

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT****INTENTIONAL RADIATOR CERTIFICATION TO  
FCC PART 22 SUBPART H, PART 24 SUBPART E  
AND INDUSTRY CANADA RSS-132 and RSS-133 REQUIREMENT***OF*

**Product Name:** Smartphone  
**Brand Name:** HTC  
**Model Name:** PB99220  
**Model Different:** N/A  
**FCC ID:** NM8PB99220  
**IC:** 4115B-PB99220  
**Report No.:** EH/2010/30048  
**Issue Date:** Apr. 08, 2010  
**FCC Rule Part:** 2, 22H & 24E  
**IC Rule Part:** RSS 132, Issue 2 and RSS 133, Issue 5  
**Prepared for:** HTC Corporation  
No.23, Xinghua Rd., Taoyuan City, Taoyuan  
County 330, Taiwan, R.O.C  
**Prepared by:** SGS Taiwan Ltd.  
Electronics & Communication Laboratory  
No. 134, Wu Kung Rd., Wuku Industrial Zone,  
Taipei County, Taiwan.

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## VERIFICATION OF COMPLIANCE

**Applicant:** HTC Corporation  
No.23, Xinghua Rd., Taoyuan City, Taoyuan County 330,  
Taiwan, R.O.C

**Product Name:** Smartphone

**Brand Name:** HTC

**FCC ID:** NM8PB99220

**IC:** 4115B-PB99220

**Model No.:** PB99220

**Model Difference:** N/A

**File Number:** EH/2010/30048

**Date of Test:** Mar. 22, 2010 ~ Apr. 06, 2010

**Date of EUT Received:** Mar. 22, 2010

### We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C-2004, Issue 2 of RSS-Gen and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule PART 22 subpart H, PART 24 subpart E and IC standards Issue 2 of RSS-132, Issue 5 of RSS-133.

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

**Test By:**

*Jazz Huang*

**Date:**

Apr. 08, 2010

*Jazz Huang / Engineer*

**Prepared By:**

*Eva Kao*

**Date:**

Apr. 08, 2010

*Eva Kao / Asst. Supervisor*

**Approved By**

*Vincent Su*

**Date:**

Apr. 08, 2010

*Vincent Su / Manager*

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## Version

| Version No. | Date          | Description                  |
|-------------|---------------|------------------------------|
| 00          | Apr. 08, 2010 | Initial creation of document |
|             |               |                              |
|             |               |                              |

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## 1. GENERAL PRODUCT INFORMATION

General:

|                         |   |  |
|-------------------------|---|--|
| Product Name            | Smartphone  |  |
| Brand Name              | HTC   |  |
| Model Name              | PB99220   |  |
| Model Difference        | N/A   |  |
| Data Cable (USB)        | <ol style="list-style-type: none"> <li>Model No.: DC M410, Brand Name: MEC</li> <li>Model No.: DC M410, Brand Name: Foxlink</li> <li>Model No.: DC M410, Brand Name: COXOC</li> </ol> |  |
| Simple Hands-free (SHF) | <ol style="list-style-type: none"> <li>Model No.: RC E160, Brand Name: Cotron</li> <li>Model No.: RC E160, Brand Name: Merry</li> </ol>   |  |
| LCD Panel:              | Model No.: AMS369FG03-0, Brand Name: SMD  |  |
| Camera                  | <ol style="list-style-type: none"> <li>Model No.: 08PM15A, Brand Name: LITEON</li> <li>Model No.: CHT5A-007A, Brand Name: FOXCONN</li> </ol>  |  |
| Power Supply            | 3.7 Vdc re-chargeable battery or 5Vdc by AC/DC power adapter  |  |
|                         | Battery:  | <ol style="list-style-type: none"> <li>Model No.: BB99100, Brand Name: Formosa</li> <li>Model No.: BB99100, Brand Name: HT-Energy</li> </ol>   |
|                         | Adapter:  | <ol style="list-style-type: none"> <li>Model: TC X250 (X=C, U, E),<br/>Brand Name: Delta</li> <li>Model: TC X250 (X=B, U, E),<br/>Brand Name: Emerson</li> <li>Model: TC P300, Brand Name: Delta</li> <li>Model: TC P300, Brand Name: Foxlink</li> </ol> |

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GSM / WCDMA

| Cellular Phone Standards<br>Frequency Range and<br>Power:                      | Operating Frequency   |                       | Rated<br>Power |
|--|---|-----------------------|----------------|
|  | GSM/GPRS 850, Class 12  | 824.2 MHz– 848.8 MHz  | 33 dBm         |
|  | GSM/GPRS 900, Class 12  | 880.2MHz – 914.8MHz   | 33 dBm         |
|  | GSM/GPRS 1800, Class 12   | 1710.2MHz – 1784.8MHz | 30 dBm         |
|  | GSM/GPRS 1900, Class 12   | 1850.2MHz – 1909.8MHz | 30 dBm         |
|  | EDGE 850, Class 12  | 824.2 MHz– 848.8 MHz  | 27 dBm         |
|  | EDGE 900, Class 12  | 880.2MHz – 914.8MHz   | 27 dBm         |
|  | EDGE 1800, Class 12   | 1710.2MHz – 1784.8MHz | 26 dBm         |
|  | EDGE 1900, Class 12   | 1850.2MHz – 1909.8MHz | 26 dBm         |
|  | WCDMA/HSUPA/HSDPA<br>Band I   | 1922.4MHz – 1977.6MHz | 24 dBm         |
|  | WCDMA/HSUPA/HSDPA<br>Band II  | 1852.4MHz – 1907.6MHz | 24 dBm         |
| WCDMA/HSUPA/HSDPA<br>Band V  | 826.4MHz – 846.6MHz   | 24dBm                 |                |
| HSUPA data rate: uplink up to 2Mbps<br>HSDPA data rate: downlink up to 7.2Mbps |   |                       |                |
| Type of Emission:  | GSM850: 249KGXW, GSM1900: 253KGXW<br>EDGE 850: 248KG7W, EDGE 1900: 248KG7W<br>WCDMA Band II: 4M19F9W, WCDMA Band V: 4M21F9W |                       |                |
| Hardware Version:  | N/A   |                       |                |
| Software Version:  | N/A   |                       |                |
| IMEI:  | 351961040010280   |                       |                |

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WLAN: 802.11 b/g

|                        |  |
|------------------------|--|
| Frequency Range:       | 2412 – 2462 MHz  |
| Channel number:        | 11 channels  |
| Max. Output Power:     | 802.11 b: 20.12 dBm (Peak) / 17.59 dBm (Avg.)<br>802.11 g: 15.55 dBm (Peak) / 12.09 dBm (Avg.) |
| Modulation Technology: | DSSS, OFDM   |
| Modulation type:       | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, QPSK, BPSK for OFDM                                |
| Transition Rate:       | 802.11 b: 1/2/5.5/11 Mbps;<br>802.11 g: 6/9/12/18/24/36/48/54 Mbps                             |
| Antenna Designation:   | PIFA Antenna, 1.1dBi.  |
| Type of Emission:      | 16M4G1D  |

Bluetooth:

|                      |   |
|----------------------|---|
| Frequency Range:     | 2402 – 2480MHz                            |
| Bluetooth Version:   | V2.1 + EDR (GFSK + $\pi/4$ DQPSK + 8DPSK) |
| Channel number:      | 79 channels                               |
| Modulation type:     | Frequency Hopping Spread Spectrum         |
| Transmit Power:      | 0.91 dBm                                  |
| Dwell Time:          | $\leq 0.4s$                               |
| Operating Mode:      | Point-to-Point                            |
| Antenna Designation: | PIFA Antenna, 1.1dBi.                     |
| Type of Emission:    | 1M17FXD                                   |

The EUT is compliance with Bluetooth 2.1 + EDR Standard.

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GPS:

|                                 |                     |
|---------------------------------|---------------------|
| Receiver Frequency              | L1 Band, 1575.42MHz |
| Frequency Conversion oscillator | 19.2MHz             |
| Antenna Designation             | PIFA antenna        |

**Final Amplifier Voltage and Current Information:**

| Test mode | DC voltage (V) | DC current (mA) |
|-----------|----------------|-----------------|
| GSM 850   | 3.7Vdc         | 340             |
| DCS 1900  | 3.7Vdc         | 260             |
| EDGE 850  | 3.7Vdc         | 380             |
| EDGE 1900 | 3.7Vdc         | 320             |
| WCDMA B2  | 3.7Vdc         | 650             |
| HSUPA B2  | 3.7Vdc         | 710             |
| WCDMA B5  | 3.7Vdc         | 600             |
| HSUPA B5  | 3.7Vdc         | 640             |

This test report applies for GSM/GPRS/EDGE 850/1900 and WCDMA/HSDPA/HSUPA Bands II, Band V.

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### 1.1. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: NM8PB99220 filing to comply with Section Part 22 subpart H, Part 24 subpart E of the FCC CFR 47 Rules and IC: 4115B-PB99220 filing to comply with Issue 2 of RSS-132, Issue 5 of RSS-133

### 1.2. Test Methodology

Both conducted and radiated testing were performed according to the procedures document on chapter 13 of TIA/EIA 603C and FCC 47 CFR 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, issue 2 of RSS-132 and issue 3 of RSS-133.

### 1.3. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644.

All equipment is calibrated externally and traceable to SI (International System of Unit).

### 1.4. Special Accessories

Not available for this EUT intended for grant.

### 1.5. Equipment Modifications

Not available for this EUT intended for grant.

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## 2. SYSTEM TEST CONFIGURATION

### 2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2. EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements.

### 2.3. Test Procedure

#### 2.3.1 AC Power Line Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in TIA/EIA 603C. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

#### 2.3.2 Conducted Measurement at Antenna Port:

According to measurement procured TIA/EIA 603C and RSS-Gen, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

#### 2.3.3 Radiated Emissions (ERP/EIRP):

According to measurement procured TIA/EIA 603C and RSS-Gen, The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13 of ANSI C63.4:2003.

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#### 2.4. Measurement Equipment Used:

| Conducted Emission Test Site |            |                         |               |            |            |
|------------------------------|------------|-------------------------|---------------|------------|------------|
| EQUIPMENT TYPE               | MFR        | MODEL NUMBER            | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| EMI Test Receiver            | R&S        | ESCS30                  | 828985/004    | 09/15/2009 | 09/14/2010 |
| LISN                         | Rolf-Heine | NNB-2/16Z               | 99012         | 02/02/2010 | 02/01/2011 |
| LISN                         | FCC        | FCC-LISN-50/250-25-2-01 | 04034         | 02/02/2010 | 02/01/2011 |
| Coaxial Cables               | N/A        | WK CE Cable             | N/A           | 11/28/2009 | 11/27/2010 |

| Conducted Emission Test Site |               |                  |               |            |            |
|------------------------------|---------------|------------------|---------------|------------|------------|
| EQUIPMENT TYPE               | MFR           | MODEL NUMBER     | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Spectrum Analyzer            | Agilent       | E4446A           | MY43360126    | 04/19/2008 | 04/18/2010 |
| Spectrum Analyzer            | Agilent       | E4440A           | US41160416    | 01/25/2010 | 01/24/2011 |
| Radio Communication Analyzer | R&S           | CMU200           | 102189        | 05/13/2008 | 05/12/2010 |
| 800 – 1000MHz Filter         | Micro-Tronics | BRM13462         | 001           | 01/05/2010 | 01/04/2011 |
| 1800 – 2000MHz Filter        | Micro-Tronics | BRM13463         | 001           | 01/05/2010 | 01/04/2011 |
| Temperature Chamber          | TERCHY        | MHG-120LF        | 911009        | 04/14/2008 | 04/13/2010 |
| Temperature Chamber          | GIANT FORCE   | GTH-150-40-CP-AR | MAA0512-018   | 02/24/2010 | 02/23/2012 |
| DC Block                     | Agilent       | BLK-18           | 155452        | 07/05/2009 | 07/04/2010 |
| Attenuator                   | Mini-Circuit  | BW-S20W5         | N/A           | 07/05/2009 | 07/04/2010 |
| Attenuator                   | Mini-Circuit  | BW-S10W5         | N/A           | 07/05/2009 | 07/04/2010 |
| Attenuator                   | Mini-Circuit  | BW-S6W5          | N/A           | 07/05/2009 | 07/04/2010 |
| Splitter                     | Agilent       | 11636B           | N/A           | 07/05/2009 | 07/04/2010 |
| DC Power Supply              | Chroma        | 41901            | 777188        | 04/17/2008 | 04/16/2010 |

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| ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber |               |                     |               |            |            |
|--|---------------|---------------------|---------------|------------|------------|
| EQUIPMENT TYPE                                   | MFR           | MODEL NUMBER        | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Spectrum Analyzer                                | R&S           | FSP 40              | 100034        | 02/12/2010 | 02/11/2011 |
| Bilog Antenna                                    | SCHWAZBECK    | VULB9160            | 3136          | 11/19/2009 | 11/18/2010 |
| Dipole Antenna                                   | SCHWAZBECK    | VHAP                | 908/909       | 07/10/2008 | 07/09/2010 |
| Dipole Antenna                                   | SCHWAZBECK    | UHAP                | 891/892       | 07/10/2008 | 07/09/2010 |
| Hor.n antenna                                    | SCHWAZBECK    | BBHA 9120D          | 603           | 04/29/2009 | 04/28/2011 |
| Horn antenna                                     | SCHWAZBECK    | BBHA 9120D          | 9120D-673     | 05/09/2008 | 05/08/2010 |
| Signal Generator                                 | R&S           | SMR40               | 100210        | 02/10/2010 | 02/09/2012 |
| Signal Generator                                 | Agilent       | E4438C              | MY45093613    | 06/11/2009 | 06/10/2010 |
| Pre-Amplifier                                    | Agilent       | 8447D               | 1937A02834    | 11/28/2009 | 11/27/2010 |
| Pre-Amplifier                                    | Agilent       | 8449B               | 3008A01973    | 01/05/2010 | 01/04/2011 |
| Attenuator                                       | Mini-Circuit  | BW-S20W5            | 001           | 07/05/2009 | 07/04/2010 |
| Attenuator                                       | Mini-Circuit  | BW-S10W5            | 001           | 07/05/2009 | 07/04/2010 |
| Attenuator                                       | Mini-Circuit  | BW-S6W5             | 001           | 07/05/2009 | 07/04/2010 |
| Radio Communication Analyzer                     | R&S           | CMU200              | 102189        | 05/13/2008 | 05/12/2010 |
| Turn Table                                       | HD            | DT420               | N/A           | N.C.R      | N.C.R      |
| Antenna Tower                                    | HD            | MA240-N             | 240/657       | N.C.R      | N.C.R      |
| Controller                                       | HD            | HD100               | N/A           | N.C.R      | N.C.R      |
| Low Loss Cable                                   | HUBER+SUHNER  | SUCOFLEX 104PEA-10M | 10m           | 01/05/2010 | 01/04/2011 |
| Low Loss Cable                                   | HUBER+SUHNER  | SUCOFLEX 104PEA-3M  | 3m            | 01/05/2010 | 01/04/2011 |
| Filter 800-1000                                  | Micro-Tronics | BRM13462            | 1             | 01/05/2010 | 01/04/2011 |
| Filter 1800-2000                                 | Micro-Tronics | BRM13463            | 1             | 01/05/2010 | 01/04/2011 |
| 3m Site  | SGS           | 966 chamber         | N/A           | 11/08/2009 | 11/09/2010 |

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## 2.5. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel)

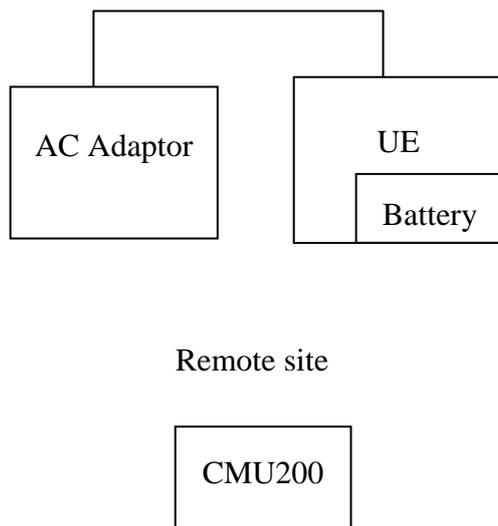


Table 2-1 Equipment Used in Tested System

| Item | Equipment                            | Mfr/Brand | Model/<br>Type No. | Series No.   | Data Cable | Power Cord            |
|------|--------------------------------------|-----------|--------------------|--------------|------------|-----------------------|
| 1.   | Universal Radio Communication Tester | R&S       | CMU200             | 102189       | shielded   | Un-shielded           |
| 2.   | AC Adaptor                           | PHIHONG   | TC U100            | 79H00055-38P | N/A        | 180cm,<br>Un-shielded |

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### 3. SUMMARY OF TEST RESULTS

| FCC Rules                                 | IC Rules  | Description Of Test  | Result    |
|---|---|--|-----------|
| §2.1046(a)                                | N/A   | RF Power Output  | Compliant |
| §2.1046(a)<br>§22.913(a)(2)<br>§24.232(c) | §4.8 (RSS-Gen)<br>§4.4 (RSS-132)<br>§6.4 (RSS-133)  | ERP/ EIRP measurement  | Compliant |
| §2.1049(h)                                | §4.6.1 (RSS-Gen)<br>§2.3 (RSS-133)                  | 99% Occupied Bandwidth   | Compliant |
| §2.1051<br>§22.917(a)<br>§24.238(a)       | §4.9 (RSS-Gen)<br>§4.5 (RSS-132)<br>§6.5 (RSS-133)  | Out of Band Emissions at Antenna<br>Terminals and<br>Band Edge | Compliant |
| §2.1053<br>§22.917(a)<br>§24.238(a)       | §4.9 (RSS-Gen)<br>§4.5 (RSS-132)<br>§6.5 (RSS-133)  | Field Strength of Spurious Radiation                           | Compliant |
| §2.1055(a)(1)<br>§22.355<br>§24.235       | §4.7 (RSS-Gen)<br>§4.3 (RSS-132)<br>§6.3 (RSS-133)  | Frequency Stability vs. Temperature                            | Compliant |
| §2.1055(d)(2)<br>§22.355<br>§24.235       | §4.7 (RSS-Gen)<br>§4.3 (RSS-132)<br>§6.3 (RSS-133)  | Frequency Stability vs. Voltage                                | Compliant |
| N/A                                       | §4.10 (RSS-Gen)<br>§4.6 (RSS-132)<br>§6.6 (RSS-133) | Receiver Spurious Emissions                                    | Compliant |

Max ERP/EIRP measurement result:

|                | dBm   | dB   | W     |
|----------------|-------|------|-------|
| GSM 850 Band   | 31.90 | ERP  | 1.549 |
| GSM 1900 Band  | 29.44 | EIRP | 0.879 |
| EDGE 850 Band  | 28.49 | ERP  | 0.706 |
| EDGE 1900 Band | 27.87 | EIRP | 0.612 |
| WCDMA Band II  | 22.25 | EIRP | 0.168 |
| WCDMA Band V   | 23.42 | ERP  | 0.220 |
| HSUPA Band II  | 20.92 | EIRP | 0.124 |
| HSUPA Band V   | 22.48 | ERP  | 0.177 |

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#### 4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

EUT was staying in continuous transmitting mode. Channel Low, Mid and High for each band with rated data rate were chosen for full testing.

The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for GSM/GPRS/EDGE and WCDMA/HSDPA/HSUPA Band II, V with power adaptor. The worst-case of E1 position for GSM 850 band, E1 position for GSM 1900, H position for WCDMA Band II and E1 position for WCDMA Band V were reported.

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## 5. RF POWER OUTPUT MEASUREMENT

### 5.1. Standard Applicable:

According to FCC §2.1046.

FCC 22.913(a) Mobile station are limited to 7W.

FCC 24.232(C) Peak Power Measurement to 2W.

3GPP Power limitation for HSDPA and HSUPA

Maximum Output Powers for HSDPA

| Sub-test in table<br>C.10.1.4 | Power Class 3  |             | Power Class 4  |             |
|-------------------------------|----------------|-------------|----------------|-------------|
|                               | Power<br>(dBm) | Tol<br>(dB) | Power<br>(dBm) | Tol<br>(dB) |
| 1                             | +24            | +1.7/-3.7   | +21            | +2.7/-2.7   |
| 2                             | +24            | +1.7/-3.7   | +21            | +2.7/-2.7   |
| 3                             | +23.5          | +2.2/-3.7   | +20.5          | +3.2/-2.7   |
| 4                             | +23.5          | +2.2/-3.7   | +20.5          | +3.2/-2.7   |

Maximum Output Powers for HSUPA

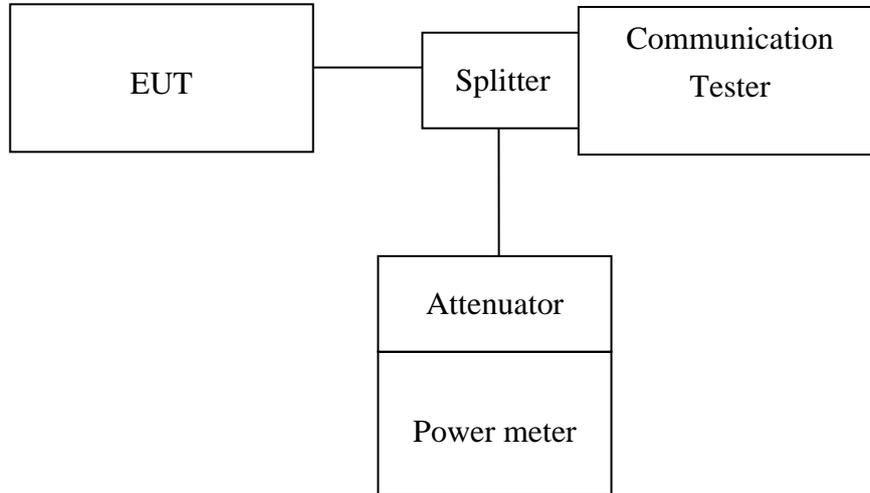
| Sub-test in table<br>C.11.1.3 | Power Class 3  |             | Power Class 4  |             |
|-------------------------------|----------------|-------------|----------------|-------------|
|                               | Power<br>(dBm) | Tol<br>(dB) | Power<br>(dBm) | Tol<br>(dB) |
| 1                             | +24            | +1.7/-6.7   | +21            | +2.7/-5.7   |
| 2                             | +22            | +3.7/-5.2   | +19            | +4.7/-4.2   |
| 3                             | +23            | +2.7/-5.2   | +20            | +3.7/-4.2   |
| 4                             | +22            | +3.7/-5.2   | +19            | +4.7/-4.2   |
| 5                             | +24            | +1.7/-6.7   | +21            | +2.7/-5.7   |

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**5.2. Test Set-up:**



*Note: Measurement setup for testing on Antenna connector*

**5.3. Measurement Procedure:**

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. The Procedure of KDB941225 KDB941125 (SAR Measurement Procedures for 3G devices, WCDMA/HSDPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing

**5.4. Measurement Equipment Used:**

Refer to section 2.4 in this report

## 5.5. Measurement Result:

### 5.5.1. RF Conducted Output Power

#### 5.5.1.1.: GSM/EDGE (GMSK; 8-PSK)

#### Result:

| Frequency<br>(MHz) | CH  | 1 Time Slot         |                   |                     |                   | 2 Time Slot         |                   |                     |                   |
|--------------------|-----|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|
|                    |     | GMSK Mode           |                   | 8-PSK Mode          |                   | GMSK Mode           |                   | 8-PSK Mode          |                   |
|                    |     | Peak Power<br>(dBm) | AV Power<br>(dBm) |
| 824.2              | 128 | 32.9                | 32.8              | 30.1                | 27.0              | 32.4                | 32.3              | 29.4                | 26.3              |
| 836.6              | 190 | 33.0                | 32.9              | 30.2                | 27.1              | 32.5                | 32.4              | 29.5                | 26.4.             |
| 848.8              | 251 | 33.0                | 32.9              | 30.2                | 27.0              | 32.4                | 32.3              | 29.5                | 26.3              |
| 1850.2             | 512 | 29.4                | 29.3              | 28.8                | 25.6              | 28.8                | 25.6              | 28.1                | 25.0              |
| 1880.0             | 661 | 29.5                | 29.4              | 28.8                | 25.6              | 28.8                | 25.6              | 28.2                | 25.1              |
| 1909.8             | 810 | 29.3                | 29.2              | 28.5                | 25.40             | 28.5                | 25.4              | 28.0                | 24.9              |

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### 5.5.1.2.: WCDMA mode

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

#### Results:

| EUT Mode         | Frequency<br>(MHz) | CH   | Peak Power<br>(dBm) | Avg. Power<br>(dBm) |
|------------------|--------------------|------|---------------------|---------------------|
| WCDMA<br>Band II | 1852.4             | 9262 | 25.83               | 22.65               |
|                  | 1880.0             | 9400 | 25.88               | 22.50               |
|                  | 1907.6             | 9538 | 26.32               | 22.29               |

| EUT Mode        | Frequency<br>(MHz) | CH   | Peak Power<br>(dBm) | Avg. Power<br>(dBm) |
|-----------------|--------------------|------|---------------------|---------------------|
| WCDMA<br>Band V | 826.4              | 4132 | 26.02               | 22.85               |
|                 | 836.6              | 4183 | 26.94               | 22.71               |
|                 | 846.6              | 4233 | 26.20               | 22.77               |

Note: The results above reflect max power with all up bits.

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### 5.5.1.3.:HSDPA Release 6 mode

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

### HSDPA SUB-TEST Setting

Table C.10.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

| Sub-test | $\beta_c$         | $\beta_a$         | $\beta_a$<br>(SF) | $\beta_c/\beta_a$ | $\beta_{HS}$<br>(Note 1,<br>Note 2) | CM (dB)<br>(Note 3) | MPR<br>(dB)<br>(Note 3) | RMC<br>(Kbps) |
|----------|-------------------|-------------------|-------------------|-------------------|-------------------------------------|---------------------|-------------------------|---------------|
| 1        | 2/15              | 15/15             | 64                | 2/15              | 4/15                                | 0.0                 | 0.0                     | 12.2          |
| 2        | 12/15<br>(Note 4) | 15/15<br>(Note 4) | 64                | 12/15<br>(Note 4) | 24/15                               | 1.0                 | 0.0                     | 12.2          |
| 3        | 15/15             | 8/15              | 64                | 15/8              | 30/15                               | 1.5                 | 0.5                     | 12.2          |
| 4        | 15/15             | 4/15              | 64                | 15/4              | 30/15                               | 1.5                 | 0.5                     | 12.2          |

**Note: The recommended HSDPA MPRs are implemented as per following sub-tests.**

### Results:

| Mode          | Sub-test | Avg. Power (dBm)<br>Channel |       |       | Power Class 3 Limita-<br>tion (dBm) | Comments |
|---------------|----------|-----------------------------|-------|-------|-------------------------------------|----------|
|               |          | 9262                        | 9400  | 9538  |                                     |          |
| HSDPA<br>(B2) | 1        | 22.82                       | 22.39 | 23.15 | 20.3dBm – 25.7dBm                   | Pass     |
|               | 2        | 22.53                       | 22.36 | 22.14 | 20.3dBm – 25.7dBm                   | Pass     |
|               | 3        | 22.34                       | 21.94 | 21.62 | 19.8dBm – 25.7dBm                   | Pass     |
|               | 4        | 22.41                       | 21.95 | 21.74 | 19.8dBm – 25.7dBm                   | Pass     |

| Mode          | Sub-test | Avg. Power (dBm)<br>Channel |       |       | Power Class 3 Limita-<br>tion (dBm) | Comments |
|---------------|----------|-----------------------------|-------|-------|-------------------------------------|----------|
|               |          | 4132                        | 4183  | 4233  |                                     |          |
| HSDPA<br>(B5) | 1        | 22.64                       | 22.57 | 22.89 | 20.3dBm – 25.7dBm                   | Pass     |
|               | 2        | 22.78                       | 22.60 | 22.64 | 20.3dBm – 25.7dBm                   | Pass     |
|               | 3        | 22.18                       | 22.09 | 22.40 | 19.8dBm – 25.7dBm                   | Pass     |
|               | 4        | 22.23                       | 22.13 | 22.46 | 19.8dBm – 25.7dBm                   | Pass     |

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### 5.5.1.3.: HSPA (HSDPA & HSUPA) Release 6 mode

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

### HSPA SUB-TEST Setting

Table C.11.1.3:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

| Sub-test | $\beta_c$      | $\beta_d$      | $\beta_d$ (SF) | $\beta_c/\beta_d$ | $\beta_{HS}$ | $\beta_{ec}$ | $\beta_{ed}$                                 | $\beta_{ed}$ (SF) | $\beta_{ed}$ (Codes) | CM (dB) | MPR (dB) | AG Index | E-TFCI | RMC (Kbps) |
|----------|----------------|----------------|----------------|-------------------|--------------|--------------|--|-------------------|----------------------|---------|----------|----------|--------|------------|
| 1        | 11/15 (Note 3) | 15/15 (Note 3) | 64             | 11/15 (Note 3)    | 22/15        | 209/225      | 1309/225                                     | 4                 | 1                    | 1.0     | 0.0      | 20       | 75     | 12.2       |
| 2        | 6/15           | 15/15          | 64             | 6/15              | 12/15        | 12/15        | 94/75  | 4                 | 1                    | 3.0     | 2.0      | 12       | 67     | 12.2       |
| 3        | 15/15          | 9/15           | 64             | 15/9              | 30/15        | 30/15        | $\beta_{ed1}: 47/15$<br>$\beta_{ed2}: 47/15$ | 4<br>4            | 2                    | 2.0     | 1.0      | 15       | 92     | 12.2       |
| 4        | 2/15           | 15/15          | 64             | 2/15              | 4/15         | 2/15         | 56/75  | 4                 | 1                    | 3.0     | 2.0      | 17       | 71     | 12.2       |
| 5        | 15/15 (Note 4) | 15/15 (Note 4) | 64             | 15/15 (Note 4)    | 30/15        | 24/15        | 134/15                                       | 4                 | 1                    | 1.0     | 0.0      | 21       | 81     | 12.2       |

**Note: The recommended HSUPA MPRs are implemented as per following sub-tests.**

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**Results:**

| Mode      | Sub-test | Avg. Power (dBm) |       |       | Power Class 3 Limitation (dBm) | Comments |
|-----------|----------|------------------|-------|-------|--------------------------------|----------|
|           |          | Channel          |       |       |                                |          |
|           |          | 9262             | 9400  | 9538  |                                |          |
| HSUPA(B2) | 1        | 22.57            | 22.48 | 22.23 | 18.8dBm – 25.7dBm              | Pass     |
|           | 2        | 20.62            | 20.55 | 20.27 | 16.8dBm – 25.7dBm              | Pass     |
|           | 3        | 21.63            | 21.50 | 21.31 | 17.8dBm – 25.7dBm              | Pass     |
|           | 4        | 20.75            | 20.60 | 20.31 | 16.8dBm – 25.7dBm              | Pass     |
|           | 5        | 22.46            | 22.34 | 22.14 | 18.8dBm – 25.7dBm              | Pass     |

| Mode      | Sub-test | Avg. Power (dBm) |       |       | Power Class 3 Limitation (dBm) | Comments |
|-----------|----------|------------------|-------|-------|--------------------------------|----------|
|           |          | Channel          |       |       |                                |          |
|           |          | 4132             | 4183  | 4233  |                                |          |
| HSUPA(B5) | 1        | 22.81            | 22.64 | 22.69 | 18.8dBm – 25.7dBm              | Pass     |
|           | 2        | 20.87            | 20.72 | 20.73 | 16.8dBm – 25.7dBm              | Pass     |
|           | 3        | 21.85            | 21.70 | 21.77 | 17.8dBm – 25.7dBm              | Pass     |
|           | 4        | 20.92            | 20.78 | 20.81 | 16.8dBm – 25.7dBm              | Pass     |
|           | 5        | 22.67            | 22.47 | 22.58 | 18.8dBm – 25.7dBm              | Pass     |

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### 5.5.2. Minimum Communications Power Measurement

#### PCS 1900 band

| PCL                | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|--------------------|------|------|------|------|------|------|------|------|------|
| Output power (dBm) | 29.4 | 27.4 | 25.4 | 23.6 | 21.7 | 19.7 | 17.6 | 15.6 | 13.6 |
| PCL                | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   |
| Output power (dBm) | 11.6 | 9.4  | 7.4  | 5.3  | 3.3  | 1.3  | 0.1  |      |      |

Note: The EUT output power was controlled by simulator. Set Communication Tester CMU200 PCL as above, and get the mobile phone output power reading.

#### WCDMA/HSDPA/HSUPA band II

The EUT output power was controlled by simulator. Set Communication Tester CMU200 function key “UE Power Control” and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm. then record the read(see page 15 for measurement data) . The min. power was measures by a function key “minimum power” then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

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## 6. ERP, EIRP MEASUREMENT

### 6.1. Standard Applicable:

According to FCC §2.1046

FCC 22.913(a) Mobile station are limited to 7W ERP.

FCC 24.232(c) Mobile station are limited to 2W EIRP.

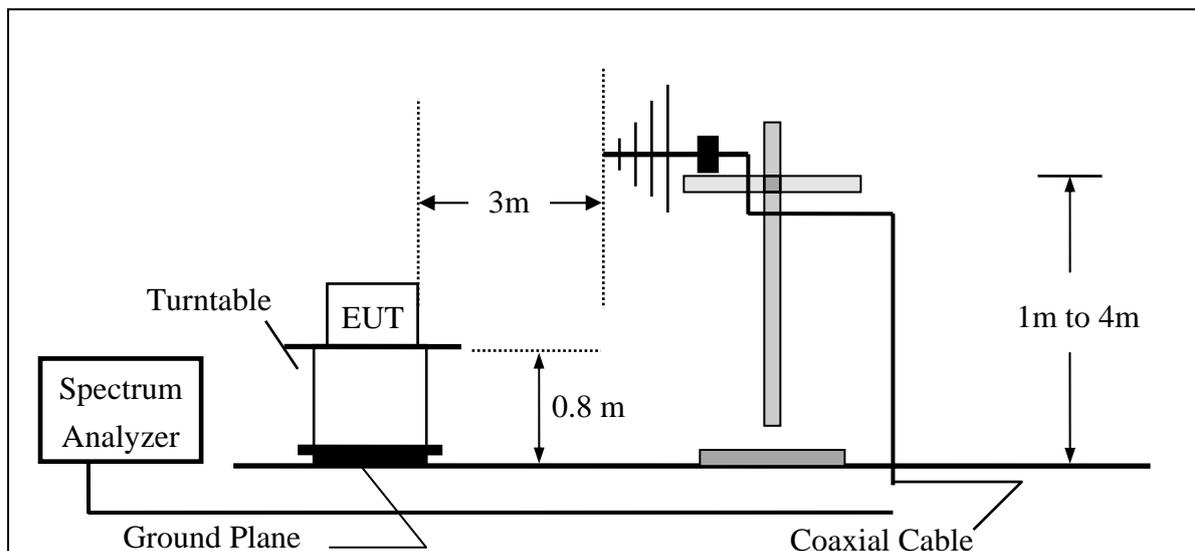
According to IC RSS-133 §6.4

The peak e.i.r.p. for transmitters operating in the band 1850-1910 MHz shall not exceed the limits 2W which given in SRSP-510.

According to issue 2 of RSS 132, section 4.4. The transmitter output power shall not exceed the limits given in SRSP-503.

### 6.2. Test SET-UP (Block Diagram of Configuration):

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz

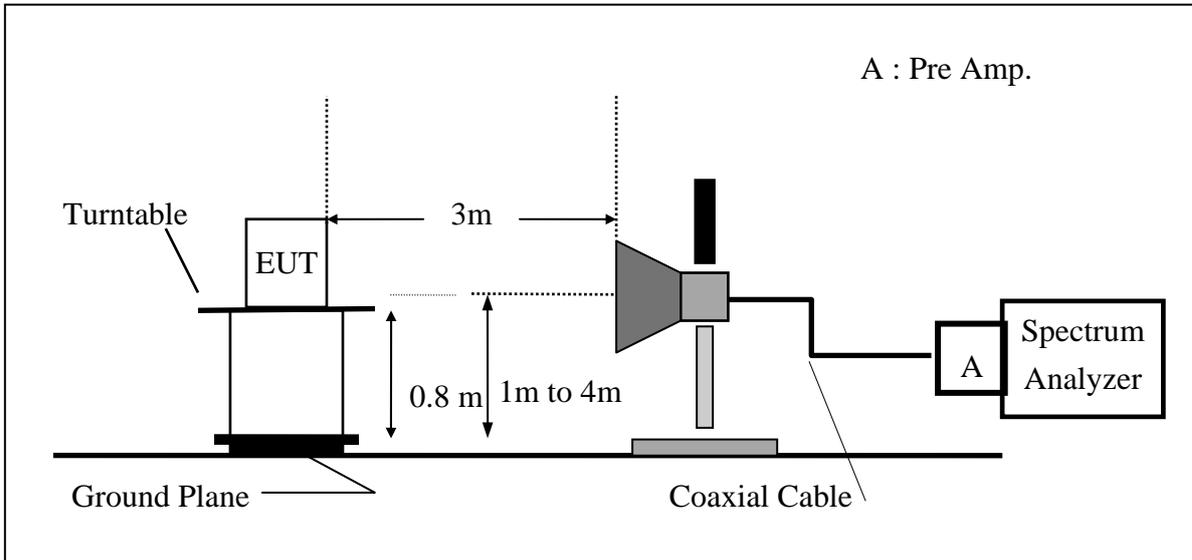


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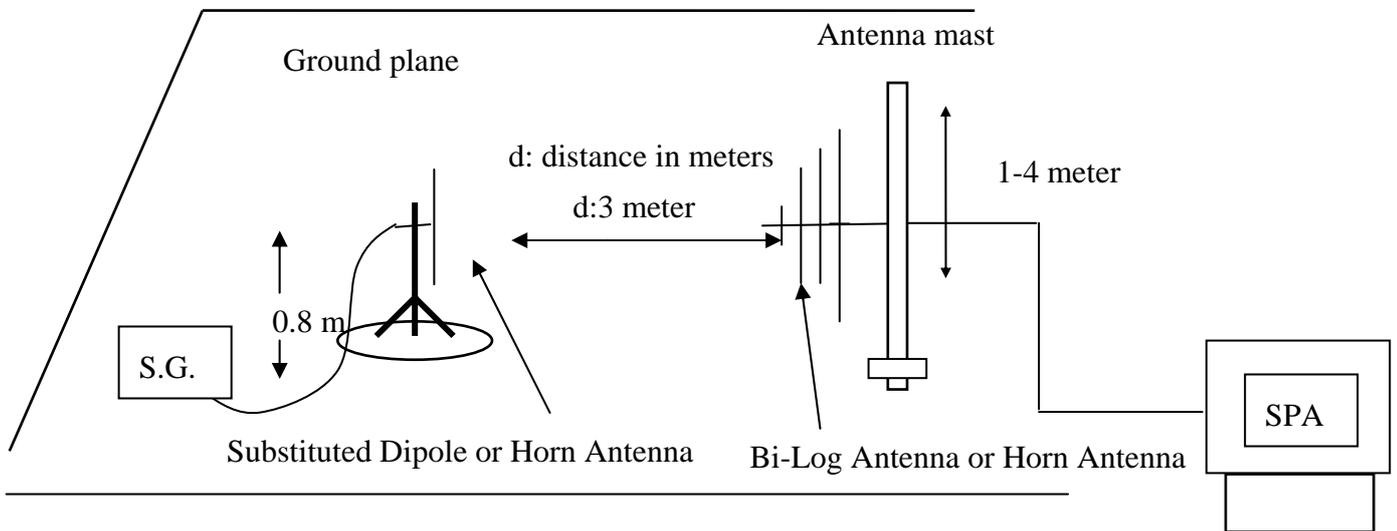
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(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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### 6.3. Measurement Procedure:

The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was in communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.80MHz were measured using a substitution method. The EUT was replaced by a dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1710-1755MHz and 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$$

$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$$

### 6.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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### 6.5. Measurement Result:

| EUT Mode | Frequency (MHz) | CH  | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | ERP (dBm)    | Limit (dBm) |
|----------|-----------------|-----|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| GSM 850  | 824.20          | 128 | H        | V            | 117.78             | 31.39             | -7.87              | 3.62            | 19.89        | 38.45       |
|          |                 |     |          | H            | 128.80             | 42.53             | -7.87              | 3.62            | 31.03        | 38.45       |
|          |                 |     | E1       | V            | 129.00             | 42.61             | -7.87              | 3.62            | 31.11        | 38.45       |
|          |                 |     |          | H            | 117.27             | 31.00             | -7.87              | 3.62            | 19.50        | 38.45       |
|          |                 |     | E2       | V            | 117.01             | 30.62             | -7.87              | 3.62            | 19.12        | 38.45       |
|          |                 |     |          | H            | 128.44             | 42.17             | -7.87              | 3.62            | 30.67        | 38.45       |
|          | 836.60          | 190 | H        | V            | 117.59             | 31.34             | -7.88              | 3.65            | 19.81        | 38.45       |
|          |                 |     |          | H            | 128.35             | 42.12             | -7.88              | 3.65            | 30.59        | 38.45       |
|          |                 |     | E1       | V            | 129.00             | 42.75             | -7.88              | 3.65            | 31.22        | 38.45       |
|          |                 |     |          | H            | 117.55             | 31.32             | -7.88              | 3.65            | 19.79        | 38.45       |
|          |                 |     | E2       | V            | 117.09             | 30.84             | -7.88              | 3.65            | 19.31        | 38.45       |
|          |                 |     |          | H            | 128.35             | 42.12             | -7.88              | 3.65            | 30.59        | 38.45       |
|          | 848.80          | 251 | H        | V            | 118.72             | 32.60             | -7.88              | 3.68            | 21.04        | 38.45       |
|          |                 |     |          | H            | 128.43             | 42.24             | -7.88              | 3.68            | 30.68        | 38.45       |
|          |                 |     | E1       | V            | 129.58             | 43.46             | -7.88              | 3.68            | <b>31.90</b> | 38.45       |
|          |                 |     |          | H            | 118.42             | 32.23             | -7.88              | 3.68            | 20.67        | 38.45       |
|          |                 |     | E2       | V            | 115.89             | 29.77             | -7.88              | 3.68            | 18.21        | 38.45       |
|          |                 |     |          | H            | 129.06             | 42.87             | -7.88              | 3.68            | 31.31        | 38.45       |

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=300 KHz, VBW=1MHz

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**Measurement Result:**

| EUT Mode | Frequency (MHz) | CH  | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | EIRP (dBm)   | Limit (dBm) |
|----------|-----------------|-----|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| PCS 1900 | 1850.20         | 512 | H        | V            | 118.19             | 13.80             | 9.90               | 5.56            | 18.14        | 33.00       |
|          |                 |     |          | H            | 127.49             | 23.31             | 9.90               | 5.56            | 27.65        | 33.00       |
|          |                 |     | E1       | V            | 125.75             | 21.36             | 9.90               | 5.56            | 25.70        | 33.00       |
|          |                 |     |          | H            | 127.50             | 23.32             | 9.90               | 5.56            | 27.66        | 33.00       |
|          |                 |     | E2       | V            | 129.42             | 25.03             | 9.90               | 5.56            | 29.37        | 33.00       |
|          |                 |     |          | H            | 124.35             | 20.17             | 9.90               | 5.84            | 24.23        | 33.00       |
|          | 1880.00         | 661 | H        | V            | 117.83             | 13.47             | 9.99               | 5.61            | 17.85        | 33.00       |
|          |                 |     |          | H            | 129.60             | 25.46             | 9.99               | 5.61            | 29.83        | 33.00       |
|          |                 |     | E1       | V            | 125.43             | 21.07             | 9.99               | 5.61            | 25.45        | 33.00       |
|          |                 |     |          | H            | 127.66             | 23.52             | 9.99               | 5.61            | 27.89        | 33.00       |
|          |                 |     | E2       | V            | 128.26             | 23.90             | 9.99               | 5.61            | 28.28        | 33.00       |
|          |                 |     |          | H            | 124.92             | 20.78             | 9.99               | 5.61            | 25.15        | 33.00       |
|          | 1909.80         | 810 | H        | V            | 116.23             | 11.90             | 10.08              | 5.66            | 16.32        | 33.00       |
|          |                 |     |          | H            | 128.54             | 24.43             | 10.08              | 5.66            | 28.85        | 33.00       |
|          |                 |     | E1       | V            | 124.34             | 20.01             | 10.08              | 5.66            | 24.43        | 33.00       |
|          |                 |     |          | H            | 126.63             | 22.52             | 10.08              | 5.66            | 26.94        | 33.00       |
|          |                 |     | E2       | V            | 129.35             | 25.02             | 10.08              | 5.66            | <b>29.44</b> | 33.00       |
|          |                 |     |          | H            | 126.14             | 22.03             | 10.08              | 5.66            | 26.45        | 33.00       |

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=300K, VBW=1MHz

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**Measurement Result:**

| EUT Mode | Frequency (MHz) | CH  | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | ERP (dBm)    | Limit (dBm) |
|----------|-----------------|-----|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| EDGE 850 | 824.20          | 128 | H        | V            | 115.12             | 28.73             | -7.87              | 3.62            | 17.23        | 38.45       |
|          |                 |     |          | H            | 125.52             | 39.25             | -7.87              | 3.62            | 27.75        | 38.45       |
|          |                 |     | E1       | V            | 125.56             | 39.17             | -7.87              | 3.62            | 27.67        | 38.45       |
|          |                 |     |          | H            | 114.10             | 27.83             | -7.87              | 3.62            | 16.33        | 38.45       |
|          |                 |     | E2       | V            | 113.90             | 27.51             | -7.87              | 3.62            | 16.01        | 38.45       |
|          |                 |     |          | H            | 125.23             | 38.96             | -7.87              | 3.62            | 27.46        | 38.45       |
|          | 836.60          | 190 | H        | V            | 114.85             | 28.60             | -7.88              | 3.65            | 17.07        | 38.45       |
|          |                 |     |          | H            | 124.96             | 38.73             | -7.88              | 3.65            | 27.20        | 38.45       |
|          |                 |     | E1       | V            | 125.27             | 39.02             | -7.88              | 3.65            | 27.49        | 38.45       |
|          |                 |     |          | H            | 113.06             | 26.83             | -7.88              | 3.65            | 15.30        | 38.45       |
|          |                 |     | E2       | V            | 113.93             | 27.68             | -7.88              | 3.65            | 16.15        | 38.45       |
|          |                 |     |          | H            | 124.55             | 38.32             | -7.88              | 3.65            | 26.79        | 38.45       |
|          | 848.80          | 251 | H        | V            | 114.86             | 28.74             | -7.88              | 3.68            | 17.18        | 38.45       |
|          |                 |     |          | H            | 124.71             | 38.52             | -7.88              | 3.68            | 26.96        | 38.45       |
|          |                 |     | E1       | V            | 126.17             | 40.05             | -7.88              | 3.68            | <b>28.49</b> | 38.45       |
|          |                 |     |          | H            | 115.23             | 29.04             | -7.88              | 3.68            | 17.48        | 38.45       |
|          |                 |     | E2       | V            | 114.42             | 28.30             | -7.88              | 3.68            | 16.74        | 38.45       |
|          |                 |     |          | H            | 125.27             | 39.08             | -7.88              | 3.68            | 27.52        | 38.45       |

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=300 KHz, VBW=1MHz

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**Measurement Result:**

| EUT Mode  | Frequency (MHz) | CH  | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | EIRP (dBm)   | Limit (dBm) |
|-----------|-----------------|-----|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| EDGE 1900 | 1850.20         | 512 | H        | V            | 116.14             | 11.75             | 9.90               | 5.56            | 16.09        | 33.00       |
|           |                 |     |          | H            | 126.96             | 22.78             | 9.90               | 5.56            | 27.12        | 33.00       |
|           |                 |     | E1       | V            | 122.04             | 17.65             | 9.90               | 5.56            | 21.99        | 33.00       |
|           |                 |     |          | H            | 123.91             | 19.73             | 9.90               | 5.56            | 24.07        | 33.00       |
|           |                 |     | E2       | V            | 127.92             | 23.53             | 9.90               | 5.56            | <b>27.87</b> | 33.00       |
|           |                 |     |          | H            | 122.68             | 18.50             | 9.90               | 5.84            | 22.56        | 33.00       |
|           | 1880.00         | 661 | H        | V            | 116.13             | 11.77             | 9.99               | 5.61            | 16.15        | 33.00       |
|           |                 |     |          | H            | 126.93             | 22.79             | 9.99               | 5.61            | 27.16        | 33.00       |
|           |                 |     | E1       | V            | 123.21             | 18.85             | 9.99               | 5.61            | 23.23        | 33.00       |
|           |                 |     |          | H            | 124.97             | 20.83             | 9.99               | 5.61            | 25.20        | 33.00       |
|           |                 |     | E2       | V            | 127.83             | 23.47             | 9.99               | 5.61            | 27.85        | 33.00       |
|           |                 |     |          | H            | 123.81             | 19.67             | 9.99               | 5.61            | 24.04        | 33.00       |
|           | 1909.80         | 810 | H        | V            | 115.67             | 11.34             | 10.08              | 5.66            | 15.76        | 33.00       |
|           |                 |     |          | H            | 126.04             | 21.93             | 10.08              | 5.66            | 26.35        | 33.00       |
|           |                 |     | E1       | V            | 123.57             | 19.24             | 10.08              | 5.66            | 23.66        | 33.00       |
|           |                 |     |          | H            | 124.90             | 20.79             | 10.08              | 5.66            | 25.21        | 33.00       |
|           |                 |     | E2       | V            | 126.93             | 22.60             | 10.08              | 5.66            | 27.02        | 33.00       |
|           |                 |     |          | H            | 123.41             | 19.30             | 10.08              | 5.66            | 23.72        | 33.00       |

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=300K, VBW=1MHz

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**Measurement Result:**

| EUT Mode | Frequency (MHz) | CH   | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | EIRP (dBm)   | Limit (dBm) |
|----------|-----------------|------|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| WCDMA II | 1852.40         | 9262 | H        | V            | 111.34             | 6.82              | 9.48               | 5.33            | 10.96        | 33.00       |
|          |                 |      |          | H            | 122.24             | 17.91             | 9.48               | 5.33            | 22.05        | 33.00       |
|          |                 |      | E1       | V            | 120.55             | 16.03             | 9.48               | 5.33            | 20.17        | 33.00       |
|          |                 |      |          | H            | 121.53             | 17.20             | 9.48               | 5.33            | 21.34        | 33.00       |
|          |                 |      | E2       | V            | 120.99             | 16.47             | 9.48               | 5.33            | 20.61        | 33.00       |
|          |                 |      |          | H            | 115.53             | 11.20             | 9.90               | 5.84            | 15.26        | 33.00       |
|          | 1880.00         | 9400 | H        | V            | 110.68             | 6.18              | 9.54               | 5.36            | 10.35        | 33.00       |
|          |                 |      |          | H            | 122.39             | 18.08             | 9.54               | 5.36            | <b>22.25</b> | 33.00       |
|          |                 |      | E1       | V            | 120.07             | 15.57             | 9.54               | 5.36            | 19.74        | 33.00       |
|          |                 |      |          | H            | 121.85             | 17.54             | 9.54               | 5.36            | 21.71        | 33.00       |
|          |                 |      | E2       | V            | 121.42             | 16.92             | 9.54               | 5.36            | 21.09        | 33.00       |
|          |                 |      |          | H            | 116.41             | 12.10             | 9.54               | 5.36            | 16.27        | 33.00       |
|          | 1907.60         | 9538 | H        | V            | 108.73             | 4.25              | 9.61               | 5.40            | 8.45         | 33.00       |
|          |                 |      |          | H            | 119.43             | 15.14             | 9.61               | 5.40            | 19.35        | 33.00       |
|          |                 |      | E1       | V            | 117.04             | 12.56             | 9.61               | 5.40            | 16.76        | 33.00       |
|          |                 |      |          | H            | 118.59             | 14.30             | 9.61               | 5.40            | 18.51        | 33.00       |
|          |                 |      | E2       | V            | 119.19             | 14.71             | 9.61               | 5.40            | 18.91        | 33.00       |
|          |                 |      |          | H            | 114.73             | 10.44             | 9.61               | 5.40            | 14.65        | 33.00       |

**Remark :**

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

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**Measurement Result:**

| EUT Mode     | Frequency (MHz) | CH   | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | ERP (dBm)    | Limit (dBm) |
|--------------|-----------------|------|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| WCDMA Band V | 826.40          | 4132 | H        | V            | 109.84             | 23.48             | -7.88              | 3.63            | 11.97        | 38.45       |
|              |                 |      |          | H            | 120.41             | 34.15             | -7.88              | 3.63            | 22.65        | 38.45       |
|              |                 |      | E1       | V            | 120.35             | 33.99             | -7.88              | 3.63            | 22.48        | 38.45       |
|              |                 |      |          | H            | 110.00             | 23.74             | -7.88              | 3.63            | 12.24        | 38.45       |
|              |                 |      | E2       | V            | 108.08             | 21.72             | -7.88              | 3.63            | 10.21        | 38.45       |
|              |                 |      |          | H            | 120.23             | 33.97             | -7.88              | 3.63            | 22.47        | 38.45       |
|              | 836.60          | 4183 | H        | V            | 110.37             | 24.11             | -7.88              | 3.65            | 12.58        | 38.45       |
|              |                 |      |          | H            | 120.88             | 34.65             | -7.88              | 3.65            | 23.12        | 38.45       |
|              |                 |      | E1       | V            | 121.21             | 34.95             | -7.88              | 3.65            | <b>23.42</b> | 38.45       |
|              |                 |      |          | H            | 110.40             | 24.17             | -7.88              | 3.65            | 12.64        | 38.45       |
|              |                 |      | E2       | V            | 108.22             | 21.96             | -7.88              | 3.65            | 10.43        | 38.45       |
|              |                 |      |          | H            | 120.35             | 34.12             | -7.88              | 3.65            | 22.59        | 38.45       |
|              | 846.60          | 4233 | H        | V            | 109.23             | 23.08             | -7.88              | 3.67            | 11.53        | 38.45       |
|              |                 |      |          | H            | 119.56             | 33.36             | -7.88              | 3.67            | 21.81        | 38.45       |
|              |                 |      | E1       | V            | 120.45             | 34.29             | -7.88              | 3.67            | 22.74        | 38.45       |
|              |                 |      |          | H            | 109.73             | 23.53             | -7.88              | 3.67            | 11.98        | 38.45       |
|              |                 |      | E2       | V            | 107.58             | 21.43             | -7.88              | 3.67            | 9.88         | 38.45       |
|              |                 |      |          | H            | 120.02             | 33.82             | -7.88              | 3.67            | 22.27        | 38.45       |

**Remark :**

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

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**Measurement Result:**

| EUT Mode      | Frequency (MHz) | CH   | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | EIRP (dBm)   | Limit (dBm) |
|---------------|-----------------|------|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| HSUPA Band II | 1852.40         | 9262 | H        | V            | 109.20             | 4.68              | 9.48               | 5.33            | 8.82         | 33.00       |
|               |                 |      |          | H            | 119.33             | 15.00             | 9.48               | 5.33            | 19.14        | 33.00       |
|               |                 |      | E1       | V            | 118.53             | 14.01             | 9.48               | 5.33            | 18.15        | 33.00       |
|               |                 |      |          | H            | 120.22             | 15.89             | 9.48               | 5.33            | 20.03        | 33.00       |
|               |                 |      | E2       | V            | 121.30             | 16.78             | 9.48               | 5.33            | <b>20.92</b> | 33.00       |
|               |                 |      |          | H            | 116.09             | 11.76             | 9.90               | 5.84            | 15.82        | 33.00       |
|               | 1880.00         | 9400 | H        | V            | 109.68             | 5.18              | 9.54               | 5.36            | 9.35         | 33.00       |
|               |                 |      |          | H            | 119.01             | 14.70             | 9.54               | 5.36            | 18.87        | 33.00       |
|               |                 |      | E1       | V            | 117.82             | 13.32             | 9.54               | 5.36            | 17.49        | 33.00       |
|               |                 |      |          | H            | 120.61             | 16.30             | 9.54               | 5.36            | 20.47        | 33.00       |
|               |                 |      | E2       | V            | 121.06             | 16.56             | 9.54               | 5.36            | 20.73        | 33.00       |
|               |                 |      |          | H            | 116.87             | 12.56             | 9.54               | 5.36            | 16.73        | 33.00       |
|               | 1907.60         | 9538 | H        | V            | 108.09             | 3.61              | 9.61               | 5.40            | 7.81         | 33.00       |
|               |                 |      |          | H            | 117.59             | 13.30             | 9.61               | 5.40            | 17.51        | 33.00       |
|               |                 |      | E1       | V            | 115.63             | 11.15             | 9.61               | 5.40            | 15.35        | 33.00       |
|               |                 |      |          | H            | 118.18             | 13.89             | 9.61               | 5.40            | 18.10        | 33.00       |
|               |                 |      | E2       | V            | 118.73             | 14.25             | 9.61               | 5.40            | 18.45        | 33.00       |
|               |                 |      |          | H            | 114.50             | 10.21             | 9.61               | 5.40            | 14.42        | 33.00       |

**Remark :**

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**Measurement Result:**

| EUT Mode     | Frequency (MHz) | CH   | EUT Pol. | Antenna Pol. | SPA Reading (dBuV) | S.G. Output (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | ERP (dBm)    | Limit (dBm) |
|--------------|-----------------|------|----------|--------------|--------------------|-------------------|--------------------|-----------------|--------------|-------------|
| HSUPA Band V | 826.40          | 4132 | H        | V            | 108.64             | 22.28             | -7.88              | 3.63            | 10.77        | 38.45       |
|              |                 |      |          | H            | 119.65             | 33.39             | -7.88              | 3.63            | 21.89        | 38.45       |
|              |                 |      | E1       | V            | 119.47             | 33.11             | -7.88              | 3.63            | 21.60        | 38.45       |
|              |                 |      |          | H            | 107.51             | 21.25             | -7.88              | 3.63            | 9.75         | 38.45       |
|              |                 |      | E2       | V            | 108.32             | 21.96             | -7.88              | 3.63            | 10.45        | 38.45       |
|              |                 |      |          | H            | 118.85             | 32.59             | -7.88              | 3.63            | 21.09        | 38.45       |
|              | 836.60          | 4183 | H        | V            | 109.23             | 22.97             | -7.88              | 3.65            | 11.44        | 38.45       |
|              |                 |      |          | H            | 119.57             | 33.34             | -7.88              | 3.65            | 21.81        | 38.45       |
|              |                 |      | E1       | V            | 120.27             | 34.01             | -7.88              | 3.65            | <b>22.48</b> | 38.45       |
|              |                 |      |          | H            | 108.67             | 22.44             | -7.88              | 3.65            | 10.91        | 38.45       |
|              |                 |      | E2       | V            | 108.56             | 22.30             | -7.88              | 3.65            | 10.77        | 38.45       |
|              |                 |      |          | H            | 119.55             | 33.32             | -7.88              | 3.65            | 21.79        | 38.45       |
|              | 846.60          | 4233 | H        | V            | 107.92             | 21.77             | -7.88              | 3.67            | 10.22        | 38.45       |
|              |                 |      |          | H            | 118.31             | 32.11             | -7.88              | 3.67            | 20.56        | 38.45       |
|              |                 |      | E1       | V            | 119.23             | 33.07             | -7.88              | 3.67            | 21.52        | 38.45       |
|              |                 |      |          | H            | 108.33             | 22.13             | -7.88              | 3.67            | 10.58        | 38.45       |
|              |                 |      | E2       | V            | 107.34             | 21.19             | -7.88              | 3.67            | 9.64         | 38.45       |
|              |                 |      |          | H            | 118.54             | 32.34             | -7.88              | 3.67            | 20.79        | 38.45       |

**Remark :**

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

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## 7. 99% OCCUPIED BANDWIDTH MEASUREMENT

### 7.1. Standard Applicable:

According to §FCC 2.1049.

According to IC RSS-Gen §4.6.1

According to IC RSS-133 §2.3

### 7.2. Test Set-up:

Refer to section 5.2 in this report

### 7.3. Measurement Procedure:

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW= 3 times RBW (10/30KHz) for GSM/EDGE; VBW= 3 times RBW (47/150KHz) for WCDMA/HSUPA, -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

### 7.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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### 7.5. Measurement Result:

| EUT Mode | Frequency (MHz) | CH  | 99% Bandwidth (MHz) |
|----------|-----------------|-----|---------------------|
| GSM 850  | 824.20          | 128 | 0.2488              |
|          | 836.60          | 190 | 0.2438              |
|          | 848.80          | 251 | 0.2466              |

| EUT Mode | Frequency (MHz) | CH  | 99% Bandwidth (MHz) |
|----------|-----------------|-----|---------------------|
| PCS 1900 | 1850.20         | 512 | 0.2438              |
|          | 1880.00         | 661 | 0.2529              |
|          | 1909.80         | 810 | 0.2447              |

| EUT Mode | Frequency (MHz) | CH  | 99% Bandwidth (MHz) |
|----------|-----------------|-----|---------------------|
| EDGE 850 | 824.20          | 128 | 0.2475              |
|          | 836.60          | 190 | 0.2484              |
|          | 848.80          | 251 | 0.2450              |

| EUT Mode  | Frequency (MHz) | CH  | 99% Bandwidth (MHz) |
|-----------|-----------------|-----|---------------------|
| EDGE 1900 | 1850.20         | 512 | 0.2483              |
|           | 1880.00         | 661 | 0.2474              |
|           | 1909.80         | 810 | 0.2426              |

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| EUT Mode | Frequency (MHz) | CH   | 99% Bandwidth (MHz) |
|----------|-----------------|------|---------------------|
| WCDMA II | 1852.40         | 9262 | 4.1761              |
|          | 1880.00         | 9400 | 4.1601              |
|          | 1907.60         | 9538 | 4.1859              |

| EUT Mode | Frequency (MHz) | CH   | 99% Bandwidth (MHz) |
|----------|-----------------|------|---------------------|
| WCDMA V  | 826.40          | 4132 | 4.2087              |
|          | 836.00          | 4180 | 4.1654              |
|          | 846.60          | 4233 | 4.1506              |

| EUT Mode | Frequency (MHz) | CH   | 99% Bandwidth (MHz) |
|----------|-----------------|------|---------------------|
| HSUPA II | 1852.4          | 9262 | 4.1846              |
|          | 1880.0          | 9400 | 4.1836              |
|          | 1907.6          | 9538 | 4.1565              |

| EUT Mode | Frequency (MHz) | CH   | 99% Bandwidth (MHz) |
|----------|-----------------|------|---------------------|
| HSUPA V  | 826.40          | 4132 | 4.1910              |
|          | 836.60          | 4183 | 4.1804              |
|          | 846.60          | 4233 | 4.1576              |

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Figure 7-1: GSM Channel Low

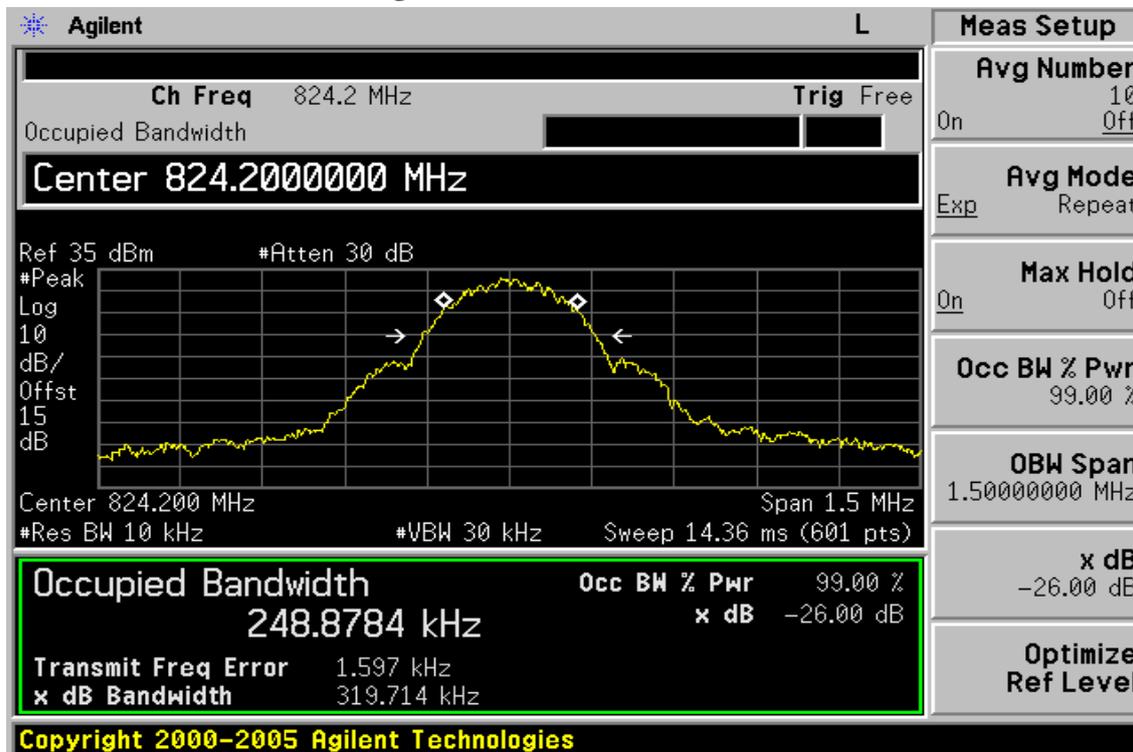
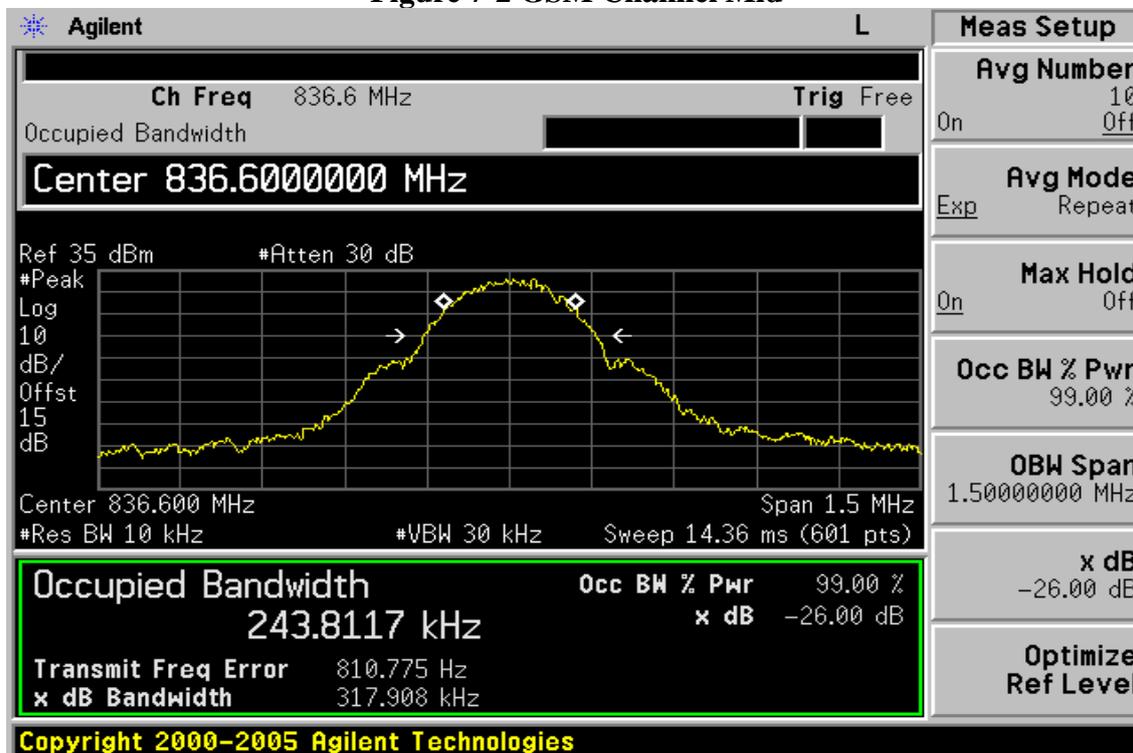


Figure 7-2 GSM Channel Mid



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Figure 7-3: GSM Channel High

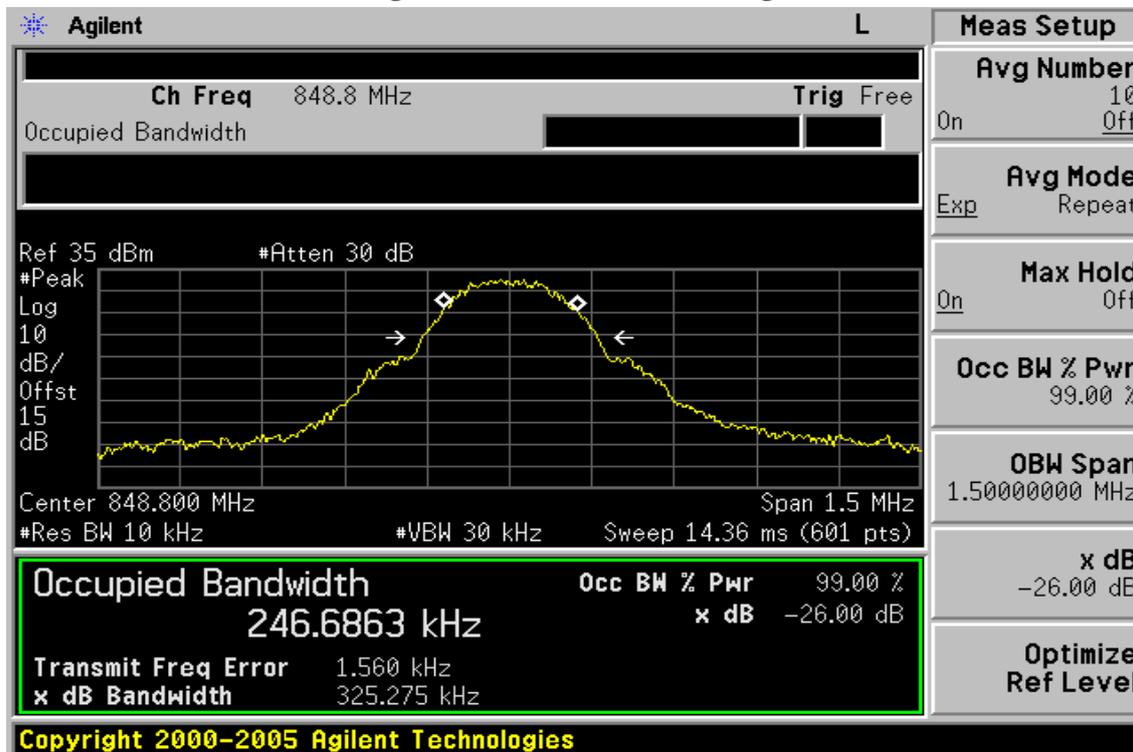
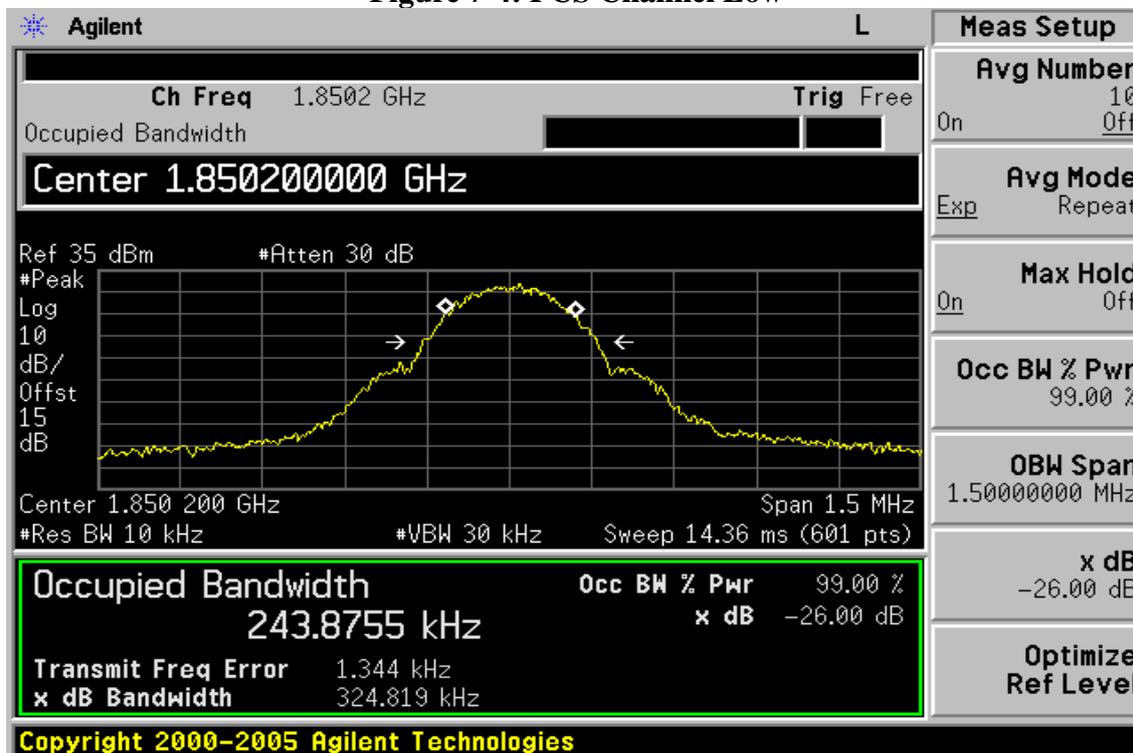


Figure 7-4: PCS Channel Low



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Figure 7-5 PCS Channel Mid

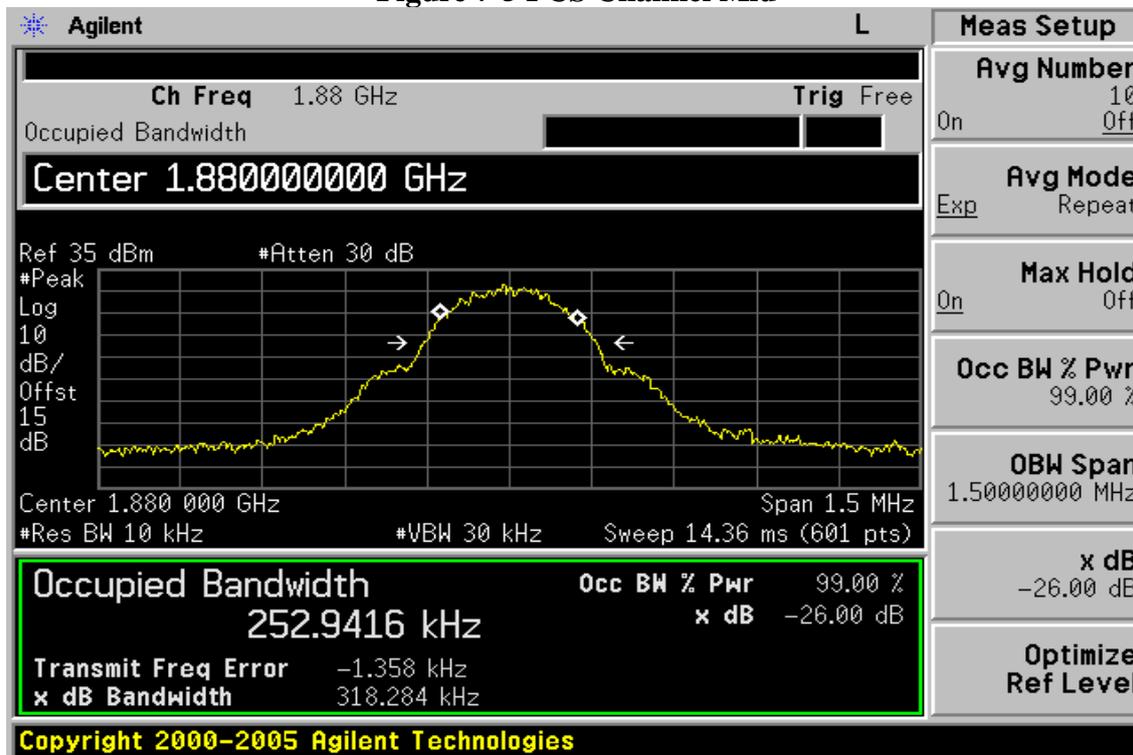
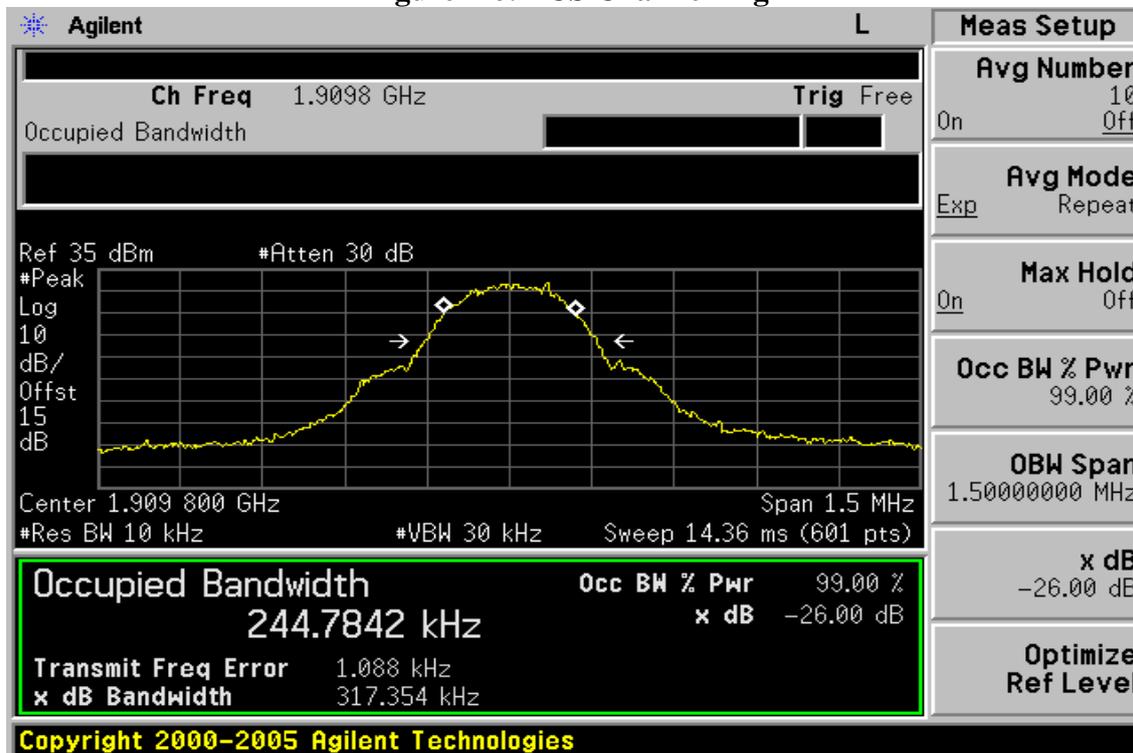


Figure 7-6: PCS Channel High



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Figure 7-7: EDGE 850 Channel Low

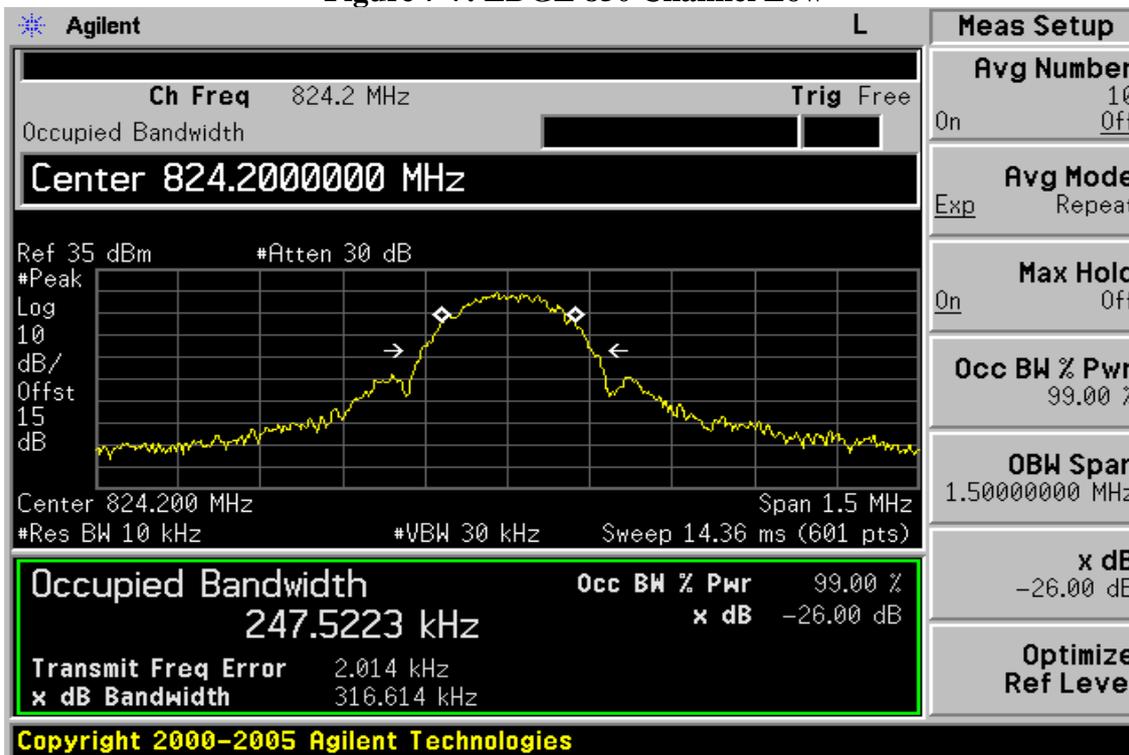
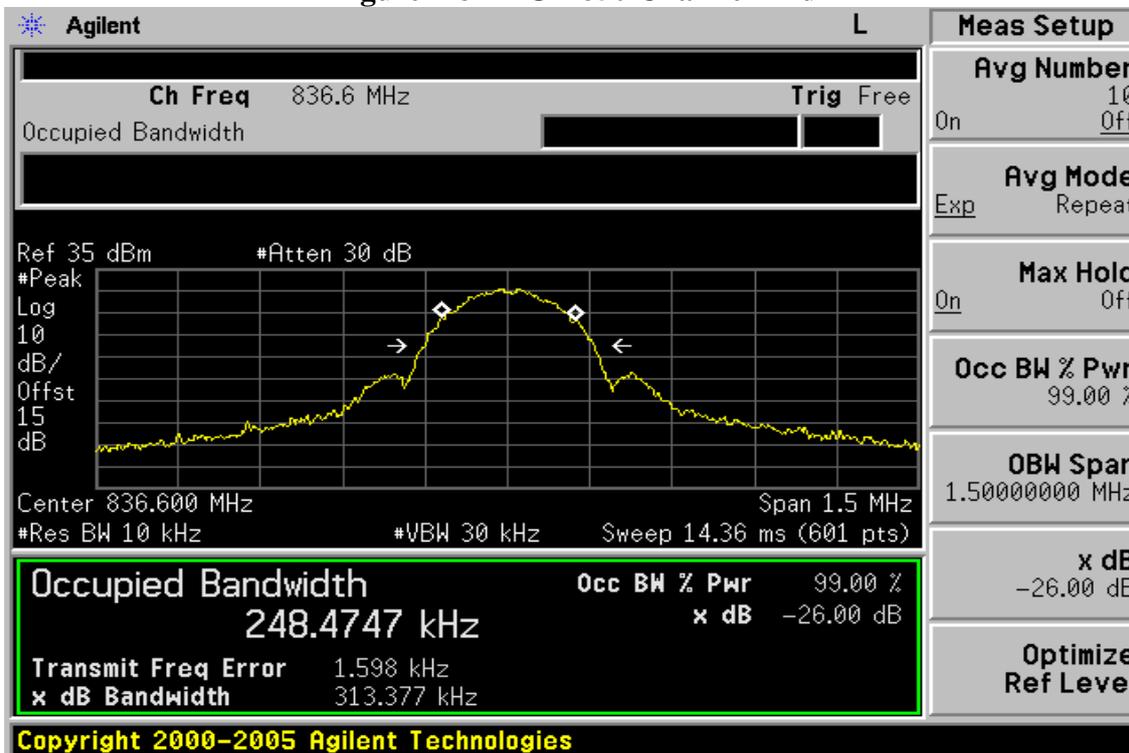


Figure 7-8 EDGE 850 Channel Mid



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Figure 7-9: EDGE 850 Channel High

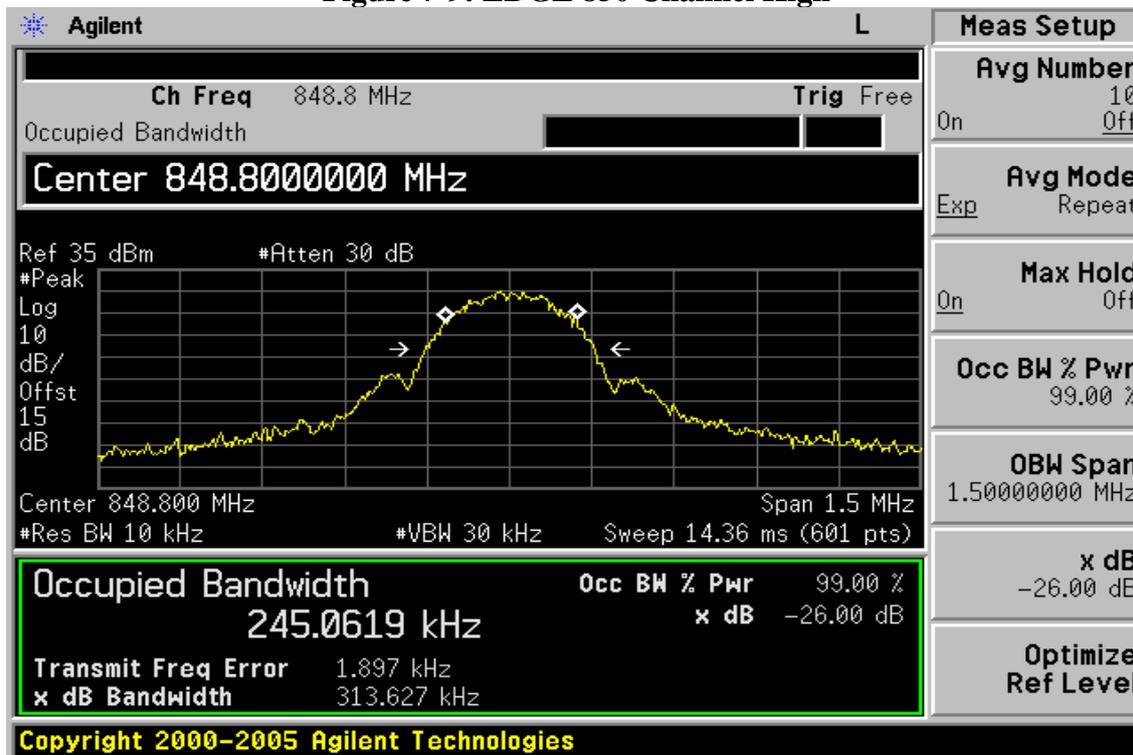
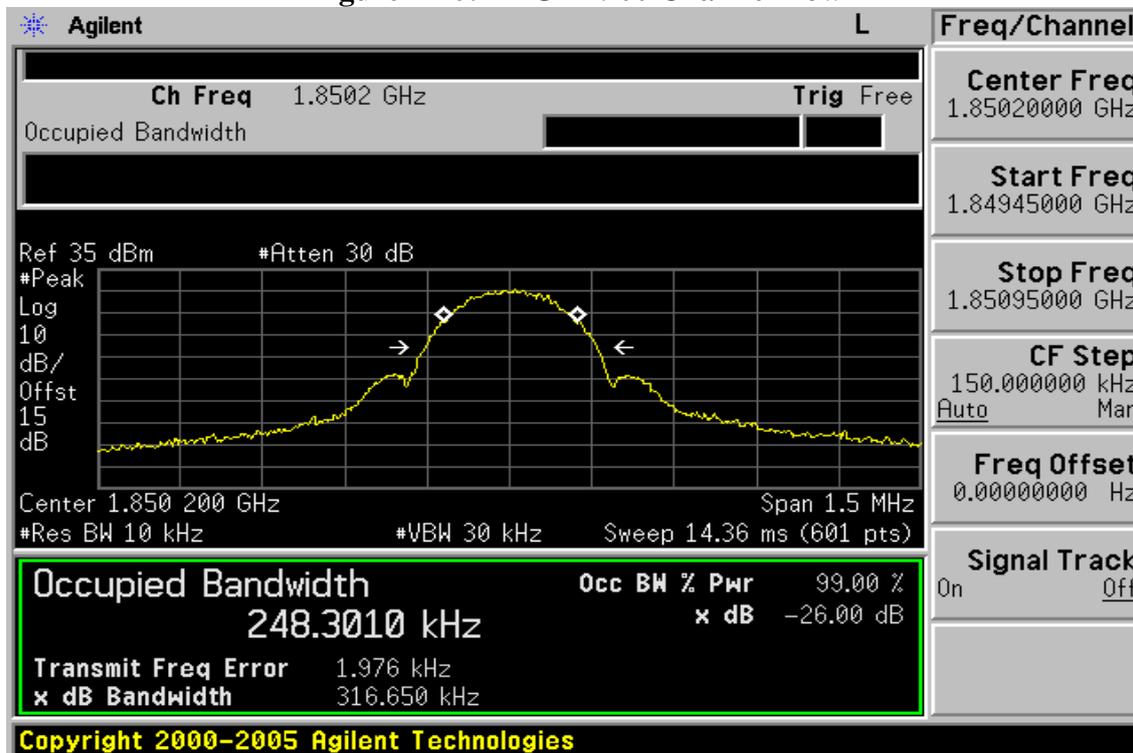


Figure 7-10: EDGE 1900 Channel Low



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Figure 7-11 EDGE 1900 Channel Mid

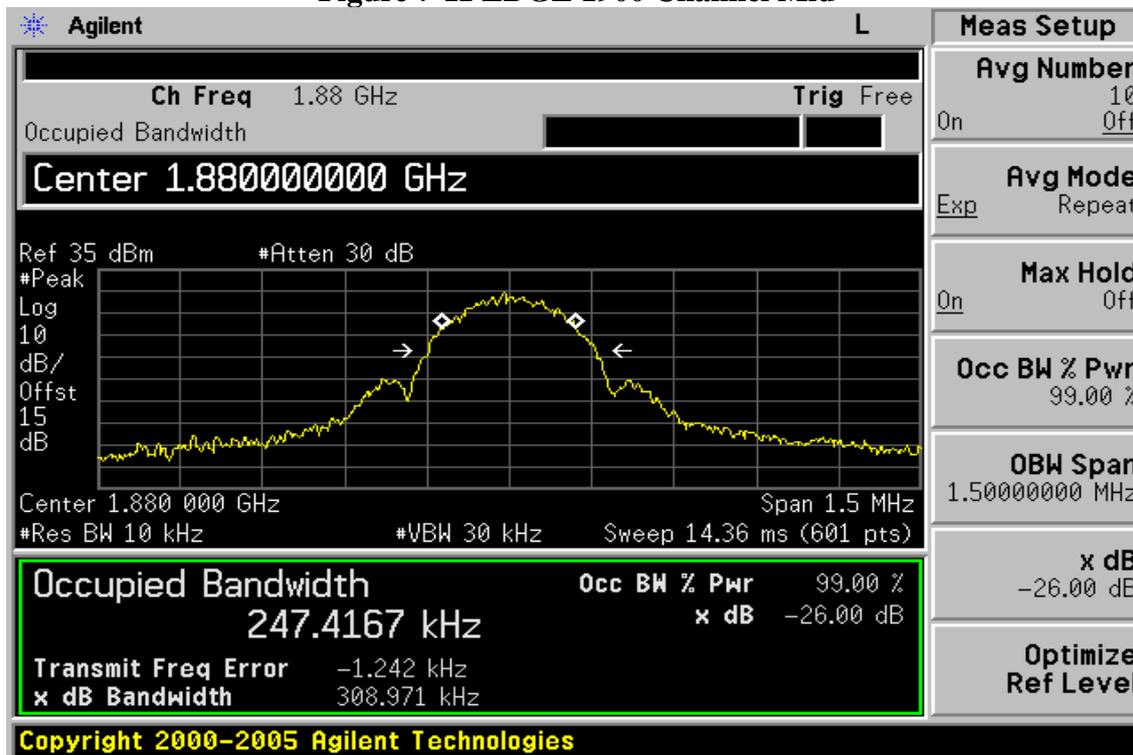
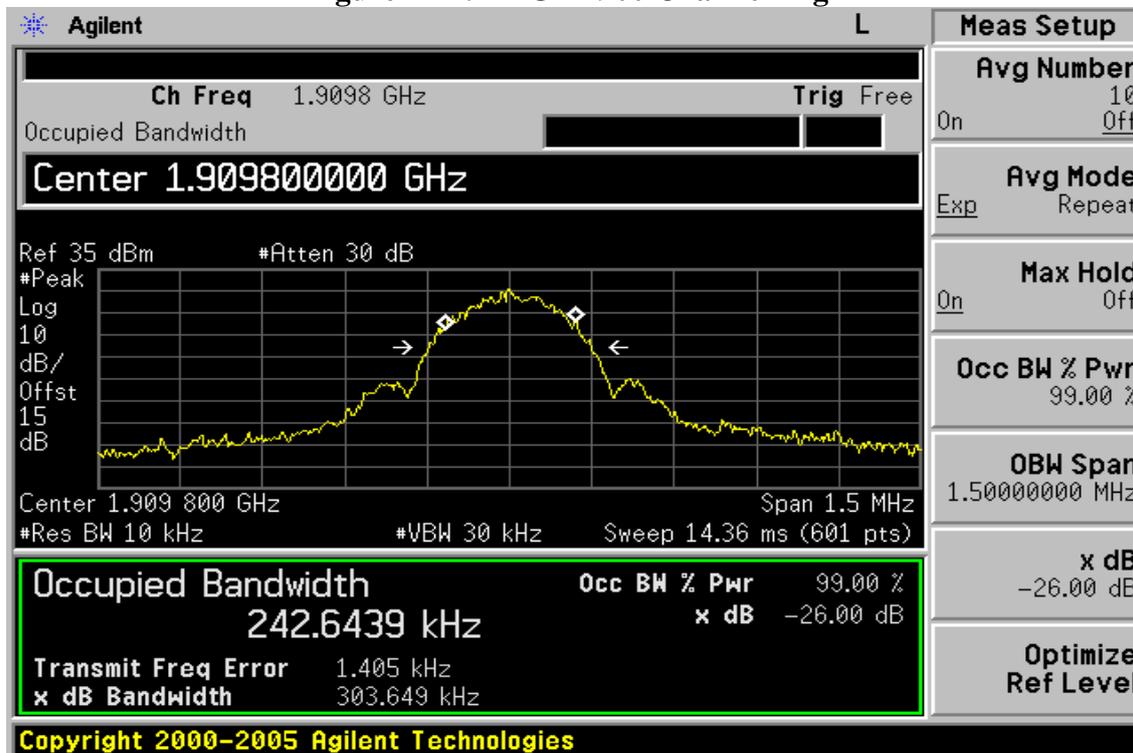


Figure 7-12: EDGE 1900 Channel High



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Figure 7-13: WCDMA II Channel Low

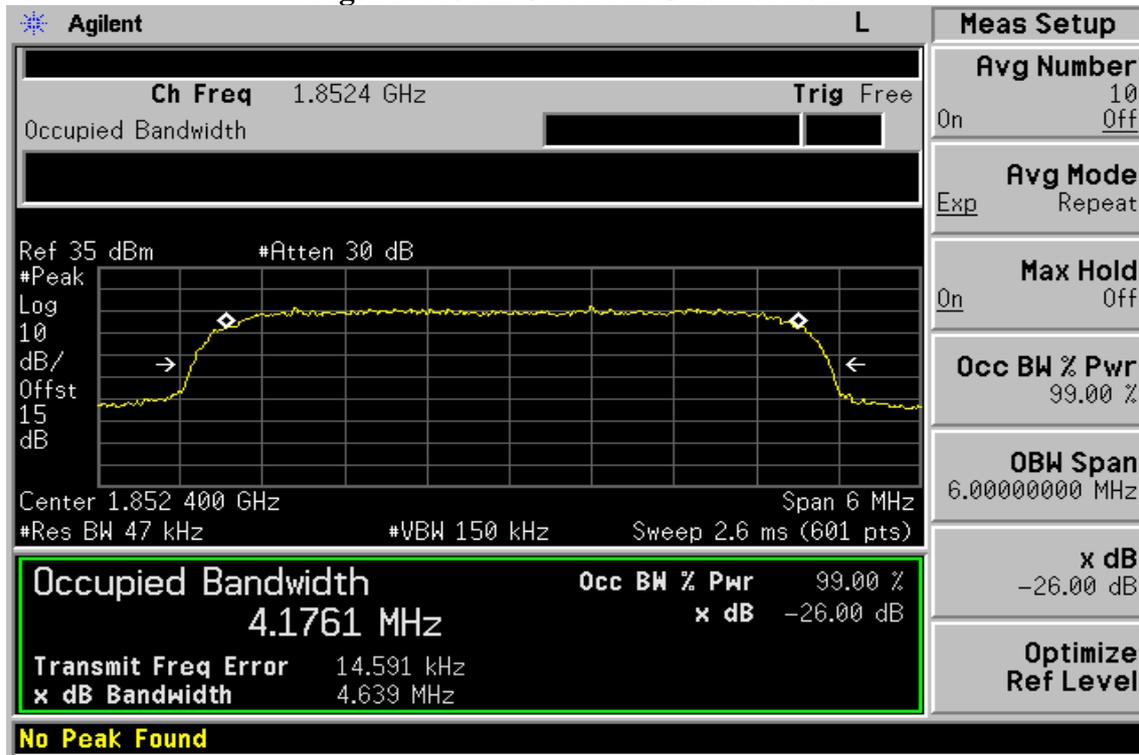
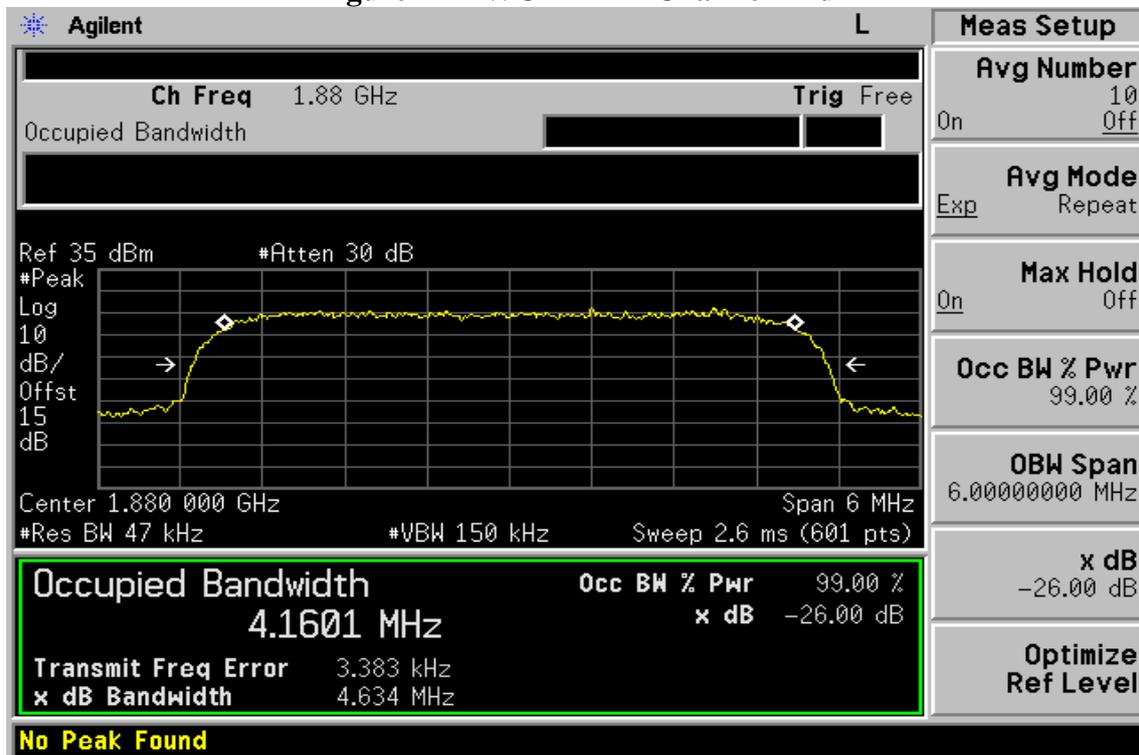


Figure 7-14 WCDMA II Channel Mid



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Figure 7-15: WCDMA II Channel High

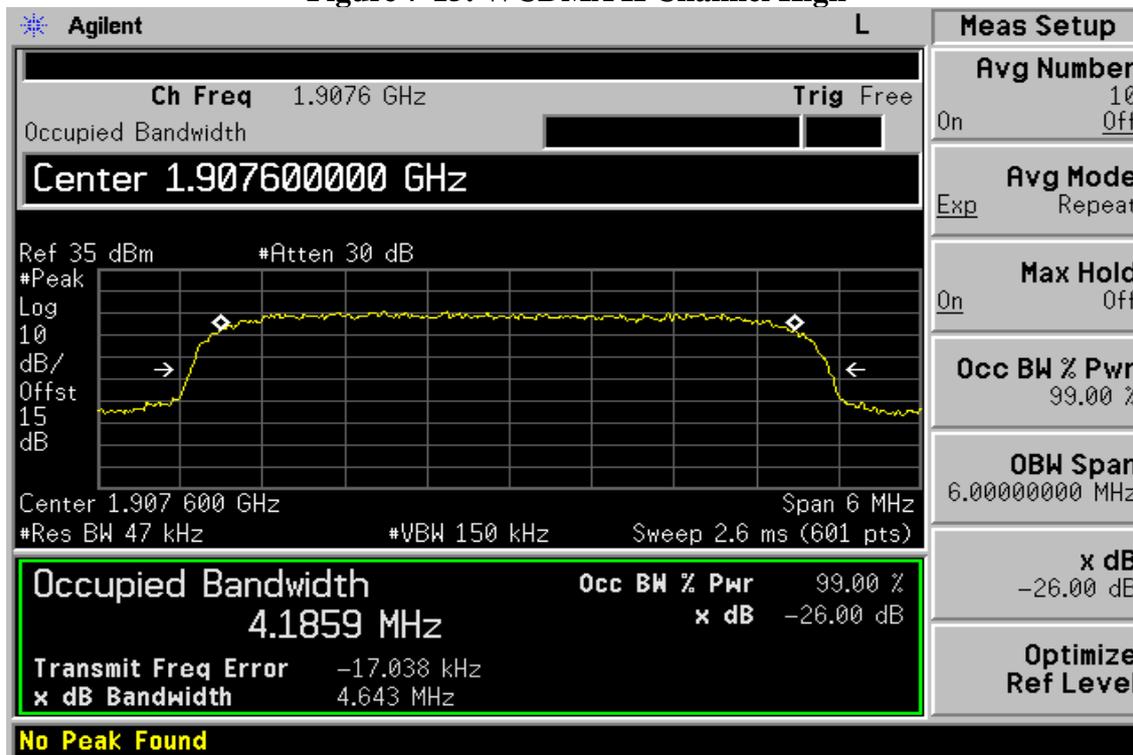
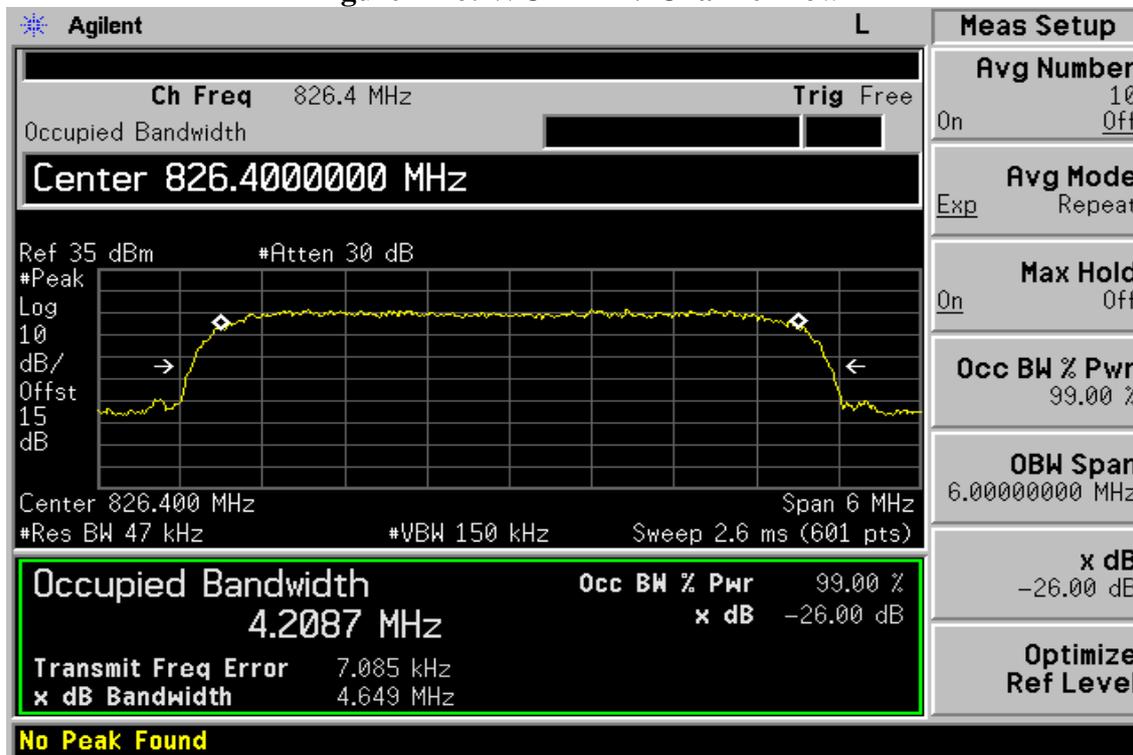


Figure 7-16: WCDMA V Channel Low



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Figure 7-17 WCDMA II Channel Mid

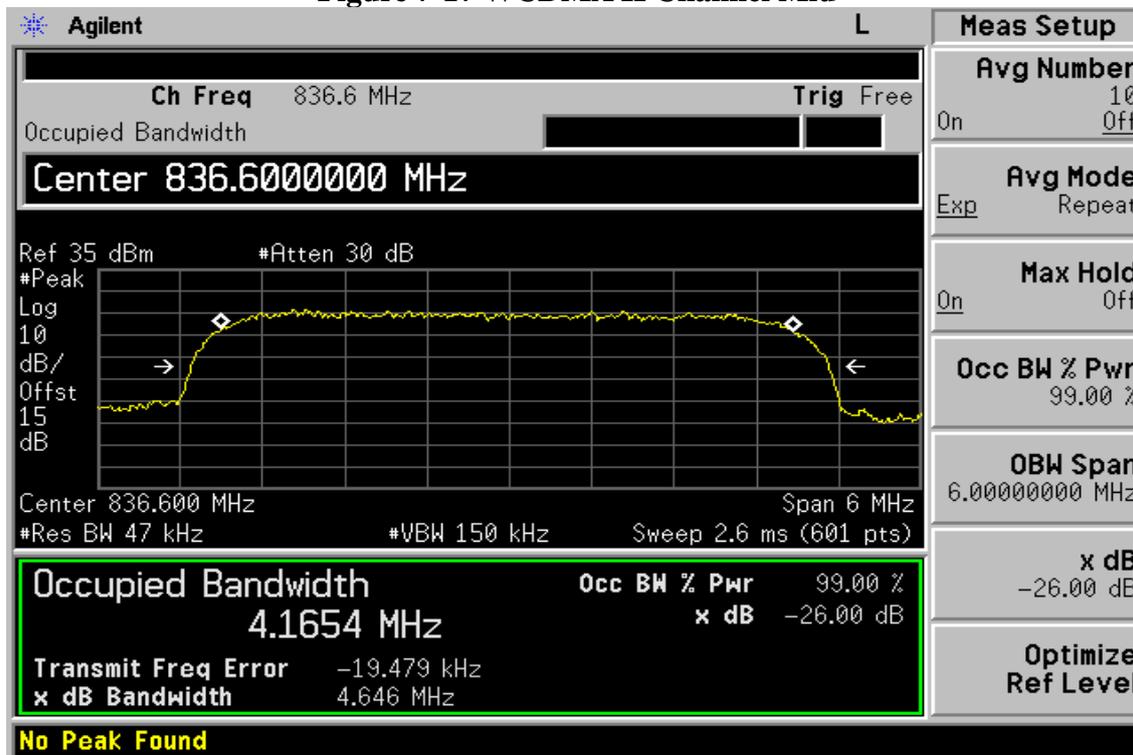
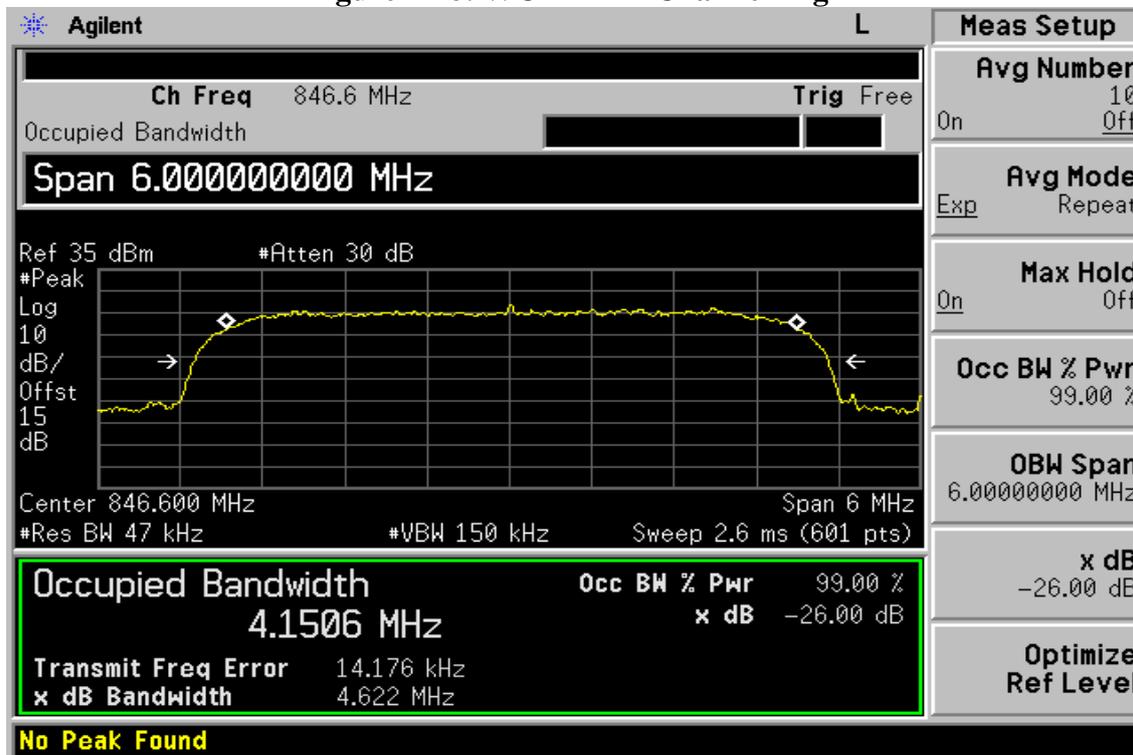


Figure 7-18: WCDMA II Channel High



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Figure 7-19: HSUPA II Channel Low

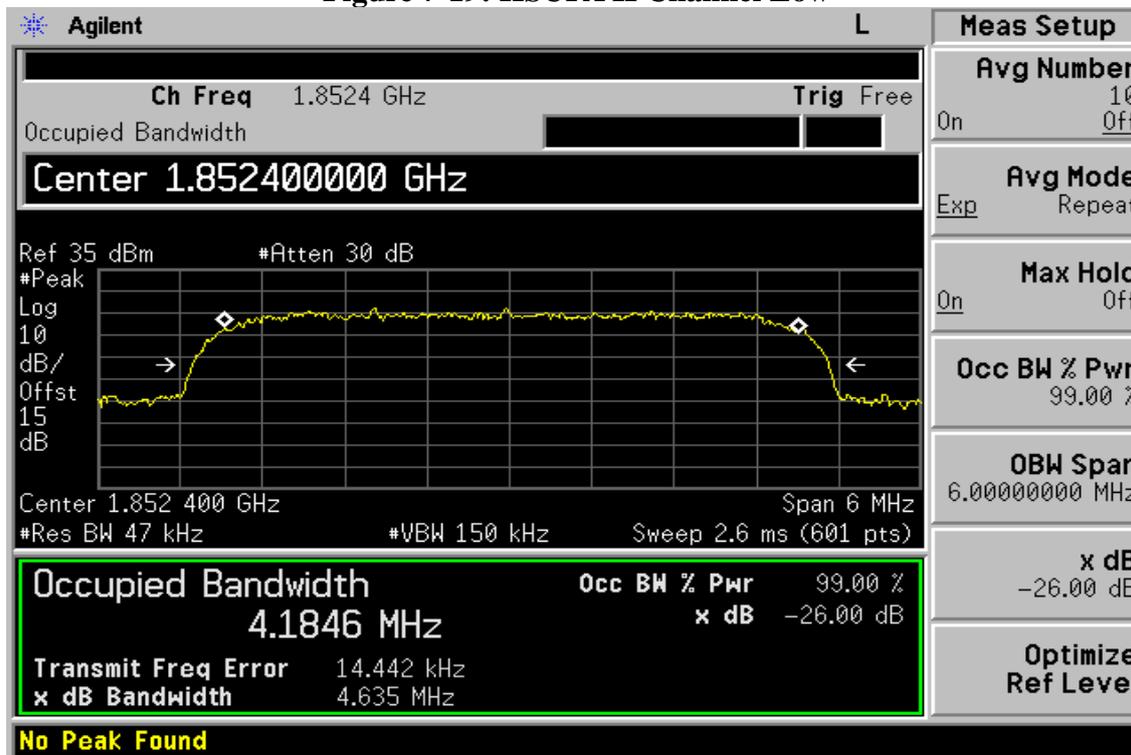
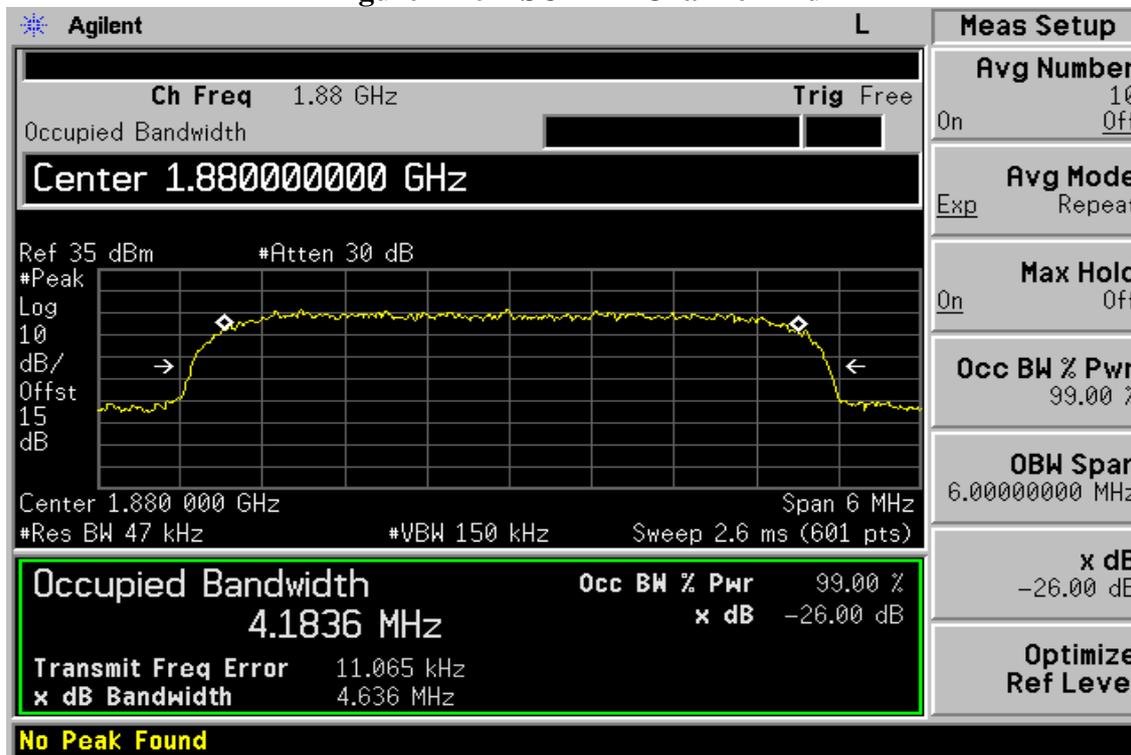


Figure 7-20 HSUPA II Channel Mid



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Figure 7-21: HSUPA II Channel High

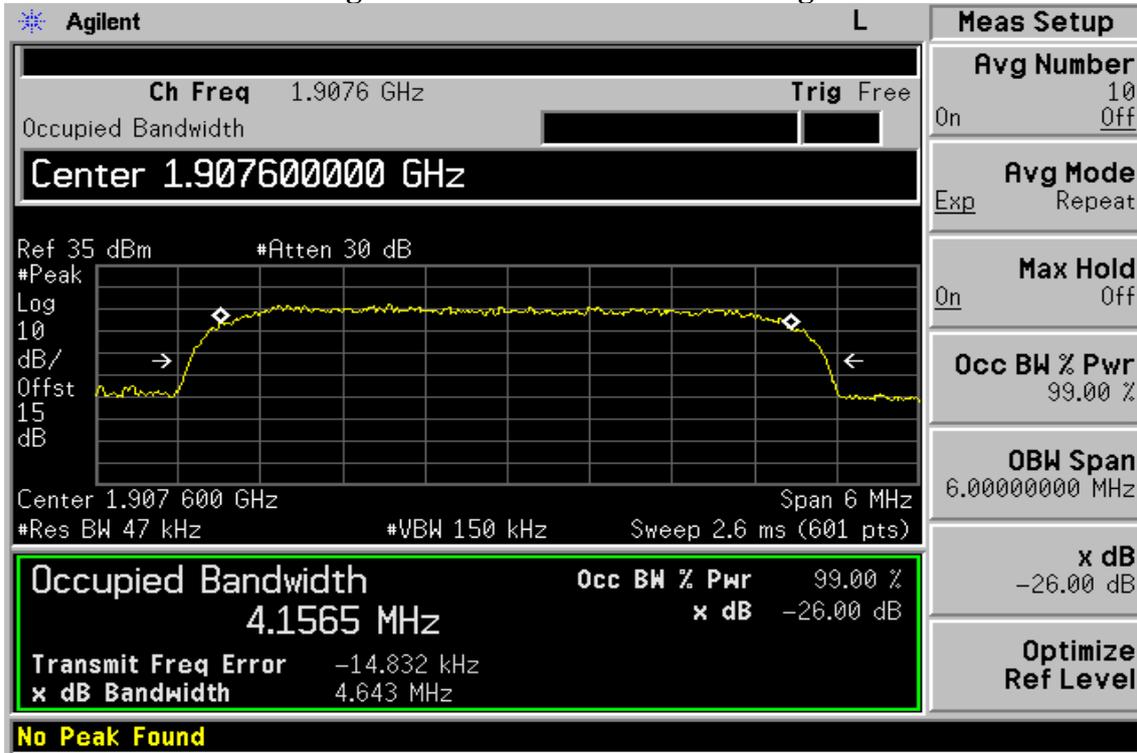
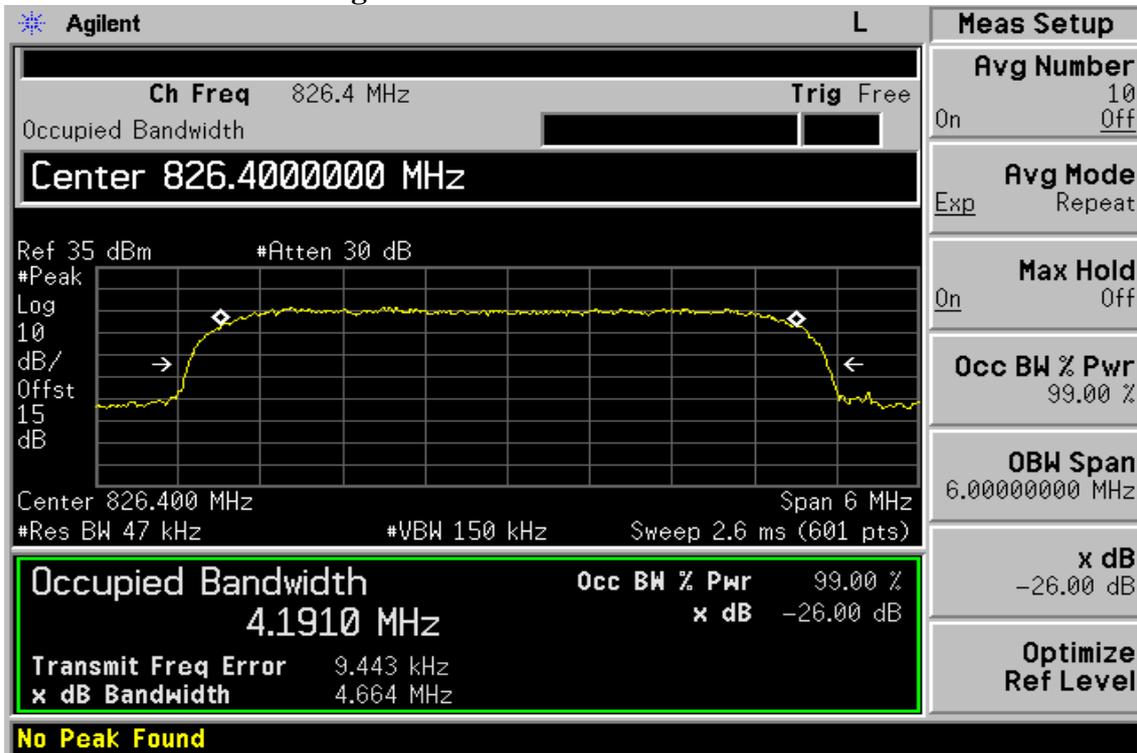


Figure 7-22: HSUPA V Channel Low



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Figure 7-23 HSUPA V Channel Mid

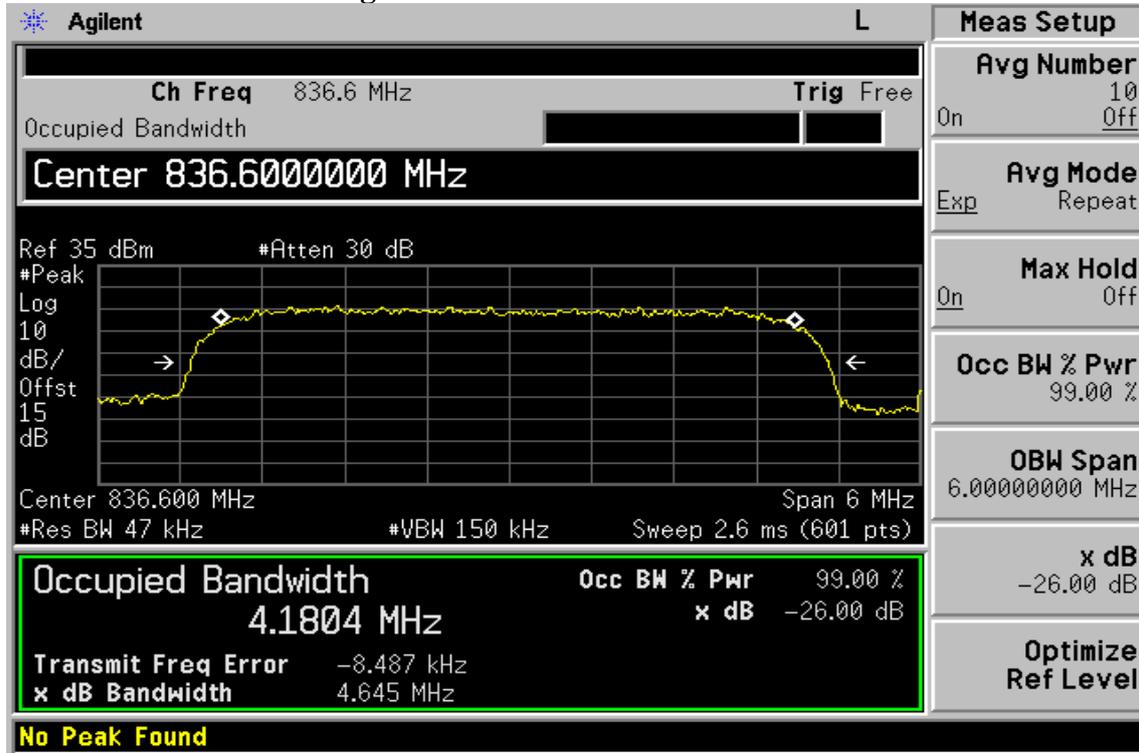
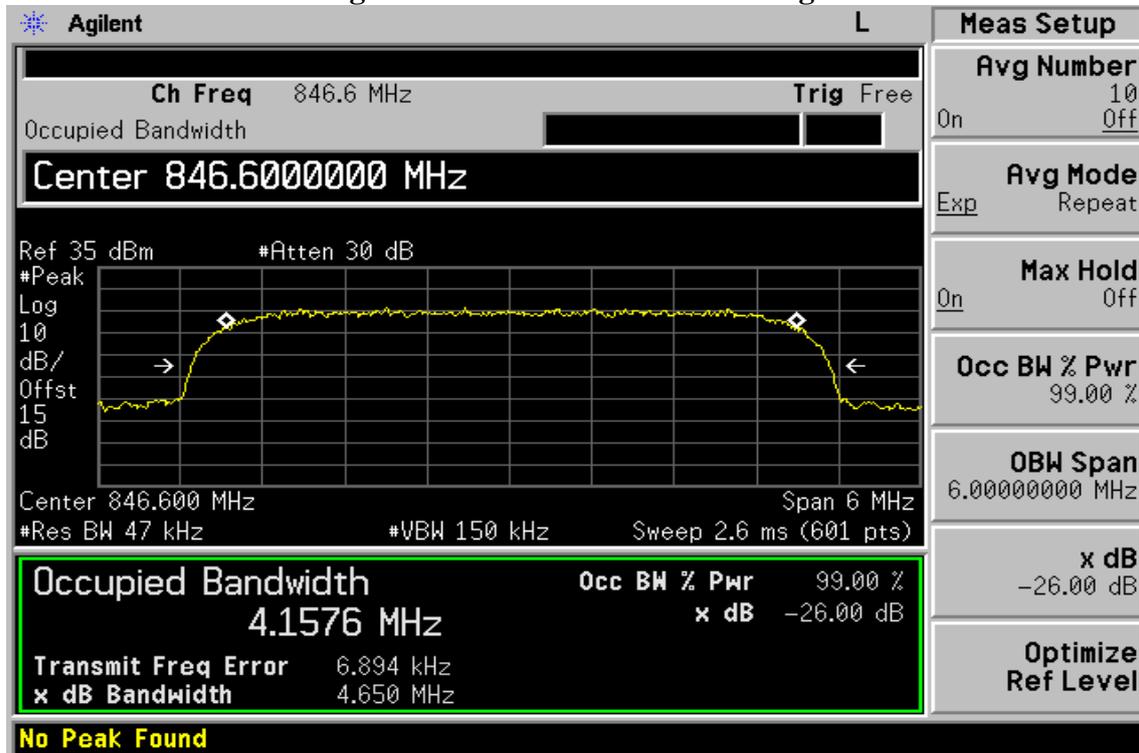


Figure 7-24: HSUPA V Channel High



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## 8. OUT OF BAND EMISSION AT ANTENNA TERMINALS

### 8.1. Standard Applicable:

According to FCC §2.1051.

FCC §22.917(a), §24.238(a) the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/or alignment procedure, shall not be less than  $43 + 10 \log$  (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5

#### 4.5.1 Out-of-block Emissions

Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least  $43 + 10 \log (P)$ , dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

$43 + 10 \log (P)$ , dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least  $43 + 10 \log (P)$ , dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

$43 + 10 \log (P)$ , dB, in any 1 MHz bandwidth

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According to RSS-133 §6.5

### 6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.

In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least  $43 + 10 \log (P)$  dB.

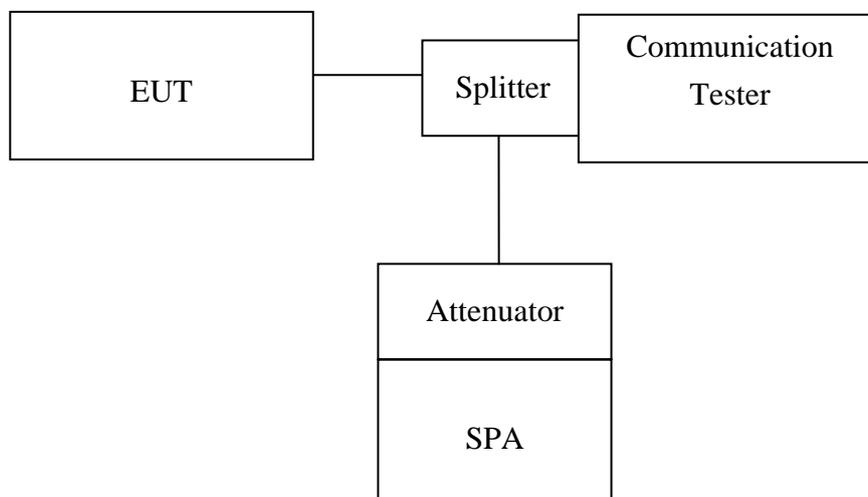
b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least  $43 + 10 \log (P)$ , dB, per any MHz of bandwidth.

(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

### 6.5.2 Out-of-Sub-band Emissions

Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

## 8.2. Test SET-UP:



*Note: Measurement setup for testing on Antenna connector*

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### 8.3. Measurement Procedure:

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10th harmonic. Limit = -13dBm

Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

### 8.4. Measurement Equipment Used:

Refer to section 2.4 in this report

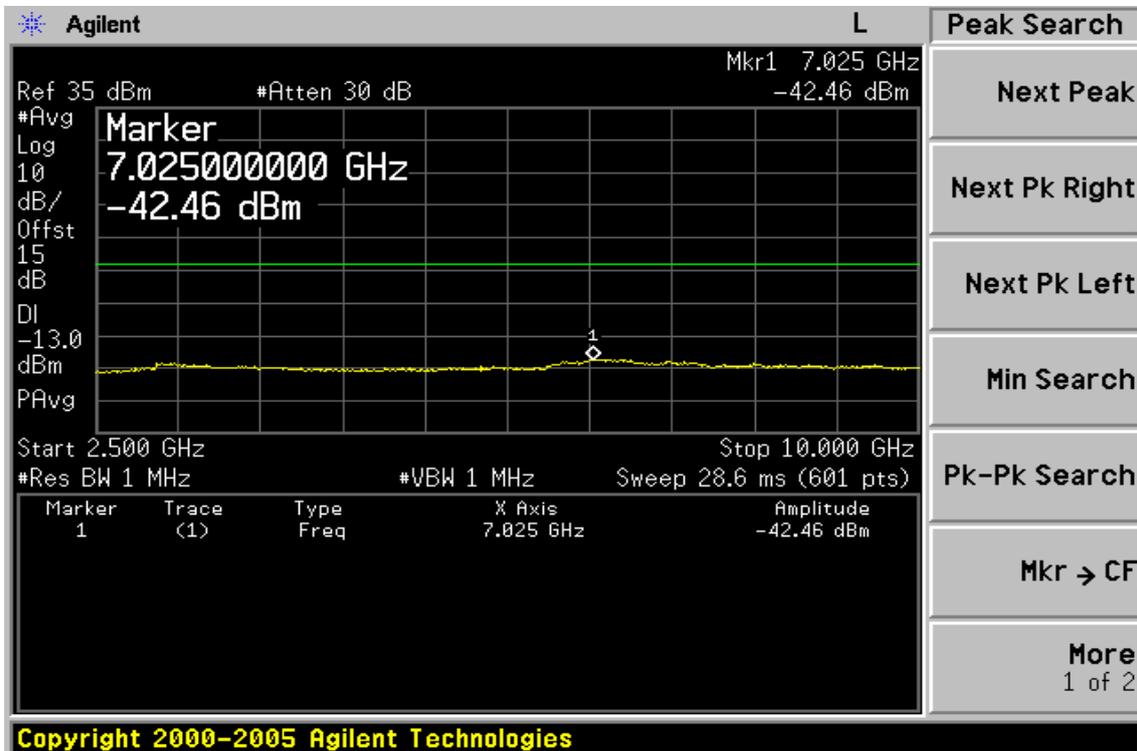
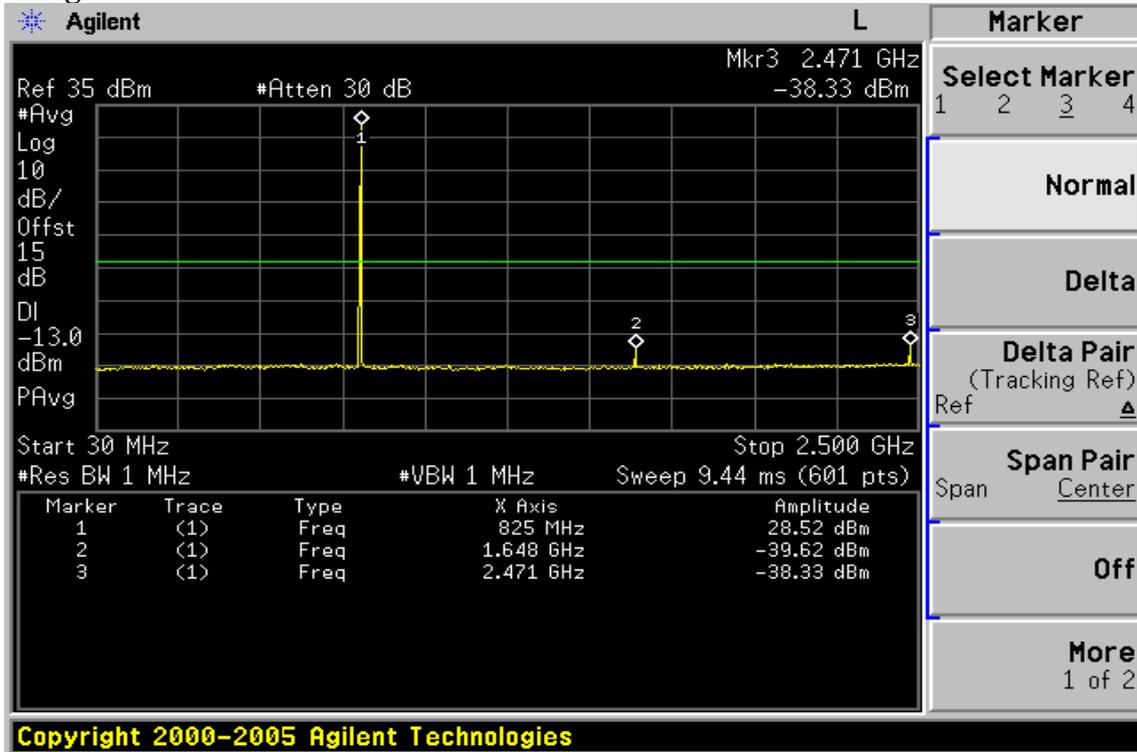
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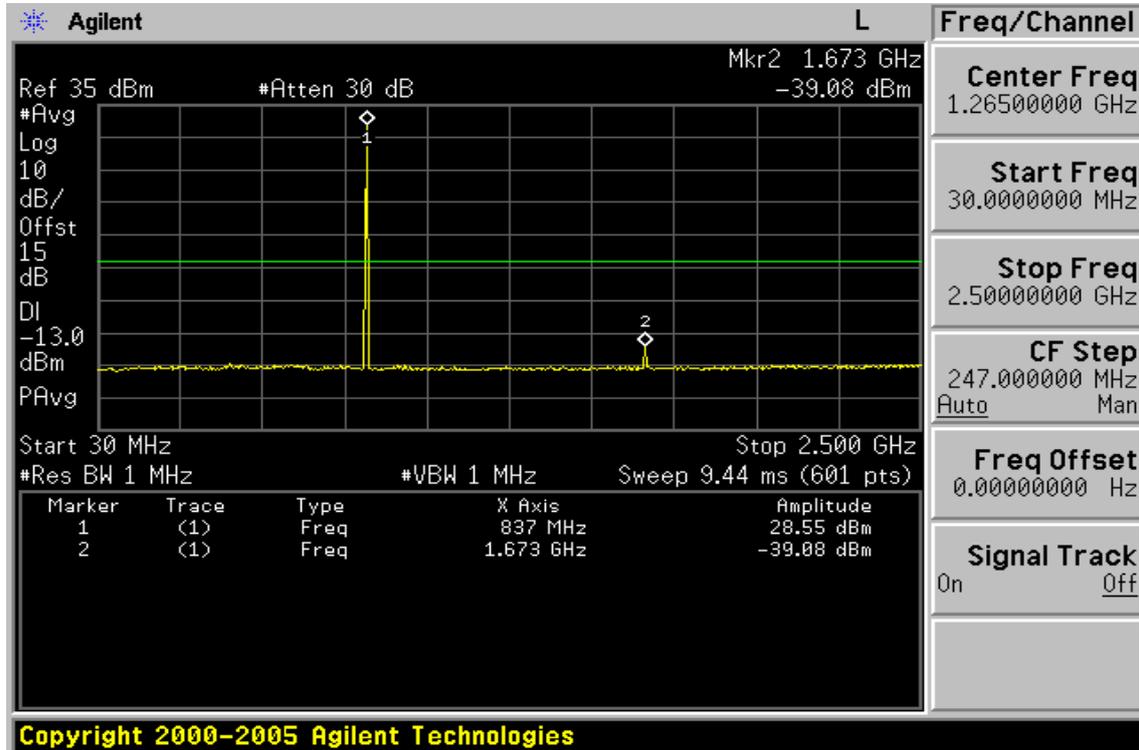
8.5. Measurement Result:

Figure 8-1: Out of Band emission at antenna terminals– GSM Channel Lowest



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Figure 8-2: Out of Band emission at antenna terminals –GSM Channel Mid

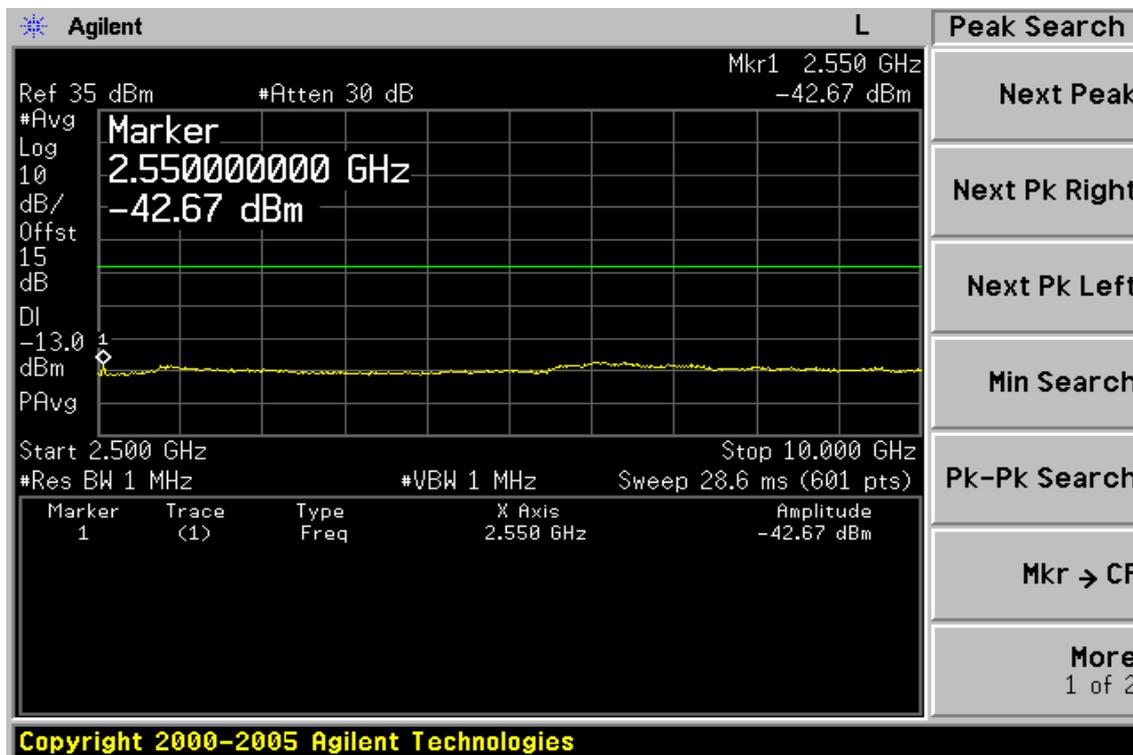
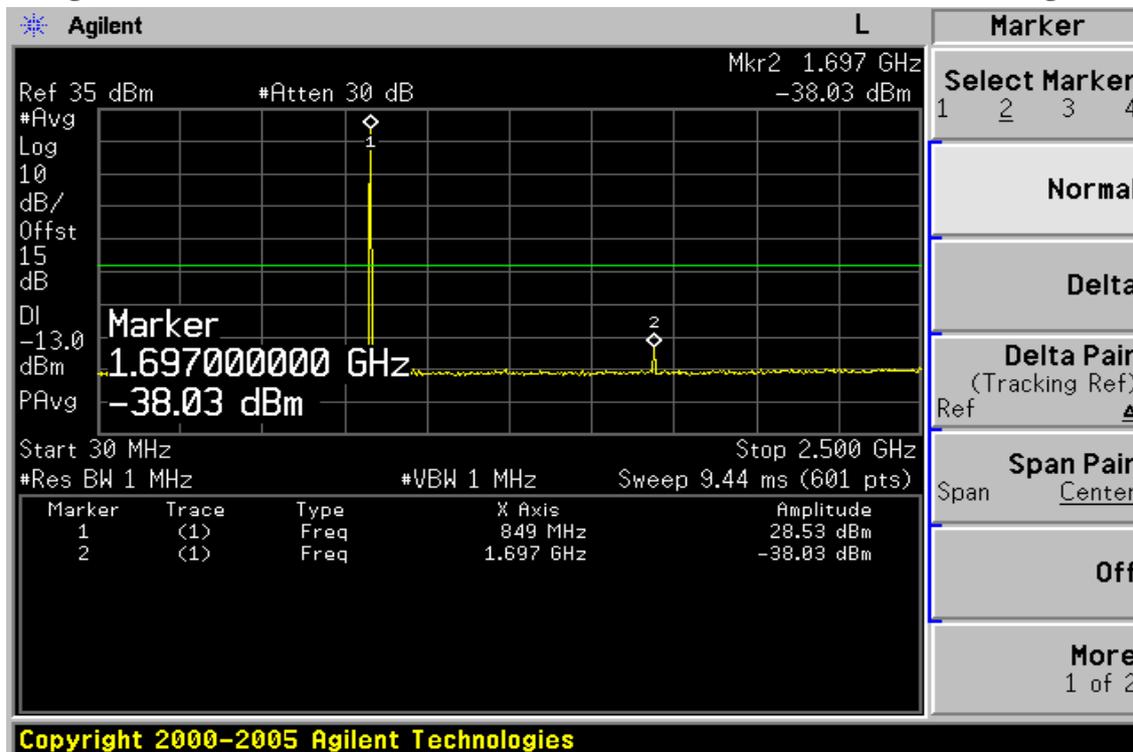


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Figure 8-3: Out of Band emission at antenna terminals–GSM Channel Highest



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Figure 8-4: Band edge emission at antenna terminals – GSM Channel Lowest

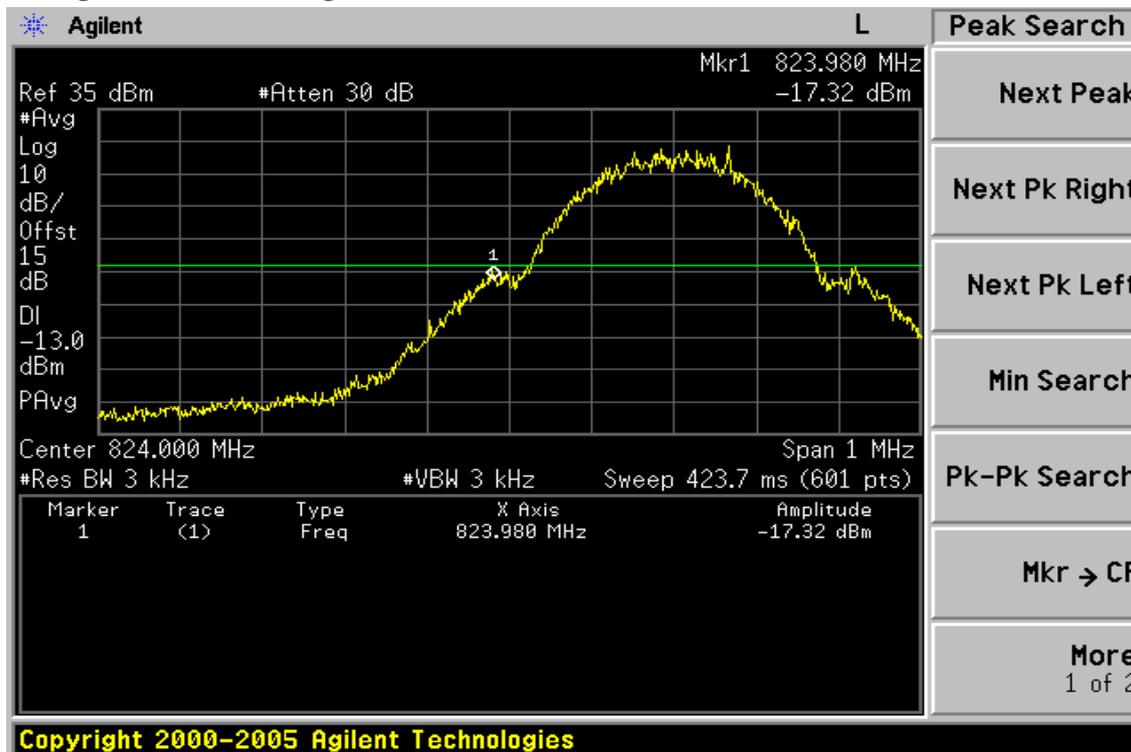


Figure 8-5: Band edge emission at antenna terminals – GSM Channel Highest

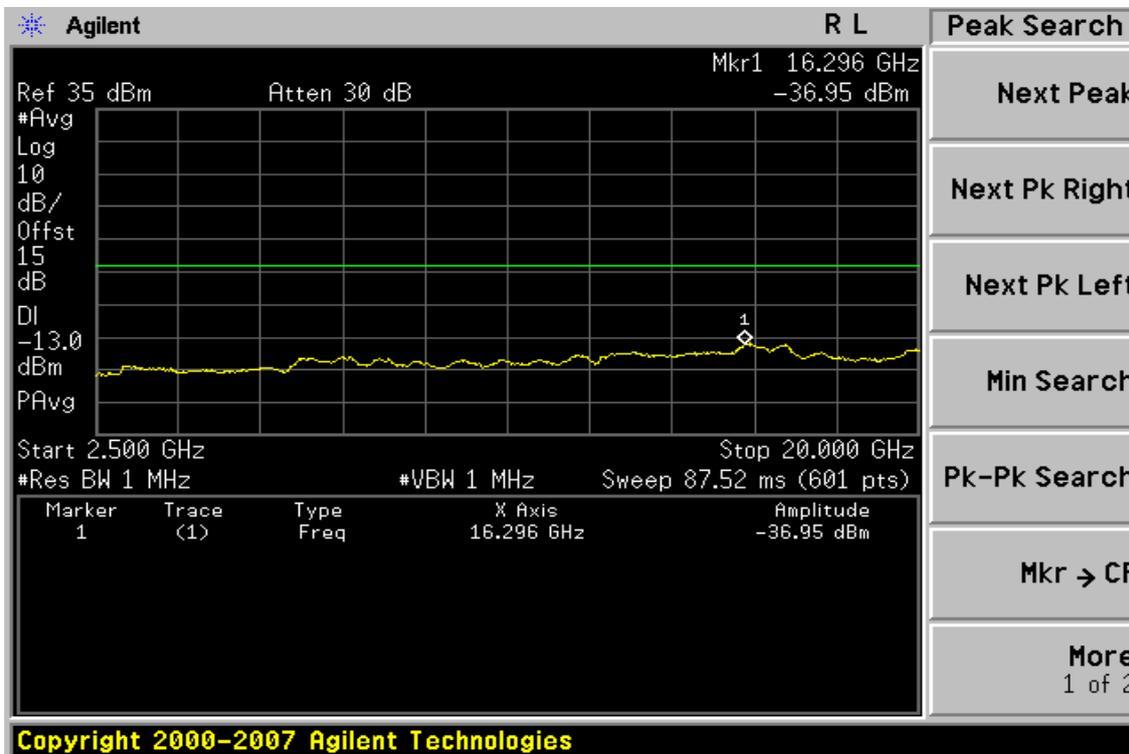
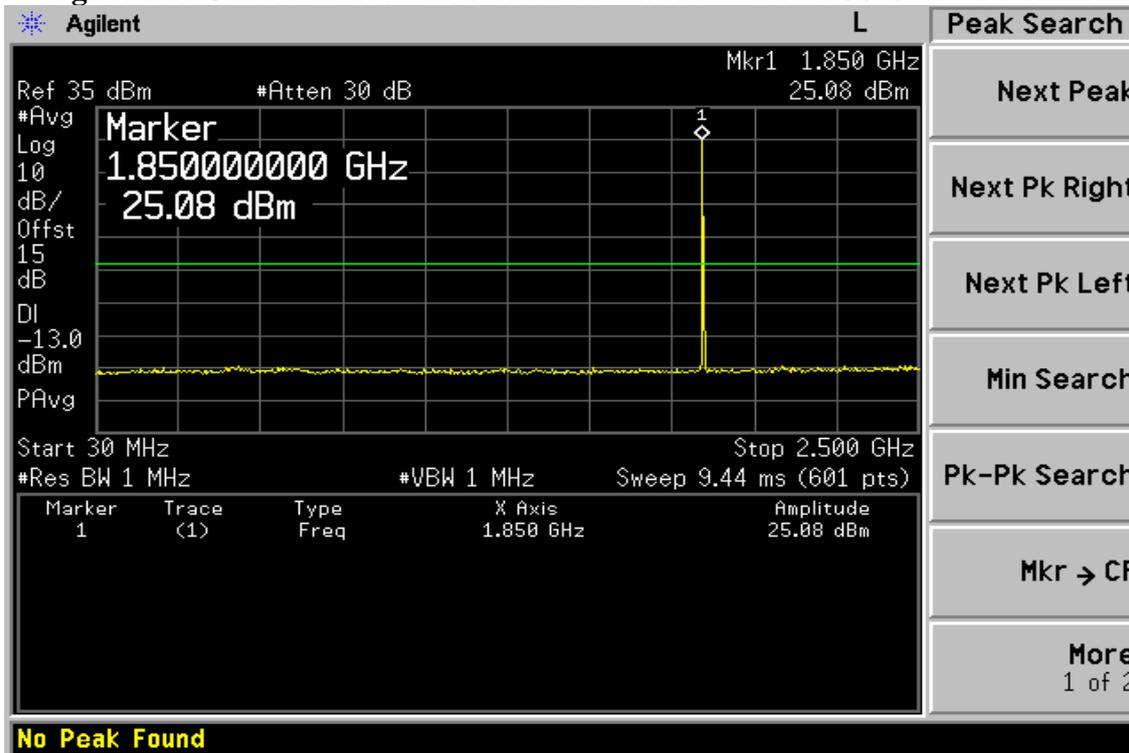


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Figure 8-6: Out of Band emission at antenna terminals– PCS Channel Lowest

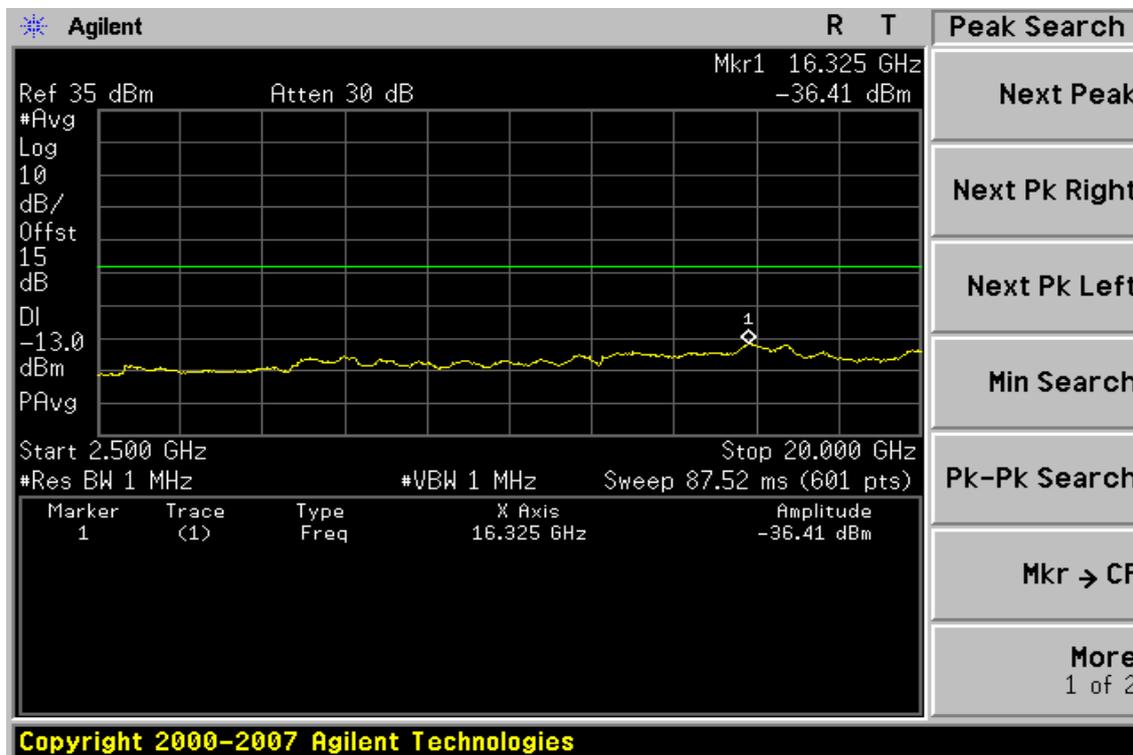
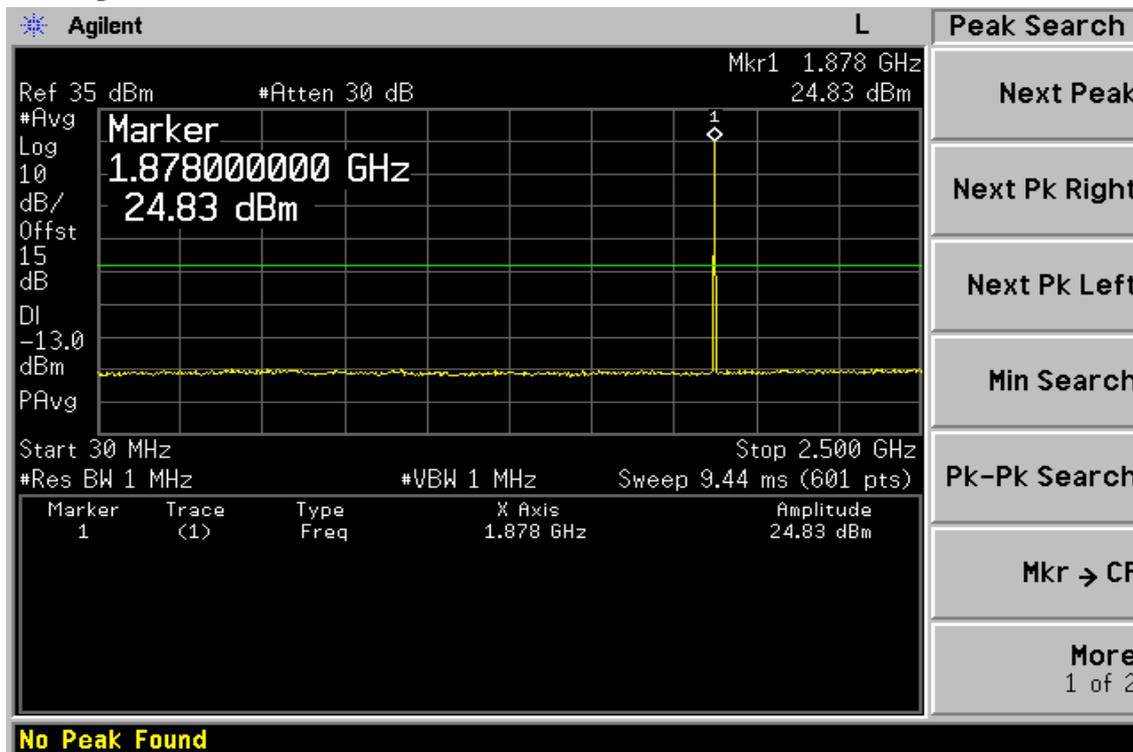


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Figure 8-7: Out of Band emission at antenna terminals –PCS Channel Mid

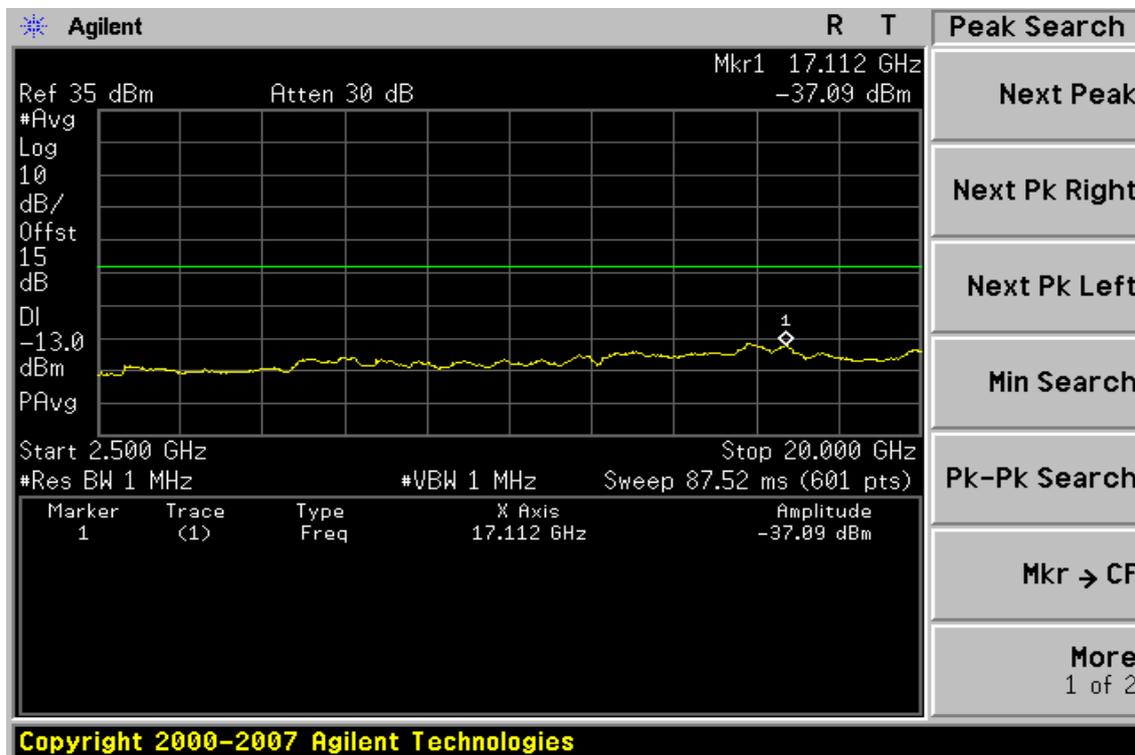
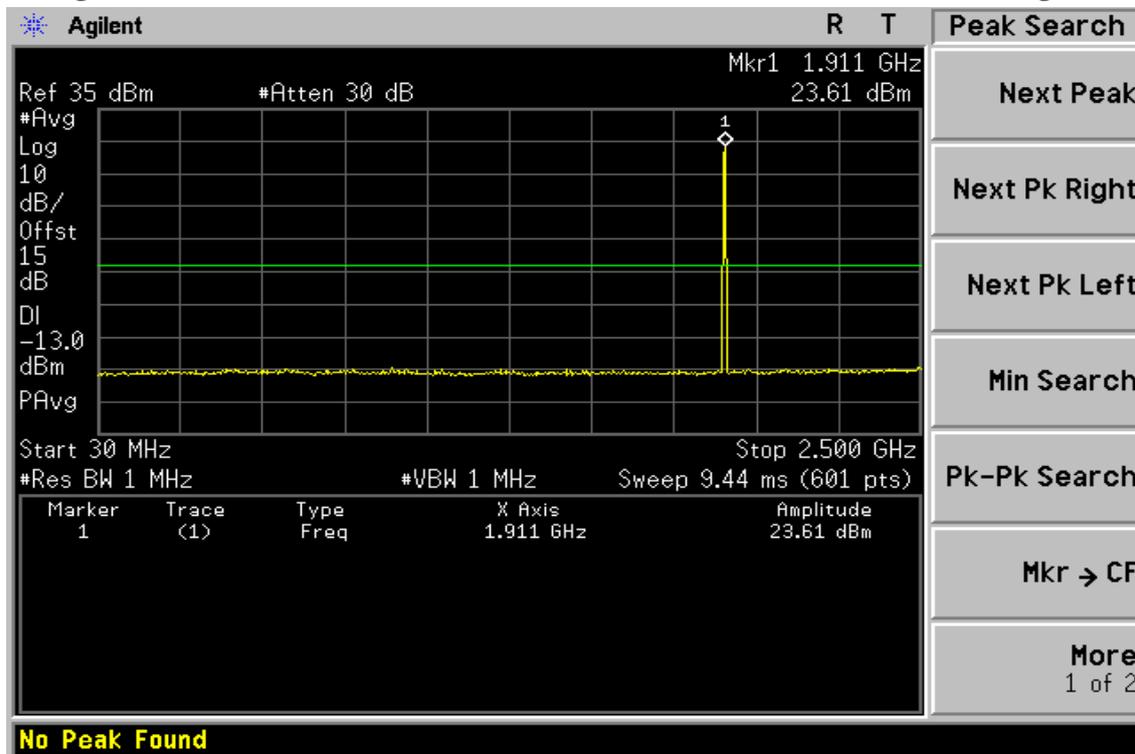


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Figure 8-8: Out of Band emission at antenna terminals-PCS Channel Highest



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Figure 8-9: Band edge emission at antenna terminals – PCS Channel Lowest

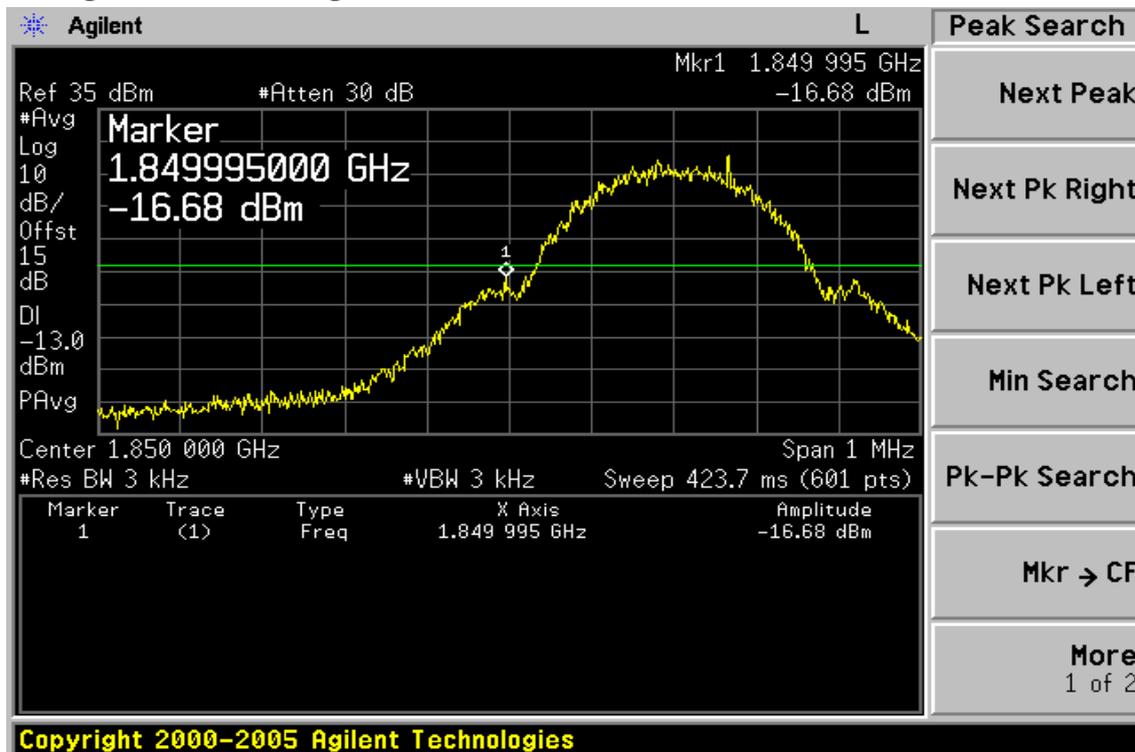
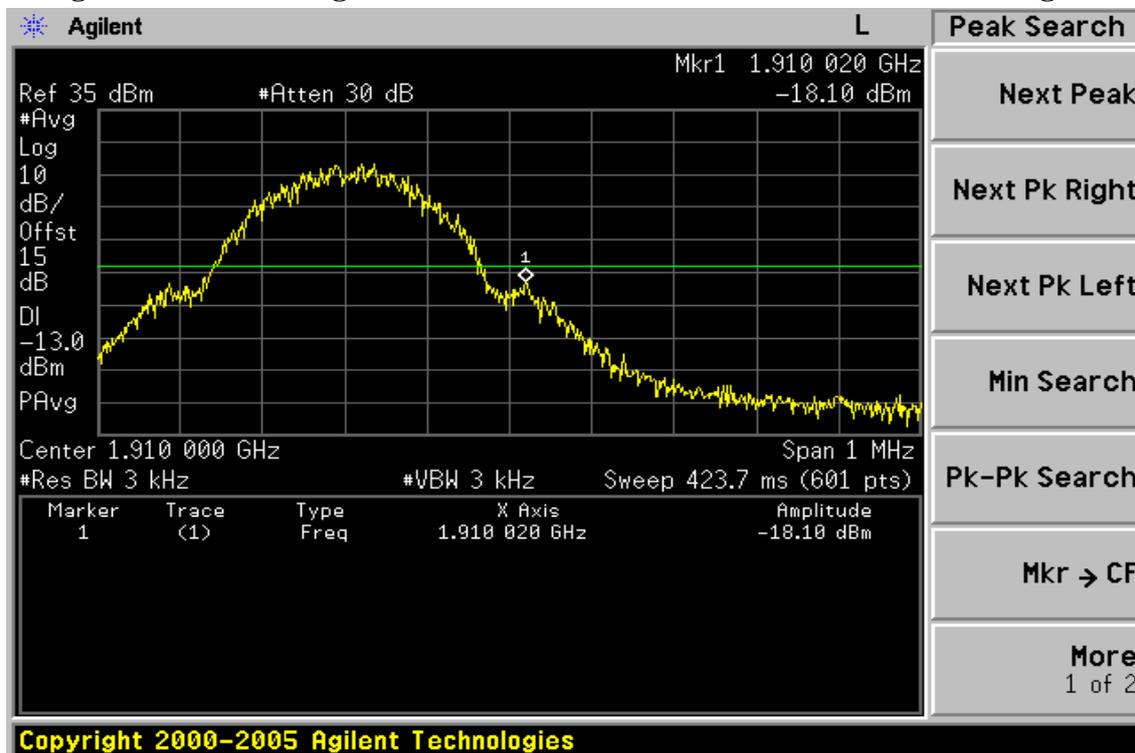


Figure 8-10: Band edge emission at antenna terminals – PCS Channel Highest

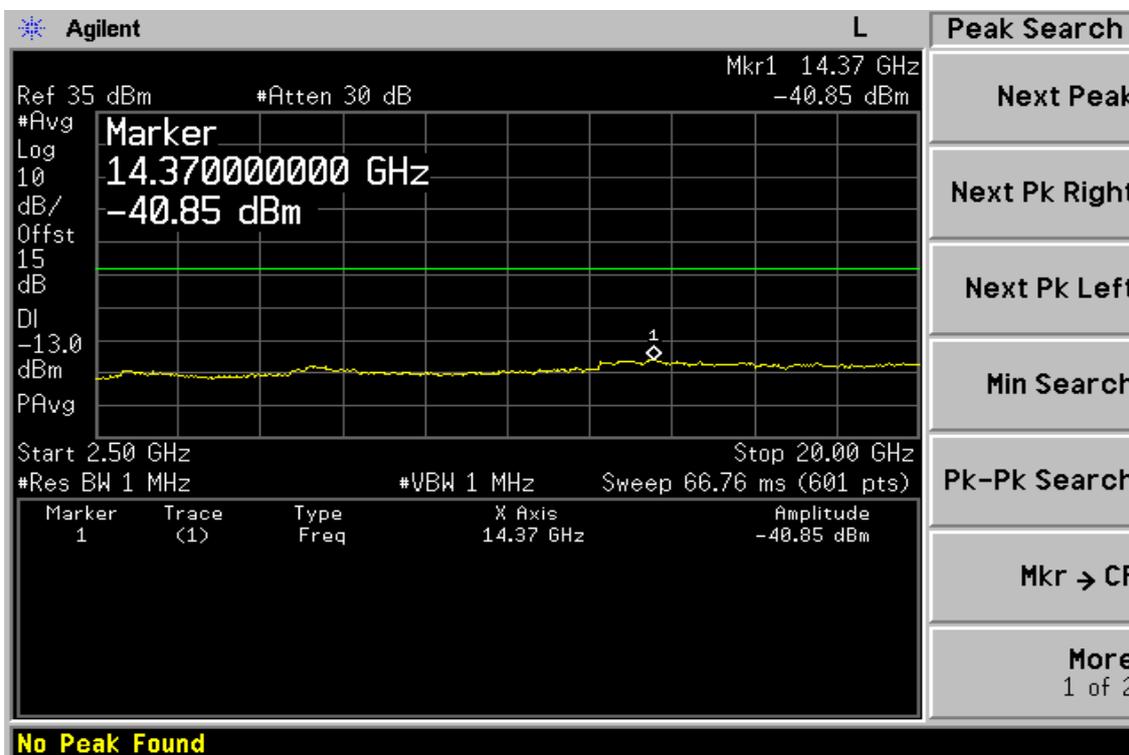
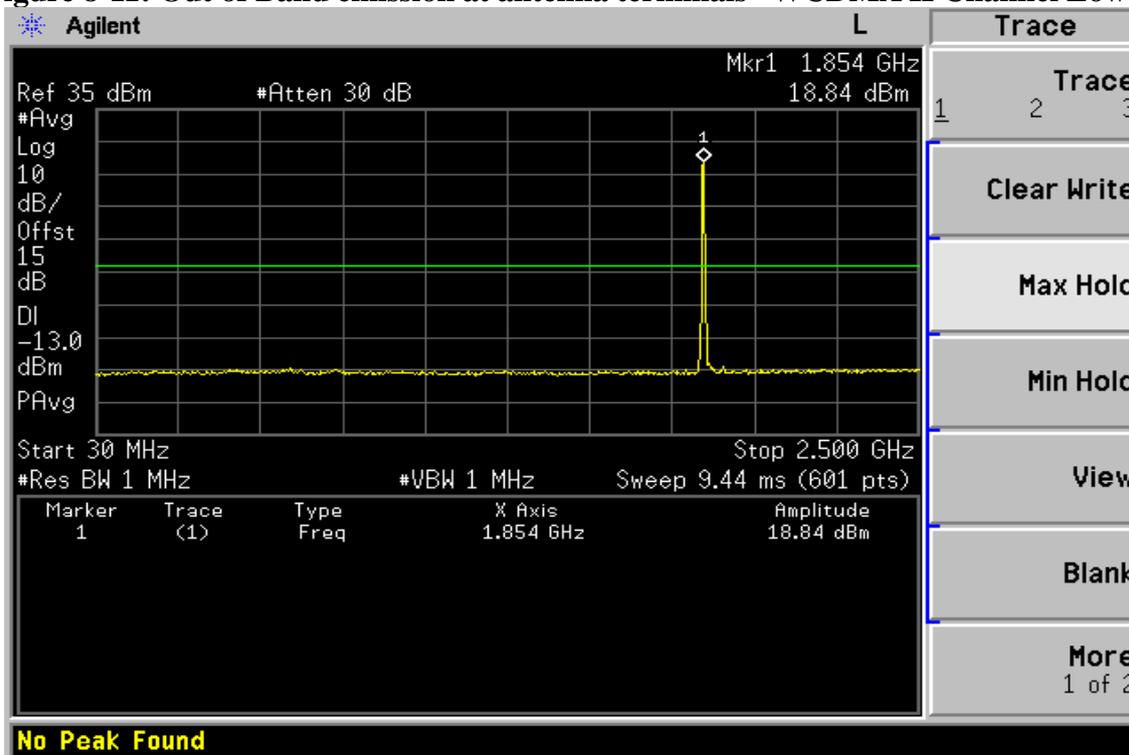


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Figure 8-11: Out of Band emission at antenna terminals– WCDMA II Channel Lowest

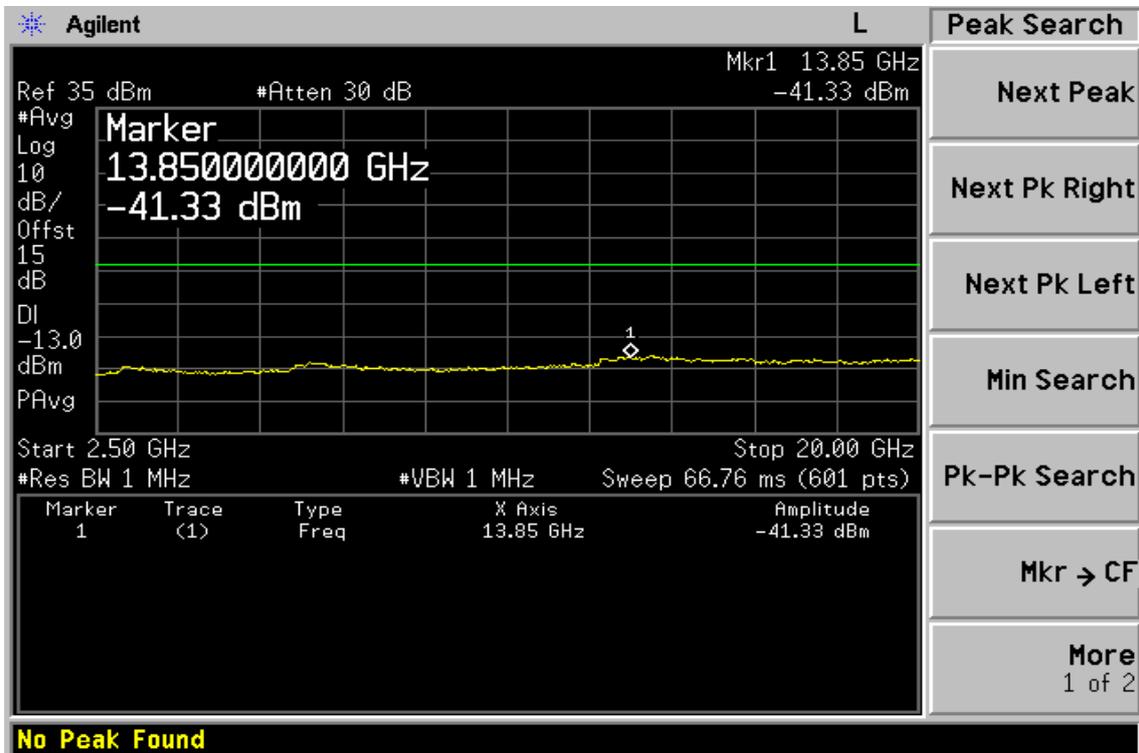
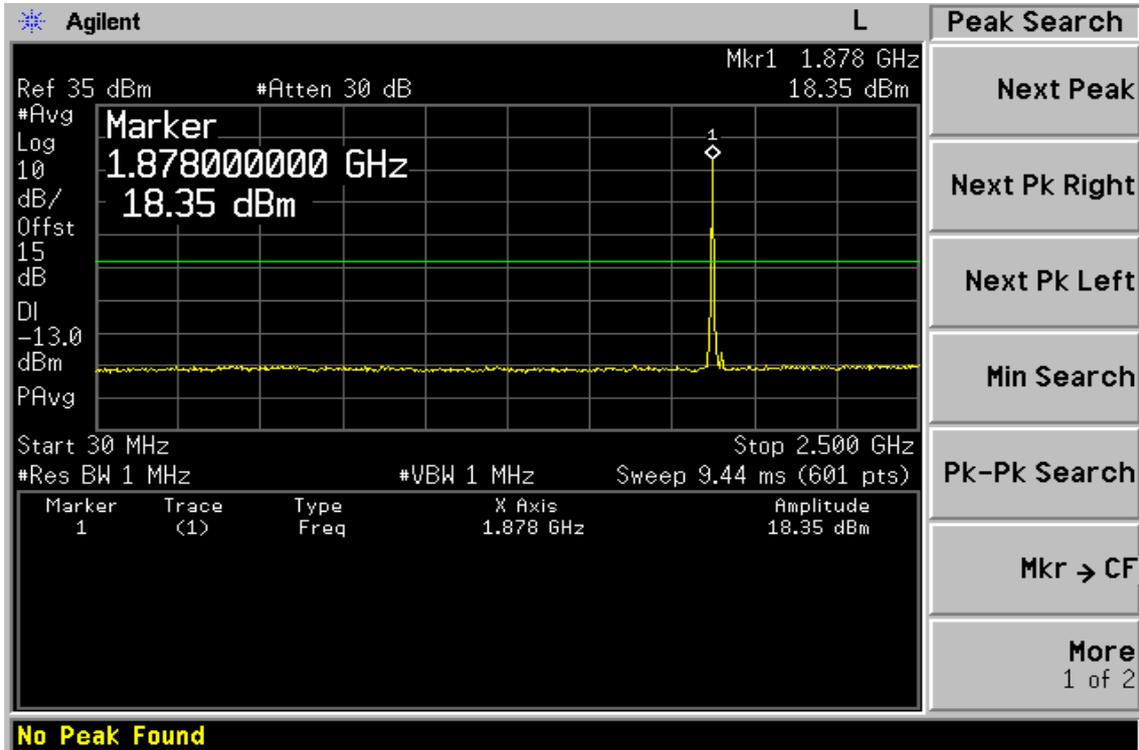


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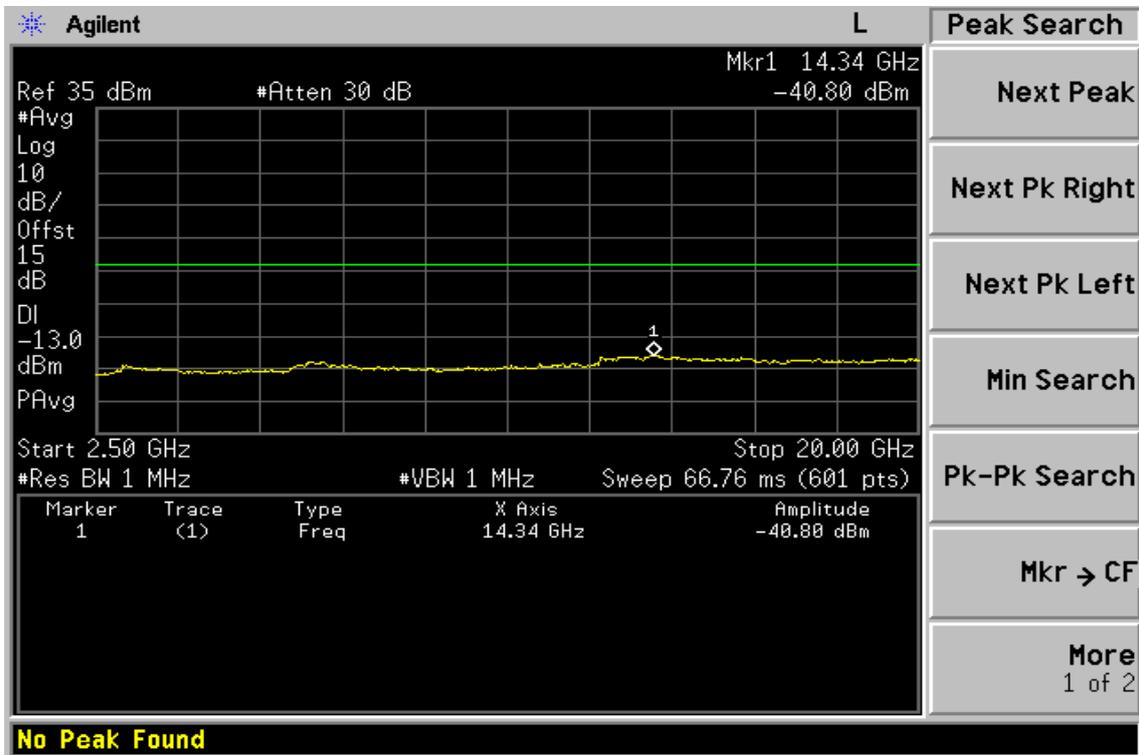
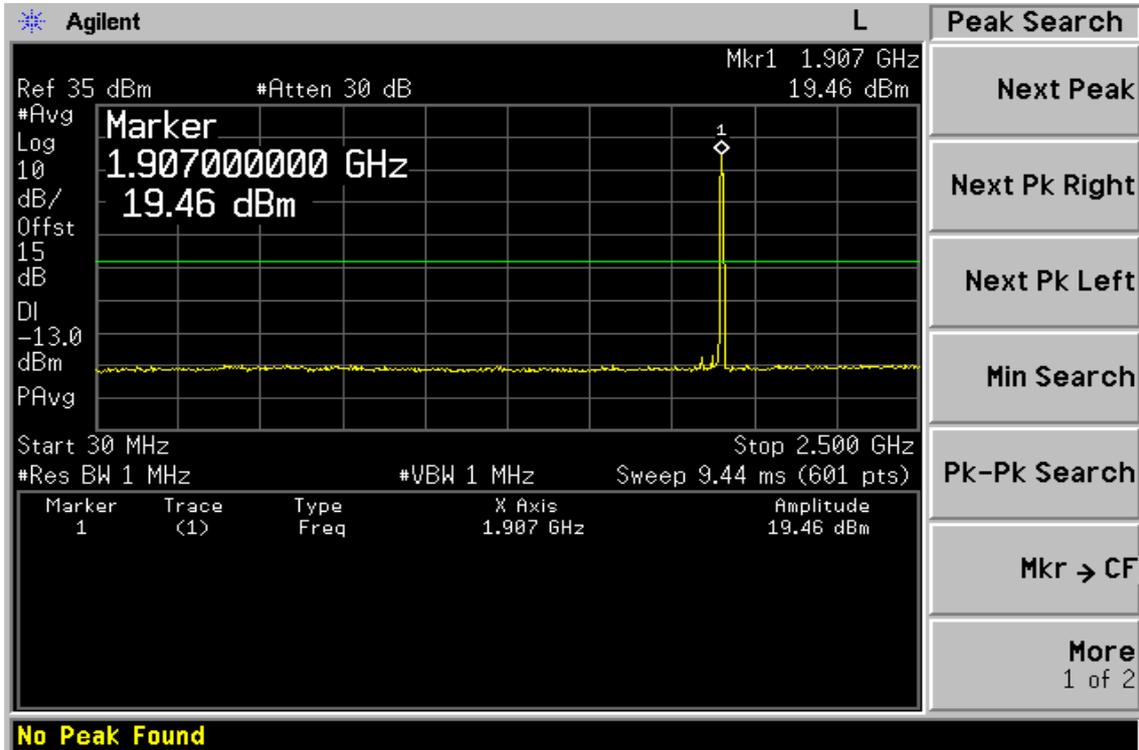
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Figure 8-12: Out of Band emission at antenna terminals –WCDMA II Channel Mid



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Figure 8-13: Out of Band emission at antenna terminals–WCDMA II Channel Highest



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Figure 8-14: Bad edge emission at antenna terminals –WCDMA II Channel Lowest

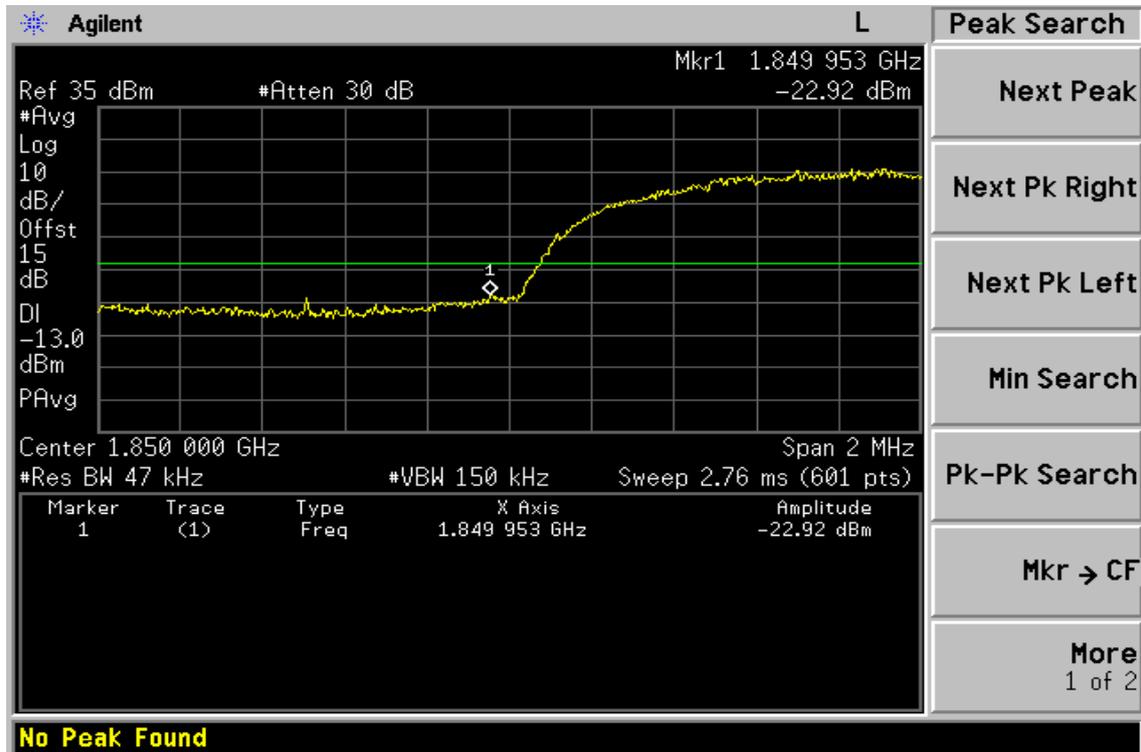
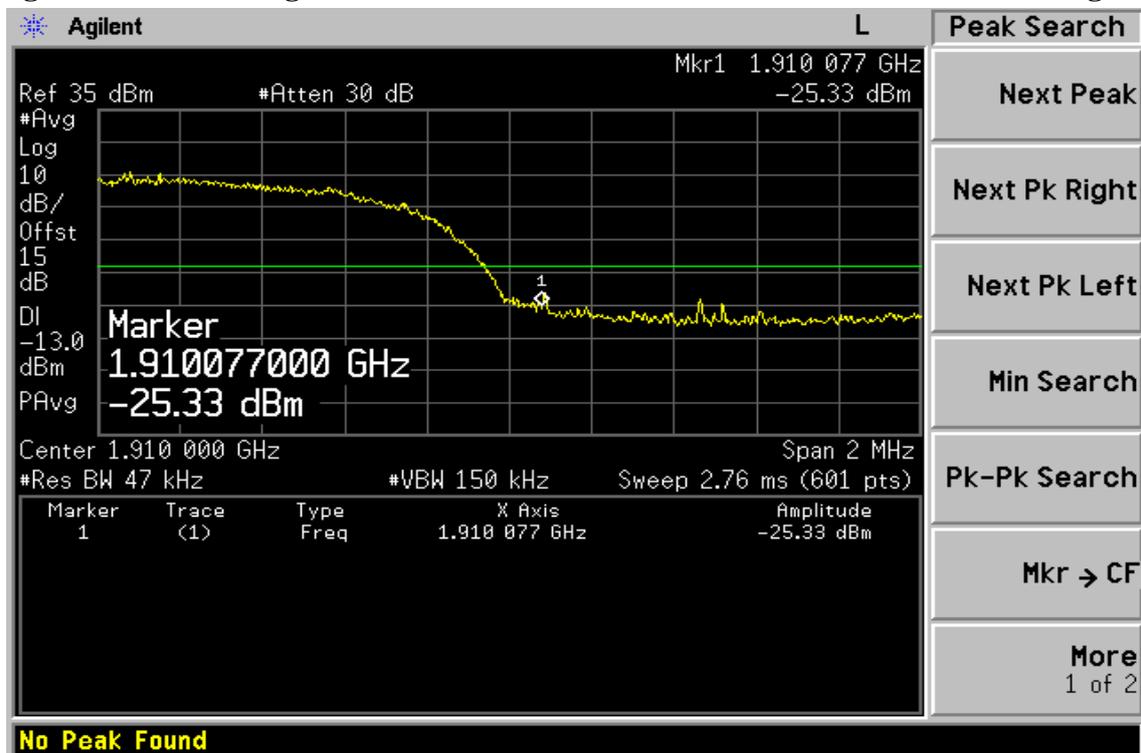


Figure 8-15: Band edge emission at antenna terminals –WCDMA II Channel Highest

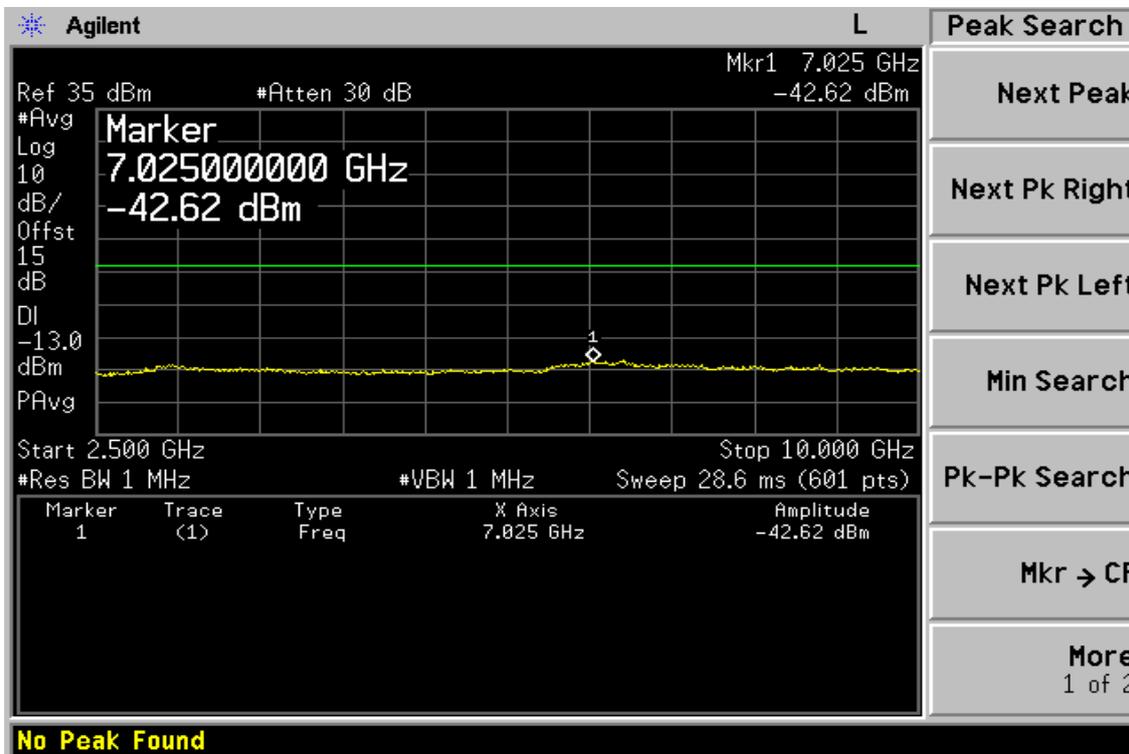
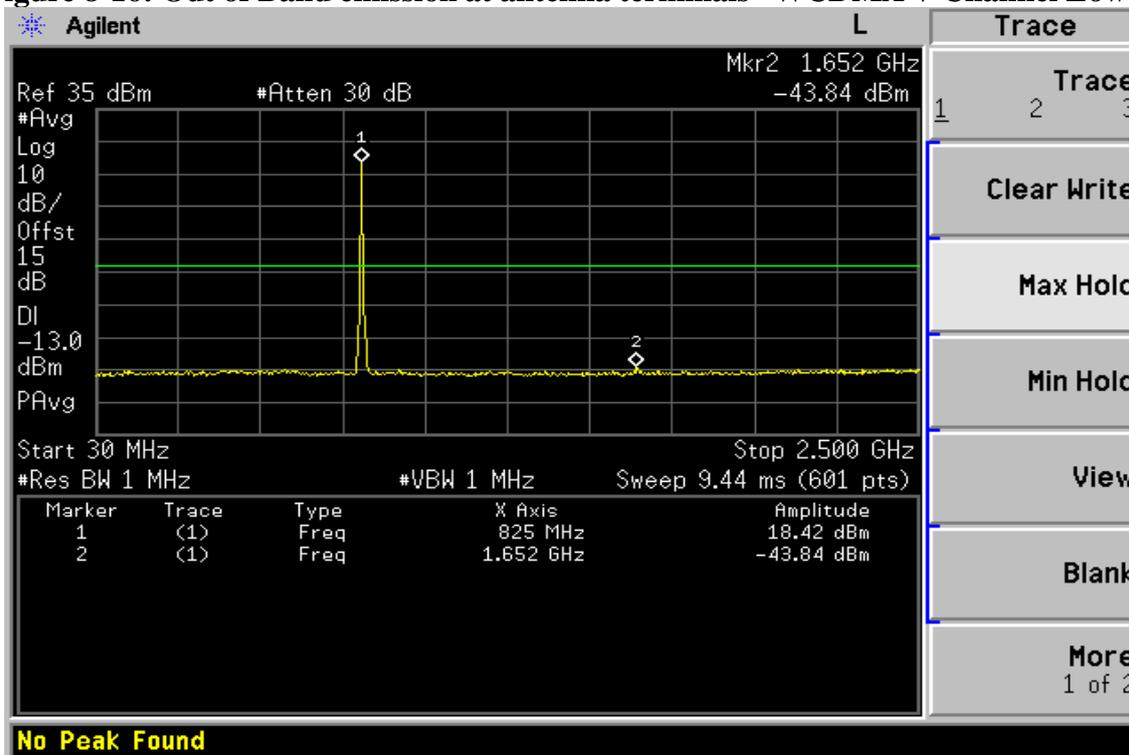


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Figure 8-16: Out of Band emission at antenna terminals– WCDMA V Channel Lowest

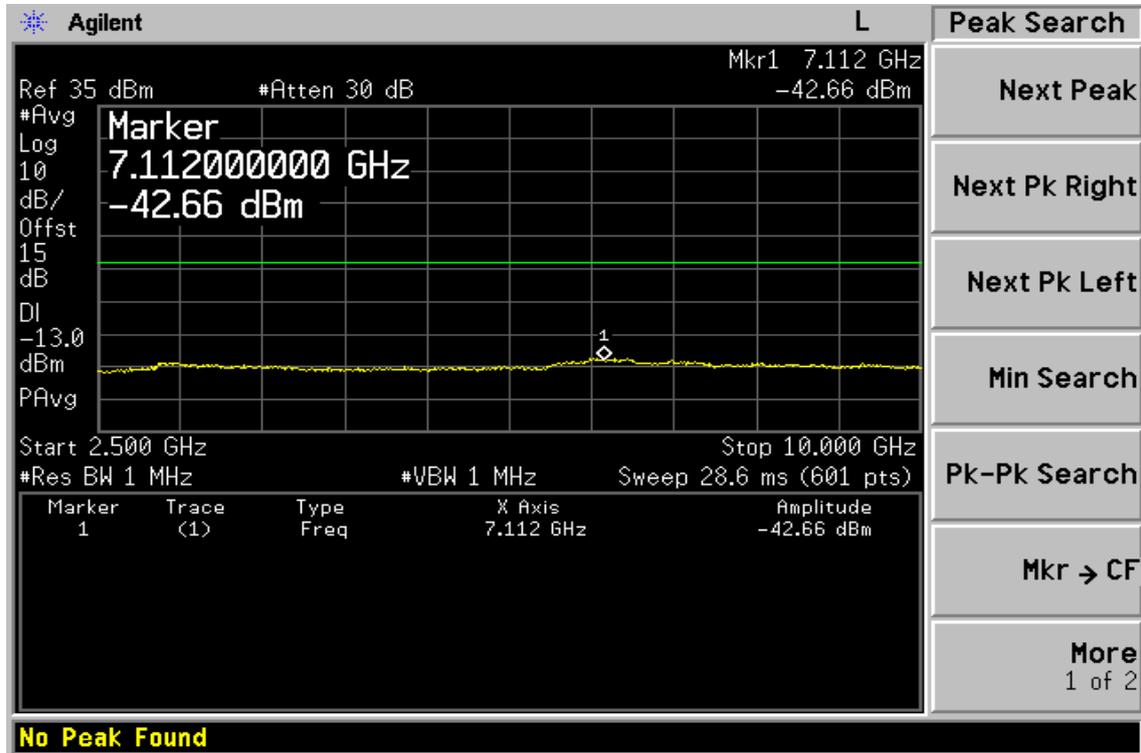
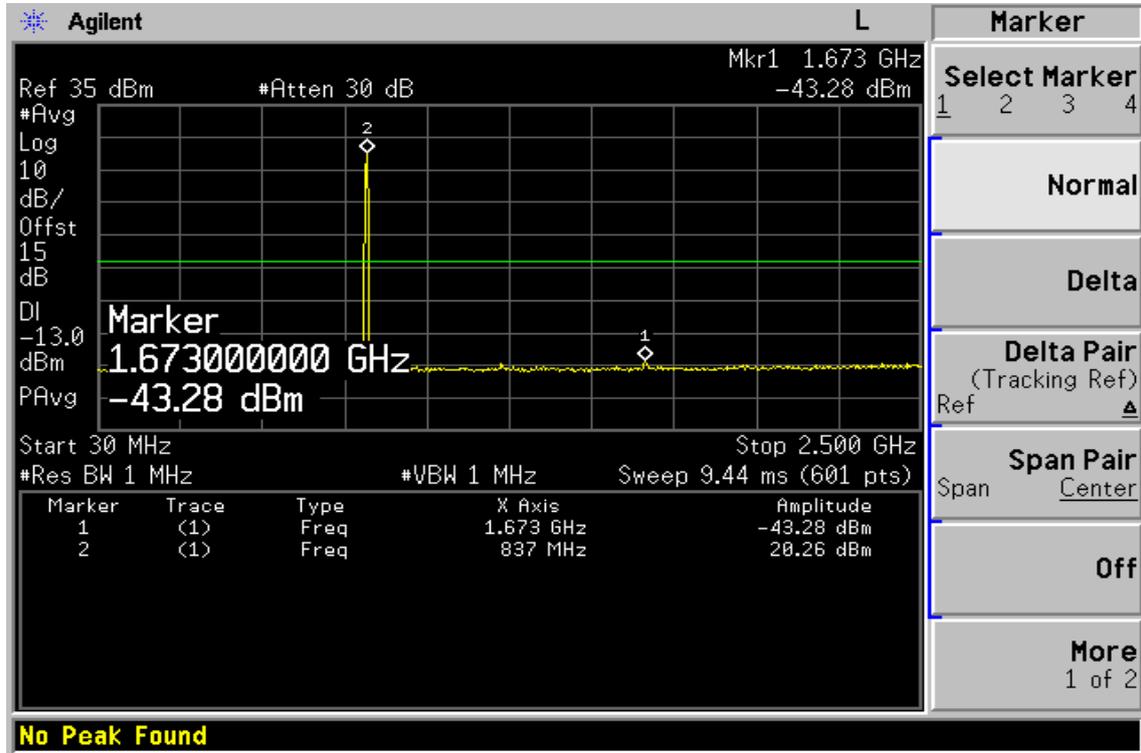


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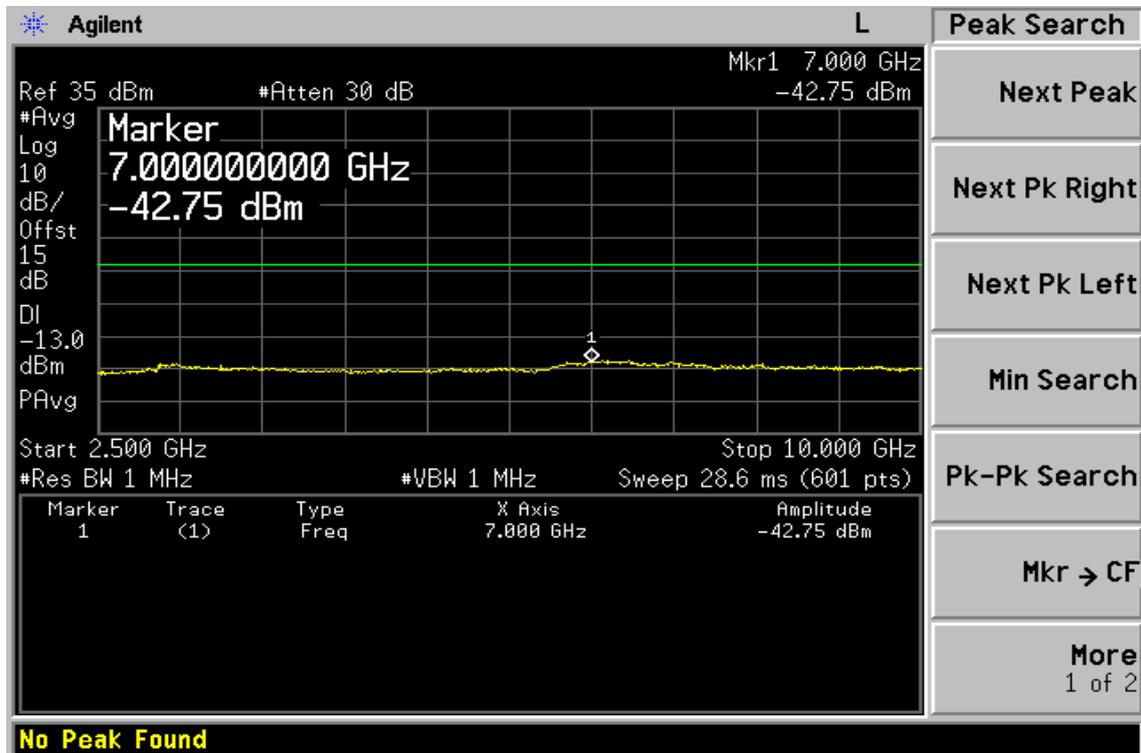
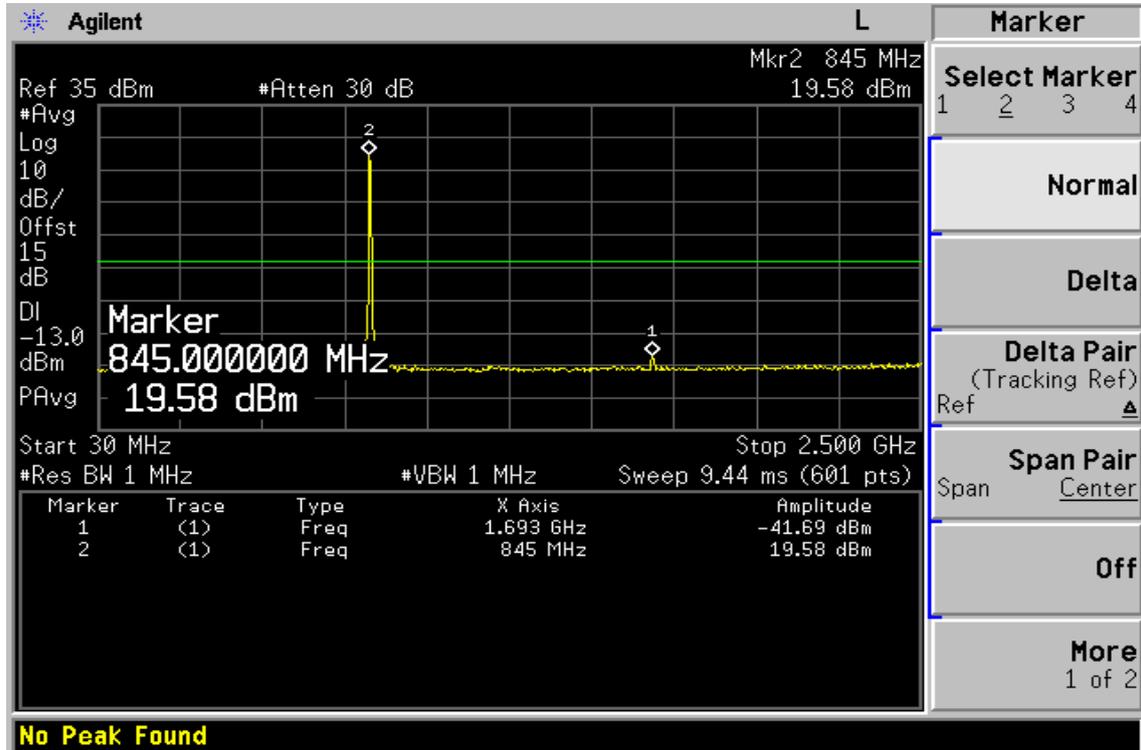
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Figure 8-17: Out of Band emission at antenna terminals –WCDMA V Channel Mid



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Figure 8-18: Out of Band emission at antenna terminals–WCDMA V Channel Highest



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Figure 8-19: Bad edge emission at antenna terminals –WCDMA V Channel Lowest

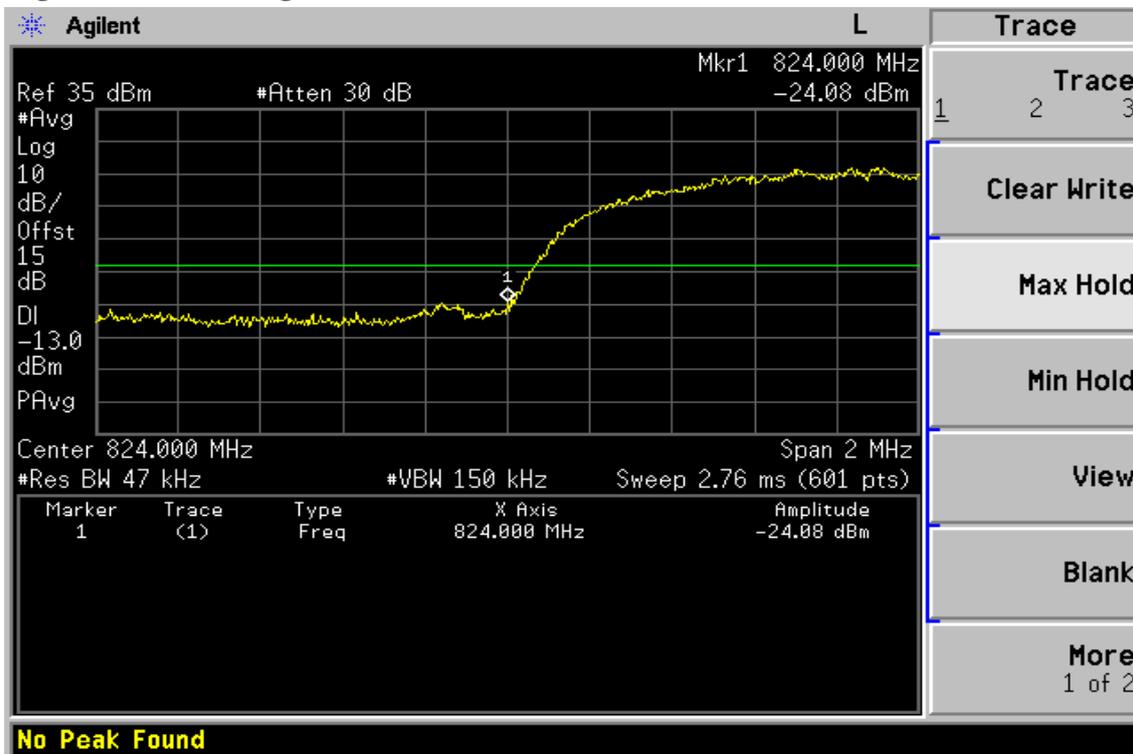
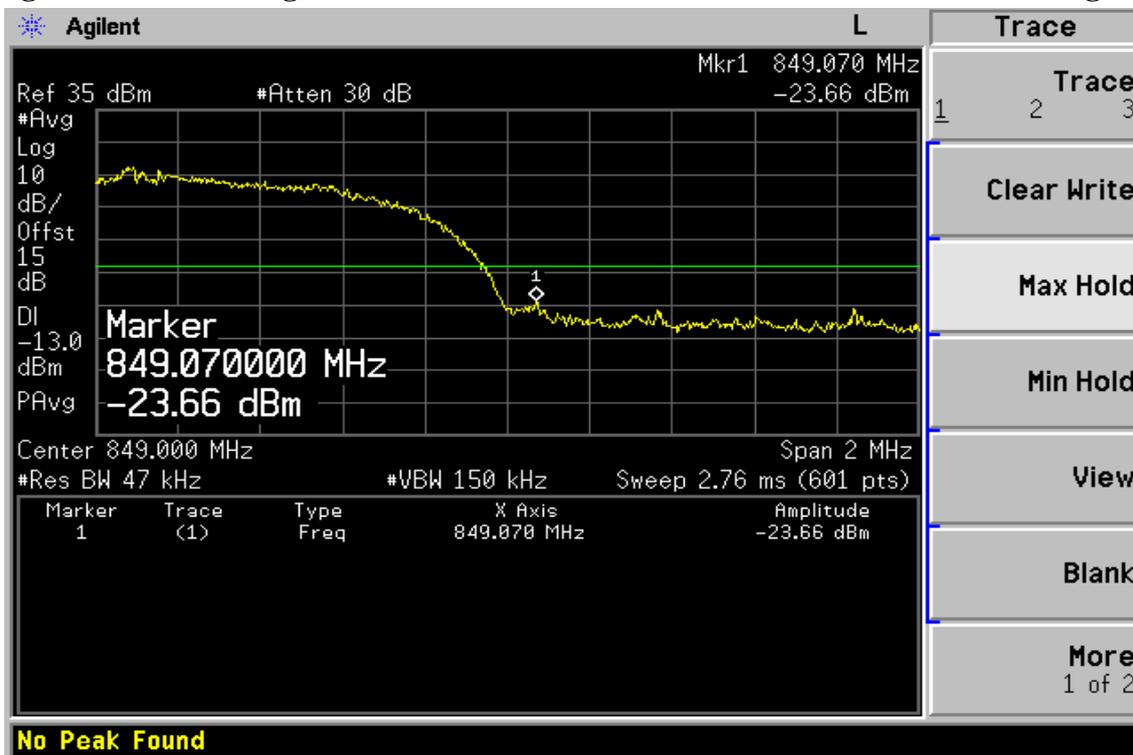


Figure 8-20: Band edge emission at antenna terminals –WCDMA II Channel Highest



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## 9. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT (TX)

### 9.1. Standard Applicable:

According to FCC §2.1053,

FCC §22.917(a), §24.238(a) the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than  $43 + 10 \log$  (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5

#### 4.5.1 Out-of-block Emissions

Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least  $43 + 10 \log (P)$ , dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

$43 + 10 \log (P)$ , dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least  $43 + 10 \log (P)$ , dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

$43 + 10 \log (P)$ , dB, in any 1 MHz bandwidth

According to RSS-133 §6.5

#### 6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.

In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least  $43 + 10 \log (P)$  dB.

b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least  $43 + 10 \log (P)$ , dB, per any MHz of bandwidth.

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(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

### 6.5.2 Out-of-Sub-band Emissions

Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

## 9.2. EUT Setup (Block Diagram of Configuration):

Refer to section 6.2 in this report

## 9.3. Measurement Procedure:

The EUT was placed on a non-conductive, The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$$

$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dBi)} - \text{Cable Loss (dB)}$$

## 9.4. Measurement Equipment Used:

Refer to section 2.4 in this report

## 9.5. Measurement Result:

Refer to attach tabular data sheets.

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### Radiated Spurious Emission Measurement Result: GSM 850 Mode

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Low Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 824.20 MHz     | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Hor           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 153.19      | 30.67               | H            | -67.35            | -7.80                 | 1.60            | -76.75         | -13.00      | -63.75            |
| 329.73      | 32.32               | H            | -65.07            | -7.75                 | 2.28            | -75.10         | -13.00      | -62.10            |
| 507.24      | 30.92               | H            | -62.28            | -7.73                 | 2.82            | -72.83         | -13.00      | -59.83            |
| 579.99      | 31.81               | H            | -59.30            | -7.78                 | 3.00            | -70.08         | -13.00      | -57.08            |
| 780.78      | 30.99               | H            | -59.44            | -7.87                 | 3.53            | -70.84         | -13.00      | -57.84            |
| 824.00      | 72.80               | H            | -13.47            | -7.87                 | 3.62            | -24.97         | -13.00      | -11.97            |
| 1648.40     | 47.08               | H            | -57.32            | 9.29                  | 5.23            | -53.26         | -13.00      | -40.26            |
| 2472.60     | 59.60               | H            | -41.31            | 10.08                 | 6.53            | -37.76         | -13.00      | -24.76            |
| 3296.80     | ---                 | H            |                   | 12.17                 | 7.71            |                | -13.00      |                   |
| 4121.00     | ---                 | H            |                   | 12.61                 | 8.86            |                | -13.00      |                   |
| 4945.20     | ---                 | H            |                   | 12.65                 | 9.74            |                | -13.00      |                   |
| 5769.40     | ---                 | H            |                   | 13.55                 | 10.54           |                | -13.00      |                   |
| 6593.60     | ---                 | H            |                   | 12.05                 | 11.30           |                | -13.00      |                   |
| 7417.80     | ---                 | H            |                   | 11.49                 | 12.10           |                | -13.00      |                   |
| 8242.00     | ---                 | H            |                   | 11.48                 | 12.71           |                | -13.00      |                   |

|                         |                        |
|-------------------------|------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB  |
|                         | 80MHz -1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB   |

**Remark:**

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$





### Radiated Spurious Emission Measurement Result: GSM 850 Mode

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 848.80 MHz      | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Ver           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant. Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|---------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 153.19      | 32.40               | V             | -65.18            | -7.80                 | 1.60            | -74.58         | -13.00      | -61.58            |
| 264.74      | 31.72               | V             | -67.69            | -7.90                 | 2.04            | -77.63         | -13.00      | -64.63            |
| 463.59      | 32.00               | V             | -61.99            | -7.71                 | 2.70            | -72.39         | -13.00      | -59.39            |
| 620.73      | 31.92               | V             | -57.38            | -7.80                 | 3.08            | -68.26         | -13.00      | -55.26            |
| 788.54      | 30.61               | V             | -56.15            | -7.87                 | 3.55            | -67.56         | -13.00      | -54.56            |
| 850.00      | 82.12               | V             | -3.99             | -7.88                 | 3.68            | -15.55         | -13.00      | -2.55             |
| 1697.60     | 48.64               | V             | -55.90            | 9.44                  | 5.31            | -51.77         | -13.00      | -38.77            |
| 2546.40     | 54.40               | V             | -46.24            | 10.20                 | 6.63            | -42.68         | -13.00      | -29.68            |
| 3395.20     | ---                 | V             |                   | 12.38                 | 7.87            |                | -13.00      |                   |
| 4244.00     | ---                 | V             |                   | 12.63                 | 9.00            |                | -13.00      |                   |
| 5092.80     | ---                 | V             |                   | 12.74                 | 9.88            |                | -13.00      |                   |
| 5941.60     | ---                 | V             |                   | 13.81                 | 10.70           |                | -13.00      |                   |
| 6790.40     | ---                 | V             |                   | 11.86                 | 11.48           |                | -13.00      |                   |
| 7639.20     | ---                 | V             |                   | 11.40                 | 12.27           |                | -13.00      |                   |
| 8488.00     | ---                 | V             |                   | 11.70                 | 12.91           |                | -13.00      |                   |

|                         |                        |
|-------------------------|------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB  |
|                         | 80MHz -1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB   |

**Remark:**

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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### Radiated Spurious Emission Measurement Result: GSM 850 Mode

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 848.80 MHz      | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Hor           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 150.28      | 30.79               | H            | -67.00            | -7.80                 | 1.59            | -76.39         | -13.00      | -63.39            |
| 264.74      | 31.96               | H            | -66.80            | -7.90                 | 2.04            | -76.74         | -13.00      | -63.74            |
| 410.24      | 32.24               | H            | -63.67            | -7.67                 | 2.54            | -73.88         | -13.00      | -60.88            |
| 550.89      | 32.69               | H            | -59.01            | -7.76                 | 2.96            | -69.73         | -13.00      | -56.73            |
| 850.00      | 72.80               | H            | -13.39            | -7.88                 | 3.68            | -24.95         | -13.00      | -11.95            |
| 1697.60     | 45.65               | H            | -58.70            | 9.44                  | 5.31            | -54.57         | -13.00      | -41.57            |
| 2546.40     | 43.54               | H            | -57.06            | 10.20                 | 6.63            | -53.50         | -13.00      | -40.50            |
| 3395.20     | ---                 | H            |                   | 12.38                 | 7.87            |                | -13.00      |                   |
| 4244.00     | ---                 | H            |                   | 12.63                 | 9.00            |                | -13.00      |                   |
| 5092.80     | ---                 | H            |                   | 12.74                 | 9.88            |                | -13.00      |                   |
| 5941.60     | ---                 | H            |                   | 13.81                 | 10.70           |                | -13.00      |                   |
| 6790.40     | ---                 | H            |                   | 11.86                 | 11.48           |                | -13.00      |                   |
| 7639.20     | ---                 | H            |                   | 11.40                 | 12.27           |                | -13.00      |                   |
| 8488.00     | ---                 | H            |                   | 11.70                 | 12.91           |                | -13.00      |                   |

|                         |                        |
|-------------------------|------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB  |
|                         | 80MHz -1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB   |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: PCS 1900 Mode**

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Mid Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1880MHz        | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Ver           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Output (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 104.69      | 41.69               | V            | -59.80           | -7.76                 | 1.38            | -68.94         | -13.00      | -55.94            |
| 153.19      | 32.92               | V            | -64.66           | -7.80                 | 1.60            | -74.06         | -13.00      | -61.06            |
| 284.14      | 32.28               | V            | -66.49           | -7.91                 | 2.11            | -76.51         | -13.00      | -63.51            |
| 419.94      | 32.46               | V            | -62.41           | -7.68                 | 2.57            | -72.66         | -13.00      | -59.66            |
| 590.66      | 31.86               | V            | -58.26           | -7.78                 | 3.02            | -69.06         | -13.00      | -56.06            |
| 644.98      | 32.59               | V            | -56.40           | -7.81                 | 3.15            | -67.35         | -13.00      | -54.35            |
| 3760.00     | ---                 | V            |                  | 12.60                 | 8.39            |                | -13.00      |                   |
| 5640.00     | 37.66               | V            | -52.92           | 13.36                 | 10.41           | -49.97         | -13.00      | -36.97            |
| 7520.00     | ---                 | V            |                  | 11.45                 | 12.19           |                | -13.00      |                   |
| 9400.00     | ---                 | V            |                  | 11.93                 | 13.61           |                | -13.00      |                   |
| 11280.00    | ---                 | V            |                  | 11.92                 | 15.27           |                | -13.00      |                   |
| 13160.00    | ---                 | V            |                  | 13.33                 | 16.71           |                | -13.00      |                   |
| 15040.00    | ---                 | V            |                  | 13.76                 | 18.15           |                | -13.00      |                   |
| 16920.00    | ---                 | V            |                  | 15.27                 | 19.32           |                | -13.00      |                   |
| 18800.00    | ---                 | V            |                  | 18.68                 | 16.58           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: PCS 1900 Mode**

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Mid Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1880MHz        | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Hor           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Output (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 104.69      | 41.69               | V            | -59.80           | -7.76                 | 1.38            | -68.94         | -13.00      | -55.94            |
| 153.19      | 32.92               | V            | -64.66           | -7.80                 | 1.60            | -74.06         | -13.00      | -61.06            |
| 284.14      | 32.28               | V            | -66.49           | -7.91                 | 2.11            | -76.51         | -13.00      | -63.51            |
| 419.94      | 32.46               | V            | -62.41           | -7.68                 | 2.57            | -72.66         | -13.00      | -59.66            |
| 590.66      | 31.86               | V            | -58.26           | -7.78                 | 3.02            | -69.06         | -13.00      | -56.06            |
| 644.98      | 32.59               | V            | -56.40           | -7.81                 | 3.15            | -67.35         | -13.00      | -54.35            |
| 3760.00     | ---                 | V            |                  | 12.60                 | 8.39            |                | -13.00      |                   |
| 5640.00     | 37.66               | V            | -52.92           | 13.36                 | 10.41           | -49.97         | -13.00      | -36.97            |
| 7520.00     | ---                 | H            |                  | 11.45                 | 12.19           |                | -13.00      |                   |
| 9400.00     | ---                 | H            |                  | 11.93                 | 13.61           |                | -13.00      |                   |
| 11280.00    | ---                 | H            |                  | 11.92                 | 15.27           |                | -13.00      |                   |
| 13160.00    | ---                 | H            |                  | 13.33                 | 16.71           |                | -13.00      |                   |
| 15040.00    | ---                 | H            |                  | 13.76                 | 18.15           |                | -13.00      |                   |
| 16920.00    | ---                 | H            |                  | 15.27                 | 19.32           |                | -13.00      |                   |
| 18800.00    | ---                 | H            |                  | 18.68                 | 16.58           |                | -13.00      |                   |

|                         |                        |
|-------------------------|------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB  |
|                         | 80MHz -1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB   |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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### Radiated Spurious Emission Measurement Result: PCS 1900 Mode

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1909.8 MHz      | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Ver           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 168.89      | 31.77               | H            | -67.47            | -7.82                 | 1.64            | -76.92         | -13.00      | -63.92            |
| 278.32      | 31.60               | H            | -66.74            | -7.91                 | 2.09            | -76.74         | -13.00      | -63.74            |
| 381.14      | 31.50               | H            | -65.22            | -7.65                 | 2.45            | -75.33         | -13.00      | -62.33            |
| 473.29      | 31.59               | H            | -62.10            | -7.71                 | 2.73            | -72.53         | -13.00      | -59.53            |
| 618.79      | 32.23               | H            | -58.10            | -7.80                 | 3.08            | -68.98         | -13.00      | -55.98            |
| 3760.00     | ---                 | H            |                   | 12.60                 | 8.39            |                | -13.00      |                   |
| 5640.00     | 39.15               | H            | -51.60            | 13.36                 | 10.41           | -48.65         | -13.00      | -35.65            |
| 7639.20     | ---                 | V            |                   | 11.40                 | 12.27           |                | -13.00      |                   |
| 9549.00     | ---                 | V            |                   | 11.95                 | 13.74           |                | -13.00      |                   |
| 11458.80    | ---                 | V            |                   | 12.17                 | 15.43           |                | -13.00      |                   |
| 13368.60    | ---                 | V            |                   | 12.97                 | 16.82           |                | -13.00      |                   |
| 15278.40    | ---                 | V            |                   | 15.00                 | 18.29           |                | -13.00      |                   |
| 17188.20    | ---                 | V            |                   | 14.47                 | 19.52           |                | -13.00      |                   |
| 19098.00    | ---                 | V            |                   | 18.66                 | 20.78           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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### Radiated Spurious Emission Measurement Result: WCDMA II Mode

Operation Mode : TX CH Low Mode      Test Date: Apr. 02, 2010  
Fundamental Frequency : 1852.4MHz      Test By: Jazz  
Temperature : 25°C      Pol: Ver  
Humidity : 65%

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 101.78      | 40.39               | V            | -61.37            | -7.76                 | 1.37            | -70.49         | -13.00      | -57.49            |
| 174.53      | 32.83               | V            | -66.66            | -7.82                 | 1.65            | -76.13         | -13.00      | -63.13            |
| 320.03      | 32.09               | V            | -65.91            | -7.81                 | 2.25            | -75.97         | -13.00      | -62.97            |
| 455.83      | 30.96               | V            | -62.99            | -7.70                 | 2.68            | -73.37         | -13.00      | -60.37            |
| 638.19      | 31.68               | V            | -57.39            | -7.81                 | 3.13            | -68.33         | -13.00      | -55.33            |
| 829.28      | 32.04               | V            | -54.29            | -7.88                 | 3.63            | -65.80         | -13.00      | -52.80            |
| 1850.00     | 60.61               | V            | -43.78            | 9.90                  | 5.56            | -39.44         | -13.00      | -26.44            |
| 3704.80     | ---                 | V            |                   | 12.61                 | 8.31            |                | -13.00      |                   |
| 5557.20     | 37.92               | V            | -52.90            | 13.24                 | 10.33           | -50.00         | -13.00      | -37.00            |
| 7409.60     | ---                 | V            |                   | 11.49                 | 12.09           |                | -13.00      |                   |
| 9262.00     | ---                 | V            |                   | 11.92                 | 13.51           |                | -13.00      |                   |
| 11114.40    | ---                 | V            |                   | 11.68                 | 15.12           |                | -13.00      |                   |
| 12966.80    | ---                 | V            |                   | 13.62                 | 16.61           |                | -13.00      |                   |
| 14819.20    | ---                 | V            |                   | 12.83                 | 17.96           |                | -13.00      |                   |
| 16671.60    | ---                 | V            |                   | 15.87                 | 19.15           |                | -13.00      |                   |
| 18524.00    | ---                 | V            |                   | 18.74                 | 10.86           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

**Remark:**

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

### Radiated Spurious Emission Measurement Result: WCDMA II Mode

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Low Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1852.4MHz      | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Hor           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 104.69      | 37.00               | H            | -65.51            | -7.76                 | 1.38            | -74.65         | -13.00      | -61.65            |
| 159.98      | 30.99               | H            | -67.55            | -7.81                 | 1.61            | -76.98         | -13.00      | -63.98            |
| 305.48      | 30.77               | H            | -66.84            | -7.89                 | 2.19            | -76.92         | -13.00      | -63.92            |
| 402.48      | 30.94               | H            | -65.36            | -7.66                 | 2.52            | -75.54         | -13.00      | -62.54            |
| 463.59      | 30.77               | H            | -63.00            | -7.71                 | 2.70            | -73.40         | -13.00      | -60.40            |
| 771.08      | 30.86               | H            | -61.63            | -7.87                 | 3.51            | -73.02         | -13.00      | -60.02            |
| 1850.00     | 68.60               | H            | -35.58            | 9.90                  | 5.56            | -31.24         | -13.00      | -18.24            |
| 3704.80     | ---                 | H            |                   | 12.61                 | 8.31            |                | -13.00      |                   |
| 5557.20     | 34.45               | H            | -56.58            | 13.24                 | 10.33           | -53.68         | -13.00      | -40.68            |
| 7409.60     | ---                 | H            |                   | 11.49                 | 12.09           |                | -13.00      |                   |
| 9262.00     | ---                 | H            |                   | 11.92                 | 13.51           |                | -13.00      |                   |
| 11114.40    | ---                 | H            |                   | 11.68                 | 15.12           |                | -13.00      |                   |
| 12966.80    | ---                 | H            |                   | 13.62                 | 16.61           |                | -13.00      |                   |
| 14819.20    | ---                 | H            |                   | 12.83                 | 17.96           |                | -13.00      |                   |
| 16671.60    | ---                 | H            |                   | 15.87                 | 19.15           |                | -13.00      |                   |
| 18524.00    | ---                 | H            |                   | 18.74                 | 10.86           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

**Remark:**

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA II Mode**

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Mid Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1880MHz        | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Ver           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 101.78      | 41.20               | V            | -60.56            | -7.76                 | 1.37            | -69.68         | -13.00      | -56.68            |
| 153.19      | 32.31               | V            | -65.27            | -7.80                 | 1.60            | -74.67         | -13.00      | -61.67            |
| 284.14      | 32.22               | V            | -66.55            | -7.91                 | 2.11            | -76.57         | -13.00      | -63.57            |
| 421.88      | 31.11               | V            | -63.70            | -7.68                 | 2.58            | -73.96         | -13.00      | -60.96            |
| 550.89      | 31.55               | V            | -60.89            | -7.76                 | 2.96            | -71.61         | -13.00      | -58.61            |
| 872.93      | 32.53               | V            | -52.96            | -7.91                 | 3.73            | -64.60         | -13.00      | -51.60            |
| 3760.00     | 36.54               | V            | -61.12            | 12.60                 | 8.39            | -56.90         | -13.00      | -43.90            |
| 5640.00     | ---                 | V            |                   | 13.36                 | 10.41           |                | -13.00      |                   |
| 7520.00     | ---                 | V            |                   | 11.45                 | 12.19           |                | -13.00      |                   |
| 9400.00     | ---                 | V            |                   | 11.93                 | 13.61           |                | -13.00      |                   |
| 11280.00    | ---                 | V            |                   | 11.92                 | 15.27           |                | -13.00      |                   |
| 13160.00    | ---                 | V            |                   | 13.33                 | 16.71           |                | -13.00      |                   |
| 15040.00    | ---                 | V            |                   | 13.76                 | 18.15           |                | -13.00      |                   |
| 16920.00    | ---                 | V            |                   | 15.27                 | 19.32           |                | -13.00      |                   |
| 18800.00    | ---                 | V            |                   | 18.68                 | 16.58           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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### Radiated Spurious Emission Measurement Result: WCDMA II Mode

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Mid Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1880MHz        | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Hor           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 104.69      | 37.92               | H            | -64.59            | -7.76                 | 1.38            | -73.73         | -13.00      | -60.73            |
| 153.19      | 30.73               | H            | -67.29            | -7.80                 | 1.60            | -76.69         | -13.00      | -63.69            |
| 313.24      | 31.56               | H            | -65.98            | -7.85                 | 2.22            | -76.04         | -13.00      | -63.04            |
| 347.19      | 31.02               | H            | -66.21            | -7.66                 | 2.35            | -76.21         | -13.00      | -63.21            |
| 591.63      | 32.92               | H            | -57.95            | -7.78                 | 3.02            | -68.75         | -13.00      | -55.75            |
| 827.34      | 31.52               | H            | -54.74            | -7.88                 | 3.63            | -66.24         | -13.00      | -53.24            |
| 3760.00     | 34.48               | H            | -63.29            | 12.60                 | 8.39            | -59.08         | -13.00      | -46.08            |
| 5640.00     | ---                 | H            |                   | 13.36                 | 10.41           |                | -13.00      |                   |
| 7520.00     | ---                 | H            |                   | 11.45                 | 12.19           |                | -13.00      |                   |
| 9400.00     | ---                 | H            |                   | 11.93                 | 13.61           |                | -13.00      |                   |
| 11280.00    | ---                 | H            |                   | 11.92                 | 15.27           |                | -13.00      |                   |
| 13160.00    | ---                 | H            |                   | 13.33                 | 16.71           |                | -13.00      |                   |
| 15040.00    | ---                 | H            |                   | 13.76                 | 18.15           |                | -13.00      |                   |
| 16920.00    | ---                 | H            |                   | 15.27                 | 19.32           |                | -13.00      |                   |
| 18800.00    | ---                 | H            |                   | 18.68                 | 16.58           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA II Mode**

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1907.6MHz       | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Ver           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 101.78      | 38.99               | V            | -62.77            | -7.76                 | 1.37            | -71.89         | -13.00      | -58.89            |
| 153.19      | 31.67               | V            | -65.91            | -7.80                 | 1.60            | -75.31         | -13.00      | -62.31            |
| 263.77      | 30.31               | V            | -69.13            | -7.90                 | 2.04            | -79.07         | -13.00      | -66.07            |
| 385.99      | 30.92               | V            | -65.18            | -7.65                 | 2.47            | -75.30         | -13.00      | -62.30            |
| 547.98      | 30.79               | V            | -61.77            | -7.76                 | 2.95            | -72.48         | -13.00      | -59.48            |
| 657.59      | 31.56               | V            | -57.44            | -7.82                 | 3.18            | -68.44         | -13.00      | -55.44            |
| 1910.00     | 58.12               | V            | -46.21            | 10.08                 | 5.66            | -41.79         | -13.00      | -28.79            |
| 3815.20     | 35.30               | V            | -62.11            | 12.60                 | 8.46            | -57.97         | -13.00      | -44.97            |
| 5722.80     | ---                 | V            |                   | 13.48                 | 10.49           |                | -13.00      |                   |
| 7630.40     | ---                 | V            |                   | 11.41                 | 12.27           |                | -13.00      |                   |
| 9538.00     | ---                 | V            |                   | 11.95                 | 13.73           |                | -13.00      |                   |
| 11445.60    | ---                 | V            |                   | 12.15                 | 15.42           |                | -13.00      |                   |
| 13353.20    | ---                 | V            |                   | 13.00                 | 16.81           |                | -13.00      |                   |
| 15260.80    | ---                 | V            |                   | 14.91                 | 18.28           |                | -13.00      |                   |
| 17168.40    | ---                 | V            |                   | 14.53                 | 19.50           |                | -13.00      |                   |
| 19076.00    | ---                 | V            |                   | 18.65                 | 20.76           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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### Radiated Spurious Emission Measurement Result: WCDMA II Mode

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 1907.6MHz       | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Hor           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Output (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 104.69      | 37.66               | H            | -64.85           | -7.76                 | 1.38            | -73.99         | -13.00      | -60.99            |
| 148.34      | 29.94               | H            | -68.00           | -7.80                 | 1.58            | -77.38         | -13.00      | -64.38            |
| 320.03      | 30.87               | H            | -66.61           | -7.81                 | 2.25            | -76.66         | -13.00      | -63.66            |
| 410.24      | 31.53               | H            | -64.38           | -7.67                 | 2.54            | -74.59         | -13.00      | -61.59            |
| 601.33      | 32.45               | H            | -58.22           | -7.79                 | 3.03            | -69.05         | -13.00      | -56.05            |
| 741.98      | 30.51               | H            | -64.97           | -7.87                 | 3.44            | -76.28         | -13.00      | -63.28            |
| 1910.00     | 65.51               | H            | -38.60           | 10.08                 | 5.66            | -34.18         | -13.00      | -21.18            |
| 3815.20     | 34.37               | H            | -63.16           | 12.60                 | 8.46            | -59.02         | -13.00      | -46.02            |
| 5722.80     | ---                 | H            |                  | 13.48                 | 10.49           |                | -13.00      |                   |
| 7630.40     | ---                 | H            |                  | 11.41                 | 12.27           |                | -13.00      |                   |
| 9538.00     | ---                 | H            |                  | 11.95                 | 13.73           |                | -13.00      |                   |
| 11445.60    | ---                 | H            |                  | 12.15                 | 15.42           |                | -13.00      |                   |
| 13353.20    | ---                 | H            |                  | 13.00                 | 16.81           |                | -13.00      |                   |
| 15260.80    | ---                 | H            |                  | 14.91                 | 18.28           |                | -13.00      |                   |
| 17168.40    | ---                 | H            |                  | 14.53                 | 19.50           |                | -13.00      |                   |
| 19076.00    | ---                 | H            |                  | 18.65                 | 20.76           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA V Mode**

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Mid Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 836.6MHz       | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Ver           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Output (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 140.58      | 41.25               | V            | -56.91           | -7.79                 | 1.55            | -66.25         | -13.00      | -53.25            |
| 162.89      | 32.17               | V            | -66.28           | -7.81                 | 1.62            | -75.71         | -13.00      | -62.71            |
| 288.99      | 31.14               | V            | -67.47           | -7.91                 | 2.13            | -77.51         | -13.00      | -64.51            |
| 424.79      | 31.68               | V            | -63.04           | -7.68                 | 2.58            | -73.31         | -13.00      | -60.31            |
| 643.04      | 32.40               | V            | -56.61           | -7.81                 | 3.14            | -67.56         | -13.00      | -54.56            |
| 1673.20     | 38.30               | V            | -66.26           | 9.36                  | 5.27            | -62.16         | -13.00      | -49.16            |
| 2509.80     | ---                 | V            |                  | 10.09                 | 6.58            |                | -13.00      |                   |
| 3346.40     | ---                 | V            |                  | 12.28                 | 7.79            |                | -13.00      |                   |
| 4183.00     | ---                 | V            |                  | 12.62                 | 8.93            |                | -13.00      |                   |
| 5019.60     | ---                 | V            |                  | 12.67                 | 9.81            |                | -13.00      |                   |
| 5856.20     | ---                 | V            |                  | 13.68                 | 10.62           |                | -13.00      |                   |
| 6692.80     | ---                 | V            |                  | 11.95                 | 11.39           |                | -13.00      |                   |
| 7529.40     | ---                 | V            |                  | 11.45                 | 12.20           |                | -13.00      |                   |
| 8366.00     | ---                 | V            |                  | 11.59                 | 12.81           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA V Mode**

|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Operation Mode        | : TX CH Mid Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 836.6MHz       | Test By:   | Jazz          |
| Temperature           | : 25°C           | Pol:       | Hor           |
| Humidity              | : 65%            |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Output (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 159.98      | 31.51               | H            | -67.03           | -7.81                 | 1.61            | -76.46         | -13.00      | -63.46            |
| 255.04      | 31.49               | H            | -67.57           | -7.89                 | 2.01            | -77.47         | -13.00      | -64.47            |
| 347.19      | 30.93               | H            | -66.30           | -7.66                 | 2.35            | -76.30         | -13.00      | -63.30            |
| 446.13      | 31.06               | H            | -63.03           | -7.70                 | 2.65            | -73.37         | -13.00      | -60.37            |
| 759.44      | 31.21               | H            | -63.76           | -7.87                 | 3.49            | -75.12         | -13.00      | -62.12            |
| 1673.20     | 41.29               | H            | -63.09           | 9.36                  | 5.27            | -58.99         | -13.00      | -45.99            |
| 2509.80     | ---                 | H            |                  | 10.09                 | 6.58            |                | -13.00      |                   |
| 3346.40     | ---                 | H            |                  | 12.28                 | 7.79            |                | -13.00      |                   |
| 4183.00     | ---                 | H            |                  | 12.62                 | 8.93            |                | -13.00      |                   |
| 5019.60     | ---                 | H            |                  | 12.67                 | 9.81            |                | -13.00      |                   |
| 5856.20     | ---                 | H            |                  | 13.68                 | 10.62           |                | -13.00      |                   |
| 6692.80     | ---                 | H            |                  | 11.95                 | 11.39           |                | -13.00      |                   |
| 7529.40     | ---                 | H            |                  | 11.45                 | 12.20           |                | -13.00      |                   |
| 8366.00     | ---                 | H            |                  | 11.59                 | 12.81           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA V Mode**

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 846.6MHz        | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Ver           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 153.19      | 32.86               | V            | -64.72            | -7.80                 | 1.60            | -74.12         | -13.00      | -61.12            |
| 295.78      | 31.89               | V            | -66.50            | -7.92                 | 2.15            | -76.57         | -13.00      | -63.57            |
| 433.52      | 31.06               | V            | -63.39            | -7.69                 | 2.61            | -73.68         | -13.00      | -60.68            |
| 577.08      | 30.97               | V            | -59.94            | -7.78                 | 3.00            | -70.71         | -13.00      | -57.71            |
| 649.83      | 32.03               | V            | -56.89            | -7.81                 | 3.16            | -67.86         | -13.00      | -54.86            |
| 850.00      | 64.68               | V            | -21.43            | -7.88                 | 3.68            | -32.99         | -13.00      | -19.99            |
| 1693.20     | ---                 | V            |                   | 9.42                  | 5.30            |                | -13.00      |                   |
| 2539.80     | ---                 | V            |                   | 10.18                 | 6.62            |                | -13.00      |                   |
| 3386.40     | ---                 | V            |                   | 12.36                 | 7.85            |                | -13.00      |                   |
| 4233.00     | ---                 | V            |                   | 12.63                 | 8.99            |                | -13.00      |                   |
| 5079.60     | ---                 | V            |                   | 12.73                 | 9.87            |                | -13.00      |                   |
| 5926.20     | ---                 | V            |                   | 13.79                 | 10.69           |                | -13.00      |                   |
| 6772.80     | ---                 | V            |                   | 11.87                 | 11.47           |                | -13.00      |                   |
| 7619.40     | ---                 | V            |                   | 11.41                 | 12.26           |                | -13.00      |                   |
| 8466.00     | ---                 | V            |                   | 11.68                 | 12.89           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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### Radiated Spurious Emission Measurement Result: WCDMA V Mode

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Operation Mode        | : TX CH High Mode | Test Date: | Apr. 02, 2010 |
| Fundamental Frequency | : 846.6MHz        | Test By:   | Jazz          |
| Temperature           | : 25°C            | Pol:       | Hor           |
| Humidity              | : 65%             |            |               |

| Freq. (MHz) | SPA. Reading (dBuV) | Ant.Pol. H/V | S.G Out-put (dBm) | Antenna Gain (dB/dBi) | Cable Loss (dB) | ERP/EIRP (dBm) | Limit (dBm) | Safe Margin (dBm) |
|-------------|---------------------|--------------|-------------------|-----------------------|-----------------|----------------|-------------|-------------------|
| 159.98      | 31.84               | H            | -66.70            | -7.81                 | 1.61            | -76.13         | -13.00      | -63.13            |
| 271.53      | 31.65               | H            | -66.90            | -7.90                 | 2.07            | -76.87         | -13.00      | -63.87            |
| 347.19      | 31.28               | H            | -65.95            | -7.66                 | 2.35            | -75.95         | -13.00      | -62.95            |
| 484.93      | 31.39               | H            | -62.19            | -7.71                 | 2.76            | -72.66         | -13.00      | -59.66            |
| 599.39      | 33.69               | H            | -57.02            | -7.79                 | 3.03            | -67.84         | -13.00      | -54.84            |
| 850.00      | 58.83               | H            | -27.36            | -7.88                 | 3.68            | -38.92         | -13.00      | -25.92            |
| 1693.20     | 43.10               | H            | -61.25            | 9.42                  | 5.30            | -57.13         | -13.00      | -44.13            |
| 2539.80     | ---                 | H            |                   | 10.18                 | 6.62            |                | -13.00      |                   |
| 3386.40     | ---                 | H            |                   | 12.36                 | 7.85            |                | -13.00      |                   |
| 4233.00     | ---                 | H            |                   | 12.63                 | 8.99            |                | -13.00      |                   |
| 5079.60     | ---                 | H            |                   | 12.73                 | 9.87            |                | -13.00      |                   |
| 5926.20     | ---                 | H            |                   | 13.79                 | 10.69           |                | -13.00      |                   |
| 6772.80     | ---                 | H            |                   | 11.87                 | 11.47           |                | -13.00      |                   |
| 7619.40     | ---                 | H            |                   | 11.41                 | 12.26           |                | -13.00      |                   |
| 8466.00     | ---                 | H            |                   | 11.68                 | 12.89           |                | -13.00      |                   |

|                         |                         |
|-------------------------|-------------------------|
| Measurement uncertainty | 30MHz - 80MHz: 5.04dB   |
|                         | 80MHz - 1000MHz: 3.76dB |
|                         | 1GHz - 13GHz: 4.45dB    |

**Remark:**

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark “---” means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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## 10. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

### 10.1. Standard Applicable:

According to FCC §2.1055(a) (1)

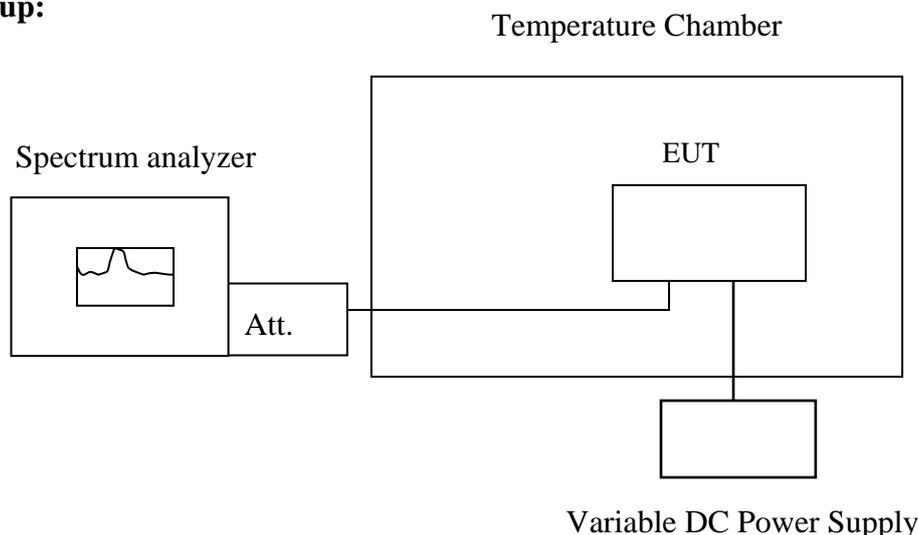
Frequency Tolerance: +/-2.5ppm for 850MHz band

+/-2.5ppm for 1900MHz band

According to RSS-133 §6.3, RSS-132 §4.3

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations

### 10.2. Test Set-up:



**Note :** Measurement setup for testing on Antenna connector

### 10.3. Measurement Procedure:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

### 10.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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### 10.5. Measurement Result:

| Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C |                  |            |            |            |
|---|------------------|------------|------------|------------|
| Limit: +/- 2.5 ppm = 2091 Hz                          |                  |            |            |            |
| Power Supply  | Environment      | Frequency  | Delta (Hz) | Limit (Hz) |
| Vdc   | Temperature (°C) | (MHz)      |            |            |
| 3.7   | -30              | 836.599988 | -3.00      | 2091       |
| 3.7   | -20              | 836.599991 | -6.00      | 2091       |
| 3.7   | -10              | 836.599982 | 3.00       | 2091       |
| 3.7   | 0                | 836.599986 | -1.00      | 2091       |
| 3.7   | 10               | 836.599988 | -3.00      | 2091       |
| 3.7   | 20               | 836.599985 | 0.00       | 2091       |
| 3.7   | 30               | 836.599982 | 3.00       | 2091       |
| 3.7   | 40               | 836.599984 | 1.00       | 2091       |
| 3.7   | 50               | 836.59998  | 5.00       | 2091       |

| Reference Frequency: PCS Mid Channel 1880 MHz @ 20°C |                  |             |            |            |
|--|------------------|-------------|------------|------------|
| Limit: +/- 2.5 ppm = 4700 Hz                         |                  |             |            |            |
| Power Supply   | Environment      | Frequency   | Delta (Hz) | Limit (Hz) |
| Vdc  | Temperature (°C) | (MHz)       |            |            |
| 3.7  | -30              | 1879.999980 | 4.00       | 4700       |
| 3.7  | -20              | 1879.999982 | 2.00       | 4700       |
| 3.7  | -10              | 1879.999980 | 4.00       | 4700       |
| 3.7  | 0                | 1879.999977 | 7.00       | 4700       |
| 3.7  | 10               | 1879.999982 | 2.00       | 4700       |
| 3.7  | 20               | 1879.999984 | 0.00       | 4700       |
| 3.7  | 30               | 1879.999982 | 2.00       | 4700       |
| 3.7  | 40               | 1879.999975 | 9.00       | 4700       |
| 3.7  | 50               | 1879.999977 | 7.00       | 4700       |

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| Reference Frequency: WCDMA II Mid Channel 1880 (ARFCN9400) MHz @ 20°C |                  |            |            |            |
|---|------------------|------------|------------|------------|
| Limit: +/- 2.5 ppm = 4700 Hz  |                  |            |            |            |
| Power Supply  | Environment      | Frequency  | Delta (Hz) | Limit (Hz) |
| Vdc   | Temperature (°C) | (MHz)      |            |            |
| 3.7   | -30              | 836.599999 | -2.00      | 2091       |
| 3.7   | -20              | 836.599998 | -1.00      | 2091       |
| 3.7   | -10              | 836.599998 | -1.00      | 2091       |
| 3.7   | 0                | 836.599999 | -2.00      | 2091       |
| 3.7   | 10               | 836.599998 | -1.00      | 2091       |
| 3.7   | 20               | 836.599997 | 0.00       | 2091       |
| 3.7   | 30               | 836.599996 | 1.00       | 2091       |
| 3.7   | 40               | 836.599997 | 0.00       | 2091       |
| 3.7   | 50               | 836.599995 | 2.00       | 2091       |

| Reference Frequency: WCDMA V Mid Channel 836.6 (ARFCN4183) MHz @ 20°C |                  |             |            |            |
|---|------------------|-------------|------------|------------|
| Limit: +/- 2.5 ppm = 2090 Hz  |                  |             |            |            |
| Power Supply  | Environment      | Frequency   | Delta (Hz) | Limit (Hz) |
| Vdc   | Temperature (°C) | (MHz)       |            |            |
| 3.7   | -30              | 1879.999995 | 3.00       | 4700       |
| 3.7   | -20              | 1879.999996 | 2.00       | 4700       |
| 3.7   | -10              | 1879.999999 | -1.00      | 4700       |
| 3.7   | 0                | 1879.999997 | 1.00       | 4700       |
| 3.7   | 10               | 1879.999997 | 1.00       | 4700       |
| 3.7   | 20               | 1879.999998 | 0.00       | 4700       |
| 3.7   | 30               | 1879.999999 | -1.00      | 4700       |
| 3.7   | 40               | 1879.999997 | 1.00       | 4700       |
| 3.7   | 50               | 1879.999996 | 2.00       | 4700       |

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## 11. FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

### 11.1. Standard Applicable:

According to FCC §2.1055(a) (1)

Frequency Tolerance: +/-2.5ppm for 850MHz band  
+/-2.5ppm for 1900MHz band

According to RSS-133 §6.3, RSS-132 §4.3

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations.

### 11.2. Test Set-up:

Refer to section 10.2 in this report

### 11.3. Measurement Procedure:

Set chamber temperature to 25°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

### 11.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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### 11.5. Measurement Result:

| Reference Frequency: GSM Mid Channel 836.6 MHz @ 25°C |                  |            |            |            |
|---|------------------|------------|------------|------------|
| Limit: +/- 2.5 ppm = 2091 Hz                          |                  |            |            |            |
| Power Supply  | Environment      | Frequency  | Delta (Hz) | Limit (Hz) |
| Vdc   | Temperature (°C) | (MHz)      |            |            |
| 4.2   | 25.00            | 836.599996 | 0.00       | 2091.00    |
| 3.7   | 25.00            | 836.599997 | -1.00      | 2091.00    |
| 3.2   | 25.00            | 836.599987 | 9.00       | 2091.00    |
| 3.1<br>(Endpoint)                                     | 25.00            | 836.599985 | 11.00      | 2091.00    |

| Reference Frequency: PCS Mid Channel 1880 MHz @ 25°C |                  |             |            |            |
|--|------------------|-------------|------------|------------|
| Limit: +/- 2.5 ppm = 4700 Hz                         |                  |             |            |            |
| Power Supply   | Environment      | Frequency   | Delta (Hz) | Limit (Hz) |
| Vdc  | Temperature (°C) | (MHz)       |            |            |
| 4.2  | 25               | 1879.999991 | 0.00       | 4700       |
| 3.7  | 25               | 1879.999985 | 6.00       | 4700       |
| 3.2  | 25               | 1879.999973 | 18.00      | 4700       |
| 3.1<br>(Endpoint)                                    | 25               | 1879.999972 | 19.00      | 4700       |

| Reference Frequency: WCDMA II Mid Channel 1880 (ARFCN9400) MHz |                  |             |            |            |
|--|------------------|-------------|------------|------------|
| Limit: +/- 2.5 ppm = 4700 Hz                                   |                  |             |            |            |
| Power Supply   | Environment      | Frequency   | Delta (Hz) | Limit (Hz) |
| Vdc  | Temperature (°C) | (MHz)       |            |            |
| 4.2  | 25               | 1879.999991 | 0.00       | 4700       |
| 3.7  | 25               | 1879.999985 | 6.00       | 4700       |
| 3.2  | 25               | 1879.999973 | 18.00      | 4700       |
| 3.1<br>(Endpoint)  | 25               | 1879.999972 | 19.00      | 4700       |

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| Reference Frequency: WCDMA V Mid Channel 836.6 (ARFCN4183) MHz |                  |            |            |            |
|--|------------------|------------|------------|------------|
| Limit: +/- 2.5 ppm = 2090 Hz                                   |                  |            |            |            |
| Power Supply   | Environment      | Frequency  | Delta (Hz) | Limit (Hz) |
| Vdc  | Temperature (°C) | (MHz)      |            |            |
| 4.2  | 25.00            | 836.599996 | 0.00       | 2091.00    |
| 3.7  | 25.00            | 836.599997 | -1.00      | 2091.00    |
| 3.2  | 25.00            | 836.599987 | 9.00       | 2091.00    |
| 3.1<br>(Endpoint)  | 25.00            | 836.599985 | 11.00      | 2091.00    |

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## 12. SPURIOUS RADIATED EMISSION TEST (RX)

### 12.1. Standard Applicable

According to RSS 132 §4.6, all spurious emissions shall comply with the limits of Table 2. The resolution bandwidth of the spectrum analyzer shall be 100 kHz for spurious emissions measurements below 1.0 GHz, and 1.0 MHz for measurements above 1.0 GHz.

| Frequency (MHz) | Field strength $\mu\text{V/m}$ | Distance (m) | Field strength at 3m $\text{dB}\mu\text{V/m}$ |
|-----------------|--------------------------------|--------------|---|
| 30-88           | 100                            | 3            | 40  |
| 88-216          | 150                            | 3            | 43.5  |
| 216-960         | 200                            | 3            | 46  |
| Above 960       | 500                            | 3            | 54  |

According to RSS 133 §6.6, Receiver spurious emissions shall comply with the limits specified in RSS-Gen.

### 12.2. EUT Setup

1. The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.
2. The EUT was put in the front of the test table. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The spacing between the peripherals was 10 centimeters.
4. External I/O cables were draped along the edge of the test table and bundle when necessary.
5. The host was connected with 120Vac/60Hz power source.

### 12.3. Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measured were complete.

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#### 12.4. Test SET-UP (Block Diagram of Configuration)

Refer to section 6.2 in this report

#### 12.5. Measurement Equipment Used:

Refer to section 2.4 in this report

#### 12.6. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

|       |                        |  |
|-------|------------------------|--|
| Where | FS = Field Strength    | CL = Cable Attenuation Factor (Cable Loss) |
|       | RA = Reading Amplitude | AG = Amplifier Gain                        |
|       | AF = Antenna Factor    |  |

#### 12.7. Measurement Result

Refer to attach tabular data sheets.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                     |           |               |
|-----------------------|---------------------|-----------|---------------|
| Operation Mode        | GSM 850 CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 824.2 MHz           | Test By   | Jazz          |
| Temperature           | 25 °C               | Pol       | Ver./Hor      |
| Humidity              | 65 %                |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.90             | -13.00         | 19.90                 | 43.50               | -23.60              |
| 284.14         | V               | Peak                        | 31.08             | -13.28         | 17.80                 | 46.00               | -28.20              |
| 368.53         | V               | Peak                        | 31.69             | -11.10         | 20.59                 | 46.00               | -25.41              |
| 468.44         | V               | Peak                        | 31.56             | -8.55          | 23.01                 | 46.00               | -22.99              |
| 609.09         | V               | Peak                        | 31.56             | -5.83          | 25.73                 | 46.00               | -20.27              |
| 154.16         | H               | Peak                        | 30.94             | -13.06         | 17.88                 | 43.50               | -25.62              |
| 368.53         | H               | Peak                        | 31.59             | -11.10         | 20.49                 | 46.00               | -25.51              |
| 473.29         | H               | Peak                        | 31.78             | -8.56          | 23.22                 | 46.00               | -22.78              |
| 601.23         | H               | Peak                        | 32.52             | -5.98          | 26.54                 | 46.00               | -19.46              |
| 764.29         | H               | Peak                        | 32.27             | -3.91          | 28.36                 | 46.00               | -17.64              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz.
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                     |           |               |
|-----------------------|---------------------|-----------|---------------|
| Operation Mode        | GSM 850 CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 836.6 MHz           | Test By   | Jazz          |
| Temperature           | 25 °C               | Pol       | Ver./Hor      |
| Humidity              | 65 %                |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.56             | -13.00         | 19.56                 | 43.50               | -23.94              |
| 269.59         | V               | Peak                        | 32.01             | -13.55         | 18.46                 | 46.00               | -27.54              |
| 482.99         | V               | Peak                        | 31.37             | -8.57          | 22.80                 | 46.00               | -23.20              |
| 652.74         | V               | Peak                        | 32.24             | -4.96          | 27.28                 | 46.00               | -18.72              |
| 824.43         | V               | Peak                        | 31.42             | -2.52          | 28.90                 | 46.00               | -17.10              |
| 153.19         | H               | Peak                        | 32.01             | -13.00         | 19.01                 | 43.50               | -24.49              |
| 305.48         | H               | Peak                        | 31.26             | -12.89         | 18.37                 | 46.00               | -27.63              |
| 415.09         | H               | Peak                        | 31.74             | -9.51          | 22.23                 | 46.00               | -23.77              |
| 586.78         | H               | Peak                        | 32.05             | -6.46          | 25.59                 | 46.00               | -20.41              |
| 730.34         | H               | Peak                        | 31.76             | -4.54          | 27.22                 | 46.00               | -18.78              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                      |           |               |
|-----------------------|----------------------|-----------|---------------|
| Operation Mode        | GSM 850 CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 848.8 MHz            | Test By   | Jazz          |
| Temperature           | 25 °C                | Pol       | Ver./Hor      |
| Humidity              | 65 %                 |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.98             | -13.00         | 19.98                 | 43.50               | -23.52              |
| 281.23         | V               | Peak                        | 31.96             | -13.31         | 18.65                 | 46.00               | -27.35              |
| 463.59         | V               | Peak                        | 31.57             | -8.55          | 23.02                 | 46.00               | -22.98              |
| 630.43         | V               | Peak                        | 32.46             | -5.37          | 27.09                 | 46.00               | -18.91              |
| 829.28         | V               | Peak                        | 32.06             | -2.43          | 29.63                 | 46.00               | -16.37              |
| 145.43         | H               | Peak                        | 31.08             | -13.14         | 17.94                 | 43.50               | -25.56              |
| 266.68         | H               | Peak                        | 31.67             | -13.57         | 18.10                 | 46.00               | -27.90              |
| 371.44         | H               | Peak                        | 31.62             | -11.02         | 20.60                 | 46.00               | -25.40              |
| 547.98         | H               | Peak                        | 32.58             | -7.68          | 24.90                 | 46.00               | -21.10              |
| 662.44         | H               | Peak                        | 32.22             | -5.01          | 27.21                 | 46.00               | -18.79              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                      |           |               |
|-----------------------|----------------------|-----------|---------------|
| Operation Mode        | GSM 1900 CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1850.2 MHz           | Test By   | Jazz          |
| Temperature           | 25 °C                | Pol       | Ver./Hor      |
| Humidity              | 65 %                 |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.87             | -13.00         | 19.87                 | 43.50               | -23.63              |
| 315.18         | V               | Peak                        | 31.69             | -12.66         | 19.03                 | 46.00               | -26.97              |
| 431.58         | V               | Peak                        | 31.63             | -9.09          | 22.54                 | 46.00               | -23.46              |
| 547.98         | V               | Peak                        | 32.08             | -7.68          | 24.40                 | 46.00               | -21.60              |
| 657.59         | V               | Peak                        | 32.69             | -4.98          | 27.71                 | 46.00               | -18.29              |
| 155.13         | H               | Peak                        | 31.62             | -13.12         | 18.50                 | 43.50               | -25.00              |
| 324.88         | H               | Peak                        | 31.94             | -12.43         | 19.51                 | 46.00               | -26.49              |
| 460.68         | H               | Peak                        | 31.37             | -8.61          | 22.76                 | 46.00               | -23.24              |
| 640.13         | H               | Peak                        | 31.31             | -5.19          | 26.12                 | 46.00               | -19.88              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz.
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                      |           |               |
|-----------------------|----------------------|-----------|---------------|
| Operation Mode        | GSM 1900 CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1880 MHz             | Test By   | Jazz          |
| Temperature           | 25 °C                | Pol       | Ver./Hor      |
| Humidity              | 65 %                 |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 33.46             | -13.00         | 20.46                 | 43.50               | -23.04              |
| 261.83         | V               | Peak                        | 31.54             | -13.30         | 18.24                 | 46.00               | -27.76              |
| 419.94         | V               | Peak                        | 31.83             | -9.39          | 22.44                 | 46.00               | -23.56              |
| 649.83         | V               | Peak                        | 32.28             | -4.95          | 27.33                 | 46.00               | -18.67              |
| 819.58         | V               | Peak                        | 32.24             | -2.61          | 29.63                 | 46.00               | -16.37              |
| 105.28         | H               | Peak                        | 31.41             | -12.83         | 18.58                 | 43.50               | -24.92              |
| 288.99         | H               | Peak                        | 31.90             | -13.23         | 18.67                 | 46.00               | -27.33              |
| 449.04         | H               | Peak                        | 32.06             | -8.61          | 23.45                 | 46.00               | -22.55              |
| 647.89         | H               | Peak                        | 32.56             | -4.99          | 27.57                 | 46.00               | -18.43              |
| 790.48         | H               | Peak                        | 31.90             | -3.26          | 28.64                 | 46.00               | -17.36              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                       |           |               |
|-----------------------|-----------------------|-----------|---------------|
| Operation Mode        | GSM 1900 CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1909.8 MHz            | Test By   | Jazz          |
| Temperature           | 25 °C                 | Pol       | Ver./Hor      |
| Humidity              | 65 %                  |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.31             | -13.00         | 19.31                 | 43.50               | -24.19              |
| 286.08         | V               | Peak                        | 31.42             | -13.26         | 18.16                 | 46.00               | -27.84              |
| 410.24         | V               | Peak                        | 31.46             | -9.64          | 21.82                 | 46.00               | -24.18              |
| 528.58         | V               | Peak                        | 31.42             | -8.02          | 23.40                 | 46.00               | -22.60              |
| 615.88         | V               | Peak                        | 32.34             | -5.70          | 26.64                 | 46.00               | -19.36              |
| 150.28         | H               | Peak                        | 30.80             | -12.83         | 17.97                 | 43.50               | -25.53              |
| 322.94         | H               | Peak                        | 31.94             | -12.47         | 19.47                 | 46.00               | -26.53              |
| 395.69         | H               | Peak                        | 30.89             | -10.15         | 20.74                 | 46.00               | -25.26              |
| 643.04         | H               | Peak                        | 31.95             | -5.14          | 26.81                 | 46.00               | -19.19              |
| 824.43         | H               | Peak                        | 31.57             | -2.52          | 29.05                 | 46.00               | -16.95              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                           |           |               |
|-----------------------|---------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band II CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1852.4 MHz                | Test By   | Jazz          |
| Temperature           | 25 °C                     | Pol       | Ver./Hor      |
| Humidity              | 65 %                      |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.21             | -13.00         | 19.21                 | 43.50               | -24.29              |
| 381.14         | V               | Peak                        | 32.19             | -10.69         | 21.50                 | 46.00               | -24.50              |
| 465.52         | V               | Peak                        | 31.52             | -8.55          | 22.97                 | 46.00               | -23.03              |
| 630.43         | V               | Peak                        | 33.06             | -5.37          | 27.69                 | 46.00               | -18.31              |
| 735.19         | V               | Peak                        | 32.52             | -4.48          | 28.04                 | 46.00               | -17.96              |
| 164.83         | H               | Peak                        | 31.07             | -13.69         | 17.38                 | 43.50               | -26.12              |
| 242.43         | H               | Peak                        | 31.84             | -14.06         | 17.78                 | 46.00               | -28.22              |
| 439.34         | H               | Peak                        | 31.98             | -8.80          | 23.18                 | 46.00               | -22.82              |
| 579.02         | H               | Peak                        | 31.21             | -6.71          | 24.50                 | 46.00               | -21.50              |
| 654.68         | H               | Peak                        | 31.33             | -4.97          | 26.36                 | 46.00               | -19.64              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz.
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                           |           |               |
|-----------------------|---------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band II CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1880 MHz                  | Test By   | Jazz          |
| Temperature           | 25 °C                     | Pol       | Ver./Hor      |
| Humidity              | 65 %                      |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 33.61             | -13.00         | 20.61                 | 43.50               | -22.89              |
| 318.09         | V               | Peak                        | 31.49             | -12.59         | 18.90                 | 46.00               | -27.10              |
| 405.39         | V               | Peak                        | 31.84             | -9.86          | 21.98                 | 46.00               | -24.02              |
| 644.98         | V               | Peak                        | 32.37             | -5.10          | 27.27                 | 46.00               | -18.73              |
| 788.54         | V               | Peak                        | 32.21             | -3.30          | 28.91                 | 46.00               | -17.09              |
| 153.19         | H               | Peak                        | 31.79             | -13.00         | 18.79                 | 43.50               | -24.71              |
| 327.79         | H               | Peak                        | 32.23             | -12.36         | 19.87                 | 46.00               | -26.13              |
| 463.59         | H               | Peak                        | 32.43             | -8.55          | 23.88                 | 46.00               | -22.12              |
| 611.03         | H               | Peak                        | 33.16             | -5.79          | 27.37                 | 46.00               | -18.63              |
| 785.63         | H               | Peak                        | 31.84             | -3.37          | 28.47                 | 46.00               | -17.53              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                            |           |               |
|-----------------------|----------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band II CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1907.6 MHz                 | Test By   | Jazz          |
| Temperature           | 25 °C                      | Pol       | Ver./Hor      |
| Humidity              | 65 %                       |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.92             | -13.00         | 19.92                 | 43.50               | -23.58              |
| 366.59         | V               | Peak                        | 31.51             | -11.17         | 20.34                 | 46.00               | -25.66              |
| 460.68         | V               | Peak                        | 32.40             | -8.61          | 23.79                 | 46.00               | -22.21              |
| 618.79         | V               | Peak                        | 32.62             | -5.64          | 26.98                 | 46.00               | -19.02              |
| 809.88         | V               | Peak                        | 32.12             | -2.79          | 29.33                 | 46.00               | -16.67              |
| 177.44         | H               | Peak                        | 32.37             | -14.38         | 17.99                 | 43.50               | -25.51              |
| 327.79         | H               | Peak                        | 31.50             | -12.36         | 19.14                 | 46.00               | -26.86              |
| 444.19         | H               | Peak                        | 32.13             | -8.70          | 23.43                 | 46.00               | -22.57              |
| 643.04         | H               | Peak                        | 33.03             | -5.14          | 27.89                 | 46.00               | -18.11              |
| 778.84         | H               | Peak                        | 32.00             | -3.58          | 28.42                 | 46.00               | -17.58              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                          |           |               |
|-----------------------|--------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band V CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 826.40 MHz               | Test By   | Jazz          |
| Temperature           | 25 °C                    | Pol       | Ver./Hor      |
| Humidity              | 65 %                     |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.97             | -13.00         | 19.97                 | 43.50               | -23.53              |
| 313.24         | V               | Peak                        | 31.53             | -12.70         | 18.83                 | 46.00               | -27.17              |
| 646.56         | V               | Peak                        | 30.97             | -8.54          | 22.43                 | 46.00               | -23.57              |
| 594.54         | V               | Peak                        | 33.35             | -6.18          | 27.17                 | 46.00               | -18.83              |
| 771.08         | V               | Peak                        | 31.91             | -3.75          | 28.16                 | 46.00               | -17.84              |
| 153.19         | H               | Peak                        | 31.08             | -13.00         | 18.08                 | 43.50               | -25.42              |
| 361.74         | H               | Peak                        | 31.23             | -11.33         | 19.90                 | 46.00               | -26.10              |
| 543.13         | H               | Peak                        | 31.31             | -7.74          | 23.57                 | 46.00               | -22.43              |
| 649.83         | H               | Peak                        | 31.94             | -4.95          | 26.99                 | 46.00               | -19.01              |
| 785.63         | H               | Peak                        | 31.41             | -3.37          | 28.04                 | 46.00               | -17.96              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz.
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                          |           |               |
|-----------------------|--------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band V CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 836.60 MHz               | Test By   | Jazz          |
| Temperature           | 25 °C                    | Pol       | Ver./Hor      |
| Humidity              | 65 %                     |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 153.19         | V               | Peak                        | 32.20             | -18.09         | 14.11                 | 43.50               | -29.39              |
| 276.38         | V               | Peak                        | 31.06             | -10.72         | 20.34                 | 46.00               | -25.66              |
| 429.64         | V               | Peak                        | 31.83             | -8.75          | 23.08                 | 46.00               | -22.92              |
| 567.38         | V               | Peak                        | 31.87             | -8.75          | 23.12                 | 46.00               | -22.88              |
| 657.59         | V               | Peak                        | 32.56             | -8.75          | 23.81                 | 46.00               | -22.19              |
| 153.19         | H               | Peak                        | 31.54             | -13.00         | 18.54                 | 43.50               | -24.96              |
| 313.24         | H               | Peak                        | 31.90             | -12.70         | 19.20                 | 46.00               | -26.80              |
| 395.69         | H               | Peak                        | 31.35             | -10.15         | 21.20                 | 46.00               | -24.80              |
| 596.48         | H               | Peak                        | 32.26             | -6.12          | 26.14                 | 46.00               | -19.86              |
| 829.28         | H               | Peak                        | 31.87             | -2.43          | 29.44                 | 46.00               | -16.56              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (below 1GHz)

|                       |                           |           |               |
|-----------------------|---------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band V CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 846.60 MHz                | Test By   | Jazz          |
| Temperature           | 25 °C                     | Pol       | Ver./Hor      |
| Humidity              | 65 %                      |           |               |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>Mode<br>(PK/QP) | Reading<br>(dBuV) | Factor<br>(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) |
|----------------|-----------------|-----------------------------|-------------------|----------------|-----------------------|---------------------|---------------------|
| 271.53         | V               | Peak                        | 32.25             | -18.50         | 13.75                 | 46.00               | -32.25              |
| 332.64         | V               | Peak                        | 31.74             | -7.81          | 23.93                 | 46.00               | -22.07              |
| 415.09         | V               | Peak                        | 31.97             | -7.81          | 24.16                 | 46.00               | -21.84              |
| 628.49         | V               | Peak                        | 32.74             | -7.81          | 24.93                 | 46.00               | -21.07              |
| 827.34         | V               | Peak                        | 32.81             | -7.81          | 25.00                 | 46.00               | -21.00              |
| 153.19         | H               | Peak                        | 31.35             | -13.00         | 18.35                 | 43.50               | -25.15              |
| 303.54         | H               | Peak                        | 31.30             | -12.93         | 18.37                 | 46.00               | -27.63              |
| 417.03         | H               | Peak                        | 31.93             | -9.46          | 22.47                 | 46.00               | -23.53              |
| 615.88         | H               | Peak                        | 32.95             | -5.70          | 27.25                 | 46.00               | -18.75              |
| 870.99         | H               | Peak                        | 32.60             | -1.58          | 31.02                 | 46.00               | -14.98              |

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                     |           |               |
|-----------------------|---------------------|-----------|---------------|
| Operation Mode        | GSM 850 CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 824.2 MHz           | Test By   | Jazz          |
| Temperature           | 25 °C               | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 1648.4      | V            | 36.11               | --                | -5.22       | 30.89                   | --                    | 74.00                     | 54.00                   | -23.11      |
| 2472.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3296.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4121.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4945.2      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 1648.4      | H            | 36.12               | --                | -5.22       | 30.90                   | --                    | 74.00                     | 54.00                   | -23.10      |
| 2472.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3296.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4121.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4945.2      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                     |           |               |
|-----------------------|---------------------|-----------|---------------|
| Operation Mode        | GSM 850 CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 836.6 MHz           | Test By   | Jazz          |
| Temperature           | 25 °C               | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 1673.2      | V            | 36.57               | --                | -5.08       | 31.49                   | --                    | 74.00                     | 54.00                   | -22.51      |
| 2509.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3346.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4183.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5019.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 1673.2      | H            | 35.59               | --                | -5.08       | 30.51                   | --                    | 74.00                     | 54.00                   | -23.49      |
| 2509.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3346.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4183.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5019.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                      |           |               |
|-----------------------|----------------------|-----------|---------------|
| Operation Mode        | GSM 850 CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 848.8 MHz            | Test By   | Jazz          |
| Temperature           | 25 °C                | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                 |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 1697.6      | V            | 36.34               | --                | -4.96       | 31.38                   | --                    | 74.00                     | 54.00                   | -22.62      |
| 2546.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3395.2      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4244.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5092.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 1697.6      | H            | 35.75               | --                | -4.96       | 30.79                   | --                    | 74.00                     | 54.00                   | -23.21      |
| 2546.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3395.2      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4244.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5092.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                      |           |               |
|-----------------------|----------------------|-----------|---------------|
| Operation Mode        | GSM 1900 CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1850.2 MHz           | Test By   | Jazz          |
| Temperature           | 25 °C                | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                 |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 3700.4      | V            | 35.31               | --                | 6.83        | 42.14                   | --                    | 74.00                     | 54.00                   | -11.86      |
| 5550.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7400.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9251.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11101.2     | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3700.4      | H            | 34.80               | --                | 6.83        | 41.63                   | --                    | 74.00                     | 54.00                   | -12.37      |
| 5550.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7400.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9251.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11101.2     | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                      |           |               |
|-----------------------|----------------------|-----------|---------------|
| Operation Mode        | GSM 1900 CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1880 MHz             | Test By   | Jazz          |
| Temperature           | 25 °C                | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                 |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 3760.0      | V            | 35.31               | --                | 6.89        | 42.20                   | --                    | 74.00                     | 54.00                   | -11.80      |
| 5640.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7520.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9400.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11280.0     | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3760.0      | H            | 34.08               | --                | 6.89        | 40.97                   | --                    | 74.00                     | 54.00                   | -13.03      |
| 5640.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7520.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9400.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11280.0     | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

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- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                       |           |               |
|-----------------------|-----------------------|-----------|---------------|
| Operation Mode        | GSM 1900 CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1909.8 MHz            | Test By   | Jazz          |
| Temperature           | 25 °C                 | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                  |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 3819.6      | V            | 33.44               | --                | 6.96        | 40.40                   | --                    | 74.00                     | 54.00                   | -13.60      |
| 5729.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7639.2      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9549.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11458.8     | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3819.6      | H            | 34.32               | --                | 6.96        | 41.28                   | --                    | 74.00                     | 54.00                   | -12.72      |
| 5729.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7639.2      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9549.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11458.8     | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

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- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                           |           |               |
|-----------------------|---------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band II CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1852.4 MHz                | Test By   | Jazz          |
| Temperature           | 25 °C                     | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                      |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 3704.8      | V            | 35.13               | --                | 6.83        | 41.96                   | --                    | 74.00                     | 54.00                   | -12.04      |
| 5557.2      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7409.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9262.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11114.4     | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3704.8      | H            | 35.39               | --                | 6.83        | 42.22                   | --                    | 74.00                     | 54.00                   | -11.78      |
| 5557.2      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7409.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9262.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11114.4     | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                           |           |               |
|-----------------------|---------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band II CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1880 MHz                  | Test By   | Jazz          |
| Temperature           | 25 °C                     | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                      |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 3760.0      | V            | 33.97               | --                | 6.89        | 40.86                   | --                    | 74.00                     | 54.00                   | -13.14      |
| 5640.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7520.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9400.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11280.0     | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3760.0      | H            | 34.28               | --                | 6.89        | 41.17                   | --                    | 74.00                     | 54.00                   | -12.83      |
| 5640.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7520.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9400.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11280.0     | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                            |           |               |
|-----------------------|----------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band II CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 1907.6 MHz                 | Test By   | Jazz          |
| Temperature           | 25 °C                      | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                       |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 3815.2      | V            | 33.08               | --                | 6.96        | 40.04                   | --                    | 74.00                     | 54.00                   | -13.96      |
| 5722.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7630.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9538.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11445.6     | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3815.2      | H            | 34.19               | --                | 6.96        | 41.15                   | --                    | 74.00                     | 54.00                   | -12.85      |
| 5722.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 7630.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 9538.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 11445.6     | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                          |           |               |
|-----------------------|--------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band V CH Low Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 826.40 MHz               | Test By   | Jazz          |
| Temperature           | 25 °C                    | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                     |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 1652.8      | V            | 36.38               | --                | -5.18       | 31.20                   | --                    | 74.00                     | 54.00                   | -22.80      |
| 2479.2      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3305.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4132.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4958.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 1652.8      | H            | 35.66               | --                | -5.18       | 30.48                   | --                    | 74.00                     | 54.00                   | -23.52      |
| 2479.2      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3305.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4132.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4958.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                          |           |               |
|-----------------------|--------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band V CH Mid Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 836.60 MHz               | Test By   | Jazz          |
| Temperature           | 25 °C                    | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                     |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 1673.2      | V            | 35.75               | --                | -5.08       | 30.67                   | --                    | 74.00                     | 54.00                   | -23.33      |
| 2509.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3346.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4183.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5019.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 1673.2      | H            | 36.20               | --                | -5.08       | 31.12                   | --                    | 74.00                     | 54.00                   | -22.88      |
| 2509.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3346.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4183.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5019.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz)

|                       |                           |           |               |
|-----------------------|---------------------------|-----------|---------------|
| Operation Mode        | WCDMA Band V CH High Mode | Test Date | Apr. 02, 2010 |
| Fundamental Frequency | 846.60 MHz                | Test By   | Jazz          |
| Temperature           | 25 °C                     | Pol       | Ver. / Hor.   |
| Humidity              | 65 %                      |           |               |

| Freq. (MHz) | Ant.Pol. H/V | Peak Reading (dBuV) | AV Reading (dBuV) | Factor (dB) | Actual Peak FS (dBuV/m) | Actual AV FS (dBuV/m) | Peak Limit at 3m (dBuV/m) | AV Limit at 3m (dBuV/m) | Margin (dB) |
|-------------|--------------|---------------------|-------------------|-------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------|
| 1693.2      | V            | 35.28               | --                | -4.96       | 30.32                   | --                    | 74.00                     | 54.00                   | -23.68      |
| 2539.8      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3386.4      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4233.0      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5079.6      | V            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 1693.2      | H            | 35.66               | --                | -4.96       | 30.70                   | --                    | 74.00                     | 54.00                   | -23.30      |
| 2539.8      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 3386.4      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 4233.0      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |
| 5079.6      | H            | --                  | --                |             |                         | --                    | 74.00                     | 54.00                   |             |

Remark:

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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