



# **FCC 47 CFR PART 22 SUBPART H**

## **TEST REPORT**

*For*

**Applicant : PARKTEL FZE**

**Address : WARE HOUSE NO: FF01,ROUND ABOUT NO: 05,  
JEBEL ALI FREEZONE DUBAI U.A.E**

**Product Name : WCDMA Mobile Phone**

**Model Name : U-720-2**

**Brand Name : unnecto <sup>TM</sup>**

**FCC ID : OLEU720**

**Report No. : STS140333F2**

**Date of Issue : April 04,2014**

**Issued by : Shenzhen Super Test Service Technology Co., Ltd.**

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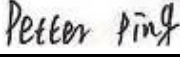
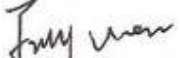
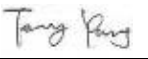
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**1. VERIFICATION OF CONFORMITY**

**Equipment Under Test:** WCDMA Mobile Phone  
**Brand Name:** unnecto <sup>TM</sup>  
**Model Number:** U-720-2  
**Series Model Name:** N/A  
**Series Model Difference description:** N/A  
**FCC ID:** OLEU720  
**Applicant:** PARKTEL FZE  
WARE HOUSE NO: FF01,ROUND ABOUT NO: 05,  
JEBEL ALI FREEZONE DUBAI U.A.E  
**Manufacturer:** Shenzhen Xiangyue Perfect Digital Science&Technology Co.,Ltd  
Building A1,Jiujiutongxin Industrial Zone11, Xinbu, Tongle, Longgang,  
shenzhen  
**Technical Standards:** 47 CFR Part 2  
47 CFR Part 22 Subpart H  
**File Number:** STS140333F2  
**Date of test:** March 24,2014- April 04,2014  
**Deviation:** None  
**Condition of Test Sample:** Normal  
**Test Result:** PASS

The above equipment was tested by Shenzhen Super Test Service Technology Co., Ltd. for compliance with the requirements set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

|                            |                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------|
| Tested by (+ signature):   |  |
|                            | Petter Ping      April 04,2014                                                       |
| Review by (+ signature):   |  |
|                            | July Wen      April 04,2014                                                          |
| Approved by (+ signature): |  |
|                            | Terry Yang      April 04,2014                                                        |

## 2. GENERAL INFORMATION

### 2.1 Product Information

| <b>EUT1- Mobile Phone</b>  |                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Description:               | WCDMA Mobile Phone                                                                                                                            |
| Model Name:                | U-720-2                                                                                                                                       |
| IMEI No.:                  | N/A                                                                                                                                           |
| Frequency Range:           | GSM 850: 824.2-848.8MHz<br>GSM1900:1850.2-1909.8MHz<br>WCDMA Band II:1852.4-1907.6MHz<br>WCDMA BandV:826.4-846.6MHz<br>Bluetooth:2402-2480MHz |
| Hardware Version:          | V965M-02                                                                                                                                      |
| Software Version:          | N/A                                                                                                                                           |
| <b>EUT2- Battery</b>       |                                                                                                                                               |
| Description:               | Lithium-ion Battery                                                                                                                           |
| Model Name:                | BU-720                                                                                                                                        |
| Brand Name:                | unnecto <sup>TM</sup>                                                                                                                         |
| Manufacturer:              | ShenZhen EAST Electronics co.,Ltd                                                                                                             |
| Capacitance:               | 1500 mAh                                                                                                                                      |
| Rated Voltage:             | 3.8V                                                                                                                                          |
| Charge Limit:              | 4.35V                                                                                                                                         |
| <b>EUT3 – Power Supply</b> |                                                                                                                                               |
| Description:               | Travel Charger                                                                                                                                |
| Model Name:                | CU-720                                                                                                                                        |
| Brand Name:                | unnecto <sup>TM</sup>                                                                                                                         |
| Manufacturer:              | SHENZHEN SAMSON POWER TECHNOLOGY CO., LTD.                                                                                                    |
| Rated Input:               | AC 100-240V, 50/60Hz, 0.4A                                                                                                                    |
| Rated Output:              | DC 5V, 0.8A                                                                                                                                   |
| Length of USB cable:       | 1.0m                                                                                                                                          |

#### NOTE:

1. The EUT is a Mobile Station, here only Cellular 850MHz band was tested in this report.
2. The normal, high and low voltage supply for the Battery of the EUT is separately 3.8V, 4.35V and 3.6V, which are specified by the applicant.
3. Please refer to Appendix 2 for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

## 2.2 Objective

The objective of the report is to perform tests according to 47 CFR Part 2, Part 22 for FCC ID Certification:

| No. | Identity                            | Document Title                                                                |
|-----|-------------------------------------|-------------------------------------------------------------------------------|
| 1   | 47 CFR Part 2<br>(10-1-11 Edition)  | Frequency Allocations and Radio Treaty Matters; General Rules and Regulations |
| 2   | 47 CFR Part 22<br>(10-1-11 Edition) | Public Mobile Services                                                        |

## 2.3 Test Standards and Results

Test items and the results are as bellow:

| No. | Rules                         | Test Type                                       | Result | Date of Test |
|-----|-------------------------------|-------------------------------------------------|--------|--------------|
| 1   | §2.106<br>§22.905             | Frequencies                                     | PASS   | 2014-04-02   |
| 2   | §2.1046                       | Conducted RF Output Power at Antenna Terminal   | PASS   | 2014-04-02   |
| 3   | §2.1049                       | Occupied Bandwidth                              | PASS   | 2014-04-02   |
| 4   | §2.1051<br>§2.1057<br>§22.917 | Conducted Spurious Emission at Antenna Terminal | PASS   | 2014-04-02   |
| 5   | §22.913                       | Transmitter Radiated Power (EIPR/ERP)           | PASS   | 2014-04-02   |
| 6   | §2.1053<br>§2.1057<br>§22.917 | Radiated Spurious Emission                      | PASS   | 2014-04-02   |
| 7   | §2.1055<br>§22.355            | Frequency Stability                             | PASS   | 2014-04-02   |

*Note:* 1. The test result judgment is decided by the limit of measurement standard  
2. The information of measurement uncertainty is available upon the customer's request.

## 2.4 Environmental Conditions

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

- Temperature: 15-35°C
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

### 3. TEST FACILITY

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site:            | Compliance Certification Services Inc. (Kun shan) Laboratory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Location:             | No.10 Weiye Rd, Innovation park, Eco&Tec,Development Zone, Kunshan City, Jiangsu, China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Description:          | <p>There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 and CISPR 16 requirements.</p> <p>The FCC Registration Number is <b>238958</b>.</p> <p>The <b>CNAS</b> Registration Number is <b>CNAS L4354</b>.</p>                                                                                                                                                                                                                                                                                                                 |
| Site Filing:          | The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Instrument Tolerance: | All measuring equipment is in accord with ANSI C63.4:2009 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Ground Plane:         | Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. |

**4. TEST EQUIPMENT LIST**

| Name of Equipment   | Manufacturer      | Model      | Serial Number | Calibration Due | calibration interval |
|---------------------|-------------------|------------|---------------|-----------------|----------------------|
| Spectrum Analyzer   | Agilent           | E4446A     | MY44020154    | 2014-5-12       | 1 year               |
| EMI Test Receiver   | R&S               | ESCI       | 1166.5950.03  | 2014-8-13       | 1 year               |
| Pre-Amplifier       | Miteq             | NSP4000-NF | 870629        | 2014-5-12       | 1 year               |
| Bilog Antenna       | Sunol             | JB1        | A110204-2     | 2014-5-12       | 1 year               |
| Horn-antenna        | SCHWARZBECK       | BBHA9120D  | D:266         | 2014-6-07       | 1 year               |
| Horn-antenna        | SCHWARZBECK       | BBHA9170   | D:171         | 2014-4-28       | 1 year               |
| Loop-antenna        | ZHINAN            | ZN30900A   | N/A           | 2014-6-07       | 1 year               |
| Turn Table          | CT                | CT123      | 4165          | N.C.R           | 1 year               |
| Antenna Tower       | CT                | CTERG23    | 3256          | N.C.R           | 1 year               |
| Controller          | CT                | CT100      | 95637         | N.C.R           | 1 year               |
| EMI TEST RECEIVER   | R&S               | ESCI       | 100781        | 2015-3-14       | 1 year               |
| V (V-LISN)          | R&S               | ENV216     | 101604        | 2014-5-21       | 1 year               |
| Pulse Limiter       | R&S               | ESH3-Z2    | 100524        | 2014-9-24       | 1 year               |
| Temperature Chamber | Guangzhou Gongwen | GDS-250    | N/A           | 2014-9-24       | 1 year               |
| Test Software       | EZ-EMC            |            |               |                 |                      |

**Instrumentation:** The following list contains equipment used at CCS for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

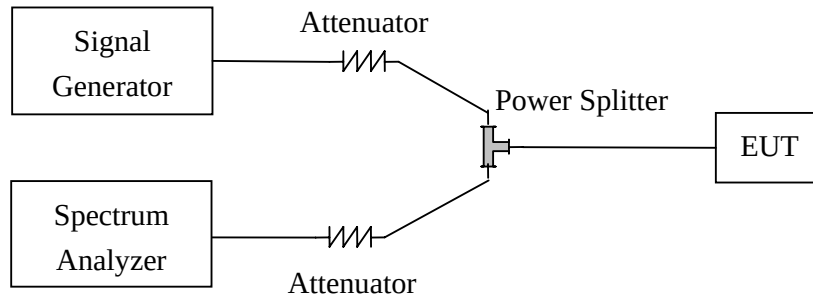
**NOTE:** Equipments listed above have been calibrated and are in the period of validation.

## 5. 47 CFR Part 2, Part 22H Requirements

### 5.1 General Information

#### 5.1.1 Conducted Related Tests

Based on ANSI/TIA-603-C-2004

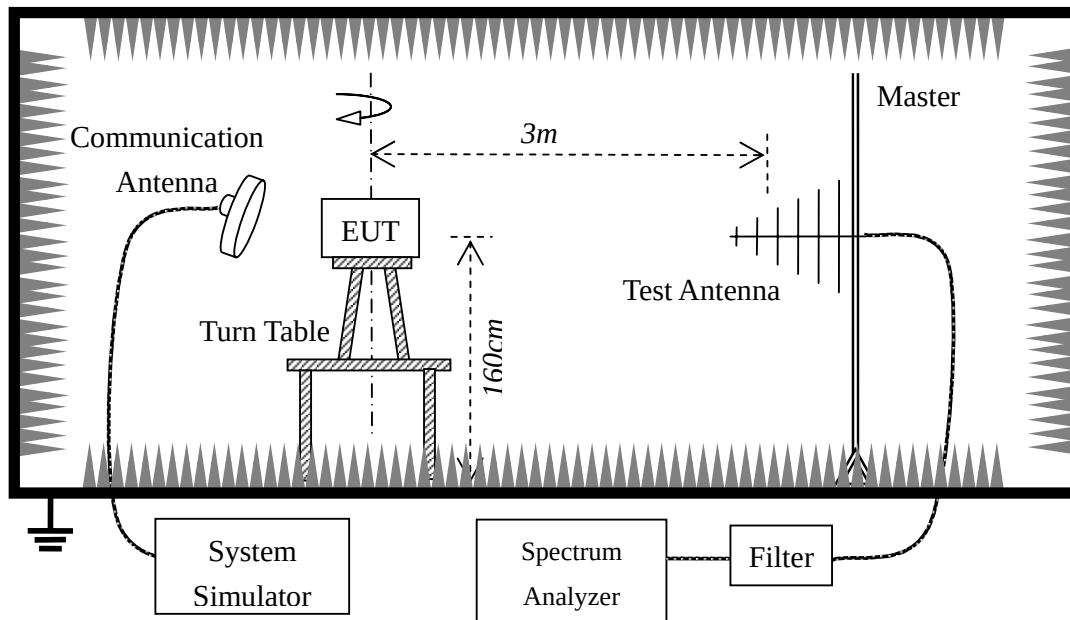


1. The EUT is coupled to the Spectrum Analyzer and the System Simulator with the suitable Attenuators through the Power Splitter; the path loss is calibrated to correct the reading.
2. The EUT is configured here as MS + Battery.
3. Set the spectrum analyzer to measure peak hold with the required settings.
4. Set the signal generator to a known output power and record the path loss in dB (LOSS) for frequencies up to the tenth harmonic of the EUT's carrier frequency.  $LOSS = \text{Generator Output Power (dBm)} - \text{Analyzer reading (dBm)}$ .
5. Replace the signal generator with the EUT.
6. Adjust the settings of the Digital Radio communication Tester (DRT) to set the EUT to its maximum power at the required channel.
7. Set the spectrum analyzer to measure peak hold with the required settings. Offset the spectrum analyzer reference level by the path loss measured above.
8. Measure and record all spurious emissions up to the tenth harmonic of the carrier frequency.
9. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.
10. If necessary steps 6 and 7 may be performed with the spectrum analyzer set to average detector.

Note: Step 4 above is performed prior to testing and LOSS is recorded by test software. Steps 3, 7, and 8 above are performed with test software.

### 5.1.2 Radiated Power and Spurious Emission Tests

Based on ANSI/TIA-603-C-2004



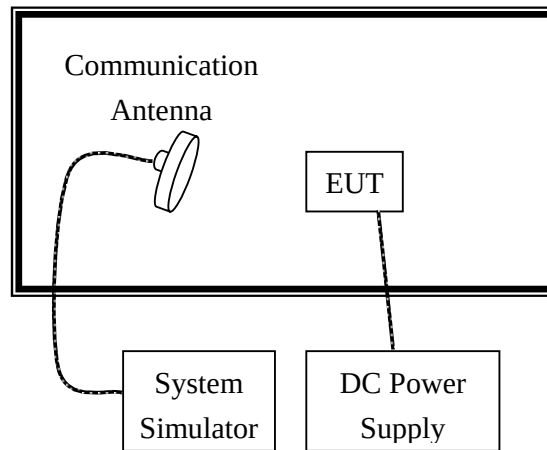
1. The test is performed in a full-Anechoic Chamber, the air loss of the site and the factors of the test system are pre-calibrated using the substitution method.
2. Connect the equipment as shown in the above diagram with the EUT's antenna in a vertical orientation.
3. Adjust the setting of System Simulator to set the EUT to its maximum power at the require channel.
4. Set the Spectrum Analyzer to the channel frequency, set the analyzer to measure peak hold with the required setting.
5. Rotate the EUT 360 degree, recorded the peak level in dBm(LVL).
6. Replace the EUT with a vertically polarized half wave dipole or known gain antenna. The center of the antenna should be at the same location as the center of the EUT's antenna.
7. Connect the antenna to a signal generator with known output power and record the path loss in dB (Loss),  $\text{Loss} = \text{Generator Output Power(dBm)} - \text{Spectrum Analyzer reading Power(dBm)}$ .
8. Determine the ERP using the following equation:  

$$\text{ERP(dBm)} = \text{LVL(dBm)} + \text{Loss(dB)}$$
9. Determine the EIRP using the following equation:  

$$\text{EIRP(dBm)} = \text{ERP(dBm)} + 2.14(\text{dB})$$
10. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.

Note: Steps 6 and 7 above are performed prior to setting and Loss is recorded by test software.

### 5.1.3 Frequency Stability Test



1. The test is performed in a Temperature Chamber.
2. The EUT is configured as MS + DC Power Supply.
3. The BCCH number of the SS used here is 200.

### 5.1.4 Test Mode Description

SIM 1 and SIM 2 are tested during all the items, According to the test data, we got the worst mode is SIM1, So we only put the worst data on the report.

## 6. FREQUENCIES

### 6.1. Requirement

According to FCC §22.905, the frequencies blocks assignment for the Cellular Radiotelephone Service are listed as below.

(a) Channel Block A:

Mobile 824 - 835MHz, Base 869 - 880MHz;

Mobile 845 - 846.5MHz, Base 890 - 891.5MHz

(b) Channel Block B:

Mobile 835 - 845 MHz, Base 880 - 890MHz;

Mobile 846.5 - 849 MHz, Base 891.5 - 894MHz

### 6.2 Test Procedure

1. Perform test system setup as section 5.1.1.
2. Perform test configuration as section 5.1
3. The resolution bandwidth (RBW) of the Spectrum Analyzer was set to at least 1% of the emission bandwidth of the fundamental emission of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=3 kHz, for WCDMA modulated signal: RBW=VBW=30 kHz.
4. The transmitter frequency arrangement of the GSM850MHz band is  $F(n)=824.2+0.2*(n-128)$ ,  $128 \leq n \leq 251$ . The lowest and the highest channel were selected to perform tests respectively. Set the TCH number to 128.
5. Set the Spectrum Analyzer suitably to capture the waveform, search peak and mark, and then record the plot.
6. Set the TCH number to 251, then repeat step 5.
7. For WCDMA, Set the TCH number to 4132 and 4233 as the low, middle, high channel, then repeat step 4.

### 6.3 Test Result

| Band                           | Channel Number | Frequency (MHz) |
|--------------------------------|----------------|-----------------|
| GSM 850<br>(GPRS class 8)      | 128            | 824.223         |
|                                | 251            | 848.767         |
| GSM 850<br>(EDGE class 8)      | 128            | 824.238         |
|                                | 251            | 848.784         |
| WCDMA Band V<br>(RMC 12.2Kbps) | 4132           | 826.325         |
|                                | 4233           | 846.578         |

## **7. Conducted RF Output Power**

### **7.1 Requirement**

According to FCC §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 §2.1033 (c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

### **7.2 Test Procedure**

1. Perform test system setup as section 5.1.1. (The radio frequency load attached to the EUT antenna terminal is 50Ω).
2. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for WCDMA modulated signal: RBW=VBW=3MHz.
3. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 128 as the low channel.
4. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
5. Set the TCH number to 190 as the middle channel, then repeat step 4.
6. Set the TCH number to 251 as the high channel, then repeat step 4.
7. For WCDMA, Set the TCH number to 4132, 4183 and 4233 as the low, middle, high channel, then repeat step 4.

**7.3 Test Result**

| Test Mode                      | Channel Number | Frequency (MHz) | Measured Power |       | Rated Power |   |
|--------------------------------|----------------|-----------------|----------------|-------|-------------|---|
|                                |                |                 | dBm            | W     | dBm         | W |
| GSM 850                        | 128            | 824.2           | 32.11          | 1.626 | 33          | 2 |
|                                | 190            | 836.6           | 32.09          | 1.618 | 33          | 2 |
|                                | 251            | 848.8           | 32.18          | 1.652 | 33          | 2 |
| GSM 850<br>(GPRS class 8)      | 128            | 824.2           | 32.10          | 1.622 | 33          | 2 |
|                                | 190            | 836.6           | 32.08          | 1.614 | 33          | 2 |
|                                | 251            | 848.8           | 32.17          | 1.648 | 33          | 2 |
| GSM 850<br>(EDGE class 8)      | 128            | 824.2           | 32.07          | 1.611 | 33          | 2 |
|                                | 190            | 836.6           | 32.05          | 1.603 | 33          | 2 |
|                                | 251            | 848.8           | 32.14          | 1.637 | 33          | 2 |
| WCDMA Band V<br>(RMC 12.2Kbps) | 4132           | 826.4           | 23.68          | 0.233 | 33          | 2 |
|                                | 4182           | 836.4           | 23.87          | 0.244 | 33          | 2 |
|                                | 4233           | 846.6           | 23.91          | 0.246 | 33          | 2 |
| HSDPA Band V                   | 4132           | 826.4           | 22.71          | 0.187 | 33          | 2 |
|                                | 4182           | 836.4           | 22.92          | 0.196 | 33          | 2 |
|                                | 4233           | 846.6           | 22.97          | 0.198 | 33          | 2 |
| HSUPA Band V                   | 4132           | 826.4           | 21.27          | 0.134 | 33          | 2 |
|                                | 4182           | 836.4           | 21.30          | 0.135 | 33          | 2 |
|                                | 4233           | 846.6           | 21.52          | 0.142 | 33          | 2 |

Note: Maximum burst average power for GSM, and maximum burst average power for WCDMA.

## 8. OCCUPIED BANDWIDTH

### 8.1 Occupied Bandwidth Definition

According to FCC §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, or 20dB bandwidth ( $10 \cdot \log 1\%$  is equal to 20dB) taking the total RF output power as reference.

### 8.2 Test Procedure

1. Perform test system setup as section 5.1.1
2. The resolution bandwidth of the Spectrum Analyzer is set to at least one percent of the emission bandwidth, e.g. for GSM modulated signal (here used):  $RBW=VBW=3$  kHz, for CDMA modulated signal:  $RBW=VBW=30$  kHz.
3. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 128 as the low channel.
4. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak; make a line whose value is 20dB lower than the peak; mark two points which the line intersected the waveform at; finally record the delta of the two points as the occupied bandwidth and the plot.
5. Set the TCH number to 190 as middle channel, then repeat step 4.
6. Set the TCH number to 251 as high channel, then repeat step 4.
7. For WCDMA, Set the TCH number to 4132, 4183 and 4233 as the low, middle, high channel, then repeat step 4.

### 8.3 Test Result

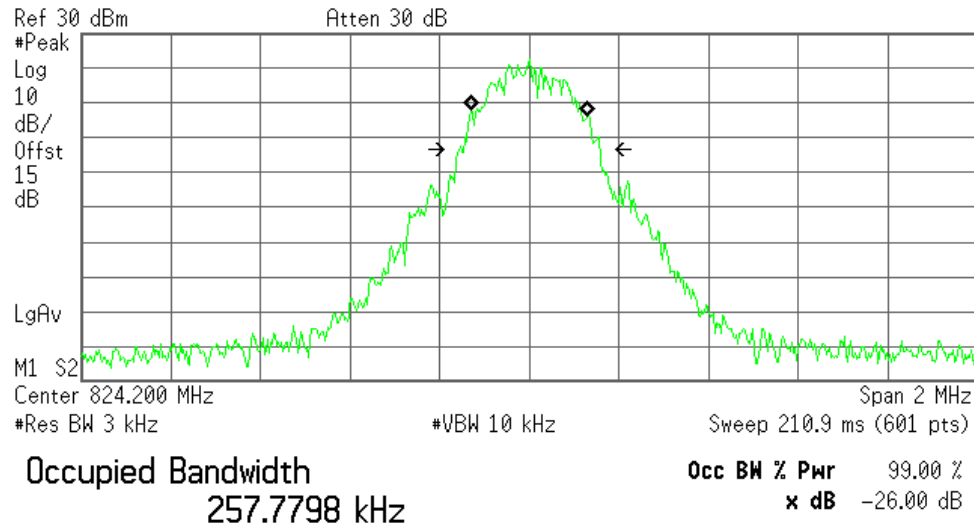
| Band                        | Channel | Frequency (MHz) | Measured Occupied Bandwidth (kHz) |                         |
|-----------------------------|---------|-----------------|-----------------------------------|-------------------------|
|                             |         |                 | 99% Emission Bandwidth            | 26dB Emission Bandwidth |
| GSM 850                     | 128     | 824.2           | 257.78                            | 315.00                  |
|                             | 190     | 836.6           | 244.18                            | 318.29                  |
|                             | 251     | 848.8           | 239.81                            | 313.29                  |
| GSM 850 (GPRS class 8)      | 128     | 824.2           | 241.93                            | 311.54                  |
|                             | 190     | 836.6           | 243.68                            | 317.39                  |
|                             | 251     | 848.8           | 244.51                            | 313.95                  |
| GSM 850 (EDGE class 8)      | 128     | 824.2           | 241.83                            | 315.46                  |
|                             | 190     | 836.6           | 243.57                            | 302.84                  |
|                             | 251     | 848.8           | 246.25                            | 314.81                  |
| WCDMA Band V (RMC 12.2Kbps) | 4132    | 826.4           | 4175                              | 4655                    |
|                             | 4182    | 836.4           | 4143                              | 4668                    |
|                             | 4233    | 846.6           | 4149                              | 4666                    |
| HSDPA Band V                | 4132    | 826.4           | 4154                              | 4675                    |
|                             | 4182    | 836.4           | 4126                              | 4660                    |
|                             | 4233    | 846.6           | 4156                              | 4659                    |
| HSUPA Band V                | 4132    | 826.4           | 4171                              | 4649                    |
|                             | 4182    | 836.4           | 4139                              | 4647                    |
|                             | 4233    | 846.6           | 4147                              | 4674                    |

## GSM850 Band:

## 1. Occupied Bandwidth when the TCH number set to 128:

Agilent

R T

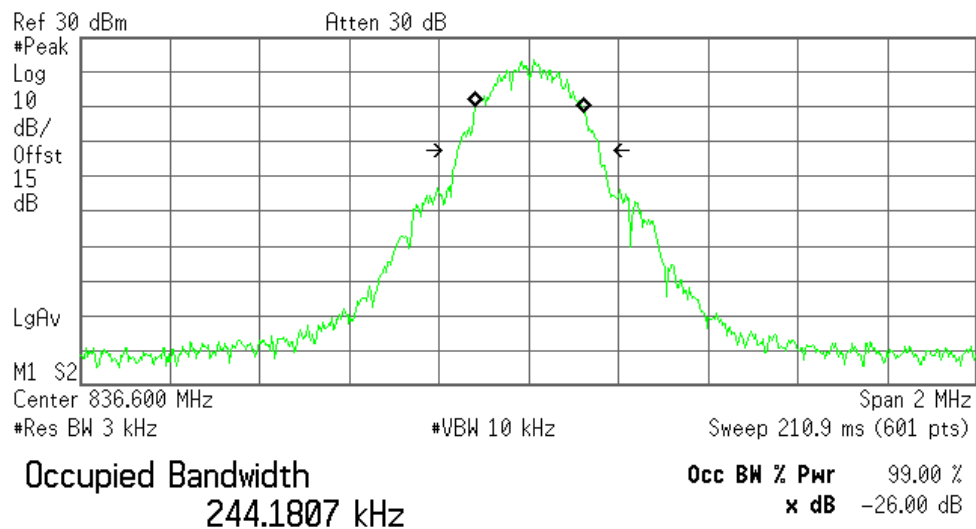


Transmit Freq Error 238.217 Hz  
x dB Bandwidth 315.003 kHz

## 2. Occupied Bandwidth when the TCH number set to 190:

Agilent

R T

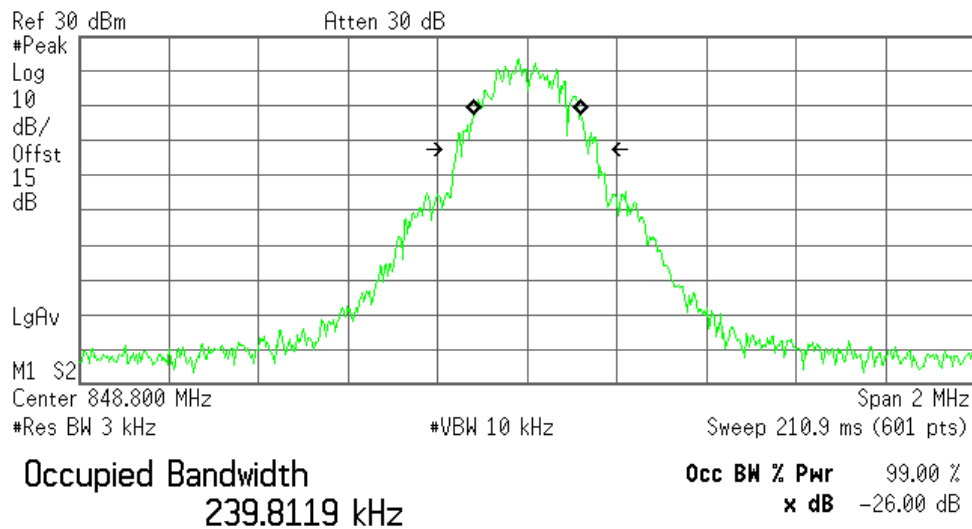


Transmit Freq Error 1.902 kHz  
x dB Bandwidth 318.296 kHz

## 3. Occupied Bandwidth when the TCH number set to 251:

Agilent

R T



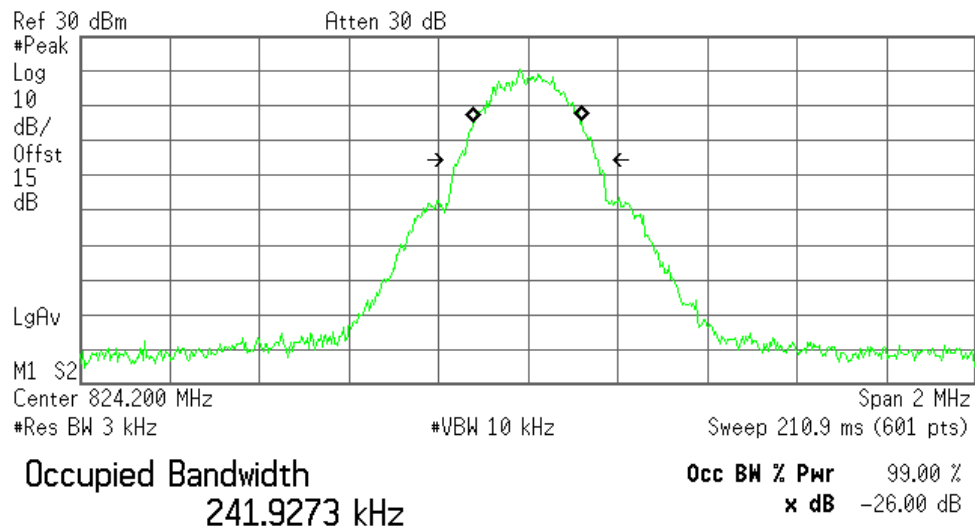
Transmit Freq Error -941.991 Hz  
x dB Bandwidth 313.292 kHz

## GSM 850(GPRS class 8)

## 4. Occupied Bandwidth when the TCH number set to 128:

Agilent

R T

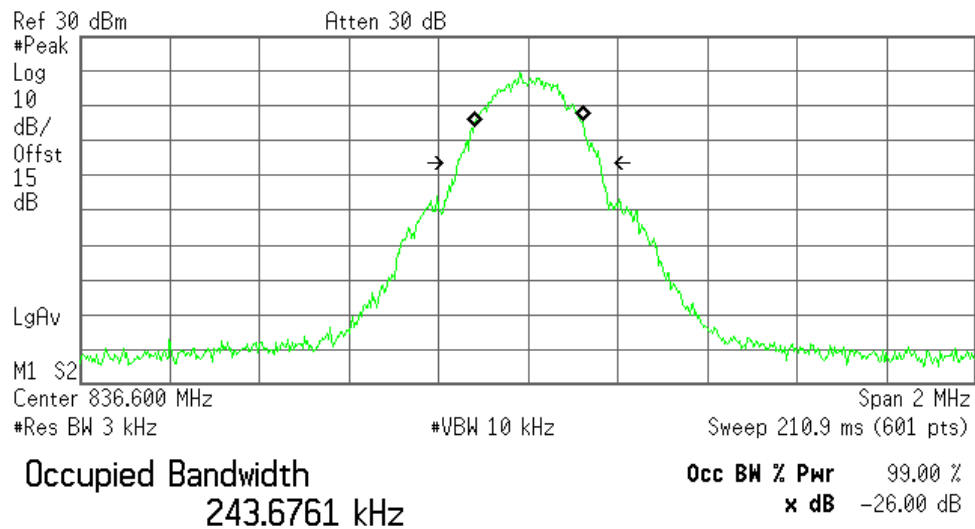


Transmit Freq Error -868.344 Hz  
x dB Bandwidth 311.536 kHz

## 5. Occupied Bandwidth when the TCH number set to 190:

Agilent

R T

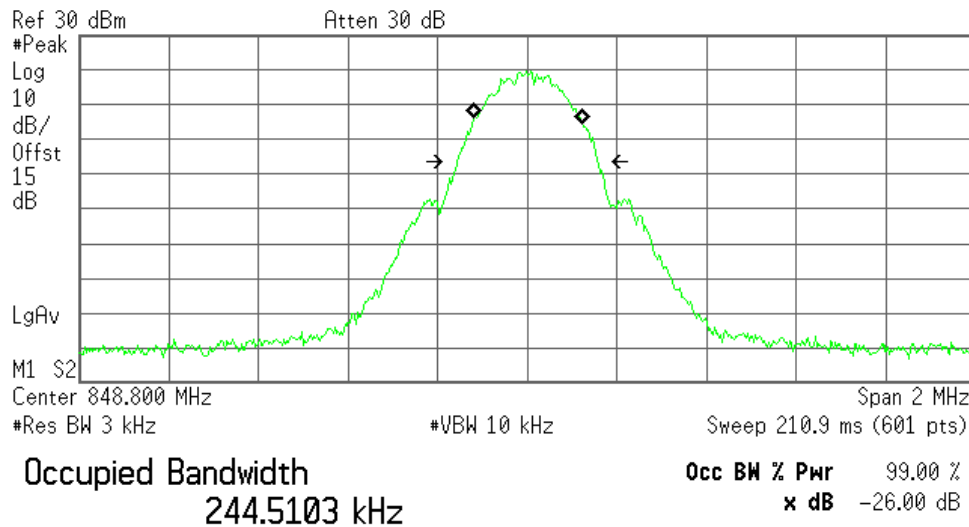


Transmit Freq Error 643.855 Hz  
x dB Bandwidth 317.390 kHz

## 6. Occupied Bandwidth when the TCH number set to 251:

Agilent

R T



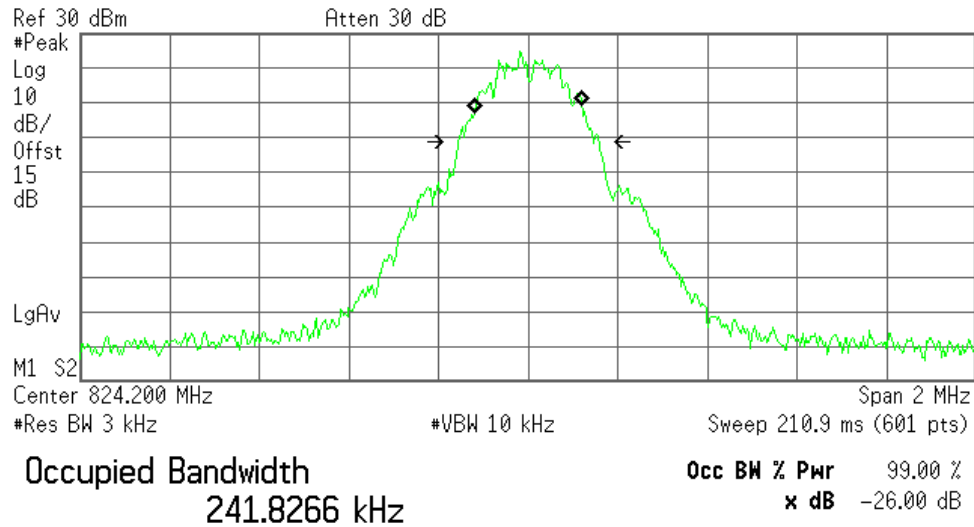
Transmit Freq Error 2.413 kHz  
x dB Bandwidth 313.945 kHz

GSM 850(EDGE class 8)

7. Occupied Bandwidth when the TCH number set to 128:

Agilent

R T

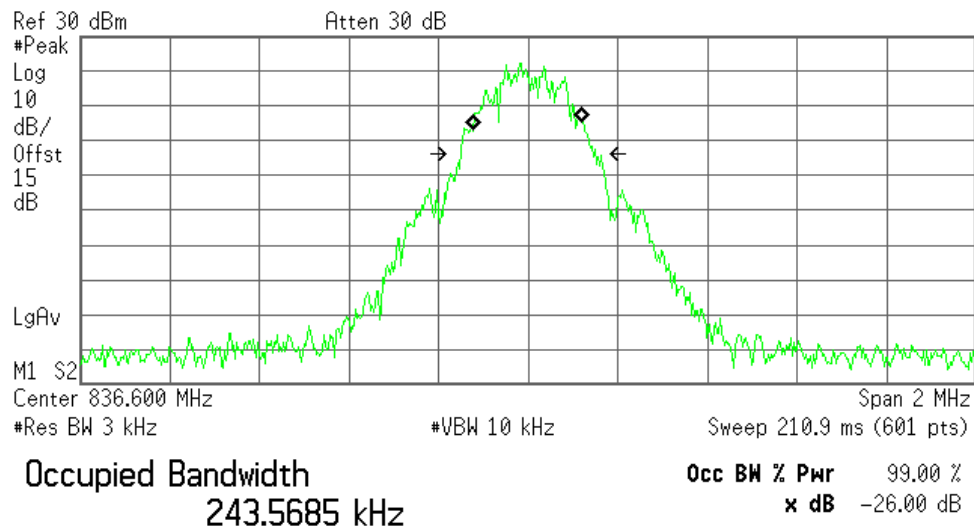


Transmit Freq Error -19.329 Hz  
x dB Bandwidth 315.463 kHz

8. Occupied Bandwidth when the TCH number set to 190:

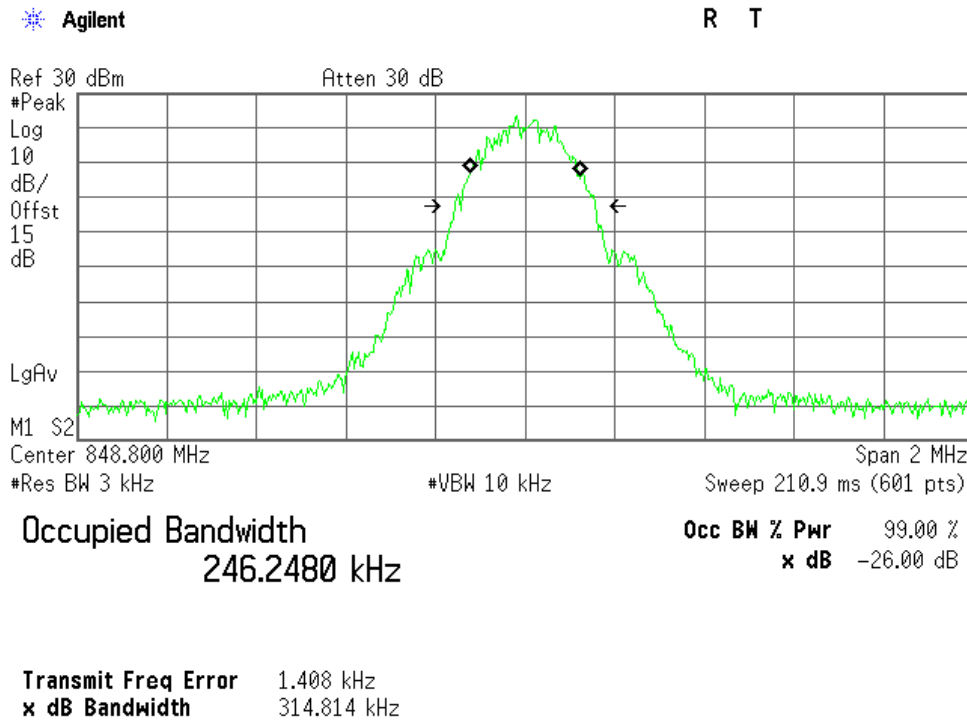
Agilent

R T



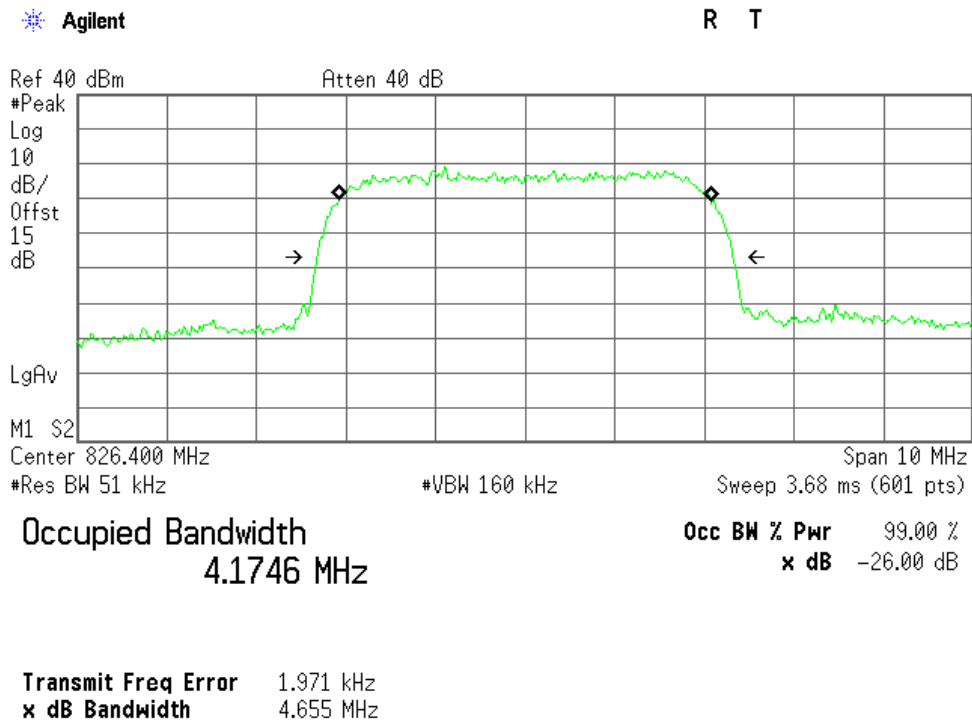
Transmit Freq Error -1.882 kHz  
x dB Bandwidth 302.836 kHz

## 9. Occupied Bandwidth when the TCH number set to 251:

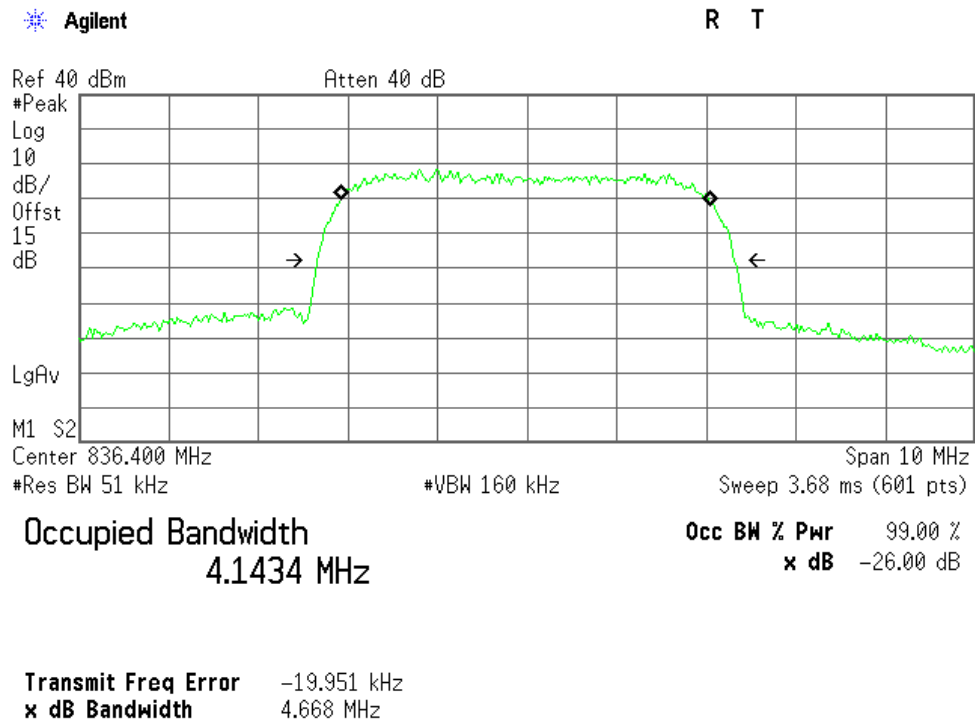


## WCDMA Band V (RMC 12.2Kbps) Band:

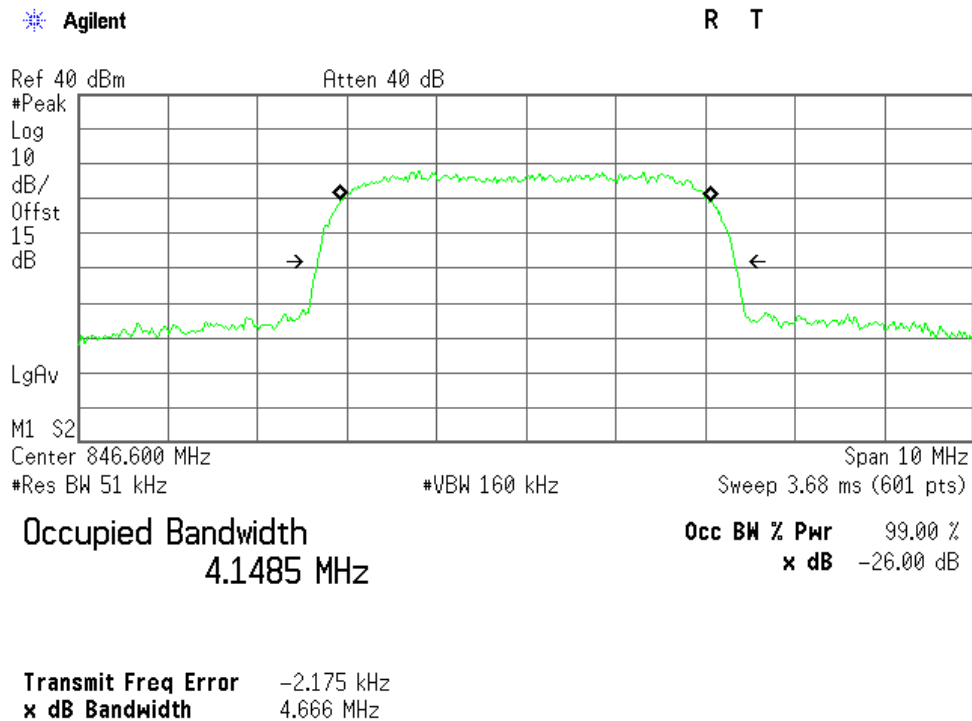
## 1. Occupied Bandwidth when the TCH number set to 4132:



## 2. Occupied Bandwidth when the TCH number set to 4182:

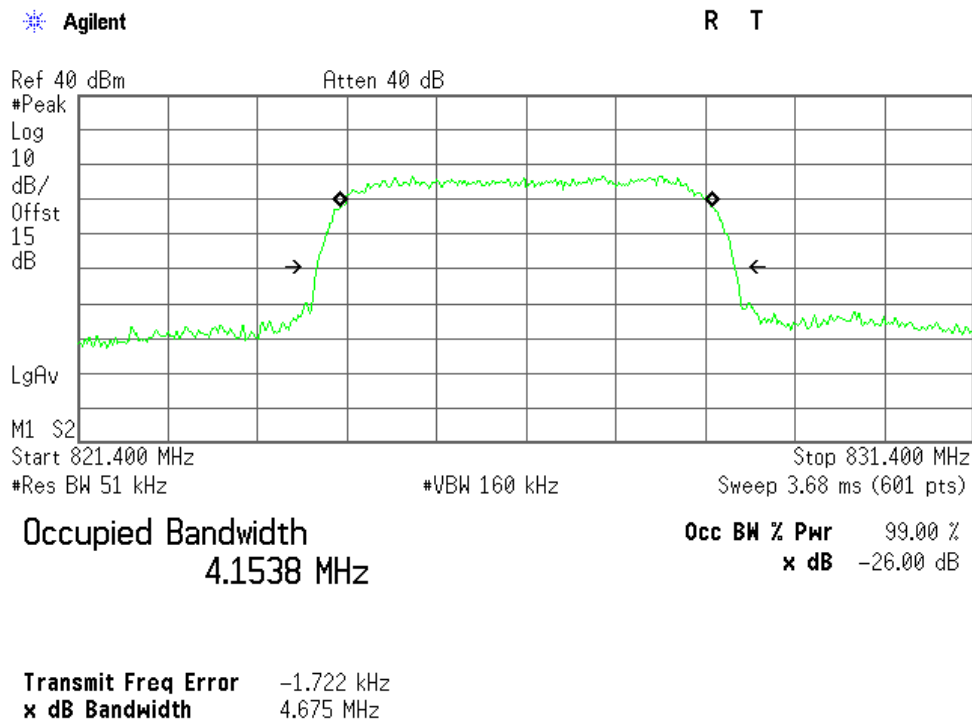


## 3. Occupied Bandwidth when the TCH number set to 4233:

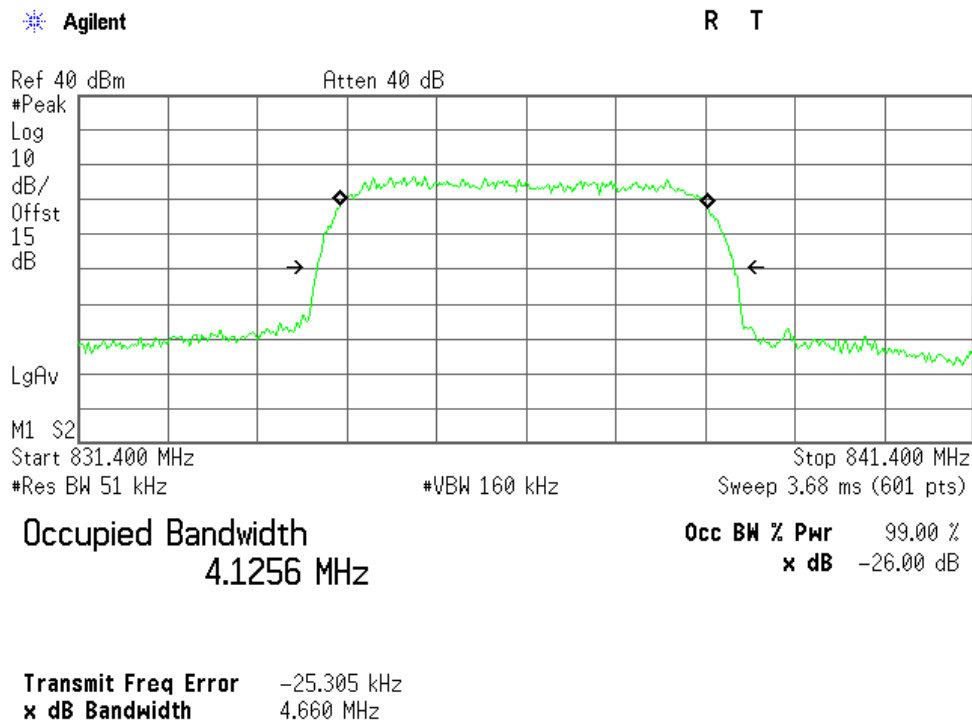


## HSDPA Band V

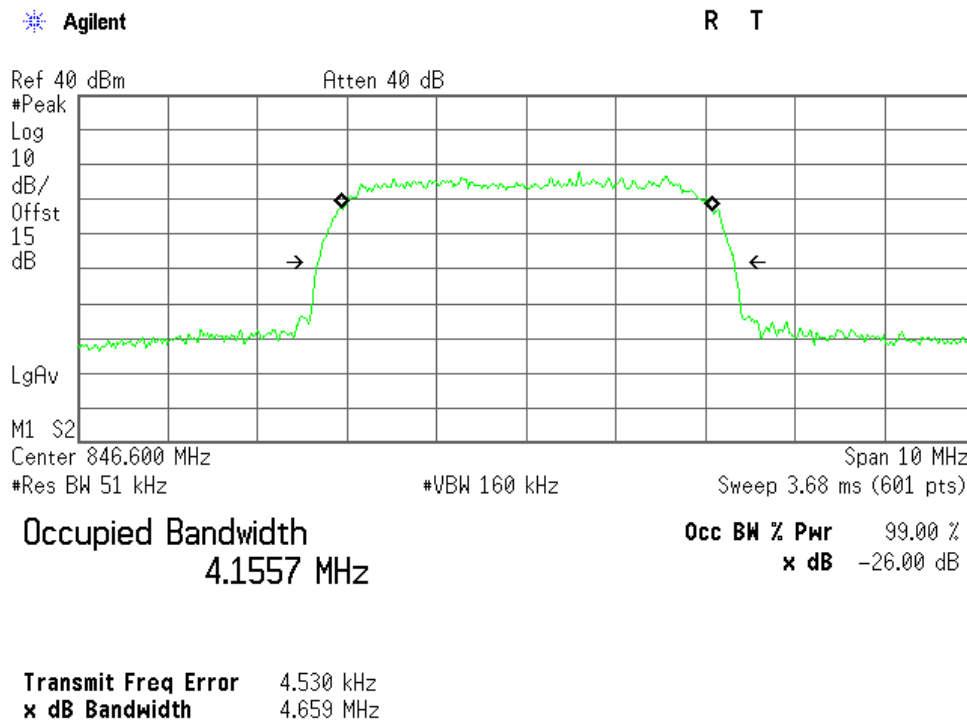
## 4. Occupied Bandwidth when the TCH number set to 4132:



## 5. Occupied Bandwidth when the TCH number set to 4182:

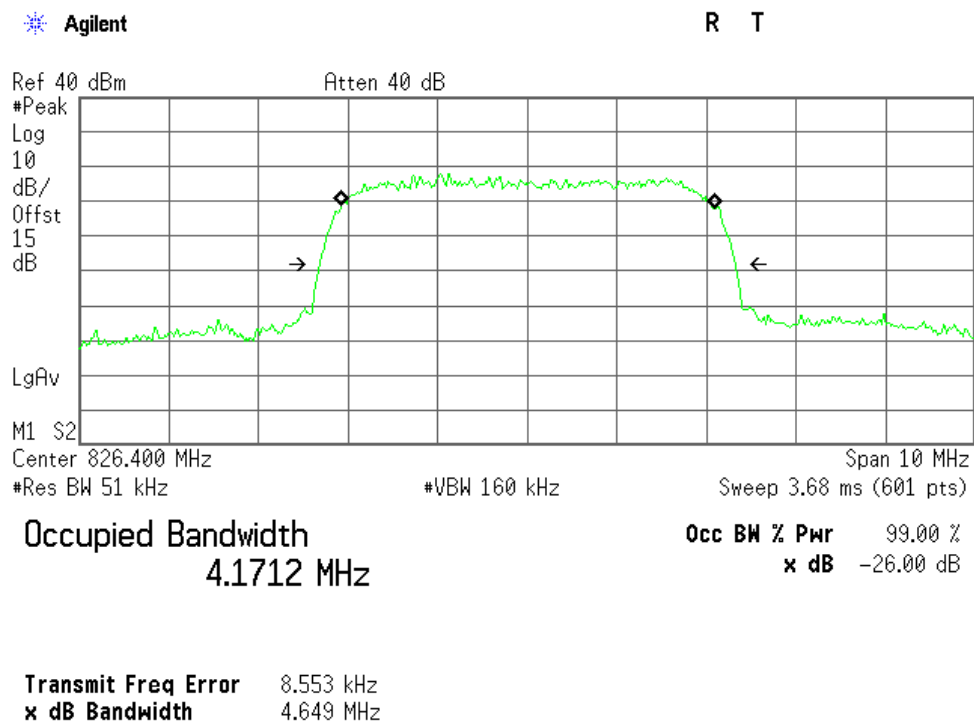


## 6. Occupied Bandwidth when the TCH number set to 4233:

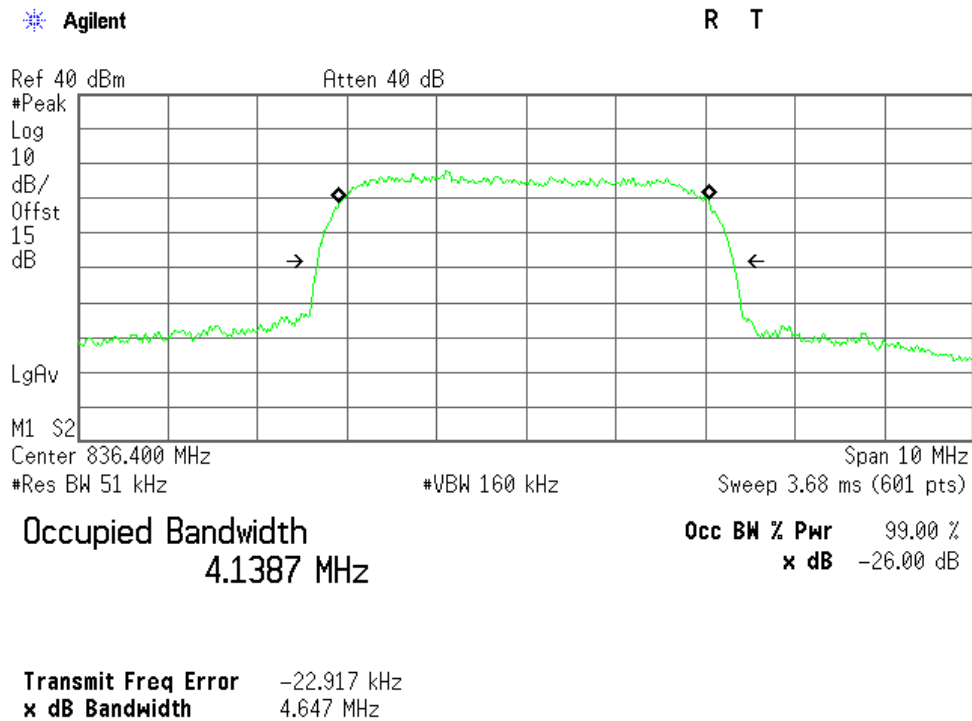


## HSUPA Band V

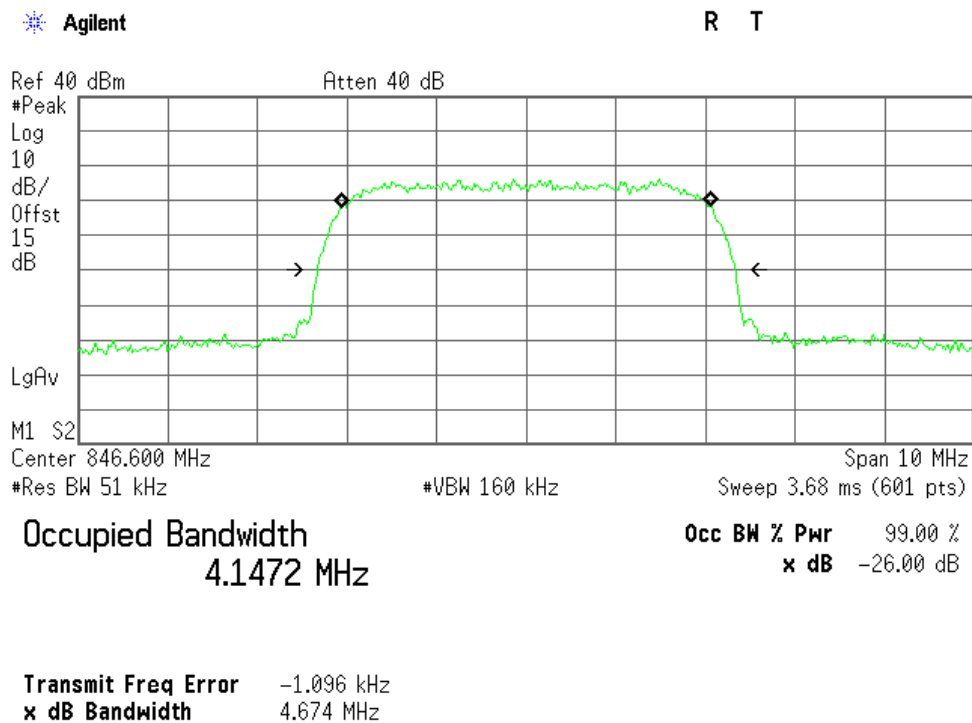
## 7. Occupied Bandwidth when the TCH number set to 4132:



## 8. Occupied Bandwidth when the TCH number set to 4182:



## 9. Occupied Bandwidth when the TCH number set to 4233:



## 9. CONDUCTED SPURIOUS EMISSION

### 9.1 Requirement

According to FCC §22.917(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.

According to FCC §22.917 (a), in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. Thus the 26dB emission bandwidth is measurement for showing compliance at the band-edge.

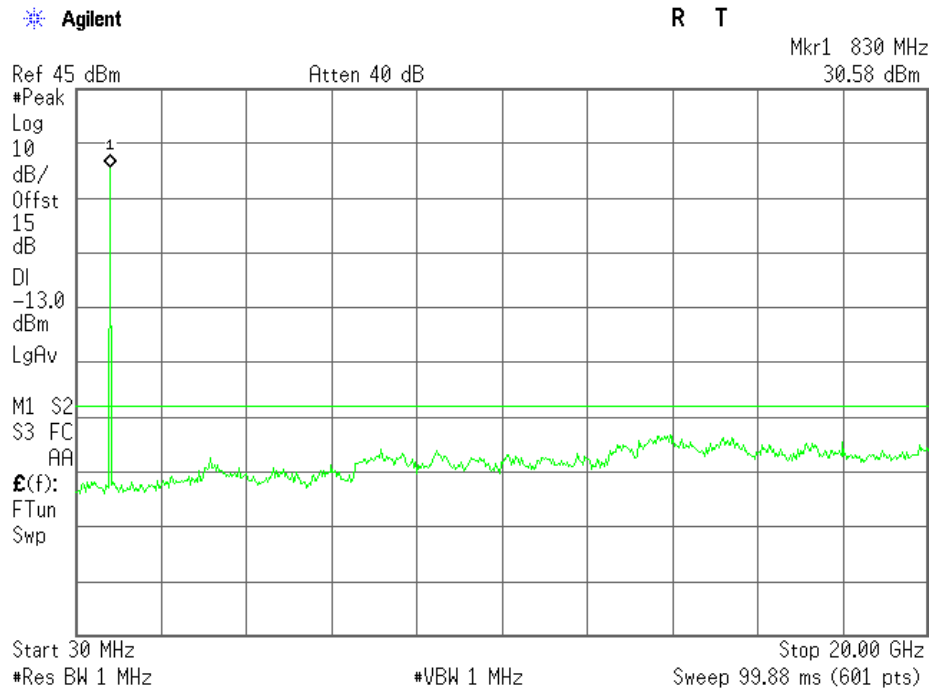
### 9.2 Test Procedure

1. Perform test system setup as section 5.1.1.
2. Make a limit line whose value is -13dBm on the Spectrum Analyzer.
3. The lowest, middle and the highest channels are selected to perform tests respectively. Set the TCH number to 128 as the lowest channel.
4. Set the RBW of the Spectrum Analyzer to 1MHz, and the measuring frequency range from 9kHz to 10<sup>th</sup> harmonic of the fundamental frequency (here used 26.5GHz); mark the fundamental frequency and the harmonics thereof; finally record the harmonics and the plot. Note, the measuring frequency range can be divided into several parts to perform tests.
5. In the 1MHz bands immediately outside and adjacent to the frequency block, the RBW of the Spectrum Analyzer was set to at least one percent of the emission bandwidth of the fundamental emission of the transmitter, e.g. for GSM modulated signal (here used): RBW=3kHz, for WCDMA modulated signal: RBW=30kHz.
6. Set the TCH number to 190 as the middle channel, then repeat step 4.
7. Set the TCH number to 251 as the highest channel, then repeat step 4 and 5.
8. For WCDMA, Set the TCH number to 4132, 4183 and 4233 as the low, middle, high channel, then repeat step 4 and 5.

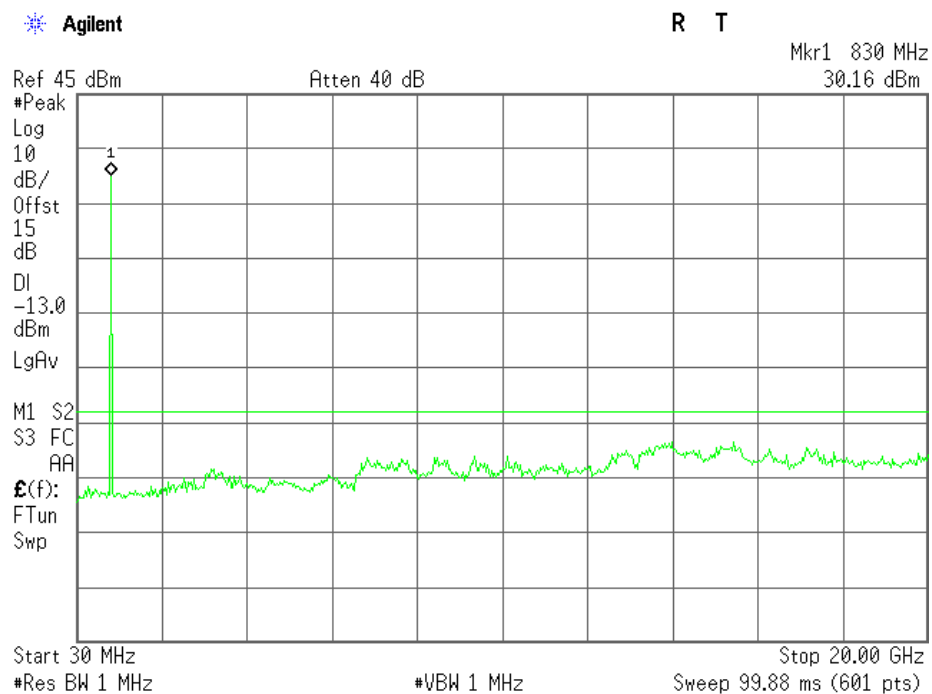
### 9.3 Test Result

#### 1. GSM850 Band:

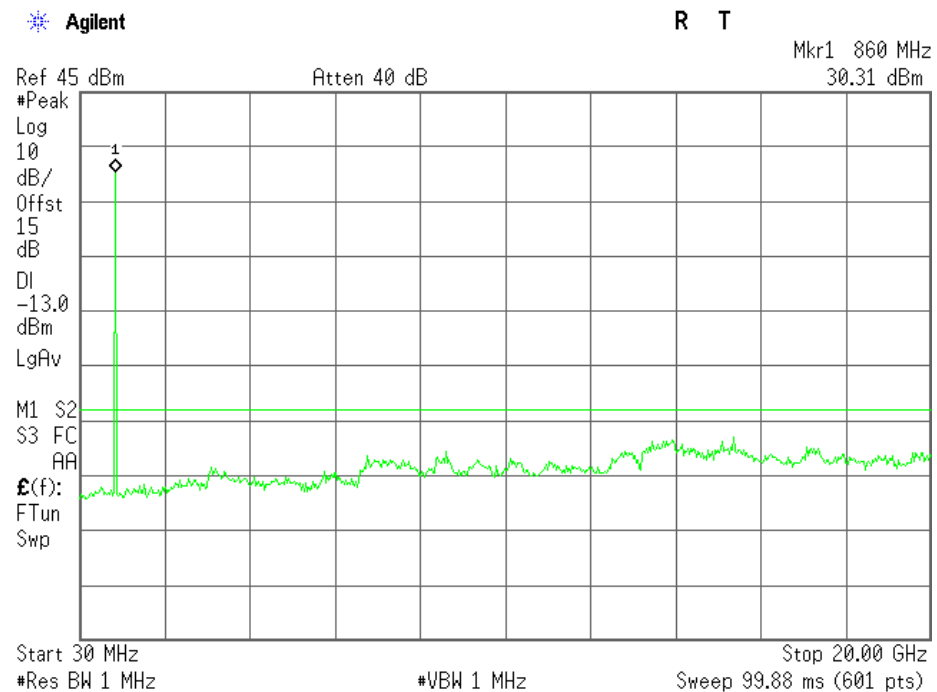
Plot when the GSM850 TCH number set to 128:



Plot when the GSM850 TCH number set to 190:

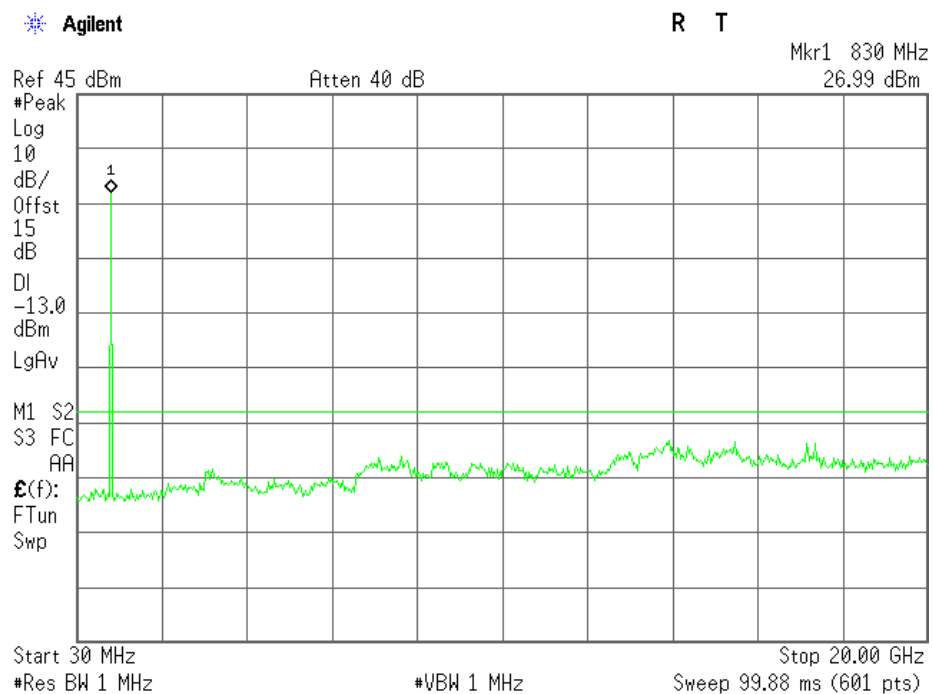


Plot when the GSM850 TCH number set to 251:

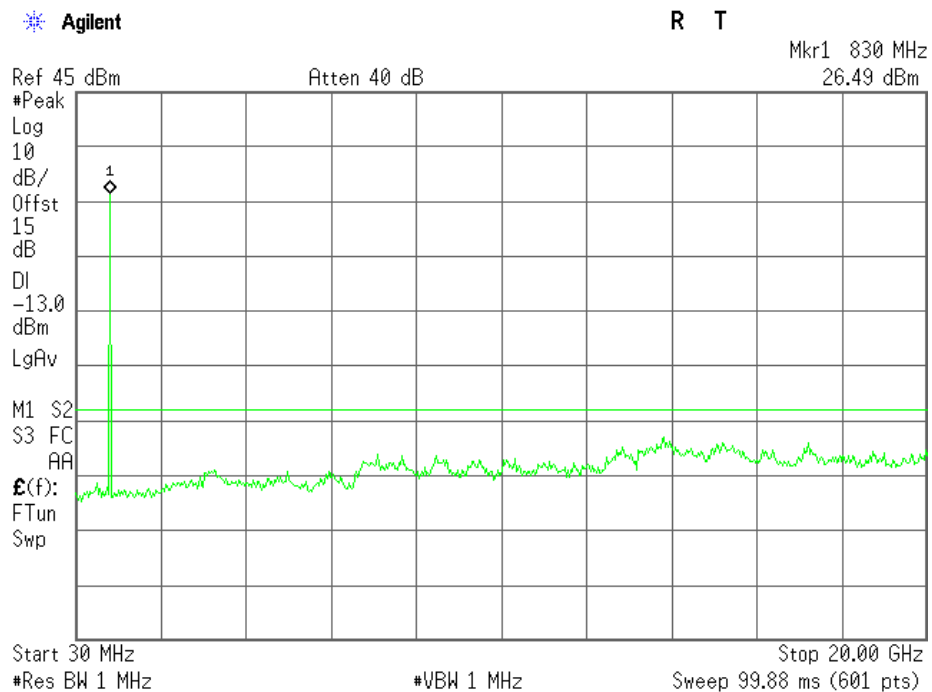


2. GSM850 (GPRS class 8) Band:

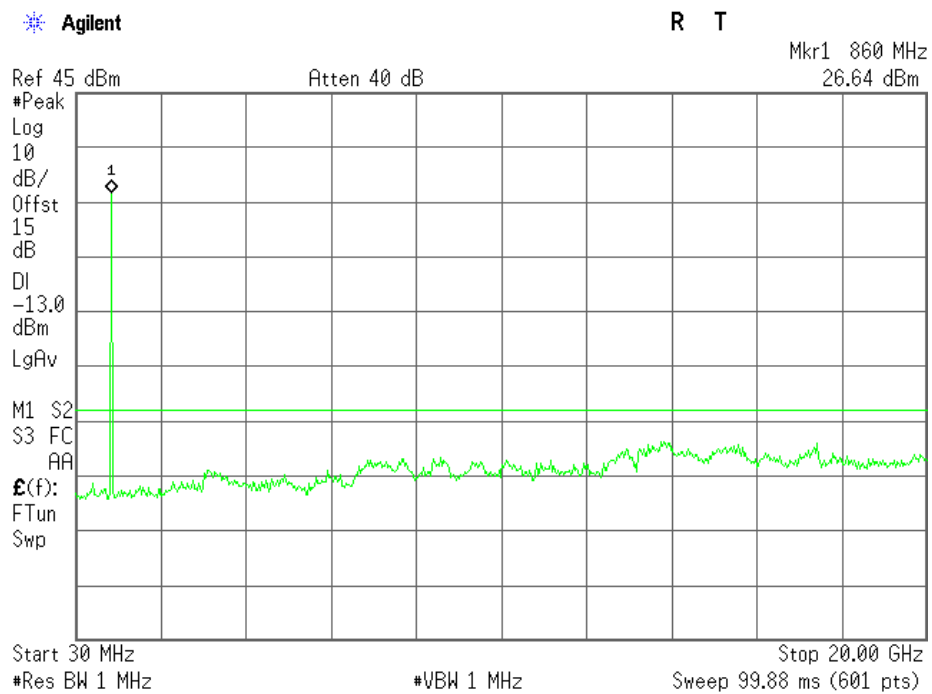
Plot when the GSM850 TCH number set to 128:



Plot when the GSM850 TCH number set to 190:

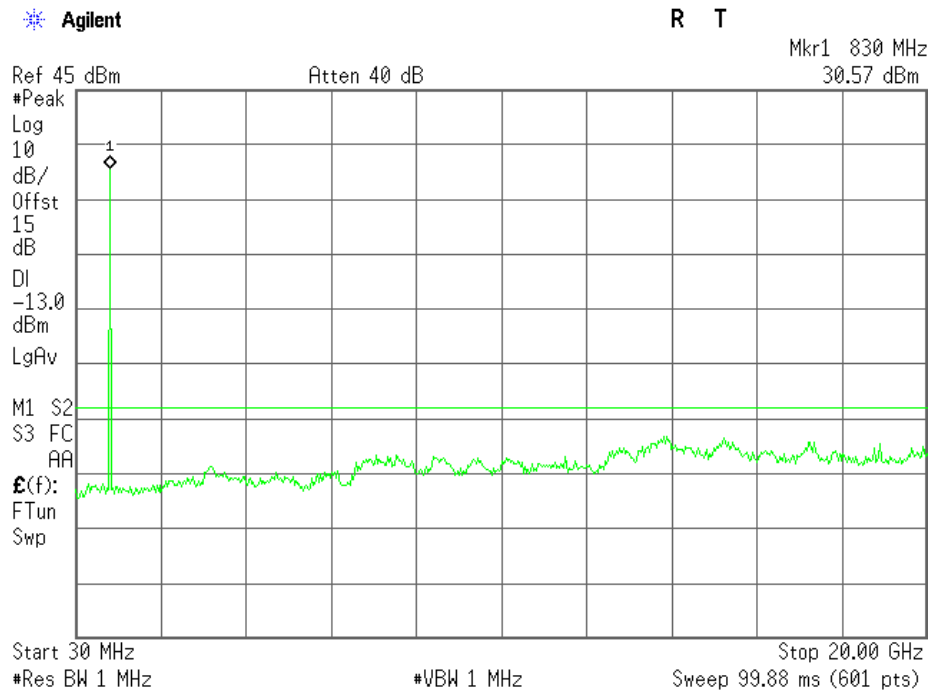


Plot when the GSM850 TCH number set to 251:

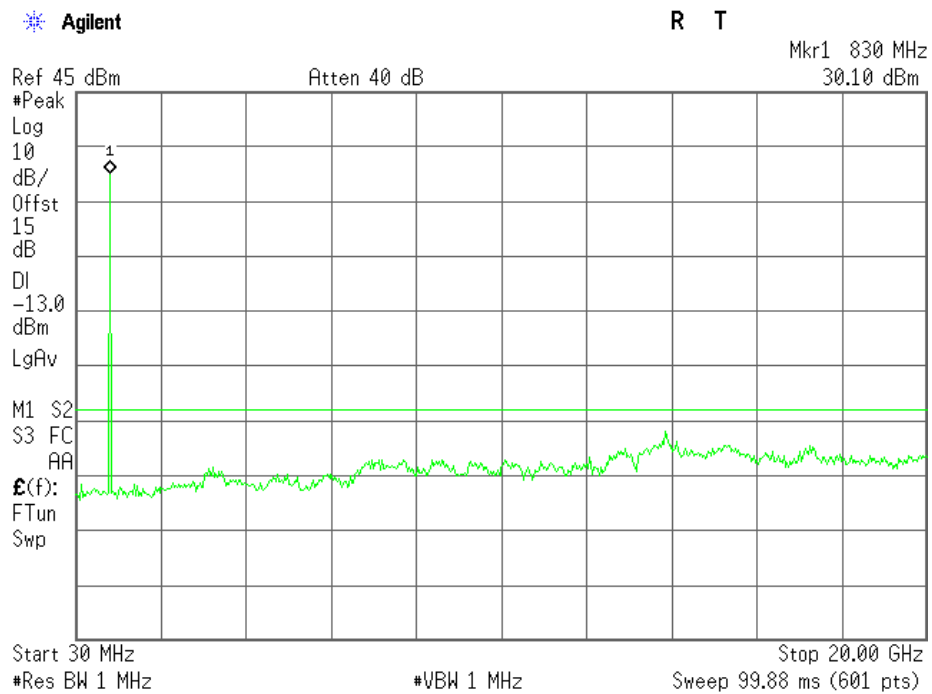


## 3.GSM850 (EDGE class 8) Band:

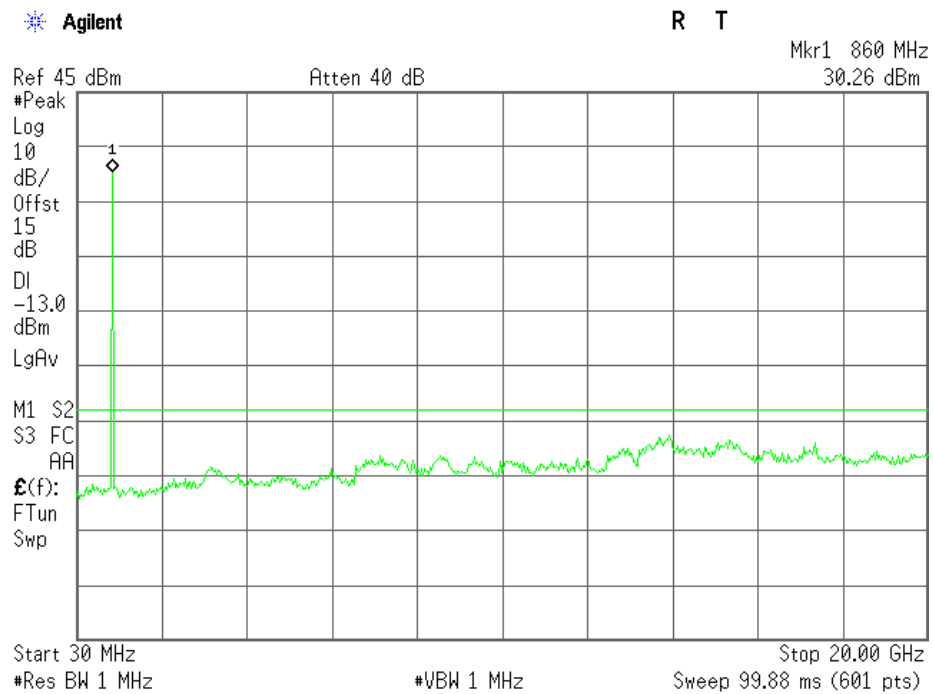
Plot when the GSM850 TCH number set to 128:



Plot when the GSM850 TCH number set to 190:



Plot when the GSM850 TCH number set to 251:

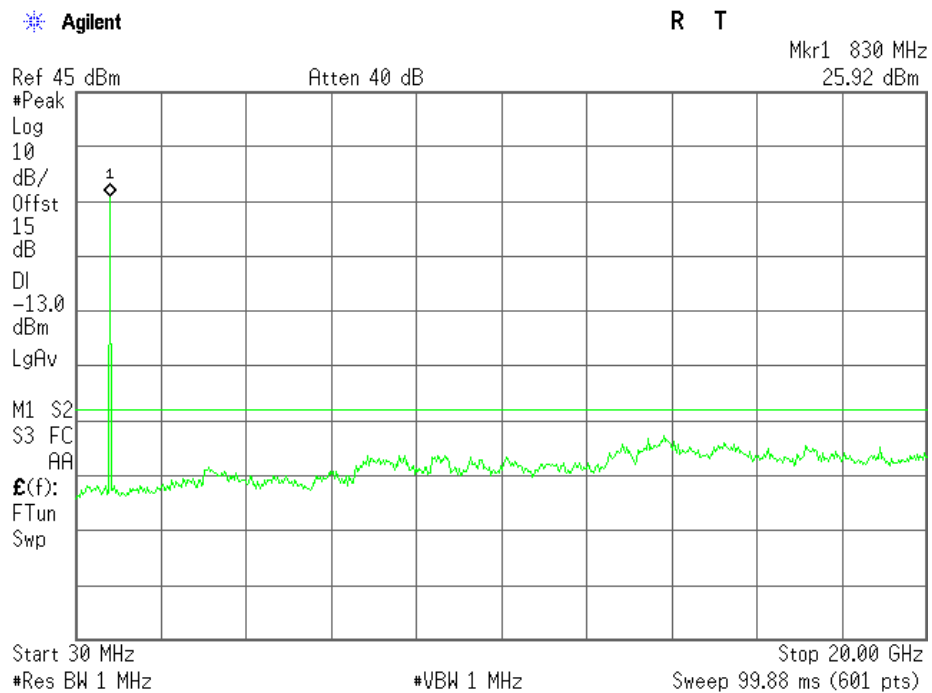


**NOTE:**

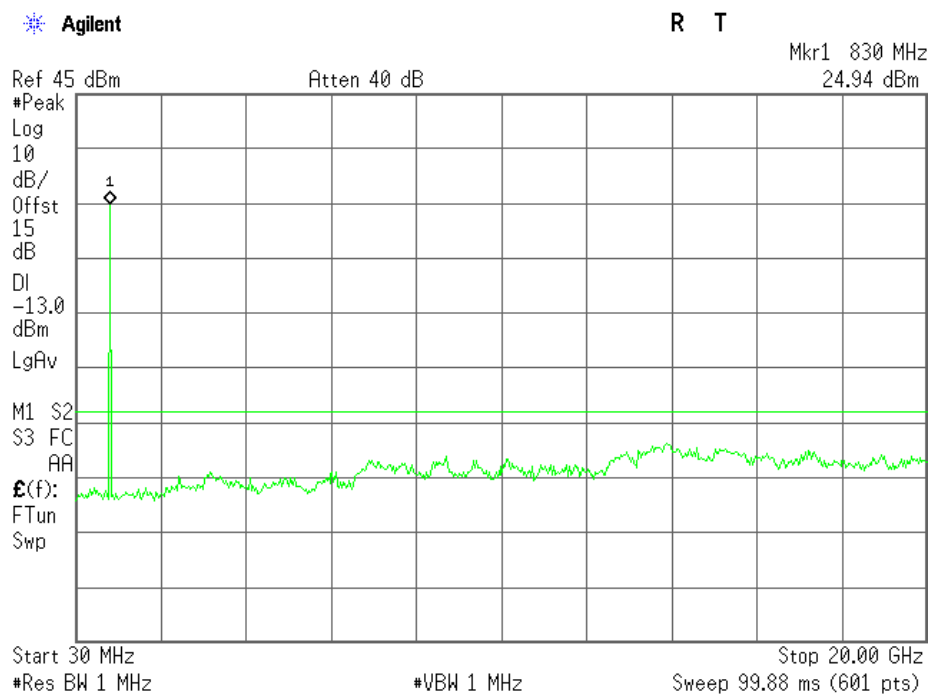
1. The marker points are the Mobile Phone and/or System Simulator transmitting frequencies which should be ignored.

## 4.WCDMA Band V (RMC 12.2Kbps):

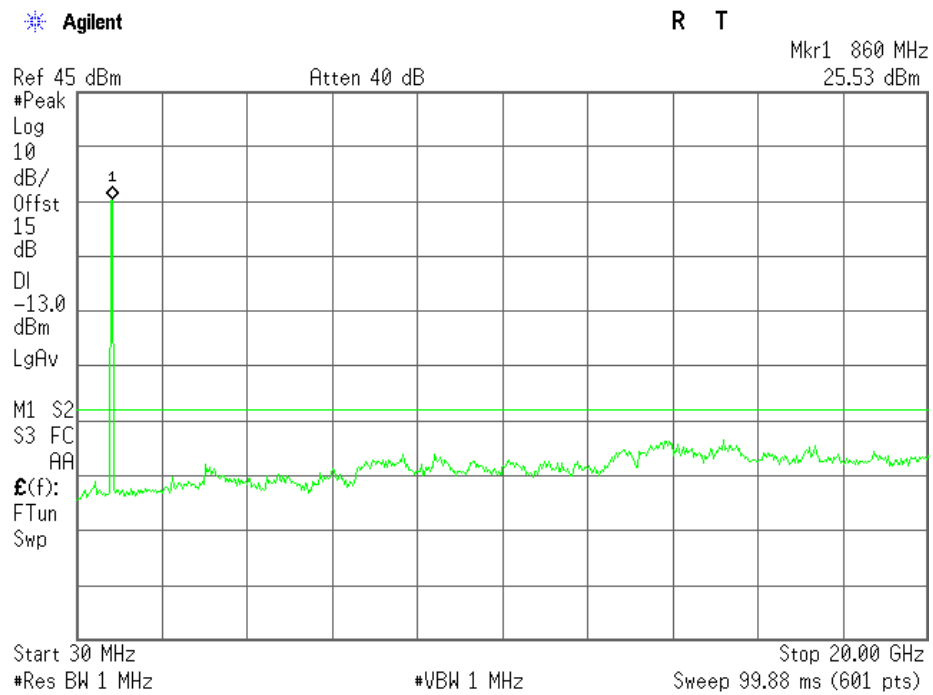
Plot when the WCDMA Band V TCH number set to 4132:



Plot when the WCDMA Band V TCH number set to 4183

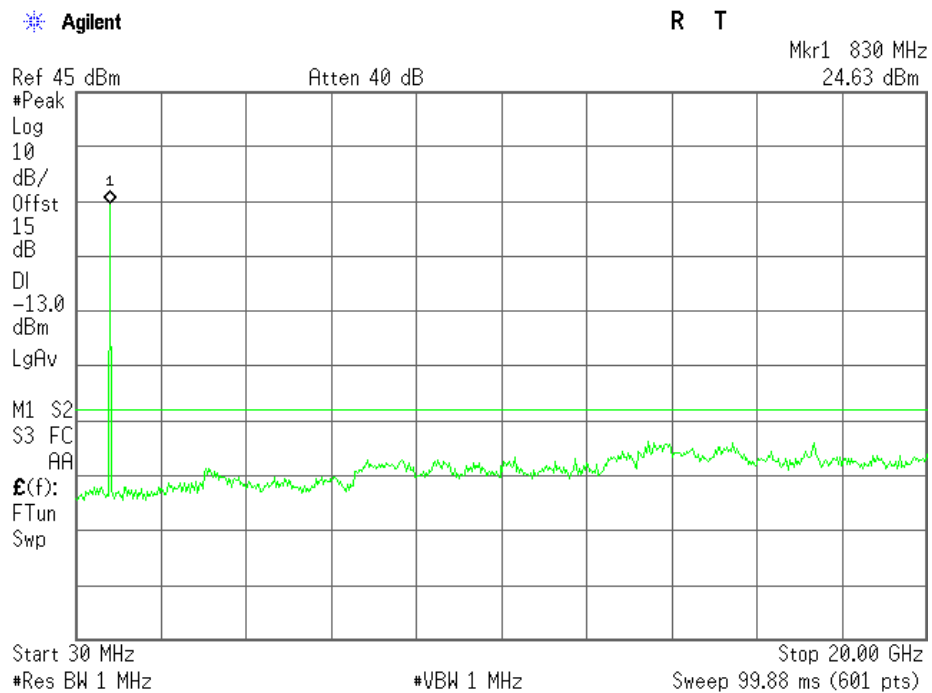


Plot when the WCDMA Band V TCH number set to 4233:

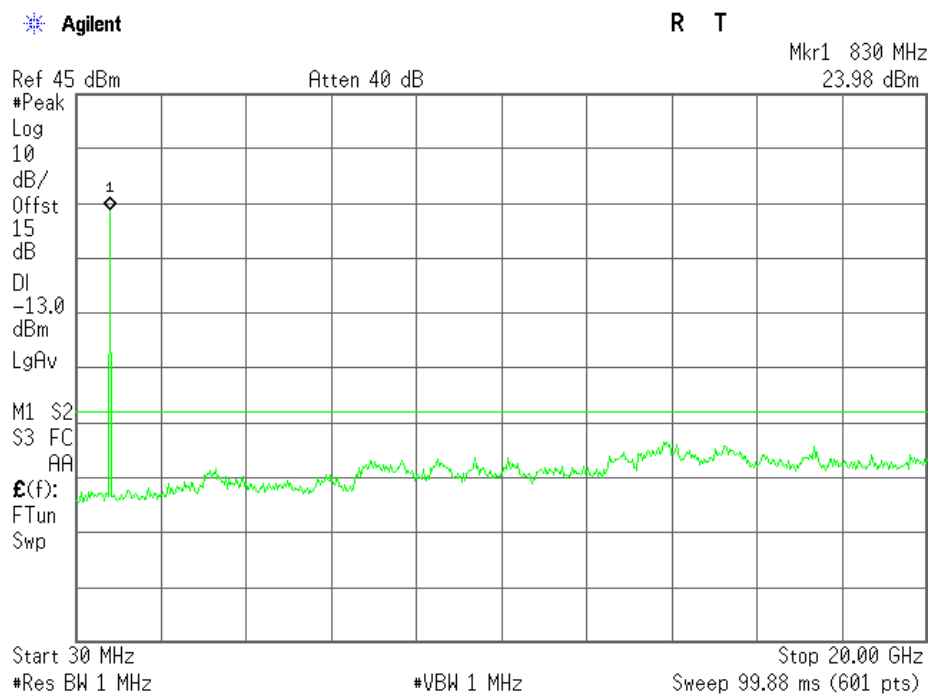


## 5.HSDPA Band V:

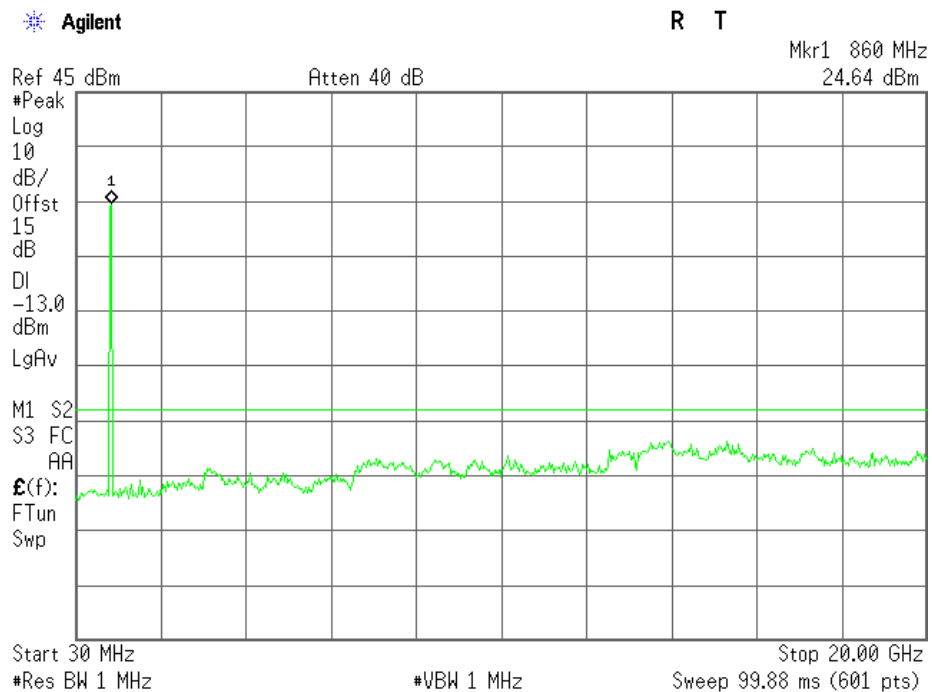
Plot when the HSDPA Band V TCH number set to 4132:



Plot when the HSDPA Band V TCH number set to 4183

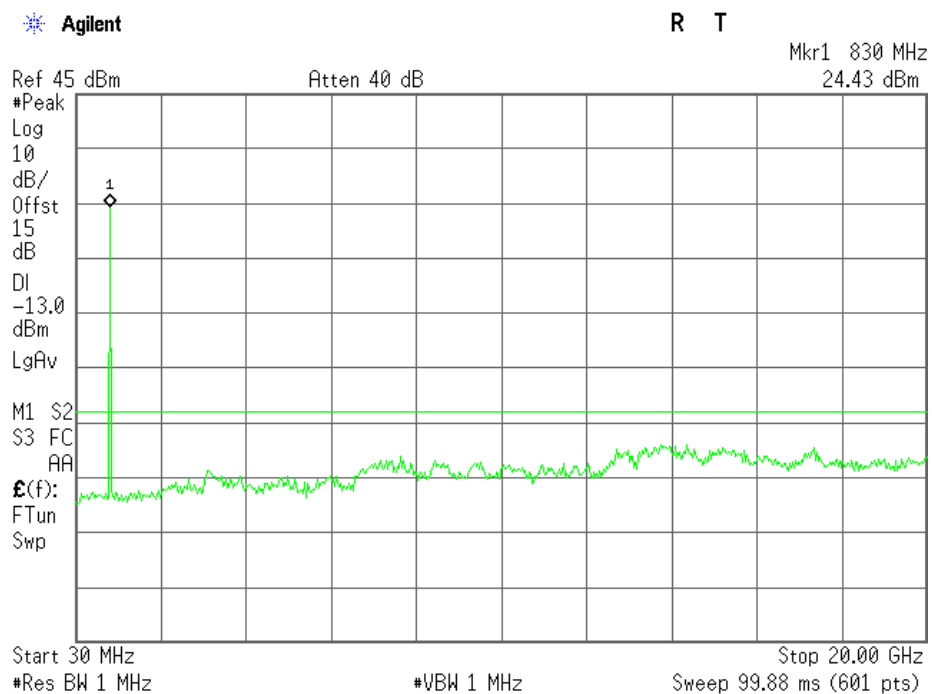


Plot when the HSDPA Band V TCH number set to 4233:

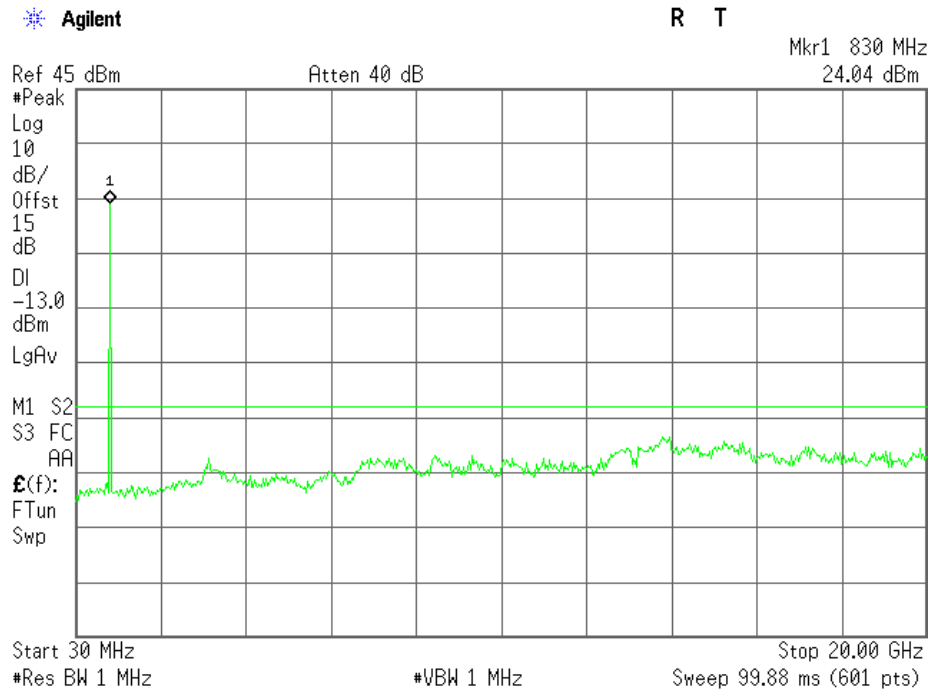


6.HSUPA Band V:

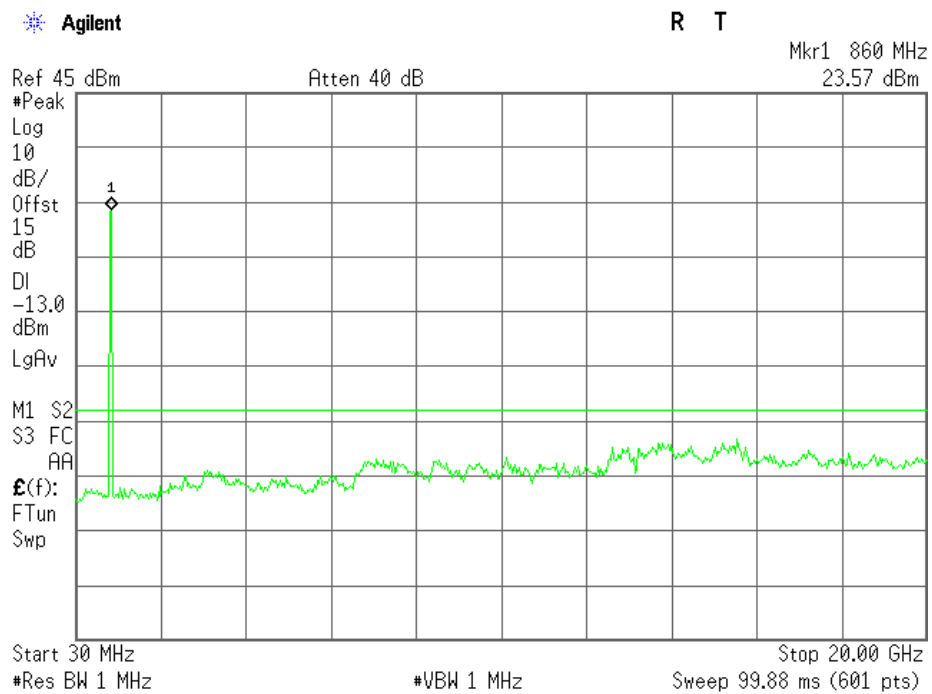
Plot when the HSUPA Band V TCH number set to 4132:



Plot when the HSUPA Band V TCH number set to 4183



Plot when the HSUPA Band V TCH number set to 4233:



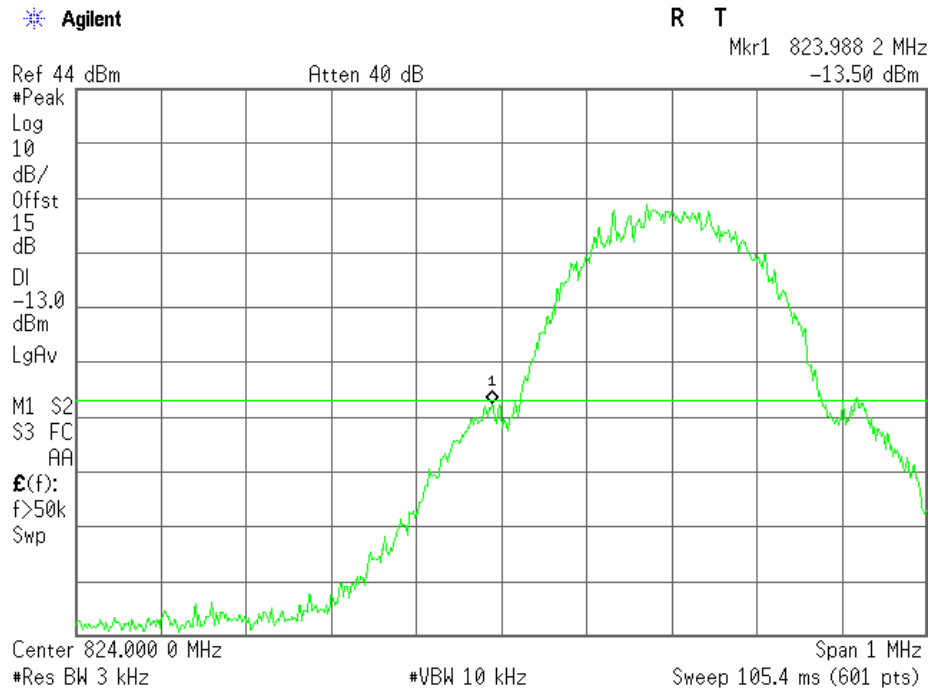
**NOTE:**

1.The marker points are the Mobile Phone and/or System Simulator transmitting frequencies which should be ignored.

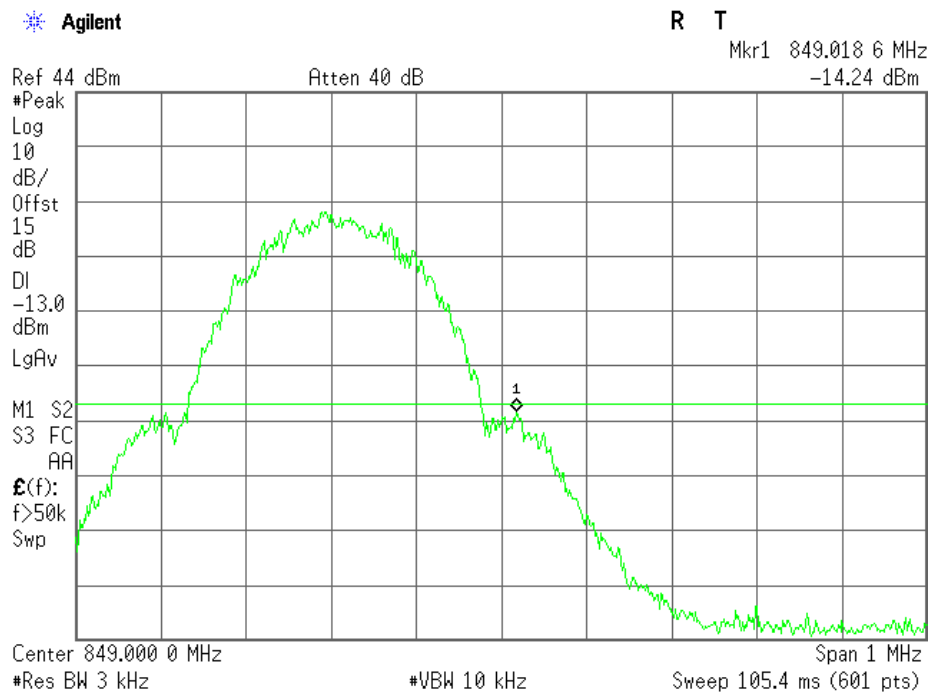
## 7. Plot for Band-edge

## 7.1 GSM850 Band

Plot when the GSM850 TCH number set to 128:

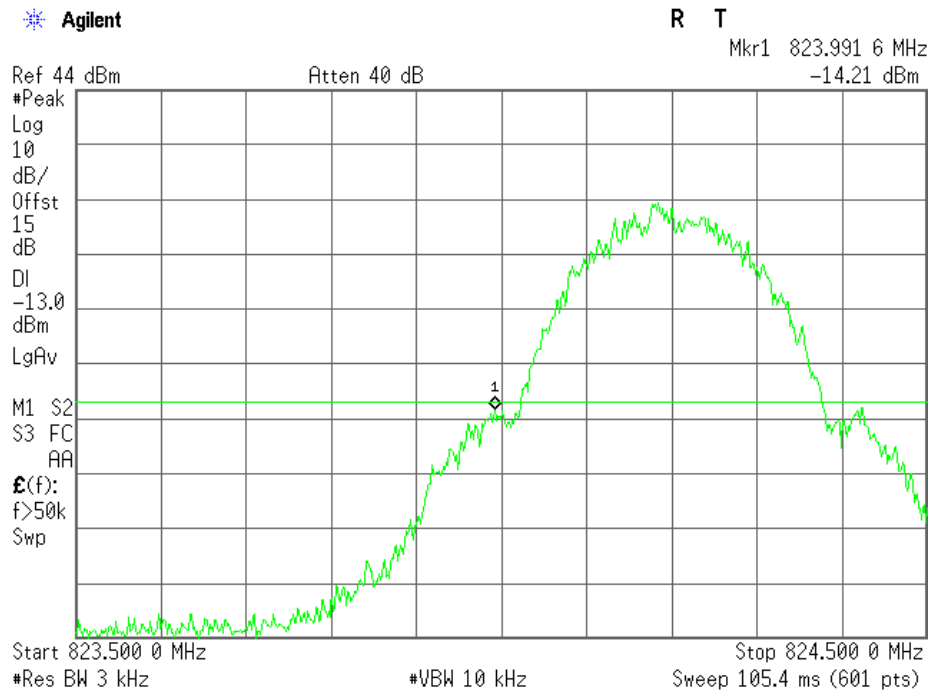


Plot when the GSM850 TCH number set to 251:

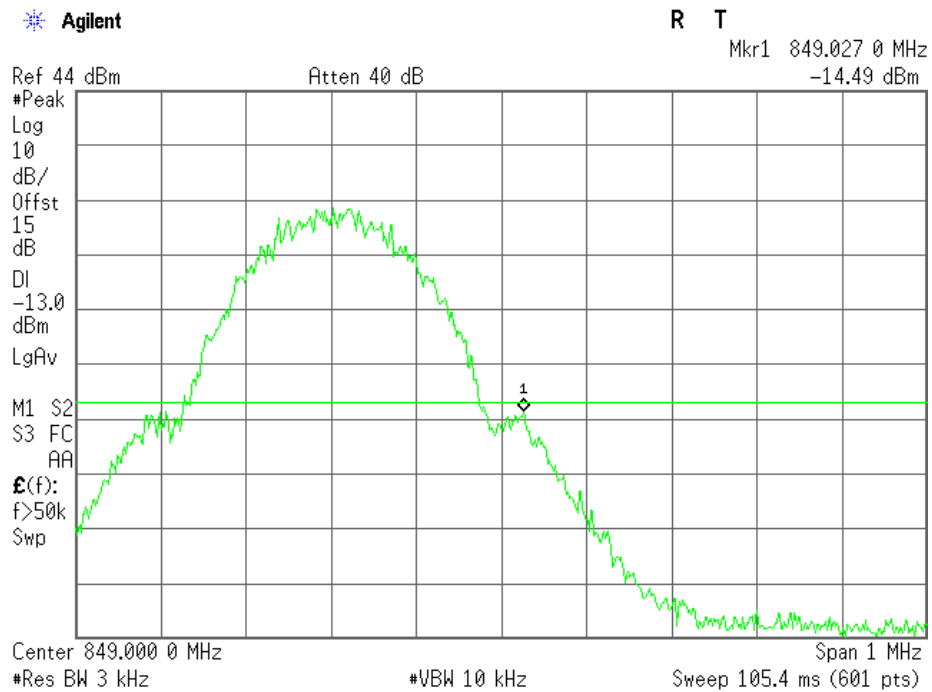


## 7.2 GSM 850(GPRS class 8) Band

Plot when the GSM850 TCH number set to 128:

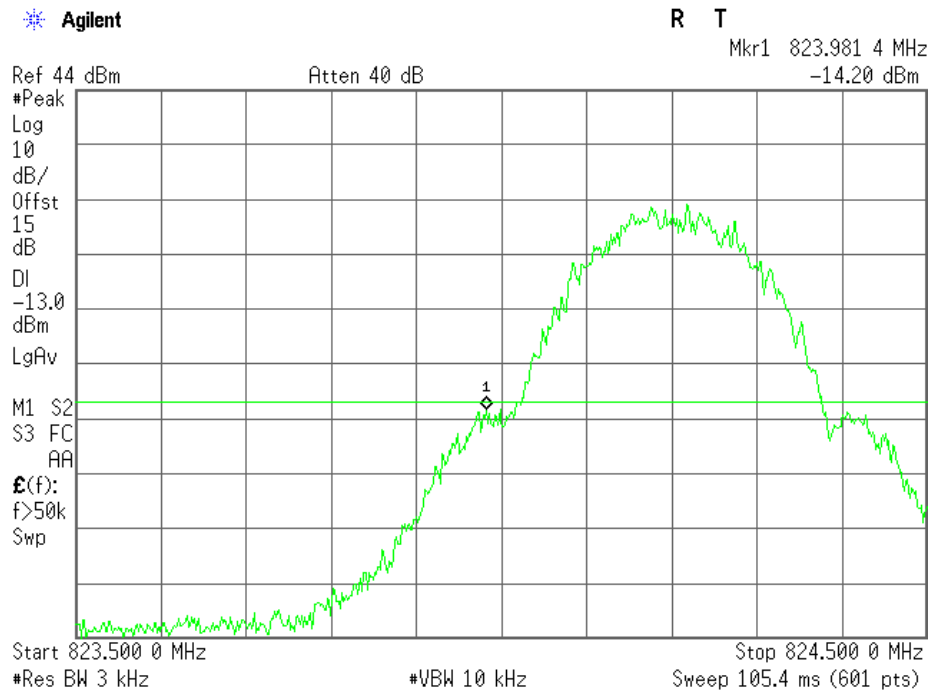


Plot when the GSM850 TCH number set to 251:

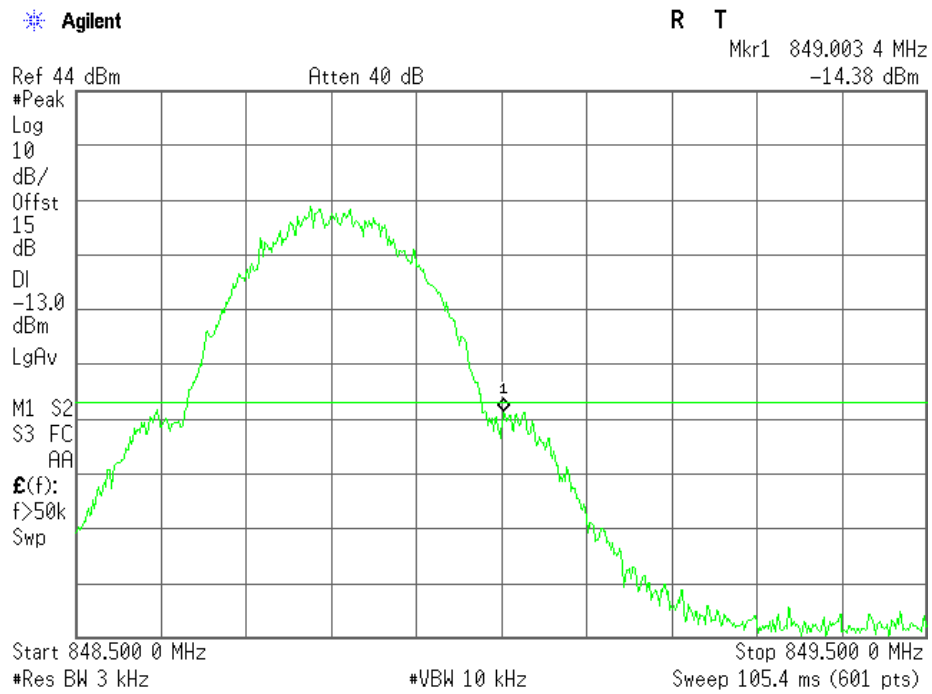


## 7.3 GSM 850(EDGE class 8) Band

Plot when the GSM850 TCH number set to 128:

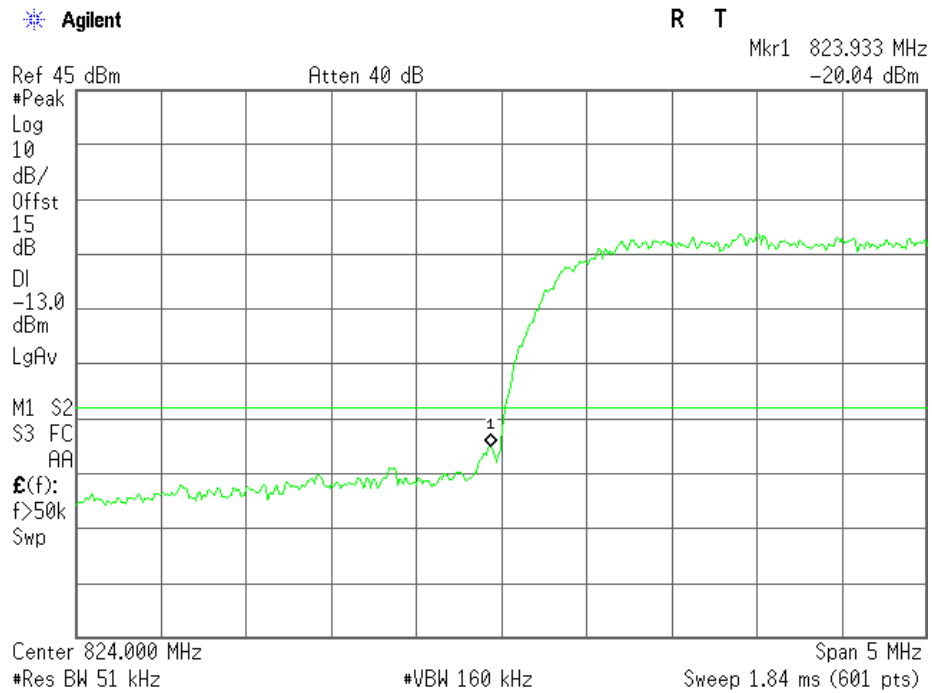


Plot when the GSM850 TCH number set to 251:

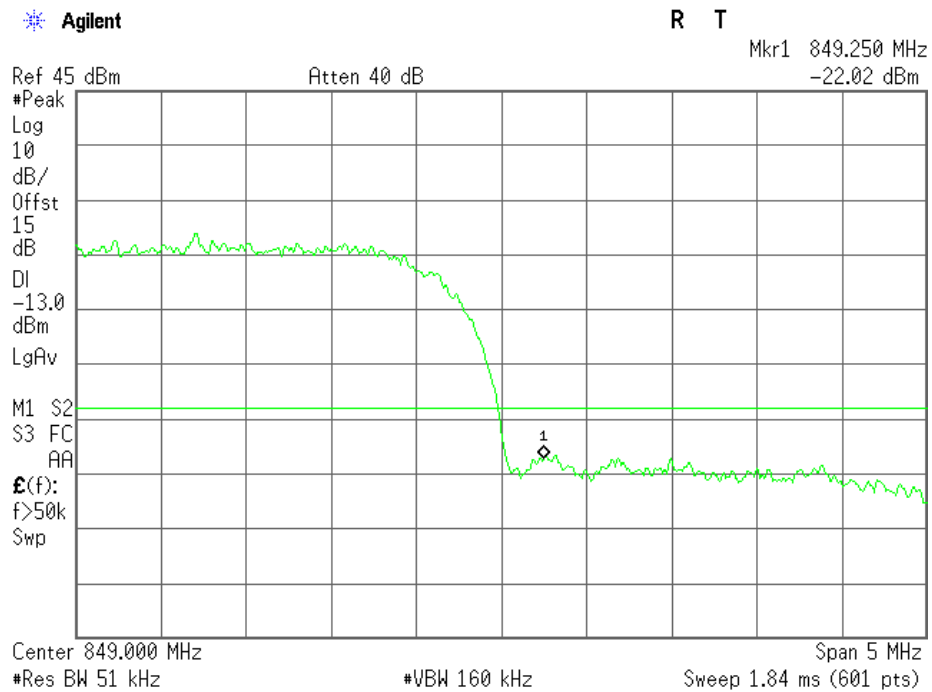


## 7.3 WCDMA Band V (RMC 12.2Kbps):

Plot when the WCDMA Band V TCH number set to 4132:

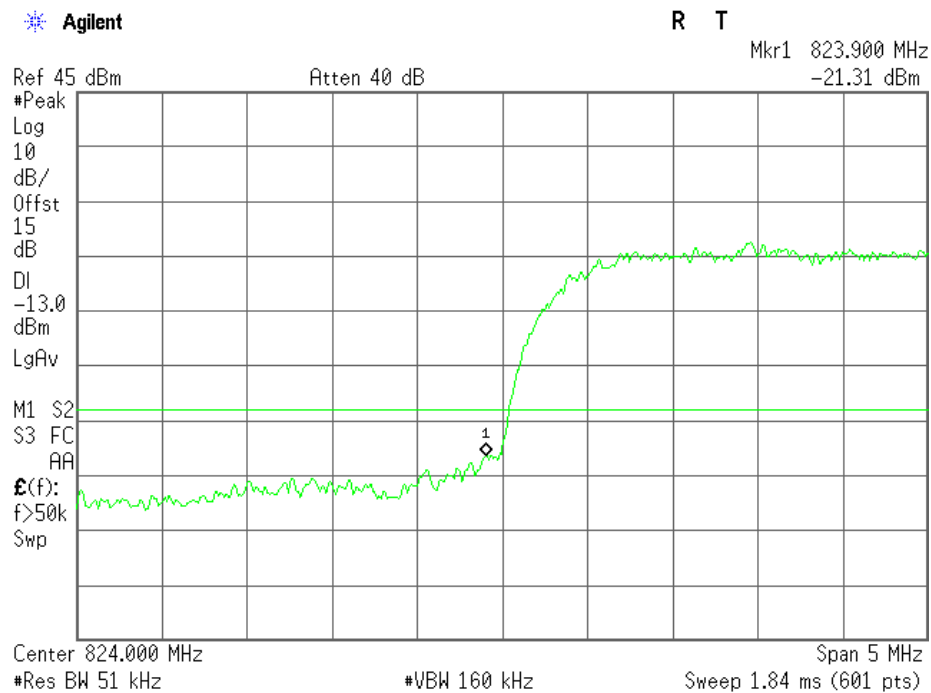


Plot when the WCDMA Band V TCH number set to 4233:

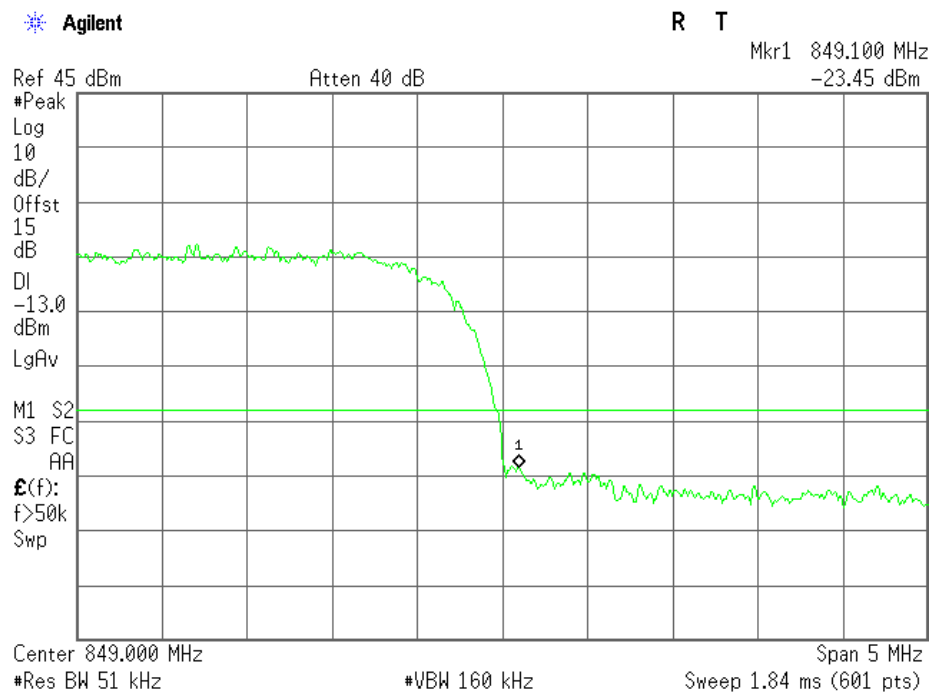


## 7.4 HSDPA Band V

Plot when the WCDMA Band V TCH number set to 4132:

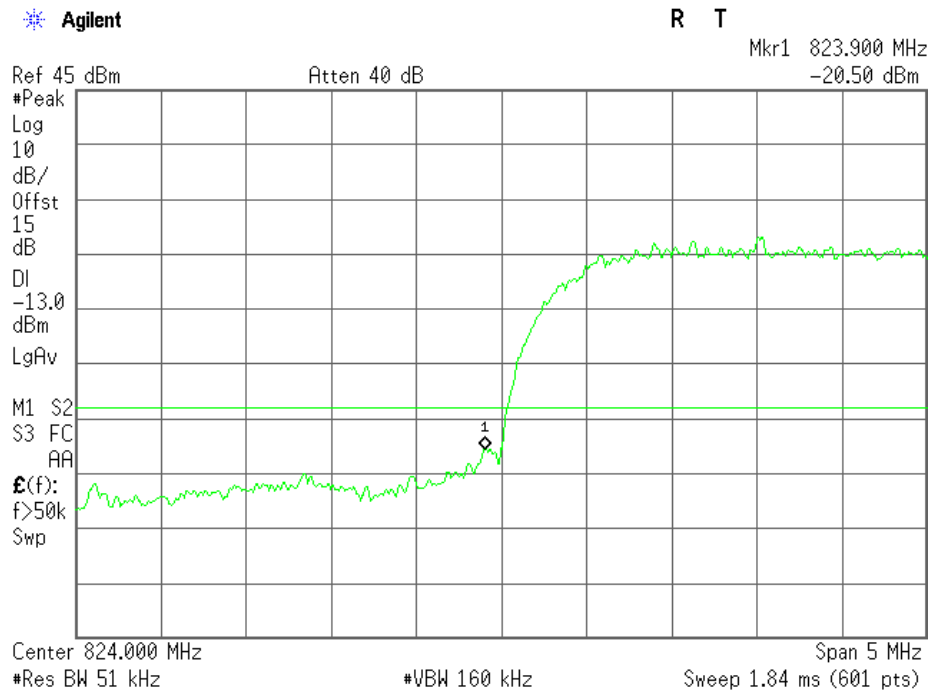


Plot when the WCDMA Band V TCH number set to 4233:

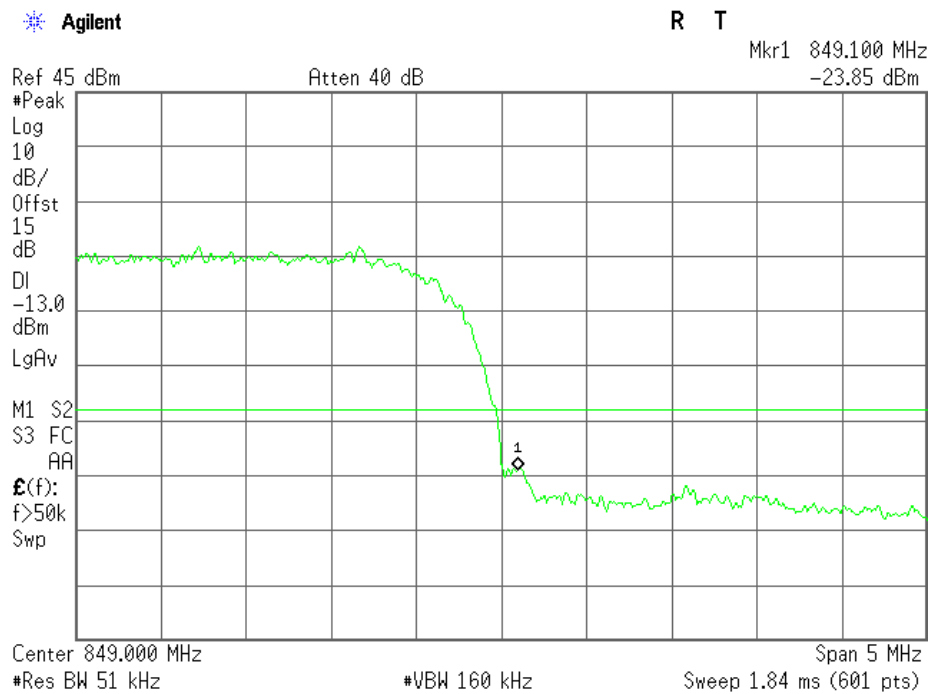


## 7.4 HSUPA Band V

Plot when the WCDMA Band V TCH number set to 4132:



Plot when the WCDMA Band V TCH number set to 4233:



## 10. Transmitter Radiated Power (EIRP/ERP)

### 10.1 Requirement

According to FCC §22.913, the ERP of Cellular mobile transmitters must not exceed 7 Watts (38.5dBm).

### 10.2 Test Procedure

1. Perform test system setup as section 5.1.1.
2. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
3. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 128 as the low channel.
4. Employ the bi-log Test Antenna as the test system receiving antenna; set the polarization of the Test Antenna to be the same as that of the EUT transmitting antenna.
5. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; actuate the Turn Table to turn from 0 degrees to 360 degrees to find the maximum reading via the Spectrum Analyzer, mark the peak; finally record the peak and the plot.
6. Set the TCH number to 190 as the middle channel, then repeat step 5.
7. Set the TCH number to 251 as the high channel, then repeat step 5.
8. For WCDMA, Set the TCH number to 4132, 4183 and 4233 as the low, middle, high channel, then repeat step 4.

### 10.3 Test Result

| Band                   | Channel | Frequency (MHz) | Measured ERP | Antenna Pol. | Limit ERP | Result |
|------------------------|---------|-----------------|--------------|--------------|-----------|--------|
|                        |         |                 | dBm          |              | DBm       |        |
| GSM 850                | 128     | 824.20          | 32.29        | V            | < 38.5    | PASS   |
|                        |         |                 | 28.55        | H            | < 38.5    | PASS   |
|                        | 190     | 836.60          | 32.38        | V            | < 38.5    | PASS   |
|                        |         |                 | 28.41        | H            | < 38.5    | PASS   |
|                        | 251     | 848.80          | 32.22        | V            | < 38.5    | PASS   |
|                        |         |                 | 28.63        | H            | < 38.5    | PASS   |
| GSM 850 (GPRS class 8) | 128     | 824.20          | 32.01        | V            | < 38.5    | PASS   |
|                        |         |                 | 28.24        | H            | < 38.5    | PASS   |
|                        | 190     | 836.60          | 32.06        | V            | < 38.5    | PASS   |
|                        |         |                 | 28.15        | H            | < 38.5    | PASS   |
|                        | 251     | 848.80          | 32.02        | V            | < 38.5    | PASS   |
|                        |         |                 | 28.09        | H            | < 38.5    | PASS   |
| GSM 850 (EDGE class 8) | 128     | 824.20          | 31.96        | V            | < 38.5    | PASS   |
|                        |         |                 | 27.52        | H            | < 38.5    | PASS   |
|                        | 190     | 836.60          | 31.86        | V            | < 38.5    | PASS   |
|                        |         |                 | 27.79        | H            | < 38.5    | PASS   |
|                        | 251     | 848.80          | 31.67        | V            | < 38.5    | PASS   |
|                        |         |                 | 27.45        | H            | < 38.5    | PASS   |
|                        |         |                 |              |              |           |        |

| Band                           | Channel | Frequency<br>(MHz) | Measured<br>ERP | Antenna | Limit ERP | Result |
|--------------------------------|---------|--------------------|-----------------|---------|-----------|--------|
|                                |         |                    | dBm             | Pol.    | DBm       |        |
| WCDMA Band V<br>(RMC 12.2Kbps) | 4132    | 826.4              | 22.36           | V       | < 38.5    | PASS   |
|                                |         |                    | 19.68           | H       | < 38.5    | PASS   |
|                                | 4182    | 836.4              | 22.19           | V       | < 38.5    | PASS   |
|                                |         |                    | 19.57           | H       | < 38.5    | PASS   |
|                                | 4233    | 846.6              | 22.08           | V       | < 38.5    | PASS   |
|                                |         |                    | 19.41           | H       | < 38.5    | PASS   |
| HSDPA Band V                   | 4132    | 826.4              | 21.46           | V       | < 38.5    | PASS   |
|                                |         |                    | 18.78           | H       | < 38.5    | PASS   |
|                                | 4182    | 836.4              | 21.54           | V       | < 38.5    | PASS   |
|                                |         |                    | 18.27           | H       | < 38.5    | PASS   |
|                                | 4233    | 846.6              | 21.32           | V       | < 38.5    | PASS   |
|                                |         |                    | 18.26           | H       | < 38.5    | PASS   |
| HSUPA Band V                   | 4132    | 826.4              | 21.08           | V       | < 38.5    | PASS   |
|                                |         |                    | 18.12           | H       | < 38.5    | PASS   |
|                                | 4182    | 836.4              | 20.82           | V       | < 38.5    | PASS   |
|                                |         |                    | 17.90           | H       | < 38.5    | PASS   |
|                                | 4233    | 846.6              | 20.65           | V       | < 38.5    | PASS   |
|                                |         |                    | 17.75           | H       | < 38.5    | PASS   |

## **11. Radiated Spurious Emission**

### **11.1 Requirement**

According to FCC §22.917(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.

### **11.2 Test Procedure**

1. Perform test system setup as section 5.1.2.
2. Make a limit line whose value is -13dBm on the Spectrum Analyzer, and set the RBW of the Spectrum Analyzer to 1MHz.
3. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 128 as the low channel.
4. Employ the bi-log Test Antenna as the test system receiving antenna and set the frequency range of the Spectrum Analyzer from 30MHz to 3GHz.
5. The measurement is performed with the Test Antenna at both horizontal and vertical polarization respectively. Set the polarization of the Test Antenna to be horizontal.
6. Actuate the Turn Table to turn from 0 degrees to 360 degrees to find the maximum reading via the Spectrum Analyzer, mark the fundamental frequency and the harmonics thereof, after then record the harmonics and the plot.
7. Set the polarization of the Test Antenna to be vertical, then repeat step 6.
8. Employ the horn Test Antenna as the test system receiving antenna and set the frequency range of the Spectrum Analyzer from 3GHz to 10th harmonic of the fundamental frequency (here used 10GHz), then repeat step 5 to 7.
9. Set the TCH number to 190 as the middle channel, then repeat step 4 to 8.
10. Set the TCH number to 251 as the high channel, then repeat step 4 to 8.
11. For WCDMA, Set the TCH number to 4132, 4183 and 4233 as the low, middle, high channel, then repeat step 4 to 8.

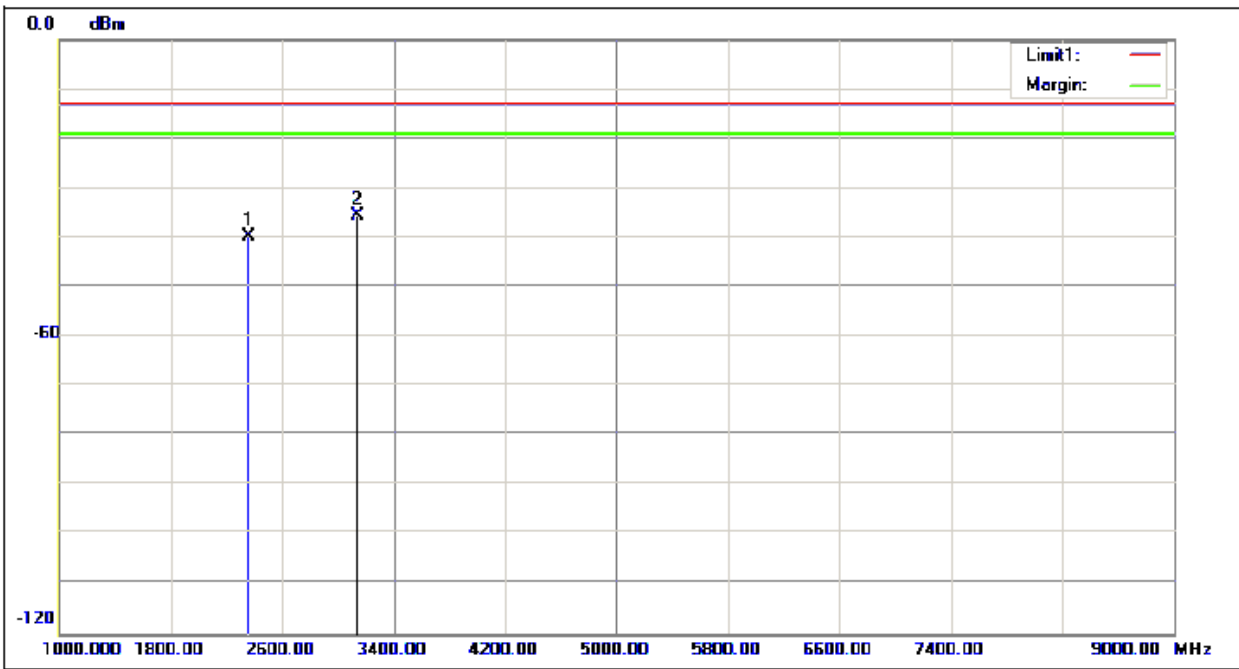
### 11.3 Test Result

Form 9KHz to 1000MHz:

The low frequency, which started from 9 kHz to 1000MHz, was pre-scanned and the result which was 20dB lower than the limit line, it need not be reported, per FCC Part2.1057(c).

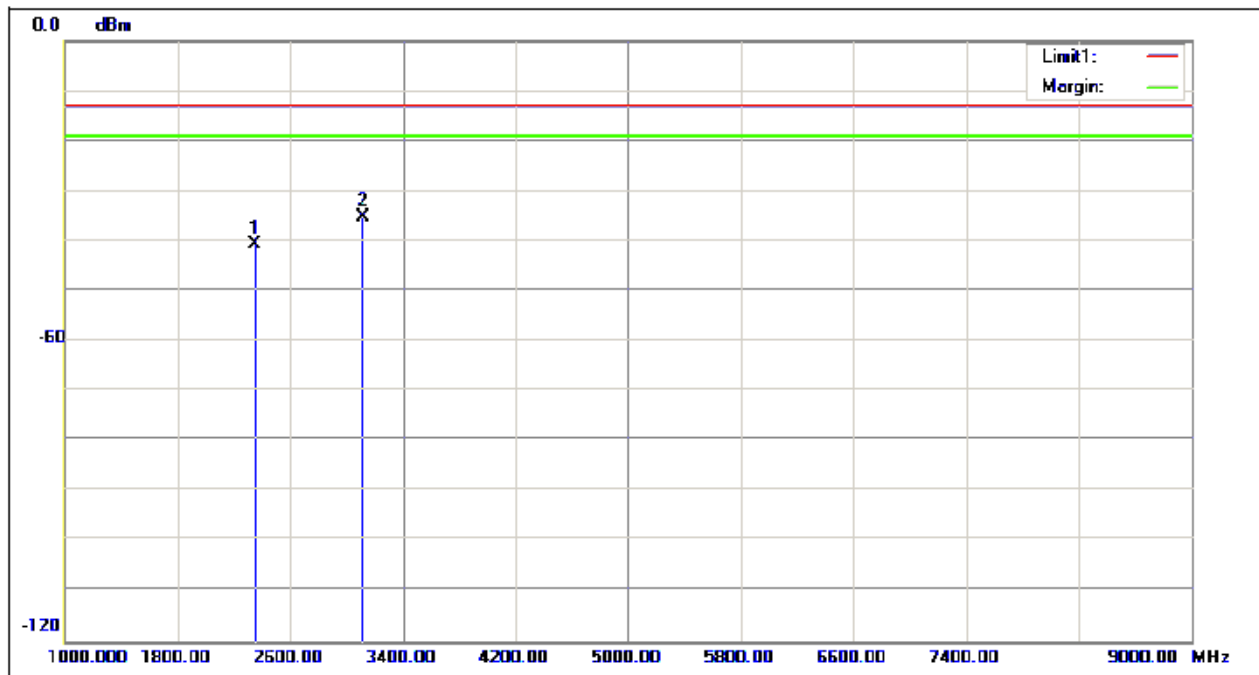
Form 1000MHz to 9000MHz:

1. GSM850 Band



| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2360.000           | -41.71           | 1.96                  | -39.75          | -13.00         | -26.75         | 250            | 38               | peak   |
| 2   | 3136.000           | -39.96           | 4.53                  | -35.43          | -13.00         | -22.43         | 250            | 117              | peak   |

Channel 190\_Horizontal

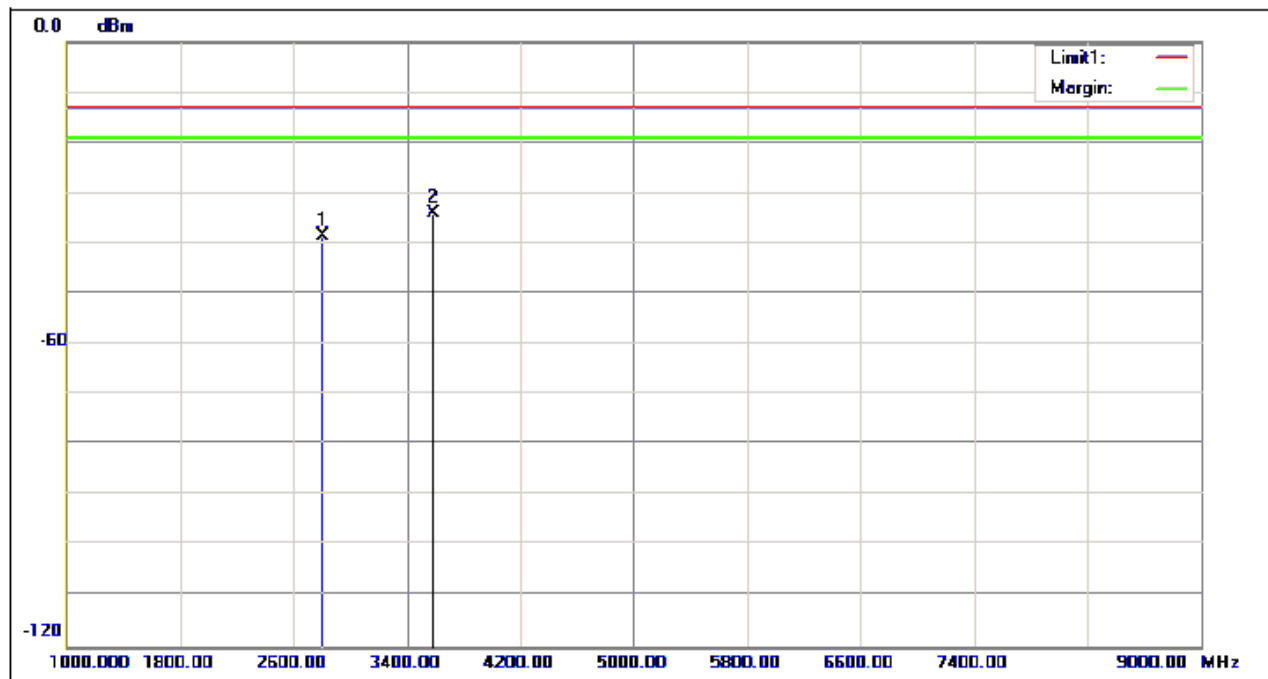


| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2352.000           | -43.04           | 2.40                  | -40.64          | -13.00         | -27.64         | 250            | 312              | peak   |
| 2   | 3120.000           | -40.16           | 4.81                  | -35.35          | -13.00         | -22.35         | 250            | 132              | peak   |

Channel 190\_Vertical

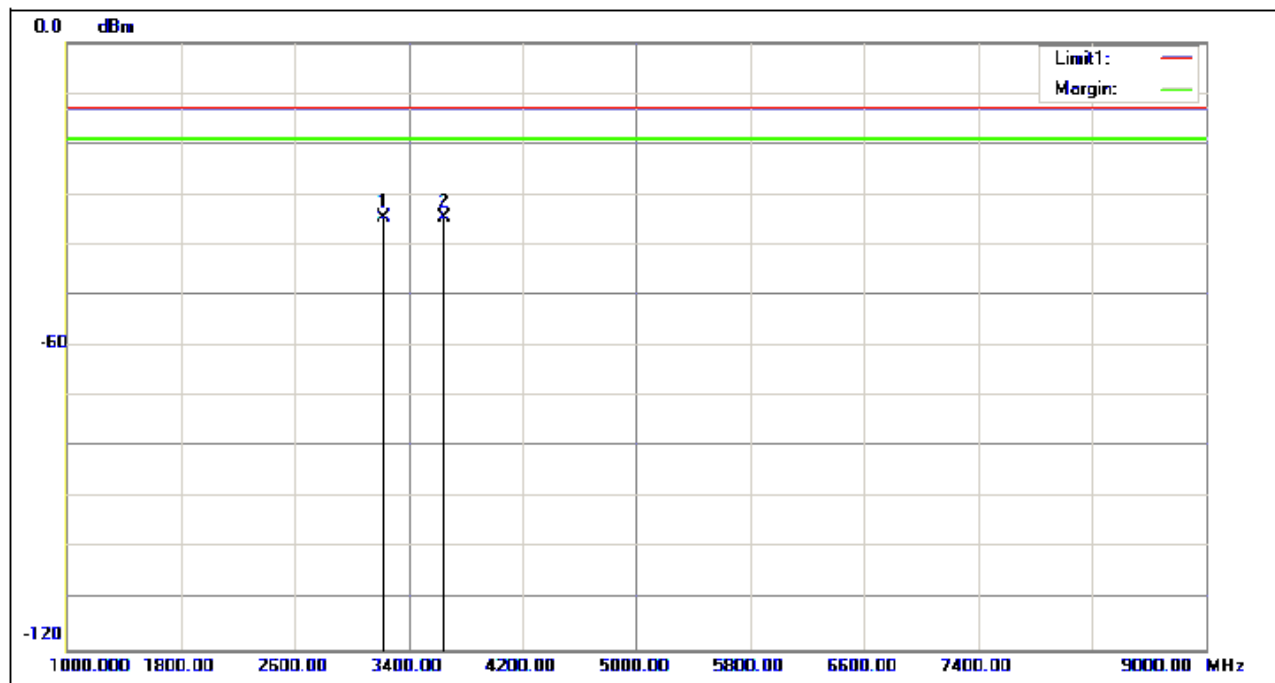
Note: Only the worst test data (GSM850 Channel 190 Mode) was display on the test report according to the recorded data for all the test channel modes.

## 2. GSM850 (GPRS class 8) Band



| No. | Frequency | Reading | Correct    | Result | Limit  | Margin | Height | Degree | Remark |
|-----|-----------|---------|------------|--------|--------|--------|--------|--------|--------|
|     | (MHz)     | (dBm)   | Factor(dB) | (dBm)  | (dBm)  | (dB)   | (cm)   | (deg.) |        |
| 1   | 2808.000  | -42.22  | 3.64       | -38.58 | -13.00 | -25.58 | 250    | 352    | peak   |
| 2   | 3584.000  | -39.45  | 5.31       | -34.14 | -13.00 | -21.14 | 250    | 219    | peak   |

Channel 190\_Horizontal

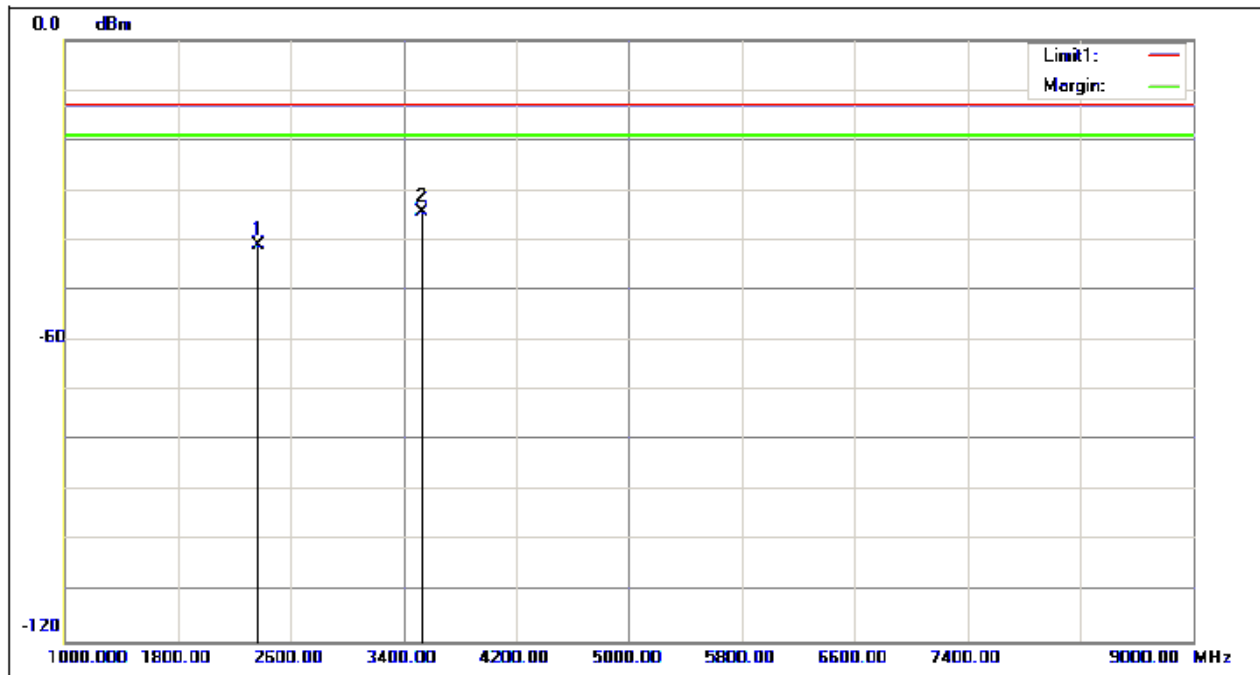


| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 3224.000           | -40.10           | 5.33                  | -34.77          | -13.00         | -21.77         | 250            | 105              | peak   |
| 2   | 3648.000           | -40.04           | 5.46                  | -34.58          | -13.00         | -21.58         | 250            | 118              | peak   |

#### Channel 190\_Vertical

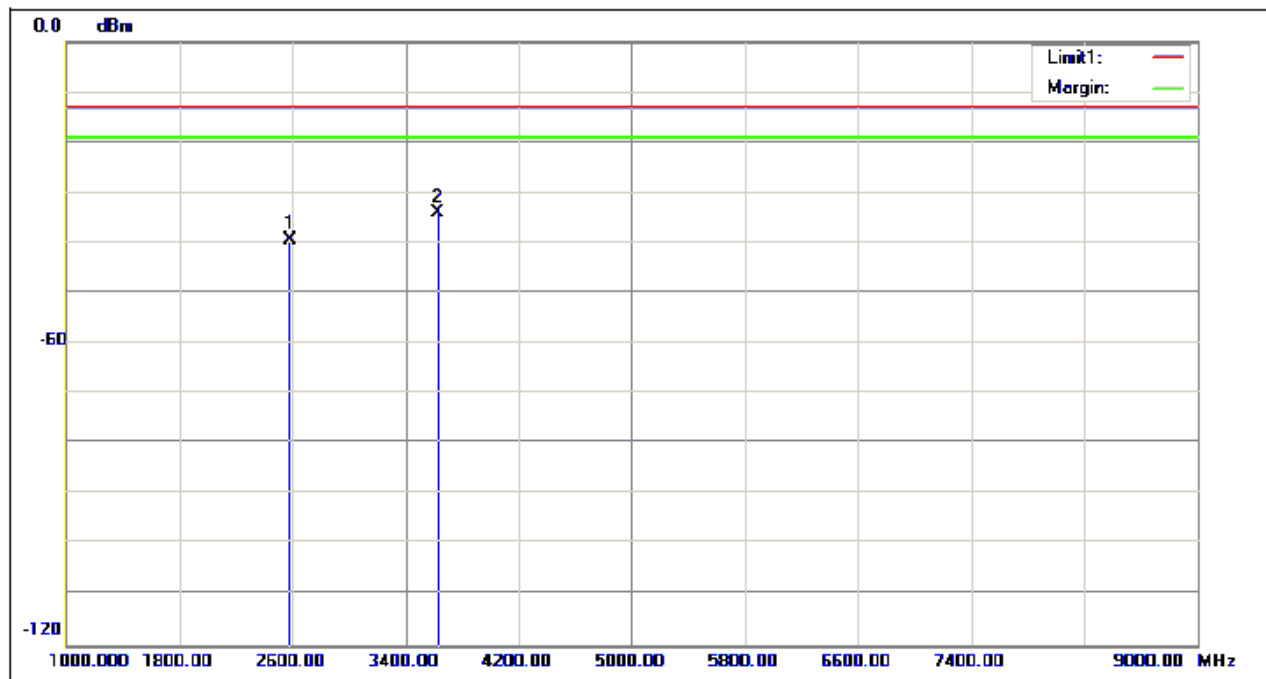
Note: Only the worst test data (GSM850 GPRS class 8 Band Channel 190 Mode) was display on the test report according to the recorded data for all the test channel modes.

## 3. GSM850 (EDGE class 8) Band



| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2368.000           | -42.90           | 1.89                  | -41.01          | -13.00         | -28.01         | 250            | 148              | peak   |
| 2   | 3536.000           | -39.62           | 5.14                  | -34.48          | -13.00         | -21.48         | 250            | 330              | peak   |

Channel 190\_Horizontal

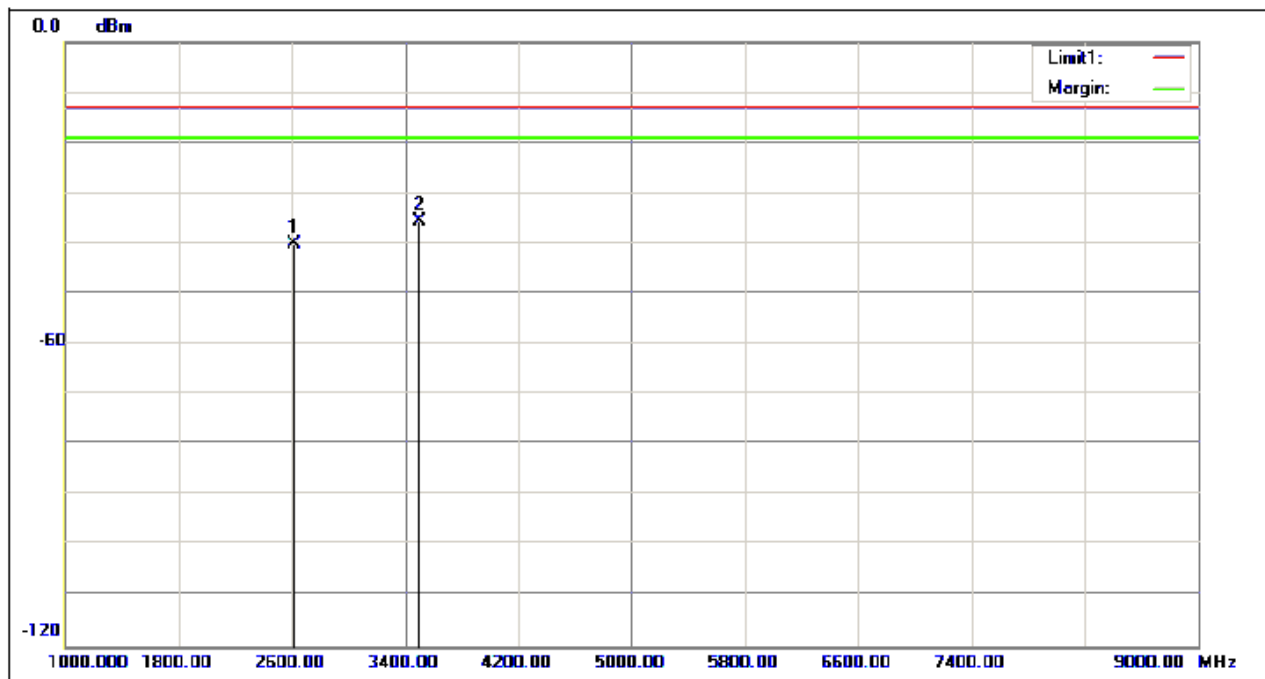


| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2584.000           | -41.74           | 2.39                  | -39.35          | -13.00         | -26.35         | 250            | 69               | peak   |
| 2   | 3632.000           | -39.67           | 5.51                  | -34.16          | -13.00         | -21.16         | 250            | 246              | peak   |

### Channel 190\_Vertical

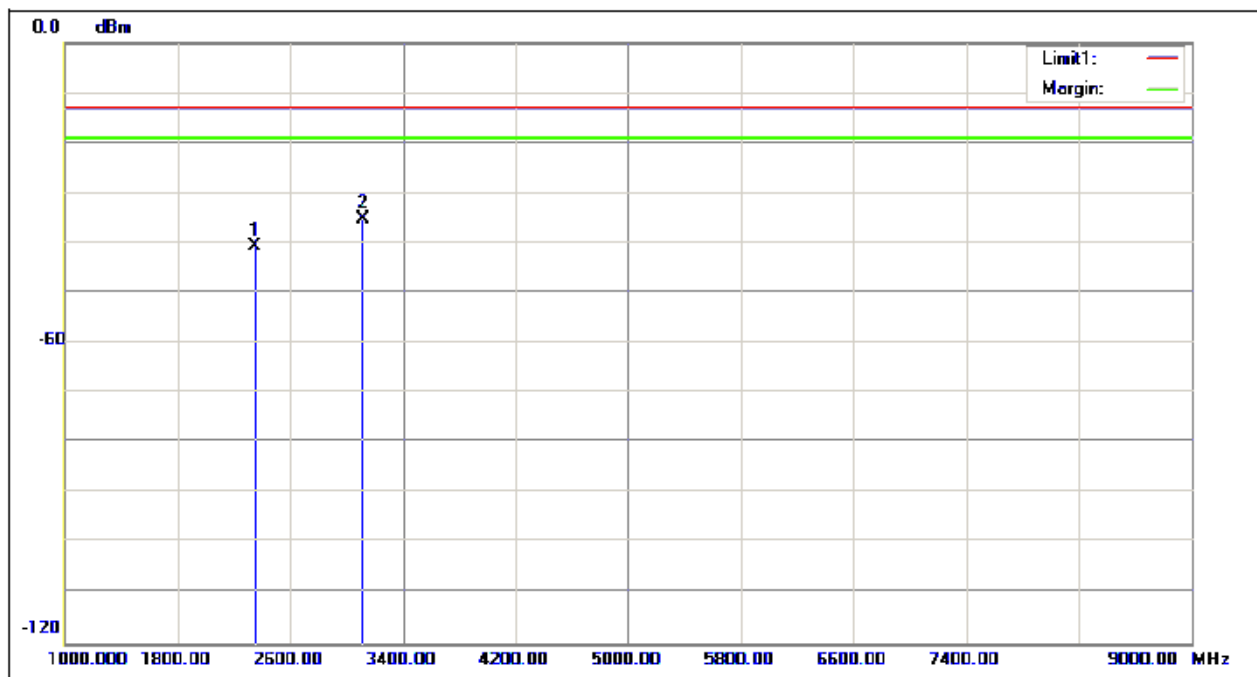
Note: Only the worst test data (GSM850 EDGE class 8 Band Channel 190 Mode) was display on the test report according to the recorded data for all the test channel modes.

## 4. Table for WCDMA Band V the Harmonics



| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2616.000           | -42.76           | 2.57                  | -40.19          | -13.00         | -27.19         | 250            | 183              | peak   |
| 2   | 3504.000           | -40.53           | 4.93                  | -35.60          | -13.00         | -22.60         |                |                  | peak   |

Channel 4182\_Horizontal

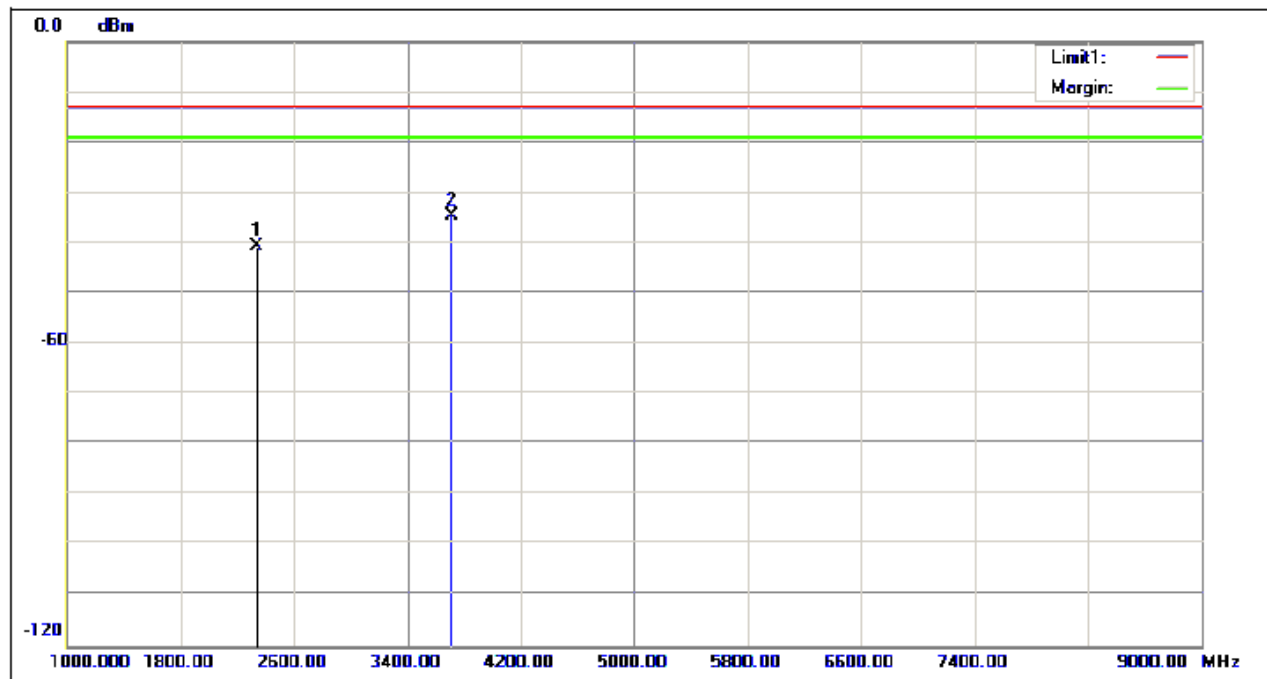


| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2352.000           | -43.04           | 2.40                  | -40.64          | -13.00         | -27.64         | 250            | 312              | peak   |
| 2   | 3120.000           | -40.16           | 4.81                  | -35.35          | -13.00         | -22.35         | 250            | 132              | peak   |

#### Channel 4182\_Vertical

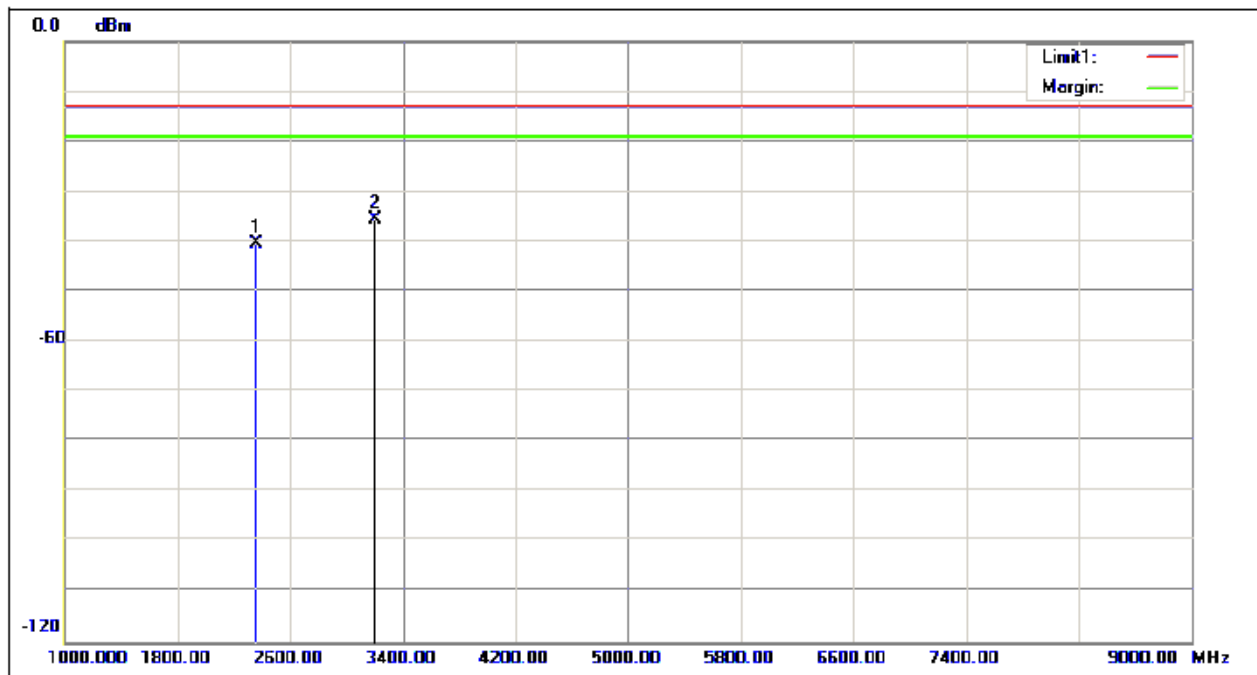
Note: Only the worst test data (WCDMA Band V Channel 4182 Mode) was display on the test report according to the recorded data for all the test channel mode.

## 5. Table for HSDPA Band V the Harmonics



| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2336.000           | -42.80           | 2.17                  | -40.63          | -13.00         | -27.63         | 250            | 232              | peak   |
| 2   | 3712.000           | -40.24           | 5.52                  | -34.72          | -13.00         | -21.72         |                |                  | peak   |

Channel 4182\_Horizontal

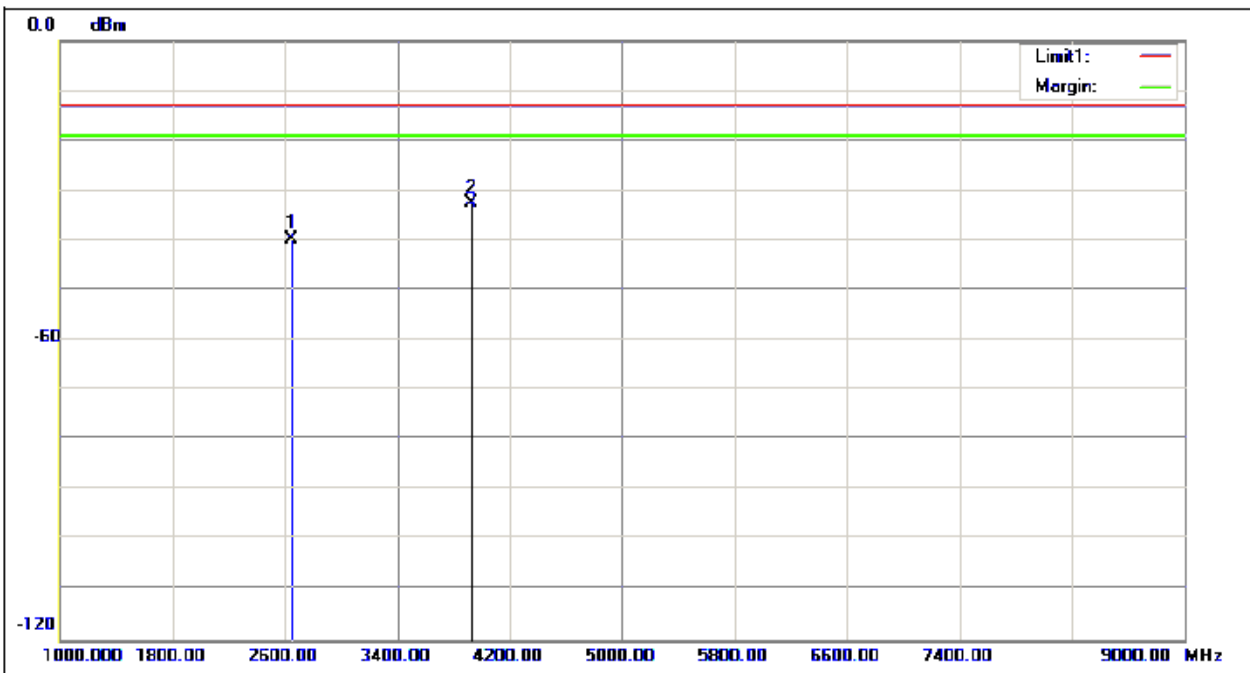


| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2360.000           | -42.55           | 2.34                  | -40.21          | -13.00         | -27.21         | 250            | 150              | peak   |
| 2   | 3200.000           | -40.79           | 5.17                  | -35.62          | -13.00         | -22.62         | 250            | 119              | peak   |

#### Channel 4182\_Vertical

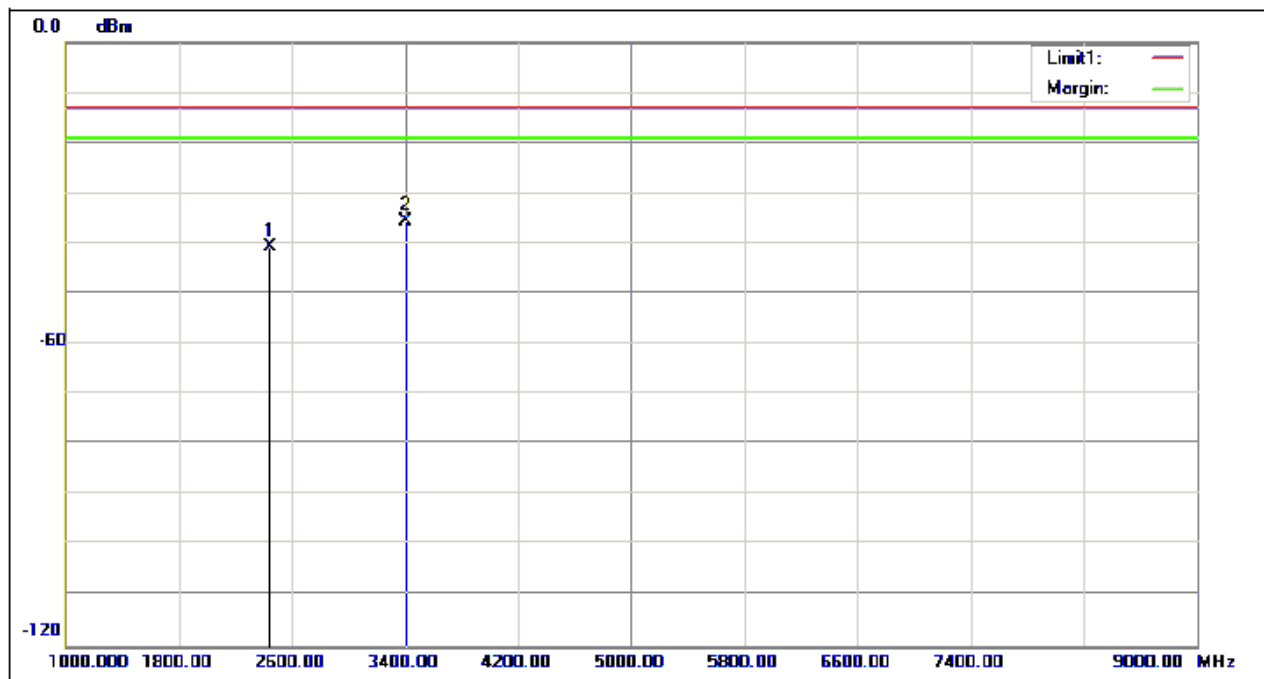
Note: Only the worst test data (HSDPA Band V Channel 4182 Mode) was display on the test report according to the recorded data for all the test channel modes

## 6. Table for HSUPA Band V the Harmonics



| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2648.000           | -42.89           | 3.16                  | -39.73          | -13.00         | -26.73         | 250            | 347              | peak   |
| 2   | 3928.000           | -39.53           | 7.12                  | -32.41          | -13.00         | -19.41         | 250            | 347              | peak   |

Channel 4182\_Horizontal



| No. | Frequency<br>(MHz) | Reading<br>(dBm) | Correct<br>Factor(dB) | Result<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|------------------|-----------------------|-----------------|----------------|----------------|----------------|------------------|--------|
| 1   | 2448.000           | -42.66           | 2.06                  | -40.60          | -13.00         | -27.60         | 250            | 110              | peak   |
| 2   | 3408.000           | -40.19           | 4.60                  | -35.59          | -13.00         | -22.59         | 250            | 124              | peak   |

## Channel 4182\_Verical

Note: Only the worst test data (HSUPA Band V Channel 4182 Mode) was display on the test report according to the recorded data for all the test channel mode

## 12. Frequency Stability

### 12.1 Frequency Stability Requirement

According to FCC §22.355, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

According to FCC §2.1055, the test conditions are:

(a) Temperature:

The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.

(b) Primary Supply Voltage:

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.

### 12.2 Test Procedure

1. Perform test system setup as section 5.1.3.
2. Set the voltage of the DC Power Supply to normal supply voltage (here used 3.7V) and the temperature of the Temperature Chamber to vary from -30°C to +50°C at intervals of 10°C.
3. At each temperature level, the EUT is powered off and kept in the Temperature Chamber for two hours.
4. After sufficient stabilization, turn on the EUT, command it via the System Simulator (SS) to operate at the maximum output power i.e. Power Control Level (PCL) = 0 and Power Class = 1, and then establish a communication link between the EUT and the SS.
5. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 128 as the low channel.
6. The frequency deviation is measured (directly read from the SS, which can report the parameter) within three minutes.
7. Set the TCH number to 190 as the middle channel, then repeat step 5.
8. Set the TCH number to 251 as the high channel, then repeat step 5.
9. Adjust the temperature of the Temperature Chamber as specified in step 2, then repeat step 3 to 7.
10. Set the voltage of the DC Power Supply to high extreme supply voltage (here used 4.2V) and the temperature of the Temperature Chamber to normal (here used +22°C), then repeat step 3 to 8.
11. Set the voltage of the DC Power Supply to low extreme supply voltage (here used 3.6V) and the temperature of the Temperature Chamber to normal (here used +22°C), then repeat step 3 to 8.

**12.3 Test Result**

## 1. Tablet for GSM850 band:

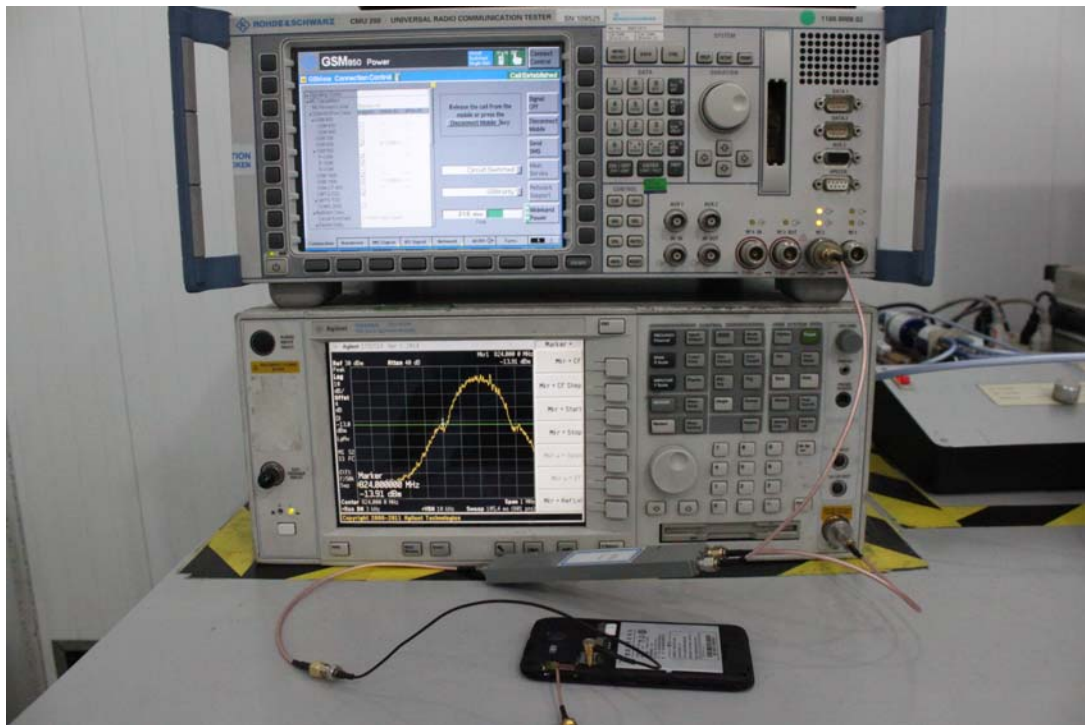
| No.          | Test Conditions |             | Frequency Deviation (Hz) at Channels Used |        |        |                                                                                           |
|--------------|-----------------|-------------|-------------------------------------------|--------|--------|-------------------------------------------------------------------------------------------|
|              | Voltage         | Temperature | 128                                       | 190    | 251    | Limit (±2.5ppm)                                                                           |
| 1            | V-nor           | -30°C       | -48.24                                    | -49.86 | -49.65 | (a) ±2060Hz for 128 Channel<br>(b) ±2096Hz for 190 Channel<br>(c) ±3055Hz for 251 Channel |
| 2            |                 | -20°C       | -41.62                                    | -40.35 | -40.28 |                                                                                           |
| 3            |                 | -10°C       | -36.48                                    | -34.24 | -35.41 |                                                                                           |
| 4            |                 | 0°C         | -30.91                                    | -29.26 | -30.85 |                                                                                           |
| 5            |                 | +10°C       | -35.34                                    | -36.71 | -35.74 |                                                                                           |
| 6            |                 | +20°C       | -37.42                                    | -31.34 | -32.16 |                                                                                           |
| 7            |                 | +30°C       | -42.76                                    | -39.92 | -38.19 |                                                                                           |
| 8            |                 | +40°C       | -45.25                                    | -41.64 | -42.93 |                                                                                           |
| 9            |                 | +50°C       | -46.53                                    | -48.87 | -48.26 |                                                                                           |
| 10           | V-high          | +22°C       | -39.23                                    | -36.06 | -37.62 |                                                                                           |
| 11           | V-low           | +22°C       | -42.80                                    | -45.16 | -44.51 |                                                                                           |
| Result: PASS |                 |             |                                           |        |        |                                                                                           |

## 2. Tablet for WCDMA Band V band:

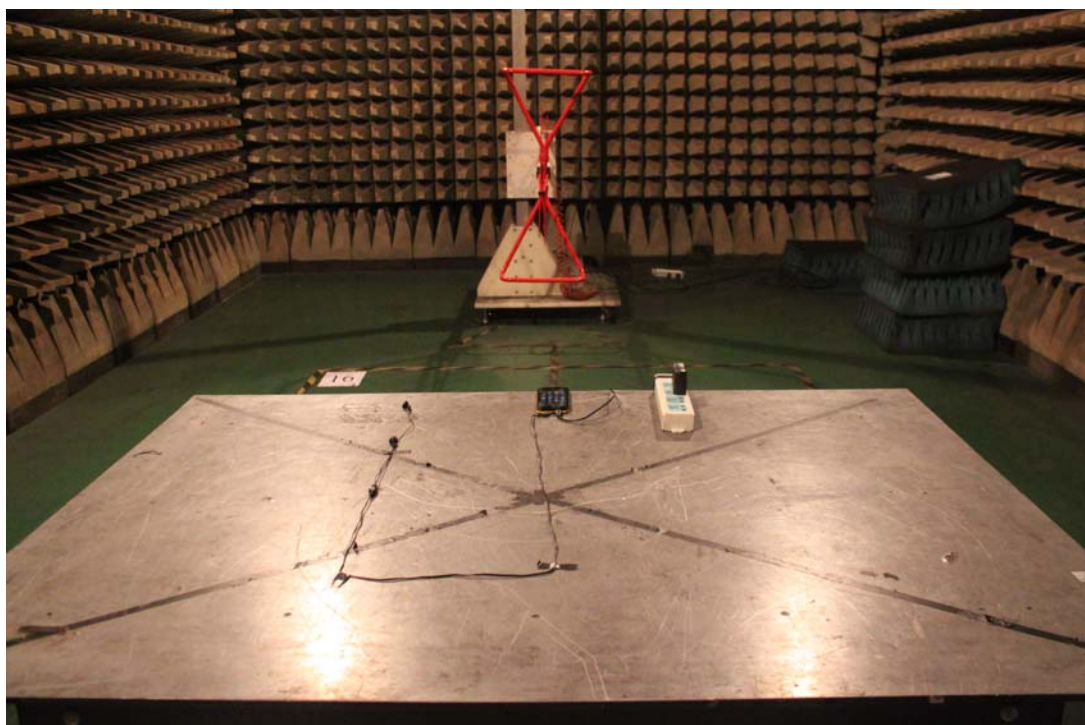
| No.          | Test Conditions |             | Frequency Deviation (Hz) at Channels Used |        |        |                                                                                           |
|--------------|-----------------|-------------|-------------------------------------------|--------|--------|-------------------------------------------------------------------------------------------|
|              | Voltage         | Temperature | 128                                       | 190    | 251    | Limit (±2.5ppm)                                                                           |
| 1            | V-nor           | -30°C       | -45.26                                    | -40.23 | -47.58 | (d) ±2060Hz for 128 Channel<br>(e) ±2096Hz for 190 Channel<br>(f) ±3055Hz for 251 Channel |
| 2            |                 | -20°C       | -40.12                                    | -38.54 | -35.96 |                                                                                           |
| 3            |                 | -10°C       | -32.32                                    | -33.29 | -30.16 |                                                                                           |
| 4            |                 | 0°C         | -26.21                                    | -25.14 | -29.46 |                                                                                           |
| 5            |                 | +10°C       | -31.15                                    | -34.58 | -32.43 |                                                                                           |
| 6            |                 | +20°C       | -30.79                                    | -27.61 | -30.05 |                                                                                           |
| 7            |                 | +30°C       | -45.13                                    | -36.44 | -43.78 |                                                                                           |
| 8            |                 | +40°C       | -42.92                                    | -43.08 | -41.50 |                                                                                           |
| 9            |                 | +50°C       | -41.32                                    | -42.29 | -43.76 |                                                                                           |
| 10           | V-high          | +22°C       | -38.74                                    | -37.61 | -39.45 |                                                                                           |
| 11           | V-low           | +22°C       | -35.14                                    | -34.41 | -35.52 |                                                                                           |
| Result: PASS |                 |             |                                           |        |        |                                                                                           |

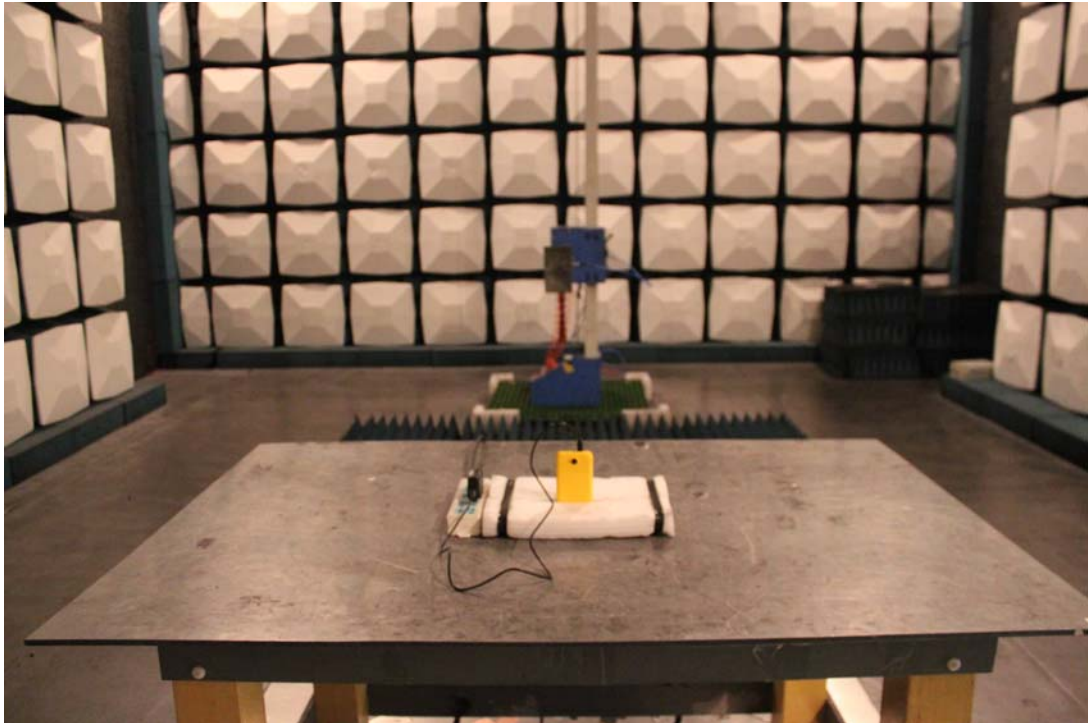
**APPENDIX 1**  
**PHOTOGRAPHS OF TEST SETUP**

## CONDUCTED TEST SETUP



## RADIATED EMISSION TEST SETUP





**APPENDIX 2**  
**PHOTOGRAPHS OF EUT**

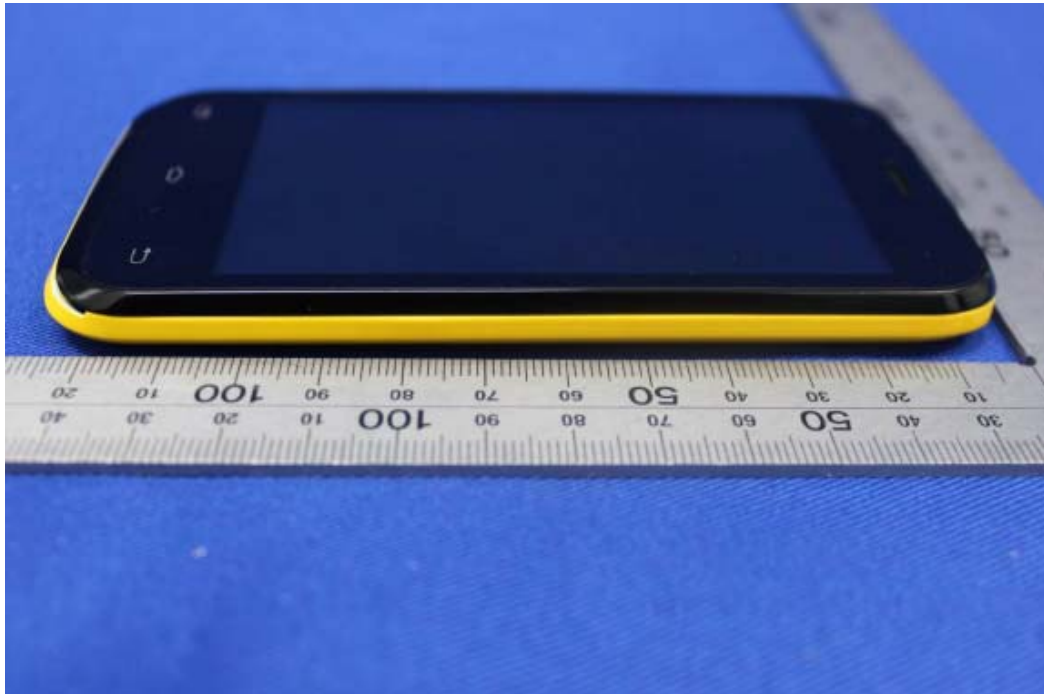
FRONT VIEW OF SAMPLE



BACK VIEW OF SAMPLE



LEFT VIEW OF SAMPLE



RIGHT VIEW OF SAMPLE



TOP VIEW OF SAMPLE



BOTTOM VIEW OF SAMPLE



PHOTO OF EARPHONE



PHOTO OF USB CABLE



PHOTO OF POWER SUPPLY



PHOTO OF BATTERY



INTERNAL PHOTO OF SAMPLE – 1



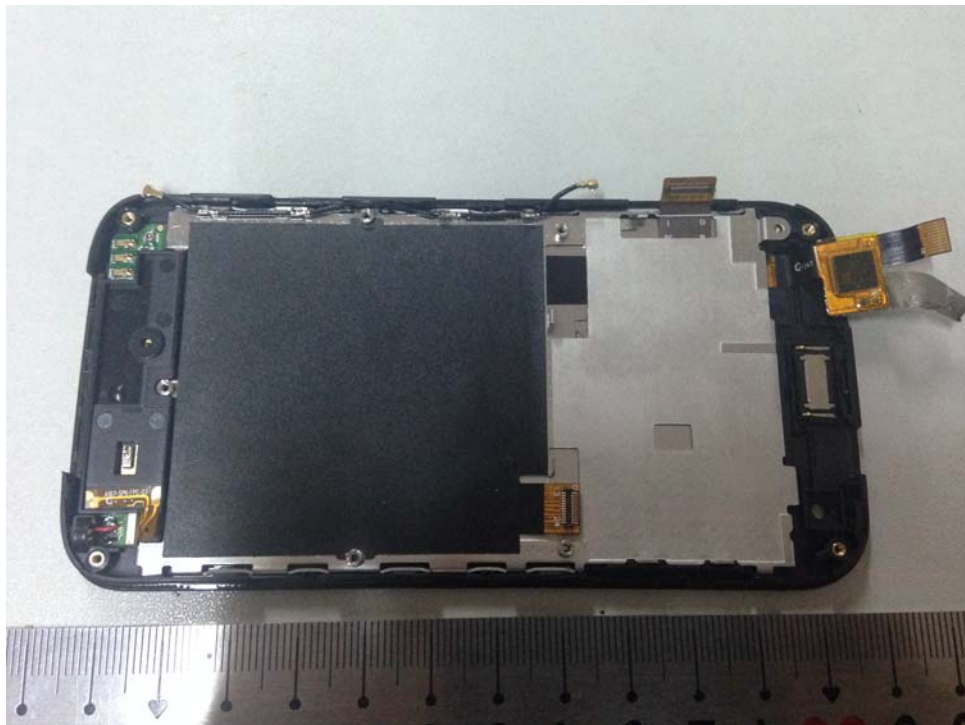
INTERNAL PHOTO OF SAMPLE – 2



INTERNAL PHOTO OF SAMPLE -3



INTERNAL PHOTO OF SAMPLE -4



INTERNAL PHOTO OF SAMPLE -5



-----END OF REPORT-----