# TEST REPORT FOR WCDMA TESTING

Report No.: SRTC2020-9004(F)-20050601(B)

Product Name: Mobile Broadband Internet Device

Product Model: K87CA

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

Specification: FCC Part 24E, Part 22H, Part 2, Part 27 (2019)

FCC ID: SRQ-K87CA

The State Radio_monitoring_center Testing Center (SRTC)

15th Building, No.30 Shixing Street, Shijingshan District,

Beijing, P.R.China

Tel: 86-10-57996183 Fax: 86-10-57996388

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# 1. GENERAL INFORMATION

## 1.1 Notes of the test report

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## 1.2 Information about the testing laboratory

| | |
|---|---|
| Company: | The State Radio_monitoring_center Testing Center (SRTC) |
| Address: | 15th Building, No.30 Shixing Street, Shijingshan District, P.R.China |
| City: | Beijing |
| Country or Region: | P.R.China |
| Contacted person: | Liu Jia |
| Tel: | +86 10 57996183 |
| Fax: | +86 10 57996388 |
| Email: | liujiaf@srtc.org.cn |

## 1.3 Applicant's details

| | |
|---|---|
| Company: | ZTE Corporation |
| Address: | ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Shenzhen, Guangdong, 518057, P.R.China |
| City: | Shenzhen |
| Country or Region: | P.R.China |
| Contacted person: | Zhao Yang |
| Tel: | 86-029-83637990 |
| Fax: | --- |
| Email: | zhao.yangxa@zte.com.cn |

## 1.4 Manufacturer's details

| | |
|---|---|
| Company: | ZTE Corporation |
| Address: | ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Shenzhen, Guangdong, 518057, P.R.China |
| City: | Shenzhen |
| Country or Region: | P.R.China |
| Contacted person: | Zhao Yang |
| Tel: | 86-029-83637990 |
| Fax: | --- |
| Email: | zhao.yangxa@zte.com.cn |

## 1.5 Test Environment

| | |
|---|---|
| Date of Receipt of test sample at SRTC: | 2020-05-06 |
| Testing Start Date: | 2020-05-06 |
| Testing End Date: | 2020-06-12 |

| Environmental Data: | Temperature (°C) | Humidity (%) |
|---|---|---|
| Ambient | 25 | 30 |
| Maximum Extreme | 55 | --- |
| Minimum Extreme | -10 | --- |

| | |
|---|---|
| Normal Supply Voltage (V d.c.): | 3.80 |
| Maximum Extreme Supply Voltage (V d.c.): | 4.35 |
| Minimum Extreme Supply Voltage (V d.c.): | 3.60 |

# 2 DESCRIPTION OF THE DEVICE UNDER TEST

## 2.1 Final Equipment Build Status

| | |
|---|---|
| Frequency Range | WCDMA Band II:<br>Tx:1852.4~1907.6MHz Rx:1932.4~1987.6MHz<br>WCDMA Band IV:<br>Tx:1712.4~1752.6MHz Rx:2112.4~2152.6MHz<br>WCDMA Band V:<br>Tx:826.4~846.6MHz Rx:871.4~891.6MHz |
| Mode | HSDPA/HSUPA |
| Emission Designator | 4M50F9W |
| Duplex Mode | FDD |
| Duplex Spacing | WCDMA Band II:80MHz<br>WCDMA Band IV:400MHz<br>WCDMA Band V:45MHz |
| Antenna Type | Fixed Internal Antenna |
| Antenna Gain | W2: 1.2dBi/W4: 0.8dBi/W5:-0.6dBi |
| Power Supply | Battery/Charger |
| Hardware Version | K87CAHW1.0 |
| Software Version | K87CAV1.0.0B01 |
| IMEI | 862750040000660 |

## 2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:

| | |
|---|---|
| Equipment | Battery 1 |
| Manufacturer | ZHUHAI COSMX BATTERY CO., LTD. |
| Model Number | Li3945T44P8hA69203 |

| | |
|---|---|
| Equipment | Charger 1 |
| Manufacturer | RUIJING |
| Model Number | STC-A51D-Z |

| | |
|---|---|
| Equipment | Charger 2 |
| Manufacturer | AOHAI |
| Model Number | STC-A51D-Z |

| | |
|---|---|
| Equipment | Charger 3 |
| Manufacturer | Chenyang |
| Model Number | STC-A520A-Z |

| | |
|---|---|
| Equipment | Charger 4 |
| Manufacturer | Ruijing |
| Model Number | STC-A520A-Z |

| | |
|---|---|
| Equipment | USB cable 1 |
| Manufacturer | Shen Zhen Shi Yi HUA XING Electron Co.,Ltd |
| Model Number | USB-MU5-W-100-M |

| | |
|---|---|
| Equipment | USB cable 2 |
| Manufacturer | King Power Electronics Co., Ltd |
| Model Number | USB-MU5-W-100-M |

## 2.3 Summary table

| FCC Rule Part | Frequency Range(MHz) | ERP/ EIRP (dBm) | ERP/ EIRP (W) | Frequency Tolerance (ppm) | Emission Designator |
|---|---|---|---|---|---|
| 24E | 1852.4-1907.6 | 25.30 | 0.339 | -0.098 | 4M18F9W |
| 22H | 826.4-846.6 | 23.68 | 0.234 | 0.100 | 4M15F9W |
| 27 | 1712.4-1752.6 | 25.19 | 0.331 | 0.097 | 4M14F9W |

# 3 REFERENCE SPECIFICATION

| Specification | Version | Title |
|---|---|---|
| FCC Part2 | 2019 | Frequency allocations and radio treaty matters; general rules and regulations |
| FCC Part22 | 2019 | Public mobile services |
| FCC Part24 | 2019 | Personal communications services |
| FCC Part27 | 2019 | Miscellaneous wireless communications services |
| ANSI C63.26 | 2015 | American national standard for compliance testing of transmitters used in licensed radio services |
| KDB 971168 D01 | April 9, 2018 | Measurement guidance for certification of licensed digital transmitters |
| TIA-603-E-2016 | March 2016 | Land Mobile FM or PM Communications Equipment Measurement and Performance Standards |

# 4 KEY TO NOTES AND RESULT CODES

The following are the definition of the test result.

| Code | Meaning |
|---|---|
| PASS | Test result shows that the requirements of the relevant specification have been met. |
| FAIL | Test result shows that the requirements of the relevant specification have not been met. |
| NT | Normal Temperature |
| NV | Nominal voltage |
| HV | High voltage |
| LV | Low voltage |

# 5 RESULT SUMMARY

| No. | Test case | FCC reference | Verdict |
|---|---|---|---|
| 1 | RF Power Output | 2.1046 | Pass |
| 2 | Effective Radiated Power and Effective Isotropic Radiated Power | 22.913(a),24.232(c),27.50(d)( 4) | Pass |
| 3 | Occupied Bandwidth | 2.1049 | Pass |
| 4 | Emission Bandwidth | 2.1049 | Pass |
| 5 | Spurious Emissions at antenna terminal | 2.1051,22.917(a),24.238(a),27.53(h) | Pass |
| 6 | Band Edges Compliance | 2.1051,22.917(a),24.238(b),27.53(h) | Pass |
| 7 | Frequency Stability | 2.1055,22.355,24.235,27.54 | Pass |
| 8 | Radiated Spurious Emissions | 2.1053,22.917(a),24.238(a),27.53(h) | Pass |
| 9 | Peak-Average Ratio | 24.232(d),27.50(d) (5) | Pass |

| | |
|---|---|
| This Test Report Is Issued by:<br>Mr. Peng Zhen | Checked by:<br>Mr. Li Bin |
| Tested by:<br>Mr. He Dengshun | Issued date:<br>20200612 |

# 6 TEST RESULT

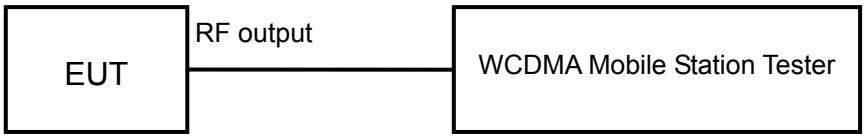
## 6.1 RF Power Output

Rule Part(s):
2.1046

Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Test procedure:
After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration.
The measurement will be conducted at three channels (Low, middle and High channels).

Limits: Limits: No specific conduct power requirements in part 2.1046.

Test result:
The test results are shown in Appendix A.

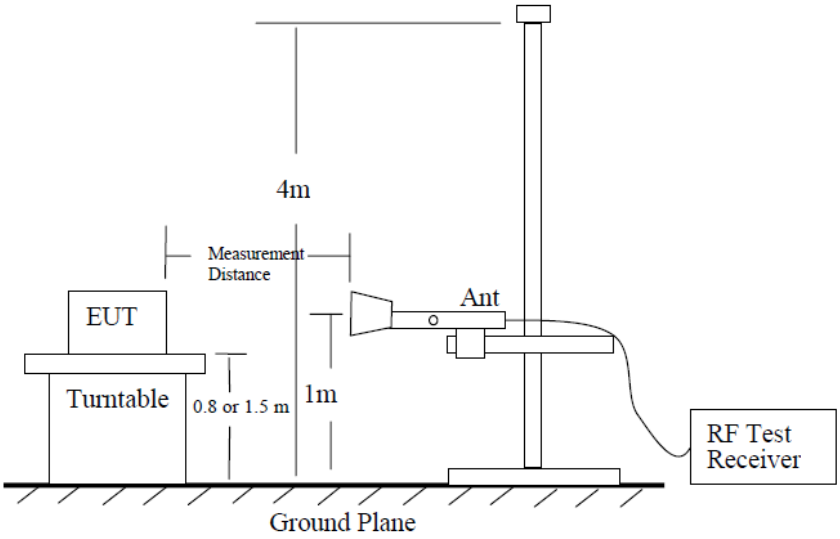
## 6.2 Effective Radiated Power and Effective Isotropic Radiated Power

Rule Part(s):
FCC: 22.913(a) (5), 24.232(c), 27.50(d) (4)

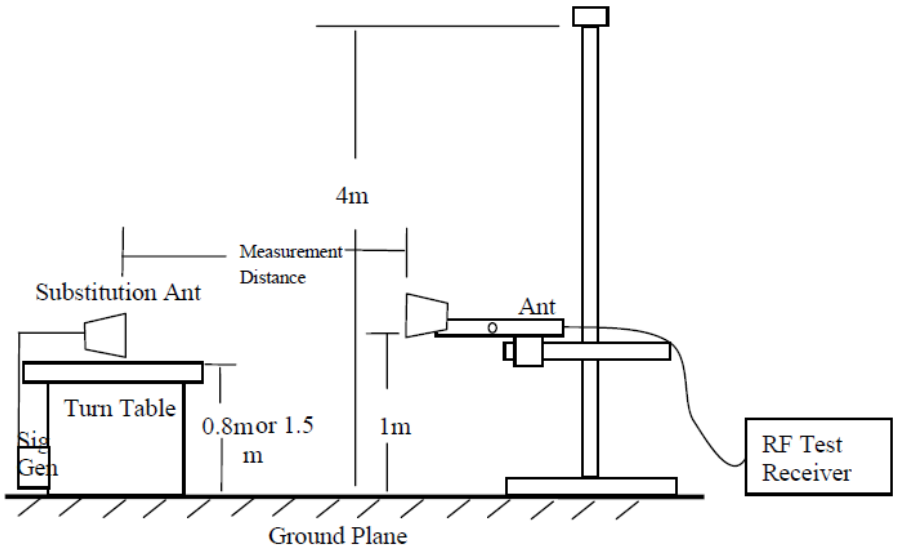
Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test setup:




Step 1




Step 2

Test procedure:
The measurements procedures in TIA-603-E-2016 are used.
Step 1:
The measurement is carried out in the chamber. EUT was placed on a 0.8m (f<1GHz)/ 1.5m (f>1GHz) high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna from 1m to 4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used and RBW is set to 100KHz(f<1GHz)/1MHz (f>1GHz). The antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum power value on spectrum analyzer or receiver. And the maximum value of the receiver should be recorded as (Pr).
Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator. To repeat the same procedure as step1 and the level of signal generator will be adjusted till the same power value on the spectrum analyzer or receiver. The ERP/EIRP of the EUT can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna.
A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).
The measurement results are obtained as described below:
Power (EIRP) = Pmea+ Pca+ Ga

**ERP/EIRP LIMIT**

This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP – 2.15 (dB).
22.913(a) (5)
The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.
24.232(c)
Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.
27.50(d) (4)
Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications
Test result:
The test results are shown in Appendix B.

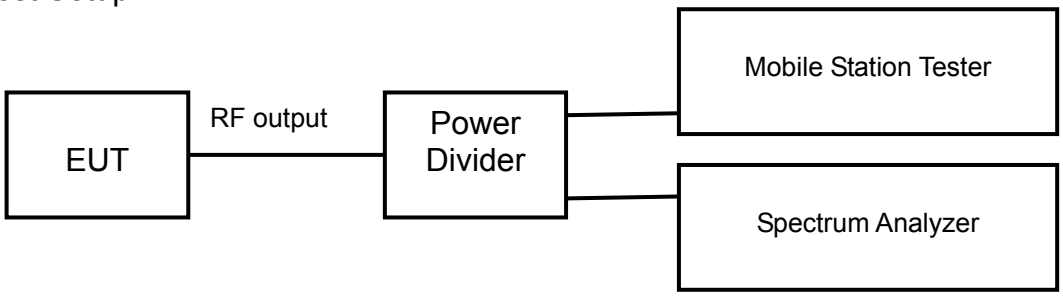
## 6.3 Occupied Bandwidth

Rule Part(s):
FCC: 2.1049

Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Test procedure:
KDB 971168 D01 v03r01 – Section 4.2

Test Settings
1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Limits: No specific occupied bandwidth requirements in part 2.1049

Test result:
The test results are shown in Appendix A.

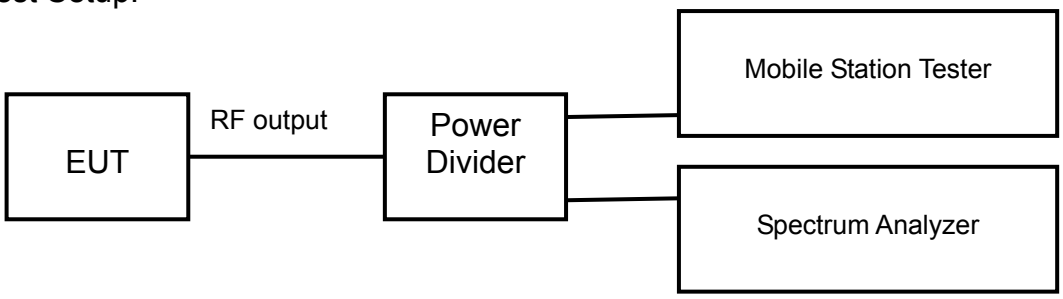
## 6.4 Emission Bandwidth

Rule Part(s):
FCC: 2.1049

Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Test procedure:
KDB 971168 D01 v03r01 – Section 4.2

Test Settings
1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 26dB occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the emission bandwidth observed in Step 7

Limits: No specific occupied bandwidth requirements in part 2.1049

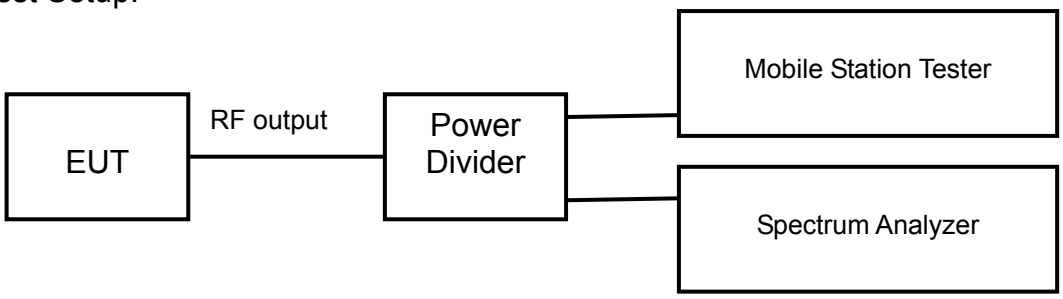
Test result:
The test results are shown in Appendix A.

## 6.5 Spurious Emissions at antenna terminal

Rule Part(s):
FCC: 2.1051, 22.917(a), 24.238(a), 27.53(h)
Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Test procedure:
KDB 971168 D01 v03r01 – Section 6.0

Test Settings
1. Start frequency was set to 30MHz and stop frequency was set to 10GHz for Cell, 20GHz for PCS
2. RBW=100 kHz (For below 1GHz), 1MHz (For above 1GHz)
3. VBW ≥ 3 x RBW
4. Detector = RMS
5. Trace mode = trace average for continuous emissions, max hold for pulse emissions
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Limits:
The minimum permissible attenuation level of any spurious emission is $43+\log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test result:
The test results are shown in Appendix A.

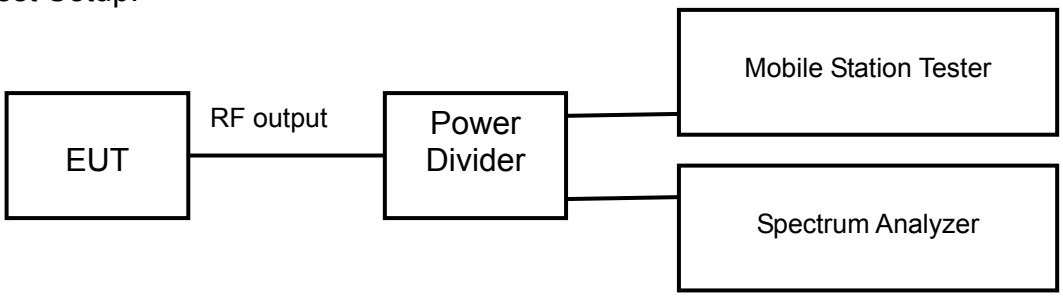
## 6.6 Band Edges Compliance

Rule Part(s)
FCC: 2.1051, 22.917(a), 24.238(a), 27.53(c)

Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Test procedure:
KDB 971168 D01 v03r01 – Section 6.0

Test Settings
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span=2MHz
3. RBW > 1% of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Limit: The minimum permissible attenuation level of any spurious emission is $43+\log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test result:
The test results are shown in Appendix A.

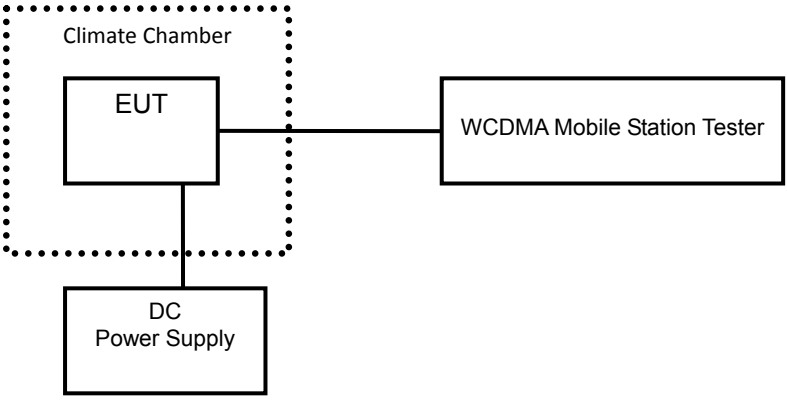
## 6.7 Frequency Stability

Rule Part(s)
FCC: 2.1055, 22.355, 24.235, 27.54

Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test setup:




Test Procedure:
ANSI/TIA-603-E-2016

Test Settings
1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C (The temperature range can be declared by the manufacturer). A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Limits: For Part 22, the frequency stability of the transmitter shall be maintained within±0.00025% (±2.5 ppm) of the center frequency. For Part 24, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test result:
The test results are shown in Appendix A.

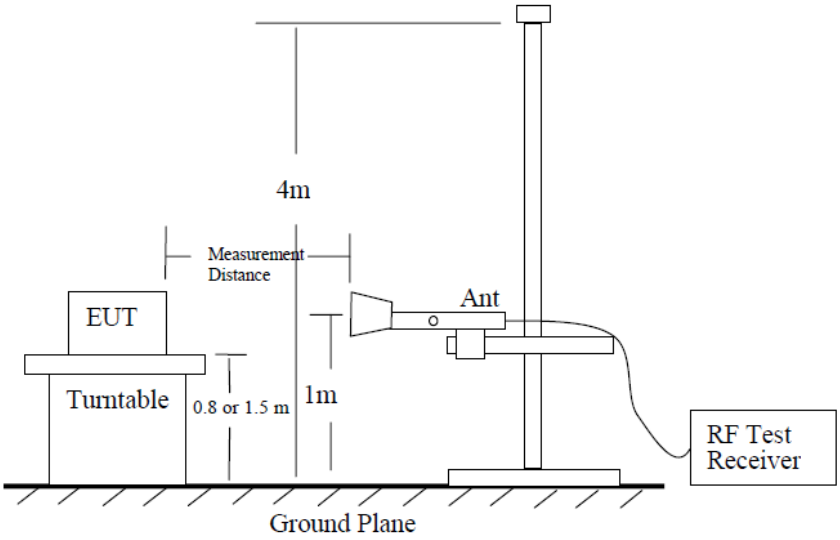
## 6.8 Radiated Spurious Emissions

Rule Part(s)
FCC: 2.1053, 22.917(a), 24.238(a), 27.53(h)

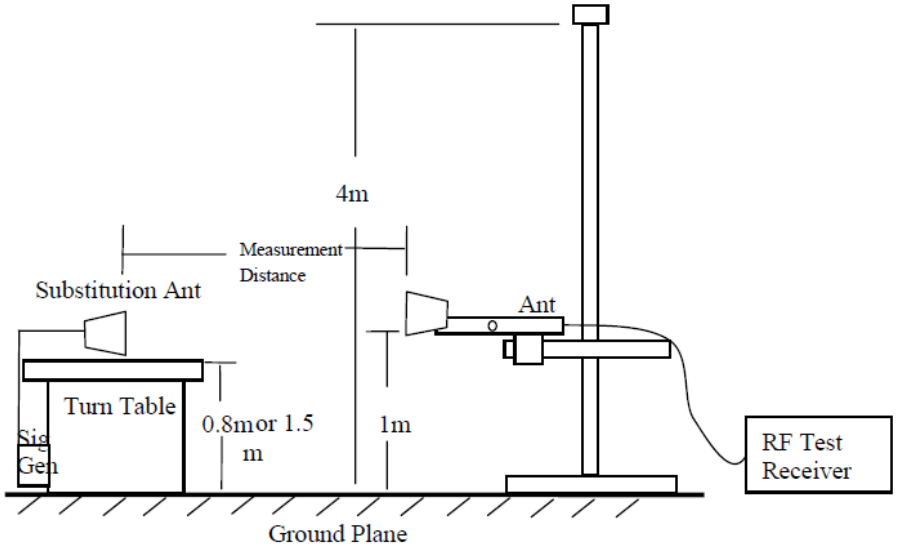
Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Step 1




Step 2

Test procedure:
The measurements procedures in TIA-603-E-2016 are used.
The spectrum was scanned from 30MHz to the 10th harmonic of the highest frequency generated within the equipment.
Step 1:
The measurement is carried out in the chamber. EUT was placed on a 0.8m (f<1GHz)/ 1.5m (f>1GHz) high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna from 1m to 4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used and RBW is set to 100 kHz (f<1GHz)/1MHz (f>1GHz). The antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum power value on spectrum analyzer or receiver. The spectrum analyzer scans from 30MHz to 10th harmonic of the carrier. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.
Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).
Calculation procedure:
The data of cable loss and antenna gain has been calibrated in full testing frequency range before the testing.
The power of the Radiated Spurious Emissions is calculated by adding the cable loss and antenna gain. The basic equation with a sample calculation is as followed:
Power (EIRP) = Pmea+ Pca + Ga
This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP – 2.15 (dB).
Assumed the power of signal source record is -20dBm. A cable loss of -30dB, and an antenna gain of 11dB are added.
P=Pmea+Pca+Ga=(-20dBm)+(-30dB)+(11dB)= -39dBm

Test result:
The test results are shown in Appendix B.

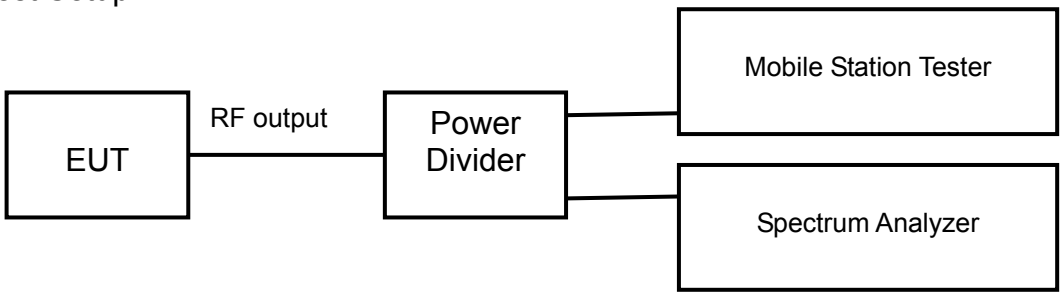
## 6.9 Peak-Average Ratio

Rule Part(s)
FCC: 24.232(d), 27.50(d) (5)

Ambient condition:

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 25°C | 30% | 101.9kPa |

Test Setup:




Test procedure:
KDB 971168 D01 v03r01 – Section 5.7.1

Test settings:
1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Limits: the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
.
Test result:
The test results are shown in Appendix A

# 7 MEASUREMENT UNCERTAINTIES

| Items | Uncertainty | |
|---|---|---|
| RF Power Output | U=0.6 dB | |
| Occupied Bandwidth | 3kHz | |
| Spurious Emissions | 9kHz~2GHz | U=1.2dB |
| | 2G~3.6GHz | U=1.4dB |
| | 3.6G~8GHz | U=2.2dB |
| | 8G~12.75GHz | U=2.7dB |
| Band Edges Compliance | 1.2dB | |
| Frequency Stability | U=48 Hz | |

# 8 TEST EQUIPMENTS

| No. | Name/Model | Manufacturer | S/N | Calibration Date | Calibration Due Date |
|---|---|---|---|---|---|
| 1 | E5515C(8960) Mobile Station Tester | Agilent | MY50266302 | 2019.08.20 | 2020.08.19 |
| 2 | N9020A Spectrum Analyzer | Agilent | MY48010771 | 2019.08.20 | 2020.08.19 |
| 3 | 6007 Power Divider | Weinschel | 6007-GJ-1 | 2019.08.20 | 2020.08.19 |
| 4 | DC Power Supply E3645A | Agilent | MY40000741 | 2020.03.01 | 2021.02.28 |
| 5 | Temperature chamber SH241 | ESPEC | 92013758 | 2019.08.20 | 2020.08.19 |
| 6 | 12.65m×8.03m×7.50m Fully-Anechoic Chamber | FRANKONIA | ----- | ----- | ----- |
| 7 | 23.18m×16.88m×9.60m Semi-Anechoic Chamber | FRANKONIA | --- | ----- | ----- |
| 8 | Turn table Diameter:1m | FRANKONIA | ----- | ----- | ----- |
| 9 | Turn table Diameter:5m | FRANKONIA | ----- | ----- | ----- |
| 10 | Antenna master FAC(MA4.0) | MATURO | ----- | ----- | ----- |
| 11 | Antenna master SAC(MA4.0) | MATURO | ----- | ----- | ----- |
| 12 | 9.080m×5.255m×3.525m Shielding room | FRANKONIA | ----- | ----- | ----- |
| 13 | HF 907 Double-Ridged Waveguide Horn Antenna | R&S | 100512 | 2019.08.20 | 2020.08.19 |
| 14 | HF 907 Double-Ridged Waveguide Horn Antenna | R&S | 100513 | 2019.08.20 | 2020.08.19 |
| 15 | HL562 Ultra log antenna | R&S | 100016 | 2019.08.20 | 2020.08.19 |
| 16 | 3160-09 Receive antenna | SCHWARZ-BECK | 002058-002 | 2019.08.20 | 2020.08.19 |
| 17 | ESI 40 EMI test receiver | R&S | 100015 | 2019.08.20 | 2020.08.19 |
| 18 | ESCS30 EMI test receiver | R&S | 100029 | 2019.08.20 | 2020.08.19 |
| 19 | HL562 Receive antenna | R&S | 100167 | 2019.08.20 | 2020.08.19 |
| 20 | ENV216 AMN | R&S | 3560.6550.12 | 2019.08.20 | 2020.08.19 |

# APPENDIX A – TEST DATA OF CONDUCTED EMISSION

**RF Power Output**

WCDMA band II

| Mode | | Carrier frequency (MHz) | Channel No. | RF Power Output (dBm) |
|---|---|---|---|---|
| Release 99 | RMC,12.2kbps | 1852.4 | 9262 | 23.67 |
| | | 1880.0 | 9400 | 23.54 |
| | | 1907.6 | 9538 | 23.61 |
| HSDPA | Subtest 1 | 1852.4 | 9262 | 22.55 |
| | | 1880.0 | 9400 | 22.43 |
| | | 1907.6 | 9538 | 22.49 |
| | Subtest 2 | 1852.4 | 9262 | 22.61 |
| | | 1880.0 | 9400 | 22.34 |
| | | 1907.6 | 9538 | 22.45 |
| | Subtest 3 | 1852.4 | 9262 | 22.52 |
| | | 1880.0 | 9400 | 22.48 |
| | | 1907.6 | 9538 | 22.61 |
| | Subtest 4 | 1852.4 | 9262 | 22.64 |
| | | 1880.0 | 9400 | 22.52 |
| | | 1907.6 | 9538 | 22.42 |
| HSUPA | Subtest 1 | 1852.4 | 9262 | 22.63 |
| | | 1880.0 | 9400 | 22.40 |
| | | 1907.6 | 9538 | 22.41 |
| | Subtest 2 | 1852.4 | 9262 | 22.63 |
| | | 1880.0 | 9400 | 22.45 |
| | | 1907.6 | 9538 | 22.56 |
| | Subtest 3 | 1852.4 | 9262 | 22.64 |
| | | 1880.0 | 9400 | 22.48 |
| | | 1907.6 | 9538 | 22.44 |
| | Subtest 4 | 1852.4 | 9262 | 22.51 |
| | | 1880.0 | 9400 | 22.42 |
| | | 1907.6 | 9538 | 22.53 |
| | Subtest 5 | 1852.4 | 9262 | 22.50 |
| | | 1880.0 | 9400 | 22.37 |
| | | 1907.6 | 9538 | 22.54 |

WCDMA band V

| Mode | | Carrier frequency (MHz) | Channel No. | RF Power Output (dBm) |
|---|---|---|---|---|
| Release 99 | RMC,12.2kbps | 826.4 | 4132 | 23.98 |
| | | 836.6 | 4183 | 23.83 |
| | | 846.6 | 4233 | 23.83 |
| HSDPA | Subtest 1 | 826.4 | 4132 | 22.96 |
| | | 836.6 | 4183 | 22.69 |
| | | 846.6 | 4233 | 22.75 |
| | Subtest 2 | 826.4 | 4132 | 22.98 |
| | | 836.6 | 4183 | 22.75 |
| | | 846.6 | 4233 | 22.70 |
| | Subtest 3 | 826.4 | 4132 | 22.80 |
| | | 836.6 | 4183 | 22.82 |
| | | 846.6 | 4233 | 22.70 |
| | Subtest 4 | 826.4 | 4132 | 22.91 |
| | | 836.6 | 4183 | 22.69 |
| | | 846.6 | 4233 | 22.79 |
| HSUPA | Subtest 1 | 826.4 | 4132 | 22.86 |
| | | 836.6 | 4183 | 22.75 |
| | | 846.6 | 4233 | 22.70 |
| | Subtest 2 | 826.4 | 4132 | 22.96 |
| | | 836.6 | 4183 | 22.64 |
| | | 846.6 | 4233 | 22.79 |
| | Subtest 3 | 826.4 | 4132 | 22.91 |
| | | 836.6 | 4183 | 22.78 |
| | | 846.6 | 4233 | 22.64 |
| | Subtest 4 | 826.4 | 4132 | 22.83 |
| | | 836.6 | 4183 | 22.80 |
| | | 846.6 | 4233 | 22.74 |
| | Subtest 5 | 826.4 | 4132 | 22.89 |
| | | 836.6 | 4183 | 22.81 |
| | | 846.6 | 4233 | 22.74 |

WCDMA band IV

| Mode | | Carrier frequency (MHz) | Channel No. | RF Power Output (dBm) |
|---|---|---|---|---|
| Release 99 | RMC,12.2kbps | 1712.4 | 1312 | 23.72 |
| | | 1732.4 | 1412 | 23.70 |
| | | 1752.6 | 1513 | 23.62 |
| HSDPA | Subtest 1 | 1712.4 | 1312 | 22.53 |
| | | 1732.4 | 1412 | 22.60 |
| | | 1752.6 | 1513 | 22.47 |
| | Subtest 2 | 1712.4 | 1312 | 22.67 |
| | | 1732.4 | 1412 | 22.55 |
| | | 1752.6 | 1513 | 22.55 |
| | Subtest 3 | 1712.4 | 1312 | 22.65 |
| | | 1732.4 | 1412 | 22.68 |
| | | 1752.6 | 1513 | 22.44 |
| | Subtest 4 | 1712.4 | 1312 | 22.71 |
| | | 1732.4 | 1412 | 22.61 |
| | | 1752.6 | 1513 | 22.48 |
| HSUPA | Subtest 1 | 1712.4 | 1312 | 22.71 |
| | | 1732.4 | 1412 | 22.52 |
| | | 1752.6 | 1513 | 22.50 |
| | Subtest 2 | 1712.4 | 1312 | 22.63 |
| | | 1732.4 | 1412 | 22.66 |
| | | 1752.6 | 1513 | 22.42 |
| | Subtest 3 | 1712.4 | 1312 | 22.57 |
| | | 1732.4 | 1412 | 22.55 |
| | | 1752.6 | 1513 | 22.47 |
| | Subtest 4 | 1712.4 | 1312 | 22.57 |
| | | 1732.4 | 1412 | 22.62 |
| | | 1752.6 | 1513 | 22.44 |
| | Subtest 5 | 1712.4 | 1312 | 22.64 |
| | | 1732.4 | 1412 | 22.57 |
| | | 1752.6 | 1513 | 22.57 |

**Occupied Bandwidth**

WCDMA band II

REL99 Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of 99% Power (MHz) |
|---|---|---|
| 1852.4 | 9262 | 4.1443 |
| 1880.0 | 9400 | 4.1550 |
| 1907.6 | 9538 | 4.1176 |

HSDPA Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of 99% Power (MHz) |
|---|---|---|
| 1852.4 | 9262 | 4.1295 |
| 1880.0 | 9400 | 4.1757 |
| 1907.6 | 9538 | 4.1393 |

WCDMA band V

REL99 Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of 99% Power (MHz) |
|---|---|---|
| 826.4 | 4132 | 4.1293 |
| 836.6 | 4183 | 4.1286 |
| 846.6 | 4233 | 4.1344 |

HSDPA Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of 99% Power (MHz) |
|---|---|---|
| 826.4 | 4132 | 4.1470 |
| 836.6 | 4183 | 4.1338 |
| 846.6 | 4233 | 4.1187 |

WCDMA band IV

REL99 Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of 99% Power (MHz) |
|---|---|---|
| 1712.4 | 1312 | 4.1193 |
| 1732.4 | 1412 | 4.1215 |
| 1752.6 | 1513 | 4.1221 |

HSDPA Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of 99% Power (MHz) |
|---|---|---|
| 1712.4 | 1312 | 4.1235 |
| 1732.4 | 1412 | 4.1279 |
| 1752.6 | 1513 | 4.1351 |

## Emission Bandwidth

WCDMA band II
REL99 Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of -26dBc Power (MHz) |
|---|---|---|
| 1852.4 | 9262 | 4.705 |
| 1880.0 | 9400 | 4.733 |
| 1907.6 | 9538 | 4.683 |

HSDPA Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of -26dBc Power (MHz) |
|---|---|---|
| 1852.4 | 9262 | 4.726 |
| 1880.0 | 9400 | 4.715 |
| 1907.6 | 9538 | 4.711 |

WCDMA band V
REL99 Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of -26dBc Power (MHz) |
|---|---|---|
| 826.4 | 4132 | 4.681 |
| 836.6 | 4183 | 4.685 |
| 846.6 | 4233 | 4.704 |

HSDPA Mode:

| Carrier frequency (MHz) | Channel No. | Bandwidth of -26dBc Power (MHz) |
|---|---|---|
| 826.4 | 4132 | 4.704 |
| 836.6 | 4183 | 4.690 |
| 846.6 | 4233 | 4.687 |

WCDMA band IV
REL99 Mode:

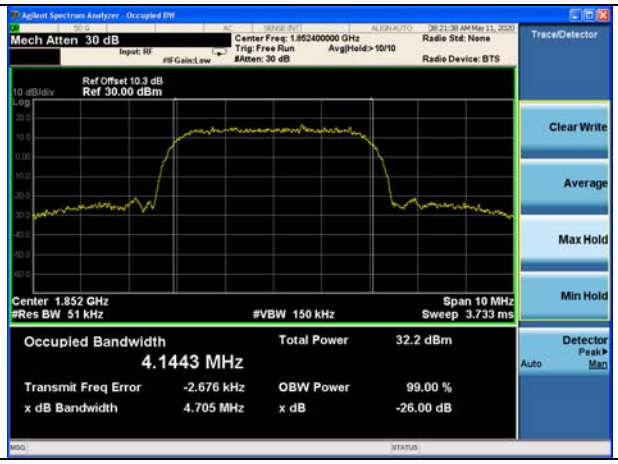
| Carrier frequency (MHz) | Channel No. | Bandwidth of -26dBc Power (MHz) |
|---|---|---|
| 1712.4 | 1312 | 4.665 |
| 1732.4 | 1412 | 4.675 |
| 1752.6 | 1513 | 4.701 |

HSDPA Mode:

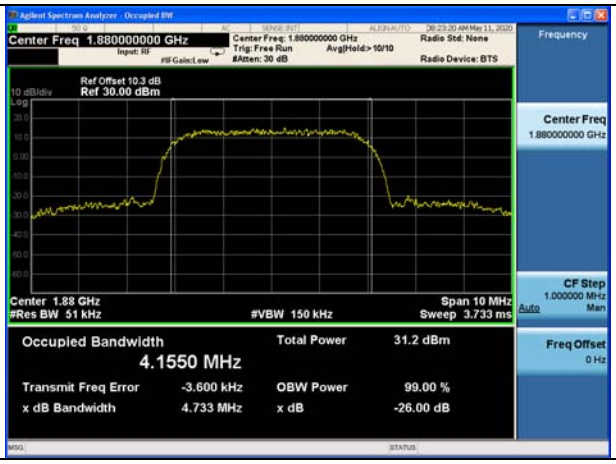
| Carrier frequency (MHz) | Channel No. | Bandwidth of -26dBc Power (MHz) |
|---|---|---|
| 1712.4 | 1312 | 4.665 |
| 1732.4 | 1412 | 4.656 |
| 1752.6 | 1513 | 4.668 |

WCDMA band II

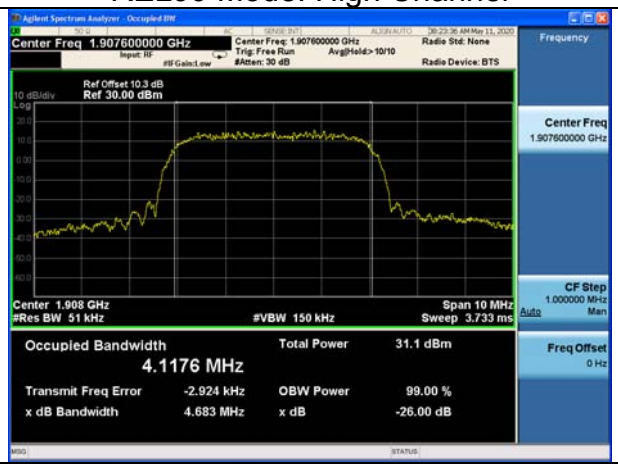
REL99 Mode: Low Channel



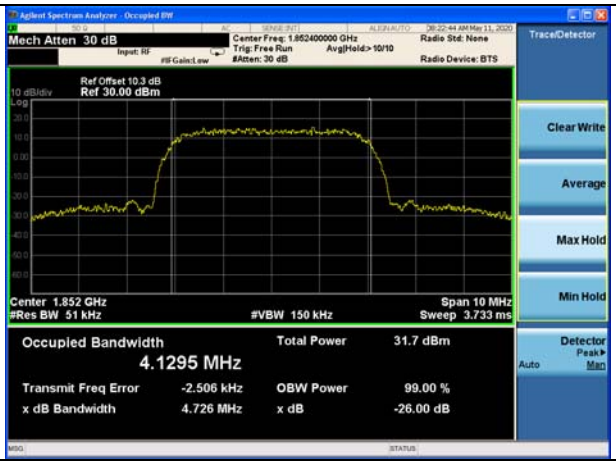

REL99 Mode: Mid Channel



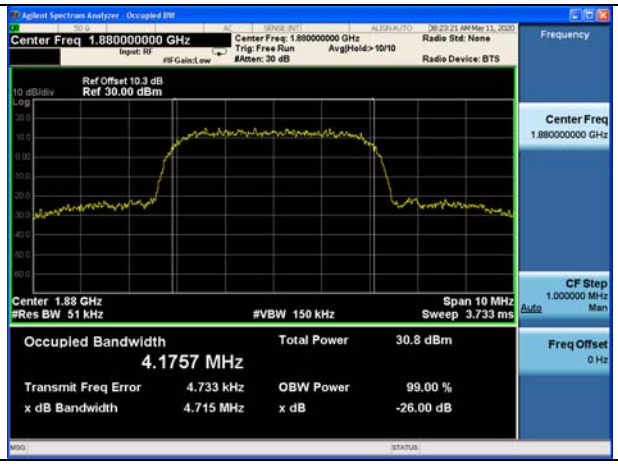

REL99 Mode: High Channel



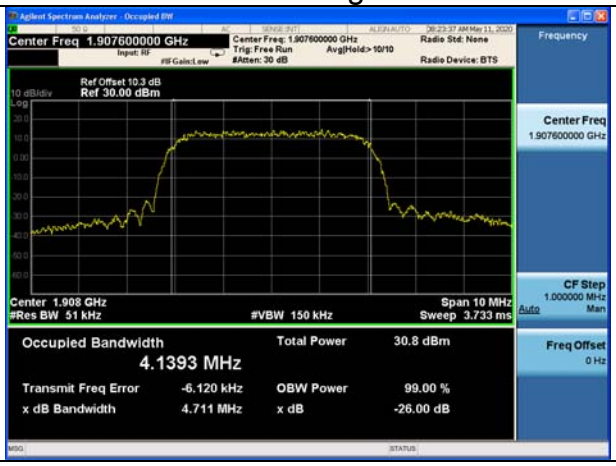

HSDPA Mode: Low Channel



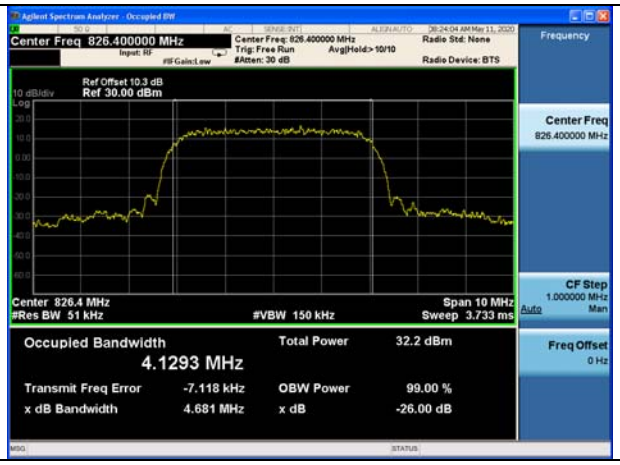
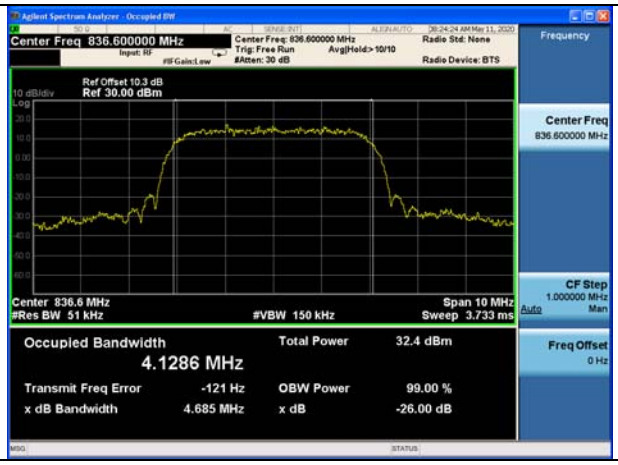
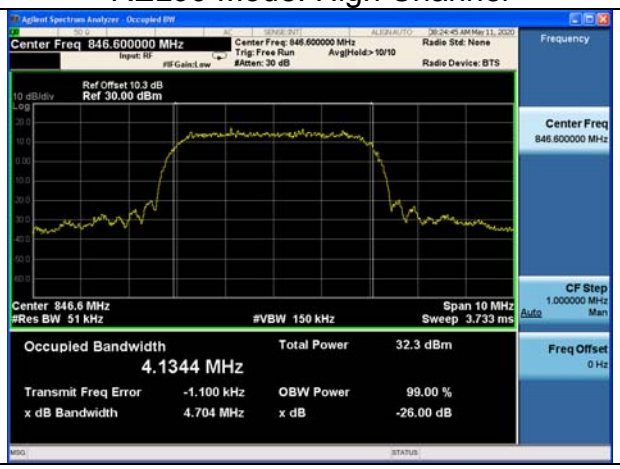
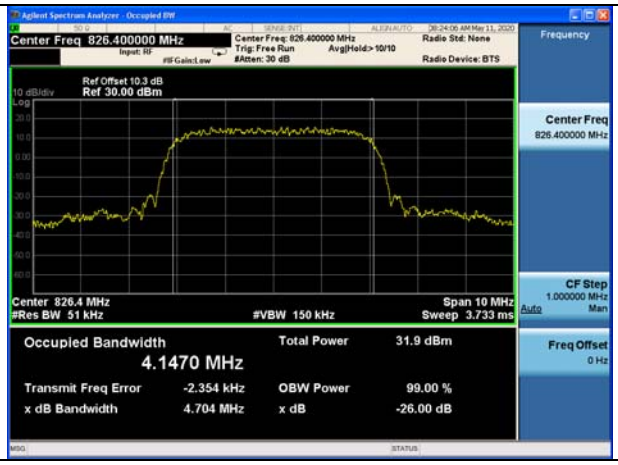
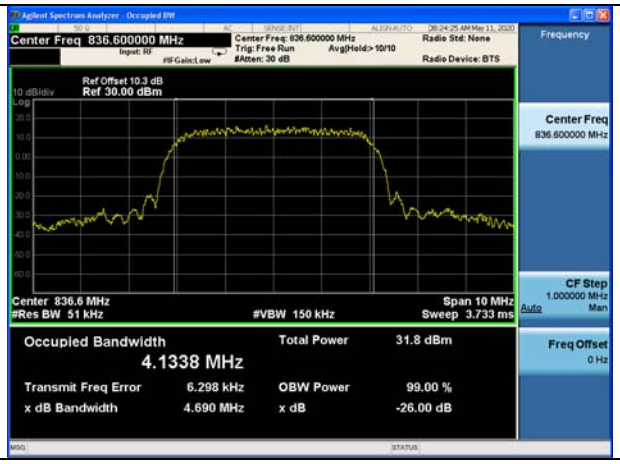
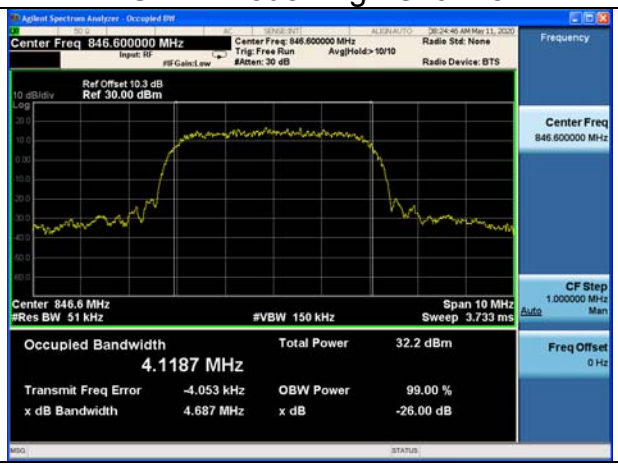

HSDPA Mode: Mid Channel



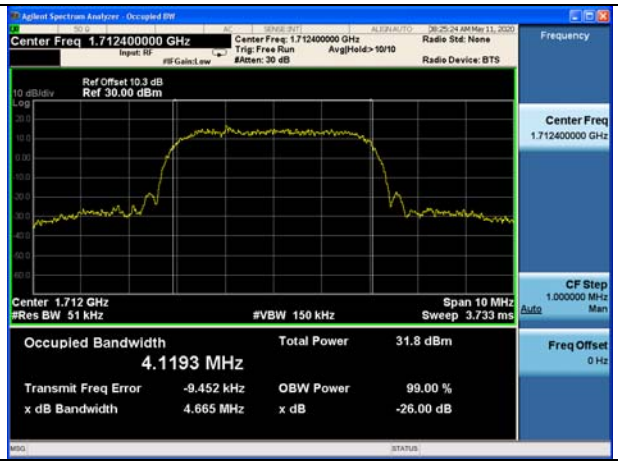
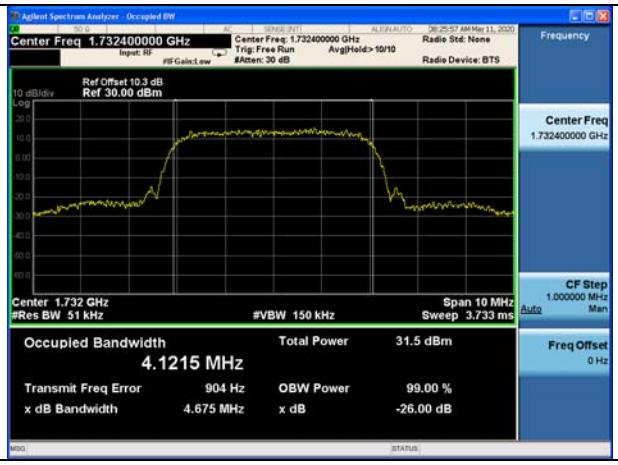
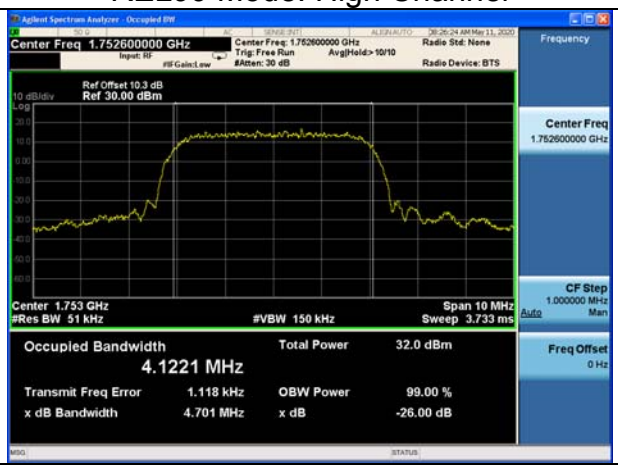
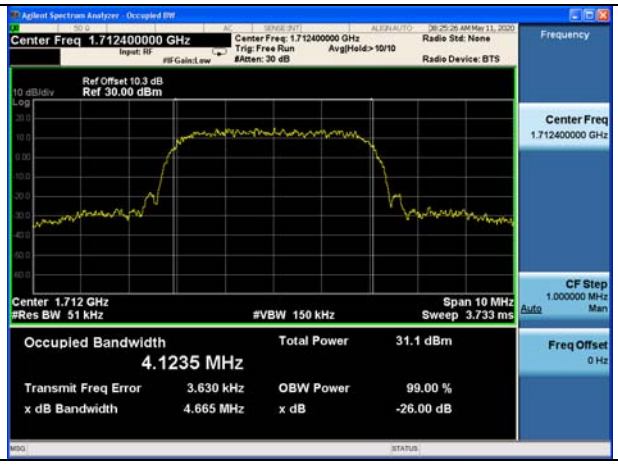
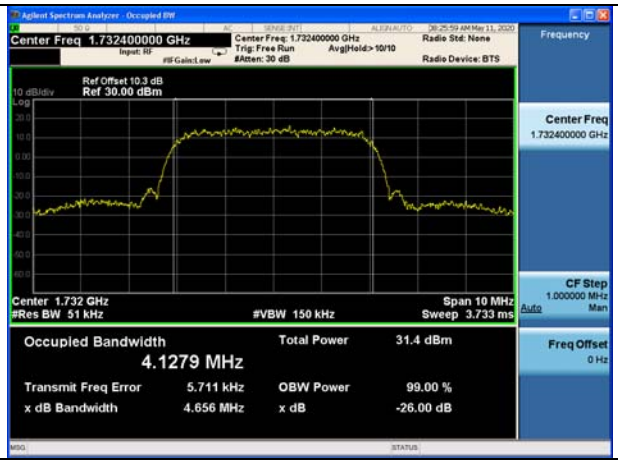
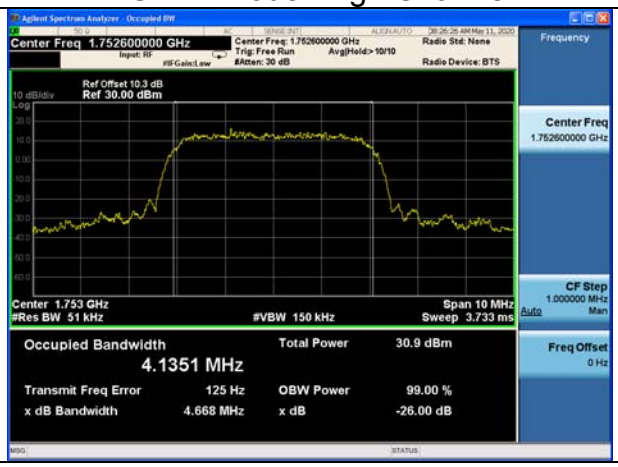

HSDPA Mode: High Channel



WCDMA band V

| REL99 Mode: Low Channel | REL99 Mode: Mid Channel |
|---|---|
|  |  |
| **REL99 Mode: High Channel** | **HSDPA Mode: Low Channel** |
|  |  |
| **HSDPA Mode: Mid Channel** | **HSDPA Mode: High Channel** |
|  |  |

WCDMA band IV

| REL99 Mode: Low Channel | REL99 Mode: Mid Channel |
|---|---|
|  |  |
| **REL99 Mode: High Channel** | **HSDPA Mode: Low Channel** |
|  |  |
| **HSDPA Mode: Mid Channel** | **HSDPA Mode: High Channel** |
|  |  |

## Spurious Emissions at antenna terminal

WCDMA band II

| Mode | Carrier frequency (MHz) | Channel | Conducted Spurious Plot |
|---|---|---|---|
| REL99 | 1880 | 9400 | Fig.1-2 |
| HSDPA | 1880 | 9400 | Fig.3-4 |

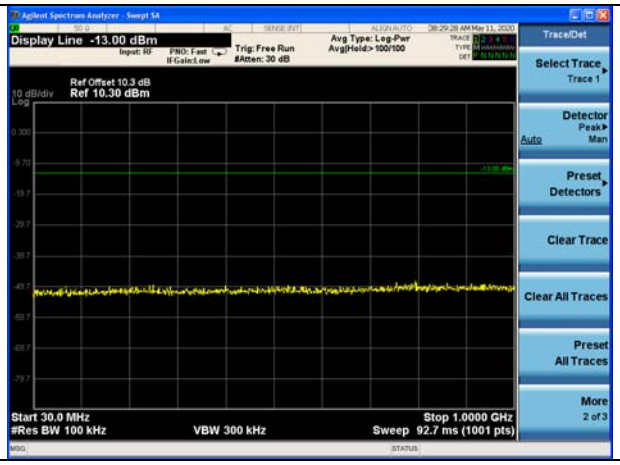



Fig.1

Fig.2

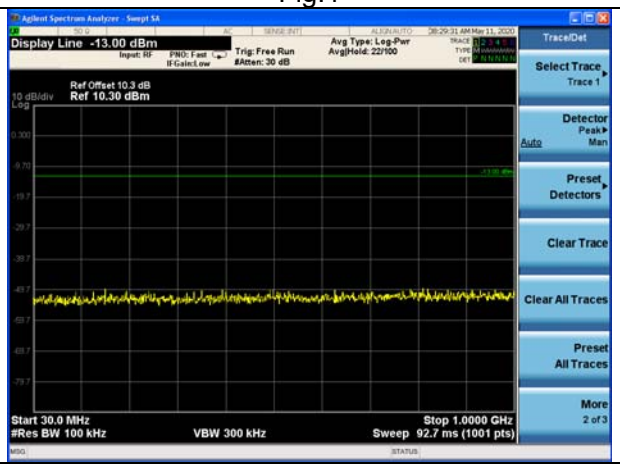



Fig3

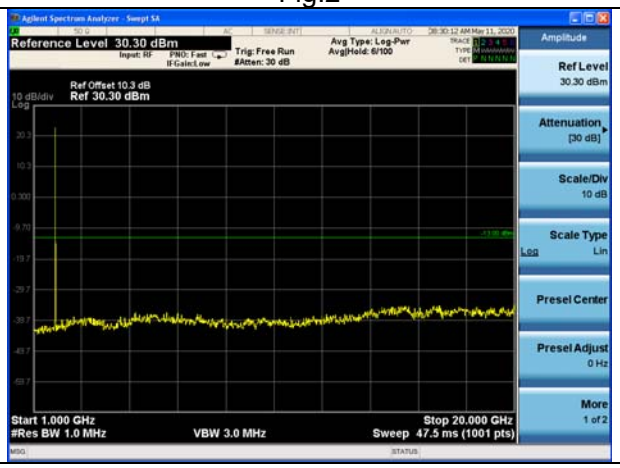



Fig4

WCDMA band V

| Mode | Carrier frequency (MHz) | Channel | Conducted Spurious Plot |
|---|---|---|---|
| REL99 | 836.6 | 4183 | Fig.1-2 |
| HSDPA | 836.6 | 4183 | Fig.3-4 |

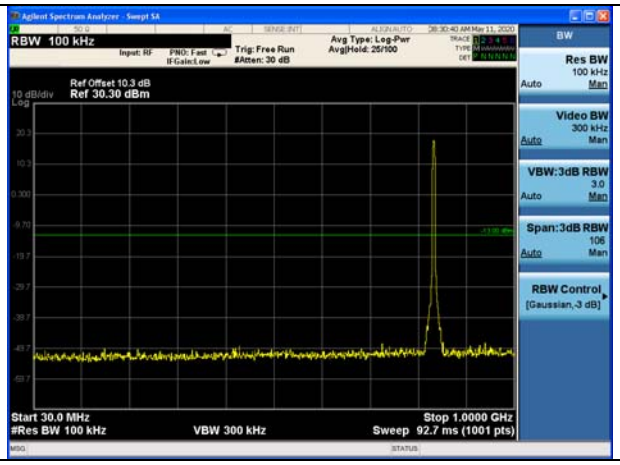



Fig.1

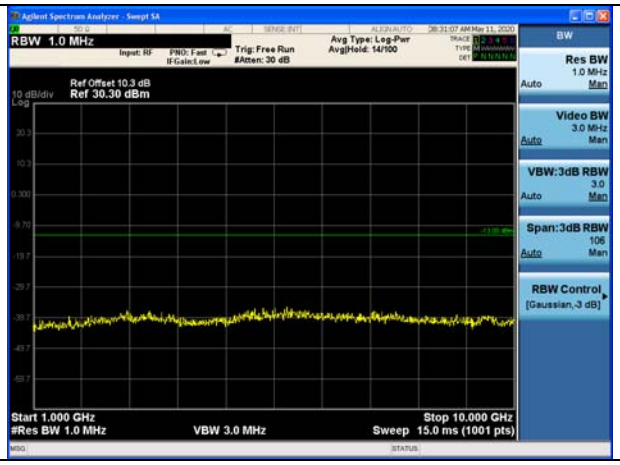



Fig.2

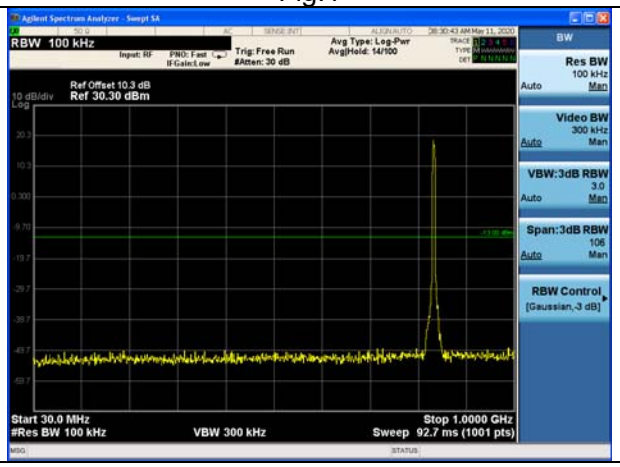



Fig3

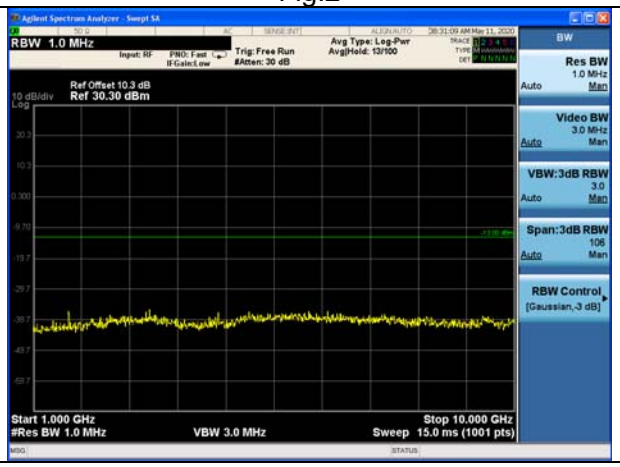



Fig4

WCDMA band IV

| Mode | Carrier frequency (MHz) | Channel | Conducted Spurious Plot |
|---|---|---|---|
| REL99 | 1732.4 | 1412 | Fig.1-2 |
| HSDPA | 1732.4 | 1412 | Fig.3-4 |

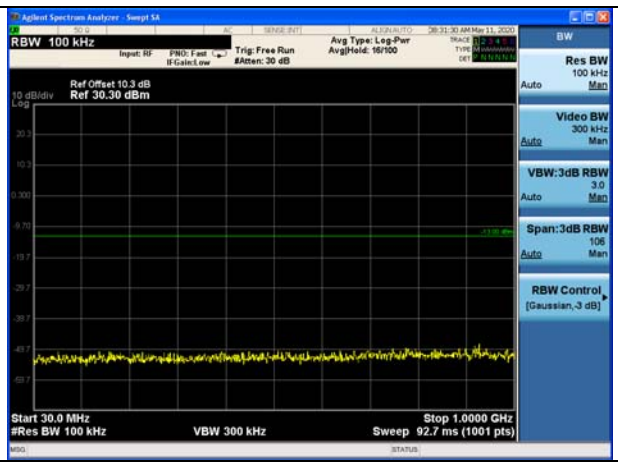



Fig.1

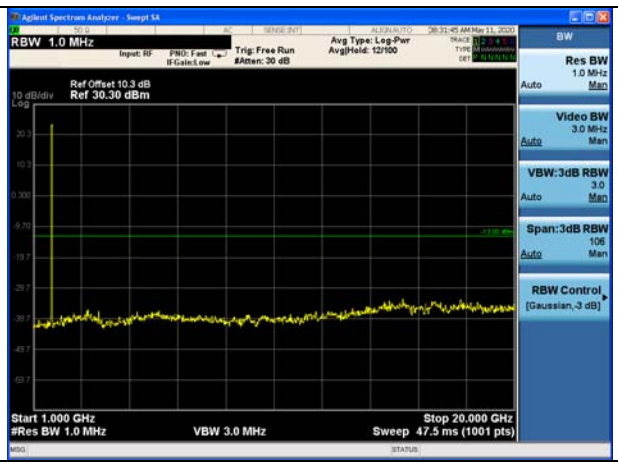



Fig.2

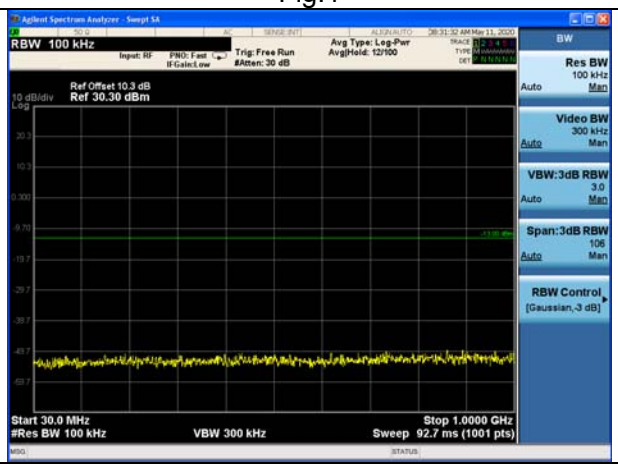



Fig3

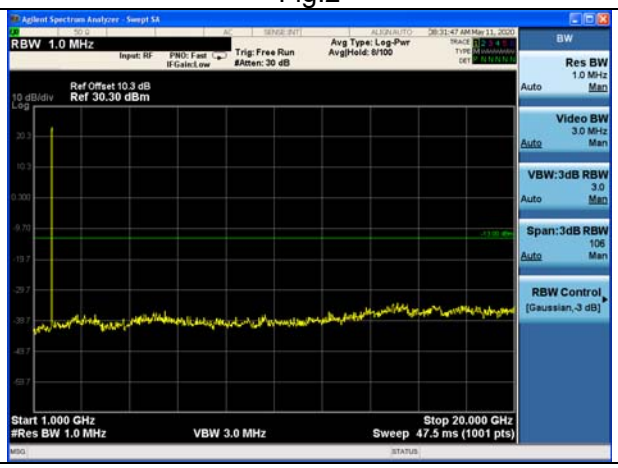



Fig4

## Band Edges Compliance

WCDMA Band II

| Mode | Carrier frequency (MHz) | Channel | Band Edges Plot |
|---|---|---|---|
| REL99 | 1852.4 | 9262 | Fig.1 |
| | 1907.6 | 9538 | Fig.2 |
| HSDPA | 1852.4 | 9262 | Fig.3 |
| | 1907.6 | 9538 | Fig.4 |

Fig.1

Fig.2

Fig.3

Fig.4

WCDMA band V

| Mode | Carrier frequency (MHz) | Channel | Band Edges Plot |
|---|---|---|---|
| REL99 | 826.4 | 4132 | Fig.1 |
| | 846.6 | 4233 | Fig.2 |
| HSDPA | 826.4 | 4132 | Fig.3 |
| | 846.6 | 4233 | Fig.4 |

Fig.1

Fig.2

Fig.3

Fig.4

WCDMA band IV

| Mode | Carrier frequency (MHz) | Channel | Band Edges Plot |
|---|---|---|---|
| REL99 | 1712.4 | 1312 | Fig.1 |
| | 1752.6 | 1513 | Fig.2 |
| HSDPA | 1712.4 | 1312 | Fig.3 |
| | 1752.6 | 1513 | Fig.4 |

Fig.1

Fig.2

Fig.3

Fig.4

## Frequency Stability

WCDMA band II
REL99 Mode:

| Temperature(°C) | Test Result (ppm)@NV | | |
|---|---|---|---|
| | Channel 9262 | Channel 9400 | Channel 9538 |
| -10 | -0.026 | -0.023 | -0.062 |
| 0 | 0.060 | 0.009 | 0.006 |
| +10 | -0.023 | -0.009 | 0.072 |
| +20 | 0.000 | 0.000 | 0.000 |
| +30 | -0.023 | 0.070 | -0.060 |
| +40 | 0.020 | 0.055 | 0.042 |
| +50 | -0.035 | -0.082 | -0.035 |
| +55 | 0.012 | -0.002 | 0.096 |
| LV@20°C | -0.031 | -0.029 | 0.006 |
| HV@20°C | 0.055 | -0.079 | -0.039 |

HSDPA Mode:

| Temperature(° C) | Test Result (ppm)@NV | | |
|---|---|---|---|
| | Channel 9262 | Channel 9400 | Channel 9538 |
| -10 | 0.064 | -0.003 | -0.015 |
| 0 | 0.097 | -0.015 | -0.041 |
| +10 | 0.067 | 0.069 | -0.040 |
| +20 | 0.000 | 0.000 | 0.000 |
| +30 | -0.006 | -0.031 | 0.004 |
| +40 | 0.077 | -0.016 | 0.009 |
| +50 | -0.085 | -0.041 | -0.056 |
| +55 | 0.042 | -0.023 | -0.002 |
| LV@20°C | 0.070 | -0.098 | -0.063 |
| HV@20°C | 0.039 | 0.091 | -0.035 |

WCDMA band V
REL99 Mode:

| Temperature(°C) | Test Result (ppm)@NV | | |
|---|---|---|---|
| | Channel 4132 | Channel 4183 | Channel 4233 |
| -10 | 0.011 | -0.003 | -0.007 |
| 0 | 0.100 | 0.051 | 0.095 |
| +10 | -0.016 | -0.032 | -0.027 |
| +20 | 0.000 | 0.000 | 0.000 |
| +30 | 0.080 | -0.091 | 0.051 |
| +40 | 0.084 | 0.001 | -0.096 |
| +50 | 0.035 | 0.022 | 0.012 |
| +55 | 0.098 | -0.069 | 0.065 |
| LV@20°C | 0.004 | -0.092 | -0.064 |
| HV@20°C | -0.050 | -0.078 | -0.037 |

HSDPA Mode:

| Temperature(°C) | Test Result (ppm)@NV | | |
|---|---|---|---|
| | Channel 4132 | Channel 4183 | Channel 4233 |
| -10 | -0.088 | -0.064 | -0.044 |
| 0 | 0.005 | -0.095 | -0.069 |
| +10 | 0.001 | -0.005 | -0.011 |
| +20 | 0.000 | 0.000 | 0.000 |
| +30 | 0.053 | -0.094 | -0.024 |
| +40 | 0.035 | 0.099 | -0.045 |
| +50 | -0.043 | 0.012 | 0.097 |
| +55 | -0.074 | -0.038 | -0.001 |
| LV@20°C | -0.019 | 0.001 | 0.027 |
| HV@20°C | 0.037 | 0.082 | 0.075 |

WCDMA band IV
REL99 Mode:

| Temperature(°C) | Test Result (ppm)@NV | | |
|---|---|---|---|
| | Channel 1312 | Channel 1412 | Channel 1513 |
| -10 | -0.054 | 0.034 | 0.018 |
| 0 | 0.070 | -0.015 | -0.038 |
| +10 | -0.064 | -0.062 | 0.081 |
| +20 | 0.000 | 0.000 | 0.000 |
| +30 | -0.082 | -0.079 | 0.064 |
| +40 | 0.022 | 0.029 | 0.066 |
| +50 | 0.042 | 0.083 | 0.020 |
| +55 | -0.084 | -0.043 | -0.004 |
| LV@20°C | -0.016 | -0.093 | 0.097 |
| HV@20°C | 0.057 | 0.076 | -0.064 |

HSDPA Mode:

| Temperature(°C) | Test Result (ppm)@NV | | |
|---|---|---|---|
| | Channel 1312 | Channel 1412 | Channel 1513 |
| -10 | 0.043 | 0.066 | -0.001 |
| 0 | -0.087 | 0.061 | 0.031 |
| +10 | -0.060 | 0.024 | -0.009 |
| +20 | 0.000 | 0.000 | 0.000 |
| +30 | 0.072 | 0.006 | 0.097 |
| +40 | -0.074 | -0.043 | -0.013 |
| +50 | -0.087 | -0.035 | -0.063 |
| +55 | 0.047 | -0.054 | 0.013 |
| LV@20°C | -0.036 | -0.003 | 0.085 |
| HV@20°C | 0.046 | -0.019 | 0.064 |

## Peak-Average Ratio

WCDMA band II

| Mode | Carrier frequency (MHz) | Channel | Band Edges Plot |
|---|---|---|---|
| REL99 | 1880 | 9400 | Fig.1 |
| HSDPA | 1880 | 9400 | Fig.2 |

Fig.1

Fig.2

WCDMA band V

| Mode | Carrier frequency (MHz) | Channel | Band Edges Plot |
|---|---|---|---|
| REL99 | 836.6 | 4183 | Fig.1 |
| HSDPA | 836.6 | 4183 | Fig.2 |

Fig.1

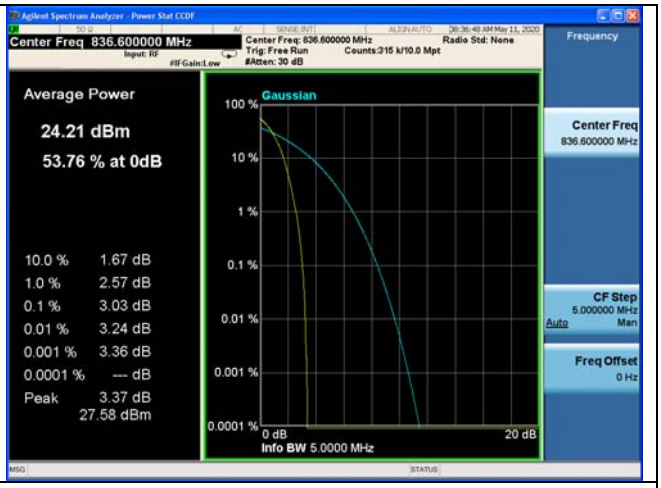



Fig.2

WCDMA band IV

| Mode | Carrier frequency (MHz) | Channel | Band Edges Plot |
|---|---|---|---|
| REL99 | 1732.4 | 1412 | Fig.1 |
| HSDPA | 1732.4 | 1412 | Fig.2 |

Fig.1

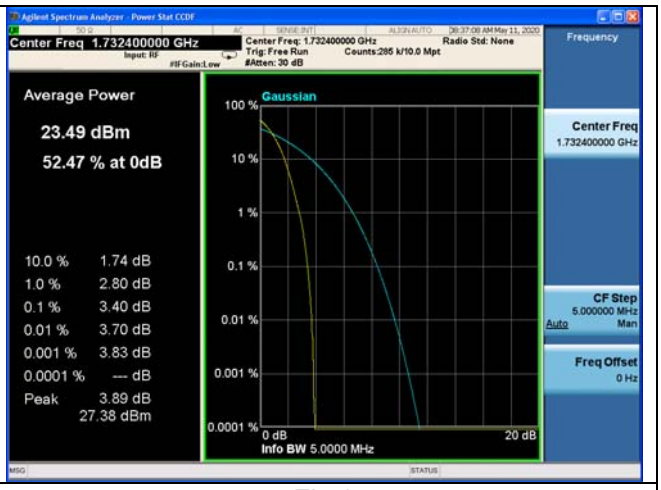



Fig.2

# APPENDIX B – TEST DATA OF RADIATED EMISSION

The measurement results are obtained as described below:
Peak EIRP = Pmea + Pca Cable loss+ Ga Antenna Gain
Sample calculation: (25.30 dBm) = (20.50 dBm) + (-3.8 dB) + (8.6 dB), the corresponding frequency is 1852.4MHz.

| Frequency (MHz) | Peak EIRP(dBm) | Pca Cable loss(dB) | Ga Antenna Gain (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|
| 1852.4 | 25.30 | -3.8 | 8.6 | 20.50 | Vertical |

WCDMA band II
Test result:

WCMDA Mode:

| Frequency (MHz) | Peak EIRP(dBm) | Pca Cable loss | Ga Antenna Gain (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|
| 1852.4 | 25.30 | -3.8 | 8.6 | 20.50 | Vertical |
| 1880.0 | 25.05 | -3.8 | 8.6 | 20.25 | Vertical |
| 1907.6 | 24.87 | -3.8 | 8.6 | 20.07 | Vertical |

HSDPA/HSUPA Mode:

| Frequency (MHz) | Peak EIRP(dBm) | Pca Cable loss | Ga Antenna Gain (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|
| 1852.4 | 23.93 | -3.8 | 8.6 | 19.13 | Vertical |
| 1880.0 | 23.94 | -3.8 | 8.6 | 19.14 | Vertical |
| 1907.6 | 24.34 | -3.8 | 8.6 | 19.54 | Vertical |

Test result:
WCDMA Mode:
Channel 9262

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2459.26 | -48.81 | -13 | Vertical |
| 2781.89 | -47.82 | -13 | Vertical |
| 3727.68 | -41.15 | -13 | Vertical |
| 6677.66 | -39.71 | -13 | Vertical |
| 9961.34 | -37.14 | -13 | Vertical |
| 17821.89 | -34.20 | -13 | Vertical |

Channel 9400

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2457.91 | -49.39 | -13 | Vertical |
| 2780.94 | -47.53 | -13 | Vertical |
| 3727.83 | -40.77 | -13 | Vertical |
| 6675.47 | -39.98 | -13 | Vertical |
| 9961.72 | -36.91 | -13 | Vertical |
| 17819.43 | -34.32 | -13 | Vertical |

Channel 9538

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2461.06 | -48.66 | -13 | Vertical |
| 2780.45 | -47.07 | -13 | Vertical |
| 3728.02 | -40.87 | -13 | Vertical |
| 6676.71 | -39.32 | -13 | Vertical |
| 9963.10 | -37.22 | -13 | Vertical |
| 17821.91 | -34.36 | -13 | Vertical |

HSDPA/HSUPA Mode:

Channel 9262

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2459.45 | -49.37 | -13 | Vertical |
| 2780.96 | -47.06 | -13 | Vertical |
| 3724.40 | -41.35 | -13 | Vertical |
| 6674.98 | -39.23 | -13 | Vertical |
| 9959.69 | -37.28 | -13 | Vertical |
| 17821.20 | -34.36 | -13 | Vertical |

Channel 9400

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2460.90 | -49.31 | -13 | Vertical |
| 2781.43 | -47.68 | -13 | Vertical |
| 3726.97 | -40.86 | -13 | Vertical |
| 6675.84 | -40.12 | -13 | Vertical |
| 9960.01 | -37.45 | -13 | Vertical |
| 17820.76 | -33.47 | -13 | Vertical |

Channel 9538

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2460.60 | -49.23 | -13 | Vertical |
| 2781.55 | -47.42 | -13 | Vertical |
| 3726.59 | -40.79 | -13 | Vertical |
| 6677.04 | -39.43 | -13 | Vertical |
| 9963.05 | -36.90 | -13 | Vertical |
| 17818.63 | -33.53 | -13 | Vertical |

WCDMA band IV
Test result:

WCMDA Mode:

| Frequency (MHz) | Peak EIRP(dBm) | Pca Cable loss | Ga Antenna Gain (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|
| 1712.4 | 24.89 | -3.8 | 8.6 | 20.09 | Vertical |
| 1732.4 | 24.66 | -3.8 | 8.6 | 19.86 | Vertical |
| 1752.6 | 25.19 | -3.8 | 8.6 | 20.39 | Vertical |

HSDPA/HSUPA Mode:

| Frequency (MHz) | Peak EIRP(dBm) | Pca Cable loss | Ga Antenna Gain (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|
| 1712.4 | 23.64 | -3.8 | 8.6 | 18.84 | Vertical |
| 1732.4 | 23.51 | -3.8 | 8.6 | 18.71 | Vertical |
| 1752.6 | 23.71 | -3.8 | 8.6 | 18.91 | Vertical |

Test result:
WCDMA Mode:
Channel 1312

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2459.92 | -48.50 | -13 | Vertical |
| 2780.65 | -47.43 | -13 | Vertical |
| 3728.31 | -40.47 | -13 | Vertical |
| 6678.07 | -39.52 | -13 | Vertical |
| 9961.87 | -37.21 | -13 | Vertical |
| 17819.45 | -33.92 | -13 | Vertical |

Channel 1412

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2458.68 | -49.38 | -13 | Vertical |
| 2782.15 | -47.59 | -13 | Vertical |
| 3727.12 | -40.59 | -13 | Vertical |
| 6677.40 | -39.73 | -13 | Vertical |
| 9961.56 | -36.92 | -13 | Vertical |
| 17821.28 | -33.70 | -13 | Vertical |

Channel 1513

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2460.90 | -49.35 | -13 | Vertical |
| 2780.54 | -47.24 | -13 | Vertical |
| 3726.95 | -40.85 | -13 | Vertical |
| 6678.25 | -39.85 | -13 | Vertical |
| 9959.93 | -36.98 | -13 | Vertical |
| 17820.50 | -33.96 | -13 | Vertical |

HSDPA/HSUPA Mode:
Channel 1312

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2458.06 | -48.83 | -13 | Vertical |
| 2778.49 | -47.63 | -13 | Vertical |
| 3728.09 | -40.63 | -13 | Vertical |
| 6675.76 | -39.46 | -13 | Vertical |
| 9961.72 | -37.00 | -13 | Vertical |
| 17821.98 | -34.39 | -13 | Vertical |

Channel 1412

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2459.03 | -49.00 | -13 | Vertical |
| 2781.99 | -46.99 | -13 | Vertical |
| 3724.73 | -40.56 | -13 | Vertical |
| 6678.63 | -39.42 | -13 | Vertical |
| 9962.93 | -36.84 | -13 | Vertical |
| 17819.96 | -34.05 | -13 | Vertical |

Channel 1513

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 2457.99 | -48.86 | -13 | Vertical |
| 2779.35 | -47.35 | -13 | Vertical |
| 3726.58 | -40.39 | -13 | Vertical |
| 6675.59 | -39.25 | -13 | Vertical |
| 9962.23 | -37.19 | -13 | Vertical |
| 17821.53 | -33.74 | -13 | Vertical |

WCDMA band V
Test result:
WCDMA Mode:

| Frequency (MHz) | Peak ERP (dBm) | Pca Cable loss(dB) | Ga Antenna Gain (dB) | Correction (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|---|
| 826.4 | 23.55 | -3.4 | 8.3 | 2.15 | 20.80 | Vertical |
| 836.6 | 23.38 | -3.4 | 8.3 | 2.15 | 20.63 | Vertical |
| 846.6 | 23.68 | -3.4 | 8.3 | 2.15 | 20.93 | Vertical |

HSDPA/HSUPA Mode:

| Frequency (MHz) | Peak ERP (dBm) | Pca Cable loss(dB) | Ga Antenna Gain (dB) | Correction (dB) | Pmea (dBm) | Polarization |
|---|---|---|---|---|---|---|
| 826.4 | 22.53 | -3.4 | 8.3 | 2.15 | 19.78 | Vertical |
| 836.6 | 22.94 | -3.4 | 8.3 | 2.15 | 20.19 | Vertical |
| 846.6 | 22.58 | -3.4 | 8.3 | 2.15 | 19.83 | Vertical |

Test result:
WCDMA Mode:
Channel 4132

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 1649.92 | -53.47 | -13 | Vertical |
| 1668.13 | -51.07 | -13 | Vertical |
| 2534.10 | -44.04 | -13 | Vertical |
| 2575.29 | -44.49 | -13 | Vertical |
| 8961.01 | -39.96 | -13 | Vertical |
| 9972.38 | -36.45 | -13 | Vertical |

Channel 4183

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 1648.91 | -53.08 | -13 | Vertical |
| 1665.14 | -51.10 | -13 | Vertical |
| 2534.31 | -44.49 | -13 | Vertical |
| 2577.70 | -43.86 | -13 | Vertical |
| 8962.07 | -39.94 | -13 | Vertical |
| 9970.24 | -36.50 | -13 | Vertical |

Channel 4233

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 1649.51 | -52.94 | -13 | Vertical |
| 1667.23 | -51.61 | -13 | Vertical |
| 2532.73 | -43.93 | -13 | Vertical |
| 2577.44 | -43.67 | -13 | Vertical |
| 8962.28 | -39.48 | -13 | Vertical |
| 9973.10 | -36.11 | -13 | Vertical |

HSDPA/HSUPA Mode:
Channel 4132

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 1649.59 | -52.52 | -13 | Vertical |
| 1666.70 | -51.04 | -13 | Vertical |
| 2533.69 | -43.94 | -13 | Vertical |
| 2577.63 | -44.03 | -13 | Vertical |
| 8963.01 | -39.21 | -13 | Vertical |
| 9972.37 | -36.46 | -13 | Vertical |

Channel 4183

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 1647.26 | -52.92 | -13 | Vertical |
| 1668.33 | -50.82 | -13 | Vertical |
| 2536.25 | -44.31 | -13 | Vertical |
| 2575.87 | -44.35 | -13 | Vertical |
| 8963.93 | -39.94 | -13 | Vertical |
| 9970.74 | -35.93 | -13 | Vertical |

Channel 4233

| Frequency (MHz) | Power (dBm) | Limited (dBm) | Polarization |
|---|---|---|---|
| 1650.20 | -52.81 | -13 | Vertical |
| 1667.49 | -50.84 | -13 | Vertical |
| 2533.95 | -44.11 | -13 | Vertical |
| 2576.32 | -43.76 | -13 | Vertical |
| 8964.29 | -39.59 | -13 | Vertical |
| 9971.14 | -36.19 | -13 | Vertical |

---The end of the test report---