# TEST REPORT

| Ref. Report No. |
| --- |
| 06-1341-019-05 |

**Name and address of the applicant**

**Ezze Mobile Tech., Inc.**
**1F, Bubmuds Bldg., 151-31, Nonhyun-dong, Kangnam-ku, Seoul, Korea**

**Standard / Test regulation**

**FCC Part 2, Part 22(H), Part 24(E)**

**Test result**

**Pass**

**Incoming date : Jun 14, 2006**

**Test date : Jun 17 ~ 23, 2006**

**Test item(s) ;**

**Dual-Band GSM/GPRS Phone with Bluetooth**

**Model/type ref. ;**

**EZ800**

**Manufacturer ;**

**Ezze Mobile Tech., Inc.**

**Additional information ;**

**-Required Authorization : Certification**
**-FCC ID. : RV2EZ800**

**Issue date : Jun 23, 2006**



**Tested and reported by**

Sung-Kyu Cho, Engineer

**Reviewed by**

Seok-Jin Kim , Telecommunication Team Manager

KOREA TESTING LABORATORY

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# 1. GENERAL INFORMATIONS

## 1.1 Applicant (Client)

| | |
|---|---|
| Name | Ezze Mobile Tech., Inc. |
| Address | 1F, Bubmuds Bldg., 151-31, Nonhyun-dong, Kangnam-ku, Seoul, Korea |
| Contact Person | Joseph Chang |
| Telephone No. | + 82-02-519-7802 |
| Facsimile No. | + 82-02-519-7882 |
| E-mail address | joseph@ezzemobile.com |

## 1.2 Equipment (EUT)

| | |
|---|---|
| Type of equipment | Dual-Band GSM/GPRS Phone with Bluetooth |
| Model Name | EZ800 |
| Serial No | RV2EZ800-20060600001 |
| FCC ID | RV2EZ800 |
| Hardware Version | 1.0 |
| Software Version | 1.0 |
| Emission Designator | 300KGXW (GSM) |
| Manufacturer Name | Ezze Mobile Tech., Inc. |
| Manufacturer Address | Rm. 204, Anyang Megavalley, 799, Guanyang-dong, Dongan-gu, Anyang-city, Gyunggi-do, Korea, 431-767 |
| Tx Frequency Range | 824Mhz ~ 849Mhz (GSM 850) / 1850.2~1909.8Mhz(GSM1900) |
| Rx Frequency Range | 869Mhz ~ 894Mhz (GSM 850) / 1930.2~1989.8Mhz(GSM1900) |
| Additional Information | Type of modulauion : GSM<br>Frequency : GSM 850/1900<br>GPRS Class 8/Class B |

## 1.3 Testing Laboratory

| | |
|---|---|
| Test Method | FCC Part 2, Part 22(H), Part 24(E) |
| Testing Place | Korea Testing Labortory (KTL)<br>222-13 Guro-dong, Guro-Gu, Seoul 152-848 Korea |
| Test Engineer | Sungkyu Cho |
| Telephone number | +82 2 860 1463 |
| Facsimile number | +82 2 860 1468 |
| E-mail address | skcho@ktl.re.kr |
| Other Comments | - |

# 3. SUMMARY OF TEST RESULTS

| Test case | Test | Result |
|---|---|---|
| 4.1 | Effective Radiated Power Output (GSM850 Mode) | Pass |
| 4.2 | Field Strength of Spurious Radiation (GSM850 Mode) | Pass |
| 4.3 | Frequency Stability (GSM850 Mode) | Pass |
| 4.4 | Conducted Spurious Emissions (GSM850 Mode) | Pass |
| 4.5 | Occupied Bandwidth (GSM850 Mode) | Pass |
| 5.1 | Effective Radiated Power Output (GSM1900 Mode) | Pass |
| 5.2 | Field Strength of Spurious Radiation (GSM1900 Mode) | Pass |
| 5.3 | Frequency Stability (GSM1900 Mode) | Pass |
| 5.4 | Conducted Spurious Emissions (GSM1900 Mode) | Pass |
| 5.5 | Occupied Bandwidth (GSM1900 Mode) | Pass |

# 4. TEST DATA (GSM 850)

## 4.1 Effective Radiated Power

### Measurement procedure

Effective Radiated Power Output and Equivalent Isotropic Radiated Power output Measurements by Substitution Method according to ANSI/TIA/EIA-603- B-2002:

The measurement of Effective Radiated Power was carried out in a KTL absorber-lined Room that was listed up at FCC according to the "Radiated Emissions Testing" procedure specified by ANSI C63.4.
The EUT was placed on a nonconductive turntable 1.0 meter above the ground plane and set up for the max.output power.
These measurements were done at 3 frequencies, 824.2 MHz, 836.6 MHz, 848.8 MHz. (bottom, middle, and top of operational frequency range) and power control level was set to 5 (Maximum power control level) by using CMU200.
The measurement was made in same test set up and configuration with 3 orthogonal planes which produced maximum emission level. Receiving antenna was installed at 3-meter distance from the EUT, and was connected to an spectrum analyzer.
The EUT was then replaced by an dipole antenna and polarized in accordance with the EUT's antenna polarization.The dipole antenna was connected to a RF signal generator with a coaxial cable. The signal generator was adjusted to a level that produced the maximum radiated emission level. The signal generator level was recorded and corrected by the power loss in the cable between the signal generator and the antenna and further corrected for the gain of the substitution antenna. The signal generator corrected level is the ERP level.

### Limits

| Power Control Level | Nominal Peak Output Power |
|---|---|
| 5 | 38.45 dBm (7 W) |

### Measurement Results

| Frequency (MHz) | Reference Level (dBm) | Polarization (H/V) | Effective Radiated Power (dBm) |
|---|---|---|---|
| 824.2 | -6.76 | V | + 31.66 |
| 836.6 | -6.74 | V | + 29.70 |
| 848.8 | -7.28 | V | + 29.29 |

## 4.2 Field Strength of Spurious Radiation

### Measurement procedure

Field Strength of Spurious Radiation Measurements by Substitution Method according to ANSI/TIA/EIA-603- B-2002:

The measurement of Effective Radiated Power was carried out in a KTL absorber-lined Room that was listed up at FCC according to the "Radiated Emissions Testing" procedure specified by ANSI C63.4.
The EUT was placed on a nonconductive turntable 1 meter above the ground plane and set up for the max.output power.
These measurements were done at 3 frequencies, 824.2 MHz, 836.6 MHz, 848.8 MHz. (bottom, middle, and top of operational frequency range) and power control level was set to 5 (Maximum power control level) by using CMU200.

A horn antenna was substituted in place of the EUT. This horn antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antennas are taken into consideration.

### 4.2.1 Operating frequency : 824.2 MHz (Bottom channel)

### Limits

The Spectrum was investigated from 30 MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1 MHz. The value that we could measure was only reported.
At least 43 + 10 log (P) dB
Measured Output Power : 31.66 dBm = 1.47 W
Limit : 43 + 10 log (W) = 44.7 dBc

### Measurement Results

| Frequency (MHz) | Level at Antenna Terminals (dBm) | Substitute Antenna Gain (dBd) | Correct Generator Level (dBm) | dBc | Margin (dB) |
|---|---|---|---|---|---|
| 1,648.4 | -39.3 | 6.0 | -33.3 | 65.0 | 20.3 |
| 2,472.6 | -46.4 | 7.2 | -39.2 | 70.9 | 26.2 |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |

### 4.2.2 Operating frequency : 836.6 MHz (Middle channel)

**Limits**

The Spectrum was investigated from 30 MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1 MHz. The value that we could measure was only reported.
At least 43 + 10 log (P) dB
Measured Output Power : 29.70 dBm = 0.93 W
Limit : 43 + 10 log (W) = 42.7 dBc

**Measurement Results**

| Frequency (MHz) | Level at Antenna Terminals (dBm) | Substitute Antenna Gain (dBd) | Correct Generator Level (dBm) | dBc | Margin (dB) |
|---|---|---|---|---|---|
| 1,673.2 | -40.3 | 6.0 | -34.3 | 64.0 | 21.3 |
| 2,509.8 | -43.1 | 7.2 | -35.9 | 65.6 | 22.9 |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |

### 4.2.3 Operating frequency : 848.8 MHz (Top channel)

**Limits**

The Spectrum was investigated from 30 MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1 MHz. The value that we could measure was only reported.
At least 43 + 10 log (P) dB
Measured Output Power : 29.29 dBm = 0.85 W
Limit : 43 + 10 log (W) = 42.3 dBc

**Measurement Results**

| Frequency (MHz) | Level at Antenna Terminals (dBm) | Substitute Antenna Gain (dBd) | Correct Generator Level (dBm) | dBc | Margin (dB) |
|---|---|---|---|---|---|
| 1,697.6 | -44.2 | 6.0 | -38.2 | 67.5 | 25.2 |
| 2546.4 | -42.8 | 7.2 | -35.6 | 64.9 | 22.6 |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |

### 4.3 Frequency Stability

**Measurement procedure**

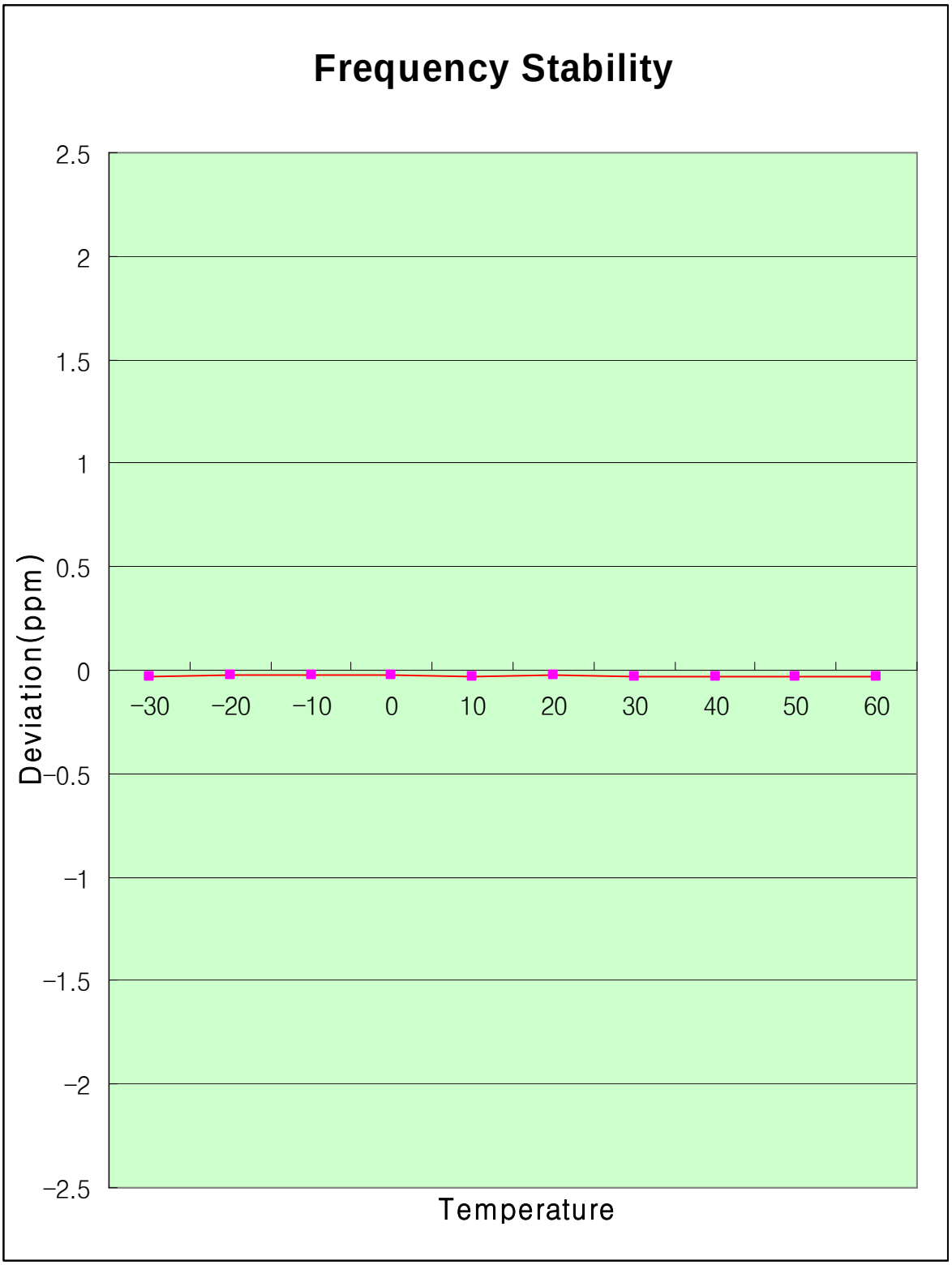
The equipment under test is placed in an environmental chamber. Frequency measurements are made at the extremes of the temperature range -30º C to +60º C and at intervals of 10º C with the primary supply voltage set to the nominal battery operating voltage. A period of time sufficient to stabilize all components of the equipment is allowed at each frequency measurement. The maximum variation of frequency is measured. The test was done at middle channel.

**Limits**

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ± 0.00025 (± 2.5ppm) of the center frequency.

**Measurement Results**

| Voltage (%) | Power (VDC) | Temperature (°C) | Frequency Error (Hz) | Frequency Error (ppm) |
|---|---|---|---|---|
| 100 % | 3.8 | + 20 (Ref) | -18 | -0.022 |
| 100 % | | - 30 | -26 | -0.031 |
| 100 % | | - 20 | -23 | -0.027 |
| 100 % | | - 10 | -21 | -0.025 |
| 100 % | | 0 | -22 | -0.026 |
| 100 % | | + 10 | -26 | -0.031 |
| 100 % | | + 20 | -23 | -0.027 |
| 100 % | | + 30 | -24 | -0.029 |
| 100 % | | + 40 | -24 | -0.029 |
| 100 % | | + 50 | -26 | -0.031 |
| 100 % | | + 60 | -24 | -0.029 |
| Battery end point | 3.47 | + 20 | +81 | +0.097 |
| 115 % | 4.37 | + 20 | -24 | -0.029 |


Frequency Stability
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
Deviation(ppm)
−30
−20
−10
0
10
20
30
40
50
60
Temperature

### 4.4 Conducted Spurious Emissions

**Measurement procedure**

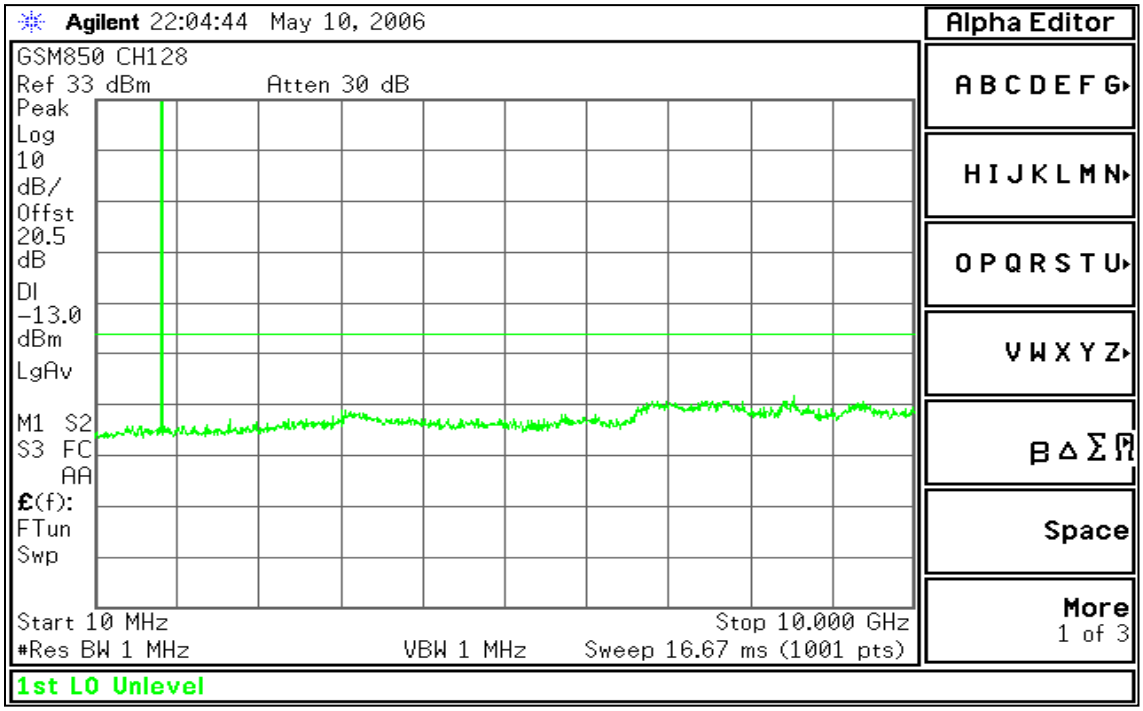
The level of the carrier and the various conducted spurious and harmonic frequencies is measured by calibrated spectrum analyzer.
These measurements were done at 3 frequencies, 824.2 MHz, 836.6 MHz, 848.8 MHz. (bottom, middle, and top of operational frequency range) and power control level was set to 5 (Maximum power control level) by using CMU200.

The Resolution BW of the analyzer is set to 1% of the emission bandwidth to show compliance with the –13 dBm limit, in the 1 MHz bands immediately outside and adjacent to the edge of the frequency block. For the Out-of-Band measurements a 1MHz RBW was used to scan from 10 MHz to 10 GHz. A display line was placed at –13 dBm to show compliance.

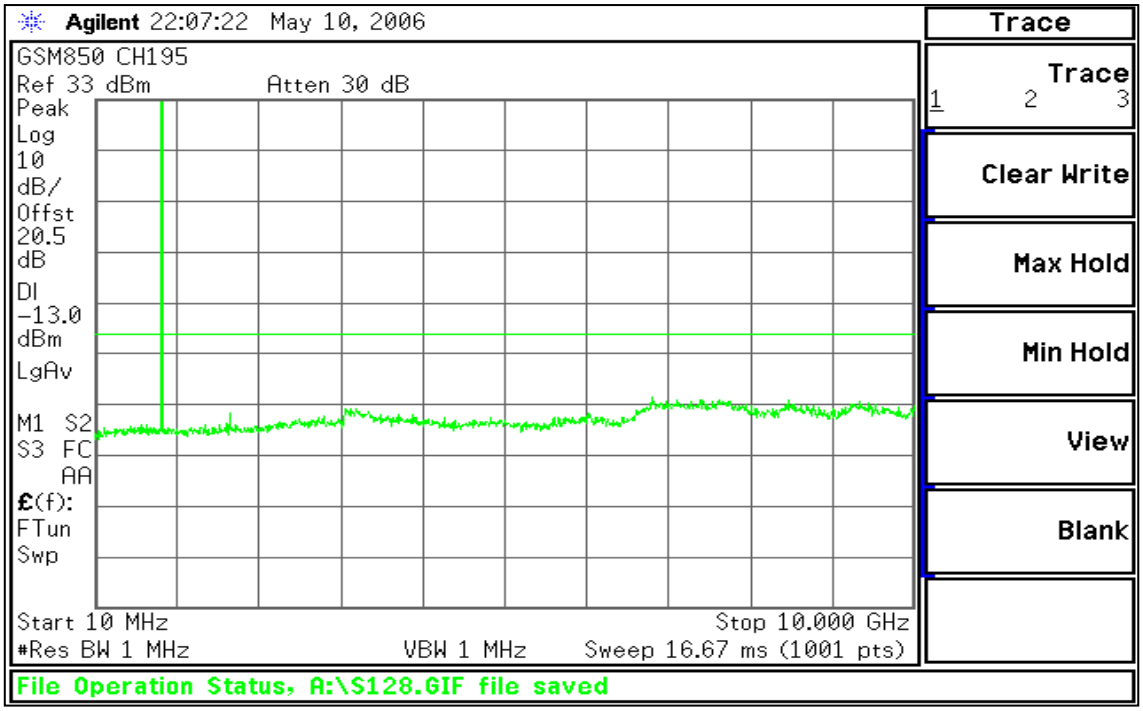
**Limits**

On any frequency outside frequency band, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

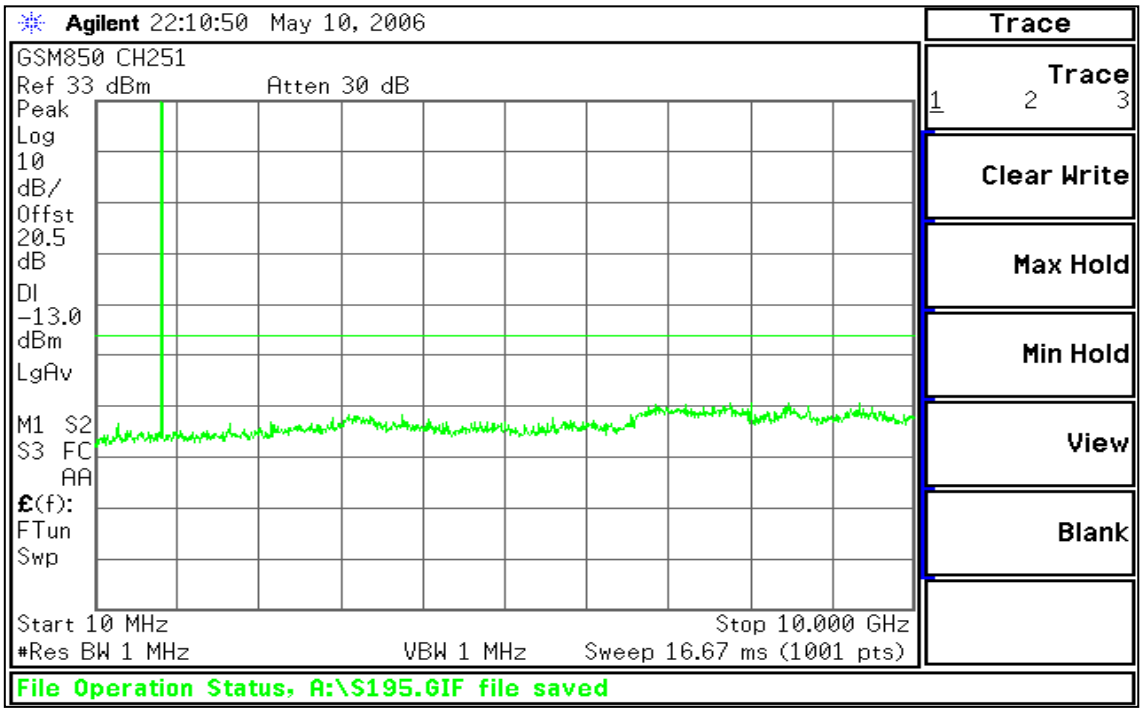
**Measurement Results**



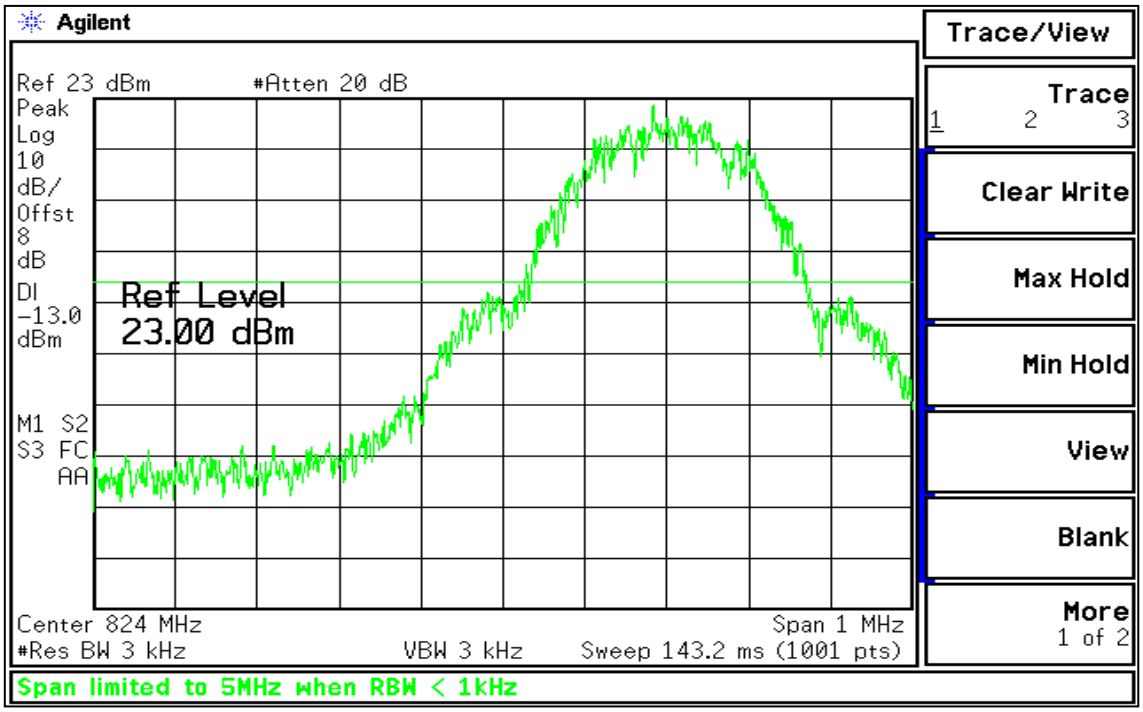

– Operating frequency : 824.2 MHz (Bottom channel) –



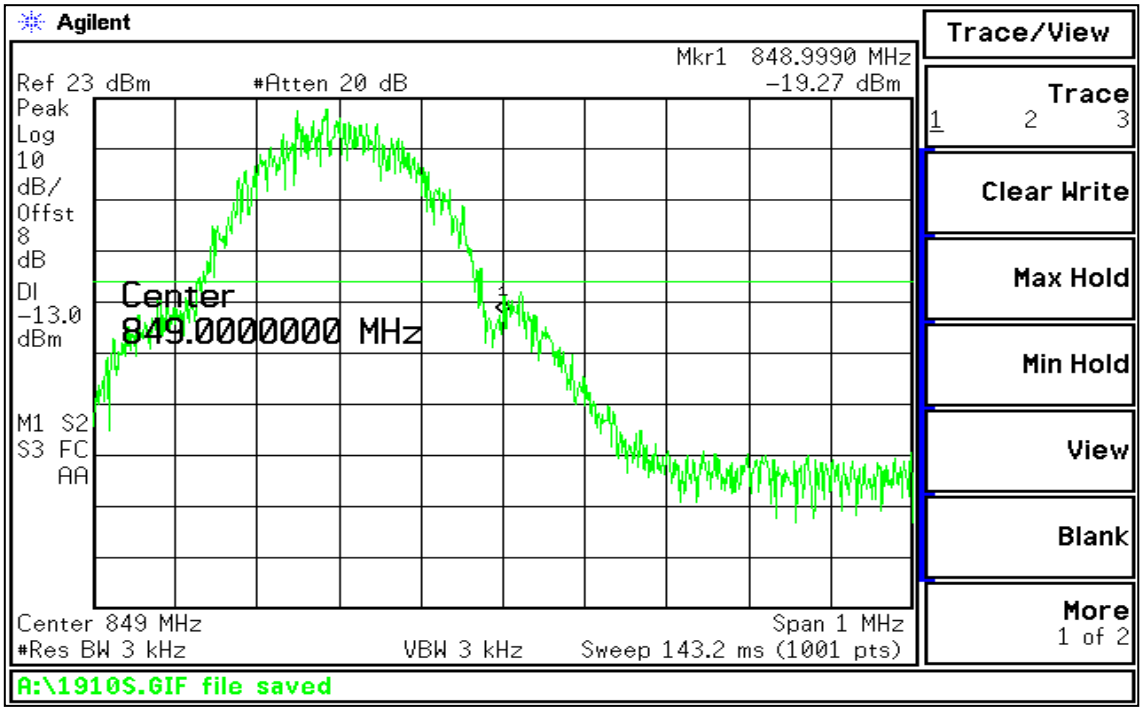

– Operating frequency : 836.6 MHz (Middle channel) –




– Operating frequency : 848.4 MHz (Top channel) –




– Lower Band Edge –




– Higher Band Edge –

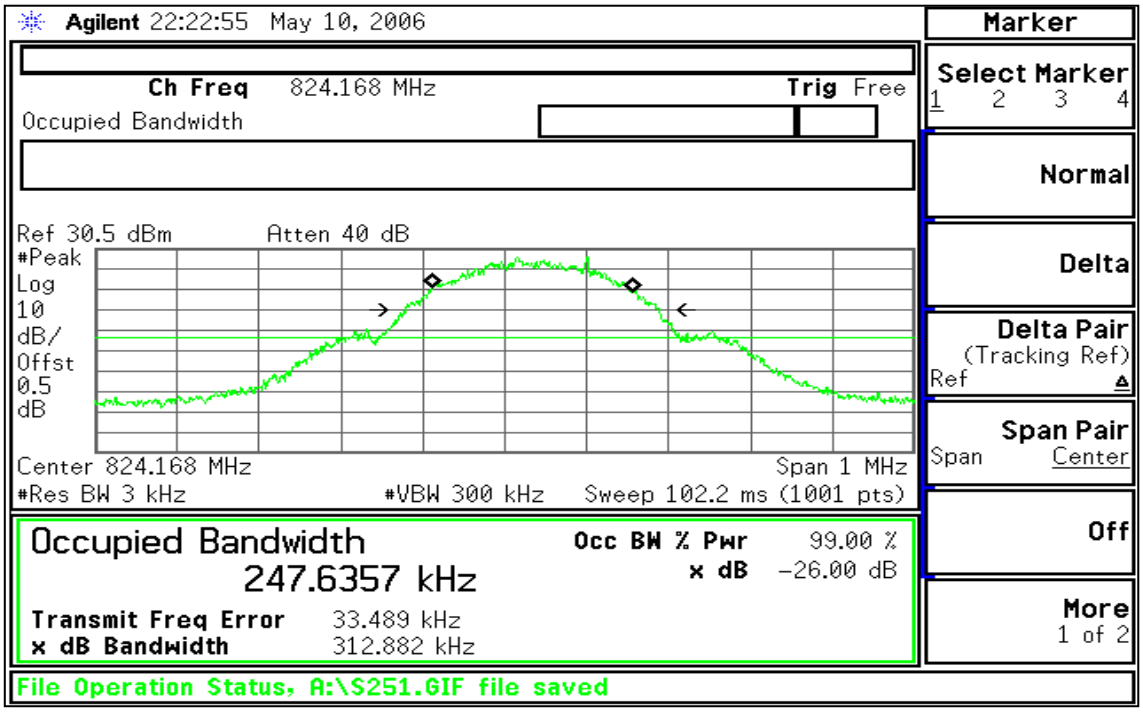
### 4.5 Occupied Bandwidth

**Measurement procedure**

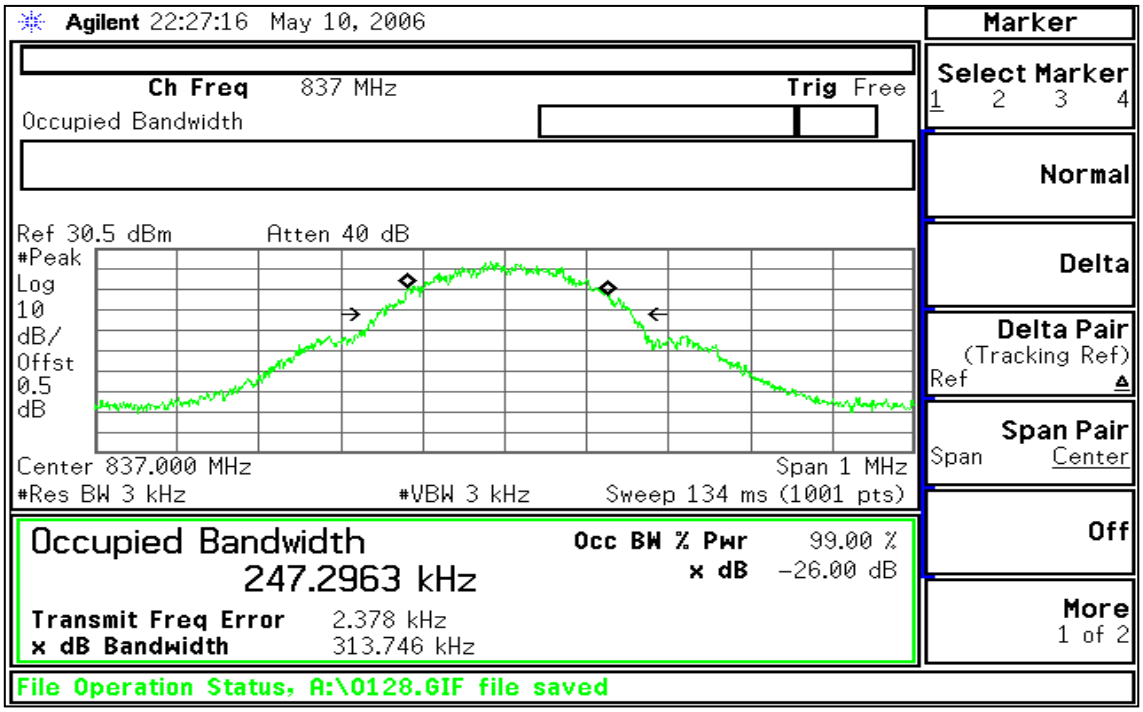
The RF output port of the equipment under test is directly coupled to the input of the Spectrum analyzer through a specialized RF connector. The analyzer is set for Peak Detector and each trace is set for Max Hold. These measurements were done at 3 frequencies, 824.2 MHz, 836.6 MHz, 848.8 MHz. (bottom, middle, and top of operational frequency range)

**Measurement Results**

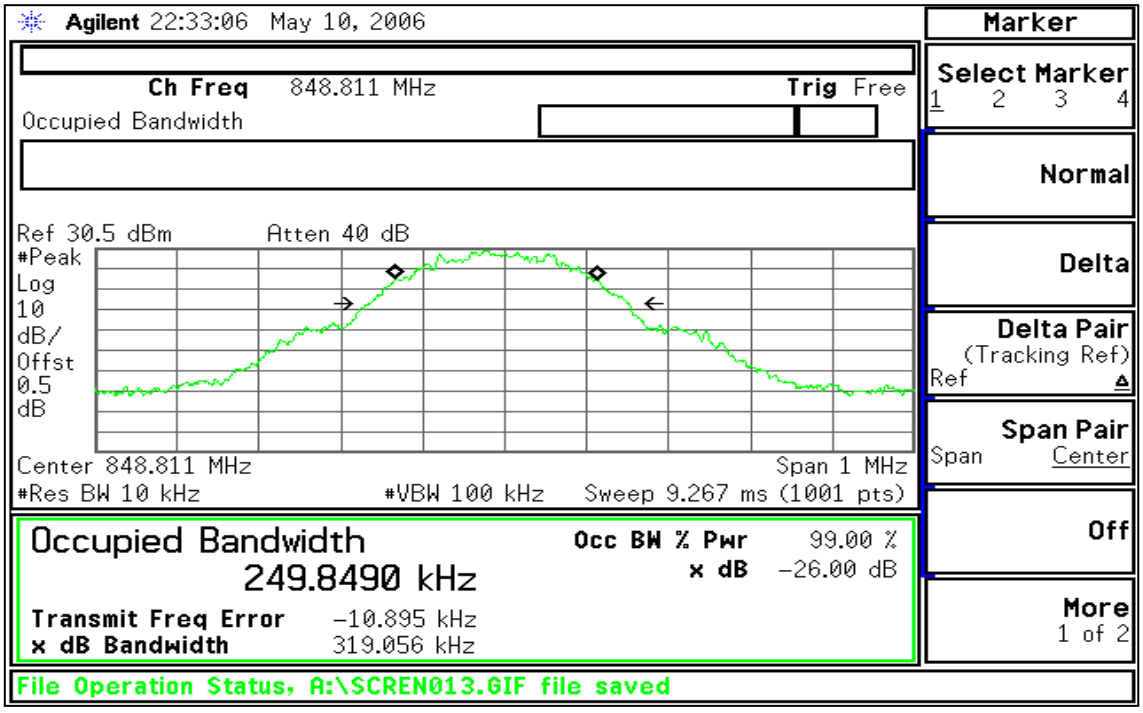
| Frequency (MHz) | 26 dB Occupied Bandwidth |
|---|---|
| 824.2 | 312.9 KHz |
| 836.6 | 313.7 KHz |
| 848.8 | 319.1 KHz |




– Operating frequency : 824.2 MHz (Bottom channel) –




– Operating frequency : 836.6 MHz (Middle channel) –




– Operating frequency : 848.4 MHz (Top channel) –

# 5. TEST DATA (GSM 1900)

## 5.1 Effective Isotropic Radiated Power

### Measurement procedure

Effective Radiated Power Output and Equivalent Isotropic Radiated Power output Measurements by Substitution Method according to ANSI/TIA/EIA-603- B-2002:

The measurement of Effective Isotropic Radiated Power was carried out in a KTL absorber-lined Room that was listed up at FCC according to the "Radiated Emissions Testing" procedure specified by ANSI C63.4.
The EUT was placed on a nonconductive turntable 1 meter above the ground plane and set up for the max.output power.
These measurements were done at 3 frequencies, 1850.2 MHz, 1880.0 MHz, 1909.8 MHz (bottom, middle, and top of operational frequency range) and power control level was set to 0 (Maximum power control level) by using CMU200.

The measurement was made in same test set up and configuration with 3 orthogonal planes which produced maximum emission level. Receiving antenna was installed at 3-meter distance from the EUT, and was connected to an spectrum analyzer.
A dipole antenna was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using horn antenna and the difference between the gain of the horn and an isotropic or dipole antennas are taken into consideration.

### Limits

| Power Control Level | Nominal Peak Output Power |
|---|---|
| 0 | + 33 dBm (2 W) |

### Measurement Results

| Frequency (MHz) | Reference Level (dBm) | Polarization (H/V) | Peak Output Power (dBm) |
|---|---|---|---|
| 1850.2 | -16.3 | V | 31.8 |
| 1880.0 | -17.6 | V | 28.9 |
| 1909.8 | -18.3 | V | 28.7 |

### 5.2 Field Strength of Spuriois Radiation

**Measurement procedure**

Field Strength of Spurious Radiation Measurements by Substitution Method according to ANSI/TIA/EIA-603- B-2002:

The measurement of Effective Radiated Power was carried out in a KTL absorber-lined Room that was listed up at FCC according to the "Radiated Emissions Testing" procedure specified by ANSI C63.4.
The EUT was placed on a nonconductive turntable 1 meter above the ground plane and set up for the max.output power.
These measurements were done at 3 frequencies, 1850.2 MHz, 1880.0 MHz, 1909.8 MHz. (bottom, middle, and top of operational frequency range) and power control level was set to 0 (Maximum power control level) by using CMU200.

A dipole antenna was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antennas are taken into consideration.

#### 5.2.1 Operating frequency : 1850.2 MHz (Bottom channel)

**Limits**

The Spectrum was investigated from 30 MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1 MHz. The value that we could measure was only reported.
At least 43 + 10 log (P) dB
Measured Output Power : 31.8 dBm = 1.51 W
Limit : 43 + 10 log (W) = 44.8 dBc

**Measurement Results**

| Frequency (MHz) | Level at Antenna Terminals (dBm) | Substitute Antenna Gain (dB) | Correct Generator Level (dBm) | dBc | Margin (dB) |
|---|---|---|---|---|---|
| 3,700.4 | -31.5 | 9.8 | -21.7 | 53.5 | 8.7 |
| 5,550.6 | < -41.4 | 11.3 | < -30.1 | < 61.9 | < 17.1 |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |

### 5.2.2 Operating frequency : 1880.0 MHz (Middle channel)

**Limits**

The Spectrum was investigated from 30 MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1MHz. The value that we could measure was only reported.
At least 43 + 10 log (P) dB
Measured Output Power : 28.9 dBm = 0.78 W
Limit : 43 + 10 log (W) = 41.9 dBc

**Measurement Results**

| Frequency (MHz) | Level at Antenna Terminals (dBm) | Substitute Antenna Gain (dB) | Correct Generator Level (dBm) | dBc | Margin (dB) |
|---|---|---|---|---|---|
| 3,760.0 | -32.4 | 9.8 | -22.6 | 51.5 | 9.6 |
| 5,640.0 | < -41.4 | 11.3 | < -30.1 | < 59.0 | < 17.1 |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |

### 5.2.3 Operating frequency : 1909.8 MHz (Top channel)

**Limits**

The Spectrum was investigated from 30 MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW= 1 MHz. The value that we could measure was only reported.

At least 43 + 10 log (P) dB
Measured Output Power : 28.7 dBm = 0.74 W
Limit : 43 + 10 log (W) = 41.7 dBc

**Measurement Results**

| Frequency (MHz) | Level at Antenna Terminals (dBm) | Substitute Antenna Gain (dB) | Correct Generator Level (dBm) | dBc | Margin (dB) |
|---|---|---|---|---|---|
| 3,819.6 | -32.5 | 9.8 | -22.7 | 51.4 | 9.7 |
| 5,729.4 | < -41.4 | 11.3 | < -30.1 | < 58.8 | < 17.1 |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |

### 5.3 Frequency Stability

**Measurement procedure**

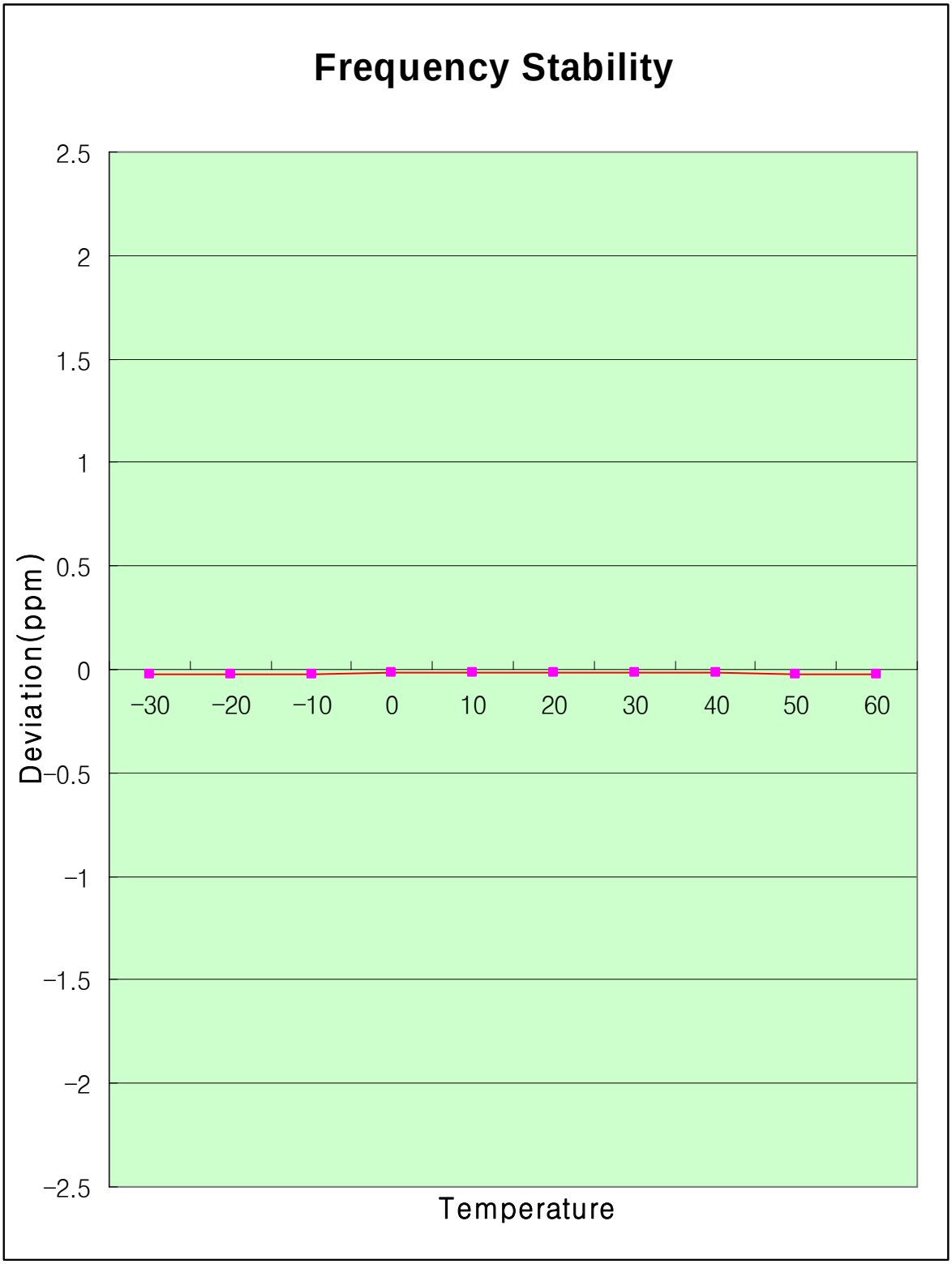
The equipment under test is placed in an environmental chamber. Frequency measurements are made at the extremes of the temperature range -30º C to +60º C and at intervals of 10º C with the primary supply voltage set to the nominal battery operating voltage. A period of time sufficient to stabilize all components of the equipment is allowed at each frequency measurement. The maximum variation of frequency is measured. The teat was done at middle channel.

**Limits**

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ± 0.00025 (± 2.5ppm) of the center frequency.

**Measurement Results**

| Voltage (%) | Power (VDC) | Temperature (°C) | Frequency Error (Hz) | Frequency Error (ppm) |
|---|---|---|---|---|
| 100 % | 3.8 | + 20 (Ref) | -33 | -0.018 |
| 100 % | | - 30 | -42 | -0.022 |
| 100 % | | - 20 | -39 | -0.021 |
| 100 % | | - 10 | -41 | -0.022 |
| 100 % | | 0 | -32 | -0.017 |
| 100 % | | + 10 | -33 | -0.018 |
| 100 % | | + 20 | -34 | -0.018 |
| 100 % | | + 30 | -34 | -0.018 |
| 100 % | | + 40 | -36 | -0.019 |
| 100 % | | + 50 | -38 | -0.020 |
| 100 % | | + 60 | -43 | -0.023 |
| 85 % | 3 | + 20 | -32 | -0.017 |
| 115 % | 4.37 | + 20 | -37 | -0.020 |


Frequency Stability
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
Deviation(ppm)
−30
−20
−10
0
10
20
30
40
50
60
Temperature

### 5.4 Conducted Spurious Emissions

**Measurement procedure**

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by calibrated spectrum analyzer.

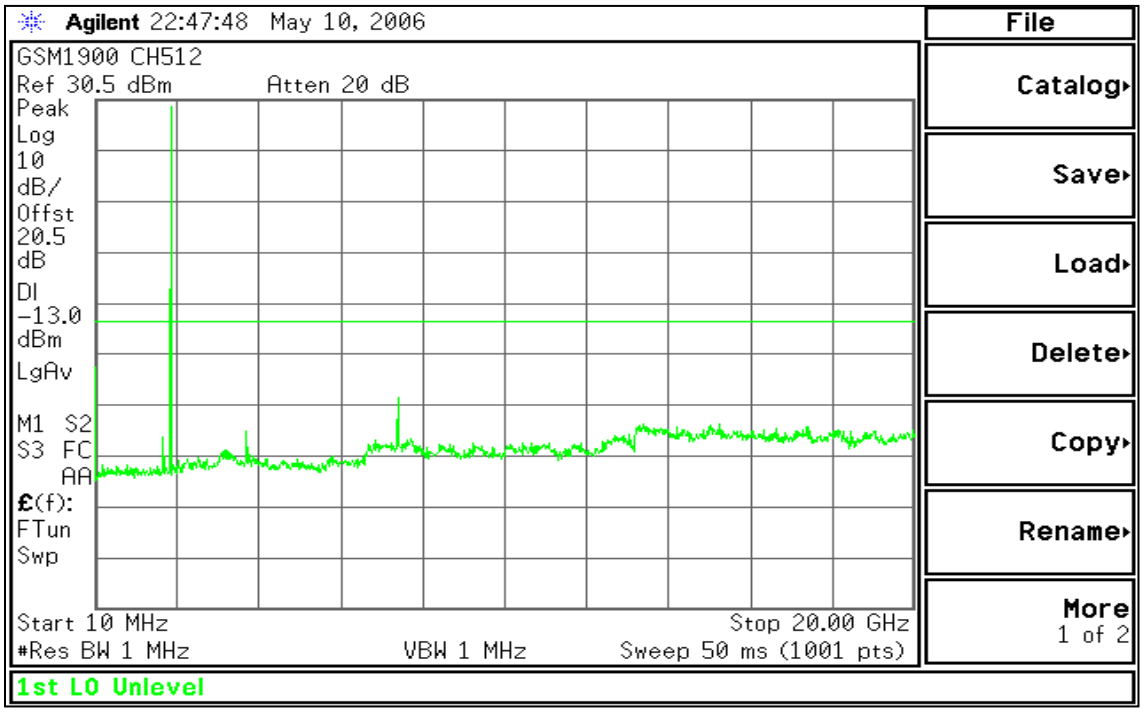
These measurements were done at 3 frequencies, 1850.2 MHz, 1880.0 MHz, 1909.8 MHz. (bottom, middle, and top of operational frequency range) and power control level was set to 0 (Maximum power control level) by using CMU200.

The Resolution BW of the analyzer is set to 1 % of the emission bandwidth to show compliance with the –13dBm limit, in the 1MHz bands immediately outside and adjacent to the edge of the frequency block. For the Out-of-Band measurements a 1 MHz RBW was used to scan from 10 MHz to 20 GHz. A display line was placed at –13 dBm to show compliance.

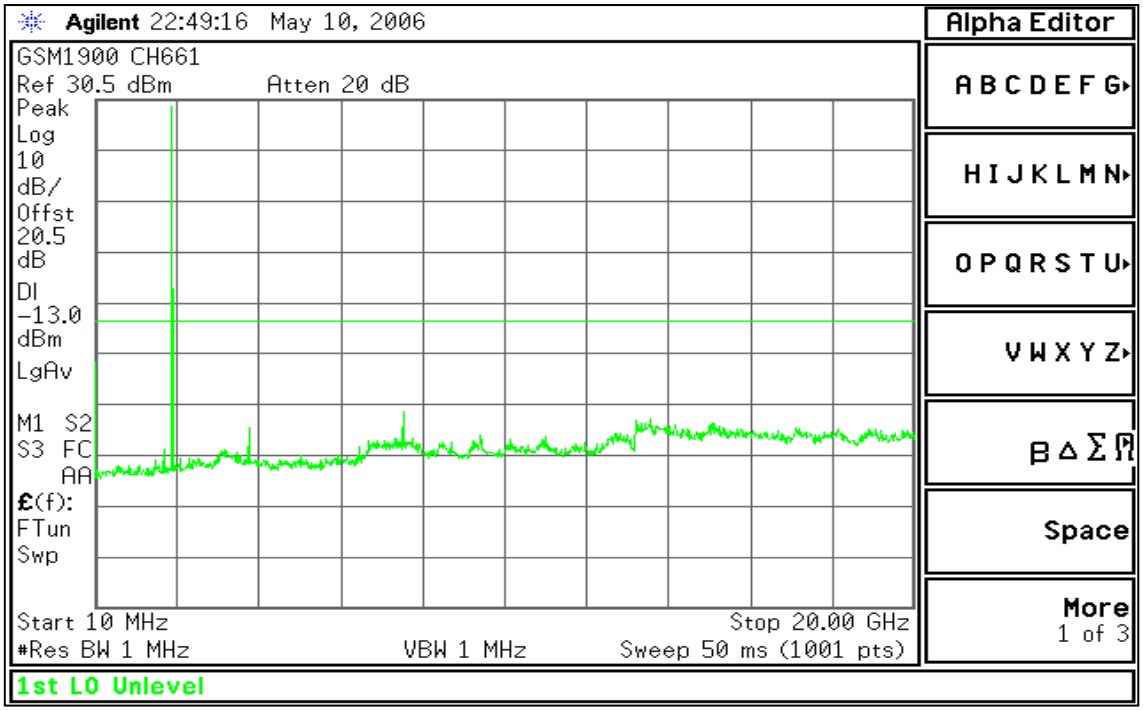
**Limits**

On any frequency outside frequency band, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

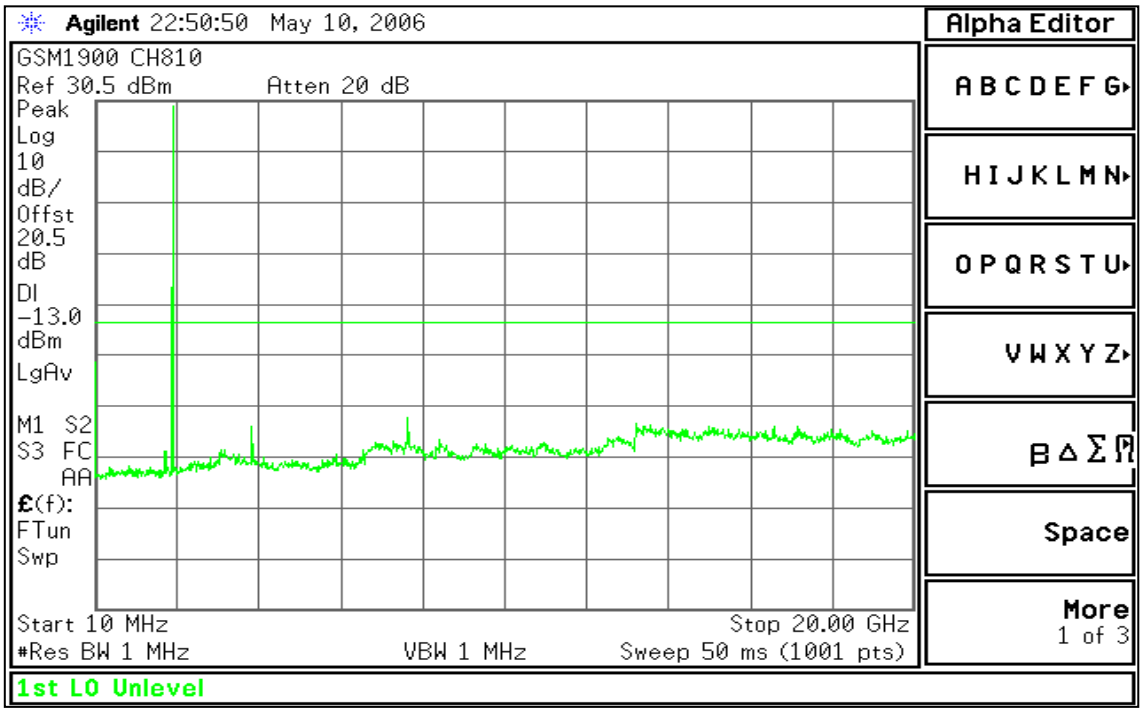
**Measurement Results**



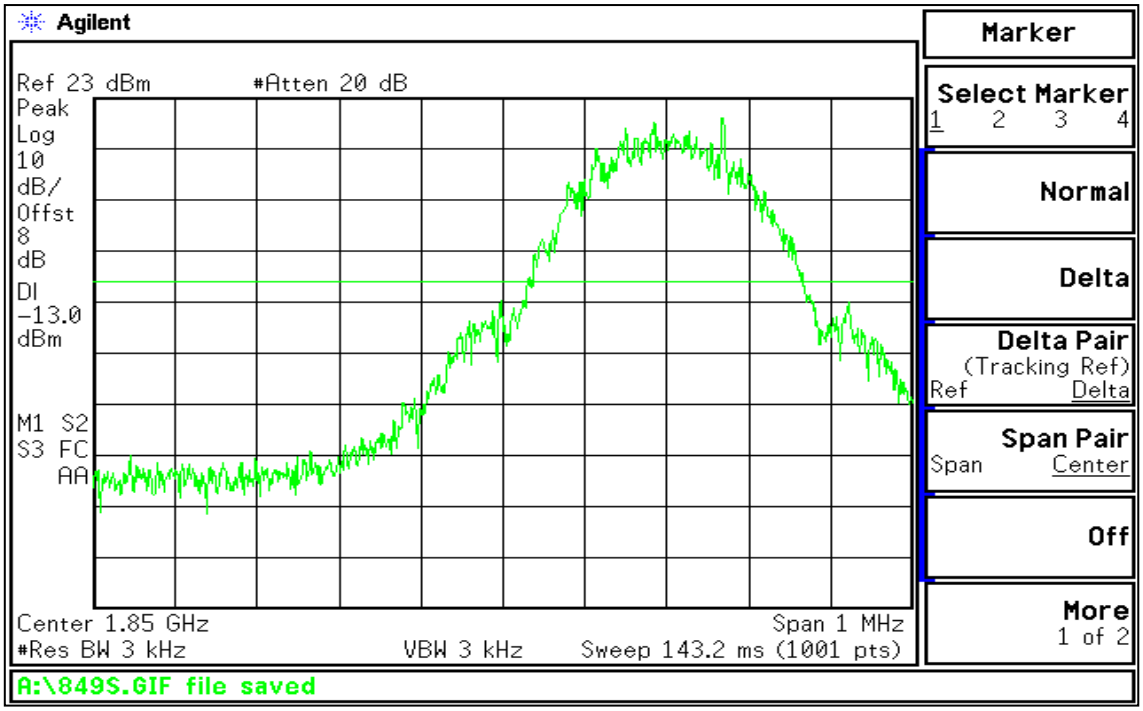

– Operating frequency : 1850.2 MHz (Bottom channel) –



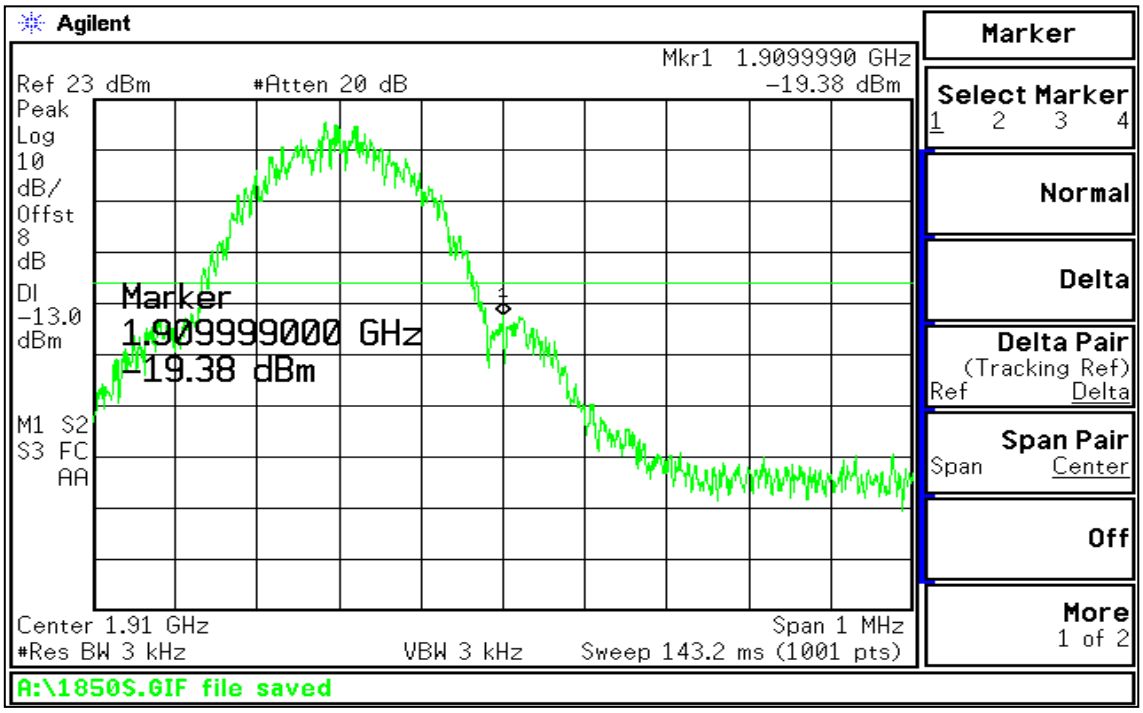

– Operating frequency : 1880.0 MHz (Middle channel) –




– Operating frequency : 1909.8 MHz (Top channel) –




– Lower Band Edge –




– Higher Band Edge –

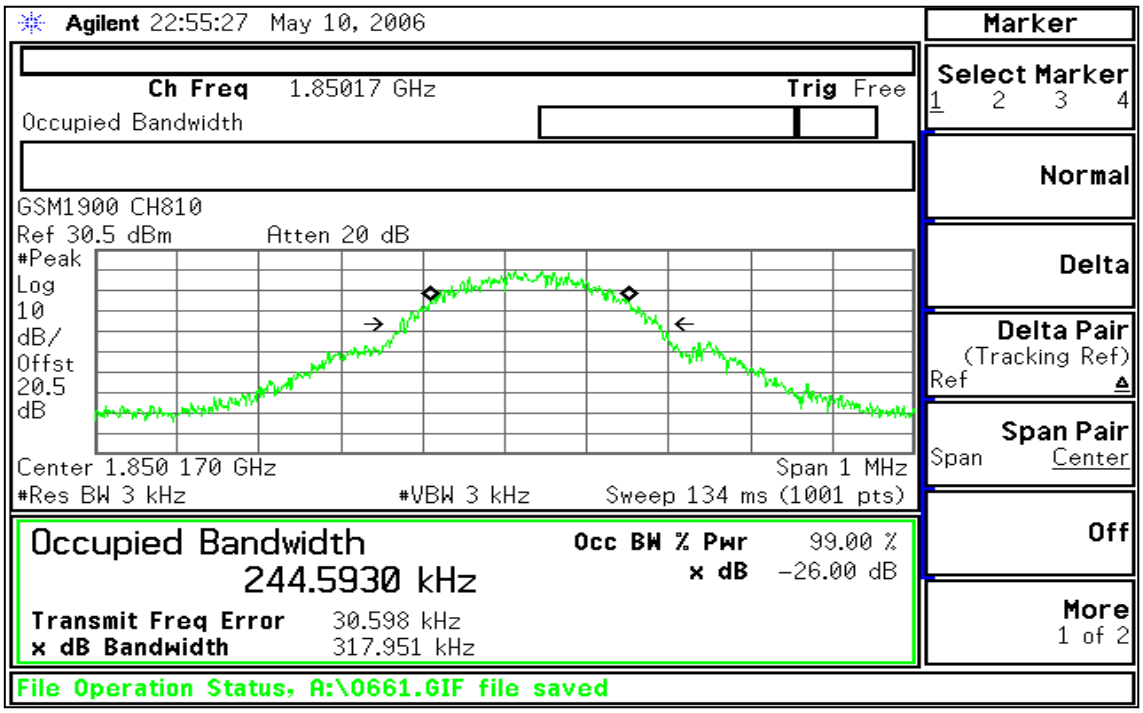
### 5.5 Occupied Bandwidth

#### Measurement procedure

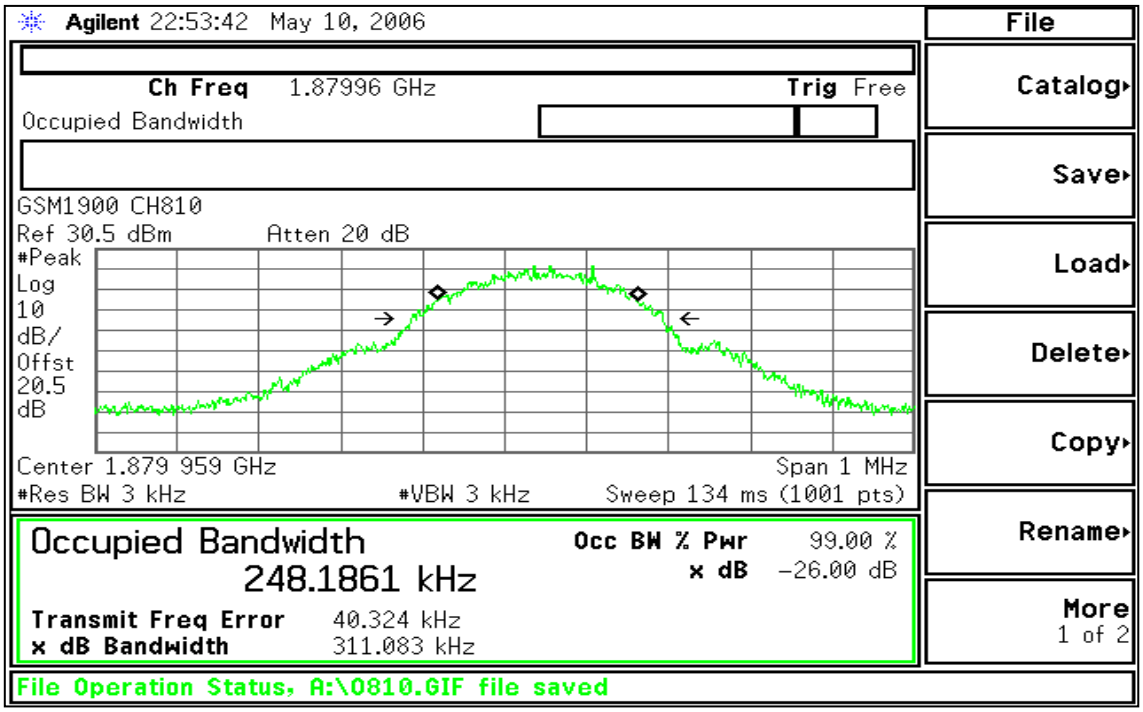
The RF output port of the equipment under test is directly coupled to the input of the Spectrum analyzer through a specialized RF connector. The analyzer is set for Peak Detector and each trace is set for Max Hold. These measurements were done at 3 frequencies, 1850.2 MHz, 1880.0 MHz, 1909.8 MHz. (bottom, middle, and top of operational frequency range)

#### Measurement Results

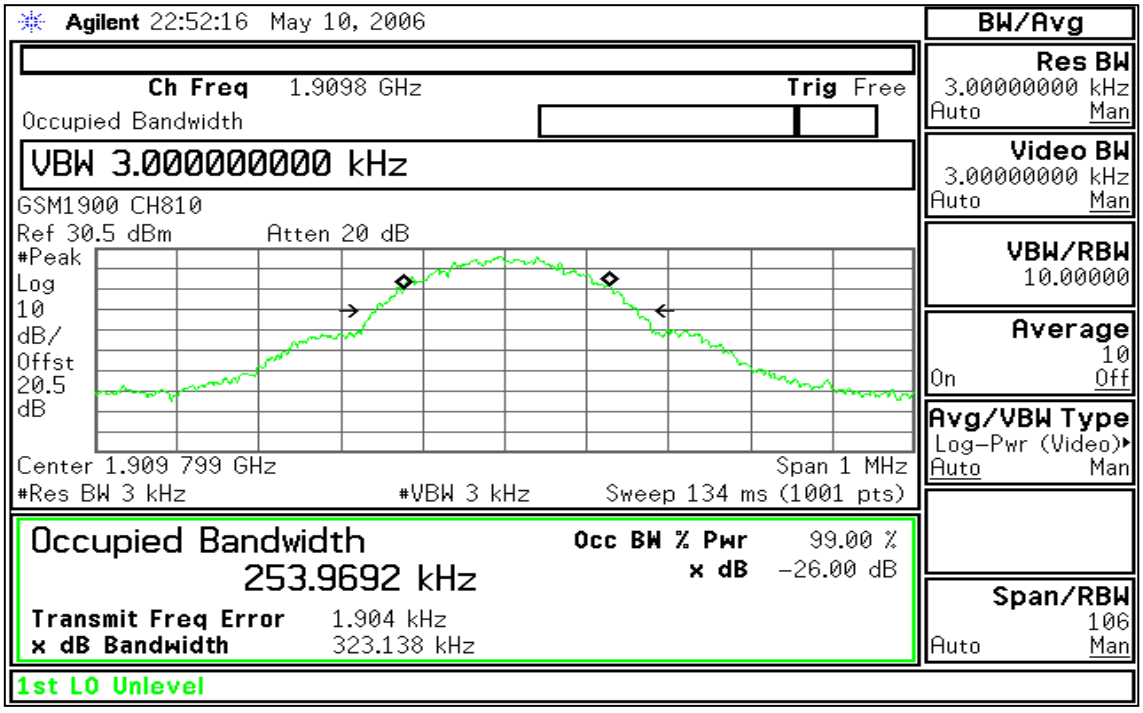
| Frequency (MHz) | 26 dB Occupied Bandwidth |
|---|---|
| 1850.2 | 318.0 KHz |
| 1880.0 | 311.1 KHz |
| 1909.8 | 323.1 KHz |




– Operating frequency : 1850.2 MHz (Bottom channel) –




– Operating frequency : 1880.0 MHz (Middle channel) –




– Operating frequency : 1909.8 MHz (Top channel) –

# 6. TEST EQUIPMENTS

| No. | Equipment | Manufacturer | Model | S/N |
|---|---|---|---|---|
| 1 | Spectrum Analyzer | Agilent | E4407B | US41443316 |
| 2 | Universal Radio Communication tester | R&S | CMU200 | 110019 |
| 3 | DC Power Supply | Agilent | E3645A | MY40000851 |
| 4 | Coaxial Attenuator | TenuLine | 8340-200 | 1087 |
| 5 | Coaxial Attenuator | TenuLine | 8080 | 7676 |
| 6 | Power Divider | HP | 11636A | 6047 |
| 7 | Power Spliter | HP | 11667A | 21063 |
| 8 | RF Attenuator | Lucas Weinschel | 1433-3 | KR785 |
| 9 | RF Attenuator | Lucas Weinschel | F1426 | AZ3615 |
| 10 | Signal Generator | HP | 8648C | 3629U00868 |
| 11 | Pre-Amplifier | HP | 8347A | 2834A00543 |
| 12 | Pre-Amplifier | HP | 8449B | 3008A00302 |
| 13 | Biconical Antenna | R&S | BBA9106 | 1062+1063 |
| 14 | Tuned Dipole Antenna | Schwarzbeck | VHA 9103 | -- |
| 15 | Tuned Dipole Antenna | The Electro-Mechanics comapny | 3121C-D134 | 9011-639 |
| 16 | Biconi-Log Antenna | ETS-Lindgren | 3142B | 00023784 |
| 17 | Double Ridge Wave Guide | ETS-Lindgren | 3115 | 6913 |
| 18 | Double Ridge Wave Guide | ETS-Lindgren | 3116 | 2664 |
| 19 | Log-Periodic Antenna | ETS-Lindgren | 3146 | 5051 |

| No. | Equipment | Manufacturer | Model | S/N |
|---|---|---|---|---|
| 20 | Temp/Humidity Chamber | Korea Power Machine | HI-5050 | HI200420 |
| 21 | High Pass Filter | Wainwright | WHK1.2/15G-10SS | 8 |
| 22 | High Pass Filter | Wainwright | WHK2.0/18G-10SS | 13 |

## Appendix 1. Photograph of the test configuration