



RF TEST REPORT

Applicant Honor Device Co., Ltd.
FCC ID 2AYGCVNE-LX1
Product Smart Phone
Model VNE-LX1
Report No. R2208A0708-R1
Issue Date August 10, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2021)/ FCC CFR 47 Part 22H (2021)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Xu Ying

Approved by: Xu Kai

TA Technology (Shanghai) Co., Ltd.

Building 3, No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000



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Summary of measurement results

| No. | Test Case | Clause in FCC rules | Verdict |
|--|--|-----------------------------------|---------|
| 1 | RF Power Output and Effective Radiated Power | 2.1046 22.913(a)(5) | PASS |
| 2 | Occupied Bandwidth | 2.1049 | PASS |
| 3 | Band Edge Compliance | 2.1051 / 22.917(a) | PASS |
| 4 | Peak-to-Average Power Ratio | 22.913(d)/ KDB 971168 D01(5.7) | PASS |
| 5 | Frequency Stability | 2.1055 / 22.355 | PASS |
| 6 | Spurious Emissions at Antenna Terminals | 2.1051 / 22.917(a) | PASS |
| 7 | Radiates Spurious Emission | 2.1053 / 22.917 (a) | PASS |
| Date of Testing: July 13, 2022 ~July 24, 2022 | | | |
| Date of Sample Received: July 13, 2022 | | | |
| Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. | | | |

VNE-LX1 (Report No.: R2208A0708-R1) is a variant model of VNE-LX3 (Report No.: R2207A0619-R1V2). Test values all duplicated from Original for variant. There is no test for variant in this report.

The difference between VNE-LX3 and VNE-LX1 are show in the below table:

| / | Model | VNE-LX3 | VNE-LX1 |
|----------------------|------------|---|--|
| Licensed Frequency | LTE Band | B2/B4/B5/B7/B13/B26/B38/B66 | B5/B7 |
| | UMTS Band | B2/B4/B5 | B2/B5 |
| Unlicensed Frequency | NFC | Not support | Support |
| Software | Version | 2.1.0.34(SP02C900E5R1P1) | 2.1.0.57(SP03C900E5R1P1) |
| RF | RF circuit | The RF circuit of the same frequency is the same. | The RF circuit of the same frequency is the same. The different frequency changed by hardware and some RF parameters. Changes are followed: DeleteWB4/LTEB2/B4/B13/B66/B38 SAWS and RF matching. |
| | Tune-up | The tune-up of the same frequency are the same. | The tune-up of the same frequency are the same. |
| Others | | The same | The same |

The detailed product change description please refers to the Difference Declaration Letter.



1. Test Laboratory

1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: Building 3, No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com



2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

| | |
|----------------------|--|
| Applicant | Honor Device Co., Ltd. |
| Applicant address | Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China |
| Manufacturer | Honor Device Co., Ltd. |
| Manufacturer address | Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China |

2.2. General Information

| EUT Description | | | |
|------------------------------|--|-------------------|---------------------|
| Model | VNE-LX1 | | |
| SN | A96BNU2625200516 | | |
| Hardware Version | HL1VNEM | | |
| Software Version | 2.1.0.57(SP03C900E5R1P1) | | |
| Power Supply | Battery / AC adapter | | |
| Antenna Type | Internal Antenna | | |
| Antenna Gain | Band | Main Antenna(dBi) | Second Antenna(dBi) |
| | GSM850 | -0.3 | -1.7 |
| | WCDMA Band V | -0.3 | -1.7 |
| | LTE Band 5 | -0.3 | -1.7 |
| Test Mode(s) | GSM 850; WCDMA Band V; LTE Band 5; | | |
| Test Modulation | (GSM/GPRS)GMSK, (EGPRS) GMSK/ 8PSK; (WCDMA) BPSK ,QPSK,16QAM; (LTE) QPSK, 16QAM(Uplink); QPSK, 16QAM,64QAM(Downlink); | | |
| GPRS Multislot Class | 12 | | |
| EGPRS Multislot Class | 12 | | |
| HSDPA UE Category | 14 | | |
| HSUPA UE Category | 7 | | |
| DC-HSDPA UE Category | 24 | | |
| HSPA+ UE Category | 24 | | |
| LTE Category | 4 | | |
| Maximum E.R.P. | GSM 850: | 30.45dBm | |
| | WCDMA Band V: | 21.76dBm | |
| | LTE Band 5: | 21.33dBm | |
| Rated Power Supply Voltage | 3.87V | | |
| Operating Voltage | Minimum: 3.6V Maximum: 4.45V | | |
| Operating Temperature | Lowest: 0°C Highest: +35°C | | |
| Testing Temperature | Lowest:-30°C Highest: +50°C | | |
| Operating Frequency Range(s) | Band | Tx (MHz) | Rx (MHz) |
| | GSM850 | 824 ~ 849 | 869 ~ 894 |
| | WCDMA Band V | 824 ~ 849 | 869 ~ 894 |
| | LTE Band 5 | 824 ~ 849 | 869 ~ 894 |
| EUT Accessory | | | |



| Accessory | Model | Manufacture | No. |
|------------|---------------------|---|-----|
| Adapter | HW-050200E02 | Honor Device Co., Ltd. (Manufacturer: Huntkey) | 1 |
| | | Honor Device Co., Ltd. (Manufacturer: BYD) | 2 |
| | HW-050200B02 | Honor Device Co., Ltd. (Manufacturer: Huntkey) | 3 |
| | | Honor Device Co., Ltd. (Manufacturer: BYD) | 4 |
| | HW-050200U02 | Honor Device Co., Ltd. (Manufacturer: Huntkey) | 5 |
| | | Honor Device Co., Ltd. (Manufacturer: BYD) | 6 |
| Battery | HB496590EFW | Honor Device Co., Ltd. (Manufacturer: SCUD) | 1 |
| | | Honor Device Co., Ltd. (Manufacturer: NVT) | 2 |
| | HB496590EFW-F | Honor Device Co., Ltd. (Manufacturer: SCUD) | 3 |
| | | Honor Device Co., Ltd. (Manufacturer: NVT) | 4 |
| Data Cable | RY0002 | NingBo Broad Telecommunication Co., Ltd. | 1 |
| | AU2-CRO013HF | Freeport Resources Enterprises Corp. | 2 |
| | 2120-00001-0 | MING JI ELECTRONICS CO., LTD. | 3 |
| | L125UC007-CS-H | LUXSHARE PRECISION INDUSTRY CO., LTD. | 4 |
| | CUDU01B-HC451-EH | FOXCONN INTERCONNECT TECHNOLOGY LIMITED | 5 |
| Earphone | MEND1532B528C00 | Jiangxi Lianchuang Hongsheng Electronic Co., LTD. | 1 |
| | 1293-3283-3.5MM-339 | BOLUO COUNTY QUANCHENG ELECTRONIC CO.,LTD. | 2 |

Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.

2. There is more than one Adapter/Battery/Data cable/Earphone, each one should be applied throughout the compliance test respectively, and however, only the worst case (Battery 3 /Data cable 1/ Earphone 1) will be recorded in this report.



3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR 47 Part 22H (2021)

FCC CFR47 Part 2 (2021)

Reference standard:

ANSI C63.26-2015

KDB 971168 D01 Power Meas License Digital Systems v03r01

4. Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, and however, only the worst case (SIM 1) will be recorded in this report.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Main Antenna: Z axis, vertical polarization for GSM/WCDMA/LTE; Second Antenna: X axis, horizontal polarization for Second Antenna GSM/WCDMA/LTE) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated. Subsequently, only the worst case emissions are reported.

The following testing in GSM/WCDMA/LTE is set based on the maximum RF Output Power.

Test modes are chosen to be reported as the worst case configuration below:

| Test items | Modes/Modulation | |
|--|--|--|
| | GSM 850 | WCDMA Band V |
| RF Power Output and Effective Radiated power | GSM GPRS EGPRS | RMC/AMR HSDPA/HSUPA DC-HSDPA/HSPA+ |
| Occupied Bandwidth | GSM GPRS(1Tx slot) EGPRS(1Tx slot) | RMC |
| Band Edge Compliance | GSM GPRS(1Tx slot) EGPRS(1Tx slot) | RMC |
| Peak-to-Average Power Ratio | GSM GPRS(1Tx slot) EGPRS(1Tx slot) | RMC |
| Frequency Stability | GSM GPRS(1Tx slot) EGPRS(1Tx slot) | RMC |
| Spurious Emissions at Antenna Terminals | GSM | RMC |
| Radiates Spurious Emission | GSM | RMC |



Test modes are chosen as the worst case configuration below for LTE Band 5

| Test items | Modes | Bandwidth (MHz) | | | | | Modulation | | RB | | | Test Channel | | | |
|--|---|-----------------|---|---|----|----|------------|-------|----|-----|------|--------------|---|---|---|
| | | 1.4 | 3 | 5 | 10 | 15 | QPSK | 16QAM | 1 | 50% | 100% | L | M | H | |
| RF power output and Effective Radiated power | LTE 5 | O | O | O | O | - | O | O | O | O | O | O | O | O | O |
| Occupied Bandwidth | LTE 5 | O | O | O | O | - | O | O | O | - | O | O | O | O | |
| Band Edge Compliance | LTE 5 | O | O | O | O | - | O | O | O | - | O | O | - | O | |
| Peak-to-Average Power Ratio | LTE 5 | O | O | O | O | - | O | O | - | - | O | O | O | O | |
| Frequency Stability | LTE 5 | O | O | O | O | - | O | O | O | - | - | - | O | - | |
| Spurious Emissions at Antenna Terminals | LTE 5 | O | O | O | O | - | O | - | O | - | - | O | O | O | |
| Radiates Spurious Emission | LTE 5 | O | - | O | O | - | O | - | O | - | - | - | O | - | |
| Note | 1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing. | | | | | | | | | | | | | | |

5. Test Case

5.1. RF Power Output and Effective Radiated Power

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

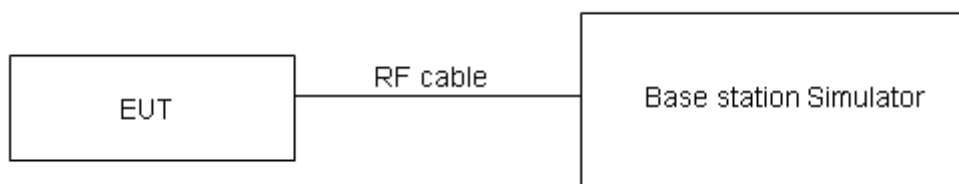
ERP can then be calculated as follows:

$$\text{EIRP (dBm)} = \text{Output Power (dBm)} - \text{Losses (dB)} + \text{Antenna Gain (dBi)}$$

where:dBd refers to gain relative to an ideal dipole.

$$\text{EIRP (dBm)} = \text{ERP (dBm)} + 2.15 \text{ (dB)}.$$

Test Setup



Limits

No specific RF power output requirements in part 2.1046.

Rule Part 22.913(a)(5) specifies that "Mobile/portable stations are limited to 7 watts ERP".

| | |
|-------|--------------------------------|
| Limit | $\leq 7 \text{ W}$ (38.45 dBm) |
|-------|--------------------------------|

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4 \text{ dB}$ for RF power output, $k = 2$, $U = 1.19 \text{ dB}$ for ERP.

Test Results

Refer to the section 6.1 of this report for test data.

5.2. Occupied Bandwidth

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

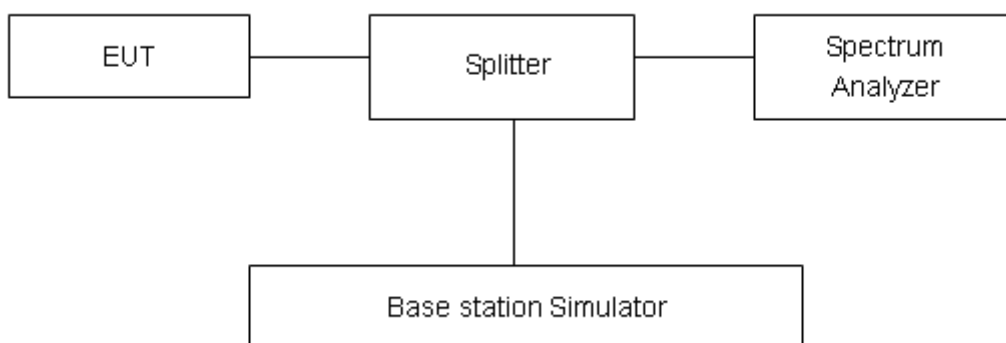
Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to $\geq 1\%EBW$, VBW is set to 3x RBW.

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 624\text{Hz}$.

Test Results

Refer to the section 6.2 of this report for test data.

5.3. Band Edge Compliance

Ambient condition

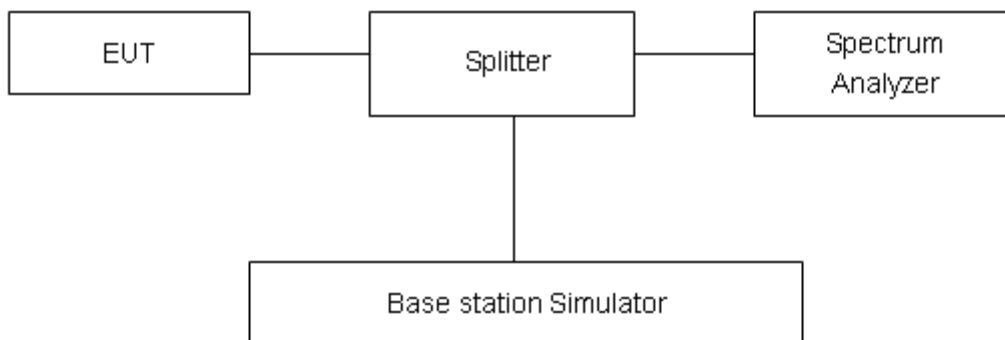
| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The average detector is used. RBW is set to $\geq 1\%EBW$, VBW is set to 3x RBW.

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.”

| | |
|-------|---------|
| Limit | -13 dBm |
|-------|---------|

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U=0.684dB$.

Test Results

Refer to the section 6.3 of this report for test data.

5.4. Peak-to-Average Power Ratio (PAPR)

Ambient condition

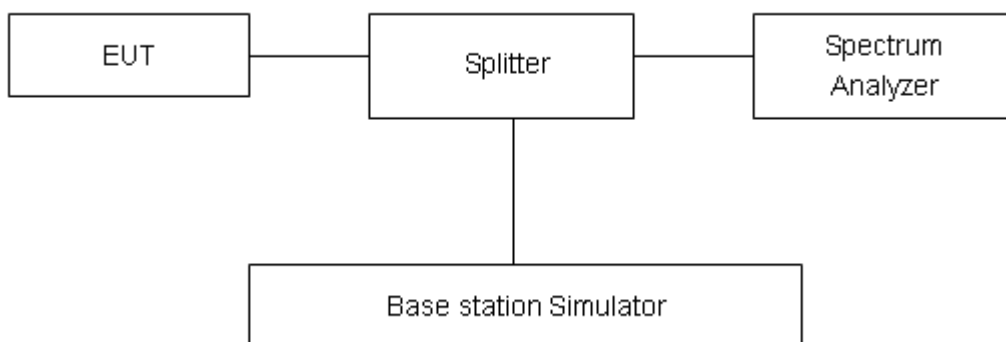
| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Methods of Measurement

Measure the total peak power and record as P_{Pk} . And measure the total average power and record as P_{Avg} . Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$PAPR (dB) = P_{Pk} (dBm) - P_{Avg} (dBm).$$

Test Setup



Limits

According to the Sec. 22.913(d), The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4$ dB.

Test Results

Refer to the section 6.4 of this report for test data.

5.5. Frequency Stability

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +50°C in 10°C step size,

(1) With all power removed, the temperature was decreased to 0°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

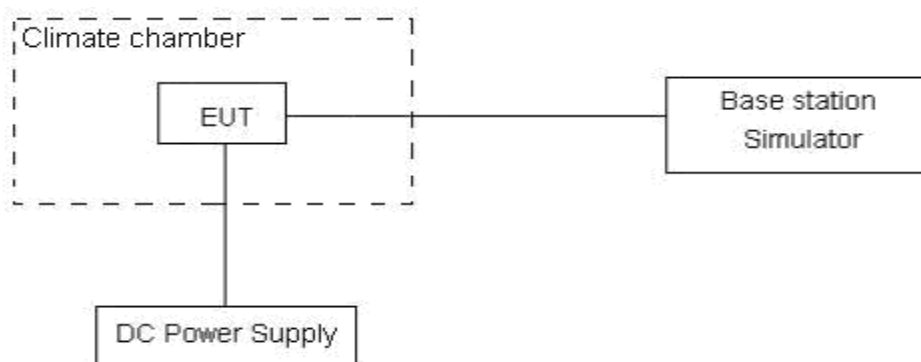
(3) Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements. Frequency Stability (Voltage Variation)

The frequency stability shall be measured with variation of primary supply voltage as follows:

Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.60 V and 4.45 V, with a nominal voltage of 3.87V.

Test setup



Limits

According to the Sec. 22.355, the frequency stability of the carrier shall be accurate to within 2.5 ppm of the received frequency for mobile stations.

| Limits | ≤ 2.5 ppm |
|--------|-----------|
|--------|-----------|

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 3$, $U = 0.01\text{ppm}$.



Test Results

Refer to the section 6.5 of this report for test data.

5.6. Spurious Emissions at Antenna Terminals

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier.

The peak detector is used. RBW are set to 100 kHz and VBW are set to 300 kHz for below 1G, RBW are set to 1MHz and VBW are set to 3MHz for above 1G, Sweep is set to ATUO.

RBW is set to 1 kHz (0.009MHz~ 0.15 MHz),

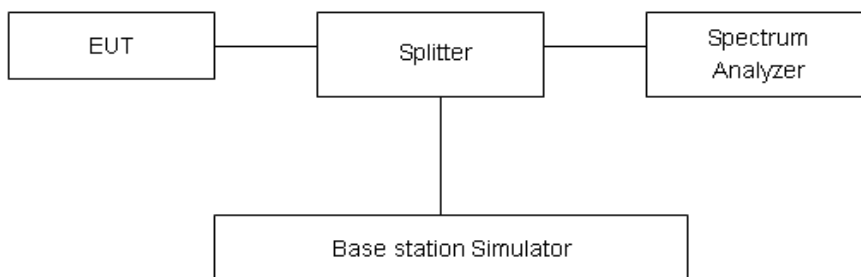
RBW is set to 10 kHz (0.15 MHz~ 30 MHz)

RBW is set to 100 kHz (30MHz~1000 MHz)

RBW is set to 1000 kHz (above 1000MHz)

The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup



Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.”

| | |
|-------|---------|
| Limit | -13 dBm |
|-------|---------|

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

| Frequency | Uncertainty |
|------------|-------------|
| 9kHz-1GHz | 0.684 dB |
| 1GHz-10GHz | 1.407 dB |

Test Results

Refer to the section 6.6 of this report for test data.

5.7. Radiates Spurious Emission

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

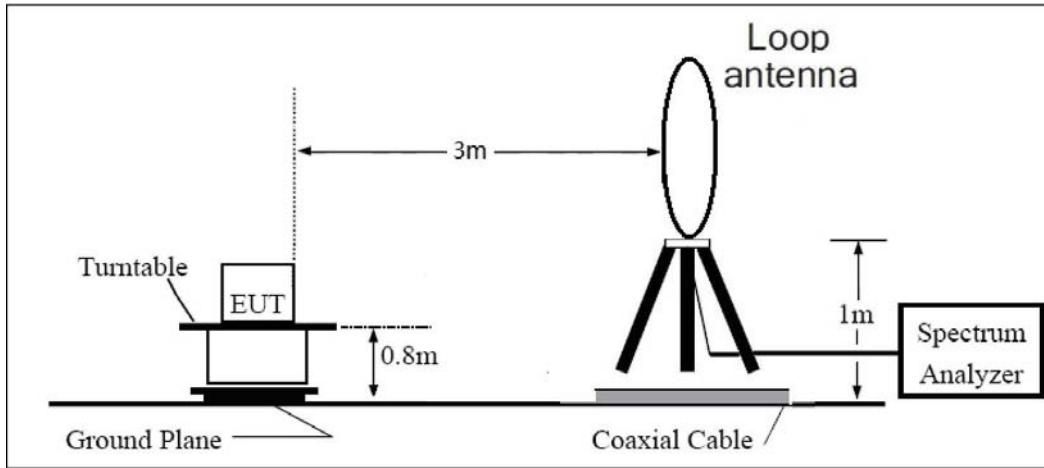
1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26-2015.
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or 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.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=100kHz,VBW=300kHz, and the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust 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.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP

= EIRP-2.15dB.

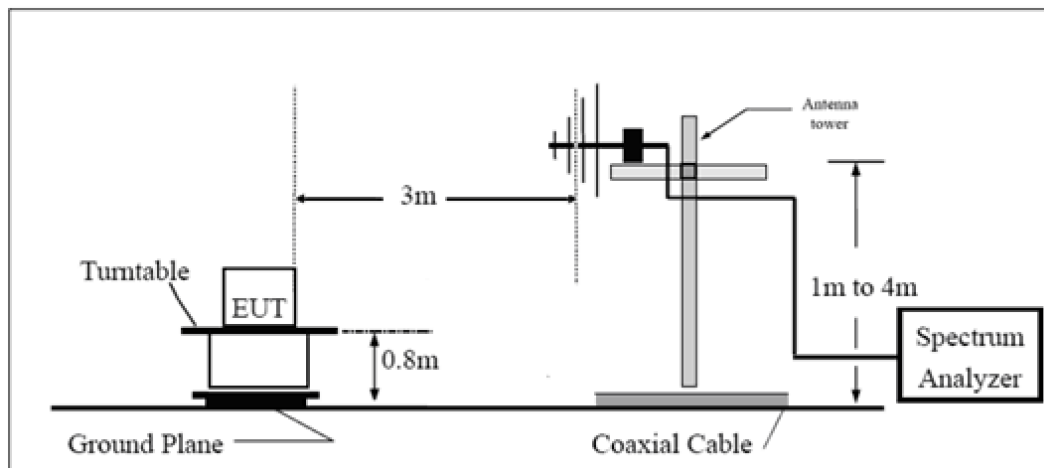
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

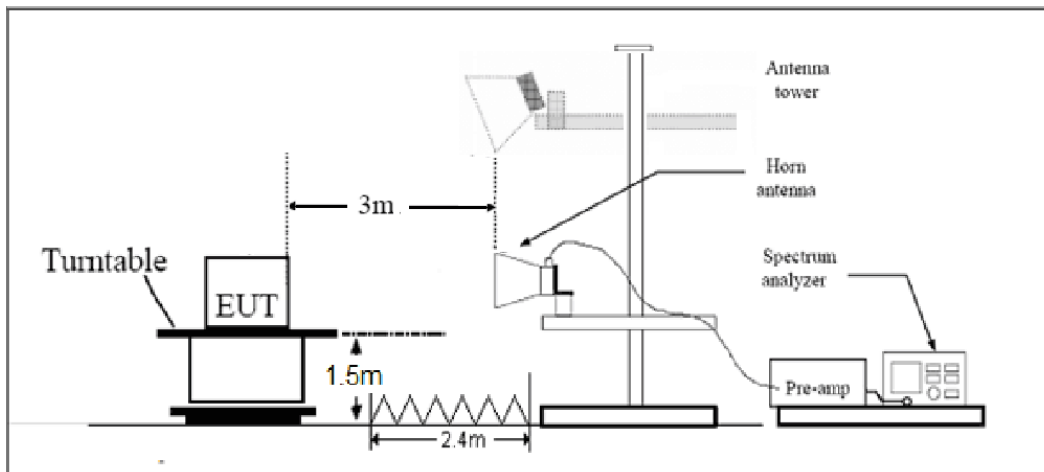
9KHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.”

| | |
|-------|---------|
| Limit | -13 dBm |
|-------|---------|

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

Test Results

Refer to the section 6.7 of this report for test data.

6. Test Result

6.1. RF Power Output and Effective Radiated Power

| GSM 850 | | Maximum Output Power (dBm) | | | Main Antenna ERP (dBm) | | | Second Antenna ERP (dBm) | | |
|-------------------|------------|----------------------------|-----------|-----------|------------------------|-----------|-----------|--------------------------|-----------|-----------|
| | | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | |
| | | 128/824.2 | 190/836.6 | 251/848.8 | 128/824.2 | 190/836.6 | 251/848.8 | 128/824.2 | 190/836.6 | 251/848.8 |
| GSM | CS | 32.83 | 32.90 | 32.86 | 30.38 | 30.45 | 30.41 | 28.98 | 29.05 | 29.01 |
| GPRS/EGPRS (GMSK) | 1 Tx Slot | 32.82 | 32.88 | 32.84 | 30.37 | 30.43 | 30.39 | 28.97 | 29.03 | 28.99 |
| | 2 Tx Slots | 30.15 | 30.23 | 30.19 | 27.70 | 27.78 | 27.74 | 26.30 | 26.38 | 26.34 |
| | 3 Tx Slots | 28.35 | 28.40 | 28.42 | 25.90 | 25.95 | 25.97 | 24.50 | 24.55 | 24.57 |
| | 4 Tx Slots | 26.87 | 26.92 | 26.90 | 24.42 | 24.47 | 24.45 | 23.02 | 23.07 | 23.05 |
| EGPRS (8PSK) | 1 Tx Slot | 25.96 | 26.23 | 26.26 | 23.51 | 23.78 | 23.81 | 22.11 | 22.38 | 22.41 |
| | 2 Tx Slots | 22.92 | 23.20 | 23.15 | 20.47 | 20.75 | 20.70 | 19.07 | 19.35 | 19.30 |
| | 3 Tx Slots | 20.99 | 21.18 | 21.24 | 18.54 | 18.73 | 18.79 | 17.14 | 17.33 | 17.39 |
| | 4 Tx Slots | 19.71 | 19.77 | 19.72 | 17.26 | 17.32 | 17.27 | 15.86 | 15.92 | 15.87 |

| WCDMA Band V | | Maximum Output Power (dBm) | | | Main Antenna ERP (dBm) | | | Second Antenna ERP (dBm) | | |
|--------------|-----------|----------------------------|--------------|------------|------------------------|------------|------------|--------------------------|------------|------------|
| | | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | |
| | | 4132/826.4 | 4183/836.6 | 4233/846.6 | 4132/826.4 | 4183/836.6 | 4233/846.6 | 4132/826.4 | 4183/836.6 | 4233/846.6 |
| RMC | 12.2k | 24.02 | 24.10 | 24.05 | 21.57 | 21.65 | 21.6 | 20.17 | 20.25 | 20.20 |
| AMR | 12.2k | 24.04 | 24.10 | 24.21 | 21.59 | 21.65 | 21.76 | 20.19 | 20.25 | 20.36 |
| HSDPA | Subtest 1 | 23.66 | 23.52 | 23.69 | 21.21 | 21.07 | 21.24 | 19.81 | 19.67 | 19.84 |
| | Subtest 2 | 23.38 | 23.64 | 23.59 | 20.93 | 21.19 | 21.14 | 19.53 | 19.79 | 19.74 |
| | Subtest 3 | 23.06 | 23.20 | 23.05 | 20.61 | 20.75 | 20.6 | 19.21 | 19.35 | 19.20 |
| | Subtest 4 | 23.10 | 23.16 | 22.99 | 20.65 | 20.71 | 20.54 | 19.25 | 19.31 | 19.14 |
| HSUPA | Subtest 1 | 23.00 | 23.00 | 22.97 | 20.55 | 20.55 | 20.52 | 19.15 | 19.15 | 19.12 |
| | Subtest 2 | 21.46 | 21.66 | 21.59 | 19.01 | 19.21 | 19.14 | 17.61 | 17.81 | 17.74 |
| | Subtest 3 | 22.32 | 22.44 | 22.19 | 19.87 | 19.99 | 19.74 | 18.47 | 18.59 | 18.34 |
| | Subtest 4 | 21.88 | 21.76 | 21.93 | 19.43 | 19.31 | 19.48 | 18.03 | 17.91 | 18.08 |
| | Subtest 5 | 23.50 | 23.56 | 23.77 | 21.05 | 21.11 | 21.32 | 19.65 | 19.71 | 19.92 |
| DC-HSDPA | Subtest 1 | 23.42 | 23.76 | 23.51 | 20.97 | 21.31 | 21.06 | 19.57 | 19.91 | 19.66 |
| | Subtest 2 | 23.54 | 23.58 | 23.59 | 21.09 | 21.13 | 21.14 | 19.69 | 19.73 | 19.74 |
| | Subtest 3 | 23.12 | 23.14 | 23.01 | 20.67 | 20.69 | 20.56 | 19.27 | 19.29 | 19.16 |
| | Subtest 4 | 23.02 | 23.02 | 22.91 | 20.57 | 20.57 | 20.46 | 19.17 | 19.17 | 19.06 |
| HSPA+ | 16QAM | 20.68 | 21.06 | 20.93 | 18.23 | 18.61 | 18.48 | 16.83 | 17.21 | 17.08 |



| LTE Band 5 | | | | Maximum Output Power (dBm) | | | Main Antenna ERP (dBm) | | | Second Antenna ERP (dBm) | | |
|------------|------------|---------------|--------|----------------------------|-------------|-------------|------------------------|-------------|-------------|--------------------------|-------------|-------------|
| Bandwidth | Modulation | RB allocation | offset | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | |
| | | | | 20407/824.7 | 20525/836.5 | 20643/848.3 | 20407/824.7 | 20525/836.5 | 20643/848.3 | 20407/824.7 | 20525/836.5 | 20643/848.3 |
| 1.4MHz | QPSK | 1 | 0 | 23.57 | 23.63 | 23.67 | 21.12 | 21.18 | 21.22 | 19.72 | 19.78 | 19.82 |
| | | 1 | 2 | 23.70 | 23.62 | 23.61 | 21.25 | 21.17 | 21.16 | 19.85 | 19.77 | 19.76 |
| | | 1 | 5 | 23.63 | 23.59 | 23.59 | 21.18 | 21.14 | 21.14 | 19.78 | 19.74 | 19.74 |
| | | 3 | 0 | 23.59 | 23.78 | 23.61 | 21.14 | 21.33 | 21.16 | 19.74 | 19.93 | 19.76 |
| | | 3 | 2 | 23.59 | 23.74 | 23.56 | 21.14 | 21.29 | 21.11 | 19.74 | 19.89 | 19.71 |
| | | 3 | 3 | 23.62 | 23.64 | 23.56 | 21.17 | 21.19 | 21.11 | 19.77 | 19.79 | 19.71 |
| | 16QAM | 1 | 0 | 22.85 | 22.86 | 22.96 | 20.40 | 20.41 | 20.51 | 19.00 | 19.01 | 19.11 |
| | | 1 | 2 | 22.95 | 22.96 | 22.95 | 20.50 | 20.51 | 20.50 | 19.10 | 19.11 | 19.10 |
| | | 1 | 5 | 22.92 | 22.96 | 22.77 | 20.47 | 20.51 | 20.32 | 19.07 | 19.11 | 18.92 |
| | | 3 | 0 | 22.65 | 22.71 | 22.66 | 20.20 | 20.26 | 20.21 | 18.80 | 18.86 | 18.81 |
| | | 3 | 2 | 22.68 | 22.73 | 22.64 | 20.23 | 20.28 | 20.19 | 18.83 | 18.88 | 18.79 |
| | | 3 | 3 | 22.66 | 22.74 | 22.56 | 20.21 | 20.29 | 20.11 | 18.81 | 18.89 | 18.71 |
| 3MHz | QPSK | 1 | 0 | 23.53 | 23.54 | 23.62 | 21.08 | 21.09 | 21.17 | 19.68 | 19.69 | 19.77 |
| | | 1 | 7 | 23.64 | 23.60 | 23.58 | 21.19 | 21.15 | 21.13 | 19.79 | 19.75 | 19.73 |
| | | 1 | 14 | 23.57 | 23.52 | 23.51 | 21.12 | 21.07 | 21.06 | 19.72 | 19.67 | 19.66 |
| | | 8 | 0 | 22.62 | 22.77 | 22.64 | 20.17 | 20.32 | 20.19 | 18.77 | 18.92 | 18.79 |
| | | 8 | 4 | 22.64 | 22.71 | 22.56 | 20.19 | 20.26 | 20.11 | 18.79 | 18.86 | 18.71 |
| | | 8 | 7 | 22.63 | 22.66 | 22.55 | 20.18 | 20.21 | 20.10 | 18.78 | 18.81 | 18.70 |
| | 16QAM | 15 | 0 | 22.59 | 22.72 | 22.61 | 20.14 | 20.27 | 20.16 | 18.74 | 18.87 | 18.76 |
| | | 1 | 0 | 22.82 | 22.79 | 22.89 | 20.37 | 20.34 | 20.44 | 18.97 | 18.94 | 19.04 |
| | | 1 | 7 | 22.92 | 22.90 | 22.91 | 20.47 | 20.45 | 20.46 | 19.07 | 19.05 | 19.06 |
| | | 1 | 14 | 22.87 | 22.89 | 22.71 | 20.42 | 20.44 | 20.26 | 19.02 | 19.04 | 18.86 |
| | | 8 | 0 | 21.68 | 21.77 | 21.70 | 19.23 | 19.32 | 19.25 | 17.83 | 17.92 | 17.85 |
| | | 8 | 4 | 21.69 | 21.73 | 21.64 | 19.24 | 19.28 | 19.19 | 17.84 | 17.88 | 17.79 |
| 5MHz | QPSK | 8 | 7 | 21.69 | 21.73 | 21.59 | 19.24 | 19.28 | 19.14 | 17.84 | 17.88 | 17.74 |
| | | 15 | 0 | 21.63 | 21.72 | 21.67 | 19.18 | 19.27 | 19.22 | 17.78 | 17.87 | 17.82 |
| | | 1 | 0 | 23.54 | 23.58 | 23.64 | 21.09 | 21.13 | 21.19 | 19.69 | 19.73 | 19.79 |
| | | 1 | 13 | 23.66 | 23.61 | 23.61 | 21.21 | 21.16 | 21.16 | 19.81 | 19.76 | 19.76 |
| | QPSK | 1 | 24 | 23.60 | 23.57 | 23.55 | 21.15 | 21.12 | 21.10 | 19.75 | 19.72 | 19.70 |
| | | 12 | 0 | 22.64 | 22.81 | 22.67 | 20.19 | 20.36 | 20.22 | 18.79 | 18.96 | 18.82 |
| | | 1 | 0 | 23.53 | 23.54 | 23.62 | 21.08 | 21.09 | 21.17 | 19.68 | 19.69 | 19.77 |
| | | 1 | 7 | 23.64 | 23.60 | 23.58 | 21.19 | 21.15 | 21.13 | 19.79 | 19.75 | 19.73 |



| | | | | | | | | | | | | |
|-----------|------------|---------------|--------|------------------------|-------------|-----------|------------------------|-------------|-----------|------------------------|-------------|-----------|
| | | 12 | 6 | 22.67 | 22.76 | 22.60 | 20.22 | 20.31 | 20.15 | 18.82 | 18.91 | 18.75 |
| | | 12 | 13 | 22.66 | 22.69 | 22.59 | 20.21 | 20.24 | 20.14 | 18.81 | 18.84 | 18.74 |
| | | 25 | 0 | 22.61 | 22.76 | 22.66 | 20.16 | 20.31 | 20.21 | 18.76 | 18.91 | 18.81 |
| | 16QAM | 1 | 0 | 22.84 | 22.81 | 22.91 | 20.39 | 20.36 | 20.46 | 18.99 | 18.96 | 19.06 |
| | | 1 | 13 | 22.94 | 22.93 | 22.93 | 20.49 | 20.48 | 20.48 | 19.09 | 19.08 | 19.08 |
| | | 1 | 24 | 22.89 | 22.93 | 22.74 | 20.44 | 20.48 | 20.29 | 19.04 | 19.08 | 18.89 |
| | | 12 | 0 | 21.71 | 21.79 | 21.73 | 19.26 | 19.34 | 19.28 | 17.86 | 17.94 | 17.88 |
| | | 12 | 6 | 21.72 | 21.78 | 21.68 | 19.27 | 19.33 | 19.23 | 17.87 | 17.93 | 17.83 |
| | | 12 | 13 | 21.71 | 21.77 | 21.62 | 19.26 | 19.32 | 19.17 | 17.86 | 17.92 | 17.77 |
| | | 25 | 0 | 21.66 | 21.77 | 21.71 | 19.21 | 19.32 | 19.26 | 17.81 | 17.92 | 17.86 |
| Bandwidth | Modulation | RB allocation | offset | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | | Channel/Frequency(MHz) | | |
| | | | | 20450/829 | 20525/836.5 | 20600/844 | 20450/829 | 20525/836.5 | 20600/844 | 20450/829 | 20525/836.5 | 20600/844 |
| 10MHz | QPSK | 1 | 0 | 23.50 | 23.50 | 23.59 | 21.05 | 21.05 | 21.14 | 19.65 | 19.65 | 19.74 |
| | | 1 | 25 | 23.63 | 23.56 | 23.56 | 21.18 | 21.11 | 21.11 | 19.78 | 19.71 | 19.71 |
| | | 1 | 49 | 23.55 | 23.51 | 23.48 | 21.10 | 21.06 | 21.03 | 19.70 | 19.66 | 19.63 |
| | | 25 | 0 | 22.59 | 22.72 | 22.60 | 20.14 | 20.27 | 20.15 | 18.74 | 18.87 | 18.75 |
| | | 25 | 13 | 22.62 | 22.67 | 22.53 | 20.17 | 20.22 | 20.08 | 18.77 | 18.82 | 18.68 |
| | | 25 | 25 | 22.60 | 22.61 | 22.51 | 20.15 | 20.16 | 20.06 | 18.75 | 18.76 | 18.66 |
| | | 50 | 0 | 22.56 | 22.67 | 22.57 | 20.11 | 20.22 | 20.12 | 18.71 | 18.82 | 18.72 |
| | 16QAM | 1 | 0 | 22.79 | 22.75 | 22.84 | 20.34 | 20.30 | 20.39 | 18.94 | 18.90 | 18.99 |
| | | 1 | 25 | 22.89 | 22.88 | 22.87 | 20.44 | 20.43 | 20.42 | 19.04 | 19.03 | 19.02 |
| | | 1 | 49 | 22.84 | 22.86 | 22.69 | 20.39 | 20.41 | 20.24 | 18.99 | 19.01 | 18.84 |
| | | 25 | 0 | 21.65 | 21.73 | 21.67 | 19.20 | 19.28 | 19.22 | 17.80 | 17.88 | 17.82 |
| | | 25 | 13 | 21.66 | 21.71 | 21.61 | 19.21 | 19.26 | 19.16 | 17.81 | 17.86 | 17.76 |
| | | 25 | 25 | 21.66 | 21.68 | 21.55 | 19.21 | 19.23 | 19.10 | 17.81 | 17.83 | 17.70 |
| | | 50 | 0 | 21.61 | 21.68 | 21.64 | 19.16 | 19.23 | 19.19 | 17.76 | 17.83 | 17.79 |

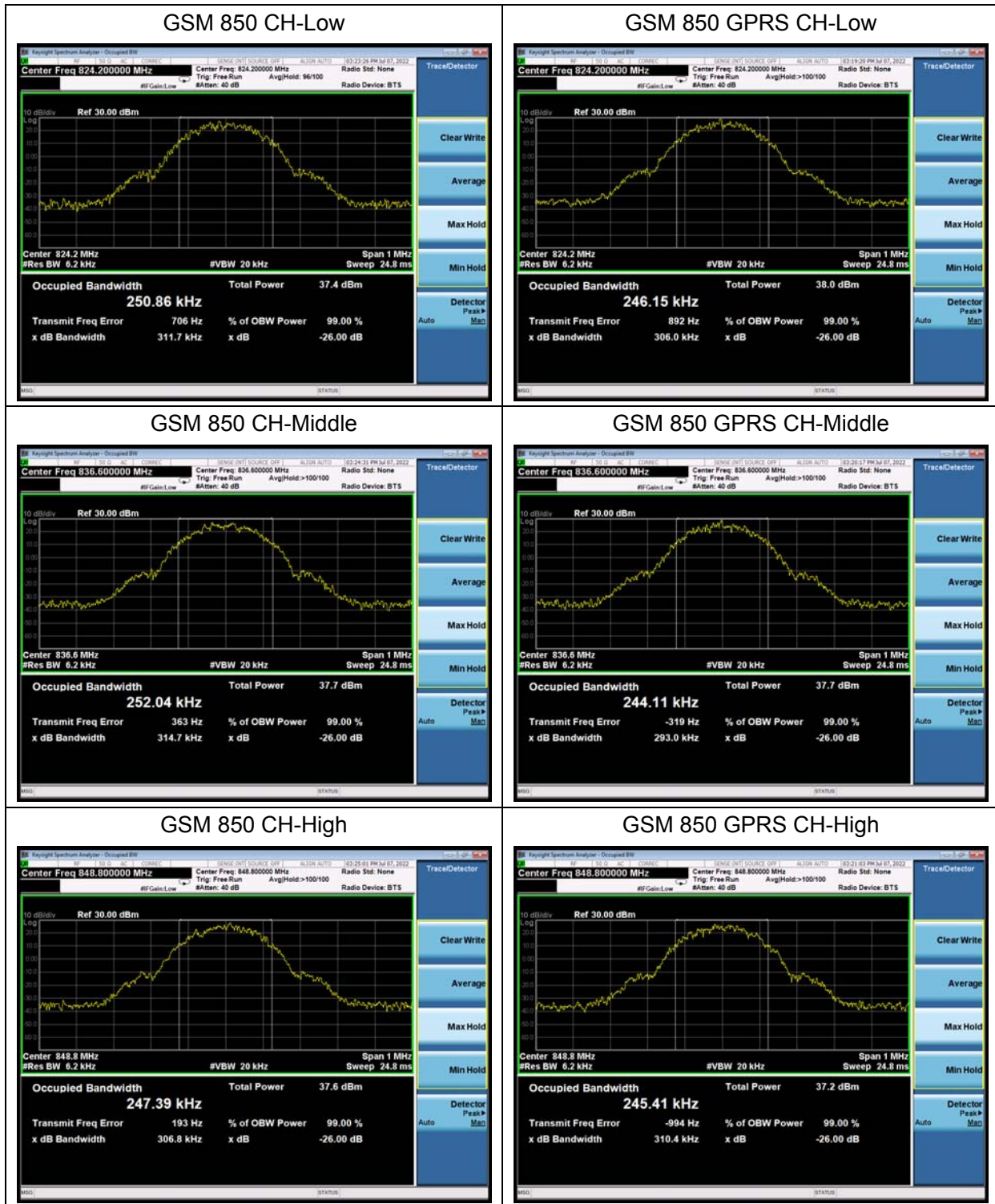
6.2. Occupied Bandwidth

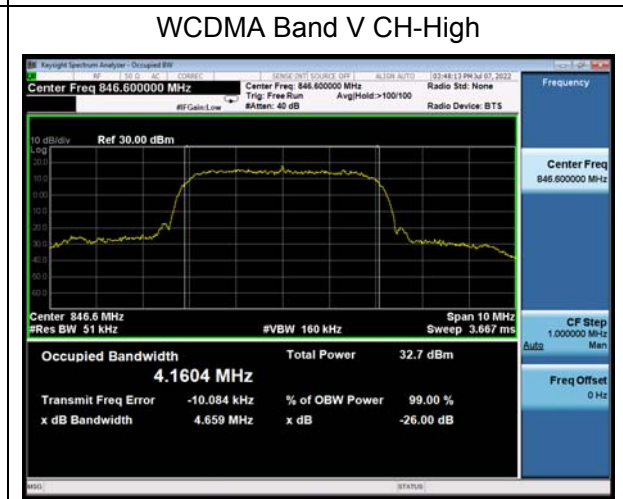
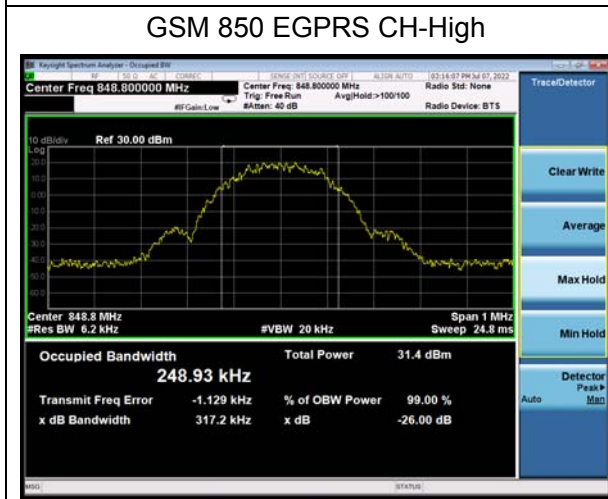
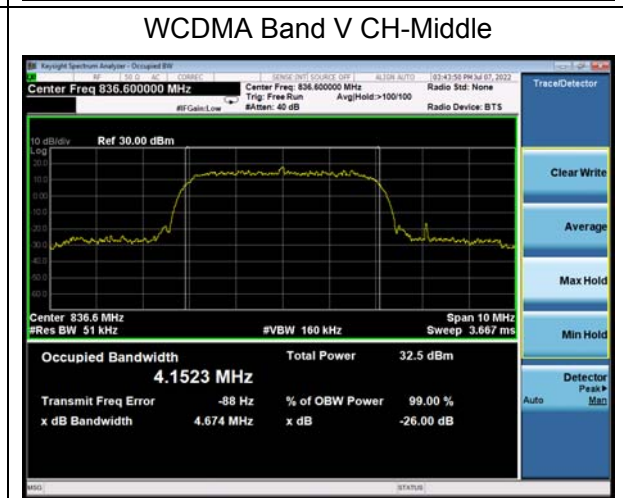
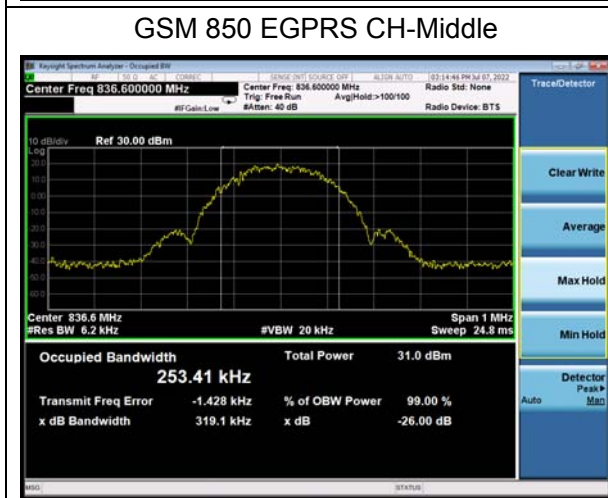
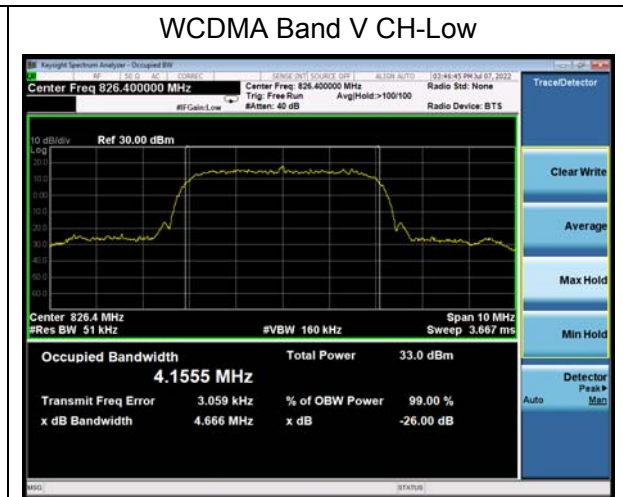
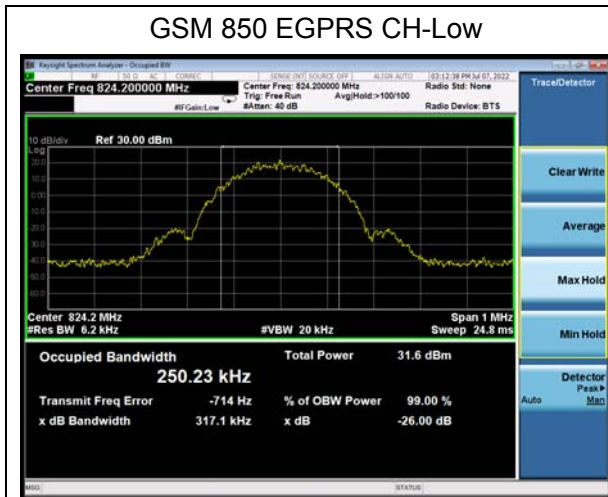
| Mode | Channel | Frequency (MHz) | 99% Power Bandwidth (MHz) | -26dBc Bandwidth(MHz) |
|--------------------|---------|-----------------|---------------------------|-----------------------|
| GSM 850 (GMSK) | 128 | 824.2 | 0.251 | 0.312 |
| | 190 | 836.6 | 0.252 | 0.315 |
| | 251 | 848.8 | 0.247 | 0.307 |
| GPRS 850 (GMSK) | 128 | 824.2 | 0.246 | 0.306 |
| | 190 | 836.6 | 0.244 | 0.293 |
| | 251 | 848.8 | 0.245 | 0.310 |
| EGPRS 850 (8PSK) | 128 | 824.2 | 0.250 | 0.317 |
| | 190 | 836.6 | 0.253 | 0.319 |
| | 251 | 848.8 | 0.249 | 0.317 |
| WCDMA Band V (RMC) | 4132 | 826.4 | 4.156 | 4.666 |
| | 4183 | 836.6 | 4.152 | 4.674 |
| | 4233 | 846.6 | 4.160 | 4.659 |

| LTE Band 5 | | | | | | |
|------------|------------|-----------------|---------|-----------------|--------------------------|-----------------------|
| RB | Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | 99% Power Bandwidth(MHz) | -26dBc Bandwidth(MHz) |
| 1 | QPSK | 1.4 | 20407 | 824.7 | 0.302 | 0.472 |
| | | | 20525 | 836.5 | 0.294 | 0.464 |
| | | | 20643 | 848.3 | 0.289 | 0.475 |
| | | 3 | 20415 | 825.5 | 0.400 | 0.574 |
| | | | 20525 | 836.5 | 0.398 | 0.579 |
| | | | 20635 | 847.5 | 0.399 | 0.573 |
| | | 5 | 20425 | 826.5 | 0.701 | 0.960 |
| | | | 20525 | 836.5 | 0.730 | 1.050 |
| | | | 20625 | 846.5 | 0.698 | 0.986 |
| | | 10 | 20450 | 829 | 1.119 | 1.575 |
| | | | 20525 | 836.5 | 1.118 | 1.502 |
| | | | 20600 | 844 | 1.129 | 1.543 |
| | 16QAM | 1.4 | 20407 | 824.7 | 0.299 | 0.463 |
| | | | 20525 | 836.5 | 0.300 | 0.474 |
| | | | 20643 | 848.3 | 0.312 | 0.495 |



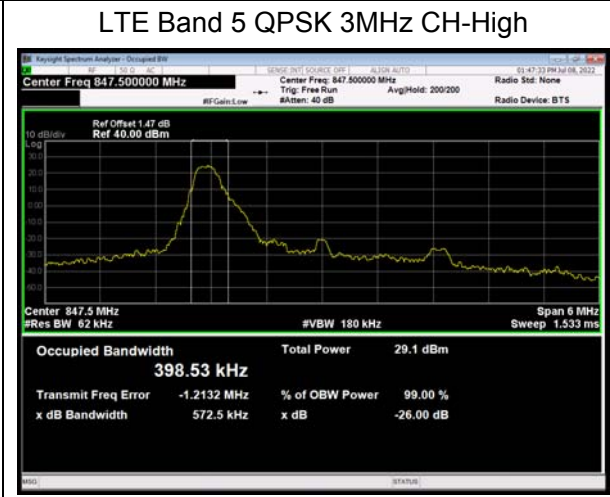
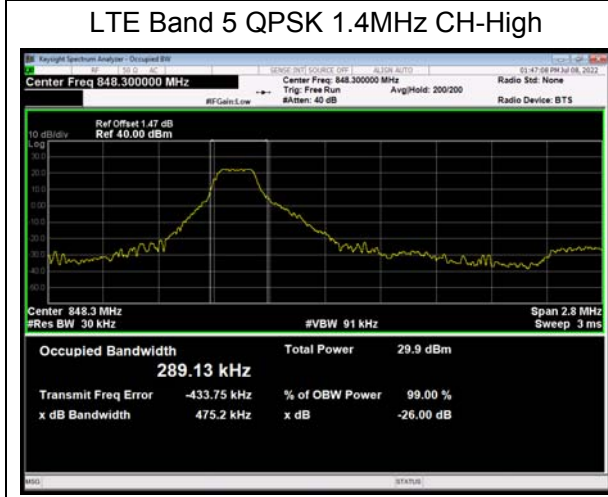
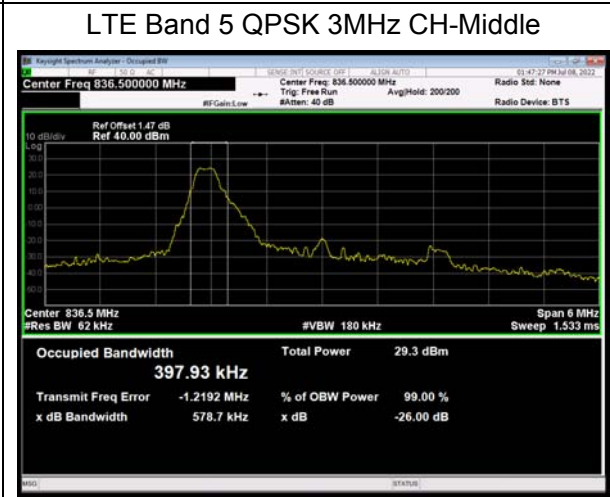
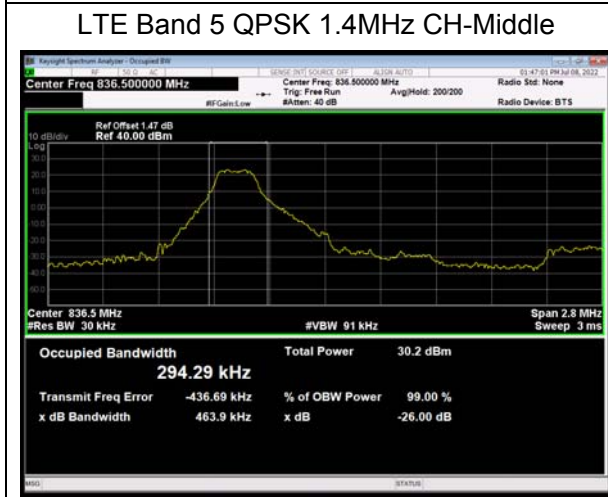
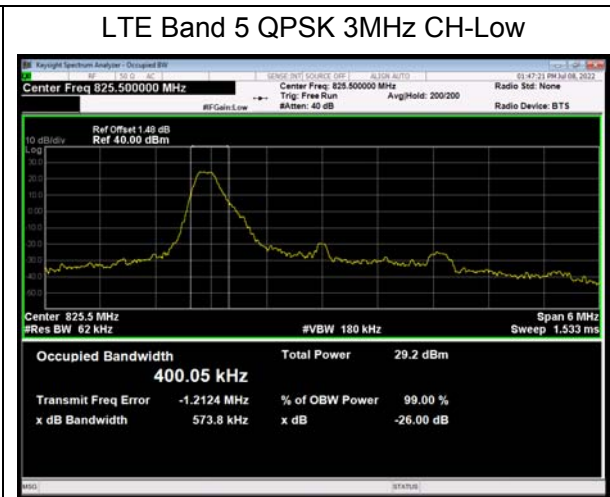
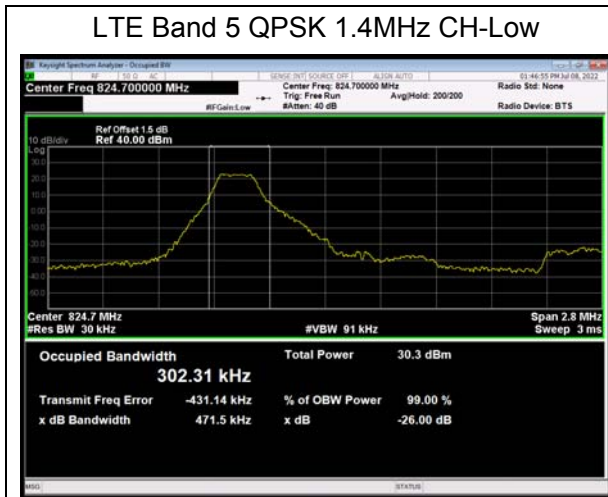
| | | | | | | |
|------|-------|-------|-------|-------|-------|-------|
| | | 3 | 20415 | 825.5 | 0.387 | 0.548 |
| | | | 20525 | 836.5 | 0.400 | 0.569 |
| | | | 20635 | 847.5 | 0.382 | 0.563 |
| | | 5 | 20425 | 826.5 | 0.685 | 0.997 |
| | | | 20525 | 836.5 | 0.758 | 1.009 |
| | | | 20625 | 846.5 | 0.656 | 0.928 |
| | | 10 | 20450 | 829 | 1.131 | 1.529 |
| | | | 20525 | 836.5 | 1.135 | 1.509 |
| | | | 20600 | 844 | 1.074 | 1.619 |
| 100% | QPSK | 1.4 | 20407 | 824.7 | 1.093 | 1.278 |
| | | | 20525 | 836.5 | 1.098 | 1.273 |
| | | | 20643 | 848.3 | 1.094 | 1.270 |
| | | 3 | 20415 | 825.5 | 2.699 | 2.928 |
| | | | 20525 | 836.5 | 2.694 | 2.927 |
| | | | 20635 | 847.5 | 2.692 | 2.904 |
| | | 5 | 20425 | 826.5 | 4.509 | 4.880 |
| | | | 20525 | 836.5 | 4.508 | 4.926 |
| | | | 20625 | 846.5 | 4.499 | 4.876 |
| | 10 | 20450 | 829 | 8.969 | 9.704 | |
| | | 20525 | 836.5 | 8.972 | 9.683 | |
| | | 20600 | 844 | 8.968 | 9.695 | |
| | 16QAM | 1.4 | 20407 | 824.7 | 1.092 | 1.300 |
| | | | 20525 | 836.5 | 1.098 | 1.295 |
| | | | 20643 | 848.3 | 1.088 | 1.270 |
| 3 | | 20415 | 825.5 | 2.686 | 2.929 | |
| | | 20525 | 836.5 | 2.681 | 2.897 | |
| | | 20635 | 847.5 | 2.694 | 2.910 | |
| 5 | | 20425 | 826.5 | 4.517 | 4.875 | |
| | | 20525 | 836.5 | 4.513 | 4.881 | |
| | | 20625 | 846.5 | 4.496 | 4.852 | |
| 10 | 20450 | 829 | 8.967 | 9.720 | | |
| | 20525 | 836.5 | 8.998 | 9.662 | | |
| | 20600 | 844 | 8.954 | 9.695 | | |

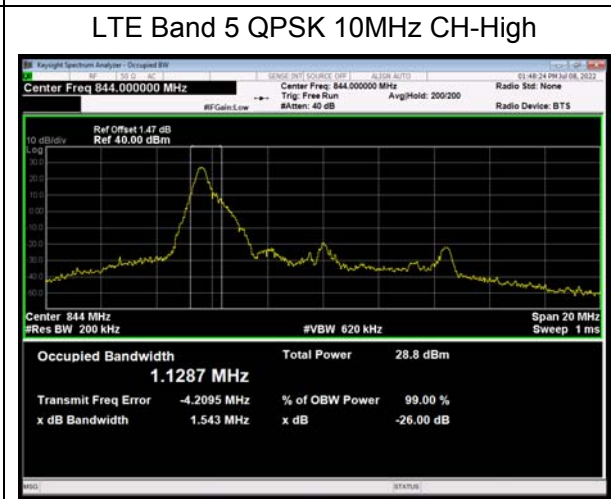
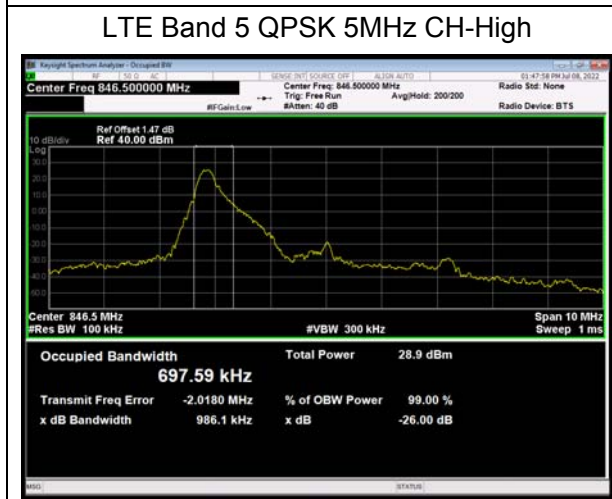
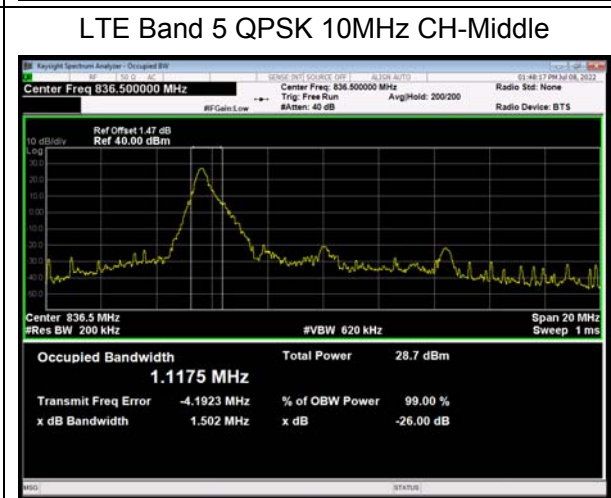
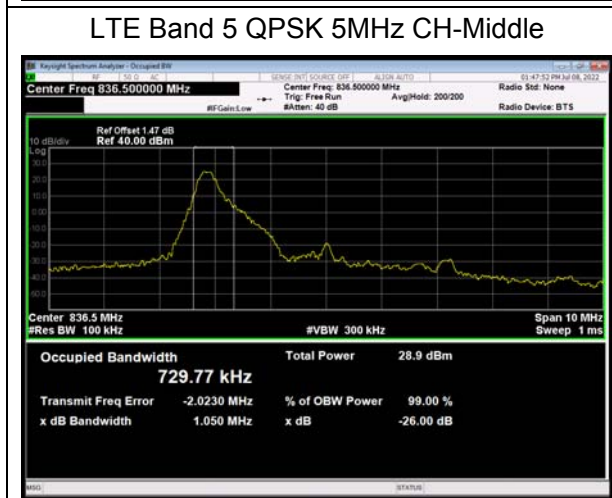
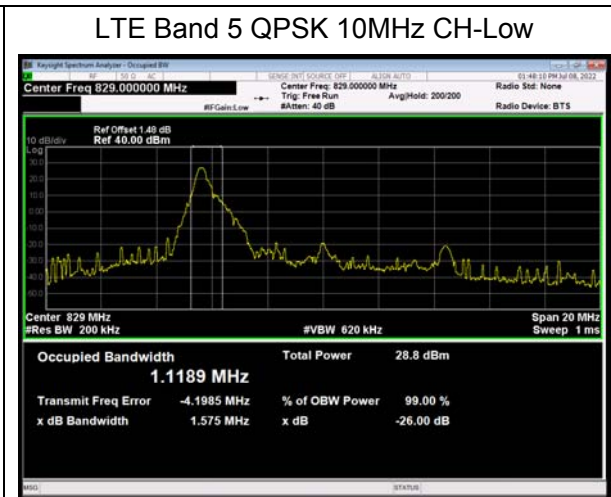
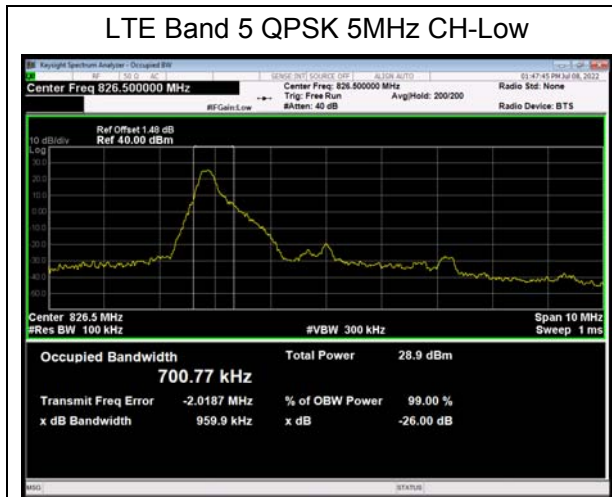


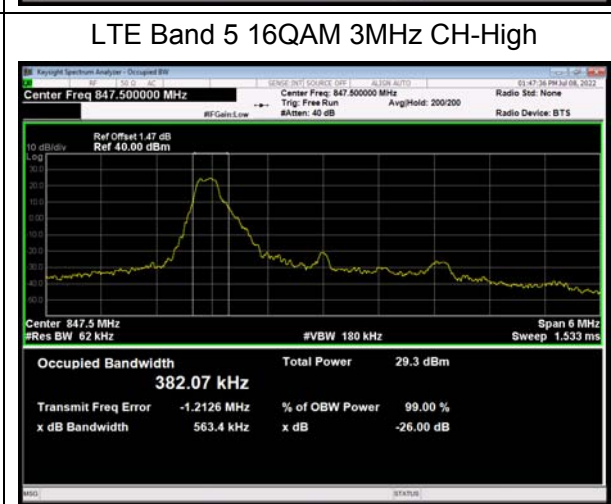
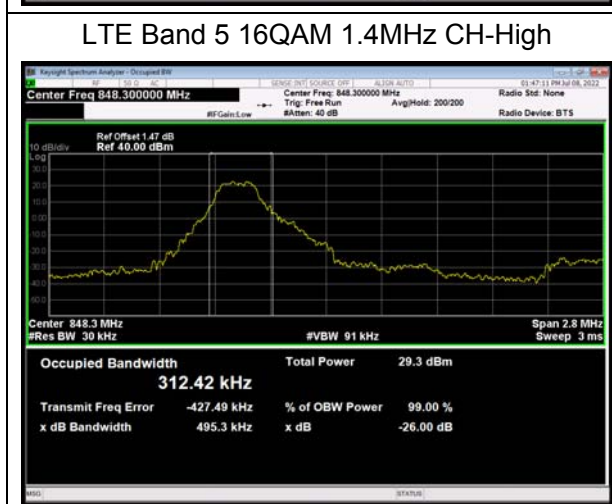
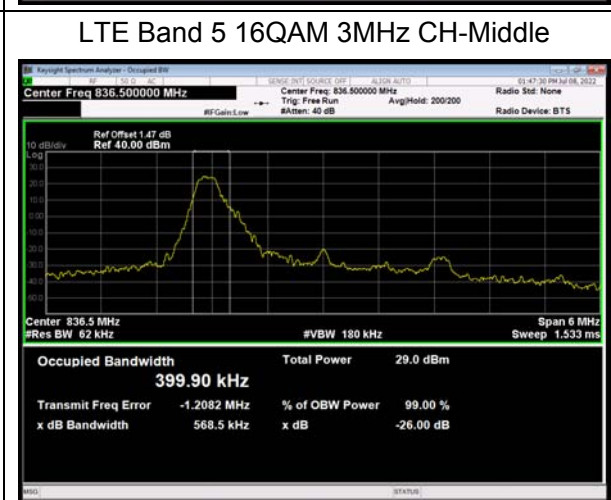
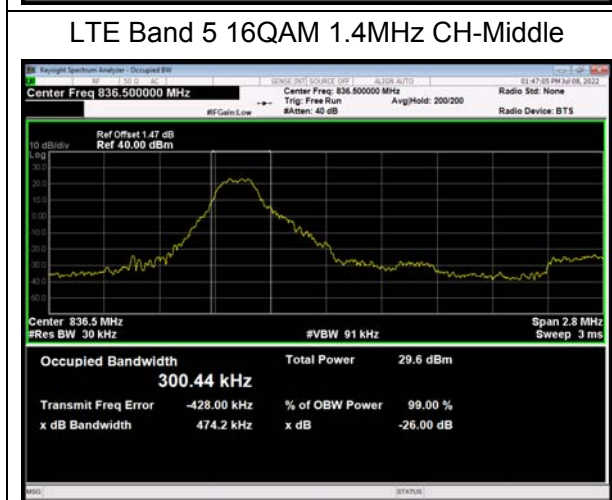
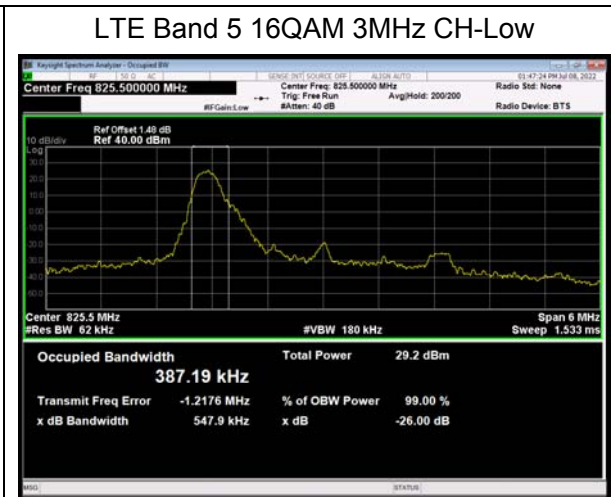
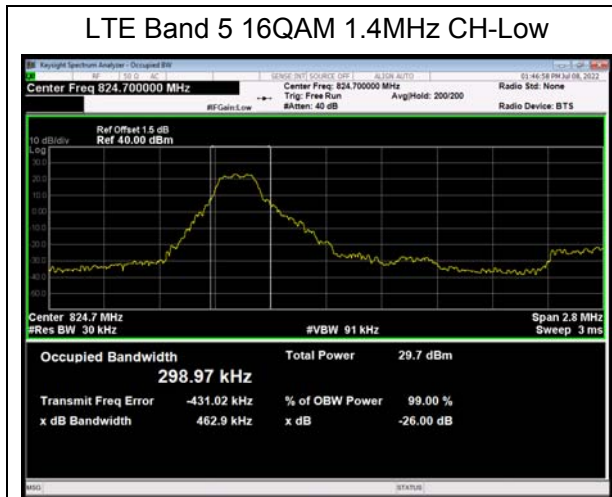


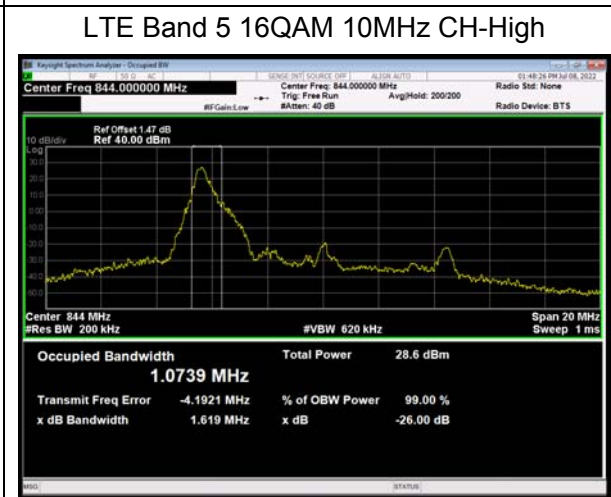
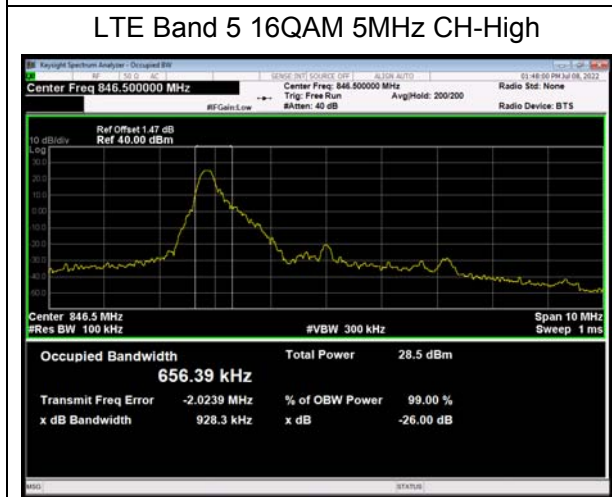
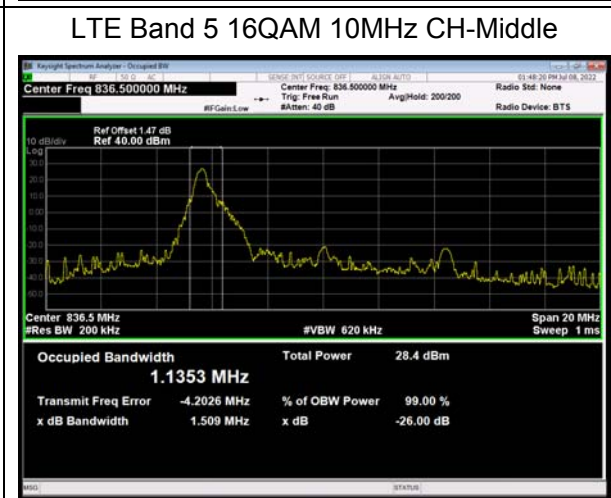
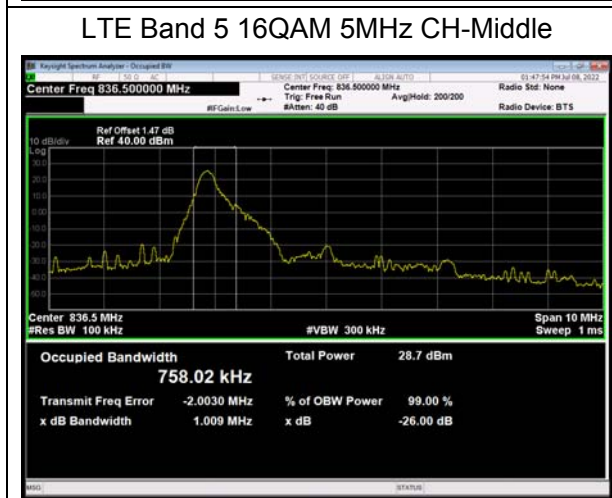
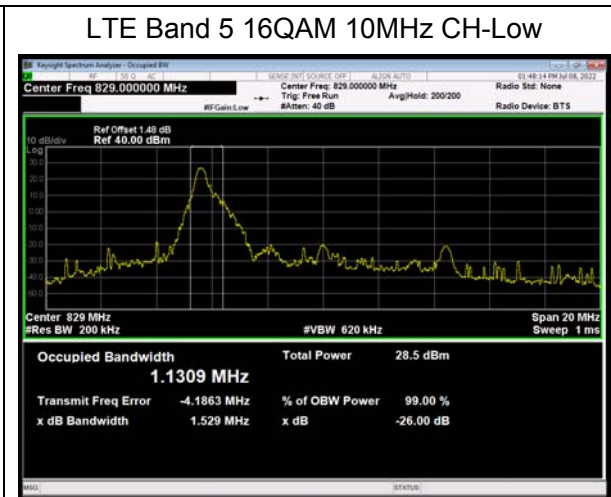
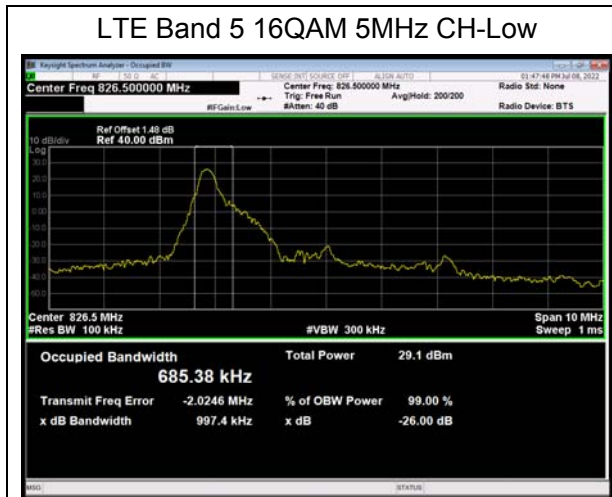


1 RB



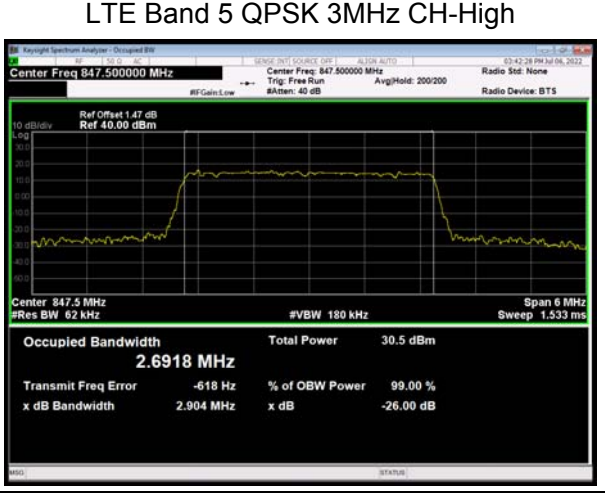
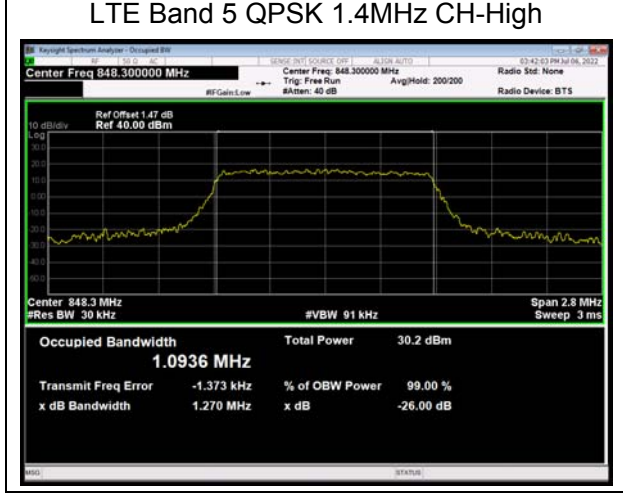
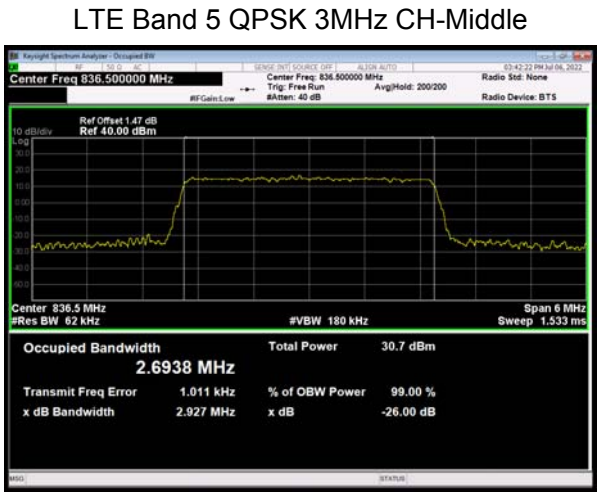
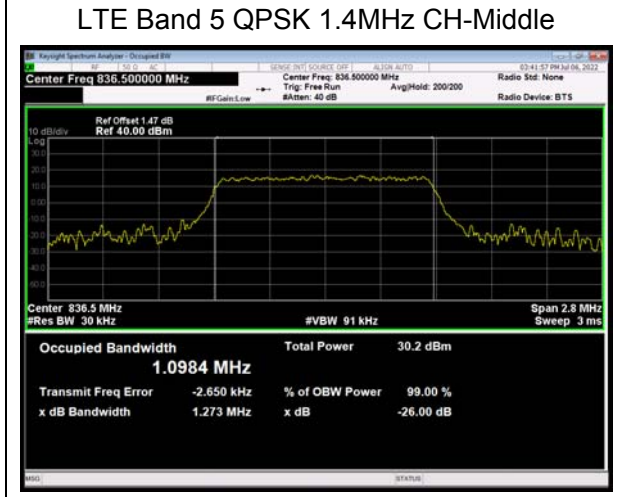
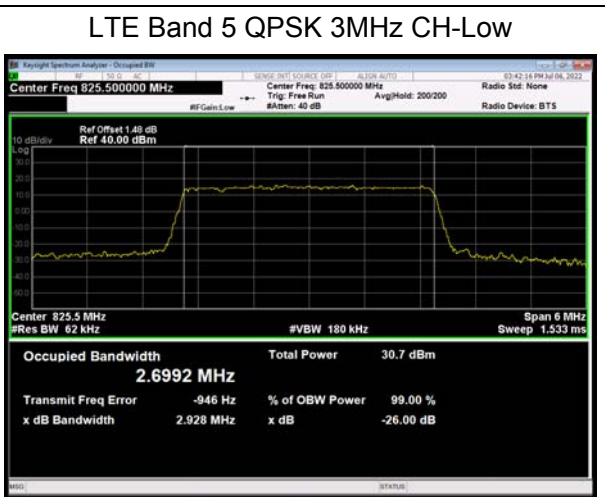
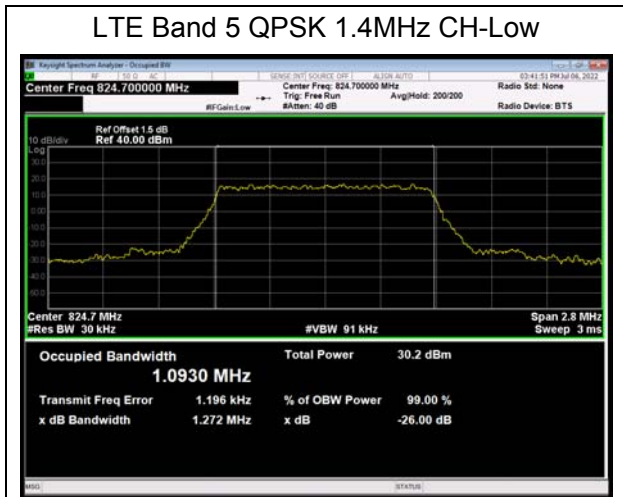


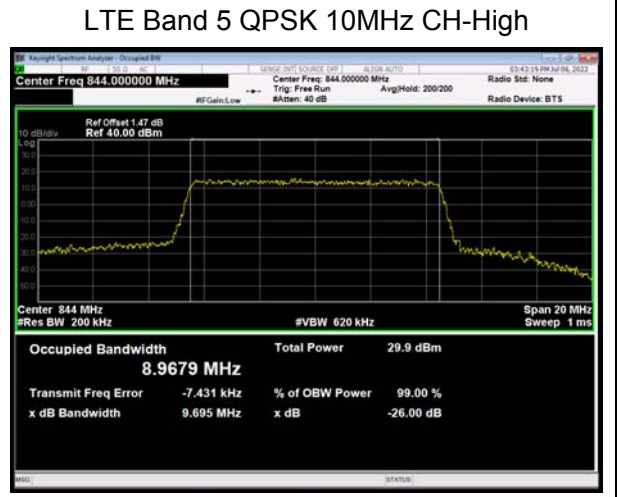
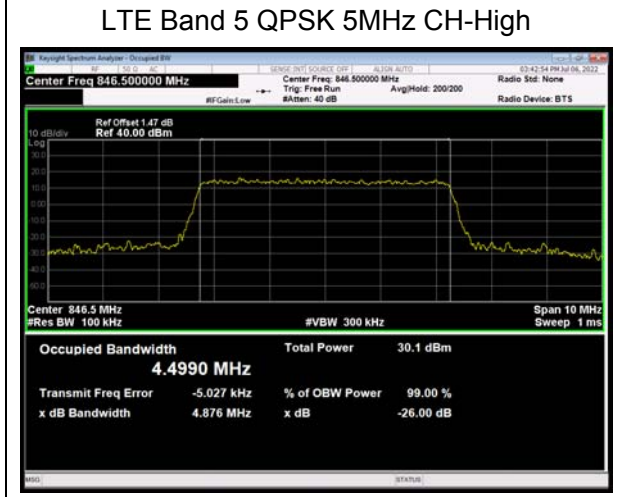
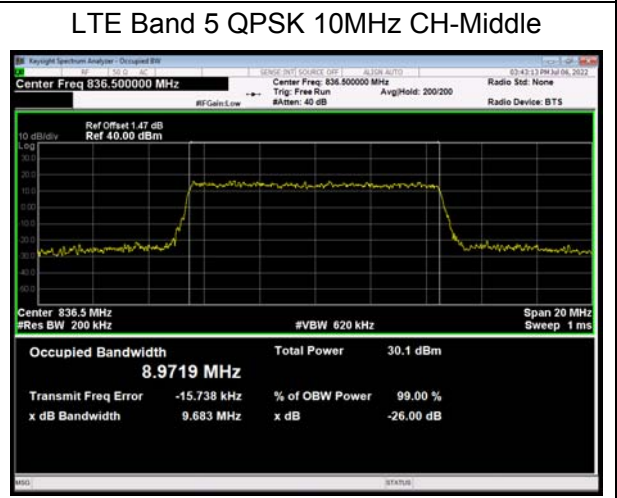
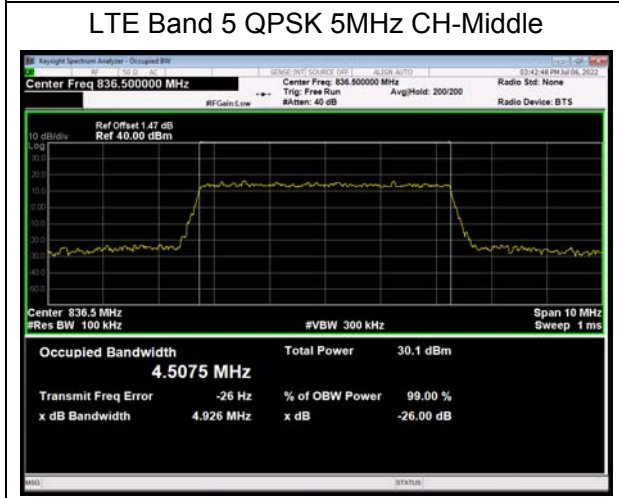
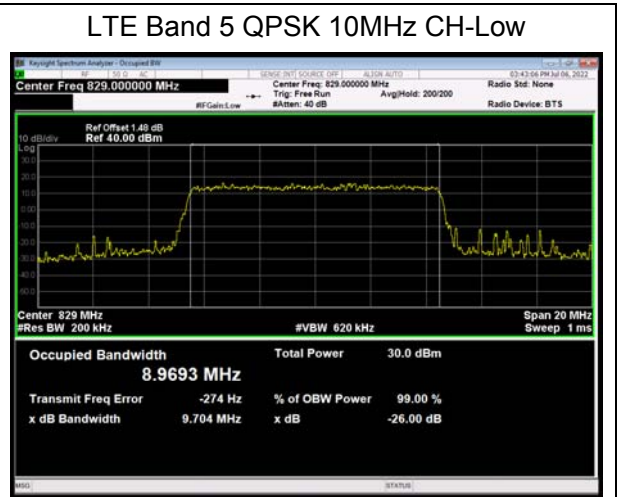
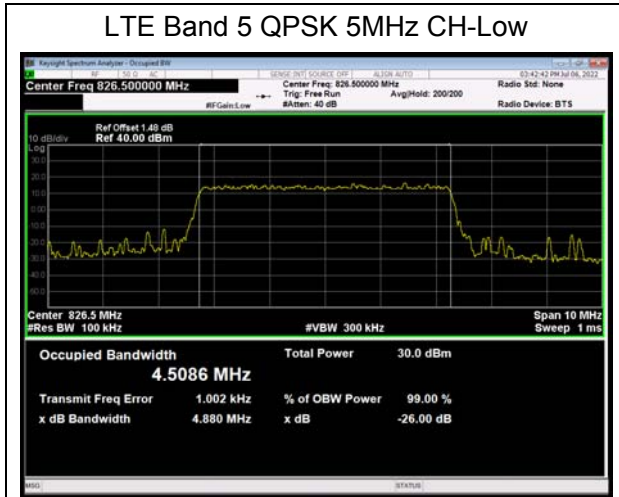


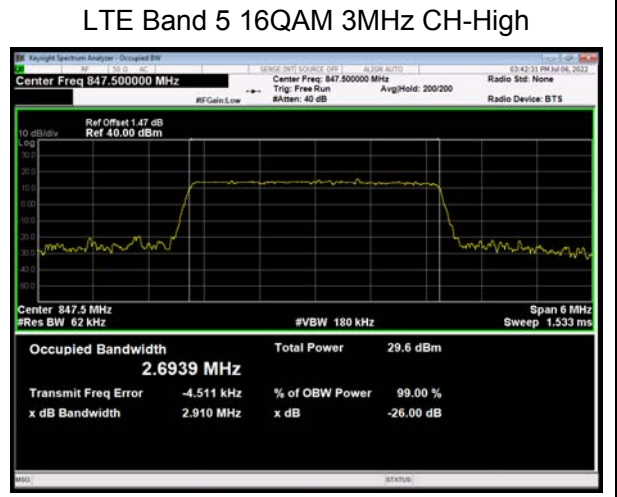
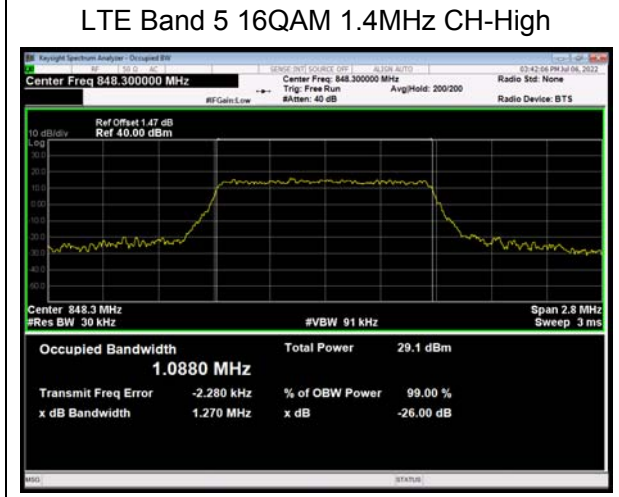
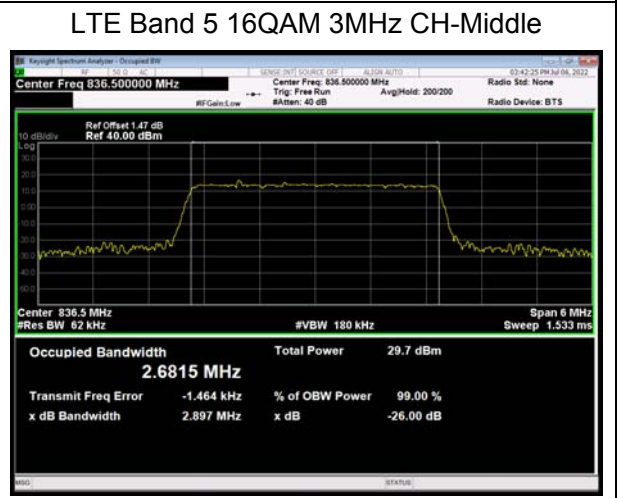
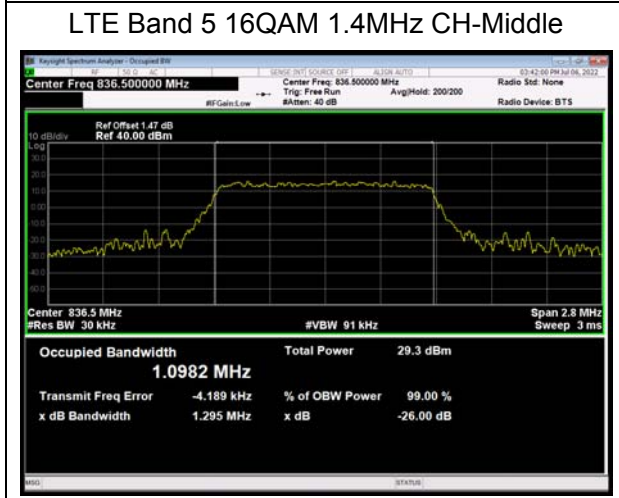
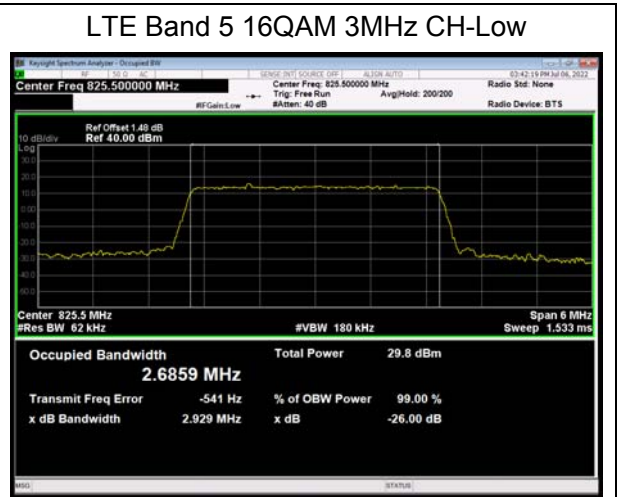
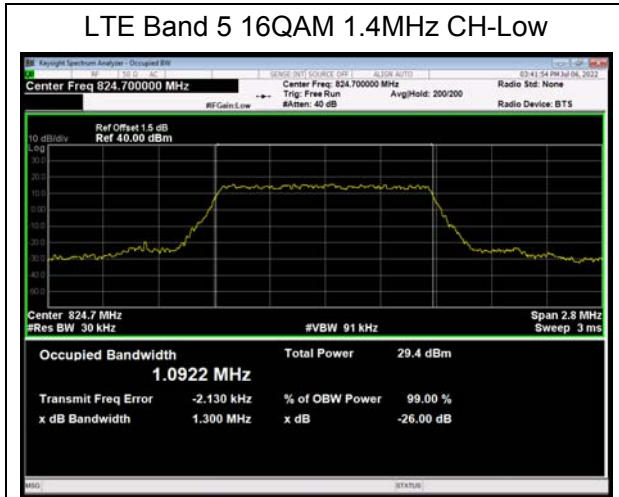


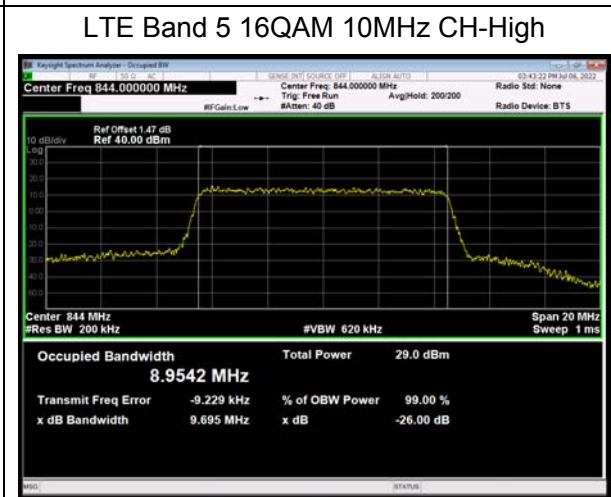
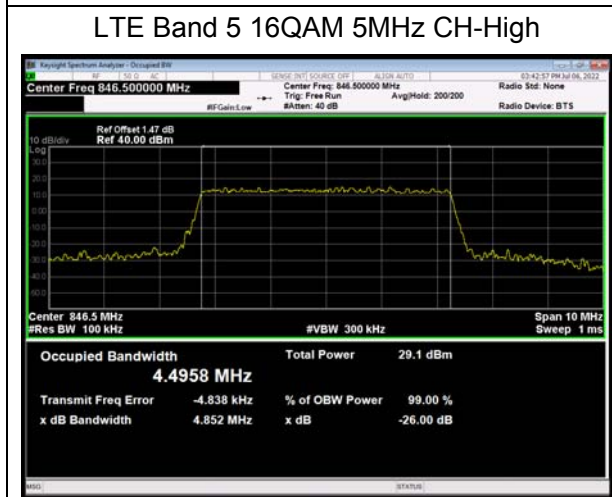
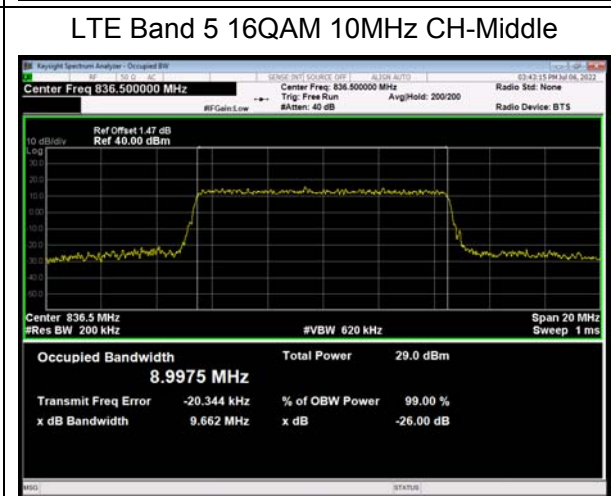
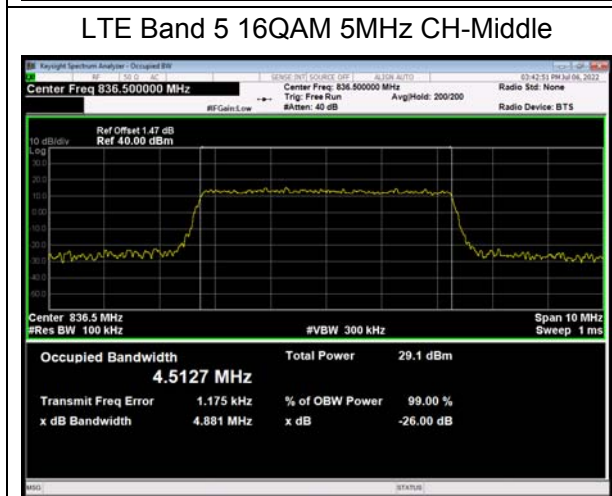
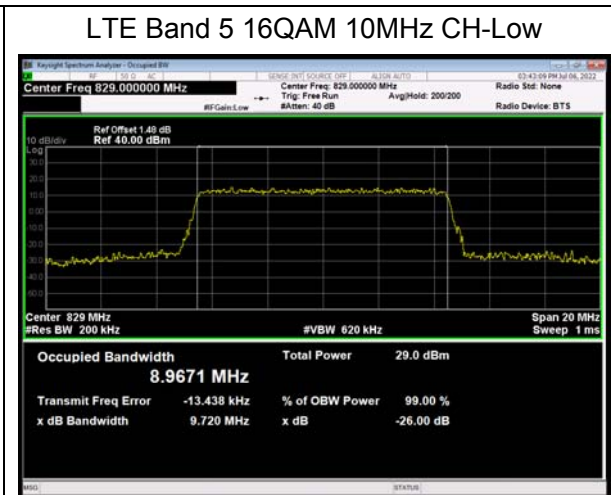
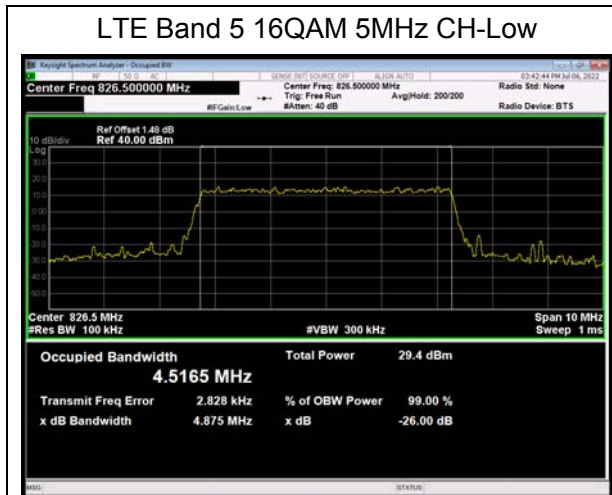


100%RB



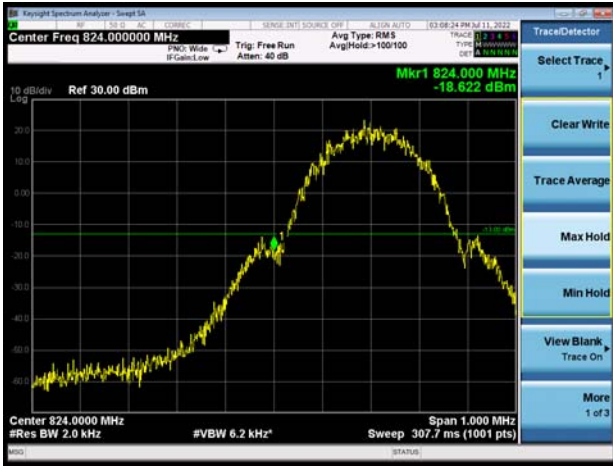




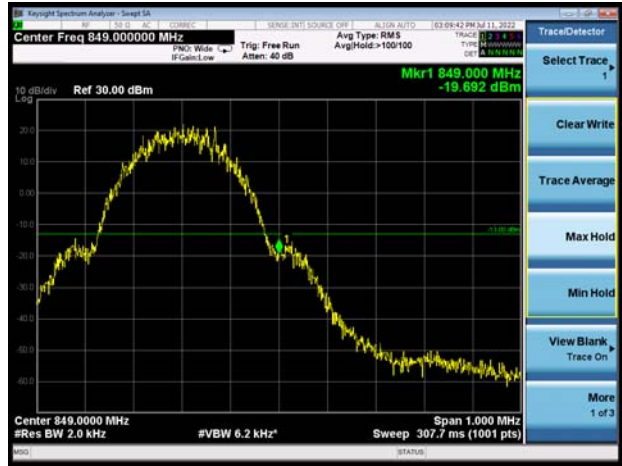


6.3. Band Edge Compliance

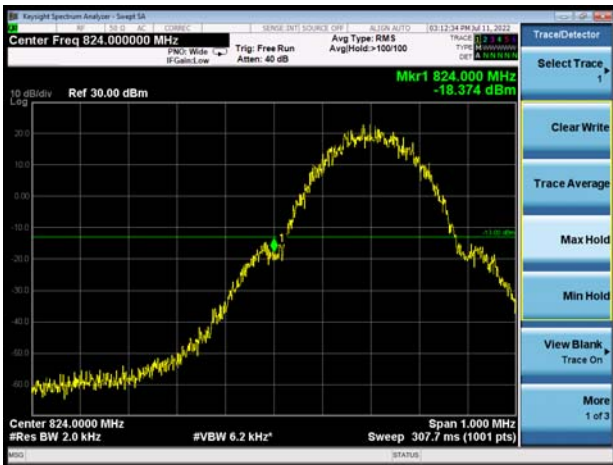
GSM 850 CH-Low



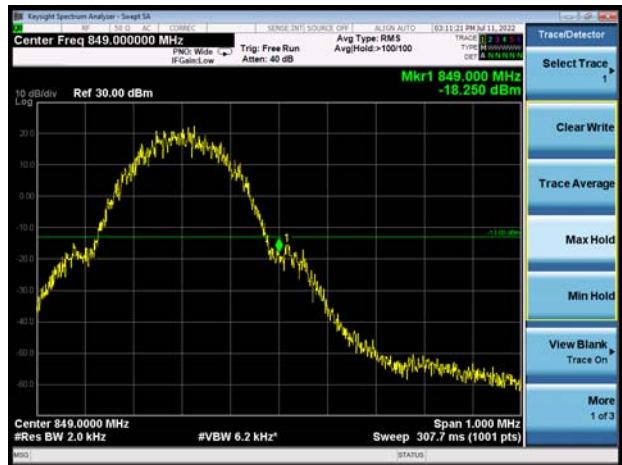
GSM 850 CH-High



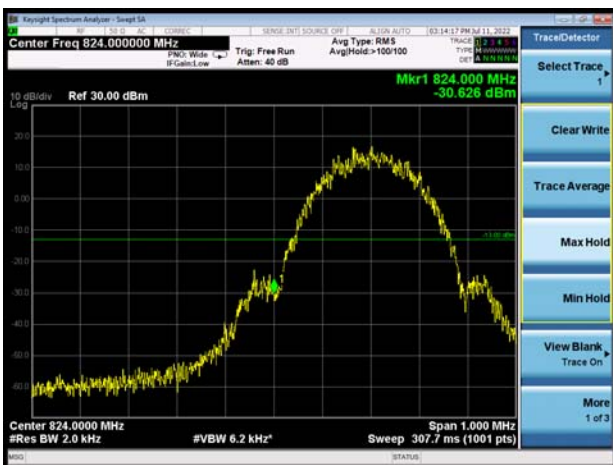
GSM 850 GPRS CH-Low



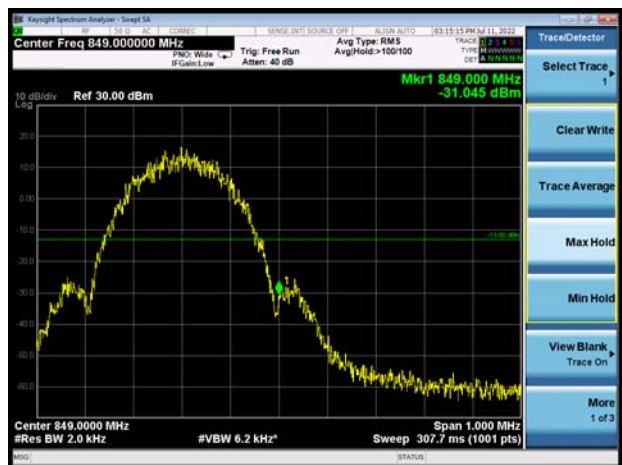
GSM 850 GPRS CH-High



GSM 850 EGPRS CH-Low

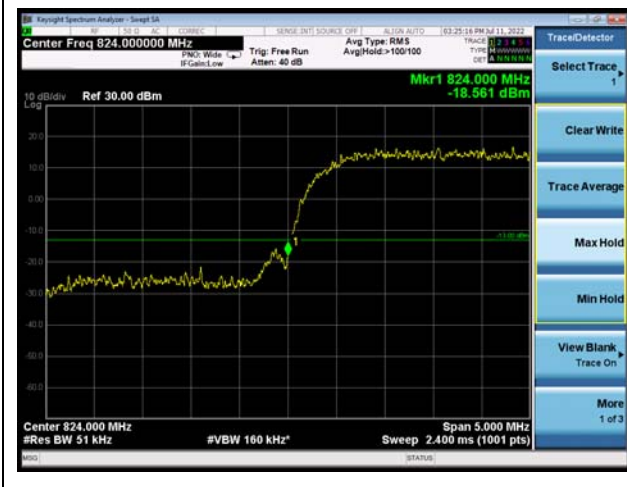


GSM 850 EGPRS CH-High





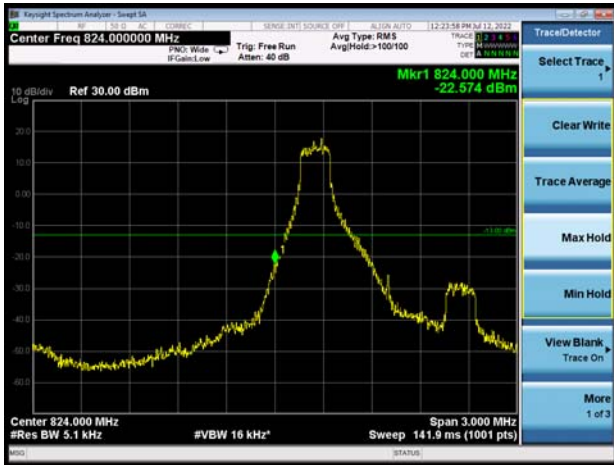
WCDMA Band V CH-Low



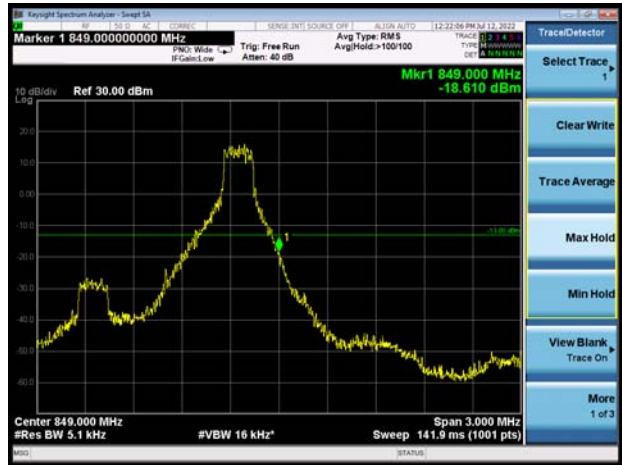
WCDMA Band V CH-High



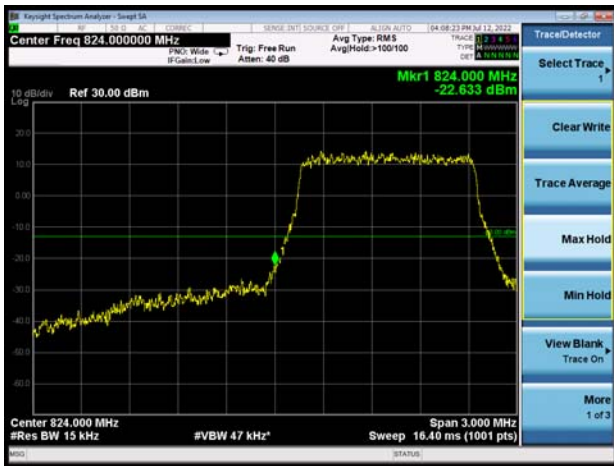
LTE Band 5 QPSK 1.4MHz CH-Low 1RB



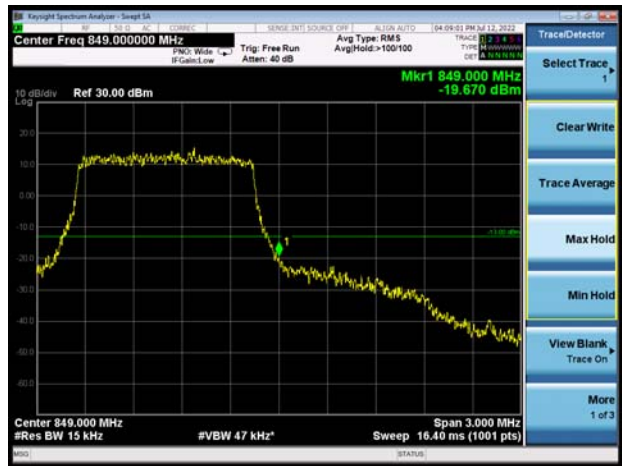
LTE Band 5 QPSK 1.4MHz CH-High 1RB



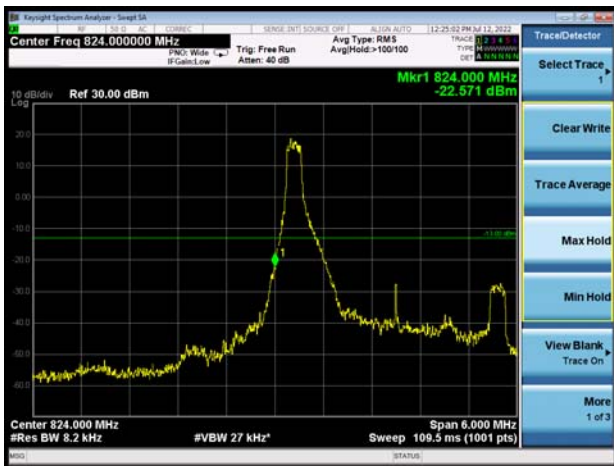
LTE Band 5 QPSK 1.4MHz CH-Low 100%RB



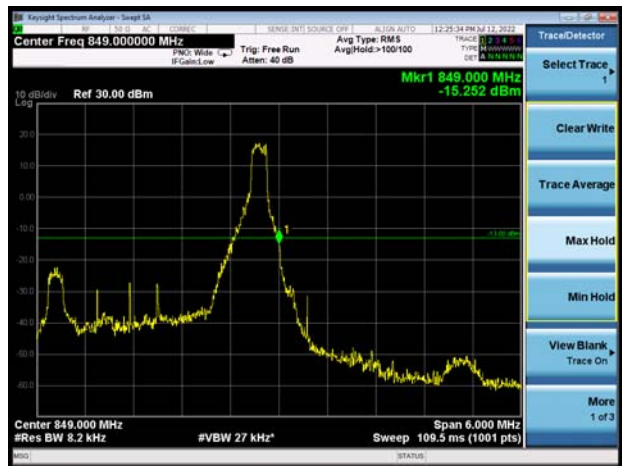
LTE Band 5 QPSK 1.4MHz CH-High 100%RB



LTE Band 5 QPSK 3MHz CH-Low 1RB



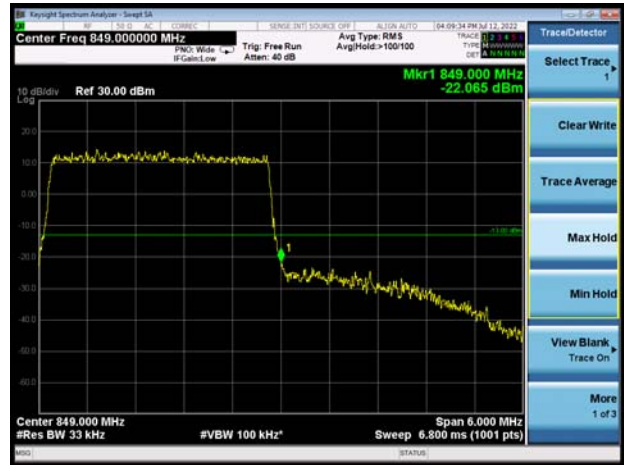
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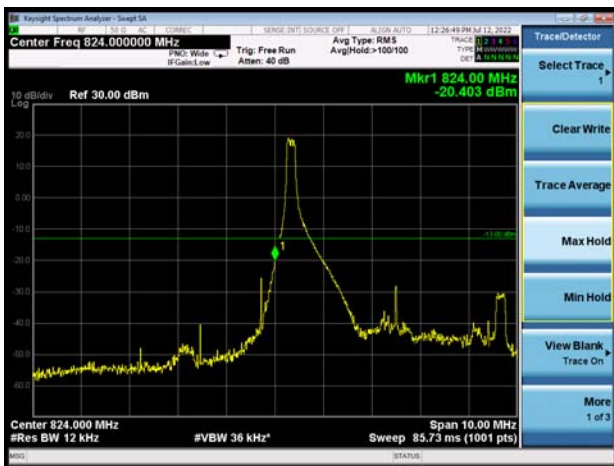
LTE Band 5 QPSK 3MHz CH-Low 100%RB



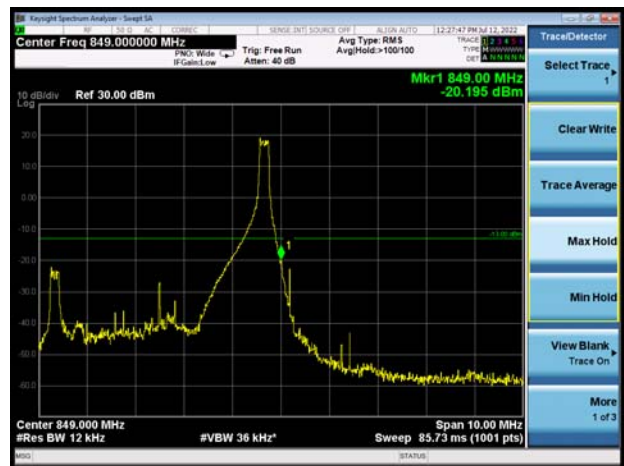
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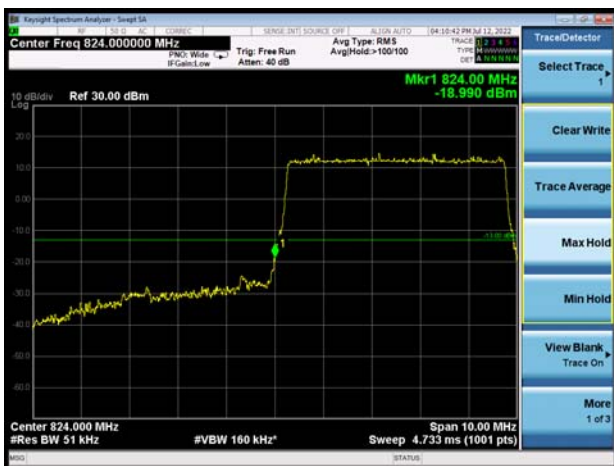
LTE Band 5 QPSK 5MHz CH-Low 1RB



LTE Band 5 QPSK 5MHz CH-High 1RB



LTE Band 5 QPSK 5MHz CH-Low 100%RB



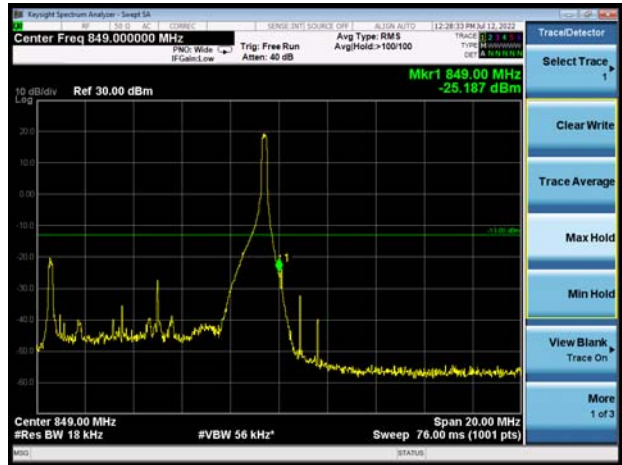
LTE Band 5 QPSK 5MHz CH-High 100%RB



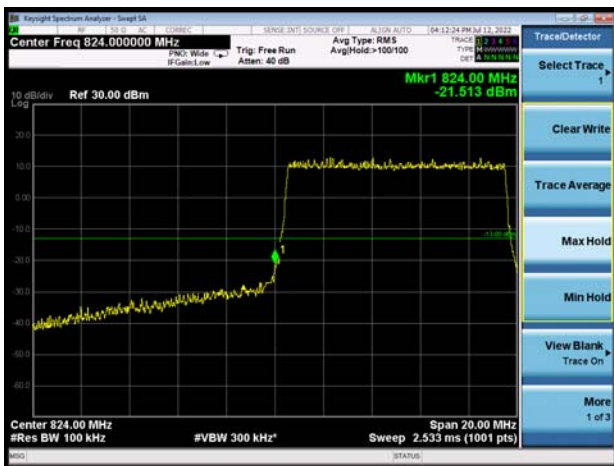
LTE Band 5 QPSK 10MHz CH-Low 1RB



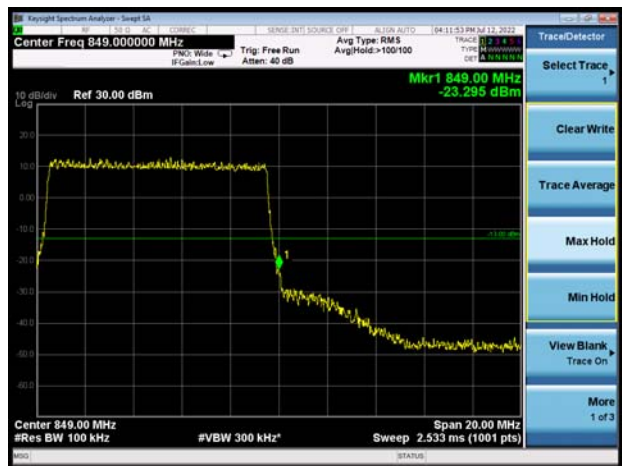
LTE Band 5 QPSK 10MHz CH-High 1RB



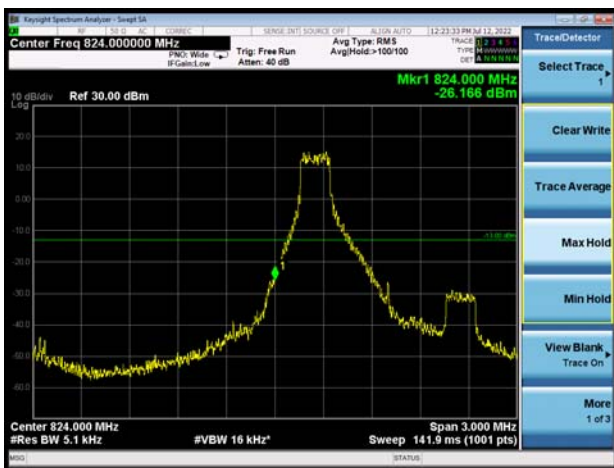
LTE Band 5 QPSK 10MHz CH-Low 100%RB



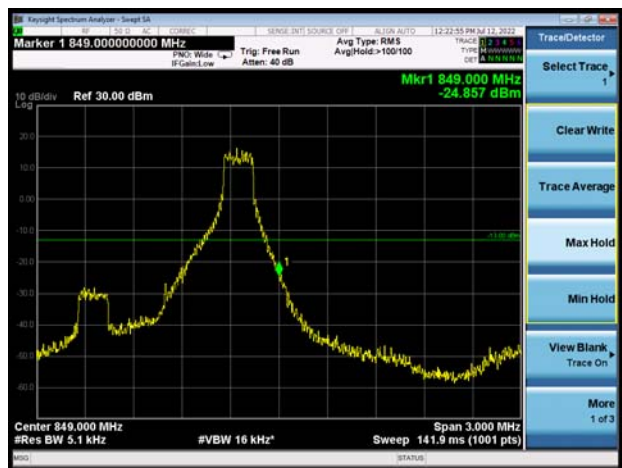
LTE Band 5 QPSK 10MHz CH-High 100%RB



LTE Band 5 16QAM 1.4MHz CH-Low 1RB



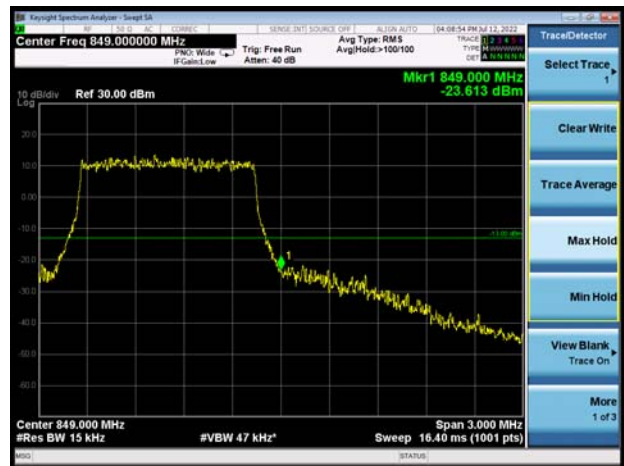
LTE Band 5 16QAM 1.4MHz CH-High 1RB



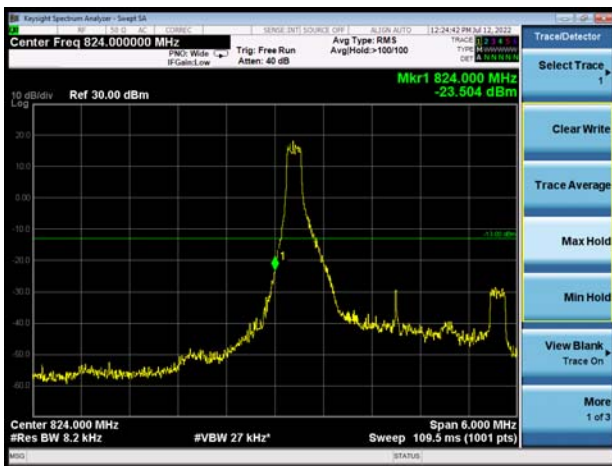
LTE Band 5 16QAM 1.4MHz CH-Low 100%RB



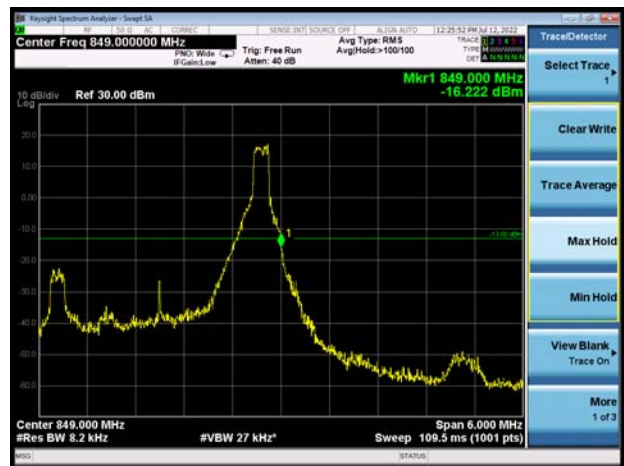
LTE Band 5 16QAM 1.4MHz CH-High 100%RB



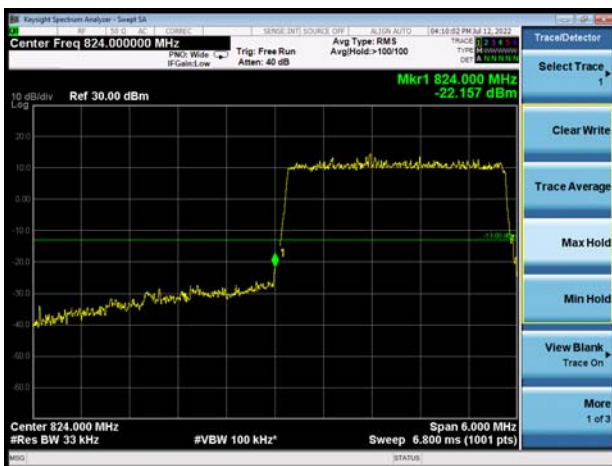
LTE Band 5 16QAM 3MHz CH-Low 1RB



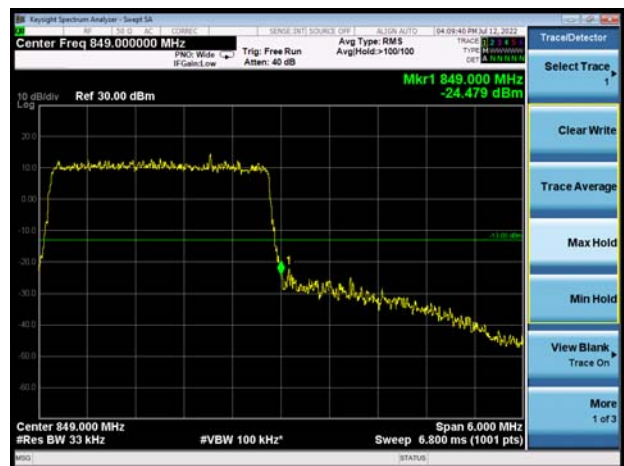
LTE Band 5 16QAM 3MHz CH-High 1RB



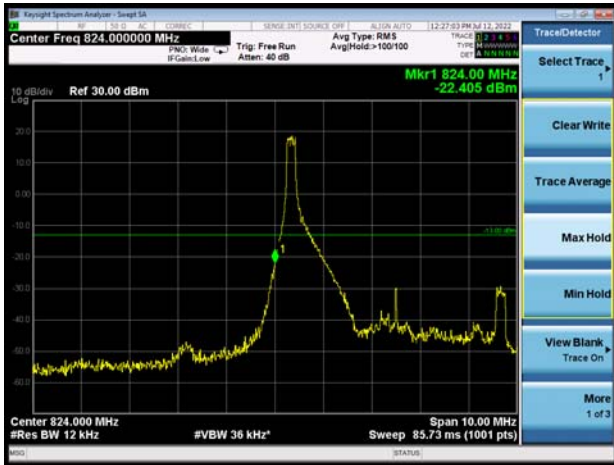
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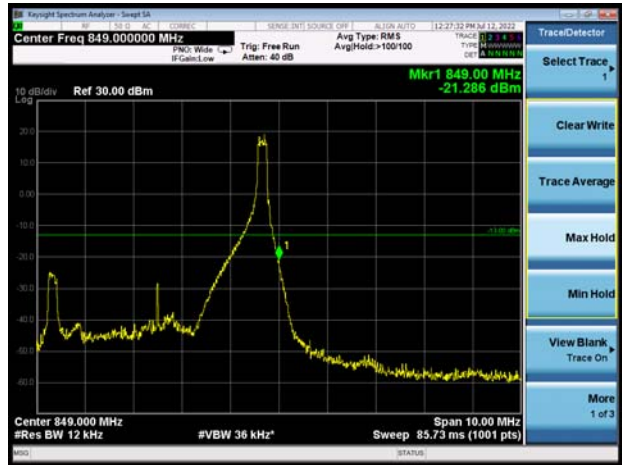
LTE Band 5 16QAM 3MHz CH-High 100%RB



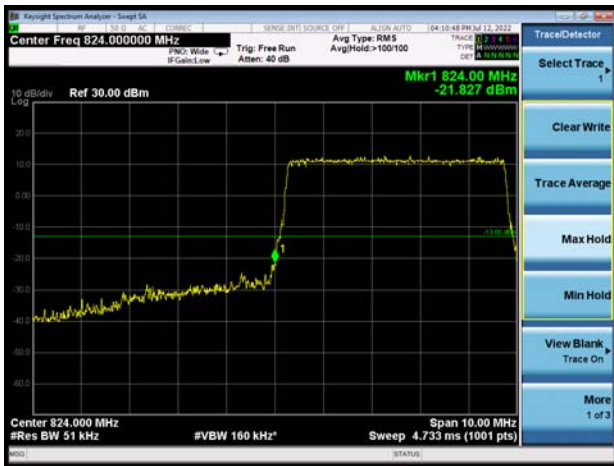
LTE Band 5 16QAM 5MHz CH-Low 1RB



LTE Band 5 16QAM 5MHz CH-High 1RB



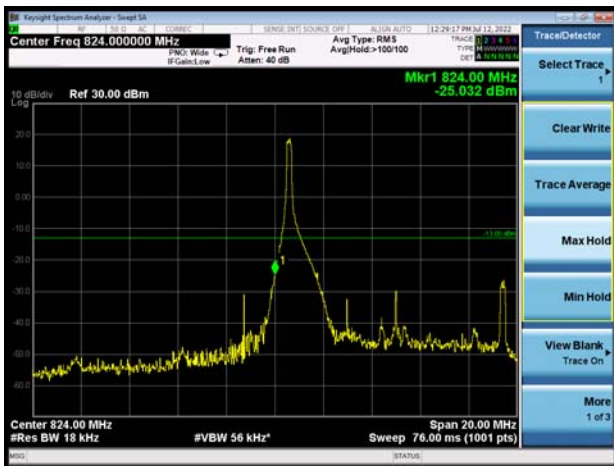
LTE Band 5 16QAM 5MHz CH-Low 100%RB



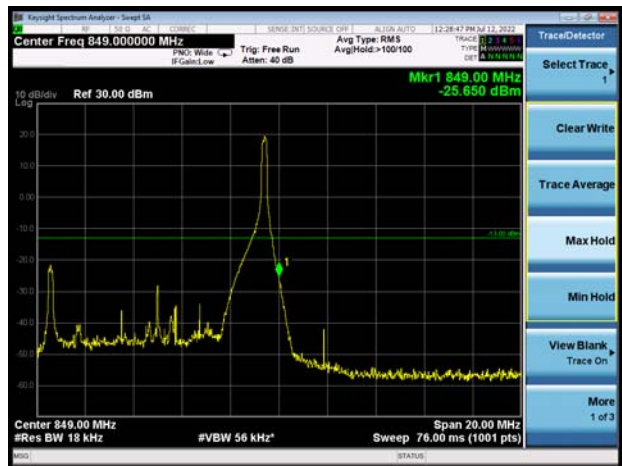
LTE Band 5 16QAM 5MHz CH-High 100%RB



LTE Band 5 16QAM 10MHz CH-Low 1RB

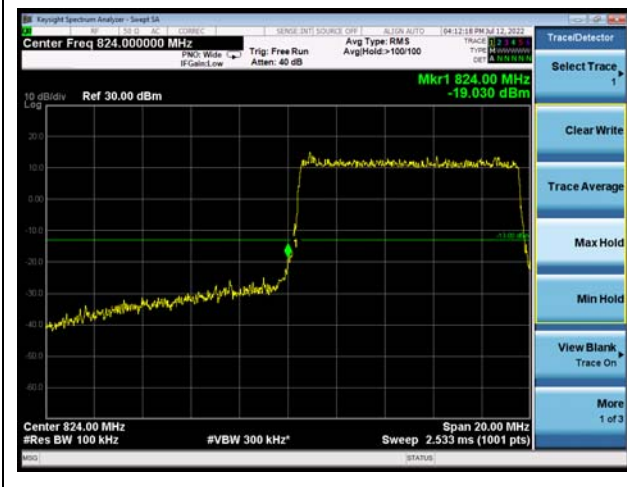


LTE Band 5 16QAM 10MHz CH-High 1RB





LTE Band 5 16QAM 10MHz CH-Low 100%RB



LTE Band 5 16QAM 10MHz CH-High 100%RB



6.4. Peak-to-Average Power Ratio (PAPR)

| Mode | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
|--------------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| GSM 850 (GMSK) | 128 | 824.2 | 32.25 | 29.61 | 2.64 | ≤13 | PASS |
| | 190 | 836.6 | 32.24 | 29.61 | 2.63 | ≤13 | PASS |
| | 251 | 848.8 | 32.20 | 29.57 | 2.63 | ≤13 | PASS |
| GPRS 850 (GMSK) | 128 | 824.2 | 32.30 | 29.66 | 2.64 | ≤13 | PASS |
| | 190 | 836.6 | 32.31 | 29.67 | 2.64 | ≤13 | PASS |
| | 251 | 848.8 | 32.26 | 29.62 | 2.64 | ≤13 | PASS |
| EGPRS 850 (8PSK) | 128 | 824.2 | 28.47 | 22.85 | 5.62 | ≤13 | PASS |
| | 190 | 836.6 | 28.61 | 22.98 | 5.63 | ≤13 | PASS |
| | 251 | 848.8 | 28.57 | 22.94 | 5.63 | ≤13 | PASS |
| WCDMA Band V (RMC) | 4132 | 826.4 | 26.49 | 23.50 | 2.99 | ≤13 | PASS |
| | 4183 | 836.6 | 26.37 | 23.55 | 2.82 | ≤13 | PASS |
| | 4233 | 846.6 | 26.36 | 23.49 | 2.87 | ≤13 | PASS |

| LTE Band 5 | | | | | | | | |
|------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK | 1.4 | 20407 | 824.7 | 27.68 | 22.19 | 5.49 | ≤13 | PASS |
| | | 20525 | 836.5 | 27.12 | 22.13 | 4.99 | ≤13 | PASS |
| | | 20643 | 848.3 | 26.94 | 22.13 | 4.81 | ≤13 | PASS |
| | 3 | 20415 | 825.5 | 27.59 | 22.15 | 5.44 | ≤13 | PASS |
| | | 20525 | 836.5 | 27.15 | 22.11 | 5.04 | ≤13 | PASS |
| | | 20635 | 847.5 | 27.07 | 22.04 | 5.03 | ≤13 | PASS |
| | 5 | 20425 | 826.5 | 27.62 | 22.13 | 5.49 | ≤13 | PASS |
| | | 20525 | 836.5 | 27.23 | 22.13 | 5.10 | ≤13 | PASS |
| | | 20625 | 846.5 | 27.28 | 22.06 | 5.22 | ≤13 | PASS |
| | 10 | 20450 | 829 | 27.41 | 22.16 | 5.25 | ≤13 | PASS |
| | | 20525 | 836.5 | 27.37 | 22.15 | 5.22 | ≤13 | PASS |
| | | 20600 | 844 | 27.45 | 22.09 | 5.36 | ≤13 | PASS |
| 16QAM | 1.4 | 20407 | 824.7 | 27.42 | 21.19 | 6.23 | ≤13 | PASS |
| | | 20525 | 836.5 | 26.94 | 21.19 | 5.75 | ≤13 | PASS |
| | | 20643 | 848.3 | 26.84 | 21.14 | 5.70 | ≤13 | PASS |
| | 3 | 20415 | 825.5 | 27.53 | 21.22 | 6.31 | ≤13 | PASS |



| | | | | | | | | |
|--|----|-------|-------|-------|-------|------|-----|------|
| | | 20525 | 836.5 | 27.01 | 21.17 | 5.84 | ≤13 | PASS |
| | | 20635 | 847.5 | 26.93 | 21.02 | 5.91 | ≤13 | PASS |
| | 5 | 20425 | 826.5 | 27.43 | 21.19 | 6.24 | ≤13 | PASS |
| | | 20525 | 836.5 | 27.04 | 21.15 | 5.89 | ≤13 | PASS |
| | | 20625 | 846.5 | 27.12 | 21.09 | 6.03 | ≤13 | PASS |
| | 10 | 20450 | 829 | 27.30 | 21.20 | 6.10 | ≤13 | PASS |
| | | 20525 | 836.5 | 27.14 | 21.19 | 5.95 | ≤13 | PASS |
| | | 20600 | 844 | 27.34 | 21.13 | 6.21 | ≤13 | PASS |

6.5. Frequency Stability

| GSM 850 | | | | | | |
|-----------------|---------|-----------------|-----------------|---------------------------|---------------------------|---------|
| Condition | | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| Temperature | Voltage | GMSK | 8PSK | GMSK | 8PSK | |
| Normal (25°C) | Normal | 14.33 | 12.29 | 0.01713 | 0.01469 | PASS |
| Extreme (50°C) | | 13.38 | 12.63 | 0.01600 | 0.01509 | PASS |
| Extreme (40°C) | | 17.61 | 3.54 | 0.02105 | 0.00423 | PASS |
| Extreme (30°C) | | 10.69 | 3.59 | 0.01278 | 0.00430 | PASS |
| Extreme (20°C) | | 10.88 | 12.45 | 0.01301 | 0.01489 | PASS |
| Extreme (10°C) | | 10.59 | 11.27 | 0.01266 | 0.01347 | PASS |
| Extreme (0°C) | | 2.22 | 4.17 | 0.00265 | 0.00499 | PASS |
| Extreme (-10°C) | | 1.71 | 5.07 | 0.00205 | 0.00606 | PASS |
| Extreme (-20°C) | | 9.29 | 15.35 | 0.01111 | 0.01835 | PASS |
| Extreme (-30°C) | | 4.60 | 5.37 | 0.00550 | 0.00641 | PASS |
| 25°C | LV | 17.55 | 15.04 | 0.02098 | 0.01798 | PASS |
| | HV | 3.35 | 16.34 | 0.00400 | 0.01953 | PASS |

| WCDMA Band V | | | | | | |
|-----------------|---------|-----------------|-----------------|---------------------------|---------------------------|---------|
| Condition | | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| Temperature | Voltage | BPSK | QPSK | BPSK | QPSK | |
| Normal (25°C) | Normal | 1.33 | 11.23 | 0.00159 | 0.01342 | PASS |
| Extreme (50°C) | | 12.33 | 12.23 | 0.01474 | 0.01462 | PASS |
| Extreme (40°C) | | 1.97 | 7.93 | 0.00236 | 0.00948 | PASS |
| Extreme (30°C) | | 1.80 | 5.12 | 0.00215 | 0.00612 | PASS |
| Extreme (20°C) | | 8.48 | 11.13 | 0.01013 | 0.01330 | PASS |
| Extreme (10°C) | | 7.39 | 16.08 | 0.00883 | 0.01922 | PASS |
| Extreme (0°C) | | 13.97 | 12.95 | 0.01670 | 0.01548 | PASS |
| Extreme (-10°C) | | 3.25 | 10.76 | 0.00389 | 0.01286 | PASS |
| Extreme (-20°C) | | 1.37 | 5.58 | 0.00164 | 0.00667 | PASS |
| Extreme (-30°C) | | 11.85 | 3.35 | 0.01416 | 0.00400 | PASS |
| 25°C | LV | 2.08 | 13.76 | 0.00248 | 0.01645 | PASS |
| | HV | 12.31 | 14.38 | 0.01471 | 0.01719 | PASS |



| LTE Band 5 | | | | | | |
|-----------------|---------|-----------------|-----------------|---------------------------|---------------------------|---------|
| Condition | | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| BANDWIDTH | 1.4MHz | 16QAM | QPSK | 16QAM | QPSK | |
| Temperature | Voltage | | | | | |
| Normal (25°C) | Normal | 7.94 | 8.92 | 0.00949 | 0.01066 | PASS |
| Extreme (50°C) | | 11.58 | 12.75 | 0.01385 | 0.01524 | PASS |
| Extreme (40°C) | | 12.48 | 14.74 | 0.01492 | 0.01761 | PASS |
| Extreme (30°C) | | 3.22 | 1.48 | 0.00384 | 0.00176 | PASS |
| Extreme (20°C) | | 10.36 | 4.05 | 0.01239 | 0.00484 | PASS |
| Extreme (10°C) | | 17.74 | 2.33 | 0.02121 | 0.00279 | PASS |
| Extreme (0°C) | | 2.42 | 8.52 | 0.00290 | 0.01019 | PASS |
| Extreme (-10°C) | | 2.51 | 1.06 | 0.00299 | 0.00127 | PASS |
| Extreme (-20°C) | | 6.80 | 15.92 | 0.00813 | 0.01902 | PASS |
| Extreme (-30°C) | | 5.41 | 17.22 | 0.00647 | 0.02059 | PASS |
| 25°C | LV | 10.39 | 1.26 | 0.01241 | 0.00151 | PASS |
| | HV | 1.54 | 16.22 | 0.00184 | 0.01939 | PASS |
| Condition | | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| BANDWIDTH | 3MHz | 16QAM | QPSK | 16QAM | QPSK | |
| Temperature | Voltage | | | | | |
| Normal (25°C) | Normal | 2.71 | 17.50 | 0.00324 | 0.02091 | PASS |
| Extreme (50°C) | | 17.87 | 3.05 | 0.02136 | 0.00365 | PASS |
| Extreme (40°C) | | 7.41 | 5.01 | 0.00886 | 0.00599 | PASS |
| Extreme (30°C) | | 3.15 | 10.14 | 0.00377 | 0.01212 | PASS |
| Extreme (20°C) | | 7.09 | 11.03 | 0.00847 | 0.01318 | PASS |
| Extreme (10°C) | | 4.05 | 14.46 | 0.00484 | 0.01728 | PASS |
| Extreme (0°C) | | 7.18 | 9.08 | 0.00858 | 0.01085 | PASS |
| Extreme (-10°C) | | 10.47 | 14.21 | 0.01252 | 0.01699 | PASS |
| Extreme (-20°C) | | 17.25 | 4.37 | 0.02063 | 0.00523 | PASS |
| Extreme (-30°C) | | 3.94 | 13.92 | 0.00470 | 0.01664 | PASS |
| 25°C | LV | 6.96 | 3.66 | 0.00832 | 0.00438 | PASS |
| | HV | 14.86 | 8.69 | 0.01776 | 0.01039 | PASS |
| Condition | | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| BANDWIDTH | 5MHz | 16QAM | QPSK | 16QAM | QPSK | |
| Temperature | Voltage | | | | | |
| Normal (25°C) | Normal | 9.62 | 8.36 | 0.01150 | 0.01000 | PASS |
| Extreme (50°C) | | 5.50 | 11.82 | 0.00657 | 0.01413 | PASS |
| Extreme (40°C) | | 9.51 | 2.67 | 0.01136 | 0.00320 | PASS |

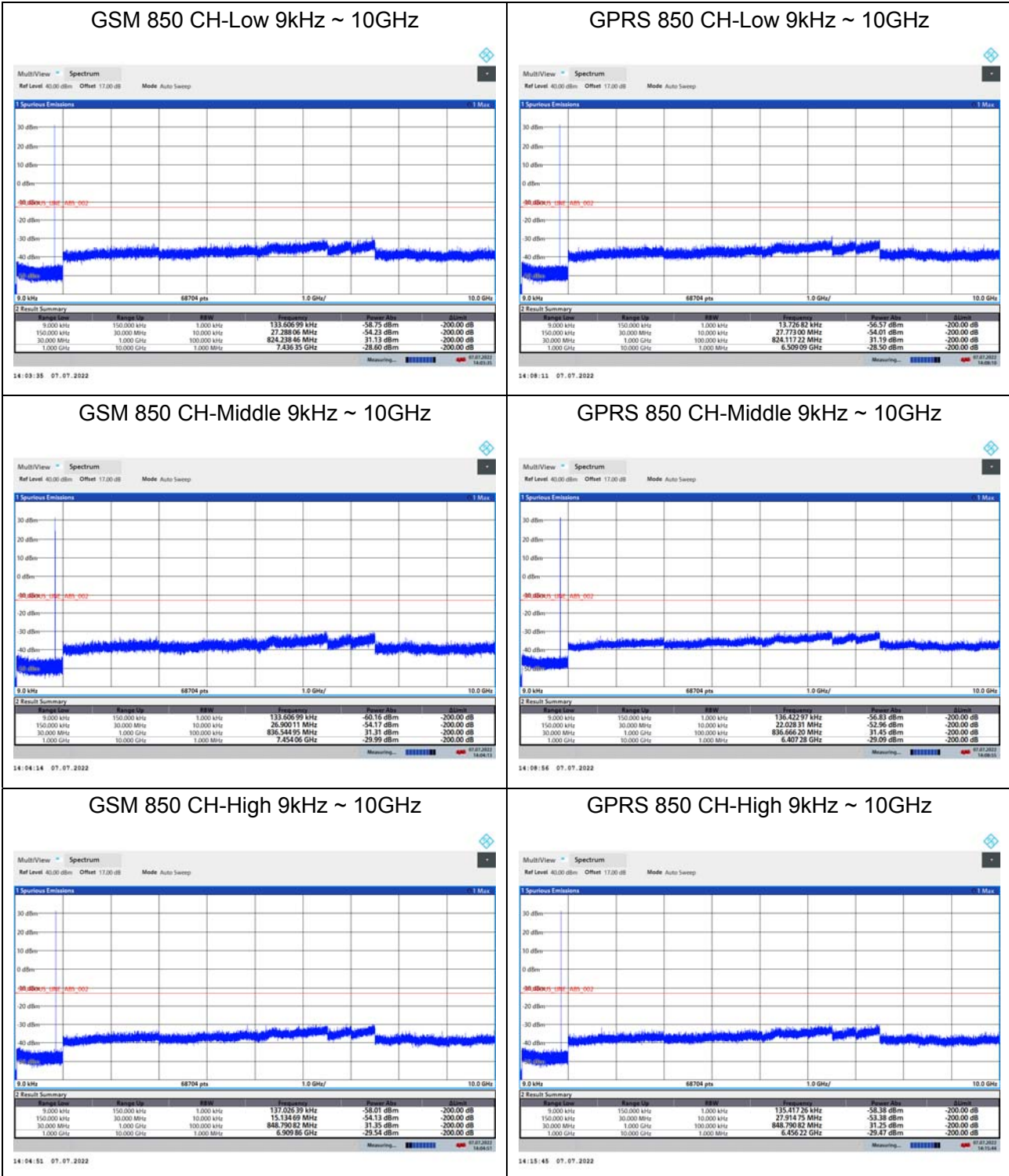


| | | | | | | |
|-----------------|---------|--------------------|--------------------|---------------------------------|---------------------------------|---------|
| Extreme (30°C) | | 17.34 | 6.07 | 0.02072 | 0.00726 | PASS |
| Extreme (20°C) | | 1.56 | 7.17 | 0.00187 | 0.00857 | PASS |
| Extreme (10°C) | | 16.08 | 2.03 | 0.01922 | 0.00242 | PASS |
| Extreme (0°C) | | 8.44 | 13.25 | 0.01008 | 0.01584 | PASS |
| Extreme (-10°C) | | 15.49 | 17.25 | 0.01852 | 0.02062 | PASS |
| Extreme (-20°C) | | 17.87 | 14.26 | 0.02136 | 0.01704 | PASS |
| Extreme (-30°C) | | 4.74 | 7.23 | 0.00567 | 0.00864 | PASS |
| 25°C | LV | 17.05 | 9.75 | 0.02039 | 0.01165 | PASS |
| | HV | 13.18 | 10.05 | 0.01576 | 0.01201 | PASS |
| Condition | | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| BANDWIDTH | 10MHz | | | | | |
| Temperature | Voltage | 16QAM | QPSK | 16QAM | QPSK | |
| Normal (25°C) | Normal | 15.47 | 2.05 | 0.01849 | 0.00245 | |
| Extreme (50°C) | | 10.23 | 1.45 | 0.01223 | 0.00173 | PASS |
| Extreme (40°C) | | 1.00 | 16.41 | 0.00120 | 0.01961 | PASS |
| Extreme (30°C) | | 3.81 | 3.88 | 0.00456 | 0.00463 | PASS |
| Extreme (20°C) | | 1.93 | 3.55 | 0.00230 | 0.00424 | PASS |
| Extreme (10°C) | | 9.64 | 16.17 | 0.01153 | 0.01933 | PASS |
| Extreme (0°C) | | 3.84 | 9.98 | 0.00459 | 0.01192 | PASS |
| Extreme (-10°C) | | 2.31 | 5.64 | 0.00276 | 0.00674 | PASS |
| Extreme (-20°C) | | 4.88 | 4.14 | 0.00584 | 0.00495 | PASS |
| Extreme (-30°C) | | 17.66 | 17.23 | 0.02110 | 0.02060 | PASS |
| 25°C | LV | 10.43 | 7.67 | 0.01247 | 0.00916 | PASS |
| | HV | 1.96 | 12.22 | 0.00234 | 0.01460 | PASS |

6.6. Spurious Emissions at Antenna Terminals

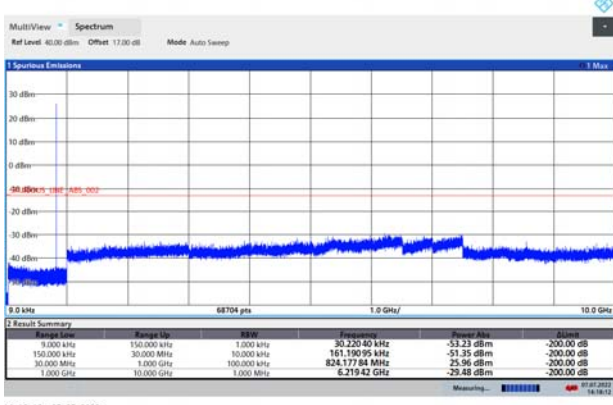
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.





EGPRS 850 CH-Low 9kHz ~ 10GHz



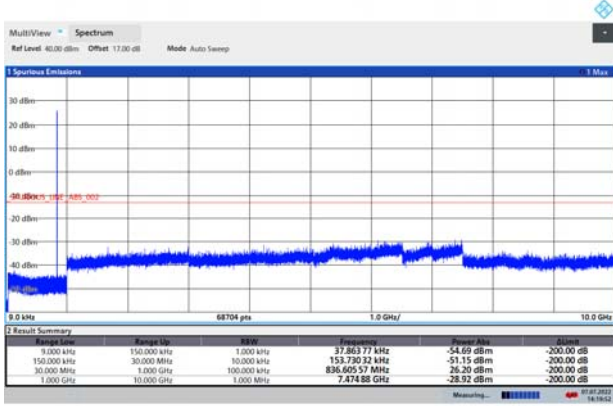
14:18:13 07.07.2022

WCDMA BAND V CH-Low 9kHz ~ 10GHz



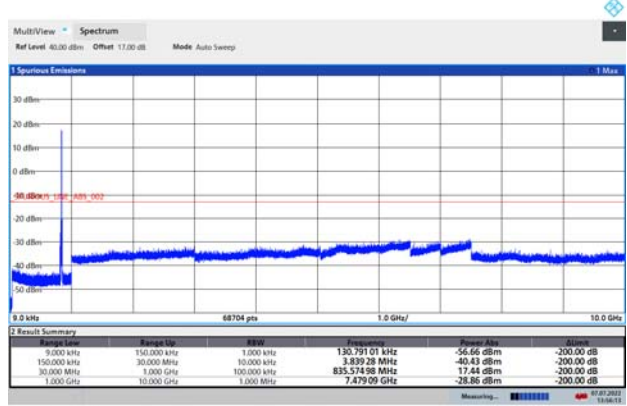
13:59:27 07.07.2022

EGPRS 850 CH-Middle 9kHz ~ 10GHz



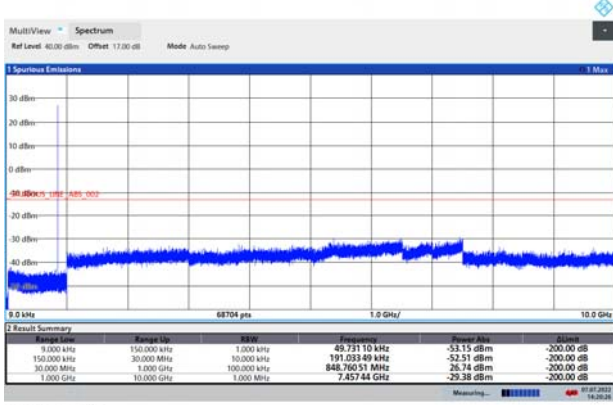
14:19:52 07.07.2022

WCDMA BAND V CH-Middle 9kHz ~ 10GHz



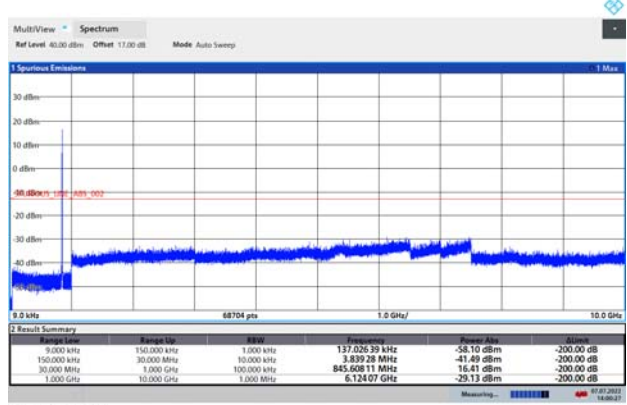
13:56:13 07.07.2022

EGPRS 850 CH-High 9kHz ~ 10GHz



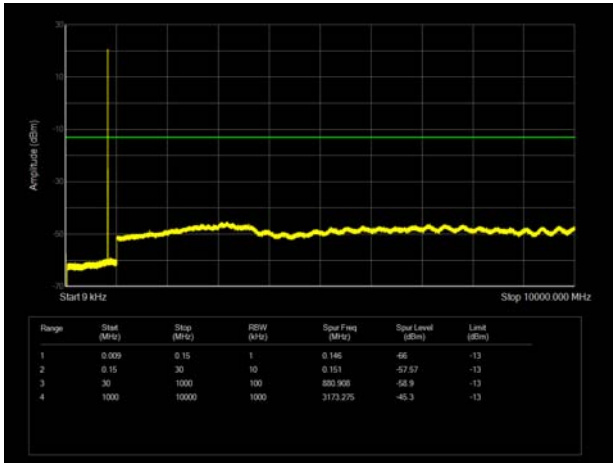
14:20:27 07.07.2022

WCDMA BAND V CH-High 9kHz ~ 10GHz

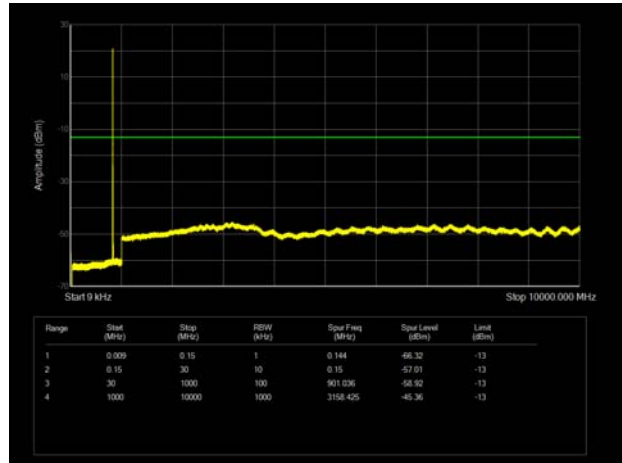


14:00:27 07.07.2022

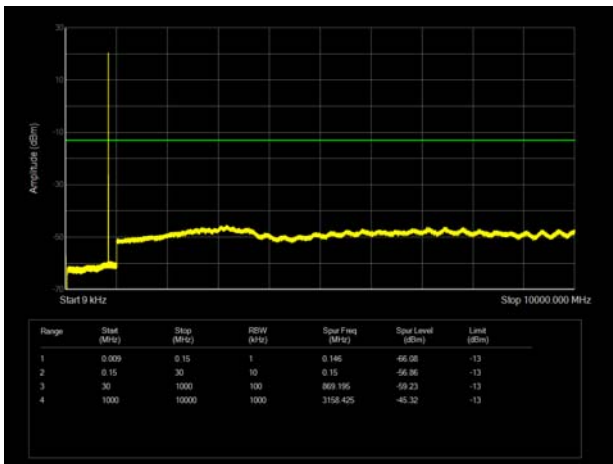
LTE Band 5 1.4MHz CH-Low 9kHz~10GHz



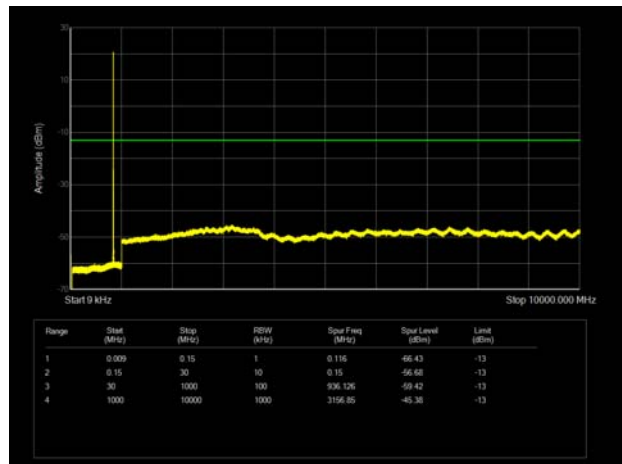
LTE Band 5 3MHz CH-Low 9kHz~10GHz



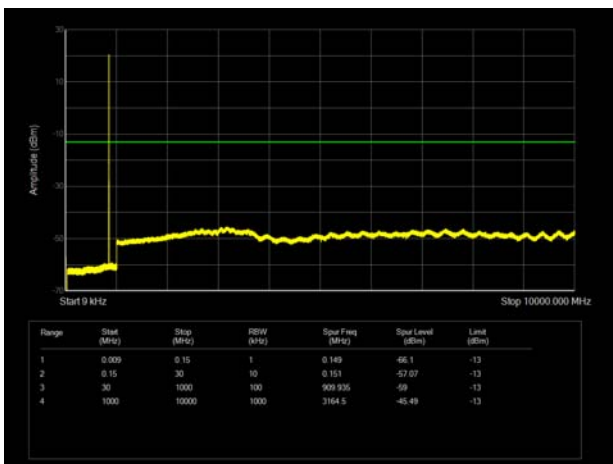
LTE Band 5 1.4MHz CH-Middle 9kHz~10GHz



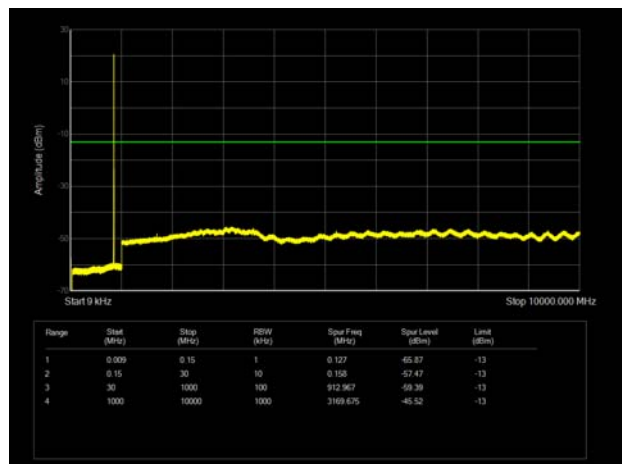
LTE Band 5 3MHz CH-Middle 9kHz~10GHz



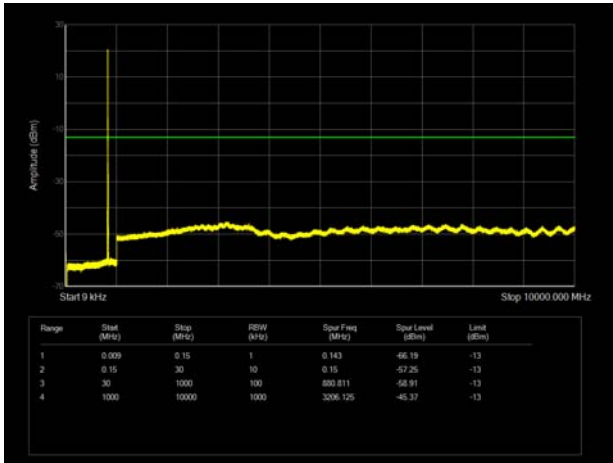
LTE Band 5 1.4MHz CH-High 9kHz~10GHz



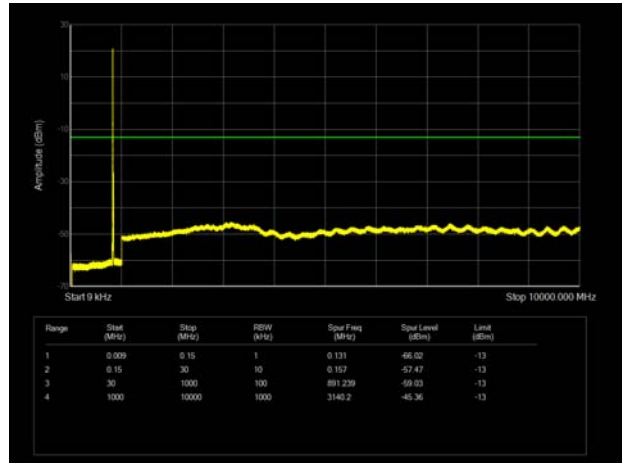
LTE Band 5 3MHz CH-High 9kHz~10GHz



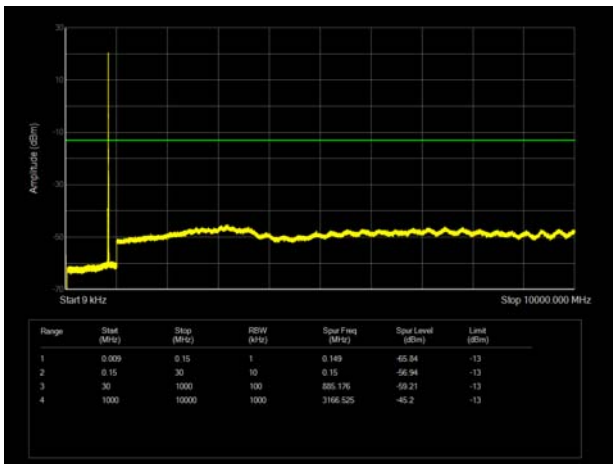
LTE Band 5 5MHz CH-Low 9kHz~10GHz



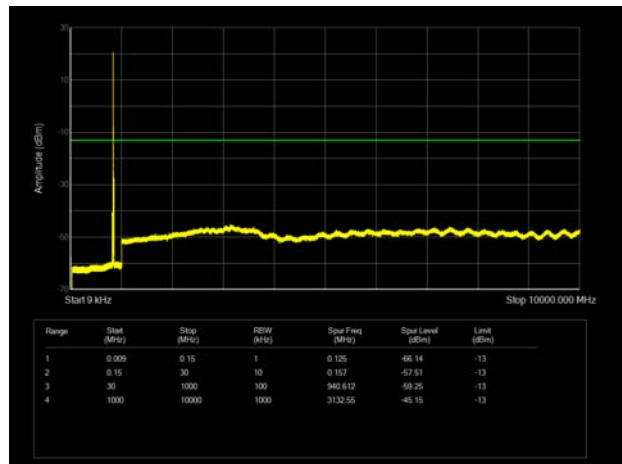
LTE Band 5 10MHz CH-Low 9kHz~10GHz



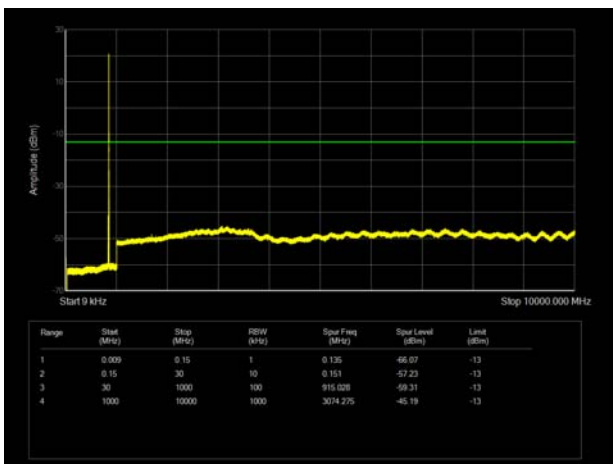
LTE Band 5 5MHz CH-Middle 9kHz~10GHz



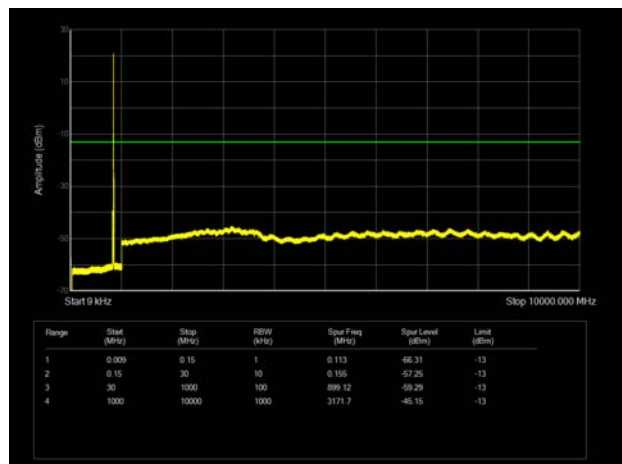
LTE Band 5 10MHz CH-Middle 9kHz~10GHz



LTE Band 5 5MHz CH-High 9kHz~10GHz



LTE Band 5 10MHz CH-High 9kHz~10GHz



6.7. Radiates Spurious Emission

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

Main Antenna

GSM 850 CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1673.55 | -62.51 | 1.70 | 8.70 | Vertical | -57.66 | -13.00 | 44.66 | 45 |
| 3 | 2509.80 | -60.52 | 2.30 | 12.00 | Vertical | -52.97 | -13.00 | 39.97 | 90 |
| 4 | 3346.40 | -65.89 | 2.70 | 12.70 | Vertical | -58.04 | -13.00 | 45.04 | 270 |
| 5 | 4183.00 | -64.11 | 3.00 | 12.50 | Vertical | -56.76 | -13.00 | 43.76 | 0 |
| 6 | 5019.60 | -62.18 | 3.40 | 12.50 | Vertical | -55.23 | -13.00 | 42.23 | 90 |
| 7 | 5856.20 | -64.00 | 3.40 | 12.80 | Vertical | -56.75 | -13.00 | 43.75 | 45 |
| 8 | 6692.80 | -59.67 | 4.10 | 11.50 | Vertical | -54.42 | -13.00 | 41.42 | 225 |
| 9 | 7529.40 | -56.23 | 4.20 | 12.20 | Vertical | -50.38 | -13.00 | 37.38 | 90 |
| 10 | 8366.00 | -54.56 | 4.30 | 12.50 | Vertical | -48.51 | -13.00 | 35.51 | 135 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

WCDMA Band V CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1671.20 | -66.29 | 1.70 | 8.70 | Vertical | -61.44 | -13.00 | 48.44 | 45 |
| 3 | 2510.40 | -65.32 | 2.30 | 12.00 | Vertical | -57.77 | -13.00 | 44.77 | 0 |
| 4 | 3346.40 | -66.05 | 2.70 | 12.70 | Vertical | -58.20 | -13.00 | 45.20 | 180 |
| 5 | 4183.00 | -63.96 | 3.00 | 12.50 | Vertical | -56.61 | -13.00 | 43.61 | 0 |
| 6 | 5019.60 | -64.17 | 3.40 | 12.50 | Vertical | -57.22 | -13.00 | 44.22 | 45 |
| 7 | 5856.20 | -62.60 | 3.40 | 12.80 | Vertical | -55.35 | -13.00 | 42.35 | 315 |
| 8 | 6692.80 | -54.25 | 4.10 | 11.50 | Vertical | -49.00 | -13.00 | 36.00 | 0 |
| 9 | 7529.40 | -54.29 | 4.20 | 12.20 | Vertical | -48.44 | -13.00 | 35.44 | 180 |
| 10 | 8366.00 | -54.38 | 4.30 | 12.50 | Vertical | -48.33 | -13.00 | 35.33 | 0 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

LTE Band 5 1.4MHz CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1673.00 | -65.72 | 1.70 | 8.70 | Vertical | -60.87 | -13.00 | 47.87 | 0 |
| 3 | 2509.50 | -66.10 | 2.30 | 12.00 | Vertical | -58.55 | -13.00 | 45.55 | 180 |
| 4 | 3346.00 | -65.16 | 2.70 | 12.70 | Vertical | -57.31 | -13.00 | 44.31 | 45 |
| 5 | 4182.50 | -64.29 | 3.00 | 12.50 | Vertical | -56.94 | -13.00 | 43.94 | 180 |
| 6 | 5019.00 | -64.90 | 3.40 | 12.50 | Vertical | -57.95 | -13.00 | 44.95 | 0 |
| 7 | 5855.50 | -63.03 | 3.40 | 12.80 | Vertical | -55.78 | -13.00 | 42.78 | 180 |
| 8 | 6692.00 | -55.20 | 4.10 | 11.50 | Vertical | -49.95 | -13.00 | 36.95 | 315 |
| 9 | 7528.50 | -52.84 | 4.20 | 12.20 | Vertical | -46.99 | -13.00 | 33.99 | 0 |
| 10 | 8365.00 | -54.51 | 4.30 | 12.50 | Vertical | -48.46 | -13.00 | 35.46 | 315 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
 2. The worst emission was found in the antenna is Vertical position.

LTE Band 5 5MHz CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1668.60 | -65.17 | 1.70 | 8.70 | Vertical | -60.32 | -13.00 | 47.32 | 225 |
| 3 | 2503.30 | -65.90 | 2.30 | 12.00 | Vertical | -58.35 | -13.00 | 45.35 | 270 |
| 4 | 3337.50 | -64.29 | 2.70 | 12.70 | Vertical | -56.44 | -13.00 | 43.44 | 0 |
| 5 | 4171.88 | -64.12 | 3.00 | 12.50 | Vertical | -56.77 | -13.00 | 43.77 | 180 |
| 6 | 5006.25 | -61.77 | 3.40 | 12.50 | Vertical | -54.82 | -13.00 | 41.82 | 225 |
| 7 | 5840.63 | -63.49 | 3.40 | 12.80 | Vertical | -56.24 | -13.00 | 43.24 | 270 |
| 8 | 6675.00 | -54.87 | 4.10 | 11.50 | Vertical | -49.62 | -13.00 | 36.62 | 0 |
| 9 | 7509.38 | -52.35 | 4.20 | 12.20 | Vertical | -46.50 | -13.00 | 33.50 | 180 |
| 10 | 8343.75 | -53.91 | 4.30 | 12.50 | Vertical | -47.86 | -13.00 | 34.86 | 45 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
 2. The worst emission was found in the antenna is Vertical position.



LTE Band 5 10MHz CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1664.40 | -66.41 | 1.70 | 8.70 | Vertical | -61.56 | -13.00 | 48.56 | 0 |
| 3 | 2496.60 | -66.12 | 2.30 | 12.00 | Vertical | -58.57 | -13.00 | 45.57 | 180 |
| 4 | 3326.00 | -65.33 | 2.70 | 12.70 | Vertical | -57.48 | -13.00 | 44.48 | 180 |
| 5 | 4157.50 | -63.52 | 3.00 | 12.50 | Vertical | -56.17 | -13.00 | 43.17 | 0 |
| 6 | 4989.00 | -63.64 | 3.40 | 12.50 | Vertical | -56.69 | -13.00 | 43.69 | 180 |
| 7 | 5820.50 | -58.30 | 3.40 | 12.80 | Vertical | -51.05 | -13.00 | 38.05 | 315 |
| 8 | 6652.00 | -54.69 | 4.10 | 11.50 | Vertical | -49.44 | -13.00 | 36.44 | 0 |
| 9 | 7483.50 | -54.79 | 4.20 | 12.20 | Vertical | -48.94 | -13.00 | 35.94 | 315 |
| 10 | 8315.00 | -53.82 | 4.30 | 12.50 | Vertical | -47.77 | -13.00 | 34.77 | 270 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

**Second Antenna**

GSM 850 CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1673.25 | -61.20 | 1.70 | 8.70 | Horizontal | -56.35 | -13.00 | 43.35 | 225 |
| 3 | 2509.80 | -55.15 | 2.30 | 12.00 | Horizontal | -47.60 | -13.00 | 34.60 | 90 |
| 4 | 3346.40 | -63.93 | 2.70 | 12.70 | Horizontal | -56.08 | -13.00 | 43.08 | 225 |
| 5 | 4183.00 | -64.28 | 3.00 | 12.50 | Horizontal | -56.93 | -13.00 | 43.93 | 90 |
| 6 | 5019.60 | -62.47 | 3.40 | 12.50 | Horizontal | -55.52 | -13.00 | 42.52 | 45 |
| 7 | 5856.20 | -62.71 | 3.40 | 12.80 | Horizontal | -55.46 | -13.00 | 42.46 | 315 |
| 8 | 6692.80 | -58.40 | 4.10 | 11.50 | Horizontal | -53.15 | -13.00 | 40.15 | 90 |
| 9 | 7529.40 | -54.74 | 4.20 | 12.20 | Horizontal | -48.89 | -13.00 | 35.89 | 45 |
| 10 | 8366.00 | -54.65 | 4.30 | 12.50 | Horizontal | -48.60 | -13.00 | 35.60 | 225 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

WCDMA Band V CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1671.20 | -64.37 | 1.70 | 8.70 | Horizontal | -59.52 | -13.00 | 46.52 | 90 |
| 3 | 2510.40 | -60.56 | 2.30 | 12.00 | Horizontal | -53.01 | -13.00 | 40.01 | 180 |
| 4 | 3346.40 | -66.54 | 2.70 | 12.70 | Horizontal | -58.69 | -13.00 | 45.69 | 0 |
| 5 | 4183.00 | -64.75 | 3.00 | 12.50 | Horizontal | -57.40 | -13.00 | 44.40 | 45 |
| 6 | 5019.60 | -62.91 | 3.40 | 12.50 | Horizontal | -55.96 | -13.00 | 42.96 | 225 |
| 7 | 5856.20 | -62.60 | 3.40 | 12.80 | Horizontal | -55.35 | -13.00 | 42.35 | 90 |
| 8 | 6692.80 | -59.46 | 4.10 | 11.50 | Horizontal | -54.21 | -13.00 | 41.21 | 45 |
| 9 | 7529.40 | -55.48 | 4.20 | 12.20 | Horizontal | -49.63 | -13.00 | 36.63 | 315 |
| 10 | 8366.00 | -55.00 | 4.30 | 12.50 | Horizontal | -48.95 | -13.00 | 35.95 | 90 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.



LTE Band 5 1.4MHz CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1673.00 | -60.98 | 1.70 | 8.70 | Horizontal | -56.13 | -13.00 | 43.13 | 0 |
| 3 | 2509.50 | -56.03 | 2.30 | 12.00 | Horizontal | -48.48 | -13.00 | 35.48 | 225 |
| 4 | 3346.00 | -64.65 | 2.70 | 12.70 | Horizontal | -56.80 | -13.00 | 43.80 | 45 |
| 5 | 4182.50 | -64.41 | 3.00 | 12.50 | Horizontal | -57.06 | -13.00 | 44.06 | 180 |
| 6 | 5019.00 | -63.86 | 3.40 | 12.50 | Horizontal | -56.91 | -13.00 | 43.91 | 0 |
| 7 | 5855.50 | -61.88 | 3.40 | 12.80 | Horizontal | -54.63 | -13.00 | 41.63 | 180 |
| 8 | 6692.00 | -54.59 | 4.10 | 11.50 | Horizontal | -49.34 | -13.00 | 36.34 | 315 |
| 9 | 7528.50 | -53.28 | 4.20 | 12.20 | Horizontal | -47.43 | -13.00 | 34.43 | 0 |
| 10 | 8365.00 | -54.51 | 4.30 | 12.50 | Horizontal | -48.46 | -13.00 | 35.46 | 315 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 5 5MHz CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1668.60 | -59.57 | 1.70 | 8.70 | Horizontal | -54.72 | -13.00 | 41.72 | 135 |
| 3 | 2503.30 | -55.72 | 2.30 | 12.00 | Horizontal | -48.17 | -13.00 | 35.17 | 90 |
| 4 | 3337.50 | -64.31 | 2.70 | 12.70 | Horizontal | -56.46 | -13.00 | 43.46 | 0 |
| 5 | 4171.88 | -62.82 | 3.00 | 12.50 | Horizontal | -55.47 | -13.00 | 42.47 | 180 |
| 6 | 5006.25 | -64.32 | 3.40 | 12.50 | Horizontal | -57.37 | -13.00 | 44.37 | 225 |
| 7 | 5840.63 | -62.90 | 3.40 | 12.80 | Horizontal | -55.65 | -13.00 | 42.65 | 270 |
| 8 | 6675.00 | -56.17 | 4.10 | 11.50 | Horizontal | -50.92 | -13.00 | 37.92 | 0 |
| 9 | 7509.38 | -53.39 | 4.20 | 12.20 | Horizontal | -47.54 | -13.00 | 34.54 | 180 |
| 10 | 8343.75 | -54.12 | 4.30 | 12.50 | Horizontal | -48.07 | -13.00 | 35.07 | 45 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.



LTE Band 5 10MHz CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1664.40 | -64.01 | 1.70 | 8.70 | Horizontal | -59.16 | -13.00 | 46.16 | 0 |
| 3 | 2496.60 | -59.78 | 2.30 | 12.00 | Horizontal | -52.23 | -13.00 | 39.23 | 135 |
| 4 | 3326.00 | -64.34 | 2.70 | 12.70 | Horizontal | -56.49 | -13.00 | 43.49 | 180 |
| 5 | 4157.50 | -63.99 | 3.00 | 12.50 | Horizontal | -56.64 | -13.00 | 43.64 | 0 |
| 6 | 4989.00 | -63.85 | 3.40 | 12.50 | Horizontal | -56.90 | -13.00 | 43.90 | 180 |
| 7 | 5820.50 | -63.40 | 3.40 | 12.80 | Horizontal | -56.15 | -13.00 | 43.15 | 315 |
| 8 | 6652.00 | -54.46 | 4.10 | 11.50 | Horizontal | -49.21 | -13.00 | 36.21 | 0 |
| 9 | 7483.50 | -54.18 | 4.20 | 12.20 | Horizontal | -48.33 | -13.00 | 35.33 | 315 |
| 10 | 8315.00 | -54.31 | 4.30 | 12.50 | Horizontal | -48.26 | -13.00 | 35.26 | 270 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.



7. Main Test Instruments

| Name | Manufacturer | Type | Serial Number | Calibration Date | Expiration Date |
|--------------------------------------|--------------|------------|---------------|------------------|-----------------|
| Climate Chamber | ESPEC | SU-242 | 93000506 | 2021-12-12 | 2022-12-11 |
| Wideband radio communication tester | R&S | CMW500 | 150415 | 2022-05-14 | 2023-05-13 |
| Spectrum Analyzer | Keysight | N9020A | MY50510203 | 2021-12-12 | 2022-12-11 |
| Universal Radio Communication Tester | Agilent | E5515C | GB44400275 | 2021-12-12 | 2022-12-11 |
| Spectrum Analyzer | R&S | FSV3030 | 101411 | 2021-12-12 | 2022-12-11 |
| Spectrum Analyzer | R&S | FSV30 | 104028 | 2021-12-12 | 2022-12-11 |
| TRILOG Broadband Antenna | Schwarzbeck | VULB 9163 | 01111 | 2019--9-12 | 2022-09-11 |
| Horn Antenna | Schwarzbeck | BBHA 9120D | 1594 | 2020-12-17 | 2023-12-16 |
| Software | R&S | EMC32 | 10.35.10 | / | / |

*****END OF REPORT *****



ANNEX A: The EUT Appearance

The EUT Appearance is submitted separately.



ANNEX B: Test Setup Photos

The Test Setup Photos is submitted separately.



ANNEX C: Product Change Description

The Product Change Description are submitted separately.