# TEST REPORT

FCC Sub6 n77 Test for SM-S721B/DS
Certification

**APPLICANT**
SAMSUNG Electronics Co., Ltd.

**REPORT NO.**
HCT-RF-2407-FC065

**DATE OF ISSUE**
July 24, 2024

**Tested by**
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**Technical Manager**
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HCT CO., LTD.
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# TEST REPORT

REPORT NO.
HCT-RF-2407-FC065

DATE OF ISSUE
July 24, 2024

Additional Model
SM-S721B

| | |
|---|---|
| Applicant | **SAMSUNG Electronics Co., Ltd.**<br>129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea |
| Product Name<br>Model Name | Mobile Phone<br>SM-S721B/DS |
| Date of Test | May 21, 2024 ~ July 23, 2024 |
| FCC ID | A3LSMS721B |
| Location of Test | ■ Permanent Testing Lab ☐ On Site Testing<br>(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 Republic of Korea) |
| FCC Classification: | PCS Licensed Transmitter Held to Ear (PCE) |
| Test Standard Used | FCC Rule Part : § 27 |
| Test Results | PASS |

## REVISION HISTORY

The revision history for this test report is shown in table.

| Revision No. | Date of Issue | Description |
|---|---|---|
| 0 | July 24, 2024 | Initial Release |

## Notice

| Content |
|---|
| The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.<br>HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a) |
| The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.<br>The test results have only been applied with the test methods required by the standard(s).<br>The laboratory is not accredited for the test results marked *.<br>Information provided by the applicant is marked **.<br>Test results provided by external providers are marked ***. |
| When confirmation of authenticity of this test report is required, please contact www.hct.co.kr |
| The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA). |

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# MEASUREMENT REPORT

## 1. GENERAL INFORMATION

| | |
|---|---|
| **Applicant Name:** | SAMSUNG Electronics Co., Ltd. |
| **Address:** | 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea |
| **FCC ID:** | A3LSMS721B |
| **Application Type:** | Certification |
| **FCC Classification:** | PCS Licensed Transmitter Held to Ear (PCE) |
| **FCC Rule Part(s):** | § 27 |
| **EUT Type:** | Mobile phone |
| **Model(s):** | SM-S721B/DS |
| **Additional Model(s)** | SM-S721B |
| **SCS(kHz):** | 30 |
| **Bandwidth(MHz):** | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |
| **Waveform:** | CP-OFDM, DFT-S-OFDM |
| **Modulation:** | DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM<br>CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM |
| **Tx Frequency:**<br>**(3450 MHz - 3550 MHz)** | 3455.01 MHz – 3544.99 MHz (Sub6 n77(10 MHz))<br>3457.50 MHz – 3542.50 MHz (Sub6 n77(15 MHz))<br>3460.02 MHz – 3540.00 MHz (Sub6 n77(20 MHz))<br>3465.00 MHz – 3534.99 MHz (Sub6 n77(30 MHz))<br>3470.01 MHz – 3529.98 MHz (Sub6 n77(40 MHz))<br>3475.02 MHz – 3525.00 MHz (Sub6 n77(50 MHz))<br>3480.00 MHz – 3519.99 MHz (Sub6 n77(60 MHz))<br>3485.01 MHz – 3514.98 MHz (Sub6 n77(70 MHz))<br>3490.02 MHz – 3510.00 MHz (Sub6 n77(80 MHz))<br>3495.00 MHz – 3504.99 MHz (Sub6 n77(90 MHz))<br>3500.01 MHz (Sub6 n77(100 MHz)) |
| **Tx Frequency:**<br>**(3700 MHz - 3980 MHz)** | 3705.00 MHz – 3975.00 MHz (Sub6 n77(10 MHz))<br>3707.51 MHz – 3972.48 MHz (Sub6 n77(15 MHz))<br>3710.01 MHz – 3969.99 MHz (Sub6 n77(20 MHz))<br>3715.02 MHz – 3964.98 MHz (Sub6 n77(30 MHz))<br>3720.00 MHz – 3960.00 MHz (Sub6 n77(40 MHz))<br>3725.10 MHz – 3954.99 MHz (Sub6 n77(50 MHz))<br>3730.02 MHz – 3949.98 MHz (Sub6 n77(60 MHz))<br>3735.00 MHz – 3945.00 MHz (Sub6 n77(70 MHz))<br>3740.01 MHz – 3939.99 MHz (Sub6 n77(80 MHz))<br>3745.02 MHz – 3934.98 MHz (Sub6 n77(90 MHz))<br>3745.02 MHz – 3934.98 MHz (Sub6 n77(90 MHz))<br>3750.00 MHz – 3930.00 MHz (Sub6 n77(100 MHz)) |
| **Date(s) of Tests:** | May 21, 2024 ~ July 23, 2024 |
| **Serial number:** | Radiated : R3CX40LGCGM<br>Conducted : R3CX503EC4V |

## 1.1. MAXIMUM OUTPUT POWER

**1. 3450 MHz - 3550 MHz**

| | Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | EIRP | |
|---|---|---|---|---|---|---|
| | | | | | Max. Power (W) | Max. Power (dBm) |
| Power Class 3 | Sub6 n77 (10) | 3455.01 – 3544.99 | 8M70G7D | PI/2 BPSK | 0.098 | 19.93 |
| | | | 8M71G7D | QPSK | 0.097 | 19.87 |
| | | | 8M65W7D | 16QAM | 0.079 | 18.96 |
| | | | 8M71W7D | 64QAM | 0.054 | 17.35 |
| | | | 8M69W7D | 256QAM | 0.036 | 15.51 |
| | Sub6 n77 (15) | 3457.50 – 3542.50 | 13M0G7D | PI/2 BPSK | 0.099 | 19.96 |
| | | | 13M0G7D | QPSK | 0.097 | 19.88 |
| | | | 13M0W7D | 16QAM | 0.080 | 19.01 |
| | | | 13M0W7D | 64QAM | 0.056 | 17.49 |
| | | | 12M9W7D | 256QAM | 0.035 | 15.40 |
| | Sub6 n77 (20) | 3460.02 – 3540.00 | 18M0G7D | PI/2 BPSK | 0.097 | 19.86 |
| | | | 18M0G7D | QPSK | 0.096 | 19.83 |
| | | | 18M0G7D | 16QAM | 0.080 | 19.03 |
| | | | 18M0G7D | 64QAM | 0.056 | 17.51 |
| | | | 17M9G7D | 256QAM | 0.035 | 15.40 |
| | Sub6 n77 (30) | 3465.00 – 3534.99 | 27M0G7D | PI/2 BPSK | 0.097 | 19.87 |
| | | | 27M0G7D | QPSK | 0.094 | 19.72 |
| | | | 27M0G7D | 16QAM | 0.076 | 18.79 |
| | | | 26M9G7D | 64QAM | 0.053 | 17.24 |
| | | | 26M9G7D | 256QAM | 0.035 | 15.40 |
| | Sub6 n77 (40) | 3470.01 – 3529.98 | 35M9G7D | PI/2 BPSK | 0.097 | 19.89 |
| | | | 36M0G7D | QPSK | 0.095 | 19.78 |
| | | | 35M9G7D | 16QAM | 0.076 | 18.81 |
| | | | 35M9G7D | 64QAM | 0.053 | 17.28 |
| | | | 36M0G7D | 256QAM | 0.035 | 15.44 |
| | Sub6 n77 (50) | 3475.02 – 3525.00 | 46M1G7D | PI/2 BPSK | 0.097 | 19.86 |
| | | | 46M0G7D | QPSK | 0.098 | 19.91 |
| | | | 45M9W7D | 16QAM | 0.077 | 18.89 |
| | | | 46M0W7D | 64QAM | 0.054 | 17.32 |
| | | | 46M0W7D | 256QAM | 0.035 | 15.42 |
| | Sub6 n77 (60) | 3480.00 – 3519.99 | 58M2G7D | PI/2 BPSK | 0.100 | 19.99 |
| | | | 58M3G7D | QPSK | 0.097 | 19.86 |
| | | | 58M1W7D | 16QAM | 0.078 | 18.90 |
| | | | 58M2W7D | 64QAM | 0.055 | 17.44 |
| | | | 58M2W7D | 256QAM | 0.036 | 15.52 |
| | Sub6 n77 (70) | 3485.01 – 3514.98 | 64M7G7D | PI/2 BPSK | 0.100 | 19.98 |
| | | | 64M8G7D | QPSK | 0.099 | 19.94 |
| | | | 64M7W7D | 16QAM | 0.077 | 18.89 |
| | | | 64M7W7D | 64QAM | 0.057 | 17.56 |
| | | | 65M0W7D | 256QAM | 0.035 | 15.49 |
| | Sub6 n77 (80) | 3490.02 – 3510.00 | 77M8G7D | PI/2 BPSK | 0.100 | 20.00 |
| | | | 77M7G7D | QPSK | 0.098 | 19.90 |
| | | | 77M5W7D | 16QAM | 0.077 | 18.86 |
| | | | 77M5W7D | 64QAM | 0.055 | 17.43 |
| | | | 77M4W7D | 256QAM | 0.034 | 15.35 |
| | Sub6 n77 (90) | 3495.00 – 3504.99 | 87M3G7D | PI/2 BPSK | 0.099 | 19.94 |
| | | | 87M2G7D | QPSK | 0.098 | 19.93 |
| | | | 87M3W7D | 16QAM | 0.079 | 18.97 |
| | | | 87M2W7D | 64QAM | 0.056 | 17.47 |
| | | | 87M4W7D | 256QAM | 0.036 | 15.52 |
| | Sub6 n77 (100) | 3500.01 | 96M7G7D | PI/2 BPSK | 0.104 | 20.16 |
| | | | 96M8G7D | QPSK | 0.103 | 20.13 |
| | | | 96M7W7D | 16QAM | 0.084 | 19.22 |
| | | | 96M6W7D | 64QAM | 0.059 | 17.68 |
| | | | 96M8W7D | 256QAM | 0.037 | 15.72 |

2. 3700 MHz - 3980 MHz

| | Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | EIRP | |
|---|---|---|---|---|---|---|
| | | | | | Max. Power (W) | Max. Power (dBm) |
| Power Class 3 | Sub6 n77 (10) | 3705.00 – 3975.00 | 8M69G7D | PI/2 BPSK | 0.128 | 21.07 |
| | | | 8M69G7D | QPSK | 0.126 | 21.02 |
| | | | 8M67W7D | 16QAM | 0.100 | 19.98 |
| | | | 8M68W7D | 64QAM | 0.069 | 18.38 |
| | | | 8M65W7D | 256QAM | 0.045 | 16.55 |
| | Sub6 n77 (15) | 3707.51 – 3972.48 | 13M0G7D | PI/2 BPSK | 0.123 | 20.91 |
| | | | 13M0G7D | QPSK | 0.121 | 20.83 |
| | | | 13M0G7D | 16QAM | 0.095 | 19.77 |
| | | | 13M0G7D | 64QAM | 0.066 | 18.21 |
| | | | 12M9G7D | 256QAM | 0.043 | 16.35 |
| | Sub6 n77 (20) | 3710.01 – 3969.99 | 18M0G7D | PI/2 BPSK | 0.120 | 20.80 |
| | | | 18M0G7D | QPSK | 0.120 | 20.78 |
| | | | 18M0G7D | 16QAM | 0.096 | 19.82 |
| | | | 18M0G7D | 64QAM | 0.068 | 18.31 |
| | | | 18M0G7D | 256QAM | 0.044 | 16.44 |
| | Sub6 n77 (30) | 3715.02 – 3964.98 | 27M0G7D | PI/2 BPSK | 0.120 | 20.79 |
| | | | 27M0G7D | QPSK | 0.119 | 20.74 |
| | | | 27M0G7D | 16QAM | 0.092 | 19.65 |
| | | | 27M1G7D | 64QAM | 0.067 | 18.24 |
| | | | 26M9G7D | 256QAM | 0.044 | 16.44 |
| | Sub6 n77 (40) | 3720.00 – 3960.00 | 35M9G7D | PI/2 BPSK | 0.119 | 20.74 |
| | | | 35M9G7D | QPSK | 0.117 | 20.70 |
| | | | 35M9G7D | 16QAM | 0.092 | 19.63 |
| | | | 36M0W7D | 64QAM | 0.067 | 18.28 |
| | | | 35M9W7D | 256QAM | 0.044 | 16.43 |
| | Sub6 n77 (50) | 3725.10 – 3954.99 | 46M1G7D | PI/2 BPSK | 0.126 | 21.02 |
| | | | 46M0G7D | QPSK | 0.124 | 20.95 |
| | | | 46M0G7D | 16QAM | 0.098 | 19.90 |
| | | | 45M9G7D | 64QAM | 0.071 | 18.49 |
| | | | 45M9G7D | 256QAM | 0.045 | 16.57 |
| | Sub6 n77 (60) | 3730.02 – 3949.98 | 58M1G7D | PI/2 BPSK | 0.124 | 20.95 |
| | | | 58M2G7D | QPSK | 0.124 | 20.94 |
| | | | 58M3W7D | 16QAM | 0.097 | 19.87 |
| | | | 58M3W7D | 64QAM | 0.070 | 18.47 |
| | | | 58M3W7D | 256QAM | 0.045 | 16.50 |
| | Sub6 n77 (70) | 3735.00 – 3945.00 | 64M8G7D | PI/2 BPSK | 0.128 | 21.07 |
| | | | 64M6G7D | QPSK | 0.126 | 21.01 |
| | | | 64M7W7D | 16QAM | 0.104 | 20.17 |
| | | | 64M8W7D | 64QAM | 0.070 | 18.42 |
| | | | 64M7W7D | 256QAM | 0.047 | 16.70 |
| | Sub6 n77 (80) | 3740.01 – 3939.99 | 77M5G7D | PI/2 BPSK | 0.119 | 20.76 |
| | | | 77M5G7D | QPSK | 0.118 | 20.72 |
| | | | 77M4W7D | 16QAM | 0.095 | 19.80 |
| | | | 77M6W7D | 64QAM | 0.066 | 18.20 |
| | | | 77M6W7D | 256QAM | 0.042 | 16.25 |
| | Sub6 n77 (90) | 3745.02 – 3934.98 | 87M0G7D | PI/2 BPSK | 0.121 | 20.84 |
| | | | 87M1G7D | QPSK | 0.120 | 20.78 |
| | | | 87M0W7D | 16QAM | 0.097 | 19.88 |
| | | | 87M0W7D | 64QAM | 0.068 | 18.30 |
| | | | 87M0W7D | 256QAM | 0.043 | 16.35 |
| | Sub6 n77 (100) | 3750.00 – 3930.00 | 96M7G7D | PI/2 BPSK | 0.121 | 20.83 |
| | | | 96M5G7D | QPSK | 0.120 | 20.80 |
| | | | 96M6W7D | 16QAM | 0.100 | 19.98 |
| | | | 96M7W7D | 64QAM | 0.069 | 18.37 |
| | | | 96M5W7D | 256QAM | 0.044 | 16.48 |

# 2. INTRODUCTION

## 2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub 6.
It also supports IEEE 802.11 a/b/g/n/ac/ax (20/40/80/160 MHz), Bluetooth(ePA), BT LE(ePA), NFC, WPT, WIFI 6E.

## 2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

## 2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.**

# 3. DESCRIPTION OF TESTS

## 3.1 TEST PROCEDURE

| Test Description | Test Procedure Used |
|---|---|
| Occupied Bandwidth | - KDB 971168 D01 v03r01 – Section 4.3<br>- ANSI C63.26-2015 – Section 5.4.4 |
| Band Edge | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7 |
| Spurious and Harmonic Emissions at Antenna Terminal | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7 |
| Conducted Output Power | - N/A (See SAR Report) |
| Peak- to- Average Ratio | - KDB 971168 D01 v03r01 – Section 5.7<br>- ANSI C63.26-2015 – Section 5.2.3.4 |
| Frequency stability | - ANSI C63.26-2015 – Section 5.6 |
| Effective Radiated Power/ Effective Isotropic Radiated Power | - KDB 971168 D01 v03r01 – Section 5.2 & 5.8<br>- ANSI/TIA-603-E-2016 – Section 2.2.17 |
| Radiated Spurious and Harmonic Emissions | - KDB 971168 D01 v03r01 – Section 6.2<br>- ANSI/TIA-603-E-2016 – Section 2.2.12 |

## 3.2 RADIATED POWER

**Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.
The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

**Test Settings**

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

**Test Note**

1. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission.
2. A half wave dipole is then substituted in place of the EUT. For emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.
   The power is calculated by the following formula;

$$P_{d\ (dBm)} = Pg_{\ (dBm)} - \text{cable loss}_{\ (dB)} + \text{antenna gain}_{\ (dB)}$$

   Where: $P_d$ is the dipole equivalent power and $P_g$ is the generator output power into the substitution antenna.
3. The maximum value is calculated by adding the forward power to the calibrated source plus its appropriate gain value.
   These steps are repeated with the receiving antenna in both vertical and horizontal polarization.
   the difference between the gain of the horn and an isotropic antenna are taken into consideration
4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

## 3.3 RADIATED SPURIOUS EMISSIONS

**Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA-603-E-2016.

**Test Settings**

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to $10^{th}$ harmonics from 9 kHz.

**Test Note**

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
   The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data
3. For spurious emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.
   The spurious emissions is calculated by the following formula;

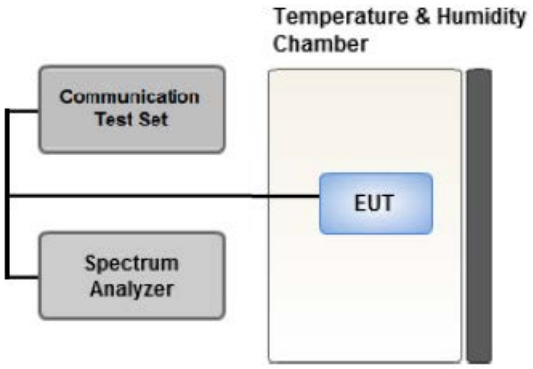
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

   Where: $P_g$ is the generator output power into the substitution antenna.

   If the fundamental frequency is below 1 GHz, RF output power has been converted to EIRP.

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

## 3.4 PEAK- TO- AVERAGE RATIO




Test setup

① CCDF Procedure for PAPR

Test Settings

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
   .- for continuous transmissions, set to 1 ms,
   .- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1 %.

② Alternate Procedure for PAPR

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as $P_{Pk}$.

Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as $P_{Avg}$. Determine the P.A.R. from:

$$P.A.R_{(dB)} = P_{Pk\ (dBm)} - P_{Avg\ (dBm)}\ (P_{Avg} = \text{Average Power} + \text{Duty cycle Factor})$$

**Test Settings(Peak Power)**

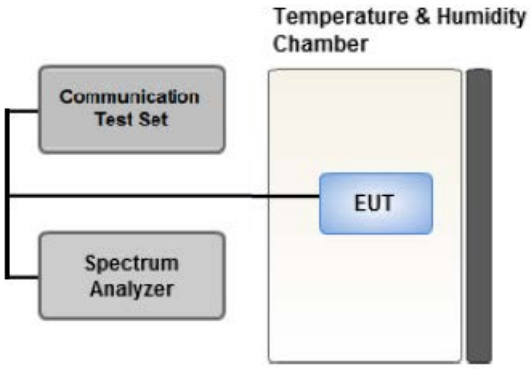
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period).
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the peak amplitude level.

**Test Settings(Average Power)**

1. Set span to 2 × to 3 × the OBW.
2. Set RBW ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. The transmission period is the (on + off) time.
6. Detector = power averaging (rms).
7. Set sweep trigger to "free run."
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
9. Use the peak marker function to determine the maximum amplitude level.
10. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25 %.

## 3.5 OCCUPIED BANDWIDTH.



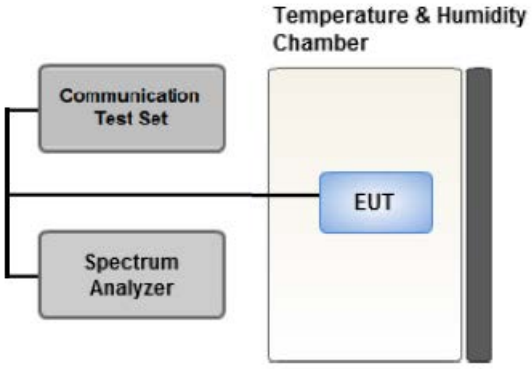

**Test setup**

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 power of a given emission.
The EUT makes a call to the communication simulator.
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

**Test Settings**

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

## 3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL




**Test setup**

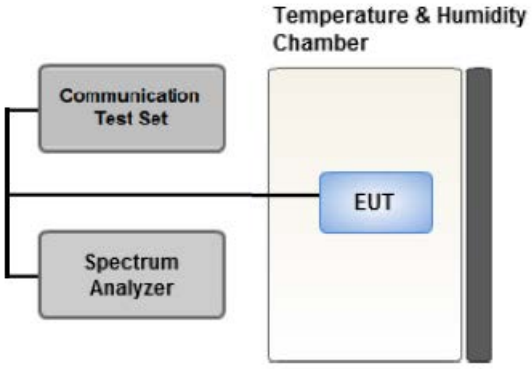
**Test Overview**

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

**Test Settings**

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = RMS
4. Trace Mode = trace average
5. Sweep time = auto
6. Number of points in sweep ≥ 2 x Span / RBW

## 3.7 BAND EDGE




**Test setup**

**Test Overview**

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of
operation were investigated and the worst case configuration results are reported in this section.

**Test Settings**

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

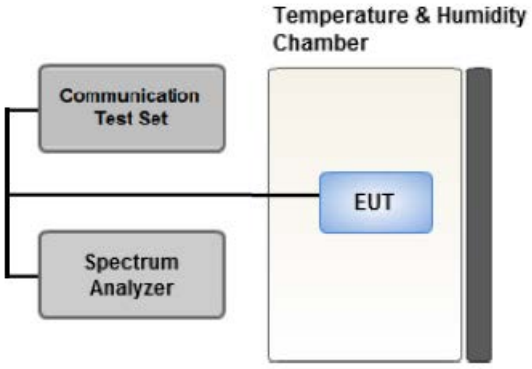
**Test Notes**

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.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.
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, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 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.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. .

Where Margin < 1 dB the emission level is either corrected by 10 log(1 MHz/ RB) or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge.

## 3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE




**Test setup**

**Test Overview**

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.
The frequency stability of the transmitter is measured by:

1. Temperature:
   The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.
2. Primary Supply Voltage:
   .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
   .- 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.

**Test Settings**

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

## 3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: PC3 Only (SA, NSA)
  Worst case: SA mode
  Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
  Worst case : Stand alone
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.
  Therefore, only the worst case(stand-alone) results were reported.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
  The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- All power classes were tested, and the results were reported for the worst case PC3. (PC3 Only)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported.
  (Worst case : 100 MHz(3450 MHz - 3550 MHz), 10 MHz(3700 MHz - 3980 MHz))
- SM-S721B/DS & additional models were tested and the worst case results are reported.
  (Worst case : SM-S721B/DS)

[ 3450 MHz - 3550 MHz Worst case ]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Effective Isotropic Radiated Power | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | See Section 8.1 | | X |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK | See Section 8.2 | | X |

[ 3700 MHz - 3980 MHz Worst case ]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Effective Isotropic Radiated Power | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | See Section 9.1 | | Z |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK | See Section 9.2 | | X |

### 3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: PC3 Only (SA, NSA)
  Worst case: SA mode
- All power classes were tested, and the results were reported for the worst case PC3. (PC3 Only)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SM-S721B/DS & additional models were tested and the worst case results are reported.
  (Worst case : SM-S721B/DS)

[ Worst case ]

| Test Description | Modulation | Bandwidth (MHz) | Frequency | RB size | RB offset |
|---|---|---|---|---|---|
| Occupied Bandwidth, | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | Mid | Full RB | 0 |
| Peak-To-Average Ratio | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | Mid | Full RB | 0 |
| Band Edge | PI/2 BPSK | 10 | Low | 1 | 0 |
| | | | High | 1 | 23 |
| | | 15 | Low | 1 | 0 |
| | | | High | 1 | 37 |
| | | 20 | Low | 1 | 0 |
| | | | High | 1 | 50 |
| | | 30 | Low | 1 | 0 |
| | | | High | 1 | 77 |
| | | 40 | Low | 1 | 0 |
| | | | High | 1 | 105 |
| | | 50 | Low | 1 | 0 |
| | | | High | 1 | 132 |
| | | 60 | Low | 1 | 0 |
| | | | High | 1 | 161 |
| | | 70 | Low | 1 | 0 |
| | | | High | 1 | 188 |
| | | 80 | Low | 1 | 0 |
| | | | High | 1 | 216 |
| | | 90 | Low | 1 | 0 |
| | | | High | 1 | 244 |
| | | 100 | Low | 1 | 0 |
| | | | High | 1 | 272 |
| | | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | Low, High | Full RB | 0 |
| Spurious and Harmonic Emissions at Antenna Terminal | PI/2 BPSK | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | Low, Mid, High | 1 | 1 |

## 4. LIST OF TEST EQUIPMENT

| Equipment | Model | Manufacture | Serial No. | Due to Calibration | Calibration Interval |
|---|---|---|---|---|---|
| Precision Dipole Antenna | UHAP | Schwarzbeck | 01273 | 03/10/2026 | Biennial |
| Precision Dipole Antenna | UHAP | Schwarzbeck | 01274 | 03/10/2026 | Biennial |
| Horn Antenna(1~18 GHz) | BBHA 9120D | Schwarzbeck | 02289 | 02/14/2026 | Biennial |
| Horn Antenna(1~18 GHz) | BBHA 9120D | Schwarzbeck | 9120D-1299 | 04/27/2025 | Biennial |
| Horn Antenna(15~40 GHz) | BBHA 9170 | Schwarzbeck | BBHA9170342 | 09/29/2024 | Biennial |
| Horn Antenna(15~40 GHz) | BBHA 9170 | Schwarzbeck | BBHA9170124 | 03/28/2025 | Biennial |
| Loop Antenna(9 kHz~30 MHz) | FMZB1513 | Rohde & Schwarz | 1513-175 | 01/16/2025 | Biennial |
| Bilog Antenna | VULB9160 | Schwarzbeck | 3150 | 03/09/2025 | Biennial |
| Hybrid Antenna | VULB9160 | Schwarzbeck | 760 | 02/24/2025 | Biennial |
| RF Switching System | FBSR-06B (1G HPF + LNA) | T&M SYSTEM | F3L1 | 05/14/2025 | Annual |
| RF Switching System | FBSR-06B (3G HPF + LNA) | T&M SYSTEM | F3L2 | 05/14/2025 | Annual |
| RF Switching System | FBSR-06B (6G HPF + LNA) | T&M SYSTEM | F3L3 | 05/14/2025 | Annual |
| RF Switching System | FBSR-06B (LNA) | T&M SYSTEM | F3L4 | 05/14/2025 | Annual |
| Power Amplifier | CBL18265035 | CERNEX | 22966 | 11/17/2024 | Annual |
| Power Amplifier | CBL26405040 | CERNEX | 25956 | 02/26/2025 | Annual |
| DC Power Supply | E3632A | Hewlett Packard | MY40004427 | 08/25/2024 | Annual |
| Power Splitter(DC~26.5 GHz) | 11667B | Hewlett Packard | 11275 | 02/29/2025 | Annual |
| Chamber | SU-642 | ESPEC | 93008124 | 02/19/2025 | Annual |
| Signal Analyzer(10 Hz~26.5 GHz) | N9020A | Agilent | MY51110063 | 04/04/2025 | Annual |
| ATTENUATOR(20 dB) | 8493C | Hewlett Packard | 17280 | 04/17/2025 | Annual |
| Spectrum Analyzer(10 Hz~40 GHz) | FSV40 | REOHDE & SCHWARZ | 101436 | 02/13/2025 | Annual |
| Base Station | 8960 (E5515C) | Agilent | MY48360800 | 08/10/2024 | Annual |
| Wideband Radio Communication Tester | MT8821C | Anritsu Corp. | 6262287701 | 05/16/2025 | Annual |
| Wideband Radio Communication Tester | MT8000A | Anritsu Corp. | 6262302511 | 05/14/2025 | Annual |
| Signal Analyzer(5 Hz~40.0 GHz) | N9030B | KEYSIGHT | MY55480167 | 05/17/2025 | Annual |
| 4-Way Divider | ZC4PD-K1844+ | Mini-Circuits | 942907 | 09/19/2024 | Annual |
| FCC LTE Mobile Conducted RF Automation Test Software | - | HCT CO., LTD., | - | - | - |

Note:

1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

## 5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the $U_{CISPR}$ measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

| Parameter | Expanded Uncertainty (±dB) |
|---|---|
| Conducted Disturbance (150 kHz ~ 30 MHz) | 1.98 (Confidence level about 95 %, $k$=2) |
| Radiated Disturbance (9 kHz ~ 30 MHz) | 4.36 (Confidence level about 95 %, $k$=2) |
| Radiated Disturbance (30 MHz ~ 1 GHz) | 5.70 (Confidence level about 95 %, $k$=2) |
| Radiated Disturbance (1 GHz ~ 18 GHz) | 5.52 (Confidence level about 95 %, $k$=2) |
| Radiated Disturbance (18 GHz ~ 40 GHz) | 5.66 (Confidence level about 95 %, $k$=2) |
| Radiated Disturbance (Above 40 GHz) | 5.58 (Confidence level about 95 %, $k$=2) |

# 6. SUMMARY OF TEST RESULTS

## 6.1 Test Condition : Conducted Test

| Test Description | FCC Part Section(s) | Test Limit | Test Result |
|---|---|---|---|
| Occupied Bandwidth | § 2.1049 | N/A | PASS |
| Band Edge / Spurious and Harmonic Emissions at Antenna Terminal. | § 2.1051, § 27.53(n)(2), § 27.53(l)(2) | < -13 dBm | PASS |
| Conducted Output Power | § 2.1046 | N/A | See Note1 |
| Peak- to- Average Ratio | § 27.50(k)(4), § 27.50(j)(4) | < 13 dB | PASS |
| Frequency stability / variation of ambient temperature | § 2.1055, § 27.54 | Emission must remain in band | PASS |

Note:

1. See SAR Report
2. All conducted tests were tested using 5G Wireless Tester.

## 6.2 Test Condition : Radiated Test

| Test Description | FCC Part Section(s) | Test Limit | Test Result |
|---|---|---|---|
| Equivalent Isotropic Radiated Power | § 27.50(k)(3), § 27.50(j)(3) | < 1 Watts max. EIRP | PASS |
| Radiated Spurious and Harmonic Emissions | § 2.1051, § 27.53(n)(2), § 27.53(l)(2) | < -13 dBm | PASS |

Note:

1. Radiated tests were tested using 5G Wireless Tester.

## 7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

| Ch./ Freq. | | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBd) | C.L | Pol. | ERP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 128 | 824.20 | -21.37 | 38.40 | -10.61 | 0.95 | H | 0.483 | 26.84 |

ERP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test, the turn table is rotated until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

7.2 EIRP Sample Calculation

| Ch./ Freq. | | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol. | EIRP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 20175 | 1,732.50 | -15.75 | 18.45 | 9.90 | 1.76 | H | 0.456 | 26.59 |

EIRP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test, the turn table is rotated until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW
GSM BW = 249 kHz
G = Phase Modulation
X = Cases not otherwise covered
W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W
GSM BW = 249 kHz
G = Phase Modulation
7 = Quantized/Digital Info
W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W
WCDMA BW = 4.17 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D
LTE BW = 4.48 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D
LTE BW = 4.48 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

## 8. TEST DATA(3450 MHz - 3550 MHz)

### 8.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3455.01 | Sub6 n77/ 10 MHz [30 kHz] | PI/2 BPSK | -26.26 | 11.68 | 11.20 | 2.96 | H | < 1.00 | 0.098 | 19.93 | 1 | 1 |
| | | QPSK | -26.32 | 11.62 | 11.20 | 2.96 | H | | 0.097 | 19.87 | | |
| | | 16-QAM | -27.23 | 10.71 | 11.20 | 2.96 | H | | 0.079 | 18.96 | | |
| | | 64-QAM | -28.85 | 9.09 | 11.20 | 2.96 | H | | 0.054 | 17.34 | | |
| | | 256-QAM | -30.68 | 7.26 | 11.20 | 2.96 | H | | 0.036 | 15.51 | | |
| 3500.01 | | PI/2 BPSK | -26.66 | 11.59 | 11.30 | 3.00 | H | | 0.098 | 19.89 | 1 | 22 |
| | | QPSK | -26.76 | 11.49 | 11.30 | 3.00 | H | | 0.095 | 19.79 | | |
| | | 16-QAM | -27.62 | 10.63 | 11.30 | 3.00 | H | | 0.078 | 18.93 | | |
| | | 64-QAM | -29.20 | 9.05 | 11.30 | 3.00 | H | | 0.054 | 17.35 | | |
| | | 256-QAM | -31.21 | 7.04 | 11.30 | 3.00 | H | | 0.034 | 15.34 | | |
| 3544.98 | | PI/2 BPSK | -26.90 | 11.17 | 11.35 | 3.02 | H | | 0.089 | 19.50 | 1 | 12 |
| | | QPSK | -26.91 | 11.16 | 11.35 | 3.02 | H | | 0.089 | 19.49 | | |
| | | 16-QAM | -27.94 | 10.13 | 11.35 | 3.02 | H | | 0.070 | 18.46 | | |
| | | 64-QAM | -29.50 | 8.57 | 11.35 | 3.02 | H | | 0.049 | 16.90 | | |
| | | 256-QAM | -31.41 | 6.66 | 11.35 | 3.02 | H | | 0.032 | 14.99 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3457.50 | Sub6 n77/ 15 MHz [30 kHz] | PI/2 BPSK | -26.26 | 11.65 | 11.20 | 2.95 | H | < 1.00 | 0.098 | 19.90 | 1 | 1 |
| | | QPSK | -26.28 | 11.63 | 11.20 | 2.95 | H | | 0.097 | 19.88 | | |
| | | 16-QAM | -27.34 | 10.57 | 11.20 | 2.95 | H | | 0.076 | 18.82 | | |
| | | 64-QAM | -28.67 | 9.24 | 11.20 | 2.95 | H | | 0.056 | 17.49 | | |
| | | 256-QAM | -30.76 | 7.15 | 11.20 | 2.95 | H | | 0.035 | 15.40 | | |
| 3500.01 | | PI/2 BPSK | -26.59 | 11.66 | 11.30 | 3.00 | H | | 0.099 | 19.96 | 1 | 19 |
| | | QPSK | -26.75 | 11.50 | 11.30 | 3.00 | H | | 0.096 | 19.80 | | |
| | | 16-QAM | -27.54 | 10.71 | 11.30 | 3.00 | H | | 0.080 | 19.01 | | |
| | | 64-QAM | -29.17 | 9.08 | 11.30 | 3.00 | H | | 0.055 | 17.38 | | |
| | | 256-QAM | -31.17 | 7.08 | 11.30 | 3.00 | H | | 0.035 | 15.38 | | |
| 3542.50 | | PI/2 BPSK | -26.86 | 11.09 | 11.30 | 3.02 | H | | 0.087 | 19.37 | 1 | 19 |
| | | QPSK | -26.87 | 11.08 | 11.30 | 3.02 | H | | 0.086 | 19.36 | | |
| | | 16-QAM | -27.94 | 10.01 | 11.30 | 3.02 | H | | 0.067 | 18.29 | | |
| | | 64-QAM | -29.35 | 8.60 | 11.30 | 3.02 | H | | 0.049 | 16.88 | | |
| | | 256-QAM | -31.36 | 6.59 | 11.30 | 3.02 | H | | 0.031 | 14.87 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3460.02 | Sub6 n77/ 20 MHz [30 kHz] | PI/2 BPSK | -26.30 | 11.61 | 11.20 | 2.95 | H | < 1.00 | 0.097 | 19.86 | 1 | 1 |
| | | QPSK | -26.33 | 11.58 | 11.20 | 2.95 | H | | 0.096 | 19.83 | | |
| | | 16-QAM | -27.13 | 10.78 | 11.20 | 2.95 | H | | 0.080 | 19.03 | | |
| | | 64-QAM | -28.77 | 9.14 | 11.20 | 2.95 | H | | 0.055 | 17.39 | | |
| | | 256-QAM | -30.85 | 7.06 | 11.20 | 2.95 | H | | 0.034 | 15.31 | | |
| 3500.01 | | PI/2 BPSK | -26.70 | 11.55 | 11.30 | 3.00 | H | | 0.097 | 19.85 | 1 | 25 |
| | | QPSK | -26.74 | 11.51 | 11.30 | 3.00 | H | | 0.096 | 19.81 | | |
| | | 16-QAM | -27.53 | 10.72 | 11.30 | 3.00 | H | | 0.080 | 19.02 | | |
| | | 64-QAM | -29.04 | 9.21 | 11.30 | 3.00 | H | | 0.056 | 17.51 | | |
| | | 256-QAM | -31.15 | 7.10 | 11.30 | 3.00 | H | | 0.035 | 15.40 | | |
| 3540.00 | | PI/2 BPSK | -26.90 | 11.05 | 11.30 | 3.02 | H | | 0.086 | 19.33 | 1 | 25 |
| | | QPSK | -26.93 | 11.02 | 11.30 | 3.02 | H | | 0.085 | 19.30 | | |
| | | 16-QAM | -27.68 | 10.27 | 11.30 | 3.02 | H | | 0.072 | 18.55 | | |
| | | 64-QAM | -29.37 | 8.58 | 11.30 | 3.02 | H | | 0.049 | 16.86 | | |
| | | 256-QAM | -31.41 | 6.54 | 11.30 | 3.02 | H | | 0.030 | 14.82 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3465.00 | Sub6 n77/ 30 MHz [30 kHz] | PI/2 BPSK | -26.37 | 11.50 | 11.20 | 2.95 | H | < 1.00 | 0.094 | 19.75 | 1 | 1 |
| | | QPSK | -26.43 | 11.44 | 11.20 | 2.95 | H | | 0.093 | 19.69 | | |
| | | 16-QAM | -27.41 | 10.46 | 11.20 | 2.95 | H | | 0.074 | 18.71 | | |
| | | 64-QAM | -28.92 | 8.95 | 11.20 | 2.95 | H | | 0.052 | 17.20 | | |
| | | 256-QAM | -30.83 | 7.04 | 11.20 | 2.95 | H | | 0.034 | 15.29 | | |
| 3500.01 | | PI/2 BPSK | -26.68 | 11.57 | 11.30 | 3.00 | H | | 0.097 | 19.87 | 1 | 39 |
| | | QPSK | -26.83 | 11.42 | 11.30 | 3.00 | H | | 0.094 | 19.72 | | |
| | | 16-QAM | -27.76 | 10.49 | 11.30 | 3.00 | H | | 0.076 | 18.79 | | |
| | | 64-QAM | -29.31 | 8.94 | 11.30 | 3.00 | H | | 0.053 | 17.24 | | |
| | | 256-QAM | -31.15 | 7.10 | 11.30 | 3.00 | H | | 0.035 | 15.40 | | |
| 3534.99 | | PI/2 BPSK | -26.88 | 11.03 | 11.30 | 3.01 | H | | 0.086 | 19.33 | 1 | 39 |
| | | QPSK | -26.90 | 11.01 | 11.30 | 3.01 | H | | 0.085 | 19.31 | | |
| | | 16-QAM | -28.00 | 9.91 | 11.30 | 3.01 | H | | 0.066 | 18.21 | | |
| | | 64-QAM | -29.51 | 8.40 | 11.30 | 3.01 | H | | 0.047 | 16.70 | | |
| | | 256-QAM | -31.36 | 6.55 | 11.30 | 3.01 | H | | 0.031 | 14.85 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3470.01 | Sub6 n77/ 40 MHz [30 kHz] | PI/2 BPSK | -26.35 | 11.48 | 11.20 | 2.95 | H | < 1.00 | 0.094 | 19.73 | 1 | 1 |
| | | QPSK | -26.40 | 11.43 | 11.20 | 2.95 | H | | 0.093 | 19.68 | | |
| | | 16-QAM | -27.47 | 10.36 | 11.20 | 2.95 | H | | 0.073 | 18.61 | | |
| | | 64-QAM | -28.95 | 8.88 | 11.20 | 2.95 | H | | 0.052 | 17.13 | | |
| | | 256-QAM | -30.83 | 7.00 | 11.20 | 2.95 | H | | 0.034 | 15.25 | | |
| 3500.01 | | PI/2 BPSK | -26.66 | 11.59 | 11.30 | 3.00 | H | | 0.097 | 19.89 | 1 | 53 |
| | | QPSK | -26.77 | 11.48 | 11.30 | 3.00 | H | | 0.095 | 19.78 | | |
| | | 16-QAM | -27.74 | 10.51 | 11.30 | 3.00 | H | | 0.076 | 18.81 | | |
| | | 64-QAM | -29.27 | 8.98 | 11.30 | 3.00 | H | | 0.053 | 17.28 | | |
| | | 256-QAM | -31.11 | 7.14 | 11.30 | 3.00 | H | | 0.035 | 15.44 | | |
| 3529.98 | | PI/2 BPSK | -26.86 | 11.02 | 11.30 | 2.99 | H | | 0.086 | 19.33 | 1 | 53 |
| | | QPSK | -26.95 | 10.93 | 11.30 | 2.99 | H | | 0.084 | 19.24 | | |
| | | 16-QAM | -28.09 | 9.79 | 11.30 | 2.99 | H | | 0.065 | 18.10 | | |
| | | 64-QAM | -29.40 | 8.48 | 11.30 | 2.99 | H | | 0.048 | 16.79 | | |
| | | 256-QAM | -31.27 | 6.61 | 11.30 | 2.99 | H | | 0.031 | 14.92 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3475.02 | Sub6 n77/ 50 MHz [30 kHz] | PI/2 BPSK | -26.29 | 11.59 | 11.20 | 2.97 | H | < 1.00 | 0.096 | 19.82 | 1 | 1 |
| | | QPSK | -26.30 | 11.58 | 11.20 | 2.97 | H | | 0.096 | 19.81 | | |
| | | 16-QAM | -27.29 | 10.59 | 11.20 | 2.97 | H | | 0.076 | 18.82 | | |
| | | 64-QAM | -28.79 | 9.09 | 11.20 | 2.97 | H | | 0.054 | 17.32 | | |
| | | 256-QAM | -30.70 | 7.18 | 11.20 | 2.97 | H | | 0.035 | 15.41 | | |
| 3500.01 | | PI/2 BPSK | -26.69 | 11.56 | 11.30 | 3.00 | H | | 0.097 | 19.86 | 1 | 66 |
| | | QPSK | -26.64 | 11.61 | 11.30 | 3.00 | H | | 0.098 | 19.91 | | |
| | | 16-QAM | -27.66 | 10.59 | 11.30 | 3.00 | H | | 0.077 | 18.89 | | |
| | | 64-QAM | -29.25 | 9.00 | 11.30 | 3.00 | H | | 0.054 | 17.30 | | |
| | | 256-QAM | -31.13 | 7.12 | 11.30 | 3.00 | H | | 0.035 | 15.42 | | |
| 3525.00 | | PI/2 BPSK | -26.73 | 11.17 | 11.30 | 2.98 | H | | 0.089 | 19.49 | 1 | 66 |
| | | QPSK | -26.85 | 11.05 | 11.30 | 2.98 | H | | 0.087 | 19.37 | | |
| | | 16-QAM | -27.68 | 10.22 | 11.30 | 2.98 | H | | 0.071 | 18.54 | | |
| | | 64-QAM | -29.29 | 8.61 | 11.30 | 2.98 | H | | 0.049 | 16.93 | | |
| | | 256-QAM | -31.28 | 6.62 | 11.30 | 2.98 | H | | 0.031 | 14.94 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3480.00 | Sub6 n77/ 60 MHz [30 kHz] | PI/2 BPSK | -26.33 | 11.61 | 11.20 | 2.99 | H | < 1.00 | 0.096 | 19.82 | 1 | 1 |
| | | QPSK | -26.34 | 11.60 | 11.20 | 2.99 | H | | 0.096 | 19.81 | | |
| | | 16-QAM | -27.28 | 10.66 | 11.20 | 2.99 | H | | 0.077 | 18.87 | | |
| | | 64-QAM | -28.71 | 9.23 | 11.20 | 2.99 | H | | 0.055 | 17.44 | | |
| | | 256-QAM | -30.72 | 7.22 | 11.20 | 2.99 | H | | 0.035 | 15.43 | | |
| 3500.01 | | PI/2 BPSK | -26.56 | 11.69 | 11.30 | 3.00 | H | | 0.100 | 19.99 | 1 | 81 |
| | | QPSK | -26.69 | 11.56 | 11.30 | 3.00 | H | | 0.097 | 19.86 | | |
| | | 16-QAM | -27.65 | 10.60 | 11.30 | 3.00 | H | | 0.078 | 18.90 | | |
| | | 64-QAM | -29.14 | 9.11 | 11.30 | 3.00 | H | | 0.055 | 17.41 | | |
| | | 256-QAM | -31.03 | 7.22 | 11.30 | 3.00 | H | | 0.036 | 15.52 | | |
| 3519.99 | | PI/2 BPSK | -26.47 | 11.45 | 11.30 | 2.97 | H | | 0.095 | 19.78 | 1 | 81 |
| | | QPSK | -26.57 | 11.35 | 11.30 | 2.97 | H | | 0.093 | 19.68 | | |
| | | 16-QAM | -27.63 | 10.29 | 11.30 | 2.97 | H | | 0.073 | 18.62 | | |
| | | 64-QAM | -28.97 | 8.95 | 11.30 | 2.97 | H | | 0.053 | 17.28 | | |
| | | 256-QAM | -31.08 | 6.84 | 11.30 | 2.97 | H | | 0.033 | 15.17 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3485.01 | Sub6 n77/ 70 MHz [30 kHz] | PI/2 BPSK | -26.23 | 11.78 | 11.20 | 3.00 | H | < 1.00 | 0.100 | 19.98 | 1 | 1 |
| | | QPSK | -26.27 | 11.74 | 11.20 | 3.00 | H | | 0.099 | 19.94 | | |
| | | 16-QAM | -27.33 | 10.68 | 11.20 | 3.00 | H | | 0.077 | 18.88 | | |
| | | 64-QAM | -28.74 | 9.27 | 11.20 | 3.00 | H | | 0.056 | 17.47 | | |
| | | 256-QAM | -30.73 | 7.28 | 11.20 | 3.00 | H | | 0.035 | 15.48 | | |
| 3500.01 | | PI/2 BPSK | -26.70 | 11.55 | 11.30 | 3.00 | H | | 0.097 | 19.85 | 1 | 94 |
| | | QPSK | -26.71 | 11.54 | 11.30 | 3.00 | H | | 0.096 | 19.84 | | |
| | | 16-QAM | -27.75 | 10.50 | 11.30 | 3.00 | H | | 0.076 | 18.80 | | |
| | | 64-QAM | -28.99 | 9.26 | 11.30 | 3.00 | H | | 0.057 | 17.56 | | |
| | | 256-QAM | -31.06 | 7.19 | 11.30 | 3.00 | H | | 0.035 | 15.49 | | |
| 3514.98 | | PI/2 BPSK | -26.52 | 11.54 | 11.30 | 2.98 | H | | 0.097 | 19.87 | 1 | 94 |
| | | QPSK | -26.63 | 11.43 | 11.30 | 2.98 | H | | 0.095 | 19.76 | | |
| | | 16-QAM | -27.50 | 10.56 | 11.30 | 2.98 | H | | 0.077 | 18.89 | | |
| | | 64-QAM | -29.15 | 8.91 | 11.30 | 2.98 | H | | 0.053 | 17.24 | | |
| | | 256-QAM | -31.04 | 7.02 | 11.30 | 2.98 | H | | 0.034 | 15.35 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3490.02 | Sub6 n77/ 80 MHz [30 kHz] | PI/2 BPSK | -26.44 | 11.64 | 11.20 | 3.00 | H | < 1.00 | 0.096 | 19.84 | 1 | 1 |
| | | QPSK | -26.45 | 11.63 | 11.20 | 3.00 | H | | 0.096 | 19.83 | | |
| | | 16-QAM | -27.59 | 10.49 | 11.20 | 3.00 | H | | 0.074 | 18.69 | | |
| | | 64-QAM | -28.85 | 9.23 | 11.20 | 3.00 | H | | 0.055 | 17.43 | | |
| | | 256-QAM | -30.93 | 7.15 | 11.20 | 3.00 | H | | 0.034 | 15.35 | | |
| 3500.01 | | PI/2 BPSK | -26.71 | 11.54 | 11.30 | 3.00 | H | | 0.096 | 19.84 | 1 | 108 |
| | | QPSK | -26.73 | 11.52 | 11.30 | 3.00 | H | | 0.096 | 19.82 | | |
| | | 16-QAM | -27.76 | 10.49 | 11.30 | 3.00 | H | | 0.076 | 18.79 | | |
| | | 64-QAM | -29.13 | 9.12 | 11.30 | 3.00 | H | | 0.055 | 17.42 | | |
| | | 256-QAM | -31.20 | 7.05 | 11.30 | 3.00 | H | | 0.034 | 15.35 | | |
| 3510.00 | | PI/2 BPSK | -26.53 | 11.68 | 11.30 | 2.98 | H | | 0.100 | 20.00 | 1 | 108 |
| | | QPSK | -26.63 | 11.58 | 11.30 | 2.98 | H | | 0.098 | 19.90 | | |
| | | 16-QAM | -27.67 | 10.54 | 11.30 | 2.98 | H | | 0.077 | 18.86 | | |
| | | 64-QAM | -29.24 | 8.97 | 11.30 | 2.98 | H | | 0.054 | 17.29 | | |
| | | 256-QAM | -31.20 | 7.01 | 11.30 | 2.98 | H | | 0.034 | 15.33 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3495.00 | Sub6 n77/ 90 MHz [30 kHz] | PI/2 BPSK | -26.52 | 11.65 | 11.25 | 3.00 | H | < 1.00 | 0.098 | 19.90 | 1 | 1 |
| | | QPSK | -26.56 | 11.61 | 11.25 | 3.00 | H | | 0.097 | 19.86 | | |
| | | 16-QAM | -27.55 | 10.62 | 11.25 | 3.00 | H | | 0.077 | 18.87 | | |
| | | 64-QAM | -29.20 | 8.97 | 11.25 | 3.00 | H | | 0.053 | 17.22 | | |
| | | 256-QAM | -30.96 | 7.21 | 11.25 | 3.00 | H | | 0.035 | 15.46 | | |
| 3500.01 | | PI/2 BPSK | -26.67 | 11.58 | 11.30 | 3.00 | H | | 0.097 | 19.88 | 1 | 1 |
| | | QPSK | -26.68 | 11.57 | 11.30 | 3.00 | H | | 0.097 | 19.87 | | |
| | | 16-QAM | -27.74 | 10.51 | 11.30 | 3.00 | H | | 0.076 | 18.81 | | |
| | | 64-QAM | -29.21 | 9.04 | 11.30 | 3.00 | H | | 0.054 | 17.34 | | |
| | | 256-QAM | -31.21 | 7.04 | 11.30 | 3.00 | H | | 0.034 | 15.34 | | |
| 3504.99 | | PI/2 BPSK | -26.60 | 11.63 | 11.30 | 2.99 | H | | 0.099 | 19.94 | 1 | 122 |
| | | QPSK | -26.61 | 11.62 | 11.30 | 2.99 | H | | 0.098 | 19.93 | | |
| | | 16-QAM | -27.57 | 10.66 | 11.30 | 2.99 | H | | 0.079 | 18.97 | | |
| | | 64-QAM | -29.07 | 9.16 | 11.30 | 2.99 | H | | 0.056 | 17.47 | | |
| | | 256-QAM | -31.02 | 7.21 | 11.30 | 2.99 | H | | 0.036 | 15.52 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3500.01 | Sub6 n77/ 100 MHz [30 kHz] | PI/2 BPSK | -26.39 | 11.86 | 11.30 | 3.00 | H | < 1.00 | 0.104 | 20.16 | 1 | 1 |
| | | QPSK | -26.42 | 11.83 | 11.30 | 3.00 | H | | 0.103 | 20.13 | | |
| | | 16-QAM | -27.33 | 10.92 | 11.30 | 3.00 | H | | 0.084 | 19.22 | | |
| | | 64-QAM | -28.87 | 9.38 | 11.30 | 3.00 | H | | 0.059 | 17.68 | | |
| | | 256-QAM | -30.83 | 7.42 | 11.30 | 3.00 | H | | 0.037 | 15.72 | | |

## 8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77(78)
▣ Bandwidth: 100 MHz
▣ Modulation: PI/2 BPSK
▣ Distance: 1 meters
▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | RB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size | Offset |
| 633334 (3500.01) | 7 000.02 | -65.44 | 10.90 | -59.52 | 4.32 | V | -52.94 | -13.00 | 1 | 1 |
| | 10 500.03 | -64.15 | 11.30 | -53.55 | 5.41 | V | -47.66 | -13.00 | | |
| | 14 000.04 | -61.29 | 12.30 | -51.94 | 6.35 | V | -45.99 | -13.00 | | |

### 8.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3500.01 | BPSK | Full RB | 0 | 4.25 |
| | | | QPSK | | | 5.26 |
| | | | 16-QAM | | | 5.76 |
| | | | 64-QAM | | | 5.99 |
| | | | 256-QAM | | | 5.93 |
| | 15 MHz | | BPSK | | | 4.96 |
| | | | QPSK | | | 5.26 |
| | | | 16-QAM | | | 5.69 |
| | | | 64-QAM | | | 5.77 |
| | | | 256-QAM | | | 5.97 |
| | 20 MHz | | BPSK | | | 5.25 |
| | | | QPSK | | | 5.40 |
| | | | 16-QAM | | | 5.71 |
| | | | 64-QAM | | | 6.05 |
| | | | 256-QAM | | | 6.04 |
| | 30 MHz | | BPSK | | | 4.36 |
| | | | QPSK | | | 5.33 |
| | | | 16-QAM | | | 5.73 |
| | | | 64-QAM | | | 6.00 |
| | | | 256-QAM | | | 6.02 |
| | 40 MHz | | BPSK | | | 5.70 |
| | | | QPSK | | | 5.74 |
| | | | 16-QAM | | | 5.93 |
| | | | 64-QAM | | | 6.10 |
| | | | 256-QAM | | | 6.16 |
| | 50 MHz | | BPSK | | | 4.28 |
| | | | QPSK | | | 5.34 |
| | | | 16-QAM | | | 5.78 |
| | | | 64-QAM | | | 5.98 |
| | | | 256-QAM | | | 6.10 |
| | 60 MHz | | BPSK | | | 4.29 |
| | | | QPSK | | | 5.31 |
| | | | 16-QAM | | | 5.74 |
| | | | 64-QAM | | | 5.98 |
| | | | 256-QAM | | | 6.10 |
| | 70 MHz | | BPSK | | | 4.55 |
| | | | QPSK | | | 5.35 |
| | | | 16-QAM | | | 5.73 |
| | | | 64-QAM | | | 5.99 |
| | | | 256-QAM | | | 6.05 |
| | 80 MHz | | BPSK | | | 4.87 |
| | | | QPSK | | | 5.34 |
| | | | 16-QAM | | | 5.76 |
| | | | 64-QAM | | | 5.96 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 256-QAM | | | 6.08 |
| | 90 MHz | | BPSK | | | 4.63 |
| | | | QPSK | | | 5.31 |
| | | | 16-QAM | | | 5.76 |
| | | | 64-QAM | | | 5.96 |
| | | | 256-QAM | | | 6.09 |
| | 100 MHz | | BPSK | | | 4.24 |
| | | | QPSK | | | 5.31 |
| | | | 16-QAM | | | 5.73 |
| | | | 64-QAM | | | 5.96 |
| | | | 256-QAM | | | 6.00 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 87 ~ 141.

## 8.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3500.01 | BPSK | Full RB | 0 | 8.7022 |
| | | | QPSK | | | 8.7126 |
| | | | 16-QAM | | | 8.6511 |
| | | | 64-QAM | | | 8.7075 |
| | | | 256-QAM | | | 8.6888 |
| | 15 MHz | | BPSK | | | 12.959 |
| | | | QPSK | | | 12.974 |
| | | | 16-QAM | | | 12.998 |
| | | | 64-QAM | | | 12.988 |
| | | | 256-QAM | | | 12.931 |
| | 20 MHz | | BPSK | | | 17.990 |
| | | | QPSK | | | 18.002 |
| | | | 16-QAM | | | 17.964 |
| | | | 64-QAM | | | 18.020 |
| | | | 256-QAM | | | 17.919 |
| | 30 MHz | | BPSK | | | 27.029 |
| | | | QPSK | | | 26.968 |
| | | | 16-QAM | | | 27.002 |
| | | | 64-QAM | | | 26.930 |
| | | | 256-QAM | | | 26.934 |
| | 40 MHz | | BPSK | | | 35.881 |
| | | | QPSK | | | 35.983 |
| | | | 16-QAM | | | 35.891 |
| | | | 64-QAM | | | 35.879 |
| | | | 256-QAM | | | 35.983 |
| | 50 MHz | | BPSK | | | 46.064 |
| | | | QPSK | | | 45.961 |
| | | | 16-QAM | | | 45.934 |
| | | | 64-QAM | | | 45.945 |
| | | | 256-QAM | | | 45.997 |
| | 60 MHz | | BPSK | | | 58.242 |
| | | | QPSK | | | 58.283 |
| | | | 16-QAM | | | 58.098 |
| | | | 64-QAM | | | 58.232 |
| | | | 256-QAM | | | 58.209 |
| | 70 MHz | | BPSK | | | 64.685 |
| | | | QPSK | | | 64.832 |
| | | | 16-QAM | | | 64.709 |
| | | | 64-QAM | | | 64.668 |
| | | | 256-QAM | | | 64.966 |
| | 80 MHz | | BPSK | | | 77.771 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | QPSK | | | 77.646 |
| | | | 16-QAM | | | 77.446 |
| | | | 64-QAM | | | 77.501 |
| | | | 256-QAM | | | 77.409 |
| | 90 MHz | | BPSK | | | 87.297 |
| | | | QPSK | | | 87.196 |
| | | | 16-QAM | | | 87.321 |
| | | | 64-QAM | | | 87.154 |
| | | | 256-QAM | | | 87.358 |
| | 100 MHz | | BPSK | | | 96.674 |
| | | | QPSK | | | 96.777 |
| | | | 16-QAM | | | 96.675 |
| | | | 64-QAM | | | 96.599 |
| | | | 256-QAM | | | 96.790 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 142 ~ 196.

## 8.5 CONDUCTED SPURIOUS EMISSIONS

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n77 | 10 | 3455.010 | 4.9213 | 37.190 | -70.527 | -33.337 | -13.00 |
| | | 3500.010 | 9.7114 | 37.805 | -70.719 | -32.914 | |
| | | 3544.980 | 9.6894 | 37.805 | -70.879 | -33.074 | |
| | 15 | 3457.500 | 8.8634 | 37.805 | -70.830 | -33.025 | |
| | | 3500.010 | 9.1077 | 37.805 | -70.233 | -32.428 | |
| | | 3542.490 | 8.3006 | 37.805 | -71.039 | -33.234 | |
| | 20 | 3460.020 | 8.2882 | 37.805 | -70.832 | -33.027 | |
| | | 3500.010 | 6.0484 | 37.805 | -70.434 | -32.629 | |
| | | 3540.000 | 9.9502 | 37.805 | -70.878 | -33.073 | |
| | 30 | 3465.000 | 9.6770 | 37.805 | -70.169 | -32.364 | |
| | | 3500.010 | 5.1960 | 37.805 | -70.857 | -33.052 | |
| | | 3534.990 | 9.6989 | 37.805 | -69.810 | -32.005 | |
| | 40 | 3470.010 | 10.0000 | 37.805 | -70.315 | -32.510 | |
| | | 3500.010 | 8.8794 | 37.805 | -70.480 | -32.675 | |
| | | 3529.980 | 9.0429 | 37.805 | -71.153 | -33.348 | |
| | 50 | 3475.020 | 8.8490 | 37.805 | -70.316 | -32.511 | |
| | | 3500.010 | 8.8654 | 37.805 | -70.648 | -32.843 | |
| | | 3525.000 | 5.2014 | 37.805 | -71.172 | -33.367 | |
| | 60 | 3480.000 | 9.7149 | 37.805 | -70.730 | -32.925 | |
| | | 3500.010 | 8.0484 | 37.805 | -70.169 | -32.364 | |
| | | 3519.990 | 9.9477 | 37.805 | -70.350 | -32.545 | |
| | 70 | 3485.010 | 9.1182 | 37.805 | -70.284 | -32.479 | |
| | | 3500.010 | 9.6949 | 37.805 | -70.703 | -32.898 | |
| | | 3514.980 | 9.7074 | 37.805 | -70.373 | -32.568 | |
| | 80 | 3490.020 | 9.6904 | 37.805 | -70.513 | -32.708 | |
| | | 3500.010 | 8.2842 | 37.805 | -70.152 | -32.347 | |
| | | 3510.000 | 6.0265 | 37.805 | -70.594 | -32.789 | |
| | 90 | 3495.000 | 8.2792 | 37.805 | -69.915 | -32.110 | |
| | | 3500.010 | 9.4222 | 37.805 | -71.219 | -33.414 | |
| | | 3504.990 | 9.0907 | 37.805 | -69.325 | -31.520 | |
| | 100 | 3500.010 | 5.9801 | 37.805 | -70.663 | -32.858 | |

**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 197 ~ 258.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.990


- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter

- Result(dBm) = Reading + Factor

3. Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 34.484 |
| 1 – 5 | 37.190 |
| 5 – 10 | 37.805 |
| 10 – 15 | 38.330 |
| 15 – 20 | 38.703 |
| Above 20 | 39.345 |

## 8.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 259 ~ 390.
2. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990

## 8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3455.010 | 100% | +20(Ref) | 3455 009 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3455 009 995 | -2.6 | 0.000 000 | -0.001 |
| | 100% | -20 | 3455 009 997 | -0.2 | 0.000 000 | 0.000 |
| | 100% | -10 | 3455 009 994 | -3.3 | 0.000 000 | -0.001 |
| | 100% | 0 | 3455 009 998 | 0.1 | 0.000 000 | 0.000 |
| | 100% | +10 | 3455 009 994 | -4.0 | 0.000 000 | -0.001 |
| | 100% | +30 | 3455 009 993 | -4.3 | 0.000 000 | -0.001 |
| | 100% | +40 | 3455 009 995 | -2.5 | 0.000 000 | -0.001 |
| | 100% | +50 | 3455 009 994 | -3.7 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3455 009 995 | -2.6 | 0.000 000 | -0.001 |
| 3544.980 | 100% | +20(Ref) | 3544 979 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3544 979 997 | -2.7 | 0.000 000 | -0.001 |
| | 100% | -20 | 3544 979 996 | -2.9 | 0.000 000 | -0.001 |
| | 100% | -10 | 3544 979 999 | -0.2 | 0.000 000 | 0.000 |
| | 100% | 0 | 3544 979 998 | -1.7 | 0.000 000 | 0.000 |
| | 100% | +10 | 3544 979 998 | -1.1 | 0.000 000 | 0.000 |
| | 100% | +30 | 3544 979 998 | -1.7 | 0.000 000 | 0.000 |
| | 100% | +40 | 3544 979 999 | -0.6 | 0.000 000 | 0.000 |
| | 100% | +50 | 3544 979 997 | -1.9 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3544 980 000 | 0.7 | 0.000 000 | 0.000 |

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3457.500 | 100% | +20(Ref) | 3457 499 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3457 499 998 | -0.5 | 0.000 000 | 0.000 |
| | 100% | -20 | 3457 499 997 | -1.6 | 0.000 000 | 0.000 |
| | 100% | -10 | 3457 500 000 | 1.1 | 0.000 000 | 0.000 |
| | 100% | 0 | 3457 500 000 | 1.5 | 0.000 000 | 0.000 |
| | 100% | +10 | 3457 500 000 | 1.0 | 0.000 000 | 0.000 |
| | 100% | +30 | 3457 499 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | +40 | 3457 499 999 | 0.4 | 0.000 000 | 0.000 |
| | 100% | +50 | 3457 499 998 | -1.1 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3457 499 997 | -1.7 | 0.000 000 | 0.000 |
| 3542.490 | 100% | +20(Ref) | 3542 489 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3542 489 993 | -4.7 | 0.000 000 | -0.001 |
| | 100% | -20 | 3542 489 994 | -4.1 | 0.000 000 | -0.001 |
| | 100% | -10 | 3542 489 996 | -2.4 | 0.000 000 | -0.001 |
| | 100% | 0 | 3542 489 995 | -2.9 | 0.000 000 | -0.001 |
| | 100% | +10 | 3542 489 997 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +30 | 3542 489 996 | -2.1 | 0.000 000 | -0.001 |
| | 100% | +40 | 3542 489 994 | -3.6 | 0.000 000 | -0.001 |
| | 100% | +50 | 3542 489 994 | -3.7 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3542 489 994 | -3.8 | 0.000 000 | -0.001 |

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3460.020 | 100% | +20(Ref) | 3460 019 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3460 019 995 | -2.2 | 0.000 000 | -0.001 |
| | 100% | -20 | 3460 019 996 | -1.1 | 0.000 000 | 0.000 |
| | 100% | -10 | 3460 019 994 | -3.5 | 0.000 000 | -0.001 |
| | 100% | 0 | 3460 019 998 | 0.5 | 0.000 000 | 0.000 |
| | 100% | +10 | 3460 019 997 | -0.6 | 0.000 000 | 0.000 |
| | 100% | +30 | 3460 019 996 | -1.6 | 0.000 000 | 0.000 |
| | 100% | +40 | 3460 019 996 | -1.1 | 0.000 000 | 0.000 |
| | 100% | +50 | 3460 019 996 | -1.6 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3460 019 994 | -3.1 | 0.000 000 | -0.001 |
| 3540.000 | 100% | +20(Ref) | 3539 999 996 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3539 999 994 | -1.9 | 0.000 000 | -0.001 |
| | 100% | -20 | 3539 999 993 | -3.5 | 0.000 000 | -0.001 |
| | 100% | -10 | 3539 999 993 | -3.1 | 0.000 000 | -0.001 |
| | 100% | 0 | 3539 999 994 | -2.5 | 0.000 000 | -0.001 |
| | 100% | +10 | 3539 999 993 | -3.3 | 0.000 000 | -0.001 |
| | 100% | +30 | 3539 999 994 | -2.4 | 0.000 000 | -0.001 |
| | 100% | +40 | 3539 999 995 | -1.1 | 0.000 000 | 0.000 |
| | 100% | +50 | 3539 999 994 | -2.4 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3539 999 993 | -3.2 | 0.000 000 | -0.001 |

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3465.000 | 100% | +20(Ref) | 3464 999 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3464 999 994 | -4.1 | 0.000 000 | -0.001 |
| | 100% | -20 | 3464 999 997 | -1.3 | 0.000 000 | 0.000 |
| | 100% | -10 | 3464 999 999 | 0.4 | 0.000 000 | 0.000 |
| | 100% | 0 | 3464 999 999 | 0.9 | 0.000 000 | 0.000 |
| | 100% | +10 | 3464 999 999 | 0.1 | 0.000 000 | 0.000 |
| | 100% | +30 | 3464 999 996 | -2.1 | 0.000 000 | -0.001 |
| | 100% | +40 | 3464 999 998 | -0.3 | 0.000 000 | 0.000 |
| | 100% | +50 | 3464 999 995 | -3.3 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3464 999 997 | -1.6 | 0.000 000 | 0.000 |
| 3534.990 | 100% | +20(Ref) | 3534 989 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3534 989 996 | -1.0 | 0.000 000 | 0.000 |
| | 100% | -20 | 3534 989 994 | -2.6 | 0.000 000 | -0.001 |
| | 100% | -10 | 3534 989 997 | 0.1 | 0.000 000 | 0.000 |
| | 100% | 0 | 3534 989 997 | -0.2 | 0.000 000 | 0.000 |
| | 100% | +10 | 3534 989 996 | -0.8 | 0.000 000 | 0.000 |
| | 100% | +30 | 3534 989 995 | -1.7 | 0.000 000 | 0.000 |
| | 100% | +40 | 3534 989 996 | -1.0 | 0.000 000 | 0.000 |
| | 100% | +50 | 3534 989 999 | 2.1 | 0.000 000 | 0.001 |
| | Batt. Endpoint | +20 | 3534 989 996 | -1.1 | 0.000 000 | 0.000 |

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3470.010 | 100% | +20(Ref) | 3470 009 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3470 009 997 | -0.7 | 0.000 000 | 0.000 |
| | 100% | -20 | 3470 009 995 | -2.5 | 0.000 000 | -0.001 |
| | 100% | -10 | 3470 009 994 | -3.6 | 0.000 000 | -0.001 |
| | 100% | 0 | 3470 009 998 | 0.5 | 0.000 000 | 0.000 |
| | 100% | +10 | 3470 009 994 | -3.2 | 0.000 000 | -0.001 |
| | 100% | +30 | 3470 009 994 | -3.5 | 0.000 000 | -0.001 |
| | 100% | +40 | 3470 009 995 | -2.4 | 0.000 000 | -0.001 |
| | 100% | +50 | 3470 009 996 | -1.8 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3470 009 994 | -3.2 | 0.000 000 | -0.001 |
| 3529.980 | 100% | +20(Ref) | 3529 979 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3529 979 996 | -2.0 | 0.000 000 | -0.001 |
| | 100% | -20 | 3529 979 996 | -1.8 | 0.000 000 | -0.001 |
| | 100% | -10 | 3529 979 994 | -4.0 | 0.000 000 | -0.001 |
| | 100% | 0 | 3529 979 997 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +10 | 3529 979 997 | -0.2 | 0.000 000 | 0.000 |
| | 100% | +30 | 3529 979 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | +40 | 3529 979 994 | -3.4 | 0.000 000 | -0.001 |
| | 100% | +50 | 3529 979 995 | -2.7 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3529 979 998 | 0.1 | 0.000 000 | 0.000 |

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3475.020 | 100% | +20(Ref) | 3475 019 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3475 019 994 | -3.4 | 0.000 000 | -0.001 |
| | 100% | -20 | 3475 019 995 | -3.1 | 0.000 000 | -0.001 |
| | 100% | -10 | 3475 019 993 | -5.1 | 0.000 000 | -0.001 |
| | 100% | 0 | 3475 019 994 | -3.4 | 0.000 000 | -0.001 |
| | 100% | +10 | 3475 019 993 | -4.5 | 0.000 000 | -0.001 |
| | 100% | +30 | 3475 019 996 | -1.8 | 0.000 000 | -0.001 |
| | 100% | +40 | 3475 019 998 | 0.4 | 0.000 000 | 0.000 |
| | 100% | +50 | 3475 019 997 | -0.3 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3475 019 996 | -1.9 | 0.000 000 | -0.001 |
| 3525.000 | 100% | +20(Ref) | 3524 999 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3524 999 995 | -2.6 | 0.000 000 | -0.001 |
| | 100% | -20 | 3524 999 996 | -1.6 | 0.000 000 | 0.000 |
| | 100% | -10 | 3524 999 998 | 0.7 | 0.000 000 | 0.000 |
| | 100% | 0 | 3524 999 998 | 0.9 | 0.000 000 | 0.000 |
| | 100% | +10 | 3524 999 995 | -1.7 | 0.000 000 | 0.000 |
| | 100% | +30 | 3524 999 995 | -1.8 | 0.000 000 | -0.001 |
| | 100% | +40 | 3524 999 997 | -0.3 | 0.000 000 | 0.000 |
| | 100% | +50 | 3524 999 996 | -1.0 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3524 999 998 | 0.9 | 0.000 000 | 0.000 |

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3480.000 | 100% | +20(Ref) | 3479 999 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3479 999 995 | -2.1 | 0.000 000 | -0.001 |
| | 100% | -20 | 3479 999 997 | -0.5 | 0.000 000 | 0.000 |
| | 100% | -10 | 3479 999 996 | -1.2 | 0.000 000 | 0.000 |
| | 100% | 0 | 3479 999 993 | -4.6 | 0.000 000 | -0.001 |
| | 100% | +10 | 3479 999 994 | -3.9 | 0.000 000 | -0.001 |
| | 100% | +30 | 3479 999 996 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +40 | 3479 999 996 | -2.1 | 0.000 000 | -0.001 |
| | 100% | +50 | 3479 999 995 | -2.6 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3479 999 997 | -0.9 | 0.000 000 | 0.000 |
| 3519.990 | 100% | +20(Ref) | 3519 989 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3519 989 998 | -0.8 | 0.000 000 | 0.000 |
| | 100% | -20 | 3519 989 997 | -1.1 | 0.000 000 | 0.000 |
| | 100% | -10 | 3519 989 999 | 0.3 | 0.000 000 | 0.000 |
| | 100% | 0 | 3519 989 998 | -0.5 | 0.000 000 | 0.000 |
| | 100% | +10 | 3519 989 994 | -4.1 | 0.000 000 | -0.001 |
| | 100% | +30 | 3519 989 996 | -2.3 | 0.000 000 | -0.001 |
| | 100% | +40 | 3519 989 998 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +50 | 3519 989 997 | -1.8 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3519 989 996 | -2.6 | 0.000 000 | -0.001 |

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3485.010 | 100% | +20(Ref) | 3485 009 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3485 009 998 | -0.6 | 0.000 000 | 0.000 |
| | 100% | -20 | 3485 009 996 | -2.4 | 0.000 000 | -0.001 |
| | 100% | -10 | 3485 009 995 | -4.2 | 0.000 000 | -0.001 |
| | 100% | 0 | 3485 009 996 | -2.9 | 0.000 000 | -0.001 |
| | 100% | +10 | 3485 009 995 | -4.0 | 0.000 000 | -0.001 |
| | 100% | +30 | 3485 009 995 | -4.0 | 0.000 000 | -0.001 |
| | 100% | +40 | 3485 009 995 | -3.8 | 0.000 000 | -0.001 |
| | 100% | +50 | 3485 009 996 | -3.1 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3485 009 997 | -1.7 | 0.000 000 | 0.000 |
| 3514.980 | 100% | +20(Ref) | 3514 979 996 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3514 979 991 | -4.7 | 0.000 000 | -0.001 |
| | 100% | -20 | 3514 979 993 | -2.9 | 0.000 000 | -0.001 |
| | 100% | -10 | 3514 979 994 | -2.6 | 0.000 000 | -0.001 |
| | 100% | 0 | 3514 979 996 | -0.2 | 0.000 000 | 0.000 |
| | 100% | +10 | 3514 979 992 | -4.4 | 0.000 000 | -0.001 |
| | 100% | +30 | 3514 979 992 | -4.4 | 0.000 000 | -0.001 |
| | 100% | +40 | 3514 979 994 | -1.9 | 0.000 000 | -0.001 |
| | 100% | +50 | 3514 979 994 | -2.6 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3514 979 994 | -1.9 | 0.000 000 | -0.001 |

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3490.020 | 100% | +20(Ref) | 3490 019 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3490 019 996 | -1.9 | 0.000 000 | -0.001 |
| | 100% | -20 | 3490 019 997 | -1.3 | 0.000 000 | 0.000 |
| | 100% | -10 | 3490 019 996 | -1.8 | 0.000 000 | -0.001 |
| | 100% | 0 | 3490 019 997 | -1.1 | 0.000 000 | 0.000 |
| | 100% | +10 | 3490 019 997 | -0.8 | 0.000 000 | 0.000 |
| | 100% | +30 | 3490 019 997 | -1.4 | 0.000 000 | 0.000 |
| | 100% | +40 | 3490 019 996 | -2.2 | 0.000 000 | -0.001 |
| | 100% | +50 | 3490 019 998 | -0.3 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3490 019 995 | -2.9 | 0.000 000 | -0.001 |
| 3510.000 | 100% | +20(Ref) | 3509 999 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3509 999 997 | -1.8 | 0.000 000 | -0.001 |
| | 100% | -20 | 3509 999 996 | -2.6 | 0.000 000 | -0.001 |
| | 100% | -10 | 3509 999 998 | -0.5 | 0.000 000 | 0.000 |
| | 100% | 0 | 3509 999 995 | -3.0 | 0.000 000 | -0.001 |
| | 100% | +10 | 3509 999 997 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +30 | 3509 999 997 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +40 | 3509 999 996 | -2.4 | 0.000 000 | -0.001 |
| | 100% | +50 | 3509 999 997 | -1.6 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3509 999 997 | -1.1 | 0.000 000 | 0.000 |

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3495.000 | 100% | +20(Ref) | 3494 999 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3494 999 997 | -0.4 | 0.000 000 | 0.000 |
| | 100% | -20 | 3494 999 994 | -3.3 | 0.000 000 | -0.001 |
| | 100% | -10 | 3494 999 997 | -0.7 | 0.000 000 | 0.000 |
| | 100% | 0 | 3494 999 994 | -3.5 | 0.000 000 | -0.001 |
| | 100% | +10 | 3494 999 994 | -3.2 | 0.000 000 | -0.001 |
| | 100% | +30 | 3494 999 994 | -3.2 | 0.000 000 | -0.001 |
| | 100% | +40 | 3494 999 996 | -1.7 | 0.000 000 | 0.000 |
| | 100% | +50 | 3494 999 995 | -2.1 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3494 999 995 | -2.1 | 0.000 000 | -0.001 |
| 3504.990 | 100% | +20(Ref) | 3504 989 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3504 989 998 | -1.2 | 0.000 000 | 0.000 |
| | 100% | -20 | 3504 989 998 | -1.0 | 0.000 000 | 0.000 |
| | 100% | -10 | 3504 989 995 | -3.9 | 0.000 000 | -0.001 |
| | 100% | 0 | 3504 989 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | +10 | 3504 989 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | +30 | 3504 989 997 | -1.5 | 0.000 000 | 0.000 |
| | 100% | +40 | 3504 989 997 | -1.8 | 0.000 000 | -0.001 |
| | 100% | +50 | 3504 989 998 | -0.9 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3504 990 000 | 0.9 | 0.000 000 | 0.000 |

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3500.010 | 100% | +20(Ref) | 3500 009 996 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3500 009 994 | -2.6 | 0.000 000 | -0.001 |
| | 100% | -20 | 3500 009 992 | -4.8 | 0.000 000 | -0.001 |
| | 100% | -10 | 3500 009 992 | -4.8 | 0.000 000 | -0.001 |
| | 100% | 0 | 3500 009 994 | -2.8 | 0.000 000 | -0.001 |
| | 100% | +10 | 3500 009 994 | -2.8 | 0.000 000 | -0.001 |
| | 100% | +30 | 3500 009 995 | -1.8 | 0.000 000 | -0.001 |
| | 100% | +40 | 3500 009 994 | -2.6 | 0.000 000 | -0.001 |
| | 100% | +50 | 3500 009 996 | -0.9 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3500 009 991 | -5.2 | 0.000 000 | -0.001 |

# 9. TEST DATA (3700 MHz - 3980 MHz)

## 9.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3705.00 | Sub6 n77/ 10 MHz [30 kHz] | PI/2 BPSK | -26.14 | 12.35 | 11.40 | 3.09 | H | < 1.00 | 0.116 | 20.66 | 1 | 1 |
| | | QPSK | -26.23 | 12.26 | 11.40 | 3.09 | H | | 0.114 | 20.57 | | |
| | | 16-QAM | -27.10 | 11.39 | 11.40 | 3.09 | H | | 0.093 | 19.70 | | |
| | | 64-QAM | -28.64 | 9.85 | 11.40 | 3.09 | H | | 0.066 | 18.16 | | |
| | | 256-QAM | -30.65 | 7.84 | 11.40 | 3.09 | H | | 0.041 | 16.15 | | |
| 3840.00 | | PI/2 BPSK | -26.57 | 13.11 | 11.10 | 3.14 | H | | 0.128 | 21.07 | 1 | 12 |
| | | QPSK | -26.62 | 13.06 | 11.10 | 3.14 | H | | 0.126 | 21.02 | | |
| | | 16-QAM | -27.66 | 12.02 | 11.10 | 3.14 | H | | 0.100 | 19.98 | | |
| | | 64-QAM | -29.26 | 10.42 | 11.10 | 3.14 | H | | 0.069 | 18.38 | | |
| | | 256-QAM | -31.09 | 8.59 | 11.10 | 3.14 | H | | 0.045 | 16.55 | | |
| 3975.00 | | PI/2 BPSK | -27.05 | 12.60 | 10.90 | 3.20 | H | | 0.107 | 20.30 | 1 | 1 |
| | | QPSK | -27.11 | 12.54 | 10.90 | 3.20 | H | | 0.106 | 20.24 | | |
| | | 16-QAM | -28.11 | 11.54 | 10.90 | 3.20 | H | | 0.084 | 19.24 | | |
| | | 64-QAM | -29.66 | 9.99 | 10.90 | 3.20 | H | | 0.059 | 17.69 | | |
| | | 256-QAM | -31.51 | 8.14 | 10.90 | 3.20 | H | | 0.038 | 15.84 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3707.51 | Sub6 n77/ 15 MHz [30 kHz] | PI/2 BPSK | -26.07 | 12.42 | 11.40 | 3.09 | H | < 1.00 | 0.118 | 20.73 | 1 | 1 |
| | | QPSK | -26.12 | 12.37 | 11.40 | 3.09 | H | | 0.117 | 20.68 | | |
| | | 16-QAM | -27.25 | 11.24 | 11.40 | 3.09 | H | | 0.090 | 19.55 | | |
| | | 64-QAM | -28.59 | 9.90 | 11.40 | 3.09 | H | | 0.066 | 18.21 | | |
| | | 256-QAM | -30.59 | 7.90 | 11.40 | 3.09 | H | | 0.042 | 16.21 | | |
| 3840.00 | | PI/2 BPSK | -26.73 | 12.95 | 11.10 | 3.14 | H | | 0.123 | 20.91 | 1 | 19 |
| | | QPSK | -26.81 | 12.87 | 11.10 | 3.14 | H | | 0.121 | 20.83 | | |
| | | 16-QAM | -27.87 | 11.81 | 11.10 | 3.14 | H | | 0.095 | 19.77 | | |
| | | 64-QAM | -29.46 | 10.22 | 11.10 | 3.14 | H | | 0.066 | 18.18 | | |
| | | 256-QAM | -31.29 | 8.39 | 11.10 | 3.14 | H | | 0.043 | 16.35 | | |
| 3972.48 | | PI/2 BPSK | -26.95 | 12.70 | 10.90 | 3.20 | H | | 0.110 | 20.40 | 1 | 1 |
| | | QPSK | -26.96 | 12.69 | 10.90 | 3.20 | H | | 0.109 | 20.39 | | |
| | | 16-QAM | -27.91 | 11.74 | 10.90 | 3.20 | H | | 0.088 | 19.44 | | |
| | | 64-QAM | -29.54 | 10.11 | 10.90 | 3.20 | H | | 0.060 | 17.81 | | |
| | | 256-QAM | -31.57 | 8.08 | 10.90 | 3.20 | H | | 0.038 | 15.78 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3710.01 | Sub6 n77/ 20 MHz [30 kHz] | PI/2 BPSK | -26.15 | 12.37 | 11.40 | 3.11 | H | < 1.00 | 0.116 | 20.66 | 1 | 1 |
| | | QPSK | -26.16 | 12.36 | 11.40 | 3.11 | H | | 0.116 | 20.65 | | |
| | | 16-QAM | -27.09 | 11.43 | 11.40 | 3.11 | H | | 0.094 | 19.72 | | |
| | | 64-QAM | -28.78 | 9.74 | 11.40 | 3.11 | H | | 0.064 | 18.03 | | |
| | | 256-QAM | -30.64 | 7.88 | 11.40 | 3.11 | H | | 0.041 | 16.17 | | |
| 3840.00 | | PI/2 BPSK | -26.84 | 12.84 | 11.10 | 3.14 | H | | 0.120 | 20.80 | 1 | 49 |
| | | QPSK | -26.86 | 12.82 | 11.10 | 3.14 | H | | 0.120 | 20.78 | | |
| | | 16-QAM | -27.82 | 11.86 | 11.10 | 3.14 | H | | 0.096 | 19.82 | | |
| | | 64-QAM | -29.33 | 10.35 | 11.10 | 3.14 | H | | 0.068 | 18.31 | | |
| | | 256-QAM | -31.20 | 8.48 | 11.10 | 3.14 | H | | 0.044 | 16.44 | | |
| 3969.99 | | PI/2 BPSK | -27.01 | 12.61 | 10.90 | 3.20 | H | | 0.107 | 20.31 | 1 | 25 |
| | | QPSK | -27.16 | 12.46 | 10.90 | 3.20 | H | | 0.104 | 20.16 | | |
| | | 16-QAM | -28.12 | 11.50 | 10.90 | 3.20 | H | | 0.083 | 19.20 | | |
| | | 64-QAM | -29.73 | 9.89 | 10.90 | 3.20 | H | | 0.057 | 17.59 | | |
| | | 256-QAM | -31.68 | 7.94 | 10.90 | 3.20 | H | | 0.037 | 15.64 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3715.02 | Sub6 n77/ 30 MHz [30 kHz] | PI/2 BPSK | -26.20 | 12.47 | 11.40 | 3.12 | H | < 1.00 | 0.119 | 20.75 | 1 | 1 |
| | | QPSK | -26.25 | 12.42 | 11.40 | 3.12 | H | | 0.118 | 20.70 | | |
| | | 16-QAM | -27.31 | 11.36 | 11.40 | 3.12 | H | | 0.092 | 19.64 | | |
| | | 64-QAM | -28.82 | 9.85 | 11.40 | 3.12 | H | | 0.065 | 18.13 | | |
| | | 256-QAM | -30.51 | 8.16 | 11.40 | 3.12 | H | | 0.044 | 16.44 | | |
| 3840.00 | | PI/2 BPSK | -26.85 | 12.83 | 11.10 | 3.14 | H | | 0.120 | 20.79 | 1 | 76 |
| | | QPSK | -26.90 | 12.78 | 11.10 | 3.14 | H | | 0.119 | 20.74 | | |
| | | 16-QAM | -27.99 | 11.69 | 11.10 | 3.14 | H | | 0.092 | 19.65 | | |
| | | 64-QAM | -29.40 | 10.28 | 11.10 | 3.14 | H | | 0.067 | 18.24 | | |
| | | 256-QAM | -31.36 | 8.32 | 11.10 | 3.14 | H | | 0.043 | 16.28 | | |
| 3964.98 | | PI/2 BPSK | -27.14 | 12.55 | 10.90 | 3.21 | H | | 0.106 | 20.24 | 1 | 39 |
| | | QPSK | -27.15 | 12.54 | 10.90 | 3.21 | H | | 0.105 | 20.23 | | |
| | | 16-QAM | -28.22 | 11.47 | 10.90 | 3.21 | H | | 0.082 | 19.16 | | |
| | | 64-QAM | -29.58 | 10.11 | 10.90 | 3.21 | H | | 0.060 | 17.80 | | |
| | | 256-QAM | -31.56 | 8.13 | 10.90 | 3.21 | H | | 0.038 | 15.82 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3720.00 | Sub6 n77/ 40 MHz [30 kHz] | PI/2 BPSK | -26.23 | 12.46 | 11.40 | 3.14 | H | < 1.00 | 0.118 | 20.72 | 1 | 1 |
| | | QPSK | -26.27 | 12.42 | 11.40 | 3.14 | H | | 0.117 | 20.68 | | |
| | | 16-QAM | -27.35 | 11.34 | 11.40 | 3.14 | H | | 0.091 | 19.60 | | |
| | | 64-QAM | -28.78 | 9.91 | 11.40 | 3.14 | H | | 0.066 | 18.17 | | |
| | | 256-QAM | -30.64 | 8.05 | 11.40 | 3.14 | H | | 0.043 | 16.31 | | |
| 3840.00 | | PI/2 BPSK | -26.90 | 12.78 | 11.10 | 3.14 | H | | 0.119 | 20.74 | 1 | 104 |
| | | QPSK | -26.94 | 12.74 | 11.10 | 3.14 | H | | 0.117 | 20.70 | | |
| | | 16-QAM | -28.01 | 11.67 | 11.10 | 3.14 | H | | 0.092 | 19.63 | | |
| | | 64-QAM | -29.36 | 10.32 | 11.10 | 3.14 | H | | 0.067 | 18.28 | | |
| | | 256-QAM | -31.21 | 8.47 | 11.10 | 3.14 | H | | 0.044 | 16.43 | | |
| 3960.00 | | PI/2 BPSK | -26.98 | 12.80 | 10.90 | 3.21 | H | | 0.112 | 20.49 | 1 | 53 |
| | | QPSK | -27.13 | 12.65 | 10.90 | 3.21 | H | | 0.108 | 20.34 | | |
| | | 16-QAM | -28.06 | 11.72 | 10.90 | 3.21 | H | | 0.087 | 19.41 | | |
| | | 64-QAM | -29.73 | 10.05 | 10.90 | 3.21 | H | | 0.059 | 17.74 | | |
| | | 256-QAM | -31.38 | 8.40 | 10.90 | 3.21 | H | | 0.041 | 16.09 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3725.10 | Sub6 n77/ 50 MHz [30 kHz] | PI/2 BPSK | -26.08 | 12.76 | 11.40 | 3.14 | H | < 1.00 | 0.126 | 21.02 | 1 | 1 |
| | | QPSK | -26.15 | 12.69 | 11.40 | 3.14 | H | | 0.124 | 20.95 | | |
| | | 16-QAM | -27.20 | 11.64 | 11.40 | 3.14 | H | | 0.098 | 19.90 | | |
| | | 64-QAM | -28.61 | 10.23 | 11.40 | 3.14 | H | | 0.071 | 18.49 | | |
| | | 256-QAM | -30.53 | 8.31 | 11.40 | 3.14 | H | | 0.045 | 16.57 | | |
| 3840.00 | | PI/2 BPSK | -26.81 | 12.87 | 11.10 | 3.14 | H | | 0.121 | 20.83 | 1 | 131 |
| | | QPSK | -26.87 | 12.81 | 11.10 | 3.14 | H | | 0.120 | 20.77 | | |
| | | 16-QAM | -27.92 | 11.76 | 11.10 | 3.14 | H | | 0.094 | 19.72 | | |
| | | 64-QAM | -29.33 | 10.35 | 11.10 | 3.14 | H | | 0.068 | 18.31 | | |
| | | 256-QAM | -31.20 | 8.48 | 11.10 | 3.14 | H | | 0.044 | 16.44 | | |
| 3954.99 | | PI/2 BPSK | -26.96 | 12.83 | 10.90 | 3.21 | H | | 0.113 | 20.52 | 1 | 66 |
| | | QPSK | -27.06 | 12.73 | 10.90 | 3.21 | H | | 0.110 | 20.42 | | |
| | | 16-QAM | -28.03 | 11.76 | 10.90 | 3.21 | H | | 0.088 | 19.45 | | |
| | | 64-QAM | -29.54 | 10.25 | 10.90 | 3.21 | H | | 0.062 | 17.94 | | |
| | | 256-QAM | -31.64 | 8.15 | 10.90 | 3.21 | H | | 0.038 | 15.84 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3730.02 | Sub6 n77/ 60 MHz [30 kHz] | PI/2 BPSK | -26.17 | 12.69 | 11.40 | 3.14 | H | < 1.00 | 0.124 | 20.95 | 1 | 1 |
| | | QPSK | -26.18 | 12.68 | 11.40 | 3.14 | H | | 0.124 | 20.94 | | |
| | | 16-QAM | -27.25 | 11.61 | 11.40 | 3.14 | H | | 0.097 | 19.87 | | |
| | | 64-QAM | -28.65 | 10.21 | 11.40 | 3.14 | H | | 0.070 | 18.47 | | |
| | | 256-QAM | -30.62 | 8.24 | 11.40 | 3.14 | H | | 0.045 | 16.50 | | |
| 3840.00 | | PI/2 BPSK | -26.70 | 12.98 | 11.10 | 3.14 | H | | 0.124 | 20.94 | 1 | 160 |
| | | QPSK | -26.71 | 12.97 | 11.10 | 3.14 | H | | 0.124 | 20.93 | | |
| | | 16-QAM | -27.77 | 11.91 | 11.10 | 3.14 | H | | 0.097 | 19.87 | | |
| | | 64-QAM | -29.32 | 10.36 | 11.10 | 3.14 | H | | 0.068 | 18.32 | | |
| | | 256-QAM | -31.23 | 8.45 | 11.10 | 3.14 | H | | 0.044 | 16.41 | | |
| 3949.98 | | PI/2 BPSK | -27.03 | 12.75 | 10.90 | 3.20 | H | | 0.111 | 20.45 | 1 | 81 |
| | | QPSK | -27.05 | 12.73 | 10.90 | 3.20 | H | | 0.110 | 20.43 | | |
| | | 16-QAM | -28.10 | 11.68 | 10.90 | 3.20 | H | | 0.087 | 19.38 | | |
| | | 64-QAM | -29.65 | 10.13 | 10.90 | 3.20 | H | | 0.061 | 17.83 | | |
| | | 256-QAM | -31.50 | 8.28 | 10.90 | 3.20 | H | | 0.040 | 15.98 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3735.00 | Sub6 n77/ 70 MHz [30 kHz] | PI/2 BPSK | -26.07 | 12.79 | 11.40 | 3.12 | H | < 1.00 | 0.128 | 21.07 | 1 | 1 |
| | | QPSK | -26.13 | 12.73 | 11.40 | 3.12 | H | | 0.126 | 21.01 | | |
| | | 16-QAM | -26.97 | 11.89 | 11.40 | 3.12 | H | | 0.104 | 20.17 | | |
| | | 64-QAM | -28.72 | 10.14 | 11.40 | 3.12 | H | | 0.070 | 18.42 | | |
| | | 256-QAM | -30.44 | 8.42 | 11.40 | 3.12 | H | | 0.047 | 16.70 | | |
| 3840.00 | | PI/2 BPSK | -26.64 | 13.04 | 11.10 | 3.14 | H | | 0.126 | 21.00 | 1 | 187 |
| | | QPSK | -26.67 | 13.01 | 11.10 | 3.14 | H | | 0.125 | 20.97 | | |
| | | 16-QAM | -27.68 | 12.00 | 11.10 | 3.14 | H | | 0.099 | 19.96 | | |
| | | 64-QAM | -29.33 | 10.35 | 11.10 | 3.14 | H | | 0.068 | 18.31 | | |
| | | 256-QAM | -31.09 | 8.59 | 11.10 | 3.14 | H | | 0.045 | 16.55 | | |
| 3945.00 | | PI/2 BPSK | -27.06 | 12.78 | 10.85 | 3.18 | H | | 0.111 | 20.45 | 1 | 94 |
| | | QPSK | -27.07 | 12.77 | 10.85 | 3.18 | H | | 0.111 | 20.44 | | |
| | | 16-QAM | -27.89 | 11.95 | 10.85 | 3.18 | H | | 0.092 | 19.62 | | |
| | | 64-QAM | -29.49 | 10.35 | 10.85 | 3.18 | H | | 0.063 | 18.02 | | |
| | | 256-QAM | -31.55 | 8.29 | 10.85 | 3.18 | H | | 0.039 | 15.96 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3740.01 | Sub6 n77/ 80 MHz [30 kHz] | PI/2 BPSK | -26.66 | 12.20 | 11.40 | 3.10 | H | < 1.00 | 0.112 | 20.50 | 1 | 1 |
| | | QPSK | -26.71 | 12.15 | 11.40 | 3.10 | H | | 0.111 | 20.45 | | |
| | | 16-QAM | -27.68 | 11.18 | 11.40 | 3.10 | H | | 0.089 | 19.48 | | |
| | | 64-QAM | -29.24 | 9.62 | 11.40 | 3.10 | H | | 0.062 | 17.92 | | |
| | | 256-QAM | -31.13 | 7.73 | 11.40 | 3.10 | H | | 0.040 | 16.03 | | |
| 3840.00 | | PI/2 BPSK | -26.88 | 12.80 | 11.10 | 3.14 | H | | 0.119 | 20.76 | 1 | 215 |
| | | QPSK | -26.92 | 12.76 | 11.10 | 3.14 | H | | 0.118 | 20.72 | | |
| | | 16-QAM | -27.84 | 11.84 | 11.10 | 3.14 | H | | 0.095 | 19.80 | | |
| | | 64-QAM | -29.44 | 10.24 | 11.10 | 3.14 | H | | 0.066 | 18.20 | | |
| | | 256-QAM | -31.39 | 8.29 | 11.10 | 3.14 | H | | 0.042 | 16.25 | | |
| 3939.99 | | PI/2 BPSK | -26.84 | 12.39 | 11.40 | 3.10 | H | | 0.117 | 20.69 | 1 | 108 |
| | | QPSK | -26.87 | 12.36 | 11.40 | 3.10 | H | | 0.116 | 20.66 | | |
| | | 16-QAM | -28.05 | 11.18 | 11.40 | 3.10 | H | | 0.089 | 19.48 | | |
| | | 64-QAM | -29.52 | 9.71 | 11.40 | 3.10 | H | | 0.063 | 18.01 | | |
| | | 256-QAM | -31.43 | 7.80 | 11.40 | 3.10 | H | | 0.041 | 16.10 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3745.02 | Sub6 n77/ 90 MHz [30 kHz] | PI/2 BPSK | -26.64 | 12.10 | 11.35 | 3.09 | H | < 1.00 | 0.109 | 20.36 | 1 | 1 |
| | | QPSK | -26.65 | 12.09 | 11.35 | 3.09 | H | | 0.108 | 20.35 | | |
| | | 16-QAM | -27.66 | 11.08 | 11.35 | 3.09 | H | | 0.086 | 19.34 | | |
| | | 64-QAM | -29.07 | 9.67 | 11.35 | 3.09 | H | | 0.062 | 17.93 | | |
| | | 256-QAM | -31.03 | 7.71 | 11.35 | 3.09 | H | | 0.040 | 15.97 | | |
| 3840.00 | | PI/2 BPSK | -26.84 | 12.84 | 11.10 | 3.14 | H | | 0.120 | 20.80 | 1 | 243 |
| | | QPSK | -26.88 | 12.80 | 11.10 | 3.14 | H | | 0.119 | 20.76 | | |
| | | 16-QAM | -27.76 | 11.92 | 11.10 | 3.14 | H | | 0.097 | 19.88 | | |
| | | 64-QAM | -29.34 | 10.34 | 11.10 | 3.14 | H | | 0.068 | 18.30 | | |
| | | 256-QAM | -31.29 | 8.39 | 11.10 | 3.14 | H | | 0.043 | 16.35 | | |
| 3934.98 | | PI/2 BPSK | -26.72 | 13.20 | 10.80 | 3.16 | H | | 0.121 | 20.84 | 1 | 122 |
| | | QPSK | -26.78 | 13.14 | 10.80 | 3.16 | H | | 0.120 | 20.78 | | |
| | | 16-QAM | -27.91 | 12.01 | 10.80 | 3.16 | H | | 0.092 | 19.65 | | |
| | | 64-QAM | -29.42 | 10.50 | 10.80 | 3.16 | H | | 0.065 | 18.14 | | |
| | | 256-QAM | -31.24 | 8.68 | 10.80 | 3.16 | H | | 0.043 | 16.32 | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3750.00 | Sub6 n77/ 100 MHz [30 kHz] | PI/2 BPSK | -26.64 | 11.99 | 11.30 | 3.08 | H | < 1.00 | 0.105 | 20.21 | 1 | 1 |
| | | QPSK | -26.68 | 11.95 | 11.30 | 3.08 | H | | 0.104 | 20.17 | | |
| | | 16-QAM | -27.55 | 11.08 | 11.30 | 3.08 | H | | 0.085 | 19.30 | | |
| | | 64-QAM | -29.15 | 9.48 | 11.30 | 3.08 | H | | 0.059 | 17.70 | | |
| | | 256-QAM | -31.10 | 7.53 | 11.30 | 3.08 | H | | 0.038 | 15.75 | | |
| 3840.00 | | PI/2 BPSK | -26.84 | 12.84 | 11.10 | 3.14 | H | | 0.120 | 20.80 | 1 | 136 |
| | | QPSK | -26.86 | 12.82 | 11.10 | 3.14 | H | | 0.120 | 20.78 | | |
| | | 16-QAM | -27.66 | 12.02 | 11.10 | 3.14 | H | | 0.100 | 19.98 | | |
| | | 64-QAM | -29.32 | 10.36 | 11.10 | 3.14 | H | | 0.068 | 18.32 | | |
| | | 256-QAM | -31.24 | 8.44 | 11.10 | 3.14 | H | | 0.044 | 16.40 | | |
| 3930.00 | | PI/2 BPSK | -26.76 | 13.19 | 10.80 | 3.16 | H | | 0.121 | 20.83 | 1 | 136 |
| | | QPSK | -26.79 | 13.16 | 10.80 | 3.16 | H | | 0.120 | 20.80 | | |
| | | 16-QAM | -27.66 | 12.29 | 10.80 | 3.16 | H | | 0.099 | 19.93 | | |
| | | 64-QAM | -29.22 | 10.73 | 10.80 | 3.16 | H | | 0.069 | 18.37 | | |
| | | 256-QAM | -31.11 | 8.84 | 10.80 | 3.16 | H | | 0.044 | 16.48 | | |

## 9.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77(78)
▣ Bandwidth: 10 MHz
▣ Modulation: PI/2 BPSK
▣ Distance: 1 meters
▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | RB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size | Offset |
| 647000 (3705.000) | 7 410.00 | -63.86 | 10.80 | -56.30 | 4.47 | V | -49.97 | -13.00 | 1 | 1 |
| | 11 115.00 | -62.31 | 11.30 | -50.86 | 5.61 | V | -45.17 | -13.00 | | |
| | 14 820.00 | -57.91 | 13.20 | -52.83 | 6.59 | V | -46.22 | -13.00 | | |
| 656000 (3840.00) | 7 680.00 | -63.76 | 11.10 | -56.90 | 4.55 | V | -50.35 | -13.00 | 1 | 12 |
| | 11 520.00 | -65.56 | 11.50 | -54.42 | 5.70 | V | -48.62 | -13.00 | | |
| | 15 360.00 | -60.59 | 15.10 | -54.80 | 6.72 | V | -46.42 | -13.00 | | |
| 665000 (3975.000) | 7 950.00 | -62.93 | 10.70 | -54.80 | 4.64 | V | -48.74 | -13.00 | 1 | 1 |
| | 11 925.00 | -61.44 | 12.10 | -51.21 | 5.87 | V | -44.98 | -13.00 | | |
| | 15 900.00 | -63.50 | 15.00 | -55.99 | 6.87 | V | -47.86 | -13.00 | | |

### 9.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3840.00 | BPSK | Full RB | 0 | 4.22 |
| | | | QPSK | | | 5.30 |
| | | | 16-QAM | | | 5.77 |
| | | | 64-QAM | | | 6.05 |
| | | | 256-QAM | | | 6.16 |
| | 15 MHz | | BPSK | | | 4.33 |
| | | | QPSK | | | 5.26 |
| | | | 16-QAM | | | 5.73 |
| | | | 64-QAM | | | 5.99 |
| | | | 256-QAM | | | 6.11 |
| | 20 MHz | | BPSK | | | 4.16 |
| | | | QPSK | | | 5.26 |
| | | | 16-QAM | | | 5.78 |
| | | | 64-QAM | | | 6.06 |
| | | | 256-QAM | | | 6.03 |
| | 30 MHz | | BPSK | | | 4.26 |
| | | | QPSK | | | 5.24 |
| | | | 16-QAM | | | 5.78 |
| | | | 64-QAM | | | 6.06 |
| | | | 256-QAM | | | 6.12 |
| | 40 MHz | | BPSK | | | 4.34 |
| | | | QPSK | | | 5.19 |
| | | | 16-QAM | | | 5.77 |
| | | | 64-QAM | | | 5.98 |
| | | | 256-QAM | | | 6.01 |
| | 50 MHz | | BPSK | | | 4.72 |
| | | | QPSK | | | 5.26 |
| | | | 16-QAM | | | 5.75 |
| | | | 64-QAM | | | 6.00 |
| | | | 256-QAM | | | 6.00 |
| | 60 MHz | | BPSK | | | 5.71 |
| | | | QPSK | | | 5.78 |
| | | | 16-QAM | | | 5.99 |
| | | | 64-QAM | | | 6.13 |
| | | | 256-QAM | | | 6.19 |
| | 70 MHz | | BPSK | | | 4.24 |
| | | | QPSK | | | 5.31 |
| | | | 16-QAM | | | 5.81 |
| | | | 64-QAM | | | 5.98 |
| | | | 256-QAM | | | 6.10 |
| | 80 MHz | | BPSK | | | 4.33 |
| | | | QPSK | | | 5.28 |
| | | | 16-QAM | | | 5.78 |
| | | | 64-QAM | | | 5.98 |
| | | | 256-QAM | | | 6.13 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 90 MHz | | BPSK | | | 4.17 |
| | | | QPSK | | | 5.28 |
| | | | 16-QAM | | | 5.73 |
| | | | 64-QAM | | | 5.93 |
| | | | 256-QAM | | | 6.00 |
| | 100 MHz | | BPSK | | | 4.82 |
| | | | QPSK | | | 5.22 |
| | | | 16-QAM | | | 5.72 |
| | | | 64-QAM | | | 5.90 |
| | | | 256-QAM | | | 6.01 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 392 ~ 446.

## 9.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3840.00 | BPSK | Full RB | 0 | 8.6877 |
| | | | QPSK | | | 8.6926 |
| | | | 16-QAM | | | 8.6664 |
| | | | 64-QAM | | | 8.6747 |
| | | | 256-QAM | | | 8.6470 |
| | 15 MHz | | BPSK | | | 12.950 |
| | | | QPSK | | | 12.956 |
| | | | 16-QAM | | | 12.966 |
| | | | 64-QAM | | | 12.998 |
| | | | 256-QAM | | | 12.931 |
| | 20 MHz | | BPSK | | | 18.012 |
| | | | QPSK | | | 17.965 |
| | | | 16-QAM | | | 17.952 |
| | | | 64-QAM | | | 18.018 |
| | | | 256-QAM | | | 17.995 |
| | 30 MHz | | BPSK | | | 26.995 |
| | | | QPSK | | | 26.959 |
| | | | 16-QAM | | | 26.978 |
| | | | 64-QAM | | | 27.052 |
| | | | 256-QAM | | | 26.932 |
| | 40 MHz | | BPSK | | | 35.935 |
| | | | QPSK | | | 35.885 |
| | | | 16-QAM | | | 35.877 |
| | | | 64-QAM | | | 35.957 |
| | | | 256-QAM | | | 35.873 |
| | 50 MHz | | BPSK | | | 46.065 |
| | | | QPSK | | | 45.984 |
| | | | 16-QAM | | | 45.948 |
| | | | 64-QAM | | | 45.848 |
| | | | 256-QAM | | | 45.855 |
| | 60 MHz | | BPSK | | | 58.132 |
| | | | QPSK | | | 58.158 |
| | | | 16-QAM | | | 58.324 |
| | | | 64-QAM | | | 58.290 |
| | | | 256-QAM | | | 58.254 |
| | 70 MHz | | BPSK | | | 64.795 |
| | | | QPSK | | | 64.596 |
| | | | 16-QAM | | | 64.669 |
| | | | 64-QAM | | | 64.842 |
| | | | 256-QAM | | | 64.736 |
| | 80 MHz | | BPSK | | | 77.456 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | QPSK | | | 77.524 |
| | | | 16-QAM | | | 77.364 |
| | | | 64-QAM | | | 77.572 |
| | | | 256-QAM | | | 77.588 |
| | 90 MHz | | BPSK | | | 86.986 |
| | | | QPSK | | | 87.107 |
| | | | 16-QAM | | | 86.970 |
| | | | 64-QAM | | | 86.993 |
| | | | 256-QAM | | | 86.998 |
| | 100 MHz | | BPSK | | | 96.740 |
| | | | QPSK | | | 96.514 |
| | | | 16-QAM | | | 96.600 |
| | | | 64-QAM | | | 96.711 |
| | | | 256-QAM | | | 96.508 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 447 ~ 501.

## 9.5 CONDUCTED SPURIOUS EMISSIONS

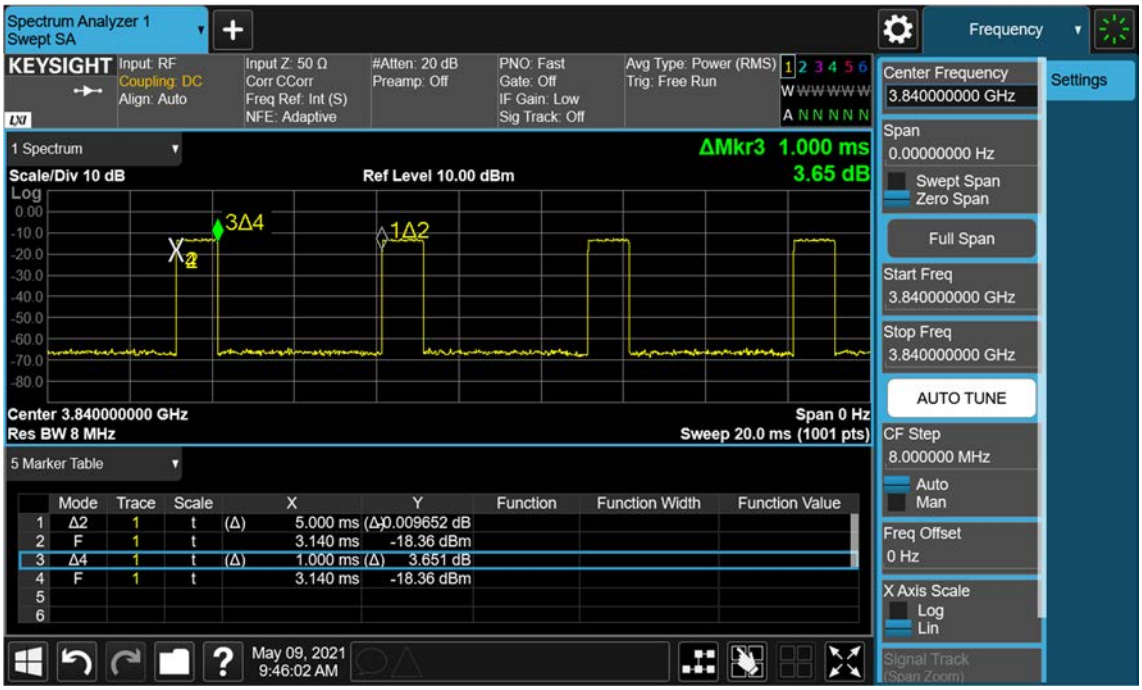
| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n77 | 10 | 3705.000 | 8.8928 | 37.805 | -70.414 | -32.609 | -13.00 |
| | | 3840.000 | 9.9606 | 37.805 | -70.963 | -33.158 | |
| | | 3975.000 | 4.9437 | 37.190 | -70.526 | -33.336 | |
| | 15 | 3707.520 | 8.2652 | 37.805 | -70.710 | -32.905 | |
| | | 3840.000 | 9.7099 | 37.805 | -70.073 | -32.268 | |
| | | 3972.480 | 9.4222 | 37.805 | -70.160 | -32.355 | |
| | 20 | 3710.010 | 9.7263 | 37.805 | -70.620 | -32.815 | |
| | | 3840.000 | 9.1800 | 37.805 | -70.818 | -33.013 | |
| | | 3969.990 | 5.9946 | 37.805 | -70.633 | -32.828 | |
| | 30 | 3715.020 | 8.8420 | 37.805 | -70.679 | -32.874 | |
| | | 3840.000 | 9.4791 | 37.805 | -70.591 | -32.786 | |
| | | 3964.980 | 8.5668 | 37.805 | -69.651 | -31.846 | |
| | 40 | 3720.000 | 9.7049 | 37.805 | -70.950 | -33.145 | |
| | | 3840.000 | 4.8974 | 37.190 | -70.760 | -33.570 | |
| | | 3960.000 | 8.2647 | 37.805 | -71.218 | -33.413 | |
| | 50 | 3725.010 | 8.0165 | 37.805 | -71.068 | -33.263 | |
| | | 3840.000 | 8.8903 | 37.805 | -70.028 | -32.223 | |
| | | 3954.990 | 5.4936 | 37.805 | -69.828 | -32.023 | |
| | 60 | 3730.020 | 9.1296 | 37.805 | -69.701 | -31.896 | |
| | | 3840.000 | 8.9013 | 37.805 | -70.256 | -32.451 | |
| | | 3949.980 | 4.9826 | 37.190 | -70.658 | -33.468 | |
| | 70 | 3735.000 | 8.0259 | 37.805 | -70.703 | -32.898 | |
| | | 3840.000 | 9.4442 | 37.805 | -70.513 | -32.708 | |
| | | 3945.000 | 8.2538 | 37.805 | -70.109 | -32.304 | |
| | 80 | 3740.010 | 9.9821 | 37.805 | -69.918 | -32.113 | |
| | | 3840.000 | 9.1795 | 37.805 | -70.831 | -33.026 | |
| | | 3939.990 | 9.1660 | 37.805 | -71.145 | -33.340 | |
| | 90 | 3745.020 | 9.1226 | 37.805 | -70.737 | -32.932 | |
| | | 3840.000 | 8.9013 | 37.805 | -70.552 | -32.747 | |
| | | 3934.980 | 4.3829 | 37.190 | -70.008 | -32.818 | |
| | 100 | 3750.000 | 5.2124 | 37.805 | -70.105 | -32.300 | |
| | | 3840.000 | 9.4207 | 37.805 | -70.590 | -32.785 | |
| | | 3930.000 | 9.7084 | 37.805 | -70.711 | -32.906 | |

**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 502 ~ 567.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.990




- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter

- Result(dBm) = Reading + Factor

3. Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 34.484 |
| 1 – 5 | 37.190 |
| 5 – 10 | 37.805 |
| 10 – 15 | 38.330 |
| 15 – 20 | 38.703 |
| Above 20 | 39.345 |

## 9.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 568 ~ 699.
2. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990

## 9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3705.000 | 100% | +20(Ref) | 3704 999 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3704 999 995 | -3.2 | 0.000 000 | -0.001 |
| | 100% | -20 | 3704 999 998 | -0.5 | 0.000 000 | 0.000 |
| | 100% | -10 | 3704 999 996 | -2.5 | 0.000 000 | -0.001 |
| | 100% | 0 | 3704 999 998 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +10 | 3704 999 997 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +30 | 3704 999 996 | -2.5 | 0.000 000 | -0.001 |
| | 100% | +40 | 3704 999 998 | -1.0 | 0.000 000 | 0.000 |
| | 100% | +50 | 3704 999 996 | -3.1 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3704 999 995 | -3.8 | 0.000 000 | -0.001 |
| 3975.000 | 100% | +20(Ref) | 3974 999 993 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3974 999 984 | -8.4 | 0.000 000 | -0.002 |
| | 100% | -20 | 3974 999 984 | -8.8 | 0.000 000 | -0.002 |
| | 100% | -10 | 3974 999 985 | -7.7 | 0.000 000 | -0.002 |
| | 100% | 0 | 3974 999 986 | -7.1 | 0.000 000 | -0.002 |
| | 100% | +10 | 3974 999 986 | -6.7 | 0.000 000 | -0.002 |
| | 100% | +30 | 3974 999 984 | -8.9 | 0.000 000 | -0.002 |
| | 100% | +40 | 3974 999 988 | -5.0 | 0.000 000 | -0.001 |
| | 100% | +50 | 3974 999 986 | -6.6 | 0.000 000 | -0.002 |
| | Batt. Endpoint | +20 | 3974 999 984 | -8.8 | 0.000 000 | -0.002 |

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3707.520 | 100% | +20(Ref) | 3707 519 996 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3707 519 994 | -2.8 | 0.000 000 | -0.001 |
| | 100% | -20 | 3707 519 996 | -0.9 | 0.000 000 | 0.000 |
| | 100% | -10 | 3707 519 994 | -2.6 | 0.000 000 | -0.001 |
| | 100% | 0 | 3707 519 993 | -3.5 | 0.000 000 | -0.001 |
| | 100% | +10 | 3707 519 991 | -5.5 | 0.000 000 | -0.001 |
| | 100% | +30 | 3707 519 994 | -2.4 | 0.000 000 | -0.001 |
| | 100% | +40 | 3707 519 994 | -2.9 | 0.000 000 | -0.001 |
| | 100% | +50 | 3707 519 993 | -3.2 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3707 519 992 | -4.4 | 0.000 000 | -0.001 |
| 3972.480 | 100% | +20(Ref) | 3972 479 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3972 479 995 | -4.2 | 0.000 000 | -0.001 |
| | 100% | -20 | 3972 480 000 | 0.8 | 0.000 000 | 0.000 |
| | 100% | -10 | 3972 479 998 | -1.0 | 0.000 000 | 0.000 |
| | 100% | 0 | 3972 479 997 | -2.3 | 0.000 000 | -0.001 |
| | 100% | +10 | 3972 480 000 | 0.9 | 0.000 000 | 0.000 |
| | 100% | +30 | 3972 479 997 | -2.6 | 0.000 000 | -0.001 |
| | 100% | +40 | 3972 479 999 | -0.4 | 0.000 000 | 0.000 |
| | 100% | +50 | 3972 480 000 | 1.3 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3972 479 996 | -3.3 | 0.000 000 | -0.001 |

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3710.010 | 100% | +20(Ref) | 3710 009 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3710 009 994 | -4.1 | 0.000 000 | -0.001 |
| | 100% | -20 | 3710 009 998 | -0.7 | 0.000 000 | 0.000 |
| | 100% | -10 | 3710 009 997 | -1.8 | 0.000 000 | 0.000 |
| | 100% | 0 | 3710 009 998 | -0.9 | 0.000 000 | 0.000 |
| | 100% | +10 | 3710 009 993 | -6.1 | 0.000 000 | -0.002 |
| | 100% | +30 | 3710 009 995 | -3.3 | 0.000 000 | -0.001 |
| | 100% | +40 | 3710 009 998 | -0.3 | 0.000 000 | 0.000 |
| | 100% | +50 | 3710 009 998 | -0.7 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3710 009 996 | -2.3 | 0.000 000 | -0.001 |
| 3969.990 | 100% | +20(Ref) | 3969 989 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3969 989 995 | -3.1 | 0.000 000 | -0.001 |
| | 100% | -20 | 3969 989 996 | -2.2 | 0.000 000 | -0.001 |
| | 100% | -10 | 3969 989 995 | -2.9 | 0.000 000 | -0.001 |
| | 100% | 0 | 3969 989 998 | -0.5 | 0.000 000 | 0.000 |
| | 100% | +10 | 3969 989 999 | 0.1 | 0.000 000 | 0.000 |
| | 100% | +30 | 3969 989 997 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +40 | 3969 989 999 | 1.0 | 0.000 000 | 0.000 |
| | 100% | +50 | 3969 989 998 | -0.4 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3969 989 996 | -2.8 | 0.000 000 | -0.001 |

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3715.020 | 100% | +20(Ref) | 3715 019 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3715 019 995 | -2.1 | 0.000 000 | -0.001 |
| | 100% | -20 | 3715 019 993 | -3.7 | 0.000 000 | -0.001 |
| | 100% | -10 | 3715 019 993 | -3.8 | 0.000 000 | -0.001 |
| | 100% | 0 | 3715 019 993 | -3.7 | 0.000 000 | -0.001 |
| | 100% | +10 | 3715 019 994 | -2.8 | 0.000 000 | -0.001 |
| | 100% | +30 | 3715 019 993 | -4.1 | 0.000 000 | -0.001 |
| | 100% | +40 | 3715 019 994 | -2.5 | 0.000 000 | -0.001 |
| | 100% | +50 | 3715 019 995 | -1.9 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3715 019 994 | -3.2 | 0.000 000 | -0.001 |
| 3964.980 | 100% | +20(Ref) | 3964 979 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3964 979 994 | -3.8 | 0.000 000 | -0.001 |
| | 100% | -20 | 3964 979 996 | -2.2 | 0.000 000 | -0.001 |
| | 100% | -10 | 3964 979 998 | -0.1 | 0.000 000 | 0.000 |
| | 100% | 0 | 3964 979 999 | 1.1 | 0.000 000 | 0.000 |
| | 100% | +10 | 3964 979 997 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +30 | 3964 979 995 | -2.6 | 0.000 000 | -0.001 |
| | 100% | +40 | 3964 980 000 | 1.5 | 0.000 000 | 0.000 |
| | 100% | +50 | 3964 979 996 | -1.7 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3964 979 998 | 0.1 | 0.000 000 | 0.000 |

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3720.000 | 100% | +20(Ref) | 3719 999 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3719 999 997 | -1.9 | 0.000 000 | -0.001 |
| | 100% | -20 | 3719 999 999 | -0.6 | 0.000 000 | 0.000 |
| | 100% | -10 | 3719 999 997 | -2.0 | 0.000 000 | -0.001 |
| | 100% | 0 | 3719 999 996 | -3.7 | 0.000 000 | -0.001 |
| | 100% | +10 | 3719 999 999 | -0.5 | 0.000 000 | 0.000 |
| | 100% | +30 | 3719 999 997 | -2.6 | 0.000 000 | -0.001 |
| | 100% | +40 | 3719 999 996 | -3.4 | 0.000 000 | -0.001 |
| | 100% | +50 | 3719 999 997 | -2.6 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3719 999 997 | -2.3 | 0.000 000 | -0.001 |
| 3960.000 | 100% | +20(Ref) | 3959 999 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3959 999 998 | 0.6 | 0.000 000 | 0.000 |
| | 100% | -20 | 3959 999 996 | -1.4 | 0.000 000 | 0.000 |
| | 100% | -10 | 3959 999 999 | 0.7 | 0.000 000 | 0.000 |
| | 100% | 0 | 3959 999 997 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +10 | 3959 999 997 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +30 | 3959 999 997 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +40 | 3959 999 999 | 1.5 | 0.000 000 | 0.000 |
| | 100% | +50 | 3959 999 996 | -1.6 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3959 999 995 | -3.1 | 0.000 000 | -0.001 |

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3725.010 | 100% | +20(Ref) | 3725 010 000 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3725 009 997 | -2.4 | 0.000 000 | -0.001 |
| | 100% | -20 | 3725 009 997 | -3.0 | 0.000 000 | -0.001 |
| | 100% | -10 | 3725 009 998 | -1.9 | 0.000 000 | -0.001 |
| | 100% | 0 | 3725 009 999 | -0.8 | 0.000 000 | 0.000 |
| | 100% | +10 | 3725 009 997 | -2.5 | 0.000 000 | -0.001 |
| | 100% | +30 | 3725 009 999 | -0.8 | 0.000 000 | 0.000 |
| | 100% | +40 | 3725 009 997 | -2.2 | 0.000 000 | -0.001 |
| | 100% | +50 | 3725 009 998 | -1.4 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3725 009 999 | -0.8 | 0.000 000 | 0.000 |
| 3954.990 | 100% | +20(Ref) | 3954 990 001 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3954 990 001 | 0.5 | 0.000 000 | 0.000 |
| | 100% | -20 | 3954 989 998 | -2.4 | 0.000 000 | -0.001 |
| | 100% | -10 | 3954 989 999 | -1.2 | 0.000 000 | 0.000 |
| | 100% | 0 | 3954 989 999 | -1.8 | 0.000 000 | 0.000 |
| | 100% | +10 | 3954 990 001 | 0.5 | 0.000 000 | 0.000 |
| | 100% | +30 | 3954 990 001 | 0.8 | 0.000 000 | 0.000 |
| | 100% | +40 | 3954 990 000 | -0.9 | 0.000 000 | 0.000 |
| | 100% | +50 | 3954 989 997 | -3.2 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3954 989 997 | -3.3 | 0.000 000 | -0.001 |

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3730.020 | 100% | +20(Ref) | 3730 020 000 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3730 019 997 | -2.9 | 0.000 000 | -0.001 |
| | 100% | -20 | 3730 020 000 | -0.4 | 0.000 000 | 0.000 |
| | 100% | -10 | 3730 019 999 | -1.4 | 0.000 000 | 0.000 |
| | 100% | 0 | 3730 019 997 | -3.7 | 0.000 000 | -0.001 |
| | 100% | +10 | 3730 019 999 | -1.6 | 0.000 000 | 0.000 |
| | 100% | +30 | 3730 019 998 | -2.2 | 0.000 000 | -0.001 |
| | 100% | +40 | 3730 019 998 | -2.1 | 0.000 000 | -0.001 |
| | 100% | +50 | 3730 019 998 | -2.7 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3730 019 999 | -1.3 | 0.000 000 | 0.000 |
| 3949.980 | 100% | +20(Ref) | 3949 979 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3949 979 996 | -0.9 | 0.000 000 | 0.000 |
| | 100% | -20 | 3949 979 995 | -1.5 | 0.000 000 | 0.000 |
| | 100% | -10 | 3949 979 995 | -1.5 | 0.000 000 | 0.000 |
| | 100% | 0 | 3949 979 996 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +10 | 3949 979 995 | -1.6 | 0.000 000 | 0.000 |
| | 100% | +30 | 3949 979 995 | -1.8 | 0.000 000 | 0.000 |
| | 100% | +40 | 3949 979 995 | -2.3 | 0.000 000 | -0.001 |
| | 100% | +50 | 3949 979 998 | 1.2 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3949 979 996 | -1.2 | 0.000 000 | 0.000 |

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3735.000 | 100% | +20(Ref) | 3734 999 995 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3734 999 993 | -2.7 | 0.000 000 | -0.001 |
| | 100% | -20 | 3734 999 993 | -2.7 | 0.000 000 | -0.001 |
| | 100% | -10 | 3734 999 991 | -4.1 | 0.000 000 | -0.001 |
| | 100% | 0 | 3734 999 992 | -3.2 | 0.000 000 | -0.001 |
| | 100% | +10 | 3734 999 990 | -5.4 | 0.000 000 | -0.001 |
| | 100% | +30 | 3734 999 992 | -3.2 | 0.000 000 | -0.001 |
| | 100% | +40 | 3734 999 993 | -2.3 | 0.000 000 | -0.001 |
| | 100% | +50 | 3734 999 991 | -4.3 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3734 999 994 | -1.8 | 0.000 000 | 0.000 |
| 3945.000 | 100% | +20(Ref) | 3944 999 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3944 999 996 | -2.7 | 0.000 000 | -0.001 |
| | 100% | -20 | 3944 999 996 | -2.7 | 0.000 000 | -0.001 |
| | 100% | -10 | 3944 999 996 | -2.7 | 0.000 000 | -0.001 |
| | 100% | 0 | 3944 999 996 | -3.4 | 0.000 000 | -0.001 |
| | 100% | +10 | 3944 999 998 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +30 | 3944 999 998 | -1.5 | 0.000 000 | 0.000 |
| | 100% | +40 | 3944 999 997 | -2.3 | 0.000 000 | -0.001 |
| | 100% | +50 | 3944 999 998 | -1.6 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3945 000 000 | 0.5 | 0.000 000 | 0.000 |

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3740.010 | 100% | +20(Ref) | 3740 009 996 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3740 009 994 | -1.8 | 0.000 000 | 0.000 |
| | 100% | -20 | 3740 009 993 | -3.3 | 0.000 000 | -0.001 |
| | 100% | -10 | 3740 009 993 | -3.3 | 0.000 000 | -0.001 |
| | 100% | 0 | 3740 009 992 | -4.7 | 0.000 000 | -0.001 |
| | 100% | +10 | 3740 009 995 | -1.2 | 0.000 000 | 0.000 |
| | 100% | +30 | 3740 009 993 | -2.9 | 0.000 000 | -0.001 |
| | 100% | +40 | 3740 009 992 | -4.7 | 0.000 000 | -0.001 |
| | 100% | +50 | 3740 009 993 | -2.9 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3740 009 994 | -2.2 | 0.000 000 | -0.001 |
| 3939.990 | 100% | +20(Ref) | 3939 990 000 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3939 989 997 | -2.8 | 0.000 000 | -0.001 |
| | 100% | -20 | 3939 990 000 | -0.6 | 0.000 000 | 0.000 |
| | 100% | -10 | 3939 989 999 | -1.4 | 0.000 000 | 0.000 |
| | 100% | 0 | 3939 990 000 | -0.7 | 0.000 000 | 0.000 |
| | 100% | +10 | 3939 990 000 | -0.3 | 0.000 000 | 0.000 |
| | 100% | +30 | 3939 989 998 | -2.2 | 0.000 000 | -0.001 |
| | 100% | +40 | 3939 989 999 | -0.9 | 0.000 000 | 0.000 |
| | 100% | +50 | 3939 990 000 | 0.0 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3939 990 000 | 0.0 | 0.000 000 | 0.000 |

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3745.020 | 100% | +20(Ref) | 3745 019 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3745 019 995 | -2.1 | 0.000 000 | -0.001 |
| | 100% | -20 | 3745 019 995 | -2.1 | 0.000 000 | -0.001 |
| | 100% | -10 | 3745 019 996 | -1.1 | 0.000 000 | 0.000 |
| | 100% | 0 | 3745 019 995 | -2.2 | 0.000 000 | -0.001 |
| | 100% | +10 | 3745 019 994 | -3.1 | 0.000 000 | -0.001 |
| | 100% | +30 | 3745 019 993 | -3.6 | 0.000 000 | -0.001 |
| | 100% | +40 | 3745 019 994 | -2.6 | 0.000 000 | -0.001 |
| | 100% | +50 | 3745 019 998 | 1.2 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3745 019 993 | -3.5 | 0.000 000 | -0.001 |
| 3934.980 | 100% | +20(Ref) | 3934 979 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3934 979 996 | -1.8 | 0.000 000 | 0.000 |
| | 100% | -20 | 3934 979 993 | -4.7 | 0.000 000 | -0.001 |
| | 100% | -10 | 3934 979 997 | 0.0 | 0.000 000 | 0.000 |
| | 100% | 0 | 3934 979 996 | -1.1 | 0.000 000 | 0.000 |
| | 100% | +10 | 3934 979 993 | -4.6 | 0.000 000 | -0.001 |
| | 100% | +30 | 3934 979 996 | -1.8 | 0.000 000 | 0.000 |
| | 100% | +40 | 3934 979 998 | 0.1 | 0.000 000 | 0.000 |
| | 100% | +50 | 3934 979 996 | -1.9 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3934 979 997 | -0.2 | 0.000 000 | 0.000 |

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

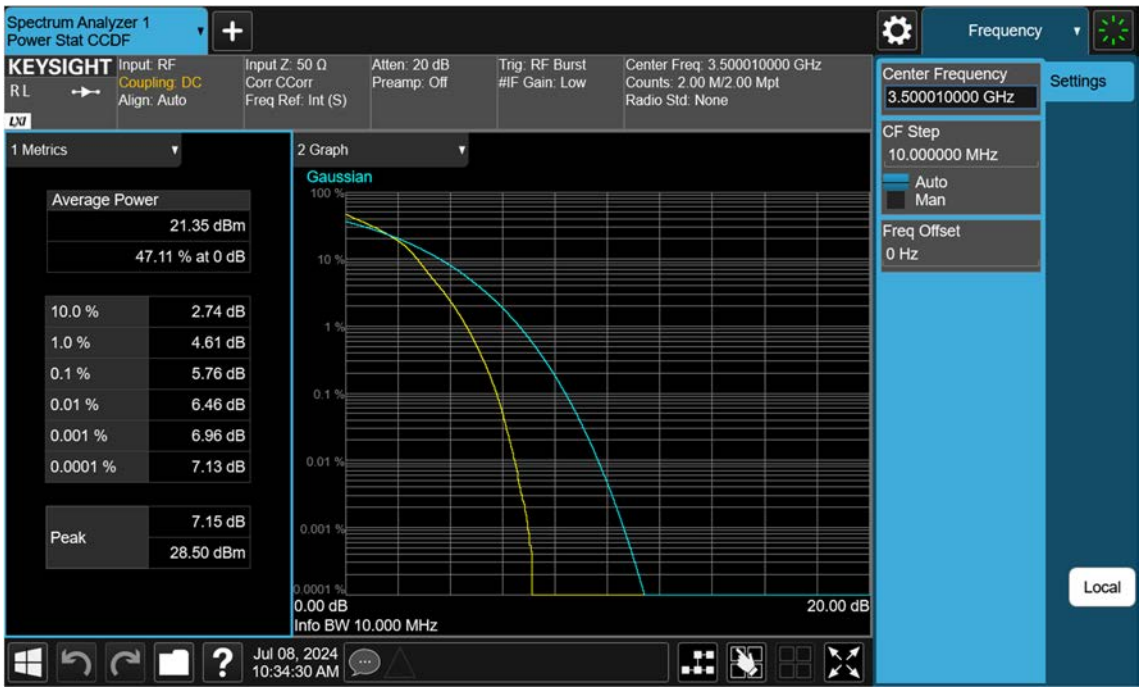
| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3750.000 | 100% | +20(Ref) | 3749 999 999 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3749 999 997 | -2.4 | 0.000 000 | -0.001 |
| | 100% | -20 | 3749 999 997 | -2.1 | 0.000 000 | -0.001 |
| | 100% | -10 | 3750 000 000 | 0.9 | 0.000 000 | 0.000 |
| | 100% | 0 | 3750 000 000 | 0.9 | 0.000 000 | 0.000 |
| | 100% | +10 | 3749 999 999 | -0.6 | 0.000 000 | 0.000 |
| | 100% | +30 | 3749 999 995 | -4.7 | 0.000 000 | -0.001 |
| | 100% | +40 | 3749 999 998 | -1.8 | 0.000 000 | 0.000 |
| | 100% | +50 | 3749 999 994 | -5.2 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3749 999 997 | -2.3 | 0.000 000 | -0.001 |
| 3930.000 | 100% | +20(Ref) | 3929 999 998 | 0.0 | 0.000 000 | 0.000 |
| | 100% | -30 | 3929 999 996 | -1.8 | 0.000 000 | 0.000 |
| | 100% | -20 | 3929 999 994 | -4.5 | 0.000 000 | -0.001 |
| | 100% | -10 | 3929 999 997 | -0.8 | 0.000 000 | 0.000 |
| | 100% | 0 | 3929 999 997 | -0.8 | 0.000 000 | 0.000 |
| | 100% | +10 | 3929 999 996 | -2.0 | 0.000 000 | -0.001 |
| | 100% | +30 | 3929 999 996 | -2.4 | 0.000 000 | -0.001 |
| | 100% | +40 | 3929 999 999 | 0.5 | 0.000 000 | 0.000 |
| | 100% | +50 | 3929 999 999 | 0.5 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3929 999 994 | -3.9 | 0.000 000 | -0.001 |

## 10. TEST PLOTS(3450 MHz - 3550 MHz)

n77(3450~3550 MHz)_10 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_10 M_PAR_Mid_QPSK_FullRB

n77(3450~3550 MHz)_10 M_PAR_Mid_16QAM_FullRB

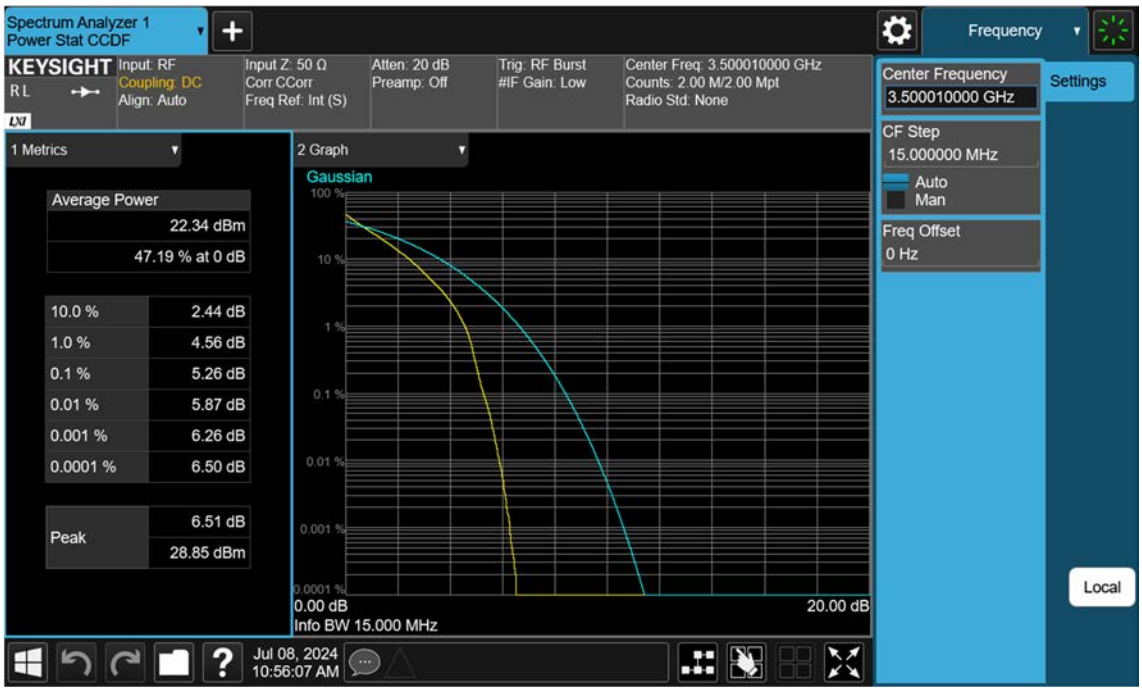


n77(3450~3550 MHz)_10 M_PAR_Mid_64QAM_FullRB

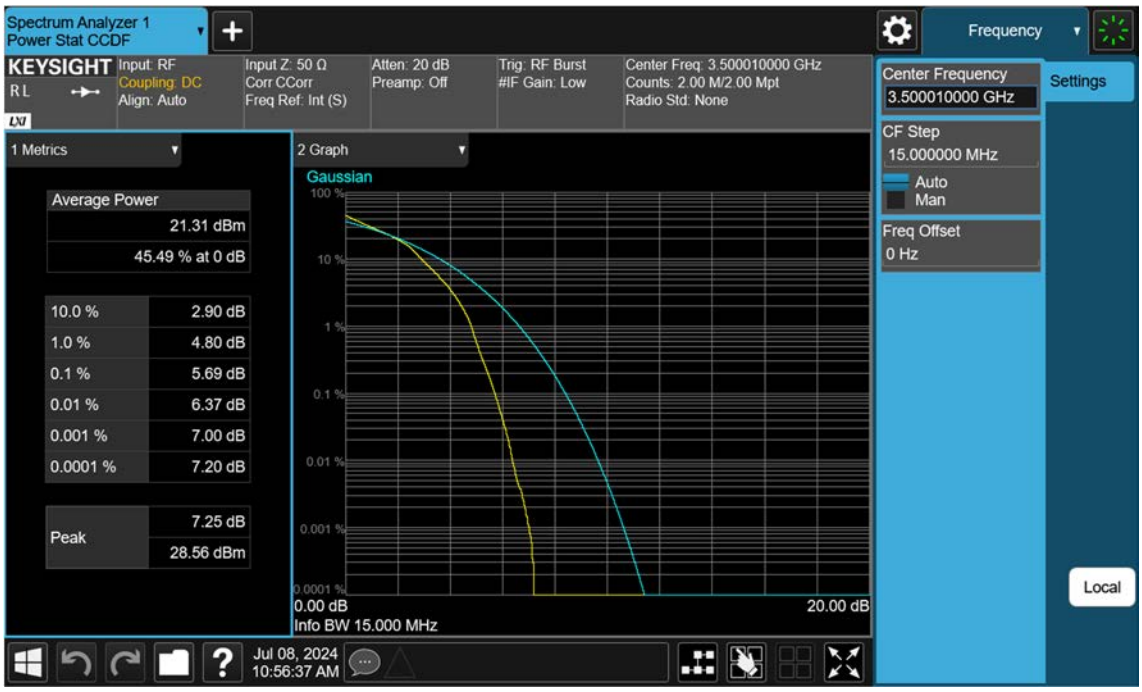
n77(3450~3550 MHz)_10 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_15 M_PAR_Mid_BPSK_FullRB

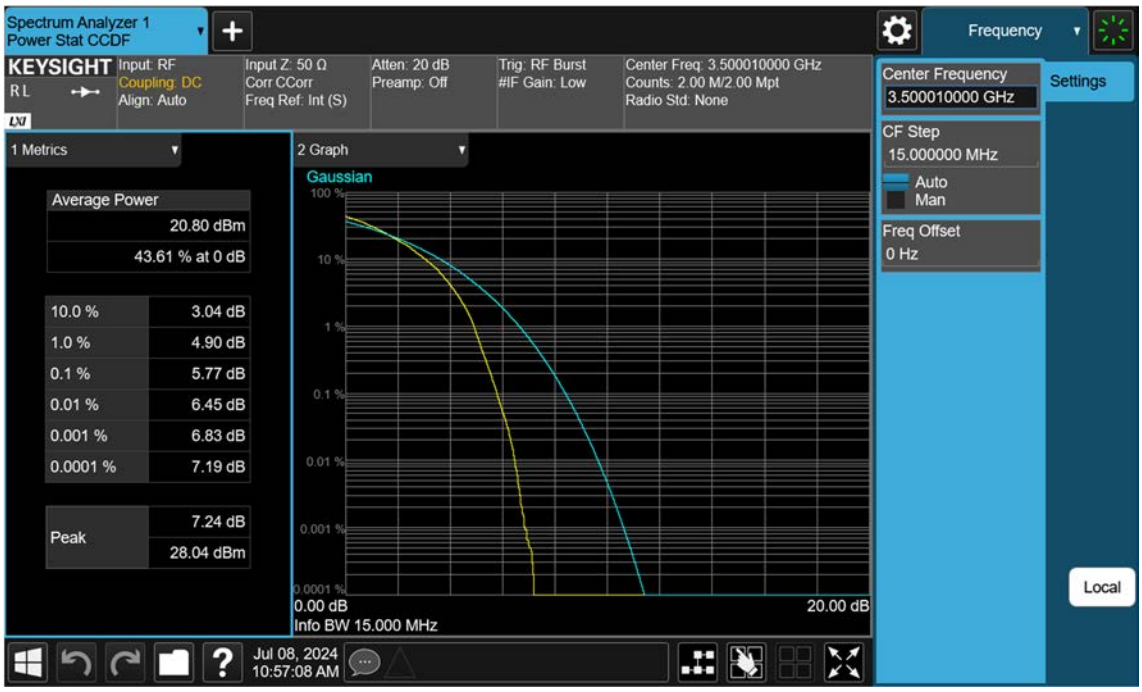
n77(3450~3550 MHz)_15 M_PAR_Mid_QPSK_FullRB



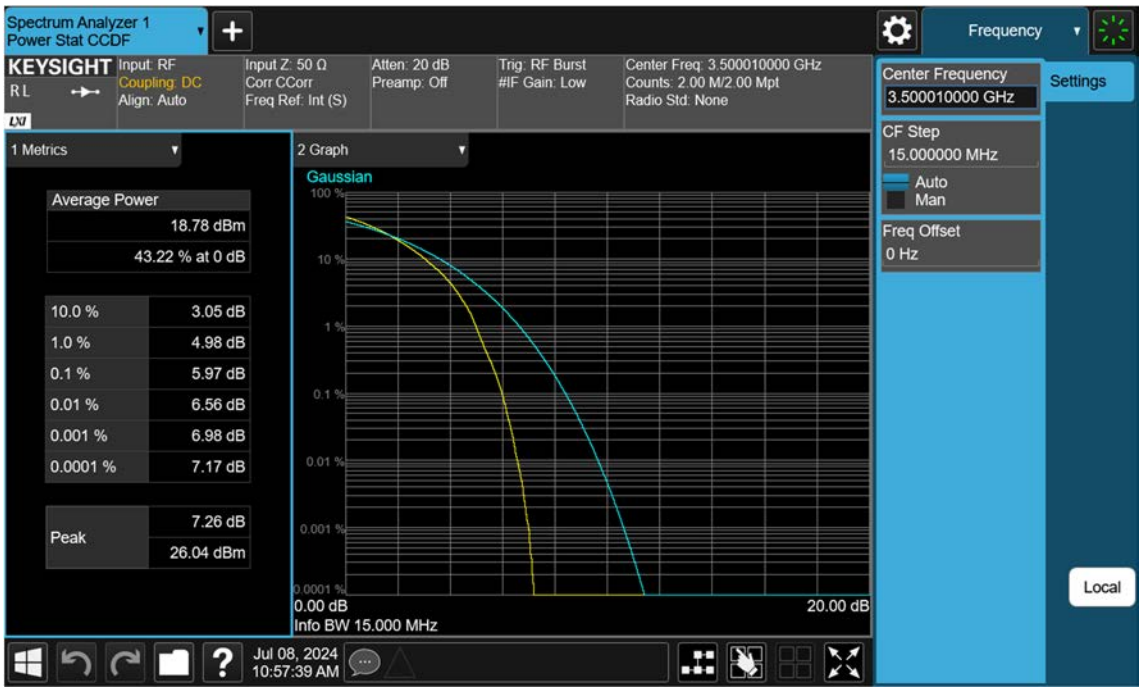
n77(3450~3550 MHz)_15 M_PAR_Mid_16QAM_FullRB



n77(3450~3550 MHz)_15 M_PAR_Mid_64QAM_FullRB

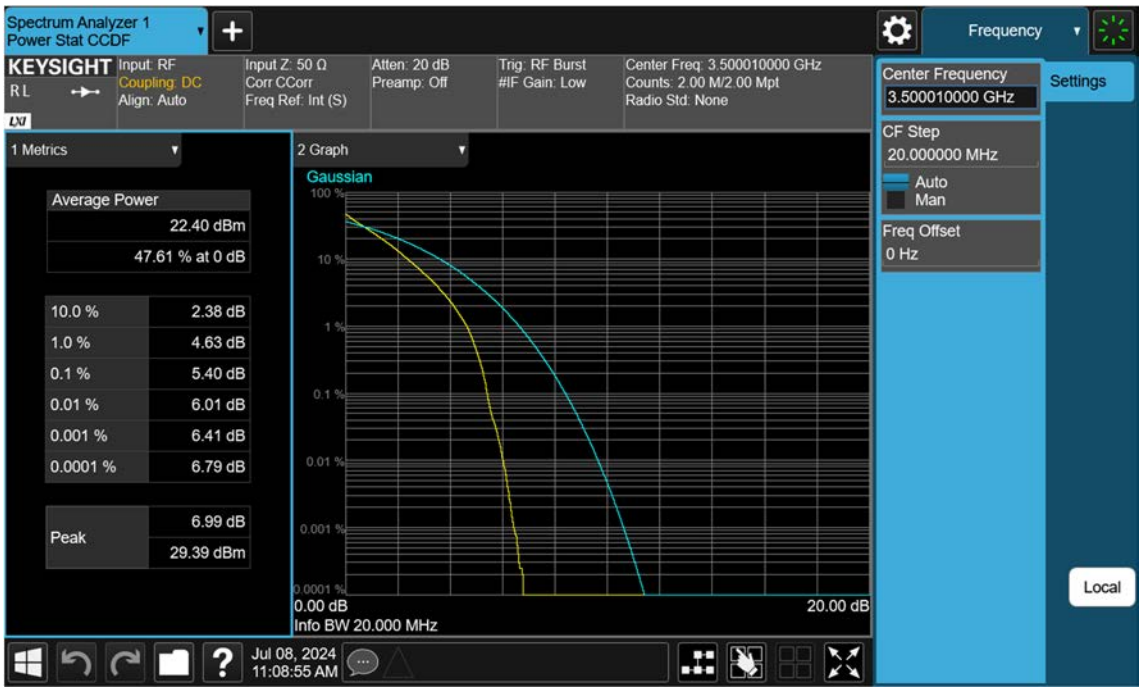


n77(3450~3550 MHz)_15 M_PAR_Mid_256QAM_FullRB



n77(3450~3550 MHz)_20 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_20 M_PAR_Mid_QPSK_FullRB



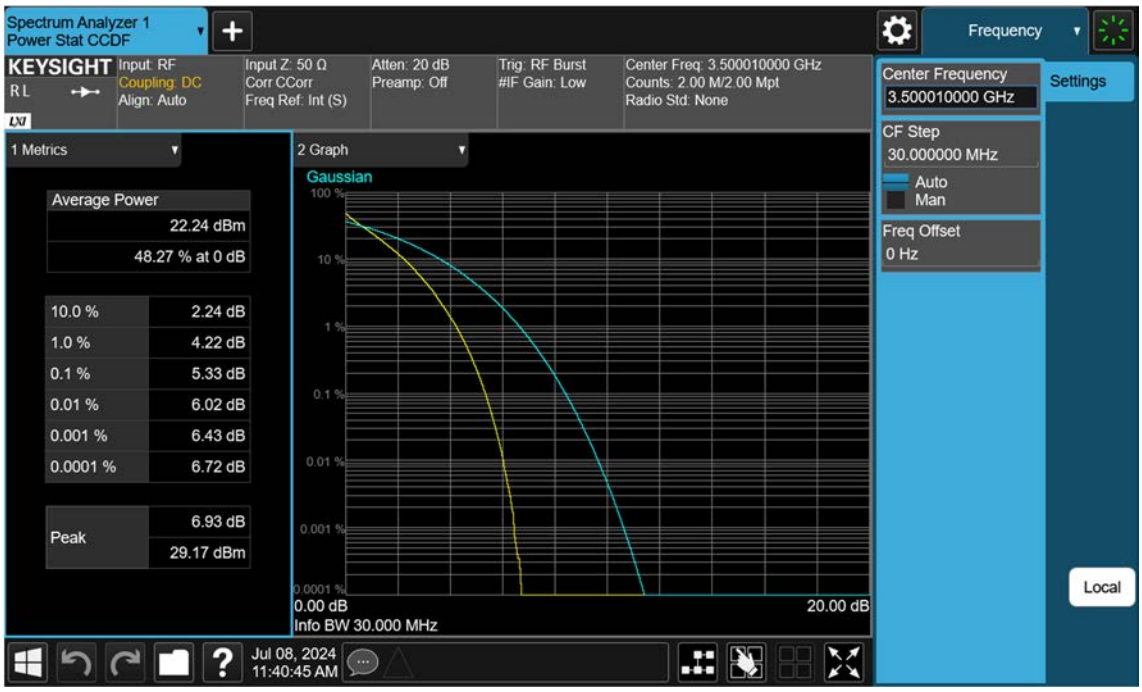
n77(3450~3550 MHz)_20 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_20 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_20 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_30 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_30 M_PAR_Mid_QPSK_FullRB



n77(3450~3550 MHz)_30 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_30 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_30 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_40 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_40 M_PAR_Mid_QPSK_FullRB

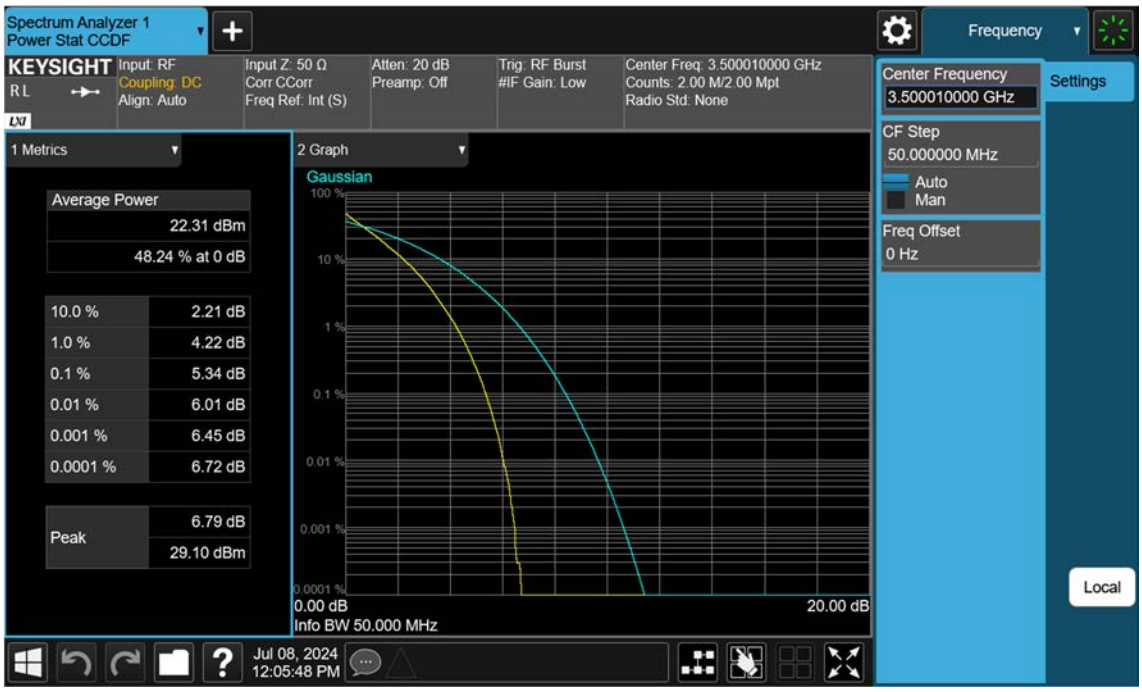
n77(3450~3550 MHz)_40 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_40 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_40 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_50 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_50 M_PAR_Mid_QPSK_FullRB



n77(3450~3550 MHz)_50 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_50 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_50 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_60 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_60 M_PAR_Mid_QPSK_FullRB

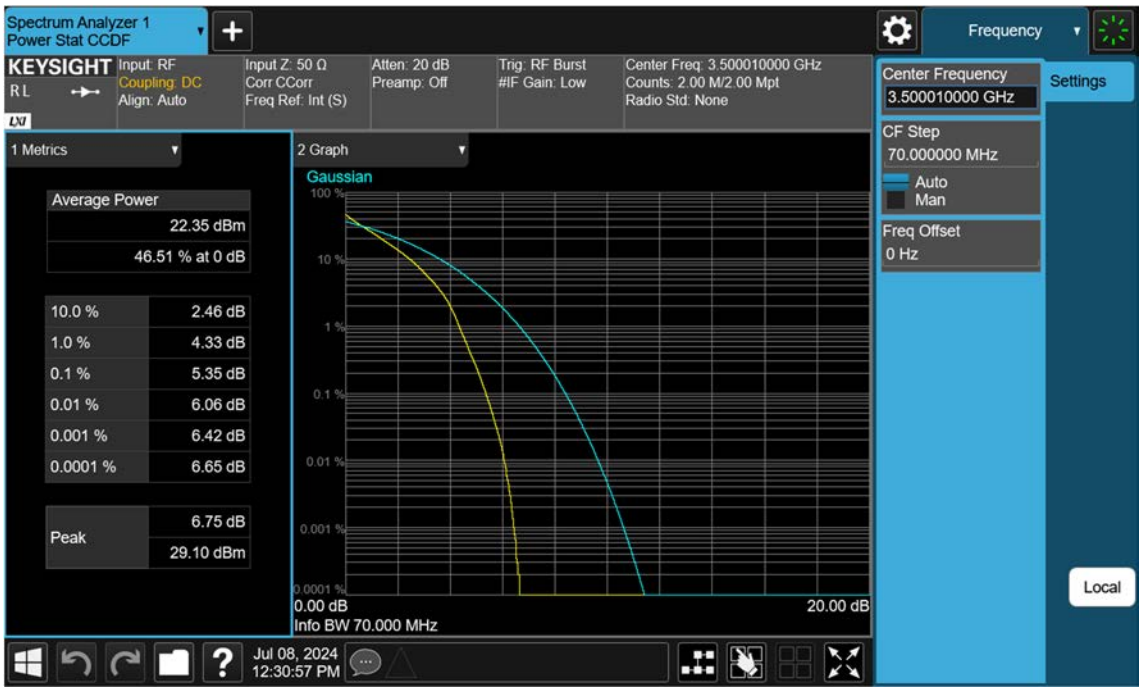
n77(3450~3550 MHz)_60 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_60 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_60 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_70 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_70 M_PAR_Mid_QPSK_FullRB



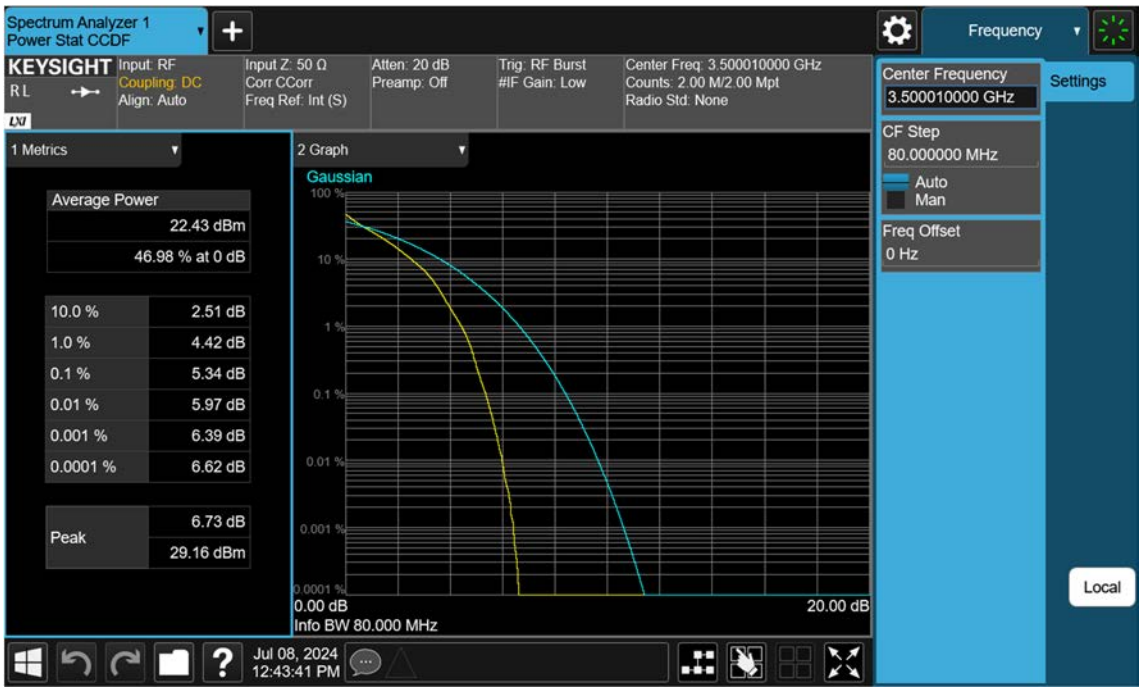
n77(3450~3550 MHz)_70 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_70 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_70 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_80 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_80 M_PAR_Mid_QPSK_FullRB



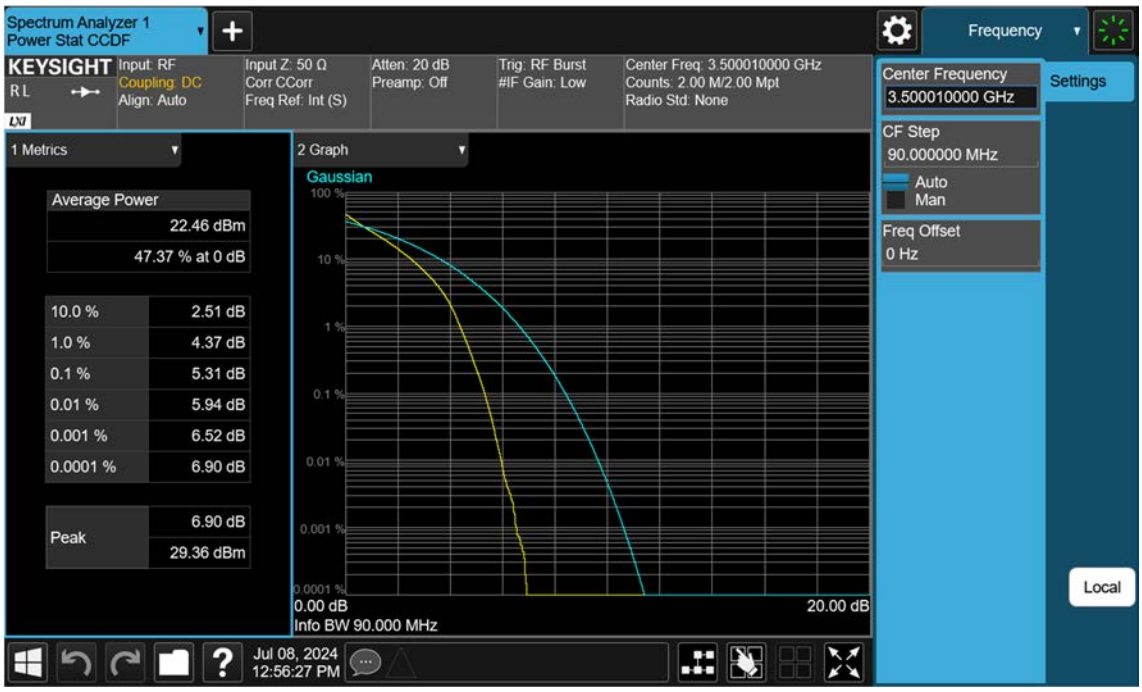
n77(3450~3550 MHz)_80 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_80 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_80 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_90 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_90 M_PAR_Mid_QPSK_FullRB



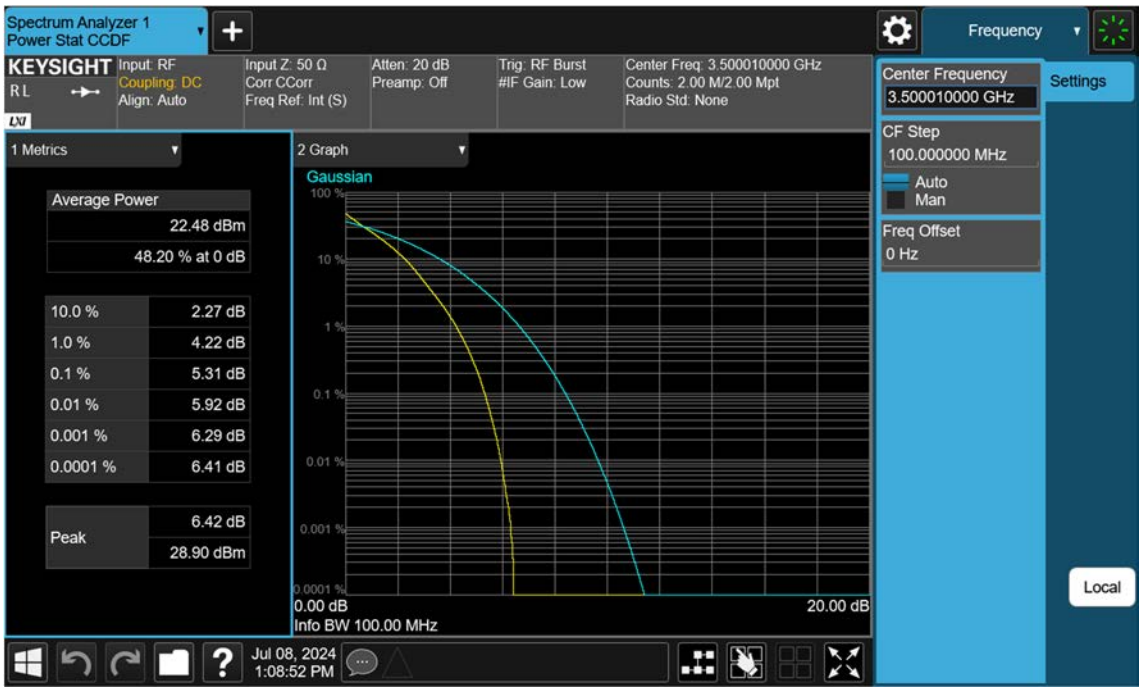
n77(3450~3550 MHz)_90 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_90 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_90 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_100 M_PAR_Mid_BPSK_FullRB

n77(3450~3550 MHz)_100 M_PAR_Mid_QPSK_FullRB



n77(3450~3550 MHz)_100 M_PAR_Mid_16QAM_FullRB

n77(3450~3550 MHz)_100 M_PAR_Mid_64QAM_FullRB

n77(3450~3550 MHz)_100 M_PAR_Mid_256QAM_FullRB

n77(3450~3550 MHz)_10 M_OBW_Mid_BPSK_FullRB

n77(3450~3550 MHz)_10 M_OBW_Mid_QPSK_FullRB

n77(3450~3550 MHz)_10 M_OBW_Mid_16QAM_FullRB

n77(3450~3550 MHz)_10 M_OBW_Mid_64QAM_FullRB