# Partial FCC Test Report

| | |
|---|---|
| **Report No.:** | RF190925C38-1 |
| **FCC ID:** | WIYQSC20A |
| **Original FCC ID:** | XMR201706SC20A |
| **Model:** | SC20-A |
| **Received Date:** | Sep. 25, 2019 |
| **Test Date:** | Oct. 15 ~ Oct. 21, 2019 |
| **Issued Date:** | Oct. 29, 2019 |
| **Applicant:** | CASTLES TECHNOLOGY CO., LTD. |
| **Address:** | 6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT, NEW TAIPEI CITY 23143, TAIWAN (R. O. C.) |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories |
| **Lab Address:** | No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan |
| **Test Location:** | No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN |
| **FCC Registration/ Designation Number:** | 788550 / TW0003 |

Testing Laboratory
2021

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## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| RF190925C38-1 | Original release | Oct. 29, 2019 |

## 1 Certificate of Conformity

| | |
|---|---|
| **Product:** | LTE module |
| **Brand:** | Quectel |
| **Model:** | SC20-A |
| **Sample Status:** | Identical Prototype |
| **Applicant:** | CASTLES TECHNOLOGY CO., LTD. |
| **Test Date:** | Oct. 15 ~ Oct. 21, 2019 |
| **Standards:** | 47 CFR FCC Part 15, Subpart E (Section 15.407)<br>ANSI C63.10:2013 |

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Polly Chien , **Date:** Oct. 29, 2019

Polly Chien / Specialist

**Approved by :** Bruce Chen , **Date:** Oct. 29, 2019

Bruce Chen / Senior Project Engineer

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart E (Section 15.407) | | | |
|---|---|---|---|
| FCC Clause | Test Item | Result | Remarks |
| 15.407(b)(6) | AC Power Conducted Emissions | Pass | Meet the requirement of limit. Minimum passing margin is -20.80dB at 14.93475MHz. |
| 15.407(b) (1/2/3/4(i/ii)/6) | Radiated Emissions & Band Edge Measurement | Pass | Meet the requirement of limit. Minimum passing margin is -0.7dB at 5150.00MHz & 5350.00MHz. |
| 15.407(a)(1/2/3) | Max Average Transmit Power | N/A | Refer to Note 1 |
| --- | Occupied Bandwidth Measurement | N/A | Refer to Note 1 |
| 15.407(a)(1/2/3) | Peak Power Spectral Density | N/A | Refer to Note 1 |
| 15.407(e) | 6dB bandwidth | N/A | Refer to Note 1 |
| 15.407(g) | Frequency Stability | N/A | Refer to Note 1 |
| 15.203 | Antenna Requirement | Pass | Antenna connectors are IPEX at antenna side not standard connector.. |

Note:

1. This report is a partial report. Therefore, only test item of AC Power Conducted Emissions and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to Sporton International (KunShan) INC. report no.: FR741007D & FR741007E for module (Brand: Quectel, Model: SC20-A).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
3. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.

### 2.1 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 | Expanded Uncertainty (k=2) (±) |
|---|---|---|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz | 2.94 dB |
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz | 3.04 dB |
| | 30MHz ~ 200MHz | 3.59 dB |
| | 200MHz ~1000MHz | 3.60 dB |
| | 1GHz ~ 18GHz | 2.29 dB |
| | 18GHz ~ 40GHz | 2.29 dB |

### 2.2 Modification Record

There were no modifications required for compliance.

## 3 General Information

### 3.1 General Description of EUT

| | |
|---|---|
| Product | LTE module |
| Brand | Quectel |
| Model | SC20-A |
| Status of EUT | Identical Prototype |
| Power Supply Rating | 9Vdc~48Vdc, 1.5A~0.5A<br>3Vdc (Battery) |
| Modulation Type | 64QAM, 16QAM, QPSK, BPSK for OFDM |
| Modulation Technology | OFDM |
| Transfer Rate | 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps<br>802.11n: up to MCS0 |
| Operating Frequency | 5180~5250MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz |
| Number of Channel | 5180~5240MHz:<br>802.11a, 802.11n (HT20): 4<br>802.11n (HT40): 2<br>5260~5320MHz:<br>802.11a, 802.11n (HT20): 4<br>802.11n (HT40): 2<br>5500~5700MHz:<br>802.11a, 802.11n (HT20): 11<br>802.11n (HT40): 5<br>5745~5825MHz:<br>802.11a, 802.11n (HT20): 5<br>802.11n (HT40): 2 |
| Antenna Type | Dipole antenna with 4.9 dBi gain |
| Antenna Connector | IPEX |
| Accessory Device | Refer to note |
| Data Cable Supplied | NA |

Note:

1. This report is a partial report. Therefore, only test item of AC Power Conducted Emissions and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to Sporton International (KunShan) INC. report no.: FR741007D & FR741007E for module (Brand: Quectel, Model: SC20-A).
2. The EUT was installed in a specific End-product.

| Product | Brand | Model |
|---|---|---|
| POS Terminal | CASTLES TECHNOLOGY | SATURN1000-E UPT |

3. The End-product contains following accessory device.

| Product | Brand | Model | Description |
|---|---|---|---|
| Battery | MITSUBISHI Lithium Manganese Dioxide Battery | CR2032 | 3Vdc, 210mAh |

4. The EUT provides one completed transmitter and one receiver.

| Modulation Mode | TX Function |
|---|---|
| 802.11a | 1TX |
| 802.11n (HT20) | 1TX |
| 802.11n (HT40) | 1TX |

5. The conducted power of EUT was listed as below.

802.11a

| Chan. | Freq. (MHz) | Conducted Power (mW) | Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|
| 36 | 5180 | 16.63 | 12.21 | 24 | Pass |
| 40 | 5200 | 19.05 | 12.80 | 24 | Pass |
| 48 | 5240 | 19.41 | 12.88 | 24 | Pass |
| 52 | 5260 | 19.95 | 13.00 | 24 | Pass |
| 60 | 5300 | 18.32 | 12.63 | 24 | Pass |
| 64 | 5320 | 18.11 | 12.58 | 24 | Pass |
| 100 | 5500 | 17.38 | 12.40 | 24 | Pass |
| 116 | 5580 | 19.63 | 12.93 | 24 | Pass |
| 140 | 5700 | 18.92 | 12.77 | 24 | Pass |
| 149 | 5745 | 15.31 | 11.85 | 30 | Pass |
| 157 | 5785 | 14.35 | 11.57 | 30 | Pass |
| 165 | 5825 | 13.80 | 11.40 | 30 | Pass |

802.11n (HT20)

| Chan. | Freq. (MHz) | Conducted Power (mW) | Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|
| 36 | 5180 | 19.19 | 12.83 | 24 | Pass |
| 40 | 5200 | 22.75 | 13.57 | 24 | Pass |
| 48 | 5240 | 23.07 | 13.63 | 24 | Pass |
| 52 | 5260 | 23.50 | 13.71 | 24 | Pass |
| 60 | 5300 | 23.39 | 13.69 | 24 | Pass |
| 64 | 5320 | 21.93 | 13.41 | 24 | Pass |
| 100 | 5500 | 16.75 | 12.24 | 24 | Pass |
| 116 | 5580 | 17.91 | 12.53 | 24 | Pass |
| 140 | 5700 | 20.56 | 13.13 | 24 | Pass |
| 149 | 5745 | 15.14 | 11.80 | 30 | Pass |
| 157 | 5785 | 13.24 | 11.22 | 30 | Pass |
| 165 | 5825 | 10.96 | 10.40 | 30 | Pass |

802.11n (HT40)

| Chan. | Freq. (MHz) | Conducted Power (mW) | Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|
| 38 | 5190 | 11.43 | 10.58 | 24 | Pass |
| 46 | 5230 | 19.50 | 12.90 | 24 | Pass |
| 54 | 5270 | 20.09 | 13.03 | 24 | Pass |
| 62 | 5310 | 12.47 | 10.96 | 24 | Pass |
| 102 | 5510 | 10.94 | 10.39 | 24 | Pass |
| 110 | 5550 | 11.14 | 10.47 | 24 | Pass |
| 134 | 5670 | 16.98 | 12.30 | 24 | Pass |
| 151 | 5755 | 10.33 | 10.14 | 30 | Pass |
| 159 | 5795 | 11.30 | 10.53 | 30 | Pass |

### 3.2 Description of Test Modes

5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 36 | 5180 MHz | 44 | 5220 MHz |
| 40 | 5200 MHz | 48 | 5240 MHz |

2 channels are provided for 802.11n (HT40):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 38 | 5190 MHz | 46 | 5230 MHz |

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (HT20):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 52 | 5260 MHz | 60 | 5300 MHz |
| 56 | 5280 MHz | 64 | 5320 MHz |

2 channels are provided for 802.11n (HT40):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 54 | 5270 MHz | 62 | 5310 MHz |

5500~5700MHz:

11 channels are provided for 802.11a, 802.11n (HT20):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 100 | 5500 MHz | 124 | 5620 MHz |
| 104 | 5520 MHz | 128 | 5640 MHz |
| 108 | 5540 MHz | 132 | 5660 MHz |
| 112 | 5560 MHz | 136 | 5680 MHz |
| 116 | 5580 MHz | 140 | 5700 MHz |
| 120 | 5600 MHz | | |

5 channels are provided for 802.11n (HT40):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 102 | 5510 MHz | 126 | 5630 MHz |
| 110 | 5550 MHz | 134 | 5670 MHz |
| 118 | 5590 MHz | | |

5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 149 | 5745 MHz | 161 | 5805 MHz |
| 153 | 5765 MHz | 165 | 5825 MHz |
| 157 | 5785 MHz | | |

2 channels are provided for 802.11n (HT40):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 151 | 5755 MHz | 159 | 5795 MHz |

### 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT CONFIGURE MODE | APPLICABLE TO | | | DESCRIPTION |
|---|---|---|---|---|
| | RE≥1G | RE<1G | PLC | |
| - | √ | √ | √ | - |

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement RE<1G: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

**Radiated Emission Test (Above 1GHz):**

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

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) | Remark |
|---|---|---|---|---|---|---|---|
| - | 802.11a | 5180-5240 | 36 to 48 | 36, 40, 48 | OFDM | 6.0 | - |
| | 802.11n (HT20) | | 36 to 48 | 36, 40, 48 | OFDM | 7.2 | - |
| | 802.11n (HT40) | | 38 to 46 | 38, 46 | OFDM | 15.0 | - |
| | 802.11a | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDM | 6.0 | - |
| | 802.11n (HT20) | | 52 to 64 | 52, 60, 64 | OFDM | 7.2 | - |
| | 802.11n (HT40) | | 54 to 62 | 54, 62 | OFDM | 15.0 | - |
| | 802.11a | 5500-5700 | 100 to 140 | 100, 116, 140 | OFDM | 6.0 | - |
| | 802.11n (HT20) | | 100 to 140 | 100, 116, 140 | OFDM | 7.2 | - |
| | 802.11n (HT40) | | 102 to 134 | 102, 110, 134 | OFDM | 15.0 | - |
| | 802.11a | 5745-5825 | 149 to 165 | 149, 157, 165 | OFDM | 6.0 | - |
| | 802.11n (HT20) | | 149 to 165 | 149, 157, 165 | OFDM | 7.2 | - |
| | 802.11n (HT40) | | 151 to 159 | 151, 159 | OFDM | 15.0 | - |

**Radiated Emission Test (Below 1GHz):**

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

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) | Remark |
|---|---|---|---|---|---|---|---|
| - | 802.11n (HT20) | 5180-5240 | 36 to 48 | 52 | OFDM | 7.2 | - |
| | | 5260-5320 | 52 to 64 | | OFDM | 7.2 | - |
| | | 5500-5700 | 100 to 140 | | OFDM | 7.2 | - |
| | | 5745-5825 | 149 to 165 | | OFDM | 7.2 | - |

**Power Line Conducted Emission Test:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) | Remark |
|---|---|---|---|---|---|---|---|
| - | 802.11n (HT20) | 5180-5240 | 36 to 48 | 52 | OFDM | 7.2 | - |
| | | 5260-5320 | 52 to 64 | | OFDM | 7.2 | - |
| | | 5500-5700 | 100 to 140 | | OFDM | 7.2 | - |
| | | 5745-5825 | 149 to 165 | | OFDM | 7.2 | - |

**Test Condition:**

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER (System) | TESTED BY |
|---|---|---|---|
| **RE≥1G** | 22deg. C, 66% RH | 12Vdc | Han Wu |
| **RE<1G** | 22deg. C, 66% RH | 12Vdc | Han Wu |
| **PLC** | 22deg. C, 66% RH | 12Vdc | Han Wu |

### 3.3 Description of Support Units

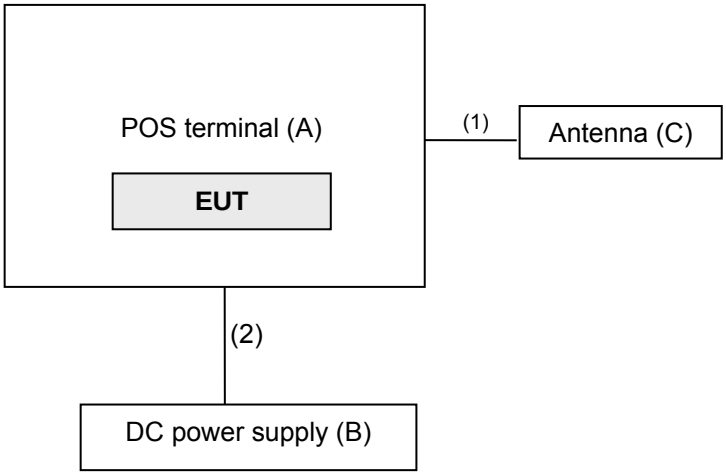
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|---|---|---|---|---|---|---|
| A. | POS terminal | CASTLES TECHNOLOGY | SATURN1000-E UPT | NA | FCC DoC Approved | Provided by client. |
| B. | DC power supply | Keysight | U8002A | MY56330015 | NA | - |
| C. | Antenna | ARISTOTLE ENTERPRISES INC. | RFA-LTE-T100-41-3M | NA | NA | Provided by client. |

Note: All power cords of the above support units are non-shielded (1.8m).

| ID | Cable Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks |
|---|---|---|---|---|---|---|
| 1. | Antenna cable | 1 | 3 | N | 0 | Provided by client. |
| 2. | Power cable | 1 | 1 | N | 0 | Provided by client. |

#### 3.3.1 Configuration of System under Test




### 3.4 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 standards:

**FCC Part 15, Subpart E (15.407)**

**KDB 789033 D02 General UNII Test Procedure New Rules v02r01**

ANSI C63.10-2013

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

# 4 Test Types and Results

## 4.1 Radiated Emission and Bandedge Measurement

### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

| Frequencies (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009 ~ 0.490 | 2400/F(kHz) | 300 |
| 0.490 ~ 1.705 | 24000/F(kHz) | 30 |
| 1.705 ~ 30.0 | 30 | 30 |
| 30 ~ 88 | 100 | 3 |
| 88 ~ 216 | 150 | 3 |
| 216 ~ 960 | 200 | 3 |
| Above 960 | 500 | 3 |

**NOTE**:

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

Limits of unwanted emission out of the restricted bands

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v02r01</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK:74 (dBμV/m)</td><td>AV:54 (dBμV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK:-27 (dBm/MHz)</td><td rowspan="3">PK:68.2(dBμV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1<br>PK:10 (dBm/MHz) *2<br>PK:15.6 (dBm/MHz) *3<br>PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBμV/m) *1<br>PK: 105.2 (dBμV/m) *2<br>PK: 110.8 (dBμV/m) *3<br>PK: 122.2 (dBμV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.<br>*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.<br>*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.<br>*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

**Note:** The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$E = \frac{1000000\sqrt{30P}}{3}$ μV/m, where P is the eirp (Watts).

### 4.1.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| Test Receiver KEYSIGHT | N9038A | MY55420137 | Apr. 15, 2019 | Apr. 14, 2020 |
| Spectrum Analyzer ROHDE & SCHWARZ | FSP40 | 100269 | Jun. 04, 2019 | Jun. 03, 2020 |
| BILOG Antenna SCHWARZBECK | VULB9168 | 9168-160 | Nov. 21, 2018 | Nov. 20, 2019 |
| HORN Antenna SCHWARZBECK | BBHA 9120 D | 9120D-1169 | Nov. 25, 2018 | Nov. 24, 2019 |
| HORN Antenna SCHWARZBECK | BBHA 9170 | BBHA9170241 | Nov. 25, 2018 | Nov. 24, 2019 |
| Loop Antenna TESEQ | HLA 6121 | 45745 | Jul. 01, 2019 | Jun. 30, 2020 |
| Preamplifier Agilent (Below 1GHz) | 8447D | 2944A10638 | Jul. 11, 2019 | Jul. 10, 2020 |
| Preamplifier Agilent (Above 1GHz) | 8449B | 3008A02367 | Feb. 19, 2019 | Feb. 18, 2020 |
| RF signal cable HUBER+SUHNER&EMCI | SUCOFLEX 104 & EMC104-SM-SM8000 | CABLE-CH9-02 (248780+171006) | Jan. 19, 2019 | Jan. 18, 2020 |
| RF signal cable HUBER+SUHNER | SUCOFLEX 104 | CABLE-CH9-(250795/4) | Jul. 11, 2019 | Jul. 10, 2020 |
| RF signal cable Woken | 8D-FB | Cable-CH9-01 | Jul. 30, 2019 | Jul. 29, 2020 |
| Software BV ADT | ADT_Radiated_ V7.6.15.9.5 | NA | NA | NA |
| Antenna Tower EMCO | 2070/2080 | 512.835.4684 | NA | NA |
| Turn Table EMCO | 2087-2.03 | NA | NA | NA |
| Antenna Tower &Turn BV ADT | AT100 | AT93021705 | NA | NA |
| Turn Table BV ADT | TT100 | TT93021705 | NA | NA |
| Turn Table Controller BV ADT | SC100 | SC93021705 | NA | NA |
| Boresight Antenna Fixture | FBA-01 | FBA-SIP01 | NA | NA |
| Pre-amplifier (18GHz-40GHz) EMC | EMC184045B | 980175 | Nov. 14, 2018 | Nov. 13, 2019 |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

### 4.1.3 Test Procedures

**For Radiated emission below 30MHz**

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

**For Radiated emission above 30MHz**

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

**Note:**

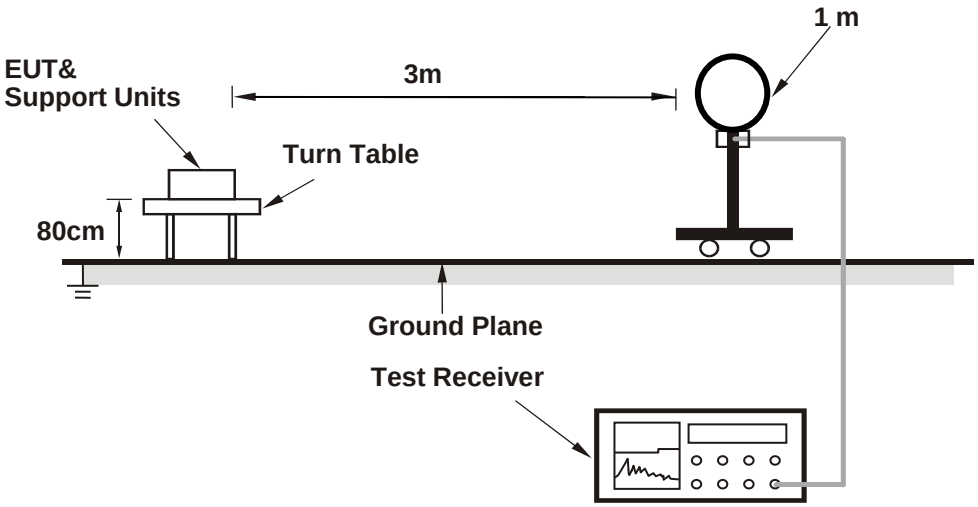
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

### 4.1.4 Deviation from Test Standard

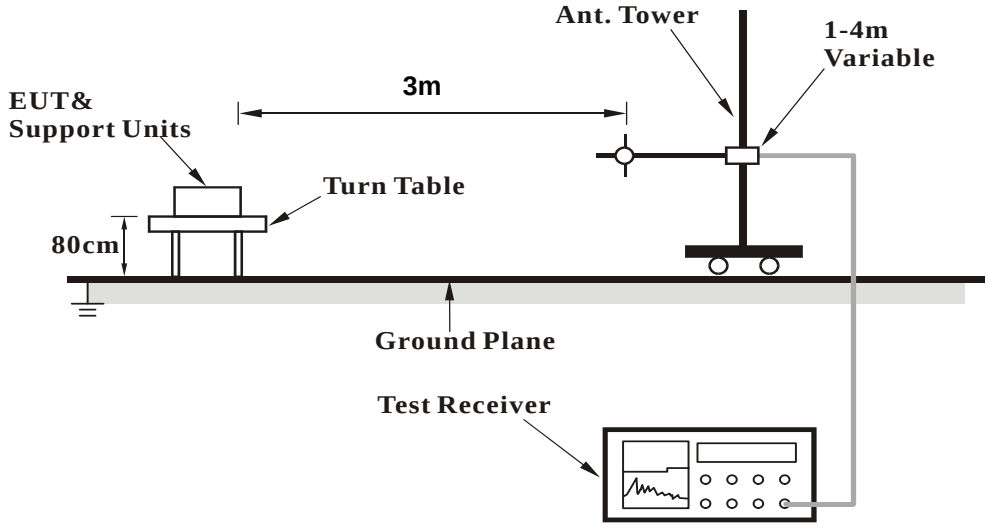
No deviation.

### 4.1.5 Test Set Up

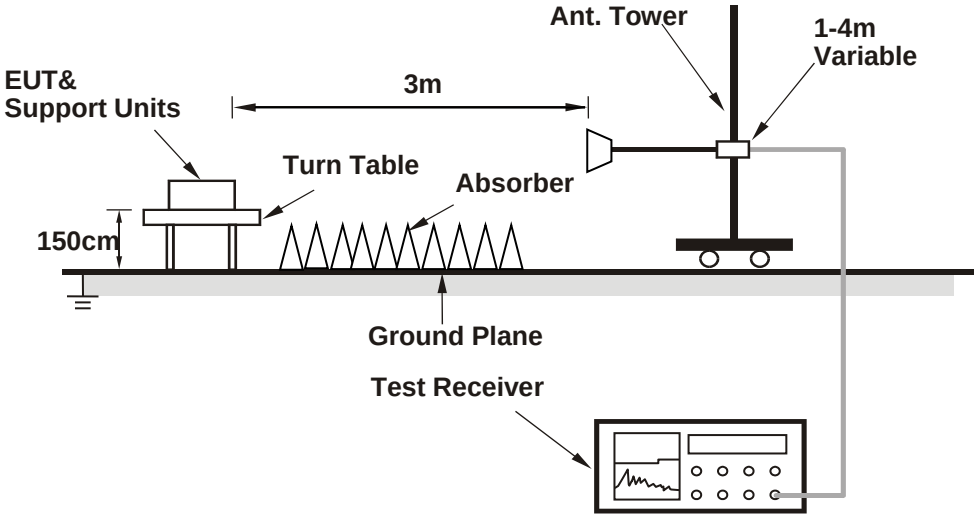
**For Radiated emission below 30MHz**




**For Radiated emission 30MHz to 1GHz**



**For Radiated emission above 1GHz**




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

### 4.1.6 EUT Operating Conditions

a. Plugged the EUT into the POS terminal and placed them on the testing table.
b. Set the EUT under transmission condition continuously at specific channel frequency.

### 4.1.7 Test Results

Above 1GHz data:

802.11a

| CHANNEL | TX Channel 36 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 56.7 PK | 74.0 | -17.3 | 1.00 H | 281 | 52.6 | 4.1 |
| 2 | 5150.00 | 42.4 AV | 54.0 | -11.6 | 1.00 H | 281 | 38.3 | 4.1 |
| 3 | *5180.00 | 102.4 PK | | | 1.00 H | 281 | 63.9 | 38.5 |
| 4 | *5180.00 | 91.2 AV | | | 1.00 H | 281 | 52.7 | 38.5 |
| 5 | #10360.00 | 56.2 PK | 68.2 | -12.0 | 1.40 H | 288 | 39.7 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 55.5 PK | 74.0 | -18.5 | 1.09 V | 334 | 51.4 | 4.1 |
| 2 | 5150.00 | 41.5 AV | 54.0 | -12.5 | 1.09 V | 334 | 37.4 | 4.1 |
| 3 | *5180.00 | 101.1 PK | | | 1.00 V | 335 | 62.6 | 38.5 |
| 4 | *5180.00 | 90.6 AV | | | 1.00 V | 335 | 52.1 | 38.5 |
| 5 | #10360.00 | 56.5 PK | 74.0 | -17.5 | 2.39 V | 244 | 40.0 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 40 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5200.00 | 101.8 PK | | | 1.00 H | 282 | 63.4 | 38.4 |
| 2 | *5200.00 | 91.9 AV | | | 1.00 H | 282 | 53.5 | 38.4 |
| 3 | #10400.00 | 56.3 PK | 68.2 | -11.9 | 1.41 H | 282 | 39.8 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5200.00 | 101.5 PK | | | 1.10 V | 337 | 63.1 | 38.4 |
| 2 | *5200.00 | 91.5 AV | | | 1.10 V | 337 | 53.1 | 38.4 |
| 3 | #10400.00 | 56.3 PK | 68.2 | -11.9 | 2.42 V | 242 | 39.8 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 48 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5240.00 | 101.9 PK | | | 1.05 H | 290 | 63.6 | 38.3 |
| 2 | *5240.00 | 91.5 AV | | | 1.05 H | 290 | 53.2 | 38.3 |
| 3 | 5350.00 | 53.4 PK | 74.0 | -20.6 | 1.14 H | 297 | 49.5 | 3.9 |
| 4 | 5350.00 | 39.8 AV | 54.0 | -14.2 | 1.14 H | 297 | 35.9 | 3.9 |
| 5 | #10480.00 | 56.3 PK | 68.2 | -11.9 | 1.38 H | 281 | 40.0 | 16.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5240.00 | 101.6 PK | | | 1.10 V | 333 | 63.3 | 38.3 |
| 2 | *5240.00 | 91.0 AV | | | 1.10 V | 333 | 52.7 | 38.3 |
| 3 | 5350.00 | 53.4 PK | 74.0 | -20.6 | 1.10 V | 335 | 49.5 | 3.9 |
| 4 | 5350.00 | 39.5 AV | 54.0 | -14.5 | 1.10 V | 335 | 35.6 | 3.9 |
| 5 | #10480.00 | 56.5 PK | 68.2 | -11.7 | 2.46 V | 252 | 40.2 | 16.3 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 52 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 54.2 PK | 74.0 | -19.8 | 1.96 H | 276 | 50.1 | 4.1 |
| 2 | 5150.00 | 39.6 AV | 54.0 | -14.4 | 1.96 H | 276 | 35.5 | 4.1 |
| 3 | *5260.00 | 104.4 PK | | | 2.00 H | 271 | 66.2 | 38.2 |
| 4 | *5260.00 | 94.2 AV | | | 2.00 H | 271 | 56.0 | 38.2 |
| 5 | #10520.00 | 56.2 PK | 68.2 | -12.0 | 1.35 H | 285 | 39.9 | 16.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 54.2 PK | 74.0 | -19.8 | 1.08 V | 338 | 50.1 | 4.1 |
| 2 | 5150.00 | 39.8 AV | 54.0 | -14.2 | 1.08 V | 338 | 35.7 | 4.1 |
| 3 | *5260.00 | 103.9 PK | | | 1.10 V | 333 | 65.7 | 38.2 |
| 4 | *5260.00 | 93.8 AV | | | 1.10 V | 333 | 55.6 | 38.2 |
| 5 | #10520.00 | 56.4 PK | 68.2 | -11.8 | 2.41 V | 257 | 40.1 | 16.3 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 60 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5300.00 | 104.5 PK | | | 1.83 H | 267 | 66.4 | 38.1 |
| 2 | *5300.00 | 93.9 AV | | | 1.83 H | 267 | 55.8 | 38.1 |
| 3 | 10600.00 | 56.1 PK | 74.0 | -17.9 | 1.46 H | 291 | 39.6 | 16.5 |
| 4 | 10600.00 | 42.0 AV | 54.0 | -12.0 | 1.46 H | 291 | 25.5 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5300.00 | 103.8 PK | | | 1.08 V | 333 | 65.7 | 38.1 |
| 2 | *5300.00 | 93.6 AV | | | 1.08 V | 333 | 55.5 | 38.1 |
| 3 | 10600.00 | 56.6 PK | 74.0 | -17.4 | 2.38 V | 241 | 40.1 | 16.5 |
| 4 | 10600.00 | 42.3 AV | 54.0 | -11.7 | 2.38 V | 241 | 25.8 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 64 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5320.00 | 105.1 PK | | | 1.95 H | 267 | 66.9 | 38.2 |
| 2 | *5320.00 | 94.0 AV | | | 1.95 H | 267 | 55.8 | 38.2 |
| 3 | 5350.00 | 60.2 PK | 74.0 | -13.8 | 4.00 H | 264 | 56.3 | 3.9 |
| 4 | 5350.00 | 43.8 AV | 54.0 | -10.2 | 4.00 H | 264 | 39.9 | 3.9 |
| 5 | 10640.00 | 56.3 PK | 74.0 | -17.7 | 1.42 H | 282 | 39.6 | 16.7 |
| 6 | 10640.00 | 42.3 AV | 54.0 | -11.7 | 1.42 H | 282 | 25.6 | 16.7 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5320.00 | 104.6 PK | | | 1.09 V | 337 | 66.4 | 38.2 |
| 2 | *5320.00 | 93.3 AV | | | 1.09 V | 337 | 55.1 | 38.2 |
| 3 | 5350.00 | 59.2 PK | 74.0 | -14.8 | 1.02 V | 335 | 55.3 | 3.9 |
| 4 | 5350.00 | 43.5 AV | 54.0 | -10.5 | 1.02 V | 335 | 39.6 | 3.9 |
| 5 | 10640.00 | 56.3 PK | 74.0 | -17.7 | 2.35 V | 257 | 39.6 | 16.7 |
| 6 | 10640.00 | 42.6 AV | 54.0 | -11.4 | 2.35 V | 257 | 25.9 | 16.7 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 100 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5460.00 | 54.2 PK | 74.0 | -19.8 | 2.13 H | 260 | 49.8 | 4.4 |
| 2 | 5460.00 | 41.2 AV | 54.0 | -12.8 | 2.13 H | 260 | 36.8 | 4.4 |
| 3 | #5470.00 | 53.7 PK | 68.2 | -14.5 | 2.18 H | 264 | 49.2 | 4.5 |
| 4 | *5500.00 | 98.5 PK | | | 2.14 H | 260 | 59.7 | 38.8 |
| 5 | *5500.00 | 87.1 AV | | | 2.14 H | 260 | 48.3 | 38.8 |
| 6 | 11000.00 | 58.5 PK | 74.0 | -15.5 | 1.43 H | 287 | 40.1 | 18.4 |
| 7 | 11000.00 | 44.0 AV | 54.0 | -10.0 | 1.43 H | 287 | 25.6 | 18.4 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5460.00 | 54.5 PK | 74.0 | -19.5 | 1.40 V | 333 | 50.1 | 4.4 |
| 2 | 5460.00 | 40.0 AV | 54.0 | -14.0 | 1.40 V | 333 | 35.6 | 4.4 |
| 3 | #5470.00 | 55.2 PK | 68.2 | -13.0 | 1.40 V | 338 | 50.7 | 4.5 |
| 4 | *5500.00 | 96.2 PK | | | 1.45 V | 337 | 57.4 | 38.8 |
| 5 | *5500.00 | 84.8 AV | | | 1.45 V | 337 | 46.0 | 38.8 |
| 6 | 11000.00 | 58.6 PK | 74.0 | -15.4 | 2.43 V | 257 | 40.2 | 18.4 |
| 7 | 11000.00 | 44.2 AV | 54.0 | -9.8 | 2.43 V | 257 | 25.8 | 18.4 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 116 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5580.00 | 96.1 PK | | | 2.06 H | 255 | 57.4 | 38.7 |
| 2 | *5580.00 | 85.4 AV | | | 2.06 H | 255 | 46.7 | 38.7 |
| 3 | 11160.00 | 57.3 PK | 74.0 | -16.7 | 1.40 H | 277 | 40.2 | 17.1 |
| 4 | 11160.00 | 43.0 AV | 54.0 | -11.0 | 1.40 H | 277 | 25.9 | 17.1 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5580.00 | 93.9 PK | | | 1.47 V | 334 | 55.2 | 38.7 |
| 2 | *5580.00 | 83.2 AV | | | 1.47 V | 334 | 44.5 | 38.7 |
| 3 | 11160.00 | 57.2 PK | 74.0 | -16.8 | 2.36 V | 248 | 40.1 | 17.1 |
| 4 | 11160.00 | 42.8 AV | 54.0 | -11.2 | 2.36 V | 248 | 25.7 | 17.1 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 140 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5700.00 | 93.7 PK | | | 2.04 H | 247 | 54.8 | 38.9 |
| 2 | *5700.00 | 83.2 AV | | | 2.04 H | 247 | 44.3 | 38.9 |
| 3 | #5725.00 | 54.3 PK | 68.2 | -13.9 | 2.00 H | 246 | 49.7 | 4.6 |
| 4 | 11400.00 | 57.2 PK | 74.0 | -16.8 | 1.34 H | 291 | 39.7 | 17.5 |
| 5 | 11400.00 | 43.0 AV | 54.0 | -11.0 | 1.34 H | 291 | 25.5 | 17.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5700.00 | 91.4 PK | | | 1.40 V | 336 | 52.5 | 38.9 |
| 2 | *5700.00 | 81.2 AV | | | 1.40 V | 336 | 42.3 | 38.9 |
| 3 | #5725.00 | 55.2 PK | 68.2 | -13.0 | 1.46 V | 335 | 50.6 | 4.6 |
| 4 | 11400.00 | 57.4 PK | 74.0 | -16.6 | 2.42 V | 241 | 39.9 | 17.5 |
| 5 | 11400.00 | 43.0 AV | 54.0 | -11.0 | 2.42 V | 241 | 25.5 | 17.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 149 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5642.40 | 53.3 PK | 68.2 | -14.9 | 1.75 H | 241 | 48.7 | 4.6 |
| 2 | *5745.00 | 93.1 PK | | | 1.75 H | 241 | 54.1 | 39.0 |
| 3 | *5745.00 | 82.2 AV | | | 1.75 H | 241 | 43.2 | 39.0 |
| 4 | #5944.80 | 53.5 PK | 68.2 | -14.7 | 1.75 H | 241 | 48.2 | 5.3 |
| 5 | 11490.00 | 57.0 PK | 74.0 | -17.0 | 1.32 H | 283 | 40.2 | 16.8 |
| 6 | 11490.00 | 42.3 AV | 54.0 | -11.7 | 1.32 H | 283 | 25.5 | 16.8 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5643.20 | 53.5 PK | 68.2 | -14.7 | 1.38 V | 336 | 48.9 | 4.6 |
| 2 | *5745.00 | 91.0 PK | | | 1.38 V | 336 | 52.0 | 39.0 |
| 3 | *5745.00 | 80.1 AV | | | 1.38 V | 336 | 41.1 | 39.0 |
| 4 | #5974.40 | 54.0 PK | 68.2 | -14.2 | 1.38 V | 336 | 48.7 | 5.3 |
| 5 | 11490.00 | 56.3 PK | 74.0 | -17.7 | 2.40 V | 247 | 39.5 | 16.8 |
| 6 | 11490.00 | 42.3 AV | 54.0 | -11.7 | 2.40 V | 247 | 25.5 | 16.8 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 157 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5648.00 | 53.7 PK | 68.2 | -14.5 | 1.98 H | 242 | 49.1 | 4.6 |
| 2 | *5785.00 | 93.9 PK | | | 1.98 H | 242 | 54.7 | 39.2 |
| 3 | *5785.00 | 82.6 AV | | | 1.98 H | 242 | 43.4 | 39.2 |
| 4 | #5996.80 | 53.6 PK | 68.2 | -14.6 | 1.98 H | 242 | 48.3 | 5.3 |
| 5 | 11570.00 | 56.7 PK | 74.0 | -17.3 | 1.42 H | 282 | 40.1 | 16.6 |
| 6 | 11570.00 | 42.2 AV | 54.0 | -11.8 | 1.42 H | 282 | 25.6 | 16.6 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5608.80 | 53.3 PK | 68.2 | -14.9 | 1.44 V | 334 | 48.9 | 4.4 |
| 2 | *5785.00 | 91.5 PK | | | 1.44 V | 334 | 52.3 | 39.2 |
| 3 | *5785.00 | 80.4 AV | | | 1.44 V | 334 | 41.2 | 39.2 |
| 4 | #5994.40 | 54.0 PK | 68.2 | -14.2 | 1.14 V | 334 | 48.7 | 5.3 |
| 5 | 11570.00 | 56.4 PK | 74.0 | -17.6 | 2.46 V | 248 | 39.8 | 16.6 |
| 6 | 11570.00 | 42.4 AV | 54.0 | -11.6 | 2.46 V | 248 | 25.8 | 16.6 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 165 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5619.20 | 53.4 PK | 68.2 | -14.8 | 1.88 H | 242 | 48.9 | 4.5 |
| 2 | *5825.00 | 92.2 PK | | | 1.88 H | 242 | 52.8 | 39.4 |
| 3 | *5825.00 | 81.8 AV | | | 1.88 H | 242 | 42.4 | 39.4 |
| 4 | #5936.00 | 54.0 PK | 68.2 | -14.2 | 1.88 H | 242 | 48.7 | 5.3 |
| 5 | 11650.00 | 56.7 PK | 74.0 | -17.3 | 1.42 H | 290 | 40.2 | 16.5 |
| 6 | 11650.00 | 42.3 AV | 54.0 | -11.7 | 1.42 H | 290 | 25.8 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5624.80 | 54.0 PK | 68.2 | -14.2 | 1.42 V | 333 | 49.5 | 4.5 |
| 2 | *5825.00 | 90.3 PK | | | 1.42 V | 333 | 50.9 | 39.4 |
| 3 | *5825.00 | 79.7 AV | | | 1.42 V | 333 | 40.3 | 39.4 |
| 4 | #5937.60 | 53.4 PK | 68.2 | -14.8 | 1.42 V | 333 | 48.1 | 5.3 |
| 5 | 11650.00 | 56.4 PK | 74.0 | -17.6 | 2.37 V | 255 | 39.9 | 16.5 |
| 6 | 11650.00 | 42.1 AV | 54.0 | -11.9 | 2.37 V | 255 | 25.6 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

| CHANNEL | TX Channel 36 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 59.4 PK | 74.0 | -14.6 | 1.96 H | 269 | 55.3 | 4.1 |
| 2 | 5150.00 | 43.9 AV | 54.0 | -10.1 | 1.96 H | 269 | 39.8 | 4.1 |
| 3 | *5180.00 | 104.3 PK | | | 1.95 H | 266 | 65.8 | 38.5 |
| 4 | *5180.00 | 92.6 AV | | | 1.95 H | 266 | 54.1 | 38.5 |
| 5 | #10360.00 | 56.3 PK | 68.2 | -11.9 | 1.37 H | 291 | 39.8 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 58.7 PK | 74.0 | -15.3 | 1.01 V | 333 | 54.6 | 4.1 |
| 2 | 5150.00 | 43.4 AV | 54.0 | -10.6 | 1.01 V | 333 | 39.3 | 4.1 |
| 3 | *5180.00 | 103.6 PK | | | 1.01 V | 334 | 65.1 | 38.5 |
| 4 | *5180.00 | 91.8 AV | | | 1.01 V | 334 | 53.3 | 38.5 |
| 5 | #10360.00 | 56.4 PK | 68.2 | -11.8 | 2.35 V | 243 | 39.9 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 40 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5200.00 | 103.1 PK | | | 1.86 H | 262 | 64.7 | 38.4 |
| 2 | *5200.00 | 92.7 AV | | | 1.86 H | 262 | 54.3 | 38.4 |
| 3 | #10400.00 | 56.0 PK | 68.2 | -12.2 | 1.36 H | 276 | 39.5 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5200.00 | 102.9 PK | | | 1.09 V | 334 | 64.5 | 38.4 |
| 2 | *5200.00 | 91.9 AV | | | 1.09 V | 334 | 53.5 | 38.4 |
| 3 | #10400.00 | 56.1 PK | 68.2 | -12.1 | 2.46 V | 243 | 39.6 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 48 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5240.00 | 104.7 PK | | | 1.88 H | 266 | 66.4 | 38.3 |
| 2 | *5240.00 | 94.0 AV | | | 1.88 H | 266 | 55.7 | 38.3 |
| 3 | 5350.00 | 54.1 PK | 74.0 | -19.9 | 1.86 H | 268 | 50.2 | 3.9 |
| 4 | 5350.00 | 39.4 AV | 54.0 | -14.6 | 1.86 H | 268 | 35.5 | 3.9 |
| 5 | #10480.00 | 56.5 PK | 68.2 | -11.7 | 1.34 H | 287 | 40.2 | 16.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5240.00 | 104.5 PK | | | 1.01 V | 333 | 66.2 | 38.3 |
| 2 | *5240.00 | 93.2 AV | | | 1.01 V | 333 | 54.9 | 38.3 |
| 3 | 5350.00 | 53.5 PK | 74.0 | -20.5 | 1.03 V | 333 | 49.6 | 3.9 |
| 4 | 5350.00 | 39.6 AV | 54.0 | -14.4 | 1.03 V | 333 | 35.7 | 3.9 |
| 5 | #10480.00 | 55.8 PK | 68.2 | -12.4 | 2.36 V | 241 | 39.5 | 16.3 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 52 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 53.6 PK | 74.0 | -20.4 | 1.96 H | 270 | 49.5 | 4.1 |
| 2 | 5150.00 | 39.9 AV | 54.0 | -14.1 | 1.96 H | 270 | 35.8 | 4.1 |
| 3 | *5260.00 | 105.1 PK | | | 2.00 H | 270 | 66.9 | 38.2 |
| 4 | *5260.00 | 94.4 AV | | | 2.00 H | 270 | 56.2 | 38.2 |
| 5 | #10520.00 | 56.4 PK | 68.2 | -11.8 | 1.36 H | 290 | 40.1 | 16.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 53.9 PK | 74.0 | -20.1 | 1.02 V | 338 | 49.8 | 4.1 |
| 2 | 5150.00 | 39.8 AV | 54.0 | -14.2 | 1.02 V | 338 | 35.7 | 4.1 |
| 3 | *5260.00 | 104.1 PK | | | 1.04 V | 336 | 65.9 | 38.2 |
| 4 | *5260.00 | 93.1 AV | | | 1.04 V | 336 | 54.9 | 38.2 |
| 5 | #10520.00 | 56.4 PK | 68.2 | -11.8 | 2.35 V | 243 | 40.1 | 16.3 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 60 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5300.00 | 105.8 PK | | | 1.99 H | 262 | 67.7 | 38.1 |
| 2 | *5300.00 | 94.5 AV | | | 1.99 H | 262 | 56.4 | 38.1 |
| 3 | 10600.00 | 56.6 PK | 74.0 | -17.4 | 1.35 H | 282 | 40.1 | 16.5 |
| 4 | 10600.00 | 42.0 AV | 54.0 | -12.0 | 1.35 H | 282 | 25.5 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5300.00 | 105.3 PK | | | 1.04 V | 334 | 67.2 | 38.1 |
| 2 | *5300.00 | 94.2 AV | | | 1.04 V | 334 | 56.1 | 38.1 |
| 3 | 10600.00 | 56.0 PK | 74.0 | -18.0 | 2.35 V | 256 | 39.5 | 16.5 |
| 4 | 10600.00 | 42.3 AV | 54.0 | -11.7 | 2.35 V | 256 | 25.8 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 64 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5320.00 | 104.4 PK | | | 1.99 H | 263 | 66.2 | 38.2 |
| 2 | *5320.00 | 93.8 AV | | | 1.99 H | 263 | 55.6 | 38.2 |
| 3 | 5350.00 | 59.9 PK | 74.0 | -14.1 | 1.98 H | 264 | 56.0 | 3.9 |
| 4 | 5350.00 | 44.7 AV | 54.0 | -9.3 | 1.98 H | 264 | 40.8 | 3.9 |
| 5 | 10640.00 | 56.3 PK | 74.0 | -17.7 | 1.35 H | 290 | 39.6 | 16.7 |
| 6 | 10640.00 | 42.2 AV | 54.0 | -11.8 | 1.35 H | 290 | 25.5 | 16.7 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5320.00 | 103.8 PK | | | 1.04 V | 336 | 65.6 | 38.2 |
| 2 | *5320.00 | 94.1 AV | | | 1.04 V | 336 | 55.9 | 38.2 |
| 3 | 5350.00 | 59.3 PK | 74.0 | -14.7 | 1.01 V | 333 | 55.4 | 3.9 |
| 4 | 5350.00 | 44.0 AV | 54.0 | -10.0 | 1.01 V | 333 | 40.1 | 3.9 |
| 5 | 10640.00 | 56.6 PK | 74.0 | -17.4 | 2.40 V | 247 | 39.9 | 16.7 |
| 6 | 10640.00 | 42.5 AV | 54.0 | -11.5 | 2.40 V | 247 | 25.8 | 16.7 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 100 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5460.00 | 54.0 PK | 74.0 | -20.0 | 1.94 H | 263 | 49.6 | 4.4 |
| 2 | 5460.00 | 41.4 AV | 54.0 | -12.6 | 1.94 H | 263 | 37.0 | 4.4 |
| 3 | #5470.00 | 55.3 PK | 68.2 | -12.9 | 1.94 H | 261 | 50.8 | 4.5 |
| 4 | *5500.00 | 97.3 PK | | | 1.94 H | 261 | 58.5 | 38.8 |
| 5 | *5500.00 | 86.5 AV | | | 1.94 H | 261 | 47.7 | 38.8 |
| 6 | 11000.00 | 58.3 PK | 74.0 | -15.7 | 1.32 H | 283 | 39.9 | 18.4 |
| 7 | 11000.00 | 44.3 AV | 54.0 | -9.7 | 1.32 H | 283 | 25.9 | 18.4 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5460.00 | 53.9 PK | 74.0 | -20.1 | 1.46 V | 335 | 49.5 | 4.4 |
| 2 | 5460.00 | 40.1 AV | 54.0 | -13.9 | 1.46 V | 335 | 35.7 | 4.4 |
| 3 | #5470.00 | 55.0 PK | 68.2 | -13.2 | 1.44 V | 337 | 50.5 | 4.5 |
| 4 | *5500.00 | 95.2 PK | | | 1.45 V | 335 | 56.4 | 38.8 |
| 5 | *5500.00 | 84.3 AV | | | 1.45 V | 335 | 45.5 | 38.8 |
| 6 | 11000.00 | 58.1 PK | 74.0 | -15.9 | 2.47 V | 239 | 39.7 | 18.4 |
| 7 | 11000.00 | 44.1 AV | 54.0 | -9.9 | 2.47 V | 239 | 25.7 | 18.4 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 116 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5580.00 | 95.5 PK | | | 2.04 H | 253 | 56.8 | 38.7 |
| 2 | *5580.00 | 84.7 AV | | | 2.04 H | 253 | 46.0 | 38.7 |
| 3 | 11160.00 | 56.8 PK | 74.0 | -17.2 | 1.37 H | 283 | 39.7 | 17.1 |
| 4 | 11160.00 | 42.7 AV | 54.0 | -11.3 | 1.37 H | 283 | 25.6 | 17.1 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5580.00 | 93.2 PK | | | 1.39 V | 337 | 54.5 | 38.7 |
| 2 | *5580.00 | 82.4 AV | | | 1.39 V | 337 | 43.7 | 38.7 |
| 3 | 11160.00 | 56.7 PK | 74.0 | -17.3 | 2.83 V | 252 | 39.6 | 17.1 |
| 4 | 11160.00 | 42.7 AV | 54.0 | -11.3 | 2.83 V | 252 | 25.6 | 17.1 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 140 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5700.00 | 93.5 PK | | | 1.47 H | 248 | 54.6 | 38.9 |
| 2 | *5700.00 | 83.0 AV | | | 1.47 H | 248 | 44.1 | 38.9 |
| 3 | #5725.00 | 55.4 PK | 68.2 | -12.8 | 1.42 H | 245 | 50.8 | 4.6 |
| 4 | 11400.00 | 57.0 PK | 74.0 | -17.0 | 1.39 H | 281 | 39.5 | 17.5 |
| 5 | 11400.00 | 43.3 AV | 54.0 | -10.7 | 1.39 H | 281 | 25.8 | 17.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5700.00 | 91.5 PK | | | 1.41 V | 335 | 52.6 | 38.9 |
| 2 | *5700.00 | 80.7 AV | | | 1.41 V | 335 | 41.8 | 38.9 |
| 3 | #5725.00 | 54.8 PK | 68.2 | -13.4 | 1.47 V | 337 | 50.2 | 4.6 |
| 4 | 11400.00 | 57.4 PK | 74.0 | -16.6 | 2.49 V | 244 | 39.9 | 17.5 |
| 5 | 11400.00 | 42.8 AV | 54.0 | -11.2 | 2.49 V | 244 | 25.3 | 17.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 149 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5648.80 | 52.6 PK | 68.2 | -15.6 | 1.74 H | 243 | 48.0 | 4.6 |
| 2 | *5745.00 | 92.7 PK | | | 1.74 H | 243 | 53.7 | 39.0 |
| 3 | *5745.00 | 82.0 AV | | | 1.74 H | 243 | 43.0 | 39.0 |
| 4 | #5961.60 | 53.6 PK | 68.2 | -14.6 | 1.74 H | 243 | 48.2 | 5.4 |
| 5 | 11490.00 | 56.7 PK | 74.0 | -17.3 | 1.34 H | 283 | 39.9 | 16.8 |
| 6 | 11490.00 | 42.6 AV | 54.0 | -11.4 | 1.34 H | 283 | 25.8 | 16.8 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5642.40 | 52.9 PK | 68.2 | -15.3 | 1.40 V | 333 | 48.3 | 4.6 |
| 2 | *5745.00 | 90.7 PK | | | 1.40 V | 333 | 51.7 | 39.0 |
| 3 | *5745.00 | 79.9 AV | | | 1.40 V | 333 | 40.9 | 39.0 |
| 4 | #5999.20 | 53.6 PK | 68.2 | -14.6 | 1.40 V | 333 | 48.3 | 5.3 |
| 5 | 11490.00 | 56.5 PK | 74.0 | -17.5 | 2.49 V | 254 | 39.7 | 16.8 |
| 6 | 11490.00 | 42.3 AV | 54.0 | -11.7 | 2.49 V | 254 | 25.5 | 16.8 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 157 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5621.60 | 53.9 PK | 68.2 | -14.3 | 1.95 H | 241 | 49.4 | 4.5 |
| 2 | *5785.00 | 92.1 PK | | | 1.95 H | 241 | 52.9 | 39.2 |
| 3 | *5785.00 | 81.7 AV | | | 1.95 H | 241 | 42.5 | 39.2 |
| 4 | #5934.40 | 53.5 PK | 68.2 | -14.7 | 1.95 H | 241 | 48.2 | 5.3 |
| 5 | 11570.00 | 56.5 PK | 74.0 | -17.5 | 1.46 H | 278 | 39.9 | 16.6 |
| 6 | 11570.00 | 42.1 AV | 54.0 | -11.9 | 1.46 H | 278 | 25.5 | 16.6 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5620.80 | 53.6 PK | 68.2 | -14.6 | 1.43 V | 336 | 49.1 | 4.5 |
| 2 | *5785.00 | 90.2 PK | | | 1.43 V | 336 | 51.0 | 39.2 |
| 3 | *5785.00 | 79.4 AV | | | 1.43 V | 336 | 40.2 | 39.2 |
| 4 | #5981.60 | 54.3 PK | 68.2 | -13.9 | 1.43 V | 336 | 49.0 | 5.3 |
| 5 | 11570.00 | 56.8 PK | 74.0 | -17.2 | 2.43 V | 246 | 40.2 | 16.6 |
| 6 | 11570.00 | 42.2 AV | 54.0 | -11.8 | 2.43 V | 246 | 25.6 | 16.6 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 165 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5634.40 | 53.4 PK | 68.2 | -14.8 | 1.89 H | 243 | 48.8 | 4.6 |
| 2 | *5825.00 | 91.0 PK | | | 1.89 H | 243 | 51.6 | 39.4 |
| 3 | *5825.00 | 81.1 AV | | | 1.89 H | 243 | 41.7 | 39.4 |
| 4 | #5964.00 | 53.6 PK | 68.2 | -14.6 | 1.89 H | 243 | 48.2 | 5.4 |
| 5 | 11650.00 | 56.6 PK | 74.0 | -17.4 | 1.44 H | 278 | 40.1 | 16.5 |
| 6 | 11650.00 | 42.2 AV | 54.0 | -11.8 | 1.44 H | 278 | 25.7 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5627.20 | 53.0 PK | 68.2 | -15.2 | 1.40 V | 338 | 48.5 | 4.5 |
| 2 | *5825.00 | 88.9 PK | | | 1.40 V | 338 | 49.5 | 39.4 |
| 3 | *5825.00 | 78.8 AV | | | 1.40 V | 338 | 39.4 | 39.4 |
| 4 | #5969.60 | 53.6 PK | 68.2 | -14.6 | 1.40 V | 338 | 48.2 | 5.4 |
| 5 | 11650.00 | 56.1 PK | 74.0 | -17.9 | 2.35 V | 253 | 39.6 | 16.5 |
| 6 | 11650.00 | 42.3 AV | 54.0 | -11.7 | 2.35 V | 253 | 25.8 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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| CHANNEL | TX Channel 38 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 69.6 PK | 74.0 | -4.4 | 1.96 H | 260 | 65.5 | 4.1 |
| **2** | **5150.00** | **53.3 AV** | **54.0** | **-0.7** | **1.96 H** | **260** | **49.2** | **4.1** |
| 3 | *5190.00 | 100.1 PK | | | 1.93 H | 259 | 61.7 | 38.4 |
| 4 | *5190.00 | 89.1 AV | | | 1.93 H | 259 | 50.7 | 38.4 |
| 5 | #10380.00 | 56.2 PK | 68.2 | -12.0 | 1.38 H | 289 | 39.6 | 16.6 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 67.2 PK | 74.0 | -6.8 | 1.05 V | 335 | 63.1 | 4.1 |
| 2 | 5150.00 | 51.7 AV | 54.0 | -2.3 | 1.05 V | 335 | 47.6 | 4.1 |
| 3 | *5190.00 | 99.4 PK | | | 1.03 V | 333 | 61.0 | 38.4 |
| 4 | *5190.00 | 88.0 AV | | | 1.03 V | 333 | 49.6 | 38.4 |
| 5 | #10380.00 | 56.1 PK | 68.2 | -12.1 | 2.49 V | 256 | 39.5 | 16.6 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| | | | |
|---|---|---|---|
| CHANNEL | TX Channel 46 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5230.00 | 102.1 PK | | | 1.90 H | 262 | 63.9 | 38.2 |
| 2 | *5230.00 | 91.8 AV | | | 1.90 H | 262 | 53.6 | 38.2 |
| 3 | 5350.00 | 53.8 PK | 74.0 | -20.2 | 1.86 H | 269 | 49.9 | 3.9 |
| 4 | 5350.00 | 39.7 AV | 54.0 | -14.3 | 1.86 H | 269 | 35.8 | 3.9 |
| 5 | #10460.00 | 56.2 PK | 68.2 | -12.0 | 1.37 H | 284 | 39.9 | 16.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5230.00 | 101.5 PK | | | 1.04 V | 334 | 63.3 | 38.2 |
| 2 | *5230.00 | 91.0 AV | | | 1.04 V | 334 | 52.8 | 38.2 |
| 3 | 5350.00 | 53.4 PK | 74.0 | -20.6 | 1.02 V | 338 | 49.5 | 3.9 |
| 4 | 5350.00 | 39.7 AV | 54.0 | -14.3 | 1.02 V | 338 | 35.8 | 3.9 |
| 5 | #10460.00 | 56.3 PK | 68.2 | -11.9 | 2.52 V | 242 | 40.0 | 16.3 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 54 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 54.2 PK | 74.0 | -19.8 | 2.03 H | 260 | 50.1 | 4.1 |
| 2 | 5150.00 | 40.0 AV | 54.0 | -14.0 | 2.03 H | 260 | 35.9 | 4.1 |
| 3 | *5270.00 | 102.5 PK | | | 2.04 H | 262 | 64.3 | 38.2 |
| 4 | *5270.00 | 92.8 AV | | | 2.04 H | 262 | 54.6 | 38.2 |
| 5 | #10540.00 | 56.2 PK | 68.2 | -12.0 | 1.32 H | 285 | 39.8 | 16.4 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5150.00 | 53.6 PK | 74.0 | -20.4 | 1.07 V | 334 | 49.5 | 4.1 |
| 2 | 5150.00 | 39.6 AV | 54.0 | -14.4 | 1.07 V | 334 | 35.5 | 4.1 |
| 3 | *5270.00 | 102.3 PK | | | 1.07 V | 334 | 64.1 | 38.2 |
| 4 | *5270.00 | 92.2 AV | | | 1.07 V | 334 | 54.0 | 38.2 |
| 5 | #10540.00 | 56.0 PK | 68.2 | -12.2 | 2.37 V | 246 | 39.6 | 16.4 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 62 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5310.00 | 100.5 PK | | | 1.94 H | 268 | 62.3 | 38.2 |
| 2 | *5310.00 | 89.9 AV | | | 1.94 H | 268 | 51.7 | 38.2 |
| 3 | 5350.00 | 70.2 PK | 74.0 | -3.8 | 1.94 H | 268 | 66.3 | 3.9 |
| **4** | **5350.00** | **53.3 AV** | **54.0** | **-0.7** | **1.94 H** | **268** | **49.4** | **3.9** |
| 5 | 10620.00 | 56.8 PK | 74.0 | -17.2 | 1.32 H | 280 | 40.1 | 16.7 |
| 6 | 10620.00 | 42.4 AV | 54.0 | -11.6 | 1.32 H | 280 | 25.7 | 16.7 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5310.00 | 100.2 PK | | | 1.02 V | 333 | 62.0 | 38.2 |
| 2 | *5310.00 | 89.6 AV | | | 1.02 V | 333 | 51.4 | 38.2 |
| 3 | 5350.00 | 69.5 PK | 74.0 | -4.5 | 1.10 V | 336 | 65.6 | 3.9 |
| 4 | 5350.00 | 52.1 AV | 54.0 | -1.9 | 1.10 V | 336 | 48.2 | 3.9 |
| 5 | 10620.00 | 56.8 PK | 74.0 | -17.2 | 2.39 V | 241 | 40.1 | 16.7 |
| 6 | 10620.00 | 42.5 AV | 54.0 | -11.5 | 2.39 V | 241 | 25.8 | 16.7 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 102 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5460.00 | 54.8 PK | 74.0 | -19.2 | 2.11 H | 265 | 50.4 | 4.4 |
| 2 | 5460.00 | 42.1 AV | 54.0 | -11.9 | 2.11 H | 265 | 37.7 | 4.4 |
| 3 | #5470.00 | 58.9 PK | 68.2 | -9.3 | 2.16 H | 259 | 54.4 | 4.5 |
| 4 | *5510.00 | 93.7 PK | | | 2.17 H | 260 | 54.9 | 38.8 |
| 5 | *5510.00 | 83.6 AV | | | 2.17 H | 260 | 44.8 | 38.8 |
| 6 | 11020.00 | 57.9 PK | 74.0 | -16.1 | 1.38 H | 279 | 39.8 | 18.1 |
| 7 | 11020.00 | 44.0 AV | 54.0 | -10.0 | 1.38 H | 279 | 25.9 | 18.1 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 5460.00 | 53.2 PK | 74.0 | -20.8 | 1.41 V | 338 | 48.8 | 4.4 |
| 2 | 5460.00 | 40.9 AV | 54.0 | -13.1 | 1.41 V | 338 | 36.5 | 4.4 |
| 3 | #5470.00 | 58.1 PK | 68.2 | -10.1 | 1.39 V | 337 | 53.6 | 4.5 |
| 4 | *5510.00 | 91.5 PK | | | 1.45 V | 336 | 52.7 | 38.8 |
| 5 | *5510.00 | 81.6 AV | | | 1.45 V | 336 | 42.8 | 38.8 |
| 6 | 11020.00 | 57.7 PK | 74.0 | -16.3 | 2.50 V | 254 | 39.6 | 18.1 |
| 7 | 11020.00 | 43.7 AV | 54.0 | -10.3 | 2.50 V | 254 | 25.6 | 18.1 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 110 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5550.00 | 91.7 PK | | | 1.39 H | 272 | 53.0 | 38.7 |
| 2 | *5550.00 | 82.1 AV | | | 1.39 H | 272 | 43.4 | 38.7 |
| 3 | 11100.00 | 56.9 PK | 74.0 | -17.1 | 1.31 H | 283 | 39.7 | 17.2 |
| 4 | 11100.00 | 42.8 AV | 54.0 | -11.2 | 1.31 H | 283 | 25.6 | 17.2 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5550.00 | 89.6 PK | | | 1.45 V | 335 | 50.9 | 38.7 |
| 2 | *5550.00 | 79.7 AV | | | 1.45 V | 335 | 41.0 | 38.7 |
| 3 | 11100.00 | 56.9 PK | 74.0 | -17.1 | 2.44 V | 255 | 39.7 | 17.2 |
| 4 | 11100.00 | 42.8 AV | 54.0 | -11.2 | 2.44 V | 255 | 25.6 | 17.2 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 134 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5670.00 | 90.8 PK | | | 1.75 H | 254 | 51.8 | 39.0 |
| 2 | *5670.00 | 81.0 AV | | | 1.75 H | 254 | 42.0 | 39.0 |
| 3 | #5725.00 | 54.2 PK | 68.2 | -14.0 | 1.73 H | 255 | 49.6 | 4.6 |
| 4 | 11340.00 | 57.9 PK | 74.0 | -16.1 | 1.38 H | 283 | 40.2 | 17.7 |
| 5 | 11340.00 | 43.5 AV | 54.0 | -10.5 | 1.38 H | 283 | 25.8 | 17.7 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | *5670.00 | 88.7 PK | | | 1.38 V | 337 | 49.7 | 39.0 |
| 2 | *5670.00 | 79.0 AV | | | 1.38 V | 337 | 40.0 | 39.0 |
| 3 | #5725.00 | 54.3 PK | 68.2 | -13.9 | 1.40 V | 334 | 49.7 | 4.6 |
| 4 | 11340.00 | 57.3 PK | 74.0 | -16.7 | 2.36 V | 254 | 39.6 | 17.7 |
| 5 | 11340.00 | 43.2 AV | 54.0 | -10.8 | 2.36 V | 254 | 25.5 | 17.7 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 151 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5631.20 | 53.1 PK | 68.2 | -15.1 | 1.92 H | 245 | 48.6 | 4.5 |
| 2 | *5755.00 | 88.1 PK | | | 1.92 H | 245 | 49.0 | 39.1 |
| 3 | *5755.00 | 78.1 AV | | | 1.92 H | 245 | 39.0 | 39.1 |
| 4 | #5946.40 | 53.8 PK | 68.2 | -14.4 | 1.92 H | 245 | 48.5 | 5.3 |
| 5 | 11510.00 | 56.9 PK | 74.0 | -17.1 | 1.33 H | 281 | 40.1 | 16.8 |
| 6 | 11510.00 | 42.3 AV | 54.0 | -11.7 | 1.33 H | 281 | 25.5 | 16.8 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5629.60 | 53.6 PK | 68.2 | -14.6 | 1.41 V | 338 | 49.1 | 4.5 |
| 2 | *5755.00 | 88.1 PK | | | 1.41 V | 338 | 49.0 | 39.1 |
| 3 | *5755.00 | 75.7 AV | | | 1.41 V | 338 | 36.6 | 39.1 |
| 4 | #5972.00 | 54.0 PK | 68.2 | -14.2 | 1.41 V | 338 | 48.7 | 5.3 |
| 5 | 11510.00 | 56.8 PK | 74.0 | -17.2 | 2.36 V | 244 | 40.0 | 16.8 |
| 6 | 11510.00 | 42.3 AV | 54.0 | -11.7 | 2.36 V | 244 | 25.5 | 16.8 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| CHANNEL | TX Channel 159 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 40GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5605.60 | 53.7 PK | 68.2 | -14.5 | 1.85 H | 246 | 49.3 | 4.4 |
| 2 | *5795.00 | 89.1 PK | | | 1.85 H | 246 | 49.9 | 39.2 |
| 3 | *5795.00 | 78.7 AV | | | 1.85 H | 246 | 39.5 | 39.2 |
| 4 | #5956.80 | 53.4 PK | 68.2 | -14.8 | 1.85 H | 246 | 48.1 | 5.3 |
| 5 | 11590.00 | 56.1 PK | 74.0 | -17.9 | 1.39 H | 280 | 39.6 | 16.5 |
| 6 | 11590.00 | 42.0 AV | 54.0 | -12.0 | 1.39 H | 280 | 25.5 | 16.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | #5620.00 | 53.9 PK | 68.2 | -14.3 | 1.45 V | 336 | 49.4 | 4.5 |
| 2 | *5795.00 | 87.1 PK | | | 1.45 V | 336 | 47.9 | 39.2 |
| 3 | *5795.00 | 76.5 AV | | | 1.45 V | 336 | 37.3 | 39.2 |
| 4 | #5988.80 | 54.6 PK | 68.2 | -13.6 | 1.45 V | 336 | 49.3 | 5.3 |
| 5 | 11590.00 | 56.5 PK | 74.0 | -17.5 | 2.36 V | 240 | 40.0 | 16.5 |
| 6 | 11590.00 | 42.0 AV | 54.0 | -12.0 | 2.36 V | 240 | 25.5 | 16.5 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

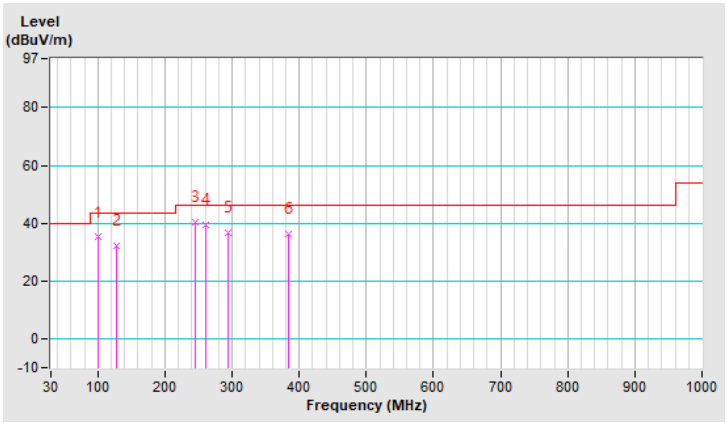
Below 1GHz Worst-Case Data: 802.11n (HT20)

| | | | |
|---|---|---|---|
| CHANNEL | TX Channel 52 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 99.84 | 35.1 QP | 43.5 | -8.4 | 1.49 H | 137 | 48.7 | -13.6 |
| 2 | 127.97 | 32.3 QP | 43.5 | -11.2 | 1.49 H | 12 | 43.2 | -10.9 |
| 3 | 244.37 | 40.4 QP | 46.0 | -5.6 | 1.00 H | 275 | 50.4 | -10.0 |
| 4 | 259.89 | 39.3 QP | 46.0 | -6.7 | 1.00 H | 141 | 48.9 | -9.6 |
| 5 | 293.84 | 36.9 QP | 46.0 | -9.1 | 1.00 H | 151 | 45.0 | -8.1 |
| 6 | 384.05 | 36.2 QP | 46.0 | -9.8 | 1.00 H | 309 | 42.3 | -6.1 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

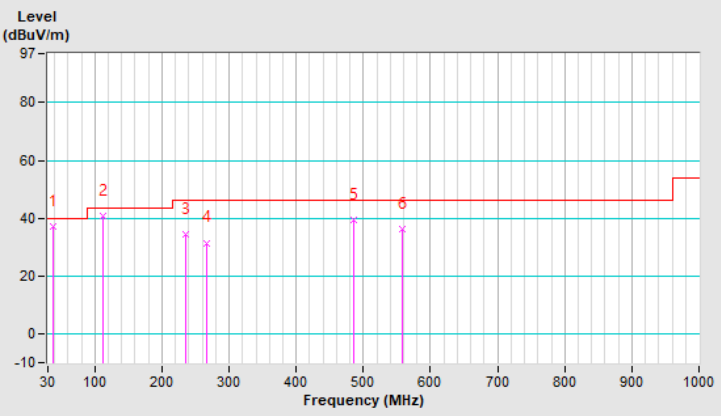


| | | | |
|---|---|---|---|
| CHANNEL | TX Channel 52 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 37.76 | 37.0 QP | 40.0 | -3.0 | 1.01 V | 218 | 47.6 | -10.6 |
| 2 | 112.45 | 40.9 QP | 43.5 | -2.6 | 1.01 V | 14 | 53.1 | -12.2 |
| 3 | 235.64 | 34.6 QP | 46.0 | -11.4 | 1.50 V | 167 | 45.1 | -10.5 |
| 4 | 266.68 | 31.5 QP | 46.0 | -14.5 | 1.01 V | 116 | 40.5 | -9.0 |
| 5 | 484.93 | 39.2 QP | 46.0 | -6.8 | 1.01 V | 25 | 43.4 | -4.2 |
| 6 | 557.68 | 36.4 QP | 46.0 | -9.6 | 1.01 V | 15 | 39.4 | -3.0 |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.



## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 - 0.5 | 66 - 56 | 56 - 46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

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

### 4.2.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| Test Receiver<br>ROHDE & SCHWARZ | ESR3 | 102412 | Feb. 14, 2019 | Feb. 13, 2020 |
| RF signal cable (with 10dB PAD)<br>Woken | 5D-FB | Cable-cond2-01 | Sep. 05, 2019 | Sep. 04, 2020 |
| LISN<br>ROHDE & SCHWARZ<br>(EUT) | ESH2-Z5 | 100100 | Jan. 30, 2019 | Jan. 29, 2020 |
| LISN<br>ROHDE & SCHWARZ<br>(Peripheral) | ESH3-Z5 | 100312 | Aug. 13, 2019 | Aug. 12, 2020 |
| Software<br>ADT | BV ADT_Cond_<br>V7.3.7.4 | NA | NA | NA |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2.
3. The VCCI Site Registration No. is C-12047.

### 4.2.3 Test Procedures

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

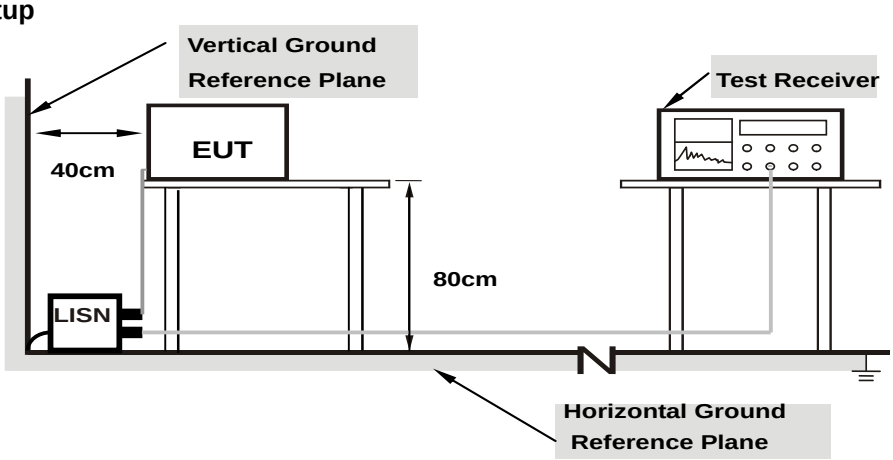
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

### 4.2.4 Deviation from Test Standard

No deviation.

### 4.2.5 Test Setup




**Note: 1.Support units were connected to second LISN.**

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

### 4.2.6 EUT Operating Conditions

Same as 4.1.6.

### 4.2.7 Test Results

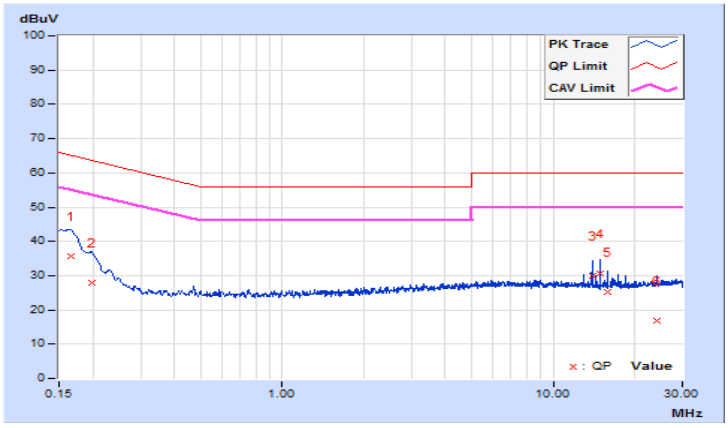
Worst-Case Data: 802.11n (HT20)

| Phase | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|---|---|---|---|

| No | Freq. | Corr. Factor | Reading Value [dB (uV)] | | Emission Level [dB (uV)] | | Limit [dB (uV)] | | Margin (dB) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | (dB) | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16575 | 10.11 | 25.70 | 7.58 | 35.81 | 17.69 | 65.17 | 55.17 | -29.36 | -37.48 |
| 2 | 0.19721 | 10.12 | 17.89 | 5.70 | 28.01 | 15.82 | 63.73 | 53.73 | -35.72 | -37.91 |
| 3 | 13.94025 | 10.50 | 19.49 | 18.43 | 29.99 | 28.93 | 60.00 | 50.00 | -30.01 | -21.07 |
| **4** | **14.93475** | **10.51** | **20.05** | **18.69** | **30.56** | **29.20** | **60.00** | **50.00** | **-29.44** | **-20.80** |
| 5 | 15.93150 | 10.54 | 14.57 | 12.51 | 25.11 | 23.05 | 60.00 | 50.00 | -34.89 | -26.95 |
| 6 | 24.24300 | 10.53 | 6.43 | 4.73 | 16.96 | 15.26 | 60.00 | 50.00 | -43.04 | -34.74 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

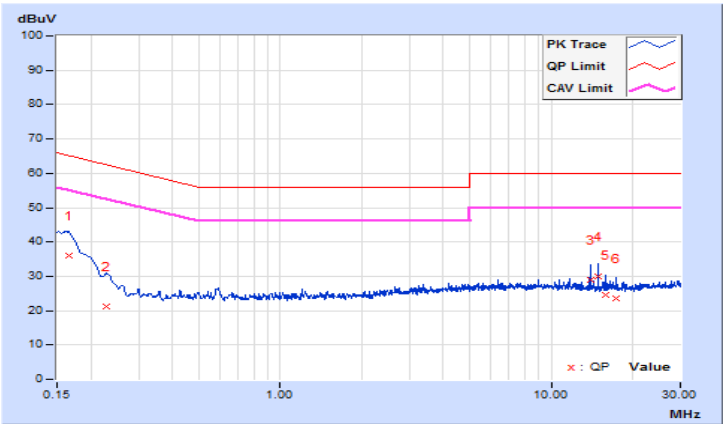


| Phase | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|---|---|---|---|

| No | Freq. | Corr. Factor | Reading Value [dB (uV)] | | Emission Level [dB (uV)] | | Limit [dB (uV)] | | Margin (dB) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | (dB) | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16524 | 10.17 | 25.93 | 7.68 | 36.10 | 17.85 | 65.20 | 55.20 | -29.10 | -37.35 |
| 2 | 0.22743 | 10.19 | 10.86 | 4.79 | 21.05 | 14.98 | 62.54 | 52.54 | -41.49 | -37.56 |
| 3 | 13.93800 | 10.63 | 18.41 | 17.23 | 29.04 | 27.86 | 60.00 | 50.00 | -30.96 | -22.14 |
| 4 | 14.93475 | 10.65 | 19.20 | 17.90 | 29.85 | 28.55 | 60.00 | 50.00 | -30.15 | -21.45 |
| 5 | 15.92925 | 10.68 | 13.85 | 11.88 | 24.53 | 22.56 | 60.00 | 50.00 | -35.47 | -27.44 |
| 6 | 17.42100 | 10.73 | 12.81 | 11.05 | 23.54 | 21.78 | 60.00 | 50.00 | -36.46 | -28.22 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

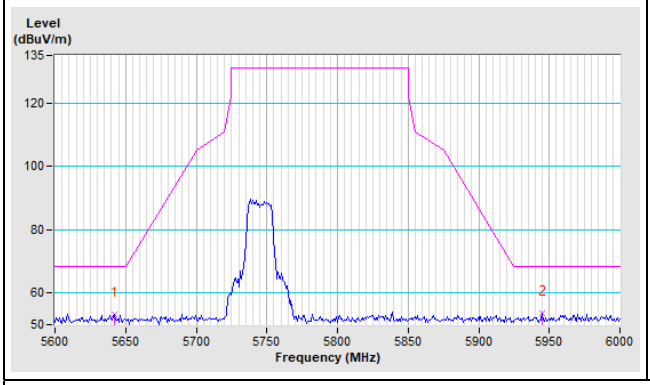
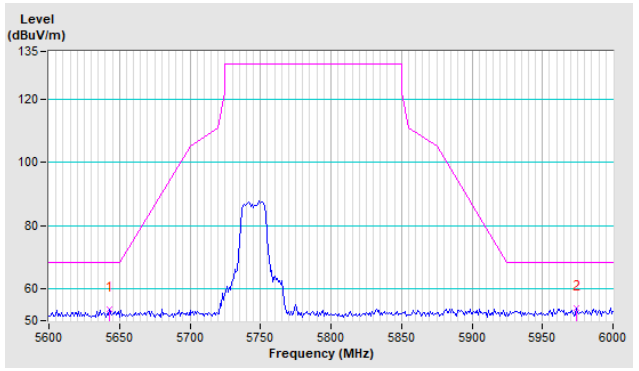
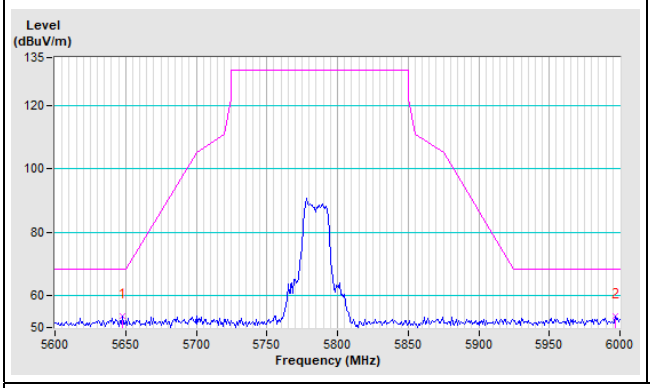
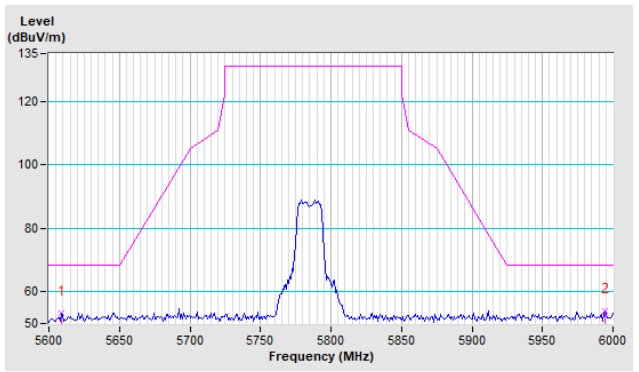
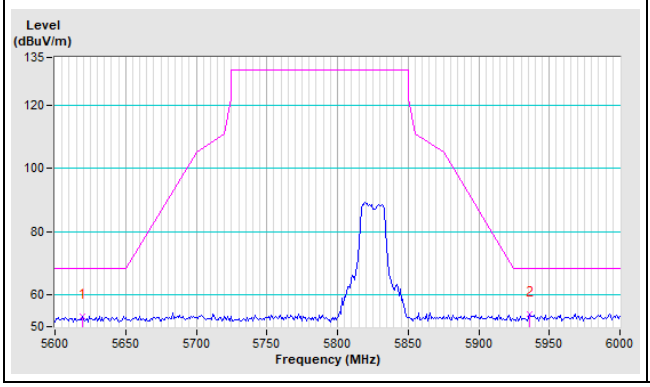
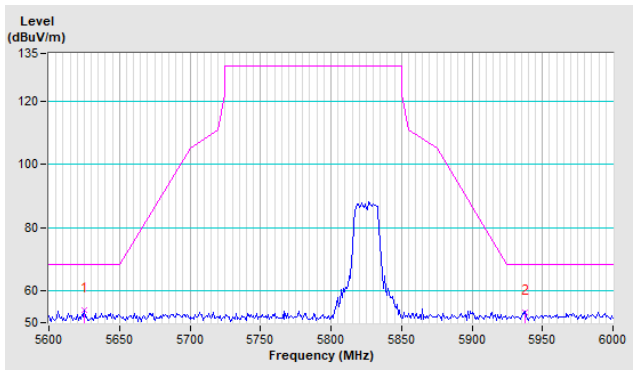


## 5 Pictures of Test Arrangements

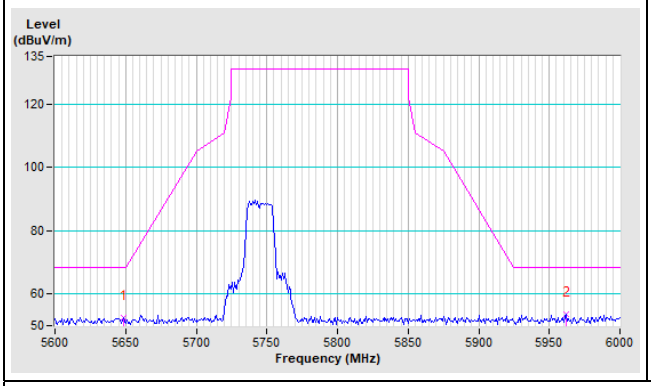
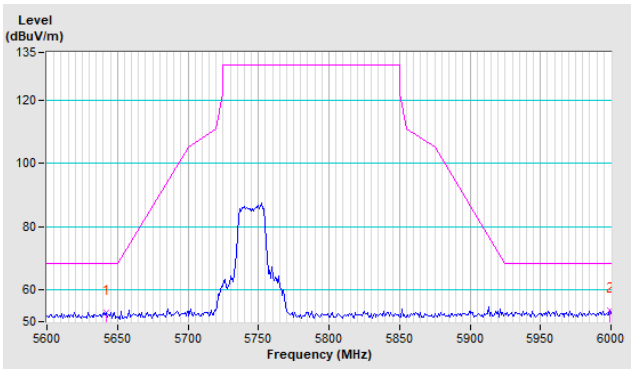
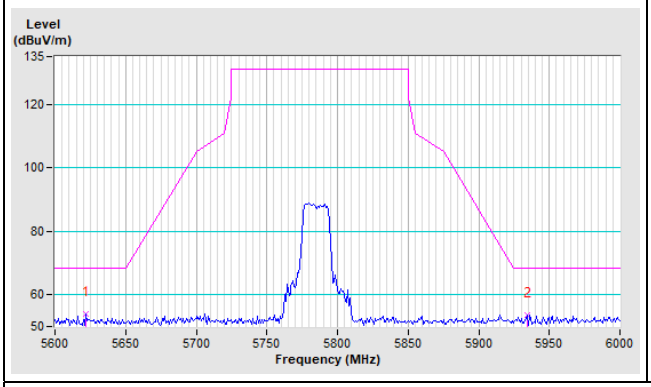
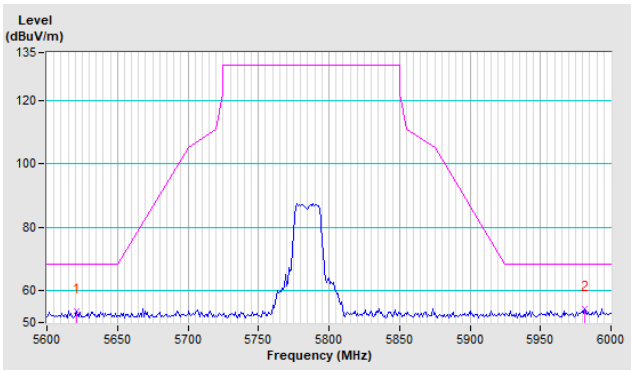
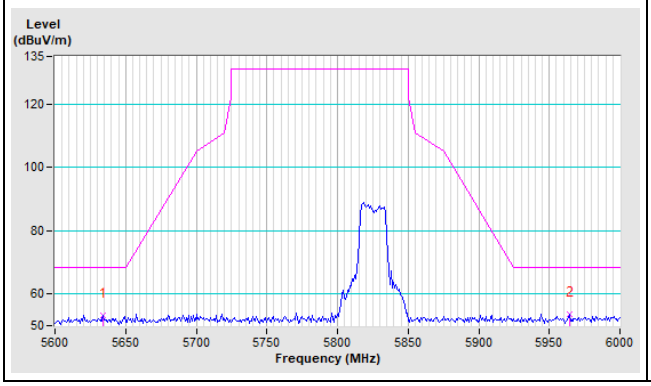
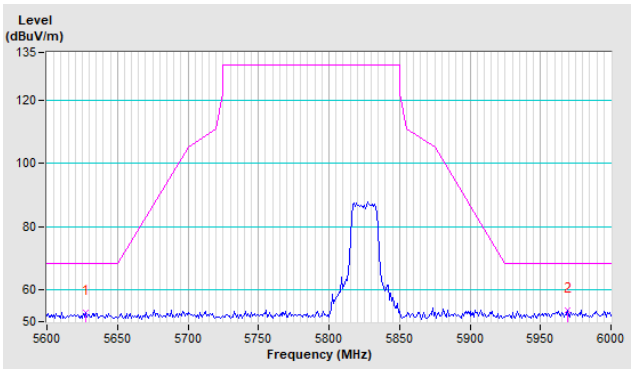
Please refer to the attached file (Test Setup Photo).

## Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

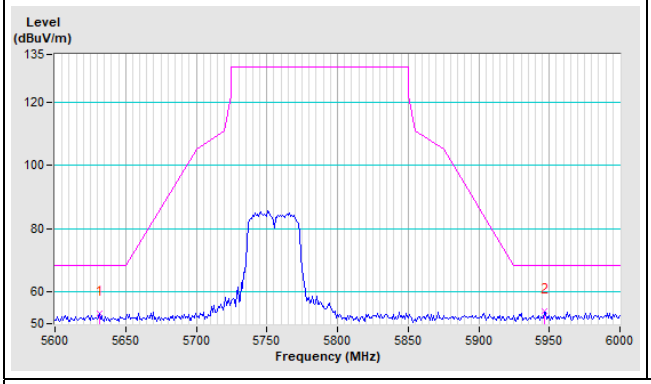
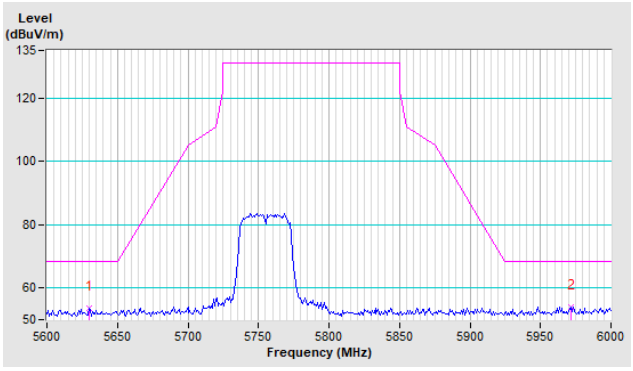
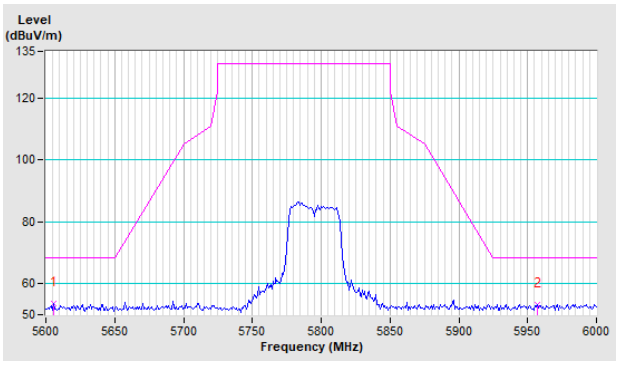
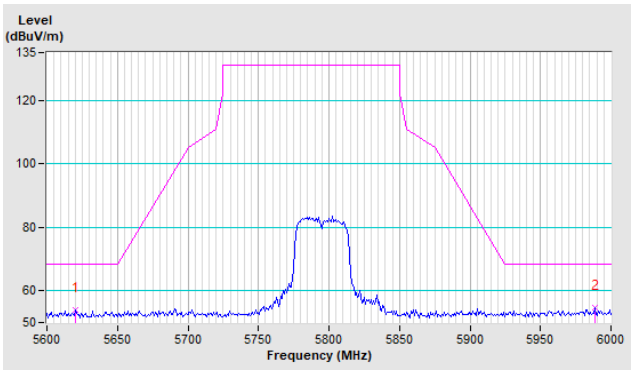
802.11a

| CH149 | |
|---|---|
| Horizontal | Vertical |
|  |  |
| CH157 | |
| Horizontal | Vertical |
|  |  |
| CH165 | |
| Horizontal | Vertical |
|  |  |

802.11n (HT20)

| CH149 | |
|---|---|
| Horizontal | Vertical |
|  |  |
| **CH157** | |
| Horizontal | Vertical |
|  |  |
| **CH165** | |
| Horizontal | Vertical |
|  |  |

## 802.11n (HT40)

| CH151 | |
|---|---|
| Horizontal | Vertical |
|  |  |
| **CH159** | |
| Horizontal | Vertical |
|  |  |

**Appendix – Information of the Testing Laboratories**

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following: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The address and road map of all our labs can be found in our web site also.

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