# TEST REPORT
On behalf of

Mettler Toledo (Changzhou) Measurement Technology Co., Ltd

Product Name: RF Module

Model No.: MT-UHF-RFID01

FCC ID: 2ALAI24MT107

Prepared For: Mettler Toledo (Changzhou) Measurement Technology Co., Ltd
No.111 Taihu West Road Changzhou City,
Jiangsu Province, China.

Prepared By: Audix Technology (Shanghai) Co., Ltd.
3F, Building 34, No. 680 Guiping Rd.,
Caohejing, Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500

TESTING
NVLAP LAB CODE 200371-0

| | | |
|---|---|---|
| File No. | : | C1D2406011 |
| Report No. | : | ACI-F24138 |
| Date of Test | : | 2024.08.16-09.25 |
| Date of Report | : | 2024.09.26 |

The statement is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

# TABLE OF CONTENTS

Page

# TEST REPORT

| | | |
|---|---|---|
| Applicant | : | Mettler Toledo (Changzhou) Measurement Technology Co., Ltd |
| EUT Description | : | RF Module |
| | (A) Model No. | : Refer to Sec.2.1 |
| | (B) Power Supply | : DC 5V or 24V |
| | (C) Test Voltage | : DC 5V (from notebook) |

**Test Procedure Used:**

*FCC RULES AND REGULATIONS PART 15 SUBPART C*
*AND ANSI C63.10-2013*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: Refer to Sec2.1), which was tested is technically compliance with the FCC limits.

This report applies to above tested Sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

Date of Test : 2024.08.16-09.25 Date of Report : 2024.09.26

Producer : _____
JAREY LU / Deputy Assistant Manager

Review : _____
LVY LV / Deputy Assistant Manager

For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : _____
KAMP CHEN / Manager

Authorized Signature(s)

# 1 SUMMARY OF STANDARDS AND RESULTS

## 1.1 Description of Standards and Results

The result is determined according to the decision rules of customer selection in the ASC-403 application service form.
1. According to IEC GUIDE 115 Procedure 2 and ILAC-G8, the uncertainties value is not used in determining the PASS/FAIL results.
2. If the required specification or standard already contains the decision rules, it will be carried out in accordance with the regulations or standard documents or the requirements of the competent units. If the required specification or standard does not contain a decision rule, the same paragraph 1.
3. If your company has a required decision rule, it will be implemented in accordance with the requirements and ISO/IEC Guide 98-4 specifications.

The EUT have been tested according to the applicable standards as referenced below:

| Description / Test Item | Test Standard | Results | Meets Limit |
|---|---|---|---|
| **EMISSION** | | | |
| Conducted Emission | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | N/A | 15.207 |
| Radiated Emission | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.209(a) 15.205(a)(c) |
| 20 dB Bandwidth Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(a)(1) |
| Carrier Frequency Separation Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(a)(1) |
| Number of Hopping Frequencies Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(a)(1)(i) |
| Dwell Time Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(a)(1)(i) |
| Maximum Peak Output Power Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(b)(2) |
| Band Edge Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(d) |
| Emission Limitations Measurement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.247(d) |
| Antenna Requirement | FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013 | Pass | 15.203 |
| N/A is an abbreviation for Not Applicable. | | | |

# 2 GENERAL INFORMATION

## 2.1 Description of Equipment Under Test

Description : RF Module

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Model Number : MT-UHF-RFID01

Radio Tech. : RFID

Chanel Freq. : 902-928MHz, Total 50 channels.

Modulation : ASK

Antenna Port : Transmit Type: 1T1X;
Connector: IPEX

Note : The EUT shipped with one of Antennas provided as below:

| No. | Model | Antenna Type | Connector | Peak Gain(dBi) |
|---|---|---|---|---|
| 1. | 868/915 MHz Flexible Antenna | Flex | IPEX | -26.3 |
| 2. | ARRKP5062-S915B | Dielectric Ceramics | MMCX-JW | 3 |
| Note1: When EUT shipped with Antenna #2, one additional IPEX-to-MMCX-JW cable shipped.<br>Note2: As the Gain showed as above, we select Antenna #2 for the full test and Antenna#1 for differential test in current report. | | | | |

Applicant : Mettler Toledo (Changzhou) Measurement Technology Co., Ltd
No.111 Taihu West Road Changzhou City,
Jiangsu Province, China.

Manufacturer : Same as Applicant.

## 2.2 EUT Specifications Assessed in Current Report

| Mode | Modulation |
|---|---|
| RFID | ASK |

| Channel List | | | |
|---|---|---|---|
| Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) |
| 01 | 902.75 | 26 | 915.25 |
| 02 | 903.25 | 27 | 915.75 |
| 03 | 903.75 | 28 | 916.25 |
| … | … | … | … |
| … | … | … | … |
| … | … | … | … |
| 23 | 913.75 | 48 | 926.25 |
| 24 | 914.25 | 49 | 926.75 |
| 25 | 914.75 | 50 | 927.25 |
| 01 | 902.75 | 26 | 915.25 |
| 02 | 903.25 | 27 | 915.75 |

## 2.3 Test Information

The test software " UniversalReaderAssistant.exe" was used to control EUT work in TX mode, Power Setting and select test channel.

| Mode | Power Setting | Test Channel | | Frequency (MHz) |
|---|---|---|---|---|
| RFID | 24 | Low: | 01 | 902.75 |
| | 24 | Middle: | 26 | 915.25 |
| | 24 | High: | 50 | 927.25 |
| | 24 | Hopping: | -- | -- |

## 2.4 Sample Description

| Test Item | HVIN | Sample Number | Date of receipted |
|---|---|---|---|
| Radiated Emission | MT-UHF-RFID01 | E20240607439-02/02 | 2024.06.07 |
| Conducted RF Test | MT-UHF-RFID01 | E20240607439-02/02 | 2024.06.07 |

## 2.5 Supported equipment

Brand : Acer
Product Name: : Notebook PC
Model Name : TravelMate P238 series
Model Number : N15W8

## 2.6 Description of Test Facility

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F, Building 34, No. 680 Guiping Rd., Caohejing, Hi-Tech Park, Shanghai 200233, China

Accredited by NVLAP, Lab Code : 200371-0

FCC Designation Number : CN5027

Test Firm Registration Number : 954668

# 3 RADIATED EMISSION TEST

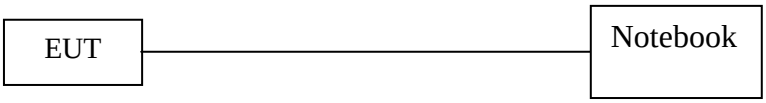
## 3.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

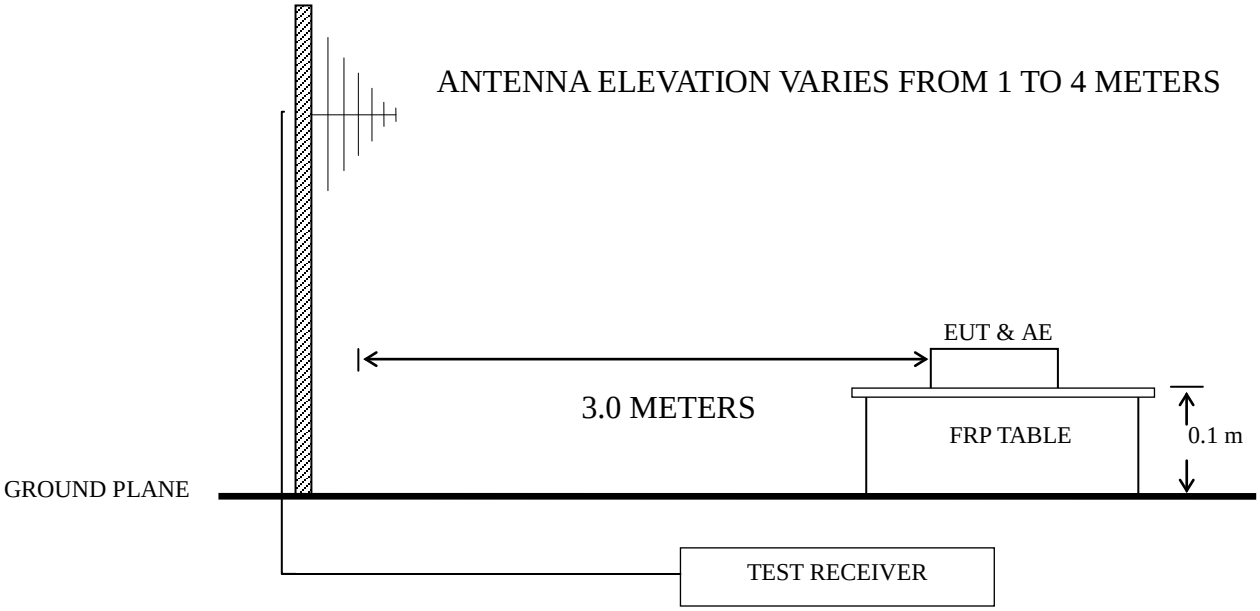
| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Preamplifier | Agilent | 8447D | 2944A10548 | 2024.02.22 | 1 Year |
| 2. | Preamplifier | HP | 8449B | 3008A00864 | 2024.02.22 | 1 Year |
| 3. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 4. | Test Receiver | R&S | ESCI | 101303 | 2024.02.22 | 1 Year |
| 5. | Bilog Antenna+6dB Attenuator | Schwarz beck | VULB 9168+EMCI-N-6-06 | 707+AT-N0637 | 2024.07.31 | 1 Year |
| 6. | Horn Antenna | EMCO | 3115 | 96074878 | 2024.07.25 | 1 Year |
| 7. | Coaxial Switch | Anritsu | MP59B | 6200655086 | 2024.02.22 | 1 Year |
| 8. | High Pass Filter | Agilent | 84300-80038 | 006 | 2023.12.13 | 1 Year |
| 9. | Coaxial Cable | SCHAFFNER | RG 212U-MIL C 17+N1K50-EW0630-N1K50-15m-1 | RE-10m-001/ RE-15m-002 | 2024.02.22 | 1 Year |
| 10. | RF Cable | Mini-Circuits | FLC-3FT-SMSM+ | 22022838 | 2024.08.09 | 1 Year |
| 11. | RF Cable | Mini-Circuits | FLC-3FT-SMSM+ | 22022830 | 2024.08.09 | 1 Year |
| 12. | Software | Audix | e3 | 210616 | -- | -- |

## 3.2 Block Diagram of Test Setup

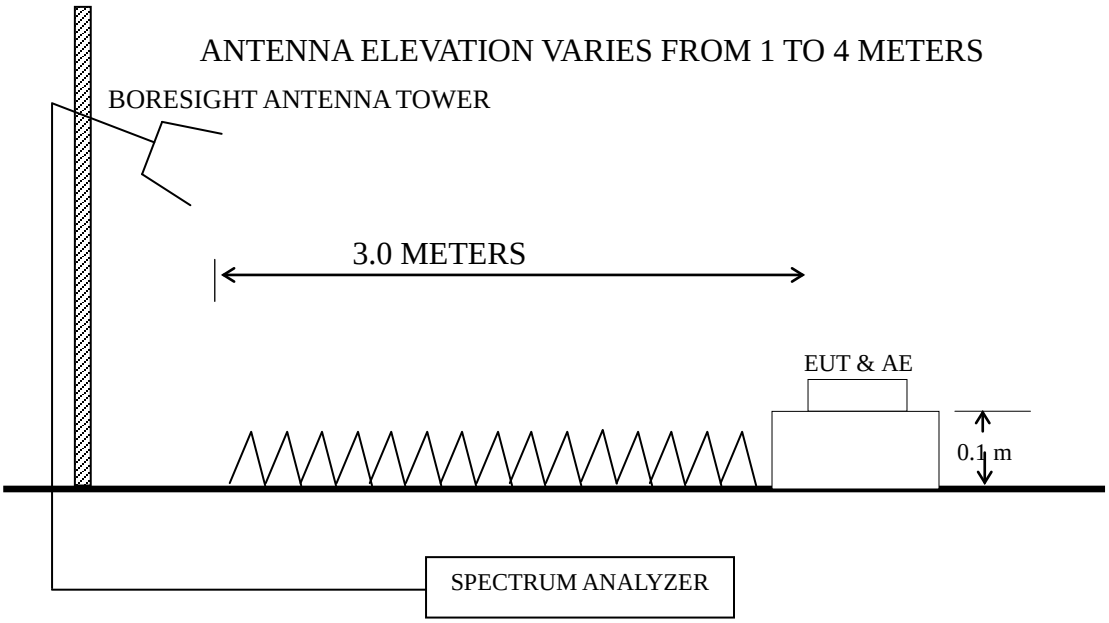
### 3.2.1 EUT & Peripherals



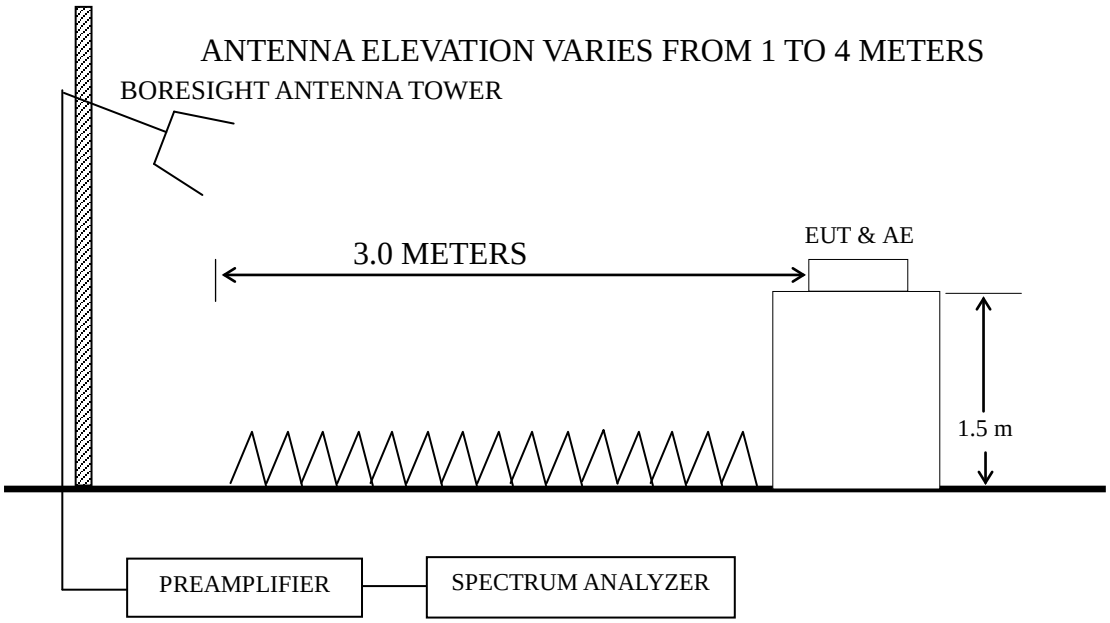

### 3.2.2 Below 1GHz




### 3.2.3 Above 1GHz (1 to 4GHz)



3.2.4 Above 1GHz (4 to 10GHz)




## 3.3 Radiated Emission Limit (§15.209)

| Frequency (MHz) | Distance (m) | Field strength limits (μV/m) | |
|---|---|---|---|
| | | (μV/m) | dB(μV/m) |
| 30 ~ 88 | 3 | 100 | 40.0 |
| 88 ~ 216 | 3 | 150 | 43.5 |
| 216 ~ 960 | 3 | 200 | 46.0 |
| Above 960 | 3 | 500 | 54.0 |

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

## 3.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.4.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

## 3.5 Operating Condition of EUT

3.5.1 Setup the EUT as shown in Sec. 3.2.

3.5.2 Turn the EUT on.

3.5.3 Connect the EUT and Notebook PC through one USB-to Type-C cable.

3.5.4 Use the software as section 2.3 to select the test mode, and then test.

3.5.5 Repeat step 3.5.3 and 3.5.4, until the test of all modes finished.

## 3.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a 0.1m high insulating support on a turntable. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.10: 2013 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of Agilent N9010A was set at 1MHz for above 1GHz.

The frequency range from 30 MHz to 10 GHz (Up to $10^{th}$ harmonics from fundamental frequency) was checked.

All the test results are listed in Sec.3.7.

## 3.7 Test Results

**<PASS>**

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Frequency range: below 1GHz (Worst case emission)
(Shipped With ANT#2):

| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P15-16 |
| 2. | | | 26 | 915.25 MHz | P17-18 |
| 3. | | | 50 | 927.25 MHz | P19-20 |
| 4. | | | Hopping | -- | P21-22 |

(Shipped With ANT#1):

| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P23-24 |
| 2. | | | 26 | 915.25 MHz | P25-26 |
| 3. | | | 50 | 927.25 MHz | P27-28 |
| 4. | | | Hopping | -- | P29-30 |

Frequency range: 1GHz to 4GHz
(Shipped With ANT#2):

| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P31-32 |
| 2. | | | 26 | 915.25 MHz | P33-34 |
| 3. | | | 50 | 927.25 MHz | P35-36 |
| 4. | | | Hopping | -- | P37-38 |

(Shipped With ANT#1):

| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P39-40 |
| 2. | | | 26 | 915.25 MHz | P41-42 |
| 3. | | | 50 | 927.25 MHz | P43-44 |
| 4. | | | Hopping | -- | P45-46 |

Frequency range: 4GHz to 10GHz
(Shipped With ANT#2):

| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P48-49 |
| 2. | | | 26 | 915.25 MHz | P50-51 |
| 3. | | | 50 | 927.25 MHz | P52-53 |
| 4. | | | Hopping | -- | P54-55 |

(Shipped With ANT#1):

| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P56-57 |
| 2. | | | 26 | 915.25 MHz | P58-59 |
| 3. | | | 50 | 927.25 MHz | P60-61 |
| 4. | | | Hopping | -- | P62-63 |

Band-Edge and Restricted bands:
(Shipped With ANT#2):

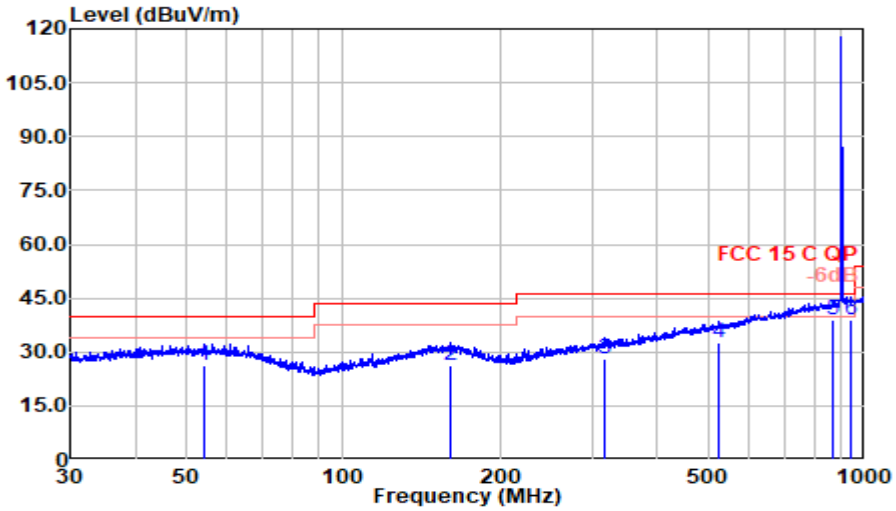
| No. | Operation | Mode | Channel | Frequency | Data Page |
|---|---|---|---|---|---|
| 1. | Transmitting | RFID | 01 | 902.75 MHz | P64-65 |
| 2. | | | 50 | 927.25 MHz | P66-67 |

NOTE 1 – The equation of Emission Level and Margin showed as below:
a). For 30MHz – 1GHz & 1GHz – 4GHz:
Emission Level = Read Level + Antenna Factor + Cable Loss
Margin = Limits - Emission Level.
b). For 4GHz – 10GHz:
Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin = Limits - Emission Level.
NOTE 2 – "QP" means "Quasi-Peak" values.
NOTE 3 – 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.
NOTE 4 – The emission levels which not reported are too low against the official limit.
NOTE 5 – The emission levels recorded below is data of EUT configured in Lying direction, for this direction was the maximum emission direction during the test. The data of Side & Standing direction are too low against the official limit to be reported.
NOTE 6 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.
For above 1GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
NOTE 7 – The frequency range 608-614MHz & 960-1240MHz were tested for Restricted bands.

## Radiated emission < 1GHz

| Test Date: | 2024.08.20, 2024.09.25 | Temp./Hum.: | 22℃/51%RH | Test By: | Jarey |
|---|---|---|---|---|---|

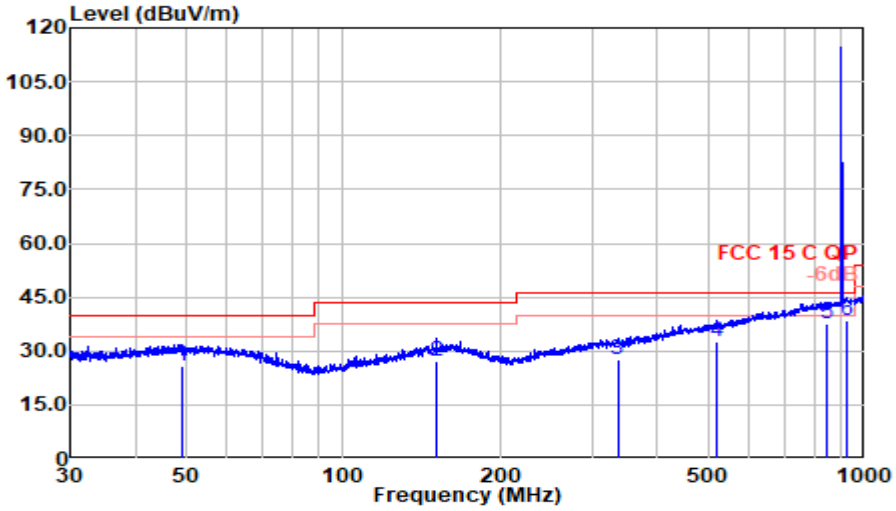
**Mode: TX 902.75MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 54.356 | 6.02 | 19.40 | 0.80 | 26.23 | 40.00 | 13.77 | QP |
| 160.627 | 5.90 | 19.10 | 1.40 | 26.40 | 43.50 | 17.10 | QP |
| 317.701 | 6.13 | 19.81 | 1.96 | 27.89 | 46.00 | 18.11 | QP |
| 524.554 | 6.28 | 23.79 | 2.55 | 32.62 | 46.00 | 13.38 | QP |
| 870.655 | 6.94 | 28.51 | 3.36 | 38.81 | 46.00 | 7.19 | QP |
| 938.833 | 6.40 | 29.40 | 3.35 | 39.15 | 46.00 | 6.85 | QP |

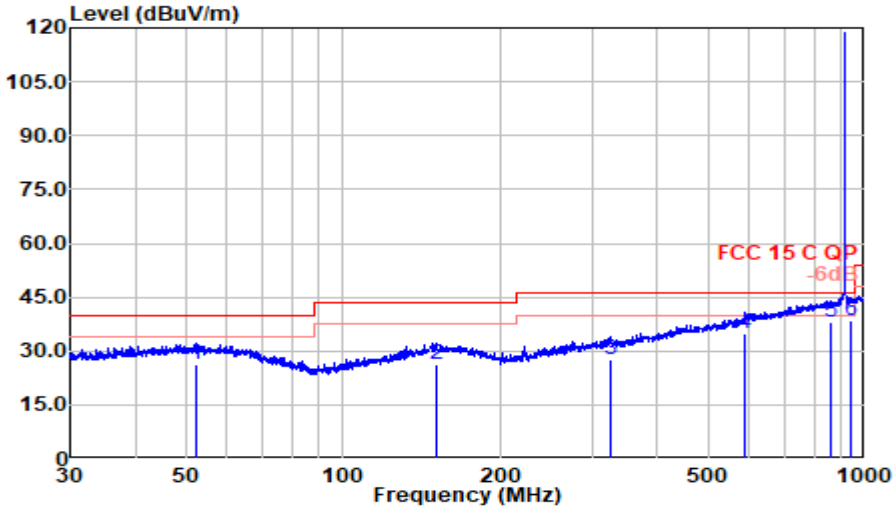
**Mode: TX 902.75MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 49.014 | 5.38 | 19.50 | 0.76 | 25.64 | 40.00 | 14.36 | QP |
| 151.332 | 6.74 | 19.20 | 1.35 | 27.28 | 43.50 | 16.22 | QP |
| 336.035 | 5.53 | 20.18 | 1.98 | 27.69 | 46.00 | 18.31 | QP |
| 519.065 | 6.18 | 23.70 | 2.54 | 32.42 | 46.00 | 13.58 | QP |
| 848.056 | 5.92 | 28.40 | 3.30 | 37.62 | 46.00 | 8.38 | QP |
| 925.756 | 5.99 | 29.30 | 3.38 | 38.66 | 46.00 | 7.34 | QP |

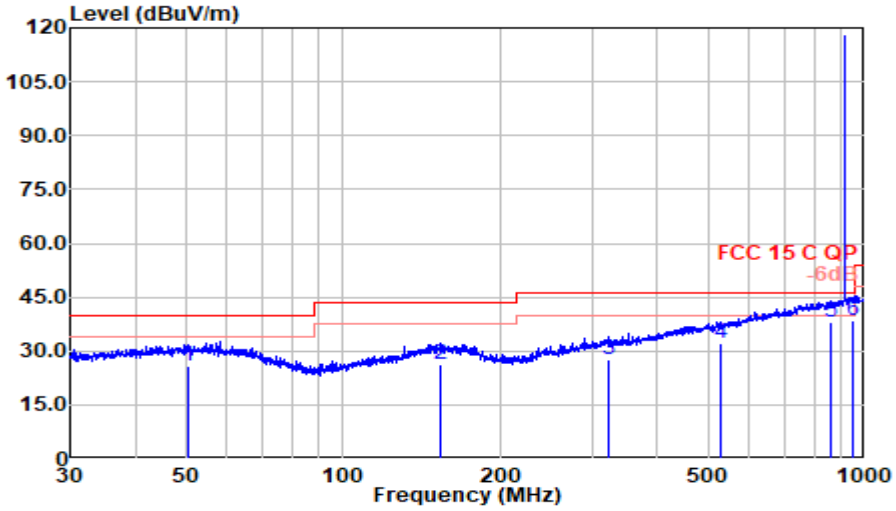
**Mode: TX 915.25MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 52.483 | 6.06 | 19.50 | 0.79 | 26.35 | 40.00 | 13.65 | QP |
| 150.802 | 5.66 | 19.18 | 1.34 | 26.19 | 43.50 | 17.31 | QP |
| 326.167 | 5.72 | 20.10 | 1.97 | 27.79 | 46.00 | 18.21 | QP |
| 588.905 | 7.18 | 24.96 | 2.78 | 34.91 | 46.00 | 11.09 | QP |
| 863.056 | 6.37 | 28.40 | 3.34 | 38.11 | 46.00 | 7.89 | QP |
| 937.188 | 5.59 | 29.40 | 3.36 | 38.35 | 46.00 | 7.65 | QP |

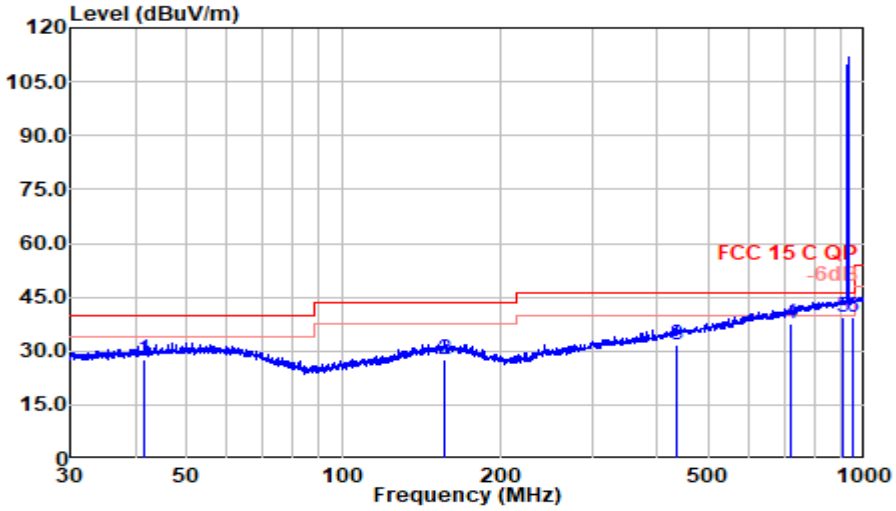
**Mode: TX 915.25MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 50.497 | 5.33 | 19.50 | 0.77 | 25.60 | 40.00 | 14.40 | QP |
| 154.279 | 5.64 | 19.27 | 1.36 | 26.28 | 43.50 | 17.22 | QP |
| 323.888 | 5.82 | 20.06 | 1.96 | 27.84 | 46.00 | 18.16 | QP |
| 527.321 | 5.66 | 23.80 | 2.56 | 32.01 | 46.00 | 13.99 | QP |
| 861.544 | 6.17 | 28.40 | 3.34 | 37.91 | 46.00 | 8.09 | QP |
| 952.094 | 5.92 | 29.40 | 3.34 | 38.65 | 46.00 | 7.35 | QP |

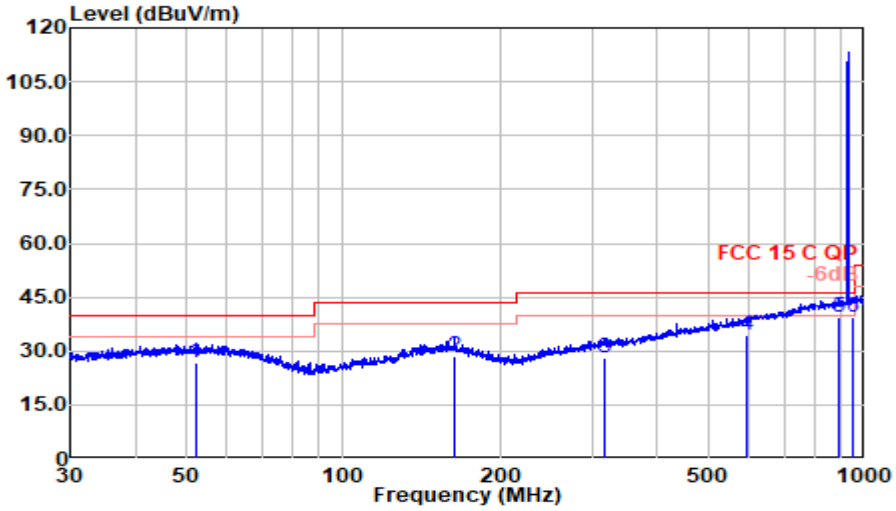
**Mode: TX 927.75MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 41.567 | 7.73 | 19.16 | 0.70 | 27.59 | 40.00 | 12.41 | QP |
| 155.910 | 6.83 | 19.20 | 1.37 | 27.41 | 43.50 | 16.09 | QP |
| 435.590 | 6.94 | 22.51 | 2.30 | 31.75 | 46.00 | 14.25 | QP |
| 719.200 | 7.62 | 26.98 | 2.95 | 37.55 | 46.00 | 8.45 | QP |
| 906.482 | 7.02 | 28.83 | 3.42 | 39.27 | 46.00 | 6.73 | QP |
| 945.440 | 6.85 | 29.40 | 3.34 | 39.58 | 46.00 | 6.42 | QP |

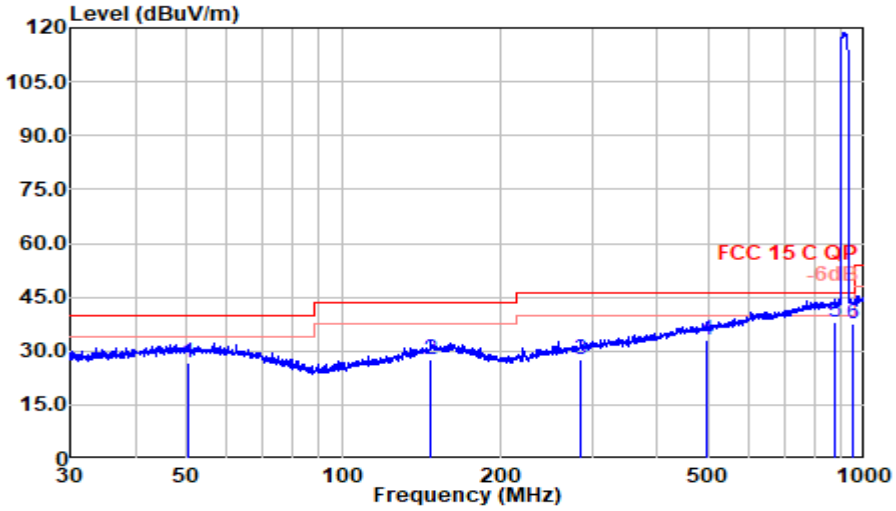
**Mode: TX 927.75MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 52.116 | 6.44 | 19.50 | 0.79 | 26.72 | 40.00 | 13.28 | QP |
| 164.042 | 7.96 | 19.00 | 1.42 | 28.37 | 43.50 | 15.13 | QP |
| 318.259 | 6.45 | 19.83 | 1.96 | 28.24 | 46.00 | 17.76 | QP |
| 592.011 | 6.36 | 25.04 | 2.79 | 34.20 | 46.00 | 11.80 | QP |
| 892.291 | 7.31 | 28.65 | 3.41 | 39.37 | 46.00 | 6.63 | QP |
| 948.761 | 6.61 | 29.40 | 3.33 | 39.34 | 46.00 | 6.66 | QP |

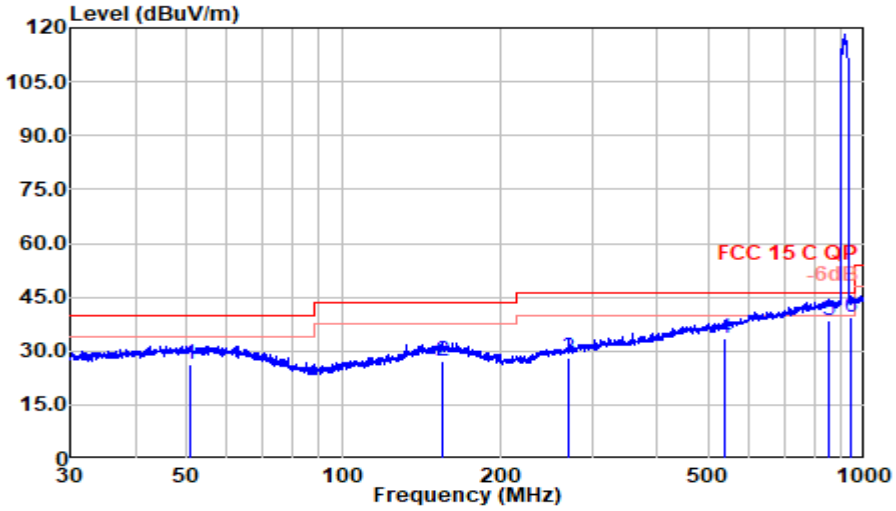
**Mode: TX Hopping(902-928)** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 50.321 | 6.65 | 19.50 | 0.77 | 26.92 | 40.00 | 13.08 | QP |
| 147.662 | 7.08 | 19.10 | 1.33 | 27.51 | 43.50 | 15.99 | QP |
| 284.977 | 6.93 | 18.80 | 1.89 | 27.62 | 46.00 | 18.38 | QP |
| 497.677 | 7.17 | 23.40 | 2.49 | 33.06 | 46.00 | 12.94 | QP |
| 878.322 | 6.18 | 28.60 | 3.38 | 38.16 | 46.00 | 7.84 | QP |
| 945.440 | 4.85 | 29.40 | 3.34 | 37.59 | 46.00 | 8.41 | QP |

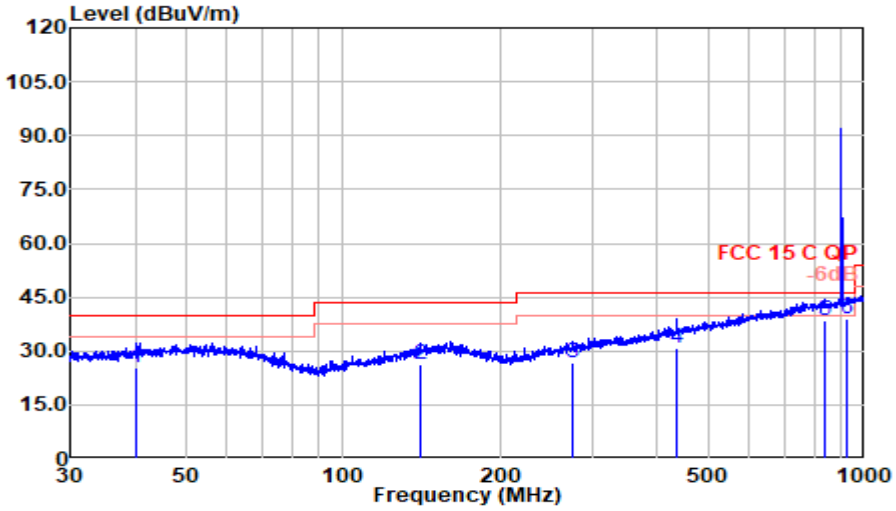
**Mode: TX Hopping(902-928)** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 50.942 | 6.03 | 19.50 | 0.78 | 26.31 | 40.00 | 13.69 | QP |
| 154.549 | 6.46 | 19.24 | 1.37 | 27.07 | 43.50 | 16.43 | QP |
| 271.325 | 7.84 | 18.35 | 1.82 | 28.02 | 46.00 | 17.98 | QP |
| 537.589 | 6.79 | 23.95 | 2.58 | 33.32 | 46.00 | 12.68 | QP |
| 854.025 | 6.83 | 28.40 | 3.32 | 38.55 | 46.00 | 7.45 | QP |
| 943.784 | 6.71 | 29.40 | 3.34 | 39.45 | 46.00 | 6.55 | QP |

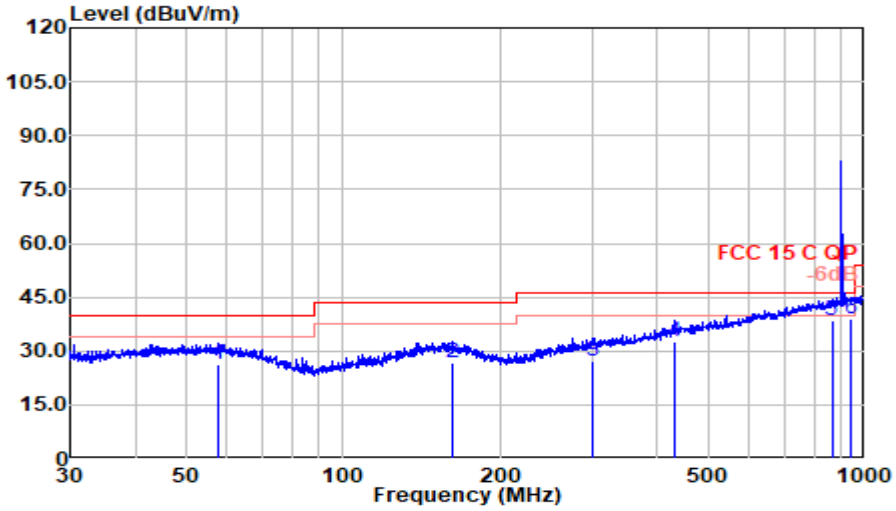
**Mode: TX 902.75MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 40.135 | 5.54 | 18.93 | 0.75 | 25.21 | 40.00 | 14.79 | QP |
| 141.082 | 6.10 | 18.71 | 1.39 | 26.19 | 43.50 | 17.31 | QP |
| 275.157 | 6.19 | 18.51 | 1.96 | 26.66 | 46.00 | 19.34 | QP |
| 435.590 | 5.76 | 22.51 | 2.45 | 30.72 | 46.00 | 15.28 | QP |
| 834.779 | 6.86 | 28.20 | 3.37 | 38.43 | 46.00 | 7.57 | QP |
| 927.381 | 5.90 | 29.30 | 3.60 | 38.80 | 46.00 | 7.20 | QP |

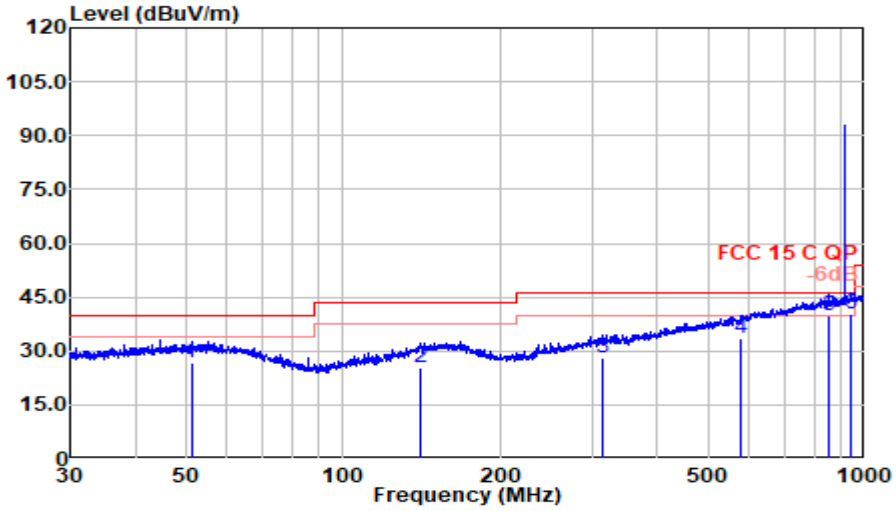
**Mode: TX 902.75MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 57.594 | 5.93 | 19.24 | 0.88 | 26.05 | 40.00 | 13.95 | QP |
| 162.611 | 6.14 | 19.10 | 1.48 | 26.72 | 43.50 | 16.78 | QP |
| 299.841 | 6.21 | 19.10 | 2.07 | 27.38 | 46.00 | 18.62 | QP |
| 431.788 | 7.61 | 22.37 | 2.44 | 32.42 | 46.00 | 13.58 | QP |
| 864.571 | 6.63 | 28.40 | 3.46 | 38.49 | 46.00 | 7.51 | QP |
| 942.131 | 5.79 | 29.40 | 3.61 | 38.81 | 46.00 | 7.19 | QP |

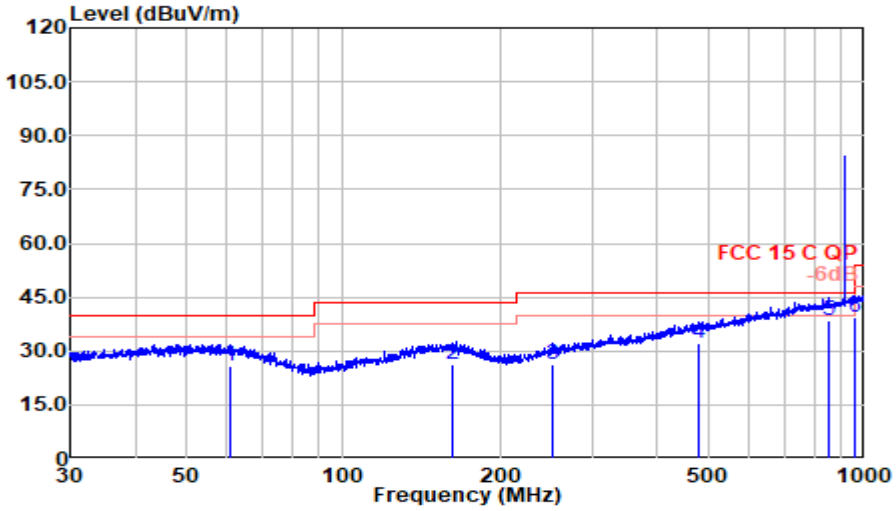
**Mode: TX 915.25MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 51.211 | 6.31 | 19.50 | 0.84 | 26.65 | 40.00 | 13.35 | QP |
| 140.342 | 5.25 | 18.70 | 1.38 | 25.34 | 43.50 | 18.16 | QP |
| 314.377 | 6.45 | 19.68 | 2.11 | 28.24 | 46.00 | 17.76 | QP |
| 577.656 | 6.15 | 24.61 | 2.90 | 33.66 | 46.00 | 12.34 | QP |
| 854.025 | 7.82 | 28.40 | 3.43 | 39.65 | 46.00 | 6.35 | QP |
| 940.480 | 7.20 | 29.40 | 3.61 | 40.21 | 46.00 | 5.79 | QP |

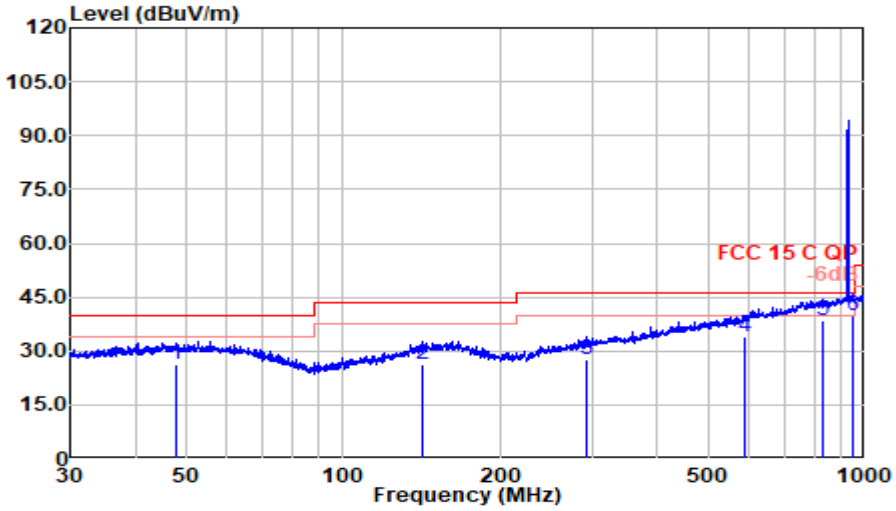
**Mode: TX 915.25MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 60.918 | 6.02 | 18.91 | 0.91 | 25.84 | 40.00 | 14.16 | QP |
| 162.611 | 5.61 | 19.10 | 1.48 | 26.19 | 43.50 | 17.31 | QP |
| 252.948 | 6.59 | 17.70 | 1.87 | 26.16 | 46.00 | 19.84 | QP |
| 481.371 | 6.23 | 23.13 | 2.59 | 31.95 | 46.00 | 14.05 | QP |
| 851.035 | 6.81 | 28.40 | 3.42 | 38.63 | 46.00 | 7.37 | QP |
| 958.794 | 6.13 | 29.40 | 3.64 | 39.17 | 46.00 | 6.83 | QP |

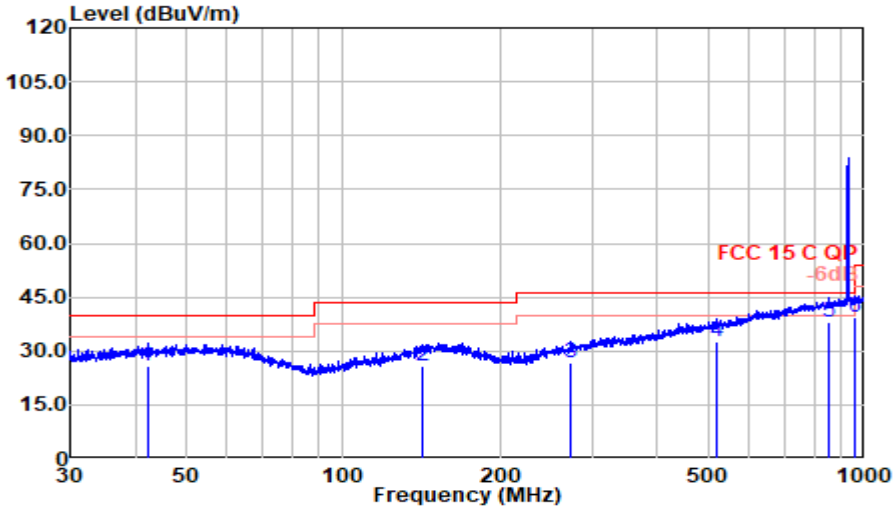
**Mode: TX 927.25MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 47.826 | 5.94 | 19.52 | 0.81 | 26.27 | 40.00 | 13.73 | QP |
| 142.574 | 6.19 | 18.86 | 1.39 | 26.44 | 43.50 | 17.06 | QP |
| 292.058 | 6.76 | 18.94 | 2.04 | 27.74 | 46.00 | 18.26 | QP |
| 588.905 | 6.18 | 24.96 | 2.93 | 34.07 | 46.00 | 11.93 | QP |
| 828.946 | 6.62 | 28.30 | 3.35 | 38.27 | 46.00 | 7.73 | QP |
| 950.426 | 6.71 | 29.40 | 3.63 | 39.74 | 46.00 | 6.26 | QP |

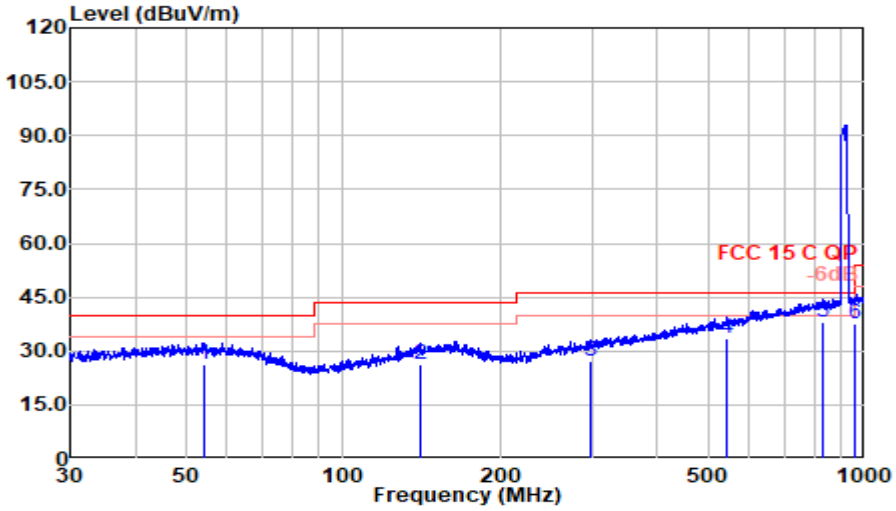
**Mode: TX 927.25MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 42.154 | 6.03 | 19.20 | 0.77 | 26.00 | 40.00 | 14.00 | QP |
| 142.075 | 5.68 | 18.81 | 1.39 | 25.88 | 43.50 | 17.62 | QP |
| 272.755 | 6.22 | 18.41 | 1.95 | 26.58 | 46.00 | 19.42 | QP |
| 518.156 | 6.39 | 23.70 | 2.71 | 32.80 | 46.00 | 13.20 | QP |
| 855.523 | 6.04 | 28.40 | 3.43 | 37.87 | 46.00 | 8.13 | QP |
| 953.765 | 6.26 | 29.40 | 3.63 | 39.29 | 46.00 | 6.71 | QP |

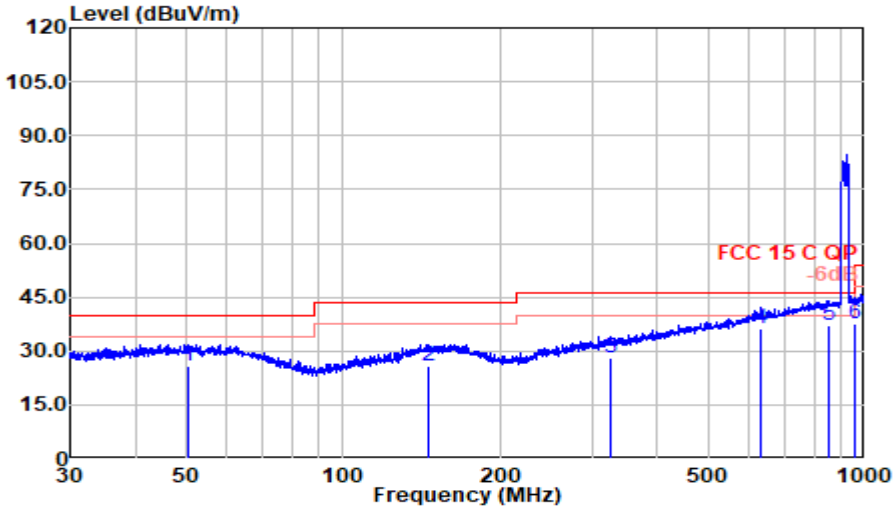
**Mode: Hopping(902-928)** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 54.071 | 5.97 | 19.40 | 0.86 | 26.23 | 40.00 | 13.77 | QP |
| 140.588 | 6.11 | 18.70 | 1.38 | 26.19 | 43.50 | 17.31 | QP |
| 297.746 | 6.12 | 19.06 | 2.06 | 27.23 | 46.00 | 18.77 | QP |
| 542.323 | 6.79 | 24.05 | 2.79 | 33.62 | 46.00 | 12.38 | QP |
| 831.857 | 6.62 | 28.26 | 3.36 | 38.24 | 46.00 | 7.76 | QP |
| 953.765 | 4.75 | 29.40 | 3.63 | 37.78 | 46.00 | 8.22 | QP |

**Mode: Hopping(902-928)** **With ANT#1**



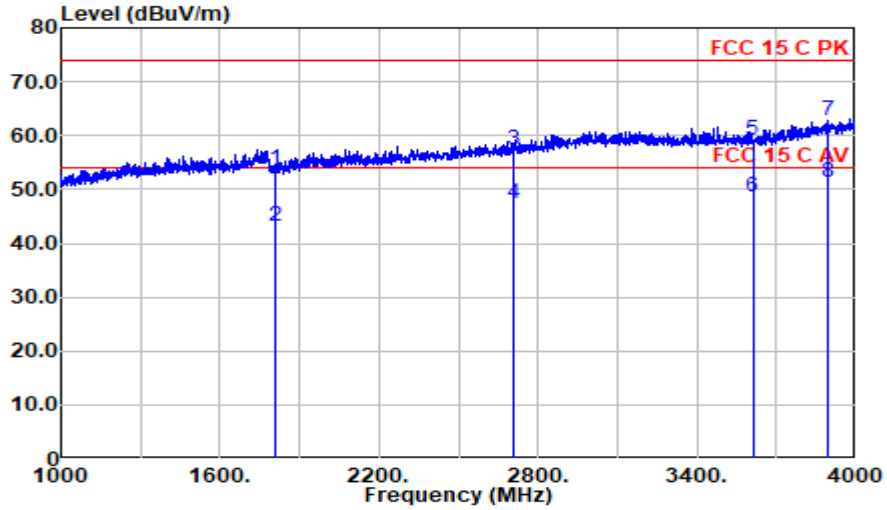

Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 50.675 | 5.45 | 19.50 | 0.83 | 25.78 | 40.00 | 14.22 | QP |
| 145.351 | 5.35 | 19.00 | 1.41 | 25.75 | 43.50 | 17.75 | QP |
| 324.456 | 5.72 | 20.08 | 2.14 | 27.93 | 46.00 | 18.07 | QP |
| 630.582 | 7.13 | 25.90 | 3.00 | 36.03 | 46.00 | 9.97 | QP |
| 852.529 | 5.12 | 28.40 | 3.42 | 36.94 | 46.00 | 9.06 | QP |
| 953.765 | 4.58 | 29.40 | 3.63 | 37.61 | 46.00 | 8.39 | QP |

## Radiated Emission 1GHz to 4GHz

| Test Date: | 2024.08.20, 2024.09.25 | Temp./Hum.: | 22℃/51%RH | Test By: | Jarey |
|---|---|---|---|---|---|

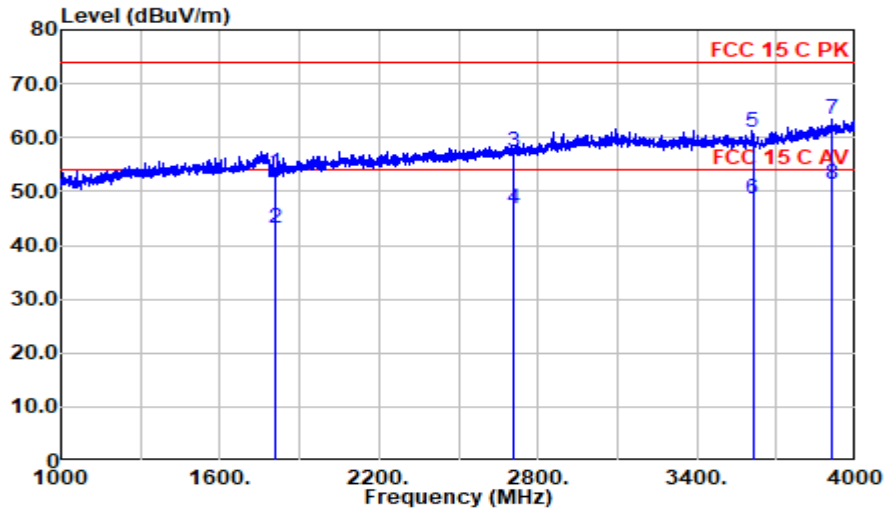
**Mode: TX 902.75MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1805.500 | 26.23 | 26.54 | 0.83 | 53.61 | 74.00 | 20.39 | Peak |
| 1805.500 | 15.88 | 26.54 | 0.83 | 43.26 | 54.00 | 10.74 | Average |
| 2708.250 | 27.18 | 29.18 | 1.02 | 57.38 | 74.00 | 16.62 | Peak |
| 2708.250 | 17.10 | 29.18 | 1.02 | 47.30 | 54.00 | 6.70 | Average |
| 3611.000 | 26.55 | 31.52 | 1.19 | 59.26 | 74.00 | 14.74 | Peak |
| 3611.000 | 15.78 | 31.52 | 1.19 | 48.49 | 54.00 | 5.51 | Average |
| 3894.650 | 28.83 | 32.68 | 1.24 | 62.75 | 74.00 | 11.25 | Peak |
| 3894.650 | 17.37 | 32.68 | 1.24 | 51.29 | 54.00 | 2.71 | Average |

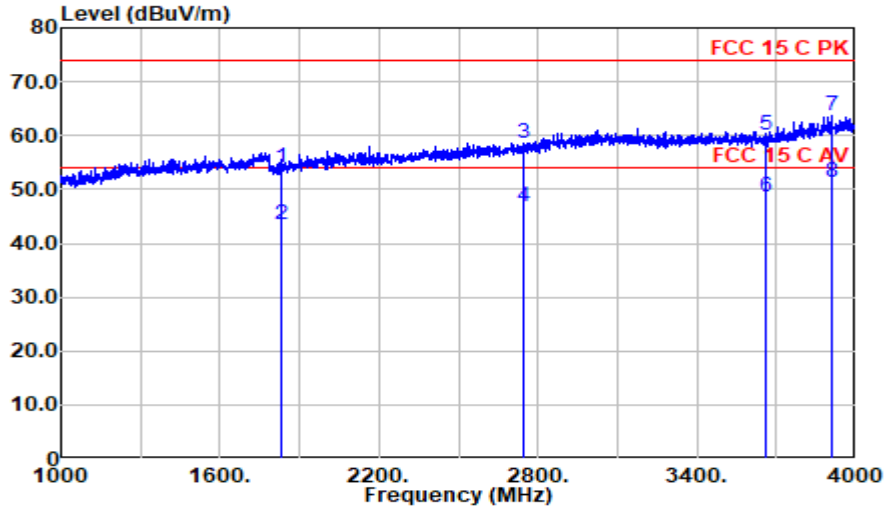
**Mode: TX 902.75MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1805.500 | 26.20 | 26.54 | 0.83 | 53.58 | 74.00 | 20.42 | Peak |
| 1805.500 | 15.69 | 26.54 | 0.83 | 43.07 | 54.00 | 10.93 | Average |
| 2708.250 | 27.23 | 29.18 | 1.02 | 57.43 | 74.00 | 16.57 | Peak |
| 2708.250 | 16.73 | 29.18 | 1.02 | 46.93 | 54.00 | 7.07 | Average |
| 3611.000 | 28.20 | 31.52 | 1.19 | 60.91 | 74.00 | 13.09 | Peak |
| 3611.000 | 15.97 | 31.52 | 1.19 | 48.68 | 54.00 | 5.32 | Average |
| 3908.450 | 29.40 | 32.72 | 1.24 | 63.36 | 74.00 | 10.64 | Peak |
| 3908.450 | 17.45 | 32.72 | 1.24 | 51.41 | 54.00 | 2.59 | Average |

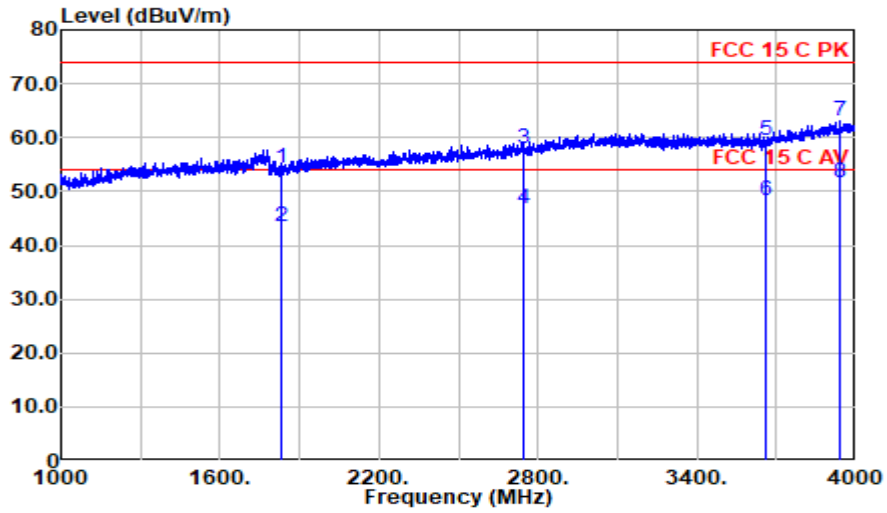
**Mode: TX 915.25MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1830.500 | 26.33 | 26.75 | 0.84 | 53.92 | 74.00 | 20.08 | Peak |
| 1830.500 | 15.92 | 26.75 | 0.84 | 43.50 | 54.00 | 10.50 | Average |
| 2745.750 | 28.29 | 29.11 | 1.02 | 58.42 | 74.00 | 15.58 | Peak |
| 2745.750 | 16.71 | 29.11 | 1.02 | 46.84 | 54.00 | 7.16 | Average |
| 3661.000 | 27.19 | 31.67 | 1.20 | 60.06 | 74.00 | 13.94 | Peak |
| 3661.000 | 15.67 | 31.67 | 1.20 | 48.54 | 54.00 | 5.46 | Average |
| 3911.900 | 29.61 | 32.72 | 1.24 | 63.58 | 74.00 | 10.42 | Peak |
| 3911.900 | 17.38 | 32.72 | 1.24 | 51.35 | 54.00 | 2.65 | Average |

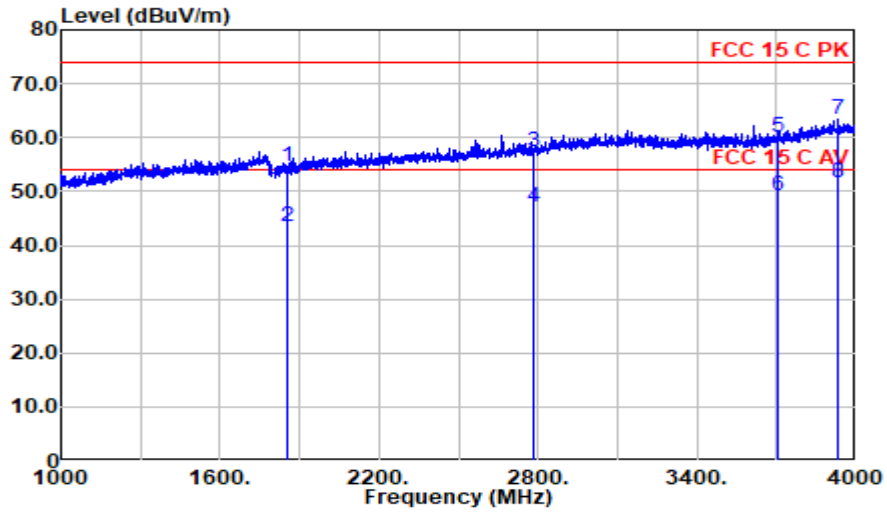
**Mode: TX 915.25MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1830.500 | 26.63 | 26.75 | 0.84 | 54.22 | 74.00 | 19.78 | Peak |
| 1830.500 | 15.74 | 26.75 | 0.84 | 43.32 | 54.00 | 10.68 | Average |
| 2745.750 | 27.71 | 29.11 | 1.02 | 57.84 | 74.00 | 16.16 | Peak |
| 2745.750 | 16.75 | 29.11 | 1.02 | 46.88 | 54.00 | 7.12 | Average |
| 3661.000 | 26.53 | 31.67 | 1.20 | 59.40 | 74.00 | 14.60 | Peak |
| 3661.000 | 15.52 | 31.67 | 1.20 | 48.39 | 54.00 | 5.61 | Average |
| 3940.650 | 29.19 | 32.78 | 1.25 | 63.22 | 74.00 | 10.78 | Peak |
| 3940.650 | 17.47 | 32.78 | 1.25 | 51.50 | 54.00 | 2.50 | Average |

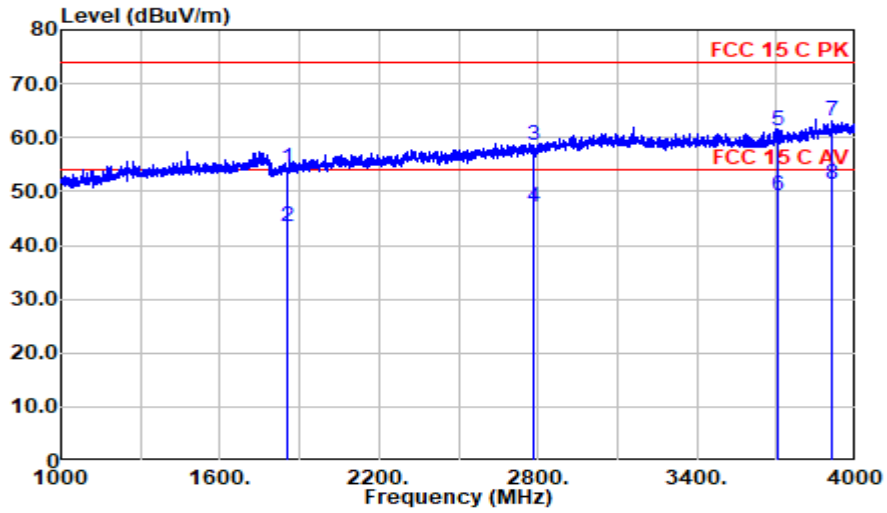
**Mode: TX 927.25MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1854.500 | 27.00 | 26.94 | 0.84 | 54.78 | 74.00 | 19.22 | Peak |
| 1854.500 | 15.68 | 26.94 | 0.84 | 43.46 | 54.00 | 10.54 | Average |
| 2781.750 | 27.36 | 29.10 | 1.03 | 57.49 | 74.00 | 16.51 | Peak |
| 2781.750 | 16.86 | 29.10 | 1.03 | 46.99 | 54.00 | 7.01 | Average |
| 3709.000 | 26.88 | 31.95 | 1.21 | 60.04 | 74.00 | 13.96 | Peak |
| 3709.000 | 16.00 | 31.95 | 1.21 | 49.16 | 54.00 | 4.84 | Average |
| 3931.450 | 29.48 | 32.76 | 1.25 | 63.49 | 74.00 | 10.51 | Peak |
| 3931.450 | 17.50 | 32.76 | 1.25 | 51.51 | 54.00 | 2.49 | Average |

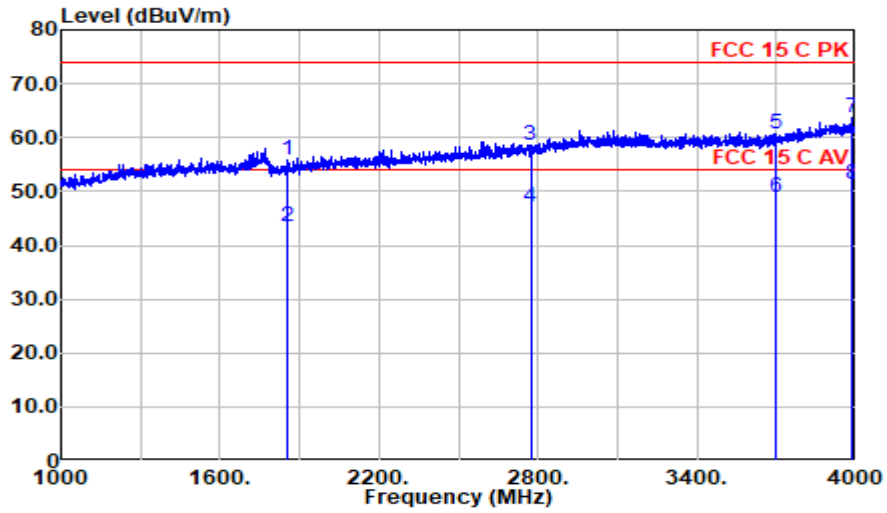
**Mode: TX 927.25MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1854.500 | 26.43 | 26.94 | 0.84 | 54.21 | 74.00 | 19.79 | Peak |
| 1854.500 | 15.68 | 26.94 | 0.84 | 43.46 | 54.00 | 10.54 | Average |
| 2781.750 | 28.57 | 29.10 | 1.03 | 58.70 | 74.00 | 15.30 | Peak |
| 2781.750 | 16.87 | 29.10 | 1.03 | 47.00 | 54.00 | 7.00 | Average |
| 3709.000 | 28.03 | 31.95 | 1.21 | 61.19 | 74.00 | 12.81 | Peak |
| 3709.000 | 16.14 | 31.95 | 1.21 | 49.30 | 54.00 | 4.70 | Average |
| 3907.300 | 29.18 | 32.71 | 1.24 | 63.14 | 74.00 | 10.86 | Peak |
| 3907.300 | 17.47 | 32.71 | 1.24 | 51.43 | 54.00 | 2.57 | Average |

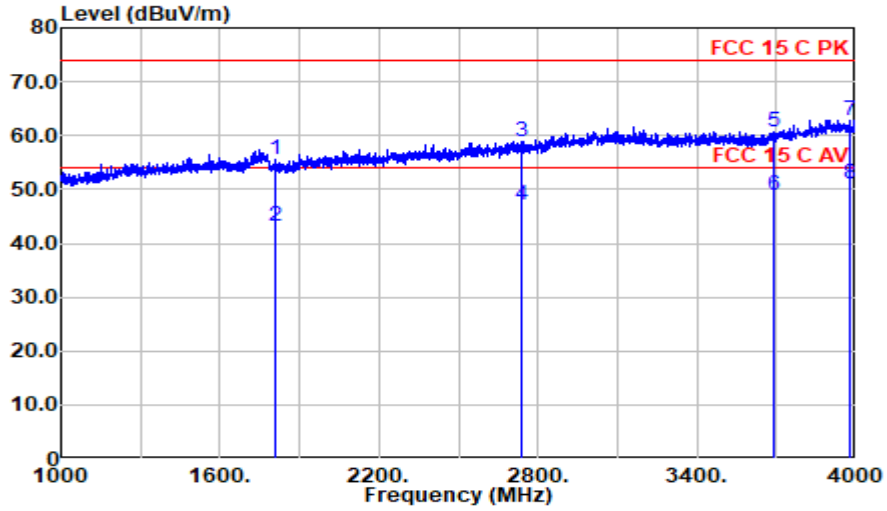
**Mode: Hopping(902-928)** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1852.250 | 28.00 | 26.92 | 0.84 | 55.76 | 74.00 | 18.24 | Peak |
| 1852.250 | 15.78 | 26.92 | 0.84 | 43.54 | 54.00 | 10.46 | Average |
| 2772.250 | 28.56 | 29.10 | 1.03 | 58.68 | 74.00 | 15.32 | Peak |
| 2772.250 | 16.84 | 29.10 | 1.03 | 46.97 | 54.00 | 7.03 | Average |
| 3698.000 | 27.57 | 31.89 | 1.21 | 60.66 | 74.00 | 13.34 | Peak |
| 3698.000 | 15.88 | 31.89 | 1.21 | 48.97 | 54.00 | 5.03 | Average |
| 3985.500 | 29.70 | 32.73 | 1.26 | 63.69 | 74.00 | 10.31 | Peak |
| 3985.500 | 17.19 | 32.73 | 1.26 | 51.18 | 54.00 | 2.82 | Average |

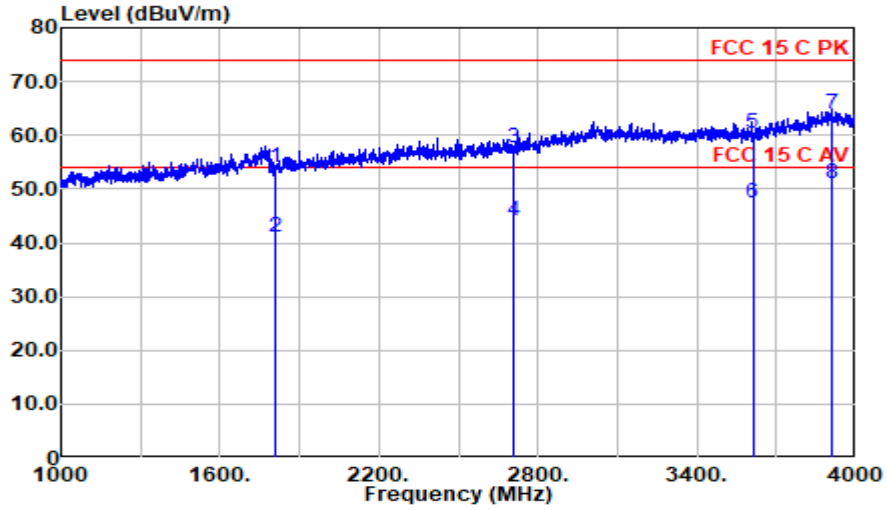
**Mode: Hopping(902-928)** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1810.850 | 27.99 | 26.59 | 0.84 | 55.41 | 74.00 | 18.59 | Peak |
| 1810.850 | 15.81 | 26.59 | 0.84 | 43.23 | 54.00 | 10.77 | Average |
| 2741.200 | 28.76 | 29.12 | 1.02 | 58.90 | 74.00 | 15.10 | Peak |
| 2741.200 | 16.86 | 29.12 | 1.02 | 47.00 | 54.00 | 7.00 | Average |
| 3692.250 | 27.66 | 31.85 | 1.21 | 60.72 | 74.00 | 13.28 | Peak |
| 3692.250 | 15.92 | 31.85 | 1.21 | 48.98 | 54.00 | 5.02 | Average |
| 3977.450 | 28.93 | 32.74 | 1.26 | 62.93 | 74.00 | 11.07 | Peak |
| 3977.450 | 17.09 | 32.74 | 1.26 | 51.09 | 54.00 | 2.91 | Average |

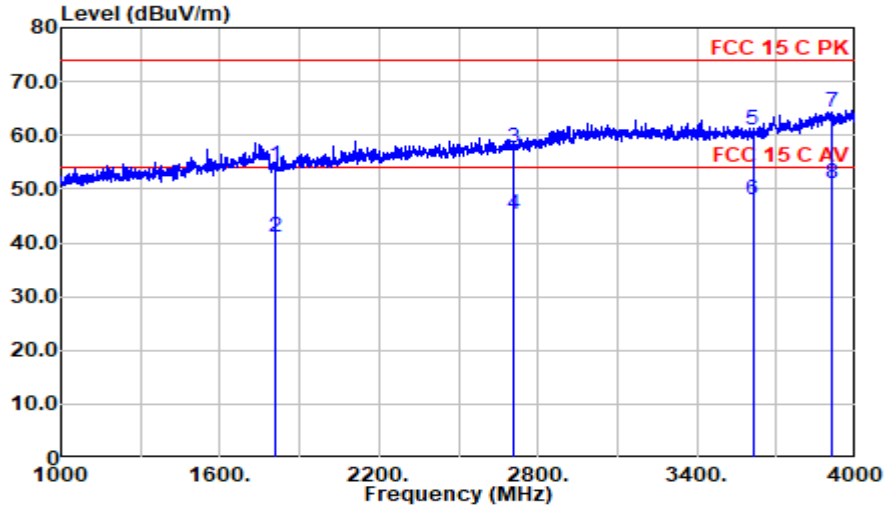
**Mode: TX 902.75MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1805.500 | 22.60 | 26.83 | 4.66 | 54.09 | 74.00 | 19.91 | Peak |
| 1805.500 | 9.56 | 26.83 | 4.66 | 41.05 | 54.00 | 12.95 | Average |
| 2708.250 | 23.10 | 29.17 | 5.50 | 57.76 | 74.00 | 16.24 | Peak |
| 2708.250 | 9.41 | 29.17 | 5.50 | 44.08 | 54.00 | 9.92 | Average |
| 3611.000 | 22.68 | 31.47 | 6.29 | 60.44 | 74.00 | 13.56 | Peak |
| 3611.000 | 9.57 | 31.47 | 6.29 | 47.32 | 54.00 | 6.68 | Average |
| 3913.000 | 24.53 | 32.85 | 6.55 | 63.94 | 74.00 | 10.06 | Peak |
| 3913.000 | 11.75 | 32.85 | 6.55 | 51.15 | 54.00 | 2.85 | Average |

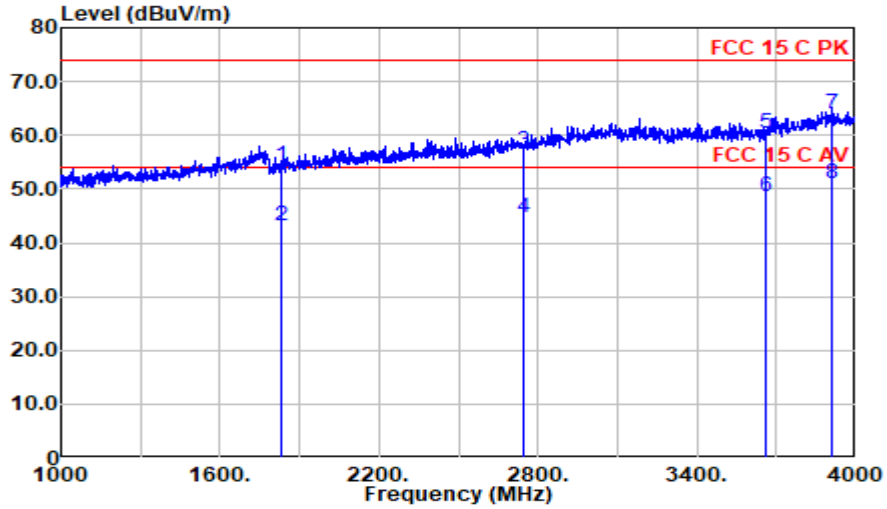
**Mode: TX 902.75MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1805.500 | 22.89 | 26.83 | 4.66 | 54.38 | 74.00 | 19.62 | Peak |
| 1805.500 | 9.49 | 26.83 | 4.66 | 40.98 | 54.00 | 13.02 | Average |
| 2708.250 | 23.10 | 29.17 | 5.50 | 57.77 | 74.00 | 16.23 | Peak |
| 2708.250 | 10.51 | 29.17 | 5.50 | 45.18 | 54.00 | 8.82 | Average |
| 3611.000 | 23.09 | 31.47 | 6.29 | 60.84 | 74.00 | 13.16 | Peak |
| 3611.000 | 10.21 | 31.47 | 6.29 | 47.96 | 54.00 | 6.04 | Average |
| 3907.000 | 24.90 | 32.87 | 6.55 | 64.32 | 74.00 | 9.68 | Peak |
| 3907.000 | 11.59 | 32.87 | 6.55 | 51.01 | 54.00 | 2.99 | Average |

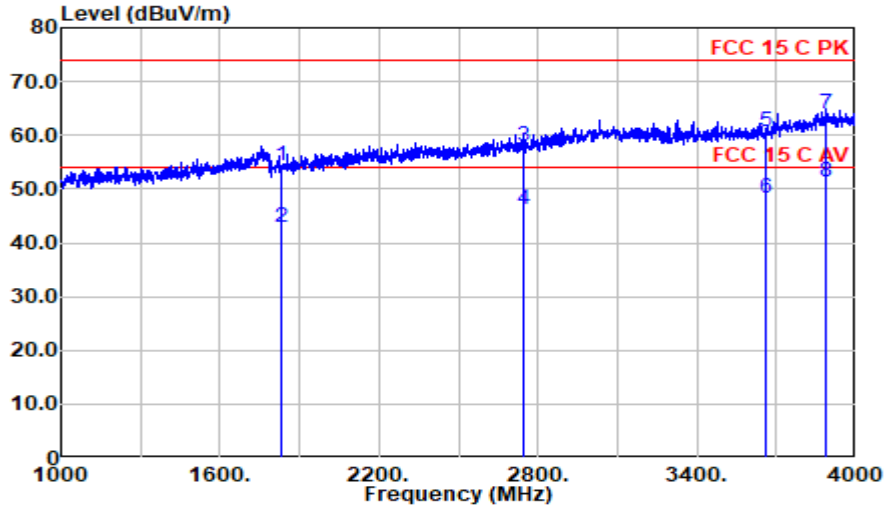
**Mode: TX 915.25MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1830.500 | 22.71 | 26.98 | 4.69 | 54.38 | 74.00 | 19.62 | Peak |
| 1830.500 | 11.43 | 26.98 | 4.69 | 43.10 | 54.00 | 10.90 | Average |
| 2745.750 | 22.46 | 29.02 | 5.53 | 57.00 | 74.00 | 17.00 | Peak |
| 2745.750 | 10.25 | 29.02 | 5.53 | 44.79 | 54.00 | 9.21 | Average |
| 3661.000 | 22.36 | 31.79 | 6.33 | 60.48 | 74.00 | 13.52 | Peak |
| 3661.000 | 10.44 | 31.79 | 6.33 | 48.56 | 54.00 | 5.44 | Average |
| 3908.500 | 24.71 | 32.87 | 6.55 | 64.13 | 74.00 | 9.87 | Peak |
| 3908.500 | 11.47 | 32.87 | 6.55 | 50.89 | 54.00 | 3.11 | Average |

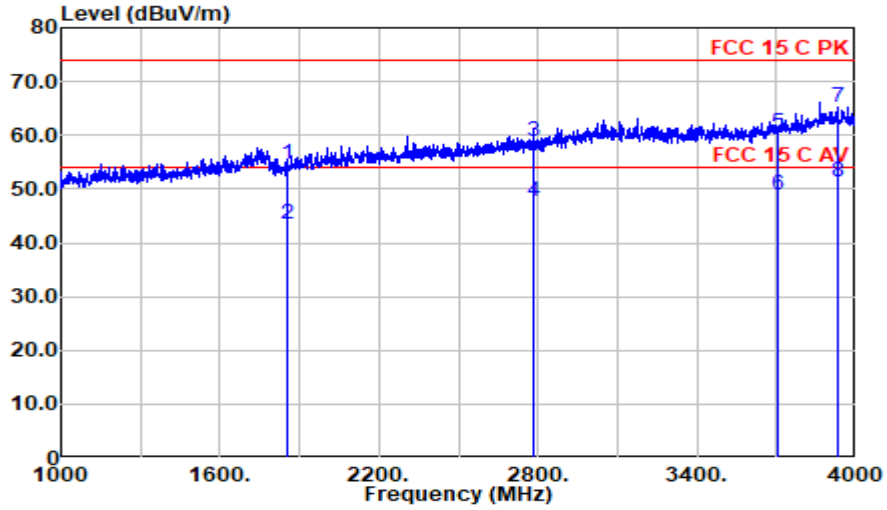
**Mode: TX 915.25MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1830.500 | 22.58 | 26.98 | 4.69 | 54.25 | 74.00 | 19.75 | Peak |
| 1830.500 | 11.26 | 26.98 | 4.69 | 42.93 | 54.00 | 11.07 | Average |
| 2745.750 | 23.36 | 29.02 | 5.53 | 57.91 | 74.00 | 16.09 | Peak |
| 2745.750 | 11.54 | 29.02 | 5.53 | 46.08 | 54.00 | 7.92 | Average |
| 3661.000 | 22.53 | 31.79 | 6.33 | 60.65 | 74.00 | 13.35 | Peak |
| 3661.000 | 10.25 | 31.79 | 6.33 | 48.37 | 54.00 | 5.63 | Average |
| 3889.000 | 24.62 | 32.86 | 6.53 | 64.01 | 74.00 | 9.99 | Peak |
| 3889.000 | 11.96 | 32.86 | 6.53 | 51.35 | 54.00 | 2.65 | Average |

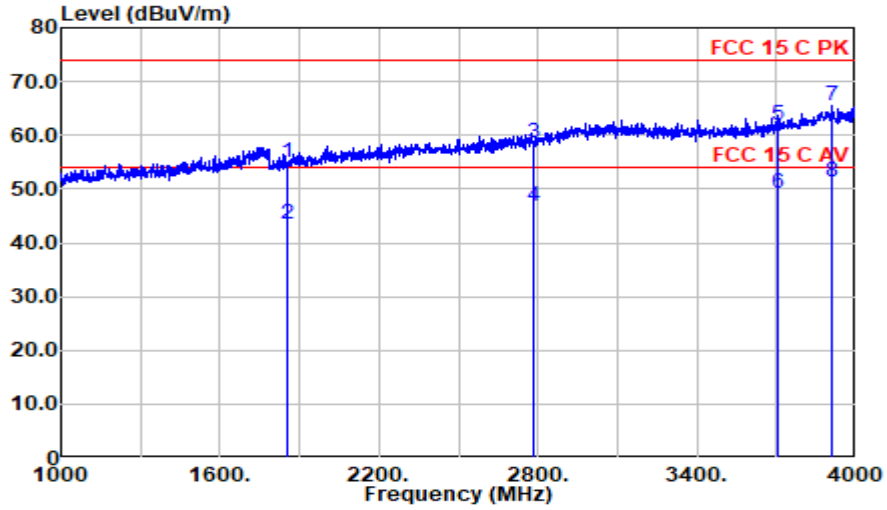
**Mode: TX 927.25MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1854.500 | 22.64 | 27.15 | 4.72 | 54.50 | 74.00 | 19.50 | Peak |
| 1854.500 | 11.46 | 27.15 | 4.72 | 43.32 | 54.00 | 10.68 | Average |
| 2781.750 | 24.34 | 29.00 | 5.56 | 58.90 | 74.00 | 15.10 | Peak |
| 2781.750 | 13.23 | 29.00 | 5.56 | 47.80 | 54.00 | 6.20 | Average |
| 3709.000 | 21.71 | 32.15 | 6.37 | 60.24 | 74.00 | 13.76 | Peak |
| 3709.000 | 10.47 | 32.15 | 6.37 | 49.00 | 54.00 | 5.00 | Average |
| 3929.500 | 25.78 | 32.78 | 6.57 | 65.13 | 74.00 | 8.87 | Peak |
| 3929.500 | 11.98 | 32.78 | 6.57 | 51.33 | 54.00 | 2.67 | Average |

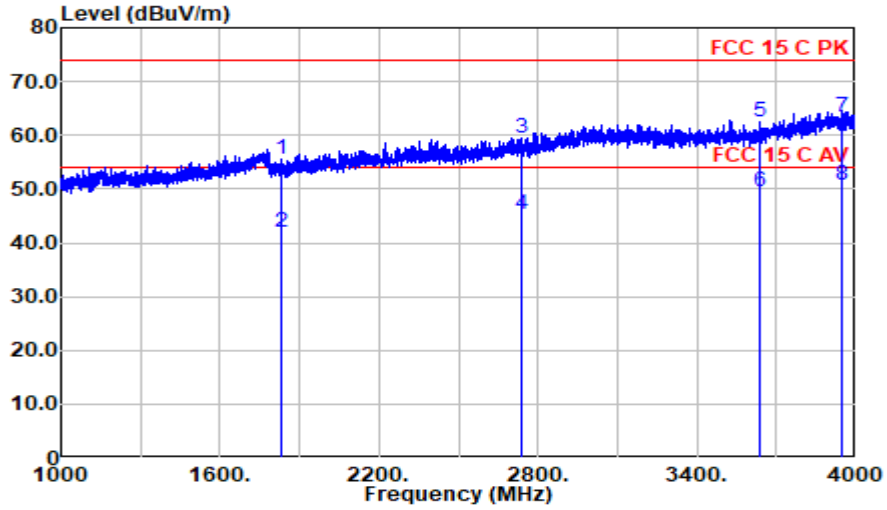
**Mode: TX 927.25MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1854.500 | 23.16 | 27.15 | 4.72 | 55.02 | 74.00 | 18.98 | Peak |
| 1854.500 | 11.52 | 27.15 | 4.72 | 43.38 | 54.00 | 10.62 | Average |
| 2781.750 | 24.11 | 29.00 | 5.56 | 58.68 | 74.00 | 15.32 | Peak |
| 2781.750 | 12.31 | 29.00 | 5.56 | 46.87 | 54.00 | 7.13 | Average |
| 3709.000 | 23.32 | 32.15 | 6.37 | 61.85 | 74.00 | 12.15 | Peak |
| 3709.000 | 10.53 | 32.15 | 6.37 | 49.06 | 54.00 | 4.94 | Average |
| 3911.500 | 26.00 | 32.85 | 6.55 | 65.40 | 74.00 | 8.60 | Peak |
| 3911.500 | 11.85 | 32.85 | 6.55 | 51.26 | 54.00 | 2.74 | Average |

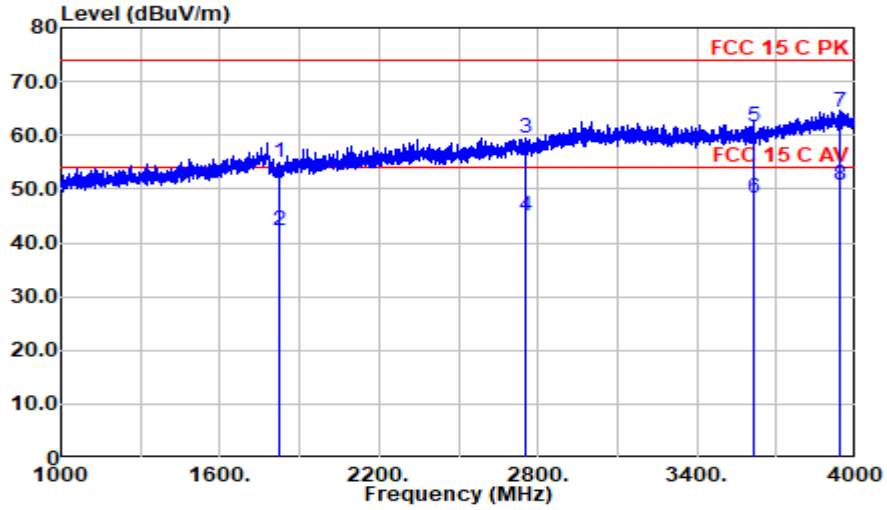
**Mode: TX Hopping(902-928)** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1834.750 | 23.82 | 27.01 | 4.69 | 55.52 | 74.00 | 18.48 | Peak |
| 1834.750 | 10.38 | 27.01 | 4.69 | 42.08 | 54.00 | 11.92 | Average |
| 2736.250 | 24.95 | 29.05 | 5.52 | 59.53 | 74.00 | 14.47 | Peak |
| 2736.250 | 10.59 | 29.05 | 5.52 | 45.17 | 54.00 | 8.83 | Average |
| 3636.250 | 24.44 | 31.62 | 6.31 | 62.37 | 74.00 | 11.63 | Peak |
| 3636.250 | 11.53 | 31.62 | 6.31 | 49.46 | 54.00 | 4.54 | Average |
| 3945.250 | 24.24 | 32.72 | 6.58 | 63.54 | 74.00 | 10.46 | Peak |
| 3945.250 | 11.52 | 32.72 | 6.58 | 50.82 | 54.00 | 3.18 | Average |

**Mode: TX Hopping(902-928)** **With ANT#1**



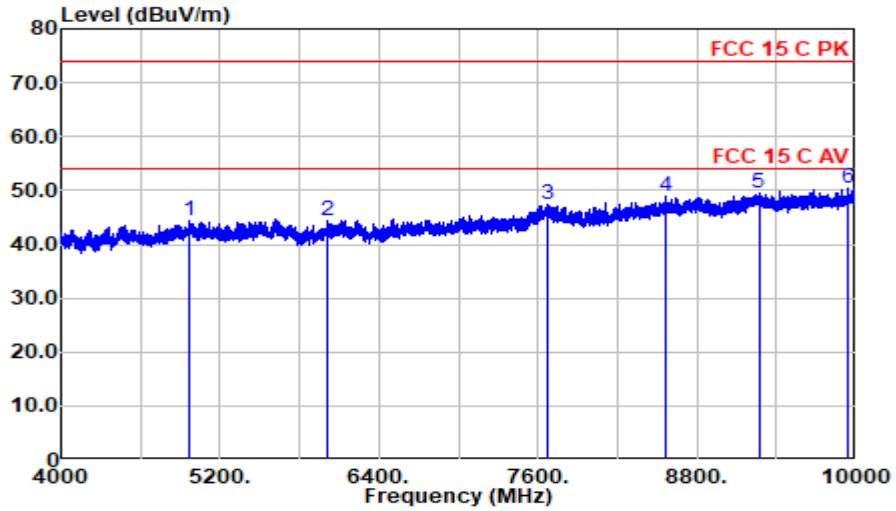

Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1825.000 | 23.30 | 26.95 | 4.68 | 54.94 | 74.00 | 19.06 | Peak |
| 1825.000 | 10.53 | 26.95 | 4.68 | 42.16 | 54.00 | 11.84 | Average |
| 2749.750 | 24.99 | 29.00 | 5.53 | 59.52 | 74.00 | 14.48 | Peak |
| 2749.750 | 10.50 | 29.00 | 5.53 | 45.03 | 54.00 | 8.97 | Average |
| 3616.750 | 23.71 | 31.50 | 6.29 | 61.50 | 74.00 | 12.50 | Peak |
| 3616.750 | 10.57 | 31.50 | 6.29 | 48.36 | 54.00 | 5.64 | Average |
| 3936.250 | 24.88 | 32.75 | 6.57 | 64.21 | 74.00 | 9.79 | Peak |
| 3936.250 | 11.54 | 32.75 | 6.57 | 50.87 | 54.00 | 3.13 | Average |

## Radiated Emission 4GHz to 10GHz

| Test Date: | 2024.08.20, 2024.09.25 | Temp./Hum.: | 22°C/51%RH | Test By: | Jarey |
|---|---|---|---|---|---|

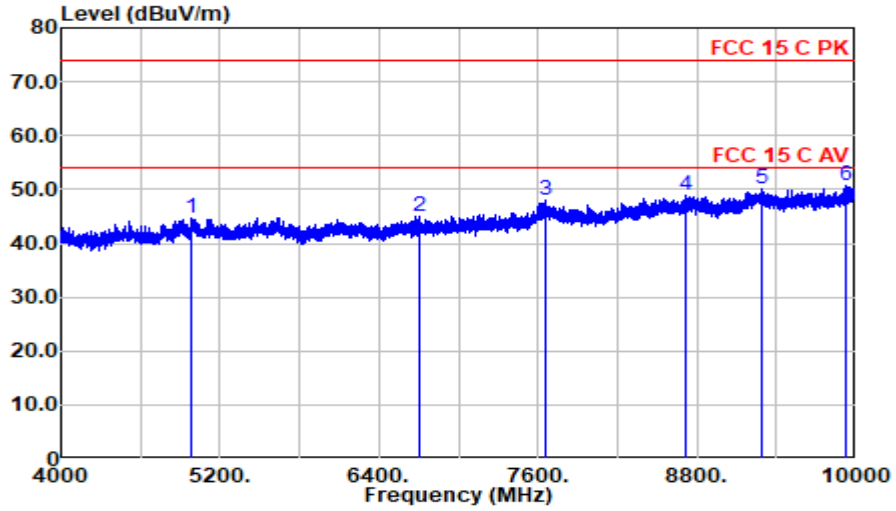
**Mode: TX 902.75MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4962.250 | 38.69 | 33.25 | 7.77 | 35.32 | 44.40 | 74.00 | 29.60 | Peak |
| 6007.750 | 36.98 | 34.23 | 8.43 | 35.30 | 44.33 | 74.00 | 29.67 | Peak |
| 7667.500 | 36.19 | 36.80 | 9.97 | 35.57 | 47.39 | 74.00 | 26.61 | Peak |
| 8571.250 | 35.81 | 38.16 | 10.50 | 35.60 | 48.87 | 74.00 | 25.13 | Peak |
| 9267.250 | 35.97 | 38.17 | 10.86 | 35.52 | 49.48 | 74.00 | 24.52 | Peak |
| 9945.250 | 35.90 | 38.40 | 11.41 | 35.32 | 50.40 | 74.00 | 23.60 | Peak |

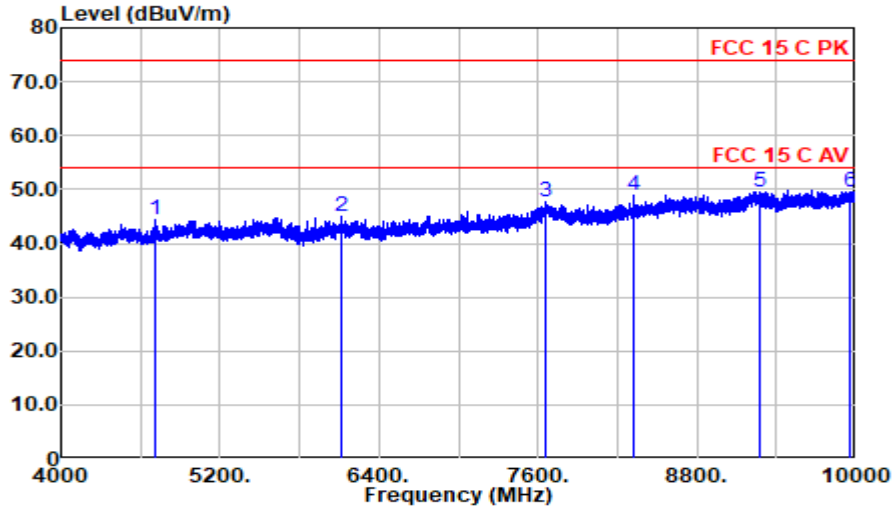
**Mode: TX 902.75MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4985.500 | 38.91 | 33.34 | 7.80 | 35.31 | 44.74 | 74.00 | 29.26 | Peak |
| 6703.750 | 36.48 | 35.03 | 9.02 | 35.44 | 45.08 | 74.00 | 28.92 | Peak |
| 7658.500 | 36.86 | 36.80 | 9.96 | 35.57 | 48.05 | 74.00 | 25.95 | Peak |
| 8718.250 | 35.92 | 37.90 | 10.54 | 35.60 | 48.76 | 74.00 | 25.24 | Peak |
| 9287.500 | 36.76 | 38.12 | 10.87 | 35.51 | 50.25 | 74.00 | 23.75 | Peak |
| 9928.750 | 36.20 | 38.40 | 11.39 | 35.32 | 50.67 | 74.00 | 23.33 | Peak |

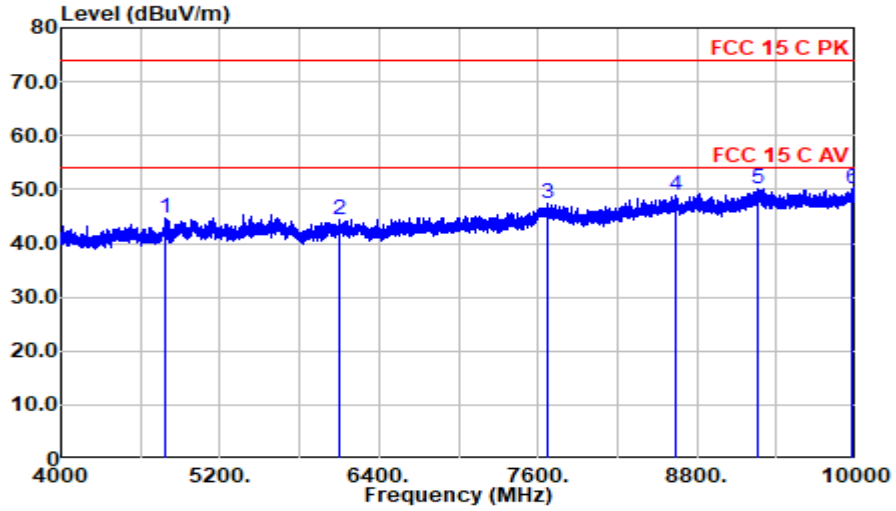
**Mode: TX 915.25MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4710.250 | 39.82 | 32.46 | 7.53 | 35.46 | 44.35 | 74.00 | 29.65 | Peak |
| 6112.750 | 37.37 | 34.47 | 8.52 | 35.32 | 45.04 | 74.00 | 28.96 | Peak |
| 7660.000 | 36.51 | 36.80 | 9.97 | 35.57 | 47.71 | 74.00 | 26.29 | Peak |
| 8325.250 | 36.15 | 38.00 | 10.42 | 35.60 | 48.96 | 74.00 | 25.04 | Peak |
| 9279.250 | 36.09 | 38.14 | 10.87 | 35.51 | 49.58 | 74.00 | 24.42 | Peak |
| 9955.750 | 35.14 | 38.39 | 11.42 | 35.31 | 49.63 | 74.00 | 24.37 | Peak |

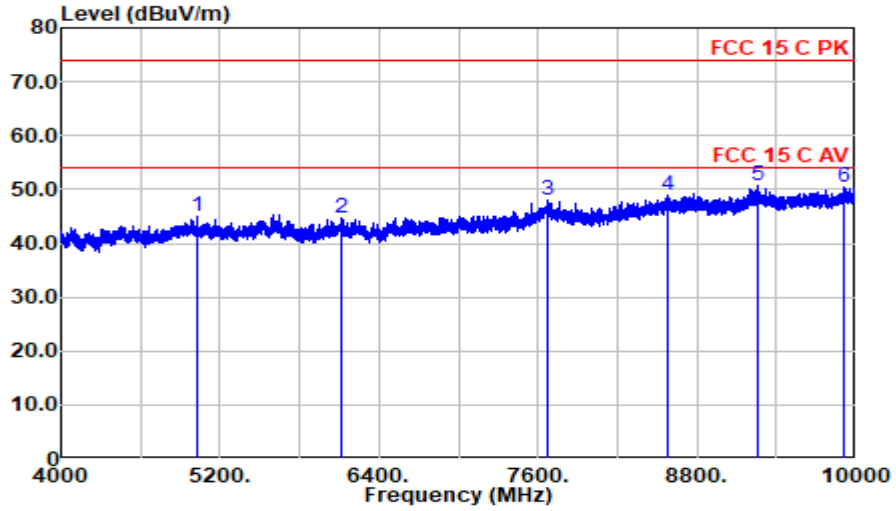
**Mode: TX 915.25MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4785.250 | 39.53 | 32.84 | 7.60 | 35.42 | 44.55 | 74.00 | 29.45 | Peak |
| 6097.750 | 36.82 | 34.50 | 8.51 | 35.32 | 44.50 | 74.00 | 29.50 | Peak |
| 7676.500 | 36.05 | 36.80 | 9.98 | 35.57 | 47.27 | 74.00 | 26.73 | Peak |
| 8647.000 | 35.92 | 38.10 | 10.52 | 35.60 | 48.94 | 74.00 | 25.06 | Peak |
| 9253.750 | 36.70 | 38.19 | 10.85 | 35.52 | 50.22 | 74.00 | 23.78 | Peak |
| 9975.250 | 35.79 | 38.35 | 11.43 | 35.31 | 50.26 | 74.00 | 23.74 | Peak |

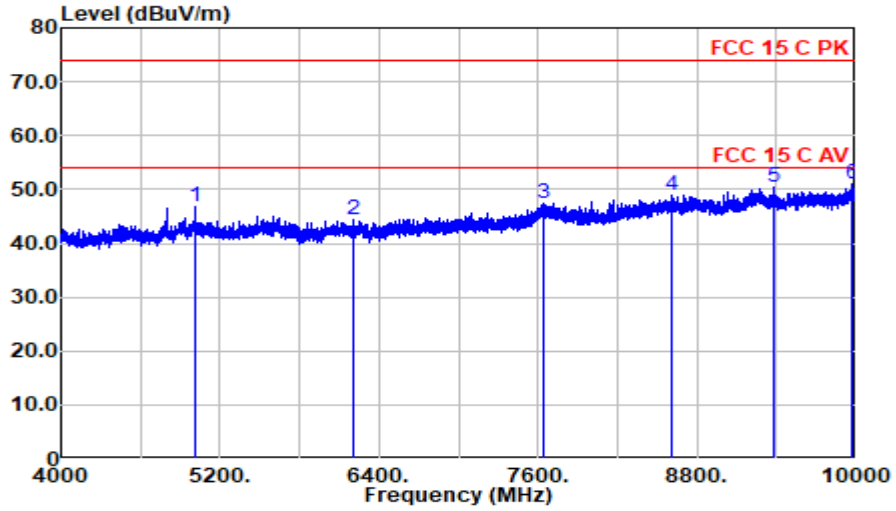
**Mode: TX 927.25MHz** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 5024.500 | 38.90 | 33.45 | 7.83 | 35.30 | 44.88 | 74.00 | 29.12 | Peak |
| 6109.750 | 36.92 | 34.48 | 8.52 | 35.32 | 44.59 | 74.00 | 29.41 | Peak |
| 7671.250 | 36.72 | 36.80 | 9.98 | 35.57 | 47.93 | 74.00 | 26.07 | Peak |
| 8574.250 | 35.95 | 38.15 | 10.50 | 35.60 | 49.00 | 74.00 | 25.00 | Peak |
| 9256.000 | 37.28 | 38.19 | 10.85 | 35.52 | 50.80 | 74.00 | 23.20 | Peak |
| 9916.750 | 36.05 | 38.40 | 11.38 | 35.32 | 50.51 | 74.00 | 23.49 | Peak |

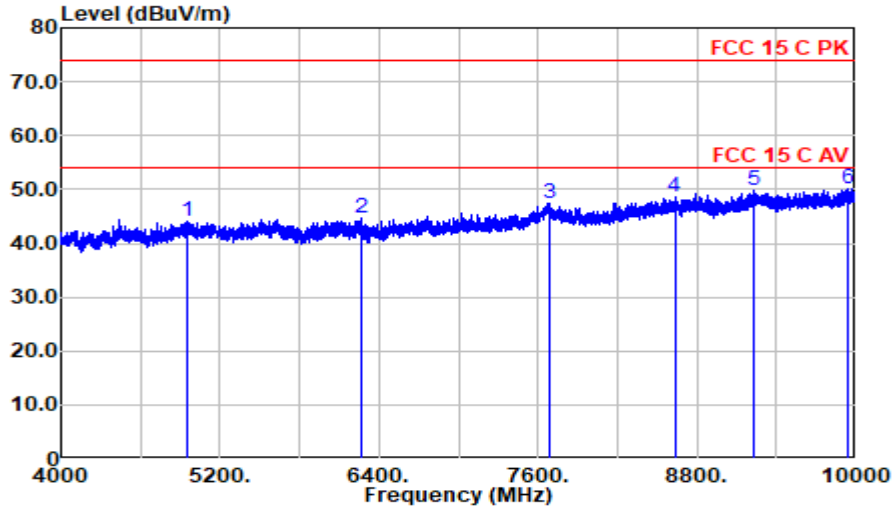
**Mode: TX 927.25MHz** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 5010.250 | 40.71 | 33.42 | 7.82 | 35.30 | 46.64 | 74.00 | 27.36 | Peak |
| 6211.750 | 36.49 | 34.62 | 8.61 | 35.35 | 44.38 | 74.00 | 29.62 | Peak |
| 7648.750 | 36.18 | 36.80 | 9.95 | 35.57 | 47.37 | 74.00 | 26.63 | Peak |
| 8616.250 | 35.86 | 38.10 | 10.51 | 35.60 | 48.88 | 74.00 | 25.12 | Peak |
| 9376.750 | 36.74 | 38.11 | 10.95 | 35.48 | 50.31 | 74.00 | 23.69 | Peak |
| 9964.750 | 36.39 | 38.37 | 11.42 | 35.31 | 50.87 | 74.00 | 23.13 | Peak |

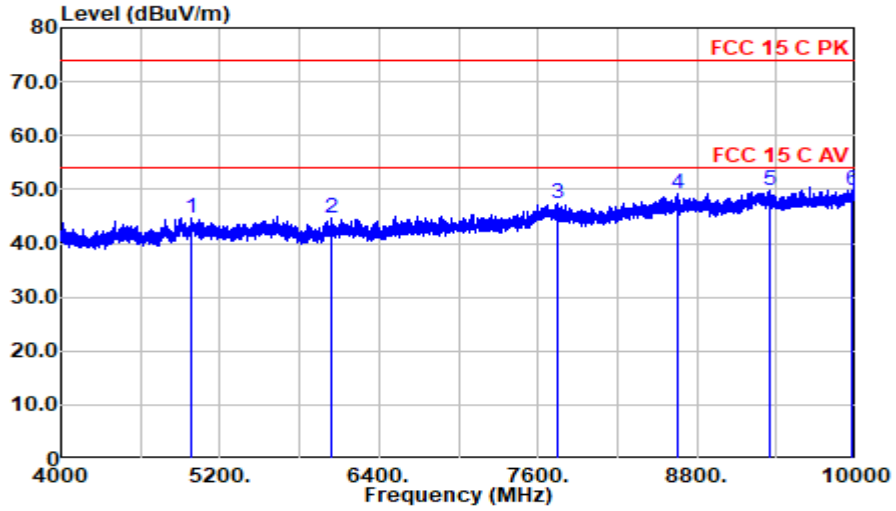
**Mode: TX Hopping(902-928)** **With ANT#2**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4949.500 | 38.43 | 33.20 | 7.76 | 35.33 | 44.06 | 74.00 | 29.94 | Peak |
| 6272.500 | 36.64 | 34.70 | 8.66 | 35.36 | 44.65 | 74.00 | 29.35 | Peak |
| 7687.000 | 36.25 | 36.80 | 9.99 | 35.57 | 47.47 | 74.00 | 26.53 | Peak |
| 8632.750 | 35.55 | 38.10 | 10.52 | 35.60 | 48.57 | 74.00 | 25.43 | Peak |
| 9232.000 | 36.29 | 38.24 | 10.83 | 35.53 | 49.83 | 74.00 | 24.17 | Peak |
| 9946.750 | 35.56 | 38.40 | 11.41 | 35.32 | 50.06 | 74.00 | 23.94 | Peak |

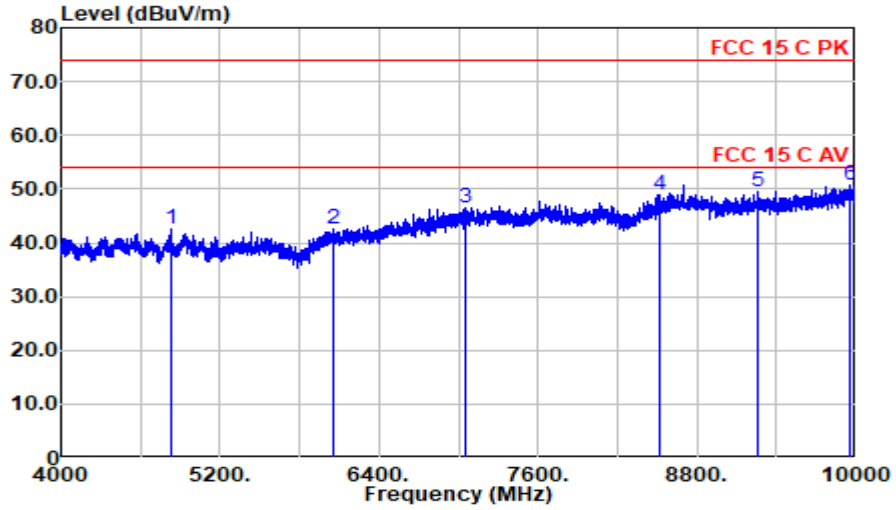
**Mode: TX Hopping(902-928)** **With ANT#2**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4989.250 | 38.96 | 33.36 | 7.80 | 35.31 | 44.81 | 74.00 | 29.19 | Peak |
| 6038.500 | 37.07 | 34.35 | 8.45 | 35.31 | 44.57 | 74.00 | 29.43 | Peak |
| 7748.500 | 36.15 | 36.90 | 10.06 | 35.58 | 47.53 | 74.00 | 26.47 | Peak |
| 8660.500 | 36.10 | 38.06 | 10.53 | 35.60 | 49.08 | 74.00 | 24.92 | Peak |
| 9346.750 | 36.46 | 38.01 | 10.92 | 35.49 | 49.90 | 74.00 | 24.10 | Peak |
| 9973.750 | 35.48 | 38.35 | 11.43 | 35.31 | 49.96 | 74.00 | 24.04 | Peak |

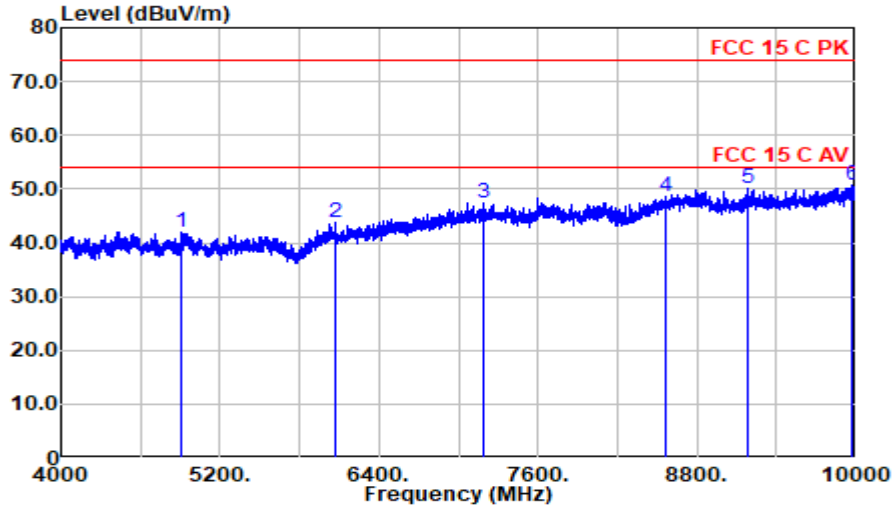
**Mode: TX 902.75MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4831.000 | 37.21 | 33.24 | 7.50 | 35.39 | 42.56 | 74.00 | 31.44 | Peak |
| 6052.000 | 35.29 | 34.39 | 8.33 | 35.31 | 42.70 | 74.00 | 31.30 | Peak |
| 7049.500 | 37.20 | 35.60 | 9.18 | 35.51 | 46.48 | 74.00 | 27.52 | Peak |
| 8525.500 | 35.63 | 38.40 | 10.36 | 35.60 | 48.78 | 74.00 | 25.22 | Peak |
| 9263.500 | 36.25 | 38.17 | 10.73 | 35.52 | 49.63 | 74.00 | 24.37 | Peak |
| 9949.000 | 36.21 | 38.49 | 11.29 | 35.31 | 50.67 | 74.00 | 23.33 | Peak |

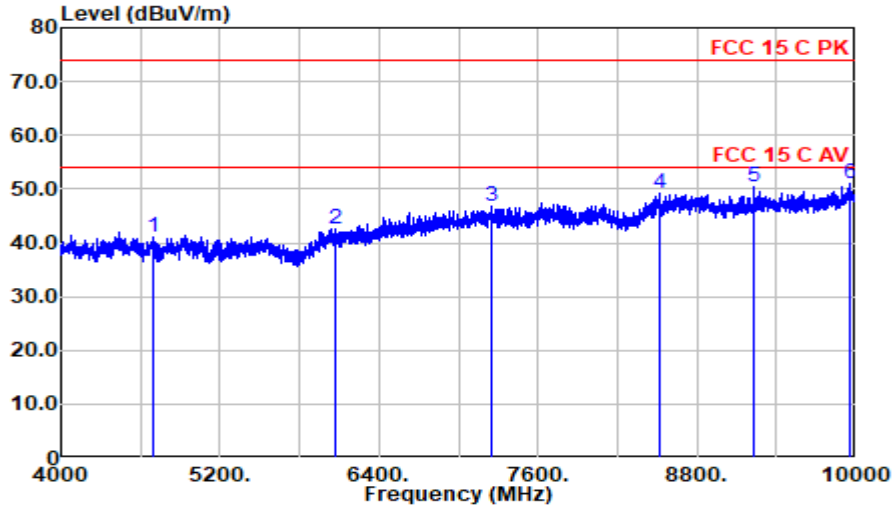
**Mode: TX 902.75MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4910.500 | 36.26 | 33.34 | 7.59 | 35.35 | 41.84 | 74.00 | 32.16 | Peak |
| 6076.000 | 36.32 | 34.30 | 8.35 | 35.32 | 43.65 | 74.00 | 30.35 | Peak |
| 7195.000 | 37.45 | 36.18 | 9.34 | 35.52 | 47.45 | 74.00 | 26.55 | Peak |
| 8567.500 | 35.48 | 38.40 | 10.37 | 35.60 | 48.66 | 74.00 | 25.34 | Peak |
| 9187.000 | 36.78 | 38.25 | 10.66 | 35.54 | 50.16 | 74.00 | 23.84 | Peak |
| 9976.000 | 36.20 | 38.50 | 11.31 | 35.31 | 50.71 | 74.00 | 23.29 | Peak |

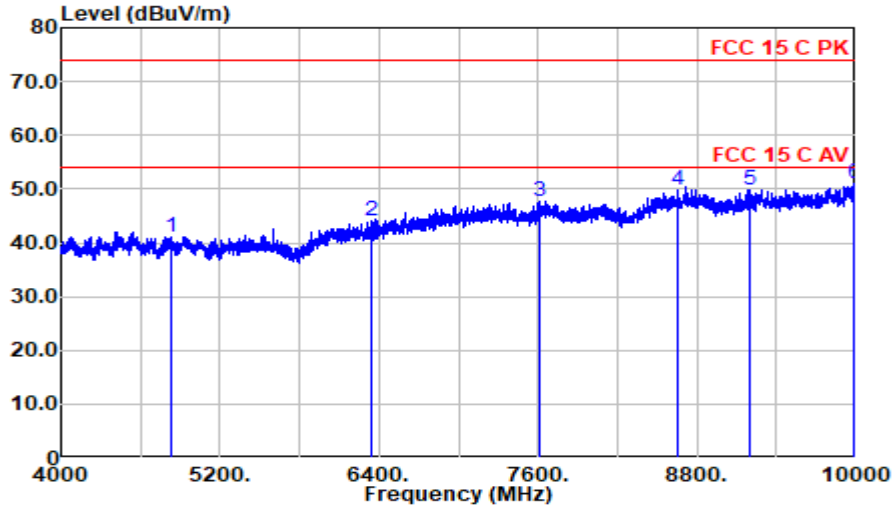
**Mode: TX 915.25MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4702.000 | 36.52 | 32.50 | 7.37 | 35.47 | 40.92 | 74.00 | 33.08 | Peak |
| 6077.500 | 35.22 | 34.29 | 8.36 | 35.32 | 42.54 | 74.00 | 31.46 | Peak |
| 7253.500 | 36.21 | 36.62 | 9.40 | 35.53 | 46.70 | 74.00 | 27.30 | Peak |
| 8521.000 | 36.00 | 38.40 | 10.36 | 35.60 | 49.16 | 74.00 | 24.84 | Peak |
| 9224.500 | 36.90 | 38.20 | 10.69 | 35.53 | 50.27 | 74.00 | 23.73 | Peak |
| 9952.000 | 36.44 | 38.50 | 11.29 | 35.31 | 50.92 | 74.00 | 23.08 | Peak |

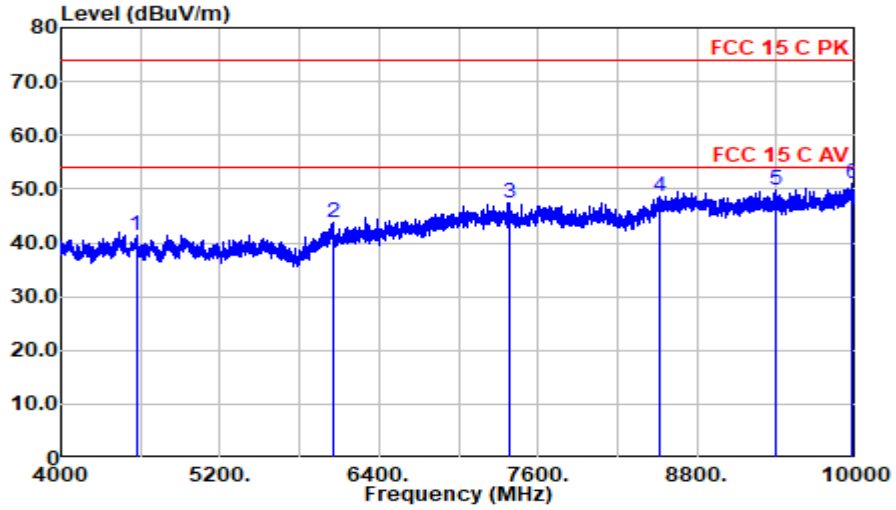
**Mode: TX 915.25MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4825.000 | 35.84 | 33.25 | 7.50 | 35.40 | 41.19 | 74.00 | 32.81 | Peak |
| 6341.500 | 36.32 | 34.60 | 8.58 | 35.37 | 44.13 | 74.00 | 29.87 | Peak |
| 7619.500 | 36.57 | 37.00 | 9.79 | 35.56 | 47.80 | 74.00 | 26.20 | Peak |
| 8654.500 | 36.71 | 38.42 | 10.40 | 35.60 | 49.93 | 74.00 | 24.07 | Peak |
| 9202.000 | 36.62 | 38.20 | 10.68 | 35.54 | 49.96 | 74.00 | 24.04 | Peak |
| 9991.000 | 36.54 | 38.50 | 11.32 | 35.30 | 51.06 | 74.00 | 22.94 | Peak |

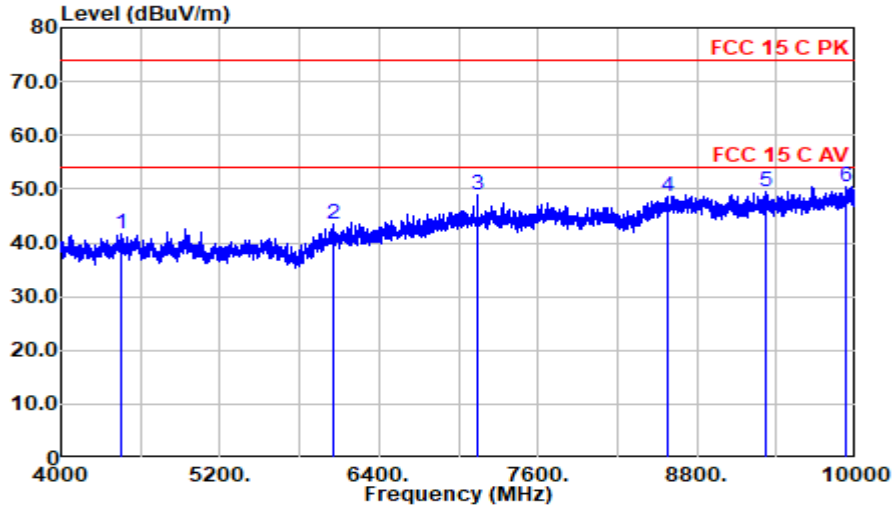
**Mode: TX 927.75MHz** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4567.000 | 37.27 | 32.47 | 7.23 | 35.54 | 41.42 | 74.00 | 32.58 | Peak |
| 6052.000 | 36.49 | 34.39 | 8.33 | 35.31 | 43.90 | 74.00 | 30.10 | Peak |
| 7388.500 | 36.47 | 36.98 | 9.54 | 35.54 | 47.44 | 74.00 | 26.56 | Peak |
| 8512.000 | 35.47 | 38.40 | 10.35 | 35.60 | 48.63 | 74.00 | 25.37 | Peak |
| 9397.000 | 36.17 | 38.38 | 10.84 | 35.48 | 49.91 | 74.00 | 24.09 | Peak |
| 9970.000 | 36.42 | 38.50 | 11.31 | 35.31 | 50.92 | 74.00 | 23.08 | Peak |

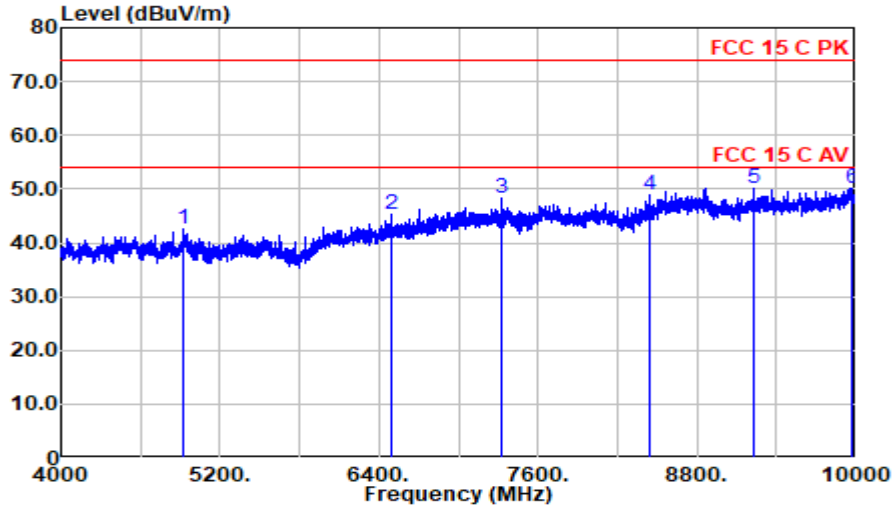
**Mode: TX 927.75MHz** **With ANT#1**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4450.000 | 37.63 | 32.50 | 7.10 | 35.61 | 41.62 | 74.00 | 32.38 | Peak |
| 6059.500 | 35.97 | 34.36 | 8.34 | 35.31 | 43.36 | 74.00 | 30.64 | Peak |
| 7144.000 | 39.08 | 35.99 | 9.28 | 35.52 | 48.84 | 74.00 | 25.16 | Peak |
| 8584.000 | 35.35 | 38.40 | 10.38 | 35.60 | 48.53 | 74.00 | 25.47 | Peak |
| 9326.500 | 36.18 | 38.10 | 10.78 | 35.50 | 49.56 | 74.00 | 24.44 | Peak |
| 9926.500 | 36.03 | 38.31 | 11.27 | 35.32 | 50.29 | 74.00 | 23.71 | Peak |

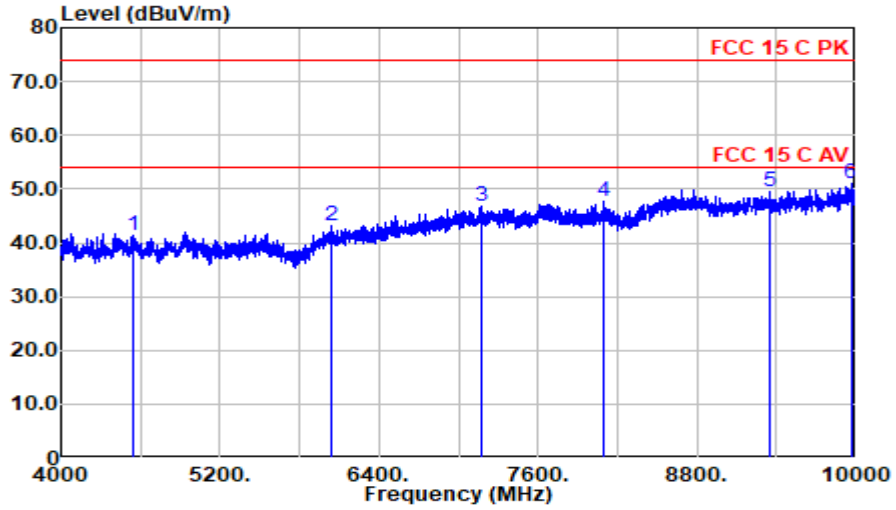
**Mode: TX Hopping(902-928)** **With ANT#1**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4928.500 | 36.77 | 33.41 | 7.60 | 35.34 | 42.45 | 74.00 | 31.55 | Peak |
| 6497.500 | 37.42 | 34.60 | 8.71 | 35.40 | 45.32 | 74.00 | 28.68 | Peak |
| 7327.000 | 37.37 | 36.90 | 9.48 | 35.53 | 48.21 | 74.00 | 25.79 | Peak |
| 8440.000 | 35.82 | 38.22 | 10.33 | 35.60 | 48.77 | 74.00 | 25.23 | Peak |
| 9233.500 | 36.88 | 38.20 | 10.70 | 35.53 | 50.25 | 74.00 | 23.75 | Peak |
| 9973.000 | 35.54 | 38.50 | 11.31 | 35.31 | 50.04 | 74.00 | 23.96 | Peak |

**Mode: TX Hopping(902-928)** **With ANT#1**



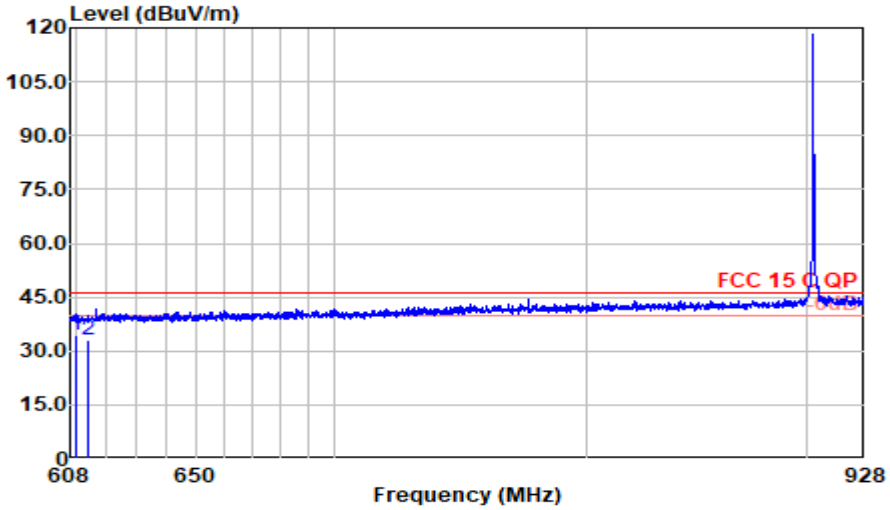

Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 4538.500 | 37.33 | 32.52 | 7.20 | 35.56 | 41.49 | 74.00 | 32.51 | Peak |
| 6043.000 | 35.78 | 34.37 | 8.33 | 35.31 | 43.17 | 74.00 | 30.83 | Peak |
| 7168.000 | 36.95 | 36.07 | 9.31 | 35.52 | 46.81 | 74.00 | 27.19 | Peak |
| 8101.000 | 35.59 | 37.60 | 10.22 | 35.60 | 47.81 | 74.00 | 26.19 | Peak |
| 9352.000 | 36.00 | 38.11 | 10.80 | 35.49 | 49.42 | 74.00 | 24.58 | Peak |
| 9962.500 | 36.58 | 38.50 | 11.30 | 35.31 | 51.07 | 74.00 | 22.93 | Peak |

## Band-Edge and Restricted bands:

| Test Date: | 2024.08.20 | Temp./Hum.: | 22℃/51%RH | Test By: | Jarey |
|---|---|---|---|---|---|

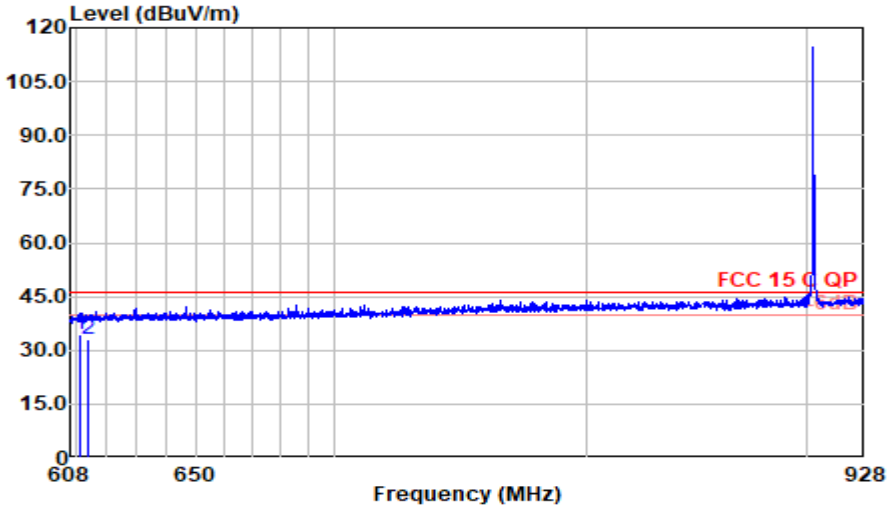
**Mode: TX 902.75MHz**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 609.673 | 5.79 | 25.59 | 2.84 | 34.22 | 46.00 | 11.78 | QP |
| 614.000 | 4.59 | 25.76 | 2.84 | 33.19 | 46.00 | 12.81 | QP |

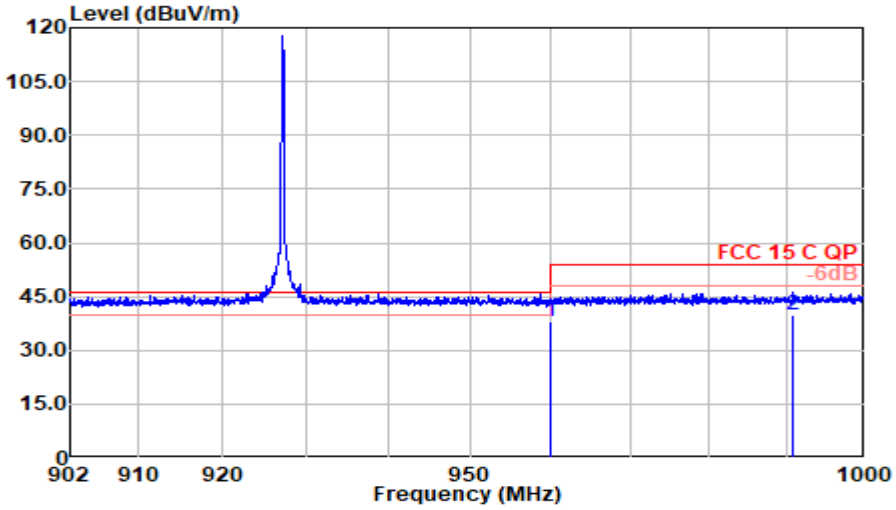
**Mode: TX 902.75MHz**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 611.222 | 5.90 | 25.65 | 2.84 | 34.38 | 46.00 | 11.62 | QP |
| 614.000 | 4.45 | 25.76 | 2.84 | 33.05 | 46.00 | 12.95 | QP |

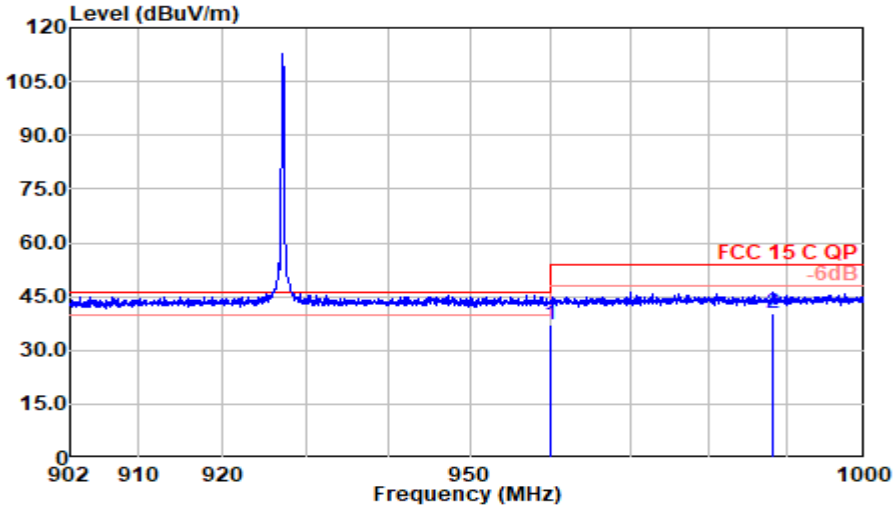
**Mode: TX 927.75MHz**




Polarization at Horizontal

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 960.000 | 5.19 | 29.40 | 3.36 | 37.95 | 46.00 | 8.05 | QP |
| 990.641 | 6.93 | 29.60 | 3.47 | 40.00 | 54.00 | 14.00 | QP |

**Mode: TX 927.75MHz**




Polarization at Vertical

| Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 960.000 | 4.37 | 29.40 | 3.36 | 37.13 | 46.00 | 8.87 | QP |
| 988.093 | 7.25 | 29.60 | 3.46 | 40.31 | 54.00 | 13.69 | QP |

# 4 20DB BANDWIDTH MEASUREMENT

## 4.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 4.2 Block Diagram of Test Setup


## 4.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.
(i). For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

## 4.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

## 4.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of 20 dB bandwidth was measure by spectrum analyzer with settings: Span = between 2.0 times and 5.0 times of the OBW, RBW = 1% to 5% of the OBW, VBW ≥ 3 × RBW, Detector = Peak, Trace = Max Hold.
Use the “x dB” bandwidth function of the instrument, set it as “-20 dB” to measure and report the 20dB bandwidth.

The test procedure is defined in ANSI C63.10-2013 (the 6.9.2 Measurement Procedure “ Occupied bandwidth—relative measurement procedure” was used).

## 4.6 Test Results

**PASSED.**

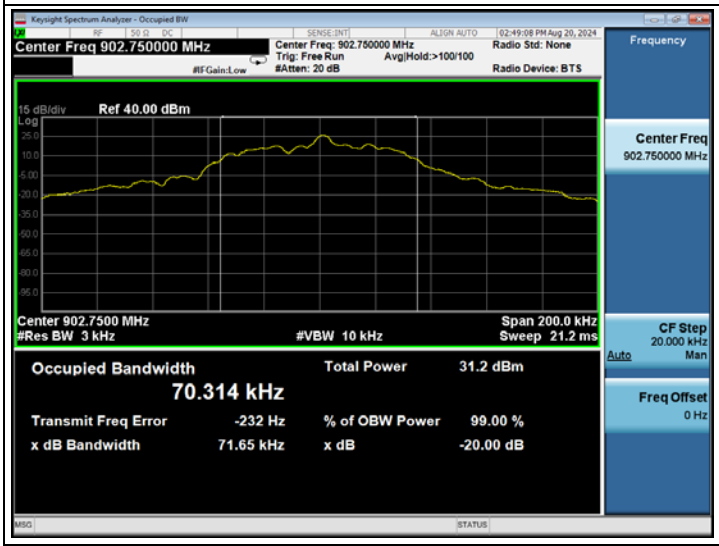
All the test results are attached in next pages.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

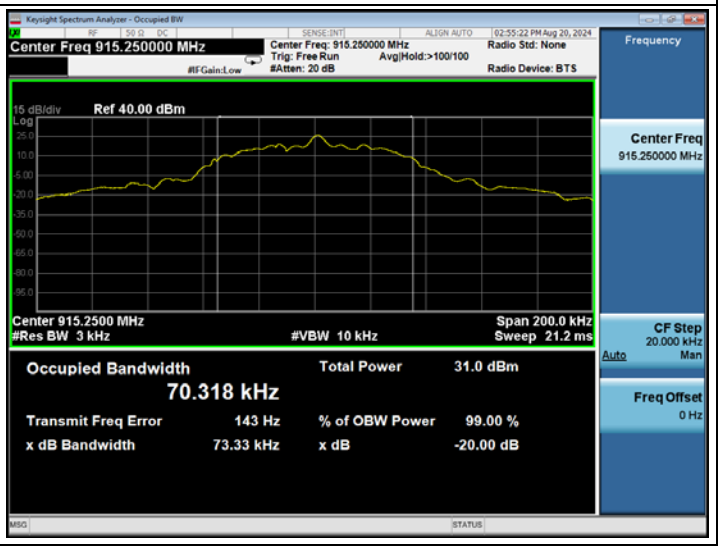
| Mode | Channel | Frequency (MHz) | **20 dB Bandwidth (kHz)** | **Limit (kHz)** |
|---|---|---|---|---|
| RFID | 01 | 902.75 | **71.65** | **500** |
| | 26 | 915.25 | **73.33** | **500** |
| | 50 | 927.25 | **71.58** | **500** |

**RFID**

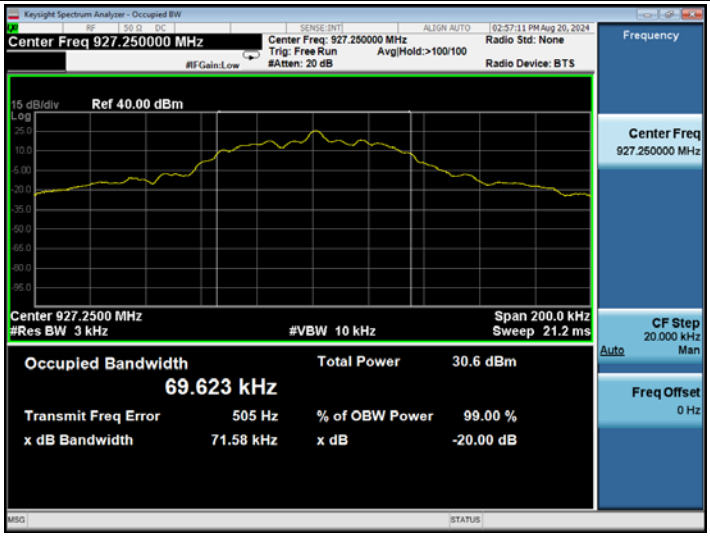
CH01 (902.75MHz)




CH25 (915.25MHz)




CH50 (927.25MHz)



# 5 CARRIER FREQUENCY SEPARATION MEASUREMENT

## 5.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 5.2 Block Diagram of Test Setup

The Same as Section. 4.2

## 5.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

## 5.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to have its hopping function enabled.

## 5.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
a) Span = wide enough to capture the peaks of two adjacent channels
b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
c) VBW ≥ RBW
d) Sweep = auto
e) Detector function = peak
f) Trace = max hold
g) Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

The test procedure is defined in ANSI C63.10-2013 (the 7.8.2 Measurement Procedure “Carrier frequency separation” was used).

## 5.6 Test Results

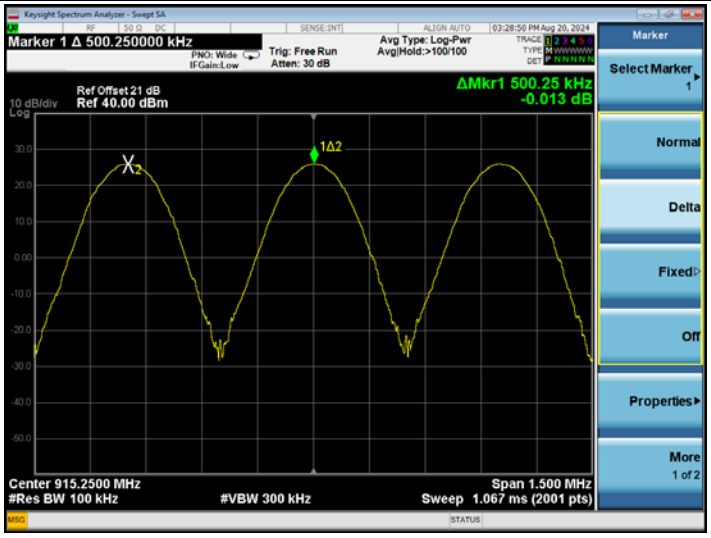
**PASSED.**

All the test results are attached in next pages.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

| Mode | Channel | **Separation (kHz)** | **Limit (kHz)** |
|---|---|---|---|
| RFID | Hopping | **500.25** | **73.33** |

RFID-Hopping



# 6 NUMBER OF HOPPING FREQUENCIES MEASUREMENT

## 6.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 6.2 Block Diagram of Test Setup

The Same as Section. 4.2

## 6.3 Specification Limits (§15.247(a)(1)(i))

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

## 6.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to have its hopping function enabled.

## 6.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
a) Span = the frequency band of operation.
b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
c) VBW ≥ RBW
d) Sweep = auto
e) Detector function = peak
f) Trace = max hold
g) Allow the trace to stabilize. It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies.

The test procedure is defined in ANSI C63.10-2013 (the 7.8.3 Measurement Procedure “Number of Hopping Frequencies” was used).

## 6.6 Test Results

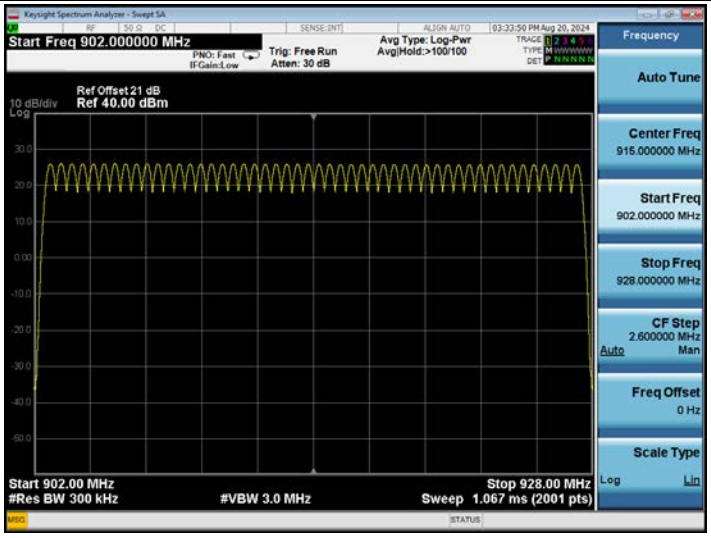
**PASSED.**

All the test results are attached in next pages.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

| Mode | Channel | **Number of Hopping Frequencies** |
|---|---|---|
| RFID | Hopping | **50** |

RFID-Hopping



# 7 DWELL TIME MEASUREMENT

## 7.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 7.2 Block Diagram of Test Setup

The Same as Section. 4.2

## 7.3 Specification Limits (§15.247(a)(1)(i))

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

## 7.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to have its hopping function enabled.

## 7.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
a) Span = zero span, centered on a hopping channel.
b) RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
c) Sweep: As necessary to capture the entire dwell time per hopping channel.
d) Detector function: Peak.
e) Trace: Max hold.

Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time.

Repeat the measurement using a longer sweep time to determine the number of hops over the period specified in the requirements. The sweep time shall be

equal to, or less than, the period specified in the requirements.

Determine the number of hops over the sweep time and calculate the total number of hops in the period specified in the requirements, using the following equation:
(Number of hops in the period specified in the requirements) =
(number of hops on spectrum analyzer) × (period specified in the requirements / analyzer sweep time)

The average time of occupancy is calculated from the transmit time per hop multiplied by the number of hops in the period specified in the requirements. If the number of hops in a specific time varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation.

The test procedure is defined in ANSI C63.10-2013 (the 7.8.4 Measurement Procedure “Time of occupancy (dwell time)” was used).

## 7.6 Test Results

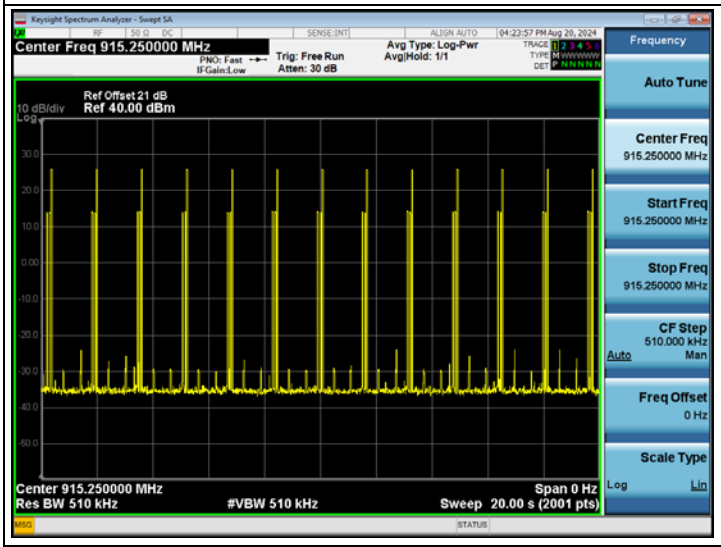
**PASSED.**

All the test results are attached in next pages.

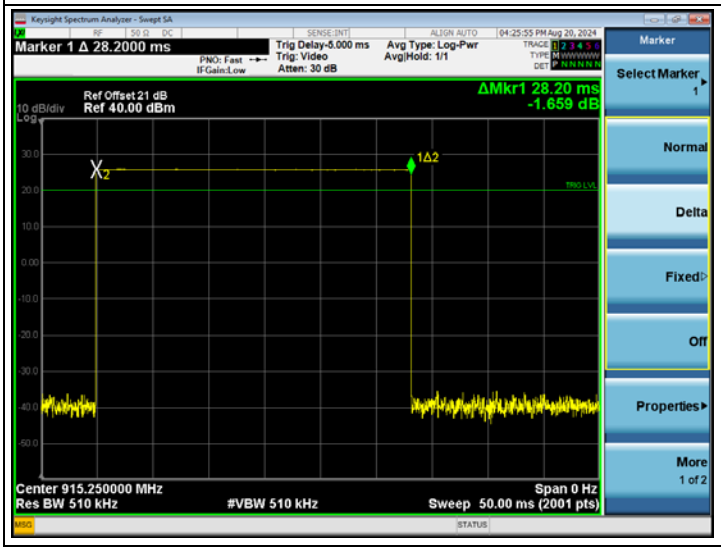
(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

| Mode | Number of Hops on SA | SA Sweep time (s) | Period specified in the requirements (s) | Number of Hops in period specified in the requirements |
|---|---|---|---|---|
| RFID | 13 | 20 | 20 | 13 |

| Mode | Number of Hops in period specified in the requirements | Transmit time per hop (ms) | **Dwell Time (ms)** | Limit (ms) |
|---|---|---|---|---|
| RFID | 13 | 28.2 | 366.6 | 400 |

| **Number of Hops on SA** |
|---|
| RFID-Hopping |
|  |



| **Transmit time per hop** |
|---|
| RFID-Hopping |
|  |

# 8 TRANSMITTER OUTPUT POWER

## 8.1 Test Equipment

The following test equipment was used during the maximum peak output power measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 8.2 Block Diagram of Test Setup

Same as section 4.2.

## 8.3 Specification Limits (§15.247(b)(2))

For frequency hopping systems operating in the 902–928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

## 8.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

## 8.5 Test Procedure

This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. The hopping shall be disabled for this test:

a) Use the following spectrum analyzer settings:
   1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
   2) RBW > 20 dB bandwidth of the emission being measured.
   3) VBW ≥ RBW.
   4) Sweep: Auto.
   5) Detector function: Peak.
   6) Trace: Max hold.

b) Allow trace to stabilize.

c) Use the marker-to-peak function to set the marker to the peak of the emission.

d) The indicated level is the peak output power, after any corrections for external attenuators and cables.

The test procedure is defined in ANSI C63.10-2013 ( 7.8.5 Measurement Procedure " Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices" was used).

## 8.6 Test Results

**PASSED.**

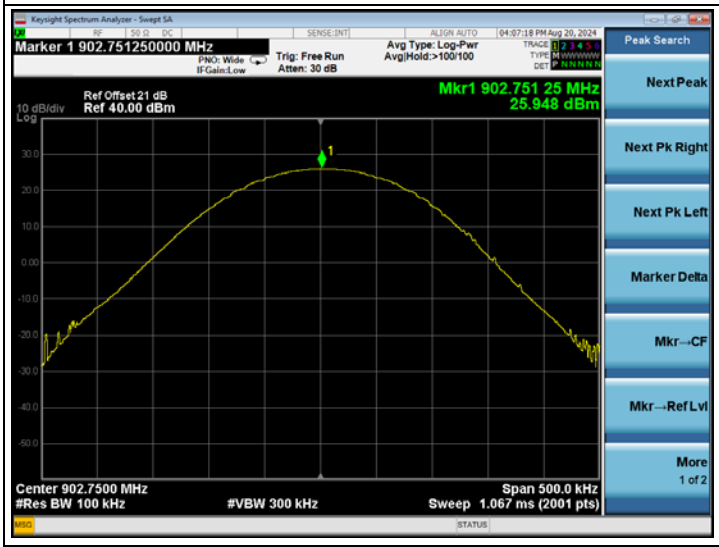
All the test results are listed below.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

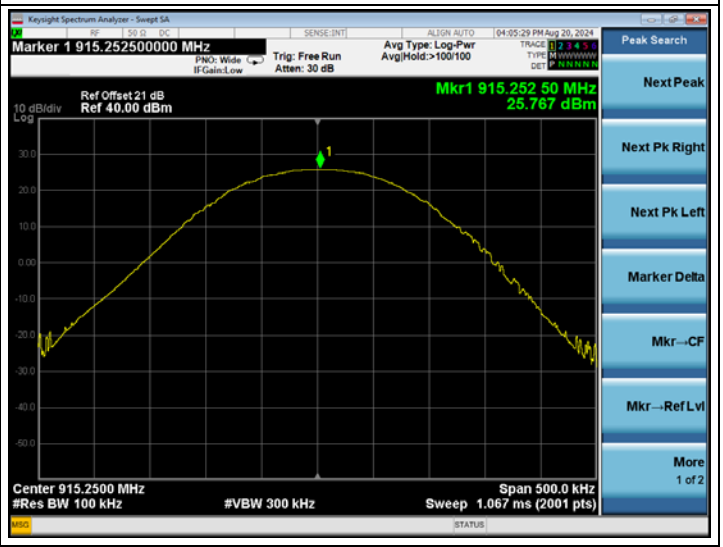
| Mode | Channel | Frequency (MHz) | **Maximum Conducted Output Power (dBm)** | Limit (dBm) |
|---|---|---|---|---|
| RFID | 01 | 902.75 | **25.948** | 30 |
| | 26 | 915.25 | **25.767** | 30 |
| | 50 | 927.25 | **25.642** | 30 |

**RFID**

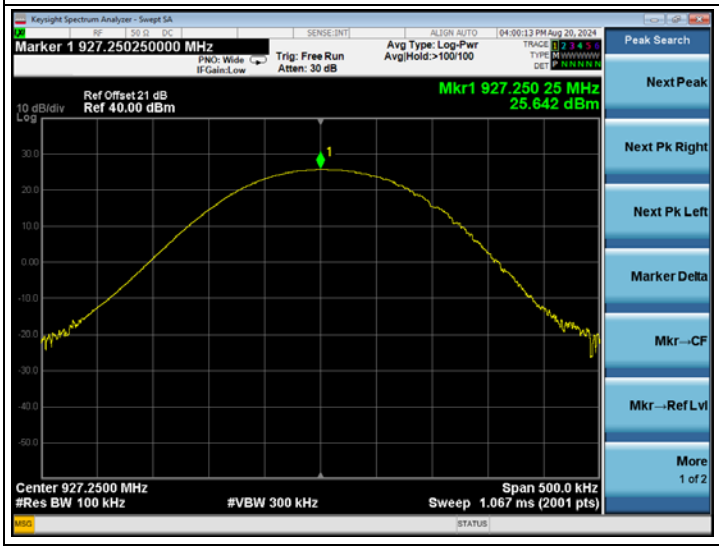
CH01 (902.75MHz)




CH25 (915.25MHz)




CH50 (927.25MHz)



# 9 BAND EDGE MEASUREMENT

## 9.1 Test Equipment

The following test equipment was used during the maximum peak output power measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 9.2 Block Diagram of Test Setup

The Same as Section. 4.2

## 9.3 Specification Limits (§15.247(d))

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, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.
In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see§15.205(c)). (※This test result attaching to §3.7).

## 9.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one and have its hopping function enabled.

## 9.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
a) Set the EUT to the lowest frequency channel (for the hopping on test, the hopping sequence shall include the lowest frequency channel).
b) Set the EUT to operate at maximum output power and 100% duty cycle, or equivalent “normal mode of operation” as specified in 6.10.3 of ANSI C63.10.
c) Perform the test as follows:

1) Span: wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2) Attenuation: Auto

3) Sweep time: Coupled.
4) Resolution bandwidth: 100kHz.
5) Video bandwidth: 300kHz.
6) Detector: peak
7) Trace: max hold.

d) Allow the trace to stabilize. For the test with the hopping function turned ON, this can take several minutes to achieve a reasonable probability of intercepting any emissions due to oscillator overshoot.
e) Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, and then use the marker-to-peak function to move the marker to the peak of the in-band emission.
f) Repeat step b) through step e) for every applicable modulation.
k) Set the EUT to the highest frequency channel (for the hopping on test, the hopping sequence shall include the highest frequency channel and repeat step b) through step f).

Band-edge measurements shall be tested both on single channels, and with the EUT hopping.

The test procedure is defined in ANSI C63.10-2013 (7.8.6 " Band-edge measurements for RF conducted emissions", 6.10.4 Measurement Procedure " Authorized-band band-edge measurements (relative method)" was used).

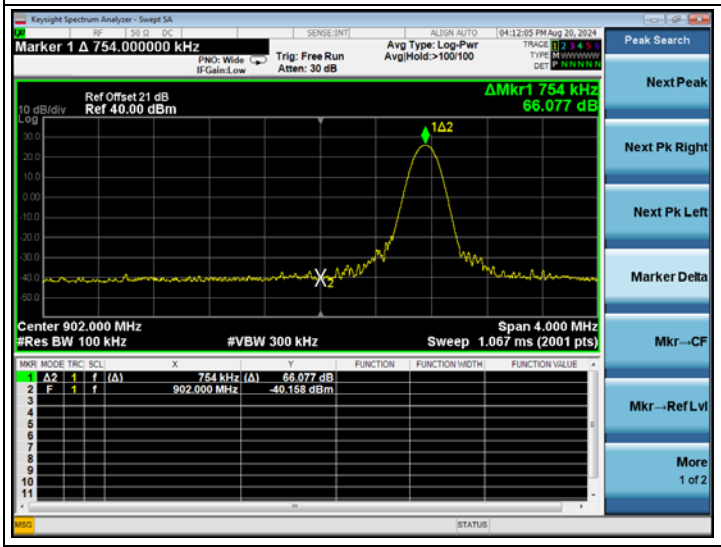
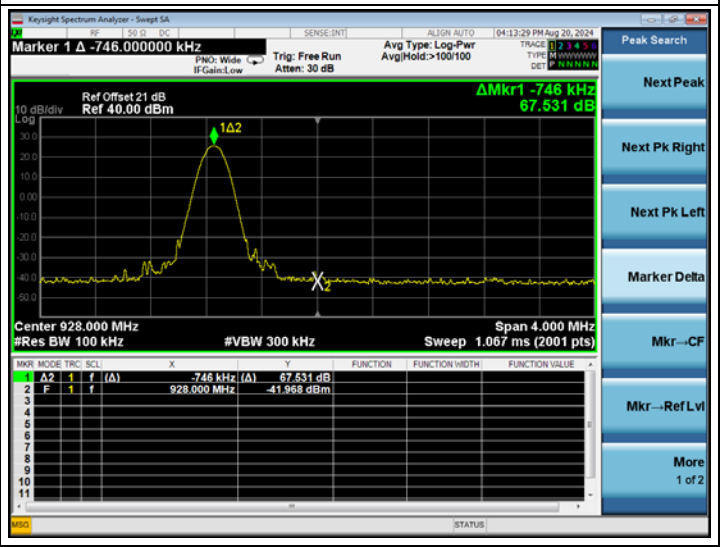
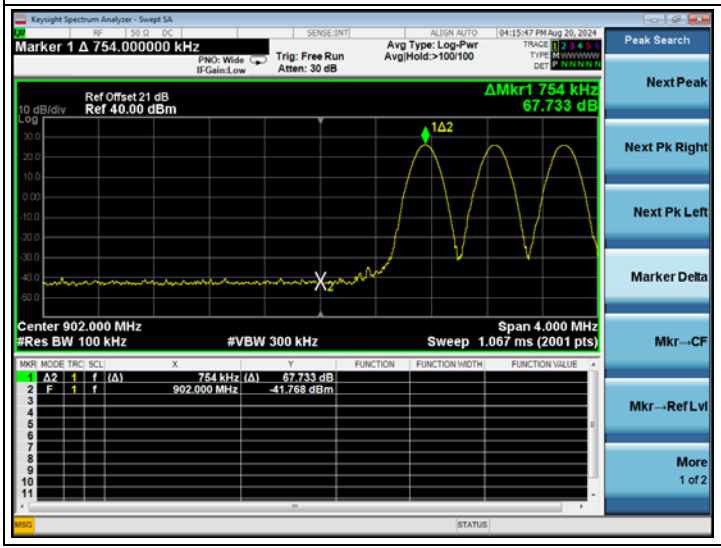
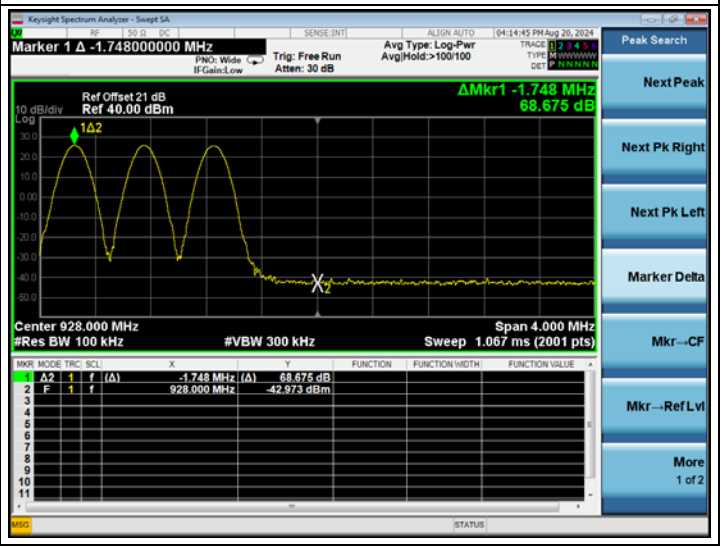
## 9.6 Test Results

**PASSED.**

All the test results are attached in next pages.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

| Mode | Location | Channel | Frequency (MHz) | **Delta Marker (dB)** | Limit (dB) |
|---|---|---|---|---|---|
| RFID | Lower Edge | 01 | 902.75 | **66.077** | 20 |
| | Upper Edge | 50 | 927.25 | **67.531** | 20 |
| RFID | Lower Edge | Hopping | -- | **67.733** | 20 |
| | Upper Edge | Hopping | -- | **68.675** | 20 |

| **RFID** | |
|---|---|
| CH01 (902.75MHz) | CH50 (927.25MHz) |
|  |  |
| **RFID** | |
| Hoppping | Hoppping |
|  |  |

# 10 UNWANTED EMISSIONS MEASUREMENT

## 10.1 Test Equipment

The following test equipment was used during the emission limitations test：

| Item | Type | Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | Spectrum Analyzer | Agilent | N9010A | MY52221182 | 2024.08.09 | 1 Year |
| 2. | RF Cable | Mini-Circuits | FLC-3FT-SM SM+ | 22022838 | 2024.08.09 | 1 Year |
| 3. | 20 dB Attenuator | Mini-Circuits | BW-S20W2+ | 001 | 2024.08.09 | 1 Year |

## 10.2 Block Diagram of Test Setup

Same as Section. 4.2.

## 10.3 Specification Limits (§15.247(d))

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, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.
In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see§15.205(c)). (※This test result attaching to §4.7).

## 10.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

## 10.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

Establish a reference level by using the following procedure:
Connect the primary antenna port through an attenuator to the spectrum analyzer input; in the results, account for all losses between the unlicensed wireless device output and the spectrum analyzer. The instrument shall span 30 MHz to 10 times the operating frequency in GHz, with a resolution bandwidth of 100 kHz, video bandwidth of 300 kHz, and a coupled sweep time with a peak detector. The band 30 MHz to the highest frequency may be split into smaller spans, as long as the entire spectrum is covered.

The test procedure is defined in ANSI C63.10-2013 (7.8.8 “ Conducted spurious emissions test methodology” was used).

## 10.6 Test Results

**PASSED**.

The test data was attached in the next pages.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

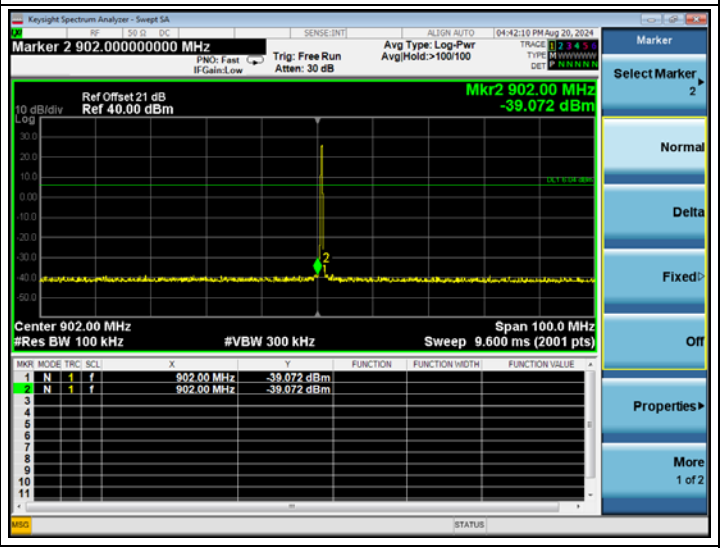
| Mode | Channel | Frequency (MHz) | Data Page |
|---|---|---|---|
| RFID | 01 | 902.75 | P89 |
| | 26 | 915.25 | P90 |
| | 50 | 927.25 | P91 |

**RFID**

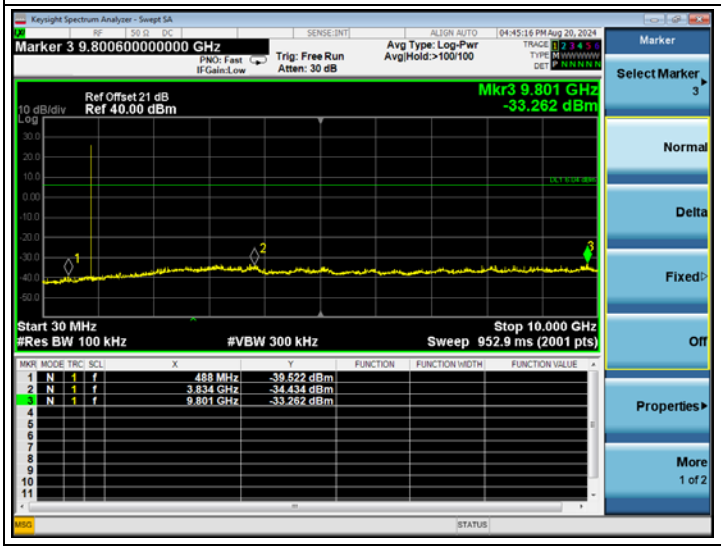
CH01 (902.75MHz)

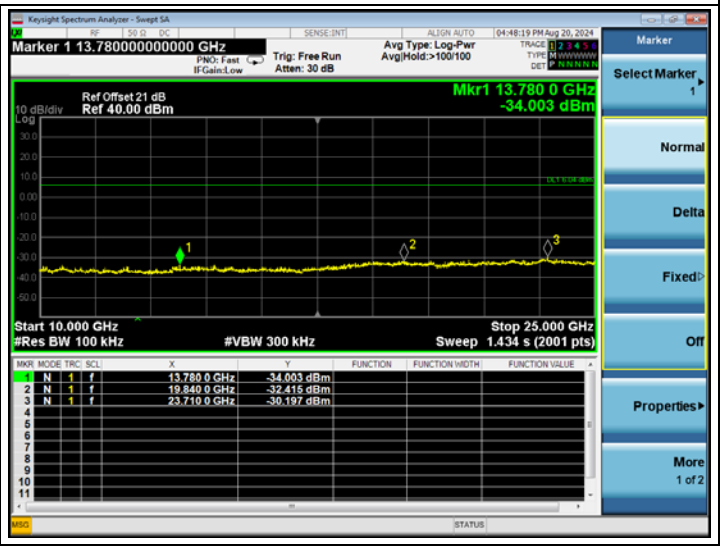
Reference Level


Edge

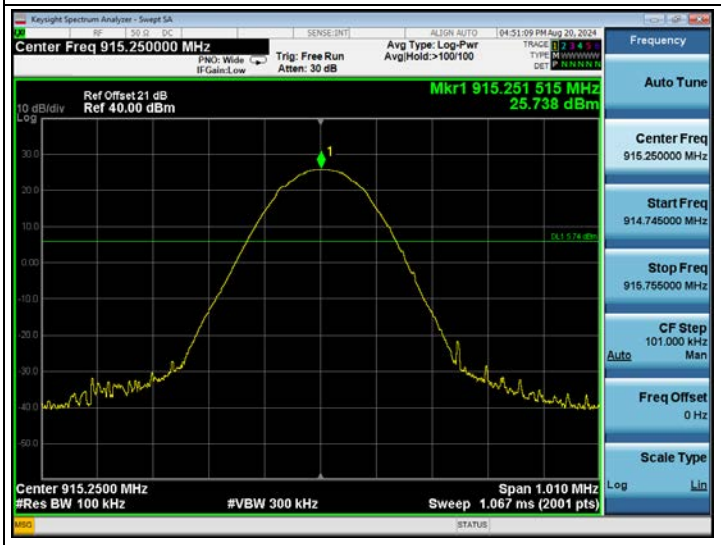



Emission Level

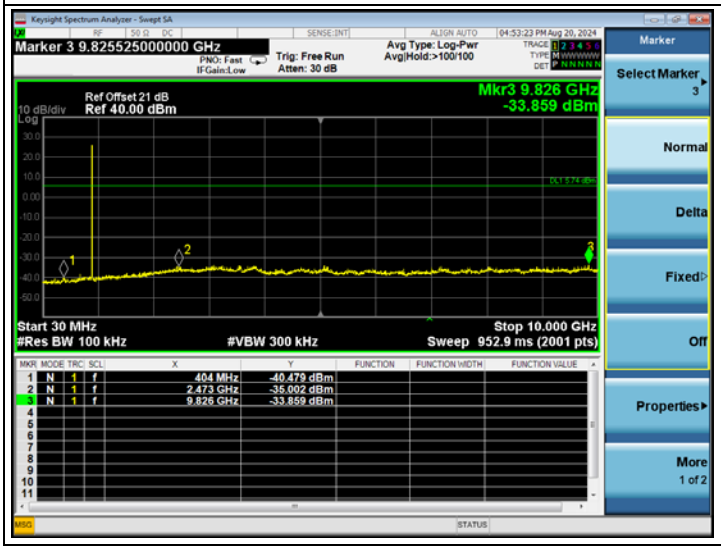


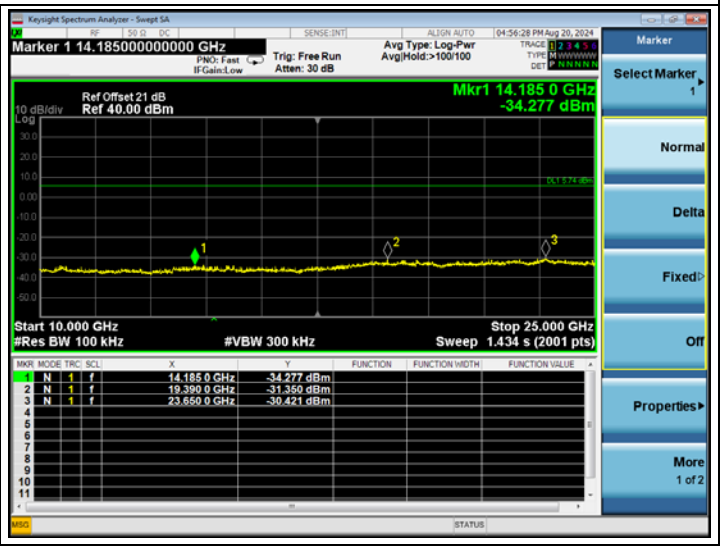



| **RFID** |
|---|
| CH25 (915.25MHz) |
| Reference Level |




| Emission Level |
|---|



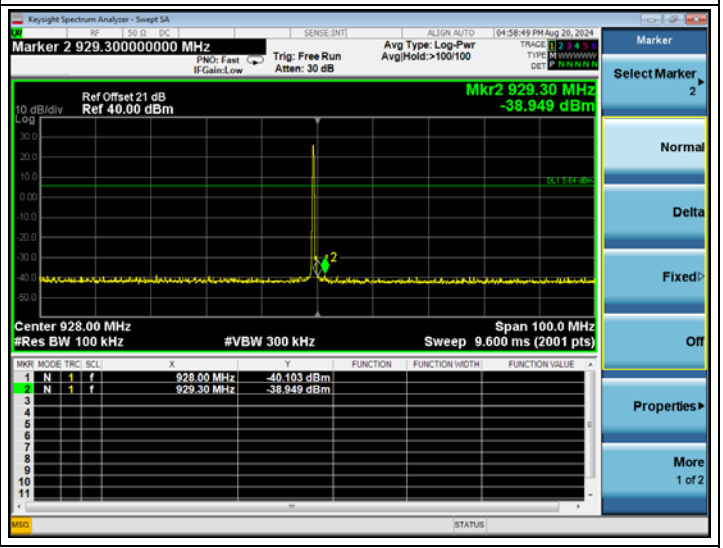



**RFID**

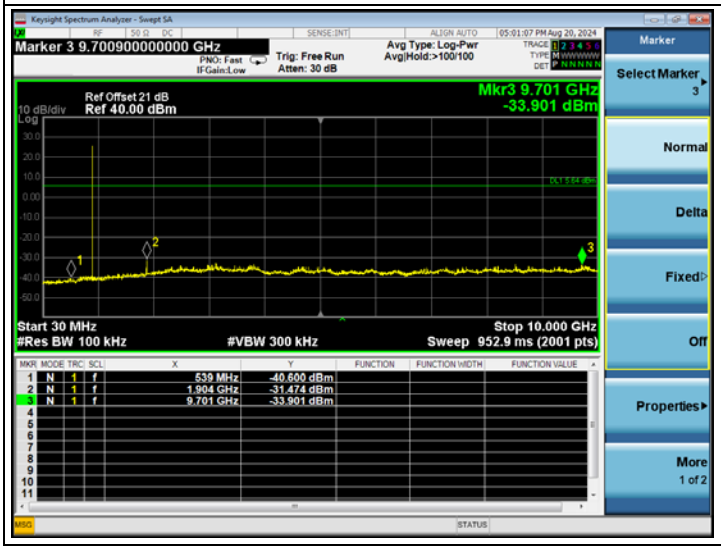
CH50 (927.25MHz)

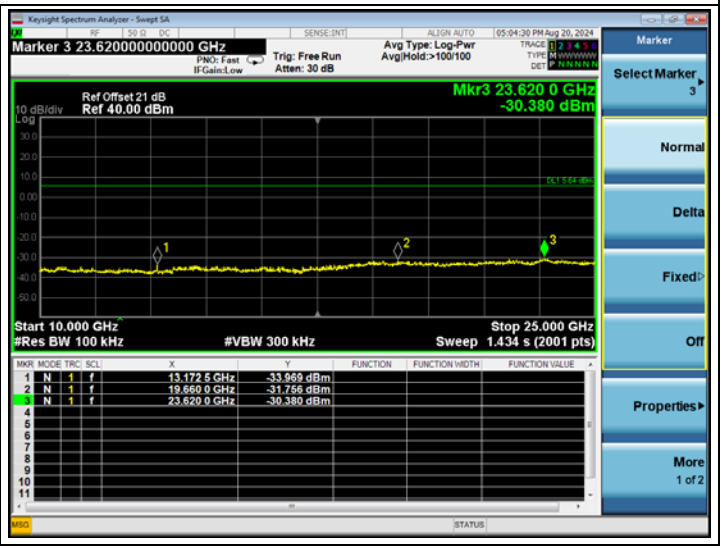
Reference Level


Edge




Emission Level



# 11 ANTENNA REQUIREMENT

## 11.1 Specification Limits (§15.203)

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.

## 11.2 Result

| |
|---|
| According to KDB 353028 D1, the following describes the three ways that can be used to demonstrate compliance to Section 15.203:<br>a) Antenna permanently attached.<br>b) Unique (non-standard) antenna connector.<br>c) Professional installation. |
| For this product, the antenna is:<br>☐ Antenna permanently attached<br>☑ Unique (non-standard) antenna connector<br>☐ Professional installation<br>☐ not meet any of ways list above<br>that<br>☑ compliant<br>☐ not compliant<br>with the requirement of Section 15.203. |

# 12 DEVIATION TO TEST SPECIFICATIONS

None.

# 13 MEASUREMENT UNCERTAINTY LIST

The measurement uncertainty was estimated for test on the EUT according to CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage of K=2.
The uncertainties value is not used in determining the PASS/FAIL results.

| Test Items/Facilities | Frequency/Equipment/Unit | Uncertainty |
|---|---|---|
| Conducted Emission No.1 Shielded Room | 9kHz~150kHz | ±3.1 dB |
| | 150kHz~30MHz | ±2.6 dB |
| Conducted Emission No.3 Shielded Room | 9kHz~150kHz | ±3.1 dB |
| | 150kHz~30MHz | ±2.6 dB |
| Radiated Emission | 30MHz~200MHz, Horizontal | ±3.8 dB |
| | 30MHz~200MHz, Vertical | ±4.1 dB |
| | 200MHz~1000MHz, Horizontal | ±3.6 dB |
| | 200MHz~1000MHz, Vertical | ±5.1 dB |
| | 1GHz~6GHz | ±5.3 dB |
| | 6GHz~18GHz | ±5.3 dB |
| | 18GHz~40GHz | ±3.5 dB |
| Output Power Test | 50MHz~18GHz | 0.77 dB |
| Power Density Test | 9kHz~6GHz | 1.08 dB |
| RF Frequency Test | 9kHz~40GHz | $6*10^{-4}$ |
| Bandwidth Test | 9kHz~6GHz | $1.5*10^{-3}$ |
| RF Radiated Power Test | 30MHz~1000MHz | 3.06 dB |
| Conducted Output Power Test | 50MHz~18GHz | 0.83 dB |
| AC Voltage(<10kHz) Test | 120V~230V | 0.04 % |
| DC Power Test | 0V~30V | 0.4 % |
| Temperature | -40℃~+100℃ | 0.52 ℃ |
| Humidity | 30%~95% | 2.6 % |