# INTENTIONAL RADIATOR TEST REPORT

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|---|---|
| **Report Reference Number:** | E10599-2204-Star Solutions International Inc_iCell COMPAC-N LTE BTS B05_Rev-1.3 |
| Total Number of Pages: | 46 |
| Date of Issue: | September 25, 2022 |

| | |
|---|---|
| **EMC Test Laboratory:** | **QAI Laboratories Ltd.** |
| Address: | 3980 North Fraser Way, Burnaby, BC, V5J 5K5 Canada |
| Phone: | (604) 527-8378 |
| Fax: | (604) 527-8368 |

## Laboratory Accreditations (per ISO/IEC 17025:2017)

CERT #3657.02

This report has been completed in accordance with the requirements of ISO/IEC 17025.
Test results contained in this report are within QAI Laboratories ISO/IEC 17025 accreditations.
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| | |
|---|---|
| **Manufacturer**: | **Starsolutions International Inc** |
| **Address:** | 120 - 4600 Jacombs Road<br>Richmond BC V6V 3B1 Canada |

| | |
|---|---|
| **Equipment Tested:** | **iCell COMPAC-N-LTE BC05** |
| Model Number(s): | NL-0511.0 |
| ISED ID: | 8076A-71205001 |
| FCC ID: | S52-7-12-05-00-1 |

## REVISION HISTORY

| Date | Report Number | Details | Author's Initials |
|---|---|---|---|
| August 17, 2022 | E10599-2204-Star Solutions International Inc_iCell COMPAC-N LTE BTS B05_Rev-1.0 | Draft | AN |
| August 22, 2022 | E10599-2204-Star Solutions International Inc_iCell COMPAC-N LTE BTS B05_Rev-1.1 | Edited | AN |
| September 15, 2022 | E10599-2204-Star Solutions International Inc_iCell COMPAC-N LTE BTS B05_Rev-1.2 | Removed typo (0510) | AN |
| September 25, 2022 | E10599-2204-Star Solutions International Inc_iCell COMPAC-N LTE BTS B05_Rev-1.3 | Removed typos | AN |
| All previous versions of this report have been superseded by the latest dated revision as listed in the above table. Please dispose of all previous electronic and paper printed revisions accordingly. | | | |

## REPORT AUTHORIZATION

The data documented in this report is for the test equipment provided by the manufacturer. The tests were conducted on the sample equipment as requested by the manufacturer for the purpose of demonstrating compliance with the standards outlined in Section I of this report as agreed upon by the Manufacturer under the quote 22RH06161R2 and 22RH07114.

The Manufacturer is responsible for the tested product configurations, continued product compliance, and for the appropriate auditing of subsequent products as required.

This report may comprise a partial list of tests that are required for FCC and ISED Declaration of Conformity can only be produced by the manufacturer. This is to certify that the following report is true and correct to the best of our knowledge.

Testing Performed by
Report Created by
**Alireza Nezam**
RF/EMC Test Engineer

Report reviewed by
**Parminder Singh**
VP, EMC

## QAI FACILITIES

**British Columbia**
**QAI Laboratories Inc.**
**Main Laboratory/Headquarters**
3980 North Fraser Way,
Burnaby, BC V5J Canada

**Ontario**
**QAI Laboratories Inc.**
25 Royal Group Crescent #3,
Vaughan,
ON L4H 1X9 Canada

**Virginia**
**QAI Laboratories Ltd.**
1047 Zachary Taylor Hwy,
Suite A Huntly,
VA 22640 USA

**China**
**QAI Laboratories Ltd**
Room 408, No. 228, Jiangchang 3rd Road Jing'An District,
Shanghai, China 200436

**California**
**QAI Laboratories Ltd.**
8385 White Oak Avenue Rancho
Cucamonga, CA 91730 USA

**Oklahoma**
**QAI Laboratories Ltd.**
5110 North Mingo Road
Tulsa, OK 74117, USA

**Miami**
**QAI Laboratories Ltd.**
8148 NW 74th Ave,
Medley, FL 33166 USA

**South Korea**
**QAI Laboratories Ltd**
#502, 8, Sanbon-ro 324beon-gil
Gunpo-si, Gyeonggi-do, 15829,
South Korea

## QAI EMC ACCREDITATION

QAI EMC is your one-stop regulatory compliance partner for electromagnetic compatibility (EMC) and electromagnetic interference (EMI). Products are tested to the latest and applicable EMC/EMI requirements for domestic and international markets. QAI EMC goes above and beyond being a testing facility—we are your regulatory compliance partner. QAI EMC has the capability to perform RF Emissions and Immunity for all types of electronics manufacturing including Industrial, Scientific, Medical, Information Technology, Telecom, Wireless, Automotive, Marine and Avionics.

| EMC Laboratory Location | FCC Designation (3m SAC) | IC Registration (3m SAC) | A2LA Certificate |
|---|---|---|---|
| Burnaby, BC, Canada | CA9543 | 9543A | 3657.02 |

### EMC Facility Burnaby BC, Canada

# TABLE OF CONTENTS

# Section I: GENERAL INFORMATION

## 1.1 Product Description

The information provided in this section is for the Equipment Under Test (EUT) and the corresponding Auxiliary Equipment needed to perform the tests as a complete system.

EUT

**Equipment Under Test (EUT)**

| | |
|---|---|
| **EUT** | iCell COMPAC-N LTE BC05 |
| **Manufacturer** | Starsolutions International Inc |
| **HVIN/Model No.** | NL-0511, NL-0510 |
| **PMN** | iCell COMPAC-N-LTE BC05 |
| **FVIN** | - |
| **Frequency Range** | TX 869 MHz– 894 MHz, and RX 824 MHz – 849 MHz |

**Technical Specifications**

| | | |
|---|---|---|
| **CAPACITY/Performance** | Configurations | 2TRX LTE |
| | RF Output Power | 2 x 20W (2x43 dBm) |
| **Frequency BANDs** | Supported Bands | LTE Band Class 5 – BW 5MHz and 10 MHz |
| **PROTOCOL SUPPORT** | Signaling | GPS / IP |
| **INTERFACES** | Antenna Connectors | N-type female |
| **HARDWARE** | Dimensions | 450 mm H × 320 mm W x 180 mm D (17.7 x 12.6 x 7.0 in.) |
| | Weight | 16 kilograms |
| | Input Voltage | 120 AC |
| | Power Consumption | 170W typical |
| | Options | Mounting brackets for wall or pole |
| | Type of Modulations | QPSK, 16QAM, 64QAM, 256QAM |
| **ENVIRONMENTAL** | Temperature | Operating: -40 to +55°C |
| | | Storage: -40 to +55°C |
| | Humidity | 5–95% non-condensing |

## 1.2 Environmental Conditions

The equipment under test was operated and tested under the following environmental conditions:

| Parameter | Conditions |
|---|---|
| Location | Indoors |
| Temperature | 25ºC |
| Relative Humidity | 48.8% |
| Atmospheric Pressure | 101.3 kPa |

## 1.3 Measurement Uncertainty

| Parameter | Uncertainty |
|---|---|
| Radiated Emissions, 30MHz -1GHz | ± 2.40 dB |
| Radiated Emissions, 1GHz -40GHz | ± 2.48 dB |
| Conducted Emissions, 0.15MHz -30MHz | ± 2.82 dB |
| Radio Frequency | ±1.5 x 10-5 MHz |
| Total RF Power Conducted | ±1.36 dB |
| Spurious Emissions, Conducted | ±1.36 dB |
| RF Power Density, Conducted | ±1.36 dB |
| Temperature | ±1ºC |
| Humidity | ±5 % |
| DC and low frequency voltages | ±3 % |

## 1.4 Worst Test Case

Worst-case orientation was determined during the preliminary testing.
The final radiated emissions were performed in the worst-case orientation.

## 1.5 Sample Calculations of Emissions Data

Radiated and conducted emissions were performed using EMC32 software developed by Rohdes & Schwarz. Transducer factors like Antenna factors, Cable Losses and Amplifier gains were stored in the test templates which are used to perform the emissions measurements. After test is finished, data is generated from the EMC32 consisting of product details, emission plots and final data tables as shown below.

| Frequency (MHz.) | Q-Peak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz.) | Ant. Ht. (cm) | Pol | Turntable Position (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|---|---|---|---|---|---|---|---|---|---|
| 42.663900 | 33.0 | 1000.000 | 120.000 | 100.0 | H | 70.0 | 13.2 | 7.5 | 40.5 |

Quasi-Peak reading shown in the table above is already corrected by the software using correction factor shown in column "Corr." The correction factor listed under "Corr." table calculated as:

**Corr.(dB) = Antenna factor + Cable loss**

Or

**Corr.(dB) = Antenna factor + Cable Loss - Amp gain (if pre-amplifier was used)**

The final Quasi peak reading shown in the data is calculated by the software using following equation:

**Corrected Quasi-Peak (dBµV/m) = Raw Quasi-Peak Reading + Antenna factor + Cable loss**

To obtain the final Quasi-Peak or Average reading during power line conducted emissions, transducer factors are included in the final measurement as shown below.

| Frequency (MHz.) | Q-Peak (dBµV) | Meas. Time (ms) | Bandwidth (kHz.) | PE | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|---|
| 0.150 | 44.3 | 1000.000 | 9.000 | GND | 0.6 | 21.7 | 66.0 |

| Frequency (MHz.) | Average (dBµV) | Meas. Time (ms) | Bandwidth (kHz.) | PE | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|---|
| 0.150 | 27.2 | 1000.000 | 9.000 | GND | 0.6 | 28.8 | 56.0 |

Quasi Peak or Average reading shown in above table is already corrected by the software using the correction factor shown in column "Corr." The correction factor listed under "Corr." table calculated as:

**Corr.(dB) = Antenna factor + Cable loss**

The final Quasi-peak or Average reading shown in the data is calculated by the software using following equation:

**Corr. Quasi-Peak/Average Reading (dBµV) = Raw Quasi-Peak/Average Reading + Antenna factor + Cable loss**

The allowable margin from the limits, as per the standards, were calculated for both radiated and conducted emissions:

**Margin(dB) = Limit – Quasi-Peak or Average reading**

## 1.6 Test Equipment List

The tables below contain all the equipment used by QAI Laboratories in conducting all tests on the Equipment Under Test (EUT) as per Section 1.

**Emissions Test Equipment**

**Note:** Equipment listed above have 3 years calibration interval.

**Measurement Software List Emissions Test Equipment**

| Sl. NO. | Manufacturer | Model | Description | Serial No. | S/W Version | Calibration Due Date |
|---|---|---|---|---|---|---|
| 1 | AH Systems | PAM118 | Amplifier (10KHz-18GHz) | 189 | N/A | Conditional Use |
| 2 | EMCO | 3825/2 | LISN (150kHz-30MHz) | 9002-1601 | N/A | 2023-Oct-01 |
| 3 | ETS Lindgren | 2165 | Turntable | 00043677 | N/A | N/A |
| 4 | ETS Lindgren | 2125 | Mast | 00077487 | N/A | N/A |
| 5 | ETS Lindgren | S201 | 5-meter Semi-Anechoic Chamber | 1030 | N/A | N/A |
| 6 | Hewlett Packard | 8449B | Preamplifier (1-26 GHz) | 2933A00198 | N/A | 2025-Feb-15 |
| 7 | Rohde & Schwarz | ESU40 | EMI Receiver | 100011 | EMC32 v10.35.10/ FV 4.73 SP4 | 2023-Jul-05 |
| 8 | Sunol Sciences | DRH-118 | Horn Antenna, 1.0-18 GHz | A050905 | N/A | 2023-07-28 |
| 9 | Sunol Sciences | SM46C | Turntable | 051204-2 | N/A | N/A |
| 10 | Sunol Sciences | TWR95 | Mast | TREML0001 | N/A | N/A |
| 11 | Sunol Sciences | JB3 | Biconilog Antenna 30MHz – 3GHz | A042004 | N/A | 2023-Jul-30 |
| 12 | TTi | HA1600A | Power Analyzer; Harm/Flicker | 318801 | N/A | 2022-Oct-01 |
| 13 | TTi | AC1000A | Power Supply, Low Distortion | 317113 | N/A | 2022-Oct-01 |
| 14 | Rigol | RSA5065-TG | Spectrum Analyser | 39775 | N/A | 4/11/2023 |

**Note:** Equipment listed above have 3 years calibration interval.

**Measurement Software List**

| Sl. No. | Manufacturer | Model | Version | Description |
|---|---|---|---|---|
| 1 | Rhode & Schwarz | EMC 32 | 10.35.10 | Emissions Test Software |
| 2 | TESEQ | WIN 3000 | 1.2.0 | Surge, EFT & Voltage Dips Immunity Test Program |
| 3 | Thurlby Thandar Instruments | HA-PC Link Version | 2.02 | Harmonics and Flicker Test Program |
| 4 | VI Automation | Via EMC Immunity Executive | 1.0.308 | Radiated and Conducted Immunity Test Program |

# Section II: EXECUTIVE SUMMARY OF STANDARDS AND LIMITS

## 2.1 Purpose

The purpose of this report is to demonstrate and document the compliance of EUT per Sections 2.2 of this report.

## 2.2 Scope

The information documented in this report is based on the test methods and levels as per Quote mentioned above
The requirements specified in ICES-Gen applies as well as the chosen measurement procedure (CAN/CSA-CISPR 32:17 and ANSI C63.26). Only 5 and 10 MHz apply for FCC, due to subbands limits (for subband A 869 to 880 MHz and 890 to 891.5 MHz AND for subband B 880 to 890 MHz and 891.5 to 894 MHz).
This device is categorized as Fixed device, and antennas would be installed by end users.

**RSS-132 Issue 3**– Cellular Telephone Systems Operating in the Bands 824-849 MHz. and 869-894 MHz.
**Gen Issue 5**– General Requirements for Compliance of Radio Apparatus.
**ICES-003 Issue 7**– Information Technology Equipment (Including Digital Apparatus).
– Limits and Methods of Measurement
**SRSP-503 Issue 7**–Technical Requirements for Cellular Radiotelephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
**CFR Title 47 FCC Part 2** - Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
**CFR Title 47 FCC Part 22** – Public Mobile Services, Subpart H – Cellular Radiotelephone Service - Only applicable sections will be included
**CFR Title 47 FCC Part 24** – Personal Communications Services - Only applicable sections will be included
**CFR Title 47 Part 27** – Miscellaneous Wireless Communication Services - Only applicable sections will be included

## 2.3 Summary of Results

The following tests demonstrate the testimony to “FCC and ISED” Mark Electromagnetic compatibility testing for “WP5 Wireless Platform 5” manufactured by JSF Technologies Inc.

| Test or Measurement | Performance Criteria |
|---|---|
| **Spurious emission at antenna terminal** | **Comply** |
| **Spurious Radiated Emissions** | **Comply** |
| **Frequency Stability** | **Comply** |
| **Transmitter Output Power** | **Comply** |
| **Peak to average ratio** | **Comply** |
| **Modulation Characteristics** | **Comply** |
| **Occupied channel BW** | **Comply** |

# Section III: DATA & TEST RESULTS

## 3.1 Frequency Stability

**Date Performed:** July 28,29 2022

**Test Standard:** As per section 2.2.
47CFR 2.1055

**Test Method:** ANSI C63.26:2013

**Test Setup:** The carrier frequency shall not depart from the reference frequency in excess of ±1.5 ppm for base stations.

**Modifications:** No modification was required to comply for this test.

**Final Results:** The EUT complies with the applicable standard.

**Measurement Data and Plot:**

| Sub-band | Channel | Frequency | Freq. at 50°C | Deviation at 50°C | Freq. at 40° | Deviation at 40°C | Freq. at 30°C | Deviation at 30°C | Freq. at 20°C | Deviation at 20°C | Limit | Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | | Hz | Hz | ppm | Hz | ppm | Hz | ppm | Hz | ppm | ppm | |
| 869-880 | 2425 | 871500000 | 871500910 | 1 | 871501024 | 1.2 | 871501011 | 1.2 | 871501153 | 1.3 | ±1.5 | Comply |
| 880-890 | 2585 | 887500000 | 887499250 | 0.8 | 887499782 | 0.2 | 887501044 | 1.2 | 887501081 | 1.2 | ±1.5 | Comply |

| Sub-band | Channel | Frequency | Freq. at 10°C | Deviation at 10°C | Freq. at 0° | Deviation at 0°C | Freq. at -10°C | Deviation at -10°C | Freq. at -20°C | Deviation at -20°C | Limit | Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | | Hz | Hz | ppm | Hz | ppm | Hz | ppm | Hz | ppm | ppm | |
| 869-880 | 2425 | 871500000 | 871500909 | 1 | 871501023 | 1.2 | 871501011 | 1.2 | 871501154 | 1.3 | ±1.5 | Comply |
| 880-890 | 2585 | 887500000 | 887499249 | 0.8 | 887499779 | 0.2 | 887501044 | 1.2 | 887501082 | 1.2 | ±1.5 | Comply |

| Sub-band | Channel | Frequency | Freq. at 115% of the $V_{nom}$ | Deviation at 115% of the $V_{nom}$ | Freq. at of the $V_{nom}$ | Deviation at of the $V_{nom}$ | Freq. at 85% of the $V_{nom}$ | Deviation at 85% of the $V_{nom}$ | Limit | Results |
|---|---|---|---|---|---|---|---|---|---|---|
| MHz | | Hz | Hz | ppm | Hz | ppm | Hz | ppm | ppm | |
| 869-880 | 2425 | 871500000 | 871500909 | 1 | 871501023 | 1.2 | 871501011 | 1.2 | ±1.5 | Comply |
| 880-890 | 2585 | 887500000 | 887499250 | 0.8 | 887499782 | 0.2 | 887501044 | 1.2 | ±1.5 | Comply |

**Table 1: Frequency Stability**

## 3.2 RF Output Power and equivalent Isotropically Radiated Power

**Date Performed:** July 11, 12, 25, 26, 2022

**Test Standard:** As Per Section 2.2, 47CFR 2.1046

**Test Method:** ANSI C63.26:2015

**Test Requirement:**

The transmitter output power shall be measured in terms of average power. The equivalent isotropically radiated power (e.i.r.p.) for base station digital systems are limited to 1640 Watts (EIRP), with an antenna height above average terrain (HAAT) up to 150 m, except in urban area where they are limited to a maximum allowable EIRP of 820 watts.

**Modifications:** No modification was required to comply for this test.

**Final Result:** The EUT complies with the applicable standard.

**Measurement Data:**

| QPSK | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub-band (MHz) | Bandwidth (MHz) | Channel | Channel Number | Center Freq (MHz) | Raw Conducted Power Peak (dBm) | Raw Conducted Power Ave (dBm) | PAPR (dB) | Attenuation (dB) | Peak Power (dBm) | Conducted Power Ave (dBm) | Conducted Power Ave (Watts) | Status |
| 869-880 | 5 | Low | 2425 | 871.5 | 5.63 | 0.29 | 5.34 | 33.2 | 38.83 | 33.49 | 2.23 | Comply |
| | 5 | Mid | 2455 | 874.5 | 5.41 | 0.34 | 5.07 | 33.2 | 38.61 | 33.54 | 2.25 | Comply |
| | 5 | High | 2485 | 877.5 | 5.55 | 0.39 | 5.16 | 33.2 | 38.75 | 33.59 | 2.28 | Comply |
| 869-880 | 10 | Low | 2450 | 874 | 5.39 | 0.41 | 4.98 | 33.2 | 38.59 | 33.61 | 2.29 | Comply |
| | 10 | Mid | 2455 | 874.5 | 5.12 | 0.42 | 4.7 | 33.2 | 38.32 | 33.62 | 2.30 | Comply |
| | 10 | High | 2460 | 875 | 5.77 | 0.36 | 5.41 | 33.2 | 38.97 | 33.56 | 2.26 | Comply |
| 880-890 | 10 | Mid | 2560 | 885 | 5.24 | 0.29 | 4.95 | 33.2 | 38.44 | 33.49 | 2.23 | Comply |
| 880-890 | 5 | Low | 2535 | 882.5 | 5.38 | 0.34 | 5.04 | 33.2 | 38.58 | 33.54 | 2.25 | Comply |
| | 5 | High | 2585 | 887.5 | 5.41 | 0.35 | 5.06 | 33.2 | 38.61 | 33.55 | 2.26 | Comply |

**Table 2: Transmitter Output Power QPSK**

| 64 QAM | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub-band (MHz) | Bandwidth (MHz) | Channel | Channel Number | Center Freq (MHz) | Raw Conducted Power Peak (dBm) | Raw Conducted Power Ave (dBm) | PAPR (dB) | Attenuation (dB) | Peak Power (dBm) | Conducted Power Ave (dBm) | Conducted Power Ave (Watts) | Status |
| 869-880 | 5 | Low | 2425 | 871.5 | 9.24 | 4.88 | 4.36 | 33.2 | 42.44 | 38.08 | 6.42 | Comply |
| | 5 | Mid | 2455 | 874.5 | 9.23 | 4.57 | 4.66 | 33.2 | 42.43 | 37.77 | 5.98 | Comply |
| | 5 | High | 2485 | 877.5 | 9.25 | 4.49 | 4.76 | 33.2 | 42.45 | 37.69 | 5.87 | Comply |
| 869-880 | 10 | Low | 2450 | 874 | 9.12 | 4.47 | 4.65 | 33.2 | 42.32 | 37.67 | 5.84 | Comply |
| | 10 | Mid | 2455 | 874.5 | 9.32 | 4.39 | 4.93 | 33.2 | 42.52 | 37.59 | 5.74 | Comply |
| | 10 | High | 2460 | 875 | 9.27 | 4.38 | 4.89 | 33.2 | 42.47 | 37.58 | 5.72 | Comply |
| 880-890 | 10 | Mid | 2560 | 885 | 9.38 | 4.56 | 4.82 | 33.2 | 42.58 | 37.76 | 5.97 | Comply |
| 880-890 | 5 | Low | 2535 | 882.5 | 9.12 | 4.61 | 4.51 | 33.2 | 42.32 | 37.81 | 6.03 | Comply |
| 880-890 | 5 | High | 2585 | 887.5 | 9.28 | 4.67 | 4.61 | 33.2 | 42.48 | 37.87 | 6.12 | Comply |

**Table 3: Transmitter Output Power 64 QAM**

| 256 QAM |
|---|

| Sub-band (MHz) | Bandwidth (MHz) | Channel | Channel Number | Center Freq (MHz) | Raw Conducted Power Peak (dBm) | Raw Conducted Power Ave (dBm) | PAPR (dB) | Attenuation (dB) | Peak Power (dBm) | Conducted Power Ave (dBm) | Conducted Power Ave (Watts) | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 9.19 | 4.77 | 4.42 | 33.2 | 42.39 | 37.97 | 6.26 | Comply |
| | 5 | Mid | 2455 | 874.5 | 9.24 | 4.74 | 4.5 | 33.2 | 42.44 | 37.94 | 6.22 | Comply |
| | 5 | High | 2485 | 877.5 | 9.35 | 4.71 | 4.64 | 33.2 | 42.55 | 37.91 | 6.18 | Comply |
| 869-880 | 10 | Low | 2450 | 874 | 9.31 | 4.73 | 4.58 | 33.2 | 42.51 | 37.93 | 6.20 | Comply |
| | 10 | Mid | 2455 | 874.5 | 9.25 | 4.81 | 4.44 | 33.2 | 42.45 | 38.01 | 6.32 | Comply |
| | 10 | High | 2460 | 875 | 9.18 | 4.69 | 4.49 | 33.2 | 42.38 | 37.89 | 6.15 | Comply |
| 880-890 | 10 | Mid | 2560 | 885 | 9.27 | 4.54 | 4.73 | 33.2 | 42.47 | 37.74 | 5.94 | Comply |
| 880-890 | 5 | Low | 2535 | 882.5 | 9.41 | 4.62 | 4.79 | 33.2 | 42.61 | 37.82 | 6.05 | Comply |
| 880-890 | 5 | High | 2585 | 887.5 | 9.38 | 4.59 | 4.79 | 33.2 | 42.58 | 37.79 | 6.01 | Comply |

**Table 4: Transmitter Output Power 256 QAM**

## 3.3 Modulation Characteristics

**Date Performed:** July 26, 2022

**Test Standard:** 47CFR2.1047, 47CFR2.201, RSS-199, RS-Gen

**Test Method:** ANSI C63.26:2015

**Test Requirement:**

The Occupied bandwidth was measured to be 4.58 MHz and 9.32 MHZ (for 869 to 880 MHz, Config QPSK), 4.49 and 8.91 MHz (for config 869 to 880 MHz, 64 QAM), 4.44 and 8.91 MHz (for config 869 to 880 MHz, 256 QAM), 4.44 and 8.91 MHz (for config 880 to 890 MHz, QPSK), 4.44 and 8.91 MHz (for config 880 to 890 MHz, 64 QAM) and 4.50 and 9.10 (for config 880 to 890 MHz, 256 QAM).
Therefore, the modulation characteristic for config 869 to 880 MHz are only 5 MHz and 10 MHz and for config 880 to 890 MHz are 5 MHz and 10 MHz for all modulations. 15 MHz and 20 MHz bandwidth would not fit to subbands “869 to 880 MHz” and “880 to 890 MHz”.

**Modifications:** No modification was required to comply for this test.

**Final Result:** The EUT complies with the applicable standard.

## 3.4 Spurious Emissions at Antenna

**Date Performed:** July 12, 17, 22, 26 2022

**Test Standard:** As Per Section 2.2, 2.1051, 2.1057, 27.53, RS-199, RSS Gen

**Test Method:** ANSI C63.26:2015

**Test Requirement:**

Base station equipment shall comply with the limits in (i) and (ii) below.

(i) In the first 1.0 MHz. band immediately outside and adjacent to each of the sub-bands specified in the standard 'RSS-132 Issue 3 (5.1)', the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10 p (watts).
(ii) After the first 1.0 MHz. immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz. bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10 p (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz.
(iii) Required attenuation 30+ 10 log p30+10 log 20W= 43dB below the transmitter power

**Modifications:** No modification was required to comply for this test.

**Final Result:** The EUT complies with the applicable standard.

**Measurement Data and Plot:**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | Attenuation | Results |
|---|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 53 | Comply |
| | 5 | High | 2485 | 877.5 | 62 | Comply |
| 869-880 | 10 | Low | 2450 | 874 | 54 | Comply |
| | 10 | High | 2460 | 875 | 59 | Comply |

**Table 5: Data: Out of Band Emissions QPSK**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | Attenuation | Results |
|---|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 53 | Comply |
| | 5 | High | 2485 | 877.5 | 60 | Comply |
| 869-880 | 10 | Low | 2450 | 874 | 55 | Comply |
| | 10 | High | 2460 | 875 | 58 | Comply |

**Table 6: Data: Out of Band Emissions 64QAM**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | Attenuation | Results |
|---|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 54 | Comply |
| | 5 | High | 2485 | 877.5 | 59 | Comply |
| 869-880 | 10 | Low | 2450 | 874 | 54 | Comply |
| | 10 | High | 2460 | 875 | 58 | Comply |

**Table 7: Data: Out of Band Emissions 256 QAM**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | Attenuation | Results |
|---|---|---|---|---|---|---|
| 880-890 | 5 | Low | 2535 | 882.5 | 54 | Comply |
| | 5 | High | 2585 | 887.5 | 58 | Comply |

| | | | | | | |
|---|---|---|---|---|---|---|
| 880-890 | 10 | Low | 2560 | 885 | 54 | Comply |
| | 10 | High | 2560 | 885 | 57 | Comply |

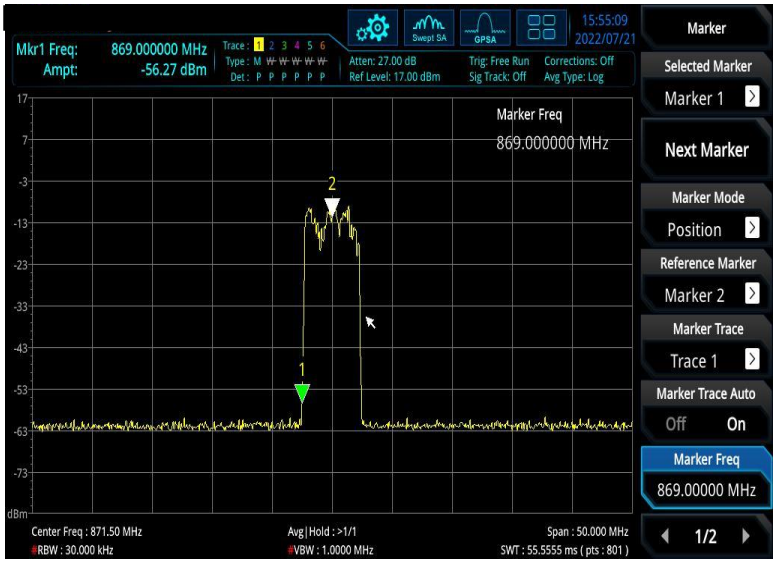
**Table 8: Data: Out of Band Emissions QPSK**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | Attenuation | Results |
|---|---|---|---|---|---|---|
| 880-890 | 5 | Low | 2535 | 882.5 | 53 | Comply |
| | 5 | High | 2585 | 887.5 | 58 | Comply |
| 880-890 | 10 | Low | 2560 | 885 | 54 | Comply |
| | 10 | High | 2560 | 885 | 56 | Comply |

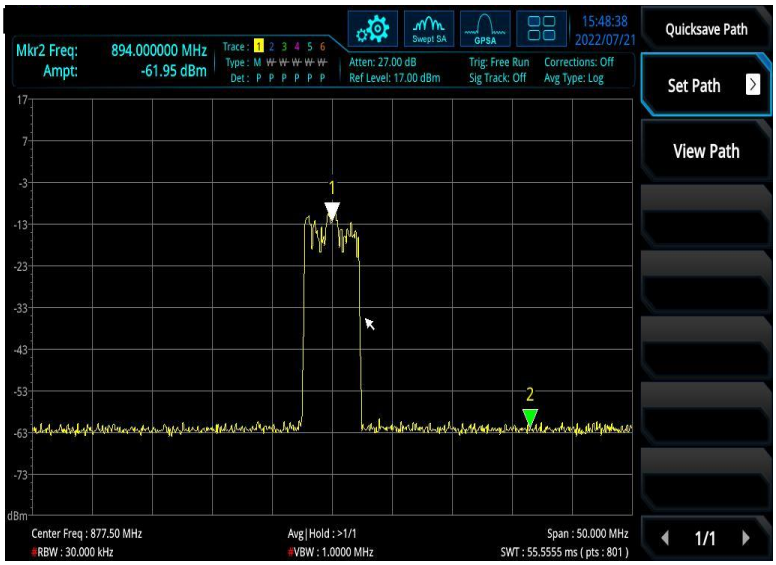
**Table 9: Data: Out of Band Emissions 64QAM**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | Attenuation | Results |
|---|---|---|---|---|---|---|
| 880-890 | 5 | Low | 2535 | 882.5 | 55 | Comply |
| | 5 | High | 2585 | 887.5 | 60 | Comply |
| 880-890 | 10 | Low | 2560 | 885 | 55 | Comply |
| | 10 | High | 2560 | 885 | 54 | Comply |

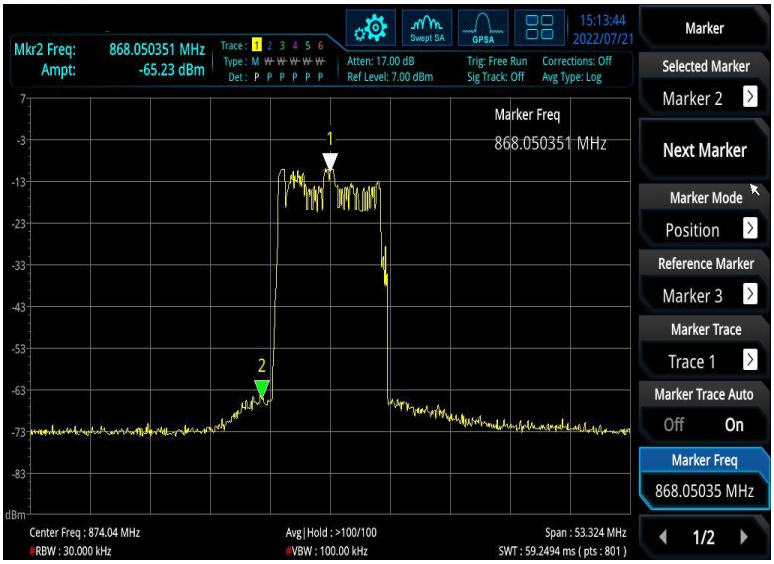
**Table 10: Data: Out of Band Emissions 256 QAM**




**Plot 1: Bandedge_5 MHz CH 2425**

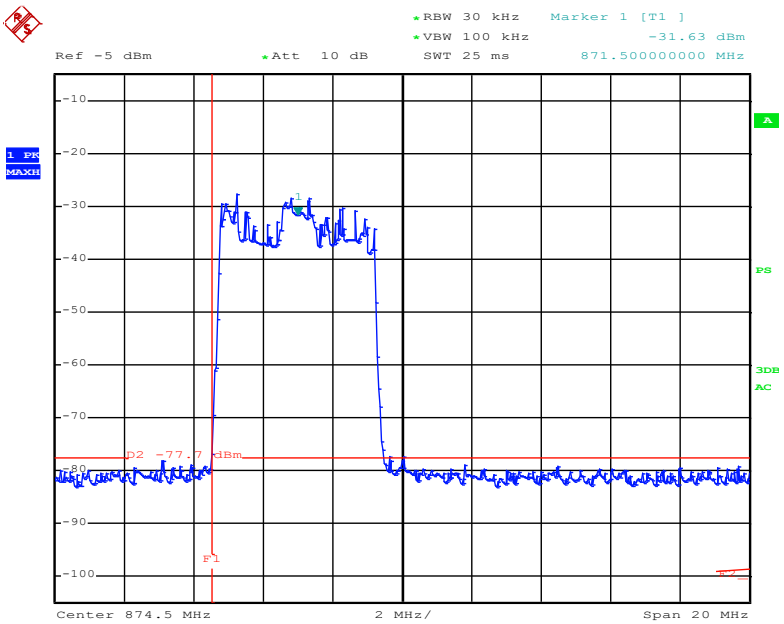



**Plot 2: Bandedge_5 MHz CH 2485**

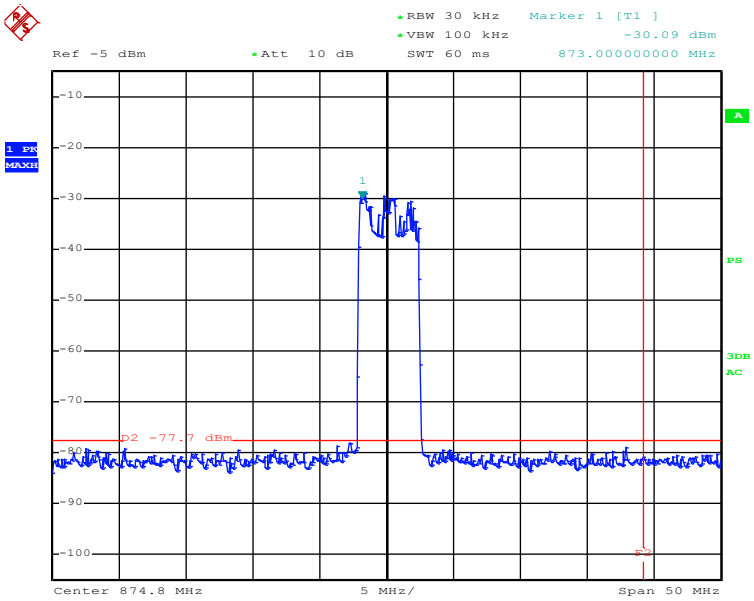



**Plot 3: Bandedge_5 MHz CH 2450**


**Plot 4: Bandedge_5 MHz CH 2460**

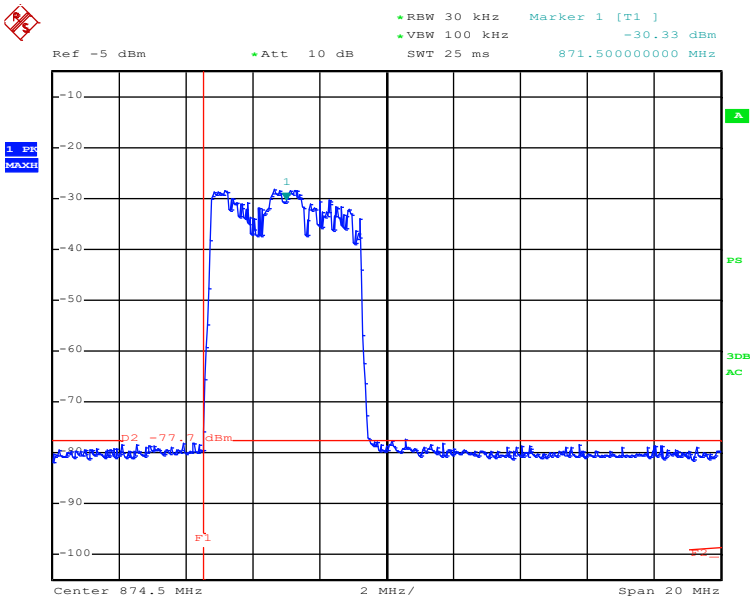



**Plot 5: Bandedge_5 MHz CH 2425 Low (F1 at 869MHz)**



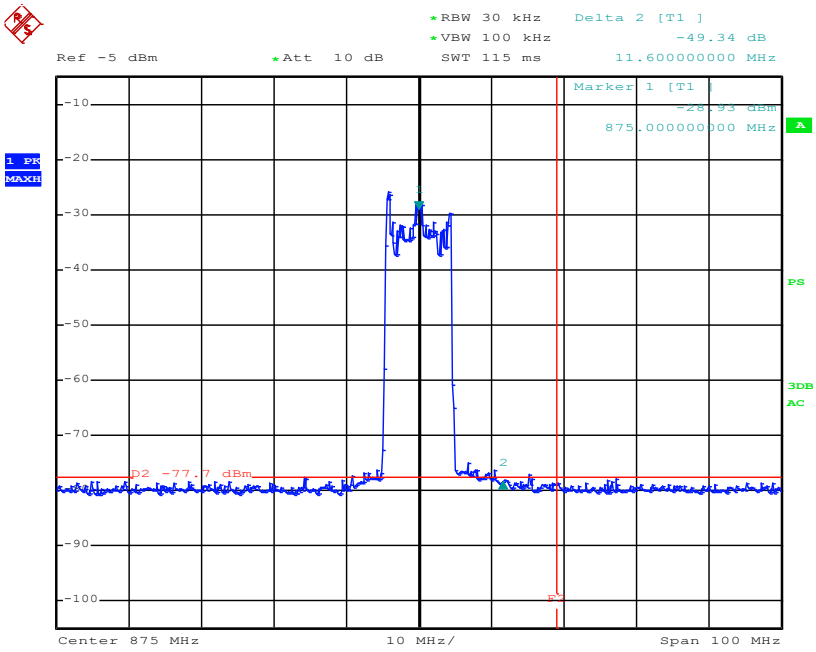

Date: 22.JUL.2022 14:25:12

**Plot 6: Bandedge_5 MHz CH 2485 Hi (F2 at 890MHz)**



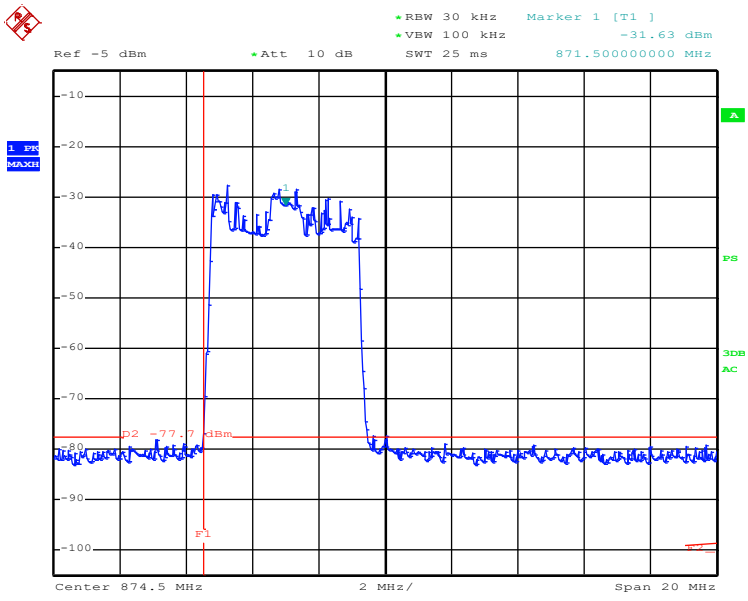

Date: 22.JUL.2022 14:37:04

**Plot 7: Bandedge_5 MHz CH 2450-Low- 31 (F1 at 869MHz)**



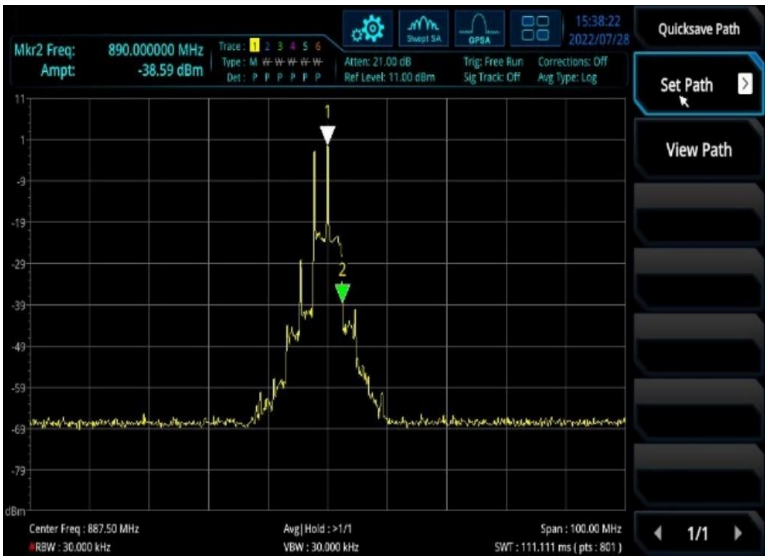

Date: 22.JUL.2022 12:26:03

**Plot 8: Bandedge_5 MHz CH 2460 Hi (F1 at 890MHz)**

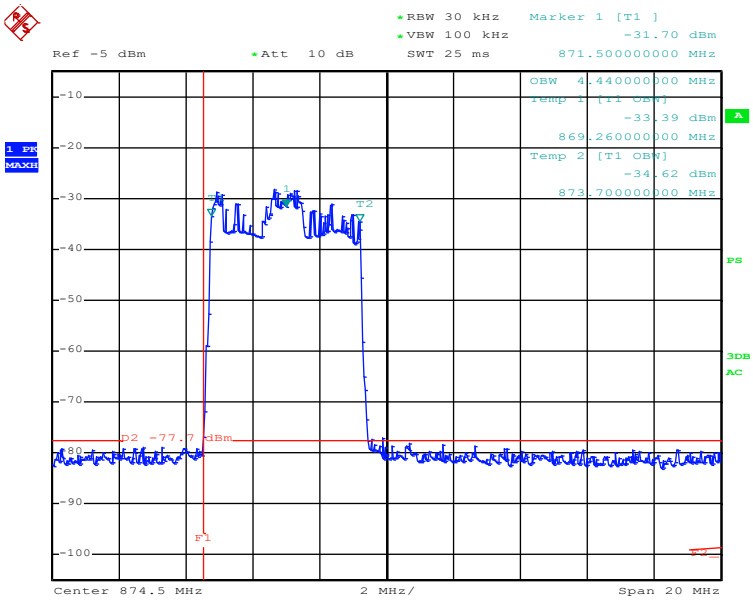



Date: 22.JUL.2022 14:37:36

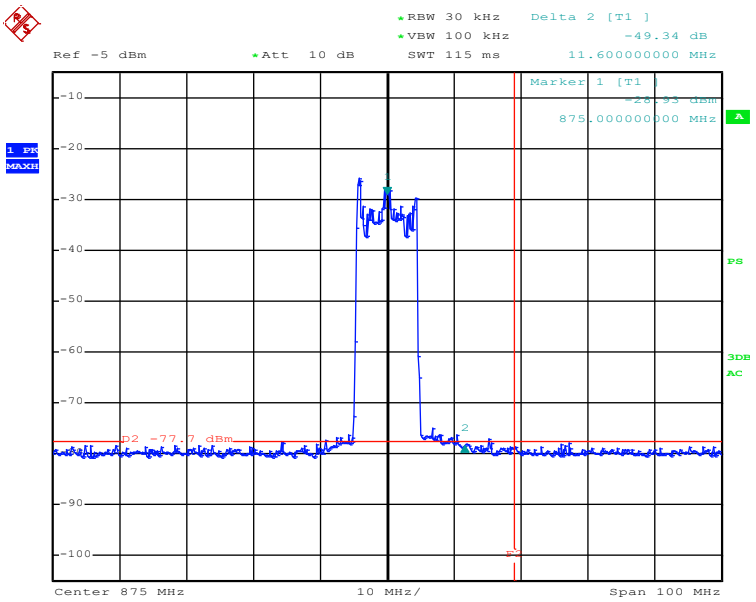
**Plot 9: Bandedge_5 MHz CH 2425 Low (F1 at 869MHz)**



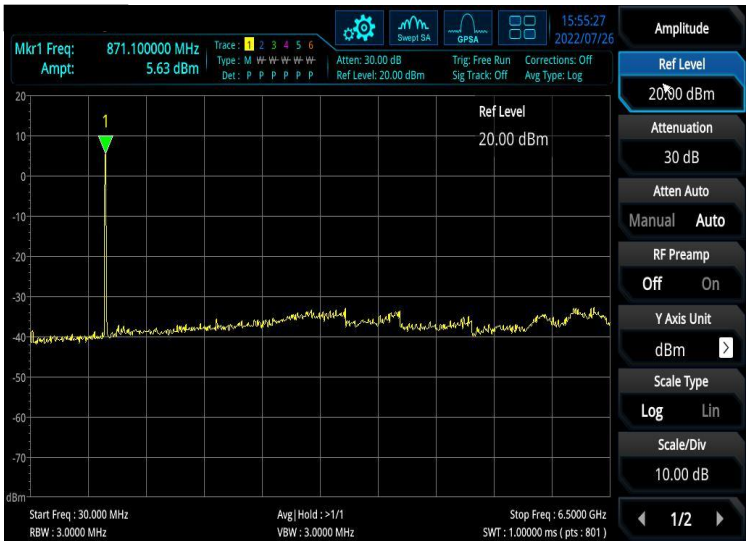

**Plot 10: Bandedge_5 MHz CH 2485 Hi (F2 at 890MHz)**



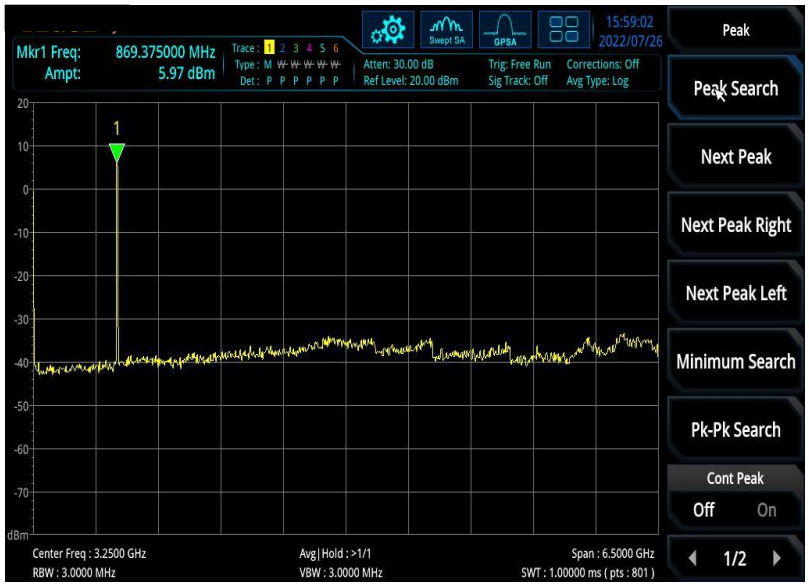

**Plot 11: Bandedge_5 MHz CH 2450 Low (F1 at 869MHz)**




**Plot 12: Bandedge_5 MHz CH 2460 Hi (F1 at 890MHz)**

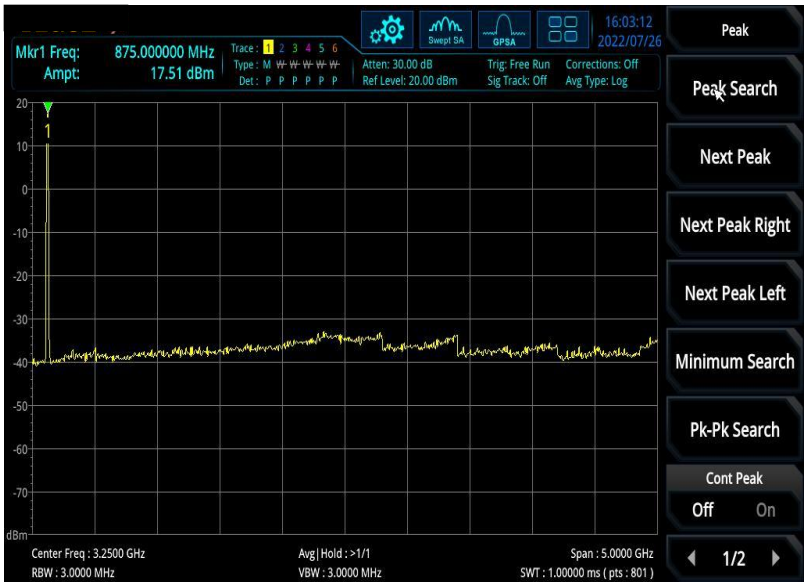



**Plot 13: Spurious Emissions_Channel 2425**

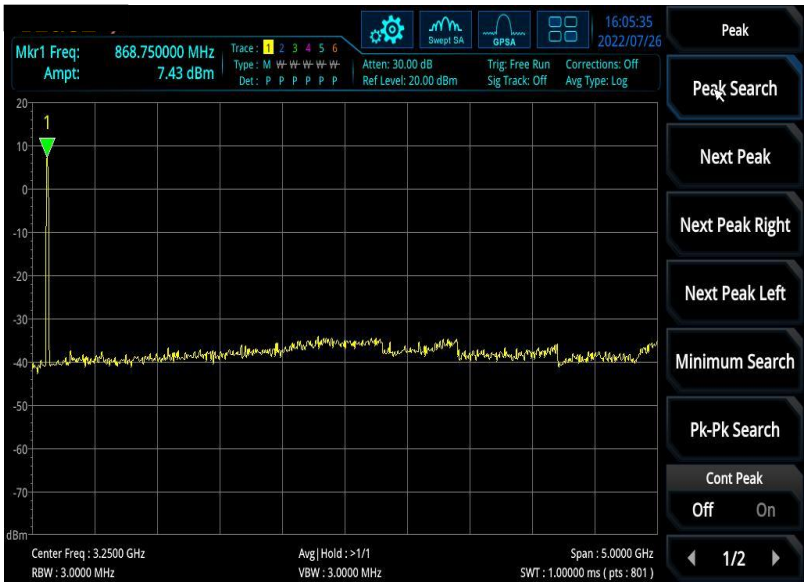



**Plot 14: Spurious Emissions _Channel 2455**


**Plot 15: Spurious Band Emissions _Channel 2485**

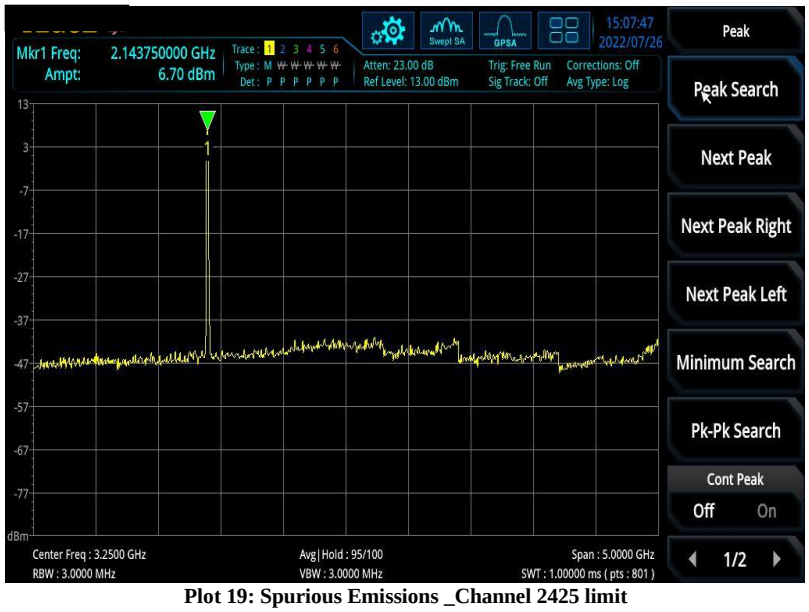



**Plot 16: Spurious Emissions Channel 2450**

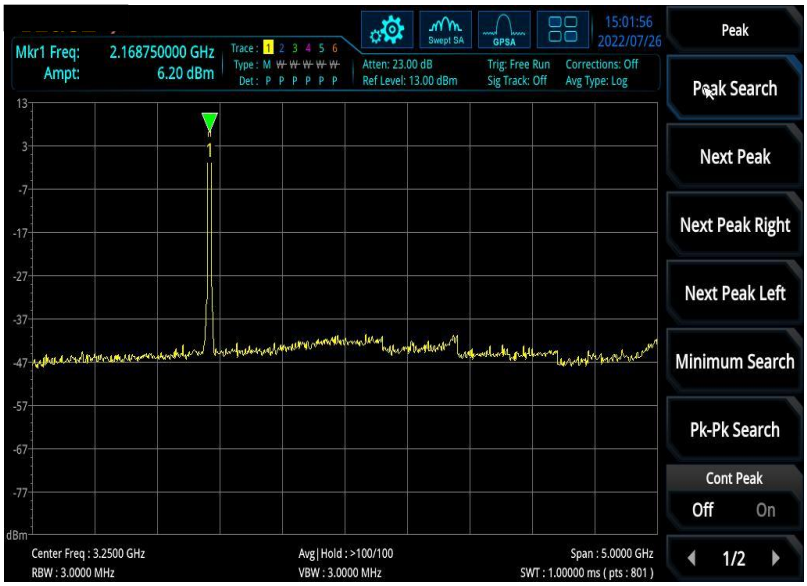



**Plot 17: Spurious Emissions _Channel 2455**


**Plot 18: Spurious Emissions _Channel 2460**




**Plot 19: Spurious Emissions _Channel 2425 limit**




**Plot 20: Spurious Emissions _Channel 2425 limit**

## 3.5 Radiated Spurious Emissions

**Date Performed:** July 11,12,13 2022

**Test Standard:** As per Section 2.2

**Test Method:** CFR 15.1053, RSS-132, RSS 133

**Final Result:** The EUT complies with the applicable standard.

### Test Requirement:

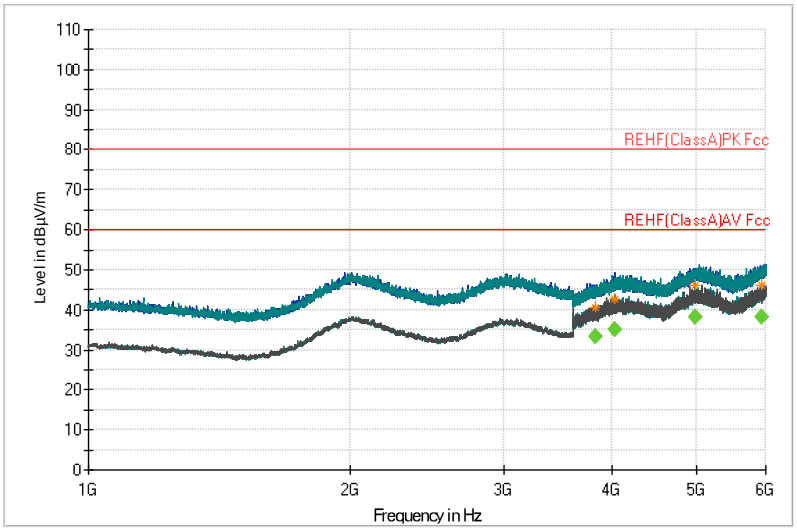
Radiated emission measurements shall be performed with the receiver antenna connected to the receiver antenna ports. The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz., whichever is higher, to at least five times the highest tunable or local oscillator frequency, whichever is higher, without exceeding 40 GHz.
Spurious emissions from receivers shall not exceed the radiated emissions limits shown in table 3 below.

| Frequency (MHz.) | Field Strength Quasi Peak (Class B) (dBµV/m @ 3m SAC) | | Result |
|---|---|---|---|
| 30 – 88 | 40.0 | | Comply |
| 88 – 216 | 43.5 | | |
| 216 – 960 | 46.0 | | |
| Above 960 | 54.0 | | |
| **Frequency (GHz.)** | **Maximum Field Strength (dB mV/m at 3 m)** | | **Result** |
| | **Peak** | **Average** | |
| 1-40 | 74 | 54 | Comply Upto 18 GHz. |
| **Note 1**: The lower limit shall apply at the transition frequency.<br>**Note 2**: Additional provisions may be required for cases where interference occurs. | | | |

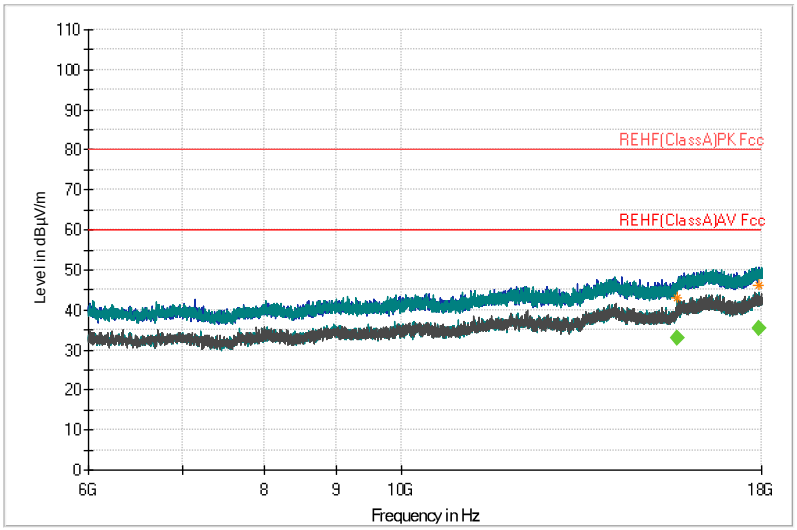
**Table 11: Transmitter emission limits**

The EUT was tested in our 3 m SAC and was positioned on the center of the turntable. The transmitter was set for continuous transmission. The RF radiated emissions were measured in the frequency range of 150kHz. to 18 GHz. The EUT was pre-scanned in 3 different orthogonal orientations and was found to radiate highest when placed flat on the tabletop as indicated in the test photos.

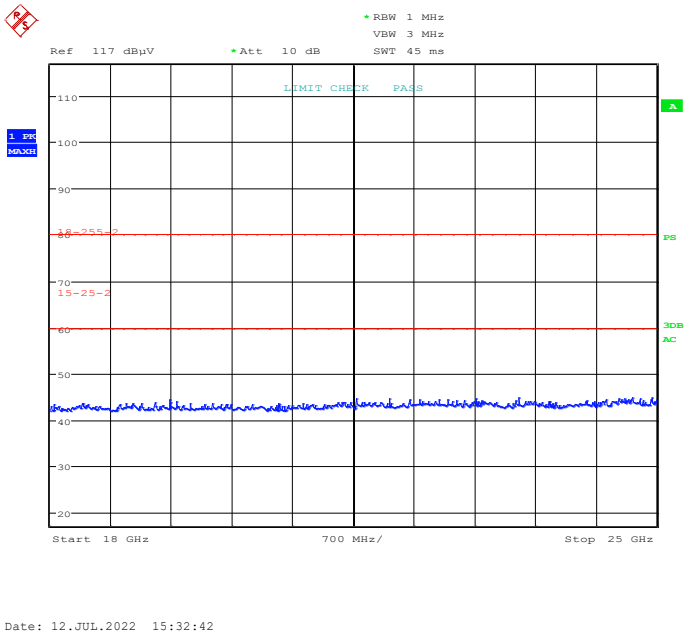
## Measurement Data and Plot:



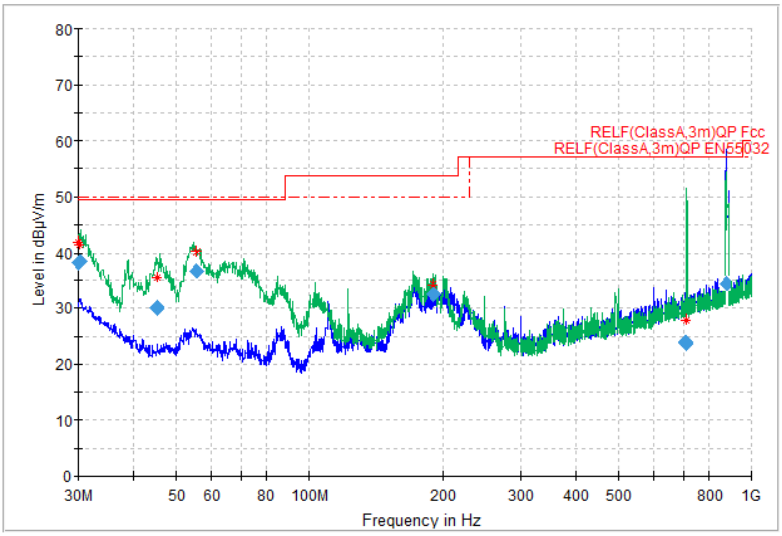

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol |
|---|---|---|---|---|---|---|---|---|
| 3821.6200 | --- | 33.23 | 60.00 | 26.77 | 1000.0 | 1000.0 | 149.0 | V |
| 4025.5720 | --- | 35.02 | 60.00 | 24.98 | 1000.0 | 1000.0 | 199.0 | V |
| 4983.5560 | --- | 38.04 | 60.00 | 21.96 | 1000.0 | 1000.0 | 399.0 | V |
| 5936.2720 | --- | 38.32 | 60.00 | 21.68 | 1000.0 | 1000.0 | 349.0 | H |



| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Azimuth (deg) | Corr. (dB) | Height (cm) | Pol |
|---|---|---|---|---|---|---|---|---|
| 15690.5360 | --- | 32.92 | 60.00 | 27.08 | 154 | 8.7 | 371.0 | H |
| 17914.6360 | --- | 35.45 | 60.00 | 24.55 | 256 | 12.8 | 325.0 | H |



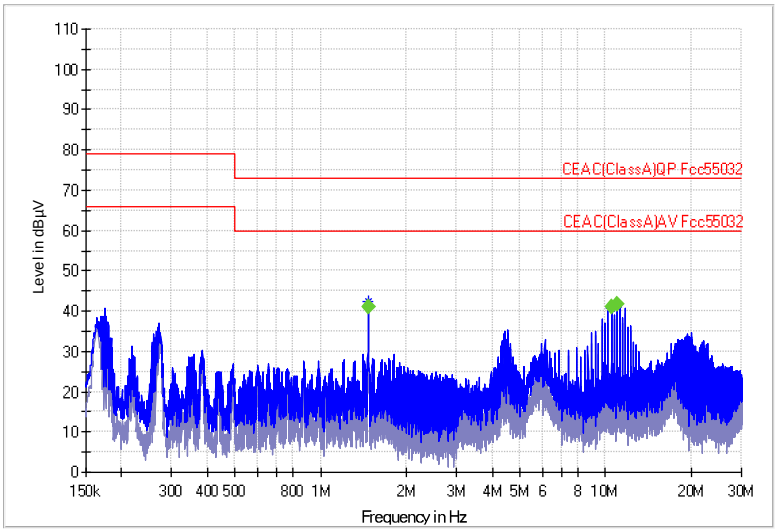

**Plot 21: Radiated Emissions (Above 1GHz) at 3m SAC**




**Plot 22: Radiated Emissions: 30 MHz-1GHz.**
Note: No emission of significance were observed.

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Corr. (dB) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|---|---|---|---|---|---|---|---|---|---|
| 30.0524 | 38.2 | 49.5 | 11.3 | 1000 | 25.4 | 120.000 | 115.0 | V | 179 |
| 30.2047 | 38.3 | 49.5 | 11.2 | 1000 | 25.2 | 120.000 | 99.0 | V | 162 |
| 45.3458 | 30.2 | 49.5 | 19.3 | 1000 | 14.8 | 120.000 | 162.0 | V | 176 |
| 55.4715 | 36.6 | 49.5 | 12.9 | 1000 | 12.0 | 120.000 | 116.0 | V | 152 |
| 190.4130 | 32.6 | 53.9 | 21.3 | 1000 | 17.1 | 120.000 | 116.0 | V | 266 |
| 711.8533 | 23.7 | 56.9 | 33.2 | 1000 | 26.7 | 120.000 | 383.0 | V | 27 |
| 713.9534 | 23.9 | 56.9 | 33.0 | 1000 | 26.8 | 120.000 | 320.0 | V | 180 |
| 931.058 | 34.1 | 56.9 | 22.8 | 1000 | 26.5 | 120.000 | 225.0 | V | 185 |

**Table 12: Final Data of Radiated Emissions at 3m SAC–(30MHz-1GHz)**

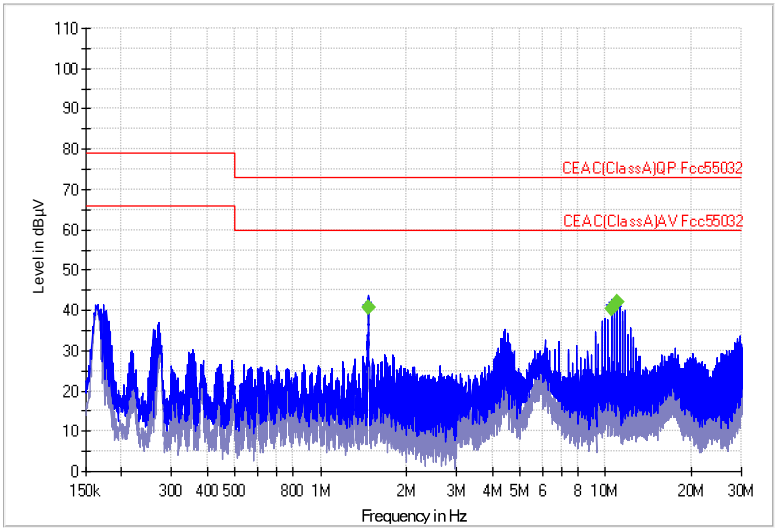



**Plot 23: Conducted Emissions Line 1: 150 kHz -30 MHz**

Note: No emission of significance were observed.

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE |
|---|---|---|---|---|---|---|---|---|
| 1.4704 | --- | 41.0 | 60.0 | 19.0 | 1000 | 9.000 | L1 | GND |
| 10.4640 | --- | 40.9 | 60.0 | 19.1 | 1000 | 9.000 | L1 | GND |
| 10.9760 | --- | 41.8 | 60.0 | 18.2 | 1000 | 9.000 | L1 | GND |

**Table 13: Final Data of Conducted Emissions Line 1–(150kHz - 30MHz)**



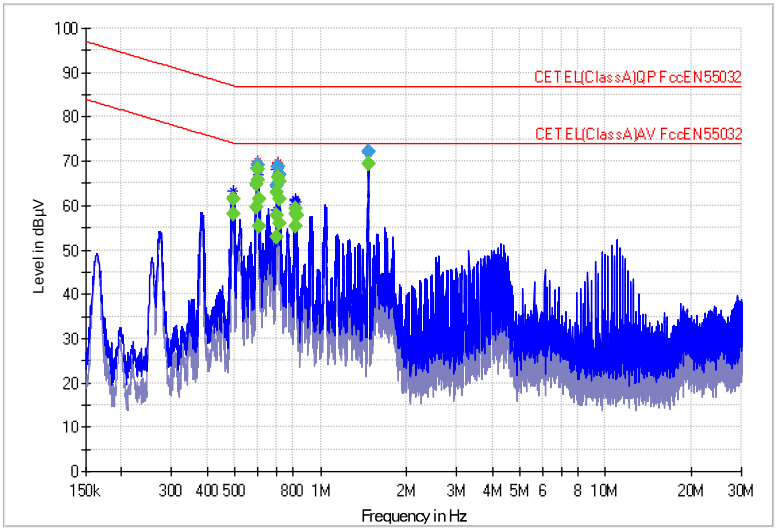

**Plot 24: Conducted Emissions Line 2: 150 kHz -30 MHz**

Note: No emission of significance was observed.

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE |
|---|---|---|---|---|---|---|---|---|
| 1.4692 | --- | 40.8 | 60.0 | 19.2 | 1000 | 9.000 | L2 | GND |
| 10.4640 | --- | 40.3 | 60.0 | 19.7 | 1000 | 9.000 | L2 | GND |
| 10.9720 | --- | 42.0 | 60.0 | 18.0 | 1000 | 9.000 | L2 | GND |

**Plot 25: Conducted Emissions Line 2: 150 kHz -30 MHz**

Note: No emission of significance was observed.




**Plot 26: Conducted Emissions Telecom: 150 kHz -30 MHz**

Note: No emission of significance was observed.

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Corr. (dB) | PE |
|---|---|---|---|---|---|---|---|---|
| 0.4924 | --- | 61.4 | 74.1 | 12.7 | 1000 | 9.000 | 20.4 | GND |
| 0.4948 | --- | 58.0 | 74.1 | 16.1 | 1000 | 9.000 | 20.4 | GND |
| 0.5932 | --- | 59.6 | 74.0 | 14.4 | 1000 | 9.000 | 20.3 | GND |
| 0.5956 | --- | 64.7 | 74.0 | 9.3 | 1000 | 9.000 | 20.3 | GND |
| 0.6008 | --- | 68.1 | 74.0 | 5.9 | 1000 | 9.000 | 20.3 | GND |
| 0.6032 | 69.1 | --- | 87.0 | 17.9 | 1000 | 9.000 | 20.3 | GND |
| 0.6032 | --- | 65.8 | 74.0 | 8.2 | 1000 | 9.000 | 20.3 | GND |
| 0.6056 | --- | 61.4 | 74.0 | 12.6 | 1000 | 9.000 | 20.3 | GND |
| 0.6080 | --- | 55.5 | 74.0 | 18.5 | 1000 | 9.000 | 20.3 | GND |
| 0.6992 | --- | 53.0 | 74.0 | 21.0 | 1000 | 9.000 | 20.3 | GND |
| 0.7012 | 64.4 | --- | 87.0 | 22.6 | 1000 | 9.000 | 20.3 | GND |
| 0.7012 | --- | 57.9 | 74.0 | 16.1 | 1000 | 9.000 | 20.3 | GND |
| 0.7036 | --- | 63.0 | 74.0 | 11.0 | 1000 | 9.000 | 20.3 | GND |
| 0.7060 | --- | 66.2 | 74.0 | 7.8 | 1000 | 9.000 | 20.3 | GND |
| 0.7060 | 68.8 | --- | 87.0 | 18.2 | 1000 | 9.000 | 20.3 | GND |
| 0.7120 | --- | 65.4 | 74.0 | 8.6 | 1000 | 9.000 | 20.3 | GND |
| 0.7140 | 67.1 | --- | 87.0 | 19.9 | 1000 | 9.000 | 20.3 | GND |
| 0.7144 | --- | 61.5 | 74.0 | 12.5 | 1000 | 9.000 | 20.3 | GND |
| 0.7168 | --- | 56.0 | 74.0 | 18.0 | 1000 | 9.000 | 20.3 | GND |
| 0.8124 | --- | 55.3 | 74.0 | 18.7 | 1000 | 9.000 | 20.3 | GND |
| 0.8148 | --- | 58.2 | 74.0 | 15.8 | 1000 | 9.000 | 20.3 | GND |
| 0.8168 | --- | 59.3 | 74.0 | 14.7 | 1000 | 9.000 | 20.3 | GND |
| 0.8208 | --- | 57.9 | 74.0 | 16.1 | 1000 | 9.000 | 20.3 | GND |
| 1.4704 | --- | 69.4 | 74.0 | 4.6 | 1000 | 9.000 | 20.2 | GND |
| 1.4704 | 72.1 | --- | 87.0 | 14.9 | 1000 | 9.000 | 20.2 | GND |

**Plot 27: Conducted Emissions Telecom: 150 kHz -30 MHz**

Note: No emission of significance was observed.

## 3.6 Occupied Bandwidth

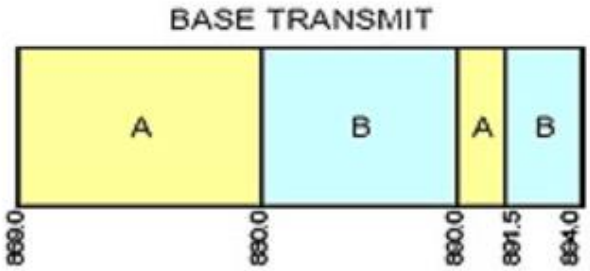
**Date Performed:** July 11, 26, 25, 2022

**Test Standard:** As per Section 2.2

**Test Method:** ANSI C63.26:2015

**Test Setup:**
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable.

869-880 MHz, 880-890 MHz, 890-891.5 MHz, and 891.5-894 MHz for base transmit.




**Modifications:** No modification was required to comply for this test.

**Final Result:** The EUT complies with the applicable standard.

**Measurement Data and Plot:**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | OBW (MHz) |
|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 4.56 |
| | 5 | Mid | 2455 | 874.5 | 4.58 |
| | 5 | High | 2485 | 877.5 | 4.56 |
| 869-880 | 10 | Low | 2450 | 874 | 9.15 |
| | 10 | Mid | 2455 | 874.5 | 9.10 |
| | 10 | High | 2460 | 875 | 9.32 |

**Table 14: Data: Occupied Bandwidth QPSK**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | OBW (MHz) |
|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 4.4 |
| | 5 | Mid | 2455 | 874.5 | 4.4 |
| | 5 | High | 2485 | 877.5 | 4.5 |
| 869-880 | 10 | Low | 2450 | 874 | 8.9 |
| | 10 | Mid | 2455 | 874.5 | 9 |
| | 10 | High | 2460 | 875 | 9 |

**Table 15: Data: Occupied Bandwidth 64 QAM**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | OBW (MHz) |
|---|---|---|---|---|---|
| 869-880 | 5 | Low | 2425 | 871.5 | 4.44 |

| | | | | | |
|---|---|---|---|---|---|
| | 5 | Mid | 2455 | 874.5 | 4.42 |
| | 5 | High | 2485 | 877.5 | 4.44 |
| 869-880 | 10 | Low | 2450 | 874 | 8.9 |
| | 10 | Mid | 2455 | 874.5 | 8.92 |
| | 10 | High | 2460 | 875 | 8.92 |

**Table 16: Data: Occupied Bandwidth 256 QAM**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | OBW (MHz) |
|---|---|---|---|---|---|
| 880-890 | 5 | Low | 2535 | 882.5 | 4.42 |
| | 5 | High | 2585 | 887.5 | 4.44 |
| | 10 | Low | 2560 | 885 | 8.92 |
| 880-890 | 10 | High | 2560 | 885 | 8.91 |
| | 5 | Low | 2535 | 882.5 | 4.90 |
| | 5 | High | 2585 | 887.5 | 4.70 |

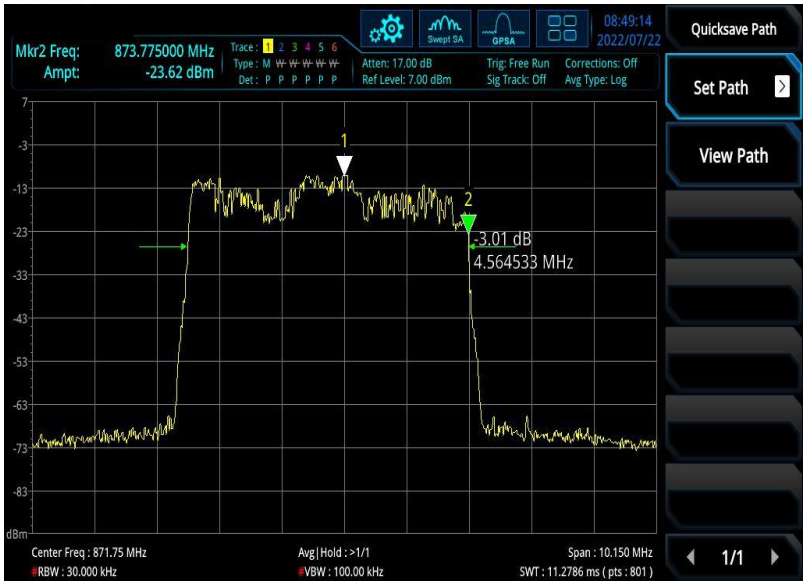
**Table 17: Data: Occupied Bandwidth QPSK**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | OBW (MHz) |
|---|---|---|---|---|---|
| 880-890 | 5 | Low | 2535 | 882.5 | 4.42 |
| | 5 | High | 2585 | 887.5 | 4.44 |
| | 10 | Low | 2560 | 885 | 9.42 |
| 880-890 | 10 | High | 2560 | 885 | 8.91 |
| | 5 | Low | 2535 | 882.5 | 4.42 |
| | 5 | High | 2585 | 887.5 | 4.90 |

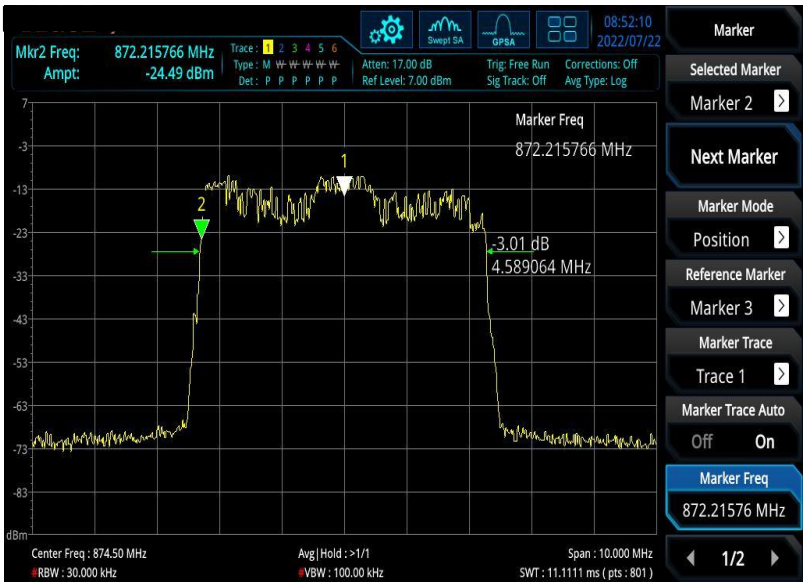
**Table 18: Data: Occupied Bandwidth 64 QAM**

| Sub-band (MHz) | Bandwidth (MHz) | Side Channel | Channel | Center Freq (MHz) | OBW (MHz) |
|---|---|---|---|---|---|
| 880-890 | 5 | Low | 2535 | 882.5 | 4.42 |
| | 5 | High | 2585 | 887.5 | 4.50 |
| 880-890 | 10 | Low | 2560 | 885 | 9.10 |
| | 10 | High | 2560 | 885 | 9.05 |

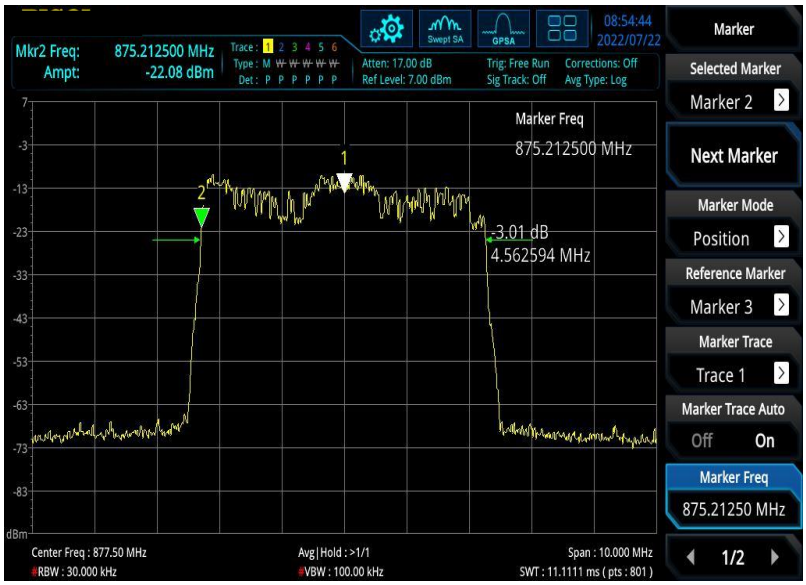
**Table 19: Data: Occupied Bandwidth 256 QAM**



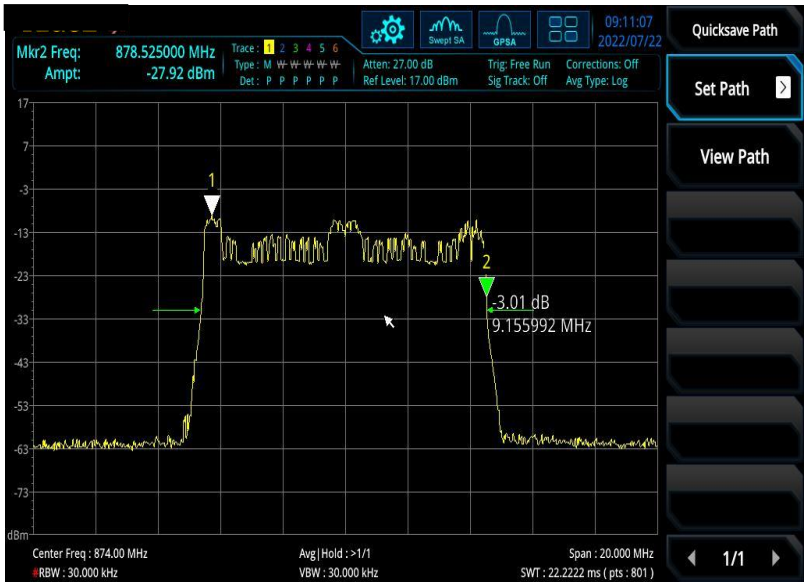

**Plot 28: Occupied Bandwidth (5MHz BW) Low Ch:2425 Center 871.5 MHz QPSK**



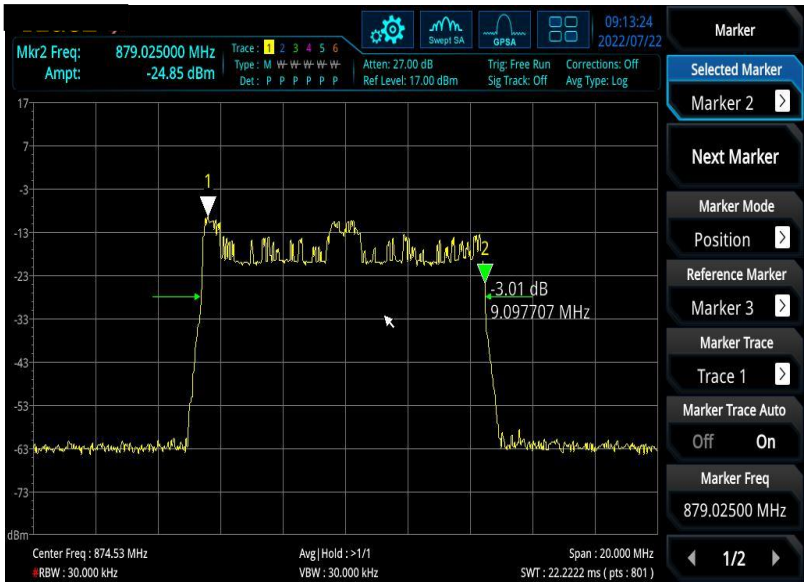

**Plot 29: Occupied Bandwidth (5MHz BW) Mid Ch:2455 Center 874.5 MHz/Pl QPSK**



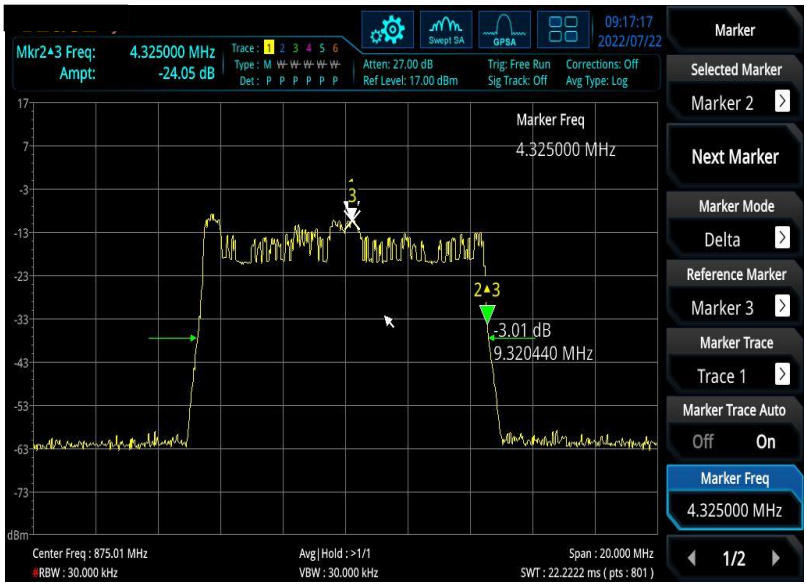

**Plot 30: Occupied Bandwidth (5MHz BW) Hight Ch:2485 Center 877.5 MHz QPSK**



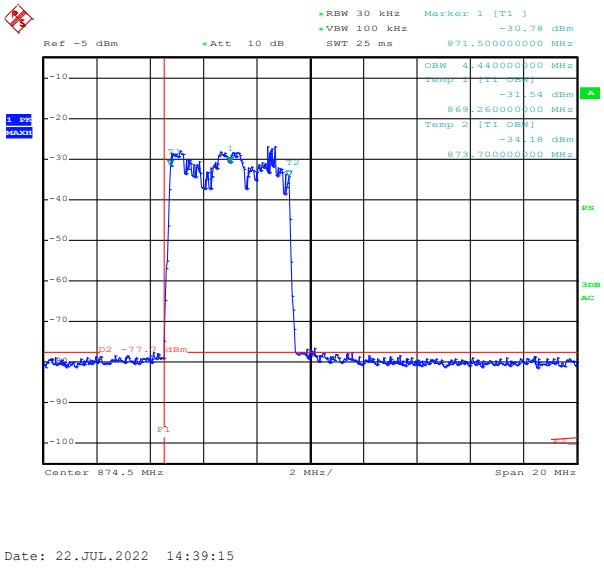

**Plot 31: Occupied Bandwidth -10 MHz BW – Low 2450- Center 874 MHz QPSK**



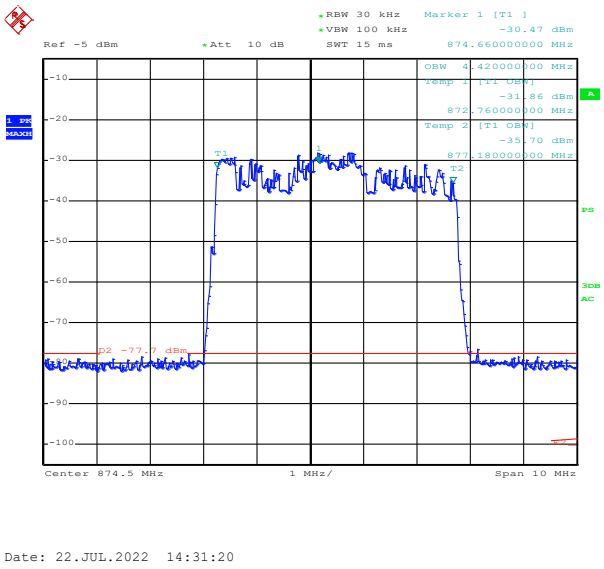

**Plot 32: Occupied Bandwidth (10 MHz BW) Mid 2455 Center 874.5 MHz QPSK**



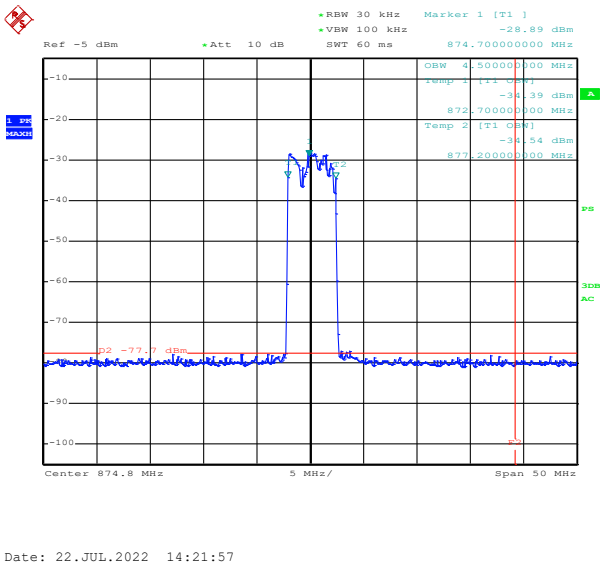

**Plot 33: Occupied Bandwidth (10 MHz BW) High 2460 Center 875 MHz QPSK**



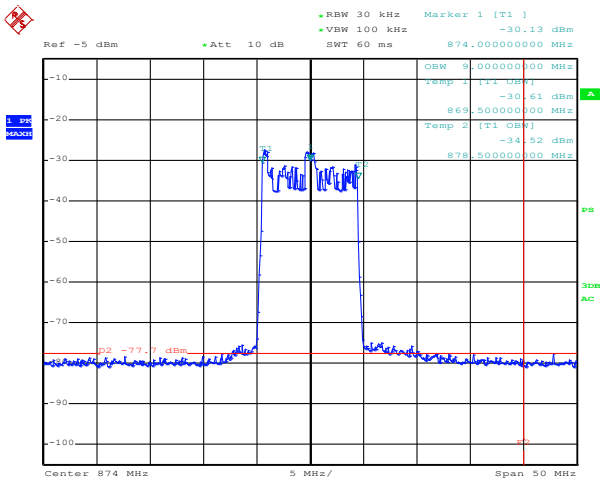

**Plot 34: Occupied Bandwidth (5MHz BW) Low Ch:2425 Center 871.5 MHz 64 QAM**



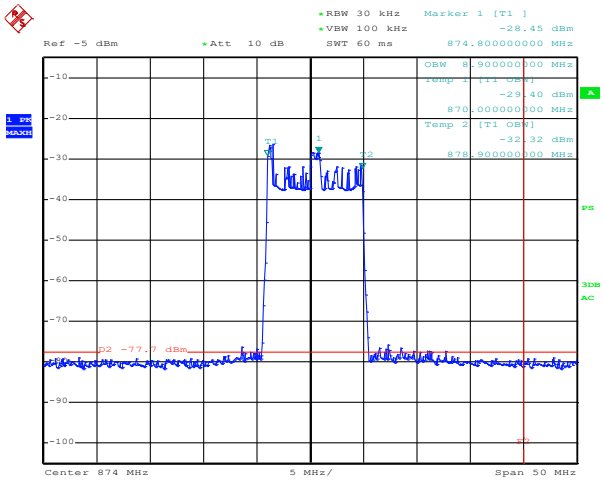

**Plot 35: Occupied Bandwidth (5MHz BW) Mid Ch:2455 Center 874.5 MHz 64 QAM**



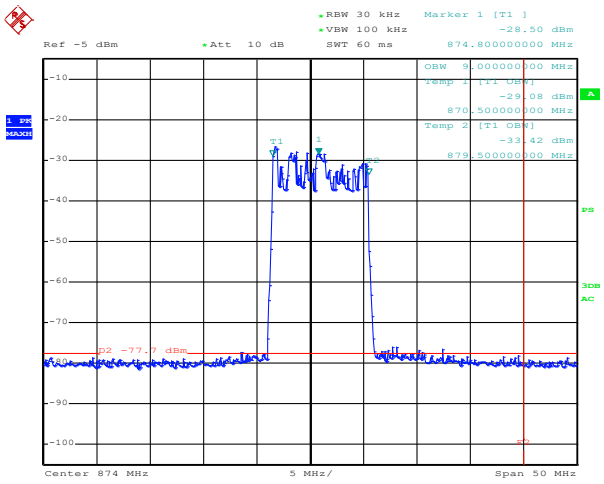

**Plot 36: Occupied Bandwidth (5MHz BW) Hight Ch:2485 Center 877.5 MHz 64 QAM**



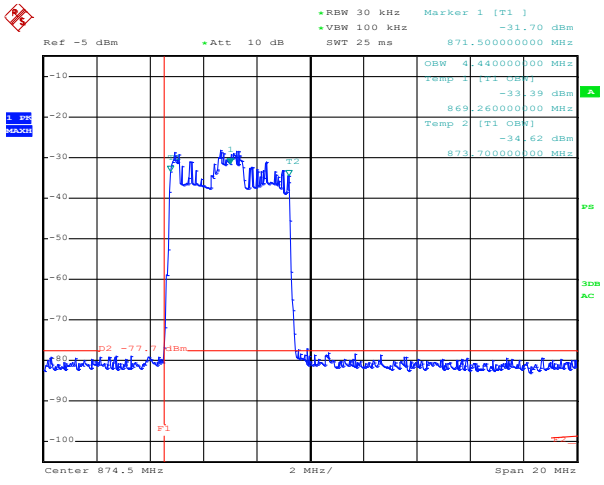

**Plot 37: Occupied Bandwidth -10 MHz BW – Low 2450- Center 874 MHz 64QAM**



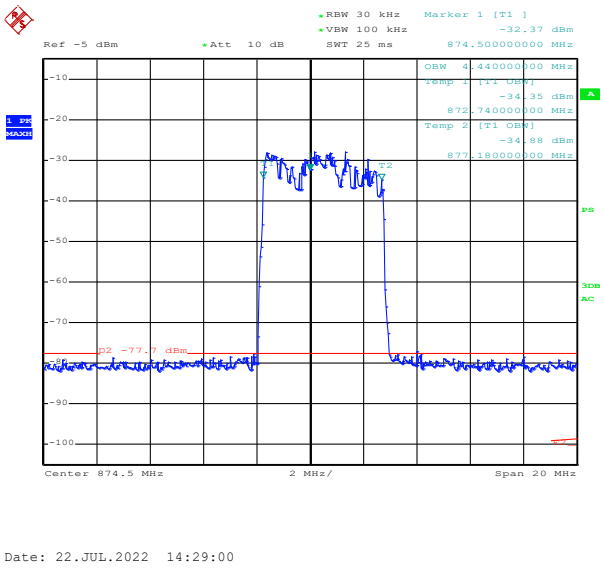

**Plot 38: Occupied Bandwidth (10 MHz BW) Mid 2455 Center 874.5 MHz 64QAM**



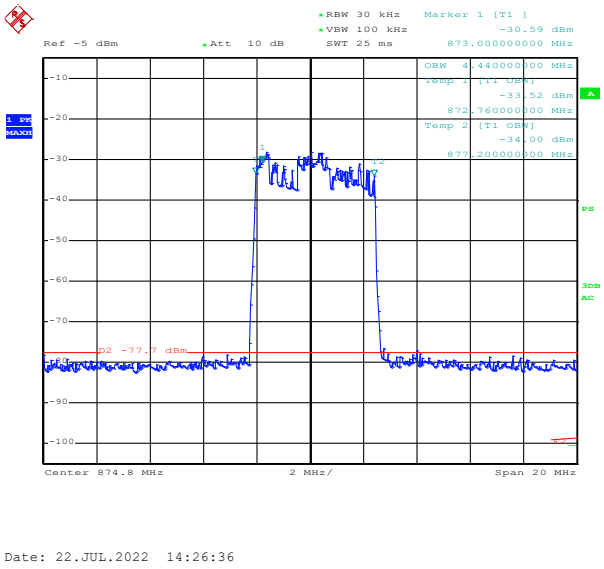

**Plot 39: Occupied Bandwidth (10 MHz BW) High 2460 Center 875 MHz 64QAM**



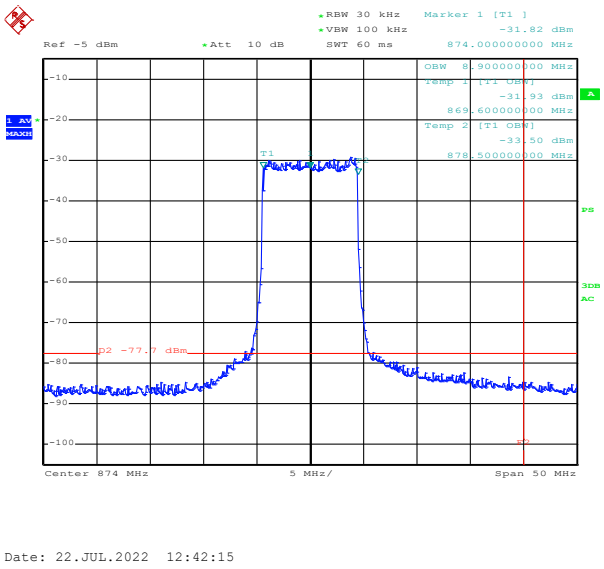

**Plot 40: Occupied Bandwidth (5MHz BW) Low Ch:2425 Center 871.5 MHz 128QAM**



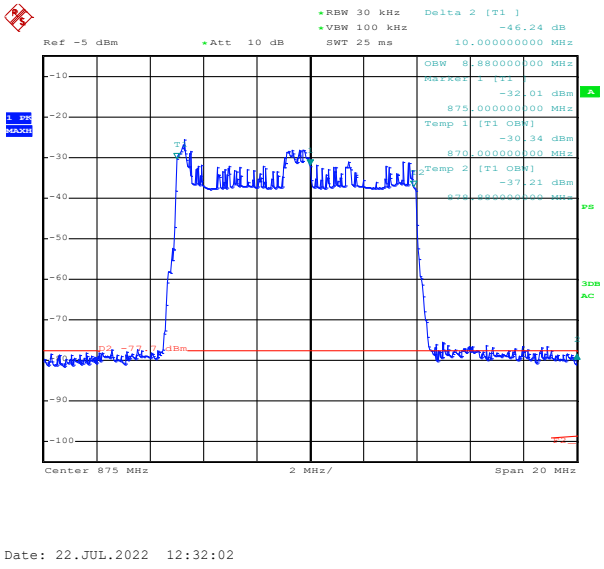

**Plot 41: Occupied Bandwidth (5MHz BW) Mid Ch:2455 Center 874.5 MHz 128QAM**



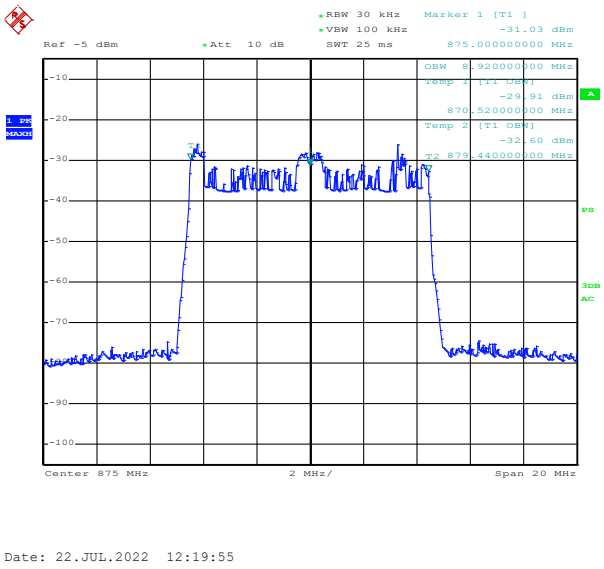

**Plot 42: Occupied Bandwidth (5MHz BW) Hight Ch:2485 Center 877.5 MHz 128QAM**




**Plot 43: Occupied Bandwidth -10 MHz BW – Low 2450- Center 874 MHz 128QAM**




**Plot 44: Occupied Bandwidth (10 MHz BW) Mid 2455 Center 874.5 MHz 128QAM**




**Plot 45: Occupied Bandwidth (10 MHz BW) High 2460 Center 875 MHz 128QAM**

# Appendix A: TEST SETUP PHOTOS

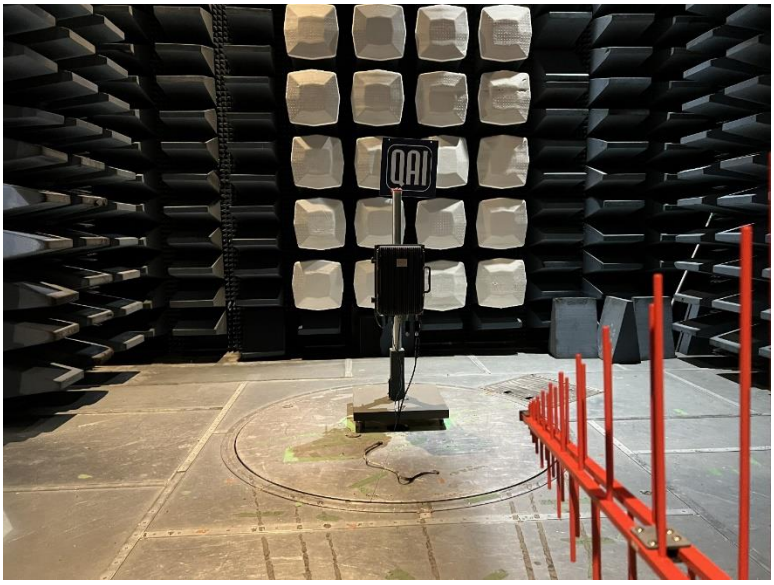


**Figure 1: Radiated Emissions 30MHz– 1GHz**

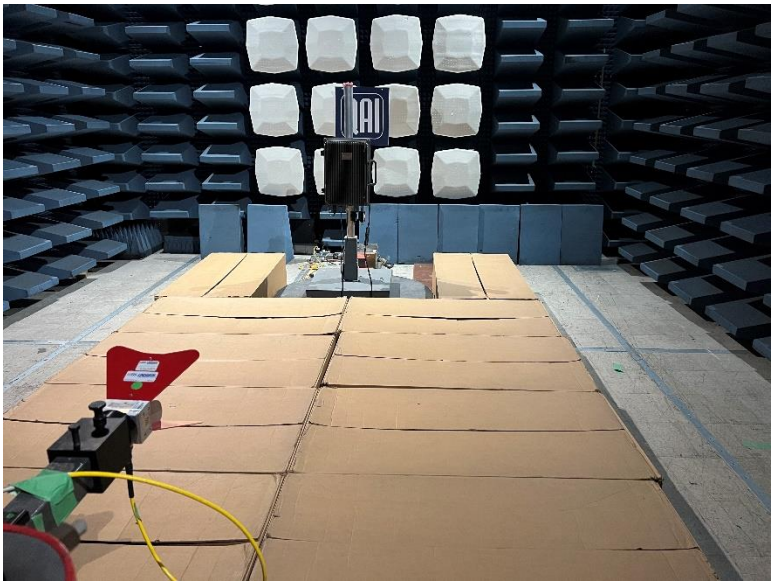


**Figure 2: Radiated Emissions above 1GHz**

**Figure 3: Conducted Emissions AC Main.**

**Figure 4: Conducted Emissions- Telecom**

**Figure 5: Radio Testing Station**

# Appendix B: ABBREVIATIONS

| Abbreviation | Definition |
|---|---|
| AC | Alternating Current |
| AM | Amplitude Modulation |
| CE | European Conformity |
| CISPR | Comité International Spécial des Perturbations Radioélectriques (International Special Committee on Radio Interference) |
| DC | Direct Current |
| EFT | Electrical Fast Transient |
| EMC | Electro Magnetic Compatibility |
| EMI | Electro Magnetic Interference |
| ESD | Electrostatic Discharge |
| EUT | Equipment Under Test |
| FCC | Federal Communications Commission |
| FVIN | Firmware Version Identification Number |
| IC | Industry Canada |
| ICES | Interference Causing Equipment Standard |
| IEC | International Electrotechnical Commission |
| LISN | Line Impedance Stabilizing Network |
| OATS | Open Area Test Site |
| RF | Radio Frequency |
| RMS | Root-Mean-Square |
| SAC | Semi-Anechoic Chamber |

# END OF REPORT