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File Number **24/36405324M1**

# TEST REPORT
## Radiofrequency

| | | | |
|---|---|---|---|
| **Petitioner's Reference:** | Lock Up Smart Doors S.L. | | |
| Company Address: | Escritor Jeronimo Tristante, N10, 3B. 30100- Murcia – Spain. | | |
| Represented by: | Juan Jesús Pinuaga Cascales | | |
| **PMN:** | Access controller - Lock up smart door | | |
| Brand: | OPERTO | HMN: | OC1-EXT |
| Sample #1: | 45013 | Applus Id: | 22053-00002 |
| Sample #2: | 42622 | Applus Id: | 22053-00001 |
| **Result:** | **complies** | | |

It has been tested and complies with the applicable standard. See test result summary section.

| | |
|---|---|
| **Applicable Standard:** | |
| RF standard/s: | **FCC 47 CFR Part 15 Subpart C (October 2023)[1]**<br>**ANSI C63.10 (2013)**<br>**RSS-247 — Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices – Issue 3[1]**<br>**RSS-Gen [1]** |

*[v1] The latest modifications of the standard, published at the date of the tests reported in this document, have been considered.*

| | |
|---|---|
| **Dates and Test Site:** | Applus Barcelona, Bellaterra |
| Equipment Reception Date | March 7, 2024 |
| Test Initial Date: | March 15, 2024 |
| Test Final Date: | May 24, 2024 |
| **Modification Description:** | M1 |

This report replaces and supersedes the report 24/36405324 dated on December 12, 2024.

Modifications performed: Blue highlighting in the report code is removed due to a typographical error from page 3 to page 61. High channel band edge limit correction made due to typographical error on page 31. It is responsibility of the petitioner to replace the previous version with this one.

**Test Manager:** Javier Miguel Nadales Lisbona
**Date of issue:** Bellaterra, March 4, 2025

JOSE MANUEL SUAREZ ROMAN
Firmado digitalmente por JOSE MANUEL SUAREZ ROMAN
Fecha: 2025.03.04 08:45:25 +01'00'

EMC & Wireless Technical Manager
Electrical and Electronics
LGAI Technological Center S.A.

ENSAYO ISO 17025 Nº9 / LE894

The results refer only and exclusively to the sample, product or material delivered for testing, and tested under conditions stipulated in this document. The equipment has been tested under conditions stipulated by standard(s) quoted in this document. This document will not be reproduced otherwise than in full.
This is the first page of the document, which consists of 61 pages.

# 1 TEST RESULTS SUMMARY

| Test Description | Sample # | DUT Test Modes | Results | Criteria Note |
|---|---|---|---|---|
| ANTENNA REQUIEREMENTS<br>(FCC Part 15.203, RSS-GEN 6.8) | #1, #2 | Mode 1 | PASS | -- |
| OCCUPIED BANDWIDTH (99%) & EMISSION BANDWIDTH 20 dB<br>(FCC Part 15.247 (a), RSS-247 5.2) | #1 | Mode 1 | PASS | CN4 |
| 6 dB BANDWITDH<br>(FCC Part 15.247 (a), RSS-247 5.2) | #1 | Mode 1 | PASS | CN4 |
| MAXIMUM PEAK CONDUCTED OUTPUT POWER<br>(FCC Part 15.247 (c), RSS-247 5.4) | #1 | Mode 1 | PASS | CN4 |
| POWER SPECTRAL DENSITY<br>(FCC Part 15.247 (b), RSS-247 5.4) | #1 | Mode 1 | PASS | CN4 |
| BAND EDGE<br>(FCC Part 15.247 (d), RSS-247 5.5) | #1 | Mode 1 | PASS | CN4 |
| RADIOFREQUENCY RADIATED EMISSIONS<br>(FCC Part 15.247 (d), RSS-247 5.5) | #2 | Mode 1 | PASS | CN4 |

**Table 1: Test description**

The test results are shown in detail on the following pages.

The criteria to give conformity in those cases where it is not implicit in the standard or specification will be, for EMC emissions tests, a non-simple binary decision rule will be followed with a safety zone equal to the value of the uncertainty (w = U).

In this case, the upper limit of the value of the probability of false acceptance, according to ILAC G8, is 2.5 % and the criteria notes are:

CN1: The measured results are above the upper limit, even considering the uncertainty interval.
CN2: The measured results are above the specified limits, but within the uncertainty interval. It is therefore not possible to state compliance based on the 95% level of confidence. However, the results indicate that non-compliance is more probable than compliance.
CN3: The measured results are below the specified limits, but within the uncertainty interval. It is therefore not possible to state compliance based on the 95% level of confidence. However, the results indicate that compliance is more probable than non-compliance.
CN4: The measured results are within the limits, including the uncertainty interval.

# 2 INDEX

# 3 GENERAL DESCRIPTION OF TEST ITEMS

## 3.1 EQUIPMENT DESCRIPTION

*This information has been provided by the customer and it is not covered by the accreditation. LGAI does not assume any responsibility from it.*

| EQUIPMENT DESCRIPTION | | | |
|---|---|---|---|
| **Description** | The device is WiFi and BLE access system controller used to interact with a variety of access systems as can be common doors, entrance doors, electrical strikes, parking barriers, and elevators among others. | | |
| **EUT Version** | **FVIN** | **HVIN** | |
| | 7.6.2 | LockUpAIR_V4 | |
| **Power supply** | +/- | 12 V | -- Hz |
| **Equipment Size** | **Length** | **Width** | **Height** |
| | 80 mm | 80 mm | 30 mm |
| **Modulation** | GFSK | | |
| **Operating Frequency Band** | 2400MHz - 2483.5 MHz | | |
| **Maximum RF Output Power [dBm]** | 10 | | |
| **Operating Channel(s) Width(s) [MHz]** | 1 | | |
| **Equipment Type** | DTS | | |
| **Number of Hopping Channels** | N/A | | |
| **Emission Designator** | 1M1G1D | | |
| **FCC ID** | -- | | |

Table 2: Equipment description

| RF FEATURES | | | | | |
|---|---|---|---|---|---|
| **Description** | **Communication Technology** | **Radio Chipset** | **Brand** | **Module Model** | **Antenna Gain [dBi]** |
| | Bluetooth | CC2640 | TI | Not provided | 3.3 |

Table 3: RF Features

### 3.2 TEST CONFIGURATION

| DUT Operation Modes | |
|---|---|
| **Mode #** | **Description** |
| **1** | The customer provides instructions for setting up the sample in test mode with continuously modulated transmission operating on a single channel through the RF Smart Studio software. |

Table 4. Test Configuration

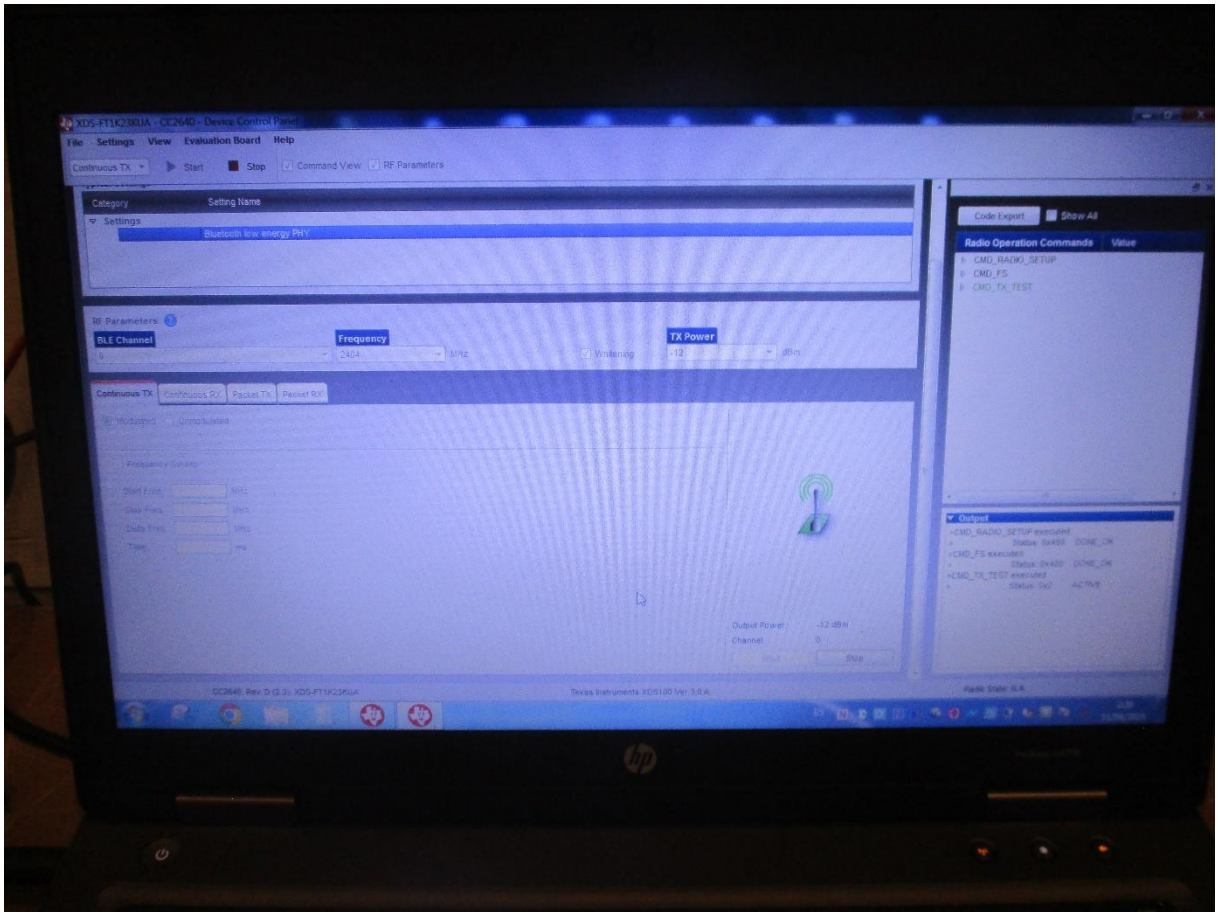



Fig. 1: – Sample Configuration

### 3.3 PHOTOGRAPHS

Photographs identifying the equipment under test and its auxiliaries, as well as assembly photographs for radiated and conducted tests, can be found in the document with ID 24/36405327

### 3.4 TEST FACILITIES ID

| TEST FACILITIES ID | |
|---|---|
| FCC Test Firm Registration Number: | 507478 |
| ISED Assigned Code: | 5766A |
| CABID | ES0001 |

Table 5: Test facilities ID

### 3.5 COMPETENCES AND GUARANTEES

LGAI Technological Center, S.A. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 9/LE894.
In order to assure the traceability to other national and international laboratories, Applus+ Laboratories has a calibration and maintenance program for its measurement equipment.
Applus+ Laboratories guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at Applus+ Laboratories at the time of performance of the test.
Applus+ Laboratories is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test. The results presented in this Test Report apply only to the particular item under test established in this document.


**General conditions:**

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of Applus+ Laboratories.

# 4 TEST RESULTS

## 4.1 ANTENNA REQUIREMENT

### 4.1.1 Requirements

For intentional device, according to FCC 47 CFR, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to RSS-Gen, the applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

### 4.1.2 Summary Test Results

The laboratory checks that the sample has an internal antenna, so that no hardware modifications are possible. Complying with the requirements of this section.

## 4.2 OCCUPIED CHANNEL BANDWIDTH (99%) & 20 dB BANDWIDTH

### 4.2.1 Test Setup Required

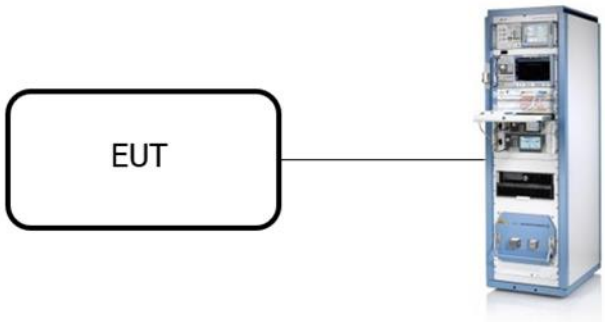



Fig. 2: Set-Up - Occupied Channel Bandwidth & Occupied Channel Bandwidth 99% & Emission Bandwidth 20dB

### 4.2.2 Requirements

The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. In some cases, for example multichannel frequency-division systems, the percentage of 0.5 percent may lead to certain difficulties in the practical application of the definitions of occupied and necessary bandwidth; in such cases a different percentage may prove useful

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 4.2.3 EMI Receiver configuration

During the conducted test, the EMI receiver was set with the following configurations:

| Central frequency [MHz] | Span [MHz] | Detector | Trace Mode | RBW [kHz] | VBW [kHz] |
|---|---|---|---|---|---|
| Channel frequency | 2 | Peak | Max Hold | 10 | 30 |

Table 6: EMI Receiver configuration – Occupied Channel Bandwidth 99% & Emission Bandwidth 20dB

### 4.2.4 Test Environmental Conditions

| Test Date | Technician | Supervisor | Temperature [ºC] | Humidity [%] | Atm. Pressure [mbar] |
|---|---|---|---|---|---|
| 15/03/2024 | P. Redondo | J.M. Nadales | 22.8 | 45 | 998 |

Table 7: Test environmental conditions – Occupied Channel Bandwidth 99% & Emission Bandwidth 20dB

### 4.2.5 Summary Test Results

| Frequency [MHz] | 99% Bandwidth [MHz] | 20 dB Bandwidth [kHz] | Results |
|---|---|---|---|
| 2402 | 1.1 | 1.2 | PASS |
| 2440 | 1.0 | 1.2 | PASS |
| 2480 | 1.1 | 1.2 | PASS |

Table 8: Summary Test Results – Occupied Channel Bandwidth 99% & Emission Bandwidth 20dB

### 4.2.6 Test Results

#### 4.2.6.1 Sample #1. Mode #1

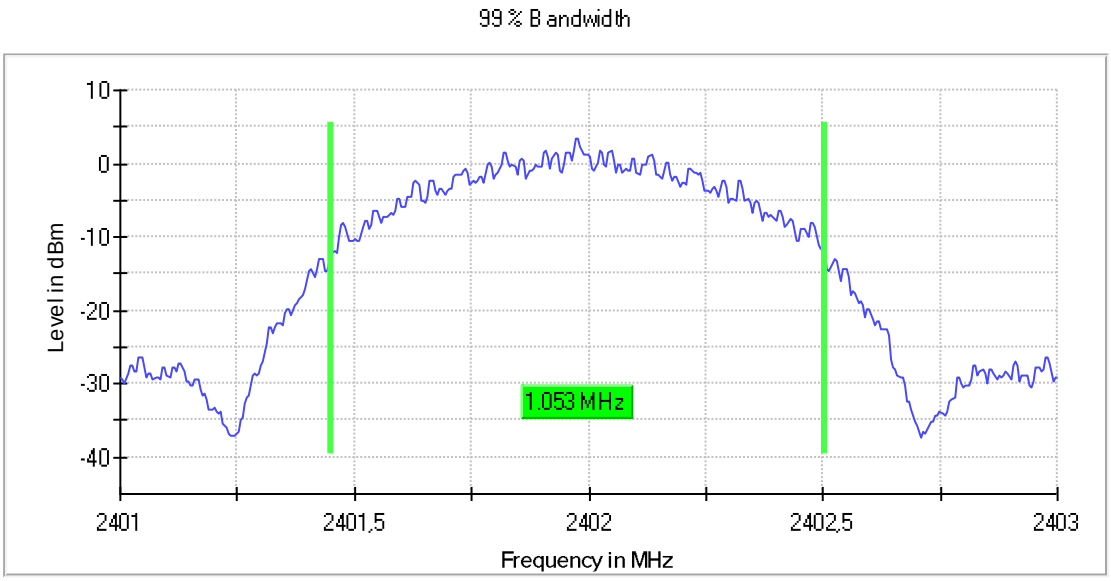



Fig. 3: Low Channel - 99% Occupied Channel Bandwidth

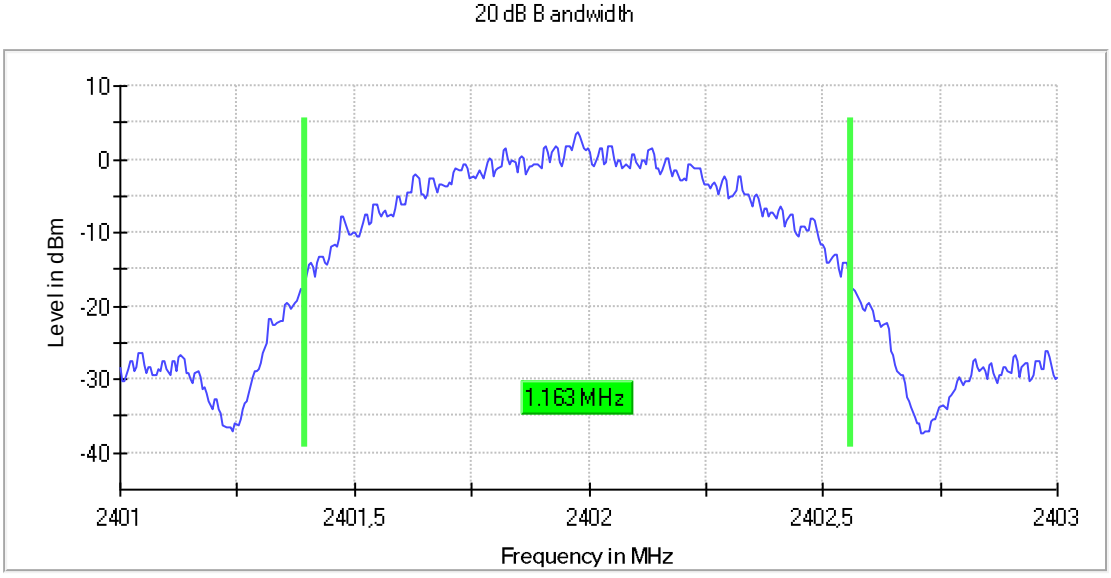



Fig. 4: Low Channel - Emission Bandwidth 20dB

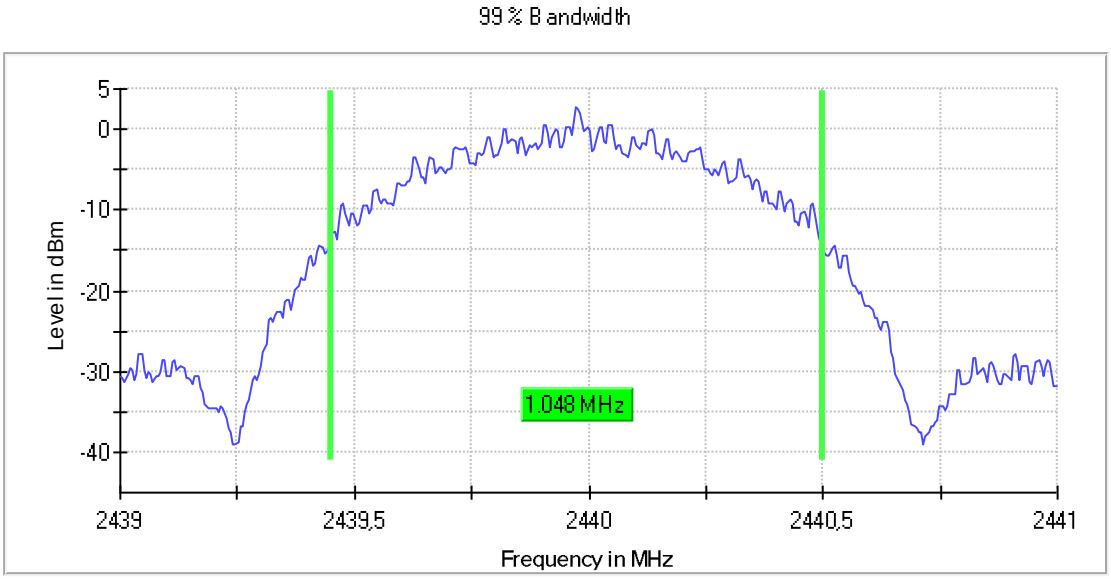



Fig. 5: Middle Channel - 99% Occupied Channel Bandwidth

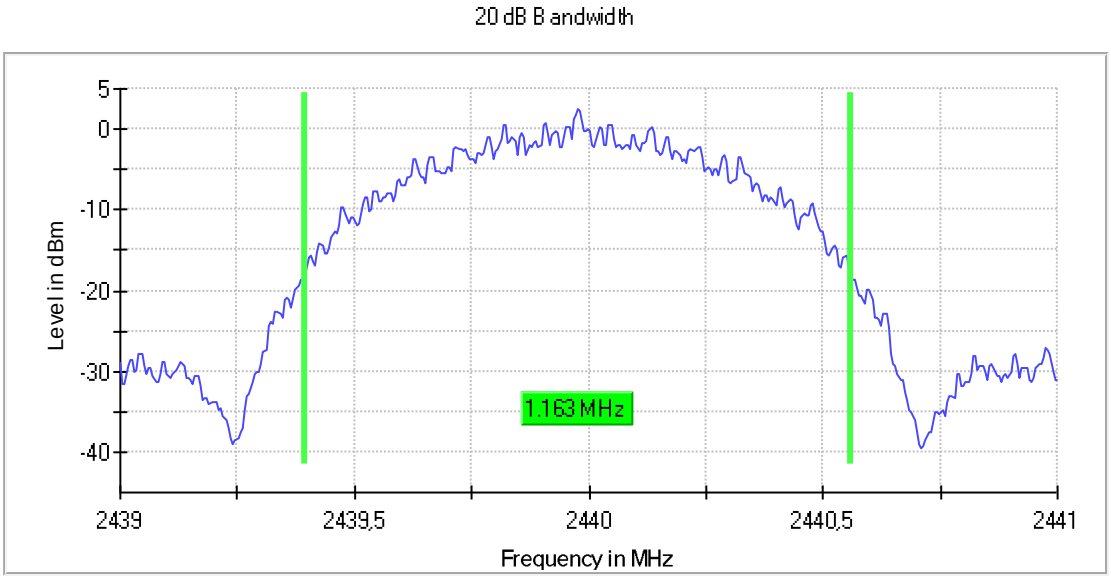



Fig. 6: Middle Channel - Emission Bandwidth 20dB

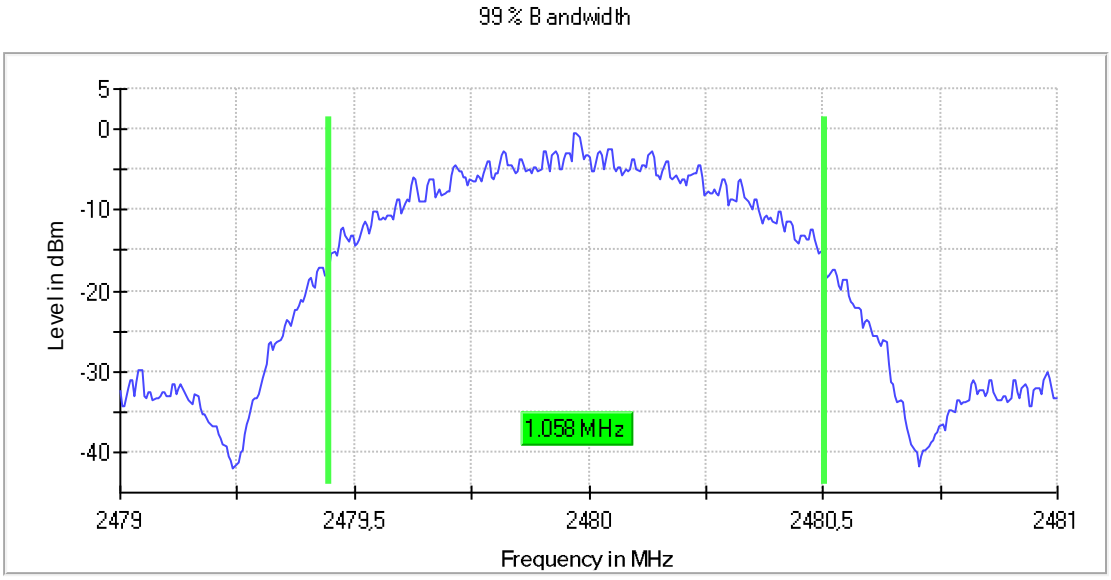



Fig. 7: High Channel - 99% Occupied Channel Bandwidth

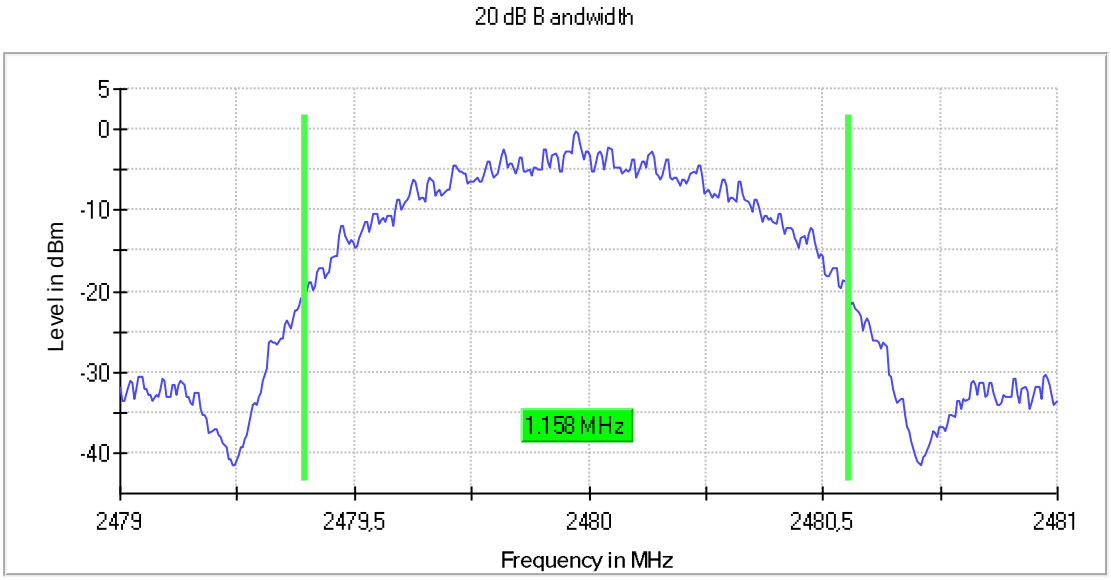



Fig. 8: High Channel - Emission Bandwidth 20dB

### 4.2.7 Test Equipment Used

| Equipment | Brand | Model | Applus Ref. | Last Calibration | Next Calibration |
|---|---|---|---|---|---|
| DIGITAL THERMO-HYGROMETER | TESTO | 608-H1 | 1041916 | 09/02/2024 | 09/02/2025 |
| SHIELDED CHAMBER SR0 | ALBATROSS | SR | 1042267 | - | - |
| RF SWITCH | ROHDE & SCHWARZ | OSP120 | 1042701 | 24/03/2022 | 24/03/2024 |
| SIGNAL SPECTRUM ANALYZER | ROHDE & SCHWARZ | FSVA3044 | 1042700 | 23/02/2022 | 15/11/2024 |
| CABLE RF 40 GHz | HUBERSUHNER | SF102 | 1042545 | 28/05/2024 | 28/05/2025 |
| RF CABLE | ASTROLAB | 32026-29094-29094-24TC | 1041825 | 16/05/2023 | 16/05/2024 |

**Table 9: Test Instruments – 99% Occupied Channel Bandwidth & Emission Bandwidth 20dB**

### 4.2.8 Uncertainty

| Test Type | Test Description | Uncertainty |
|---|---|---|
| Emission | RF bandwidth measurements | ±76.0 Hz |

Table 10: Uncertainties - 99% Occupied Channel Bandwidth & Emission Bandwidth 20dB

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

## 4.3 DTS BANDWIDTH

### 4.3.1 Test Setup Required

#### 4.3.1.1 Tabletop equipment

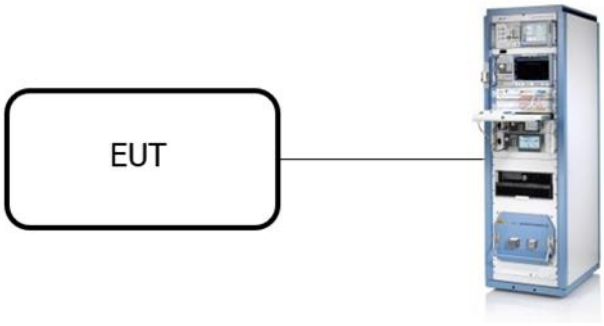



Fig. 9: Set-Up - DTS Bandwidth

### 4.3.2 Requirements

The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. In some cases, for example multichannel frequency-division systems, the percentage of 0.5 percent may lead to certain difficulties in the practical application of the definitions of occupied and necessary bandwidth; in such cases a different percentage may prove useful

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 4.3.3 EMI Receiver configuration

During the conducted test, the EMI receiver was set with the following configurations:

| Central frequency [MHz] | Span [MHz] | Detector | Trace Mode | RBW [kHz] | VBW [kHz] |
|---|---|---|---|---|---|
| Channel frequency | 2 | Peak | Max Hold | 100 | 300 |

Table 11: EMI Receiver configuration – DTS Bandwidth

### 4.3.4 Test Environmental Conditions

| Test Date | Technician | Supervisor | Temperature [ºC] | Humidity [%] | Atm. Pressure [mbar] |
|---|---|---|---|---|---|
| 15/03/2024 | P. Redondo | J.M. Nadales | 22.8 | 45 | 998 |

Table 12: Test environmental conditions – DTS Bandwidth

### 4.3.5 Summary Test Results

| Frequency [MHz] | DTS Bandwidth [kHz] | Results |
|---|---|---|
| 2402 | 740.0 | PASS |
| 2440 | 760.0 | PASS |
| 2480 | 760.0 | PASS |

Table 13: Summary Test Results – DTS Bandwidth

### 4.3.6 Test Results

#### 4.3.6.1 Sample #1. Mode #1

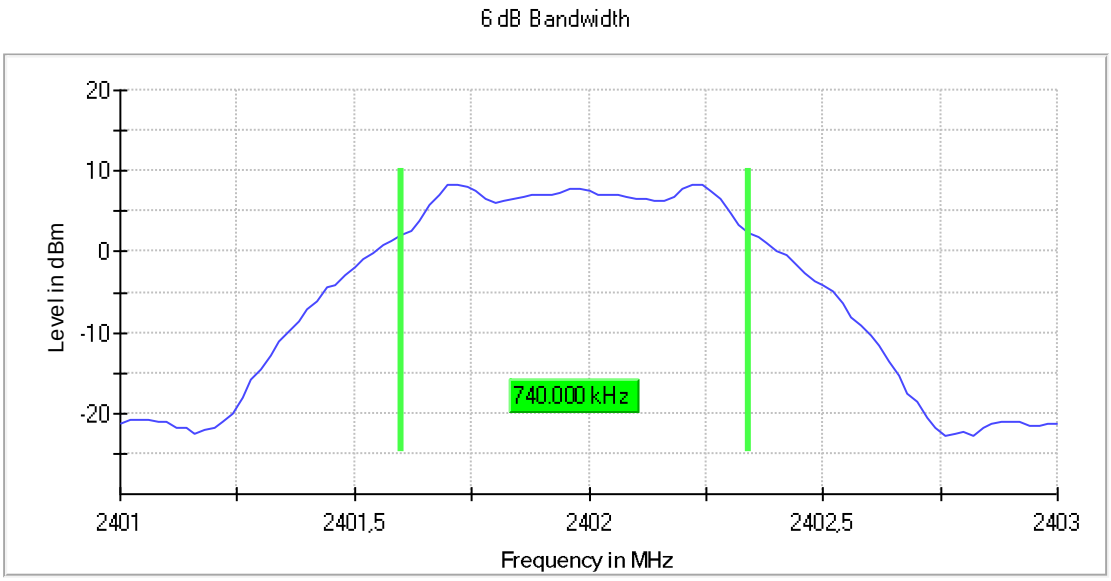



Fig. 10: Low Channel - DTS Bandwidth

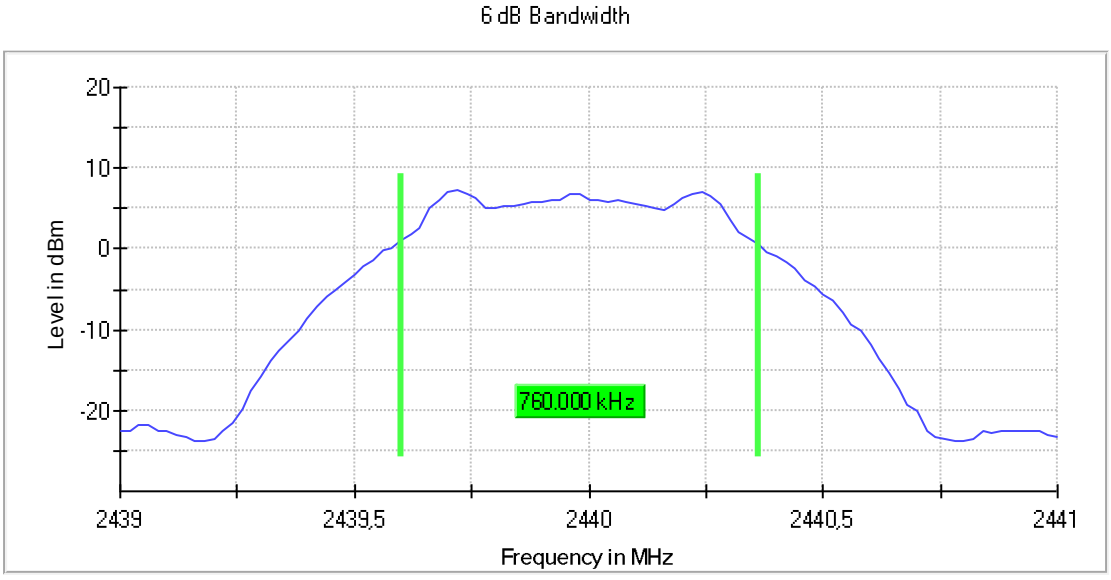



Fig. 11: Middle Channel -DTS Bandwidth

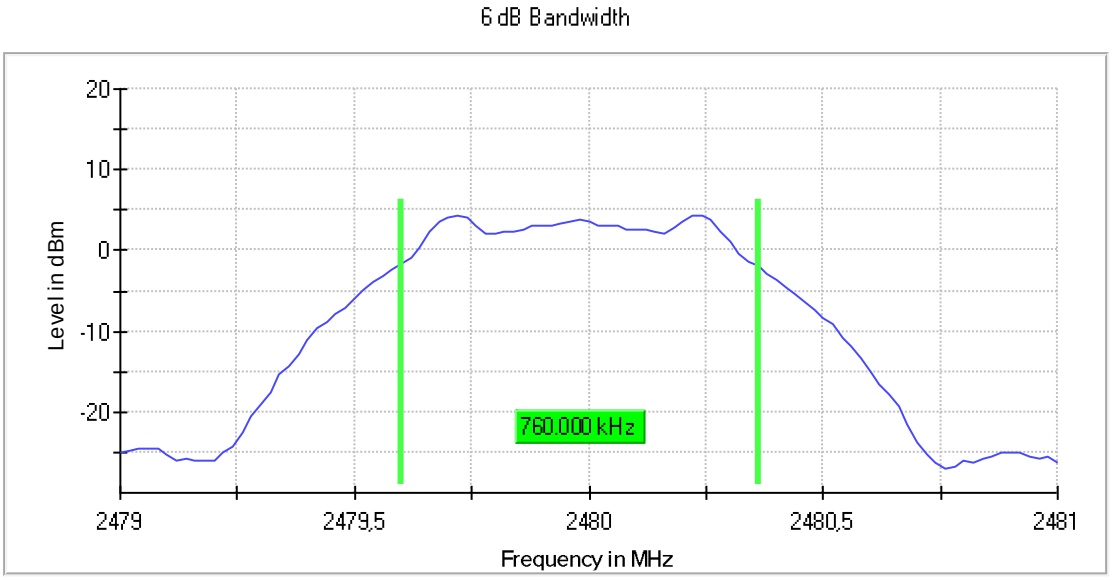



Fig. 12: High Channel - DTS Bandwidth

### 4.3.7 Test Equipment Used

| Equipment | Brand | Model | Applus Ref. | Last Calibration | Next Calibration |
|---|---|---|---|---|---|
| DIGITAL THERMO-HYGROMETER | TESTO | 608-H1 | 1041916 | 09/02/2024 | 09/02/2025 |
| SHIELDED CHAMBER SR0 | ALBATROSS | SR | 1042267 | - | - |
| RF SWITCH | ROHDE & SCHWARZ | OSP120 | 1042701 | 24/03/2022 | 24/03/2024 |
| SIGNAL SPECTRUM ANALYZER | ROHDE & SCHWARZ | FSVA3044 | 1042700 | 23/02/2022 | 15/11/2024 |
| CABLE RF 40 GHz | HUBERSUHNER | SF102 | 1042545 | 28/05/2024 | 28/05/2025 |
| RF CABLE | ASTROLAB | 32026-29094-29094-24TC | 1041825 | 16/05/2023 | 16/05/2024 |

Table 14: Test Instruments – DTS Bandwidth

### 4.3.8 Uncertainty

| Test Type | Test Description | Uncertainty |
|---|---|---|
| Emission | RF bandwidth measurements | ±76.0 Hz |

Table 15: Uncertainties - DTS Bandwidth

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

## 4.4 MAXIMUM CONDUCTED OUTPUT POWER

### 4.4.1 Test Setup Required

#### 4.4.1.1 Tabletop equipment

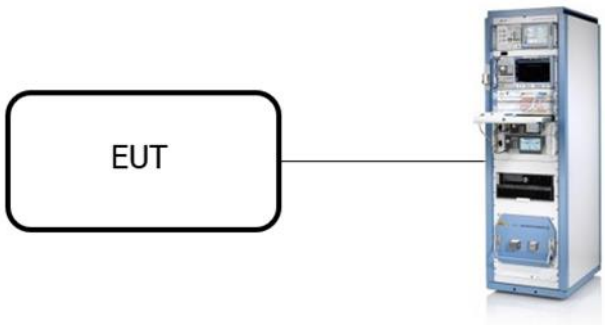



Fig. 13: Set-Up - Maximum Conducted Output Power

### 4.4.2 Requirements

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one-Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

### 4.4.3 EMI Receiver configuration

During the conducted test, the EMI receiver was set with the following configurations:

| Central frequency [MHz] | Span [MHz] | Detector | Trace Mode | Resolution Bandwidth [kHz] | Video Bandwidth [kHz] |
|---|---|---|---|---|---|
| Channel frequency | 3 | Peak | Max Hold | 1000 | 3000 |

Table 16: Power Meter configuration – Maximum Conducted Output Power

### 4.4.4 Test Environmental Conditions

| Test Date | Technician | Supervisor | Temperature [ºC] | Humidity [%] | Atm. Pressure [mbar] |
|---|---|---|---|---|---|
| 15/03/2024 | P. Redondo | J.M. Nadales | 22.8 | 45 | 998 |

Table 17: Test environmental conditions – Maximum Conducted Output Power

### 4.4.5 Summary Test Results

| Frequency [MHz] | Conducted Output Power [dBm] | Limit [dBm] | Antenna Gain [dBi] | EIRP [dBm] | Limit [dBm] | Results |
|---|---|---|---|---|---|---|
| 2402 | 8.6 | 30.0 | 3.3 | 11.9 | 36.0 | PASS |
| 2440 | 7.4 | 30.0 | 3.3 | 10.7 | 36.0 | PASS |
| 2480 | 4.6 | 30.0 | 3.3 | 7.9 | 36.0 | PASS |

Table 18: Summary Test Results – Maximum Conducted Output Power

### 4.4.6 Test Results

#### 4.4.6.1 Sample #1. Mode #1

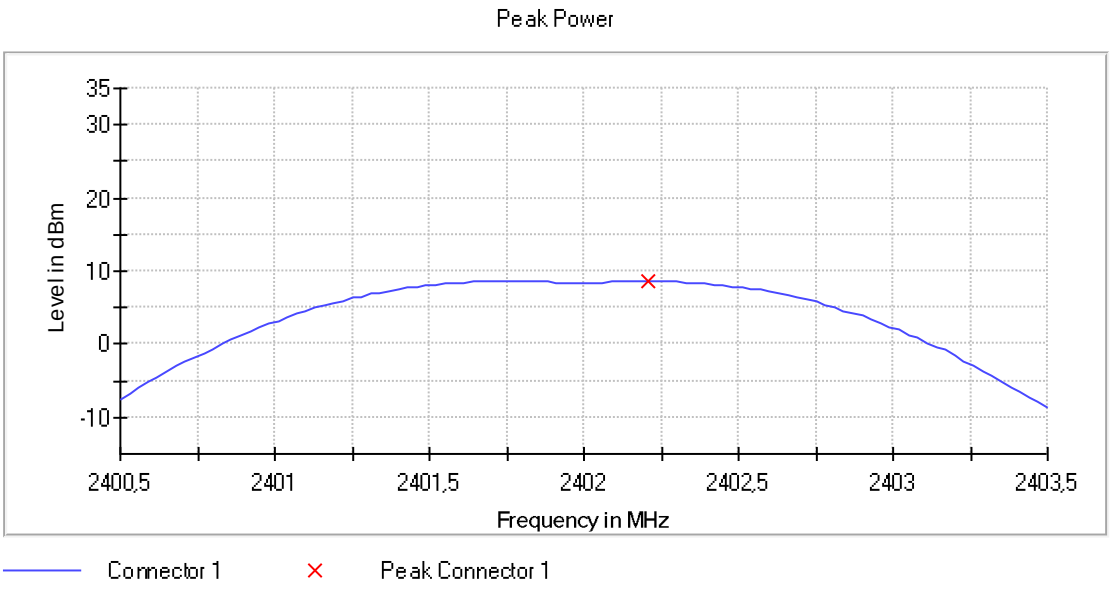



Fig. 14: Low Channel - Maximum Conducted Output Power

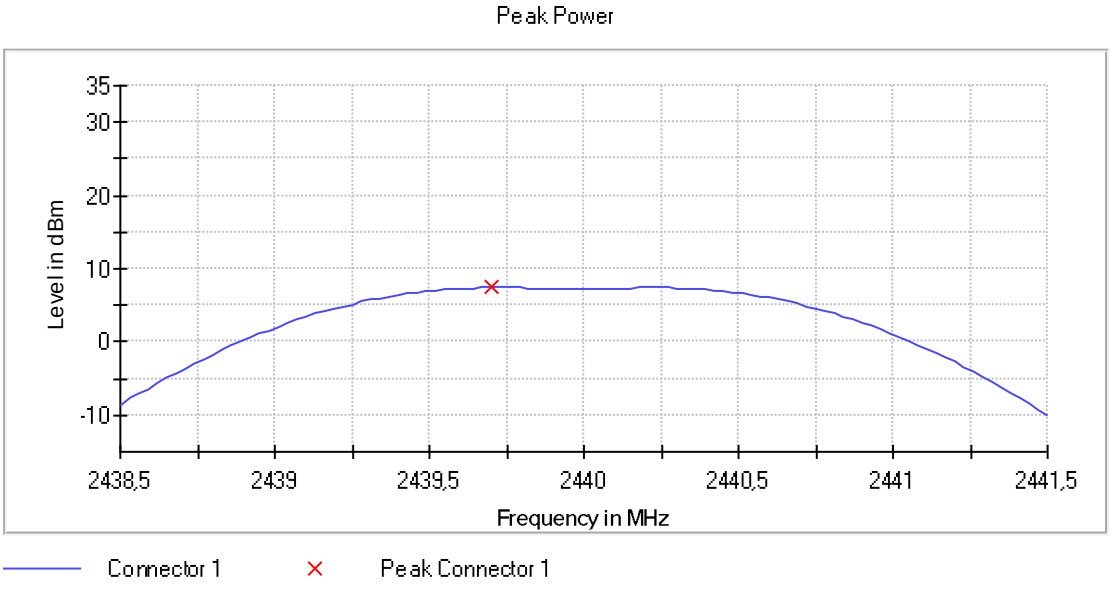



Fig. 15: Middle Channel - Maximum Conducted Output Power

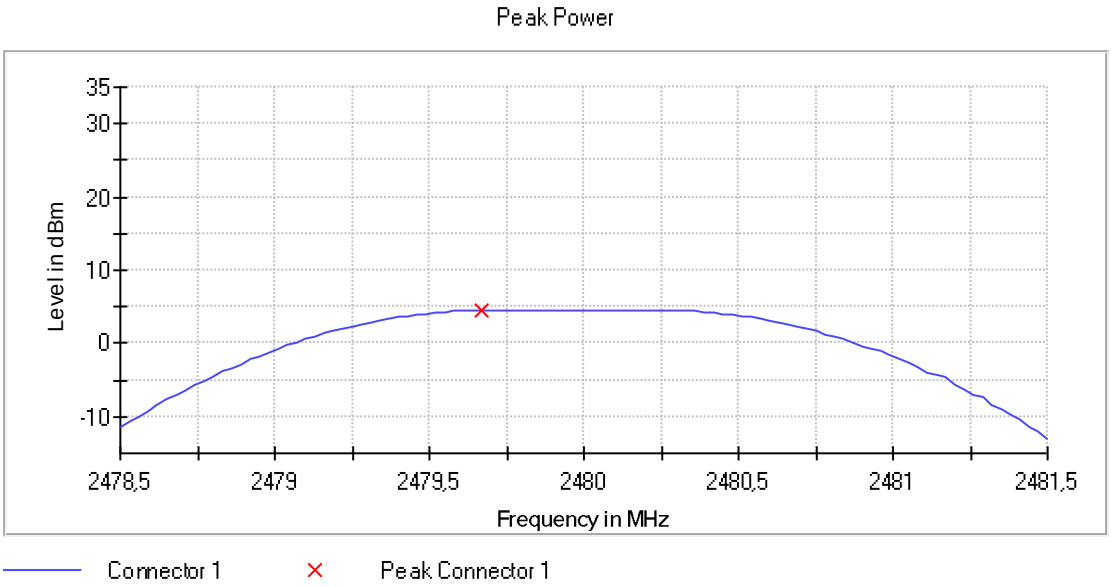



Fig. 16: High Channel - Maximum Conducted Output Power

### 4.4.7 Test Equipment Used

| Equipment | Brand | Model | Applus Ref. | Last Calibration | Next Calibration |
|---|---|---|---|---|---|
| DIGITAL THERMO-HYGROMETER | TESTO | 608-H1 | 1041916 | 09/02/2024 | 09/02/2025 |
| SHIELDED CHAMBER SR0 | ALBATROSS | SR | 1042267 | - | - |
| RF SWITCH | ROHDE & SCHWARZ | OSP120 | 1042701 | 24/03/2022 | 24/03/2024 |
| SIGNAL SPECTRUM ANALYZER | ROHDE & SCHWARZ | FSVA3044 | 1042700 | 23/02/2022 | 15/11/2024 |
| CABLE RF 40 GHz | HUBERSUHNER | SF102 | 1042545 | 28/05/2024 | 28/05/2025 |
| RF CABLE | ASTROLAB | 32026-29094-29094-24TC | 1041825 | 16/05/2023 | 16/05/2024 |

Table 19: Test Instruments – Maximum Conducted Output Power

### 4.4.8 Uncertainty

| Test Type | Test Description | Uncertainty |
|---|---|---|
| Emissions | RF output power measurements [Conducted] | ±1.3 dB |

Table 20: Uncertainties - Maximum Conducted Output Power

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

## 4.5 POWER SPECTRAL DENSITY

### 4.5.1 Test Setup Required

#### 4.5.1.1 Tabletop equipment

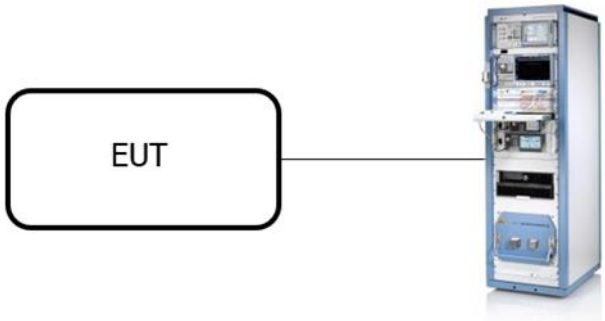



Fig. 17: Power Spectral Density setup of table top equipment.

### 4.5.2 Requirements

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 4.5.3 EMI Receiver configuration

During the conducted test, the EMI receiver was set with the following configurations:

| Central frequency [MHz] | Span [MHz] | Detector | Trace Mode | Resolution Bandwidth [kHz] | Video Bandwidth [kHz] |
|---|---|---|---|---|---|
| Channel frequency | 3 | Peak | Max Hold | 10 | 30 |

Table 21: EMI Receiver configuration – Power Spectral Density

### 4.5.4 Test Environmental Conditions

| Test Date | Technician | Supervisor | Temperature [ºC] | Humidity [%] | Atm. Pressure [mbar] |
|---|---|---|---|---|---|
| 15/03/2024 | P. Redondo | J.M. Nadales | 22.8 | 45 | 998 |

Table 22: Test environmental conditions – Power Spectral Density

### 4.5.5 Summary Test Results

| Frequency [MHz] | PSD [dBm] | Limit [dBm] | Results |
|---|---|---|---|
| 2402 | 3.6 | 8.00 | PASS |
| 2440 | 1.3 | 8.00 | PASS |
| 2480 | -0.5 | 8.00 | PASS |

Table 23: Summary Test Results – Power Spectral Density

### 4.5.6 Test Results

#### 4.5.6.1 Sample #1. Mode #1

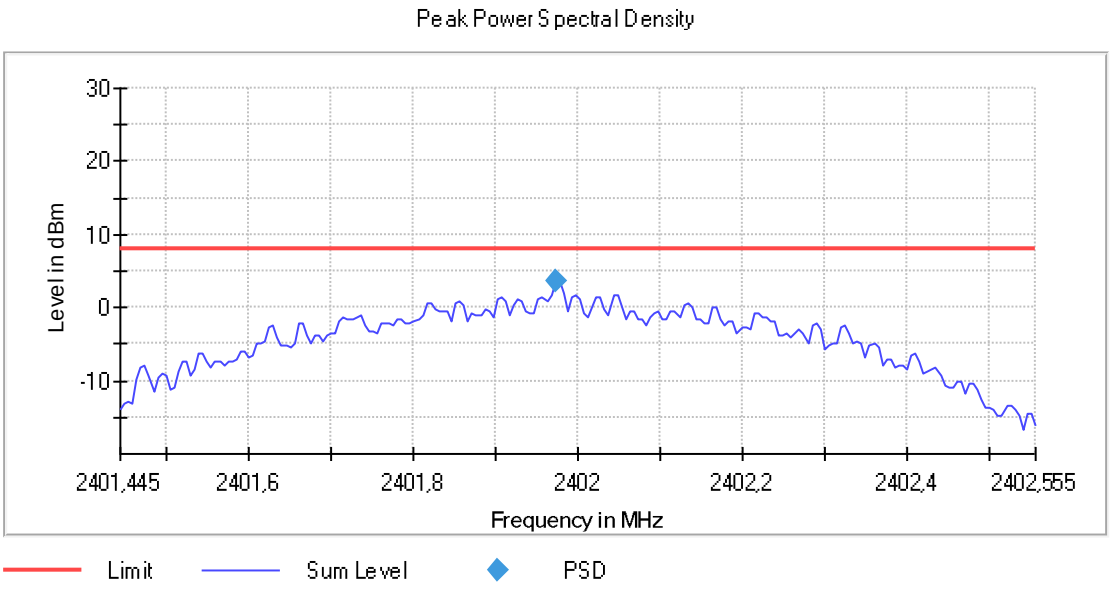



Fig. 18: Low Channel - Power Spectral Density

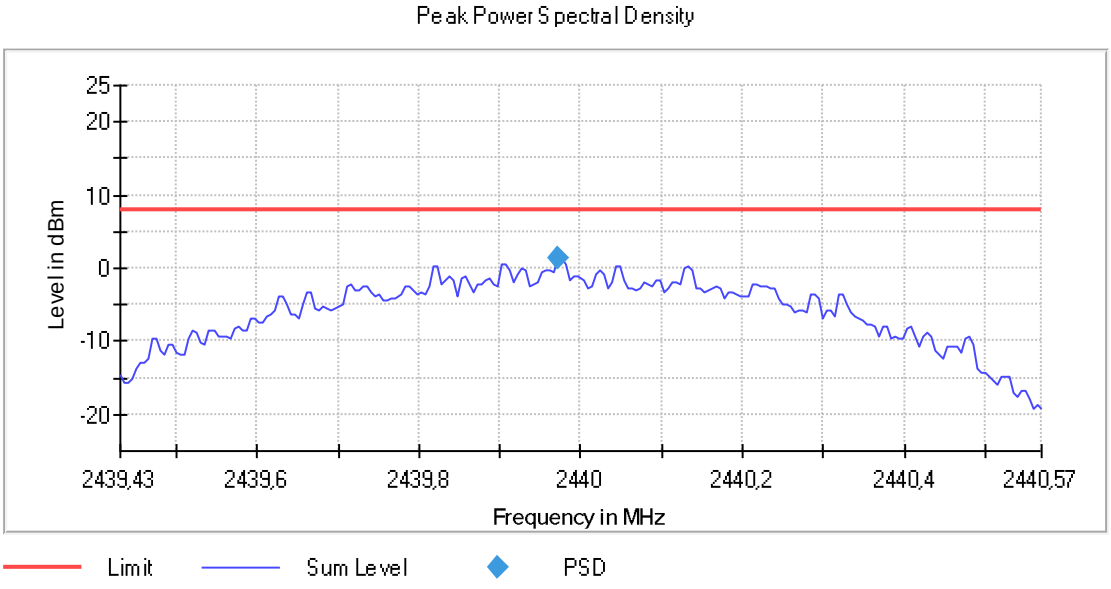



Fig. 19: Middle Channel - Power Spectral Density

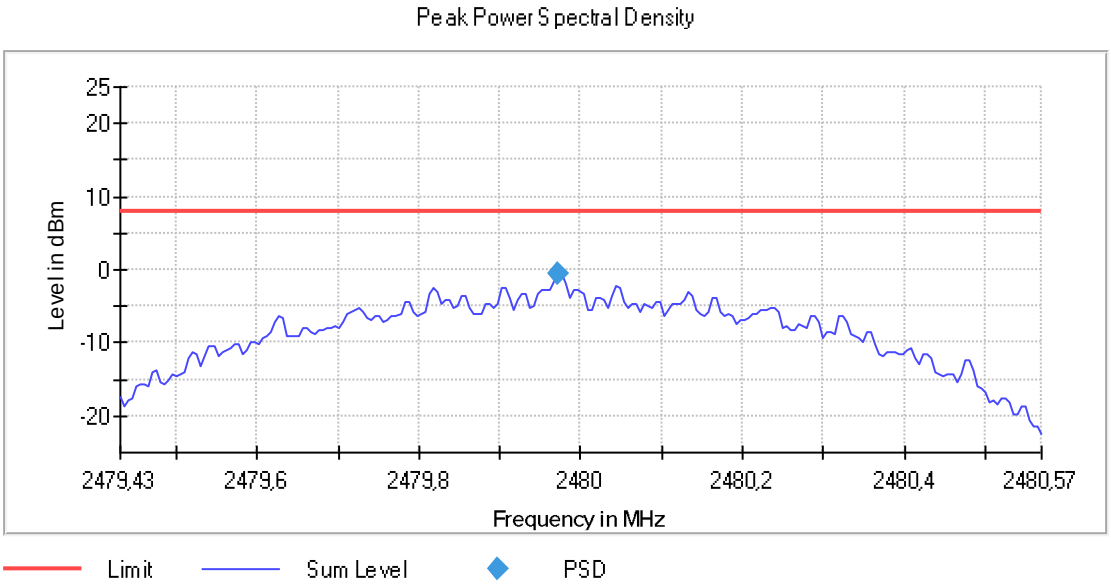



Fig. 20: High Channel - Power Spectral Density

### 4.5.7 Test Equipment Used

| Equipment | Brand | Model | Applus Ref. | Last Calibration | Next Calibration |
|---|---|---|---|---|---|
| DIGITAL THERMO-HYGROMETER | TESTO | 608-H1 | 1041916 | 09/02/2024 | 09/02/2025 |
| SHIELDED CHAMBER SR0 | ALBATROSS | SR | 1042267 | - | - |
| RF SWITCH | ROHDE & SCHWARZ | OSP120 | 1042701 | 24/03/2022 | 24/03/2024 |
| SIGNAL SPECTRUM ANALYZER | ROHDE & SCHWARZ | FSVA3044 | 1042700 | 23/02/2022 | 15/11/2024 |
| CABLE RF 40 GHz | HUBERSUHNER | SF102 | 1042545 | 28/05/2024 | 28/05/2025 |
| RF CABLE | ASTROLAB | 32026-29094-29094-24TC | 1041825 | 16/05/2023 | 16/05/2024 |

Table 24: Test Instruments – Power Spectral Density

### 4.5.8 Uncertainty

| Test Type | Test Description | Uncertainty |
|---|---|---|
| Emissions | Power spectral density measurements [Conducted] | ±2.6 dB |

Table 25: Uncertainties - Power Spectral Density

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

## 4.6 BAND EDGE

### 4.6.1 Test Setup Required

#### 4.6.1.1 Tabletop equipment

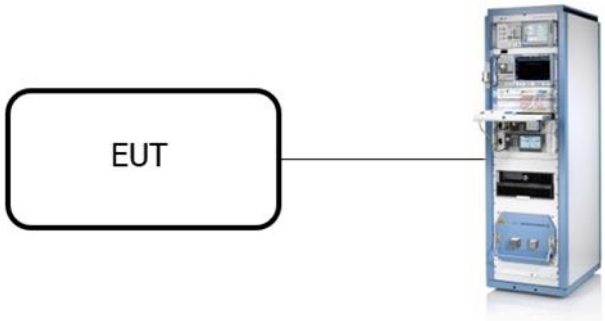



Fig. 21: Band Edge setup of table top equipment.

### 4.6.2 Test Parameters

#### 4.6.2.1 Requirements

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

### 4.6.3 EMI Receiver configuration

During the conducted test, the EMI receiver was set with the following configurations:

| Central frequency [MHz] | Span [MHz] | Detector | Resolution Bandwidth [kHz] | Video Bandwidth [kHz] |
|---|---|---|---|---|
| Band Edges | 100 | Max Peak | 100 | 300 |

Table 26: EMI Receiver configuration – Band Edge

### 4.6.4 Test Environmental Conditions

| Test Date | Technician | Supervisor | Temperature [ºC] | Humidity [%] | Atm. Pressure [mbar] |
|---|---|---|---|---|---|
| 15/03/2024 | P. Redondo | J.M. Nadales | 22.8 | 45 | 998 |

Table 27: Test environmental conditions – Band Edge

### 4.6.5 Summary Test Results

| Frequency [MHz] | Band Edge | Limit [dBm] | Results |
|---|---|---|---|
| 2402 | PK < Limit - I | -8.3 | PASS |
| 2480 | PK < Limit - I | -12.5 | PASS |

Table 28: Summary Test Results – Band Edge

### 4.6.6 Test Results

#### 4.6.6.1 Sample #1. Mode #1

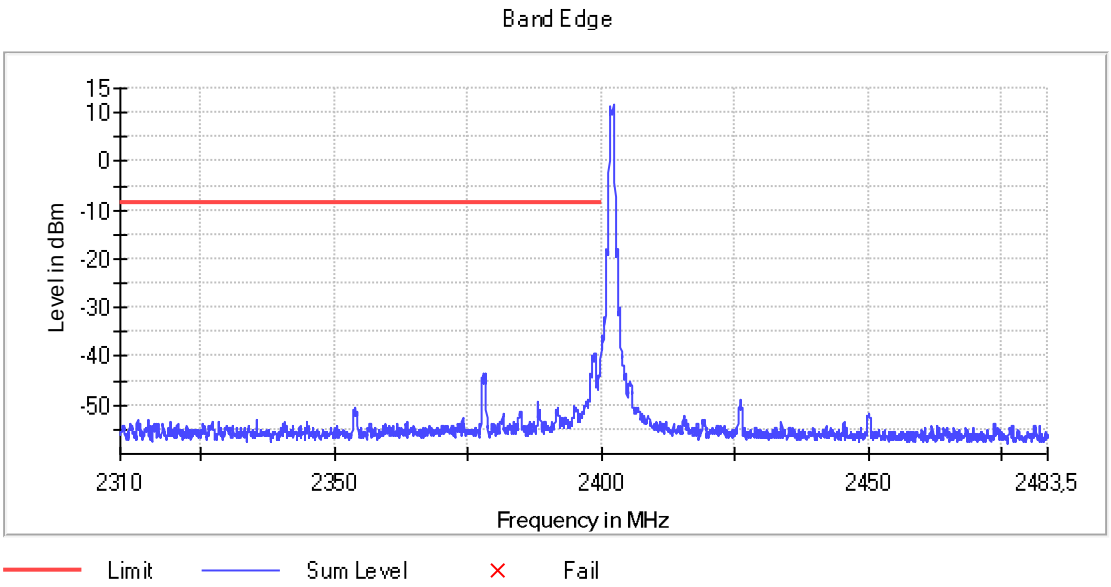



Fig. 22: Low Channel - Band Edge

**FINAL MEASUREMENTS**

| Frequency [MHz] | Max amplitude Level [dBm] | Margin [dB] | Result |
|---|---|---|---|
| 2399.950 | -38.8 | 30.5 | PASS |

Table 29: Low Channel - Band Edge

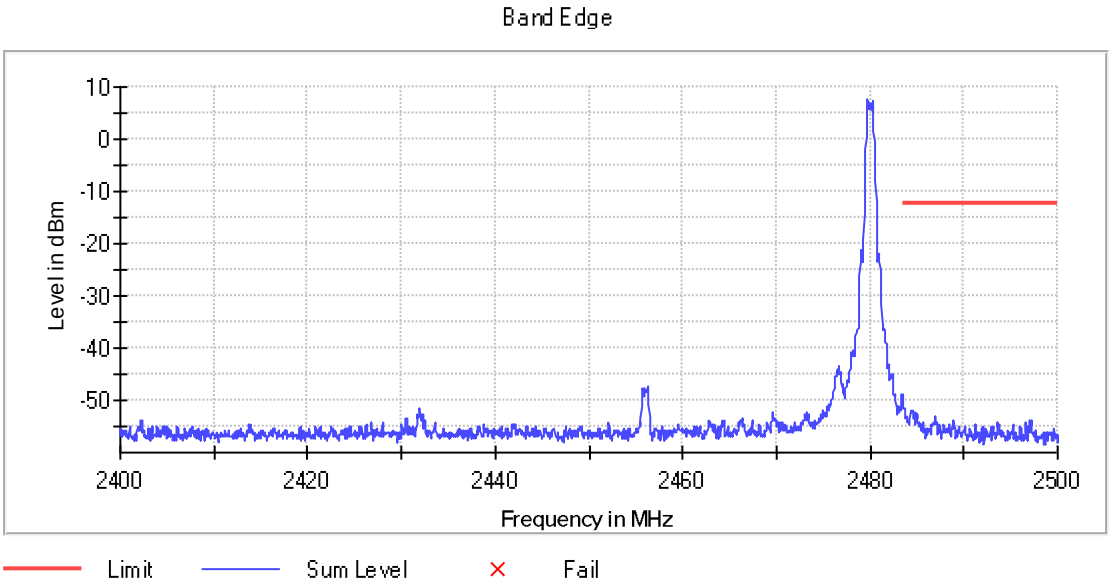



Fig. 23: High Channel - Band Edge

**FINAL MEASUREMENTS**

| Frequency [MHz] | Max amplitude Level [dBm] | Margin [dB] | Result |
|---|---|---|---|
| 2483.550 | -50.4 | 37.9 | PASS |

Table 30. High Channel - Band Edge

### 4.6.7 Test Equipment Used

| Equipment | Brand | Model | Applus Ref. | Last Calibration | Next Calibration |
|---|---|---|---|---|---|
| DIGITAL THERMO-HYGROMETER | TESTO | 608-H1 | 1041916 | 09/02/2024 | 09/02/2025 |
| SHIELDED CHAMBER SR0 | ALBATROSS | SR | 1042267 | - | - |
| RF SWITCH | ROHDE & SCHWARZ | OSP120 | 1042701 | 24/03/2022 | 24/03/2024 |
| SIGNAL SPECTRUM ANALYZER | ROHDE & SCHWARZ | FSVA3044 | 1042700 | 23/02/2022 | 15/11/2024 |
| CABLE RF 40 GHz | HUBERSUHNER | SF102 | 1042545 | 28/05/2024 | 28/05/2025 |
| RF CABLE | ASTROLAB | 32026-29094-29094-24TC | 1041825 | 16/05/2023 | 16/05/2024 |

Table 31: Test Instruments – Band Edge

### 4.6.8 Uncertainty

| Test Type | Test Description | Uncertainty |
|---|---|---|
| Emissions | Adjacent channels power measurement | 1.3 dB |

Table 32: Uncertainties - Band Edge

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

## 4.7 RADIO-FREQUENCY RADIATED EMISSIONS

### 4.7.1 Test Setup Required

#### 4.7.1.1 Tabletop equipment

Fig. 24: Radio-frequency radiated emissions setup of table top equipment.

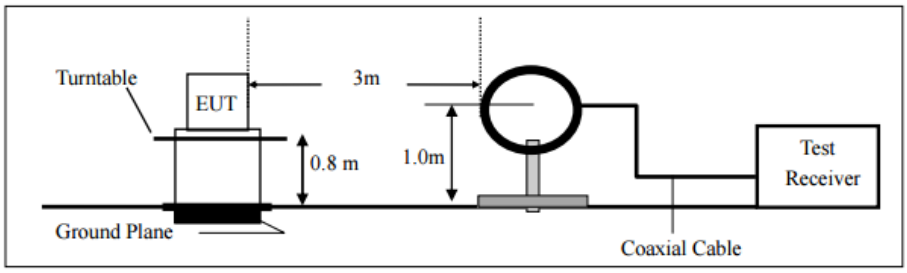



Fig. 25: Radio-frequency radiated emissions of table top equipment from 9 kHz to 30 MHz

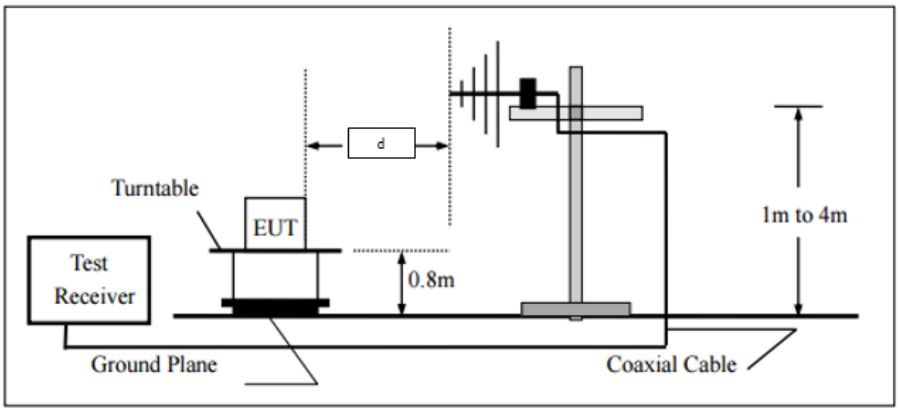



Fig. 26: Radio-frequency radiated emissions of table top equipment from 30 MHz to 1000 MHz

Distance "d" depends on test chamber.

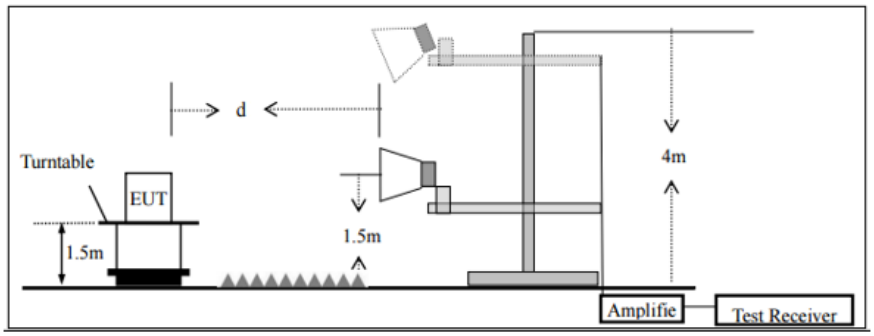



Fig. 27: Radio-frequency radiated emissions setup of table top equipment above 1 GHz

Distance "d" depends on test chamber.

### 4.7.2 Test Procedure

According to ANSI C63.4-2014 & ANSI C63.4a-2017:

All radiated test are performed in a semi-anechoic chamber. The measurement antenna is situated at a distance of 3 m. The EUT is placed at a height of 80 cm above the reference ground plane in the center of the chamber turntable to perform the measurements below 1 GHz.

For measurements above 1 GHz the EUT is placed at a height of 1.5 m above the test chamber floor in the center of the turntable.

### 4.7.3 Requirements

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Only spurious emissions are permitted in any of the frequency bands listed below:

| Frequency [MHz] | Frequency [MHz] | Frequency [MHz] | Frequency [GHz)] |
|---|---|---|---|
| 0.090–0.110 | 16.42–16.423 | 399.9–410 | 4.5–5.15 |
| (1)0.495–0.505 | 16.69475–16.69525 | 608–614 | 5.35–5.46 |
| 2.1735–2.1905 | 16.80425–16.80475 | 960–1240 | 7.25–7.75 |
| 4.125–4.128 | 25.5–25.67 | 1300–1427 | 8.025–8.5 |
| 4.17725–4.17775 | 37.5–38.25 | 1435–1626.5 | 9.0–9.2 |
| 4.20725–4.20775 | 73–74.6 | 1645.5–1646.5 | 9.3–9.5 |
| 6.215–6.218 | 74.8–75.2 | 1660–1710 | 10.6–12.7 |
| 6.26775–6.26825 | 108–121.94 | 1718.8–1722.2 | 13.25–13.4 |
| 6.31175–6.31225 | 123–138 | 2200–2300 | 14.47–14.5 |
| 8.291–8.294 | 149.9–150.05 | 2310–2390 | 15.35–16.2 |
| 8.362–8.366 | 156.52475–156.52525 | 2483.5–2500 | 17.7–21.4 |
| 8.37625–8.38675 | 156.7–156.9 | 2690–2900 | 22.01–23.12 |
| 8.41425–8.41475 | 162.0125–167.17 | 3260–3267 | 23.6–24.0 |
| 12.29–12.293 | 167.72–173.2 | 3332–3339 | 31.2–31.8 |
| 12.51975–12.52025 | 240–285 | 3345.8–3358 | 36.43–36.5 |
| 12.57675–12.57725 | 322–335.4 | 3600–4400 | (2) |
| 13.36–13.41 | | | |

Table 33. Restricted bands of operation

Note 1: Until February 1, 1999, this restricted band shall be 0.490–0.510 MHz.
Note 2: Above 38.6

According to § 15.209(a) and RSS-Gen section 8.9, the radiated emission limits for restricted bands are:

| Frequency Range [MHz] | Quasi-peak detector (QP) [dBµV/m] | Peak detector (PK) [dBµV/m] | | Average detector (AVG) [dBµV/m] | |
|---|---|---|---|---|---|
| | 3 m measuring distance | 3 m measuring distance | 1 m measuring distance[1] | 3 m measuring distance | 1 m measuring distance[1] |
| 0.009 – 0.490 | 20log(2400/F[kHz]) + 80 | N/A | N/A | N/A | N/A |
| 0.490 – 1.705 | 20log(24000/F[kHz]) + 40 | N/A | N/A | N/A | N/A |
| 1.705 - 30 | 20log(24000/F[kHz]) + 40 | N/A | N/A | N/A | N/A |
| 30 – 88 | 40.0 | N/A | N/A | N/A | N/A |
| 88 – 216 | 43.5 | N/A | N/A | N/A | N/A |
| 216 – 960 | 46.0 | N/A | N/A | N/A | N/A |
| 960 – 1000 | 54.0 | N/A | N/A | N/A | N/A |
| 1000 – 18000 | N/A | 74 | N/A | 54 | N/A |
| 18000 - 40000 | N/A | N/A | 83.54 | N/A | 63.54 |

Table 34: Radio-frequency radiated emissions requirements

*Note 1: The limits has been modified according to the applicable standard applying the formula:* $L_2 = L_1 - 20log(d_2/d_1)$*, where:*
*$L_2$: New Limit.*
*$L_1$: Limit at 3 meters.*
*$d_1$: 3 meters (standard distance).*
*$d_2$: 1 meter (new measurement distance).*

According to FCC Part 15 Subpart C FCC 15.247, the limits for unrestricted bands are:

| Frequency Range [MHz] | Test Mode | Measurement distance [m] |
|---|---|---|
| 30 – 88 | QPK | 3 |
| 88 – 216 | | |
| 216 – 960 | | |
| Above 960 | Peak power | |
| Above 18000 | | 1 |

Table 35. Radiated Emission limits. Unrestricted bands

#### 4.7.3.1 Receiver Parameters

According to standard ANSI C63.4-2014:

| Frequency Range [MHz] | Detector | Resolution Bandwidth [MHz] | Video Bandwidth [MHz] |
|---|---|---|---|
| 0.009 – 0.15 | Quasi-peak (QP) | $200 \cdot 10^{-6}$ | $1 \cdot 10^{-3}$ |
| 0.15 – 30 | Quasi-peak (QP) | $9 \cdot 10^{-3}$ | $30 \cdot 10^{-3}$ |
| 30 – 1000 | Quasi-peak (QP) | 0.12 | 0.30 |
| Above 1000 | Peak (PK) | 1 | 3 |
| | Average (AVG) | 1 | 10 |

Table 36: Receiver parameters – Radio-frequency radiated emissions

### 4.7.4 Test Environmental Conditions

| Test Date | Technician | Supervisor | Temperature [ºC] | Humidity [%] | Atm. Pressure [mbar] |
|---|---|---|---|---|---|
| 11/04/2024 | J. M Llaurado | -- | 21.3 | 51.4 | 1010.8 |
| 11/04/2024 | A. Pérez | J.M. Nadales | 21.3 | 51.4 | 1010.8 |
| 12/04/2024 | J. M Llaurado | -- | 21.0 | 50.1 | 1008.4 |
| 24/05/2024 | A. Moliner | J.M. Nadales | 22.9 | 47.2 | 998.3 |

Table 37: Test environmental conditions – Radio-frequency radiated emissions

### 4.7.5 Summary Test Results

| Frequency Range [MHz] | Test Area | Distance [m] | Emissions | Results |
|---|---|---|---|---|
| 9 kHz – 30 MHz | SAC 1 | 3 m | Limit - I <= QP < Limit | PASS |
| 30 MHz – 1 GHz | SAC 1 | 3 m | Limit - I <= QP < Limit | PASS |
| 1 GHz – 18 GHz | SAC 1 | 3 m | Limit - I <= PK < Limit<br>Limit - I <= AVG < Limit | PASS |
| 18 GHz – 26 GHz | SAC 1 | 1 m | Limit - I <= PK < Limit<br>Limit - I <= AVG < Limit | PASS |

Table 38: Summary test results – Radio-frequency radiated emissions

### 4.7.6 Test Results

#### 4.7.6.1 Ambient Levels. Frequency range: 9 kHz – 30 MHz

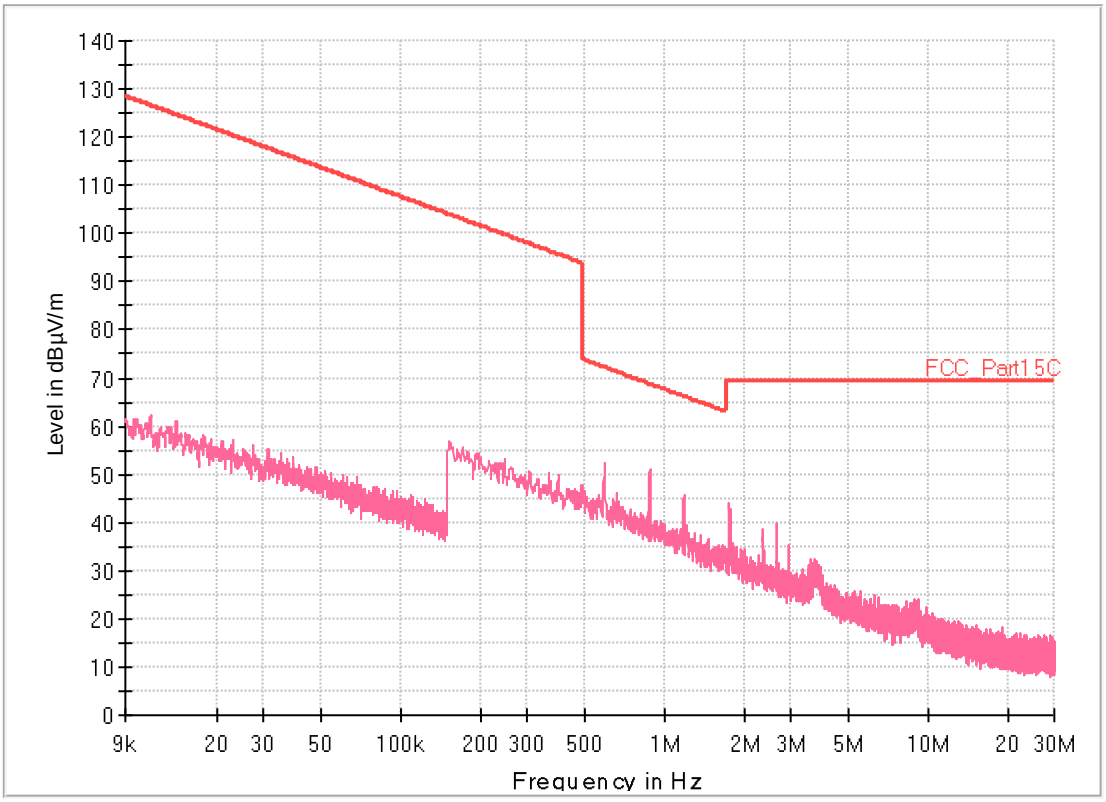



Fig. 28: Ambient level. Frequency range: 9 kHz – 30 MHz - Axis X

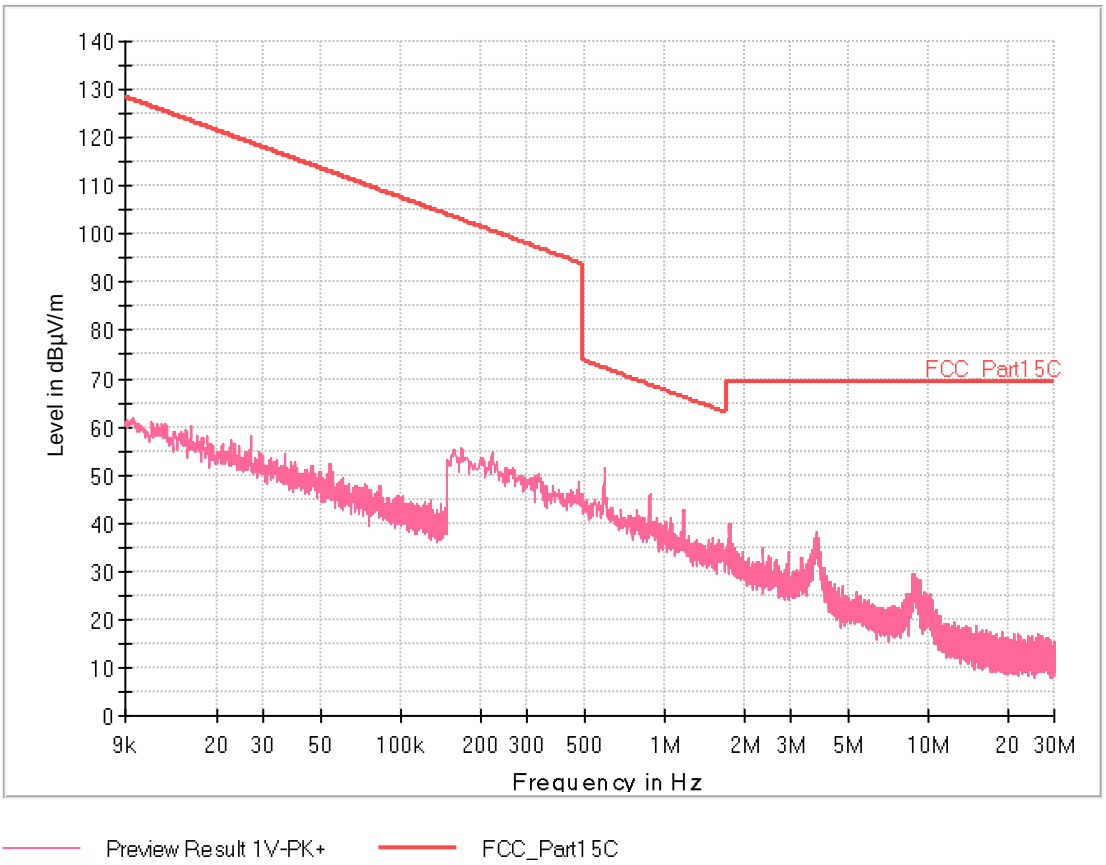



**Fig. 29: Ambient level. Frequency range: 9 kHz – 30 MHz - Axis Y**

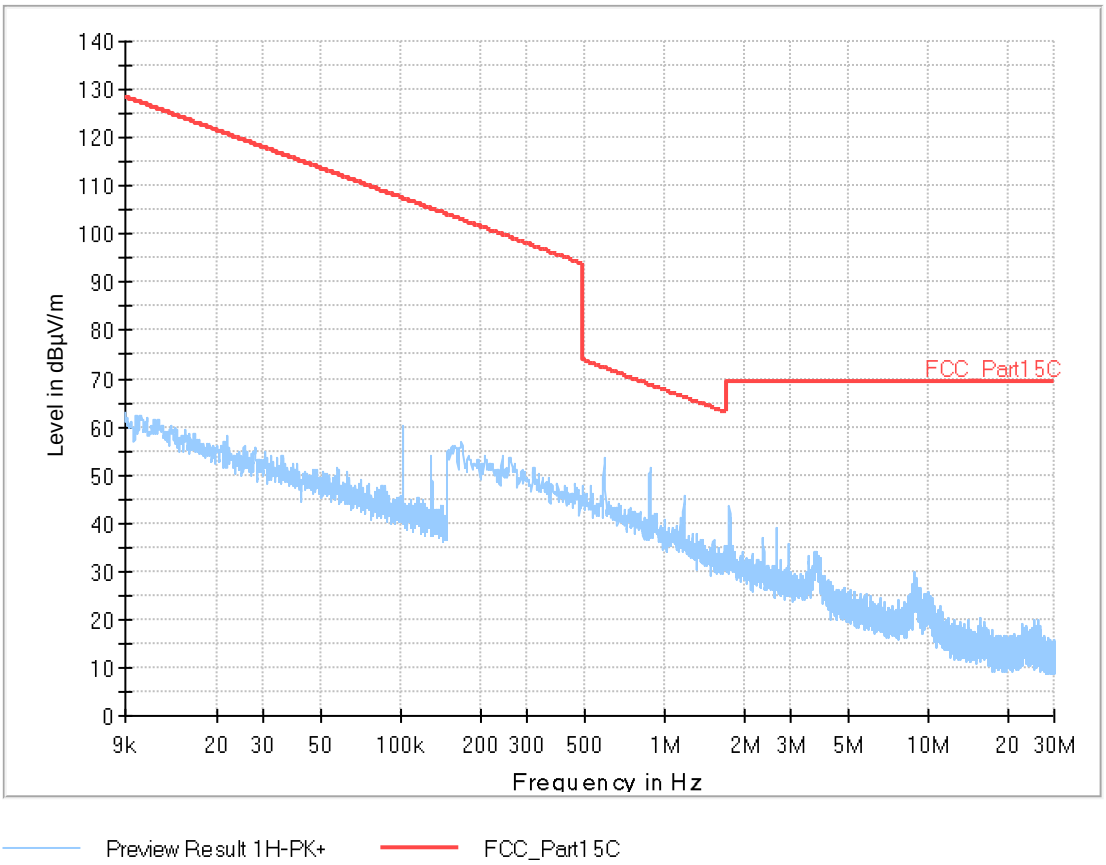



**Fig. 30: Ambient level. Frequency range: 9 kHz – 30 MHz - Axis Z**

#### 4.7.6.2 Ambient Levels. Frequency range: 30 MHz – 1 GHz

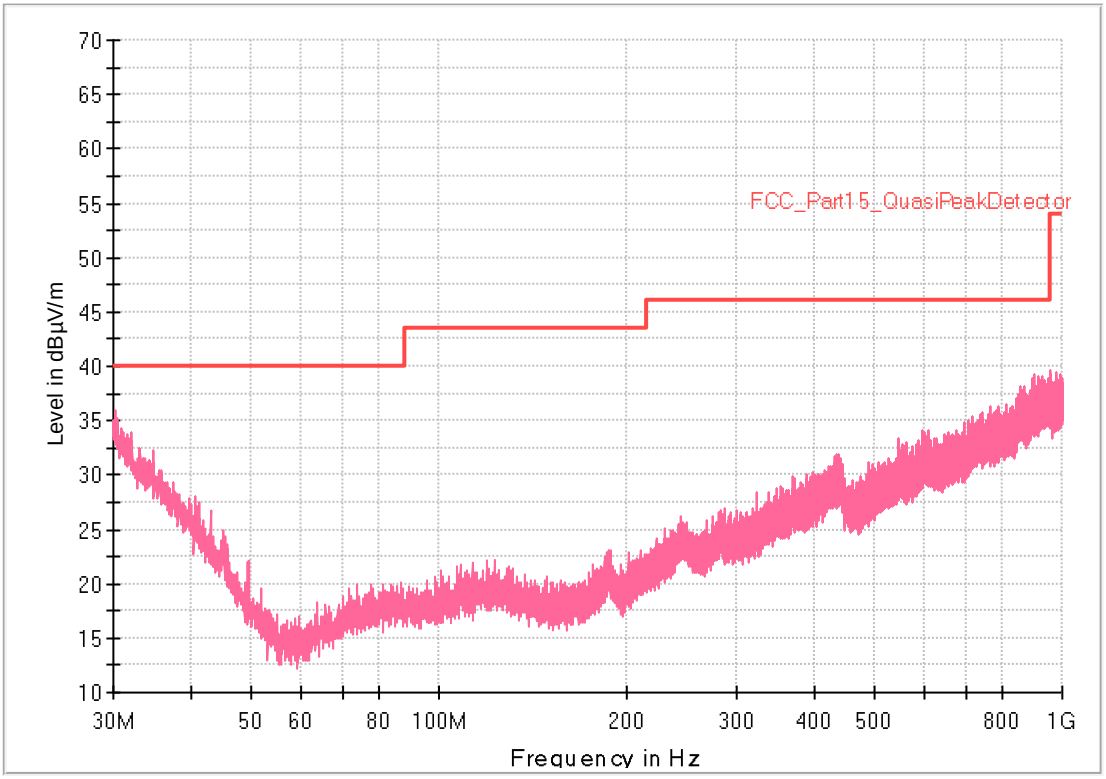



Fig. 31: Ambient level. Frequency range: 30 MHz – 1 GHz

#### 4.7.6.3 Ambient Levels. Frequency range: 1 GHz – 3.5 GHz

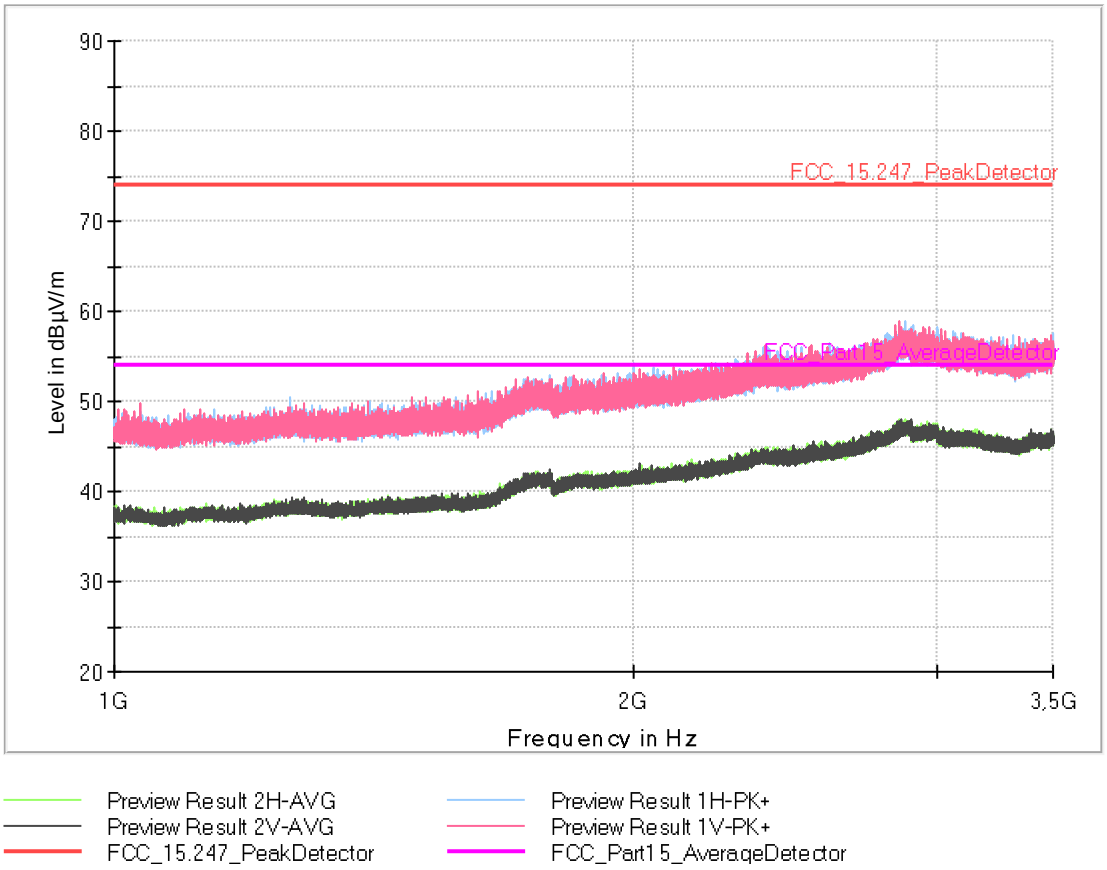



Fig. 32: Ambient level. Frequency range: 1 GHz – 3.5 GHz

#### 4.7.6.4 Ambient Levels. Frequency range: 3.5 GHz – 18 GHz

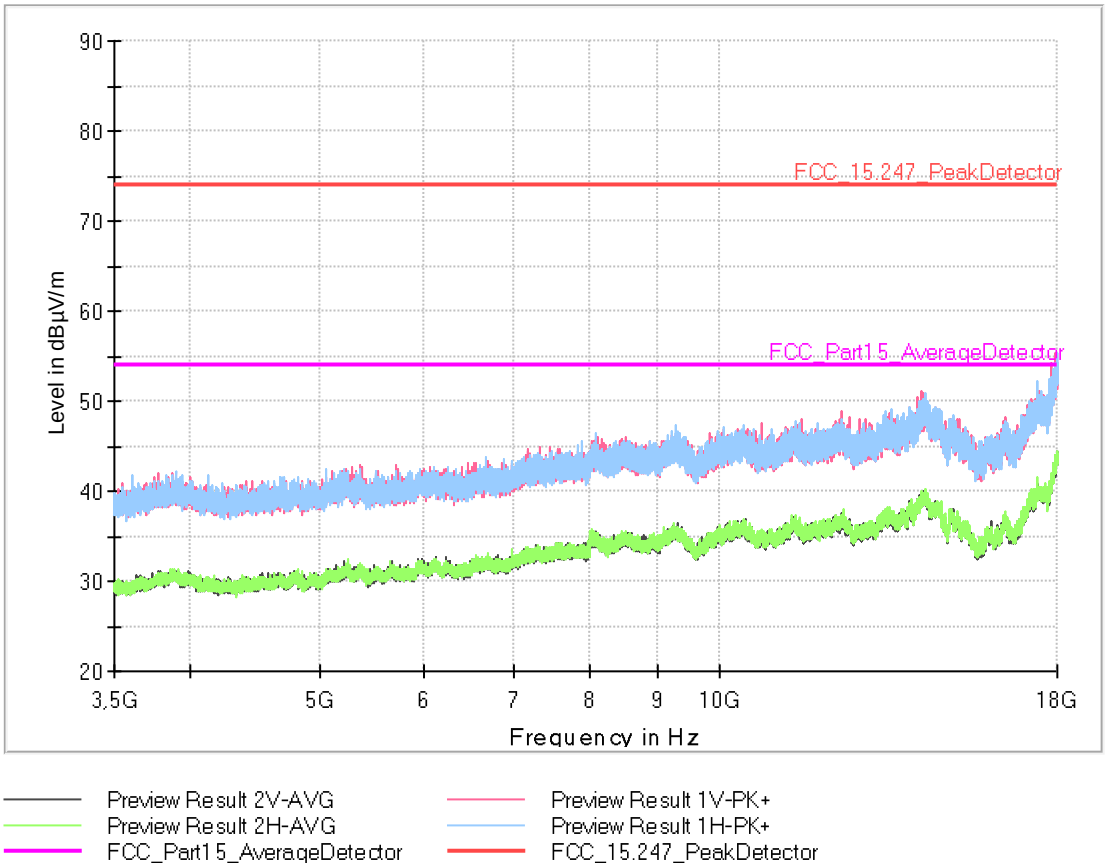



Fig. 33: Ambient level. Frequency range: 3.5 GHz – 18 GHz

#### 4.7.6.5 Ambient Levels. Frequency range: 18 GHz – 26 GHz

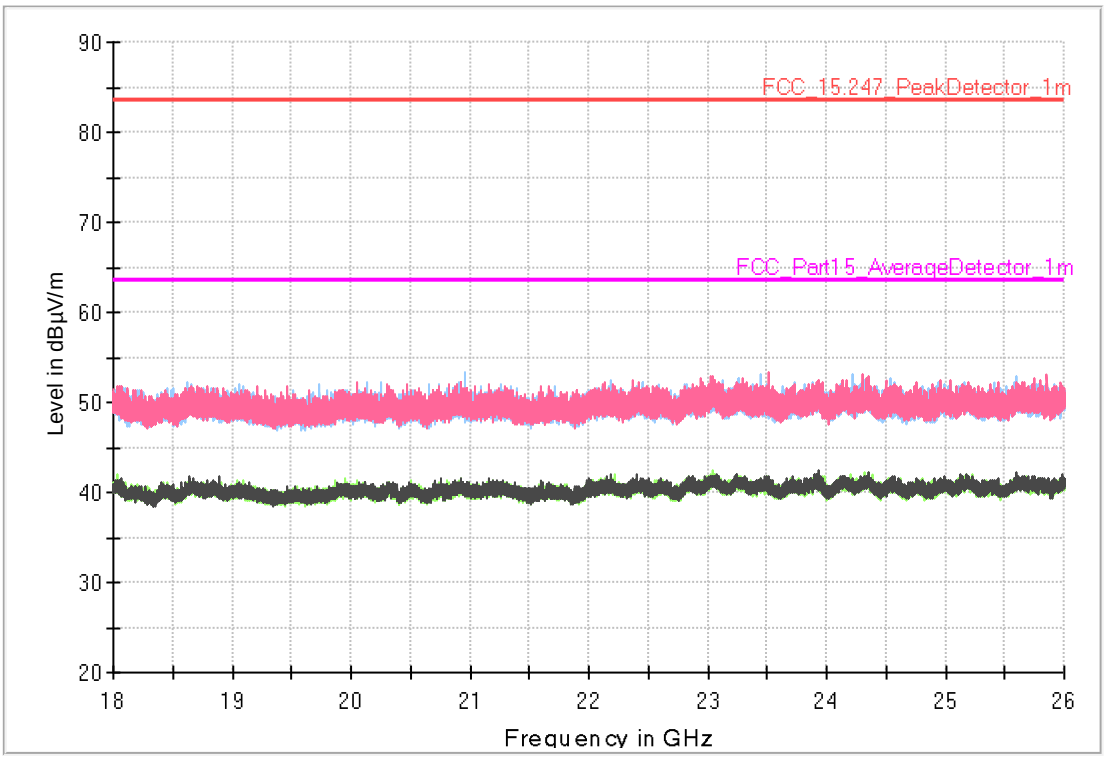



Fig. 34: Ambient level. Frequency range: 18 GHz – 26 GHz

#### 4.7.6.6 Sample #2. Mode 1. All Channel[1]. Frequency range: 9 kHz – 30 MHz

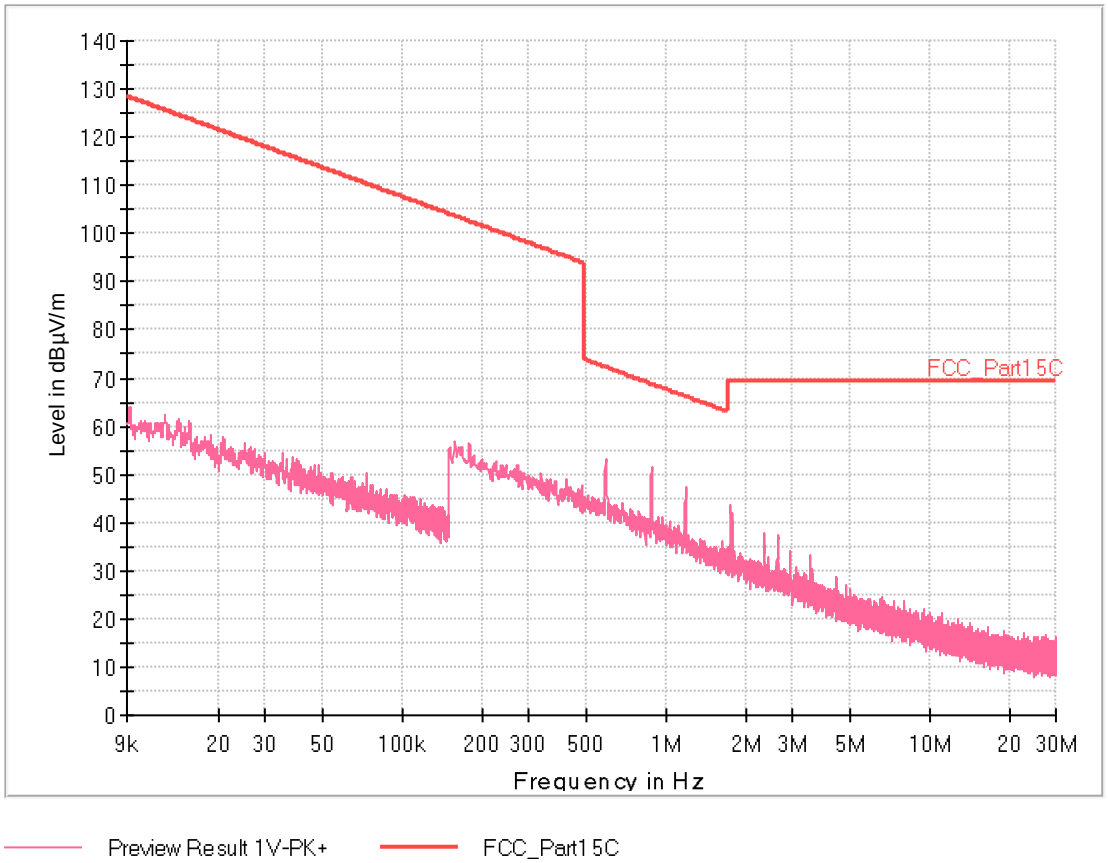



Fig. 35: All Channel. Frequency range: 9 kHz – 30 MHz – Axis X

**FINAL MEASUREMENTS**

No spurious detected. All emissions are below of the QPK limit

*Note [1]*: This frequency range has been measured in different channels and the results obtained are very similar between them. Therefore, the radiated emissions in this frequency range do not depend on the channel configured
The above graph is taken as the most representative result.

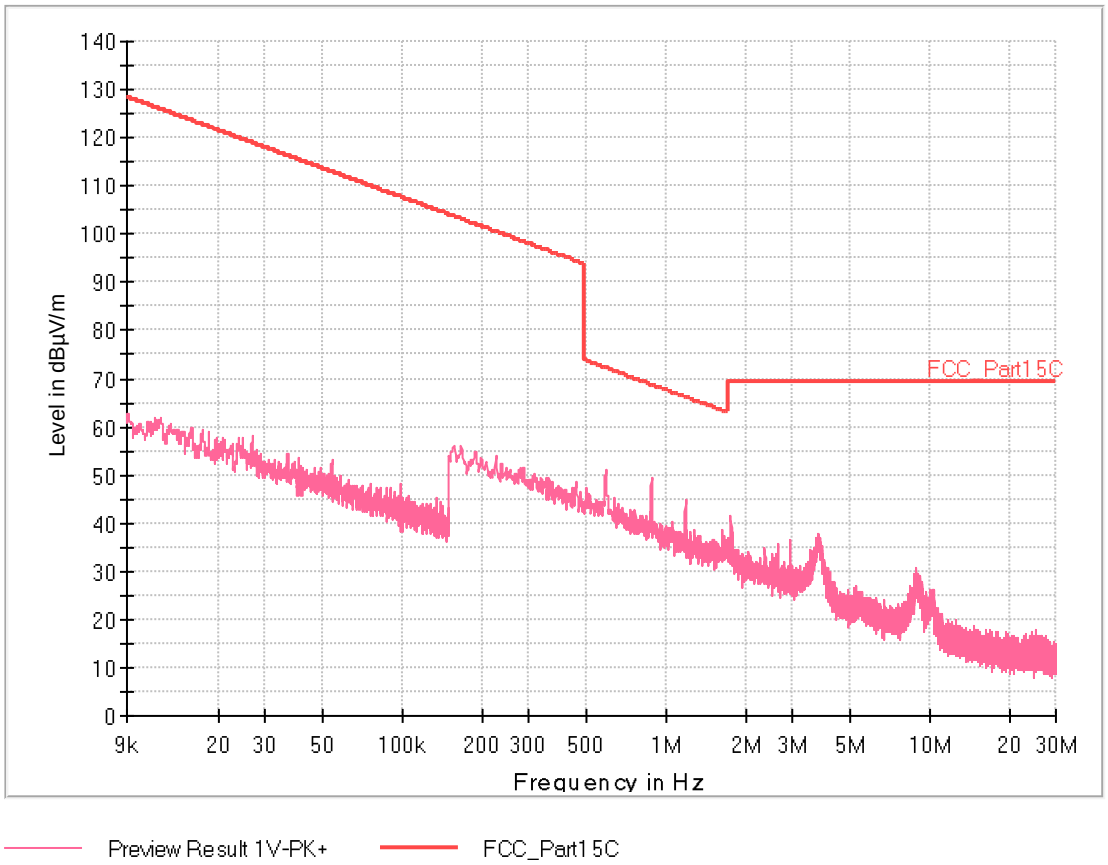



**Fig. 36: All Channel. Frequency range: 9 kHz – 30 MHz – Axis Y**

**FINAL MEASUREMENTS**

No spurious detected. All emissions are below of the QPK limit

*Note [1]*: This frequency range has been measured in different channels and the results obtained are very similar between them. Therefore, the radiated emissions in this frequency range do not depend on the channel configured
The above graph is taken as the most representative result.

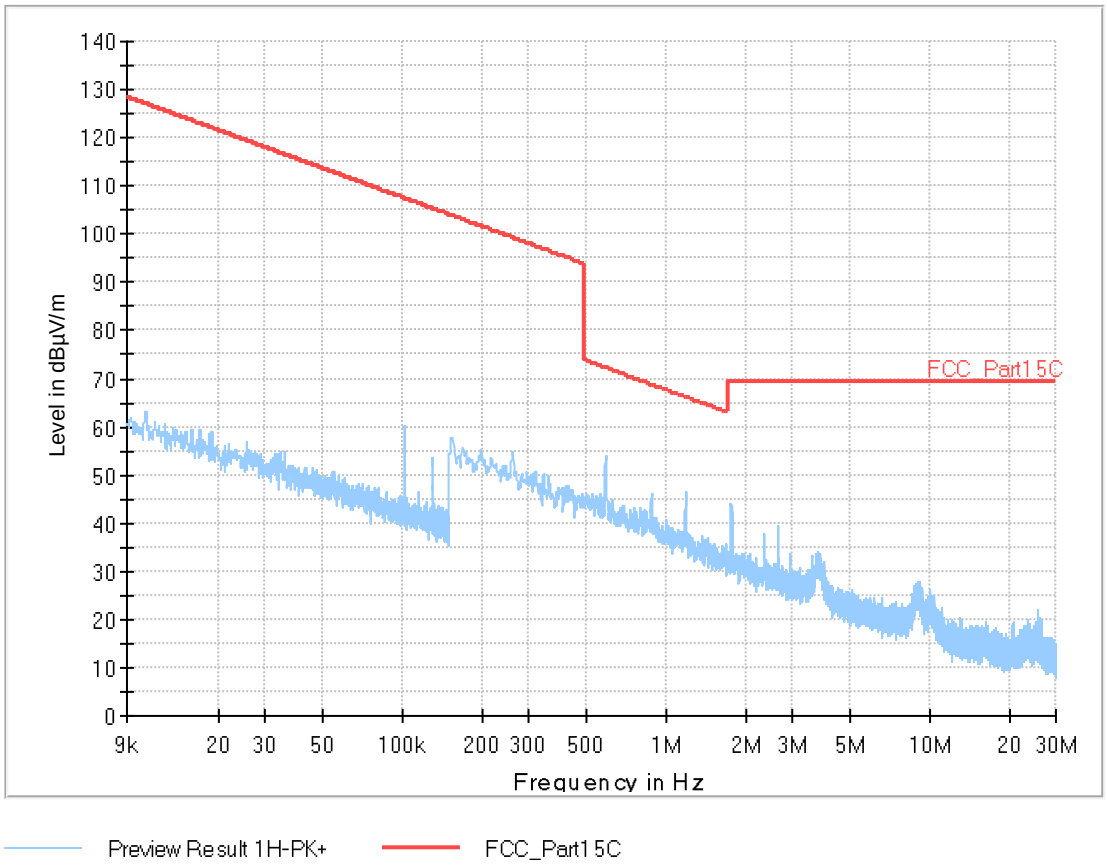



**Fig. 37: All Channel. Frequency range: 9 kHz – 30 MHz – Axis Z**

**FINAL MEASUREMENTS**

No spurious detected. All emissions are below of the QPK limit

*Note [1]*: This frequency range has been measured in different channels and the results obtained are very similar between them. Therefore, the radiated emissions in this frequency range do not depend on the channel configured
The above graph is taken as the most representative result.

#### 4.7.6.7 Sample #2. Mode 1. Frequency range: 30 MHz – 1 GHz

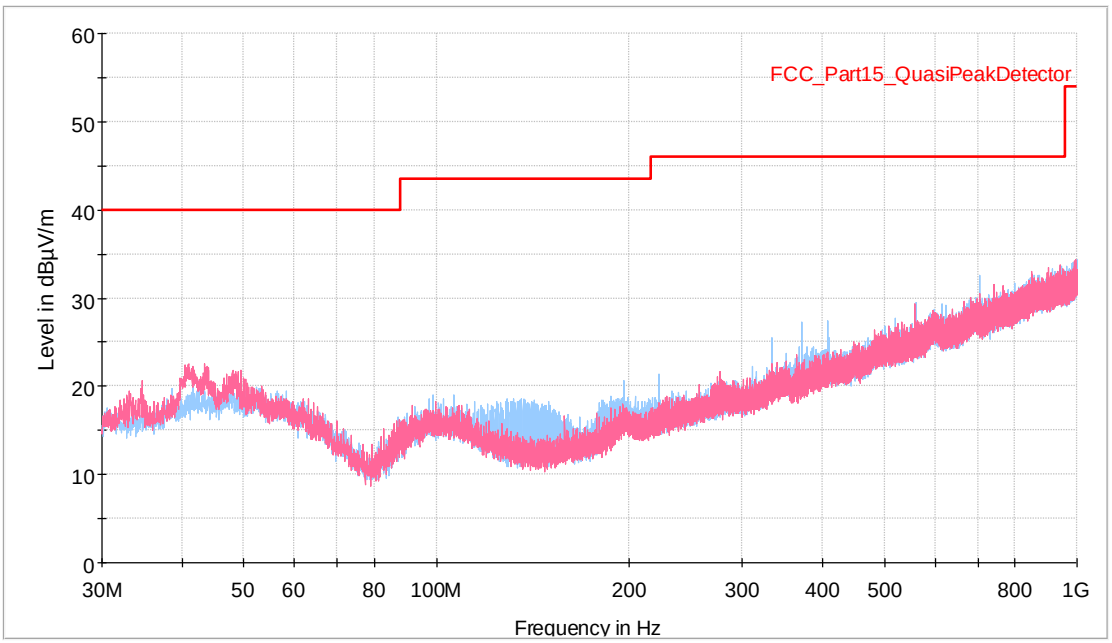



Fig. 38: Low Channel. Frequency range: 30 MHz – 1GHz

**FINAL MEASUREMENTS**

No spurious detected. All emissions are below of the QPK limit

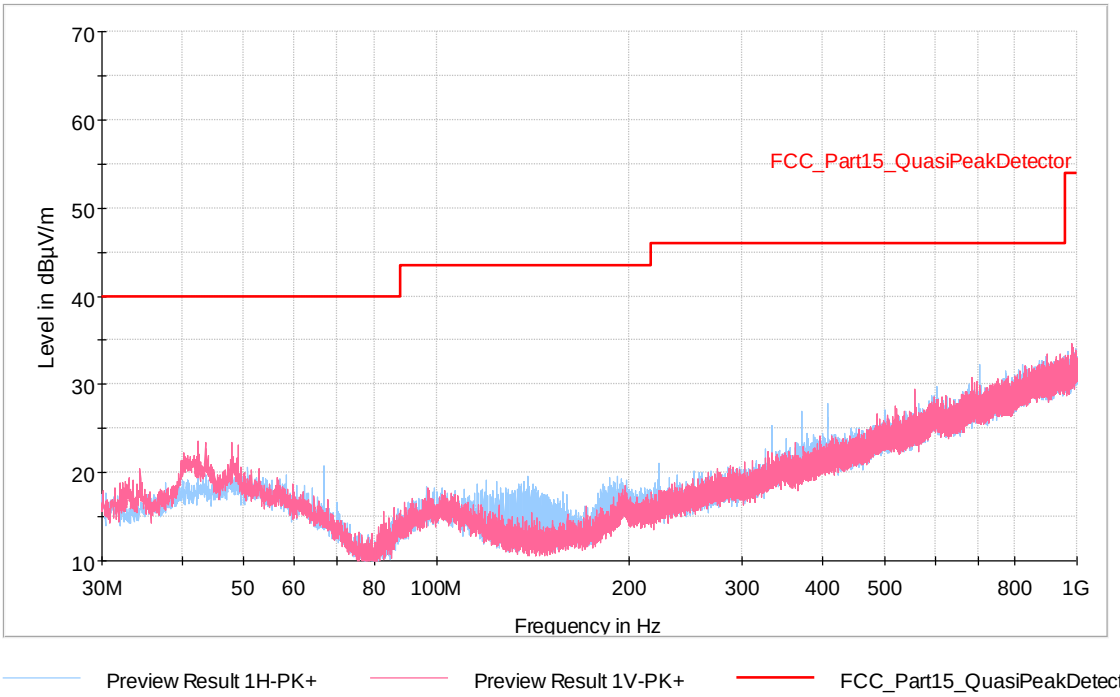



Fig. 39: Middle Channel. Frequency range: 30 MHz – 1GHz

**FINAL MEASUREMENTS**

No spurious detected. All emissions are below of the QPK limit

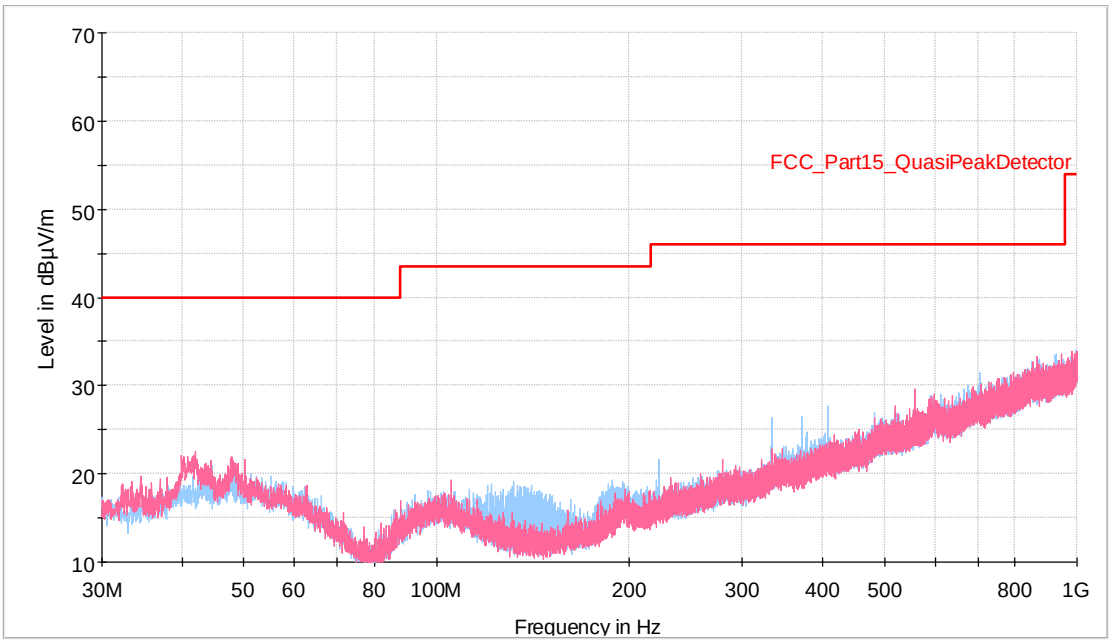



Fig. 40: High Channel. Frequency range: 30 MHz – 1GHz

**FINAL MEASUREMENTS**

No spurious detected. All emissions are below of the QPK limit

#### 4.7.6.8 Sample #2. Mode 1.. Frequency range: 1 GHz – 3.5 GHz

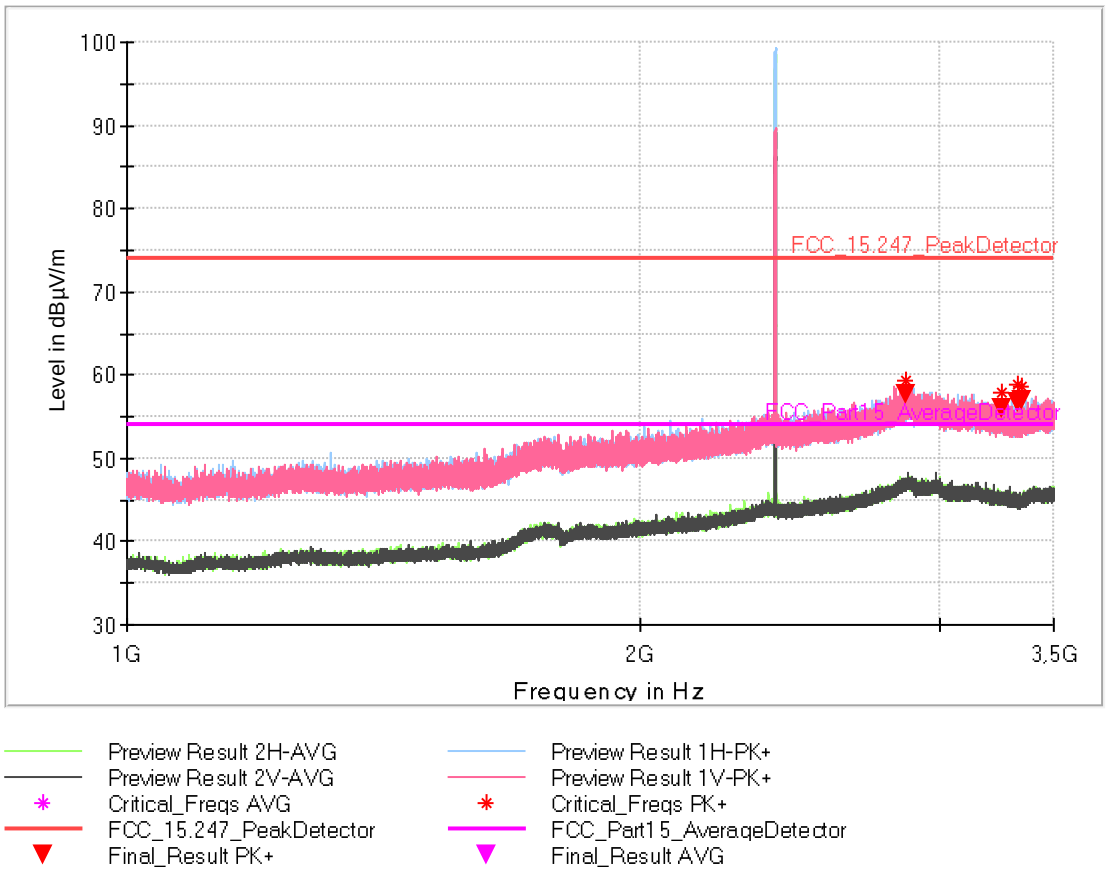



Fig. 41: Low Channel. Frequency range: 1 GHz – 3.5 GHz

**FINAL MEASUREMENTS**

| Frequency [MHz] | MaxPeak [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Pol | Azimuth [deg] | Corr. [dB/m] |
|---|---|---|---|---|---|---|---|
| 2862.750[1] | 57.71 | 74.00 | 16.29 | 120.0 | V | 0.0 | 32.9 |
| 3332.170[1] | 56.76 | 74.00 | 17.24 | 222.0 | V | 0.0 | 34.9 |
| 3355.080[1] | 57.05 | 74.00 | 16.95 | 336.0 | V | 9.0 | 34.9 |

Table 39: Low Channel - Frequency range: 1 GHz – 3.5 GHz

*Note [1]*: The final frequency measurements within the restricted band correspond to the ambient level as can be seen in the graphs above. Therefore, a maximization with peak detector as worst case is performed.

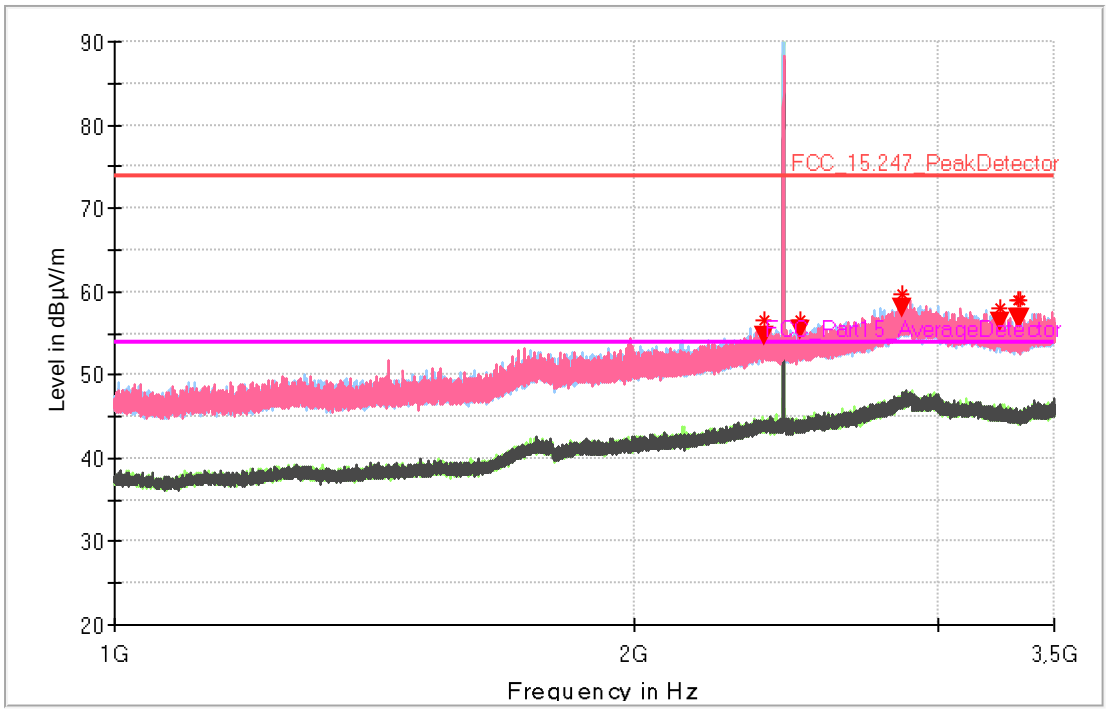



Fig. 42: Middle Channel. Frequency range: 1 GHz – 3.5 GHz

**FINAL MEASUREMENTS**

| Frequency [MHz] | MaxPeak [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Pol | Azimuth [deg] | Corr. [dB/m] |
|---|---|---|---|---|---|---|---|
| 2375.080[1] | 54.60 | 74.00 | 19.40 | 223.0 | V | 348.0 | 31.9 |
| 2493.000[1] | 55.39 | 74.00 | 18.61 | 100.0 | V | 187.0 | 32.0 |
| 2861.420[1] | 57.93 | 74.00 | 16.07 | 253.0 | V | 266.0 | 32.9 |
| 3336.830[1] | 56.88 | 74.00 | 17.12 | 122.0 | V | 204.0 | 34.8 |

Table 40: Middle Channel - Frequency range: 1 GHz – 3.5 GHz

*Note [1]*: The final frequency measurements within the restricted band correspond to the ambient level as can be seen in the graphs above. Therefore, a maximization with peak detector as worst case is performed.

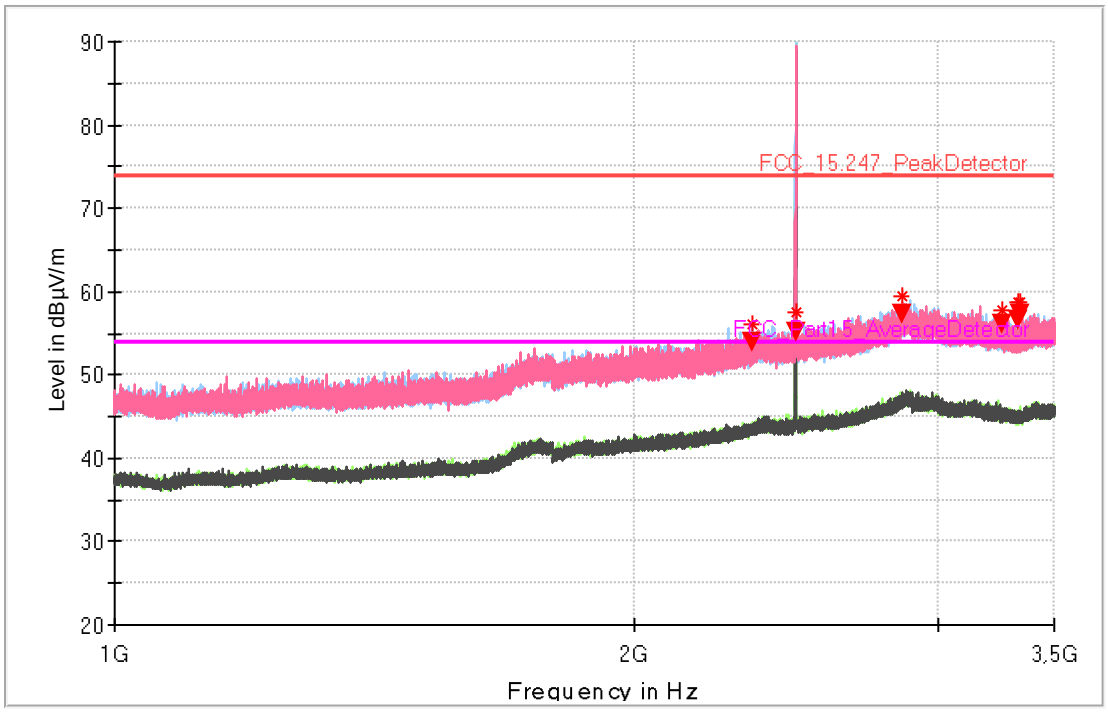



Fig. 43: High Channel. Frequency range: 1 GHz – 3.5 GHz

**FINAL MEASUREMENTS**

| Frequency [MHz] | MaxPeak [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Pol | Azimuth [deg] | Corr. [dB/m] |
|---|---|---|---|---|---|---|---|
| 2340.250[1] | 53.89 | 74.00 | 20.11 | 223.0 | H | 198.0 | 31.6 |
| 2484.080[1] | 55.18 | 74.00 | 18.82 | 100.0 | H | 147.0 | 31.9 |
| 2858.670[1] | 57.37 | 74.00 | 16.63 | 253.0 | V | 300.0 | 32.9 |
| 3348.580[1] | 57.30 | 74.00 | 16.70 | 122.0 | V | 165.0 | 34.9 |

Table 41: High Channel - Frequency range: 1 GHz – 3.5 GHz

*Note [1]*: The final frequency measurements within the restricted band correspond to the ambient level as can be seen in the graphs above. Therefore, a maximization with peak detector as worst case is performed.

#### 4.7.6.9 Sample #2. Mode 1.. Frequency range: 3.5 GHz – 18 GHz

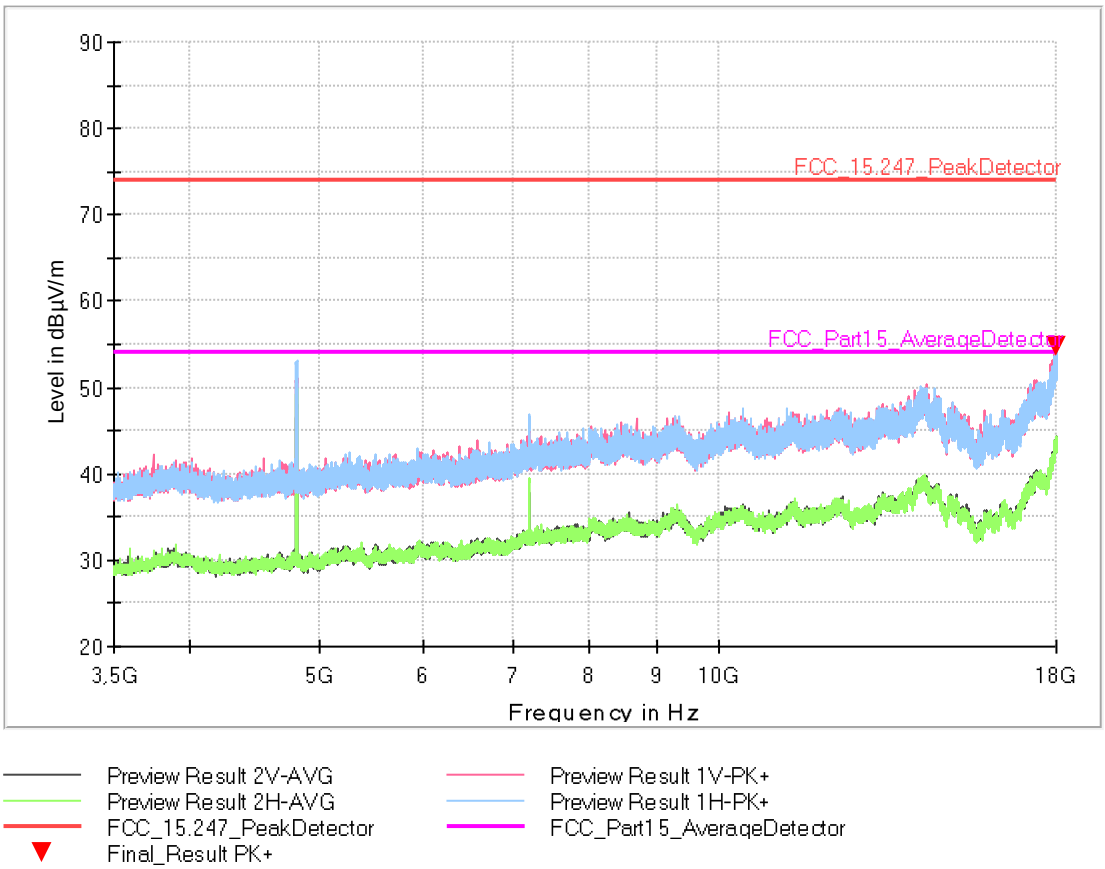



Fig. 44: Low Channel. Frequency range: 3.5 GHz - 18 GHz

**FINAL MEASUREMENTS**

| Frequency [MHz] | MaxPeak [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Pol | Azimuth [deg] | Corr. [dB/m] |
|---|---|---|---|---|---|---|---|
| 17966.650[1] | 55.40 | 74.00 | 18.60 | 151.0 | H | 0.0 | 8.0 |

Table 42: Low Channel - Frequency range: 3.5 GHz - 18 GHz

*Note [1]*: The final frequency measurements within the restricted band correspond to the ambient level as can be seen in the graphs above. Therefore, a maximization with peak detector as worst case is performed.

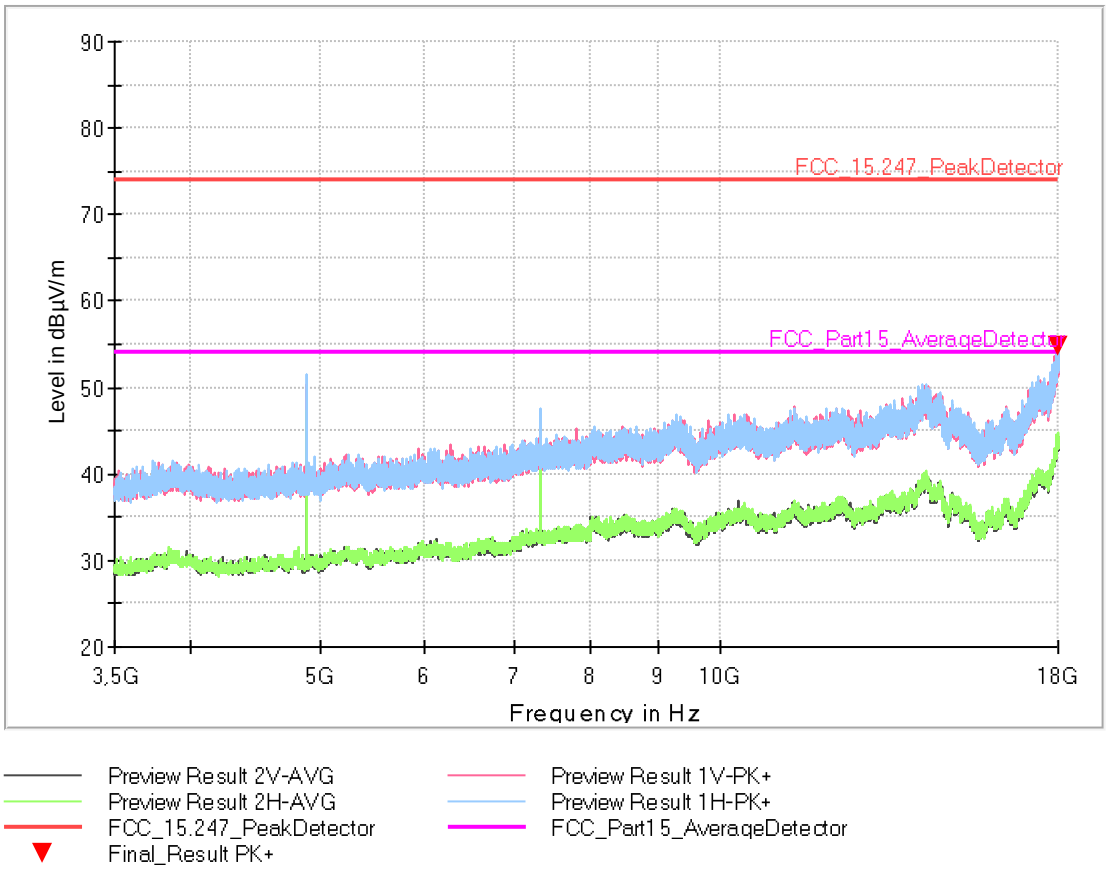



Fig. 45: High Channel. Frequency range: 3.5 GHz - 18 GHz

**FINAL MEASUREMENTS**

| Frequency [MHz] | MaxPeak [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Pol | Azimuth [deg] | Corr. [dB/m] |
|---|---|---|---|---|---|---|---|
| 17835.670[1] | 54.97 | 74.00 | 19.03 | 343.0 | H | 142.0 | 7.1 |

Table 43: High Channel - Frequency range: 3.5 GHz - 18 GHz

*Note [1]*: The final frequency measurements within the restricted band correspond to the ambient level as can be seen in the graphs above. Therefore, a maximization with peak detector as worst case is performed.

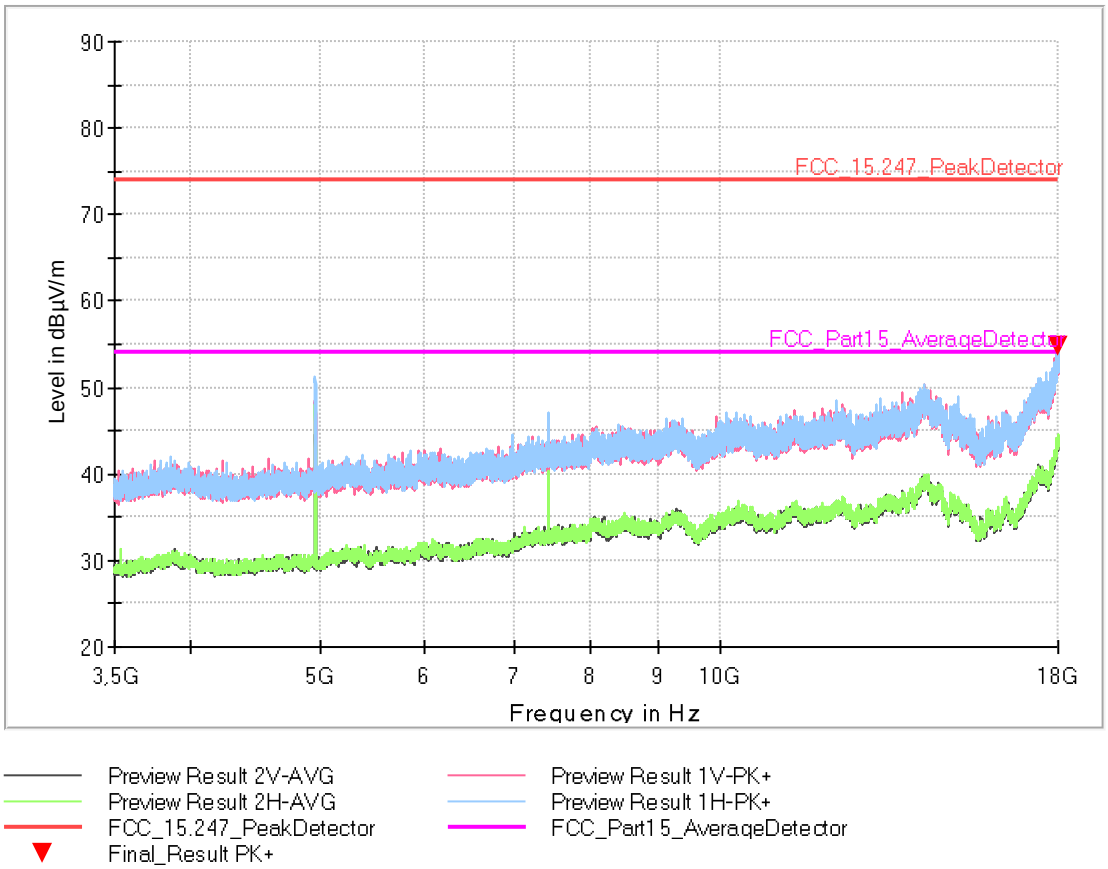



Fig. 46: Middle Channel. Frequency range: 3.5 GHz - 18 GHz

**FINAL MEASUREMENTS**

| Frequency [MHz] | MaxPeak [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Pol | Azimuth [deg] | Corr. [dB/m] |
|---|---|---|---|---|---|---|---|
| 17954.570[1] | 55.45 | 74.00 | 18.55 | 151.0 | H | 205.0 | 8.0 |

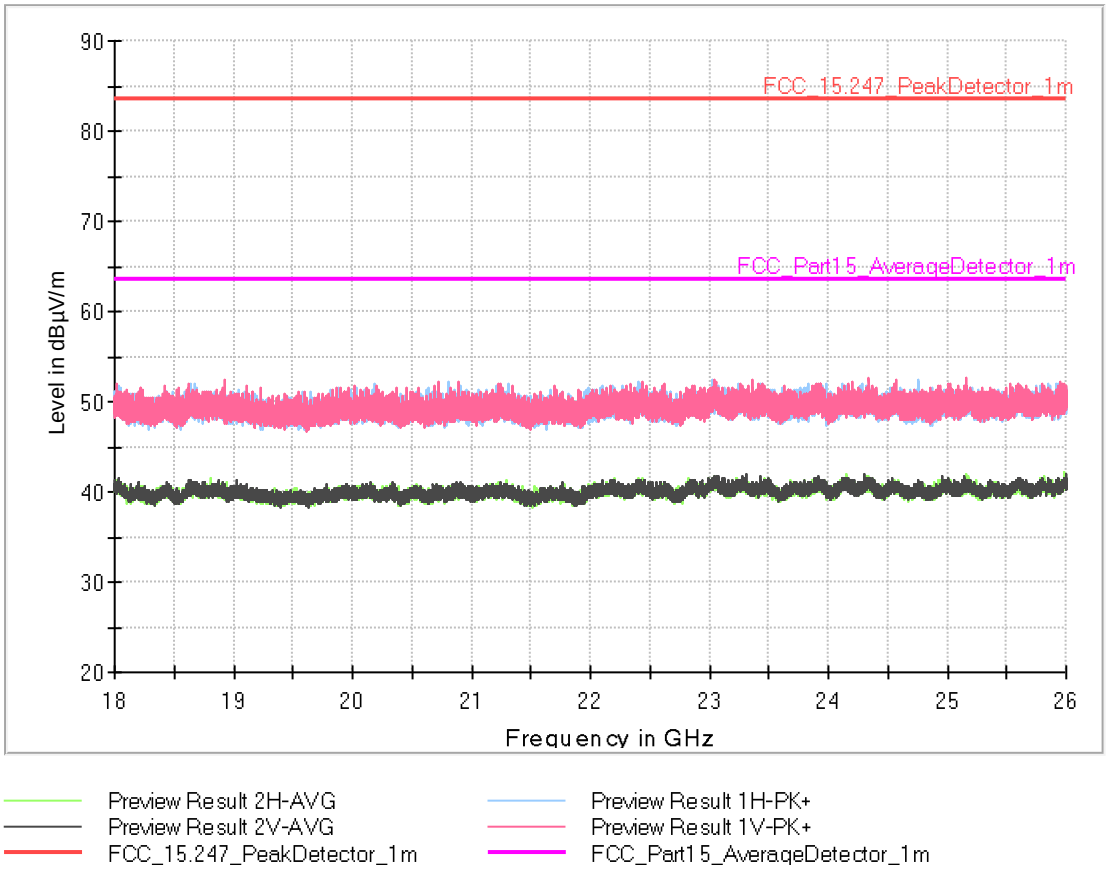
Table 44: Middle Channel - Frequency range: 3.5 GHz - 18 GHz

*Note [1]*: The final frequency measurements within the restricted band correspond to the ambient level as can be seen in the graphs above. Therefore, a maximization with peak detector as worst case is performed.

#### 4.7.6.10 Sample #2. Mode 1. All Channel[1]. Frequency range: 18 GHz – 26 GHz

Fig. 47: All Channel. Frequency range: 18 GHz – 26 GHz

**FINAL MEASUREMENTS**




No spurious detected. All emissions are 20 dB below the peak limit

*Note [1]*: This frequency range has been measured in different channels and the results obtained are very similar between them. Therefore, the radiated emissions in this frequency range do not depend on the channel configured
The above graph is taken as the most representative result.

## 4.8 Test Equipment Used

| Equipment | Brand | Model | Applus Ref. | Last Calibration | Next Calibration |
|---|---|---|---|---|---|
| ACTIVE LOOP ANTENNA | EMCO | 6502 | 05-ER-019 | 04/10/2023 | 04/10/2024 |
| BILOG ANTENNA | SCHWARZBECK | VULB 9162 | 1042229 | 27/02/2024 | 27/02/2025 |
| HORN ANTENNA | EMCO | 3115 | 05-ER-017 | 06/12/2023 | 06/12/2024 |
| HORN ANTENNA | MVG | EH 1840 | 1042685 | 14/04/2022 | 21/06/2026 |
| RF CABLE | HUBER+SUHNER | SF126E | 1042728 | 21/08/2023 | 21/08/2024 |
| 3 DB ATTENUATOR | HUBER+SUHNER | 6803.17.B | 1042021 | 25/05/2023 | 25/05/2024 |
| RF CABLE | RHODE & SCHWARZ | NA | 1041502 | 09/10/2023 | 09/10/2024 |
| RF CABLE | HUBER+SUHNER | SF104 | 1041964 | 22/06/2023 | 22/06/2024 |
| HIGHPASS FILTER | WAINWRIGHT INSTRUMENTS | WHNX6-2765-3500-26500-40CC | 1042511 | 12/05/2023 | 29/04/2025 |
| RF CABLE | HUBER+SUHNER | SF104/11N/11N | 1042585 | 12/05/2023 | 12/05/2024 |
| RF CABLE | HUBER+SUHNER | SF102 | 1042546 | 18/04/2023 | 28/04/2025 |
| RF AMPLIFIER | BONN ELEKTRONIK | BLMA 0118-M | 1041733 | 12/05/2023 | 25/04/2025 |
| EMI RECEIVER | R&S | ESW 26 | 1041791 | 14/11/2023 | 14/11/2024 |
| THERMOHIGROMETER | PCE IBERICA | THB 40 | 1042022 | 07/11/2023 | 07/11/2024 |
| TEST SOFTWARE | ROHDE & SCHWARZ | EMC32 v.10.50.00 | 104624 | -- | -- |
| MAST-TABLE CONTROLLER | MATURO | NCD | 1042758 | -- | -- |

Table 45: Test Instruments – Radio-frequency radiated emissions

### 4.7.7 Uncertainty

| Test Type | Test Description | Uncertainty |
|---|---|---|
| Emissions | RADIO-FREQUENCY RADIATED EMISSIONS 9 kHz – 30 MHz | ± 3.9 dB |
| Emissions | RADIO-FREQUENCY RADIATED EMISSIONS 30 MHz – 1 GHz | ± 5.3 dB |
| Emissions | RADIO-FREQUENCY RADIATED EMISSIONS 1 GHz – 6 GHz | ± 5.3 dB |
| Emissions | RADIO-FREQUENCY RADIATED EMISSIONS 6 GHz – 18 GHz | ± 5.5 dB |
| Emissions | RADIO-FREQUENCY RADIATED EMISSIONS 18 GHz – 26 GHz | ± 5.1 dB |

Table 46: Radio-frequency radiated emissions measuring Uncertainties

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.