GHz to 20GHz)



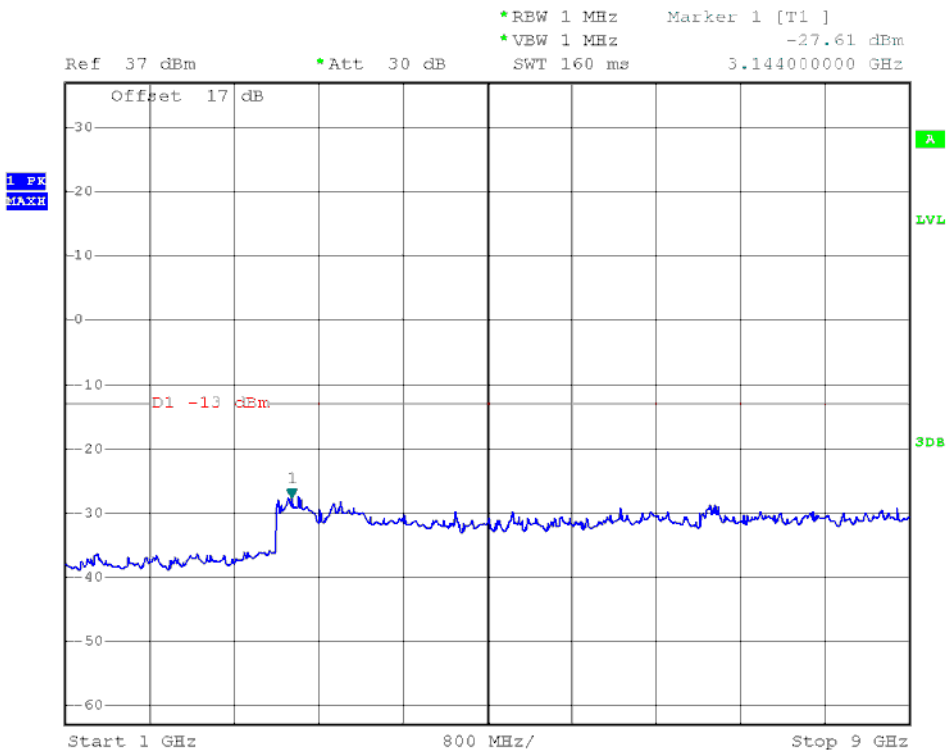
(Plot G 1: HSUPA 850MHz Channel = 4132, 30MHz to 1GHz)



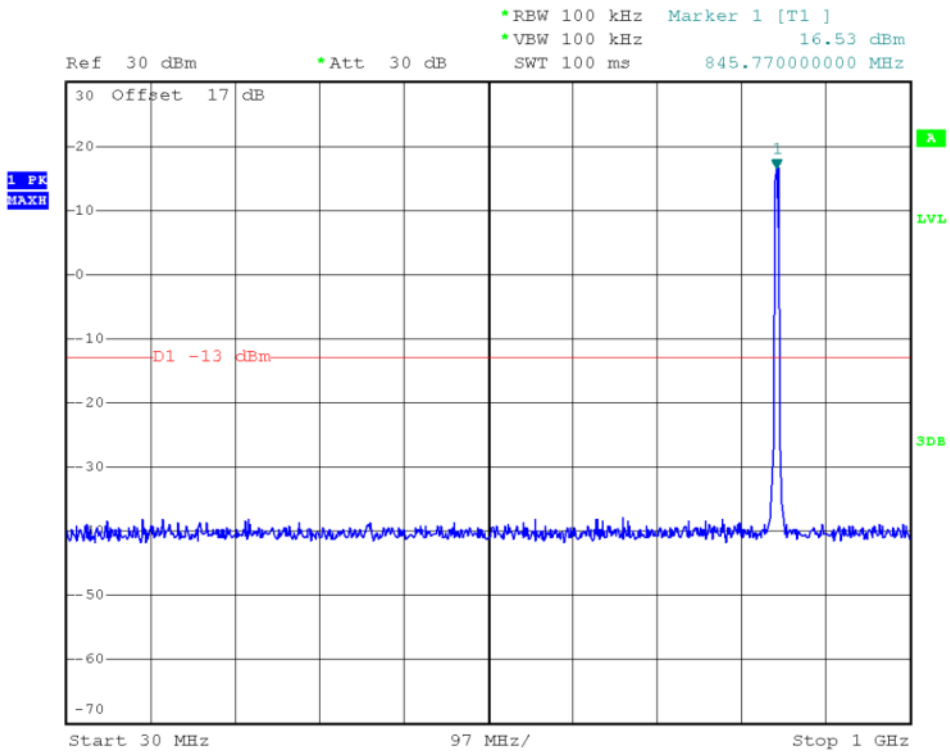
(Plot G1.1: HSUPA 850MHz Channel = 4132, 1GHz to 9GHz)



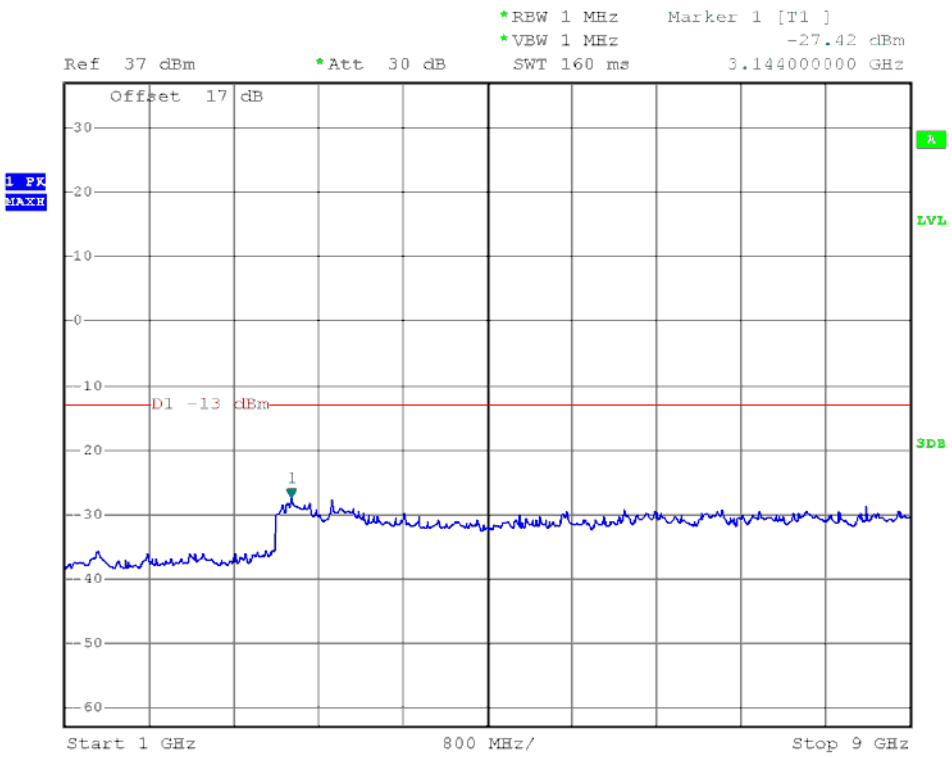
(Plot G2: HSUPA 850MHz Channel = 4183, 30MHz to 1GHz)



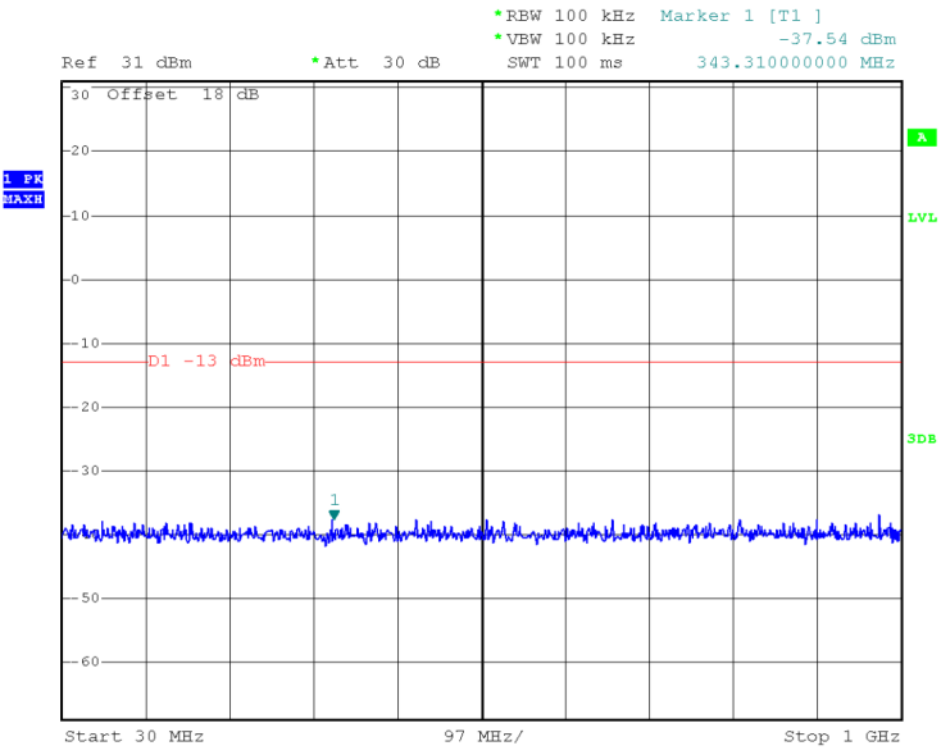
(Plot G2.1: HSUPA 850MHz Channel = 4183, 1GHz to 9GHz)



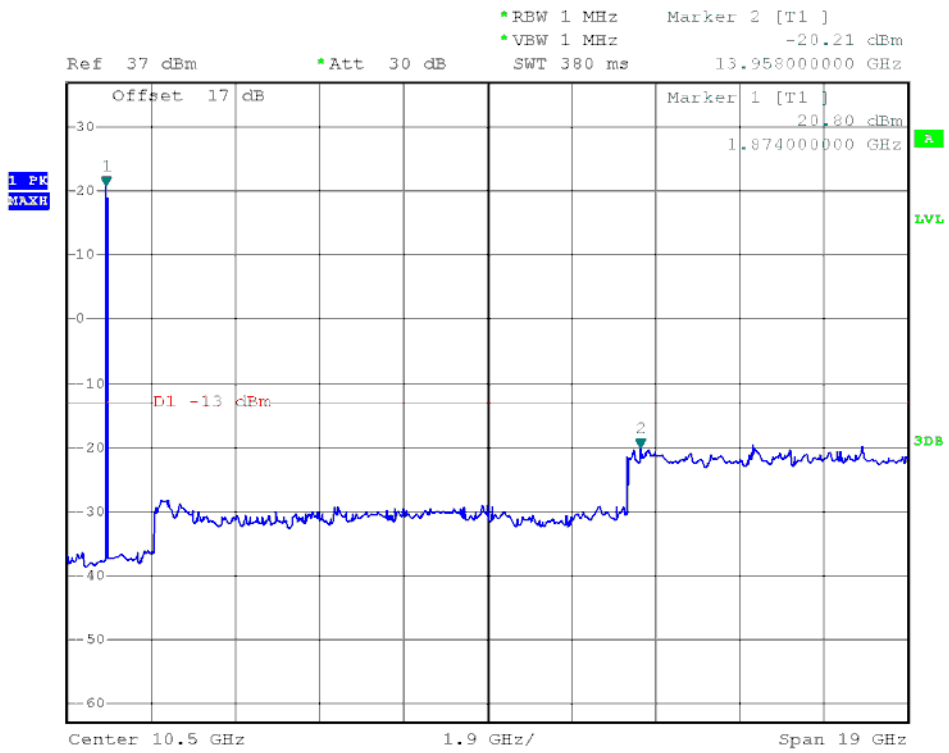
(Plot G 3: HSUPA850MHz Channel = 4233, 30MHz to 1GHz)



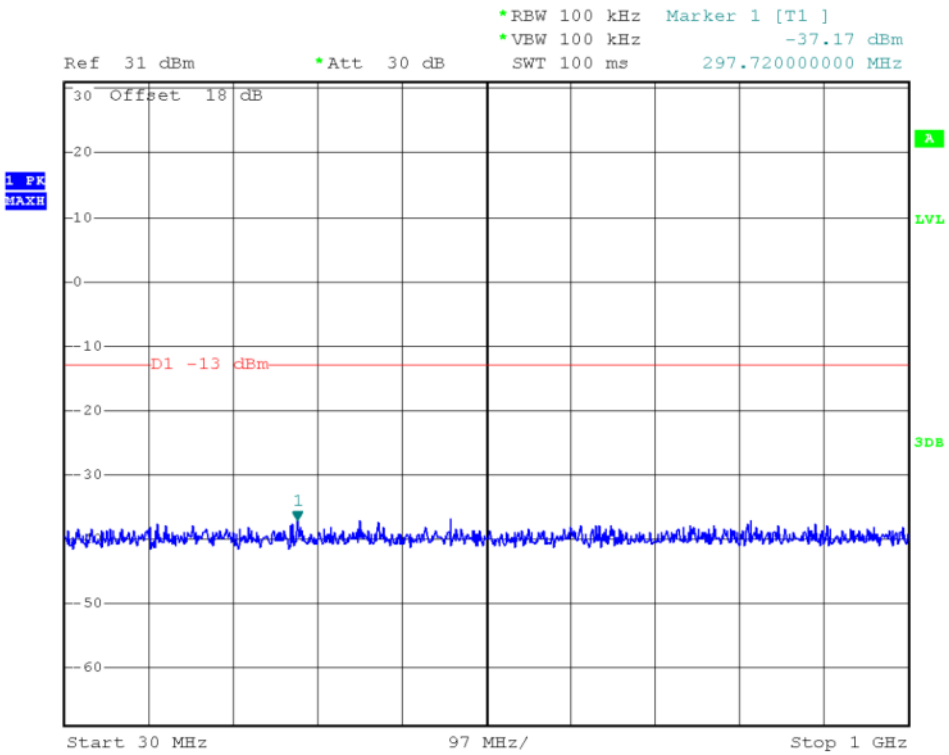
(Plot G3.1: HSUPA850MHz Channel = 4233, 1GHz to 9GHz)



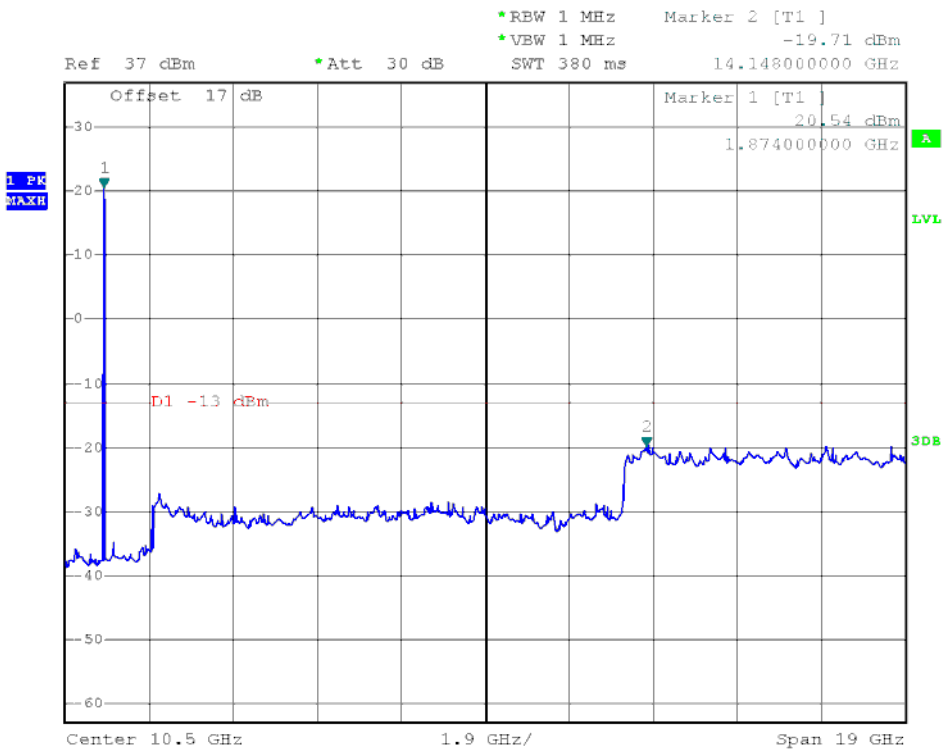
(Plot H1: HSUPA1900MHz Channel = 9262, 30MHz to 1GHz)



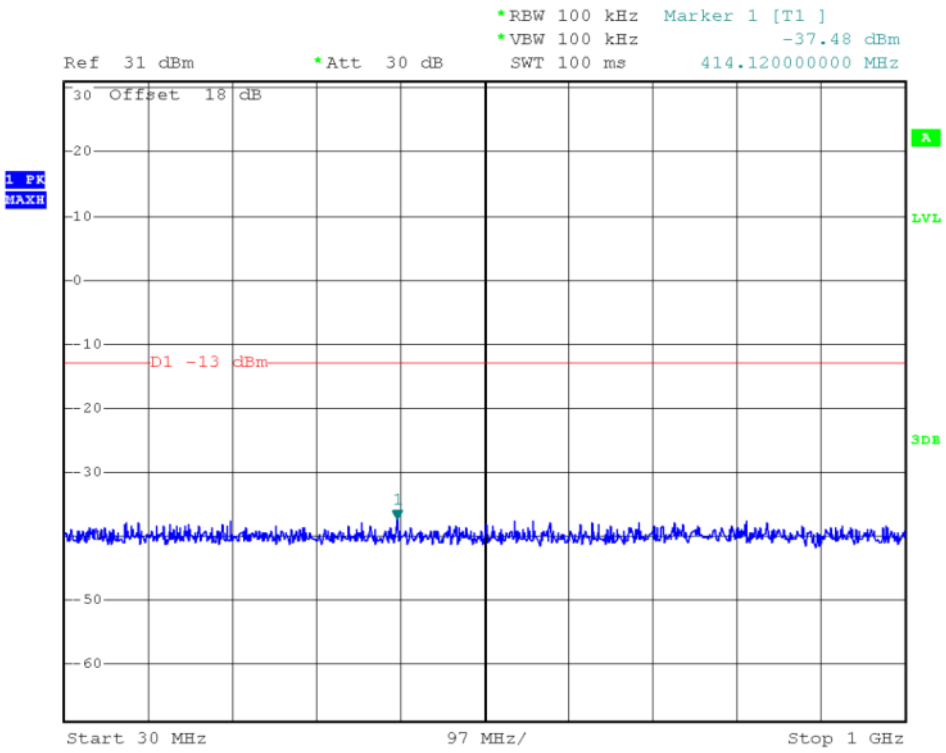
(Plot H1.1: HSUPA1900MHz Channel = 9262, 1GHz to 20GHz)



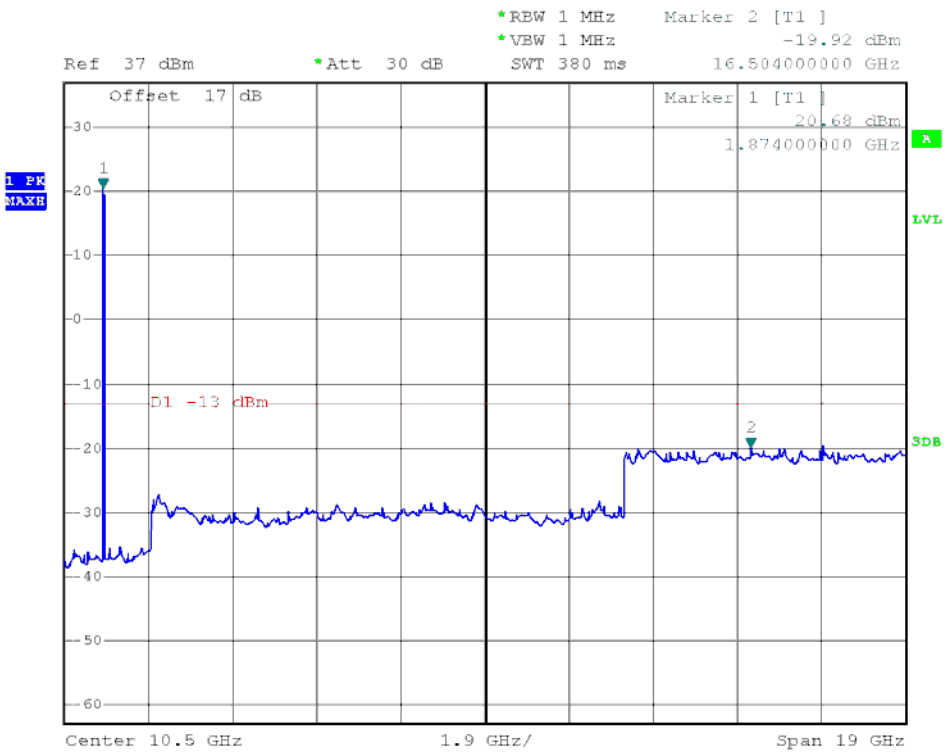
(Plot H2: HSUPA1900MHz Channel = 9400, 30MHz to 1GHz)



(Plot H2.1: HSUPA1900MHz Channel = 9400, 1GHz to 20GHz)



(Plot H3: HSUPA1900MHz Channel = 9538, 30MHz to 1GHz)



(Plot H3.1: HSUPA1900MHz Channel = 9538 1GHz to 20GHz)

2.6 Band Edge

2.6.1 Requirement

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

2.6.2 Test Description

See section 2.1.2 of this report.

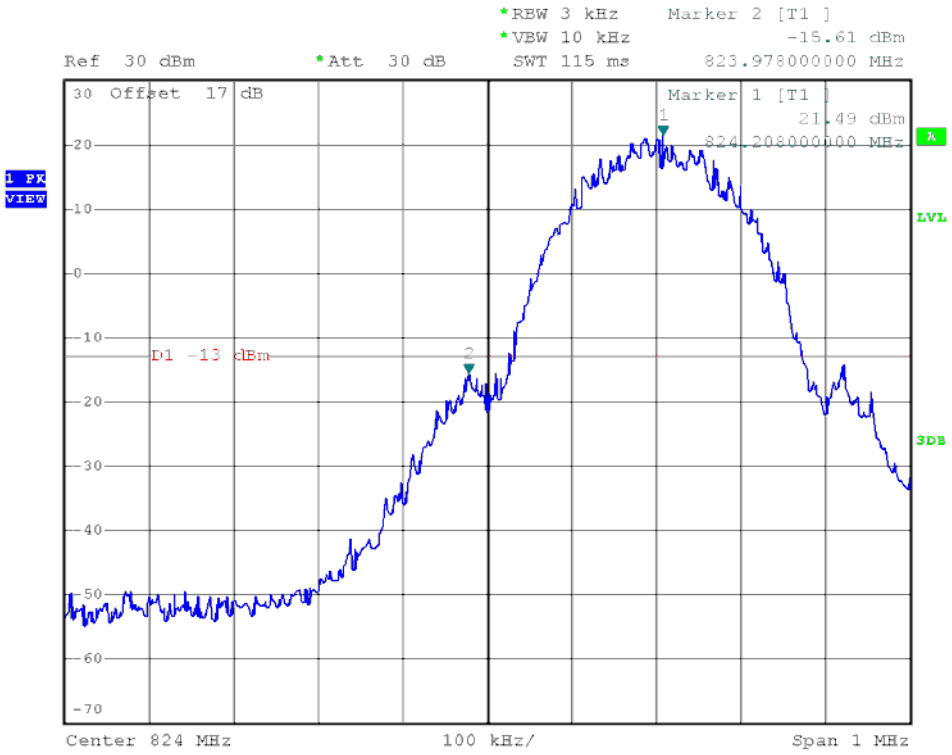
2.6.3 Test Result

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

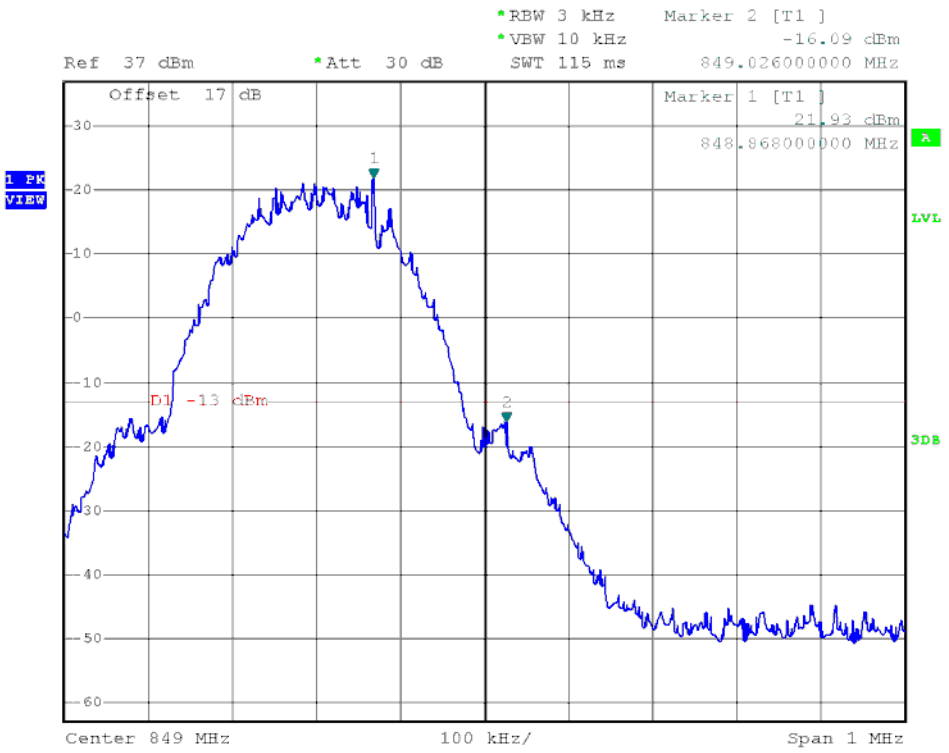
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-15.61	Plat A	-13	PASS
	251	848.8	-16.09	Plot B		PASS
GSM 1900MHz	512	1850.2	-14.02	Plat C	-13	PASS
	810	1909.8	-14.68	Plot D		PASS
WCDMA 850MHz	4132	826.4	-20.26	Plat E	-13	PASS
	4233	846.6	-16.92	Plot F		PASS
WCDMA 1900MHz	9262	1852.4	-19.49	Plat G	-13	PASS
	9538	1907.6	-18.35	Plot H		PASS
HSDPA 850MHz	4132	826.4	-16.28	Plat I	-13	PASS
	4233	846.6	-16.60	Plot J		PASS
HSDPA 1900MHz	9262	1852.4	-19.85	Plat K	-13	PASS
	9538	1907.6	-16.23	Plot L		PASS
HSUPA 850MHz	4132	826.4	-16.27	Plat M	-13	PASS
	4233	846.6	-16.58	Plot N		PASS
HSUPA 1900MHz	9262	1852.4	-20.16	Plat O	-13	PASS
	9538	1907.6	-17.72	Plot P		PASS

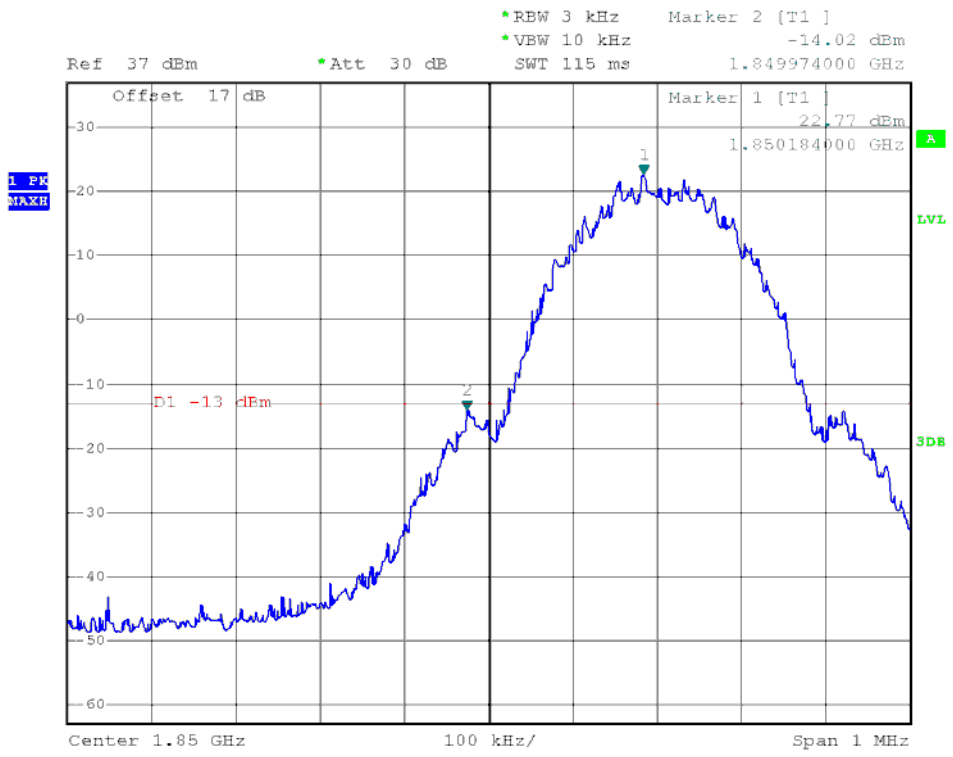
2. Test Plots:



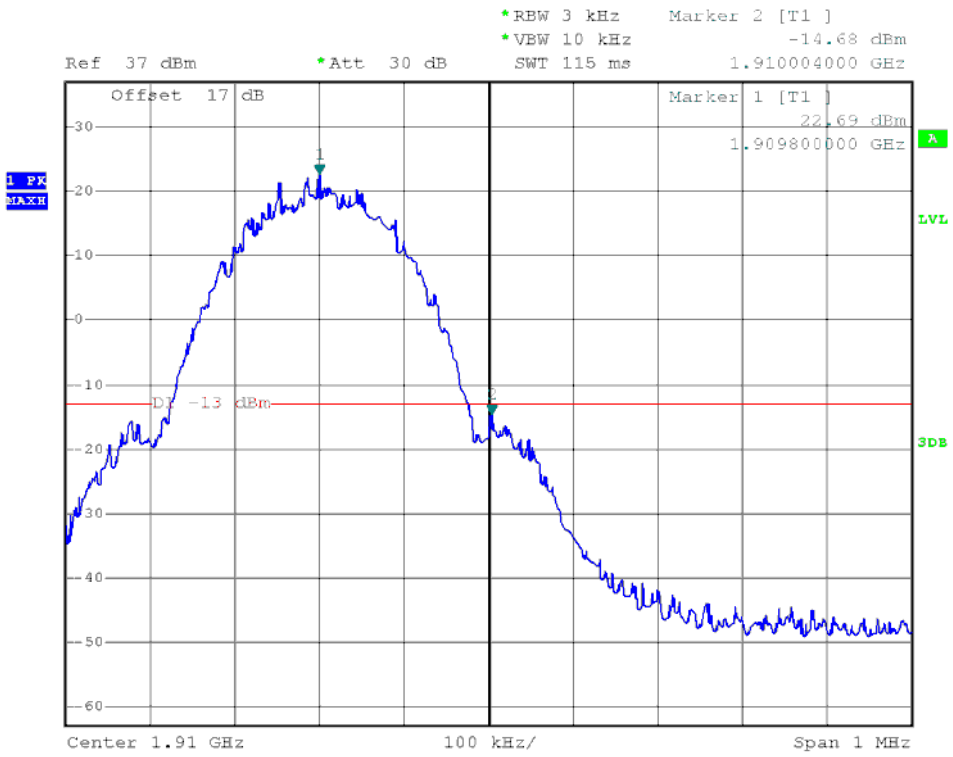
(Plot A: GSM 850 Channel = 128)



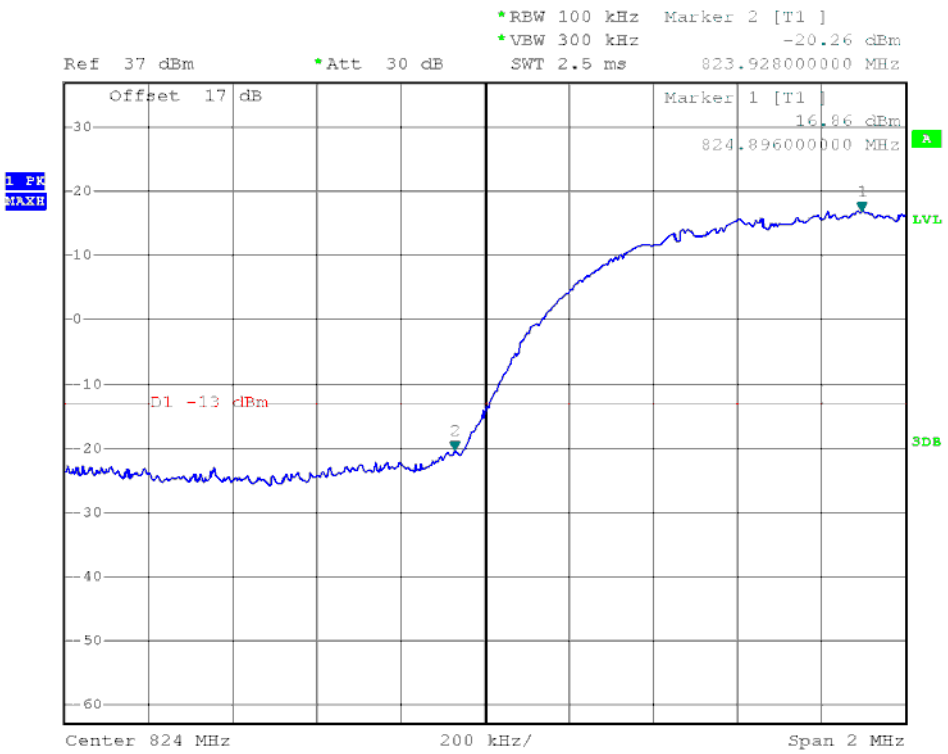
(Plot B: GSM 850 Channel = 251)



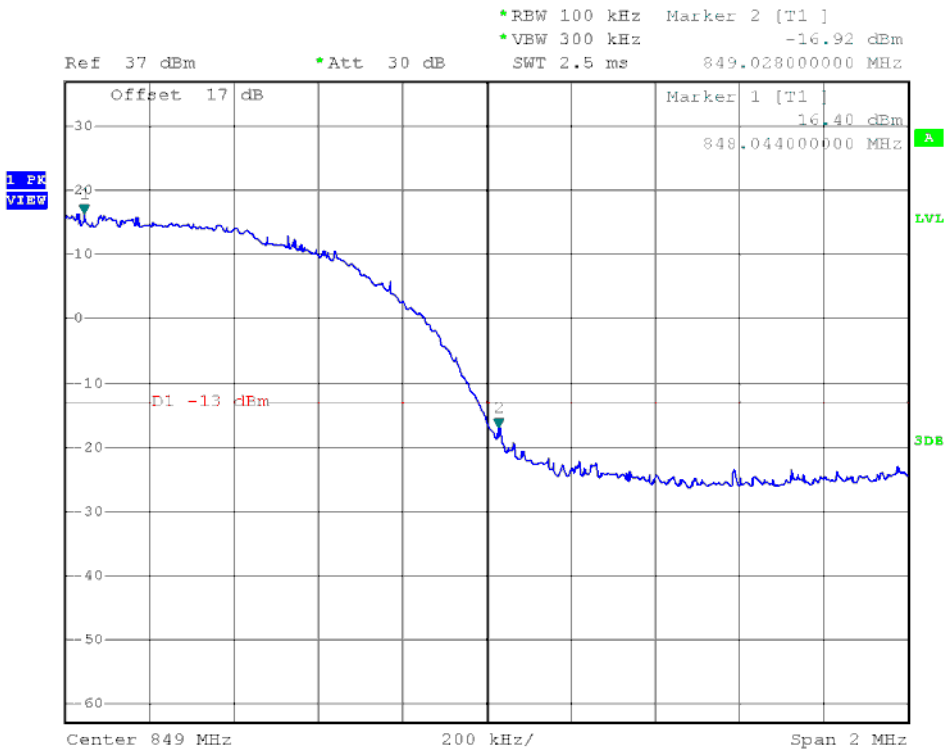
(Plot C: GSM 1900 Channel = 512)



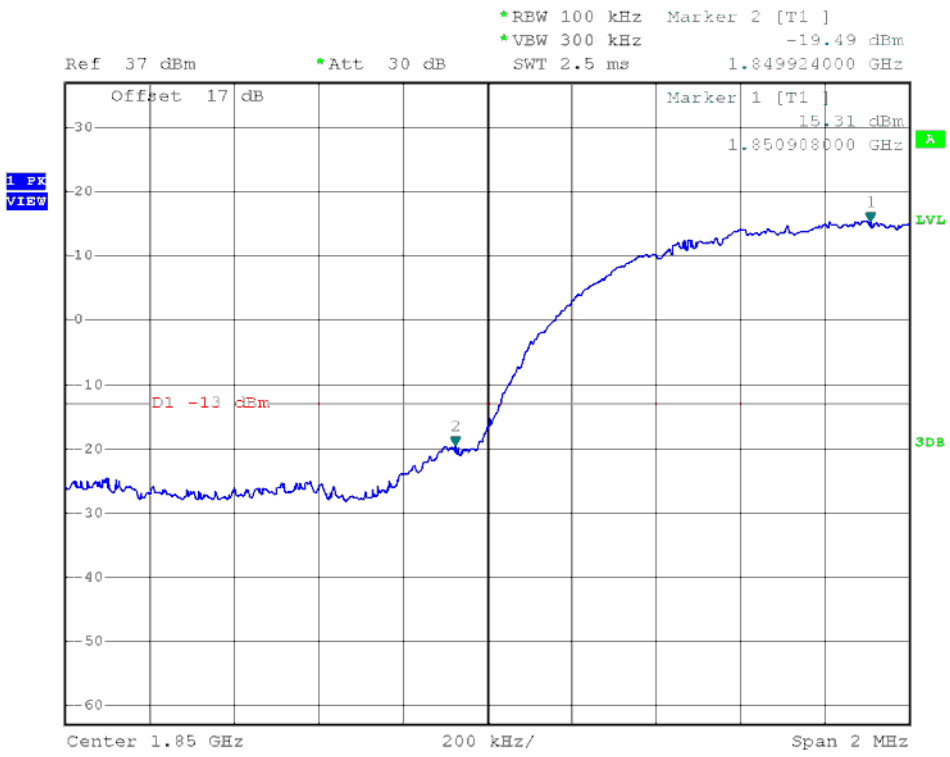
(Plot D: GSM 1900 Channel = 810)



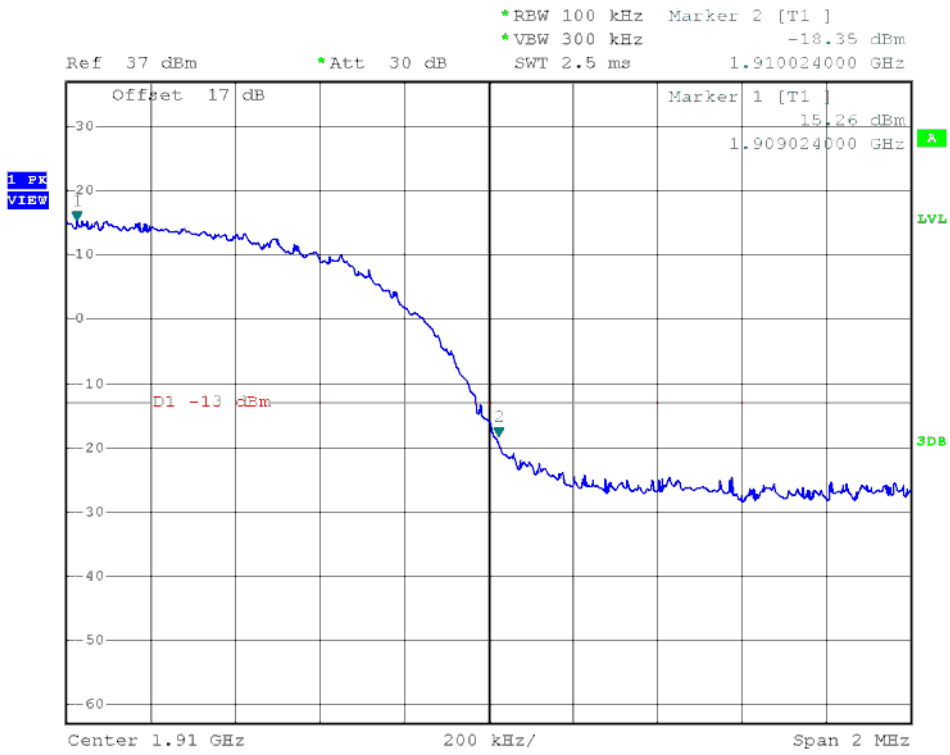
(Plot E: WCDMA 850 Channel = 4132)



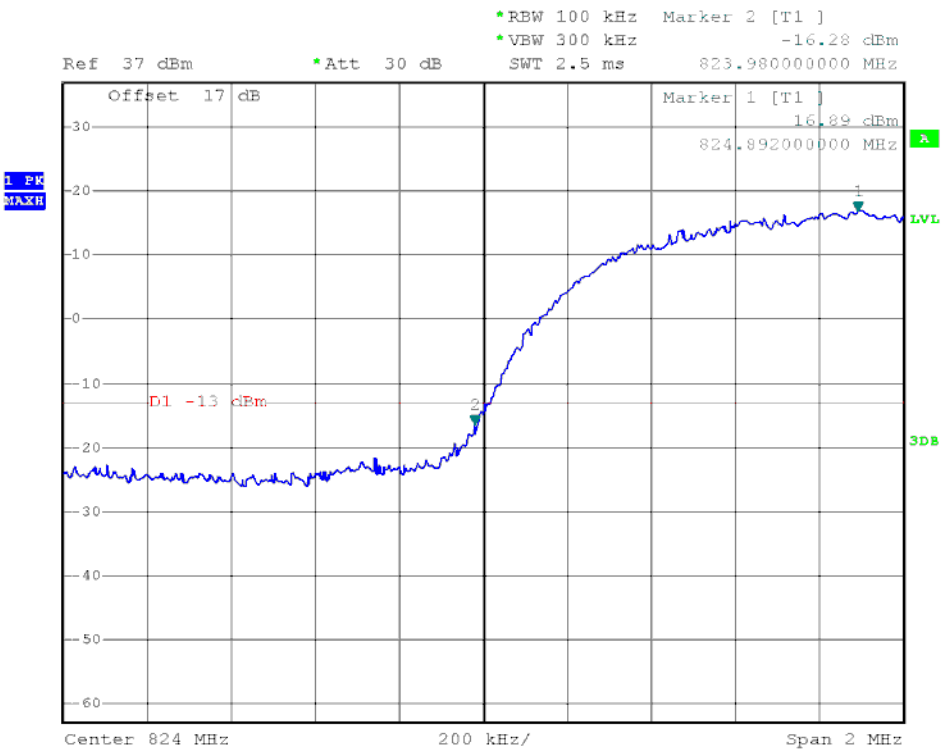
(Plot F: WCDMA 850 Channel = 4233)



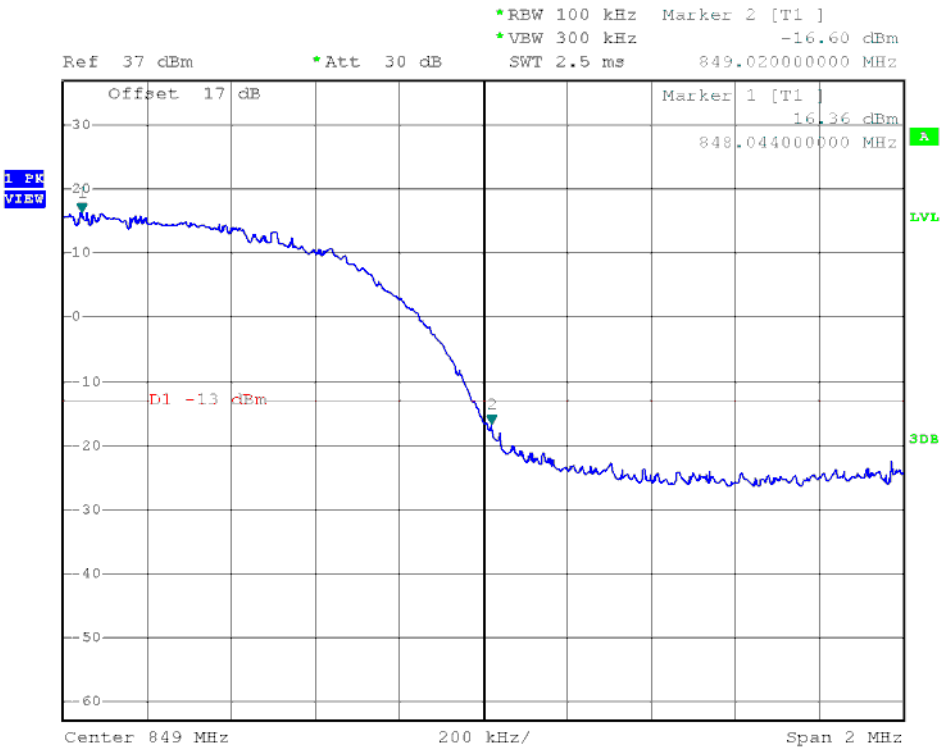
(Plot G: WCDMA 1900 Channel = 9262)



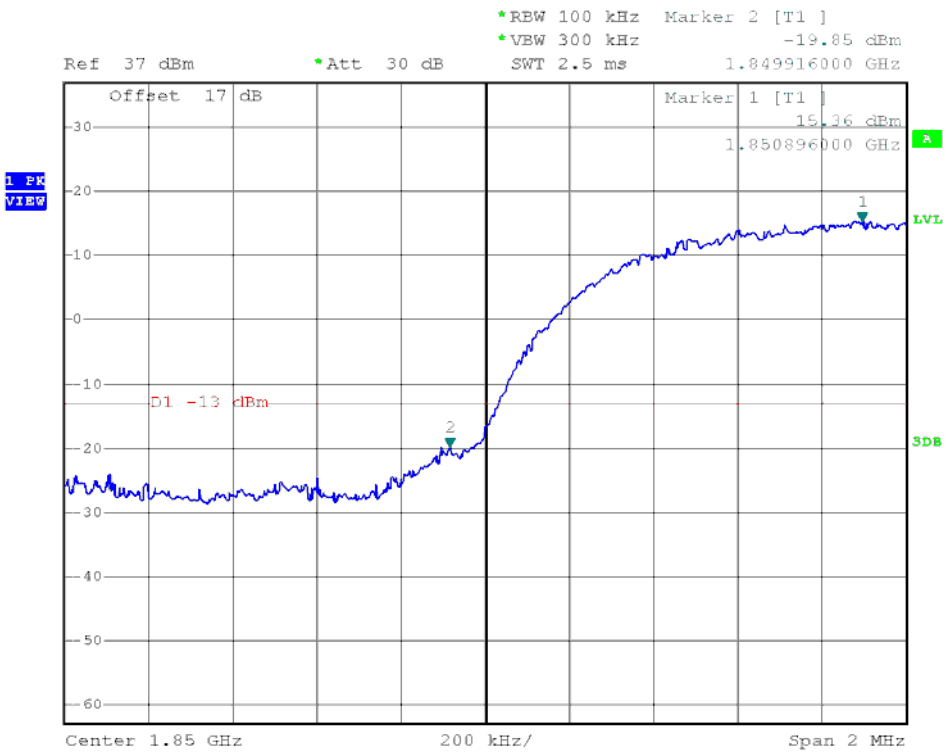
(Plot H: WCDMA 1900 Channel = 9538)



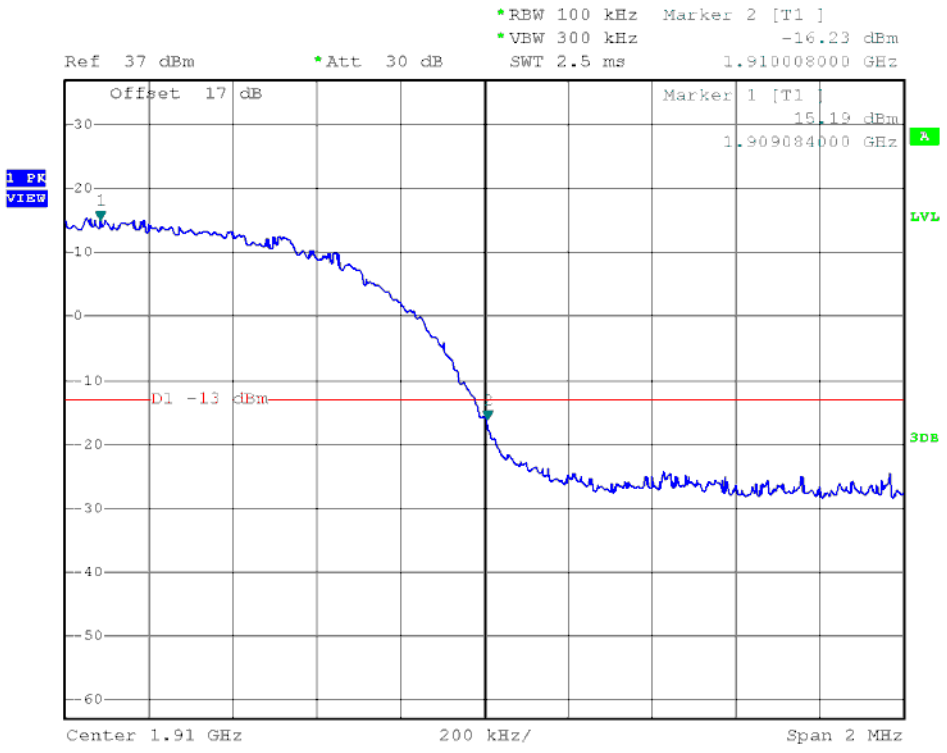
(Plot I: HSDPA 850 Channel = 4132)



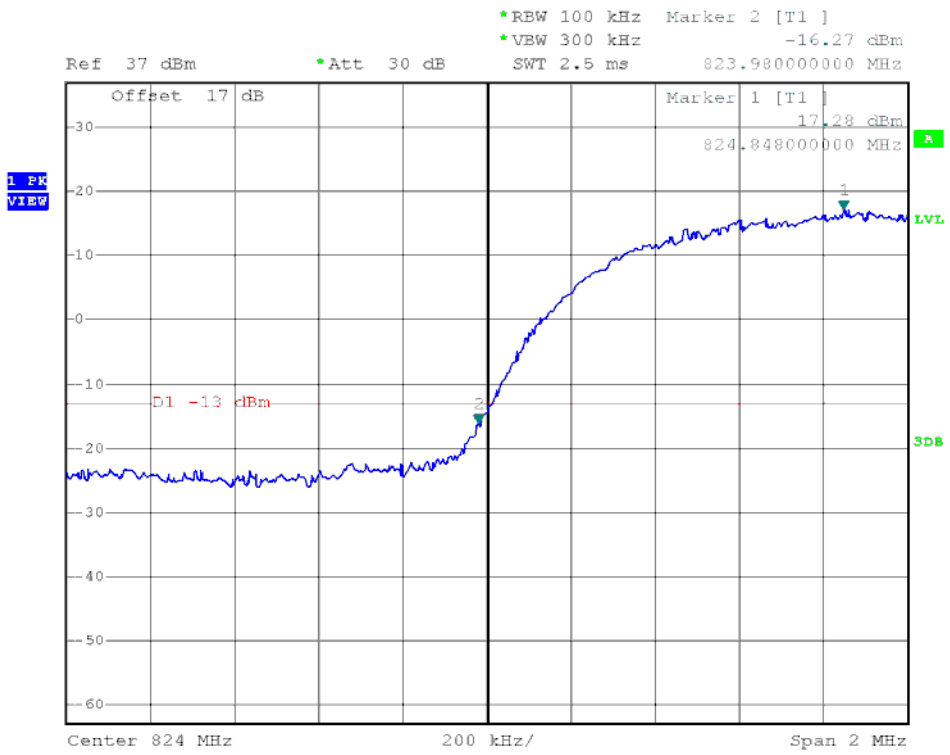
(Plot J: HSDPA850 Channel = 4233)



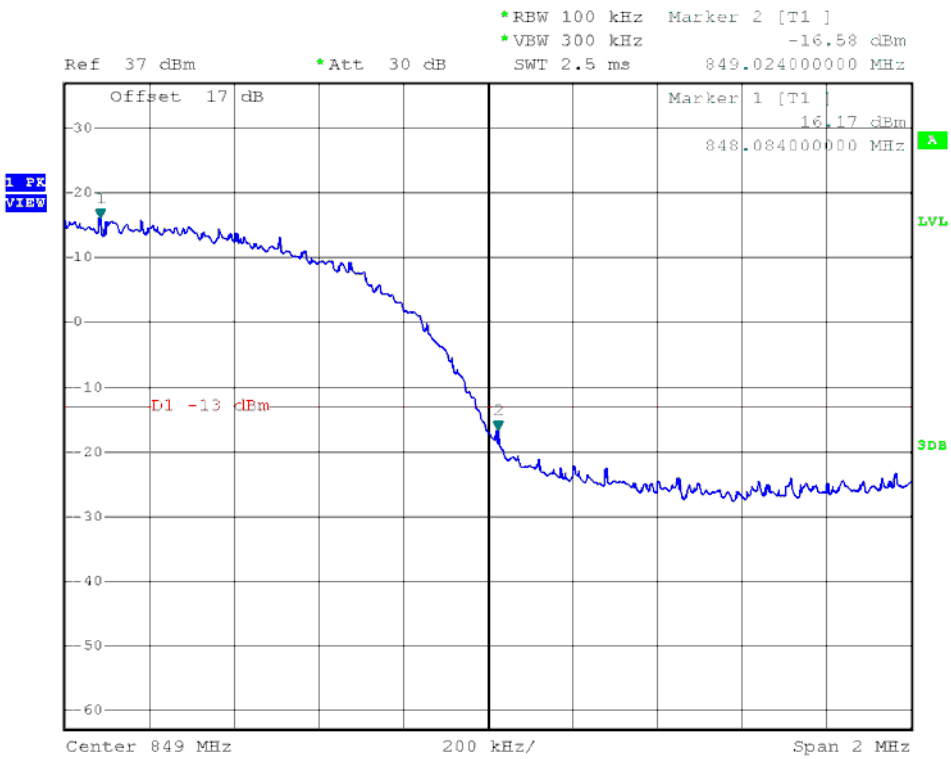
(Plot K: HSDPA 1900 Channel = 9262)



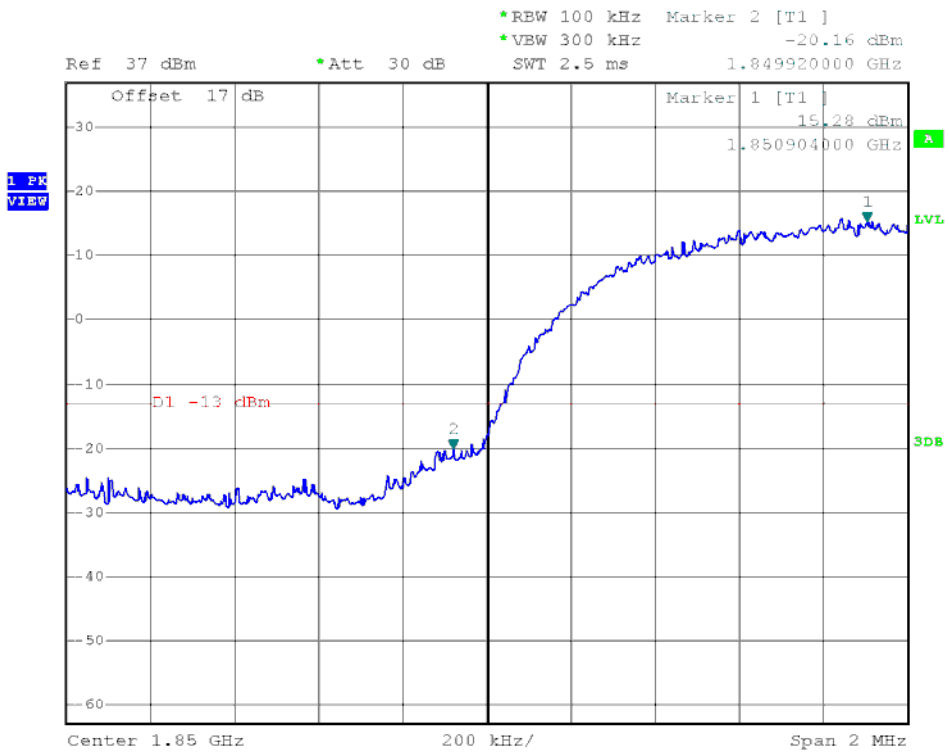
(Plot L: HSDPA 1900 Channel = 9538)



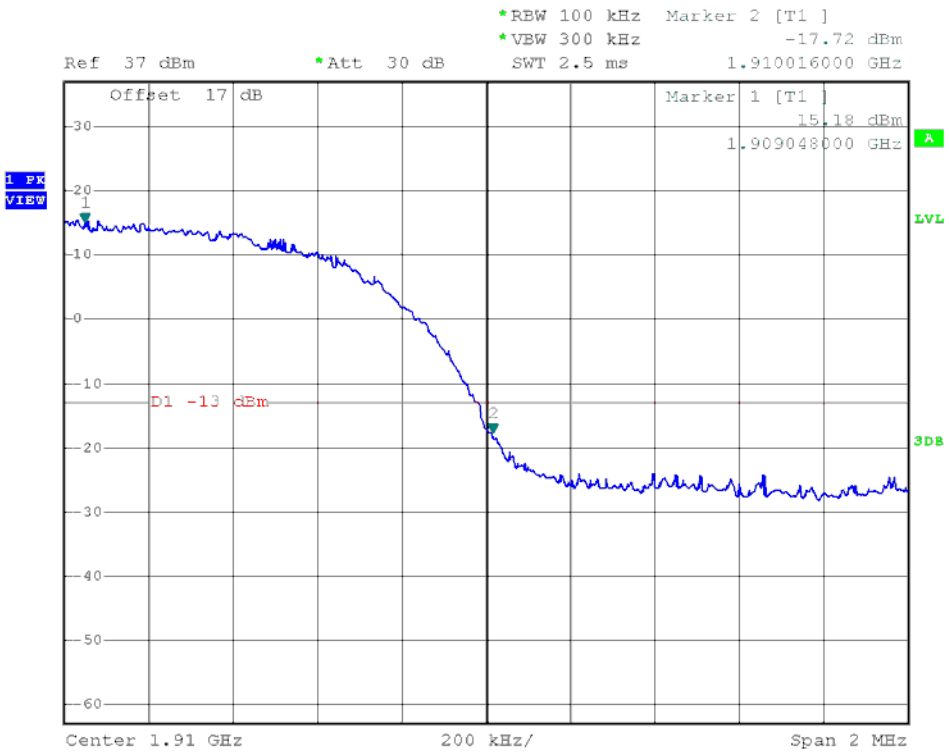
(Plot M: HSUPA 850 Channel = 4132)



(Plot N: HSUPA850 Channel = 4233)



(Plot O: HSUPA 1900 Channel = 9262)



(Plot P: HSUPA 1900 Channel = 9538)

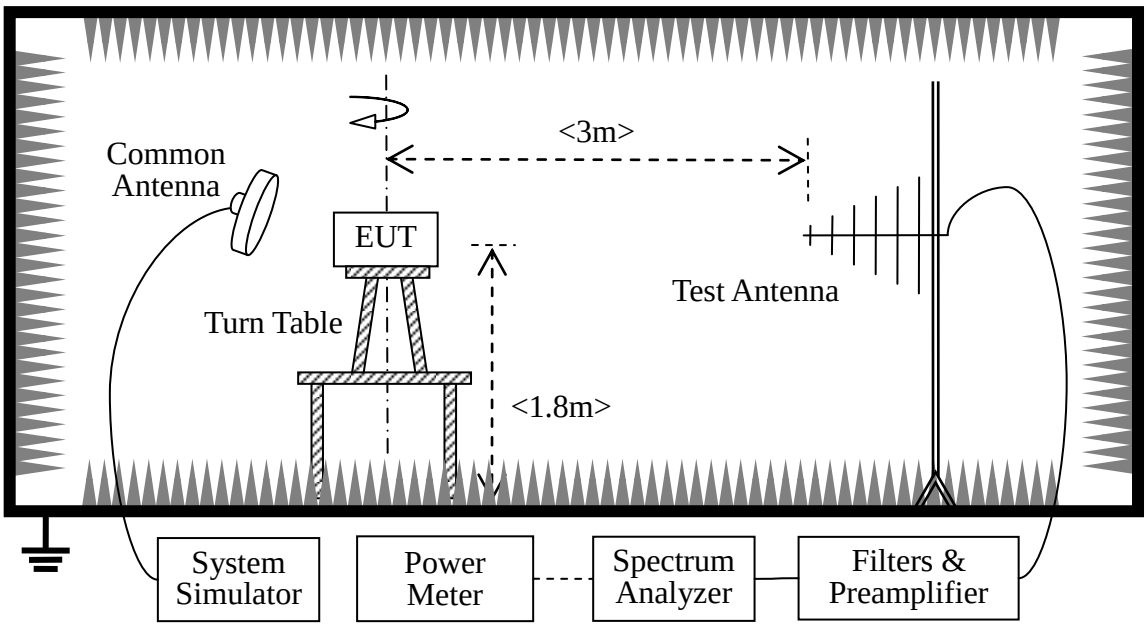
2.7 Transmitter Radiated Power (EIRP/ERP)

2.7.1 Requirement

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

2.7.2 Test Description

1. Test Setup:



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

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

- GSM Maximum RF output power: GSM 850 32.71dBm, GSM 1900 29.60dBm，WCDMA 850 22.89dBm, WCDMA 1900 22.76 dBm, Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB
- Minimum RF power: GSM 850 3.1dBm, GSM 1900 0.3dBm,WCDMA 850 0.39dBm ,WCDMA 1900 0.5dBm.

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

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal.Due Date
Spectrum Analyzer	Agilent	E7405A	US44210471	2014.06.10
Power Meter	Agilent	E4418B	GB43318055	2014.06.10
Full-Anechoic Chamber	Albatross～Projects	12.8m*6.8m*6.4m	A0412372	2015.01.04
Double ridge horn antenna	R&S	HF906	A0304225	2014.06.07
Ultra-wideband antenna	R&S	HL562	A0304224	2014.06.05
Loop antenna	R&S	HFH2-Z2	A0304226	2014.06.05

2.7.3 Test Result

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

The substitution corrections are obtained as described below:

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

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

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

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

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

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

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

1. GSM Model Test Verdict:

Band	Channel	Frequency (MHz)	polarizations	PCL	Measured ERP			Limit		Verdict
					dBm	W	Refer to Plot	dBm	W	
GSM 850MHz	128	824.20	vertical	5	33.23	2.104	Plot A	38.5	7	PASS
	190	836.60	vertical	5	32.94	1.968				PASS
	251	848.80	vertical	5	33.14	2.061				PASS
GPRS 850MHz	128	824.20	vertical	5	32.83	1.919	PlotB Note 1	38.5	7	PASS
	190	836.60	vertical	5	32.88	1.941				PASS
	251	848.80	vertical	5	32.69	1.859				PASS
Note 1:	All the slots were tested and just the worst data was record in this report.									

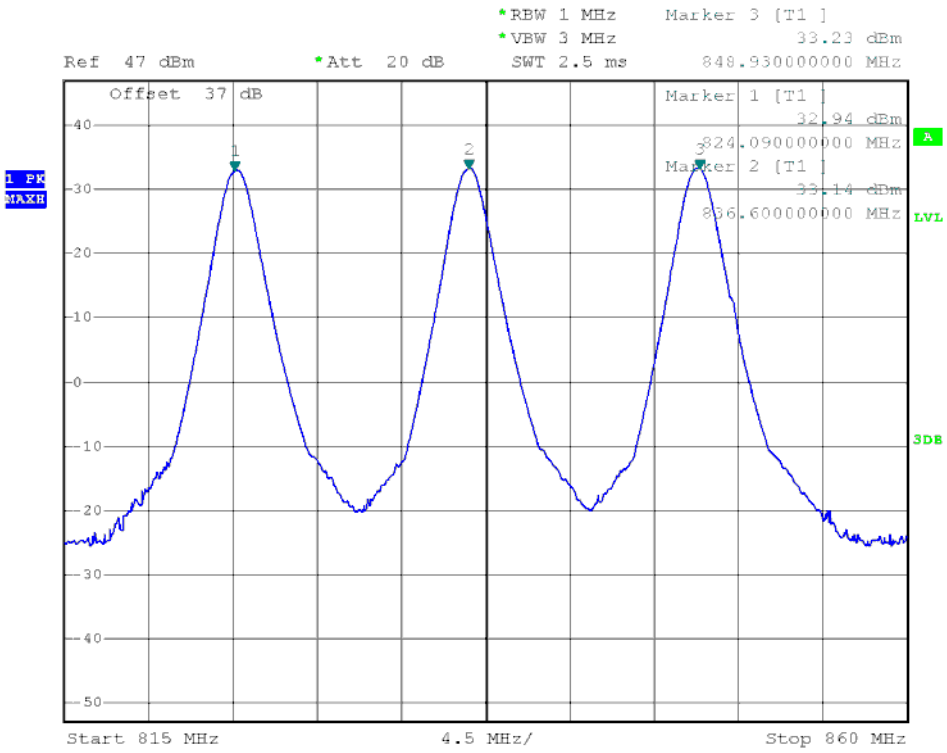
Band	Channel	Frequency (MHz)	polarizations	PCL	Measured EIRP			Limit		Verdict
					dBm	W	Refer to Plot	dBm	W	
GSM 1900MHz	512	1850.2	vertical	0	29.68	0.929	Plot C	33	2	PASS
	661	1880.0	vertical	0	29.81	0.957				PASS
	810	1909.8	vertical	0	29.58	0.908				PASS
GPRS 1900MHz	512	1850.2	vertical	0	28.99	0.793	Plot D Note 1	33	2	PASS
	661	1880.0	vertical	0	28.97	0.789				PASS
	810	1909.8	vertical	0	28.86	0.769				PASS
Note 1:	All the slots were tested and just the worst data was record in this report.									

2. WCDMA Model Test Verdict:

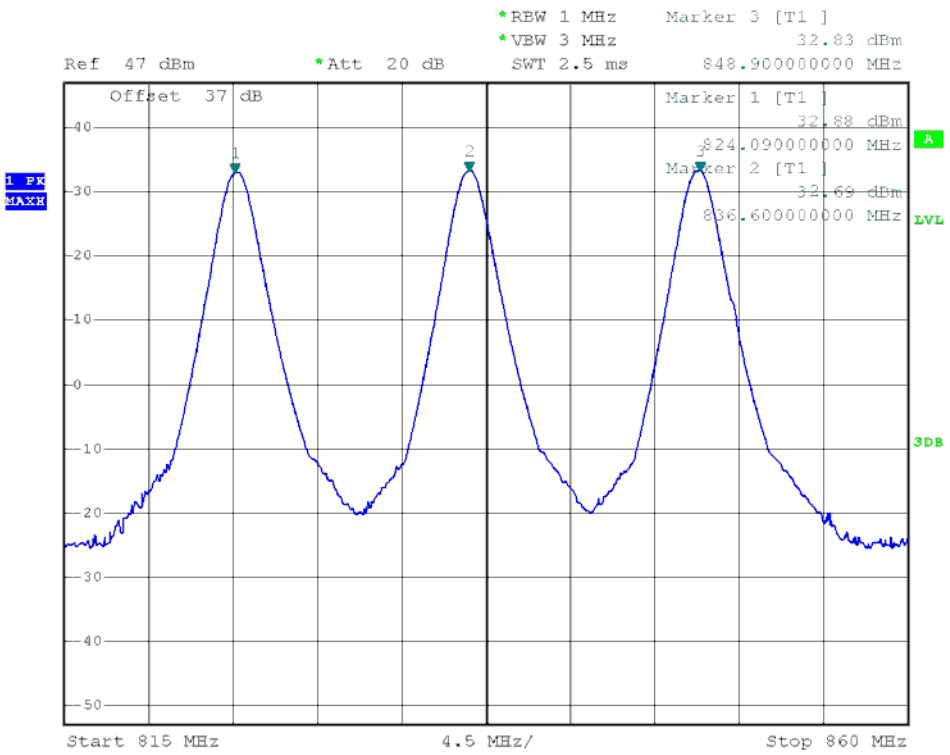
Band	Channel	Frequency (MHz)	polarizations	Measured ERP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
WCDMA 850MHz	4132	826.4	vertical	27.25	0.531	Plot E	38.5	7	PASS
	4175	835	vertical	27.39	0.548				PASS
	4233	846.6	vertical	27.28	0.535				PASS
HSDPA 850MHz	4132	826.4	vertical	27.09	0.512	Plot F	38.5	7	PASS
	4175	835	vertical	27.11	0.514				PASS
	4233	846.6	vertical	27.24	0.530				PASS
HSUPA 850MHz	4132	826.4	vertical	26.41	0.438	Plot G	38.5	7	PASS
	4175	835	vertical	26.31	0.428				PASS
	4233	846.6	vertical	26.44	0.441				PASS
Note 1:	All the slots were tested and just the worst data was record in this report.								

Band	Channel	Frequency (MHz)	polarizations	Measured EIRP			Limit		Verdict
				dBm	W	Refer to Plot	dBm	W	
WCDMA 1900MHz	9262	1852.4	vertical	26.68	0.466	Plot H	33	2	PASS
	9400	1880	vertical	27.27	0.533				PASS
	9538	1907.6	vertical	26.85	0.484				PASS
HSDPA 1900MHz	9262	1852.4	vertical	25.11	0.324	Plot I	33	2	PASS
	9400	1880	vertical	25.23	0.333				PASS
	9538	1907.6	vertical	25.33	0.341				PASS
HSUPA 1900MHz	9262	1852.4	vertical	25.32	0.340	Plot J	33	2	PASS
	9400	1880	vertical	25.29	0.338				PASS
	9538	1907.6	vertical	25.32	0.340				PASS
Note 1:	All the slots were tested and just the worst data was record in this report.								

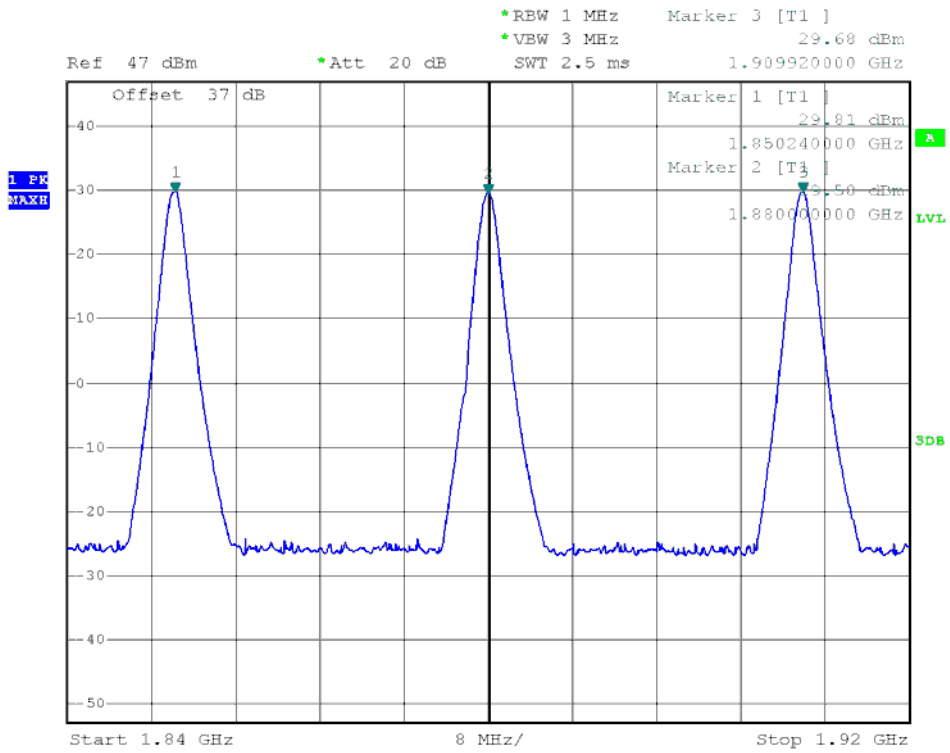
3. Test Plots:



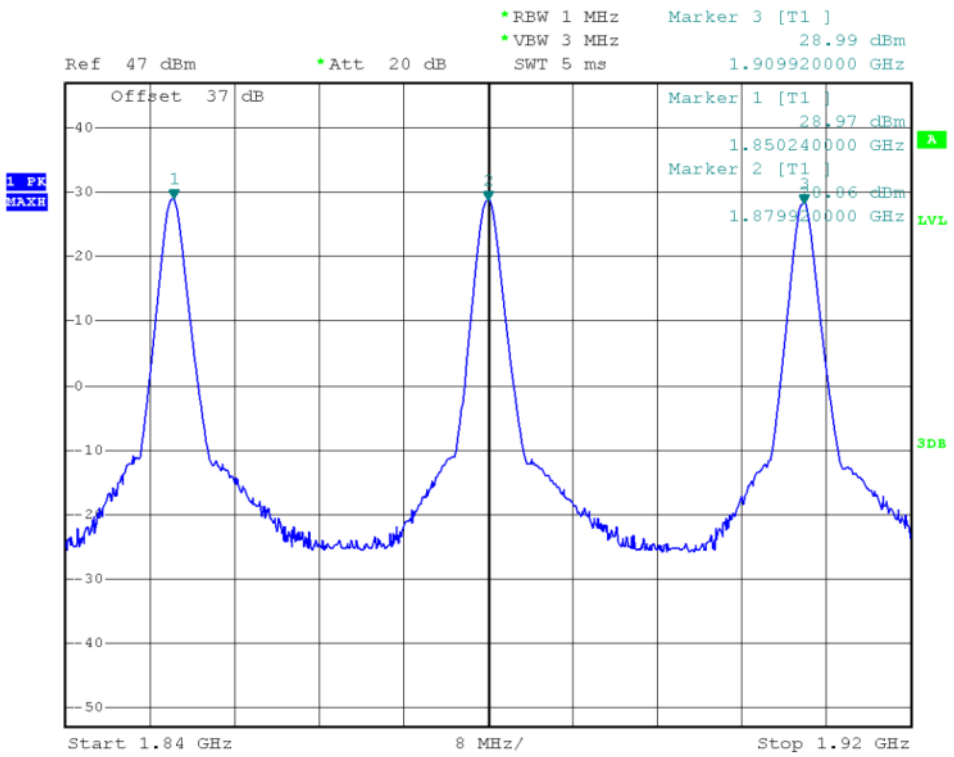
(Plot A: GSM 850MHz Channel = 128, 190, 251)



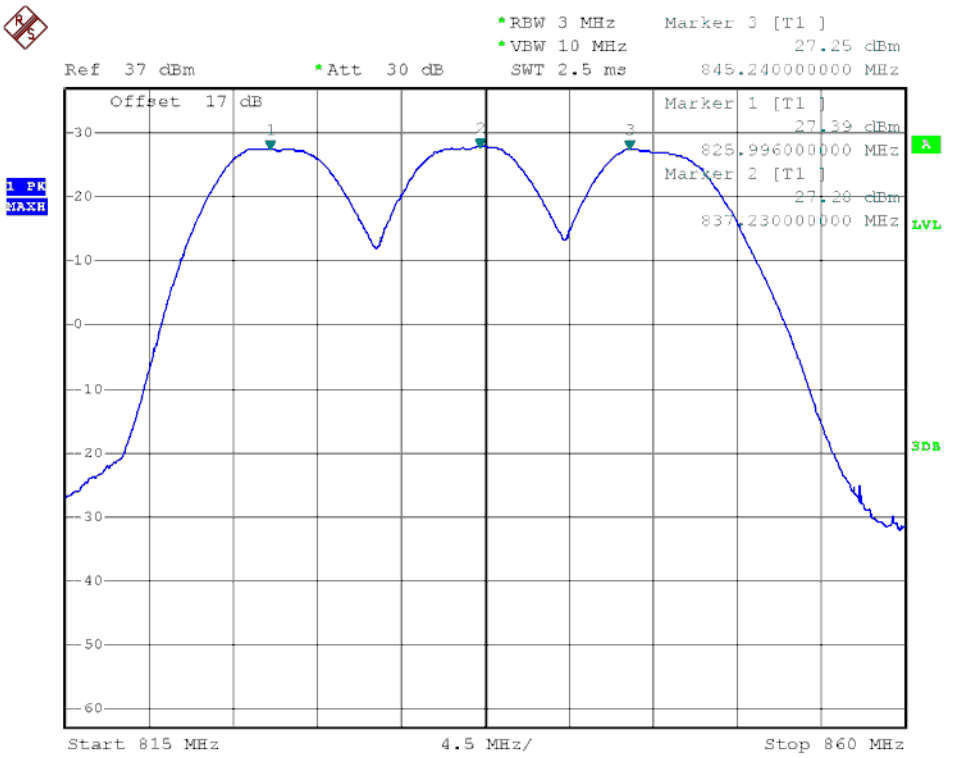
(Plot B: GPRS 850MHz Channel = 128, 190, 251)



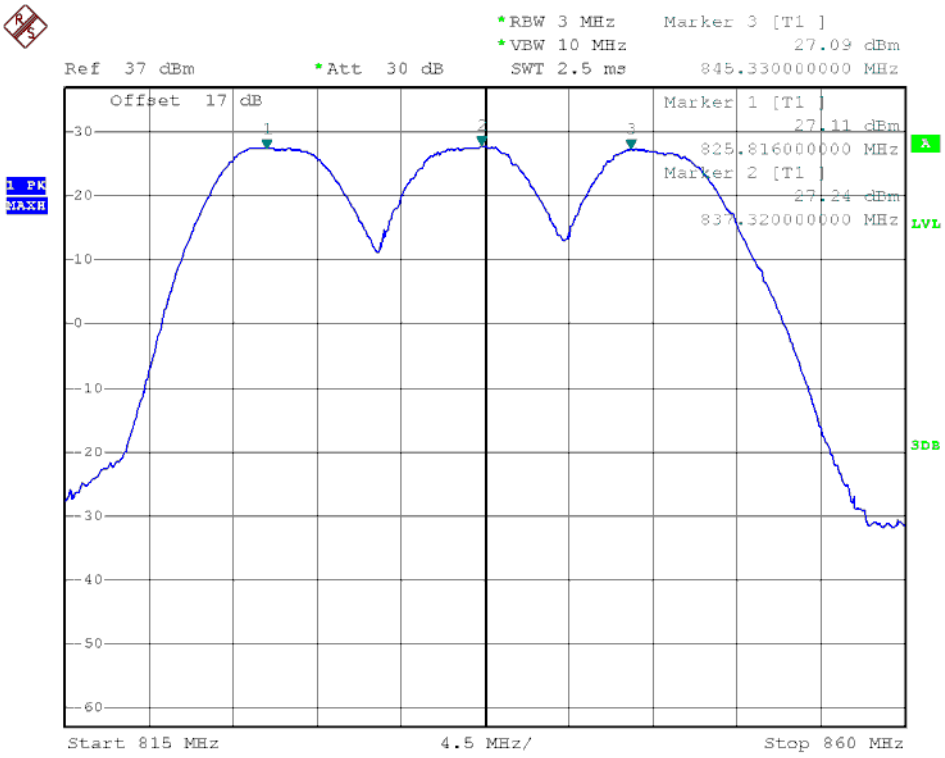
(Plot C: GSM1900MHz Channel = 512, 661, 810)



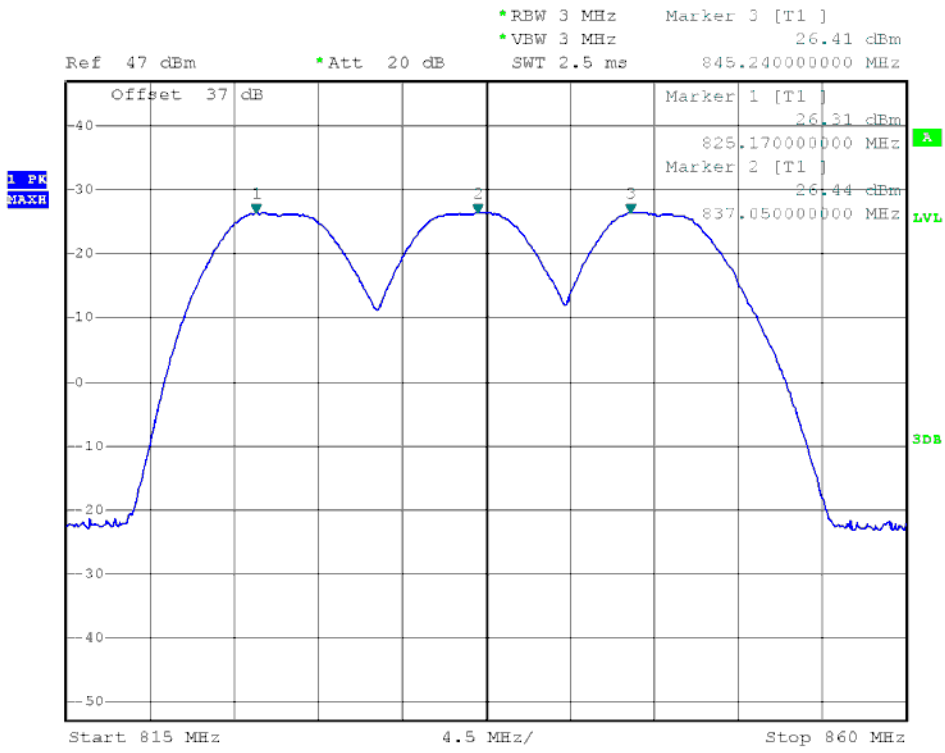
(Plot D: GPRS 1900MHz Channel = 512, 661, 810)



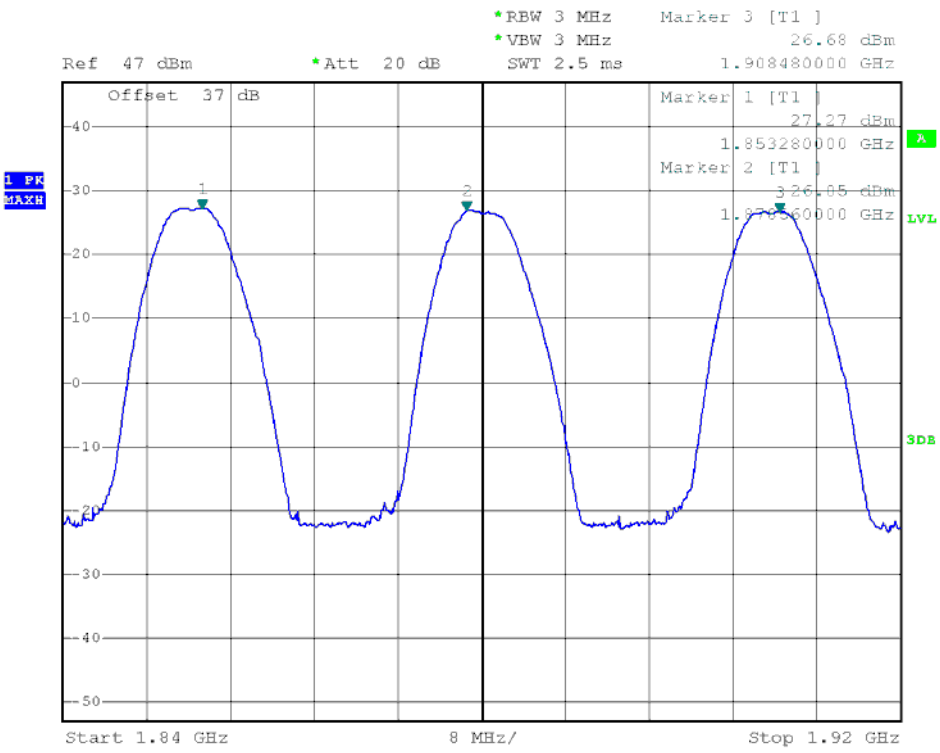
(Plot E: WCDMA 850 MHz Channel = 4132, 4175, 4233)



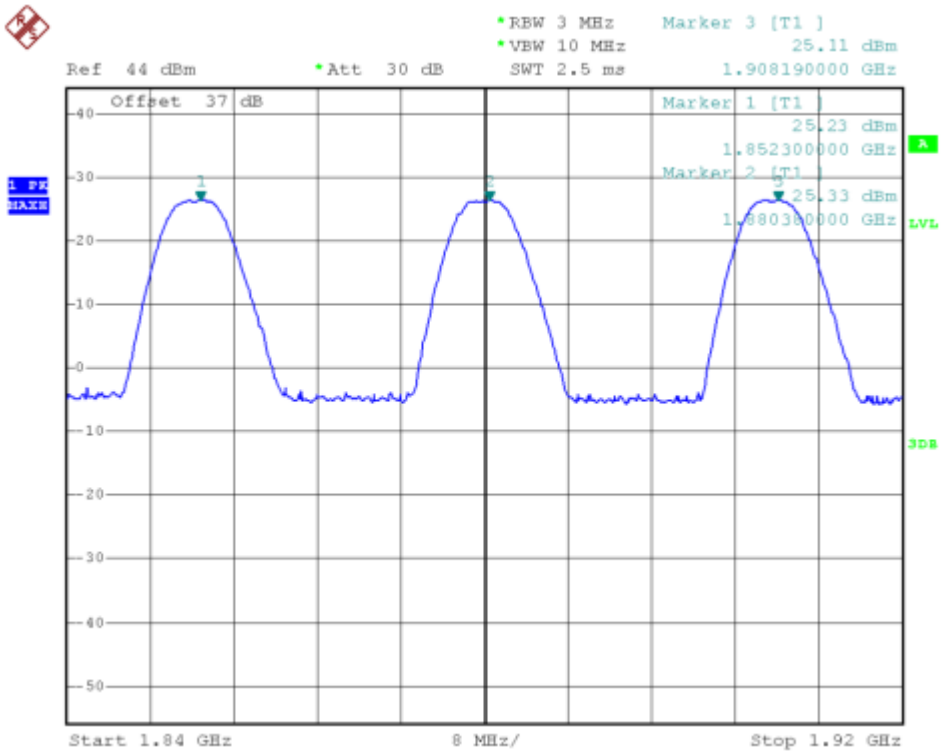
(Plot F: HSDPA 850 MHz Channel = 4132, 4175, 4233)



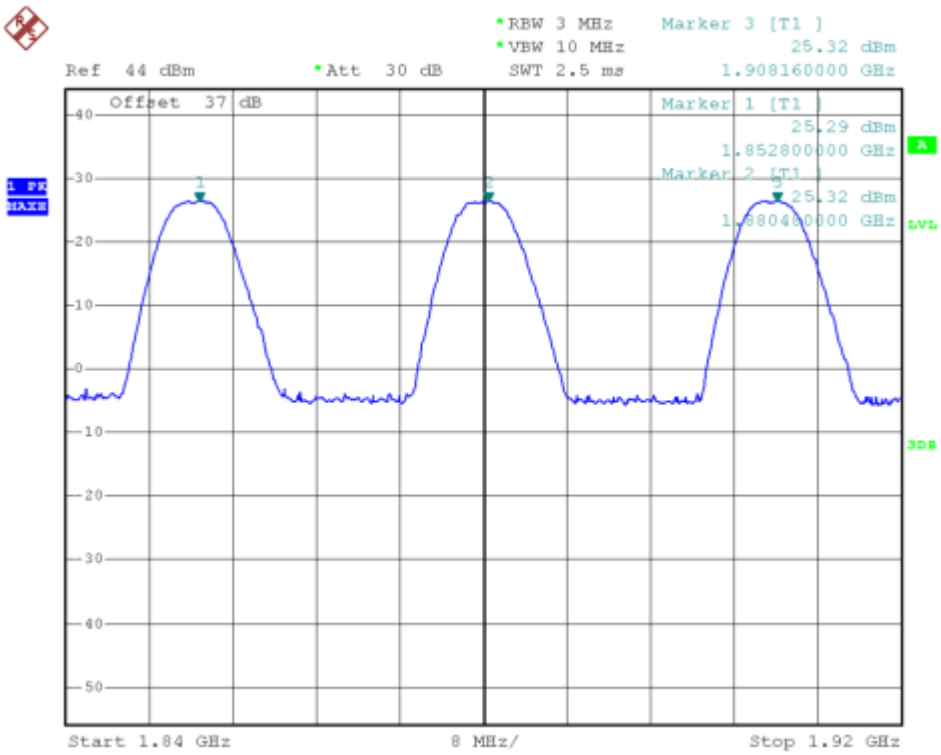
(Plot G: HSUPA 850 MHz Channel = 4132, 4175, 4233)



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



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



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

2.8 Radiated Out of Band Emissions

2.8.1 Requirement

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

2.8.2 Test Description

See section 2.7.2 of this report.

Equipment List：

Description	Manufacturer	Model	Serial No.	Cal.Due Date
Spectrum Analyzer	Agilent	E7405A	US44210471	2014.06.10
Power Meter	Agilent	E4418B	GB43318055	2014.06.10
Full-Anechoic Chamber	Albatross～Projects	12.8m*6.8m*6.4m	A0412372	2015.01.04
Double ridge horn antenna	R&S	HF906	A0304225	2014.06.07
Ultra-wideband antenna	R&S	HL562	A0304224	2014.06.05
Loop antenna	R&S	HFH2-Z2	A0304226	2014.06.05

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

2.8.3 Test Result

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

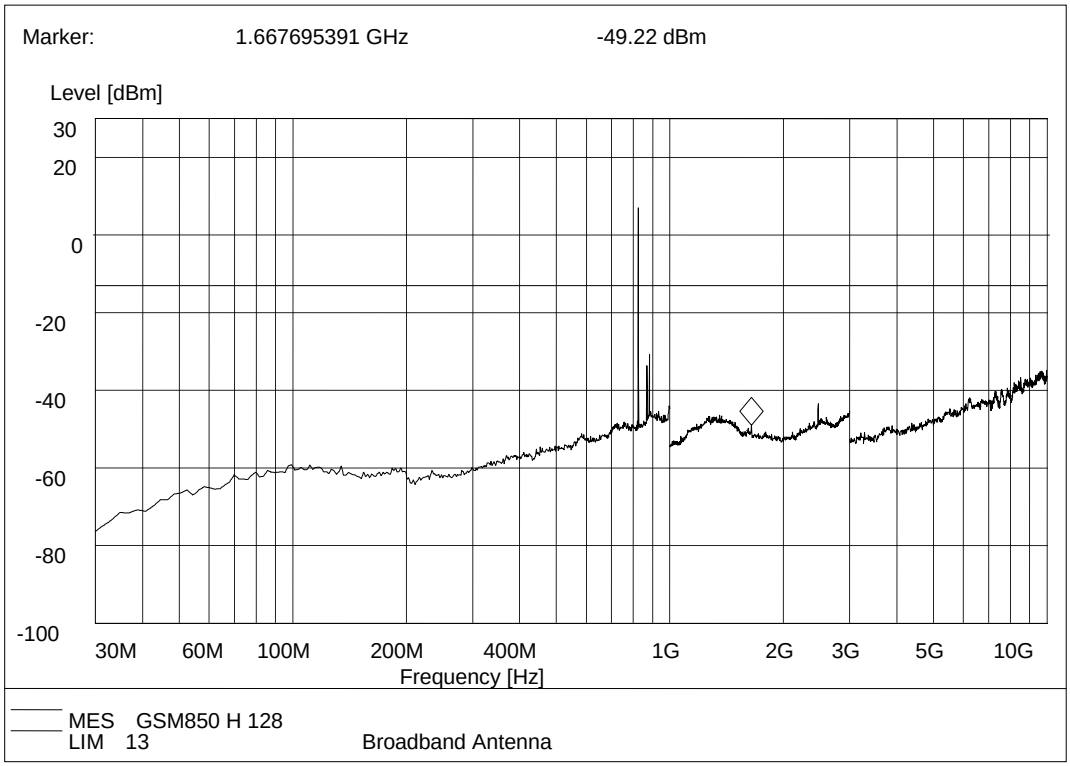
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
GSM 850MHz	128	824.2	< -25	< -25	Plot A.1/A.2	-13	PASS
	190	836.6	< -25	< -25	Plot A.3/A.4		PASS
	251	848.8	< -25	< -25	Plot A.5/A.6		PASS
GSM 1900MHz	512	1850.2	< -25	< -25	Plot B.1/B.2	-13	PASS
	661	1880.0	< -25	< -25	Plot B.3/B.4		PASS
	810	1909.8	< -25	< -25	Plot B.5/B.6		PASS
WCDMA 850MHz	4132	826.4	< -25	< -25	Plot E.1/E.2	-13	PASS
	4183	836.6	< -25	< -25	Plot E.3/E.4		PASS
	4233	846.6	< -25	< -25	Plot E.5/E.6		PASS
WCDMA 1900MHz	9262	1852.4	< -25	< -25	Plot F.1/F.2	-13	PASS
	9400	1880	< -25	< -25	Plot F.3/F.4		PASS
	9538	1907.6	< -25	< -25	Plot F.5/F.6		PASS
HSDPA 850MHz	4132	826.4	< -25	< -25	Plot G.1/G.2	-13	PASS
	4183	836.6	< -25	< -25	Plot G.3/G.4		PASS
	4233	846.6	< -25	< -25	Plot G.5/G.6		PASS
HSDPA 1900MHz	9262	1852.4	< -25	< -25	Plot H.1/H.2	-13	PASS
	9400	1880	< -25	< -25	Plot H.3/H.4		PASS
	9538	1907.6	< -25	< -25	Plot H.5/H.6		PASS
HSUPA 850MHz	4132	826.4	< -25	< -25	Plot I.1/I.2	-13	PASS
	4183	836.6	< -25	< -25	Plot I.3/I.4		PASS
	4233	846.6	< -25	< -25	Plot I.5/I.6		PASS
HSUPA 1900MHz	9262	1852.4	< -25	< -25	Plot J.1/J.2	-13	PASS
	9400	1880	< -25	< -25	Plot J.3/J.4		PASS
	9538	1907.6	< -25	< -25	Plot J.5/J.6		PASS
GPRS850	128	824.2	< -25	< -25	Plot K.1/K.2	-13	PASS
	190	836.6	< -25	< -25	Plot K.3/K.4		PASS
	251	848.8	< -25	< -25	Plot K.5/K.6		PASS
GPRS1900	512	1850.2	< -25	< -25	Plot L.1/L.2	-13	PASS
	661	1880	< -25	< -25	Plot L.3/L.4		PASS
	810	1909.8	< -25	< -25	Plot L.5/L.6		PASS

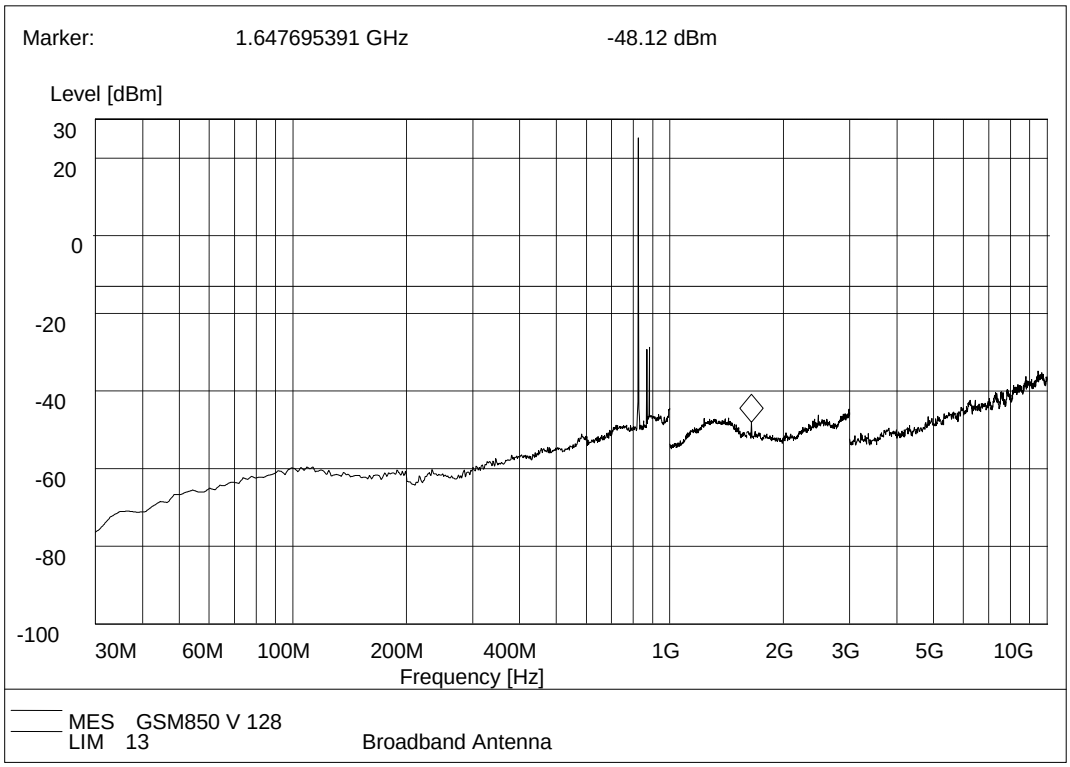
2. Test Plots for the Whole Measurement Frequency Range:

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

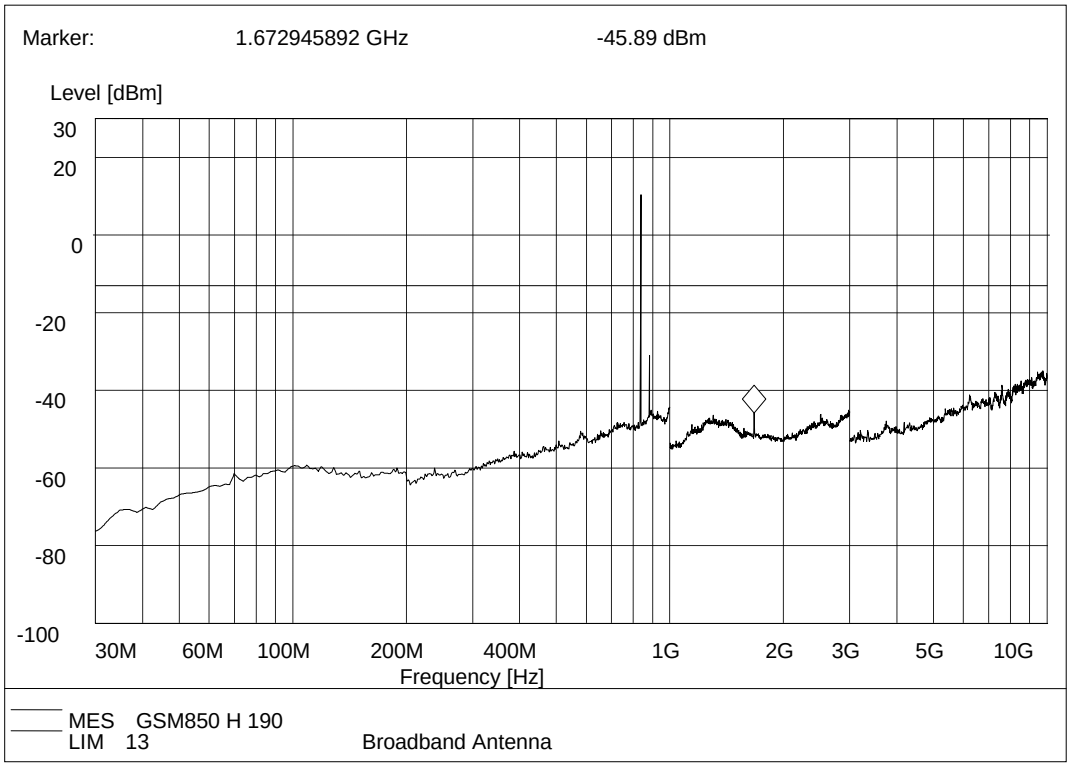
Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.



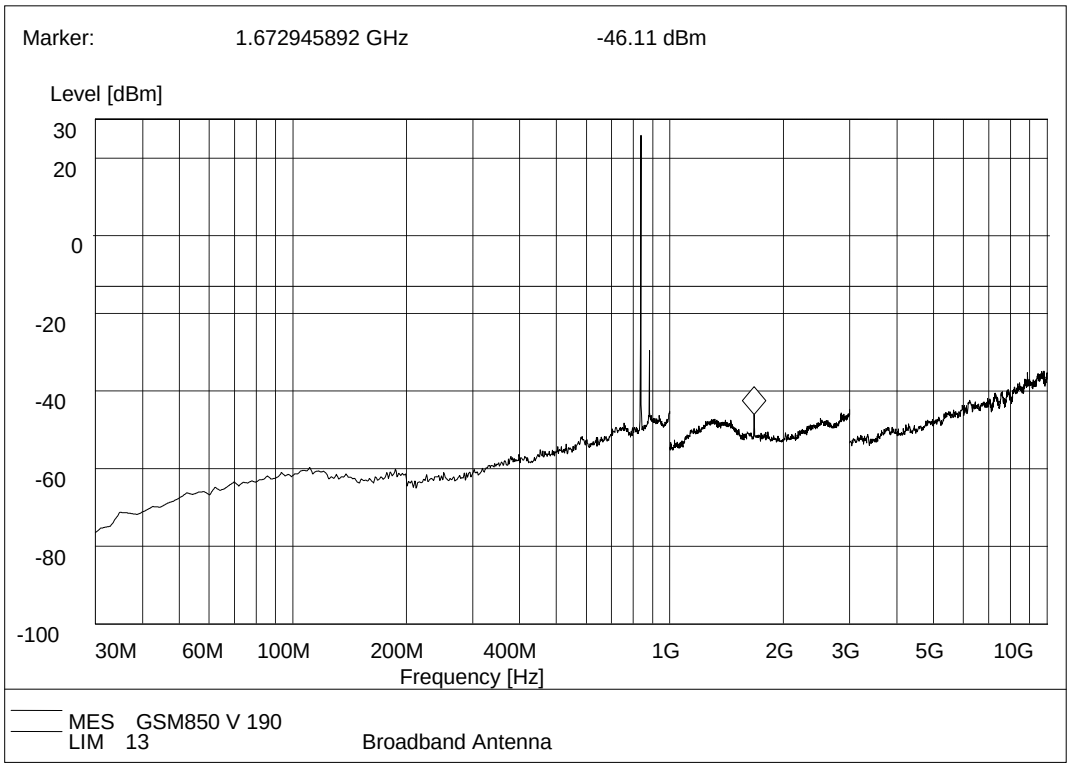
(Plot A.1: GSM 850MHz Channel = 128, Test Antenna Horizontal)



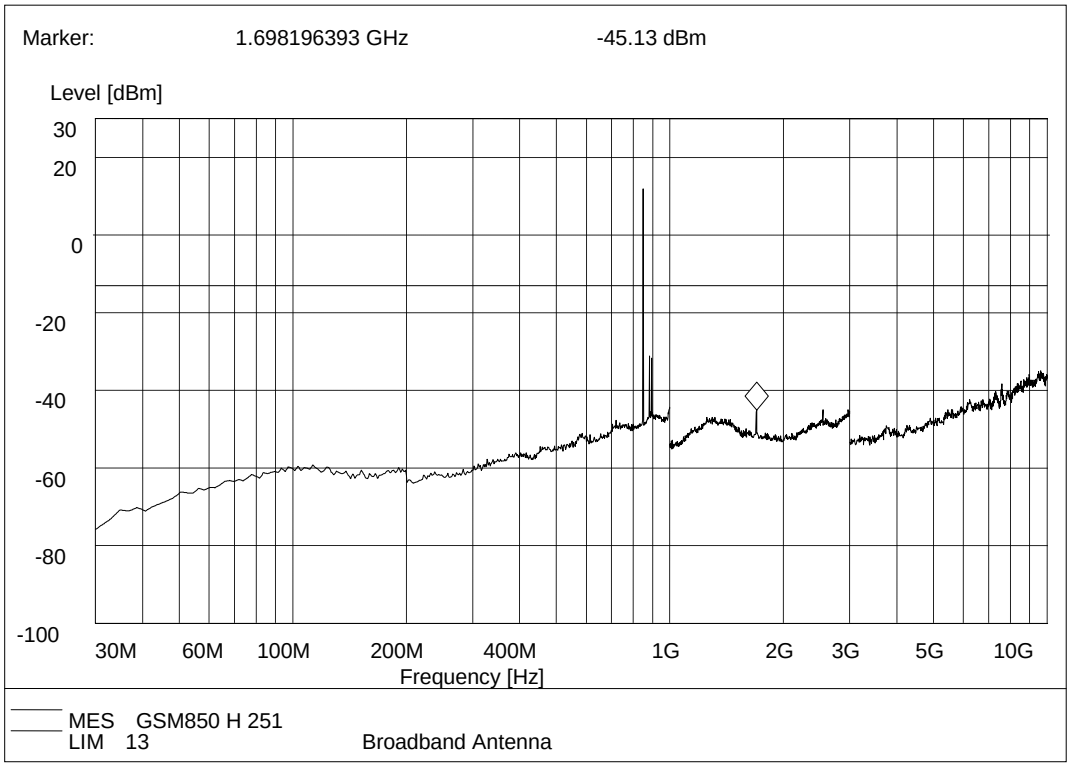
(Plot A.2: GSM 850MHz Channel = 128, Test Antenna Vertical)



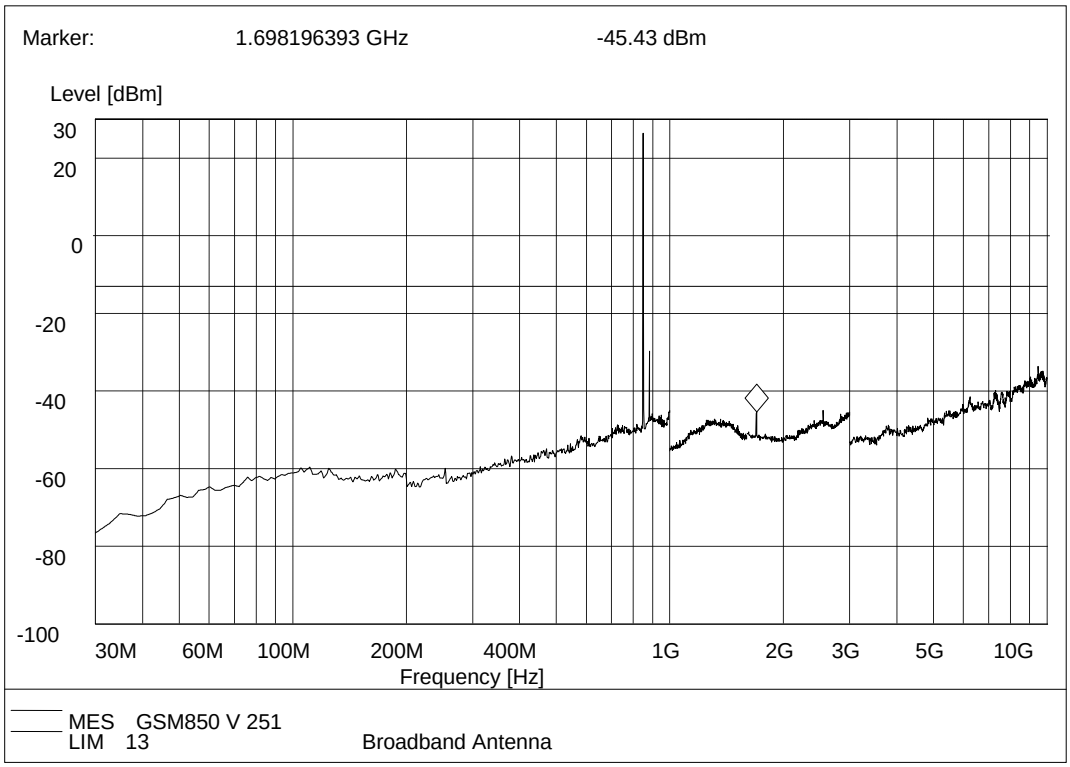
(Plot A.3: GSM 850MHz Channel = 190, Test Antenna Horizontal)



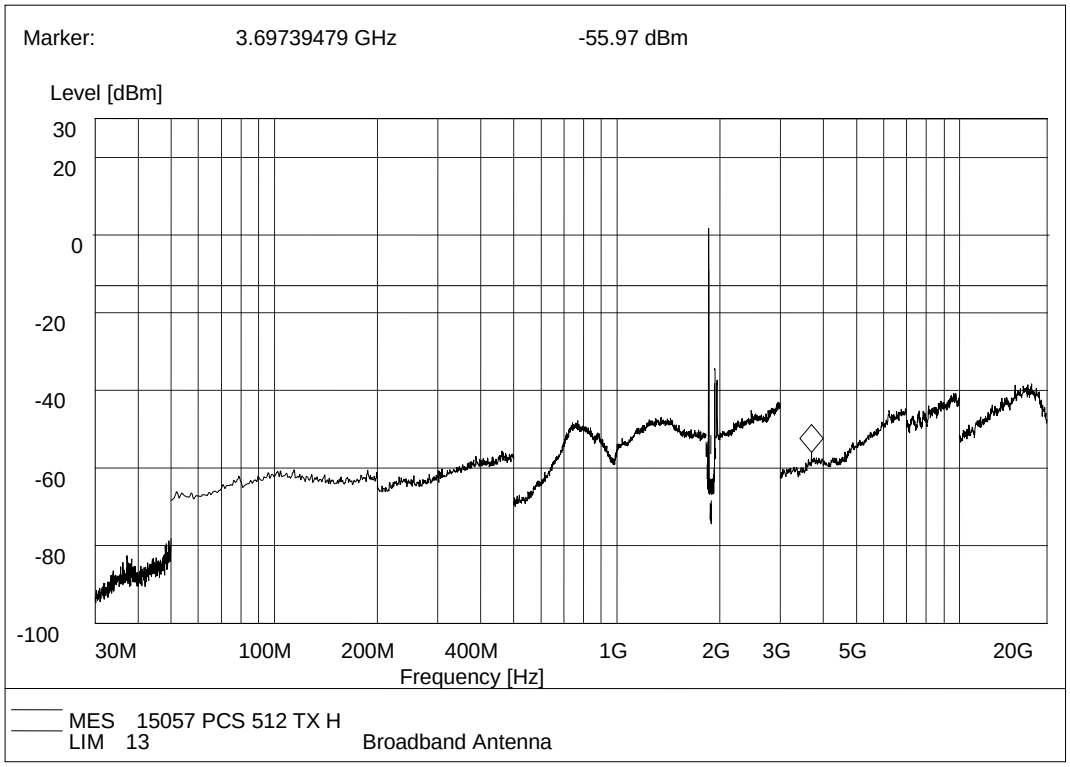
(Plot A.4: GSM 850MHz Channel = 190, Test Antenna Vertical)



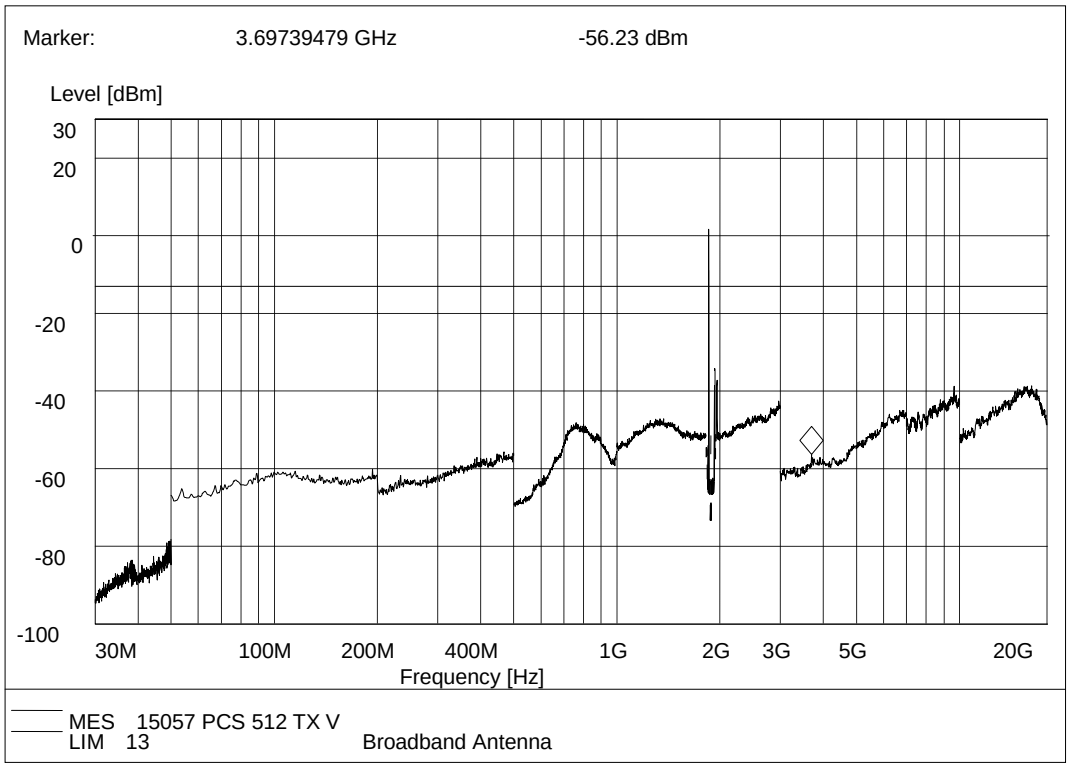
(Plot A.5: GSM 850MHz Channel = 251, Test Antenna Horizontal)



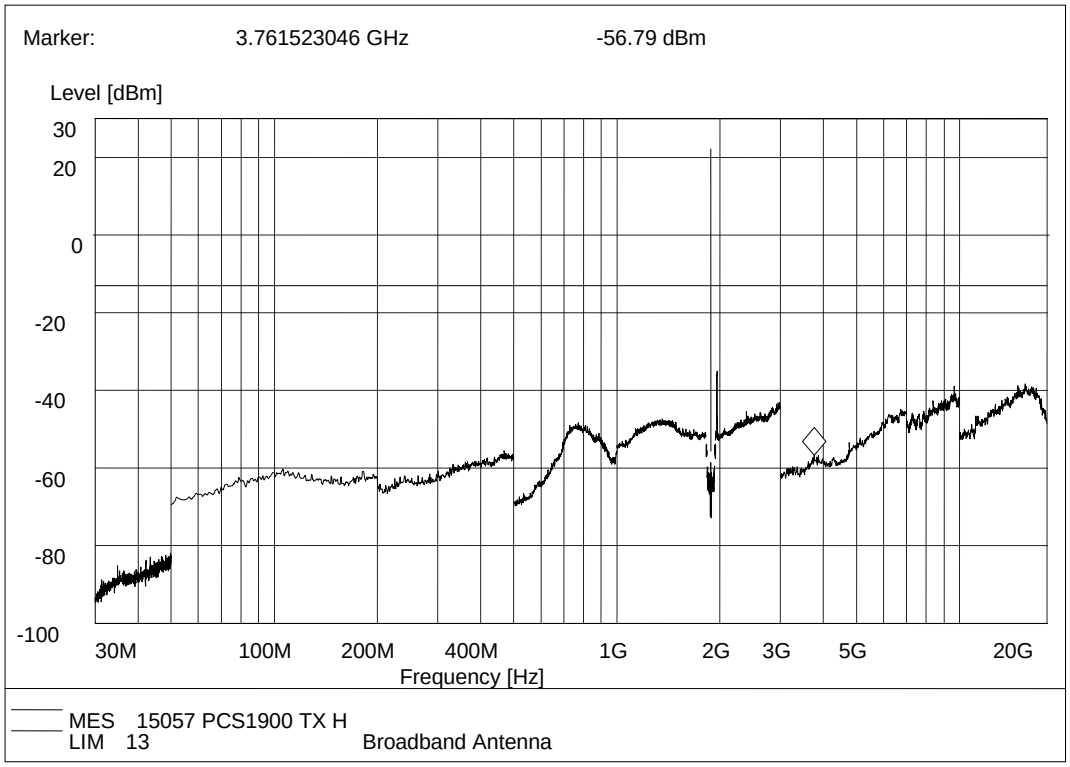
(Plot A.6: GSM 850MHz Channel = 251, Test Antenna Vertical)



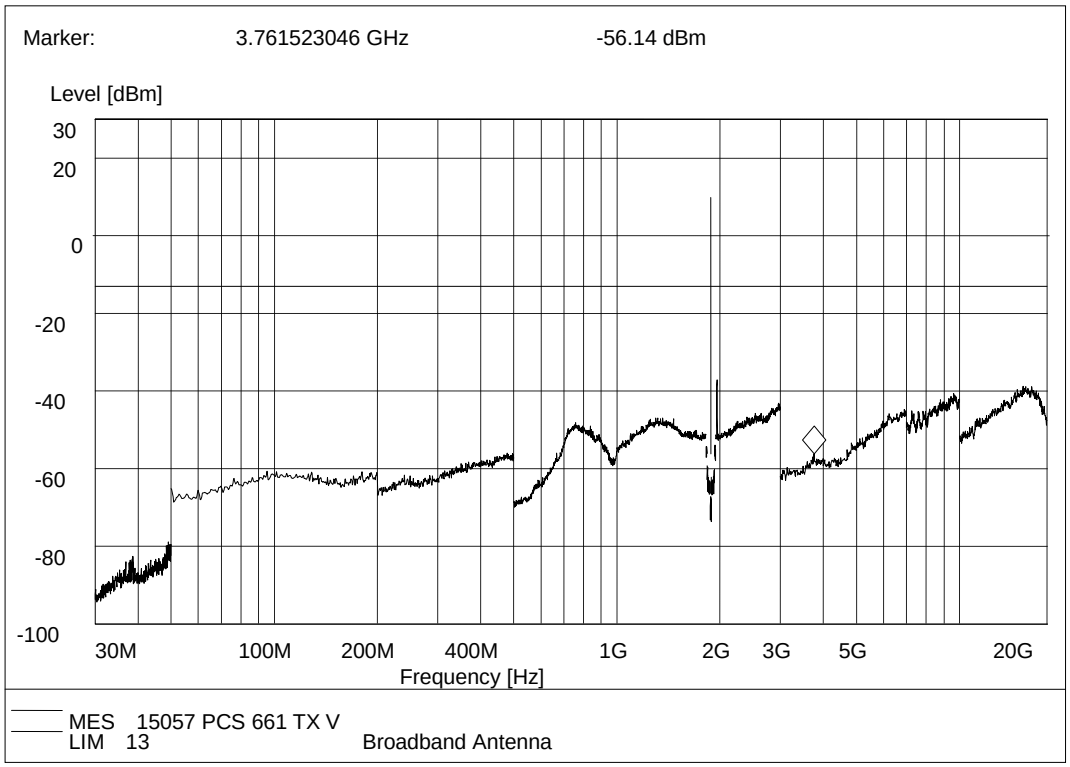
(Plot B.1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



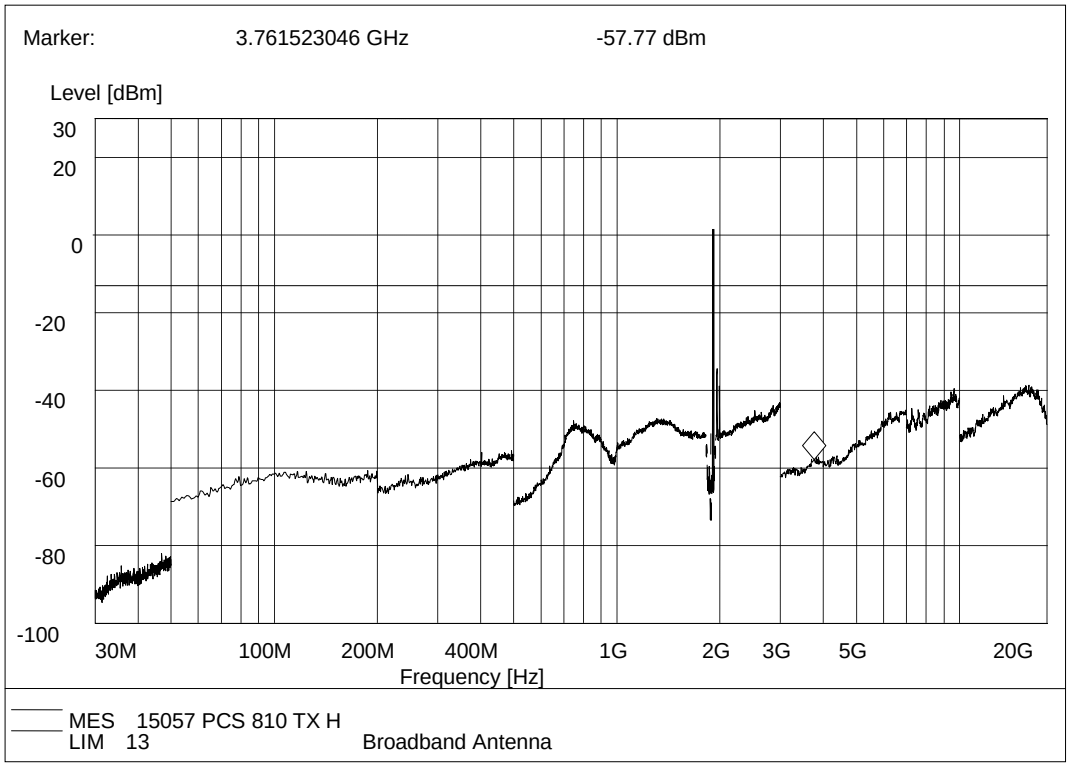
(Plot B.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



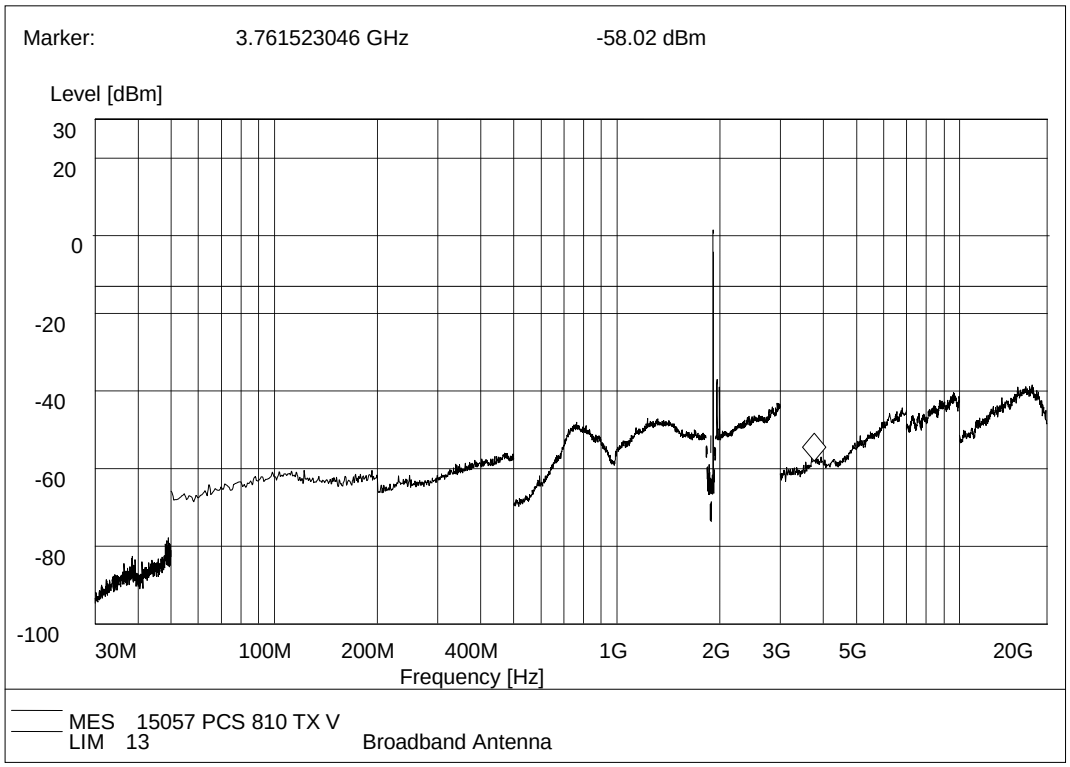
(Plot B.3: GSM 1900MHz Channel = 661, Test Antenna Horizontal)



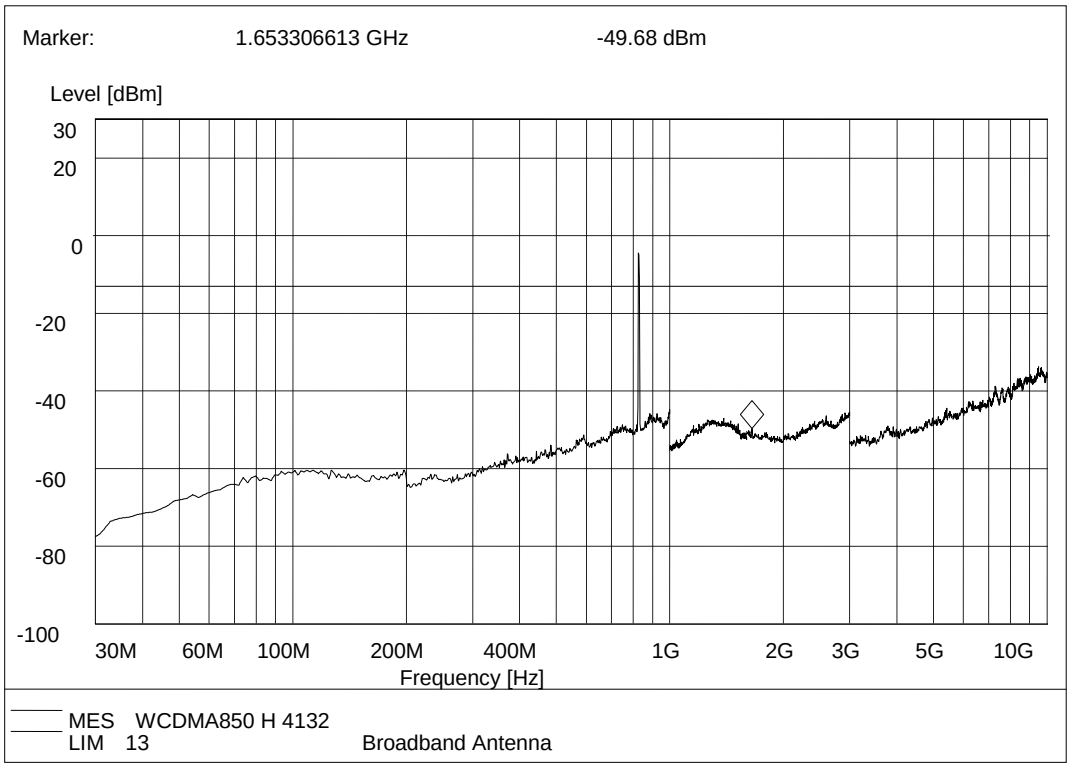
(Plot B.4: GSM 1900MHz Channel = 661, Test Antenna Vertical)



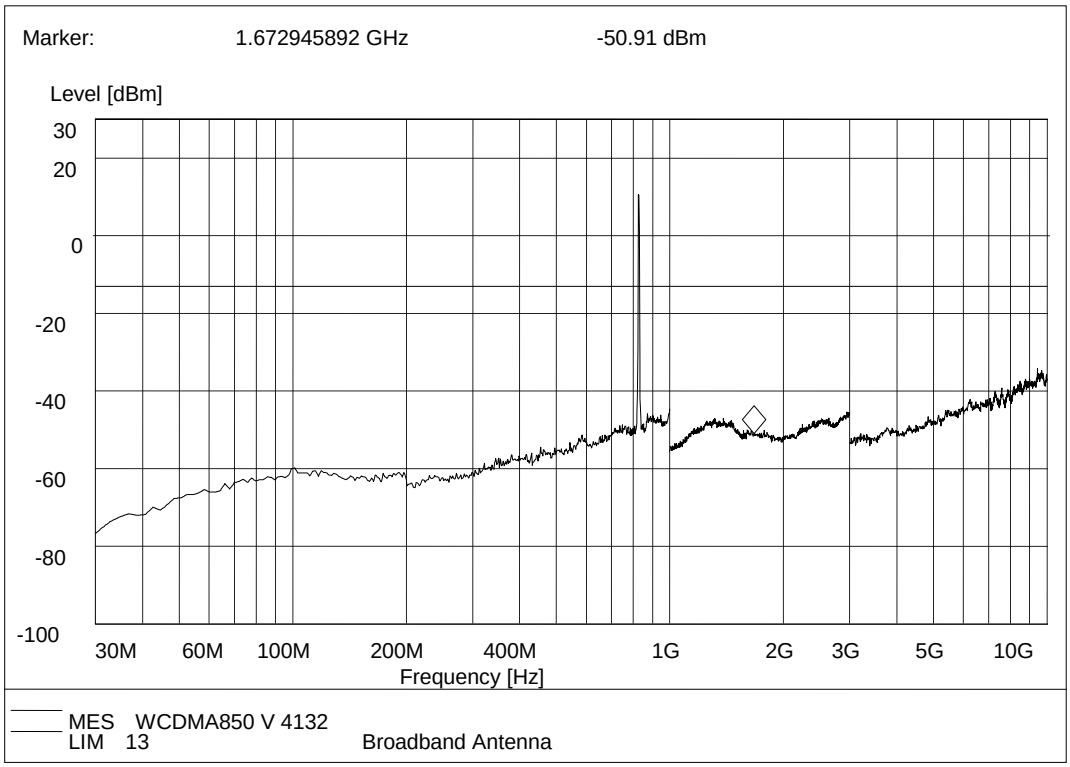
(Plot B.5: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



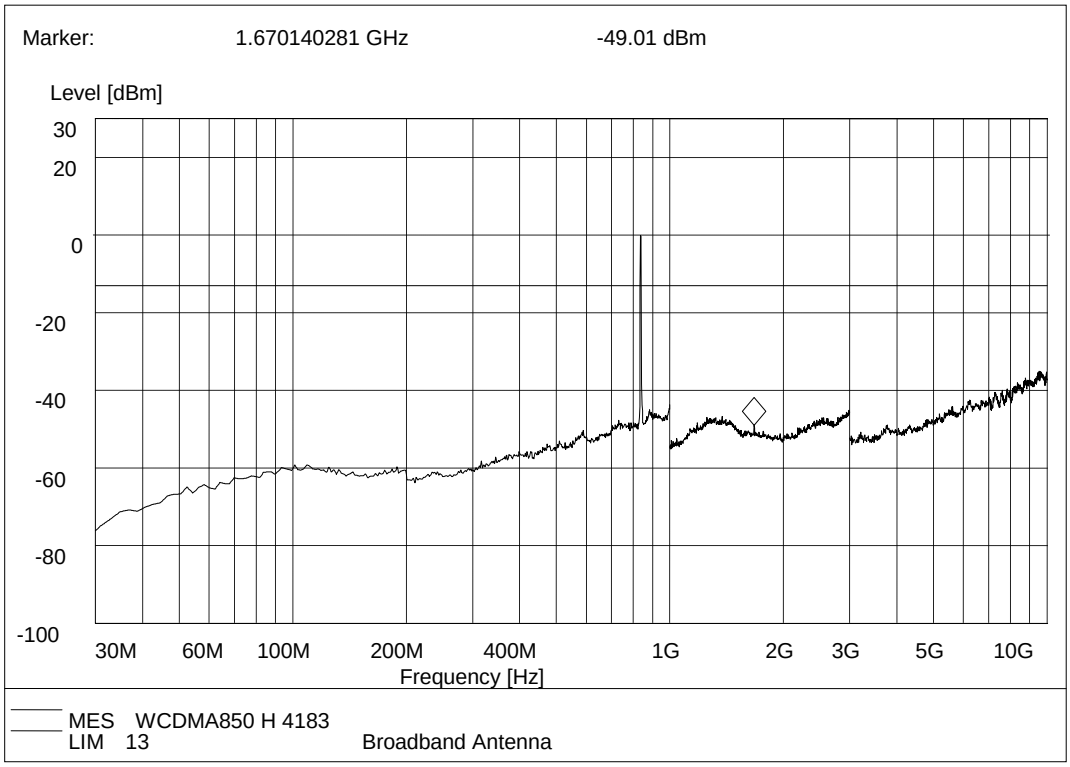
(PlotB.6: GSM 1900MHz Channel = 810, Test Antenna Vertical)



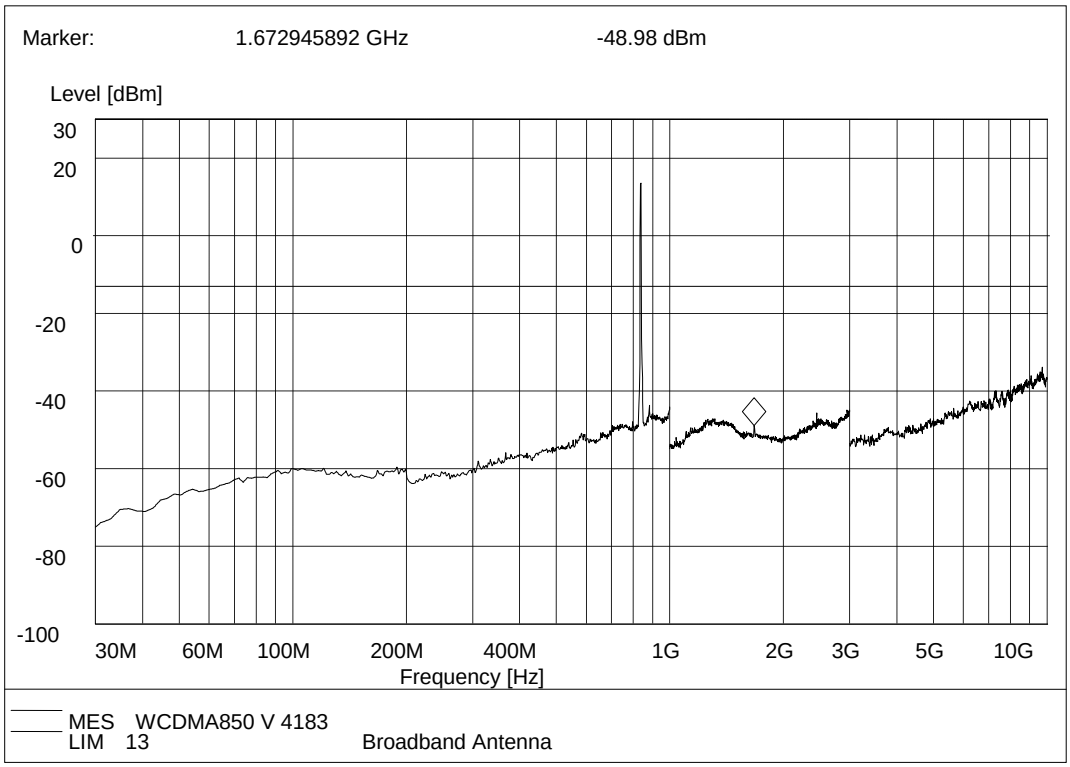
(Plot E.1: WCDMA 850MHz Channel = 4132, Test Antenna Horizontal)



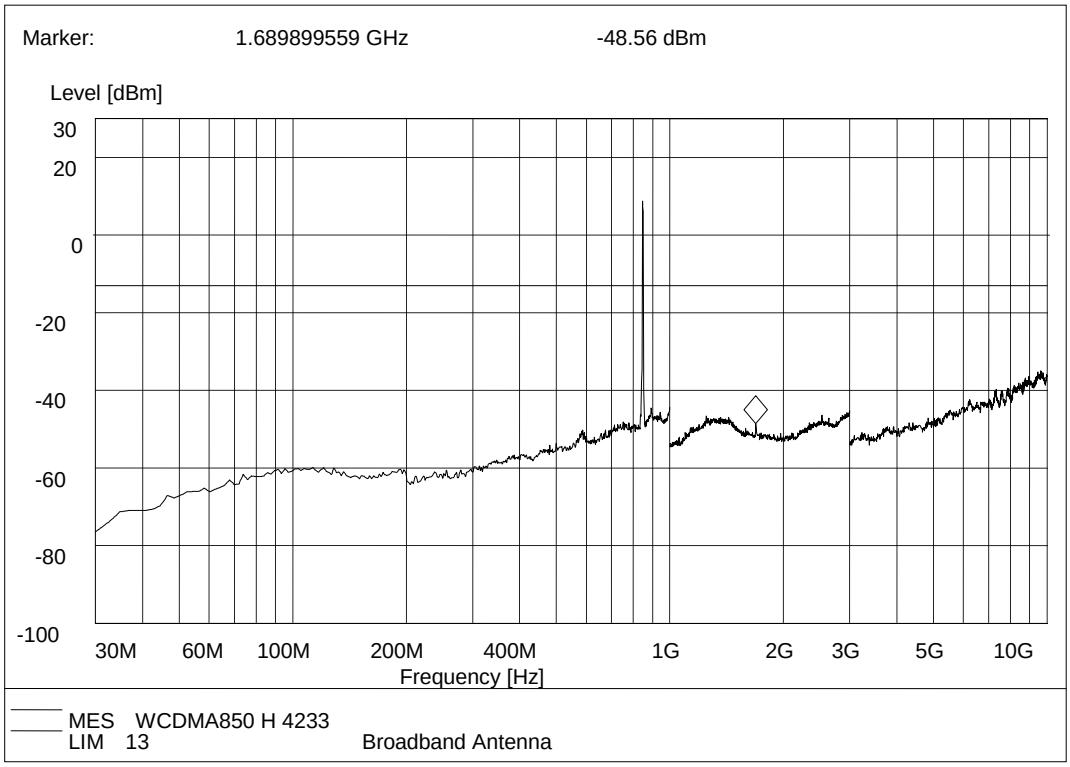
(Plot E.2: WCDMA 850MHz Channel = 4132, Test Antenna Vertical)



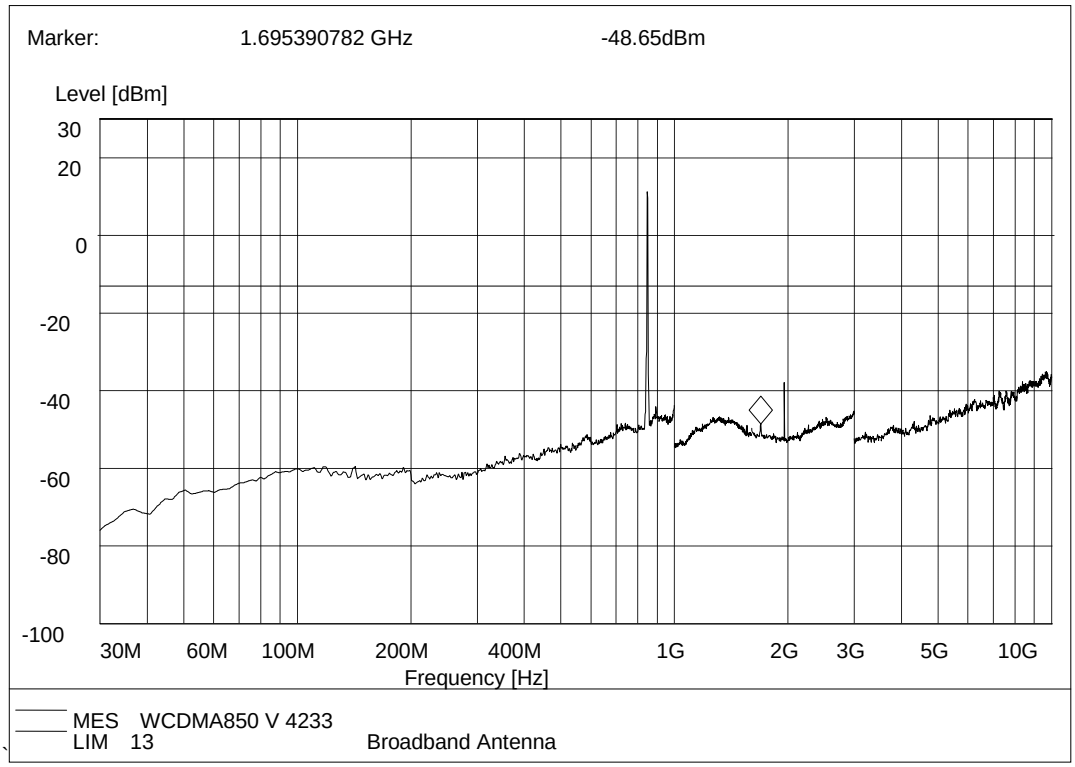
(Plot E.3: WCDMA 850MHz Channel = 4183, Test Antenna Horizontal)



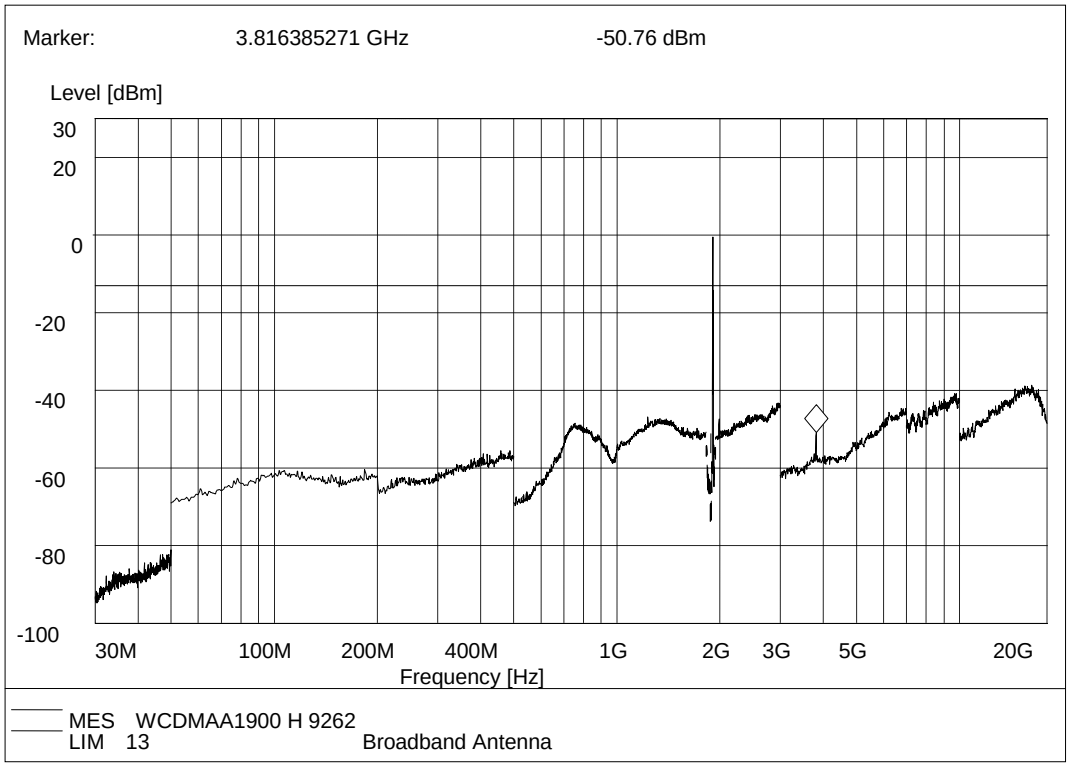
(Plot E.4: WCDMA 850MHz Channel = 4183, Test Antenna Vertical)



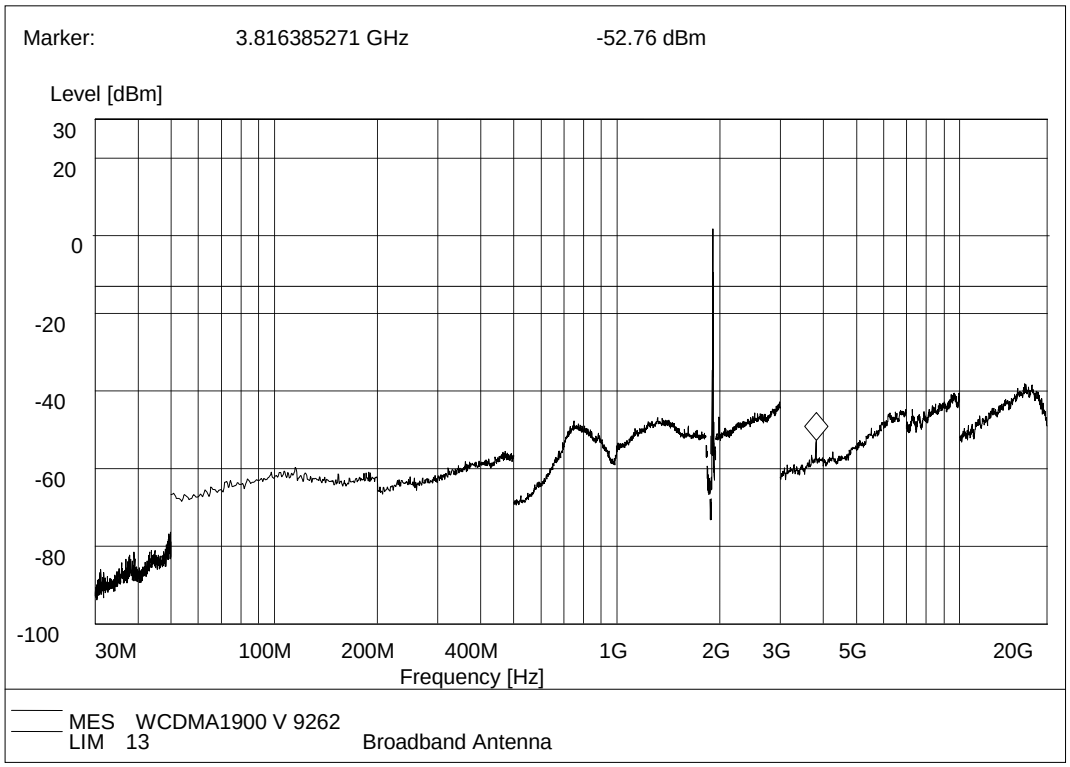
(Plot E.5: WCDMA 850MHz Channel = 4233, Test Antenna Horizontal)



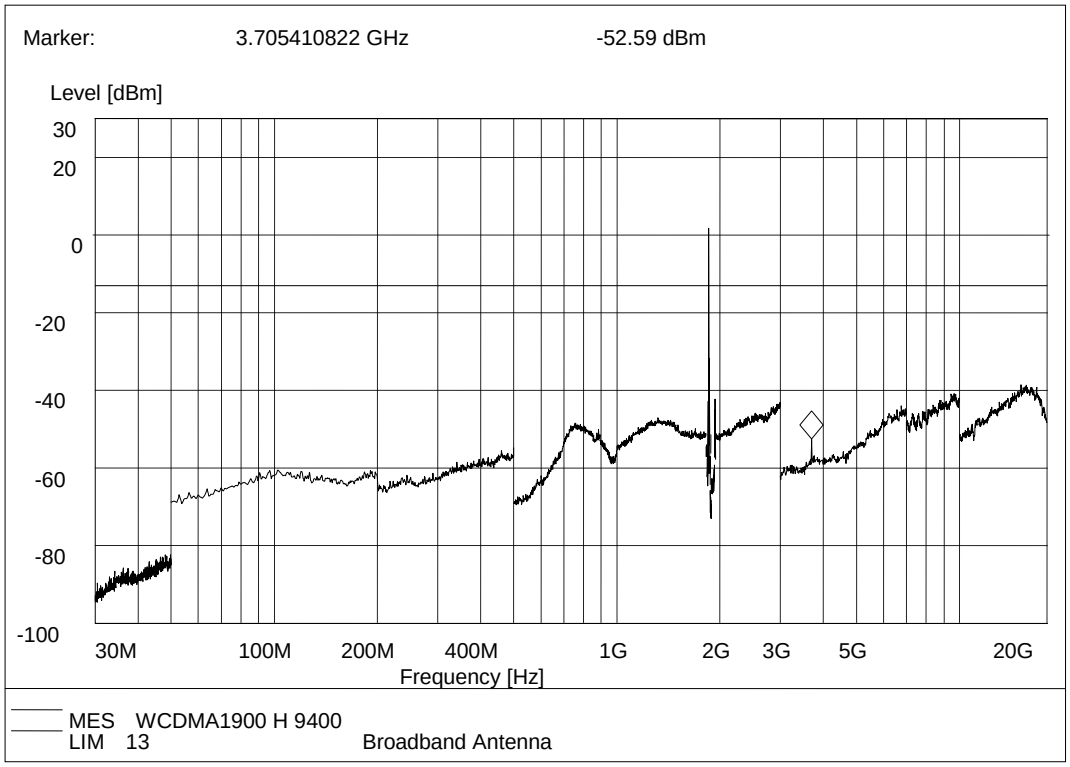
(Plot E.6: WCDMA 850MHz Channel = 4233, Test Antenna Vertical)



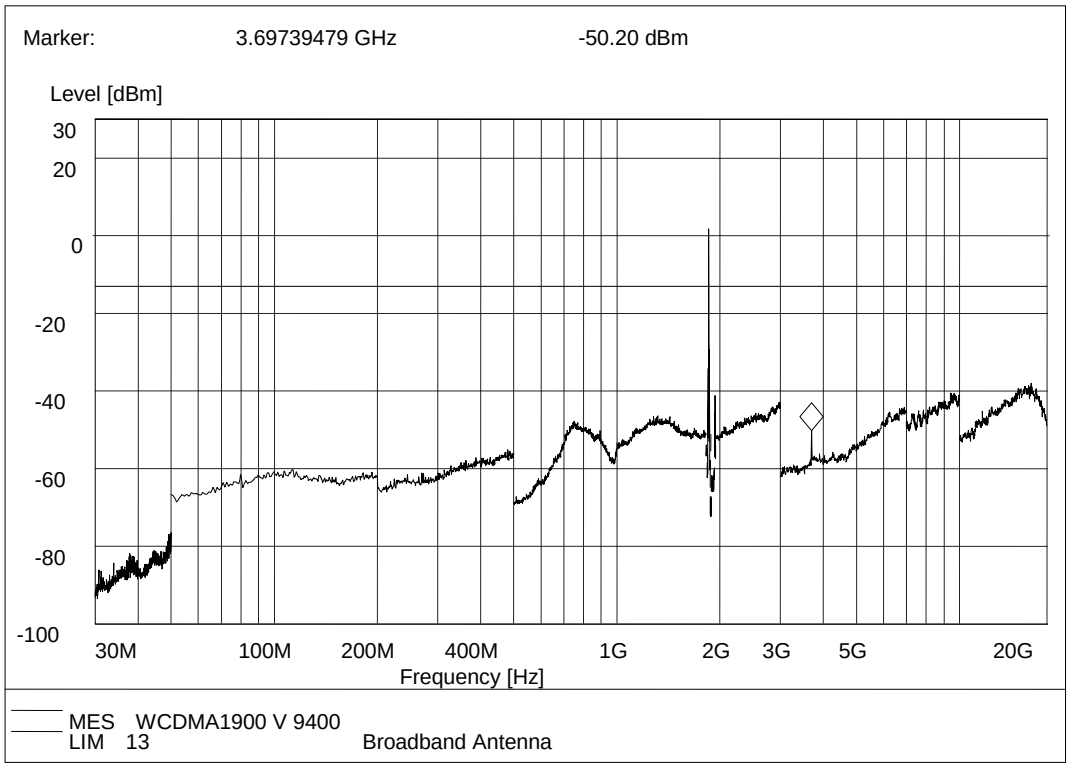
(Plot F.1: WCDMA 1900MHz Channel = 9262, Test Antenna Horizontal)



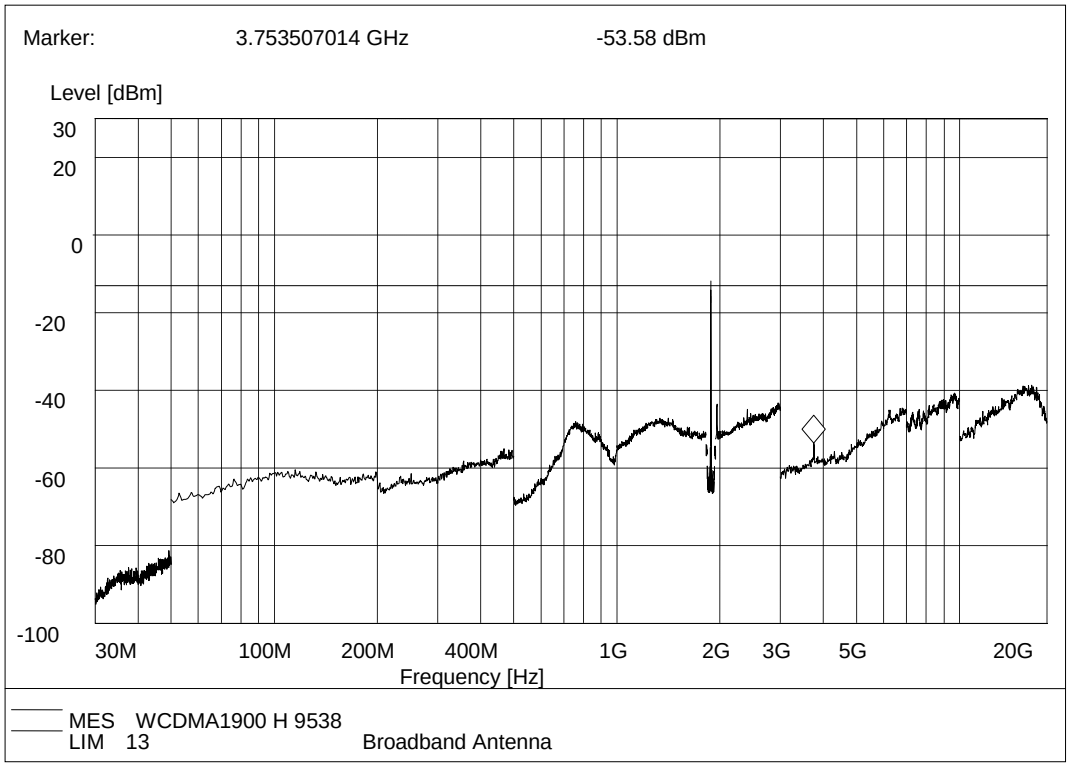
(Plot F.2: WCDMA 1900MHz Channel = 9262, Test Antenna Vertical)



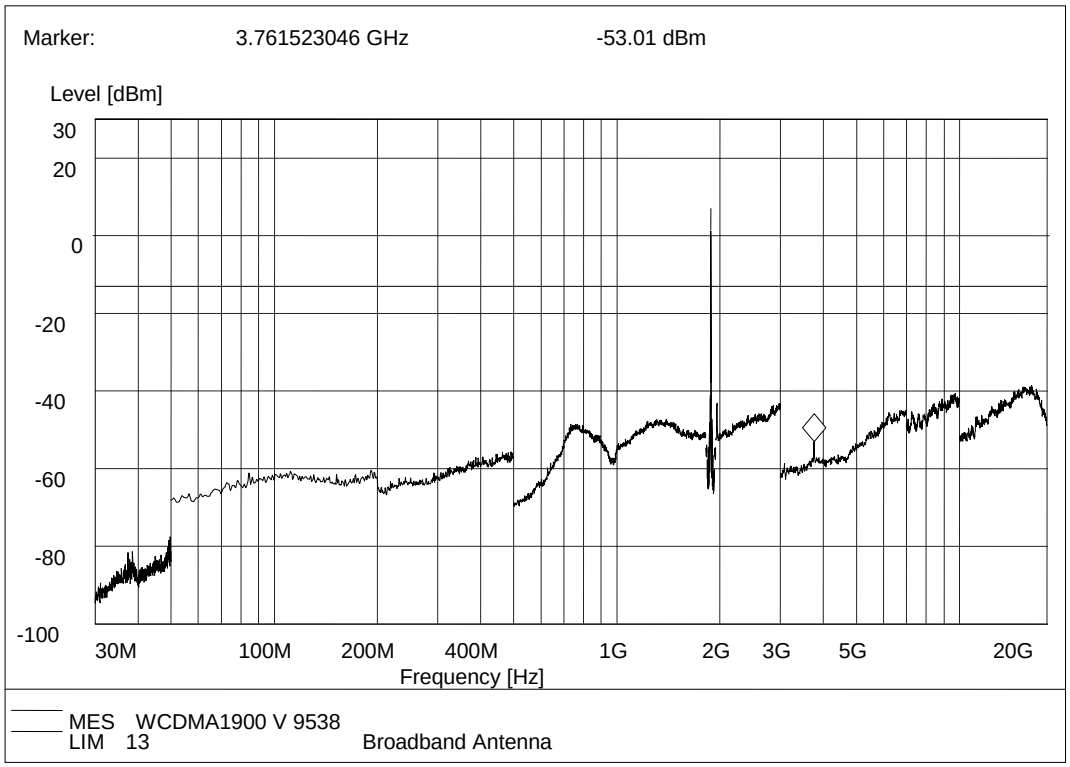
(Plot F.3: WCDMA 1900MHz Channel = 9400, Test Antenna Horizontal)



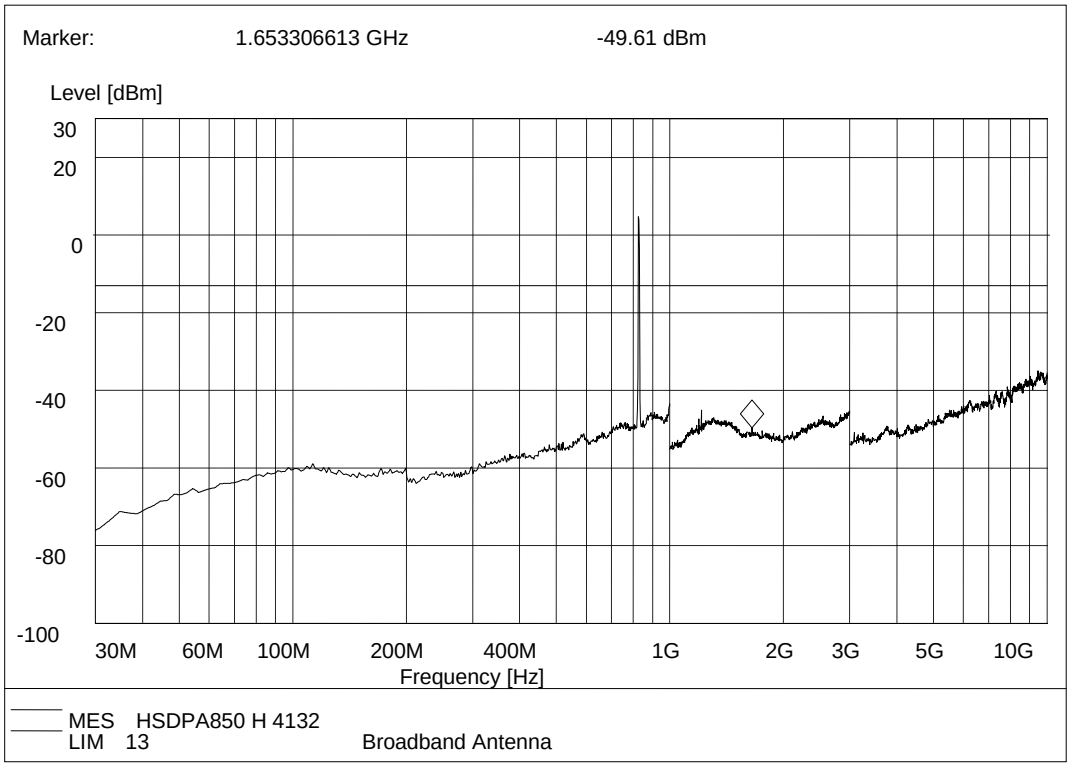
(Plot F.4: WCDMA 1900MHz Channel = 9400, Test Antenna Vertical)



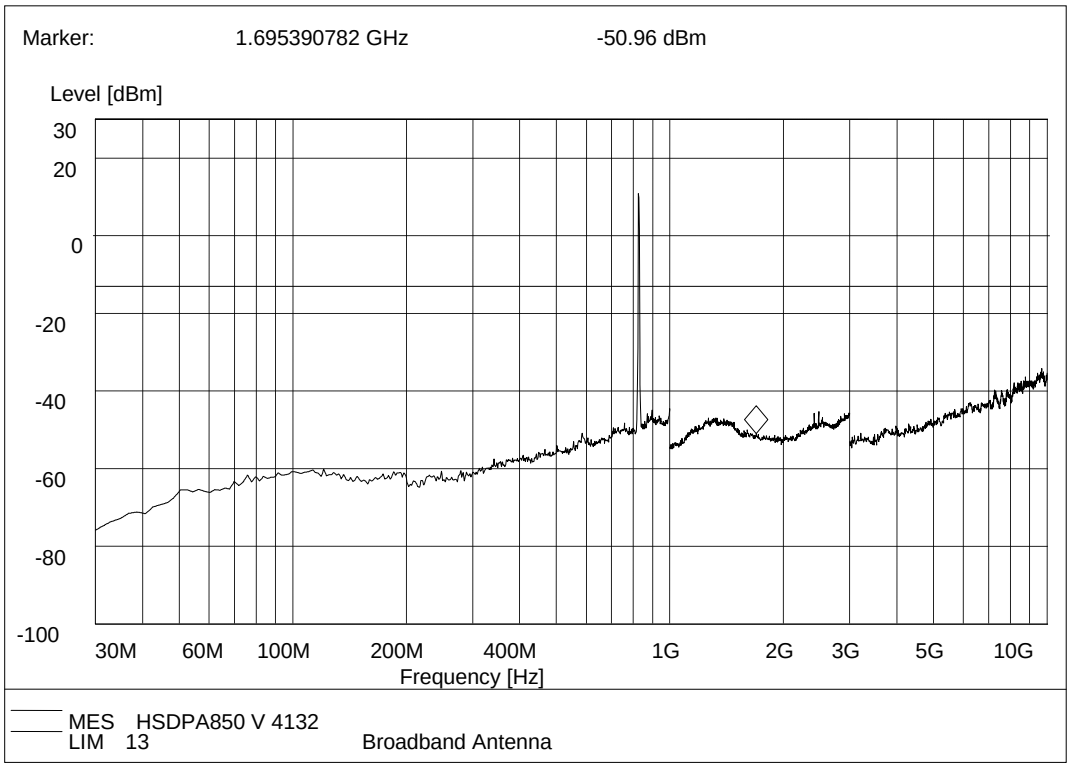
(Plot F.5: WCDMA 1900MHz Channel = 9538, Test Antenna Horizontal)



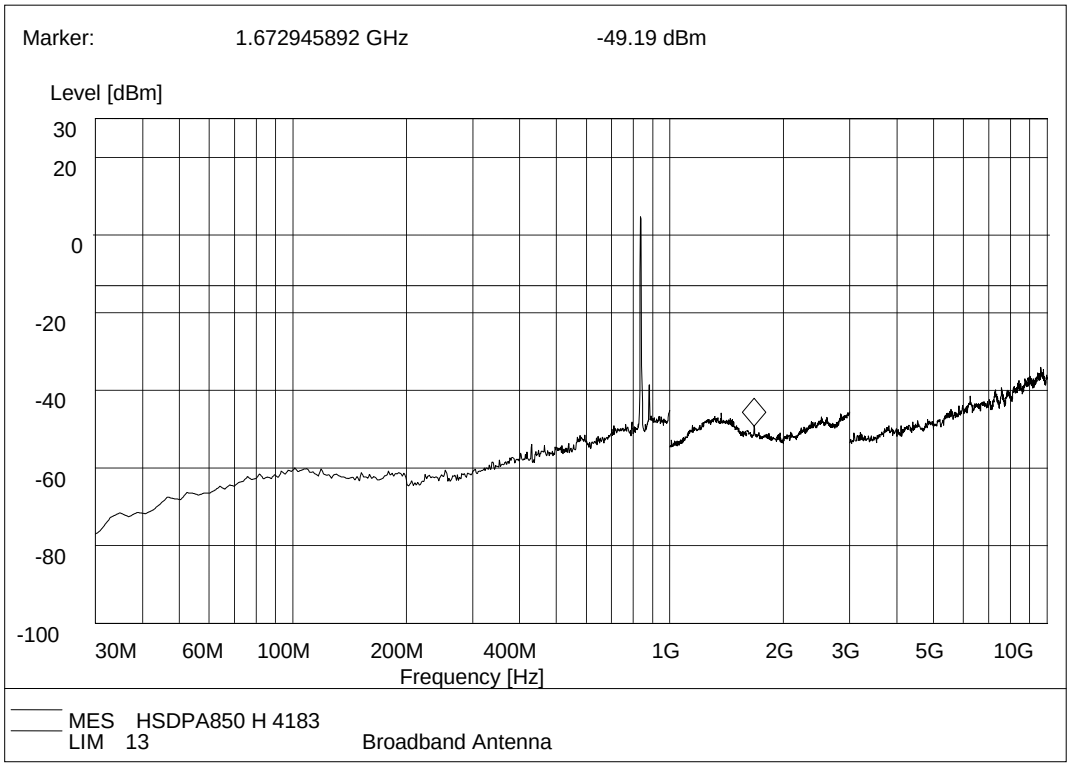
(Plot F.6: WCDMA 1900MHz Channel = 9538, Test Antenna Vertical)



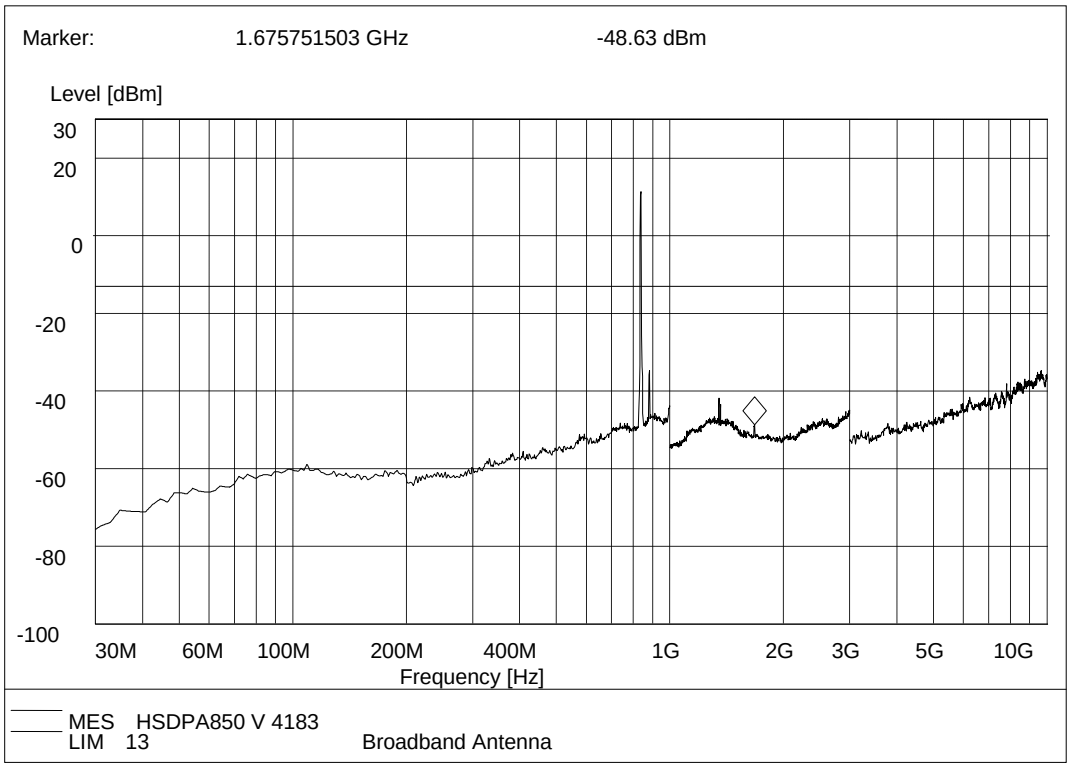
(Plot G.1: HSDPA 850MHz Channel = 4132, Test Antenna Horizontal)



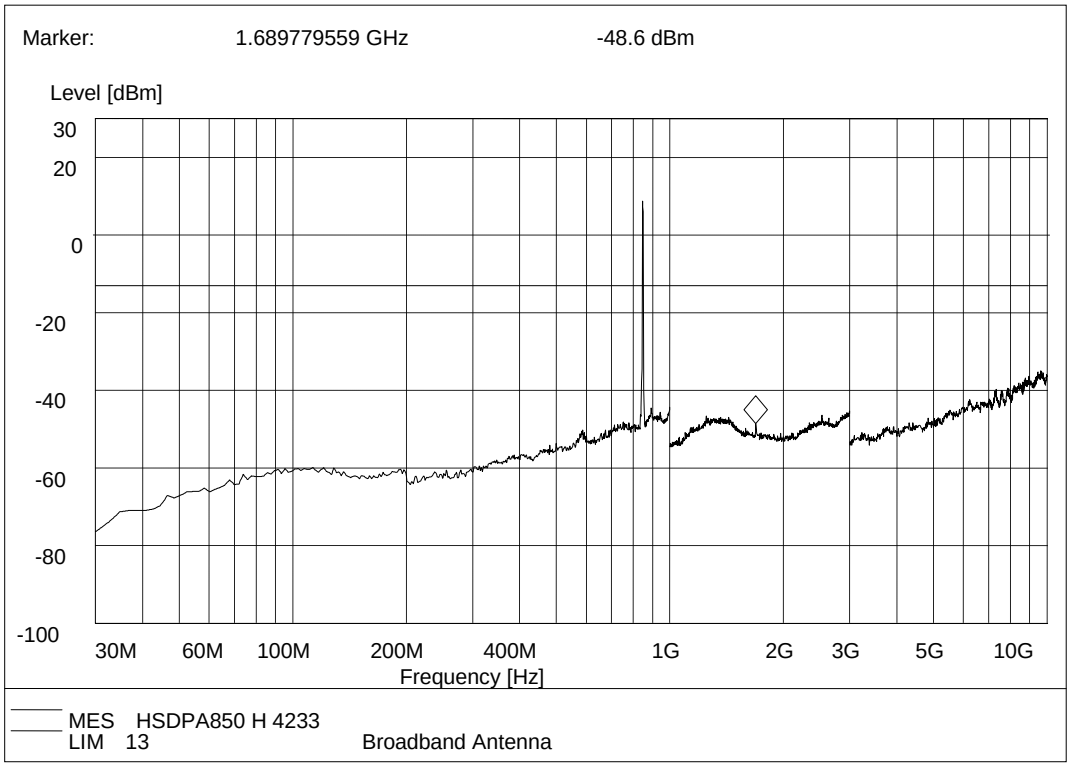
(Plot G.2: HSDPA 850MHz Channel = 4132, Test Antenna Vertical)



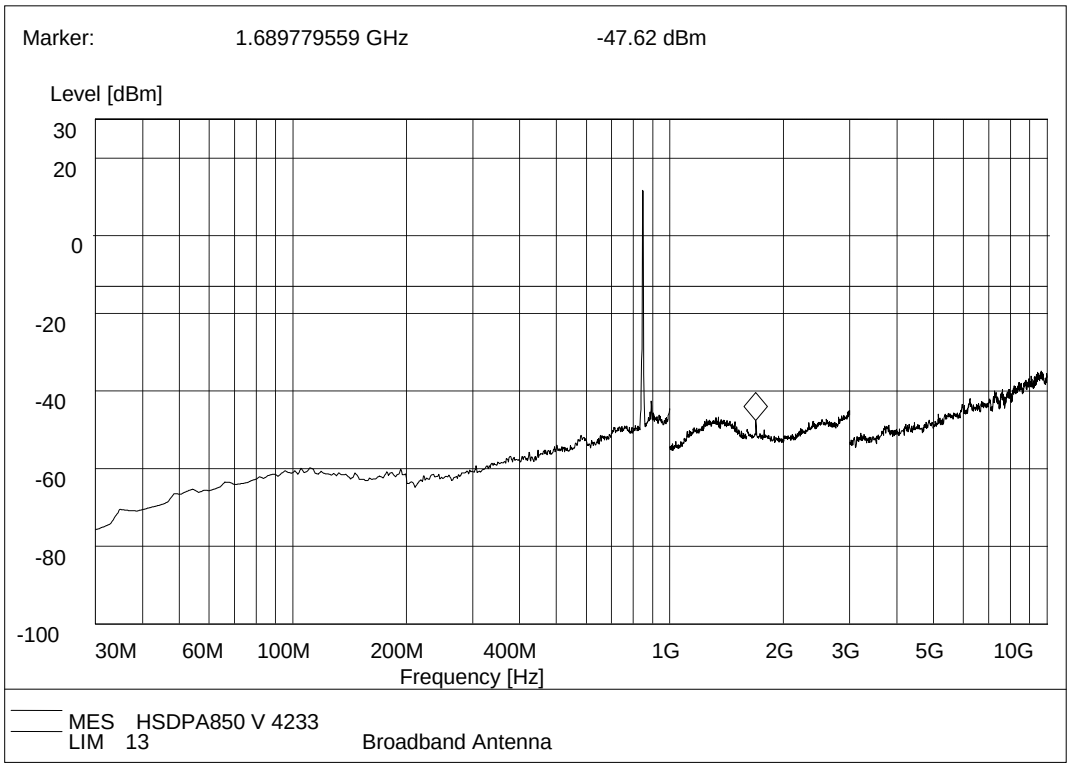
(Plot G.3: HSDPA 850MHz Channel = 4183, Test Antenna Horizontal)



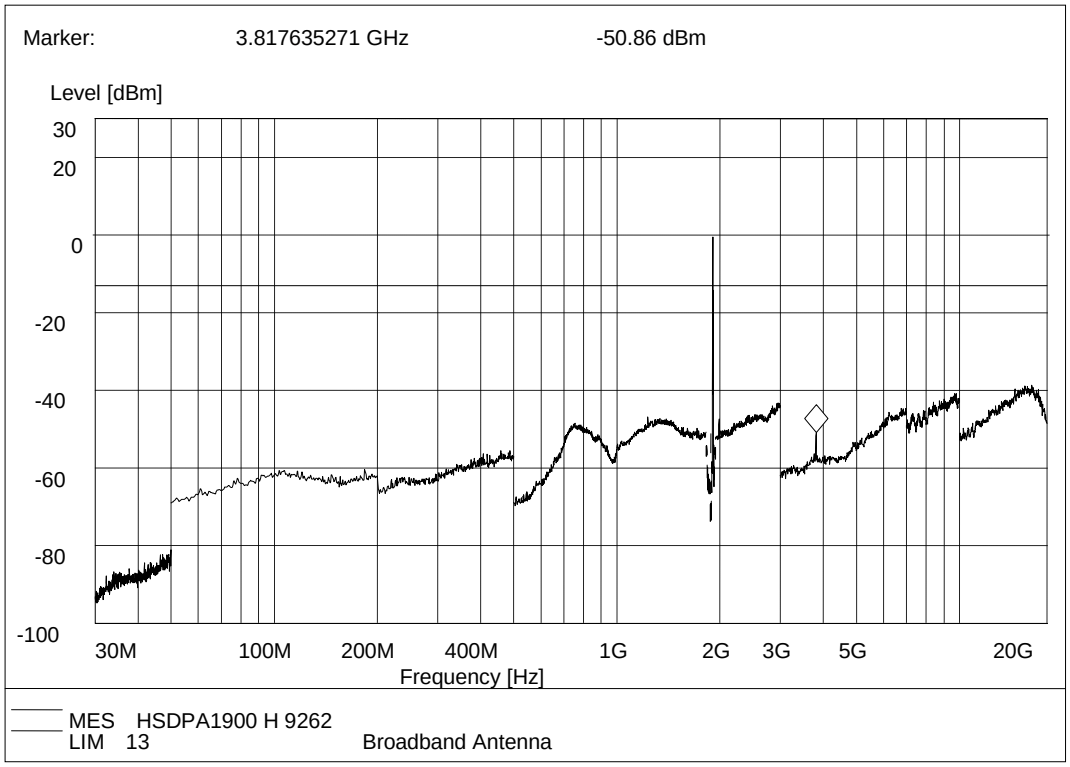
(Plot G.4: HSDPA 850MHz Channel = 4183, Test Antenna Vertical)



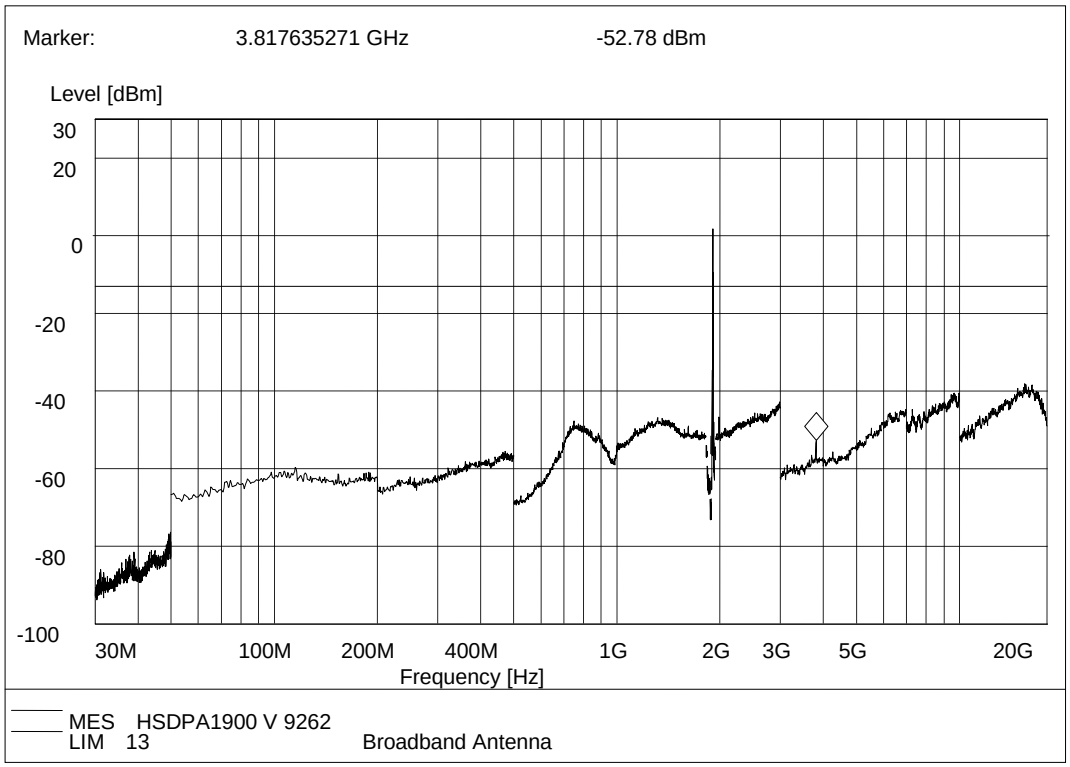
(Plot G.5: HSDPA 850MHz Channel = 4233, Test Antenna Horizontal)



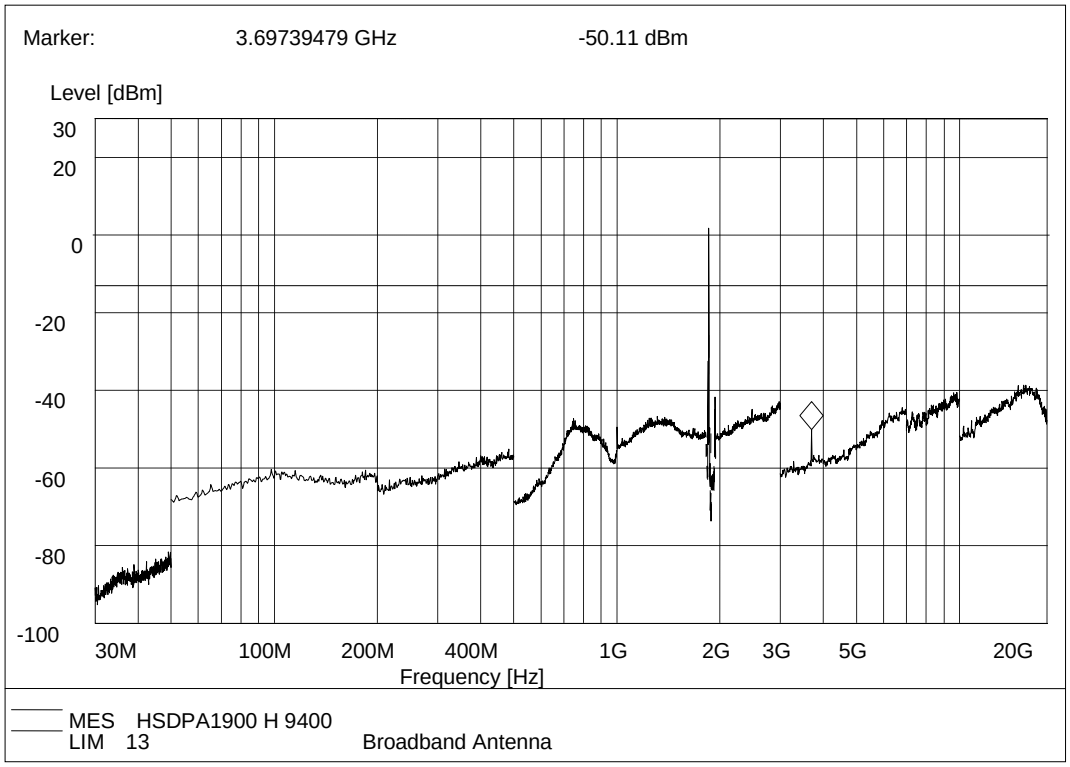
(Plot G.6: HSDPA 850MHz Channel = 4233, Test Antenna Vertical)



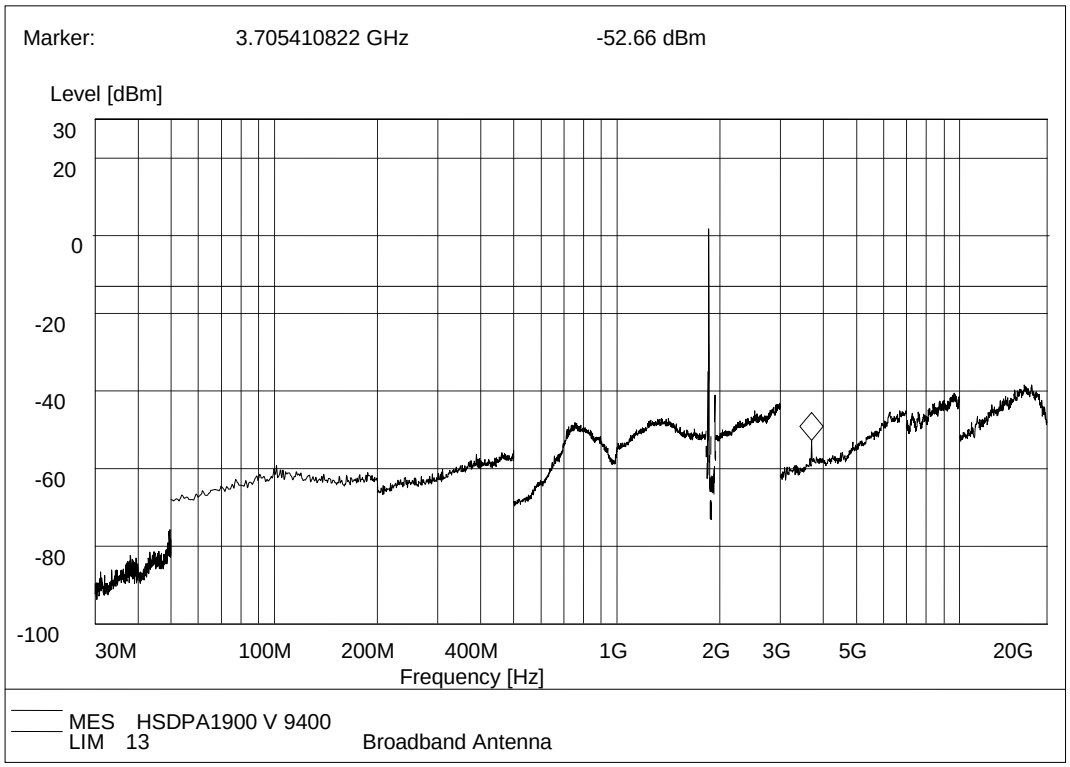
(Plot H.1: HSDPA 1900 MHz Channel = 9262, Test Antenna Horizontal)



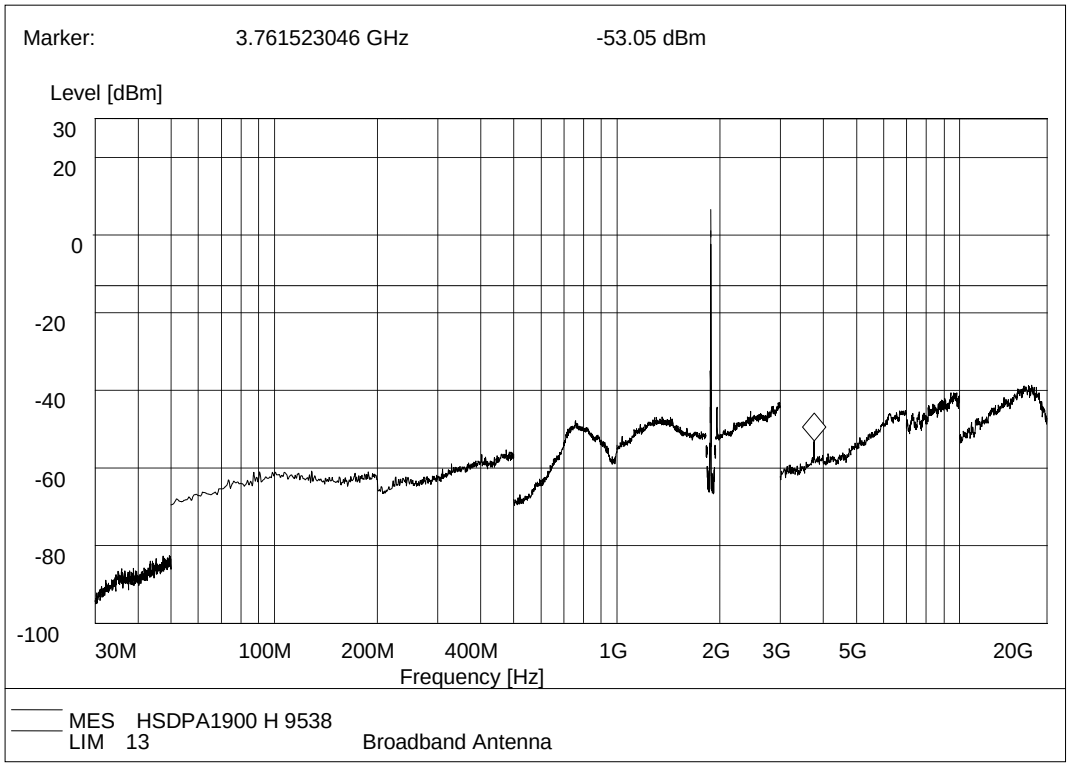
(Plot H.2: HSDPA 1900 MHz Channel = 9262, Test Antenna Vertical)



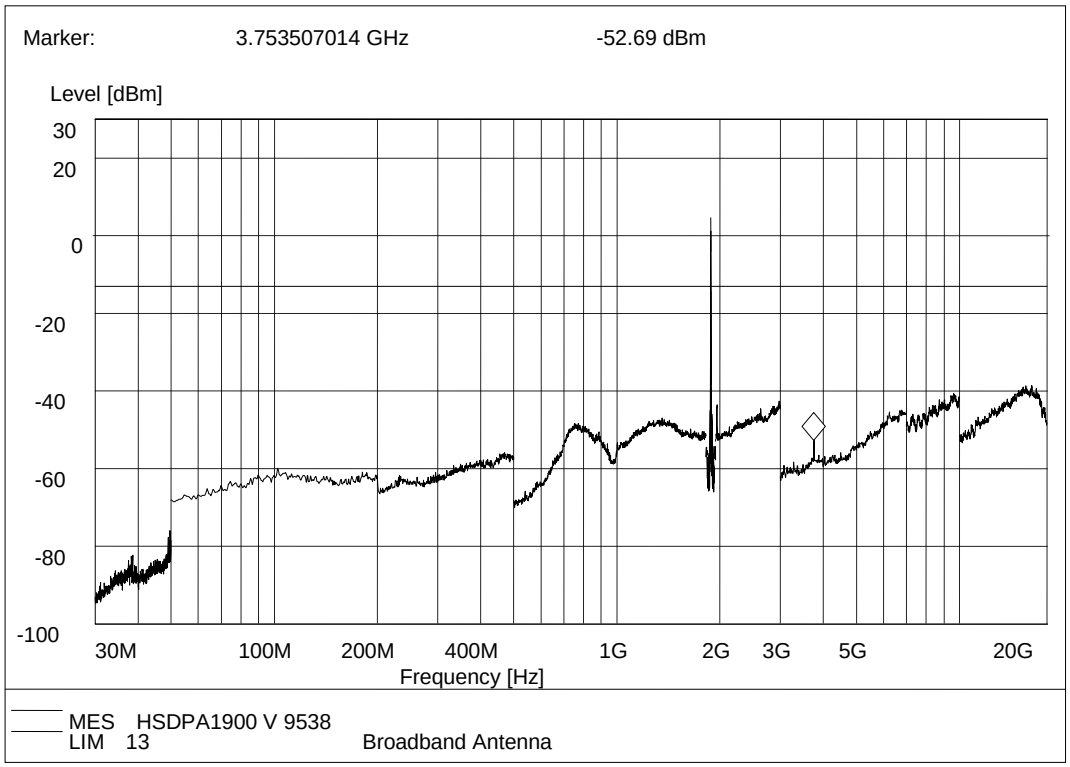
(Plot H.3: HSDPA 1900 MHz Channel = 9400, Test Antenna Horizontal)



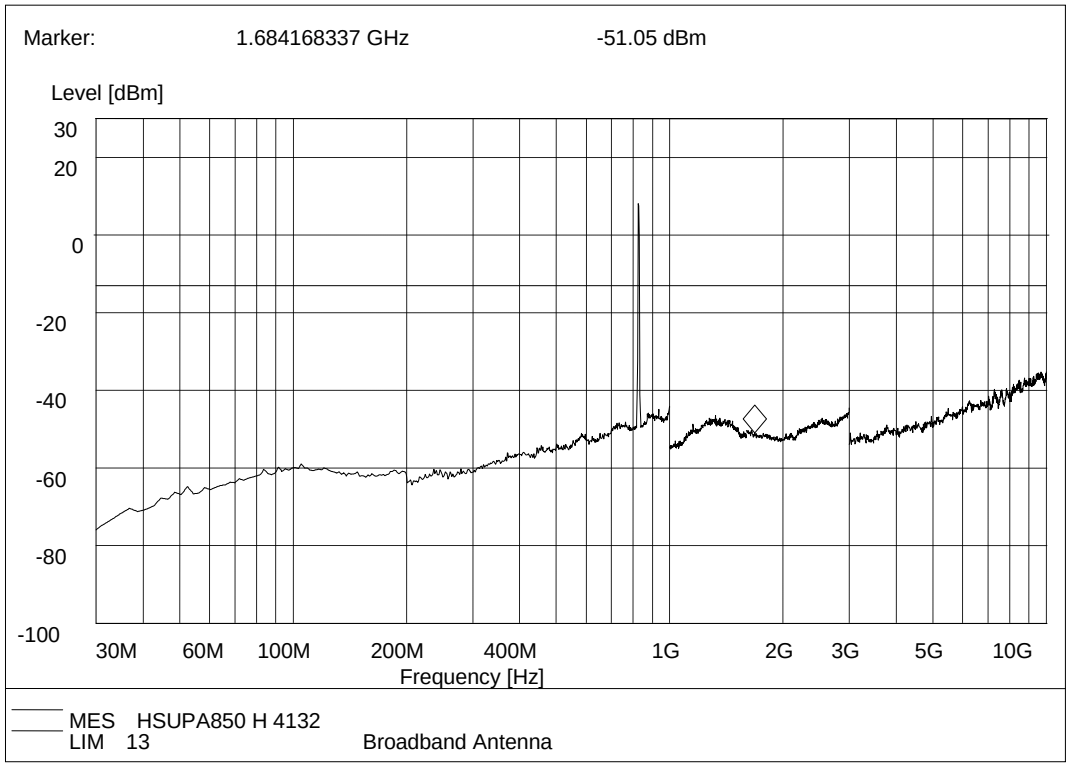
(Plot H.4: HSDPA 1900 MHz Channel = 9400, Test Antenna Vertical)



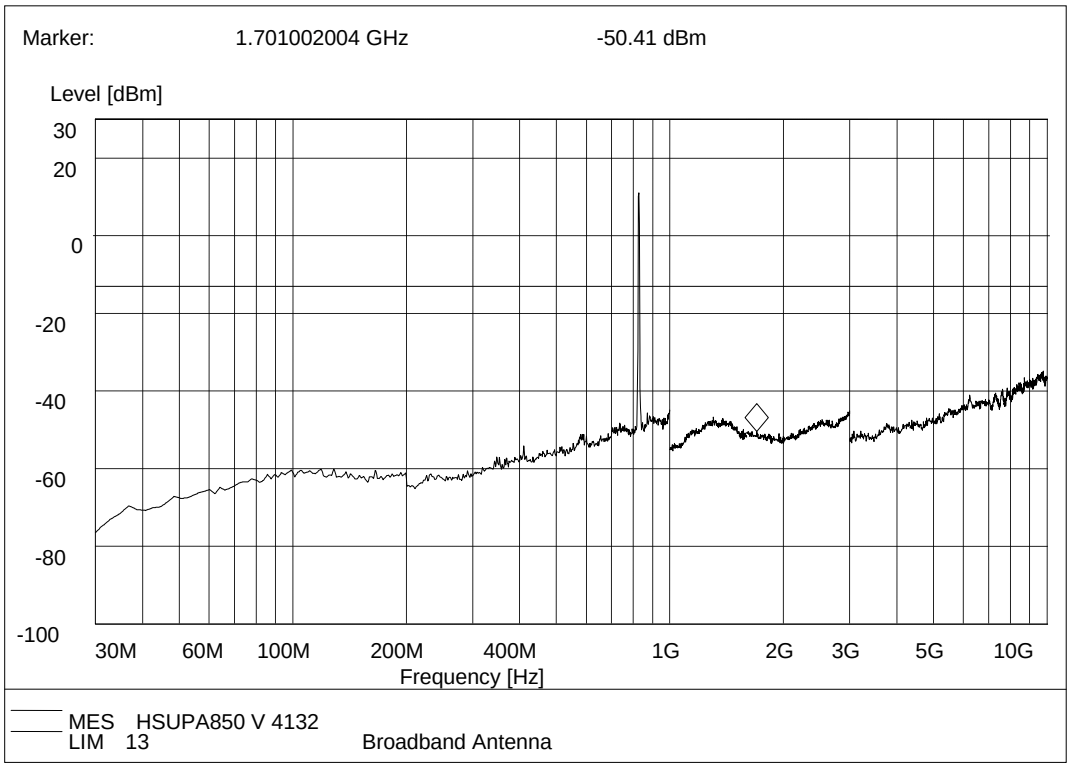
(Plot H.5: HSDPA 1900 MHz Channel = 9538, Test Antenna Horizontal)



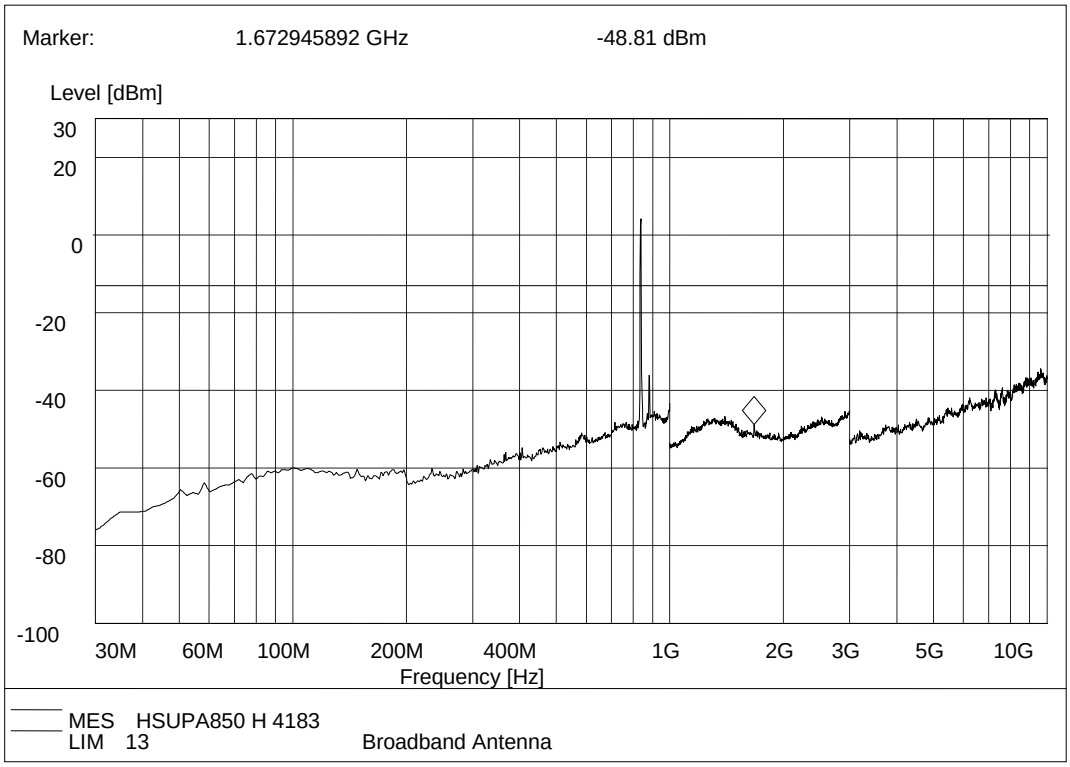
(Plot H.6: HSDPA 1900 MHz Channel = 9538, Test Antenna Vertical)



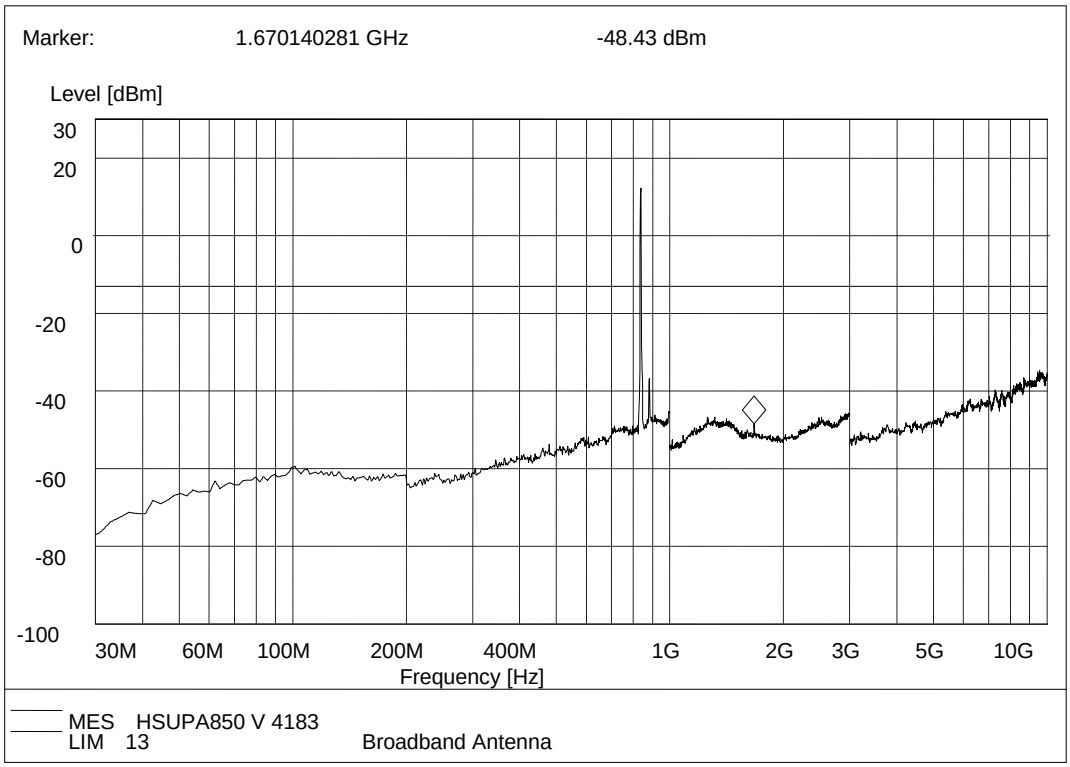
(Plot I.1: HSUPA 850MHz Channel = 4132, Test Antenna Horizontal)



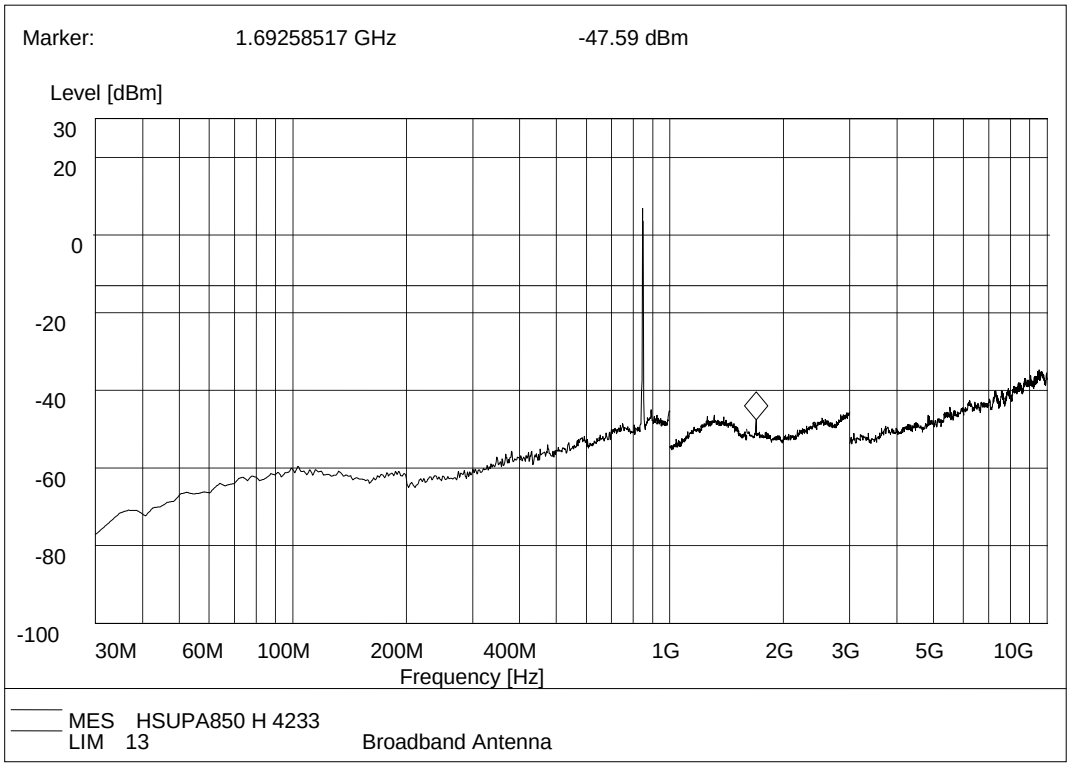
(Plot I.2: HSUPA 850 MHz Channel = 4132, Test Antenna Vertical)



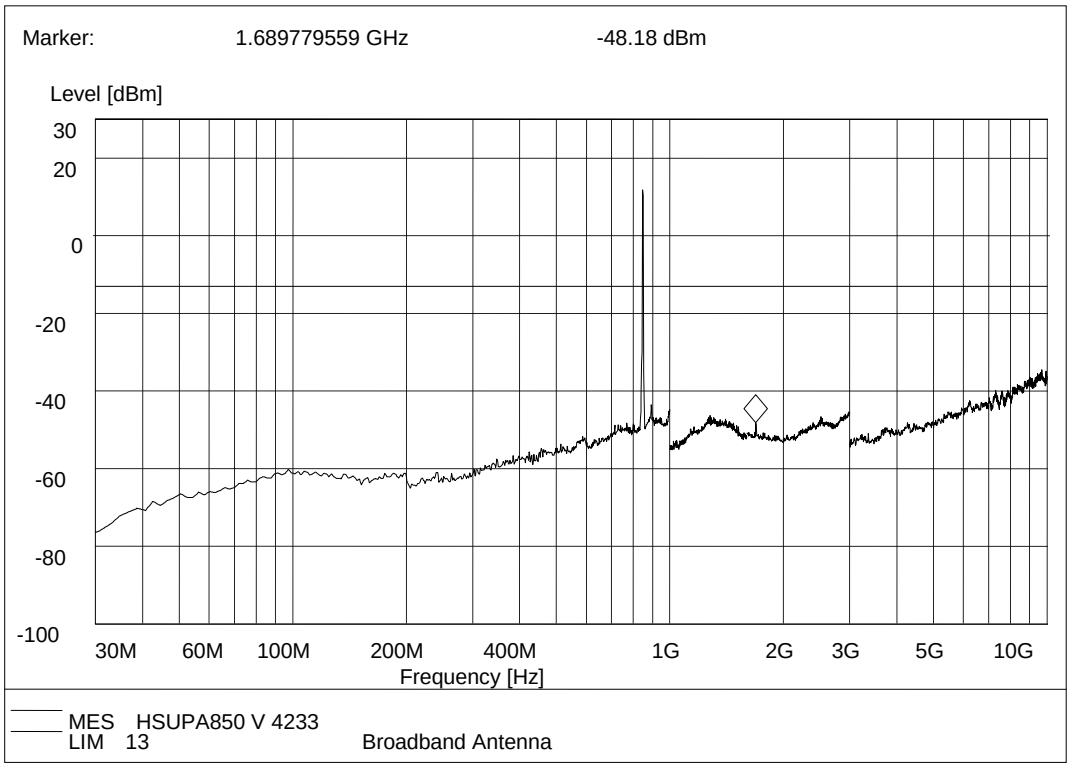
(Plot I.3: HSUPA 850MHz Channel = 4183, Test Antenna Horizontal)



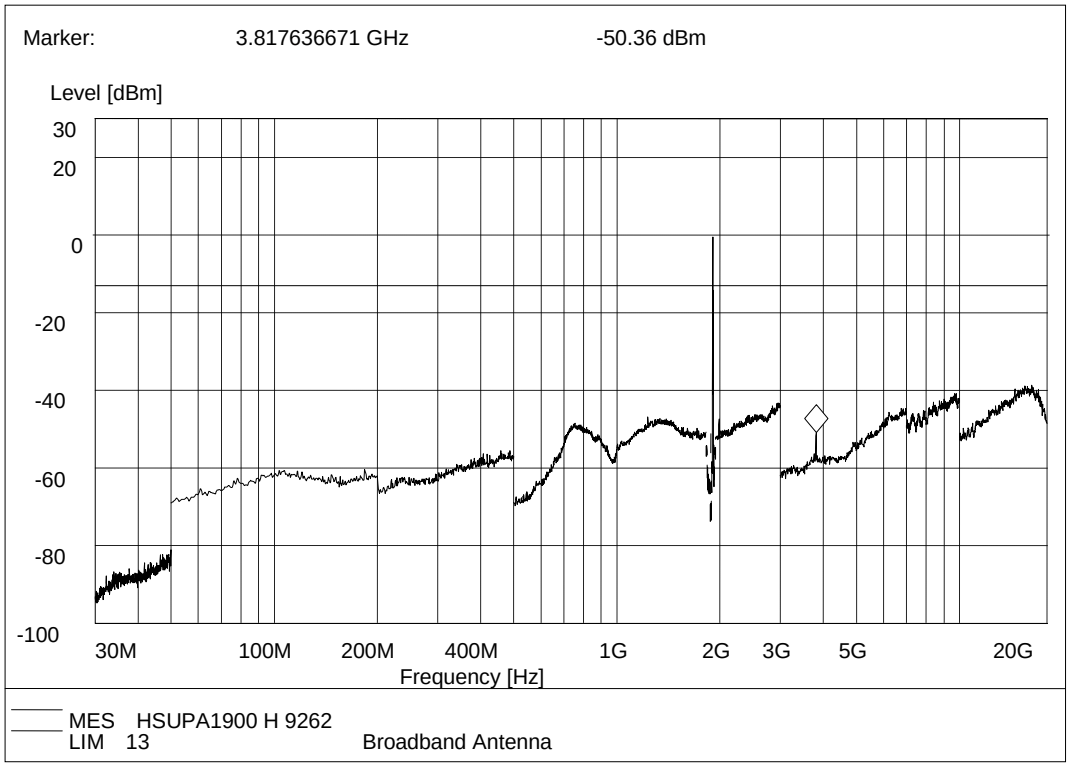
(Plot I.4: HSUPA 850MHz Channel = 4183, Test Antenna Vertical)



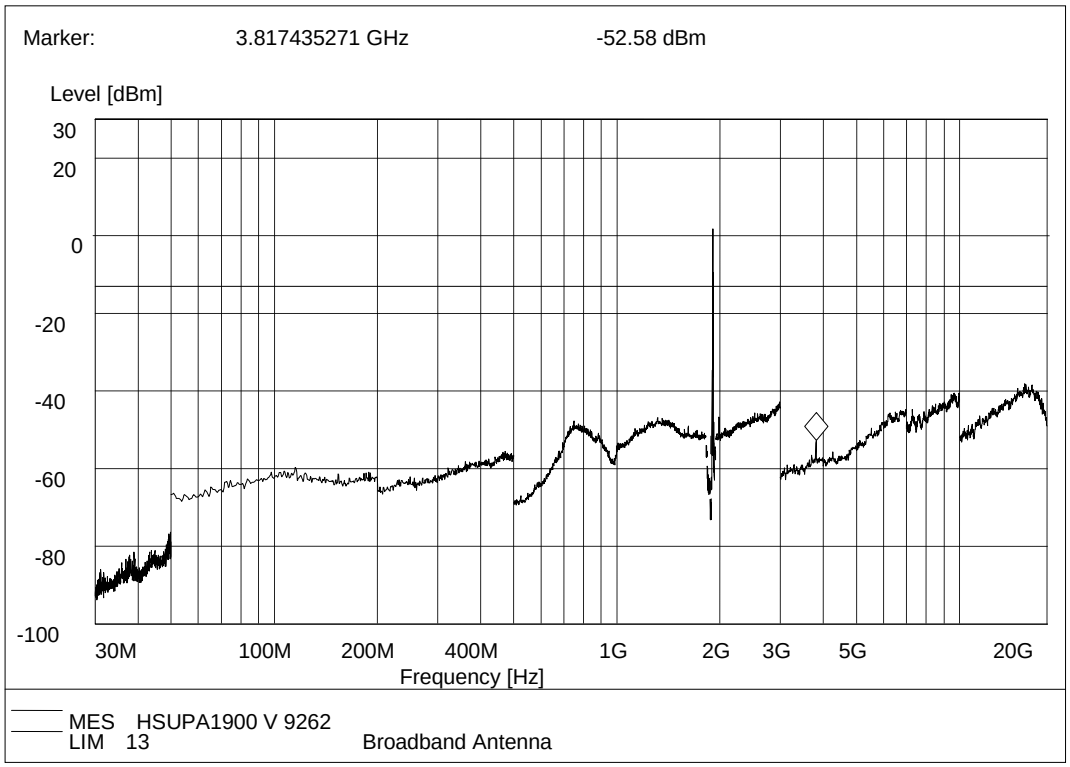
(Plot I.5: HSUPA 850MHz Channel = 4233, Test Antenna Horizontal)



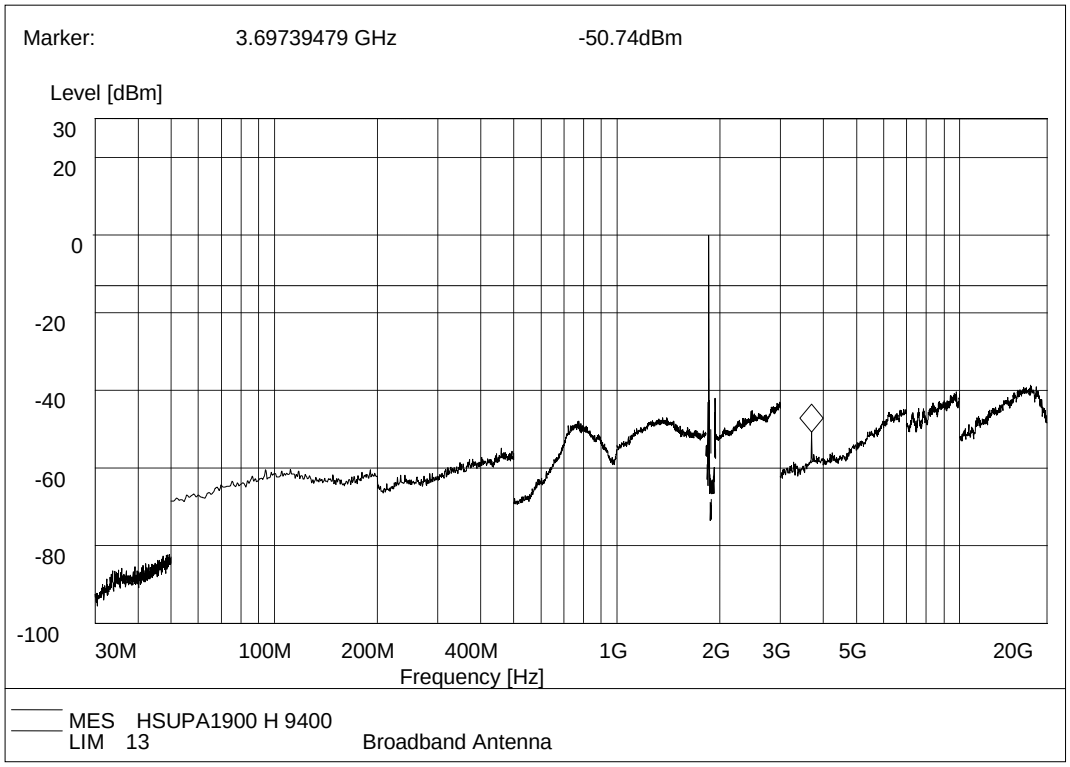
(Plot I.6: HSUPA 850MHz Channel = 4233, Test Antenna Vertical)



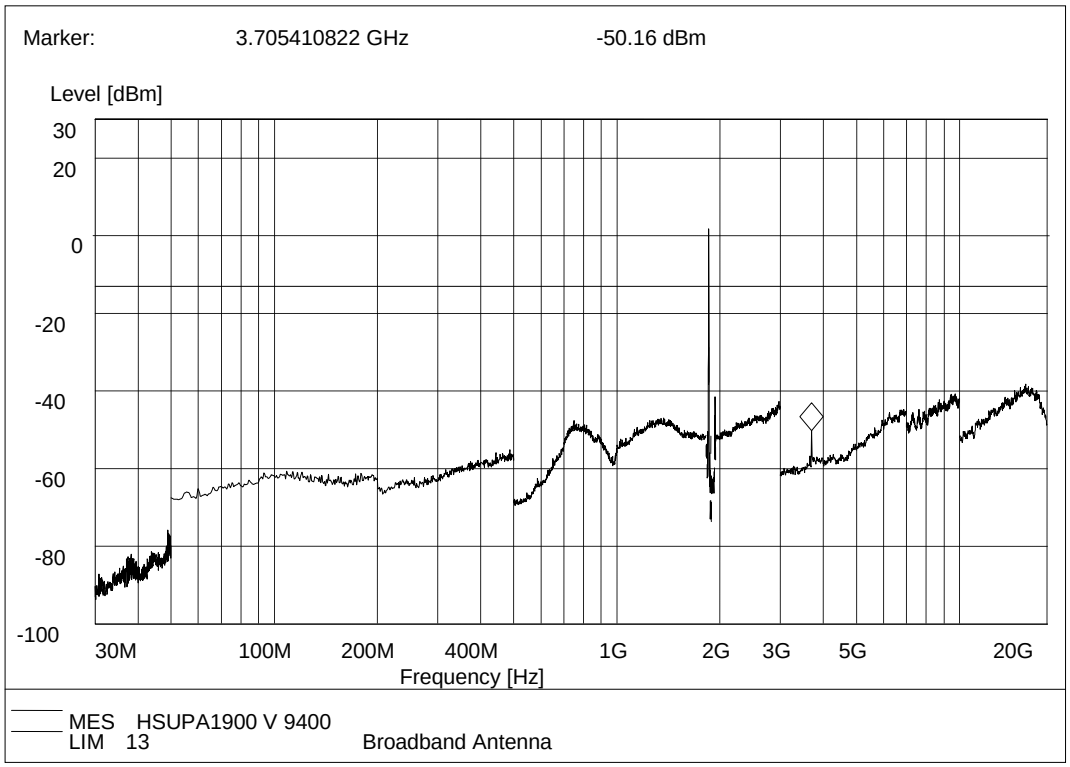
(Plot J.1: HSUPA 1900 MHz Channel = 9262, Test Antenna Horizontal)



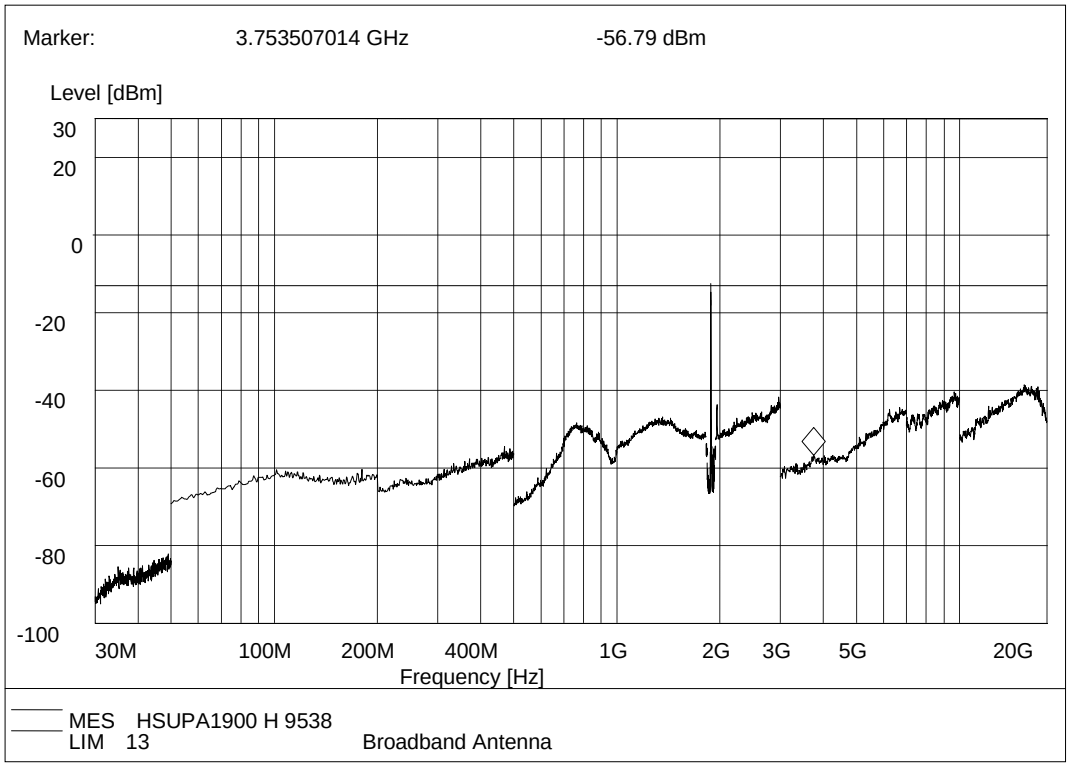
(Plot J.2: HSUPA 1900 MHz Channel = 9262, Test Antenna Vertical)



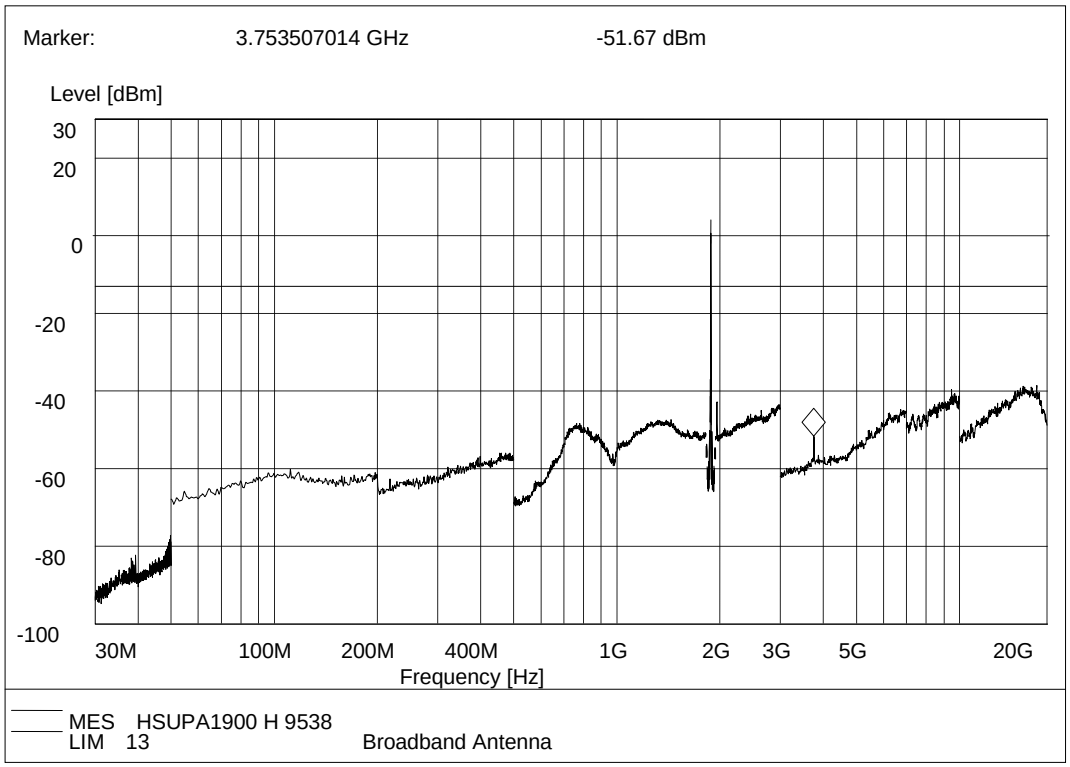
(Plot J.3: HSUPA 1900 MHz Channel = 9400, Test Antenna Horizontal)



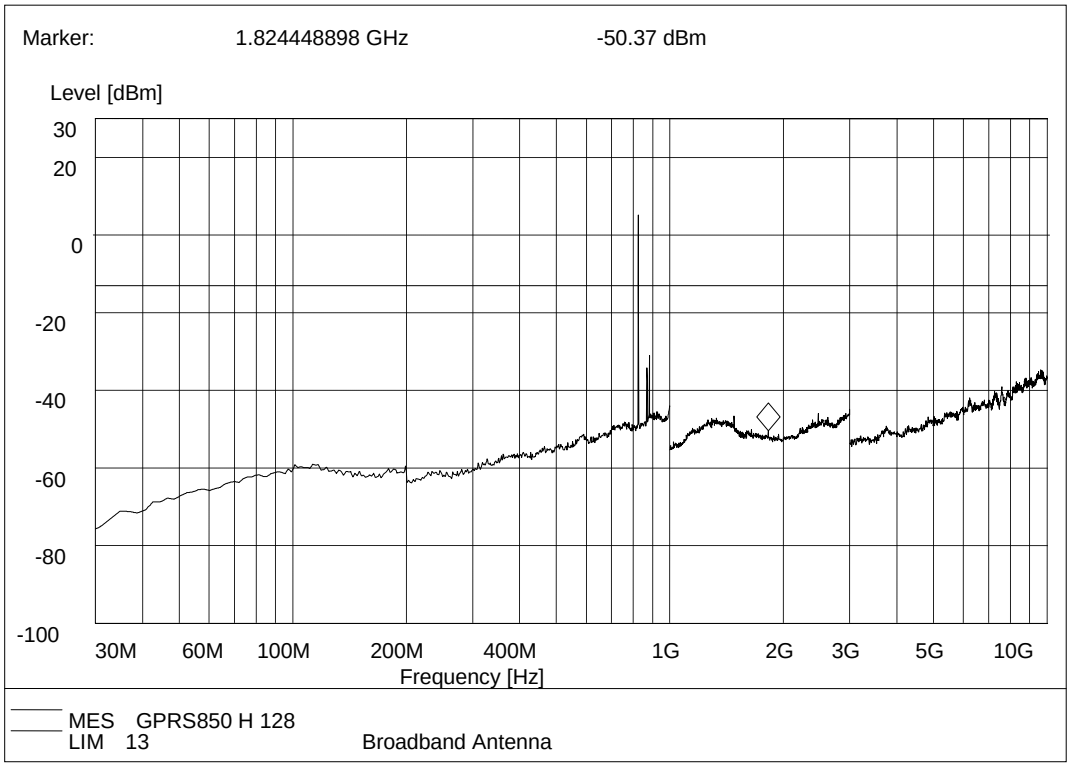
(Plot J.4: HSUPA 1900 MHz Channel = 9400, Test Antenna Vertical)



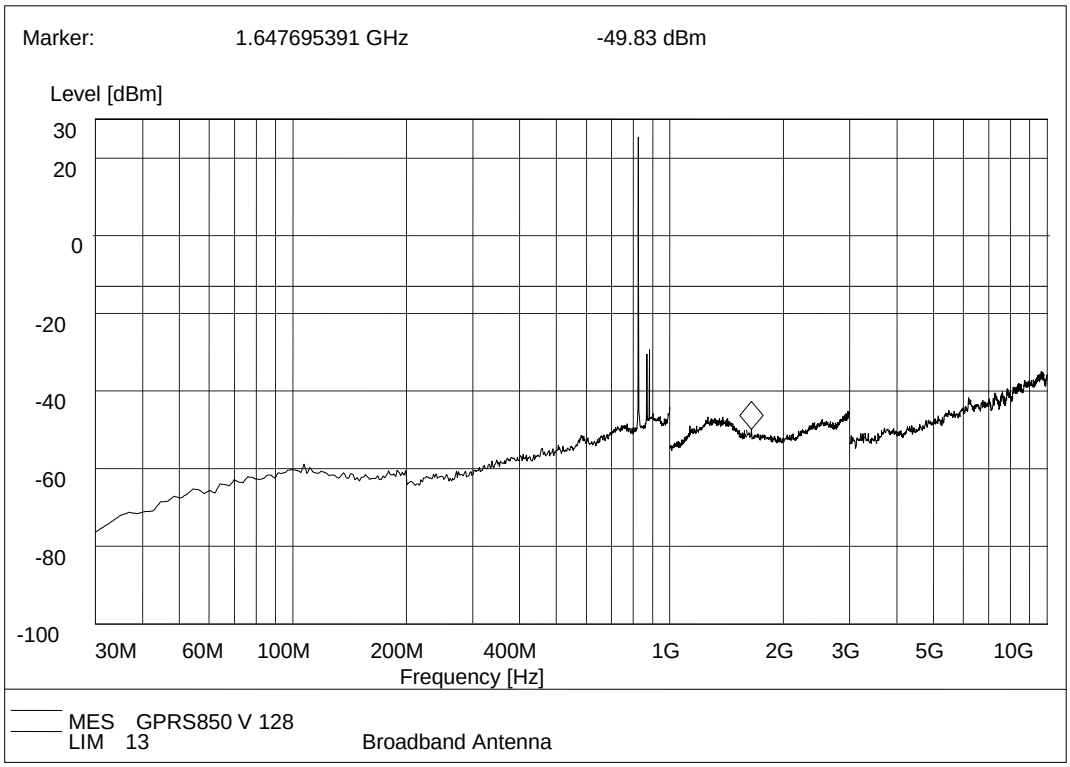
(Plot J.5: HSUPA 1900 MHz Channel = 9538, Test Antenna Horizontal)



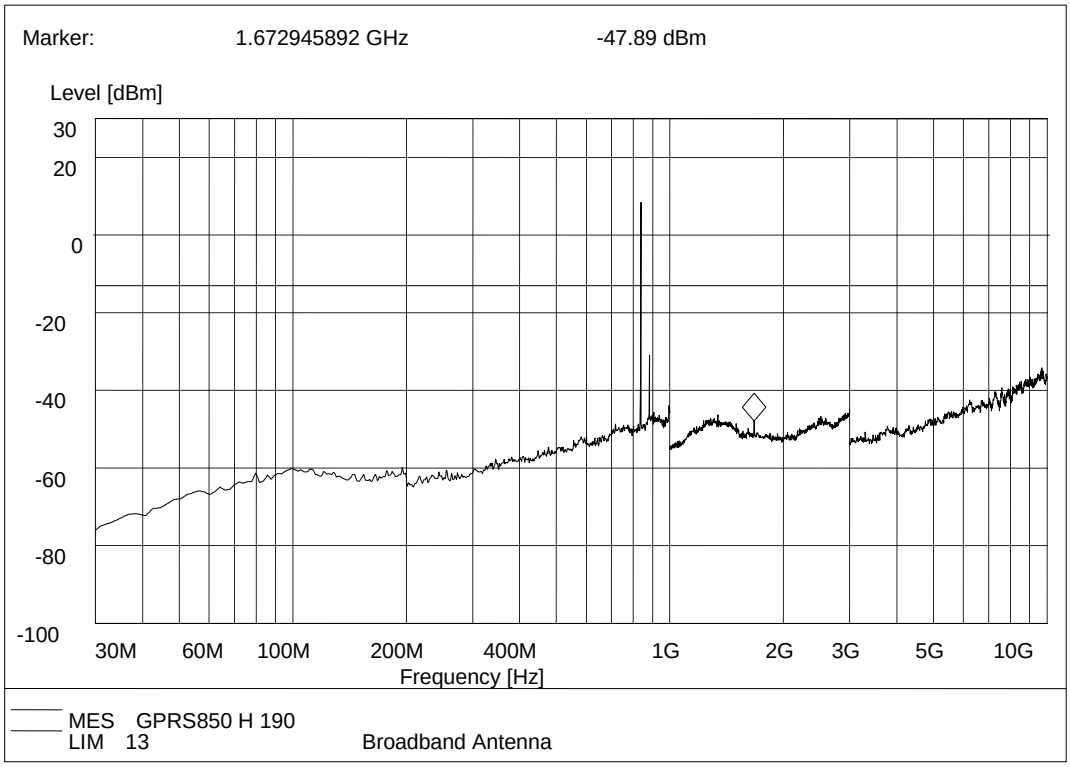
(Plot J.6: HSUPA 1900 MHz Channel = 9538, Test Antenna Vertical)



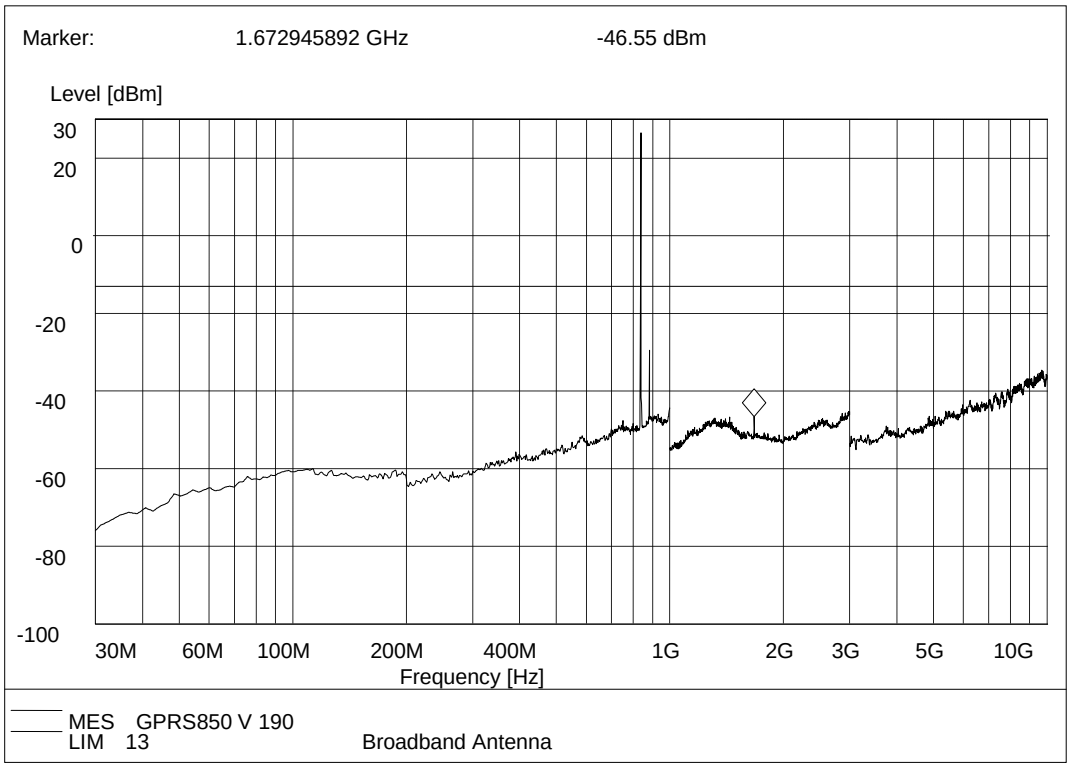
(Plot K.1: GPRS850MHz Channel = 128, Test Antenna Horizontal)



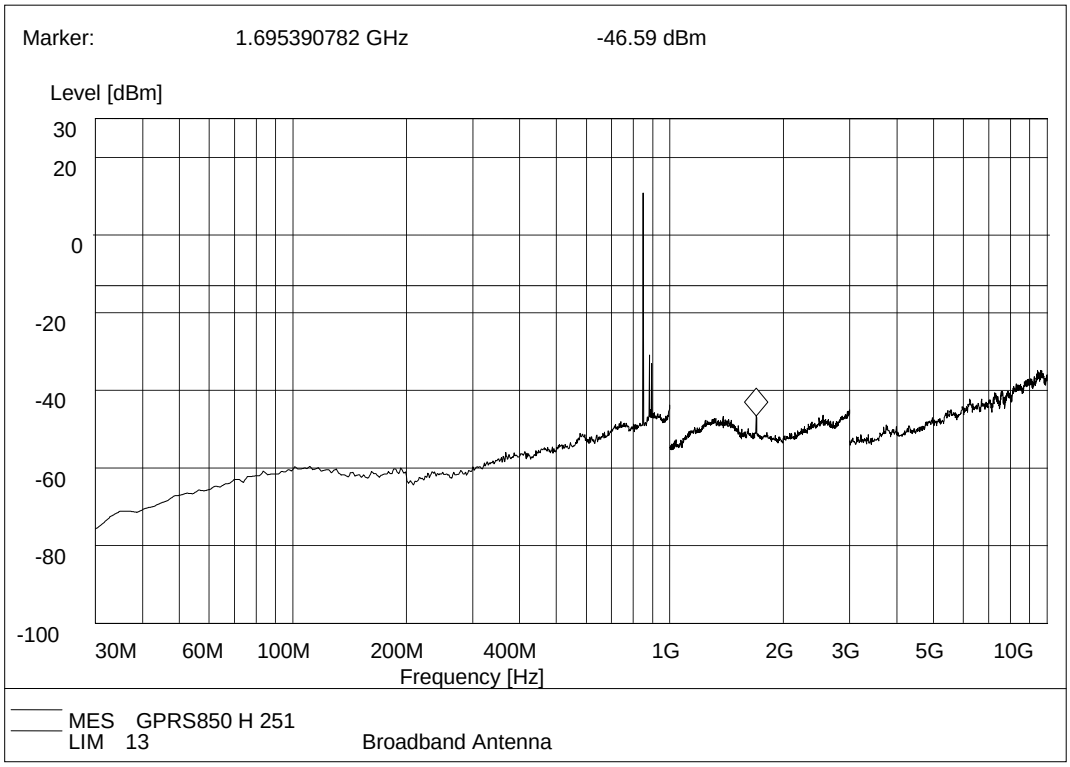
(Plot K.2: GPRS850 MHz Channel = 128, Test Antenna Vertical)



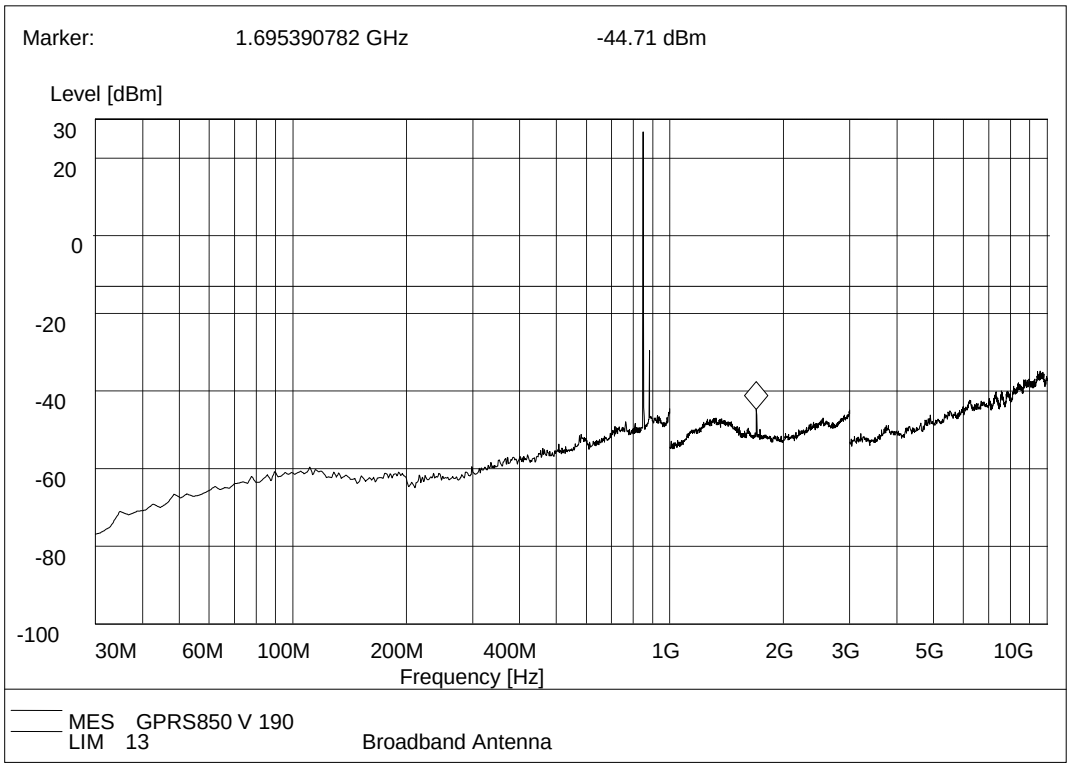
(Plot K.3: GPRS850MHz Channel = 190, Test Antenna Horizontal)



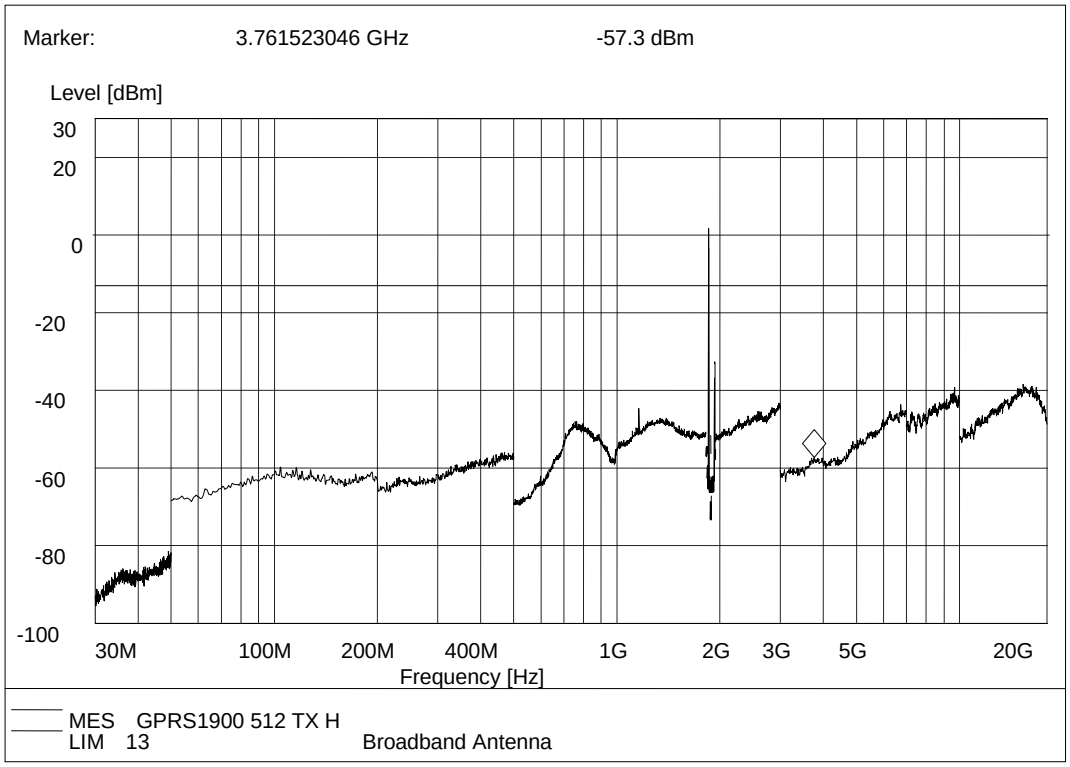
(Plot K.4: GPRS850MHz Channel = 190, Test Antenna Vertical)



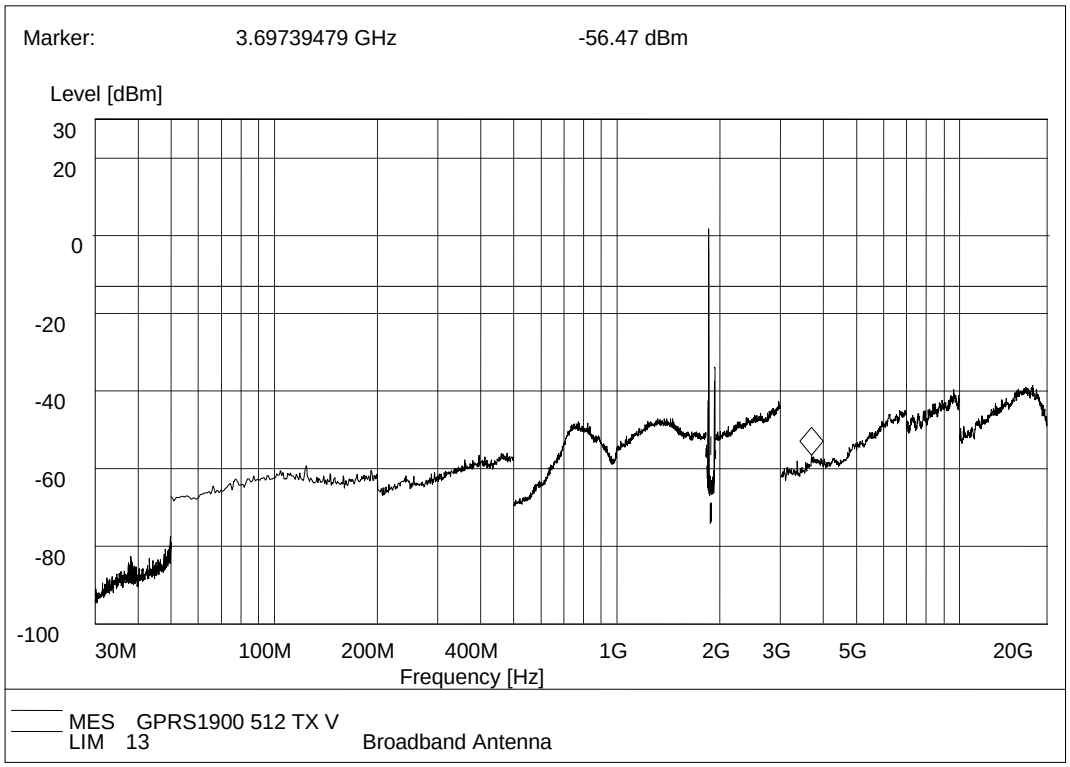
(Plot K.5: GPRS850MHz Channel = 251, Test Antenna Horizontal)



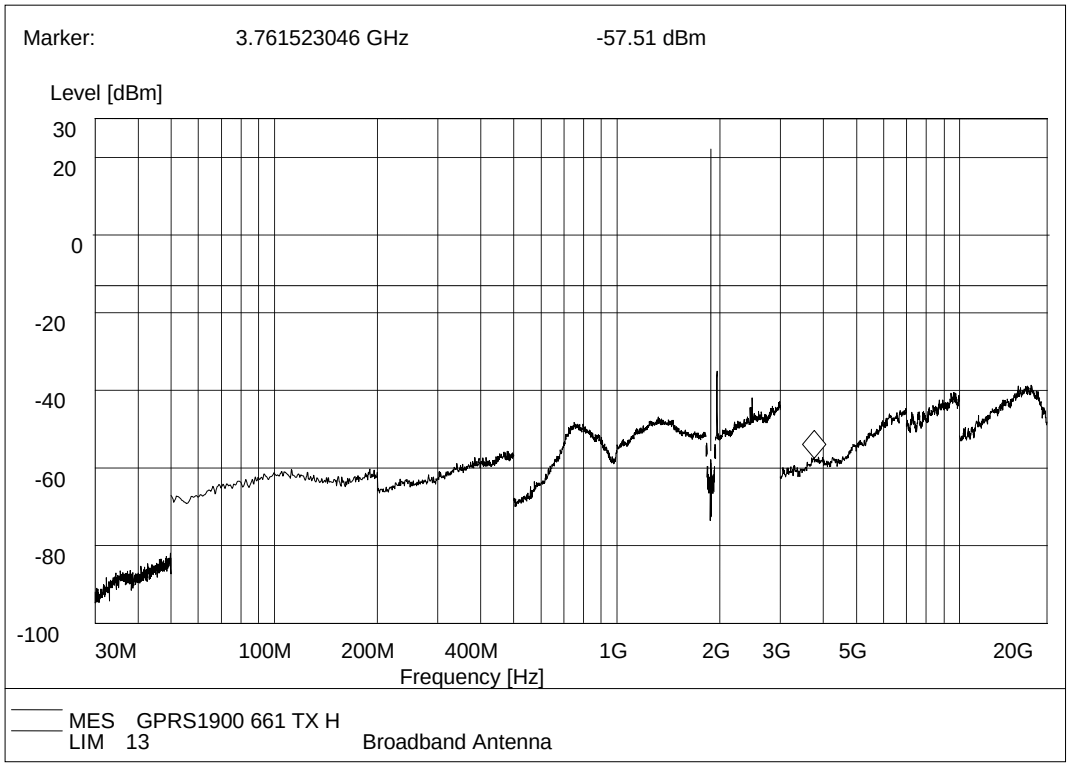
(Plot K.6: GPRS850MHz Channel = 251, Test Antenna Vertical)



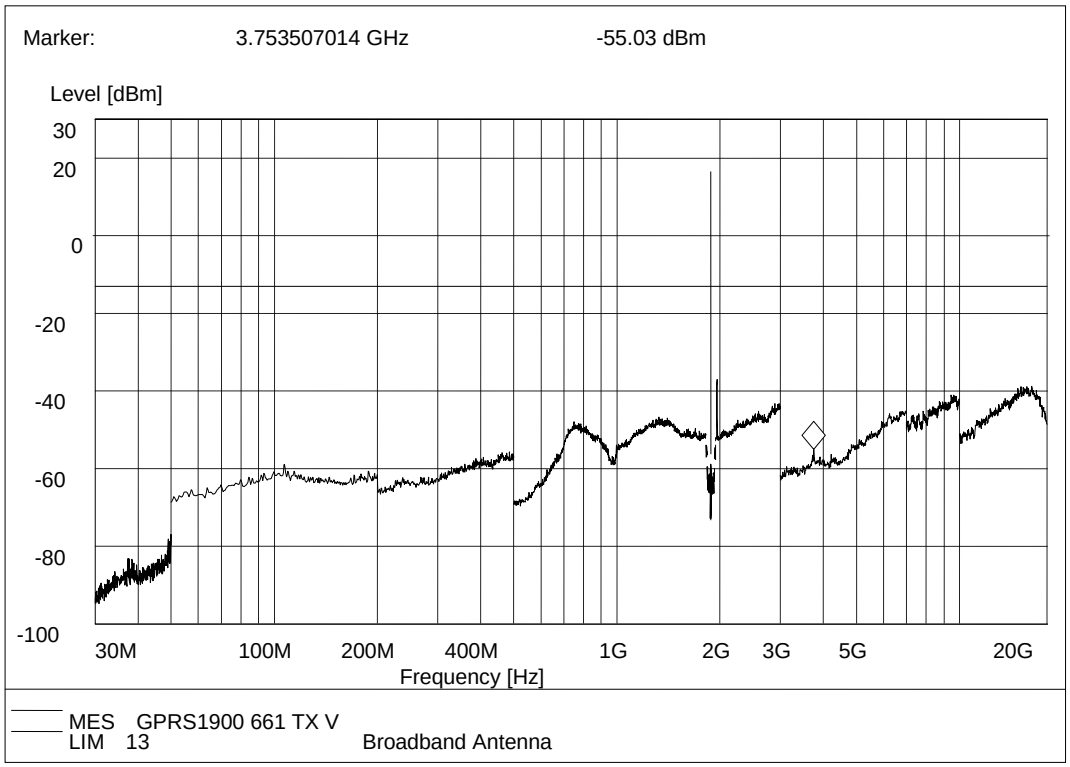
(Plot L.1: GPRS1900 MHz Channel = 512, Test Antenna Horizontal)



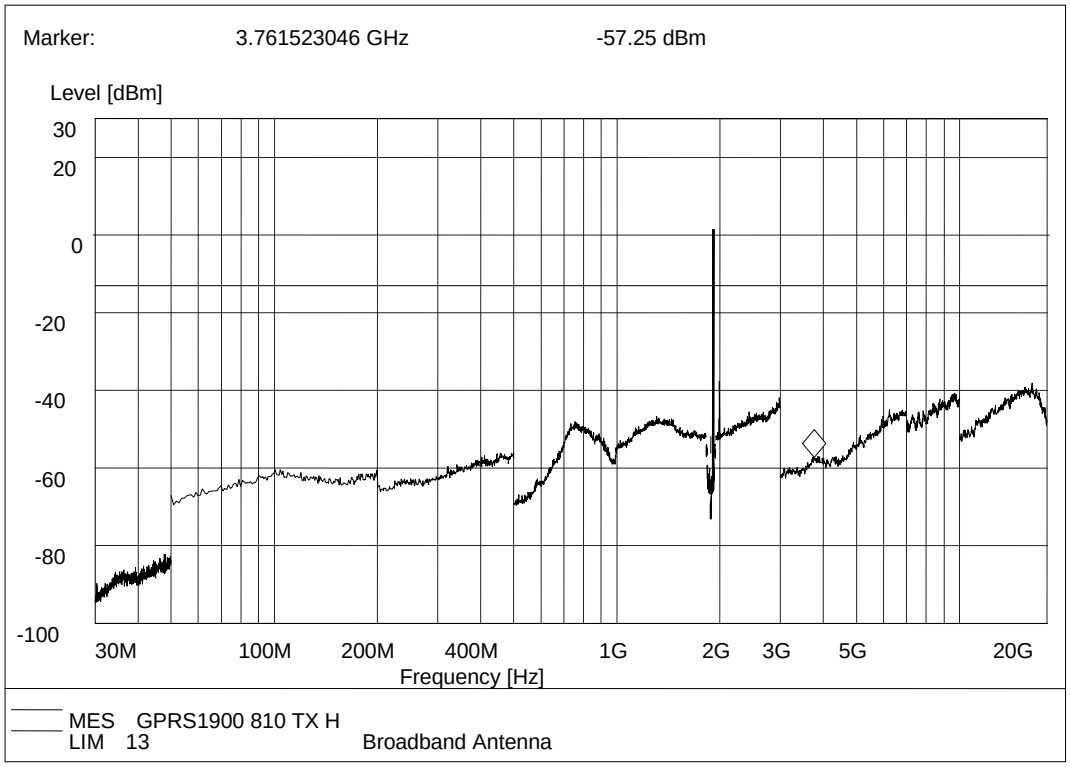
(Plot L.2: GPRS1900 MHz Channel = 512, Test Antenna Vertical)



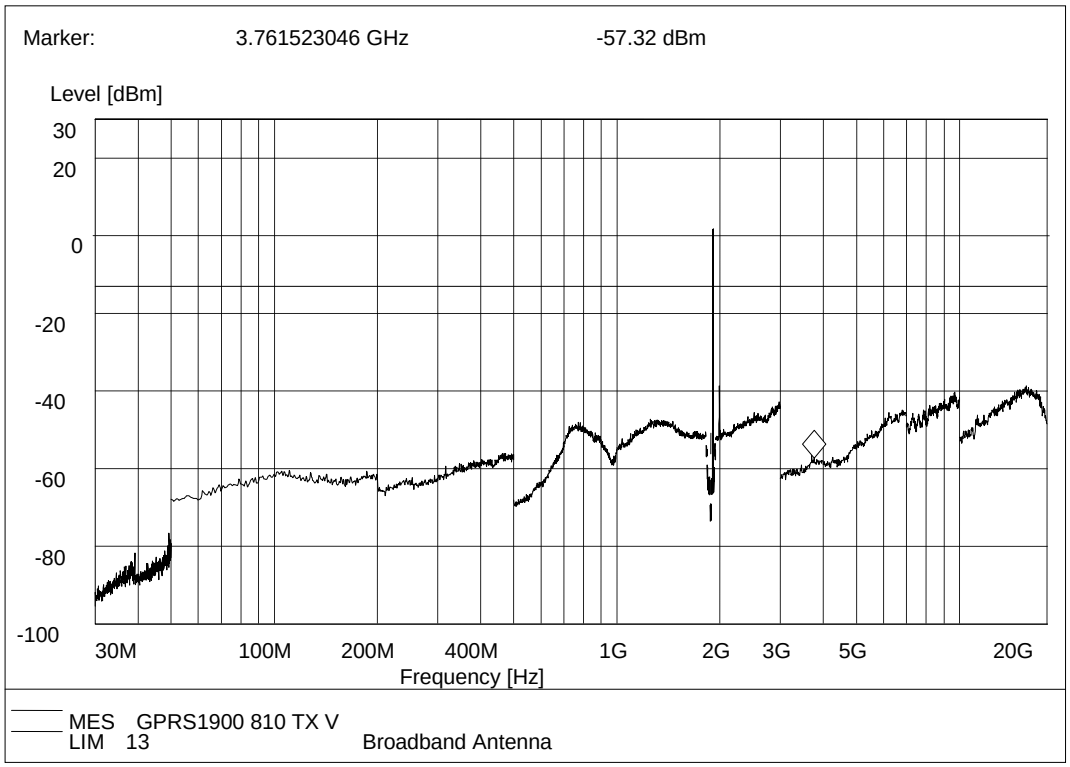
(Plot L.3: GPRS1900 MHz Channel = 661, Test Antenna Horizontal)



(Plot L.4: GPRS1900 MHz Channel = 661, Test Antenna Vertical)



(Plot L.5: GPRS1900 MHz Channel = 810, Test Antenna Horizontal)



(Plot L.6: GPRS1900 MHz Channel = 810, Test Antenna Vertical)

Annex A Accreditation Certificate

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L1659)

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd.

Building 28/29, Shigudong, Xili Industrial Area, Xili Street,

Nanshan District, Shenzhen, Guangdong, China

is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence of testing and calibration.

The scope of accreditation is detailed in the attached appendices bearing the same registration number as above. The appendices form an integral part of this certificate.

Date of Issue: 2012-09-29

Date of Expiry: 2015-09-28

Date of Initial Accreditation: 1999-08-03

Date of Update: 2012-09-29

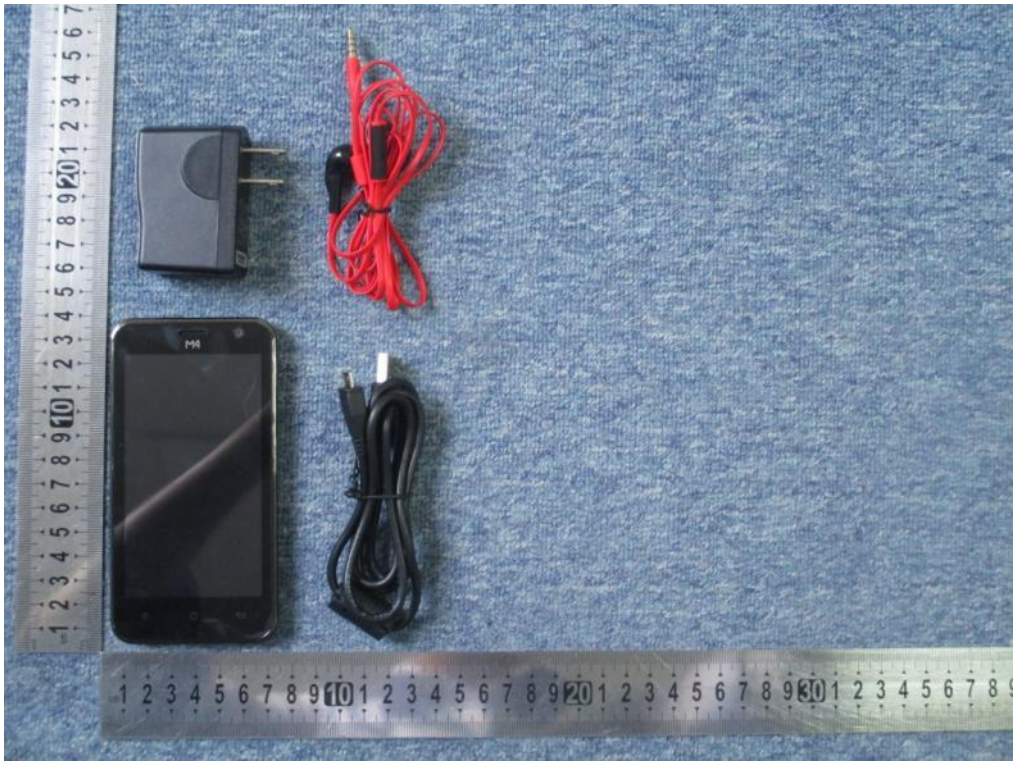
Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA) and Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

No.CNAS AL 2

0005210

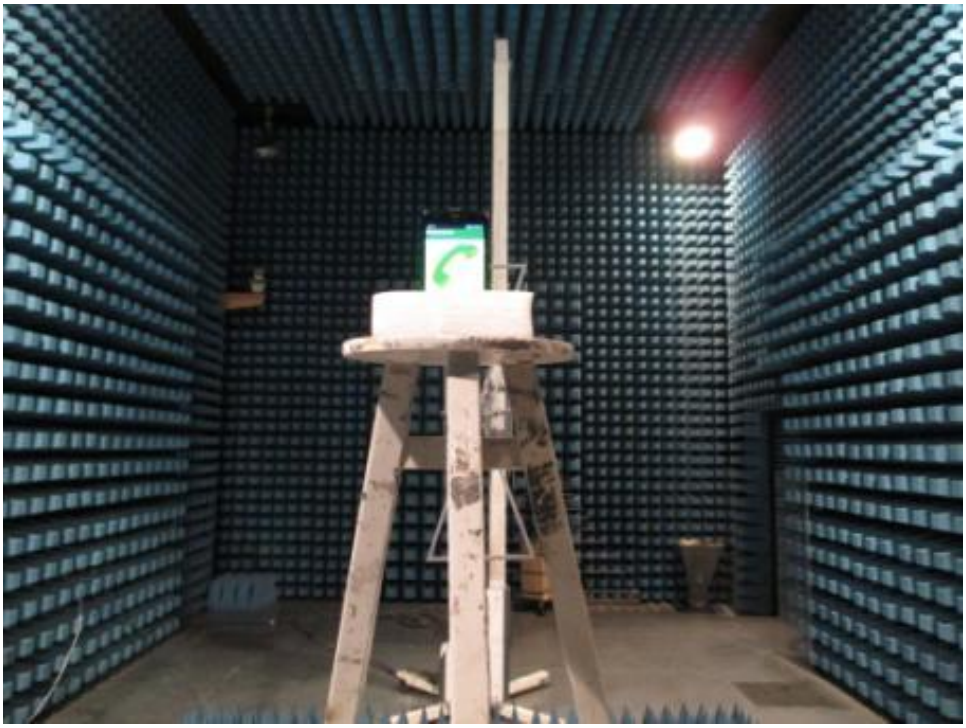
Annex B PHOTOGRAPHS OF THE EUT



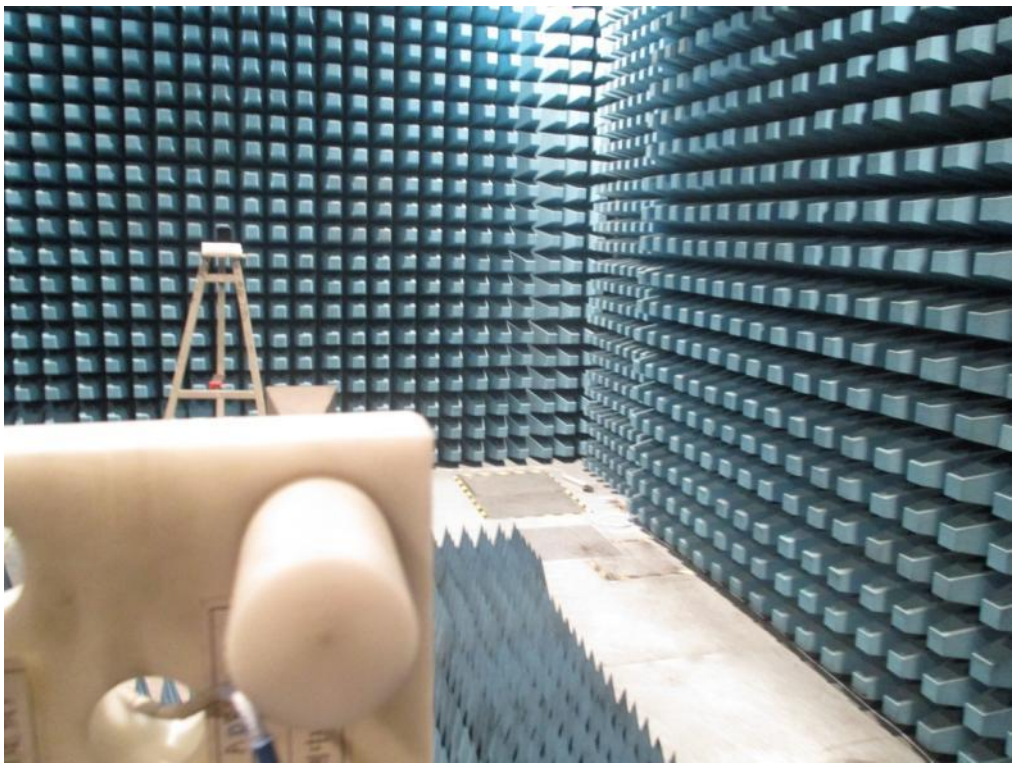
Annex C PHOTOGRAPHS OF THE TEST SETUP

1. Conducted Measurement Setup

2. Radiated Measurement Setup



30M~18G



18G~20G

** END OF REPORT **