



# FCC TEST REPORT (PART 90)



|            |  |
|------------|--|
| Applicant: | Cohda Wireless Pty Ltd.                      |
| Address:   | 27 Greenhill Road Wayville SA 5034 Australia |

|                          |  |
|--------------------------|--|
| Manufacturer or Supplier | Cohda Wireless Pty Ltd.                          |
| Address                  | 27 Greenhill Road Wayville SA 5034 Australia     |
| Product                  | Road-Side (Transceiver) Unit for infrastructure. |
| Brand Name               | Cohda Wireless                                   |
| Model Name               | MK6 RSU  |
| Series Model             | MK6 RSU  |
| FCC ID                   | 2AEGPMK6RSU                                      |
| Date of tests            | Jan. 26, 2023 ~ Sep. 01, 2023                    |

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 90, Subpart M**
☒ **ANSI/TIA/EIA-603- D**  
☒ **FCC Part 2**
☒ **ANSI/TIA/EIA-603-E**
☒ **ANSI C63.26-2015**

**CONCLUSION:** The submitted sample was found to COMPLY with the test requirement

|  |  |
|--|--|
| Prepared by Chao Wu<br>Engineer / Mobile Department  | Approved by Peibo Sun<br>Manager / Mobile Department   |
| <br>Date: Sep. 01, 2023 | <br>Date: Sep. 01, 2023 |

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**BUREAU** Test Report No.: PSU-QSU2306260109RF05  
**VERITAS**

## 5. MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB .....49



## RELEASE CONTROL RECORD

| ISSUE NO.             | REASON FOR CHANGE | DATE ISSUED   |
|-----------------------|-------------------|---------------|
| PSU-QSU2306260109RF05 | Original release  | Sep. 01, 2023 |



## 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 90 |                                 |                            |            |                  |
|-------------------------------|---------------------------------|----------------------------|------------|------------------|
| No.                           | Test Description                | Standard Clause            | Remark     | DSRC Test result |
| 1                             | Transmitter frequency stability | § 90.379<br>§ 90.395(a)    | Applicable | See Note1        |
| 2                             | RF output power                 | § 90.375(c)<br>§ 90.377(b) | Applicable | See Note1        |
| 3                             | Conducted spurious emissions    | § 90.379<br>§ 90.395(a)    | Applicable | See Note1        |
| 4                             | Occupied Bandwidth              | § 90.379                   | Applicable | See Note1        |
| 5                             | Transmitter spectrum mask       | § 90.379<br>§ 90.395(a)    | Applicable | See Note1        |
| 6                             | Radiated Spurious Emissions     | § 90.379                   | Applicable | Compliance       |

**Note:** 1.Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).

### \*Test Lab Information Reference

**Lab :**

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

**Lab Address:**

Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province

The FCC Site Registration No. is 434559; The Designation No. is CN1325.



## 1.1 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:

| MEASUREMENT         | FREQUENCY     | UNCERTAINTY |
|---------------------|---------------|-------------|
| Conducted emissions | 9kHz~30MHz    | 2.66dB      |
| Radiated emissions  | 9KHz ~ 30MHz  | 2.68dB      |
|                     | 30MHz ~ 1GHz  | 3.26dB      |
|                     | 1GHz ~ 18GHz  | 4.48dB      |
|                     | 18GHz ~ 40GHz | 4.12dB      |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .



## 1.2 TEST INSTRUMENTS

| Equipment                          | Manufacturer            | Model No.        | Serial No.             | Last Cal. | Next Cal. |
|------------------------------------|-------------------------|------------------|------------------------|-----------|-----------|
| Pre-Amplifier                      | R&S                     | SCU18F1          | 100815                 | Aug.30,22 | Aug.29,24 |
| Pre-Amplifier                      | R&S                     | SCU08F1          | 101028                 | Sep.16,22 | Sep.15,24 |
| Signal Generator                   | R&S                     | SMB100A          | 182185                 | Feb.16,22 | Fed.15,24 |
| 3m Fully-anechoic Chamber          | TDK                     | 9m*6m*6m         | HRSW-SZ-EM C-01Chamber | Nov.24,22 | Nov.23,25 |
| 3m Semi-anechoic Chamber           | TDK                     | 9m*6m*6m         | HRSW-SZ-EM C-02Chamber | Nov.24,22 | Nov.23,25 |
| EMI TEST Receiver                  | R&S                     | ESW44            | 101973                 | Feb.25,22 | Feb.24,24 |
| Bilog Antenna                      | SCHWARZBECK             | VULB 9163        | 1264                   | Feb.28,22 | Feb.27,24 |
| Horn Antenna                       | ETS-LINDGREN            | 3117             | 227836                 | Aug.22,22 | Aug.21,24 |
| Biconical Antenna                  | SCHWARZ                 | VUBA 9117        | 69250                  | Nov.14,22 | Nov.13,24 |
| Horn Antenna (18GHz-40GHz)         | Steatite Q-par Antennas | QMS 00880        | 23486                  | Feb.23,22 | Feb.22,24 |
| Horn Antenna                       | Steatite Q-par Antennas | QMS 00208        | 23485                  | Aug.22,22 | Aug.21,24 |
| Loop Antenna                       | SCHWARZ                 | HFH2-Z2/Z2E      | 100976                 | Feb.23,22 | Feb.22,24 |
| WIDEBANDRADIO COMMUNICATION TESTER | R&S                     | CMW500           | 169399                 | Jun.27,22 | Jun.26,24 |
| Test Software                      | ELEKTRA                 | ELEKTRA4.32      | N/A                    | N/A       | N/A       |
| Open Switch and Control Unit       | R&S                     | OSP220           | 101964                 | N/A       | N/A       |
| DC Source                          | HYELEC                  | HY3010B          | 551016                 | Aug.31,22 | Aug.30,24 |
| Hygrothermograph                   | DELI                    | 20210528         | SZ014                  | Sep.06,22 | Sep.05,24 |
| PC                                 | LENOVO                  | E14              | HRSW0024               | N/A       | N/A       |
| TMC-AMI18843A(CABLE)               | R&S                     | HF290-NMNM-7.00M | N/A                    | N/A       | N/A       |
| TMC-AMI18843A(CABLE)               | R&S                     | HF290-NMNM-4.00M | N/A                    | N/A       | N/A       |
| CABLE                              | R&S                     | W13.02           | N/A                    | Apr.28,23 | Oct.27,23 |
| CABLE                              | R&S                     | W12.14           | N/A                    | Apr.28,23 | Oct.27,23 |
| CABLE                              | R&S                     | J12J103539-00-1  | SEP-03-20-069          | Arp.28,23 | Oct.27,23 |
| CABLE                              | R&S                     | J12J103539-00-1  | SEP-03-20-070          | Arp.28,23 | Oct.27,23 |
| Temperature Chamber                | votsch                  | VT4002           | 58566078100050         | May.31,22 | May.30,24 |

### NOTE:

1. The calibration interval of the above test instruments is 6 months or 24 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Fully-anechoic Chamber.
3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 434559; The Designation No. is CN1325.



### 1.3 TEST ENVIRONMENT

| Environment Parameter                             | 96~98 kPa Selected Values During Tests |            |
|---|--|------------|
| Relative Humidity                                 | 40-60 % RH Ambient                     |            |
| Value   | Temperature(℃ )                        | Voltage(V) |
| NTNV  | 25                                     | 48         |
| LTLV  | -20                                    | 40.8       |
| LTHV  | -20                                    | 55.2       |
| HTLV  | 75                                     | 40.8       |
| HTHV  | 75                                     | 55.2       |
| Remark:   |  |            |
| NV: Normal Voltage                                |  |            |
| LV: Low Extreme Test Voltage                      |  |            |
| HV: High Extreme Test Voltage                     |  |            |
| NT: Normal Temperature                            |  |            |
| LT: Low Extreme Test Temperature                  |  |            |
| HT: High Extreme Test Temperature                 |  |            |
| The EUT was tested by adjustable DC power supply. |  |            |





## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|                             |  |                                  |
|-----------------------------|--|----------------------------------|
| <b>PRODUCT*</b>             | Road-Side (Transceiver) Unit for infrastructure. |                                  |
| <b>BRAND NAME*</b>          | Cohda Wireless                                   |                                  |
| <b>MODEL NAME*</b>          | MK6 RSU  |                                  |
| <b>SERIES MODEL*</b>        | MK6 RSU  |                                  |
| <b>NOMINAL VOLTAGE*</b>     | 48Vdc(POE Adapter)                               |                                  |
| <b>EXTREME TEMPERATURE*</b> | -20°C and 75°C                                   |                                  |
| <b>MODULATION TYPE*</b>     | <b>DSRC</b>                                      | BPSK,QPSK,16QAM,64QAM            |
| <b>OPERATING FREQUENCY*</b> | <b>DSRC</b>                                      | 5895 MHz – 5925 MHz              |
| <b>ANTENNA GAIN*</b>        | <b>DSRC</b>                                      | ANT 1:6.10 dBi<br>ANT 2:6.10 dBi |
| <b>ANTENNA TYPE*</b>        | <b>DSRC</b>                                      | Dipole Antenna                   |
| <b>FCC ID*</b>              | 2AEGPMK6RSU                                      |                                  |
| <b>HW VERSION*</b>          | Rev 1.0  |                                  |
| <b>SW VERSION*</b>          | 19.Release.134186                                |                                  |
| <b>I/O PORTS*</b>           | Refer to user's manual                           |                                  |
| <b>CABLE SUPPLIED*</b>      | N/A  |                                  |

**NOTE:**

1. \*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 , Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. The EUT incorporates a SISO function. Physically, the EUT provides two transmitters and two receivers. Both ICs share the 2 X DSRC antenna ports through the use of RF switches and combiners but MK6 does not support MIMO on DSRC.

| MODULATION MODE        | TX/RX FUNCTION |
|------------------------|----------------|
| <b>BPSK (1/2,3/4)</b>  | 2TX /2RX       |
| <b>QPSK (1/2,3/4)</b>  | 2TX /2RX       |
| <b>16QAM (1/2,3/4)</b> | 2TX /2RX       |
| <b>64QAM (2/3,3/4)</b> | 2TX /2RX       |

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.



**List of Accessory:**

| ACCESSORIES                      | MANUFACTURER | MODEL              |
|----------------------------------|--------------|--------------------|
| 2x Antenna for LTE/2G/3G/CDMA    | Taoglas      | TG.80.4H31         |
| 1x Antenna for WLAN/BT           | HUBER+SUHNER | 1399.17.0224       |
| 1x Antenna for WLAN/BT           | HUBER+SUHNER | 1399.17.0224       |
| 2x Antenna for DSRC              | Taoglas      | TD.80.6H31         |
| 1x Antenna for GNSS              | Taoglas      | TLS.40.1F11        |
| 1xM12 field attachable connector | Amphenol     | MSXS-08BMMD-SL8001 |



## 2.2 DESCRIPTION OF TEST MODES

The EUT was tested together with the above additional components, and a configuration, which produced the worst emission levels, was selected and recorded in the report.

### DSRC:

| Channel | Modulation | Coding rate |
|---------|------------|-------------|
| 180     | BPSK       | 1/2         |
|         | BPSK       | 3/4         |
|         | QPSK       | 1/2         |
|         | QPSK       | 3/4         |
|         | 16-QAM     | 1/2         |
|         | 16-QAM     | 3/4         |
|         | 64-QAM     | 2/3         |
|         | 64-QAM     | 3/4         |
| 182     | BPSK       | 1/2         |
|         | BPSK       | 3/4         |
|         | QPSK       | 1/2         |
|         | QPSK       | 3/4         |
|         | 16-QAM     | 1/2         |
|         | 16-QAM     | 3/4         |
|         | 64-QAM     | 2/3         |
|         | 64-QAM     | 3/4         |
| 184     | BPSK       | 1/2         |
|         | BPSK       | 3/4         |
|         | QPSK       | 1/2         |
|         | QPSK       | 3/4         |
|         | 16-QAM     | 1/2         |
|         | 16-QAM     | 3/4         |
|         | 64-QAM     | 2/3         |
|         | 64-QAM     | 3/4         |

### TEST CONDITION:

| APPLICABLE TO                  | ENVIRONMENTAL CONDITIONS | INPUT POWER           | TESTED BY |
|--------------------------------|--------------------------|-----------------------|-----------|
| Transmitter unwanted emissions | 25deg. C, 60%RH          | DC 48V By POE Adapter | Chao Wu   |
| Receiver spurious emissions    | 25deg. C, 60%RH          | DC 48V By POE Adapter | Chao Wu   |



## **2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS**

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standard:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 90**

**ANSI/TIA/EIA-603-D**

**ANSI/TIA/EIA-603-E**

**ANSI C63.26-2015**

All tests have been performed and recorded as per the above standard.



## 2.4 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photograph of the test configuration for reference.

For the actual test configuration, please refer to the related Item in this test report (Photographs of the Test Configuration).

## 2.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together without any other necessary accessories or support units.

### For test

| NO. | PRODUCT     | BRAND  | MODEL NO.    | SERIAL NO. | FCC ID |
|-----|-------------|--------|--------------|------------|--------|
| 1   | PC          | Lenovo | ThinkPad E14 | HRSW00024  | N/A    |
| 2   | POE Adapter | N/A    | N/A          | N/A        | N/A    |

| NO. | DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|--|
| 1   | N/A                                    |



### 3. TEST TYPES AND RESULTS

#### 3.1 TRANSMITTER FREQUENCY STABILITY

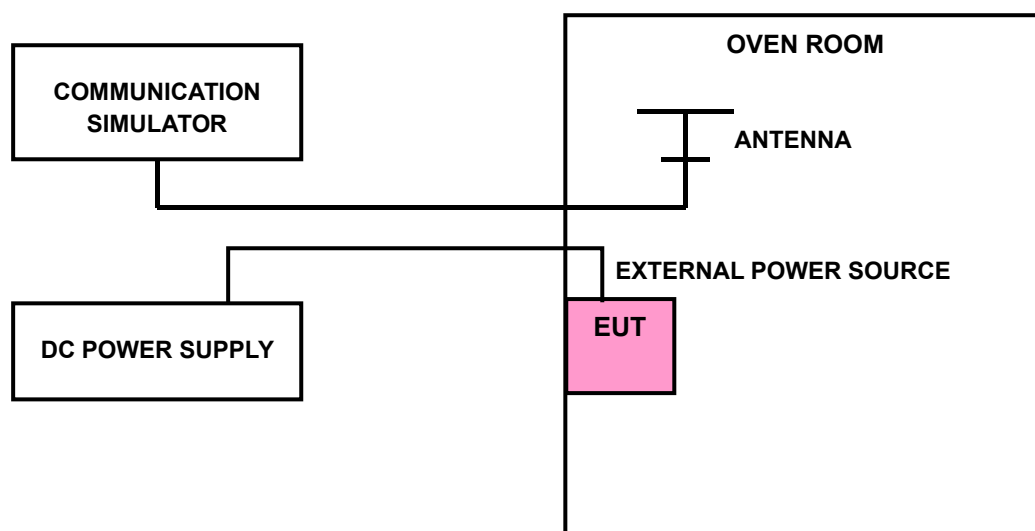
##### 3.1.1 LIMITS OF TRANSMITTER FREQUENCY STABILITY

The transmitted center frequency tolerance shall be  $\pm 10$  ppm maximum for RSUs and  $\pm 10$  ppm maximum for OBUs. The transmit center frequency and the symbol clock frequency shall be derived from the same reference oscillator.

##### 3.1.2 TEST PROCEDURES

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5^{\circ}\text{C}$  during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

##### 3.1.3 TEST SETUP





**BUREAU VERITAS** Test Report No.: PSU-QSU2306260109RF05

### 3.1.4 TEST RESULTS

Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).



## 3.2 RF OUTPUT POWER

### 3.2.1 LIMITS

Per FCC Part 90.635(a)(b)

The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

### 3.2.2 TEST PROCEDURES

#### **EIRP / ERP MEASUREMENT:**

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$L_{\text{C}}$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB

#### **CONDUCTED POWER MEASUREMENT:**

- The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.





### 3.2.3 TEST SETUP

#### CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).



### 3.2.4 TEST RESULTS

#### RF OUTPUT POWER

##### DSRC:

Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).



### 3.3 CONDUCTED SPURIOUS EMISSIONS

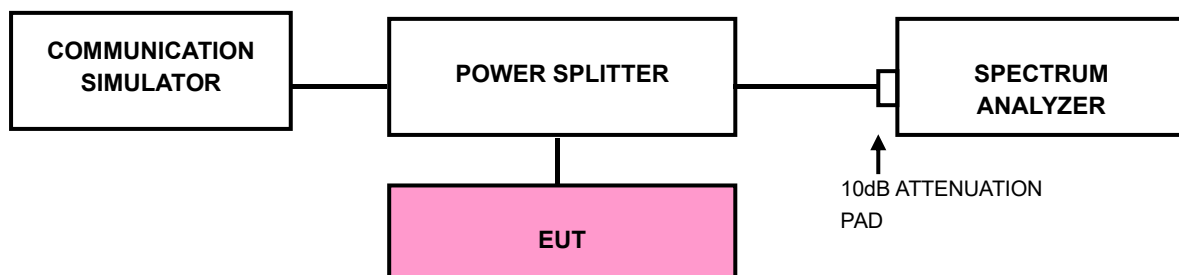
#### 3.3.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10}(P)$  dB. The limit of emission equal to  $-13\text{dBm}$

#### 3.3.2 TEST PROCEDURE

- The EUT makes a phone call to the communication simulator. All measurements were done at middle operational frequency range.
- Measuring frequency range is from 9kHz up to a frequency including its 10<sup>th</sup> harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

#### 3.3.3 TEST SETUP





### 3.1.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).



### 3.4 OCCUPIED BANDWIDTH MEASUREMENT

#### 3.4.1 LIMITS OF OF OCCUPIED BANDWIDTH MEASUREMENT

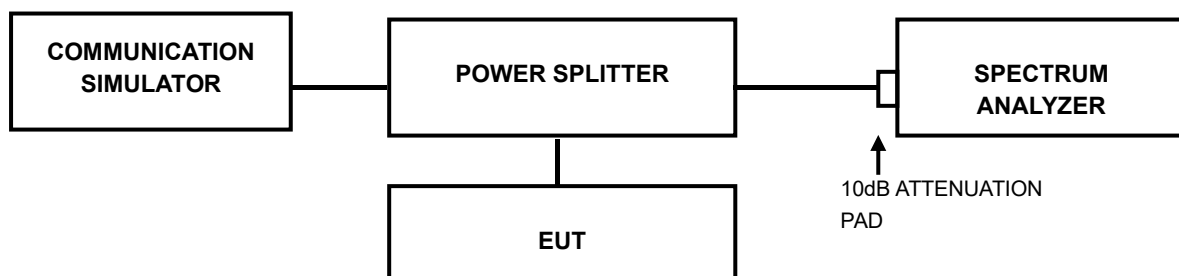
The transmitted spectral mask for class A, B, C, and D devices are shown in Figs. 12-15. In addition, all DSRC site installations shall limit the EIRP in the transmitted spectrum to  $-25$  dBm or less in the 100 kHz at the channel edges and the band edges.

The width of a frequency band such that, 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.

#### 3.4.2 TEST PROCEDURES

Refer to chapter § 90.379 § 90.395(a)

#### 3.4.3 TEST SETUP





#### 3.4.4 TEST RESULTS

Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).



### 3.5 Transmitter Spectrum Mask Within The 5 Ghz Its Frequency Band For 10 Mhz Channels

#### 3.5.1 LIMITS

The transmitted spectral mask for class A, B, C, and D devices are shown in Figs. 12-15. In addition, all DSRC site installations shall limit the EIRP in the transmitted spectrum to -25 dBm or less in the 100 kHz at the channel edges and the band edges.

**TABLE 10 DSRC Spectrum Mask<sup>A</sup>**

NOTE 1—Reduction in Power Spectral Density, dBr.

| Class   | ± 4.5-MHz<br>Offset | ± 5.0-MHz<br>Offset | ± 5.5-MHz<br>Offset | ± 10-MHz<br>Offset | ± 15-MHz<br>Offset |
|---------|---------------------|---------------------|---------------------|--------------------|--------------------|
| Class A | 0                   | -10                 | -20                 | -28                | -40                |
| Class B | 0                   | -16                 | -20                 | -28                | -40                |
| Class C | 0                   | -26                 | -32                 | -40                | -50                |
| Class D | 0                   | -35                 | -45                 | -55                | -65                |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

#### 3.5.2 TEST PROCEDURE

Refer to chapter § 90.379 § 90.395(a)

#### 3.5.3 TEST SETUP

Step 1:

- Connect the DUT transmitter output to the test setup and activate normal operation at maximum output power.

Step 2:

- Measure the average power in the transmission bandwidth ( $f_c \pm 4,5$  MHz) using a resolution bandwidth of 100 kHz. This shall be recorded as the "Power Spectral Density at the carrier centre frequency  $f_c$ " according to Table 6.

Step 3:

- Measure the power level in the range of  $f_c \pm 15$  MHz with a resolution bandwidth of 100 kHz and record these values.
- The video signal of the spectrum analyser can be "gated" such that the spectrum measured is measured 4,0  $\mu$ s before the beginning of the transmission to 4,0  $\mu$ s after the end of the transmission.



### 3.5.4 TEST RESULTS

Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).



## 3.6 Radiated emission measurement

### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The spurious emissions of the receiver shall not exceed the limits given in § 15.209.

(1) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10}(P)$  dB. The limit of emission equal to  $-13\text{dBm}$

(2) For operations in the 763–775 MHz and 793–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to  $-70\text{ dBW/MHz}$  equivalent isotropically radiated power (EIRP) for wideband signals, and  $-80\text{ dBW}$  EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

### 3.6.2 TEST PROCEDURES

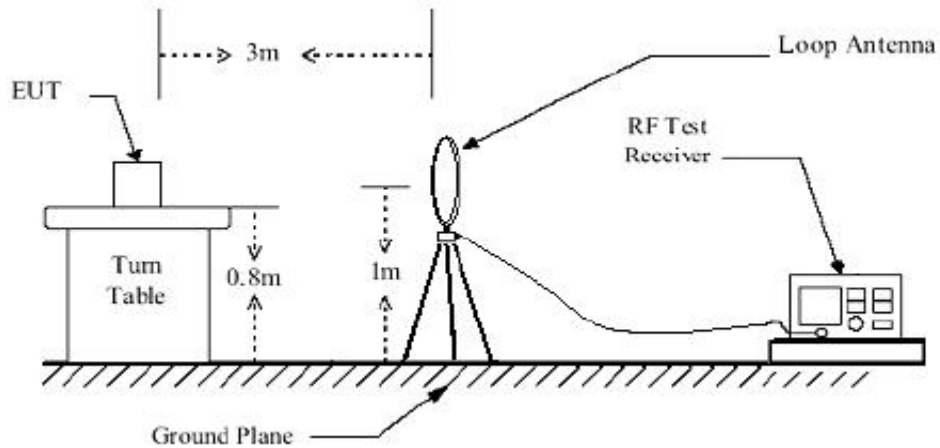
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}.$

**NOTE:** The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

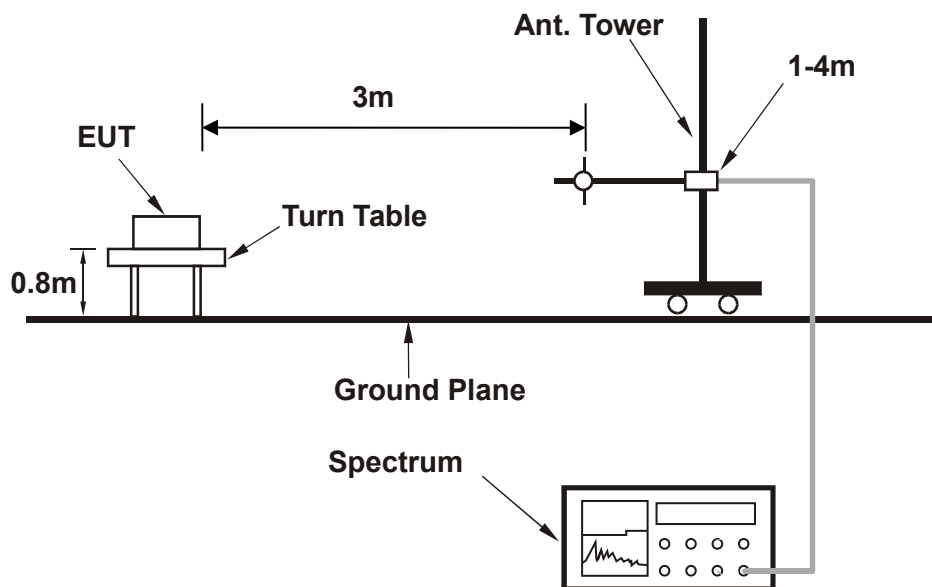


### 3.6.3 TEST SETUP

**<Below 30MHz>**

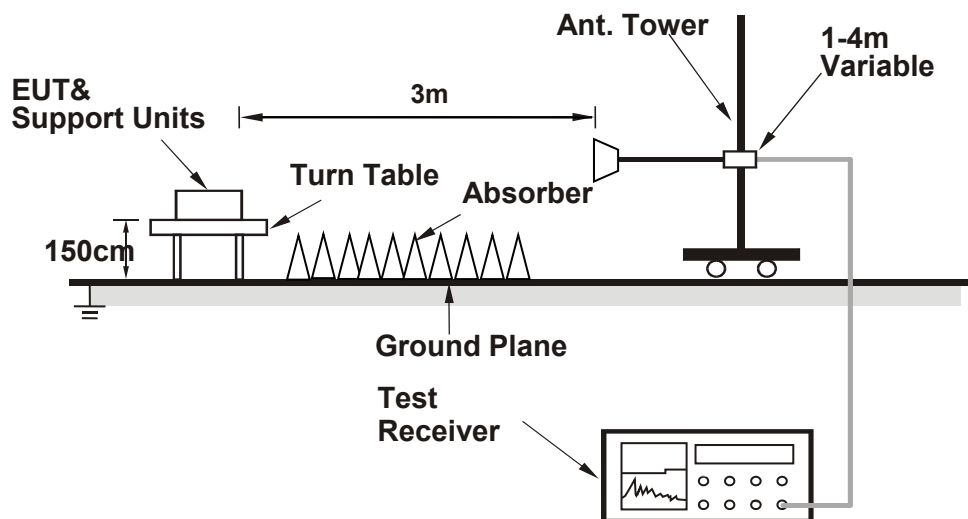


**< Frequency Range 30MHz~1GHz >**





**< Frequency Range above 1GHz >**



For the actual test configuration, please refer to the attached file (Test Setup Photo).

**3.6.4 DEVIATION FROM TEST STANDARD**

No deviation



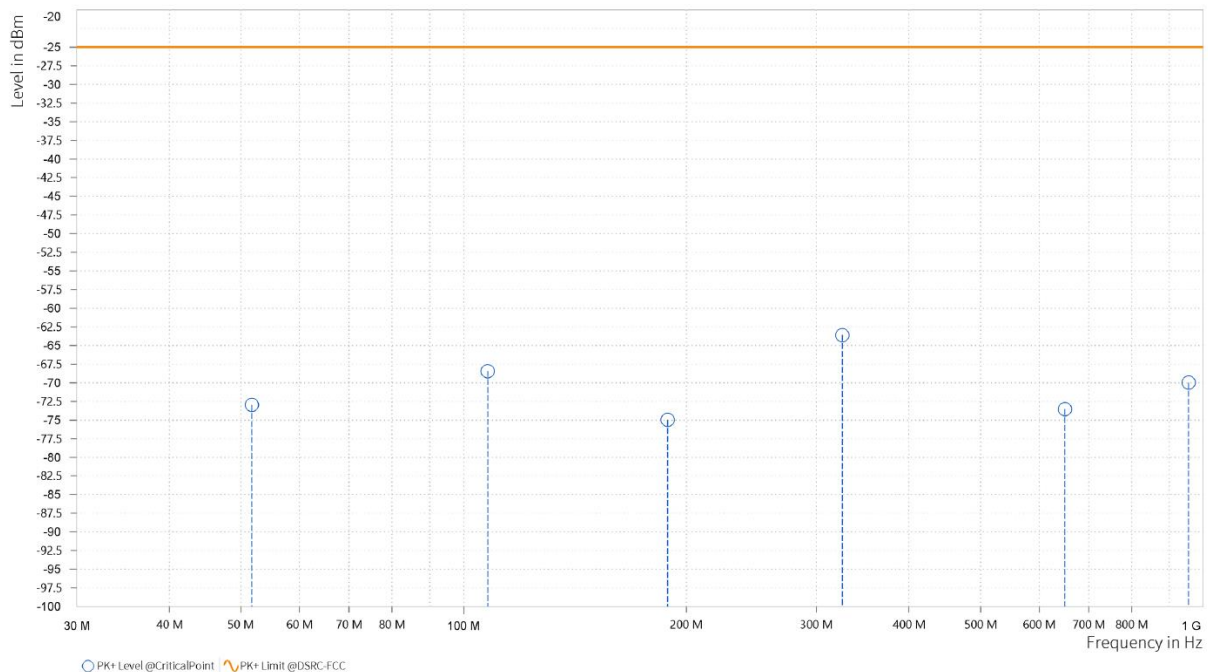
### 3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

**TX BELOW 1GHz WORST-CASE DATA as below:**

**DSRC \_1/2 BPSK\_(SISO- ANT1)**

| SPURIOUS EMISSION<br>FREQUENCY RANGE | 30MHz ~ 1GHz | OPERATING<br>CHANNEL | 180 |
|--------------------------------------|--------------|----------------------|-----|
| SPURIOUS EMISSION LEVEL              |              |                      |     |
| H                                    |              |                      |     |

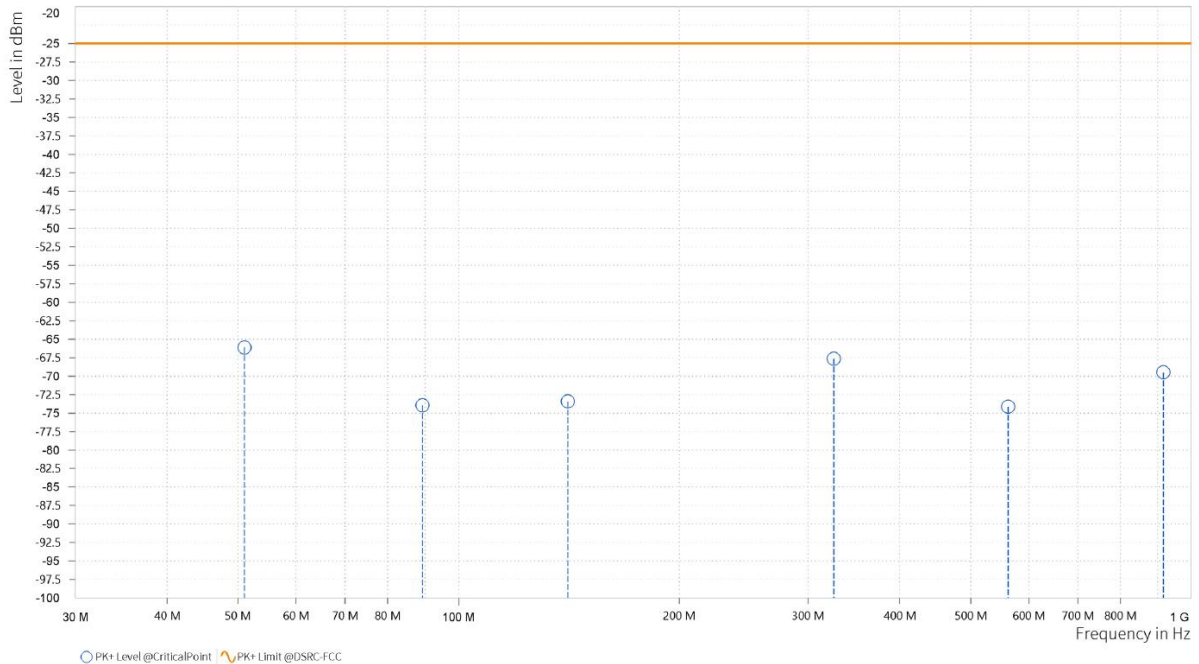


| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 1  | 51.700             | -72.97                | -25.00                | 47.97                 | 1.76               | H            | 4.5              | 1                        |
| 1  | 107.800            | -68.43                | -25.00                | 43.43                 | -3.46              | H            | 354.8            | 2                        |
| 1  | 188.700            | -74.98                | -25.00                | 49.98                 | -5.08              | H            | 359              | 1                        |
| 1  | 325.000            | -63.61                | -25.00                | 38.61                 | 1.40               | H            | 354.8            | 2                        |
| 2  | 650.063            | -73.54                | -25.00                | 48.54                 | 5.54               | H            | 1.3              | 2                        |
| 2  | 955.908            | -69.97                | -25.00                | 44.97                 | 10.63              | H            | 358.7            | 1                        |



**NOTE:** RMS Margin=RMS Limit-RMS Level.

|  |              |                              |     |
|--|--------------|------------------------------|-----|
| <b>SPURIOUS EMISSION<br/>FREQUENCY RANGE</b> | 30MHz ~ 1GHz | <b>OPERATING<br/>CHANNEL</b> | 180 |
| <b>SPURIOUS EMISSION LEVEL</b>               |              |                              |     |
| <b>V</b>                                     |              |                              |     |



| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 51.050          | -66.12          | -25.00          | 41.12           | 1.65            | V            | 1             | 1                  |
| 1  | 89.250          | -73.94          | -25.00          | 48.94           | -3.39           | V            | 1             | 1                  |
| 1  | 140.900         | -73.42          | -25.00          | 48.42           | -5.88           | V            | 359           | 2                  |
| 1  | 325.000         | -67.64          | -25.00          | 42.64           | 0.93            | V            | 22.3          | 2                  |
| 2  | 562.475         | -74.14          | -25.00          | 49.14           | 3.47            | V            | 97.4          | 2                  |
| 2  | 915.896         | -69.49          | -25.00          | 44.49           | 10.80           | V            | 0.9           | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## ABOVE 1GHz DATA

**Note:** For higher frequency, the emission is too low to be detected.

## TX THE WORSE CASE TEST DATA

### DSRC \_1/2 BPSK\_(SISO- ANT1)

|  |              |                              |             |
|--|--------------|------------------------------|-------------|
| <b>SPURIOUS EMISSION<br/>FREQUENCY RANGE</b> | 1GHz ~ 18GHz | <b>OPERATING<br/>CHANNEL</b> | 180,182,184 |
|--|--------------|------------------------------|-------------|

| SPURIOUS EMISSION LEVEL |            |  |  |  |  |  |  |  |
|-------------------------|------------|--|--|--|--|--|--|--|
| <b>Channel</b>          | <b>180</b> |  |  |  |  |  |  |  |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,800.000         | -49.83                | -25.00                | 24.83                 | 23.24              | H            | 0.9              | 2                        |
| 6  | 17,700.000         | -39.24                | -25.00                | 14.24                 | 37.20              | H            | 0.9              | 2                        |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,799.500         | -48.04                | -25.00                | 23.04                 | 23.67              | V            | 352.6            | 2                        |
| 6  | 17,700.500         | -40.10                | -25.00                | 15.10                 | 36.05              | V            | 352.6            | 2                        |

| SPURIOUS EMISSION LEVEL |            |  |  |  |  |  |  |  |
|-------------------------|------------|--|--|--|--|--|--|--|
| <b>Channel</b>          | <b>182</b> |  |  |  |  |  |  |  |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,820.000         | -48.61                | -25.00                | 23.61                 | 23.30              | H            | 1                | 2                        |
| 6  | 17,731.000         | -37.76                | -25.00                | 12.76                 | 36.95              | H            | 359.1            | 2                        |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,820.000         | -48.71                | -25.00                | 23.71                 | 23.73              | V            | 1                | 2                        |
| 6  | 17,728.500         | -39.44                | -25.00                | 14.44                 | 35.83              | V            | 1                | 2                        |





| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 184 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,841.000      | -44.26          | -25.00          | 19.26           | 23.35           | H            | 359.1         | 2                  |
| 6  | 17,758.500      | -39.13          | -25.00          | 14.13           | 36.74           | H            | 347.2         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,840.000      | -47.00          | -25.00          | 22.00           | 23.79           | V            | 346.6         | 2                  |
| 6  | 17,759.500      | -39.80          | -25.00          | 14.80           | 35.59           | V            | 1             | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## DSRC \_3/4 BPSK\_(SISO- ANT1)

|                                      |              |                      |             |
|--------------------------------------|--------------|----------------------|-------------|
| SPURIOUS EMISSION<br>FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING<br>CHANNEL | 180,182,184 |
|--------------------------------------|--------------|----------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,799.500         | -49.77                | -25.00                | 24.77                 | 23.24              | H            | 351.8            | 1                        |
| 6  | 17,699.500         | -38.45                | -25.00                | 13.45                 | 37.20              | H            | 351.8            | 2                        |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,799.500         | -48.14                | -25.00                | 23.14                 | 23.67              | V            | 359.1            | 2                        |
| 6  | 17,700.000         | -41.33                | -25.00                | 16.33                 | 36.05              | V            | 359.1            | 2                        |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,819.500         | -49.68                | -25.00                | 24.68                 | 23.29              | H            | 348.7            | 2                        |
| 6  | 17,731.000         | -38.26                | -25.00                | 13.26                 | 36.95              | H            | 359.1            | 2                        |

| Rg | Frequency<br>[MHz] | PK+<br>Level<br>[dBm] | PK+<br>Limit<br>[dBm] | PK+<br>Margin<br>[dB] | Correction<br>[dB] | Polarization | Azimuth<br>[deg] | Antenna<br>Height<br>[m] |
|----|--------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------|------------------|--------------------------|
| 6  | 11,820.000         | -49.22                | -25.00                | 24.22                 | 23.73              | V            | 1                | 2                        |
| 6  | 17,730.500         | -39.86                | -25.00                | 14.86                 | 35.82              | V            | 359.1            | 2                        |





| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 184 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,841.000      | -44.27          | -25.00          | 19.27           | 23.35           | H            | 347.2         | 2                  |
| 6  | 17,760.500      | -38.39          | -25.00          | 13.39           | 36.73           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,839.000      | -46.27          | -25.00          | 21.27           | 23.79           | V            | 345.8         | 2                  |
| 6  | 17,761.000      | -39.99          | -25.00          | 14.99           | 35.58           | V            | 359           | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## DSRC \_1/2 OPSK\_(SISO- ANT1)

|                                   |              |                   |             |
|-----------------------------------|--------------|-------------------|-------------|
| SPURIOUS EMISSION FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING CHANNEL | 180,182,184 |
|-----------------------------------|--------------|-------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -48.17          | -25.00          | 23.17           | 23.24           | H            | 359           | 2                  |
| 6  | 17,701.000      | -37.19          | -25.00          | 12.19           | 37.19           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -48.24          | -25.00          | 23.24           | 23.67           | V            | 359           | 2                  |
| 6  | 17,699.500      | -39.65          | -25.00          | 14.65           | 36.06           | V            | 351.3         | 2                  |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.65          | -25.00          | 24.65           | 23.30           | H            | 359.1         | 2                  |
| 6  | 17,730.500      | -38.54          | -25.00          | 13.54           | 36.96           | H            | 347.2         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,819.500      | -49.68          | -25.00          | 24.68           | 23.73           | V            | 345.8         | 1                  |
| 6  | 17,730.000      | -39.93          | -25.00          | 14.93           | 35.82           | V            | 359.1         | 2                  |



| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 184 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,841.500      | -44.46          | -25.00          | 19.46           | 23.36           | H            | 347.2         | 1                  |
| 6  | 17,760.500      | -38.73          | -25.00          | 13.73           | 36.73           | H            | 347.2         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,839.500      | -46.38          | -25.00          | 21.38           | 23.79           | V            | 1             | 2                  |
| 6  | 17,760.000      | -40.66          | -25.00          | 15.66           | 35.59           | V            | 348           | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## DSRC \_3/4 QPSK\_(SISO- ANT1)

|                                   |              |                   |             |
|-----------------------------------|--------------|-------------------|-------------|
| SPURIOUS EMISSION FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING CHANNEL | 180,182,184 |
|-----------------------------------|--------------|-------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,799.500      | -49.69          | -25.00          | 24.69           | 23.24           | H            | 359           | 2                  |
| 6  | 17,702.500      | -38.73          | -25.00          | 13.73           | 37.18           | H            | 1             | 2                  |
| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
| 6  | 11,800.000      | -48.39          | -25.00          | 23.39           | 23.67           | V            | 358.1         | 2                  |
| 6  | 17,700.500      | -41.20          | -25.00          | 16.20           | 36.05           | V            | 358.1         | 2                  |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.23          | -25.00          | 24.23           | 23.30           | H            | 345.9         | 1                  |
| 6  | 17,730.000      | -39.12          | -25.00          | 14.12           | 36.96           | H            | 359.1         | 2                  |
| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
| 6  | 11,820.000      | -47.96          | -25.00          | 22.96           | 23.73           | V            | 359.1         | 2                  |
| 6  | 17,729.000      | -39.33          | -25.00          | 14.33           | 35.83           | V            | 1             | 2                  |



| SPURIOUS EMISSION LEVEL |  |     |  |  |  |  |  |  |
|-------------------------|--|-----|--|--|--|--|--|--|
| Channel                 |  | 184 |  |  |  |  |  |  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,840.000      | -44.51          | -25.00          | 19.51           | 23.35           | H            | 347.3         | 1                  |
| 6  | 17,760.500      | -38.53          | -25.00          | 13.53           | 36.73           | H            | 359.1         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,840.000      | -47.27          | -25.00          | 22.27           | 23.79           | V            | 347.9         | 1                  |
| 6  | 17,759.500      | -41.79          | -25.00          | 16.79           | 35.59           | V            | 359.1         | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.





## DSRC \_1/2 16QAM\_(SISO- ANT1)

|                                   |              |                   |             |
|-----------------------------------|--------------|-------------------|-------------|
| SPURIOUS EMISSION FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING CHANNEL | 180,182,184 |
|-----------------------------------|--------------|-------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.500      | -47.58          | -25.00          | 22.58           | 23.24           | H            | 359.1         | 1                  |
| 6  | 17,700.500      | -39.30          | -25.00          | 14.30           | 37.19           | H            | 359.1         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -49.21          | -25.00          | 24.21           | 23.67           | V            | 346.6         | 1                  |
| 6  | 17,699.000      | -39.38          | -25.00          | 14.38           | 36.06           | V            | 1             | 2                  |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.32          | -25.00          | 24.32           | 23.30           | H            | 347.2         | 1                  |
| 6  | 17,729.500      | -39.60          | -25.00          | 14.60           | 36.97           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -48.33          | -25.00          | 23.33           | 23.73           | V            | 359.1         | 1                  |
| 6  | 17,730.500      | -39.67          | -25.00          | 14.67           | 35.82           | V            | 359.1         | 2                  |



| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 184 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,839.500      | -44.08          | -25.00          | 19.08           | 23.35           | H            | 346.6         | 2                  |
| 6  | 17,760.000      | -39.22          | -25.00          | 14.22           | 36.73           | H            | 359           | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,839.500      | -44.96          | -25.00          | 19.96           | 23.79           | V            | 359.1         | 1                  |
| 6  | 17,761.000      | -39.37          | -25.00          | 14.37           | 35.58           | V            | 1             | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## DSRC \_3/4 16QAM\_(SISO- ANT1)

|                                   |              |                   |             |
|-----------------------------------|--------------|-------------------|-------------|
| SPURIOUS EMISSION FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING CHANNEL | 180,182,184 |
|-----------------------------------|--------------|-------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -49.55          | -25.00          | 24.55           | 23.24           | H            | 347.9         | 2                  |
| 6  | 17,699.500      | -37.77          | -25.00          | 12.77           | 37.20           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -49.05          | -25.00          | 24.05           | 23.67           | V            | 359           | 1                  |
| 6  | 17,700.000      | -39.71          | -25.00          | 14.71           | 36.05           | V            | 359           | 2                  |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.02          | -25.00          | 24.02           | 23.30           | H            | 1             | 1                  |
| 6  | 17,730.000      | -38.84          | -25.00          | 13.84           | 36.96           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -48.99          | -25.00          | 23.99           | 23.73           | V            | 359.1         | 2                  |
| 6  | 17,730.500      | -40.44          | -25.00          | 15.44           | 35.82           | V            | 359.1         | 2                  |





| SPURIOUS EMISSION LEVEL |     |  |  |  |  |  |  |  |
|-------------------------|-----|--|--|--|--|--|--|--|
| Channel                 | 184 |  |  |  |  |  |  |  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,838.000      | -43.91          | -25.00          | 18.91           | 23.35           | H            | 346.6         | 2                  |
| 6  | 17,758.500      | -39.22          | -25.00          | 14.22           | 36.74           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,840.500      | -48.24          | -25.00          | 23.24           | 23.80           | V            | 359.1         | 1                  |
| 6  | 17,758.500      | -39.32          | -25.00          | 14.32           | 35.60           | V            | 1             | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## DSRC \_2/3 64QAM\_(SISO- ANT1)

|                                   |              |                   |             |
|-----------------------------------|--------------|-------------------|-------------|
| SPURIOUS EMISSION FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING CHANNEL | 180,182,184 |
|-----------------------------------|--------------|-------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -49.18          | -25.00          | 24.18           | 23.24           | H            | 348.6         | 2                  |
| 6  | 17,700.000      | -38.27          | -25.00          | 13.27           | 37.20           | H            | 359           | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -48.46          | -25.00          | 23.46           | 23.67           | V            | 348.6         | 2                  |
| 6  | 17,700.500      | -38.92          | -25.00          | 13.92           | 36.05           | V            | 348.6         | 2                  |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.48          | -25.00          | 24.48           | 23.30           | H            | 359           | 2                  |
| 6  | 17,730.500      | -38.85          | -25.00          | 13.85           | 36.96           | H            | 1             | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.65          | -25.00          | 24.65           | 23.73           | V            | 359           | 1                  |
| 6  | 17,731.000      | -39.92          | -25.00          | 14.92           | 35.81           | V            | 1             | 2                  |



| SPURIOUS EMISSION LEVEL |  |     |  |  |  |  |  |  |
|-------------------------|--|-----|--|--|--|--|--|--|
| Channel                 |  | 184 |  |  |  |  |  |  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,838.500      | -44.37          | -25.00          | 19.37           | 23.35           | H            | 347.3         | 2                  |
| 6  | 17,761.000      | -39.92          | -25.00          | 14.92           | 36.72           | H            | 359           | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,840.000      | -47.59          | -25.00          | 22.59           | 23.79           | V            | 347.2         | 2                  |
| 6  | 17,760.500      | -41.25          | -25.00          | 16.25           | 35.59           | V            | 1             | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



## DSRC \_3/4 64QAM\_(SISO- ANT1)

|                                   |              |                   |             |
|-----------------------------------|--------------|-------------------|-------------|
| SPURIOUS EMISSION FREQUENCY RANGE | 1GHz ~ 18GHz | OPERATING CHANNEL | 180,182,184 |
|-----------------------------------|--------------|-------------------|-------------|

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 180 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -47.94          | -25.00          | 22.94           | 23.24           | H            | 359.1         | 1                  |
| 6  | 17,698.000      | -38.27          | -25.00          | 13.27           | 37.21           | H            | 359.1         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,800.000      | -49.14          | -25.00          | 24.14           | 23.67           | V            | 359.1         | 2                  |
| 6  | 17,699.000      | -39.49          | -25.00          | 14.49           | 36.06           | V            | 1             | 2                  |

| SPURIOUS EMISSION LEVEL |     |
|-------------------------|-----|
| Channel                 | 182 |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -48.82          | -25.00          | 23.82           | 23.30           | H            | 1             | 2                  |
| 6  | 17,730.500      | -39.24          | -25.00          | 14.24           | 36.96           | H            | 346.5         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,820.000      | -49.25          | -25.00          | 24.25           | 23.73           | V            | 359.1         | 2                  |
| 6  | 17,730.500      | -39.59          | -25.00          | 14.59           | 35.82           | V            | 346.6         | 2                  |



| SPURIOUS EMISSION LEVEL |     |  |  |  |  |  |  |  |
|-------------------------|-----|--|--|--|--|--|--|--|
| Channel                 | 184 |  |  |  |  |  |  |  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,838.500      | -43.44          | -25.00          | 18.44           | 23.35           | H            | 347.9         | 1                  |
| 6  | 17,759.500      | -38.84          | -25.00          | 13.84           | 36.73           | H            | 347.9         | 2                  |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 6  | 11,840.500      | -46.42          | -25.00          | 21.42           | 23.80           | V            | 1             | 2                  |
| 6  | 17,759.000      | -40.65          | -25.00          | 15.65           | 35.60           | V            | 1             | 2                  |

**NOTE:** RMS Margin=RMS Limit-RMS Level.



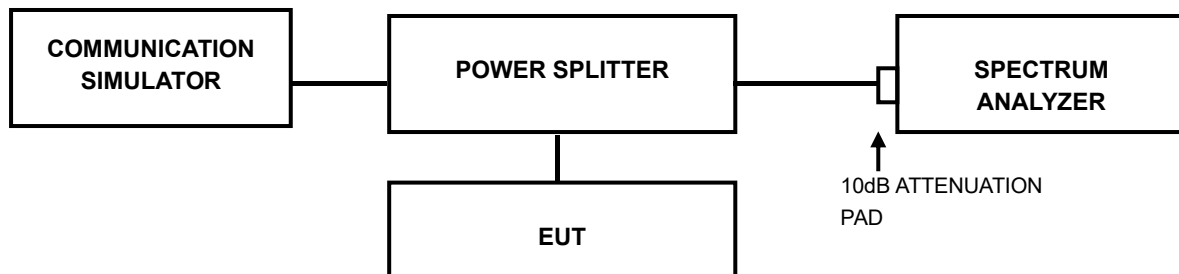


### 3.7 PEAK TO AVERAGE RATIO

#### 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

#### 3.7.2 TEST SETUP



#### 3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



### 3.7.4 TEST RESULTS

Please refer to the report (Report No.: CQC-IVTS-2023-00333, Model Name:MK6 RSU, FCC ID:2AEGPMK6RSU).



## 4. PHOTOGRAPHS OF THE TEST CONFIGURATION

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





**BUREAU VERITAS** Test Report No.: PSU-QSU2306260109RF05

## **5. MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications were made to the EUT by the lab during the test.

**--- END ---**