Telit wireless solutions

Telit Communications, Inc.
3131 RDU Center Drive
Morrisville, NC 27560, USA

26 June 2013

TUV Rheinland of North America
762 Park Avenue
Youngsville NC 27596
USA

Subject: Authority to use FCC exhibits supplied for FCCID: PGDEF0001

We, Telit Wireless Solutions, 3131 RDU Center Drive, Suite 135, Morrisville, NC 27560, hereby authorize Evado Filip US Ltd., to use our exhibits used for FCC ID: RI7HE910 in support of their application reference FCCID: PGDEF0001 for which TUV Rheinland of North America, 762 Park Ave, Youngsville NC, 27596, USA is the appointed TCB.

Yours sincerely

Brian Tucker

Global VP Quality

Signature

# FCC 47 CFR PART 22H and 24E

| | | |
|---|---|---|
| Product Type | : | 2G/3G Module |
| Applicant | : | Telit Communications S.p.A. |
| Address | : | Via Stazione di Prosecco, 5/B, Sgonico, TS 34010, Italy |
| Trade Name | : | Telit |
| Model Number | : | HE910 |
| Test Specification | : | FCC 47 CFR PART 22H: Oct, 2009<br>FCC 47 CFR PART 24E: Oct, 2009<br>CANADA RSS-132 ISSUE 2: Sep., 2005<br>CANADA RSS-133 ISSUE 5: Feb., 2009<br>Canada RSS-Gen ISSUE 3: Dec., 2010<br>ANSI/TIA-603-C-2004 |
| Receive Date | : | Nov. 30, 2011 |
| Issue Date | : | Feb. 03, 2012 |

**Issue by**

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
Taoyuan County 334, Taiwan R.O.C.
Tel：+886-3-2710188 / Fax：+886-3-2710190

Taiwan Accreditation Foundation accreditation number: 1330

## Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| 00 | Dec. 20, 2011 | Initial Issue | |
| 01 | Jan. 30, 2012 | Revised software version. | Joyce Liao |
| 02 | Feb. 03, 2012 | Add IC standard and RX of field strength of spurious radiation test data | Linda Su |
| | | | |

# Verification of Compliance

Issued Date: 02/03/2012

| | | |
|---|---|---|
| Product Type | : | 2G/3G Module |
| Applicant | : | Telit Communications S.p.A. |
| Address | : | Via Stazione di Prosecco, 5/B, Sgonico, TS 34010, Italy |
| Trade Name | : | Telit |
| Model Number | : | HE910 |
| FCC ID | : | RI7HE910 |
| IC | : | 5131A-HE910 |
| EUT Rated Voltage | : | DC 3.8V |
| Test Voltage | : | DC 3.4 / 3.8 / 4.2V |
| Applicable Standard | : | FCC 47 CFR PART 22H: Oct, 2009<br>FCC 47 CFR PART 24E: Oct, 2009<br>CANADA RSS-132 ISSUE 2: Sep., 2005<br>CANADA RSS-133 ISSUE 5: Feb., 2009<br>Canada RSS-Gen ISSUE 3: Dec., 2010<br>ANSI/TIA-603-C-2004 |
| Test Result | : | Complied |
| Performing Lab. | : | A Test Lab Techno Corp.<br>No. 140-1, Changan Street, Bade City<br>Taoyuan County 334, Taiwan R.O.C.<br>Tel：+886-3-2710188 / Fax：+886-3-2710190<br>Taiwan Accreditation Foundation accreditation number: 1330<br>http://www.atl-lab.com.tw/e-index.htm |

The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2009 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 22H, Part 24E.
The test results of this report relate only to the tested sample identified in this report.

Approved By : _____ Reviewed By : _____

(Manager) (Murphy Wang) (Testing Engineer) (Fly Lu)

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# 1 General Information

## 1.1. EUT Description

| | | | | | |
|---|---|---|---|---|---|
| Applicant | | Telit Communications S.p.A. | | | |
| Applicant Address | | Via Stazione di Prosecco, 5/B, Sgonico, TS 34010, Italy | | | |
| Manufacturer | | Telit Communications S.p.A. | | | |
| Manufacturer Address | | Via Stazione di Prosecco, 5/B, Sgonico, TS 34010, Italy | | | |
| Product Type | | 2G/3G Module | | | |
| Trade Name | | Telit | | | |
| Model Number | | HE910 | | | |
| FCC ID | | RI7HE910 | | | |
| IC | | 5131A-HE910 | | | |
| Hardware Version | | 0 | | | |
| Software Version | | 12.00.002 | | | |
| Mode | GSM/GPRS/ EGPRS | Band | UL Frequency (MHz) | DL Frequency (MHz) | Modulation |
| | | 850 | 824.2 ~ 848.8 | 869.2 ~ 893.8 | GMSK/8PSK |
| | | 1900 | 1850.2 ~ 1909.8 | 1930.2 ~ 1989.8 | GMSK/8PSK |
| | WCDMA | Band | UL Frequency (MHz) | DL Frequency (MHz) | Modulation |
| | | II | 1852.4 ~ 1907.6 | 1932.4 ~ 1987.6 | QPSK |
| | | V | 826.4 ~ 846.6 | 871.4 ~ 891.6 | QPSK |
| Channel Control | | Auto | | | |
| Max. RF Output power | | GSM/GPRS 850: 33.00 dBm / 1.995 W, EGPRS 850: 29.90 dBm / 0.977 W<br>GSM/GPRS 1900: 29.90 dBm / 0.977 W, EGPRS 1900: 28.60 dBm / 0.724 W<br>WCDMA Band II: 26.39 dBm / 0.436 W<br>WCDMA Band V: 26.63 dBm / 0.460 W | | | |
| Max. ERP/EIRP | | GSM/GPRS 850: 25.87 dBm / 0.386 W, EGPRS 850: 25.58 dBm / 0.361 W<br>GSM/GPRS 1900: 25.34 dBm / 0.342 W, EGPRS 1900: 23.14 dBm / 0.206 W<br>WCDMA Band II: 21.95 dBm / 0.157 W<br>WCDMA Band V: 17.71 dBm / 0.059 W | | | |
| Emission Designator | | GSM/GPRS 850: 240KGXW, EGPRS 850: 248KG7W<br>GSM/GPRS 1900: 241KGXW, EGPRS 1900: 252KG7W<br>WCDMA Band II: 4M10F9W<br>WCDMA Band V: 4M08F9W | | | |

## 1.2. Mode of Operation

ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

| Test Mode |
|---|
| Mode 1: GSM 850 Link |
| Mode 2: GSM 1900 Link |
| Mode 3: WCDMA Band II Link |
| Mode 4: WCDMA Band V Link |
| Mode 5: EGPRS 850 Link |
| Mode 6: EGPRS 1900 Link |
| Mode 7: Receive Mode |

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

**Tested System Details**

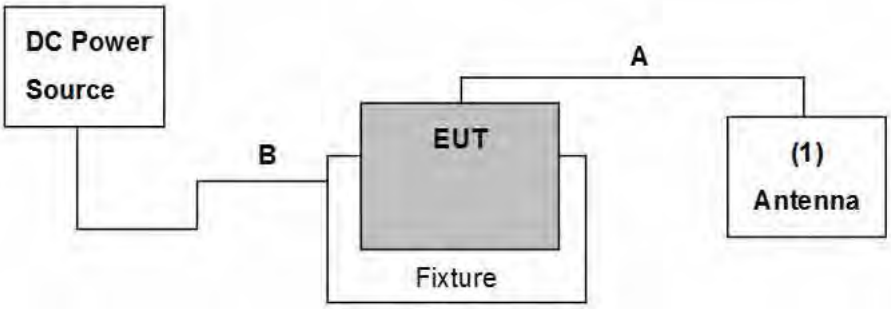
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

| | Product | Manufacturer | Model Number | Serial Number | Power Cord |
|---|---|---|---|---|---|
| 1. | Universal Radio Communication Tester | R&S | CMU200 | 109369 | N/A |

## 1.3. EUT Exercise Software

| | |
|---|---|
| 1. | Setup the EUT and Base Station (CMU200) as shown on 1.4. |
| 2. | Turn on the power of all equipment. |

## 1.4. Configuration of Test System Details




| Signal Cable Type | | Signal Cable Description |
|---|---|---|
| A | Signal Cable | Non-Shielded, 1.8m |
| B | DC Power Cable | Non-Shielded, 1.3m |

| Devices Description | | | | | |
|---|---|---|---|---|---|
| Product | | Manufacturer | Model Number | Serial Number | Power Cord |
| 1. | Antenna (Max Gain: 2.14 dBi) | Tel Cab | T-AT314 | N/A | N/A |

## 1.5. Test Site Environment

| Items | Required (IEC 68-1) | Actual |
|---|---|---|
| Temperature (°C) | 15-35 | 26 |
| Humidity (%RH) | 25-75 | 60 |
| Barometric pressure (mbar) | 860-1060 | 950 |

## 1.6. Summary of Test Result

| Description | FCC Rule | IC Rule | Limit | Result |
|---|---|---|---|---|
| Conducted Output Power | §2.1046 | N/A | N/A | Pass |
| Effective Radiated Power | §22.913(a)(2) | RSS-132(4.4)<br>SRSP-503(5.1.3) | < 7 Watts for FCC<br>(<6.3 Watts for IC) | Pass |
| Equivalent Isotropic Radiated Power | §24.232(c) | RSS-133 (6.4)<br>SRSP-510(5.1.2) | < 2 Watts | Pass |
| Occupied Bandwidth | §2.1049<br>§22.917(a)<br>§24.238(a) | RSS-Gen (4.6.1) | N/A | Pass |
| Band Edge Measurement | §2.1051<br>§22.917(a)<br>§24.238(a) | RSS-132<br>(4.5.1)RSS-133<br>(6.5.1) | < $43+10\log_{10}$(P[Watts]) | Pass |
| Conducted Emission | §2.1051<br>§22.917(a)<br>§24.238(a) | RSS-132 (4.5.1)<br>RSS-133 (6.5.1) | < $43+10\log_{10}$(P[Watts]) | Pass |
| Field Strength of Spurious Radiation | §2.1053<br>§22.917(a)<br>§24.238(a) | RSS-132 (4.5.1)<br>RSS-133 (6.5.1)<br>RSS-Gen (4.10) | < $43+10\log_{10}$(P[Watts]) | Pass |
| Frequency Stability for Temperature & Voltage | §2.1055<br>§22.355<br>§24.235 | RSS-132(4.3)<br>RSS-133(6.3) | < 2.5 ppm | Pass |

# 2 RF Output Power Test

## 2.1. Limit

N/A

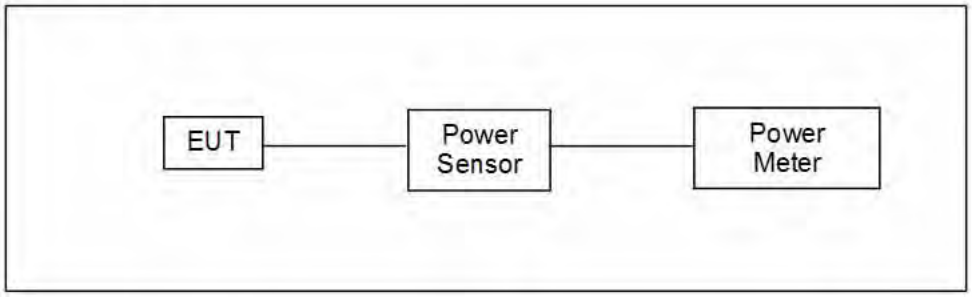
## 2.2. Test Instruments

| Describe | Manufacturer | Model No. | Serial No. | Cal. Date | Remark |
|---|---|---|---|---|---|
| Universal Radio Communication Tester | ROHDE & SCHWARZ | CMU200 | 109369 | 08/10/2010 | (2) |
| Single Channel PK Power Sensor | Agilent | N1911A | MY45101619 | 07/19/2010 | (2) |
| Wideband Power Meter | Agilent | N1921A | MY45241957 | 07/19/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

## 2.3. Test Setup




## 2.4. Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

1. The transmitter output was connected to power meter and base station through power divider.
2. Set base station for EUT at GSM 850: PCL=5 and PCS 1900: PCL=0.
3. Set base station for EUT at WCDMA Band V and WCDMA Band II, power level was set to maximum.
4. Select lowest, middle, and highest channels for each band.

## 2.5. Uncertainty

The measurement uncertainty is defined as for RF output power measurement is 1.2 dB.

## 2.6. Test Result

| Model Number | HE910 | | | | | |
|---|---|---|---|---|---|---|
| Test Item | RF Output Power | | | | | |
| Date of Test | 12/01/2011 | | | Test Site | TE02 | |
| Bands | Data Rate | Frequency (MHz) | Burst Average Power | | Peak Power | |
| | | | (dBm) | (W) | (dBm) | (W) |
| GSM 850 | ----- | 824.2 | 32.50 | 1.778 | 32.70 | 1.862 |
| | | 836.4 | 32.40 | 1.738 | 32.60 | 1.820 |
| | | 848.8 | 32.40 | 1.738 | 32.60 | 1.820 |
| GRRS 850 | 4Down1Up | 824.2 | 32.80 | 1.905 | **33.00** | **1.995** |
| | | 836.4 | 32.70 | 1.862 | 32.90 | 1.950 |
| | | 848.8 | 32.70 | 1.862 | 32.90 | 1.950 |
| | 3Down2Up | 824.2 | 32.20 | 1.660 | 32.40 | 1.738 |
| | | 836.4 | 32.20 | 1.660 | 32.40 | 1.738 |
| | | 848.8 | 32.30 | 1.698 | 32.40 | 1.738 |
| | 2Down3Up | 824.2 | 31.70 | 1.479 | 31.90 | 1.549 |
| | | 836.4 | 31.70 | 1.479 | 31.80 | 1.514 |
| | | 848.8 | 31.70 | 1.479 | 31.90 | 1.549 |
| | 1Down4Up | 824.2 | 30.60 | 1.148 | 30.80 | 1.202 |
| | | 836.4 | 30.60 | 1.148 | 30.70 | 1.175 |
| | | 848.8 | 30.60 | 1.148 | 30.80 | 1.202 |
| EGPRS 850 | 4Down1Up | 824.2 | 27.40 | 0.550 | **29.90** | **0.977** |
| | | 836.4 | 27.20 | 0.525 | 29.80 | 0.955 |
| | | 848.8 | 27.20 | 0.525 | 29.80 | 0.955 |
| | 3Down2Up | 824.2 | 26.90 | 0.490 | 29.50 | 0.891 |
| | | 836.4 | 26.90 | 0.490 | 29.70 | 0.933 |
| | | 848.8 | 26.90 | 0.490 | 29.70 | 0.933 |
| | 2Down3Up | 824.2 | 26.00 | 0.398 | 28.90 | 0.776 |
| | | 836.4 | 26.10 | 0.407 | 28.90 | 0.776 |
| | | 848.8 | 26.20 | 0.417 | 29.00 | 0.794 |
| | 1Down4Up | 824.2 | 25.40 | 0.347 | 28.40 | 0.692 |
| | | 836.4 | 25.40 | 0.347 | 28.40 | 0.692 |
| | | 848.8 | 25.50 | 0.355 | 28.50 | 0.708 |

Note: The peak power testing result was used peak detector.

| Model Number | HE910 | | | | | |
|---|---|---|---|---|---|---|
| Test Item | RF Output Power | | | | | |
| Date of Test | 12/01/2011 | | | Test Site | TE02 | |
| Bands | Data Rate | Frequency (MHz) | Burst Average Power | | Peak Power | |
| | | | (dBm) | (W) | (dBm) | (W) |
| GSM 1900 | ----- | 1850.20 | 29.50 | 0.891 | 29.70 | 0.933 |
| | | 1880.00 | 29.40 | 0.871 | 29.60 | 0.912 |
| | | 1909.80 | 29.20 | 0.832 | 29.30 | 0.851 |
| GRRS 1900 | 4Down1Up | 1850.20 | 29.70 | 0.933 | **29.90** | **0.977** |
| | | 1880.00 | 29.60 | 0.912 | 29.80 | 0.955 |
| | | 1909.80 | 29.30 | 0.851 | 29.50 | 0.891 |
| | 3Down2Up | 1850.20 | 29.20 | 0.832 | 29.40 | 0.871 |
| | | 1880.00 | 29.20 | 0.832 | 29.40 | 0.871 |
| | | 1909.80 | 29.00 | 0.794 | 29.20 | 0.832 |
| | 2Down3Up | 1850.20 | 28.80 | 0.759 | 29.00 | 0.794 |
| | | 1880.00 | 28.60 | 0.724 | 28.80 | 0.759 |
| | | 1909.80 | 28.40 | 0.692 | 28.60 | 0.724 |
| | 1Down4Up | 1850.20 | 27.70 | 0.589 | 27.80 | 0.603 |
| | | 1880.00 | 27.40 | 0.550 | 27.50 | 0.562 |
| | | 1909.80 | 27.20 | 0.525 | 27.30 | 0.537 |
| EGPRS 1900 | 4Down1Up | 1850.20 | 25.80 | 0.380 | **28.60** | **0.724** |
| | | 1880.00 | 25.60 | 0.363 | 28.40 | 0.692 |
| | | 1909.80 | 25.40 | 0.347 | 28.30 | 0.676 |
| | 3Down2Up | 1850.20 | 25.60 | 0.363 | 28.40 | 0.692 |
| | | 1880.00 | 25.40 | 0.347 | 28.10 | 0.646 |
| | | 1909.80 | 25.20 | 0.331 | 28.10 | 0.646 |
| | 2Down3Up | 1850.20 | 25.00 | 0.316 | 27.50 | 0.562 |
| | | 1880.00 | 24.70 | 0.295 | 27.40 | 0.550 |
| | | 1909.80 | 24.50 | 0.282 | 27.20 | 0.525 |
| | 1Down4Up | 1850.20 | 24.40 | 0.275 | 27.20 | 0.525 |
| | | 1880.00 | 24.30 | 0.269 | 27.00 | 0.501 |
| | | 1909.80 | 24.10 | 0.257 | 27.00 | 0.501 |

| Model Number | HE910 | | | | | |
|---|---|---|---|---|---|---|
| Test Item | RF Output Power | | | | | |
| Date of Test | 12/01/2011 | | | Test Site | TE02 | |
| Bands | Sub-Test | Frequency (MHz) | Burst Average Power | | Peak Power | |
| | | | (dBm) | (W) | (dBm) | (W) |
| WCDMA Band II | ----- | 1852.4 | 23.85 | 0.243 | **26.39** | **0.436** |
| | | 1880.0 | 23.57 | 0.228 | 25.93 | 0.392 |
| | | 1907.6 | 23.49 | 0.223 | 25.59 | 0.362 |
| WCDMA Band V | ----- | 826.4 | 23.82 | 0.241 | **26.63** | **0.460** |
| | | 836.4 | 23.70 | 0.234 | 26.43 | 0.440 |
| | | 846.4 | 23.61 | 0.230 | 26.47 | 0.444 |

Note: The peak power testing result was used peak detector.

# 3 Effective Radiated Power / Equivalent Isotropic Radiated Power Test

## 3.1. Limit

For FCC Part 22.913(a)(2): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b): The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

## 3.2. Test Instruments

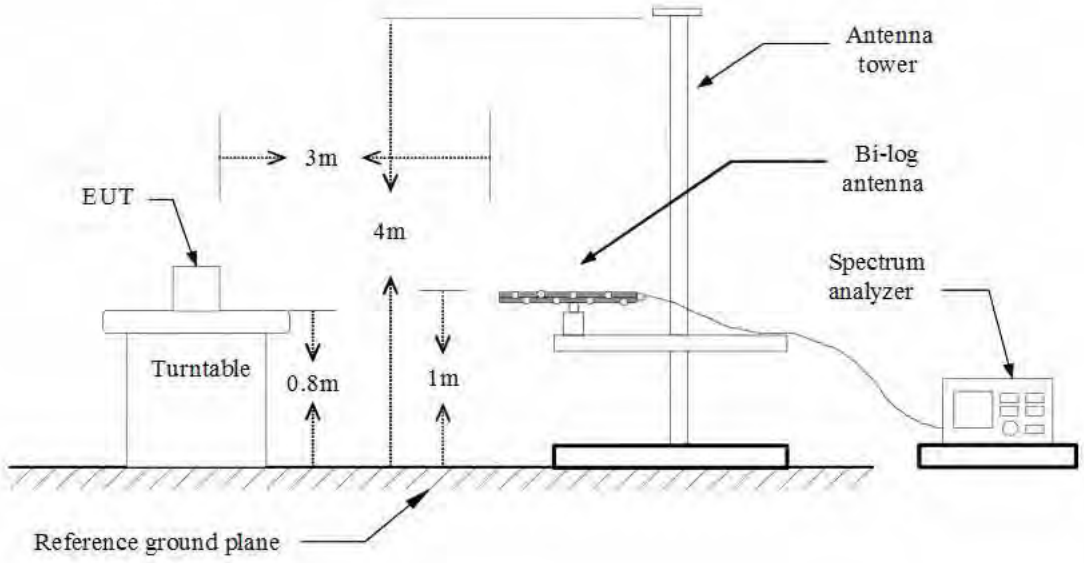
| 3 Meter Chamber | | | | | |
|---|---|---|---|---|---|
| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
| RF Pre-selector | Agilent | N9039A | MY46520256 | 01/18/2011 | (2) |
| Spectrum Analyzer | Agilent | E4446A | MY46180578 | 01/18/2011 | (1) |
| Pre Amplifier | Agilent | 8449B | 3008A02237 | 02/23/2011 | (1) |
| Pre Amplifier | Agilent | 8447D | 2944A10961 | 02/23/2011 | (1) |
| Broadband Antenna (30MHz~1GHz) | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | 9163-270 | 07/29/2011 | (1) |
| Horn Antenna (1~18GHz) | SCHWARZBECK MESS-ELEKTRONIK | BBHA9120D | 9120D-550 | 06/29/2011 | (1) |
| Horn Antenna (18~40GHz) | SCHWARZBECK MESS-ELEKTRONIK | BBHA9170 | 9170-320 | 06/28/2011 | (1) |
| Test Site | ATL | TE01 | 888001 | 12/24/2010 | (1) |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

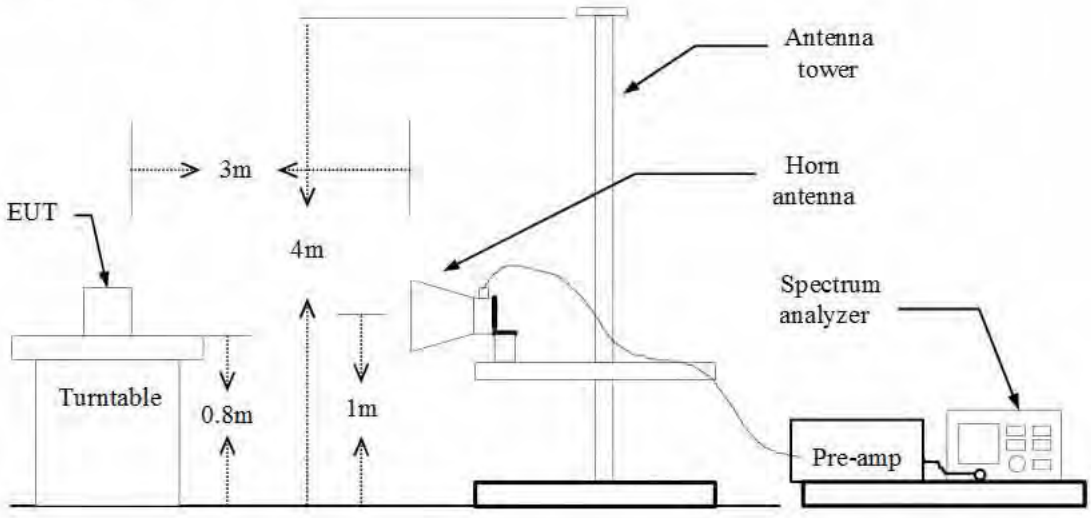
NOTE: N.C.R. = No Calibration Request.

## 3.3. Setup

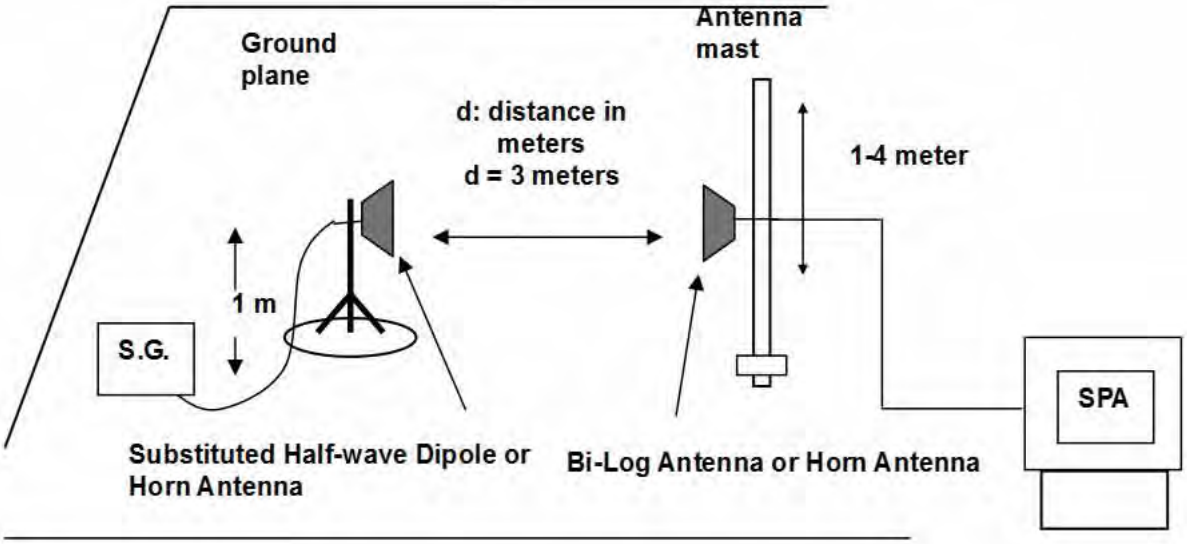
### Below 1 GHz




### Above 1 GHz



**For Substituted Method Test Set-UP**




## 3.4. Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

The EUT was placed on an 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 of the EUT, the resolution bandwidth was set to 3MHz and the average bandwidth was set to 3MHz. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824-849MHz, and EIRP in frequency band 1851.25 –1910MHz were measured using a substitution method. The EUT was replaced by half-wave dipole (824-849MHz) or horn antenna (1851.25-1910MHz) connected to a signal generator. The spectrum analyzer reading was recorded and ERP/EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)

## 3.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

## 3.6. Test Result

| Model Number | HE910 | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Item | ERP/EIRP | | | | | | |
| Test Mode | Mode 1: GSM 850 Link | | | | | | |
| Date of Test | 12/06/2011 | | | | Test Site | TE01 | |
| Bands | Frequency (MHz) | Ant. Polar. | Read Level (dBm) | Correction factor (dBm) | ERP | | Limit |
| | | | | | (dBm) | (W) | |
| GSM 850 | 824.2 | H | 13.91 | 11.96 | **25.87** | **0.386** | < 7W |
| | | V | 9.30 | 11.29 | 20.59 | 0.115 | < 7W |
| | 836.4 | H | 13.27 | 12.07 | 25.34 | 0.342 | < 7W |
| | | V | 9.67 | 11.34 | 21.01 | 0.126 | < 7W |
| | 848.8 | H | 11.85 | 12.50 | 24.35 | 0.272 | < 7W |
| | | V | 9.65 | 11.47 | 21.12 | 0.129 | < 7W |
| EGPRS 850 | 824.2 | H | 13.63 | 11.95 | **25.58** | **0.361** | < 7W |
| | | V | 9.26 | 11.29 | 20.55 | 0.114 | < 7W |
| | 836.4 | H | 13.07 | 12.07 | 25.14 | 0.327 | < 7W |
| | | V | 9.60 | 11.34 | 20.94 | 0.124 | < 7W |
| | 848.8 | H | 11.65 | 12.51 | 24.16 | 0.261 | < 7W |
| | | V | 9.50 | 11.47 | 20.97 | 0.125 | < 7W |

| Model Number | HE910 | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Item | ERP/EIRP | | | | | | |
| Test Mode | Mode 2: GSM 1900 Link | | | | | | |
| Date of Test | 12/06/2011 | | | | Test Site | TE01 | |
| Bands | Frequency (MHz) | Ant. Polar. | Read Level (dBm) | Correction factor (dBm) | EIRP | | Limit |
| | | | | | (dBm) | (W) | |
| GSM 1900 | 1850.20 | H | 11.54 | 10.49 | 22.03 | 0.160 | < 2W |
| | | V | 16.14 | 8.33 | 24.47 | 0.280 | < 2W |
| | 1880.00 | H | 10.33 | 10.51 | 20.84 | 0.121 | < 2W |
| | | V | 16.36 | 8.57 | 24.93 | 0.311 | < 2W |
| | 1909.80 | H | 9.39 | 10.51 | 19.90 | 0.098 | < 2W |
| | | V | 16.53 | 8.81 | **25.34** | **0.342** | < 2W |
| EGPRS 1900 | 1850.20 | H | 8.18 | 10.49 | 18.67 | 0.074 | < 2W |
| | | V | 13.56 | 8.33 | 21.89 | 0.155 | < 2W |
| | 1880.00 | H | 6.90 | 10.51 | 17.41 | 0.055 | < 2W |
| | | V | 13.88 | 8.57 | 22.45 | 0.176 | < 2W |
| | 1909.80 | H | 5.89 | 10.52 | 16.41 | 0.044 | < 2W |
| | | V | 14.33 | 8.81 | **23.14** | **0.206** | < 2W |

Note: 1. ERP/EIRP = Read Level + Correction factor.

2. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.

3. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

| Model Number | HE910 | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Item | ERP/EIRP | | | | | | |
| Test Mode | Mode 3: WCDMA Band II Link | | | | | | |
| Date of Test | 12/06/2011 | | | Test Site | TE01 | | |
| Bands | Frequency (MHz) | Ant. Polar. | Read Level (dBm) | Correction factor (dBm) | EIRP | | Limit |
| | | | | | (dBm) | (W) | |
| WCDMA Band II | 1852.4 | H | 6.91 | 10.50 | 17.41 | 0.055 | < 2W |
| | | V | 13.59 | 8.36 | **21.95** | **0.157** | < 2W |
| | 1880.0 | H | 5.42 | 10.51 | 15.93 | 0.039 | < 2W |
| | | V | 12.59 | 8.57 | 21.16 | 0.131 | < 2W |
| | 1907.6 | H | 4.60 | 10.52 | 15.12 | 0.033 | < 2W |
| | | V | 12.87 | 8.80 | 21.67 | 0.147 | < 2W |

| Model Number | HE910 | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Item | ERP/EIRP | | | | | | |
| Test Mode | Mode 4: WCDMA Band V Link | | | | | | |
| Date of Test | 12/06/2011 | | | Test Site | TE01 | | |
| Bands | Frequency (MHz) | Ant. Polar. | Read Level (dBm) | Correction factor (dBm) | ERP | | Limit |
| | | | | | (dBm) | (W) | |
| WCDMA Band V | 826.4 | H | 5.74 | 11.97 | **17.71** | **0.059** | < 7W |
| | | V | 1.26 | 11.30 | 12.56 | 0.018 | < 7W |
| | 836.4 | H | 5.42 | 12.07 | 17.49 | 0.056 | < 7W |
| | | V | 1.94 | 11.34 | 13.28 | 0.021 | < 7W |
| | 846.4 | H | 4.58 | 12.36 | 16.94 | 0.049 | < 7W |
| | | V | 1.98 | 11.42 | 13.40 | 0.022 | < 7W |

Note: 1. ERP/EIRP = Read Level + Correction factor.

2. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.

3. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

# 4 Occupied Bandwidth Test

## 4.1. Limit

**The Occupied Bandwidth Limit:**

N/A.

**The Band Edge Limit:**

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

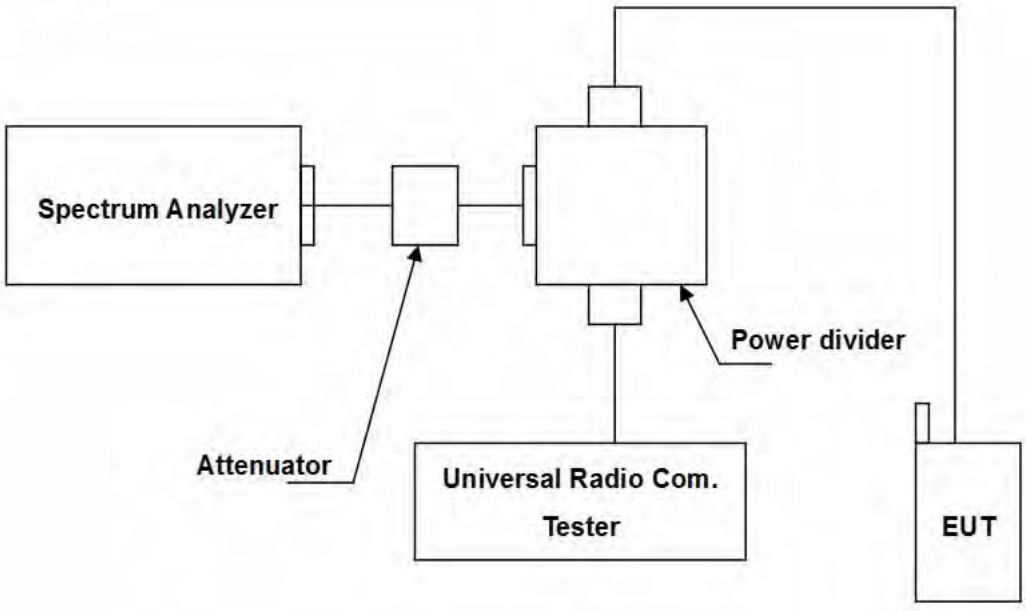
## 4.2. Test Instruments

| Describe | Manufacturer | Model No. | Serial No. | Cal. Date | Remark |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | E4445A | MY46181986 | 05/16/2011 | (2) |
| Universal Radio Communication Tester | ROHDE & SCHWARZ | CMU200 | 109369 | 08/10/2010 | (2) |
| Attenuator | RADIALL | R41572000 | 0603033073 | N.C.R. | ----- |
| Power divider | Agilent | 87302C | 3239A00760 | N.C.R. | ----- |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

## 4.3. Setup



## 4.4. Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.
3. The band edge of low and high channels for the highest RF powers within the transmitting frequency band were measured. Setting RBW as roughly BW/100.
4. The band edge setting:
   a. RB=10 kHz; VB=30 kHz for GSM 850 and PCS 1900.
   b. RB=100 kHz; VB=300 kHz for WCDMA Band V and WCDMA Band II.

## 4.5. Uncertainty

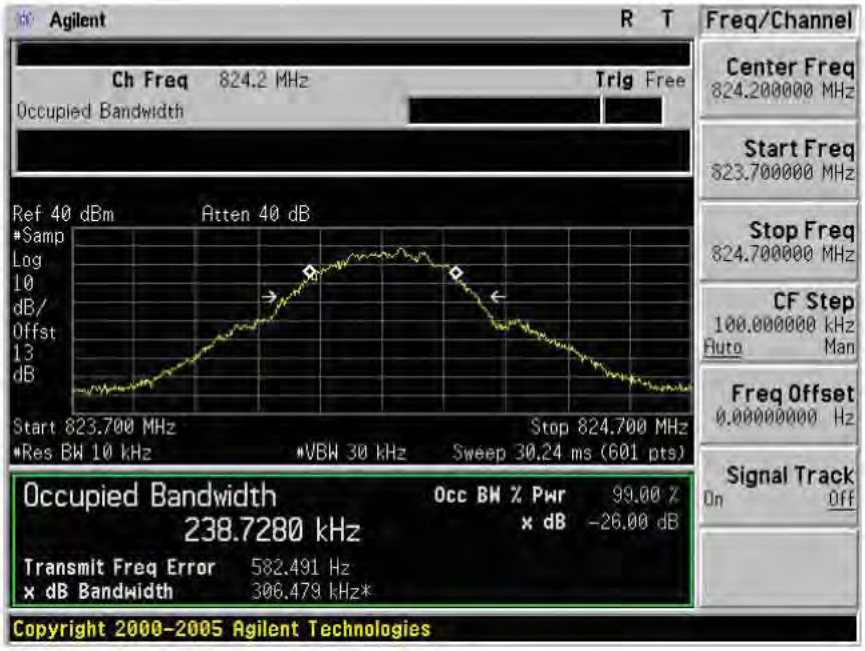
The measurement uncertainty is defined as ± 10Hz

## 4.6. Test Result

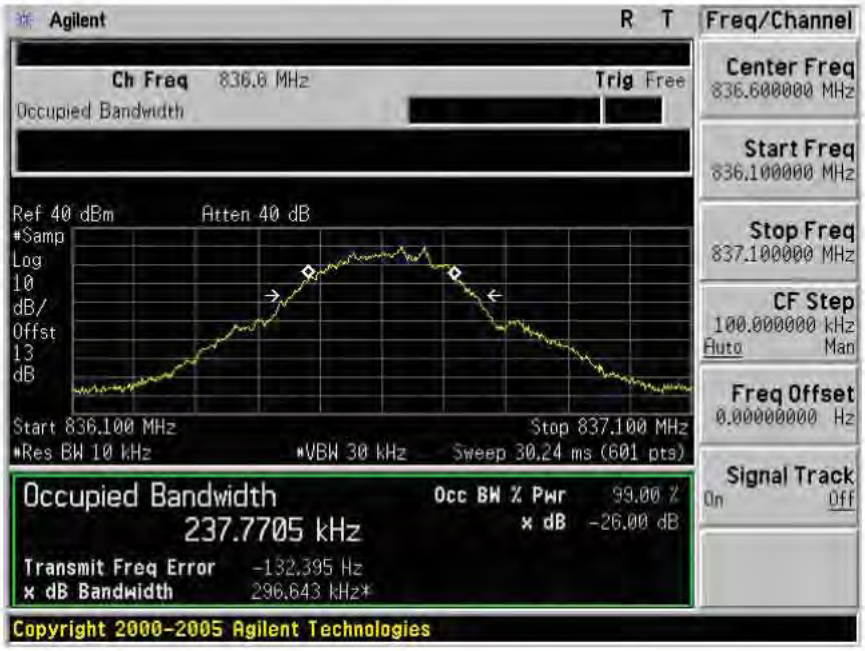
### 99% Occupied Bandwidth

| Model Number | HE910 | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: GSM 850 Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |
| Channel No. | Frequency (MHz) | 99% Bandwidth (kHz) | Note |
| 128 | 824.2 | 238.7280 | RBW:10KHz , VBW:30KHz |
| 190 | 836.4 | 237.7705 | RBW:10KHz , VBW:30KHz |
| 251 | 848.8 | 240.1195 | RBW:10KHz , VBW:30KHz |

Channel 128



Channel 190

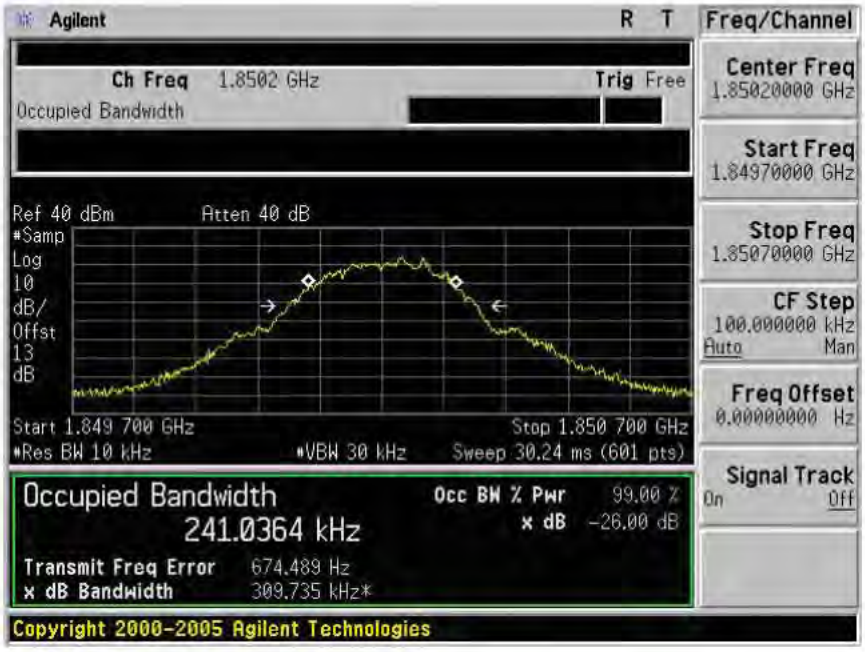



Channel 251

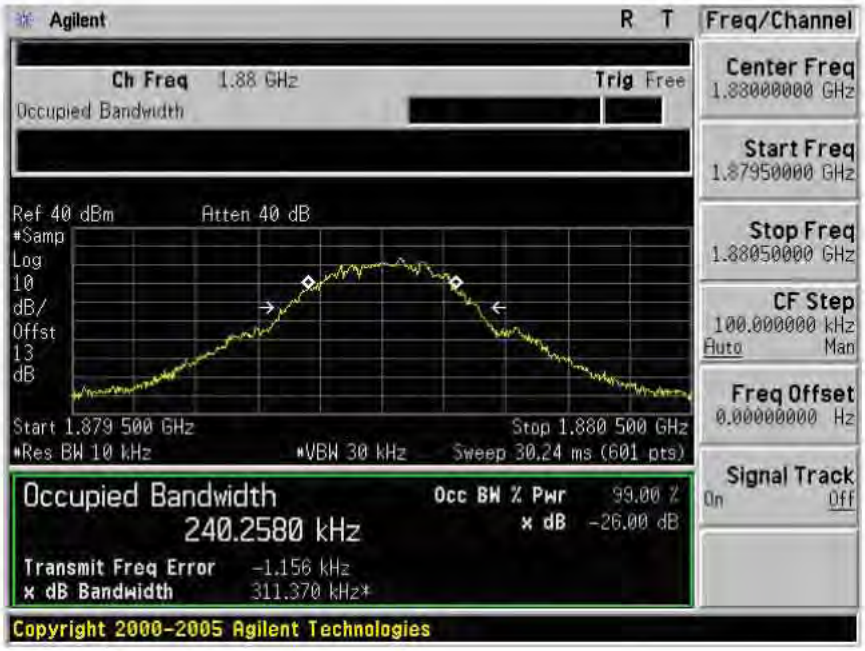
| Model Number | HE910 | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 2: GSM 1900 Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |

| Channel No. | Frequency (MHz) | 99% Bandwidth (kHz) | Note |
|---|---|---|---|
| 512 | 1850.20 | 241.0364 | RBW:10KHz , VBW:30KHz |
| 661 | 1880.00 | 240.2580 | RBW:10KHz , VBW:30KHz |
| 810 | 1909.80 | 240.3112 | RBW:10KHz , VBW:30KHz |

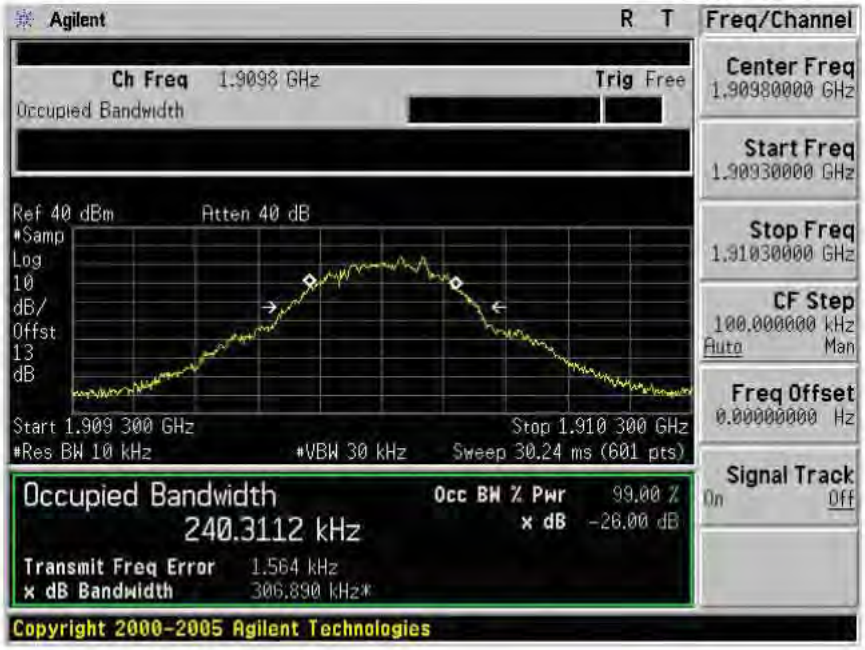
Channel 512



Channel 661



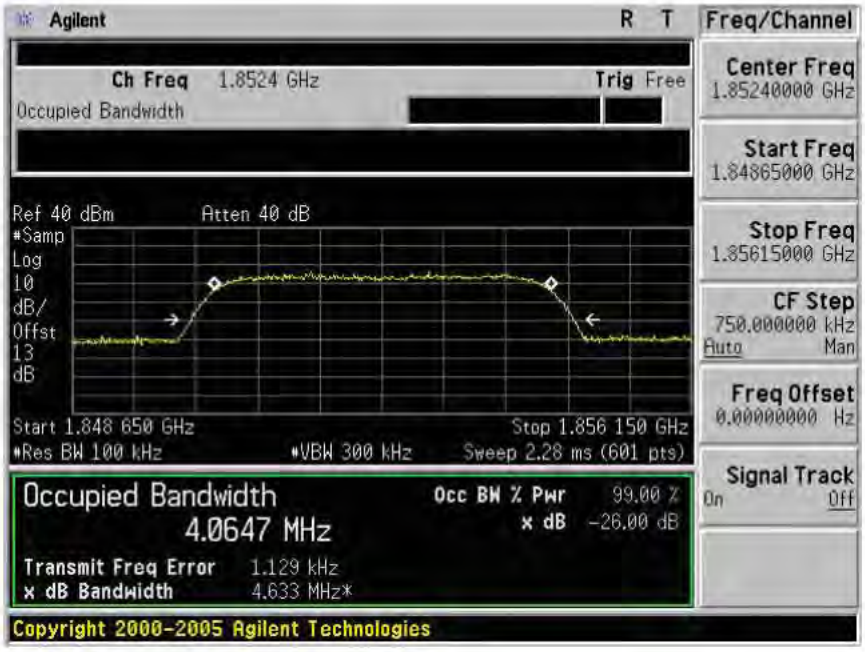

Channel 810



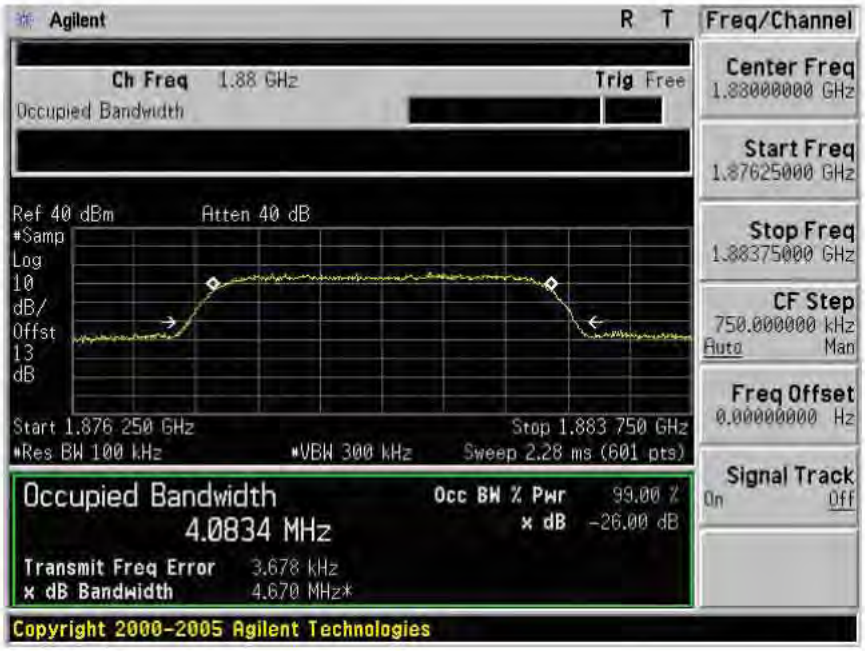
| Model Number | HE910 | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 3: WCDMA Band II Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |

| Channel No. | Frequency (MHz) | 99% Bandwidth (MHz) | Note |
|---|---|---|---|
| 9262 | 1852.4 | 4.0647 | RBW:100KHz , VBW:300KHz |
| 9400 | 1880.0 | 4.0834 | RBW:100KHz , VBW:300KHz |
| 9538 | 1907.6 | 4.0964 | RBW:100KHz , VBW:300KHz |

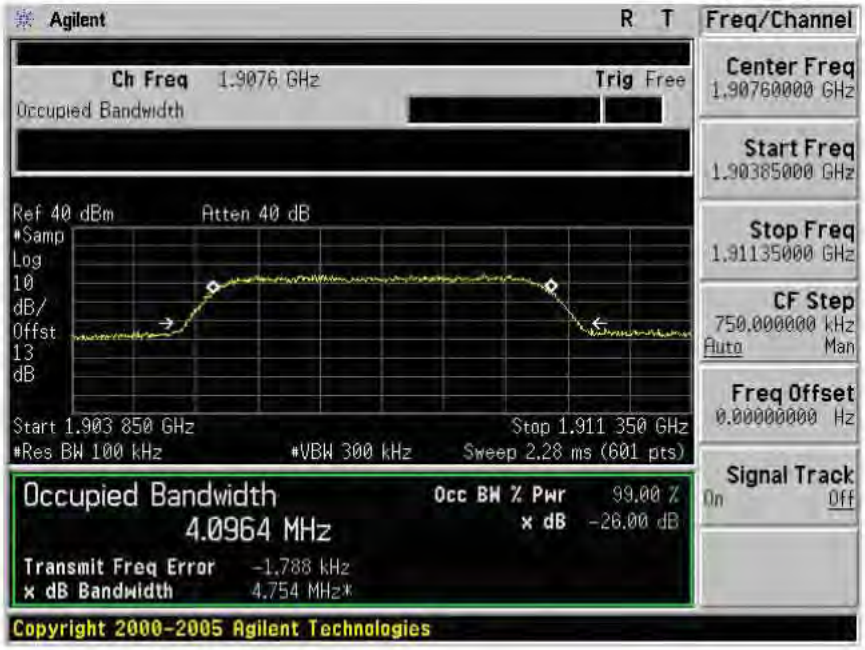
Channel 9262



Channel 9400



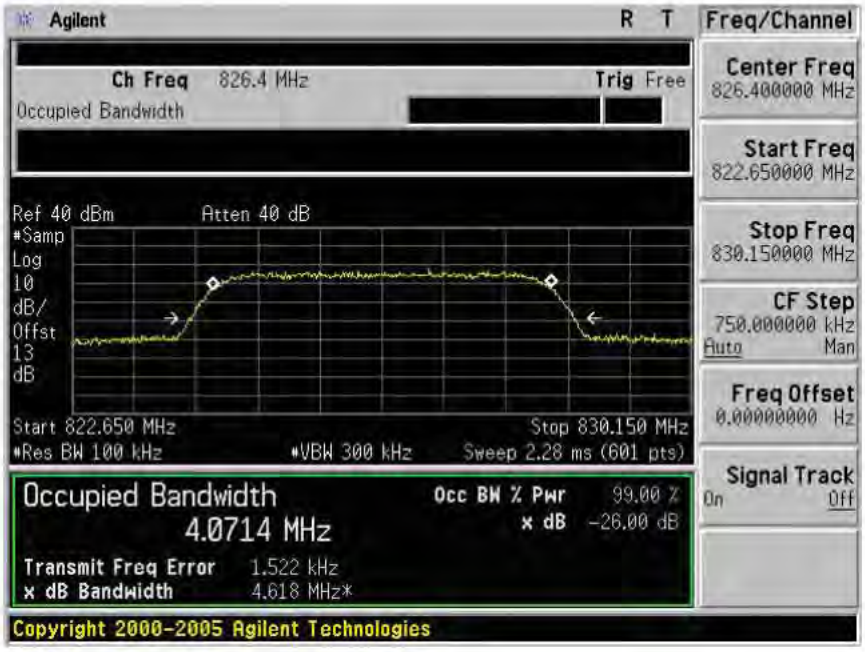

Channel 9538



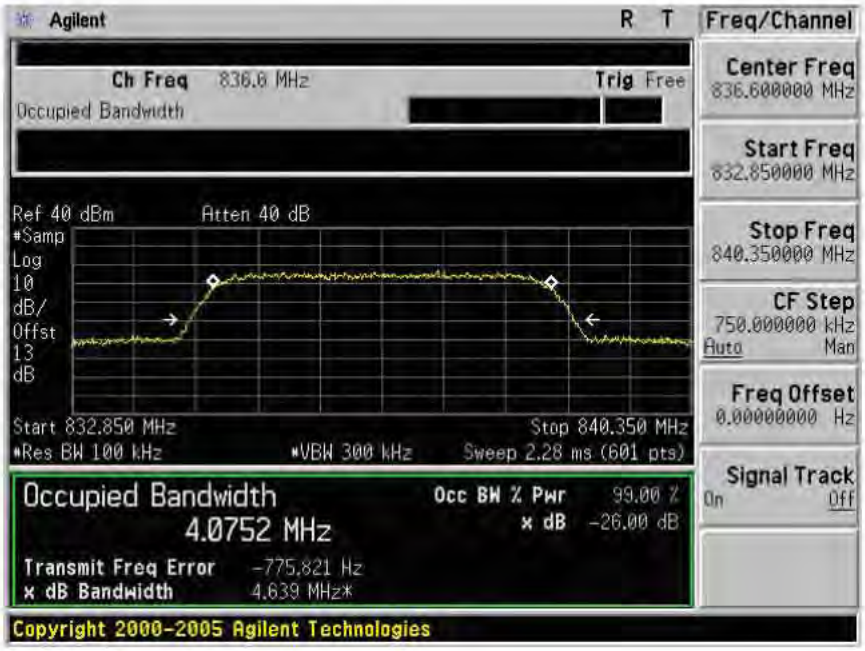
| Model Number | HE910 | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 4: WCDMA Band V Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |

| Channel No. | Frequency (MHz) | 99% Bandwidth (kHz) | Note |
|---|---|---|---|
| 4132 | 826.4 | 4.0714 | RBW:100KHz , VBW:300KHz |
| 4182 | 836.4 | 4.0752 | RBW:100KHz , VBW:300KHz |
| 4233 | 846.4 | 4.0651 | RBW:100KHz , VBW:300KHz |

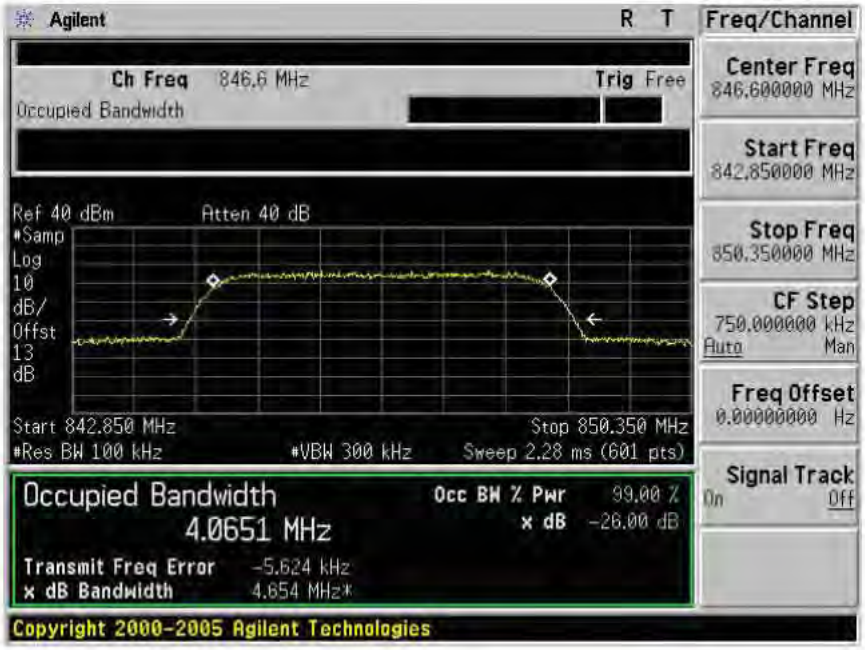
Channel 4132



Channel 4182




Channel 4233

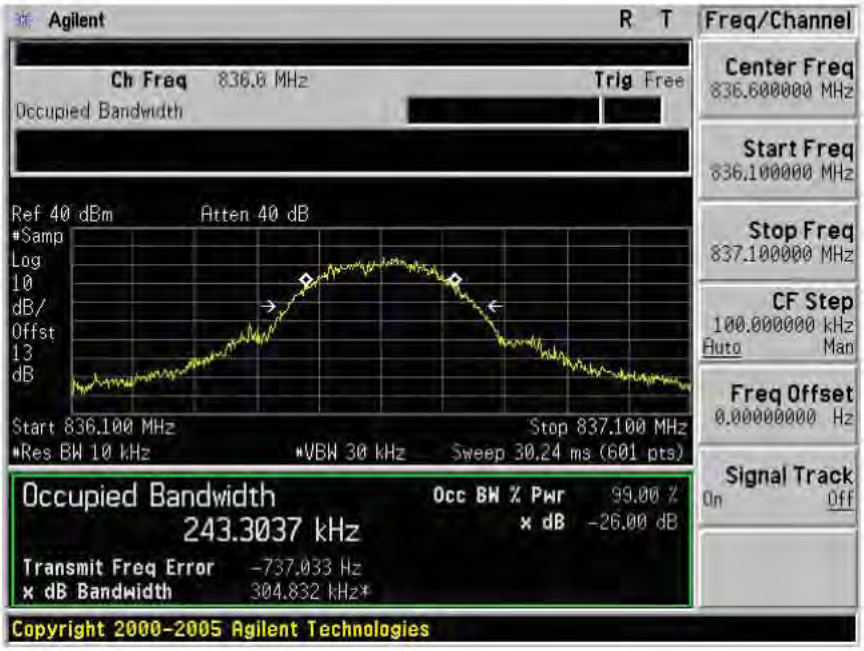


| Model Number | HE910 | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 5: EGPRS 850 Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |

| Channel No. | Frequency (MHz) | 99% Bandwidth (kHz) | Note |
|---|---|---|---|
| 128 | 824.2 | 248.3860 | RBW:10KHz , VBW:30KHz |
| 190 | 836.4 | 243.3037 | RBW:10KHz , VBW:30KHz |
| 251 | 848.8 | 242.7454 | RBW:10KHz , VBW:30KHz |

Channel 128

Channel 190

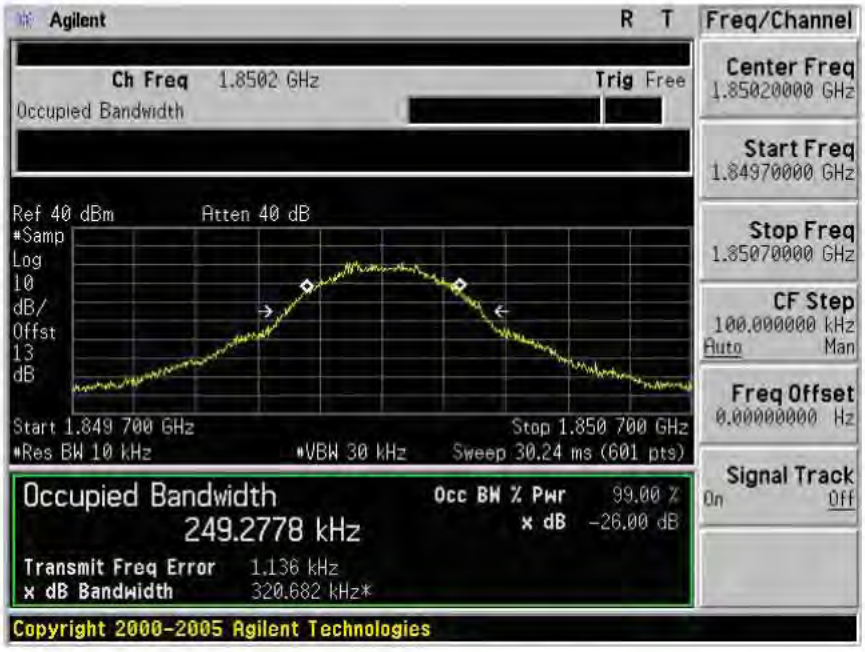



Channel 251

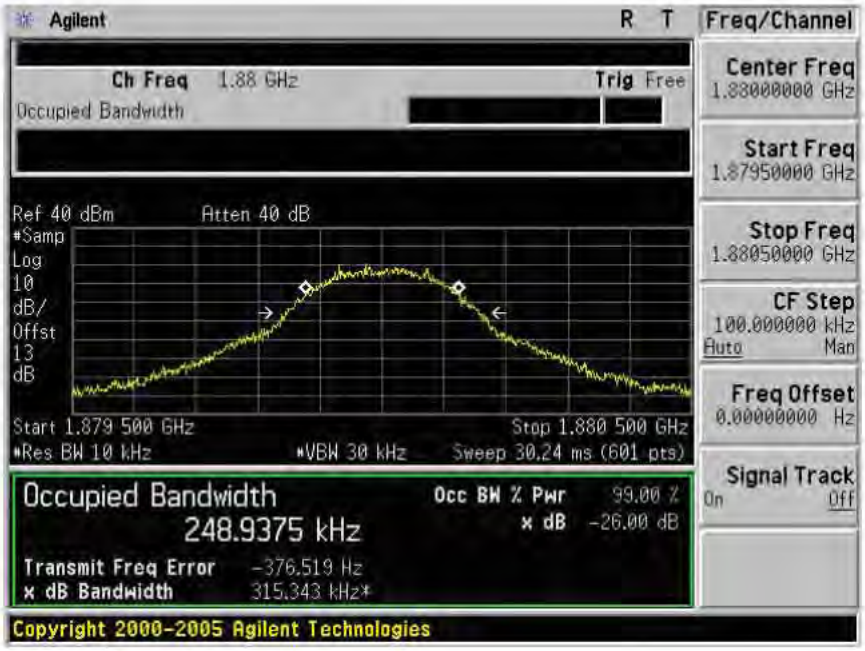
| Model Number | HE910 | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 6: EGPRS 1900 Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |

| Channel No. | Frequency (MHz) | 99% Bandwidth (kHz) | Note |
|---|---|---|---|
| 512 | 1850.20 | 249.2778 | RBW:10KHz , VBW:30KHz |
| 661 | 1880.00 | 248.9375 | RBW:10KHz , VBW:30KHz |
| 810 | 1909.80 | 252.0391 | RBW:10KHz , VBW:30KHz |

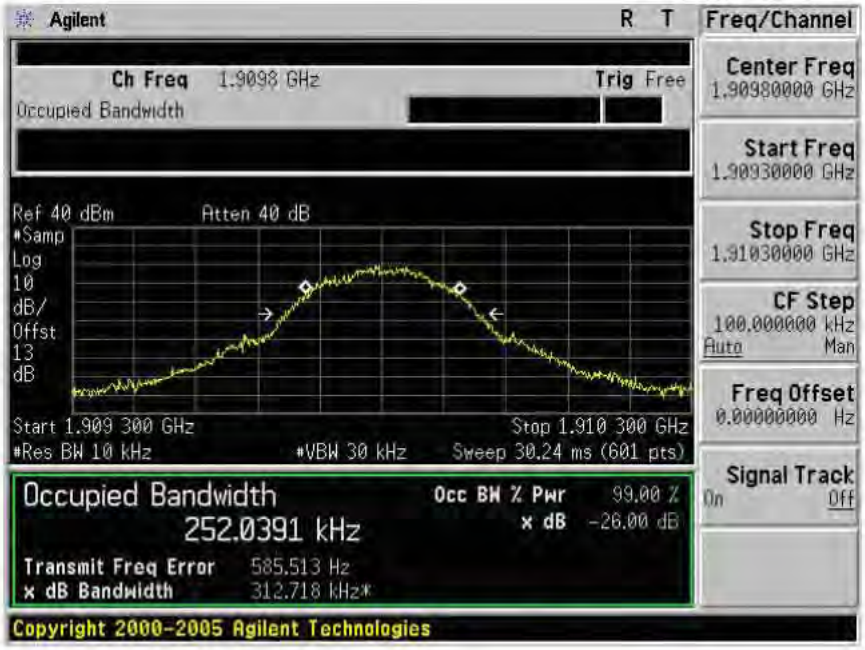
Channel 512



Channel 661




Channel 810

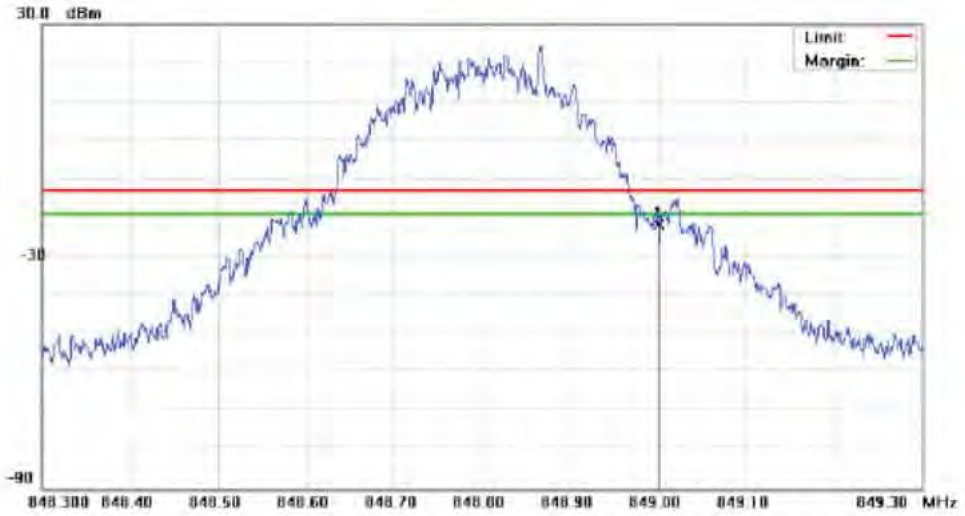


**Band Edge**

| Model Number | HE910 | | | | |
|---|---|---|---|---|---|
| Test Item | Band Edge | | | | |
| Test Mode | Mode 1: GSM 850 Link | | | | |
| Date of Test | 12/02/2011 | | Test Site | TE02 | |
| Band | Channel | Frequency (MHz) | Bandwidth (dBm) | Limit (dBm) | Result |
| Lower | 128 | 824.0000 | -15.20 | -13 | Pass |
| Higher | 251 | 849.0000 | -21.77 | -13 | Pass |

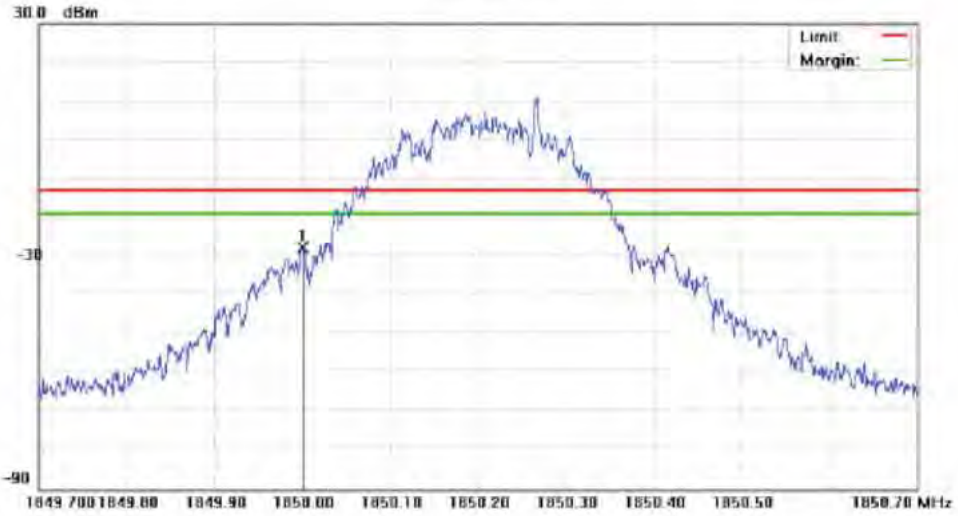
Lower Band


Higher Band



| Model Number | HE910 | | | | |
|---|---|---|---|---|---|
| Test Item | Band Edge | | | | |
| Test Mode | Mode 2: GSM 1900 Link | | | | |
| Date of Test | 12/02/2011 | | Test Site | TE02 | |
| Band | Channel | Frequency (MHz) | Bandwidth (dBm) | Limit (dBm) | Result |
| Lower | 512 | 1850.000 | -27.83 | -13 | Pass |
| Higher | 810 | 1910.000 | -34.04 | -13 | Pass |

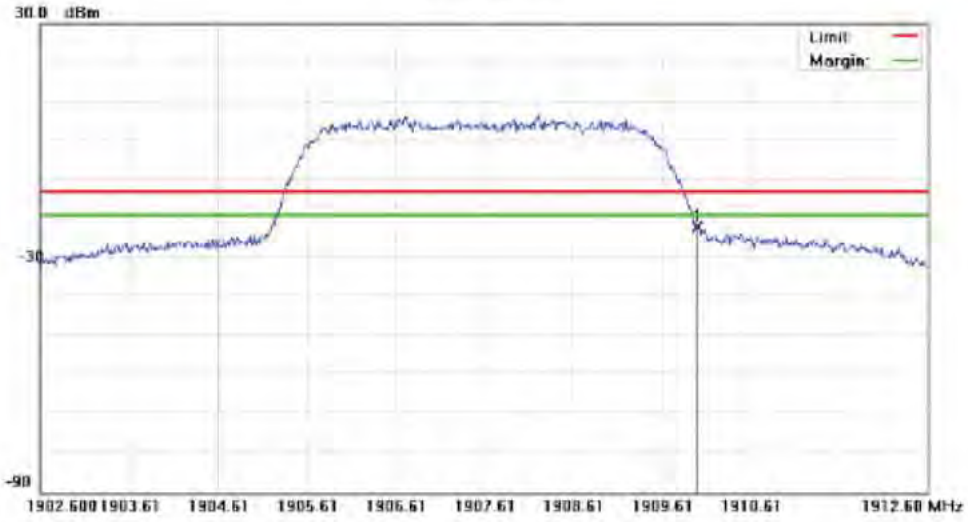
Lower Band



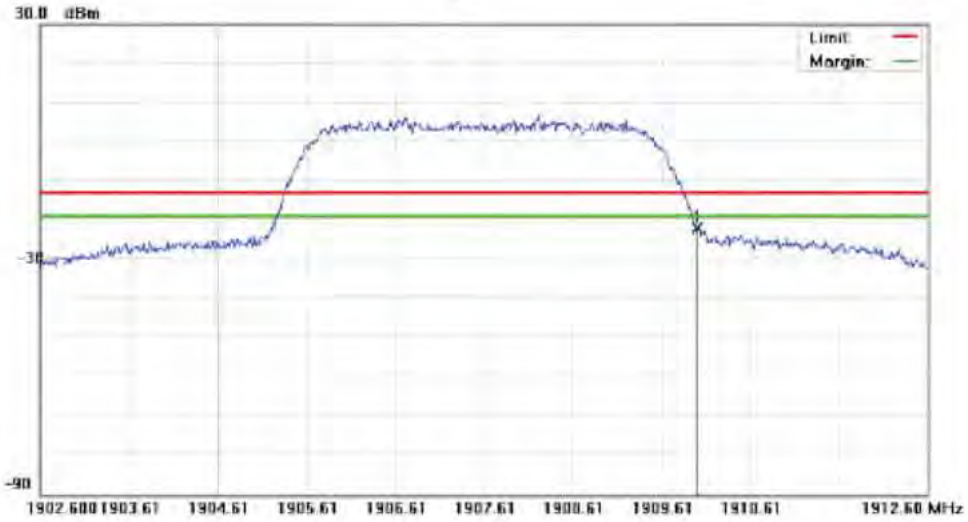

Higher Band

| Model Number | HE910 | | | | |
|---|---|---|---|---|---|
| Test Item | Band Edge | | | | |
| Test Mode | Mode 3: WCDMA Band II Link | | | | |
| Date of Test | 12/02/2011 | | Test Site | TE02 | |
| Band | Channel | Frequency (MHz) | Bandwidth (dBm) | Limit (dBm) | Result |
| Lower | 9262 | 1850.000 | -26.53 | -13 | Pass |
| Higher | 9538 | 1910.000 | -22.12 | -13 | Pass |

Lower Band

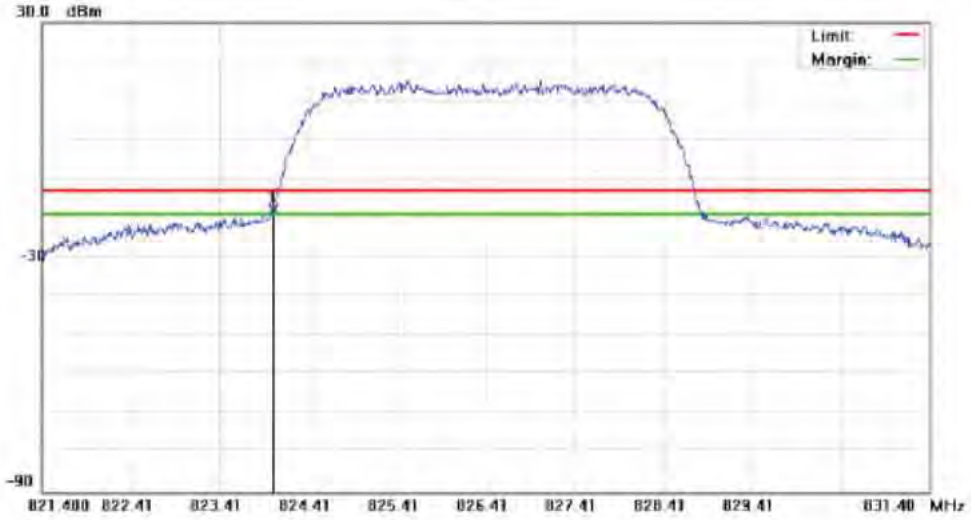



Higher Band

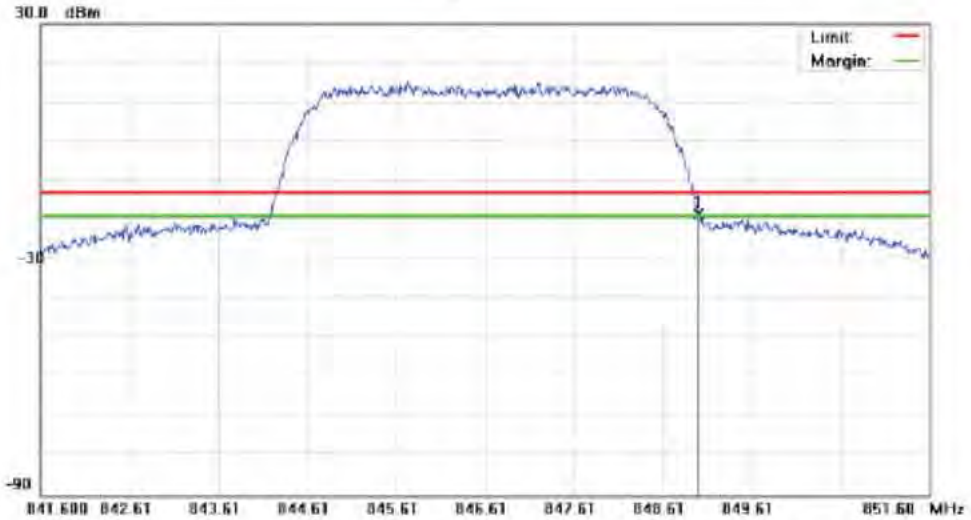


| Model Number | HE910 | | | | |
|---|---|---|---|---|---|
| Test Item | Band Edge | | | | |
| Test Mode | Mode 4: WCDMA Band V Link | | | | |
| Date of Test | 12/02/2011 | | Test Site | TE02 | |
| Band | Channel | Frequency (MHz) | Bandwidth (dBm) | Limit (dBm) | Result |
| Lower | 4132 | 824.0000 | -17.75 | -13 | Pass |
| Higher | 4233 | 849.0000 | -18.52 | -13 | Pass |

Lower Band




Higher Band



# 5 Conducted Emission Test

## 5.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

## 5.2. Test Instruments

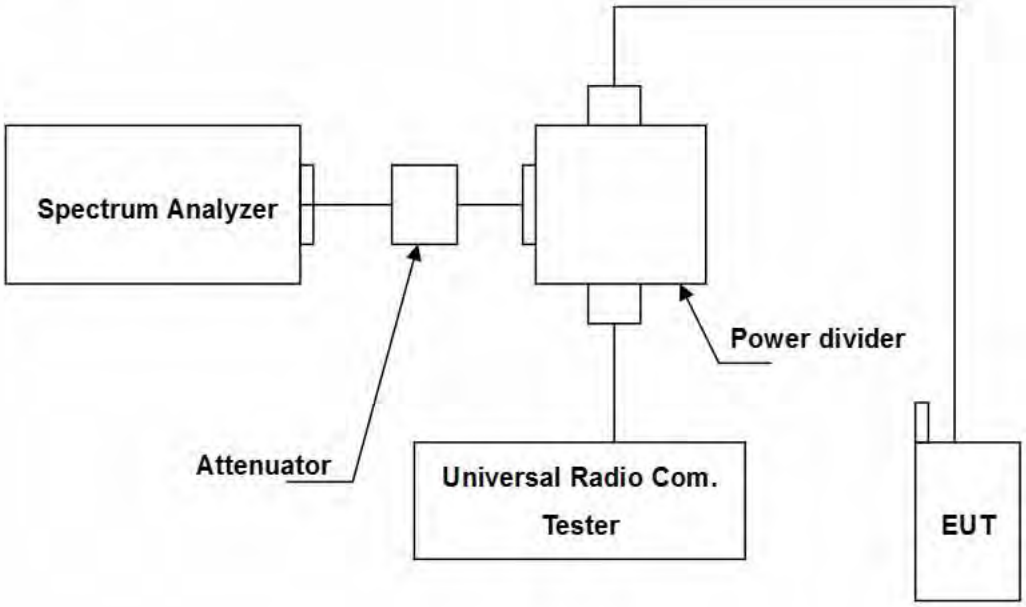
| Describe | Manufacturer | Model No. | Serial No. | Cal. Date | Remark |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | E4445A | MY46181986 | 05/16/2011 | (2) |
| Universal Radio Communication Tester | ROHDE & SCHWARZ | CMU200 | 109369 | 08/10/2010 | (2) |
| Attenuator | RADIALL | R41572000 | 0603033073 | N.C.R. | ----- |
| Power divider | Agilent | 87302C | 3239A00760 | N.C.R. | ----- |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

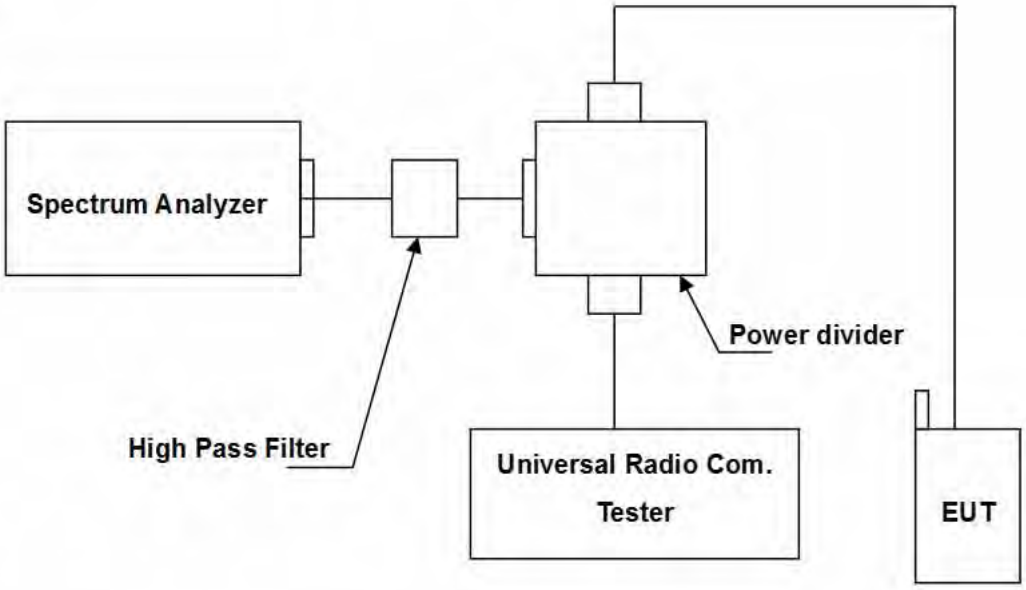
NOTE: N.C.R. = No Calibration Request.

## 5.3. Setup

**Below 2.8GHz**



**Above 2.8GHz**




## 5.4. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.
4. Test setting at GSM 850 RB>100 kHz, VB>100 kHz; PCS 1900 RB>1MHz, VB>1MHz.

## 5.5. Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

## 5.6. Test Result

| | | | |
|---|---|---|---|
| Model Number | HE910 | | |
| Test Item | Conducted Emission | | |
| Mode | Mode 1: GSM 850 Link<br>Mode 2: GSM 1900 Link<br>Mode 3: WCDMA Band II Link<br>Mode 4: WCDMA Band V Link | | |
| Date of Test | 12/02/2011 | Test Site | TE02 |

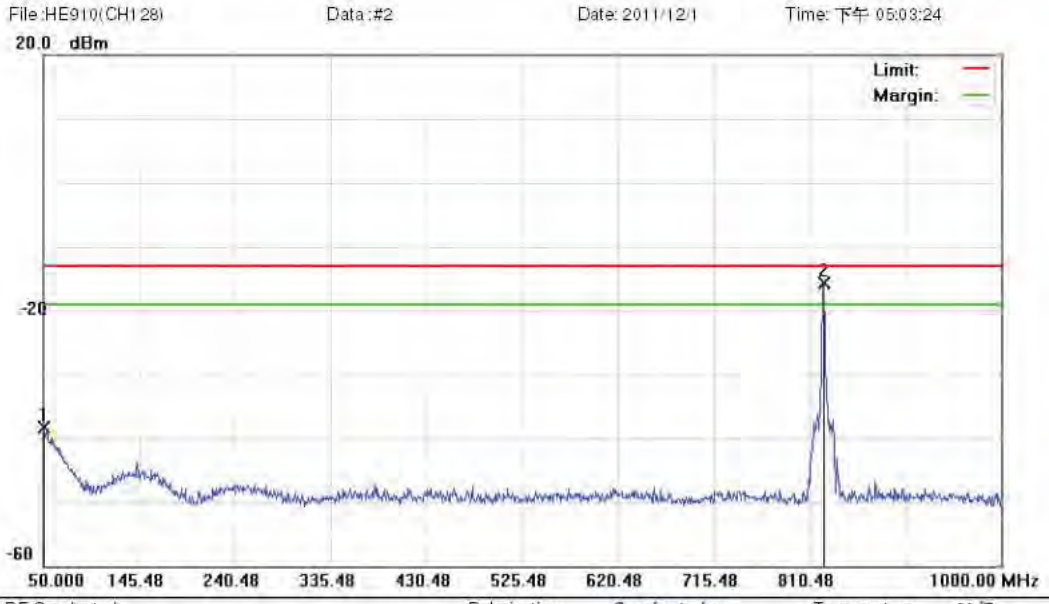

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 4.8830 | -62.17 | 28.39 | -33.78 | -13.00 | -20.78 | peak | | | |

*:Maximum data x:Over limit !:over margin



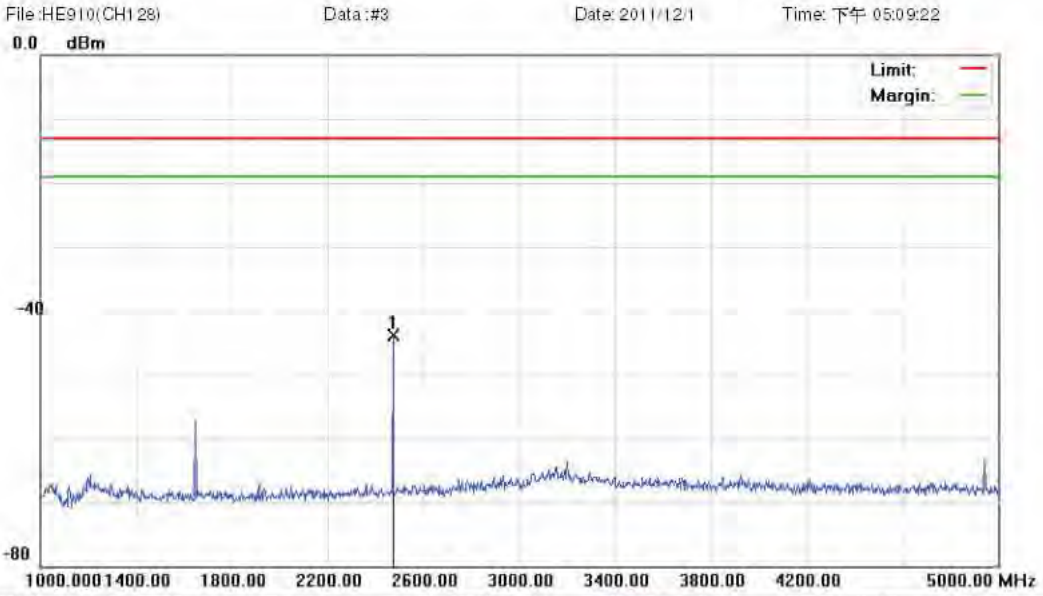

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | | 50.4750 | -52.99 | 14.61 | -38.38 | -13.00 | -25.38 | peak | | | |
| 2 | * | 824.2500 | -19.62 | 3.84 | -15.78 | -13.00 | -2.78 | peak | | | Tx |

*:Maximum data x:Over limit !:over margin



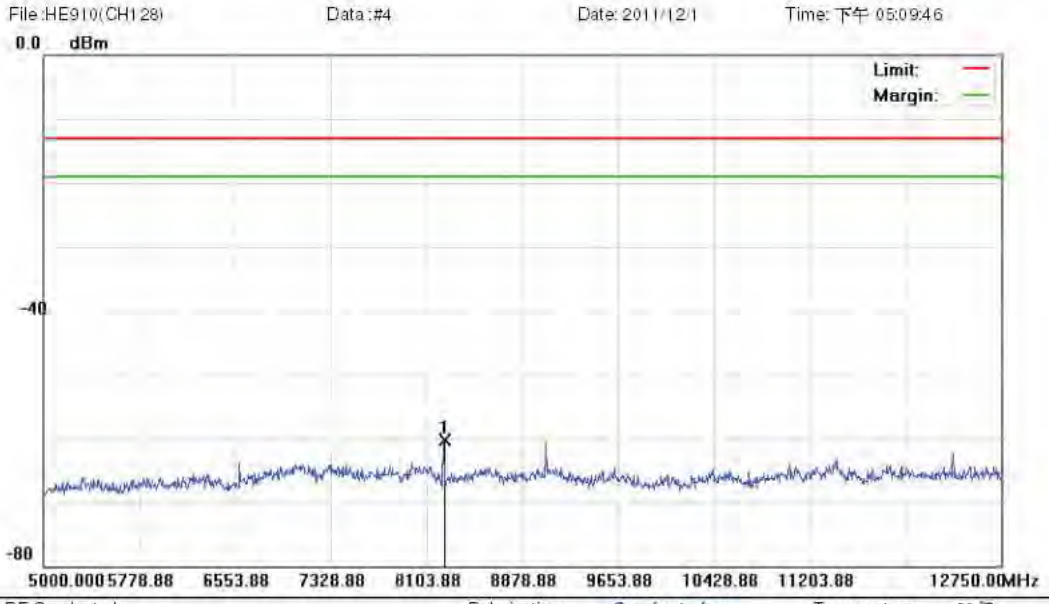

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2 %
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 2472.000 | -48.40 | 4.45 | -43.95 | -13.00 | -30.95 | peak | | | |

*:Maximum data x:Over limit !:over margin



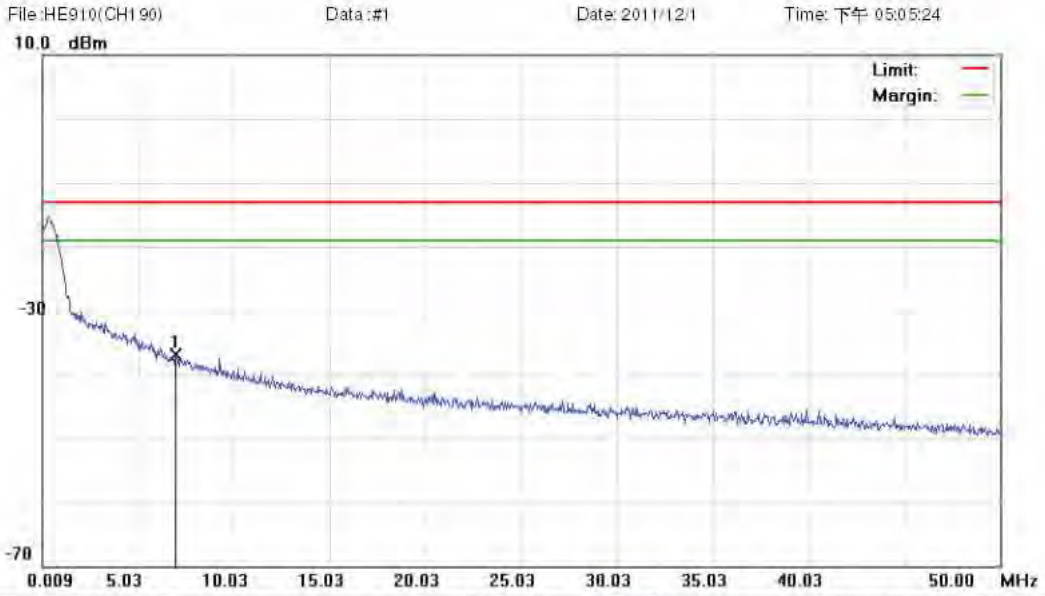

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 8243.375 | -64.99 | 4.68 | -60.31 | -13.00 | -47.31 | peak | | | |

*:Maximum data x:Over limit !:over margin



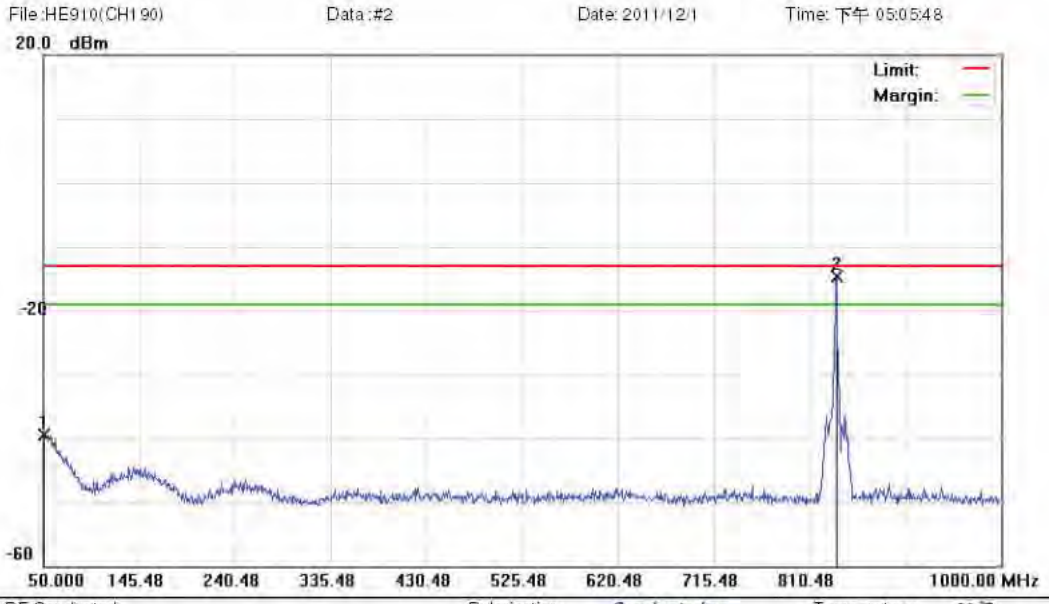

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 6.9576 | -62.80 | 25.98 | -36.82 | -13.00 | -23.82 | peak | | | |

*:Maximum data x:Over limit !:over margin



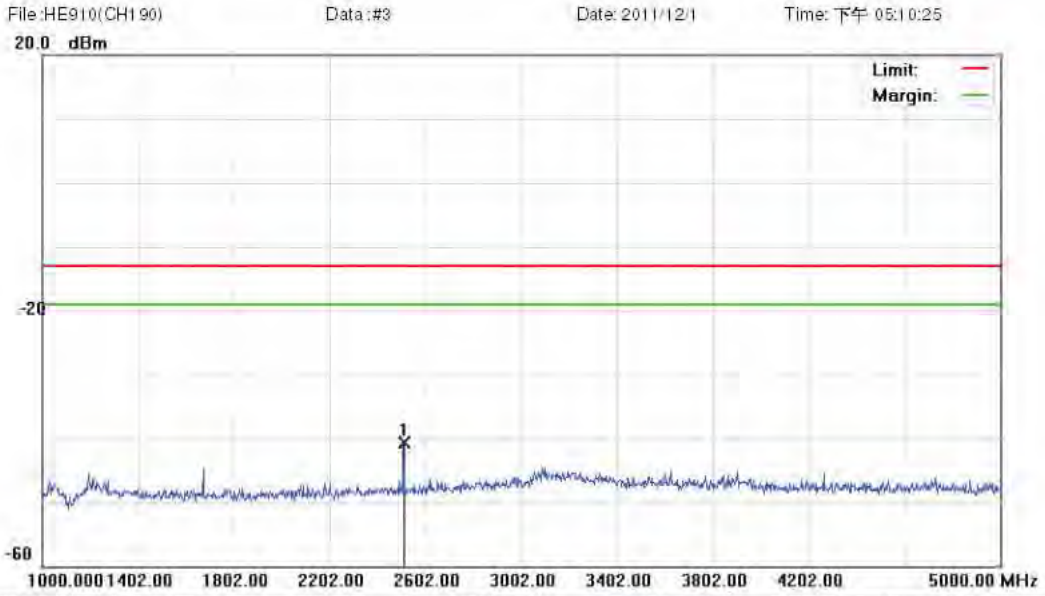

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conductedpo
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | | 50.4750 | -54.09 | 14.61 | -39.48 | -13.00 | -26.48 | peak | | | |
| 2 | * | 836.6000 | -18.69 | 3.96 | -14.73 | -13.00 | -1.73 | peak | | | Tx |

*:Maximum data x:Over limit !:over margin



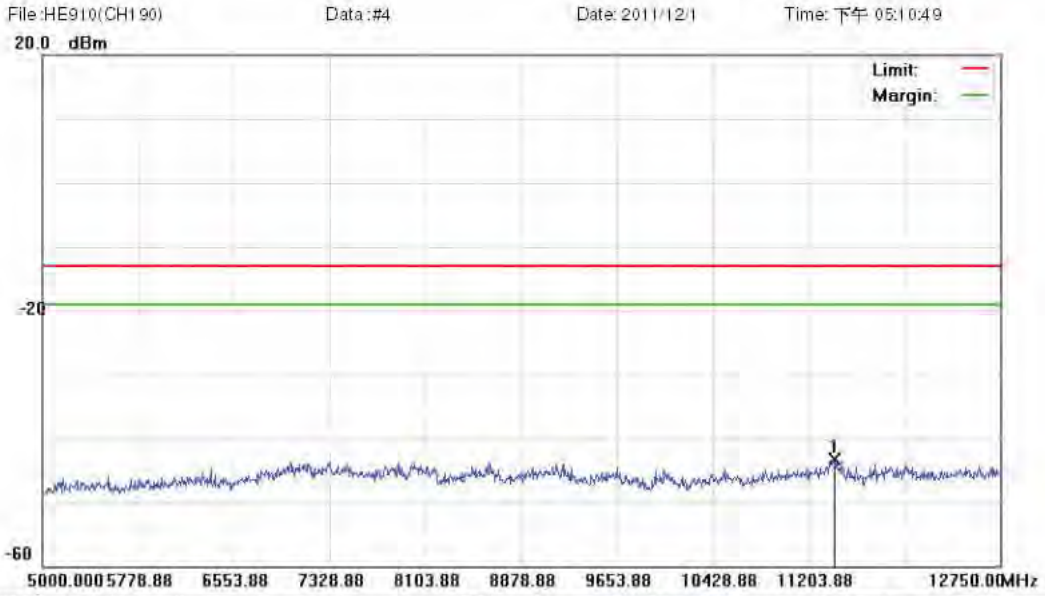

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 2510.000 | -45.09 | 4.36 | -40.73 | -13.00 | -27.73 | peak | | | |

*:Maximum data x:Over limit !:over margin



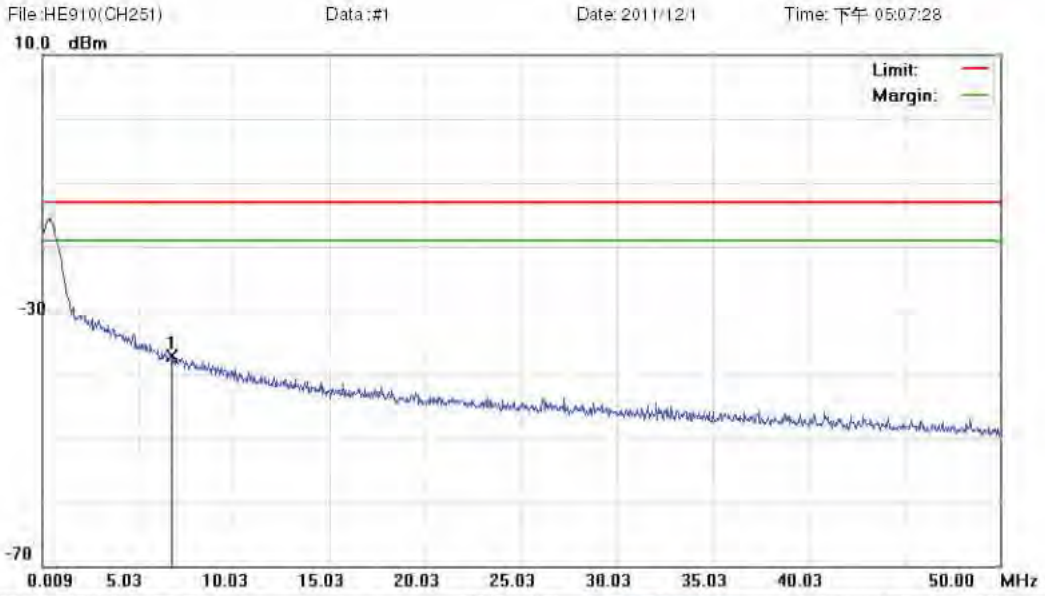

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 11405.375 | -48.94 | 5.56 | -43.38 | -13.00 | -30.38 | peak | | | |

*:Maximum data x:Over limit !:over margin



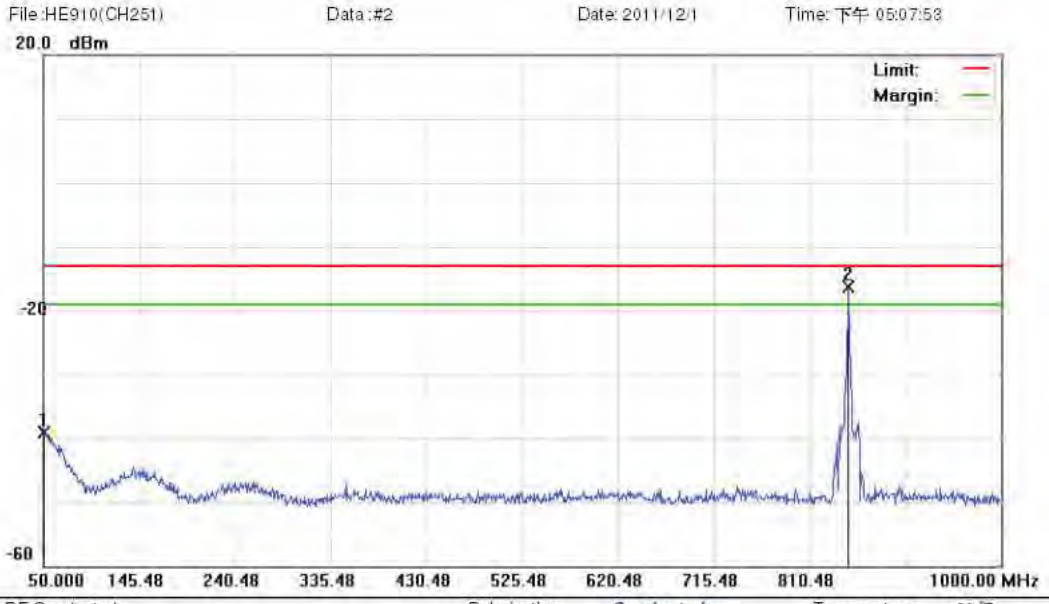

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 6.7328 | -63.30 | 26.16 | -37.14 | -13.00 | -24.14 | peak | | | |

*:Maximum data x:Over limit !:over margin



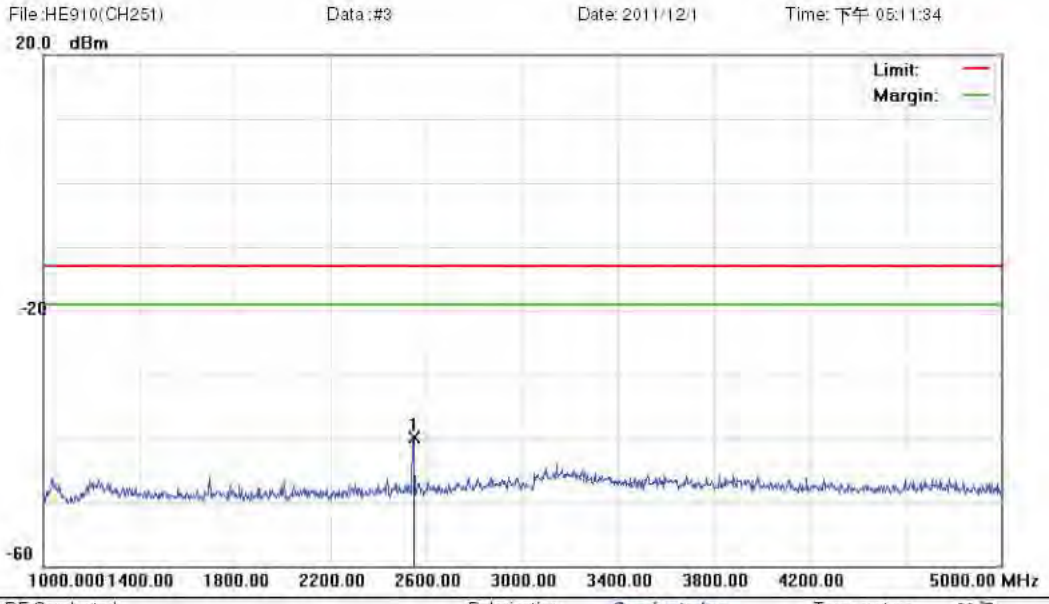

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | | 50.4750 | -53.77 | 14.61 | -39.16 | -13.00 | -26.16 | peak | | | |
| 2 | * | 848.9500 | -20.25 | 3.98 | -16.27 | -13.00 | -3.27 | peak | | | Tx |

*:Maximum data x:Over limit !:over margin



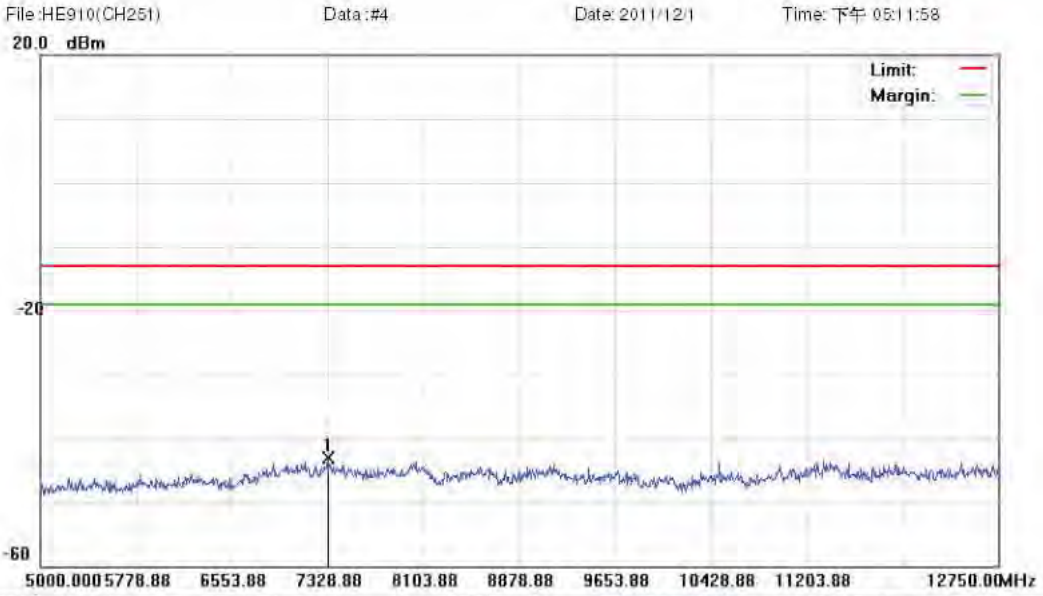

Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2 %
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 2546.000 | -44.28 | 4.45 | -39.83 | -13.00 | -26.83 | peak | | | |

*:Maximum data x:Over limit !:over margin




Site: : RF Conducted
Limit: FCC Part 22 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 1
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 7328.875 | -48.17 | 5.08 | -43.09 | -13.00 | -30.09 | peak | | | |

*:Maximum data x:Over limit !:over margin


Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 5.2080 | -62.28 | 13.26 | -49.02 | -13.00 | -36.02 | peak | | | |

*:Maximum data x:Over limit !:over margin

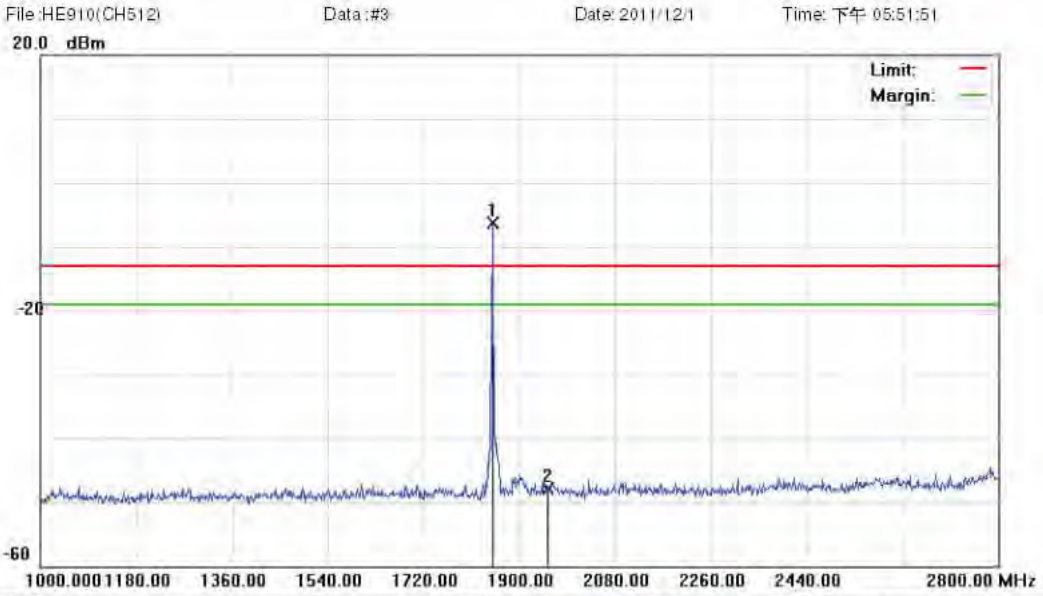

Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 566.3250 | -50.76 | 13.12 | -37.64 | -13.00 | -24.64 | peak | | | |

*:Maximum data x:Over limit !:over margin



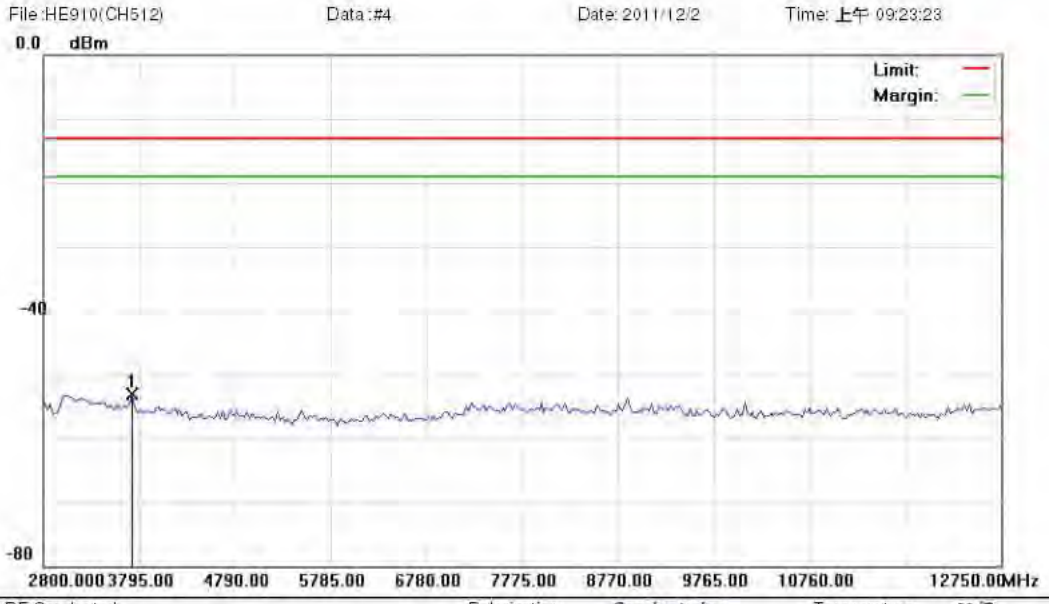

Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conductedpo
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 1850.500 | -10.63 | 4.26 | -6.37 | -13.00 | 6.63 | peak | | | Tx |
| 2 | | 1954.000 | -52.62 | 4.69 | -47.93 | -13.00 | -34.93 | peak | | | |

*:Maximum data x:Over limit !:over margin



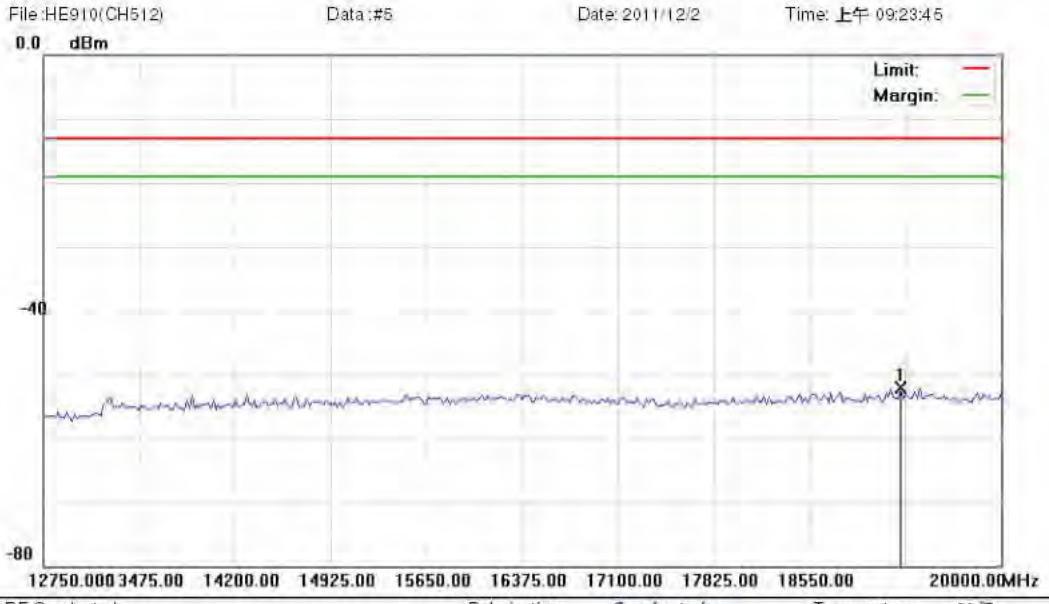

Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conductedpo
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 3720.375 | -58.01 | 4.88 | -53.13 | -13.00 | -40.13 | peak | | | |

*:Maximum data x:Over limit !:over margin




Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 19238.750 | -59.28 | 7.22 | -52.06 | -13.00 | -39.06 | peak | | | |

*:Maximum data x:Over limit !:over margin

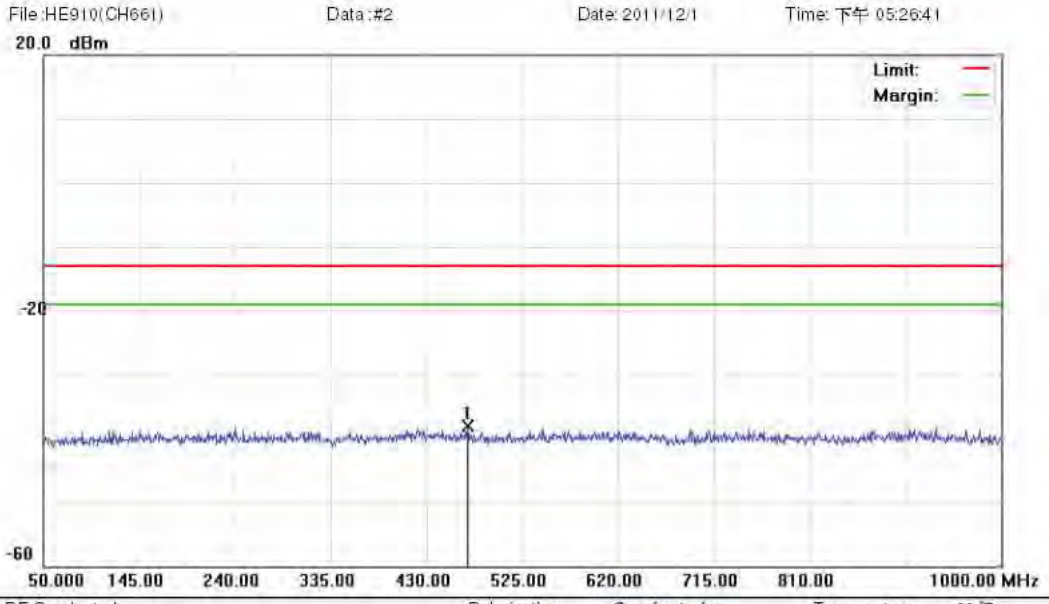

Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 5.8330 | -62.29 | 13.24 | -49.05 | -13.00 | -36.05 | peak | | | |

*:Maximum data x:Over limit !:over margin



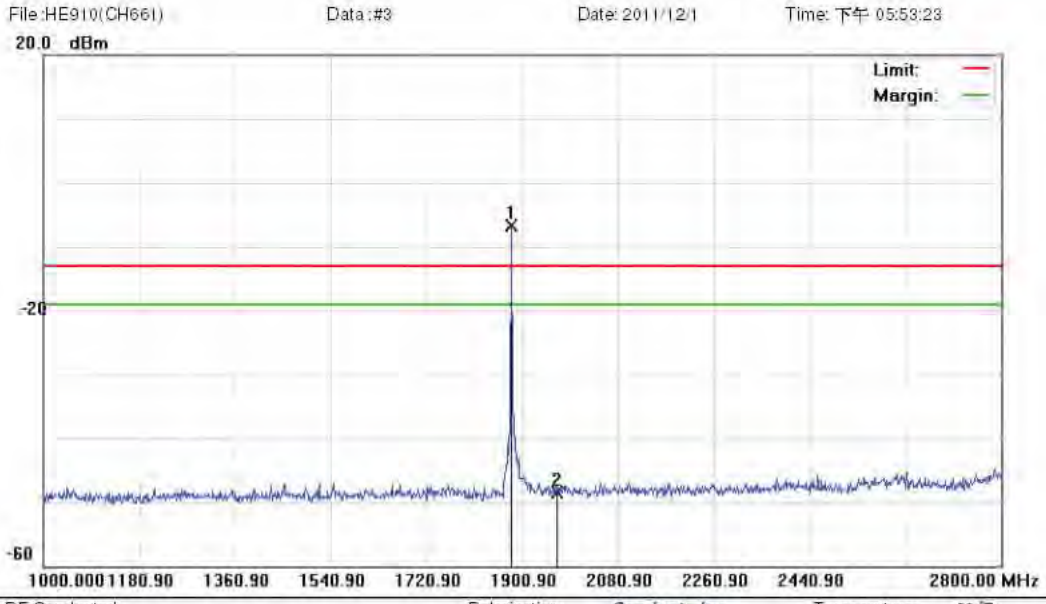

Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conducted po
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 470.8500 | -51.22 | 13.20 | -38.02 | -13.00 | -25.02 | peak | | | |

*:Maximum data x:Over limit !:over margin




Site: : RF Conducted
Limit: FCC Part 24 conducted (9k-12.75G)
EUT: 2G/3G Module
M/N: HE910
Mode: 2
Note:

Polarization: Conductedpo
Power: DC 3.8V
Distance:

Temperature: 23 ℃
Humidity: 55.2%
RBW: 1000 kHz VBW: 1000 kHz

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBm | dB | dBm | dBm | dB | Detector | cm | degree | Comment |
| 1 | * | 1880.200 | -11.38 | 4.65 | -6.73 | -13.00 | 6.27 | peak | | | Tx |
| 2 | | 1966.600 | -53.18 | 4.75 | -48.43 | -13.00 | -35.43 | peak | | | |

*:Maximum data x:Over limit !:over margin