
FCC Test Report

Report No: WD-RF-R-230316-D0

Product Name : Doorbell
Model Name : DR40
FCC ID : 2AZ3JDR40
Applicant : Rhombus Systems, Inc.
Received Date : Sep. 01, 2023
Tested Date : Sep. 11, 2023 ~ Oct. 16, 2023
Applicable Standard : 47 CFR FCC Part 15, Subpart E (Section 15.407)
789033 D02 General U-NII Test Procedures New Rules v02r01
ANSI C63.10 : 2013



Wendell Industrial Co., Ltd
Wendell EMC & RF Laboratory

Caution:

This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment.

Please note that the measurement uncertainty are provided for informational purpose only and are not used in determining the Pass/Fail results.


This report must not be used to claim product endorsement by TAF or any agency of the government.

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Test Report

Issued Date: October 16, 2023

Project No.: 22Q090502

| | |
|--|---|
| Product Name | Doorbell |
| Trade Name | rhombus |
| Brand Trademark |  rhombus |
| Model Name | DR40 |
| FCC ID | 2AZ3JDR40 |
| Applicant | Rhombus Systems, Inc. |
| Manufacturer | Dynacolor Inc. |
| EUT Rated Voltage | DC 12V ~ 28V 、 POE 42.5V ~ 57V |
| EUT Test Voltage | AC 120V / 60Hz |
| EUT Supports Radios Application | WLAN 802.11a/b/g 、 WLAN 802.11n (HT20/HT40) WLAN 802.11ac (VHT20/VHT40/VHT80) Bluetooth BR/EDR/LE 、 NFC 13.56 MHz |
| Applicable Standard | 47 CFR FCC Part 15, Subpart E (Section 15.407) 789033 D02 General U-NII Test Procedures New Rules v02r01 ANSI C63.10 : 2013 |
| Output Power | 5.18 ~ 5.24 GHz: 7.24 dBm 5.745 ~ 5.825 GHz: 9.31 dBm |
| Test Result | Complied |

Documented :



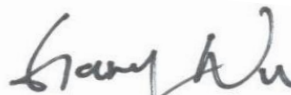
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Technical Engineer :



(Section Manager / Jack Chang)

Approved :



(Project Manager / Gary Wu)

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Document Revision History

| Report No. | Issue date | Description |
|-------------------|------------------|----------------|
| WD-RF-R-230316-D0 | October 16, 2023 | Initial report |

Summary of Test Result

| Ref. Std. Clause | Test Items | Result |
|---------------------|--------------------------------|--------|
| 15.407(a) | 26dB Bandwidth | Pass |
| 15.407(e) | 6dB Bandwidth | Pass |
| -- | 99% Occupied Bandwidth | Pass |
| 15.407(a) | Maximum Conducted Output Power | Pass |
| 15.407(a) | Power Spectral Density | Pass |
| 15.407(b) 15.209 | Unwanted Emissions | Pass |
| 15.407(g) | Frequency Stability | Pass |
| 15.207 | AC Conducted Emission | Pass |
| 15.203 15.407(a) | Antenna Requirement | Pass |

1 Generation Information

1.1 Applicant

Rhombus Systems, Inc.
1920 20th St, Sacramento, CA 95811

1.2 Manufacturer

Dynacolor Inc.
NO. 116 JOU TZ STREET, NEIHU, TAIPEI 114, TAIWAN

1.3 Description of Equipment under Test

| | |
|--|--|
| Product Name | Doorbell |
| Model No. | DR40 |
| FCC ID | 2AZ3JDR40 |
| Frequency Range | 802.11a/n/ac-20MHz: 5180-5240MHz, 5745-5825MHz 802.11n/ac-40MHz: 5190-5230MHz, 5755-5795MHz 802.11ac-80MHz: 5210MHz, 5775MHz |
| Number of Channels | 802.11a/n/ac-20MHz: 9 ; 802.11n/ac-40MHz: 4 ; 802.11ac-80MHz: 2 |
| Data Rate | 802.11a : 6M - 54 Mbps 802.11n : up to 150 Mbps 802.11ac : up to 433.3 Mbps |
| Type of Modulation | 802.11a/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM |
| Antenna Information | Refer to the table "Antenna List" |
| EUT Supports Radios Application | WLAN 802.11a/b/g WLAN 802.11n (HT20/HT40) WLAN 802.11ac (VHT20/VHT40/VHT80) Bluetooth BR/EDR/LE NFC 13.56 MHz |
| EUT Rated Voltage | DC 12V ~ 28V 、POE 42.5V ~ 57V |
| EUT Test Voltage | AC 120V / 60Hz |

Antenna List

| No. | Manufacturer | Model No. | Antenna Type | Peak Gain |
|-----|--------------|--------------------|---------------|---|
| 1 | INPAQ | RFMTA211200NNLB001 | Metal Antenna | 3.78 dBi for 5.15~5.25 GHz 3.78 dBi for 5.725~5.85 GHz |

Remark: The antenna of EUT is conforming to FCC 15.203

Channel List

| 802.11a/n/ac HT20/VHT20 | | 802.11n/ac HT40/VHT40 | | 802.11ac VHT80 | |
|-------------------------|----------------|-----------------------|----------------|----------------|----------------|
| Channel | Frequency(MHz) | Channel | Frequency(MHz) | Channel | Frequency(MHz) |
| 36 | 5180 | 38 | 5190 | 42 | 5210 |
| 40 | 5200 | 46 | 5230 | 155 | 5775 |
| 44 | 5220 | 151 | 5755 | -- | -- |
| 48 | 5240 | 159 | 5795 | -- | -- |
| 149 | 5745 | -- | -- | -- | -- |
| 153 | 5765 | -- | -- | -- | -- |
| 157 | 5785 | -- | -- | -- | -- |
| 161 | 5805 | -- | -- | -- | -- |
| 165 | 5825 | -- | -- | -- | -- |

Test Frequencies in each operating band

| Frequency range over which the device operates in each operating band (Note 1) | Number of test frequencies required | Location of test frequencies inside the operating frequency range (Note 1,2) |
|--|-------------------------------------|--|
| ≤ 1 MHz | 1 | near center |
| > 1 MHz and ≤ 10 MHz | 2 | 1 near high end, 1 near low end |
| > 10 MHz | 3 | 1 near high end, 1 near center, and 1 near low end |

Note 1: The frequency range over which the device operates in a given operating band is the difference between the highest and lowest frequencies on which the device can be tuned within that given operating band. The frequency range can be smaller than or equal to the operating band, but cannot be greater than the operating band.

Note 2: In the third column of table 1, “near” means as close as possible to or at the center / low end / high end of the frequency range over which the device operates.

Firmware / Software Version

| | | |
|----------|------------------------------------|--|
| 1 | Product Name | Doorbell |
| 2 | Model No. | DR40 |
| 3 | Test SW Version | Putty_Ver.0.63 |
| 4 | RF power setting in TEST SW | <input type="checkbox"/> RF power setting was not able to alter during testing. <input checked="" type="checkbox"/> RF power setting was able to alter during testing. (See the following table) |

Parameters of test software setting

| Type of Modulation | Channel | Frequency (MHz) | Set Value |
|--------------------|---------|-----------------|-----------|
| 802.11a | 36 | 5180 | 15 |
| | 44 | 5200 | 15 |
| | 48 | 5240 | 15 |
| | 149 | 5745 | 15 |
| | 157 | 5785 | 15 |
| | 165 | 5825 | 15 |
| 802.11ac VHT20 | 36 | 5180 | 14 |
| | 44 | 5200 | 14 |
| | 48 | 5240 | 14 |
| | 149 | 5745 | 14 |
| | 157 | 5785 | 14 |
| | 165 | 5825 | 14 |
| 802.11ac VHT40 | 38 | 5190 | 13 |
| | 46 | 5230 | 13 |
| | 151 | 5755 | 13 |
| | 159 | 5795 | 13 |
| 802.11ac VHT80 | 42 | 5210 | 11 |
| | 155 | 5775 | 12 |

1.4 Test Mode Applicability And Tested Channel Detail

1. The EUT has been pre-tested under the following test modes, and test mode A was the worst case for final test. The EUT has the following different power supply. After laboratory evaluation, the worst mode must be found by pre-test results of radiation 30M-1GHz.

| EUT Configure Mode | RE < 1G | RE ≥ 1G | ACM | ACP | Description |
|--------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-------------|
| A | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | PoE Mode |
| B | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | DC Mode |

2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.
3. The worst case was found when positioned on X axis for radiated emission. Following test modes were selected for the final test, and the final worst case is recorded in the report:

| EUT Configure Mode | RE < 1G | RE ≥ 1G | ACM | ACP | Description |
|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------|
| -- | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Transmit WIFI |

Note : RE<1G: Radiated Emission below 1GHz RE≥1G: Radiated Emission above 1GHz
 ACM: Antenna Port Conducted Measurement ACP: AC Power Line Conducted Emission

Following channel(s) was (were) selected for the final test as listed below:

Radiated Spurious Emission Measurement(Below 1GHz):

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|--------------------|---------|-------------------|----------------|-----------------|------------------|
| -- | 802.11a | 36 ~ 165 | 48, 165 | OFDM | 6 |

Radiated Spurious Emission Measurement(Above 1GHz):

| Mode | Frequency (MHz) | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|----------------|-----------------|-------------------|----------------|-----------------|------------------|
| 802.11a | 5180 ~ 5240 | 36 ~ 48 | 36, 44, 48 | OFDM | 6 |
| 802.11ac VHT20 | | 36 ~ 48 | 36, 44, 48 | OFDM | 6.5 |
| 802.11ac VHT40 | | 38 ~ 46 | 38, 46 | OFDM | 13.5 |
| 802.11ac VHT80 | | 42 | 42 | OFDM | 29.3 |
| 802.11a | 5745 ~ 5825 | 149 ~ 165 | 149, 157, 165 | OFDM | 6 |
| 802.11ac VHT20 | | 149 ~ 165 | 149, 157, 165 | OFDM | 6.5 |
| 802.11ac VHT40 | | 151 ~ 159 | 151, 159 | OFDM | 13.5 |
| 802.11ac VHT80 | | 155 | 155 | OFDM | 29.3 |

Radiated Band Edge Emission Measurement(Above 1GHz):

| Mode | Frequency (MHz) | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|----------------|-----------------|-------------------|----------------|-----------------|------------------|
| 802.11a | 5180 ~ 5240 | 36 ~ 48 | 36, 48 | OFDM | 6 |
| 802.11ac VHT20 | | 36 ~ 48 | 36, 48 | OFDM | 6.5 |
| 802.11ac VHT40 | | 38 ~ 46 | 38, 46 | OFDM | 13.5 |
| 802.11ac VHT80 | | 42 | 42 | OFDM | 29.3 |
| 802.11a | 5745 ~ 5825 | 149 ~ 165 | 149, 165 | OFDM | 6 |
| 802.11ac VHT20 | | 149 ~ 165 | 149, 165 | OFDM | 6.5 |
| 802.11ac VHT40 | | 151 ~ 159 | 151, 159 | OFDM | 13.5 |
| 802.11ac VHT80 | | 155 | 155 | OFDM | 29.3 |

Output Power, Power Spectral Density,

| Mode | Frequency (MHz) | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|----------------|-----------------|-------------------|----------------|-----------------|------------------|
| 802.11a | 5180 ~ 5240 | 36 ~ 48 | 36, 44, 48 | OFDM | 6 |
| 802.11ac VHT20 | | 36 ~ 48 | 36, 44, 48 | OFDM | 6.5 |
| 802.11ac VHT40 | | 38 ~ 46 | 38, 46 | OFDM | 13.5 |
| 802.11ac VHT80 | | 42 | 42 | OFDM | 29.3 |
| 802.11a | 5745 ~ 5825 | 149 ~ 165 | 149, 157, 165 | OFDM | 6 |
| 802.11ac VHT20 | | 149 ~ 165 | 149, 157, 165 | OFDM | 6.5 |
| 802.11ac VHT40 | | 151 ~ 159 | 151, 159 | OFDM | 13.5 |
| 802.11ac VHT80 | | 155 | 155 | OFDM | 29.3 |

6dB Bandwidth:

| Mode | Frequency (MHz) | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|----------------|-----------------|-------------------|----------------|-----------------|------------------|
| 802.11a | 5745 ~ 5825 | 149 ~ 165 | 149, 157, 165 | OFDM | 6 |
| 802.11ac VHT20 | | 149 ~ 165 | 149, 157, 165 | OFDM | 6.5 |
| 802.11ac VHT40 | | 151 ~ 159 | 151, 159 | OFDM | 13.5 |
| 802.11ac VHT80 | | 155 | 155 | OFDM | 29.3 |

26dB Bandwidth, 99% Occupied Bandwidth:

| Mode | Frequency (MHz) | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|----------------|-----------------|-------------------|----------------|-----------------|------------------|
| 802.11a | 5180 ~ 5240 | 36 ~ 48 | 36, 44, 48 | OFDM | 6 |
| 802.11ac VHT20 | | 36 ~ 48 | 36, 44, 48 | OFDM | 6.5 |
| 802.11ac VHT40 | | 38 ~ 46 | 38, 46 | OFDM | 13.5 |
| 802.11ac VHT80 | | 42 | 42 | OFDM | 29.3 |

Frequency Stability:

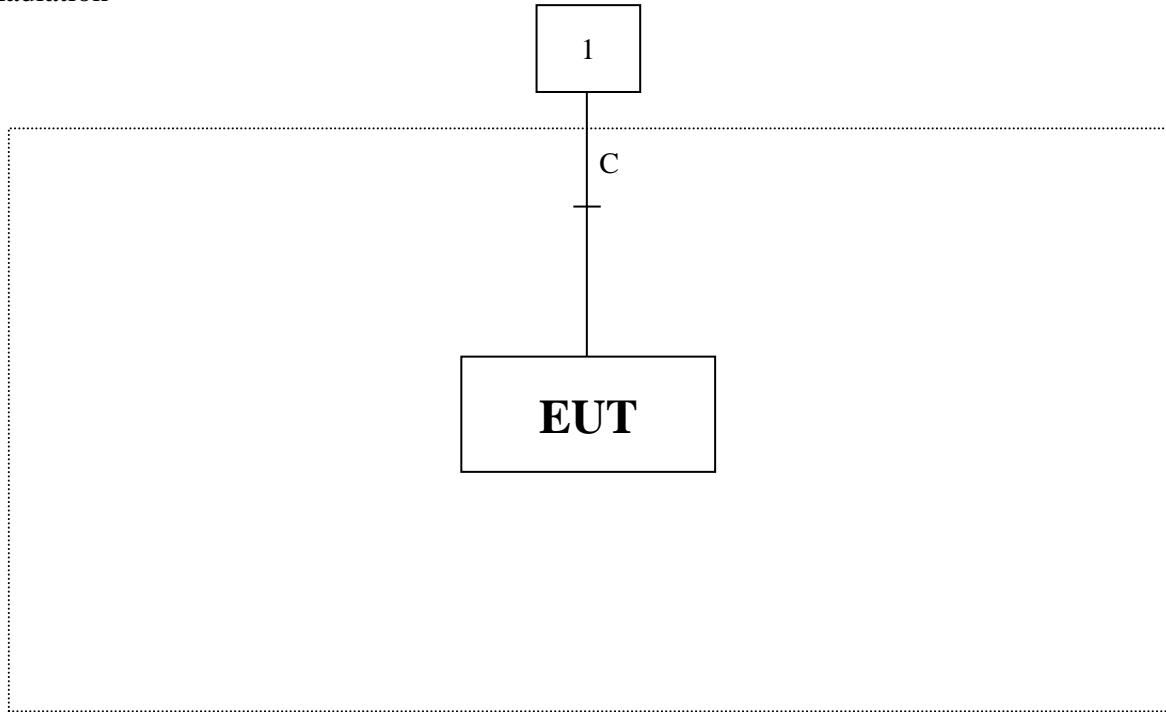
| Mode | Frequency (MHz) | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|---------|-----------------|-------------------|----------------|-----------------|------------------|
| 802.11a | 5180 ~ 5240 | 36 ~ 48 | 44 | OFDM | 6 |
| 802.11a | 5745 ~ 5825 | 149 ~ 165 | 157 | OFDM | 6 |

AC Conducted Emission:

| EUT Configure Mode | Mode | Available Channel | Tested Channel | Modulation Type | Data Rate (Mbps) |
|--------------------|---------|-------------------|----------------|-----------------|------------------|
| -- | 802.11a | 36 ~ 165 | 44 | OFDM | 6 |

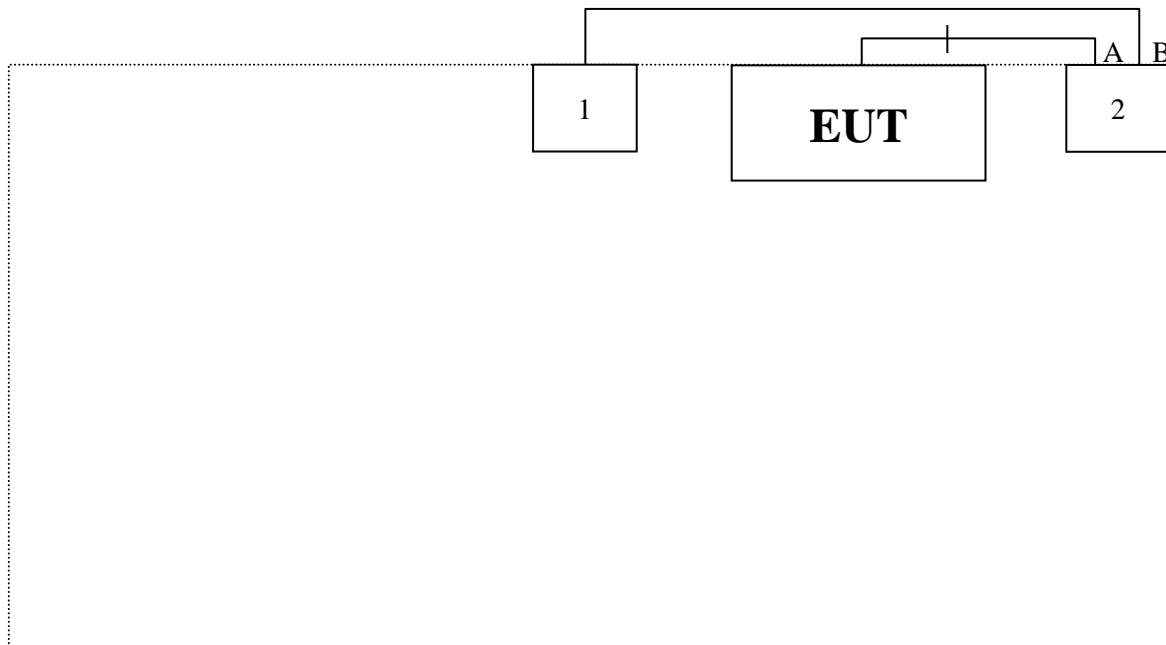
1.5 Configuration of Tested System

Radiation



Test Table

AC Conduction



Test Table

1.6 EUT Exercise Software

1. Setup the EUT as shown in Section 1.5
2. Execute software “Putty_Ver.0.63”.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous transmit.
5. Verify that the EUT works properly.

1.7 Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

| No. | Product | Manufacturer | Model No. | Serial No. | Power Cord |
|-----|-------------|--------------|-----------|------------------------|------------|
| 1 | Notebook PC | acer | N16Q1 | NXVF4TA023742254147600 | N/A |
| 2 | POE | CERIO | POE-S48V2 | N/A | N/A |

| No. | Signal Cable Type | Signal cable Description |
|-----|-------------------|------------------------------|
| A | LAN Cable | Non-shielded, Non-Core, 1.5m |
| B | LAN Cable | Non-shielded, Non-Core, 1.6m |

1.8 Test Facility

| Items | Required (IEC 60068-1) |
|----------------------------|------------------------|
| Temperature (°C) | 15-35 |
| Humidity (% RH) | 25-75 |
| Barometric pressure (mbar) | 860-1060 |

Description: Accredited by TAF
Accredited Number: 2965

Issued by: Wendell Industrial Co., Ltd

Company Address: 6F/6F-1, No.188, Baoqiao Rd., Xindian Dist.,
New Taipei City 23145, Taiwan R.O.C

Test Lab: Wendell EMC & RF Laboratory

Lab Address: 5F-1, No.188, Baoqiao Rd., Xindian Dist.,
New Taipei City 23145, Taiwan R.O.C

Test Location: No. 119, Wugong 3rd Rd., Wugu Dist.,
New Taipei City 248, Taiwan (R.O.C.)

Designation Number: TW0025

Test Firm Registration Number: 665221

1.9 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence (level based on a coverage factor K=2)

| Measurement Project | Condition | Expanded Uncertainty |
|-----------------------|---------------------|----------------------|
| AC Conducted Emission | 0.150 ~ 30 MHz | ± 2.64 dB |
| Radiated Emission | 0.009 ~ 30 MHz | ± 3.7 dB |
| | 30 ~ 1000 MHz | ± 3.9 dB |
| | 1000 ~ 18000 MHz | ± 4.5 dB |
| | 18000 ~ 40000 MHz | ± 4.3 dB |
| RF Power, Conducted | Conducted Measuring | ± 0.75 dB |
| Occupied Bandwidth | Conducted Measuring | ± 2.4 % |
| Power Density | Conducted Measuring | ± 1.2 dB |
| Duty Cycle | Conducted Measuring | ± 0.9 % |
| Frequency Stability | Conducted Measuring | ± 0.062 ppm |
| DC Power Supply | -- | ± 2.0 % |
| Temperature | -- | ± 0.55 °C |
| Humidity | -- | ± 3.1 % |

Note: Please note that the measurement uncertainty are provided for informational purpose only and are not used in determining the Pass/Fail results.

1.10 List of Test Equipment

For Conducted measurements / W08-Conducted Measurement

| Equipment | Manufacturer | Model No. | Serial No. | Cal. Date | Due Date |
|--|--------------|------------|------------|------------|------------|
| ✓ Spectrum analyzer | Keysight | N9010A | SG50420005 | 2023/08/08 | 2024/08/07 |
| ✓ Wideband Peak Power Meter | Anritsu | ML2495A | 1733007 | 2023/09/07 | 2024/09/06 |
| ✓ Pulse Power Sensor + Precision Adaptor | Anritsu | MA2411B | 1726022 | 2023/09/07 | 2024/09/06 |
| Temperature Chamber | TAICHY | MHK-225LK | 1061121 | 2023/04/24 | 2024/04/23 |
| Wireless Connectivity Tester | R&S | CMW270 | 101307 | 2023/05/29 | 2024/05/28 |
| ✓ Attenuator | MVE | MVE2211-10 | CT-9-056 | 2022/08/10 | 2024/08/09 |
| Attenuator | MVE | MVE2211-20 | CT-9-057 | 2022/08/10 | 2024/08/09 |
| Attenuator | MVE | MVE2211-30 | CT-9-058 | 2022/08/10 | 2024/08/09 |
| Power Divider | MVE | MVE8546 | 170826003 | 2022/08/10 | 2024/08/09 |
| Power Splitter | MVE | MVE8547 | 170302047 | 2022/08/11 | 2024/08/10 |
| DC Power Supply | GW INSTEK | GPC-3060D | GER817636 | 2023/08/11 | 2024/08/10 |

Remark:

1. The equipments are calibrated every one year.
2. The Attenuator/ Divider/ Splitter are calibrated every two year.
3. The test instruments marked with “✓” are used to measure the final test results.

For AC Conduction measurements / W08-CE

| | Equipment | Manufacturer | Model No. | Serial No. | Cal. Date | Due Date |
|---|------------------------------|-------------------------------|------------------------------|------------|------------|------------|
| ✓ | EMI Test Receiver | R&S | ESR3 | 102309 | 2023/06/19 | 2024/06/18 |
| ✓ | 2-Line V-Network LISN | R&S | ENV216 | 101185 | 2023/06/16 | 2024/06/15 |
| ✓ | LISN | SCHWARZBECK | NSLK 8127RC | 05028 | 2023/06/16 | 2024/06/15 |
| ✓ | Transient Limiter | EM Electronics Corporation | EM-7600 | 857 | 2023/06/17 | 2024/06/16 |
| ✓ | 50ohm Cable | EMCI | EMCCFD300-BM-BM- 5000 | 170612 | 2023/06/17 | 2024/06/16 |
| ✓ | 50 ohm terminal impedance | HUBER+SUHNER | 50 ohm terminal impedance | CT-1-109-1 | 2023/06/16 | 2024/06/15 |

Remark:

1. All equipments are calibrated every one year.
2. The test instruments marked with “✓” are used to measure the final test results.
3. Test Software version: FARAD EZ-EMC Ver.EMC-CON 3A1

For Radiated measurements / W08-996-2

| | Equipment | Manufacturer | Model No. | Serial No. | Cal. Date | Due Date |
|---|----------------------------|--------------|-------------------|-----------------------|------------|------------|
| ✓ | EMI Receiver | Keysight | N9038A | MY51210173 | 2023/08/18 | 2024/08/17 |
| ✓ | Spectrum Analyzer | Keysight | N9010A | MY52220228 | 2023/08/18 | 2024/08/17 |
| ✓ | Active Loop Antenna | Schwarzbeck | FMZB 1513-60B | 00033 | 2023/05/08 | 2024/05/07 |
| ✓ | TRILOG super broad Antenna | Schwarzbeck | VULB 9168 | VULB 9168-700 & 20E03 | 2023/07/31 | 2024/07/30 |
| ✓ | Horn Antenna | Schwarzbeck | BBHA 9120D | 01767 | 2023/08/17 | 2024/08/16 |
| ✓ | Horn Antenna | Schwarzbeck | BBHA 9170 | 703 | 2023/08/21 | 2024/08/20 |
| ✓ | Pre-Amplifier | EM | EMC330 | 060774 | 2023/08/22 | 2024/08/21 |
| ✓ | Pre-Amplifier | EMEC | EM01G18G | 060648 | 2023/08/22 | 2024/08/21 |
| ✓ | Pre-Amplifier | JPT | JPA0118-55-303K | 1910001800055003 | 2023/08/22 | 2024/08/21 |
| ✓ | Pre-Amplifier | EMCI | EMC184045SE | 980515 | 2023/08/22 | 2024/08/21 |
| ✓ | Cable | EMEC | EM-CB400 | 105060103 | 2023/08/22 | 2024/08/21 |
| ✓ | Cable | EMEC | EM-CB400 | 105060102 | 2023/08/22 | 2024/08/21 |
| ✓ | Cable | EMEC | EM-CB400 | 105060101 | 2023/08/22 | 2024/08/21 |
| ✓ | RF Cable | HUBER+SUHNER | SF102 | MY2752/2 | 2023/08/22 | 2024/08/21 |
| ✓ | RF Cable | MVE | 280280.LL266.1200 | B60028C | 2023/08/22 | 2024/08/21 |
| ✓ | RF Cable | EMCI | EMC102-KM-KM-600 | 190646 | 2023/08/22 | 2024/08/21 |
| ✓ | RF Cable | MVE | 140140.LL404.700 | B90014C | 2023/08/22 | 2024/08/21 |
| ✓ | RF Cable | MVE | 140140.LL404.300 | B90006C | 2023/08/22 | 2024/08/21 |
| | RF Filter | EMEC | BRF-2400-2500 | 002 | 2022/08/17 | 2024/08/16 |
| ✓ | RF Filter | EMEC | BRF-5150-5350 | 104 | 2022/08/17 | 2024/08/16 |
| ✓ | RF Filter | EMEC | BRF-5470-5725 | 092 | 2022/08/17 | 2024/08/16 |
| ✓ | RF Filter | EMEC | BRF-5725-5875 | 091 | 2022/08/17 | 2024/08/16 |
| | RF Filter | EMEC | HPF-2800 | 002 | 2022/08/17 | 2024/08/16 |
| ✓ | RF Filter | EMEC | HPF-5850 | 059 | 2022/08/17 | 2024/08/16 |
| | SMA Notch Filter | MVE | MFN-902.928.S1 | 190604001 | 2022/08/17 | 2024/08/16 |

Remark:

1. The equipments are calibrated every one year.
2. The Filter calibrated every two year.
3. The test instruments marked with “✓” are used to measure the final test results.
4. Test Software version: FARAD EZ-EMC Ver.WD-03A1-1

2 Test Result

2.1 Antenna Requirement

2.1.1 Applicable Standard

For the band 5.15-5.25 GHz

- (1) For an outdoor access point operating:

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

- (2) For an indoor access point operating:

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

- (3) For fixed point-to-point access points operating:

For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

- (4) For client devices:

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

2.1.2 Antenna Connected Construction

Non-standard antenna connector is used.

2.1.3 Test Result

| No. | Manufacturer | Model No. | Antenna Type | Peak Gain |
|-----|--------------|--------------------|---------------|---|
| 1 | INPAQ | RFMTA211200NNLB001 | Metal Antenna | 3.78 dBi for 5.15~5.25GHz 3.78 dBi for 5.725~5.85GHz |

Description of the operating transmit modes :

- * 802.11a : Only one Antenna mode, this port is Ant-1
- * 802.11ac_VHT20 : Only one Antenna mode, this port is Ant-1
- * 802.11ac_VHT40 : Only one Antenna mode, this port is Ant-1
- * 802.11ac_VHT80 : Only one Antenna mode, this port is Ant-1

Directional gain calculation :

- * B1_802.11a : Gain = 3.78 dBi \leq 6dBi
- * B1_802.11ac_VHT20 : Gain = 3.78 dBi \leq 6dBi
- * B1_802.11ac_VHT40 : Gain = 3.78 dBi \leq 6dBi
- * B1_802.11ac_VHT80 : Gain = 3.78 dBi \leq 6dBi
- * B3_802.11a : Gain = 3.78 dBi \leq 6dBi
- * B3_802.11ac_VHT20 : Gain = 3.78 dBi \leq 6dBi
- * B3_802.11ac_VHT40 : Gain = 3.78 dBi \leq 6dBi
- * B3_802.11ac_VHT80 : Gain = 3.78 dBi \leq 6dBi

2.2 Output Power Measurement and Transmit Power Control

2.2.1 Limit

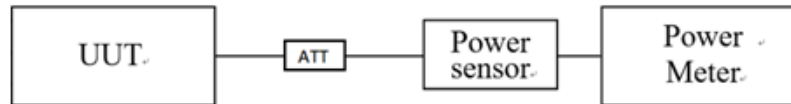
1. For frequency Band 5150~5250MHz:
 - (1) Outdoor access point : 1W (30 dBm)
 - (2) Indoor access point : 1W (30 dBm)
 - (3) Fixed point-to-point access point : 1W (30 dBm)
 - (4) Client device : 250mW (24 dBm)
 - (5) If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

2. For frequency Band 5250~5350MHz and 5470~5725MHz:
 - (1) 250mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth (MHz), whichever is lesser.
 - (2) If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3. For frequency Band 5725~5850MHz:
 - (1) The maximum conducted output power over the frequency band of operation shall not exceed 1 W(30 dBm).
 - (2) If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

2.2.2 Test Setup



2.2.3 Test Procedure

1. Enable the EUT transmit continuously.
2. Let EUT be connected to the power meter, and record the max. reading.
3. Measurement using a gated RF average power meter, since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

2.2.4 Test Result

| Mode | Frequency (MHz) | Average power (dBm) | | | Limit (dBm) | Result |
|-------------------|-----------------|---------------------|---------|-------|-------------|--------|
| | | Chain A | Chain B | Total | | |
| 802.11a | 5180 | 7.09 | -- | -- | ≤ 24 | Pass |
| | 5200 | 7.15 | -- | -- | ≤ 24 | Pass |
| | 5240 | 7.24 | -- | -- | ≤ 24 | Pass |
| | 5745 | 9.10 | -- | -- | ≤ 30 | Pass |
| | 5785 | 9.26 | -- | -- | ≤ 30 | Pass |
| | 5825 | 9.31 | -- | -- | ≤ 30 | Pass |
| 802.11ac VHT20 | 5180 | 5.64 | -- | -- | ≤ 24 | Pass |
| | 5200 | 5.84 | -- | -- | ≤ 24 | Pass |
| | 5240 | 5.71 | -- | -- | ≤ 24 | Pass |
| | 5745 | 7.65 | -- | -- | ≤ 30 | Pass |
| | 5785 | 7.84 | -- | -- | ≤ 30 | Pass |
| | 5825 | 7.99 | -- | -- | ≤ 30 | Pass |
| 802.11ac VHT40 | 5190 | 5.62 | -- | -- | ≤ 24 | Pass |
| | 5230 | 5.35 | -- | -- | ≤ 24 | Pass |
| | 5755 | 7.25 | -- | -- | ≤ 30 | Pass |
| | 5795 | 7.63 | -- | -- | ≤ 30 | Pass |
| 802.11ac VHT80 | 5210 | 3.31 | -- | -- | ≤ 24 | Pass |
| | 5775 | 6.21 | -- | -- | ≤ 30 | Pass |

Remark:

1. Average Power = Reading value on power meter + cable loss
2. $10 \log(X/mW) = \text{dBm}$, X=1 watt (Limit)
1 watt = 30 dBm
3. Section E) method 1) of power measurement of KDB 662911 is used for calculating total power.

2.2.5 Transmit Power Control

EUT doesn't support TPC function.

2.3 26dB Bandwidth, 6dB Bandwidth and 99% Occupied Bandwidth Measurement

2.3.1 Limit

Within 5725~5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

2.3.2 Test Setup



2.3.3 Test Procedure

1. The following procedure shall be used for measuring 6dB bandwidth:
 - (1) Enable the EUT transmit continuously.
 - (2) Set RBW = 100 kHz, VBW \geq 3 RBW, Sweep = auto couple.
 - (3) Detector = Peak, Trace mode = max hold.
 - (4) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
2. The following procedure shall be used for measuring 26 dB bandwidth:
 - (1) Set RBW = approximately 1% of the emission bandwidth.
 - (2) Set the VBW > RBW, Detector = Peak, Trace mode = max hold
 - (3) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
3. The following procedure shall be used for measuring 99% power bandwidth:
 - (1) Set center frequency to the nominal EUT channel center frequency.
 - (2) Set span = 1.5 times to 5.0 times the OBW.
 - (3) Set RBW = 1% to 5% of the OBW.
 - (4) Set the VBW \geq 3 RBW.
 - (5) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
 - (6) Use the 99% power bandwidth function of the instrument.

- (7) If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

2.3.4 Test Result

2.2.4.1 6dB Bandwidth

802.11a

| Frequency (MHz) | 6dB BW (MHz) | | Limit (kHz) | Result |
|-----------------|--------------|---------|-------------|--------|
| | Chain A | Chain B | | |
| 5745 | 16.33 | -- | > 500 | Pass |
| 5785 | 16.32 | -- | > 500 | Pass |
| 5825 | 16.36 | -- | > 500 | Pass |

802.11ac VHT20

| Frequency (MHz) | 6dB BW (MHz) | | Limit (kHz) | Result |
|-----------------|--------------|---------|-------------|--------|
| | Chain A | Chain B | | |
| 5745 | 17.07 | -- | > 500 | Pass |
| 5785 | 17.56 | -- | > 500 | Pass |
| 5825 | 17.56 | -- | > 500 | Pass |

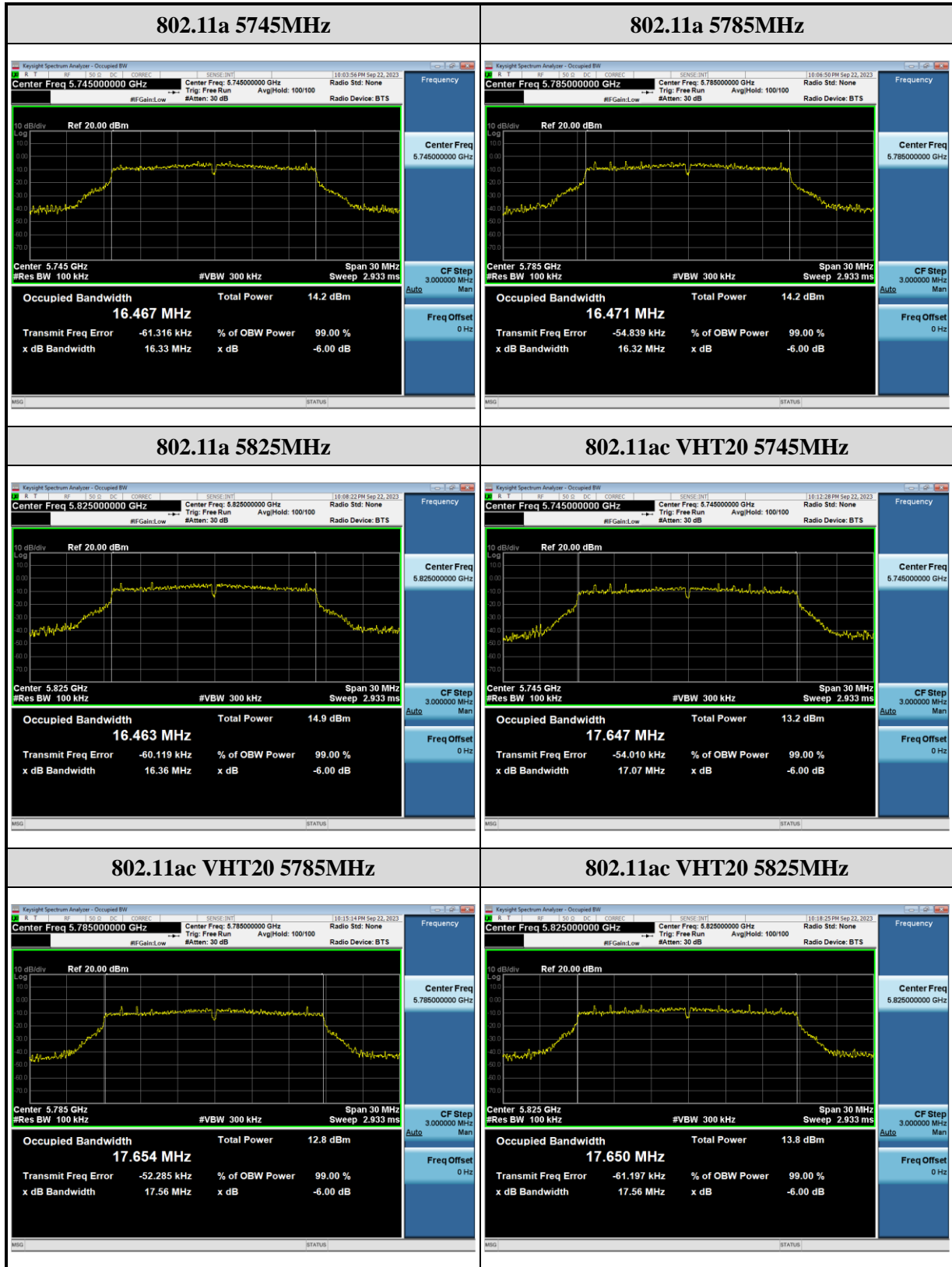
802.11ac VHT40

| Frequency (MHz) | 6dB BW (MHz) | | Limit (kHz) | Result |
|-----------------|--------------|---------|-------------|--------|
| | Chain A | Chain B | | |
| 5755 | 35.81 | -- | > 500 | Pass |
| 5795 | 35.46 | -- | > 500 | Pass |

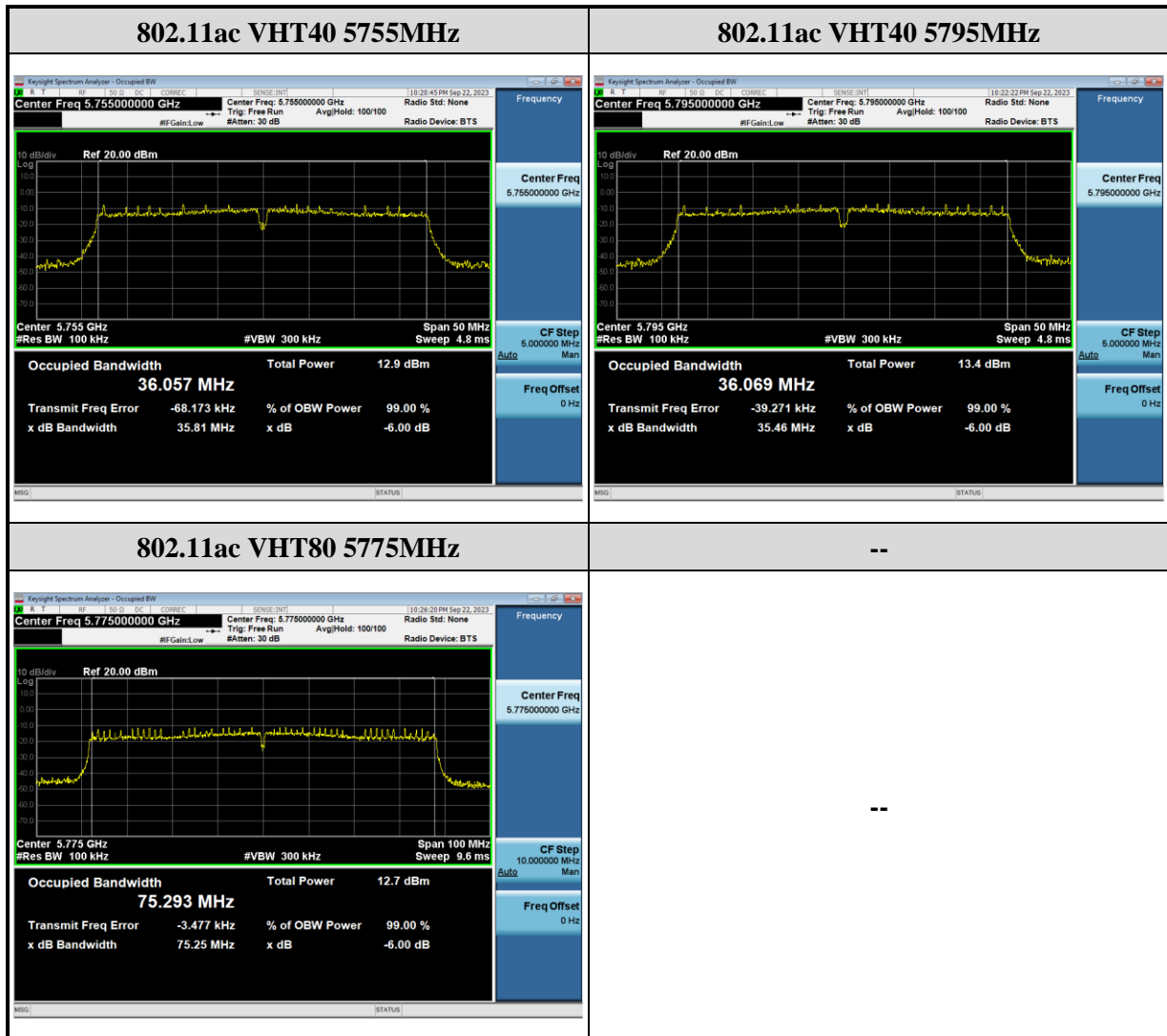
802.11ac VHT80

| Frequency (MHz) | 6dB BW (MHz) | | limit (kHz) | Result |
|-----------------|--------------|---------|-------------|--------|
| | Chain A | Chain B | | |
| 5775 | 75.25 | -- | > 500 | Pass |

6dB spectrum plot of Chain A value:



6dB spectrum plot of Chain A value:



2.2.4.1 26dB & 99% Bandwidth
802.11a

| Frequency (MHz) | 26dB BW (MHz) | | 99% OBW (MHz) | | Limit (kHz) | Result |
|--------------------|---------------|---------|---------------|---------|----------------|--------|
| | Chain A | Chain B | Chain A | Chain B | | |
| 5180 | 21.320 | -- | 17.066 | -- | -- | -- |
| 5200 | 21.480 | -- | 17.045 | -- | -- | -- |
| 5240 | 21.240 | -- | 16.898 | -- | -- | -- |

802.11ac VHT20

| Frequency (MHz) | 26dB BW (MHz) | | 99% OBW (MHz) | | Limit (kHz) | Result |
|--------------------|---------------|---------|---------------|---------|----------------|--------|
| | Chain A | Chain B | Chain A | Chain B | | |
| 5180 | 21.670 | -- | 18.002 | -- | -- | -- |
| 5200 | 21.960 | -- | 18.027 | -- | -- | -- |
| 5240 | 21.800 | -- | 17.969 | -- | -- | -- |

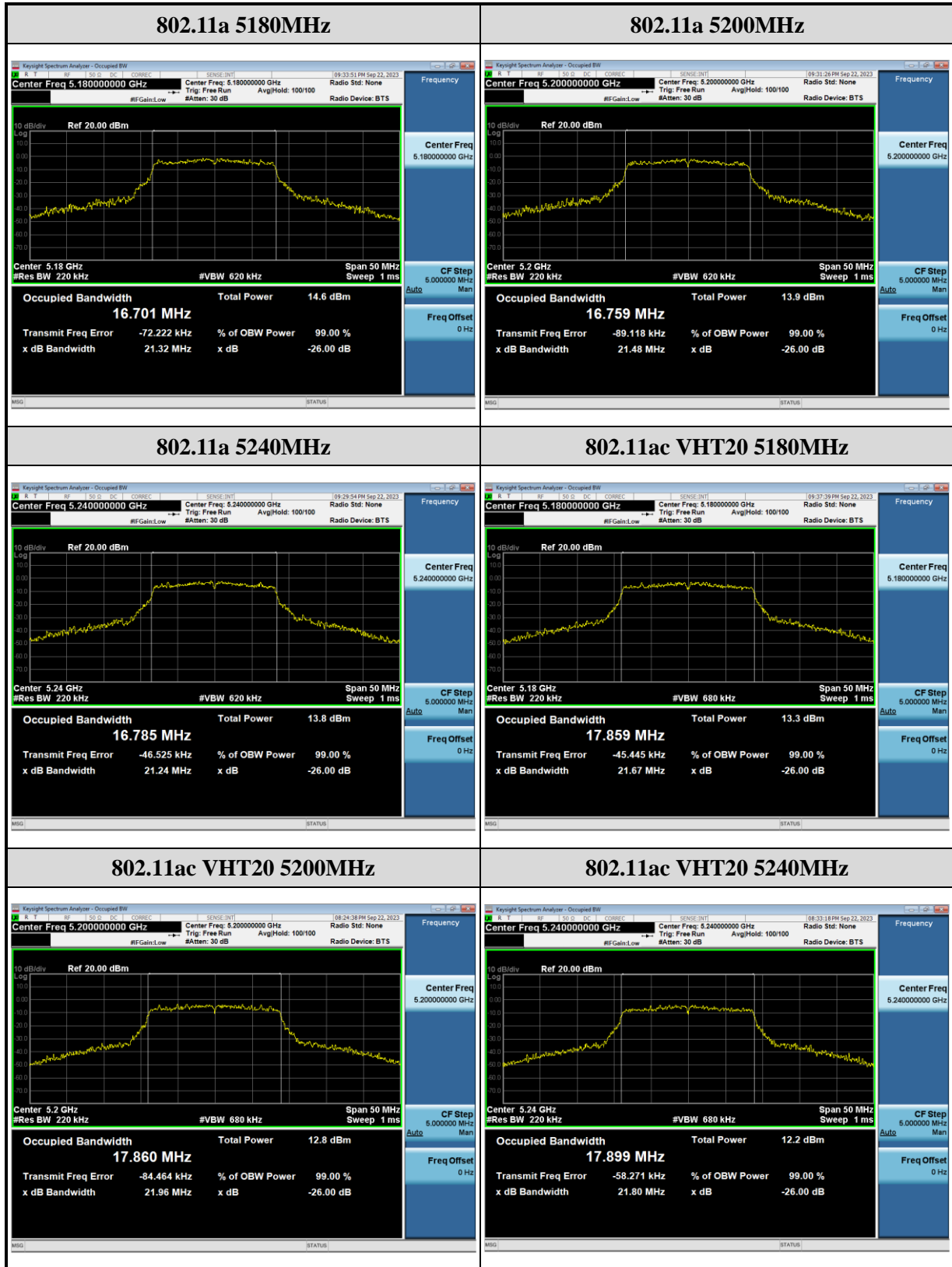
802.11ac VHT40

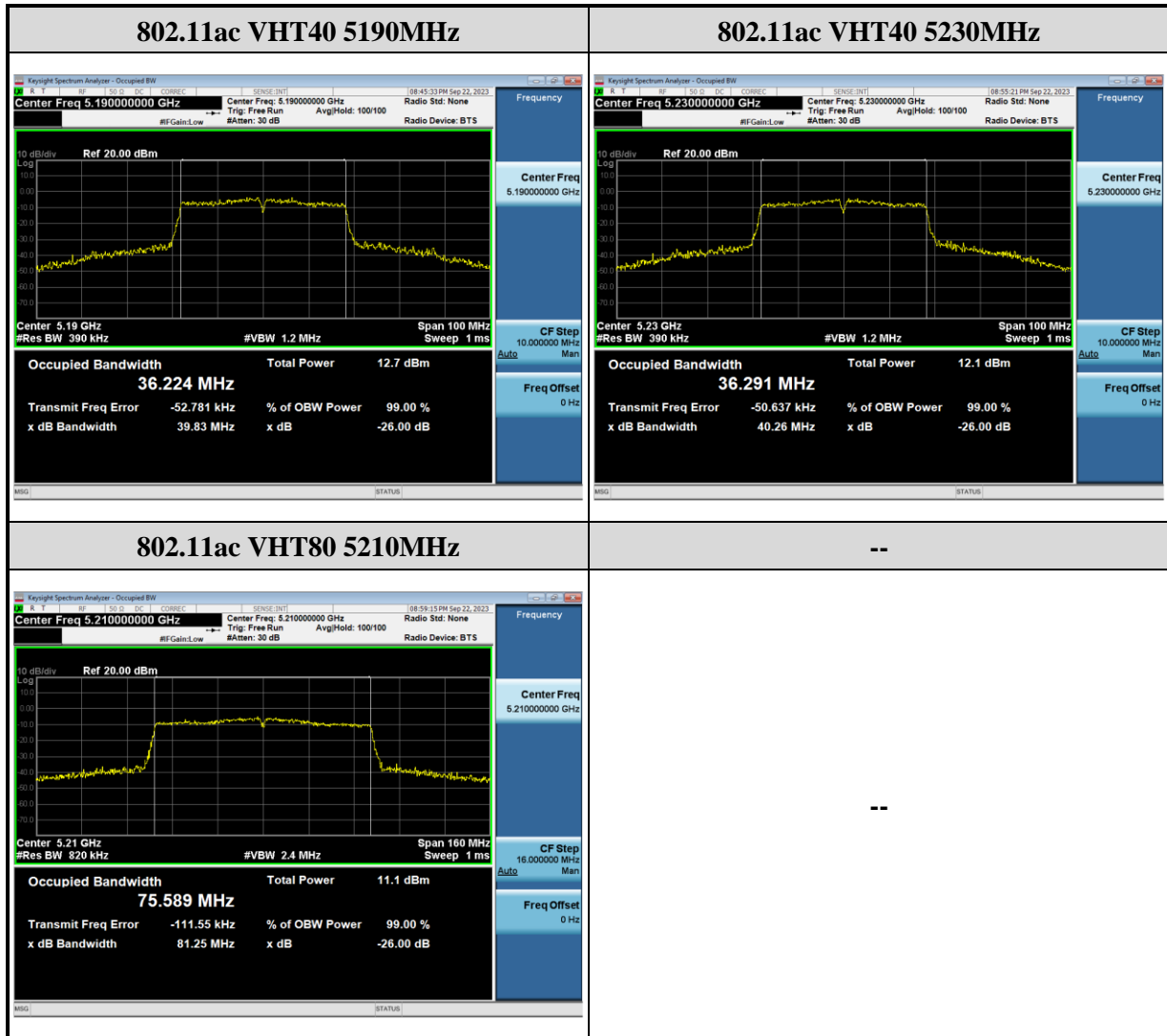
| Frequency (MHz) | 26dB BW (MHz) | | 99% OBW (MHz) | | Limit (kHz) | Result |
|--------------------|---------------|---------|---------------|---------|----------------|--------|
| | Chain A | Chain B | Chain A | Chain B | | |
| 5190 | 39.830 | -- | 36.293 | -- | -- | -- |
| 5230 | 40.260 | -- | 36.323 | -- | -- | -- |

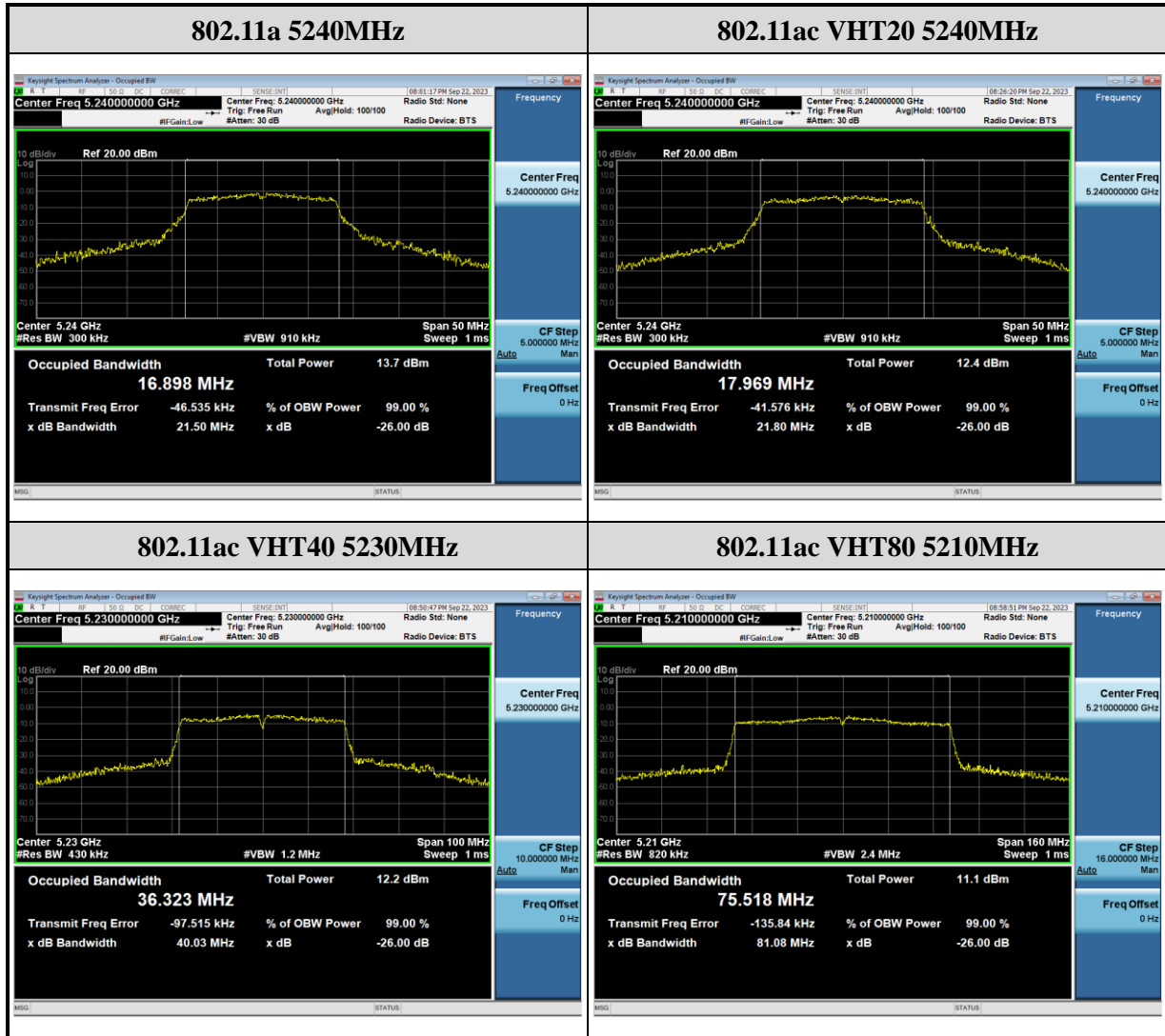
802.11ac VHT80

| Frequency (MHz) | 26dB BW (MHz) | | 99% OBW (MHz) | | limit (kHz) | Result |
|--------------------|---------------|---------|---------------|---------|----------------|--------|
| | Chain A | Chain B | Chain A | Chain B | | |
| 5210 | 81.250 | -- | 75.518 | -- | -- | -- |

26dB Occupied Bandwidth spectrum plot of Chain A value:





99% Occupied Bandwidth spectrum plot of Chain A value :


2.4 Power Spectral Density Measurement

2.4.1 Limit

1. For frequency Band 5150~5250MHz:
 - (1) Outdoor access point : 17 dBm / MHz
 - (2) Indoor access point : 17 dBm / MHz
 - (3) Fixed point-to-point access point : 17 dBm / MHz
 - (4) Client device : 11 dBm / MHz
2. For frequency Band 5250~5350MHz:
11 dBm / MHz
3. For frequency Band 5470~5725MHz:
11 dBm / MHz
4. For frequency Band 5725~5850MHz:
30 dBm / 500kHz
5. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

2.4.2 Test Setup



2.4.3 Test Procedure

1. For frequency band 5150~5250, 5250~5350, 5470~5725MHz

Method SA-2

- (1) Measure the duty cycle D of the transmitter output signal.
- (2) Set span to encompass the entire 26 dB EBW or 99% OBW of the signal
- (3) Spectrum analyzer set:
 - a) RBW = 1 MHz
 - b) VBW = 3 MHz
 - c) Sweep time = auto
 - d) Detector = RMS
 - e) Number of points in sweep $\geq [2 \text{ span} / \text{RBW}]$.
(This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
 - f) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.

2. For frequency band 5725~5850 MHz

Method SA-2

- (1) Measure the duty cycle D of the transmitter output signal.
- (2) Set span to encompass the entire 26 dB EBW or 99% OBW of the signal
- (3) Spectrum analyzer set:
 - a) RBW = 100 kHz
 - b) VBW = 300 kHz
 - c) Sweep time = auto
 - d) Detector = RMS
 - e) Number of points in sweep $\geq [2 \text{ span} / \text{RBW}]$.
(This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
 - f) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.

2.4.4 Test Result

For 5150 MHz ~ 5250 MHz

802.11a

| Frequency (MHz) | PSD (dBm/MHz) | | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Result |
|-----------------|---------------|---------|---------------------|-----------------|--------|
| | Chain A | Chain B | | | |
| 5180 | -1.69 | -- | -- | < 11 | Pass |
| 5200 | -2.12 | -- | -- | < 11 | Pass |
| 5240 | -2.48 | -- | -- | < 11 | Pass |

Remark: PSD = Reading value on a spectrum analyzer + cable loss + duty factor

802.11ac VHT20

| Frequency (MHz) | PSD (dBm/MHz) | | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Result |
|-----------------|---------------|---------|---------------------|-----------------|--------|
| | Chain A | Chain B | | | |
| 5180 | -3.60 | -- | -- | < 11 | Pass |
| 5200 | -4.12 | -- | -- | < 11 | Pass |
| 5240 | -4.15 | -- | -- | < 11 | Pass |

Remark: PSD = Reading value on a spectrum analyzer + cable loss + duty factor

802.11ac VHT40

| Frequency (MHz) | PSD (dBm/MHz) | | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Result |
|-----------------|---------------|---------|---------------------|-----------------|--------|
| | Chain A | Chain B | | | |
| 5190 | -6.89 | -- | -- | < 11 | Pass |
| 5230 | -7.29 | -- | -- | < 11 | Pass |

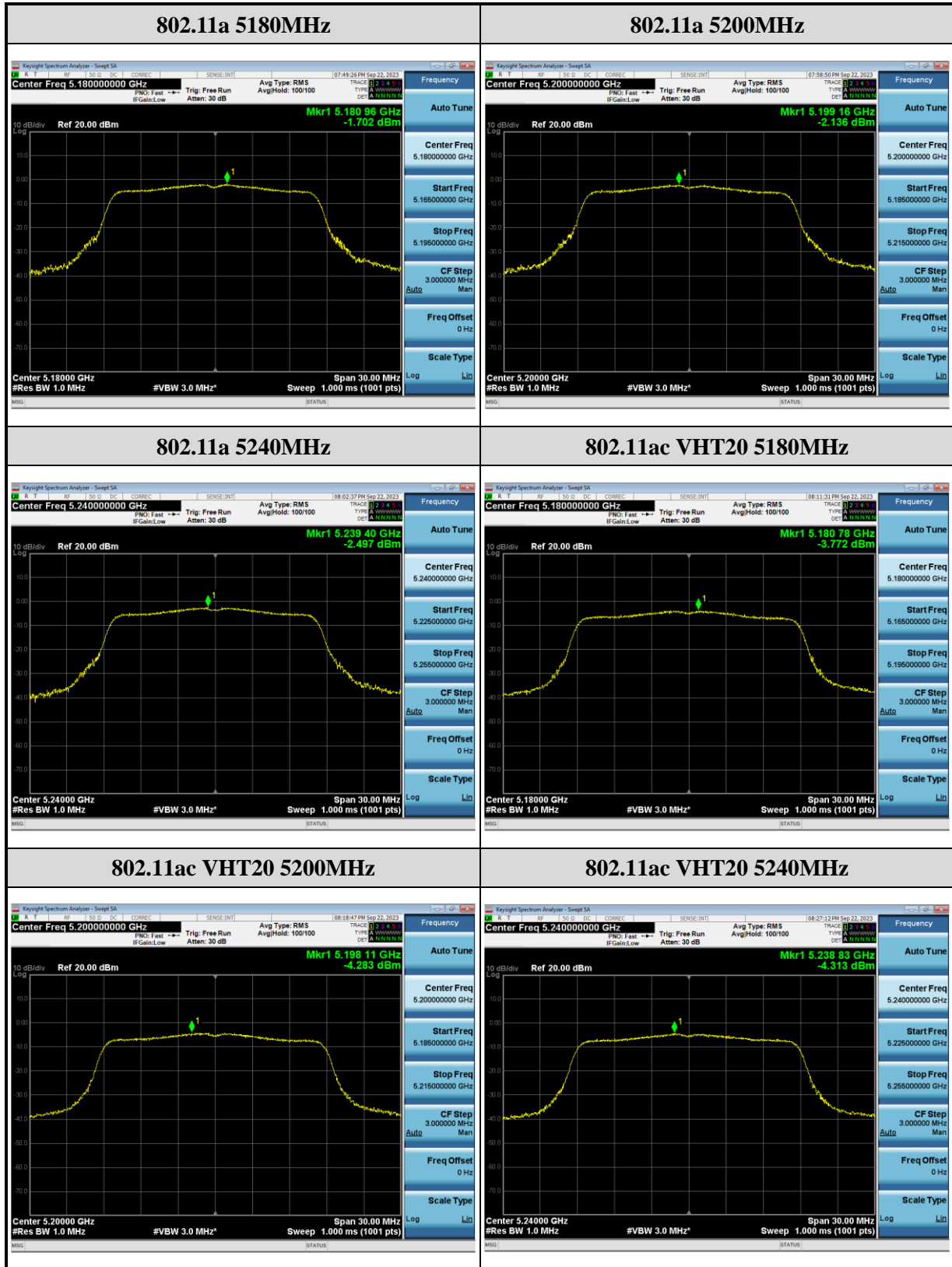
Remark: PSD = Reading value on a spectrum analyzer + cable loss + duty factor

802.11ac VHT80

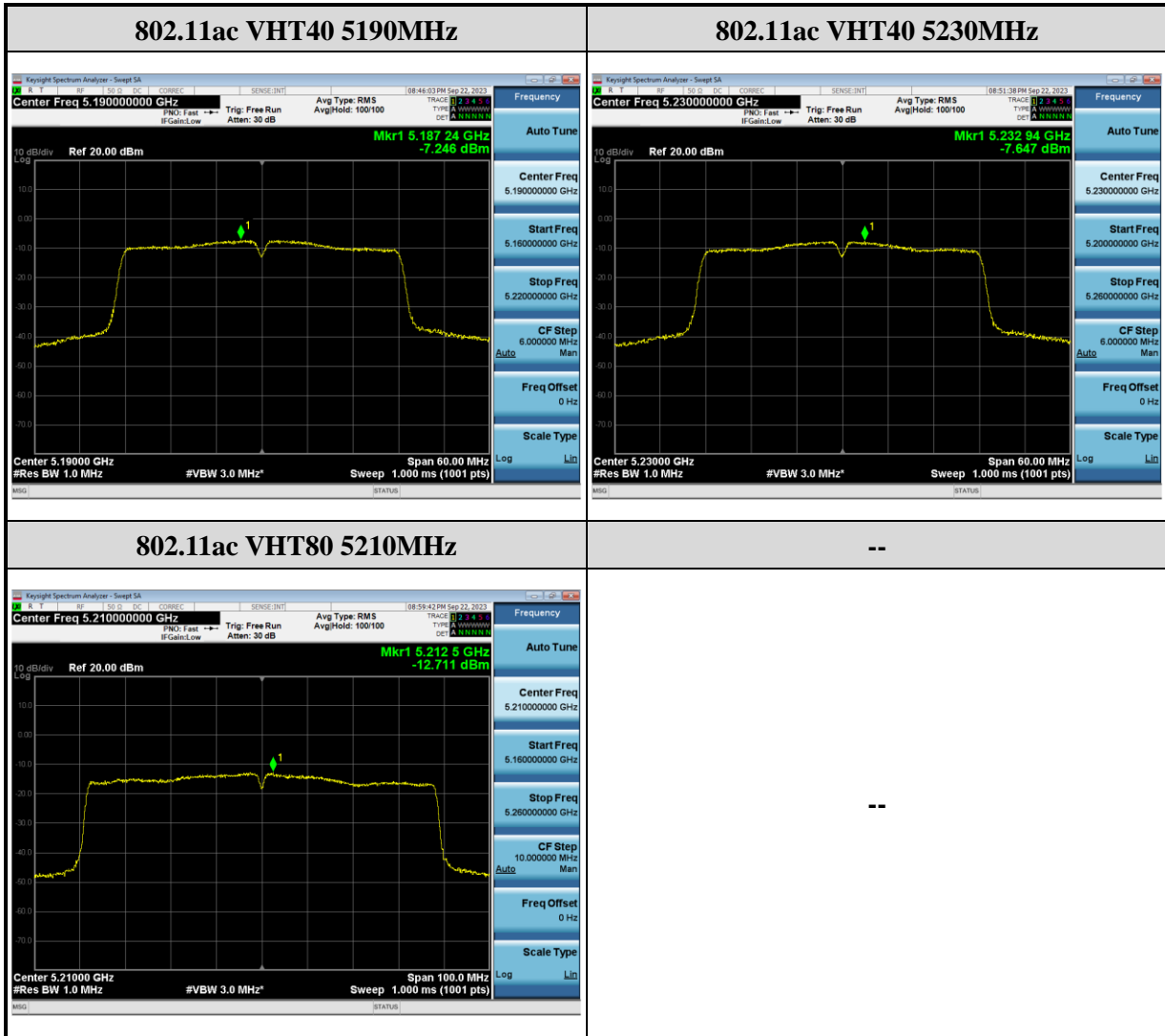
| Frequency (MHz) | PSD (dBm/MHz) | | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Result |
|-----------------|---------------|---------|---------------------|-----------------|--------|
| | Chain A | Chain B | | | |
| 5210 | -11.95 | -- | -- | < 11 | Pass |

Remark: PSD = Reading value on a spectrum analyzer + cable loss + duty factor

Power Spectral Density spectrum plot of Chain A value:



Power Spectral Density spectrum plot of Chain A value:



For 5725 MHz ~ 5850 MHz

802.11a

| Frequency (MHz) | PSD (dBm/500kHz) | | Total PSD (dBm/500kHz) | Limit (dBm/500kHz) | Result |
|-----------------|------------------|---------|------------------------|--------------------|--------|
| | Chain A | Chain B | | | |
| 5745 | -4.35 | -- | -- | < 30 | Pass |
| 5785 | -4.32 | -- | -- | < 30 | Pass |
| 5825 | -3.45 | -- | -- | < 30 | Pass |

Remark:

1. Measured value = Reading value on a spectrum analyzer + cable loss + duty factor
2. $\text{PSD(dBm/500kHz)} = \text{Measured value} + 10\log(500\text{kHz}/100\text{kHz})$

802.11ac VHT20

| Frequency (MHz) | PSD (dBm/500kHz) | | Total PSD (dBm/500kHz) | Limit (dBm/500kHz) | Result |
|-----------------|------------------|---------|------------------------|--------------------|--------|
| | Chain A | Chain B | | | |
| 5745 | -6.00 | -- | -- | < 30 | Pass |
| 5785 | -5.89 | -- | -- | < 30 | Pass |
| 5825 | -5.12 | -- | -- | < 30 | Pass |

Remark:

1. Measured value = Reading value on a spectrum analyzer + cable loss + duty factor
2. $\text{PSD(dBm/500kHz)} = \text{Measured value} + 10\log(500\text{kHz}/100\text{kHz})$

802.11ac VHT40

| Frequency (MHz) | PSD (dBm/500kHz) | | Total PSD (dBm/500kHz) | Limit (dBm/500kHz) | Result |
|-----------------|------------------|---------|------------------------|--------------------|--------|
| | Chain A | Chain B | | | |
| 5755 | -8.88 | -- | -- | < 30 | Pass |
| 5795 | -9.15 | -- | -- | < 30 | Pass |

Remark:

1. Measured value = Reading value on a spectrum analyzer + cable loss + duty factor
2. $\text{PSD(dBm/500kHz)} = \text{Measured value} + 10\log(500\text{kHz}/100\text{kHz})$

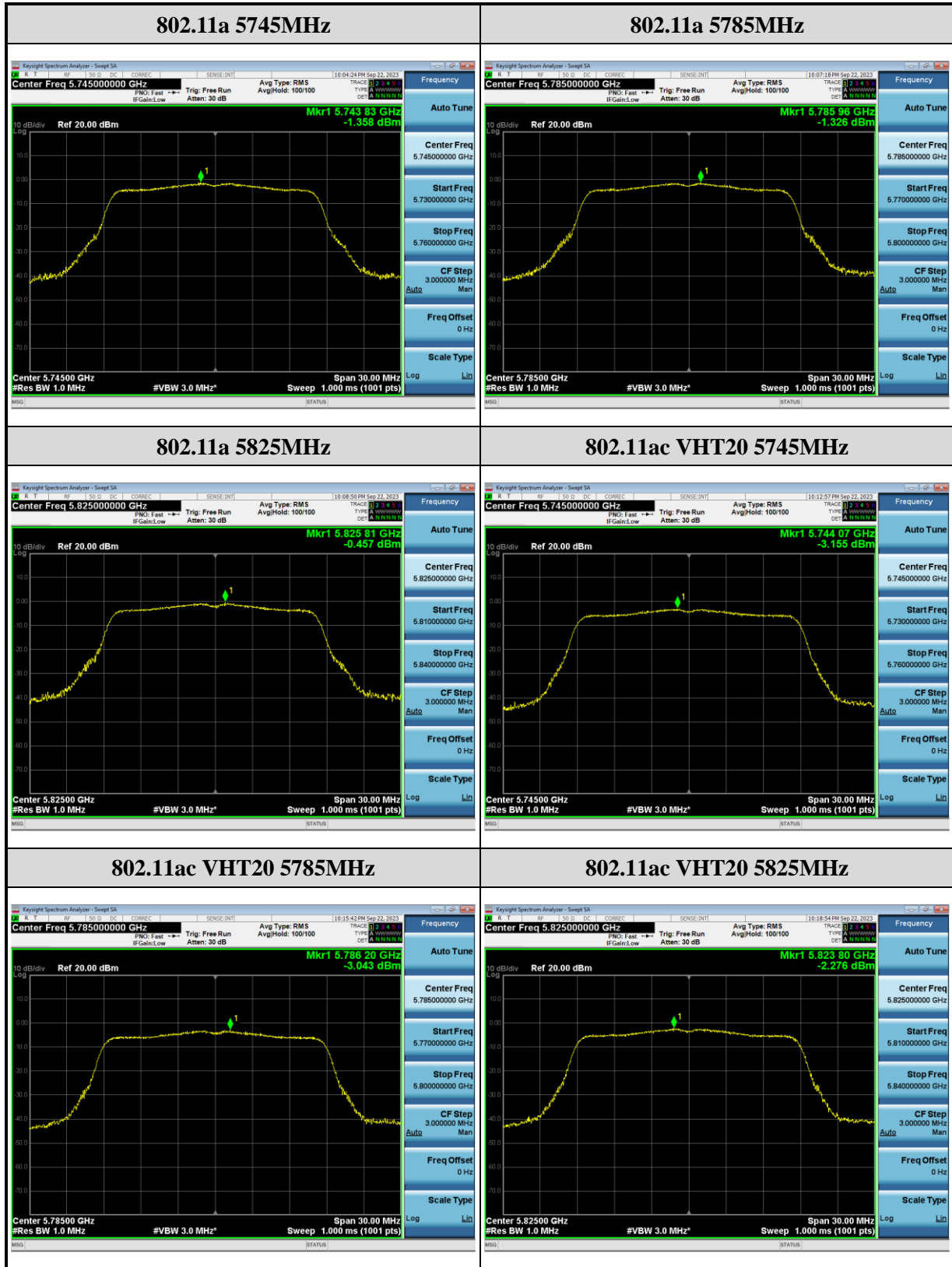
802.11ac VHT80

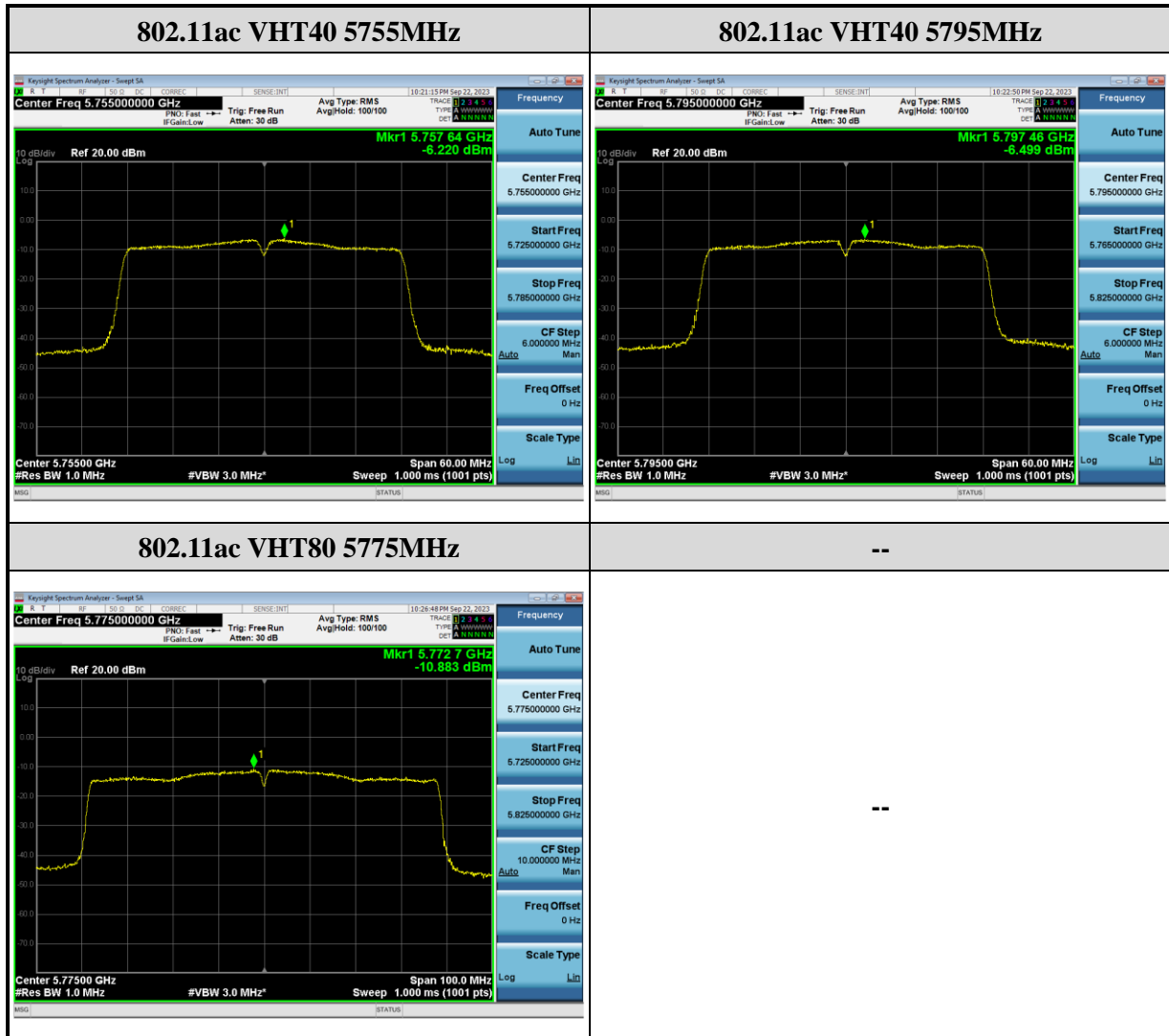
| Frequency (MHz) | PSD (dBm/500kHz) | | Total PSD (dBm/500kHz) | Limit (dBm/500kHz) | Result |
|-----------------|------------------|---------|------------------------|--------------------|--------|
| | Chain A | Chain B | | | |
| 5775 | -13.14 | -- | -- | < 30 | Pass |

Remark:

1. Measured value = Reading value on a spectrum analyzer + cable loss + duty factor
2. $\text{PSD(dBm/500kHz)} = \text{Measured value} + 10\log(500\text{kHz}/100\text{kHz})$

Power Spectral Density spectrum plot of Chain A value:





2.5 Unwanted Emission Measurement

2.5.1 Limit

1. Un- restricted bands unwanted emission limit :

| Operating Band (MHz) | Limit of all emissions outside of the operating band |
|----------------------|---|
| 5150 ~ 5250 | -27dBm/MHz, EIRP |
| 5250 ~ 5350 | -27dBm/MHz, EIRP |
| 5470 ~ 5725 | -27dBm/MHz, EIRP |
| 5725 ~ 5850 | All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. |

| EIRP (dBm) | Field Strength at 3m (dB μ V/m) |
|------------|-------------------------------------|
| - 27 | 68.2 |

2. Restricted bands unwanted emission limit :

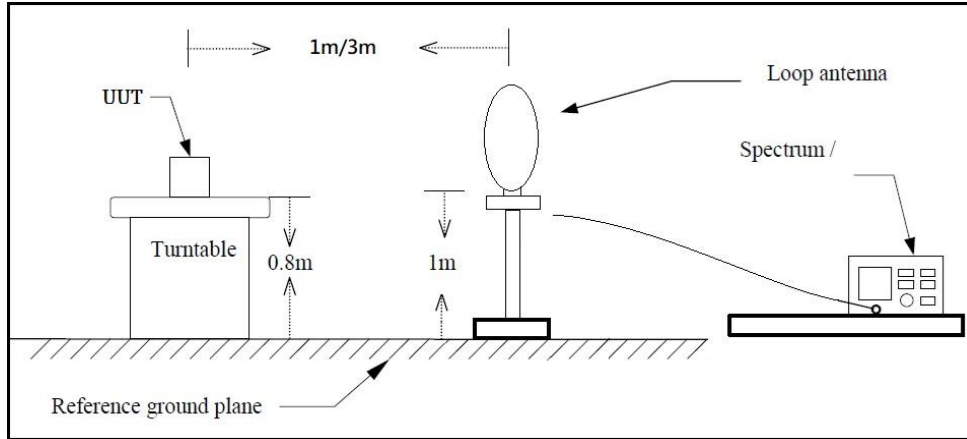
| Frequency (MHz) | Field Strength (μ V/m) | Measurement Distance (m) |
|-----------------|-----------------------------|--------------------------|
| 0.009 – 0.490 | 2400/F(kHz) | 300 |
| 0.490 – 1.705 | 24000/F(kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 – 88 | 100 | 3 |
| 88 – 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

Remarks:

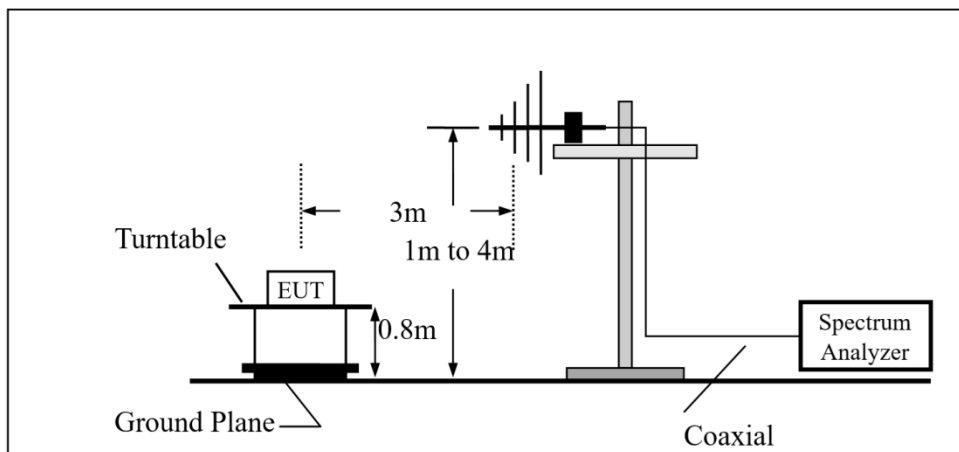
1. RF Voltage (dBuV) = 20 log RF Voltage(uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

2.5.2 Test Setup

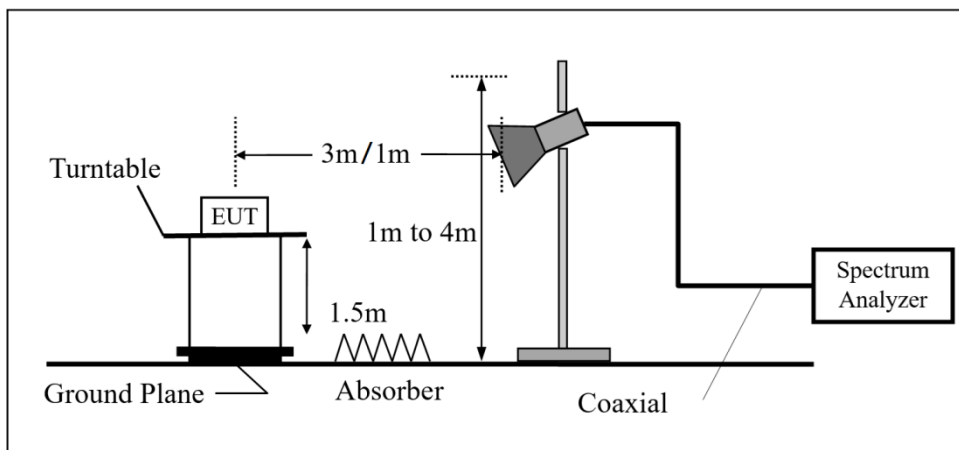
Below 30MHz



30MHz~1GHz



Above 1GHz



2.5.3 Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according test procedure of KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

For Radiated emission below 30MHz

- (1) The EUT was placed on the top of a rotating table 0.8 meters above the ground in a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- (3) Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- (4) For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- (5) The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

For Radiated emission Above 30MHz

- (1) The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for the test. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The EUT was set 3 meters away from the interference-receiving antenna, the height of the antenna is varied from 1 meter to 4 meters above the ground to determine the maximum value of the field strength.
- (3) Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- (4) For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- (5) The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- (6) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets the average limit, measurement with the average detector is unnecessary.

2.5.4 Duty Cycle

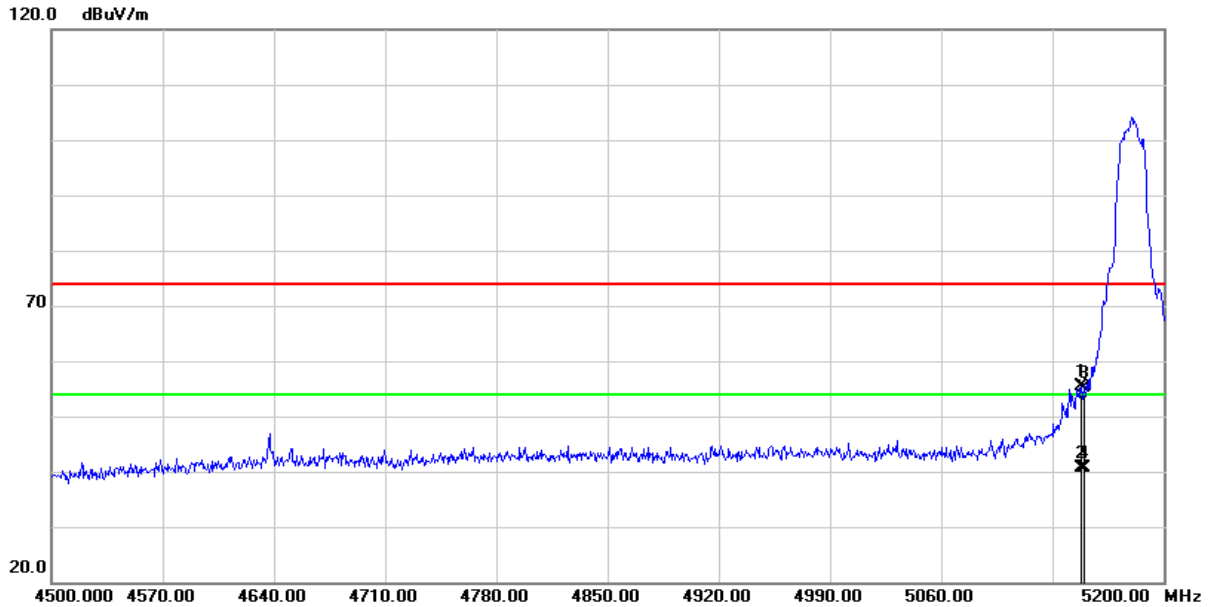
| Type of Modulation | Frequency (MHz) | on time (ms) | on+off time (ms) | Duty cycle | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|--------------------|-----------------|--------------|------------------|------------|------------------|-----------------------|
| 802.11a | 5180 | 2.081 | 2.088 | 0.997 | 0.015 | 0.010 |
| 802.11ac VHT20 | 5180 | 1.960 | 2.037 | 0.962 | 0.167 | 0.510 |
| 802.11ac VHT40 | 5190 | 0.973 | 1.056 | 0.921 | 0.355 | 1.028 |
| 802.11ac VHT80 | 5210 | 0.472 | 0.562 | 0.840 | 0.758 | 2.118 |

2.5.5 Test Result of Radiated Band Edge Measurement

The following tables for radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X axis) were recorded in this report.

| Test Frequency | | | |
|----------------|--|--|-----------------------------------|
| RF | 802.11a / 802.11ac VHT20 | 802.11ac VHT40 | 802.11ac VHT80 |
| Tx | CH36 (5180MHz) CH149 (5745MHz) CH165 (5825MHz) | CH38 (5190MHz) CH151 (5755MHz) CH159 (5795MHz) | CH42 (5210MHz) CH155 (5775MHz) |

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2023/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

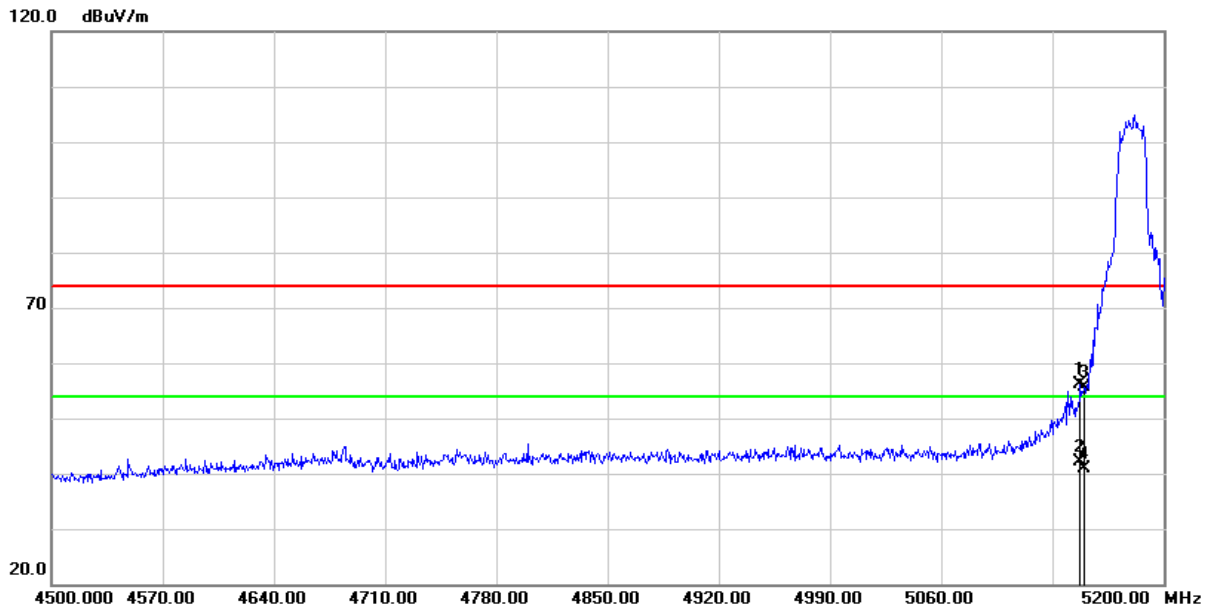


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5148.200 | 52.34 | 3.15 | 55.49 | 74.00 | -18.51 | peak |
| 2 | 5148.200 | 37.52 | 3.15 | 40.67 | 54.00 | -13.33 | AVG |
| 3 | 5150.000 | 51.87 | 3.14 | 55.01 | 74.00 | -18.99 | peak |
| 4 | 5150.000 | 37.58 | 3.14 | 40.72 | 54.00 | -13.28 | AVG |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2023/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

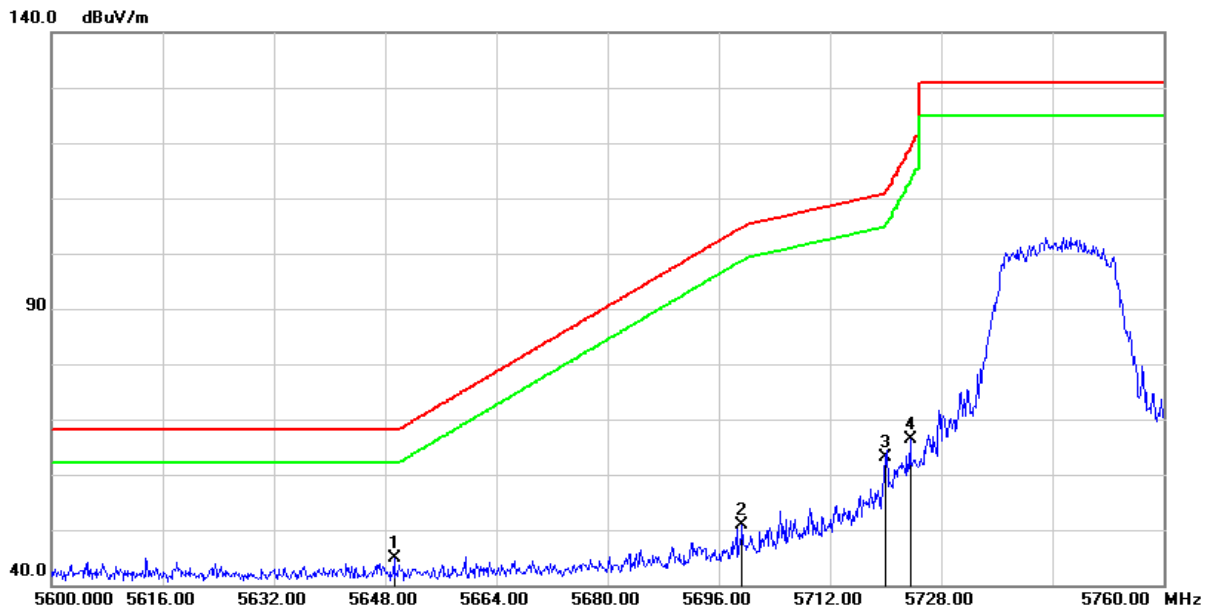


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5147.500 | 53.02 | 3.14 | 56.16 | 74.00 | -17.84 | peak |
| 2 | 5147.500 | 38.88 | 3.14 | 42.02 | 54.00 | -11.98 | AVG |
| 3 | 5150.000 | 52.43 | 3.14 | 55.57 | 74.00 | -18.43 | peak |
| 4 | 5150.000 | 37.63 | 3.14 | 40.77 | 54.00 | -13.23 | AVG |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2023/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

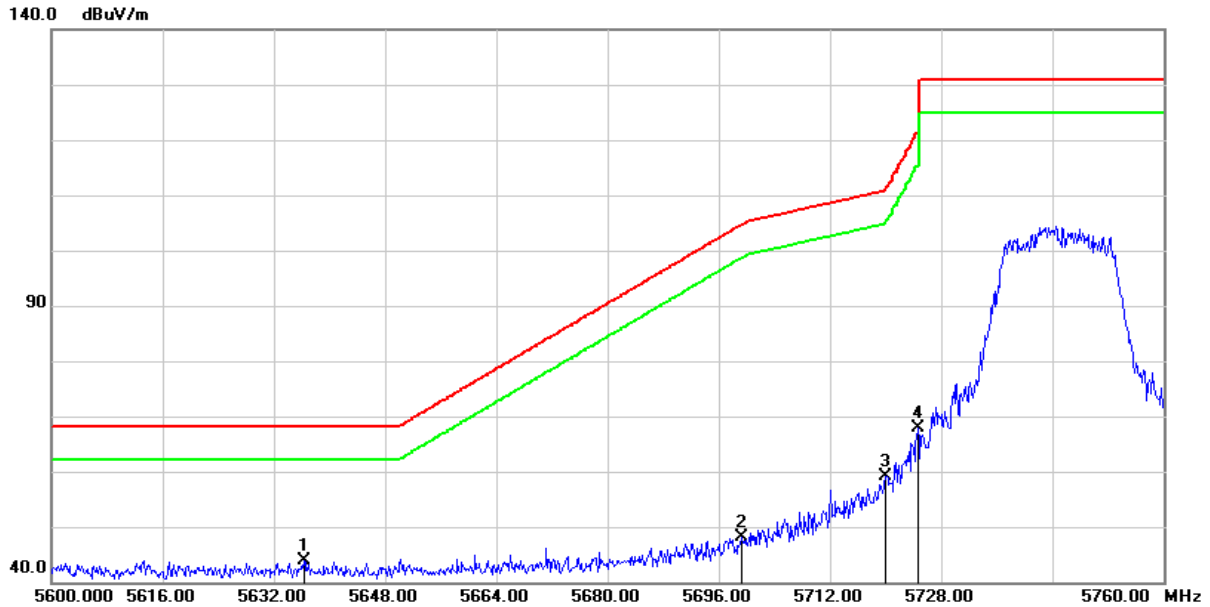


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5649.280 | 41.80 | 3.14 | 44.94 | 68.20 | -23.26 | peak |
| 2 | 5699.360 | 47.48 | 3.41 | 50.89 | 104.73 | -53.84 | peak |
| 3 | 5720.000 | 59.81 | 3.43 | 63.24 | 110.80 | -47.56 | peak |
| 4 | 5723.520 | 62.95 | 3.43 | 66.38 | 118.83 | -52.45 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2023/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |



| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5636.320 | 40.68 | 3.13 | 43.81 | 68.20 | -24.39 | peak |
| 2 | 5699.200 | 44.62 | 3.41 | 48.03 | 104.61 | -56.58 | peak |
| 3 | 5720.000 | 55.65 | 3.43 | 59.08 | 110.80 | -51.72 | peak |
| 4 | 5724.640 | 64.33 | 3.43 | 67.76 | 121.38 | -53.62 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2023/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

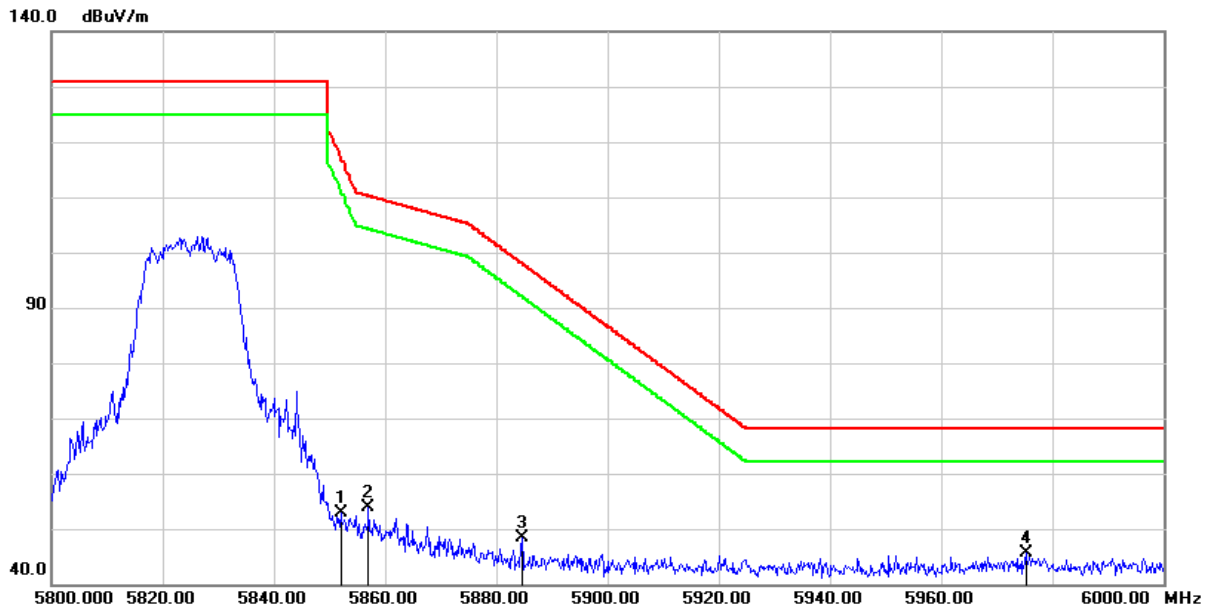


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5853.000 | 49.16 | 3.71 | 52.87 | 115.36 | -62.49 | peak |
| 2 | 5858.200 | 49.68 | 3.75 | 53.43 | 109.90 | -56.47 | peak |
| 3 | 5881.200 | 43.66 | 3.91 | 47.57 | 100.61 | -53.04 | peak |
| 4 | 5974.400 | 41.59 | 4.19 | 45.78 | 68.20 | -22.42 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2023/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

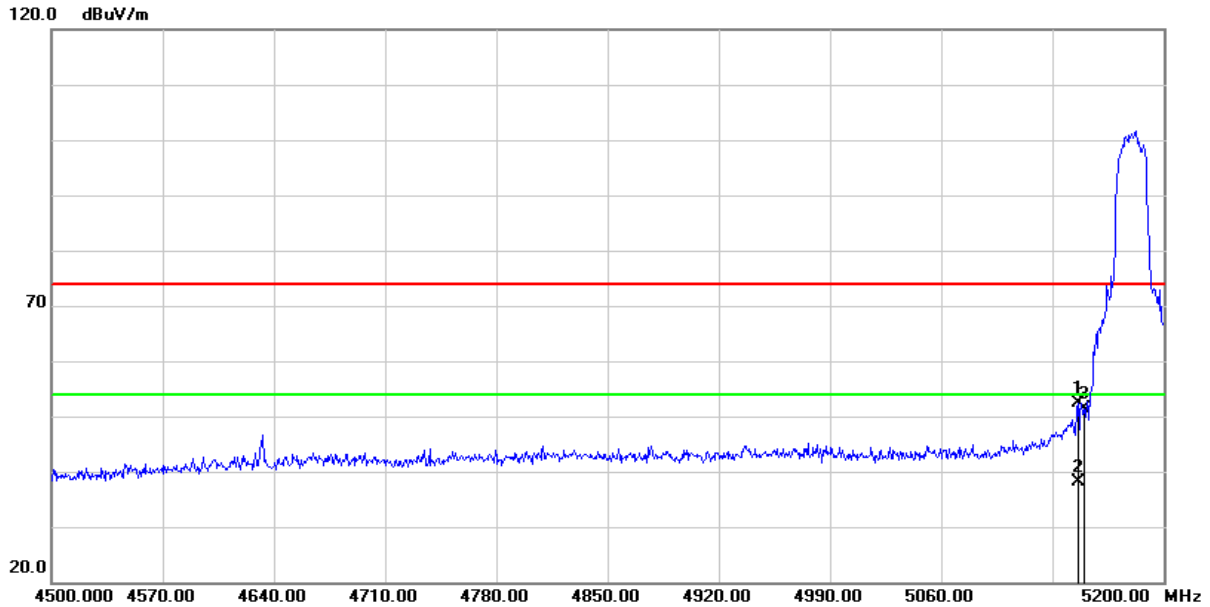


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5852.000 | 49.08 | 3.70 | 52.78 | 117.64 | -64.86 | peak |
| 2 | 5857.000 | 50.17 | 3.74 | 53.91 | 110.24 | -56.33 | peak |
| 3 | 5884.600 | 44.50 | 3.94 | 48.44 | 98.10 | -49.66 | peak |
| 4 | 5975.200 | 41.32 | 4.19 | 45.51 | 68.20 | -22.69 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2023/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

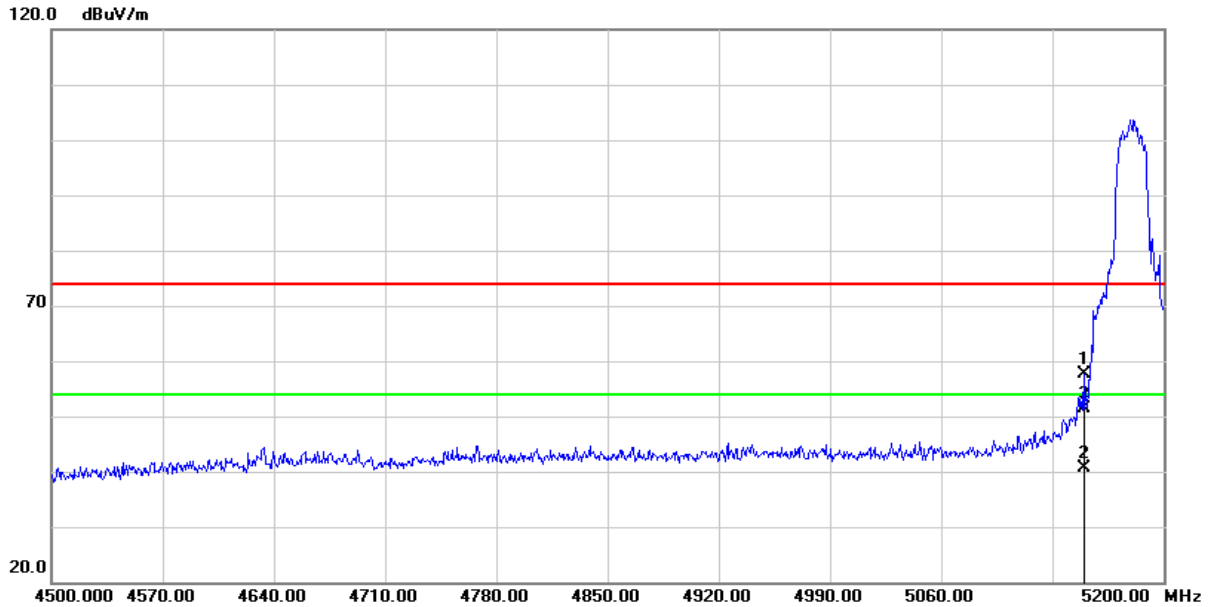


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5146.100 | 49.32 | 3.14 | 52.46 | 74.00 | -21.54 | peak |
| 2 | 5146.100 | 35.09 | 3.14 | 38.23 | 54.00 | -15.77 | AVG |
| 3 | 5150.000 | 48.17 | 3.14 | 51.31 | 74.00 | -22.69 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2023/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

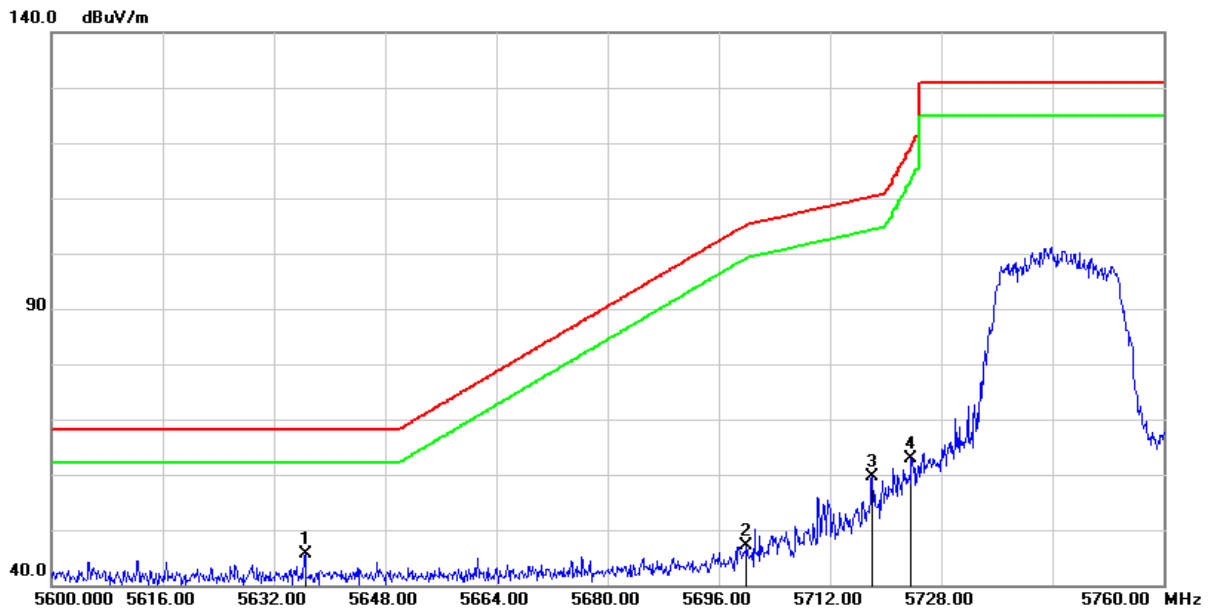


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5149.600 | 54.47 | 3.14 | 57.61 | 74.00 | -16.39 | peak |
| 2 | 5149.600 | 37.57 | 3.14 | 40.71 | 54.00 | -13.29 | AVG |
| 3 | 5150.000 | 48.21 | 3.14 | 51.35 | 74.00 | -22.65 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2023/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

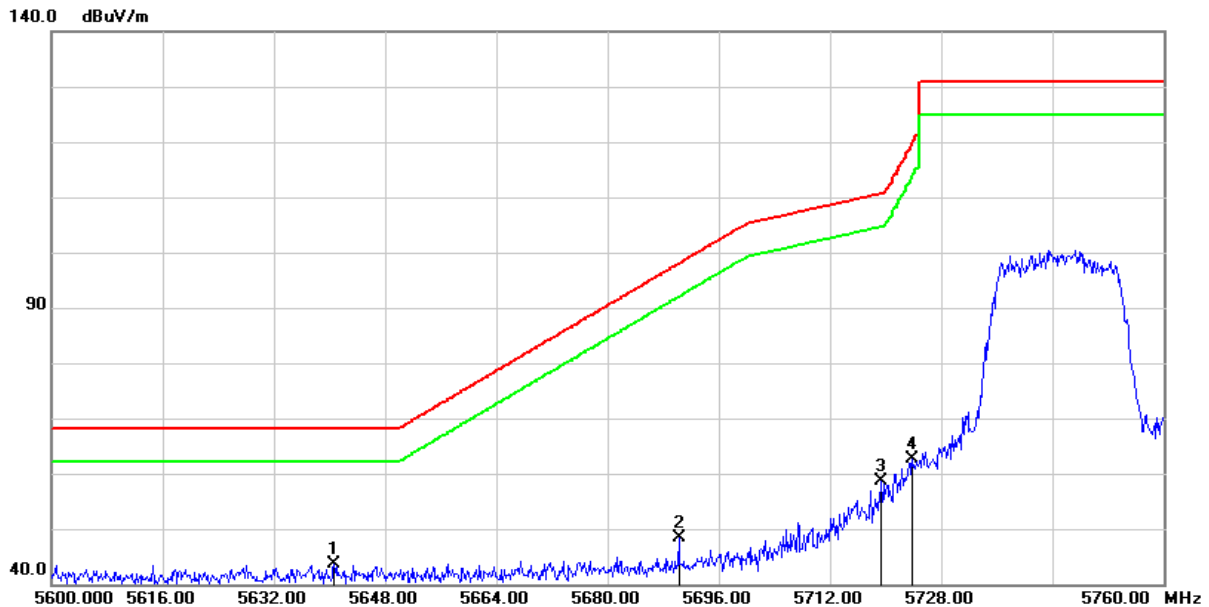


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5636.480 | 42.55 | 3.13 | 45.68 | 68.20 | -22.52 | peak |
| 2 | 5700.000 | 43.61 | 3.41 | 47.02 | 105.20 | -58.18 | peak |
| 3 | 5718.080 | 56.08 | 3.43 | 59.51 | 110.26 | -50.75 | peak |
| 4 | 5723.680 | 59.54 | 3.43 | 62.97 | 119.19 | -56.22 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2023/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

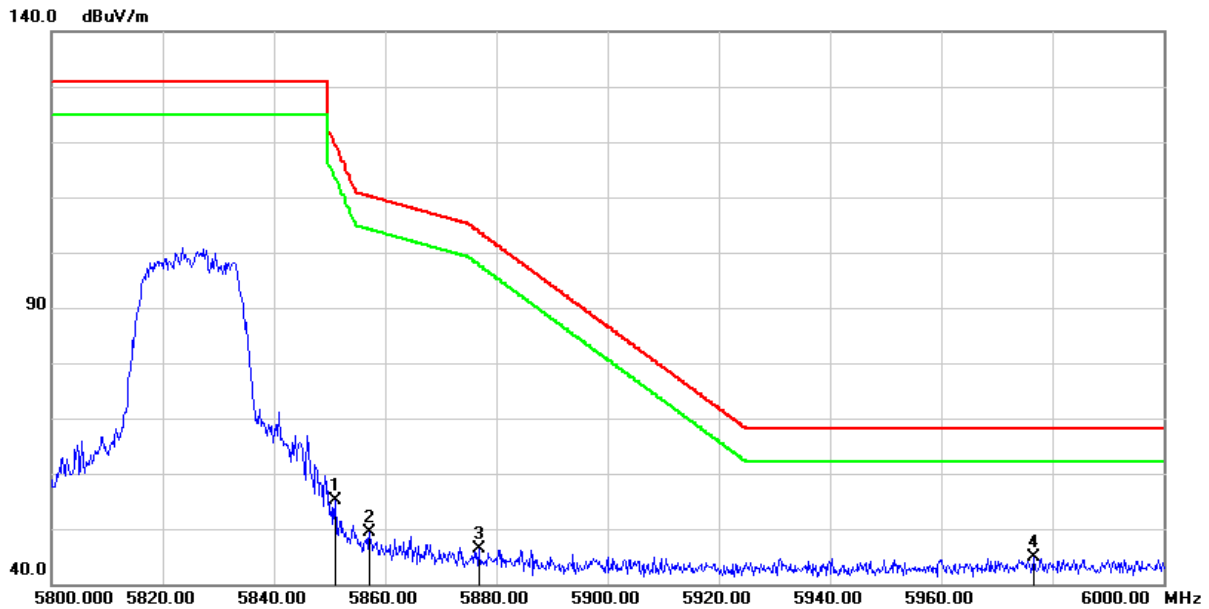


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5640.640 | 40.52 | 3.13 | 43.65 | 68.20 | -24.55 | peak |
| 2 | 5690.240 | 45.10 | 3.36 | 48.46 | 97.98 | -49.52 | peak |
| 3 | 5719.360 | 55.13 | 3.43 | 58.56 | 110.62 | -52.06 | peak |
| 4 | 5723.840 | 59.22 | 3.43 | 62.65 | 119.56 | -56.91 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2023/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

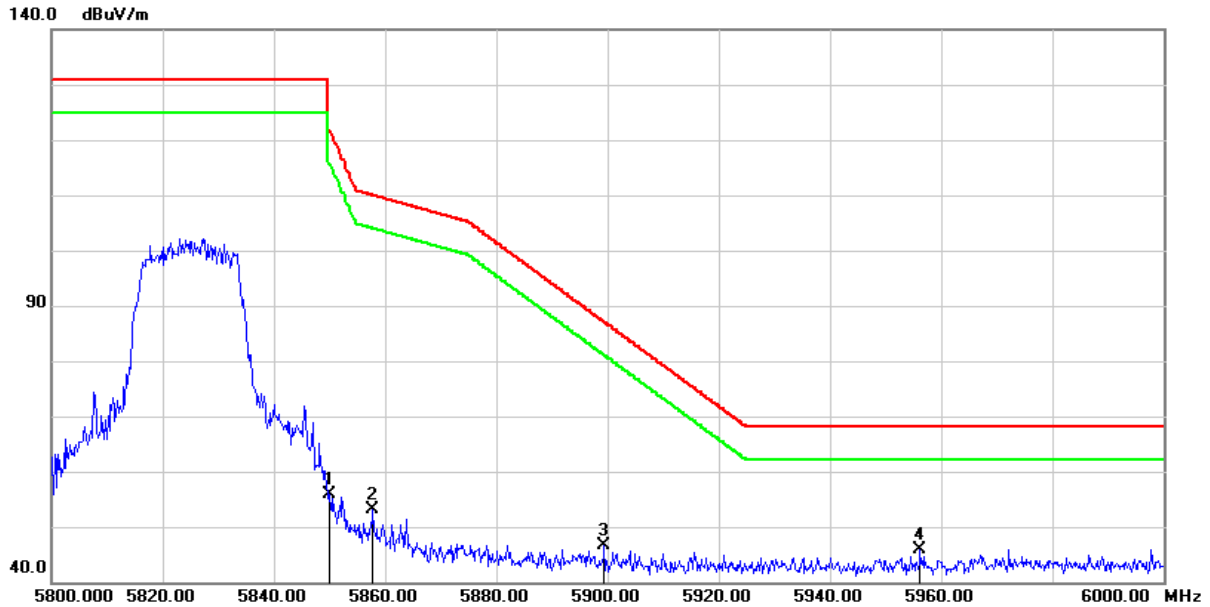


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5851.000 | 51.52 | 3.70 | 55.22 | 119.92 | -64.70 | peak |
| 2 | 5857.200 | 45.58 | 3.74 | 49.32 | 110.18 | -60.86 | peak |
| 3 | 5876.800 | 42.51 | 3.88 | 46.39 | 103.87 | -57.48 | peak |
| 4 | 5976.600 | 40.81 | 4.19 | 45.00 | 68.20 | -23.20 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2023/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

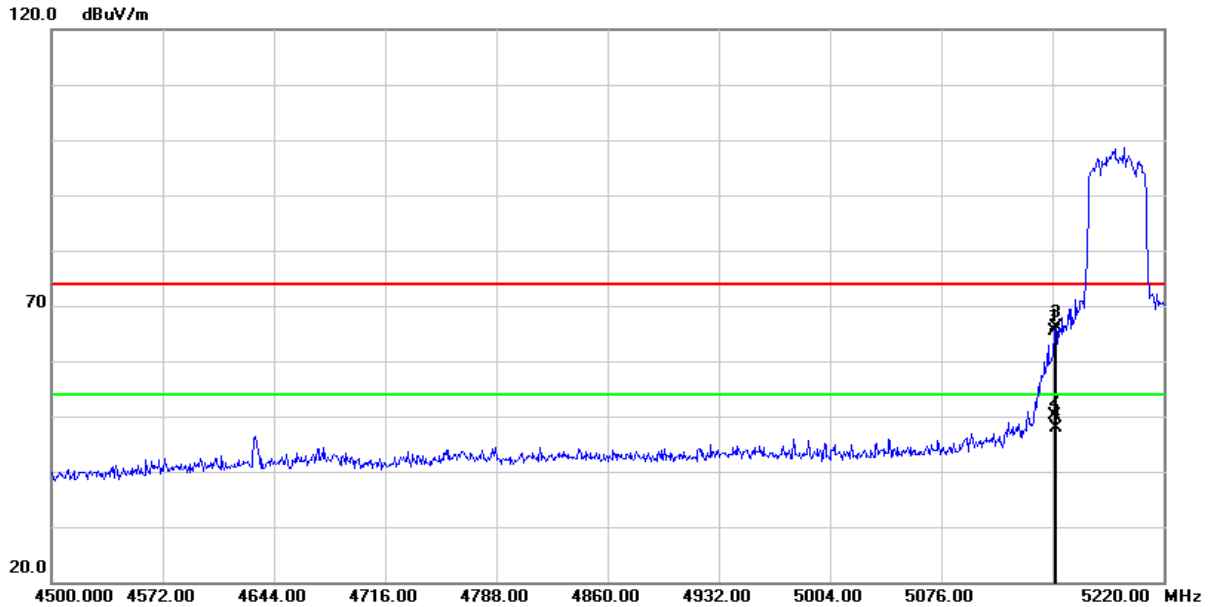


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5850.000 | 52.20 | 3.69 | 55.89 | 122.20 | -66.31 | peak |
| 2 | 5857.800 | 49.32 | 3.75 | 53.07 | 110.02 | -56.95 | peak |
| 3 | 5899.400 | 42.62 | 4.05 | 46.67 | 87.14 | -40.47 | peak |
| 4 | 5956.200 | 41.87 | 4.12 | 45.99 | 68.20 | -22.21 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH38(5190MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

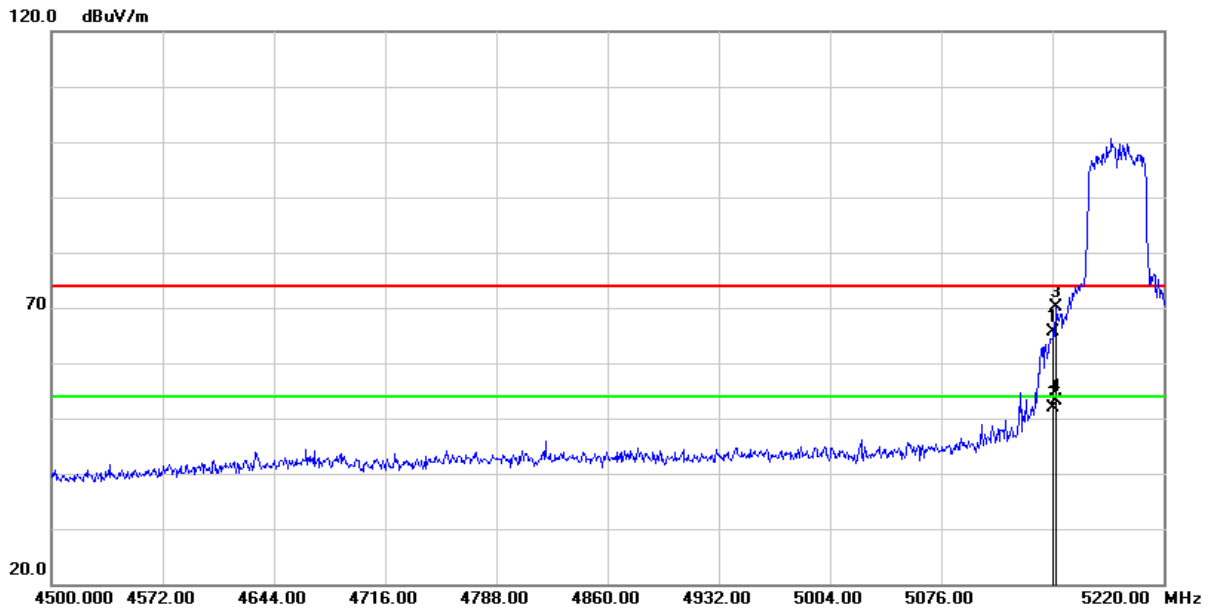


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5149.440 | 62.16 | 3.14 | 65.30 | 74.00 | -8.70 | peak |
| 2 | 5149.440 | 47.11 | 3.14 | 50.25 | 54.00 | -3.75 | AVG |
| 3 | 5150.000 | 62.97 | 3.14 | 66.11 | 74.00 | -7.89 | peak |
| 4 | 5150.000 | 44.65 | 3.14 | 47.79 | 54.00 | -6.21 | AVG |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH38(5190MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

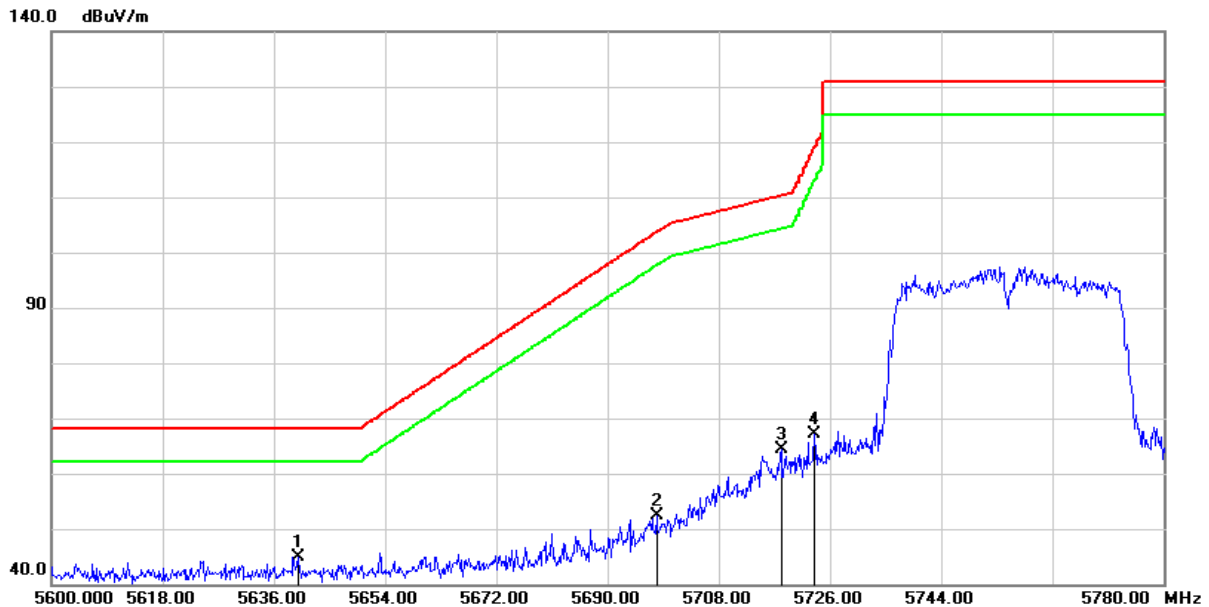


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5148.720 | 62.49 | 3.15 | 65.64 | 74.00 | -8.36 | peak |
| 2 | 5148.720 | 48.73 | 3.15 | 51.88 | 54.00 | -2.12 | AVG |
| 3 | 5150.000 | 66.95 | 3.14 | 70.09 | 74.00 | -3.91 | peak |
| 4 | 5150.000 | 49.89 | 3.14 | 53.03 | 54.00 | -0.97 | AVG |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH151(5755MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

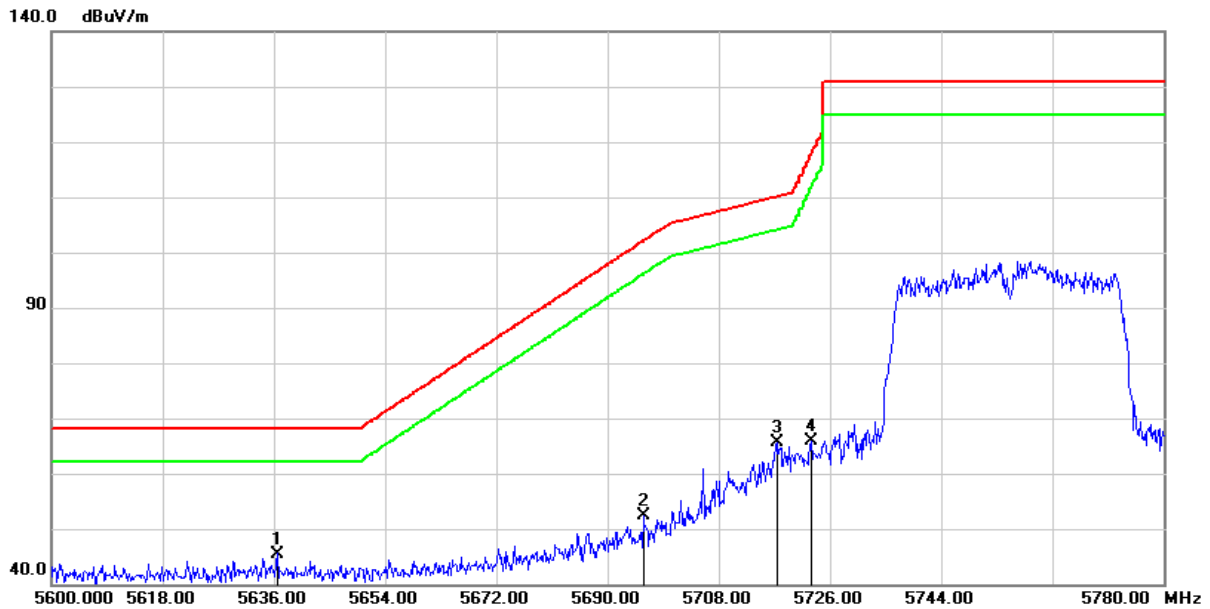


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5639.960 | 41.75 | 3.13 | 44.88 | 68.20 | -23.32 | peak |
| 2 | 5697.920 | 49.00 | 3.39 | 52.39 | 103.66 | -51.27 | peak |
| 3 | 5718.080 | 60.84 | 3.43 | 64.27 | 110.26 | -45.99 | peak |
| 4 | 5723.480 | 63.72 | 3.43 | 67.15 | 118.73 | -51.58 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH151(5755MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

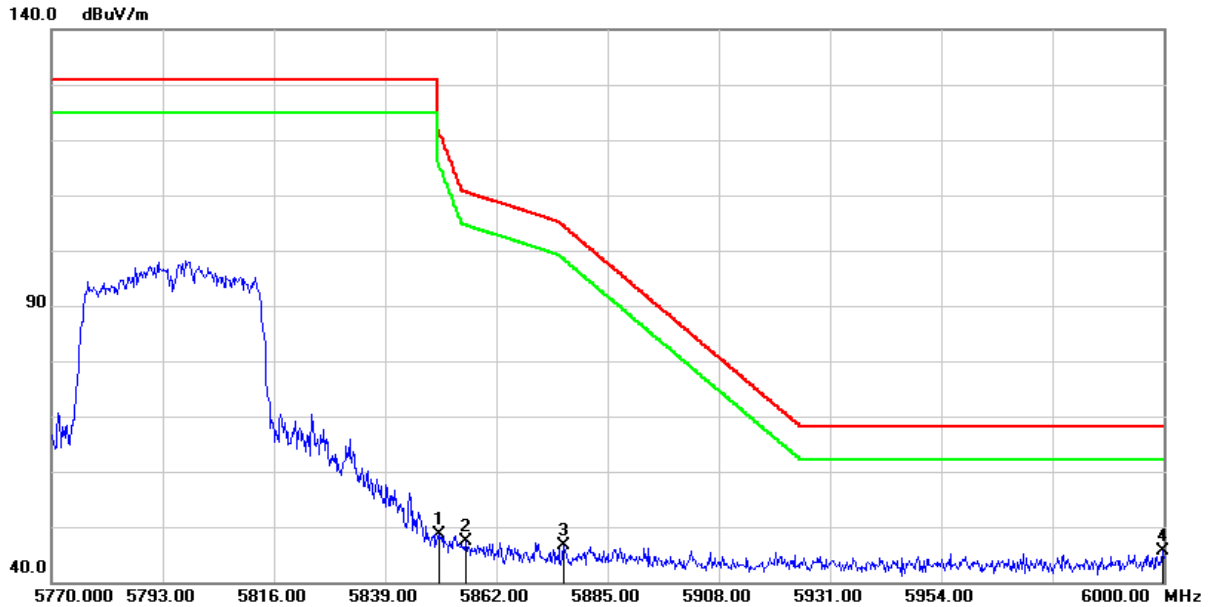


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5636.540 | 42.37 | 3.13 | 45.50 | 68.20 | -22.70 | peak |
| 2 | 5695.760 | 48.95 | 3.38 | 52.33 | 102.06 | -49.73 | peak |
| 3 | 5717.540 | 62.18 | 3.42 | 65.60 | 110.11 | -44.51 | peak |
| 4 | 5722.940 | 62.34 | 3.43 | 65.77 | 117.50 | -51.73 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH159(5795MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

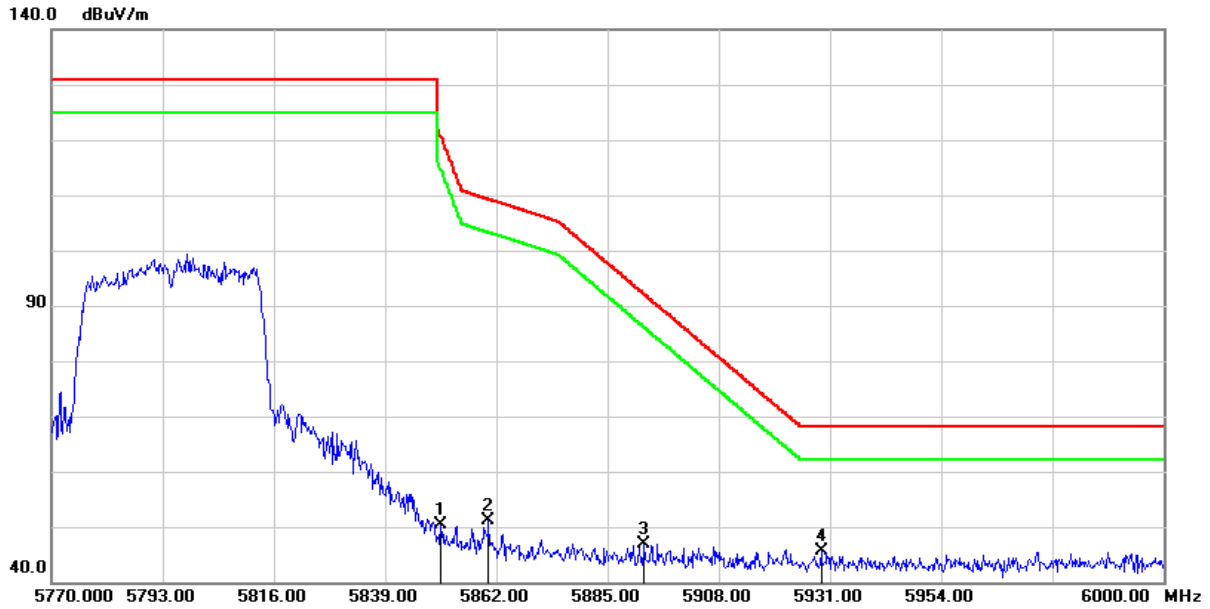


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5850.040 | 44.85 | 3.69 | 48.54 | 122.11 | -73.57 | peak |
| 2 | 5855.790 | 43.74 | 3.72 | 47.46 | 110.58 | -63.12 | peak |
| 3 | 5876.030 | 42.75 | 3.88 | 46.63 | 104.44 | -57.81 | peak |
| 4 | 5999.770 | 41.26 | 4.27 | 45.53 | 68.20 | -22.67 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH159(5795MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

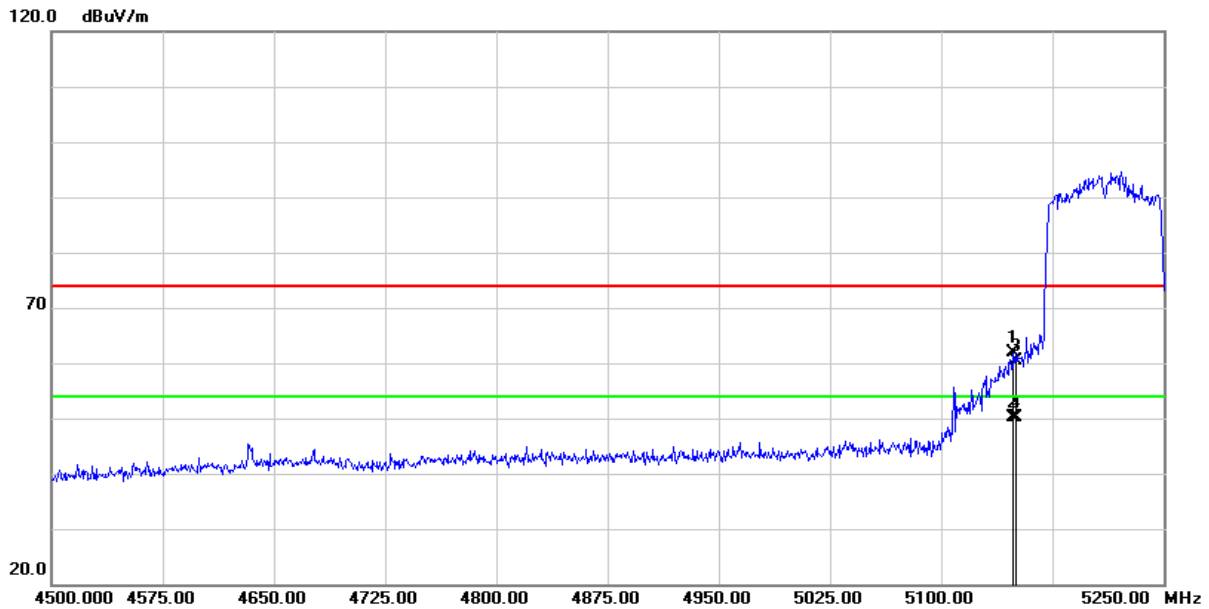


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5850.500 | 46.74 | 3.69 | 50.43 | 121.06 | -70.63 | peak |
| 2 | 5860.390 | 47.29 | 3.76 | 51.05 | 109.29 | -58.24 | peak |
| 3 | 5892.590 | 42.86 | 3.99 | 46.85 | 92.18 | -45.33 | peak |
| 4 | 5929.160 | 41.57 | 4.08 | 45.65 | 68.20 | -22.55 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2023/09/20 |
| Test Channel : | CH42 (5210MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

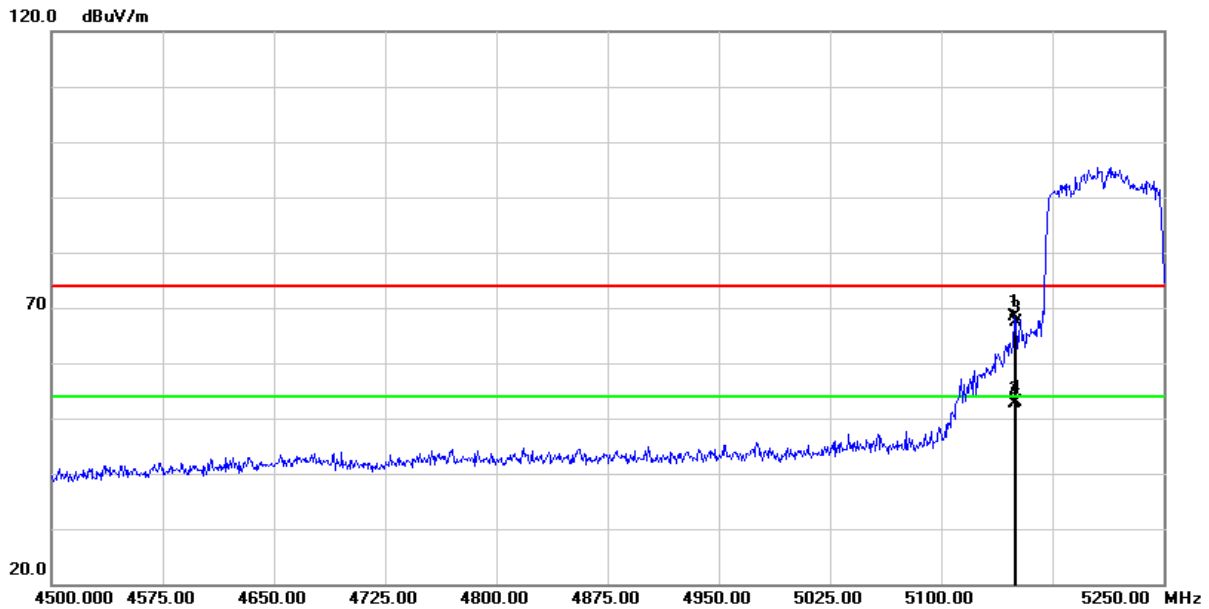


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5148.750 | 58.65 | 3.15 | 61.80 | 74.00 | -12.20 | peak |
| 2 | 5148.750 | 46.94 | 3.15 | 50.09 | 54.00 | -3.91 | AVG |
| 3 | 5150.000 | 57.20 | 3.14 | 60.34 | 74.00 | -13.66 | peak |
| 4 | 5150.000 | 46.96 | 3.14 | 50.10 | 54.00 | -3.90 | AVG |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2023/09/20 |
| Test Channel : | CH42 (5210MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

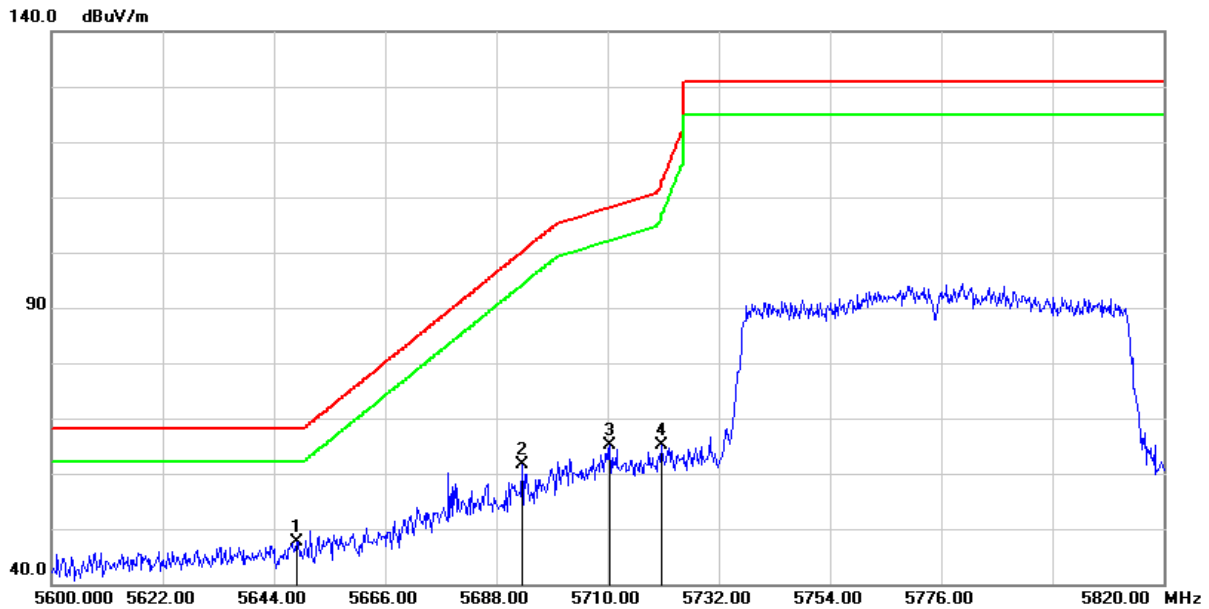


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5149.500 | 65.21 | 3.14 | 68.35 | 74.00 | -5.65 | peak |
| 2 | 5149.500 | 49.41 | 3.14 | 52.55 | 54.00 | -1.45 | AVG |
| 3 | 5150.000 | 64.17 | 3.14 | 67.31 | 74.00 | -6.69 | peak |
| 4 | 5150.000 | 49.80 | 3.14 | 52.94 | 54.00 | -1.06 | AVG |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2023/09/20 |
| Test Channel : | CH155 (5775MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

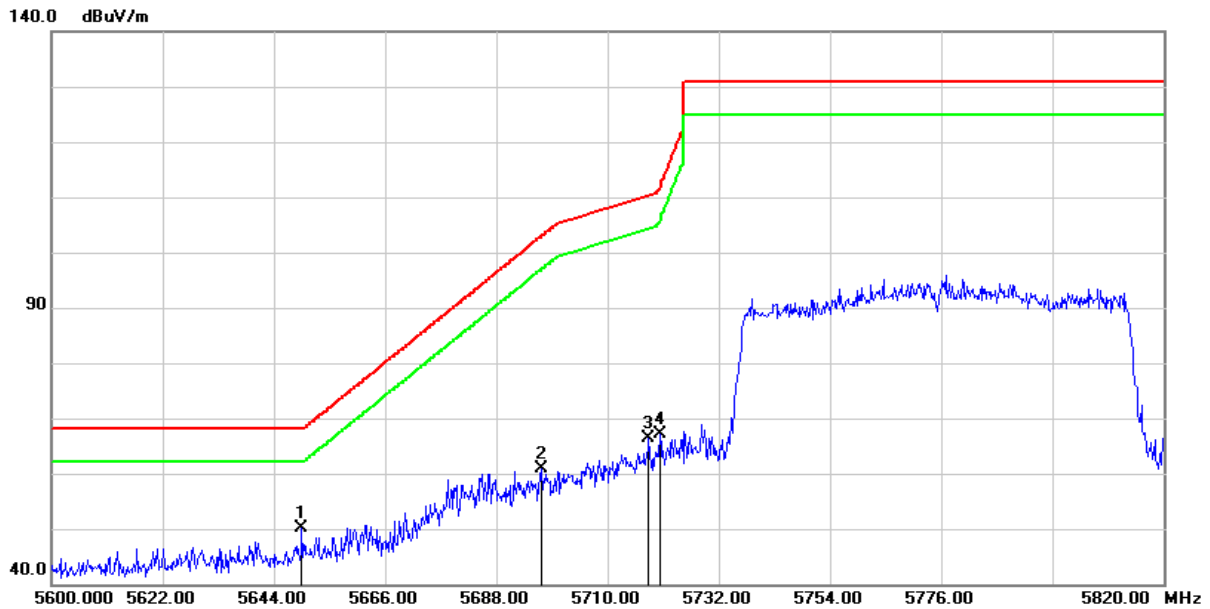


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5648.620 | 44.48 | 3.14 | 47.62 | 68.20 | -20.58 | peak |
| 2 | 5693.060 | 58.14 | 3.37 | 61.51 | 100.06 | -38.55 | peak |
| 3 | 5710.440 | 61.63 | 3.42 | 65.05 | 108.12 | -43.07 | peak |
| 4 | 5720.560 | 61.77 | 3.43 | 65.20 | 112.08 | -46.88 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2023/09/20 |
| Test Channel : | CH155 (5775MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

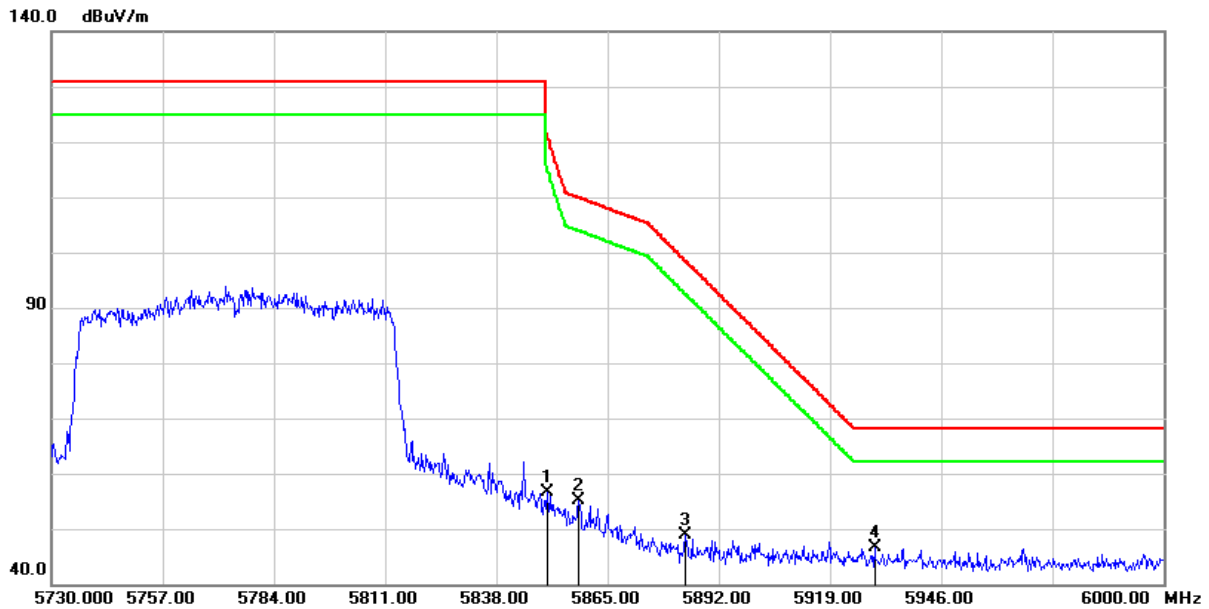


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5649.500 | 46.88 | 3.14 | 50.02 | 68.20 | -18.18 | peak |
| 2 | 5696.800 | 57.55 | 3.39 | 60.94 | 102.83 | -41.89 | peak |
| 3 | 5718.140 | 62.87 | 3.43 | 66.30 | 110.28 | -43.98 | peak |
| 4 | 5720.340 | 63.64 | 3.43 | 67.07 | 111.58 | -44.51 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2023/09/20 |
| Test Channel : | CH155 (5775MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

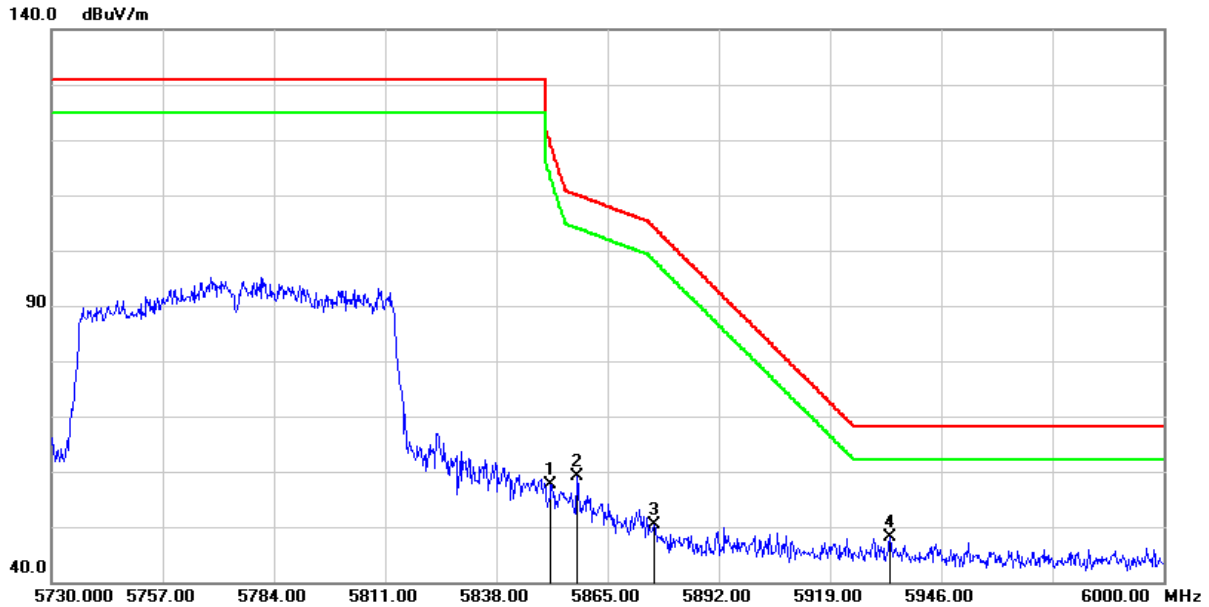


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5850.420 | 52.96 | 3.69 | 56.65 | 121.24 | -64.59 | peak |
| 2 | 5857.980 | 51.41 | 3.75 | 55.16 | 109.97 | -54.81 | peak |
| 3 | 5883.900 | 45.03 | 3.92 | 48.95 | 98.61 | -49.66 | peak |
| 4 | 5929.800 | 42.50 | 4.08 | 46.58 | 68.20 | -21.62 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2023/09/20 |
| Test Channel : | CH155 (5775MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |



| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 5851.230 | 53.86 | 3.70 | 57.56 | 119.40 | -61.84 | peak |
| 2 | 5857.440 | 55.31 | 3.74 | 59.05 | 110.12 | -51.07 | peak |
| 3 | 5876.340 | 46.38 | 3.88 | 50.26 | 104.21 | -53.95 | peak |
| 4 | 5933.580 | 43.95 | 4.09 | 48.04 | 68.20 | -20.16 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

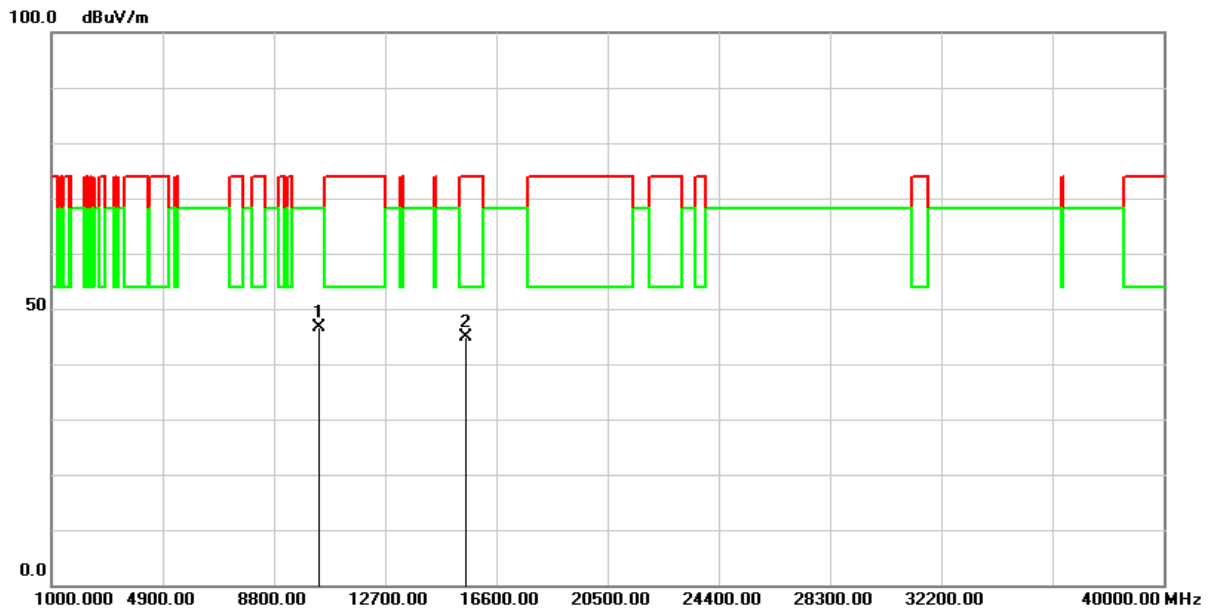
2.5.6 Test Result of Radiated Spurious Emission Measurement

- (1) The radiation measurement frequency is 9kHz ~ 30MHz. The interference value of this frequency range is less than the limit value of 20 dB. It is considered that the background noise value is not recorded.
- (2) The following table shows the radiation measurement frequency from 30MHz to 40GHz, pre-scanning in the X, Y and Z axes. The worst case (X-axis) is documented in this report.

| Test Frequency | | | |
|----------------|---|--|-----------------------------------|
| RF | 802.11a / 802.11ac VHT20 | 802.11ac VHT40 | 802.11ac VHT80 |
| Tx | CH36 (5180MHz) CH44 (5200MHz) CH48 (5240MHz) CH149 (5745MHz) CH157 (5785MHz) CH165 (5825MHz) | CH38 (5190MHz) CH46 (5230MHz) CH151 (5755MHz) CH159 (5795MHz) | CH42 (5210MHz) CH155 (5775MHz) |

Above 1GHz Data

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

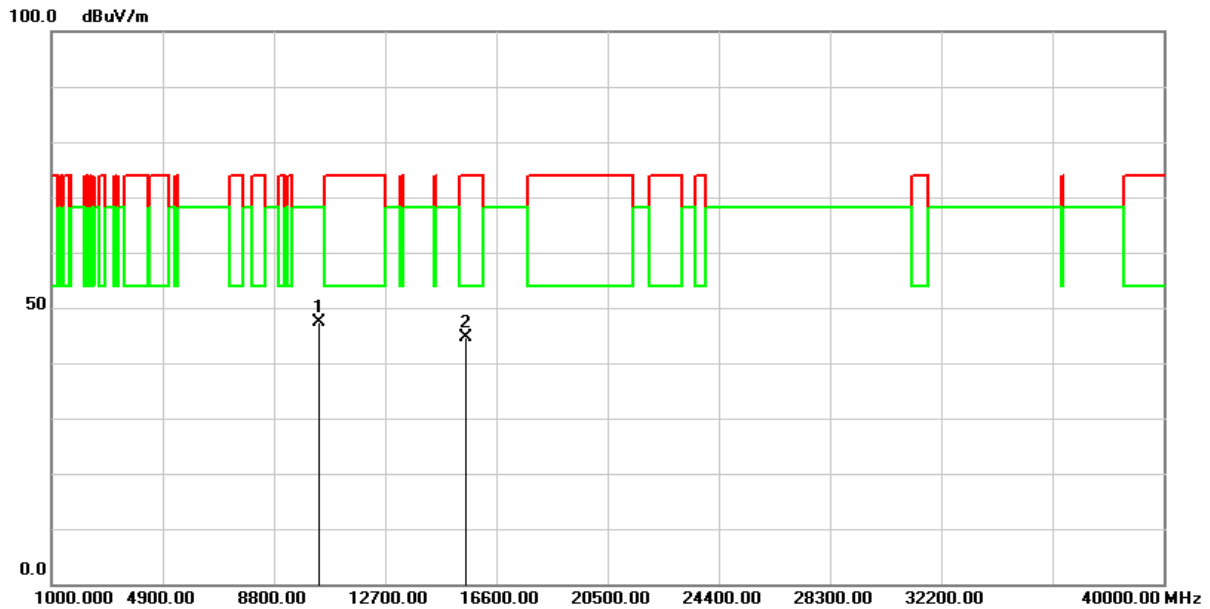


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10360.000 | 56.58 | -10.05 | 46.53 | 68.20 | -21.67 | peak |
| 2 | 15540.000 | 52.60 | -7.80 | 44.80 | 74.00 | -29.20 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

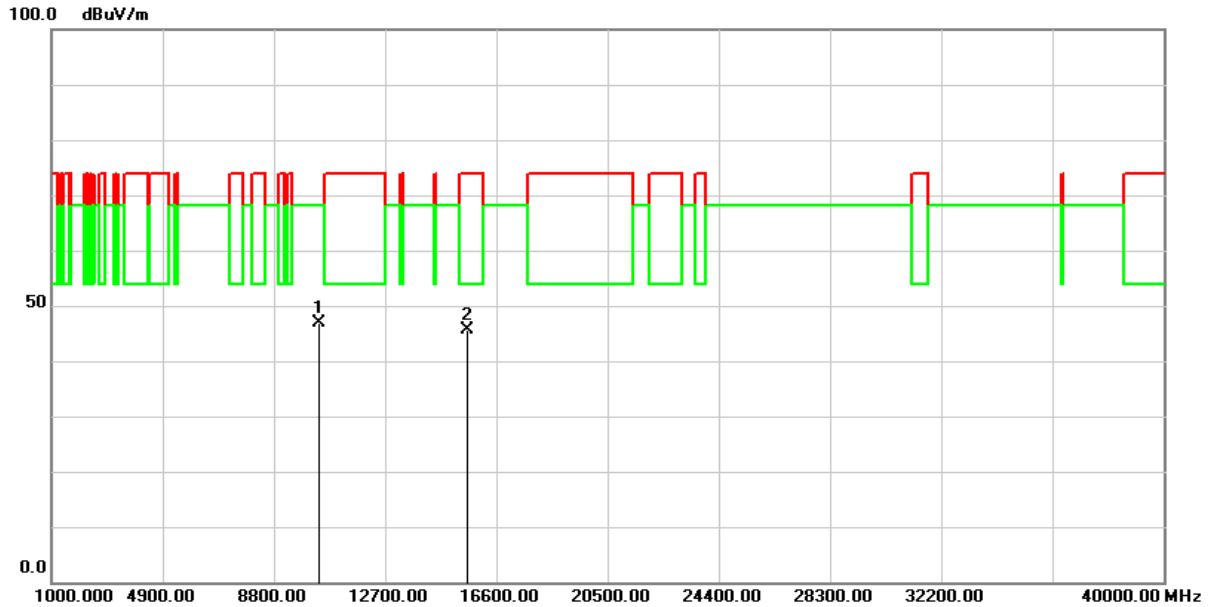


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10360.000 | 57.41 | -10.05 | 47.36 | 68.20 | -20.84 | peak |
| 2 | 15540.000 | 52.50 | -7.80 | 44.70 | 74.00 | -29.30 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH44(5200MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

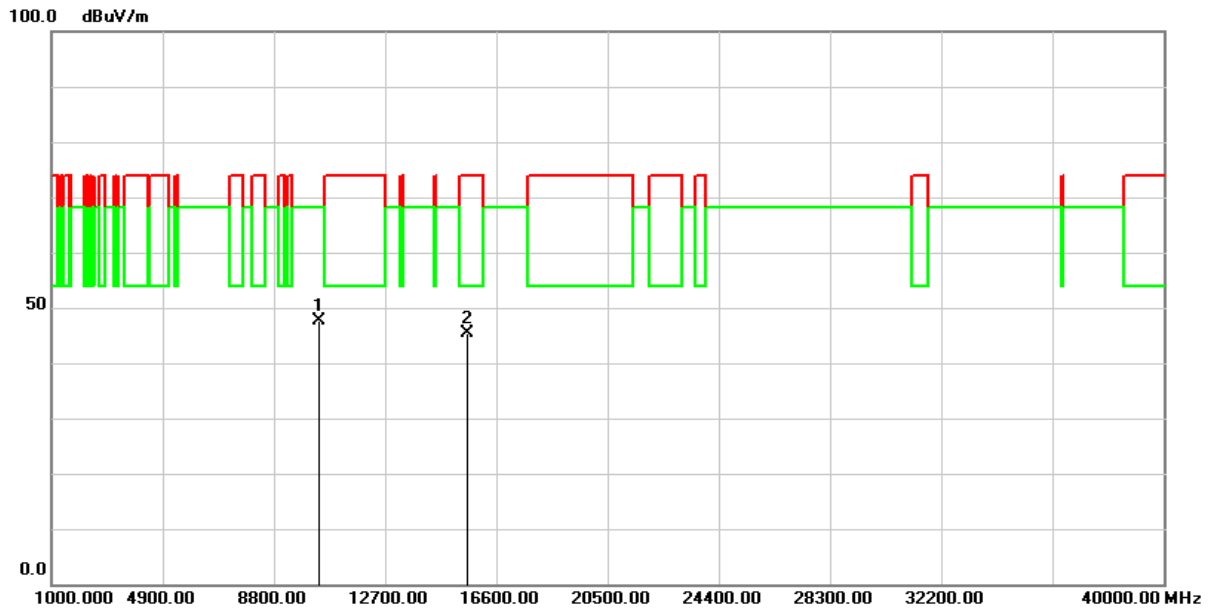


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10400.000 | 56.82 | -9.95 | 46.87 | 68.20 | -21.33 | peak |
| 2 | 15600.000 | 53.32 | -7.79 | 45.53 | 74.00 | -28.47 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH44(5200MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

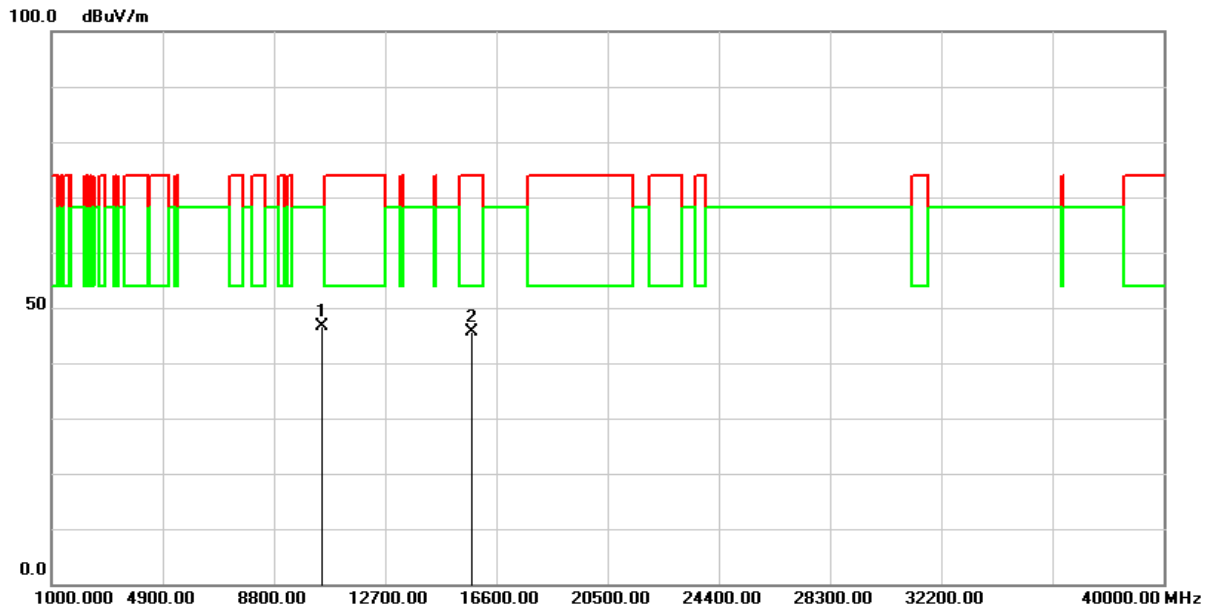


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10400.000 | 57.60 | -9.95 | 47.65 | 68.20 | -20.55 | peak |
| 2 | 15600.000 | 53.16 | -7.79 | 45.37 | 74.00 | -28.63 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH48(5240MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

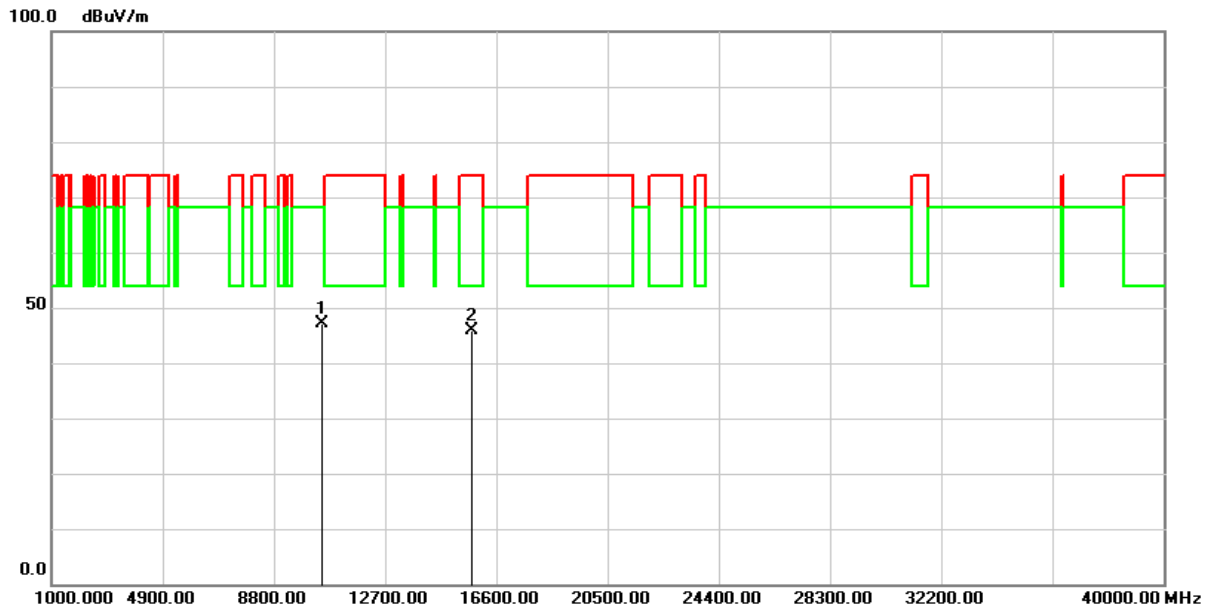


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10480.000 | 56.72 | -9.97 | 46.75 | 68.20 | -21.45 | peak |
| 2 | 15720.000 | 53.21 | -7.62 | 45.59 | 74.00 | -28.41 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH48(5240MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

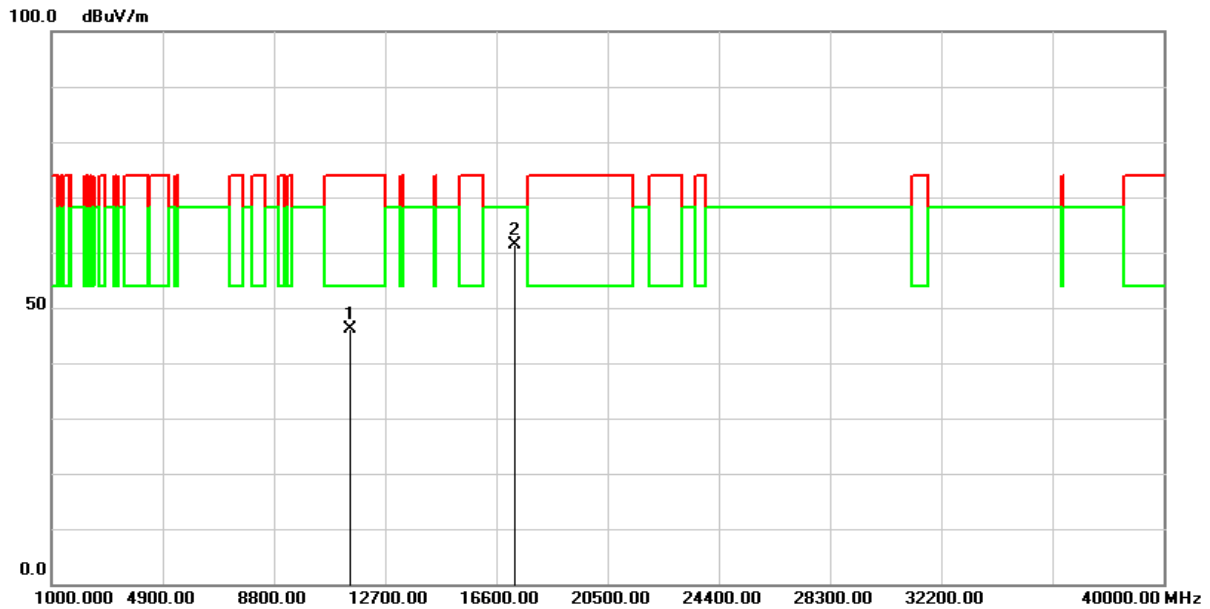


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10480.000 | 57.19 | -9.97 | 47.22 | 68.20 | -20.98 | peak |
| 2 | 15720.000 | 53.38 | -7.62 | 45.76 | 74.00 | -28.24 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

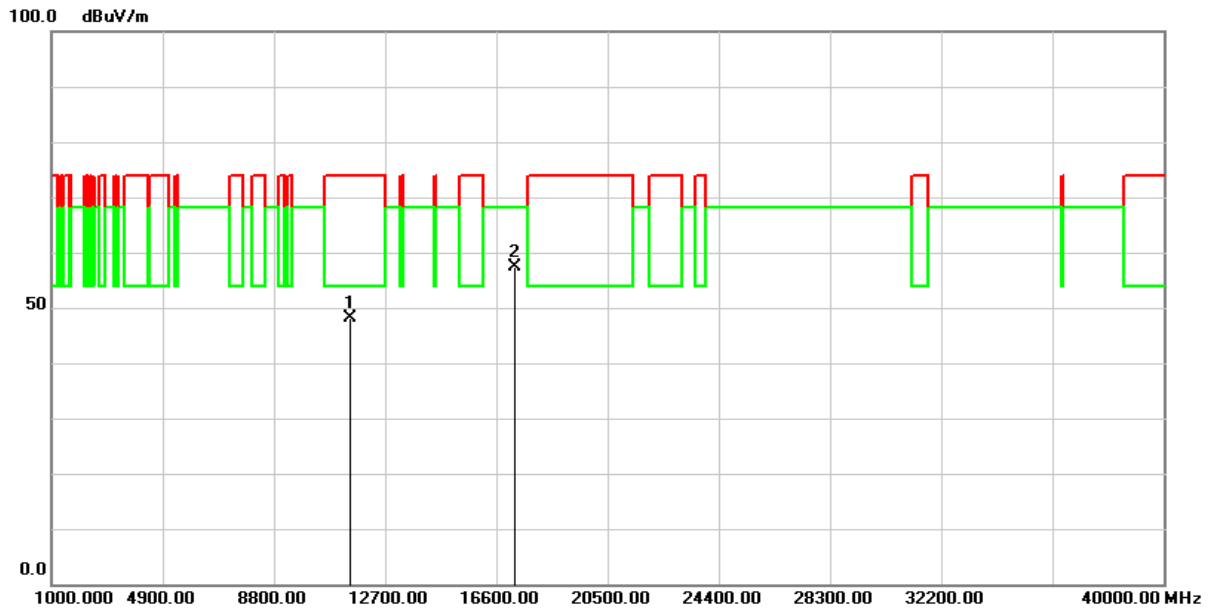


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11490.000 | 55.48 | -9.45 | 46.03 | 74.00 | -27.97 | peak |
| 2 | 17235.000 | 63.74 | -2.24 | 61.50 | 68.20 | -6.70 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

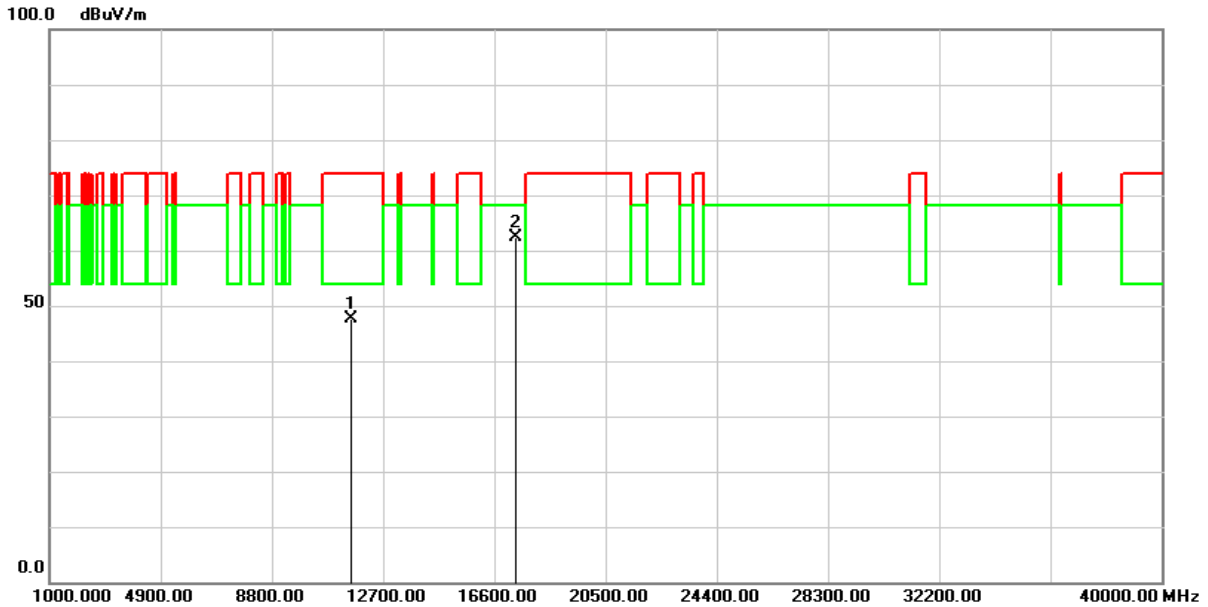


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11490.000 | 57.55 | -9.45 | 48.10 | 74.00 | -25.90 | peak |
| 2 | 17235.000 | 59.74 | -2.24 | 57.50 | 68.20 | -10.70 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH157(5785MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

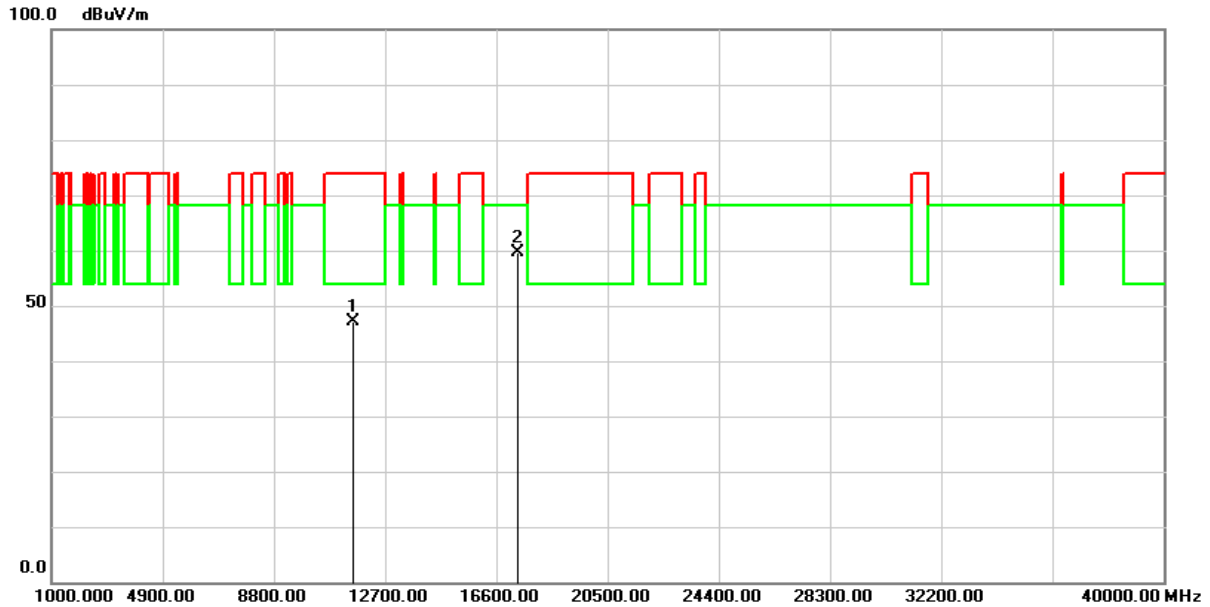


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11570.000 | 57.00 | -9.40 | 47.60 | 74.00 | -26.40 | peak |
| 2 | 17355.000 | 63.96 | -1.65 | 62.31 | 68.20 | -5.89 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH157(5785MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

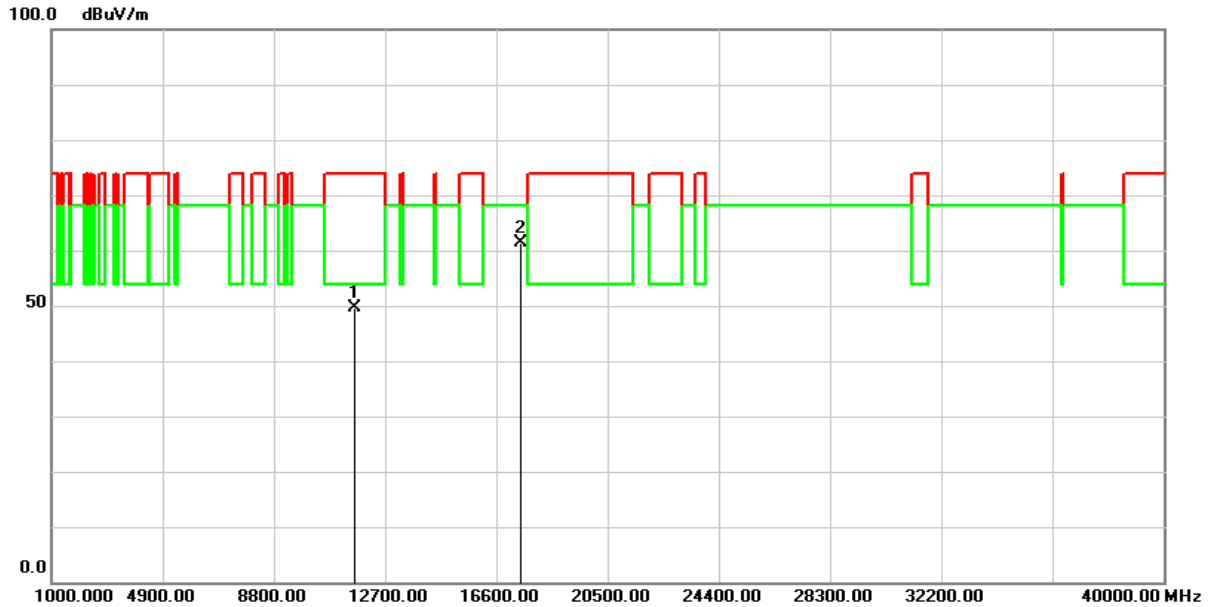


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11570.000 | 56.61 | -9.40 | 47.21 | 74.00 | -26.79 | peak |
| 2 | 17355.000 | 61.27 | -1.65 | 59.62 | 68.20 | -8.58 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

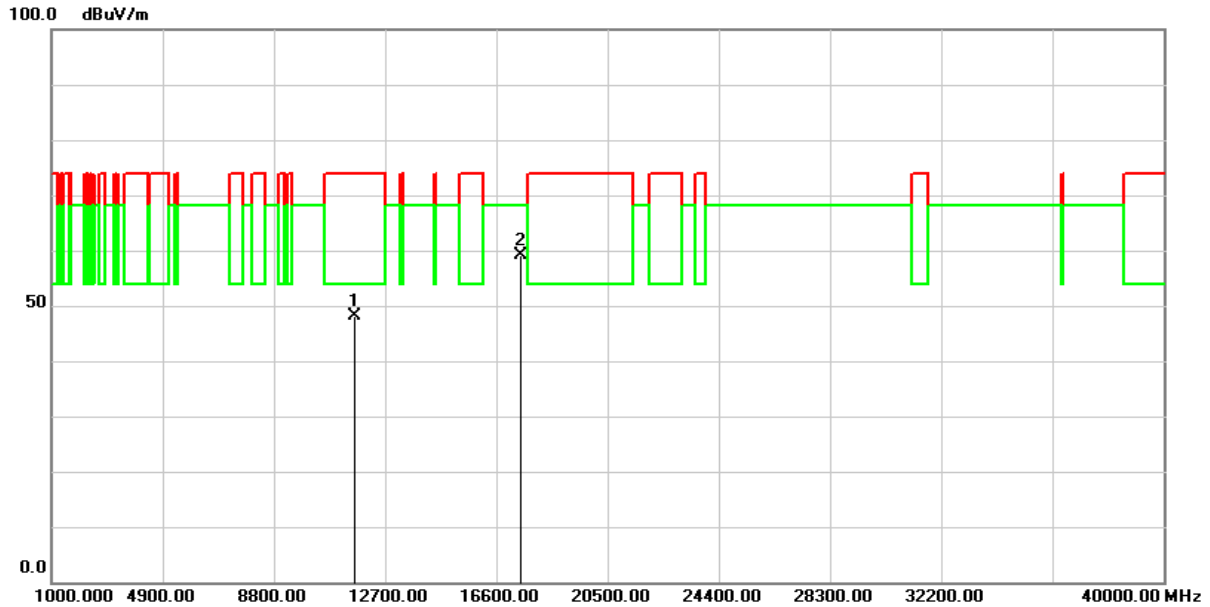


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11650.000 | 59.35 | -9.82 | 49.53 | 74.00 | -24.47 | peak |
| 2 | 17475.000 | 62.22 | -0.85 | 61.37 | 68.20 | -6.83 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

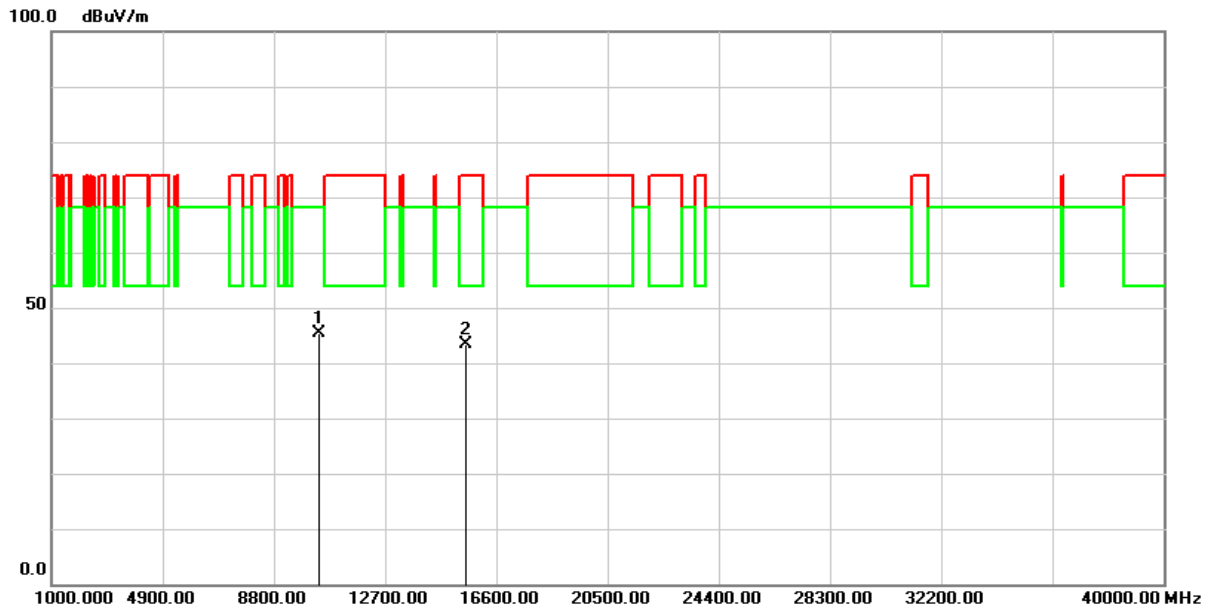


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11650.000 | 57.85 | -9.82 | 48.03 | 74.00 | -25.97 | peak |
| 2 | 17475.000 | 59.97 | -0.85 | 59.12 | 68.20 | -9.08 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

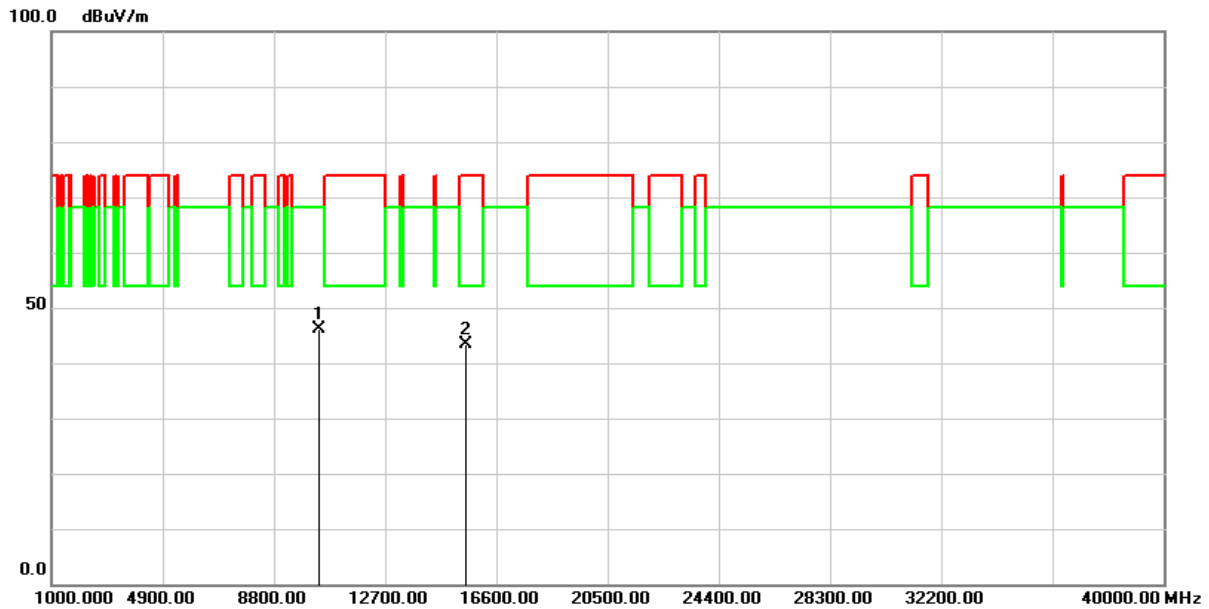


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10360.000 | 55.51 | -10.05 | 45.46 | 68.20 | -22.74 | peak |
| 2 | 15540.000 | 51.26 | -7.80 | 43.46 | 74.00 | -30.54 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH36(5180MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

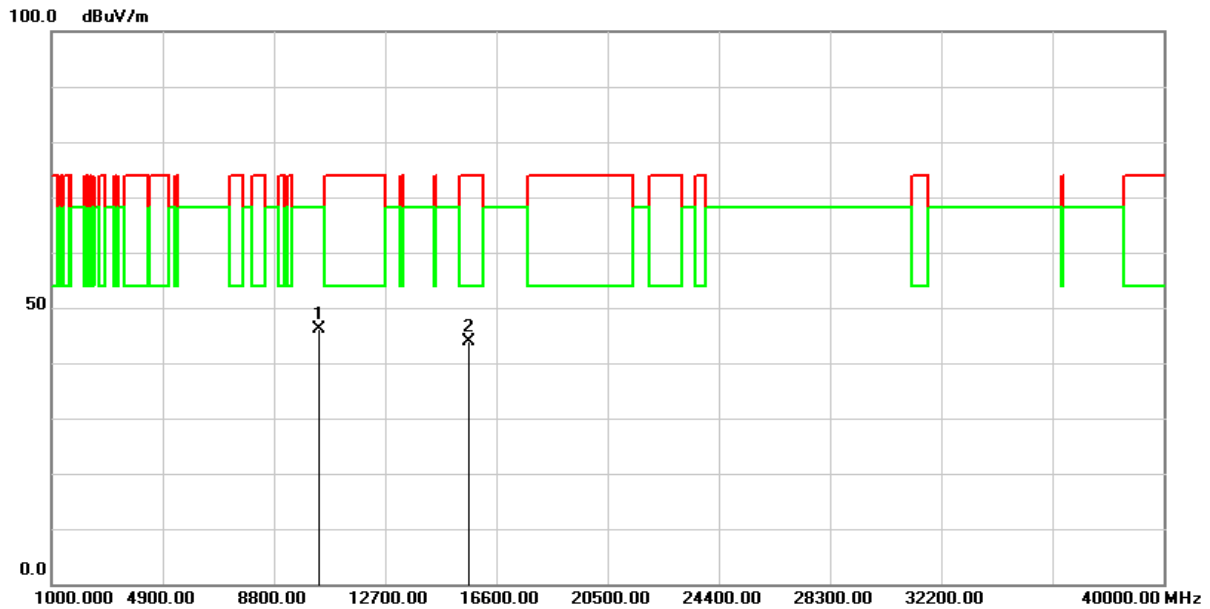


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10360.000 | 56.22 | -10.05 | 46.17 | 68.20 | -22.03 | peak |
| 2 | 15540.000 | 51.26 | -7.80 | 43.46 | 74.00 | -30.54 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH44(5200MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

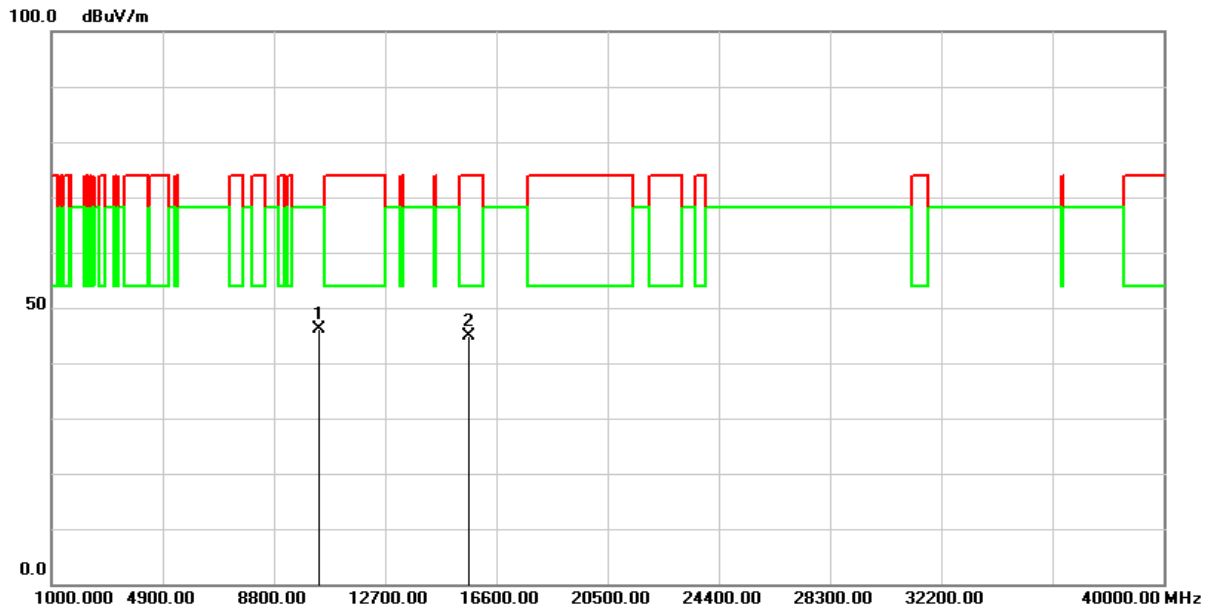


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10400.000 | 55.99 | -9.95 | 46.04 | 68.20 | -22.16 | peak |
| 2 | 15600.000 | 51.65 | -7.79 | 43.86 | 74.00 | -30.14 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH44(5200MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

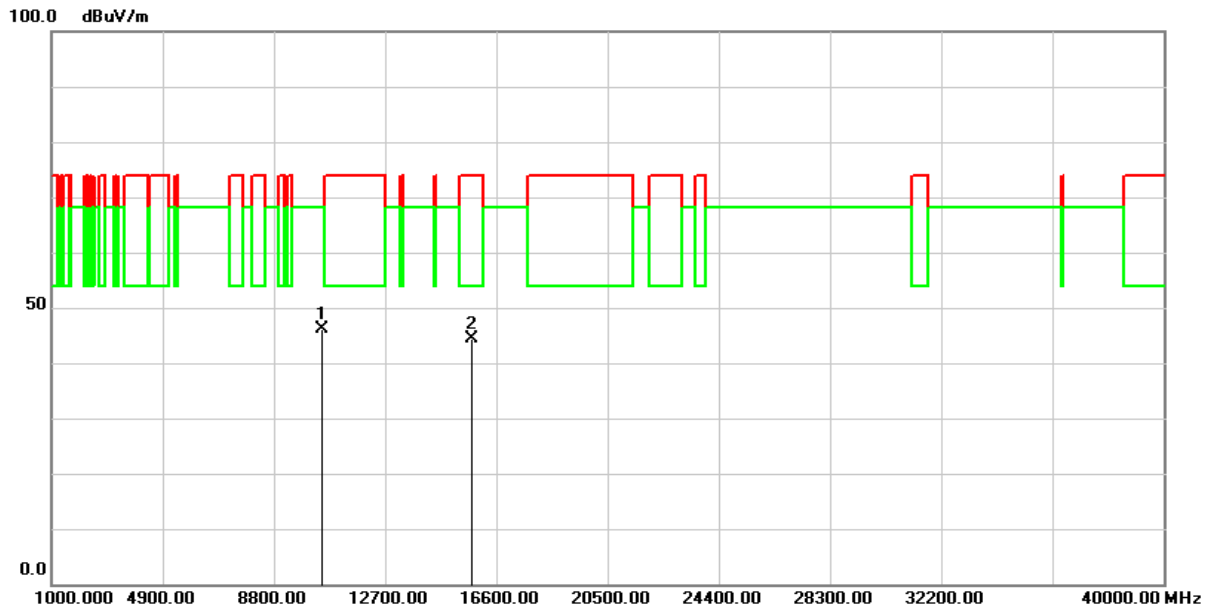


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10400.000 | 56.13 | -9.95 | 46.18 | 68.20 | -22.02 | peak |
| 2 | 15600.000 | 52.66 | -7.79 | 44.87 | 74.00 | -29.13 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH48(5240MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

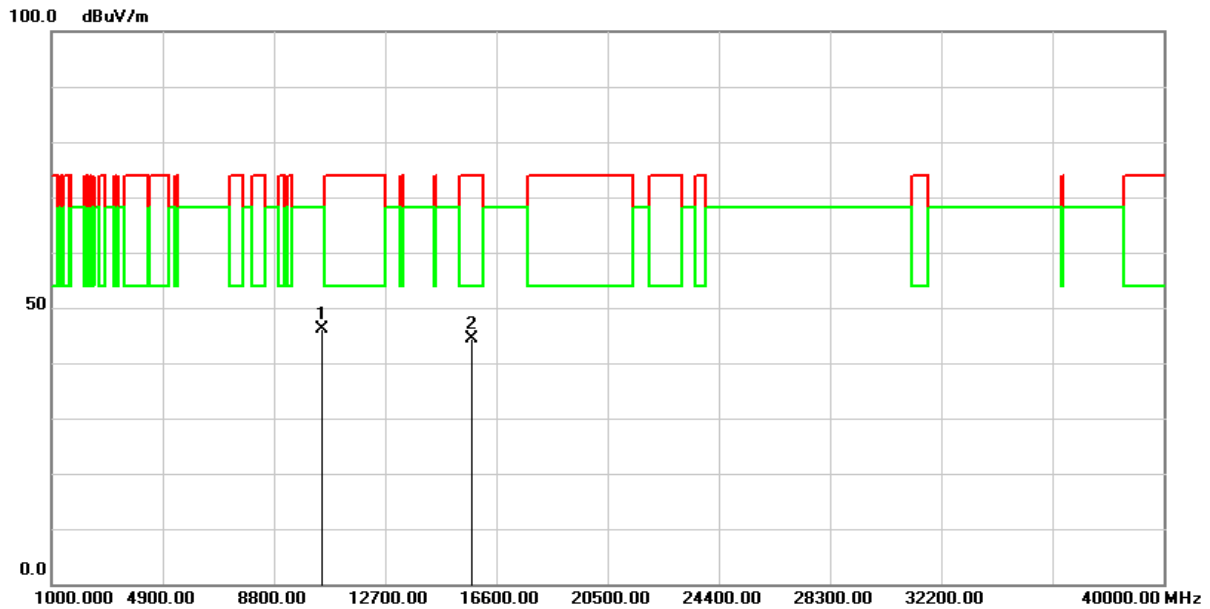


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10480.000 | 56.15 | -9.97 | 46.18 | 68.20 | -22.02 | peak |
| 2 | 15720.000 | 52.11 | -7.62 | 44.49 | 74.00 | -29.51 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH48(5240MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

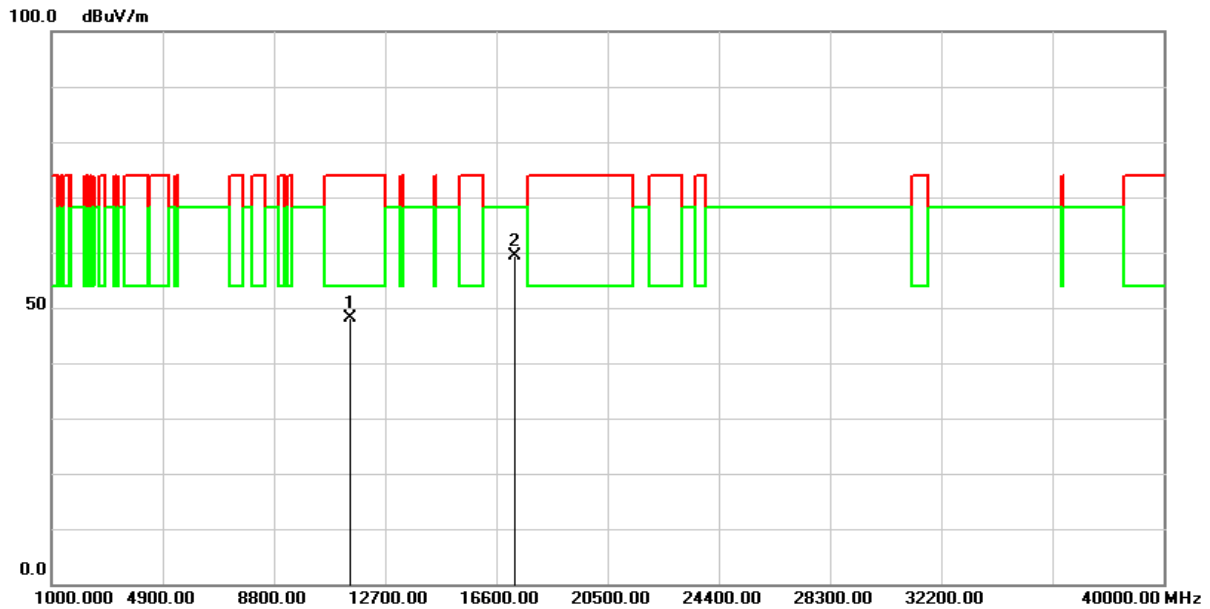


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10480.000 | 56.18 | -9.97 | 46.21 | 68.20 | -21.99 | peak |
| 2 | 15720.000 | 51.99 | -7.62 | 44.37 | 74.00 | -29.63 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

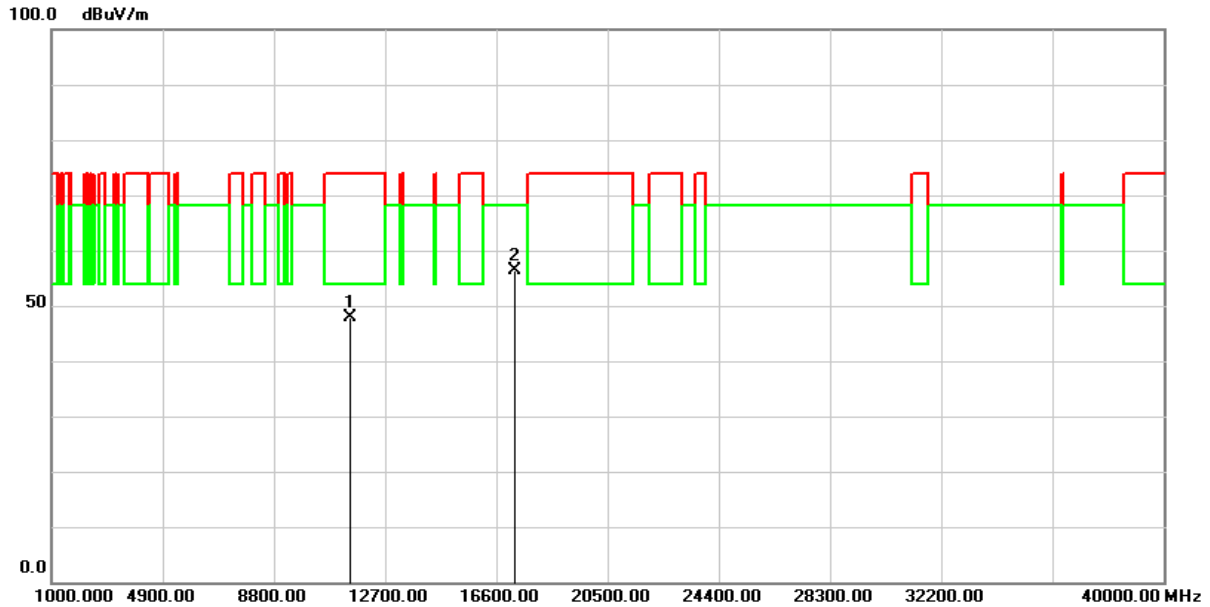


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11490.000 | 57.66 | -9.45 | 48.21 | 74.00 | -25.79 | peak |
| 2 | 17235.000 | 61.73 | -2.24 | 59.49 | 68.20 | -8.71 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH149(5745MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

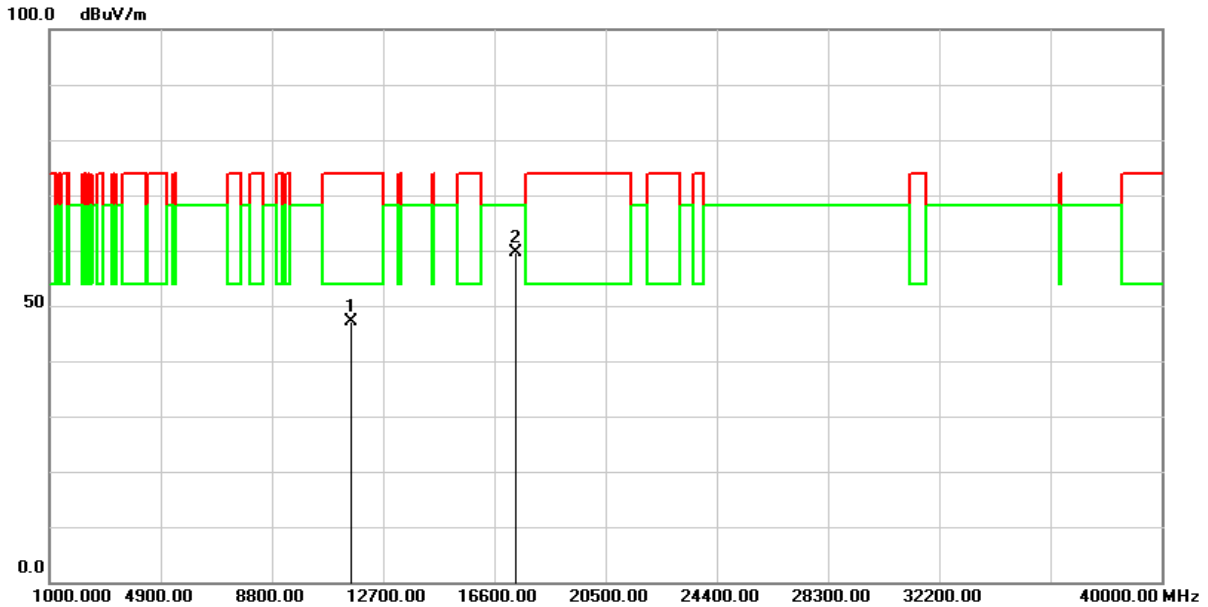


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11490.000 | 57.30 | -9.45 | 47.85 | 74.00 | -26.15 | peak |
| 2 | 17235.000 | 58.58 | -2.24 | 56.34 | 68.20 | -11.86 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH157(5785MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

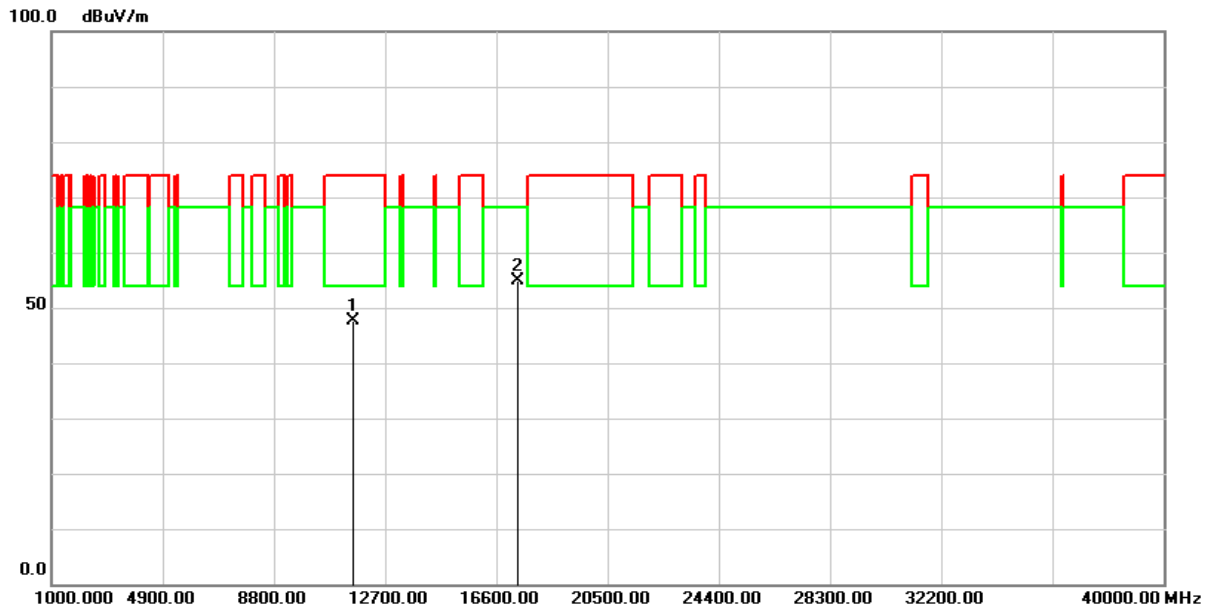


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11570.000 | 56.57 | -9.40 | 47.17 | 74.00 | -26.83 | peak |
| 2 | 17355.000 | 61.38 | -1.65 | 59.73 | 68.20 | -8.47 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH157(5785MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

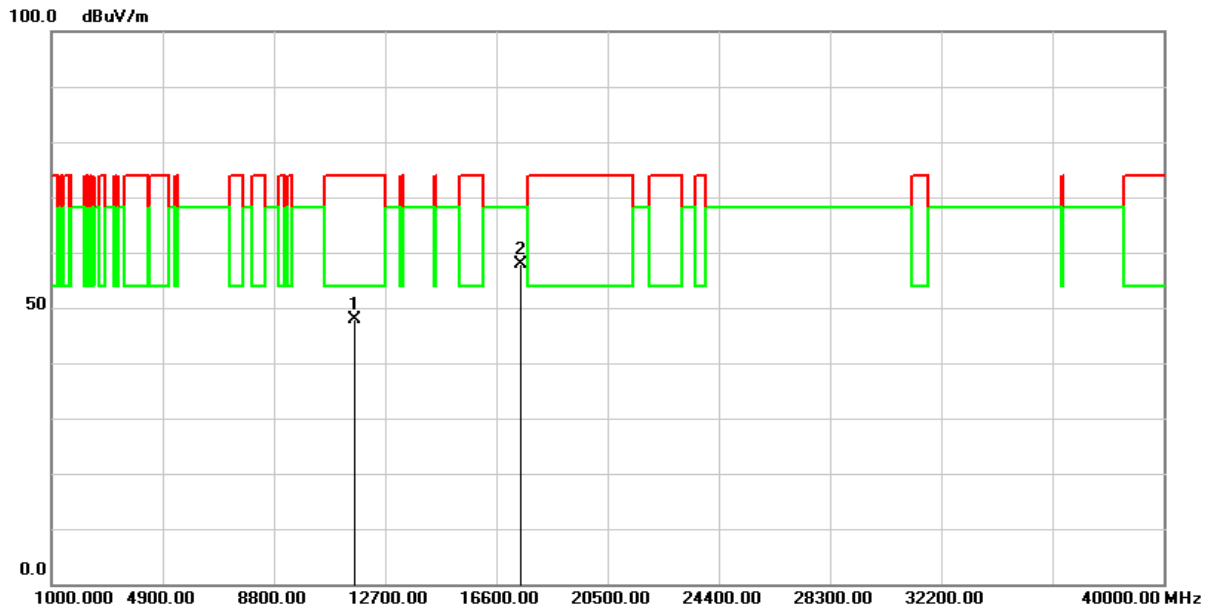


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11570.000 | 57.10 | -9.40 | 47.70 | 74.00 | -26.30 | peak |
| 2 | 17355.000 | 56.46 | -1.65 | 54.81 | 68.20 | -13.39 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

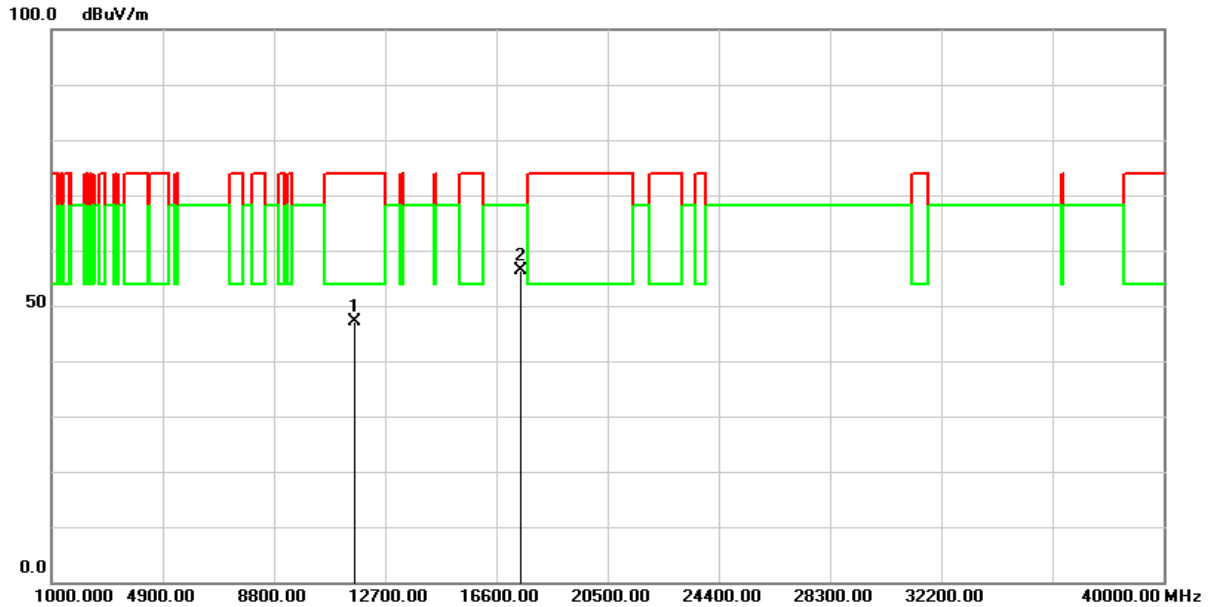


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11650.000 | 57.64 | -9.82 | 47.82 | 74.00 | -26.18 | peak |
| 2 | 17475.000 | 58.85 | -0.85 | 58.00 | 68.20 | -10.20 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT20) | Test Date : | 2022/09/20 |
| Test Channel : | CH165(5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

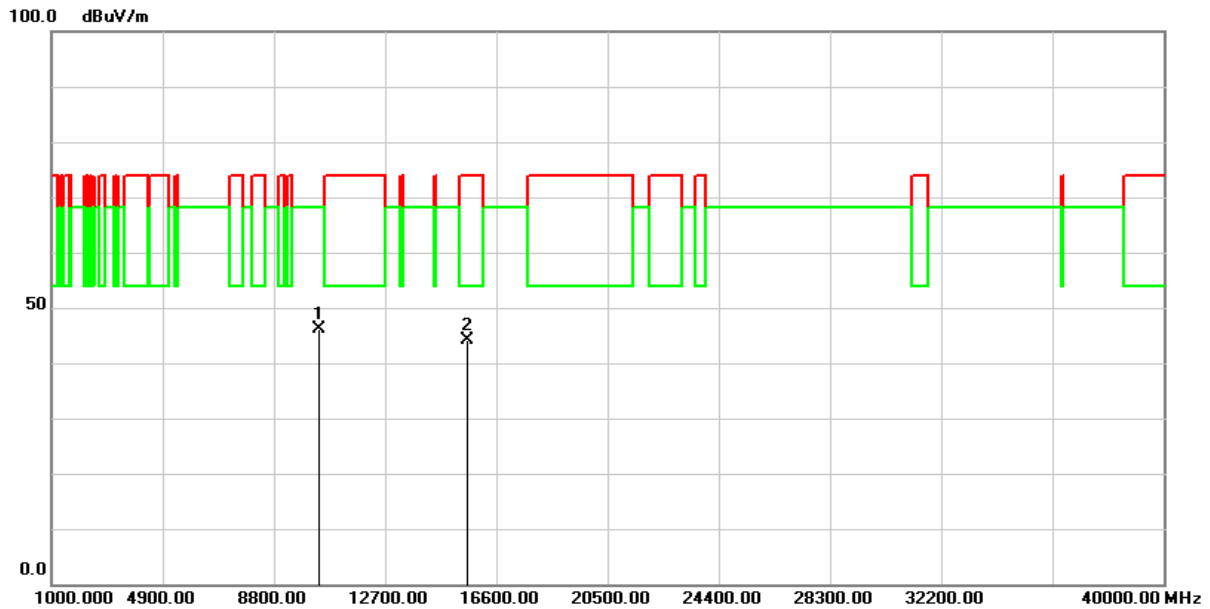


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11650.000 | 57.06 | -9.82 | 47.24 | 74.00 | -26.76 | peak |
| 2 | 17475.000 | 57.12 | -0.85 | 56.27 | 68.20 | -11.93 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH38(5190MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

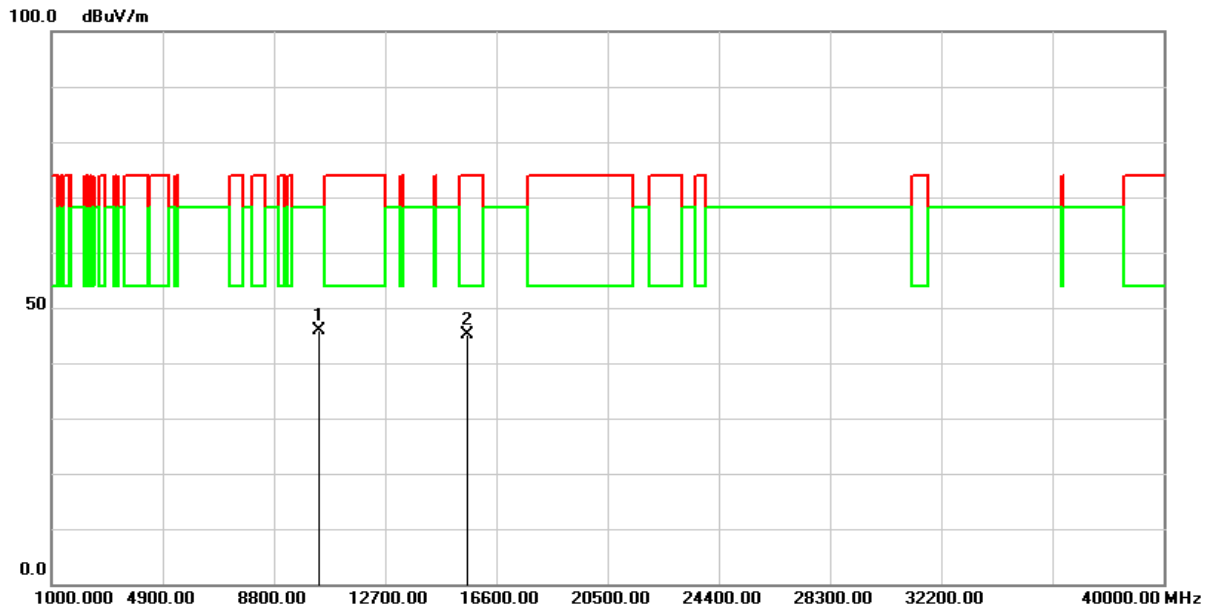


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10380.000 | 56.05 | -10.00 | 46.05 | 68.20 | -22.15 | peak |
| 2 | 15570.000 | 51.82 | -7.79 | 44.03 | 74.00 | -29.97 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH38(5190MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

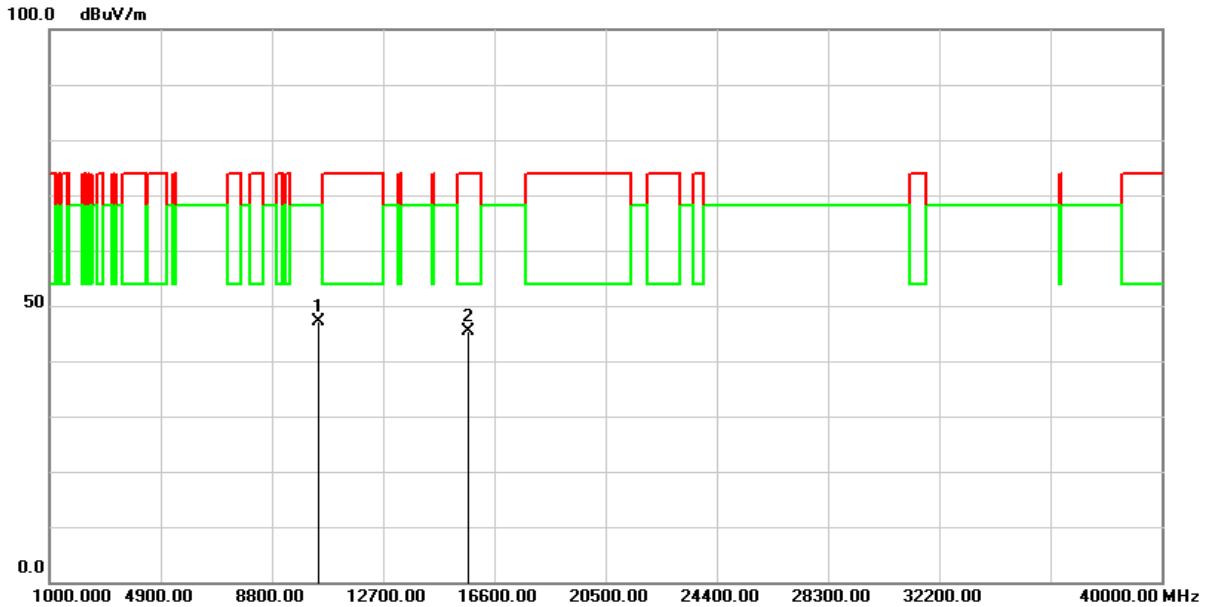


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10380.000 | 55.99 | -10.00 | 45.99 | 68.20 | -22.21 | peak |
| 2 | 15570.000 | 52.95 | -7.79 | 45.16 | 74.00 | -28.84 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH46(5230MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

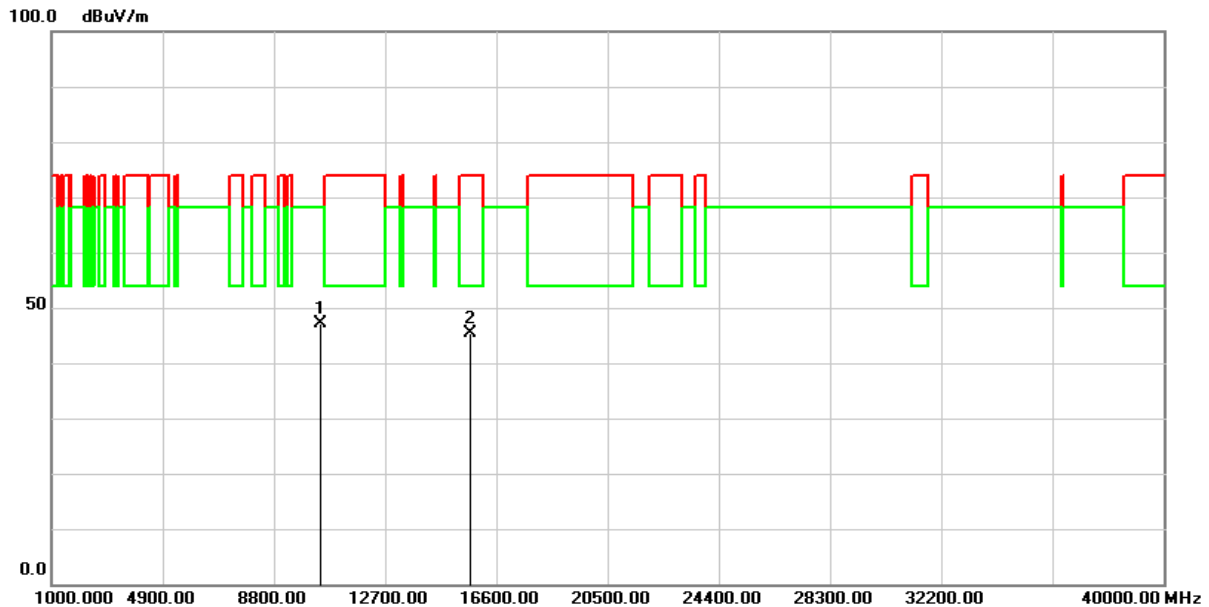


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10460.000 | 57.04 | -9.94 | 47.10 | 68.20 | -21.10 | peak |
| 2 | 15690.000 | 53.11 | -7.81 | 45.30 | 74.00 | -28.70 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH46(5230MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

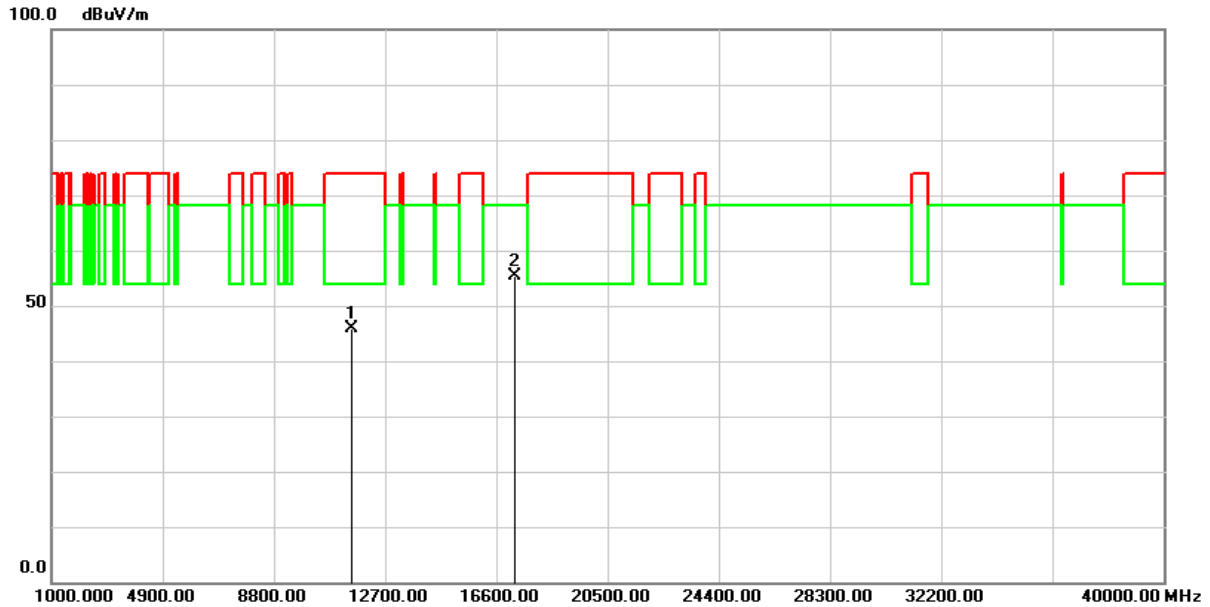


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10460.000 | 57.08 | -9.94 | 47.14 | 68.20 | -21.06 | peak |
| 2 | 15690.000 | 53.25 | -7.81 | 45.44 | 74.00 | -28.56 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH151(5755MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

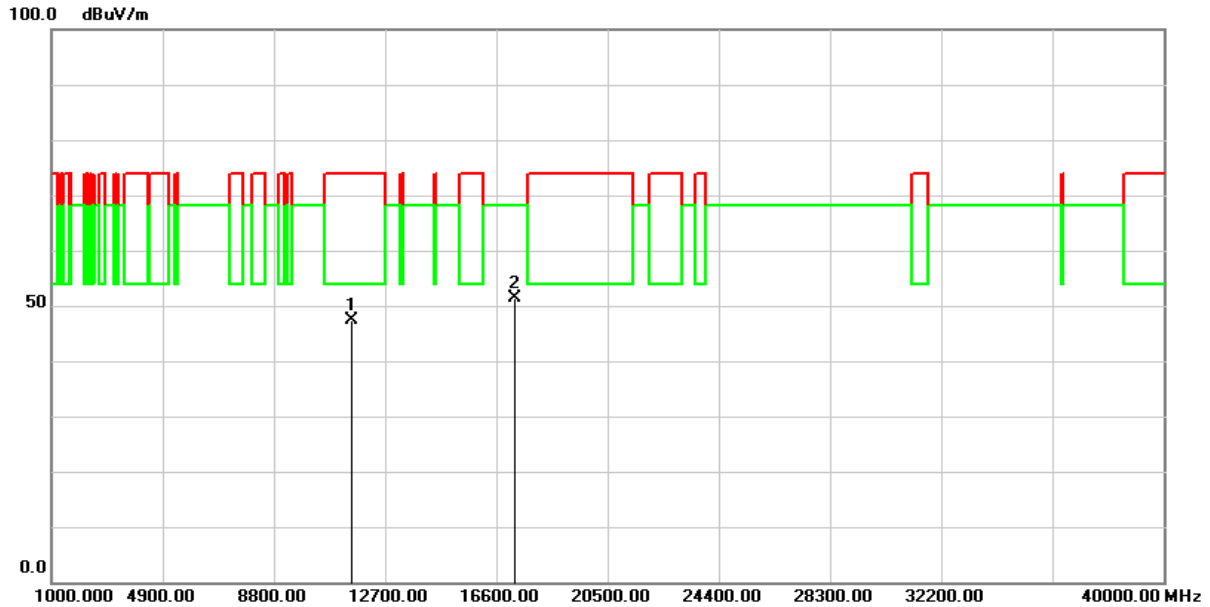


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11510.000 | 55.23 | -9.40 | 45.83 | 74.00 | -28.17 | peak |
| 2 | 17265.000 | 57.46 | -2.19 | 55.27 | 68.20 | -12.93 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH151(5755MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

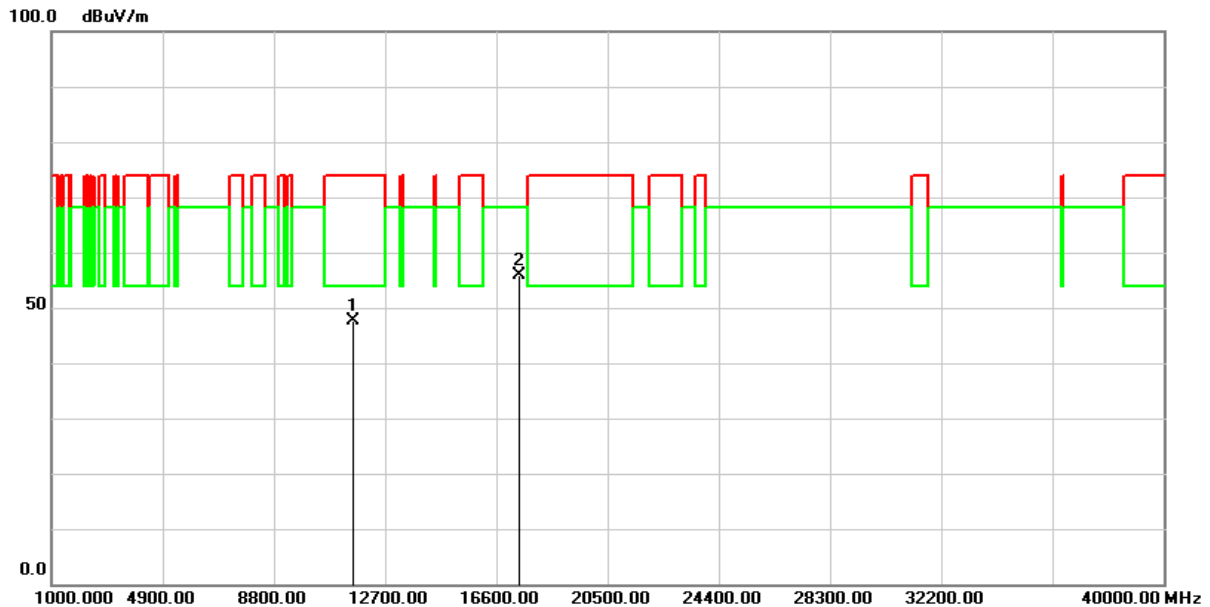


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11510.000 | 56.89 | -9.40 | 47.49 | 74.00 | -26.51 | peak |
| 2 | 17265.000 | 53.68 | -2.19 | 51.49 | 68.20 | -16.71 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH159(5795MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

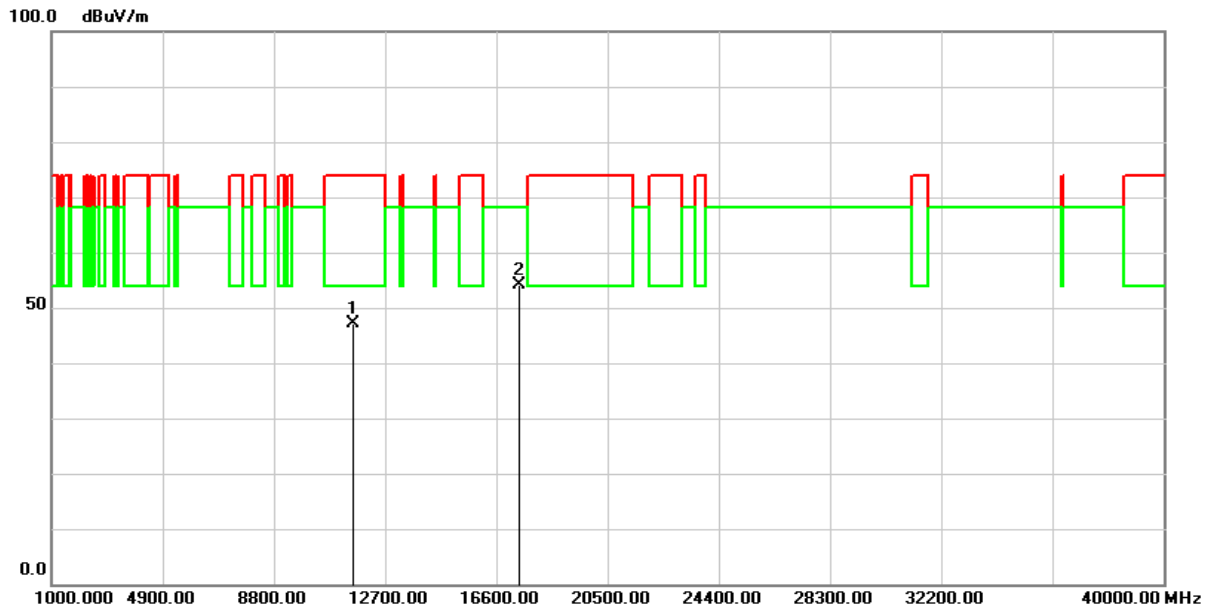


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11590.000 | 57.06 | -9.48 | 47.58 | 74.00 | -26.42 | peak |
| 2 | 17385.000 | 57.29 | -1.42 | 55.87 | 68.20 | -12.33 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT40) | Test Date : | 2022/09/20 |
| Test Channel : | CH159(5795MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

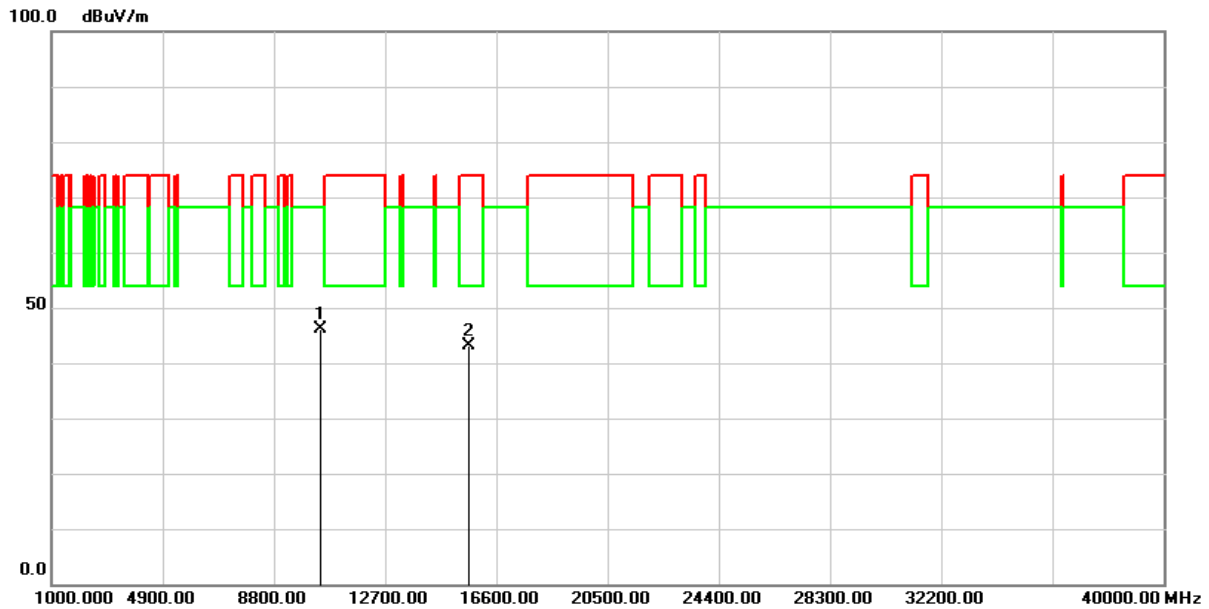


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11590.000 | 56.53 | -9.48 | 47.05 | 74.00 | -26.95 | peak |
| 2 | 17385.000 | 55.47 | -1.42 | 54.05 | 68.20 | -14.15 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2022/09/20 |
| Test Channel : | CH42 (5210MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

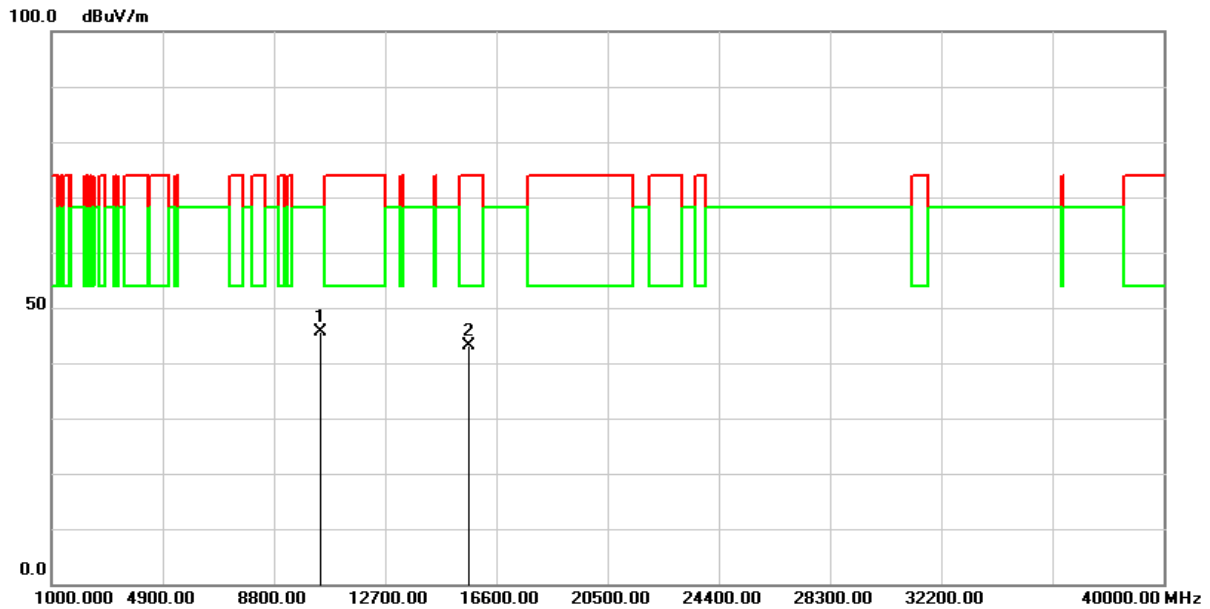


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10420.000 | 55.99 | -9.94 | 46.05 | 68.20 | -22.15 | peak |
| 2 | 15630.000 | 51.22 | -7.98 | 43.24 | 74.00 | -30.76 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2022/09/20 |
| Test Channel : | CH42 (5210MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

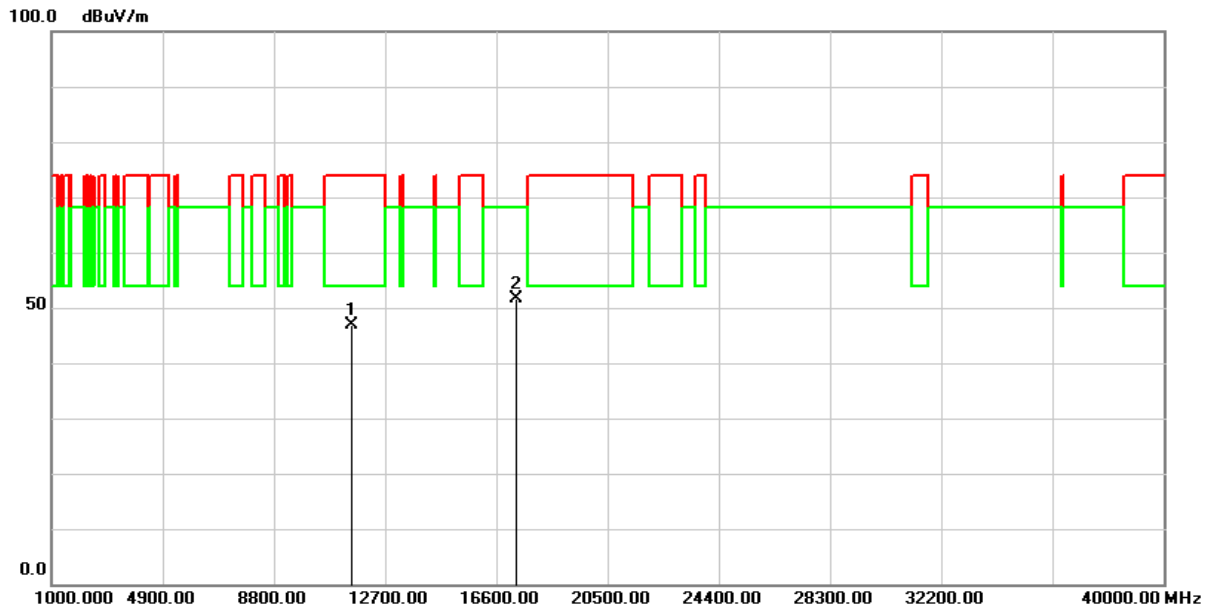


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 10420.000 | 55.59 | -9.94 | 45.65 | 68.20 | -22.55 | peak |
| 2 | 15630.000 | 51.14 | -7.98 | 43.16 | 74.00 | -30.84 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2022/09/20 |
| Test Channel : | CH155 (5775MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

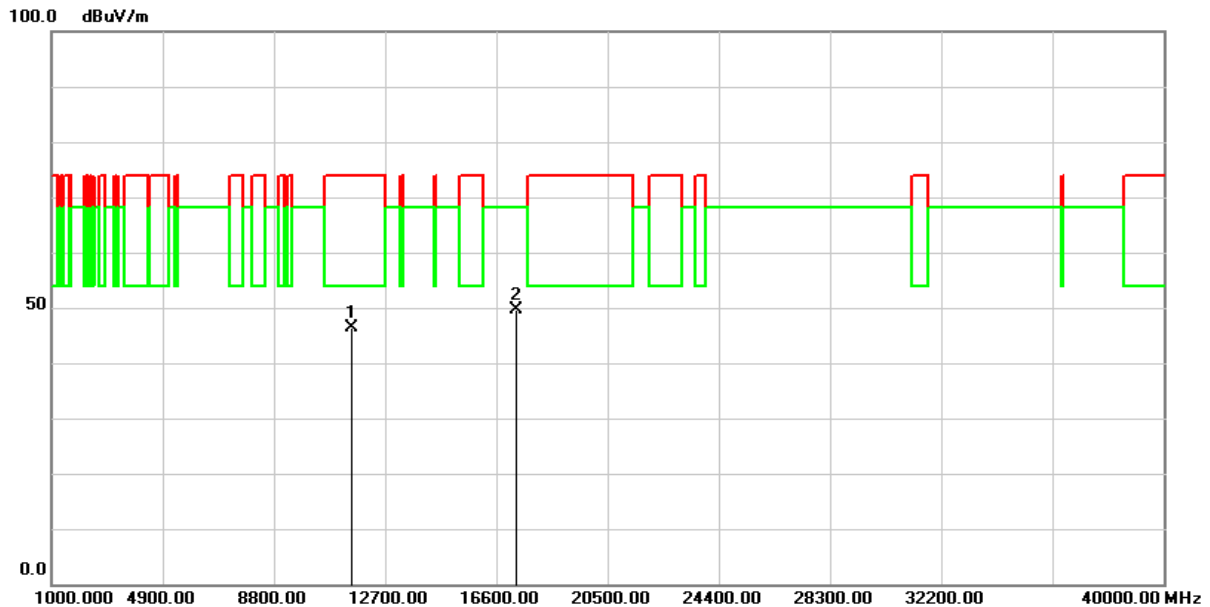


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11550.000 | 56.09 | -9.32 | 46.77 | 74.00 | -27.23 | peak |
| 2 | 17325.000 | 53.60 | -1.95 | 51.65 | 68.20 | -16.55 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|--------------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11ac VHT80) | Test Date : | 2022/09/20 |
| Test Channel : | CH155 (5775MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |



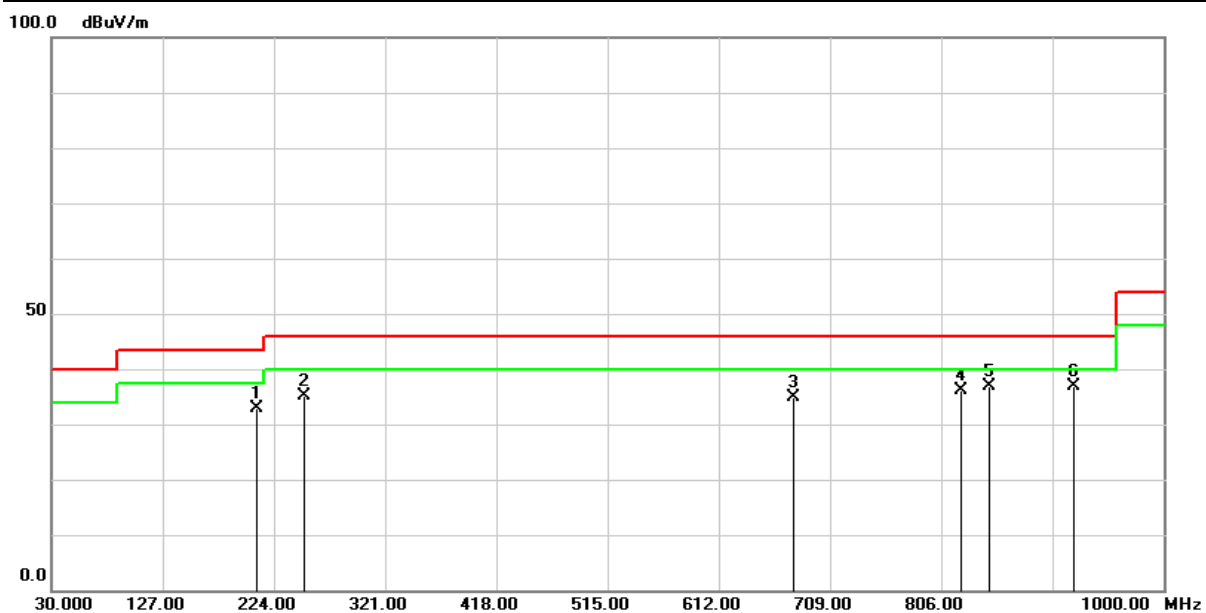
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 11550.000 | 55.80 | -9.32 | 46.48 | 74.00 | -27.52 | peak |
| 2 | 17325.000 | 51.53 | -1.95 | 49.58 | 68.20 | -18.62 | peak |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

Below 1GHz Data

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH48(5240MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

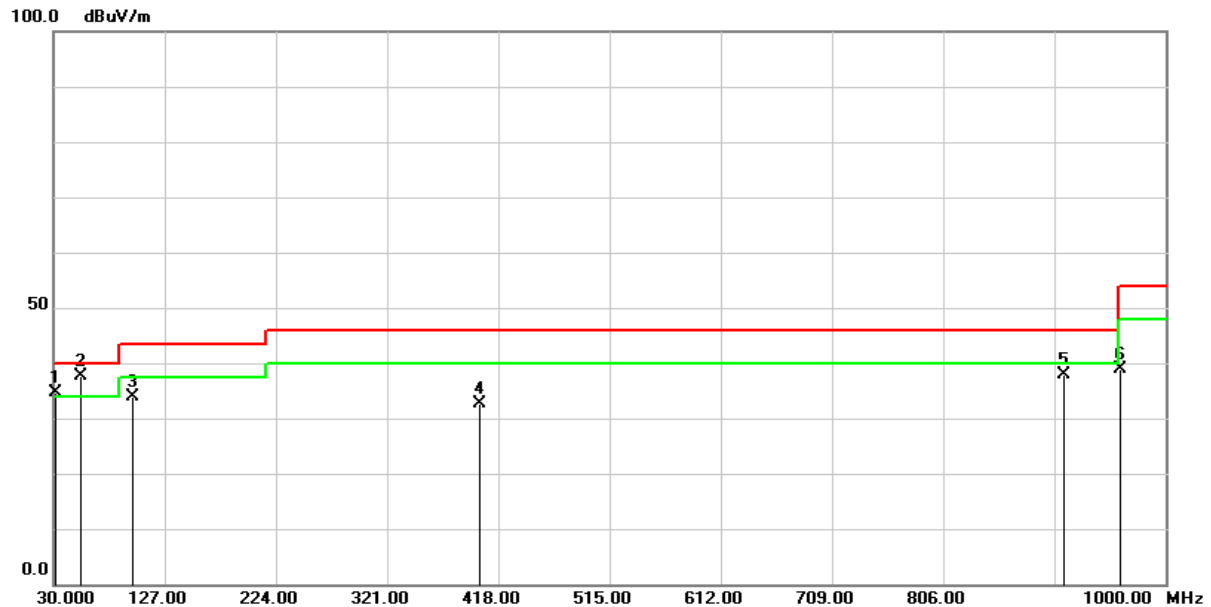


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 208.4800 | 47.27 | -14.30 | 32.97 | 43.50 | -10.53 | QP |
| 2 | 250.1900 | 47.24 | -12.11 | 35.13 | 46.00 | -10.87 | QP |
| 3 | 676.9900 | 35.74 | -0.92 | 34.82 | 46.00 | -11.18 | QP |
| 4 | 823.4600 | 33.99 | 2.06 | 36.05 | 46.00 | -9.95 | QP |
| 5 | 847.7100 | 34.45 | 2.53 | 36.98 | 46.00 | -9.02 | QP |
| 6 | 921.4300 | 33.01 | 3.86 | 36.87 | 46.00 | -9.13 | QP |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH48(5240MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |

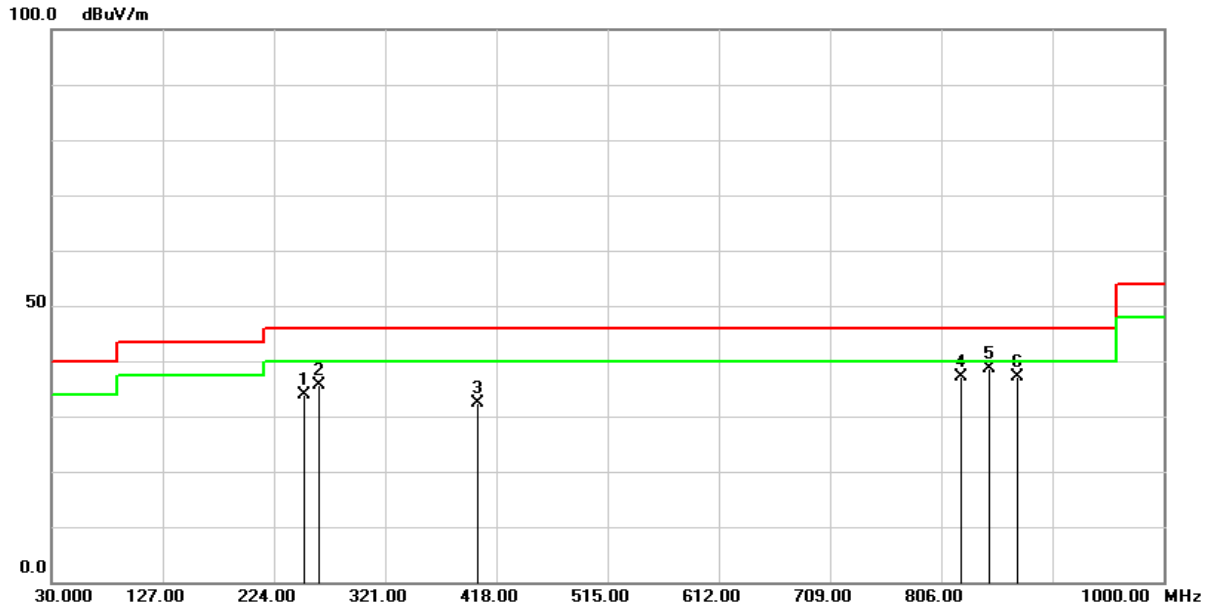


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 31.4202 | 47.67 | -13.04 | 34.63 | 40.00 | -5.37 | QP |
| 2 | 53.5170 | 47.98 | -10.46 | 37.52 | 40.00 | -2.48 | QP |
| 3 | 98.8700 | 49.81 | -15.90 | 33.91 | 43.50 | -9.59 | QP |
| 4 | 401.5100 | 39.86 | -7.17 | 32.69 | 46.00 | -13.31 | QP |
| 5 | 911.7300 | 34.42 | 3.57 | 37.99 | 46.00 | -8.01 | QP |
| 6 | 960.2300 | 34.34 | 4.58 | 38.92 | 53.90 | -14.98 | QP |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH165 (5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Horizontal | Relative Humidity : | 42.8 % |

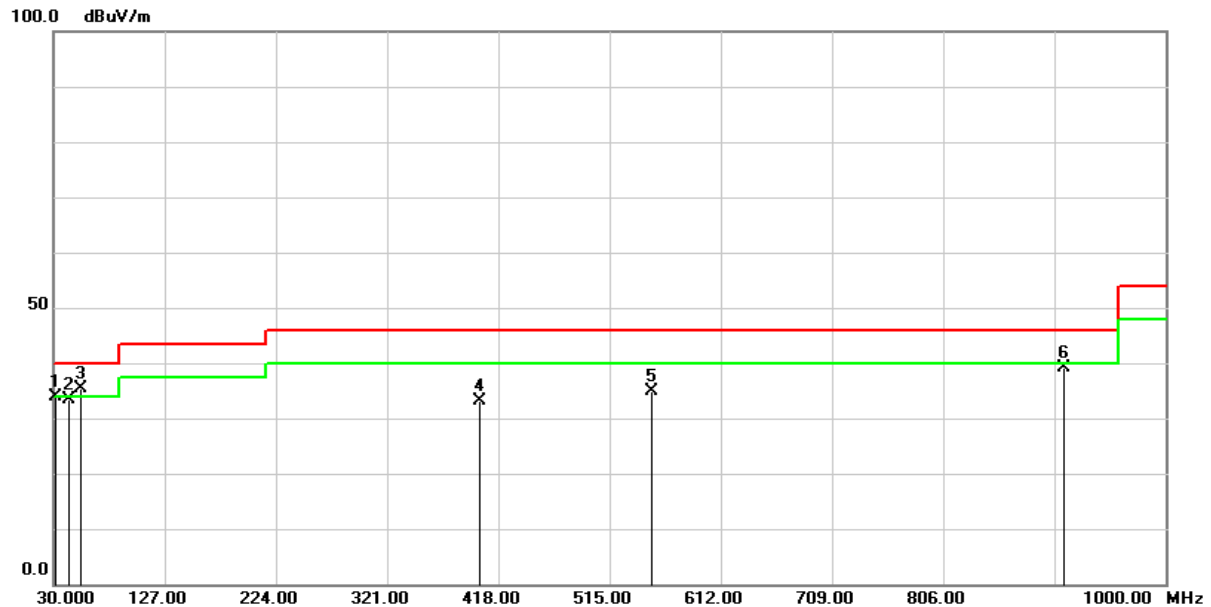


| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 250.1900 | 45.91 | -12.11 | 33.80 | 46.00 | -12.20 | QP |
| 2 | 263.7700 | 47.19 | -11.49 | 35.70 | 46.00 | -10.30 | QP |
| 3 | 401.5100 | 39.59 | -7.17 | 32.42 | 46.00 | -13.58 | QP |
| 4 | 823.4600 | 34.95 | 2.06 | 37.01 | 46.00 | -8.99 | QP |
| 5 | 847.7100 | 36.10 | 2.53 | 38.63 | 46.00 | -7.37 | QP |
| 6 | 872.9300 | 34.62 | 2.62 | 37.24 | 46.00 | -8.76 | QP |

Remark :

1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

| | | | |
|-----------------------|-------------------|----------------------------|------------|
| Test Mode : | Transmit(802.11a) | Test Date : | 2022/09/20 |
| Test Channel : | CH165 (5825MHz) | Temperature : | 23.6 °C |
| Polarization : | Vertical | Relative Humidity : | 42.8 % |



| No. | Frequency (MHz) | Reading (dBuV/m) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|------------------|-----------------------|-----------------|----------------|-------------|--------|
| 1 | 31.4110 | 47.04 | -13.04 | 34.00 | 40.00 | -6.00 | QP |
| 2 | 43.7990 | 44.89 | -11.59 | 33.30 | 40.00 | -6.70 | QP |
| 3 | 53.5630 | 45.74 | -10.46 | 35.28 | 40.00 | -4.72 | QP |
| 4 | 401.5100 | 40.18 | -7.17 | 33.01 | 46.00 | -12.99 | QP |
| 5 | 551.8600 | 38.42 | -3.65 | 34.77 | 46.00 | -11.23 | QP |
| 6 | 911.7300 | 35.50 | 3.57 | 39.07 | 46.00 | -6.93 | QP |

Remark :

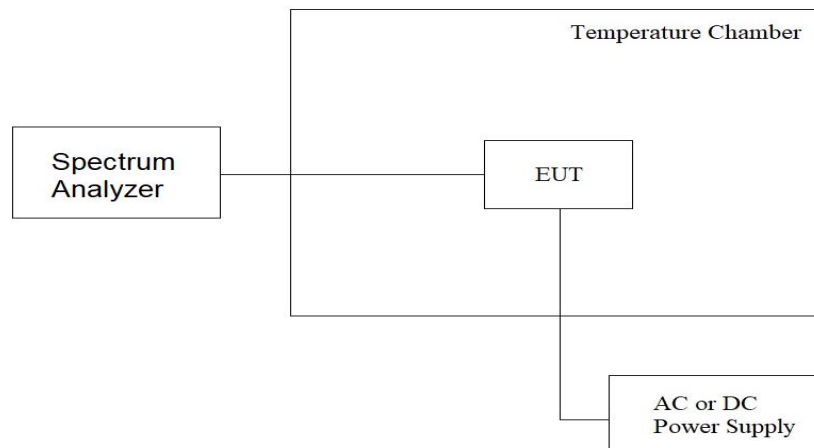
1. Correction Factor = Antenna factor + Cable loss – Amplifier gain
2. Result Value = Reading Level + Correct Factor
3. Margin Level = Result Value – Limit Value
4. The other emission levels were very low against the limit

2.6 Frequency Stability

2.6.1 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

2.6.2 Test Setup



2.6.3 Test Procedure

1. The test shall be performed under 85% ~115% of the nominal voltage.
2. Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

2.6.4 Test Result

Band I selected frequency: 5200MHz

| Temperature (°C) | Voltage (V) | Tolerance (ppm) | | | | Limit (ppm) | Result |
|------------------|-------------|-----------------|---------|--------|---------|-------------|--------|
| | | Start | 2 min | 5 min | 10 min | | |
| 20 | 42.5 | -9.228 | -8.494 | -8.301 | -0.811 | 20 | Pass |
| | 48 | -13.629 | 12.722 | -8.050 | 3.031 | 20 | Pass |
| | 57 | -1.737 | -18.668 | 9.035 | -10.541 | 20 | Pass |

| Temperature (°C) | Voltage (V) | Tolerance (ppm) | | | | Limit (ppm) | Result |
|------------------|-------------|-----------------|---------|---------|---------|-------------|--------|
| | | Start | 2 min | 5 min | 10 min | | |
| -40 | 48 | 5.811 | 16.429 | -14.479 | -14.826 | 20 | Pass |
| -20 | | 15.019 | 13.977 | 11.641 | 17.452 | 20 | Pass |
| -10 | | -8.803 | 14.479 | -15.154 | -12.394 | 20 | Pass |
| 0 | | 8.861 | 7.606 | -8.629 | -15.830 | 20 | Pass |
| 10 | | -11.178 | 14.170 | -2.915 | -12.124 | 20 | Pass |
| 20 | | -6.873 | -15.830 | 11.448 | 14.653 | 20 | Pass |
| 30 | | 4.865 | 7.645 | 10.869 | 8.919 | 20 | Pass |
| 40 | | 0.097 | -4.575 | 11.274 | -2.606 | 20 | Pass |
| 55 | | 7.510 | 4.266 | -2.297 | -1.467 | 20 | Pass |

2.7 Antenna Requirement

2.7.1 Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

An intentional radiator shall be designed to ensure that no antenna other than as furnished by the responsible party shall be used with the device. If transmitting antennas of directional gain greater than 6dBi are using the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi, for compliance to FCC 47CFR 15.407 (a) requirements.

2.7.2 Antenna Connected Construction

Non-standard antenna connector is used.

2.7.3 Antenna Gain

| No. | Manufacturer | Model No. | Antenna Type | Peak Gain |
|-----|--------------|--------------------|---------------|---|
| 1 | INPAQ | RFMTA211200NNLB001 | Metal Antenna | 3.78 dBi for 5.15~5.25GHz 3.78 dBi for 5.725~5.85GHz |

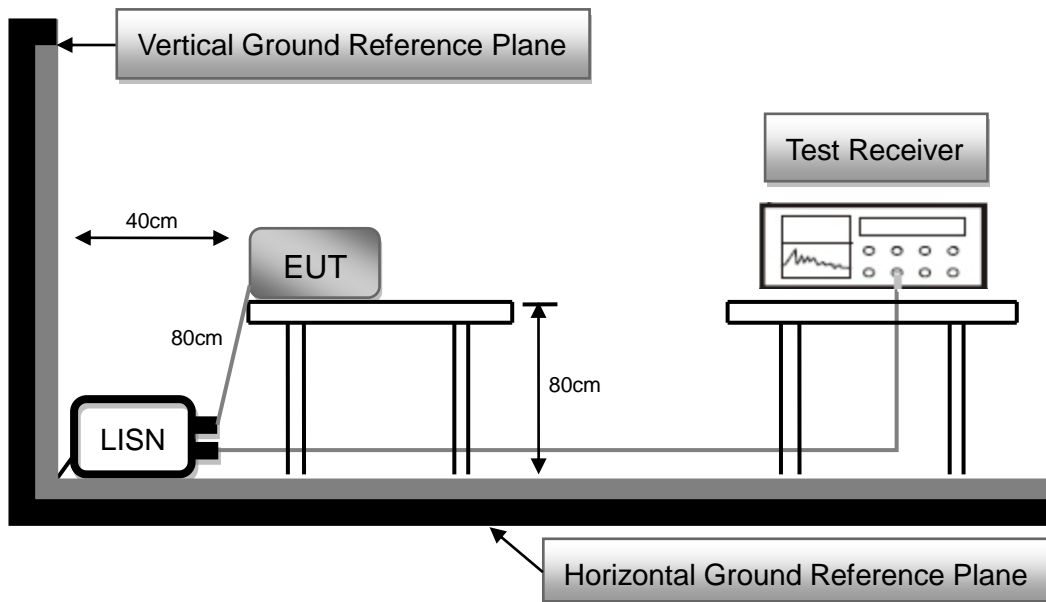
2.8 AC Conducted Emissions Measurement

2.8.1 Limit

| Frequency (MHz) | FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit | |
|-----------------|---|-----------|
| | Quasi-peak | Average |
| 0.15 to 0.5 | 66 to 56* | 56 to 46* |
| 0.50 to 5.0 | 56 | 46 |
| 5.0 to 30.0 | 60 | 50 |

*Decreases with the logarithm of the frequency

2.8.2 Test Setup

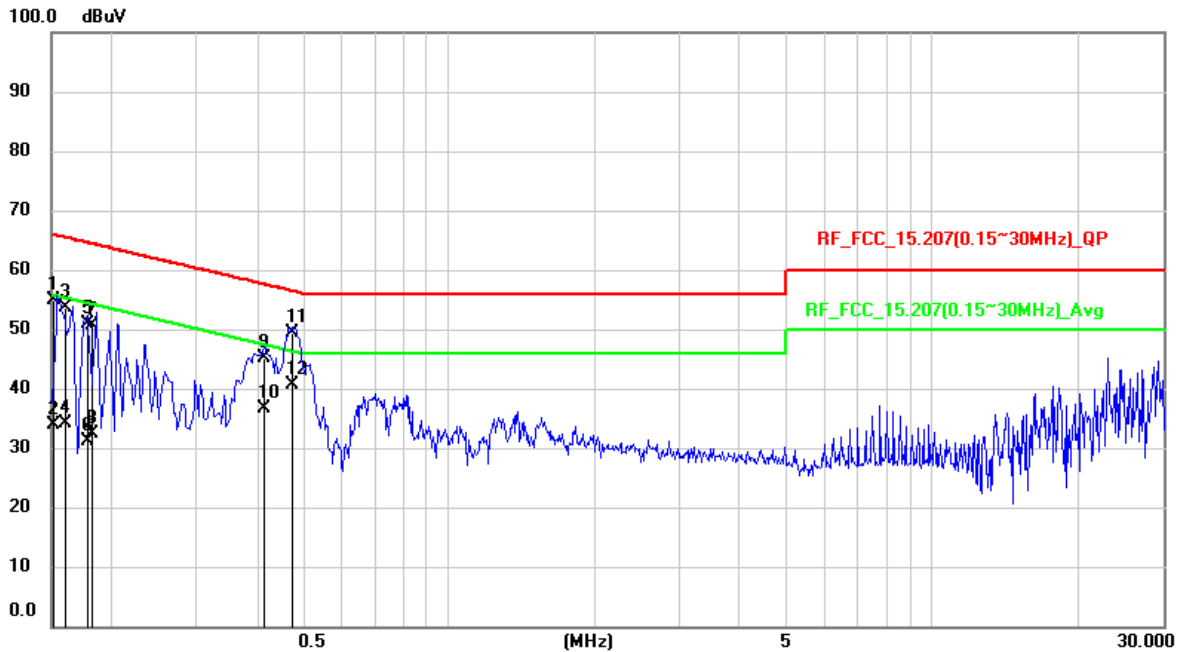


2.8.3 Test Procedure

1. The EUT was placed 0.8 meter height wooden table from the horizontal ground plane with EUT being connected to power source through a line impedance stabilization network (LISN). The LISN at least be 80 cm from nearest chassis of EUT.
2. The line impedance stabilization network (LISN) provides 50 ohm/50uH of coupling impedance for the measuring instrument. All other support equipments powered from additional LISN(s).
3. Interrelating cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle. All I/O cables were positioned to simulate typical usage.
4. All I/O cables that are not connected to a peripheral shall be bundle in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
5. The EMI test receiver connected to LISN powering the EUT. The actual test configuration, please refer to EUT test photos.
6. The receiver scanned from 150kHz to 30MHz for emissions in each of test modes. Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz. A scan was taken on both power lines, Line and Neutral, recording at least six highest emissions.
7. The EUT and cable configuration of the above highest emission levels were recorded. The Test Data of the worst case was recorded.

2.8.4 Test Result

| | | | |
|-----------------------|--------------------------|-------------------------|-------------|
| Test Voltage : | 120Vac, 60Hz | Frequency Range: | 0.15-30 MHz |
| Test Mode : | Transmit (802.11a 6Mbps) | 6dB Bandwidth : | 9 kHz |
| Test Date : | 2023/09/11 | Phase : | L |
| Temperature : | 25.2°C | Humidity : | 43 % |

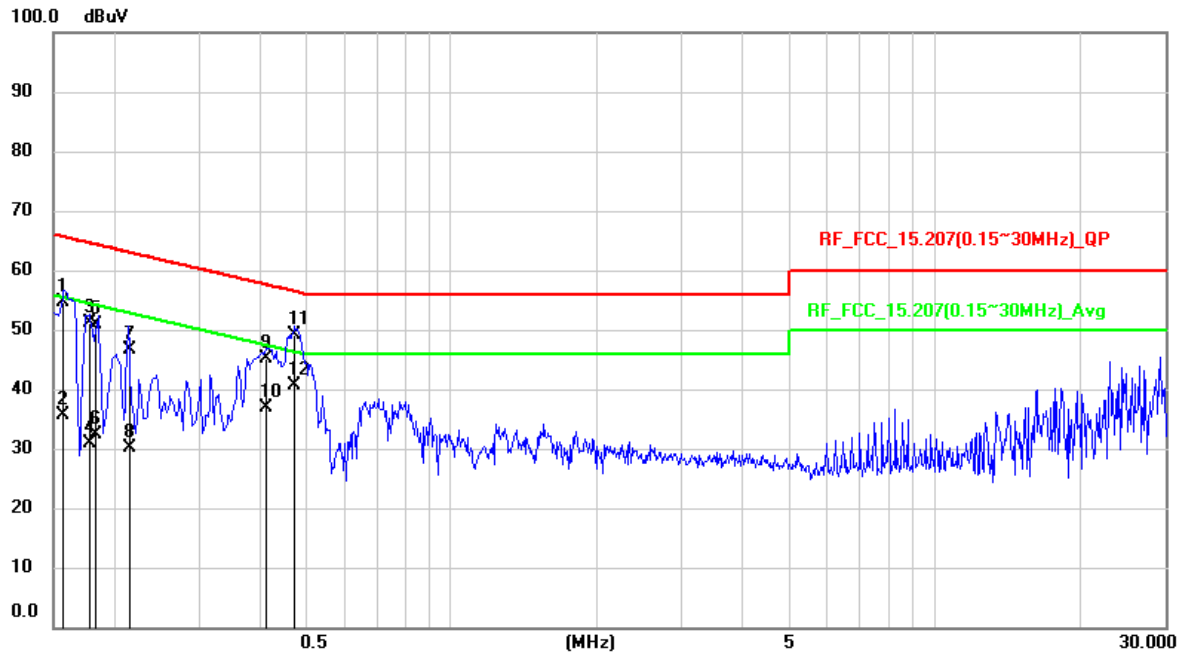


| No. | Frequency (MHz) | Reading Level (dBuV) | Correct Factor (dB) | Measurement (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------------|---------------------|--------------------|--------------|-------------|----------|
| 1 | 0.151 | 44.96 | 9.84 | 54.8 | 65.94 | -11.14 | QP |
| 2 | 0.151 | 24.04 | 9.84 | 33.88 | 55.94 | -22.06 | AVG |
| 3 | 0.1614 | 43.84 | 9.84 | 53.68 | 65.39 | -11.71 | QP |
| 4 | 0.1614 | 24.22 | 9.84 | 34.06 | 55.39 | -21.33 | AVG |
| 5 | 0.1777 | 41.17 | 9.82 | 50.99 | 64.59 | -13.6 | QP |
| 6 | 0.1777 | 21.24 | 9.82 | 31.06 | 54.59 | -23.53 | AVG |
| 7 | 0.1822 | 40.84 | 9.82 | 50.66 | 64.38 | -13.72 | QP |
| 8 | 0.1822 | 22.46 | 9.82 | 32.28 | 54.38 | -22.1 | AVG |
| 9 | 0.4121 | 35.29 | 9.84 | 45.13 | 57.61 | -12.48 | QP |
| 10 | 0.4121 | 26.87 | 9.84 | 36.71 | 47.61 | -10.9 | AVG |
| 11 | 0.4756 | 39.54 | 9.84 | 49.38 | 56.42 | -7.04 | QP |
| 12 | 0.4756 | 30.88 | 9.84 | 40.72 | 46.42 | -5.7 | AVG |

Remark:

1. QP = Quasi Peak, AVG = Average
2. Correction Factor = Insertion loss of LISN + Cable loss
3. Measurement Value = Reading Level + Correct Factor
4. Margin Level = Measurement Value – Limit Value

| | | | |
|-----------------------|--------------------------|-------------------------|-------------|
| Test Voltage : | 120Vac, 60Hz | Frequency Range: | 0.15-30 MHz |
| Test Mode : | Transmit (802.11a 6Mbps) | 6dB Bandwidth : | 9 kHz |
| Test Date : | 2023/09/11 | Phase : | N |
| Temperature : | 25.2°C | Humidity : | 43 % |



| No. | Frequency (MHz) | Reading Level (dBuV) | Correct Factor (dB) | Measurement (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------------|---------------------|--------------------|--------------|-------------|----------|
| 1 | 0.1579 | 44.84 | 9.84 | 54.68 | 65.57 | -10.89 | QP |
| 2 | 0.1579 | 25.88 | 9.84 | 35.72 | 55.57 | -19.85 | AVG |
| 3 | 0.1771 | 41.25 | 9.83 | 51.08 | 64.62 | -13.54 | QP |
| 4 | 0.1771 | 20.96 | 9.83 | 30.79 | 54.62 | -23.83 | AVG |
| 5 | 0.183 | 40.98 | 9.83 | 50.81 | 64.35 | -13.54 | QP |
| 6 | 0.183 | 22.44 | 9.83 | 32.27 | 54.35 | -22.08 | AVG |
| 7 | 0.2154 | 36.9 | 9.83 | 46.73 | 62.99 | -16.26 | QP |
| 8 | 0.2154 | 20.3 | 9.83 | 30.13 | 52.99 | -22.86 | AVG |
| 9 | 0.4113 | 35.19 | 9.84 | 45.03 | 57.62 | -12.59 | QP |
| 10 | 0.4113 | 26.96 | 9.84 | 36.8 | 47.62 | -10.82 | AVG |
| 11 | 0.4767 | 39.41 | 9.84 | 49.25 | 56.4 | -7.15 | QP |
| 12 | 0.4767 | 30.75 | 9.84 | 40.59 | 46.4 | -5.81 | AVG |

Remark:

1. QP = Quasi Peak, AVG = Average
2. Correction Factor = Insertion loss of LISN + Cable loss
3. Measurement Value = Reading Level + Correct Factor
4. Margin Level = Measurement Value – Limit Value

--- END ---