# FCC RF Test Report

| | | |
|---|---|---|
| APPLICANT | : | FCNT LLC. |
| EQUIPMENT | : | Mobile Cellular Phone |
| BRAND NAME | : | Raku-Raku smartphone |
| MODEL NAME | : | F-53E |
| FCC ID | : | 2BEPUFMP201 |
| STANDARD | : | 47 CFR Part 27 Subpart Q |
| CLASSIFICATION | : | PCS Licensed Transmitter Held to Ear (PCE) |
| TEST DATE(S) | : | Oct. 03, 2024 ~ Oct. 08, 2024 |

**We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.**

Jason Jia

**Approved by: Jason Jia**

ACCREDITED Cert #5145.02

***Sporton International Inc. (Kunshan)***
***No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300***
***People's Republic of China***

# TABLE OF CONTENTS

# REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FG480803C | Rev. 01 | Initial issue of report | Oct. 23, 2024 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|---|---|---|---|---|---|
| 3.4 | §2.1046 | Conducted Output Power | — | Report Only | - |
| 3.5 | §27.50 (k)(4) | Peak-to-Average Ratio | <13dB | PASS | |
| 3.6 | §27.50 (k)(3) | EIRP | EIRP < 1W (30dBm) | PASS | - |
| 3.7 | §2.1049 | Occupied Bandwidth | — | Report Only | - |
| 3.8 | §2.1051<br>§27.53 (n)(2) | Conducted Band Edge Measurement | -13dBm/MHz | PASS | - |
| 3.9 | §2.1051<br>§27.53 (n)(2) | Conducted Spurious Emission | -13dBm/MHz | PASS | - |
| 3.10 | §2.1055<br>§27.54 | Frequency Stability Temperature & Voltage | Within the band | PASS | - |
| 4.4 | §2.1053<br>§27.53 (n)(2) | Radiated Spurious Emission | -13dBm/MHz | PASS | Under limit 22.91 dB at 10476.00 MHz |

**Conformity Assessment Condition:**

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

# 1 General Description

## 1.1 Applicant

**FCNT LLC.**
Sanki Yamato Bldg. 3F, 7-10-1, Chuorinkan, Yamato-shi, Kanagawa, 242-0007, Japan

## 1.2 Manufacturer

**FCNT LLC.**
Sanki Yamato Bldg. 3F, 7-10-1, Chuorinkan, Yamato-shi, Kanagawa, 242-0007, Japan

## 1.3 Product Feature of Equipment Under Test

| Product Feature | |
|---|---|
| **Equipment** | Mobile Cellular Phone |
| **Brand Name** | Raku-Raku smartphone |
| **Model Name** | F-53E |
| **FCC ID** | 2BEPUFMP201 |
| **IMEI Code** | Conducted: 354413330070845/354413330070852<br>Radiation: 354413330044501/354413330044519 |
| **HW Version** | DVT2 |
| **SW Version** | UUZ34.32 |
| **EUT Stage** | Identical Prototype |

**Remark:** There are two samples under test, sample 1 is 1st source and sample 2 is 2nd source, the detailed differences could be referred to the F-53E_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, sample 1 perform full test, sample 2 verify conducted power and found less than sample 1, and sample 2 additionally verify the worst case of RSE for LTE in another report(FG480803B).

## 1.4 Product Specification of Equipment Under Test

| Product Feature | |
|---|---|
| **Tx/Rx Frequency** | LTE Band 42: 3450 MHz ~ 3550 MHz |
| **Bandwidth** | 5MHz / 10MHz / 15MHz / 20MHz |
| **Maximum Output Power to Antenna** | <Ant.5><br>LTE Band 42 : 22.89 dBm |
| **Antenna Gain** | <Ant.5><br>LTE Band 42 : -2.32 dBi |
| **Type of Modulation** | QPSK / 16QAM / 64QAM / 256QAM(Downlink only) |

## 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6 Maximum EIRP and Emission Designator

| LTE Band 42 | | QPSK | | 16QAM/64QAM | |
|---|---|---|---|---|---|
| BW (MHz) | Frequency Range (MHz) | Maximum EIRP(W) | Emission Designator (99%OBW) | Maximum EIRP(W) | Emission Designator (99%OBW) |
| **5** | 3452.5 ~ 3547.5 | 0.1096 | 4M50G7D | 0.0891 | 4M49W7D |
| **10** | 3455 ~ 3545 | 0.1104 | 9M03G7D | 0.0889 | 9M01W7D |
| **15** | 3457.5 ~ 3542.5 | 0.1102 | 13M4G7D | 0.0877 | 13M5W7D |
| **20** | 3460 ~ 3540 | 0.1140 | 17M9G7D | 0.0893 | 17M9W7D |

**Note:** All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.

## 1.7 Testing Site

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

| | | | |
|---|---|---|---|
| **Test Firm** | Sporton International Inc. (Kunshan) | | |
| **Test Site Location** | No. 1098, Pengxi North Road, Kunshan Economic Development Zone<br>Jiangsu Province 215300 People's Republic of China<br>TEL : +86-512-57900158 | | |
| **Test Site No.** | **Sporton Site No.** | **FCC Designation No.** | **FCC Test Firm Registration No.** |
| | 03CH04-KS<br>TH01-KS | CN1257 | 314309 |

## 1.8 Test Software

| Item | Site | Manufacturer | Name | Version |
|---|---|---|---|---|
| 1. | TH01-KS | SPORTON | Part2224_Ver5.0 200330 | 5.0 |
| 2. | 03CH04-KS | AUDIX | E3 | 210616 |

## 1.9 Applied Standards

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

- 47 CFR Part 27 Subpart Q
- ANSI C63.26-2015
- FCC KDB 971168 Power Meas License Digital Systems D01 v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
-

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

# 2 Test Configuration of Equipment Under Test

## 2.1 Test Mode

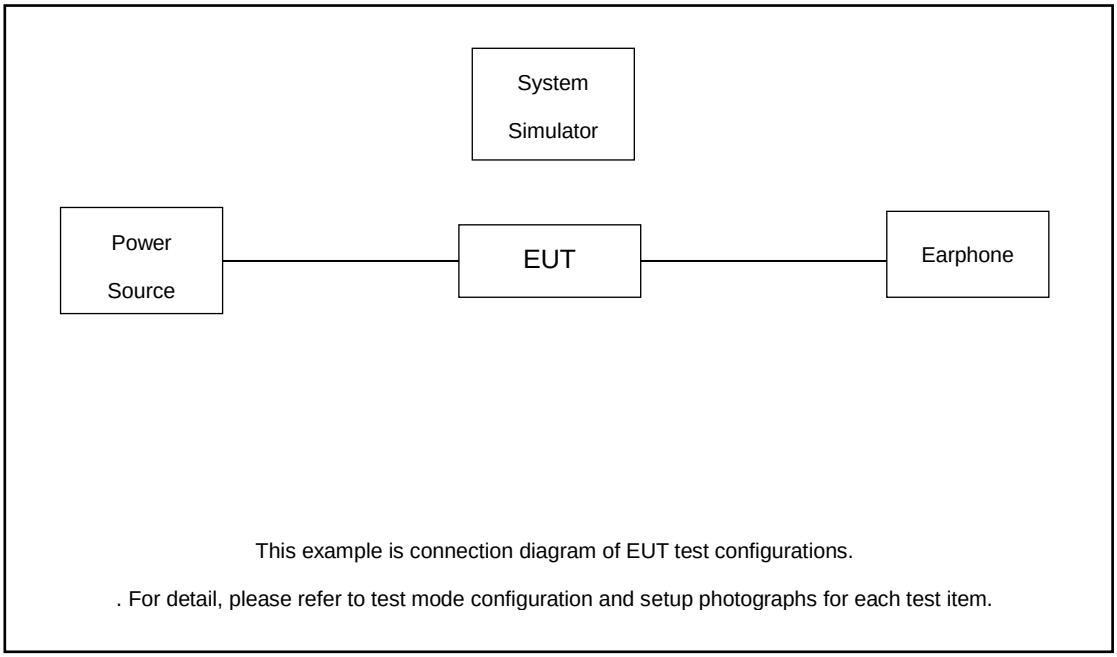
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (Y Plane)

| Test Cases | Band | Bandwidth (MHz) | Modulation | RB # | Test Channel |
|---|---|---|---|---|---|
| | | eg. 5M, 10M, 15M, 20M | eg. QPSK, 16QAM, 64QAM | 1RB, Partial RB, Full RB | L/M/H |
| Max. Output Power | LTE Band 42 | 5M, 10M, 15M, 20M | QPSK, 16QAM, 64QAM | 1RB, Full RB | L, M, H |
| Peak-to-Average Ratio | LTE Band 42 | 20M | QPSK, 16QAM, 64QAM | Full RB | M |
| E.I.R.P | LTE Band 42 | 5M, 10M, 15M, 20M | QPSK, 16QAM, 64QAM | 1RB, Full RB | L, M, H |
| 26dB and 99% Bandwidth | LTE Band 42 | 5M, 10M, 15M, 20M | QPSK, 16QAM | Full RB | M |
| Conducted Band Edge | LTE Band 42 | 5M, 10M, 15M, 20M | QPSK, 16QAM, 64QAM | 1RB, Full RB | L, H |
| Conducted Spurious Emission | LTE Band 42 | 5M, 10M, 15M, 20M | QPSK | 1RB | L, M, H |
| Frequency Stability | LTE Band 42 | 20M | QPSK | 1RB | M |
| Radiated Spurious Emission | LTE Band 42 | Worst case from maximum power | | | M |

**Note:** The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

## 2.2 Connection Diagram of Test System




This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

## 2.3 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model No. | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | Power Supply | GWINSTEK | PSS-2002 | N/A | N/A | Unshielded, 1.8 m |
| 2. | LTE Base Station | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |
| 3. | Earphone | N/A | N/A | N/A | N/A | N/A |

## 2.4 Measurement Results Explanation Example

**For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

*Offset = RF cable loss.*

Following shows an offset computation example with cable loss 6.5 dB.

Example : *Offset(dB) = RF cable loss(dB).*

= 6.5 (dB)

## 2.5 Frequency List of Low/Middle/High Channels

| LTE Band 42 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 20 | Channel | 42190 | 42590 | 42990 |
| | Frequency | 3460 | 3500 | 3540 |
| 15 | Channel | 42165 | 42590 | 43015 |
| | Frequency | 3457.5 | 3500 | 3542.5 |
| 10 | Channel | 42140 | 42590 | 43040 |
| | Frequency | 3455 | 3500 | 3545 |
| 5 | Channel | 42115 | 42590 | 43065 |
| | Frequency | 3452.5 | 3500 | 3547.5 |

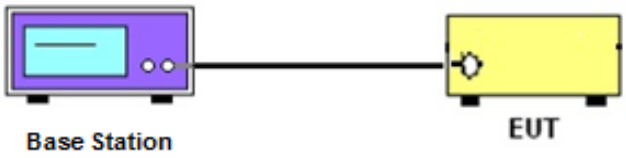
# 3 Conducted Test Items

## 3.1 Measuring Instruments

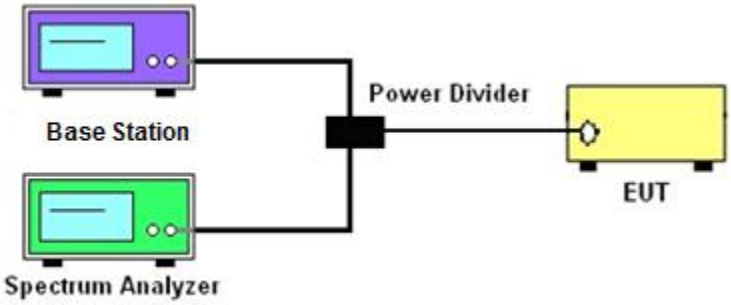
See list of measuring instruments of this test report.

## 3.2 Test Setup

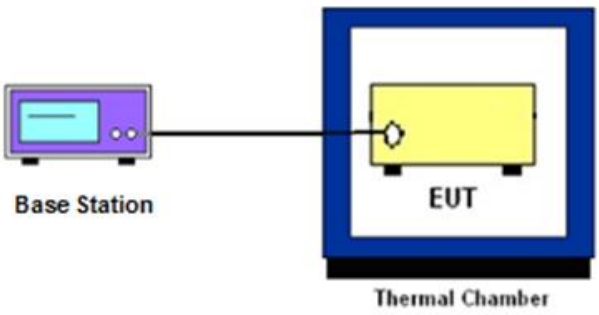
### 3.2.1 Conducted Output Power




### 3.2.2 Peak-to-Average Ratio, Occupied / 26dB Bandwidth ,Band-Edge and Conducted Spurious Emission




### 3.2.3 Frequency Stability




## 3.3 Test Result of Conducted Test

Please refer to Appendix A.

## 3.4 Conducted Output Power Measurement

### 3.4.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

### 3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

# 3.5 Peak-to-Average Ratio

## 3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

## 3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

# 3.6 EIRP

## 3.6.1 Description of EIRP Limit

**§ 27.50 (k)(3)**

Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications

## 3.6.2 Test Procedures

1. According to KDB 412172 D01 Power Approach,
2. EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

   $P_T$ = transmitter output power in dBm

   $G_T$ = gain of the transmitting antenna in dBi

   $L_C$ = signal attenuation in the connecting cable between the transmitter and antenna in dB

# 3.7 Occupied Bandwidth

## 3.7.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

## 3.7.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

# 3.8 Conducted Band Edge Measurement

## 3.8.1 Description of Conducted Band Edge Measurement

**§ 27.53 (n)(2)**

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

## 3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW ≥ 1% EBW but limited to a maximum of 200 kHz in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz and 5 MHz removed from the band edge, set RBW ≥ 500KHz.
6. Beyond the 5 MHz removed from the band edge, set RBW = 1MHz.
7. Set spectrum analyzer with RMS detector.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

# 3.9 Conducted Spurious Emission Measurement

## 3.9.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 kHz up to a frequency including its 10$^{th}$ harmonic.

## 3.9.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. Checked that all the results comply with the emission limit line.

# 3.10 Frequency Stability Measurement

## 3.10.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

## 3.10.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

## 3.10.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5.
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

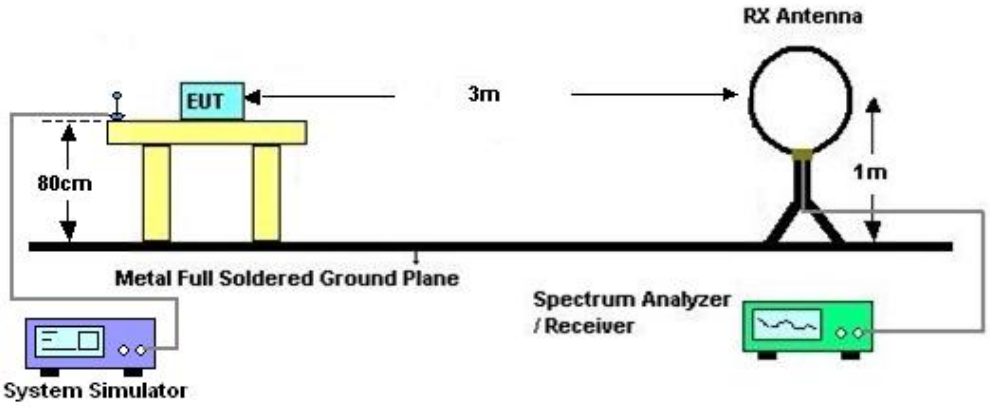
# 4 Radiated Test Items

## 4.1 Measuring Instruments

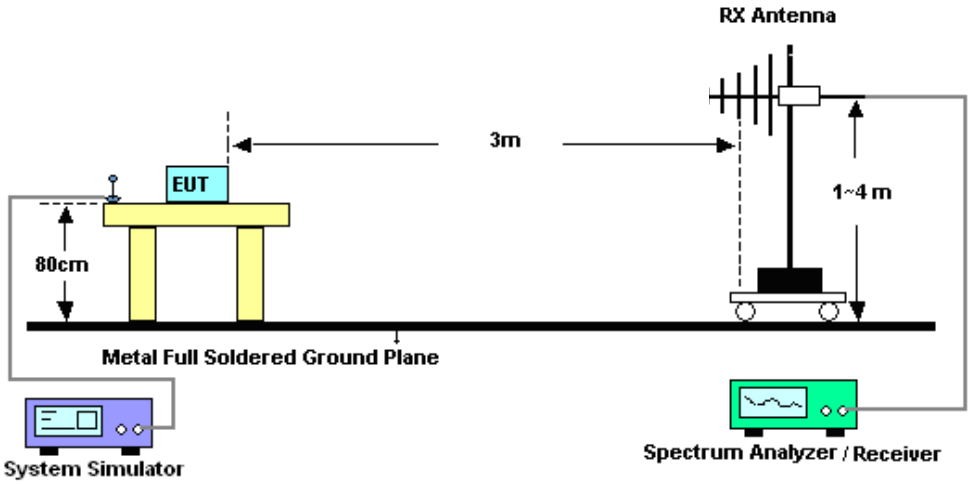
See list of measuring instruments of this test report.

## 4.2 Test Setup

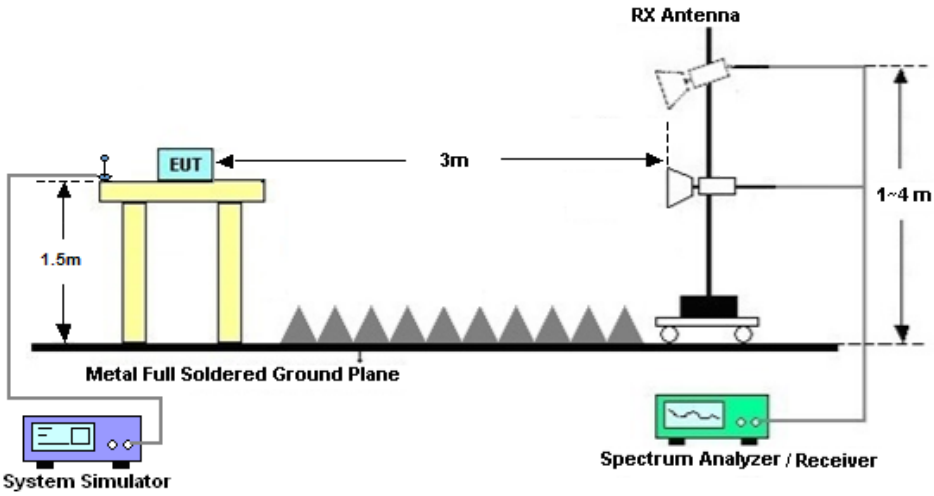
### 4.2.1 For radiated test below 30MHz




### 4.2.2 For radiated test from 30MHz to 1GHz



### 4.2.3 For radiated test above 1GHz




## 4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

## 4.4 Radiated Spurious Emission Measurement

### 4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### 4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
   EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
   ERP (dBm) = EIRP - 2.15
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

# 5 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Spectrum Analyzer | R&S | FSV40 | 101040 | 10Hz~40GHz | Oct. 11, 2023 | Oct. 03, 2024 | Oct. 10, 2024 | Conducted (TH01-KS) |
| Power divider | STI | STI08-0055 | - | 0.5~40GHz | NCR | Oct. 03, 2024 | NCR | Conducted (TH01-KS) |
| Temperature & humidity | Hongzhan | LP-150U | H2014011440 | -40~+150°C 20%~95%RH | Jul. 04, 2024 | Oct. 03, 2024 | Jul. 03, 2025 | Conducted (TH01-KS) |
| EXA Spectrum Analyzer | Keysight | N9010B | MY57471079 | 10Hz-44G,MAX 30dB | Oct. 11, 2023 | Oct. 08, 2024 | Oct. 10, 2024 | Radiation (03CH04-KS) |
| Loop Antenna | R&S | HFH2-Z2E | 101125 | 9kHz~30MHz | Sep. 08, 2024 | Oct. 08, 2024 | Sep. 07, 2025 | Radiation (03CH04-KS) |
| Bilog Antenna | TeseQ | CBL6111D | 44483 | 30MHz-1GHz | Dec. 06, 2023 | Oct. 08, 2024 | Dec. 05, 2024 | Radiation (03CH04-KS) |
| Double Ridge Horn Antenna | ETS-Lindgren | 3117 | 75957 | 1GHz~18GHz | Oct. 23, 2023 | Oct. 08, 2024 | Oct. 22, 2024 | Radiation (03CH04-KS) |
| SHF-EHF Horn | Com-power | AH-840 | 101070 | 18GHz~40GHz | Jan. 27, 2024 | Oct. 08, 2024 | Jan. 26, 2025 | Radiation (03CH04-KS) |
| Amplifier | SONOMA | 310N | 413740 | 9KHz-1GHz | Jan. 03, 2024 | Oct. 08, 2024 | Jan. 02, 2025 | Radiation (03CH04-KS) |
| Amplifier | EM | EM18G40GA | 060728 | 18~40GHz | Jan. 02, 2024 | Oct. 08, 2024 | Jan. 01, 2025 | Radiation (03CH04-KS) |
| high gain Amplifier | EM | EM01G18GA | 060840 | 1Ghz-18Ghz | Oct. 11, 2023 | Oct. 08, 2024 | Oct. 10, 2024 | Radiation (03CH04-KS) |
| Amplifier | EM | EM01G18GA | 060892 | 1Ghz-18Ghz | Oct. 11, 2023 | Oct. 08, 2024 | Oct. 10, 2024 | Radiation (03CH04-KS) |
| AC Power Source | Chroma | 61601 | F104090004 | N/A | NCR | Oct. 08, 2024 | NCR | Radiation (03CH04-KS) |
| Turn Table | ChamPro | EM 1000-T | 060762-T | 0~360 degree | NCR | Oct. 08, 2024 | NCR | Radiation (03CH04-KS) |
| Antenna Mast | ChamPro | EM 1000-A | 060762-A | 1 m~4 m | NCR | Oct. 08, 2024 | NCR | Radiation (03CH04-KS) |

NCR: No Calibration Required

# 6 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

**Uncertainty of Conducted Measurement**

| | |
|---|---|
| **Conducted Spurious Emission & Bandedge** | **±2.22 dB** |
| **Occupied Channel Bandwidth** | **±0.1%** |
| **Conducted Power** | **±0.50 dB** |
| **Peak to Average Ratio** | **±0.50 dB** |
| **Frequency Stability** | **±0.04 Hz** |

**Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.83 dB** |

**Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.83 dB** |

**Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.82 dB** |

**---------- THE END ----------**

# Appendix A. Test Results of Conducted Test

| Test Engineer : | Simle Wang | Temperature : | 24~26℃ |
|---|---|---|---|
| | | Relative Humidity : | 50~53% |

## Conducted Output Power(Average power) and EIRP

**LTE_B42_Ant.5**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | EIRP(W) | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 42190 | 42590 | 42990 | | | |
| Frequency (MHz) | | | | 3460 | 3500 | 3540 | L | M | H |
| 20 | QPSK | 1 | 0 | 22.67 | 22.89 | 22.68 | 0.1084 | 0.1140 | 0.1086 |
| 20 | QPSK | 1 | 99 | 22.49 | 22.70 | 22.61 | 0.1040 | 0.1091 | 0.1069 |
| 20 | QPSK | 100 | 0 | 21.79 | 21.84 | 21.72 | 0.0885 | 0.0895 | 0.0871 |
| 20 | 16QAM | 1 | 0 | 21.72 | 21.83 | 21.78 | 0.0871 | 0.0893 | 0.0883 |
| 20 | 64QAM | 1 | 0 | 21.73 | 21.79 | 21.69 | 0.0873 | 0.0885 | 0.0865 |
| Channel | | | | 42165 | 42590 | 43015 | EIRP(W) | | |
| Frequency (MHz) | | | | 3457.5 | 3500 | 3542.5 | L | M | H |
| 15 | QPSK | 1 | 0 | 22.68 | 22.74 | 22.67 | 0.1086 | 0.1102 | 0.1084 |
| 15 | 16QAM | 1 | 0 | 21.68 | 21.75 | 21.72 | 0.0863 | 0.0877 | 0.0871 |
| Channel | | | | 42140 | 42590 | 43040 | EIRP(W) | | |
| Frequency (MHz) | | | | 3455 | 3500 | 3545 | L | M | H |
| 10 | QPSK | 1 | 0 | 22.64 | 22.75 | 22.48 | 0.1076 | 0.1104 | 0.1038 |
| 10 | 16QAM | 1 | 0 | 21.72 | 21.81 | 21.76 | 0.0871 | 0.0889 | 0.0879 |
| Channel | | | | 42115 | 42590 | 43065 | EIRP(W) | | |
| Frequency (MHz) | | | | 3452.5 | 3500 | 3547.5 | L | M | H |
| 5 | QPSK | 1 | 0 | 22.62 | 22.72 | 22.68 | 0.1072 | 0.1096 | 0.1086 |
| 5 | 16QAM | 1 | 0 | 21.70 | 21.82 | 21.58 | 0.0867 | 0.0891 | 0.0843 |

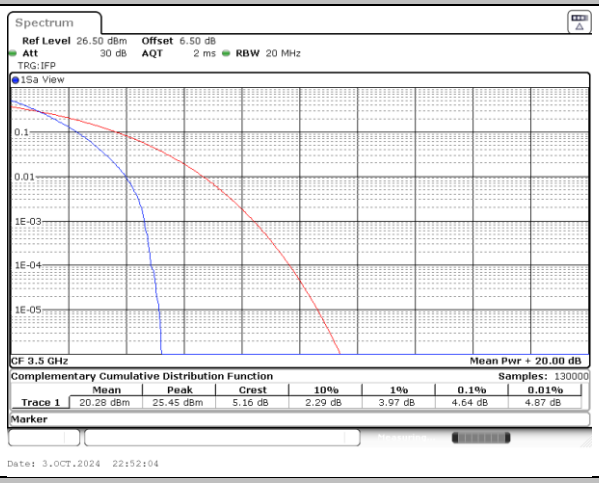
# LTE Band 42

## Peak-to-Average Ratio

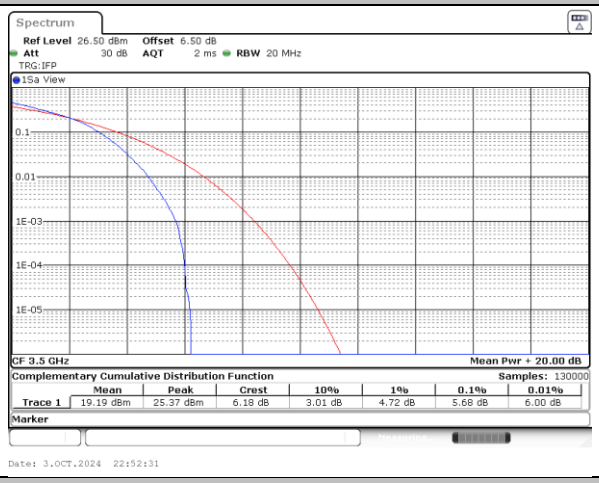
| Mode | LTE Band 42 / 20MHz | | | |
|---|---|---|---|---|
| Mod. | QPSK | 16QAM | 64QAM | Limit: 13dB |
| RB Size | Full RB | | | Result |
| Middle CH | 4.64 | 5.68 | 5.94 | PASS |

**LTE Band 42 / 20MHz / Full RB / Middle Channel**

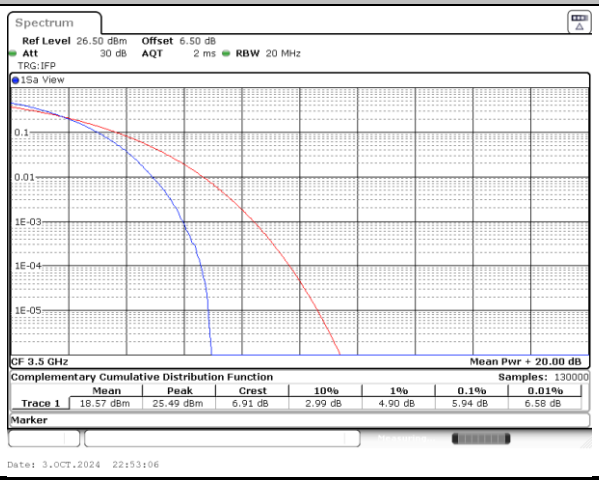
**QPSK**




**16QAM**




**64QAM**



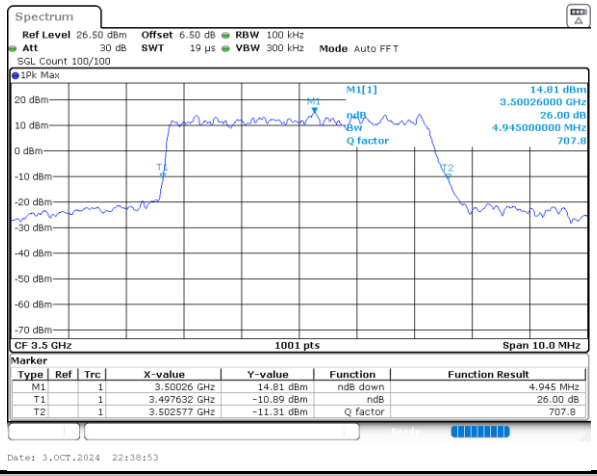

**NA**

# 26dB Bandwidth

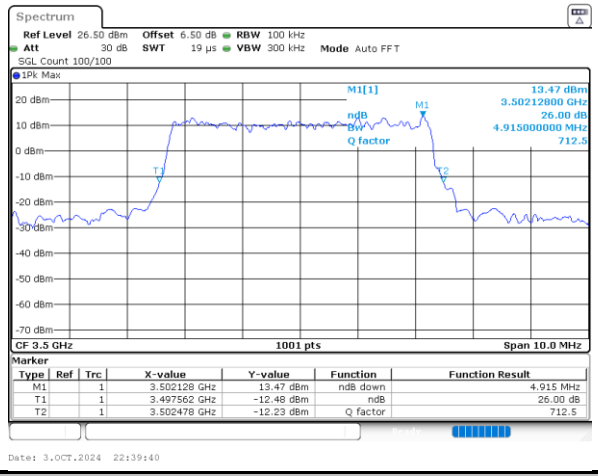
| Mode | LTE Band 42 : 26dB BW(MHz) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 4.945 | 4.915 | 9.77 | 9.67 | 14.835 | 14.476 | 18.981 | 18.941 |

## LTE Band 42 / Middle channel / Full RB/5M

### QPSK

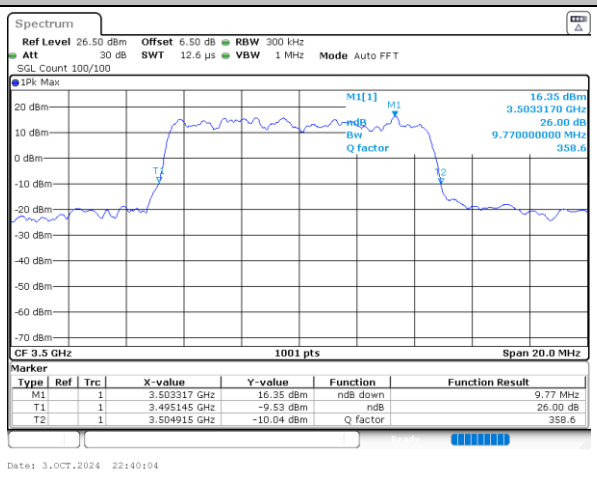



### 16QAM

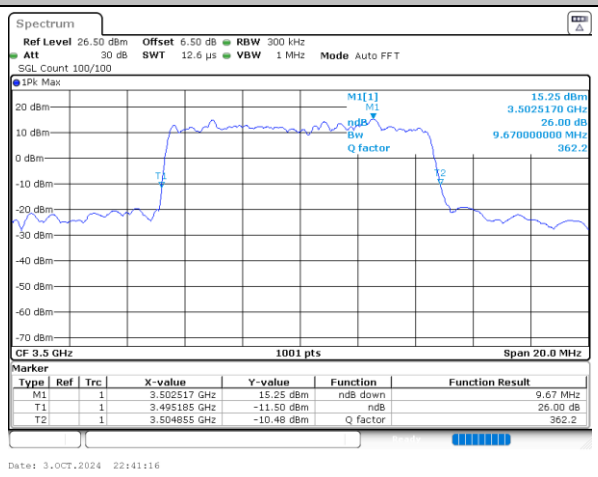



## LTE Band 42 / Middle channel / Full RB/10M

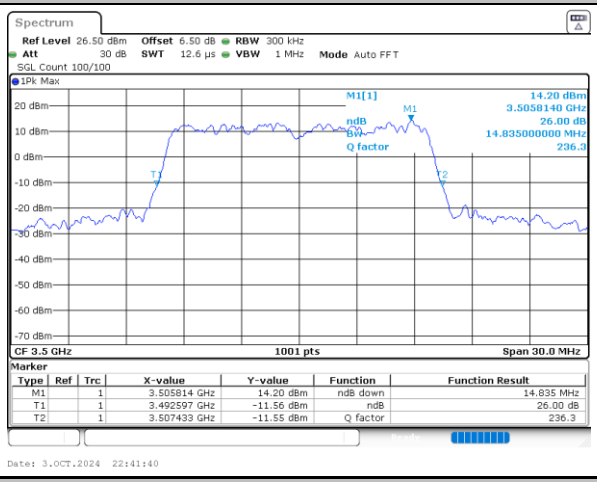
### QPSK

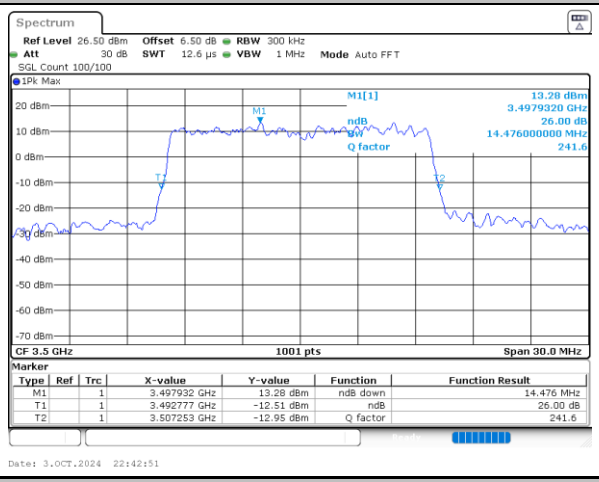



### 16QAM

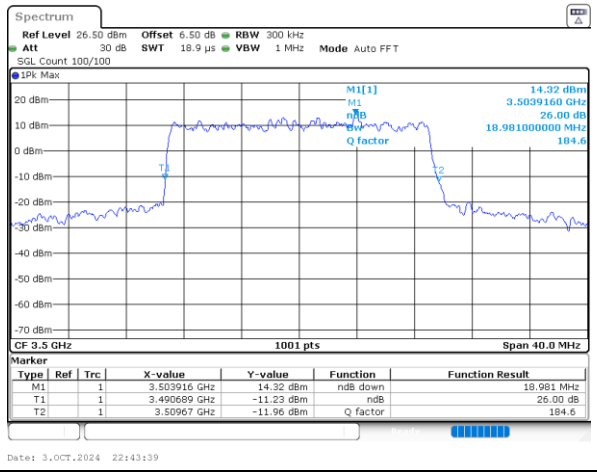


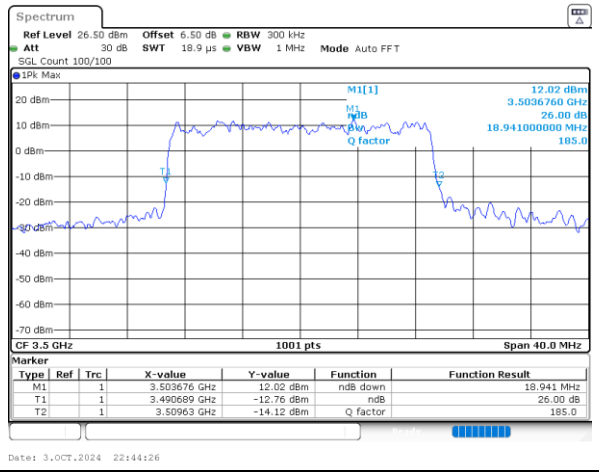
| LTE Band 42 / Middle channel / Full RB/15M | |
|---|---|
| QPSK | 16QAM |




| LTE Band 42 / Middle channel / Full RB/20M | |
|---|---|
| QPSK | 16QAM |



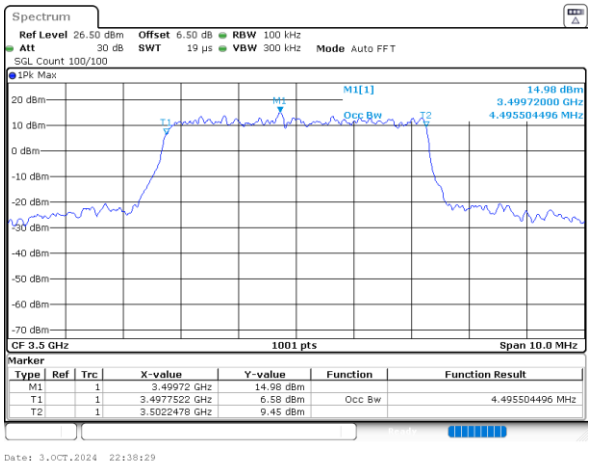



# Occupied Bandwidth

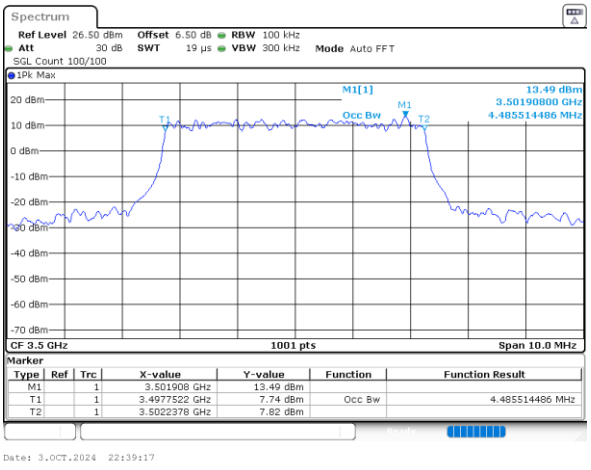
| Mode | LTE Band 42 : 99%OBW(MHz) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 4.50 | 4.49 | 9.03 | 9.01 | 13.40 | 13.49 | 17.90 | 17.90 |

## LTE Band 42 / Middle channel / Full RB/5M

### QPSK

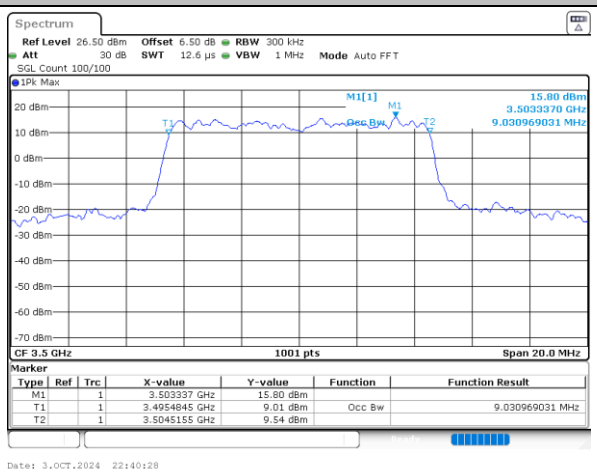



### 16QAM

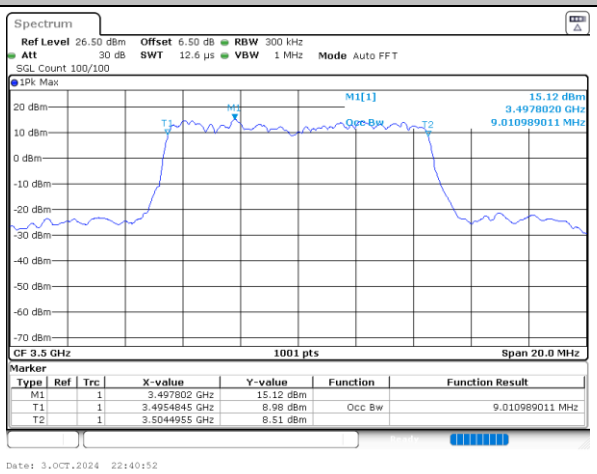



## LTE Band 42 / Middle channel / Full RB/10M

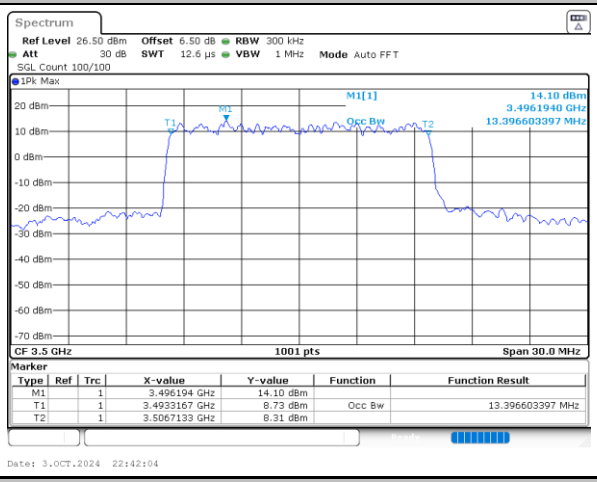
### QPSK

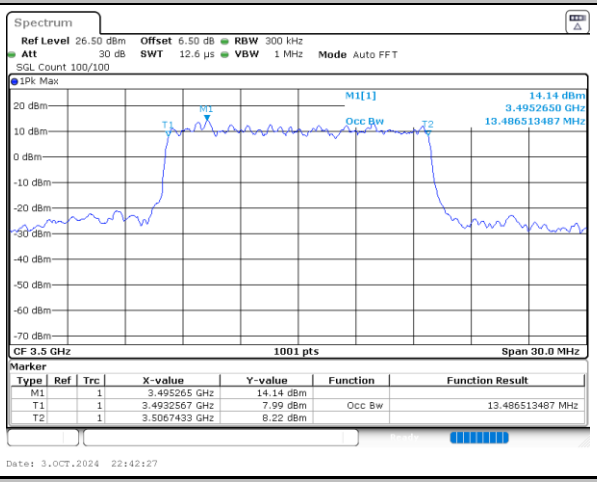



### 16QAM

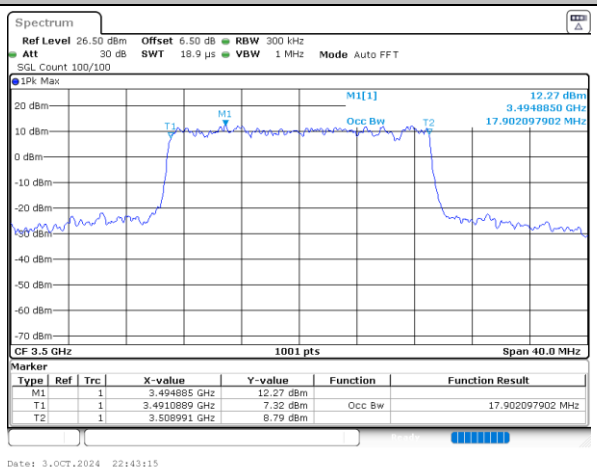


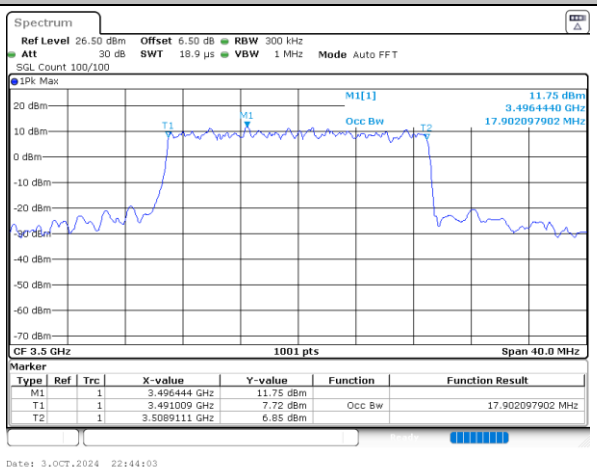
| LTE Band 42 / Middle channel / Full RB/15M | |
|---|---|
| QPSK | 16QAM |




| LTE Band 42 / Middle channel / Full RB/20M | |
|---|---|
| QPSK | 16QAM |



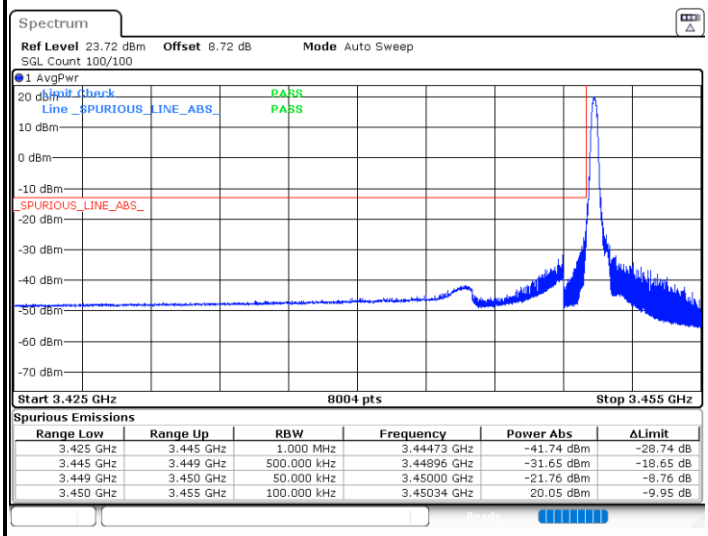



# Conducted Band Edge

## LTE Band 42 / 5MHz

### QPSK

#### Lowest Channel / 1RB0

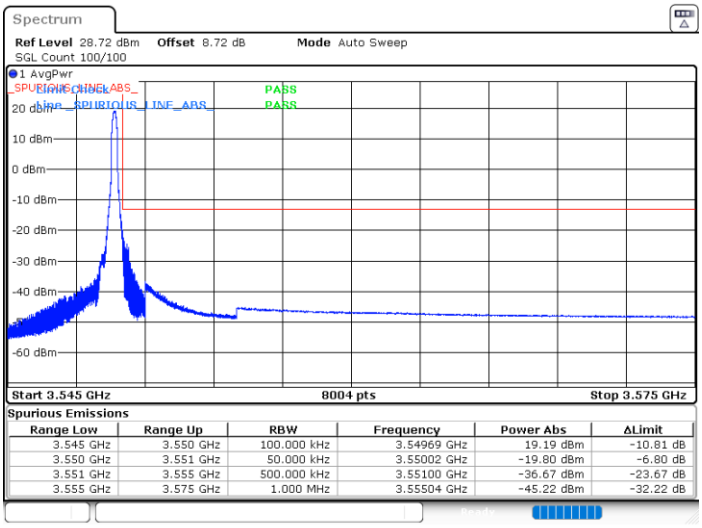



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44473 GHz | -41.74 dBm | -28.74 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44896 GHz | -31.65 dBm | -18.65 dB |
| 3.449 GHz | 3.450 GHz | 50.000 kHz | 3.45000 GHz | -21.76 dBm | -8.76 dB |
| 3.450 GHz | 3.455 GHz | 100.000 kHz | 3.45034 GHz | 20.05 dBm | -9.95 dB |

Date: 3.OCT.2024 21:17:38

#### Highest Channel / 1RBmax

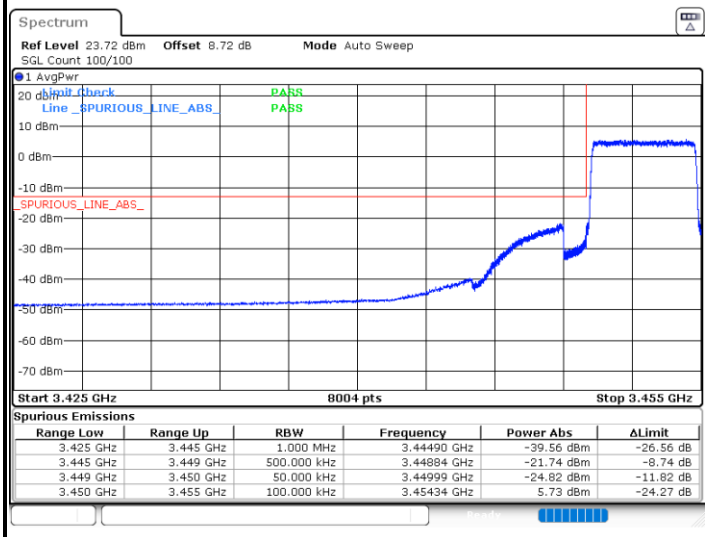



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.545 GHz | 3.550 GHz | 100.000 kHz | 3.54969 GHz | 19.19 dBm | -10.81 dB |
| 3.550 GHz | 3.551 GHz | 50.000 kHz | 3.55002 GHz | -19.80 dBm | -6.80 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55100 GHz | -36.67 dBm | -23.67 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55504 GHz | -45.22 dBm | -32.22 dB |

Date: 3.OCT.2024 21:30:49

#### Lowest Channel / FullRB

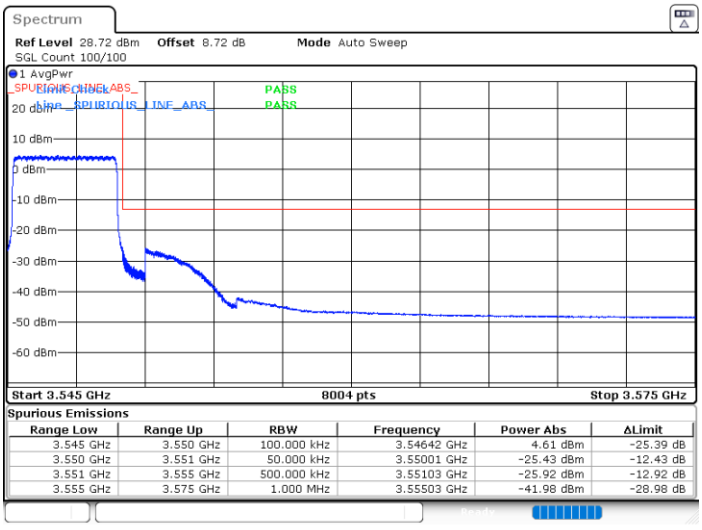



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44490 GHz | -39.56 dBm | -26.56 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44884 GHz | -21.74 dBm | -8.74 dB |
| 3.449 GHz | 3.450 GHz | 50.000 kHz | 3.44999 GHz | -24.82 dBm | -11.82 dB |
| 3.450 GHz | 3.455 GHz | 100.000 kHz | 3.45434 GHz | 5.73 dBm | -24.27 dB |

Date: 3.OCT.2024 21:20:04

#### Highest Channel / FullRB




Spurious Emissions

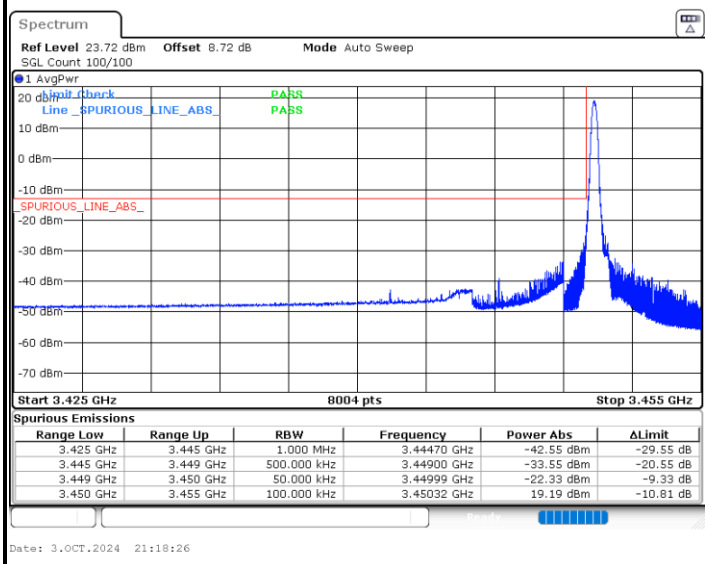
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.545 GHz | 3.550 GHz | 100.000 kHz | 3.54642 GHz | 4.61 dBm | -25.39 dB |
| 3.550 GHz | 3.551 GHz | 50.000 kHz | 3.55001 GHz | -25.43 dBm | -12.43 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55103 GHz | -25.92 dBm | -12.92 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55503 GHz | -41.98 dBm | -28.98 dB |

Date: 3.OCT.2024 21:33:31

## LTE Band 42 / 5MHz

### 16QAM

#### Lowest Channel / 1RB0

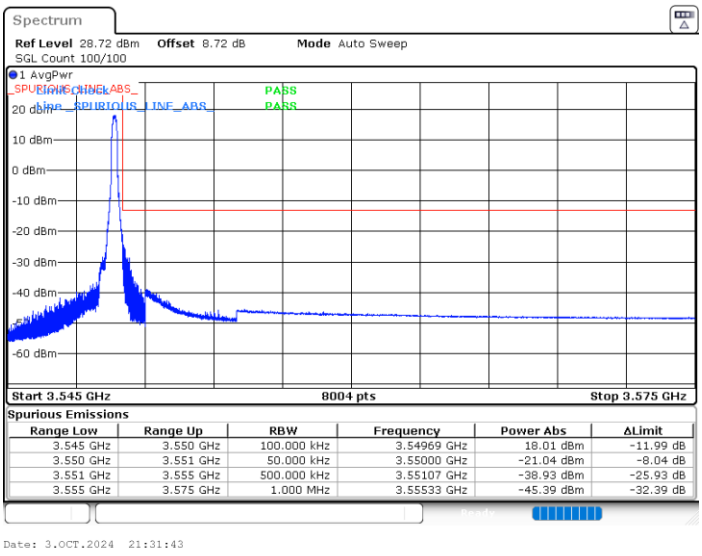



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44470 GHz | -42.55 dBm | -29.55 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44900 GHz | -33.55 dBm | -20.55 dB |
| 3.449 GHz | 3.450 GHz | 50.000 kHz | 3.44999 GHz | -22.33 dBm | -9.33 dB |
| 3.450 GHz | 3.455 GHz | 100.000 kHz | 3.45032 GHz | 19.19 dBm | -10.81 dB |

Date: 3.OCT.2024 21:18:26

#### Highest Channel / 1RBmax

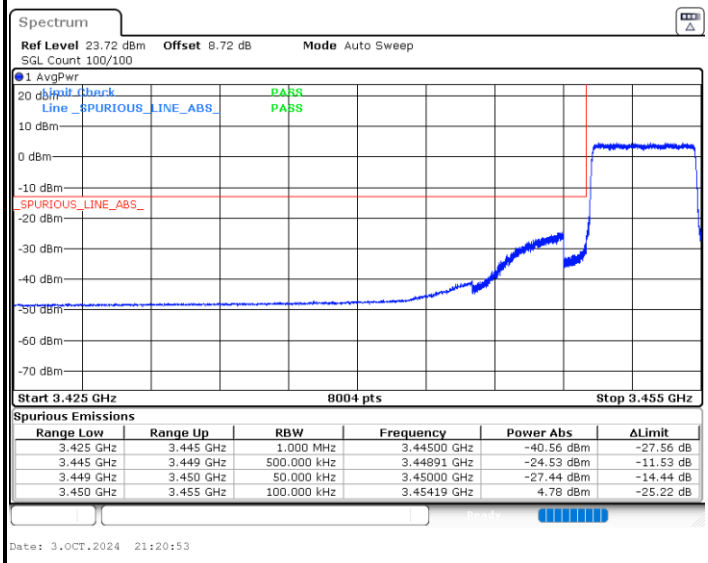



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.545 GHz | 3.550 GHz | 100.000 kHz | 3.54969 GHz | 18.01 dBm | -11.99 dB |
| 3.550 GHz | 3.551 GHz | 50.000 kHz | 3.55000 GHz | -21.04 dBm | -8.04 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55107 GHz | -38.93 dBm | -25.93 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55533 GHz | -45.39 dBm | -32.39 dB |

Date: 3.OCT.2024 21:31:43

#### Lowest Channel / FullRB

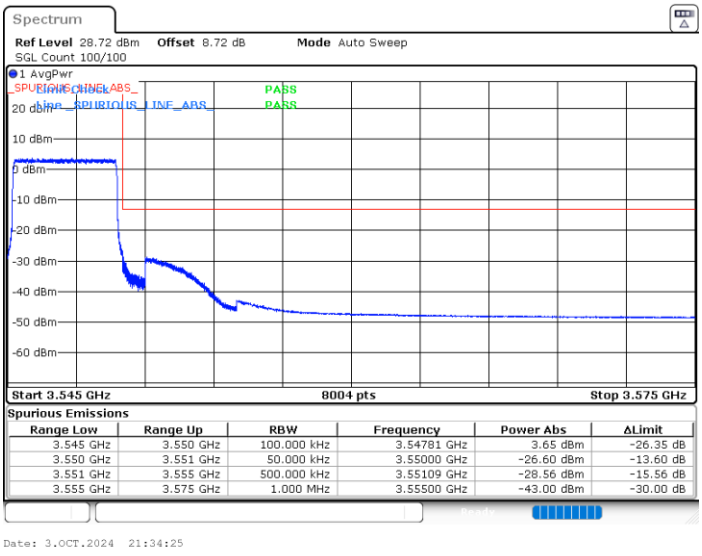



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44500 GHz | -40.56 dBm | -27.56 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44891 GHz | -24.53 dBm | -11.53 dB |
| 3.449 GHz | 3.450 GHz | 50.000 kHz | 3.45000 GHz | -27.44 dBm | -14.44 dB |
| 3.450 GHz | 3.455 GHz | 100.000 kHz | 3.45419 GHz | 4.78 dBm | -25.22 dB |

Date: 3.OCT.2024 21:20:53

#### Highest Channel / FullRB




Spurious Emissions

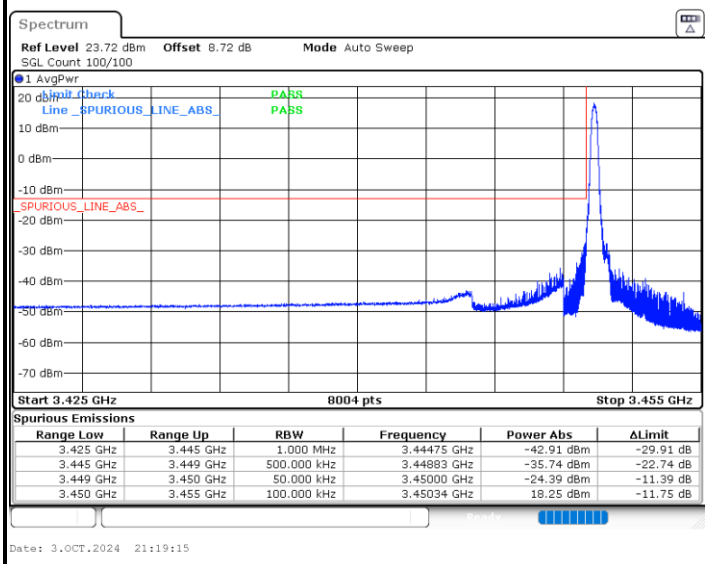
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.545 GHz | 3.550 GHz | 100.000 kHz | 3.54781 GHz | 3.65 dBm | -26.35 dB |
| 3.550 GHz | 3.551 GHz | 50.000 kHz | 3.55000 GHz | -26.60 dBm | -13.60 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55109 GHz | -28.56 dBm | -15.56 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55500 GHz | -43.00 dBm | -30.00 dB |

Date: 3.OCT.2024 21:34:25

## LTE Band 42 / 5MHz

### 64QAM

#### Lowest Channel / 1RB0

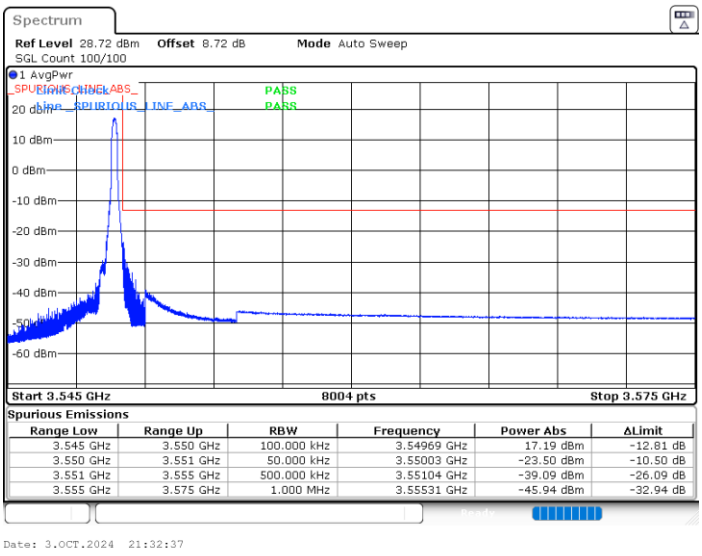



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44475 GHz | -42.91 dBm | -29.91 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44883 GHz | -35.74 dBm | -22.74 dB |
| 3.449 GHz | 3.450 GHz | 50.000 kHz | 3.45000 GHz | -24.39 dBm | -11.39 dB |
| 3.450 GHz | 3.455 GHz | 100.000 kHz | 3.45034 GHz | 18.25 dBm | -11.75 dB |

Date: 3.OCT.2024 21:19:15

#### Highest Channel / 1RBmax

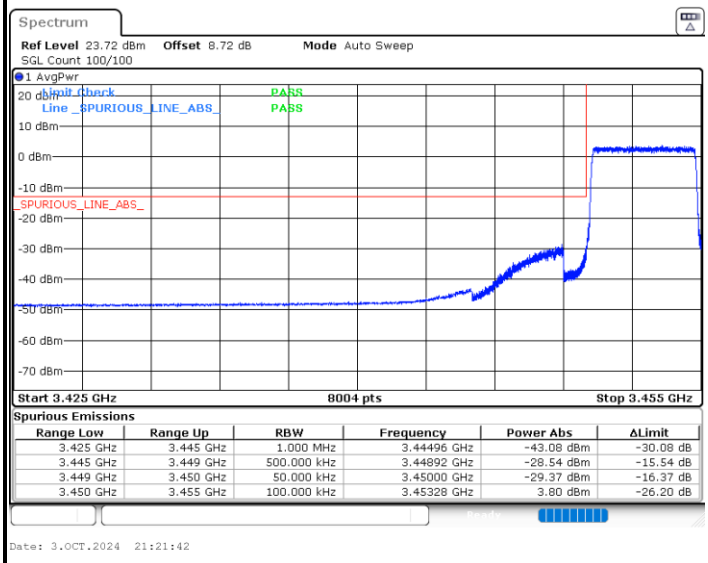



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.545 GHz | 3.550 GHz | 100.000 kHz | 3.54969 GHz | 17.19 dBm | -12.81 dB |
| 3.550 GHz | 3.551 GHz | 50.000 kHz | 3.55003 GHz | -23.50 dBm | -10.50 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55104 GHz | -39.09 dBm | -26.09 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55531 GHz | -45.94 dBm | -32.94 dB |

Date: 3.OCT.2024 21:32:37

#### Lowest Channel / FullRB

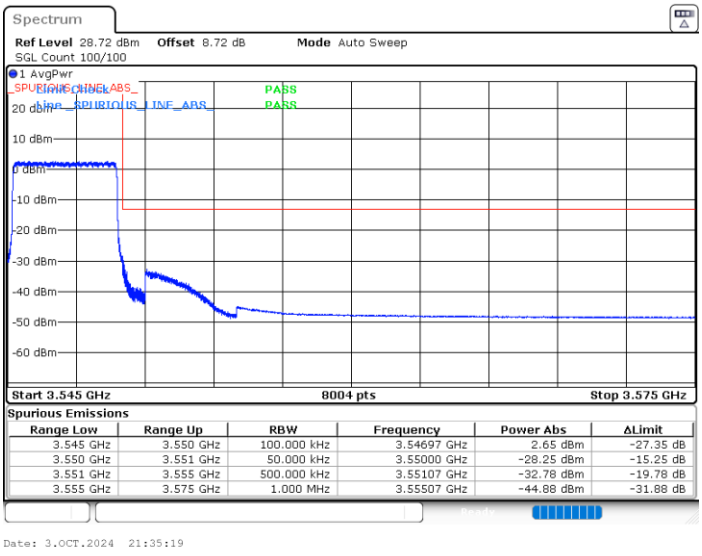



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44496 GHz | -43.08 dBm | -30.08 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44892 GHz | -28.54 dBm | -15.54 dB |
| 3.449 GHz | 3.450 GHz | 50.000 kHz | 3.45000 GHz | -29.37 dBm | -16.37 dB |
| 3.450 GHz | 3.455 GHz | 100.000 kHz | 3.45328 GHz | 3.80 dBm | -26.20 dB |

Date: 3.OCT.2024 21:21:42

#### Highest Channel / FullRB




Spurious Emissions

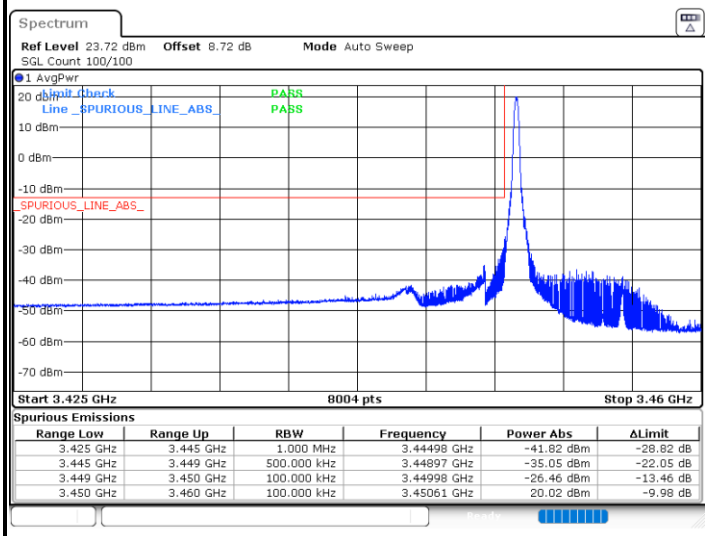
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.545 GHz | 3.550 GHz | 100.000 kHz | 3.54697 GHz | 2.65 dBm | -27.35 dB |
| 3.550 GHz | 3.551 GHz | 50.000 kHz | 3.55000 GHz | -28.25 dBm | -15.25 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55107 GHz | -32.78 dBm | -19.78 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55507 GHz | -44.88 dBm | -31.88 dB |

Date: 3.OCT.2024 21:35:19

## LTE Band 42 / 10MHz

### QPSK

#### Lowest Channel / 1RB0

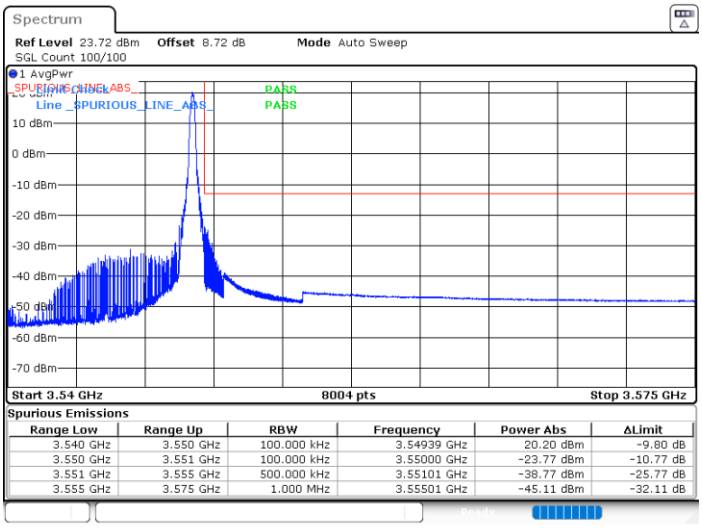



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44498 GHz | -41.82 dBm | -28.82 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44897 GHz | -35.05 dBm | -22.05 dB |
| 3.449 GHz | 3.450 GHz | 100.000 kHz | 3.44998 GHz | -26.46 dBm | -13.46 dB |
| 3.450 GHz | 3.460 GHz | 100.000 kHz | 3.45061 GHz | 20.02 dBm | -9.98 dB |

Date: 3.OCT.2024 21:36:14

#### Highest Channel / 1RBmax

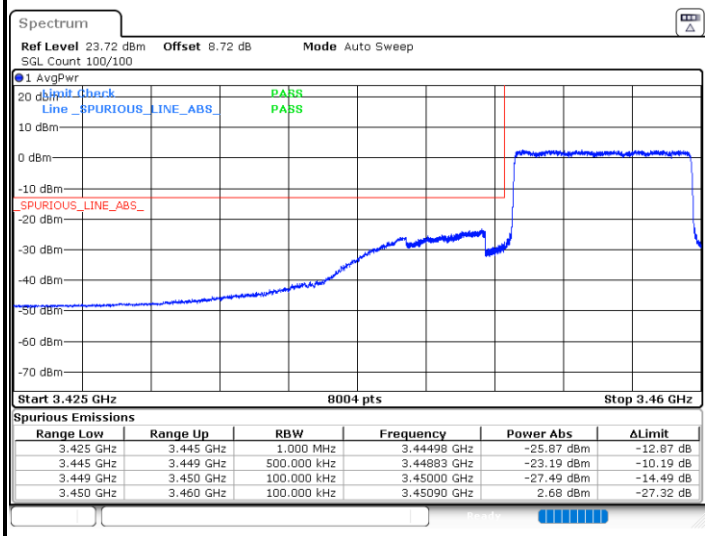



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.540 GHz | 3.550 GHz | 100.000 kHz | 3.54939 GHz | 20.20 dBm | -9.80 dB |
| 3.550 GHz | 3.551 GHz | 100.000 kHz | 3.55000 GHz | -23.77 dBm | -10.77 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55101 GHz | -38.77 dBm | -25.77 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55501 GHz | -45.11 dBm | -32.11 dB |

Date: 3.OCT.2024 21:47:47

#### Lowest Channel / FullRB

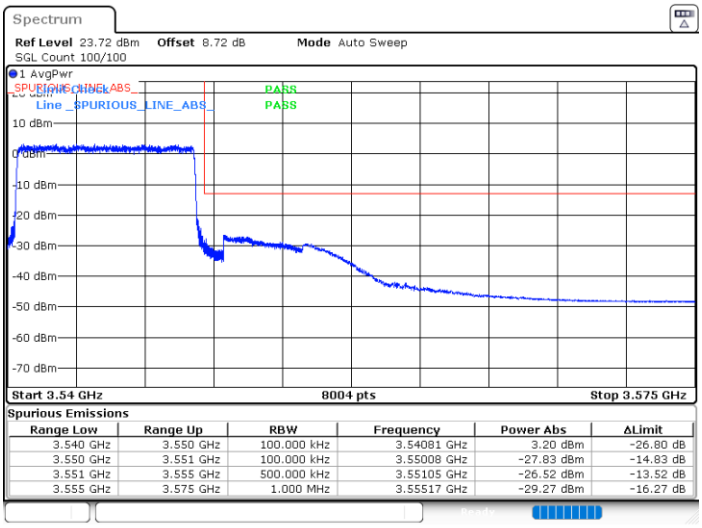



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44498 GHz | -25.87 dBm | -12.87 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44883 GHz | -23.19 dBm | -10.19 dB |
| 3.449 GHz | 3.450 GHz | 100.000 kHz | 3.45000 GHz | -27.49 dBm | -14.49 dB |
| 3.450 GHz | 3.460 GHz | 100.000 kHz | 3.45090 GHz | 2.68 dBm | -27.32 dB |

Date: 3.OCT.2024 21:38:55

#### Highest Channel / FullRB




Spurious Emissions

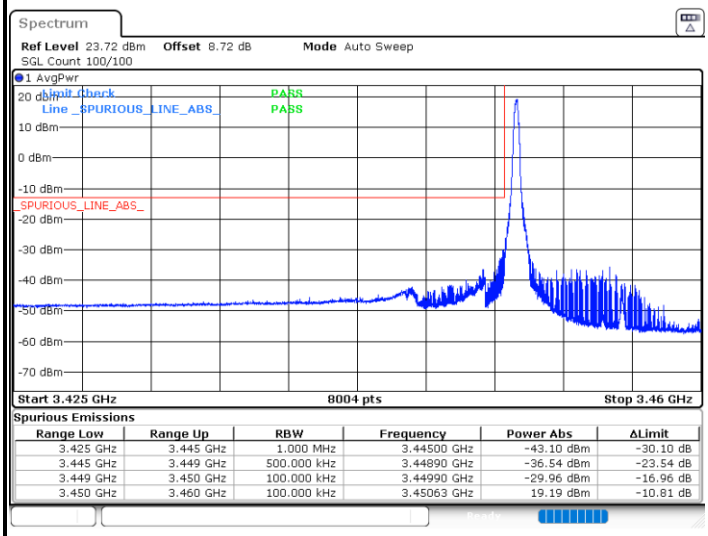
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.540 GHz | 3.550 GHz | 100.000 kHz | 3.54081 GHz | 3.20 dBm | -26.80 dB |
| 3.550 GHz | 3.551 GHz | 100.000 kHz | 3.55008 GHz | -27.83 dBm | -14.83 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55105 GHz | -26.52 dBm | -13.52 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55517 GHz | -29.27 dBm | -16.27 dB |

Date: 3.OCT.2024 21:50:29

## LTE Band 42 / 10MHz

### 16QAM

#### Lowest Channel / 1RB0

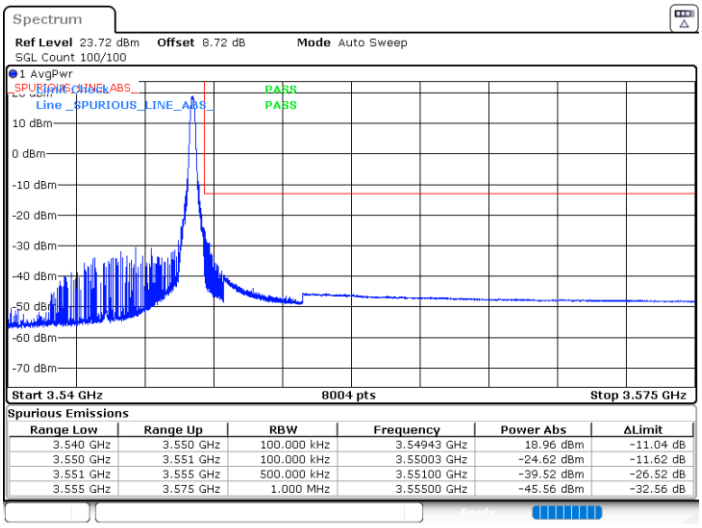



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44500 GHz | -43.10 dBm | -30.10 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44890 GHz | -36.54 dBm | -23.54 dB |
| 3.449 GHz | 3.450 GHz | 100.000 kHz | 3.44990 GHz | -29.96 dBm | -16.96 dB |
| 3.450 GHz | 3.460 GHz | 100.000 kHz | 3.45063 GHz | 19.19 dBm | -10.81 dB |

Date: 3.OCT.2024 21:37:07

#### Highest Channel / 1RBmax

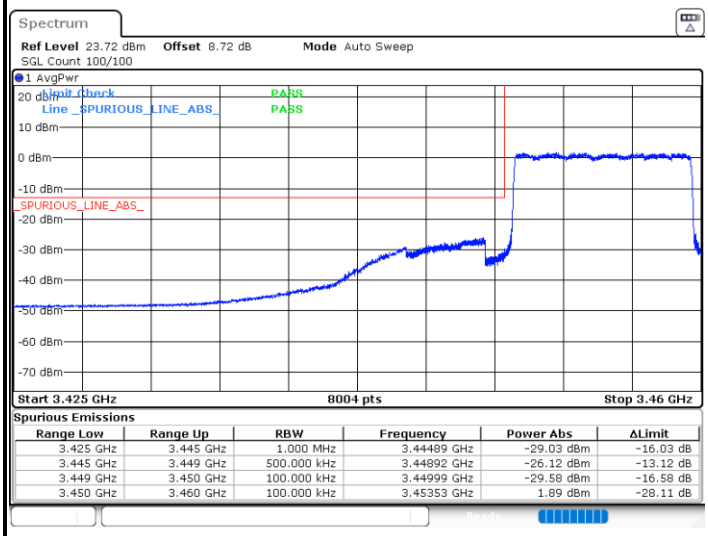



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.540 GHz | 3.550 GHz | 100.000 kHz | 3.54943 GHz | 18.96 dBm | -11.04 dB |
| 3.550 GHz | 3.551 GHz | 100.000 kHz | 3.55003 GHz | -24.62 dBm | -11.62 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55100 GHz | -39.52 dBm | -26.52 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55500 GHz | -45.56 dBm | -32.56 dB |

Date: 3.OCT.2024 21:48:41

#### Lowest Channel / FullRB

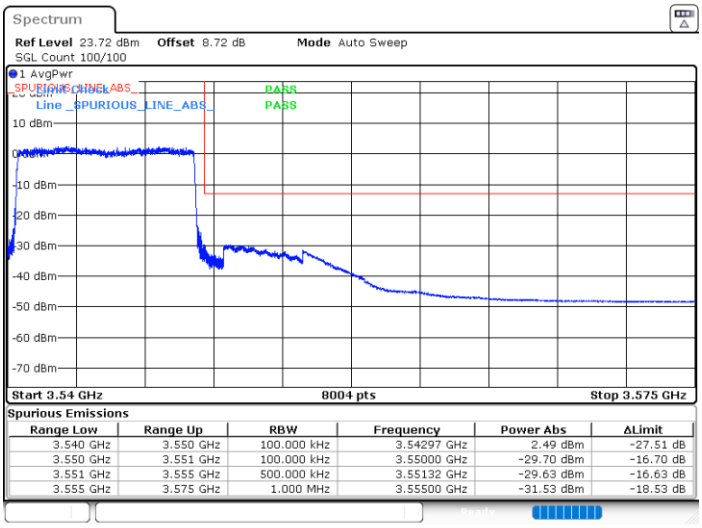



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44489 GHz | -29.03 dBm | -16.03 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44892 GHz | -26.12 dBm | -13.12 dB |
| 3.449 GHz | 3.450 GHz | 100.000 kHz | 3.44999 GHz | -29.58 dBm | -16.58 dB |
| 3.450 GHz | 3.460 GHz | 100.000 kHz | 3.45353 GHz | 1.89 dBm | -28.11 dB |

Date: 3.OCT.2024 21:39:49

#### Highest Channel / FullRB




Spurious Emissions

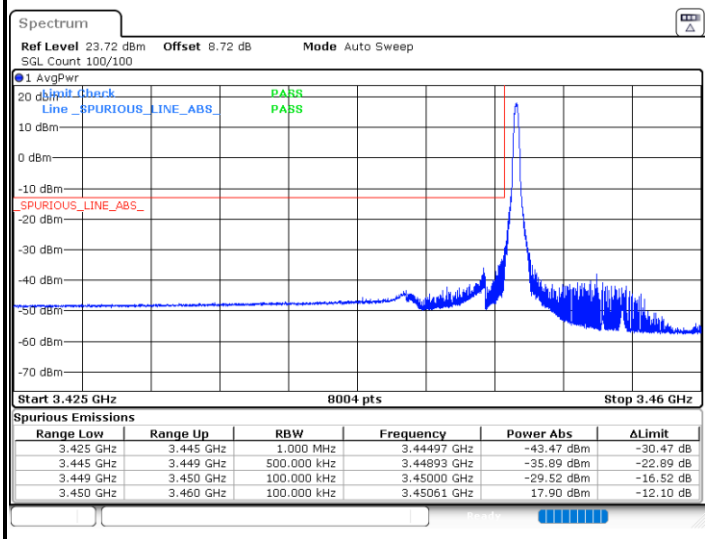
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.540 GHz | 3.550 GHz | 100.000 kHz | 3.54297 GHz | 2.49 dBm | -27.51 dB |
| 3.550 GHz | 3.551 GHz | 100.000 kHz | 3.55000 GHz | -29.70 dBm | -16.70 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55132 GHz | -29.63 dBm | -16.63 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55500 GHz | -31.53 dBm | -18.53 dB |

Date: 3.OCT.2024 21:51:23

## LTE Band 42 / 10MHz

### 64QAM

#### Lowest Channel / 1RB0

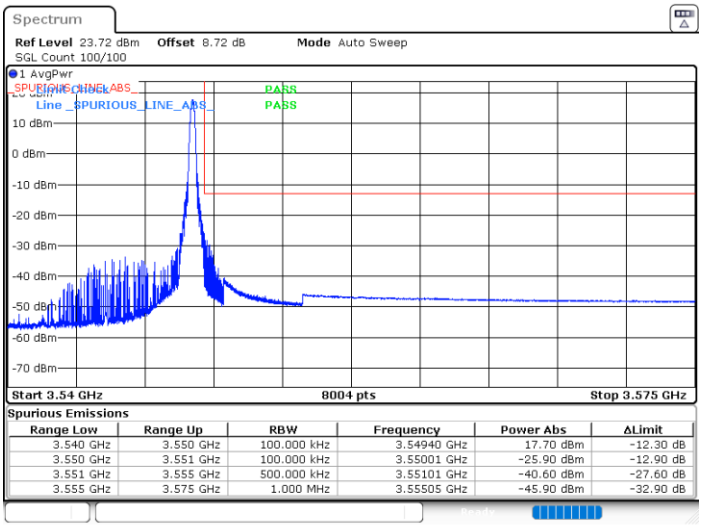



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44497 GHz | -43.47 dBm | -30.47 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44893 GHz | -35.89 dBm | -22.89 dB |
| 3.449 GHz | 3.450 GHz | 100.000 kHz | 3.45000 GHz | -29.52 dBm | -16.52 dB |
| 3.450 GHz | 3.460 GHz | 100.000 kHz | 3.45061 GHz | 17.90 dBm | -12.10 dB |

Date: 3.OCT.2024 21:38:01

#### Highest Channel / 1RBmax

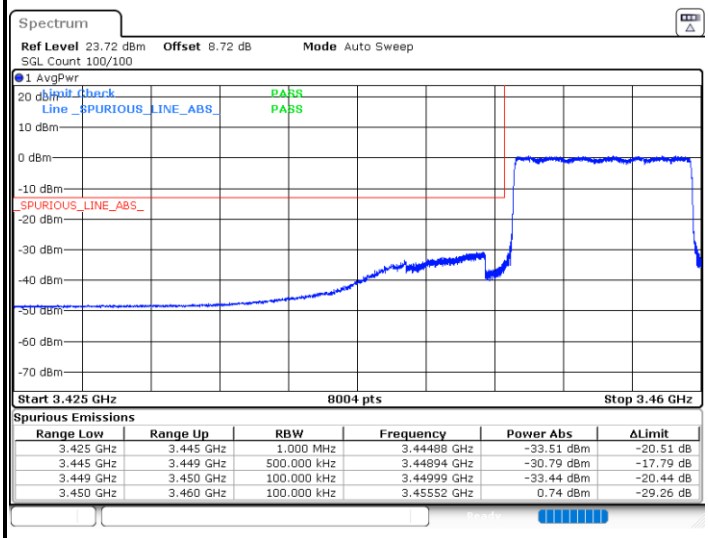



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.540 GHz | 3.550 GHz | 100.000 kHz | 3.54940 GHz | 17.70 dBm | -12.30 dB |
| 3.550 GHz | 3.551 GHz | 100.000 kHz | 3.55001 GHz | -25.90 dBm | -12.90 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55101 GHz | -40.60 dBm | -27.60 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55505 GHz | -45.90 dBm | -32.90 dB |

Date: 3.OCT.2024 21:49:35

#### Lowest Channel / FullRB

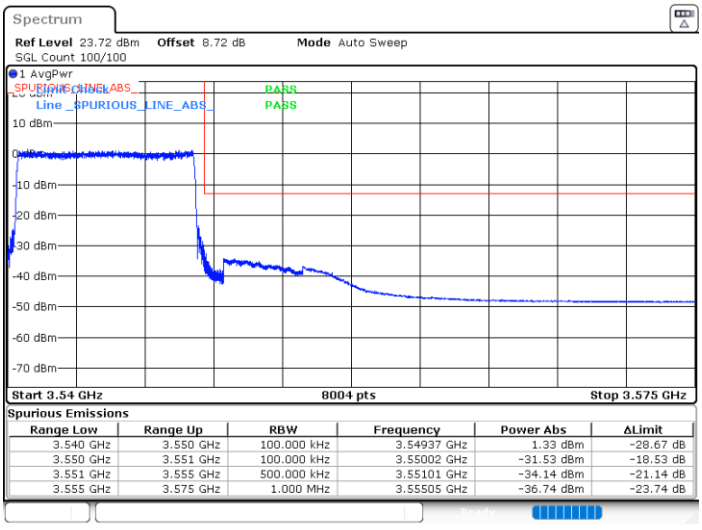



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44488 GHz | -33.51 dBm | -20.51 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44894 GHz | -30.79 dBm | -17.79 dB |
| 3.449 GHz | 3.450 GHz | 100.000 kHz | 3.44999 GHz | -33.44 dBm | -20.44 dB |
| 3.450 GHz | 3.460 GHz | 100.000 kHz | 3.45552 GHz | 0.74 dBm | -29.26 dB |

Date: 3.OCT.2024 21:40:43

#### Highest Channel / FullRB




Spurious Emissions

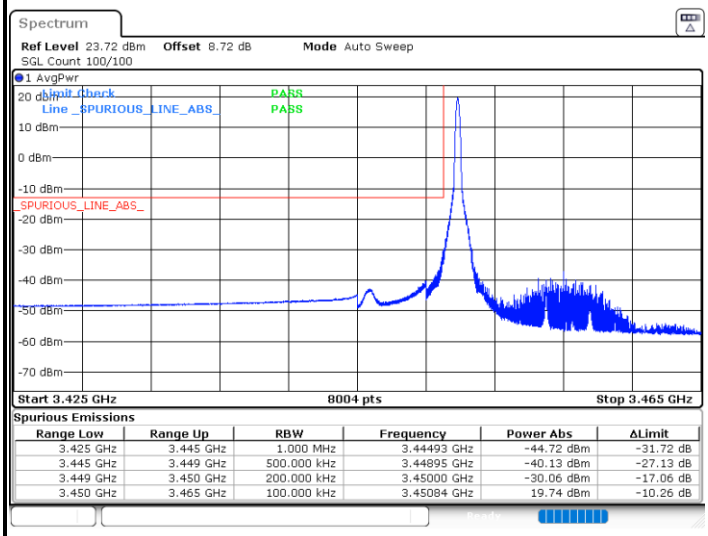
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.540 GHz | 3.550 GHz | 100.000 kHz | 3.54937 GHz | 1.33 dBm | -28.67 dB |
| 3.550 GHz | 3.551 GHz | 100.000 kHz | 3.55002 GHz | -31.53 dBm | -18.53 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55101 GHz | -34.14 dBm | -21.14 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55505 GHz | -36.74 dBm | -23.74 dB |

Date: 3.OCT.2024 21:52:16

## LTE Band 42 / 15MHz

### QPSK

#### Lowest Channel / 1RB0

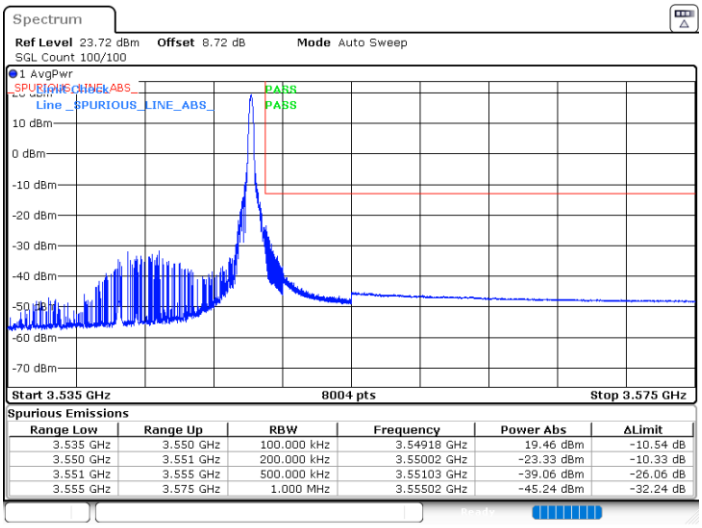



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44493 GHz | -44.72 dBm | -31.72 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44895 GHz | -40.13 dBm | -27.13 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.45000 GHz | -30.06 dBm | -17.06 dB |
| 3.450 GHz | 3.465 GHz | 100.000 kHz | 3.45084 GHz | 19.74 dBm | -10.26 dB |

Date: 3.OCT.2024 21:56:13

#### Highest Channel / 1RBmax

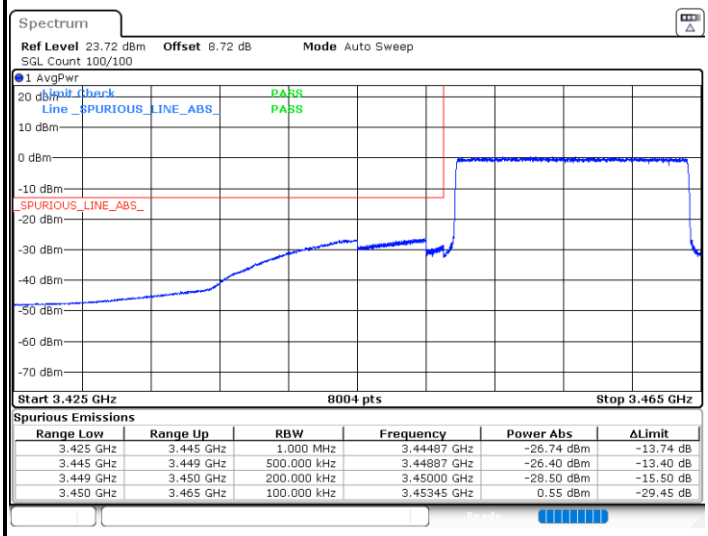



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.535 GHz | 3.550 GHz | 100.000 kHz | 3.54918 GHz | 19.46 dBm | -10.54 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55002 GHz | -23.33 dBm | -10.33 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55103 GHz | -39.06 dBm | -26.06 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55502 GHz | -45.24 dBm | -32.24 dB |

Date: 3.OCT.2024 22:07:47

#### Lowest Channel / FullRB

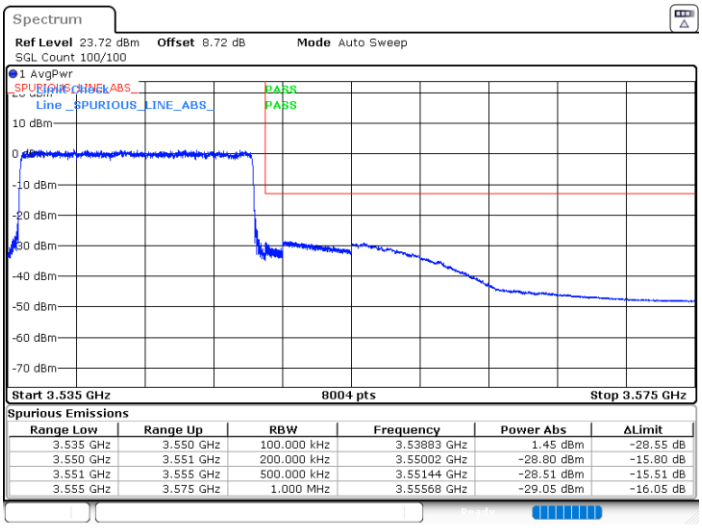



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44487 GHz | -26.74 dBm | -13.74 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44887 GHz | -26.40 dBm | -13.40 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.45000 GHz | -28.50 dBm | -15.50 dB |
| 3.450 GHz | 3.465 GHz | 100.000 kHz | 3.45345 GHz | 0.55 dBm | -29.45 dB |

Date: 3.OCT.2024 21:58:55

#### Highest Channel / FullRB




Spurious Emissions

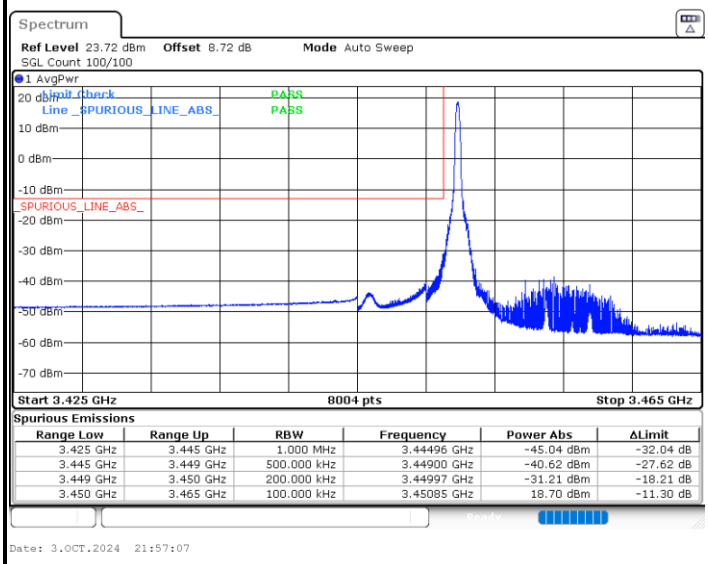
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.535 GHz | 3.550 GHz | 100.000 kHz | 3.53883 GHz | 1.45 dBm | -28.55 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55002 GHz | -28.80 dBm | -15.80 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55144 GHz | -28.51 dBm | -15.51 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55568 GHz | -29.05 dBm | -16.05 dB |

Date: 3.OCT.2024 22:10:29

## LTE Band 42 / 15MHz

### 16QAM

#### Lowest Channel / 1RB0

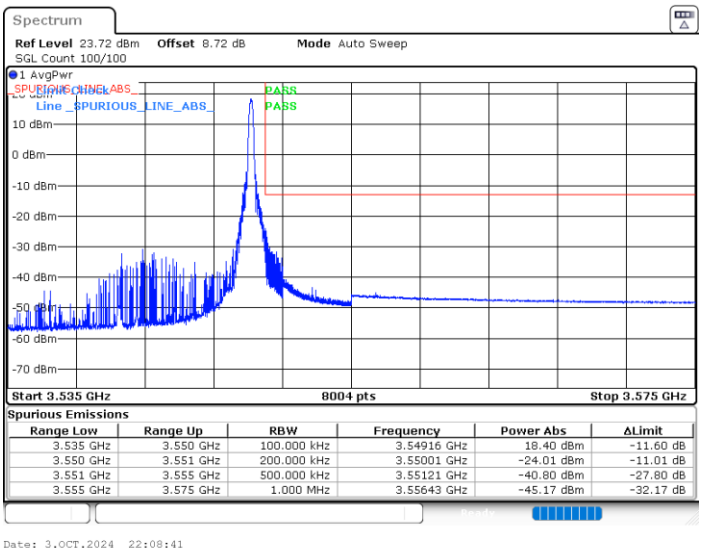



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44496 GHz | -45.04 dBm | -32.04 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44900 GHz | -40.62 dBm | -27.62 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.44997 GHz | -31.21 dBm | -18.21 dB |
| 3.450 GHz | 3.465 GHz | 100.000 kHz | 3.45085 GHz | 18.70 dBm | -11.30 dB |

Date: 3.OCT.2024 21:57:07

#### Highest Channel / 1RBmax

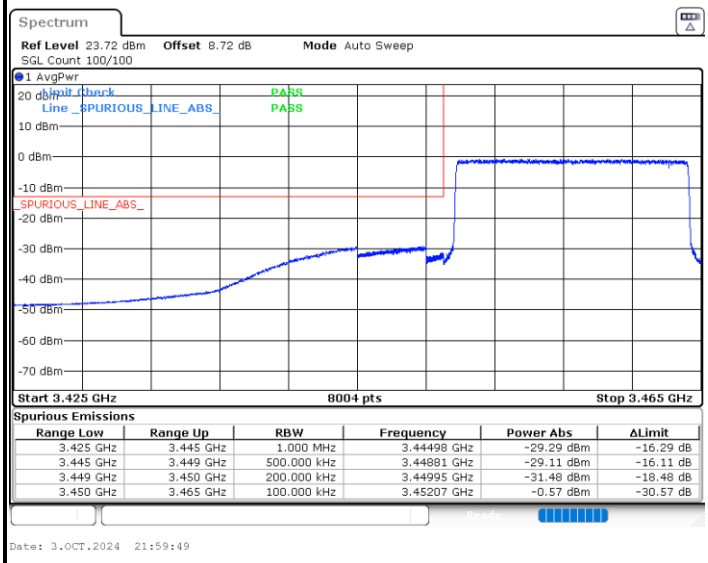



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.535 GHz | 3.550 GHz | 100.000 kHz | 3.54916 GHz | 18.40 dBm | -11.60 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55001 GHz | -24.01 dBm | -11.01 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55121 GHz | -40.80 dBm | -27.80 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55643 GHz | -45.17 dBm | -32.17 dB |

Date: 3.OCT.2024 22:08:41

#### Lowest Channel / FullRB

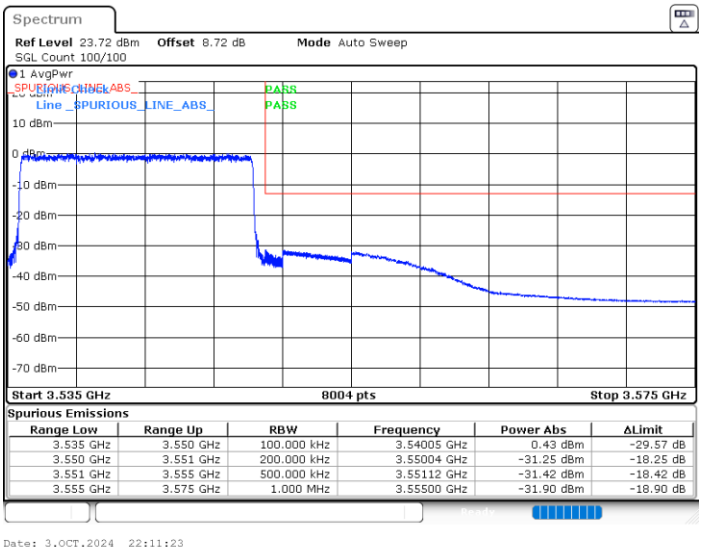



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44498 GHz | -29.29 dBm | -16.29 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44881 GHz | -29.11 dBm | -16.11 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.44995 GHz | -31.48 dBm | -18.48 dB |
| 3.450 GHz | 3.465 GHz | 100.000 kHz | 3.45207 GHz | -0.57 dBm | -30.57 dB |

Date: 3.OCT.2024 21:59:49

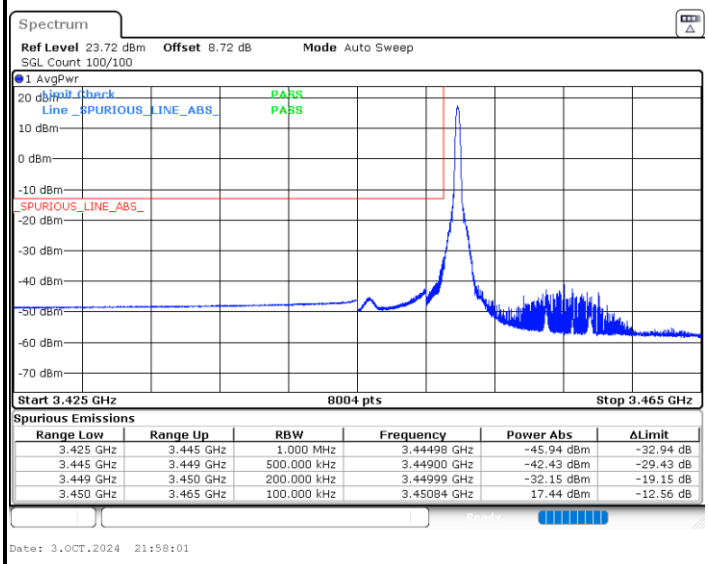
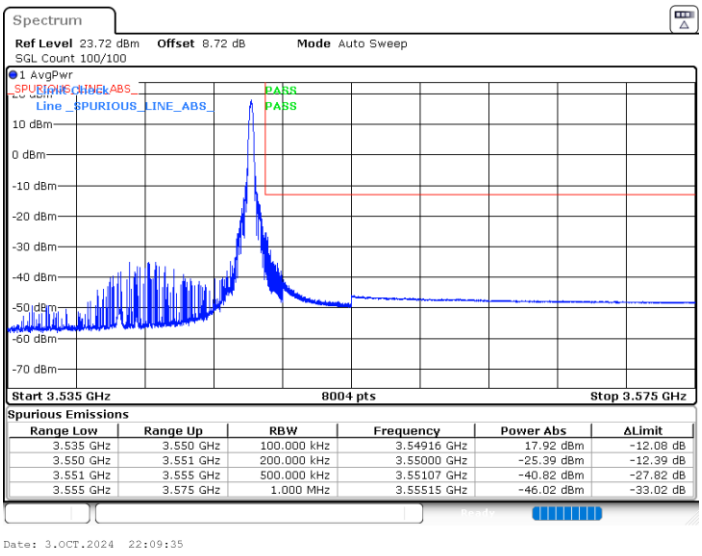
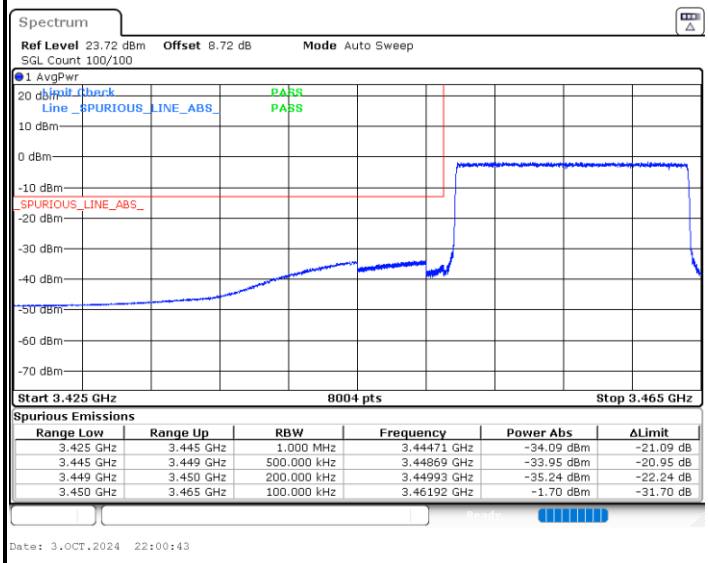
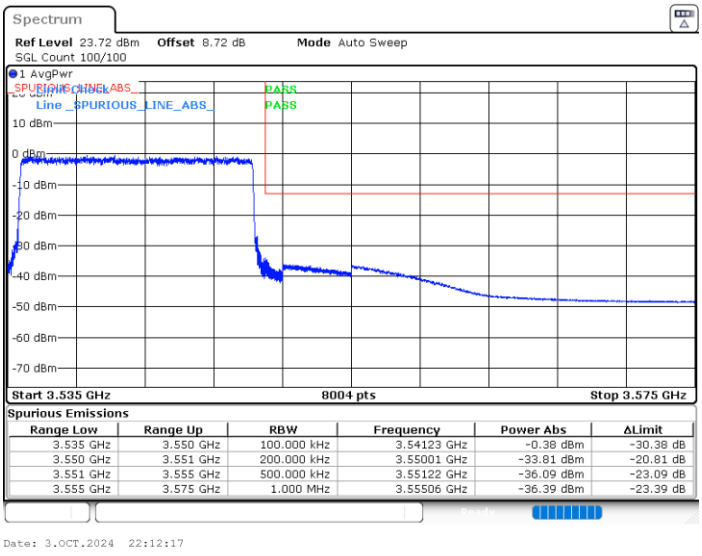
#### Highest Channel / FullRB




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.535 GHz | 3.550 GHz | 100.000 kHz | 3.54005 GHz | 0.43 dBm | -29.57 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55004 GHz | -31.25 dBm | -18.25 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55112 GHz | -31.42 dBm | -18.42 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55500 GHz | -31.90 dBm | -18.90 dB |

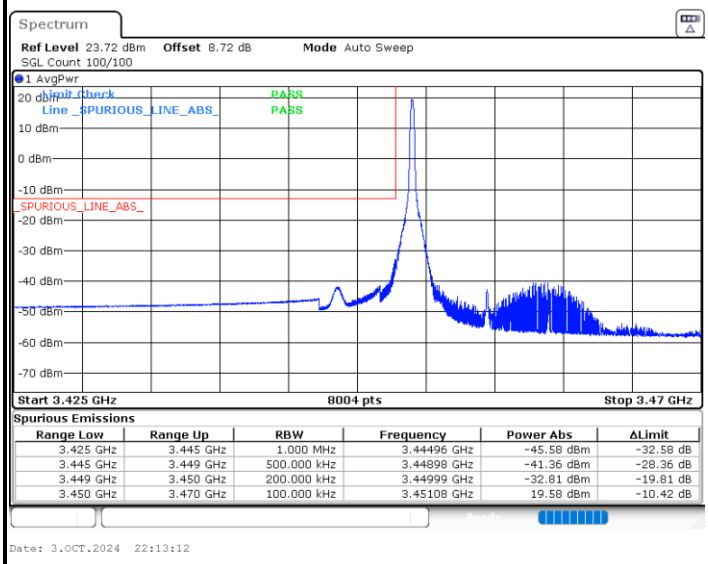
Date: 3.OCT.2024 22:11:23

| LTE Band 42 / 15MHz | |
|---|---|
| 64QAM | |
| Lowest Channel / 1RB0 | Highest Channel / 1RBmax |
|  |  |
| Lowest Channel / FullRB | Highest Channel / FullRB |
|  |  |

## LTE Band 42 / 20MHz

### QPSK

#### Lowest Channel / 1RB0

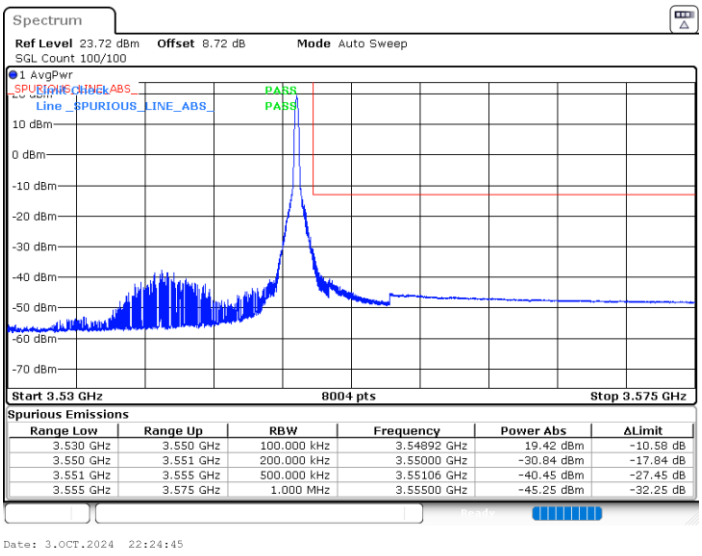



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44496 GHz | -45.58 dBm | -32.58 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44898 GHz | -41.36 dBm | -28.36 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.44999 GHz | -32.81 dBm | -19.81 dB |
| 3.450 GHz | 3.470 GHz | 100.000 kHz | 3.45108 GHz | 19.58 dBm | -10.42 dB |

Date: 3.OCT.2024 22:13:12

#### Highest Channel / 1RBmax

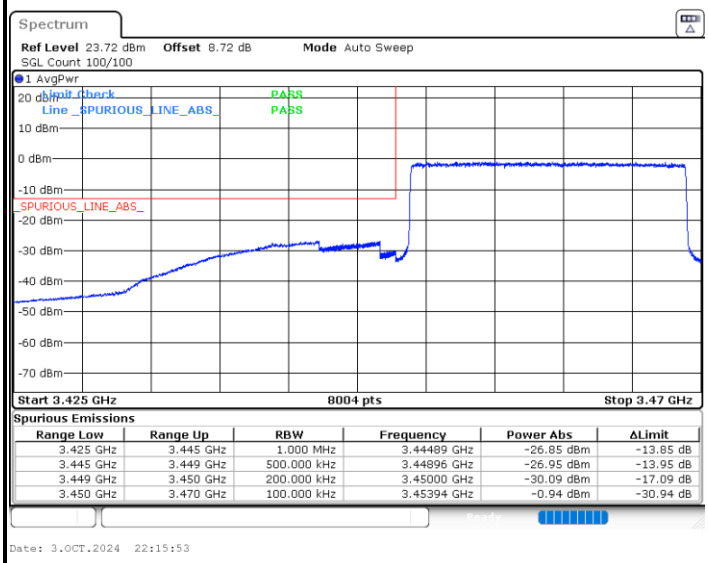



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.530 GHz | 3.550 GHz | 100.000 kHz | 3.54892 GHz | 19.42 dBm | -10.58 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55000 GHz | -30.84 dBm | -17.84 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55106 GHz | -40.45 dBm | -27.45 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55500 GHz | -45.25 dBm | -32.25 dB |

Date: 3.OCT.2024 22:24:45

#### Lowest Channel / FullRB

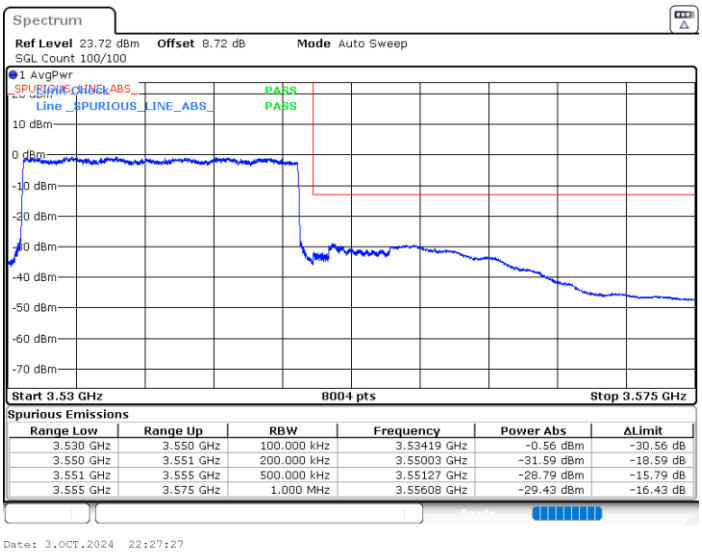



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44489 GHz | -26.85 dBm | -13.85 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44896 GHz | -26.95 dBm | -13.95 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.45000 GHz | -30.09 dBm | -17.09 dB |
| 3.450 GHz | 3.470 GHz | 100.000 kHz | 3.45394 GHz | -0.94 dBm | -30.94 dB |

Date: 3.OCT.2024 22:15:53

#### Highest Channel / FullRB




Spurious Emissions

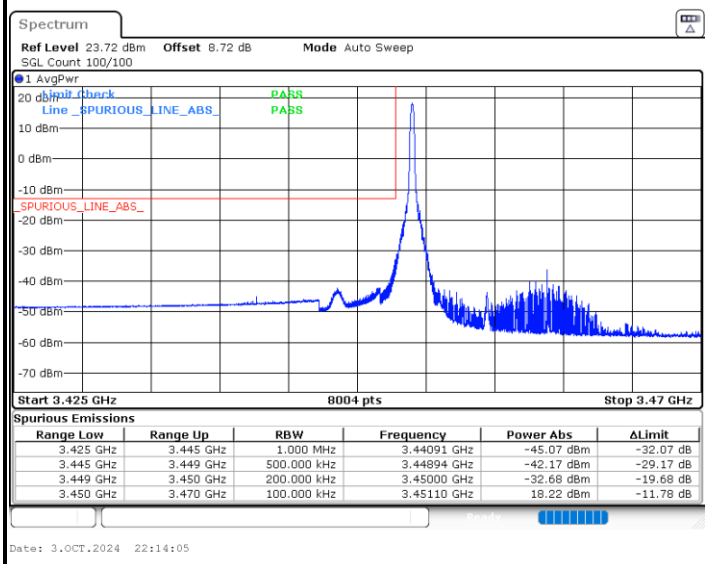
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.530 GHz | 3.550 GHz | 100.000 kHz | 3.53419 GHz | -0.56 dBm | -30.56 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55003 GHz | -31.59 dBm | -18.59 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55127 GHz | -28.79 dBm | -15.79 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55608 GHz | -29.43 dBm | -16.43 dB |

Date: 3.OCT.2024 22:27:27

## LTE Band 42 / 20MHz

### 16QAM

#### Lowest Channel / 1RB0

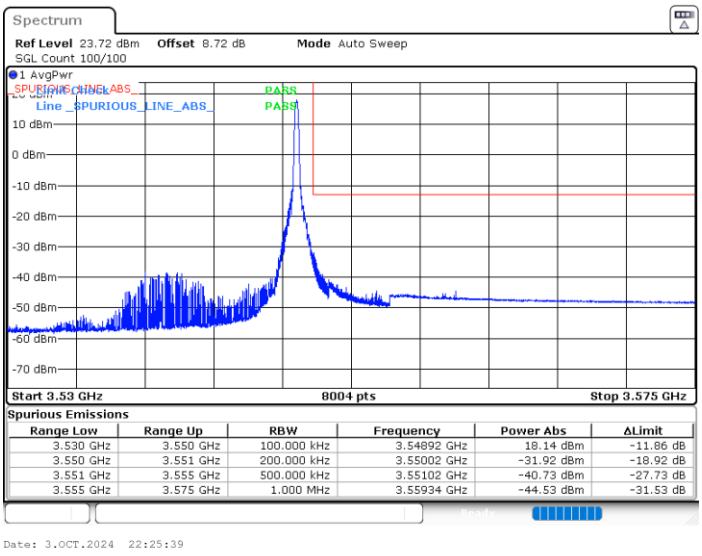



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44091 GHz | -45.07 dBm | -32.07 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44894 GHz | -42.17 dBm | -29.17 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.45000 GHz | -32.68 dBm | -19.68 dB |
| 3.450 GHz | 3.470 GHz | 100.000 kHz | 3.45110 GHz | 18.22 dBm | -11.78 dB |

Date: 3.OCT.2024 22:14:05

#### Highest Channel / 1RBmax

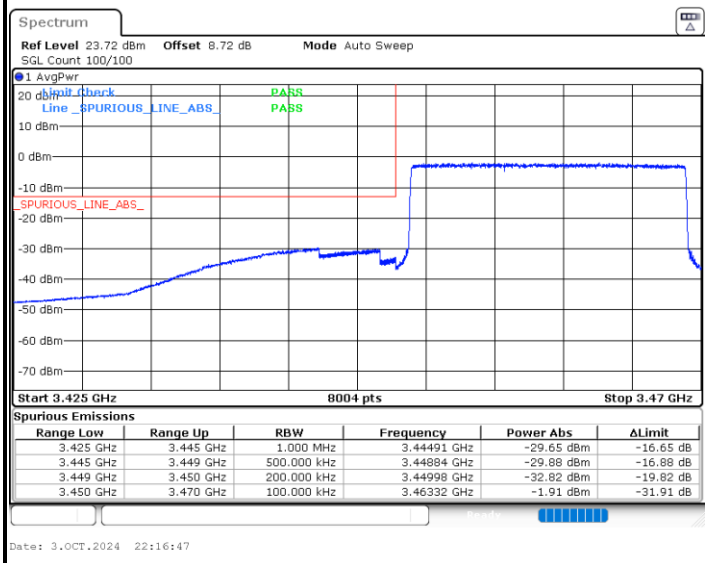



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.530 GHz | 3.550 GHz | 100.000 kHz | 3.54892 GHz | 18.14 dBm | -11.86 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55002 GHz | -31.92 dBm | -18.92 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55102 GHz | -40.73 dBm | -27.73 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55934 GHz | -44.53 dBm | -31.53 dB |

Date: 3.OCT.2024 22:25:39

#### Lowest Channel / FullRB

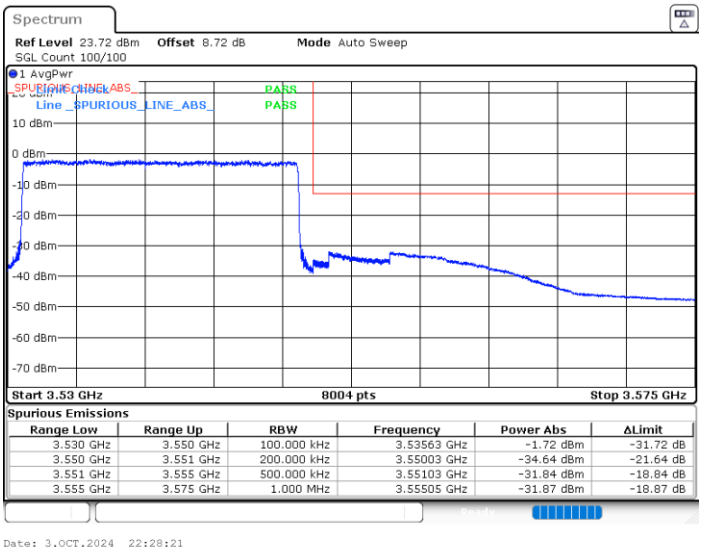



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44491 GHz | -29.65 dBm | -16.65 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44884 GHz | -29.88 dBm | -16.88 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.44998 GHz | -32.82 dBm | -19.82 dB |
| 3.450 GHz | 3.470 GHz | 100.000 kHz | 3.46332 GHz | -1.91 dBm | -31.91 dB |

Date: 3.OCT.2024 22:16:47

#### Highest Channel / FullRB




Spurious Emissions

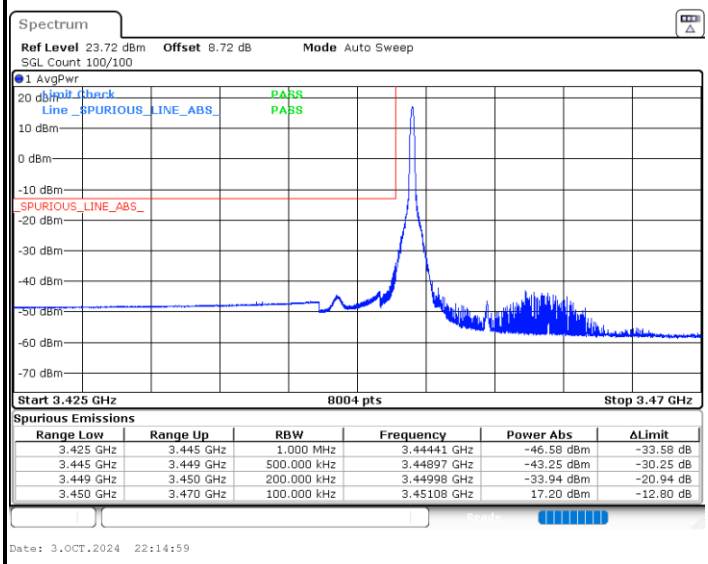
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.530 GHz | 3.550 GHz | 100.000 kHz | 3.53563 GHz | -1.72 dBm | -31.72 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55003 GHz | -34.64 dBm | -21.64 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55103 GHz | -31.84 dBm | -18.84 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55505 GHz | -31.87 dBm | -18.87 dB |

Date: 3.OCT.2024 22:28:21

## LTE Band 42 / 20MHz

### 64QAM

#### Lowest Channel / 1RB0

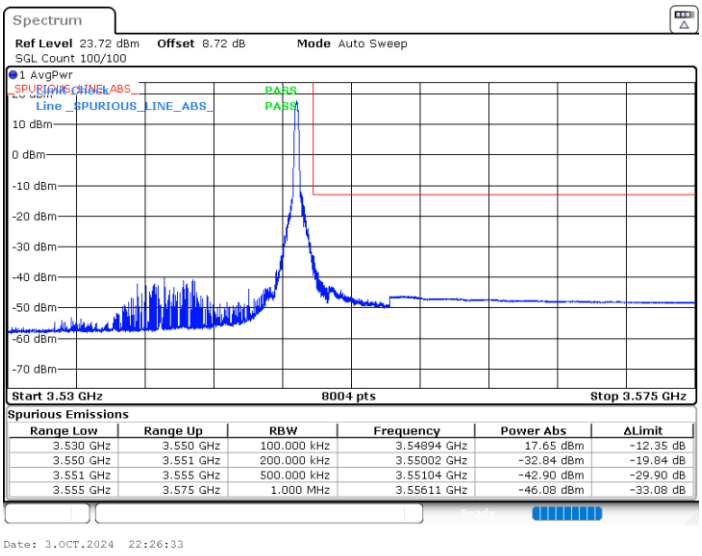



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44441 GHz | -46.58 dBm | -33.58 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44897 GHz | -43.25 dBm | -30.25 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.44998 GHz | -33.94 dBm | -20.94 dB |
| 3.450 GHz | 3.470 GHz | 100.000 kHz | 3.45108 GHz | 17.20 dBm | -12.80 dB |

Date: 3.OCT.2024 22:14:59

#### Highest Channel / 1RBmax

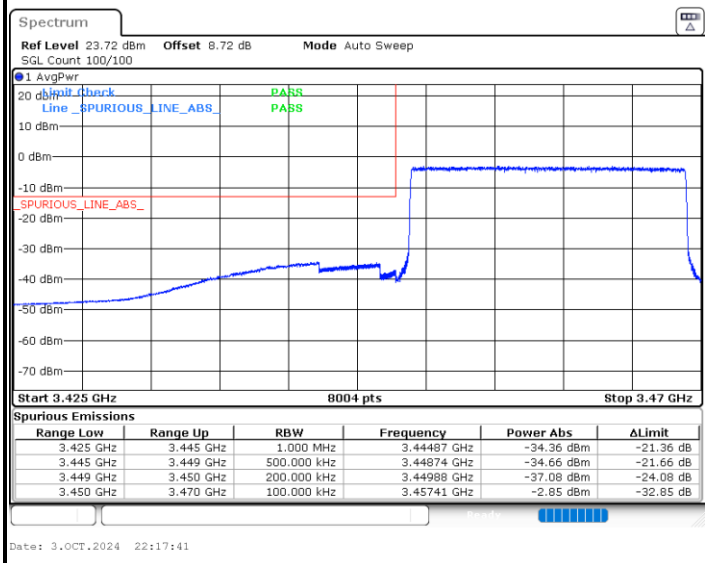



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.530 GHz | 3.550 GHz | 100.000 kHz | 3.54894 GHz | 17.65 dBm | -12.35 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55002 GHz | -32.84 dBm | -19.84 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55104 GHz | -42.90 dBm | -29.90 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55611 GHz | -46.08 dBm | -33.08 dB |

Date: 3.OCT.2024 22:26:33

#### Lowest Channel / FullRB

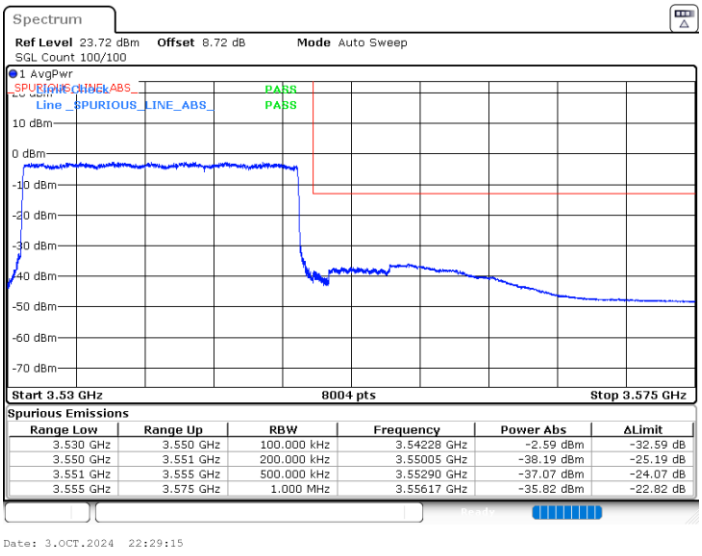



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.425 GHz | 3.445 GHz | 1.000 MHz | 3.44487 GHz | -34.36 dBm | -21.36 dB |
| 3.445 GHz | 3.449 GHz | 500.000 kHz | 3.44874 GHz | -34.66 dBm | -21.66 dB |
| 3.449 GHz | 3.450 GHz | 200.000 kHz | 3.44988 GHz | -37.08 dBm | -24.08 dB |
| 3.450 GHz | 3.470 GHz | 100.000 kHz | 3.45741 GHz | -2.85 dBm | -32.85 dB |

Date: 3.OCT.2024 22:17:41

#### Highest Channel / FullRB




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 3.530 GHz | 3.550 GHz | 100.000 kHz | 3.54228 GHz | -2.59 dBm | -32.59 dB |
| 3.550 GHz | 3.551 GHz | 200.000 kHz | 3.55005 GHz | -38.19 dBm | -25.19 dB |
| 3.551 GHz | 3.555 GHz | 500.000 kHz | 3.55290 GHz | -37.07 dBm | -24.07 dB |
| 3.555 GHz | 3.575 GHz | 1.000 MHz | 3.55617 GHz | -35.82 dBm | -22.82 dB |

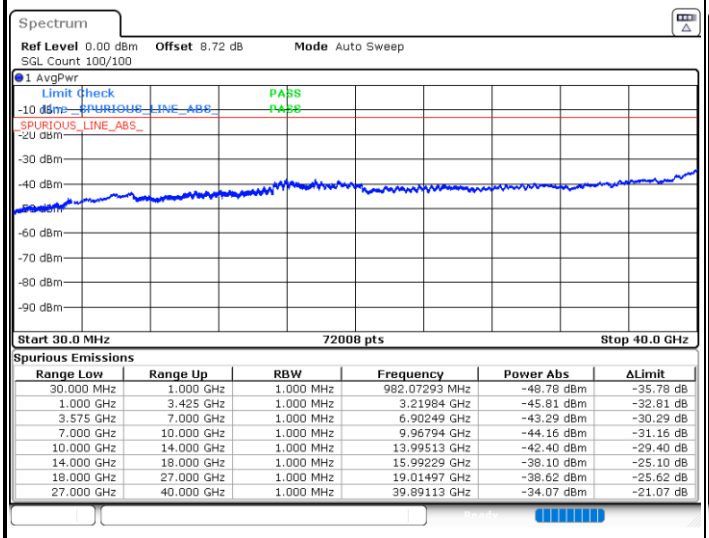
Date: 3.OCT.2024 22:29:15

# Conducted Spurious Emission

## LTE Band 42/ 5MHz

### QPSK / 1RB0

#### Lowest Channel

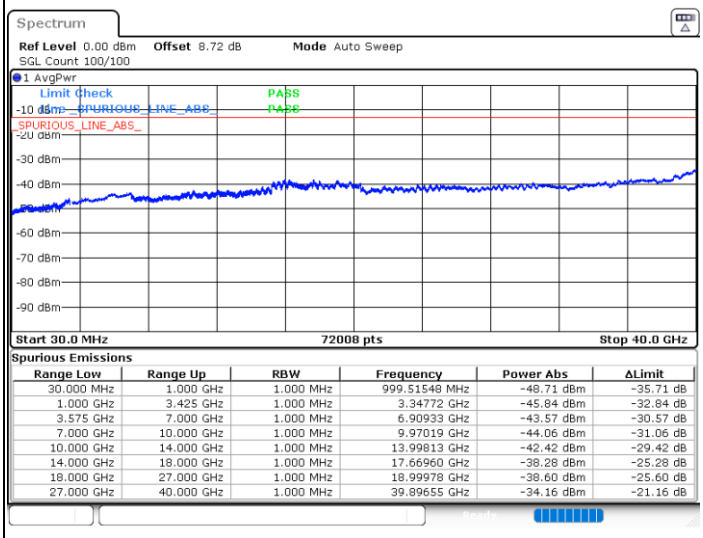



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 982.07293 MHz | -48.78 dBm | -35.78 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.21984 GHz | -45.81 dBm | -32.81 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.90249 GHz | -43.29 dBm | -30.29 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.96794 GHz | -44.16 dBm | -31.16 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99513 GHz | -42.40 dBm | -29.40 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.99229 GHz | -38.10 dBm | -25.10 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.01497 GHz | -38.62 dBm | -25.62 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.89113 GHz | -34.07 dBm | -21.07 dB |

Date: 3.OCT.2024 21:25:49

#### Middle Channel

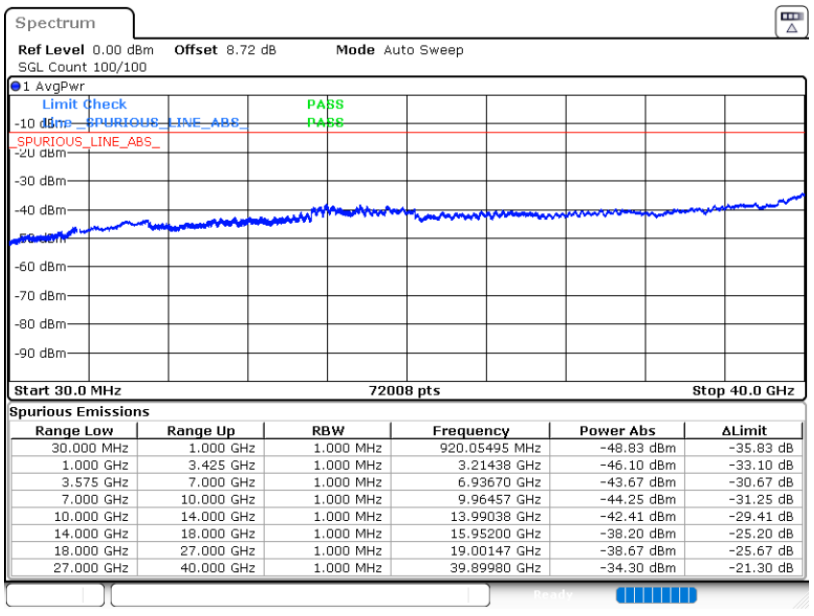



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 999.51548 MHz | -48.71 dBm | -35.71 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.34772 GHz | -45.84 dBm | -32.84 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.90933 GHz | -43.57 dBm | -30.57 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.97019 GHz | -44.06 dBm | -31.06 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99813 GHz | -42.42 dBm | -29.42 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.66960 GHz | -38.28 dBm | -25.28 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 18.99978 GHz | -38.60 dBm | -25.60 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.89655 GHz | -34.16 dBm | -21.16 dB |

Date: 3.OCT.2024 21:27:52

#### Highest Channel




Spurious Emissions

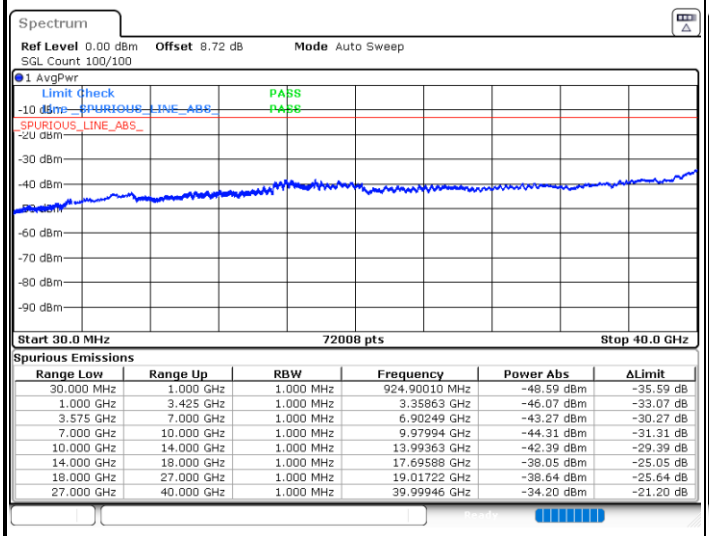
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 920.05495 MHz | -48.83 dBm | -35.83 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.21438 GHz | -46.10 dBm | -33.10 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.93670 GHz | -43.67 dBm | -30.67 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.96457 GHz | -44.25 dBm | -31.25 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99038 GHz | -42.41 dBm | -29.41 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.95200 GHz | -38.20 dBm | -25.20 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.00147 GHz | -38.67 dBm | -25.67 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.89980 GHz | -34.30 dBm | -21.30 dB |

Date: 3.OCT.2024 21:29:55

## LTE Band 42/ 10MHz

### QPSK / 1RB0

#### Lowest Channel

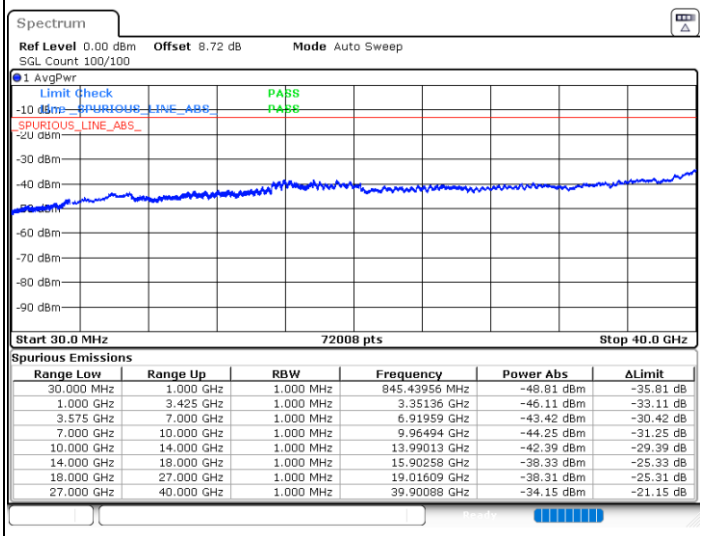



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 924.90010 MHz | -48.59 dBm | -35.59 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.35863 GHz | -46.07 dBm | -33.07 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.90249 GHz | -43.27 dBm | -30.27 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.97994 GHz | -44.31 dBm | -31.31 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99363 GHz | -42.39 dBm | -29.39 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.69588 GHz | -38.05 dBm | -25.05 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.01722 GHz | -38.64 dBm | -25.64 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.99946 GHz | -34.20 dBm | -21.20 dB |

Date: 3.OCT.2024 21:42:46

#### Middle Channel

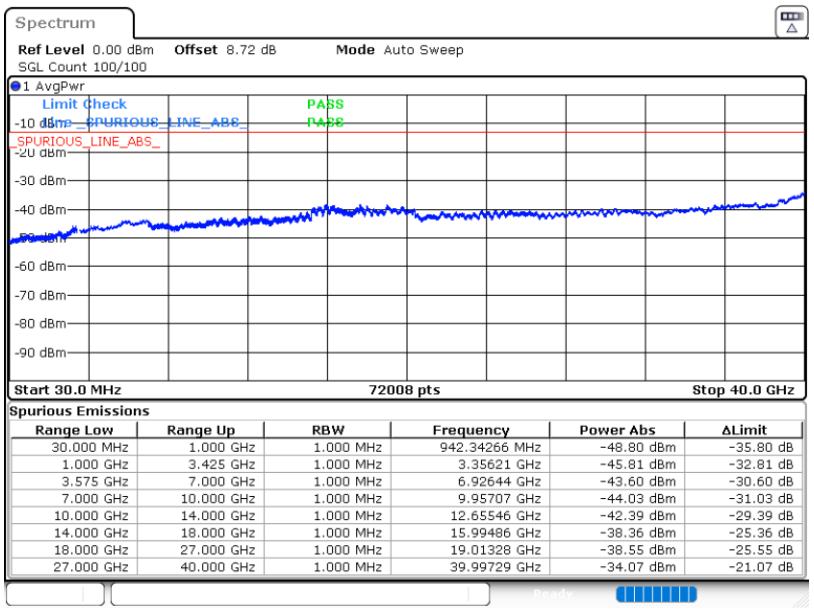



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 845.43956 MHz | -48.81 dBm | -35.81 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.35136 GHz | -46.11 dBm | -33.11 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.91959 GHz | -43.42 dBm | -30.42 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.96494 GHz | -44.25 dBm | -31.25 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99013 GHz | -42.39 dBm | -29.39 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.90258 GHz | -38.33 dBm | -25.33 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.01609 GHz | -38.31 dBm | -25.31 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.90088 GHz | -34.15 dBm | -21.15 dB |

Date: 3.OCT.2024 21:44:50

#### Highest Channel




Spurious Emissions

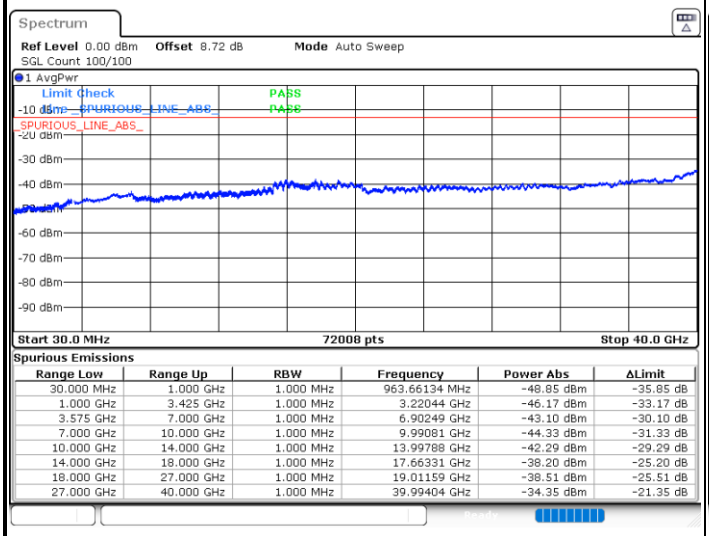
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 942.34266 MHz | -48.80 dBm | -35.80 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.35621 GHz | -45.81 dBm | -32.81 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.92644 GHz | -43.60 dBm | -30.60 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.95707 GHz | -44.03 dBm | -31.03 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 12.65546 GHz | -42.39 dBm | -29.39 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.99486 GHz | -38.36 dBm | -25.36 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.01328 GHz | -38.55 dBm | -25.55 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.99729 GHz | -34.07 dBm | -21.07 dB |

Date: 3.OCT.2024 21:46:53

## LTE Band 42/ 15MHz

### QPSK / 1RB0

#### Lowest Channel

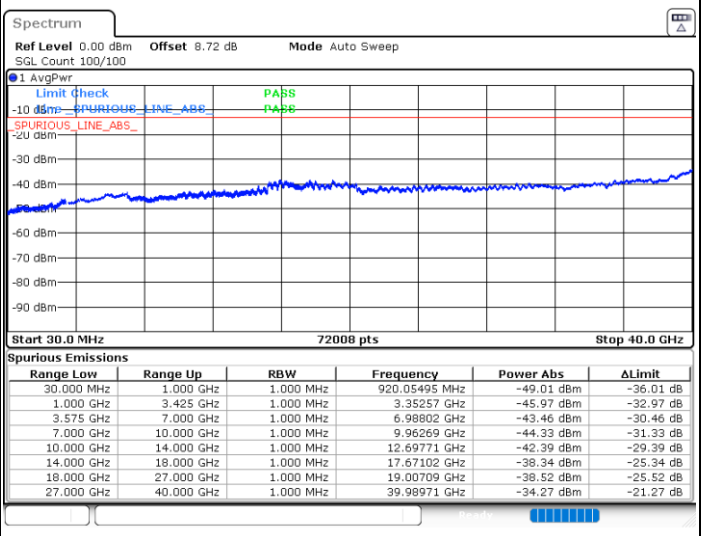



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 963.66134 MHz | -48.85 dBm | -35.85 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.22044 GHz | -46.17 dBm | -33.17 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.90249 GHz | -43.10 dBm | -30.10 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.99081 GHz | -44.33 dBm | -31.33 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99788 GHz | -42.29 dBm | -29.29 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.66331 GHz | -38.20 dBm | -25.20 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.01159 GHz | -38.51 dBm | -25.51 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.99404 GHz | -34.35 dBm | -21.35 dB |

Date: 3.OCT.2024 22:02:47

#### Middle Channel

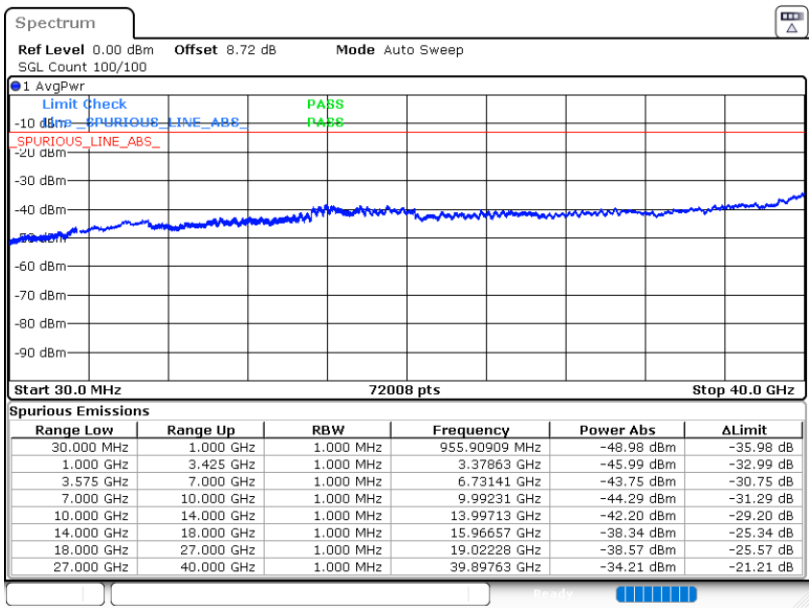



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 920.05495 MHz | -49.01 dBm | -36.01 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.35257 GHz | -45.97 dBm | -32.97 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.98802 GHz | -43.46 dBm | -30.46 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.96269 GHz | -44.33 dBm | -31.33 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 12.69771 GHz | -42.39 dBm | -29.39 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.67102 GHz | -38.34 dBm | -25.34 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.00709 GHz | -38.52 dBm | -25.52 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.98971 GHz | -34.27 dBm | -21.27 dB |

Date: 3.OCT.2024 22:04:50

#### Highest Channel




Spurious Emissions

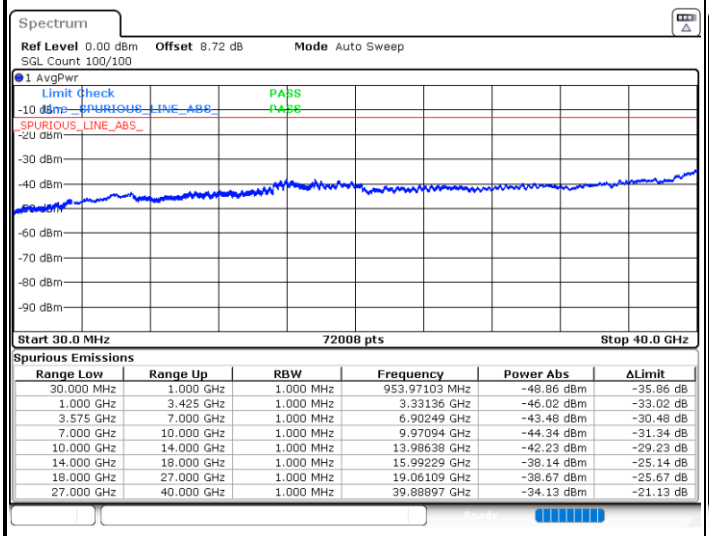
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 955.90909 MHz | -48.98 dBm | -35.98 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.37863 GHz | -45.99 dBm | -32.99 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.73141 GHz | -43.75 dBm | -30.75 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.99231 GHz | -44.29 dBm | -31.29 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99713 GHz | -42.20 dBm | -29.20 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.96657 GHz | -38.34 dBm | -25.34 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.02228 GHz | -38.57 dBm | -25.57 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.89763 GHz | -34.21 dBm | -21.21 dB |

Date: 3.OCT.2024 22:06:53

## LTE Band 42/ 20MHz

### QPSK / 1RB0

#### Lowest Channel

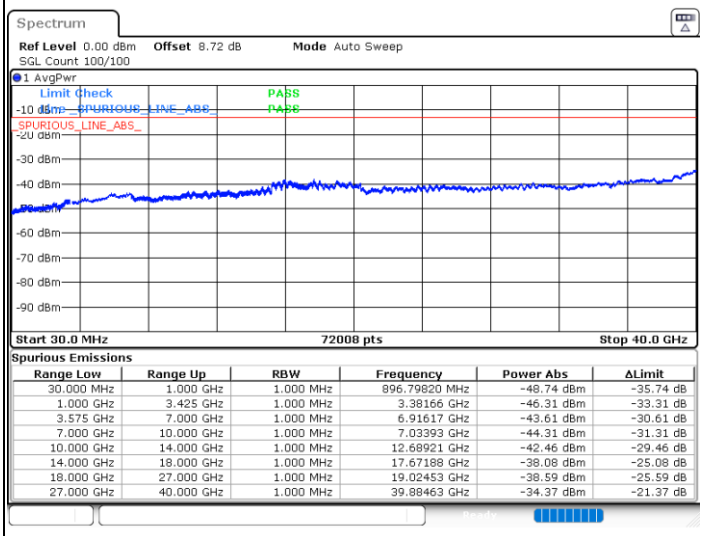



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 953.97103 MHz | -48.86 dBm | -35.86 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.33136 GHz | -46.02 dBm | -33.02 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.90249 GHz | -43.48 dBm | -30.48 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.97094 GHz | -44.34 dBm | -31.34 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.98638 GHz | -42.23 dBm | -29.23 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.99229 GHz | -38.14 dBm | -25.14 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.06109 GHz | -38.67 dBm | -25.67 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.88897 GHz | -34.13 dBm | -21.13 dB |

Date: 3.OCT.2024 22:19:44

#### Middle Channel

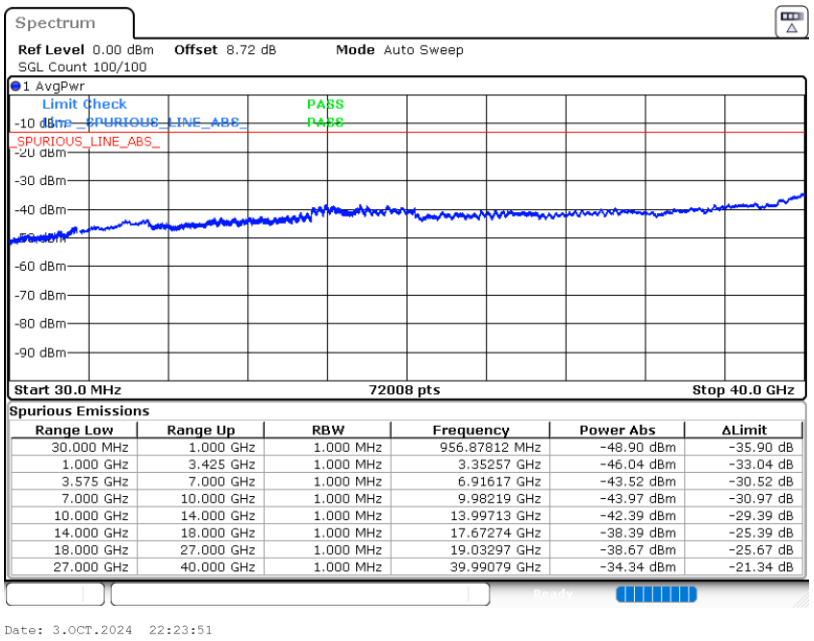



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 896.79820 MHz | -48.74 dBm | -35.74 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.38166 GHz | -46.31 dBm | -33.31 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.91617 GHz | -43.61 dBm | -30.61 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.03393 GHz | -44.31 dBm | -31.31 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 12.68921 GHz | -42.46 dBm | -29.46 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.67188 GHz | -38.08 dBm | -25.08 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.02453 GHz | -38.59 dBm | -25.59 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.88463 GHz | -34.37 dBm | -21.37 dB |

Date: 3.OCT.2024 22:21:48

#### Highest Channel




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 956.87812 MHz | -48.90 dBm | -35.90 dB |
| 1.000 GHz | 3.425 GHz | 1.000 MHz | 3.35257 GHz | -46.04 dBm | -33.04 dB |
| 3.575 GHz | 7.000 GHz | 1.000 MHz | 6.91617 GHz | -43.52 dBm | -30.52 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 9.98219 GHz | -43.97 dBm | -30.97 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 13.99713 GHz | -42.39 dBm | -29.39 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.67274 GHz | -38.39 dBm | -25.39 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 19.03297 GHz | -38.67 dBm | -25.67 dB |
| 27.000 GHz | 40.000 GHz | 1.000 MHz | 39.99079 GHz | -34.34 dBm | -21.34 dB |

Date: 3.OCT.2024 22:23:51

# Frequency Stability

| Test Conditions | | LTE Band 42 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 20MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0021 | PASS |
| 40 | Normal Voltage | 0.0035 | |
| 30 | Normal Voltage | 0.0012 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0019 | |
| 0 | Normal Voltage | 0.0005 | |
| -10 | Normal Voltage | 0.0016 | |
| -20 | Normal Voltage | 0.0023 | |
| -30 | Normal Voltage | 0.0034 | |
| 20 | Maximum Voltage | 0.0022 | |
| 20 | Normal Voltage | 0.0005 | |
| 20 | Battery End Point | 0.0013 | |

**Note:**

1. Normal Voltage =3.91V ; Battery End Point (BEP) =3.40V ; Maximum Voltage =4.48V
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

# Appendix B. Test Results of Radiated Test

## Radiated Spurious Emission

| Test Engineer : | Simle Wang | Temperature : | 23~25℃ |
|---|---|---|---|
| | | Relative Humidity : | 41~42% |

| LTE Band 42 / 20MHz / QPSK / Ant. 5 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 6984 | -45.81 | -13 | -32.81 | -56.02 | 3.03 | 13.24 | H |
| | 10476 | -38.87 | -13 | -25.87 | -48.32 | 3.56 | 13.01 | H |
| | 13968 | -52.94 | -13 | -39.94 | -62.46 | 3.92 | 13.44 | H |
| | 6984 | -50.81 | -13 | -37.81 | -61.02 | 3.03 | 13.24 | V |
| | 10476 | -35.91 | -13 | -22.91 | -45.36 | 3.56 | 13.01 | V |
| | 13968 | -52.21 | -13 | -39.21 | -61.73 | 3.92 | 13.44 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.