

# **FCC Test Report**

Report No.: RF141227C17A

FCC ID: 2ACTO-AP100C

Test Model: AP 100C

Received Date: Dec. 27, 2014

**Test Date:** Jan. 23 ~ May 27, 2015

Issued Date: May 27, 2015

Applicant: Sophos Ltd

Address: The Pentagon, Abingdon, OX14 3YP, United Kingdom

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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 (R.O.C.)





This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

Report No.: RF141227C17A Page No. 1 / 116 Report Format Version: 6.1.1



# **Table of Contents**

| R | Release Control Record |  |     |  |  |
|---|------------------------|--|-----|--|--|
| 1 | C                      | ertificate of Conformity                             | 5   |  |  |
| 2 | S                      | ummary of Test Results                               | 6   |  |  |
|   | 2.1<br>2.2             | Measurement Uncertainty                              |     |  |  |
| 3 | G                      | eneral Information                                   | 7   |  |  |
|   | 3.1                    | General Description of EUT                           | 7   |  |  |
|   | 3.2                    | Description of Test Modes                            |     |  |  |
|   | 3.2.1                  | Test Mode Applicability and Tested Channel Detail    | 11  |  |  |
|   | 3.3                    | Duty Cycle of Test Signal                            |     |  |  |
|   | 3.4                    | Description of Support Units                         |     |  |  |
|   | 3.4.1                  | Consiguration of System under Test                   |     |  |  |
|   | 3.5                    | General Description of Applied Standard              |     |  |  |
| 4 | Т                      | est Types and Results                                |     |  |  |
|   | 4.1                    | Radiated Emission and Bandedge Measurement           |     |  |  |
|   |                        | Limits of Radiated Emission and Bandedge Measurement |     |  |  |
|   |                        | Test Instruments                                     |     |  |  |
|   |                        | Test Procedure  Deviation from Test Standard         |     |  |  |
|   |                        | Test Setup   |     |  |  |
|   |                        | EUT Operating Condition                              |     |  |  |
|   |                        | Test Results   |     |  |  |
|   | 4.2                    | Conducted Emission Measurement                       |     |  |  |
|   |                        | Limits of Conducted Emission Measurement             |     |  |  |
|   |                        | Test Instruments                                     |     |  |  |
|   |                        | Test Procedure                                       |     |  |  |
|   |                        | Deviation from Test Standard                         |     |  |  |
|   |                        | EUT Operating Condition                              |     |  |  |
|   |                        | Test Results   |     |  |  |
|   | 4.3                    | Transmit Power Measurment                            |     |  |  |
|   |                        | Limits of Transmit Power Measurement                 | 85  |  |  |
|   |                        | Test Setup   |     |  |  |
|   |                        | Test Instruments                                     |     |  |  |
|   |                        | Test Procedure                                       |     |  |  |
|   |                        | Deviation fromTest Standard                          |     |  |  |
|   |                        | Test Result  |     |  |  |
|   | 4.4                    | Peak Power Spectral Density Measurement              |     |  |  |
|   | 4.4.1                  | Limits of Peak Power Spectral Density Measurement    |     |  |  |
|   | 4.4.2                  | Test Setup   | 105 |  |  |
|   |                        | Test Instruments                                     |     |  |  |
|   |                        | Test Procedure                                       |     |  |  |
|   |                        | Deviation from Test Standard                         |     |  |  |
|   |                        | EUT Operating Condition                              |     |  |  |
|   | 4.4.7                  | Test Results Frequency Stability Measurement         |     |  |  |
|   |                        | Limits of Frequency Stability Measurement            |     |  |  |
|   |                        | Test Setup   |     |  |  |
|   |                        | Test Instruments                                     |     |  |  |
|   |                        | Test Procedure                                       |     |  |  |
|   |                        | Deviation from Test Standard                         |     |  |  |
|   | 4.5.6                  | EUT Operating Condition                              | 113 |  |  |



| 4.5.7 Test Results  |  |
|---|--|
| Appendix – Information on the Testing Laboratories        |  |
| Appoint The Theory of the Tooking Laboratories imminimum. |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |



## **Release Control Record**

| Issue No.    | Description       | Date Issued  |
|--------------|-------------------|--------------|
| RF141227C17A | Original release. | May 27, 2015 |

Report No.: RF141227C17A Page No. 4 / 116 Report Format Version: 6.1.1



## 1 Certificate of Conformity

**Product:** Sophos wireless Access Point AP 100C

Brand: Sophos

Test Model: AP 100C

Sample Status: Engineering sample

Applicant: Sophos Ltd

**Test Date:** Jan. 23 ~ May 27, 2015

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10:2009

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 EMC characteristics under the conditions specified in this report.

Prepared by: , Date: May 27, 2015

Pettie Chen / Senior Specialist

**Approved by :** , **Date:** May 27, 2015

Ken Liu / Senior Manager



# 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart E (SECTION 15.407) |   |        |   |  |  |  |
|--|---|--------|---|--|--|--|
| FCC<br>Clause                                  | Test Item                                     | Result | Remarks   |  |  |  |
| 15.407(b)(6)                                   | AC Power Conducted Emissions                  | PASS   | Meet the requirement of limit. Minimum passing margin is -15.73dB at 0.49735MHz.                            |  |  |  |
| 15.407(b)<br>(1/2/3/4/6)                       | Radiated Emissions & Band Edge<br>Measurement | PASS   | Meet the requirement of limit. Minimum passing margin is -1.0dB at 5350.00, 5470.00, 11000.00, 11160.00MHz. |  |  |  |
| 15.407(a)(1/2<br>/3)                           | Max Average Transmit Power                    | PASS   | Meet the requirement of limit.  |  |  |  |
| 15.407(a)(1/2<br>/3)                           | Peak Power Spectral Density                   | PASS   | Meet the requirement of limit.  |  |  |  |
| 15.407(g)                                      | Frequency Stability                           | PASS   | Meet the requirement of limit.  |  |  |  |
| 15.203   | Antenna Requirement                           | PASS   | Ant. D, E: No antenna connector is used. Ant. F: Antenna connector is I-PEX not a standard connector.       |  |  |  |

## 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       | Expended Uncertainty (k=2) (±) |
|------------------------------------|-----------------|--------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz  | 2.44 dB                        |
| Radiated Emissions up to 1 GHz     | 30MHz ~ 200MHz  | 3.63 dB                        |
|                                    | 200MHz ~1000MHz | 3.64 dB                        |
| Dedicted Emissions above 1 CUz     | 1GHz ~ 18GHz    | 2.29 dB                        |
| Radiated Emissions above 1 GHz     | 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               | Sophos wireless Access Point AP 100C                      |  |  |
|-----------------------|---|--|--|
| Brand                 | Sophos  |  |  |
| Test Model            | AP 100C   |  |  |
| Status of EUT         | Engineering sample  |  |  |
| Power Supply Rating   | 12Vdc (adapter)   |  |  |
|                       | 55Vdc (PoE)   |  |  |
| Modulation Type       | 256QAM, 64QAM, 16QAM, QPSK, BPSK                          |  |  |
| Modulation Technology | OFDM  |  |  |
|                       | 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps |  |  |
| Transfer Rate         | 802.11n: up to 450.0Mbps                                  |  |  |
|                       | 802.11ac: up to 1300Mbps                                  |  |  |
| Operating Frequency   | 5260 ~ 5320MHz & 5500 ~ 5700MHz                           |  |  |
|                       | 5260 ~ 5320MHz:   |  |  |
|                       | 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20)           |  |  |
|                       | 2 for 802.11n (HT40), 802.11ac (VHT40)                    |  |  |
| Number of Channel     | 1 for 802.11ac (VHT80)                                    |  |  |
| Number of Chamiler    | 5500 ~ 5700MHz:   |  |  |
|                       | 8 for 802.11a, 802.11n (HT20), 802.11ac (VHT20)           |  |  |
|                       | 3 for 802.11n (HT40), 802.11ac (VHT40)                    |  |  |
|                       | 1 for 802.11ac (VHT80)                                    |  |  |
|                       | 1TX:  |  |  |
|                       | 802.11a:  |  |  |
|                       | 5260 ~ 5320MHz: 238.232mW                                 |  |  |
|                       | 5500 ~ 5700MHz: 131.522mW                                 |  |  |
|                       | 2TX:  |  |  |
|                       | 802.11n (HT20):   |  |  |
|                       | 5260 ~ 5320MHz: 231.677mW                                 |  |  |
|                       | 5500 ~ 5700MHz: 235.271mW                                 |  |  |
|                       | 802.11n (HT40):   |  |  |
| Output Power          | 5260 ~ 5320MHz: 200.234mW                                 |  |  |
| Output i owei         | 5500 ~ 5700MHz: 214.161mW                                 |  |  |
|                       | 802.11ac (VHT20):   |  |  |
|                       | 5260 ~ 5320MHz: 229.147mW                                 |  |  |
|                       | 5500 ~ 5700MHz: 239.777mW                                 |  |  |
|                       | 802.11ac (VHT40):   |  |  |
|                       | 5260 ~ 5320MHz: 200.237mW                                 |  |  |
|                       | 5500 ~ 5700MHz: 215.108mW                                 |  |  |
|                       | 802.11ac (VHT80):   |  |  |
|                       | 5260 ~ 5320MHz: 128.982mW                                 |  |  |
|                       | 5500 ~ 5700MHz: 76.715mW                                  |  |  |



|                     | 3TX:                      |
|---------------------|---------------------------|
|                     | 802.11n (HT20):           |
|                     | 5260 ~ 5320MHz: 101.608mW |
|                     | 5500 ~ 5700MHz: 101.902mW |
|                     | 802.11n (HT40):           |
|                     | 5260 ~ 5320MHz: 199.282mW |
|                     | 5500 ~ 5700MHz: 191.394mW |
| Output Dower        | 802.11ac (VHT20):         |
| Output Power        | 5260 ~ 5320MHz: 98.321mW  |
|                     | 5500 ~ 5700MHz: 102.578mW |
|                     | 802.11ac (VHT40):         |
|                     | 5260 ~ 5320MHz: 196.299mW |
|                     | 5500 ~ 5700MHz: 194.075mW |
|                     | 802.11ac (VHT80):         |
|                     | 5260 ~ 5320MHz: 83.442mW  |
|                     | 5500 ~ 5700MHz: 66.455mW  |
| Antenna Type        | Refer to Note             |
| Antenna Connector   | Refer to Note             |
| Accessory Device    | NA                        |
| Data Cable Supplied | NA                        |

#### Note:

- 1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report to BV ADT report no. RF141227C17-1. Differences compared with the original report are adding 5260~5320MHz and 5500~5700MHz band and a PoE for support unit. Therefore, the EUT was re-tested and presented in the test report.
- 2. The EUT incorporates a MIMO function. Physically, the EUT provides 3 completed transmitters and 3 receivers.

| Modulation Mode  | TX FUNCTION  |
|------------------|--------------|
| 802.11a          | 1TX (Ant. D) |
| 802.11n (HT20)   | 2TX/3TX      |
| 802.11n (HT40)   | 2TX/3TX      |
| 802.11ac (VHT20) | 2TX/3TX      |
| 802.11ac (VHT40) | 2TX/3TX      |
| 802.11ac (VHT80) | 2TX/3TX      |

<sup>\*</sup>The EUT doesn't support diversity function in 802.11a and 2TX of 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40) & 802.11ac (VHT80).

3. The EUT uses following adapter and PoE.

| Adapter (Support unit only) |                               |  |  |
|-----------------------------|-------------------------------|--|--|
| Brand                       | Asian Power Devices Inc.      |  |  |
| Model                       | WA-18Q12R                     |  |  |
| Input Power                 | 100-240Vac ~50-60Hz 0.5A Max. |  |  |
| Output Power                | 12Vdc / 1.5A                  |  |  |
| Power Line                  | 1.5m cable without core       |  |  |

<sup>\*</sup>For 802.11a was fixed in Antenna D.

<sup>\*</sup>For 2TX of 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40) & 802.11ac (VHT80) were fixed in Antenna D & E

<sup>\*</sup>The EUT doesn't support beamforming function.



| PoE (Support unit only)  |                           |  |  |  |
|--------------------------|---------------------------|--|--|--|
| Brand PowerDesine        |                           |  |  |  |
| Model                    | PD-9001GR/AC              |  |  |  |
| Input Power              | 100-240Vac~50-60Hz, 0.67A |  |  |  |
| Output Power 55Vdc, 0.6A |                           |  |  |  |

4. The following antennas were provided to the EUT.

| Antenna Type | PIFA               |            |                   |
|--------------|--------------------|------------|-------------------|
|              | P/N                | Gain (dBi) | Antenna Connector |
| Ant. D       | RFMTA100800NN5B001 | 6.13       | NA                |
| Ant. E       | RFMTA100800NN5B002 | 5.96       | NA                |
| Ant. F       | RFMTA150719IM5B301 | 6.27       | I-PEX             |

5. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.



## 3.2 Description of Test Modes

#### FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

## 2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

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

## 1 channel is provided for 802.11ac (VHT80):

| Channel | Frequency |  |
|---------|-----------|--|
| 58      | 5290MHz   |  |

#### FOR 5500 ~ 5700MHz

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 100     | 5500 MHz  | 116     | 5580 MHz  |
| 104     | 5520 MHz  | 132     | 5660 MHz  |
| 108     | 5540 MHz  | 136     | 5680 MHz  |
| 112     | 5560 MHz  | 140     | 5700 MHz  |

## 3 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

|         | \ //      | , ,     |           |
|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency |
| 102     | 5510 MHz  | 134     | 5670 MHz  |
| 110     | 5550 MHz  |         |           |

## 1 channel is provided for 802.11ac (VHT80):

| Channel | Frequency |
|---------|-----------|
| 106     | 5530MHz   |

Report No.: RF141227C17A Page No. 10 / 116 Report Format Version: 6.1.1



## 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT<br>CONFIGURE |       | APPLICA | ABLE TO      |      | DESCRIPTION        |
|------------------|-------|---------|--------------|------|--------------------|
| MODE             | RE≥1G | RE<1G   | PLC          | APCM | DESCRIPTION        |
| Α                | √     | √       | $\checkmark$ | √    | Power from Adapter |
| В                | -     | V       | √            | -    | Power from PoE     |

Where **RE≥1G:** Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

**APCM:** Antenna Port Conducted Measurement

Note: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane.** 

2. "-" means no effect.

## 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<br>CONFIGURE<br>MODE | MODE               | FREQ.<br>BAND (MHz) | AVAILABLE<br>CHANNEL | TESTED<br>CHANNEL | MODULATION<br>TECHNOLOGY | MODULATION<br>TYPE | DATA<br>RATE<br>(Mbps) | TX<br>FUNCTION |
|--------------------------|--------------------|---------------------|----------------------|-------------------|--------------------------|--------------------|------------------------|----------------|
| Α                        | 802.11a            |                     | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 6.0                    | 1TX            |
| Α                        | 802.11n (HT20)     |                     | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 6.5                    | 2TX/3TX        |
| Α                        | 802.11n (HT40)     |                     | 54 to 62             | 54, 62            | OFDM                     | BPSK               | 13.5                   | 2TX/3TX        |
| Α                        | 000 44 () (  ITOO) |                     | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 13.0                   | 2TX            |
| Α                        | 802.11ac (VHT20)   | 5260-5320           | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 19.5                   | 3TX            |
| Α                        | 000 44 () (        |                     | 54 to 62             | 54, 62            | OFDM                     | BPSK               | 27.0                   | 2TX            |
| Α                        | 802.11ac (VHT40)   |                     | 54 to 62             | 54, 62            | OFDM                     | BPSK               | 40.5                   | 3TX            |
| А                        | 000 44 (1/1/20)    |                     | 58                   | 58                | OFDM                     | BPSK               | 58.5                   | 2TX            |
| А                        | 802.11ac (VHT80)   |                     | 58                   | 58                | OFDM                     | BPSK               | 87.5                   | 3TX            |
| Α                        | 802.11a            |                     | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 6.0                    | 1TX            |
| Α                        | 802.11n (HT20)     |                     | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 6.5                    | 2TX/3TX        |
| Α                        | 802.11n (HT40)     |                     | 102 to 134           | 102, 110, 134     | OFDM                     | BPSK               | 13.5                   | 2TX/3TX        |
| Α                        | 000 44 () (  ITOO) |                     | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 13.0                   | 2TX            |
| А                        | 802.11ac (VHT20)   | 5500-5700           | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 19.5                   | 3TX            |
| Α                        | 000 44 0/11740     |                     | 102 to 134           | 102, 110, 134     | OFDM                     | BPSK               | 27.0                   | 2TX            |
| А                        | 802.11ac (VHT40)   |                     | 102 to 134           | 102, 110, 134     | OFDM                     | BPSK               | 40.5                   | 3TX            |
| А                        | 000 44 () (11700)  |                     | 106                  | 106               | OFDM                     | BPSK               | 58.5                   | 2TX            |
| А                        | 802.11ac (VHT80)   |                     | 106                  | 106               | OFDM                     | BPSK               | 87.5                   | 3TX            |



## 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<br>CONFIGURE<br>MODE | MODE    | FREQ. BAND<br>(MHz) | AVAILABLE<br>CHANNEL | TESTED<br>CHANNEL | MODULATION<br>TECHNOLOGY | MODULATION<br>TYPE | DATA<br>RATE<br>(Mbps) | TX<br>FUNCTION |
|--------------------------|---------|---------------------|----------------------|-------------------|--------------------------|--------------------|------------------------|----------------|
| 4.5                      | 802.11a | 5260-5320           | 52 to 64             | 0.4               | OFDM                     | BPSK               | 6.0                    | 1TX            |
| A, B                     | 802.11a | 5500-5700           | 100 to 140           | 64                | OFDM                     | BPSK               | 6.0                    | 1TX            |

### **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<br>CONFIGURE<br>MODE | MODE    | FREQ. BAND<br>(MHz) | AVAILABLE<br>CHANNEL | TESTED<br>CHANNEL | MODULATION<br>TECHNOLOGY | MODULATION<br>TYPE | DATA<br>RATE<br>(Mbps) | TX<br>FUNCTION |
|--------------------------|---------|---------------------|----------------------|-------------------|--------------------------|--------------------|------------------------|----------------|
| 4 5                      | 802.11a | 5260-5320           | 52 to 64             | 0.4               | OFDM                     | BPSK               | 6.0                    | 1TX            |
| A, B                     | 802.11a | 5500-5700           | 100 to 140           | 64                | OFDM                     | BPSK               | 6.0                    | 1TX            |

Report No.: RF141227C17A Page No. 12 / 116 Report Format Version: 6.1.1



## **Antenna Port Conducted Measurement:**

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, 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<br>CONFIGURE<br>MODE | MODE               | FREQ.<br>BAND (MHz) | AVAILABLE<br>CHANNEL | TESTED<br>CHANNEL | MODULATION<br>TECHNOLOGY | MODULATION<br>TYPE | DATA<br>RATE<br>(Mbps) | TX<br>FUNCTION |
|--------------------------|--------------------|---------------------|----------------------|-------------------|--------------------------|--------------------|------------------------|----------------|
| Α                        | 802.11a            |                     | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 6.0                    | 1TX            |
| Α                        | 802.11n (HT20)     |                     | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 6.5                    | 2TX/3TX        |
| Α                        | 802.11n (HT40)     |                     | 54 to 62             | 54, 62            | OFDM                     | BPSK               | 13.5                   | 2TX/3TX        |
| А                        | 000 44 () (  ITOO) |                     | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 13.0                   | 2TX            |
| Α                        | 802.11ac (VHT20)   | 5260-5320           | 52 to 64             | 52, 60, 64        | OFDM                     | BPSK               | 19.5                   | 3TX            |
| А                        | 000 44 () (        |                     | 54 to 62             | 54, 62            | OFDM                     | BPSK               | 27.0                   | 2TX            |
| А                        | 802.11ac (VHT40)   |                     | 54 to 62             | 54, 62            | OFDM                     | BPSK               | 40.5                   | 3TX            |
| А                        | 0.00 44 0.01700)   |                     | 58                   | 58                | OFDM                     | BPSK               | 58.5                   | 2TX            |
| А                        | 802.11ac (VHT80)   |                     | 58                   | 58                | OFDM                     | BPSK               | 87.5                   | 3TX            |
| А                        | 802.11a            |                     | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 6.0                    | 1TX            |
| А                        | 802.11n (HT20)     |                     | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 6.5                    | 2TX/3TX        |
| А                        | 802.11n (HT40)     |                     | 102 to 134           | 102, 110, 134     | OFDM                     | BPSK               | 13.5                   | 2TX/3TX        |
| Α                        | 000 44 (1/1/20)    |                     | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 13.0                   | 2TX            |
| А                        | 802.11ac (VHT20)   | 5500-5700           | 100 to 140           | 100, 116, 140     | OFDM                     | BPSK               | 19.5                   | 3TX            |
| А                        |                    |                     | 102 to 134           | 102, 110, 134     | OFDM                     | BPSK               | 27.0                   | 2TX            |
| А                        | 802.11ac (VHT40)   |                     | 102 to 134           | 102, 110, 134     | OFDM                     | BPSK               | 40.5                   | 3TX            |
| А                        | 000 44 () (11700)  |                     | 106                  | 106               | OFDM                     | BPSK               | 58.5                   | 2TX            |
| Α                        | 802.11ac (VHT80)   |                     | 106                  | 106               | OFDM                     | BPSK               | 87.5                   | 3TX            |

## **Test Condition:**

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER           | TESTED BY  |
|---------------|--------------------------|-----------------------|------------|
| RE≥1G         | 25deg. C, 60%RH          | 120Vac, 60Hz          | Tank Wu    |
| RE<1G         | 25deg. C, 60%RH          | 120Vac, 60Hz<br>55Vdc | Match Tsui |
| PLC           | 25deg. C, 64%RH          | 120Vac, 60Hz<br>55Vdc | Match Tsui |
| APCM          | 25deg. C, 60%RH          | 120Vac, 60Hz          | Antony Lee |

Report No.: RF141227C17A Page No. 13 / 116 Report Format Version: 6.1.1

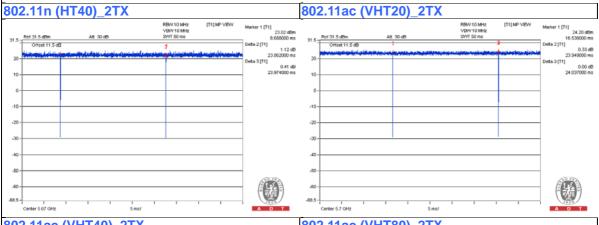


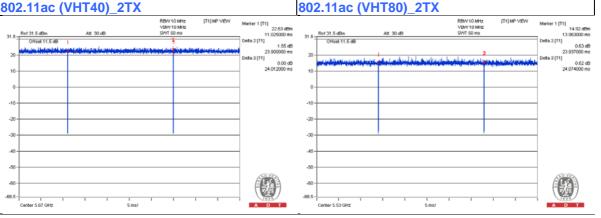
23.35 dBm 13.438000 me

0.73 dB 23.799000 ms

#### 3.3 Duty Cycle of Test Signal

```
Duty cycle of test signal is ≥ 98 %, duty factor is not required.
802.11a_1TX: Duty cycle = 23.987/24.087 = 0.996
802.11n (HT20) 2TX: Duty cycle = 23.799/23.912 = 0.995
802.11n (HT40)_2TX: Duty cycle = 23.862/23.974 = 0.995
802.11ac (VHT20)_2TX: Duty cycle = 23.949/24.037 = 0.996
802.11ac (VHT40)_2TX: Duty cycle = 23.9/24.012 = 0.995
802.11ac (VHT80)_2TX: Duty cycle = 23.937/24.074 = 0.994
802.11n (HT20)_3TX: Duty cycle = 23.875/23.962 = 0.996
802.11n (HT40)_3TX: Duty cycle = 23.863/23.975 = 0.995
802.11ac (VHT20)_3TX: Duty cycle = 23.9/23.987 = 0.996
802.11ac (VHT40)_3TX: Duty cycle = 23.888/23.988 = 0.996
802.11ac (VHT80)_3TX: Duty cycle = 23.787/23.962 = 0.993
802.11a_1TX
                                                    802.11n (HT20)
    Ref 31.5 dBm
Offset 11.5 dB
                                                       Ref 31.5 dBm
Offset 11.5 dB
                                          eta 2 [T1]
                                             1,49 dB
23,987000 ms
802.11n (HT40)_2TX
                                                    802.11ac (VHT20)_2TX
```











## 3.4 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. | Notebook | DELL                     | E5410     | 1HC2XM1    | FCC DoC Approved | -                   |
| В. | Adapter  | Asian Power Devices Inc. | WA-18Q12R | NA         | NA               | Provided by client. |

#### Note:

- 1. All power cords of the above support units are non-shielded (1.8m).
- 2. Item A acted as communication partners to transfer data.

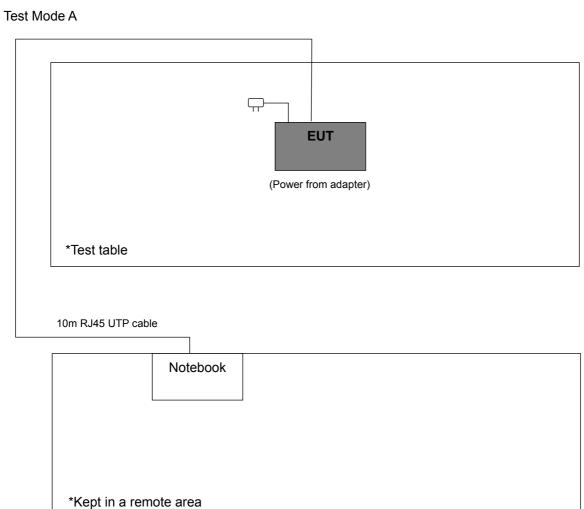
| ID | Descriptions | Qty. | Length (m) | Shielding<br>(Yes/No) | Cores (Qty.) | Remarks |
|----|--------------|------|------------|-----------------------|--------------|---------|
| 1. | RJ 45 cable  | 1    | 10         | N                     | 0            | -       |

Note: The core(s) is(are) originally attached to the cable(s).

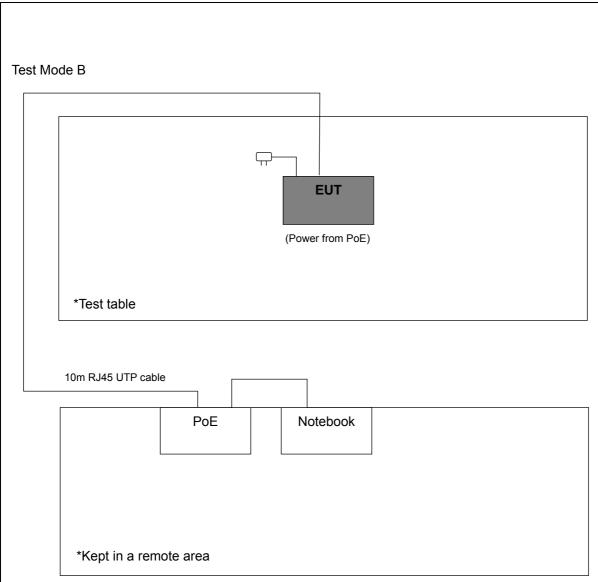
Report No.: RF141227C17A Page No. 16 / 116 Report Format Version: 6.1.1



#### Configuration of System under Test 3.4.1







#### 3.5 General Description of Applied Standard

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) 789033 D02 General UNII Test Procedure New Rules v01 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2009

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

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 18 / 116

Report Format Version: 6.1.1



## 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.

| specified as below table. |                                   |                               |
|---------------------------|-----------------------------------|-------------------------------|
| Frequencies<br>(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

| APPLICABLE TO                | LIMIT                                      |  |  |  |  |
|------------------------------|--|--|--|--|--|
| 789033 D02 General UNII Test | FIELD STRENGTH AT 3m                       |  |  |  |  |
| Procedure New Rules v01      | PK:74 (dBµV/m)                             | AV:54 (dBμV/m)                             |  |  |  |
| APPLICABLE TO                | EIRP LIMIT                                 | EQUIVALENT FIELD<br>STRENGTH AT 3m         |  |  |  |
| 15.407(b)(1)                 |  |  |  |  |  |
| 15.407(b)(2)                 | PK:-27 (dBm/MHz)                           | PK:68.2(dBµV/m)                            |  |  |  |
| 15.407(b)(3)                 |  |  |  |  |  |
| 15.407(b)(4)                 | PK:-27 (dBm/MHz) *1<br>PK:-17 (dBm/MHz) *2 | PK: 68.2(dBμV/m) *1<br>PK:78.2 (dBμV/m) *2 |  |  |  |

**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).

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 19 / 116

Report Format Version: 6.1.1



## 4.1.2 Test Instruments

| Description & Manufacturer                          | Model No.                    | Serial No.                       | Date Of Calibration            | Due Date Of<br>Calibration     |
|---|------------------------------|----------------------------------|--------------------------------|--------------------------------|
| Test Receiver<br>ROHDE & SCHWARZ                    | ESCS30                       | 100289                           | Dec. 01, 2014                  | Nov. 30, 2015                  |
| Spectrum Analyzer ROHDE & SCHWARZ                   | E4446A                       | MY51100039                       | Aug. 18, 2014                  | Aug. 17, 2015                  |
| BILOG Antenna<br>SCHWARZBECK                        | VULB9168                     | 9168-156                         | Feb. 27, 2014<br>Feb. 06, 2015 | Feb. 26, 2015<br>Feb. 05, 2016 |
| HORN Antenna<br>SCHWARZBECK                         | BBHA 9120 D                  | 9120D-1169                       | Aug. 26, 2014<br>Feb. 09, 2015 | Feb. 08, 2016<br>Feb. 08, 2016 |
| HORN Antenna<br>SCHWARZBECK                         | BBHA 9170                    | BBHA9170241                      | Feb. 17, 2014<br>Feb. 09, 2015 | Feb. 16, 2015<br>Feb. 08, 2016 |
| Preamplifier<br>Agilent                             | 8449B                        | 3008A01911                       | Aug. 09, 2014                  | Aug. 08, 2015                  |
| Preamplifier<br>Agilent                             | 8447D                        | 2944A10638                       | Aug. 09, 2014                  | Aug. 08, 2015                  |
| RF signal cable<br>HUBER+SUHNNER                    | SUCOFLEX 104                 | 248780/4<br>309222/4<br>274092/4 | Aug. 09, 2014                  | Aug. 08, 2015                  |
| RF signal cable<br>Worken                           | 8D-FB                        | Cable-CH9-01                     | Aug. 11, 2014                  | Aug. 10, 2015                  |
| Software<br>BV ADT                                  | ADT_Radiated_<br>V7.6.15.9.4 | NA                               | NA                             | NA                             |
| Antenna Tower<br>EMCO                               | 2070/2080                    | 512.835.4684                     | NA                             | NA                             |
| Turn Table<br>EMCO                                  | 2087-2.03                    | NA                               | NA                             | NA                             |
| Antenna Tower &Turn Table Controller EMCO           | 2090                         | NA                               | NA                             | NA                             |
| High Speed Peak Power Meter                         | ML2495A                      | 0824011                          | Jul. 26, 2014                  | Jul. 25, 2015                  |
| Power Sensor  | MA2411B                      | 0738171                          | Jul. 26, 2014                  | Jul. 25, 2015                  |
| WIT Standard<br>Temperature And<br>Humidity Chamber | TH-4S-C                      | W981030                          | Jun. 09, 2014                  | Jun. 08, 2015                  |

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.
- 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
- 4. The FCC Site Registration No. is 215374.
- 5. The IC Site Registration No. is IC 7450F-9.



#### 4.1.3 Test Procedure

- a. The EUT was placed on the top of a rotating table 0.8 meters 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 detect 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 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
- 5. All modes of operation were investigated and the worst-case emissions are reported.

| 4.1.4 Devia | ition trom | Test Standar | 'n |
|-------------|------------|--------------|----|

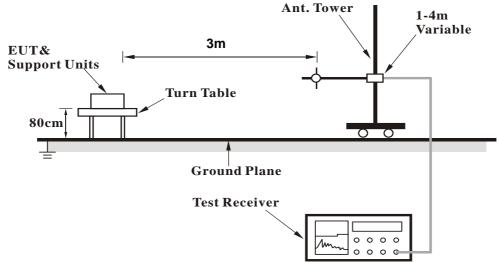
No deviation.

Report No.: RF141227C17A Page No. 21 / 116 Report Format Version: 6.1.1

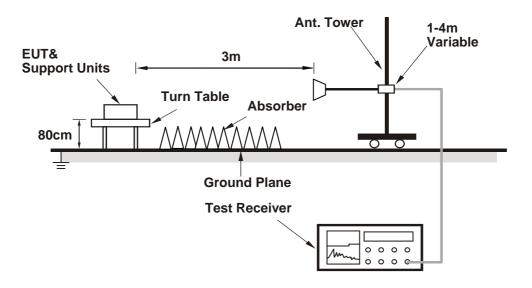


#### 4.1.5 Test Setup

## <Frequency Range below 1GHz>



## <Frequency Range above 1GHz>



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

## 4.1.6 EUT Operating Condition

- a. Placed the EUT on the testing table.
- b. Prepared notebooks to act as communication partner and placed it outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- d. The communication partner sent data to EUT by command "PING".
- e. The necessary accessories enable the system in full functions.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 22 / 116

Report Format Version: 6.1.1



#### 4.1.7 Test Results

#### **ABOVE 1GHz DATA:**

802.11a\_1TX

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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3506.00  | 47.8 PK                       | 74.0              | -26.2          | 1.00 H                   | 352                        | 49.60                  | -1.80                          |  |
| 2   | #3506.00  | 42.8 AV                       | 54.0              | -11.2          | 1.00 H                   | 352                        | 44.60                  | -1.80                          |  |
| 3   | 5150.00   | 60.5 PK                       | 74.0              | -13.5          | 1.15 H                   | 74                         | 58.50                  | 2.00                           |  |
| 4   | 5150.00   | 47.6 AV                       | 54.0              | -6.4           | 1.15 H                   | 74                         | 45.60                  | 2.00                           |  |
| 5   | *5260.00  | 115.7 PK                      |                   |                | 1.15 H                   | 74                         | 75.60                  | 40.10                          |  |
| 6   | *5260.00  | 105.2 AV                      |                   |                | 1.15 H                   | 74                         | 65.10                  | 40.10                          |  |
| 7   | #10520.00   | 59.6 PK                       | 74.0              | -14.4          | 1.00 H                   | 9                          | 44.30                  | 15.30                          |  |
| 8   | #10520.00   | 46.6 AV                       | 54.0              | -7.4           | 1.00 H                   | 9                          | 31.30                  | 15.30                          |  |
| 9   | 15780.00  | 63.1 PK                       | 74.0              | -10.9          | 1.07 H                   | 23                         | 48.30                  | 14.80                          |  |
| 10  | 15780.00  | 49.0 AV                       | 54.0              | -5.0           | 1.07 H                   | 23                         | 34.20                  | 14.80                          |  |
|     |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3506.00  | 47.6 PK                       | 74.0              | -26.4          | 1.06 V                   | 37                         | 49.40                  | -1.80                          |  |
| 2   | #3506.00  | 41.5 AV                       | 54.0              | -12.5          | 1.06 V                   | 37                         | 43.30                  | -1.80                          |  |
| 3   | 5150.00   | 59.0 PK                       | 74.0              | -15.0          | 1.00 V                   | 34                         | 57.00                  | 2.00                           |  |
| 4   | 5150.00   | 46.0 AV                       | 54.0              | -8.0           | 1.00 V                   | 34                         | 44.00                  | 2.00                           |  |
| 5   | *5260.00  | 115.7 PK                      |                   |                | 1.00 V                   | 34                         | 75.60                  | 40.10                          |  |
| 6   | *5260.00  | 105.5 AV                      |                   |                | 1.00 V                   | 34                         | 65.40                  | 40.10                          |  |
| 7   | #10520.00   | 62.8 PK                       | 74.0              | -11.2          | 1.25 V                   | 18                         | 47.50                  | 15.30                          |  |
|     |   |                               |                   |                |                          |                            |                        |                                |  |

### **REMARKS:**

9

15780.00

15780.00

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

-7.3

-1.7

1.01 V

1.01 V

30

30

51.90

37.50

14.80

14.80

- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

74.0

54.0

5. " \* ": Fundamental frequency.

66.7 PK

52.3 AV

6. " # ": The radiated frequency is out of the restricted band.

Report No.: RF141227C17A Page No. 23 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY &        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3533.00       | 48.6 PK                       | 74.0              | -25.4          | 1.25 H                   | 346                        | 50.30                  | -1.70                          |
| 2   | #3533.00       | 43.4 AV                       | 54.0              | -10.6          | 1.25 H                   | 346                        | 45.10                  | -1.70                          |
| 3   | *5300.00       | 116.0 PK                      |                   |                | 1.01 H                   | 46                         | 75.90                  | 40.10                          |
| 4   | *5300.00       | 105.8 AV                      |                   |                | 1.01 H                   | 46                         | 65.70                  | 40.10                          |
| 5   | 10600.00       | 60.6 PK                       | 74.0              | -13.4          | 1.00 H                   | 322                        | 44.40                  | 16.20                          |
| 6   | 10600.00       | 47.5 AV                       | 54.0              | -6.5           | 1.00 H                   | 322                        | 31.30                  | 16.20                          |
| 7   | 15900.00       | 69.1 PK                       | 74.0              | -4.9           | 1.05 H                   | 23                         | 54.20                  | 14.90                          |
| 8   | 15900.00       | 52.9 AV                       | 54.0              | -1.1           | 1.05 H                   | 23                         | 38.00                  | 14.90                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3533.00       | 48.5 PK                       | 74.0              | -25.5          | 1.02 V                   | 344                        | 50.20                  | -1.70                          |
| 2   | #3533.00       | 43.4 AV                       | 54.0              | -10.6          | 1.02 V                   | 344                        | 45.10                  | -1.70                          |
| 3   | *5300.00       | 114.7 PK                      |                   |                | 1.18 V                   | 36                         | 74.60                  | 40.10                          |
| 4   | *5300.00       | 104.8 AV                      |                   |                | 1.18 V                   | 36                         | 64.70                  | 40.10                          |
| 5   | 10600.00       | 63.8 PK                       | 74.0              | -10.2          | 1.31 V                   | 17                         | 47.60                  | 16.20                          |
| 6   | 10600.00       | 50.6 AV                       | 54.0              | -3.4           | 1.31 V                   | 17                         | 34.40                  | 16.20                          |
| 7   | 15900.00       | 69.5 PK                       | 74.0              | -4.5           | 1.00 V                   | 30                         | 54.60                  | 14.90                          |
| 8   | 15900.00       | 52.4 AV                       | 54.0              | -1.6           | 1.00 V                   | 30                         | 37.50                  | 14.90                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 24 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3546.00  | 46.6 PK                       | 74.0              | -27.4          | 1.00 H                   | 287                        | 48.40                  | -1.80                          |  |
| 2   | #3546.00  | 38.6 AV                       | 54.0              | -15.4          | 1.00 H                   | 287                        | 40.40                  | -1.80                          |  |
| 3   | *5320.00  | 114.8 PK                      |                   |                | 1.00 H                   | 351                        | 74.60                  | 40.20                          |  |
| 4   | *5320.00  | 104.8 AV                      |                   |                | 1.00 H                   | 351                        | 64.60                  | 40.20                          |  |
| 5   | 5350.00   | 65.7 PK                       | 74.0              | -8.3           | 1.00 H                   | 351                        | 63.70                  | 2.00                           |  |
| 6   | 5350.00   | 50.1 AV                       | 54.0              | -3.9           | 1.00 H                   | 351                        | 48.10                  | 2.00                           |  |
| 7   | 10640.00  | 59.5 PK                       | 74.0              | -14.5          | 1.00 H                   | 322                        | 43.20                  | 16.30                          |  |
| 8   | 10640.00  | 48.7 AV                       | 54.0              | -5.3           | 1.00 H                   | 322                        | 32.40                  | 16.30                          |  |
| 9   | 15960.00  | 65.0 PK                       | 74.0              | -9.0           | 1.05 H                   | 23                         | 50.30                  | 14.70                          |  |
| 10  | 15960.00  | 50.4 AV                       | 54.0              | -3.6           | 1.05 H                   | 23                         | 35.70                  | 14.70                          |  |
|     |   | ANTENNA                       | POLARITY          | & TEST D       | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3546.00  | 48.1 PK                       | 74.0              | -25.9          | 1.02 V                   | 344                        | 49.90                  | -1.80                          |  |
| 2   | #3546.00  | 43.4 AV                       | 54.0              | -10.6          | 1.02 V                   | 344                        | 45.20                  | -1.80                          |  |
| 3   | *5320.00  | 114.8 PK                      |                   |                | 1.07 V                   | 32                         | 74.60                  | 40.20                          |  |
| 4   | *5320.00  | 103.9 AV                      |                   |                | 1.07 V                   | 32                         | 63.70                  | 40.20                          |  |
| 5   | 5350.00   | 67.5 PK                       | 74.0              | -6.5           | 1.07 V                   | 32                         | 65.50                  | 2.00                           |  |
| 6   | 5350.00   | 50.2 AV                       | 54.0              | -3.8           | 1.07 V                   | 32                         | 48.20                  | 2.00                           |  |
| 7   | 10640.00  | 61.7 PK                       | 74.0              | -12.3          | 1.24 V                   | 16                         | 45.40                  | 16.30                          |  |
| 8   | 10640.00  | 48.5 AV                       | 54.0              | -5.5           | 1.24 V                   | 16                         | 32.20                  | 16.30                          |  |
| 9   | 15960.00  | 63.5 PK                       | 74.0              | -10.5          | 1.04 V                   | 14                         | 48.80                  | 14.70                          |  |
| 10  | 15960.00  | 49.8 AV                       | 54.0              | -4.2           | 1.04 V                   | 14                         | 35.10                  | 14.70                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 25 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3666.00        | 49.4 PK                       | 74.0              | -24.6          | 1.33 H                   | 356                        | 50.70                  | -1.30                          |
| 2   | 3666.00        | 44.8 AV                       | 54.0              | -9.2           | 1.33 H                   | 356                        | 46.10                  | -1.30                          |
| 3   | 5460.00        | 64.1 PK                       | 74.0              | -9.9           | 1.18 H                   | 57                         | 62.00                  | 2.10                           |
| 4   | 5460.00        | 48.8 AV                       | 54.0              | -5.2           | 1.18 H                   | 57                         | 46.70                  | 2.10                           |
| 5   | #5470.00       | 68.7 PK                       | 74.0              | -5.3           | 1.18 H                   | 57                         | 66.50                  | 2.20                           |
| 6   | #5470.00       | 52.6 AV                       | 54.0              | -1.4           | 1.18 H                   | 57                         | 50.40                  | 2.20                           |
| 7   | *5500.00       | 115.0 PK                      |                   |                | 1.18 H                   | 57                         | 74.70                  | 40.30                          |
| 8   | *5500.00       | 104.5 AV                      |                   |                | 1.18 H                   | 57                         | 64.20                  | 40.30                          |
| 9   | 11000.00       | 64.2 PK                       | 74.0              | -9.8           | 1.00 H                   | 126                        | 46.50                  | 17.70                          |
| 10  | 11000.00       | 50.7 AV                       | 54.0              | -3.3           | 1.00 H                   | 126                        | 33.00                  | 17.70                          |
| 11  | #16500.00      | 63.9 PK                       | 74.0              | -10.1          | 1.00 H                   | 94                         | 47.60                  | 16.30                          |
| 12  | #16500.00      | 50.5 AV                       | 54.0              | -3.5           | 1.00 H                   | 94                         | 34.20                  | 16.30                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3666.00        | 51.7 PK                       | 74.0              | -22.3          | 1.00 V                   | 0                          | 53.00                  | -1.30                          |
| 2   | 3666.00        | 48.6 AV                       | 54.0              | -5.4           | 1.00 V                   | 0                          | 49.90                  | -1.30                          |
| 3   | 5460.00        | 62.2 PK                       | 74.0              | -11.8          | 1.08 V                   | 15                         | 60.10                  | 2.10                           |
| 4   | 5460.00        | 46.7 AV                       | 54.0              | -7.3           | 1.08 V                   | 15                         | 44.60                  | 2.10                           |
| 5   | #5470.00       | 66.9 PK                       | 74.0              | -7.1           | 1.07 V                   | 13                         | 64.70                  | 2.20                           |
| 6   | #5470.00       | 51.1 AV                       | 54.0              | -2.9           | 1.07 V                   | 13                         | 48.90                  | 2.20                           |
| 7   | *5500.00       | 112.5 PK                      |                   |                | 1.05 V                   | 13                         | 72.20                  | 40.30                          |
| 8   | *5500.00       | 102.1 AV                      |                   |                | 1.05 V                   | 13                         | 61.80                  | 40.30                          |
| 9   | 11000.00       | 65.6 PK                       | 74.0              | -8.4           | 1.35 V                   | 24                         | 47.90                  | 17.70                          |
| 10  | 11000.00       | 51.7 AV                       | 54.0              | -2.3           | 1.35 V                   | 24                         | 34.00                  | 17.70                          |
| 11  | #16500.00      | 63.3 PK                       | 74.0              | -10.7          | 1.00 V                   | 282                        | 47.00                  | 16.30                          |
| 12  | #16500.00      | 50.7 AV                       | 54.0              | -3.3           | 1.00 V                   | 282                        | 34.40                  | 16.30                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 26 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3720.00        | 46.3 PK                       | 74.0              | -27.7          | 1.00 H                   | 275                        | 47.20                  | -0.90                          |
| 2   | 3720.00        | 37.1 AV                       | 54.0              | -16.9          | 1.00 H                   | 275                        | 38.00                  | -0.90                          |
| 3   | *5580.00       | 113.3 PK                      |                   |                | 1.04 H                   | 61                         | 72.80                  | 40.50                          |
| 4   | *5580.00       | 103.7 AV                      |                   |                | 1.04 H                   | 61                         | 63.20                  | 40.50                          |
| 5   | 11160.00       | 62.1 PK                       | 74.0              | -11.9          | 1.00 H                   | 70                         | 45.70                  | 16.40                          |
| 6   | 11160.00       | 49.4 AV                       | 54.0              | -4.6           | 1.00 H                   | 70                         | 33.00                  | 16.40                          |
| 7   | #16740.00      | 66.2 PK                       | 74.0              | -7.8           | 1.00 H                   | 62                         | 47.10                  | 19.10                          |
| 8   | #16740.00      | 52.8 AV                       | 54.0              | -1.2           | 1.00 H                   | 62                         | 33.70                  | 19.10                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  | •                              |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3720.00        | 45.8 PK                       | 74.0              | -28.2          | 1.00 V                   | 21                         | 46.70                  | -0.90                          |
| 2   | 3720.00        | 35.2 AV                       | 54.0              | -18.8          | 1.00 V                   | 21                         | 36.10                  | -0.90                          |
| 3   | *5580.00       | 112.6 PK                      |                   |                | 1.00 V                   | 20                         | 72.10                  | 40.50                          |
| 4   | *5580.00       | 102.4 AV                      |                   |                | 1.00 V                   | 20                         | 61.90                  | 40.50                          |
| 5   | 11160.00       | 69.3 PK                       | 74.0              | -4.7           | 1.00 V                   | 26                         | 52.90                  | 16.40                          |
| 6   | 11160.00       | 53.0 AV                       | 54.0              | -1.0           | 1.00 V                   | 26                         | 36.60                  | 16.40                          |
| 7   | #16740.00      | 65.7 PK                       | 74.0              | -8.3           | 1.00 V                   | 357                        | 46.60                  | 19.10                          |
| 8   | #16740.00      | 52.1 AV                       | 54.0              | -1.9           | 1.00 V                   | 357                        | 33.00                  | 19.10                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 27 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3800.00        | 44.4 PK                       | 74.0              | -29.6          | 1.00 H                   | 15                         | 45.10                  | -0.70                          |
| 2   | 3800.00        | 35.3 AV                       | 54.0              | -18.7          | 1.00 H                   | 15                         | 36.00                  | -0.70                          |
| 3   | *5700.00       | 109.5 PK                      |                   |                | 1.00 H                   | 80                         | 68.70                  | 40.80                          |
| 4   | *5700.00       | 98.4 AV                       |                   |                | 1.00 H                   | 80                         | 57.60                  | 40.80                          |
| 5   | #5725.00       | 64.2 PK                       | 74.0              | -9.8           | 1.00 H                   | 80                         | 61.60                  | 2.60                           |
| 6   | #5725.00       | 49.9 AV                       | 54.0              | -4.1           | 1.00 H                   | 80                         | 47.30                  | 2.60                           |
| 7   | 11400.00       | 64.0 PK                       | 74.0              | -10.0          | 1.00 H                   | 353                        | 47.80                  | 16.20                          |
| 8   | 11400.00       | 50.3 AV                       | 54.0              | -3.7           | 1.00 H                   | 353                        | 34.10                  | 16.20                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  | •                              |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3800.00        | 44.3 PK                       | 74.0              | -29.7          | 1.00 V                   | 73                         | 45.00                  | -0.70                          |
| 2   | 3800.00        | 35.8 AV                       | 54.0              | -18.2          | 1.00 V                   | 73                         | 36.50                  | -0.70                          |
| 3   | *5700.00       | 109.0 PK                      |                   |                | 1.02 V                   | 89                         | 68.20                  | 40.80                          |
| 4   | *5700.00       | 98.5 AV                       |                   | _              | 1.02 V                   | 89                         | 57.70                  | 40.80                          |
| 5   | #5725.00       | 64.0 PK                       | 74.0              | -10.0          | 1.02 V                   | 89                         | 61.40                  | 2.60                           |
| 6   | #5725.00       | 50.5 AV                       | 54.0              | -3.5           | 1.02 V                   | 89                         | 47.90                  | 2.60                           |
| 7   | 11400.00       | 67.9 PK                       | 74.0              | -6.1           | 1.28 V                   | 28                         | 51.70                  | 16.20                          |
| 8   | 11400.00       | 52.9 AV                       | 54.0              | -1.1           | 1.28 V                   | 28                         | 36.70                  | 16.20                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 28 / 116 Report Format Version: 6.1.1



# 802.11n (HT20)\_2TX

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

|     |                | ANTENNA                       | POLARITY &        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5100.00        | 59.0 PK                       | 74.0              | -15.0          | 1.05 H                   | 288                        | 57.10                  | 1.90                           |
| 2   | 5100.00        | 46.6 AV                       | 54.0              | -7.4           | 1.05 H                   | 288                        | 44.70                  | 1.90                           |
| 3   | *5260.00       | 114.4 PK                      |                   |                | 1.02 H                   | 64                         | 74.30                  | 40.10                          |
| 4   | *5260.00       | 102.9 AV                      |                   |                | 1.02 H                   | 64                         | 62.80                  | 40.10                          |
| 5   | 5460.00        | 59.7 PK                       | 74.0              | -14.3          | 1.52 H                   | 35                         | 57.60                  | 2.10                           |
| 6   | 5460.00        | 47.1 AV                       | 54.0              | -6.9           | 1.52 H                   | 35                         | 45.00                  | 2.10                           |
| 7   | #10520.00      | 61.0 PK                       | 74.0              | -13.0          | 1.02 H                   | 34                         | 45.70                  | 15.30                          |
| 8   | #10520.00      | 47.8 AV                       | 54.0              | -6.2           | 1.02 H                   | 34                         | 32.50                  | 15.30                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5150.00        | 57.4 PK                       | 74.0              | -16.6          | 1.02 V                   | 6                          | 55.40                  | 2.00                           |
| 2   | 5150.00        | 44.5 AV                       | 54.0              | -9.5           | 1.02 V                   | 6                          | 42.50                  | 2.00                           |
| 3   | *5260.00       | 114.1 PK                      |                   |                | 1.01 V                   | 46                         | 74.00                  | 40.10                          |
| 4   | *5260.00       | 104.1 AV                      |                   |                | 1.01 V                   | 46                         | 64.00                  | 40.10                          |
| 5   | 5460.00        | 59.3 PK                       | 74.0              | -14.7          | 1.01 V                   | 5                          | 57.20                  | 2.10                           |
| 6   | 5460.00        | 46.5 AV                       | 54.0              | -7.5           | 1.01 V                   | 5                          | 44.40                  | 2.10                           |
| 7   | #10520.00      | 61.3 PK                       | 74.0              | -12.7          | 1.05 V                   | 34                         | 46.00                  | 15.30                          |
| 8   | #10520.00      | 48.5 AV                       | 54.0              | -5.5           | 1.05 V                   | 34                         | 33.20                  | 15.30                          |

## **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)
- 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.

Report No.: RF141227C17A Page No. 29 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5300.00  | 114.0 PK                      |                   |                | 1.01 H                   | 333                        | 73.90                  | 40.10                          |  |
| 2   | *5300.00  | 103.7 AV                      |                   |                | 1.01 H                   | 333                        | 63.60                  | 40.10                          |  |
| 3   | 10600.00  | 62.2 PK                       | 74.0              | -11.8          | 1.02 H                   | 63                         | 46.00                  | 16.20                          |  |
| 4   | 10600.00  | 48.4 AV                       | 54.0              | -5.6           | 1.02 H                   | 63                         | 32.20                  | 16.20                          |  |
| 5   | 15900.00  | 65.7 PK                       | 74.0              | -8.3           | 1.00 H                   | 29                         | 50.80                  | 14.90                          |  |
| 6   | 15900.00  | 50.5 AV                       | 54.0              | -3.5           | 1.00 H                   | 29                         | 35.60                  | 14.90                          |  |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5300.00  | 114.1 PK                      |                   |                | 1.00 V                   | 293                        | 74.00                  | 40.10                          |  |
| 2   | *5300.00  | 103.8 AV                      |                   |                | 1.00 V                   | 293                        | 63.70                  | 40.10                          |  |
| 3   | 10600.00  | 62.8 PK                       | 74.0              | -11.2          | 1.05 V                   | 35                         | 46.60                  | 16.20                          |  |
| 4   | 10600.00  | 49.7 AV                       | 54.0              | -4.3           | 1.05 V                   | 35                         | 33.50                  | 16.20                          |  |
| 5   | 15900.00  | 66.2 PK                       | 74.0              | -7.8           | 1.03 V                   | 27                         | 51.30                  | 14.90                          |  |
| 6   | 15900.00  | 50.6 AV                       | 54.0              | -3.4           | 1.03 V                   | 27                         | 35.70                  | 14.90                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 30 / 116 Report Format Version: 6.1.1 Reference No.: 141227C17, 141227C19



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

|     |                | ANTENNA                       | POLARITY (        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5320.00       | 114.1 PK                      |                   |                | 1.00 H                   | 332                        | 73.90                  | 40.20                          |
| 2   | *5320.00       | 103.6 AV                      |                   |                | 1.00 H                   | 332                        | 63.40                  | 40.20                          |
| 3   | 5350.00        | 61.4 PK                       | 74.0              | -12.6          | 1.17 H                   | 20                         | 59.40                  | 2.00                           |
| 4   | 5350.00        | 49.2 AV                       | 54.0              | -4.8           | 1.17 H                   | 20                         | 47.20                  | 2.00                           |
| 5   | 10640.00       | 62.2 PK                       | 74.0              | -11.8          | 1.54 H                   | 88                         | 45.90                  | 16.30                          |
| 6   | 10640.00       | 48.5 AV                       | 54.0              | -5.5           | 1.54 H                   | 88                         | 32.20                  | 16.30                          |
| 7   | 15960.00       | 63.2 PK                       | 74.0              | -10.8          | 1.00 H                   | 28                         | 48.50                  | 14.70                          |
| 8   | 15960.00       | 49.7 AV                       | 54.0              | -4.3           | 1.00 H                   | 28                         | 35.00                  | 14.70                          |
|     |                | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5320.00       | 114.9 PK                      |                   |                | 1.00 V                   | 300                        | 74.70                  | 40.20                          |
| 2   | *5320.00       | 104.2 AV                      |                   |                | 1.00 V                   | 300                        | 64.00                  | 40.20                          |
| 3   | 5350.00        | 64.1 PK                       | 74.0              | -9.9           | 1.00 V                   | 302                        | 62.10                  | 2.00                           |
| 4   | 5350.00        | 49.9 AV                       | 54.0              | -4.1           | 1.00 V                   | 302                        | 47.90                  | 2.00                           |
| 5   | 10640.00       | 62.1 PK                       | 74.0              | -11.9          | 1.05 V                   | 64                         | 45.80                  | 16.30                          |
| 6   | 10640.00       | 48.5 AV                       | 54.0              | -5.5           | 1.05 V                   | 64                         | 32.20                  | 16.30                          |
| 7   | 15960.00       | 64.7 PK                       | 74.0              | -9.3           | 1.03 V                   | 27                         | 50.00                  | 14.70                          |
| 8   | 15960.00       | 49.5 AV                       | 54.0              | -4.5           | 1.03 V                   | 27                         | 34.80                  | 14.70                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 31 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY &        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 58.0 PK                       | 74.0              | -16.0          | 1.16 H                   | 17                         | 55.90                  | 2.10                           |
| 2   | 5460.00        | 44.9 AV                       | 54.0              | -9.1           | 1.16 H                   | 17                         | 42.80                  | 2.10                           |
| 3   | #5470.00       | 59.9 PK                       | 74.0              | -14.1          | 1.16 H                   | 17                         | 57.70                  | 2.20                           |
| 4   | #5470.00       | 46.1 AV                       | 54.0              | -7.9           | 1.16 H                   | 17                         | 43.90                  | 2.20                           |
| 5   | *5500.00       | 113.7 PK                      |                   |                | 1.06 H                   | 56                         | 73.40                  | 40.30                          |
| 6   | *5500.00       | 103.2 AV                      |                   |                | 1.06 H                   | 56                         | 62.90                  | 40.30                          |
| 7   | 11000.00       | 63.2 PK                       | 74.0              | -10.8          | 1.00 H                   | 330                        | 45.50                  | 17.70                          |
| 8   | 11000.00       | 49.5 AV                       | 54.0              | -4.5           | 1.00 H                   | 330                        | 31.80                  | 17.70                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 59.1 PK                       | 74.0              | -14.9          | 1.00 V                   | 7                          | 57.00                  | 2.10                           |
| 2   | 5460.00        | 46.6 AV                       | 54.0              | -7.4           | 1.00 V                   | 7                          | 44.50                  | 2.10                           |
| 3   | #5470.00       | 66.4 PK                       | 74.0              | -7.6           | 1.00 V                   | 7                          | 64.20                  | 2.20                           |
| 4   | #5470.00       | 51.2 AV                       | 54.0              | -2.8           | 1.00 V                   | 7                          | 49.00                  | 2.20                           |
| 5   | *5500.00       | 116.5 PK                      |                   |                | 1.00 V                   | 5                          | 76.20                  | 40.30                          |
| 6   | *5500.00       | 106.2 AV                      |                   |                | 1.00 V                   | 5                          | 65.90                  | 40.30                          |
| 7   | 11000.00       | 66.2 PK                       | 74.0              | -7.8           | 1.35 V                   | 15                         | 48.50                  | 17.70                          |
| 8   | 11000.00       | 51.0 AV                       | 54.0              | -3.0           | 1.35 V                   | 15                         | 33.30                  | 17.70                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 32 / 116 Report Format Version: 6.1.1



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

|  | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|--|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO.  | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1  | *5580.00  | 110.0 PK                      |                   |                | 1.06 H                   | 12                         | 69.50                  | 40.50                          |  |
| 2  | *5580.00  | 99.9 AV                       |                   |                | 1.06 H                   | 12                         | 59.40                  | 40.50                          |  |
| 3  | 11160.00  | 64.3 PK                       | 74.0              | -9.7           | 1.02 H                   | 351                        | 47.90                  | 16.40                          |  |
| 4  | 11160.00  | 48.5 AV                       | 54.0              | -5.5           | 1.02 H                   | 351                        | 32.10                  | 16.40                          |  |
|  |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. FREQ. (MHz) EMISSION LIMIT (dBuV/m) (dBuV/m) |   |                               |                   |                | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1  | *5580.00  | 114.9 PK                      |                   |                | 1.00 V                   | 9                          | 74.40                  | 40.50                          |  |
| 2  | *5580.00  | 104.4 AV                      |                   |                | 1.00 V                   | 9                          | 63.90                  | 40.50                          |  |
| 3  | 11160.00  | 65.1 PK                       | 74.0              | -8.9           | 1.31 V                   | 22                         | 48.70                  | 16.40                          |  |
| 4  | 11160.00  | 49.9 AV                       | 54.0              | -4.1           | 1.31 V                   | 22                         | 33.50                  | 16.40                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 33 / 116 Reference No.: 141227C17, 141227C19



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5700.00  | 110.6 PK                      |                   |                | 1.52 H                   | 74                         | 69.80                  | 40.80                          |  |
| 2   | *5700.00  | 100.2 AV                      |                   |                | 1.52 H                   | 74                         | 59.40                  | 40.80                          |  |
| 3   | #5725.00  | 59.9 PK                       | 74.0              | -14.1          | 1.59 H                   | 74                         | 57.30                  | 2.60                           |  |
| 4   | #5725.00  | 48.0 AV                       | 54.0              | -6.0           | 1.59 H                   | 74                         | 45.40                  | 2.60                           |  |
| 5   | 11400.00  | 64.0 PK                       | 74.0              | -10.0          | 1.35 H                   | 357                        | 47.80                  | 16.20                          |  |
| 6   | 11400.00  | 49.4 AV                       | 54.0              | -4.6           | 1.35 H                   | 357                        | 33.20                  | 16.20                          |  |
|     |   | ANTENNA                       | POLARITY          | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5700.00  | 109.9 PK                      |                   |                | 1.14 V                   | 40                         | 69.10                  | 40.80                          |  |
| 2   | *5700.00  | 99.1 AV                       |                   |                | 1.14 V                   | 40                         | 58.30                  | 40.80                          |  |
| 3   | #5725.00  | 62.5 PK                       | 74.0              | -11.5          | 1.24 V                   | 152                        | 59.90                  | 2.60                           |  |
| 4   | #5725.00  | 48.0 AV                       | 54.0              | -6.0           | 1.24 V                   | 152                        | 45.40                  | 2.60                           |  |
| 5   | 11400.00  | 67.8 PK                       | 74.0              | -6.2           | 1.23 V                   | 25                         | 51.60                  | 16.20                          |  |
|     |   |                               |                   |                |                          |                            |                        |                                |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 34 / 116 Report Format Version: 6.1.1



# 802.11n (HT40)\_2TX

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

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |  |   |                |                          |                            |                        |                                |  |
|---|--|---|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m)  | LIMIT<br>(dBuV/m)   | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 5150.00   | 56.6 PK  | 74.0  | -17.4          | 1.56 H                   | 66                         | 54.60                  | 2.00                           |  |
| 5150.00   | 44.0 AV  | 54.0  | -10.0          | 1.56 H                   | 66                         | 42.00                  | 2.00                           |  |
| *5270.00  | 107.3 PK   |   |                | 1.12 H                   | 333                        | 67.20                  | 40.10                          |  |
| *5270.00  | 97.5 AV  |   |                | 1.12 H                   | 333                        | 57.40                  | 40.10                          |  |
| #10540.00   | 60.8 PK  | 74.0  | -13.2          | 1.41 H                   | 99                         | 45.20                  | 15.60                          |  |
| #10540.00   | 47.8 AV  | 54.0  | -6.2           | 1.41 H                   | 99                         | 32.20                  | 15.60                          |  |
|   | ANTENNA  | POLARITY  | 4 & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m)  | LIMIT<br>(dBuV/m)   | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 5150.00   | 57.0 PK  | 74.0  | -17.0          | 1.02 V                   | 94                         | 55.00                  | 2.00                           |  |
| 5150.00   | 44.3 AV  | 54.0  | -9.7           | 1.02 V                   | 94                         | 42.30                  | 2.00                           |  |
| *5270.00  | 110.9 PK   |   |                | 1.00 V                   | 35                         | 70.80                  | 40.10                          |  |
| *5270.00  | 100.6 AV   |   |                | 1.00 V                   | 35                         | 60.50                  | 40.10                          |  |
| #10540.00   | 61.6 PK  | 74.0  | -12.4          | 1.00 V                   | 24                         | 46.00                  | 15.60                          |  |
|   | FREQ. (MHz)  5150.00  5150.00  *5270.00  *5270.00  #10540.00  #10540.00  FREQ. (MHz)  5150.00  5150.00  *5270.00  *5270.00 | FREQ. (MHz) EMISSION LEVEL (dBuV/m)  5150.00 56.6 PK  5150.00 44.0 AV  *5270.00 97.5 AV  #10540.00 60.8 PK  #10540.00 47.8 AV  ANTENNA  FREQ. (MHz) EMISSION LEVEL (dBuV/m)  5150.00 57.0 PK  5150.00 44.3 AV  *5270.00 110.9 PK  *5270.00 100.6 AV | FREQ. (MHz)    | FREQ. (MHz)              | FREQ. (MHz)                | FREQ. (MHz)            | FREQ. (MHz)                    |  |

## **REMARKS:**

#10540.00

6

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

-5.2

1.00 V

24

33.20

15.60

- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

54.0

5. " \* ": Fundamental frequency.

48.8 AV

6. " # ": The radiated frequency is out of the restricted band.

Report No.: RF141227C17A Page No. 35 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5310.00  | 106.8 PK                      |                   |                | 1.13 H                   | 332                        | 66.70                  | 40.10                          |  |
| 2   | *5310.00  | 96.4 AV                       |                   |                | 1.13 H                   | 332                        | 56.30                  | 40.10                          |  |
| 3   | 5350.00   | 61.3 PK                       | 74.0              | -12.7          | 1.21 H                   | 19                         | 59.30                  | 2.00                           |  |
| 4   | 5350.00   | 48.4 AV                       | 54.0              | -5.6           | 1.21 H                   | 19                         | 46.40                  | 2.00                           |  |
| 5   | 10620.00  | 61.4 PK                       | 74.0              | -12.6          | 1.58 H                   | 89                         | 45.20                  | 16.20                          |  |
| 6   | 10620.00  | 47.7 AV                       | 54.0              | -6.3           | 1.58 H                   | 89                         | 31.50                  | 16.20                          |  |
|     |   | ANTENNA                       | A POLARITY        | 4 & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5310.00  | 110.2 PK                      |                   |                | 1.00 V                   | 33                         | 70.10                  | 40.10                          |  |
| 2   | *5310.00  | 100.3 AV                      |                   |                | 1.00 V                   | 33                         | 60.20                  | 40.10                          |  |
| 3   | 5350.00   | 64.1 PK                       | 74.0              | -9.9           | 1.00 V                   | 8                          | 62.10                  | 2.00                           |  |
| 4   | 5350.00   | 51.5 AV                       | 54.0              | -2.5           | 1.00 V                   | 8                          | 49.50                  | 2.00                           |  |
| 5   | 10620.00  | 62.1 PK                       | 74.0              | -11.9          | 1.02 V                   | 85                         | 45.90                  | 16.20                          |  |
| 6   | 10620.00  | 48.7 AV                       | 54.0              | -5.3           | 1.02 V                   | 85                         | 32.50                  | 16.20                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 36 / 116 Report Format Version: 6.1.1 Reference No.: 141227C17, 141227C19



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

|     |                | ANTENNA                       | POLARITY &        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 58.9 PK                       | 74.0              | -15.1          | 1.03 H                   | 16                         | 56.80                  | 2.10                           |
| 2   | 5460.00        | 46.3 AV                       | 54.0              | -7.7           | 1.03 H                   | 16                         | 44.20                  | 2.10                           |
| 3   | #5470.00       | 61.8 PK                       | 74.0              | -12.2          | 1.03 H                   | 16                         | 59.60                  | 2.20                           |
| 4   | #5470.00       | 48.0 AV                       | 54.0              | -6.0           | 1.03 H                   | 16                         | 45.80                  | 2.20                           |
| 5   | *5510.00       | 104.8 PK                      |                   |                | 1.34 H                   | 297                        | 64.50                  | 40.30                          |
| 6   | *5510.00       | 94.5 AV                       |                   |                | 1.34 H                   | 297                        | 54.20                  | 40.30                          |
| 7   | 11020.00       | 62.7 PK                       | 74.0              | -11.3          | 1.37 H                   | 330                        | 45.30                  | 17.40                          |
| 8   | 11020.00       | 48.6 AV                       | 54.0              | -5.4           | 1.37 H                   | 330                        | 31.20                  | 17.40                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 62.5 PK                       | 74.0              | -11.5          | 1.00 V                   | 6                          | 60.40                  | 2.10                           |
| 2   | 5460.00        | 49.8 AV                       | 54.0              | -4.2           | 1.00 V                   | 6                          | 47.70                  | 2.10                           |
| 3   | #5470.00       | 67.9 PK                       | 74.0              | -6.1           | 1.00 V                   | 6                          | 65.70                  | 2.20                           |
| 4   | #5470.00       | 52.6 AV                       | 54.0              | -1.4           | 1.00 V                   | 6                          | 50.40                  | 2.20                           |
| 5   | *5510.00       | 109.8 PK                      |                   |                | 1.00 V                   | 5                          | 69.50                  | 40.30                          |
| 6   | *5510.00       | 98.8 AV                       |                   |                | 1.00 V                   | 5                          | 58.50                  | 40.30                          |
| 7   | 11020.00       | 64.9 PK                       | 74.0              | -9.1           | 1.45 V                   | 17                         | 47.50                  | 17.40                          |
| 8   | 11020.00       | 51.2 AV                       | 54.0              | -2.8           | 1.45 V                   | 17                         | 33.80                  | 17.40                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 37 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M  |                               |                   |                |                          |                            |                        |                                |  |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)   | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #5470.00   | 58.7 PK                       | 74.0              | -15.3          | 1.05 H                   | 247                        | 56.50                  | 2.20                           |  |
| 2   | #5470.00   | 44.7 AV                       | 54.0              | -9.3           | 1.05 H                   | 247                        | 42.50                  | 2.20                           |  |
| 3   | *5550.00   | 103.7 PK                      |                   |                | 1.00 H                   | 11                         | 63.30                  | 40.40                          |  |
| 4   | *5550.00   | 93.3 AV                       |                   |                | 1.00 H                   | 11                         | 52.90                  | 40.40                          |  |
| 5   | 11100.00   | 63.3 PK                       | 74.0              | -10.7          | 1.00 H                   | 56                         | 46.70                  | 16.60                          |  |
| 6   | 11100.00   | 50.2 AV                       | 54.0              | -3.8           | 1.00 H                   | 56                         | 33.60                  | 16.60                          |  |
|     |  | ANTENNA                       | A POLARITY        | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | NO. FREQ. (MHz) EMISSION LIMIT (dBuV/m) (dB) ANTENNA TABLE RAW CORRECT FACTOR (m) (Degree) (dBuV) (dB/m) |                               |                   |                |                          |                            |                        |                                |  |
| 1   | #5470.00   | 59.6 PK                       | 74.0              | -14.4          | 1.00 V                   | 6                          | 57.40                  | 2.20                           |  |
| 2   | #5470.00   | 45.9 AV                       | 54.0              | -8.1           | 1.00 V                   | 6                          | 43.70                  | 2.20                           |  |
| 3   | *5550.00   | 110.4 PK                      |                   |                | 1.00 V                   | 5                          | 70.00                  | 40.40                          |  |
| 4   | *5550.00   | 99.7 AV                       |                   |                | 1.00 V                   | 5                          | 59.30                  | 40.40                          |  |
| 5   | 11100.00   | 68.3 PK                       | 74.0              | -5.7           | 1.40 V                   | 17                         | 51.70                  | 16.60                          |  |
| 6   | 11100.00   | 52.8 AV                       | 54.0              | -1.2           | 1.40 V                   | 17                         | 36.20                  | 16.60                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 38 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5670.00  | 103.4 PK                      |                   |                | 1.14 H                   | 12                         | 62.70                  | 40.70                          |  |
| 2   | *5670.00  | 92.7 AV                       |                   |                | 1.14 H                   | 12                         | 52.00                  | 40.70                          |  |
| 3   | #5725.00  | 57.4 PK                       | 74.0              | -16.6          | 1.00 H                   | 10                         | 54.80                  | 2.60                           |  |
| 4   | #5725.00  | 44.7 AV                       | 54.0              | -9.3           | 1.00 H                   | 10                         | 42.10                  | 2.60                           |  |
| 5   | 11340.00  | 65.5 PK                       | 74.0              | -8.5           | 1.05 H                   | 353                        | 49.00                  | 16.50                          |  |
| 6   | 11340.00  | 51.9 AV                       | 54.0              | -2.1           | 1.05 H                   | 353                        | 35.40                  | 16.50                          |  |
|     |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5670.00  | 106.2 PK                      |                   |                | 1.00 V                   | 3                          | 65.50                  | 40.70                          |  |
| 2   | *5670.00  | 95.7 AV                       |                   |                | 1.00 V                   | 3                          | 55.00                  | 40.70                          |  |
| 3   | #5725.00  | 57.3 PK                       | 74.0              | -16.7          | 1.00 V                   | 286                        | 54.70                  | 2.60                           |  |
| 4   | #5725.00  | 44.9 AV                       | 54.0              | -9.1           | 1.00 V                   | 286                        | 42.30                  | 2.60                           |  |
| 5   | 11340.00  | 67.1 PK                       | 74.0              | -6.9           | 1.26 V                   | 12                         | 50.60                  | 16.50                          |  |
| 6   | 11340.00  | 52.7 AV                       | 54.0              | -1.3           | 1.26 V                   | 12                         | 36.20                  | 16.50                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 39 / 116 Report Format Version: 6.1.1



# 802.11ac (HT20)\_2TX

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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 5150.00   | 58.8 PK                       | 74.0              | -15.2          | 1.05 H                   | 224                        | 56.80                  | 2.00                           |  |
| 2   | 5150.00   | 46.4 AV                       | 54.0              | -7.6           | 1.05 H                   | 224                        | 44.40                  | 2.00                           |  |
| 3   | *5260.00  | 114.1 PK                      |                   |                | 1.38 H                   | 46                         | 74.00                  | 40.10                          |  |
| 4   | *5260.00  | 102.6 AV                      |                   |                | 1.38 H                   | 46                         | 62.50                  | 40.10                          |  |
| 5   | 5460.00   | 59.6 PK                       | 74.0              | -14.4          | 1.02 H                   | 35                         | 57.50                  | 2.10                           |  |
| 6   | 5460.00   | 47.0 AV                       | 54.0              | -7.0           | 1.02 H                   | 35                         | 44.90                  | 2.10                           |  |
| 7   | #10520.00   | 61.0 PK                       | 74.0              | -13.0          | 1.47 H                   | 88                         | 45.70                  | 15.30                          |  |
| 8   | #10520.00   | 47.5 AV                       | 54.0              | -6.5           | 1.47 H                   | 88                         | 32.20                  | 15.30                          |  |
|     |   | ANTENNA                       | POLARITY          | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 5150.00   | 57.1 PK                       | 74.0              | -16.9          | 1.02 V                   | 64                         | 55.10                  | 2.00                           |  |
| 2   | 5150.00   | 44.3 AV                       | 54.0              | -9.7           | 1.02 V                   | 64                         | 42.30                  | 2.00                           |  |
| 3   | *5260.00  | 113.8 PK                      |                   |                | 1.02 V                   | 45                         | 73.70                  | 40.10                          |  |
| 4   | *5260.00  | 103.9 AV                      |                   |                | 1.02 V                   | 45                         | 63.80                  | 40.10                          |  |
| 5   | 5460.00   | 59.6 PK                       | 74.0              | -14.4          | 1.01 V                   | 5                          | 57.50                  | 2.10                           |  |
| 6   | 5460.00   | 46.3 AV                       | 54.0              | -7.7           | 1.01 V                   | 5                          | 44.20                  | 2.10                           |  |
| 7   | #10520.00   | 60.9 PK                       | 74.0              | -13.1          | 1.52 V                   | 66                         | 45.60                  | 15.30                          |  |
| 8   | #10520.00   | 48.4 AV                       | 54.0              | -5.6           | 1.52 V                   | 66                         | 33.10                  | 15.30                          |  |

## **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)
- 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.

Report No.: RF141227C17A Page No. 40 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5300.00  | 113.8 PK                      |                   |                | 1.01 H                   | 334                        | 73.70                  | 40.10                          |  |
| 2   | *5300.00  | 103.5 AV                      |                   |                | 1.01 H                   | 334                        | 63.40                  | 40.10                          |  |
| 3   | 10600.00  | 62.0 PK                       | 74.0              | -12.0          | 1.05 H                   | 84                         | 45.80                  | 16.20                          |  |
| 4   | 10600.00  | 48.3 AV                       | 54.0              | -5.7           | 1.05 H                   | 84                         | 32.10                  | 16.20                          |  |
| 5   | 15900.00  | 65.4 PK                       | 74.0              | -8.6           | 1.26 H                   | 96                         | 50.50                  | 14.90                          |  |
| 6   | 15900.00  | 50.4 AV                       | 54.0              | -3.6           | 1.26 H                   | 96                         | 35.50                  | 14.90                          |  |
|     |   | ANTENNA                       | POLARITY          | 4 TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5300.00  | 113.8 PK                      |                   |                | 1.00 V                   | 295                        | 73.70                  | 40.10                          |  |
| 2   | *5300.00  | 103.6 AV                      |                   |                | 1.00 V                   | 295                        | 63.50                  | 40.10                          |  |
| 3   | 10600.00  | 62.1 PK                       | 74.0              | -11.9          | 1.52 V                   | 95                         | 45.90                  | 16.20                          |  |
| 4   | 10600.00  | 49.4 AV                       | 54.0              | -4.6           | 1.52 V                   | 95                         | 33.20                  | 16.20                          |  |
| 5   | 15900.00  | 66.3 PK                       | 74.0              | -7.7           | 1.03 V                   | 28                         | 51.40                  | 14.90                          |  |
| 6   | 15900.00  | 50.7 AV                       | 54.0              | -3.3           | 1.03 V                   | 28                         | 35.80                  | 14.90                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No.: 141227C17, 141227C19

Page No. 41 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5320.00       | 113.8 PK                      |                   |                | 1.02 H                   | 65                         | 73.60                  | 40.20                          |
| 2   | *5320.00       | 103.4 AV                      |                   |                | 1.02 H                   | 65                         | 63.20                  | 40.20                          |
| 3   | 5350.00        | 61.3 PK                       | 74.0              | -12.7          | 1.05 H                   | 84                         | 59.30                  | 2.00                           |
| 4   | 5350.00        | 49.3 AV                       | 54.0              | -4.7           | 1.05 H                   | 84                         | 47.30                  | 2.00                           |
| 5   | 10640.00       | 61.5 PK                       | 74.0              | -12.5          | 1.01 H                   | 54                         | 45.20                  | 16.30                          |
| 6   | 10640.00       | 48.4 AV                       | 54.0              | -5.6           | 1.01 H                   | 54                         | 32.10                  | 16.30                          |
| 7   | 15960.00       | 63.1 PK                       | 74.0              | -10.9          | 1.05 H                   | 88                         | 48.40                  | 14.70                          |
| 8   | 15960.00       | 49.5 AV                       | 54.0              | -4.5           | 1.05 H                   | 88                         | 34.80                  | 14.70                          |
|     |                | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5320.00       | 114.7 PK                      |                   |                | 1.05 V                   | 21                         | 74.50                  | 40.20                          |
| 2   | *5320.00       | 103.9 AV                      |                   |                | 1.05 V                   | 21                         | 63.70                  | 40.20                          |
| 3   | 5350.00        | 63.8 PK                       | 74.0              | -10.2          | 1.02 V                   | 33                         | 61.80                  | 2.00                           |
| 4   | 5350.00        | 49.5 AV                       | 54.0              | -4.5           | 1.02 V                   | 33                         | 47.50                  | 2.00                           |
| 5   | 10640.00       | 61.9 PK                       | 74.0              | -12.1          | 1.41 V                   | 51                         | 45.60                  | 16.30                          |
| 6   | 10640.00       | 48.5 AV                       | 54.0              | -5.5           | 1.41 V                   | 51                         | 32.20                  | 16.30                          |
| 7   | 15960.00       | 64.8 PK                       | 74.0              | -9.2           | 1.02 V                   | 32                         | 50.10                  | 14.70                          |
| 8   | 15960.00       | 49.4 AV                       | 54.0              | -4.6           | 1.02 V                   | 32                         | 34.70                  | 14.70                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.



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

|     |                | ANTENNA I                     | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 57.9 PK                       | 74.0              | -16.1          | 1.15 H                   | 18                         | 55.80                  | 2.10                           |
| 2   | 5460.00        | 44.8 AV                       | 54.0              | -9.2           | 1.15 H                   | 18                         | 42.70                  | 2.10                           |
| 3   | #5470.00       | 59.7 PK                       | 74.0              | -14.3          | 1.17 H                   | 18                         | 57.50                  | 2.20                           |
| 4   | #5470.00       | 45.7 AV                       | 54.0              | -8.3           | 1.17 H                   | 18                         | 43.50                  | 2.20                           |
| 5   | *5500.00       | 113.5 PK                      |                   |                | 1.33 H                   | 285                        | 73.20                  | 40.30                          |
| 6   | *5500.00       | 103.0 AV                      |                   |                | 1.33 H                   | 285                        | 62.70                  | 40.30                          |
| 7   | 11000.00       | 63.5 PK                       | 74.0              | -10.5          | 1.25 H                   | 65                         | 45.80                  | 17.70                          |
| 8   | 11000.00       | 49.6 AV                       | 54.0              | -4.4           | 1.25 H                   | 65                         | 31.90                  | 17.70                          |
|     |                | ANTENNA                       | A POLARITY        | 4 TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 58.9 PK                       | 74.0              | -15.1          | 1.00 V                   | 8                          | 56.80                  | 2.10                           |
| 2   | 5460.00        | 46.4 AV                       | 54.0              | -7.6           | 1.00 V                   | 8                          | 44.30                  | 2.10                           |
| 3   | #5470.00       | 66.3 PK                       | 74.0              | -7.7           | 1.00 V                   | 8                          | 64.10                  | 2.20                           |
| 4   | #5470.00       | 50.9 AV                       | 54.0              | -3.1           | 1.00 V                   | 8                          | 48.70                  | 2.20                           |
| 5   | *5500.00       | 116.3 PK                      |                   |                | 1.00 V                   | 5                          | 76.00                  | 40.30                          |
| 6   | *5500.00       | 105.9 AV                      |                   |                | 1.00 V                   | 5                          | 65.60                  | 40.30                          |
| 7   | 11000.00       | 65.9 PK                       | 74.0              | -8.1           | 1.38 V                   | 95                         | 48.20                  | 17.70                          |
| 8   | 11000.00       | 50.8 AV                       | 54.0              | -3.2           | 1.38 V                   | 95                         | 33.10                  | 17.70                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 43 / 116 Reference No.: 141227C17, 141227C19



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

|   | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                                |                                |  |
|---|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|--------------------------------|--------------------------------|--|
| NO.   | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV)         | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | *5580.00  | 109.7 PK                      |                   |                | 1.06 H                   | 13                         | 69.20                          | 40.50                          |  |
| 2   | *5580.00  | 99.7 AV                       |                   |                | 1.06 H                   | 13                         | 59.20                          | 40.50                          |  |
| 3   | 11160.00  | 64.1 PK                       | 74.0              | -9.9           | 1.03 H                   | 352                        | 47.70                          | 16.40                          |  |
| 4   | 11160.00  | 50.4 AV                       | 54.0              | -3.6           | 1.03 H                   | 352                        | 34.00                          | 16.40                          |  |
|   |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                          |                                |  |
| NO. FREQ. LEVEL LIMIT MARGIN HEIGHT ANGLE VALUE FAC |   |                               |                   |                |                          |                            | CORRECTION<br>FACTOR<br>(dB/m) |                                |  |
| 1   | *5580.00  | 114.6 PK                      |                   |                | 1.00 V                   | 10                         | 74.10                          | 40.50                          |  |
| 2   | *5580.00  | 104.2 AV                      |                   |                | 1.00 V                   | 10                         | 63.70                          | 40.50                          |  |
| 3   | 11160.00  | 68.5 PK                       | 74.0              | -5.5           | 1.32 V                   | 23                         | 52.10                          | 16.40                          |  |
| 4   | 11160.00  | 49.6 AV                       | 54.0              | -4.4           | 1.32 V                   | 23                         | 33.20                          | 16.40                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19

Page No. 44 / 116

Report Format Version: 6.1.1



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

|     |   | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz)  | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5700.00  | 110.4 PK                      |                   |                | 1.00 H                   | 55                         | 69.60                  | 40.80                          |
| 2   | *5700.00  | 99.9 AV                       |                   |                | 1.00 H                   | 55                         | 59.10                  | 40.80                          |
| 3   | #5725.00  | 57.4 PK                       | 74.0              | -16.6          | 1.03 H                   | 65                         | 54.80                  | 2.60                           |
| 4   | #5725.00  | 47.6 AV                       | 54.0              | -6.4           | 1.03 H                   | 65                         | 45.00                  | 2.60                           |
| 5   | 11400.00  | 63.7 PK                       | 74.0              | -10.3          | 1.02 H                   | 95                         | 47.50                  | 16.20                          |
| 6   | 11400.00  | 49.3 AV                       | 54.0              | -4.7           | 1.02 H                   | 95                         | 33.10                  | 16.20                          |
|     |   | ANTENNA                       | POLARITY          | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | NO. FREQ. (MHz) EMISSION LIMIT (dBuV/m) (dB) ANTENNA TABLE RAW CORRECTION HEIGHT ANGLE VALUE FACTOR (dB/m) (dB/m) |                               |                   |                |                          |                            |                        |                                |
| 1   | *5700.00  | 109.6 PK                      |                   |                | 1.02 V                   | 41                         | 68.80                  | 40.80                          |
| 2   | *5700.00  | 98.8 AV                       |                   |                | 1.02 V                   | 41                         | 58.00                  | 40.80                          |
| 3   | #5725.00  | 57.8 PK                       | 74.0              | -16.2          | 1.41 V                   | 59                         | 55.20                  | 2.60                           |
| 4   | #5725.00  | 44.7 AV                       | 54.0              | -9.3           | 1.41 V                   | 59                         | 42.10                  | 2.60                           |
| 5   | 11400.00  | 67.0 PK                       | 74.0              | -7.0           | 1.23 V                   | 24                         | 50.80                  | 16.20                          |
| 6   | 11400.00  | 52.6 AV                       | 54.0              | -1.4           | 1.23 V                   | 24                         | 36.40                  | 16.20                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 45 / 116 Report Format Version: 6.1.1



# 802.11ac (VHT40)\_2TX

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

|     |                | ANTENNA                       | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5150.00        | 56.5 PK                       | 74.0              | -17.5          | 1.57 H                   | 65                         | 54.50                  | 2.00                           |
| 2   | 5150.00        | 43.7 AV                       | 54.0              | -10.3          | 1.57 H                   | 65                         | 41.70                  | 2.00                           |
| 3   | *5270.00       | 107.1 PK                      |                   |                | 1.05 H                   | 98                         | 67.00                  | 40.10                          |
| 4   | *5270.00       | 97.1 AV                       |                   |                | 1.05 H                   | 98                         | 57.00                  | 40.10                          |
| 5   | #10540.00      | 60.6 PK                       | 74.0              | -13.4          | 1.42 H                   | 100                        | 45.00                  | 15.60                          |
| 6   | #10540.00      | 47.7 AV                       | 54.0              | -6.3           | 1.42 H                   | 100                        | 32.10                  | 15.60                          |
|     |                | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5150.00        | 56.9 PK                       | 74.0              | -17.1          | 1.03 V                   | 95                         | 54.90                  | 2.00                           |
| 2   | 5150.00        | 44.1 AV                       | 54.0              | -9.9           | 1.03 V                   | 95                         | 42.10                  | 2.00                           |
| 3   | *5270.00       | 110.6 PK                      |                   |                | 1.01 V                   | 45                         | 70.50                  | 40.10                          |
| 4   | *5270.00       | 100.4 AV                      |                   |                | 1.01 V                   | 45                         | 60.30                  | 40.10                          |

### **REMARKS:**

#10540.00

#10540.00

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

-12.6

-5.3

1.00 V

1.00 V

25

25

45.80

33.10

15.60

15.60

- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

74.0

54.0

5. " \* ": Fundamental frequency.

61.4 PK

48.7 AV

6. " # ": The radiated frequency is out of the restricted band.

Report No.: RF141227C17A Page No. 46 / 116 Report Format Version: 6.1.1 Reference No.: 141227C17, 141227C19



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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5310.00       | 106.6 PK                      |                   |                | 1.15 H                   | 333                        | 66.50                  | 40.10                          |
| 2   | *5310.00       | 96.1 AV                       |                   |                | 1.15 H                   | 333                        | 56.00                  | 40.10                          |
| 3   | 5350.00        | 61.0 PK                       | 74.0              | -13.0          | 1.22 H                   | 21                         | 59.00                  | 2.00                           |
| 4   | 5350.00        | 48.2 AV                       | 54.0              | -5.8           | 1.22 H                   | 21                         | 46.20                  | 2.00                           |
| 5   | 10620.00       | 61.3 PK                       | 74.0              | -12.7          | 1.05 H                   | 96                         | 45.10                  | 16.20                          |
| 6   | 10620.00       | 47.4 AV                       | 54.0              | -6.6           | 1.05 H                   | 96                         | 31.20                  | 16.20                          |
|     |                | ANTENNA                       | POLARITY          | ' & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5310.00       | 109.9 PK                      |                   |                | 1.00 V                   | 47                         | 69.80                  | 40.10                          |
| 2   | *5310.00       | 100.1 AV                      |                   |                | 1.00 V                   | 47                         | 60.00                  | 40.10                          |
| 3   | 5350.00        | 63.8 PK                       | 74.0              | -10.2          | 1.00 V                   | 43                         | 61.80                  | 2.00                           |
| 4   | 5350.00        | 51.3 AV                       | 54.0              | -2.7           | 1.00 V                   | 43                         | 49.30                  | 2.00                           |
| 5   | 10620.00       | 61.9 PK                       | 74.0              | -12.1          | 1.03 V                   | 89                         | 45.70                  | 16.20                          |
| 6   | 10620.00       | 48.4 AV                       | 54.0              | -5.6           | 1.03 V                   | 89                         | 32.20                  | 16.20                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 47 / 116 Reference No.: 141227C17, 141227C19



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

|     |                | ANTENNA                       | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 58.6 PK                       | 74.0              | -15.4          | 1.03 H                   | 15                         | 56.50                  | 2.10                           |
| 2   | 5460.00        | 46.1 AV                       | 54.0              | -7.9           | 1.03 H                   | 15                         | 44.00                  | 2.10                           |
| 3   | #5470.00       | 61.7 PK                       | 74.0              | -12.3          | 1.03 H                   | 15                         | 59.50                  | 2.20                           |
| 4   | #5470.00       | 47.9 AV                       | 54.0              | -6.1           | 1.03 H                   | 15                         | 45.70                  | 2.20                           |
| 5   | *5510.00       | 104.5 PK                      |                   |                | 1.35 H                   | 299                        | 64.20                  | 40.30                          |
| 6   | *5510.00       | 94.3 AV                       |                   |                | 1.35 H                   | 299                        | 54.00                  | 40.30                          |
| 7   | 11020.00       | 62.4 PK                       | 74.0              | -11.6          | 1.05 H                   | 84                         | 45.00                  | 17.40                          |
| 8   | 11020.00       | 48.6 AV                       | 54.0              | -5.4           | 1.05 H                   | 84                         | 31.20                  | 17.40                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 62.4 PK                       | 74.0              | -11.6          | 1.00 V                   | 5                          | 60.30                  | 2.10                           |
| 2   | 5460.00        | 49.6 AV                       | 54.0              | -4.4           | 1.00 V                   | 5                          | 47.50                  | 2.10                           |
| 3   | #5470.00       | 67.7 PK                       | 74.0              | -6.3           | 1.00 V                   | 5                          | 65.50                  | 2.20                           |
| 4   | #5470.00       | 52.7 AV                       | 54.0              | -1.3           | 1.00 V                   | 5                          | 50.50                  | 2.20                           |
| 5   | *5510.00       | 109.6 PK                      |                   |                | 1.00 V                   | 7                          | 69.30                  | 40.30                          |
| 6   | *5510.00       | 98.6 AV                       |                   |                | 1.00 V                   | 7                          | 58.30                  | 40.30                          |
| 7   | 11020.00       | 64.7 PK                       | 74.0              | -9.3           | 1.45 V                   | 18                         | 47.30                  | 17.40                          |
| 8   | 11020.00       | 50.9 AV                       | 54.0              | -3.1           | 1.45 V                   | 18                         | 33.50                  | 17.40                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 48 / 116
Reference No.: 141227C17, 141227C19



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #5470.00  | 58.5 PK                       | 74.0              | -15.5          | 1.06 H                   | 248                        | 56.30                  | 2.20                           |
| 2   | #5470.00  | 44.4 AV                       | 54.0              | -9.6           | 1.06 H                   | 248                        | 42.20                  | 2.20                           |
| 3   | *5550.00  | 93.5 PK                       |                   |                | 1.00 H                   | 12                         | 53.10                  | 40.40                          |
| 4   | *5550.00  | 93.1 AV                       |                   |                | 1.00 H                   | 12                         | 52.70                  | 40.40                          |
| 5   | 11100.00  | 62.5 PK                       | 74.0              | -11.5          | 1.05 H                   | 9                          | 45.90                  | 16.60                          |
| 6   | 11100.00  | 49.8 AV                       | 54.0              | -4.2           | 1.05 H                   | 9                          | 33.20                  | 16.60                          |
|     |   | ANTENNA                       | POLARITY          | 4 TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #5470.00  | 59.4 PK                       | 74.0              | -14.6          | 1.00 V                   | 5                          | 57.20                  | 2.20                           |
| 2   | #5470.00  | 45.7 AV                       | 54.0              | -8.3           | 1.00 V                   | 5                          | 43.50                  | 2.20                           |
| 3   | *5550.00  | 110.2 PK                      |                   |                | 1.00 V                   | 6                          | 69.80                  | 40.40                          |
| 4   | *5550.00  | 99.5 AV                       |                   |                | 1.00 V                   | 6                          | 59.10                  | 40.40                          |
| 5   | 11100.00  | 67.9 PK                       | 74.0              | -6.1           | 1.41 V                   | 18                         | 51.30                  | 16.60                          |
| 6   | 11100.00  | 52.7 AV                       | 54.0              | -1.3           | 1.41 V                   | 18                         | 36.10                  | 16.60                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 49 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5670.00  | 103.2 PK                      |                   |                | 1.15 H                   | 13                         | 62.50                  | 40.70                          |
| 2   | *5670.00  | 92.4 AV                       |                   |                | 1.15 H                   | 13                         | 51.70                  | 40.70                          |
| 3   | #5725.00  | 57.2 PK                       | 74.0              | -16.8          | 1.00 H                   | 12                         | 54.60                  | 2.60                           |
| 4   | #5725.00  | 44.6 AV                       | 54.0              | -9.4           | 1.00 H                   | 12                         | 42.00                  | 2.60                           |
| 5   | 11340.00  | 65.3 PK                       | 74.0              | -8.7           | 1.05 H                   | 355                        | 48.80                  | 16.50                          |
| 6   | 11340.00  | 51.7 AV                       | 54.0              | -2.3           | 1.05 H                   | 355                        | 35.20                  | 16.50                          |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5670.00  | 105.9 PK                      |                   |                | 1.00 V                   | 5                          | 65.20                  | 40.70                          |
| 2   | *5670.00  | 95.4 AV                       |                   |                | 1.00 V                   | 5                          | 54.70                  | 40.70                          |
| 3   | #5725.00  | 57.1 PK                       | 74.0              | -16.9          | 1.00 V                   | 288                        | 54.50                  | 2.60                           |
| 4   | #5725.00  | 44.7 AV                       | 54.0              | -9.3           | 1.00 V                   | 288                        | 42.10                  | 2.60                           |
| 5   | 11340.00  | 67.0 PK                       | 74.0              | -7.0           | 1.25 V                   | 13                         | 50.50                  | 16.50                          |
| 6   | 11340.00  | 52.5 AV                       | 54.0              | -1.5           | 1.25 V                   | 13                         | 36.00                  | 16.50                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 50 / 116 Report Format Version: 6.1.1



# 802.11ac (VHT80)\_2TX

| CHANNEL         | TX Channel 58 | DETECTOR | Peak (PK)    |
|-----------------|---------------|----------|--------------|
| FREQUENCY RANGE | 1GHz ~ 40GHz  | FUNCTION | Average (AV) |

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5290.00  | 105.3 PK                      |                   |                | 1.65 H                   | 54                         | 65.20                  | 40.10                          |
| 2   | *5290.00  | 94.7 AV                       |                   |                | 1.65 H                   | 54                         | 54.60                  | 40.10                          |
| 3   | 5350.00   | 65.3 PK                       | 74.0              | -8.7           | 1.77 H                   | 34                         | 63.30                  | 2.00                           |
| 4   | 5350.00   | 51.7 AV                       | 54.0              | -2.3           | 1.77 H                   | 34                         | 49.70                  | 2.00                           |
| 5   | #10580.00   | 59.9 PK                       | 74.0              | -14.1          | 1.49 H                   | 170                        | 44.00                  | 15.90                          |
| 6   | #10580.00   | 47.0 AV                       | 54.0              | -7.0           | 1.49 H                   | 170                        | 31.10                  | 15.90                          |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | *5290.00  | 105.4 PK                      |                   |                | 1.88 V                   | 27                         | 65.30                  | 40.10                          |

| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| 1   | *5290.00       | 105.4 PK                      |                   |                | 1.88 V                   | 27                         | 65.30                  | 40.10                          |
| 2   | *5290.00       | 95.7 AV                       |                   |                | 1.88 V                   | 27                         | 55.60                  | 40.10                          |
| 3   | 5350.00        | 68.1 PK                       | 74.0              | -5.9           | 1.66 V                   | 354                        | 66.10                  | 2.00                           |
| 4   | 5350.00        | 53.0 AV                       | 54.0              | -1.0           | 1.66 V                   | 354                        | 51.00                  | 2.00                           |
| 5   | #10580.00      | 60.1 PK                       | 74.0              | -13.9          | 1.59 V                   | 100                        | 44.20                  | 15.90                          |
| 6   | #10580.00      | 46.9 AV                       | 54.0              | -7.1           | 1.59 V                   | 100                        | 31.00                  | 15.90                          |

### **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)
- 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.

Report No.: RF141227C17A Page No. 51 / 116 Report Format Version: 6.1.1



| CHANNEL         | TX Channel 106 | DETECTOR | Peak (PK)    |
|-----------------|----------------|----------|--------------|
| FREQUENCY RANGE | 1GHz ~ 40GHz   | FUNCTION | Average (AV) |

|     |                | ANTENNA                       | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 61.5 PK                       | 74.0              | -12.5          | 1.75 H                   | 37                         | 59.40                  | 2.10                           |
| 2   | 5460.00        | 49.1 AV                       | 54.0              | -4.9           | 1.75 H                   | 37                         | 47.00                  | 2.10                           |
| 3   | #5470.00       | 64.9 PK                       | 74.0              | -9.1           | 1.76 H                   | 37                         | 62.70                  | 2.20                           |
| 4   | #5470.00       | 52.2 AV                       | 54.0              | -1.8           | 1.76 H                   | 37                         | 50.00                  | 2.20                           |
| 5   | *5530.00       | 101.5 PK                      |                   |                | 1.64 H                   | 36                         | 61.10                  | 40.40                          |
| 6   | *5530.00       | 91.9 AV                       |                   |                | 1.64 H                   | 36                         | 51.50                  | 40.40                          |
| 7   | 11060.00       | 60.1 PK                       | 74.0              | -13.9          | 1.50 H                   | 178                        | 43.00                  | 17.10                          |
| 8   | 11060.00       | 47.1 AV                       | 54.0              | -6.9           | 1.50 H                   | 178                        | 30.00                  | 17.10                          |
|     |                | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 5460.00        | 61.7 PK                       | 74.0              | -12.3          | 1.83 V                   | 30                         | 59.60                  | 2.10                           |
| 2   | 5460.00        | 48.7 AV                       | 54.0              | -5.3           | 1.83 V                   | 30                         | 46.60                  | 2.10                           |
| 3   | #5470.00       | 66.2 PK                       | 74.0              | -7.8           | 1.84 V                   | 27                         | 64.00                  | 2.20                           |
| 4   | #5470.00       | 52.6 AV                       | 54.0              | -1.4           | 1.84 V                   | 27                         | 50.40                  | 2.20                           |
| 5   | *5530.00       | 101.8 PK                      |                   |                | 1.86 V                   | 48                         | 61.40                  | 40.40                          |
| 6   | *5530.00       | 91.8 AV                       |                   |                | 1.86 V                   | 48                         | 51.40                  | 40.40                          |
| 7   | 11060.00       | 60.9 PK                       | 74.0              | -13.1          | 1.60 V                   | 108                        | 43.80                  | 17.10                          |
| 8   | 11060.00       | 47.8 AV                       | 54.0              | -6.2           | 1.60 V                   | 108                        | 30.70                  | 17.10                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 52 / 116 Report Format Version: 6.1.1



# 802.11n (HT20)\_3TX

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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3506.00  | 46.6 PK                       | 74.0              | -27.4          | 1.00 H                   | 261                        | 48.40                  | -1.80                          |
| 2   | #3506.00  | 38.4 AV                       | 54.0              | -15.6          | 1.00 H                   | 261                        | 40.20                  | -1.80                          |
| 3   | 5150.00   | 59.6 PK                       | 74.0              | -14.4          | 1.67 H                   | 79                         | 57.60                  | 2.00                           |
| 4   | 5150.00   | 47.8 AV                       | 54.0              | -6.2           | 1.67 H                   | 79                         | 45.80                  | 2.00                           |
| 5   | *5260.00  | 114.9 PK                      |                   |                | 1.03 H                   | 55                         | 74.80                  | 40.10                          |
| 6   | *5260.00  | 105.2 AV                      |                   |                | 1.03 H                   | 55                         | 65.10                  | 40.10                          |
| 7   | #10520.00   | 60.5 PK                       | 74.0              | -13.5          | 1.00 H                   | 316                        | 45.20                  | 15.30                          |
| 8   | #10520.00   | 47.4 AV                       | 54.0              | -6.6           | 1.00 H                   | 316                        | 32.10                  | 15.30                          |
|     |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3506.00  | 47.9 PK                       | 74.0              | -26.1          | 1.03 V                   | 341                        | 49.70                  | -1.80                          |
| 2   | #3506.00  | 40.6 AV                       | 54.0              | -13.4          | 1.03 V                   | 341                        | 42.40                  | -1.80                          |
| 3   | 5150.00   | 59.3 PK                       | 74.0              | -14.7          | 1.11 V                   | 347                        | 57.30                  | 2.00                           |
| 4   | 5150.00   | 47.3 AV                       | 54.0              | -6.7           | 1.11 V                   | 347                        | 45.30                  | 2.00                           |
| 5   | *5260.00  | 114.9 PK                      |                   |                | 1.00 V                   | 25                         | 74.80                  | 40.10                          |
| 6   | *5260.00  | 105.0 AV                      |                   |                | 1.00 V                   | 25                         | 64.90                  | 40.10                          |
| 7   | #10520.00   | 59.7 PK                       | 74.0              | -14.3          | 1.00 V                   | 87                         | 44.40                  | 15.30                          |
| 8   | #10520.00   | 47.5 AV                       | 54.0              | -6.5           | 1.00 V                   | 87                         | 32.20                  | 15.30                          |

## **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)
- 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.

Report No.: RF141227C17A Page No. 53 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3533.00  | 48.0 PK                       | 74.0              | -26.0          | 1.54 H                   | 321                        | 49.70                  | -1.70                          |
| 2   | #3533.00  | 41.3 AV                       | 54.0              | -12.7          | 1.54 H                   | 321                        | 43.00                  | -1.70                          |
| 3   | *5300.00  | 114.2 PK                      |                   |                | 1.00 H                   | 46                         | 74.10                  | 40.10                          |
| 4   | *5300.00  | 104.6 AV                      |                   |                | 1.00 H                   | 46                         | 64.50                  | 40.10                          |
| 5   | 10600.00  | 61.6 PK                       | 74.0              | -12.4          | 1.00 H                   | 49                         | 45.40                  | 16.20                          |
| 6   | 10600.00  | 48.8 AV                       | 54.0              | -5.2           | 1.00 H                   | 49                         | 32.60                  | 16.20                          |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3533.00  | 48.1 PK                       | 74.0              | -25.9          | 1.03 V                   | 16                         | 49.80                  | -1.70                          |
| 2   | #3533.00  | 41.5 AV                       | 54.0              | -12.5          | 1.03 V                   | 16                         | 43.20                  | -1.70                          |
| 3   | *5300.00  | 116.4 PK                      |                   |                | 1.00 V                   | 33                         | 76.30                  | 40.10                          |
| 4   | *5300.00  | 106.1 AV                      |                   |                | 1.00 V                   | 33                         | 66.00                  | 40.10                          |
|     | 40000 00  | 64.0 DIZ                      | 74.0              | -9.8           | 1.17 V                   | 27                         | 48.00                  | 16.20                          |
| 5   | 10600.00  | 64.2 PK                       | 74.0              | -9.0           | 1.17 V                   | 21                         | 40.00                  | 10.20                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 54 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3546.00       | 45.5 PK                       | 74.0              | -28.5          | 1.00 H                   | 285                        | 47.30                  | -1.80                          |
| 2   | #3546.00       | 38.2 AV                       | 54.0              | -15.8          | 1.00 H                   | 285                        | 40.00                  | -1.80                          |
| 3   | *5320.00       | 111.9 PK                      |                   |                | 1.00 H                   | 343                        | 71.70                  | 40.20                          |
| 4   | *5320.00       | 103.0 AV                      |                   |                | 1.00 H                   | 343                        | 62.80                  | 40.20                          |
| 5   | 5350.00        | 61.3 PK                       | 74.0              | -12.7          | 1.00 H                   | 38                         | 59.30                  | 2.00                           |
| 6   | 5350.00        | 48.0 AV                       | 54.0              | -6.0           | 1.00 H                   | 38                         | 46.00                  | 2.00                           |
| 7   | 10640.00       | 59.9 PK                       | 74.0              | -14.1          | 1.00 H                   | 323                        | 43.60                  | 16.30                          |
| 8   | 10640.00       | 46.8 AV                       | 54.0              | -7.2           | 1.00 H                   | 323                        | 30.50                  | 16.30                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3546.00       | 47.1 PK                       | 74.0              | -26.9          | 1.05 V                   | 34                         | 48.90                  | -1.80                          |
| 2   | #3546.00       | 41.0 AV                       | 54.0              | -13.0          | 1.05 V                   | 34                         | 42.80                  | -1.80                          |
| 3   | *5320.00       | 115.2 PK                      |                   |                | 1.00 V                   | 41                         | 75.00                  | 40.20                          |
| 4   | *5320.00       | 105.2 AV                      |                   |                | 1.00 V                   | 41                         | 65.00                  | 40.20                          |
| 5   | 5350.00        | 63.1 PK                       | 74.0              | -10.9          | 1.08 V                   | 44                         | 61.10                  | 2.00                           |
| 6   | 5350.00        | 48.4 AV                       | 54.0              | -5.6           | 1.08 V                   | 44                         | 46.40                  | 2.00                           |
| 7   | 10640.00       | 61.2 PK                       | 74.0              | -12.8          | 1.28 V                   | 16                         | 44.90                  | 16.30                          |
| 8   | 10640.00       | 48.2 AV                       | 54.0              | -5.8           | 1.28 V                   | 16                         | 31.90                  | 16.30                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 55 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3666.00        | 46.8 PK                       | 74.0              | -27.2          | 1.00 H                   | 280                        | 48.10                  | -1.30                          |
| 2   | 3666.00        | 36.9 AV                       | 54.0              | -17.1          | 1.00 H                   | 280                        | 38.20                  | -1.30                          |
| 3   | 5460.00        | 59.4 PK                       | 74.0              | -14.6          | 1.00 H                   | 30                         | 57.30                  | 2.10                           |
| 4   | 5460.00        | 46.0 AV                       | 54.0              | -8.0           | 1.00 H                   | 30                         | 43.90                  | 2.10                           |
| 5   | #5470.00       | 61.0 PK                       | 74.0              | -13.0          | 1.00 H                   | 31                         | 58.80                  | 2.20                           |
| 6   | #5470.00       | 46.5 AV                       | 54.0              | -7.5           | 1.00 H                   | 31                         | 44.30                  | 2.20                           |
| 7   | *5500.00       | 110.8 PK                      |                   |                | 1.00 H                   | 26                         | 70.50                  | 40.30                          |
| 8   | *5500.00       | 100.8 AV                      |                   |                | 1.00 H                   | 26                         | 60.50                  | 40.30                          |
| 9   | 11000.00       | 64.3 PK                       | 74.0              | -9.7           | 1.00 H                   | 8                          | 46.60                  | 17.70                          |
| 10  | 11000.00       | 50.9 AV                       | 54.0              | -3.1           | 1.00 H                   | 8                          | 33.20                  | 17.70                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3666.00        | 46.2 PK                       | 74.0              | -27.8          | 1.00 V                   | 7                          | 47.50                  | -1.30                          |
| 2   | 3666.00        | 36.7 AV                       | 54.0              | -17.3          | 1.00 V                   | 7                          | 38.00                  | -1.30                          |
| 3   | 5460.00        | 59.2 PK                       | 74.0              | -14.8          | 1.00 V                   | 4                          | 57.10                  | 2.10                           |
| 4   | 5460.00        | 46.8 AV                       | 54.0              | -7.2           | 1.00 V                   | 4                          | 44.70                  | 2.10                           |
| 5   | #5470.00       | 60.7 PK                       | 74.0              | -13.3          | 1.00 V                   | 7                          | 58.50                  | 2.20                           |
| 6   | #5470.00       | 47.5 AV                       | 54.0              | -6.5           | 1.00 V                   | 7                          | 45.30                  | 2.20                           |
| 7   | *5500.00       | 114.2 PK                      |                   |                | 1.32 V                   | 29                         | 73.90                  | 40.30                          |
| 8   | *5500.00       | 104.0 AV                      |                   |                | 1.32 V                   | 29                         | 63.70                  | 40.30                          |
| 9   | 11000.00       | 68.5 PK                       | 74.0              | -5.5           | 1.24 V                   | 23                         | 50.80                  | 17.70                          |
| 10  | 11000.00       | 53.0 AV                       | 54.0              | -1.0           | 1.24 V                   | 23                         | 35.30                  | 17.70                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

Page No. 56 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3720.00  | 45.4 PK                       | 74.0              | -28.6          | 1.00 H                   | 92                         | 46.30                  | -0.90                          |  |
| 2   | #3720.00  | 35.7 AV                       | 54.0              | -18.3          | 1.00 H                   | 92                         | 36.60                  | -0.90                          |  |
| 3   | *5580.00  | 111.4 PK                      |                   |                | 1.05 H                   | 46                         | 70.90                  | 40.50                          |  |
| 4   | *5580.00  | 101.3 AV                      |                   |                | 1.05 H                   | 46                         | 60.80                  | 40.50                          |  |
| 5   | #11160.00   | 64.2 PK                       | 74.0              | -9.8           | 1.00 H                   | 51                         | 47.80                  | 16.40                          |  |
| 6   | #11160.00   | 50.0 AV                       | 54.0              | -4.0           | 1.00 H                   | 51                         | 33.60                  | 16.40                          |  |
|     |   | ANTENNA                       | POLARITY          | ' & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3720.00  | 44.8 PK                       | 74.0              | -29.2          | 1.00 V                   | 1                          | 45.70                  | -0.90                          |  |
| 2   | #3720.00  | 35.1 AV                       | 54.0              | -18.9          | 1.00 V                   | 1                          | 36.00                  | -0.90                          |  |
| 3   | *5580.00  | 115.1 PK                      |                   |                | 1.00 V                   | 19                         | 74.60                  | 40.50                          |  |
| 4   | *5580.00  | 105.2 AV                      |                   |                | 1.00 V                   | 19                         | 64.70                  | 40.50                          |  |
| 5   | #11160.00   | 67.7 PK                       | 74.0              | -6.3           | 1.36 V                   | 23                         | 51.30                  | 16.40                          |  |
| 6   | #11160.00   | 53.0 AV                       | 54.0              | -1.0           | 1.36 V                   | 23                         | 36.60                  | 16.40                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

Report No.: RF141227C17A Page No. 57 / 116 Report Format Version: 6.1.1 Reference No.: 141227C17, 141227C19



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

|     |                | ANTENNA                       | POLARITY (        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3800.00       | 45.1 PK                       | 74.0              | -28.9          | 1.00 H                   | 13                         | 45.80                  | -0.70                          |
| 2   | #3800.00       | 35.3 AV                       | 54.0              | -18.7          | 1.00 H                   | 13                         | 36.00                  | -0.70                          |
| 3   | *5700.00       | 110.4 PK                      |                   |                | 1.50 H                   | 72                         | 69.60                  | 40.80                          |
| 4   | *5700.00       | 99.9 AV                       |                   |                | 1.50 H                   | 72                         | 59.10                  | 40.80                          |
| 5   | #5725.00       | 60.5 PK                       | 74.0              | -13.5          | 1.00 H                   | 337                        | 57.90                  | 2.60                           |
| 6   | #5725.00       | 46.8 AV                       | 54.0              | -7.2           | 1.00 H                   | 337                        | 44.20                  | 2.60                           |
| 7   | #11400.00      | 65.5 PK                       | 74.0              | -8.5           | 1.34 H                   | 336                        | 49.30                  | 16.20                          |
| 8   | #11400.00      | 51.6 AV                       | 54.0              | -2.4           | 1.34 H                   | 336                        | 35.40                  | 16.20                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3800.00       | 45.2 PK                       | 74.0              | -28.8          | 1.00 V                   | 74                         | 45.90                  | -0.70                          |
| 2   | #3800.00       | 34.8 AV                       | 54.0              | -19.2          | 1.00 V                   | 74                         | 35.50                  | -0.70                          |
| 3   | *5700.00       | 109.1 PK                      |                   |                | 1.02 V                   | 44                         | 68.30                  | 40.80                          |
| 4   | *5700.00       | 98.9 AV                       |                   |                | 1.02 V                   | 44                         | 58.10                  | 40.80                          |
| 5   | #5725.00       | 59.8 PK                       | 74.0              | -14.2          | 1.00 V                   | 82                         | 57.20                  | 2.60                           |
| 6   | #5725.00       | 46.5 AV                       | 54.0              | -7.5           | 1.00 V                   | 82                         | 43.90                  | 2.60                           |
| 7   | #11400.00      | 67.7 PK                       | 74.0              | -6.3           | 1.02 V                   | 28                         | 51.50                  | 16.20                          |
| 8   | #11400.00      | 52.9 AV                       | 54.0              | -1.1           | 1.02 V                   | 28                         | 36.70                  | 16.20                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

Report No.: RF141227C17A Page No. 58 / 116 Report Format Version: 6.1.1



# 802.11n (HT40)\_3TX

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

|     |                | ANTENNA                       | POLARITY &        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3513.00       | 47.1 PK                       | 74.0              | -26.9          | 1.00 H                   | 121                        | 48.80                  | -1.70                          |
| 2   | #3513.00       | 38.8 AV                       | 54.0              | -15.2          | 1.00 H                   | 121                        | 40.50                  | -1.70                          |
| 3   | #5150.00       | 59.7 PK                       | 74.0              | -14.3          | 1.50 H                   | 166                        | 57.70                  | 2.00                           |
| 4   | #5150.00       | 47.1 AV                       | 54.0              | -6.9           | 1.50 H                   | 166                        | 45.10                  | 2.00                           |
| 5   | *5270.00       | 112.6 PK                      |                   |                | 1.10 H                   | 140                        | 72.50                  | 40.10                          |
| 6   | *5270.00       | 102.3 AV                      |                   |                | 1.10 H                   | 140                        | 62.20                  | 40.10                          |
| 7   | #10540.00      | 60.0 PK                       | 74.0              | -14.0          | 1.00 H                   | 300                        | 44.40                  | 15.60                          |
| 8   | #10540.00      | 47.9 AV                       | 54.0              | -6.1           | 1.00 H                   | 300                        | 32.30                  | 15.60                          |
|     |                | ANTENNA                       | POLARITY          | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3513.00       | 47.6 PK                       | 74.0              | -26.4          | 1.00 V                   | 190                        | 49.30                  | -1.70                          |
| 2   | #3513.00       | 40.1 AV                       | 54.0              | -13.9          | 1.00 V                   | 190                        | 41.80                  | -1.70                          |
| 3   | #5150.00       | 58.8 PK                       | 74.0              | -15.2          | 1.20 V                   | 137                        | 56.80                  | 2.00                           |
| 4   | #5150.00       | 46.2 AV                       | 54.0              | -7.8           | 1.20 V                   | 137                        | 44.20                  | 2.00                           |
| 5   | *5270.00       | 113.9 PK                      |                   |                | 1.00 V                   | 122                        | 73.80                  | 40.10                          |
| 6   | *5270.00       | 103.4 AV                      |                   |                | 1.00 V                   | 122                        | 63.30                  | 40.10                          |
| 7   | #10540.00      | 62.9 PK                       | 74.0              | -11.1          | 1.10 V                   | 18                         | 47.30                  | 15.60                          |
| 8   | #10540.00      | 49.0 AV                       | 54.0              | -5.0           | 1.10 V                   | 18                         | 33.40                  | 15.60                          |

## **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)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3540.00  | 48.1 PK                       | 74.0              | -25.9          | 1.19 H                   | 300                        | 49.90                  | -1.80                          |  |
| 2   | #3540.00  | 42.5 AV                       | 54.0              | -11.5          | 1.19 H                   | 300                        | 44.30                  | -1.80                          |  |
| 3   | *5310.00  | 113.0 PK                      |                   |                | 1.01 H                   | 70                         | 72.90                  | 40.10                          |  |
| 4   | *5310.00  | 103.1 AV                      |                   |                | 1.01 H                   | 75                         | 63.00                  | 40.10                          |  |
| 5   | #5350.00  | 64.2 PK                       | 74.0              | -9.8           | 1.01 H                   | 75                         | 62.20                  | 2.00                           |  |
| 6   | #5350.00  | 51.7 AV                       | 54.0              | -2.3           | 1.01 H                   | 75                         | 49.70                  | 2.00                           |  |
| 7   | #10620.00   | 60.4 PK                       | 74.0              | -13.6          | 1.00 H                   | 120                        | 44.20                  | 16.20                          |  |
| 8   | #10620.00   | 47.9 AV                       | 54.0              | -6.1           | 1.00 H                   | 120                        | 31.70                  | 16.20                          |  |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3540.00  | 48.6 PK                       | 74.0              | -25.4          | 1.00 V                   | 100                        | 50.40                  | -1.80                          |  |
| 2   | #3540.00  | 42.3 AV                       | 54.0              | -11.7          | 1.00 V                   | 100                        | 44.10                  | -1.80                          |  |
| 3   | *5310.00  | 114.2 PK                      |                   |                | 1.05 V                   | 45                         | 74.10                  | 40.10                          |  |
| 4   | *5310.00  | 104.7 AV                      |                   |                | 1.05 V                   | 45                         | 64.60                  | 40.10                          |  |
| 5   | #5350.00  | 64.0 PK                       | 74.0              | -10.0          | 1.05 V                   | 40                         | 62.00                  | 2.00                           |  |
| 6   | #5350.00  | 51.6 AV                       | 54.0              | -2.4           | 1.05 V                   | 40                         | 49.60                  | 2.00                           |  |
| 7   | #10620.00   | 62.1 PK                       | 74.0              | -11.9          | 1.00 V                   | 21                         | 45.90                  | 16.20                          |  |
| 8   | #10620.00   | 49.3 AV                       | 54.0              | -4.7           | 1.00 V                   | 21                         | 33.10                  | 16.20                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 60 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |  |
| 1   | #3673.00  | 44.8 PK                       | 74.0              | -29.2          | 1.00 H                   | 82                         | 46.10                  | -1.30                          |  |  |
| 2   | #3673.00  | 35.7 AV                       | 54.0              | -18.3          | 1.00 H                   | 82                         | 37.00                  | -1.30                          |  |  |
| 3   | #5460.00  | 61.9 PK                       | 74.0              | -12.1          | 1.06 H                   | 77                         | 59.80                  | 2.10                           |  |  |
| 4   | #5460.00  | 47.7 AV                       | 54.0              | -6.3           | 1.06 H                   | 77                         | 45.60                  | 2.10                           |  |  |
| 5   | #5470.00  | 65.0 PK                       | 74.0              | -9.0           | 1.07 H                   | 61                         | 62.80                  | 2.20                           |  |  |
| 6   | #5470.00  | 50.0 AV                       | 54.0              | -4.0           | 1.07 H                   | 61                         | 47.80                  | 2.20                           |  |  |
| 7   | *5510.00  | 107.3 PK                      |                   |                | 1.00 H                   | 26                         | 67.00                  | 40.30                          |  |  |
| 8   | *5510.00  | 97.7 AV                       |                   |                | 1.00 H                   | 26                         | 57.40                  | 40.30                          |  |  |
| 9   | #11020.00   | 62.4 PK                       | 74.0              | -11.6          | 1.02 H                   | 7                          | 45.00                  | 17.40                          |  |  |
| 10  | #11020.00   | 49.2 AV                       | 54.0              | -4.8           | 1.02 H                   | 7                          | 31.80                  | 17.40                          |  |  |
|     |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |  |
| 1   | #3673.00  | 47.3 PK                       | 74.0              | -26.7          | 1.00 V                   | 2                          | 48.60                  | -1.30                          |  |  |
| 2   | #3673.00  | 37.6 AV                       | 54.0              | -16.4          | 1.00 V                   | 2                          | 38.90                  | -1.30                          |  |  |
| 3   | #5460.00  | 62.6 PK                       | 74.0              | -11.4          | 1.13 V                   | 18                         | 60.50                  | 2.10                           |  |  |
| 4   | #5460.00  | 49.3 AV                       | 54.0              | -4.7           | 1.13 V                   | 18                         | 47.20                  | 2.10                           |  |  |
| 5   | #5470.00  | 68.8 PK                       | 74.0              | -5.2           | 1.10 V                   | 28                         | 66.60                  | 2.20                           |  |  |
| 6   | #5470.00  | 53.0 AV                       | 54.0              | -1.0           | 1.10 V                   | 28                         | 50.80                  | 2.20                           |  |  |
| 7   | *5510.00  | 110.1 PK                      |                   |                | 1.00 V                   | 22                         | 69.80                  | 40.30                          |  |  |
| 8   | *5510.00  | 100.8 AV                      |                   |                | 1.00 V                   | 22                         | 60.50                  | 40.30                          |  |  |
| 9   | #11020.00   | 66.7 PK                       | 74.0              | -7.3           | 1.17 V                   | 25                         | 49.30                  | 17.40                          |  |  |
| 10  | #11020.00   | 51.6 AV                       | 54.0              | -2.4           | 1.17 V                   | 25                         | 34.20                  | 17.40                          |  |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 61 / 116

Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3700.00   | 44.5 PK                       | 74.0              | -29.5          | 1.00 H                   | 328                        | 45.50                  | -1.00                          |  |
| 2   | 3700.00   | 33.2 AV                       | 54.0              | -20.8          | 1.00 H                   | 328                        | 34.20                  | -1.00                          |  |
| 3   | *5550.00  | 110.2 PK                      |                   |                | 1.00 H                   | 350                        | 69.80                  | 40.40                          |  |
| 4   | *5550.00  | 100.5 AV                      |                   |                | 1.00 H                   | 350                        | 60.10                  | 40.40                          |  |
| 5   | 11100.00  | 62.5 PK                       | 74.0              | -11.5          | 1.40 H                   | 8                          | 45.90                  | 16.60                          |  |
| 6   | 11100.00  | 49.6 AV                       | 54.0              | -4.4           | 1.40 H                   | 8                          | 33.00                  | 16.60                          |  |
|     |   | ANTENNA                       | A POLARITY        | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3700.00   | 45.7 PK                       | 74.0              | -28.3          | 1.12 V                   | 336                        | 46.70                  | -1.00                          |  |
| 2   | 3700.00   | 33.6 AV                       | 54.0              | -20.4          | 1.12 V                   | 336                        | 34.60                  | -1.00                          |  |
| 3   | *5550.00  | 112.0 PK                      |                   |                | 1.00 V                   | 28                         | 71.60                  | 40.40                          |  |
| 4   | *5550.00  | 101.4 AV                      |                   |                | 1.00 V                   | 28                         | 61.00                  | 40.40                          |  |
| 5   | 11100.00  | 64.0 PK                       | 74.0              | -10.0          | 1.45 V                   | 21                         | 47.40                  | 16.60                          |  |
| 6   | 11100.00  | 51.6 AV                       | 54.0              | -2.4           | 1.45 V                   | 21                         | 35.00                  | 16.60                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 62 / 116 Reference No.: 141227C17, 141227C19



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

|     |                | ANTENNA                       | POLARITY (        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3780.00        | 44.8 PK                       | 74.0              | -29.2          | 1.14 H                   | 81                         | 45.50                  | -0.70                          |
| 2   | 3780.00        | 34.5 AV                       | 54.0              | -19.5          | 1.14 H                   | 81                         | 35.20                  | -0.70                          |
| 3   | *5670.00       | 106.0 PK                      |                   |                | 1.00 H                   | 340                        | 65.30                  | 40.70                          |
| 4   | *5670.00       | 96.7 AV                       |                   |                | 1.00 H                   | 340                        | 56.00                  | 40.70                          |
| 5   | #5725.00       | 58.9 PK                       | 74.0              | -15.1          | 1.00 H                   | 82                         | 56.30                  | 2.60                           |
| 6   | #5725.00       | 46.6 AV                       | 54.0              | -7.4           | 1.00 H                   | 82                         | 44.00                  | 2.60                           |
| 7   | 11340.00       | 62.3 PK                       | 74.0              | -11.7          | 1.12 H                   | 71                         | 45.80                  | 16.50                          |
| 8   | 11340.00       | 50.0 AV                       | 54.0              | -4.0           | 1.12 H                   | 71                         | 33.50                  | 16.50                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3780.00        | 44.8 PK                       | 74.0              | -29.2          | 1.01 V                   | 73                         | 45.50                  | -0.70                          |
| 2   | 3780.00        | 35.2 AV                       | 54.0              | -18.8          | 1.01 V                   | 73                         | 35.90                  | -0.70                          |
| 3   | *5670.00       | 108.8 PK                      |                   |                | 1.00 V                   | 354                        | 68.10                  | 40.70                          |
| 4   | *5670.00       | 99.0 AV                       |                   |                | 1.00 V                   | 354                        | 58.30                  | 40.70                          |
| 5   | #5725.00       | 58.9 PK                       | 74.0              | -15.1          | 1.00 V                   | 39                         | 56.30                  | 2.60                           |
| 6   | #5725.00       | 46.6 AV                       | 54.0              | -7.4           | 1.00 V                   | 39                         | 44.00                  | 2.60                           |
| 7   | 11340.00       | 66.8 PK                       | 74.0              | -7.2           | 1.35 V                   | 24                         | 50.30                  | 16.50                          |
| 8   | 11340.00       | 52.9 AV                       | 54.0              | -1.1           | 1.35 V                   | 24                         | 36.40                  | 16.50                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 63 / 116 Report Format Version: 6.1.1



# 802.11ac (VHT20)\_3TX

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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3506.00  | 45.4 PK                       | 74.0              | -28.6          | 1.23 H                   | 278                        | 47.20                  | -1.80                          |  |
| 2   | #3506.00  | 36.5 AV                       | 54.0              | -17.5          | 1.23 H                   | 278                        | 38.30                  | -1.80                          |  |
| 3   | 5150.00   | 59.0 PK                       | 74.0              | -15.0          | 1.20 H                   | 72                         | 57.00                  | 2.00                           |  |
| 4   | 5150.00   | 46.5 AV                       | 54.0              | -7.5           | 1.20 H                   | 72                         | 44.50                  | 2.00                           |  |
| 5   | *5260.00  | 116.1 PK                      |                   |                | 1.01 H                   | 65                         | 76.00                  | 40.10                          |  |
| 6   | *5260.00  | 106.2 AV                      |                   |                | 1.01 H                   | 65                         | 66.10                  | 40.10                          |  |
| 7   | #10520.00   | 60.2 PK                       | 74.0              | -13.8          | 1.00 H                   | 318                        | 44.90                  | 15.30                          |  |
| 8   | #10520.00   | 47.2 AV                       | 54.0              | -6.8           | 1.00 H                   | 318                        | 31.90                  | 15.30                          |  |
|     |   | ANTENNA                       | POLARITY          | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3506.00  | 47.7 PK                       | 74.0              | -26.3          | 1.01 V                   | 321                        | 49.50                  | -1.80                          |  |
| 2   | #3506.00  | 40.3 AV                       | 54.0              | -13.7          | 1.01 V                   | 321                        | 42.10                  | -1.80                          |  |
| 3   | 5150.00   | 59.2 PK                       | 74.0              | -14.8          | 1.09 V                   | 349                        | 57.20                  | 2.00                           |  |
| 4   | 5150.00   | 46.9 AV                       | 54.0              | -7.1           | 1.09 V                   | 349                        | 44.90                  | 2.00                           |  |
| 5   | *5260.00  | 116.9 PK                      |                   | _              | 1.00 V                   | 27                         | 76.80                  | 40.10                          |  |
| 6   | *5260.00  | 106.9 AV                      |                   |                | 1.00 V                   | 27                         | 66.80                  | 40.10                          |  |
| 7   | #10520.00   | 59.8 PK                       | 74.0              | -14.2          | 1.00 V                   | 93                         | 44.50                  | 15.30                          |  |
| 8   | #10520.00   | 47.6 AV                       | 54.0              | -6.4           | 1.00 V                   | 93                         | 32.30                  | 15.30                          |  |

## **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)
- 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.

Report No.: RF141227C17A Page No. 64 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3533.00  | 48.1 PK                       | 74.0              | -25.9          | 1.46 H                   | 316                        | 49.80                  | -1.70                          |  |
| 2   | #3533.00  | 41.4 AV                       | 54.0              | -12.6          | 1.46 H                   | 316                        | 43.10                  | -1.70                          |  |
| 3   | *5300.00  | 115.3 PK                      |                   |                | 1.00 H                   | 68                         | 75.20                  | 40.10                          |  |
| 4   | *5300.00  | 105.8 AV                      |                   |                | 1.00 H                   | 68                         | 65.70                  | 40.10                          |  |
| 5   | 10600.00  | 61.5 PK                       | 74.0              | -12.5          | 1.00 H                   | 52                         | 45.30                  | 16.20                          |  |
| 6   | 10600.00  | 48.7 AV                       | 54.0              | -5.3           | 1.00 H                   | 52                         | 32.50                  | 16.20                          |  |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3533.00  | 47.9 PK                       | 74.0              | -26.1          | 1.01 V                   | 18                         | 49.60                  | -1.70                          |  |
| 2   | #3533.00  | 41.4 AV                       | 54.0              | -12.6          | 1.01 V                   | 18                         | 43.10                  | -1.70                          |  |
| 3   | *5300.00  | 116.9 PK                      |                   |                | 1.00 V                   | 18                         | 76.80                  | 40.10                          |  |
| 4   | *5300.00  | 106.3 AV                      |                   |                | 1.00 V                   | 18                         | 66.20                  | 40.10                          |  |
| 5   | 10600.00  | 64.5 PK                       | 74.0              | -9.5           | 1.16 V                   | 29                         | 48.30                  | 16.20                          |  |
| 6   | 10600.00  | 50.8 AV                       | 54.0              | -3.2           | 1.16 V                   | 29                         | 34.60                  | 16.20                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 65 / 116 Report Format Version: 6.1.1



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

|     |                | ANTENNA                       | POLARITY          | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3546.00       | 46.1 PK                       | 74.0              | -27.9          | 1.01 H                   | 282                        | 47.90                  | -1.80                          |
| 2   | #3546.00       | 36.9 AV                       | 54.0              | -17.1          | 1.01 H                   | 282                        | 38.70                  | -1.80                          |
| 3   | *5320.00       | 115.5 PK                      |                   |                | 1.00 H                   | 65                         | 75.30                  | 40.20                          |
| 4   | *5320.00       | 105.0 AV                      |                   |                | 1.00 H                   | 65                         | 64.80                  | 40.20                          |
| 5   | 5350.00        | 65.6 PK                       | 74.0              | -8.4           | 1.25 H                   | 296                        | 63.60                  | 2.00                           |
| 6   | 5350.00        | 49.9 AV                       | 54.0              | -4.1           | 1.25 H                   | 296                        | 47.90                  | 2.00                           |
| 7   | 10640.00       | 59.1 PK                       | 74.0              | -14.9          | 1.00 H                   | 332                        | 42.80                  | 16.30                          |
| 8   | 10640.00       | 46.0 AV                       | 54.0              | -8.0           | 1.00 H                   | 332                        | 29.70                  | 16.30                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  | •                              |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3546.00       | 47.0 PK                       | 74.0              | -27.0          | 1.04 V                   | 33                         | 48.80                  | -1.80                          |
| 2   | #3546.00       | 40.8 AV                       | 54.0              | -13.2          | 1.04 V                   | 33                         | 42.60                  | -1.80                          |
| 3   | *5320.00       | 116.3 PK                      |                   |                | 1.00 V                   | 48                         | 76.10                  | 40.20                          |
| 4   | *5320.00       | 105.8 AV                      |                   |                | 1.00 V                   | 48                         | 65.60                  | 40.20                          |
| 5   | 5350.00        | 65.2 PK                       | 74.0              | -8.8           | 1.00 V                   | 50                         | 63.20                  | 2.00                           |
| 6   | 5350.00        | 49.9 AV                       | 54.0              | -4.1           | 1.00 V                   | 50                         | 47.90                  | 2.00                           |
| 7   | 10640.00       | 61.4 PK                       | 74.0              | -12.6          | 1.16 V                   | 13                         | 45.10                  | 16.30                          |
|     |                |                               |                   |                |                          |                            |                        |                                |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 66 / 116 Report Format Version: 6.1.1



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

|                  | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M    |  |                      |                        |  |                            |   |                                       |  |
|------------------|--|--|----------------------|------------------------|--|----------------------------|---|---------------------------------------|--|
| NO.              | FREQ.<br>(MHz)   | EMISSION<br>LEVEL<br>(dBuV/m)                        | LIMIT<br>(dBuV/m)    | MARGIN<br>(dB)         | ANTENNA<br>HEIGHT<br>(m)                       | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV)                    | CORRECTION<br>FACTOR<br>(dB/m)        |  |
| 1                | 3666.00  | 46.9 PK  | 74.0                 | -27.1                  | 1.00 H   | 274                        | 48.20                                     | -1.30                                 |  |
| 2                | 3666.00  | 37.1 AV  | 54.0                 | -16.9                  | 1.00 H   | 274                        | 38.40                                     | -1.30                                 |  |
| 3                | 5460.00  | 59.3 PK  | 74.0                 | -14.7                  | 1.00 H   | 31                         | 57.20                                     | 2.10                                  |  |
| 4                | 5460.00  | 45.9 AV  | 54.0                 | -8.1                   | 1.00 H   | 31                         | 43.80                                     | 2.10                                  |  |
| 5                | #5470.00   | 60.9 PK  | 74.0                 | -13.1                  | 1.00 H   | 29                         | 58.70                                     | 2.20                                  |  |
| 6                | #5470.00   | 46.4 AV  | 54.0                 | -7.6                   | 1.00 H   | 29                         | 44.20                                     | 2.20                                  |  |
| 7                | *5500.00   | 74.9 PK  |                      |                        | 1.00 H   | 40                         | 72.60                                     | 2.30                                  |  |
| 8                | *5500.00   | 64.5 AV  |                      |                        | 1.00 H   | 40                         | 62.20                                     | 2.30                                  |  |
| 9                | 11000.00   | 64.0 PK  | 74.0                 | -10.0                  | 1.00 H   | 33                         | 46.30                                     | 17.70                                 |  |
| 10               | 11000.00   | 51.4 AV  | 54.0                 | -2.6                   | 1.00 H   | 33                         | 33.70                                     | 17.70                                 |  |
|                  |  | ANTENNA  | POLARITY             | & TEST DI              | STANCE: V                                      | ERTICAL A                  | T 3 M                                     |                                       |  |
| NO.              | FREQ.<br>(MHz)   | EMISSION<br>LEVEL<br>(dBuV/m)                        | LIMIT<br>(dBuV/m)    | MARGIN<br>(dB)         | ANTENNA<br>HEIGHT<br>(m)                       | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV)                    | CORRECTION<br>FACTOR<br>(dB/m)        |  |
| 1                | 3666.00  | 46.3 PK  | 74.0                 | -27.7                  | 1.00 V   | 10                         | 47.60                                     | -1.30                                 |  |
| 2                | 3666.00  |  |                      |                        |  |                            |   |                                       |  |
|                  | 3000.00  | 36.9 AV  | 54.0                 | -17.1                  | 1.00 V   | 10                         | 38.20                                     | -1.30                                 |  |
| 3                | 5460.00  | 36.9 AV<br>59.8 PK                                   | 54.0<br>74.0         | -17.1<br>-14.2         | 1.00 V<br>1.00 V                               | 10<br>6                    | 38.20<br>57.70                            | -1.30<br>2.10                         |  |
| 3                |  |  |                      |                        |  |                            |   |                                       |  |
|                  | 5460.00  | 59.8 PK  | 74.0                 | -14.2                  | 1.00 V   | 6                          | 57.70                                     | 2.10                                  |  |
| 4                | 5460.00<br>5460.00                                     | 59.8 PK<br>46.9 AV                                   | 74.0<br>54.0         | -14.2<br>-7.1          | 1.00 V<br>1.00 V                               | 6                          | 57.70<br>44.80                            | 2.10<br>2.10                          |  |
| 4<br>5           | 5460.00<br>5460.00<br>#5470.00                         | 59.8 PK<br>46.9 AV<br>60.6 PK                        | 74.0<br>54.0<br>74.0 | -14.2<br>-7.1<br>-13.4 | 1.00 V<br>1.00 V<br>1.00 V                     | 6<br>6<br>7                | 57.70<br>44.80<br>58.40                   | 2.10<br>2.10<br>2.20                  |  |
| 4<br>5<br>6      | 5460.00<br>5460.00<br>#5470.00<br>#5470.00             | 59.8 PK<br>46.9 AV<br>60.6 PK<br>46.9 AV             | 74.0<br>54.0<br>74.0 | -14.2<br>-7.1<br>-13.4 | 1.00 V<br>1.00 V<br>1.00 V<br>1.00 V           | 6<br>6<br>7<br>7           | 57.70<br>44.80<br>58.40<br>44.70          | 2.10<br>2.10<br>2.20<br>2.20          |  |
| 4<br>5<br>6<br>7 | 5460.00<br>5460.00<br>#5470.00<br>#5470.00<br>*5500.00 | 59.8 PK<br>46.9 AV<br>60.6 PK<br>46.9 AV<br>114.2 PK | 74.0<br>54.0<br>74.0 | -14.2<br>-7.1<br>-13.4 | 1.00 V<br>1.00 V<br>1.00 V<br>1.00 V<br>1.00 V | 6<br>6<br>7<br>7<br>25     | 57.70<br>44.80<br>58.40<br>44.70<br>73.90 | 2.10<br>2.10<br>2.20<br>2.20<br>40.30 |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 67 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3720.00   | 45.3 PK                       | 74.0              | -28.7          | 1.00 H                   | 101                        | 46.20                  | -0.90                          |  |
| 2   | 3720.00   | 35.5 AV                       | 54.0              | -18.5          | 1.00 H                   | 101                        | 36.40                  | -0.90                          |  |
| 3   | *5580.00  | 113.5 PK                      |                   |                | 1.02 H                   | 82                         | 73.00                  | 40.50                          |  |
| 4   | *5580.00  | 103.3 AV                      |                   |                | 1.02 H                   | 82                         | 62.80                  | 40.50                          |  |
| 5   | 11160.00  | 63.9 PK                       | 74.0              | -10.1          | 1.00 H                   | 55                         | 47.50                  | 16.40                          |  |
| 6   | 11160.00  | 49.6 AV                       | 54.0              | -4.4           | 1.00 H                   | 55                         | 33.20                  | 16.40                          |  |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3720.00   | 44.4 PK                       | 74.0              | -29.6          | 1.00 V                   | 13                         | 45.30                  | -0.90                          |  |
| 2   | 3720.00   | 34.9 AV                       | 54.0              | -19.1          | 1.00 V                   | 13                         | 35.80                  | -0.90                          |  |
| 3   | *5580.00  | 113.9 PK                      |                   |                | 1.00 V                   | 357                        | 73.40                  | 40.50                          |  |
| 4   | *5580.00  | 103.7 AV                      |                   |                | 1.00 V                   | 357                        | 63.20                  | 40.50                          |  |
| 5   | 11160.00  | 64.7 PK                       | 74.0              | -9.3           | 1.38 V                   | 23                         | 48.30                  | 16.40                          |  |
|     |   |                               |                   |                |                          |                            |                        |                                |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.



Report Format Version: 6.1.1

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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3800.00   | 45.0 PK                       | 74.0              | -29.0          | 1.00 H                   | 21                         | 45.70                  | -0.70                          |  |
| 2   | 3800.00   | 35.2 AV                       | 54.0              | -18.8          | 1.00 H                   | 21                         | 35.90                  | -0.70                          |  |
| 3   | *5700.00  | 110.0 PK                      |                   |                | 1.05 H                   | 77                         | 69.20                  | 40.80                          |  |
| 4   | *5700.00  | 99.6 AV                       |                   |                | 1.05 H                   | 77                         | 58.80                  | 40.80                          |  |
| 5   | #5725.00  | 60.2 PK                       | 74.0              | -13.8          | 1.00 H                   | 321                        | 57.60                  | 2.60                           |  |
| 6   | #5725.00  | 46.7 AV                       | 54.0              | -7.3           | 1.00 H                   | 321                        | 44.10                  | 2.60                           |  |
| 7   | 11400.00  | 65.3 PK                       | 74.0              | -8.7           | 1.33 H                   | 321                        | 49.10                  | 16.20                          |  |
| 8   | 11400.00  | 51.4 AV                       | 54.0              | -2.6           | 1.33 H                   | 321                        | 35.20                  | 16.20                          |  |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3800.00   | 44.6 PK                       | 74.0              | -29.4          | 1.00 V                   | 63                         | 45.30                  | -0.70                          |  |
| 2   | 3800.00   | 34.4 AV                       | 54.0              | -19.6          | 1.00 V                   | 63                         | 35.10                  | -0.70                          |  |
| 3   | *5700.00  | 110.8 PK                      |                   |                | 1.03 V                   | 39                         | 70.00                  | 40.80                          |  |
| 4   | *5700.00  | 99.7 AV                       |                   |                | 1.03 V                   | 39                         | 58.90                  | 40.80                          |  |
| 5   | #5725.00  | 59.5 PK                       | 74.0              | -14.5          | 1.00 V                   | 88                         | 56.90                  | 2.60                           |  |
| 6   | #5725.00  | 46.1 AV                       | 54.0              | -7.9           | 1.00 V                   | 88                         | 43.50                  | 2.60                           |  |
| 7   | 11400.00  | 67.3 PK                       | 74.0              | -6.7           | 1.09 V                   | 10                         | 51.10                  | 16.20                          |  |
| 8   | 11400.00  | 52.6 AV                       | 54.0              | -1.4           | 1.09 V                   | 10                         | 36.40                  | 16.20                          |  |

### **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)
- 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.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 69 / 116



Report Format Version: 6.1.1

# 802.11ac (VHT40)\_3TX

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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3513.00  | 46.9 PK                       | 74.0              | -27.1          | 1.00 H                   | 321                        | 48.60                  | -1.70                          |  |
| 2   | #3513.00  | 39.0 AV                       | 54.0              | -15.0          | 1.00 H                   | 321                        | 40.70                  | -1.70                          |  |
| 3   | 5150.00   | 59.1 PK                       | 74.0              | -14.9          | 1.49 H                   | 66                         | 57.10                  | 2.00                           |  |
| 4   | 5150.00   | 46.8 AV                       | 54.0              | -7.2           | 1.49 H                   | 66                         | 44.80                  | 2.00                           |  |
| 5   | *5270.00  | 112.3 PK                      |                   |                | 1.10 H                   | 73                         | 72.20                  | 40.10                          |  |
| 6   | *5270.00  | 101.9 AV                      |                   |                | 1.10 H                   | 73                         | 61.80                  | 40.10                          |  |
| 7   | #10540.00   | 59.9 PK                       | 74.0              | -14.1          | 1.00 H                   | 164                        | 44.30                  | 15.60                          |  |
| 8   | #10540.00   | 47.1 AV                       | 54.0              | -6.9           | 1.00 H                   | 164                        | 31.50                  | 15.60                          |  |
|     |   | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | #3513.00  | 47.5 PK                       | 74.0              | -26.5          | 1.00 V                   | 312                        | 49.20                  | -1.70                          |  |
| 2   | #3513.00  | 39.8 AV                       | 54.0              | -14.2          | 1.00 V                   | 312                        | 41.50                  | -1.70                          |  |
| 3   | 5150.00   | 58.7 PK                       | 74.0              | -15.3          | 1.15 V                   | 37                         | 56.70                  | 2.00                           |  |
| 4   | 5150.00   | 45.9 AV                       | 54.0              | -8.1           | 1.15 V                   | 37                         | 43.90                  | 2.00                           |  |
| 5   | *5270.00  | 113.7 PK                      |                   |                | 1.00 V                   | 32                         | 73.60                  | 40.10                          |  |
| 6   | *5270.00  | 102.9 AV                      |                   |                | 1.00 V                   | 32                         | 62.80                  | 40.10                          |  |
| 7   | #10540.00   | 62.7 PK                       | 74.0              | -11.3          | 1.23 V                   | 18                         | 47.10                  | 15.60                          |  |
| 8   | #10540.00   | 48.8 AV                       | 54.0              | -5.2           | 1.23 V                   | 18                         | 33.20                  | 15.60                          |  |

## **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)
- 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.

Report No.: RF141227C17A Page No. 70 / 116 Reference No.: 141227C17, 141227C19



Report Format Version: 6.1.1

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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3540.00       | 48.0 PK                       | 74.0              | -26.0          | 1.32 H                   | 312                        | 49.80                  | -1.80                          |
| 2   | #3540.00       | 42.3 AV                       | 54.0              | -11.7          | 1.32 H                   | 312                        | 44.10                  | -1.80                          |
| 3   | *5310.00       | 112.7 PK                      |                   |                | 1.00 H                   | 65                         | 72.60                  | 40.10                          |
| 4   | *5310.00       | 102.8 AV                      |                   |                | 1.00 H                   | 65                         | 62.70                  | 40.10                          |
| 5   | 5350.00        | 64.7 PK                       | 74.0              | -9.3           | 1.00 H                   | 59                         | 62.70                  | 2.00                           |
| 6   | 5350.00        | 51.9 AV                       | 54.0              | -2.1           | 1.00 H                   | 59                         | 49.90                  | 2.00                           |
| 7   | 10620.00       | 59.8 PK                       | 74.0              | -14.2          | 1.00 H                   | 59                         | 43.60                  | 16.20                          |
| 8   | 10620.00       | 47.7 AV                       | 54.0              | -6.3           | 1.00 H                   | 59                         | 31.50                  | 16.20                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3540.00       | 48.0 PK                       | 74.0              | -26.0          | 1.02 V                   | 19                         | 49.80                  | -1.80                          |
| 2   | #3540.00       | 42.0 AV                       | 54.0              | -12.0          | 1.02 V                   | 19                         | 43.80                  | -1.80                          |
| 3   | *5310.00       | 113.8 PK                      |                   |                | 1.00 V                   | 25                         | 73.70                  | 40.10                          |
| 4   | *5310.00       | 104.5 AV                      |                   |                | 1.00 V                   | 25                         | 64.40                  | 40.10                          |
| 5   | 5350.00        | 63.7 PK                       | 74.0              | -10.3          | 1.00 V                   | 38                         | 61.70                  | 2.00                           |
| 6   | 5350.00        | 51.3 AV                       | 54.0              | -2.7           | 1.00 V                   | 38                         | 49.30                  | 2.00                           |
| 7   | 10620.00       | 61.8 PK                       | 74.0              | -12.2          | 1.00 V                   | 19                         | 45.60                  | 16.20                          |
| 8   | 10620.00       | 49.1 AV                       | 54.0              | -4.9           | 1.00 V                   | 19                         | 32.90                  | 16.20                          |

### **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)
- 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.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 71 / 116



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

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|---|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.   | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3673.00        | 45.2 PK                       | 74.0              | -28.8          | 1.00 H                   | 89                         | 46.50                  | -1.30                          |
| 2   | 3673.00        | 35.9 AV                       | 54.0              | -18.1          | 1.00 H                   | 89                         | 37.20                  | -1.30                          |
| 3   | 5460.00        | 61.7 PK                       | 74.0              | -12.3          | 1.00 H                   | 46                         | 59.60                  | 2.10                           |
| 4   | 5460.00        | 47.6 AV                       | 54.0              | -6.4           | 1.00 H                   | 46                         | 45.50                  | 2.10                           |
| 5   | #5470.00       | 64.0 PK                       | 74.0              | -10.0          | 1.00 H                   | 40                         | 61.80                  | 2.20                           |
| 6   | #5470.00       | 49.8 AV                       | 54.0              | -4.2           | 1.00 H                   | 40                         | 47.60                  | 2.20                           |
| 7   | *5510.00       | 109.9 PK                      |                   |                | 1.06 H                   | 54                         | 69.60                  | 40.30                          |
| 8   | *5510.00       | 99.8 AV                       |                   |                | 1.06 H                   | 54                         | 59.50                  | 40.30                          |
| 9   | 11020.00       | 62.3 PK                       | 74.0              | -11.7          | 1.00 H                   | 16                         | 44.90                  | 17.40                          |
| 10  | 11020.00       | 48.7 AV                       | 54.0              | -5.3           | 1.00 H                   | 16                         | 31.30                  | 17.40                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.   | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3673.00        | 46.9 PK                       | 74.0              | -27.1          | 1.00 V                   | 6                          | 48.20                  | -1.30                          |
| 2   | 3673.00        | 37.2 AV                       | 54.0              | -16.8          | 1.00 V                   | 6                          | 38.50                  | -1.30                          |
| 3   | 5460.00        | 60.0 PK                       | 74.0              | -14.0          | 1.44 V                   | 12                         | 57.90                  | 2.10                           |
| 4   | 5460.00        | 47.5 AV                       | 54.0              | -6.5           | 1.44 V                   | 12                         | 45.40                  | 2.10                           |
| 5   | #5470.00       | 67.9 PK                       | 74.0              | -6.1           | 1.33 V                   | 27                         | 65.70                  | 2.20                           |
| 6   | #5470.00       | 52.5 AV                       | 54.0              | -1.5           | 1.33 V                   | 27                         | 50.30                  | 2.20                           |
| 7   | *5510.00       | 110.6 PK                      |                   |                | 1.31 V                   | 26                         | 70.30                  | 40.30                          |
| 8   | *5510.00       | 100.6 AV                      |                   |                | 1.31 V                   | 26                         | 60.30                  | 40.30                          |
| 9   | 11020.00       | 65.5 PK                       | 74.0              | -8.5           | 1.07 V                   | 20                         | 48.10                  | 17.40                          |
| 10  | 11020.00       | 50.0 AV                       | 54.0              | -4.0           | 1.07 V                   | 20                         | 32.60                  | 17.40                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.

Report No.: RF141227C17A Page No. 72 / 116 Report Format Version: 6.1.1



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

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3700.00   | 44.2 PK                       | 74.0              | -29.8          | 1.00 H                   | 322                        | 45.20                  | -1.00                          |  |
| 2   | 3700.00   | 33.2 AV                       | 54.0              | -20.8          | 1.00 H                   | 322                        | 34.20                  | -1.00                          |  |
| 3   | *5550.00  | 110.0 PK                      |                   |                | 1.05 H                   | 59                         | 69.60                  | 40.40                          |  |
| 4   | *5550.00  | 100.2 AV                      |                   |                | 1.05 H                   | 59                         | 59.80                  | 40.40                          |  |
| 5   | 11100.00  | 62.1 PK                       | 74.0              | -11.9          | 1.32 H                   | 10                         | 45.50                  | 16.60                          |  |
| 6   | 11100.00  | 49.1 AV                       | 54.0              | -4.9           | 1.32 H                   | 10                         | 32.50                  | 16.60                          |  |
|     |   | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 3700.00   | 45.5 PK                       | 74.0              | -28.5          | 1.10 V                   | 326                        | 46.50                  | -1.00                          |  |
| 2   | 3700.00   | 33.1 AV                       | 54.0              | -20.9          | 1.10 V                   | 326                        | 34.10                  | -1.00                          |  |
| 3   | *5550.00  | 110.5 PK                      |                   |                | 1.08 V                   | 28                         | 70.10                  | 40.40                          |  |
| 4   | *5550.00  | 100.0 AV                      |                   |                | 1.08 V                   | 28                         | 59.60                  | 40.40                          |  |
| 5   | 11100.00  | 63.3 PK                       | 74.0              | -10.7          | 1.36 V                   | 25                         | 46.70                  | 16.60                          |  |
| 6   | 11100.00  | 50.6 AV                       | 54.0              | -3.4           | 1.36 V                   | 25                         | 34.00                  | 16.60                          |  |

# **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)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.

Report No.: RF141227C17A Page No. 73 / 116 Report Format Version: 6.1.1 Reference No.: 141227C17, 141227C19



Report Format Version: 6.1.1

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

|     |                | ANTENNA                       | POLARITY 8        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3780.00        | 44.6 PK                       | 74.0              | -29.4          | 1.13 H                   | 86                         | 45.30                  | -0.70                          |
| 2   | 3780.00        | 34.3 AV                       | 54.0              | -19.7          | 1.13 H                   | 86                         | 35.00                  | -0.70                          |
| 3   | *5670.00       | 107.0 PK                      |                   |                | 1.02 H                   | 45                         | 66.30                  | 40.70                          |
| 4   | *5670.00       | 96.4 AV                       |                   |                | 1.02 H                   | 45                         | 55.70                  | 40.70                          |
| 5   | #5725.00       | 58.8 PK                       | 74.0              | -15.2          | 1.00 H                   | 76                         | 56.20                  | 2.60                           |
| 6   | #5725.00       | 46.5 AV                       | 54.0              | -7.5           | 1.00 H                   | 76                         | 43.90                  | 2.60                           |
| 7   | 11340.00       | 62.2 PK                       | 74.0              | -11.8          | 1.10 H                   | 70                         | 45.70                  | 16.50                          |
| 8   | 11340.00       | 49.9 AV                       | 54.0              | -4.1           | 1.10 H                   | 70                         | 33.40                  | 16.50                          |
|     |                | ANTENNA                       | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3780.00        | 44.6 PK                       | 74.0              | -29.4          | 1.00 V                   | 77                         | 45.30                  | -0.70                          |
| 2   | 3780.00        | 35.1 AV                       | 54.0              | -18.9          | 1.00 V                   | 77                         | 35.80                  | -0.70                          |
| 3   | *5670.00       | 107.8 PK                      |                   |                | 1.00 V                   | 354                        | 67.10                  | 40.70                          |
| 4   | *5670.00       | 97.6 AV                       |                   |                | 1.00 V                   | 354                        | 56.90                  | 40.70                          |
| 5   | #5725.00       | 58.7 PK                       | 74.0              | -15.3          | 1.00 V                   | 36                         | 56.10                  | 2.60                           |
| 6   | #5725.00       | 46.4 AV                       | 54.0              | -7.6           | 1.00 V                   | 36                         | 43.80                  | 2.60                           |
| 7   | 11340.00       | 66.1 PK                       | 74.0              | -7.9           | 1.36 V                   | 20                         | 49.60                  | 16.50                          |
| 8   | 11340.00       | 52.7 AV                       | 54.0              | -1.3           | 1.36 V                   | 20                         | 36.20                  | 16.50                          |

#### **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)
- 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.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 74 / 116



# 802.11ac (VHT80)\_3TX

| CHANNEL         | TX Channel 58 | DETECTOR | Peak (PK)    |
|-----------------|---------------|----------|--------------|
| FREQUENCY RANGE | 1GHz ~ 40GHz  | FUNCTION | Average (AV) |

|     |                | ANTENNA                       | POLARITY A        | R TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3526.00       | 48.1 PK                       | 74.0              | -25.9          | 1.05 H                   | 323                        | 49.80                  | -1.70                          |
| 2   | #3526.00       | 41.9 AV                       | 54.0              | -12.1          | 1.05 H                   | 323                        | 43.60                  | -1.70                          |
| 3   | *5290.00       | 105.4 PK                      |                   |                | 1.00 H                   | 64                         | 65.30                  | 40.10                          |
| 4   | *5290.00       | 95.3 AV                       |                   |                | 1.00 H                   | 64                         | 55.20                  | 40.10                          |
| 5   | 5350.00        | 67.2 PK                       | 74.0              | -6.8           | 1.00 H                   | 60                         | 65.20                  | 2.00                           |
| 6   | 5350.00        | 52.7 AV                       | 54.0              | -1.3           | 1.00 H                   | 60                         | 50.70                  | 2.00                           |
| 7   | #10580.00      | 61.6 PK                       | 74.0              | -12.4          | 1.00 H                   | 106                        | 45.70                  | 15.90                          |
| 8   | #10580.00      | 47.7 AV                       | 54.0              | -6.3           | 1.00 H                   | 106                        | 31.80                  | 15.90                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | #3526.00       | 47.8 PK                       | 74.0              | -26.2          | 1.05 V                   | 16                         | 49.50                  | -1.70                          |
| 2   | #3526.00       | 41.7 AV                       | 54.0              | -12.3          | 1.05 V                   | 16                         | 43.40                  | -1.70                          |
| 3   | *5290.00       | 106.4 PK                      |                   |                | 1.00 V                   | 32                         | 66.30                  | 40.10                          |
| 4   | *5290.00       | 96.8 AV                       |                   |                | 1.00 V                   | 32                         | 56.70                  | 40.10                          |
| 5   | 5350.00        | 66.6 PK                       | 74.0              | -7.4           | 1.01 V                   | 42                         | 64.60                  | 2.00                           |
| 6   | 5350.00        | 53.0 AV                       | 54.0              | -1.0           | 1.01 V                   | 42                         | 51.00                  | 2.00                           |
| 7   | #10580.00      | 61.4 PK                       | 74.0              | -12.6          | 1.00 V                   | 311                        | 45.50                  | 15.90                          |
| 8   | #10580.00      | 48.1 AV                       | 54.0              | -5.9           | 1.00 V                   | 311                        | 32.20                  | 15.90                          |

# **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)
- 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.

Report No.: RF141227C17A Page No. 75 / 116 Report Format Version: 6.1.1



| CHANNEL         | TX Channel 106 | DETECTOR | Peak (PK)    |
|-----------------|----------------|----------|--------------|
| FREQUENCY RANGE | 1GHz ~ 40GHz   | FUNCTION | Average (AV) |

|     |                | ANTENNA                       | POLARITY 6        | & TEST DIS     | TANCE: HO                | RIZONTAL                   | AT 3 M                 |                                |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3686.00        | 45.6 PK                       | 74.0              | -28.4          | 1.00 H                   | 85                         | 46.80                  | -1.20                          |
| 2   | 3686.00        | 36.9 AV                       | 54.0              | -17.1          | 1.00 H                   | 85                         | 38.10                  | -1.20                          |
| 3   | 5460.00        | 62.3 PK                       | 74.0              | -11.7          | 1.00 H                   | 59                         | 60.20                  | 2.10                           |
| 4   | 5460.00        | 48.1 AV                       | 54.0              | -5.9           | 1.00 H                   | 59                         | 46.00                  | 2.10                           |
| 5   | #5470.00       | 66.9 PK                       | 74.0              | -7.1           | 1.00 H                   | 32                         | 64.70                  | 2.20                           |
| 6   | #5470.00       | 51.3 AV                       | 54.0              | -2.7           | 1.00 H                   | 32                         | 49.10                  | 2.20                           |
| 7   | *5530.00       | 101.0 PK                      |                   |                | 1.00 H                   | 23                         | 60.60                  | 40.40                          |
| 8   | *5530.00       | 91.3 AV                       |                   |                | 1.00 H                   | 23                         | 50.90                  | 40.40                          |
| 9   | 11060.00       | 61.3 PK                       | 74.0              | -12.7          | 1.00 H                   | 264                        | 44.20                  | 17.10                          |
| 10  | 11060.00       | 48.5 AV                       | 54.0              | -5.5           | 1.00 H                   | 264                        | 31.40                  | 17.10                          |
|     |                | ANTENNA                       | POLARITY          | & TEST DI      | STANCE: V                | ERTICAL A                  | T 3 M                  |                                |
| NO. | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1   | 3686.00        | 45.6 PK                       | 74.0              | -28.4          | 1.00 V                   | 8                          | 46.80                  | -1.20                          |
| 2   | 3686.00        | 37.4 AV                       | 54.0              | -16.6          | 1.00 V                   | 8                          | 38.60                  | -1.20                          |
| 3   | 5460.00        | 64.2 PK                       | 74.0              | -9.8           | 1.10 V                   | 28                         | 62.10                  | 2.10                           |
| 4   | 5460.00        | 51.8 AV                       | 54.0              | -2.2           | 1.10 V                   | 28                         | 49.70                  | 2.10                           |
| 5   | #5470.00       | 70.2 PK                       | 74.0              | -3.8           | 1.01 V                   | 24                         | 68.00                  | 2.20                           |
| 6   | #5470.00       | 53.0 AV                       | 54.0              | -1.0           | 1.01 V                   | 24                         | 50.80                  | 2.20                           |
| 7   | *5530.00       | 103.8 PK                      |                   |                | 1.00 V                   | 20                         | 63.40                  | 40.40                          |
| 8   | *5530.00       | 94.3 AV                       |                   |                | 1.00 V                   | 20                         | 53.90                  | 40.40                          |
| 9   | 11060.00       | 64.0 PK                       | 74.0              | -10.0          | 1.16 V                   | 29                         | 46.90                  | 17.10                          |
| 10  | 11060.00       | 50.9 AV                       | 54.0              | -3.1           | 1.16 V                   | 29                         | 33.80                  | 17.10                          |

# **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)
- 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.

Report No.: RF141227C17A Page No. 76 / 116 Report Format Version: 6.1.1



# **Below 1GHz Data**

#### 802.11a

| CHANNEL         | TX Channel 64 | DETECTOR | Overi Back (OB) |
|-----------------|---------------|----------|-----------------|
| FREQUENCY RANGE | 30MHz ~ 1GHz  | FUNCTION | Quasi-Peak (QP) |
| TEST MODE       | А             |          |                 |

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ. (MHz)   | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 80.96   | 22.9 QP                       | 40.0              | -17.1          | 1.75 H                   | 132                        | 41.70                  | -18.80                         |  |
| 2   | 120.08  | 23.1 QP                       | 43.5              | -20.4          | 1.50 H                   | 333                        | 39.80                  | -16.70                         |  |
| 3   | 155.87  | 26.8 QP                       | 43.5              | -16.7          | 2.00 H                   | 108                        | 40.70                  | -13.90                         |  |
| 4   | 250.08  | 33.9 QP                       | 46.0              | -12.1          | 1.50 H                   | 310                        | 48.40                  | -14.50                         |  |
| 5   | 524.17  | 34.4 QP                       | 46.0              | -11.6          | 1.25 H                   | 350                        | 42.60                  | -8.20                          |  |
| 6   | 900.78  | 34.3 QP                       | 46.0              | -11.7          | 1.00 H                   | 144                        | 35.60                  | -1.30                          |  |
|     |   | ANTENN                        | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL AT                 | Г 3 M                  |                                |  |
| NO. | FREQ. (MHz)   | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 33.68   | 29.6 QP                       | 40.0              | -10.4          | 1.10 V                   | 60                         | 45.40                  | -15.80                         |  |
| 2   | 50.07   | 29.0 QP                       | 40.0              | -11.0          | 1.00 V                   | 310                        | 43.40                  | -14.40                         |  |
| 3   | 129.08  | 32.5 QP                       | 43.5              | -11.0          | 1.00 V                   | 210                        | 48.00                  | -15.50                         |  |
| 4   | 250.05  | 32.7 QP                       | 46.0              | -13.3          | 2.10 V                   | 180                        | 47.20                  | -14.50                         |  |
| 5   | 525.14  | 36.1 QP                       | 46.0              | -9.9           | 1.00 V                   | 211                        | 44.30                  | -8.20                          |  |
| 6   | 900.04  | 39.0 QP                       | 46.0              | -7.0           | 1.00 V                   | 139                        | 40.30                  | -1.30                          |  |

# 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)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 77 / 116

Report Format Version: 6.1.1



| CHANNEL         | TX Channel 64 | DETECTOR | Ougoi Dook (OD) |
|-----------------|---------------|----------|-----------------|
| FREQUENCY RANGE | 30MHz ~ 1GHz  | FUNCTION | Quasi-Peak (QP) |
| TEST MODE       | В             |          |                 |

|     | ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                               |                   |                |                          |                            |                        |                                |  |
|-----|---|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|
| NO. | FREQ. (MHz)   | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 57.12   | 30.9 QP                       | 40.0              | -9.1           | 1.99 H                   | 92                         | 45.50                  | -14.60                         |  |
| 2   | 88.23   | 26.9 QP                       | 43.5              | -16.6          | 1.99 H                   | 219                        | 46.60                  | -19.70                         |  |
| 3   | 138.78  | 30.0 QP                       | 43.5              | -13.5          | 1.99 H                   | 231                        | 44.80                  | -14.80                         |  |
| 4   | 300.16  | 36.0 QP                       | 46.0              | -10.0          | 1.99 H                   | 115                        | 48.40                  | -12.40                         |  |
| 5   | 428.48  | 34.7 QP                       | 46.0              | -11.3          | 1.99 H                   | 39                         | 44.50                  | -9.80                          |  |
| 6   | 840.67  | 39.7 QP                       | 46.0              | -6.3           | 1.00 H                   | 162                        | 41.50                  | -1.80                          |  |
|     |   | ANTENN                        | A POLARITY        | / & TEST DI    | STANCE: V                | ERTICAL AT                 | T 3 M                  |                                |  |
| NO. | FREQ.<br>(MHz)                                      | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |  |
| 1   | 35.73   | 34.5 QP                       | 40.0              | -5.5           | 1.00 V                   | 3                          | 50.10                  | -15.60                         |  |
| 2   | 66.84   | 32.8 QP                       | 40.0              | -7.2           | 1.00 V                   | 170                        | 48.50                  | -15.70                         |  |
| 3   | 292.38  | 40.0 QP                       | 46.0              | -6.0           | 1.50 V                   | 16                         | 52.70                  | -12.70                         |  |
| 4   | 300.16  | 43.6 QP                       | 46.0              | -2.4           | 1.50 V                   | 153                        | 56.00                  | -12.40                         |  |
| 5   | 422.65  | 32.0 QP                       | 46.0              | -14.0          | 1.50 V                   | 289                        | 42.00                  | -10.00                         |  |
| 6   | 840.67  | 44.1 QP                       | 46.0              | -1.9           | 1.00 V                   | 115                        | 45.90                  | -1.80                          |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19

Page No. 78 / 116

Report Format Version: 6.1.1



# 4.2 Conducted Emission Measurement

#### 4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz)   | Conducted  | Limit (dBuV) |
|-------------------|------------|--------------|
| Frequency (Miriz) | 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.
- 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 4.2.2 Test Instruments

| Description & Manufacturer              | Model No.                | Serial No.     | Date Of Calibration | Due Date Of<br>Calibration |
|---|--------------------------|----------------|---------------------|----------------------------|
| Test Receiver<br>ROHDE & SCHWARZ        | ESCI                     | 100613         | Nov. 11, 2014       | Nov. 10, 2015              |
| RF signal cable<br>Woken                | 5D-FB                    | Cable-HYC01-01 | Dec. 26, 2014       | Dec. 25, 2015              |
| LISN<br>ROHDE & SCHWARZ<br>(EUT)        | ESH3-Z5                  | 835239/001     | Mar. 02, 2015       | Mar. 01, 2016              |
| LISN<br>ROHDE & SCHWARZ<br>(Peripheral) | ESH3-Z5                  | 100311         | Jul. 21, 2014       | Jul. 20, 2015              |
| Software<br>ADT                         | BV ADT_Cond_<br>V7.3.7.3 | NA             | NA                  | NA                         |

**Notes** 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 1.
- 3. The VCCI Site Registration No. is C-2040.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 79 / 116 Report Format Version: 6.1.1



#### 4.2.3 Test Procedure

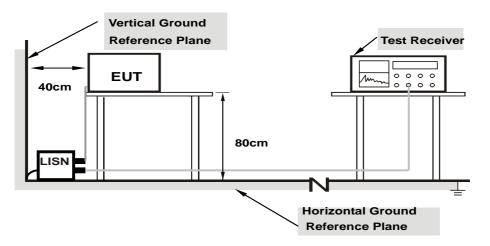
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

#### 4.2.6 EUT Operating Condition

Same as 4.1.6.

Report No.: RF141227C17A Page No. 80 / 116 Report Format Version: 6.1.1



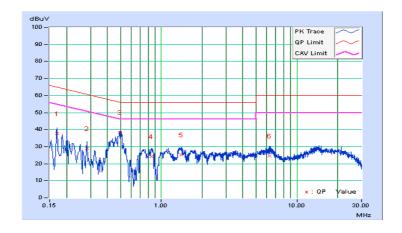
#### 4.2.7 **Test Results**

| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|----------|-------------------|-----------------------------------|
| Test Mode | A        |                   |                                   |

|    | Erog Corr. |        | Reading Value |       | Emissic | Emission Level |       | Limit |        | Margin |  |
|----|------------|--------|---------------|-------|---------|----------------|-------|-------|--------|--------|--|
| No | Freq.      | Factor | [dB           | (uV)] | [dB (   | (uV)]          | [dB ( | (uV)] | (d     | B)     |  |
|    | [MHz]      | (dB)   | Q.P.          | AV.   | Q.P.    | AV.            | Q.P.  | AV.   | Q.P.   | AV.    |  |
| 1  | 0.16951    | 0.05   | 37.57         | 23.14 | 37.62   | 23.19          | 64.98 | 54.98 | -27.36 | -31.79 |  |
| 2  | 0.28275    | 0.06   | 29.06         | 18.15 | 29.12   | 18.21          | 60.73 | 50.73 | -31.61 | -32.52 |  |
| 3  | 0.49735    | 0.06   | 38.27         | 30.25 | 38.33   | 30.31          | 56.04 | 46.04 | -17.71 | -15.73 |  |
| 4  | 0.84917    | 0.07   | 24.20         | 16.07 | 24.27   | 16.14          | 56.00 | 46.00 | -31.73 | -29.86 |  |
| 5  | 1.40578    | 0.10   | 25.23         | 17.41 | 25.33   | 17.51          | 56.00 | 46.00 | -30.67 | -28.49 |  |
| 6  | 6.28137    | 0.29   | 24.14         | 17.31 | 24.43   | 17.60          | 60.00 | 50.00 | -35.57 | -32.40 |  |

#### 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.



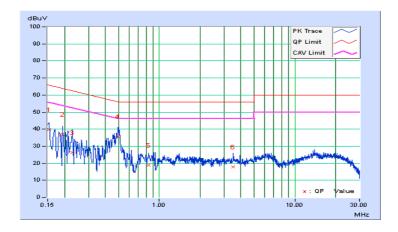
Report No.: RF141227C17A



| Phase     | Neutral (N) | Defector Efficient | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|-------------|--------------------|-----------------------------------|
| Test Mode | A           |                    |                                   |

|    | Freq. Corr. |        | Readin | g Value | Emissic | Emission Level |       | Limit |        | Margin |  |
|----|-------------|--------|--------|---------|---------|----------------|-------|-------|--------|--------|--|
| No | rieq.       | Factor | [dB    | (uV)]   | [dB (   | (uV)]          | [dB   | (uV)] | (d     | B)     |  |
|    | [MHz]       | (dB)   | Q.P.   | AV.     | Q.P.    | AV.            | Q.P.  | AV.   | Q.P.   | AV.    |  |
| 1  | 0.15384     | 0.05   | 39.67  | 21.49   | 39.72   | 21.54          | 65.79 | 55.79 | -26.07 | -34.25 |  |
| 2  | 0.19367     | 0.05   | 37.09  | 19.42   | 37.14   | 19.47          | 63.88 | 53.88 | -26.74 | -34.41 |  |
| 3  | 0.22895     | 0.05   | 26.08  | 19.45   | 26.13   | 19.50          | 62.49 | 52.49 | -36.36 | -32.99 |  |
| 4  | 0.49509     | 0.06   | 35.47  | 22.58   | 35.53   | 22.64          | 56.08 | 46.08 | -20.55 | -23.44 |  |
| 5  | 0.83146     | 0.07   | 18.69  | 10.63   | 18.76   | 10.70          | 56.00 | 46.00 | -37.24 | -35.30 |  |
| 6  | 3.52459     | 0.17   | 17.78  | 10.33   | 17.95   | 10.50          | 56.00 | 46.00 | -38.05 | -35.50 |  |

- 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.

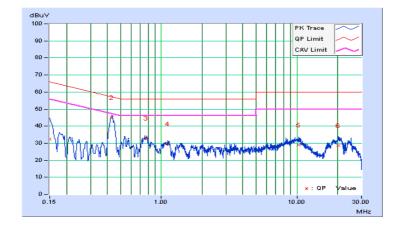




| Phase     | Line (L) | LI DETECTOR FUNCTION | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|----------|----------------------|-----------------------------------|
| Test Mode | В        |                      |                                   |

|    | Erog Corr. |        | Reading Value |       | Emissic | Emission Level |       | Limit |        | Margin |  |
|----|------------|--------|---------------|-------|---------|----------------|-------|-------|--------|--------|--|
| No | Freq.      | Factor | [dB (         | (uV)] | [dB (   | (uV)]          | [dB ( | (uV)] | (d     | B)     |  |
|    | [MHz]      | (dB)   | Q.P.          | AV.   | Q.P.    | AV.            | Q.P.  | AV.   | Q.P.   | AV.    |  |
| 1  | 0.15000    | 0.05   | 32.24         | 23.53 | 32.29   | 23.58          | 66.00 | 56.00 | -33.71 | -32.42 |  |
| 2  | 0.43122    | 0.06   | 44.96         | 35.45 | 45.02   | 35.51          | 57.23 | 47.23 | -12.21 | -11.72 |  |
| 3  | 0.76789    | 0.07   | 32.86         | 26.05 | 32.93   | 26.12          | 56.00 | 46.00 | -23.07 | -19.88 |  |
| 4  | 1.12359    | 0.08   | 29.65         | 22.58 | 29.73   | 22.66          | 56.00 | 46.00 | -26.27 | -23.34 |  |
| 5  | 10.30818   | 0.46   | 28.37         | 23.13 | 28.83   | 23.59          | 60.00 | 50.00 | -31.17 | -26.41 |  |
| 6  | 20.13010   | 0.90   | 27.79         | 21.44 | 28.69   | 22.34          | 60.00 | 50.00 | -31.31 | -27.66 |  |

- 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.

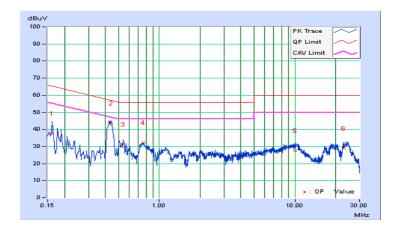




| Phase     | Neutral (N) | i Delecior Elinciion | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|-------------|----------------------|-----------------------------------|
| Test Mode | В           |                      |                                   |

|    | Freq. Corr. |        | Readin | Reading Value |       | Emission Level |       | nit       | Margin |        |  |
|----|-------------|--------|--------|---------------|-------|----------------|-------|-----------|--------|--------|--|
| No | rieq.       | Factor | [dB    | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |        | (dB)   |  |
|    | [MHz]       | (dB)   | Q.P.   | AV.           | Q.P.  | AV.            | Q.P.  | AV.       | Q.P.   | AV.    |  |
| 1  | 0.16173     | 0.05   | 37.81  | 24.85         | 37.86 | 24.90          | 65.37 | 55.37     | -27.51 | -30.47 |  |
| 2  | 0.43924     | 0.06   | 43.70  | 36.07         | 43.76 | 36.13          | 57.08 | 47.08     | -13.31 | -10.94 |  |
| 3  | 0.54089     | 0.06   | 31.16  | 22.54         | 31.22 | 22.60          | 56.00 | 46.00     | -24.78 | -23.40 |  |
| 4  | 0.75984     | 0.07   | 32.20  | 25.15         | 32.27 | 25.22          | 56.00 | 46.00     | -23.73 | -20.78 |  |
| 5  | 10.04621    | 0.42   | 27.28  | 21.76         | 27.70 | 22.18          | 60.00 | 50.00     | -32.30 | -27.82 |  |
| 6  | 22.85146    | 0.77   | 28.11  | 22.95         | 28.88 | 23.72          | 60.00 | 50.00     | -31.12 | -26.28 |  |

- 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.





#### 4.3 Transmit Power Measurment

# 4.3.1 Limits of Transmit Power Measurement

| Operation<br>Band |   | EUT Category                      | LIMIT   |
|-------------------|---|-----------------------------------|---|
| U-NII-1           |   | Outdoor Access Point              | 1 Watt (30 dBm) (Max. e.i.r.p ≤ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon) |
| O-INII-1          |   | Fixed point-to-point Access Point | 1 Watt (30 dBm)   |
|                   |   | Indoor Access Point               | 1 Watt (30 dBm)   |
|                   |   | Mobile and Portable client device | 250mW (24 dBm)  |
| U-NII-2A          |   | $\sqrt{}$                         | 250mW (24 dBm) or 11 dBm+10 log B*  |
| U-NII-2C          | √ |                                   | 250mW (24 dBm) or 11 dBm+10 log B*  |
| U-NII-3           |   |                                   | 1 Watt (30 dBm)   |

<sup>\*</sup>B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

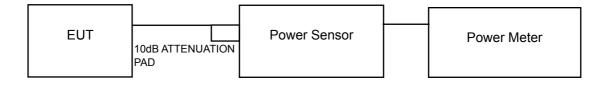
Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \le 4$ ;

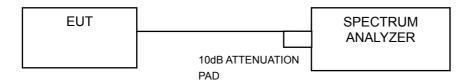
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N<sub>ANT</sub>;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $N_{ANT} \ge 5$ .

For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS}) dB$ .

# 4.3.2 Test Setup





#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

Report No.: RF141227C17A Page No. 85 / 116 Report Format Version: 6.1.1



#### 4.3.4 Test Procedure

#### FOR AVERAGE POWER MEASUREMENT

#### For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

#### For 802.11ac (VHT80)

- 1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- 2) Set sweep trigger to "free run".
- 3) Set RBW = 1 MHz.
- 4) Set VBW ≥ 3 MHz
- 5) Number of points in sweep ≥ 2 Span / RBW.
- 6) Sweep time ≤ (number of points in sweep) \* T
- 7) Detector = RMS.
- 8) Trace mode = max hold.
- 9) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

#### 4.3.5 Deviation fromTest Standard

No deviation.

#### 4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission Condition continuously at lowest, middle and highest channel frequencies individually.

Report No.: RF141227C17A Page No. 86 / 116 Report Format Version: 6.1.1



# 4.3.7 Test Result

#### **POWER OUTPUT:**

#### 802.11a 1TX

| Channel | Channel<br>Frequency<br>(MHz) | Maximum<br>Conducted Power<br>(mW) | Maximum<br>Conducted Power<br>(dBm) | Power Limit (dBm) | Pass/Fail |
|---------|-------------------------------|------------------------------------|-------------------------------------|-------------------|-----------|
| 52      | 5260                          | 116.950                            | 20.68                               | 23.87             | Pass      |
| 60      | 5300                          | 178.238                            | 22.51                               | 23.87             | Pass      |
| 64      | 5320                          | 238.232                            | 23.77                               | 23.87             | Pass      |
| 100     | 5500                          | 115.611                            | 20.63                               | 23.87             | Pass      |
| 116     | 5580                          | 131.522                            | 21.19                               | 23.87             | Pass      |
| 140     | 5700                          | 69.984                             | 18.45                               | 23.87             | Pass      |

<sup>\*</sup>Gain=6.13dBi > 6dBi, so the limit shall be reduced to 24-(6.13-6) = 23.87dBm.

- 1. 11dBm + 10log(22.56) = 24.53 dBm > 23.87dBm.
- 2. 11dBm + 10log( 23.00) = 24.62 dBm > 23.87dBm. 3. 11dBm + 10log( 24.32) = 24.86 dBm > 23.87dBm.
- 4. 11dBm + 10log(22.54) = 24.53 dBm > 23.87 dBm.
- 5. 11dBm + 10log(21.77) = 24.38 dBm > 23.87 dBm.
- 6. 11dBm + 10log(22.63) = 24.55dBm > 23.87dBm.

Report No.: RF141227C17A Page No. 87 / 116 Report Format Version: 6.1.1 Reference No.: 141227C17, 141227C19



#### 802.11n (HT20)\_2TX

| Ohara | Chan. Freq.                      | Maximum Conduc | Total          | Total          | Power       | D / F-il |      |
|-------|----------------------------------|----------------|----------------|----------------|-------------|----------|------|
| Chan. | (MHz) Chain 0 Chain 1 Power (mW) |                | Power<br>(dBm) | Limit<br>(dBm) | Pass / Fail |          |      |
| 52    | 5260                             | 20.37          | 20.56          | 222.656        | 23.48       | 23.87    | Pass |
| 60    | 5300                             | 20.25          | 20.75          | 224.775        | 23.52       | 23.87    | Pass |
| 64    | 5320                             | 20.46          | 20.81          | 231.677        | 23.65       | 23.87    | Pass |
| 100   | 5500                             | 20.21          | 21.15          | 235.271        | 23.72       | 23.87    | Pass |
| 116   | 5580                             | 20.14          | 20.31          | 210.675        | 23.24       | 23.87    | Pass |
| 140   | 5700                             | 18.56          | 18.33          | 139.856        | 21.46       | 23.87    | Pass |

<sup>\*</sup>Max. Gain=6.13dBi > 6dBi, so the limit shall be reduced to 24-(6.13-6) = 23.87dBm.

#### NOTE:

### **CHAIN 0**

- 1. 11dBm + 10log(23.26) = 24.67 dBm > 23.87 dBm.
- 2. 11dBm + 10log(23.58) = 24.73 dBm > 23.87dBm.
- 3. 11dBm + 10log(23.81) = 24.77 dBm > 23.87 dBm.
- 4. 11dBm + 10log( 22.98) = 24.61 dBm > 23.87dBm.
- 5. 11dBm + 10log(23.37) = 24.69 dBm > 23.87 dBm.
- 6. 11dBm + 10log(22.96) = 24.61dBm > 23.87dBm.

#### CHAIN 1

- 1. 11dBm + 10log(23.94) = 24.79 dBm > 23.87 dBm.
- 2. 11dBm + 10log(23.45) = 24.70 dBm > 23.87dBm.
- 3. 11dBm + 10log(23.96) = 24.79 dBm > 23.87dBm.
- 4. 11dBm + 10log(23.70) = 24.75 dBm > 23.87 dBm.
- 5. 11dBm + 10log(23.60) = 24.73 dBm > 23.87dBm.
- 6. 11dBm + 10log(23.33) = 24.68 dBm > 23.87 dBm.



#### 802.11n (HT40)\_2TX

| Chan  | Chan. Freq. | Maximum Conducted Power (dBm) |         | Total         | Total          | Power<br>Limit | Pass / Fail |
|-------|-------------|-------------------------------|---------|---------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0                       | Chain 1 | Power<br>(mW) | Power<br>(dBm) | (dBm)          | Pass/Pall   |
| 54    | 5270        | 19.89                         | 20.06   | 198.890       | 22.99          | 23.87          | Pass        |
| 62    | 5310        | 19.98                         | 20.03   | 200.234       | 23.02          | 23.87          | Pass        |
| 102   | 5510        | 19.06                         | 19.58   | 171.320       | 22.34          | 23.87          | Pass        |
| 110   | 5550        | 20.16                         | 20.43   | 214.161       | 23.31          | 23.87          | Pass        |
| 134   | 5670        | 20.14                         | 19.73   | 197.248       | 22.95          | 23.87          | Pass        |

<sup>\*</sup>Max. Gain=6.13dBi > 6dBi, so the limit shall be reduced to 24-(6.13-6) = 23.87dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(47.12) = 27.73 dBm > 23.87 dBm.
- 2. 11dBm + 10log(46.55) = 27.68 dBm > 23.87 dBm.
- 3. 11dBm + 10log(46.88) = 27.71 dBm > 23.87dBm.
- 4. 11dBm + 10log(46.62) = 27.69 dBm > 23.87 dBm.
- 5. 11dBm + 10log(45.99) = 27.63 dBm > 23.87 dBm.

#### CHAIN 1

- 1. 11dBm + 10log(45.66) = 27.60 dBm > 23.87dBm.
- 2. 11dBm + 10log(45.11) = 27.54 dBm > 23.87 dBm.
- 3. 11dBm + 10log(45.77) = 27.61dBm > 23.87dBm.
- 4. 11dBm + 10log(45.34) = 27.56 dBm > 23.87 dBm.
- 5. 11dBm + 10log(46.38) = 27.66 dBm > 23.87 dBm.

Report No.: RF141227C17A Page No. 89 / 116 Report Format Version: 6.1.1



#### 802.11ac (VHT20)\_2TX

| Ohara | Chan. Freq. | Maximum Conduc | Total   | Total         | Power          | D / F-ii       |             |
|-------|-------------|----------------|---------|---------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0        | Chain 1 | Power<br>(mW) | Power<br>(dBm) | Limit<br>(dBm) | Pass / Fail |
| 52    | 5260        | 20.52          | 20.51   | 225.180       | 23.53          | 23.87          | Pass        |
| 60    | 5300        | 20.36          | 20.81   | 229.147       | 23.60          | 23.87          | Pass        |
| 64    | 5320        | 20.21          | 20.83   | 226.014       | 23.54          | 23.87          | Pass        |
| 100   | 5500        | 20.32          | 21.21   | 239.777       | 23.80          | 23.87          | Pass        |
| 116   | 5580        | 20.34          | 20.78   | 227.817       | 23.58          | 23.87          | Pass        |
| 140   | 5700        | 18.51          | 18.55   | 142.572       | 21.54          | 23.87          | Pass        |

<sup>\*</sup>Max. Gain=6.13dBi > 6dBi, so the limit shall be reduced to 24-(6.13-6) = 23.87dBm.

#### NOTE:

### **CHAIN 0**

- 1. 11dBm + 10log(22.94) = 24.61dBm > 23.87dBm.
- 2. 11dBm + 10log(23.11) = 24.64 dBm > 23.87 dBm.
- 3. 11dBm + 10log(23.72) = 24.75 dBm > 23.87 dBm.
- 4. 11dBm + 10log(23.19) = 24.65 dBm > 23.87 dBm.
- 5. 11dBm + 10log(23.20) = 24.65dBm > 23.87dBm.
- 6. 11dBm + 10log(22.60) = 24.54 dBm > 23.87 dBm.

#### CHAIN 1

- 1. 11dBm + 10log(23.52) = 24.71 dBm > 23.87dBm.
- 2. 11dBm + 10log(23.04) = 24.62 dBm > 23.87 dBm.
- 3. 11dBm + 10log(23.19) = 24.65 dBm > 23.87 dBm.
- 4. 11dBm + 10log(23.15) = 24.65dBm > 23.87dBm.
- 5. 11dBm + 10log(24.19) = 24.84 dBm > 23.87dBm.
- 6. 11dBm + 10log(23.89) = 24.78 dBm > 23.87 dBm.



#### 802.11ac (VHT40)\_2TX

| Chan  | Chan. Freq. | Maximum Conducted Power (dBm) |         | Total         | Total          | Power          | Pass / Fail |
|-------|-------------|-------------------------------|---------|---------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0                       | Chain 1 | Power<br>(mW) | Power<br>(dBm) | Limit<br>(dBm) | Pass / Pall |
| 54    | 5270        | 20.06                         | 19.74   | 195.580       | 22.91          | 23.87          | Pass        |
| 62    | 5310        | 19.97                         | 20.04   | 200.237       | 23.02          | 23.87          | Pass        |
| 102   | 5510        | 19.01                         | 19.54   | 169.566       | 22.29          | 23.87          | Pass        |
| 110   | 5550        | 20.21                         | 20.42   | 215.108       | 23.33          | 23.87          | Pass        |
| 134   | 5670        | 20.12                         | 19.78   | 197.862       | 22.96          | 23.87          | Pass        |

<sup>\*</sup>Max. Gain=6.13dBi > 6dBi, so the limit shall be reduced to 24-(6.13-6) = 23.87dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(46.14) = 27.64 dBm > 23.87 dBm.
- 2. 11dBm + 10log(46.27) = 27.65 dBm > 23.87 dBm.
- 3. 11dBm + 10log(46.42) = 27.67 dBm > 23.87 dBm.
- 4. 11dBm + 10log(46.13) = 27.64 dBm > 23.87 dBm.
- 5. 11dBm + 10log(45.98) = 27.63 dBm > 23.87 dBm.

#### CHAIN 1

- 1. 11dBm + 10log(46.53) = 27.68 dBm > 23.87 dBm.
- 2. 11dBm + 10log(46.49) = 27.67 dBm > 23.87 dBm.
- 3. 11dBm + 10log(45.79) = 27.61 dBm > 23.87dBm.
- 4. 11dBm + 10log(45.98) = 27.63 dBm > 23.87 dBm.
- 5. 11dBm + 10log(44.99) = 27.53 dBm > 23.87dBm.

#### 802.11ac (VHT80)\_2TX

| Chan. Freq. (MHz) | Maximum Conduc | Total   | Total         | Power          | Pass / Fail    |           |      |
|-------------------|----------------|---------|---------------|----------------|----------------|-----------|------|
|                   | Chain 0        | Chain 1 | Power<br>(mW) | Power<br>(dBm) | Limit<br>(dBm) | rass/raii |      |
| 58                | 5290           | 18.10   | 18.09         | 128.982        | 21.11          | 23.87     | Pass |
| 106               | 5530           | 15.66   | 16.01         | 76.715         | 18.85          | 23.87     | Pass |

<sup>\*</sup>Max. Gain=6.13dBi > 6dBi, so the limit shall be reduced to 24-(6.13-6) = 23.87dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(89.11) = 30.50 dBm > 23.87dBm.
- 2. 11dBm + 10log(89.27) = 30.51 dBm > 23.87 dBm.

#### CHAIN '

- 1. 11dBm + 10log(89.67) = 30.53 dBm > 23.87dBm.
- 2. 11dBm + 10log(86.76) = 30.38 dBm > 23.87 dBm.



#### 802.11n (HT20)\_3TX

| Ohara | Chan. Freq. | Maximum Conducted Power (dBm) |         |         | Total<br>Power | Total          | Power          | Pass / Fail |
|-------|-------------|-------------------------------|---------|---------|----------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0                       | Chain 1 | Chain 2 | (mW)           | Power<br>(dBm) | Limit<br>(dBm) | rass/raii   |
| 52    | 5260        | 15.26                         | 15.16   | 14.73   | 96.101         | 19.83          | 23.73          | Pass        |
| 60    | 5300        | 15.37                         | 15.37   | 14.86   | 99.490         | 19.98          | 23.73          | Pass        |
| 64    | 5320        | 15.64                         | 15.42   | 14.79   | 101.608        | 20.07          | 23.73          | Pass        |
| 100   | 5500        | 15.29                         | 15.11   | 14.63   | 95.280         | 19.79          | 23.73          | Pass        |
| 116   | 5580        | 15.66                         | 15.64   | 14.54   | 101.902        | 20.08          | 23.73          | Pass        |
| 140   | 5700        | 15.13                         | 14.84   | 13.42   | 85.042         | 19.30          | 23.73          | Pass        |

<sup>\*</sup>Max. Gain=6.27dBi > 6dBi, so the limit shall be reduced to 24-(6.27-6) = 23.73dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(23.51) = 24.71 dBm > 23.73dBm.
- 2. 11dBm + 10log(24.09) = 24.82 dBm > 23.73 dBm.
- 3. 11dBm + 10log(23.69) = 24.75 dBm > 23.73 dBm.
- 4. 11dBm + 10log(23.23) = 24.66 dBm > 23.73dBm.
- 5. 11dBm + 10log(23.32) = 24.68 dBm > 23.73dBm.
- 6. 11dBm + 10log(23.69) = 24.75 dBm > 23.73 dBm.

#### **CHAIN 1**

- 1. 11dBm + 10log(23.62) = 24.73 dBm > 23.73 dBm.
- 2. 11dBm + 10log(23.75) = 24.76 dBm > 23.73 dBm.
- 3. 11dBm + 10log(23.22) = 24.66 dBm > 23.73dBm.
- 4. 11dBm + 10log(23.59) = 24.73 dBm > 23.73 dBm.
- 5. 11dBm + 10log(23.34) = 24.68 dBm > 23.73 dBm.
- 6. 11dBm + 10log(23.97) = 24.80 dBm > 23.73dBm.

#### **CHAIN 2**

- 1. 11dBm + 10log(23.75) = 24.76 dBm > 23.73 dBm.
- 2. 11dBm + 10log(23.28) = 24.67 dBm > 23.73dBm.
- 3. 11dBm + 10log(23.48) = 24.71 dBm > 23.73dBm.
- 4. 11dBm + 10log(23.70) = 24.75 dBm > 23.73 dBm.
- 5. 11dBm + 10log(23.43) = 24.70 dBm > 23.73dBm.
- 6. 11dBm + 10log(23.76) = 24.76 dBm > 23.73dBm.



#### 802.11n (HT40)\_3TX

| Chan  | Chan. Freq. | Maximum Conducted Power (dBm) |         |         | Total         | Total<br>Power | Power          | Pass / Fail |
|-------|-------------|-------------------------------|---------|---------|---------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0                       | Chain 1 | Chain 2 | Power<br>(mW) | (dBm)          | Limit<br>(dBm) | rass/raii   |
| 54    | 5270        | 18.57                         | 18.25   | 17.53   | 195.403       | 22.91          | 23.73          | Pass        |
| 62    | 5310        | 18.42                         | 18.43   | 17.79   | 199.282       | 22.99          | 23.73          | Pass        |
| 102   | 5510        | 17.01                         | 17.22   | 17.13   | 154.599       | 21.89          | 23.73          | Pass        |
| 110   | 5550        | 18.23                         | 18.14   | 17.76   | 191.394       | 22.82          | 23.73          | Pass        |
| 134   | 5670        | 16.94                         | 16.42   | 15.23   | 126.627       | 21.03          | 23.73          | Pass        |

<sup>\*</sup>Max. Gain=6.27dBi > 6dBi, so the limit shall be reduced to 24-(6.27-6) = 23.73dBm.

### NOTE:

# **CHAIN 0**

- 1. 11dBm + 10log(45.76) = 27.60 dBm > 23.73dBm.
- 2. 11dBm + 10log(45.40) = 27.57 dBm > 23.73dBm.
- 3. 11dBm + 10log(45.38) = 27.57 dBm > 23.73 dBm.
- 4. 11dBm + 10log(45.06) = 27.54 dBm > 23.73dBm.
- 5. 11dBm + 10log(45.63) = 27.59 dBm > 23.73 dBm.

#### CHAIN 1

- 1. 11dBm + 10log(45.47) = 27.58 dBm > 23.73dBm.
- 2. 11dBm + 10log(45.20) = 27.55 dBm > 23.73 dBm.
- 3. 11dBm + 10log(45.04) = 27.54 dBm > 23.73dBm.
- 4. 11dBm + 10log(45.07) = 27.54 dBm > 23.73dBm.
- 5. 11dBm + 10log(45.72) = 27.60 dBm > 23.73dBm.

#### CHAIN 2

- 1. 11dBm + 10log(46.97) = 27.72 dBm > 23.73 dBm.
- 2. 11dBm + 10log(46.08) = 27.64 dBm > 23.73dBm.
- 3. 11dBm + 10log(45.99) = 27.63 dBm > 23.73dBm.
- 4. 11dBm + 10log(45.18) = 27.55 dBm > 23.73 dBm.
- 5. 11dBm + 10log(46.06) = 27.63 dBm > 23.73 dBm.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19

Page No. 93 / 116 Report Format Version: 6.1.1



#### 802.11ac (VHT20)\_3TX

| Chan  | Chan. Freq. | Maximum Conducted Power (dBm) |         |         | Total<br>Power | Total          | Power          | Pass / Fail |
|-------|-------------|-------------------------------|---------|---------|----------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0                       | Chain 1 | Chain 2 | (mW)           | Power<br>(dBm) | Limit<br>(dBm) | rass/raii   |
| 52    | 5260        | 15.37                         | 15.22   | 14.86   | 98.321         | 19.93          | 23.73          | Pass        |
| 60    | 5300        | 15.42                         | 15.31   | 14.69   | 98.241         | 19.92          | 23.73          | Pass        |
| 64    | 5320        | 15.53                         | 15.29   | 14.57   | 98.175         | 19.92          | 23.73          | Pass        |
| 100   | 5500        | 15.55                         | 15.36   | 14.26   | 96.917         | 19.86          | 23.73          | Pass        |
| 116   | 5580        | 15.65                         | 15.84   | 14.39   | 102.578        | 20.11          | 23.73          | Pass        |
| 140   | 5700        | 15.26                         | 14.95   | 13.31   | 86.264         | 19.36          | 23.73          | Pass        |

<sup>\*</sup>Max. Gain=6.27dBi > 6dBi, so the limit shall be reduced to 24-(6.27-6) = 23.73dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(23.81) = 24.77 dBm > 23.73dBm.
- 2. 11dBm + 10log(23.63) = 24.73 dBm > 23.73 dBm.
- 3. 11dBm + 10log(23.68) = 24.74 dBm > 23.73 dBm.
- 4. 11dBm + 10log(23.94) = 24.79 dBm > 23.73dBm.
- 5. 11dBm + 10log(23.80) = 24.77 dBm > 23.73dBm.
- 6. 11dBm + 10log(23.61) = 24.73 dBm > 23.73 dBm.

#### **CHAIN 1**

- 1. 11dBm + 10log(24.71) = 24.93 dBm > 23.73dBm.
- 2. 11dBm + 10log(24.96) = 24.97 dBm > 23.73dBm.
- 3. 11dBm + 10log(23.95) = 24.79 dBm > 23.73dBm.
- 4. 11dBm + 10log(23.47) = 24.71 dBm > 23.73dBm.
- 5. 11dBm + 10log(23.01) = 24.62 dBm > 23.73 dBm.
- 6. 11dBm + 10log(23.83) = 24.77 dBm > 23.73dBm.

#### **CHAIN 2**

- 1. 11dBm + 10log(23.26) = 24.67 dBm > 23.73dBm.
- 2. 11dBm + 10log(23.79) = 24.76 dBm > 23.73 dBm.
- 3. 11dBm + 10log(23.70) = 24.75 dBm > 23.73 dBm.
- 4. 11dBm + 10log(23.11) = 24.64 dBm > 23.73dBm.
- 5. 11dBm + 10log(22.99) = 24.62 dBm > 23.73 dBm. 6. 11dBm + 10log(23.59) = 24.73 dBm > 23.73 dBm.



#### 802.11ac (VHT40)\_3TX

| Chan  | Chan. Freq. | Maximum Conducted Power (dBm) |         |         | Total         | Total          | Power<br>Limit | Pass / Fail |
|-------|-------------|-------------------------------|---------|---------|---------------|----------------|----------------|-------------|
| Chan. | (MHz)       | Chain 0                       | Chain 1 | Chain 2 | Power<br>(mW) | Power<br>(dBm) | (dBm)          | rass/raii   |
| 54    | 5270        | 18.45                         | 18.12   | 17.55   | 191.732       | 22.83          | 23.73          | Pass        |
| 62    | 5310        | 18.46                         | 18.33   | 17.64   | 196.299       | 22.93          | 23.73          | Pass        |
| 102   | 5510        | 17.74                         | 18.02   | 17.73   | 182.109       | 22.60          | 23.73          | Pass        |
| 110   | 5550        | 18.16                         | 18.33   | 17.82   | 194.075       | 22.88          | 23.73          | Pass        |
| 134   | 5670        | 17.63                         | 17.31   | 15.62   | 148.245       | 21.71          | 23.73          | Pass        |

<sup>\*</sup>Max. Gain=6.27dBi > 6dBi, so the limit shall be reduced to 24-(6.27-6) = 23.73dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(45.80) = 27.61dBm > 23.73dBm.
- 2. 11dBm + 10log(45.11) = 27.54 dBm > 23.73dBm.
- 3. 11dBm + 10log(45.91) = 27.62 dBm > 23.73 dBm.
- 4. 11dBm + 10log(45.30) = 27.56 dBm > 23.73dBm.
- 5. 11dBm + 10log(45.42) = 27.57 dBm > 23.73dBm.

#### CHAIN 1

- 1. 11dBm + 10log(45.89) = 27.62 dBm > 23.73 dBm.
- 2. 11dBm + 10log(45.81) = 27.61dBm > 23.73dBm.
- 3. 11dBm + 10log(45.36) = 27.57 dBm > 23.73dBm.
- 4. 11dBm + 10log(45.18) = 27.55 dBm > 23.73 dBm.
- 5. 11dBm + 10log(45.73) = 27.60 dBm > 23.73dBm.

#### CHAIN 2

- 1. 11dBm + 10log(46.30) = 27.66 dBm > 23.73dBm.
- 2. 11dBm + 10log(46.25) = 27.65dBm > 23.73dBm.
- 3. 11dBm + 10log(45.62) = 27.59 dBm > 23.73 dBm.
- 4. 11dBm + 10log(45.30) = 27.56 dBm > 23.73dBm.
- 5. 11dBm + 10log(46.04) = 27.63 dBm > 23.73dBm.

#### 802.11ac (VHT80)\_3TX

| Chan. Freq. (MHz) | Maximum Conducted Power (dBm) |         |         | Total         | Total          | Power          | Pass / Fail |      |
|-------------------|-------------------------------|---------|---------|---------------|----------------|----------------|-------------|------|
|                   | Chain 0                       | Chain 1 | Chain 2 | Power<br>(mW) | Power<br>(dBm) | Limit<br>(dBm) | Pass / Fall |      |
| 58                | 5290                          | 14.62   | 14.71   | 13.96         | 83.442         | 19.21          | 23.73       | Pass |
| 106               | 5530                          | 13.21   | 13.67   | 13.47         | 66.455         | 18.23          | 23.73       | Pass |

<sup>\*</sup>Max. Gain=6.27dBi > 6dBi, so the limit shall be reduced to 24-(6.27-6) = 23.73dBm.

#### NOTE:

#### **CHAIN 0**

- 1. 11dBm + 10log(88.96) = 30.49 dBm > 23.73 dBm.
- 2. 11dBm + 10log(89.32) = 30.51 dBm > 23.73dBm.

#### **CHAIN 1**

- 1. 11dBm + 10log(88.47) = 30.47 dBm > 23.73dBm.
- 2. 11dBm + 10log(92.56) = 30.66 dBm > 23.73dBm.

#### CHAIN 2

- 1. 11dBm + 10log(89.07) = 30.50 dBm > 23.73dBm.
- 2. 11dBm + 10log(87.72) = 30.43 dBm > 23.73dBm.

Report No.: RF141227C17A Page No. 95 / 116 Report Format Version: 6.1.1



# **26dB BANDWIDTH:**

# 802.11a\_1TX

| Channel | Channel Frequency<br>(MHz) | 26dBc Bandwidth (MHz) | Pass / Fail |
|---------|----------------------------|-----------------------|-------------|
| 52      | 5260                       | 22.56                 | PASS        |
| 60      | 5300                       | 23.00                 | PASS        |
| 64      | 5320                       | 24.32                 | PASS        |
| 100     | 5500                       | 22.54                 | PASS        |
| 116     | 5580                       | 21.77                 | PASS        |
| 140     | 5700                       | 22.63                 | PASS        |

# 802.11n (HT20)\_2TX

| Channel | Channel Frequency | 26dBc Band | Pass / Fail |               |  |
|---------|-------------------|------------|-------------|---------------|--|
| Channel | (MHz)             | Chain 0    | Chain 1     | 1 455 / 1 411 |  |
| 52      | 5260              | 23.26      | 23.94       | PASS          |  |
| 60      | 5300              | 23.58      | 23.45       | PASS          |  |
| 64      | 5320              | 23.81      | 23.96       | PASS          |  |
| 100     | 5500              | 22.98      | 23.70       | PASS          |  |
| 116     | 5580              | 23.37      | 23.60       | PASS          |  |
| 140     | 5700              | 22.96      | 23.33       | PASS          |  |

# 802.11n (HT40)\_2TX

| Channel | Channel Frequency | 26dBc Band | Pass / Fail |             |
|---------|-------------------|------------|-------------|-------------|
| Channel | (MHz)             | Chain 0    | Chain 1     | F455 / F411 |
| 54      | 5270              | 47.12      | 45.66       | PASS        |
| 62      | 5310              | 46.55      | 45.11       | PASS        |
| 102     | 5510              | 46.88      | 45.77       | PASS        |
| 110     | 5550              | 46.62      | 45.34       | PASS        |
| 134     | 5670              | 45.99      | 46.38       | PASS        |
| 140     | 5700              | 47.12      | 45.66       | PASS        |

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19

Page No. 96 / 116

Report Format Version: 6.1.1



# 802.11ac (VHT20)\_2TX

| Channel | Channel Frequency | el Frequency 26dBc Bandwidth (MHz) |         | Pass / Fail   |
|---------|-------------------|------------------------------------|---------|---------------|
| Channel | (MHz)             | Chain 0                            | Chain 1 | F 455 / F 411 |
| 52      | 5260              | 22.94                              | 23.52   | PASS          |
| 60      | 5300              | 23.11                              | 23.04   | PASS          |
| 64      | 5320              | 23.72                              | 23.19   | PASS          |
| 100     | 5500              | 23.19                              | 23.15   | PASS          |
| 116     | 5580              | 23.20                              | 24.19   | PASS          |
| 140     | 5700              | 22.60                              | 23.89   | PASS          |

# 802.11ac (VHT40)\_2TX

| Channel | Channel Frequency | 26dBc Band | Pass / Fail |                  |
|---------|-------------------|------------|-------------|------------------|
| Channel | (MHz)             | Chain 0    | Chain 1     | F 4 5 5 / F 4 11 |
| 54      | 5270              | 46.14      | 46.53       | PASS             |
| 62      | 5310              | 46.27      | 46.49       | PASS             |
| 102     | 5510              | 46.42      | 45.79       | PASS             |
| 110     | 5550              | 46.13      | 45.98       | PASS             |
| 134     | 5670              | 45.98      | 44.99       | PASS             |

# 802.11ac (HT80)\_2TX

| Channel  | Channel Frequency | 26dBc Bandwidth (MHz) |         | Pass / Fail   |
|----------|-------------------|-----------------------|---------|---------------|
| Chamilei | (MHz)             | Chain 0               | Chain 1 | r ass / r all |
| 58       | 5290              | 89.11                 | 89.67   | PASS          |
| 106      | 5530              | 89.27                 | 86.76   | PASS          |



# 802.11n (HT20)\_3TX

| Channel | Channel Frequency 26dBc Bandwidth (MHz) |         |         | Pass / Fail |           |
|---------|---|---------|---------|-------------|-----------|
| Channel | (MHz)                                   | Chain 0 | Chain 1 | Chain 2     | rass/raii |
| 52      | 5260                                    | 23.51   | 23.62   | 23.75       | PASS      |
| 60      | 5300                                    | 24.09   | 23.75   | 23.28       | PASS      |
| 64      | 5320                                    | 23.69   | 23.22   | 23.48       | PASS      |
| 100     | 5500                                    | 23.23   | 23.59   | 23.70       | PASS      |
| 116     | 5580                                    | 23.32   | 23.34   | 23.43       | PASS      |
| 140     | 5700                                    | 23.69   | 23.97   | 23.76       | PASS      |

# 802.11n (HT40)\_3TX

| Channel | Channel Frequency | Channel Frequency 26dBc Bandwidth (MHz) |         |         | Pass / Fail |
|---------|-------------------|---|---------|---------|-------------|
| Channel | (MHz)             | Chain 0                                 | Chain 1 | Chain 2 | rass/raii   |
| 54      | 5270              | 45.76                                   | 45.47   | 46.97   | PASS        |
| 62      | 5310              | 45.40                                   | 45.20   | 46.08   | PASS        |
| 102     | 5510              | 45.38                                   | 45.04   | 45.99   | PASS        |
| 110     | 5550              | 45.06                                   | 45.07   | 45.18   | PASS        |
| 134     | 5670              | 45.63                                   | 45.72   | 46.06   | PASS        |

# 802.11ac (VHT20)\_3TX

| Channal | Channel Frequency | 26dBc Bandwidth (MHz) |         |         | Pass / Fail |
|---------|-------------------|-----------------------|---------|---------|-------------|
| Channel | (MHz)             | Chain 0               | Chain 1 | Chain 2 | Fass/Fall   |
| 52      | 5260              | 23.81                 | 24.71   | 23.26   | PASS        |
| 60      | 5300              | 23.63                 | 24.96   | 23.79   | PASS        |
| 64      | 5320              | 23.68                 | 23.95   | 23.70   | PASS        |
| 100     | 5500              | 23.94                 | 23.47   | 23.11   | PASS        |
| 116     | 5580              | 23.80                 | 23.01   | 22.99   | PASS        |
| 140     | 5700              | 23.61                 | 23.83   | 23.59   | PASS        |

# 802.11ac (VHT40)\_3TX

| Channel | Channel Frequency | 26dBc Bandwidth (MHz) |         |         | Pass / Fail |
|---------|-------------------|-----------------------|---------|---------|-------------|
| Channel | (MHz)             | Chain 0               | Chain 1 | Chain 2 | Fass/Faii   |
| 54      | 5270              | 45.80                 | 45.89   | 46.30   | PASS        |
| 62      | 5310              | 45.11                 | 45.81   | 46.25   | PASS        |
| 102     | 5510              | 45.91                 | 45.36   | 45.62   | PASS        |
| 110     | 5550              | 45.30                 | 45.18   | 45.30   | PASS        |
| 134     | 5670              | 45.42                 | 45.73   | 46.04   | PASS        |

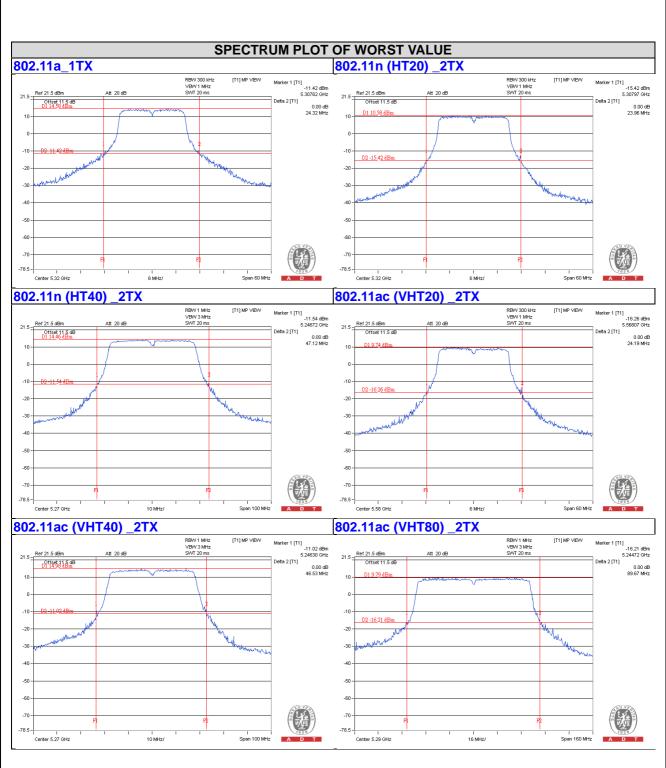


# 802.11ac (VHT80)\_3TX

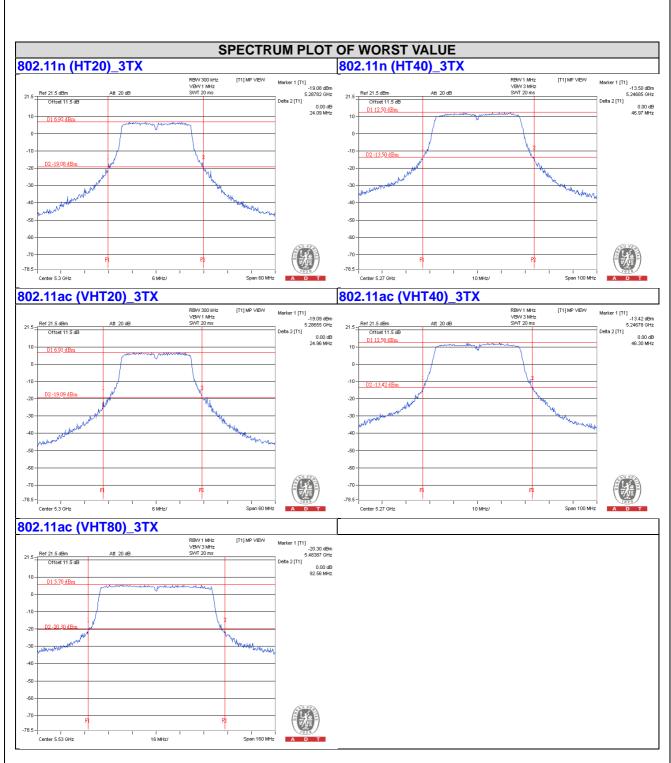
| Channel  | Channel Frequency 26dBc Bandwidth (MHz) |         |         |         | Pass / Fail   |
|----------|---|---------|---------|---------|---------------|
| Chamilei | (MHz)                                   | Chain 0 | Chain 1 | Chain 2 | r ass / r all |
| 58       | 5290                                    | 88.96   | 88.47   | 89.07   | PASS          |
| 106      | 5530                                    | 89.32   | 92.56   | 87.72   | PASS          |

Report No.: RF141227C17A Page No. 99 / 116 Report Format Version: 6.1.1











#### **EUT MAXIMUM CONDUCTED POWER**

#### 802.11a

| Francisco Decid (MILE) | Max. Power        |                    |  |
|------------------------|-------------------|--------------------|--|
| Frequency Band (MHz)   | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350              | 238.232           | 23.77              |  |
| 5470~5725              | 131.522           | 21.19              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

### 802.11n (HT20)\_2TX

| Francisco Band (MIII) | Max. Power        |                    |  |
|-----------------------|-------------------|--------------------|--|
| Frequency Band (MHz)  | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350             | 231.677           | 23.65              |  |
| 5470~5725             | 235.271           | 23.72              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

# 802.11n (HT40)\_2TX

| 5 1000               | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
| Frequency Band (MHz) | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 200.234           | 23.02              |  |
| 5470~5725            | 214.161           | 23.31              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

# 802.11ac (VHT20)\_2TX

| Frequency Band (MHz) | Max. I            | Power              |
|----------------------|-------------------|--------------------|
|                      | Output Power (mW) | Output Power (dBm) |
| 5250~5350            | 229.147           | 23.60              |
| 5470~5725            | 239.777           | 23.80              |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

### 802.11ac (VHT40)\_2TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 200.237           | 23.02              |  |
| 5470~5725            | 215.108           | 23.33              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

Report No.: RF141227C17A Page No. 102 / 116 Report Format Version: 6.1.1



# 802.11ac (VHT80)\_2TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 128.982           | 21.11              |  |
| 5470~5725            | 76.715            | 18.85              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

# 802.11n (HT20)\_3TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 101.608           | 20.07              |  |
| 5470~5725            | 101.902           | 20.08              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

# 802.11n (HT40)\_3TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 199.282           | 22.99              |  |
| 5470~5725            | 191.394           | 22.82              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

# 802.11ac (VHT20)\_3TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 98.321            | 19.93              |  |
| 5470~5725            | 102.578           | 20.11              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

# 802.11ac (VHT40)\_3TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 196.299           | 22.93              |  |
| 5470~5725            | 194.075           | 22.88              |  |

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

Report No.: RF141227C17A Page No. 103 / 116 Report Format Version: 6.1.1



# 802.11ac (VHT80)\_3TX

| Frequency Band (MHz) | Max. Power        |                    |  |
|----------------------|-------------------|--------------------|--|
|                      | Output Power (mW) | Output Power (dBm) |  |
| 5250~5350            | 83.442            | 19.21              |  |
| 5470~5725            | 66.455            | 18.23              |  |

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

Page No. 104 / 116 Report Format Version: 6.1.1

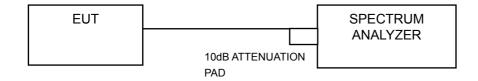


# 4.4 Peak Power Spectral Density Measurement

# 4.4.1 Limits of Peak Power Spectral Density Measurement

| Operation Band | EUT Category |                                      | LIMIT         |
|----------------|--------------|--------------------------------------|---------------|
|                |              | Outdoor Access Point                 |               |
| U-NII-1        |              | Fixed point-to-point Access<br>Point | 17dBm/ MHz    |
|                |              | Indoor Access Point                  |               |
|                |              | Mobile and Portable client device    | 11dBm/ MHz    |
| U-NII-2A       |              | $\checkmark$                         | 11dBm/ MHz    |
| U-NII-2C       | V            |                                      | 11dBm/ MHz    |
| U-NII-3        |              |                                      | 30dBm/ 500kHz |

# 4.4.2 Test Setup



# 4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

# 4.4.4 Test Procedure

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value

# 4.4.5 Deviation from Test Standard

No deviation.

#### 4.4.6 EUT Operating Condition

Same as Item 4.3.6.

Report No.: RF141227C17A Page No. 105 / 116 Report Format Version: 6.1.1



#### 4.4.7 Test Results

#### 802.11a\_1TX

| Channel | Frequency (MHz) | PSD (dBm) | Maximum Limit<br>(dBm) | Pass/Fail |
|---------|-----------------|-----------|------------------------|-----------|
| 52      | 5260            | 6.49      | 10.87                  | Pass      |
| 60      | 5300            | 8.32      | 10.87                  | Pass      |
| 64      | 5320            | 9.10      | 10.87                  | Pass      |
| 100     | 5500            | 6.38      | 10.87                  | Pass      |
| 116     | 5580            | 6.94      | 10.87                  | Pass      |
| 140     | 5700            | 4.20      | 10.87                  | Pass      |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Gain = 6.13 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.13-6) = 10.87 dBm.

# 802.11n (HT20)\_2TX

|       | Chan. Freq. | PSD     | (dBm)   | Total<br>Power<br>Density<br>(dBm) | Max. Limit<br>(dBm) | Pass/Fail |
|-------|-------------|---------|---------|------------------------------------|---------------------|-----------|
| Chan. | (MHz)       | Chain 0 | Chain 1 |                                    |                     |           |
| 52    | 5260        | 4.24    | 4.42    | 7.34                               | 7.94                | Pass      |
| 60    | 5300        | 4.77    | 4.97    | 7.88                               | 7.94                | Pass      |
| 64    | 5320        | 4.51    | 5.10    | 7.83                               | 7.94                | Pass      |
| 100   | 5500        | 4.76    | 5.08    | 7.93                               | 7.94                | Pass      |
| 116   | 5580        | 4.58    | 5.14    | 7.88                               | 7.94                | Pass      |
| 140   | 5700        | 4.96    | 4.68    | 7.83                               | 7.94                | Pass      |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20 + 10^{G2/20 + ... + 10^{GN/20}})^2/2] = 9.06 \text{ dBi} > 6 \text{dBi}$ , so the power density limit shall be reduced to 11-(9.06-6) = 7.94 dBm.



# 802.11n (HT40)\_2TX

|       | Chan. Freq. | PSD (   | (dBm)   | Total<br>Power<br>Density<br>(dBm) | Max. Limit<br>(dBm) | Pass/Fail |
|-------|-------------|---------|---------|------------------------------------|---------------------|-----------|
| Chan. | (MHz)       | Chain 0 | Chain 1 |                                    |                     |           |
| 54    | 5270        | 2.77    | 2.69    | 5.74                               | 7.94                | Pass      |
| 62    | 5310        | 2.82    | 3.07    | 5.96                               | 7.94                | Pass      |
| 102   | 5510        | 1.87    | 2.94    | 5.45                               | 7.94                | Pass      |
| 110   | 5550        | 3.20    | 3.89    | 6.57                               | 7.94                | Pass      |
| 134   | 5670        | 3.35    | 3.17    | 6.27                               | 7.94                | Pass      |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain = 10 log[(10<sup>G1/20 +</sup> 10<sup>G2/20 + ... +</sup> 10<sup>GN/20</sup>)<sup>2</sup>/2]= 9.06 dBi > 6dBi, so the power density limit shall be reduced to 11-(9.06-6) = 7.94dBm.

# 802.11ac (VHT20)\_2TX

|       | Chan. Freq. | PSD (   | Total<br>Power | Max. Limit          |      |           |  |
|-------|-------------|---------|----------------|---------------------|------|-----------|--|
| Chan. | (MHz)       | Chain 0 | Chain 1        | Density (dBm) (dBm) |      | Pass/Fail |  |
| 52    | 5260        | 4.54    | 5.04           | 7.81                | 7.94 | Pass      |  |
| 60    | 5300        | 4.59    | 5.07           | 7.85                | 7.94 | Pass      |  |
| 64    | 5320        | 4.46    | 5.12           | 7.81                | 7.94 | Pass      |  |
| 100   | 5500        | 4.35    | 5.00           | 7.70                | 7.94 | Pass      |  |
| 116   | 5580        | 4.69    | 4.46           | 7.59                | 7.94 | Pass      |  |
| 140   | 5700        | 5.03    | 4.67           | 7.86                | 7.94 | Pass      |  |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2] = 9.06 dBi > 6dBi$ , so the power density limit shall be reduced to 11-(9.06-6) = 7.94dBm.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19

Page No. 107 / 116

Report Format Version: 6.1.1



# 802.11ac (VHT40)\_2TX

|       | Chan. Freq.           | PSD ( | PSD (dBm)                 |                     |           |      |
|-------|-----------------------|-------|---------------------------|---------------------|-----------|------|
| Chan. | (MHz) Chain 0 Chain 1 |       | Power<br>Density<br>(dBm) | Max. Limit<br>(dBm) | Pass/Fail |      |
| 54    | 5270                  | 2.64  | 2.70                      | 5.68                | 7.94      | Pass |
| 62    | 5310                  | 2.70  | 3.09                      | 5.91                | 7.94      | Pass |
| 102   | 5510                  | 2.05  | 2.89                      | 5.50                | 7.94      | Pass |
| 110   | 5550                  | 3.17  | 3.70                      | 6.45                | 7.94      | Pass |
| 134   | 5670                  | 3.48  | 3.06                      | 6.29                | 7.94      | Pass |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain = 10 log[(10<sup>G1/20 +</sup> 10<sup>G2/20 + ... +</sup> 10<sup>GN/20</sup>)<sup>2</sup>/2]= 9.06 dBi > 6dBi, so the power density limit shall be reduced to 11-(9.06-6) = 7.94dBm.

# 802.11ac (VHT80)\_2TX

|       | Chan. Freq. |       | (dBm) | Total<br>Power   | Max. Limit |           |
|-------|-------------|-------|-------|------------------|------------|-----------|
| Chan. | (MHz)       |       |       | Density<br>(dBm) | (dBm)      | Pass/Fail |
| 58    | 5290        | -2.42 | -2.17 | 0.72             | 7.94       | Pass      |
| 106   | 5530        | -4.63 | -3.96 | -1.27            | 7.94       | Pass      |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain = 10 log[(10<sup>G1/20 +</sup> 10<sup>G2/20 + ... +</sup> 10<sup>GN/20</sup>)<sup>2</sup>/2]= 9.06 dBi > 6dBi, so the power density limit shall be reduced to 11-(9.06-6) = 7.94dBm.

Report No.: RF141227C17A Reference No.: 141227C17, 141227C19 Page No. 108 / 116

Report Format Version: 6.1.1



# 802.11n (HT20)\_3TX

|       | Chan. Freq. |      | PSD (dBm) |                  | Total<br>Power | Max. Limit |      |  |
|-------|-------------|------|-----------|------------------|----------------|------------|------|--|
| Chan. | (MHz)       |      | Chain 2   | Density<br>(dBm) | (dBm)          | Pass/Fail  |      |  |
| 52    | 5260        | 1.33 | 1.12      | 1.03             | 5.93           | 6.11       | Pass |  |
| 60    | 5300        | 1.36 | 1.62      | 0.48             | 5.95           | 6.11       | Pass |  |
| 64    | 5320        | 1.17 | 1.66      | 0.36             | 5.87           | 6.11       | Pass |  |
| 100   | 5500        | 1.07 | 1.32      | 0.51             | 5.75           | 6.11       | Pass |  |
| 116   | 5580        | 1.35 | 1.17      | 0.66             | 5.84           | 6.11       | Pass |  |
| 140   | 5700        | 1.64 | 1.35      | 0.78             | 6.04           | 6.11       | Pass |  |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20 + ... +} 10^{GN/20})^2/3] = 10.89 \text{ dBi} > 6 \text{dBi}$ , so the power density limit shall be reduced to 11-(10.89-6) = 6.11 dBm.

# 802.11n (HT40)\_3TX

|       | Chan. Freq. |      | PSD (dBm) |                  | Total<br>Power | Max. Limit |      |
|-------|-------------|------|-----------|------------------|----------------|------------|------|
| Chan. | (MHz)       | · ·  |           | Density<br>(dBm) | (dBm)          | Pass/Fail  |      |
| 54    | 5270        | 1.07 | 1.04      | 0.40             | 5.62           | 6.11       | Pass |
| 62    | 5310        | 1.74 | -0.12     | 0.75             | 5.63           | 6.11       | Pass |
| 102   | 5510        | 0.71 | 1.38      | 0.94             | 5.79           | 6.11       | Pass |
| 110   | 5550        | 1.28 | 1.35      | 0.57             | 5.85           | 6.11       | Pass |
| 134   | 5670        | 0.54 | 0.44      | 0.30             | 5.20           | 6.11       | Pass |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/3] = 10.89 \text{ dBi} > 6 \text{dBi}$ , so the power density limit shall be reduced to 11-(10.89-6) = 6.11 dBm.



# 802.11ac (VHT20)\_3TX

|       | Chan. Freq. |         | PSD (dBm) |         | Total<br>Power   | Max. Limit |           |  |
|-------|-------------|---------|-----------|---------|------------------|------------|-----------|--|
| Chan. | (MHz)       | Chain 0 | Chain 1   | Chain 2 | Density<br>(dBm) | (dBm)      | Pass/Fail |  |
| 52    | 5260        | 1.07    | 0.91      | 0.59    | 5.63             | 6.11       | Pass      |  |
| 60    | 5300        | 1.41    | 1.44      | 0.64    | 5.95             | 6.11       | Pass      |  |
| 64    | 5320        | 1.53    | 1.35      | 0.42    | 5.90             | 6.11       | Pass      |  |
| 100   | 5500        | 1.26    | 1.37      | 0.35    | 5.79             | 6.11       | Pass      |  |
| 116   | 5580        | 1.45    | 1.29      | 0.62    | 5.91             | 6.11       | Pass      |  |
| 140   | 5700        | 1.26    | 0.92      | 0.30    | 5.62             | 6.11       | Pass      |  |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20 + 10^{G2/20 + ... + 10^{GN/20}})^2/3] = 10.89 \text{ dBi} > 6 \text{dBi}$ , so the power density limit shall be reduced to 11-(10.89-6) = 6.11 dBm.

# 802.11ac (VHT40)\_3TX

|       | Chan. Freq. PSD (dBm) |      |      | Total<br>Power   | Max. Limit | Pass/Fail |      |
|-------|-----------------------|------|------|------------------|------------|-----------|------|
| Chan. | (MHz)                 |      |      | Density<br>(dBm) | (dBm)      |           |      |
| 54    | 5270                  | 1.47 | 1.13 | 0.56             | 5.84       | 6.11      | Pass |
| 62    | 5310                  | 0.91 | 1.19 | 1.03             | 5.82       | 6.11      | Pass |
| 102   | 5510                  | 1.06 | 1.23 | 0.60             | 5.74       | 6.11      | Pass |
| 110   | 5550                  | 0.82 | 0.78 | 0.72             | 5.54       | 6.11      | Pass |
| 134   | 5670                  | 0.82 | 0.65 | 0.42             | 5.40       | 6.11      | Pass |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20 + 10^{G2/20 + ... + 10^{GN/20}})^2/3] = 10.89 \, dBi > 6dBi$ , so the power density limit shall be reduced to  $11-(10.89-6) = 6.11 \, dBm$ .

# 802.11ac (VHT80)\_3TX

|       | Chan. Freq. |         | PSD (dBm) | Total<br>Power | Max. Limit       |       |           |
|-------|-------------|---------|-----------|----------------|------------------|-------|-----------|
| Chan. | (MHz)       | Chain 0 | Chain 1   | Chain 2        | Density<br>(dBm) | (dBm) | Pass/Fail |
| 58    | 5290        | -5.61   | -5.63     | -5.71          | -0.88            | 6.11  | Pass      |
| 106   | 5530        | -6.15   | -5.91     | -5.80          | -1.18            | 6.11  | Pass      |

**NOTE:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $10 \log[(10^{G1/20 + 10^{G2/20 + ... + 10^{GN/20}})^2/3] = 10.89 \, dBi > 6dBi$ , so the power density limit shall be reduced to  $11-(10.89-6) = 6.11 \, dBm$ .

Report No.: RF141227C17A Page No. 110 / 116 Report Format Version: 6.1.1









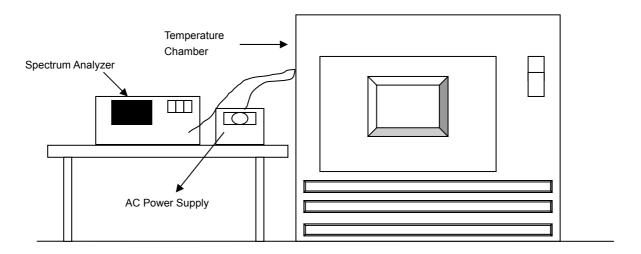


# 4.5 Frequency Stability Measurement

# 4.5.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

#### 4.5.2 Test Setup



#### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedure

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

#### 4.5.5 Deviation from Test Standard

No deviation.

# 4.5.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

Report No.: RF141227C17A Page No. 113 / 116 Report Format Version: 6.1.1



# 4.5.7 Test Results

|                  | FREQUEMCY STABILITY VERSUS TEMP. |                                |                           |                                |                           |                                |                           |                                |                           |
|------------------|----------------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|
|                  |                                  |                                | OF                        | PERATING F                     | REQUENCY                  | 5320MHz                        |                           |                                |                           |
|                  | POWER                            | 0 MIN                          | NUTE                      | 2 MIN                          | NUTE                      | 5 MIN                          | NUTE                      | 10 MI                          | NUTE                      |
| <b>TEMP.</b> (℃) | SUPPLY<br>(Vac)                  | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) |
| 50               | 120                              | 5319.9923                      | -0.00014                  | 5319.9941                      | -0.00011                  | 5319.992                       | -0.00015                  | 5319.9922                      | -0.00015                  |
| 40               | 120                              | 5320.0000                      | 0.00000                   | 5319.9984                      | -0.00003                  | 5319.9983                      | -0.00003                  | 5320.0028                      | 0.00005                   |
| 30               | 120                              | 5319.9785                      | -0.00040                  | 5319.9771                      | -0.00043                  | 5319.9761                      | -0.00045                  | 5319.9796                      | -0.00038                  |
| 20               | 120                              | 5320.0268                      | 0.00050                   | 5320.0252                      | 0.00047                   | 5320.0257                      | 0.00048                   | 5320.0233                      | 0.00044                   |
| 10               | 120                              | 5320.0163                      | 0.00031                   | 5320.014                       | 0.00026                   | 5320.0164                      | 0.00031                   | 5320.0157                      | 0.00030                   |
| 0                | 120                              | 5319.9954                      | -0.00009                  | 5319.995                       | -0.00009                  | 5319.9934                      | -0.00012                  | 5319.9908                      | -0.00017                  |

|                  | FREQUEMCY STABILITY VERSUS VOLTAGE |                                |                           |                                |                           |                                |                           |                                |                           |
|------------------|------------------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|
|                  | OPERATING FREQUENCY: 5320MHz       |                                |                           |                                |                           |                                |                           |                                |                           |
|                  | POWER                              | 0 MIN                          | NUTE                      | 2 MIN                          | NUTE                      | 5 MIN                          | NUTE                      | 10 MINUTE                      |                           |
| <b>TEMP.</b> (℃) | SUPPLY<br>(Vac)                    | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) | Measured<br>Frequency<br>(MHz) | Frequency<br>Drift<br>(%) |
|                  | 138                                | 5320.0271                      | 0.00051                   | 5320.0247                      | 0.00046                   | 5320.0266                      | 0.00050                   | 5320.0242                      | 0.00045                   |
| 20               | 120                                | 5320.0268                      | 0.00050                   | 5320.0252                      | 0.00047                   | 5320.0257                      | 0.00048                   | 5320.0233                      | 0.00044                   |
|                  | 102                                | 5320.0258                      | 0.00048                   | 5320.0261                      | 0.00049                   | 5320.0251                      | 0.00047                   | 5320.0238                      | 0.00045                   |

Report No.: RF141227C17A Page No. 114 / 116 Report Format Version: 6.1.1



| 5 Pictures of Test Arrangements                       |
|---|
| Please refer to the attached file (Test Setup Photo). |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |

Report No.: RF141227C17A Page No. 115 / 116 Reference No.: 141227C17, 141227C19



# Appendix - Information on 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 accredited and approved according to ISO/IEC 17025.

Hsin Chu EMC/RF Lab/Telecom Lab

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab

Tel: 886-2-26052180 Tel: 886-3-5935343 Fax: 886-2-26051924 Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety

Tel: 886-3-3183232 Fax: 886-3-3270892

Email: <a href="mailto:service.adt@tw.bureauveritas.com">service.adt@tw.bureauveritas.com</a>
Web Site: <a href="mailto:www.bureauveritas-adt.com">www.bureauveritas-adt.com</a>

The address and road map of all our labs can be found in our web site also.

--- END ---

Report No.: RF141227C17A Page No. 116 / 116 Report Format Version: 6.1.1