



## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: frank2018 #131

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz( $\pi/4$  DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

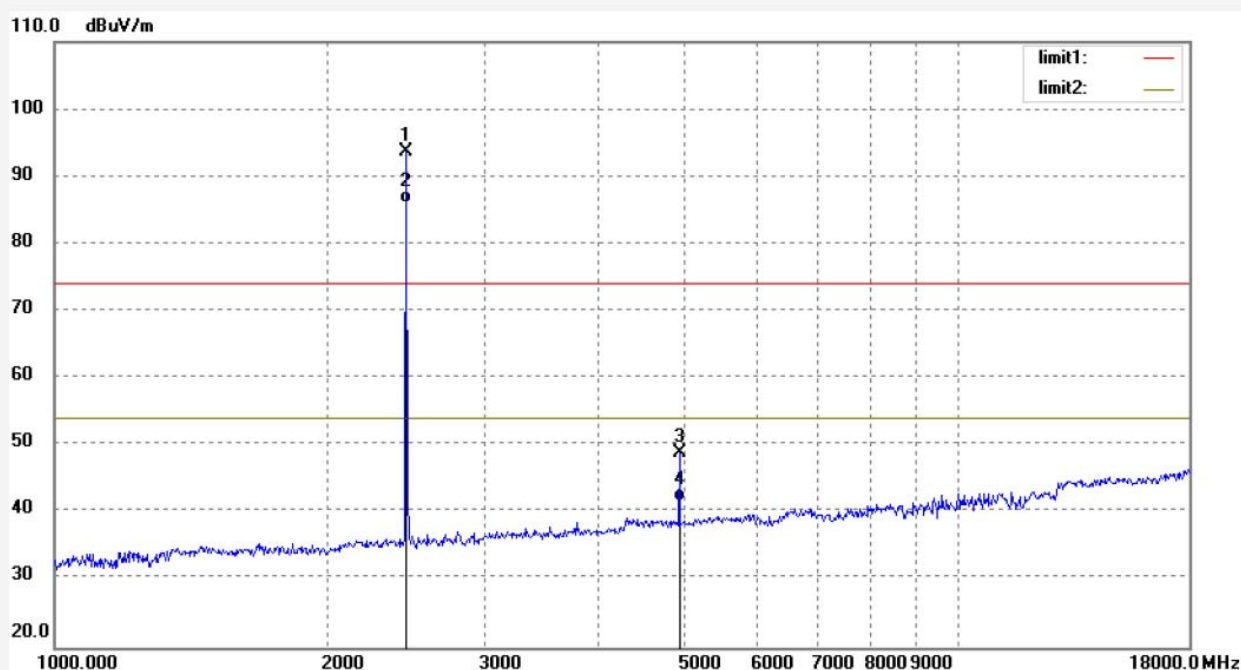
Date: 18/01/26/

Time: 9/13/34

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2480.034    | 97.83            | -4.04       | 93.79           |                |             | peak     | 200         | 34            |        |
| 2   | 2480.034    | 90.15            | -4.04       | 86.11           |                |             | AVG      | 150         | 195           |        |
| 3   | 4960.064    | 45.31            | 3.50        | 48.81           | 74.00          | -25.19      | peak     | 200         | 257           |        |
| 4   | 4960.064    | 38.18            | 3.50        | 41.68           | 54.00          | -12.32      | AVG      | 150         | 123           |        |

Job No.: frank2018 #137

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

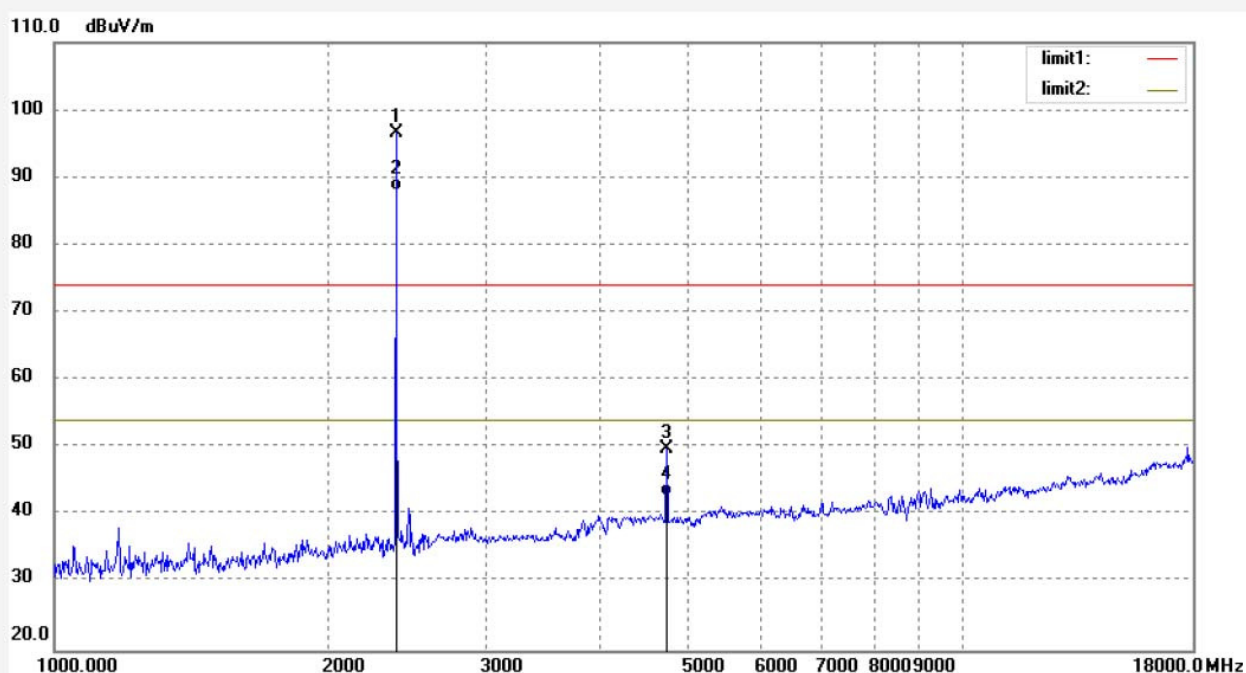
Date: 18/01/26/

Time: 9/19/26

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2402.119    | 100.92           | -4.37       | 96.55           |                |             | peak     | 250         | 132           |        |
| 2   | 2402.119    | 92.34            | -4.37       | 87.97           |                |             | AVG      | 250         | 102           |        |
| 3   | 4804.257    | 47.22            | 2.70        | 49.92           | 74.00          | -24.08      | peak     | 250         | 87            |        |
| 4   | 4804.257    | 40.12            | 2.70        | 42.82           | 54.00          | -11.18      | AVG      | 250         | 245           |        |

Job No.: frank2018 #138

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

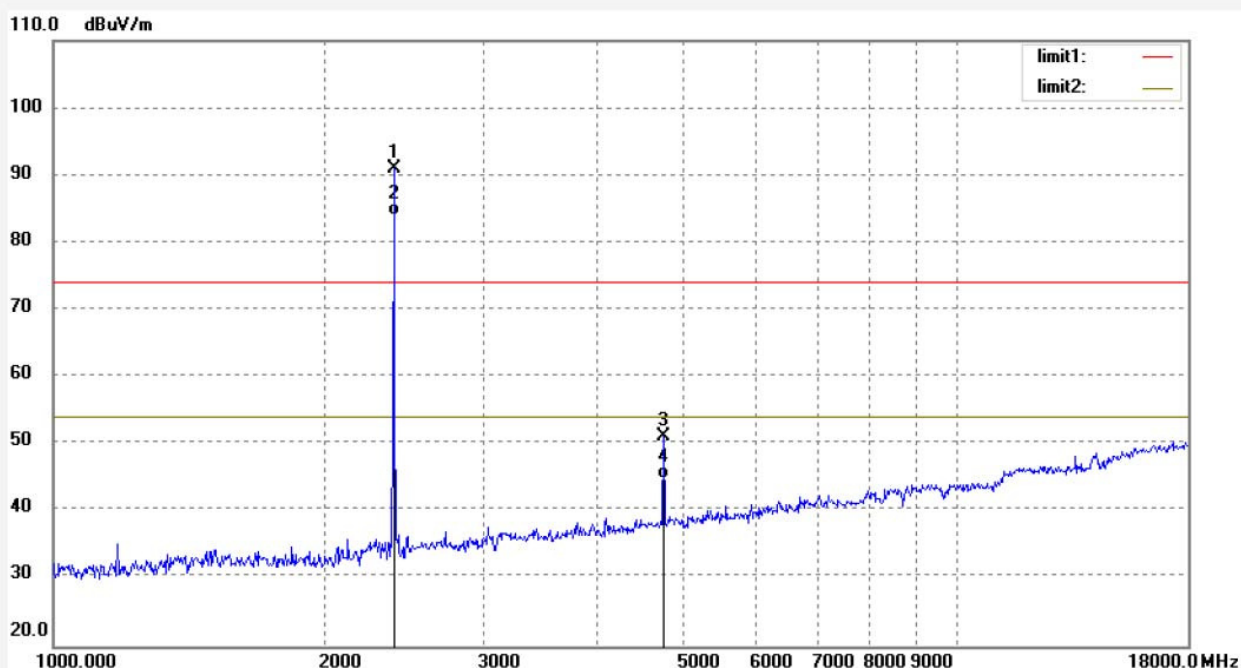
Date: 18/01/26/

Time: 9/20/07

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2402.119    | 95.32            | -4.37       | 90.95           |                |             | peak     | 150         | 138           |        |
| 2   | 2402.119    | 88.38            | -4.37       | 84.01           |                |             | AVG      | 150         | 248           |        |
| 3   | 4804.257    | 48.51            | 2.70        | 51.21           | 74.00          | -22.79      | peak     | 150         | 347           |        |
| 4   | 4804.257    | 42.18            | 2.70        | 44.88           | 54.00          | -9.12       | AVG      | 150         | 298           |        |

Job No.: frank2018 #140

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2441MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

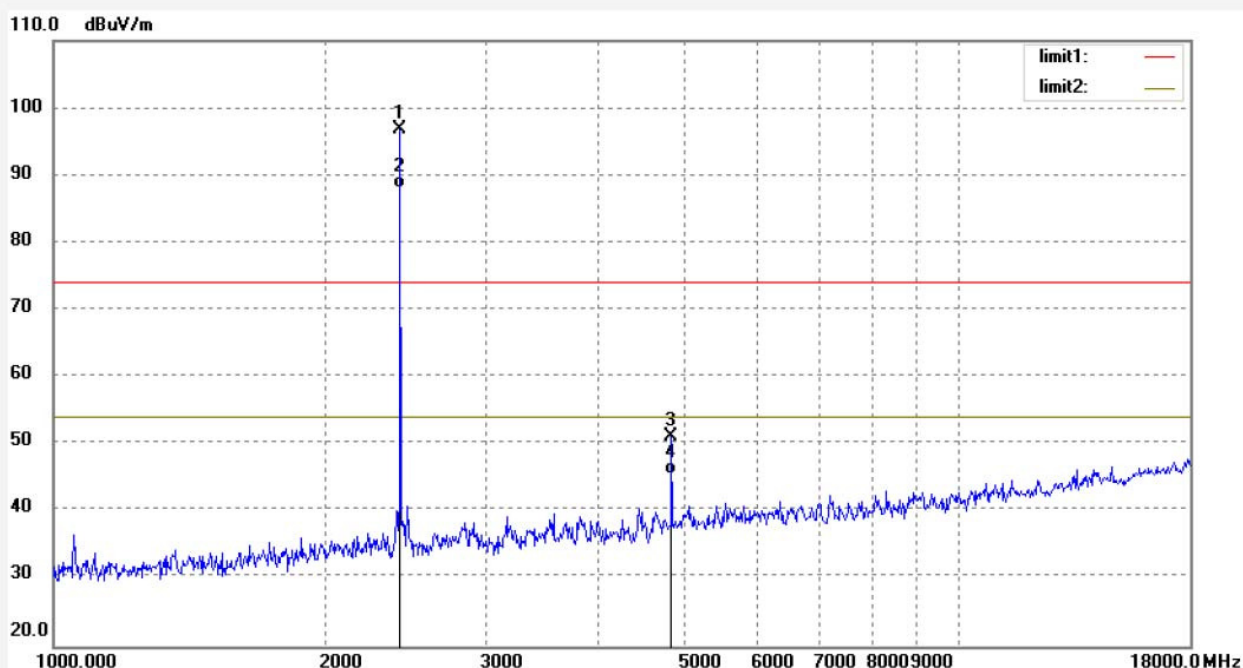
Date: 18/01/26/

Time: 9/21/54

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2441.121    | 101.06           | -4.20       | 96.86           |                |             | peak     | 200         | 132           |        |
| 2   | 2441.121    | 92.32            | -4.20       | 88.12           |                |             | AVG      | 200         | 197           |        |
| 3   | 4882.224    | 48.09            | 3.07        | 51.16           | 74.00          | -22.84      | peak     | 250         | 46            |        |
| 4   | 4882.224    | 42.38            | 3.07        | 45.45           | 54.00          | -8.55       | AVG      | 250         | 245           |        |

Job No.: frank2018 #139

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2441MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

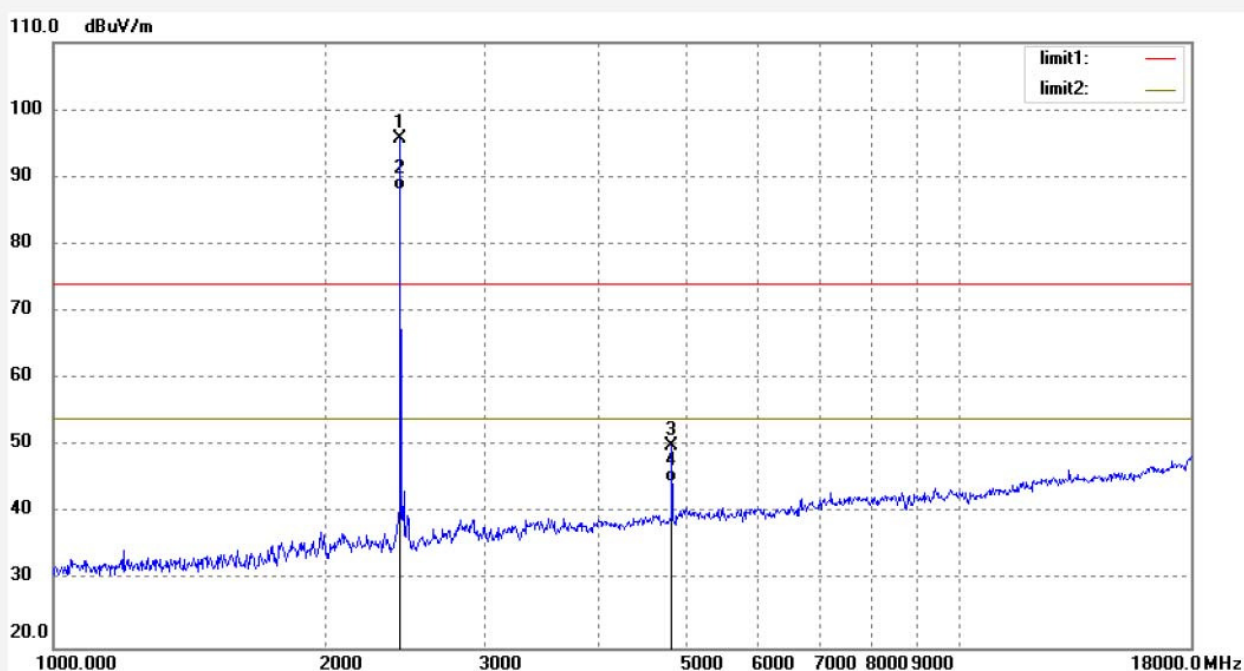
Date: 18/01/26/

Time: 9/21/19

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2441.121    | 99.93            | -4.20       | 95.73           |                |             | peak     | 250         | 132           |        |
| 2   | 2441.121    | 92.35            | -4.20       | 88.15           |                |             | AVG      | 250         | 97            |        |
| 3   | 4882.224    | 47.06            | 3.07        | 50.13           | 74.00          | -23.87      | peak     | 250         | 274           |        |
| 4   | 4882.224    | 41.59            | 3.07        | 44.66           | 54.00          | -9.34       | AVG      | 250         | 140           |        |

Job No.: frank2018 #141

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

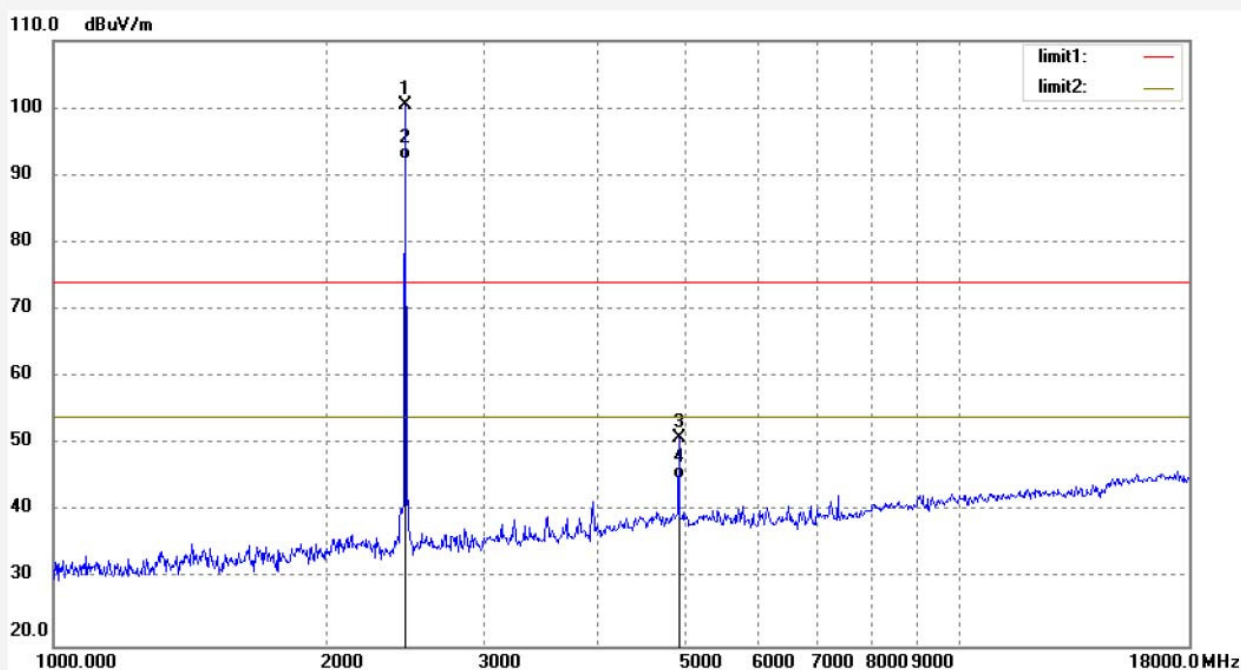
Date: 18/01/26/

Time: 9/22/41

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2480.034    | 104.56           | -4.04       | 100.52          |                |             | peak     | 250         | 82            |        |
| 2   | 2480.034    | 96.45            | -4.04       | 92.41           |                |             | AVG      | 250         | 134           |        |
| 3   | 4960.064    | 47.52            | 3.50        | 51.02           | 74.00          | -22.98      | peak     | 250         | 248           |        |
| 4   | 4960.064    | 41.38            | 3.50        | 44.88           | 54.00          | -9.12       | AVG      | 250         | 102           |        |



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Tel:+86-0755-26503290

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Job No.: frank2018 #142

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

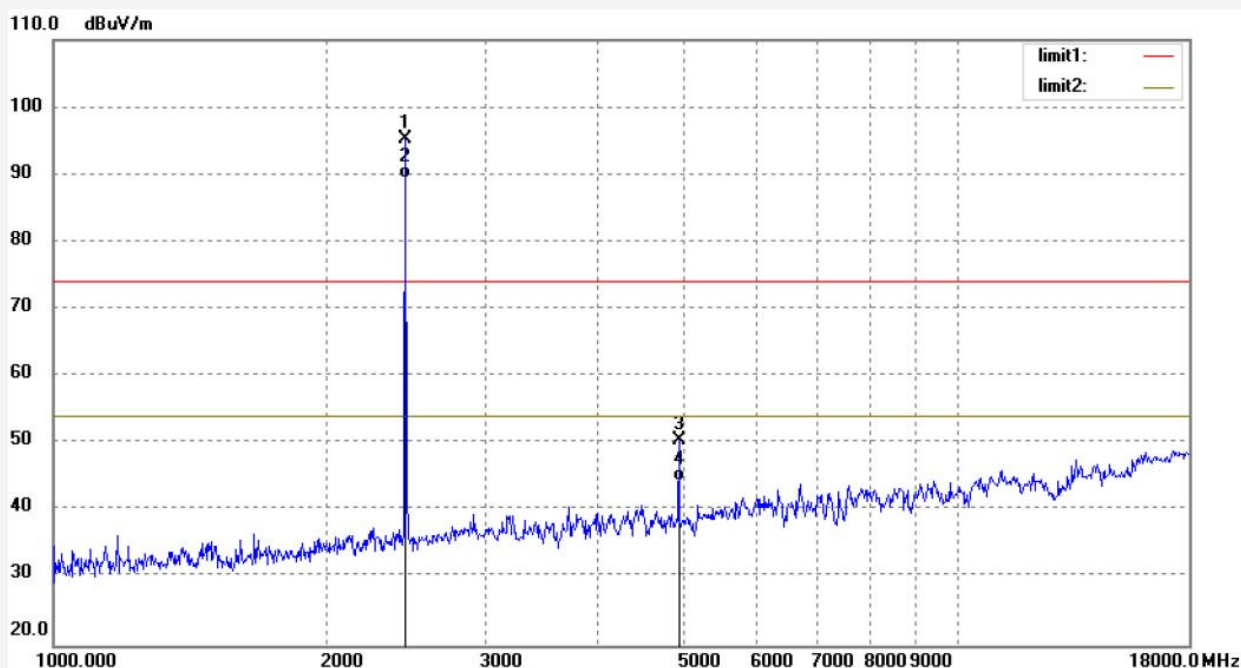
Date: 18/01/26/

Time: 9/23/24

Engineer Signature:

Distance: 3m

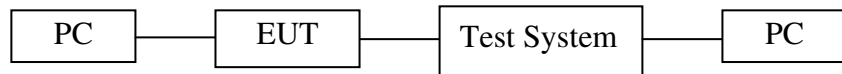
Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2480.034    | 99.32            | -4.04       | 95.28           |                |             | peak     | 150         | 132           |        |
| 2   | 2480.034    | 93.48            | -4.04       | 89.44           |                |             | AVG      | 150         | 27            |        |
| 3   | 4960.064    | 46.93            | 3.50        | 50.43           | 74.00          | -23.57      | peak     | 150         | 187           |        |
| 4   | 4960.064    | 40.99            | 3.50        | 44.49           | 54.00          | -9.51       | AVG      | 150         | 345           |        |

## 11.BAND EDGE COMPLIANCE TEST

### 11.1.Block Diagram of Test Setup



(EUT: WiFi module)

### 11.2.The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, 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).

### 11.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 11.4.Operating Condition of EUT

11.4.1.Setup the EUT and simulator as shown as Section 11.1.

11.4.2.Turn on the power of all equipment.

11.4.3.Let the EUT work in TX (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

## 11.5. Test Procedure

11.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

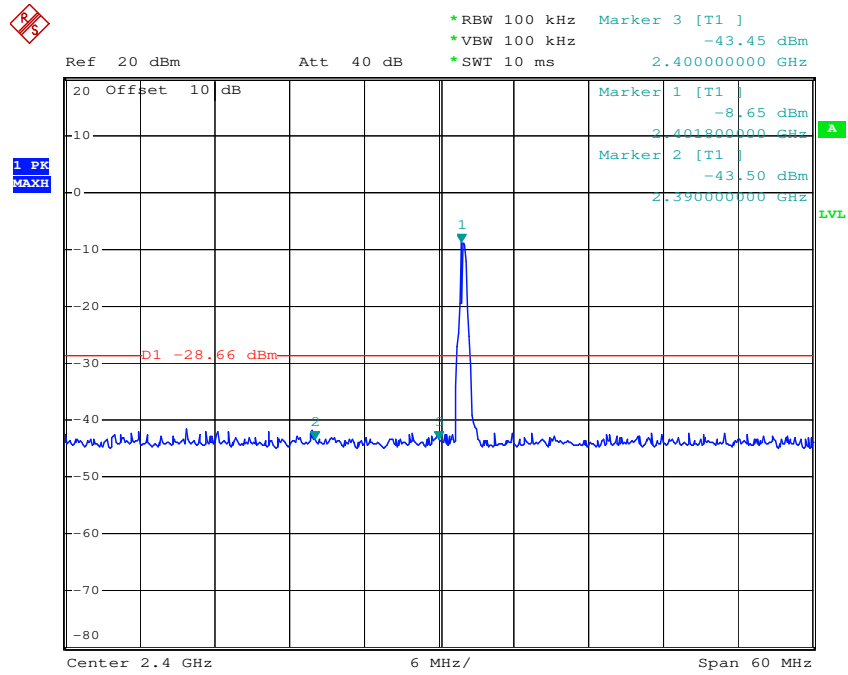
11.5.2. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz with convenient frequency span including 100 kHz bandwidth from band edge.

11.5.3. The band edges were measured and recorded.

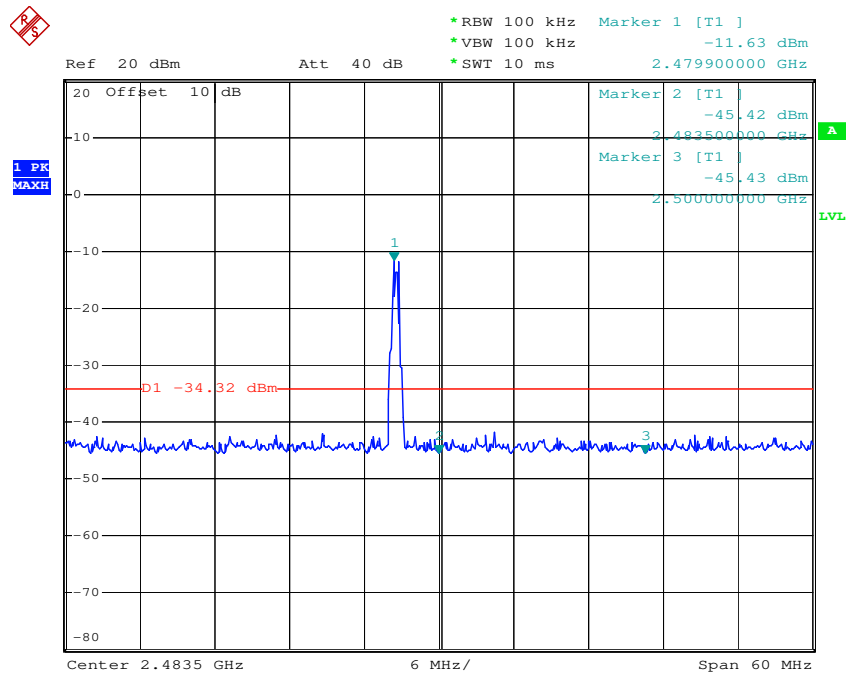
## 11.6. Test Result

| Frequency<br>(MHz) | Result of Band Edge<br>(dBc) | Limit of Band Edge<br>(dBc) |
|--------------------|------------------------------|-----------------------------|
| GFSK               |                              |                             |
| 2400.00            | 34.80                        | > 20dBc                     |
| 2483.50            | 33.79                        | > 20dBc                     |
| $\Pi/4$ DQPSK Mode |                              |                             |
| 2400.00            | 34.47                        | > 20dBc                     |
| 2483.50            | 28.67                        | > 20dBc                     |
| 8DPSK              |                              |                             |
| 2400.00            | 34.38                        | > 20dBc                     |
| 2483.50            | 30.56                        | > 20dBc                     |

## GFSK

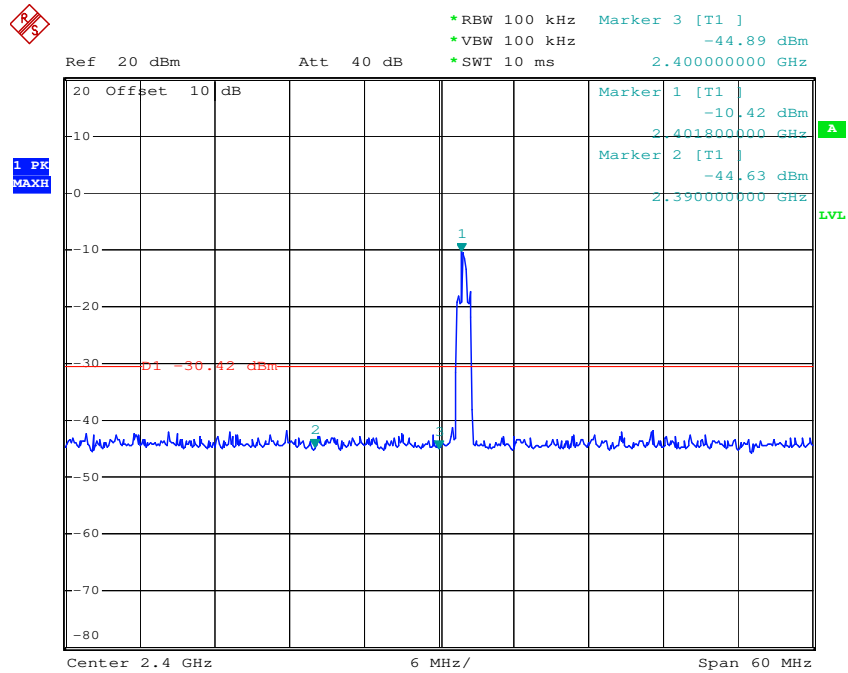


Comment A:  
Date: 18.JAN.2018 16:03:15

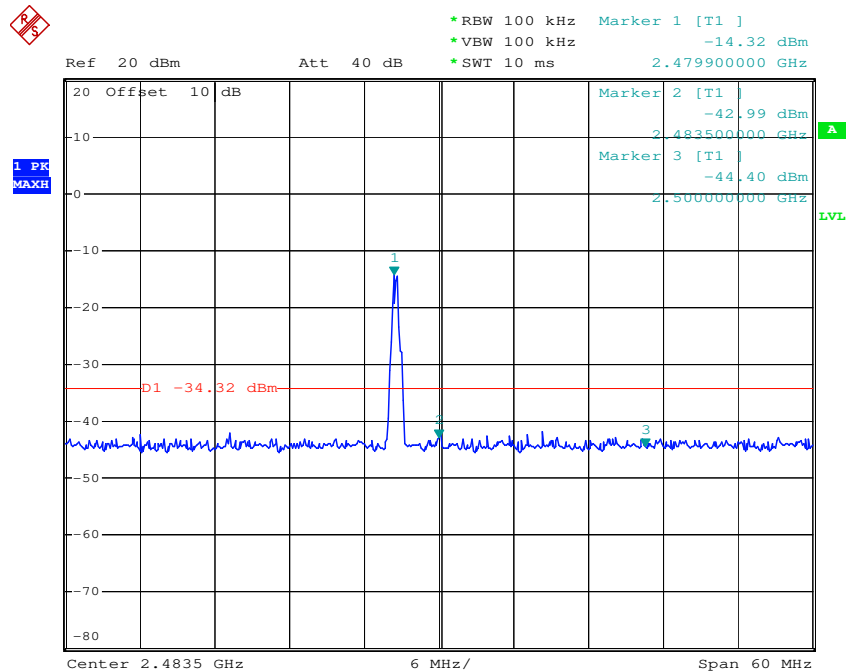


Comment A:  
Date: 18.JAN.2018 16:00:13

## $\Pi/4$ DQPSK Mode

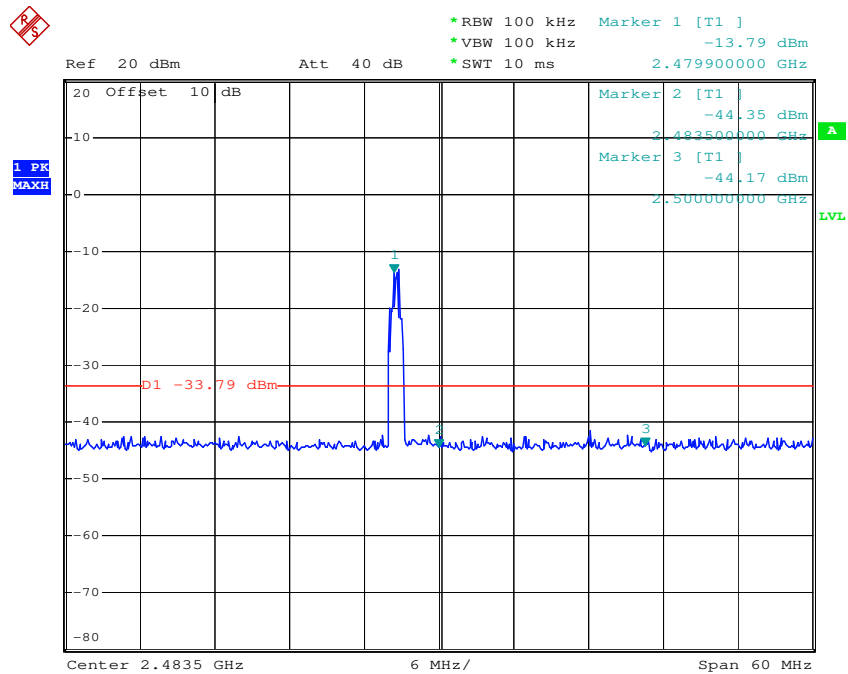
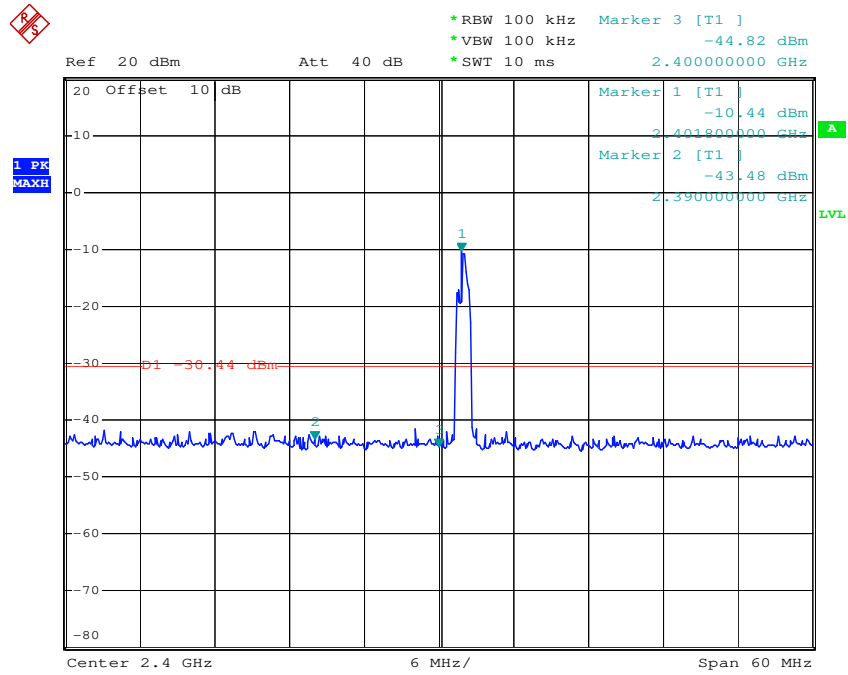


Comment A:  
 Date: 18.JAN.2018 16:04:09



Comment A:  
 Date: 18.JAN.2018 15:59:17

## 8DPSK



## Radiated Band Edge Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

Test Procedure:

The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

Let the EUT work in TX (Hopping off, Hopping on) modes measure it.

We select 2402MHz, 2480MHz TX frequency to transmit(Hopping off mode).

We select 2402-2480MHz TX frequency to transmit(Hopping on mode).

During the radiated emission test, the spectrum analyzer was set with the following configurations:

- 1.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
- 2.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- 3.All modes of operation were investigated and the worst-case emissions are reported.

## Non-hopping mode



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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: frank2018 #147

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(GSKF)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

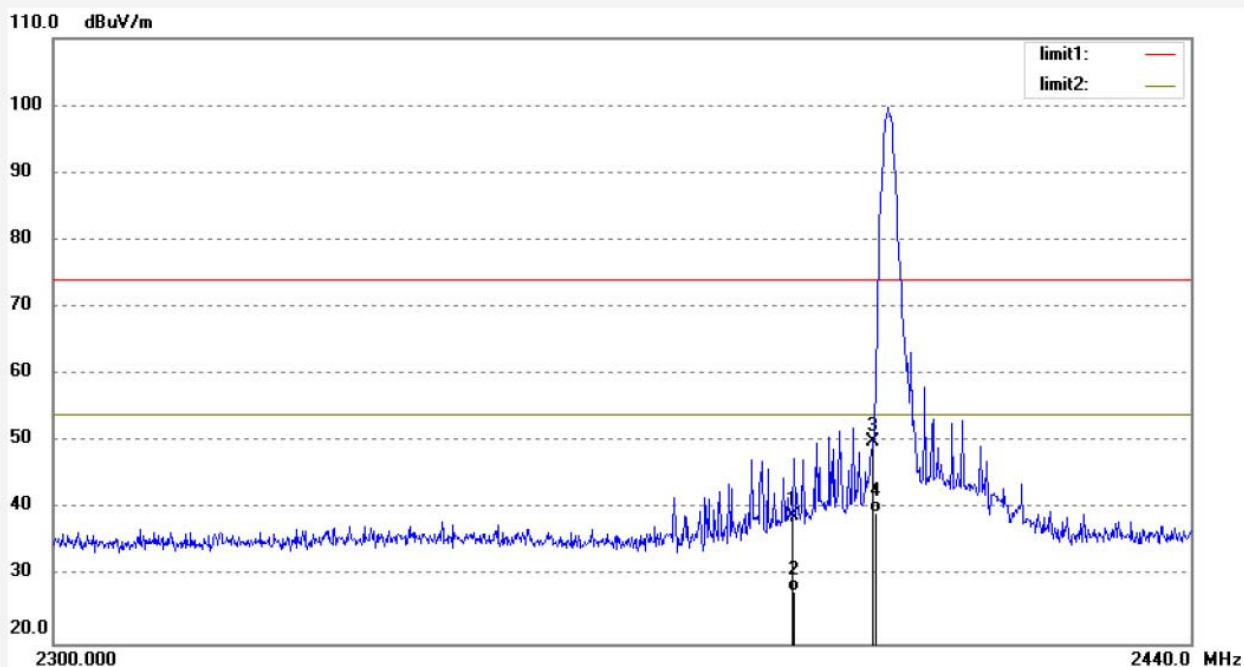
Date: 18/01/26/

Time: 9/32/38

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552

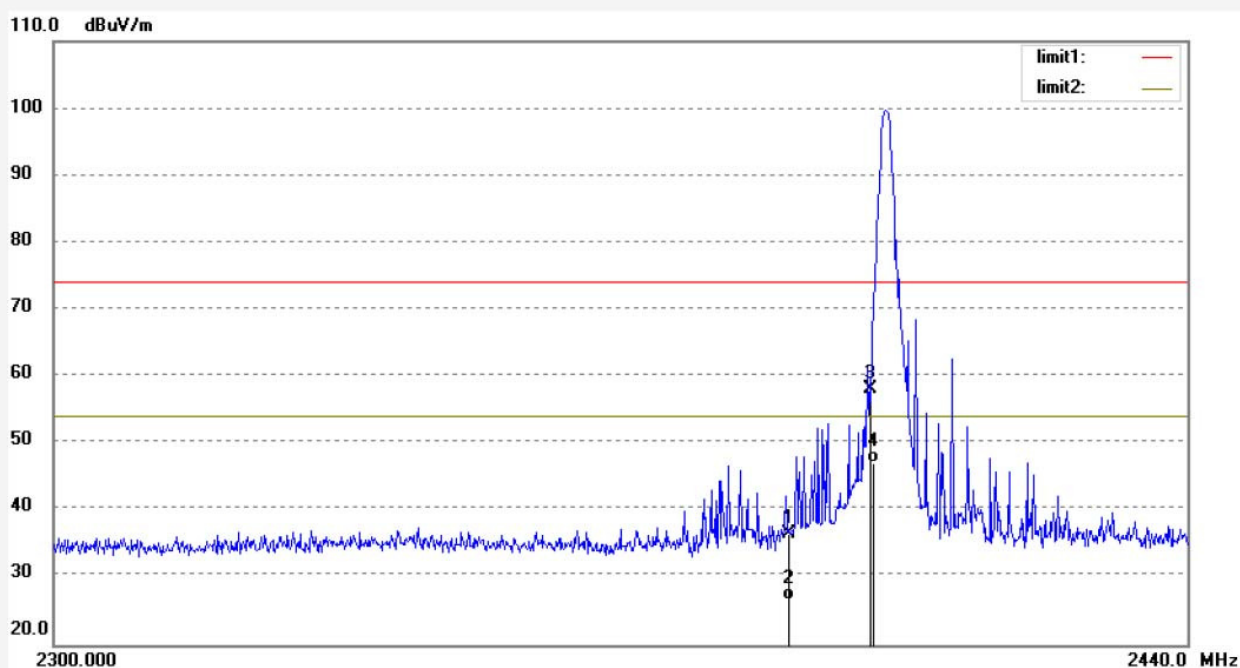


| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2390.000       | 43.34               | -4.32          | 39.02              | 74.00             | -34.98         | peak     | 250            | 25               |        |
| 2   | 2390.000       | 32.15               | -4.32          | 27.83              | 54.00             | -26.17         | AVG      | 200            | 187              |        |
| 3   | 2400.000       | 54.34               | -4.27          | 50.07              | 74.00             | -23.93         | peak     | 250            | 243              |        |
| 4   | 2400.000       | 43.84               | -4.27          | 39.57              | 54.00             | -14.43         | AVG      | 250            | 134              |        |

Job No.: frank2018 #148  
Standard: FCC PK  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2402MHz(GSKF)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical  
Power Source: DC 3.3V  
Date: 18/01/26/  
Time: 9/34/05  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 40.84            | -4.32       | 36.52           | 74.00          | -37.48      | peak     | 250         | 132           |        |
| 2   | 2390.000    | 31.02            | -4.32       | 26.70           | 54.00          | -27.30      | AVG      | 150         | 122           |        |
| 3   | 2400.000    | 62.47            | -4.27       | 58.20           | 74.00          | -15.80      | peak     | 200         | 91            |        |
| 4   | 2400.000    | 51.37            | -4.27       | 47.10           | 54.00          | -6.90       | AVG      | 150         | 157           |        |

Job No.: frank2018 #150

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(□/4 DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

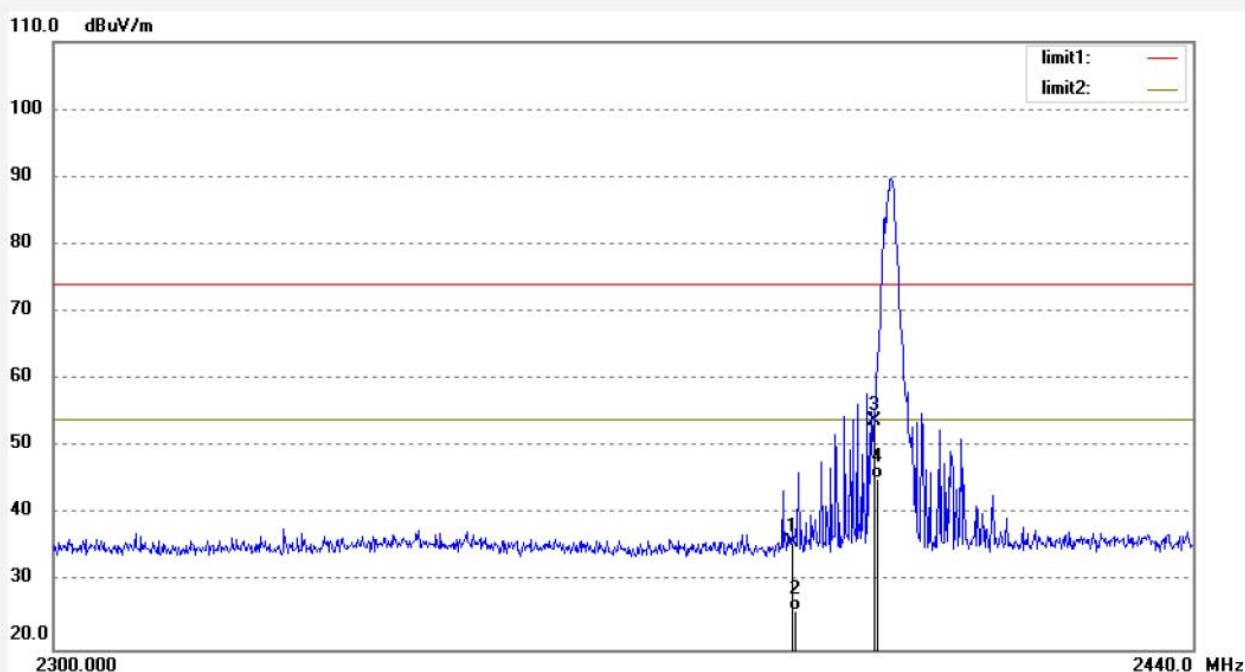
Date: 18/01/26/

Time: 9/36/52

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 40.23            | -4.32       | 35.91           | 74.00          | -38.09      | peak     | 200         | 146           |        |
| 2   | 2390.000    | 30.15            | -4.32       | 25.83           | 54.00          | -28.17      | AVG      | 200         | 278           |        |
| 3   | 2400.000    | 58.18            | -4.27       | 53.91           | 74.00          | -20.09      | peak     | 250         | 93            |        |
| 4   | 2400.000    | 49.65            | -4.27       | 45.38           | 54.00          | -8.62       | AVG      | 200         | 144           |        |

Job No.: frank2018 #149

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(□/4 DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

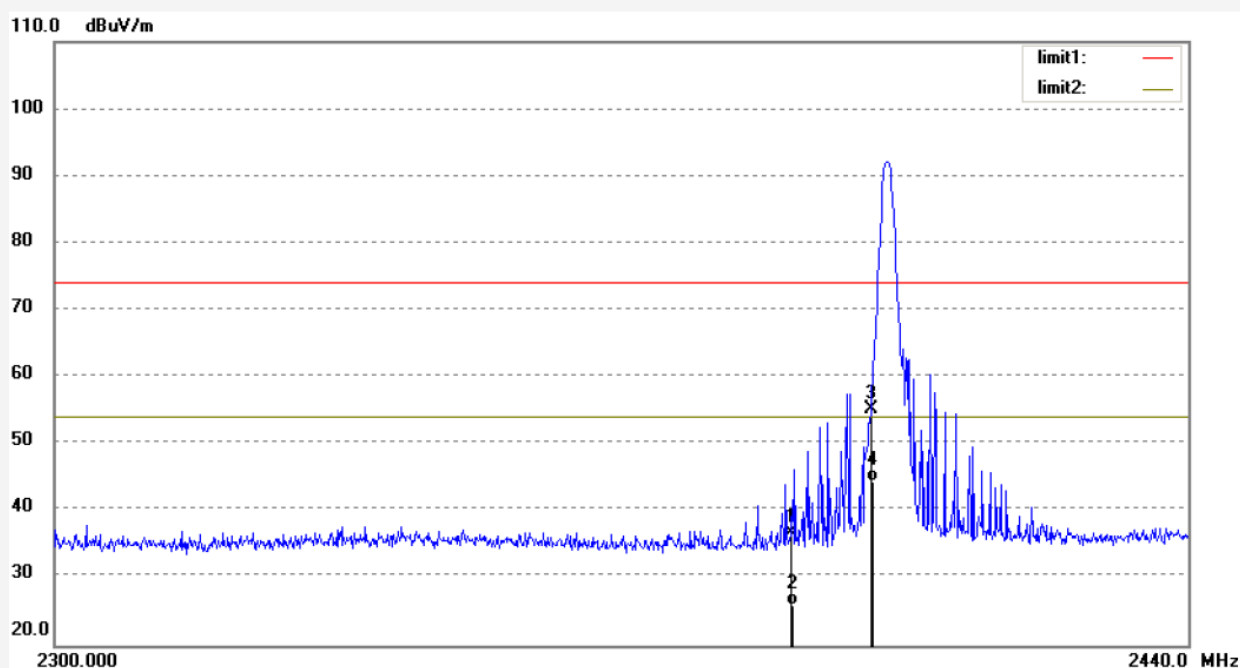
Date: 18/01/26/

Time: 9/36/01

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 41.13            | -4.32       | 36.81           | 74.00          | -37.19      | peak     | 200         | 32            |        |
| 2   | 2390.000    | 30.25            | -4.32       | 25.93           | 54.00          | -28.07      | AVG      | 150         | 124           |        |
| 3   | 2400.000    | 59.43            | -4.27       | 55.16           | 74.00          | -18.84      | peak     | 150         | 97            |        |
| 4   | 2400.000    | 48.68            | -4.27       | 44.41           | 54.00          | -9.59       | AVG      | 150         | 61            |        |

Job No.: frank2018 #151

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

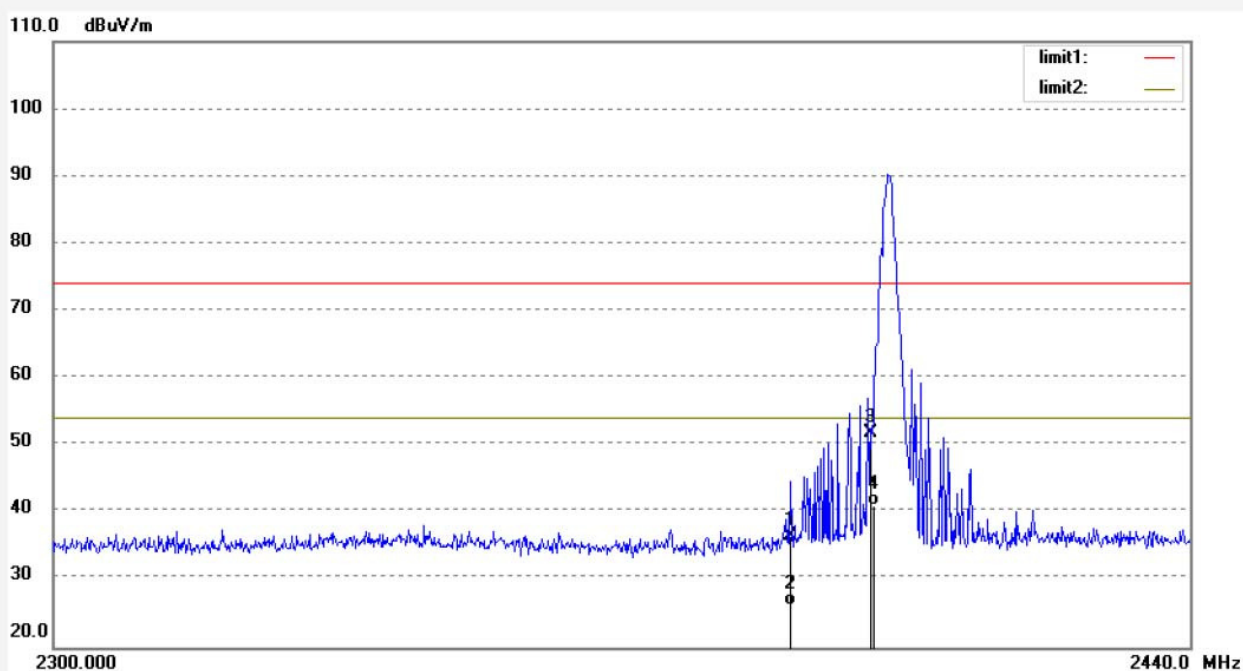
Date: 18/01/26/

Time: 9/38/06

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 40.89            | -4.32       | 36.57           | 74.00          | -37.43      | peak     | 250         | 134           |        |
| 2   | 2390.000    | 30.55            | -4.32       | 26.23           | 54.00          | -27.77      | AVG      | 200         | 102           |        |
| 3   | 2400.000    | 56.04            | -4.27       | 51.77           | 74.00          | -22.23      | peak     | 250         | 75            |        |
| 4   | 2400.000    | 45.35            | -4.27       | 41.08           | 54.00          | -12.92      | AVG      | 250         | 309           |        |



## ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: frank2018 #152

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2402MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

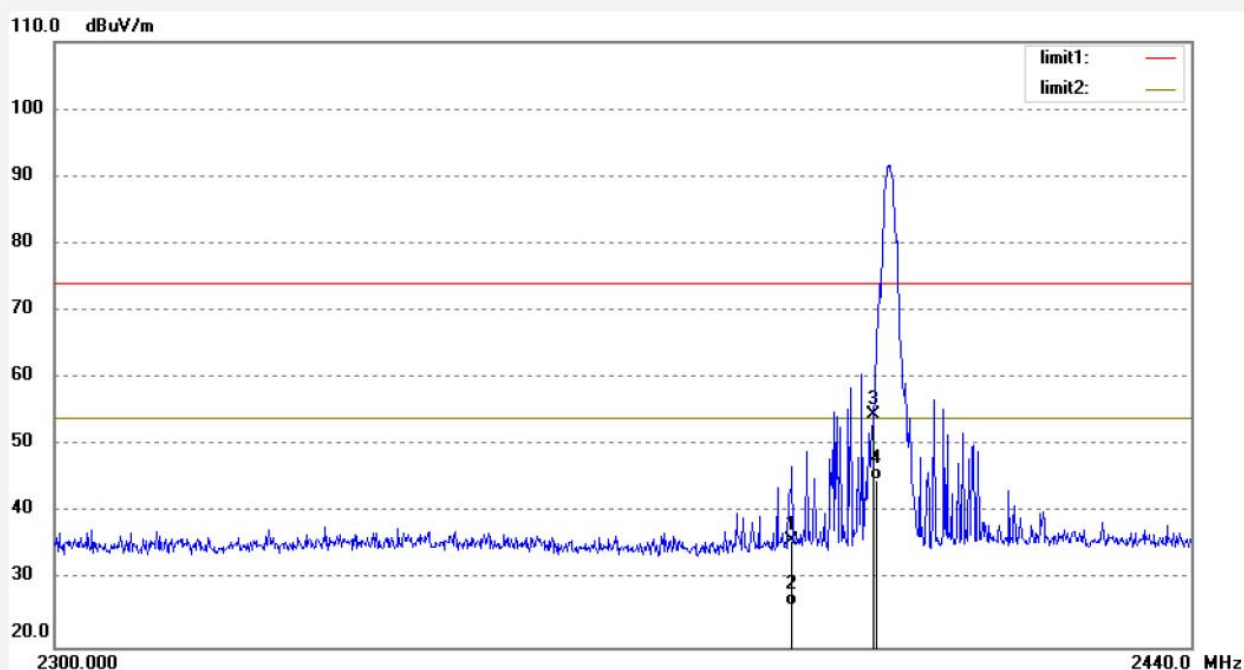
Date: 18/01/26/

Time: 9/38/56

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 40.29            | -4.32       | 35.97           | 74.00          | -38.03      | peak     | 200         | 348           |        |
| 2   | 2390.000    | 30.45            | -4.32       | 26.13           | 54.00          | -27.87      | AVG      | 150         | 158           |        |
| 3   | 2400.000    | 58.77            | -4.27       | 54.50           | 74.00          | -19.50      | peak     | 150         | 54            |        |
| 4   | 2400.000    | 49.18            | -4.27       | 44.91           | 54.00          | -9.09       | AVG      | 150         | 312           |        |

Job No.: frank2018 #158

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(GFSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

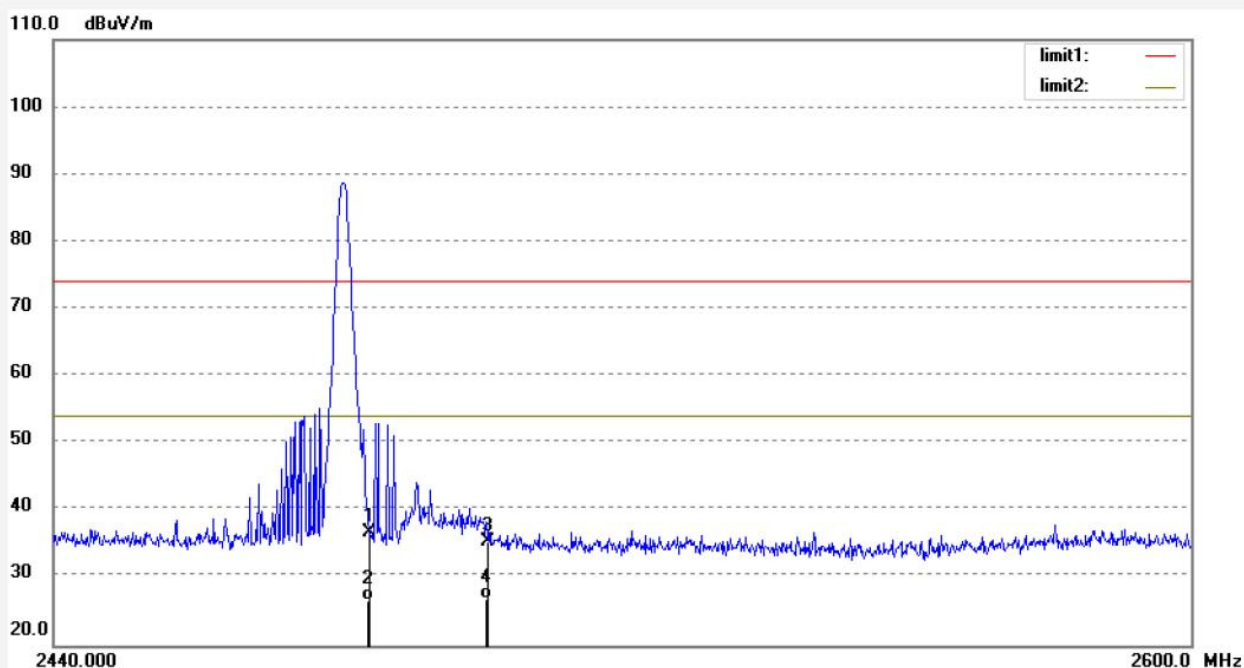
Date: 18/01/26/

Time: 9/45/22

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2483.500    | 40.71            | -3.89       | 36.82           | 74.00          | -37.18      | peak     | 250         | 44            |        |
| 2   | 2483.500    | 30.42            | -3.89       | 26.53           | 54.00          | -27.47      | AVG      | 250         | 123           |        |
| 3   | 2500.000    | 39.24            | -3.81       | 35.43           | 74.00          | -38.57      | peak     | 250         | 97            |        |
| 4   | 2500.000    | 30.78            | -3.81       | 26.97           | 54.00          | -27.03      | AVG      | 250         | 158           |        |

Job No.: frank2018 #157

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(GFSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

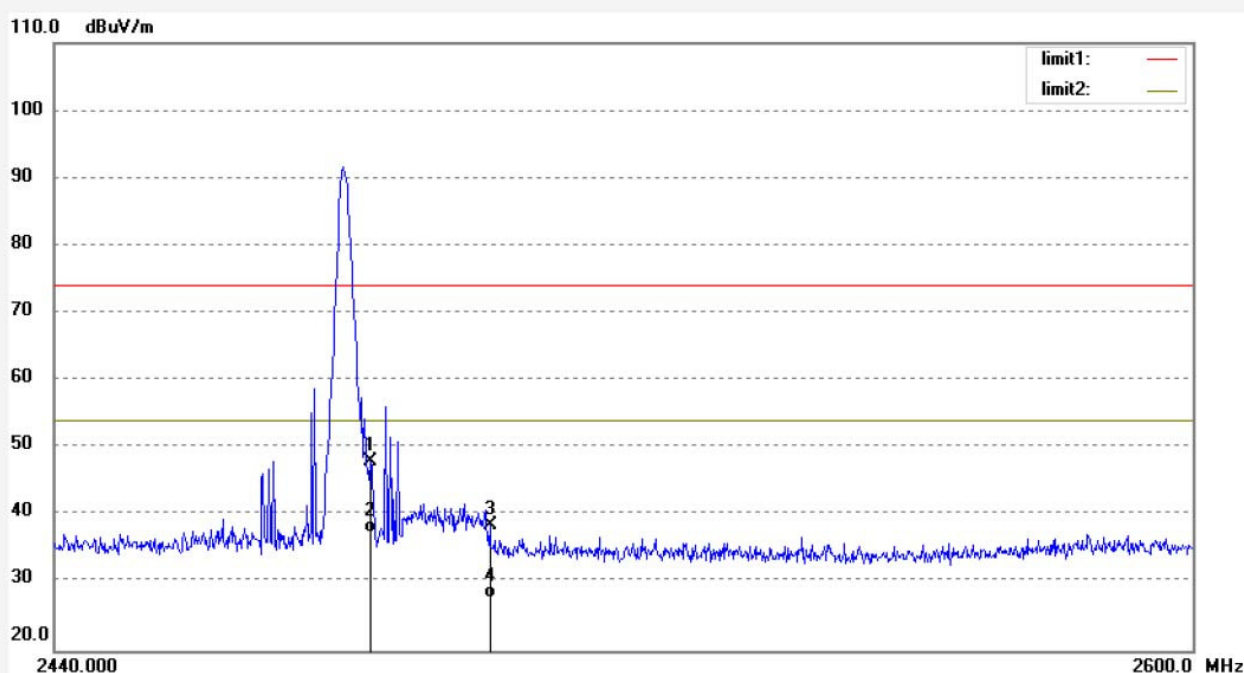
Date: 18/01/26/

Time: 9/44/35

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2483.500    | 51.85            | -3.89       | 47.96           | 74.00          | -26.04      | peak     | 200         | 182           |        |
| 2   | 2483.500    | 41.35            | -3.89       | 37.46           | 54.00          | -16.54      | AVG      | 150         | 248           |        |
| 3   | 2500.000    | 42.32            | -3.81       | 38.51           | 74.00          | -35.49      | peak     | 150         | 137           |        |
| 4   | 2500.000    | 31.58            | -3.81       | 27.77           | 54.00          | -26.23      | AVG      | 200         | 45            |        |

Job No.: frank2018 #155

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(□/4 DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

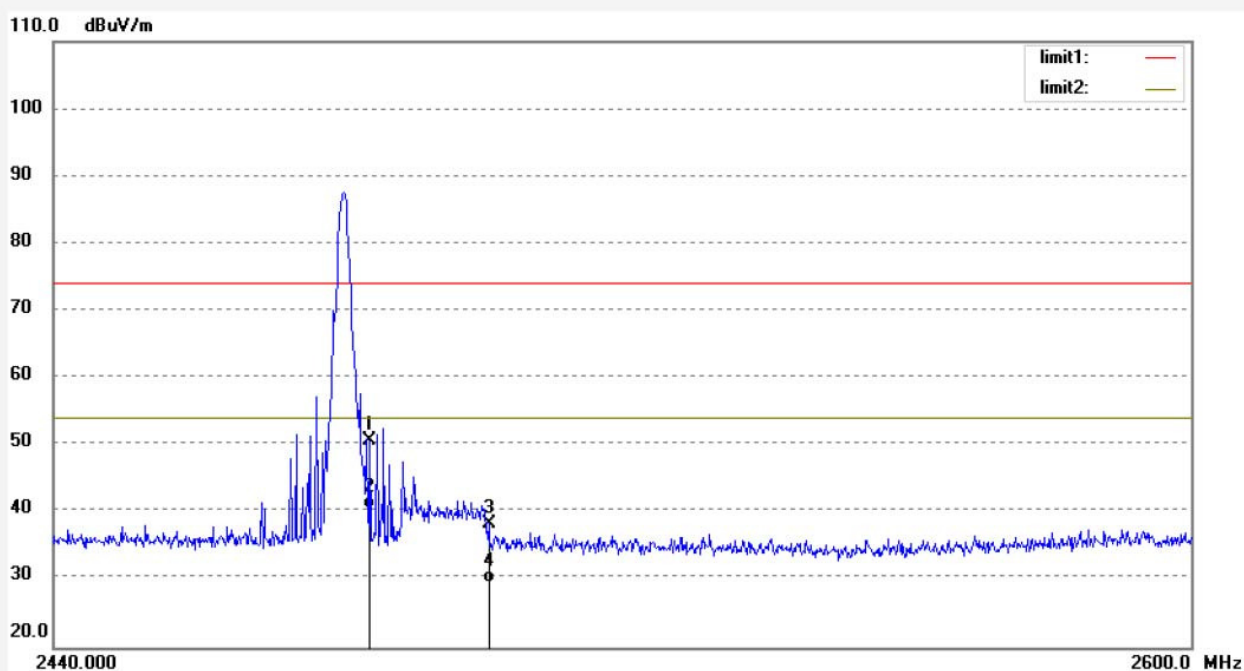
Date: 18/01/26/

Time: 9/42/38

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2483.500       | 54.68               | -3.89          | 50.79              | 74.00             | -23.21         | peak     | 200            | 159              |        |
| 2   | 2483.500       | 44.48               | -3.89          | 40.59              | 54.00             | -13.41         | AVG      | 250            | 87               |        |
| 3   | 2500.000       | 42.16               | -3.81          | 38.35              | 74.00             | -35.65         | peak     | 200            | 347              |        |
| 4   | 2500.000       | 33.46               | -3.81          | 29.65              | 54.00             | -24.35         | AVG      | 250            | 99               |        |

Job No.: frank2018 #156

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(Π/4 DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

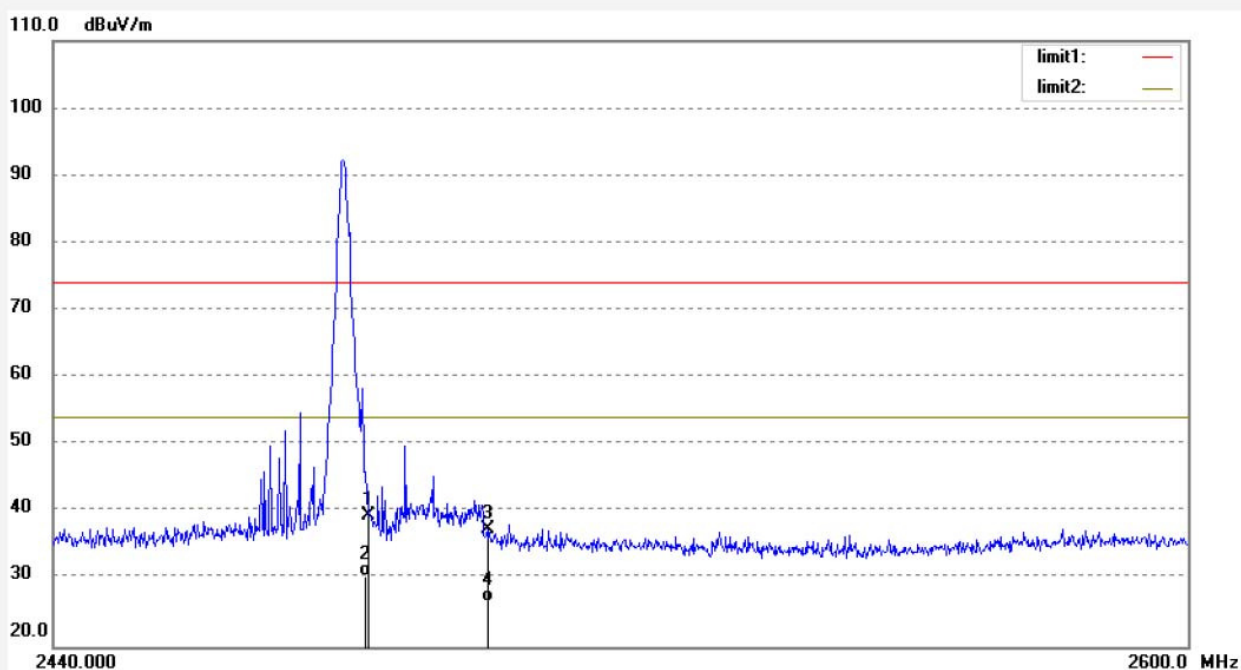
Date: 18/01/26/

Time: 9/43/38

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2483.500    | 43.33            | -3.89       | 39.44           | 74.00          | -34.56      | peak     | 200         | 193           |        |
| 2   | 2483.500    | 34.25            | -3.89       | 30.36           | 54.00          | -23.64      | AVG      | 150         | 54            |        |
| 3   | 2500.000    | 41.17            | -3.81       | 37.36           | 74.00          | -36.64      | peak     | 200         | 147           |        |
| 4   | 2500.000    | 30.48            | -3.81       | 26.67           | 54.00          | -27.33      | AVG      | 150         | 47            |        |

Job No.: frank2018 #154

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

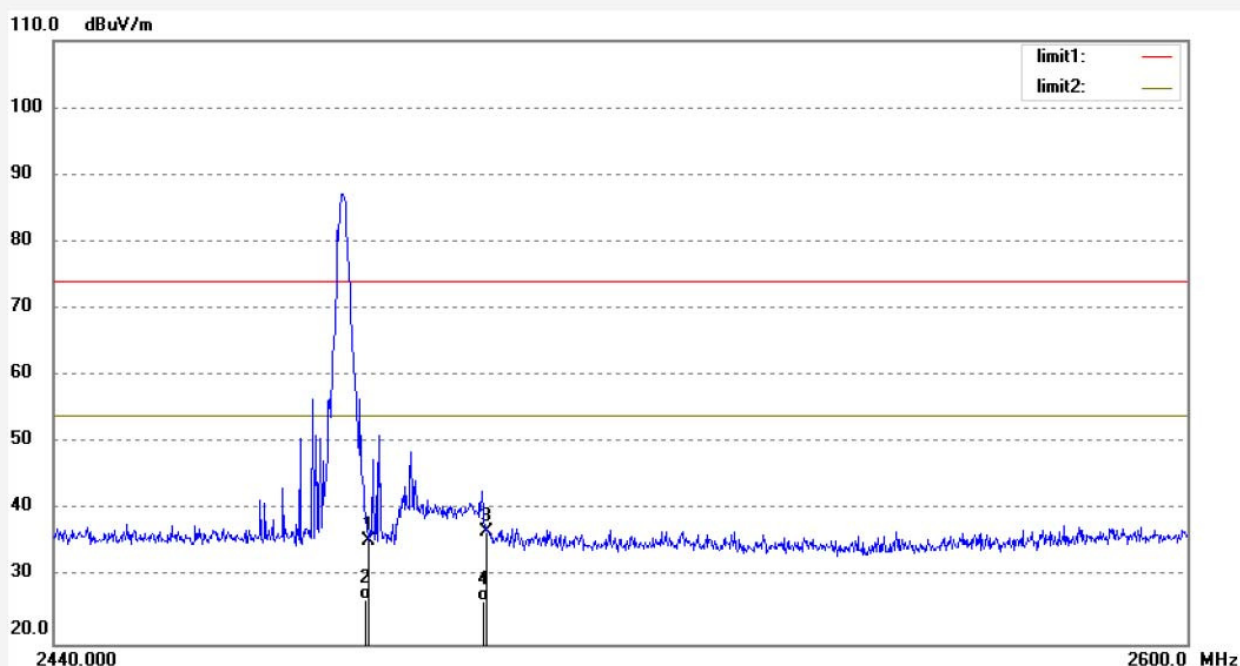
Date: 18/01/26/

Time: 9/41/30

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2483.500       | 39.31               | -3.89          | 35.42              | 74.00             | -38.58         | peak     | 250            | 222              |        |
| 2   | 2483.500       | 30.45               | -3.89          | 26.56              | 54.00             | -27.44         | AVG      | 200            | 90               |        |
| 3   | 2500.000       | 40.66               | -3.81          | 36.85              | 74.00             | -37.15         | peak     | 250            | 189              |        |
| 4   | 2500.000       | 30.19               | -3.81          | 26.38              | 54.00             | -27.62         | AVG      | 200            | 127              |        |

Job No.: frank2018 #153

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: TX 2480MHz(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

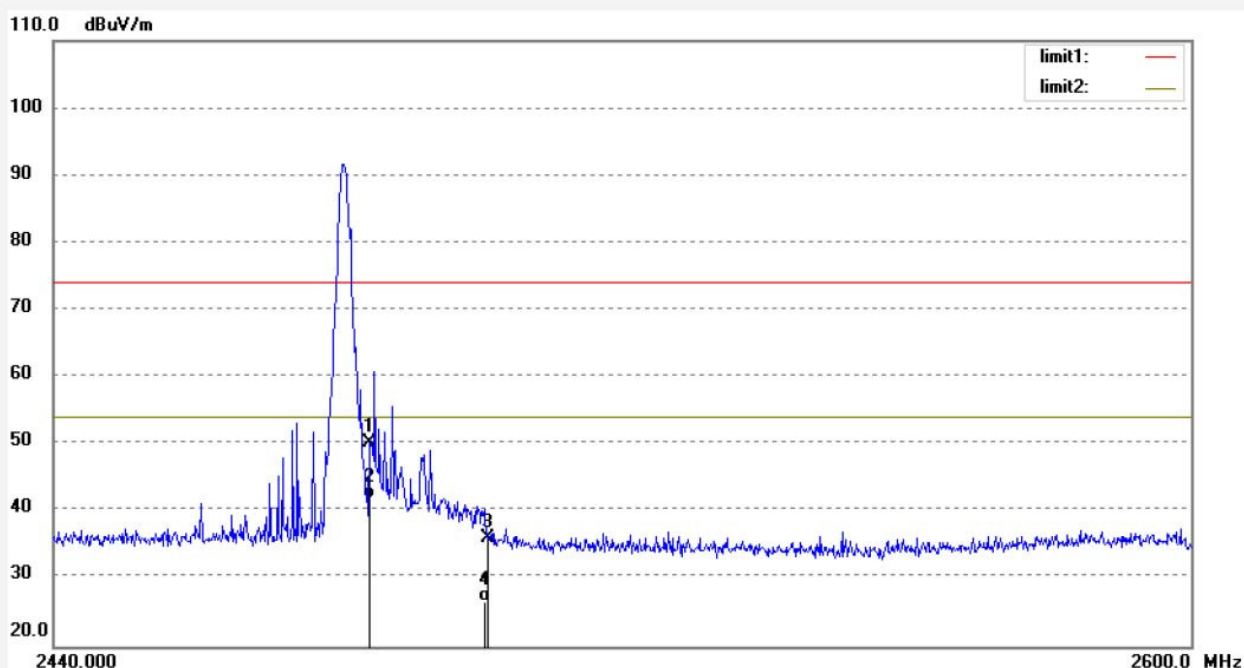
Date: 18/01/26/

Time: 9/40/33

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2483.500    | 54.14            | -3.89       | 50.25           | 74.00          | -23.75      | peak     | 200         | 351           |        |
| 2   | 2483.500    | 45.87            | -3.89       | 41.98           | 54.00          | -12.02      | AVG      | 150         | 158           |        |
| 3   | 2500.000    | 39.91            | -3.81       | 36.10           | 74.00          | -37.90      | peak     | 250         | 345           |        |
| 4   | 2500.000    | 30.47            | -3.81       | 26.66           | 54.00          | -27.34      | AVG      | 200         | 240           |        |

## Hopping mode



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Job No.: frank2018 #159

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: Hopping(GFSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

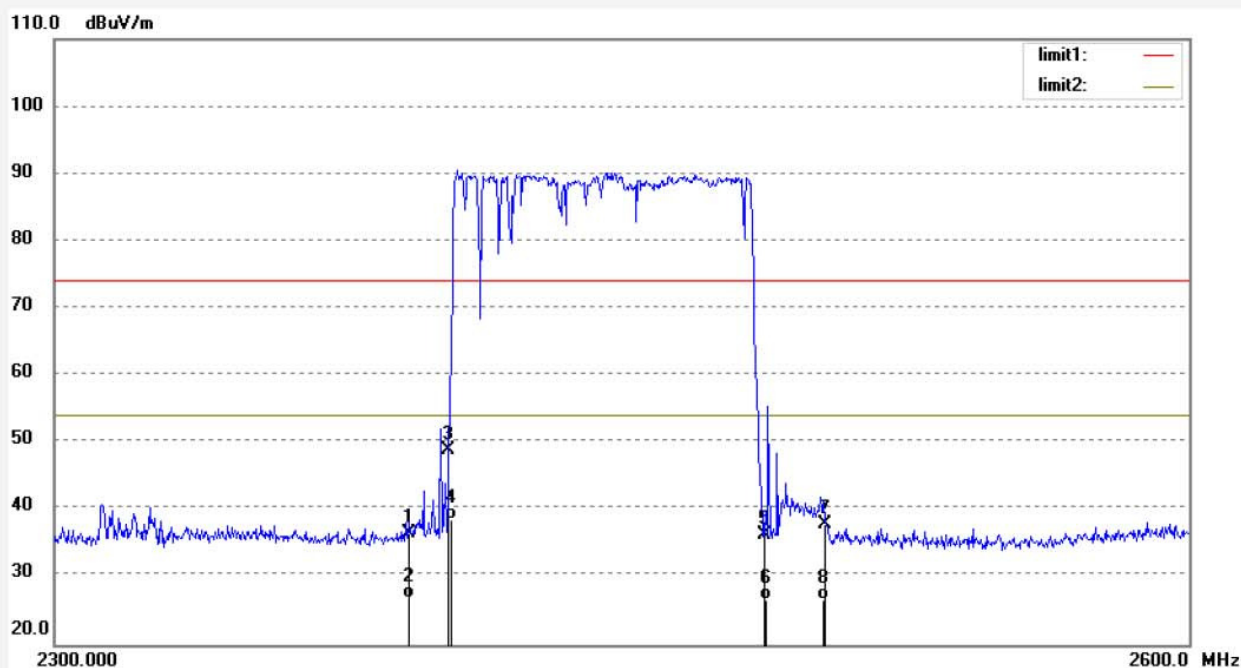
Date: 18/01/26/

Time: 9/47/59

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2390.000       | 40.87               | -4.32          | 36.55              | 74.00             | -37.45         | peak     | 250            | 123              |        |
| 2   | 2390.000       | 31.25               | -4.32          | 26.93              | 54.00             | -27.07         | AVG      | 250            | 254              |        |
| 3   | 2400.000       | 53.24               | -4.27          | 48.97              | 74.00             | -25.03         | peak     | 250            | 198              |        |
| 4   | 2400.000       | 42.88               | -4.27          | 38.61              | 54.00             | -15.39         | AVG      | 250            | 258              |        |
| 5   | 2483.500       | 40.18               | -3.89          | 36.29              | 74.00             | -37.71         | peak     | 250            | 94               |        |
| 6   | 2483.500       | 30.48               | -3.89          | 26.59              | 54.00             | -27.41         | AVG      | 200            | 168              |        |
| 7   | 2500.000       | 41.66               | -3.81          | 37.85              | 74.00             | -36.15         | peak     | 200            | 101              |        |
| 8   | 2500.000       | 30.48               | -3.81          | 26.67              | 54.00             | -27.33         | AVG      | 200            | 130              |        |

Job No.: frank2018 #160

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: Hopping(GFSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

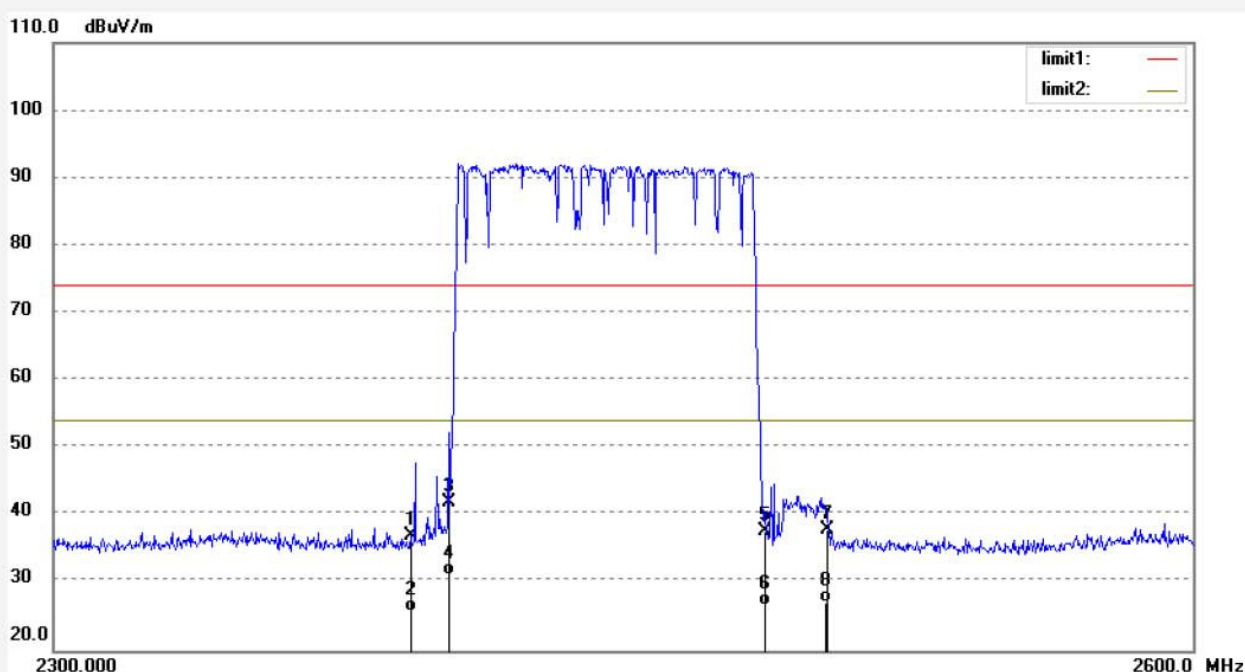
Date: 18/01/26/

Time: 9/49/56

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 41.28            | -4.32       | 36.96           | 74.00          | -37.04      | peak     | 250         | 120           |        |
| 2   | 2390.000    | 30.15            | -4.32       | 25.83           | 54.00          | -28.17      | AVG      | 200         | 139           |        |
| 3   | 2400.000    | 46.19            | -4.27       | 41.92           | 74.00          | -32.08      | peak     | 250         | 49            |        |
| 4   | 2400.000    | 35.45            | -4.27       | 31.18           | 54.00          | -22.82      | AVG      | 200         | 65            |        |
| 5   | 2483.500    | 41.63            | -3.89       | 37.74           | 74.00          | -36.26      | peak     | 150         | 154           |        |
| 6   | 2483.500    | 30.50            | -3.89       | 26.61           | 54.00          | -27.39      | AVG      | 150         | 197           |        |
| 7   | 2500.000    | 41.64            | -3.81       | 37.83           | 74.00          | -36.17      | peak     | 200         | 25            |        |
| 8   | 2500.000    | 30.98            | -3.81       | 27.17           | 54.00          | -26.83      | AVG      | 200         | 167           |        |

Job No.: frank2018 #162

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: Hopping(□/4 DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

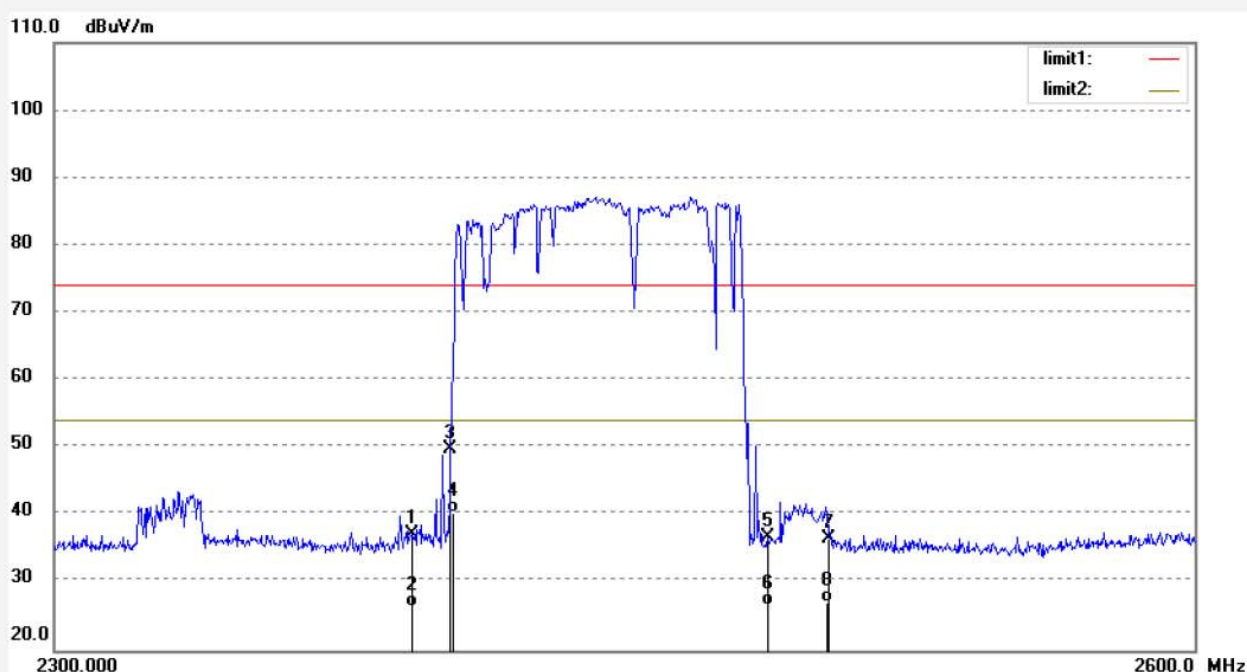
Date: 18/01/26/

Time: 9/53/31

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 41.52            | -4.32       | 37.20           | 74.00          | -36.80      | peak     | 250         | 120           |        |
| 2   | 2390.000    | 30.65            | -4.32       | 26.33           | 54.00          | -27.67      | AVG      | 300         | 103           |        |
| 3   | 2400.000    | 54.10            | -4.27       | 49.83           | 74.00          | -24.17      | peak     | 250         | 92            |        |
| 4   | 2400.000    | 44.55            | -4.27       | 40.28           | 54.00          | -13.72      | AVG      | 250         | 154           |        |
| 5   | 2483.500    | 40.55            | -3.89       | 36.66           | 74.00          | -37.34      | peak     | 250         | 193           |        |
| 6   | 2483.500    | 30.64            | -3.89       | 26.75           | 54.00          | -27.25      | AVG      | 250         | 24            |        |
| 7   | 2500.000    | 40.41            | -3.81       | 36.60           | 74.00          | -37.40      | peak     | 250         | 164           |        |
| 8   | 2500.000    | 30.84            | -3.81       | 27.03           | 54.00          | -26.97      | AVG      | 200         | 358           |        |

Job No.: frank2018 #161

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: Hopping(□/4 DQPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

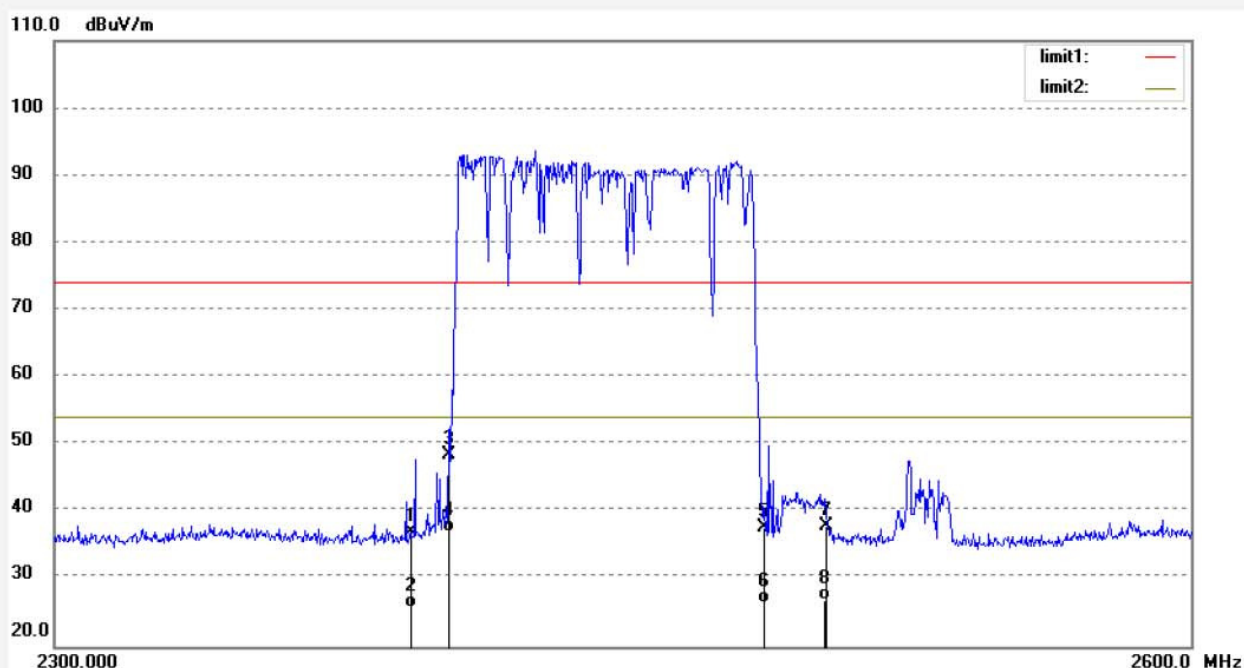
Date: 18/01/26/

Time: 9/51/46

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 41.28            | -4.32       | 36.96           | 74.00          | -37.04      | peak     | 200         | 132           |        |
| 2   | 2390.000    | 30.15            | -4.32       | 25.83           | 54.00          | -28.17      | AVG      | 200         | 100           |        |
| 3   | 2400.000    | 52.66            | -4.27       | 48.39           | 74.00          | -25.61      | peak     | 250         | 97            |        |
| 4   | 2400.000    | 41.35            | -4.27       | 37.08           | 54.00          | -16.92      | AVG      | 250         | 187           |        |
| 5   | 2483.500    | 41.63            | -3.89       | 37.74           | 74.00          | -36.26      | peak     | 250         | 154           |        |
| 6   | 2483.500    | 30.41            | -3.89       | 26.52           | 54.00          | -27.48      | AVG      | 200         | 264           |        |
| 7   | 2500.000    | 41.64            | -3.81       | 37.83           | 74.00          | -36.17      | peak     | 250         | 350           |        |
| 8   | 2500.000    | 30.57            | -3.81       | 26.76           | 54.00          | -27.24      | AVG      | 150         | 330           |        |

Job No.: frank2018 #163

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: Hopping(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal

Power Source: DC 3.3V

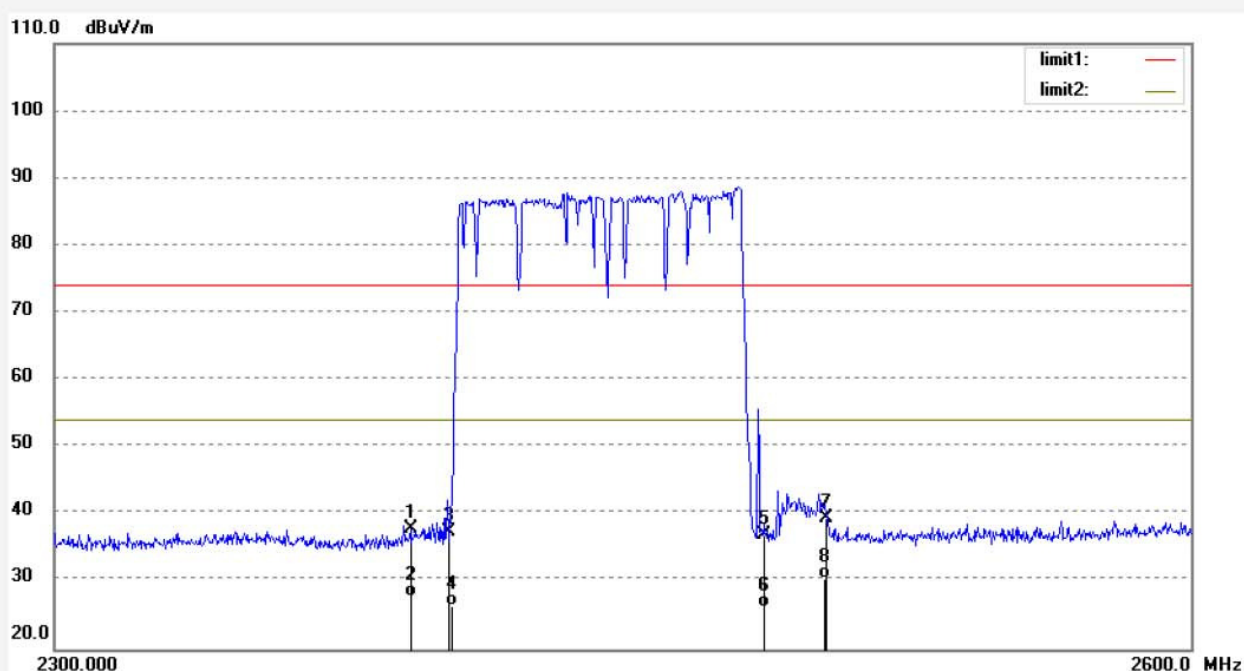
Date: 18/01/26/

Time: 9/55/36

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 42.27            | -4.32       | 37.95           | 74.00          | -36.05      | peak     | 250         | 150           |        |
| 2   | 2390.000    | 31.98            | -4.32       | 27.66           | 54.00          | -26.34      | AVG      | 250         | 123           |        |
| 3   | 2400.000    | 41.74            | -4.27       | 37.47           | 74.00          | -36.53      | peak     | 250         | 48            |        |
| 4   | 2400.000    | 30.69            | -4.27       | 26.42           | 54.00          | -27.58      | AVG      | 250         | 91            |        |
| 5   | 2483.500    | 40.92            | -3.89       | 37.03           | 74.00          | -36.97      | peak     | 250         | 189           |        |
| 6   | 2483.500    | 29.98            | -3.89       | 26.09           | 54.00          | -27.91      | AVG      | 250         | 213           |        |
| 7   | 2500.000    | 43.36            | -3.81       | 39.55           | 74.00          | -34.45      | peak     | 250         | 221           |        |
| 8   | 2500.000    | 34.19            | -3.81       | 30.38           | 54.00          | -23.62      | AVG      | 200         | 90            |        |

Job No.: frank2018 #164

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: Wifi module

Mode: Hopping(8DPSK)

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical

Power Source: DC 3.3V

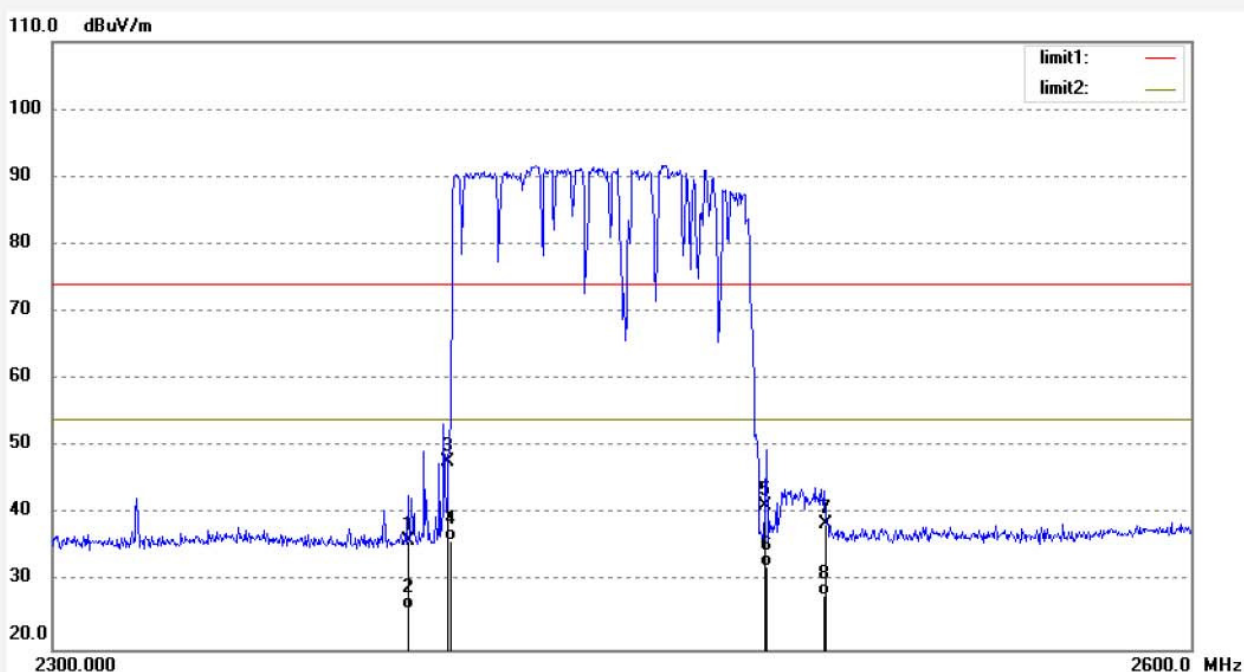
Date: 18/01/26/

Time: 9/58/26

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20172552



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2390.000    | 40.48            | -4.32       | 36.16           | 74.00          | -37.84      | peak     | 200         | 193           |        |
| 2   | 2390.000    | 30.19            | -4.32       | 25.87           | 54.00          | -28.13      | AVG      | 250         | 246           |        |
| 3   | 2400.000    | 51.99            | -4.27       | 47.72           | 74.00          | -26.28      | peak     | 250         | 184           |        |
| 4   | 2400.000    | 40.34            | -4.27       | 36.07           | 54.00          | -17.93      | AVG      | 200         | 255           |        |
| 5   | 2483.500    | 45.24            | -3.89       | 41.35           | 74.00          | -32.65      | peak     | 200         | 145           |        |
| 6   | 2483.500    | 36.18            | -3.89       | 32.29           | 54.00          | -21.71      | AVG      | 250         | 92            |        |
| 7   | 2500.000    | 42.28            | -3.81       | 38.47           | 74.00          | -35.53      | peak     | 200         | 310           |        |
| 8   | 2500.000    | 31.90            | -3.81       | 28.09           | 54.00          | -25.91      | AVG      | 250         | 215           |        |

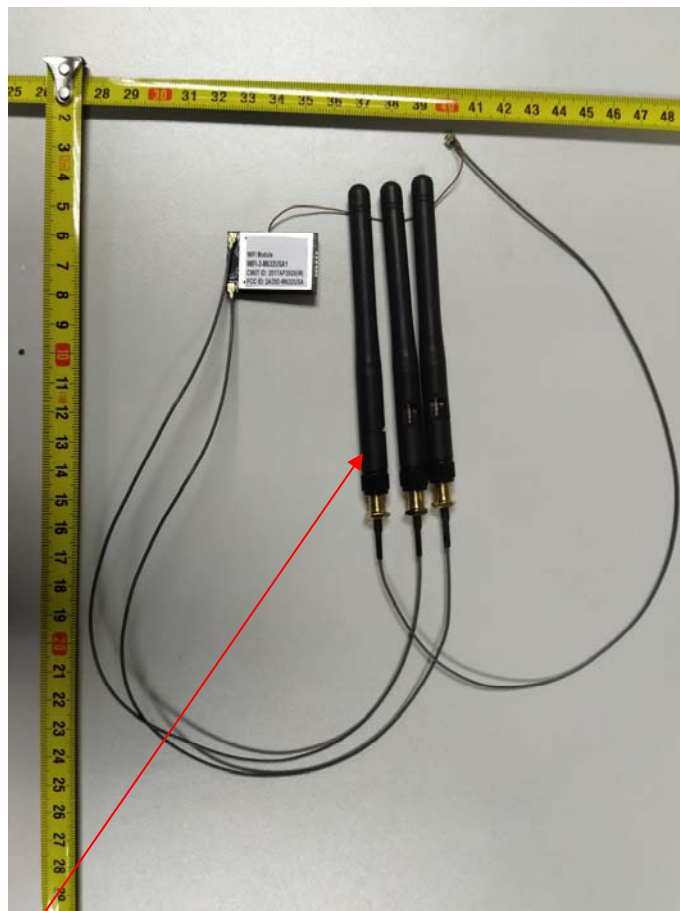
## 12.ANTENNA REQUIREMENT

### 12.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### 12.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Max Antenna gain of EUT is 2dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna