



FCC RF Test Report

**Product Name: HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone
with Bluetooth**

Model Number: HUAWEI U8665,U8665

**Report No: SYBH(Z-RF)003052012-2001
FCC ID: QISU8665**

Reliability Laboratory of Huawei Technologies Co., Ltd.

Huawei Base, Bantian, Longgang District, Shenzhen 518129, P.R. China

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Notice

1. The laboratory has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS), and accreditation number: L0310.
2. The laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements. The site recognition number is 97456.
3. The laboratory has been listed by industry Canada to perform electromagnetic emission measurement. The site recognition number is 6369A-2.
4. The test report is invalid if not marked with "exclusive stamp for the test report".
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7. If there is any dissidence for the test report, please file objection to the test centre within 15 days from the date of receiving the test report.
8. Normally, the test report is only responsible for the samples that have undergone the test.
9. Context of the test report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of the laboratory.



Applicant: Huawei Technologies Co., Ltd.
Address: Huawei Base, Bantian, Longgang District, Shenzhen
518129, P.R. China
Date of Receipt Test Item: Apr.20, 2012
Start Date of Test: Apr.21, 2012
End Date of Test: May.05, 2012

Test Result: Pass

Approved By Senior Engineer May.05, 2012 Dai Linjun *Dai Linjun*
Date Name Signature

Reviewed By May.05, 2012 Cousy Xu *Cousy XU*
Date Name Signature

Operator May.05, 2012 Huang Qiuliang *Huang Qiuliang*
Date Name Signature

Contents

1	<u>General Information</u>	5
1.1	APPLIED STANDARD.....	5
1.2	TEST LOCATION.....	5
1.3	TEST ENVIRONMENT CONDITION	5
2	<u>Summary</u>	6
3	<u>Product Description</u>	7
3.1	PRODUCT INFORMATION	7
4	<u>Test Description</u>	8
4.1	SUPPORTED FREQUENCY RANGE	8
4.2	TRANSMITTER / RECEIVER CHARACTERISTICS.....	8
4.3	ANTENNA GAIN.....	8
4.4	POWER SUPPLY	8
5	<u>General Test Conditions / Configurations</u>	9
5.1	RF CHANNELS UNDER TEST.....	9
5.2	TEST MODES.....	9
5.3	TEST ENVIRONMENTS	9
5.4	TEST SETUPS.....	10
5.5	TEST CONDITIONS	12
6	<u>Main Test Instruments</u>	14
7	<u>Test Results</u>	15
8	<u>Measurement Uncertainty</u>	15



1 General Information

1.1 Applied Standard

Applied Rules:	47 CFR FCC Part 2:2010, Subpart J 47 CFR FCC Part 24:2010, Subpart E ANSI/TIA 603C:2004
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1.2 Test Location

Test Location 1:	Reliability Laboratory of Huawei Technologies Co., Ltd.
Address:	Huawei Base, Bantian, Longgang District, Shenzhen 518129, P.R. China

1.3 Test Environment Condition

Ambient Temperature:	20 – 25 °C
Ambient Relative Humidity:	45 – 55 %
Atmospheric Pressure:	101 kPa

2 Summary

Table 1 Summary of results

Test Case	FCC Part No.	Requirements	Result
PCS Band			
Transmitter Output Power	2.1046 & 24.232	Peak EIRP not exceed 2 W Peak-to-average ratio not exceed 13 dB	Pass
Modulation Characteristics	2.104	Digital modulation	Pass
Occupied Bandwidth	2.104	(Not specified)	Pass
Band Edges Compliance	2.1051 & 24.238	Below -13 dBm/1%*EBW, in 1 MHz range	Pass
Spurious Emission at Antenna Terminals	2.1051 & 24.238	Below -13 dBm/1 kHz, 9 kHz to 150 kHz Below -13 dBm/10 kHz, 150 kHz to 30 MHz Below -13 dBm/1 MHz, 30 MHz to 10 th harmonics	Pass
Field Strength of Spurious Radiation	2.1053 & 24.238	Below -13 dBm/1 MHz	Pass
Frequency Stability	2.1055 & 24.235	Stay within the authorized frequency block	Pass

3 Product Description

3.1 Product Information

3.1.1 General Description

HUAWEI U8665, U8665 subscriber equipment in the WCDMA/GSM system. The HSDPA/UMTS frequency band is Band II and Band V. but only Band V test data included in this report. The GSM/GPRS/EDGE frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900, but only GSM850 test data included in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, HSDPA/UMTS and GSM/GPRS/EDGE protocol processing, voice, video, MMS service, GPS, AGPS and WIFI etc. Externally it provides micro SD card interface, earphone port (to provide voice service) and USIM card interface. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

3.1.2 Board Information

Board Information

HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth		
HUAWEI U8665,U8665		
Board and Module		
Hardware Version	Software Version	Serial Number
HD2U8655M	U8665V100R001C07B013	L6X01A9232500326

3.1.3 Adapter Technical Data

AC/DCAdapter Model	HW-050100U1W
Manufacturer	Huawei Technologies Co., Ltd.
Input Voltage	~100-240V 50/60Hz 0.2A
Output Voltage	5V  1A
Rated Power	5W

3.1.4 Battery Technical Data

Name	Manufacture	Description
Rechargeable Li-ion	Huawei Technologies Co., Ltd.	Battery Model: HB5K1H Rated capacity: 1400mAh Nominal Voltage:  +3.7V Charging Voltage:  +4.2V

4 Test Description

4.1 Supported Frequency Range

Characteristics	Description
Downlink	869to 894 MHz
Uplink	824 to 849 MHz

4.2 Transmitter / Receiver Characteristics

Characteristics	Description
System Type	GSM UMTS
TX Output Power (per Antenna Port)	GSM system: 33dBm; UMTS system: 24dBm;
Channel Spacing(s) / Bandwidth(s)	GSM system: 200 kHz UMTS system: 5 MHz
Designation of Emissions	GSM system: 247KGXW (GMSK modulation), 244KG7W (8PSK modulation) UMTS system: 4M18F9W

4.3 Antenna Gain

Antenna Gain(dBi)	-0.8
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4.4 Power Supply

Specification	Description
Power Supply Type	Directly Connected to DC /AC Power Supply
Input to EUT (DC power)	DC Voltage Nominal: \approx 3.7 V DC Voltage Range: \approx 3.6V to 4.2 V
Input to EUT (AC power)	AC Voltage Nominal: ~ 220 V (50/60 Hz) AC Voltage Range: ~100-240V

5 General Test Conditions / Configurations

5.1 RF Channels under Test

Test Mode	TX / RX	RF Channel		
		Bottom (B)	Middle (M)	Top (T)
TM1/TM2	TX	Channel 128	Channel 192	Channel 251
		824.2MHz	837.0MHz	848.8MHz
	RX	Channel 128	Channel 192	Channel 251
		869.2MHz	882.0MHz	893.8MHz
TM3/TM4	TX	Channel 4132	Channel 4182	Channel 4233
		826.4MHz	836.4MHz	846.6MHz
	RX	Channel 4357	Channel 4407	Channel 4458
		871.4MHz	881.4MHz	891.6MHz

5.2 Test Modes

Test Mode	Test Modes Description
TM1	GSM/GPRS, GMSK modulation
TM2	EDGE, 8PSK modulation
TM3	WCDMA ,QPSK modulation
TM4	HSDPA , QPSK modulation

5.3 Test Environments

Environment Parameter	Selected Values During Tests	
Relative Humidity	Ambient	
Temperature	TN	Ambient
Voltage	VL	3.6V
	VN	3.7V
	VH	4.2V

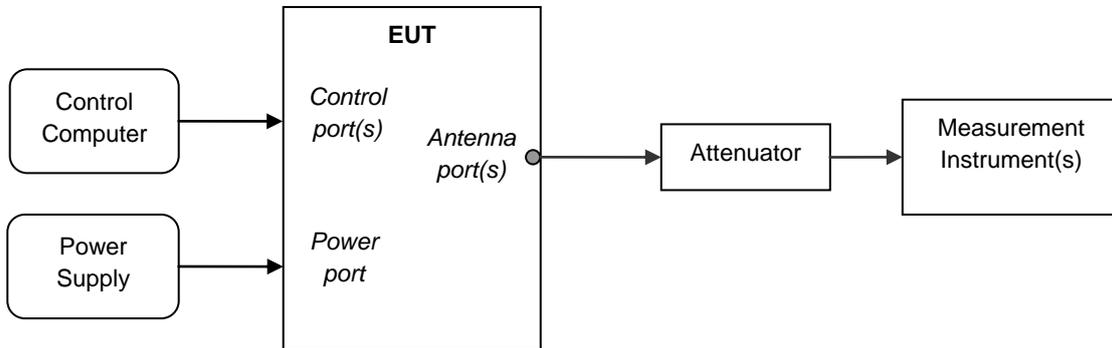
NOTE: VL= lower extreme test voltages
VN= nominal voltage
VH= upper extreme test voltage
TN= normal temperature

5.4 Test Setups

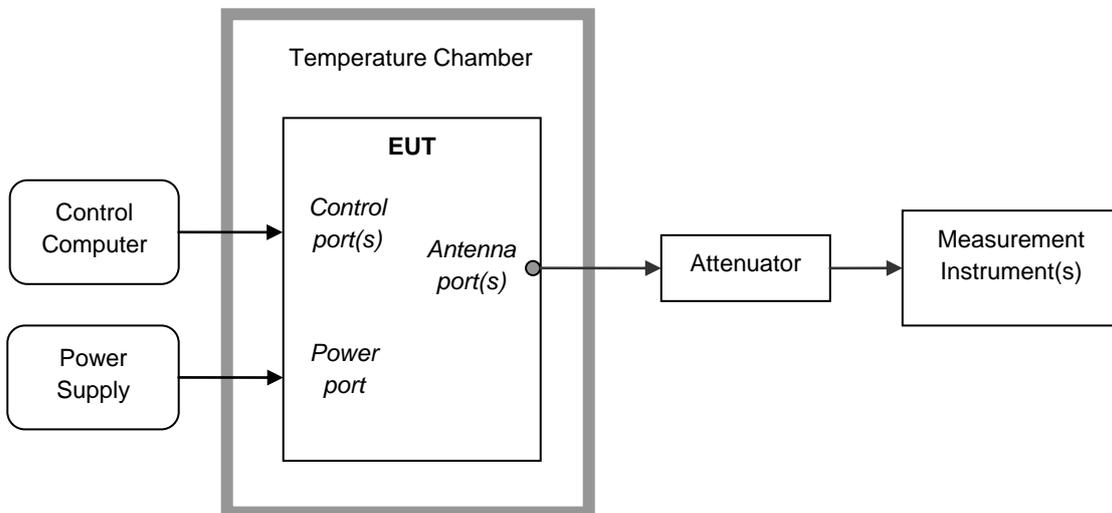
5.4.1 General Test Setup Configurations

Configuration	Description
Test Antenna Ports	Until otherwise declared, all TX tests are ONLY performed at the main Transmitter antenna port (e.g. TRXA, TXA and so on) of the EUT, and all RX tests are ONLY performed at the main Receiver antenna port (e.g. TRXA, RXA and so on) of the EUT.
Multiple RF Sources	Other than the tested RF source of the EUT, other RF source(s) are disabled or shutdown during measurements.

5.4.2 Test Setup 1



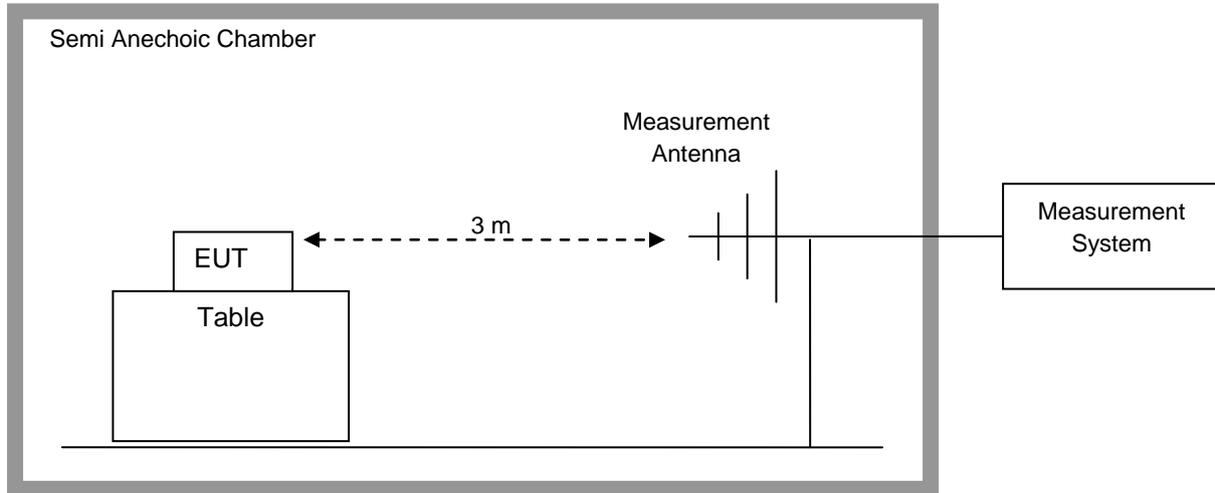
5.4.3 Test Setup 2



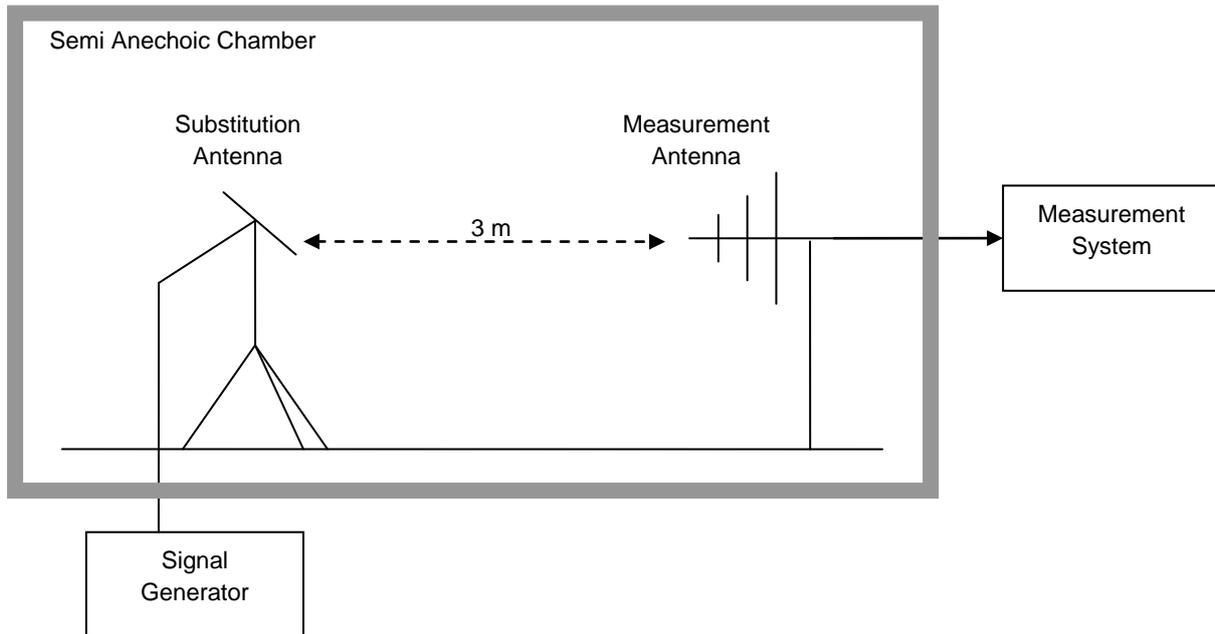
5.4.4 Test Setup 3

NOTE: Effective Isotropic radiated power (EIRP) refers to the radiation power output of the EUT, assuming all emissions are radiated from half-wave dipole antennas.

Step 1: Pre-test



Step 2: Substitution method to verify the maximum EIRP



5.5 Test Conditions

Test Case	Test Conditions	
Transmitter Output Power	Test Configuration	Ambient Temperature & Rated Voltage
	Test Setup	Test Setup 1 & Test Setup 3
	Detector	RMS
	RF Channels (TX)	B, M, T
	Test Mode	TM1/TM2/TM3/TM4
Modulation Characteristics	Test Configuration	Ambient Temperature & Rated Voltage
	Test Setup	Test Setup 1
	RF Channels (TX)	M
	Test Mode	TM1/TM2/TM3
Occupied Bandwidth	Test Configuration	Ambient Temperature & Rated Voltage
	Test Setup	Test Setup 1
	Detector	PK
	RF Channels (TX)	B, M, T
	Test Mode	TM1/TM2/TM3
Band Edges Compliance	Test Configuration	Ambient Temperature & Rated Voltage
	Test Setup	Test Setup 1
	Detector	RMS
	RF Channels (TX)	B, T
	Test Mode	TM1/TM2/TM3
Spurious Emission at Antenna Terminals	Test Configuration	Ambient Temperature & Rated Voltage
	Test Setup	Test Setup 1
	Detector	PK
	RF Channels (TX)	B, M, T
	Test Mode	TM1/TM2/TM3
Field Strength of Spurious Radiation	Test Configuration	Ambient Temperature & Rated Voltage
	Test Setup	Test Setup 3
	Detector	PK
	RF Channels (TX)	M
	Test Mode	TM1/TM2/TM3/TM4
Frequency Stability	Test Configuration	(1) -30 °C to +50 °C with step 10 °C at Rated Voltage; (2) 85%, 100% and 115% of Rated Voltage at Ambient Temperature.
	Test Setup	Test Setup 2



Test Case	Test Conditions	
	RF Channels (TX)	M
	Test Mode	TM1/TM2/TM3

6 Main Test Instruments

Table 2 Main Test Equipments

Equipment Description	Manufacturer	Model	Serial Number	Calibrated until
Power supply	KEITHLEY	2303	1288003	Sep.27,2012
Universal Radio Communication Tester	R&S	CMU200	117341	Jan.12.2013
Universal Radio Communication Tester	Agilent	E5515C	MY50260239	Aug.31,2012
Spectrum Analyzer	Agilent	E4440A	MY48250119	Jul.17,2012
Signal Analyzer	R&S	FSQ31	200021	Sep.27,2012
Temperature Chamber	WEISS	WKL64	24600294	Feb.13,2013
Signal generator	Agilent	E8257D	MY49281095	Jul.09.2012
Test receiver	R&S	ESU26	100150	May.29.2012
Tunable Dipole	Schwarzbeck	D69250-UHAP/D69250-VHAP	919/1009	Jan.29.2013
Tunable Dipole	Schwarzbeck	D69250-UHAP/D69250-VHAP	979/917	Jan.29.2013
Horn Antenna	R & S	HF906	100683	May.15, 2012
Horn Antenna	R & S	HF906	100684	Jul.01, 2012
Broadband Antenna	Schwarzbeck	VULB 9163	9163-357	May.15, 2012
Broadband Antenna	Schwarzbeck	VULB 9163	9163-356	May.15, 2012

7 Test Results

No.	Test Item	Test Result
1	Transmitter Output Power	Appendix A
2	Modulation Characteristics	Appendix B
3	Occupied Bandwidth	Appendix C
4	Band Edges Compliance	Appendix D
5	Spurious Emission at Antenna Terminals	Appendix E
6	Radiated Spurious Emissions	Appendix F
7	Frequency Stability	Appendix G
8	Photos of Radiated Spurious Emissions	Appendix H

NOTE: The Appendix H only photos of Field Strength of Spurious Radiation, no test data.

8 Measurement Uncertainty

For a 95% confidence level (k=2), the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 as following:

Test Item		Extended Uncertainty
Transmitter Output Power	Power (dBm)	U =0.39 dB
Occupied Bandwidth	Magnitude (%)	U=0.2%
Band Edge Compliance	Disturbance Power (dBm)	U=2.0 dB
Conducted Spurious Emissions	Disturbance Power (dBm)	U=2.0 dB
Field Strength of Spurious Radiation	ERP (dBm)	U=4.6 dB (30 MHz – 1GHz) U=3.0 dB (above 1 GHz)
Frequency Stability	Frequency Accuracy (ppm)	U=0.21 ppm

-----The END-----



Appendix A

Transmitter Output Power According to FCC Part 2.1046 & Part 22.913



Conducted Power of Transmitter

Table 1 Measurement Results

		RF Output Power (Conducted)					
TEST CONDITIONS		Channel128(B)		Channel192(M)		Channel251(T)	
		824.2MHz		837.0MHz		848.8MHz	
		dBm		dBm		dBm	
T_{nom} / V_{nom}	Measured	Limit	Measured	Limit	Measured	Limit	
TM1	32.31	38.50	32.69	38.50	33.01	38.50	
TM2	27.04	38.50	27.39	38.50	27.75	38.50	
TEST CONDITIONS		Channel4132(B)		Channel4182(M)		Channel4233(T)	
		826.4MHz		836.4MHz		846.6MHz	
		dBm		dBm		dBm	
T_{nom} / V_{nom}	Measured	Limit	Measured	Limit	Measured	Limit	
TM3	23.13	38.50	23.6	38.50	23.33	38.50	
TM4	Case1	23.02	38.50	23.48	38.50	23.24	38.50
	Case2	22.88	38.50	23.14	38.50	23.06	38.50
	Case3	21.95	38.50	22.41	38.50	22.23	38.50
	Case4	22.01	38.50	22.36	38.50	22.21	38.50



Effective Radiated Power of Transmitter (ERP)

Table 2 Substitution Results

Test Mode	Freq. [MHz]	Meas. Level [dBm]	Substitution Antenna Type	SGP [dBm]	Substitution Gain [dBd]	Cable Loss [dB]	Substitution Level (ERP) [dBm]	FCC limit [dBm]	Result
TM1	824.2	31.51	Dipole Ant.	34.85	-2.75	0.6	31.50	38.5	Pass
TM1	837.0	31.89	Dipole Ant.	35.34	-2.87	0.6	31.87	38.5	Pass
TM1	848.8	32.21	Dipole Ant.	35.64	-2.85	0.6	32.19	38.5	Pass
TM2	824.2	26.24	Dipole Ant.	29.60	-2.75	0.6	26.25	38.5	Pass
TM2	837.0	26.59	Dipole Ant.	30.03	-2.87	0.6	26.56	38.5	Pass
TM2	848.8	26.88	Dipole Ant.	30.32	-2.85	0.6	26.87	38.5	Pass
TM3	826.4	22.33	Dipole Ant.	25.68	-2.75	0.6	22.33	38.5	Pass
TM3	836.4	22.80	Dipole Ant.	26.25	-2.87	0.6	22.78	38.5	Pass
TM3	846.6	22.53	Dipole Ant.	25.99	-2.85	0.6	22.54	38.5	Pass

Note: a, For getting the ERP (Efficient Radiated Power) in substitution method, the following formula should take to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

b, SGP=Signal Generator Level

-----The END-----



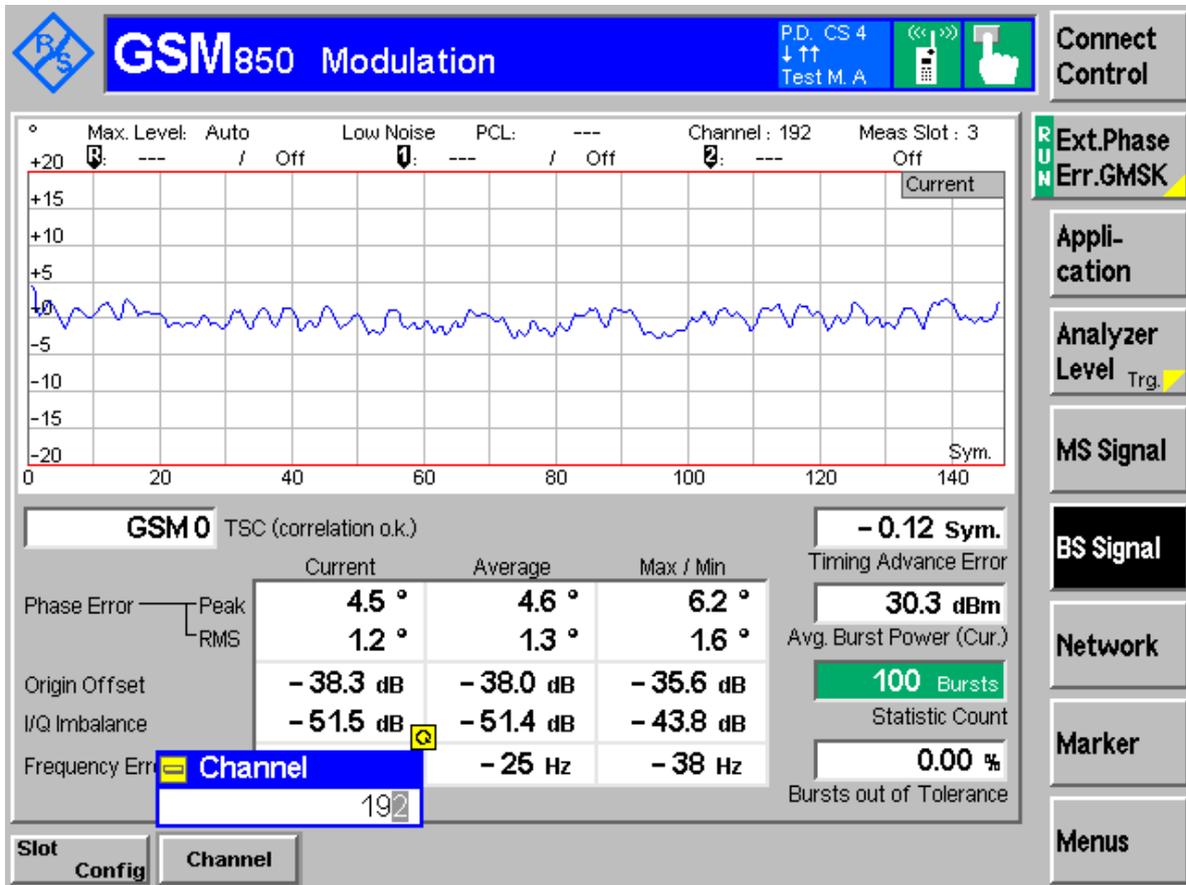
Appendix B

Modulation Characteristics

According to FCC Part 2.1047 & Part22 Subpart H

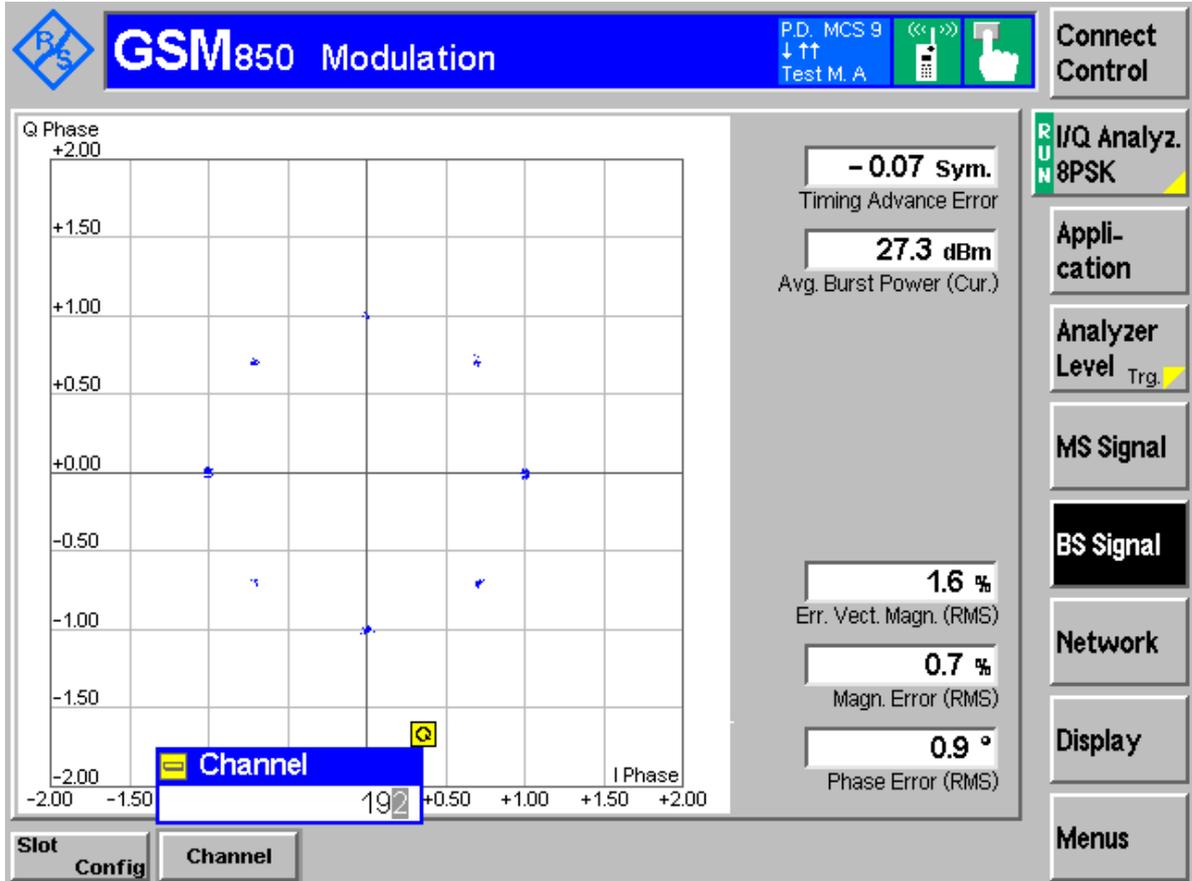


TM1:GPRS/GSM Channel 192



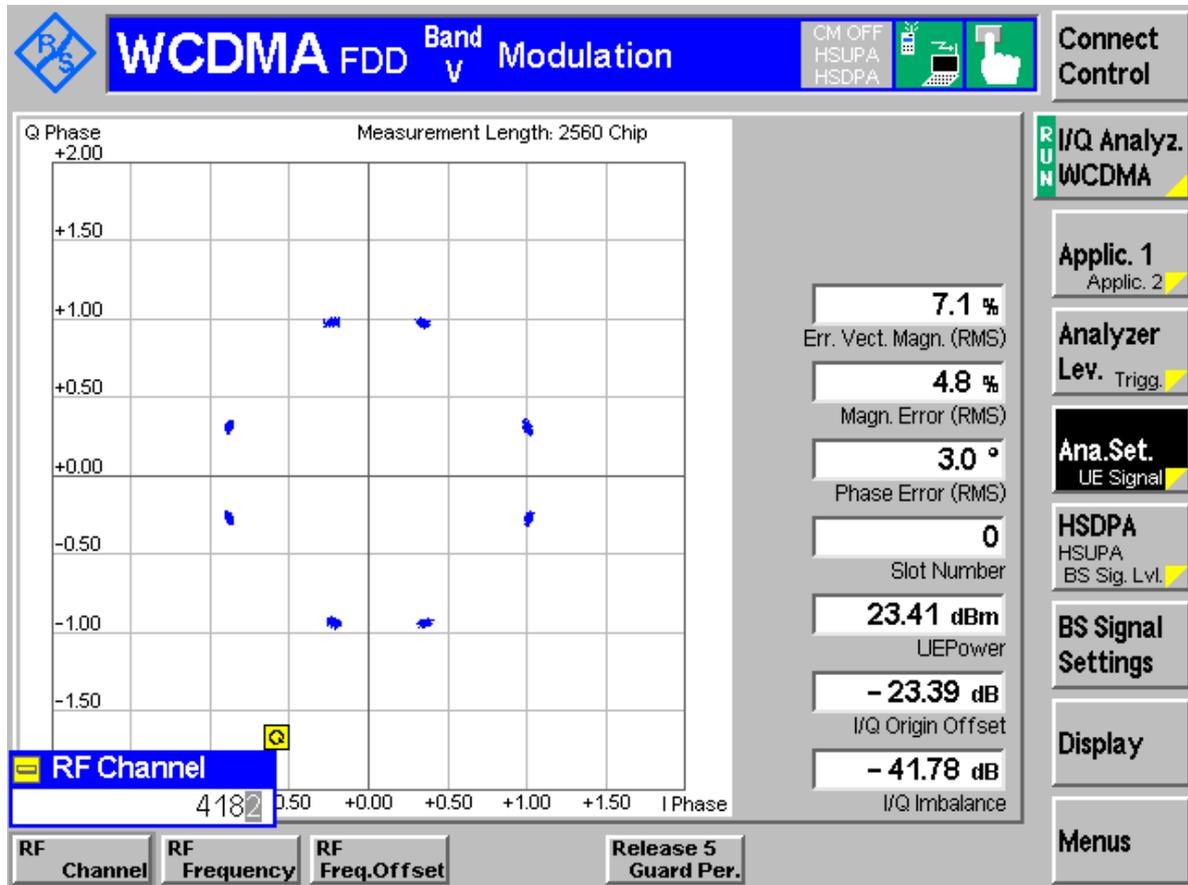


TM2:EDGE Channel 192





TM3: WCDMA Channel 4182





Appendix C

Occupied Bandwidth

According to FCC Part 2.1049 & Part 22 Subpart H



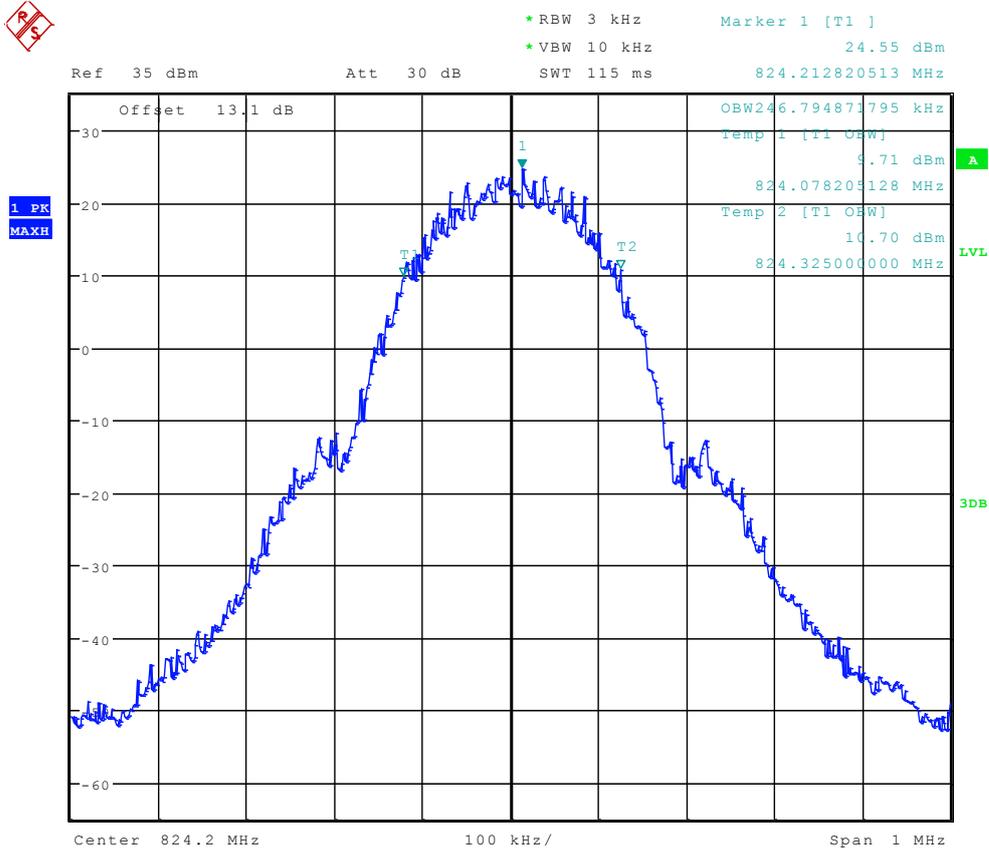
Result Table

Table 1 Measurement Results

Test Mode	RF Channel	Occupied Bandwidth [kHz]	Verdict
TM1	128	246.79	Pass
	192	243.58	Pass
	251	241.98	Pass
TM2	128	245.19	Pass
	192	243.58	Pass
	251	241.98	Pass
Test Mode	RF Channel	Occupied Bandwidth [MHz]	Verdict
TM3	4132	4.18	Pass
	4182	4.18	Pass
	4233	4.18	Pass



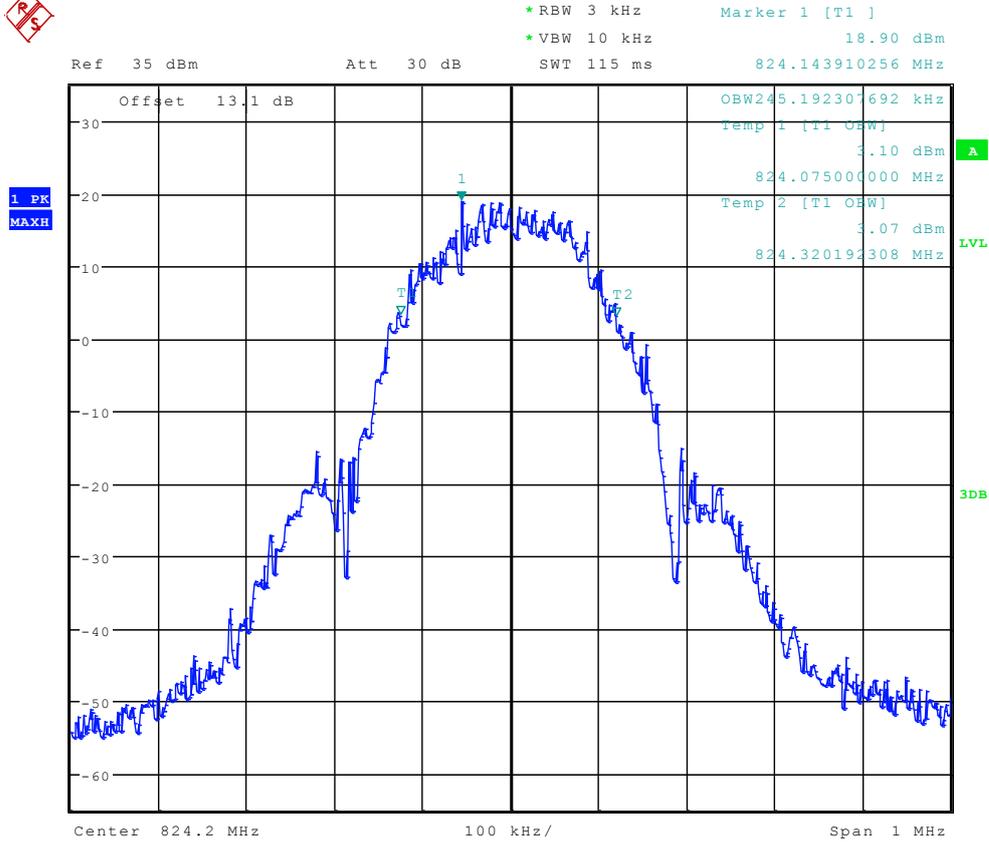
Channel 128 (TM1:GPRS/GSM)



Date: 23.APR.2012 15:37:42



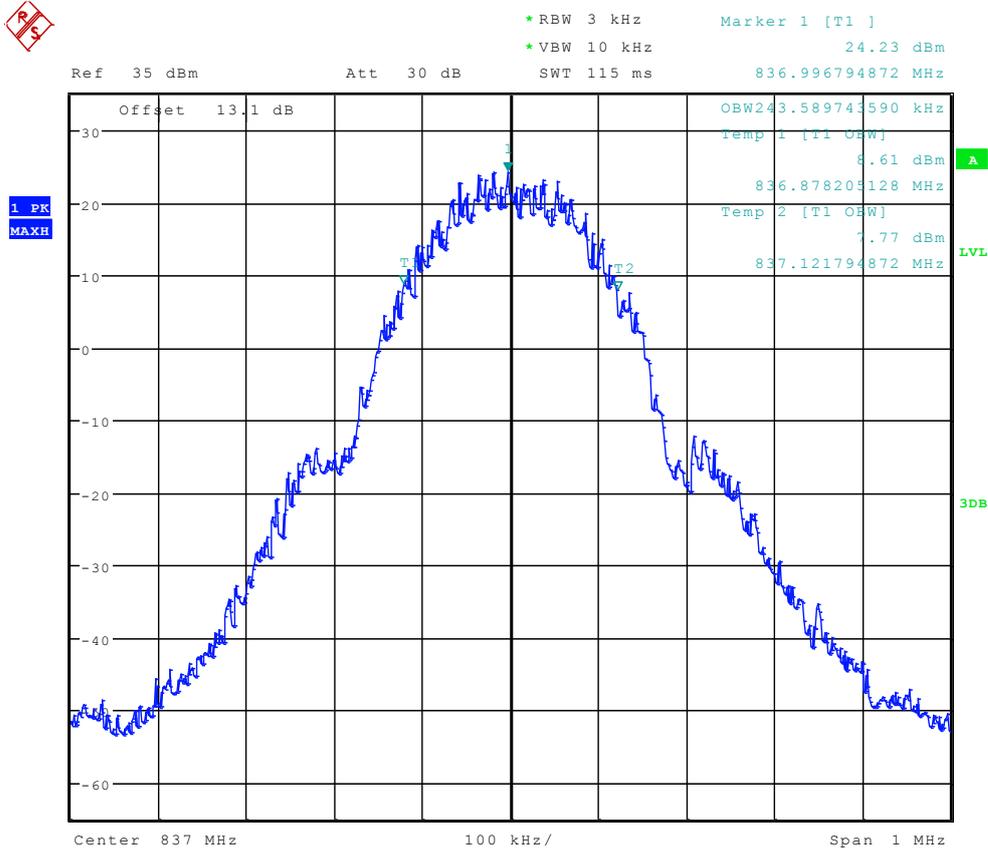
Channel 128 (TM2:EDGE)



Date: 23.APR.2012 15:43:18



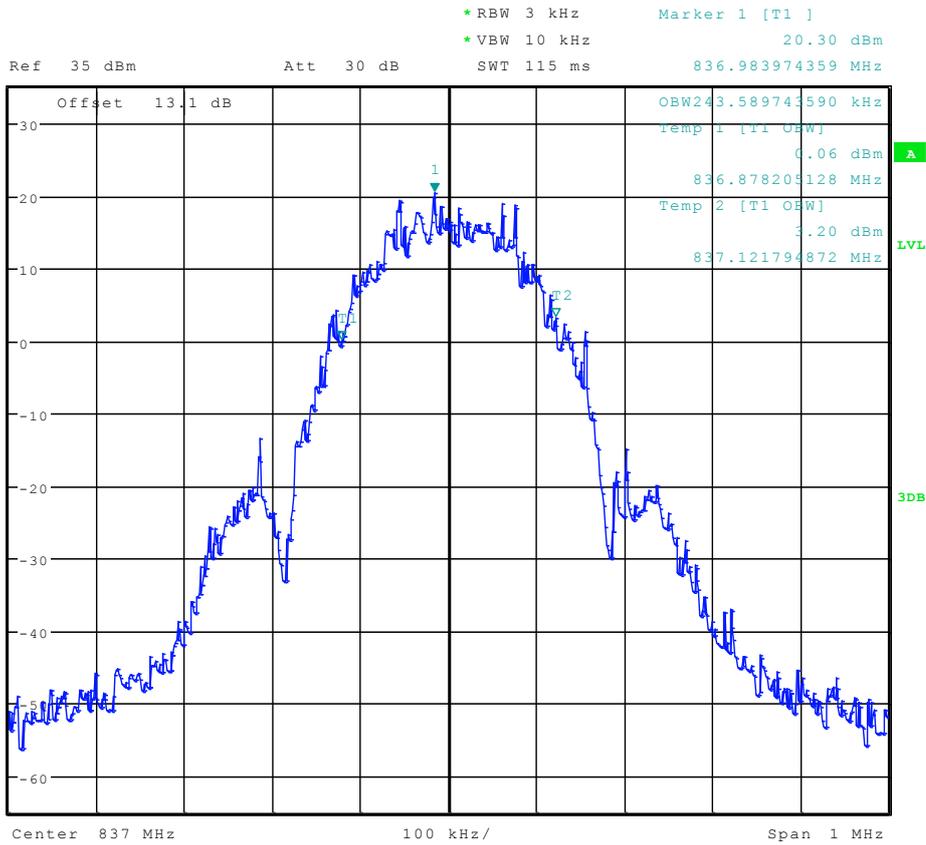
Channel 192 (TM1:GPRS/GSM)



Date: 23.APR.2012 15:37:56



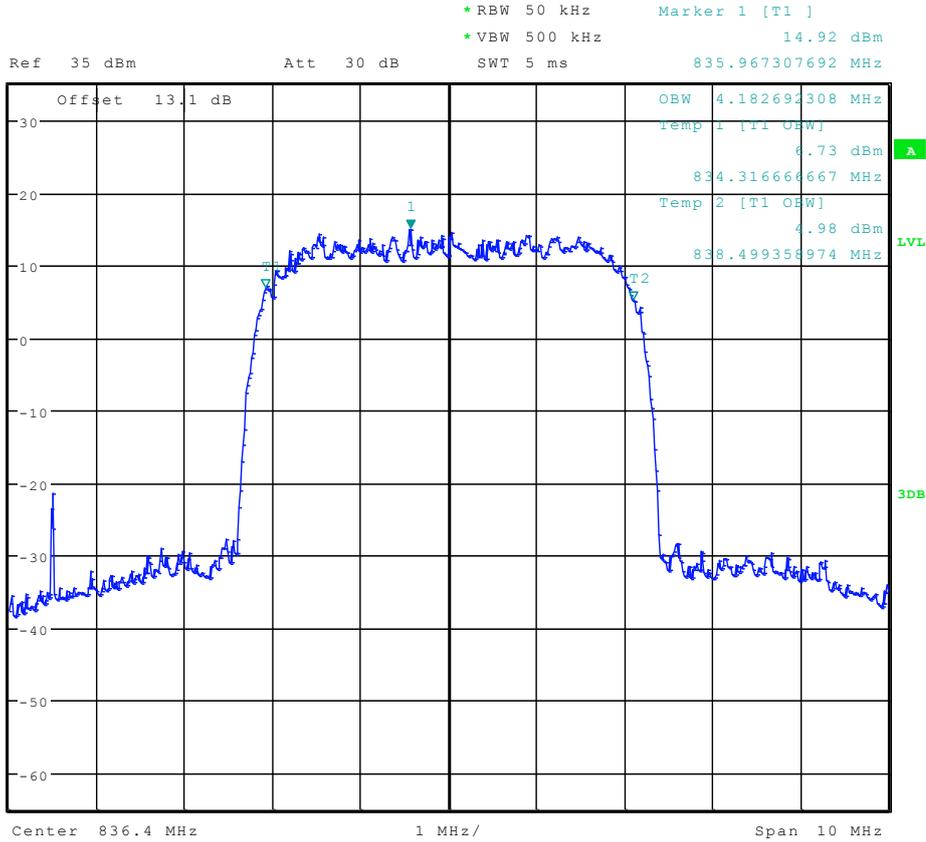
Channel 192 (TM2:EDGE)



Date: 23.APR.2012 15:43:31



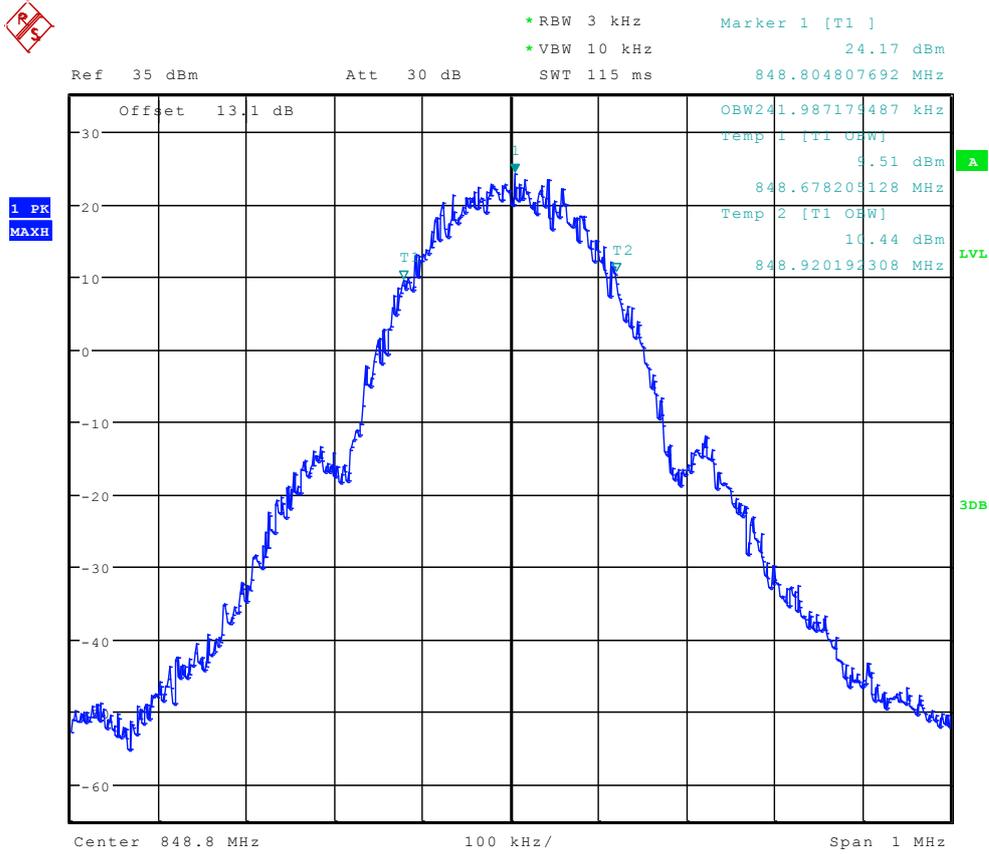
Channel 4182 (TM3: WCDMA)



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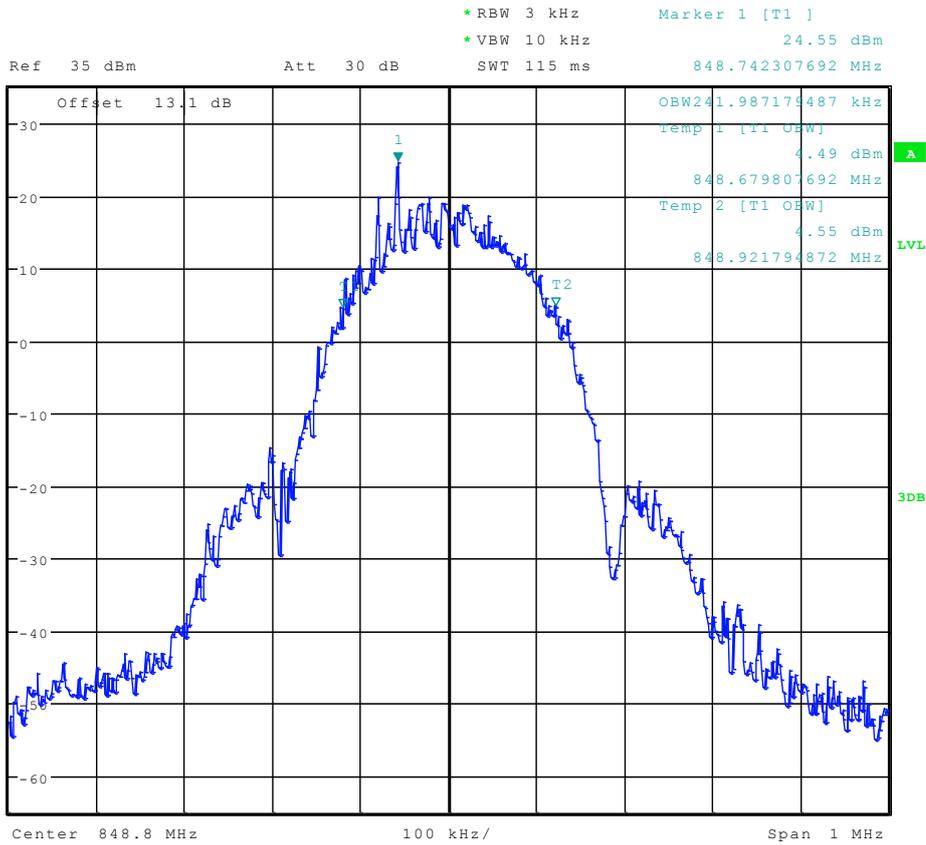
Channel 251 (TM1:GPRS/GSM)



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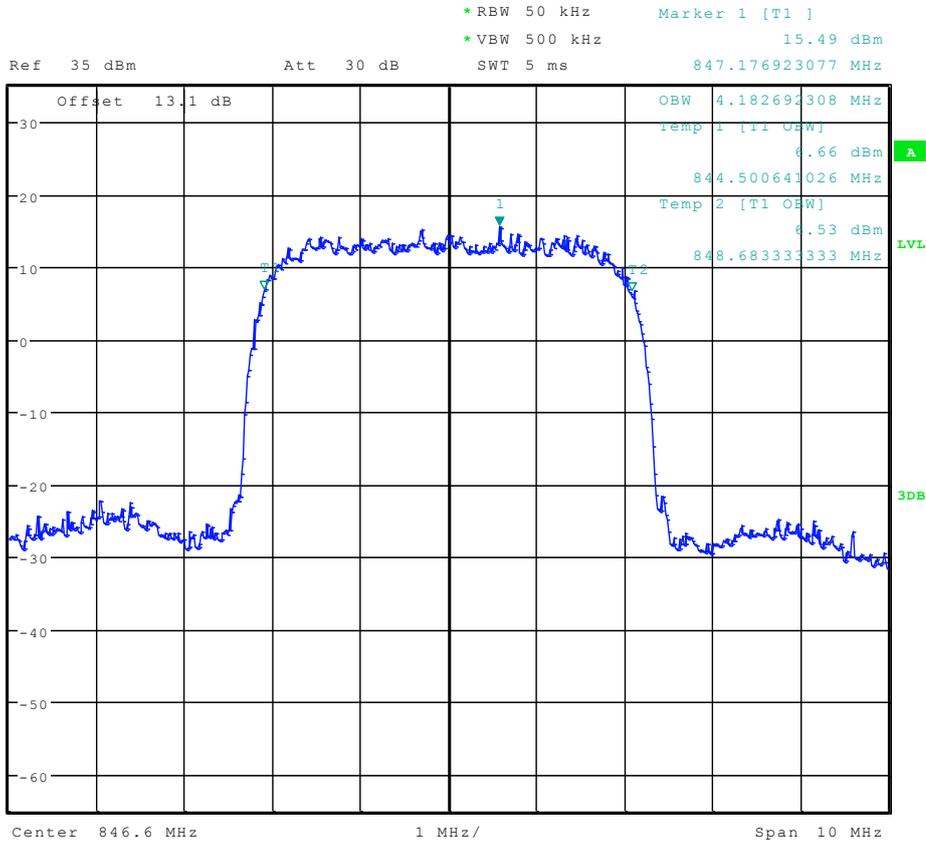
Channel 251 (TM2:EDGE)



Date: 23.APR.2012 15:43:45



Channel 4233 (TM3: WCDMA)



Date: 23.APR.2012 15:49:29



Appendix D

Band Edges Compliance

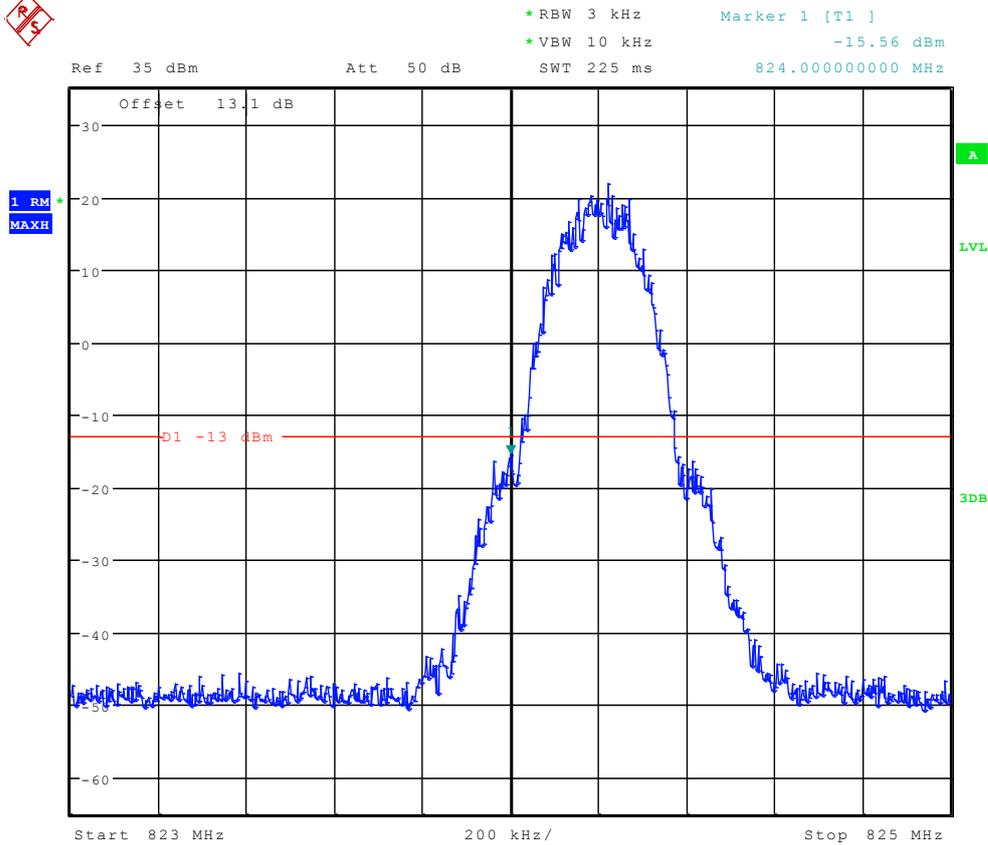
According to FCC Part 2.1051 & Part 22 Subpart H



TM1:GPRS/GSM

Left Edge

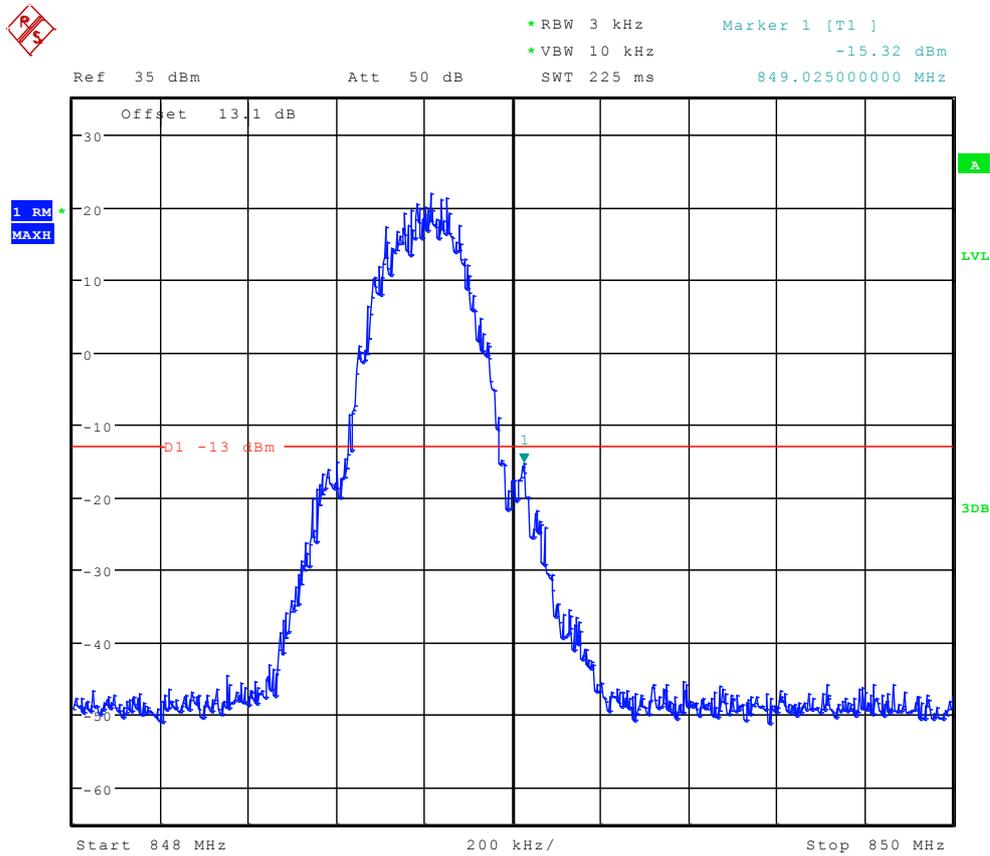
Channel 128



Date: 23.APR.2012 15:41:22



Right Edge Channel 251



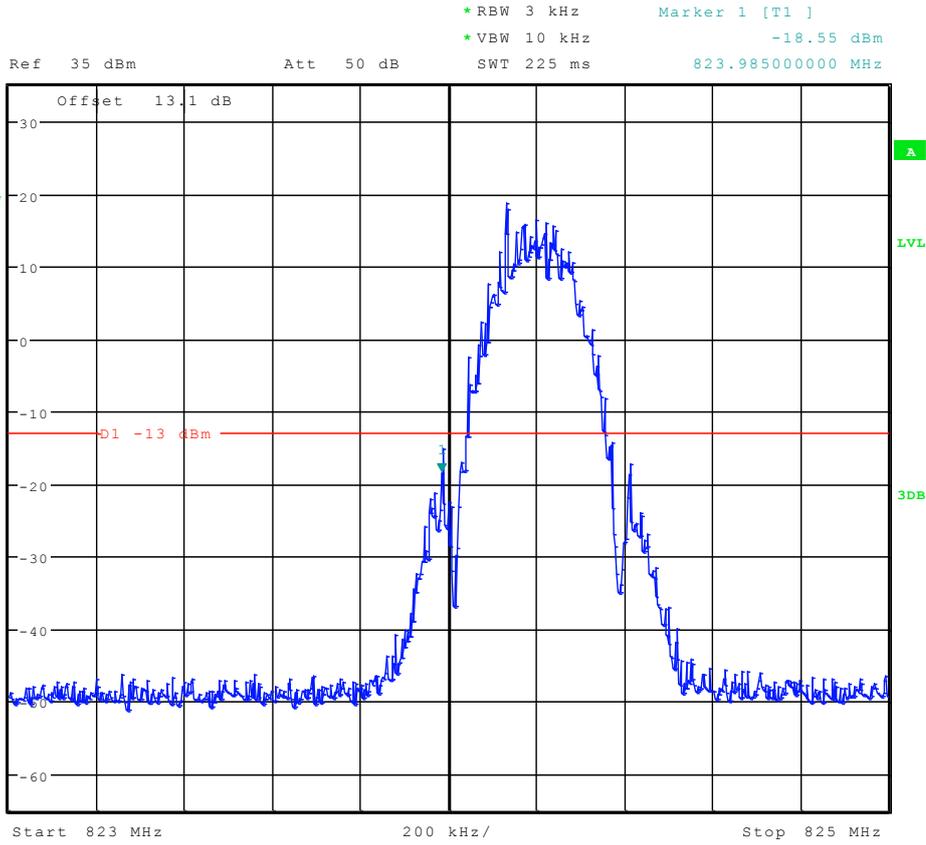
Date: 23.APR.2012 15:41:35



TM2:EDGE

Left Edge

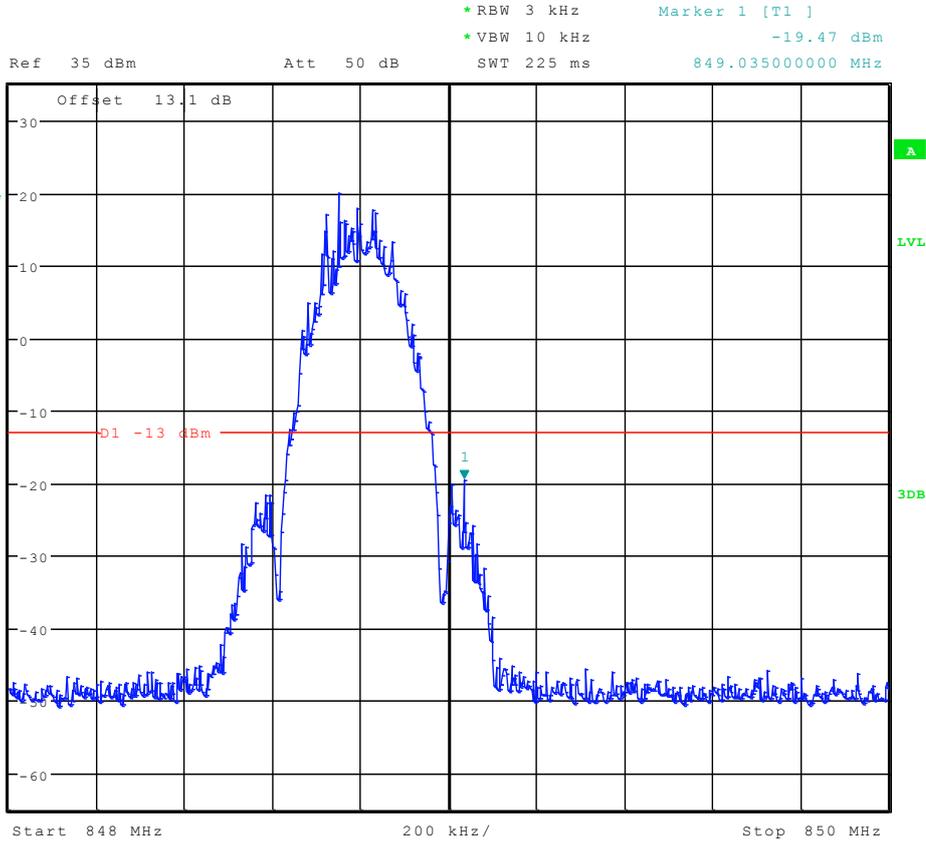
Channel 128



Date: 23.APR.2012 15:46:57



Right Edge Channel 251



Date: 23.APR.2012 15:47:10



TM3: WCDMA

Left Edge

Channel 4132

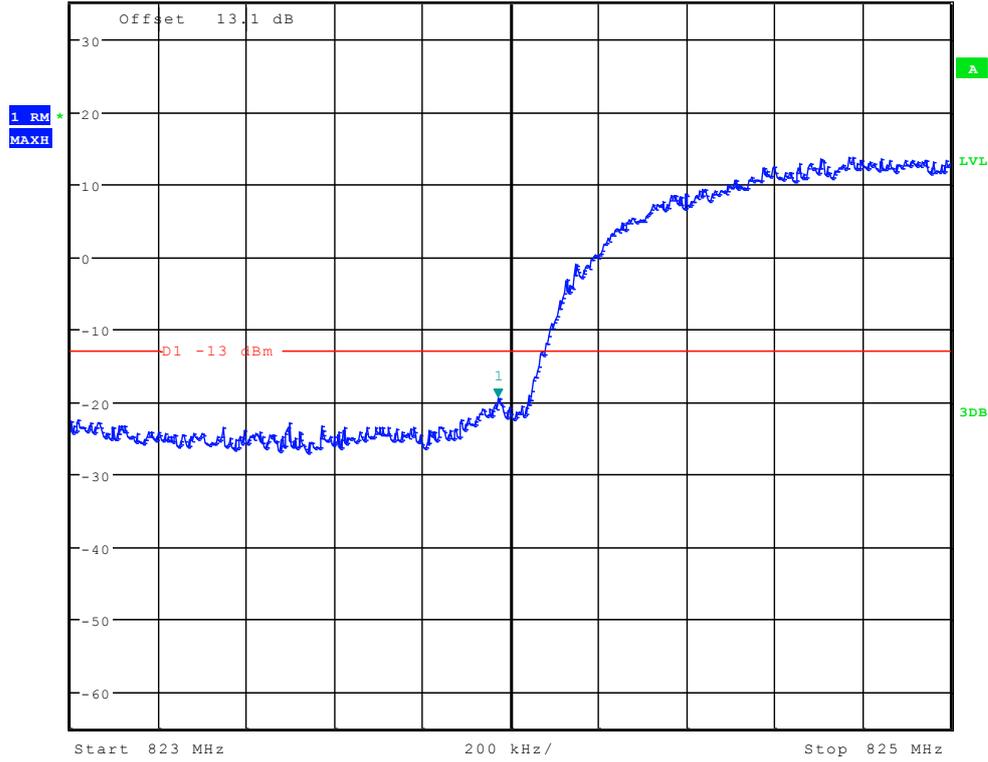


Ref 35 dBm Att 50 dB SWT 2.5 ms

*RBW 50 kHz *VBW 200 kHz

Marker 1 [T1] -19.41 dBm

823.97000000 MHz



Date: 23.APR.2012 15:52:45

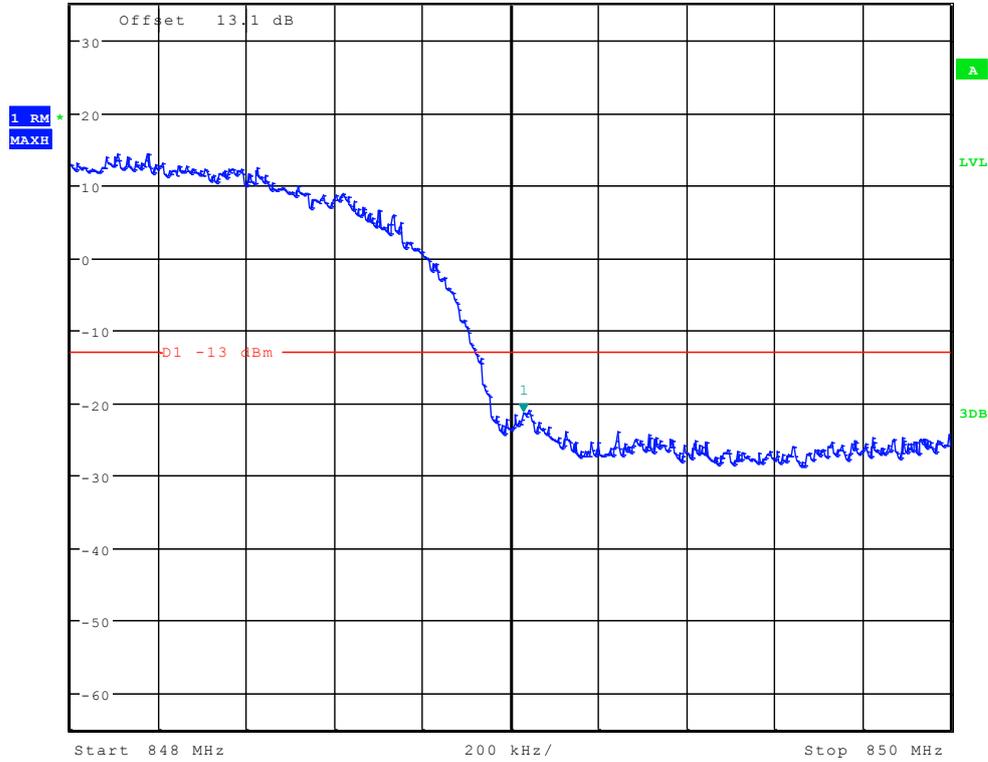
Right Edge



Channel 4233



Ref 35 dBm Att 50 dB *RBW 50 kHz Marker 1 [T1] *VBW 200 kHz -21.36 dBm
SWT 2.5 ms 849.03000000 MHz



Date: 23.APR.2012 15:52:59



Appendix E

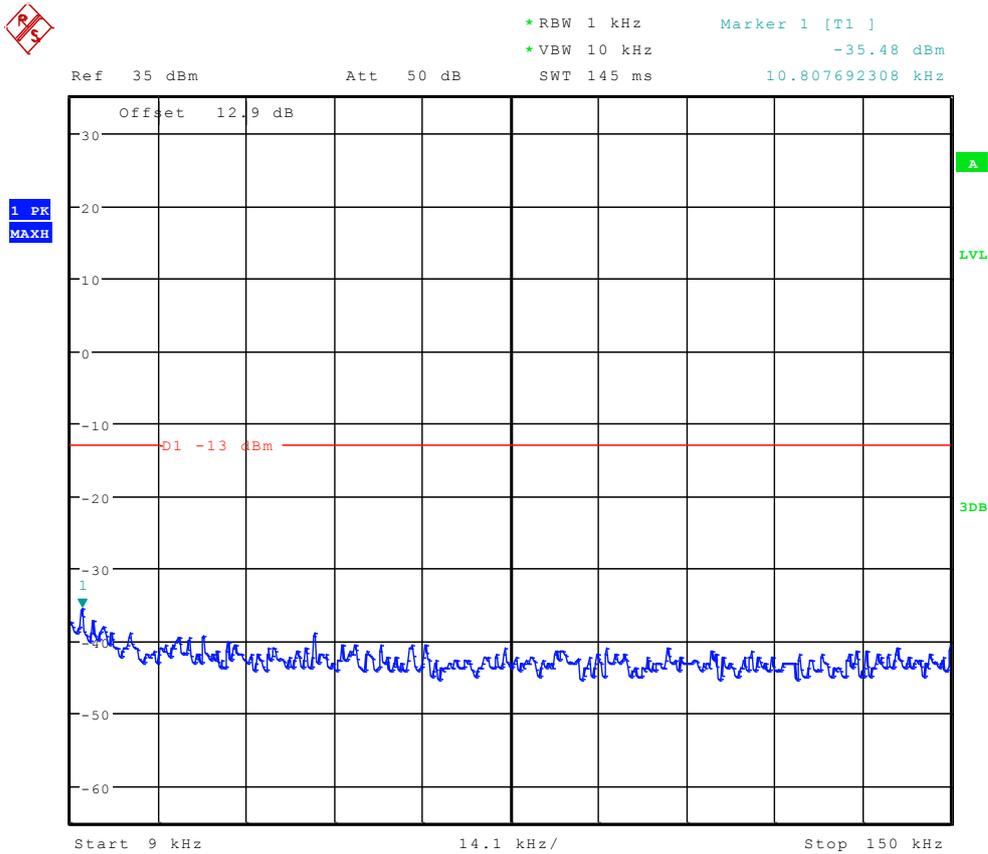
Spurious Emission at Antenna Terminal

According to FCC Part 2.1051 & Part 22 Subpart H



TM1: GPRS/GSM

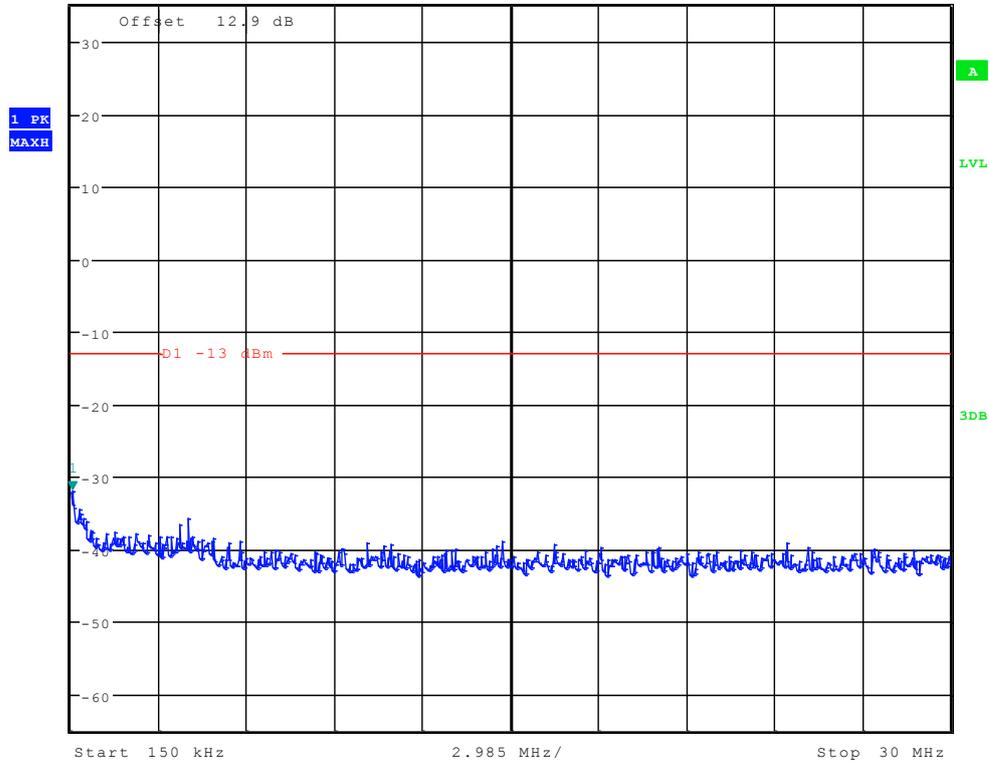
Channel 128



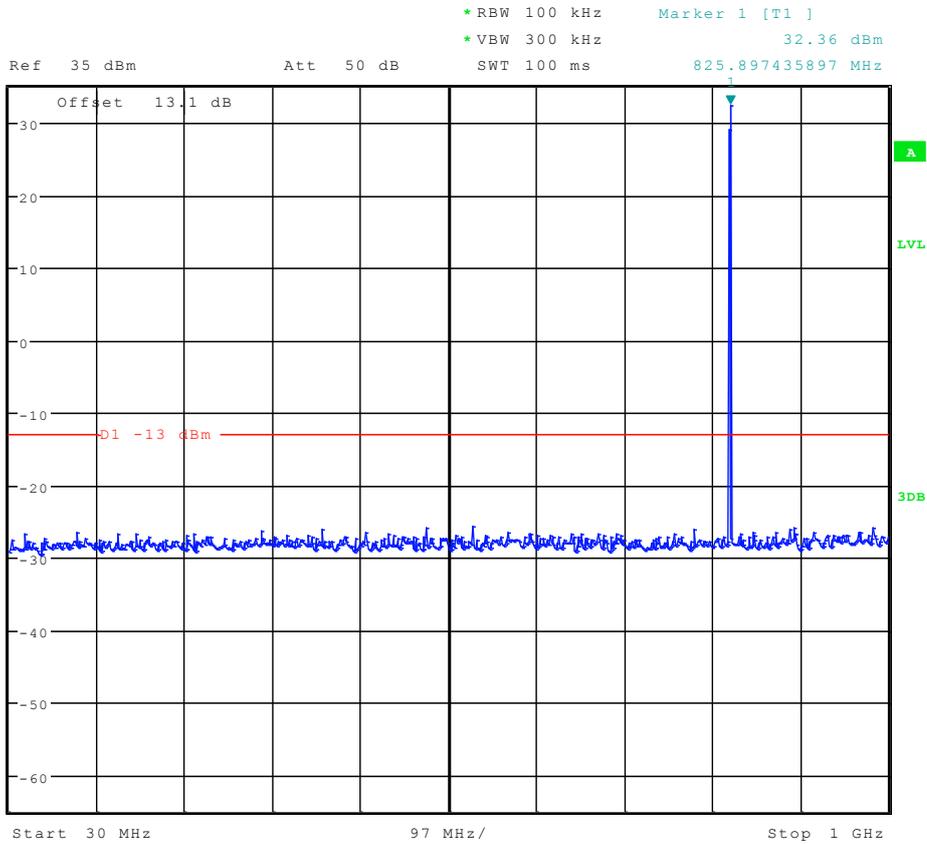
Date: 23.APR.2012 15:38:24



Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz
*RBW 10 kHz Marker 1 [T1]
*VBW 30 kHz -31.87 dBm



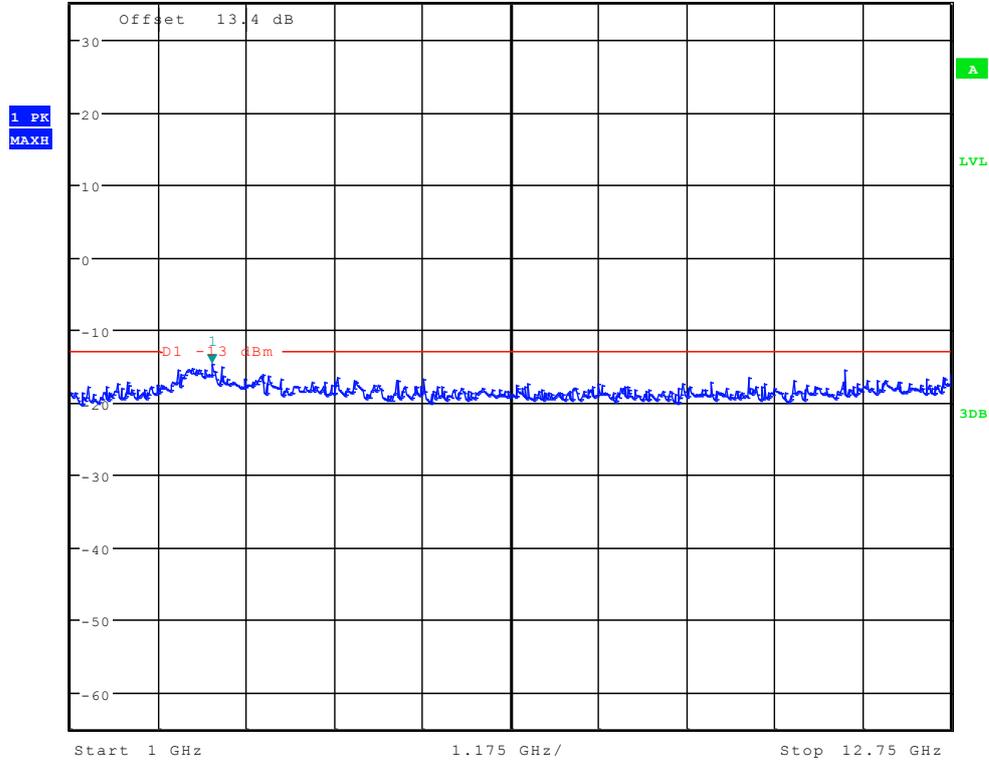
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Date: 23.APR.2012 15:39:52



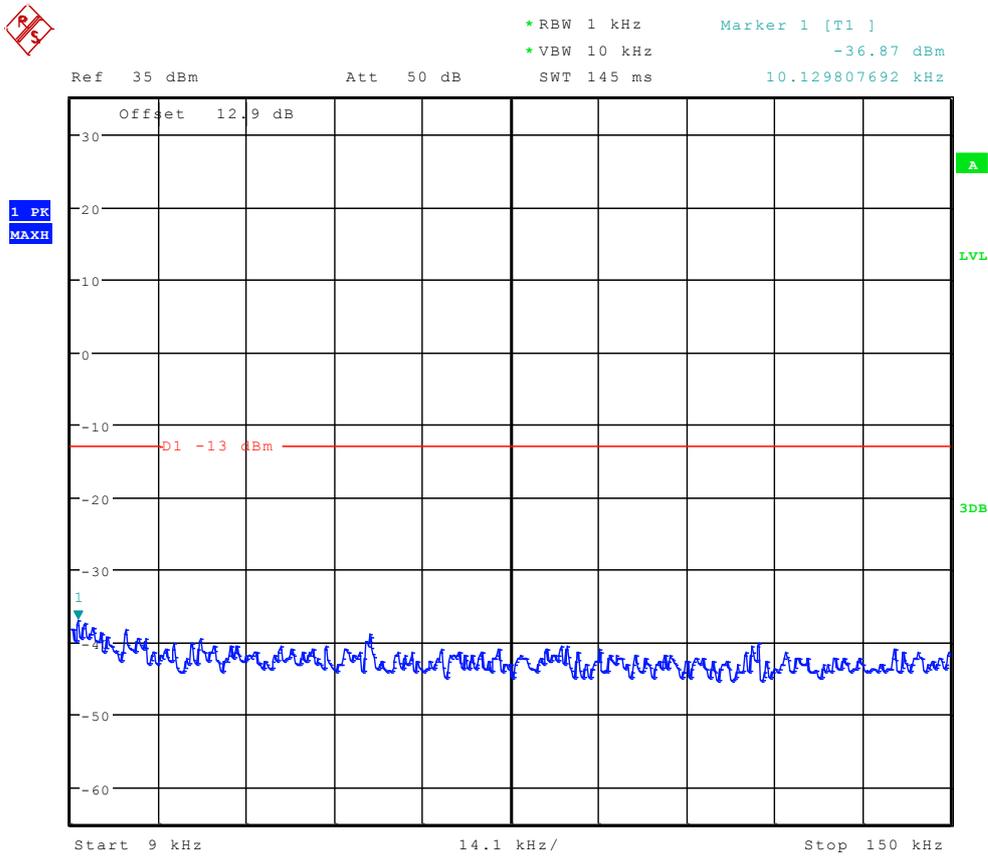
Ref 35 dBm Att 50 dB SWT 70 ms
*RBW 1 MHz Marker 1 [T1] -14.78 dBm
*VBW 3 MHz 2.883012821 GHz



Date: 23.APR.2012 15:40:35



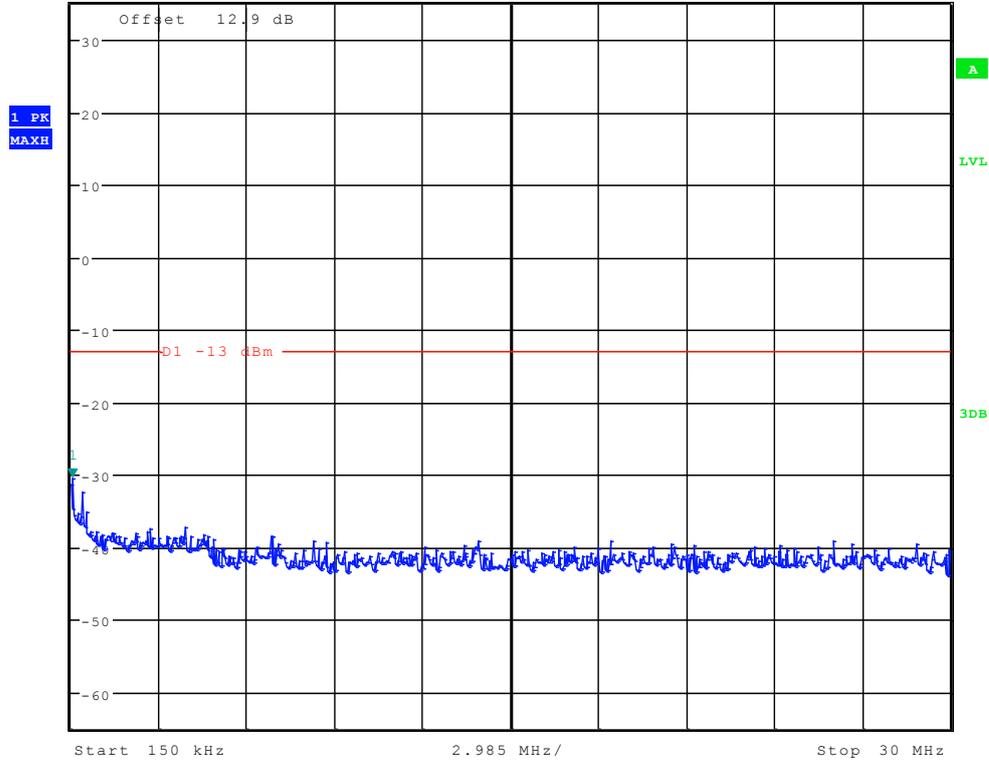
Channel 192



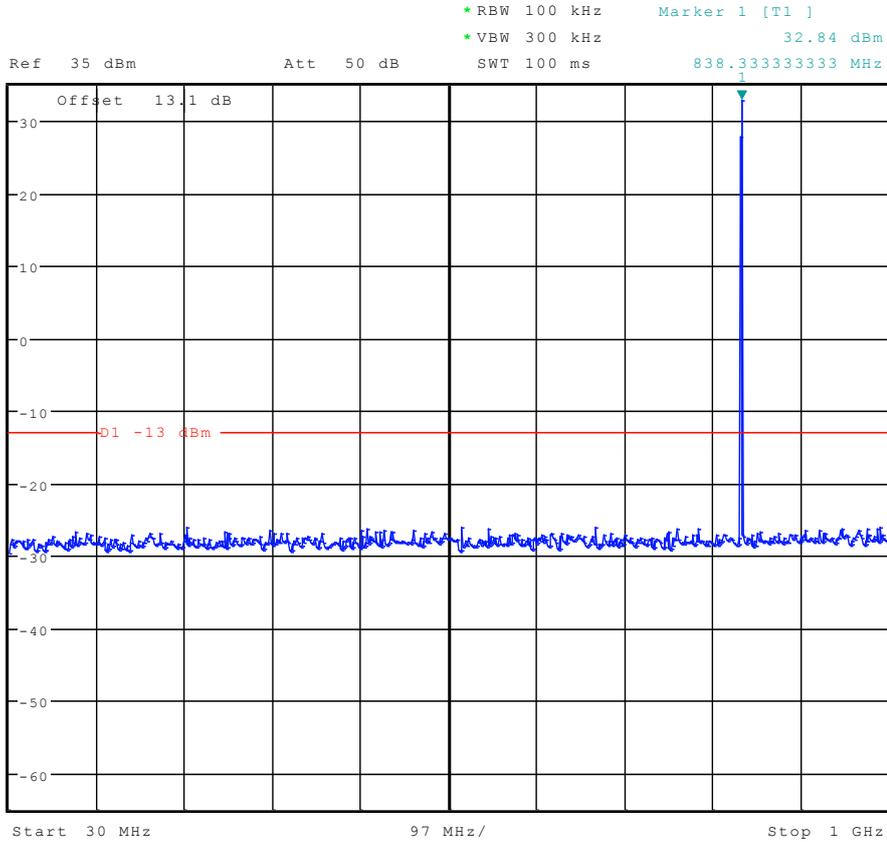
Date: 23.APR.2012 15:38:39



*RBW 10 kHz Marker 1 [T1]
 *VBW 30 kHz -30.36 dBm
 Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz



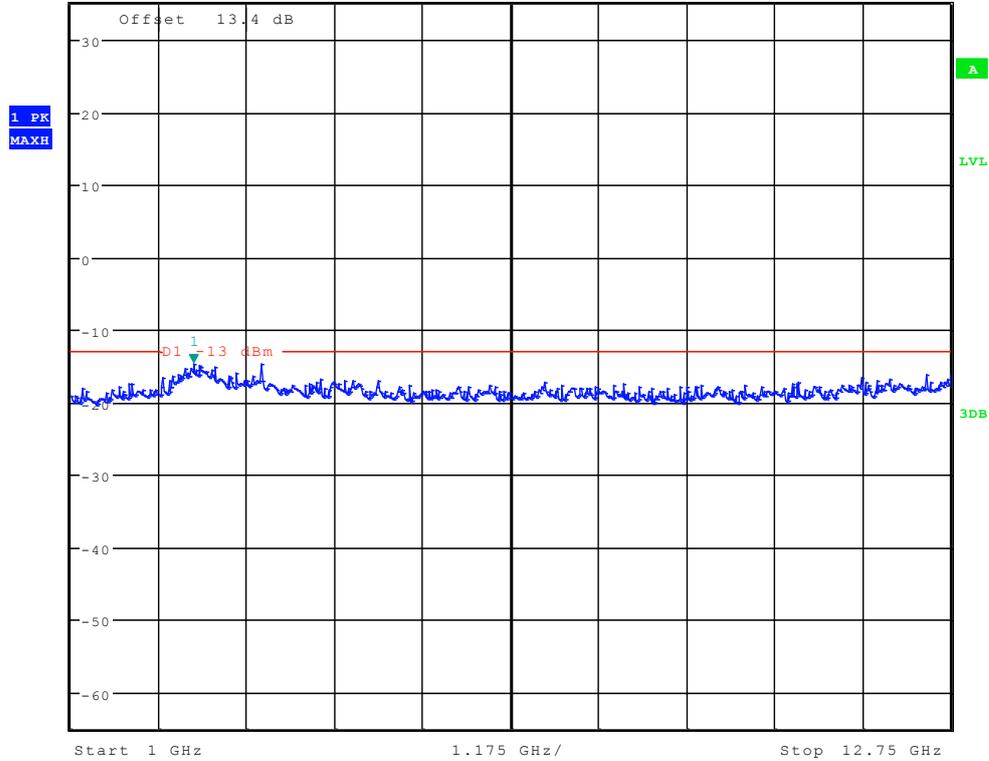
Date: 23.APR.2012 15:39:22



Date: 23.APR.2012 15:40:06



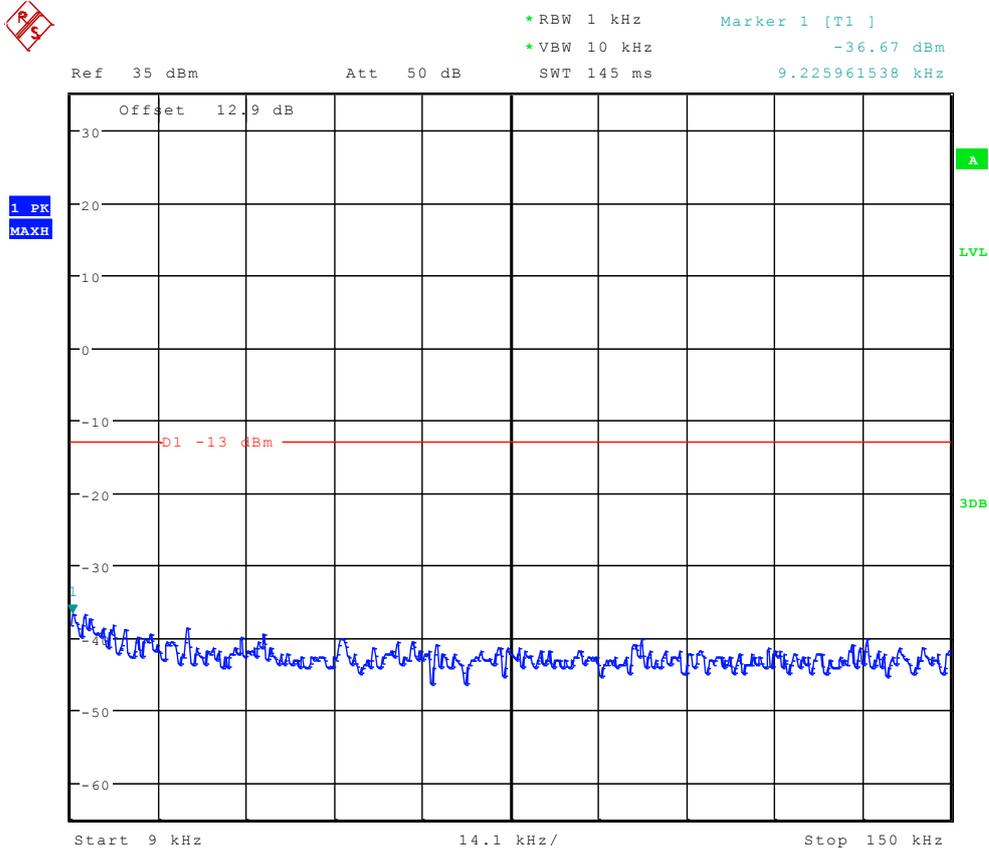
Ref 35 dBm Att 50 dB SWT 70 ms
*RBW 1 MHz Marker 1 [T1]
*VBW 3 MHz -14.66 dBm
2.638221154 GHz



Date: 23.APR.2012 15:40:50



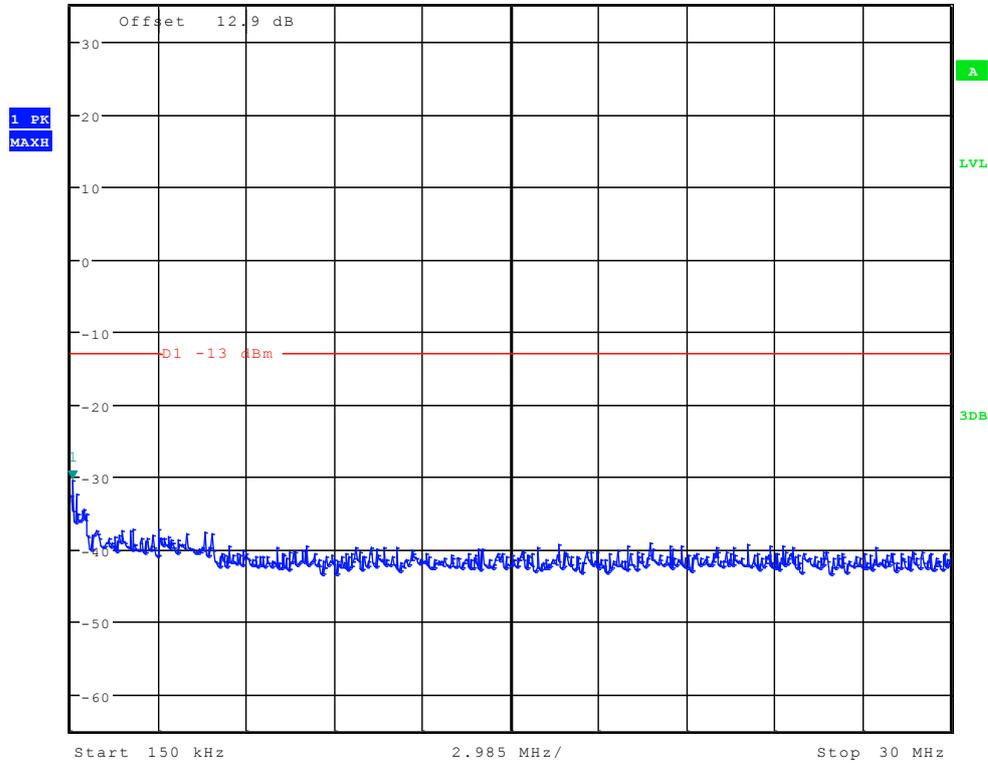
Channel 251



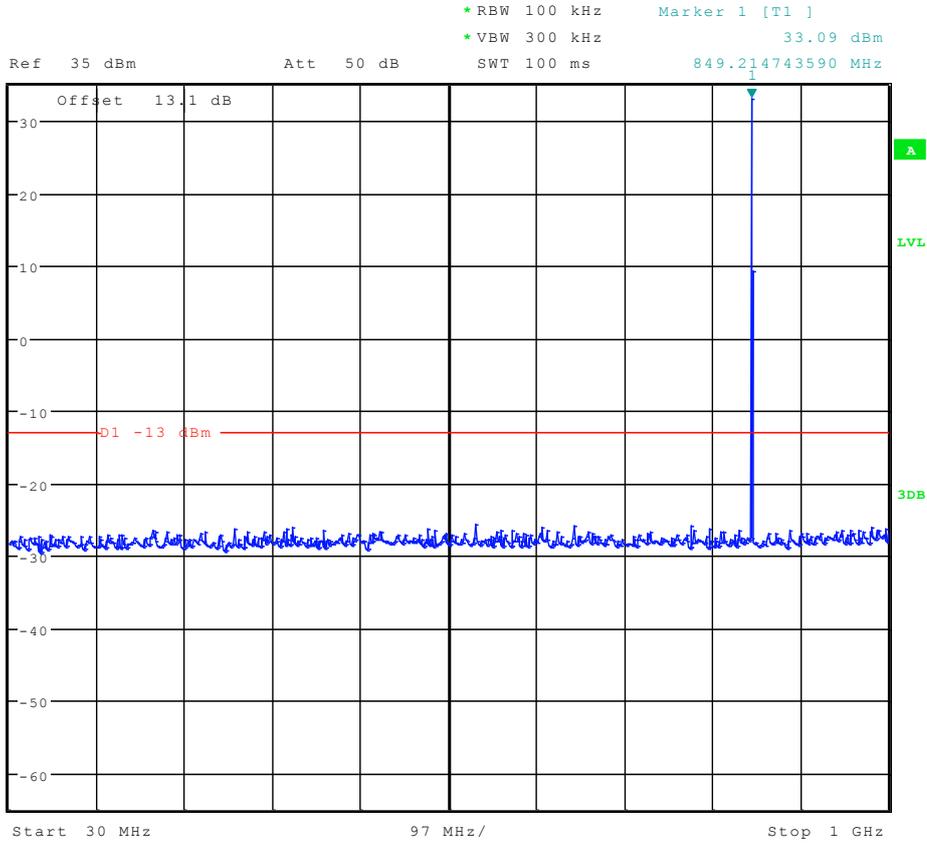
Date: 23.APR.2012 15:38:53



*RBW 10 kHz Marker 1 [T1]
*VBW 30 kHz -30.36 dBm
Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz



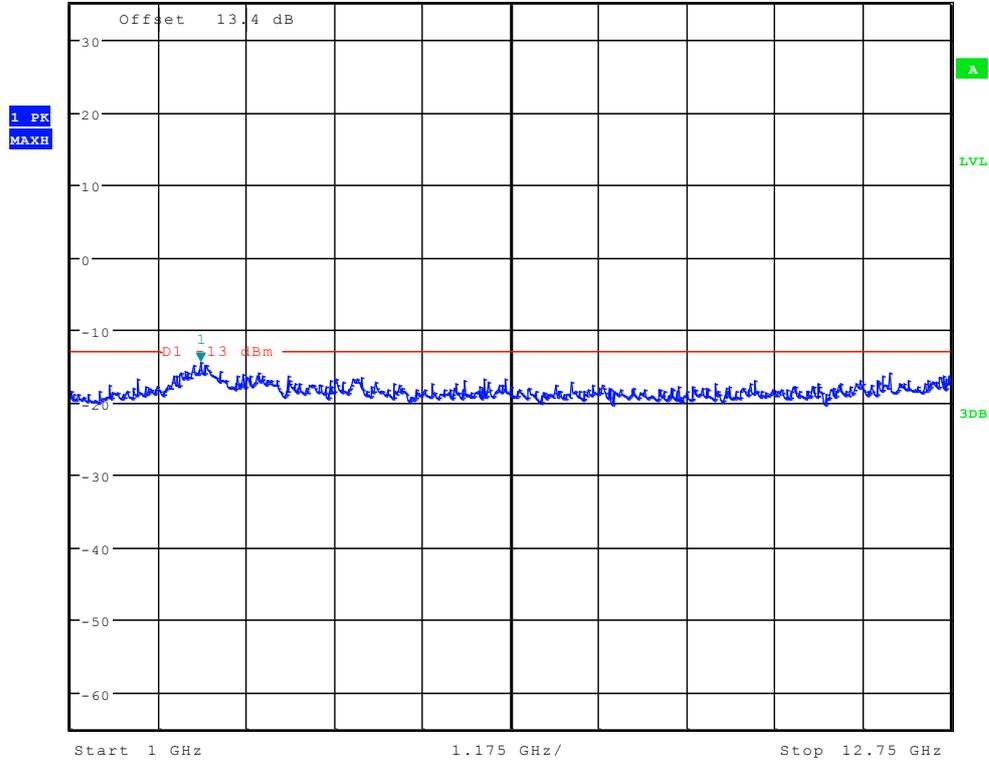
Date: 23.APR.2012 15:39:37



Date: 23.APR.2012 15:40:20



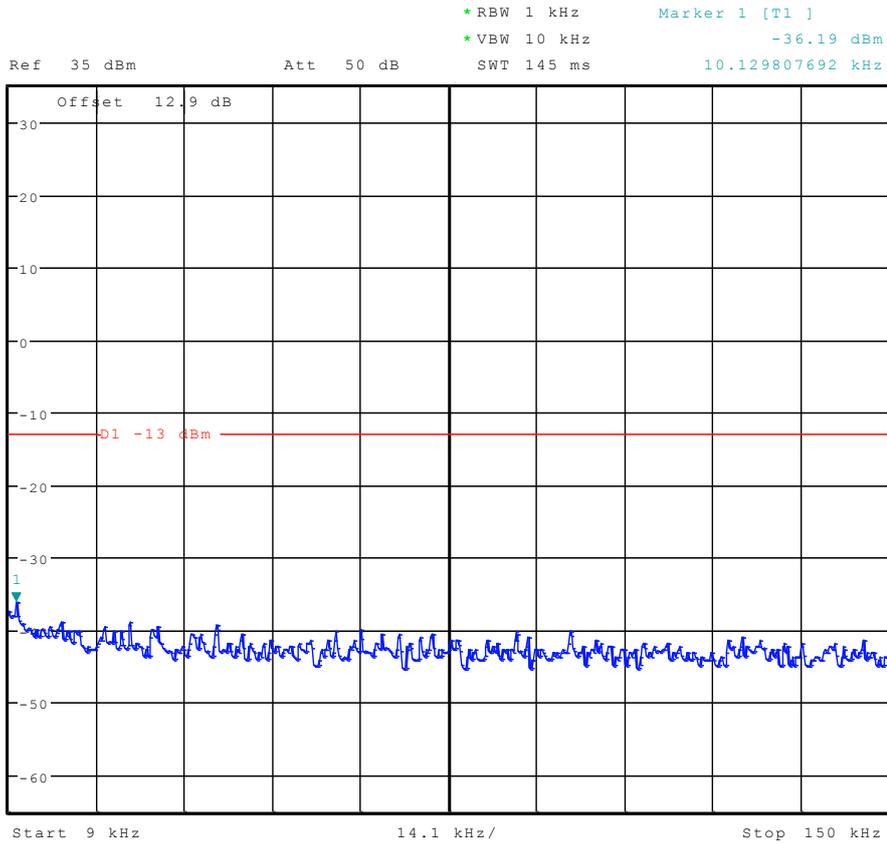
Ref 35 dBm Att 50 dB SWT 70 ms
*RBW 1 MHz Marker 1 [T1]
*VBW 3 MHz -14.48 dBm
2.732371795 GHz



Date: 23.APR.2012 15:41:04



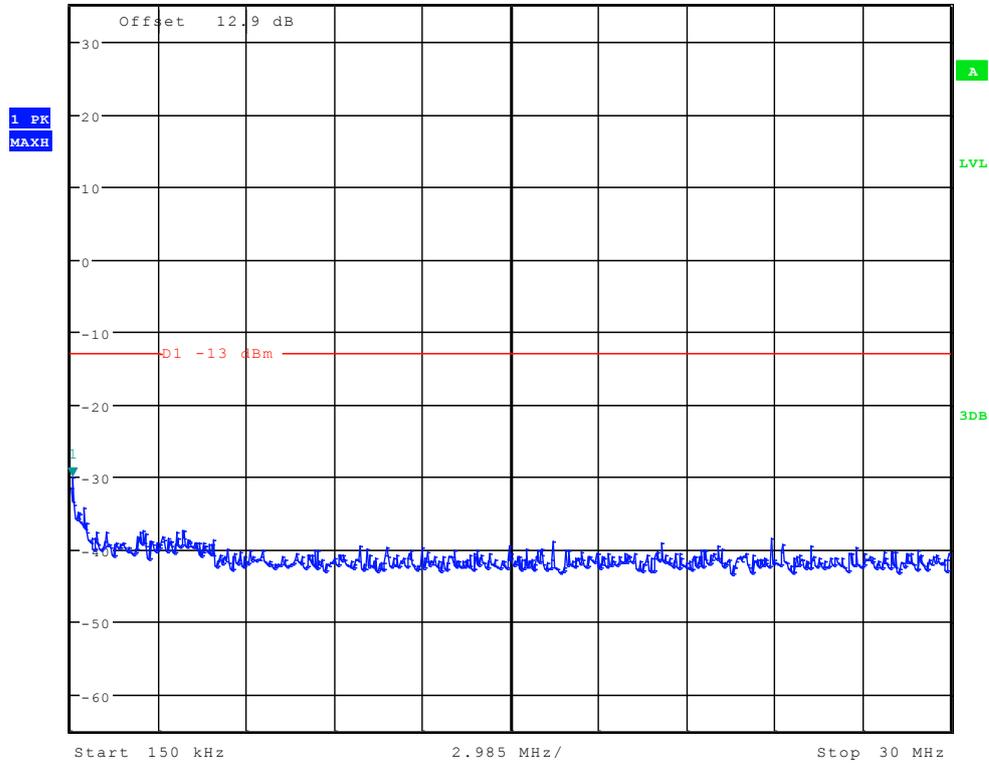
TM2: EDGE Channel 128



Date: 23.APR.2012 15:44:00



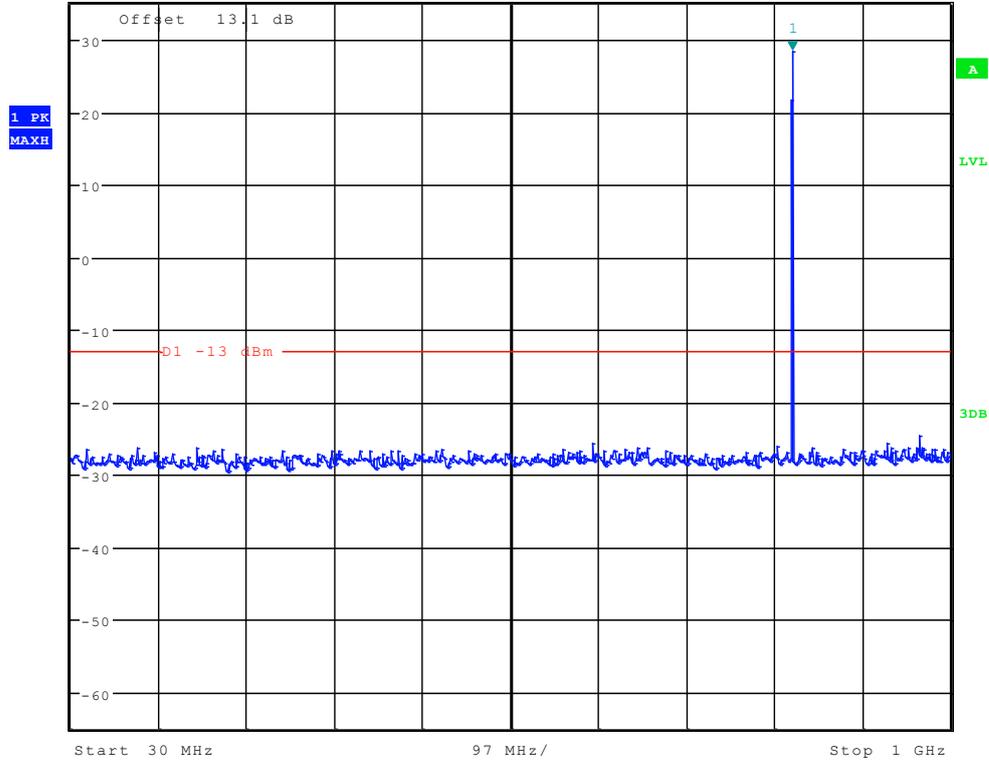
Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz
 *RBW 10 kHz Marker 1 [T1]
 *VBW 30 kHz -30.03 dBm



Date: 23.APR.2012 15:44:43



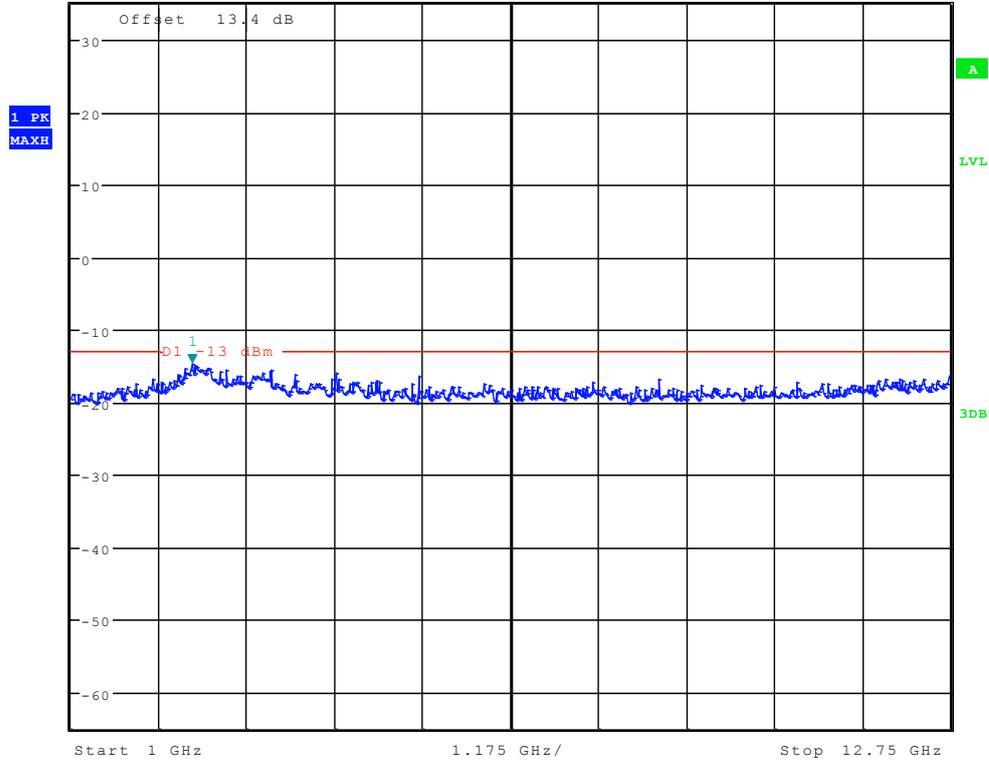
Ref 35 dBm Att 50 dB SWT 100 ms 825.897435897 MHz
 *RBW 100 kHz Marker 1 [T1] 28.31 dBm
 *VBW 300 kHz



Date: 23.APR.2012 15:45:27



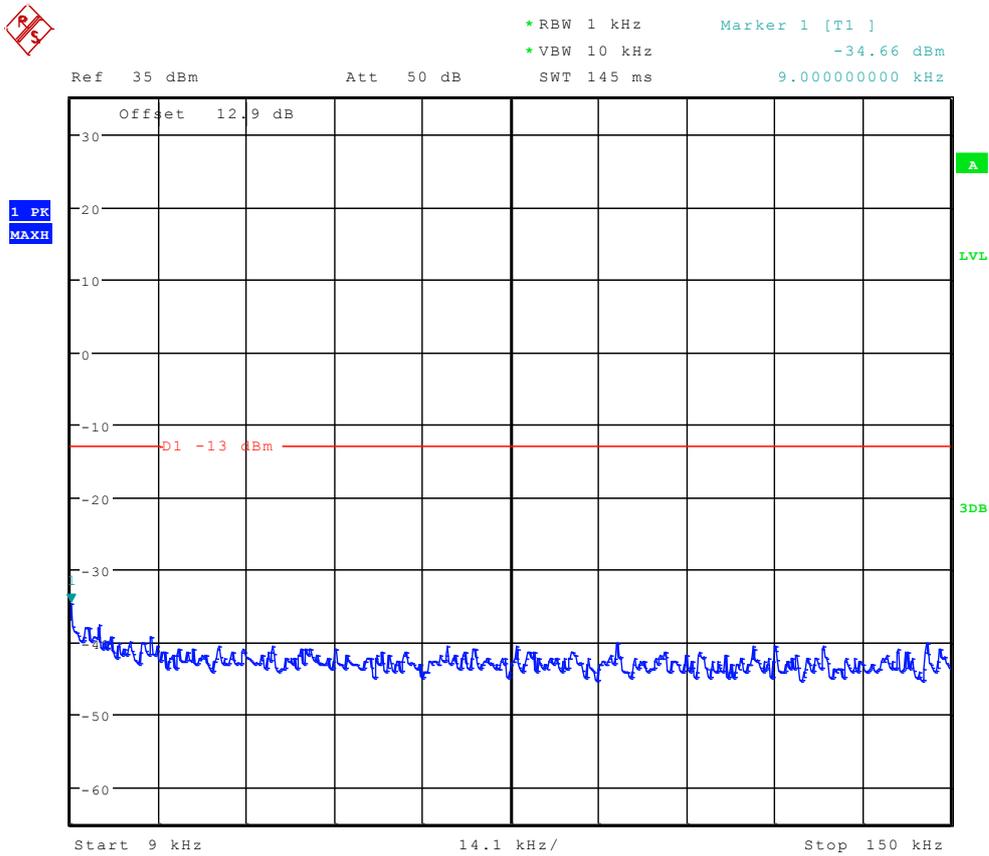
*RBW 1 MHz Marker 1 [T1]
*VBW 3 MHz -14.64 dBm
Ref 35 dBm Att 50 dB SWT 70 ms 2.619391026 GHz



Date: 23.APR.2012 15:46:10



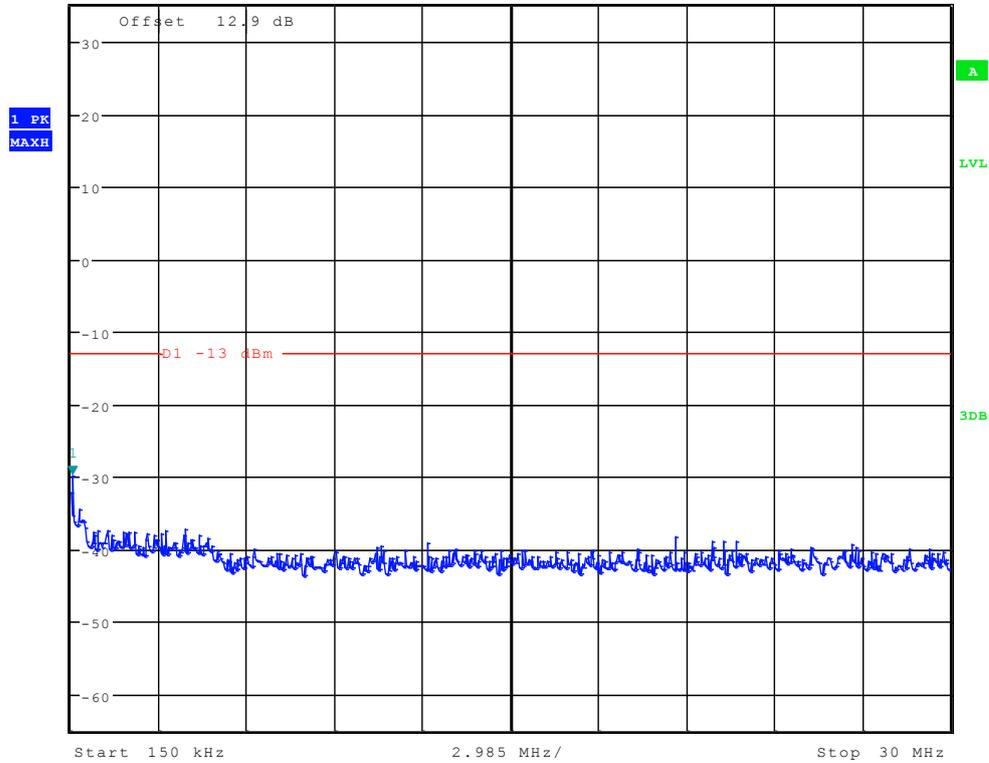
Channel 192



Date: 23.APR.2012 15:44:14



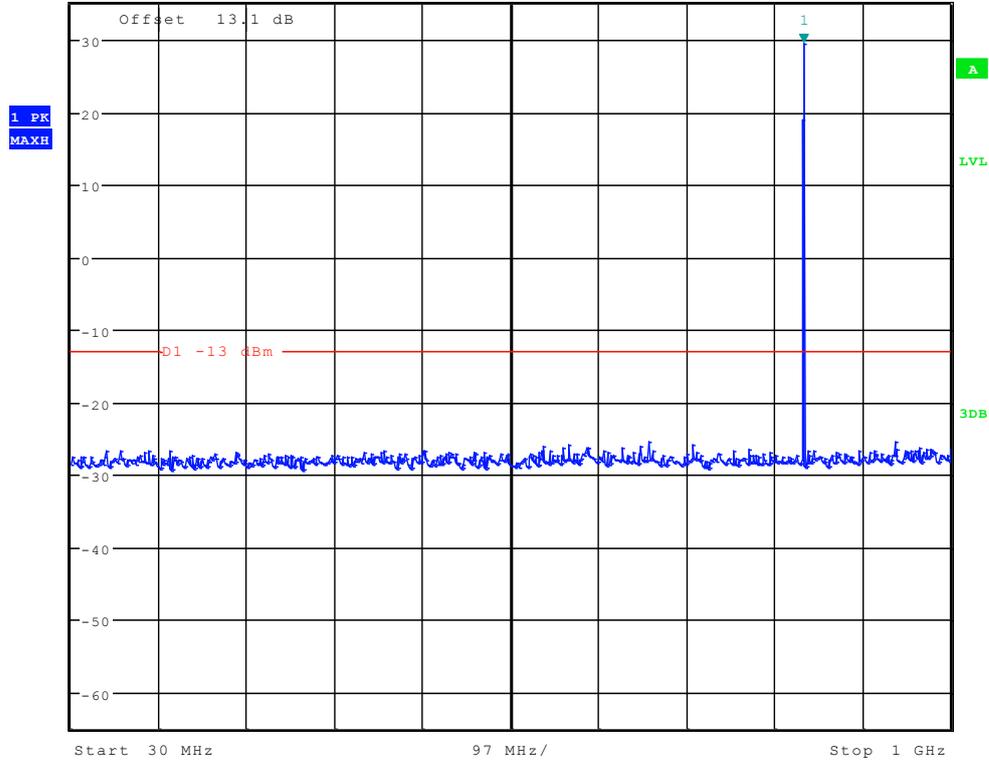
*RBW 10 kHz Marker 1 [T1]
 *VBW 30 kHz -29.81 dBm
 Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz



Date: 23.APR.2012 15:44:57



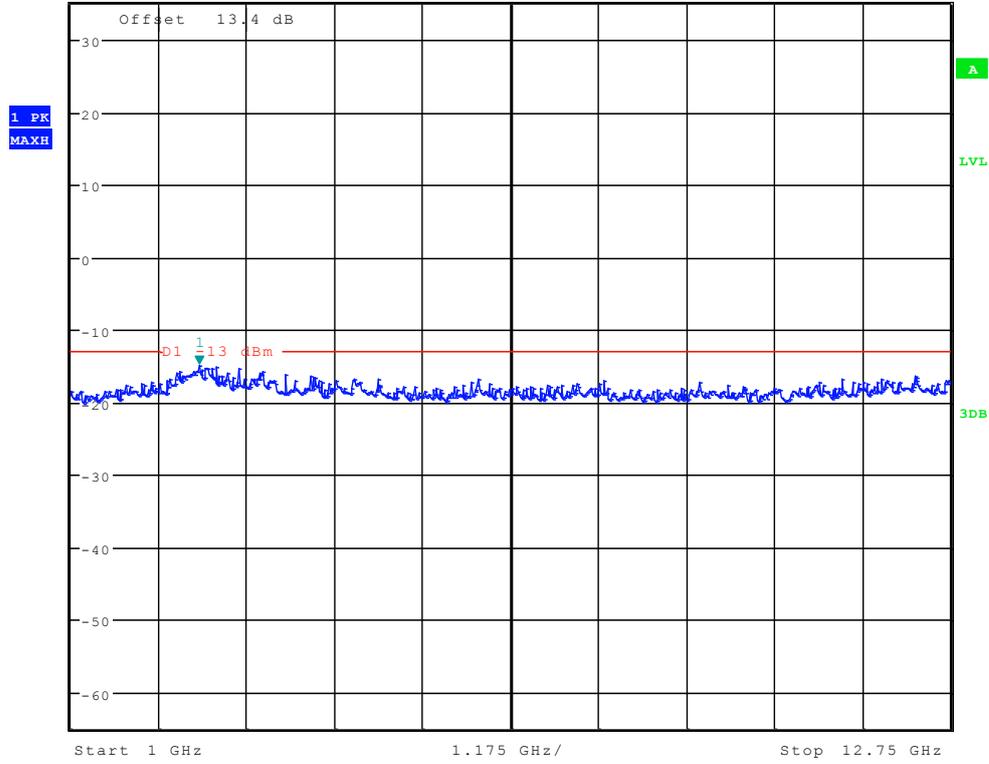
*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz 29.49 dBm
Ref 35 dBm Att 50 dB SWT 100 ms 838.3333333333 MHz



Date: 23.APR.2012 15:45:41



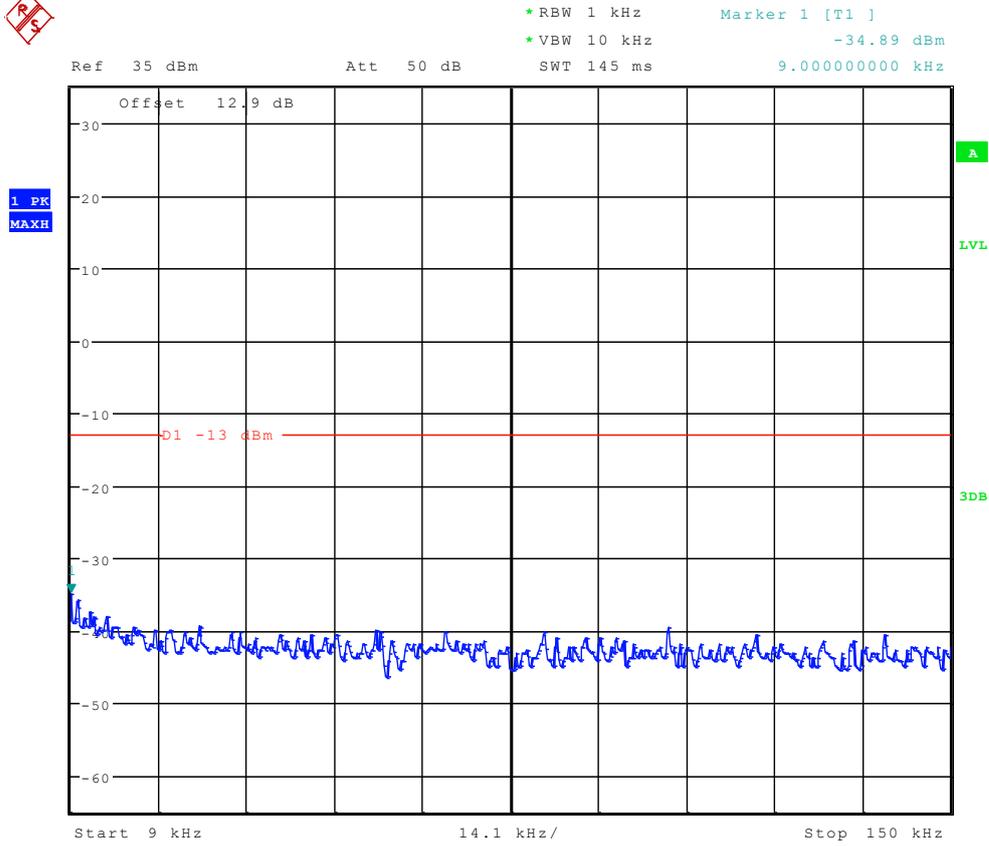
*RBW 1 MHz Marker 1 [T1]
*VBW 3 MHz -14.88 dBm
Ref 35 dBm Att 50 dB SWT 70 ms 2.713541667 GHz



Date: 23.APR.2012 15:46:25



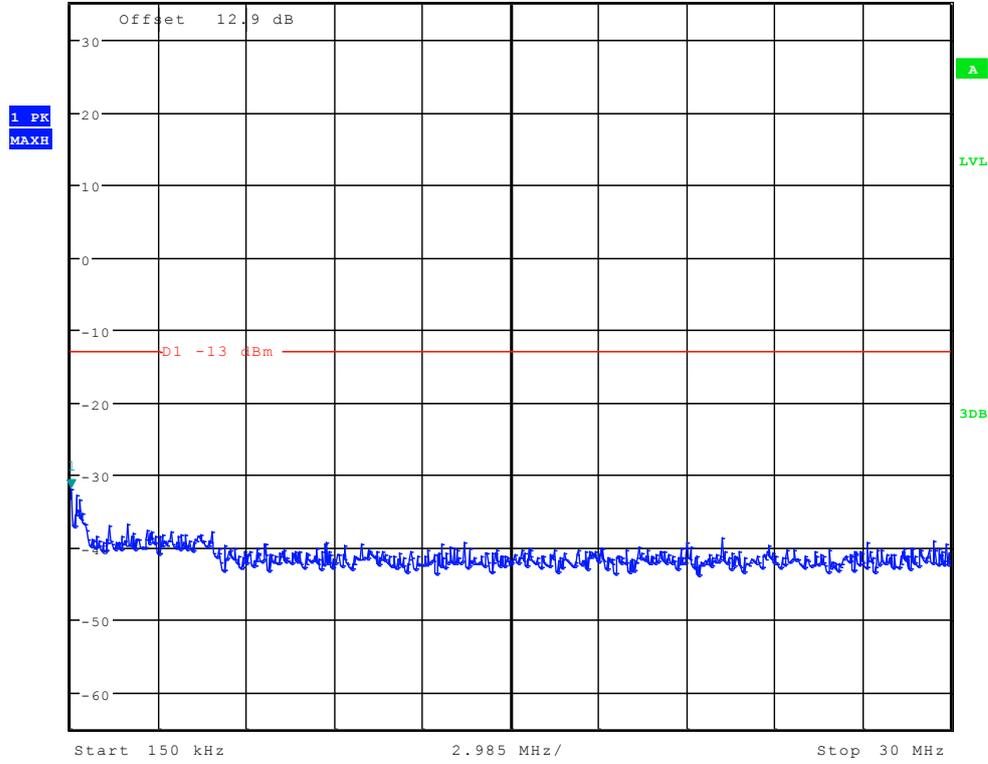
Channel 251



Date: 23.APR.2012 15:44:28



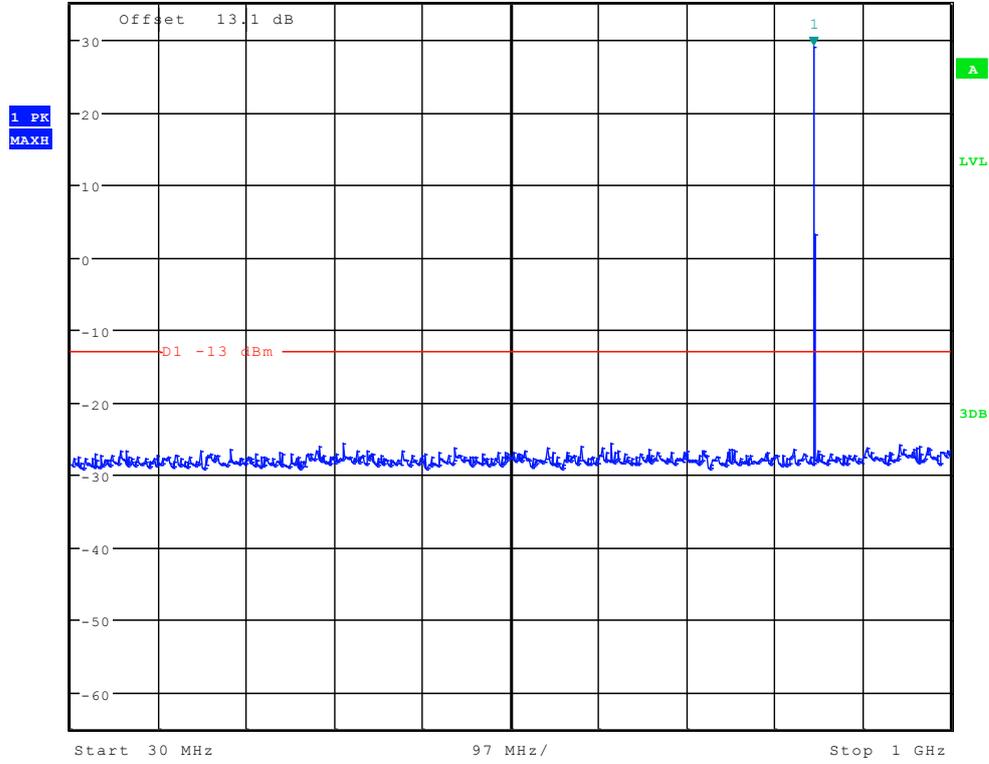
Ref 35 dBm Att 50 dB SWT 300 ms 150.00000000 kHz
 *RBW 10 kHz Marker 1 [T1]
 *VBW 30 kHz -31.87 dBm



Date: 23.APR.2012 15:45:12



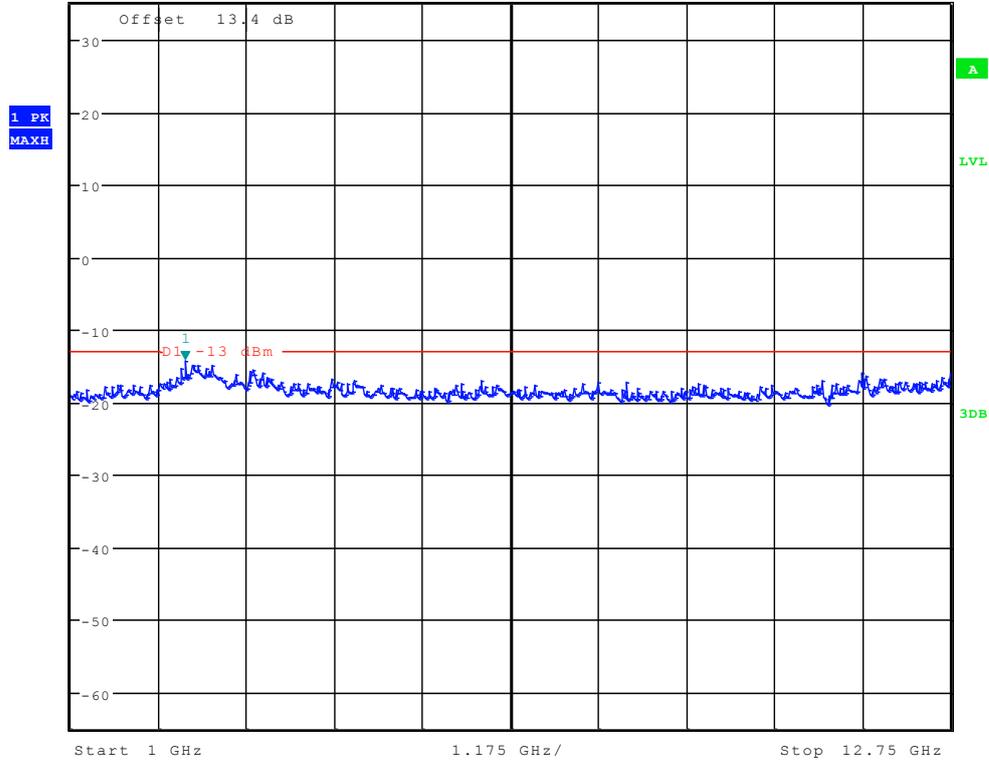
Ref 35 dBm Att 50 dB SWT 100 ms 849.214743590 MHz
 *RBW 100 kHz Marker 1 [T1] 29.11 dBm
 *VBW 300 kHz



Date: 23.APR.2012 15:45:55



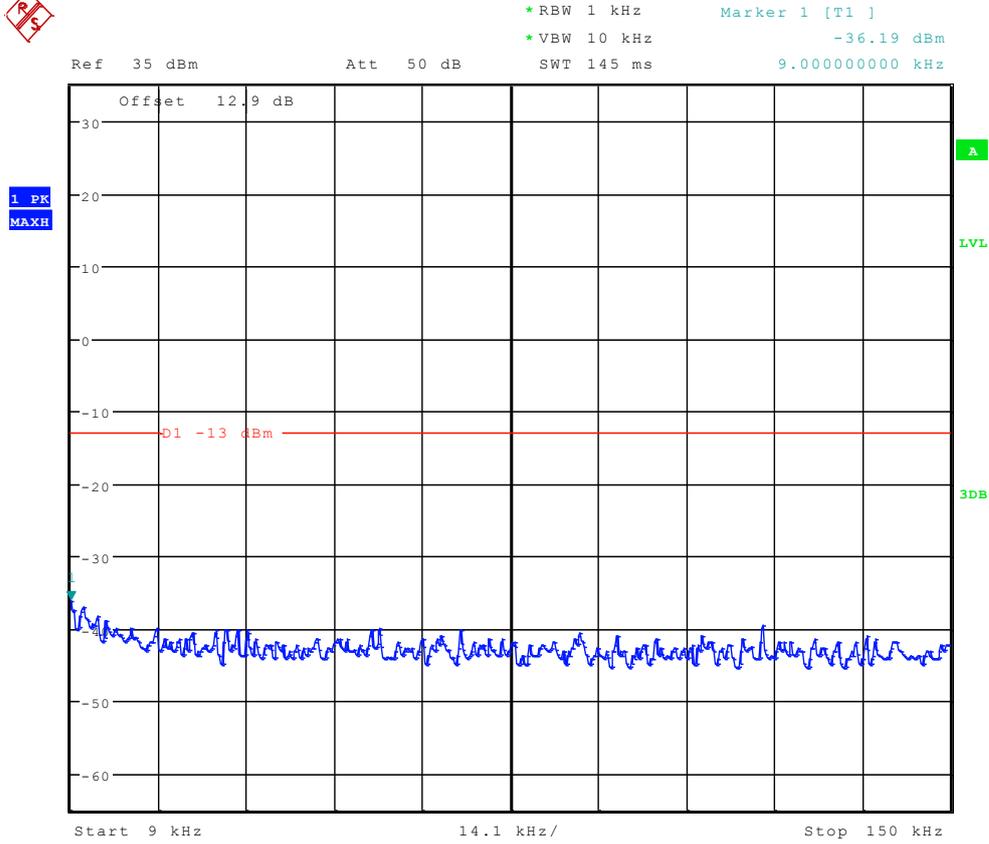
*RBW 1 MHz Marker 1 [T1]
*VBW 3 MHz -14.26 dBm
Ref 35 dBm Att 50 dB SWT 70 ms 2.525240385 GHz



Date: 23.APR.2012 15:46:39



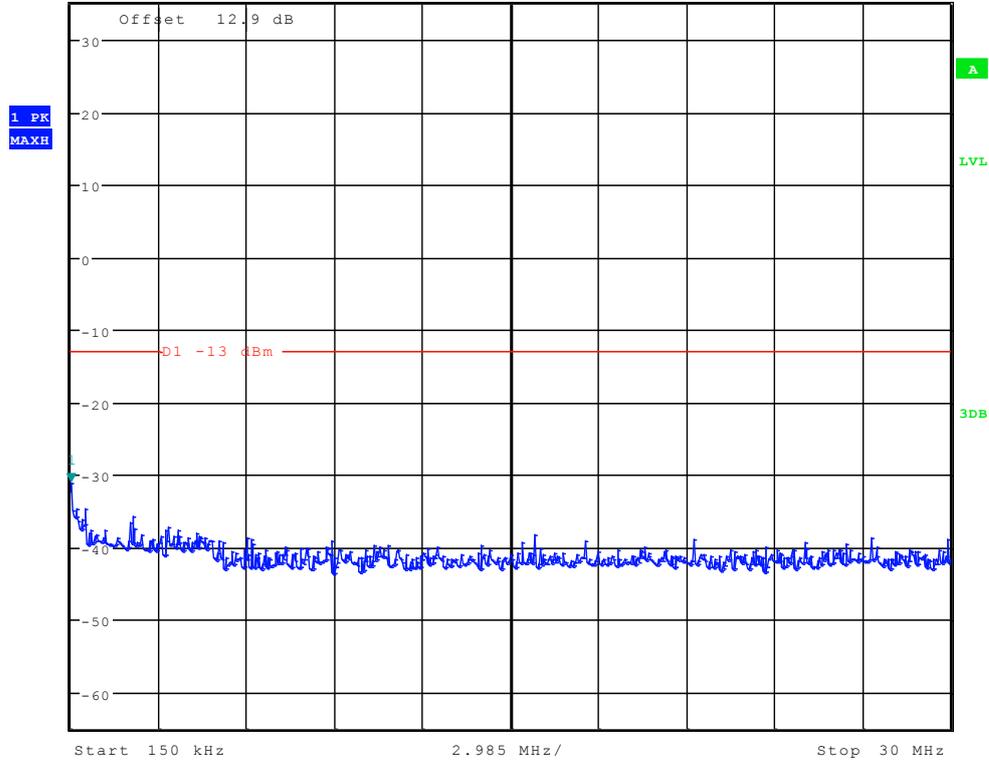
TM3: WCDMA Channel 4132



Date: 23.APR.2012 15:49:44



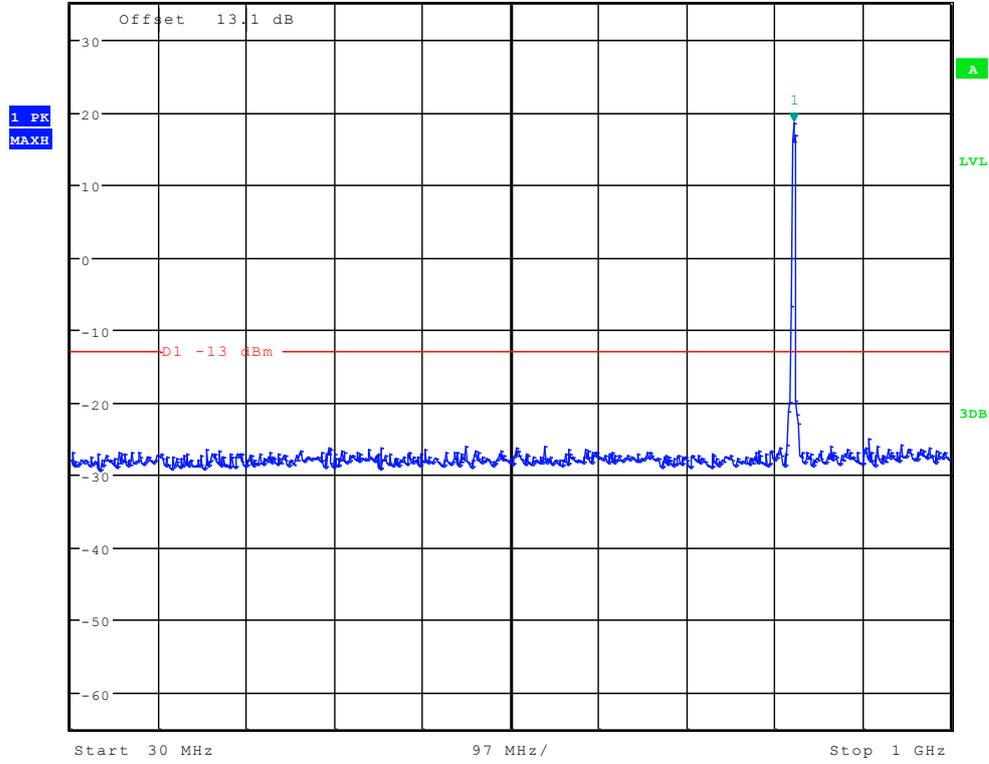
*RBW 10 kHz Marker 1 [T1]
 *VBW 30 kHz -31.16 dBm
 Ref 35 dBm Att 50 dB SWT 300 ms 150.000000000 kHz



Date: 23.APR.2012 15:50:35



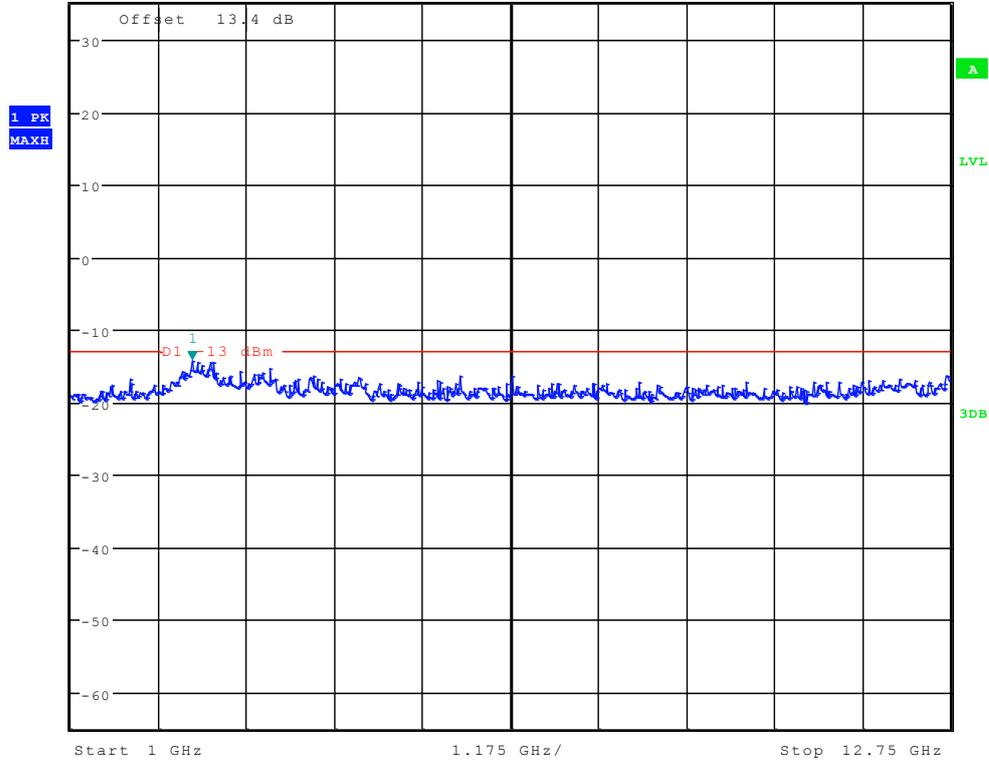
Ref 35 dBm Att 50 dB SWT 100 ms 827.451923077 MHz
*RBW 100 kHz Marker 1 [T1] 18.49 dBm
*VBW 300 kHz



Date: 23.APR.2012 15:51:18



*RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -14.27 dBm
 Ref 35 dBm Att 50 dB SWT 70 ms 2.619391026 GHz



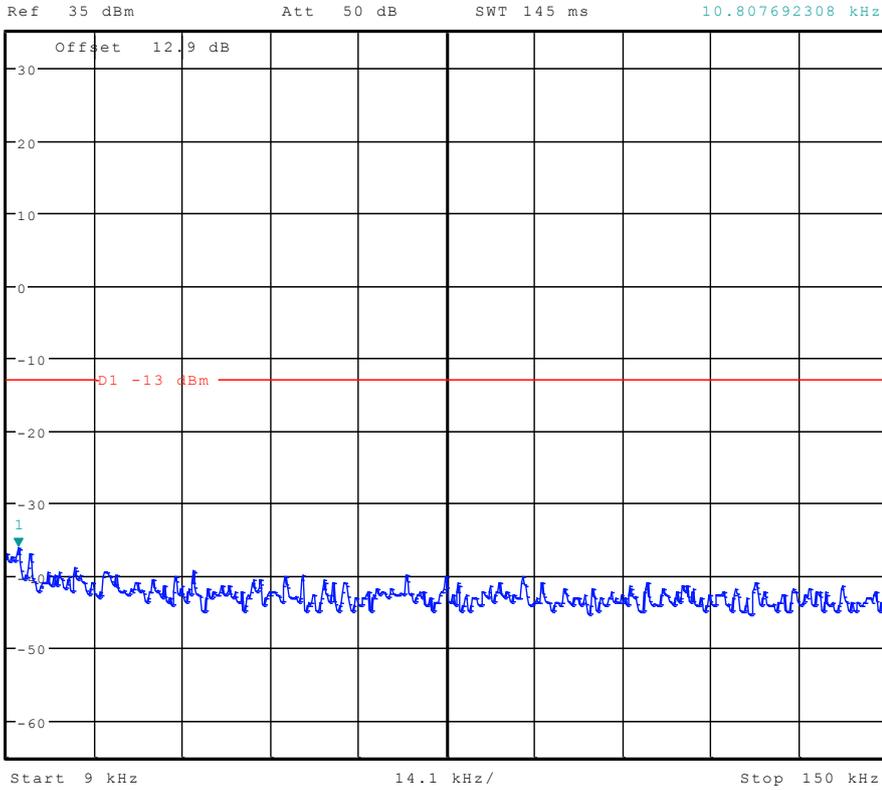
Date: 23.APR.2012 15:52:02



Channel 4182



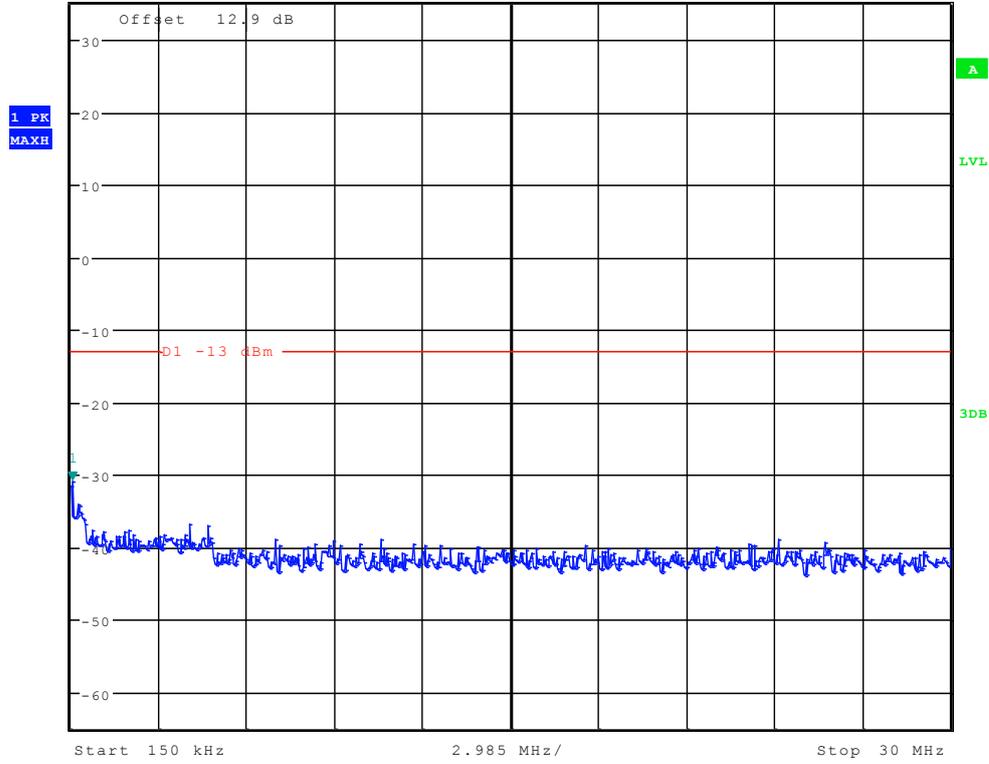
*RBW 1 kHz Marker 1 [T1]
 *VBW 10 kHz -36.19 dBm
 SWT 145 ms 10.807692308 kHz



Date: 23.APR.2012 15:50:05



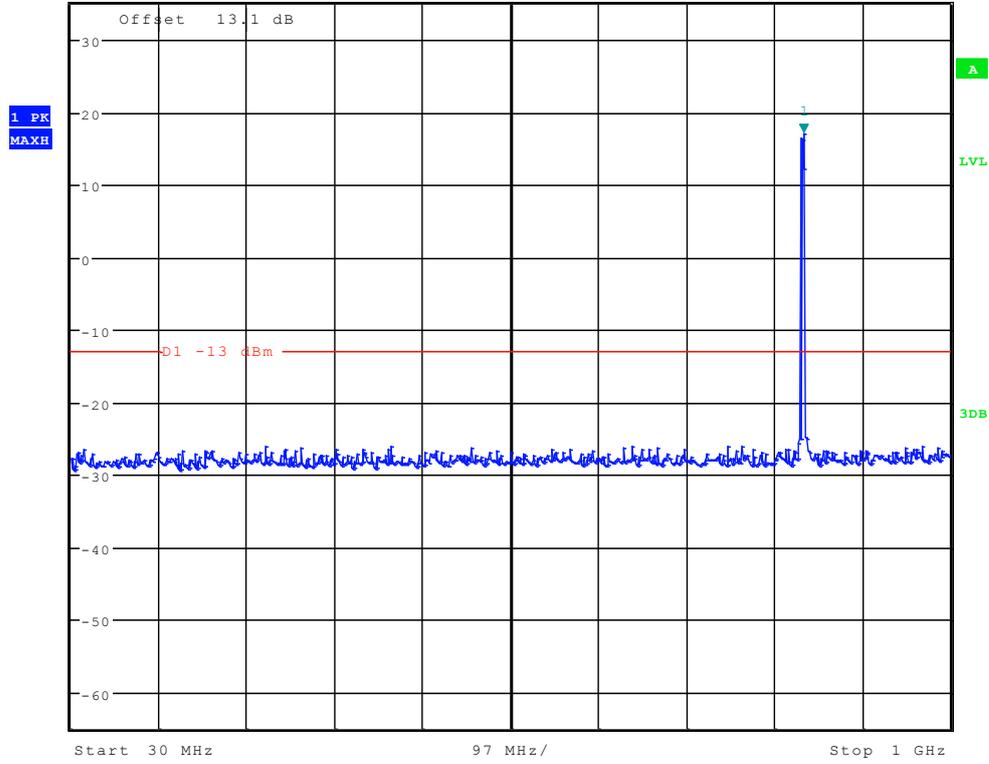
*RBW 10 kHz Marker 1 [T1]
*VBW 30 kHz -30.90 dBm
Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz



Date: 23.APR.2012 15:50:49



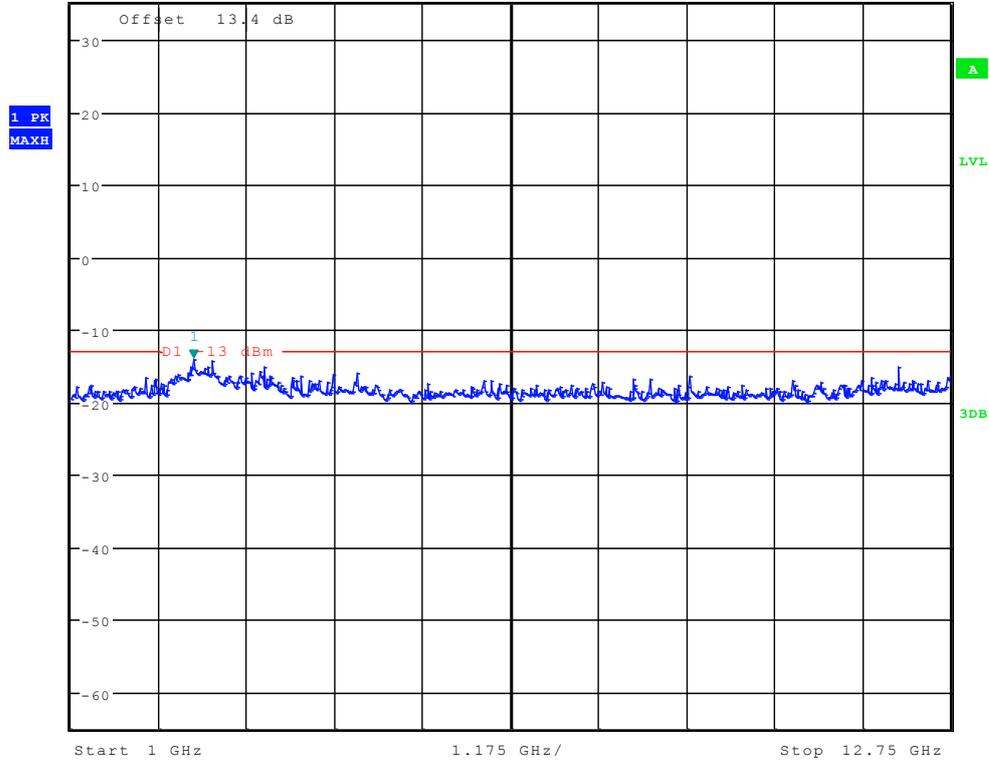
Ref 35 dBm Att 50 dB SWT 100 ms
*RBW 100 kHz Marker 1 [T1] 16.96 dBm
*VBW 300 kHz 838.3333333333 MHz



Date: 23.APR.2012 15:51:33



*RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -14.13 dBm
 Ref 35 dBm Att 50 dB SWT 70 ms 2.638221154 GHz



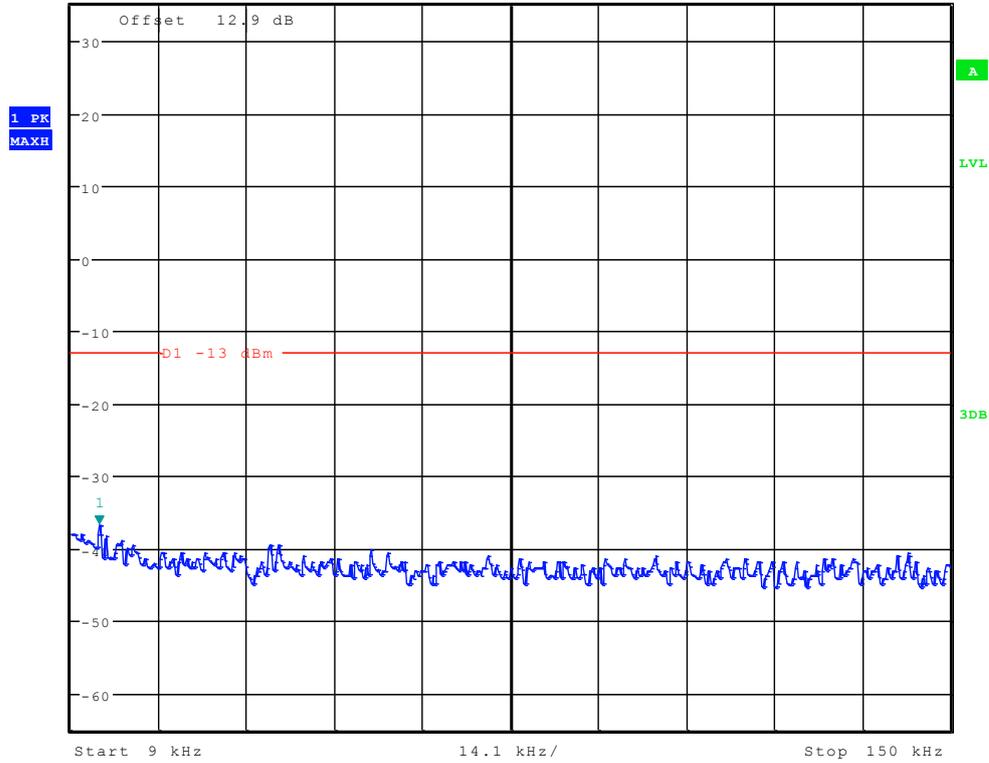
Date: 23.APR.2012 15:52:16



Channel 4233



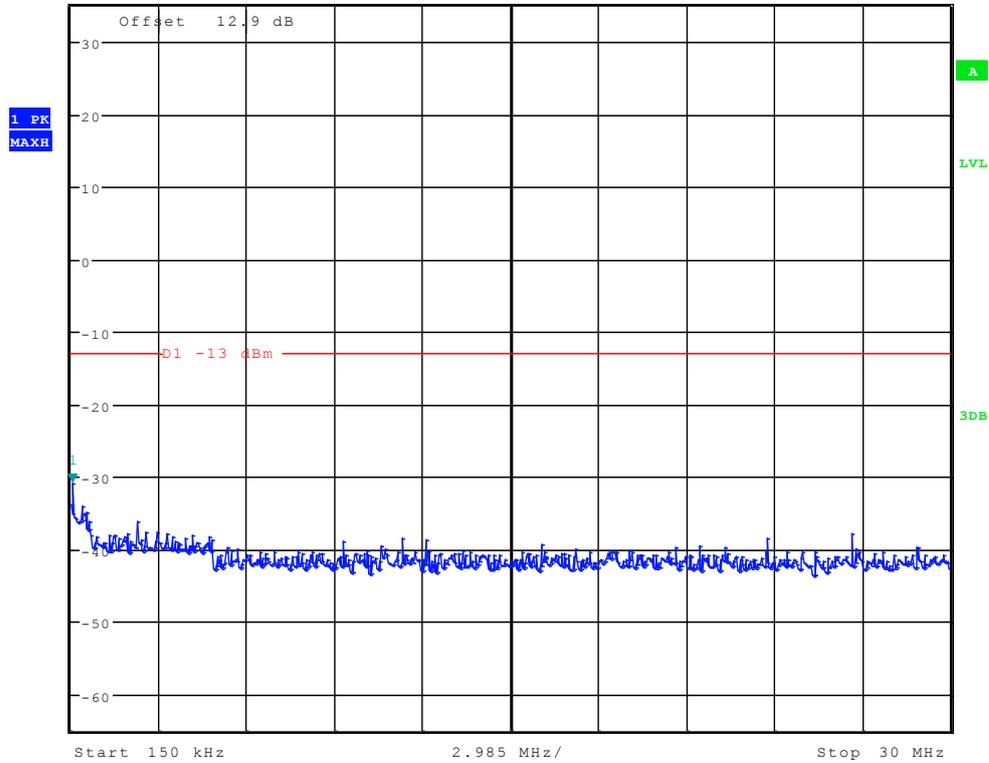
*RBW 1 kHz Marker 1 [T1]
 *VBW 10 kHz -36.67 dBm
 Ref 35 dBm Att 50 dB SWT 145 ms 13.519230769 kHz



Date: 23.APR.2012 15:50:20



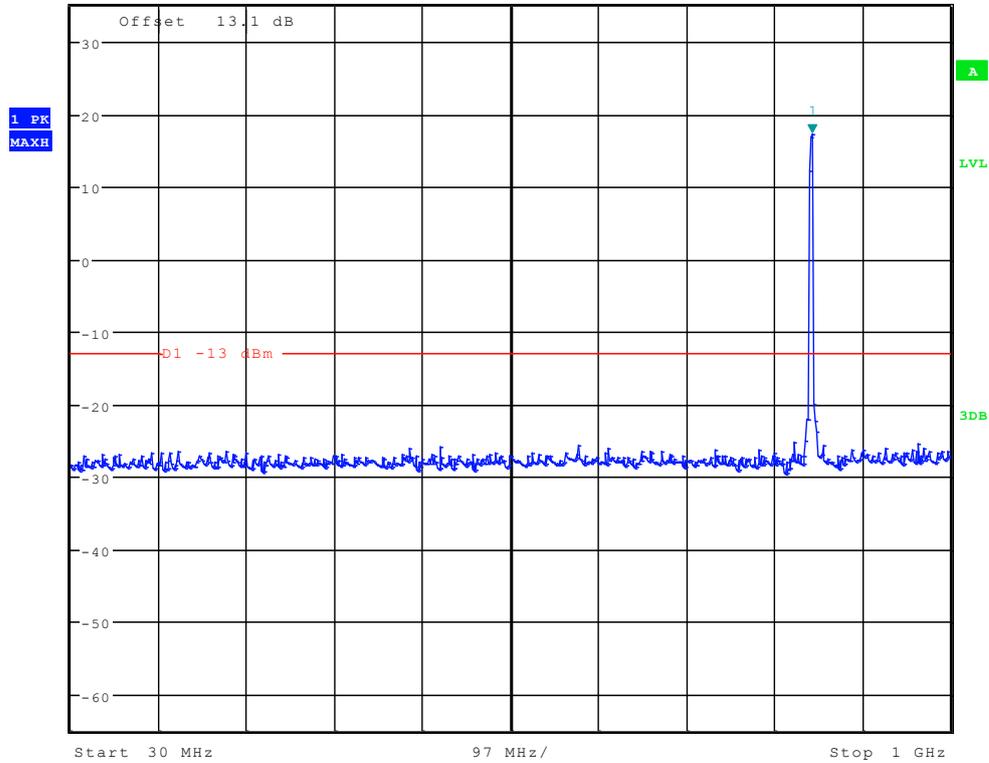
*RBW 10 kHz Marker 1 [T1]
 *VBW 30 kHz -30.95 dBm
 Ref 35 dBm Att 50 dB SWT 300 ms 197.836538462 kHz



Date: 23.APR.2012 15:51:03



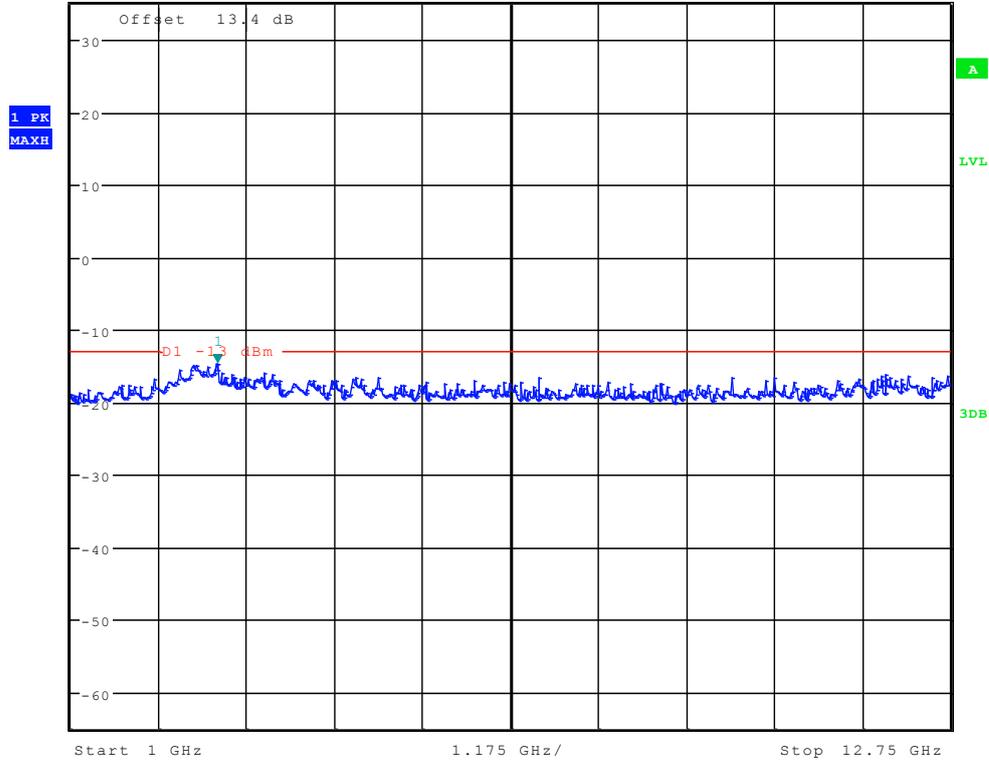
Ref 35 dBm Att 50 dB SWT 100 ms 847.660256410 MHz
*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz 17.27 dBm



Date: 23.APR.2012 15:51:47



Ref 35 dBm Att 50 dB SWT 70 ms
*RBW 1 MHz Marker 1 [T1]
*VBW 3 MHz -14.64 dBm
2.958333333 GHz



Date: 23.APR.2012 15:52:31

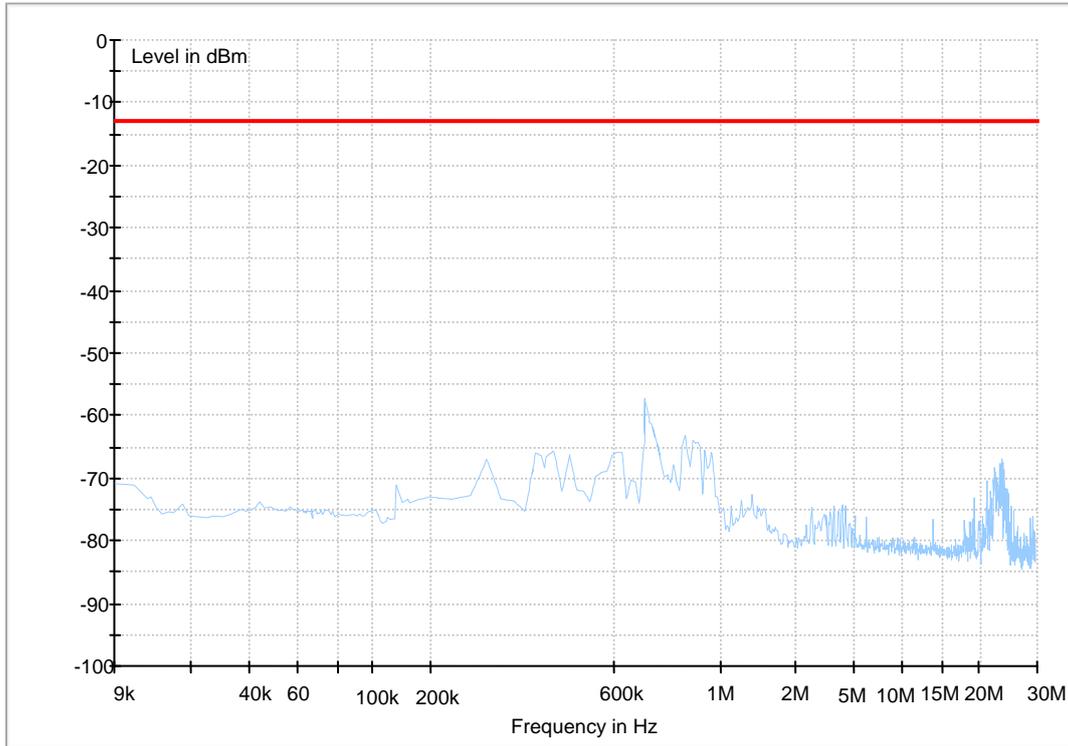


Appendix F

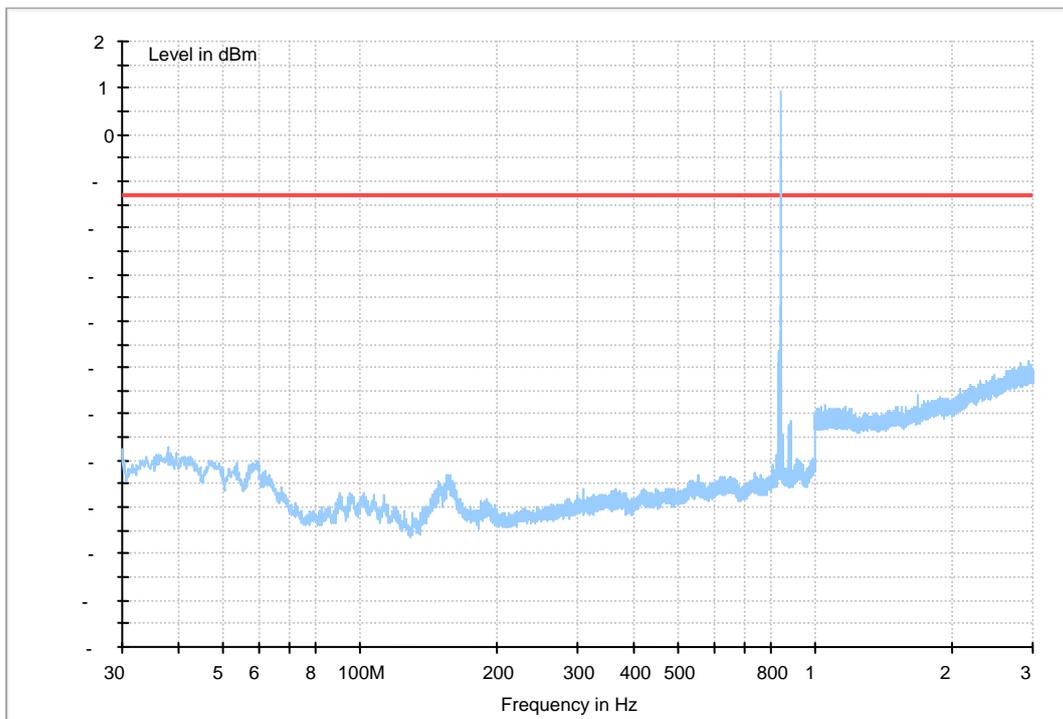
Radiated spurious emission

GSM 850

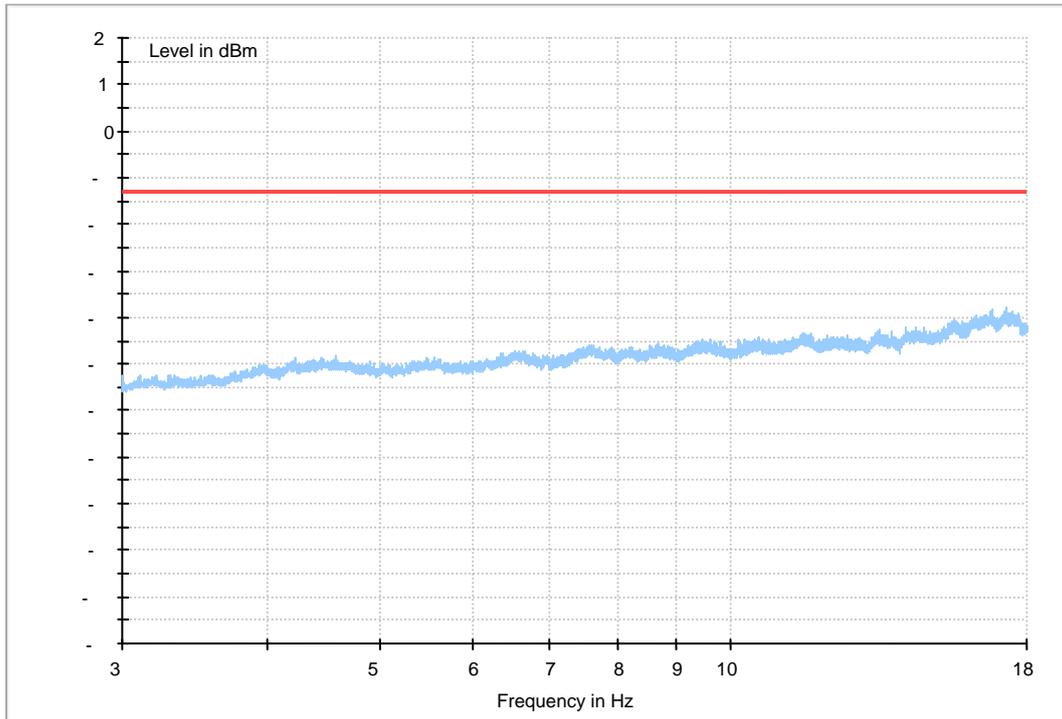
(9kHz~30MHz)



(30MHz~3GHz)

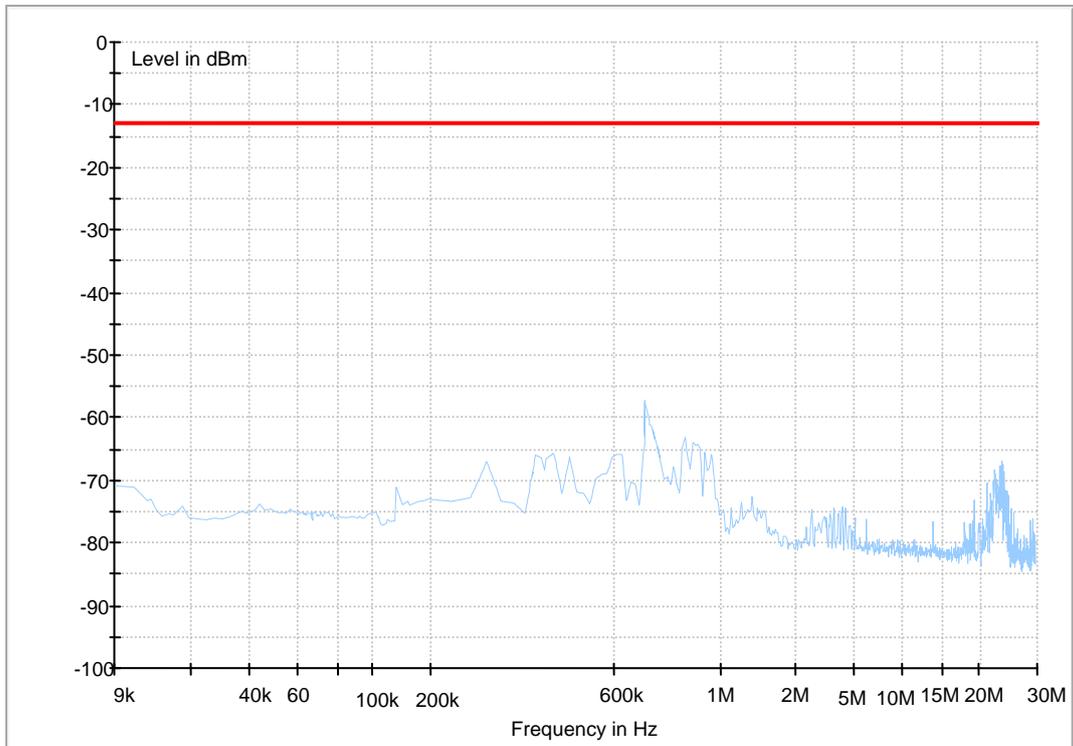


(3GHz~18GHz)

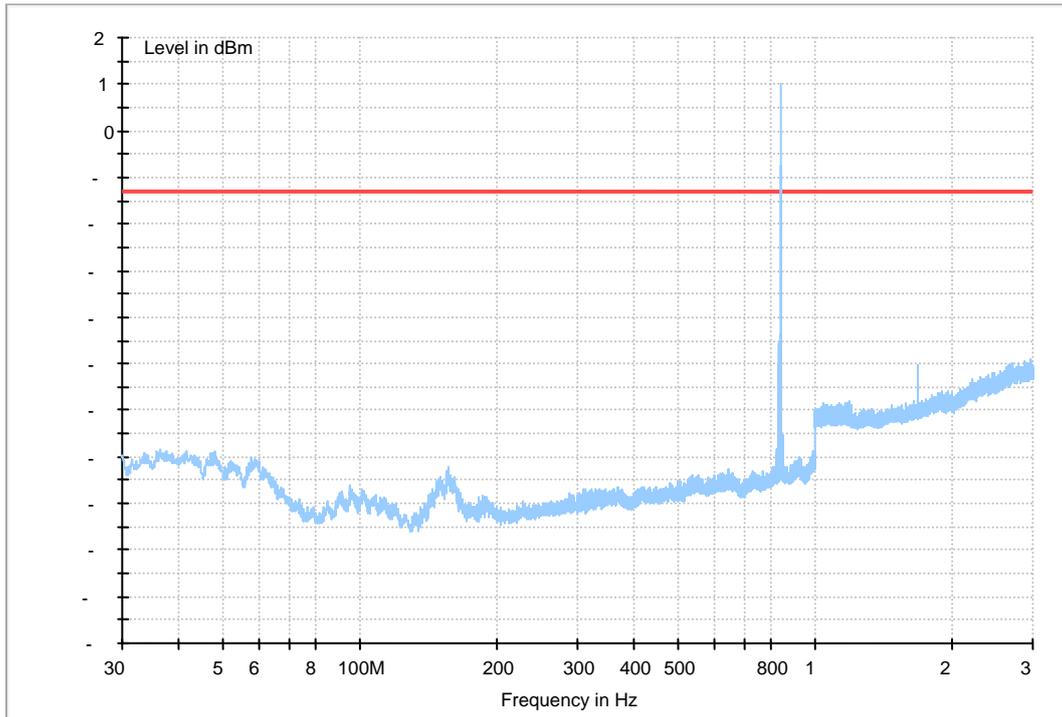


GPRS 850

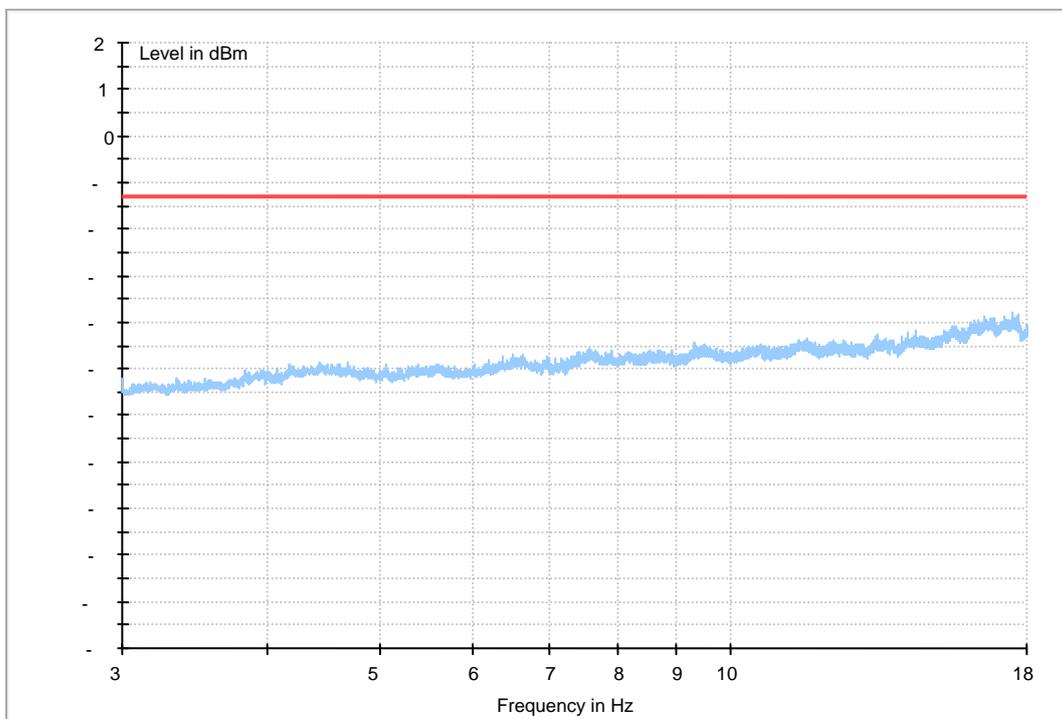
(9kHz~30MHz)



(30MHz~3GHz)

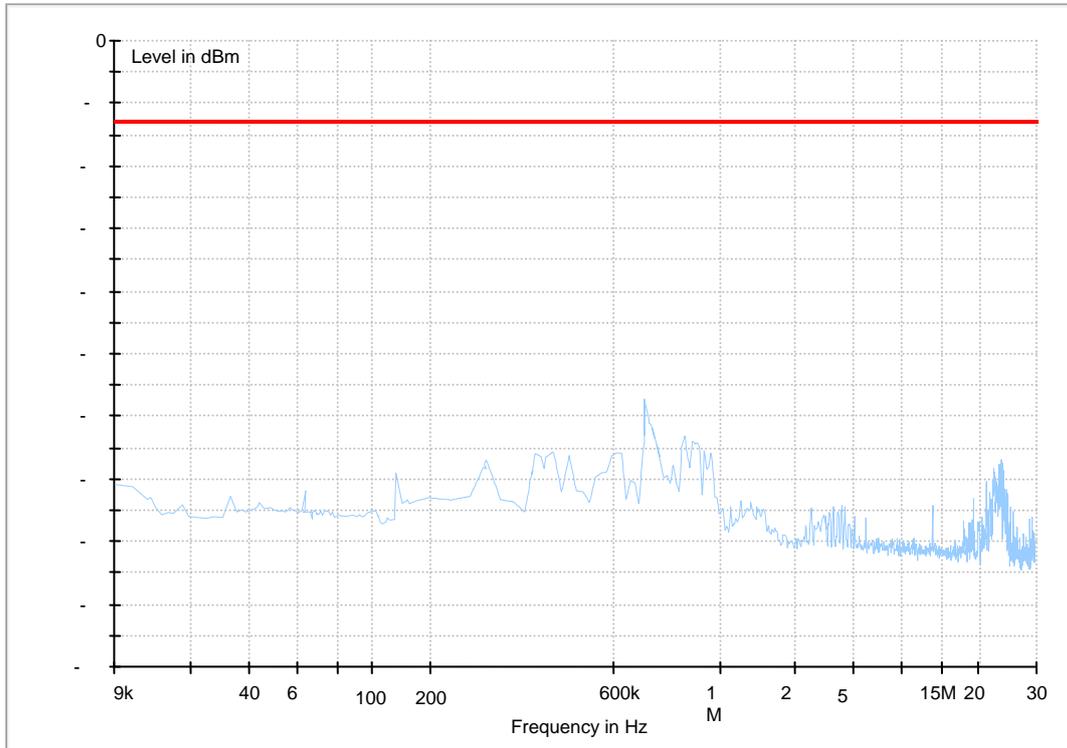


(3GHz~18GHz)

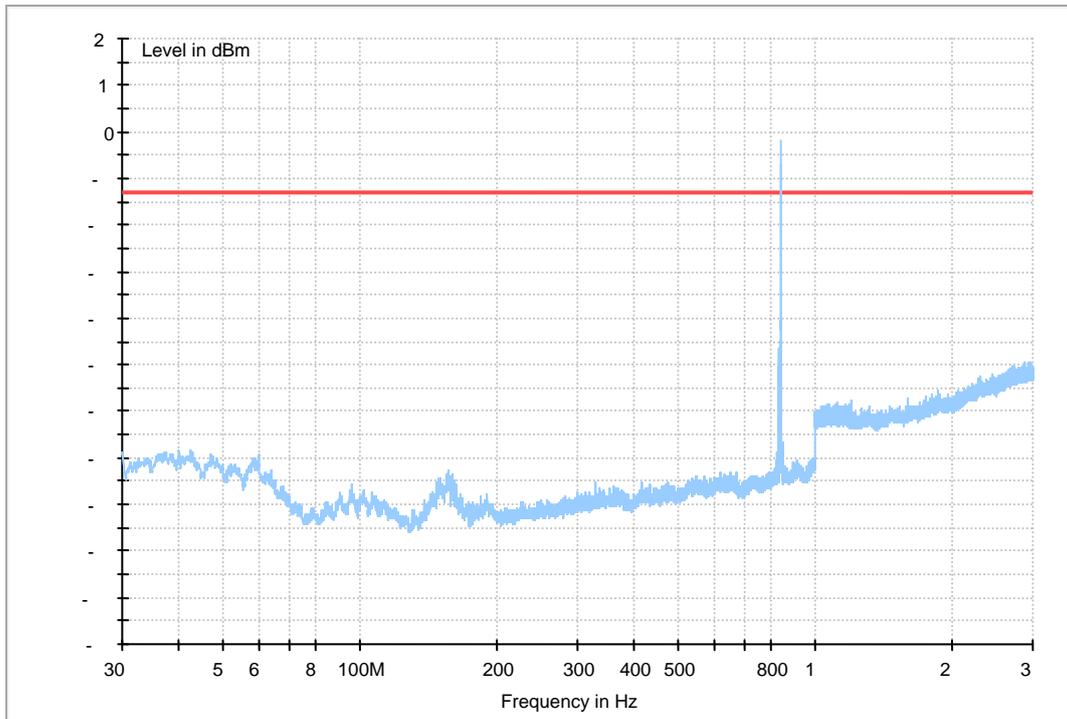


EDGE 850

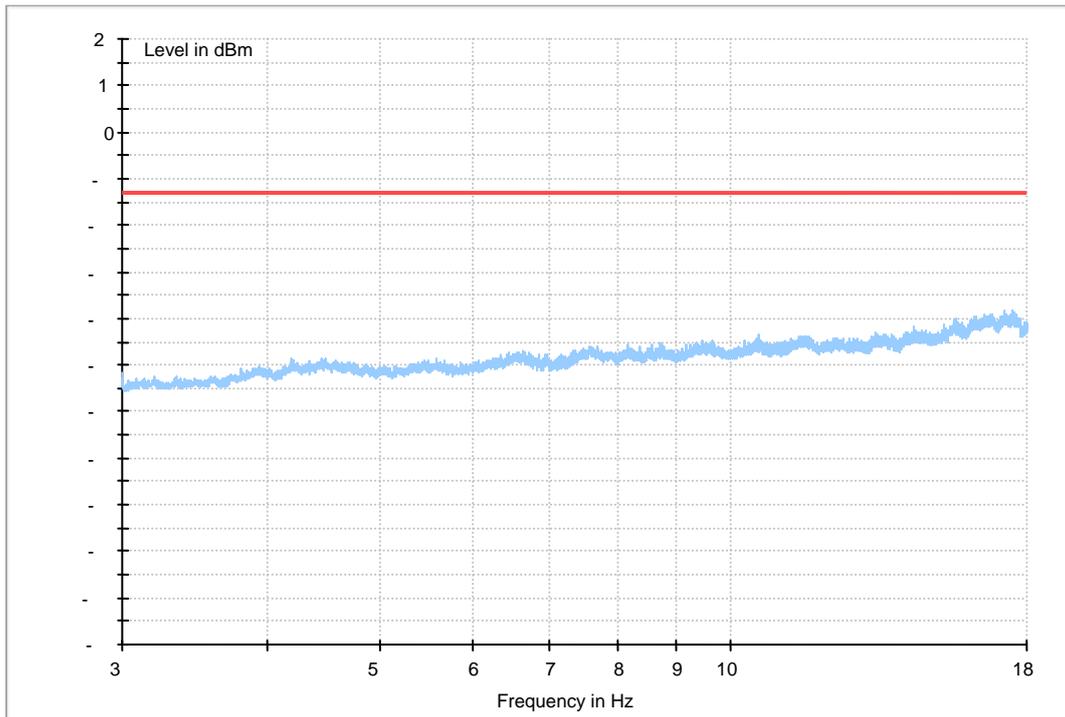
(9kHz~30MHz)



(30MHz~3GHz)

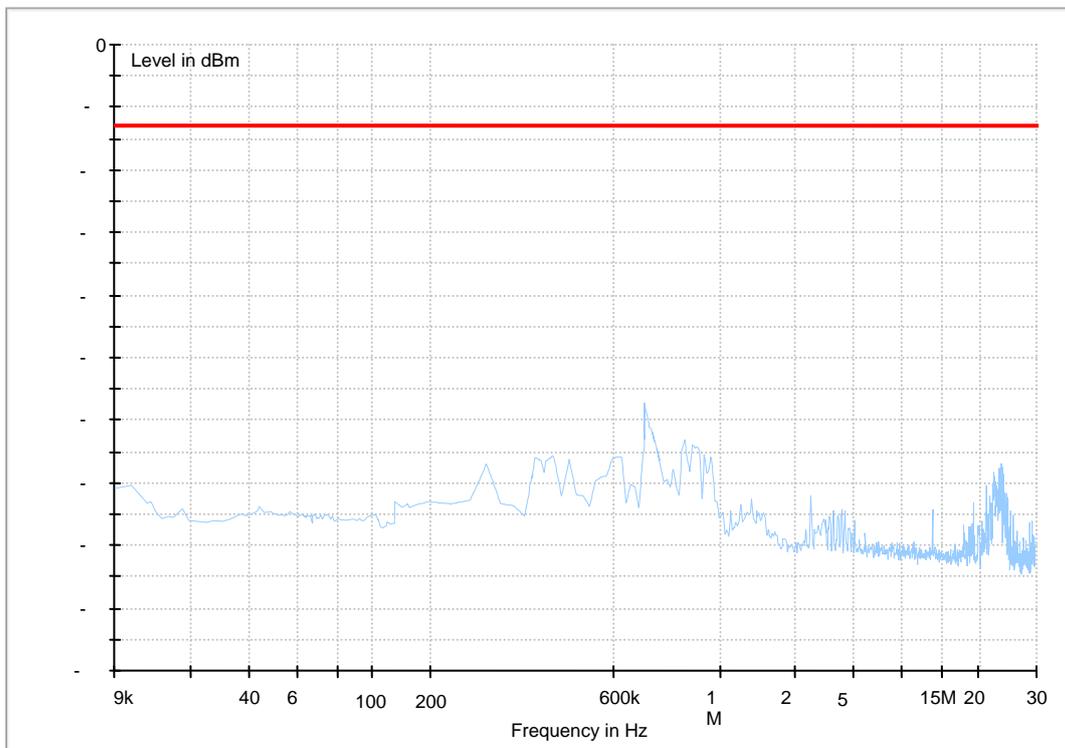


(3GHz~18GHz)

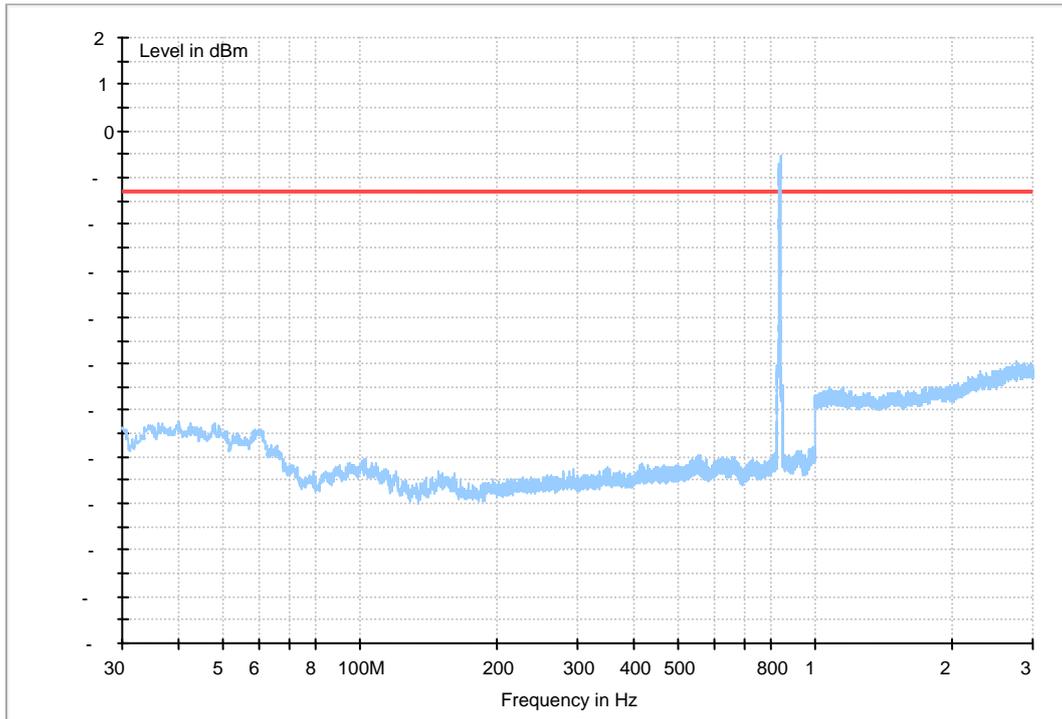


WCDMA Band V

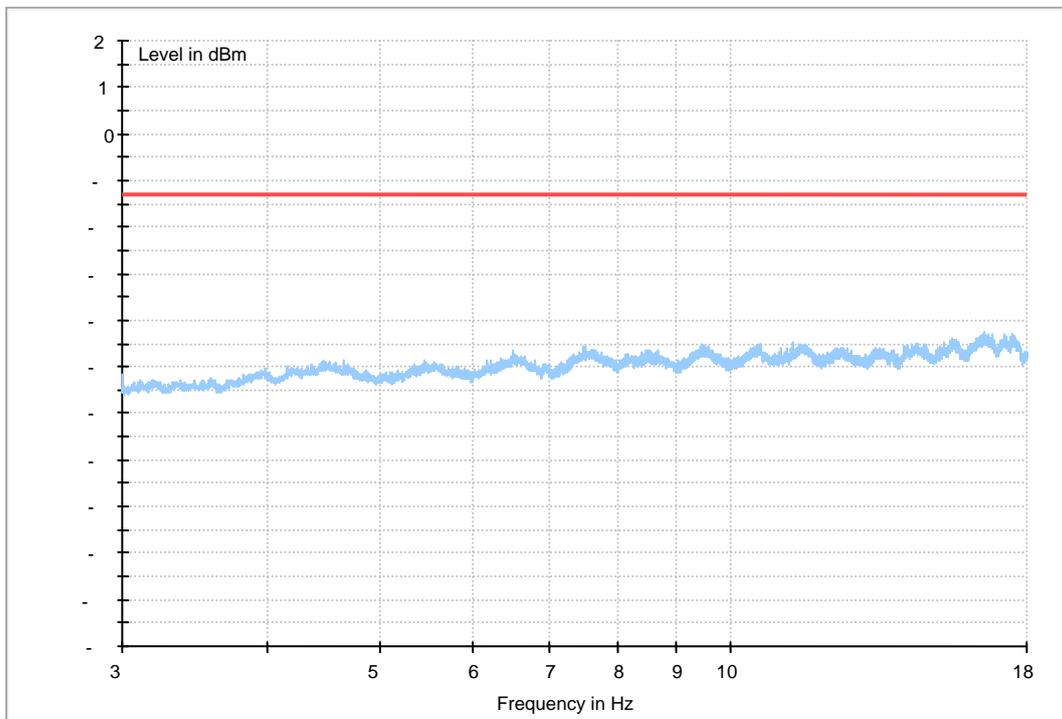
(9KHz~30MHz)



(30MHz~3GHz)

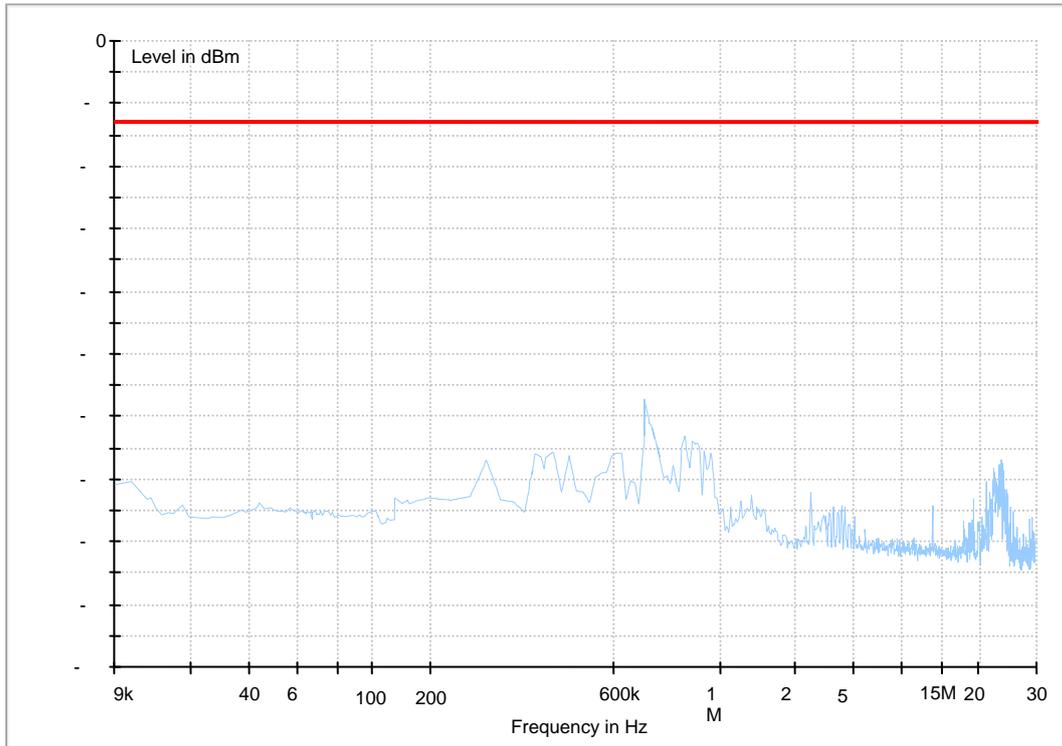


(3GHz~18GHz)

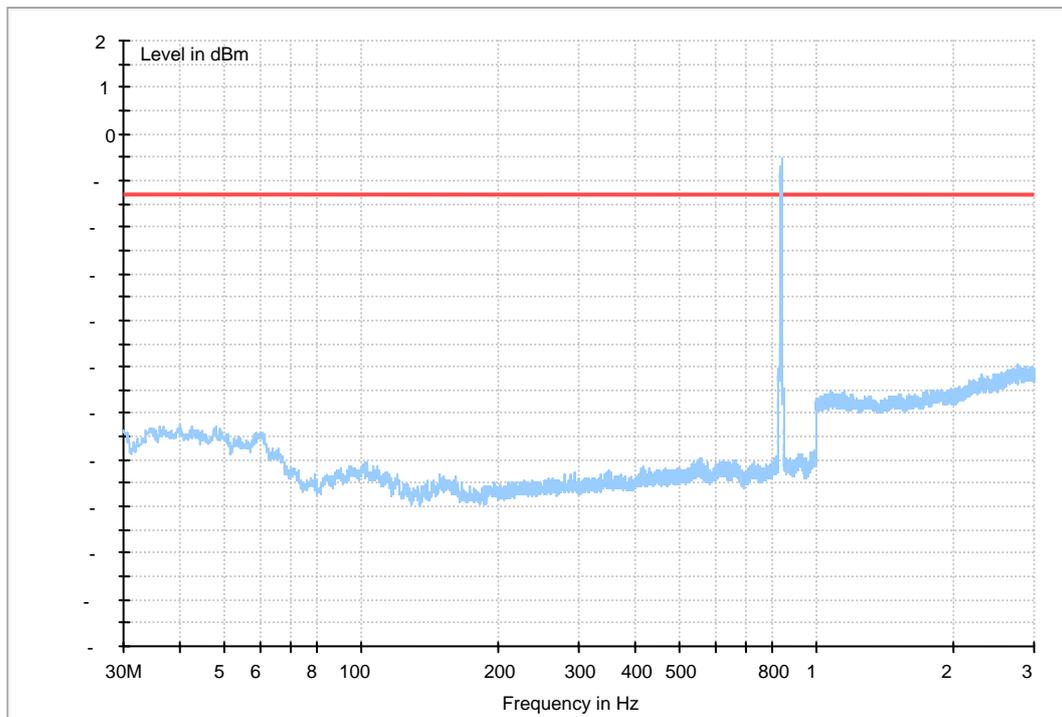


HSDPA Band V

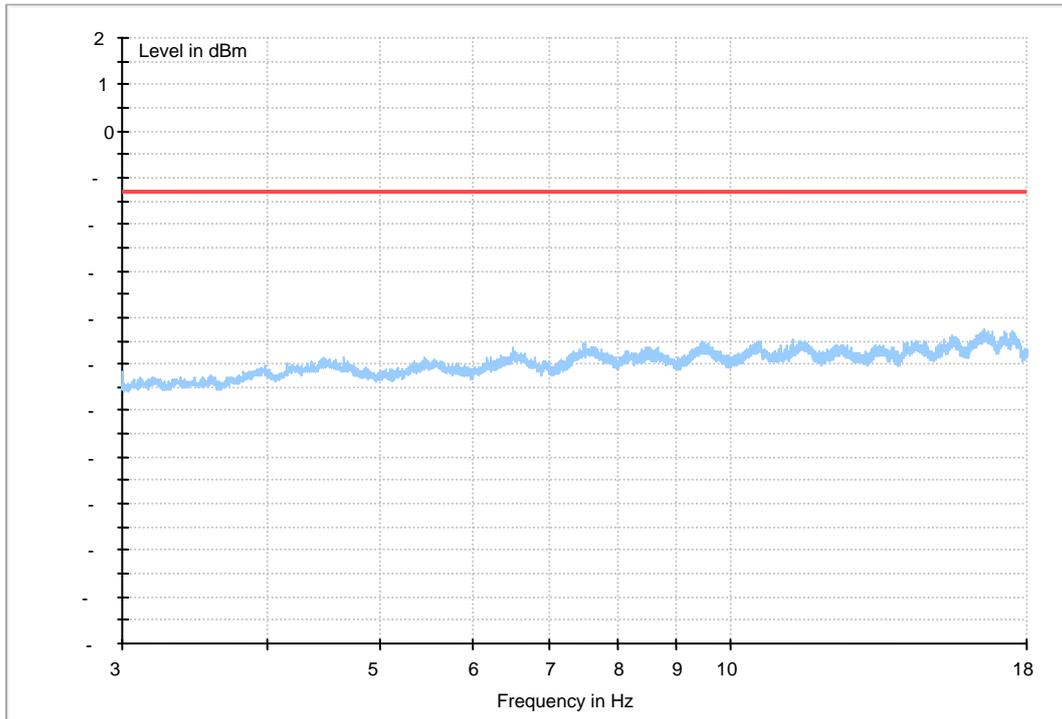
(9KHz~30MHz)



(30MHz~3GHz)



(3GHz~18GHz)



-----END-----



Appendix G

Frequency Stability According to FCC Part 2.1055& Part 22.355



Frequency Error vs. Temperature:

Test Mode	RF Ch.	Volt.	Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 1	M	VN	-30 °C	-15	-0.0179	---	±2.5	Pass
			-20 °C	20	0.0239	---	±2.5	Pass
			-10 °C	-11	-0.0131	---	±2.5	Pass
			0 °C	13	0.0155	---	±2.5	Pass
			10 °C	22	0.0263	---	±2.5	Pass
			20 °C	-8	-0.0096	---	±2.5	Pass
			30 °C	-10	-0.0119	---	±2.5	Pass
			40 °C	15	0.0179	---	±2.5	Pass
			50 °C	-13	-0.0155	---	±2.5	Pass
TM 2	M	VN	-30 °C	15	0.0179	---	±2.5	Pass
			-20 °C	-8	-0.0096	---	±2.5	Pass
			-10 °C	19	0.0227	---	±2.5	Pass
			0 °C	-11	-0.0131	---	±2.5	Pass
			10 °C	18	0.0215	---	±2.5	Pass
			20 °C	18	0.0215	---	±2.5	Pass
			30 °C	-14	-0.0167	---	±2.5	Pass
			40 °C	15	0.0179	---	±2.5	Pass
			50 °C	17	0.0203	---	±2.5	Pass
TM 3	M	VN	-30 °C	8	0.0096	---	±2.5	Pass
			-20 °C	10	0.0120	---	±2.5	Pass
			-10 °C	-14	-0.0167	---	±2.5	Pass
			0 °C	11	0.0132	---	±2.5	Pass
			10 °C	-19	-0.0227	---	±2.5	Pass
			20 °C	-18	-0.0215	---	±2.5	Pass
			30 °C	-15	-0.0179	---	±2.5	Pass
			40 °C	10	0.0120	---	±2.5	Pass
			50 °C	-17	-0.0203	---	±2.5	Pass



Frequency Error vs. Voltage:

Test Mode	RF Ch.	Temp.	Volt.(V)	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 1	M	20 °C	VL	17	0.0203	---	±2.5	Pass
			VN	-14	-0.0167	---	±2.5	Pass
			VH	-16	-0.0191	---	±2.5	Pass
TM 2	M	20 °C	VL	19	0.0227	---	±2.5	Pass
			VN	-15	-0.0179	---	±2.5	Pass
			VH	12	0.0143	---	±2.5	Pass
TM 3	M	20 °C	VL	-17	-0.0203	---	±2.5	Pass
			VN	17	0.0203	---	±2.5	Pass
			VH	-16	-0.0191	---	±2.5	Pass

-----The END-----