



Test report No.: 2330006R-RFUSV03S-A

# TEST REPORT

|                                              |                                                                                                                          |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Product Name                                 | 5G Enterprise Router                                                                                                     |
| Trademark                                    | BEC, Billion                                                                                                             |
| Model and /or type reference                 | AirConnect® 8112, BEC AirConnect® 8112, BEC 8112                                                                         |
| FCC ID                                       | QI3BEC-8112                                                                                                              |
| Applicant's name / address                   | Billion Electric Co., Ltd.<br>8F., No.192, Sec. 2, Zhongxing Rd., Xindian Dist., New Taipei City<br>231, Taiwan (R.O.C.) |
| Manufacturer's name                          | Billion Electric Co., Ltd.                                                                                               |
| Test method requested, standard              | FCC CFR Title 47 Part 15 Subpart E<br>ANSI C63.4: 2014, ANSI C63.10: 2013<br>KDB Publication 789033                      |
| Verdict Summary                              | IN COMPLIANCE                                                                                                            |
| Documented By<br>(Supervisor / Jinn Chen)    | <i>Jinn Chen</i>                                                                                                         |
| Tested By<br>(Senior Engineer / Ivan Chuang) | <i>Ivan Chuang</i>                                                                                                       |
| Approved By<br>(Senior Engineer / Jack Hsu)  | <i>Jack Hsu</i>                                                                                                          |
| Date of Receipt                              | 2023/03/01                                                                                                               |
| Date of Issue                                | 2023/06/21                                                                                                               |
| Report Version                               | V1.0                                                                                                                     |

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Appendix 1: EUT Test Photographs  
Appendix 2: Product Photos-Please refer to the file: 2330006R-Product Photos

## Revision History

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| Report No.          | Version | Description              | Issued Date |
|---------------------|---------|--------------------------|-------------|
| 2330006R-RFUSV03S-A | V1.0    | Initial issue of report. | 2023/06/21  |

## 1. General Information

### 1.1. EUT Description

|                              |                                                                                                                                                                                                                    |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name                 | 5G Enterprise Router                                                                                                                                                                                               |
| Trademark                    | BEC, Billion                                                                                                                                                                                                       |
| Model and /or type reference | AirConnect® 8112, BEC AirConnect® 8112, BEC 8112                                                                                                                                                                   |
| EUT Rated Voltage            | AC 100-240V / 50-60Hz                                                                                                                                                                                              |
| EUT Test Voltage             | AC 120V / 60Hz                                                                                                                                                                                                     |
| Frequency Range              | 802.11a/n/ac-20 MHz: 5180-5240 MHz, 5745-5825 MHz<br>802.11n/ac-40 MHz: 5190-5230 MHz, 5755-5795 MHz<br>802.11ac-80 MHz: 5210 MHz, 5775 MHz                                                                        |
| Number of Channels           | 802.11a/n/ac-20 MHz: 9CH, 802.11n/ac-40 MHz: 4CH<br>802.11ac-80 MHz: 2CH                                                                                                                                           |
| Data Rate                    | 802.11a: 6-54 Mbps, 802.11n: up to 600 MHz<br>802.11ac: up to 1733.3 MHz                                                                                                                                           |
| Type of Modulation           | OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM                                                                                                                                                                             |
| Channel Control              | Auto                                                                                                                                                                                                               |
| Adapter                      | MFR: BILLION, M/N: PA1024-150HUB200<br>Input: AC 100-240V~0.6A 50-60Hz<br>Output: 15V  2A 30W<br>Cable out: Non-shielded, 1.5 m |

#### Antenna List

| No. | Manufacturer                    | Part No.              | Antenna Type | Peak Gain                                              |
|-----|---------------------------------|-----------------------|--------------|--------------------------------------------------------|
| 1   | GRAND-TEK<br>TECHNOLOGY CO.,LTD | OA-5G-EB-01-BL (ANT5) | PCB          | 4.0 dBi for 5150-5250 MHz<br>4.5 dBi for 5725-5850 MHz |
| 2   | GRAND-TEK<br>TECHNOLOGY CO.,LTD | OA-5G-EB-01-BL (ANT6) | PCB          | 3.6 dBi for 5150-5250 MHz<br>4.3 dBi for 5725-5850 MHz |
| 3   | GRAND-TEK<br>TECHNOLOGY CO.,LTD | OA-5G-EB-01-BL (ANT7) | PCB          | 2.8 dBi for 5150-5250 MHz<br>3.1 dBi for 5725-5850 MHz |
| 4   | GRAND-TEK<br>TECHNOLOGY CO.,LTD | OA-5G-EB-01-BL (ANT8) | PCB          | 2.3 dBi for 5150-5250 MHz<br>3.1 dBi for 5725-5850 MHz |

Note: The antenna of EUT is conform to FCC 15.203.

## 802.11a/n/ac-20 MHz Center Working Frequency of Each Channel:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| 36      | 5180            | 40      | 5200            | 44      | 5220            | 48      | 5240            |
| 149     | 5745            | 153     | 5765            | 157     | 5785            | 161     | 5805            |
| 165     | 5825            | --      | --              | --      | --              | --      | --              |

## 802.11n/ac-40 MHz Center Working Frequency of Each Channel:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| 38      | 5190            | 46      | 5230            | 151     | 5755            | 159     | 5795            |

## 802.11ac-80 MHz Center Working Frequency of Each Channel:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | -- | -- | -- | -- |
|---------|-----------------|---------|-----------------|----|----|----|----|
| 42      | 5210            | 155     | 5775            | -- | -- | -- | -- |

## Note:

1. This device is a 5G Enterprise Router with built-in WLAN, this report for 5GHz WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest data rates are tested in each mode. Only worst case is shown in the report.
4. (802.11a is 6Mbps 、802.11ac-20 MHz/40 MHz/80 MHz is MCS0)
5. The spectrum plot against conducted item only shows the worst case.
6. It's declared by manufacture about all models are electrically identical, different model names for marketing purpose.
7. These tests were conducted on a sample for the purpose of demonstrating compliance of 802.11a/n/ac transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

|           |        |                            |
|-----------|--------|----------------------------|
| Test Mode | Mode 1 | Transmit (802.11a)         |
|           |        | Transmit (802.11ac-20 MHz) |
|           |        | Transmit (802.11ac-40 MHz) |
|           |        | Transmit (802.11ac-80 MHz) |
|           | Mode 2 | Co-location                |

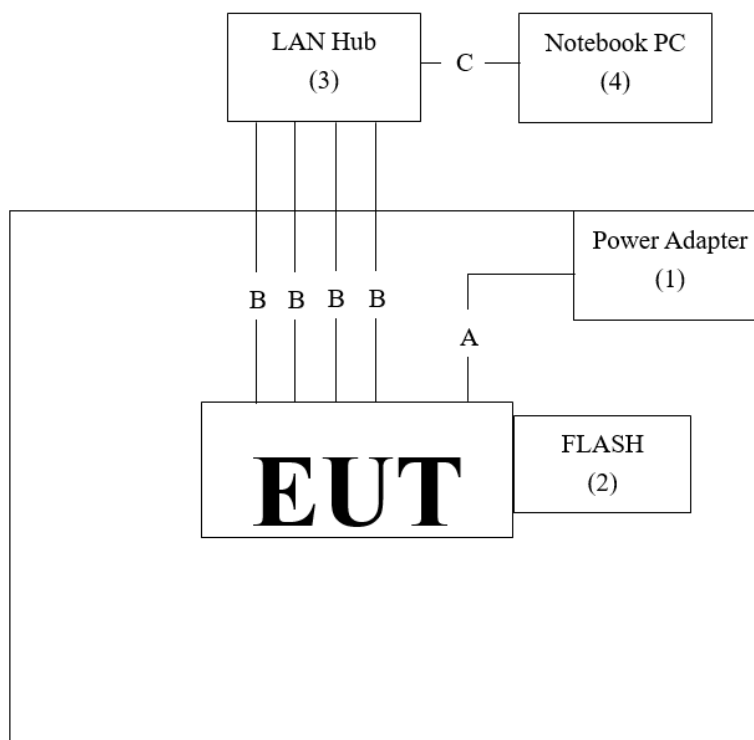
### 1.2. Tested System Details

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

| Product         | Manufacturer | Model No.        | Serial No.    | Power Cord         |
|-----------------|--------------|------------------|---------------|--------------------|
| 1 Power Adapter | BILLION      | PA1024-150HUB200 | N/A           | N/A                |
| 2 FLASH         | Kingston     | DT100G3/8GB      | N/A           | N/A                |
| 3 LAN Hub       | TP-LINK      | TL-SG108         | 2161597000480 | Non-shielded, 1.5m |
| 4 Notebook PC   | Lenovo       | TP00067C         | PF-0EW0C3     | N/A                |

| Cable Type    | Cable Description        |
|---------------|--------------------------|
| A Power Cable | Non-shielded, 1.5m       |
| B LAN Cable   | Non-shielded, 3m, 4 PCS. |
| C LAN Cable   | Non-shielded, 2m         |

### 1.3. Configuration of tested System



### 1.4. EUT Exercise Software

|    |                                                                |
|----|----------------------------------------------------------------|
| 1. | Setup the EUT as shown in Section 1.3.                         |
| 2. | Execute software “QATool Version 0.0.1.71” on the Notebook PC. |
| 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.                            |

## 1.5. Test Facility

Ambient conditions in the laboratory:

| Performed Item     | Items            | Required | Actual  |
|--------------------|------------------|----------|---------|
| Conducted Emission | Temperature (°C) | 10~40 °C | 21.5 °C |
|                    | Humidity (%RH)   | 10~90 %  | 47.6 %  |
| Radiated Emission  | Temperature (°C) | 10~40 °C | 23.5 °C |
|                    | Humidity (%RH)   | 10~90 %  | 65.3 %  |
| Conductive         | Temperature (°C) | 10~40 °C | 22.0 °C |
|                    | Humidity (%RH)   | 10~90 %  | 55.0 %  |

|        |                                                       |
|--------|-------------------------------------------------------|
| USA    | FCC Registration Number: TW0033                       |
| Canada | CAB Identifier Number: TW3023 / Company Number: 26930 |

|                  |                         |
|------------------|-------------------------|
| Site Description | Accredited by TAF       |
|                  | Accredited Number: 3023 |

|                    |                                                                             |
|--------------------|-----------------------------------------------------------------------------|
| Test Laboratory    | DEKRA Testing and Certification Co., Ltd.                                   |
|                    | Linkou Laboratory                                                           |
| Address            | No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C. |
| Performed Location | No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C.   |
| Phone Number       | +886-3-275-7255                                                             |
| Fax Number         | +886-3-327-8031                                                             |

## 1.6. List of Test Equipment

**For Conduction Measurements / HY-SR01**

|   | Equipment          | Manufacturer | Model No. | Serial No. | Cal. Date  | Due Date   |
|---|--------------------|--------------|-----------|------------|------------|------------|
| V | EMI Test Receiver  | R&S          | ESR7      | 101601     | 2022/06/23 | 2023/06/22 |
| V | Two-Line V-Network | R&S          | ENV216    | 101306     | 2022/05/23 | 2023/05/22 |
| V | Two-Line V-Network | R&S          | ENV216    | 101307     | 2022/07/04 | 2023/07/03 |
| V | Coaxial Cable      | SUHNER       | RG400 BNC | RF001      | 2022/05/24 | 2023/05/23 |

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software Version: e3 210616 dekra V9.

**For Conducted Measurements / HY-SR02**

|   | Equipment           | Manufacturer | Model No. | Serial No. | Cal. Date  | Due Date   |
|---|---------------------|--------------|-----------|------------|------------|------------|
| V | Spectrum Analyzer   | R&S          | FSV30     | 103466     | 2022/12/22 | 2023/12/21 |
| V | Peak Power Analyzer | KEYSIGHT     | 8990B     | MY51000539 | 2022/05/27 | 2023/05/26 |
| V | Power Sensor        | KEYSIGHT     | N1923A    | MY59240002 | 2022/05/19 | 2023/05/18 |
| V | Power Sensor        | KEYSIGHT     | N1923A    | MY59240003 | 2022/05/19 | 2023/05/18 |

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software Version: RF Conducted Test Tools R3 V3.0.0.14.

**For Radiated Measurements / HY-CB03**

|   | Equipment         | Manufacturer  | Model No.          | Serial No.   | Cal. Date  | Due Date   |
|---|-------------------|---------------|--------------------|--------------|------------|------------|
| V | Loop Antenna      | AMETEK        | HLA6121            | 56736        | 2022/05/14 | 2023/05/13 |
| V | Bi-Log Antenna    | SCHWARZBECK   | VULB9168           | 9168-675     | 2021/08/11 | 2023/08/10 |
| V | Horn Antenna      | Com-Power     | AH-840             | 101100       | 2021/10/04 | 2023/10/03 |
| V | Horn Antenna      | RF SPIN       | DRH18-E            | 210508A18ES  | 2022/06/08 | 2023/06/07 |
| V | Horn Antenna      | RF SPIN       | DRH18-E            | 210507A18ES  | 2023/05/11 | 2024/05/10 |
| V | Pre-Amplifier     | SGH           | 0301               | 20211007-10  | 2023/01/10 | 2024/01/09 |
| V | Pre-Amplifier     | SGH           | PRAMP118           | 20200701     | 2023/01/10 | 2024/01/09 |
| V | Pre-Amplifier     | EMCI          | EMC05820SE         | 980310       | 2023/01/10 | 2024/01/09 |
| V | Pre-Amplifier     | EMCI          | EMC184045SE        | 980369       | 2023/01/10 | 2024/01/09 |
|   | Coaxial Cable     | EMCI          | EMC102-KM-K M-600  | 1160314      |            |            |
|   | Coaxial Cable     | EMCI          | EMC102-KM-K M-7000 | 170242       |            |            |
|   | Filter            | MICRO TRONICS | BRM50702           | G269         | 2023/01/05 | 2024/01/04 |
| V | Filter            | MICRO TRONICS | BRM50716           | G196         | 2023/01/05 | 2024/01/04 |
| V | EMI Test Receiver | R&S           | ESR3               | 102793       | 2022/12/05 | 2023/12/04 |
| V | Spectrum Analyzer | R&S           | FSV3044            | 101114       | 2023/02/16 | 2024/02/15 |
| V | Coaxial Cable     | SGH           | SGH18              | 2021005-1    | 2023/01/10 | 2024/01/09 |
|   | Coaxial Cable     | SGH           | SGH18              | 202108-4     |            |            |
|   | Coaxial Cable     | SGH           | SGH18              | GD20110223-1 |            |            |
|   | Coaxial Cable     | SGH           | HA800              | GD20110222-3 |            |            |

Note:

1. Bi-Log Antenna and Horn Antenna(AH-840) is calibrated every two years, the other equipments are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software Version: E3 210616 dekra V9.

### 1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

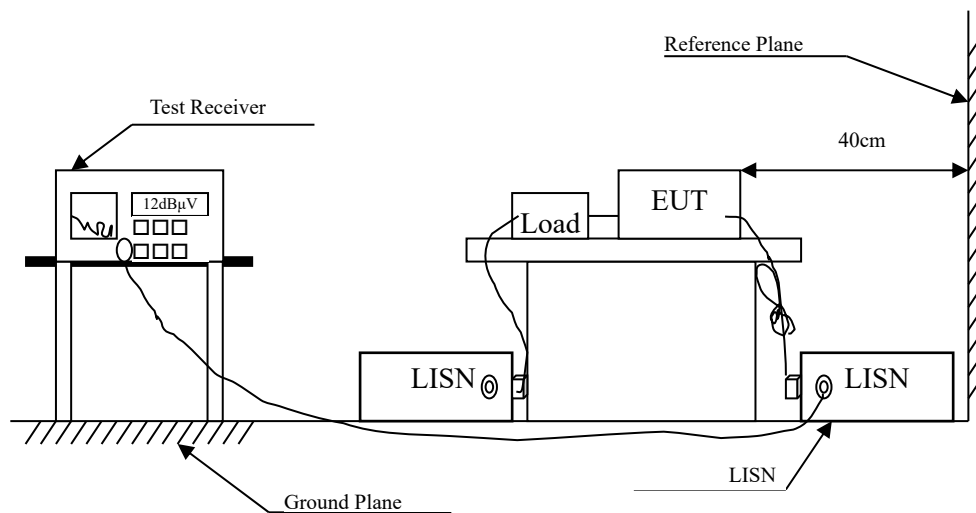
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

| Test Item                      | Uncertainty                                                                                                               |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Conducted Emission             | $\pm 3.50$ dB                                                                                                             |
| Maximum conducted output power | Spectrum Analyzer: $\pm 2.14$ dB<br>Power Meter: $\pm 1.05$ dB                                                            |
| Maximum Power Spectral Density | $\pm 2.14$ dB                                                                                                             |
| Radiated Emission              | 9 kHz~30 MHz: $\pm 3.88$ dB<br>30 MHz~1 GHz: $\pm 4.42$ dB<br>1 GHz~18 GHz: $\pm 4.28$ dB<br>18 GHz~40 GHz: $\pm 3.90$ dB |
| Band Edge                      | 9 kHz~30 MHz: $\pm 3.88$ dB<br>30 MHz~1 GHz: $\pm 4.42$ dB<br>1 GHz~18 GHz: $\pm 4.28$ dB<br>18 GHz~40 GHz: $\pm 3.90$ dB |
| Occupied Bandwidth             | $\pm 1580.61$ Hz                                                                                                          |
| Duty Cycle                     | $\pm 0.53$ %                                                                                                              |

## 2. Conducted Emission

### 2.1. Test Setup



### 2.2. Limits

| FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit |        |       |
|-----------------------------------------------------|--------|-------|
| Frequency<br>MHz                                    | Limits |       |
|                                                     | QP     | AV    |
| 0.15 - 0.50                                         | 66-56  | 56-46 |
| 0.50-5.0                                            | 56     | 46    |
| 5.0 - 30                                            | 60     | 50    |

Remarks : In the above table, the tighter limit applies at the band edges.

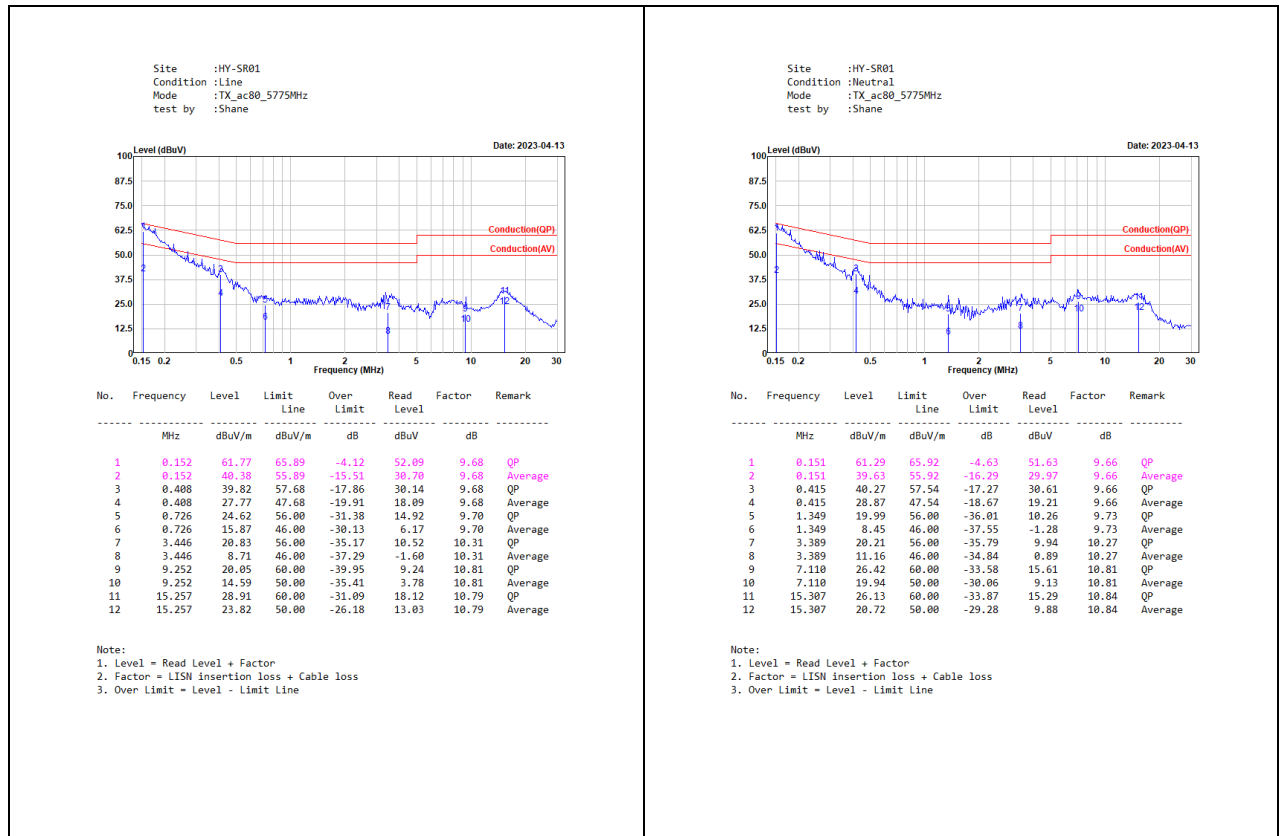
### 2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50 $\mu$ H coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50 $\mu$ H coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

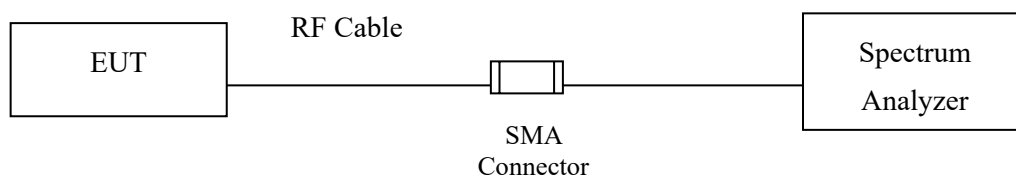
## 2.4. Test Result of Conducted Emission



### 3. Maximun conducted output power

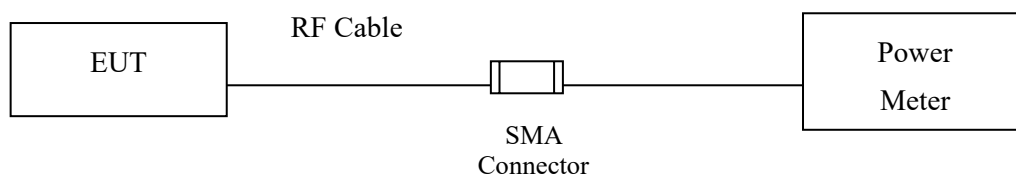
#### 3.1. Test Setup

##### 26dB Occupied Bandwidth

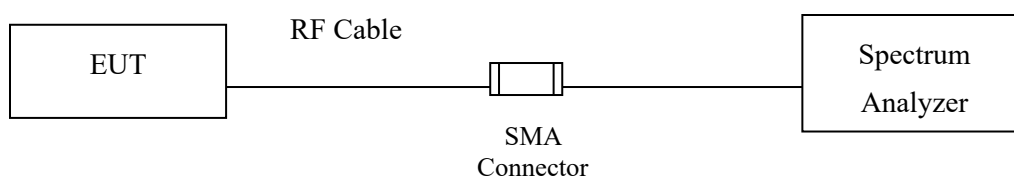


##### Conduction Power Measurement

Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



### 3.2. Limits

For the band 5.15-5.25 GHz,

- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W, provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. 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 is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 99% emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII 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. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

The maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater than the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW  $\leq$  40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

## 3.4. Test Result of Maximum conducted output power

Product : 5G Enterprise Router  
Test Item : Maximum conducted output power  
Test Mode : Transmit (802.11a)  
Test Date : 2023/04/12

| Channel No. | Frequency<br>(MHz) | Output<br>Power<br>(dBm) | Output Power Limit<br>(dBm) |
|-------------|--------------------|--------------------------|-----------------------------|
| 36          | 5180               | 22.77                    | 30                          |
| 44          | 5220               | 24.61                    | 30                          |
| 48          | 5240               | 24.26                    | 30                          |
| 149         | 5745               | 21.52                    | 30                          |
| 157         | 5785               | 27.08                    | 30                          |
| 165         | 5825               | 25.98                    | 30                          |

Product : 5G Enterprise Router  
Test Item : Maximum conducted output power  
Test Mode : Transmit (802.11ac-20 MHz)  
Test Date : 2023/04/12

| Channel No. | Frequency (MHz) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Chain D Power (dBm) | Output Power (dBm) | Output Power Limit (dBm) |
|-------------|-----------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------------|
| 36          | 5180            | 20.27               | 20.86               | 21.09               | 21.14               | 20.37              | 30                       |
| 44          | 5220            | 21.24               | 20.98               | 20.69               | 19.77               | 24.07              | 30                       |
| 48          | 5240            | 22.03               | 21.79               | 21.55               | 20.69               | 24.64              | 30                       |
| 149         | 5745            | 23.39               | 23.37               | 22.89               | 23.22               | 24.26              | 30                       |
| 157         | 5785            | 23.87               | 24.16               | 23.69               | 23.91               | 24.22              | 30                       |
| 165         | 5825            | 23.18               | 23.42               | 23.24               | 23.06               | 24.21              | 30                       |

Note:

1. Output Power (dBm) = 10\*LOG (Chain A(mW) + Chain B(mW) + Chain C(mW) + Chain C(mW))

Product : 5G Enterprise Router  
Test Item : Maximum conducted output power  
Test Mode : Transmit (802.11ac-40 MHz)  
Test Date : 2023/04/12

| Channel No. | Frequency (MHz) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Chain D Power (dBm) | Output Power (dBm) | Output Power Limit (dBm) |
|-------------|-----------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------------|
| 38          | 5190            | 17.89               | 18.52               | 18.95               | 18.99               | 24.63              | 30                       |
| 46          | 5230            | 18.63               | 18.05               | 18.06               | 17.02               | 24.00              | 30                       |
| 151         | 5755            | 21.66               | 21.54               | 21.26               | 21.56               | 27.53              | 30                       |
| 159         | 5795            | 23.70               | 23.92               | 23.56               | 23.89               | 29.79              | 30                       |

Note:

1. Output Power (dBm) =  $10 \cdot \text{LOG} (\text{Chain A(mW)} + \text{Chain B(mW)} + \text{Chain C(mW)} + \text{Chain C(mW)})$

Product : 5G Enterprise Router  
Test Item : Maximum conducted output power  
Test Mode : Transmit (802.11ac-80 MHz)  
Test Date : 2023/04/12

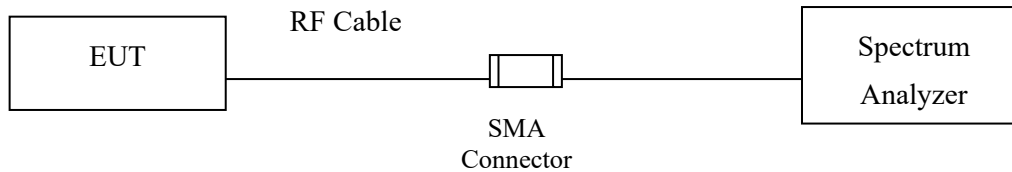
| Channel No. | Frequency (MHz) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Chain D Power (dBm) | Output Power (dBm) | Output Power Limit (dBm) |
|-------------|-----------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------------|
| 42          | 5210            | 14.84               | 14.42               | 14.56               | 13.31               | 20.34              | 30                       |
| 155         | 5775            | 14.92               | 14.88               | 14.72               | 14.89               | 20.87              | 30                       |

Note:

1. Output Power (dBm) =  $10 \cdot \log (\text{Chain A(mW)} + \text{Chain B(mW)} + \text{Chain C(mW)} + \text{Chain C(mW)})$

## 4. Maximum Power Spectral Density

### 4.1. Test Setup



### 4.2. Limits

For the band 5.15-5.25 GHz,

- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. 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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, 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, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, 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, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, 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 UNII 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. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

#### 4.3. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.

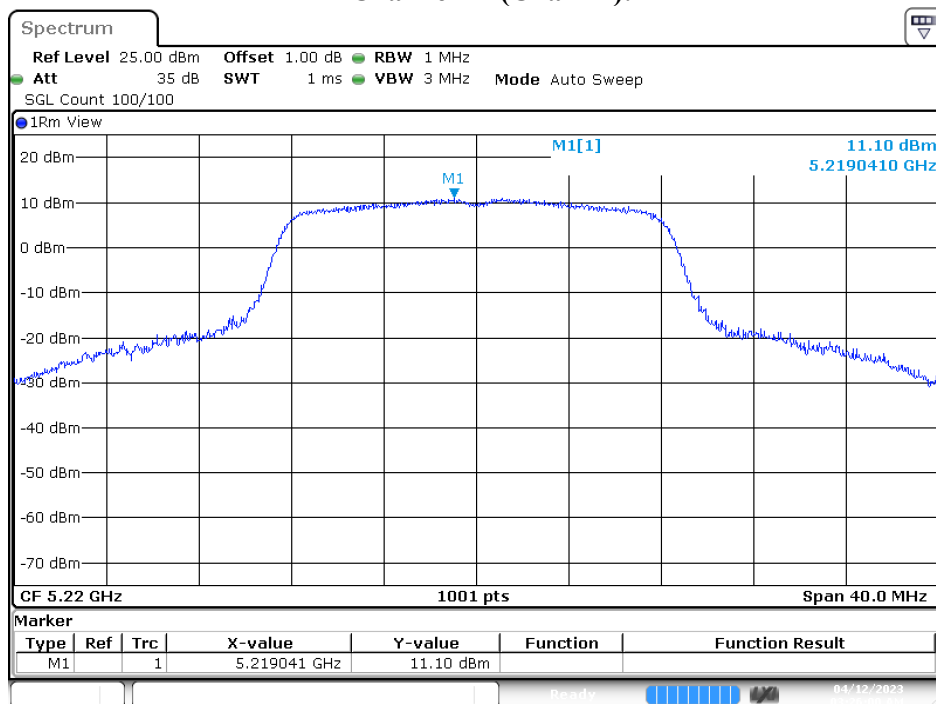
SA-1 method is selected to run the test.

## 4.4. Test Result of Maximun Power Spectral Density

Product : 5G Enterprise Router  
Test Item : Maximun Power Spectral Density  
Test Mode : Transmit (802.11a)

| Channel No. | Frequency<br>(MHz) | Data Rate<br>(Mbps) | Chain | PPSD/MHz<br>(dBm) | Duty factor<br>(dB) | Total<br>PPSD/MHz<br>(dBm) | Limit<br>(dBm) | Result |
|-------------|--------------------|---------------------|-------|-------------------|---------------------|----------------------------|----------------|--------|
| 36          | 5180               | 6                   | A     | 9.31              | 1.36                | 10.67                      | 17             | Pass   |
| 44          | 5220               | 6                   | A     | 11.10             | 1.36                | 12.46                      | 17             | Pass   |
| 48          | 5240               | 6                   | A     | 10.36             | 1.36                | 11.72                      | 17             | Pass   |
| 149         | 5745               | 6                   | A     | 7.80              | 1.36                | 9.16                       | 30             | Pass   |
| 157         | 5785               | 6                   | A     | 10.34             | 1.36                | 11.70                      | 30             | Pass   |
| 165         | 5825               | 6                   | A     | 9.26              | 1.36                | 10.62                      | 30             | Pass   |

## Channel 44 (Chain A):



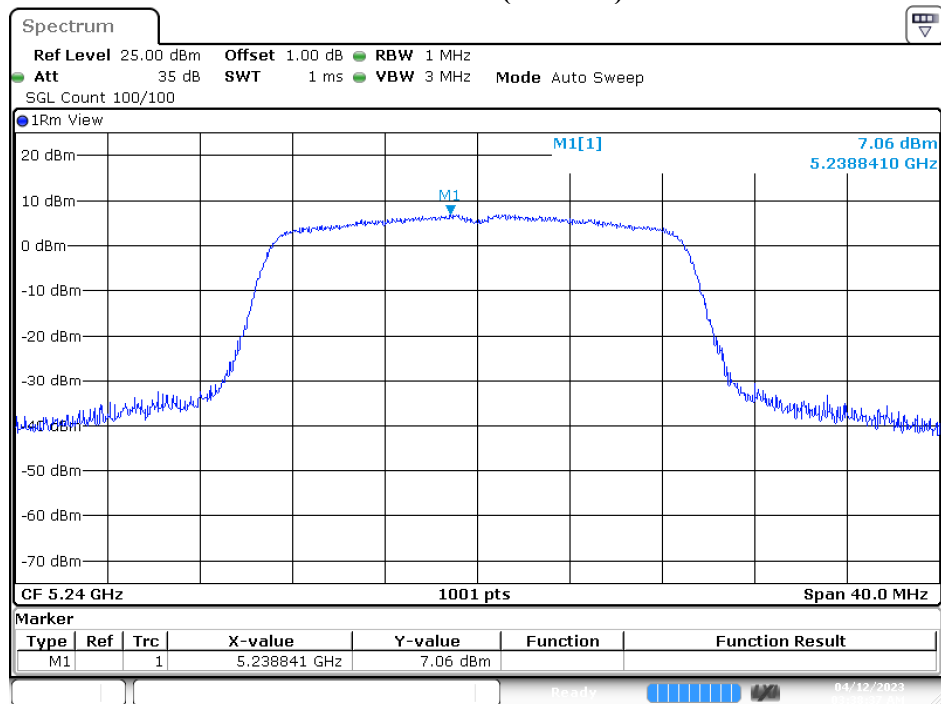
Date: 12.APR.2023 03:26:01

Product : 5G Enterprise Router  
 Test Item : Maximun Power Spectral Density  
 Test Mode : Transmit (802.11ac-20 MHz)

| Channel No. | Frequency<br>(MHz) | Data Rate | Chain | PPSD/MHz<br>(dBm) | Duty factor<br>(dB) | Total<br>PPSD/MHz<br>(dBm) | Limit<br>(dBm) | Result |
|-------------|--------------------|-----------|-------|-------------------|---------------------|----------------------------|----------------|--------|
| 36          | 5180               | MCS0      | A     | 6.26              | 1.20                | 13.48                      | 17             | Pass   |
|             |                    |           | B     | 6.88              | 1.20                | 14.10                      | 17             | Pass   |
|             |                    |           | C     | 6.64              | 1.20                | 13.86                      | 17             | Pass   |
|             |                    |           | D     | 6.63              | 1.20                | 13.85                      | 17             | Pass   |
| 44          | 5220               | MCS0      | A     | 6.01              | 1.20                | 13.23                      | 17             | Pass   |
|             |                    |           | B     | 6.09              | 1.20                | 13.31                      | 17             | Pass   |
|             |                    |           | C     | 6.04              | 1.20                | 13.26                      | 17             | Pass   |
|             |                    |           | D     | 5.35              | 1.20                | 12.57                      | 17             | Pass   |
| 48          | 5240               | MCS0      | A     | 7.06              | 1.20                | 14.28                      | 17             | Pass   |
|             |                    |           | B     | 6.93              | 1.20                | 14.15                      | 17             | Pass   |
|             |                    |           | C     | 6.93              | 1.20                | 14.15                      | 17             | Pass   |
|             |                    |           | D     | 5.92              | 1.20                | 13.14                      | 17             | Pass   |
| 149         | 5745               | MCS0      | A     | 5.11              | 1.20                | 12.33                      | 30             | Pass   |
|             |                    |           | B     | 5.27              | 1.20                | 12.49                      | 30             | Pass   |
|             |                    |           | C     | 5.35              | 1.20                | 12.57                      | 30             | Pass   |
|             |                    |           | D     | 5.69              | 1.20                | 12.91                      | 30             | Pass   |
| 157         | 5785               | MCS0      | A     | 5.87              | 1.20                | 13.09                      | 30             | Pass   |
|             |                    |           | B     | 5.99              | 1.20                | 13.21                      | 30             | Pass   |
|             |                    |           | C     | 6.29              | 1.20                | 13.51                      | 30             | Pass   |
|             |                    |           | D     | 6.23              | 1.20                | 13.45                      | 30             | Pass   |
| 165         | 5825               | MCS0      | A     | 4.83              | 1.20                | 12.05                      | 30             | Pass   |
|             |                    |           | B     | 5.33              | 1.20                | 12.55                      | 30             | Pass   |
|             |                    |           | C     | 5.53              | 1.20                | 12.75                      | 30             | Pass   |
|             |                    |           | D     | 5.12              | 1.20                | 12.34                      | 30             | Pass   |

Note: The quantity  $10 \cdot \log 4$  (four antennas) is added to the spectrum peak value according to document 662911 D01.

## Channel 48 (Chain A):



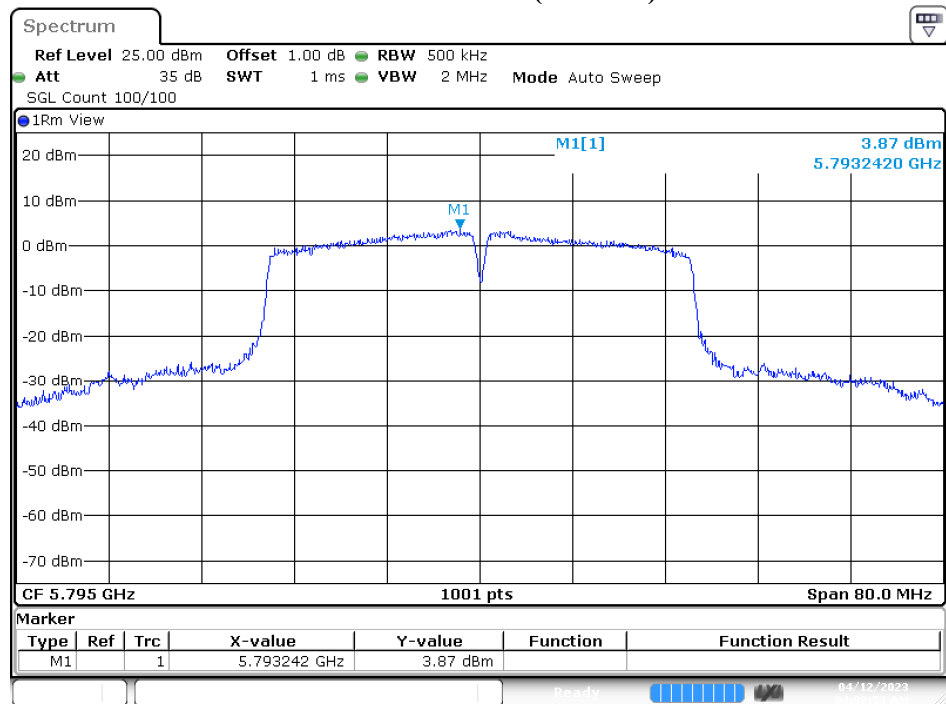
Date: 12.APR.2023 03:38:37

Product : 5G Enterprise Router  
 Test Item : Maximun Power Spectral Density  
 Test Mode : Transmit (802.11ac-40 MHz)

| Channel No. | Frequency<br>(MHz) | Data Rate | Chain | PPSD/MHz<br>(dBm) | Duty factor<br>(dB) | Total<br>PPSD/MHz<br>(dBm) | Limit<br>(dBm) | Result |
|-------------|--------------------|-----------|-------|-------------------|---------------------|----------------------------|----------------|--------|
| 38          | 5190               | MCS0      | A     | 0.07              | 1.79                | 7.88                       | 17             | Pass   |
|             |                    |           | B     | 0.16              | 1.79                | 7.97                       | 17             | Pass   |
|             |                    |           | C     | 1.22              | 1.79                | 9.03                       | 17             | Pass   |
|             |                    |           | D     | 0.74              | 1.79                | 8.55                       | 17             | Pass   |
| 46          | 5230               | MCS0      | A     | 0.32              | 1.79                | 8.13                       | 17             | Pass   |
|             |                    |           | B     | -0.18             | 1.79                | 7.63                       | 17             | Pass   |
|             |                    |           | C     | -0.09             | 1.79                | 7.72                       | 17             | Pass   |
|             |                    |           | D     | -0.66             | 1.79                | 7.15                       | 17             | Pass   |
| 151         | 5755               | MCS0      | A     | 1.11              | 1.79                | 8.92                       | 30             | Pass   |
|             |                    |           | B     | 0.62              | 1.79                | 8.43                       | 30             | Pass   |
|             |                    |           | C     | 0.43              | 1.79                | 8.24                       | 30             | Pass   |
|             |                    |           | D     | 1.00              | 1.79                | 8.81                       | 30             | Pass   |
| 159         | 5795               | MCS0      | A     | 2.96              | 1.79                | 10.77                      | 30             | Pass   |
|             |                    |           | B     | 3.09              | 1.79                | 10.90                      | 30             | Pass   |
|             |                    |           | C     | 3.87              | 1.79                | 11.68                      | 30             | Pass   |
|             |                    |           | D     | 3.42              | 1.79                | 11.23                      | 30             | Pass   |

Note: The quantity  $10 \cdot \log 4$  (four antennas) is added to the spectrum peak value according to document 662911 D01.

## Channel 159 (Chain C):



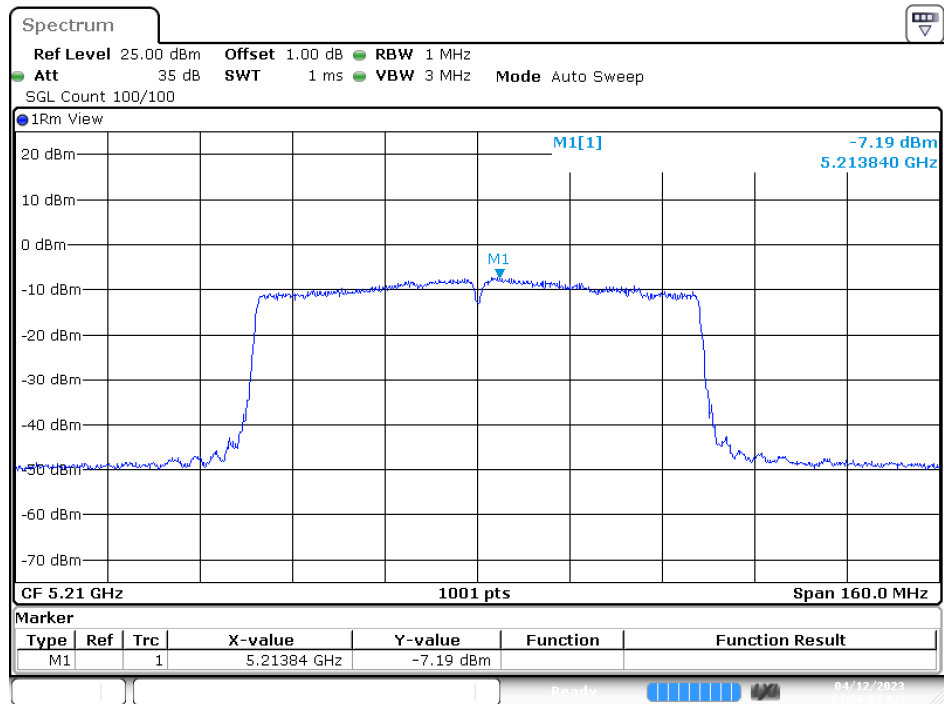
Date: 12.APR.2023 04:02:53

Product : 5G Enterprise Router  
 Test Item : Maximun Power Spectral Density  
 Test Mode : Transmit (802.11ac-80 MHz)

| Channel No. | Frequency<br>(MHz) | Data Rate | Chain | PPSD/MHz<br>(dBm) | Duty factor<br>(dB) | Total<br>PPSD/MHz<br>(dBm) | Limit<br>(dBm) | Result |
|-------------|--------------------|-----------|-------|-------------------|---------------------|----------------------------|----------------|--------|
| 42          | 5210               | MCS0      | A     | -7.19             | 3.60                | 2.43                       | 17             | Pass   |
|             |                    |           | B     | -7.88             | 3.60                | 1.74                       | 17             | Pass   |
|             |                    |           | C     | -7.76             | 3.60                | 1.86                       | 17             | Pass   |
|             |                    |           | D     | -8.52             | 3.60                | 1.10                       | 17             | Pass   |
| 155         | 5775               | MCS0      | A     | -9.63             | 3.60                | -0.01                      | 30             | Pass   |
|             |                    |           | B     | -10.14            | 3.60                | -0.52                      | 30             | Pass   |
|             |                    |           | C     | -10.31            | 3.60                | -0.69                      | 30             | Pass   |
|             |                    |           | D     | -9.91             | 3.60                | -0.29                      | 30             | Pass   |

Note: The quantity  $10 \cdot \log 4$  (four antennas) is added to the spectrum peak value according to document 662911 D01.

## Channel 42 (Chain A):

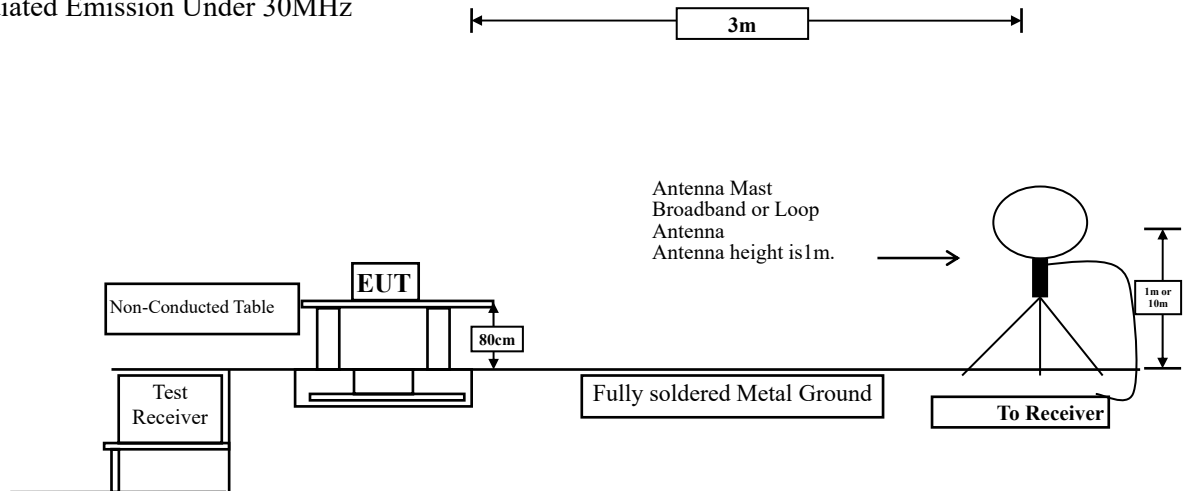


Date: 12.APR.2023 04:06:03

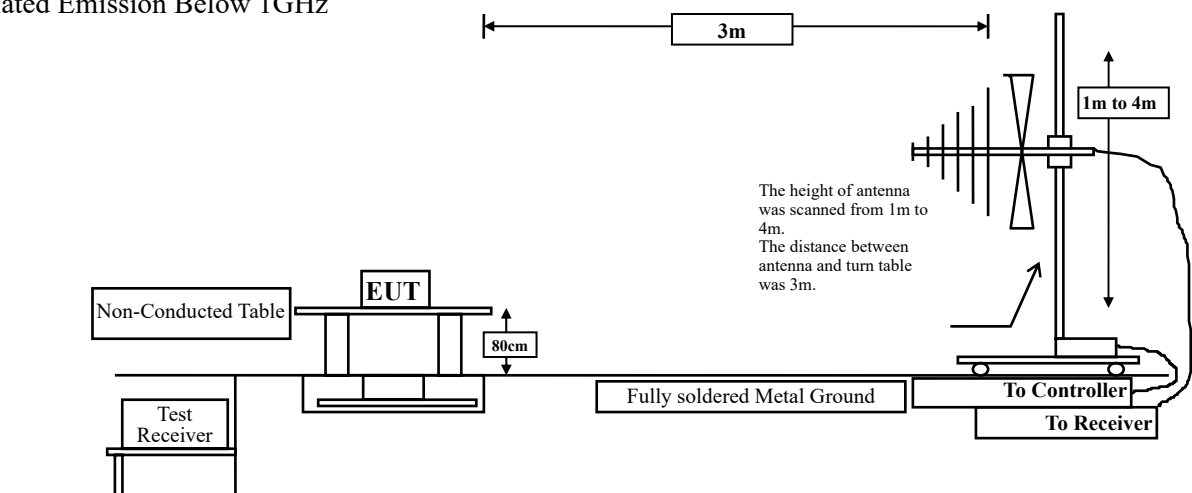
## 5. Radiated Emission

### 5.1. Test Setup

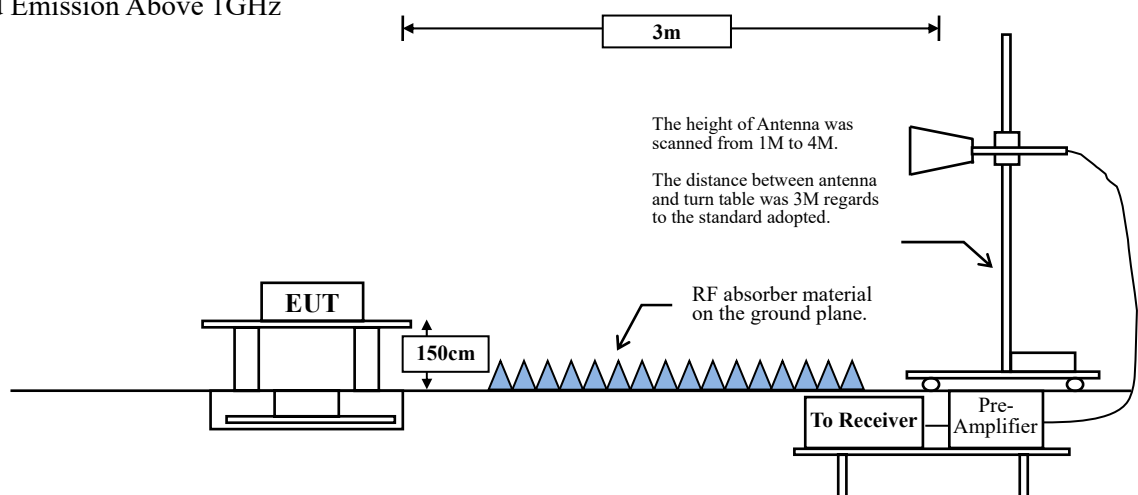
#### Radiated Emission Under 30MHz



#### Radiated Emission Below 1GHz



#### Radiated Emission Above 1GHz



## 5.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209(a) Limits |                                      |                              |
|--------------------------------------------------|--------------------------------------|------------------------------|
| Frequency<br>MHz                                 | Field strength<br>(microvolts/meter) | Measurement distance (meter) |
| 0.009-0.490                                      | 2400/F(kHz)                          | 300                          |
| 0.490-1.705                                      | 24000/F(kHz)                         | 30                           |
| 1.705-30                                         | 30                                   | 30                           |
| 30-88                                            | 100                                  | 3                            |
| 88-216                                           | 150                                  | 3                            |
| 216-960                                          | 200                                  | 3                            |
| Above 960                                        | 500                                  | 3                            |

Remarks: E field strength (dB $\mu$ V/m) = 20 log E field strength ( $\mu$ V/m).

### 5.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9 kHz and 30 MHz~1 GHz is 120 kHz and above 1 GHz is 1 MHz.

Radiated emission measurements below 30 MHz are made using Loop Antenna and 30 MHz~1 GHz are made using broadband Bilog antenna and above 1 GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range from 9 kHz - 10 th Harmonic of fundamental was investigated.

**RBW and VBW Parameter setting:**

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW  $\geq$  3MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW = 10Hz, when duty cycle  $\geq$  98 %

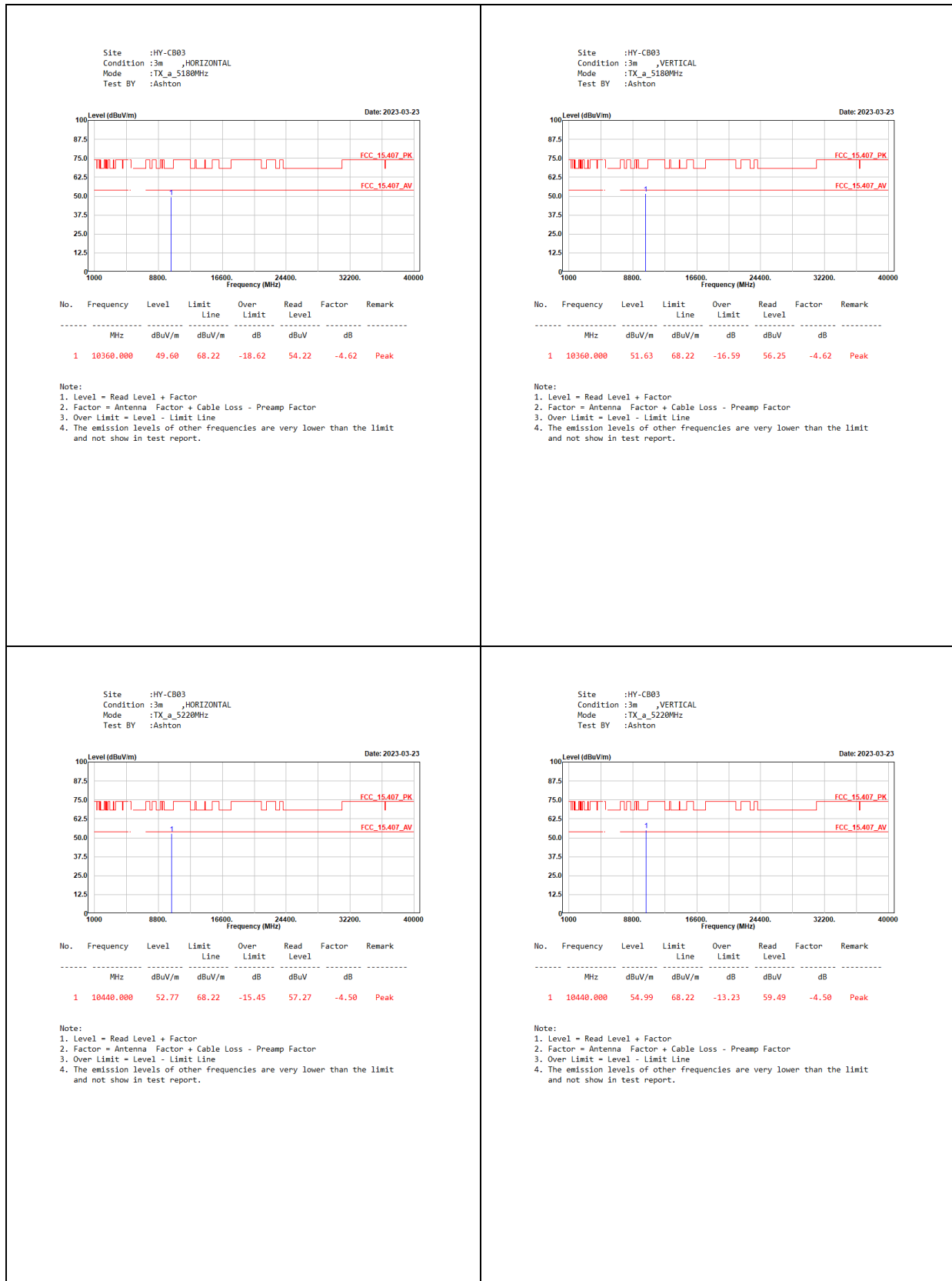
VBW  $\geq$  1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

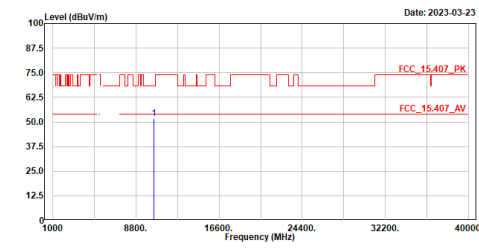
| 5GHz band       | Duty Cycle (%) | T (ms) | 1/T (Hz) | VBW (Hz) |
|-----------------|----------------|--------|----------|----------|
| 802.11a         | 73.11          | 1.4000 | 714      | 1000     |
| 802.11ac-20 MHz | 75.77          | 1.3100 | 763      | 1000     |
| 802.11ac-40 MHz | 66.16          | 0.6550 | 1527     | 2000     |
| 802.11ac-80 MHz | 43.59          | 0.3230 | 3096     | 5000     |

Note: Duty Cycle Refer to Section 8.

## 5.4. Test Result of Radiated Emission



Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_a\_5240MHz  
Test BY :Ashton

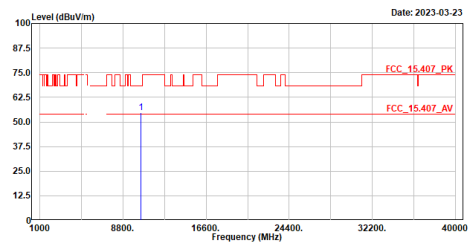


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level |        |        |
|     |           |        |       |        |       |        |        |
| 1   | 10480.000 | 51.57  | 68.22 | -16.65 | 55.97 | -4.40  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_a\_5240MHz  
Test BY :Ashton

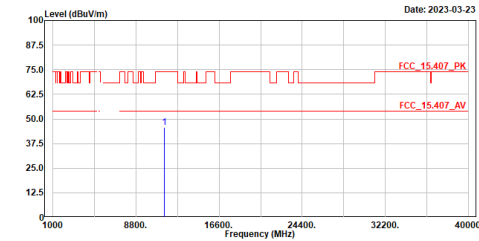


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level |        |        |
|     |           |        |       |        |       |        |        |
| 1   | 10480.000 | 54.81  | 68.22 | -13.41 | 59.21 | -4.40  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_a\_5745MHz  
Test BY :Ashton

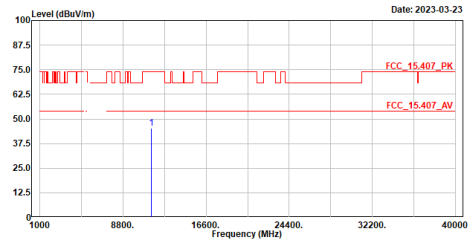


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level |        |        |
|     |           |        |       |        |       |        |        |
| 1   | 11490.000 | 45.75  | 74.00 | -28.25 | 47.74 | -1.99  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_a\_5745MHz  
Test BY :Ashton

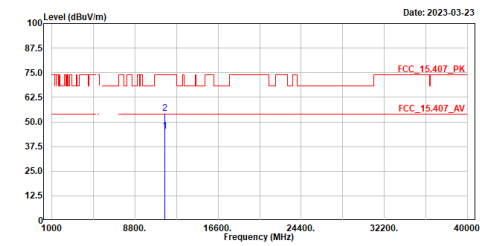


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level |        |        |
|     |           |        |       |        |       |        |        |
| 1   | 11490.000 | 45.16  | 74.00 | -28.84 | 47.15 | -1.99  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

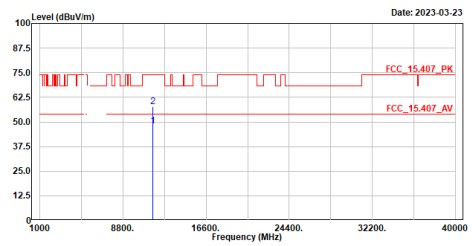
Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX @ 5785MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11570.000 | 45.41  | 54.00  | -8.59  | 47.22 | -1.81  | Average |
| 2   | 11570.000 | 54.44  | 74.00  | -19.56 | 56.25 | -1.81  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

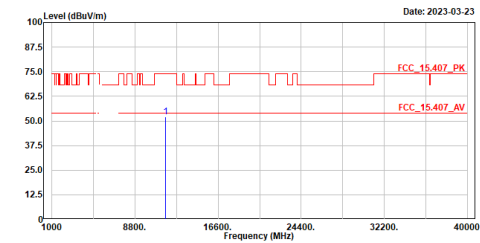
Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX @ 5785MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11570.000 | 47.87  | 54.00  | -6.13  | 49.68 | -1.81  | Average |
| 2   | 11570.000 | 57.68  | 74.00  | -16.32 | 59.49 | -1.81  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

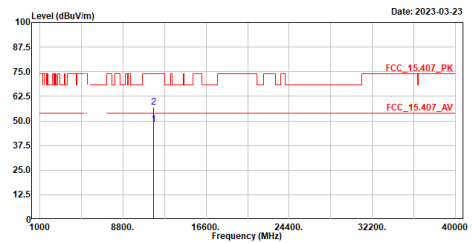
Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX @ 5825MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |        |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 11650.000 | 52.09  | 74.00  | -21.91 | 53.91 | -1.82  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX @ 5825MHz  
Test BY :Ashton

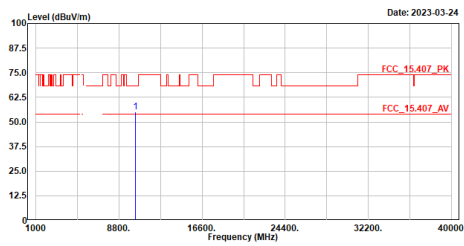


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11650.000 | 48.30  | 54.00  | -5.70  | 50.12 | -1.82  | Average |
| 2   | 11650.000 | 57.07  | 74.00  | -16.93 | 58.89 | -1.82  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

## MIMO

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac20\_5180MHz  
Test BY :Ashton

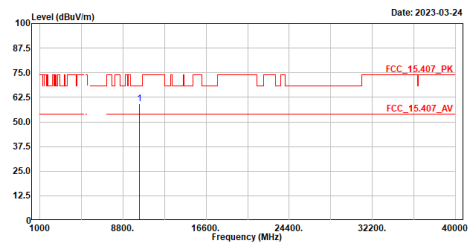


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 10360.000 | 54.96  | 68.22 | -13.26 | 59.58 | -4.62  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac20\_5180MHz  
Test BY :Ashton

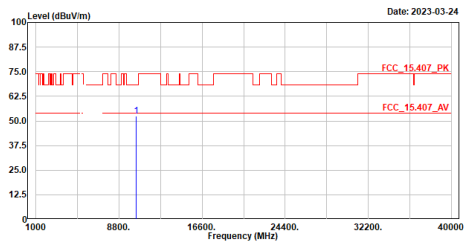


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark |
|-----|-----------|--------|-------|-------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |        |
| 1   | 10360.000 | 59.33  | 68.22 | -8.89 | 63.95 | -4.62  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac20\_5220MHz  
Test BY :Ashton

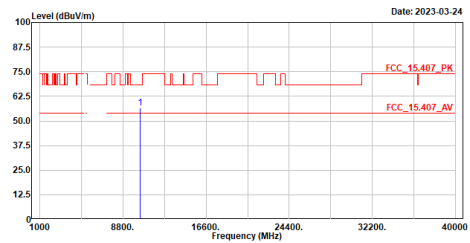


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 10440.000 | 52.55  | 68.22 | -15.67 | 57.05 | -4.50  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac20\_5220MHz  
Test BY :Ashton

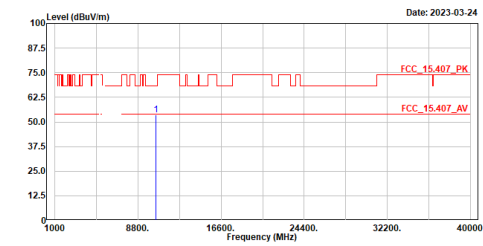


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 10440.000 | 56.79  | 68.22 | -11.43 | 61.29 | -4.50  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac20\_5240MHz  
Test BY :Ashton

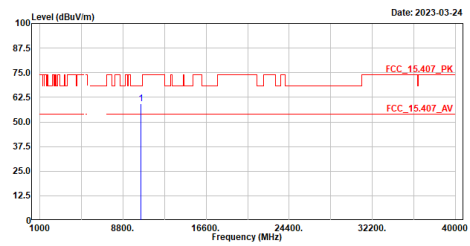


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 10480.000 | 53.53  | 68.22 | -14.69 | 57.93 | -4.40  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac20\_5240MHz  
Test BY :Ashton

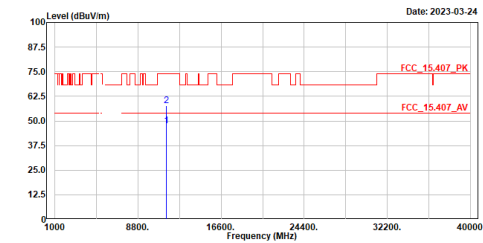


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark |
|-----|-----------|--------|-------|-------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |        |
| 1   | 10480.000 | 59.22  | 68.22 | -9.00 | 63.62 | -4.40  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac20\_5745MHz  
Test BY :Ashton

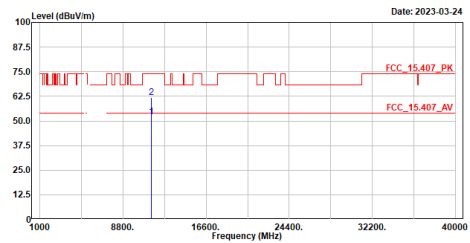


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11490.000 | 47.64  | 54.00 | -6.36  | 49.63 | -1.99  | Average |
| 2   | 11490.000 | 57.85  | 74.00 | -16.15 | 59.84 | -1.99  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac20\_5745MHz  
Test BY :Ashton

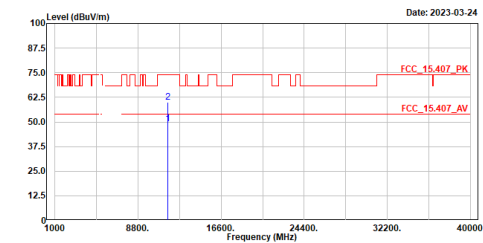


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11490.000 | 52.19  | 54.00 | -1.81  | 54.18 | -1.99  | Average |
| 2   | 11490.000 | 61.77  | 74.00 | -12.23 | 63.76 | -1.99  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

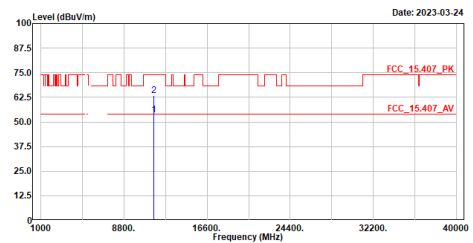
Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac20\_5785MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11570.000 | 49.05  | 54.00 | -4.95  | 58.86 | -1.81  | Average |
| 2   | 11570.000 | 59.88  | 74.00 | -14.12 | 61.69 | -1.81  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

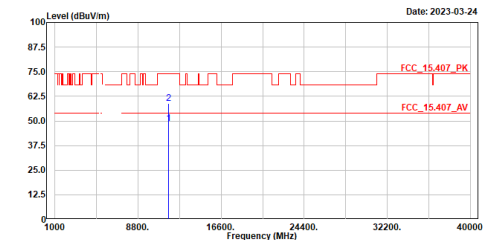
Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac20\_5785MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11570.000 | 53.54  | 54.00 | -0.46  | 55.35 | -1.81  | Average |
| 2   | 11570.000 | 63.31  | 74.00 | -10.69 | 65.12 | -1.81  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

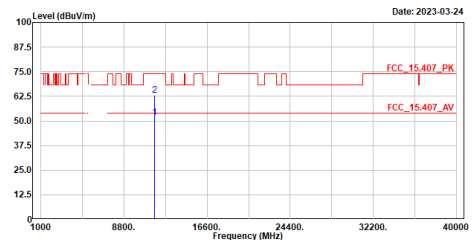
Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac20\_5825MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11650.000 | 48.71  | 54.00 | -5.29  | 58.53 | -1.82  | Average |
| 2   | 11650.000 | 58.82  | 74.00 | -15.18 | 60.64 | -1.82  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

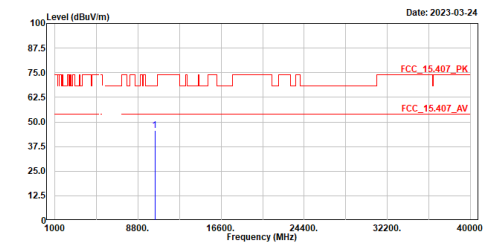
Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac20\_5825MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11650.000 | 51.78  | 54.00 | -2.22  | 53.60 | -1.82  | Average |
| 2   | 11650.000 | 63.09  | 74.00 | -10.91 | 64.91 | -1.82  | Peak    |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac40\_5190MHz  
Test BY :Ashton

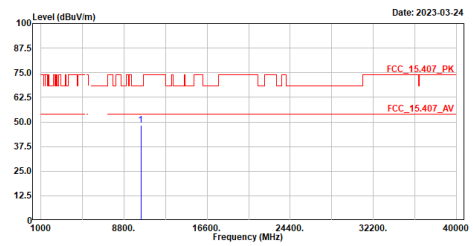


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |        |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 10380.000 | 45.69  | 68.22  | -22.53 | 50.28 | -4.59  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac40\_5190MHz  
Test BY :Ashton

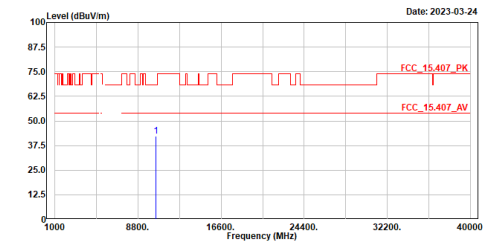


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |        |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 10380.000 | 48.46  | 68.22  | -19.76 | 53.05 | -4.59  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac40\_5230MHz  
Test BY :Ashton

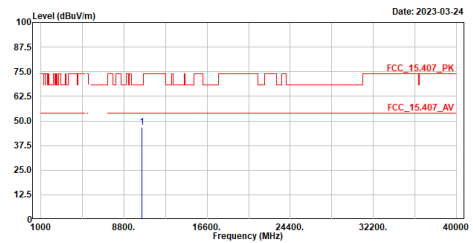


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |        |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 10460.000 | 42.38  | 68.22  | -25.84 | 46.84 | -4.46  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac40\_5230MHz  
Test BY :Ashton

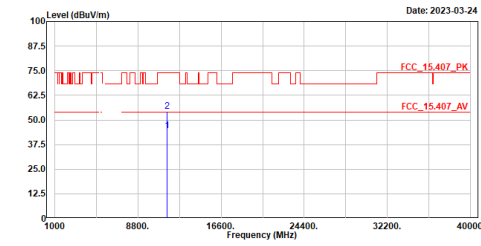


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |        |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 10460.000 | 46.61  | 68.22  | -21.61 | 51.07 | -4.46  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac40\_5755MHz  
Test BY :Ashton

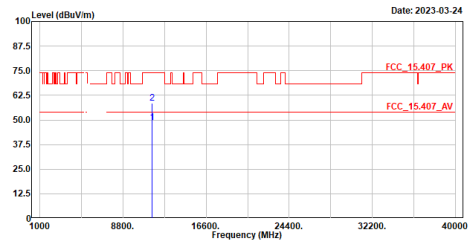


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11510.000 | 44.68  | 54.00  | -9.32  | 46.60 | -1.92  | Average |
| 2   | 11510.000 | 54.18  | 74.00  | -19.82 | 56.10 | -1.92  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac40\_5755MHz  
Test BY :Ashton

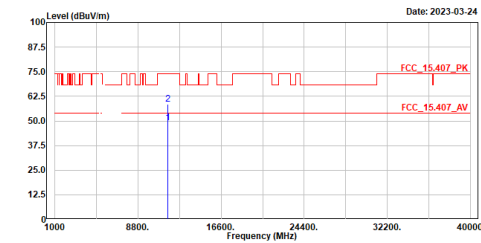


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11510.000 | 48.61  | 54.00  | -5.39  | 50.53 | -1.92  | Average |
| 2   | 11510.000 | 58.53  | 74.00  | -15.47 | 60.45 | -1.92  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac40\_5795MHz  
Test BY :Ashton

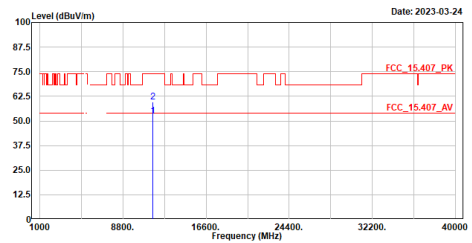


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11590.000 | 49.14  | 54.00  | -4.86  | 50.97 | -1.83  | Average |
| 2   | 11590.000 | 58.61  | 74.00  | -15.39 | 60.44 | -1.83  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac40\_5795MHz  
Test BY :Ashton

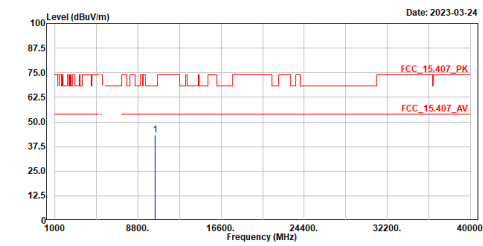


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|--------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line   | Limit  | Level |        |         |
|     |           |        | dBuV/m | dB     | dBuV  | dB     |         |
| 1   | 11590.000 | 52.62  | 54.00  | -1.38  | 54.45 | -1.83  | Average |
| 2   | 11590.000 | 59.50  | 74.00  | -14.50 | 61.33 | -1.83  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac80\_5210MHz  
Test BY :Ashton

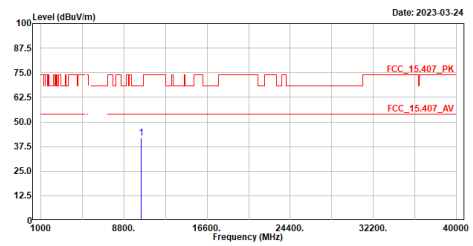


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 10420.000 | 43.46  | 68.22 | -24.76 | 47.99 | -4.53  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac80\_5210MHz  
Test BY :Ashton

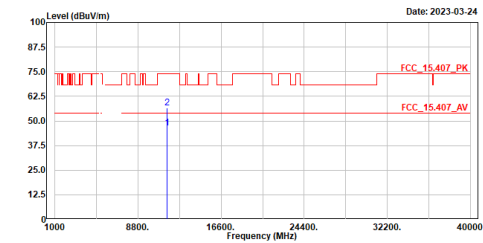


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 10420.000 | 41.84  | 68.22 | -26.38 | 46.37 | -4.53  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac80\_5775MHz  
Test BY :Ashton

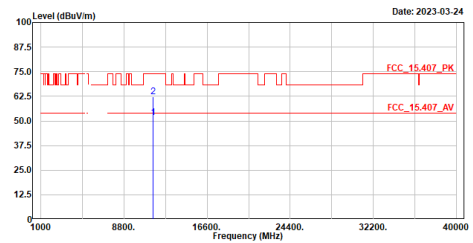


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11550.000 | 46.26  | 54.00 | -7.74  | 48.05 | -1.79  | Average |
| 2   | 11550.000 | 56.76  | 74.00 | -17.24 | 58.55 | -1.79  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac80\_5775MHz  
Test BY :Ashton

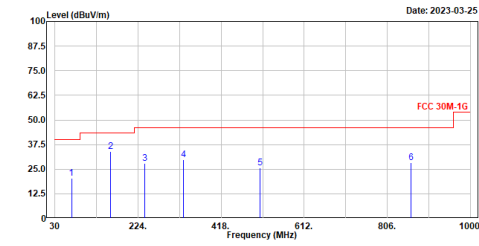


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark  |
|-----|-----------|--------|-------|--------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |         |
| 1   | 11550.000 | 51.66  | 54.00 | -2.34  | 53.45 | -1.79  | Average |
| 2   | 11550.000 | 62.17  | 74.00 | -11.83 | 63.96 | -1.79  | Peak    |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

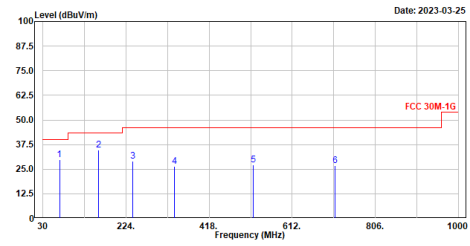
Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac80\_5775MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | Mhz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 68.800    | 20.38  | 40.00 | -19.62 | 46.71 | -26.33 | QP     |
| 2   | 159.980   | 33.90  | 43.50 | -9.60  | 57.90 | -24.00 | QP     |
| 3   | 239.520   | 27.97  | 46.00 | -18.03 | 53.64 | -25.67 | QP     |
| 4   | 329.730   | 29.92  | 46.00 | -16.08 | 52.66 | -22.74 | QP     |
| 5   | 508.210   | 25.78  | 46.00 | -20.22 | 44.19 | -18.41 | QP     |
| 6   | 862.260   | 28.19  | 46.00 | -17.81 | 41.85 | -12.86 | QP     |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB03  
Condition :3m ,VERTICAL  
Mode :TX\_ac80\_5775MHz  
Test BY :Ashton

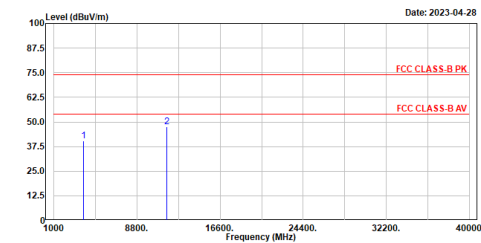


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | Mhz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 68.800    | 29.97  | 40.00 | -10.03 | 56.38 | -26.33 | QP     |
| 2   | 159.980   | 34.78  | 43.50 | -8.72  | 58.78 | -24.00 | QP     |
| 3   | 239.520   | 28.99  | 46.00 | -17.01 | 54.66 | -25.67 | QP     |
| 4   | 336.520   | 26.33  | 46.00 | -19.67 | 48.93 | -22.60 | QP     |
| 5   | 528.820   | 27.06  | 46.00 | -18.94 | 45.27 | -18.21 | QP     |
| 6   | 711.910   | 26.85  | 46.00 | -19.15 | 41.58 | -14.73 | QP     |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

## Co-location

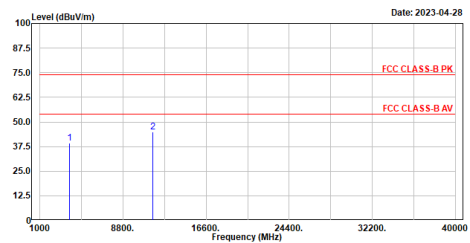
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5795MHz+LTE\_B2\_3M\_QPSK\_1RB7\_CH18900  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 3760.000  | 40.28  | 74.00  | -33.72 | 58.67 | -18.39 | Peak   |
| 2   | 11590.000 | 47.37  | 74.00  | -26.63 | 49.20 | -1.83  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

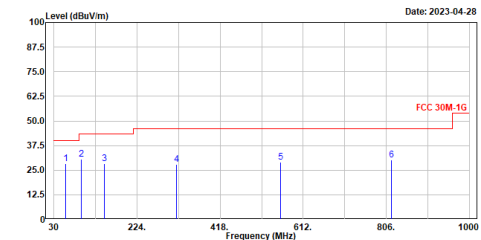
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5795MHz+LTE\_B2\_3M\_QPSK\_1RB7\_CH18900  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 3760.000  | 39.13  | 74.00  | -34.87 | 57.52 | -18.39 | Peak   |
| 2   | 11590.000 | 44.78  | 74.00  | -29.22 | 46.61 | -1.83  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

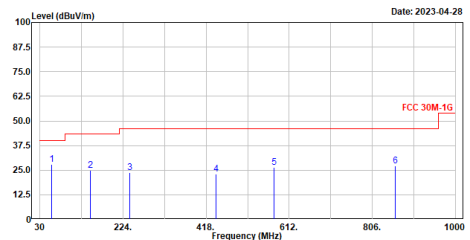
Site :HY-CB03  
Condition :3m ,HORIZONTAL  
Mode :TX\_ac40\_5795MHz+LTE\_B2\_3M\_QPSK\_1RB7\_CH18900  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 58.130    | 28.43  | 40.00  | -11.57 | 53.25 | -24.82 | QP     |
| 2   | 94.020    | 30.64  | 43.50  | -12.86 | 60.49 | -29.85 | QP     |
| 3   | 147.370   | 28.47  | 43.50  | -15.03 | 52.76 | -24.29 | QP     |
| 4   | 316.150   | 28.00  | 46.00  | -18.00 | 51.12 | -23.12 | QP     |
| 5   | 559.620   | 29.15  | 46.00  | -16.85 | 46.74 | -17.59 | QP     |
| 6   | 817.640   | 30.34  | 46.00  | -15.66 | 43.55 | -13.21 | QP     |

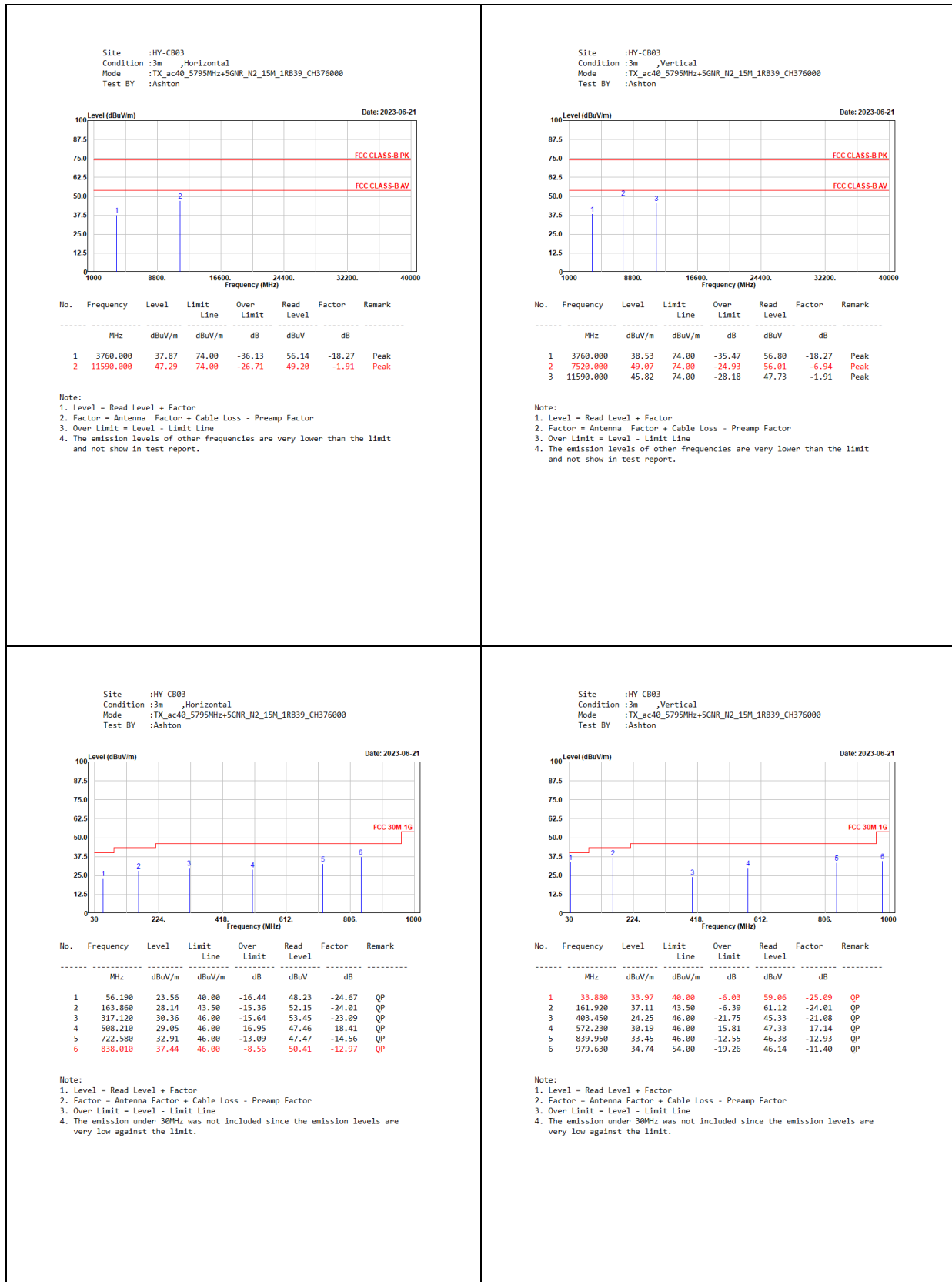
Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5795MHz+LTE\_B2\_3M\_QPSK\_1RB7\_CH18900  
Test BY :Ashton



| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | dBuV/m | dB     | dBuV  | dB     |        |
| 1   | 58.130    | 27.74  | 40.00  | -12.26 | 52.56 | -24.82 | QP     |
| 2   | 147.370   | 25.09  | 43.50  | -18.41 | 49.38 | -24.29 | QP     |
| 3   | 239.520   | 23.76  | 46.00  | -22.24 | 49.43 | -25.67 | QP     |
| 4   | 441.280   | 23.03  | 46.00  | -22.97 | 42.87 | -19.84 | QP     |
| 5   | 577.080   | 26.53  | 46.00  | -19.47 | 43.46 | -16.93 | QP     |
| 6   | 860.320   | 27.21  | 46.00  | -18.79 | 40.11 | -12.90 | QP     |

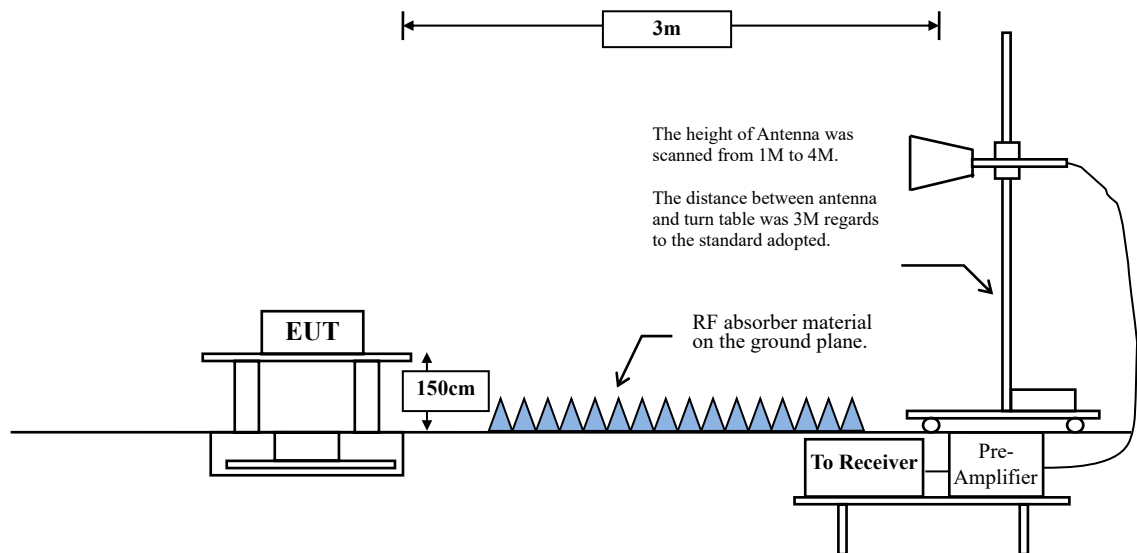
Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission under 30MHz was not included since the emission levels are very low against the limit.



## 6. Band Edge

### 6.1. Test Setup

RF Radiated Measurement:



### 6.2. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

| FCC Part 15 Subpart C Paragraph 15.209 Limits |                     |                             |
|-----------------------------------------------|---------------------|-----------------------------|
| Frequency<br>MHz                              | $\mu\text{V/m @3m}$ | $\text{dB}\mu\text{V/m@3m}$ |
| 30-88                                         | 100                 | 40                          |
| 88-216                                        | 150                 | 43.5                        |
| 216-960                                       | 200                 | 46                          |
| Above 960                                     | 500                 | 54                          |

Remarks:

1. RF Voltage ( $\text{dB}\mu\text{V}$ ) =  $20 \log \text{RF Voltage } (\mu\text{V})$ .
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.

### 6.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

#### **RBW and VBW Parameter setting:**

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW  $\geq$  3MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW = 10Hz, when duty cycle  $\geq$  98 %

VBW  $\geq$  1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

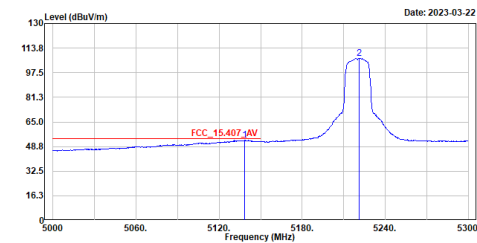
| 5GHz band       | Duty Cycle (%) | T (ms) | 1/T (Hz) | VBW (Hz) |
|-----------------|----------------|--------|----------|----------|
| 802.11a         | 73.11          | 1.4000 | 714      | 1000     |
| 802.11ac-20 MHz | 75.77          | 1.3100 | 763      | 1000     |
| 802.11ac-40 MHz | 66.16          | 0.6550 | 1527     | 2000     |
| 802.11ac-80 MHz | 43.59          | 0.3230 | 3096     | 5000     |

Note: Duty Cycle Refer to Section 8.

## 6.4. Test Result of Band Edge



Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX a\_5220MHz  
Test BY :Ashton

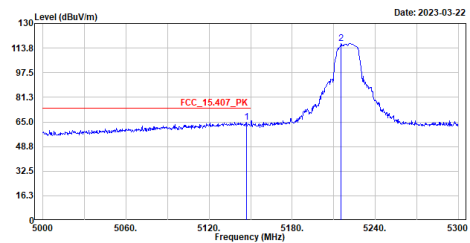


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5138.600  | 52.89  | 54.00 | -1.11 | 37.10 | 15.79  | Average |
| 2   | 5221.400  | 107.18 | ----- | ----- | 91.46 | 15.72  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX a\_5220MHz  
Test BY :Ashton

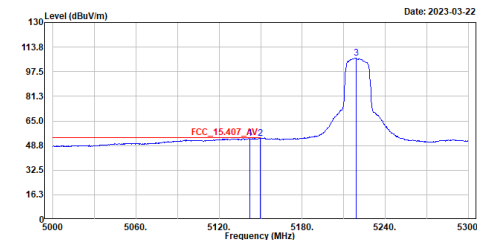


| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  | dB     |        |
| 1   | 5147.000  | 64.62  | 74.00 | -9.38 | 48.81  | 15.81  | Peak   |
| 2   | 5215.400  | 116.89 | ----- | ----- | 101.14 | 15.75  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX a\_5220MHz  
Test BY :Ashton

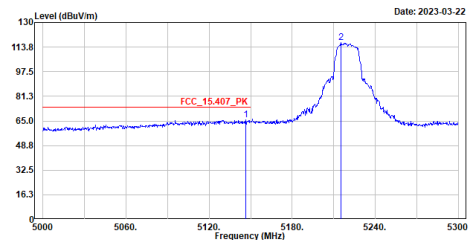


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5142.200  | 53.48  | 54.00 | -0.52 | 37.67 | 15.81  | Average |
| 2   | 5149.700  | 53.65  | 54.00 | -0.35 | 37.84 | 15.81  | Average |
| 3   | 5219.000  | 106.51 | ----- | ----- | 90.77 | 15.74  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX a\_5220MHz  
Test BY :Ashton

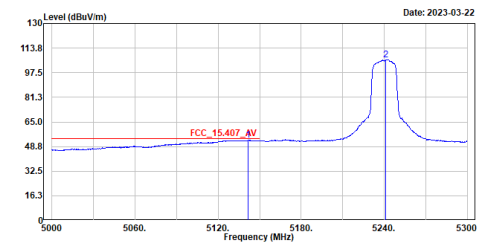


| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  | dB     |        |
| 1   | 5146.400  | 65.55  | 74.00 | -8.45 | 49.74  | 15.81  | Peak   |
| 2   | 5215.400  | 116.88 | ----- | ----- | 101.13 | 15.75  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_a\_5240MHz\_B1  
Test BY :Ashton

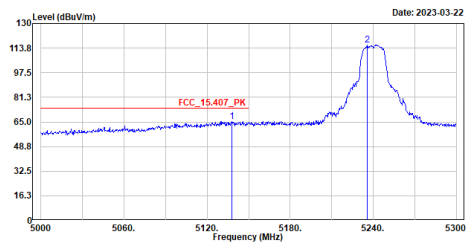


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5141.900  | 52.92  | 54.00 | -1.08 | 37.11 | 15.81  | Average |
| 2   | 5241.200  | 106.21 | ----- | ----- | 90.58 | 15.63  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_a\_5240MHz\_B1  
Test BY :Ashton

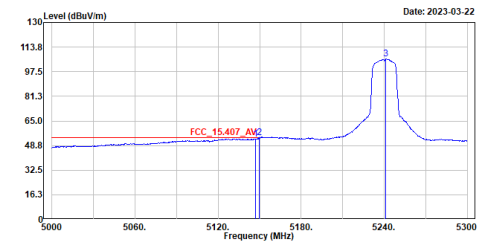


| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  | dB     |        |
| 1   | 5137.700  | 65.26  | 74.00 | -8.74 | 49.47  | 15.79  | Peak   |
| 2   | 5235.500  | 115.75 | ----- | ----- | 100.09 | 15.66  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_a\_5240MHz\_B1  
Test BY :Ashton

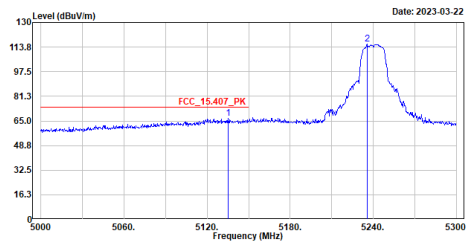


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5147.000  | 53.07  | 54.00 | -0.93 | 37.26 | 15.81  | Average |
| 2   | 5149.700  | 53.93  | 54.00 | -0.07 | 38.12 | 15.81  | Average |
| 3   | 5241.200  | 105.96 | ----- | ----- | 90.33 | 15.63  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

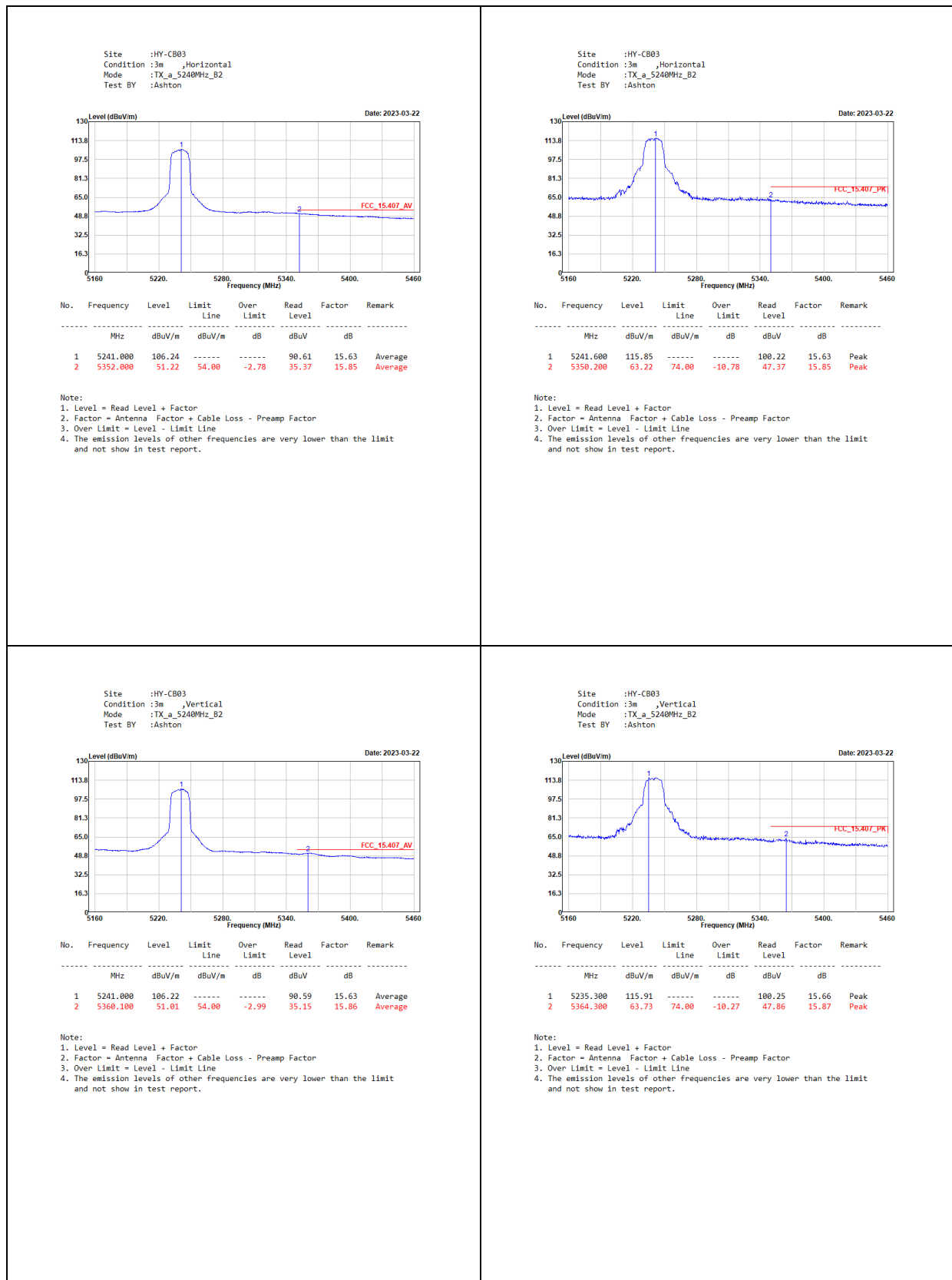
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_a\_5240MHz\_B1  
Test BY :Ashton

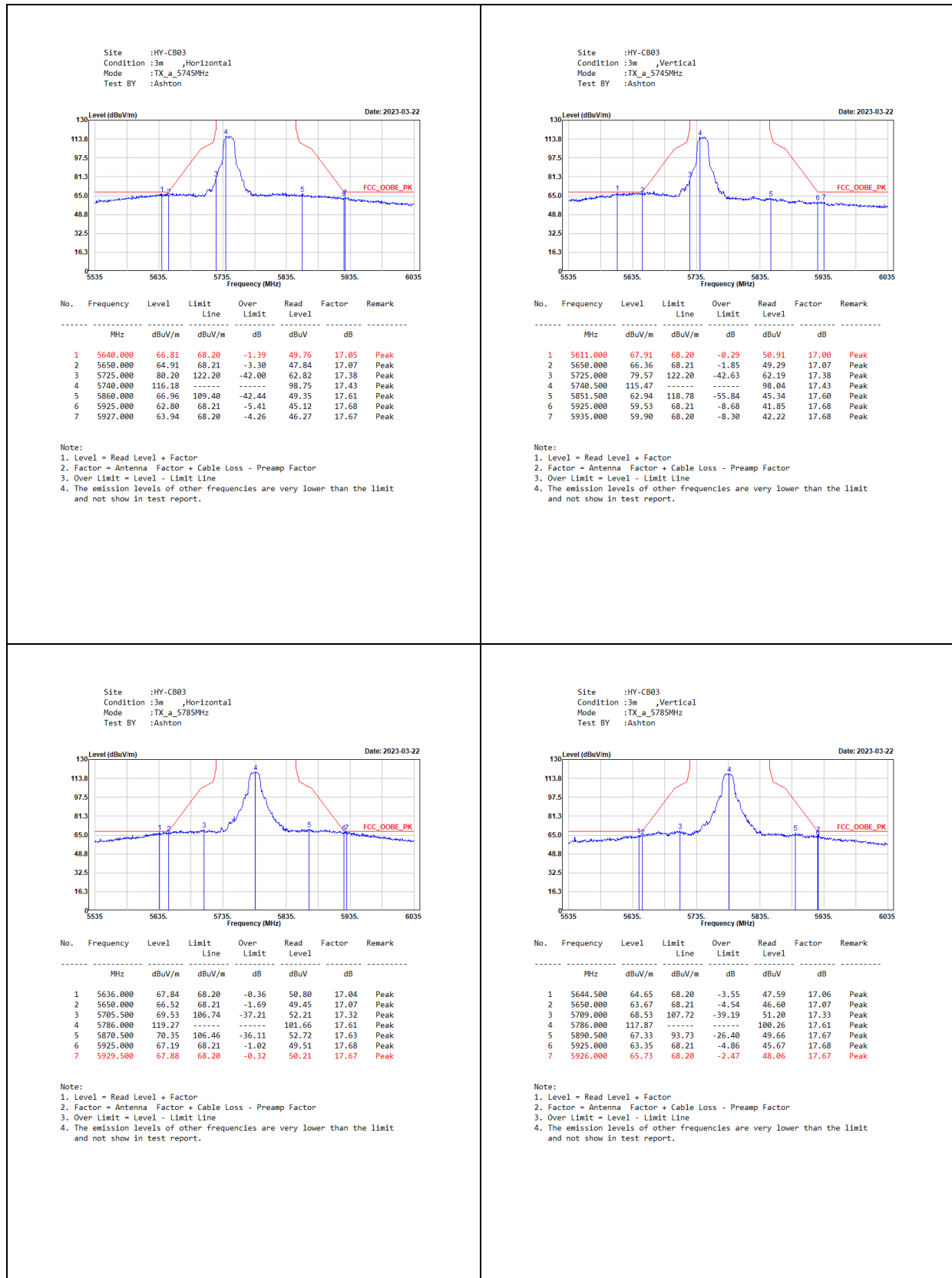


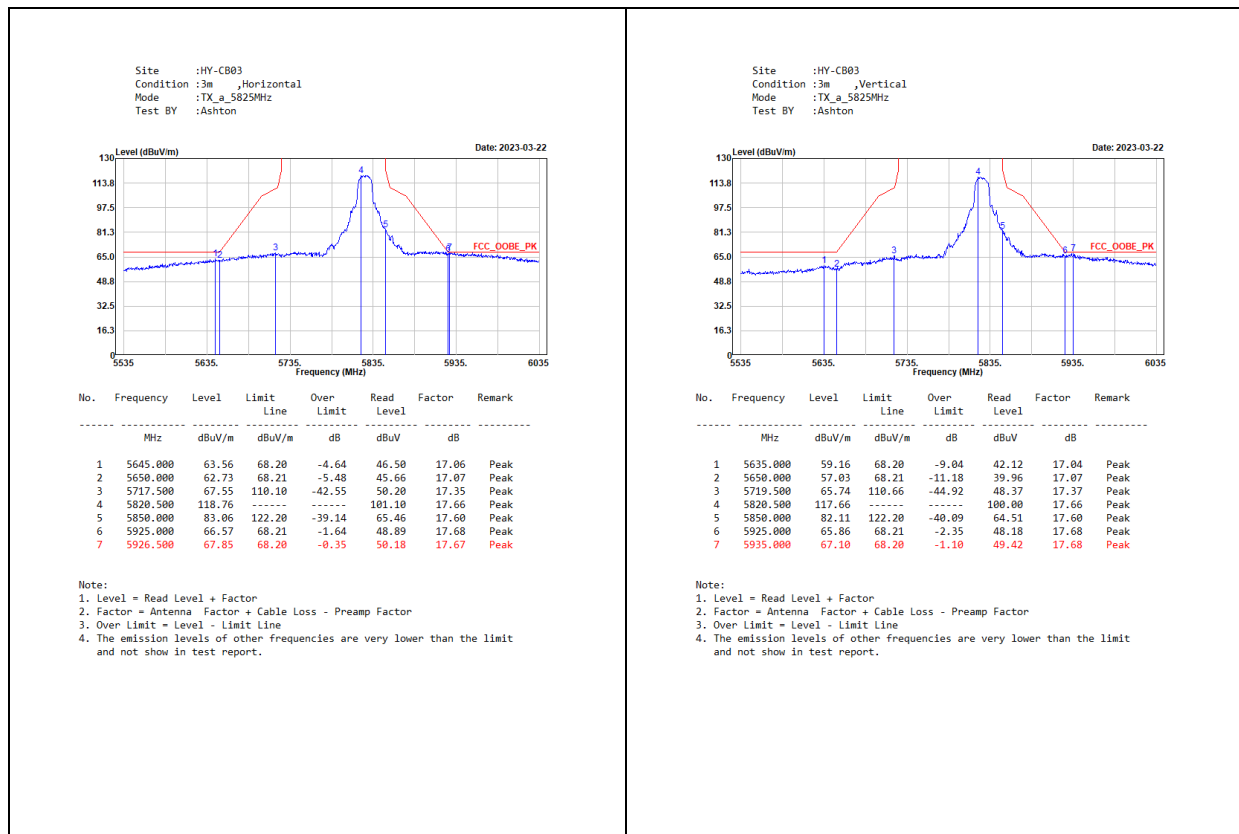
| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  | dB     |        |
| 1   | 5135.000  | 66.53  | 74.00 | -7.47 | 50.74  | 15.79  | Peak   |
| 2   | 5235.500  | 115.67 | ----- | ----- | 100.01 | 15.66  | Peak   |

Note:

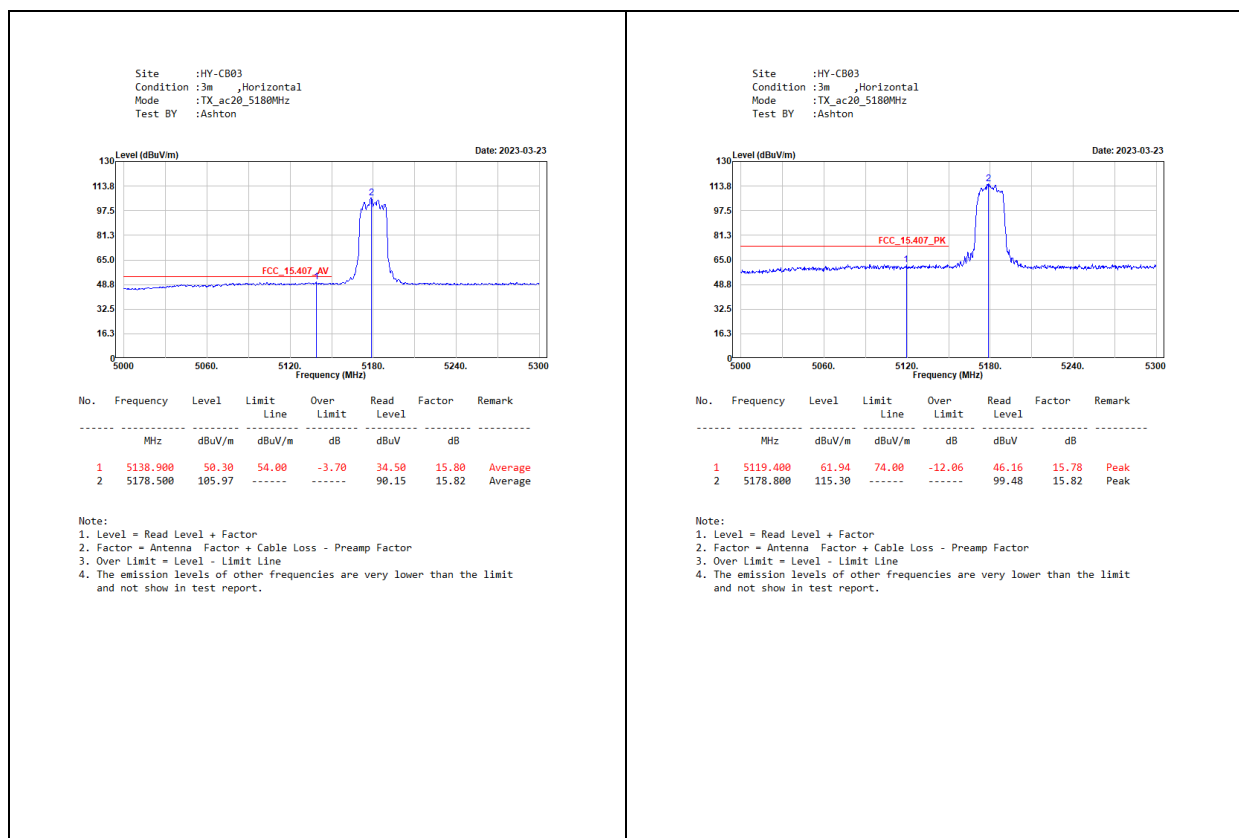
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.



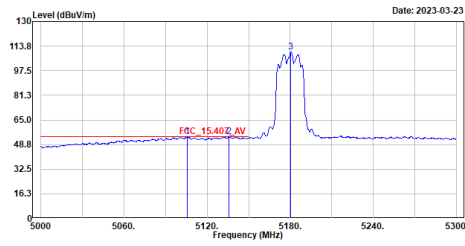




## MIMO



Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5180MHz  
Test BY :Ashton

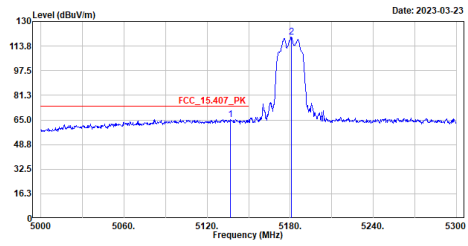


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5105.600  | 53.74  | 54.00 | -0.26 | 37.97 | 15.77  | Average |
| 2   | 5135.600  | 53.81  | 54.00 | -0.19 | 38.02 | 15.79  | Average |
| 3   | 5180.600  | 109.82 | ----- | ----- | 94.00 | 15.82  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5180MHz  
Test BY :Ashton

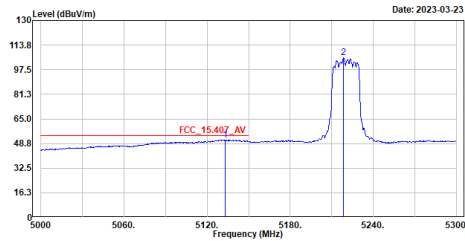


| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  | dB     |        |
| 1   | 5137.100  | 65.46  | 74.00 | -8.54 | 49.66  | 15.80  | Peak   |
| 2   | 5180.900  | 119.74 | ----- | ----- | 103.92 | 15.82  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5220MHz  
Test BY :Ashton

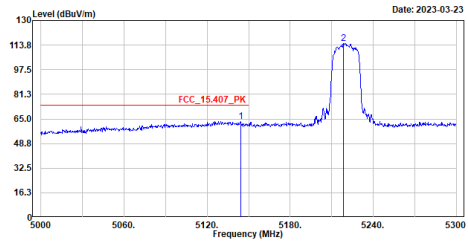


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5133.200  | 51.23  | 54.00 | -2.77 | 35.44 | 15.79  | Average |
| 2   | 5218.700  | 105.35 | ----- | ----- | 89.61 | 15.74  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5220MHz  
Test BY :Ashton

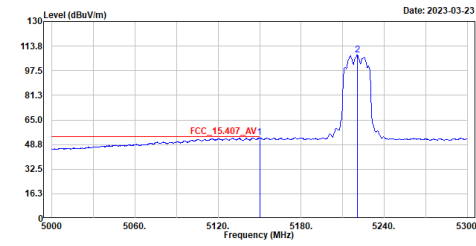


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 5144.300  | 63.17  | 74.00 | -10.83 | 47.37 | 15.80  | Peak   |
| 2   | 5218.700  | 114.71 | ----- | -----  | 98.97 | 15.74  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5220MHz  
Test BY :Ashton

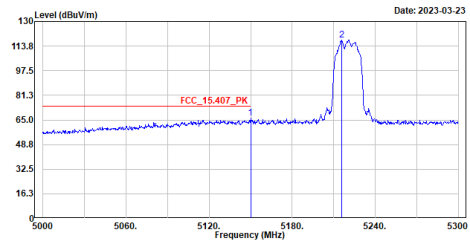


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5150.000  | 53.36  | 54.00 | -0.64 | 37.54 | 15.82  | Average |
| 2   | 5220.500  | 108.15 | ----- | ----- | 92.42 | 15.73  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5220MHz  
Test BY :Ashton

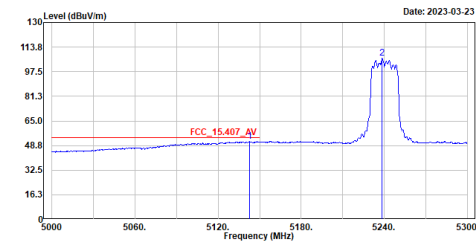


| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  | dB     |        |
| 1   | 5150.000  | 66.00  | 74.00 | -8.00 | 50.18  | 15.82  | Peak   |
| 2   | 5215.700  | 117.87 | ----- | ----- | 102.12 | 15.75  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5240MHz\_B1  
Test BY :Ashton

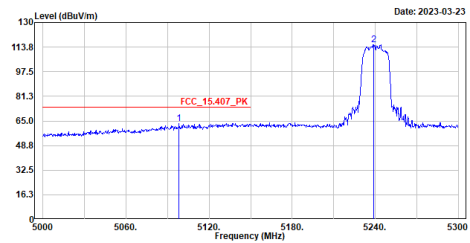


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5142.800  | 51.31  | 54.00 | -2.69 | 35.51 | 15.80  | Average |
| 2   | 5238.500  | 106.22 | ----- | ----- | 90.58 | 15.64  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5240MHz\_B1  
Test BY :Ashton

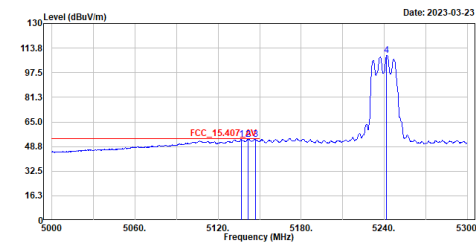


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 5098.400  | 63.52  | 74.00 | -10.48 | 47.77 | 15.75  | Peak   |
| 2   | 5238.800  | 115.48 | ----- | -----  | 99.84 | 15.64  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

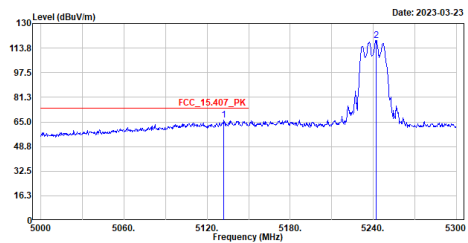
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5240MHz\_B1  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level |        |         |
| 1   | 5136.800  | 53.35  | 54.00 | -0.65 | 37.55 | 15.80  | Average |
| 2   | 5141.600  | 53.60  | 54.00 | -0.40 | 37.79 | 15.81  | Average |
| 3   | 5147.000  | 53.57  | 54.00 | -0.43 | 37.76 | 15.81  | Average |
| 4   | 5241.800  | 108.77 | ----- | ----- | 93.14 | 15.63  | Average |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

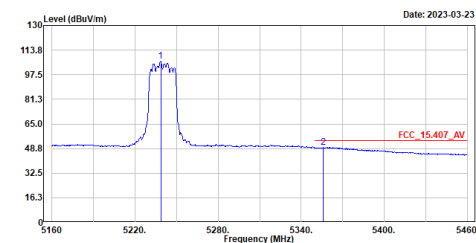
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5240MHz\_B1  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read   | Factor | Remark |
|-----|-----------|--------|-------|-------|--------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level  |        |        |
| 1   | 5132.000  | 66.19  | 74.00 | -7.81 | 50.39  | 15.80  | Peak   |
| 2   | 5242.100  | 118.79 | ----- | ----- | 103.16 | 15.63  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

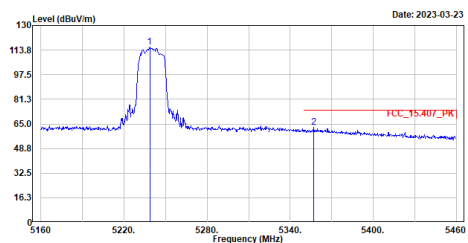
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5240MHz\_B2  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level |        |         |
| 1   | 5238.600  | 106.22 | ----- | ----- | 90.58 | 15.64  | Average |
| 2   | 5355.900  | 49.58  | 54.00 | -4.42 | 33.73 | 15.85  | Average |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

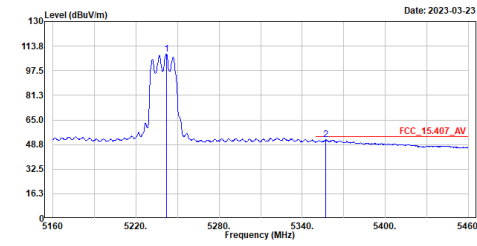
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5240MHz\_B2  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level |        |        |
| 1   | 5238.600  | 115.56 | ----- | -----  | 99.92 | 15.64  | Peak   |
| 2   | 5356.800  | 62.72  | 74.00 | -11.28 | 46.86 | 15.86  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5240MHz\_B2  
Test BY :Ashton

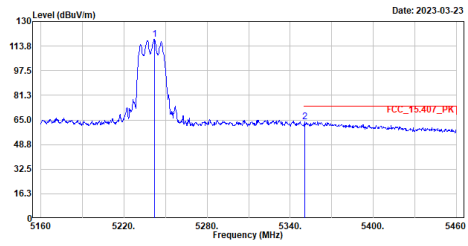


| No. | Frequency<br>MHz | Level<br>dBuV/m | Limit<br>Line<br>dBuV/m | Over<br>Limit<br>dB | Read<br>Level<br>dBuV | Factor<br>dB | Remark  |
|-----|------------------|-----------------|-------------------------|---------------------|-----------------------|--------------|---------|
| 1   | 5242.200         | 108.60          | -----                   | -----               | 92.97                 | 15.63        | Average |
| 2   | 5356.000         | 51.88           | 54.00                   | -2.12               | 36.02                 | 15.86        | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5240MHz\_B2  
Test BY :Ashton

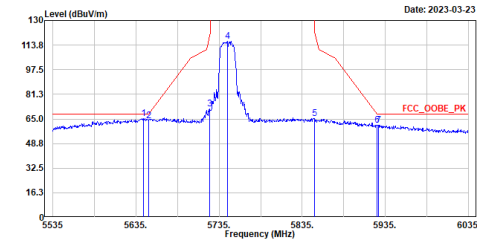


| No. | Frequency<br>MHz | Level<br>dBuV/m | Limit<br>Line<br>dBuV/m | Over<br>Limit<br>dB | Read<br>Level<br>dBuV | Factor<br>dB | Remark |
|-----|------------------|-----------------|-------------------------|---------------------|-----------------------|--------------|--------|
| 1   | 5241.900         | 118.35          | -----                   | -----               | 102.72                | 15.63        | Peak   |
| 2   | 5350.500         | 63.87           | 74.00                   | -10.13              | 48.02                 | 15.85        | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5745MHz  
Test BY :Ashton

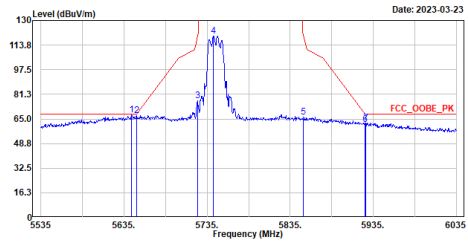


| No. | Frequency<br>MHz | Level<br>dBuV/m | Limit<br>Line<br>dBuV/m | Over<br>Limit<br>dB | Read<br>Level<br>dBuV | Factor<br>dB | Remark |
|-----|------------------|-----------------|-------------------------|---------------------|-----------------------|--------------|--------|
| 1   | 5644.000         | 65.33           | 68.20                   | -2.87               | 48.27                 | 17.06        | Peak   |
| 2   | 5650.000         | 63.98           | 68.21                   | -4.23               | 46.91                 | 17.07        | Peak   |
| 3   | 5723.500         | 71.79           | 118.78                  | -46.99              | 54.41                 | 17.38        | Peak   |
| 4   | 5745.000         | 116.05          | -----                   | -----               | 98.60                 | 17.45        | Peak   |
| 5   | 5850.000         | 65.33           | 122.20                  | -56.87              | 47.73                 | 17.60        | Peak   |
| 6   | 5925.000         | 60.62           | 68.21                   | -7.59               | 42.94                 | 17.68        | Peak   |
| 7   | 5926.500         | 60.98           | 68.20                   | -7.22               | 43.31                 | 17.67        | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5745MHz  
Test BY :Ashton

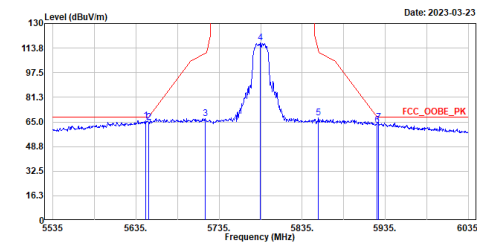


| No. | Frequency<br>MHz | Level<br>dBuV/m | Limit<br>Line<br>dBuV/m | Over<br>Limit<br>dB | Read<br>Level<br>dBuV | Factor<br>dB | Remark |
|-----|------------------|-----------------|-------------------------|---------------------|-----------------------|--------------|--------|
| 1   | 5644.000         | 67.84           | 68.20                   | -0.36               | 50.78                 | 17.06        | Peak   |
| 2   | 5650.000         | 67.09           | 68.21                   | -1.12               | 50.02                 | 17.07        | Peak   |
| 3   | 5723.500         | 76.94           | 118.78                  | -41.84              | 59.56                 | 17.38        | Peak   |
| 4   | 5742.500         | 119.74          | -----                   | -----               | 102.30                | 17.44        | Peak   |
| 5   | 5850.500         | 66.06           | 121.06                  | -55.00              | 48.46                 | 17.60        | Peak   |
| 6   | 5925.000         | 61.47           | 68.21                   | -6.74               | 43.79                 | 17.68        | Peak   |
| 7   | 5926.000         | 62.40           | 68.20                   | -5.80               | 44.73                 | 17.67        | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5785MHz  
Test BY :Ashton

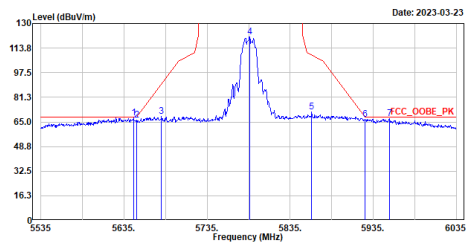


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level | dB     |        |
| 1   | 5647.000  | 65.85  | 68.20  | -2.35  | 48.79 | 17.06  | Peak   |
| 2   | 5650.000  | 64.91  | 68.21  | -3.30  | 47.84 | 17.07  | Peak   |
| 3   | 5718.000  | 67.21  | 110.24 | -43.03 | 49.84 | 17.37  | Peak   |
| 4   | 5784.500  | 117.14 | -----  | -----  | 99.53 | 17.61  | Peak   |
| 5   | 5854.500  | 67.77  | 111.94 | -44.17 | 50.16 | 17.61  | Peak   |
| 6   | 5925.000  | 63.03  | 68.21  | -5.18  | 45.35 | 17.68  | Peak   |
| 7   | 5926.500  | 64.53  | 68.20  | -3.67  | 46.86 | 17.67  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5785MHz  
Test BY :Ashton

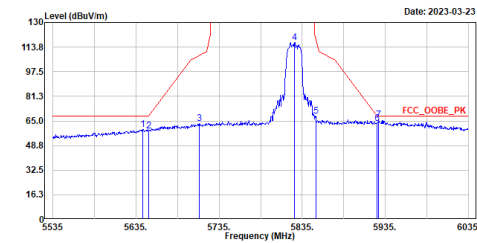


| No. | Frequency | Level  | Limit  | Over   | Read   | Factor | Remark |
|-----|-----------|--------|--------|--------|--------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level  | dB     |        |
| 1   | 5646.500  | 67.90  | 68.20  | -0.30  | 50.84  | 17.06  | Peak   |
| 2   | 5650.000  | 66.09  | 68.21  | -2.12  | 49.02  | 17.07  | Peak   |
| 3   | 5680.000  | 68.49  | 90.40  | -21.91 | 51.34  | 17.15  | Peak   |
| 4   | 5786.000  | 121.35 | -----  | -----  | 103.74 | 17.61  | Peak   |
| 5   | 5861.000  | 71.53  | 109.12 | -37.59 | 53.91  | 17.62  | Peak   |
| 6   | 5925.000  | 66.74  | 68.21  | -1.47  | 49.06  | 17.68  | Peak   |
| 7   | 5955.000  | 67.07  | 68.20  | -1.13  | 49.39  | 17.68  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac20\_5825MHz  
Test BY :Ashton

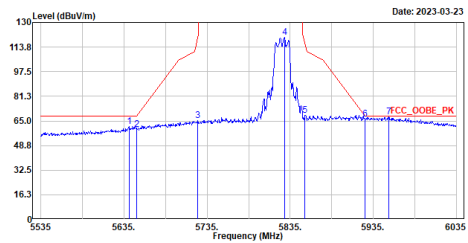


| No. | Frequency | Level  | Limit  | Over   | Read  | Factor | Remark |
|-----|-----------|--------|--------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level | dB     |        |
| 1   | 5643.500  | 59.24  | 68.20  | -8.96  | 42.18 | 17.06  | Peak   |
| 2   | 5650.000  | 58.46  | 68.21  | -9.75  | 41.39 | 17.07  | Peak   |
| 3   | 5711.000  | 63.18  | 108.28 | -45.10 | 45.85 | 17.33  | Peak   |
| 4   | 5826.000  | 116.72 | -----  | -----  | 99.07 | 17.65  | Peak   |
| 5   | 5851.500  | 68.39  | 118.78 | -50.39 | 50.79 | 17.68  | Peak   |
| 6   | 5925.000  | 63.24  | 68.21  | -4.97  | 45.56 | 17.68  | Peak   |
| 7   | 5927.000  | 65.63  | 68.20  | -2.57  | 47.96 | 17.67  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac20\_5825MHz  
Test BY :Ashton

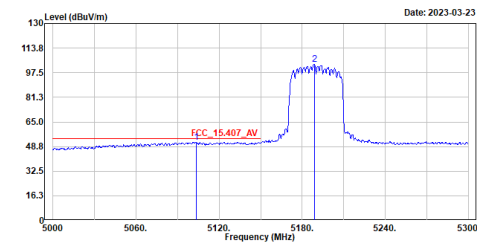


| No. | Frequency | Level  | Limit  | Over   | Read   | Factor | Remark |
|-----|-----------|--------|--------|--------|--------|--------|--------|
|     | MHz       | dBuV/m | Line   | Limit  | Level  | dB     |        |
| 1   | 5641.000  | 61.24  | 68.20  | -6.96  | 44.18  | 17.06  | Peak   |
| 2   | 5650.000  | 59.52  | 68.21  | -8.69  | 42.45  | 17.07  | Peak   |
| 3   | 5723.500  | 65.26  | 118.78 | -53.52 | 47.88  | 17.38  | Peak   |
| 4   | 5826.000  | 119.98 | -----  | -----  | 102.33 | 17.65  | Peak   |
| 5   | 5853.000  | 68.83  | 115.36 | -46.53 | 51.22  | 17.61  | Peak   |
| 6   | 5925.000  | 66.43  | 68.21  | -1.78  | 48.75  | 17.68  | Peak   |
| 7   | 5954.000  | 67.76  | 68.20  | -0.44  | 50.08  | 17.68  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5190MHz  
Test BY :Ashton

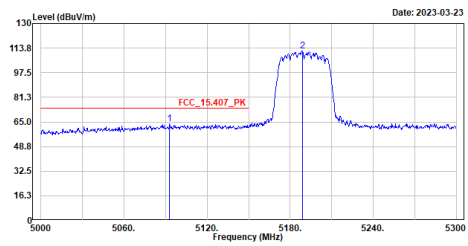


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5103.500  | 51.57  | 54.00 | -2.43 | 35.82 | 15.75  | Average |
| 2   | 5188.700  | 103.17 | ----- | ----- | 87.35 | 15.82  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5190MHz  
Test BY :Ashton

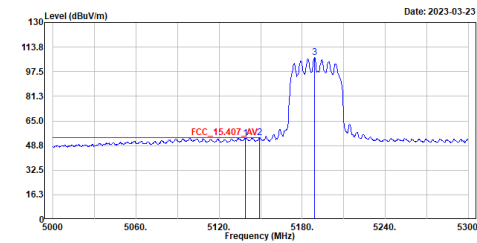


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 5093.000  | 63.57  | 74.00 | -10.43 | 47.85 | 15.72  | Peak   |
| 2   | 5188.700  | 112.02 | ----- | -----  | 96.20 | 15.82  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5190MHz  
Test BY :Ashton

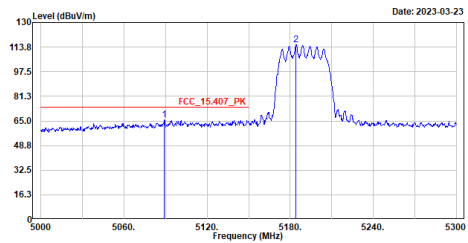


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5139.200  | 53.69  | 54.00 | -0.31 | 37.89 | 15.80  | Average |
| 2   | 5149.100  | 53.79  | 54.00 | -0.21 | 37.99 | 15.80  | Average |
| 3   | 5189.000  | 106.76 | ----- | ----- | 90.94 | 15.82  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5190MHz  
Test BY :Ashton

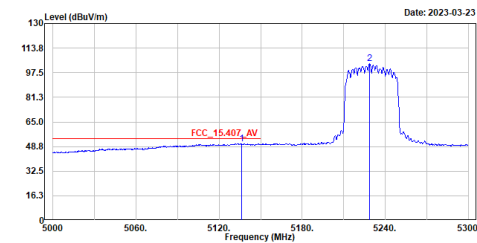


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark |
|-----|-----------|--------|-------|-------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |        |
| 1   | 5089.100  | 65.53  | 74.00 | -8.47 | 49.83 | 15.70  | Peak   |
| 2   | 5184.200  | 115.45 | ----- | ----- | 99.63 | 15.82  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

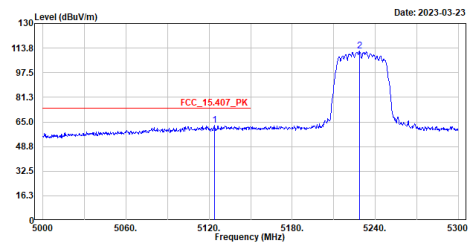
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5230MHz\_B1  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5136.200  | 50.70  | 54.00 | -3.30 | 34.90 | 15.80  | Average |
| 2   | 5228.900  | 103.40 | ----- | ----- | 87.70 | 15.70  | Average |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

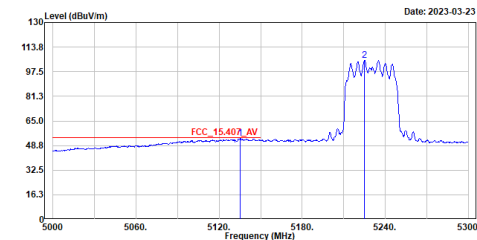
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5230MHz\_B1  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 5124.200  | 62.69  | 74.00 | -11.31 | 46.91 | 15.78  | Peak   |
| 2   | 5228.900  | 111.75 | ----- | -----  | 96.05 | 15.70  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

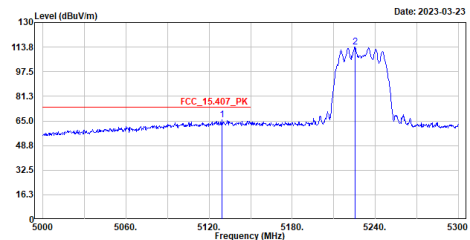
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5230MHz\_B1  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5135.000  | 53.64  | 54.00 | -0.36 | 37.85 | 15.79  | Average |
| 2   | 5225.000  | 105.13 | ----- | ----- | 89.43 | 15.70  | Average |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

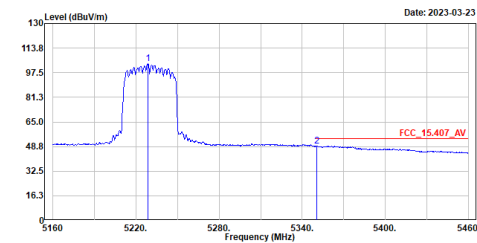
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5230MHz\_B1  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark |
|-----|-----------|--------|-------|-------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |        |
| 1   | 5129.300  | 65.53  | 74.00 | -8.47 | 49.74 | 15.79  | Peak   |
| 2   | 5225.300  | 114.04 | ----- | ----- | 98.34 | 15.70  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

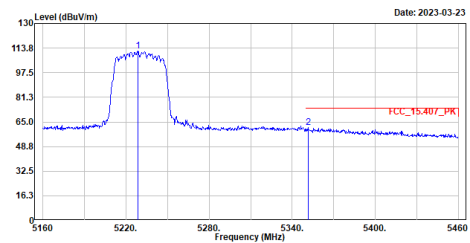
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5230MHz\_B2  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5228.400  | 103.49 | ----- | ----- | 87.80 | 15.69  | Average |
| 2   | 5350.800  | 49.21  | 54.00 | -4.79 | 33.36 | 15.85  | Average |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

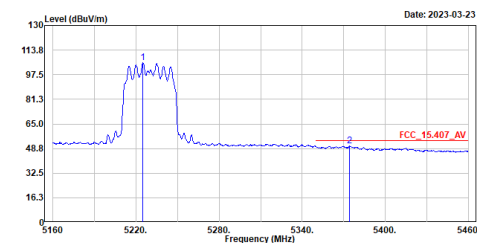
Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac40\_5230MHz\_B2  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 5228.400  | 111.84 | ----- | -----  | 96.15 | 15.69  | Peak   |
| 2   | 5351.400  | 61.26  | 74.00 | -12.74 | 45.41 | 15.85  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

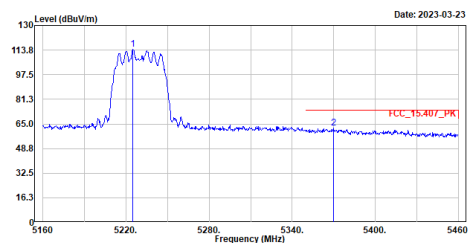
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5230MHz\_B2  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5225.100  | 105.33 | ----- | ----- | 89.63 | 15.70  | Average |
| 2   | 5374.200  | 50.68  | 54.00 | -3.32 | 34.80 | 15.88  | Average |

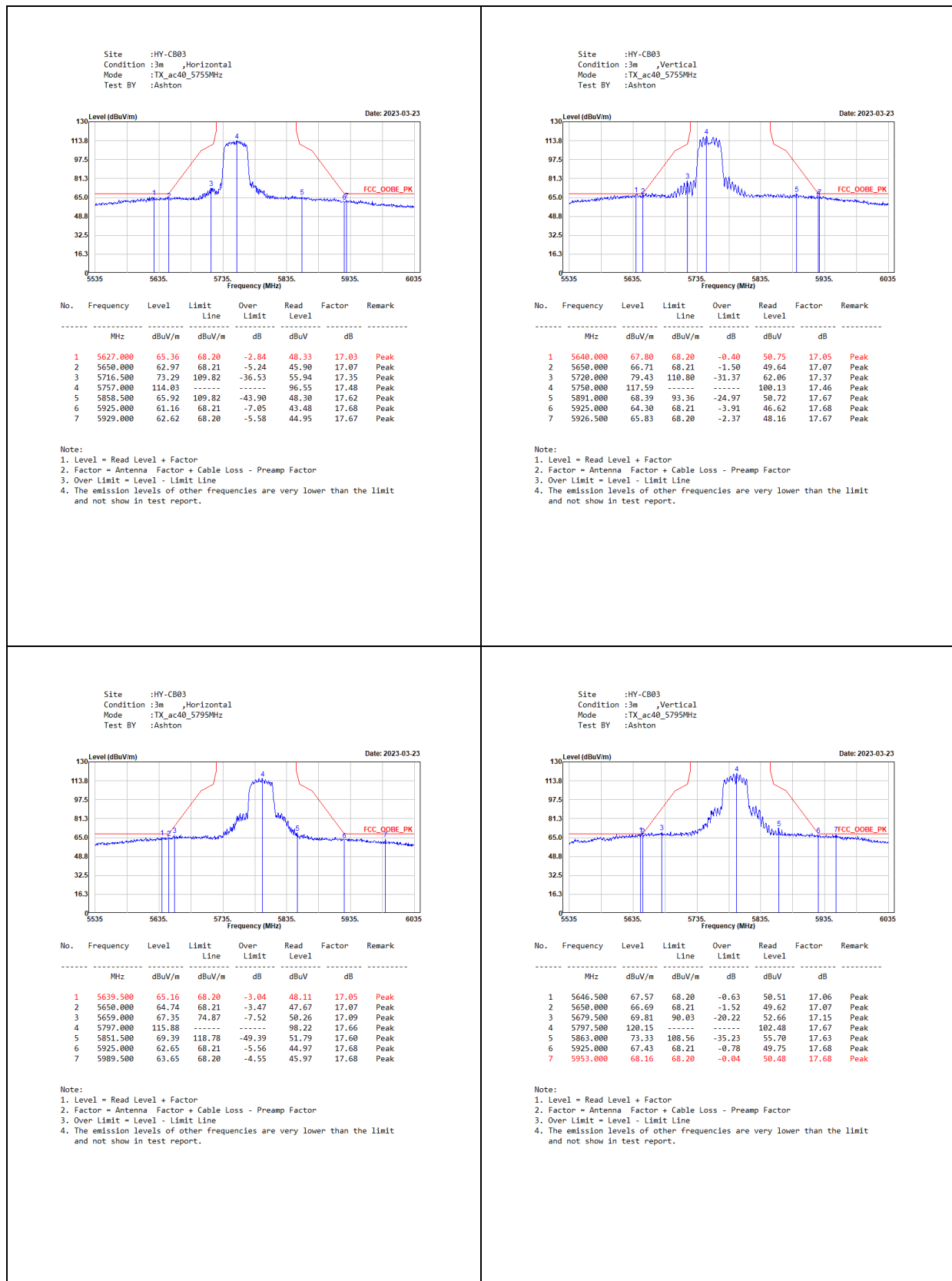
Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac40\_5230MHz\_B2  
Test BY :Ashton

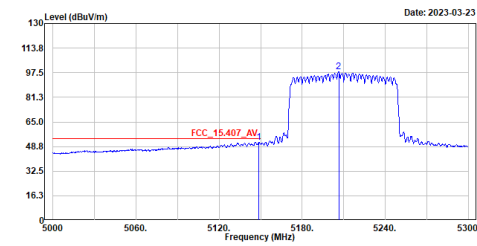


| No. | Frequency | Level  | Limit | Over   | Read  | Factor | Remark |
|-----|-----------|--------|-------|--------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit  | Level | dB     |        |
| 1   | 5225.100  | 114.09 | ----- | -----  | 98.39 | 15.70  | Peak   |
| 2   | 5369.700  | 62.37  | 74.00 | -11.63 | 46.50 | 15.87  | Peak   |

Note:  
1. Level = Read Level + Factor  
2. Factor = Antenna Factor + Cable Loss - Preamp Factor  
3. Over Limit = Level - Limit Line  
4. The emission levels of other frequencies are very lower than the limit and not show in test report.



Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac80\_5210MHz  
Test BY :Ashton

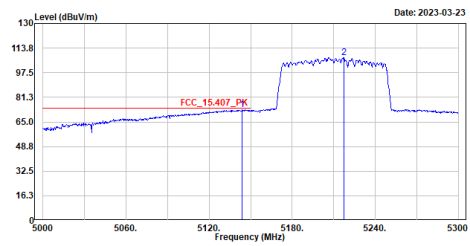


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5148.800  | 51.75  | 54.00 | -2.25 | 35.95 | 15.80  | Average |
| 2   | 5206.400  | 97.97  | ----- | ----- | 82.18 | 15.79  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Horizontal  
Mode :TX\_ac80\_5210MHz  
Test BY :Ashton

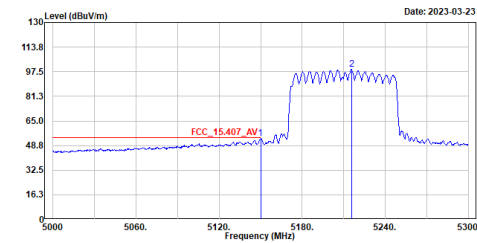


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark |
|-----|-----------|--------|-------|-------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |        |
| 1   | 5144.800  | 72.93  | 74.00 | -1.07 | 57.13 | 15.80  | Peak   |
| 2   | 5217.200  | 107.51 | ----- | ----- | 91.76 | 15.75  | Peak   |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac80\_5210MHz  
Test BY :Ashton

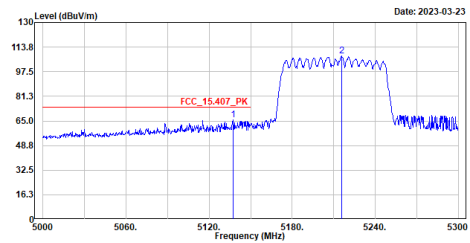


| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark  |
|-----|-----------|--------|-------|-------|-------|--------|---------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |         |
| 1   | 5150.000  | 53.58  | 54.00 | -0.42 | 37.76 | 15.82  | Average |
| 2   | 5215.700  | 98.90  | ----- | ----- | 83.15 | 15.75  | Average |

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

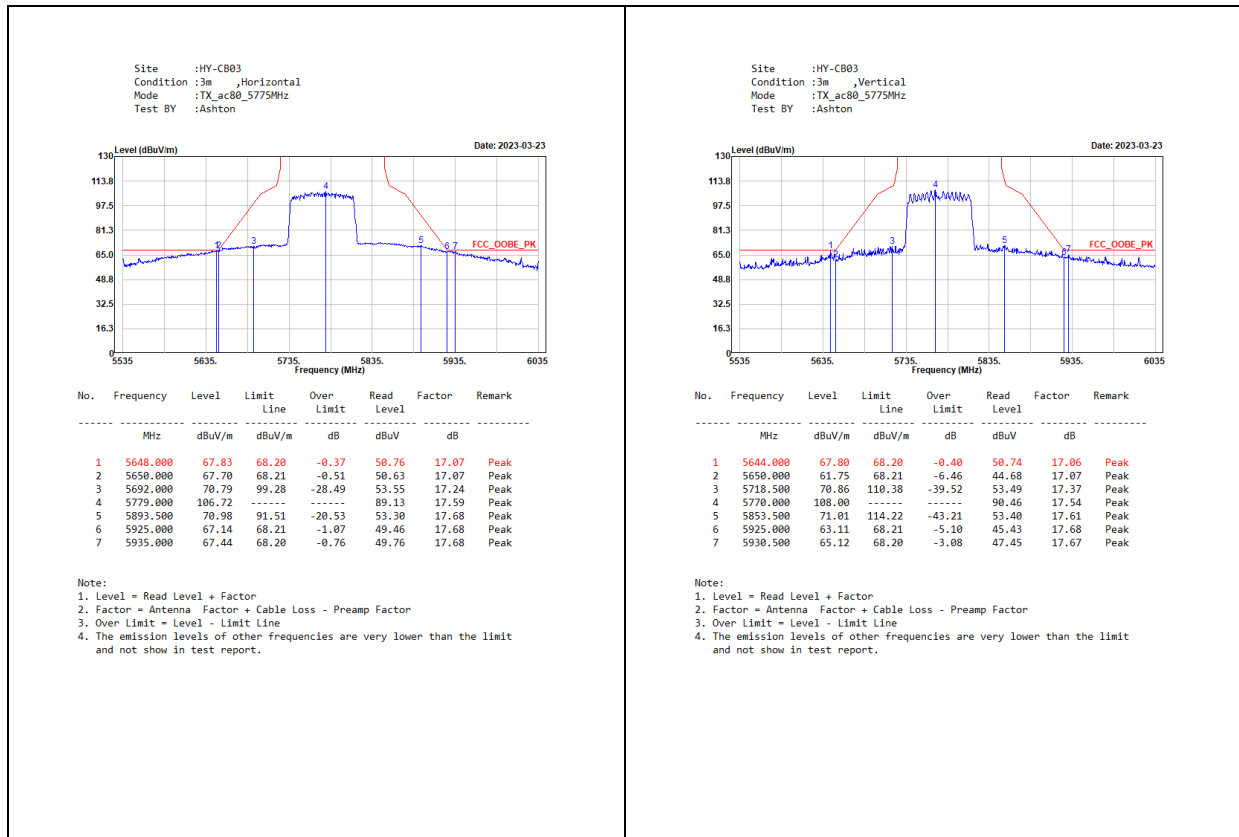
Site :HY-CB03  
Condition :3m ,Vertical  
Mode :TX\_ac80\_5210MHz  
Test BY :Ashton



| No. | Frequency | Level  | Limit | Over  | Read  | Factor | Remark |
|-----|-----------|--------|-------|-------|-------|--------|--------|
|     | MHz       | dBuV/m | Line  | Limit | Level | dB     |        |
| 1   | 5137.400  | 65.51  | 74.00 | -8.49 | 49.71 | 15.80  | Peak   |
| 2   | 5215.700  | 107.78 | ----- | ----- | 92.03 | 15.75  | Peak   |

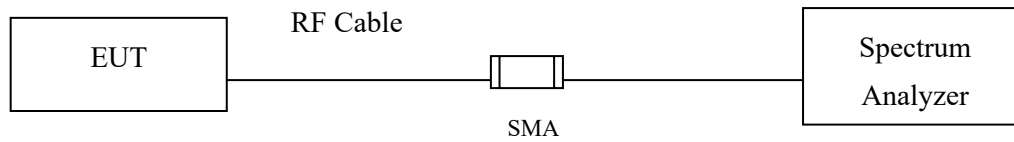
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.



## 7. Occupied Bandwidth

### 7.1. Test Setup



### 7.2. Limits

For the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

### 7.3. Test Procedure

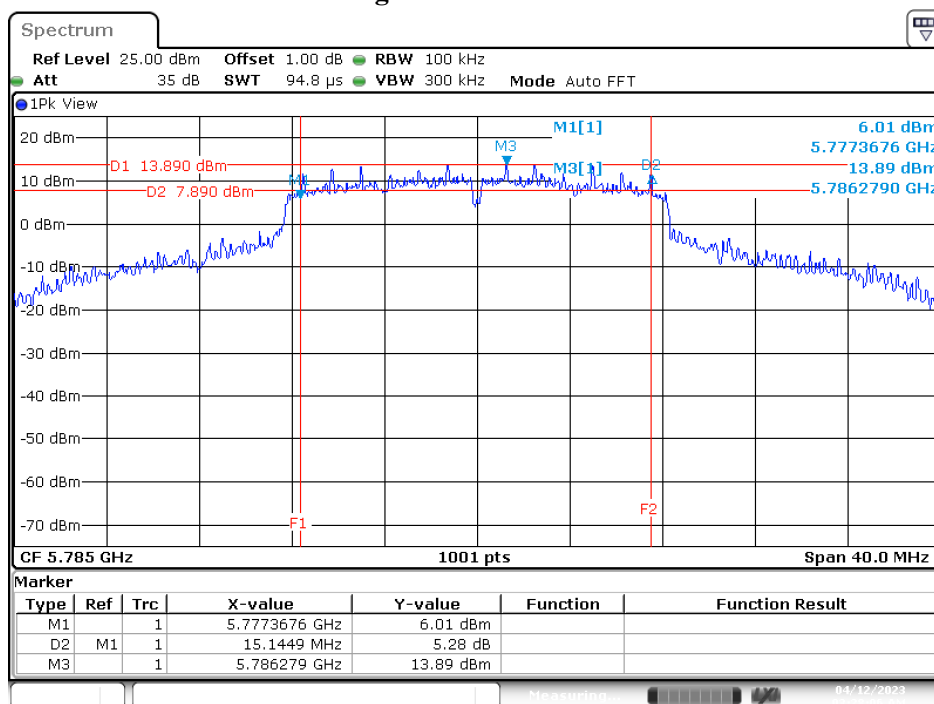
The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

## 7.4. Test Result of Occupied Bandwidth

Product : 5G Enterprise Router  
 Test Item : Occupied Bandwidth Data  
 Test Mode : Transmit (802.11a)  
 Test Date : 2023/04/12

| Channel No. | Chain | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-------|-----------------|-------------------------|----------------------|--------|
| 149         | A     | 5745            | 15105                   | >500                 | Pass   |
| 157         | A     | 5785            | 15145                   | >500                 | Pass   |
| 165         | A     | 5825            | 15145                   | >500                 | Pass   |

Figure Channel 157:

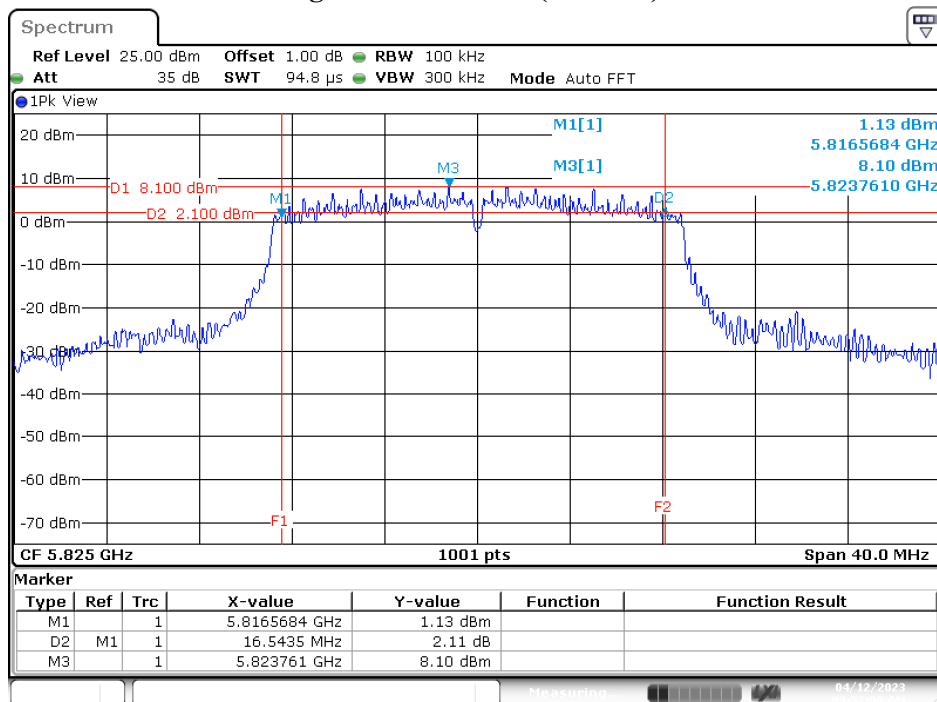


Date: 12.APR.2023 03:28:07

Product : 5G Enterprise Router  
 Test Item : Occupied Bandwidth Data  
 Test Mode : Transmit (802.11ac-20 MHz)  
 Test Date : 2023/04/12

| Channel No. | Chain | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-------|-----------------|-------------------------|----------------------|--------|
| 149         | A     | 5745            | 15065                   | >500                 | Pass   |
| 157         | A     | 5785            | 15105                   | >500                 | Pass   |
| 165         | A     | 5825            | 15105                   | >500                 | Pass   |
| 149         | B     | 5745            | 16544                   | >500                 | Pass   |
| 157         | B     | 5785            | 16304                   | >500                 | Pass   |
| 165         | B     | 5825            | 16544                   | >500                 | Pass   |
| 149         | C     | 5745            | 15305                   | >500                 | Pass   |
| 157         | C     | 5785            | 15664                   | >500                 | Pass   |
| 165         | C     | 5825            | 15704                   | >500                 | Pass   |
| 149         | D     | 5745            | 15105                   | >500                 | Pass   |
| 157         | D     | 5785            | 15105                   | >500                 | Pass   |
| 165         | D     | 5825            | 15944                   | >500                 | Pass   |

Figure Channel 165 (Chain B):

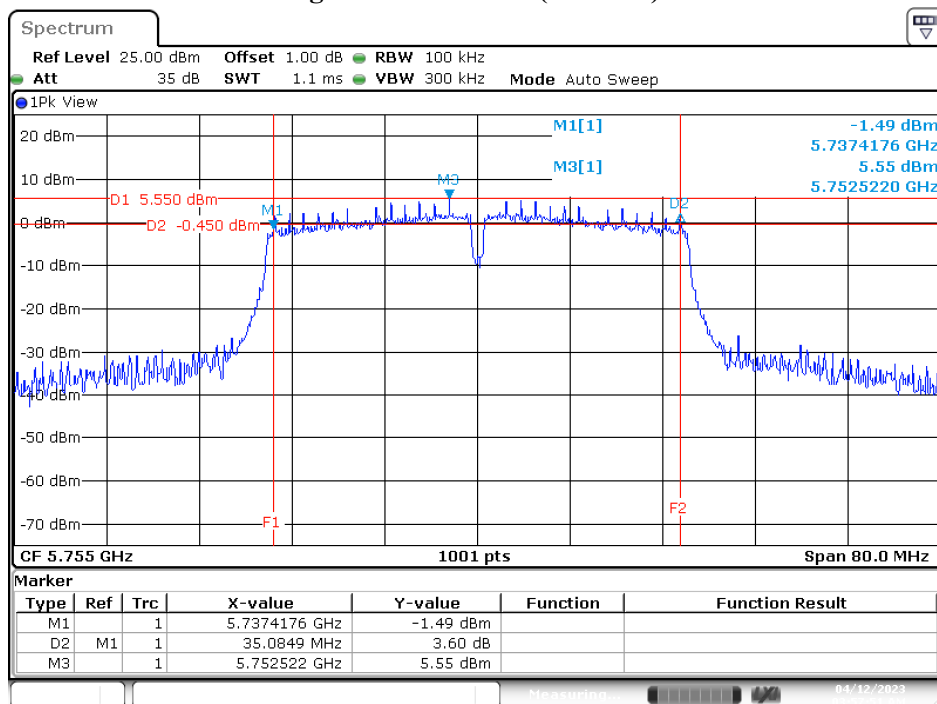


Date: 12.APR.2023 03:52:09

Product : 5G Enterprise Router  
 Test Item : Occupied Bandwidth Data  
 Test Mode : Transmit (802.11ac-40 MHz)  
 Test Date : 2023/04/12

| Channel No. | Chain | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-------|-----------------|-------------------------|----------------------|--------|
| 151         | A     | 5755            | 35085                   | >500                 | Pass   |
| 159         | A     | 5795            | 35085                   | >500                 | Pass   |
| 151         | B     | 5755            | 35005                   | >500                 | Pass   |
| 159         | B     | 5795            | 35085                   | >500                 | Pass   |
| 151         | C     | 5755            | 35005                   | >500                 | Pass   |
| 159         | C     | 5795            | 35085                   | >500                 | Pass   |
| 151         | D     | 5755            | 35005                   | >500                 | Pass   |
| 159         | D     | 5795            | 35085                   | >500                 | Pass   |

Figure Channel 151 (Chain A):

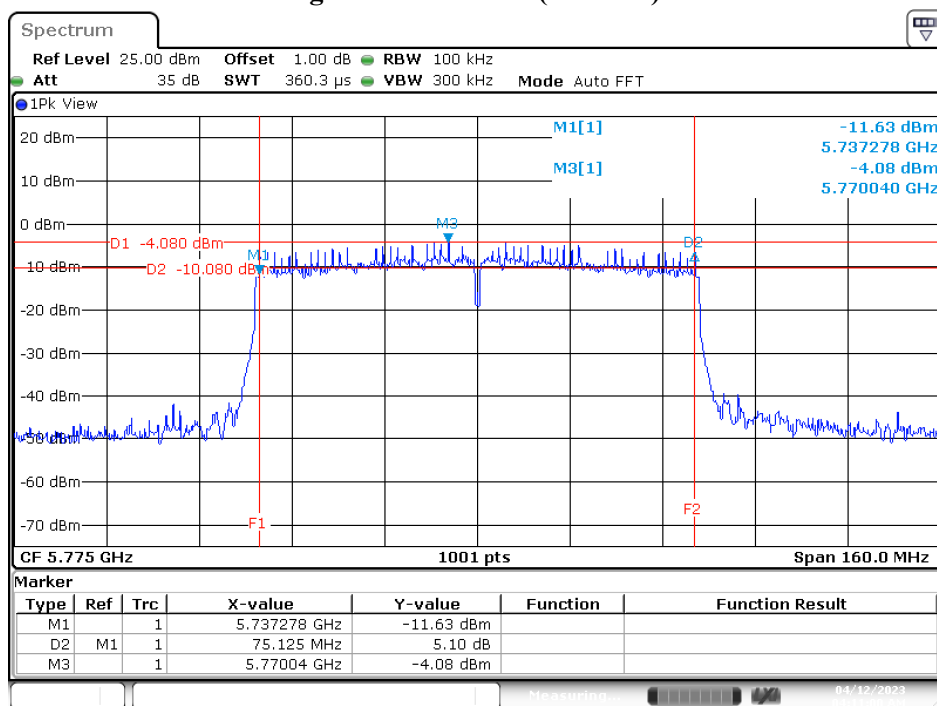


Date: 12.APR.2023 03:57:51

Product : 5G Enterprise Router  
 Test Item : Occupied Bandwidth Data  
 Test Mode : Transmit (802.11ac-80 MHz)  
 Test Date : 2023/04/12

| Channel No. | Chain | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-------|-----------------|-------------------------|----------------------|--------|
| 155         | A     | 5775            | 75125                   | >500                 | Pass   |
| 155         | B     | 5775            | 75125                   | >500                 | Pass   |
| 155         | C     | 5775            | 74965                   | >500                 | Pass   |
| 155         | D     | 5775            | 75125                   | >500                 | Pass   |

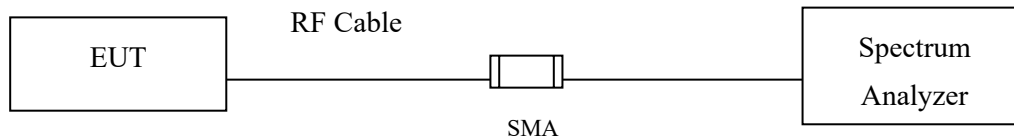
Figure Channel 155 (Chain A):



Date: 12.APR.2023 04:11:00

## 8. Duty Cycle

### 8.1. Test Setup



### 8.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to U-NII test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.

### 8.3. Test Result of Duty Cycle

Product : 5G Enterprise Router  
Test Item : Duty Cycle  
Test Mode : Transmit

Duty Cycle Formula:

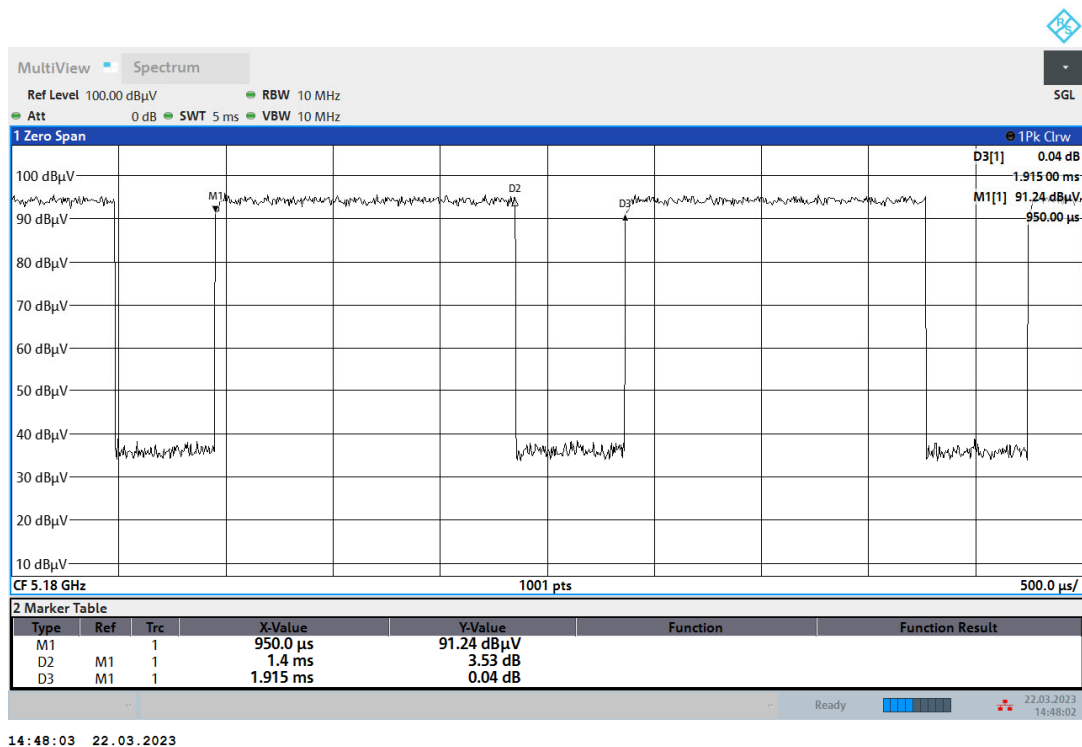
Duty Cycle =  $T_{on} / (T_{on} + T_{off})$

Duty Factor =  $10 \log (1/\text{Duty Cycle})$

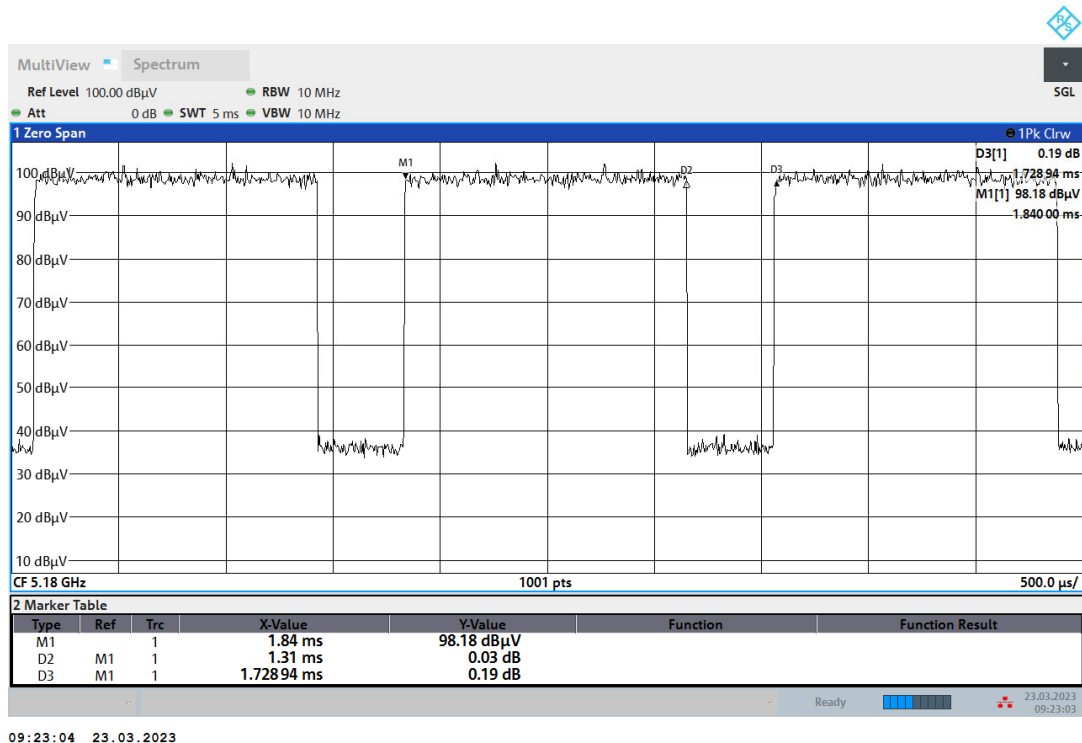
Results:

| 5GHz band       | Ton<br>(ms) | Ton + Toff<br>(ms) | Duty Cycle<br>(%) | Duty Factor<br>(dB) |
|-----------------|-------------|--------------------|-------------------|---------------------|
| 802.11a         | 1.4000      | 1.9150             | 73.11             | 1.36                |
| 802.11ac-20 MHz | 1.3100      | 1.7289             | 75.77             | 1.21                |
| 802.11ac-40 MHz | 0.6550      | 0.9900             | 66.16             | 1.79                |
| 802.11ac-80 MHz | 0.3230      | 0.7410             | 43.59             | 3.61                |

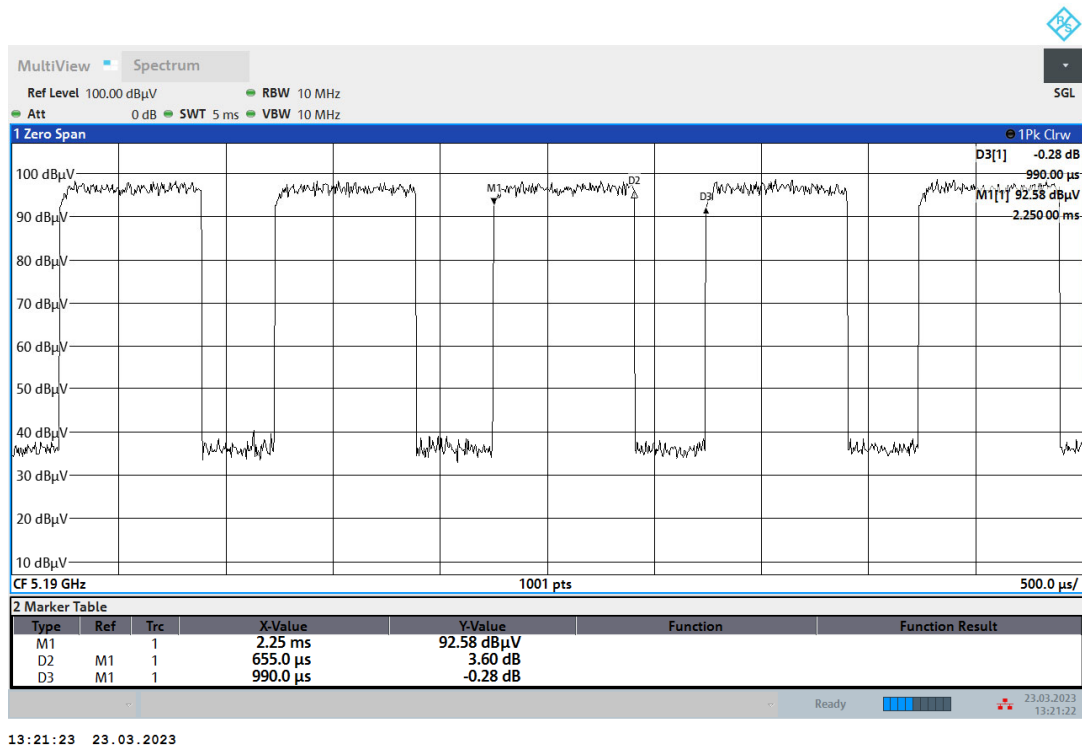
802.11a



802.11ac20



802.11ac40



802.11ac80

