

Test Report No.:  
**FCC2022-0068-RF1A1**

## **RF Test Report**

**EUT** : WIFI Module  
**MODEL** : WF-U21DS-SSC1  
**BRAND NAME** : N/A  
**CLIENT** : Sichuan AI-Link Technology Co.,Ltd.  
**Classification Of Test** : N/A

**CVC Testing Technology Co., Ltd.**



|                                                                                                                                                                           |                                                                                                                                                                  |                                                                                                                                                                    |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <b>Client</b>                                                                                                                                                             | Name : Sichuan AI-Link Technology Co.,Ltd.<br>Address : Anzhou Industrial Park, Mianyang, Sichuan, P.R.C                                                         |                                                                                                                                                                    |                       |
| <b>Manufacturer</b>                                                                                                                                                       | Name : Sichuan AI-Link Technology Co.,Ltd.<br>Address : Anzhou Industrial Park, Mianyang, Sichuan, P.R.C                                                         |                                                                                                                                                                    |                       |
| <b>Equipment Under Test</b>                                                                                                                                               | Name : WIFI Module<br>Model/Type: WF-U21DS-SSC1<br>Trade mark : N/A<br>Serial NO.:N/A<br>Sample NO.:1-1                                                          |                                                                                                                                                                    |                       |
| Date of Receipt.                                                                                                                                                          | 2021.11.10                                                                                                                                                       | Date of Testing                                                                                                                                                    | 2022.02.21~2023.01.04 |
| <b>Test Specification</b>                                                                                                                                                 |                                                                                                                                                                  | <b>Test Result</b>                                                                                                                                                 |                       |
| FCC Part 15, Subpart C, Section 15.247                                                                                                                                    |                                                                                                                                                                  | PASS                                                                                                                                                               |                       |
| <b>Evaluation of Test Result</b>                                                                                                                                          | The equipment under test was found to comply with the requirements of the standards applied.<br><br><b>Issue Date: 2023.06.19</b>                                |                                                                                                                                                                    |                       |
| Tested by:<br><br><b>Xu ZhenFei</b><br>Name                      Signature             | Reviewed by:<br><br><b>Liu YongHai</b><br>Name                      Signature | Approved by:<br><br><b>Chen HuaWen</b><br>Name                      Signature |                       |
| <b>Other Aspects: NONE.</b>                                                                                                                                               |                                                                                                                                                                  |                                                                                                                                                                    |                       |
| Abbreviations:OK,    Pass= passed                      Fail = failed                      N/A= not applicable                      EUT= equipment, sample(s) under tested |                                                                                                                                                                  |                                                                                                                                                                    |                       |

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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## RELEASE CONTROL RECORD

| ISSUE NO.          | REASON FOR CHANGE   | DATE ISSUED |
|--------------------|---------------------|-------------|
| FCC2022-0068-RF1   | Original release    | 2023.01.05  |
| FCC2022-0068-RF1A1 | Update Testing Date | 2023.06.19  |

Note: After the release of a new report, it will replace the original report.



## 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 15, Subpart C           |                             |        |                                |
|----------------------------------------------------|-----------------------------|--------|--------------------------------|
| STANDARD SECTION                                   | TEST TYPE AND LIMIT         | RESULT | REMARK                         |
| 15.207                                             | AC Power Conducted Emission | PASS   | Meet the requirement of limit. |
| 15.209                                             | Radiated Emissions          | PASS   | Meet the requirement of limit. |
| 15.247(d)<br>15.209<br>8.10 Table 7<br>8.9 Table 5 | Band Edge Measurement       | PASS   | Meet the requirement of limit. |
| 15.247(d)<br>5.5                                   | 6dB bandwidth               | PASS   | Meet the requirement of limit. |
| 15.247(a)(2)<br>5.2(a)                             | Conducted Output power      | PASS   | Meet the requirement of limit. |
| 15.247(b)<br>5.4(d)                                | Power Spectral Density      | PASS   | Meet the requirement of limit. |
| 15.247(e)<br>5.2(b)                                | Antenna Requirement         | PASS   | Meet the requirement of limit. |



## 1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS

| Test Equipment                  | Type/Mode                                    | SERIAL NO.     | Equipment No. | Manufacturer | Cal. Due   |
|---------------------------------|----------------------------------------------|----------------|---------------|--------------|------------|
| WIFI & Bluetooth Test System 1  |                                              |                |               |              | /          |
| Communication Shielded Room 2   | 4m*3m*3m                                     | CRTDSWKSR44301 | VGDS-0700     | CRT          | 2024/04/24 |
| Bluetooth system integration    | /                                            | /              | -             | Tonscend     | /          |
| Spectrum Analyzer               | FSV40                                        | 101580         | DZ-000238-3   | R&S          | 2023/06/05 |
| Comprehensive Test Instrument   | CMW270                                       | 100304         | DZ-000240-1   | R&S          | 2023/12/06 |
| Analog Signal Generator         | SMB100A                                      | 181858         | DZ-000238-2   | R&S          | 2023/06/05 |
| Vector Signal Generator         | SGT100A                                      | 111661         | DZ-000238-1   | R&S          | 2023/06/05 |
| RF Radio Frequency Switch       | JS0806-2                                     | 19H9080187     | `             | Tonscend     | 2023/06/06 |
| Programmable DC Power Supply    | E3644A                                       | MY58036222     | DZ-000178     | KEYSIGHT     | 2023/04/21 |
| Radiation SpuriousTest System   |                                              |                |               |              | /          |
| 3m Semi-Anechoic Chamber        | FACT-4                                       | ST08035        | WKNA-0024     | ETS          | 2024/12/12 |
| Spectrum Analyzer               | N9010B                                       | MY57470323     | DZ-000174     | KEYSIGHT     | 2023/03/02 |
| EMI Test Receiver               | N9038A-508                                   | MY532290079    | EM-000397     | Agilent      | 2023/03/02 |
| Broadband Antenna               | VULB 9163                                    | 9163-530       | EM-000342     | SCHWARZBECK  | 2023/06/25 |
| Waveguide Horn Antenna          | HF906                                        | 360306/008     | EM-000093     | R&S          | 2023/03/04 |
| Waveguide Horn Antenna          | BBHA9170                                     | 00949          | DZ-000209-2   | SCHWARZBECK  | 2023/07/31 |
| Preamplifier                    | BBV 9721                                     | 9721-050       | DZ-000209-1   | SCHWARZBECK  | 2023/06/05 |
| 5G Bandstop Filters             | WRCJV12-4<br>900-5100-5<br>900-6100-5<br>OEE | 851770         | DZ-000186     | WI           | 2023/12/06 |
| Comprehensive tester            | CMW500                                       | 159000         | DZ-000240-2   | R&S          | 2023/12/06 |
| Conducted emission              |                                              |                |               |              | /          |
| EMI Test Receiver               | ESR3                                         | 102394         | VG DY-0705    | R&S          | 2023-03-04 |
| LISN                            | NSLK 8128                                    | 8128-316       | VG DY-0149    | SCHWARZBECK  | 2023-09-04 |
| DC LISN                         | PVDC8301-017                                 | PVDC8301#17    | VG DY-0692    | SCHWARZBECK  | 2023-10-08 |
| LISN                            | NSLK 8129                                    | 8129-268       | EM-000388     | SCHWARZBECK  | 2023-03-03 |
| Plus Limiter (#1)               | VTSD 9561 F-N                                | 00515          | VG DY-0808    | SCHWARZBECK  | 2023-03-04 |
| Impedance Stabilization Network | ISN T800                                     | 27095          | WKNE-0195     | TESEQ        | 2023-09-04 |
| Impedance Stabilization Network | NTFM8158                                     | 8158-0092      | VG DY-0356    | SCHWARZBECK  | 2023-06-07 |
| ImpedanceStabilizationNetwork   | NTFM8131                                     | #184           | EM-000498     | SCHWARZBECK  | 2023-06-07 |
| Voltage Probe                   | TK9420                                       | 9420-499       | VG DY-0128    | SCHWARZBECK  | 2023-03-04 |
| Power Divider                   | 4901.17.B                                    | 22643830       | DB-0016       | HUBER+SUHNER | 2023-09-01 |
| Video Signal Generator          | GV-798+                                      | 151064920001   | VGDS-0215     | PROMAX       | 2023-05-30 |
| Shielding Room(#1)              | GP1A                                         | 001            | WKNF-0001     | LEINING      | 2024-08-08 |



## 1.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| No. | ITEM                | FREQUENCY     | UNCERTAINTY |
|-----|---------------------|---------------|-------------|
| 1   | Conducted emissions | 9kHz~30MHz    | ±2.66dB     |
| 2   | Radiated emissions  | 9KHz ~ 30MHz  | ±0.769dB    |
|     |                     | 30MHz ~ 1GMHz | ±0.877dB    |
|     |                     | 1GHz ~ 18GHz  | ±0.777dB    |
|     |                     | 18GHz ~ 40GHz | ±1.315dB    |

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

## 1.3 TEST LOCATION

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology Co., Ltd.

Address: No.3,TiantaiyiRoad,KaitaiAvenue,ScienceCity,Guangzhou,China

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## 2 GENERAL INFORMATION

### 2.1 GENERAL PRODUCT INFORMATION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| PRODUCT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | WIFI Module                                                                                                                                    |
| BRAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                                                                            |
| MODEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | WF-U21DS-SSC1                                                                                                                                  |
| ADDITIONAL MODEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | /                                                                                                                                              |
| FCC ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2AOKI-AL5621D1                                                                                                                                 |
| POWER SUPPLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DC 3.3V                                                                                                                                        |
| MODULATIONTECHNOLOGY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DSSS, GFSK, OFDM, OFDMA                                                                                                                        |
| MODULATION TYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, QPSK, BPSK for OFDM<br>64QAM, 16QAM, QPSK, BPSK for OFDMA<br>GFSK for BT-LE                        |
| OPERATING FREQUENCY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2412MHz ~ 2462MHz for 11b/g/n(HT20)<br>2422MHz ~ 2452MHz for 11n(HT40)<br>2402MHz ~ 2480MHz for BT-LE                                          |
| NUMBER OF CHANNEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 802.11b/g/n (HT20): 11<br>802.11n (HT40): 7<br>BT-LE: 40                                                                                       |
| PEAK OUTPUT POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | WLAN: 20.22dBm (Maximum)<br>BLE:2.02dBm (Maximum)                                                                                              |
| ANTENNA TYPE (Remark 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | WLAN:<br>ANT0:External Antenna, with 3.46dBi gain<br>ANT1:External Antenna, with 3.46dBi gain<br>BT-LE:<br>External Antenna, with 3.46dBi gain |
| I/O PORTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Refer to user's manual                                                                                                                         |
| CABLE SUPPLIED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/A                                                                                                                                            |
| Remark:<br><ol style="list-style-type: none"><li>For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.</li><li>For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.</li><li>Please refer to the EUT photo document for detailed product photo. (Report NO.: FCC2022-0068-E )</li><li>Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.</li><li>The EUT have MIMO function, provides 2 completed transmitter and 2 receiver.</li><li>The Test Model is the same with the the original model WF-U21DS-SSA1 in Test Report No.FCC2022-0012 except that the model under test this time is added the shield.Therefore,we only test the radiated emission and as for the other test items ,we refer to the data in Test Report No.FCC2022-0012-RF1.</li></ol> |                                                                                                                                                |



## 2.2 Description of Accessories

N/A

## 2.3 OTHER INFORMATION

Operating frequency of each channel

| 2.4G WIFI                   |             |         |             |         |             |         |             |
|-----------------------------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 802.11b/g/n (HT20)/ax(HE20) |             |         |             |         |             |         |             |
| CHANNEL                     | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) |         |             |
| 1                           | 2412        | 5       | 2432        | 9       | 2452        |         |             |
| 2                           | 2417        | 6       | 2437        | 10      | 2457        |         |             |
| 3                           | 2422        | 7       | 2442        | 11      | 2462        |         |             |
| 4                           | 2427        | 8       | 2447        |         |             |         |             |
| 802.11n (HT40) ax(HE40)     |             |         |             |         |             |         |             |
| CHANNEL                     | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) |         |             |
| 3                           | 2422        | 6       | 2437        | 9       | 2452        |         |             |
| 4                           | 2427        | 7       | 2442        |         |             |         |             |
| 5                           | 2432        | 8       | 2447        |         |             |         |             |
| BT-LE(1 Mbps)               |             |         |             |         |             |         |             |
| CHANNEL                     | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) |
| 0                           | 2402        | 10      | 2422        | 20      | 2442        | 30      | 2462        |
| 1                           | 2404        | 11      | 2424        | 21      | 2444        | 31      | 2464        |
| 2                           | 2406        | 12      | 2426        | 22      | 2446        | 32      | 2466        |
| 3                           | 2408        | 13      | 2428        | 23      | 2448        | 33      | 2468        |
| 4                           | 2410        | 14      | 2430        | 24      | 2450        | 34      | 2470        |
| 5                           | 2412        | 15      | 2432        | 25      | 2452        | 35      | 2472        |
| 6                           | 2414        | 16      | 2434        | 26      | 2454        | 36      | 2474        |
| 7                           | 2416        | 17      | 2436        | 27      | 2456        | 37      | 2476        |
| 8                           | 2418        | 18      | 2438        | 28      | 2458        | 38      | 2478        |
| 9                           | 2420        | 19      | 2440        | 29      | 2460        | 39      | 2480        |

1. The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.
2. By means of test software which provided by manufacture, the power levels during the tests were set according to the following codes:

| 2.4G WIFI      |               |                |               |                |               |                |               |
|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
| 802.11b        |               | 802.11g        |               | 802.11n(HT20)  |               | 802.11n(HT40)  |               |
| FREQUENCY(MHZ) | POWER SETTING | FREQUENCY(MHZ) | POWER SETTING | FREQUENCY(MHZ) | POWER SETTING | FREQUENCY(MHZ) | POWER SETTING |
| <b>2412</b>    | 17            | <b>2412</b>    | 15            | <b>2412</b>    | 13            | <b>2422</b>    | 13            |
| <b>2437</b>    | 17            | <b>2437</b>    | 15            | <b>2437</b>    | 13            | <b>2437</b>    | 13            |
| <b>2462</b>    | 17            | <b>2462</b>    | 15            | <b>2462</b>    | 13            | <b>2452</b>    | 13            |
| BT-LE(1 Mbps)  |               |                |               |                |               |                |               |



| GFSK    |               |         |               |         |               |
|---------|---------------|---------|---------------|---------|---------------|
| CHANNEL | POWER SETTING | CHANNEL | POWER SETTING | CHANNEL | POWER SETTING |
| 0       | DEFAULT       | 19      | DEFAULT       | 39      | DEFAULT       |

## 2.4 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, xyz axis and antenna ports

| EUT<br>CONFIGURE<br>MODE | APPLICABLE TEST ITEMS |       |     |      | DESCRIPTION        |
|--------------------------|-----------------------|-------|-----|------|--------------------|
|                          | RE<1G                 | RE≥1G | PLC | APCM |                    |
| A                        | √                     | √     | √   | √    | 2.4G WIFI Function |
| B                        | √                     | √     | √   | √    | BT Function        |

Where **RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission

**RE≥1G**: Radiated Emission above 1GHz  
**APCM**: Antenna Port Conducted Measurement

### RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- ☒ The worst case was found when positioned on x axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

| EUT<br>CONFIGURE<br>MODE | MODE    | AVAILABLE<br>CHANNEL | TESTED<br>CHANNEL | MODULATION<br>TECHNOLOGY | MODULATION<br>TYPE | DATA RATE<br>(Mbps) |
|--------------------------|---------|----------------------|-------------------|--------------------------|--------------------|---------------------|
| A                        | 802.11b | 1 to 11              | 1                 | DSSS                     | DBPSK              | 6.0                 |

For the test results, only the worst case was shown in test report.

### RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- ☒ The worst case was found when positioned on x axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:



| EUT CONFIGURE MODE | MODE          | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE PARAMETER |
|--------------------|---------------|-------------------|----------------|-----------------------|-----------------|---------------------|
| A                  | 802.11b       | 1 to 11           | 1, 6, 11       | DSSS                  | DBPSK           | 1.0 Mbit/s          |
| A                  | 802.11g       | 1 to 11           | 1, 6, 11       | OFDM                  | BPSK            | 6.0 Mbit/s          |
| A                  | 802.11n(HT20) | 1 to 11           | 1, 6, 11       | OFDM                  | BPSK            | MCS0                |
| A                  | 802.11n(HT40) | 3 to 9            | 3, 6, 9        | OFDM                  | BPSK            | MCS0                |
| B                  | BT-LE         | 0 to 39           | 0,19, 39       | DTS                   | GFSK            | 1.0 Mbit/s          |

## POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, antenna ports (if EUT with antenna diversity architecture), and packet types.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | TESTED CONDITION           |
|--------------------|----------------------------|
| -                  | BT LINK + WIFI (2.4G) Link |

## ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, antenna ports (if EUT with antenna diversity architecture), and packet types.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | MODE          | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|--------------------|---------------|-------------------|----------------|-----------------------|-----------------|------------------|
| A                  | 802.11b       | 1 to 11           | 1, 6, 11       | DSSS                  | DBPSK           | 1.0 Mbit/s       |
| A                  | 802.11g       | 1 to 11           | 1, 6, 11       | OFDM                  | BPSK            | 6.0 Mbit/s       |
| A                  | 802.11n(HT20) | 1 to 11           | 1, 6, 11       | OFDM                  | BPSK            | MCS0             |
| A                  | 802.11n(HT40) | 3 to 9            | 3, 6, 9        | OFDM                  | BPSK            | MCS0             |
| B                  | BT-LE         | 0 to 39           | 0,19, 39       | DTS                   | GFSK            | 1.0 Mbit/s       |

## TEST CONDITION:

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | TEST VOLTAGE (SYSTEM)      | TESTED BY  |
|---------------|--------------------------|----------------------------|------------|
| RE<1G         | 24deg. C, 55%RH          | DC 3.3V from USB host unit | Liu ShiWei |
| RE≥1G         | 24deg. C, 55%RH          | DC 3.3V from USB host unit | Liu ShiWei |
| PLC           | 24deg. C, 55%RH          | DC 3.3V from USB host unit | Liu ShiWei |
| APCM          | 25deg. C, 58%RH          | DC 3.3V from USB host unit | Liu ShiWei |



## 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

**FCC PART 15, Subpart C. Section 15.247**  
**KDB 558074 D01 15.247 Meas Guidance v05r02**  
**ANSI C63.10-2020**

All test items have been performed and recorded as per the above standards

## 2.6 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

During the tests:

| Support Equipment |             |                   |             |                      |                    |                |             |
|-------------------|-------------|-------------------|-------------|----------------------|--------------------|----------------|-------------|
| NO                | Description | Brand             | Model No.   | Serial Number        | Supplied by        |                |             |
| N/A               | N/A         | N/A               | N/A         | N/A                  | N/A                |                |             |
|                   |             |                   |             |                      |                    |                |             |
| Support Cable     |             |                   |             |                      |                    |                |             |
| NO                | Description | Quantity (Number) | Length (cm) | Detachable (Yes/ No) | Shielded (Yes/ No) | Cores (Number) | Supplied by |
| N/A               | N/A         | N/A               | N/A         | N/A                  | N/A                | N/A            | N/A         |
|                   |             |                   |             |                      |                    |                |             |

## 3 TEST TYPES AND RESULTS

### 3.1 CONDUCTED EMISSION MEASUREMENT

#### 3.1.1 Limit

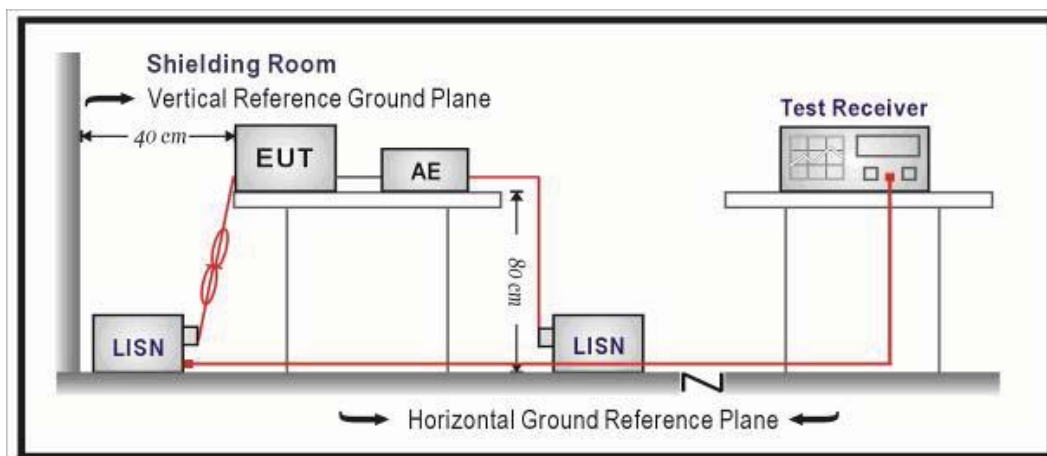
| Frequency<br>(MHz) | Conducted Limits(dBμV) |           |
|--------------------|------------------------|-----------|
|                    | Quasi-peak             | Average   |
| 0.15 - 0.5         | 66 to 56 *             | 56 to 46* |
| 0.5 - 5            | 56                     | 46        |
| 5 - 30             | 60                     | 50        |

NOTE: 1. The lower limit shall apply at the transition frequencies.  
NOTE: 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

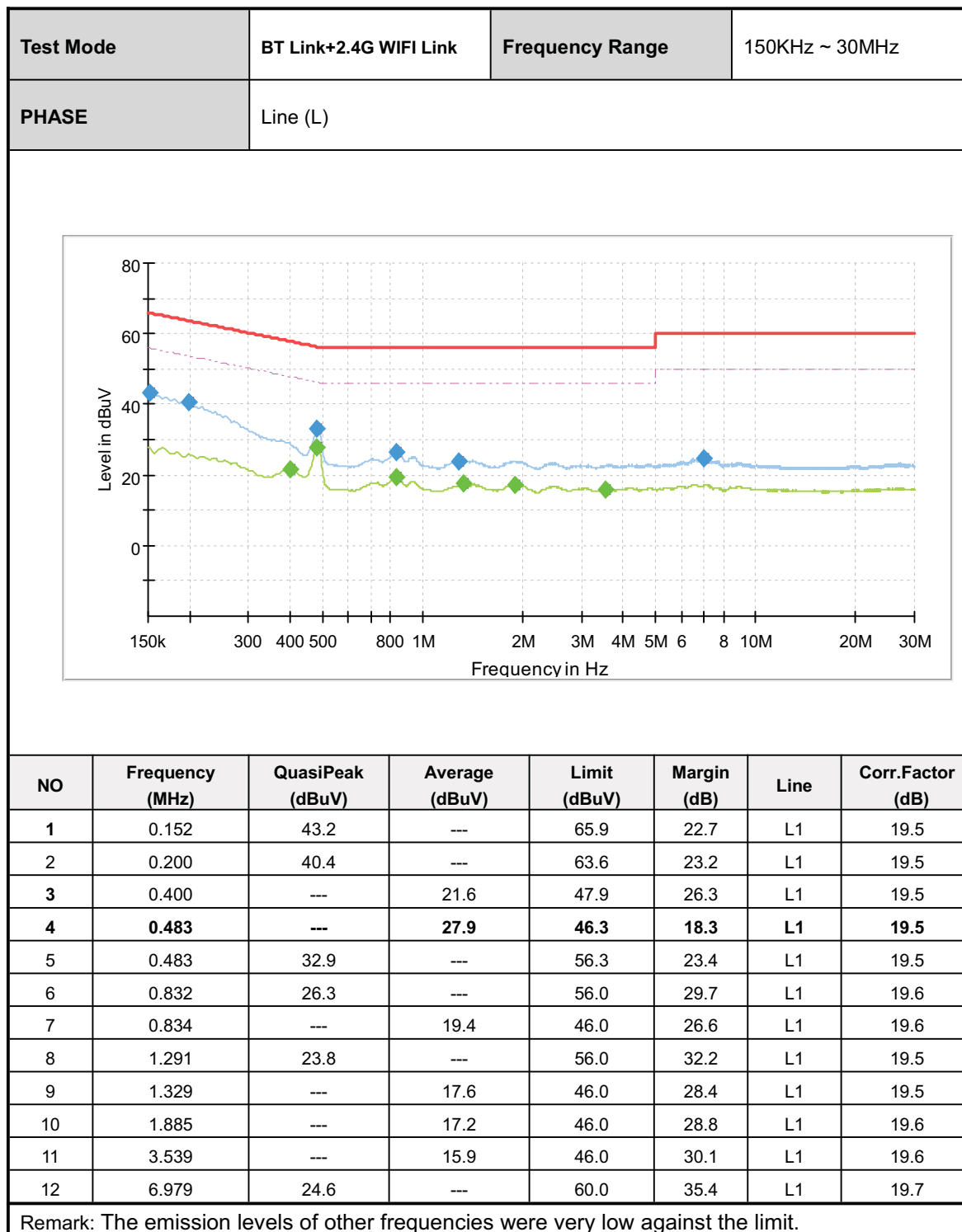
#### 3.1.2 Measurement procedure

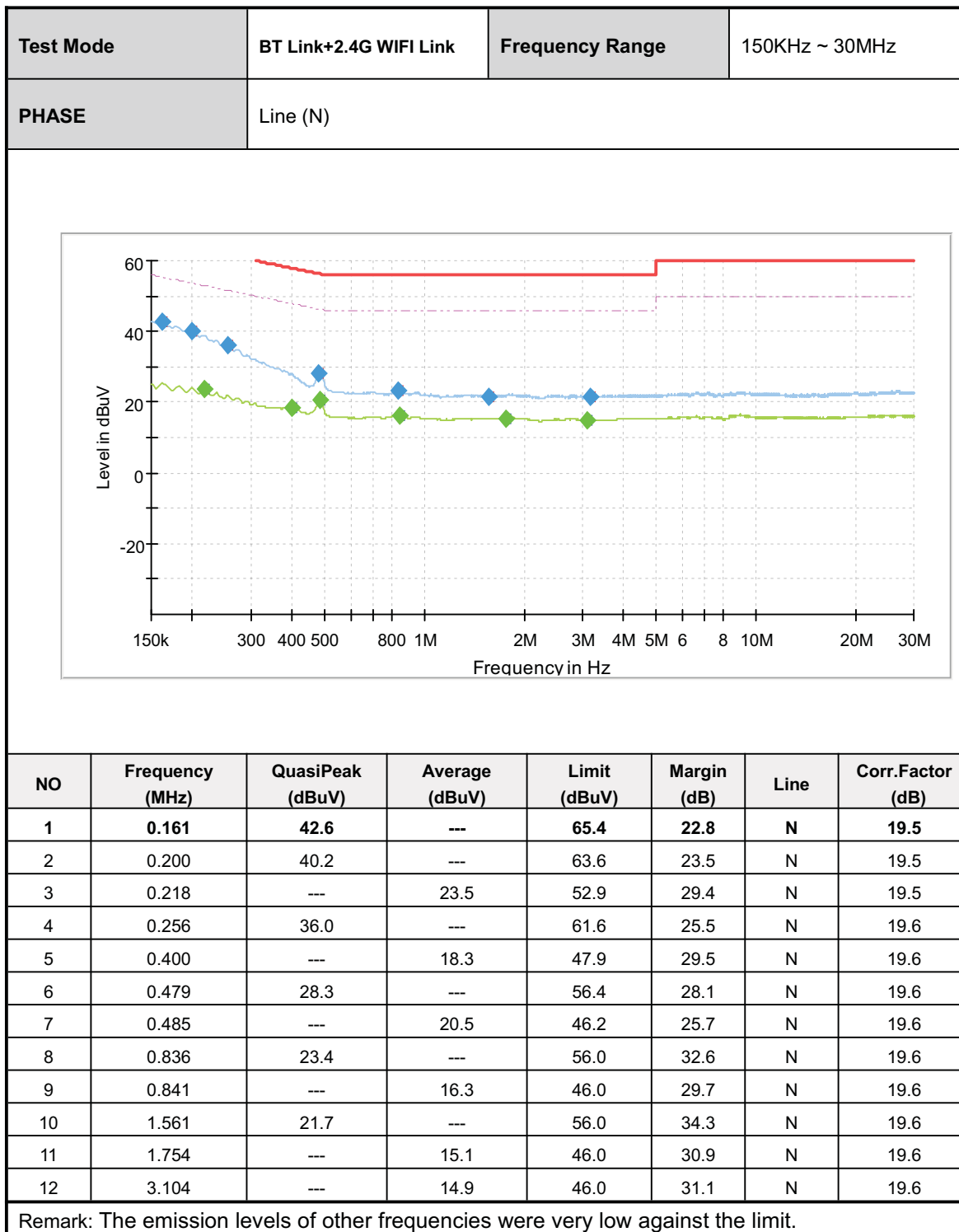
- The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the Test photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The equipment under test shall be placed on a support of non-metallic material, the height of which shall be 1.5m above the ground,
- The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

#### 3.1.3 Test setup



## 3.1.4 Test results







## 3.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT

### 3.2.1 Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

| FREQUENCIES (MHz) | FIELD STRENGTH<br>(Microvolts/Meter) | MEASUREMENT DISTANCE<br>(Meters) |
|-------------------|--------------------------------------|----------------------------------|
| 0.009 ~ 0.490     | 2400/F(kHz)                          | 300                              |
| 0.490 ~ 1.705     | 24000/F(kHz)                         | 30                               |
| 1.705 ~ 30.0      | 30                                   | 30                               |
| 30 ~ 88           | 100                                  | 3                                |
| 88 ~ 216          | 150                                  | 3                                |
| 216 ~ 960         | 200                                  | 3                                |
| Above 960         | 500                                  | 3                                |

NOTE: 1. The lower limit shall apply at the transition frequencies.  
NOTE: 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).  
NOTE: 3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

### 3.2.2 Measurement procedure

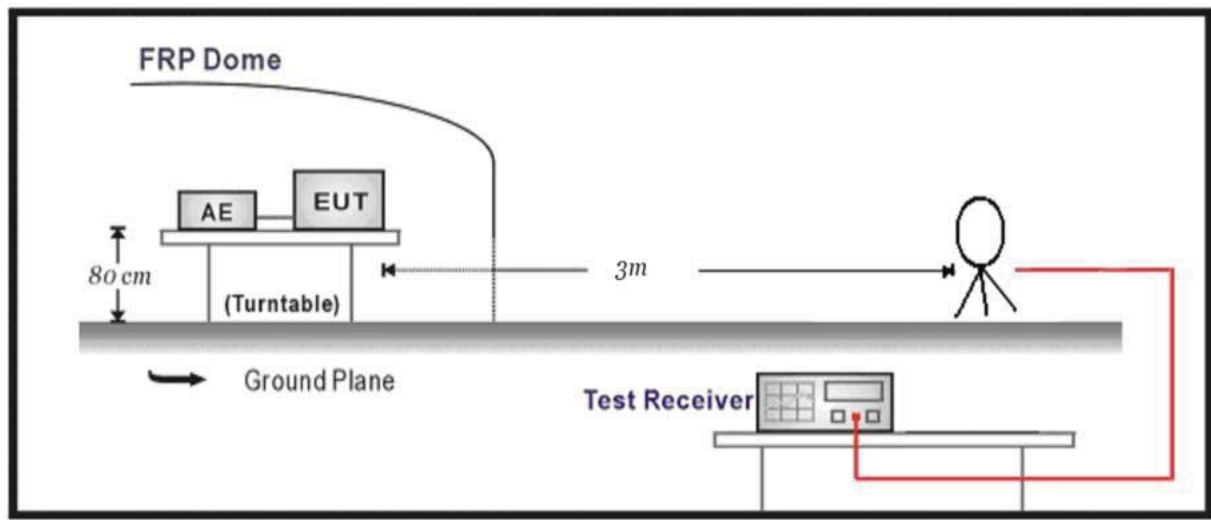
- The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- For below 1GHz was used bilog antenna, and above 1GHz was used horn antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.
- During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

**NOTE:**

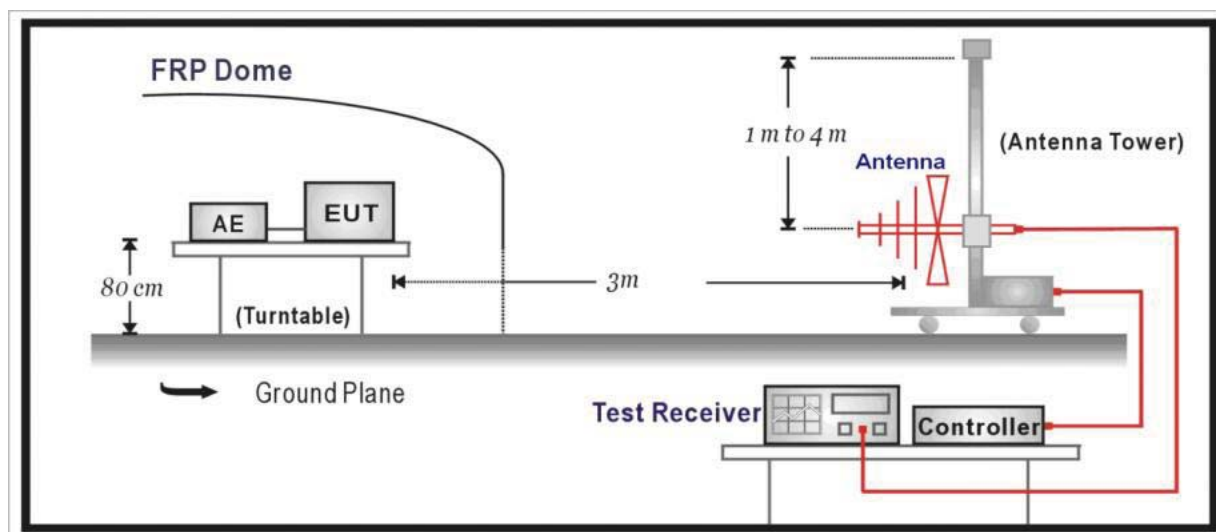
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $> 98\%$ ) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The testing of the EUT was performed on all 3 orthogonal axes; the worst-case test configuration was reported on the file test setup photo.

### 3.2.3 Test setup

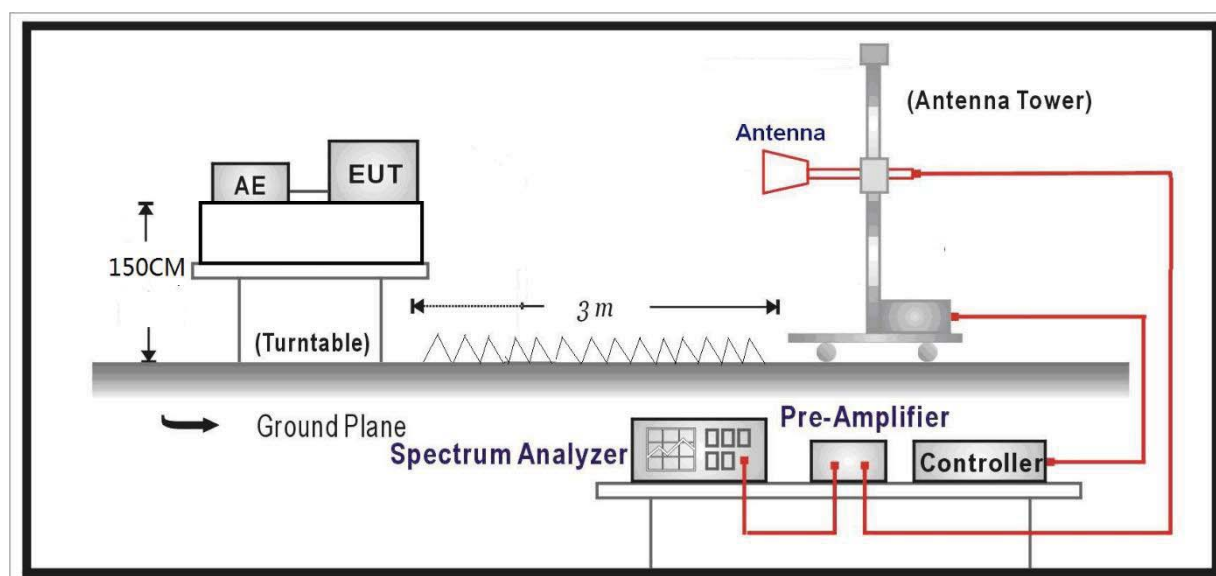
Below 30MHz Test Setup:



### Below 1GHz Test Setup:

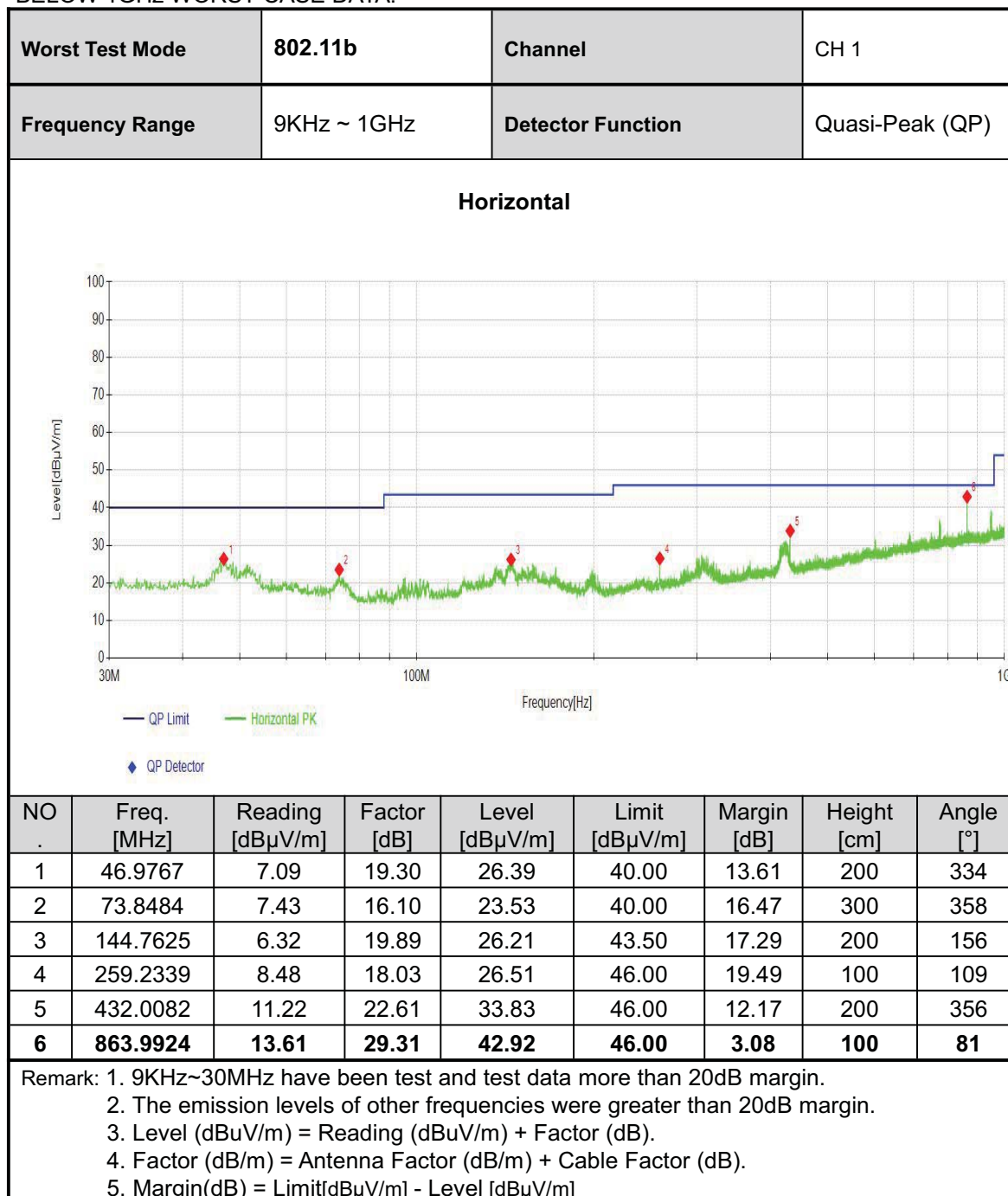


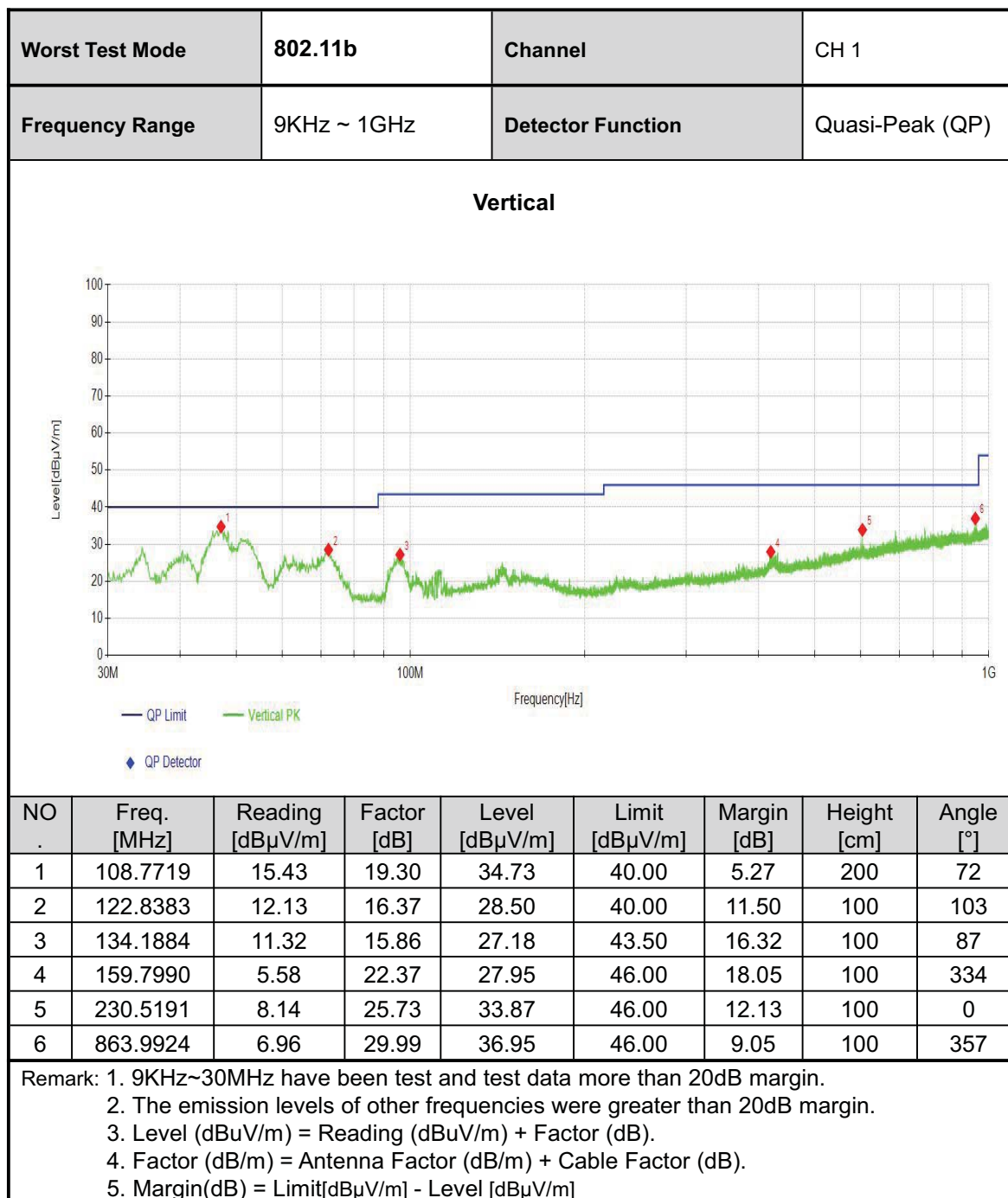
### Above 1GHz Test Setup:



## 3.2.4 Test results

BELOW 1GHz WORST-CASE DATA:







## ABOVE 1GHz DATA

| Channel                                                                                                                                                                                                                                                      |                | 802.11b CH 1        |                |                   | Frequency         |                | 2412MHz        |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 37.08               | -0.15          | 36.93             | 54.00             | 17.07          | 150            | 270          | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 45.08               | -0.15          | 44.93             | 74.00             | 29.07          | 150            | 158          | PK       |
| 3                                                                                                                                                                                                                                                            | 2413.9024      | 87.76               | 0.18           | 87.94             |                   |                | 150            | 270          | RMS      |
| 4                                                                                                                                                                                                                                                            | 2414.7005      | 89.78               | 0.19           | 89.97             |                   |                | 150            | 262          | PK       |
| 5                                                                                                                                                                                                                                                            | 4824.0000      | 46.61               | 9.68           | 56.29             | 74.00             | 17.71          | 150            | 248          | PK       |
| 6                                                                                                                                                                                                                                                            | 4824.0000      | 42.14               | 9.68           | 51.82             | 54.00             | 2.18           | 150            | 248          | AV       |
| 7                                                                                                                                                                                                                                                            | 7236.0000      | 21.20               | 12.39          | 33.59             | 54.00             | 20.41          | 150            | 247          | AV       |
| 8                                                                                                                                                                                                                                                            | 7236.0000      | 30.02               | 12.39          | 42.41             | 74.00             | 31.59          | 150            | 128          | PK       |
| 9                                                                                                                                                                                                                                                            | 9648.0000      | 27.52               | 13.13          | 40.65             | 74.00             | 33.35          | 150            | 0            | PK       |
| 10                                                                                                                                                                                                                                                           | 9648.0000      | 19.92               | 13.13          | 33.05             | 54.00             | 20.95          | 150            | 280          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 36.99               | -0.15          | 36.84             | 54.00             | 17.16          | 150            | 111          | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 45.47               | -0.15          | 45.32             | 74.00             | 28.68          | 150            | 51           | PK       |
| 3                                                                                                                                                                                                                                                            | 2414.0354      | 87.42               | 0.18           | 87.60             |                   |                | 150            | 287          | RMS      |
| 4                                                                                                                                                                                                                                                            | 2414.7195      | 89.47               | 0.19           | 89.66             |                   |                | 150            | 280          | PK       |
| 5                                                                                                                                                                                                                                                            | 4824.0000      | 41.08               | 9.68           | 50.76             | 54.00             | 3.24           | 150            | 231          | AV       |
| 6                                                                                                                                                                                                                                                            | 4824.0000      | 46.25               | 9.68           | 55.93             | 74.00             | 18.07          | 150            | 231          | PK       |
| 7                                                                                                                                                                                                                                                            | 7236.0000      | 29.86               | 12.39          | 42.25             | 74.00             | 31.75          | 150            | 15           | PK       |
| 8                                                                                                                                                                                                                                                            | 7236.0000      | 22.61               | 12.39          | 35.00             | 54.00             | 19.00          | 150            | 52           | AV       |
| 9                                                                                                                                                                                                                                                            | 9648.0000      | 19.75               | 13.13          | 32.88             | 54.00             | 21.12          | 150            | 292          | AV       |
| 10                                                                                                                                                                                                                                                           | 9648.0000      | 27.83               | 13.13          | 40.96             | 74.00             | 33.04          | 150            | 333          | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| Channel                                                                                                                                                                                                                                                      |                | 802.11b CH 6        |                | Frequency         |                   | 2437MHz        |                |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                | Detector Function |                   | PK/AV          |                |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 45.51               | 9.70           | 55.21             | 74.00             | 18.79          | 150            | 174          | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 39.57               | 9.70           | 49.27             | 54.00             | 4.73           | 150            | 252          | AV       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 23.38               | 11.03          | 34.41             | 54.00             | 19.59          | 150            | 292          | AV       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 30.74               | 11.03          | 41.77             | 74.00             | 32.23          | 150            | 24           | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 27.29               | 13.23          | 40.52             | 74.00             | 33.48          | 150            | 226          | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.33               | 13.23          | 32.56             | 54.00             | 21.44          | 150            | 337          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 45.74               | 9.70           | 55.44             | 74.00             | 18.56          | 150            | 230          | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 39.80               | 9.70           | 49.50             | 54.00             | 4.50           | 150            | 235          | AV       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 24.86               | 11.03          | 35.89             | 54.00             | 18.11          | 150            | 84           | AV       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 31.00               | 11.03          | 42.03             | 74.00             | 31.97          | 150            | 51           | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 27.16               | 13.23          | 40.39             | 74.00             | 33.61          | 150            | 101          | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.49               | 13.23          | 32.72             | 54.00             | 21.28          | 150            | 101          | AV       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                      |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------------|--------------|----------|
| Channel                                                                                                                                                                                                                                                      |                | 802.11b CH 11       |                |                   | Frequency         |                | 2462MHz <sub>z</sub> |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV                |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                      |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm]       | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2459.2599      | 95.42               | 0.56           | 95.98             |                   |                | 150                  | 263          | PK       |
| 2                                                                                                                                                                                                                                                            | 2464.0294      | 93.41               | 0.68           | 94.09             |                   |                | 150                  | 263          | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 39.27               | 0.46           | 39.73             | 54.00             | 14.27          | 150                  | 263          | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 46.51               | 0.46           | 46.97             | 74.00             | 27.03          | 150                  | 257          | PK       |
| 5                                                                                                                                                                                                                                                            | 4924.0924      | 41.41               | 10.14          | 51.55             | 54.00             | 2.45           | 150                  | 253          | RMS      |
| 6                                                                                                                                                                                                                                                            | 4924.0924      | 47.24               | 10.14          | 57.38             | 74.00             | 16.62          | 150                  | 257          | PK       |
| 7                                                                                                                                                                                                                                                            | 7386.0000      | 32.83               | 9.80           | 42.63             | 74.00             | 31.37          | 150                  | 259          | PK       |
| 8                                                                                                                                                                                                                                                            | 7386.0000      | 26.90               | 9.80           | 36.70             | 54.00             | 17.30          | 150                  | 13           | AV       |
| 9                                                                                                                                                                                                                                                            | 9848.0000      | 28.12               | 13.24          | 41.36             | 74.00             | 32.64          | 150                  | 275          | PK       |
| 10                                                                                                                                                                                                                                                           | 9848.0000      | 19.53               | 13.24          | 32.77             | 54.00             | 21.23          | 150                  | 275          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                      |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm]       | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2459.2599      | 93.33               | 0.56           | 93.89             |                   |                | 150                  | 288          | PK       |
| 2                                                                                                                                                                                                                                                            | 2459.9250      | 91.23               | 0.56           | 91.79             |                   |                | 150                  | 281          | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 38.02               | 0.46           | 38.48             | 54.00             | 15.52          | 150                  | 288          | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 45.91               | 0.46           | 46.37             | 74.00             | 27.63          | 150                  | 241          | PK       |
| 5                                                                                                                                                                                                                                                            | 4924.0924      | 41.29               | 10.14          | 51.43             | 54.00             | 2.57           | 150                  | 234          | RMS      |
| 6                                                                                                                                                                                                                                                            | 4924.0924      | 45.89               | 10.14          | 56.03             | 74.00             | 17.97          | 150                  | 234          | PK       |
| 7                                                                                                                                                                                                                                                            | 7386.0000      | 34.97               | 9.80           | 44.77             | 74.00             | 29.23          | 150                  | 84           | PK       |
| 8                                                                                                                                                                                                                                                            | 7386.0000      | 30.55               | 9.80           | 40.35             | 54.00             | 13.65          | 150                  | 84           | AV       |
| 9                                                                                                                                                                                                                                                            | 9848.0000      | 27.99               | 13.24          | 41.23             | 74.00             | 32.77          | 150                  | 166          | PK       |
| 10                                                                                                                                                                                                                                                           | 9848.0000      | 19.38               | 13.24          | 32.62             | 54.00             | 21.38          | 150                  | 297          | AV       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                      |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| Channel                                                                                                                                                                                                                                                      |                | 802.11g CH 1        |                |                   | Frequency         |                | 2412MHz        |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 42.41               | -0.15          | 42.26             | 54.00             | 11.74          | 150            | 257          | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 53.63               | -0.15          | 53.48             | 74.00             | 20.52          | 150            | 323          | PK       |
| 3                                                                                                                                                                                                                                                            | 2418.4628      | 88.55               | 0.24           | 88.79             |                   |                | 150            | 264          | RMS      |
| 4                                                                                                                                                                                                                                                            | 2418.6149      | 94.91               | 0.24           | 95.15             |                   |                | 150            | 264          | PK       |
| 5                                                                                                                                                                                                                                                            | 4824.0000      | 46.89               | 9.68           | 56.57             | 74.00             | 17.43          | 150            | 248          | PK       |
| 6                                                                                                                                                                                                                                                            | 4824.0000      | 38.47               | 9.68           | 48.15             | 54.00             | 5.85           | 150            | 248          | AV       |
| 7                                                                                                                                                                                                                                                            | 7236.0000      | 24.05               | 12.39          | 36.44             | 54.00             | 17.56          | 150            | 292          | AV       |
| 8                                                                                                                                                                                                                                                            | 7236.0000      | 32.53               | 12.39          | 44.92             | 74.00             | 29.08          | 150            | 292          | PK       |
| 9                                                                                                                                                                                                                                                            | 9648.0000      | 27.66               | 13.13          | 40.79             | 74.00             | 33.21          | 150            | 346          | PK       |
| 10                                                                                                                                                                                                                                                           | 9648.0000      | 19.65               | 13.13          | 32.78             | 54.00             | 21.22          | 150            | 121          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 42.06               | -0.15          | 41.91             | 54.00             | 12.09          | 150            | 78           | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 53.20               | -0.15          | 53.05             | 74.00             | 20.95          | 150            | 117          | PK       |
| 3                                                                                                                                                                                                                                                            | 2415.4415      | 94.25               | 0.20           | 94.45             |                   |                | 150            | 280          | PK       |
| 4                                                                                                                                                                                                                                                            | 2418.8049      | 87.28               | 0.24           | 87.52             |                   |                | 150            | 280          | RMS      |
| 5                                                                                                                                                                                                                                                            | 4824.0000      | 37.39               | 9.68           | 47.07             | 54.00             | 6.93           | 150            | 226          | AV       |
| 6                                                                                                                                                                                                                                                            | 4824.0000      | 45.77               | 9.68           | 55.45             | 74.00             | 18.55          | 150            | 226          | PK       |
| 7                                                                                                                                                                                                                                                            | 7236.0000      | 33.76               | 12.39          | 46.15             | 74.00             | 27.85          | 150            | 84           | PK       |
| 8                                                                                                                                                                                                                                                            | 7236.0000      | 26.47               | 12.39          | 38.86             | 54.00             | 15.14          | 150            | 56           | AV       |
| 9                                                                                                                                                                                                                                                            | 9648.0000      | 19.75               | 13.13          | 32.88             | 54.00             | 21.12          | 150            | 56           | AV       |
| 10                                                                                                                                                                                                                                                           | 9648.0000      | 28.14               | 13.13          | 41.27             | 74.00             | 32.73          | 150            | 92           | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| Channel                                                                                                                                                                                                                                                      |                | 802.11g CH 6        |                | Frequency         |                   | 2437MHz        |                |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                | Detector Function |                   | PK/AV          |                |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 44.66               | 9.70           | 54.36             | 74.00             | 19.64          | 150            | 217          | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 36.22               | 9.70           | 45.92             | 54.00             | 8.08           | 150            | 249          | AV       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 26.86               | 11.03          | 37.89             | 54.00             | 16.11          | 150            | 11           | AV       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 34.58               | 11.03          | 45.61             | 74.00             | 28.39          | 150            | 11           | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 27.29               | 13.23          | 40.52             | 74.00             | 33.48          | 150            | 271          | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.81               | 13.23          | 33.04             | 54.00             | 20.96          | 150            | 217          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 44.09               | 9.70           | 53.79             | 74.00             | 20.21          | 150            | 57           | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 36.85               | 9.70           | 46.55             | 54.00             | 7.45           | 150            | 230          | AV       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 29.66               | 11.03          | 40.69             | 54.00             | 13.31          | 150            | 69           | AV       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 36.81               | 11.03          | 47.84             | 74.00             | 26.16          | 150            | 69           | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 28.12               | 13.23          | 41.35             | 74.00             | 32.65          | 150            | 102          | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.33               | 13.23          | 32.56             | 54.00             | 21.44          | 150            | 163          | AV       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| Channel                                                                                                                                                                                                                                                      |                | 802.11g CH 11       |                |                   | Frequency         |                | 2462MHz        |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2457.4357      | 98.90               | 0.56           | 99.46             |                   |                | 150            | 265          | PK       |
| 2                                                                                                                                                                                                                                                            | 2458.5569      | 91.95               | 0.56           | 92.51             |                   |                | 150            | 265          | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 61.42               | 0.46           | 61.88             | 74.00             | 12.12          | 150            | 265          | PK       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 49.85               | 0.46           | 50.31             | 54.00             | 3.69           | 150            | 7            | AV       |
| 5                                                                                                                                                                                                                                                            | 4926.0000      | 45.49               | 10.07          | 55.56             | 74.00             | 18.44          | 150            | 261          | PK       |
| 6                                                                                                                                                                                                                                                            | 4926.0000      | 36.05               | 10.07          | 46.12             | 54.00             | 7.88           | 150            | 64           | AV       |
| 7                                                                                                                                                                                                                                                            | 7386.0000      | 26.20               | 9.80           | 36.00             | 54.00             | 18.00          | 150            | 0            | AV       |
| 8                                                                                                                                                                                                                                                            | 7386.0000      | 34.93               | 9.80           | 44.73             | 74.00             | 29.27          | 150            | 30           | PK       |
| 9                                                                                                                                                                                                                                                            | 9848.0000      | 27.59               | 13.24          | 40.83             | 74.00             | 33.17          | 150            | 317          | PK       |
| 10                                                                                                                                                                                                                                                           | 9848.0000      | 19.41               | 13.24          | 32.65             | 54.00             | 21.35          | 150            | 309          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2458.2528      | 97.10               | 0.56           | 97.66             |                   |                | 150            | 288          | PK       |
| 2                                                                                                                                                                                                                                                            | 2459.8300      | 89.94               | 0.56           | 90.50             |                   |                | 150            | 288          | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 59.43               | 0.46           | 59.89             | 74.00             | 14.11          | 150            | 275          | PK       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 48.48               | 0.46           | 48.94             | 54.00             | 5.06           | 150            | 275          | AV       |
| 5                                                                                                                                                                                                                                                            | 4922.4422      | 47.74               | 10.19          | 57.93             | 74.00             | 16.07          | 150            | 230          | PK       |
| 6                                                                                                                                                                                                                                                            | 4926.0000      | 36.27               | 10.07          | 46.34             | 54.00             | 7.66           | 150            | 234          | AV       |
| 7                                                                                                                                                                                                                                                            | 7386.0000      | 36.92               | 9.80           | 46.72             | 74.00             | 27.28          | 150            | 69           | PK       |
| 8                                                                                                                                                                                                                                                            | 7386.0000      | 29.24               | 9.80           | 39.04             | 54.00             | 14.96          | 150            | 85           | AV       |
| 9                                                                                                                                                                                                                                                            | 9848.0000      | 19.81               | 13.24          | 33.05             | 54.00             | 20.95          | 150            | 134          | AV       |
| 10                                                                                                                                                                                                                                                           | 9848.0000      | 28.04               | 13.24          | 41.28             | 74.00             | 32.72          | 150            | 220          | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
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| Channel                                                                                                                                                                                                                                                      |                | 802.11n20 CH 1      |                |                   | Frequency         |                | 2412MHz        |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 43.35               | -0.15          | 43.20             | 54.00             | 10.80          | 150            | 92           | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 56.89               | -0.15          | 56.74             | 74.00             | 17.26          | 150            | 92           | PK       |
| 3                                                                                                                                                                                                                                                            | 2419.0329      | 95.35               | 0.25           | 95.60             |                   |                | 150            | 263          | PK       |
| 4                                                                                                                                                                                                                                                            | 2419.2609      | 88.80               | 0.25           | 89.05             |                   |                | 150            | 270          | RMS      |
| 5                                                                                                                                                                                                                                                            | 4824.0000      | 47.17               | 9.68           | 56.85             | 74.00             | 17.15          | 150            | 255          | PK       |
| 6                                                                                                                                                                                                                                                            | 4824.0000      | 37.85               | 9.68           | 47.53             | 54.00             | 6.47           | 150            | 251          | AV       |
| 7                                                                                                                                                                                                                                                            | 7236.0000      | 23.51               | 12.39          | 35.90             | 54.00             | 18.10          | 150            | 113          | AV       |
| 8                                                                                                                                                                                                                                                            | 7236.0000      | 31.14               | 12.39          | 43.53             | 74.00             | 30.47          | 150            | 256          | PK       |
| 9                                                                                                                                                                                                                                                            | 9648.0000      | 28.04               | 13.13          | 41.17             | 74.00             | 32.83          | 150            | 256          | PK       |
| 10                                                                                                                                                                                                                                                           | 9648.0000      | 19.86               | 13.13          | 32.99             | 54.00             | 21.01          | 150            | 64           | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 43.09               | -0.15          | 42.94             | 54.00             | 11.06          | 150            | 312          | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 57.35               | -0.15          | 57.20             | 74.00             | 16.80          | 150            | 122          | PK       |
| 3                                                                                                                                                                                                                                                            | 2417.5128      | 94.74               | 0.23           | 94.97             |                   |                | 150            | 279          | PK       |
| 4                                                                                                                                                                                                                                                            | 2419.2989      | 87.66               | 0.25           | 87.91             |                   |                | 150            | 279          | RMS      |
| 5                                                                                                                                                                                                                                                            | 4824.0000      | 44.06               | 9.68           | 53.74             | 74.00             | 20.26          | 150            | 178          | PK       |
| 6                                                                                                                                                                                                                                                            | 4824.0000      | 36.78               | 9.68           | 46.46             | 54.00             | 7.54           | 150            | 27           | AV       |
| 7                                                                                                                                                                                                                                                            | 7231.4131      | 27.13               | 12.46          | 39.59             | 54.00             | 14.41          | 150            | 71           | RMS      |
| 8                                                                                                                                                                                                                                                            | 7247.7948      | 37.56               | 12.28          | 49.84             | 74.00             | 24.16          | 150            | 48           | PK       |
| 9                                                                                                                                                                                                                                                            | 9648.0000      | 29.86               | 13.13          | 42.99             | 74.00             | 31.01          | 150            | 158          | PK       |
| 10                                                                                                                                                                                                                                                           | 9648.0000      | 20.33               | 13.13          | 33.46             | 54.00             | 20.54          | 150            | 337          | AV       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
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| Channel                                                                                                                                                                                                                                                      |                | 802.11n20 CH 6      |                | Frequency         |                   | 2437MHz        |                |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                | Detector Function |                   | PK/AV          |                |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 45.36               | 9.70           | 55.06             | 74.00             | 18.94          | 150            | 142          | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 36.98               | 9.70           | 46.68             | 54.00             | 7.32           | 150            | 142          | AV       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 27.34               | 11.03          | 38.37             | 54.00             | 15.63          | 150            | 12           | AV       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 38.46               | 11.03          | 49.49             | 74.00             | 24.51          | 150            | 12           | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 27.04               | 13.23          | 40.27             | 74.00             | 33.73          | 150            | 70           | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.37               | 13.23          | 32.60             | 54.00             | 21.40          | 150            | 225          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 36.43               | 9.70           | 46.13             | 54.00             | 7.87           | 150            | 234          | AV       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 43.15               | 9.70           | 52.85             | 74.00             | 21.15          | 150            | 29           | PK       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 38.64               | 11.03          | 49.67             | 74.00             | 24.33          | 150            | 85           | PK       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 28.82               | 11.03          | 39.85             | 54.00             | 14.15          | 150            | 73           | AV       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 19.54               | 13.23          | 32.77             | 54.00             | 21.23          | 150            | 64           | AV       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 27.34               | 13.23          | 40.57             | 74.00             | 33.43          | 150            | 356          | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |             |                  |             |                |                   |             |             |           |          |
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| Channel                                                                                                                                                                                                                                                      |             | 802.11n20 CH 11  |             |                | Frequency         |             | 2462MHz     |           |          |
| Frequency Range                                                                                                                                                                                                                                              |             | Above 1G         |             |                | Detector Function |             | PK/AV       |           |          |
| Horizontal                                                                                                                                                                                                                                                   |             |                  |             |                |                   |             |             |           |          |
| NO                                                                                                                                                                                                                                                           | Freq. [MHz] | Reading [dBμV/m] | Factor [dB] | Level [dBμV/m] | Limit [dBμV/m]    | Margin [dB] | Height [cm] | Angle [°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2454.5475   | 91.61            | 0.57        | 92.18          |                   |             | 150         | 264       | RMS      |
| 2                                                                                                                                                                                                                                                            | 2458.9179   | 98.34            | 0.56        | 98.90          |                   |             | 150         | 270       | PK       |
| 3                                                                                                                                                                                                                                                            | 2483.5000   | 51.24            | 0.46        | 51.70          | 54.00             | 2.30        | 150         | 264       | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000   | 67.04            | 0.46        | 67.50          | 74.00             | 6.50        | 150         | 0         | PK       |
| 5                                                                                                                                                                                                                                                            | 4926.0000   | 45.51            | 10.07       | 55.58          | 74.00             | 18.42       | 150         | 252       | PK       |
| 6                                                                                                                                                                                                                                                            | 4926.0000   | 37.59            | 10.07       | 47.66          | 54.00             | 6.34        | 150         | 256       | AV       |
| 7                                                                                                                                                                                                                                                            | 7368.3168   | 37.58            | 10.05       | 47.63          | 74.00             | 26.37       | 150         | 260       | PK       |
| 8                                                                                                                                                                                                                                                            | 7386.0000   | 26.25            | 9.80        | 36.05          | 54.00             | 17.95       | 150         | 9         | AV       |
| 9                                                                                                                                                                                                                                                            | 9848.0000   | 19.24            | 13.24       | 32.48          | 54.00             | 21.52       | 150         | 247       | AV       |
| 10                                                                                                                                                                                                                                                           | 9848.0000   | 26.77            | 13.24       | 40.01          | 74.00             | 33.99       | 150         | 354       | PK       |
| Vertical                                                                                                                                                                                                                                                     |             |                  |             |                |                   |             |             |           |          |
| NO                                                                                                                                                                                                                                                           | Freq. [MHz] | Reading [dBμV/m] | Factor [dB] | Level [dBμV/m] | Limit [dBμV/m]    | Margin [dB] | Height [cm] | Angle [°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2454.2434   | 96.33            | 0.57        | 96.90          |                   |             | 150         | 278       | PK       |
| 2                                                                                                                                                                                                                                                            | 2459.0509   | 89.69            | 0.56        | 90.25          |                   |             | 150         | 284       | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000   | 47.84            | 0.46        | 48.30          | 54.00             | 5.70        | 150         | 116       | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000   | 61.53            | 0.46        | 61.99          | 74.00             | 12.01       | 150         | 344       | PK       |
| 5                                                                                                                                                                                                                                                            | 4926.0000   | 43.70            | 10.07       | 53.77          | 74.00             | 20.23       | 150         | 259       | PK       |
| 6                                                                                                                                                                                                                                                            | 4926.0000   | 35.99            | 10.07       | 46.06          | 54.00             | 7.94        | 150         | 251       | AV       |
| 7                                                                                                                                                                                                                                                            | 7381.1881   | 31.20            | 9.92        | 41.12          | 54.00             | 12.88       | 150         | 68        | RMS      |
| 8                                                                                                                                                                                                                                                            | 7382.3582   | 42.12            | 9.90        | 52.02          | 74.00             | 21.98       | 150         | 84        | PK       |
| 9                                                                                                                                                                                                                                                            | 9848.0000   | 27.69            | 13.24       | 40.93          | 74.00             | 33.07       | 150         | 360       | PK       |
| 10                                                                                                                                                                                                                                                           | 9848.0000   | 19.14            | 13.24       | 32.38          | 54.00             | 21.62       | 150         | 265       | AV       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |             |                  |             |                |                   |             |             |           |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| Channel                                                                                                                                                                                                                                                      |                | 802.11n40 CH 3      |                |                   | Frequency         |                | 2422MHz        |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 42.28               | -0.15          | 42.13             | 54.00             | 11.87          | 150            | 275          | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 54.88               | -0.15          | 54.73             | 74.00             | 19.27          | 150            | 321          | PK       |
| 3                                                                                                                                                                                                                                                            | 2438.6809      | 93.82               | 0.43           | 94.25             |                   |                | 150            | 262          | PK       |
| 4                                                                                                                                                                                                                                                            | 2439.5170      | 86.65               | 0.44           | 87.09             |                   |                | 150            | 269          | RMS      |
| 5                                                                                                                                                                                                                                                            | 4844.0000      | 36.50               | 9.94           | 46.44             | 54.00             | 7.56           | 150            | 255          | AV       |
| 6                                                                                                                                                                                                                                                            | 4844.0000      | 44.86               | 9.94           | 54.80             | 74.00             | 19.20          | 150            | 255          | PK       |
| 7                                                                                                                                                                                                                                                            | 7266.0000      | 30.43               | 11.99          | 42.42             | 74.00             | 31.58          | 150            | 293          | PK       |
| 8                                                                                                                                                                                                                                                            | 7266.0000      | 22.60               | 11.99          | 34.59             | 54.00             | 19.41          | 150            | 293          | AV       |
| 9                                                                                                                                                                                                                                                            | 9688.0000      | 19.85               | 13.15          | 33.00             | 54.00             | 21.00          | 150            | 244          | AV       |
| 10                                                                                                                                                                                                                                                           | 9688.0000      | 28.40               | 13.15          | 41.55             | 74.00             | 32.45          | 150            | 244          | PK       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2390.0000      | 42.57               | -0.15          | 42.42             | 54.00             | 11.58          | 150            | 64           | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000      | 52.84               | -0.15          | 52.69             | 74.00             | 21.31          | 150            | 84           | PK       |
| 3                                                                                                                                                                                                                                                            | 2432.2582      | 91.73               | 0.38           | 92.11             |                   |                | 150            | 116          | PK       |
| 4                                                                                                                                                                                                                                                            | 2433.5694      | 84.44               | 0.39           | 84.83             |                   |                | 150            | 110          | RMS      |
| 5                                                                                                                                                                                                                                                            | 4844.0000      | 35.87               | 9.94           | 45.81             | 54.00             | 8.19           | 150            | 232          | AV       |
| 6                                                                                                                                                                                                                                                            | 4844.0000      | 44.07               | 9.94           | 54.01             | 74.00             | 19.99          | 150            | 256          | PK       |
| 7                                                                                                                                                                                                                                                            | 7266.0000      | 31.93               | 11.99          | 43.92             | 74.00             | 30.08          | 150            | 73           | PK       |
| 8                                                                                                                                                                                                                                                            | 7266.0000      | 25.41               | 11.99          | 37.40             | 54.00             | 16.60          | 150            | 73           | AV       |
| 9                                                                                                                                                                                                                                                            | 9688.0000      | 19.83               | 13.15          | 32.98             | 54.00             | 21.02          | 150            | 44           | AV       |
| 10                                                                                                                                                                                                                                                           | 9688.0000      | 28.49               | 13.15          | 41.64             | 74.00             | 32.36          | 150            | 36           | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
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| Channel                                                                                                                                                                                                                                                      |                | 802.11n40 CH 6      |                | Frequency         |                   | 2422MHz        |                |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                | Detector Function |                   | PK/AV          |                |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 45.12               | 9.70           | 54.82             | 74.00             | 19.18          | 150            | 159          | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 35.59               | 9.70           | 45.29             | 54.00             | 8.71           | 150            | 163          | AV       |
| 3                                                                                                                                                                                                                                                            | 7311.0000      | 22.91               | 11.03          | 33.94             | 54.00             | 20.06          | 150            | 292          | AV       |
| 4                                                                                                                                                                                                                                                            | 7311.0000      | 30.82               | 11.03          | 41.85             | 74.00             | 32.15          | 150            | 296          | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 27.88               | 13.23          | 41.11             | 74.00             | 32.89          | 150            | 178          | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.91               | 13.23          | 33.14             | 54.00             | 20.86          | 150            | 252          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 4874.0000      | 43.03               | 9.70           | 52.73             | 74.00             | 21.27          | 150            | 58           | PK       |
| 2                                                                                                                                                                                                                                                            | 4874.0000      | 35.67               | 9.70           | 45.37             | 54.00             | 8.63           | 150            | 58           | AV       |
| 3                                                                                                                                                                                                                                                            | 7305.1305      | 26.69               | 11.14          | 37.83             | 54.00             | 16.17          | 150            | 68           | RMS      |
| 4                                                                                                                                                                                                                                                            | 7322.6823      | 34.84               | 10.98          | 45.82             | 74.00             | 28.18          | 150            | 88           | PK       |
| 5                                                                                                                                                                                                                                                            | 9748.0000      | 27.89               | 13.23          | 41.12             | 74.00             | 32.88          | 150            | 240          | PK       |
| 6                                                                                                                                                                                                                                                            | 9748.0000      | 19.25               | 13.23          | 32.48             | 54.00             | 21.52          | 150            | 240          | AV       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
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| Channel                                                                                                                                                                                                                                                      |                | 802.11n40 CH 9      |                |                   | Frequency         |                | 2452MHz        |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2446.1106      | 94.34               | 0.52           | 94.86             |                   |                | 150            | 273          | PK       |
| 2                                                                                                                                                                                                                                                            | 2449.6450      | 86.83               | 0.56           | 87.39             |                   |                | 150            | 266          | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 48.19               | 0.46           | 48.65             | 54.00             | 5.35           | 150            | 253          | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 64.58               | 0.46           | 65.04             | 74.00             | 8.96           | 150            | 253          | PK       |
| 5                                                                                                                                                                                                                                                            | 4904.0000      | 36.09               | 10.10          | 46.19             | 54.00             | 7.81           | 150            | 254          | AV       |
| 6                                                                                                                                                                                                                                                            | 4904.0000      | 42.99               | 10.10          | 53.09             | 74.00             | 20.91          | 150            | 161          | PK       |
| 7                                                                                                                                                                                                                                                            | 7356.0000      | 31.93               | 10.31          | 42.24             | 74.00             | 31.76          | 150            | 30           | PK       |
| 8                                                                                                                                                                                                                                                            | 7356.0000      | 23.66               | 10.31          | 33.97             | 54.00             | 20.03          | 150            | 35           | AV       |
| 9                                                                                                                                                                                                                                                            | 9808.0000      | 19.67               | 13.20          | 32.87             | 54.00             | 21.13          | 150            | 35           | AV       |
| 10                                                                                                                                                                                                                                                           | 9808.0000      | 27.40               | 13.20          | 40.60             | 74.00             | 33.40          | 150            | 215          | PK       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2449.4549      | 84.96               | 0.56           | 85.52             |                   |                | 150            | 288          | RMS      |
| 2                                                                                                                                                                                                                                                            | 2454.6615      | 92.10               | 0.57           | 92.67             |                   |                | 150            | 288          | PK       |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 44.52               | 0.46           | 44.98             | 54.00             | 9.02           | 150            | 346          | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 59.78               | 0.46           | 60.24             | 74.00             | 13.76          | 150            | 124          | PK       |
| 5                                                                                                                                                                                                                                                            | 4904.0000      | 45.24               | 10.10          | 55.34             | 74.00             | 18.66          | 150            | 231          | PK       |
| 6                                                                                                                                                                                                                                                            | 4904.0000      | 36.06               | 10.10          | 46.16             | 54.00             | 7.84           | 150            | 231          | AV       |
| 7                                                                                                                                                                                                                                                            | 7356.0000      | 26.57               | 10.31          | 36.88             | 54.00             | 17.12          | 150            | 68           | AV       |
| 8                                                                                                                                                                                                                                                            | 7374.1674      | 37.66               | 9.98           | 47.64             | 74.00             | 26.36          | 150            | 85           | PK       |
| 9                                                                                                                                                                                                                                                            | 9808.0000      | 19.77               | 13.20          | 32.97             | 54.00             | 21.03          | 150            | 265          | AV       |
| 10                                                                                                                                                                                                                                                           | 9808.0000      | 28.16               | 13.20          | 41.36             | 74.00             | 32.64          | 150            | 138          | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |             |                  |             |                |                   |             |             |           |          |
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| Channel                                                                                                                                                                                                                                                      |             | BT-LE CH0        |             |                | Frequency         |             | 2402MHz     |           |          |
| Frequency Range                                                                                                                                                                                                                                              |             | Above 1G         |             |                | Detector Function |             | PK/AV       |           |          |
| Horizontal                                                                                                                                                                                                                                                   |             |                  |             |                |                   |             |             |           |          |
| NO                                                                                                                                                                                                                                                           | Freq. [MHz] | Reading [dBμV/m] | Factor [dB] | Level [dBμV/m] | Limit [dBμV/m]    | Margin [dB] | Height [cm] | Angle [°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2390.0000   | 36.67            | -0.15       | 36.52          | 54.00             | 17.48       | 150         | 254       | AV       |
| 2                                                                                                                                                                                                                                                            | 2390.0000   | 45.17            | -0.15       | 45.02          | 74.00             | 28.98       | 150         | 14        | PK       |
| 3                                                                                                                                                                                                                                                            | 2401.7412   | 95.98            | -0.04       | 95.94          |                   |             | 150         | 254       | PK       |
| 4                                                                                                                                                                                                                                                            | 2401.8172   | 95.19            | -0.03       | 95.16          |                   |             | 150         | 254       | RMS      |
| 5                                                                                                                                                                                                                                                            | 4803.9604   | 47.82            | 9.28        | 57.10          | 74.00             | 16.90       | 150         | 59        | PK       |
| 6                                                                                                                                                                                                                                                            | 4804.2904   | 42.98            | 9.29        | 52.27          | 54.00             | 1.73        | 150         | 59        | RMS      |
| 7                                                                                                                                                                                                                                                            | 7205.6706   | 34.75            | 12.82       | 47.57          | 74.00             | 26.43       | 150         | 241       | PK       |
| 8                                                                                                                                                                                                                                                            | 7205.6706   | 30.42            | 12.82       | 43.24          | 54.00             | 10.76       | 150         | 74        | RMS      |
| 9                                                                                                                                                                                                                                                            | 9565.7966   | 30.18            | 13.26       | 43.44          | 74.00             | 30.56       | 150         | 74        | PK       |
| 10                                                                                                                                                                                                                                                           | 9607.9208   | 23.95            | 13.32       | 37.27          | 54.00             | 16.73       | 150         | 47        | RMS      |
| Vertical                                                                                                                                                                                                                                                     |             |                  |             |                |                   |             |             |           |          |
| NO                                                                                                                                                                                                                                                           | Freq. [MHz] | Reading [dBμV/m] | Factor [dB] | Level [dBμV/m] | Limit [dBμV/m]    | Margin [dB] | Height [cm] | Angle [°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2390.0000   | 46.30            | -0.15       | 46.15          | 74.00             | 27.85       | 150         | 339       | PK       |
| 2                                                                                                                                                                                                                                                            | 2390.0000   | 36.53            | -0.15       | 36.38          | 54.00             | 17.62       | 150         | 332       | AV       |
| 3                                                                                                                                                                                                                                                            | 2401.7222   | 93.59            | -0.04       | 93.55          |                   |             | 150         | 218       | PK       |
| 4                                                                                                                                                                                                                                                            | 2401.7222   | 93.59            | -0.04       | 93.55          |                   |             | 150         | 218       | PK       |
| 5                                                                                                                                                                                                                                                            | 4804.0000   | 35.84            | 9.29        | 45.13          | 54.00             | 8.87        | 150         | 154       | AV       |
| 6                                                                                                                                                                                                                                                            | 4804.0000   | 42.55            | 9.29        | 51.84          | 74.00             | 22.16       | 150         | 154       | PK       |
| 7                                                                                                                                                                                                                                                            | 7205.6706   | 32.70            | 12.82       | 45.52          | 54.00             | 8.48        | 150         | 360       | RMS      |
| 8                                                                                                                                                                                                                                                            | 7205.6706   | 37.88            | 12.82       | 50.70          | 74.00             | 23.30       | 150         | 360       | PK       |
| 9                                                                                                                                                                                                                                                            | 9607.9208   | 34.33            | 13.32       | 47.65          | 74.00             | 26.35       | 150         | 159       | PK       |
| 10                                                                                                                                                                                                                                                           | 9607.9208   | 31.15            | 13.32       | 44.47          | 54.00             | 9.53        | 150         | 159       | RMS      |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |             |                  |             |                |                   |             |             |           |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
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| Channel                                                                                                                                                                                                                                                      |                | BT-LE CH19          |                | Frequency         |                   | 2440MHz        |                |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                | Detector Function |                   | PK/AV          |                |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 4879.8680      | 45.48               | 9.79           | 55.27             | 74.00             | 18.73          | 150            | 47           | PK       |
| 2                                                                                                                                                                                                                                                            | 4879.8680      | 39.77               | 9.79           | 49.56             | 54.00             | 4.44           | 150            | 242          | RMS      |
| 3                                                                                                                                                                                                                                                            | 7318.0018      | 41.18               | 11.02          | 52.20             | 74.00             | 21.80          | 150            | 13           | PK       |
| 4                                                                                                                                                                                                                                                            | 7319.1719      | 34.57               | 11.02          | 45.59             | 54.00             | 8.41           | 150            | 59           | RMS      |
| 5                                                                                                                                                                                                                                                            | 9760.0360      | 30.48               | 13.25          | 43.73             | 74.00             | 30.27          | 150            | 280          | PK       |
| 6                                                                                                                                                                                                                                                            | 9760.0360      | 23.96               | 13.25          | 37.21             | 54.00             | 16.79          | 150            | 280          | RMS      |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 4883.4984      | 45.21               | 9.86           | 55.07             | 74.00             | 18.93          | 150            | 247          | PK       |
| 2                                                                                                                                                                                                                                                            | 4899.6700      | 36.78               | 10.11          | 46.89             | 54.00             | 7.11           | 150            | 166          | RMS      |
| 3                                                                                                                                                                                                                                                            | 7319.1719      | 34.24               | 11.02          | 45.26             | 54.00             | 8.74           | 150            | 13           | RMS      |
| 4                                                                                                                                                                                                                                                            | 7319.1719      | 39.03               | 11.02          | 50.05             | 74.00             | 23.95          | 150            | 39           | PK       |
| 5                                                                                                                                                                                                                                                            | 9760.0360      | 35.40               | 13.25          | 48.65             | 74.00             | 25.35          | 150            | 147          | PK       |
| 6                                                                                                                                                                                                                                                            | 9760.0360      | 29.98               | 13.25          | 43.23             | 54.00             | 10.77          | 150            | 147          | RMS      |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |



|                                                                                                                                                                                                                                                              |                |                     |                |                   |                   |                |                |              |          |
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| Channel                                                                                                                                                                                                                                                      |                | BT-LE CH39          |                |                   | Frequency         |                | 2480MHz        |              |          |
| Frequency Range                                                                                                                                                                                                                                              |                | Above 1G            |                |                   | Detector Function |                | PK/AV          |              |          |
| Horizontal                                                                                                                                                                                                                                                   |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Detector |
| 1                                                                                                                                                                                                                                                            | 2480.1620      | 94.67               | 0.32           | 94.99             |                   |                | 150            | 221          | RMS      |
| 2                                                                                                                                                                                                                                                            | 2480.2570      | 95.91               | 0.32           | 96.23             |                   |                | 150            | 221          | PK       |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 37.86               | 0.46           | 38.32             | 54.00             | 15.68          | 150            | 348          | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 44.94               | 0.46           | 45.40             | 74.00             | 28.60          | 150            | 348          | PK       |
| 5                                                                                                                                                                                                                                                            | 4960.0000      | 42.16               | 10.69          | 52.85             | 74.00             | 21.15          | 150            | 218          | PK       |
| 6                                                                                                                                                                                                                                                            | 4960.0000      | 33.93               | 10.69          | 44.62             | 54.00             | 9.38           | 150            | 69           | AV       |
| 7                                                                                                                                                                                                                                                            | 7440.0000      | 20.38               | 9.75           | 30.13             | 54.00             | 23.87          | 150            | 167          | AV       |
| 8                                                                                                                                                                                                                                                            | 7440.0000      | 27.75               | 9.75           | 37.50             | 74.00             | 36.50          | 150            | 142          | PK       |
| 9                                                                                                                                                                                                                                                            | 9920.0000      | 26.48               | 13.83          | 40.31             | 74.00             | 33.69          | 150            | 156          | PK       |
| 10                                                                                                                                                                                                                                                           | 9920.0000      | 18.48               | 13.83          | 32.31             | 54.00             | 21.69          | 150            | 107          | AV       |
| Vertical                                                                                                                                                                                                                                                     |                |                     |                |                   |                   |                |                |              |          |
| NO                                                                                                                                                                                                                                                           | Freq.<br>[MHz] | Reading<br>[dBμV/m] | Factor<br>[dB] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Remark   |
| 1                                                                                                                                                                                                                                                            | 2479.7630      | 92.85               | 0.33           | 93.18             |                   |                | 150            | 212          | PK       |
| 2                                                                                                                                                                                                                                                            | 2479.7630      | 92.01               | 0.33           | 92.34             |                   |                | 150            | 212          | RMS      |
| 3                                                                                                                                                                                                                                                            | 2483.5000      | 37.58               | 0.46           | 38.04             | 54.00             | 15.96          | 150            | 25           | AV       |
| 4                                                                                                                                                                                                                                                            | 2483.5000      | 45.38               | 0.46           | 45.84             | 74.00             | 28.16          | 150            | 38           | PK       |
| 5                                                                                                                                                                                                                                                            | 4960.0000      | 41.89               | 10.69          | 52.58             | 74.00             | 21.42          | 150            | 277          | PK       |
| 6                                                                                                                                                                                                                                                            | 4960.0000      | 34.65               | 10.69          | 45.34             | 54.00             | 8.66           | 150            | 147          | AV       |
| 7                                                                                                                                                                                                                                                            | 7440.0000      | 20.39               | 9.75           | 30.14             | 54.00             | 23.86          | 150            | 13           | AV       |
| 8                                                                                                                                                                                                                                                            | 7440.0000      | 28.40               | 9.75           | 38.15             | 74.00             | 35.85          | 150            | 178          | PK       |
| 9                                                                                                                                                                                                                                                            | 9920.0000      | 19.08               | 13.83          | 32.91             | 54.00             | 21.09          | 150            | 318          | AV       |
| 10                                                                                                                                                                                                                                                           | 9920.0000      | 27.47               | 13.83          | 41.30             | 74.00             | 32.70          | 150            | 283          | PK       |
| Remark: 1. The emission levels of other frequencies were greater than 20dB margin.<br>2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).<br>3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).<br>4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m] |                |                     |                |                   |                   |                |                |              |          |

## 3.3 6dB BANDWIDTH MEASUREMENT

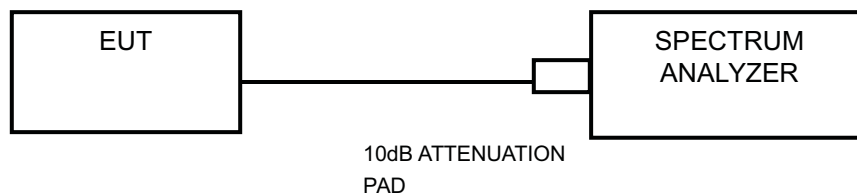
### 3.3.1 Limits

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

### 3.3.2 Measurement procedure

- Set resolution bandwidth (RBW) = 100KHz
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 3.3.3 Test setup



### 3.3.4 Test result

Please refer Annex A

## 3.4 CONDUCTED OUTPUT POWER

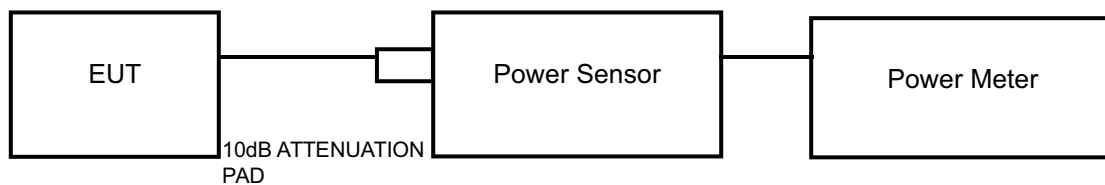
### 3.4.1 Limits

Forsystems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm).

### 3.4.2 Measurement procedure

- A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor and set the detector to PEAK. Record the power level.
- An average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor and set the detector to AVERAGE. Record the power level.

### 3.4.3 Test setup



### 3.4.4 Test result

Please refer Annex A.

### 3.5 POWER SPECTRAL DENSITY MEASUREMENT

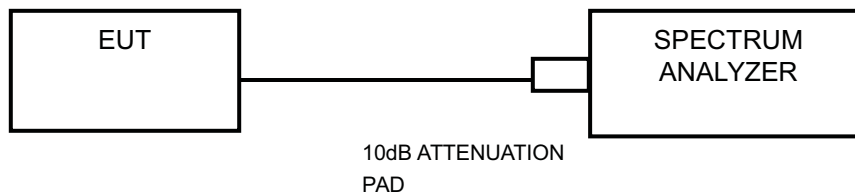
#### 3.5.1 Limits

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

#### 3.5.2 Measurement procedure

- a. Set instrument center frequency to DTS channel center frequency.
- b. Set the span to 1.5 times the DTS bandwidth.
- c. Set RBW to: 3KHz
- d. Set VBW  $\geq 3 \times$  RBW.
- e. Detector = peak
- f. Ensure that the number of measurement points in the sweep  $\geq 2 \times$  span/RBW.
- g. Sweep time = auto couple.
- h. Use the peak marker function to determine the maximum amplitude level.

#### 3.5.3 Test setup



#### 3.5.4 Test result

Please refer Annex A.

### 3.6 OUT OF BAND EMISSION MEASUREMENT

#### 3.6.1 Limits

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

#### 3.6.2 Measurement procedure

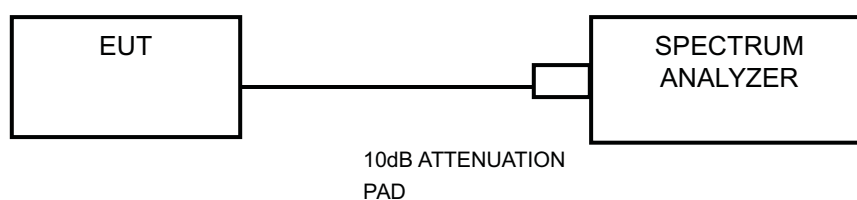
##### Measurement Procedure -Reference Level

- Set the RBW = 100 kHz.
- Set the VBW  $\geq$  300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHzband segment within the fundamental EBW.

##### Measurement Procedure –Unwanted Emission Level

- Set RBW = 100 kHz.
- Set VBW  $\geq$  300 kHz.
- Set span to encompass the spectrum to be examined
- Detector = peak.
- Trace Mode = max hold.
- Sweep = auto couple.

#### 3.6.3 Test setup



#### 3.6.4 Test result

Please refer Annex A.

## 3.7 OCCUPIED BANDWIDTH MEASUREMENT

### 3.7.1 Measurement procedure

The transmitter antenna output was connected to the spectrum analyzer through an attenuator. The resolution bandwidth shall be set to the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth.

below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

### 3.7.2 TEST SETUP



### 3.7.3 Test result

Please refer Annex A.



## 4 PHOTOGRAPHS OF TEST SETUP

Please refer to the attached file (Test Setup Photo).

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## 5 PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos report and Internal Photos).



## 6 Appendix A

Please refer to the following pages for test results.

### 6.1 6DB BANDWIDTH MEASUREMENT

#### 6.1.1 Test Result

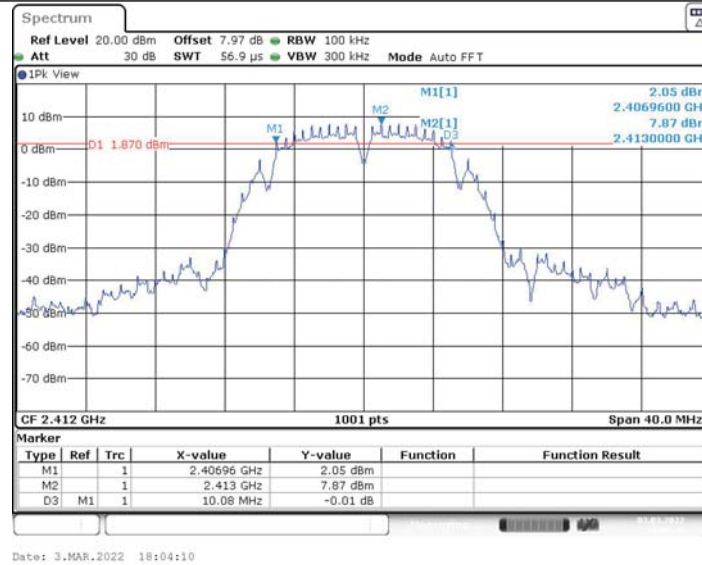
| TestMode  | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|-----------|---------|----------------|--------------|---------|---------|------------|---------|
| 11B       | Ant1    | 2412           | 10.08        | 2406.96 | 2417.04 | 0.5        | PASS    |
|           | Ant2    | 2412           | 9.04         | 2407.48 | 2416.52 | 0.5        | PASS    |
|           | Ant1    | 2437           | 10.04        | 2431.96 | 2442.00 | 0.5        | PASS    |
|           | Ant2    | 2437           | 9.52         | 2432.00 | 2441.52 | 0.5        | PASS    |
|           | Ant1    | 2462           | 10.08        | 2456.96 | 2467.04 | 0.5        | PASS    |
|           | Ant2    | 2462           | 9.04         | 2457.48 | 2466.52 | 0.5        | PASS    |
| 11G       | Ant1    | 2412           | 16.32        | 2403.84 | 2420.16 | 0.5        | PASS    |
|           | Ant2    | 2412           | 16.32        | 2403.84 | 2420.16 | 0.5        | PASS    |
|           | Ant1    | 2437           | 16.36        | 2428.80 | 2445.16 | 0.5        | PASS    |
|           | Ant2    | 2437           | 16.36        | 2428.80 | 2445.16 | 0.5        | PASS    |
|           | Ant1    | 2462           | 16.32        | 2453.84 | 2470.16 | 0.5        | PASS    |
|           | Ant2    | 2462           | 16.32        | 2453.84 | 2470.16 | 0.5        | PASS    |
| 11N20MIMO | Ant1    | 2412           | 17.52        | 2403.24 | 2420.76 | 0.5        | PASS    |
|           | Ant2    | 2412           | 17.32        | 2403.44 | 2420.76 | 0.5        | PASS    |
|           | Ant1    | 2437           | 17.36        | 2428.20 | 2445.56 | 0.5        | PASS    |
|           | Ant2    | 2437           | 16.32        | 2428.20 | 2444.52 | 0.5        | PASS    |
|           | Ant1    | 2462           | 17.28        | 2453.48 | 2470.76 | 0.5        | PASS    |
|           | Ant2    | 2462           | 16.96        | 2453.20 | 2470.16 | 0.5        | PASS    |
| 11N40MIMO | Ant1    | 2422           | 16.48        | 2404.24 | 2420.72 | 0.5        | PASS    |
|           | Ant2    | 2422           | 16.88        | 2403.84 | 2420.72 | 0.5        | PASS    |
|           | Ant1    | 2437           | 17.28        | 2418.44 | 2435.72 | 0.5        | PASS    |
|           | Ant2    | 2437           | 17.04        | 2418.44 | 2435.48 | 0.5        | PASS    |
|           | Ant1    | 2452           | 16.88        | 2433.84 | 2450.72 | 0.5        | PASS    |
|           | Ant2    | 2452           | 17.28        | 2433.20 | 2450.48 | 0.5        | PASS    |

| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|----------------|--------------|---------|---------|------------|---------|
| BLE_1M   | Ant1    | 2402           | 0.66         | 2401.68 | 2402.34 | 0.5        | PASS    |
|          |         | 2440           | 0.66         | 2439.68 | 2440.34 | 0.5        | PASS    |
|          |         | 2480           | 0.66         | 2479.68 | 2480.34 | 0.5        | PASS    |
| BLE_2M   | Ant1    | 2402           | 1.13         | 2401.43 | 2402.56 | 0.5        | PASS    |
|          |         | 2440           | 1.12         | 2439.43 | 2440.55 | 0.5        | PASS    |
|          |         | 2480           | 1.13         | 2479.43 | 2480.56 | 0.5        | PASS    |

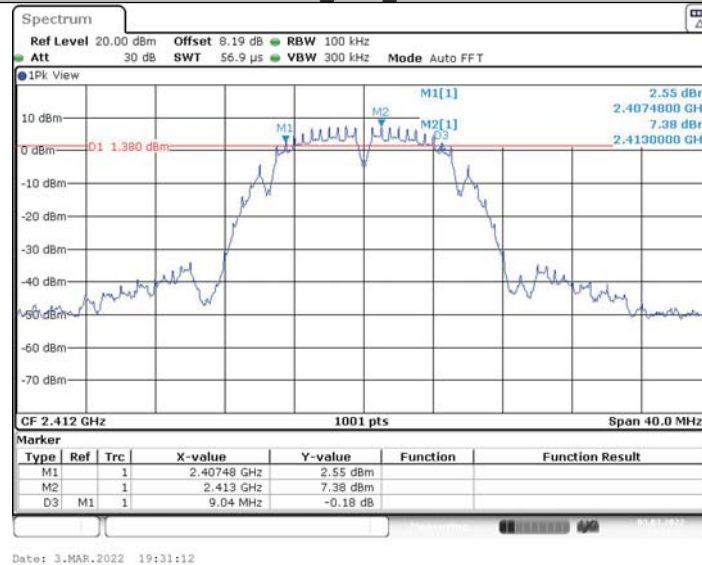


## 6.1.2 Test Graphs

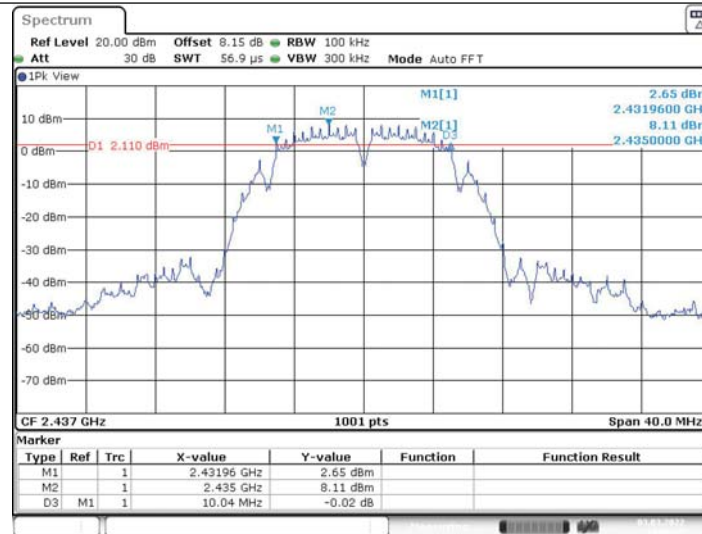
11B\_Ant1\_2412



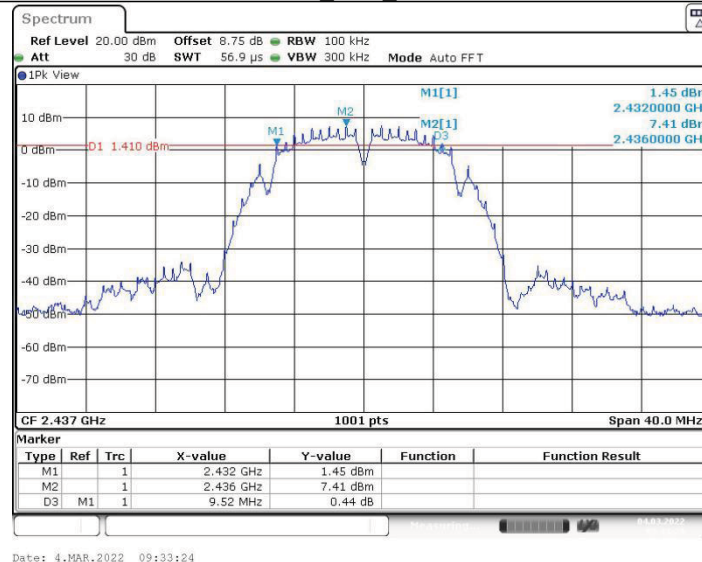
11B\_Ant2\_2412



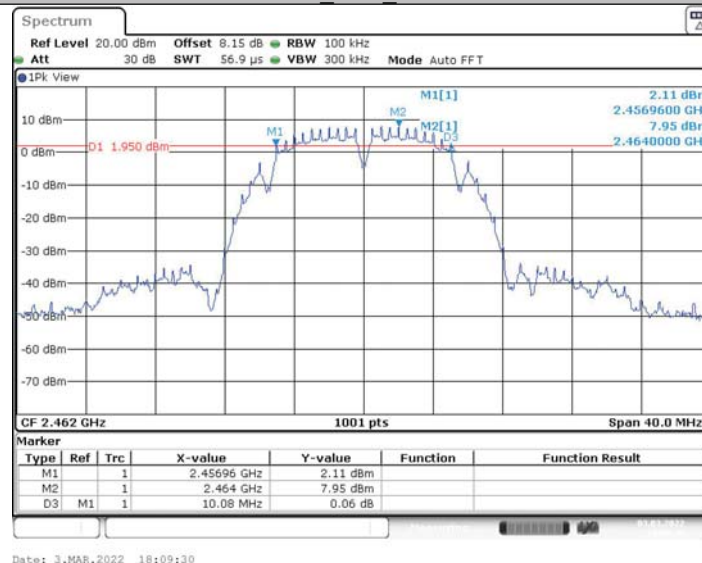
11B\_Ant1\_2437



11B Ant2 2437

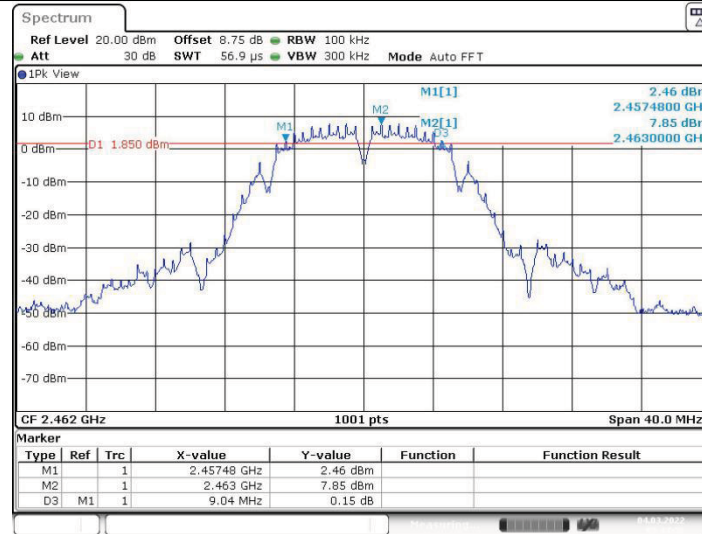


11B Ant1 2462

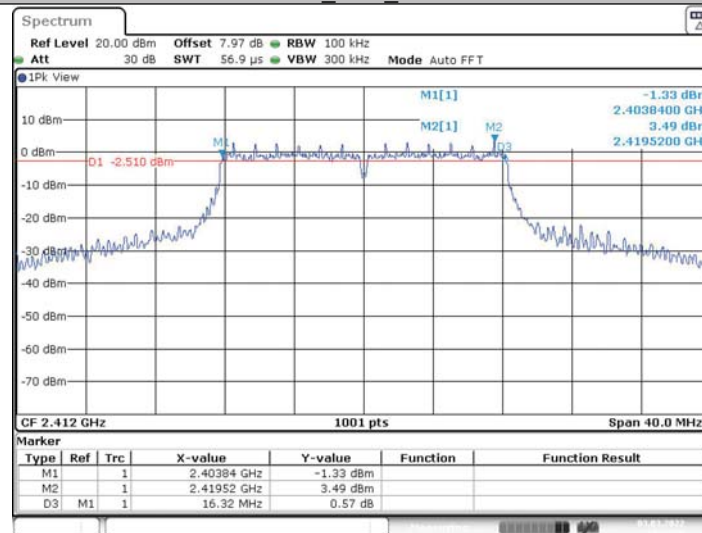




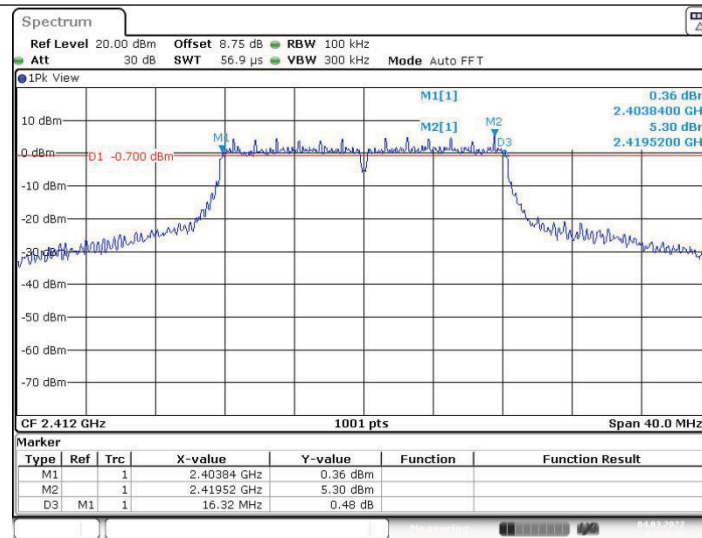
## 11B\_Ant2\_2462



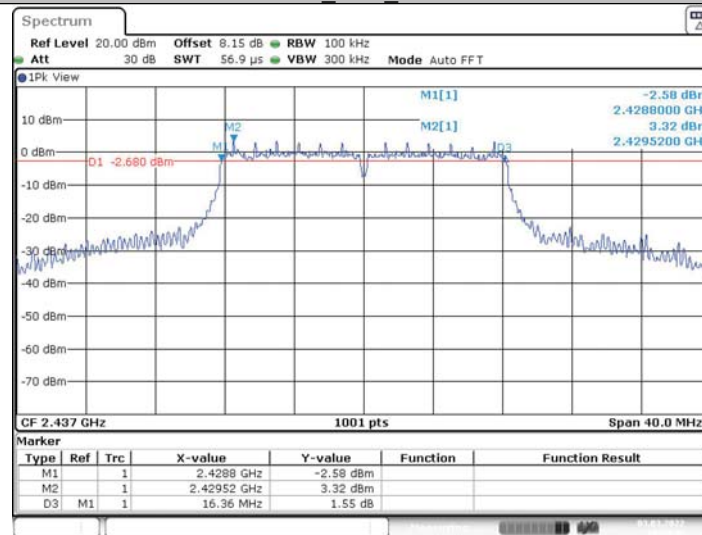
## 11G\_Ant1\_2412



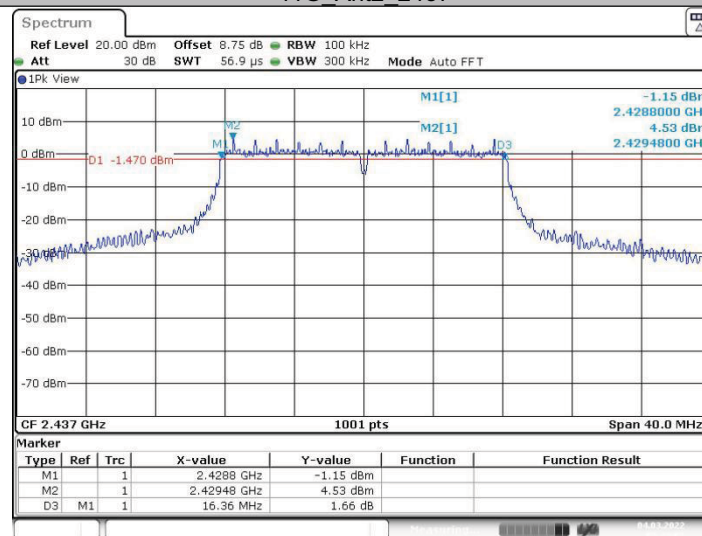
## 11G\_Ant2\_2412



11G\_Ant1\_2437

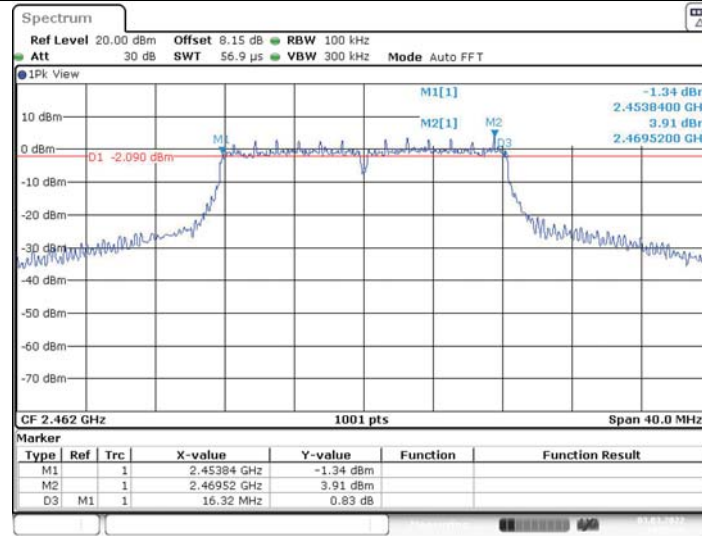


11G\_Ant2\_2437

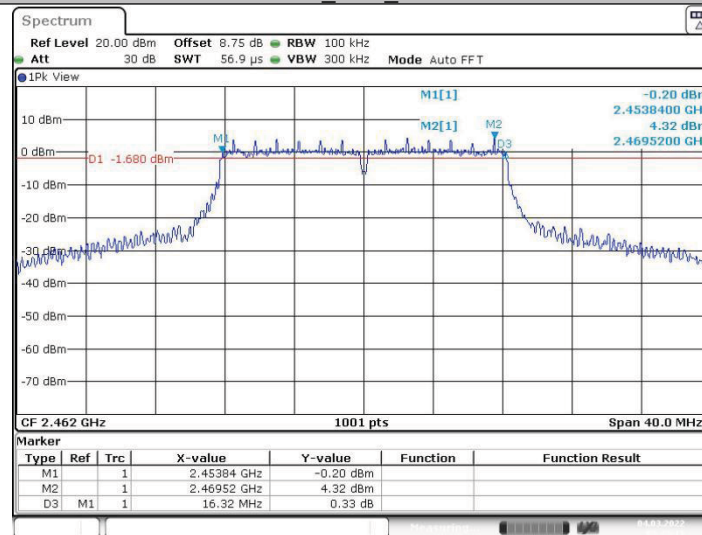




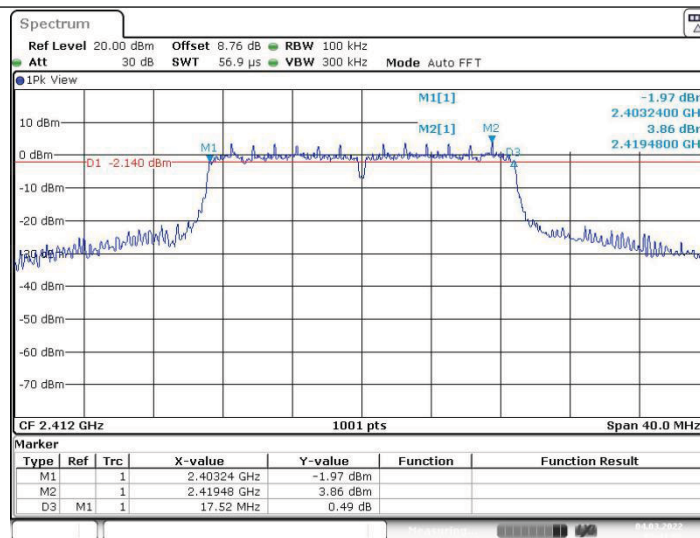
11G\_Ant1\_2462



11G\_Ant2\_2462

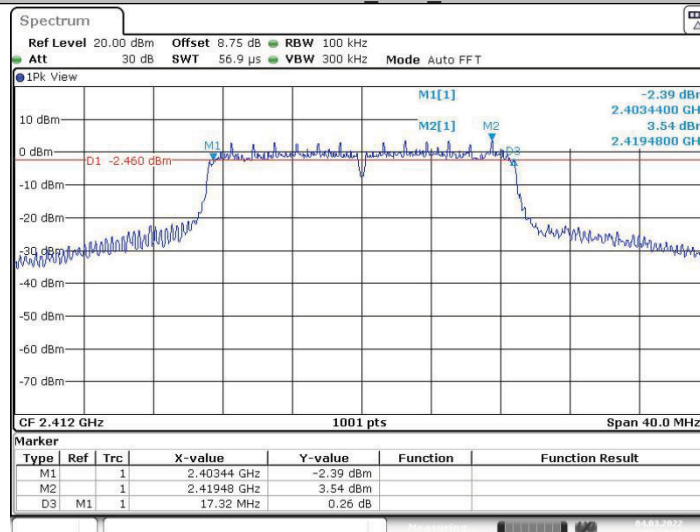


11N20MIMO\_Ant1\_2412



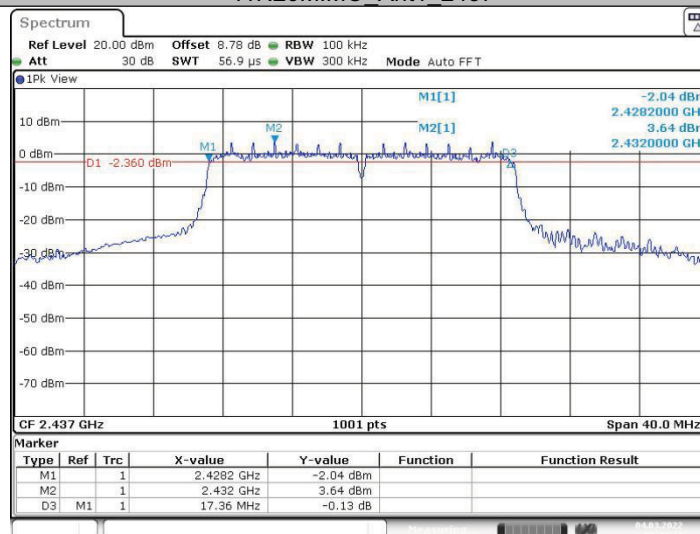
Date: 4.MAR.2022 09:41:07

## 11N20MIMO\_Ant2\_2412



Date: 4.MAR.2022 09:42:29

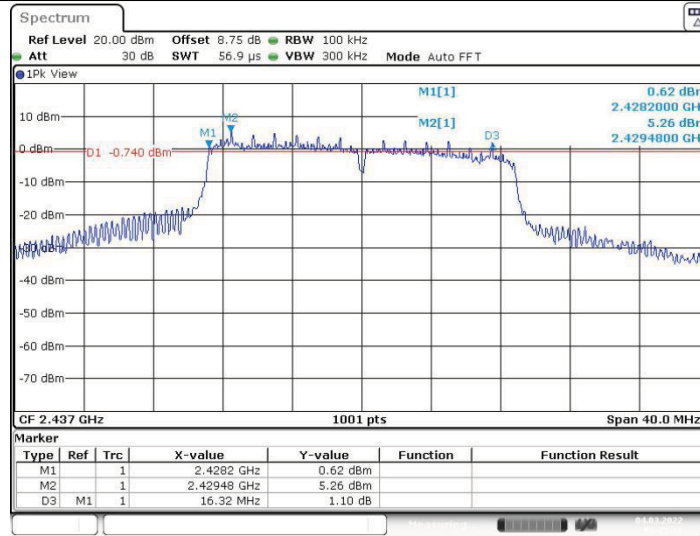
## 11N20MIMO\_Ant1\_2437



Date: 4.MAR.2022 09:44:13

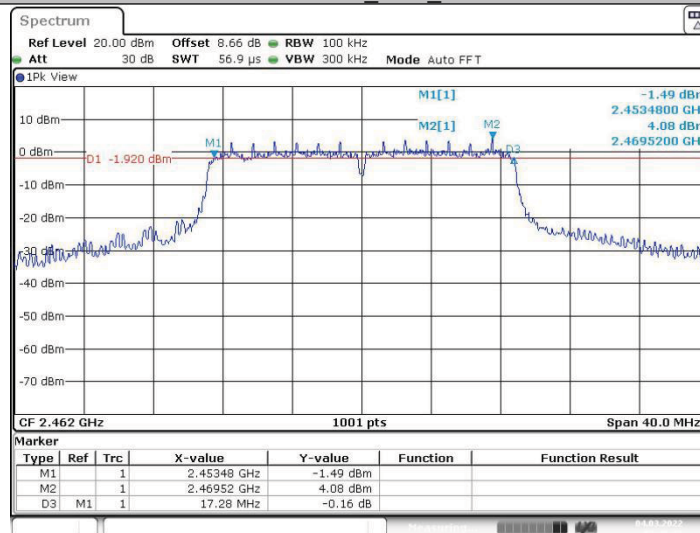


## 11N20MIMO\_Ant2\_2437



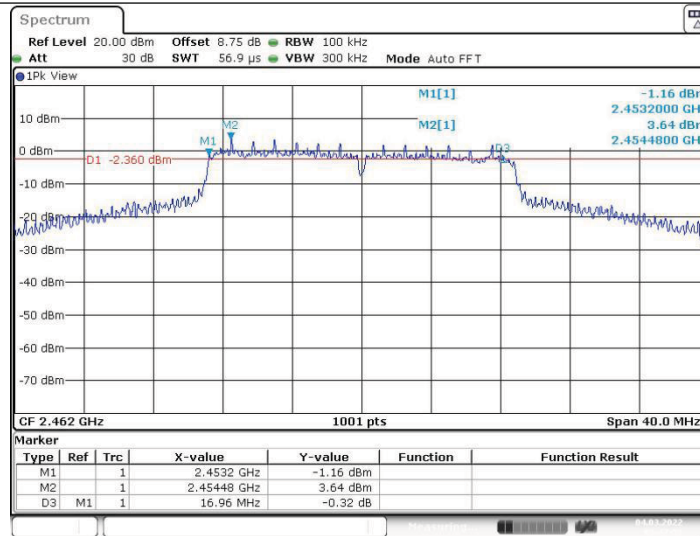
Date: 4.MAR.2022 09:45:18

## 11N20MIMO\_Ant1\_2462

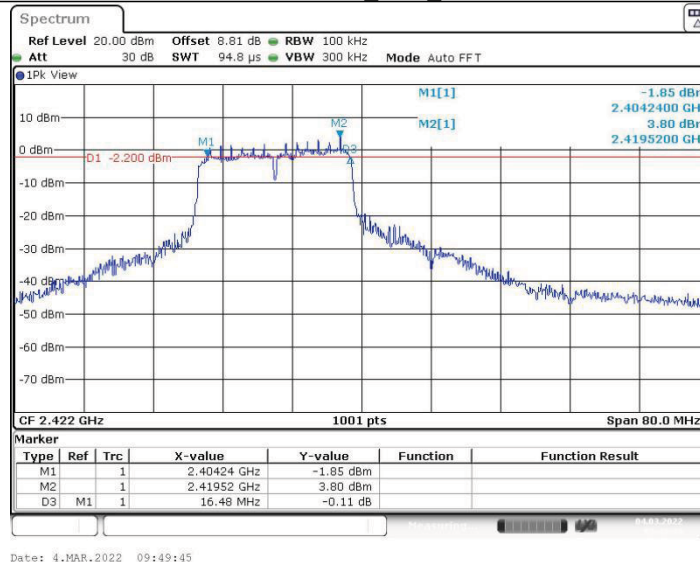


Date: 4.MAR.2022 09:46:33

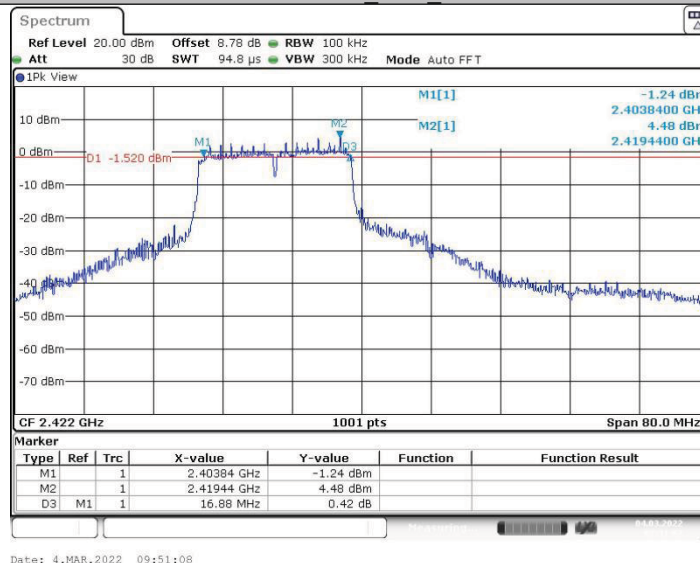
## 11N20MIMO\_Ant2\_2462



11N40MIMO\_Ant1\_2422

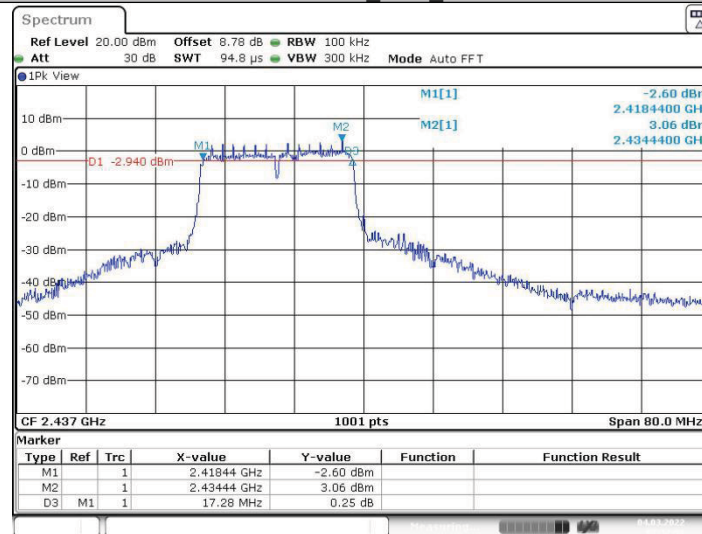


11N40MIMO\_Ant2\_2422



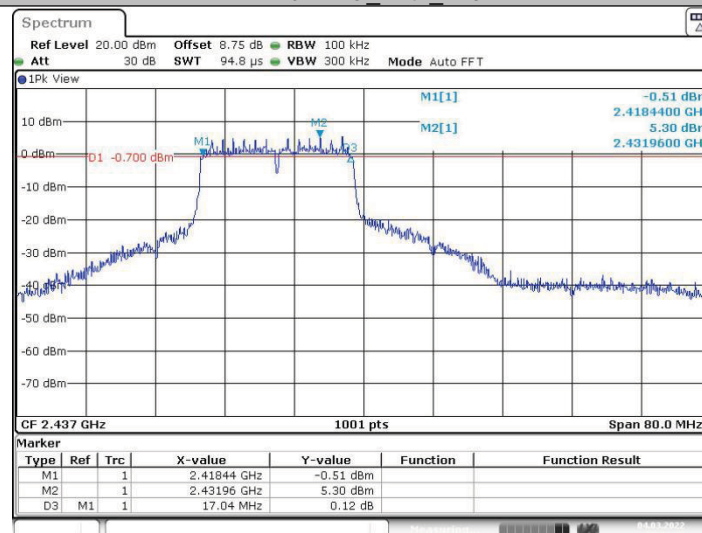


## 11N40MIMO\_Ant1\_2437



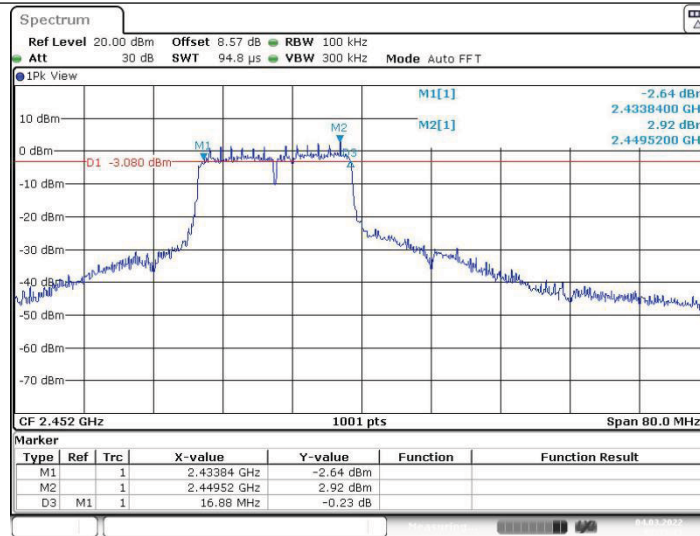
Date: 4.MAR.2022 09:52:39

## 11N40MIMO\_Ant2\_2437

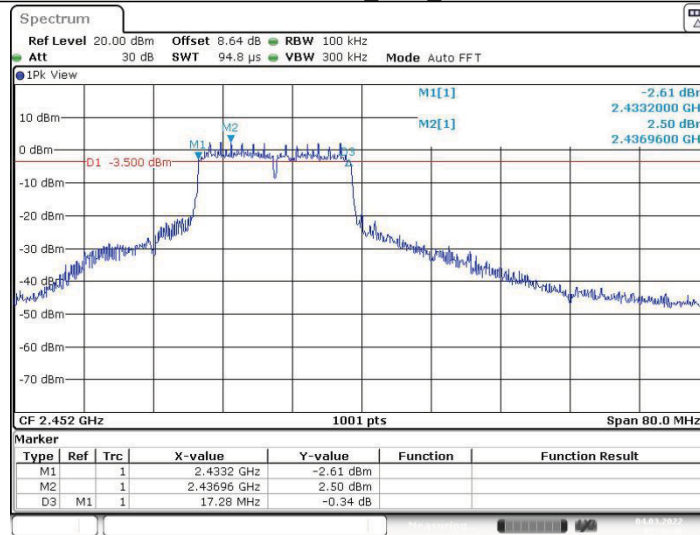


Date: 4.MAR.2022 09:53:45

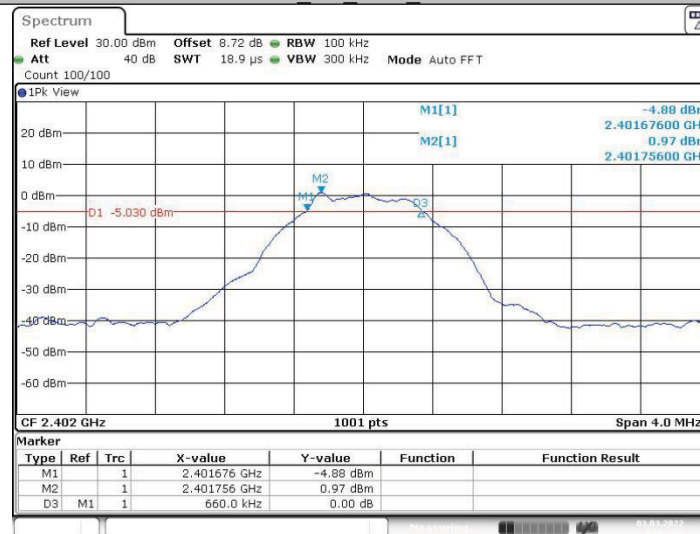
## 11N40MIMO\_Ant1\_2452



11N40MIMO\_Ant2\_2452

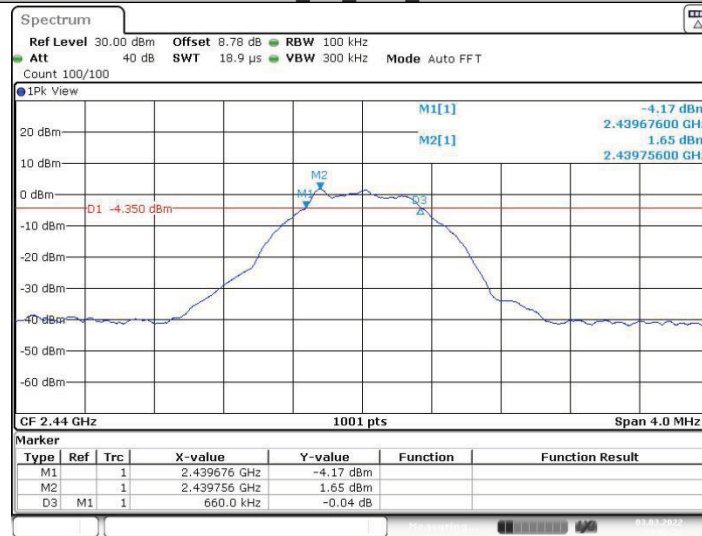


BLE\_1M\_Ant1\_2402

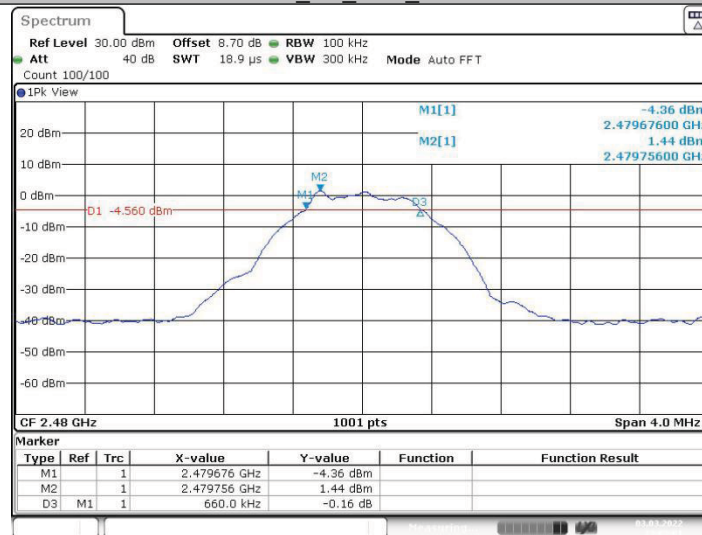




## BLE\_1M\_Ant1\_2440



## BLE\_1M\_Ant1\_2480



## BLE\_2M\_Ant1\_2402