



FCC RF Test Report

Product Name: CDMA2000 Digital Mobile Phone; Horizon

Model Number: HUAWEI H868C, H868C

**Report No: SYBH(Z-RF)001112012-2001
FCC ID: QISH868C**

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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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6. The test report is invalid if there is any evidence of erasure and/or falsification.
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.



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1 General Information

| | |
|---|---|
| 1.1 Applied Standard | |
| | |
| Applied Rules: | 47 CFR FCC Part 2:2011, Subpart J 47 CFR FCC Part 22:2011, Subpart H ANSI/TIA 603C:2004 |
| | |
| 1.2 Test Location | |
| | |
| Test Location 1: | Reliability Laboratory of Huawei Technologies Co., Ltd. |
| Address: | Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C |
| | |
| 1.3 Test Environmental 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 |
|--|-----------------|---|--------|
| Cellular Band | | | |
| Transmitter Output Power | 2.1046 & 22.913 | ERP not exceed 7 W | Pass |
| Modulation Characteristics | 2.1047 | Digital modulation | Pass |
| Occupied Bandwidth | 2.1049 | (Not specified) | Pass |
| Band Edges Compliance | 2.1051 & 917 | Below -13 dBm/1%*EBW, in 1 MHz range | Pass |
| Spurious Emission at Antenna Terminals | 2.1051 & 2.917 | Below -33 dBm/1 kHz, 9 kHz to 150 kHz Below -23 dBm/10 kHz, 150 kHz to 30 MHz Below -13 dBm/100 kHz, 30 MHz to 10 th harmonics | Pass |
| Field Strength of Spurious Radiation | 2.1053 & 22.917 | Below -13 dBm/100 kHz | Pass |
| Frequency Stability | 2.1055 & 22.355 | Maintained within the tolerances of ± 2.5 ppm | Pass |

3 Product Description

3.1 Product Information

3.1.1 General Description

CDMA2000 Digital Mobile Phone- HUAWEI H868C, H868C is subscriber equipment in the CDMA/EVDO system. The frequency band is US Cellular and N. American PCS, Their band test data included in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, CDMA2000 1x and 1XEV-DO protocol processing, voice, MMS service, GPS, AGPS and WIFI etc. Externally it provides micro SD card interface, earphone port (to provide voice service). 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

Table 2 Board Information

| | | |
|--|------------------|------------|
| CDMA2000 Digital Mobile Phone; Horizon | | |
| HUAWEI H868C, H868C | | |
| Board and Module | | |
| Equipment Designation / Description | Serial Number | Hardware V |
| MAINBOARD | V3L01A9292900147 | HC1H868CM |

3.1.3 Adapter Technical Data

| | |
|--------------------|--|
| AC/DCAdapter Model | HW-050055U1W |
| Manufacturer | Huawei Technologies Co., Ltd. |
| Input Voltage | ~100-240V 50/60Hz 0.2A |
| Output Voltage | 5V  550mA |
| Rated Power | 2.75W |



3.1.4 Battery Technical Data

| Name | Qty. | Manufacture | Description |
|---------------------|------|-------------------------------|---|
| Rechargeable Li-ion | 1 | Huawei Technologies Co., Ltd. | Battery Model: HB4W1H Rated capacity: 1750mAh Nominal Voltage: $\text{---} +3.7\text{V}$ Charging Voltage: $\text{---} +4.2\text{V}$ |

4 Test Description

4.1 Supported Frequency Range

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

4.2 Transmitter / Receiver Characteristics

| Characteristics | Description |
|------------------------------------|---------------------------------------|
| System Type | CDMA |
| TX Output Power (per Antenna Port) | CDMA system: 24.75dBm |
| Channel Spacing(s) / Bandwidth(s) | CDMA system: 1.29 MHz (Cellular band) |
| Designation of Emissions | CDMA system: 1M29F9W (Cellular band) |

4.3 Antenna Gain

| | |
|-------------------|-------|
| Antenna Gain(dBi) | -0.5 |
| Antenna Gain(dBd) | -2.20 |

5 General Test Conditions / Configurations

5.1 RF Channels under Test

| Test Mode | TX / RX | RF Channel | | |
|-------------------------------------|---------|--------------|-------------|-------------|
| | | Low (L) | Middle (M) | High (H) |
| TM1/TM3/ Subtype 0/ Subtype 2 | TX | Channel 1013 | Channel 384 | Channel 777 |
| | | 824.7MHz | 836.52MHz | 848.31MHz |
| | RX | Channel 1013 | Channel 384 | Channel 777 |
| | | 869.7MHz | 881.52MHz | 893.31MHz |

5.2 Test Modes

| Test Mode | Test Modes Description |
|-----------|--|
| TM1 | CDMA2000 1x mode QPSK modulation |
| TM3 | CDMA2000 1x mode HPSK modulation |
| Subtype 0 | CDMA2000 1x EV-DO mode HPSK modulation |
| Subtype 2 | CDMA2000 1x EV-DO mode The R-Data packet size determines the modulation format, R-Data Packet Size:128, 256, 512, 768 or 1024 BPSK Modulation R-Data Packet Size:1536 , 2048,3072,4096,6144 or 8192 QPSK Modulation R-Data Packet Size:12288 8-PSK Modulation |

5.3 Test Environment

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

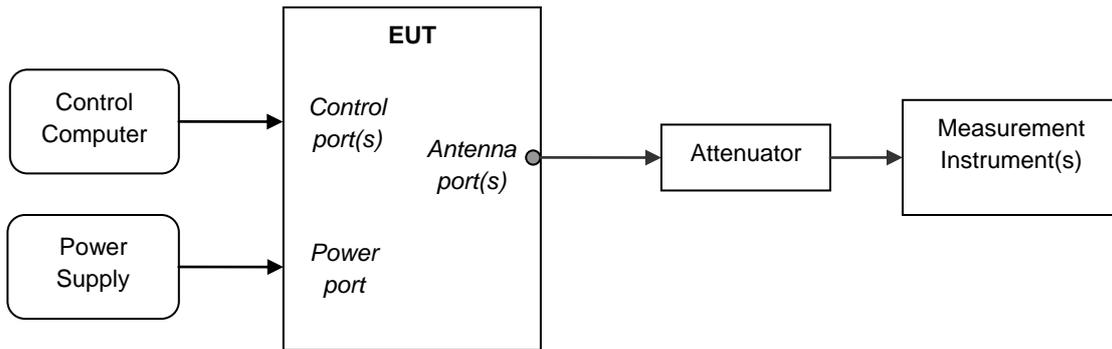
NOTE: VL= lower extreme test voltage
VN= nominal voltage
VH= upper extreme test voltage
TN= normal temperature

5.4 Test Setup

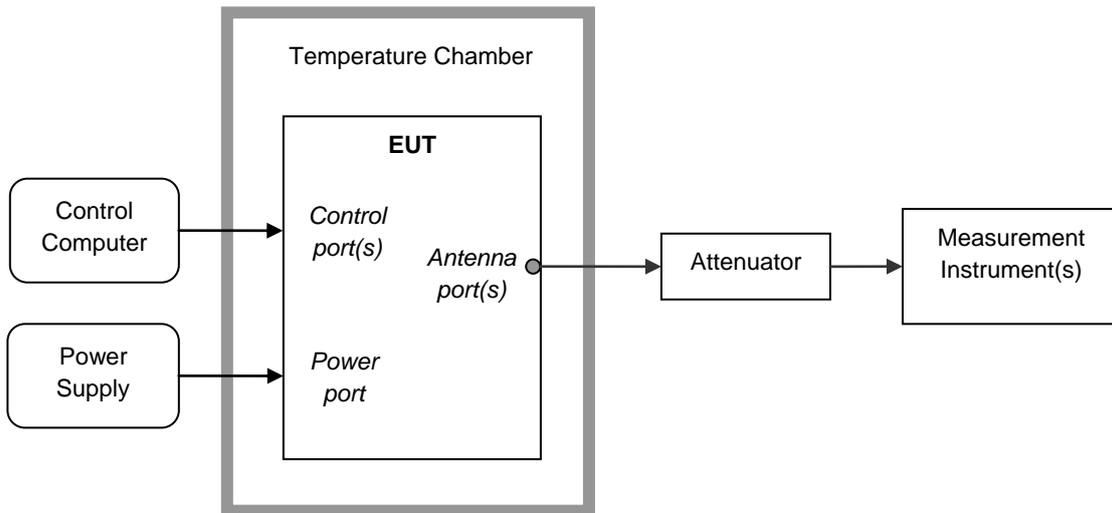
5.4.1 General Test Setup Configurations

| 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



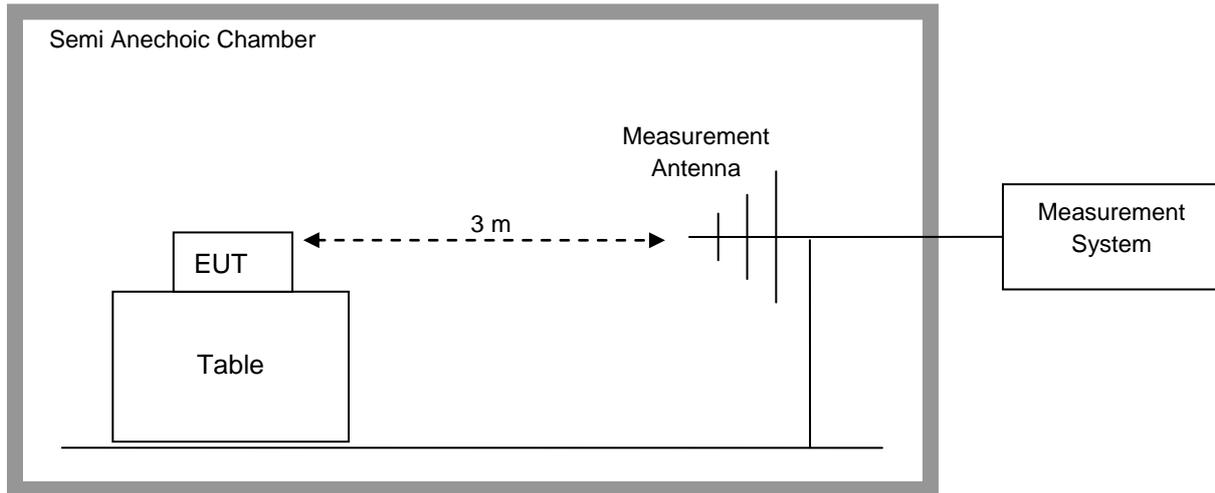
5.4.4 Test Setup 3

NOTE1: Effective radiated power (ERP) or Effective Isotropic radiated power (EIRP) refers to the EUT radiation power output, assuming all emissions are radiated from half-wave dipole antennas or horn antenna.

NOTE2: The EUT was set on insulator 80cm above the Ground Plane. The setup and test methods were according to ANSI-TIA-603C 2004. The measurements were carried through with a Rohde and Schwarz Test Receiver and control software.

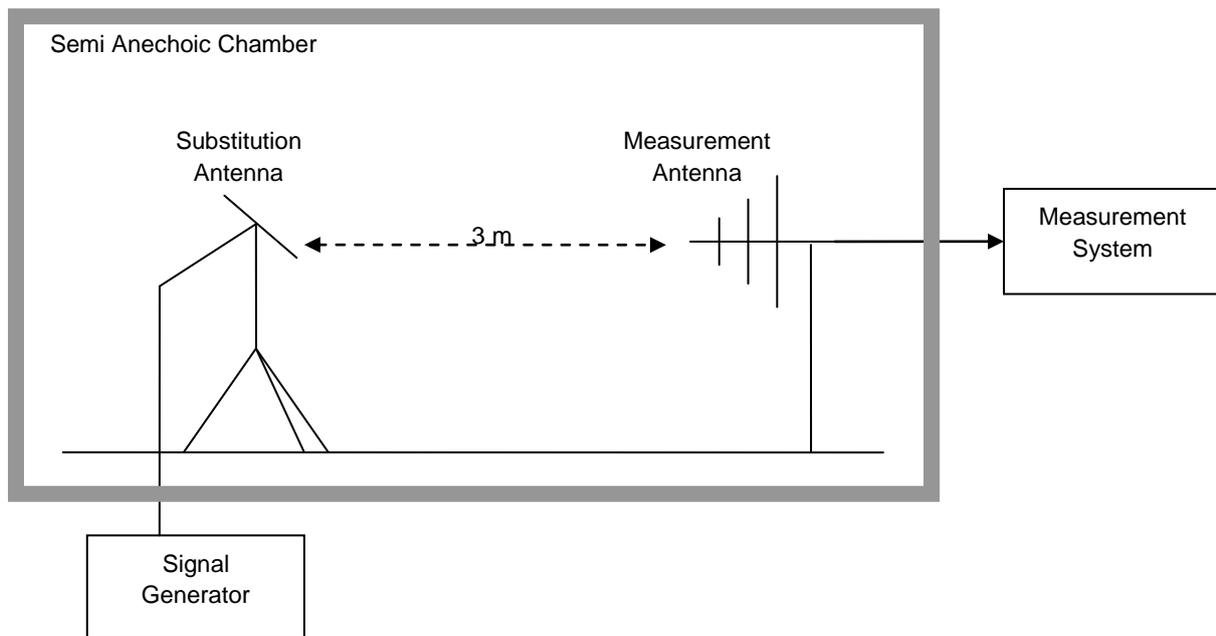
Step 1: Pre-test to find the Maximum ERP or EIRP

1. Connect the test system according to the following figure. EUT is running for 30 minutes before test, and measurement instruments are warming-up for 30 minutes.
2. Set up communication link between Universal radio communication tester and EUT, set EUT working frequency, and control EUT to transmit at maximum power.
3. Set the centre frequency of the signal analyzer or receiver to the EUT's operating frequency, the RBW is equal to the emission bandwidth of the signal. Set RMS detector for the test, and the span is equal to 2 times of emission bandwidth, the other settings should remain automatic. Normally, the height range of antenna was 1m to 4m, the azimuth range of turntable was 0° to 360°. The receiver antenna has two polarizations V and H. A portable or small unlicensed wireless device shall be placed on a non-metallic test fixture or other non-metallic support during testing. The supporting fixture shall permit orientation of the EUT in each of three orthogonal (x, y, z) axis positions such that emissions from the EUT are maximized. Measure the EUT maximum RF power and record the result.
4. Changing EUT working frequency and measuring the RF power at channel L, M, H respectively.
Complete the test data.



Step 2: Substitution method to verify the maximum ERP or EIRP

1. Measurement setup is according to the following figure. EUT was substituted by antenna, and the polarization is identical with the test antenna; the signal generator was connected to the substitution antenna.
2. The radiated output power, measured by signal analyzer set, is the same as recorded in above. Then this power level is matched by a signal from a calibrated signal generator which is substituted for EUT. The power supplied by the generator is then equal to the ERP or EIRP after corrected by the antenna gain and cable loss.



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) | L, M, H |
| | Test Mode | TM1/TM3/ Subtype 0/ Subtype 2 |
| Modulation Characteristics | Test Configuration | Ambient Temperature & Rated Voltage |
| | Test Setup | Test Setup 1 |
| | RF Channels (TX) | M |
| | Test Mode | TM1/TM3/ Subtype 0/ Subtype 2 |
| Occupied Bandwidth | Test Configuration | Ambient Temperature & Rated Voltage |
| | Test Setup | Test Setup 1 |
| | Detector | PK |
| | RF Channels (TX) | L, M, H |
| | Test Mode | TM1/TM3/ Subtype 0/ Subtype 2 |
| Band Edges Compliance | Test Configuration | Ambient Temperature & Rated Voltage |
| | Test Setup | Test Setup 1 |
| | Detector | RMS |
| | RF Channels (TX) | L, H |
| | Test Mode | TM1/TM3/ Subtype 0/ Subtype 2 |
| Spurious Emission at Antenna Terminals | Test Configuration | Ambient Temperature & Rated Voltage |
| | Test Setup | Test Setup 1 |
| | Detector | PK |
| | RF Channels (TX) | L, M, H |
| | Test Mode | TM1/TM3/ Subtype 0/ Subtype 2 |
| 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/TM3/ Subtype 0/ Subtype 2 |
| 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 |
| | RF Channels (TX) | M |



| Test Case | Test Conditions | |
|-----------|-----------------|-------------------------------|
| | Test Mode | TM1/TM3/ Subtype 0/ Subtype 2 |

6 Main Test Instruments

Table 3 Main Test Equipments

| Equipment Description | Manufacturer | Model | Serial Number | Calibrated until |
|---|--------------|-----------|---------------|------------------|
| Power supply | KEITHLEY | 2303 | 1288003 | Sept., 27,2013 |
| Universal Radio Communication Tester | R&S | CMU200 | 117341 | Jan., 12,2013 |
| Universal Radio Communication Tester | Agilent | E5515C | MY50260239 | Aug., 30,2013 |
| Spectrum analyzer | Agilent | E4440A | MY49420179 | Jul., 17,2013 |
| Signal analyzer | R&S | FSQ31 | 200021 | Sept., 27,2013 |
| Temperature chamber | WEISS | WKL64 | 24600294 | Feb.,13,2013 |
| Signal generator | Agilent | E8257D | MY49281095 | Jul.,09,2013 |
| Spectrum analyzer | R&S | FSU3 | 200474 | Mar., 05, 2013 |
| Spectrum analyzer | R&S | FSU43 | 100144 | Mar., 05, 2013 |
| Double-Ridged Waveguide Horn Antenna (1G~18GHz) | R&S | HF907 | 100304 | Apr., 05, 2013 |
| Double-Ridged Waveguide Horn Antenna (1G~18GHz) | R&S | HF907 | 100391 | Apr., 05, 2013 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZBECK | VULB 9163 | 9163-521 | Jul., 07, 2013 |
| Pyramidal Horn Antenna(26GHz-40GHz) | ETS-Lindgren | 3160-10 | 00123940 | Feb., 27, 2013 |
| Pyramidal Horn Antenna(18GHz-26.5GHz) | ETS-Lindgren | 3160-09 | 00125912 | Feb., 27, 2013 |

Note: All the equipments are calibrated once a year. When it's almost due, we will arrange calibration again before the calibration deadline.

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 | Field Strength of Spurious Radiation | Appendix F |
| 7 | Frequency Stability | Appendix G |
| 8 | Photos of Test Setup | Appendix H |

NOTE: There is no test data in Appendix H, only Photos of Test Setup for Field Strength of Spurious Radiation.

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

| TEST CONDITIONS (TN/VN) | RF Output Power | | | | | |
|----------------------------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|
| | Channel 1013(L) 824.7MHz | | Channel 384(M) 836.52MHz | | Channel 777(H) 848.31MHz | |
| | dBm | | dBm | | dBm | |
| | Measured | Limit | Measured | Limit | Measured | Limit |
| TM1 | 24.41 | 38.5 | 24.33 | 38.5 | 24.25 | 38.5 |
| TM3 | 24.22 | 38.5 | 24.21 | 38.5 | 24.22 | 38.5 |
| Subtype 0 | 23.96 | 38.5 | 23.77 | 38.5 | 23.94 | 38.5 |
| Subtype 2 | 23.88 | 38.5 | 23.72 | 38.5 | 23.89 | 38.5 |



Effective Radiated Power of Transmitter (ERP)

| Test Mode | Freq. [MHz] | Meas. Level [dBm] | Substitution Antenna Type | SGP [dBm] | Substitution Gain [dBd] | Cable Loss [dB] | Substitution Level (ERP) [dBm] | Limit [dBm] | Result |
|-----------|-------------|-------------------|---------------------------|-----------|-------------------------|-----------------|--------------------------------|-------------|--------|
| TM1 | 824.7 | 21.76 | Dipole Ant. | 25.39 | -2.95 | 0.6 | 21.84 | 38.5 | Pass |
| TM1 | 836.52 | 21.68 | Dipole Ant. | 25.1 | -3.02 | 0.6 | 21.48 | 38.5 | Pass |
| TM1 | 848.31 | 21.6 | Dipole Ant. | 25.51 | -3.11 | 0.6 | 21.8 | 38.5 | Pass |
| TM3 | 824.7 | 21.57 | Dipole Ant. | 25.26 | -2.95 | 0.6 | 21.71 | 38.5 | Pass |
| TM3 | 836.52 | 21.56 | Dipole Ant. | 25.33 | -3.02 | 0.6 | 21.71 | 38.5 | Pass |
| TM3 | 848.31 | 21.57 | Dipole Ant. | 25.08 | -3.11 | 0.6 | 21.37 | 38.5 | Pass |
| Subtype 0 | 824.7 | 21.31 | Dipole Ant. | 24.95 | -2.95 | 0.6 | 21.4 | 38.5 | Pass |
| Subtype 0 | 836.52 | 21.12 | Dipole Ant. | 25.54 | -3.02 | 0.6 | 20.92 | 38.5 | Pass |
| Subtype 0 | 848.31 | 21.29 | Dipole Ant. | 24.8 | -3.11 | 0.6 | 21.09 | 38.5 | Pass |
| Subtype 2 | 824.7 | 21.23 | Dipole Ant. | 24.58 | -2.95 | 0.6 | 21.03 | 38.5 | Pass |
| Subtype 2 | 836.52 | 21.07 | Dipole Ant. | 24.49 | -3.02 | 0.6 | 20.87 | 38.5 | Pass |
| Subtype 2 | 848.31 | 21.24 | Dipole Ant. | 25.01 | -3.11 | 0.6 | 21.3 | 38.5 | Pass |

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

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

b, SGP=Signal Generator Level

-----Te END-----



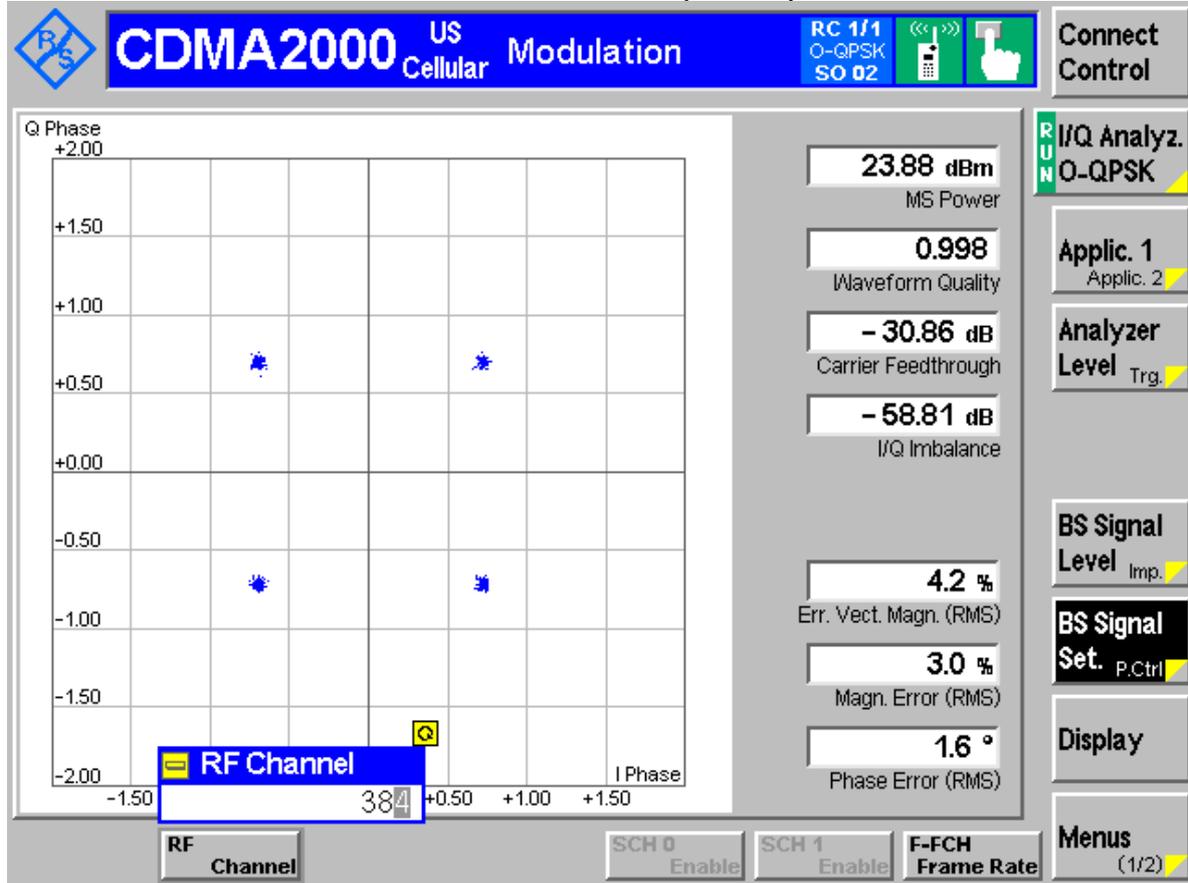
Appendix B

Modulation Characteristics

According to FCC Part 2.1047 & Part 22 Subpart H

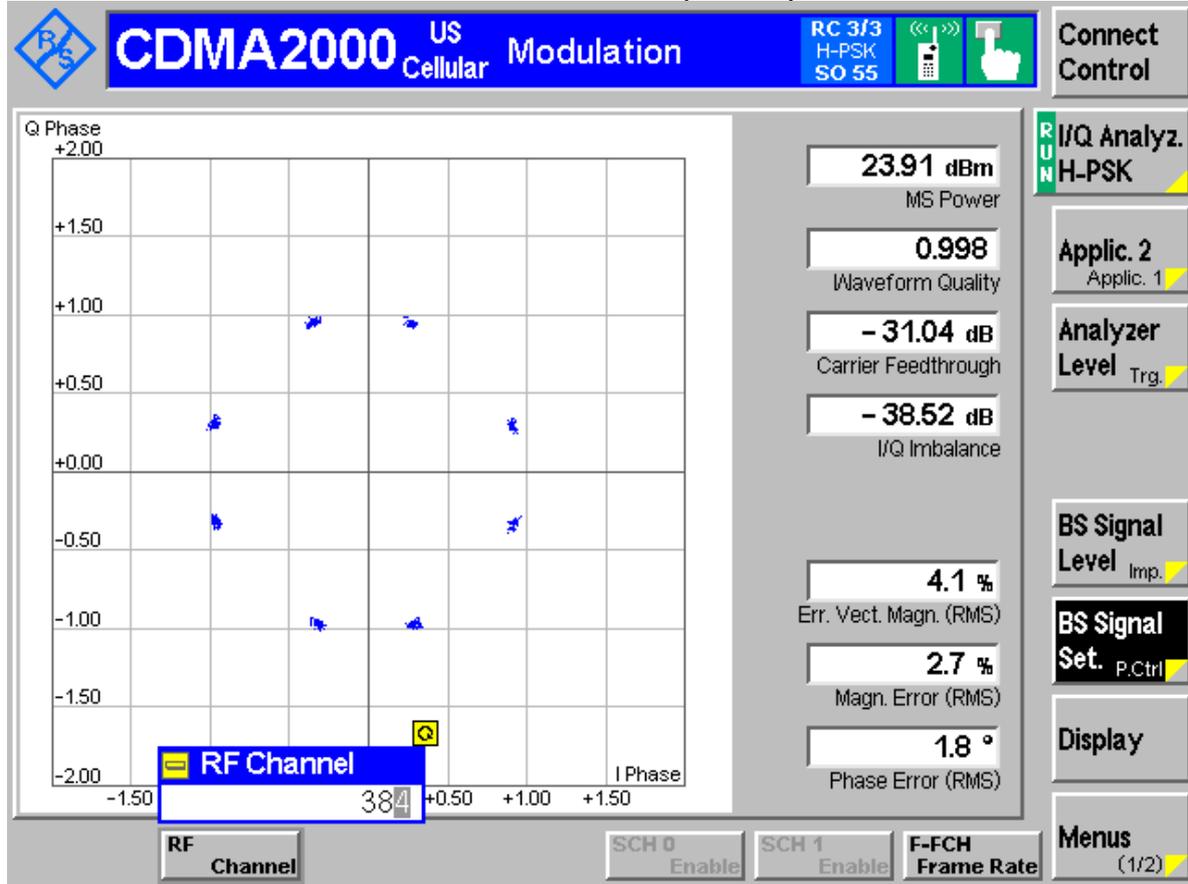


Channel 384(TM1)



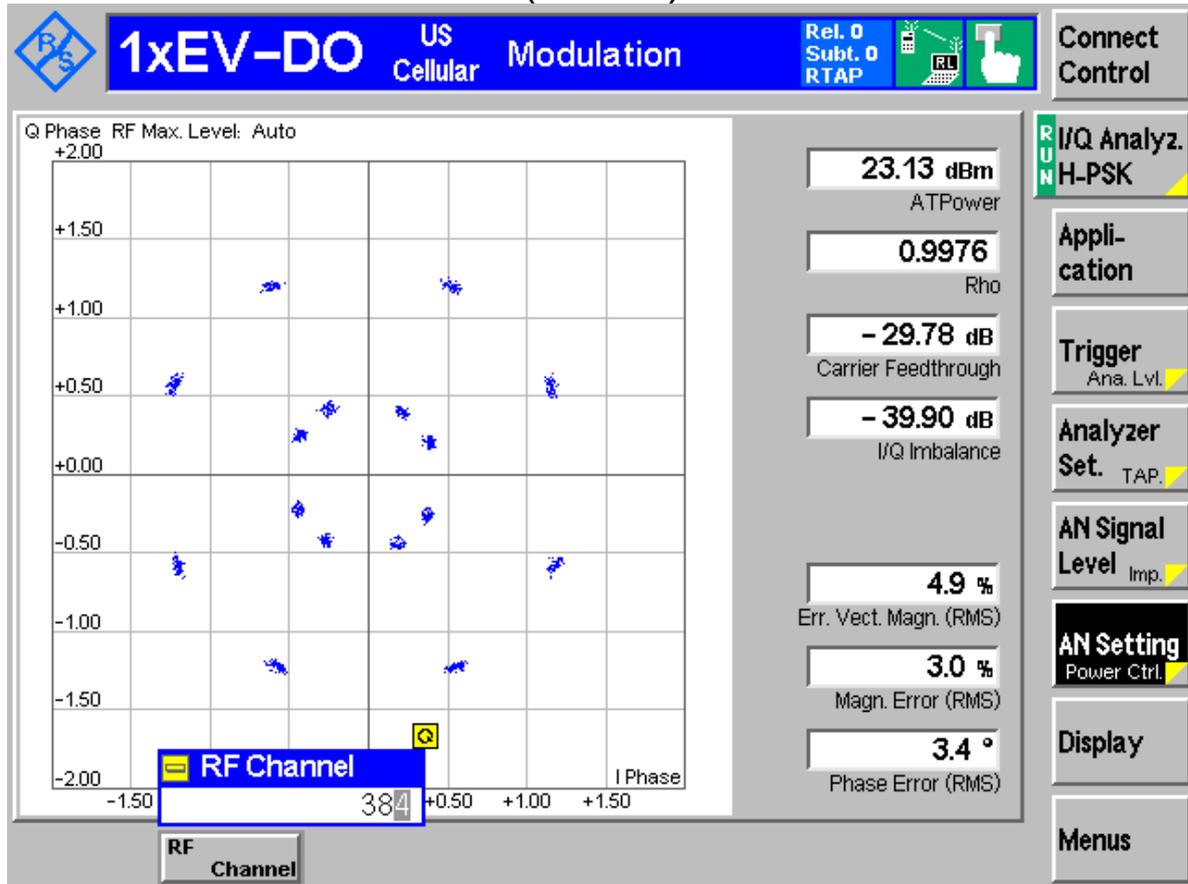


Channel 384(TM3)





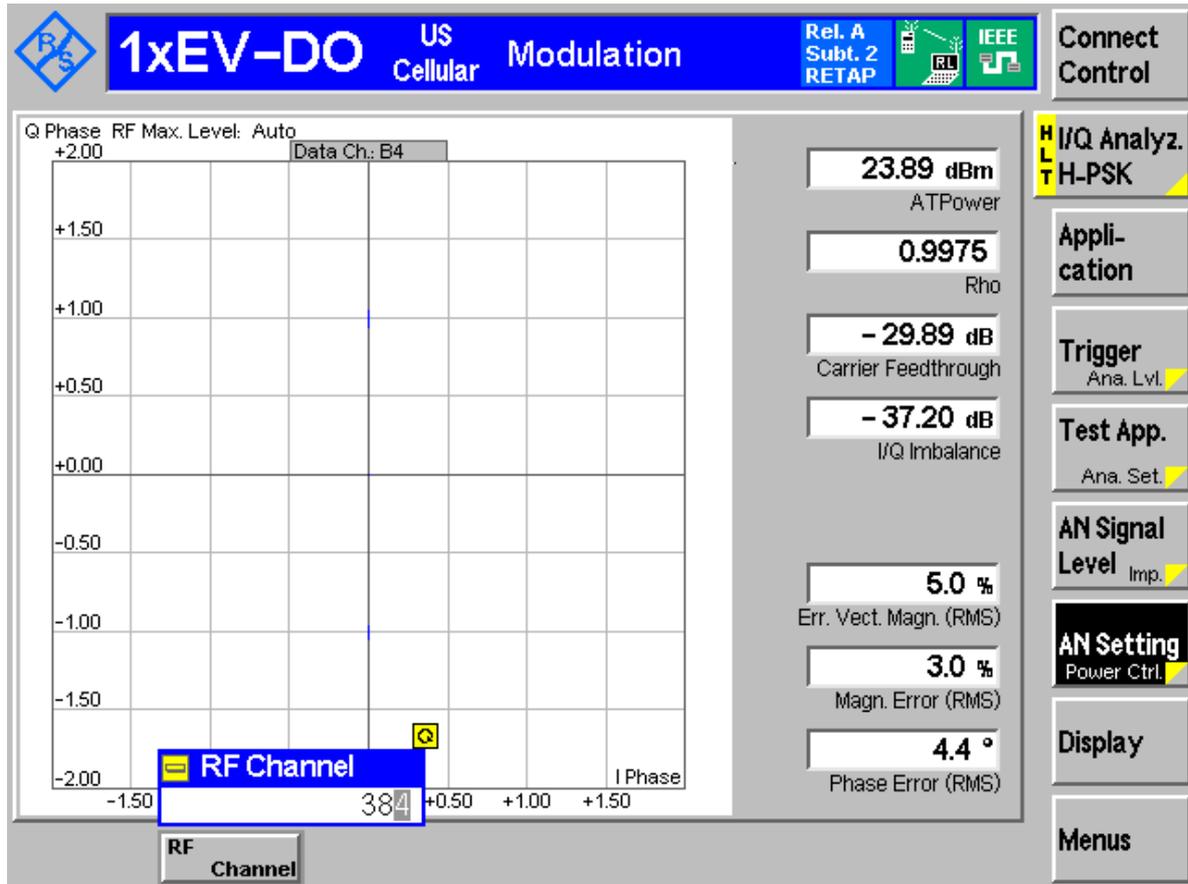
Channel 384(Subtype 0) (HPSK)





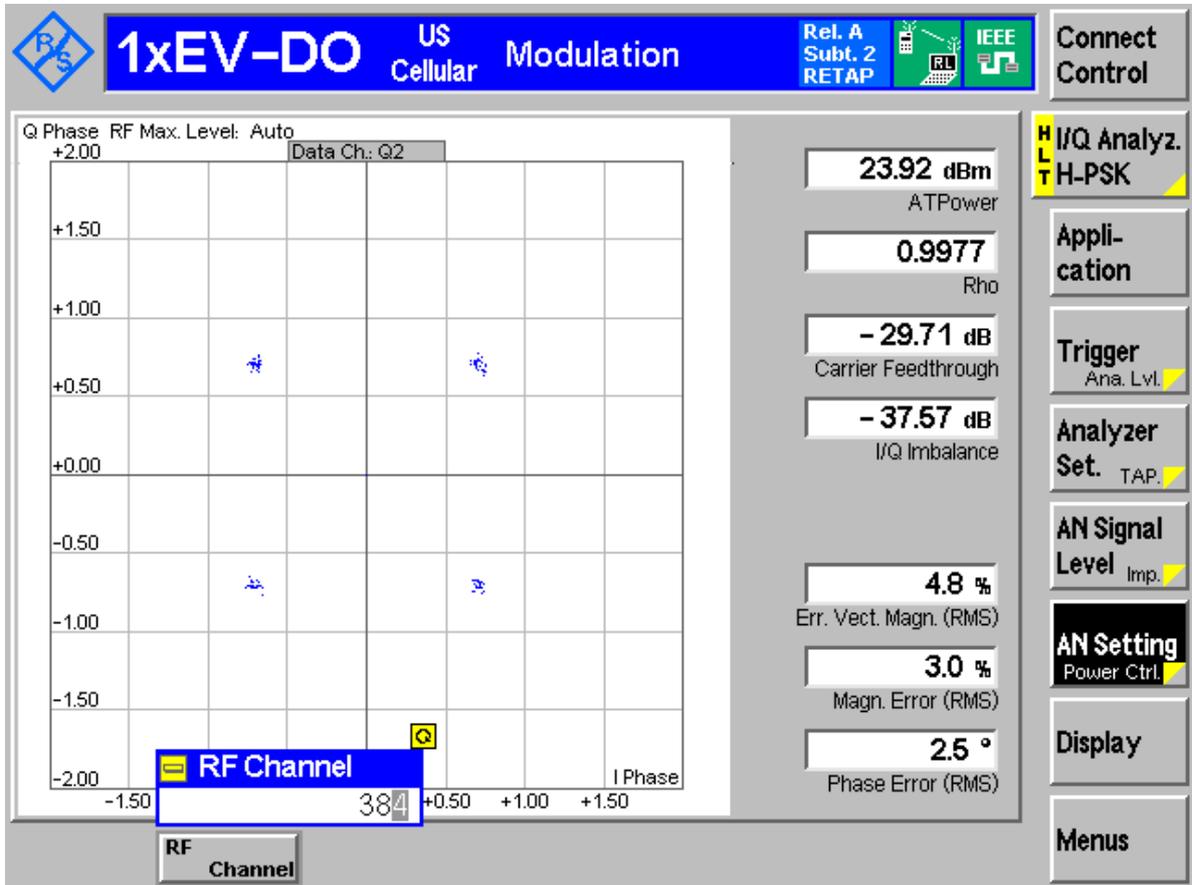
Channel 384(Subtype 2)

The R-Data packet size determines the modulation format:
R-Data Pkt Size (256 bits)(BPSK)



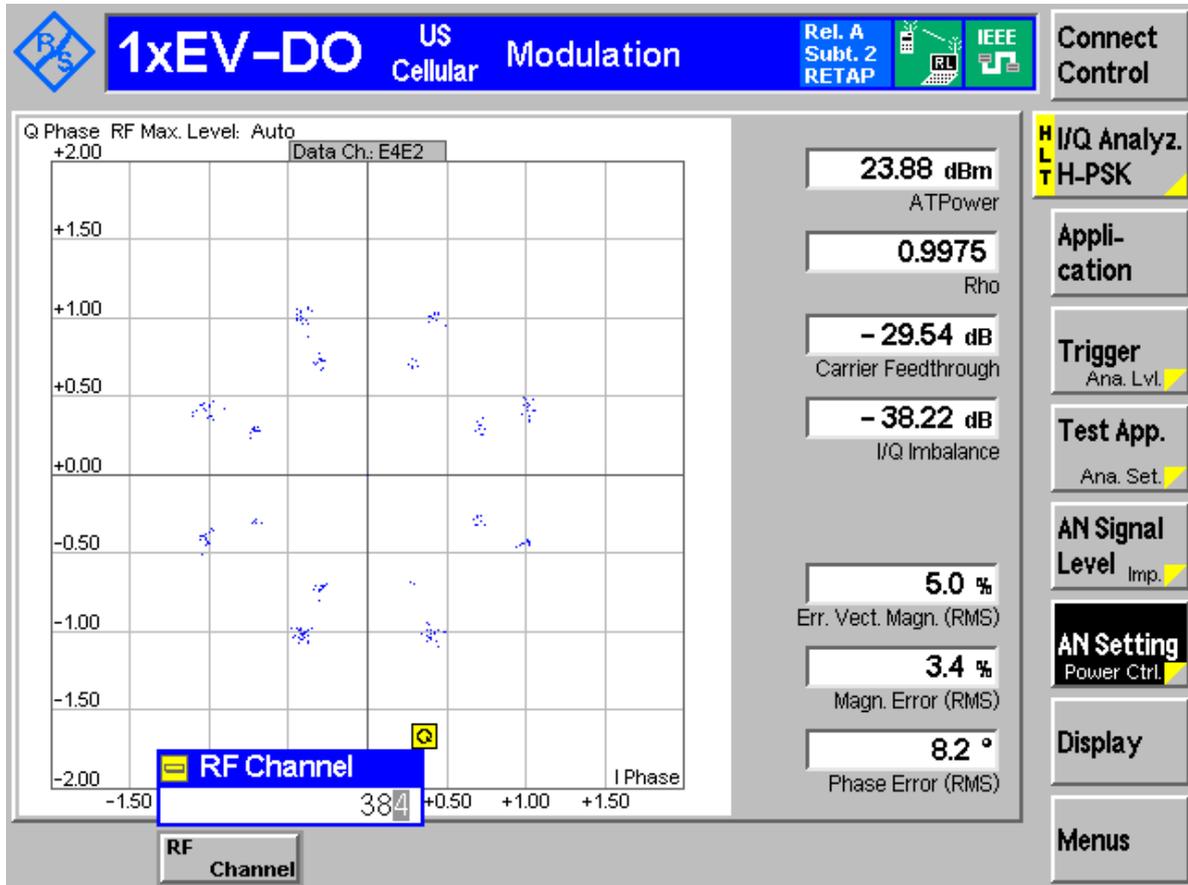


R-Data Pkt Size (4096 bits) (QPSK)





R-Data Pkt Size (12288 bits)(8PSK)



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



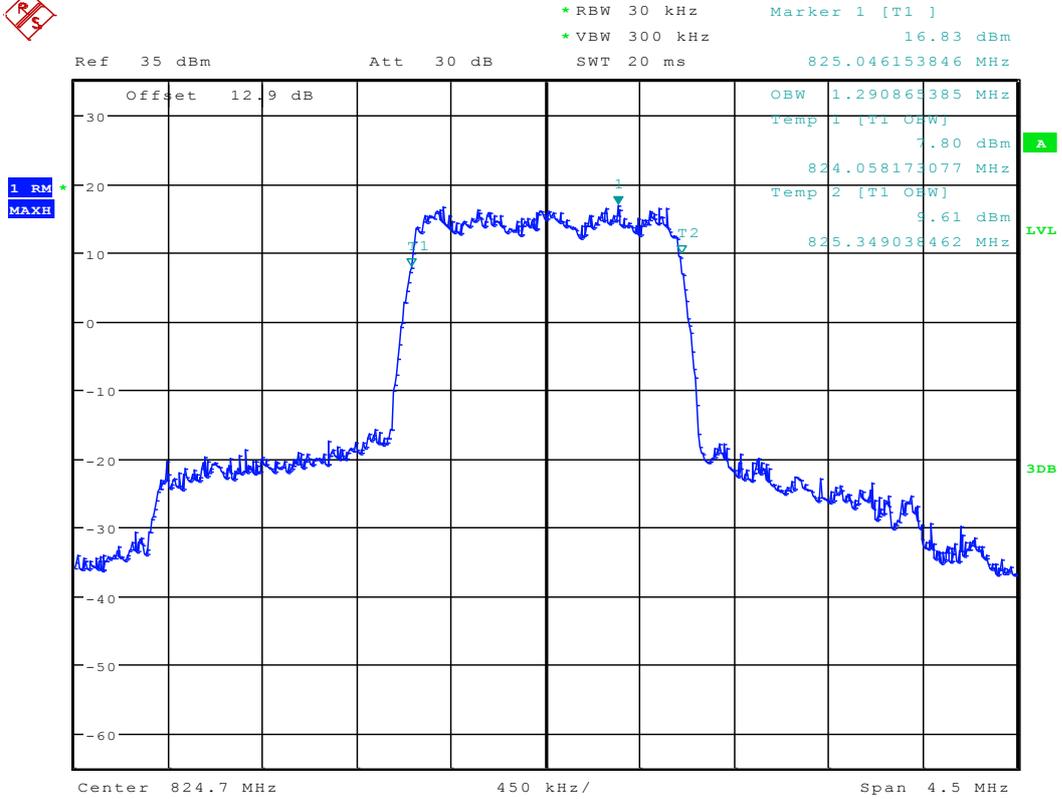
Appendix C

Occupied Bandwidth

According to FCC Part 2.1049 & Part 22 Subpart H



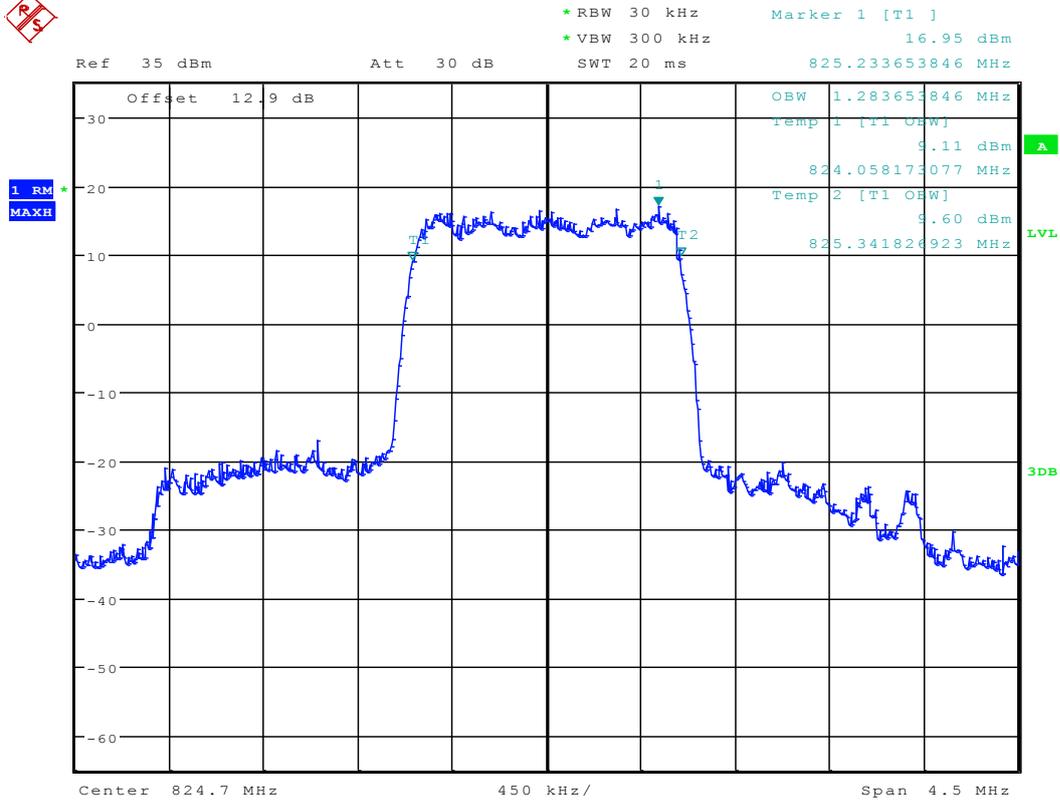
Channel 1013 (TM1)



Date: 2.NOV.2012 22:06:43



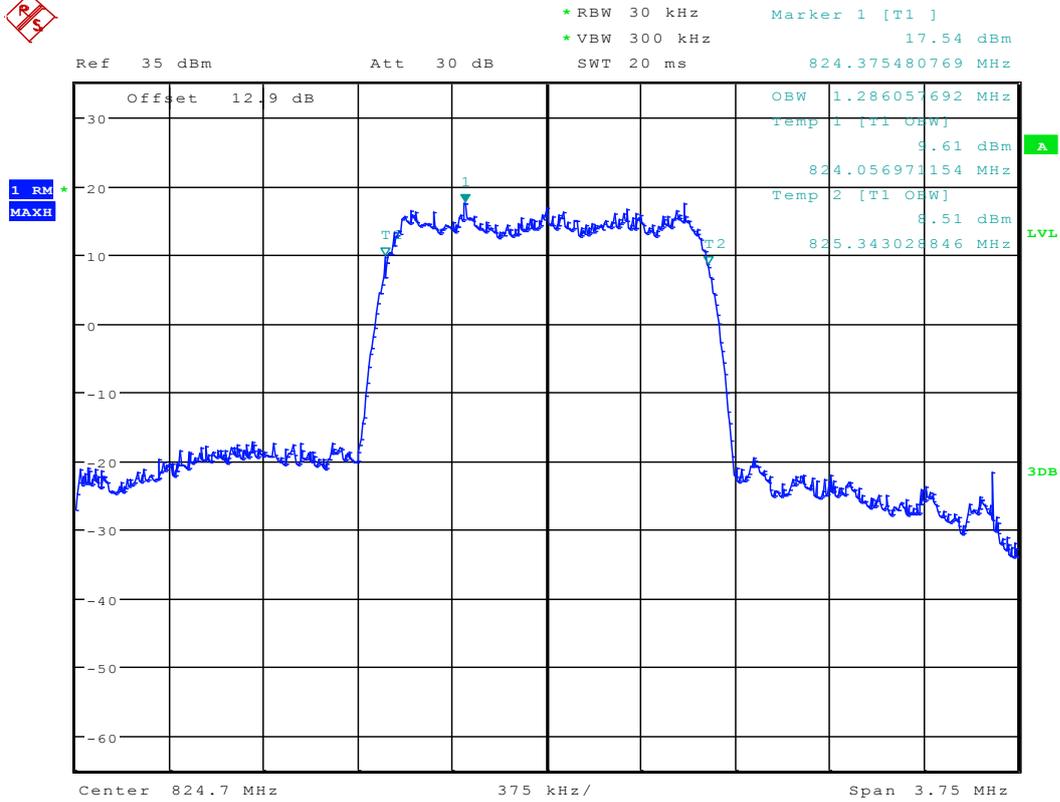
Channel 1013 (TM3)



Date: 2.NOV.2012 22:07:26



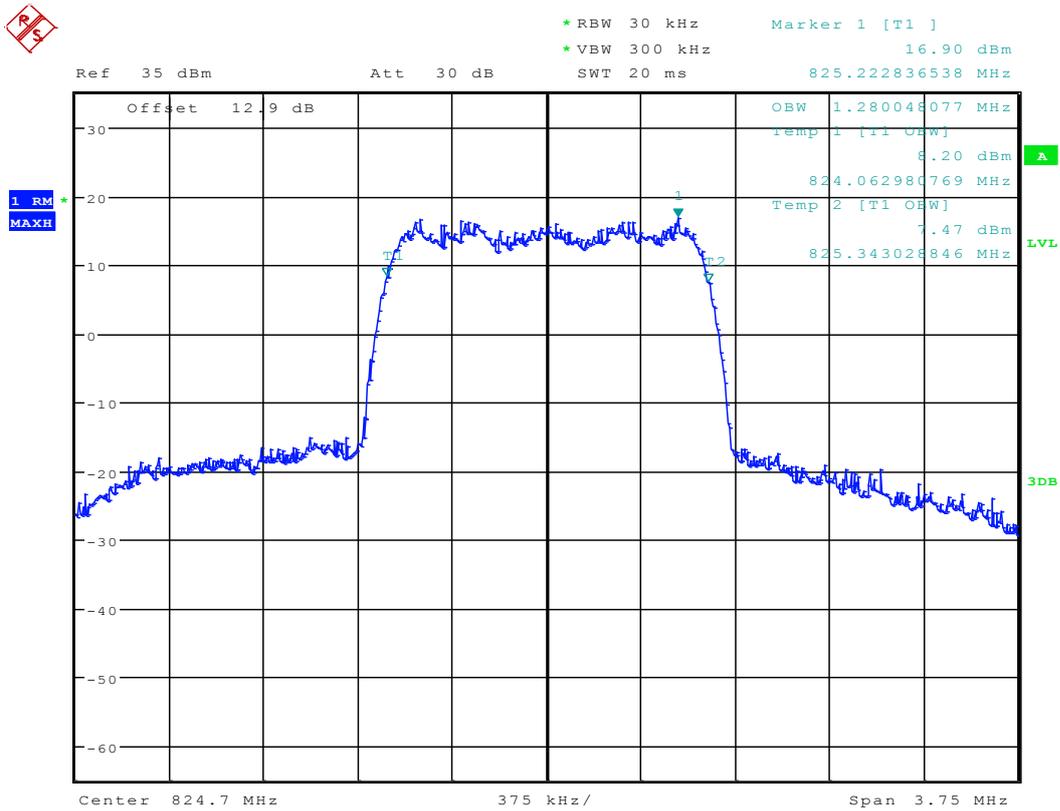
Channel 1013 (EVDO subtype 0)



Date: 2.NOV.2012 22:11:45



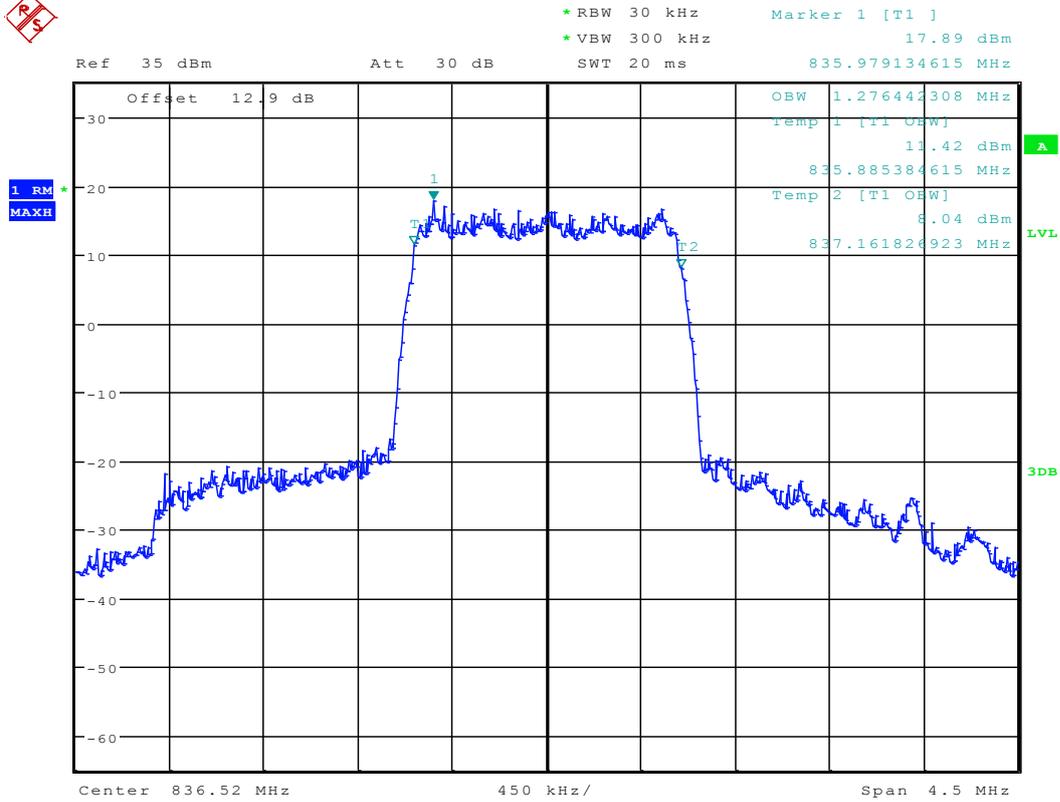
Channel 1013 (EVDO subtype 2)



Date: 2.NOV.2012 22:17:18



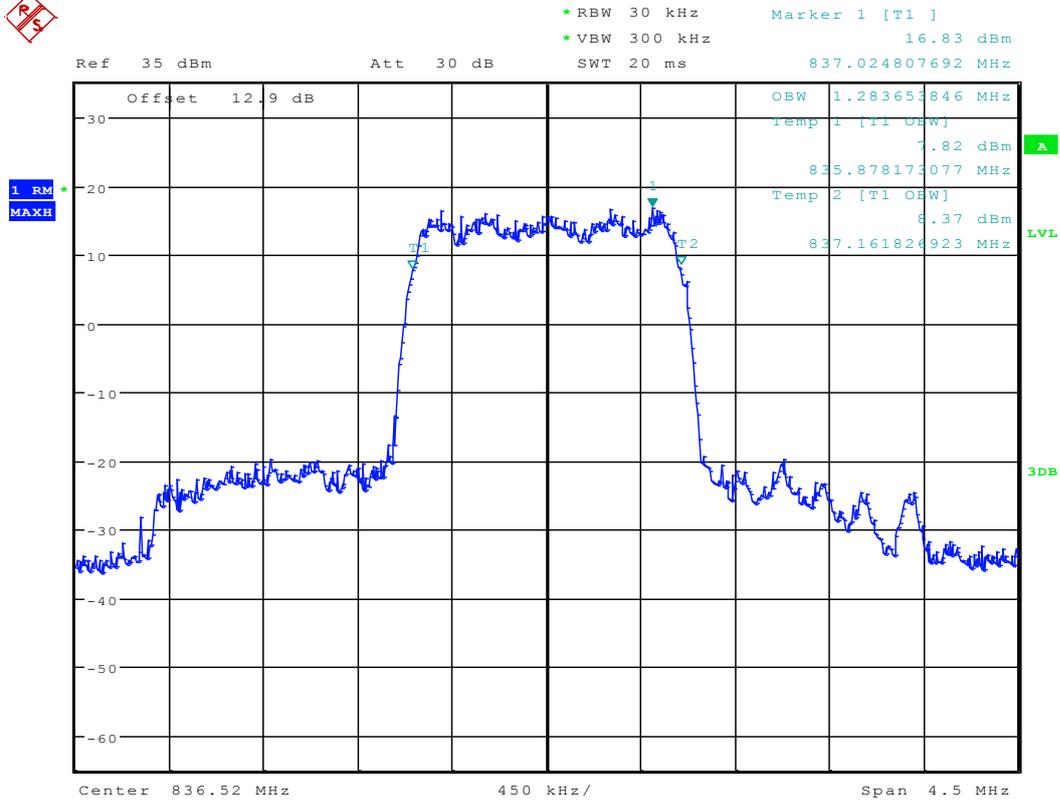
Channel 384 (TM1)



Date: 2.NOV.2012 22:06:56



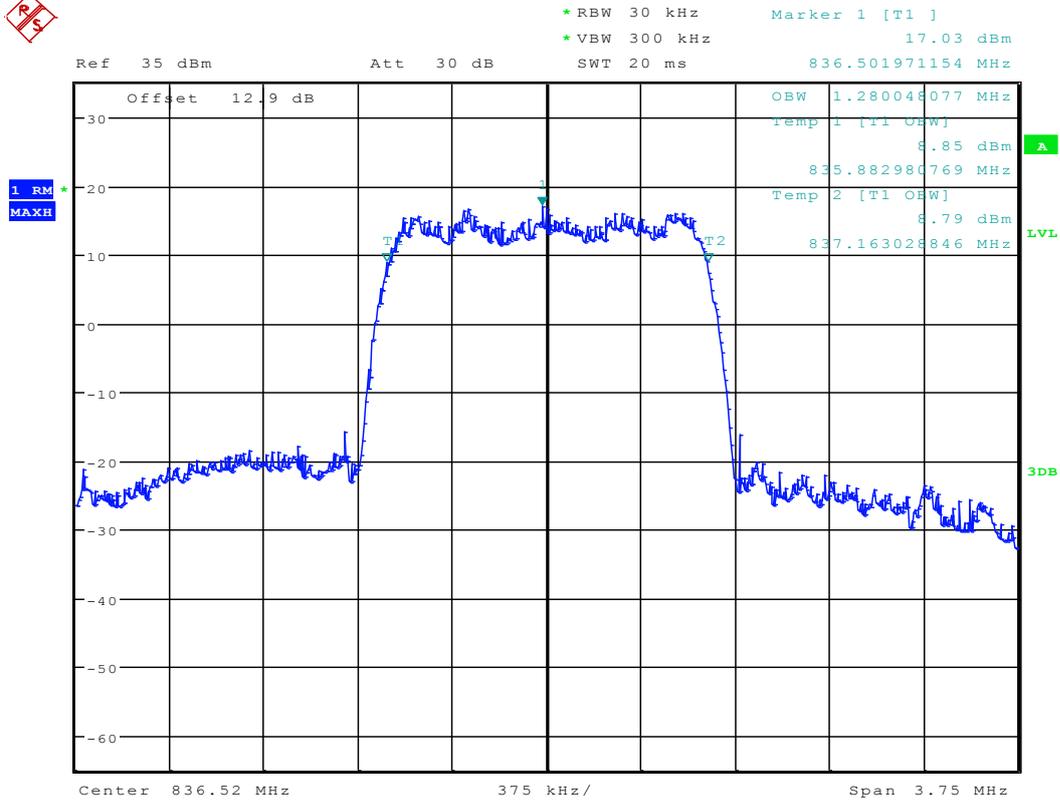
Channel 384 (TM3)



Date: 2.NOV.2012 22:07:39



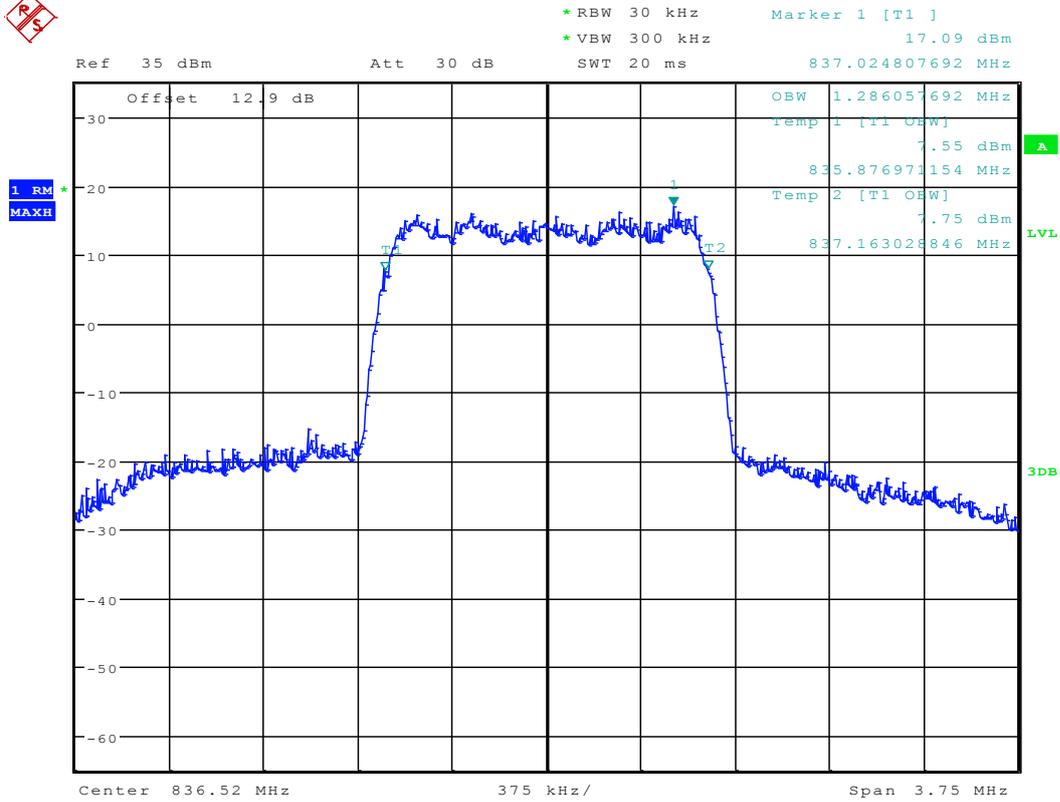
Channel 384 (EVDO subtype 0)



Date: 2.NOV.2012 22:11:59



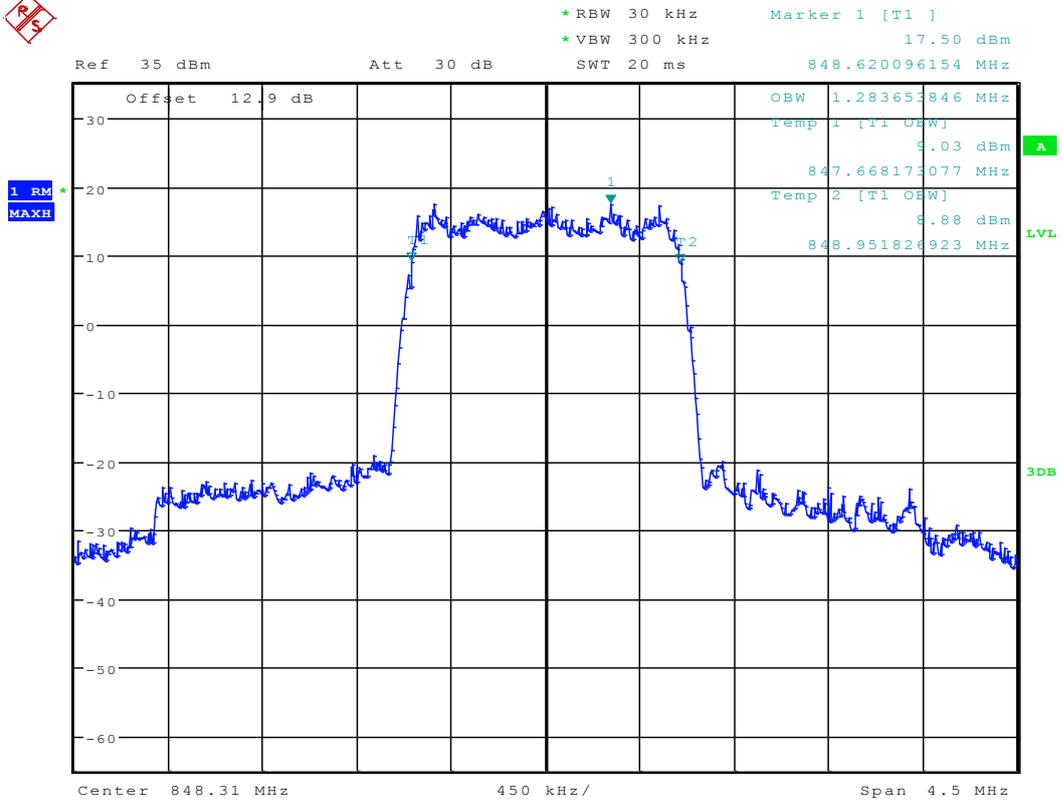
Channel 384 (EVDO Subtype 2)



Date: 2.NOV.2012 22:17:30



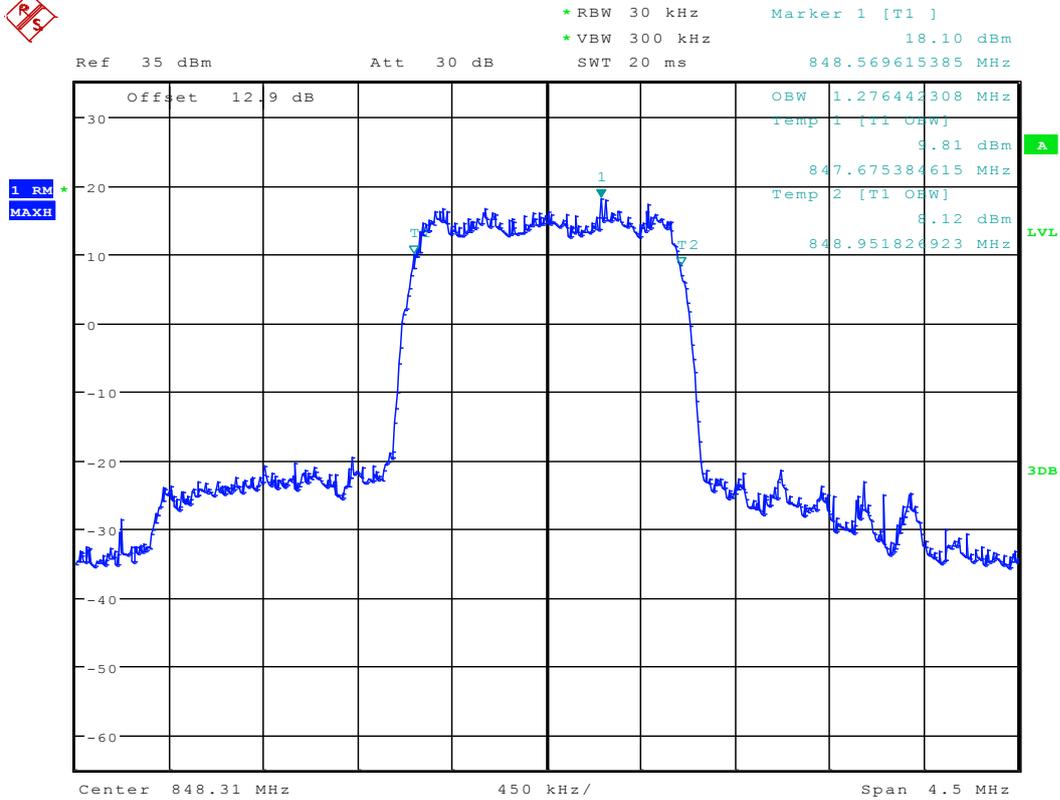
Channel 777 (TM1)



Date: 2.NOV.2012 22:07:10



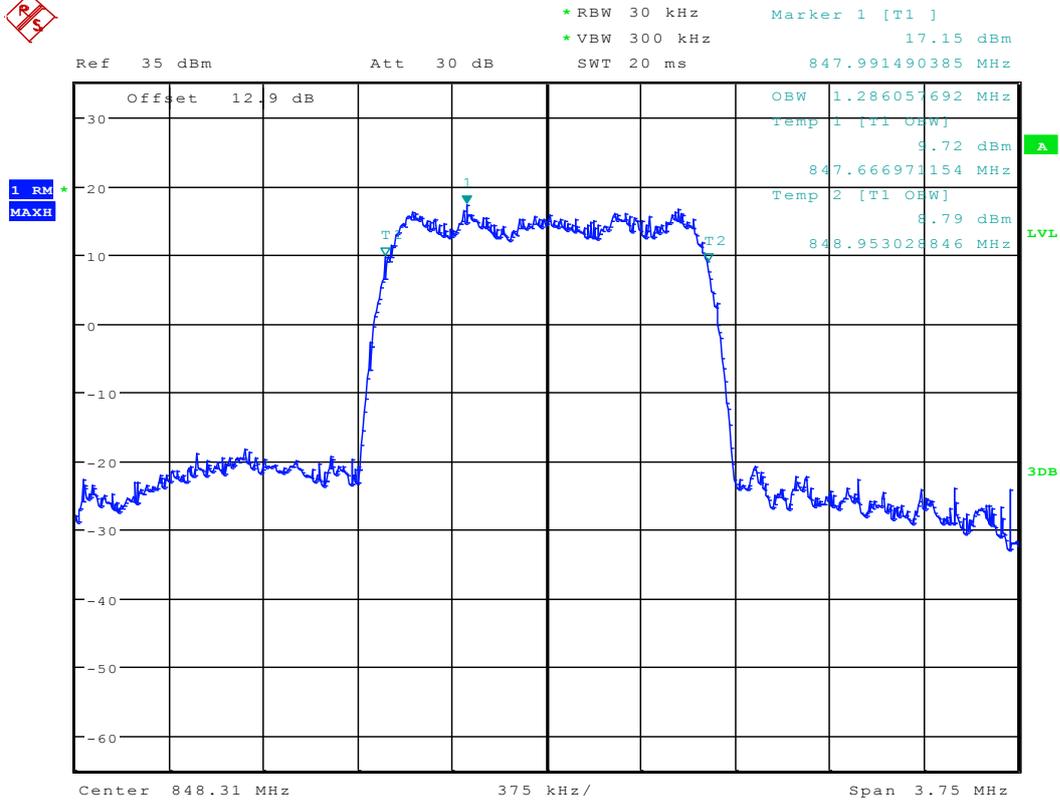
Channel 777 (TM3)



Date: 2.NOV.2012 22:07:53



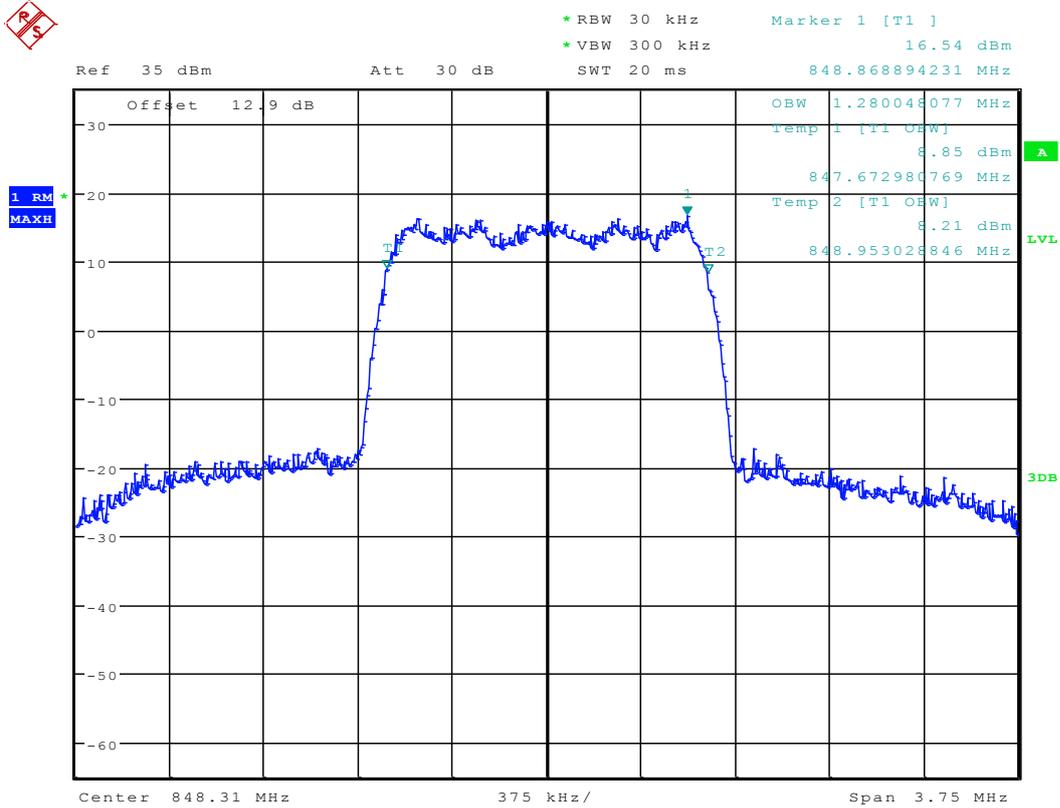
Channel 777 (EVDO subtype 0)



Date: 2.NOV.2012 22:12:13



Channel 777 (EVDO Subtype 2)



Date: 2.NOV.2012 22:17:41



Appendix D

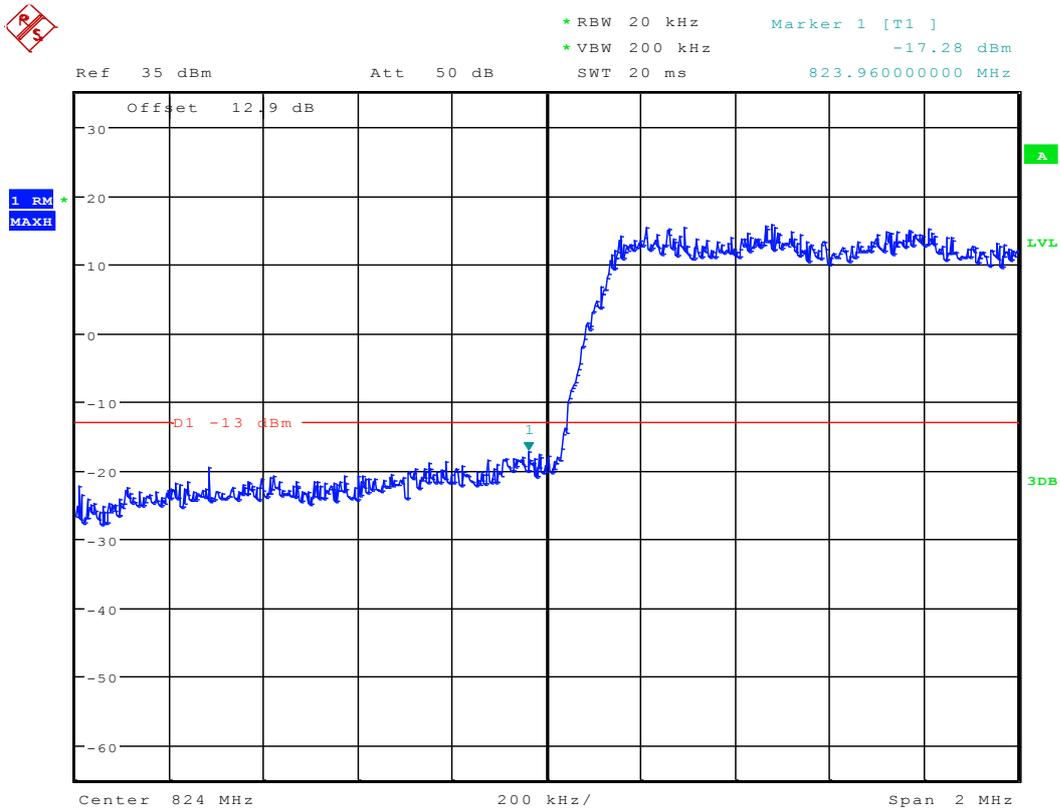
Band Edges Compliance

According to FCC Part 2.1051 & 22.917



TM1

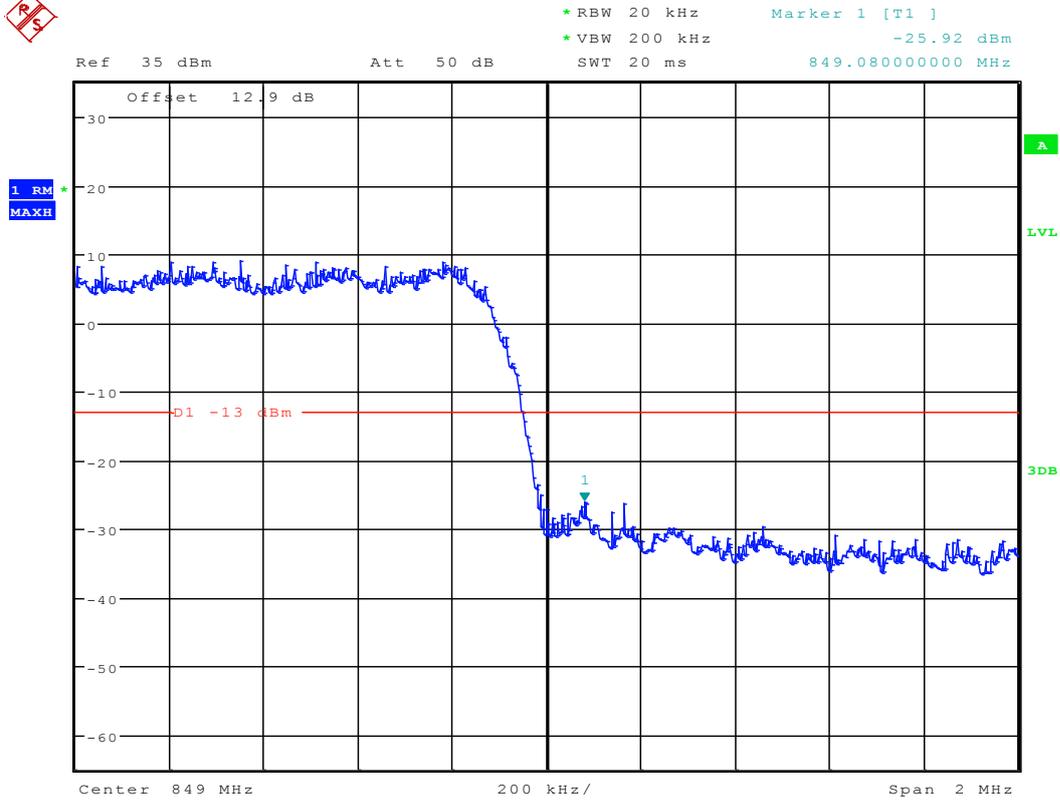
Left Edge (824 MHz) Channel 1013



Date: 2.NOV.2012 22:05:18



Right Edge (849MHz) Channel 777

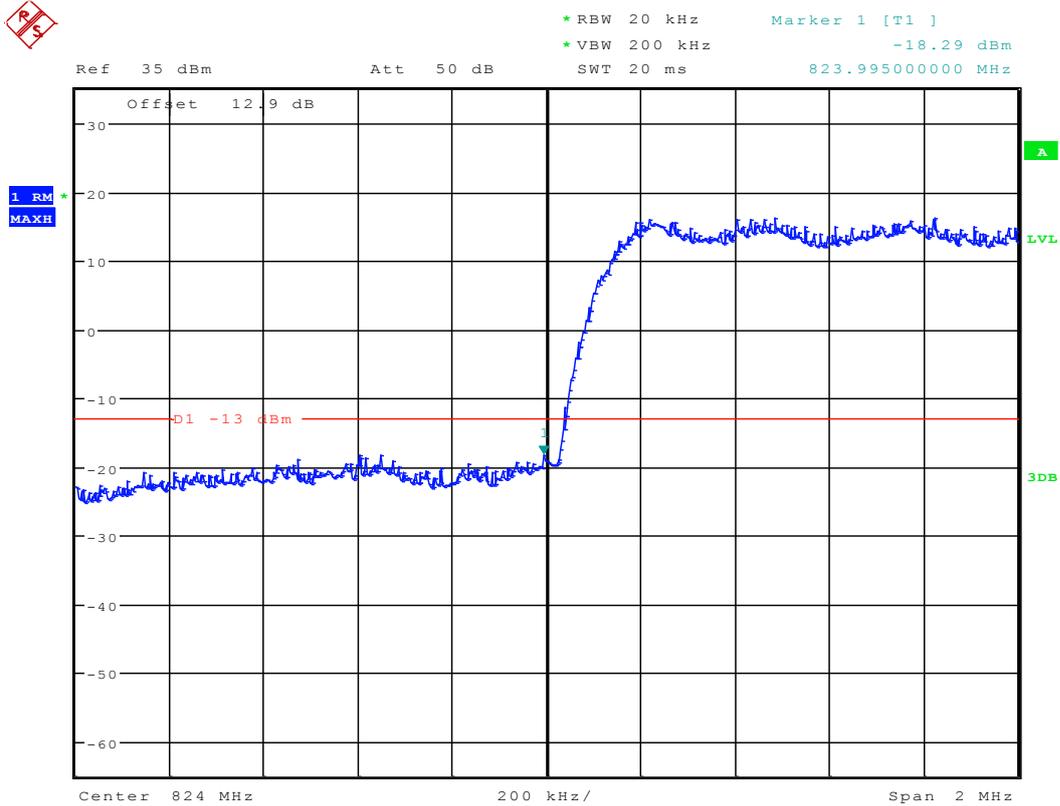


Date: 2.NOV.2012 22:05:35



TM3

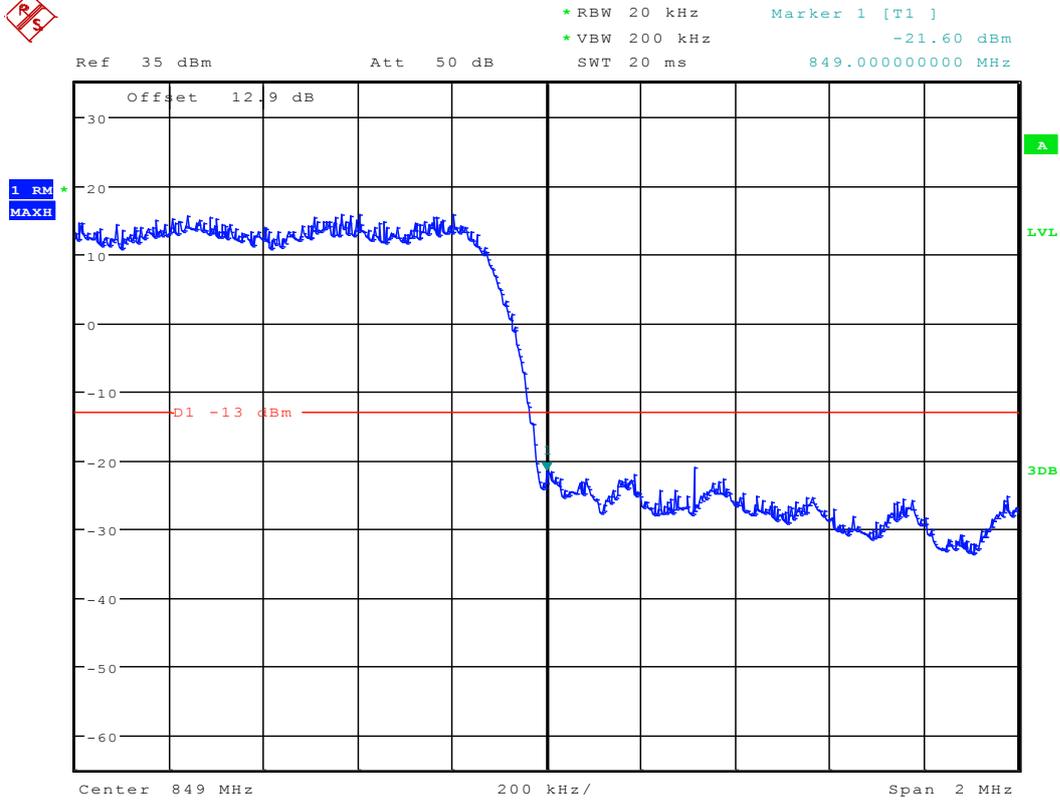
Left Edge (824 MHz) Channel 1013



Date: 2.NOV.2012 22:06:13



Right Edge (849MHz) Channel 777

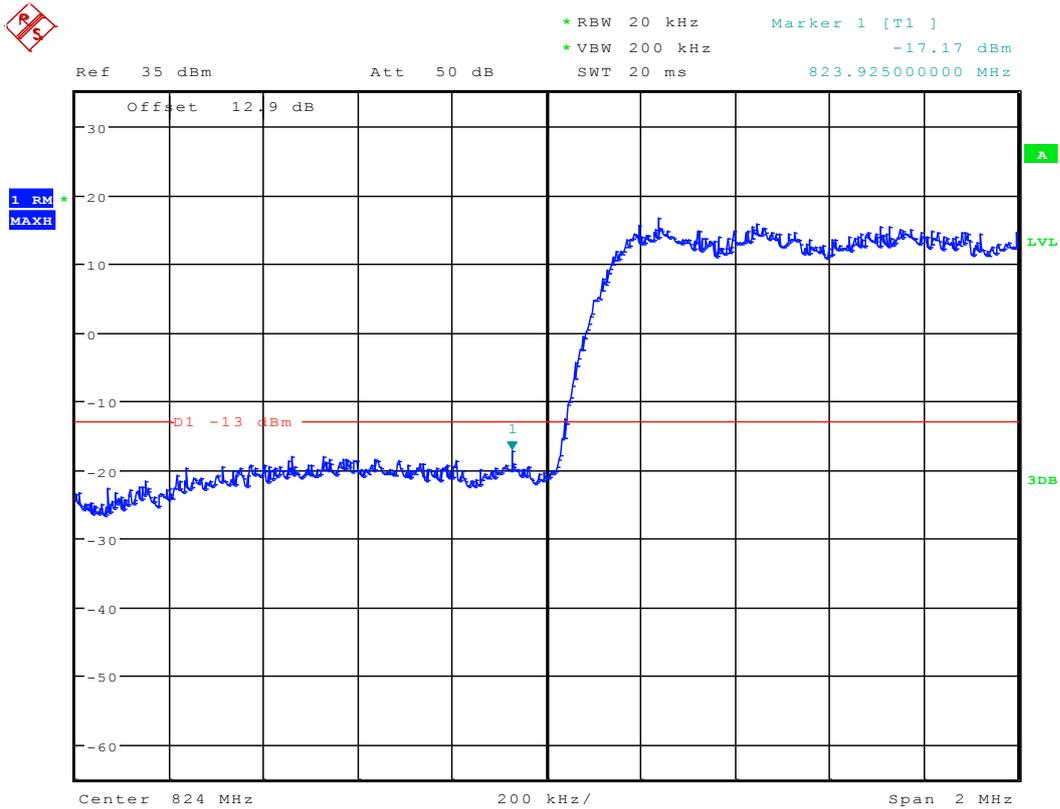


Date: 2.NOV.2012 22:06:27



EVDO Subtype 0

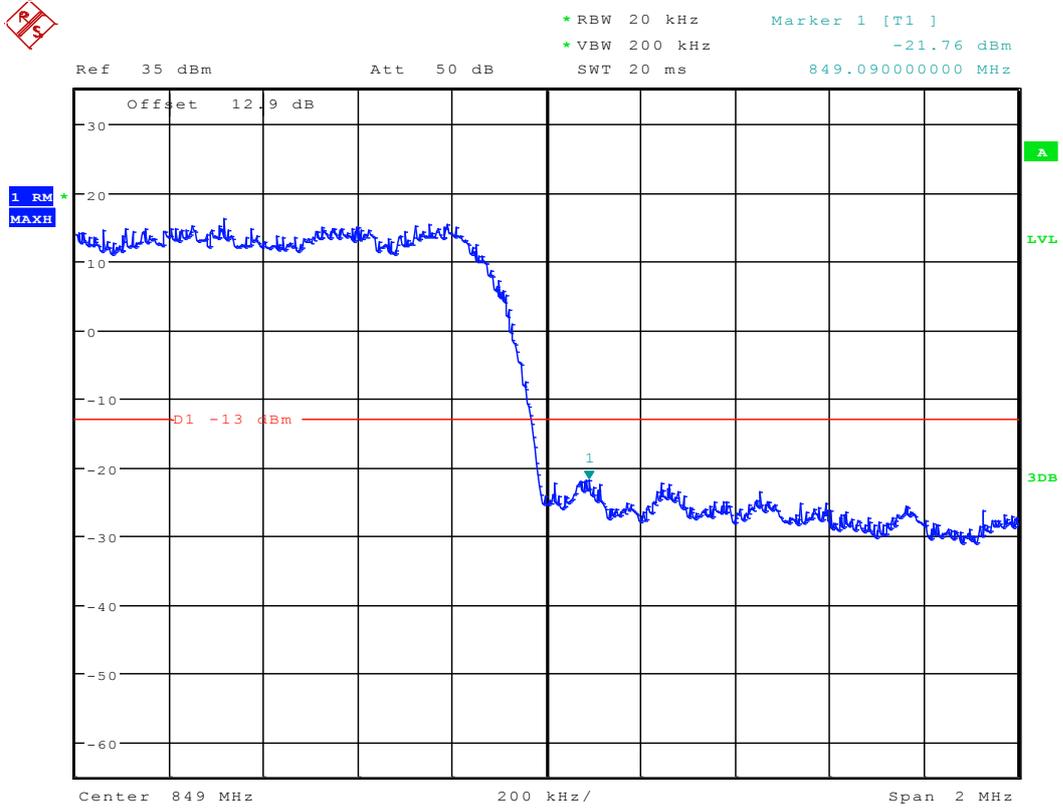
Left Edge (824 MHz) Channel 1013



Date: 2.NOV.2012 22:11:15



Right Edge (849MHz) Channel 777



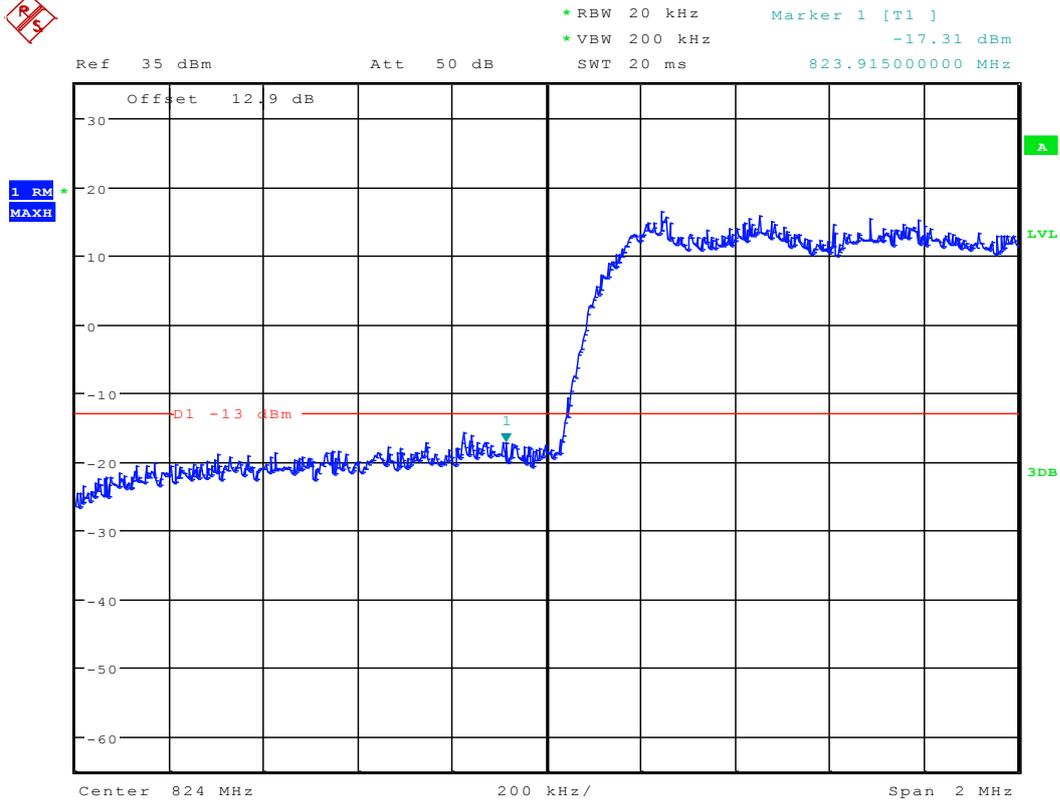
Date: 2.NOV.2012 22:11:29



EVDO Subtype 2

Modulation: BPSK

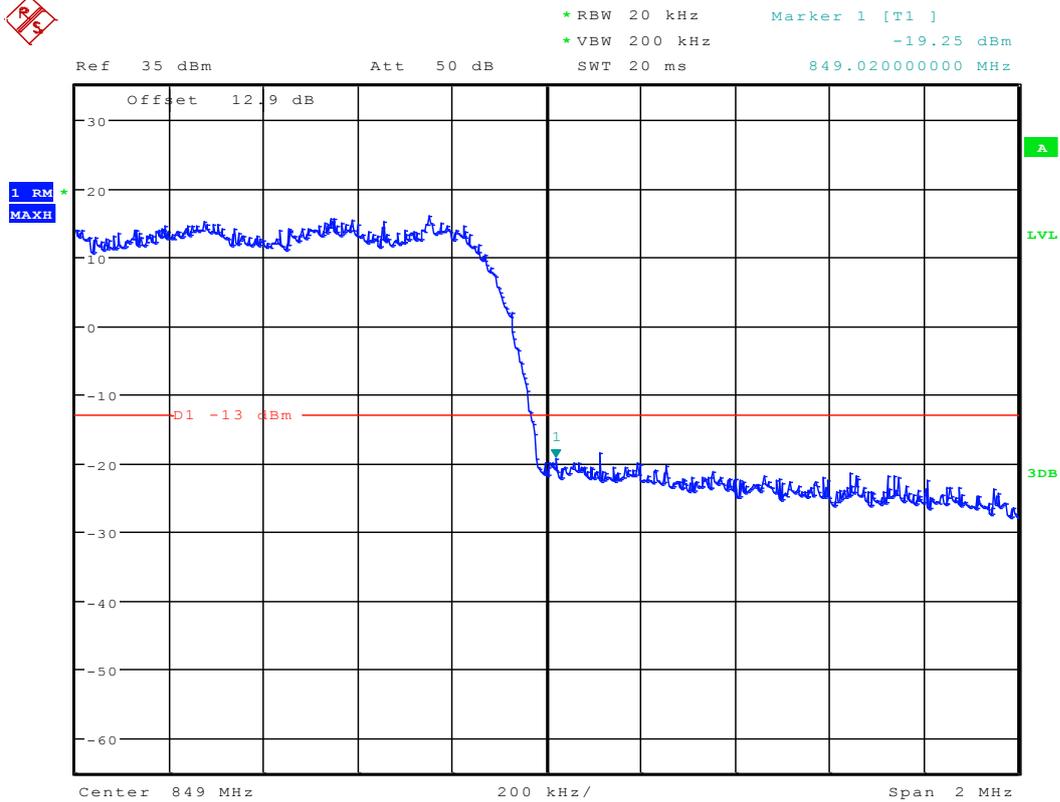
Left Edge (824 MHz) Channel 1013



Date: 2.NOV.2012 22:15:57



Right Edge (849MHz) Channel 777



Date: 2.NOV.2012 22:16:10

Modulation: QPSK

Left Edge (824 MHz)

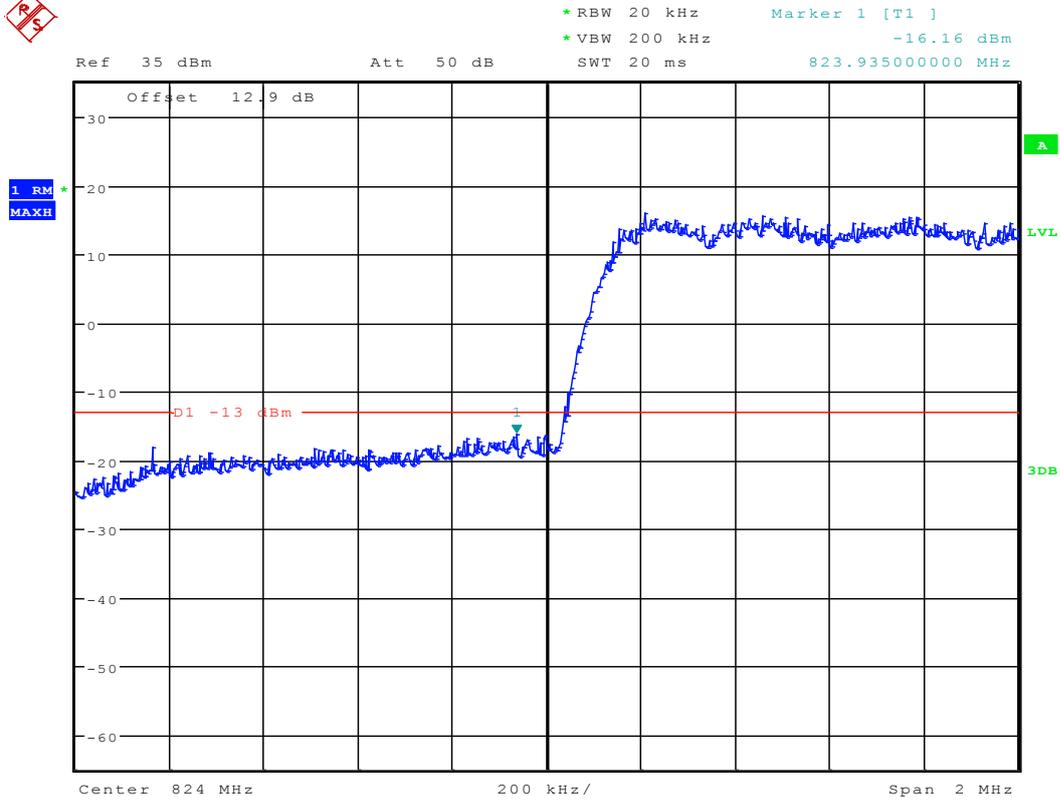
Report No:
SYBH(Z-RF)001112012-2001

Confidential Information of Huawei.
No Distribution without Written Permission

Page9,
Total13



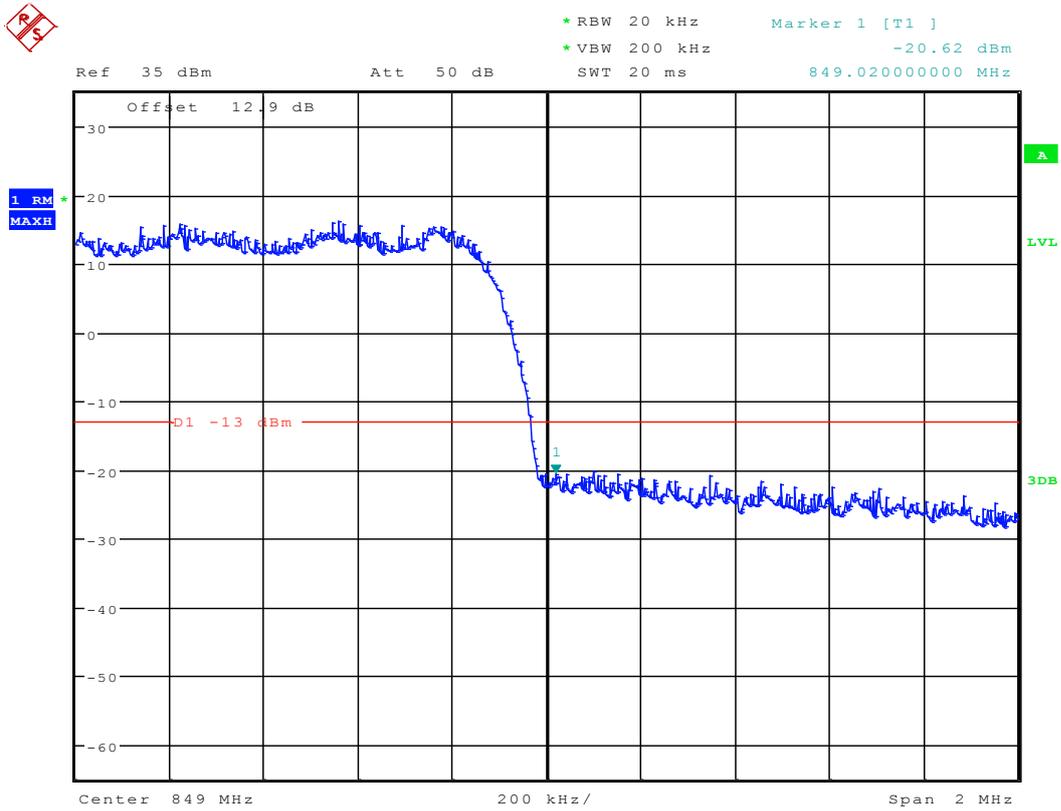
Channel 1013



Date: 2.NOV.2012 22:16:24



Right Edge (849MHz) Channel 777

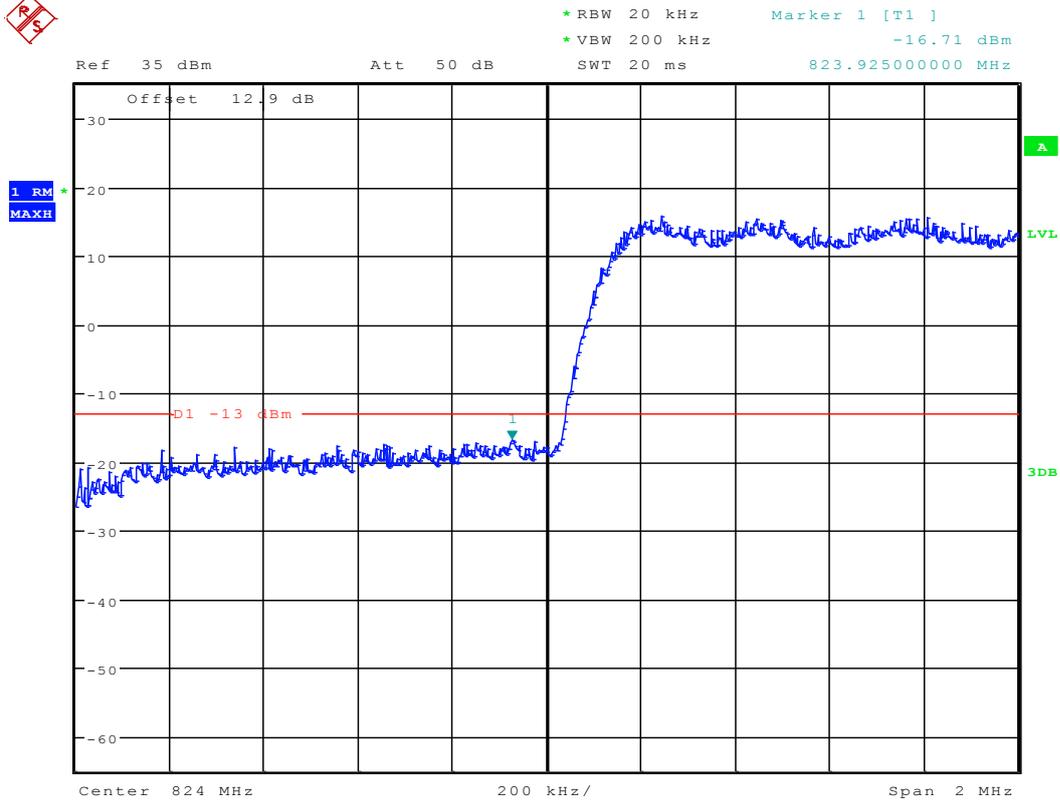


Date: 2.NOV.2012 22:16:37



Modulation: 8PSK

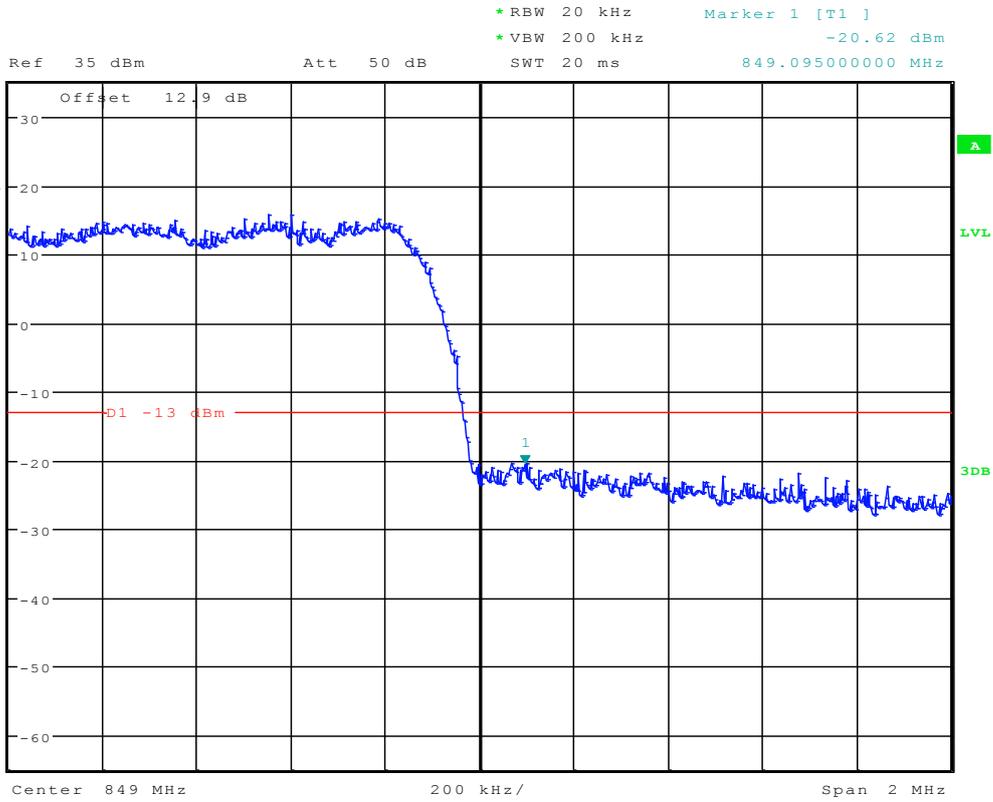
**Left Edge (824 MHz)
Channel 1013**



Date: 2.NOV.2012 22:16:51



Right Edge (849MHz) Channel 777



Date: 2.NOV.2012 22:17:05



Appendix E

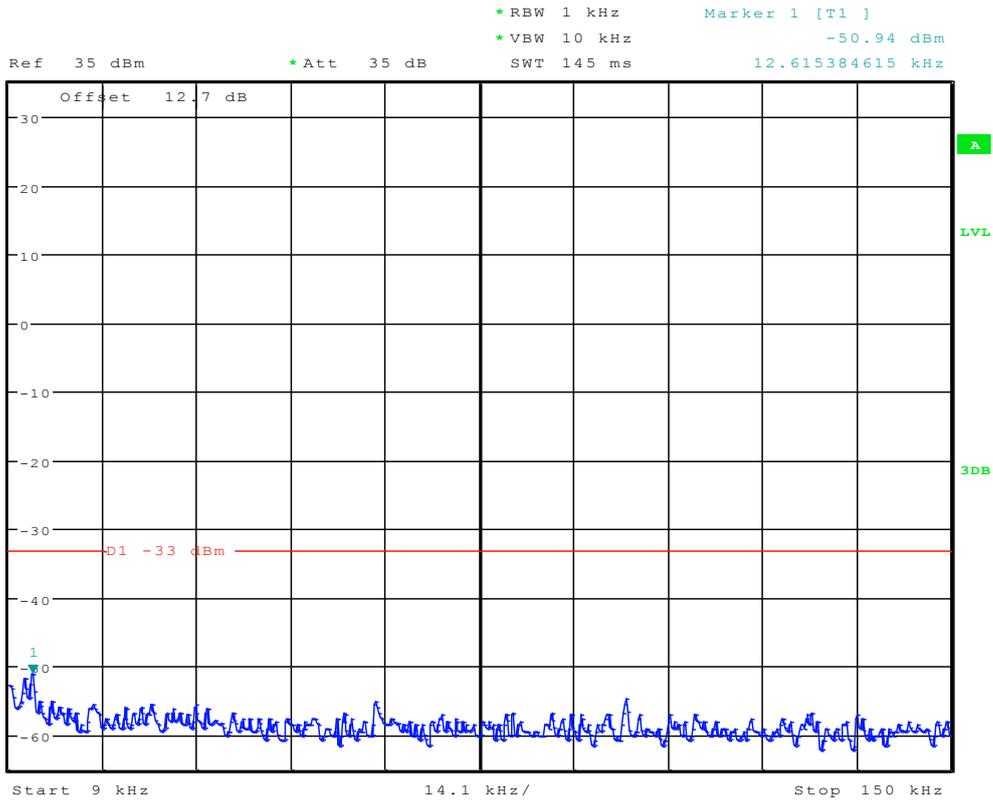
Spurious Emission at Antenna Terminal

According to FCC Part 2.1051 & 22.917

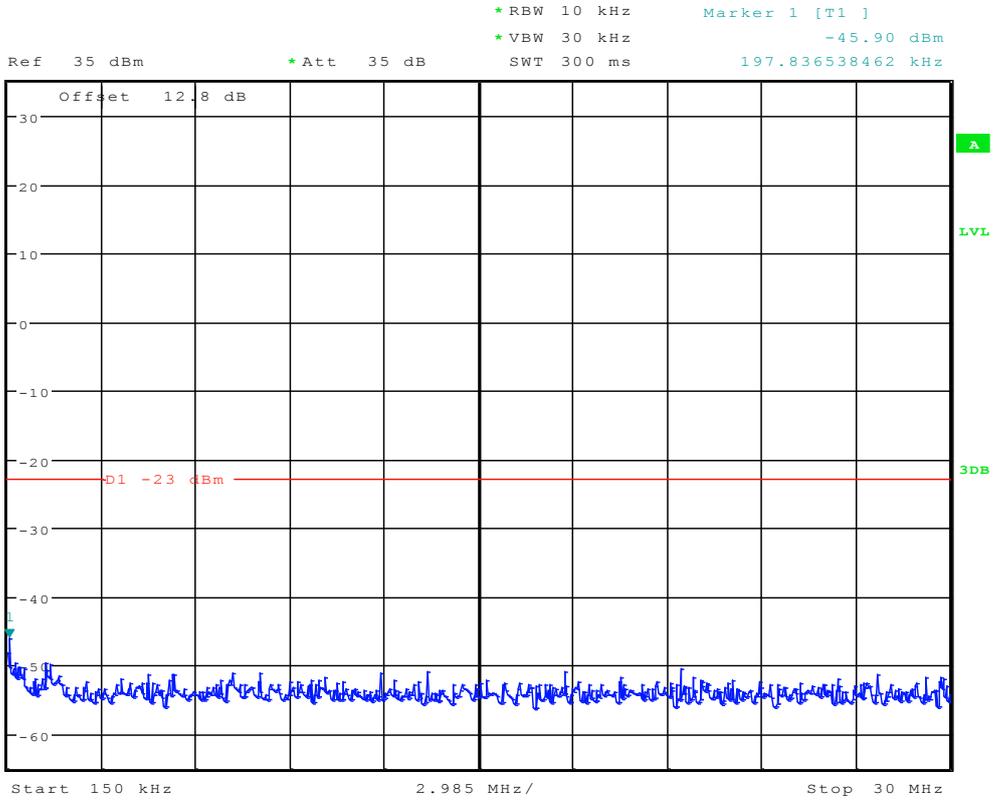


TM1

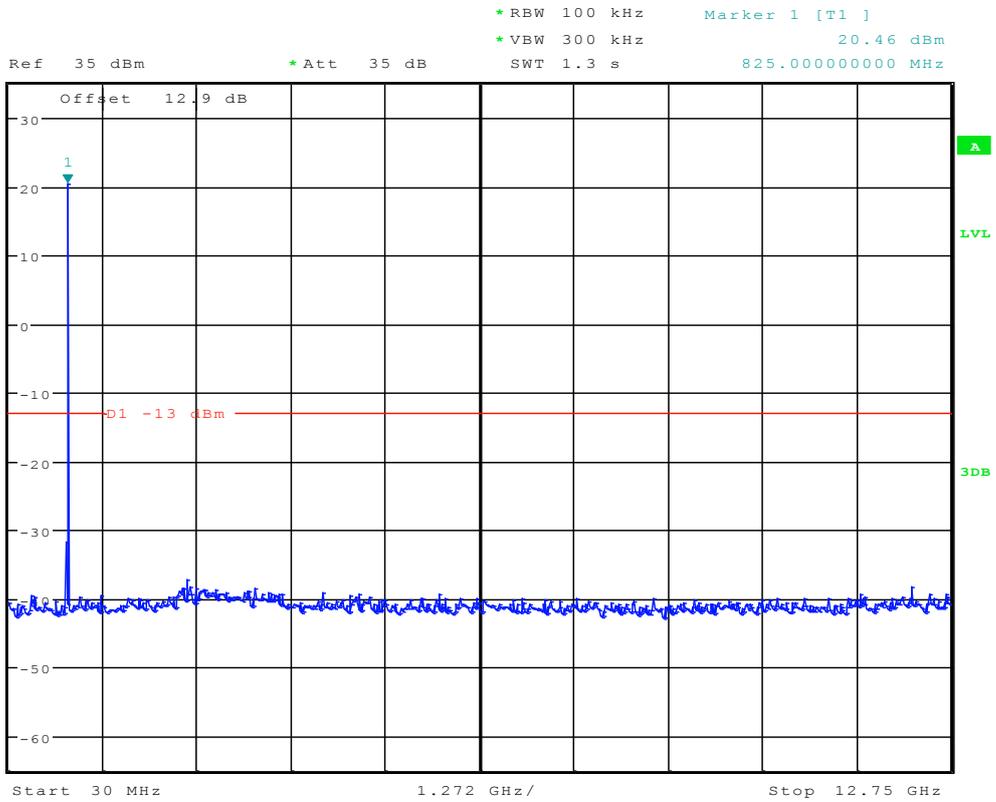
Channel 1013



Date: 2.NOV.2012 22:08:04



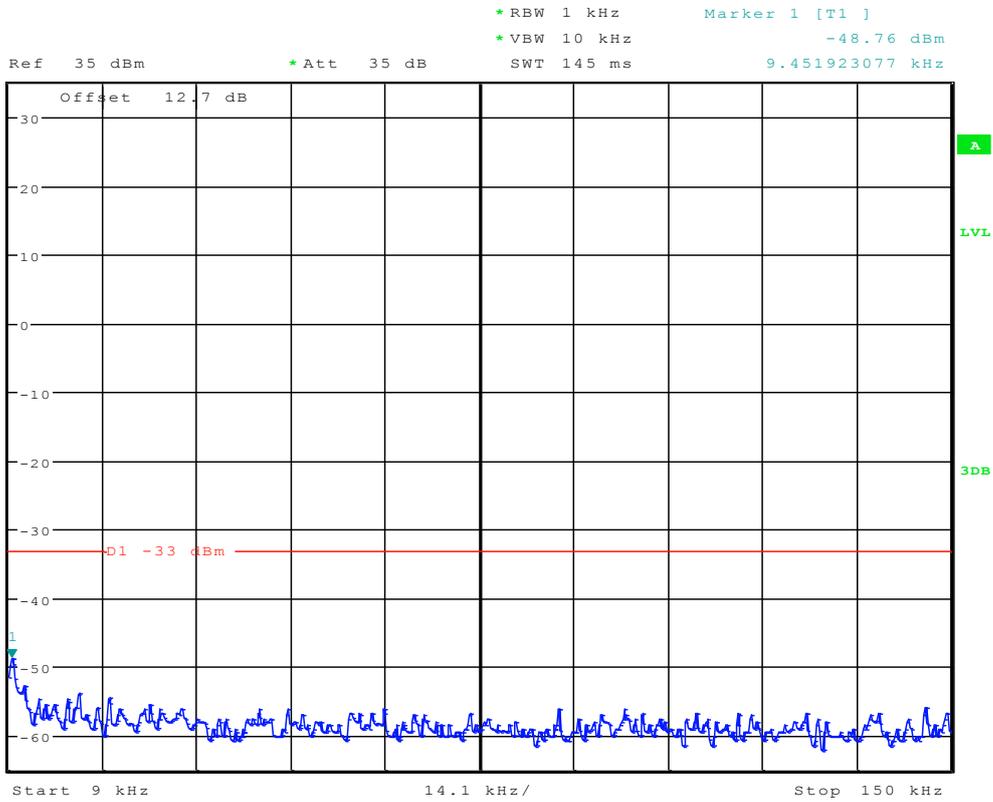
Date: 2.NOV.2012 22:08:29



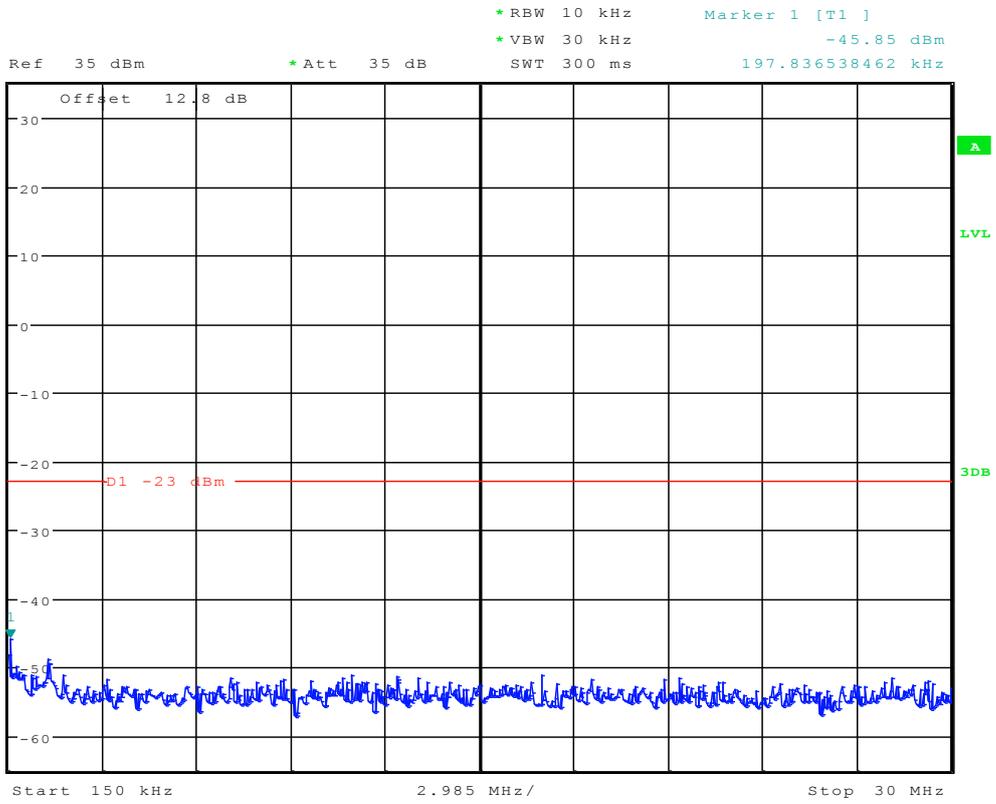
Date: 2.NOV.2012 22:08:55



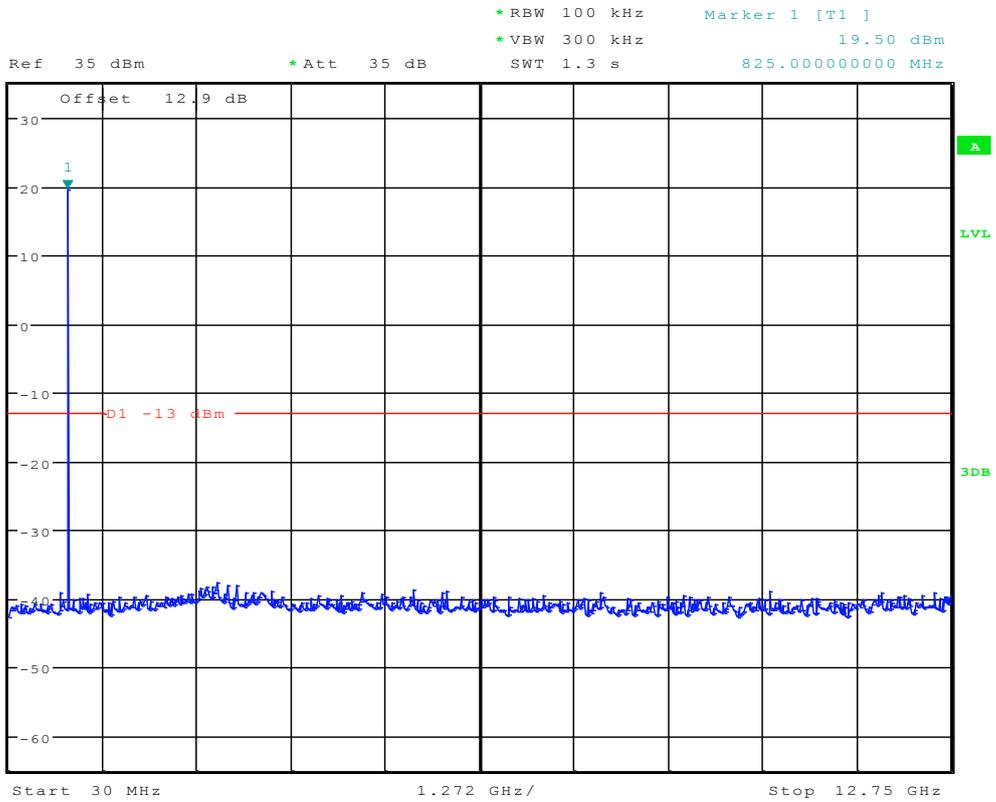
Channel 384



Date: 2.NOV.2012 22:08:12



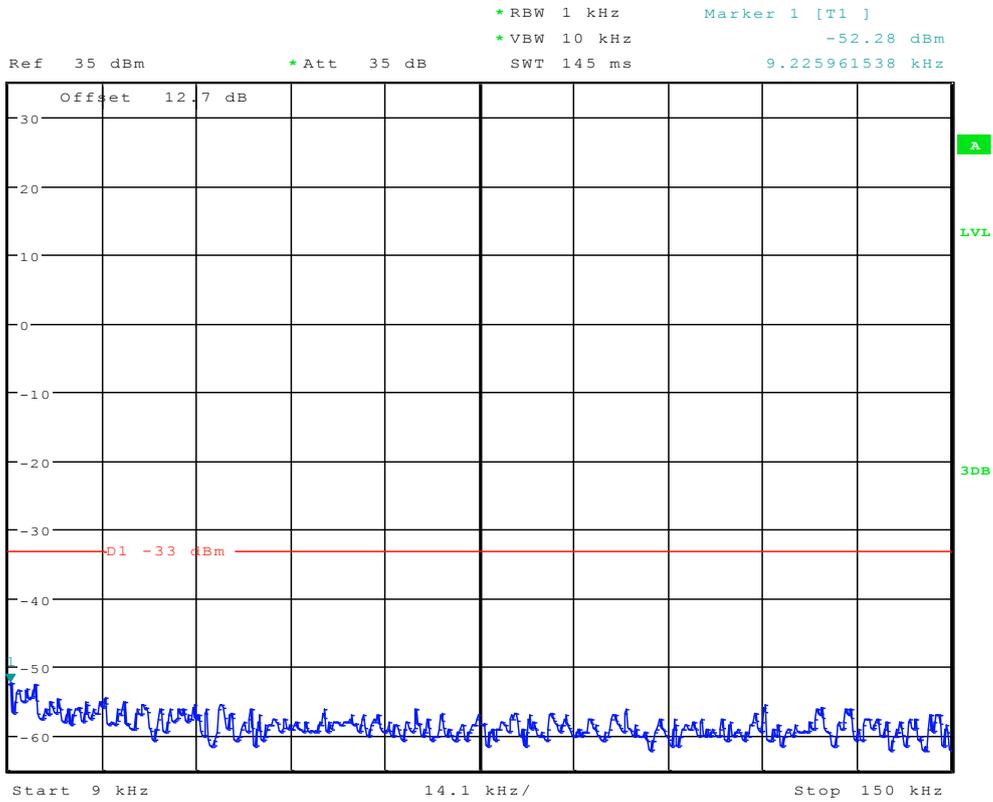
Date: 2.NOV.2012 22:08:37



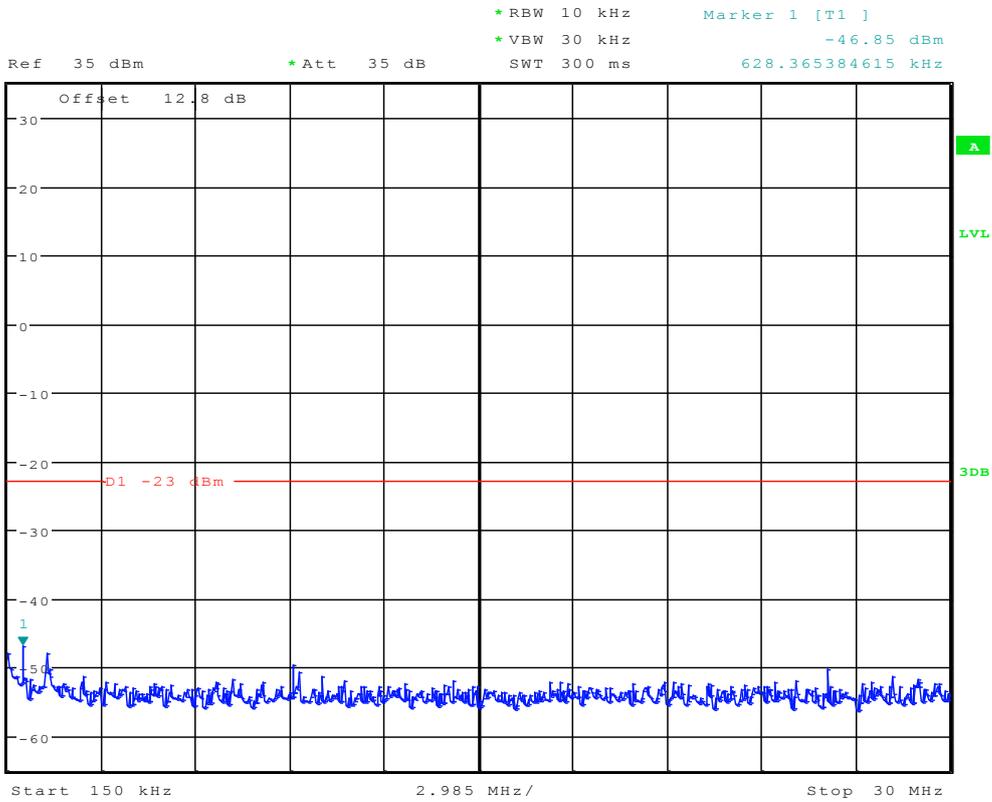
Date: 2.NOV.2012 22:09:03



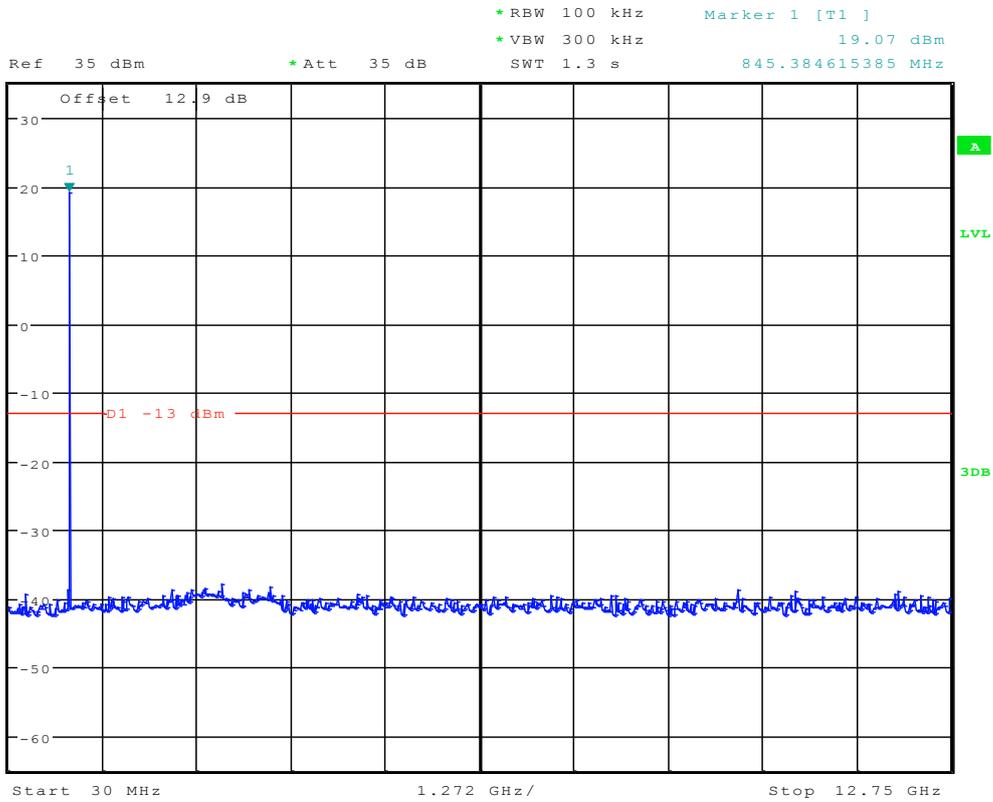
Channel 777



Date: 2.NOV.2012 22:08:20



Date: 2.NOV.2012 22:08:46

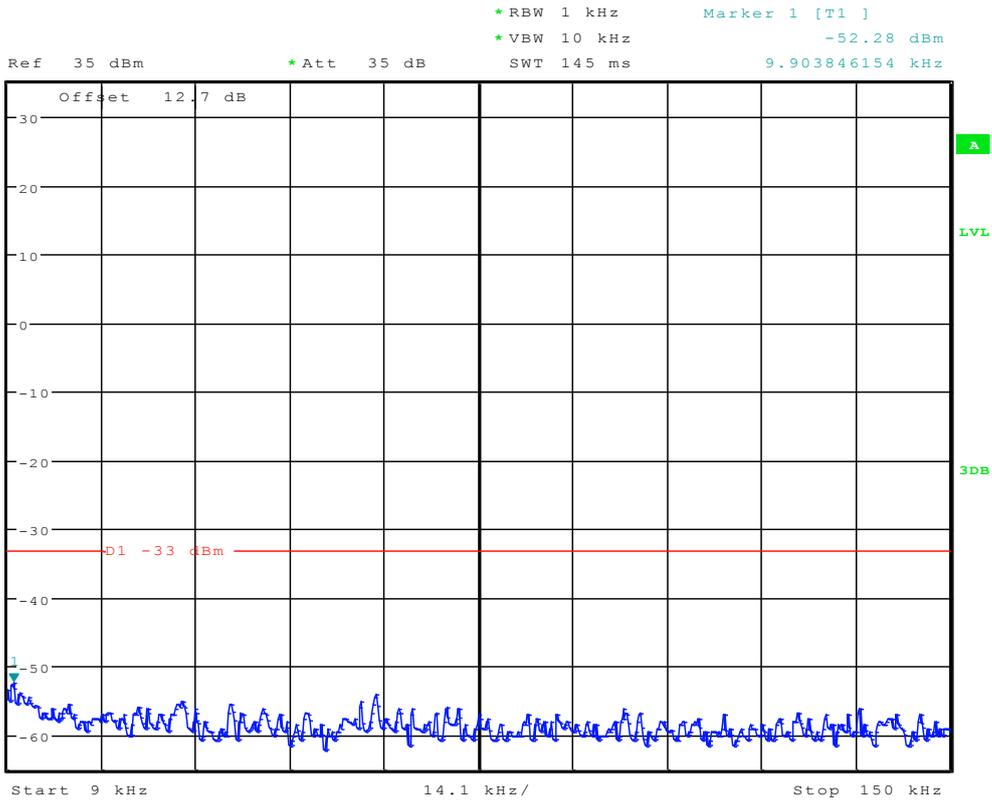


Date: 2.NOV.2012 22:09:11

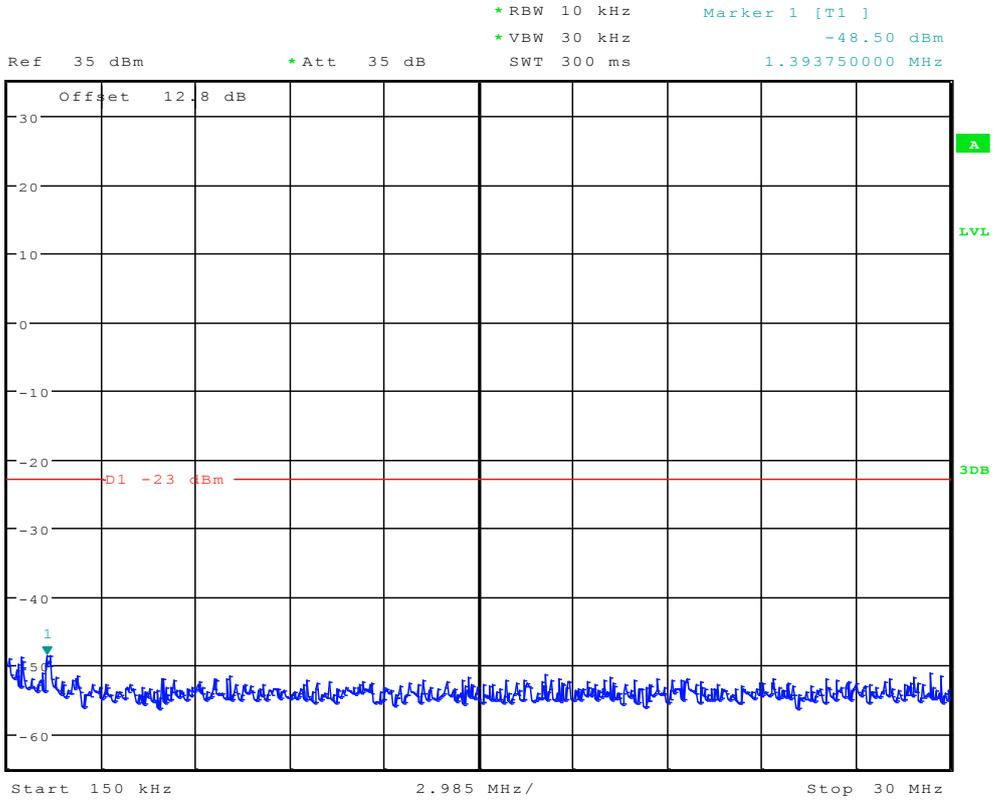


TM3

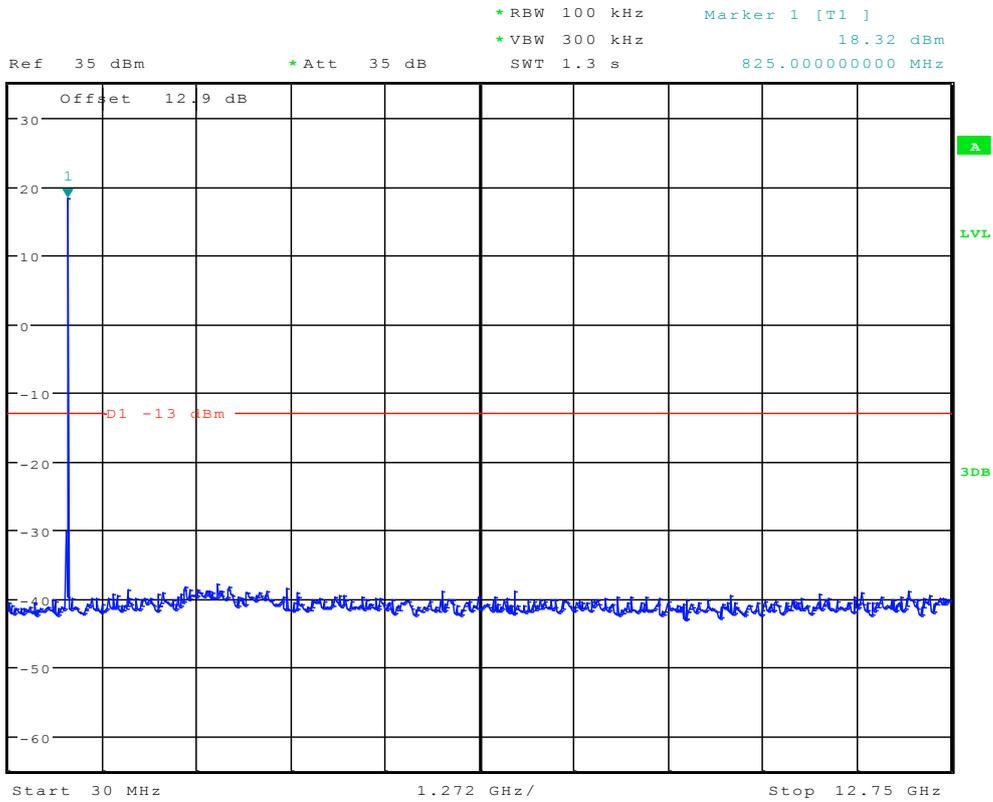
Channel 1013



Date: 2.NOV.2012 22:09:22



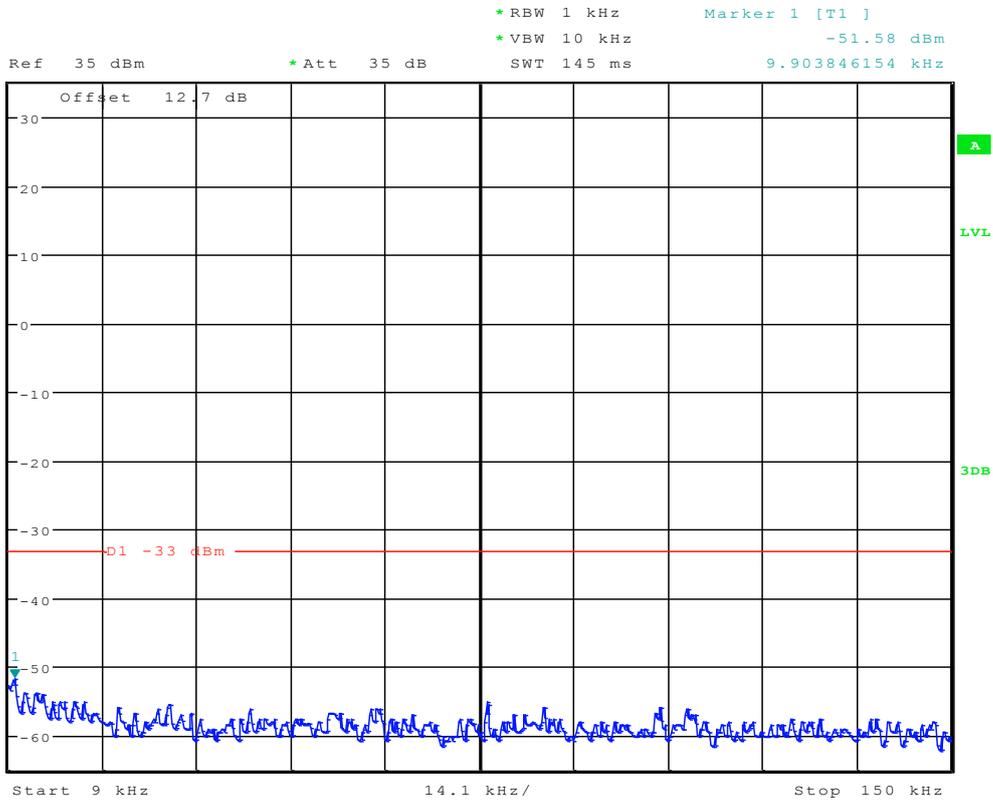
Date: 2.NOV.2012 22:09:47



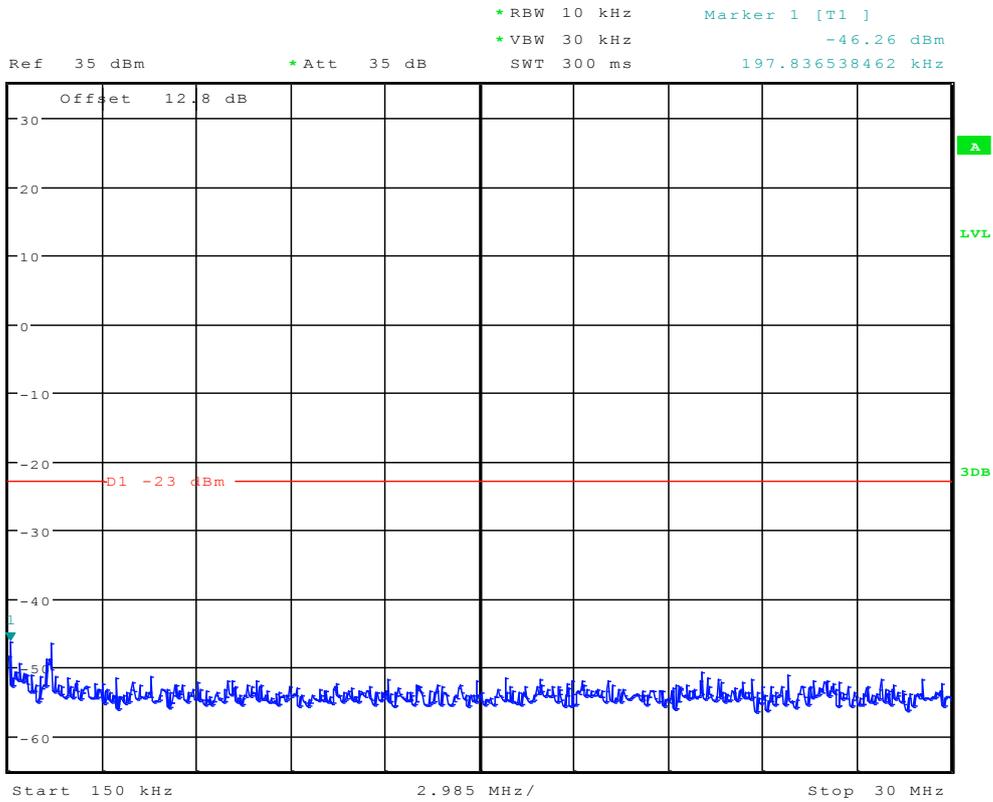
Date: 2.NOV.2012 22:10:13



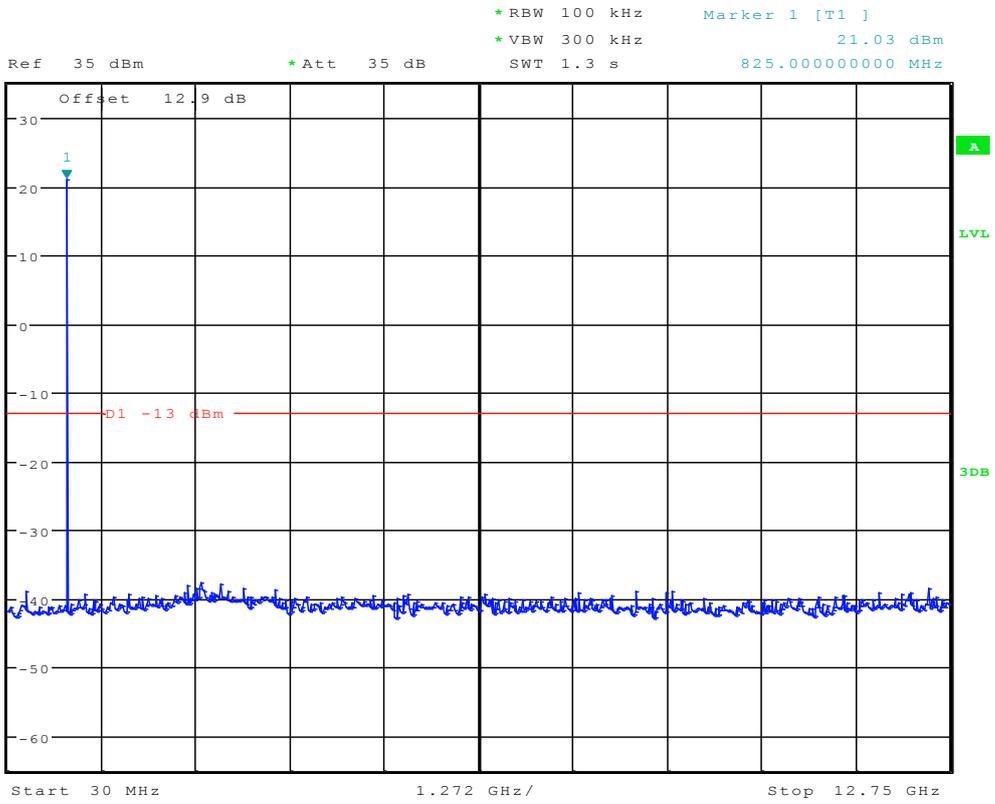
Channel 384



Date: 2.NOV.2012 22:09:30



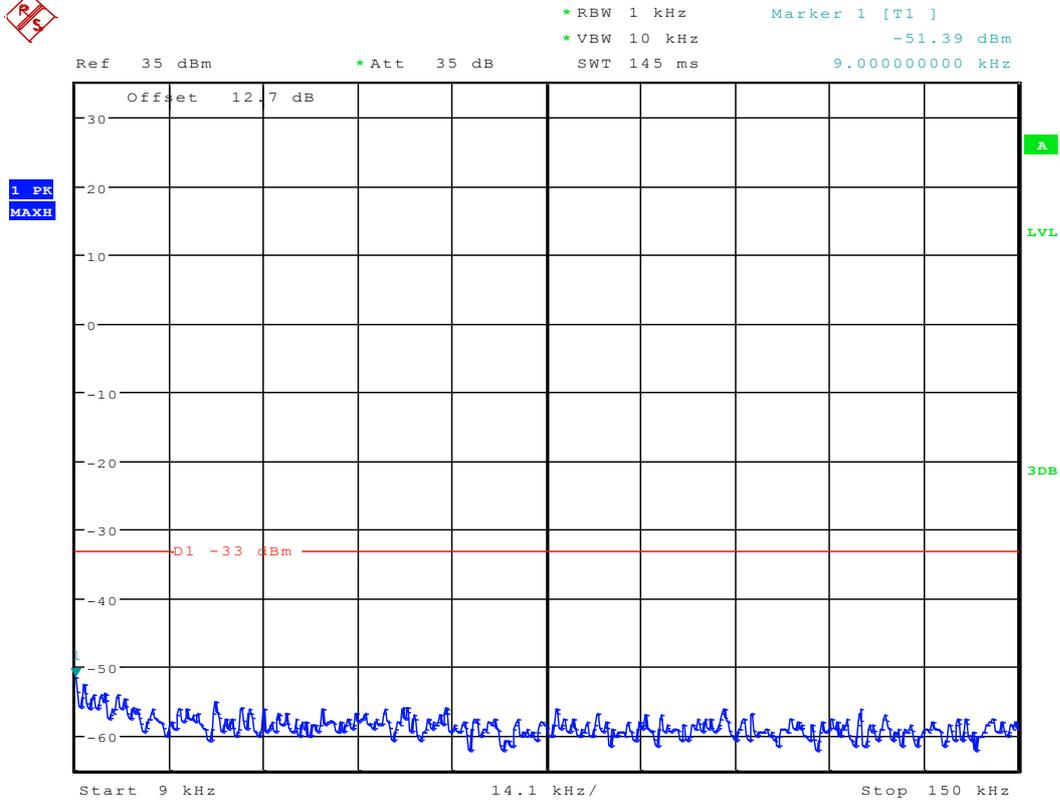
Date: 2.NOV.2012 22:09:56



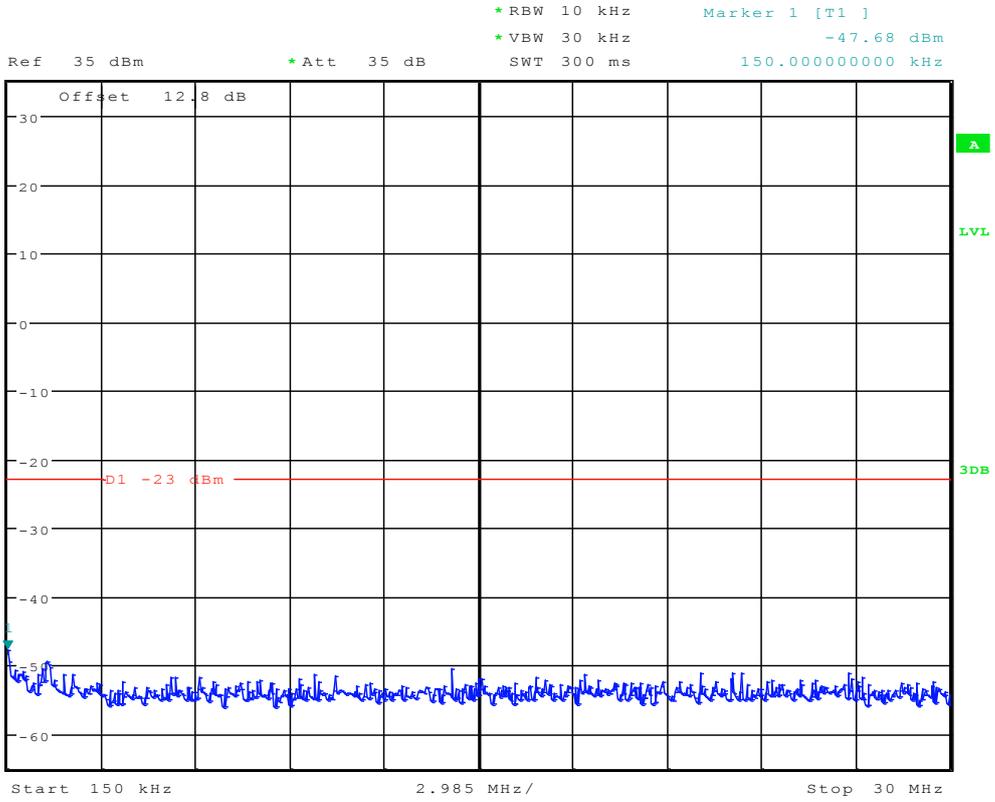
Date: 2.NOV.2012 22:10:21



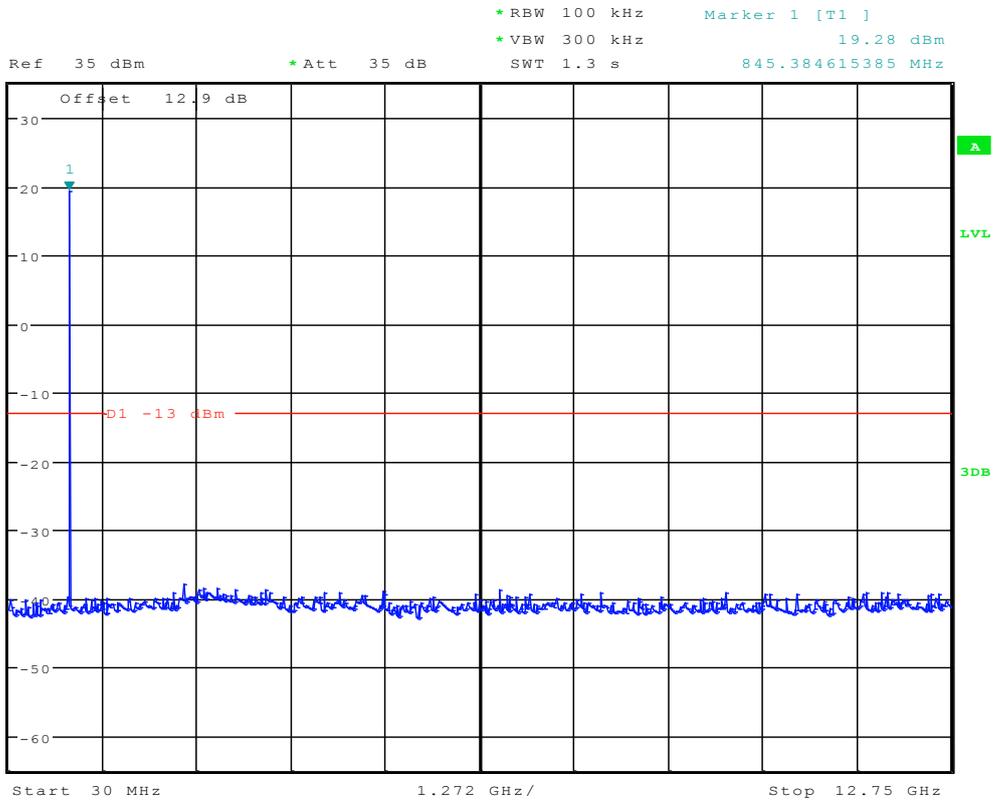
Channel 777



Date: 2.NOV.2012 22:09:38



Date: 2.NOV.2012 22:10:04

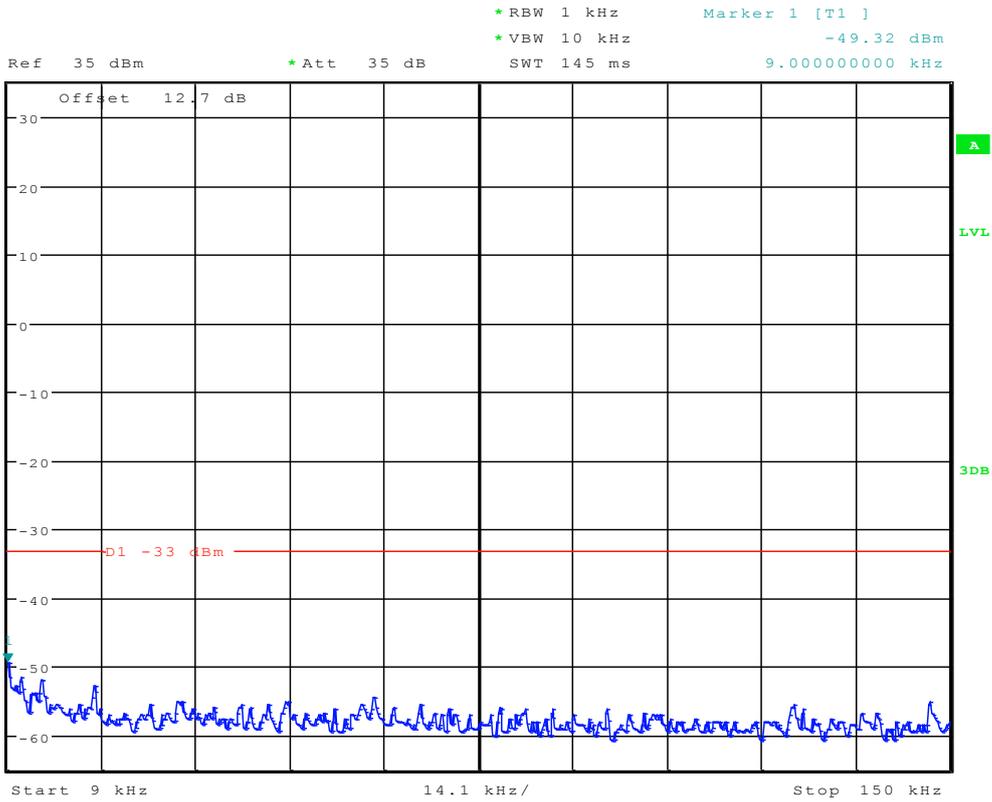


Date: 2.NOV.2012 22:10:30

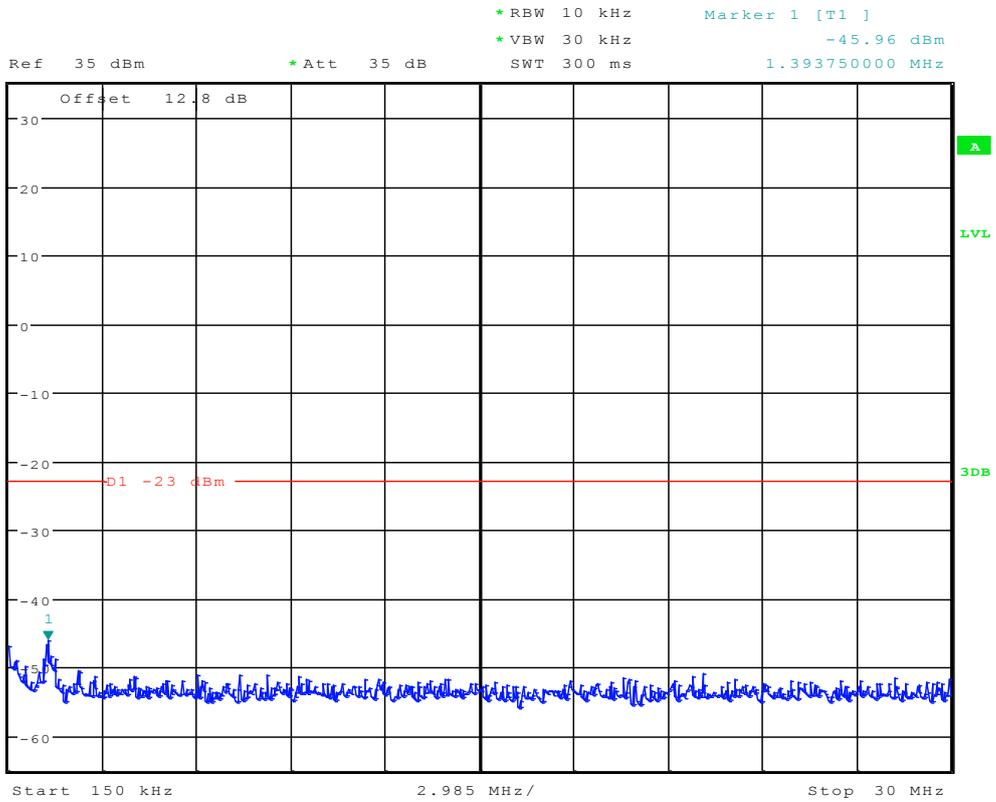


EVDO subtype 0

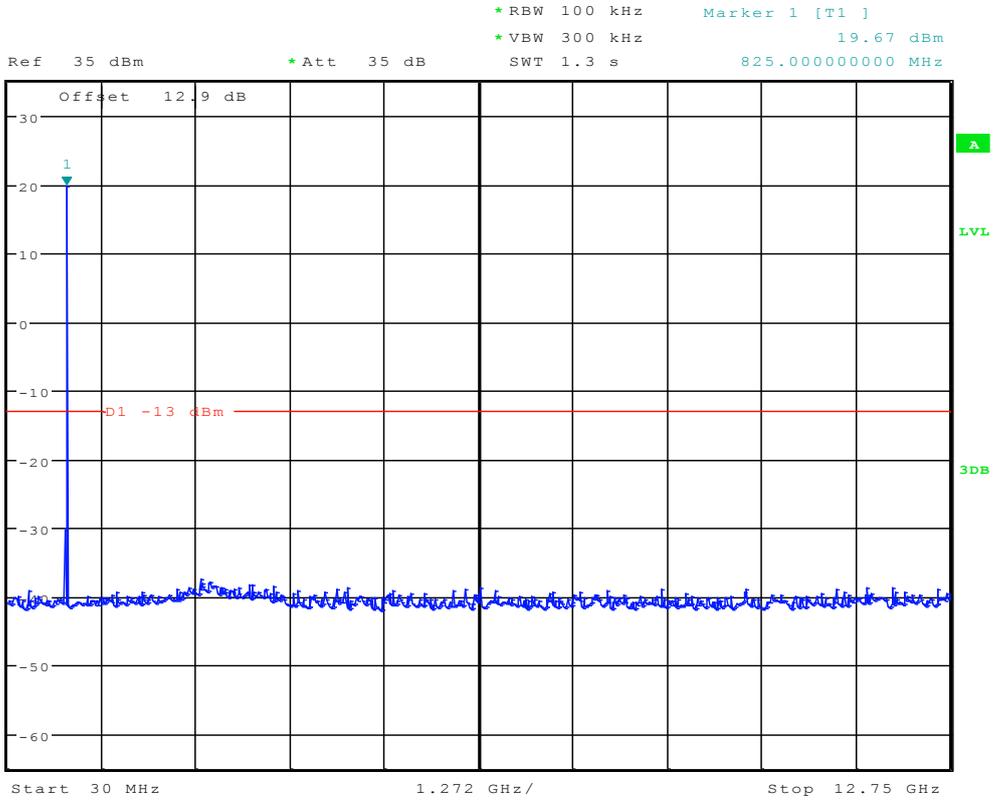
Channel 1013



Date: 2.NOV.2012 22:12:30



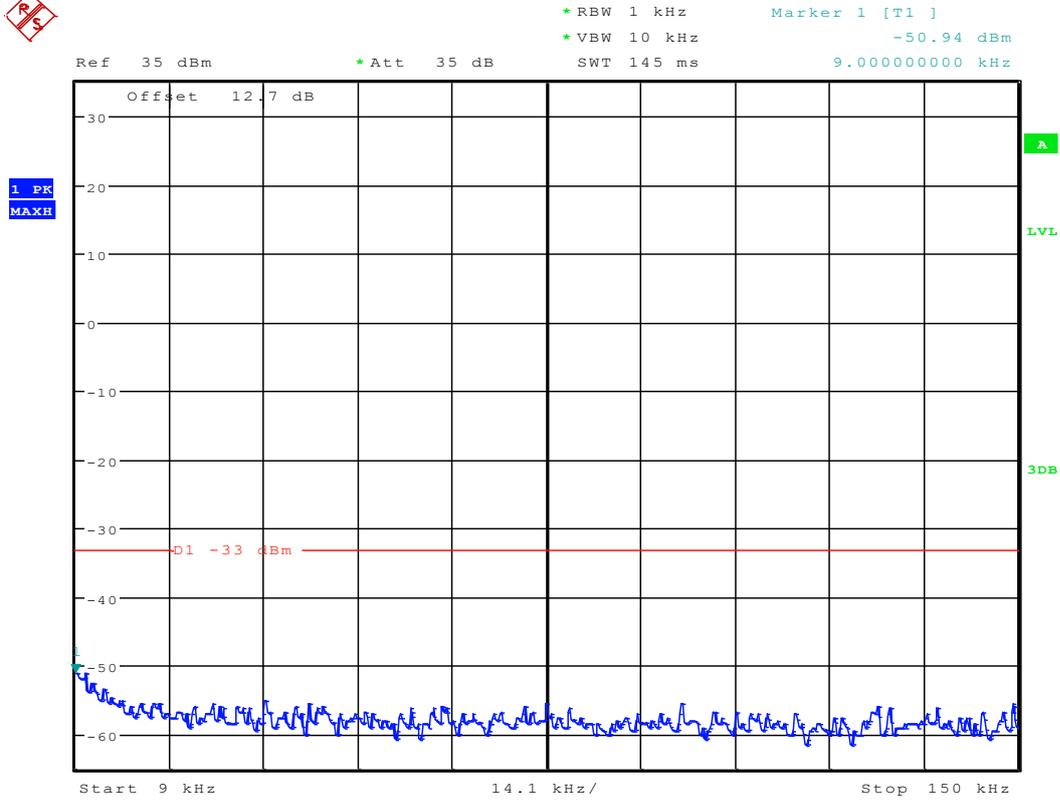
Date: 2.NOV.2012 22:13:14



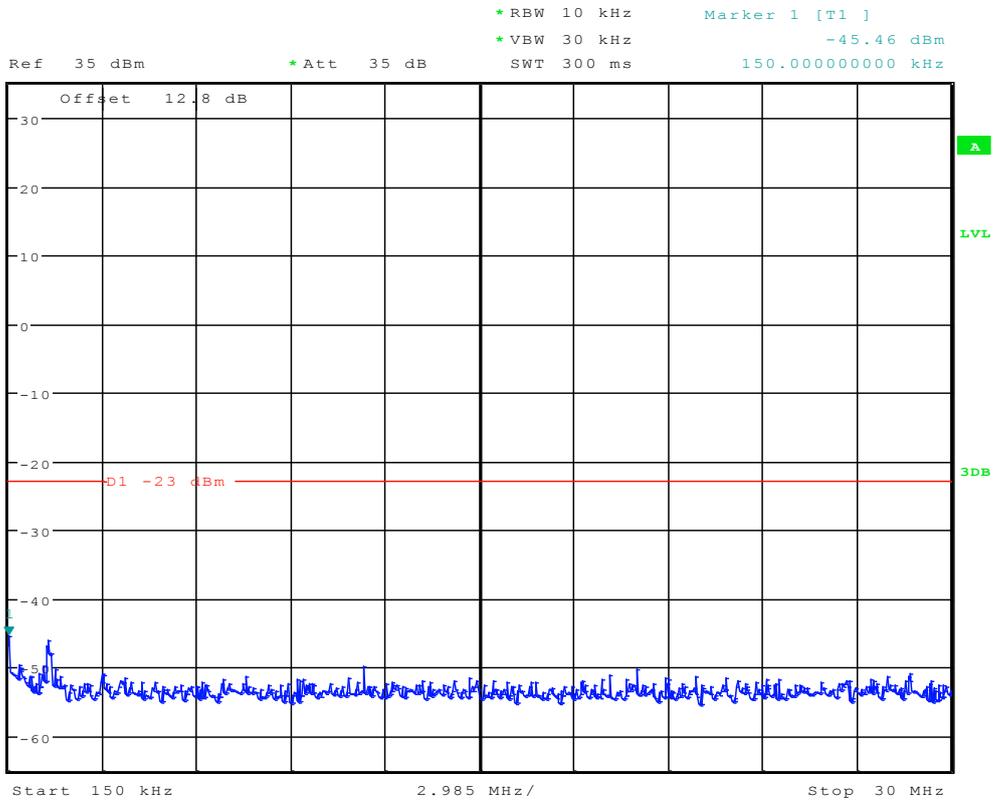
Date: 2.NOV.2012 22:13:57



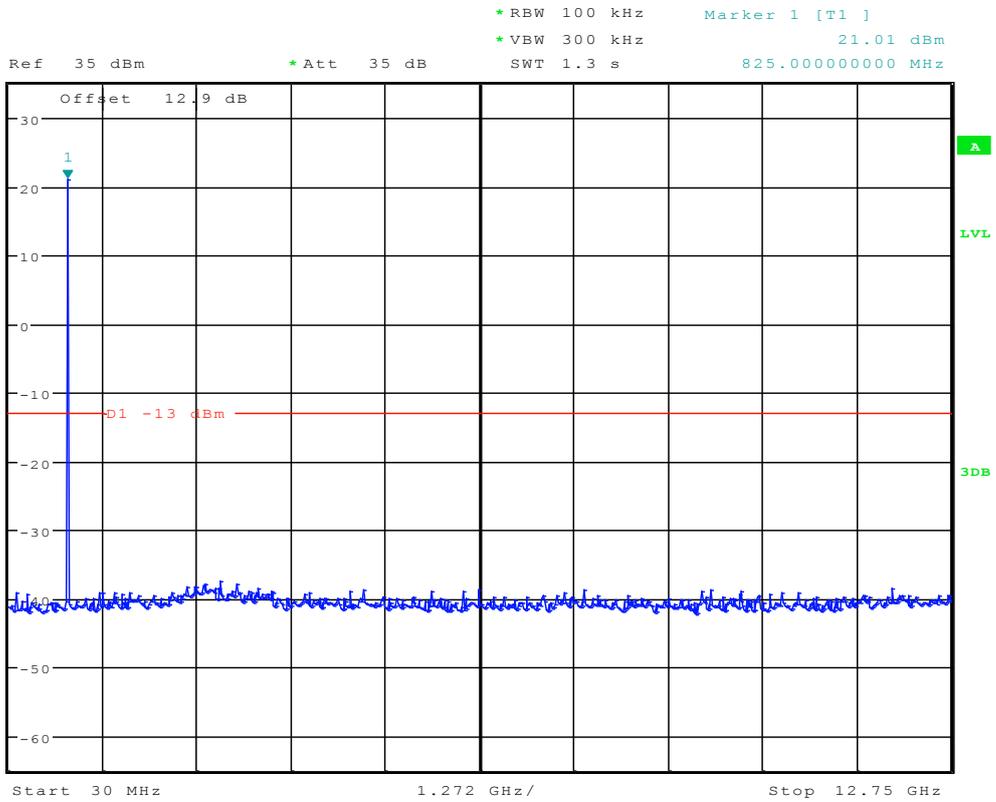
Channel 384



Date: 2.NOV.2012 22:12:44



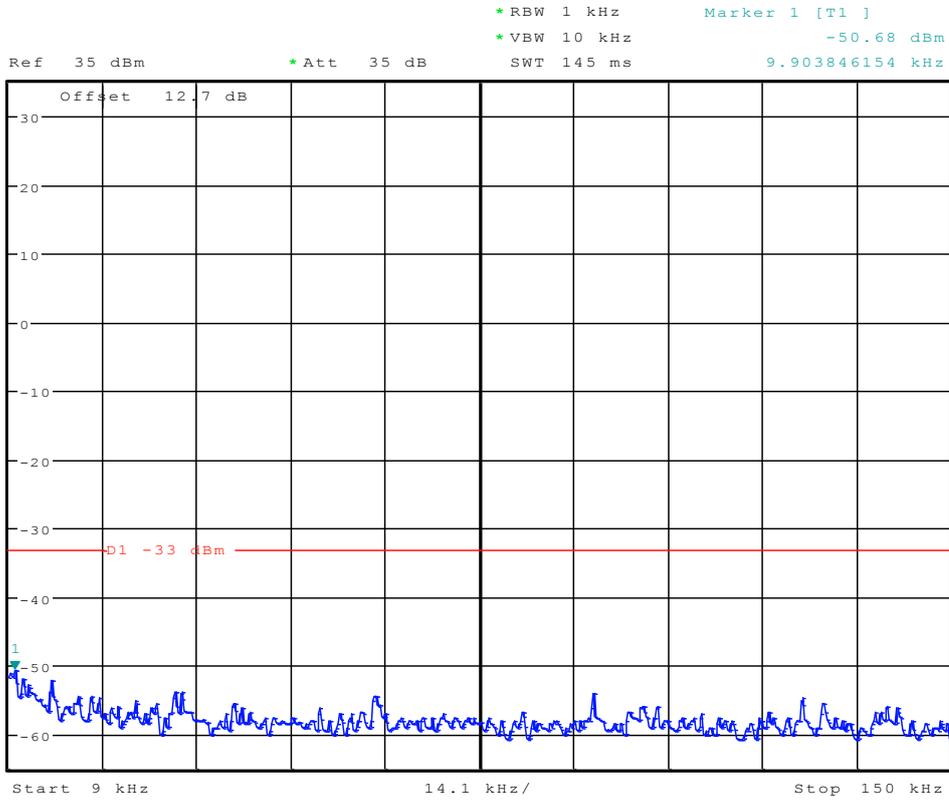
Date: 2.NOV.2012 22:13:28



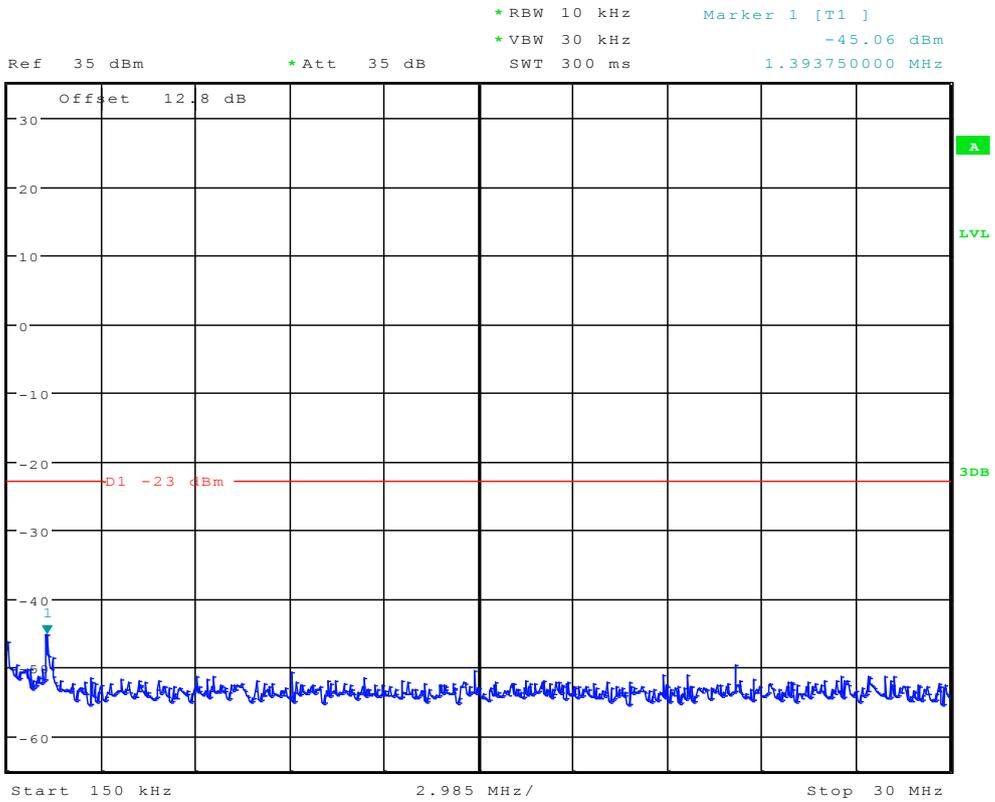
Date: 2.NOV.2012 22:14:12



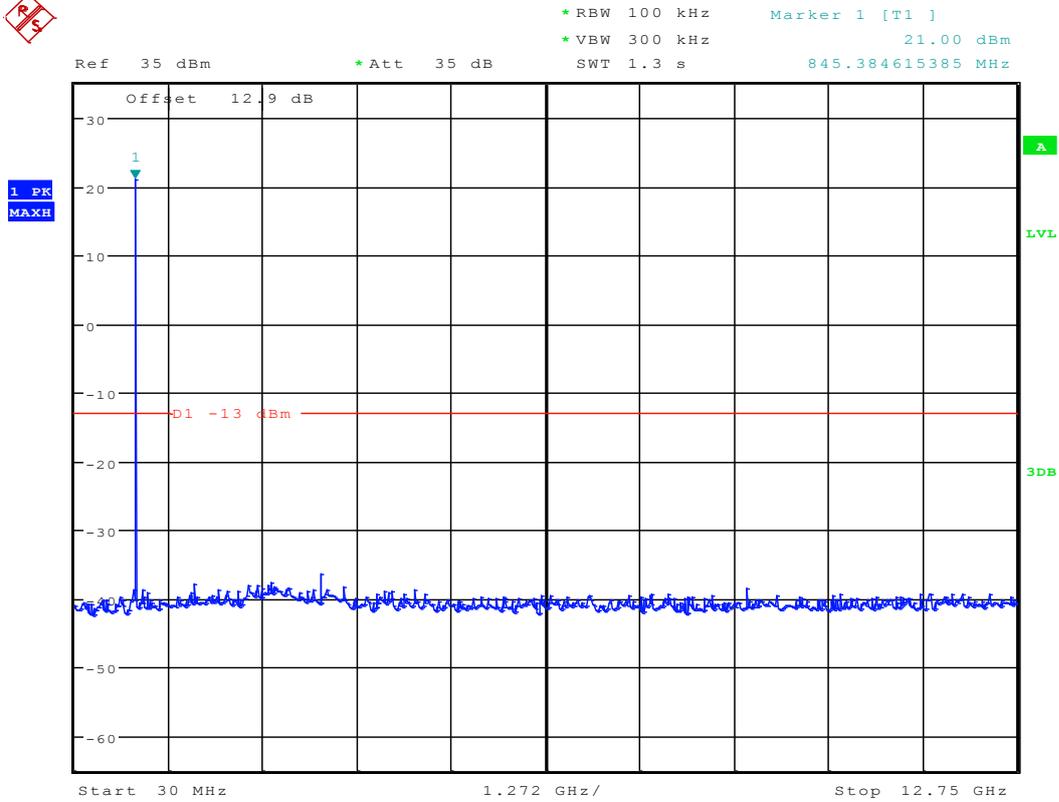
Channel 777



Date: 2.NOV.2012 22:12:59



Date: 2.NOV.2012 22:13:42



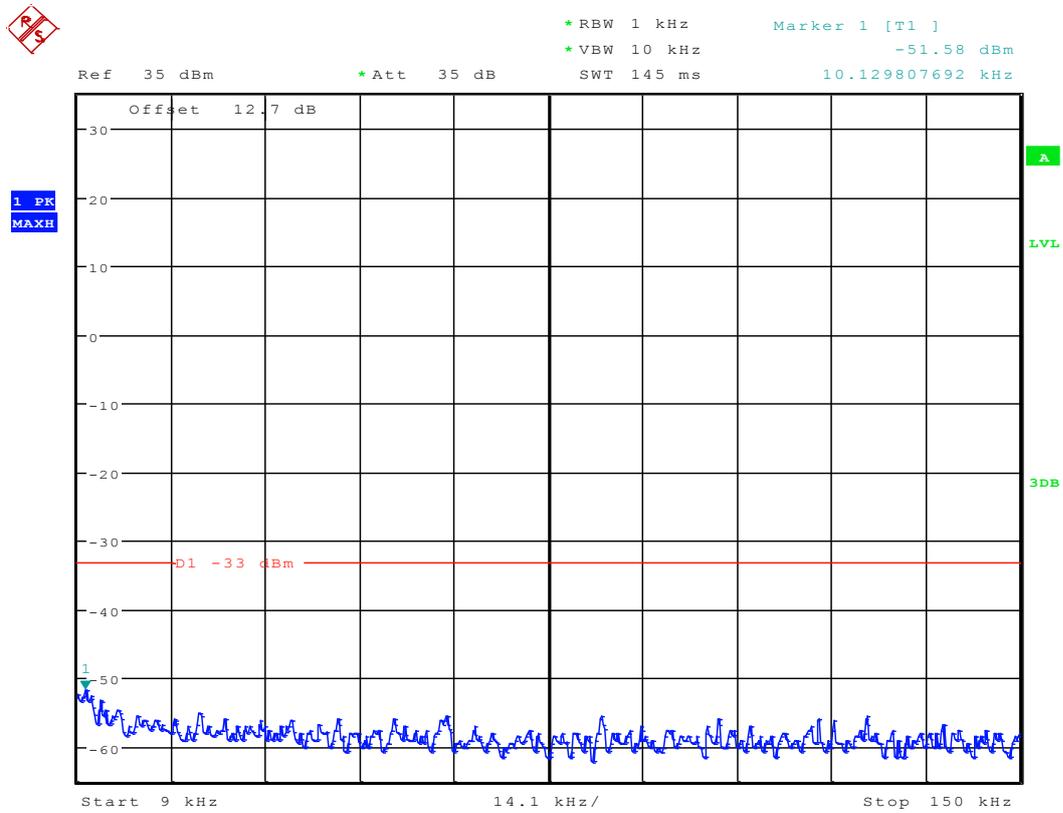
Date: 2.NOV.2012 22:14:26



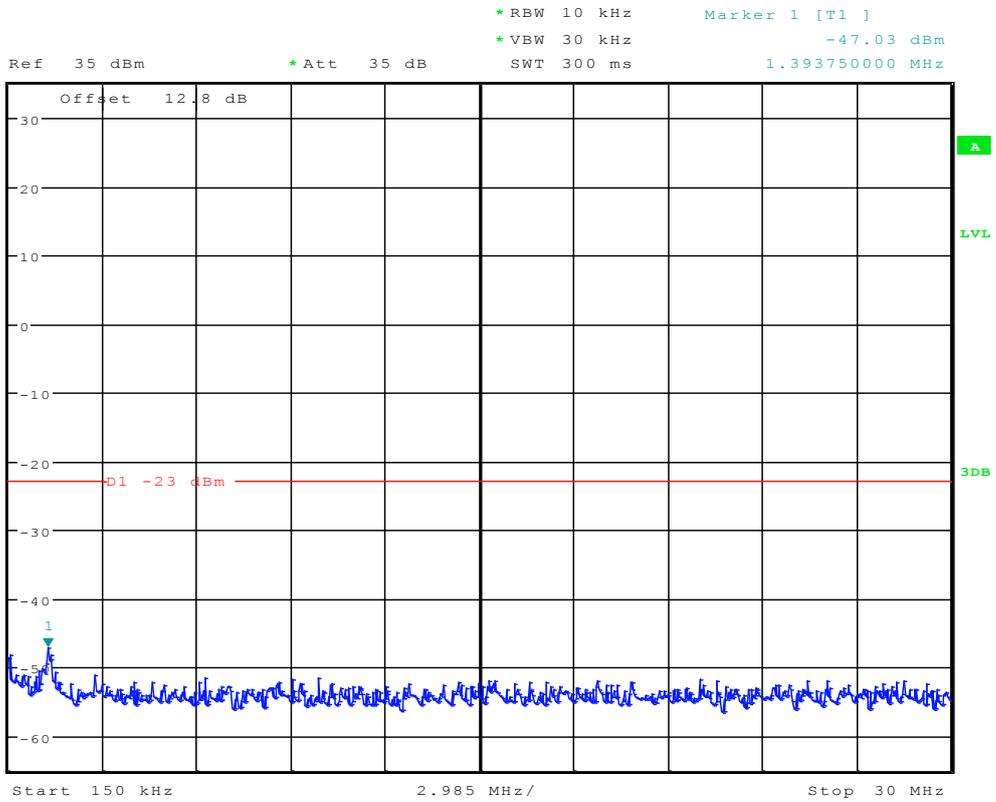
EVDO subtype 2

Modulation: BPSK

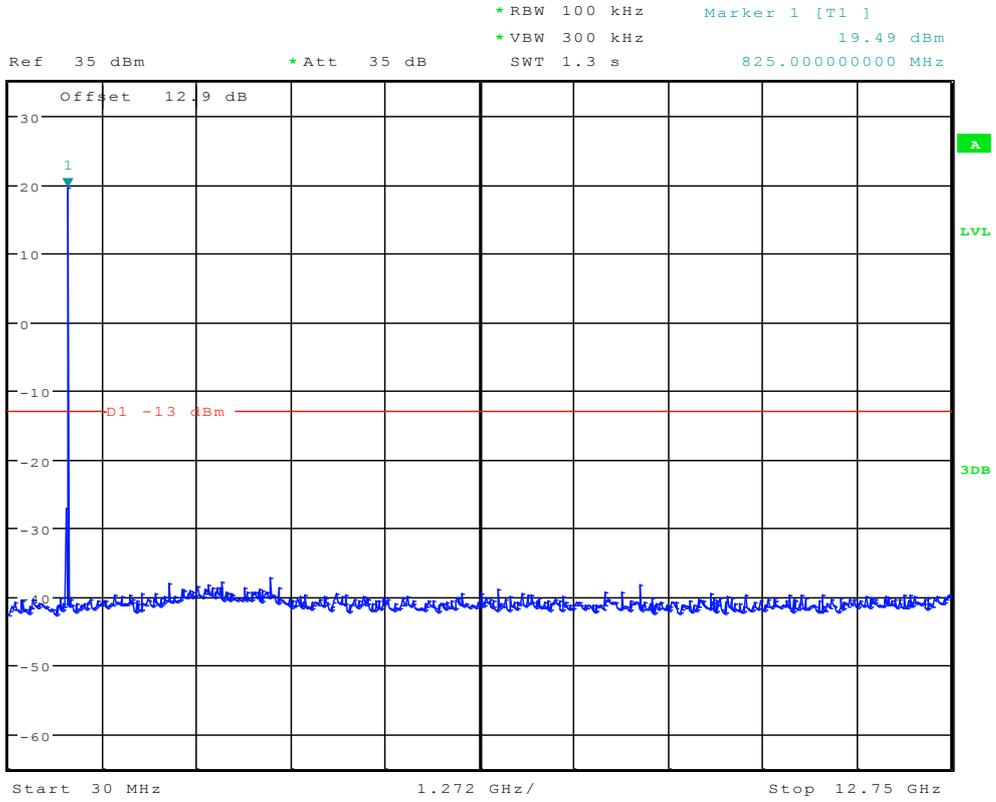
Channel 1013



Date: 2.NOV.2012 22:19:02



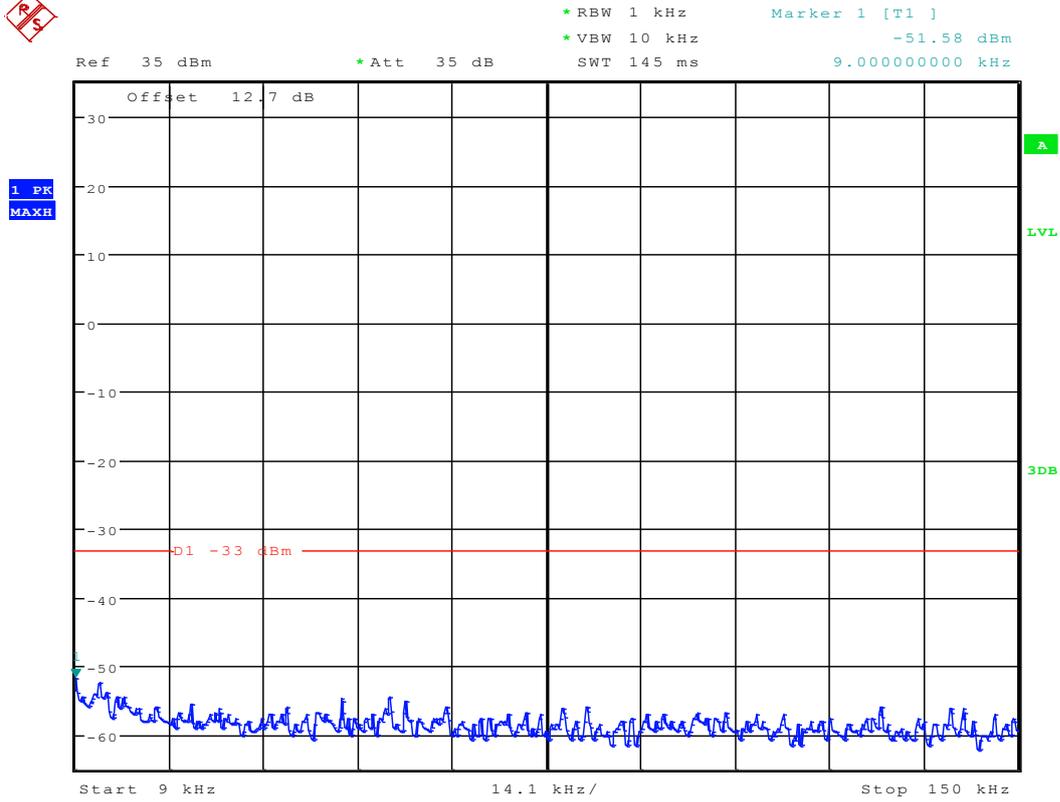
Date: 2.NOV.2012 22:19:28



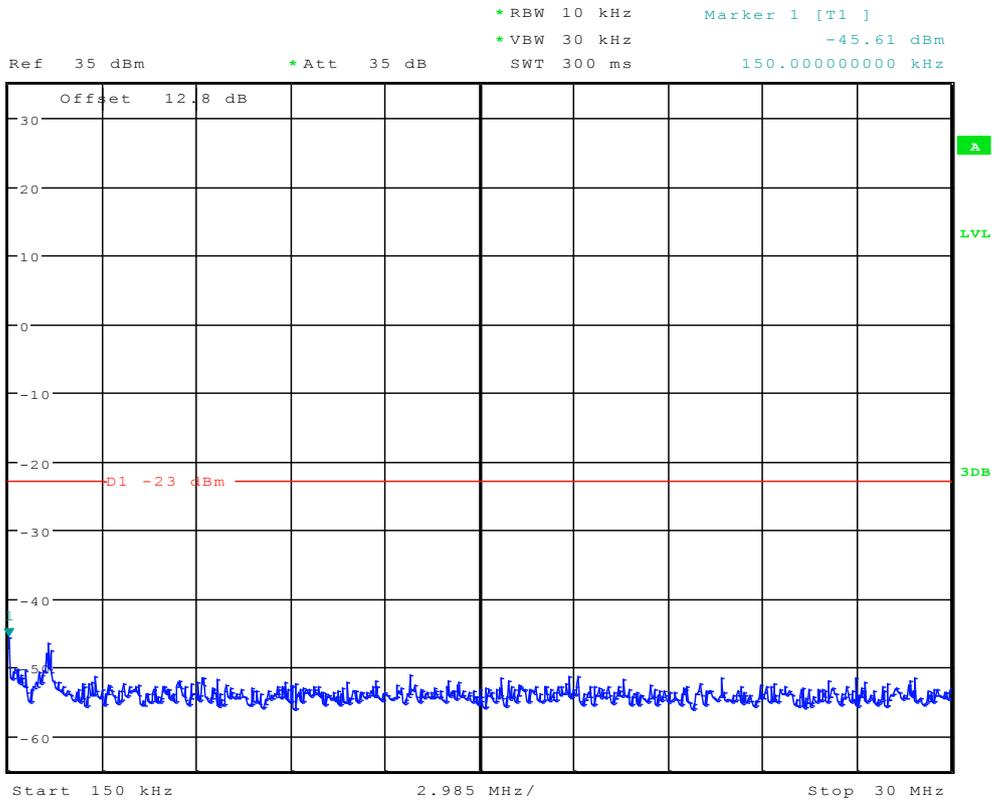
Date: 2.NOV.2012 22:19:53



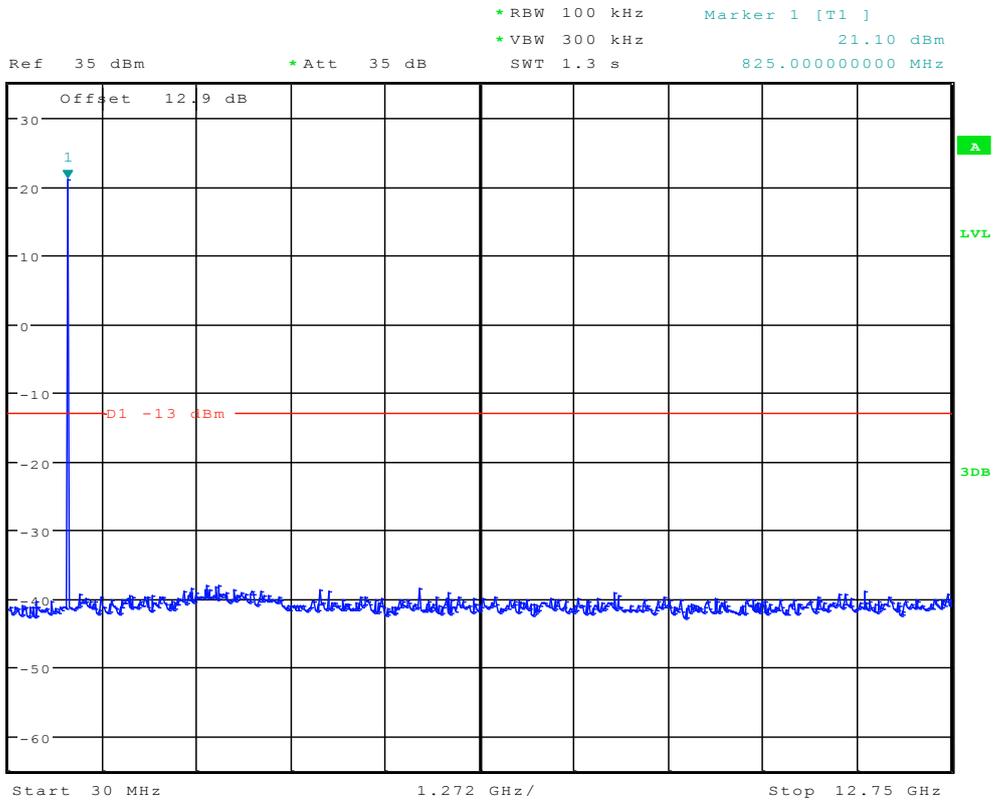
Channel 384



Date: 2.NOV.2012 22:19:10



Date: 2.NOV.2012 22:19:36



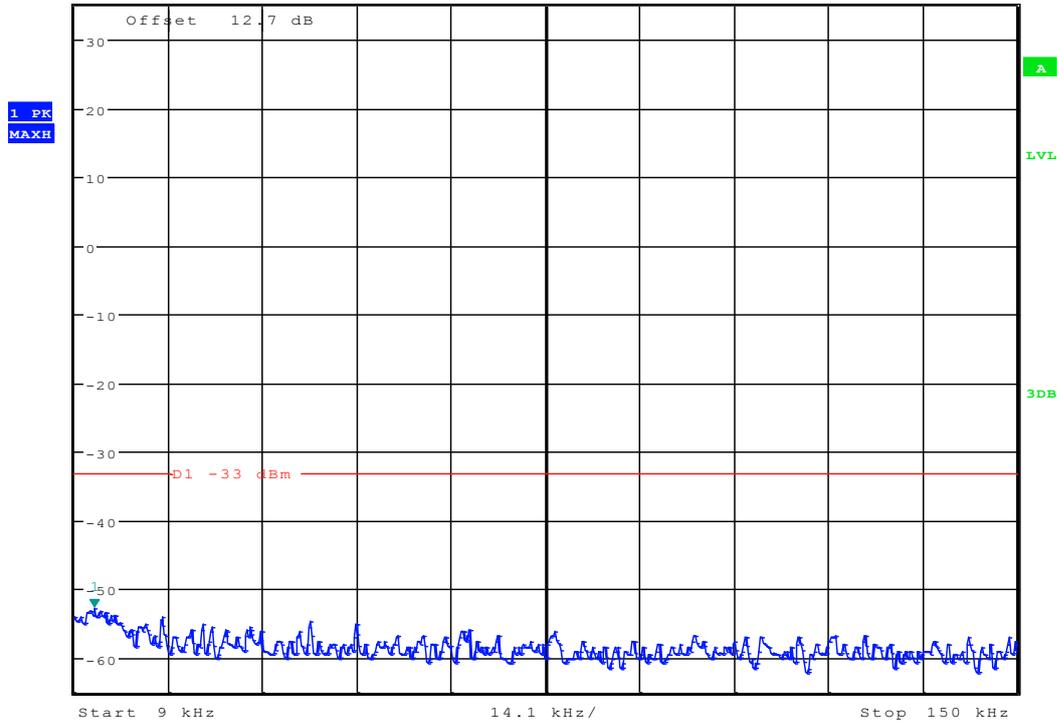
Date: 2.NOV.2012 22:20:02



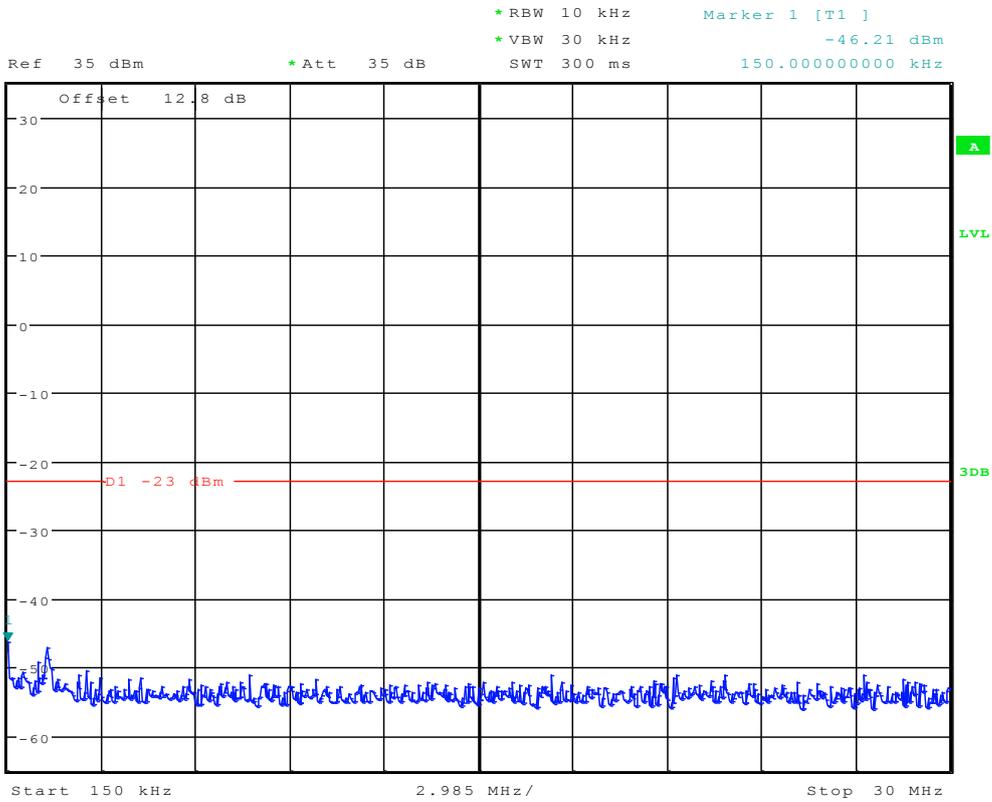
Channel 777



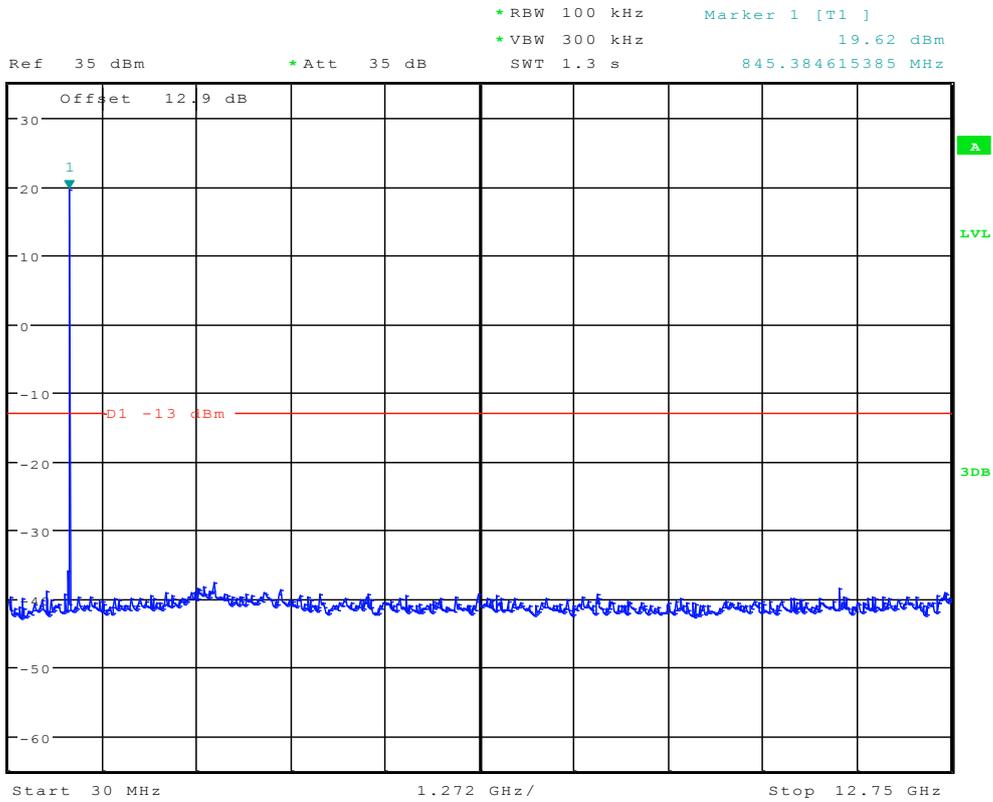
Ref 35 dBm * Att 35 dB * RBW 1 kHz * VBW 10 kHz Marker 1 [T1] -52.81 dBm
SWT 145 ms 11.937500000 kHz



Date: 2.NOV.2012 22:19:19



Date: 2.NOV.2012 22:19:44

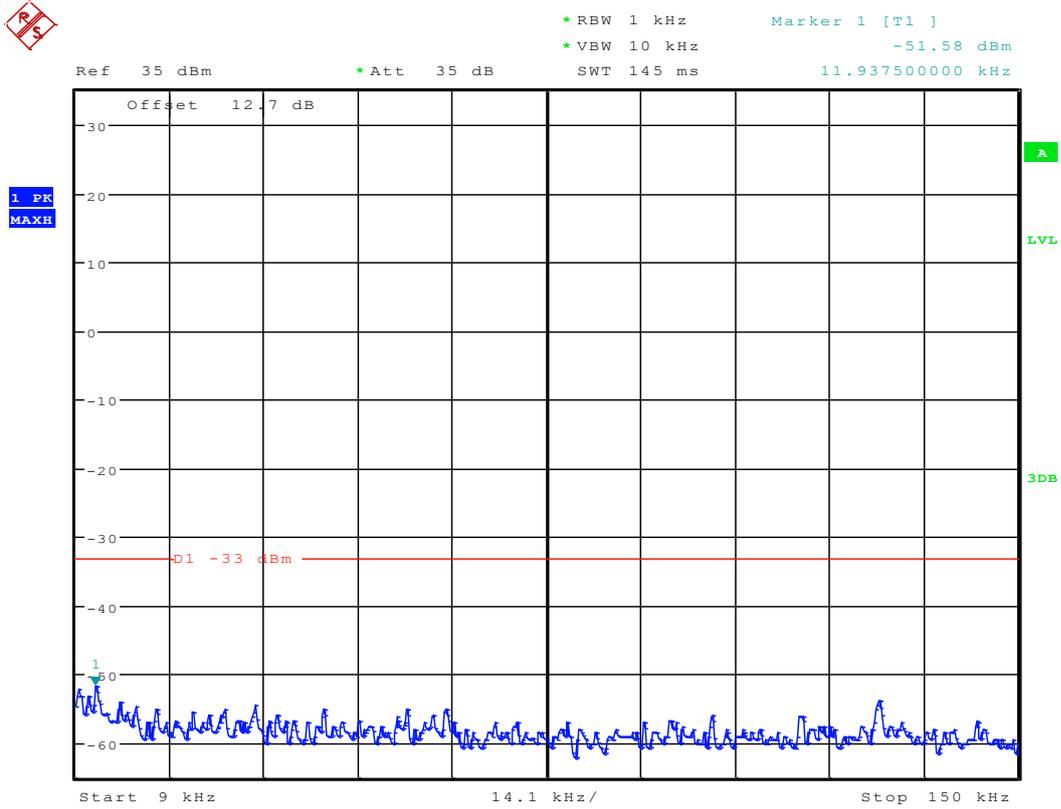


Date: 2.NOV.2012 22:20:10

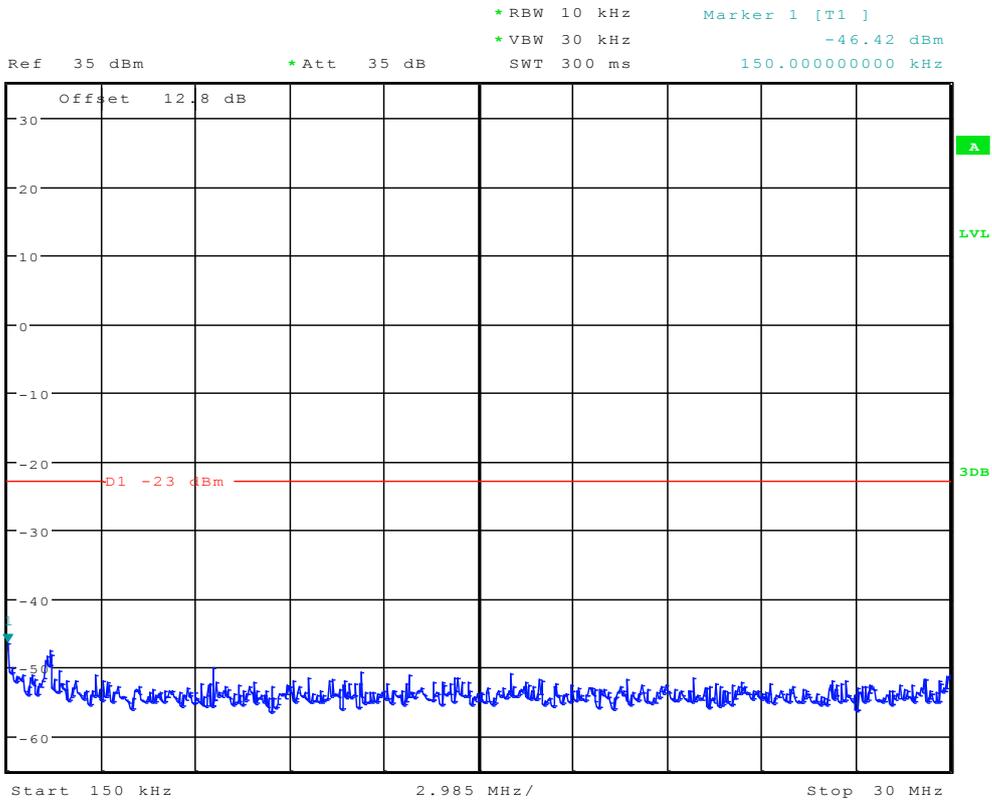


Modulation: QPSK

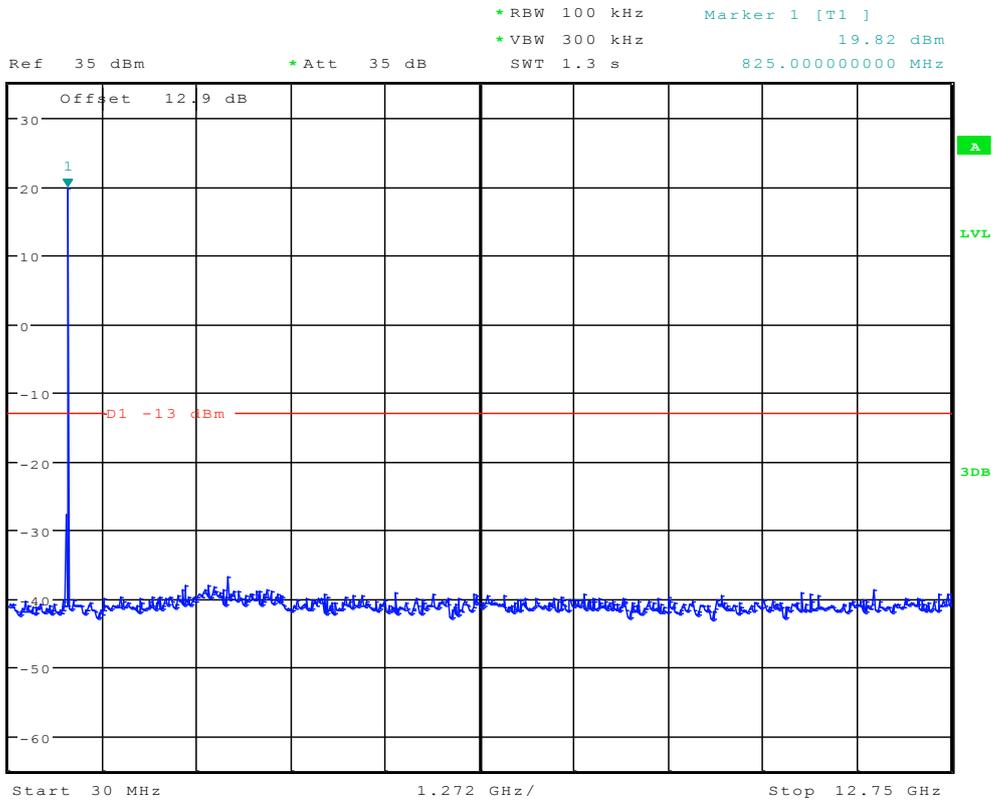
Channel 1013



Date: 2.NOV.2012 22:20:19



Date: 2.NOV.2012 22:20:44



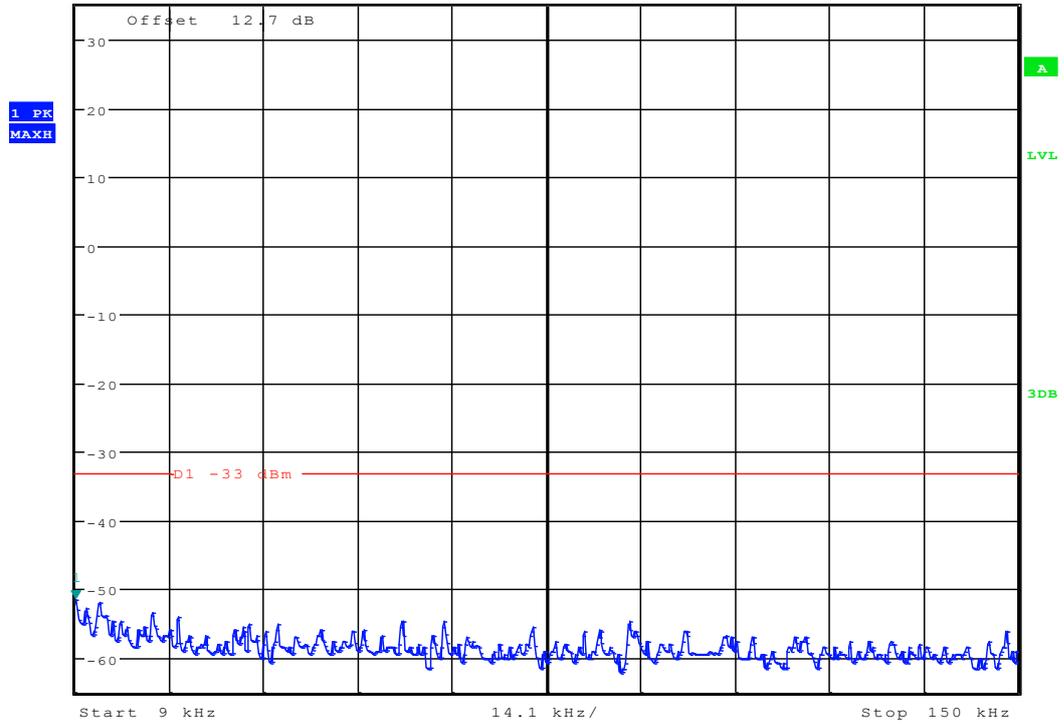
Date: 2.NOV.2012 22:21:10



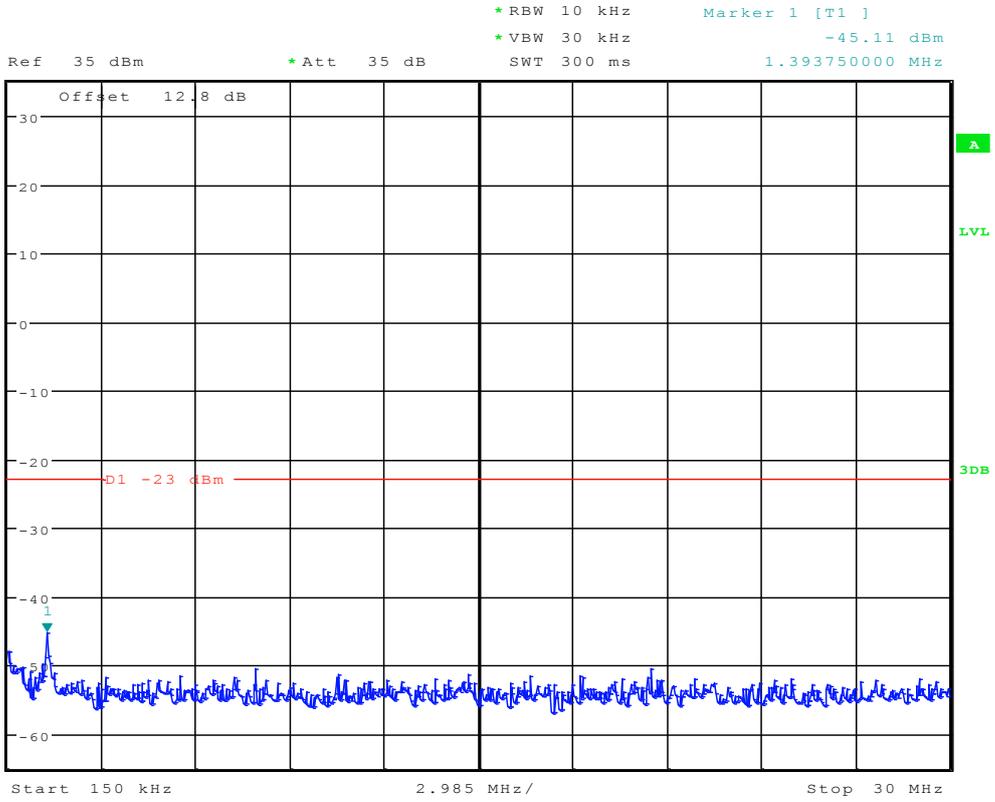
Channel 384



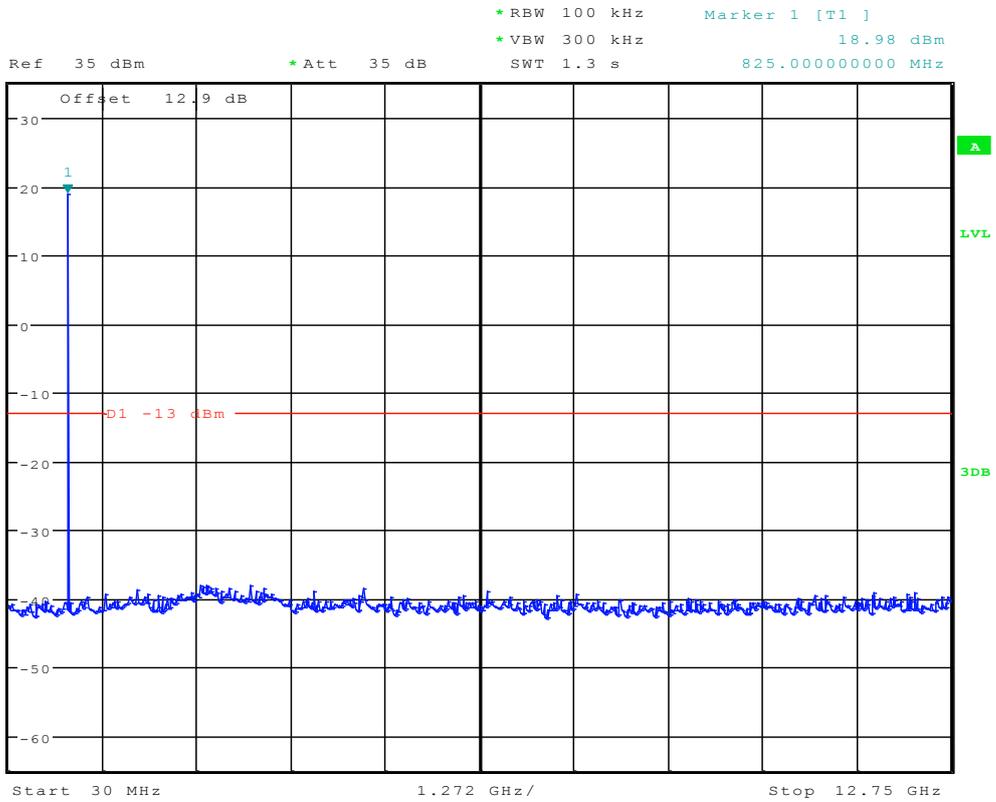
* RBW 1 kHz Marker 1 [T1]
* VBW 10 kHz -51.39 dBm
Ref 35 dBm * Att 35 dB SWT 145 ms 9.000000000 kHz



Date: 2.NOV.2012 22:20:27



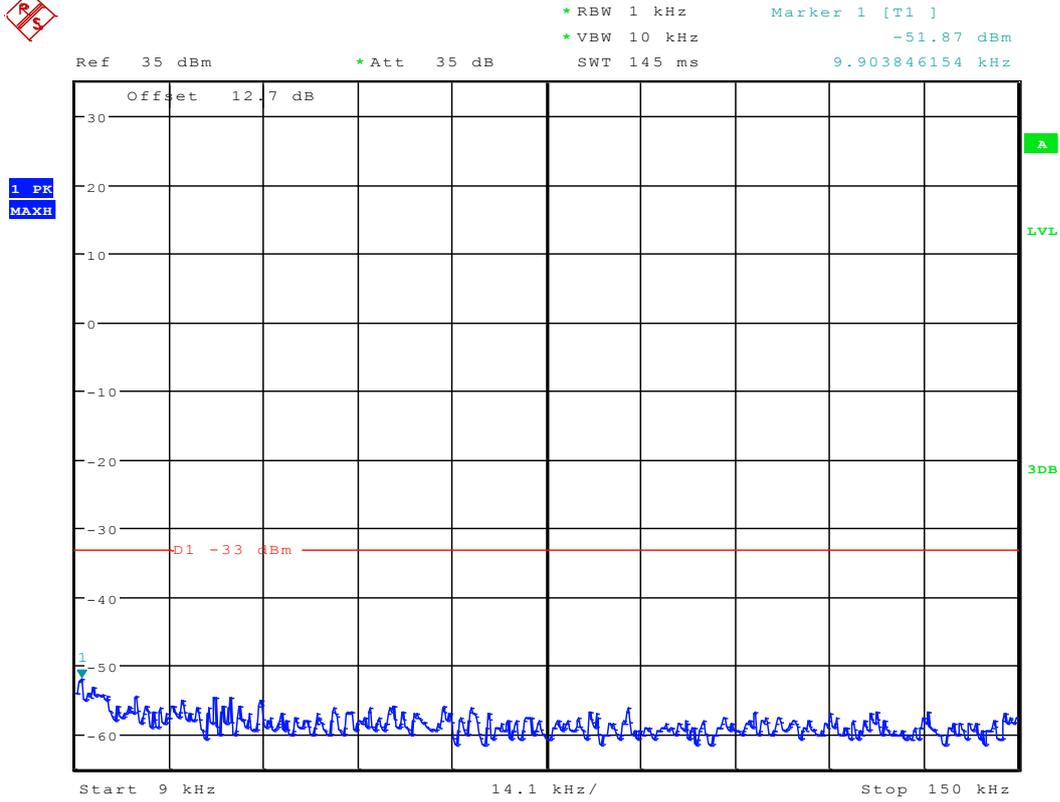
Date: 2.NOV.2012 22:20:53



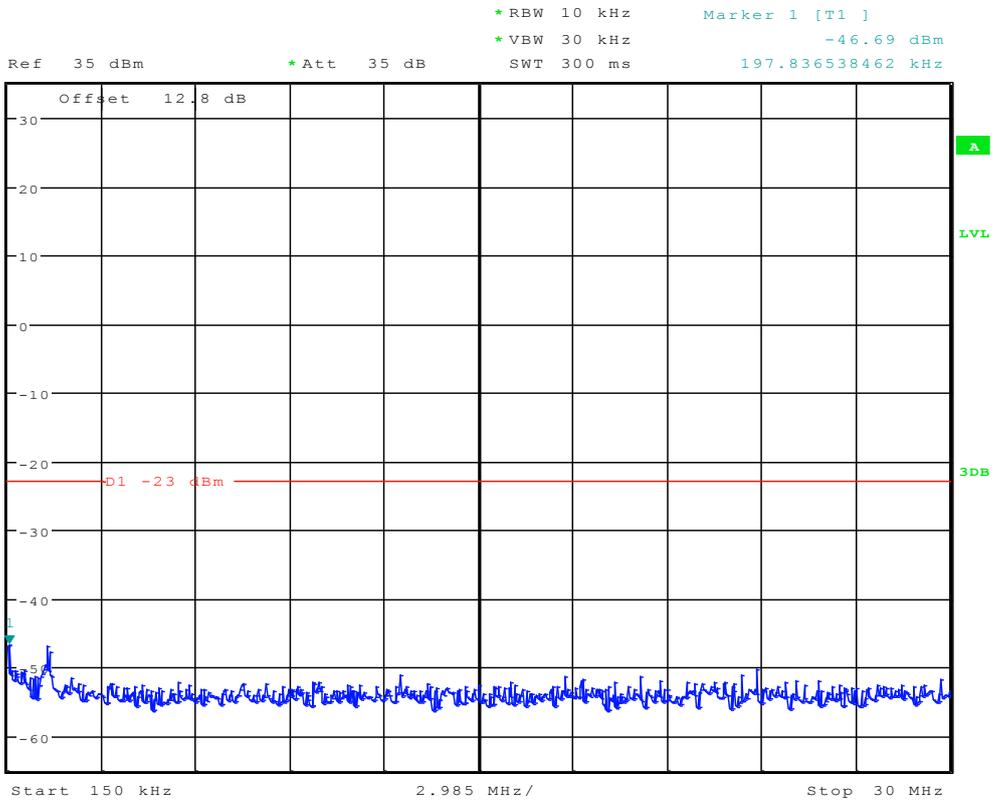
Date: 2.NOV.2012 22:21:18



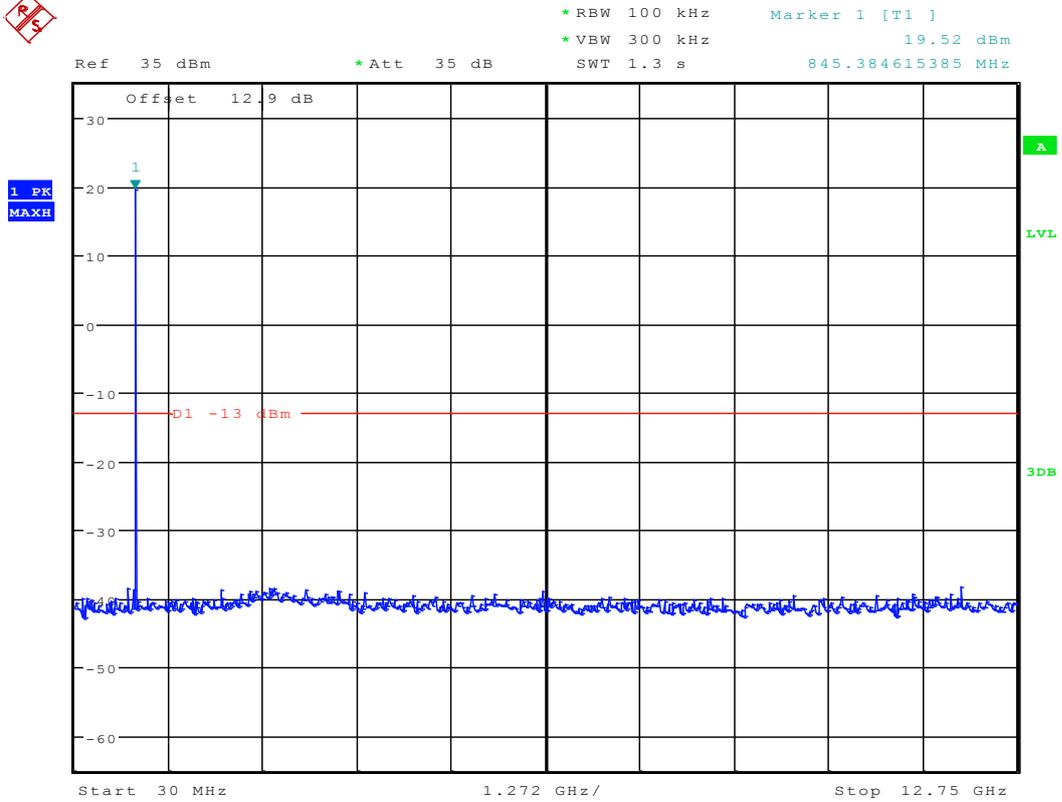
Channel 777



Date: 2.NOV.2012 22:20:35



Date: 2.NOV.2012 22:21:01

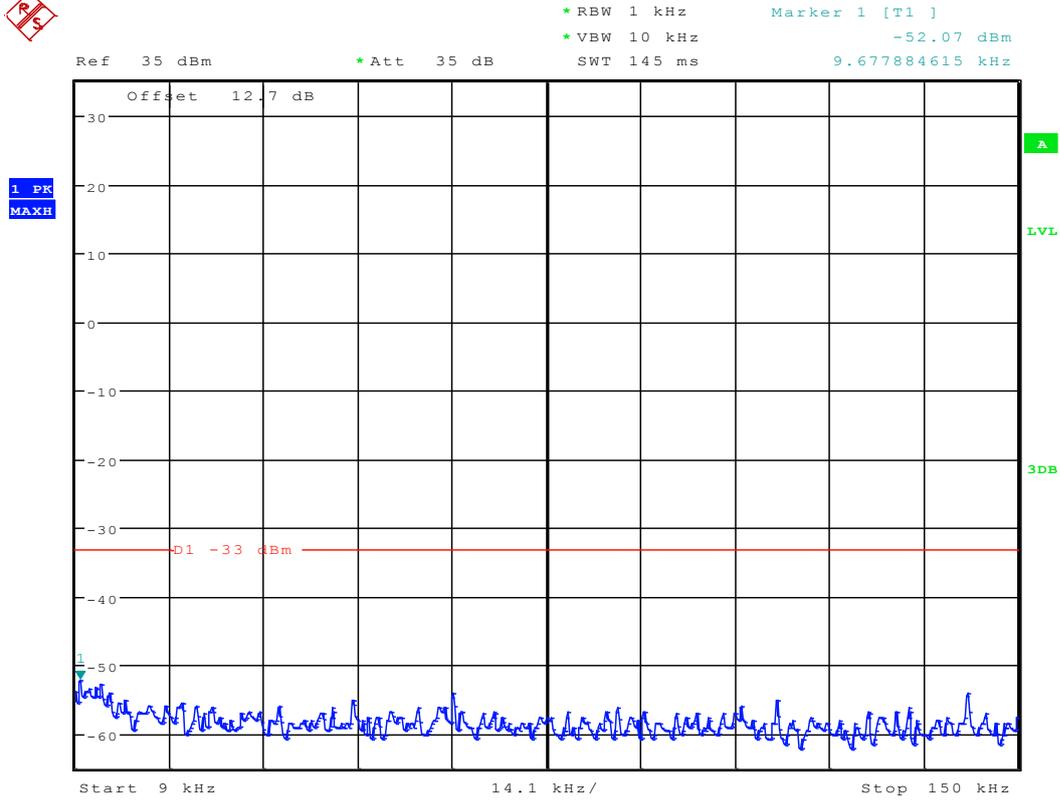


Date: 2.NOV.2012 22:21:27

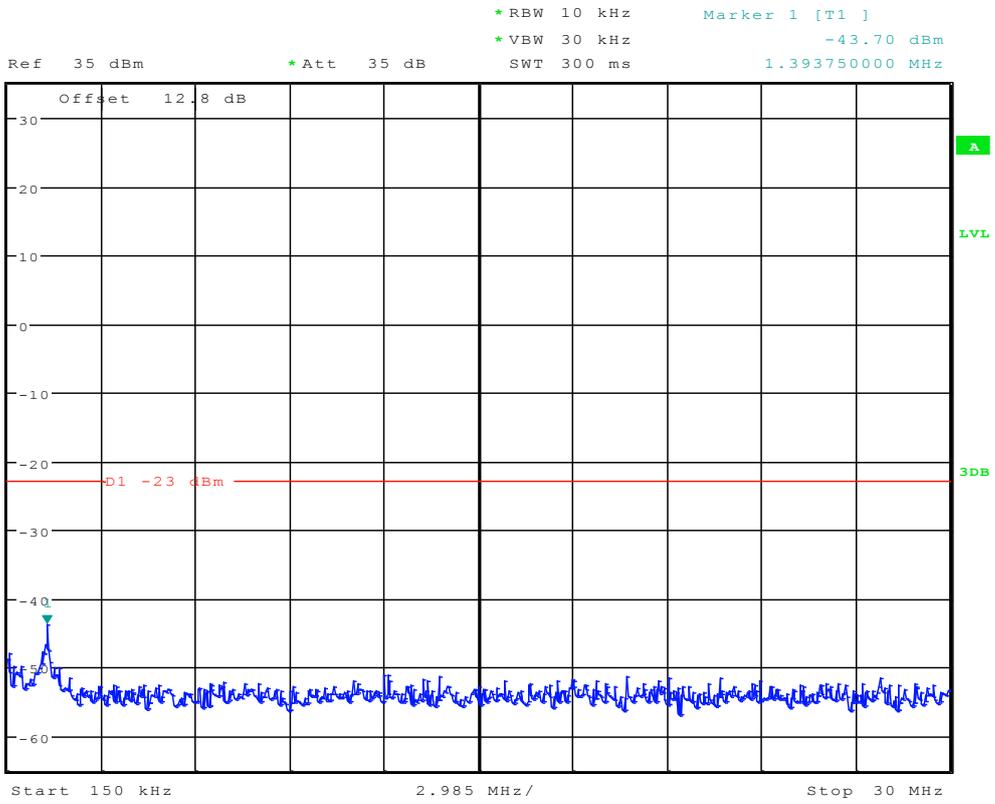


Modulation: 8PSK

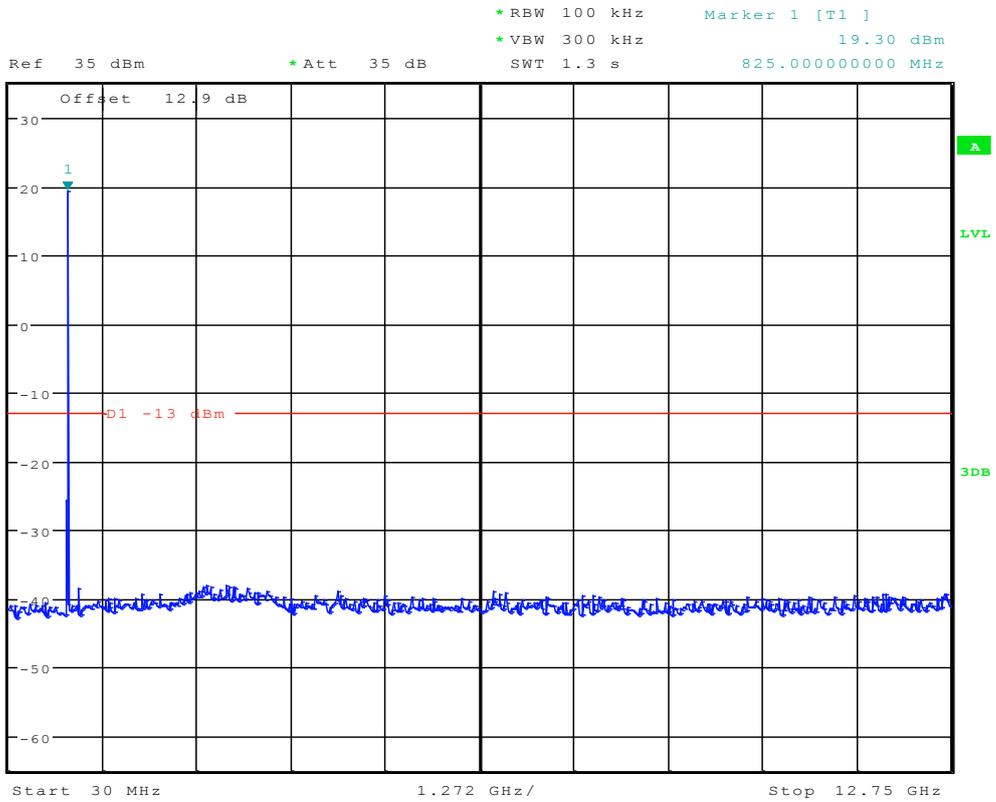
Channel 1013



Date: 2.NOV.2012 22:21:35



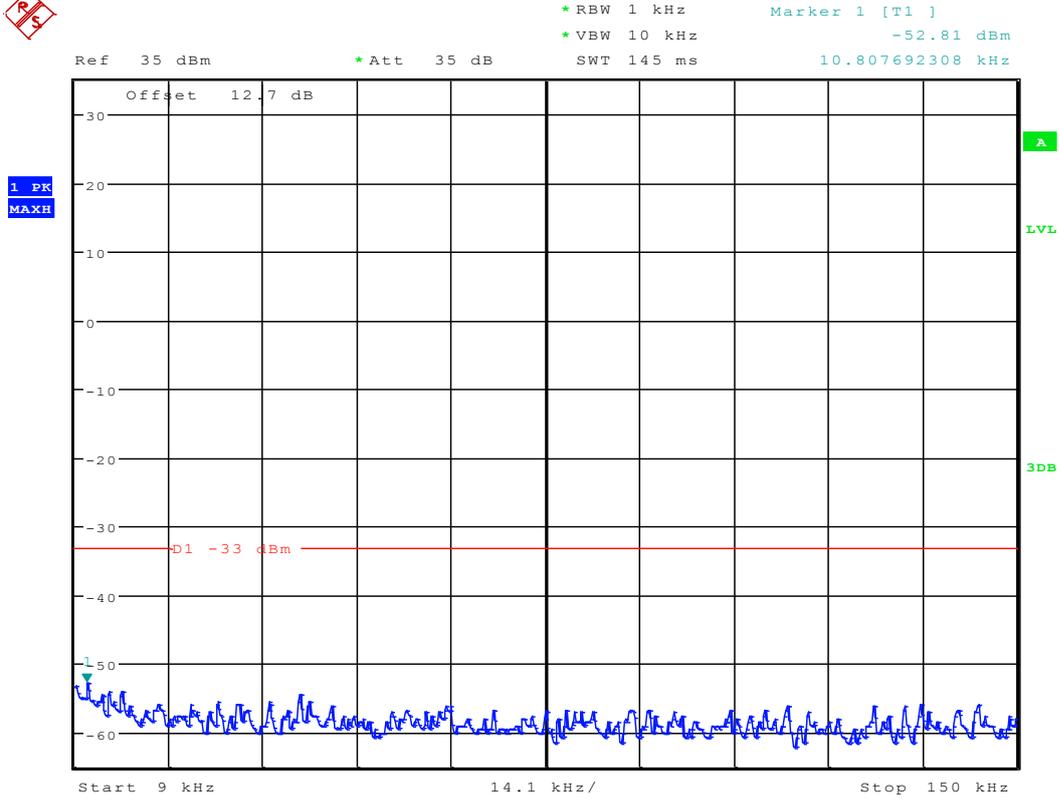
Date: 2.NOV.2012 22:22:01



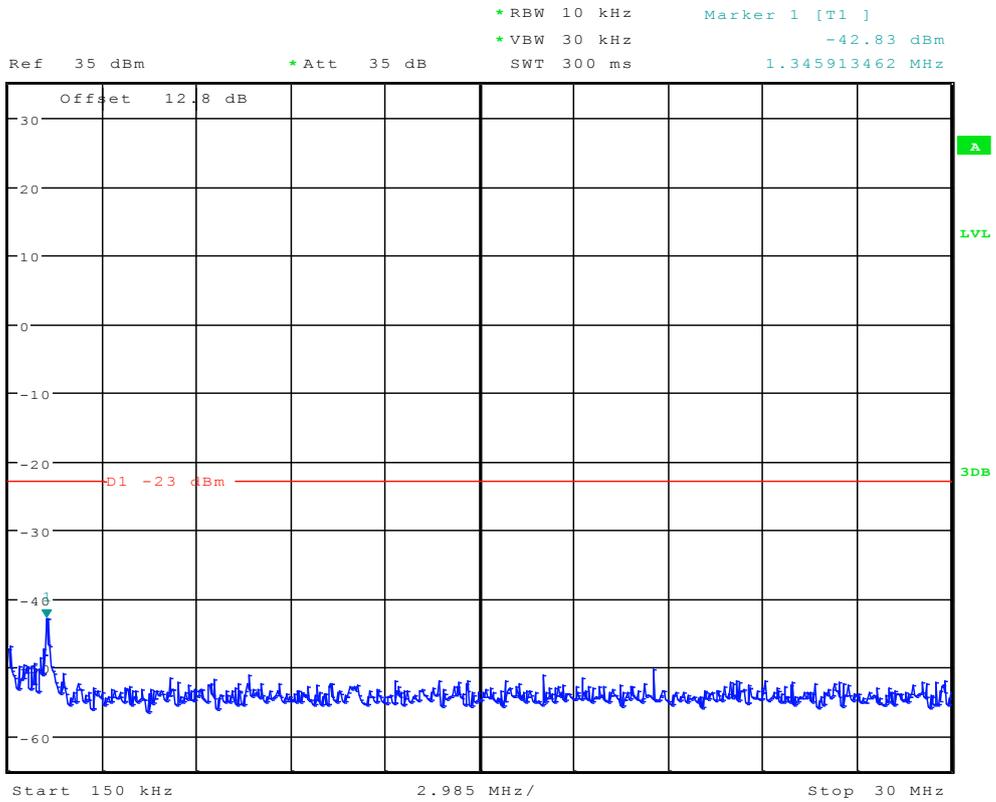
Date: 2.NOV.2012 22:22:27



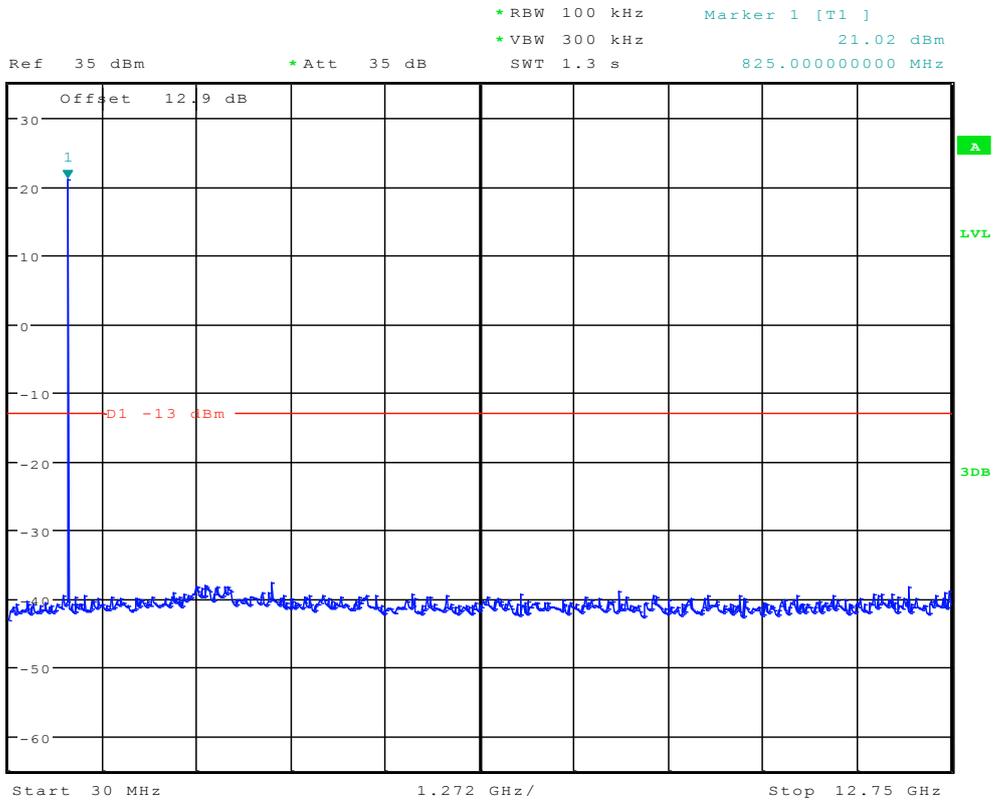
Channel 384



Date: 2.NOV.2012 22:21:44



Date: 2.NOV.2012 22:22:09



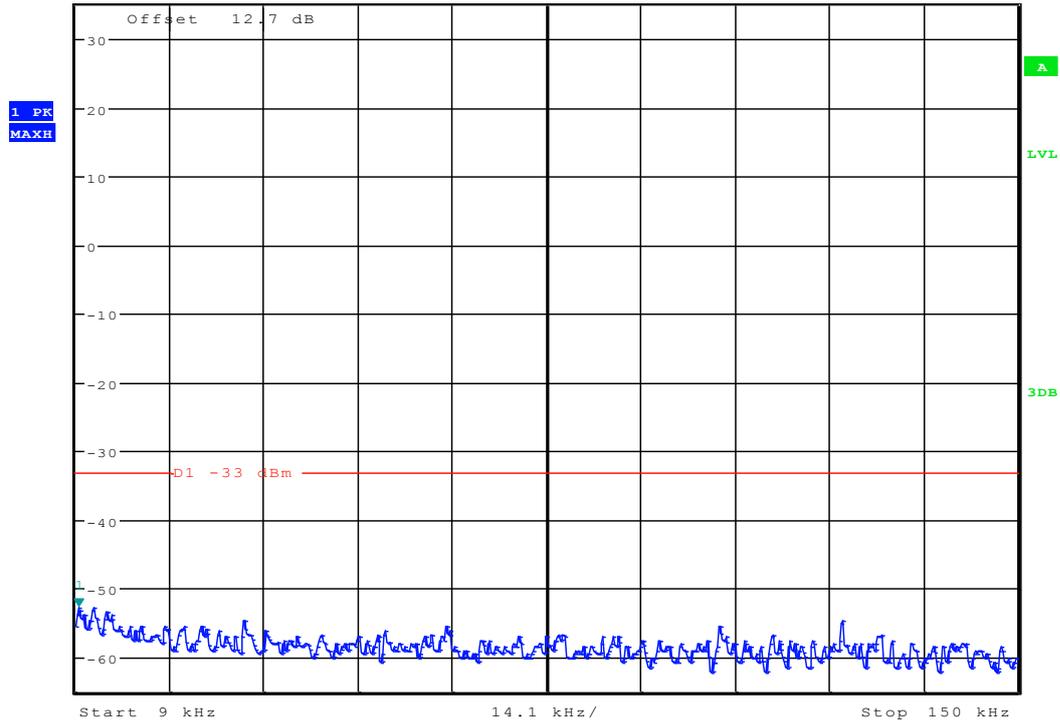
Date: 2.NOV.2012 22:22:35



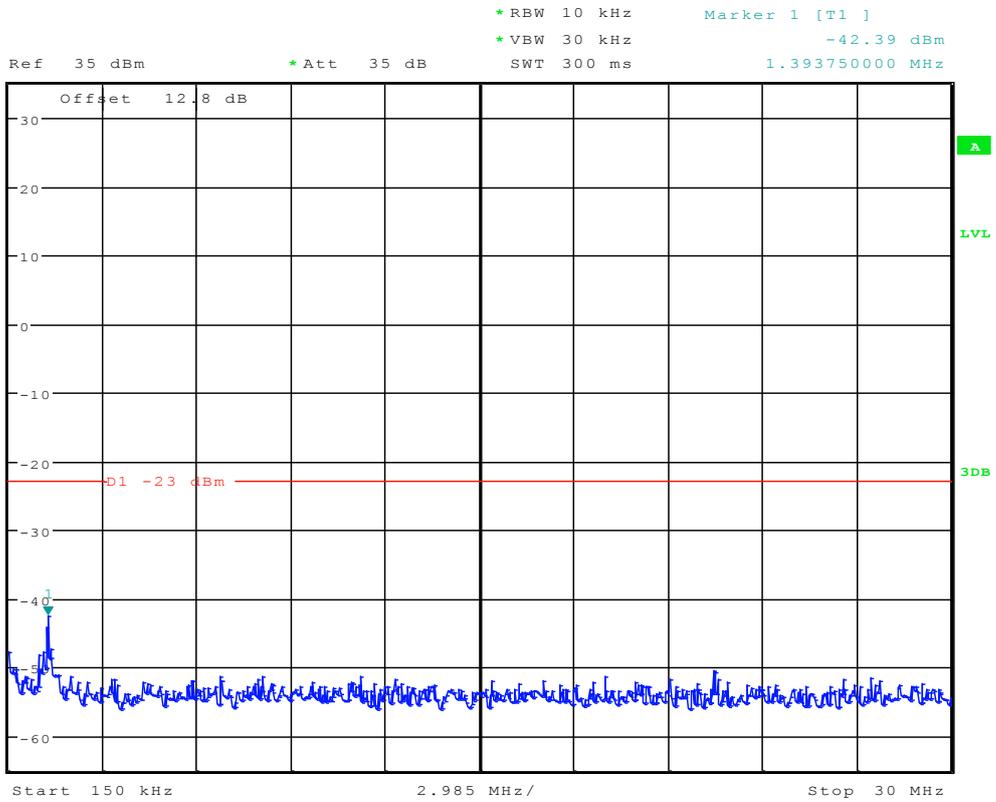
Channel 777



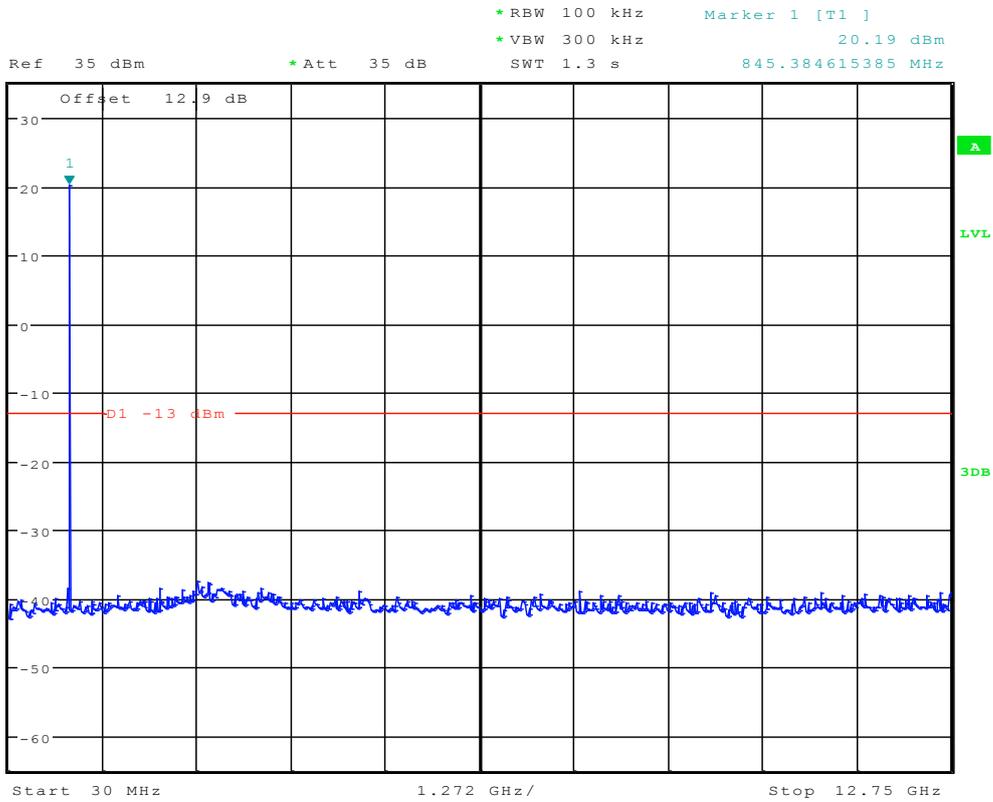
Ref 35 dBm * Att 35 dB * RBW 1 kHz Marker 1 [T1] -52.81 dBm
* VBW 10 kHz SWT 145 ms 9.451923077 kHz



Date: 2.NOV.2012 22:21:52



Date: 2.NOV.2012 22:22:18



Date: 2.NOV.2012 22:22:43

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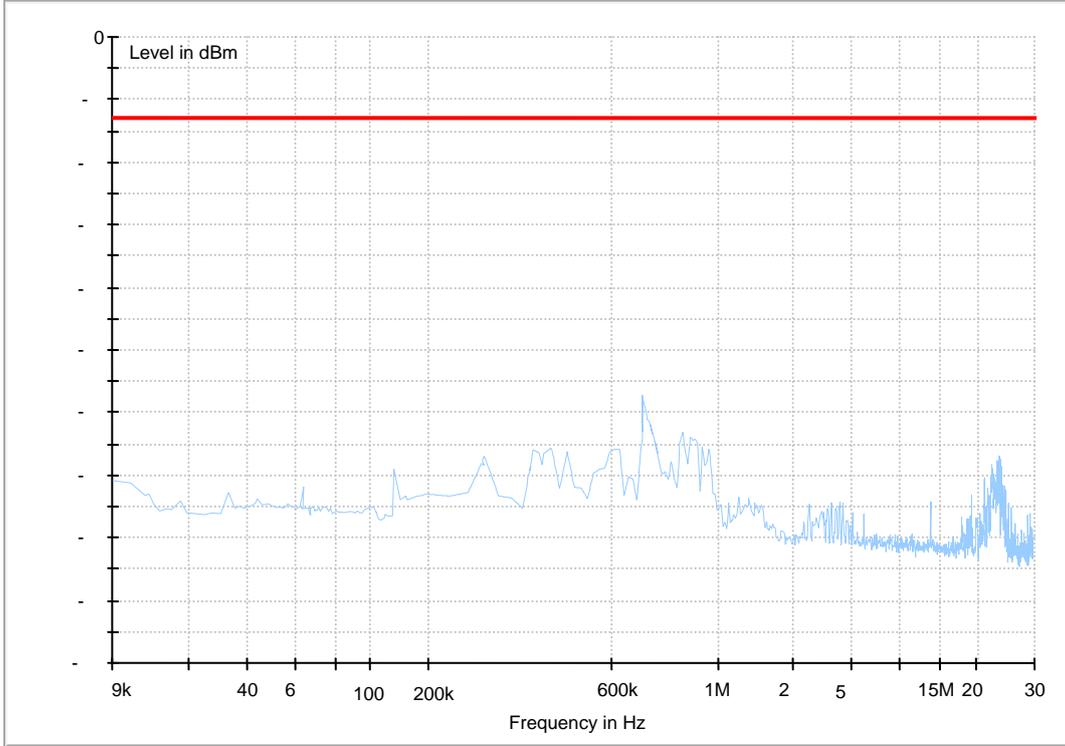


Appendix F

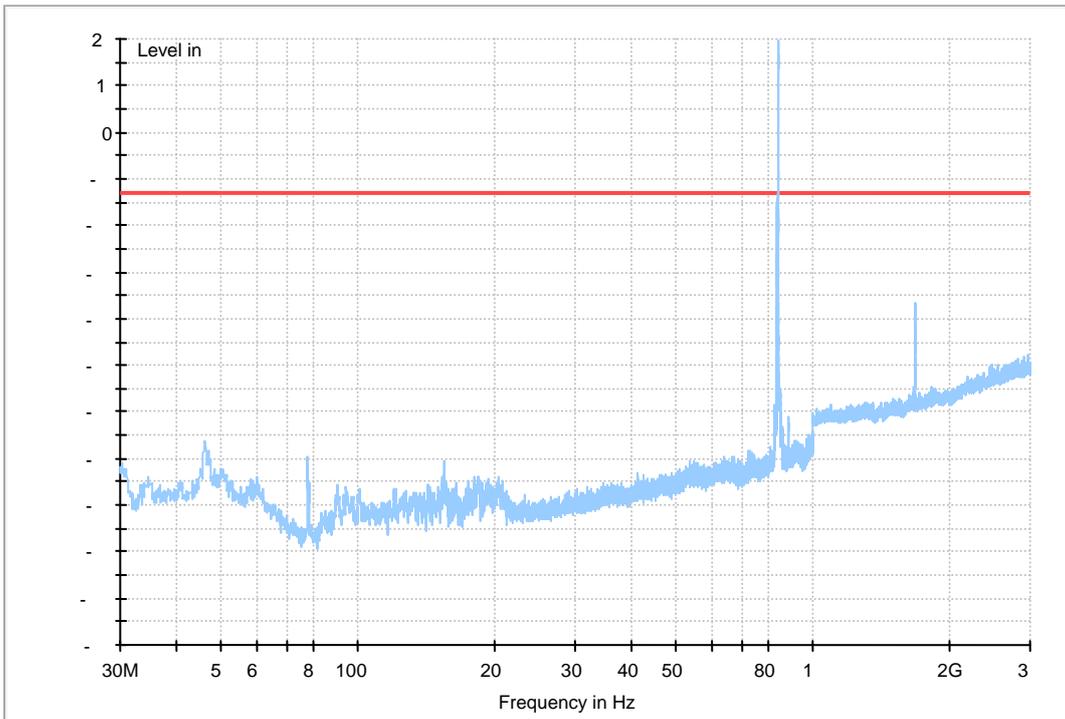
Radiated spurious emission

CDMA 800

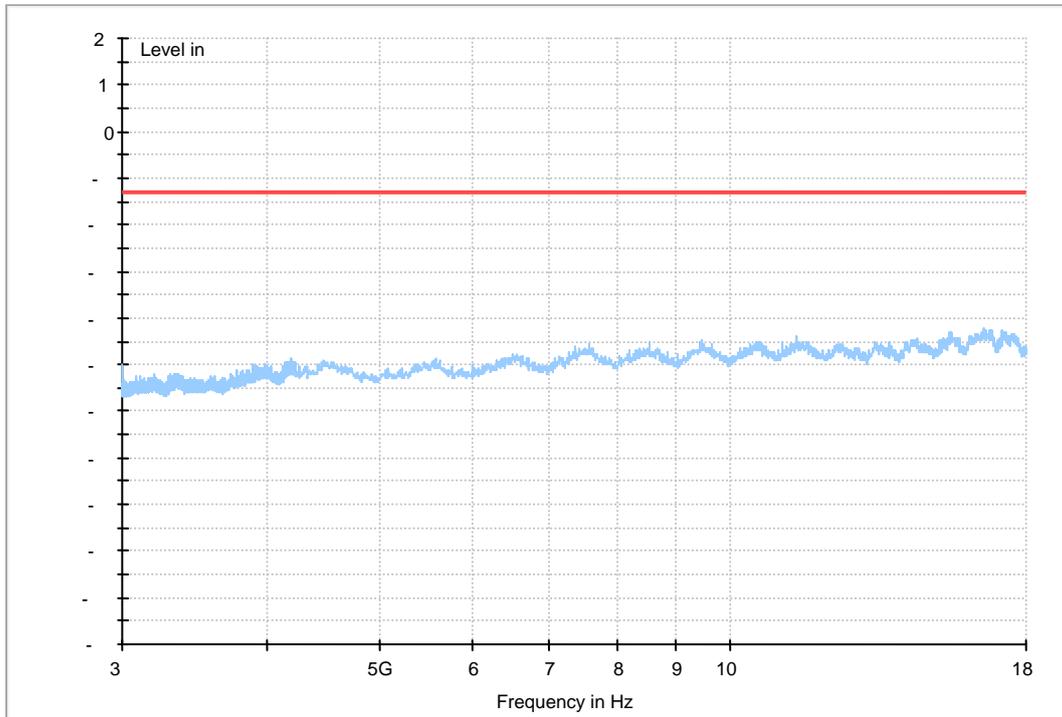
(9 kHz-30MHz)



(30MHz~3GHz)

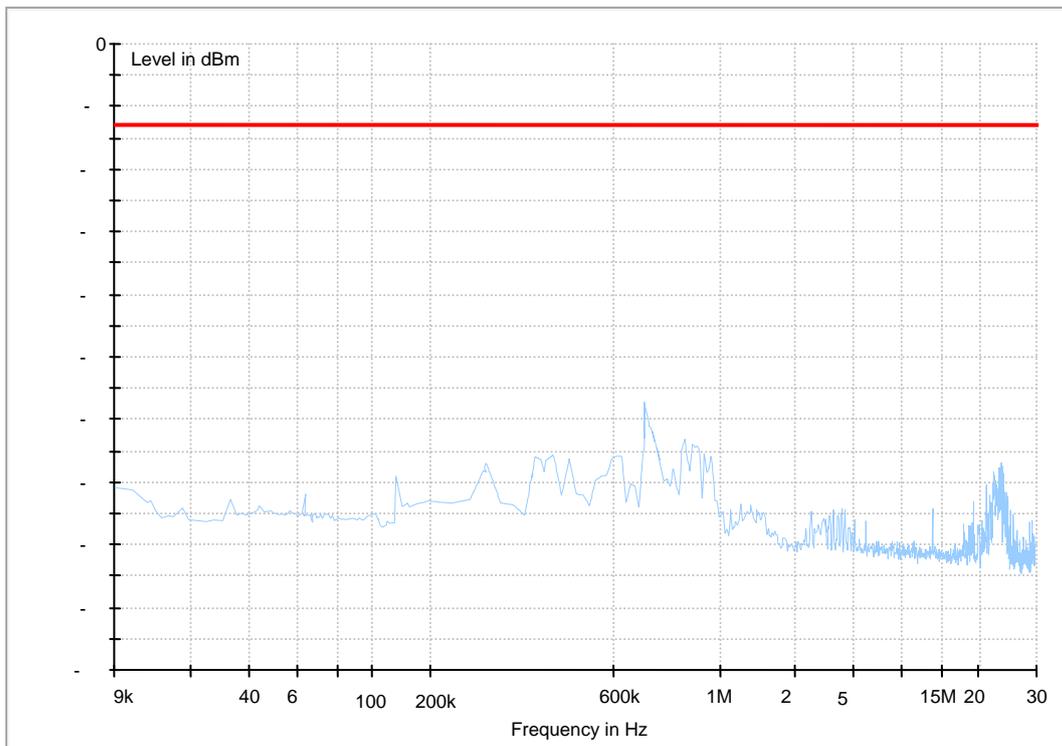


(3GHz~18GHz)

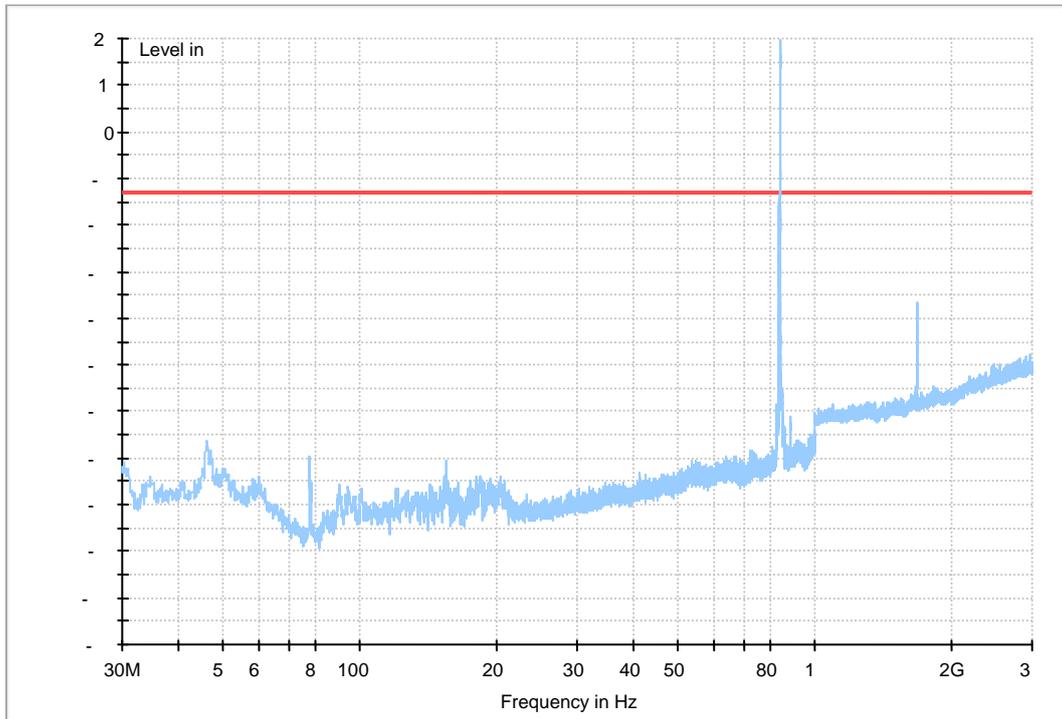


EVDO 800 Rev.0

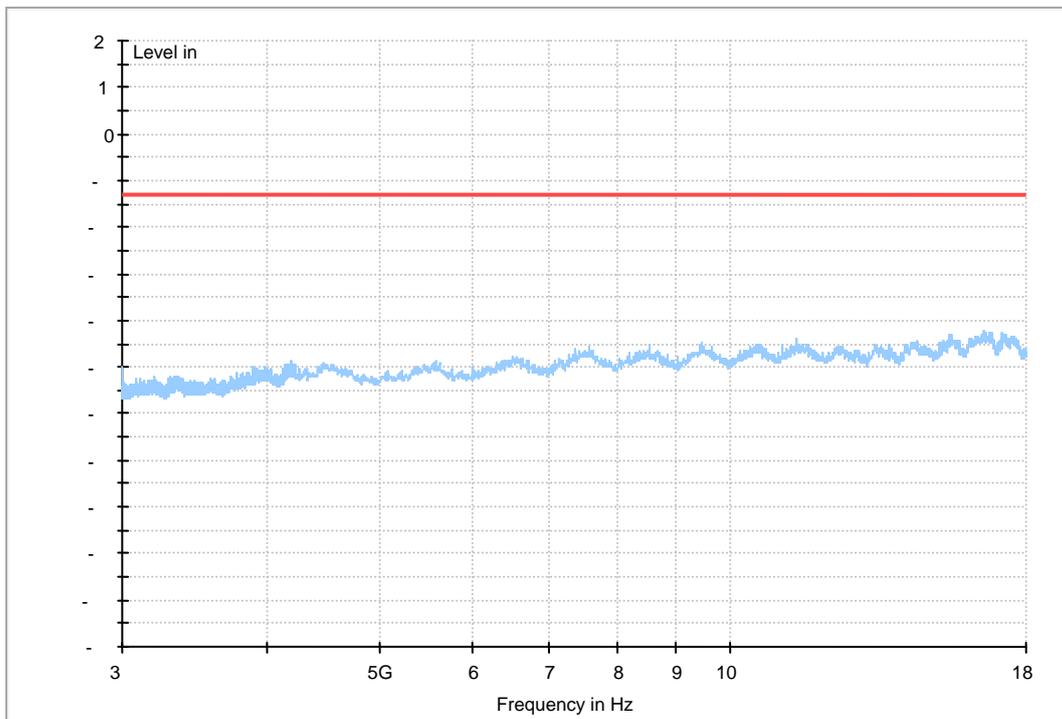
(9kHz-30MHz)



(30MHz~3GHz)

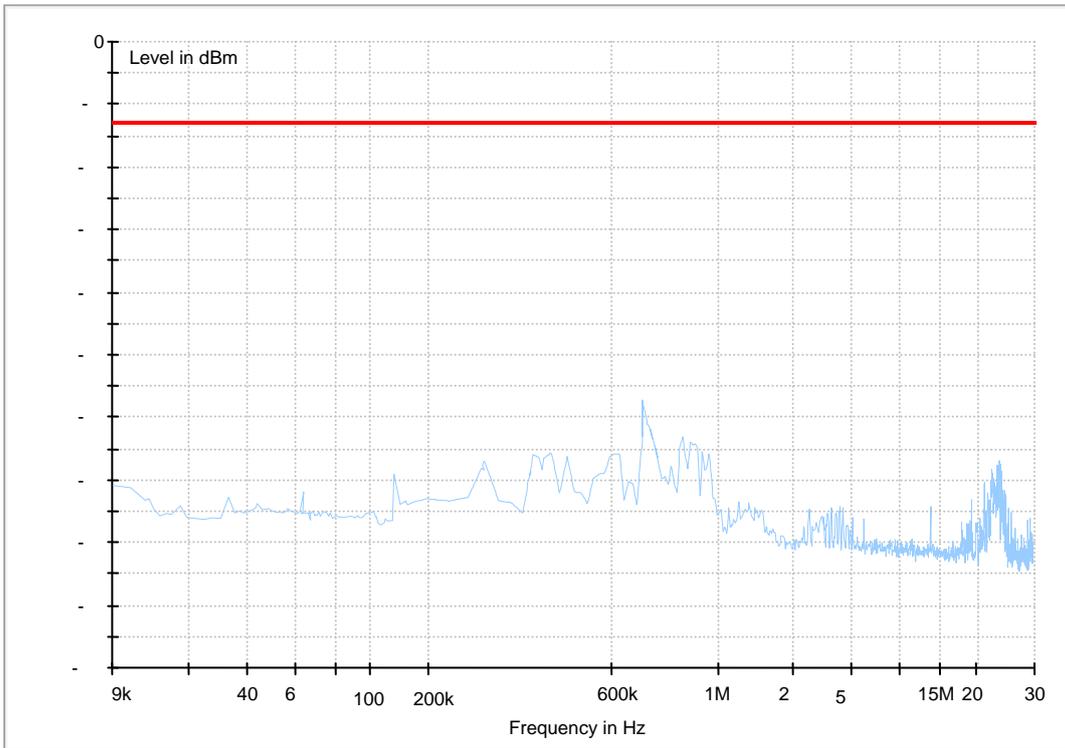


(3GHz~18GHz)

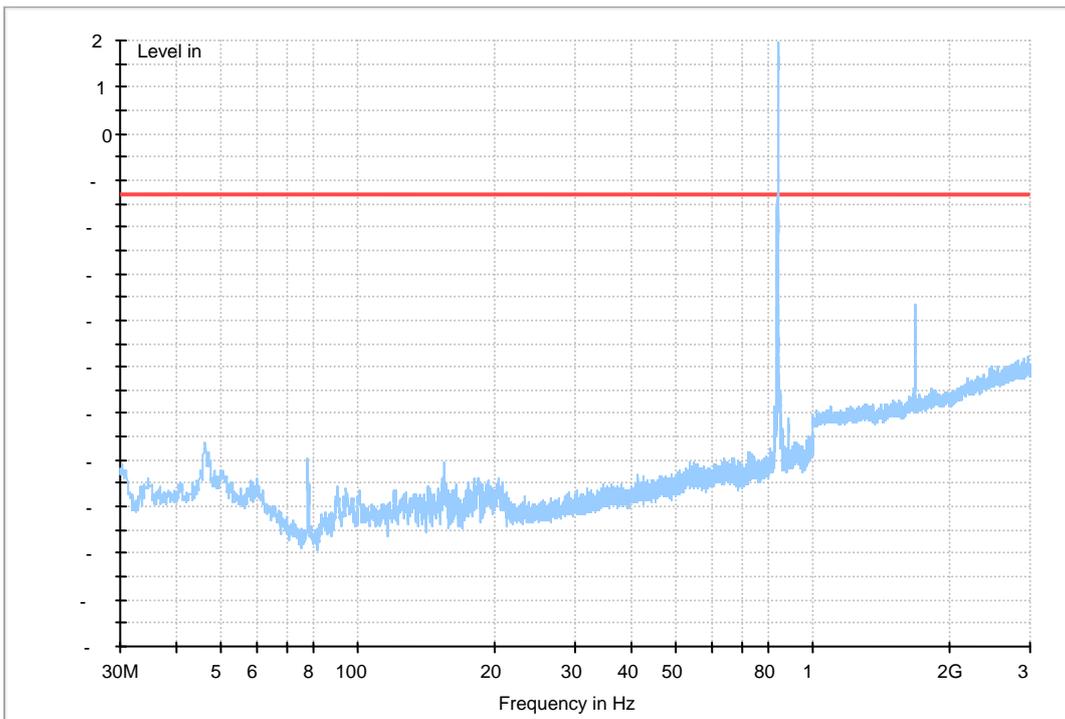


EVDO 800 Rev.A

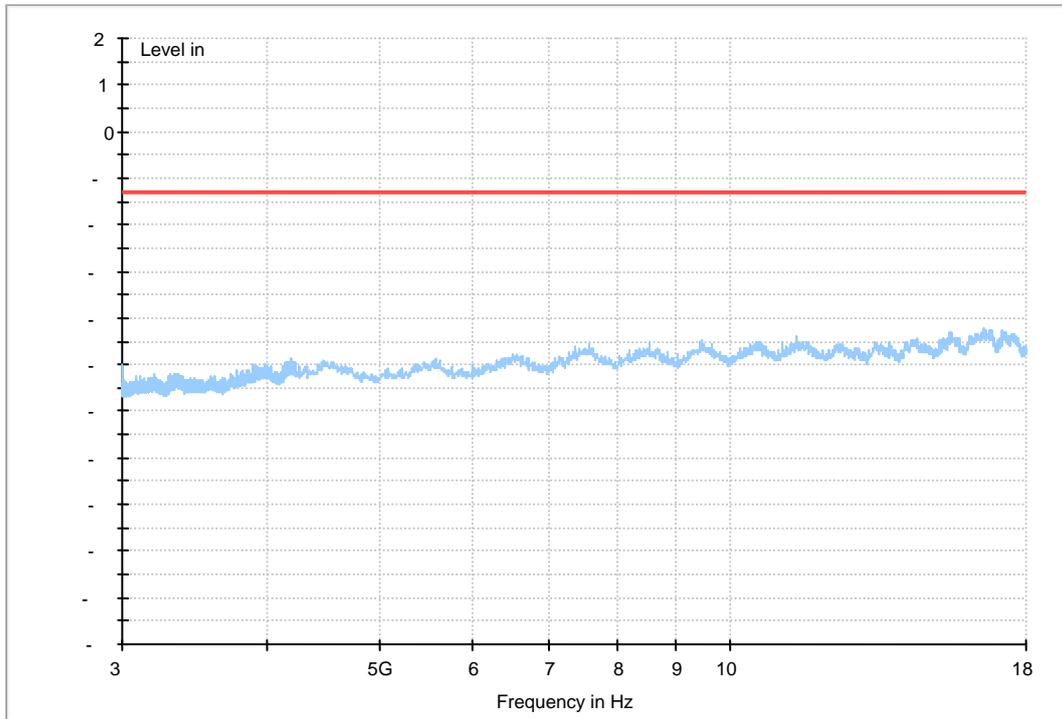
(9kHz-30MHz)



(30MHz~3GHz)



(3GHz~18GHz)





Appendix G

Frequency Stability According to FCC Part 2.1055& Part 22.355



Frequency Error vs. Temperature:

NOTE: All relevant operation modes have been tested, and the worst case data is included in this report.

Table 1 Measurement Results CDMA&EVDO

| 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 | -20 | -0.02391 | --- | ±2.5 | Pass |
| | | | -20 °C | -25 | -0.02989 | --- | ±2.5 | Pass |
| | | | -10 °C | -20 | -0.02391 | --- | ±2.5 | Pass |
| | | | 0 °C | 7 | 0.00837 | --- | ±2.5 | Pass |
| | | | 10 °C | -8 | -0.00956 | --- | ±2.5 | Pass |
| | | | 20 °C | 13 | 0.01554 | --- | ±2.5 | Pass |
| | | | 30 °C | -22 | -0.02630 | --- | ±2.5 | Pass |
| | | | 40 °C | 29 | 0.03467 | --- | ±2.5 | Pass |
| | | | 50 °C | -20 | -0.02391 | --- | ±2.5 | Pass |
| TM 3 | M | VN | -30 °C | 23 | 0.02749 | --- | ±2.5 | Pass |
| | | | -20 °C | -14 | -0.01674 | --- | ±2.5 | Pass |
| | | | -10 °C | 12 | 0.01435 | --- | ±2.5 | Pass |
| | | | 0 °C | -19 | -0.02271 | --- | ±2.5 | Pass |
| | | | 10 °C | -10 | -0.01195 | --- | ±2.5 | Pass |
| | | | 20 °C | 19 | 0.02271 | --- | ±2.5 | Pass |
| | | | 30 °C | 14 | 0.01674 | --- | ±2.5 | Pass |
| | | | 40 °C | 14 | 0.01674 | --- | ±2.5 | Pass |
| | | | 50 °C | 15 | 0.01793 | --- | ±2.5 | Pass |
| Subtype 0 | M | VN | -30 °C | 18 | 0.02152 | --- | ±2.5 | Pass |
| | | | -20 °C | -17 | -0.02032 | --- | ±2.5 | Pass |
| | | | -10 °C | 19 | 0.02271 | --- | ±2.5 | Pass |
| | | | 0 °C | -7 | -0.00837 | --- | ±2.5 | Pass |
| | | | 10 °C | -12 | -0.01435 | --- | ±2.5 | Pass |
| | | | 20 °C | -12 | -0.01435 | --- | ±2.5 | Pass |
| | | | 30 °C | 9 | 0.01076 | --- | ±2.5 | Pass |
| | | | 40 °C | -17 | -0.02032 | --- | ±2.5 | Pass |
| | | | 50 °C | -7 | -0.00837 | --- | ±2.5 | Pass |
| Subtype 2 | M | VN | -30 °C | -25 | -0.02989 | --- | ±2.5 | Pass |
| | | | -20 °C | 10 | 0.01195 | --- | ±2.5 | Pass |
| | | | -10 °C | -15 | -0.01793 | --- | ±2.5 | Pass |
| | | | 0 °C | 15 | 0.01793 | --- | ±2.5 | Pass |
| | | | 10 °C | 14 | 0.01674 | --- | ±2.5 | Pass |



| Test Mode | RF Ch. | Volt. | Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Freq. vs. 20 °C [ppm] | Limit [ppm] | Verdict |
|-----------|--------|-------|-------|------------------|-----------------------|-----------------------|-------------|---------|
| | | | 20 °C | 23 | 0.02749 | --- | ±2.5 | Pass |
| | | | 30 °C | 16 | 0.01913 | --- | ±2.5 | Pass |
| | | | 40 °C | 17 | 0.02032 | --- | ±2.5 | Pass |
| | | | 50 °C | 29 | 0.03467 | --- | ±2.5 | Pass |

Frequency Error vs. Voltage:

Table 2

Measurement Results CDMA&EVDO

| Test Mode | RF Ch. | Temp. | Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Freq. vs. 20 °C [ppm] | Limit [ppm] | Verdict |
|-----------|--------|-------|-------|------------------|-----------------------|-----------------------|-------------|---------|
| TM 1 | M | TN | VL | 36 | 0.04304 | --- | ±2.5 | Pass |
| | | | VN | -32 | -0.03825 | --- | ±2.5 | Pass |
| | | | VH | 21 | 0.02510 | --- | ±2.5 | Pass |
| TM 3 | M | TN | VL | -30 | -0.03586 | --- | ±2.5 | Pass |
| | | | VN | 42 | 0.05021 | --- | ±2.5 | Pass |
| | | | VH | -37 | -0.04423 | --- | ±2.5 | Pass |
| Subtype 0 | M | TN | VL | -42 | -0.05021 | --- | ±2.5 | Pass |
| | | | VN | 26 | 0.03108 | --- | ±2.5 | Pass |
| | | | VH | 19 | 0.02271 | --- | ±2.5 | Pass |
| Subtype 2 | M | TN | VL | -38 | -0.04543 | --- | ±2.5 | Pass |
| | | | VN | 18 | 0.02152 | --- | ±2.5 | Pass |
| | | | VH | -39 | -0.04662 | --- | ±2.5 | Pass |

-----END-----