

## FCC Test Report (WLAN)

**Report No.:** RF161219D15-1

**FCC ID:** RFH-TUS3400-1

**Test Model:** TUS3400

**Received Date:** Dec. 19, 2016

**Test Date:** Dec. 27, 2016 ~ Jan. 6, 2017

**Issued Date:** Jan. 16, 2017

**Applicant:** IEI Integration Corp.

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

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## Table of Contents

<b>Release Control Record</b> .....	<b>4</b>
<b>1 Certificate of Conformity</b> .....	<b>5</b>
<b>2 Summary of Test Results</b> .....	<b>6</b>
2.1 Measurement Uncertainty .....	6
2.2 Modification Record .....	6
<b>3 General Information</b> .....	<b>7</b>
3.1 General Description of EUT .....	7
3.2 Description of Test Modes .....	8
3.2.1 Test Mode Applicability and Tested Channel Detail .....	10
3.3 Duty Cycle of Test Signal .....	12
3.4 Description of Support Units .....	13
3.4.1 Configuration of System under Test .....	13
3.5 General Description of Applied Standard .....	13
<b>4 Test Types and Results</b> .....	<b>14</b>
4.1 Radiated Emission and Bandedge Measurement.....	14
4.1.1 Limits of Radiated Emission and Bandedge Measurement .....	14
4.1.2 Test Instruments .....	15
4.1.3 Test Procedure .....	16
4.1.4 Deviation from Test Standard .....	17
4.1.5 Test Setup.....	17
4.1.6 EUT Operating Condition .....	18
4.1.7 Test Results .....	19
4.2 Conducted Emission Measurement .....	55
4.2.1 Limits of Conducted Emission Measurement .....	55
4.2.2 Test Instruments .....	55
4.2.3 Test Procedure .....	56
4.2.4 Deviation from Test Standard .....	56
4.2.5 Test Setup.....	56
4.2.6 EUT Operating Condition .....	56
4.2.7 Test Results .....	57
4.3 Transmit Power Measurement .....	59
4.3.1 Limits of Transmit Power Measurement .....	59
4.3.2 Test Setup.....	59
4.3.3 Test Instruments .....	59
4.3.4 Test Procedure .....	60
4.3.5 Deviation from Test Standard .....	60
4.3.6 EUT Operating Condition .....	60
4.3.7 Test Result.....	61
4.4 Occupied Bandwidth Measurement .....	66
4.4.1 Test Setup.....	66
4.4.2 Test Instruments .....	66
4.4.3 Test Procedure .....	66
4.4.4 Test Results .....	67
4.5 Peak Power Spectral Density Measurement.....	69
4.5.1 Limits of Peak Power Spectral Density Measurement .....	69
4.5.2 Test Setup.....	69
4.5.3 Test Instruments .....	69
4.5.4 Test Procedure .....	69
4.5.5 Deviation from Test Standard .....	69
4.5.6 EUT Operating Condition .....	69
4.5.7 Test Results .....	70
4.6 Frequency Stability Measurement.....	74

4.6.1	Limits of Frequency Stability Measurement.....	74
4.6.2	Test Setup.....	74
4.6.3	Test Instruments .....	74
4.6.4	Test Procedure .....	74
4.6.5	Deviation from Test Standard .....	74
4.6.6	EUT Operating Condition .....	74
4.6.7	Test Results .....	75
4.7	6dB Bandwidth Measurement.....	76
4.7.1	Limits of 6dB Bandwidth Measurement.....	76
4.7.2	Test Setup.....	76
4.7.3	Test Instruments .....	76
4.7.4	Test Procedure .....	76
4.7.5	Deviation from Test Standard .....	76
4.7.6	EUT Operating Condition .....	76
4.7.7	Test Results .....	77
<b>5</b>	<b>Pictures of Test Arrangements.....</b>	<b>79</b>
	<b>Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band).....</b>	<b>80</b>
	<b>Appendix – Information on the Testing Laboratories .....</b>	<b>83</b>

### Release Control Record

Issue No.	Description	Date Issued
RF161219D15-1	Original release.	Jan. 16, 2017

## 1 Certificate of Conformity

**Product:** Portable Computer  
**Brand:** Terason  
**Test Model:** TUS3400  
**Sample Status:** Engineering sample  
**Applicant:** IEI Integration Corp.  
**Test Date:** Dec. 27, 2016 ~ Jan. 6, 2017  
**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)  
ANSI C63.10: 2013

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

**Prepared by :** Annie Chang , **Date:** Jan. 16, 2017  
Annie Chang / Senior Specialist

**Approved by :** Rex Lai , **Date:** Jan. 16, 2017  
Rex Lai / Assistant Manager

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -11.64dB at 0.38438MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -2.8dB at 5150.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is U.FL not a standard connector.

\*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.

### 2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) ( $\pm$ )
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.77 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	2.38 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.54 dB
	6GHz ~ 18GHz	4.77 dB
	18GHz ~ 40GHz	5.48 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	Portable Computer
Brand	Terason
Test Model	TUS3400
Status of EUT	Engineering sample
Power Supply Rating	19Vdc from Adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz & 5500 ~ 5700MHz, 5745 ~ 5825MHz
Number of Channel	<b>5180 ~ 5240MHz:</b> 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) <b>5260 ~ 5320MHz:</b> 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) <b>5500 ~ 5700MHz:</b> 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz)) <b>5745 ~ 5825MHz:</b> 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
Output Power	28.291mW for 5180 ~ 5240MHz 27.631mW for 5260 ~ 5320MHz 28.071mW for 5500 ~ 5700MHz 28.484mW for 5745 ~ 5825MHz
Antenna Type	PIFA antenna with 2dBi gain
Antenna Connector	U.FL connector
Accessory Device	Adapter
Data Cable Supplied	N/A

Note:

- The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	TX Function
802.11a	1TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX

- The EUT uses following adapter.

Brand	PROTEK POWER
Model	PMP120-13-2-N-B20
Input Power	100-240, 1.4-0.6A, 47-63Hz
Output Power	19V/6.32A (120W MAX)
Power Line	Non-shielded AC 3-Pin cable (1.8m) Non-shielded DC cable (1.2m) with one core

- 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 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

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

2 channels are provided for 802.11n (40MHz):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

#### FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

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

2 channels are provided for 802.11n (40MHz):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

#### FOR 5500 ~ 5700MHz

8 channels are provided for 802.11a, 802.11n (20MHz):

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 (40MHz):

Channel	Frequency	Channel	Frequency
102	5510 MHz	134	5670 MHz
110	5550 MHz		



**FOR 5745 ~ 5825MHz:**

5 channels are provided for 802.11a, 802.11n (20MHz):

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

2 channels are provided for 802.11n (40MHz):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	Powered by adapter

Where **RE≥1G**: Radiated Emission above 1GHz      **RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission      **APCM**: Antenna Port Conducted Measurement

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

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

EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
-	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5

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

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

EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11n (20MHz)	5180-5240	36 to 48	149	OFDM	BPSK	6.5
-	802.11n (20MHz)	5260-5320	52 to 64		OFDM	BPSK	6.5
-	802.11n (20MHz)	5500-5700	100 to 140		OFDM	BPSK	6.5
-	802.11n (20MHz)	5745-5825	149 to 165		OFDM	BPSK	6.5

### Power Line Conducted Emission Test:

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

EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11n (20MHz)	5180-5240	36 to 48	149	OFDM	BPSK	6.5
	802.11n (20MHz)	5260-5320	52 to 64		OFDM	BPSK	6.5
-	802.11n (20MHz)	5500-5700	100 to 140		OFDM	BPSK	6.5
-	802.11n (20MHz)	5745-5825	149 to 165		OFDM	BPSK	6.5

### 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 Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
-	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5

### Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE $\geq$ 1G	18deg. C, 76%RH	120Vac, 60Hz	Aaron You
RE<1G	18deg. C, 76%RH	120Vac, 60Hz	Aaron You
PLC	22deg. C, 70%RH	120Vac, 60Hz	Aaron You
APCM	25deg. C, 76%RH	120Vac, 60Hz	Saxon Lee

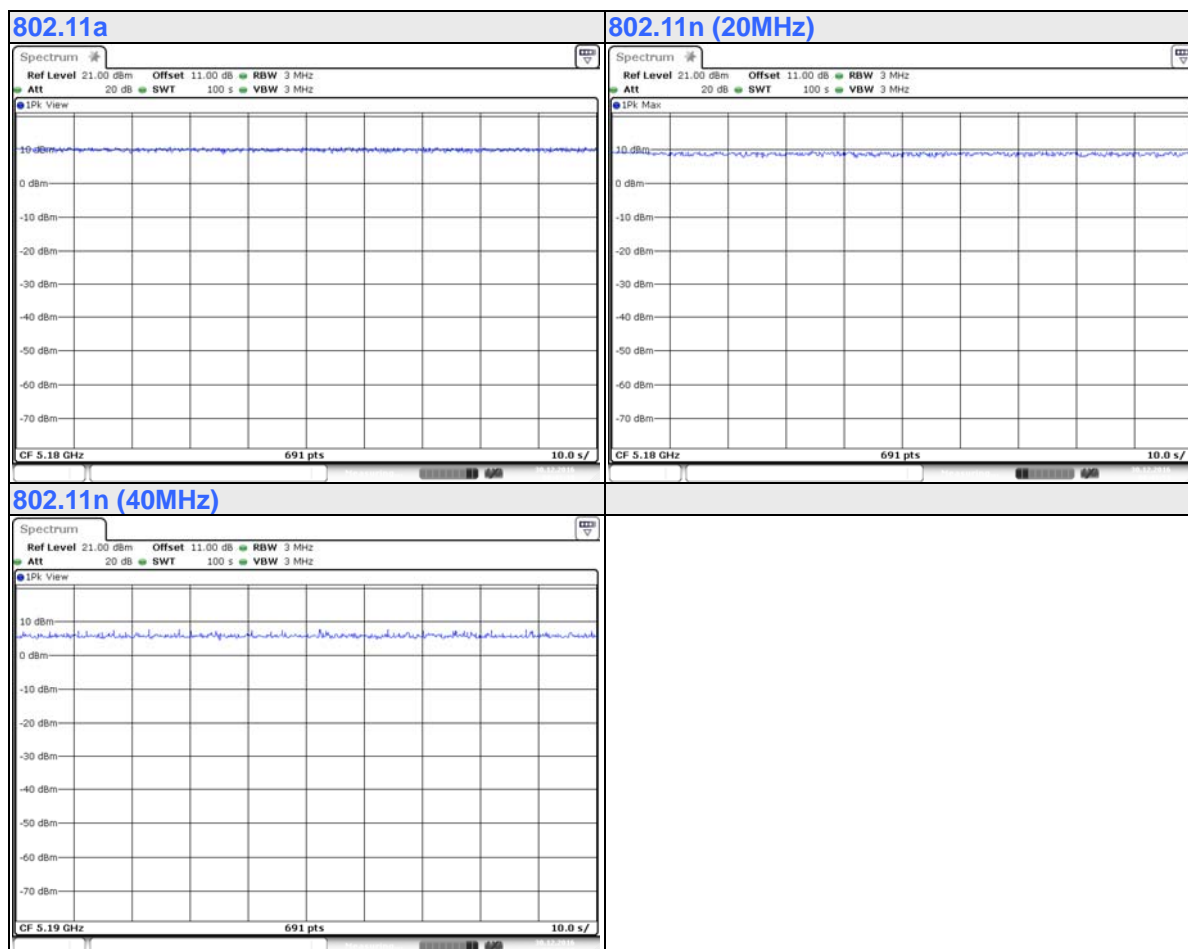
### 3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %, duty factor is not required.

**802.11a:** Duty cycle of test signal is 100 %.

**802.11n (20MHz):** Duty cycle of test signal is 100 %.

**802.11n (40MHz):** Duty cycle = Duty cycle of test signal is 100 %.



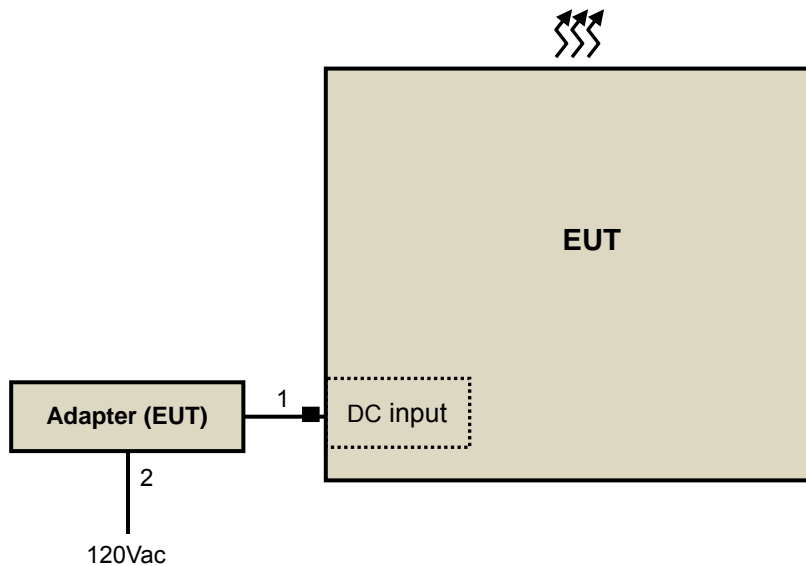
### 3.4 Description of Support Units

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	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.5	N	1	Supplied by client
2.	AC power cord	1	1.8	N	0	Supplied by client

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

#### 3.4.1 Configuration of System under Test



### 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)**  
**KDB 789033 D02 General UNII Test Procedure New Rules v01r03**  
**KDB 662911 D01 Multiple Transmitter Output v02r01**  
**ANSI C63.10-2013**

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

**NOTE:** The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

#### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

#### NOTE:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 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 Procedure New Rules v01r03		Field Strength at 3m	
		PK:74 (dBuV/m)	AV:54 (dBuV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBuV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	<input checked="" type="checkbox"/> 15.407(b)(4)(i)	PK:-27 (dBm/MHz) <sup>*1</sup> PK:10 (dBm/MHz) <sup>*2</sup> PK:15.6 (dBm/MHz) <sup>*3</sup> PK:27 (dBm/MHz) <sup>*4</sup>	PK: 68.2(dBuV/m) <sup>*1</sup> PK:105.2 (dBuV/m) <sup>*2</sup> PK: 110.8(dBuV/m) <sup>*3</sup> PK:122.2 (dBuV/m) <sup>*4</sup>
	<input type="checkbox"/> 15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
<sup>*1</sup> beyond 75 MHz or more above of the band edge. <sup>*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.		<sup>*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. <sup>*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

#### Note:

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

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

#### 4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 26, 2016	Feb. 25, 2017
HP Preamplifier	8449B	3008A01201	Feb. 26, 2016	Feb. 25, 2017
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Mar. 01, 2016	Feb. 28, 2017
Agilent TEST RECEIVER	N9038A	MY51210129	Feb. 02, 2016	Feb. 01, 2017
Schwarzbeck Antenna	VULB 9168	139	Dec. 13, 2016	Dec. 12, 2017
Schwarzbeck Antenna	VHBA 9123	480	May 29, 2015	May 28, 2017
Schwarzbeck Horn Antenna	BBHA-9170	212	Jan. 08, 2016	Jan. 07, 2017
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Jan. 21, 2016	Jan. 20, 2017
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF104	CABLE-CH6	Aug. 15, 2016	Aug. 14, 2017
SUHNER RF cable With 3dB PAD	SF102	Cable-CH8-3.6m	Aug. 15, 2016	Aug. 14, 2017
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	May 25, 2016	May 24, 2017
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 26, 2016	Jul. 25, 2017
Loop Antenna EMCI	LPA600	270	Aug. 20, 2015	Aug. 19, 2017
EMCO Horn Antenna	3115	00028257	Jan. 19, 2016	Jan. 18, 2017
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 30, 2016	Sep. 29, 2017
Anritsu Power Sensor	MA2411B	0738404	Apr. 28, 2016	Apr. 27, 2017
Anritsu Power Meter	ML2495A	0842014	Apr. 28, 2016	Apr. 27, 2017
Temperature & Humidity Chamber	MHU-225AU	920409	May 25, 2016	May 24, 2017
DIGITAL POWER METER IDRC	CP-240	240515	Sep. 9, 2016	Sep. 8, 2017
AC Power Source ExTech	CFW-105	E000603	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

#### 4.1.3 Test Procedure

##### **For Radiated emission below 30MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

##### **NOTE:**

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

##### **For Radiated emission above 30MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average 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  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

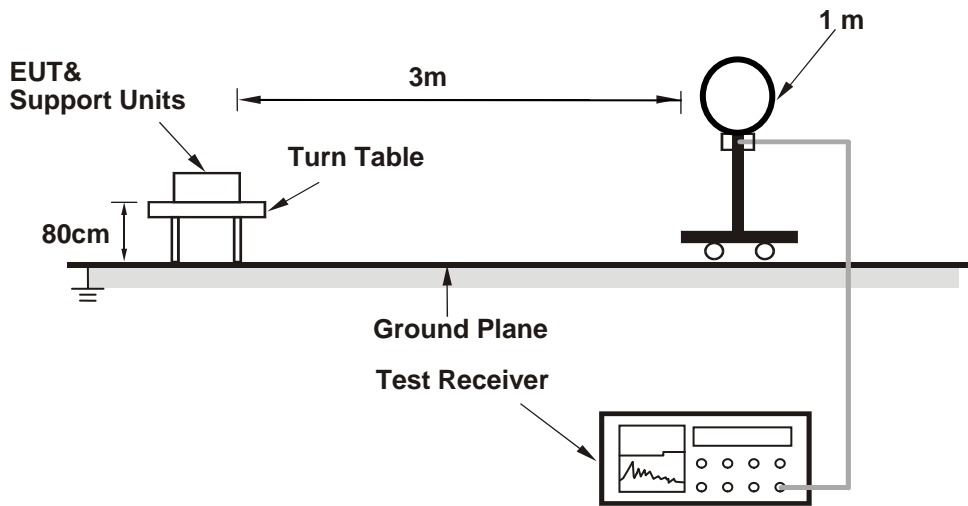


4.1.4 Deviation from Test Standard

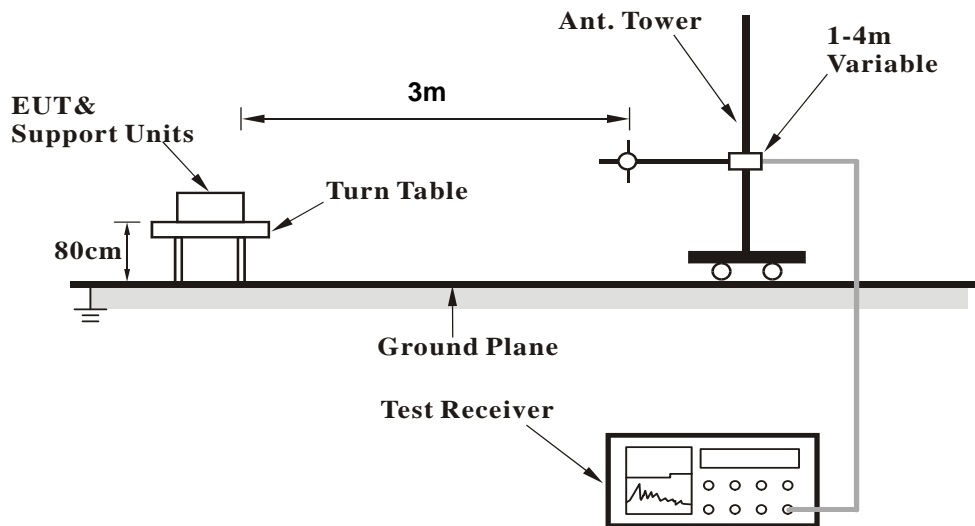
No deviation.

4.1.5 Test Setup

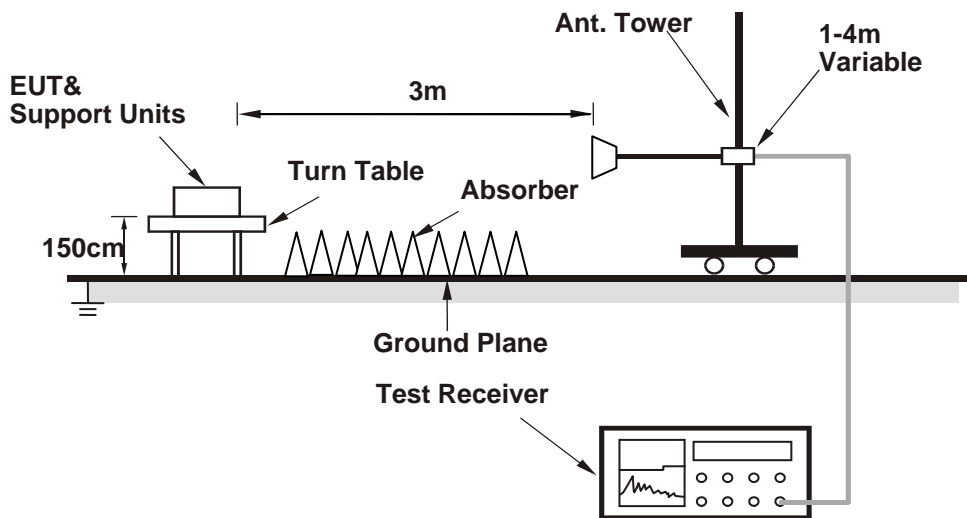
**For Radiated emission below 30MHz**



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



**For Radiated emission above 1GHz**



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

**4.1.6 EUT Operating Condition**

- a. Placed the EUT on the testing table.
- b. Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.8 PK	74.0	-11.2	3.13 H	181	52.8	10.0
2	5150.00	48.6 AV	54.0	-5.4	3.13 H	181	38.6	10.0
3	*5180.00	104.2 PK			3.13 H	181	94.1	10.2
4	*5180.00	93.0 AV			3.13 H	181	82.9	10.2
5	#10360.00	55.9 PK	74.0	-18.1	1.98 H	248	39.1	16.8
6	#10360.00	41.8 AV	54.0	-12.2	1.98 H	248	25.0	16.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.2 PK	74.0	-11.8	3.98 V	149	52.2	10.0
2	5150.00	48.4 AV	54.0	-5.6	3.98 V	149	38.5	10.0
3	*5180.00	102.0 PK			3.98 V	149	91.8	10.2
4	*5180.00	90.3 AV			3.98 V	149	80.2	10.2
5	#10360.00	56.7 PK	74.0	-17.3	1.62 V	269	39.9	16.8
6	#10360.00	42.2 AV	54.0	-11.8	1.62 V	269	25.4	16.8

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	103.9 PK			3.14 H	192	93.6	10.3
2	*5200.00	92.4 AV			3.14 H	192	82.2	10.3
3	#10400.00	57.0 PK	74.0	-17.0	1.74 H	154	40.2	16.9
4	#10400.00	43.7 AV	54.0	-10.3	1.74 H	154	26.9	16.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.7 PK			3.87 V	0	91.5	10.3
2	*5200.00	90.8 AV			3.87 V	0	80.6	10.3
3	#10400.00	56.7 PK	74.0	-17.3	2.31 V	169	39.9	16.9
4	#10400.00	42.3 AV	54.0	-11.7	2.31 V	169	25.5	16.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	105.7 PK			3.16 H	183	95.3	10.4
2	*5240.00	94.3 AV			3.16 H	183	84.0	10.4
3	5350.00	61.6 PK	74.0	-12.4	3.16 H	183	50.9	10.7
4	5350.00	48.0 AV	54.0	-6.0	3.16 H	183	37.3	10.7
5	#10480.00	57.6 PK	74.0	-16.4	1.88 H	251	40.5	17.1
6	#10480.00	43.5 AV	54.0	-10.5	1.88 H	251	26.4	17.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.9 PK			3.69 V	184	92.6	10.4
2	*5240.00	91.9 AV			3.69 V	184	81.6	10.4
3	5350.00	60.5 PK	74.0	-13.5	3.69 V	184	49.9	10.7
4	5350.00	47.5 AV	54.0	-6.5	3.69 V	184	36.9	10.7
5	#10480.00	56.4 PK	74.0	-17.6	2.02 V	205	39.3	17.1
6	#10480.00	42.7 AV	54.0	-11.3	2.02 V	205	25.6	17.1

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.9 PK	74.0	-12.1	4.00 H	191	51.9	10.0
2	5150.00	48.2 AV	54.0	-5.8	4.00 H	191	38.2	10.0
3	*5260.00	106.5 PK			4.00 H	191	96.1	10.4
4	*5260.00	94.6 AV			4.00 H	191	84.2	10.4
5	#10520.00	58.2 PK	74.0	-15.8	1.36 H	326	40.9	17.3
6	#10520.00	44.2 AV	54.0	-9.8	1.36 H	326	26.9	17.3

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.0 PK	74.0	-13.0	2.71 V	222	51.0	10.0
2	5150.00	47.9 AV	54.0	-6.1	2.71 V	222	37.9	10.0
3	*5260.00	102.3 PK			2.71 V	222	91.9	10.4
4	*5260.00	90.8 AV			2.71 V	222	80.4	10.4
5	#10520.00	57.0 PK	74.0	-17.0	1.63 V	241	39.7	17.3
6	#10520.00	43.1 AV	54.0	-10.9	1.63 V	241	25.8	17.3

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	103.5 PK			2.95 H	173	93.0	10.5
2	*5300.00	92.4 AV			2.95 H	173	81.9	10.5
3	10600.00	58.6 PK	74.0	-15.4	1.58 H	233	40.7	17.9
4	10600.00	44.3 AV	54.0	-9.7	1.58 H	233	26.4	17.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	101.2 PK			2.63 V	186	90.7	10.5
2	*5300.00	90.4 AV			2.63 V	186	79.9	10.5
3	10600.00	57.6 PK	74.0	-16.4	2.05 V	79	39.7	17.9
4	10600.00	43.5 AV	54.0	-10.5	2.05 V	79	25.6	17.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	103.7 PK			2.89 H	192	93.1	10.6
2	*5320.00	92.0 AV			2.89 H	192	81.5	10.6
3	5350.00	62.0 PK	74.0	-12.0	2.91 H	192	51.4	10.7
4	5350.00	48.5 AV	54.0	-5.5	2.91 H	192	37.9	10.7
5	11640.00	60.2 PK	74.0	-13.8	1.64 H	184	40.7	19.5
6	11640.00	45.9 AV	54.0	-8.1	1.64 H	184	26.4	19.5

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	102.0 PK			2.39 V	234	91.5	10.6
2	*5320.00	90.5 AV			2.39 V	234	79.9	10.6
3	5350.00	60.8 PK	74.0	-13.2	2.39 V	234	50.2	10.7
4	5350.00	47.8 AV	54.0	-6.2	2.39 V	234	37.2	10.7
5	10640.00	57.6 PK	74.0	-16.4	2.05 V	145	39.7	17.9
6	10640.00	43.3 AV	54.0	-10.7	2.05 V	145	25.4	17.9

**REMARKS:**

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



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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.3 PK	74.0	-11.7	4.00 H	176	51.0	11.3
2	5460.00	48.8 AV	54.0	-5.2	4.00 H	176	37.5	11.3
3	#5470.00	62.9 PK	78.2	-15.3	4.00 H	176	51.5	11.4
4	*5500.00	102.7 PK			4.00 H	176	91.0	11.6
5	*5500.00	89.8 AV			4.00 H	176	78.2	11.6
6	11000.00	58.1 PK	74.0	-15.9	1.84 H	178	40.2	17.9
7	11000.00	44.3 AV	54.0	-9.7	1.84 H	178	26.4	17.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.8 PK	74.0	-12.2	2.28 V	192	50.5	11.3
2	5460.00	48.2 AV	54.0	-5.8	2.28 V	192	36.9	11.3
3	#5470.00	61.9 PK	78.2	-16.3	2.28 V	192	50.5	11.4
4	*5500.00	101.3 PK			2.28 V	192	89.7	11.6
5	*5500.00	89.5 AV			2.28 V	192	77.9	11.6
6	11000.00	57.6 PK	74.0	-16.4	2.63 V	202	39.7	17.9
7	11000.00	43.1 AV	54.0	-10.9	2.63 V	202	25.1	17.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	104.3 PK			3.99 H	188	92.5	11.8
2	*5580.00	92.1 AV			3.99 H	188	80.3	11.8
3	11160.00	59.2 PK	74.0	-14.8	1.96 H	222	40.5	18.7
4	11160.00	45.1 AV	54.0	-8.9	1.96 H	222	26.3	18.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	102.5 PK			2.41 V	188	90.7	11.8
2	*5580.00	90.7 AV			2.41 V	188	78.9	11.8
3	11160.00	58.1 PK	74.0	-15.9	2.07 V	145	39.4	18.7
4	11160.00	44.6 AV	54.0	-9.4	2.07 V	145	25.9	18.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 132	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	102.2 PK			3.97 H	189	90.5	11.7
2	*5660.00	90.9 AV			3.97 H	189	79.1	11.7
3	11320.00	59.2 PK	74.0	-14.8	1.58 H	194	40.2	19.1
4	11320.00	45.5 AV	54.0	-8.5	1.58 H	194	26.4	19.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	100.7 PK			3.26 V	177	89.0	11.7
2	*5660.00	88.6 AV			3.26 V	177	76.9	11.7
3	11320.00	58.2 PK	74.0	-15.8	1.86 V	241	39.2	19.1
4	11320.00	44.9 AV	54.0	-9.1	1.86 V	241	25.9	19.1

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	101.9 QP			3.85 H	185	90.3	11.7
2	*5700.00	90.9 QP			3.85 H	185	79.3	11.7
3	5725.00	63.7 QP	78.2	-14.5	3.85 H	185	52.2	11.6
4	11400.00	59.6 QP	74.0	-14.4	1.64 H	238	40.7	18.9
5	11400.00	45.8 QP	54.0	-8.3	1.64 H	238	26.8	18.9

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.6 QP			2.98 V	176	88.9	11.7
2	*5700.00	89.6 QP			2.98 V	176	77.9	11.7
3	5725.00	63.0 QP	78.2	-15.2	2.98 V	176	51.5	11.6
4	11400.00	58.5 QP	74.0	-15.5	1.68 V	234	39.6	18.9
5	11400.00	44.5 QP	54.0	-9.5	1.68 V	234	25.5	18.9

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5619.88	62.4 PK	68.2	-5.8	3.96 H	192	50.6	11.8
2	*5745.00	102.3 PK			3.96 H	192	90.8	11.5
3	*5745.00	92.4 AV			3.96 H	192	80.9	11.5
4	#6011.82	61.0 PK	68.2	-7.2	3.96 H	192	49.3	11.6
5	11490.00	59.7 PK	74.0	-14.3	1.68 H	209	40.7	19.0
6	11490.00	46.0 AV	54.0	-8.0	1.68 H	209	27.0	19.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5568.69	62.1 PK	68.2	-6.1	3.42 V	194	50.3	11.8
2	*5745.00	100.9 PK			3.42 V	194	89.5	11.5
3	*5745.00	91.4 AV			3.42 V	194	79.9	11.5
4	#5940.84	60.8 PK	68.2	-7.4	3.42 V	194	49.4	11.4
5	11490.00	58.7 PK	74.0	-15.3	1.52 V	125	39.6	19.0
6	11490.00	44.4 AV	54.0	-9.6	1.52 V	125	25.3	19.0

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.76	62.8 PK	68.2	-5.4	3.95 H	179	51.0	11.8
2	*5785.00	102.9 PK			3.95 H	179	91.6	11.3
3	*5785.00	92.3 AV			3.95 H	179	81.0	11.3
4	#5962.82	62.9 PK	68.2	35.4	3.95 H	179	51.4	11.4
5	11570.00	60.3 PK	74.0	-13.7	2.11 H	190	40.8	19.5
6	11570.00	45.8 AV	54.0	-8.2	2.11 H	190	26.4	19.5

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.50	62.6 PK	68.2	-5.6	2.89 V	188	50.8	11.8
2	*5785.00	101.1 PK			2.89 V	188	89.8	11.3
3	*5785.00	91.0 AV			2.89 V	188	79.7	11.3
4	#5984.51	61.1 PK	68.2	-7.1	2.89 V	188	49.6	11.5
5	11570.00	58.8 PK	74.0	-15.2	1.28 V	314	39.3	19.5
6	11570.00	45.1 AV	54.0	-8.9	1.28 V	314	25.6	19.5

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.79	61.9 PK	68.2	-6.3	3.88 H	183	50.1	11.8
2	*5825.00	102.3 PK			3.88 H	183	91.1	11.2
3	*5825.00	91.5 AV			3.88 H	183	80.3	11.2
4	#5945.59	61.6 PK	68.2	-6.6	3.88 H	183	50.2	11.4
5	11650.00	60.3 PK	74.0	-13.7	2.30 H	130	40.9	19.5
6	11650.00	46.1 AV	54.0	-7.9	2.30 H	130	26.7	19.5

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5580.10	61.8 PK	68.2	-6.4	3.06 V	192	50.0	11.8
2	*5825.00	99.9 PK			3.06 V	192	88.7	11.2
3	*5825.00	89.9 AV			3.06 V	192	78.7	11.2
4	#5932.54	61.3 PK	68.2	-6.9	3.06 V	192	49.9	11.3
5	11650.00	58.8 PK	74.0	-15.2	1.37 V	194	39.3	19.5
6	11650.00	44.6 AV	54.0	-9.4	1.37 V	194	25.1	19.5

**REMARKS:**

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

**802.11n (20MHz)**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.5 PK	74.0	-11.5	3.11 H	183	52.5	10.0
2	5150.00	48.8 AV	54.0	-5.2	3.11 H	183	38.8	10.0
3	*5180.00	102.2 PK			3.11 H	0	92.0	10.2
4	*5180.00	91.6 AV			3.11 H	0	81.5	10.2
5	#10360.00	56.9 PK	74.0	-17.1	2.16 H	320	40.2	16.8
6	#10360.00	43.2 AV	54.0	-10.8	2.16 H	320	26.4	16.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.4 PK	74.0	-12.6	3.41 V	196	51.4	10.0
2	5150.00	48.0 AV	54.0	-6.0	3.41 V	196	38.0	10.0
3	*5180.00	100.7 PK			3.41 V	196	90.6	10.2
4	*5180.00	90.0 AV			3.41 V	196	79.9	10.2
5	#10360.00	56.4 PK	74.0	-17.6	1.77 V	231	39.6	16.8
6	#10360.00	42.3 AV	54.0	-11.7	1.77 V	231	25.5	16.8

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	102.7 PK			3.23 H	182	92.5	10.3
2	*5200.00	91.9 AV			3.23 H	182	81.6	10.3
3	#10400.00	57.4 PK	74.0	-16.6	1.56 H	251	40.5	16.9
4	#10400.00	43.5 AV	54.0	-10.5	1.56 H	251	26.7	16.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.6 PK			3.63 V	197	90.4	10.3
2	*5200.00	90.1 AV			3.63 V	197	79.9	10.3
3	#10400.00	56.7 PK	74.0	-17.3	2.18 V	245	39.9	16.9
4	#10400.00	41.9 AV	54.0	-12.1	2.18 V	245	25.0	16.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.6 PK			3.63 H	182	92.3	10.4
2	*5240.00	92.0 AV			3.63 H	182	81.6	10.4
3	5350.00	61.9 PK	74.0	-12.1	3.63 H	182	51.2	10.7
4	5350.00	48.0 AV	54.0	-6.0	3.63 H	182	37.3	10.7
5	#10480.00	58.0 PK	74.0	-16.0	1.66 H	321	40.9	17.1
6	#10480.00	44.0 AV	54.0	-10.0	1.66 H	321	26.9	17.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	100.4 PK			3.88 V	186	90.0	10.4
2	*5240.00	89.8 AV			3.88 V	186	79.4	10.4
3	5350.00	62.5 PK	74.0	-11.5	3.88 V	186	51.9	10.7
4	5350.00	46.9 AV	54.0	-7.1	3.88 V	186	36.2	10.7
5	#10480.00	56.5 PK	74.0	-17.5	1.88 V	145	39.4	17.1
6	#10480.00	42.7 AV	54.0	-11.3	1.88 V	145	25.6	17.1

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.5 PK	74.0	-11.5	2.85 H	192	52.5	10.0
2	5150.00	48.6 AV	54.0	-5.4	2.85 H	192	38.6	10.0
3	*5260.00	104.0 PK			2.85 H	192	93.6	10.4
4	*5260.00	92.6 AV			2.85 H	192	82.2	10.4
5	#10520.00	58.0 PK	74.0	-16.0	2.18 H	341	40.7	17.3
6	#10520.00	44.0 AV	54.0	-10.0	2.18 H	341	26.7	17.3

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.1 PK	74.0	-12.9	2.31 V	194	51.1	10.0
2	5150.00	47.7 AV	54.0	-6.3	2.31 V	194	37.7	10.0
3	*5260.00	101.6 PK			2.31 V	194	91.1	10.4
4	*5260.00	90.1 AV			2.31 V	194	79.7	10.4
5	#15200.00	61.5 PK	74.0	-12.5	1.23 V	208	39.6	21.9
6	#15200.00	47.1 AV	54.0	-6.9	1.23 V	208	25.3	21.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	101.8 PK			3.98 H	168	91.3	10.5
2	*5300.00	89.8 AV			3.98 H	168	79.3	10.5
3	10600.00	58.2 PK	74.0	-15.8	2.25 H	149	40.3	17.9
4	10600.00	44.3 AV	54.0	-9.7	2.25 H	149	26.4	17.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	100.5 PK			2.61 V	171	90.0	10.5
2	*5300.00	88.4 AV			2.61 V	171	77.9	10.5
3	10600.00	57.3 PK	74.0	-16.7	2.03 V	10	39.3	17.9
4	10600.00	43.1 AV	54.0	-10.9	2.03 V	10	25.2	17.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	102.0 PK			4.00 H	183	91.4	10.6
2	*5320.00	91.3 AV			4.00 H	183	80.7	10.6
3	5350.00	62.1 PK	74.0	-11.9	4.00 H	183	51.5	10.7
4	5350.00	49.3 AV	54.0	-4.7	4.00 H	183	38.6	10.7
5	10640.00	58.2 PK	74.0	-15.8	1.58 H	199	40.3	17.9
6	10640.00	44.8 AV	54.0	-9.2	1.58 H	199	27.0	17.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	100.6 PK			2.52 V	180	90.0	10.6
2	*5320.00	89.9 AV			2.52 V	180	79.3	10.6
3	5350.00	61.0 PK	74.0	-13.0	2.52 V	180	50.3	10.7
4	5350.00	48.0 AV	54.0	-6.0	2.52 V	180	37.4	10.7
5	10640.00	57.6 PK	74.0	-16.4	1.43 V	160	39.7	17.9
6	10640.00	43.0 AV	54.0	-11.0	1.43 V	160	25.1	17.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.1 PK	74.0	-10.9	3.90 H	189	51.8	11.3
2	5460.00	48.4 AV	54.0	-5.6	3.90 H	189	37.1	11.3
3	#5470.00	62.3 PK	78.2	-15.9	3.90 H	189	50.9	11.4
4	*5500.00	103.6 PK			3.90 H	189	92.0	11.6
5	*5500.00	92.3 AV			3.90 H	189	80.7	11.6
6	11000.00	58.3 PK	74.0	-15.7	2.04 H	194	40.4	17.9
7	11000.00	43.8 AV	54.0	-10.2	2.04 H	194	25.8	17.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.7 PK	74.0	-12.3	3.06 V	192	50.4	11.3
2	5460.00	48.2 AV	54.0	-5.8	3.06 V	192	36.9	11.3
3	#5470.00	61.5 PK	78.2	-16.7	3.06 V	192	50.1	11.4
4	*5500.00	101.3 PK			3.06 V	192	89.7	11.6
5	*5500.00	90.6 AV			3.06 V	192	79.0	11.6
6	11100.00	58.2 PK	74.0	-15.8	1.62 V	333	39.5	18.8
7	11100.00	43.9 AV	54.0	-10.1	1.62 V	333	25.1	18.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	104.1 PK			3.91 H	173	92.3	11.8
2	*5580.00	92.2 AV			3.91 H	173	80.4	11.8
3	11160.00	59.1 PK	74.0	-14.9	2.06 H	353	40.4	18.7
4	11160.00	45.5 AV	54.0	-8.5	2.06 H	353	26.8	18.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	102.7 PK			3.32 V	169	90.9	11.8
2	*5580.00	90.7 AV			3.32 V	169	78.9	11.8
3	11160.00	58.1 PK	74.0	-15.9	1.58 V	250	39.4	18.7
4	11160.00	44.5 AV	54.0	-9.5	1.58 V	250	25.8	18.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 132	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	103.0 PK			3.59 H	192	91.3	11.7
2	*5660.00	91.6 AV			3.59 H	192	79.9	11.7
3	11320.00	59.9 PK	74.0	-14.1	1.89 H	145	40.9	19.1
4	11320.00	45.9 AV	54.0	-8.1	1.89 H	145	26.8	19.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	102.5 PK			3.41 V	180	90.8	11.7
2	*5660.00	90.0 AV			3.41 V	180	78.3	11.7
3	11320.00	58.7 PK	74.0	-15.3	2.06 V	294	39.6	19.1
4	11320.00	44.5 AV	54.0	-9.5	2.06 V	294	25.4	19.1

**REMARKS:**

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



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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.1 PK			3.86 H	191	91.5	11.7
2	*5700.00	92.4 AV			3.86 H	191	80.7	11.7
3	#5725.00	63.8 PK	78.2	-14.4	3.86 H	191	52.3	11.6
4	11400.00	59.7 PK	74.0	-14.3	1.68 H	285	40.8	18.9
5	11400.00	45.8 AV	54.0	-8.2	1.68 H	285	26.8	18.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	101.5 PK			3.51 V	168	89.8	11.7
2	*5700.00	90.5 AV			3.51 V	168	78.9	11.7
3	#5725.00	62.6 PK	78.2	-15.6	3.51 V	168	51.0	11.6
4	11400.00	58.2 PK	74.0	-15.8	1.42 V	241	39.3	18.9
5	11400.00	44.1 AV	54.0	-9.9	1.42 V	241	25.2	18.9

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5593.41	62.6 PK	68.2	-5.6	3.99 H	180	50.7	11.8
2	*5745.00	102.5 PK			3.99 H	180	91.1	11.5
3	*5745.00	91.8 AV			3.99 H	180	80.3	11.5
4	#5994.28	60.9 PK	68.2	-7.3	3.99 H	180	49.3	11.5
5	11490.00	59.7 PK	74.0	-14.3	1.23 H	345	40.6	19.0
6	11490.00	45.8 AV	54.0	-8.2	1.23 H	345	26.8	19.0

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5581.11	62.0 PK	68.2	-6.2	3.36 V	174	50.2	11.8
2	*5745.00	100.8 PK			3.36 V	174	89.4	11.5
3	*5745.00	89.8 AV			3.36 V	174	78.3	11.5
4	#6008.26	60.9 PK	68.2	-7.3	3.36 V	174	49.3	11.6
5	11490.00	58.7 PK	74.0	-15.3	2.35 V	181	39.7	19.0
6	11490.00	44.4 AV	54.0	-9.6	2.35 V	181	25.3	19.0

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5588.18	62.2 PK	68.2	-6.0	3.73 H	186	50.4	11.8
2	*5785.00	102.0 PK			3.73 H	186	90.7	11.3
3	*5785.00	91.2 AV			3.73 H	186	79.9	11.3
4	#6007.21	61.2 PK	68.2	-7.0	3.73 H	186	49.7	11.6
5	11570.00	59.7 PK	74.0	-14.3	1.42 H	105	40.3	19.5
6	11570.00	45.5 AV	54.0	-8.5	1.42 H	105	26.1	19.5

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5569.62	62.0 PK	68.2	-6.2	3.01 V	175	50.2	11.8
2	*5785.00	100.0 PK			3.01 V	175	88.7	11.3
3	*5785.00	89.6 AV			3.01 V	175	78.3	11.3
4	#5969.50	61.1 PK	68.2	-7.1	3.01 V	175	49.6	11.5
5	11570.00	58.8 PK	74.0	-15.2	1.06 V	203	39.3	19.5
6	11570.00	44.7 AV	54.0	-9.3	1.06 V	203	25.3	19.5

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5580.04	62.3 PK	68.2	-5.9	3.98 H	186	50.5	11.8
2	*5825.00	101.9 PK			3.98 H	186	90.6	11.2
3	*5825.00	91.1 AV			3.98 H	186	79.9	11.2
4	#6017.34	61.4 PK	68.2	-6.8	3.98 H	186	49.8	11.6
5	11650.00	59.8 PK	74.0	-14.2	2.05 H	175	40.4	19.5
6	11650.00	46.2 AV	54.0	-7.8	2.05 H	175	26.7	19.5

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5563.22	61.7 PK	68.2	-6.5	2.89 V	177	49.9	11.8
2	*5825.00	99.9 PK			2.89 V	177	88.6	11.2
3	*5825.00	89.1 AV			2.89 V	177	77.9	11.2
4	#5952.76	60.3 PK	68.2	-7.9	2.89 V	177	48.9	11.4
5	11650.00	59.3 PK	74.0	-14.7	1.27 V	146	39.8	19.5
6	11650.00	44.7 AV	54.0	-9.3	1.27 V	146	25.3	19.5

**REMARKS:**

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

**802.11n (40MHz)**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.3 PK	74.0	-6.7	3.24 H	170	57.3	10.0
2	<b>5150.00</b>	<b>51.2 AV</b>	<b>54.0</b>	<b>-2.8</b>	<b>3.24 H</b>	<b>170</b>	<b>41.2</b>	<b>10.0</b>
3	*5190.00	99.6 PK			3.24 H	170	89.4	10.2
4	*5190.00	87.8 AV			3.24 H	170	77.6	10.2
5	#10380.00	57.4 PK	74.0	-16.6	1.88 H	215	40.6	16.8
6	#10380.00	43.3 AV	54.0	-10.7	1.88 H	215	26.5	16.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.0 PK	74.0	-10.0	1.74 V	149	54.0	10.0
2	5150.00	49.8 AV	54.0	-4.2	1.74 V	149	39.8	10.0
3	*5190.00	95.4 PK			1.74 V	149	85.2	10.2
4	*5190.00	83.9 AV			1.74 V	149	73.7	10.2
5	#10380.00	56.6 PK	74.0	-17.4	2.65 V	41	39.8	16.8
6	#10380.00	42.6 AV	54.0	-11.4	2.65 V	41	25.8	16.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	99.9 PK			3.96 H	177	89.6	10.3
2	*5230.00	87.9 AV			3.96 H	177	77.5	10.3
3	5350.00	63.1 PK	74.0	-10.9	3.96 H	177	52.5	10.7
4	5350.00	48.5 AV	54.0	-5.5	3.96 H	177	37.9	10.7
5	#10460.00	57.9 PK	74.0	-16.1	1.46 H	239	40.8	17.0
6	#10460.00	44.0 AV	54.0	-10.0	1.46 H	239	27.0	17.0

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	95.8 PK			1.82 V	164	85.5	10.3
2	*5230.00	83.8 AV			1.82 V	164	73.5	10.3
3	5350.00	62.1 PK	74.0	-11.9	1.82 V	164	51.5	10.7
4	5350.00	47.6 AV	54.0	-6.4	1.82 V	164	37.0	10.7
5	#10460.00	56.7 PK	74.0	-17.3	1.92 V	241	39.6	17.0
6	#10460.00	42.3 AV	54.0	-11.7	1.92 V	241	25.3	17.0

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.4 PK	74.0	-11.6	3.97 H	183	52.4	10.0
2	5150.00	48.7 AV	54.0	-5.3	3.97 H	183	38.7	10.0
3	*5270.00	102.3 PK			3.97 H	183	91.8	10.4
4	*5270.00	90.1 AV			3.97 H	183	79.7	10.4
5	#10540.00	58.3 PK	74.0	-15.7	1.88 H	255	40.9	17.5
6	#10540.00	44.3 AV	54.0	-9.7	1.88 H	255	26.9	17.5

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.2 PK	74.0	-12.8	2.63 V	174	51.3	10.0
2	5150.00	47.6 AV	54.0	-6.4	2.63 V	174	37.6	10.0
3	*5270.00	100.4 PK			2.63 V	174	90.0	10.4
4	*5270.00	88.0 AV			2.63 V	174	77.6	10.4
5	#10540.00	56.7 PK	74.0	-17.3	1.05 V	124	39.2	17.5
6	#10540.00	42.8 AV	54.0	-11.2	1.05 V	124	25.3	17.5

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	100.9 PK			4.00 H	183	90.4	10.5
2	*5310.00	89.5 AV			4.00 H	183	79.0	10.5
3	5350.00	63.1 PK	74.0	-10.9	4.00 H	183	52.5	10.7
4	5350.00	49.0 AV	54.0	-5.0	4.00 H	183	38.3	10.7
5	10620.00	58.1 PK	74.0	-15.9	1.27 H	331	40.2	17.9
6	10620.00	44.3 AV	54.0	-9.7	1.27 H	331	26.4	17.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	99.3 PK			2.74 V	191	88.8	10.5
2	*5310.00	87.8 AV			2.74 V	191	77.3	10.5
3	5350.00	62.1 PK	74.0	-11.9	2.74 V	191	51.5	10.7
4	5350.00	47.8 AV	54.0	-6.2	2.74 V	191	37.2	10.7
5	10620.00	57.2 PK	74.0	-16.8	1.23 V	152	39.3	17.9
6	10620.00	43.2 AV	54.0	-10.8	1.23 V	152	25.3	17.9

**REMARKS:**

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



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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.4 PK	74.0	-10.6	3.95 H	189	52.1	11.3
2	5460.00	49.6 AV	54.0	-4.4	3.95 H	189	38.3	11.3
3	#5470.00	66.7 PK	78.2	-11.5	3.95 H	189	55.3	11.4
4	*5510.00	100.8 PK			3.95 H	189	89.1	11.7
5	*5510.00	89.3 AV			3.95 H	189	77.7	11.7
6	11020.00	58.5 PK	74.0	-15.5	1.64 H	150	40.4	18.1
7	11020.00	45.0 AV	54.0	-9.0	1.64 H	150	26.9	18.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.8 PK	74.0	-11.2	3.36 V	198	51.5	11.3
2	5460.00	49.0 AV	54.0	-5.0	3.36 V	198	37.7	11.3
3	#5470.00	64.6 PK	78.2	-13.6	3.36 V	198	53.2	11.4
4	*5510.00	99.8 PK			3.36 V	198	88.1	11.7
5	*5510.00	88.6 AV			3.36 V	198	77.0	11.7
6	11020.00	57.5 PK	74.0	-16.5	2.07 V	214	39.4	18.1
7	11020.00	43.2 AV	54.0	-10.8	2.07 V	214	25.1	18.1

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	101.6 PK			3.79 H	189	89.9	11.7
2	*5550.00	90.8 AV			3.79 H	189	79.0	11.7
3	11100.00	59.3 PK	74.0	-14.7	2.20 H	201	40.5	18.8
4	11100.00	45.6 AV	54.0	-8.4	2.20 H	201	26.8	18.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	100.4 PK			3.06 V	184	88.7	11.7
2	*5550.00	89.8 AV			3.06 V	184	78.1	11.7
3	11100.00	58.4 PK	74.0	-15.6	1.09 V	209	39.6	18.8
4	11100.00	43.9 AV	54.0	-10.1	1.09 V	209	25.1	18.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	101.5 PK			3.95 H	189	89.8	11.7
2	*5670.00	90.4 AV			3.95 H	189	78.7	11.7
3	#5725.00	62.7 PK	78.2	-15.5	3.95 H	189	51.2	11.6
4	11340.00	59.7 PK	74.0	-14.3	1.60 H	144	40.7	19.0
5	11340.00	45.1 AV	54.0	-8.9	1.60 H	144	26.1	19.0

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	99.7 PK			3.36 V	187	88.0	11.7
2	*5670.00	87.6 AV			3.36 V	187	75.9	11.7
3	#5725.00	62.3 PK	78.2	-15.9	3.36 V	187	50.7	11.6
4	11340.00	58.5 PK	74.0	-15.5	1.78 V	219	39.5	19.0
5	11340.00	44.6 AV	54.0	-9.4	1.78 V	219	25.5	19.0

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5589.08	62.3 PK	68.2	-5.9	3.89 H	184	50.5	11.8
2	*5755.00	101.3 PK			3.89 H	184	89.9	11.4
3	*5755.00	90.1 AV			3.89 H	184	78.7	11.4
4	#6016.87	61.4 PK	68.2	-6.8	3.89 H	184	49.8	11.6
5	11510.00	59.3 PK	74.0	-14.7	1.47 H	74	40.2	19.1
6	11510.00	45.6 AV	54.0	-8.4	1.47 H	74	26.5	19.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5572.81	62.6 PK	68.2	-5.6	3.67 V	184	50.8	11.8
2	*5755.00	100.1 PK			3.67 V	184	88.7	11.4
3	*5755.00	89.0 AV			3.67 V	184	77.5	11.4
4	#6019.66	62.2 PK	68.2	-6.0	3.67 V	184	50.5	11.6
5	11510.00	58.5 PK	74.0	-15.5	1.50 V	200	39.4	19.1
6	11510.00	44.7 AV	54.0	-9.3	1.50 V	200	25.6	19.1

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5590.74	61.3 PK	68.2	-6.9	3.67 H	186	49.5	11.8
2	*5795.00	101.2 PK			3.67 H	186	90.0	11.3
3	*5795.00	89.9 AV			3.67 H	186	78.7	11.3
4	#5924.80	61.0 PK	68.4	-7.4	3.67 H	186	49.7	11.3
5	11590.00	60.2 PK	74.0	-13.8	1.54 H	124	40.7	19.6
6	11590.00	45.9 AV	54.0	-8.1	1.54 H	124	26.4	19.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5638.23	62.0 PK	68.2	-6.2	2.96 V	176	50.3	11.8
2	*5795.00	99.9 PK			2.96 V	176	88.7	11.3
3	*5795.00	88.6 AV			2.96 V	176	77.4	11.3
4	#6014.04	61.0 PK	68.2	-7.2	2.96 V	176	49.4	11.6
5	11590.00	58.6 PK	74.0	-15.4	2.06 V	100	39.0	19.6
6	11590.00	44.8 AV	54.0	-9.2	2.06 V	100	25.2	19.6

**REMARKS:**

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

**Below 1GHz Data:**

**802.11n (20MHz)**

<b>CHANNEL</b>	TX Channel 149	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	129.96	29.5 QP	43.5	-14.0	4.00 H	298	39.6	-10.2
2	162.50	33.0 QP	43.5	-10.5	4.00 H	116	42.0	-9.0
3	221.09	34.4 QP	46.0	-11.6	3.38 H	170	46.2	-11.8
4	258.92	35.6 QP	46.0	-10.4	3.18 H	162	44.6	-9.1
5	454.91	34.7 QP	46.0	-11.3	2.65 H	90	39.0	-4.3
6	912.02	37.4 QP	46.0	-8.6	1.00 H	212	33.3	4.1

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	80.54	25.2 QP	40.0	-14.8	1.40 V	253	38.7	-13.5
2	147.71	32.5 QP	43.5	-11.0	1.00 V	180	41.5	-9.1
3	324.35	31.1 QP	46.0	-14.9	1.88 V	219	38.1	-7.0
4	454.91	36.2 QP	46.0	-9.8	1.63 V	0	40.5	-4.3
5	796.64	32.9 QP	46.0	-13.1	2.88 V	242	31.0	2.0
6	999.32	33.7 QP	54.0	-20.3	1.89 V	160	28.4	5.3

**REMARKS:**

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

## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	838251/021	Oct. 24, 2016	Oct. 23, 2017
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ENV216	101195	Apr. 25, 2016	Apr. 24, 2017
LISN With Adapter (for EUT)	AD10	C03Ada-002	Apr. 25, 2016	Apr. 24, 2017
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	Jul. 25, 2016	Jul. 24, 2017
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 04, 2016	May 03, 2017
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C03.01	Sep. 22, 2016	Sep. 21, 2017
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-300	Jan. 20, 2016	Jan. 19, 2017
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-301	Jan. 20, 2016	Jan. 19, 2017
ROHDE & SCHWARZ Artificial Mains Network (For TV EUT)	ESH3-Z5	100220	Nov. 08, 2016	Nov. 07, 2017
LISN With Adapter (for TV EUT)	100220	N/A	Nov. 08, 2016	Nov. 07, 2017

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 Shielded Room No. 3.

3. The VCCI Site Registration No. C-274.

#### 4.2.3 Test Procedure

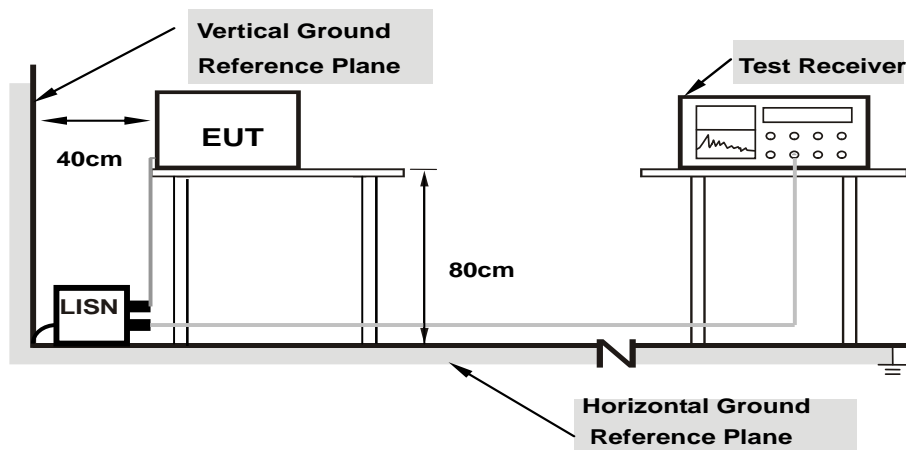
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

#### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



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

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

#### 4.2.6 EUT Operating Condition

Same as 4.1.6.



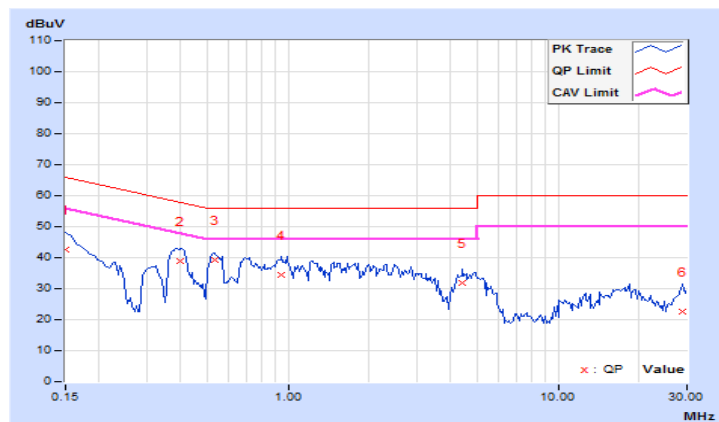
#### 4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.15001	9.74	32.81	26.15	42.55	35.89	66.00	56.00	-23.45	-20.11
2	0.40000	9.75	29.01	14.97	38.76	24.72	57.85	47.85	-19.09	-23.13
3	0.53672	9.76	29.46	23.71	39.22	33.47	56.00	46.00	-16.78	-12.53
4	0.94688	9.78	24.55	13.66	34.33	23.44	56.00	46.00	-21.67	-22.56
5	4.40625	9.81	21.90	14.12	31.71	23.93	56.00	46.00	-24.29	-22.07
6	28.91016	10.01	12.71	5.81	22.72	15.82	60.00	50.00	-37.28	-34.18

#### REMARKS:

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

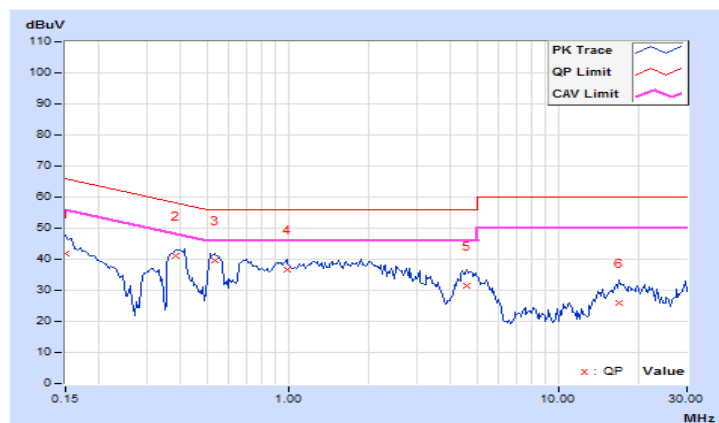


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15001	9.70	32.29	26.09	41.99	35.79	66.00	56.00	-24.01	-20.21
<b>2</b>	<b>0.38438</b>	<b>9.72</b>	<b>31.28</b>	<b>26.82</b>	<b>41.00</b>	<b>36.54</b>	<b>58.18</b>	<b>48.18</b>	<b>-17.18</b>	<b>-11.64</b>
3	0.53281	9.72	29.81	23.81	39.53	33.53	56.00	46.00	-16.47	-12.47
4	0.99375	9.71	26.88	18.73	36.59	28.44	56.00	46.00	-19.41	-17.56
5	4.59766	9.77	21.68	14.12	31.45	23.89	56.00	46.00	-24.55	-22.11
6	16.90234	9.99	15.83	10.53	25.82	20.52	60.00	50.00	-34.18	-29.48

**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.



### 4.3 Transmit Power Measurement

#### 4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		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		√	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)

\*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  $N_{ANT} \leq 4$ ;

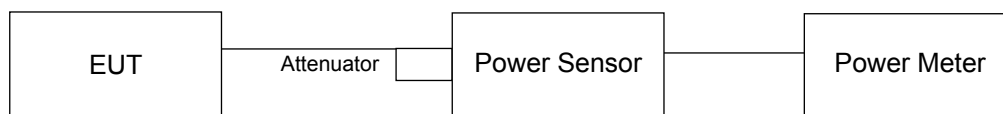
Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

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

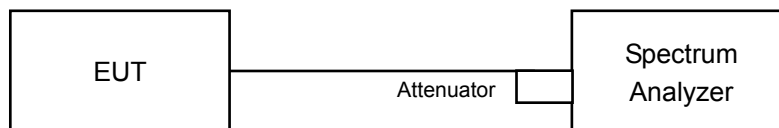
For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS})$  dB.

#### 4.3.2 Test Setup

##### For Power Output Measurement



##### For 26dB Occupied Bandwidth



#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.4 Test Procedure

##### For Average Power Measurement

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 26dB Occupied Bandwidth

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

#### 4.3.5 Deviation from Test Standard

No deviation.

#### 4.3.6 EUT Operating Condition

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

#### 4.3.7 Test Result

#### Power Output:

#### 802.11a

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
36	5180	12.162	10.85	24	Pass
40	5200	12.445	10.95	24	Pass
48	5240	12.677	11.03	24	Pass
52	5260	12.677	11.03	24	Pass
60	5300	11.803	10.72	24	Pass
64	5320	12.560	10.99	24	Pass
100	5500	11.376	10.56	24	Pass
116	5580	12.503	10.97	24	Pass
132	5660	11.776	10.71	24	Pass
140	5700	12.078	10.82	24	Pass
149	5745	12.503	10.97	30	Pass
157	5785	11.776	10.71	30	Pass
165	5825	12.050	10.81	30	Pass

#### NOTE:

#### For U-NII-2A, U-NII-2C Band:

1.  $11\text{dBm} + 10\log(26.02) = 25.15\text{ dBm} > 24\text{dBm}$ .
2.  $11\text{dBm} + 10\log(24.93) = 24.97\text{ dBm} > 24\text{dBm}$ .
3.  $11\text{dBm} + 10\log(24.78) = 24.94\text{ dBm} > 24\text{dBm}$ .
4.  $11\text{dBm} + 10\log(25.49) = 25.06\text{ dBm} > 24\text{dBm}$ .
5.  $11\text{dBm} + 10\log(24.84) = 24.95\text{ dBm} > 24\text{dBm}$ .
6.  $11\text{dBm} + 10\log(25.37) = 25.04\text{ dBm} > 24\text{dBm}$ .
7.  $11\text{dBm} + 10\log(25.48) = 25.06\text{ dBm} > 24\text{dBm}$ .

802.11n (20MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		CHAIN 0	CHAIN 1				
36	5180	10.36	12.26	27.691	14.42	24	Pass
40	5200	10.68	12.20	<b>28.291</b>	14.52	24	Pass
48	5240	10.24	12.31	27.590	14.41	24	Pass
52	5260	10.32	12.27	<b>27.631</b>	14.41	24	Pass
60	5300	10.93	11.47	26.416	14.22	24	Pass
64	5320	10.43	12.17	27.523	14.40	24	Pass
100	5500	10.92	11.00	24.948	13.97	24	Pass
116	5580	11.02	11.03	25.324	14.04	24	Pass
132	5660	10.89	10.91	24.605	13.91	24	Pass
140	5700	10.91	11.13	25.303	14.03	24	Pass
149	5745	10.44	12.41	<b>28.484</b>	14.55	30	Pass
157	5785	10.61	12.05	27.540	14.40	30	Pass
165	5825	10.70	11.59	26.170	14.18	30	Pass

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1.  $11\text{dBm} + 10\log(25.47) = 25.06\text{ dBm} > 24\text{dBm}$ .
2.  $11\text{dBm} + 10\log(25.77) = 25.11\text{ dBm} > 24\text{dBm}$ .
3.  $11\text{dBm} + 10\log(26.43) = 25.22\text{ dBm} > 24\text{dBm}$ .
4.  $11\text{dBm} + 10\log(26.59) = 25.25\text{ dBm} > 24\text{dBm}$ .
5.  $11\text{dBm} + 10\log(27.17) = 25.34\text{ dBm} > 24\text{dBm}$ .
6.  $11\text{dBm} + 10\log(26.02) = 25.15\text{ dBm} > 24\text{dBm}$ .
7.  $11\text{dBm} + 10\log(26.10) = 25.17\text{ dBm} > 24\text{dBm}$ .

**Chain 1**

1.  $11\text{dBm} + 10\log(26.35) = 25.21\text{ dBm} > 24\text{dBm}$ .
2.  $11\text{dBm} + 10\log(26.02) = 25.15\text{ dBm} > 24\text{dBm}$ .
3.  $11\text{dBm} + 10\log(27.02) = 25.32\text{ dBm} > 24\text{dBm}$ .
4.  $11\text{dBm} + 10\log(26.17) = 25.18\text{ dBm} > 24\text{dBm}$ .
5.  $11\text{dBm} + 10\log(25.70) = 25.10\text{ dBm} > 24\text{dBm}$ .
6.  $11\text{dBm} + 10\log(25.91) = 25.13\text{ dBm} > 24\text{dBm}$ .
7.  $11\text{dBm} + 10\log(25.82) = 25.12\text{ dBm} > 24\text{dBm}$ .

**802.11n (40MHz)**

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		CHAIN 0	CHAIN 1				
38	5190	10.21	12.01	26.38	14.21	24	Pass
46	5230	10.07	12.20	26.758	14.27	24	Pass
54	5270	10.17	11.83	25.64	14.09	24	Pass
62	5310	10.21	11.91	26.019	14.15	24	Pass
102	5510	10.95	11.09	25.298	14.03	24	Pass
110	5550	10.91	11.97	<b>28.071</b>	14.48	24	Pass
134	5670	10.93	11.06	25.152	14.01	24	Pass
151	5755	10.46	11.47	25.145	14.00	30	Pass
159	5795	10.33	11.92	26.349	14.21	30	Pass

**NOTE:**
**For U-NII-2A, U-NII-2C Band:**
**Chain 0**

1.  $11\text{dBm} + 10\log(46.29) = 27.65\text{ dBm} > 24\text{dBm}$ .
2.  $11\text{dBm} + 10\log(44.05) = 27.44\text{ dBm} > 24\text{dBm}$ .
3.  $11\text{dBm} + 10\log(43.11) = 27.35\text{ dBm} > 24\text{dBm}$ .
4.  $11\text{dBm} + 10\log(43.76) = 27.41\text{ dBm} > 24\text{dBm}$ .
5.  $11\text{dBm} + 10\log(43.59) = 27.39\text{ dBm} > 24\text{dBm}$ .

**Chain 1**

1.  $11\text{dBm} + 10\log(44.83) = 27.52\text{ dBm} > 24\text{dBm}$ .
2.  $11\text{dBm} + 10\log(45.20) = 27.55\text{ dBm} > 24\text{dBm}$ .
3.  $11\text{dBm} + 10\log(43.71) = 27.41\text{ dBm} > 24\text{dBm}$ .
4.  $11\text{dBm} + 10\log(43.66) = 27.40\text{ dBm} > 24\text{dBm}$ .
5.  $11\text{dBm} + 10\log(43.81) = 27.42\text{ dBm} > 24\text{dBm}$ .

**26dB Bandwidth:  
802.11a**

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
52	5260	26.02
60	5300	24.93
64	5320	24.78
100	5500	25.49
116	5580	24.84
132	5660	25.37
140	5700	25.48

**802.11n (20MHz)**

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	25.47	26.35
60	5300	25.77	26.02
64	5320	26.43	27.02
100	5500	26.59	26.17
116	5580	27.17	25.70
132	5660	26.02	25.91
140	5700	26.10	25.82

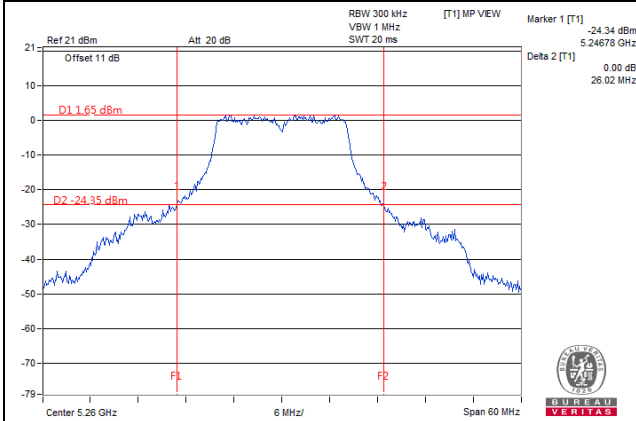
**802.11n (40MHz)**

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	46.29	44.83
62	5310	44.05	45.20
102	5510	43.11	43.71
110	5550	43.76	43.66
134	5670	43.59	43.81

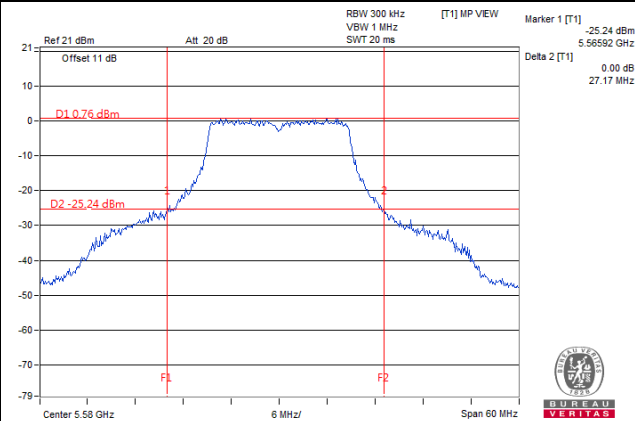


### Spectrum Plot of Worst Value

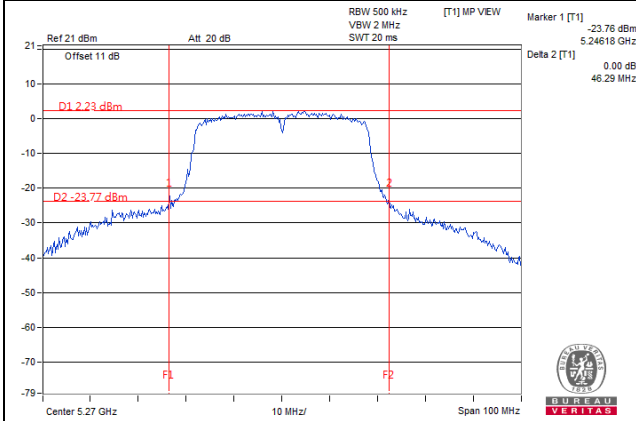
**802.11a / Chain0: CH52**



**802.11n (20MHz) /Chain0: CH116**



**802.11n (40MHz) /Chain0: CH54**



## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Setup



### 4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

#### 4.4.4 Test Results

##### 802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.28
40	5200	17.28
48	5240	17.28
52	5260	17.52
60	5300	17.28
64	5320	17.28
100	5500	17.40
116	5580	17.40
132	5660	17.28
140	5700	17.40

##### 802.11n (20MHz)

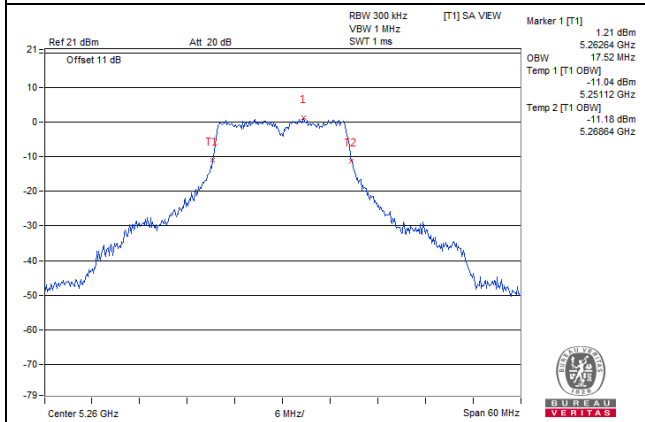
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		CHAIN 0	CHAIN 1
36	5180	18.36	18.36
40	5200	18.36	18.36
48	5240	18.36	18.24
52	5260	18.36	18.36
60	5300	18.36	18.36
64	5320	18.48	18.24
100	5500	18.48	18.24
116	5580	18.48	18.24
132	5660	18.48	18.24
140	5700	18.36	18.24

##### 802.11n (40MHz)

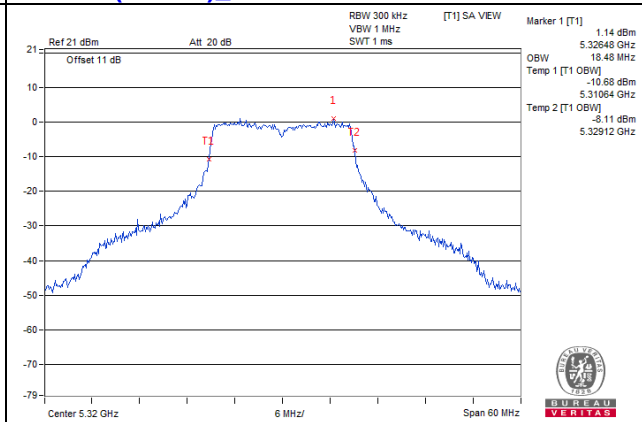
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		CHAIN 0	CHAIN 1
38	5190	36.20	36.20
46	5230	36.20	36.20
54	5270	36.20	36.20
62	5310	36.40	36.20
102	5510	36.20	36.20
110	5550	36.20	36.20
134	5670	36.20	36.20

### Spectrum Plot of Worst Value

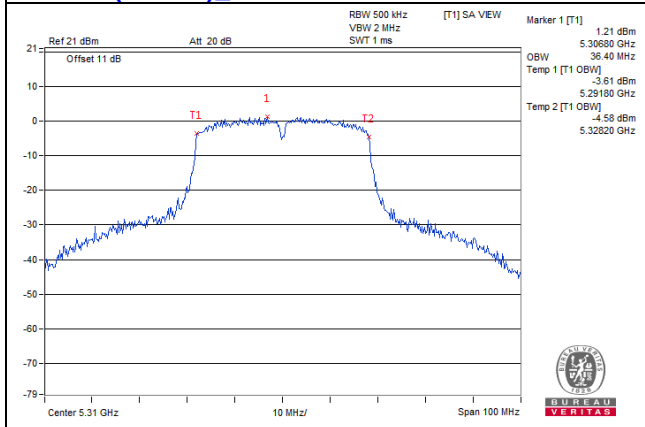
#### 802.11a / CH52



#### 802.11n (20MHz)\_Chain0 / CH64



#### 802.11n (40MHz)\_Chain0 / CH62



## 4.5 Peak Power Spectral Density Measurement

### 4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A		√	11dBm/ MHz
U-NII-2C		√	11dBm/ MHz
U-NII-3		√	30dBm/ 500kHz

### 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

#### For U-NII-1, U-NII-2A, U-NII-2C band:

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

#### For U-NII-3 band:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 500 kHz, Set VBW  $\geq$  3 RBW, Detector = RMS
- 3) Sweep time = auto, trigger set to "free run".
- 4) Trace average at least 100 traces in power averaging mode.
- 5) Record the max value

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Condition

Same as Item 4.3.6.

#### 4.5.7 Test Results

##### 802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
36	5180	-2.12	11	Pass
40	5200	-2.47	11	Pass
48	5240	-2.67	11	Pass
52	5260	-2.71	11	Pass
60	5300	-2.99	11	Pass
64	5320	-2.80	11	Pass
100	5500	-3.58	11	Pass
120	5600	-3.57	11	Pass
132	5660	-3.91	11	Pass
140	5700	-3.41	11	Pass

##### 802.11n (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-3.42	-2.30	0.19	11	Pass
40	5200	-3.37	-1.81	0.49	11	Pass
48	5240	-3.88	-2.63	-0.20	11	Pass
52	5260	-2.05	-2.19	0.89	11	Pass
60	5300	-3.91	-2.59	-0.19	11	Pass
64	5320	-3.43	-4.85	-1.07	11	Pass
100	5500	-3.64	-3.10	-0.35	11	Pass
120	5600	-3.75	-3.10	-0.40	11	Pass
132	5660	-4.54	-3.95	-1.22	11	Pass
140	5700	-3.86	-4.26	-1.05	11	Pass

- Note:**
- Method a) 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.
  - Directional gain =  $2dBi + 10\log(2) = 5.01dBi < 6dBi$ , so the power density limit no need to reduced.

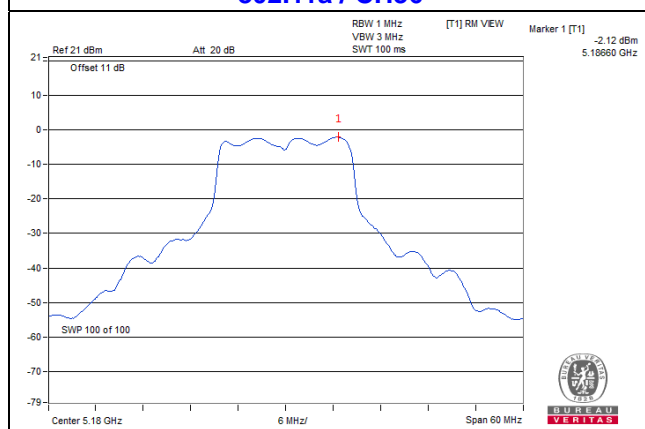
### 802.11n (40MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-4.18	-4.27	-1.21	11	Pass
46	5230	-4.27	-4.14	-1.19	11	Pass
54	5270	-5.07	-4.94	-1.99	11	Pass
62	5310	-5.00	-4.77	-1.87	11	Pass
102	5510	-6.02	-5.87	-2.93	11	Pass
118	5590	-6.01	-5.95	-2.97	11	Pass
134	5670	-6.40	-6.40	-3.39	11	Pass

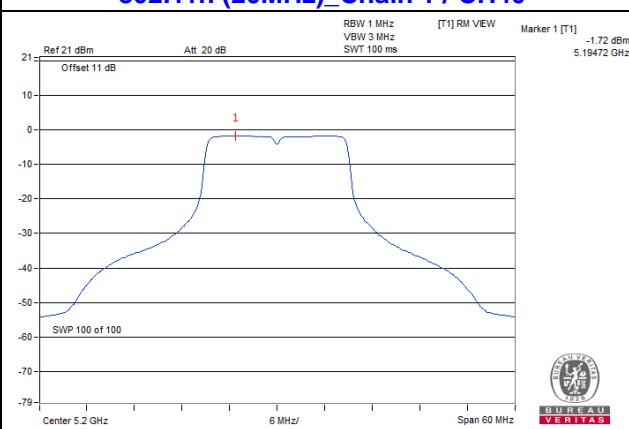
- Note:**
- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
  - Directional gain =  $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$ , so the power density limit no need to reduced.

#### Spectrum Plot of Worst Value

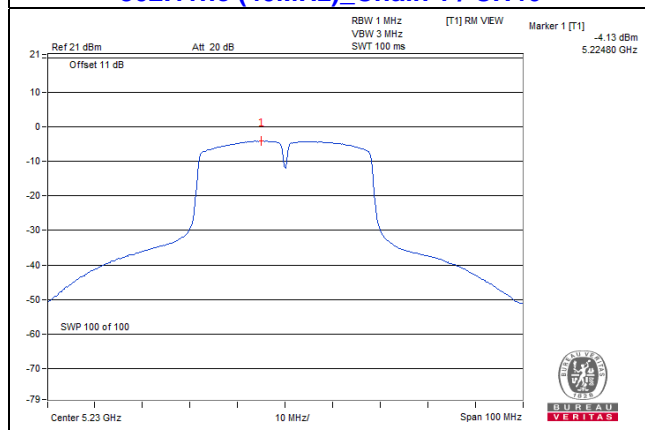
##### 802.11a / CH36



##### 802.11n (20MHz) Chain 1 / CH40



##### 802.11nc (40MHz) Chain 1 / CH46



For U-NII-3:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	4.62	30	Pass
157	5785	4.85	30	Pass
165	5825	4.85	30	Pass

802.11n (20MHz)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	4.80	3.01	7.81	30	Pass
	157	5785	5.36	3.01	8.37	30	Pass
	165	5825	4.45	3.01	7.46	30	Pass
1	149	5745	5.41	3.01	8.42	30	Pass
	157	5785	4.82	3.01	7.83	30	Pass
	165	5825	4.74	3.01	7.75	30	Pass

- Note:**
- Method a) 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.
  - Directional gain =  $2\text{dBi} + 10\log(2) = 5.01\text{dBi} > 6\text{dBi}$ , so the power density limit no need to reduced.

802.11n (40MHz)

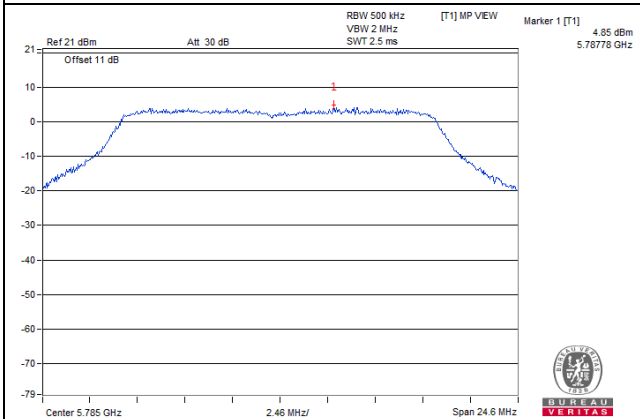
TX chain	Chan.	Freq. (MHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	2.87	3.01	5.88	30	Pass
	159	5795	3.90	3.01	6.91	30	Pass
1	151	5755	3.47	3.01	6.48	30	Pass
	159	5795	3.37	3.01	6.38	30	Pass

- Note:**
- Method a) 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.
  - Directional gain =  $2\text{dBi} + 10\log(2) = 5.01\text{dBi} > 6\text{dBi}$ , so the power density limit no need to reduced.

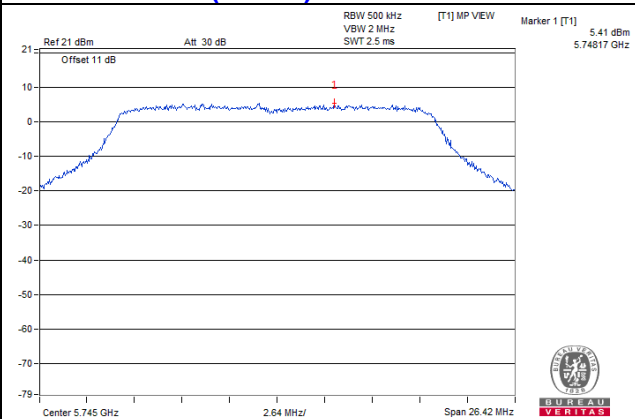


Spectrum Plot of Worst Value

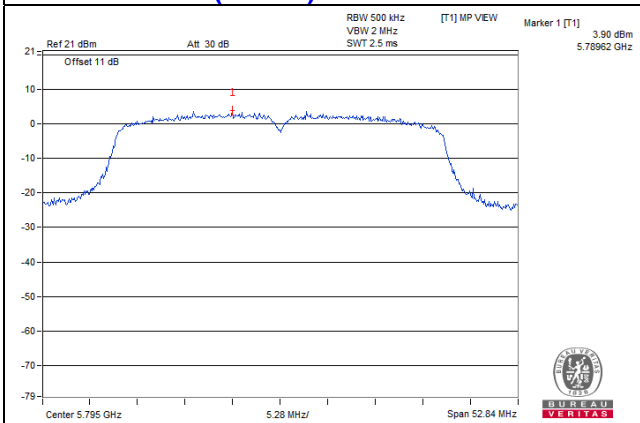
802.11a/ CH 157



802.11n (20MHz) / Chain 1: CH 149



802.11n (40MHz) / Chain 0: CH 159

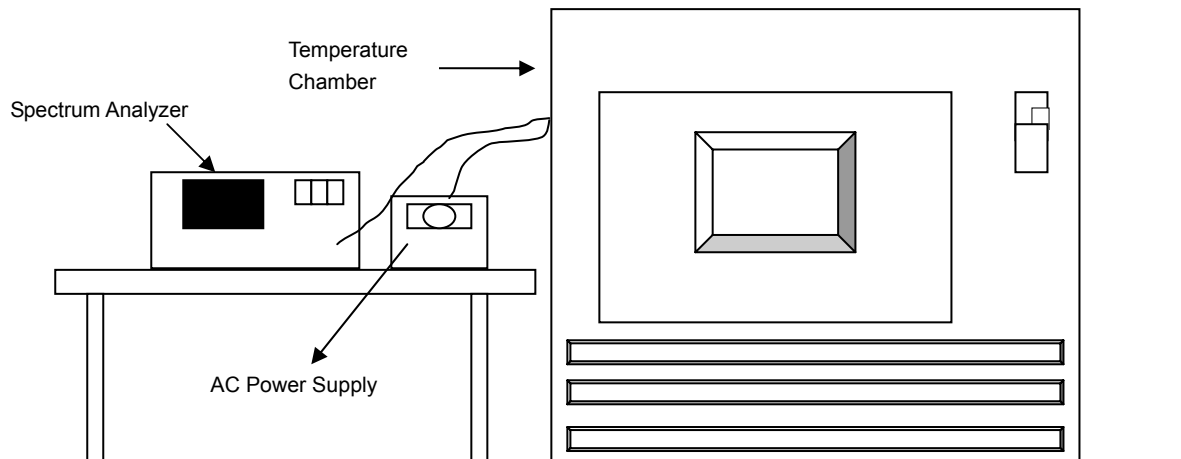


## 4.6 Frequency Stability Measurement

### 4.6.1 Limits of Frequency Stability Measurement

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

### 4.6.2 Test Setup



### 4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- 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.
- Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- 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.

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
50	120	5180.043114	Pass	5180.043139	Pass	5180.043033	Pass	5180.043041	Pass
40	120	5180.043418	Pass	5180.043675	Pass	5180.043510	Pass	5180.043677	Pass
30	120	5180.042434	Pass	5180.042267	Pass	5180.042717	Pass	5180.042181	Pass
20	120	5180.043163	Pass	5180.042985	Pass	5180.043252	Pass	5180.043143	Pass
10	120	5180.043083	Pass	5180.043719	Pass	5180.043433	Pass	5180.043325	Pass
0	120	5180.042446	Pass	5180.042142	Pass	5180.042376	Pass	5180.042689	Pass
-10	120	5180.043059	Pass	5180.0434	Pass	5180.043203	Pass	5180.043058	Pass
-20	120	5180.043087	Pass	5180.043001	Pass	5180.043238	Pass	5180.043339	Pass

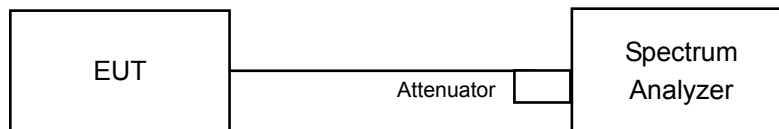
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5180.042676	Pass	5180.042435	Pass	5180.042481	Pass	5180.042491	Pass
	120	5180.043163	Pass	5180.042985	Pass	5180.043252	Pass	5180.043143	Pass
	102	5180.042836	Pass	5180.043005	Pass	5180.042966	Pass	5180.043206	Pass

## 4.7 6dB Bandwidth Measurement

### 4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

### 4.7.2 Test Setup



### 4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.7.4 Test Procedure

#### MEASUREMENT PROCEDURE REF

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

### 4.7.5 Deviation from Test Standard

No deviation.

### 4.7.6 EUT Operating Condition

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

#### 4.7.7 Test Results

##### 802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.37	0.5	PASS
157	5785	16.40	0.5	PASS
165	5825	16.40	0.5	PASS

##### 802.11n (20MHz)

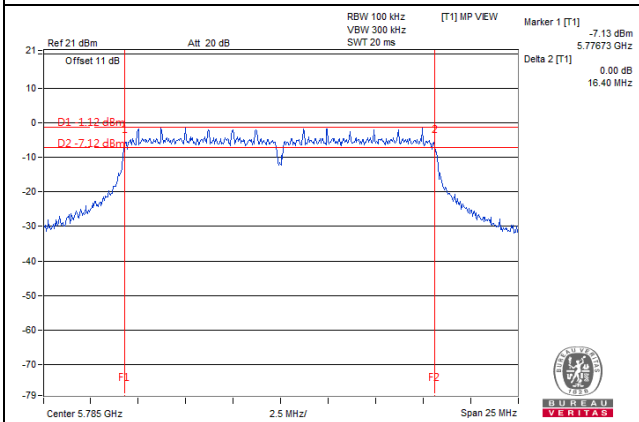
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.59	17.61	0.5	PASS
157	5785	17.61	17.62	0.5	PASS
165	5825	17.61	17.62	0.5	PASS

##### 802.11n (40MHz)

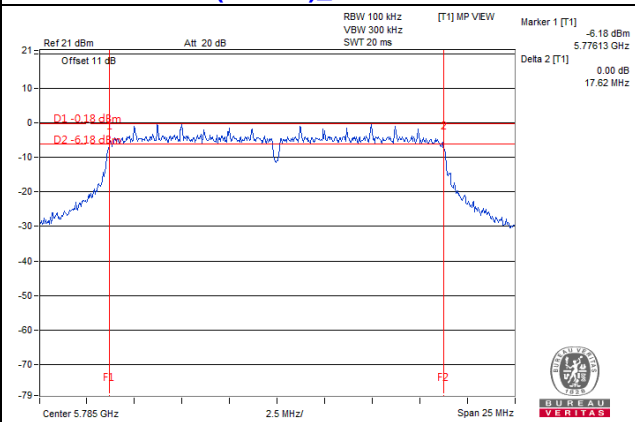
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.22	35.25	0.5	PASS
159	5795	35.23	35.17	0.5	PASS

### Spectrum Plot of Worst Value

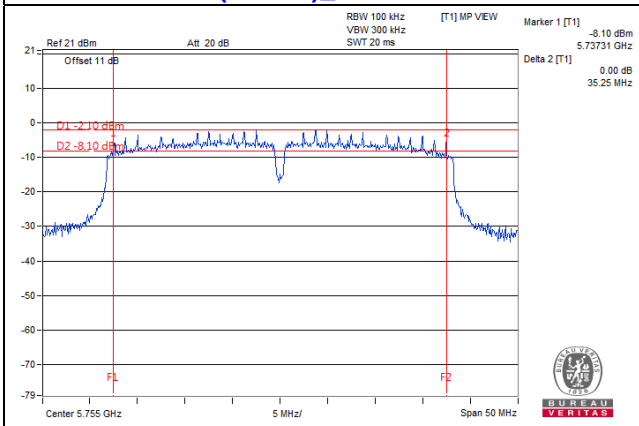
#### 802.11a / CH157



#### 802.11n (20MHz)\_Chain 1 / CH157



#### 802.11n (40MHz)\_Chain 1 / CH151



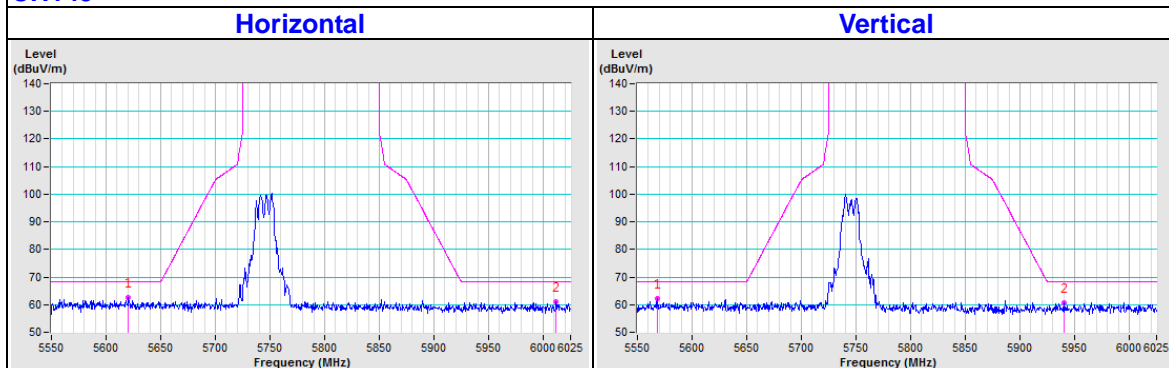
## 5 Pictures of Test Arrangements

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

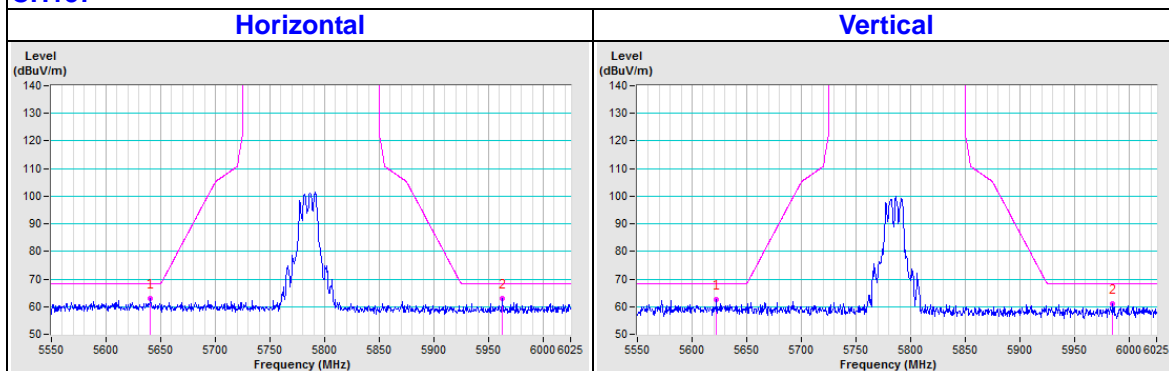
### Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

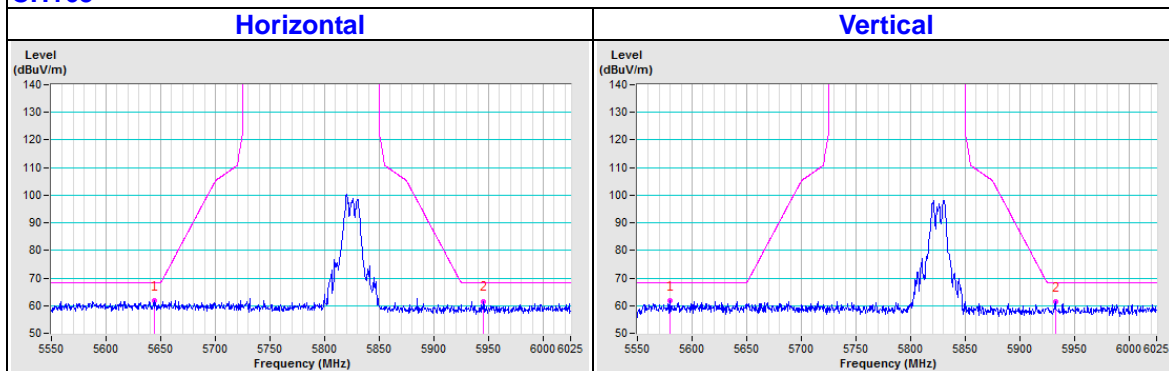
CH149



CH157



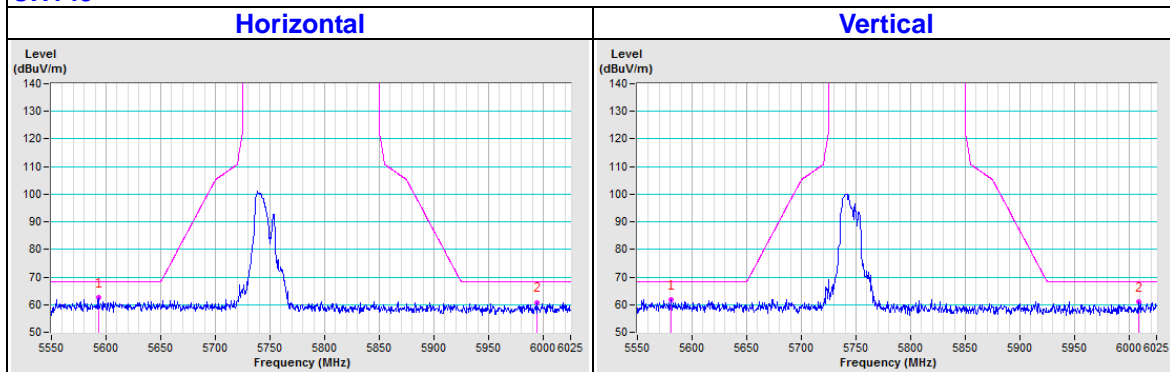
CH165



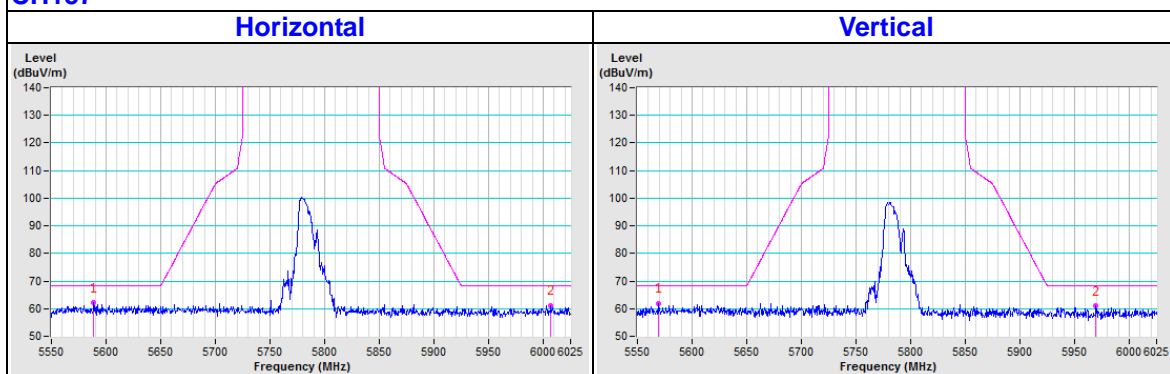


### 802.11n (20MHz)

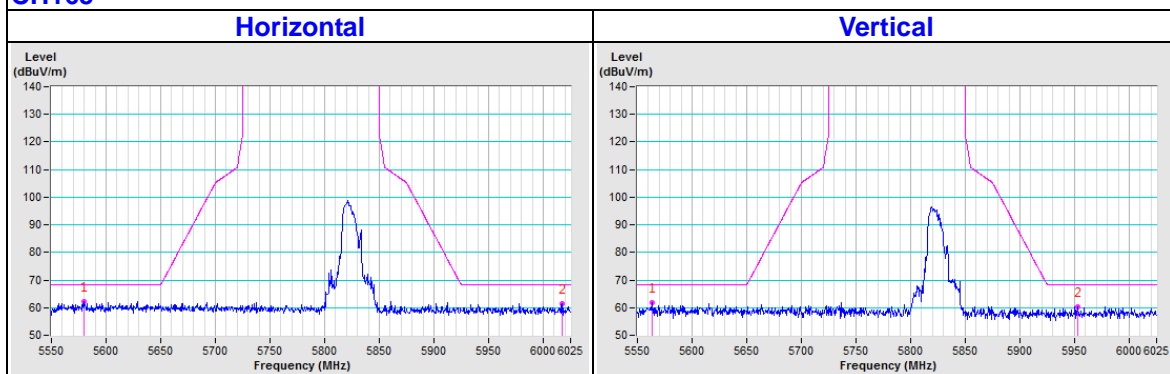
#### CH149



#### CH157



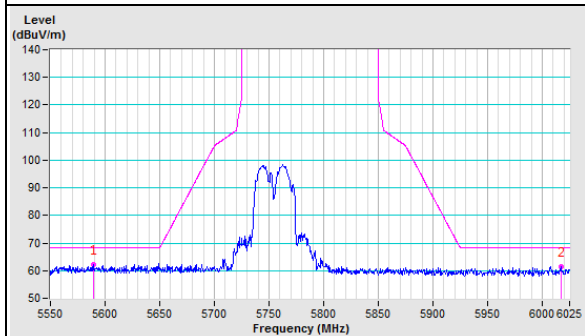
#### CH165



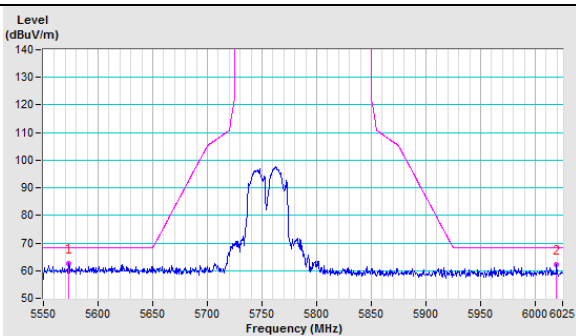
802.11n (40MHz)

CH151

Horizontal

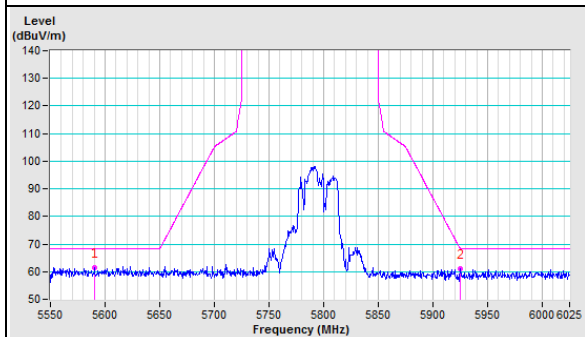


Vertical

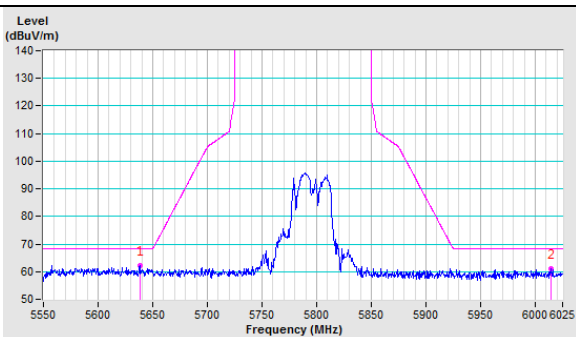


CH159

Horizontal



Vertical



## 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.

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

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

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