

## FCC Test Report

**Report No.:** RF151230E03G

**FCC ID:** 2AHBN-AP41

**Test Model:** AP41

**Series Model:** AP41E

**Received Date:** Dec. 23, 2015

**Test Date:** Oct. 26 ~ Nov. 16, 2016 (For all tests except Radiated Emissions(Frequency below 1GHz) & Conducted Emissions test)

Dec. 07, 2016 (For Radiated Emissions(Frequency below 1GHz) & Conducted Emissions test)

**Issued Date:** Dec. 08, 2016

**Applicant:** Mist Systems, Inc.

**Address:** 1601 South De Anza Blvd. Suite 248 Cupertino California United States  
95014

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City  
33383, TAIWAN (R.O.C.)



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### Release Control Record

Issue No.	Description	Date Issued
RF151230E03G	Original release.	Dec. 08, 2016

## 1 Certificate of Conformity

**Product:** Premium Wi-Fi & BLE Array AP

**Brand:** Mist

**Test Model:** AP41

**Series Model:** AP41E

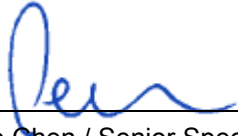
**Sample Status:** Engineering sample

**Applicant:** Mist Systems, Inc.

**Test Date:** Oct. 26 ~ Nov. 16, 2016 (For all tests except Radiated Emissions(Frequency below 1GHz) & Conducted Emissions test)  
Dec. 07, 2016 (For Radiated Emissions(Frequency below 1GHz) & Conducted Emissions test)

**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 :**  , **Date:** Dec. 08, 2016  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Dec. 08, 2016  
Ken Liu / Senior 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 -11.20dB at 14.55835MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 5648.00, 5650.40, 5929.60MHz.
15.407(a) (1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
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	For internal antenna: Antenna connector is IPEX not a standard connector. For external antenna: Antenna connector is RPSMA not a standard connector.

\*For U-NII-3 band compliance with rule part 15.407(b)(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	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	Premium Wi-Fi & BLE Array AP
Brand	Mist
Test Model	AP41
Series Model	AP41E
Model Difference	AP41 for internal antenna AP41E for external antenna
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from adapter 55Vdc from PoE
Modulation Type	256QAM, 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 600.0Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	5745 ~ 5825MHz
Number of Channel	5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	Radio 1: 1TX: 5745 ~ 5825MHz: 226.986mW 2TX: 5745 ~ 5825MHz: 451.891mW 3TX: 5745 ~ 5825MHz: 684.405mW 4TX: 5745 ~ 5825MHz: 915.724mW
Antenna Type	Refer to Note
Antenna Connector	IPEX
Accessory Device	N/A
Data Cable Supplied	N/A

**Note:**

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of the original report no.: RF151230E03-4. The difference compared with original report is updating standard to new version for U-NII-3 band. Therefore, all tests had been retested.

2. There are three radios for the EUT.

Radio	Brand	Model	Function
Radio 1	Broadcom	BCM43465	WLAN 2.4G & 5G
Radio 2	Broadcom	BCM43465	WLAN 2.4G & 5G
Radio 3	Broadcom	BCM20704	BT EDR & BT LE

3. The EUT incorporates a MIMO function. Physically, the EUT provides 4 completed transmitters and 4 receivers.

Modulation Mode	Function	Beamforming
<b>Radio 1</b>		
802.11a	1TX/2TX/3TX/4TX	Not Support
802.11n (HT20)	1TX/2TX/3TX/4TX	Support
802.11n (HT40)	1TX/2TX/3TX/4TX	Support
802.11ac (VHT20)	1TX/2TX/3TX/4TX	Support
802.11ac (VHT40)	1TX/2TX/3TX/4TX	Support
802.11ac (VHT80)	1TX/2TX/3TX/4TX	Support
<b>Radio 2</b>		
802.11a	RX only	Not Support
802.11n (HT20)	RX only	Not Support
802.11n (HT40)	RX only	Not Support
802.11ac (VHT20)	RX only	Not Support
802.11ac (VHT40)	RX only	Not Support
802.11ac (VHT80)	RX only	Not Support

\*The worst case of Radio 1 is beamforming on mode for the final tests.

\*The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

\*The worst configuration is as below.

Mode	Chain
Radio 1 / 1TX	Chain 0
Radio 1 / 2TX	Chain 0 + 1
Radio 1 / 3TX	Chain 0 + 1 + 2
Radio 1 / 4TX	Chain 0 + 1 + 2 + 3

4. The EUT uses following adapter & PoE. (Support unit only)

Adapter	
Brand	Channel Well Technology
Model	2ABN036F US
Input Power	100-240Vac~50/60Hz 1.0A
Output Power	12.0Vdc / 3.0A
Power Line	1.45m DC cable without core attached on adapter

PoE	
Brand	Microsemi
Model	PD-9001GR/AT/AC
Input Power	100-240Vac~50/60Hz 0.67A
Output Power	55Vdc / 0.6A



5. The following antennas were provided to the EUT.

Antenna Type	PIFA				
Antenna Connector	IPEX				
Gain (dBi)	Frequency				
	2.4~2.4835GHz	5.15~5.25GHz	5.25~5.35GHz	5.47~5.725GHz	5.725~5.85GHz
Int. WIFI Ant. 1	3.06	3.85	3.97	4.21	4.18
Int. WIFI Ant. 2	3.64	4.49	4.21	3.27	3.99
Int. WIFI Ant. 3	3.37	3.50	4.04	4.14	4.34
Int. WIFI Ant. 4	3.54	3.87	3.77	4.02	4.17
Scanning Radio Ant.	3.61	3.59	4.21	4.43	4.29

Antenna Type	Patch				
Antenna Connector	RPSMA				
Gain (dBi)	Frequency				
	2.4~2.4835GHz	5.15~5.25GHz	5.25~5.35GHz	5.47~5.725GHz	5.725~5.85GHz
Ext. WIFI Ant.	4	6	6	6	6

\*Int. WIFI Ant. 1~4, Ext. WIFI Ant. were for Radio 1.

\*Scanning Radio Ant. was for Radio 2

\*For Radio 1: The EUT with Patch antenna was chosen for Antenna Port Conducted Measurement test.

### 3.2 Description of Test Modes

#### FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION	
	RE $\geq$ 1G	RE<1G	PLC	APCM	Antenna	Radio
A	-	-	-	-	EUT with internal antenna	Radio 1 (Power from adapter)
B	√	√	√	-		Radio 1 (Power from PoE)
C	-	-	-	√	EUT with external antenna	Radio 1 (Power from adapter)
D	√	√	√	-		Radio 1 (Power from PoE)

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz & Bandedge Measurement  
**RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission  
**APCM**: Antenna Port Conducted Measurement

- NOTE:**
- The EUT could just position on the Z-plane according to manufacturer's requirement.
  - "-" means no effect.
  - For Radio 1: The EUT with Patch antenna was chosen for Antenna Port Conducted Measurement test.
  - According to the original worst case, test mode B, D were chosen for the Radiated Emission below 1GHz & Power Line Conducted Emission test.

#### **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)
B, D	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
B, D	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
B, D	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5
B, D	802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

#### **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)
B, D	802.11a	5745-5825	149 to 165	157	OFDM	BPSK	6.0

### 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)
B, D	802.11a	5745-5825	149 to 165	157	OFDM	BPSK	6.0

### 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)
C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
C	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
C	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5
C	802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

### Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	24deg. C, 68%RH 25deg. C, 65%RH	120Vac, 60Hz	Mahhew Yang Chris Lin
RE<1G	25deg. C, 65%RH	55Vdc	Matthew Yang
PLC	25deg. C, 65%RH	55Vdc	Matthew Yang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Frank Liu

### 3.3 Duty Cycle of Test Signal

#### Radio 1:

#### 1TX

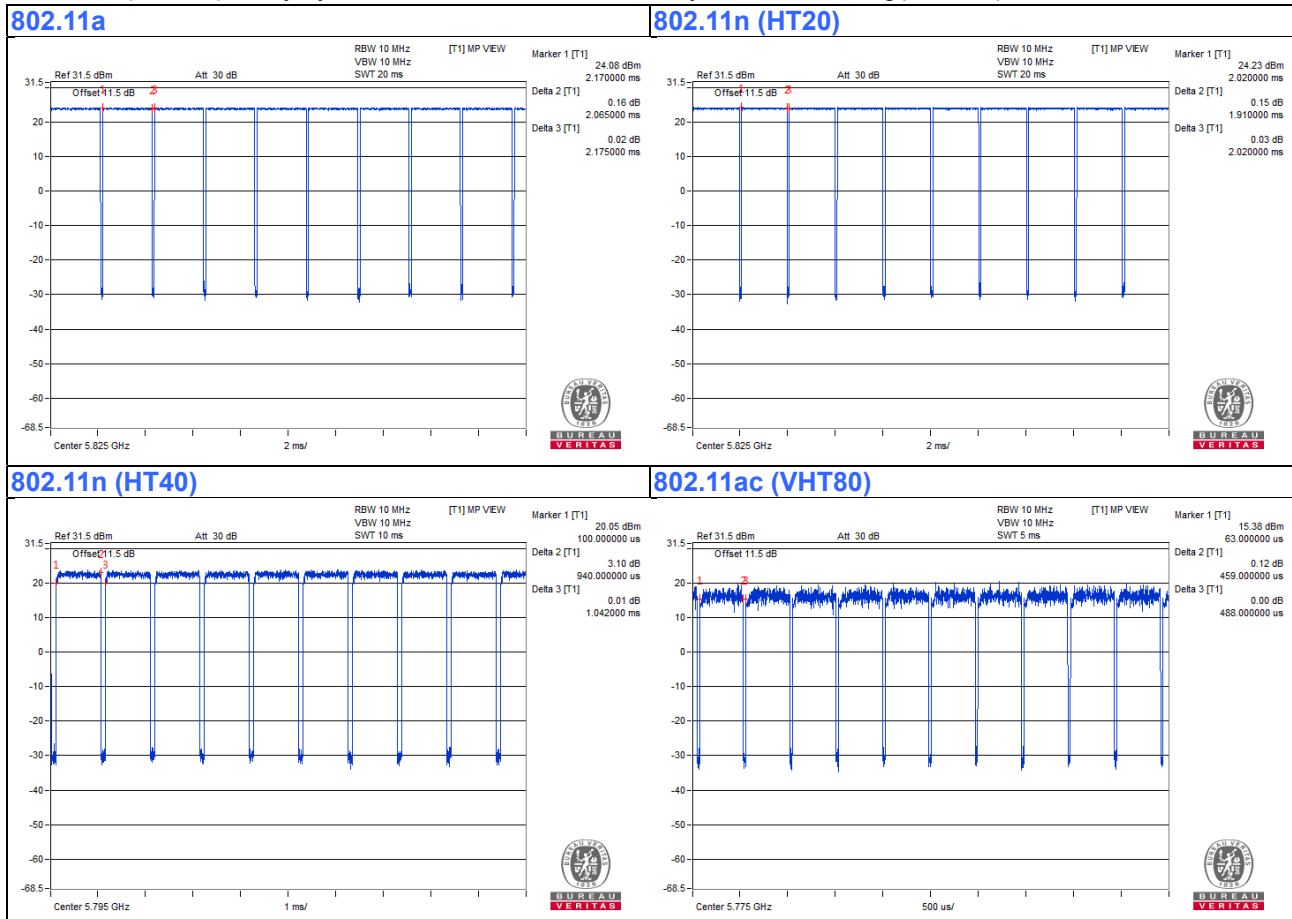
Duty cycle of test signal is < 98%, duty factor is required

**802.11a:** Duty cycle =  $2.065/2.175 = 0.949$ , Duty factor =  $10 * \log(1/0.949) = 0.23$

**802.11n (HT20):** Duty cycle =  $1.91/2.02 = 0.946$ , Duty factor =  $10 * \log(1/0.946) = 0.24$

**802.11n (HT40):** Duty cycle =  $0.94/1.042 = 0.902$ , Duty factor =  $10 * \log(1/0.902) = 0.45$

**802.11ac (VHT80):** Duty cycle =  $0.459/0.488 = 0.941$ , Duty factor =  $10 * \log(1/0.941) = 0.27$



## 2TX

Duty cycle of test signal is < 98%, duty factor is required

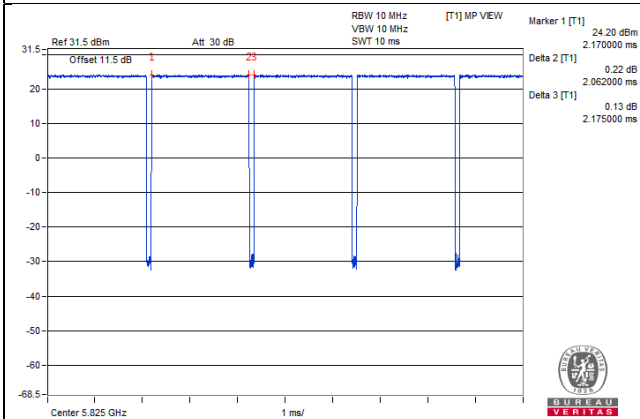
**802.11a:** Duty cycle =  $2.062/2.175 = 0.948$ , Duty factor =  $10 * \log(1/0.948) = 0.23$

**802.11n (HT20):** Duty cycle =  $1.907/2.022 = 0.943$ , Duty factor =  $10 * \log(1/0.943) = 0.25$

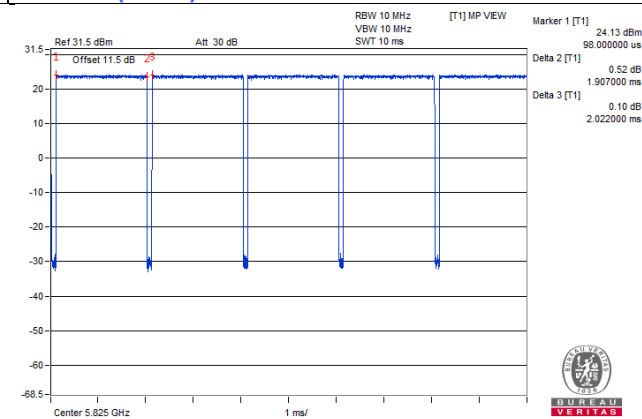
**802.11n (HT40):** Duty cycle =  $0.94/1.055 = 0.891$ , Duty factor =  $10 * \log(1/0.891) = 0.50$

**802.11ac (VHT80):** Duty cycle =  $0.457/0.524 = 0.872$ , Duty factor =  $10 * \log(1/0.872) = 0.59$

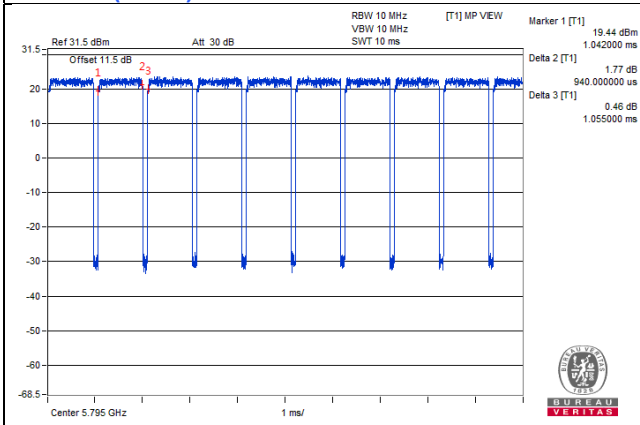
### 802.11a



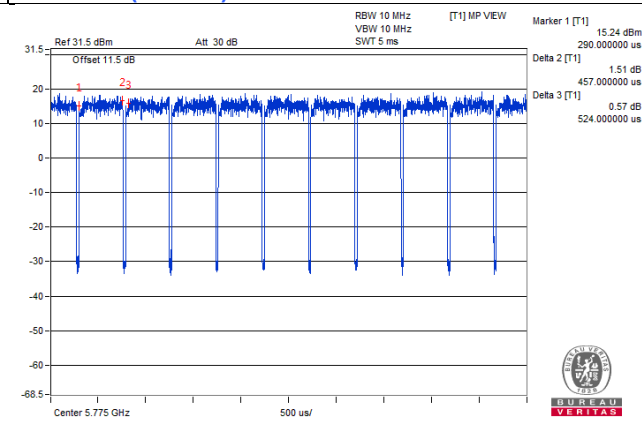
### 802.11n (HT20)



### 802.11n (HT40)



### 802.11ac (VHT80)



### 3TX

Duty cycle of test signal is < 98%, duty factor is required

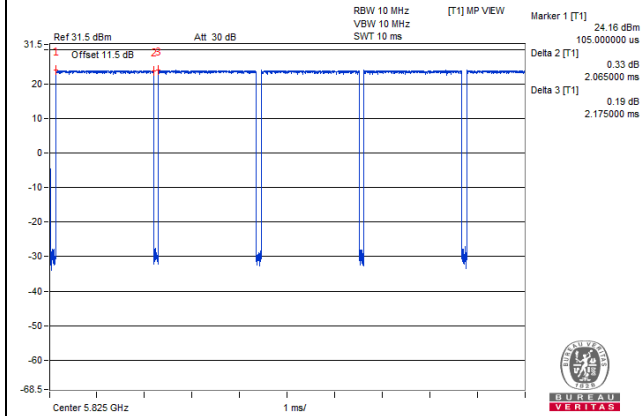
**802.11a:** Duty cycle =  $2.065/2.175 = 0.949$ , Duty factor =  $10 * \log(1/0.949) = 0.23$

**802.11n (HT20):** Duty cycle =  $1.920/2.110 = 0.910$ , Duty factor =  $10 * \log(1/0.910) = 0.41$

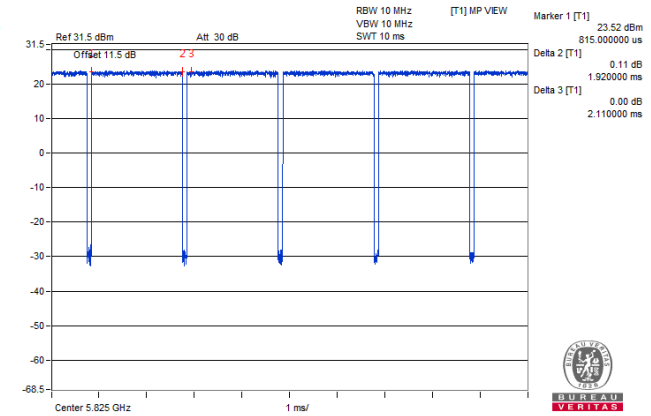
**802.11n (HT40):** Duty cycle =  $0.939/1.054 = 0.891$ , Duty factor =  $10 * \log(1/0.891) = 0.50$

**802.11ac (VHT80):** Duty cycle =  $0.460/0.489 = 0.941$ , Duty factor =  $10 * \log(1/0.941) = 0.27$

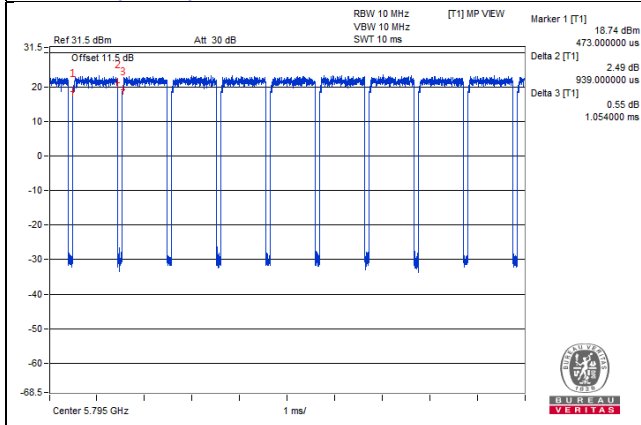
#### 802.11a



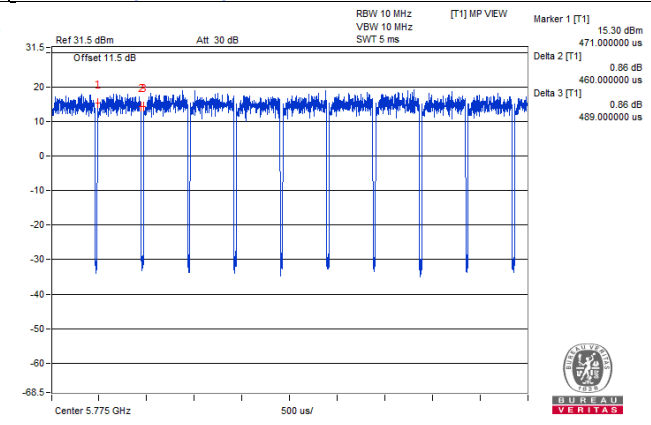
#### 802.11n (HT20)



#### 802.11n (HT40)



#### 802.11ac (VHT80)



### 4TX

Duty cycle of test signal is < 98%, duty factor is required

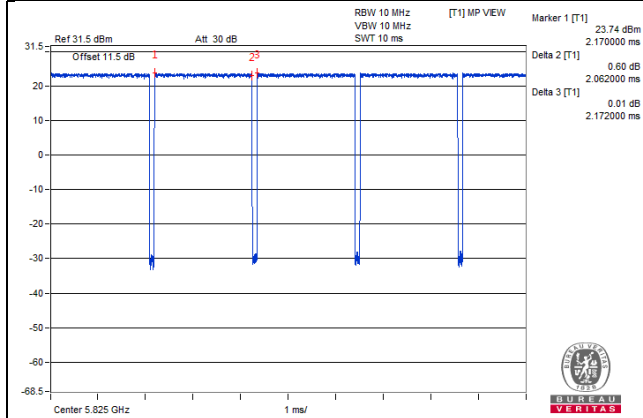
**802.11a:** Duty cycle =  $2.062/2.172 = 0.949$ , Duty factor =  $10 * \log(1/0.949) = 0.23$

**802.11n (HT20):** Duty cycle =  $1.913/2.020 = 0.947$ , Duty factor =  $10 * \log(1/0.947) = 0.24$

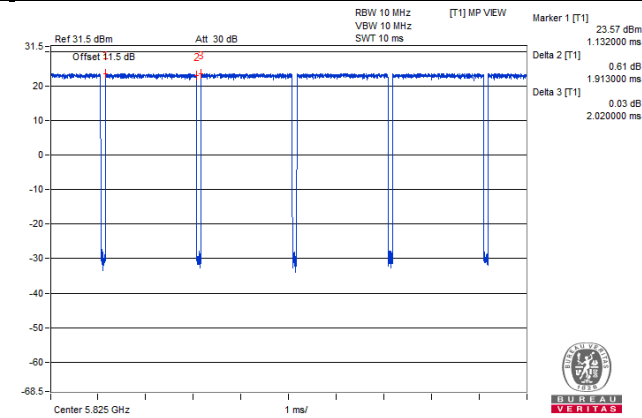
**802.11n (HT40):** Duty cycle =  $0.942/1.042 = 0.904$ , Duty factor =  $10 * \log(1/0.904) = 0.44$

**802.11ac (VHT80):** Duty cycle =  $0.459/0.489 = 0.939$ , Duty factor =  $10 * \log(1/0.939) = 0.27$

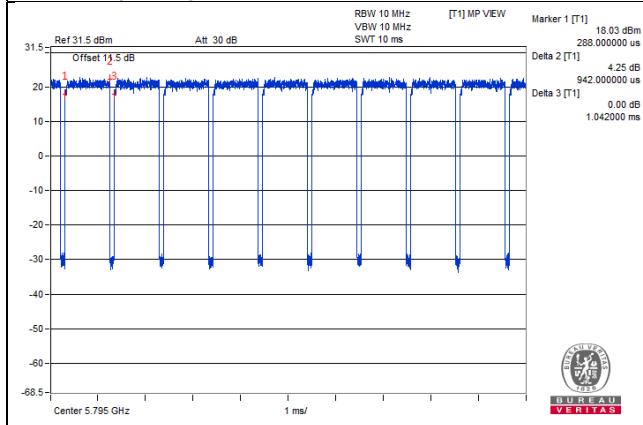
**802.11a**



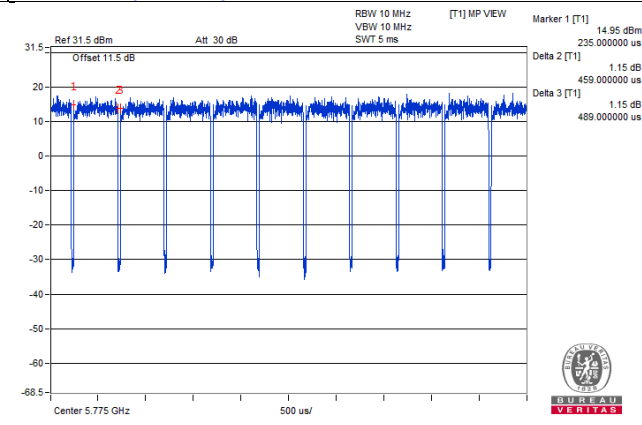
**802.11n (HT20)**



**802.11n (HT40)**



**802.11ac (VHT80)**



### 3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	6RP2YM1	FCC DoC Approved	-
B.	USB 3.0 Flash Drive	HP	v250w	N/A	FCC DoC Approved	-
C.	Adapter	Channel Well Technology	2ABN036F US	N/A	N/A	Provided by client
D.	Load	N/A	N/A	N/A	N/A	-
E.	PoE	Microsemi	PD-9001GR/AT/AC	N/A	N/A	Provided by client

Note:

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

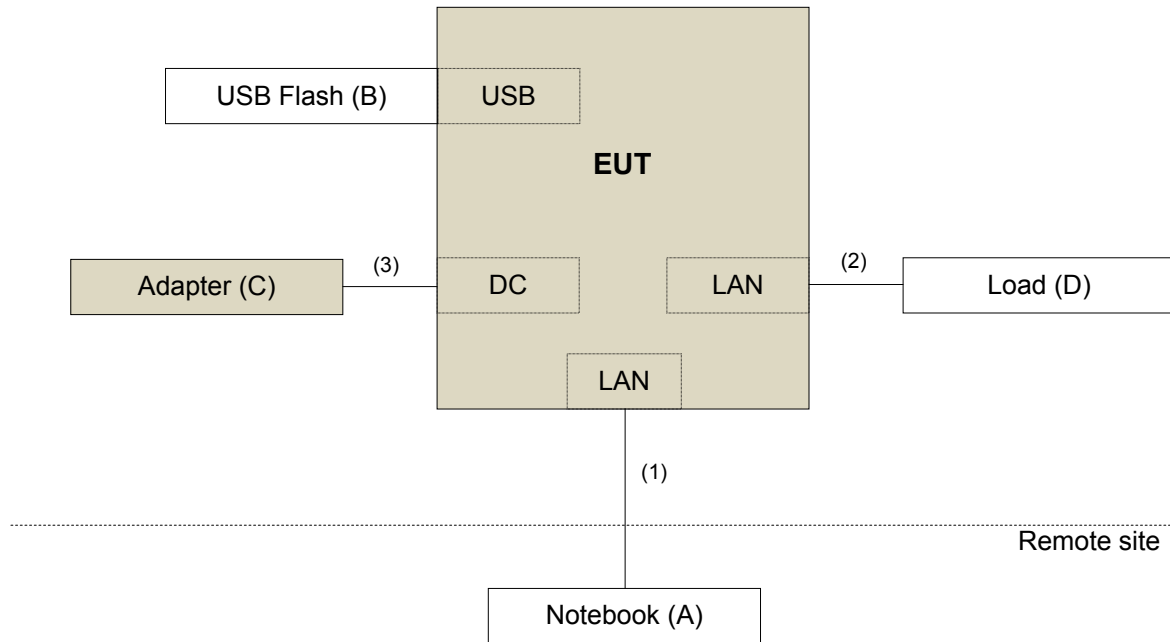
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	10	N	0	-
2.	RJ45 cable	2	1.8	N	0	-
3.	DC cable	1	1.45	-	0	attached on adapter
4.	RJ45 cable	1	3	N	0	-

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

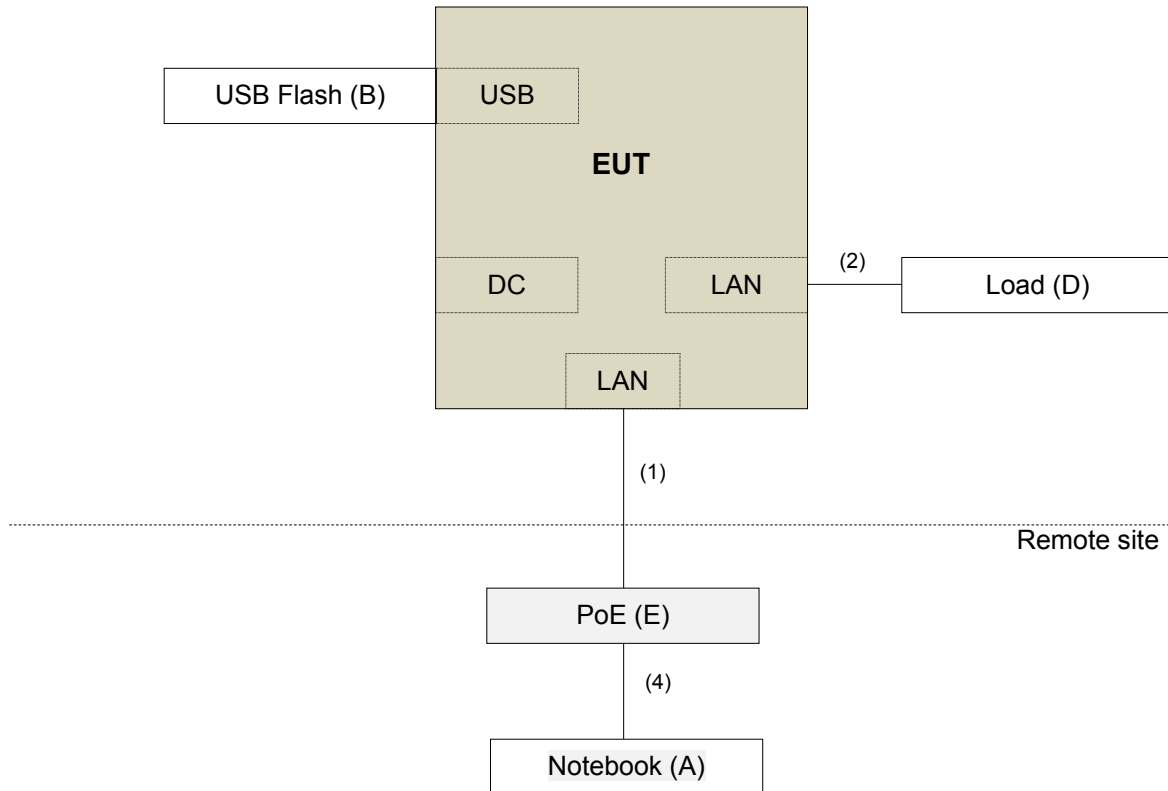


### 3.4.1 Configuration of System under Test

#### Test Mode C



Test Mode B, D



### 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 (dBµV/m)	AV:54 (dBµV/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(dBµV/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 (dBµV/m) <sup>*1</sup> PK:105.2 (dBµV/m) <sup>*2</sup> PK: 110.8 (dBµV/m) <sup>*3</sup> PK:122.2 (dBµV/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>*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
<sup>*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 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

For tested date: Oct. 26 ~ Nov. 16, 2016

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Aug. 16, 2016	Aug. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Jan. 08, 2016	Jan. 07, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2016	Aug. 08, 2017
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Aug. 09, 2016	Aug. 08, 2017
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017
High Speed Peak Power Meter	ML2495A	0824012	Aug. 11, 2016	Aug. 10, 2017
Power Sensor	MA2411B	0738171	Aug. 11, 2016	Aug. 10, 2017
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 08, 2016	Jun. 07, 2017

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is IC7450F-4.

For tested date: Dec. 07, 2016

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Aug. 16, 2016	Aug. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Jan. 08, 2016	Jan. 07, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2016	Aug. 08, 2017
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Aug. 09, 2016	Aug. 08, 2017
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. The test was performed in HwaYa Chamber 4.  
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.  
4. The FCC Site Registration No. is 460141.  
5. The IC Site Registration No. is IC7450F-4.

#### 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:**

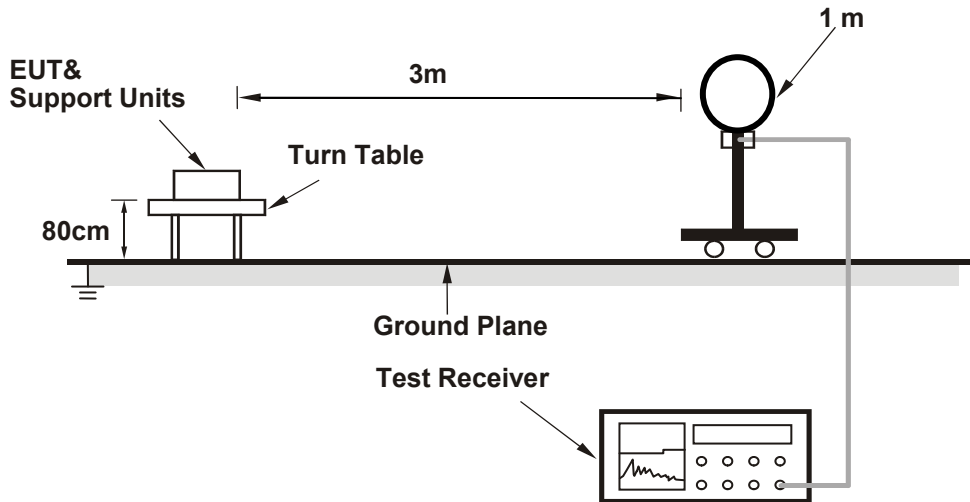
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

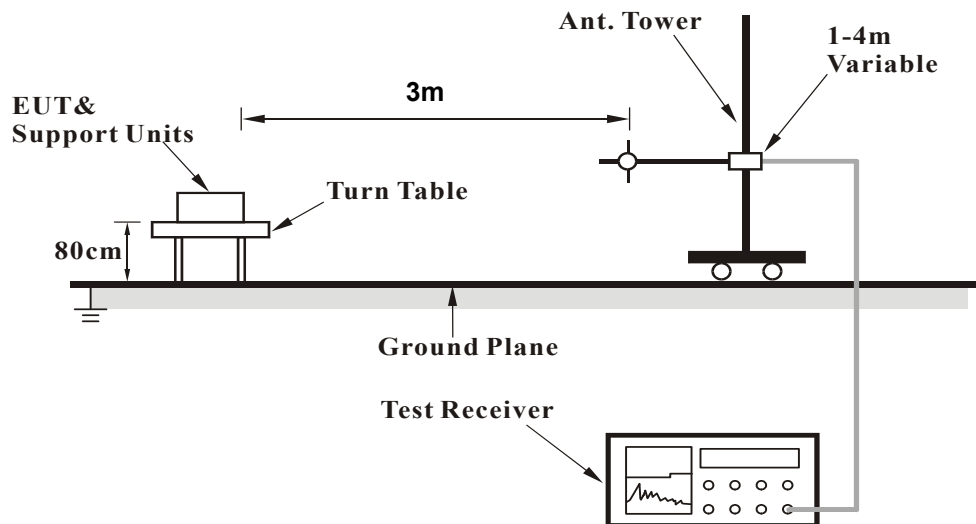
No deviation.

#### 4.1.5 Test Setup

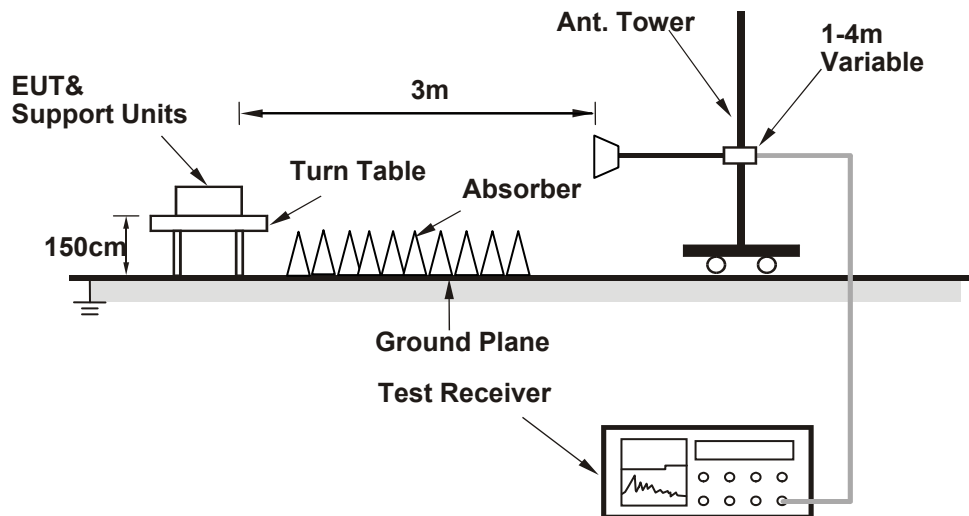
##### For Radiated emission below 30MHz



##### 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**

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



#### 4.1.7 Test Results

Above 1GHz data:

Test Mode B

1TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5627.20	59.1 PK	68.2	-9.1	1.00 H	210	52.6	6.5
2	*5745.00	113.0 PK			1.00 H	210	72.1	40.9
3	*5745.00	101.6 AV			1.00 H	210	60.7	40.9
4	#5973.60	59.4 PK	68.2	-8.8	1.00 H	210	52.2	7.2
5	11490.00	62.2 PK	74.0	-11.8	1.06 H	68	41.7	20.5
6	11490.00	49.3 AV	54.0	-4.7	1.06 H	68	28.8	20.5
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	#5640.00	61.8 PK	68.2	-6.4	1.90 V	182	55.3	6.5
2	*5745.00	118.9 PK			1.90 V	182	78.0	40.9
3	*5745.00	107.2 AV			1.90 V	182	66.3	40.9
4	#5957.60	60.4 PK	68.2	-7.8	1.90 V	182	53.2	7.2
5	11490.00	61.6 PK	74.0	-12.4	1.15 V	229	41.1	20.5
6	11490.00	48.6 AV	54.0	-5.4	1.15 V	229	28.1	20.5

#### 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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.00	60.9 PK	68.2	-7.3	1.00 H	213	54.4	6.5
2	*5785.00	116.1 PK			1.00 H	213	75.1	41.0
3	*5785.00	104.5 AV			1.00 H	213	63.5	41.0
4	#5935.20	63.6 PK	68.2	-4.6	1.00 H	213	56.5	7.1
5	11570.00	62.2 PK	74.0	-11.8	1.05 H	63	41.9	20.3
6	11570.00	49.3 AV	54.0	-4.7	1.05 H	63	29.0	20.3

**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	#5651.20	68.0 PK	69.1	-1.1	1.95 V	188	61.5	6.5
2	*5785.00	119.4 PK			1.95 V	188	78.4	41.0
3	*5785.00	108.1 AV			1.95 V	188	67.1	41.0
4	#5933.60	68.0 PK	68.2	-0.2	1.95 V	188	60.9	7.1
5	11570.00	61.6 PK	74.0	-12.4	1.17 V	233	41.3	20.3
6	11570.00	48.5 AV	54.0	-5.5	1.17 V	233	28.2	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5626.40	58.9 PK	68.2	-9.3	1.00 H	212	52.4	6.5
2	*5825.00	114.6 PK			1.00 H	212	73.4	41.2
3	*5825.00	103.0 AV			1.00 H	212	61.8	41.2
4	#5944.80	59.4 PK	68.2	-8.8	1.00 H	212	52.3	7.1
5	11650.00	61.7 PK	74.0	-12.3	1.04 H	72	41.8	19.9
6	11650.00	48.5 AV	54.0	-5.5	1.04 H	72	28.6	19.9

**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	#5616.00	59.5 PK	68.2	-8.7	1.72 V	184	53.1	6.4
2	*5825.00	118.9 PK			1.72 V	184	77.7	41.2
3	*5825.00	107.2 AV			1.72 V	184	66.0	41.2
4	#5932.00	61.8 PK	68.2	-6.4	1.72 V	184	54.7	7.1
5	11650.00	60.8 PK	74.0	-13.2	1.13 V	222	40.9	19.9
6	11650.00	47.9 AV	54.0	-6.1	1.13 V	222	28.0	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.80	59.8 PK	68.2	-8.4	1.00 H	212	53.3	6.5
2	*5745.00	112.9 PK			1.00 H	212	72.0	40.9
3	*5745.00	101.5 AV			1.00 H	212	60.6	40.9
4	#5960.00	60.7 PK	68.2	-7.5	1.00 H	212	53.5	7.2
5	11490.00	62.6 PK	74.0	-11.4	1.00 H	58	42.1	20.5
6	11490.00	49.6 AV	54.0	-4.4	1.00 H	58	29.1	20.5

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	#5647.20	62.9 PK	68.2	-5.3	1.86 V	189	56.4	6.5
2	*5745.00	118.4 PK			1.86 V	189	77.5	40.9
3	*5745.00	106.9 AV			1.86 V	189	66.0	40.9
4	#5938.40	60.4 PK	68.2	-7.8	1.86 V	189	53.3	7.1
5	11490.00	62.4 PK	74.0	-11.6	1.19 V	218	41.9	20.5
6	11490.00	49.1 AV	54.0	-4.9	1.19 V	218	28.6	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.00	58.8 PK	68.2	-9.4	1.00 H	214	52.3	6.5
2	*5785.00	115.0 PK			1.00 H	214	74.0	41.0
3	*5785.00	103.4 AV			1.00 H	214	62.4	41.0
4	#5968.00	59.3 PK	68.2	-8.9	1.00 H	214	52.1	7.2
5	11570.00	62.8 PK	74.0	-11.2	1.08 H	66	42.5	20.3
6	11570.00	49.2 AV	54.0	-4.8	1.08 H	66	28.9	20.3

**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	#5625.60	59.1 PK	68.2	-9.1	1.84 V	187	52.6	6.5
2	*5785.00	118.2 PK			1.84 V	187	77.2	41.0
3	*5785.00	107.0 AV			1.84 V	187	66.0	41.0
4	#5948.80	59.5 PK	68.2	-8.7	1.84 V	187	52.3	7.2
5	11570.00	62.6 PK	74.0	-11.4	1.14 V	237	42.3	20.3
6	11570.00	48.9 AV	54.0	-5.1	1.14 V	237	28.6	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.00	58.8 PK	68.2	-9.4	1.00 H	214	52.3	6.5
2	*5825.00	113.7 PK			1.00 H	212	72.5	41.2
3	*5825.00	102.7 AV			1.00 H	212	61.5	41.2
4	#5968.00	59.3 PK	68.2	-8.9	1.00 H	214	52.1	7.2
5	11650.00	62.3 PK	74.0	-11.7	1.02 H	62	42.4	19.9
6	11650.00	49.4 AV	54.0	-4.6	1.02 H	62	29.5	19.9

**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	#5602.40	59.3 PK	68.2	-8.9	1.93 V	188	53.0	6.3
2	*5825.00	118.7 PK			1.93 V	188	77.5	41.2
3	*5825.00	106.5 AV			1.93 V	188	65.3	41.2
4	#5943.20	62.4 PK	68.2	-5.8	1.93 V	188	55.3	7.1
5	11650.00	61.9 PK	74.0	-12.1	1.11 V	222	42.0	19.9
6	11650.00	49.1 AV	54.0	-4.9	1.11 V	222	29.2	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.80	59.5 PK	68.2	-8.7	1.00 H	210	53.0	6.5
2	*5755.00	109.3 PK			1.00 H	210	68.3	41.0
3	*5755.00	98.9 AV			1.00 H	210	57.9	41.0
4	#5972.00	59.8 PK	68.2	-8.4	1.00 H	210	52.6	7.2
5	11510.00	61.9 PK	74.0	-12.1	1.07 H	49	41.5	20.4
6	11510.00	49.2 AV	54.0	-4.8	1.07 H	49	28.8	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
<b>1</b>	<b>#5648.00</b>	<b>68.1 PK</b>	<b>68.2</b>	<b>-0.1</b>	<b>1.89 V</b>	<b>181</b>	<b>61.6</b>	<b>6.5</b>
2	*5755.00	114.4 PK			1.89 V	181	73.4	41.0
3	*5755.00	103.3 AV			1.89 V	181	62.3	41.0
4	#5956.00	60.6 PK	68.2	-7.6	1.89 V	181	53.4	7.2
5	11510.00	61.5 PK	74.0	-12.5	1.20 V	245	41.1	20.4
6	11510.00	48.9 AV	54.0	-5.1	1.20 V	245	28.5	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5629.60	59.4 PK	68.2	-8.8	1.00 H	213	52.9	6.5
2	*5795.00	111.2 PK			1.00 H	213	70.1	41.1
3	*5795.00	99.6 AV			1.00 H	213	58.5	41.1
4	#5931.20	64.7 PK	68.2	-3.5	1.00 H	213	57.6	7.1
5	11590.00	61.7 PK	74.0	-12.3	1.06 H	44	41.5	20.2
6	11590.00	49.0 AV	54.0	-5.0	1.06 H	44	28.8	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.80	62.6 PK	68.2	-5.6	1.75 V	187	56.1	6.5
2	*5795.00	114.5 PK			1.75 V	187	73.4	41.1
3	*5795.00	103.4 AV			1.75 V	187	62.3	41.1
4	#5928.00	67.9 PK	68.2	-0.3	1.75 V	187	60.8	7.1
5	11590.00	61.5 PK	74.0	-12.5	1.23 V	234	41.3	20.2
6	11590.00	48.8 AV	54.0	-5.2	1.23 V	234	28.6	20.2

**REMARKS:**

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



802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5628.00	59.6 PK	68.2	-8.6	1.00 H	211	53.1	6.5
2	*5775.00	104.6 PK			1.00 H	211	63.6	41.0
3	*5775.00	92.7 AV			1.00 H	211	51.7	41.0
4	#5933.60	60.6 PK	68.2	-7.6	1.00 H	211	53.5	7.1
5	11550.00	62.8 PK	74.0	-11.2	1.01 H	40	42.5	20.3
6	11550.00	49.0 AV	54.0	-5.0	1.01 H	40	28.7	20.3

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)
<b>1</b>	<b>#5650.40</b>	<b>68.4 PK</b>	<b>68.5</b>	<b>-0.1</b>	<b>1.86 V</b>	<b>182</b>	<b>61.9</b>	<b>6.5</b>
2	*5775.00	107.3 PK			1.86 V	182	66.3	41.0
3	*5775.00	97.2 AV			1.86 V	182	56.2	41.0
4	#5929.60	64.7 PK	68.2	-3.5	1.86 V	182	57.6	7.1
5	11550.00	62.5 PK	74.0	-11.5	1.25 V	215	42.2	20.3
6	11550.00	48.8 AV	54.0	-5.2	1.25 V	215	28.5	20.3

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

Test Mode B

2TX

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	59.2 PK	68.2	-9.0	1.07 H	220	52.7	6.5
2	*5745.00	118.7 PK			1.07 H	220	77.8	40.9
3	*5745.00	107.3 AV			1.07 H	220	66.4	40.9
4	#5992.00	59.8 PK	68.2	-8.4	1.07 H	220	52.6	7.2
5	11490.00	61.7 PK	74.0	-12.3	1.36 H	97	41.2	20.5
6	11490.00	49.5 AV	54.0	-4.5	1.36 H	97	29.0	20.5

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	#5647.20	62.0 PK	68.2	-6.2	1.72 V	186	55.5	6.5
2	*5745.00	121.6 PK			1.72 V	186	80.7	40.9
3	*5745.00	111.2 AV			1.72 V	186	70.3	40.9
4	#5977.60	61.0 PK	68.2	-7.2	1.72 V	186	53.8	7.2
5	11490.00	63.5 PK	74.0	-10.5	1.08 V	54	43.0	20.5
6	11490.00	50.9 AV	54.0	-3.1	1.08 V	54	30.4	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5645.60	59.4 PK	68.2	-8.8	1.00 H	157	52.9	6.5
2	*5785.00	117.9 PK			1.00 H	157	76.9	41.0
3	*5785.00	106.3 AV			1.00 H	157	65.3	41.0
4	#5926.40	60.5 PK	68.2	-7.7	1.00 H	157	53.4	7.1
5	11570.00	61.1 PK	74.0	-12.9	1.06 H	39	40.8	20.3
6	11570.00	48.7 AV	54.0	-5.3	1.06 H	39	28.4	20.3

**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	#5642.40	62.9 PK	68.2	-5.3	1.72 V	187	56.4	6.5
2	*5785.00	122.3 PK			1.72 V	187	81.3	41.0
3	*5785.00	111.8 AV			1.72 V	187	70.8	41.0
4	#5931.20	66.6 PK	68.2	-1.6	1.72 V	187	59.5	7.1
5	11570.00	62.9 PK	74.0	-11.1	1.36 V	98	42.6	20.3
6	11570.00	50.8 AV	54.0	-3.2	1.36 V	98	30.5	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5635.20	58.7 PK	68.2	-9.5	1.00 H	219	52.2	6.5
2	*5825.00	118.0 PK			1.00 H	219	76.8	41.2
3	*5825.00	107.6 AV			1.00 H	219	66.4	41.2
4	#5940.00	59.9 PK	68.2	-8.3	1.00 H	219	52.8	7.1
5	11650.00	61.1 PK	74.0	-12.9	1.36 H	98	41.2	19.9
6	11650.00	48.3 AV	54.0	-5.7	1.36 H	98	28.4	19.9

**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	#5650.40	59.0 PK	68.5	-9.5	1.75 V	182	52.5	6.5
2	*5825.00	122.0 PK			1.75 V	182	80.8	41.2
3	*5825.00	111.5 AV			1.75 V	182	70.3	41.2
4	#5926.40	64.1 PK	68.2	-4.1	1.75 V	182	57.0	7.1
5	11650.00	62.4 PK	74.0	-11.6	1.33 V	27	42.5	19.9
6	11650.00	50.0 AV	54.0	-4.0	1.33 V	27	30.1	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5643.20	60.3 PK	68.2	-7.9	1.10 H	219	53.8	6.5
2	*5745.00	117.4 PK			1.10 H	219	76.5	40.9
3	*5745.00	106.8 AV			1.10 H	219	65.9	40.9
4	#5977.60	59.6 PK	68.2	-8.6	1.10 H	219	52.4	7.2
5	11490.00	62.0 PK	74.0	-12.0	1.32 H	69	41.5	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.32 H	69	28.7	20.5

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	#5648.80	62.5 PK	68.2	-5.7	1.71 V	180	56.0	6.5
2	*5745.00	122.3 PK			1.71 V	180	81.4	40.9
3	*5745.00	111.0 AV			1.71 V	180	70.1	40.9
4	#5992.80	60.5 PK	68.2	-7.7	1.71 V	180	53.3	7.2
5	11490.00	63.1 PK	74.0	-10.9	1.32 V	68	42.6	20.5
6	11490.00	50.9 AV	54.0	-3.1	1.32 V	68	30.4	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5649.60	59.5 PK	68.2	-8.7	1.02 H	156	53.0	6.5
2	*5785.00	117.5 PK			1.02 H	156	76.5	41.0
3	*5785.00	107.0 AV			1.02 H	156	66.0	41.0
4	#5929.60	62.2 PK	68.2	-6.0	1.02 H	156	55.1	7.1
5	11570.00	61.1 PK	74.0	-12.9	1.06 H	98	40.8	20.3
6	11570.00	48.5 AV	54.0	-5.5	1.06 H	98	28.2	20.3

**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	#5632.00	66.3 PK	68.2	-1.9	1.56 V	182	59.8	6.5
2	*5785.00	122.4 PK			1.56 V	182	81.4	41.0
3	*5785.00	111.8 AV			1.56 V	182	70.8	41.0
4	#5944.80	62.6 PK	68.2	-5.6	1.56 V	182	55.5	7.1
5	11570.00	63.1 PK	74.0	-10.9	1.65 V	87	42.8	20.3
6	11570.00	50.8 AV	54.0	-3.2	1.65 V	87	30.5	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5635.20	58.4 PK	68.2	-9.8	1.00 H	219	51.9	6.5
2	*5825.00	118.0 PK			1.00 H	219	76.8	41.2
3	*5825.00	106.6 AV			1.00 H	219	65.4	41.2
4	#5924.80	60.7 PK	68.3	-7.6	1.00 H	219	53.6	7.1
5	11650.00	61.2 PK	74.0	-12.8	1.17 H	41	41.3	19.9
6	11650.00	48.3 AV	54.0	-5.7	1.17 H	41	28.4	19.9

**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	#5624.00	59.5 PK	68.2	-8.7	1.70 V	183	53.0	6.5
2	*5825.00	123.2 PK			1.70 V	183	82.0	41.2
3	*5825.00	111.7 AV			1.70 V	183	70.5	41.2
4	#5931.20	64.5 PK	68.2	-3.7	1.70 V	183	57.4	7.1
5	11650.00	62.8 PK	74.0	-11.2	1.28 V	74	42.9	19.9
6	11650.00	50.0 AV	54.0	-4.0	1.28 V	74	30.1	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5635.20	60.3 PK	68.2	-7.9	1.06 H	223	53.8	6.5
2	*5755.00	113.0 PK			1.06 H	223	72.0	41.0
3	*5755.00	102.2 AV			1.06 H	223	61.2	41.0
4	#5952.00	57.7 PK	68.2	-10.5	1.06 H	223	50.5	7.2
5	11510.00	61.2 PK	74.0	-12.8	1.32 H	69	40.8	20.4
6	11510.00	48.8 AV	54.0	-5.2	1.32 H	69	28.4	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.00	67.9 PK	68.2	-0.3	1.71 V	186	61.4	6.5
2	*5755.00	118.9 PK			1.71 V	186	77.9	41.0
3	*5755.00	108.7 AV			1.71 V	186	67.7	41.0
4	#5927.20	62.8 PK	68.2	-5.4	1.71 V	186	55.7	7.1
5	11510.00	63.0 PK	74.0	-11.0	1.09 V	64	42.6	20.4
6	11510.00	50.5 AV	54.0	-3.5	1.09 V	64	30.1	20.4

REMARKS:

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



CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5648.80	59.6 PK	68.2	-8.6	1.02 H	217	53.1	6.5
2	*5795.00	114.1 PK			1.02 H	217	73.0	41.1
3	*5795.00	102.7 AV			1.02 H	217	61.6	41.1
4	#5941.60	61.9 PK	68.2	-6.3	1.02 H	217	54.8	7.1
5	11590.00	60.5 PK	74.0	-13.5	1.07 H	41	40.3	20.2
6	11590.00	48.6 AV	54.0	-5.4	1.07 H	41	28.4	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.00	65.3 PK	68.2	-2.9	1.50 V	182	58.8	6.5
2	*5795.00	118.4 PK			1.50 V	182	77.3	41.1
3	*5795.00	107.6 AV			1.50 V	182	66.5	41.1
4	#5925.60	66.5 PK	68.2	-1.7	1.50 V	182	59.4	7.1
5	11590.00	62.7 PK	74.0	-11.3	1.32 V	65	42.5	20.2
6	11590.00	50.3 AV	54.0	-3.7	1.32 V	65	30.1	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5646.40	63.5 PK	68.2	-4.7	1.09 H	221	57.0	6.5
2	*5775.00	104.7 PK			1.09 H	221	63.7	41.0
3	*5775.00	94.6 AV			1.09 H	221	53.6	41.0
4	#5972.80	60.0 PK	68.2	-8.2	1.09 H	221	52.8	7.2
5	11550.00	61.8 PK	74.0	-12.2	1.39 H	64	41.5	20.3
6	11550.00	48.7 AV	54.0	-5.3	1.39 H	64	28.4	20.3

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	#5637.60	67.1 PK	68.2	-1.1	1.65 V	181	60.6	6.5
2	*5775.00	111.8 PK			1.65 V	181	70.8	41.0
3	*5775.00	100.6 AV			1.65 V	181	59.6	41.0
4	#5927.20	64.0 PK	68.2	-4.2	1.65 V	181	56.9	7.1
5	11550.00	62.9 PK	74.0	-11.1	1.05 V	87	42.6	20.3
6	11550.00	50.4 AV	54.0	-3.6	1.05 V	87	30.1	20.3

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

Test Mode B

3TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5628.80	60.1 PK	68.2	-8.1	1.03 H	159	53.6	6.5
2	*5745.00	119.2 PK			1.03 H	159	78.3	40.9
3	*5745.00	108.6 AV			1.03 H	159	67.7	40.9
4	#5953.60	60.2 PK	68.2	-8.0	1.03 H	159	53.0	7.2
5	11490.00	63.1 PK	74.0	-10.9	1.02 H	74	42.6	20.5
6	11490.00	48.9 AV	54.0	-5.1	1.02 H	74	28.4	20.5
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	#5647.20	65.9 PK	68.2	-2.3	1.79 V	186	59.4	6.5
2	*5745.00	127.3 PK			1.79 V	186	86.4	40.9
3	*5745.00	116.7 AV			1.79 V	186	75.8	40.9
4	#5991.20	61.0 PK	68.2	-7.2	1.79 V	186	53.8	7.2
5	11490.00	63.5 PK	74.0	-10.5	1.07 V	85	43.0	20.5
6	11490.00	51.1 AV	54.0	-2.9	1.07 V	85	30.6	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5632.00	59.6 PK	68.2	-8.6	1.00 H	157	53.1	6.5
2	*5785.00	121.4 PK			1.00 H	157	80.4	41.0
3	*5785.00	109.1 AV			1.00 H	157	68.1	41.0
4	#5925.60	60.2 PK	68.2	-8.0	1.00 H	157	53.1	7.1
5	11570.00	61.1 PK	74.0	-12.9	1.15 H	169	40.8	20.3
6	11570.00	49.0 AV	54.0	-5.0	1.15 H	169	28.7	20.3

**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	#5649.60	66.0 PK	68.2	-2.2	1.78 V	186	59.5	6.5
2	*5785.00	127.0 PK			1.78 V	186	86.0	41.0
3	*5785.00	116.2 AV			1.78 V	186	75.2	41.0
4	#5924.00	65.8 PK	68.9	-3.1	1.78 V	186	58.7	7.1
5	11570.00	62.9 PK	74.0	-11.1	1.25 V	87	42.6	20.3
6	11570.00	50.8 AV	54.0	-3.2	1.25 V	87	30.5	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5638.40	59.0 PK	68.2	-9.2	1.10 H	162	52.5	6.5
2	*5825.00	120.2 PK			1.10 H	162	79.0	41.2
3	*5825.00	108.5 AV			1.10 H	162	67.3	41.2
4	#5922.40	60.8 PK	70.1	-9.3	1.10 H	162	53.7	7.1
5	11650.00	60.5 PK	74.0	-13.5	1.07 H	87	40.6	19.9
6	11650.00	48.4 AV	54.0	-5.6	1.07 H	87	28.5	19.9

**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	#5624.00	60.9 PK	68.2	-7.3	1.90 V	176	54.4	6.5
2	*5825.00	122.4 PK			1.90 V	176	81.2	41.2
3	*5825.00	111.5 AV			1.90 V	176	70.3	41.2
4	#5925.60	62.7 PK	68.2	-5.5	1.90 V	176	55.6	7.1
5	11590.00	62.8 PK	74.0	-11.2	1.36 V	98	42.6	20.2
6	11590.00	50.3 AV	54.0	-3.7	1.36 V	98	30.1	20.2

**REMARKS:**

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

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5643.20	59.7 PK	68.2	-8.5	1.14 H	152	53.2	6.5
2	*5745.00	117.4 PK			1.14 H	152	76.5	40.9
3	*5745.00	106.3 AV			1.14 H	152	65.4	40.9
4	#5979.20	60.2 PK	68.2	-8.0	1.14 H	152	53.0	7.2
5	11490.00	61.5 PK	74.0	-12.5	1.07 H	44	41.0	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.07 H	44	28.7	20.5

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	#5648.00	65.2 PK	68.2	-3.0	1.71 V	188	58.7	6.5
2	*5745.00	124.1 PK			1.71 V	188	83.2	40.9
3	*5745.00	112.1 AV			1.71 V	188	71.2	40.9
4	#5979.20	63.7 PK	68.2	-4.5	1.71 V	188	56.5	7.2
5	11490.00	63.1 PK	74.0	-10.9	1.06 V	38	42.6	20.5
6	11490.00	50.6 AV	54.0	-3.4	1.06 V	38	30.1	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5647.20	58.9 PK	68.2	-9.3	1.00 H	153	52.4	6.5
2	*5785.00	119.0 PK			1.00 H	153	78.0	41.0
3	*5785.00	108.6 AV			1.00 H	153	67.6	41.0
4	#5924.80	62.7 PK	68.3	-5.6	1.00 H	153	55.6	7.1
5	11570.00	61.1 PK	74.0	-12.9	1.06 H	31	40.8	20.3
6	11570.00	48.7 AV	54.0	-5.3	1.06 H	31	28.4	20.3

**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	#5643.20	64.8 PK	68.2	-3.4	1.92 V	187	58.3	6.5
2	*5785.00	124.2 PK			1.92 V	187	83.2	41.0
3	*5785.00	114.0 AV			1.92 V	187	73.0	41.0
4	#5927.20	64.4 PK	68.2	-3.8	1.92 V	187	57.3	7.1
5	11570.00	62.9 PK	74.0	-11.1	1.17 V	88	42.6	20.3
6	11570.00	50.9 AV	54.0	-3.1	1.17 V	88	30.6	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5645.60	58.8 PK	68.2	-9.4	1.00 H	157	52.3	6.5
2	*5825.00	118.0 PK			1.00 H	157	76.8	41.2
3	*5825.00	108.0 AV			1.00 H	157	66.8	41.2
4	#5932.00	60.5 PK	68.2	-7.7	1.00 H	157	53.4	7.1
5	11650.00	60.5 PK	74.0	-13.5	1.07 H	41	40.6	19.9
6	11650.00	48.9 AV	54.0	-5.1	1.07 H	41	29.0	19.9

**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	#5600.80	60.1 PK	68.2	-8.1	1.70 V	190	53.8	6.3
2	*5825.00	123.8 PK			1.70 V	190	82.6	41.2
3	*5825.00	112.9 AV			1.70 V	190	71.7	41.2
4	#5925.60	67.3 PK	68.2	-0.9	1.70 V	190	60.2	7.1
5	11590.00	63.0 PK	74.0	-11.0	1.36 V	98	42.8	20.2
6	11590.00	50.3 AV	54.0	-3.7	1.36 V	98	30.1	20.2

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5603.20	60.2 PK	68.2	-8.0	1.01 H	152	53.9	6.3
2	*5755.00	114.4 PK			1.01 H	152	73.4	41.0
3	*5755.00	104.6 AV			1.01 H	152	63.6	41.0
4	#5952.00	59.5 PK	68.2	-8.7	1.01 H	152	52.3	7.2
5	11510.00	60.4 PK	74.0	-13.6	1.05 H	87	40.0	20.4
6	11510.00	48.5 AV	54.0	-5.5	1.05 H	87	28.1	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.20	66.9 PK	68.2	-1.3	1.73 V	188	60.4	6.5
2	*5755.00	121.7 PK			1.73 V	188	80.7	41.0
3	*5755.00	109.9 AV			1.73 V	188	68.9	41.0
4	#5925.60	61.1 PK	68.2	-7.1	1.73 V	188	54.0	7.1
5	11510.00	63.0 PK	74.0	-11.0	1.58 V	74	42.6	20.4
6	11510.00	50.8 AV	54.0	-3.2	1.58 V	74	30.4	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5628.00	60.2 PK	68.2	-8.0	1.05 H	157	53.7	6.5
2	*5795.00	114.1 PK			1.05 H	157	73.0	41.1
3	*5795.00	103.9 AV			1.05 H	157	62.8	41.1
4	#5928.80	60.7 PK	68.2	-7.5	1.05 H	157	53.6	7.1
5	11590.00	61.1 PK	74.0	-12.9	1.36 H	98	40.9	20.2
6	11590.00	48.6 AV	54.0	-5.4	1.36 H	98	28.4	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	61.5 PK	68.2	-6.7	1.70 V	176	55.0	6.5
2	*5795.00	119.6 PK			1.70 V	176	78.5	41.1
3	*5795.00	109.2 AV			1.70 V	176	68.1	41.1
4	#5922.40	62.8 PK	70.1	-7.3	1.70 V	176	55.7	7.1
5	11590.00	63.0 PK	74.0	-11.0	1.08 V	94	42.8	20.2
6	11590.00	50.6 AV	54.0	-3.4	1.08 V	94	30.4	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5645.60	60.6 PK	68.2	-7.6	1.18 H	153	54.1	6.5
2	*5775.00	108.7 PK			1.18 H	153	67.7	41.0
3	*5775.00	98.4 AV			1.18 H	153	57.4	41.0
4	#5952.00	60.2 PK	68.2	-8.0	1.18 H	153	53.0	7.2
5	11550.00	61.8 PK	74.0	-12.2	1.05 H	69	41.5	20.3
6	11550.00	48.4 AV	54.0	-5.6	1.05 H	69	28.1	20.3

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	#5651.20	67.6 PK	69.1	-1.5	1.65 V	185	61.1	6.5
2	*5775.00	115.0 PK			1.65 V	185	74.0	41.0
3	*5775.00	104.8 AV			1.65 V	185	63.8	41.0
4	#5934.40	65.4 PK	68.2	-2.8	1.65 V	185	58.3	7.1
5	11550.00	62.9 PK	74.0	-11.1	1.63 V	58	42.6	20.3
6	11550.00	51.0 AV	54.0	-3.0	1.63 V	58	30.7	20.3

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

Test Mode B

4TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5603.20	59.3 PK	68.2	-8.9	1.05 H	48	53.0	6.3
2	*5745.00	119.8 PK			1.05 H	48	78.9	40.9
3	*5745.00	109.2 AV			1.05 H	48	68.3	40.9
4	#5976.80	60.0 PK	68.2	-8.2	1.05 H	48	52.8	7.2
5	11490.00	61.0 PK	74.0	-13.0	1.36 H	97	40.5	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.36 H	97	28.7	20.5
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	#5645.60	62.5 PK	68.2	-5.7	1.23 V	10	56.0	6.5
2	*5745.00	125.6 PK			1.23 V	10	84.7	40.9
3	*5745.00	115.7 AV			1.23 V	10	74.8	40.9
4	#5976.80	63.7 PK	68.2	-4.5	1.23 V	10	56.5	7.2
5	11490.00	63.1 PK	74.0	-10.9	1.29 V	64	42.6	20.5
6	11490.00	50.9 AV	54.0	-3.1	1.29 V	64	30.4	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5628.00	60.2 PK	68.2	-8.0	1.17 H	47	53.7	6.5
2	*5785.00	121.7 PK			1.17 H	47	80.7	41.0
3	*5785.00	110.5 AV			1.17 H	47	69.5	41.0
4	#5930.40	59.7 PK	68.2	-8.5	1.17 H	47	52.6	7.1
5	11570.00	60.9 PK	74.0	-13.1	1.29 H	64	40.6	20.3
6	11570.00	49.2 AV	54.0	-4.8	1.29 H	64	28.9	20.3

**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	#5632.00	66.8 PK	68.2	-1.4	2.06 V	11	60.3	6.5
2	*5785.00	126.9 PK			2.06 V	11	85.9	41.0
3	*5785.00	116.2 AV			2.06 V	11	75.2	41.0
4	#5926.40	66.7 PK	68.2	-1.5	2.06 V	11	59.6	7.1
5	11570.00	62.9 PK	74.0	-11.1	1.29 V	64	42.6	20.3
6	11570.00	50.7 AV	54.0	-3.3	1.29 V	64	30.4	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5623.20	60.2 PK	68.2	-8.0	1.02 H	341	53.7	6.5
2	*5825.00	118.2 PK			1.02 H	341	77.0	41.2
3	*5825.00	108.7 AV			1.02 H	341	67.5	41.2
4	#5936.00	60.5 PK	68.2	-7.7	1.02 H	341	53.4	7.1
5	11650.00	60.4 PK	74.0	-13.6	1.32 H	74	40.5	19.9
6	11650.00	48.6 AV	54.0	-5.4	1.32 H	74	28.7	19.9

**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	#5633.60	60.6 PK	68.2	-7.6	2.03 V	9	54.1	6.5
2	*5825.00	126.4 PK			2.03 V	9	85.2	41.2
3	*5825.00	115.8 AV			2.03 V	9	74.6	41.2
4	#5933.60	64.5 PK	68.2	-3.7	2.03 V	9	57.4	7.1
5	11650.00	62.4 PK	74.0	-11.6	1.32 V	64	42.5	19.9
6	11650.00	50.3 AV	54.0	-3.7	1.32 V	64	30.4	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5648.00	59.7 PK	68.2	-8.5	1.04 H	333	53.2	6.5
2	*5745.00	118.9 PK			1.04 H	333	78.0	40.9
3	*5745.00	108.0 AV			1.04 H	333	67.1	40.9
4	#5978.40	60.4 PK	68.2	-7.8	1.04 H	333	53.2	7.2
5	11490.00	61.1 PK	74.0	-12.9	1.17 H	41	40.6	20.5
6	11490.00	48.9 AV	54.0	-5.1	1.17 H	41	28.4	20.5

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	#5649.60	65.3 PK	68.2	-2.9	1.16 V	10	58.8	6.5
2	*5745.00	126.5 PK			1.16 V	360	85.6	40.9
3	*5745.00	115.0 AV			1.16 V	360	74.1	40.9
4	#5976.00	63.3 PK	68.2	-4.9	1.16 V	10	56.1	7.2
5	11490.00	62.6 PK	74.0	-11.4	1.20 V	85	42.1	20.5
6	11490.00	50.9 AV	54.0	-3.1	1.20 V	85	30.4	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5630.40	59.7 PK	68.2	-8.5	1.00 H	43	53.2	6.5
2	*5785.00	120.8 PK			1.00 H	43	79.8	41.0
3	*5785.00	109.5 AV			1.00 H	43	68.5	41.0
4	#5944.00	61.3 PK	68.2	-6.9	1.00 H	43	54.2	7.1
5	11570.00	60.5 PK	74.0	-13.5	1.32 H	64	40.2	20.3
6	11570.00	48.4 AV	54.0	-5.6	1.32 H	64	28.1	20.3

**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	#5648.00	66.5 PK	68.2	-1.7	2.06 V	12	60.0	6.5
2	*5785.00	126.1 PK			2.06 V	12	85.1	41.0
3	*5785.00	115.3 AV			2.06 V	12	74.3	41.0
4	#5926.40	64.3 PK	68.2	-3.9	2.06 V	12	57.2	7.1
5	11570.00	60.9 PK	74.0	-13.1	1.05 V	87	40.6	20.3
6	11570.00	50.3 AV	54.0	-3.7	1.05 V	87	30.0	20.3

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



CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5612.00	59.6 PK	68.2	-8.6	1.04 H	40	53.3	6.3
2	*5825.00	120.0 PK			1.04 H	40	78.8	41.2
3	*5825.00	108.6 AV			1.04 H	40	67.4	41.2
4	#5922.40	64.4 PK	70.1	-5.7	1.04 H	40	57.3	7.1
5	11650.00	60.5 PK	74.0	-13.5	1.36 H	98	40.6	19.9
6	11650.00	48.6 AV	54.0	-5.4	1.36 H	98	28.7	19.9

**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	#5648.80	61.7 PK	68.2	-6.5	1.96 V	11	55.2	6.5
2	*5825.00	125.3 PK			1.96 V	11	84.1	41.2
3	*5825.00	114.7 AV			1.96 V	11	73.5	41.2
4	#5924.00	66.8 PK	68.9	-2.1	1.96 V	11	59.7	7.1
5	11650.00	62.5 PK	74.0	-11.5	1.15 V	87	42.6	19.9
6	11650.00	50.0 AV	54.0	-4.0	1.15 V	87	30.1	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5627.20	58.4 PK	68.2	-9.8	1.00 H	335	51.9	6.5
2	*5755.00	114.0 PK			1.00 H	335	73.0	41.0
3	*5755.00	104.0 AV			1.00 H	335	63.0	41.0
4	#5989.60	59.1 PK	68.2	-9.1	1.00 H	335	51.9	7.2
5	11510.00	61.3 PK	74.0	-12.7	1.07 H	85	40.9	20.4
6	11510.00	49.4 AV	54.0	-4.6	1.07 H	85	29.0	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	65.8 PK	68.2	-2.4	1.99 V	11	59.3	6.5
2	*5755.00	121.1 PK			1.99 V	11	80.1	41.0
3	*5755.00	110.9 AV			1.99 V	11	69.9	41.0
4	#5930.40	62.3 PK	68.2	-5.9	1.99 V	11	55.2	7.1
5	11510.00	62.8 PK	74.0	-11.2	1.36 V	98	42.4	20.4
6	11510.00	50.8 AV	54.0	-3.2	1.36 V	98	30.4	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5637.60	60.5 PK	68.2	-7.7	1.00 H	44	54.0	6.5
2	*5795.00	115.2 PK			1.00 H	44	74.1	41.1
3	*5795.00	104.9 AV			1.00 H	44	63.8	41.1
4	#5932.00	62.8 PK	68.2	-5.4	1.00 H	44	55.7	7.1
5	11590.00	60.7 PK	74.0	-13.3	1.36 H	98	40.5	20.2
6	11590.00	48.9 AV	54.0	-5.1	1.36 H	98	28.7	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5638.40	62.8 PK	68.2	-5.4	1.22 V	14	56.3	6.5
2	*5795.00	120.9 PK			1.22 V	14	79.8	41.1
3	*5795.00	110.5 AV			1.22 V	14	69.4	41.1
4	#5932.80	64.2 PK	68.2	-4.0	1.22 V	14	57.1	7.1
5	11590.00	61.8 PK	74.0	-12.2	1.22 V	54	41.6	20.2
6	11590.00	50.3 AV	54.0	-3.7	1.22 V	54	30.1	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5628.80	59.5 PK	68.2	-8.7	1.00 H	340	53.0	6.5
2	*5775.00	108.0 PK			1.00 H	340	67.0	41.0
3	*5775.00	97.6 AV			1.00 H	340	56.6	41.0
4	#5944.80	59.7 PK	68.2	-8.5	1.00 H	340	52.6	7.1
5	11550.00	61.3 PK	74.0	-12.7	1.47 H	41	41.0	20.3
6	11550.00	49.0 AV	54.0	-5.0	1.47 H	41	28.7	20.3

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	#5639.20	66.1 PK	68.2	-2.1	1.29 V	11	59.6	6.5
2	*5775.00	115.9 PK			1.29 V	11	74.9	41.0
3	*5775.00	105.4 AV			1.29 V	11	64.4	41.0
4	#5932.00	65.9 PK	68.2	-2.3	1.29 V	11	58.8	7.1
5	11550.00	62.8 PK	74.0	-11.2	1.26 V	87	42.5	20.3
6	11550.00	50.4 AV	54.0	-3.6	1.26 V	87	30.1	20.3

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

Test Mode D

1TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5632.00	61.6 PK	68.2	-6.6	1.65 H	58	55.1	6.5
2	*5745.00	115.2 PK			1.65 H	58	74.3	40.9
3	*5745.00	103.8 AV			1.65 H	58	62.9	40.9
4	#5964.00	60.0 PK	68.2	-8.2	1.65 H	58	52.8	7.2
5	11490.00	62.5 PK	74.0	-11.5	1.13 H	108	42.0	20.5
6	11490.00	49.5 AV	54.0	-4.5	1.13 H	108	29.0	20.5

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	#5642.40	63.0 PK	68.2	-5.2	1.39 V	6	56.5	6.5
2	*5745.00	118.5 PK			1.39 V	6	77.6	40.9
3	*5745.00	107.2 AV			1.39 V	6	66.3	40.9
4	#5967.20	59.5 PK	68.2	-8.7	1.39 V	6	52.3	7.2
5	11490.00	61.9 PK	74.0	-12.1	1.00 V	67	41.4	20.5
6	11490.00	48.6 AV	54.0	-5.4	1.00 V	67	28.1	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5625.60	58.7 PK	68.2	-9.5	1.57 H	58	52.2	6.5
2	*5785.00	116.0 PK			1.57 H	58	75.0	41.0
3	*5785.00	104.3 AV			1.57 H	58	63.3	41.0
4	#5949.60	60.3 PK	68.2	-7.9	1.57 H	58	53.1	7.2
5	11570.00	62.5 PK	74.0	-11.5	1.15 H	104	42.2	20.3
6	11570.00	49.4 AV	54.0	-4.6	1.15 H	104	29.1	20.3

**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	#5640.00	58.9 PK	68.2	-9.3	1.41 V	4	52.4	6.5
2	*5785.00	118.4 PK			1.41 V	4	77.4	41.0
3	*5785.00	106.8 AV			1.41 V	4	65.8	41.0
4	#5948.00	59.5 PK	68.2	-8.7	1.41 V	4	52.3	7.2
5	11570.00	62.0 PK	74.0	-12.0	1.00 V	62	41.7	20.3
6	11570.00	48.7 AV	54.0	-5.3	1.00 V	62	28.4	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5619.20	58.8 PK	68.2	-9.4	1.60 H	64	52.4	6.4
2	*5825.00	115.2 PK			1.60 H	64	74.0	41.2
3	*5825.00	103.3 AV			1.60 H	64	62.1	41.2
4	#5944.00	60.8 PK	68.2	-7.4	1.60 H	64	53.7	7.1
5	11650.00	61.9 PK	74.0	-12.1	1.17 H	101	42.0	19.9
6	11650.00	48.8 AV	54.0	-5.2	1.17 H	101	28.9	19.9

**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	#5624.00	58.9 PK	68.2	-9.3	1.30 V	6	52.4	6.5
2	*5825.00	118.3 PK			1.30 V	6	77.1	41.2
3	*5825.00	106.6 AV			1.30 V	6	65.4	41.2
4	#5960.00	60.1 PK	68.2	-8.1	1.30 V	6	52.9	7.2
5	11650.00	61.6 PK	74.0	-12.4	1.00 V	60	41.7	19.9
6	11650.00	48.0 AV	54.0	-6.0	1.00 V	60	28.1	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5628.00	60.3 PK	68.2	-7.9	1.61 H	62	53.8	6.5
2	*5745.00	114.9 PK			1.61 H	62	74.0	40.9
3	*5745.00	103.6 AV			1.61 H	62	62.7	40.9
4	#5937.60	60.2 PK	68.2	-8.0	1.61 H	62	53.1	7.1
5	11490.00	62.4 PK	74.0	-11.6	1.11 H	112	41.9	20.5
6	11490.00	49.6 AV	54.0	-4.4	1.11 H	112	29.1	20.5

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	#5639.20	63.4 PK	68.2	-4.8	1.40 V	7	56.9	6.5
2	*5745.00	119.4 PK			1.40 V	7	78.5	40.9
3	*5745.00	107.5 AV			1.40 V	7	66.6	40.9
4	#5963.20	59.9 PK	68.2	-8.3	1.40 V	7	52.7	7.2
5	11490.00	61.6 PK	74.0	-12.4	1.00 V	59	41.1	20.5
6	11490.00	48.8 AV	54.0	-5.2	1.00 V	59	28.3	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.80	59.3 PK	68.2	-8.9	1.63 H	60	52.8	6.5
2	*5785.00	115.7 PK			1.63 H	60	74.7	41.0
3	*5785.00	104.3 AV			1.63 H	60	63.3	41.0
4	#5942.40	60.0 PK	68.2	-8.2	1.63 H	60	52.9	7.1
5	11570.00	62.1 PK	74.0	-11.9	1.09 H	100	41.8	20.3
6	11570.00	49.5 AV	54.0	-4.5	1.09 H	100	29.2	20.3

**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	#5630.40	60.6 PK	68.2	-7.6	1.35 V	6	54.1	6.5
2	*5785.00	119.1 PK			1.35 V	6	78.1	41.0
3	*5785.00	107.3 AV			1.35 V	6	66.3	41.0
4	#5940.80	60.0 PK	68.2	-8.2	1.35 V	6	52.9	7.1
5	11570.00	61.3 PK	74.0	-12.7	1.00 V	55	41.0	20.3
6	11570.00	49.1 AV	54.0	-4.9	1.00 V	55	28.8	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5626.40	58.6 PK	68.2	-9.6	1.59 H	61	52.1	6.5
2	*5825.00	116.0 PK			1.59 H	61	74.8	41.2
3	*5825.00	103.9 AV			1.59 H	61	62.7	41.2
4	#5932.00	64.5 PK	68.2	-3.7	1.59 H	61	57.4	7.1
5	11650.00	61.6 PK	74.0	-12.4	1.10 H	114	41.7	19.9
6	11650.00	48.9 AV	54.0	-5.1	1.10 H	114	29.0	19.9

**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	#5628.00	58.4 PK	68.2	-9.8	1.36 V	9	51.9	6.5
2	*5825.00	118.3 PK			1.36 V	9	77.1	41.2
3	*5825.00	106.3 AV			1.36 V	9	65.1	41.2
4	#5946.40	63.4 PK	68.2	-4.8	1.36 V	9	56.3	7.1
5	11650.00	61.2 PK	74.0	-12.8	1.00 V	51	41.3	19.9
6	11650.00	48.4 AV	54.0	-5.6	1.00 V	51	28.5	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.00	61.2 PK	68.2	-7.0	1.67 H	64	54.7	6.5
2	*5755.00	110.5 PK			1.67 H	64	69.5	41.0
3	*5755.00	99.6 AV			1.67 H	64	58.6	41.0
4	#5933.60	59.3 PK	68.2	-8.9	1.67 H	64	52.2	7.1
5	11510.00	61.9 PK	74.0	-12.1	1.08 H	98	41.5	20.4
6	11510.00	49.1 AV	54.0	-4.9	1.08 H	98	28.7	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	68.0 PK	68.2	-0.2	1.38 V	4	61.5	6.5
2	*5755.00	113.4 PK			1.38 V	4	72.4	41.0
3	*5755.00	102.9 AV			1.38 V	4	61.9	41.0
4	#5944.80	59.6 PK	68.2	-8.6	1.38 V	4	52.5	7.1
5	11510.00	61.3 PK	74.0	-12.7	1.00 V	44	40.9	20.4
6	11510.00	48.9 AV	54.0	-5.1	1.00 V	44	28.5	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5640.00	63.0 PK	68.2	-5.2	1.68 H	59	56.5	6.5
2	*5795.00	112.6 PK			1.68 H	59	71.5	41.1
3	*5795.00	101.9 AV			1.68 H	59	60.8	41.1
4	#5945.60	66.2 PK	68.2	-2.0	1.68 H	59	59.1	7.1
5	11590.00	62.0 PK	74.0	-12.0	1.06 H	96	41.8	20.2
6	11590.00	49.2 AV	54.0	-4.8	1.06 H	96	29.0	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	65.8 PK	68.2	-2.4	1.28 V	4	59.3	6.5
2	*5795.00	114.9 PK			1.28 V	4	73.8	41.1
3	*5795.00	103.9 AV			1.28 V	4	62.8	41.1
<b>4</b>	<b>#5929.60</b>	<b>68.1 PK</b>	<b>68.2</b>	<b>-0.1</b>	<b>1.28 V</b>	<b>4</b>	<b>61.0</b>	<b>7.1</b>
5	11590.00	61.2 PK	74.0	-12.8	1.00 V	47	41.0	20.2
6	11590.00	48.8 AV	54.0	-5.2	1.00 V	47	28.6	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5648.80	63.1 PK	68.2	-5.1	1.74 H	65	56.6	6.5
2	*5775.00	105.1 PK			1.74 H	65	64.1	41.0
3	*5775.00	94.2 AV			1.74 H	65	53.2	41.0
4	#5932.80	62.1 PK	68.2	-6.1	1.74 H	65	55.0	7.1
5	11550.00	61.5 PK	74.0	-12.5	1.10 H	110	41.2	20.3
6	11550.00	48.9 AV	54.0	-5.1	1.10 H	110	28.6	20.3

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	#5648.80	67.8 PK	68.2	-0.4	1.33 V	4	61.3	6.5
2	*5775.00	108.6 PK			1.33 V	4	67.6	41.0
3	*5775.00	97.3 AV			1.33 V	4	56.3	41.0
4	#5932.00	62.7 PK	68.2	-5.5	1.33 V	4	55.6	7.1
5	11550.00	61.0 PK	74.0	-13.0	1.00 V	41	40.7	20.3
6	11550.00	48.5 AV	54.0	-5.5	1.00 V	41	28.2	20.3

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

Test Mode D

2TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5643.20	63.1 PK	68.2	-5.1	1.79 H	68	56.6	6.5
2	*5745.00	120.5 PK			1.79 H	68	79.6	40.9
3	*5745.00	109.3 AV			1.79 H	68	68.4	40.9
4	#5976.80	60.9 PK	68.2	-7.3	1.79 H	68	53.7	7.2
5	11490.00	63.1 PK	74.0	-10.9	1.32 H	64	42.6	20.5
6	11490.00	51.4 AV	54.0	-2.6	1.32 H	64	30.9	20.5

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	#5649.60	65.6 PK	68.2	-2.6	1.68 V	332	59.1	6.5
2	*5745.00	122.9 PK			1.68 V	332	82.0	40.9
3	*5745.00	112.1 AV			1.68 V	332	71.2	40.9
4	#5979.20	60.2 PK	68.2	-8.0	1.68 V	332	53.0	7.2
5	11490.00	64.5 PK	74.0	-9.5	1.47 V	85	44.0	20.5
6	11490.00	52.0 AV	54.0	-2.0	1.47 V	85	31.5	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5631.20	60.6 PK	68.2	-7.6	1.76 H	291	54.1	6.5
2	*5785.00	118.6 PK			1.76 H	291	77.6	41.0
3	*5785.00	107.5 AV			1.76 H	291	66.5	41.0
4	#5953.60	61.3 PK	68.2	-6.9	1.76 H	291	54.1	7.2
5	11570.00	61.5 PK	74.0	-12.5	1.20 H	63	41.2	20.3
6	11570.00	50.3 AV	54.0	-3.7	1.20 H	63	30.0	20.3

**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	#5644.80	62.7 PK	68.2	-5.5	1.81 V	8	56.2	6.5
2	*5785.00	122.7 PK			1.81 V	8	81.7	41.0
3	*5785.00	111.6 AV			1.81 V	8	70.6	41.0
4	#5930.40	62.5 PK	68.2	-5.7	1.81 V	8	55.4	7.1
5	11570.00	63.9 PK	74.0	-10.1	1.36 V	98	43.6	20.3
6	11570.00	51.5 AV	54.0	-2.5	1.36 V	98	31.2	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5632.00	59.1 PK	68.2	-9.1	1.76 H	289	52.6	6.5
2	*5825.00	118.8 PK			1.76 H	289	77.6	41.2
3	*5825.00	107.3 AV			1.76 H	289	66.1	41.2
4	#5927.20	60.8 PK	68.2	-7.4	1.76 H	289	53.7	7.1
5	11650.00	61.4 PK	74.0	-12.6	1.05 H	21	41.5	19.9
6	11650.00	50.0 AV	54.0	-4.0	1.05 H	21	30.1	19.9

**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	#5600.00	59.0 PK	68.2	-9.2	1.82 V	12	52.7	6.3
2	*5825.00	122.7 PK			1.82 V	12	81.5	41.2
3	*5825.00	111.5 AV			1.82 V	12	70.3	41.2
4	#5923.20	63.8 PK	69.5	-5.7	1.82 V	12	56.7	7.1
5	11650.00	62.5 PK	74.0	-11.5	1.52 V	26	42.6	19.9
6	11650.00	51.1 AV	54.0	-2.9	1.52 V	26	31.2	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5648.80	64.3 PK	68.2	-3.9	1.77 H	67	57.8	6.5
2	*5745.00	120.6 PK			1.77 H	67	79.7	40.9
3	*5745.00	109.2 AV			1.77 H	67	68.3	40.9
4	#5988.80	60.5 PK	68.2	-7.7	1.67 H	47	53.3	7.2
5	11490.00	62.4 PK	74.0	-11.6	1.36 H	98	41.9	20.5
6	11490.00	50.6 AV	54.0	-3.4	1.36 H	98	30.1	20.5

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	#5644.80	64.7 PK	68.2	-3.5	1.68 V	332	58.2	6.5
2	*5745.00	123.3 PK			1.68 V	332	82.4	40.9
3	*5745.00	111.4 AV			1.68 V	332	70.5	40.9
4	#5989.60	59.6 PK	68.2	-8.6	1.68 V	332	52.4	7.2
5	11490.00	63.4 PK	74.0	-10.6	1.32 V	69	42.9	20.5
6	11490.00	51.8 AV	54.0	-2.2	1.32 V	69	31.3	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5639.20	59.1 PK	68.2	-9.1	1.71 H	289	52.6	6.5
2	*5785.00	119.4 PK			1.71 H	289	78.4	41.0
3	*5785.00	107.8 AV			1.71 H	289	66.8	41.0
4	#5924.00	59.1 PK	68.9	-9.8	1.71 H	289	52.0	7.1
5	11570.00	62.2 PK	74.0	-11.8	1.06 H	39	41.9	20.3
6	11570.00	50.5 AV	54.0	-3.5	1.06 H	39	30.2	20.3

**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	#5649.60	63.9 PK	68.2	-4.3	1.78 V	8	57.4	6.5
2	*5785.00	123.2 PK			1.78 V	8	82.2	41.0
3	*5785.00	111.5 AV			1.78 V	8	70.5	41.0
4	#5927.20	62.8 PK	68.2	-5.4	1.78 V	8	55.7	7.1
5	11570.00	62.8 PK	74.0	-11.2	1.30 V	69	42.5	20.3
6	11570.00	51.9 AV	54.0	-2.1	1.30 V	69	31.6	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5632.80	59.3 PK	68.2	-8.9	2.30 H	279	52.8	6.5
2	*5825.00	118.2 PK			2.30 H	279	77.0	41.2
3	*5825.00	106.5 AV			2.30 H	279	65.3	41.2
4	#5927.20	62.3 PK	68.2	-5.9	2.30 H	279	55.2	7.1
5	11650.00	61.1 PK	74.0	-12.9	1.05 H	74	41.2	19.9
6	11650.00	50.0 AV	54.0	-4.0	1.05 H	74	30.1	19.9

**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	#5617.60	59.2 PK	68.2	-9.0	1.90 V	10	52.8	6.4
2	*5825.00	123.2 PK			1.90 V	10	82.0	41.2
3	*5825.00	111.7 AV			1.90 V	10	70.5	41.2
4	#5925.60	64.3 PK	68.2	-3.9	1.90 V	10	57.2	7.1
5	11650.00	62.5 PK	74.0	-11.5	1.36 V	97	42.6	19.9
6	11650.00	51.2 AV	54.0	-2.8	1.36 V	97	31.3	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.00	63.3 PK	68.2	-4.9	1.81 H	64	56.8	6.5
2	*5755.00	117.0 PK			1.81 H	64	76.0	41.0
3	*5755.00	106.0 AV			1.81 H	64	65.0	41.0
4	#5928.80	60.5 PK	68.2	-7.7	1.81 H	64	53.4	7.1
5	11510.00	61.7 PK	74.0	-12.3	1.05 H	21	41.3	20.4
6	11510.00	50.4 AV	54.0	-3.6	1.05 H	21	30.0	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.80	64.4 PK	68.2	-3.8	1.71 V	9	57.9	6.5
2	*5755.00	119.8 PK			1.71 V	9	78.8	41.0
3	*5755.00	108.1 AV			1.71 V	9	67.1	41.0
4	#5932.80	59.6 PK	68.2	-8.6	1.71 V	9	52.5	7.1
5	11510.00	63.9 PK	74.0	-10.1	1.36 V	98	43.5	20.4
6	11510.00	51.4 AV	54.0	-2.6	1.36 V	98	31.0	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5635.20	60.3 PK	68.2	-7.9	1.86 H	289	53.8	6.5
2	*5795.00	114.9 PK			1.86 H	289	73.8	41.1
3	*5795.00	103.6 AV			1.86 H	289	62.5	41.1
4	#5930.40	62.1 PK	68.2	-6.1	1.86 H	289	55.0	7.1
5	11590.00	61.7 PK	74.0	-12.3	1.32 H	65	41.5	20.2
6	11590.00	50.2 AV	54.0	-3.8	1.32 H	65	30.0	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5619.20	62.3 PK	68.2	-5.9	1.96 V	2	55.9	6.4
2	*5795.00	116.9 PK			1.96 V	2	75.8	41.1
3	*5795.00	106.0 AV			1.96 V	2	64.9	41.1
4	#5926.40	66.4 PK	68.2	-1.8	1.96 V	2	59.3	7.1
5	11590.00	62.8 PK	74.0	-11.2	1.32 V	64	42.6	20.2
6	11590.00	51.4 AV	54.0	-2.6	1.32 V	64	31.2	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5647.20	63.3 PK	68.2	-4.9	1.70 H	60	56.8	6.5
2	*5775.00	110.2 PK			1.70 H	60	69.2	41.0
3	*5775.00	99.7 AV			1.70 H	60	58.7	41.0
4	#5932.00	63.2 PK	68.2	-5.0	1.70 H	60	56.1	7.1
5	11550.00	60.8 PK	74.0	-13.2	1.06 H	302	40.5	20.3
6	11550.00	50.4 AV	54.0	-3.6	1.06 H	302	30.1	20.3

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	#5634.40	66.5 PK	68.2	-1.7	1.74 V	9	60.0	6.5
2	*5775.00	111.0 PK			1.74 V	9	70.0	41.0
3	*5775.00	100.7 AV			1.74 V	9	59.7	41.0
4	#5940.80	61.1 PK	68.2	-7.1	1.74 V	9	54.0	7.1
5	11550.00	62.9 PK	74.0	-11.1	1.05 V	21	42.6	20.3
6	11550.00	50.4 AV	54.0	-3.6	1.05 V	21	30.1	20.3

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

Test Mode D

3TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5644.00	61.2 PK	68.2	-7.0	1.84 H	307	54.7	6.5
2	*5745.00	121.4 PK			1.84 H	307	80.5	40.9
3	*5745.00	111.5 AV			1.84 H	307	70.6	40.9
4	#5976.00	59.9 PK	68.2	-8.3	1.84 H	307	52.7	7.2
5	11490.00	62.0 PK	74.0	-12.0	1.07 H	41	41.5	20.5
6	11490.00	50.6 AV	54.0	-3.4	1.07 H	41	30.1	20.5

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	#5648.80	65.3 PK	68.2	-2.9	2.02 V	8	58.8	6.5
2	*5745.00	126.1 PK			2.02 V	8	85.2	40.9
3	*5745.00	115.1 AV			2.02 V	8	74.2	40.9
4	#5977.60	61.6 PK	68.2	-6.6	2.02 V	8	54.4	7.2
5	11490.00	63.5 PK	74.0	-10.5	1.03 V	65	43.0	20.5
6	11490.00	52.4 AV	54.0	-1.6	1.03 V	65	31.9	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5620.80	62.1 PK	68.2	-6.1	1.77 H	312	55.7	6.4
2	*5785.00	124.5 PK			1.77 H	312	83.5	41.0
3	*5785.00	112.4 AV			1.77 H	312	71.4	41.0
4	#5930.40	64.7 PK	68.2	-3.5	1.77 H	312	57.6	7.1
5	11570.00	61.5 PK	74.0	-12.5	1.36 H	98	41.2	20.3
6	11570.00	50.3 AV	54.0	-3.7	1.36 H	98	30.0	20.3

**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	#5636.00	64.5 PK	68.2	-3.7	1.84 V	8	58.0	6.5
2	*5785.00	127.2 PK			1.84 V	8	86.2	41.0
3	*5785.00	115.5 AV			1.84 V	8	74.5	41.0
4	#5926.40	65.7 PK	68.2	-2.5	1.84 V	8	58.6	7.1
5	11570.00	63.1 PK	74.0	-10.9	1.39 V	65	42.8	20.3
6	11570.00	51.8 AV	54.0	-2.2	1.39 V	65	31.5	20.3

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



CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5637.60	59.2 PK	68.2	-9.0	1.83 H	310	52.7	6.5
2	*5825.00	122.5 PK			1.83 H	310	81.3	41.2
3	*5825.00	111.8 AV			1.83 H	310	70.6	41.2
4	#5924.80	63.9 PK	68.3	-4.4	1.83 H	310	56.8	7.1
5	11650.00	61.1 PK	74.0	-12.9	1.05 H	88	41.2	19.9
6	11650.00	49.9 AV	54.0	-4.1	1.05 H	88	30.0	19.9

**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	#5614.40	59.4 PK	68.2	-8.8	2.07 V	6	53.0	6.4
2	*5825.00	125.1 PK			2.07 V	6	83.9	41.2
3	*5825.00	114.2 AV			2.07 V	6	73.0	41.2
4	#5928.00	65.4 PK	68.2	-2.8	2.07 V	6	58.3	7.1
5	11650.00	62.6 PK	74.0	-11.4	1.05 V	97	42.7	19.9
6	11650.00	51.1 AV	54.0	-2.9	1.05 V	97	31.2	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5645.60	59.2 PK	68.2	-9.0	1.00 H	311	52.7	6.5
2	*5745.00	119.1 PK			1.00 H	311	78.2	40.9
3	*5745.00	108.2 AV			1.00 H	311	67.3	40.9
4	#5976.80	59.6 PK	68.2	-8.6	1.00 H	311	52.4	7.2
5	11490.00	62.9 PK	74.0	-11.1	1.05 H	20	42.4	20.5
6	11490.00	49.3 AV	54.0	-4.7	1.05 H	20	28.8	20.5

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	#5643.20	61.3 PK	68.2	-6.9	1.21 V	3	54.8	6.5
2	*5745.00	124.1 PK			1.21 V	3	83.2	40.9
3	*5745.00	112.7 AV			1.21 V	3	71.8	40.9
4	#5976.80	61.3 PK	68.2	-6.9	1.21 V	3	54.1	7.2
5	11490.00	61.9 PK	74.0	-12.1	1.00 V	57	41.4	20.5
6	11490.00	48.9 AV	54.0	-5.1	1.00 V	57	28.4	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5624.00	58.8 PK	68.2	-9.4	1.00 H	310	52.3	6.5
2	*5785.00	120.0 PK			1.00 H	310	79.0	41.0
3	*5785.00	108.9 AV			1.00 H	310	67.9	41.0
4	#5952.80	58.2 PK	68.2	-10.0	1.00 H	310	51.0	7.2
5	11490.00	62.8 PK	74.0	-11.2	1.07 H	23	42.3	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.07 H	23	28.7	20.5

**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	#5616.00	60.2 PK	68.2	-8.0	1.19 V	4	53.8	6.4
2	*5785.00	123.3 PK			1.19 V	4	82.3	41.0
3	*5785.00	112.4 AV			1.19 V	4	71.4	41.0
4	#5968.80	59.5 PK	68.2	-8.7	1.19 V	4	52.3	7.2
5	11570.00	62.4 PK	74.0	-11.6	1.00 V	59	42.1	20.3
6	11570.00	49.2 AV	54.0	-4.8	1.00 V	59	28.9	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5620.00	59.7 PK	68.2	-8.5	1.47 H	309	53.3	6.4
2	*5825.00	120.3 PK			1.47 H	309	79.1	41.2
3	*5825.00	109.6 AV			1.47 H	309	68.4	41.2
4	#5973.60	59.0 PK	68.2	-9.2	1.47 H	309	51.8	7.2
5	11650.00	61.5 PK	74.0	-12.5	1.11 H	18	41.6	19.9
6	11650.00	48.5 AV	54.0	-5.5	1.11 H	18	28.6	19.9

**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	#5626.40	58.7 PK	68.2	-9.5	1.14 V	3	52.2	6.5
2	*5825.00	122.2 PK			1.14 V	3	81.0	41.2
3	*5825.00	111.3 AV			1.14 V	3	70.1	41.2
4	#5944.80	60.1 PK	68.2	-8.1	1.14 V	3	53.0	7.1
5	11650.00	61.4 PK	74.0	-12.6	1.00 V	55	41.5	19.9
6	11650.00	48.6 AV	54.0	-5.4	1.00 V	55	28.7	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5650.40	65.0 PK	68.5	-3.5	1.30 H	310	58.5	6.5
2	*5755.00	116.2 PK			1.30 H	310	75.2	41.0
3	*5755.00	105.7 AV			1.30 H	310	64.7	41.0
4	#5968.80	59.0 PK	68.2	-9.2	1.30 H	310	51.8	7.2
5	11510.00	61.3 PK	74.0	-12.7	1.10 H	15	40.9	20.4
6	11510.00	48.7 AV	54.0	-5.3	1.10 H	15	28.3	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	66.9 PK	68.2	-1.3	1.14 V	5	60.4	6.5
2	*5755.00	120.2 PK			1.14 V	5	79.2	41.0
3	*5755.00	109.5 AV			1.14 V	5	68.5	41.0
4	#5955.20	60.3 PK	68.2	-7.9	1.14 V	5	53.1	7.2
5	11510.00	62.7 PK	74.0	-11.3	1.00 V	61	42.3	20.4
6	11510.00	49.3 AV	54.0	-4.7	1.00 V	61	28.9	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5630.40	60.1 PK	68.2	-8.1	1.57 H	307	53.6	6.5
2	*5795.00	116.5 PK			1.57 H	307	75.4	41.1
3	*5795.00	106.3 AV			1.57 H	307	65.2	41.1
4	#5942.40	62.2 PK	68.2	-6.0	1.57 H	307	55.1	7.1
5	11590.00	61.2 PK	74.0	-12.8	1.13 H	22	41.0	20.2
6	11590.00	48.6 AV	54.0	-5.4	1.13 H	22	28.4	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5631.20	64.2 PK	68.2	-4.0	1.14 V	4	57.7	6.5
2	*5795.00	119.1 PK			1.14 V	4	78.0	41.1
3	*5795.00	108.8 AV			1.14 V	4	67.7	41.1
4	#5938.40	64.0 PK	68.2	-4.2	1.14 V	4	56.9	7.1
5	11590.00	62.8 PK	74.0	-11.2	1.00 V	69	42.6	20.2
6	11590.00	49.0 AV	54.0	-5.0	1.00 V	69	28.8	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5648.80	64.9 PK	68.2	-3.3	1.46 H	309	58.4	6.5
2	*5775.00	110.1 PK			1.46 H	309	69.1	41.0
3	*5775.00	99.9 AV			1.46 H	309	58.9	41.0
4	#5936.80	61.3 PK	68.2	-6.9	1.46 H	309	54.2	7.1
5	11550.00	61.8 PK	74.0	-12.2	1.16 H	20	41.5	20.3
6	11550.00	49.4 AV	54.0	-4.6	1.16 H	20	29.1	20.3

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	#5632.80	66.6 PK	68.2	-1.6	1.17 V	4	60.1	6.5
2	*5775.00	113.5 PK			1.17 V	4	72.5	41.0
3	*5775.00	102.5 AV			1.17 V	4	61.5	41.0
4	#5937.60	62.2 PK	68.2	-6.0	1.17 V	4	55.1	7.1
5	11550.00	61.5 PK	74.0	-12.5	1.00 V	72	41.2	20.3
6	11550.00	49.2 AV	54.0	-4.8	1.00 V	72	28.9	20.3

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

Test Mode D

4TX

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5646.40	54.2 PK	68.2	-14.0	1.92 H	75	47.7	6.5
2	*5745.00	123.0 PK			1.92 H	75	82.1	40.9
3	*5745.00	112.4 AV			1.92 H	75	71.5	40.9
4	#5969.60	49.4 PK	68.2	-18.8	1.92 H	75	42.2	7.2
5	11490.00	61.4 PK	74.0	-12.6	1.47 H	87	40.9	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.47 H	87	28.7	20.5

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	#5645.60	67.8 PK	68.2	-0.4	2.00 V	7	61.3	6.5
2	*5745.00	128.2 PK			2.00 V	7	87.3	40.9
3	*5745.00	116.9 AV			2.00 V	7	76.0	40.9
4	#5987.20	63.4 PK	68.2	-4.8	2.00 V	7	56.2	7.2
5	11490.00	63.5 PK	74.0	-10.5	1.07 V	84	43.0	20.5
6	11490.00	50.9 AV	54.0	-3.1	1.07 V	84	30.4	20.5

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5650.40	62.7 PK	68.5	-5.8	2.05 H	71	56.2	6.5
2	*5785.00	124.2 PK			2.05 H	71	83.2	41.0
3	*5785.00	113.1 AV			2.05 H	71	72.1	41.0
4	#5928.80	62.5 PK	68.2	-5.7	2.05 H	71	55.4	7.1
5	11570.00	60.9 PK	74.0	-13.1	1.07 H	55	40.6	20.3
6	11570.00	49.0 AV	54.0	-5.0	1.07 H	55	28.7	20.3

**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	#5649.60	66.5 PK	68.2	-1.7	1.90 V	6	60.0	6.5
2	*5785.00	128.5 PK			1.90 V	6	87.5	41.0
3	*5785.00	117.2 AV			1.90 V	6	76.2	41.0
4	#5930.40	63.9 PK	68.2	-4.3	1.90 V	6	56.8	7.1
5	11570.00	63.3 PK	74.0	-10.7	1.47 V	85	43.0	20.3
6	11570.00	51.0 AV	54.0	-3.0	1.47 V	85	30.7	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5650.40	60.1 PK	68.5	-8.4	1.96 H	70	53.6	6.5
2	*5825.00	122.5 PK			1.96 H	70	81.3	41.2
3	*5825.00	111.8 AV			1.96 H	70	70.6	41.2
4	#5924.00	62.1 PK	68.9	-6.8	1.96 H	70	55.0	7.1
5	11650.00	60.5 PK	74.0	-13.5	1.07 H	85	40.6	19.9
6	11650.00	48.6 AV	54.0	-5.4	1.07 H	85	28.7	19.9

**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	#5647.20	60.2 PK	68.2	-8.0	1.83 V	3	53.7	6.5
2	*5825.00	127.7 PK			1.83 V	3	86.5	41.2
3	*5825.00	116.2 AV			1.83 V	3	75.0	41.2
4	#5931.20	67.6 PK	68.2	-0.6	1.83 V	3	60.5	7.1
5	11650.00	62.5 PK	74.0	-11.5	1.47 V	85	42.6	19.9
6	11650.00	50.3 AV	54.0	-3.7	1.47 V	85	30.4	19.9

**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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5637.60	60.6 PK	68.2	-7.6	1.10 H	76	54.1	6.5
2	*5745.00	122.0 PK			1.10 H	76	81.1	40.9
3	*5745.00	110.9 AV			1.10 H	76	70.0	40.9
4	#5979.20	59.8 PK	68.2	-8.4	1.10 H	76	52.6	7.2
5	11490.00	61.4 PK	74.0	-12.6	1.25 H	64	40.9	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.25 H	64	28.7	20.5
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	#5647.20	65.6 PK	68.2	-2.6	1.84 V	7	59.1	6.5
2	*5745.00	126.2 PK			1.84 V	7	85.3	40.9
3	*5745.00	115.0 AV			1.84 V	7	74.1	40.9
4	#5976.00	62.7 PK	68.2	-5.5	1.84 V	7	55.5	7.2
5	11650.00	62.5 PK	74.0	-11.5	1.47 V	85	42.6	19.9
6	11650.00	50.3 AV	54.0	-3.7	1.47 V	85	30.4	19.9

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5619.20	59.9 PK	68.2	-8.3	1.02 H	75	53.5	6.4
2	*5785.00	122.4 PK			1.02 H	75	81.4	41.0
3	*5785.00	111.3 AV			1.02 H	75	70.3	41.0
4	#5946.40	59.7 PK	68.2	-8.5	1.02 H	75	52.6	7.1
5	11570.00	60.9 PK	74.0	-13.1	1.47 H	85	40.6	20.3
6	11570.00	48.7 AV	54.0	-5.3	1.47 H	85	28.4	20.3

**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	#5632.00	65.9 PK	68.2	-2.3	1.75 V	6	59.4	6.5
2	*5785.00	125.8 PK			1.75 V	6	84.8	41.0
3	*5785.00	115.0 AV			1.75 V	6	74.0	41.0
4	#5928.00	65.3 PK	68.2	-2.9	1.75 V	6	58.2	7.1
5	11570.00	62.9 PK	74.0	-11.1	1.47 V	55	42.6	20.3
6	11570.00	50.8 AV	54.0	-3.2	1.47 V	55	30.5	20.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5614.40	59.7 PK	68.2	-8.5	1.64 H	311	53.3	6.4
2	*5825.00	123.2 PK			1.64 H	311	82.0	41.2
3	*5825.00	112.5 AV			1.64 H	311	71.3	41.2
4	#5930.40	63.6 PK	68.2	-4.6	1.64 H	311	56.5	7.1
5	11650.00	60.4 PK	74.0	-13.6	1.07 H	97	40.5	19.9
6	11650.00	48.3 AV	54.0	-5.7	1.07 H	97	28.4	19.9

**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	#5649.60	59.2 PK	68.2	-9.0	1.58 V	3	52.7	6.5
2	*5825.00	125.3 PK			1.58 V	3	84.1	41.2
3	*5825.00	114.9 AV			1.58 V	3	73.7	41.2
4	#5928.00	62.1 PK	68.2	-6.1	1.58 V	3	55.0	7.1
5	11650.00	62.0 PK	74.0	-12.0	1.32 V	64	42.1	19.9
6	11650.00	50.3 AV	54.0	-3.7	1.32 V	64	30.4	19.9

**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)
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 (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5649.60	63.5 PK	68.2	-4.7	1.08 H	75	57.0	6.5
2	*5755.00	117.6 PK			1.08 H	75	76.6	41.0
3	*5755.00	107.6 AV			1.08 H	75	66.6	41.0
4	#5926.40	61.4 PK	68.2	-6.8	1.08 H	75	54.3	7.1
5	11510.00	60.7 PK	74.0	-13.3	1.47 H	87	40.3	20.4
6	11510.00	49.1 AV	54.0	-4.9	1.47 H	87	28.7	20.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5639.20	66.9 PK	68.2	-1.3	1.98 V	6	60.4	6.5
2	*5755.00	121.7 PK			1.98 V	6	80.7	41.0
3	*5755.00	110.2 AV			1.98 V	6	69.2	41.0
4	#5931.20	59.8 PK	68.2	-8.4	1.98 V	6	52.7	7.1
5	11510.00	62.2 PK	74.0	-11.8	1.45 V	89	41.8	20.4
6	11510.00	50.8 AV	54.0	-3.2	1.45 V	89	30.4	20.4

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5636.00	61.0 PK	68.2	-7.2	1.86 H	72	54.5	6.5
2	*5795.00	117.7 PK			1.86 H	72	76.6	41.1
3	*5795.00	106.9 AV			1.86 H	72	65.8	41.1
4	#5932.80	61.2 PK	68.2	-7.0	1.86 H	72	54.1	7.1
5	11590.00	60.8 PK	74.0	-13.2	1.47 H	89	40.6	20.2
6	11590.00	48.9 AV	54.0	-5.1	1.47 H	89	28.7	20.2

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5621.60	64.9 PK	68.2	-3.3	1.75 V	5	58.5	6.4
2	*5795.00	121.0 PK			1.75 V	5	79.9	41.1
3	*5795.00	109.8 AV			1.75 V	5	68.7	41.1
4	#5928.80	67.8 PK	68.2	-0.4	1.75 V	5	60.7	7.1
5	11590.00	61.7 PK	74.0	-12.3	1.28 V	74	41.5	20.2
6	11590.00	50.7 AV	54.0	-3.3	1.28 V	74	30.5	20.2

**REMARKS:**

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

802.11ac (VHT80)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	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	#5638.40	61.4 PK	68.2	-6.8	1.95 H	73	54.9	6.5
2	*5775.00	111.3 PK			1.95 H	73	70.3	41.0
3	*5775.00	100.4 AV			1.95 H	73	59.4	41.0
4	#5933.60	62.2 PK	68.2	-6.0	1.95 H	73	55.1	7.1
5	11550.00	61.3 PK	74.0	-12.7	1.47 H	85	41.0	20.3
6	11550.00	49.0 AV	54.0	-5.0	1.47 H	85	28.7	20.3

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	#5649.60	67.2 PK	68.2	-1.0	1.81 V	5	60.7	6.5
2	*5775.00	113.6 PK			1.81 V	5	72.6	41.0
3	*5775.00	102.3 AV			1.81 V	5	61.3	41.0
4	#5933.60	61.5 PK	68.2	-6.7	1.81 V	5	54.4	7.1
5	11550.00	60.8 PK	74.0	-13.2	1.47 V	93	40.5	20.3
6	11550.00	49.0 AV	54.0	-5.0	1.47 V	93	28.7	20.3

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



Below 1GHz worst-case data:

Test Mode B

802.11a

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	41.53	35.2 QP	40.0	-4.8	1.72 H	15	49.9	-14.7
2	210.36	38.3 QP	43.5	-5.2	1.24 H	139	54.6	-16.3
3	419.92	34.2 QP	46.0	-11.8	1.99 H	5	44.3	-10.1
4	499.48	34.2 QP	46.0	-11.8	1.99 H	12	42.7	-8.5
5	573.21	33.0 QP	46.0	-13.0	1.49 H	7	40.2	-7.2
6	936.07	34.2 QP	46.0	-11.8	1.49 H	183	34.3	-0.1

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	37.66	37.2 QP	40.0	-2.8	1.48 V	22	52.0	-14.8
2	198.71	36.2 QP	43.5	-7.3	1.00 V	96	52.7	-16.5
3	361.71	30.8 QP	46.0	-15.2	1.49 V	6	42.0	-11.2
4	452.91	36.4 QP	46.0	-9.6	1.00 V	10	45.7	-9.3
5	747.84	18.8 QP	46.0	-27.2	1.24 V	279	21.8	-3.0
6	895.31	20.5 QP	46.0	-25.5	1.49 V	96	21.4	-0.9

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

Test Mode D

802.11a

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	41.53	35.1 QP	40.0	-4.9	1.62 H	11	49.8	-14.7
2	212.30	38.7 QP	43.5	-4.8	1.25 H	136	55.0	-16.3
3	417.98	34.4 QP	46.0	-11.6	2.00 H	37	44.5	-10.1
4	563.51	31.8 QP	46.0	-14.2	1.49 H	7	39.3	-7.5
5	701.28	26.4 QP	46.0	-19.6	1.00 H	63	31.0	-4.6
6	895.32	41.7 QP	46.0	-4.3	1.25 H	13	42.6	-0.9
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	35.71	32.0 QP	40.0	-8.0	1.48 V	160	47.0	-15.0
2	142.44	25.9 QP	43.5	-17.6	1.24 V	174	40.0	-14.1
3	212.30	31.8 QP	43.5	-11.7	2.00 V	191	48.1	-16.3
4	449.03	38.0 QP	46.0	-8.0	1.24 V	14	47.3	-9.3
5	893.38	38.1 QP	46.0	-7.9	2.00 V	10	39.0	-0.9
6	936.07	33.8 QP	46.0	-12.2	1.00 V	36	33.9	-0.1

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)
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

For Tested date: Dec. 07, 2016

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2015	Dec. 25, 2016
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

- Note:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
 2. The test was performed in HwaYa Shielded Room 1.  
 3. The VCCI Site Registration No. is C-2040.

### 4.2.3 Test Procedures

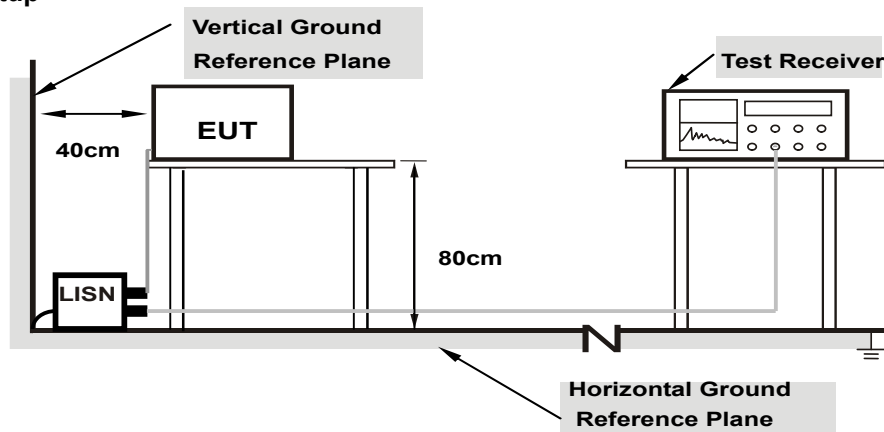
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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:** The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



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

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

#### 4.2.6 EUT Operating Conditions

Same as 4.1.6.

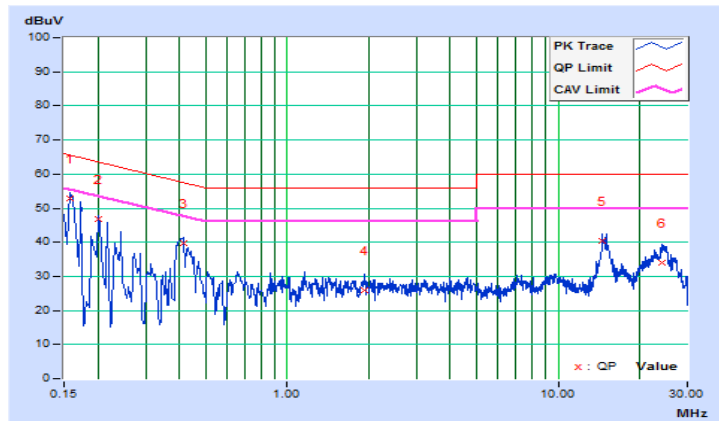
#### 4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	10.02	42.96	32.21	52.98	42.23	65.58	55.58	-12.60	-13.35
2	0.20084	10.03	36.64	27.02	46.67	37.05	63.58	53.58	-16.91	-16.53
3	0.41197	10.12	29.51	17.47	39.63	27.59	57.61	47.61	-17.98	-20.02
4	1.92514	10.26	15.75	7.25	26.01	17.51	56.00	46.00	-29.99	-28.49
5	14.55835	10.99	29.25	25.65	40.24	36.64	60.00	50.00	-19.76	-13.36
6	24.07529	11.61	22.47	16.81	34.08	28.42	60.00	50.00	-25.92	-21.58

#### 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.

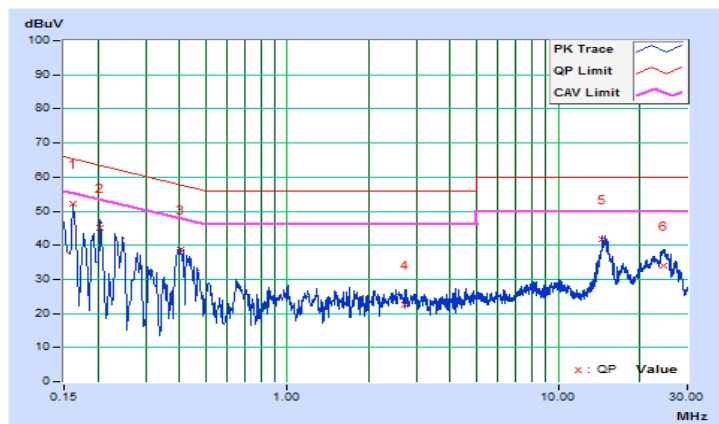


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16181	10.03	42.26	30.62	52.29	40.65	65.37	55.37	-13.08	-14.72
2	0.20474	10.04	35.24	21.44	45.28	31.48	63.42	53.42	-18.14	-21.94
3	0.40373	10.13	28.54	20.18	38.67	30.31	57.78	47.78	-19.11	-17.47
4	2.70714	10.33	12.19	4.59	22.52	14.92	56.00	46.00	-33.48	-31.08
<b>5</b>	<b>14.55835</b>	<b>11.08</b>	<b>30.76</b>	<b>27.72</b>	<b>41.84</b>	<b>38.80</b>	<b>60.00</b>	<b>50.00</b>	<b>-18.16</b>	<b>-11.20</b>
6	24.55622	11.79	22.24	16.77	34.03	28.56	60.00	50.00	-25.97	-21.44

**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.

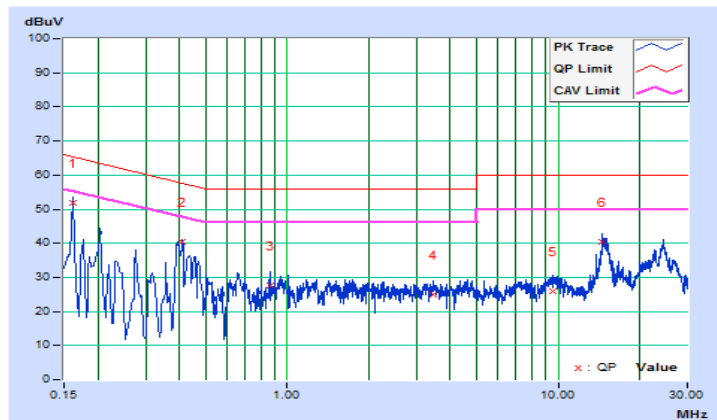


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16173	10.02	41.97	31.11	51.99	41.13	65.37	55.37	-13.38	-14.24
2	0.40806	10.12	30.45	20.80	40.57	30.92	57.69	47.69	-17.12	-16.77
3	0.86162	10.18	17.30	7.41	27.48	17.59	56.00	46.00	-28.52	-28.41
4	3.43831	10.37	14.46	7.79	24.83	18.16	56.00	46.00	-31.17	-27.84
5	9.55355	10.71	15.16	8.84	25.87	19.55	60.00	50.00	-34.13	-30.45
6	14.55444	10.99	29.52	26.46	40.51	37.45	60.00	50.00	-19.49	-12.55

**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.

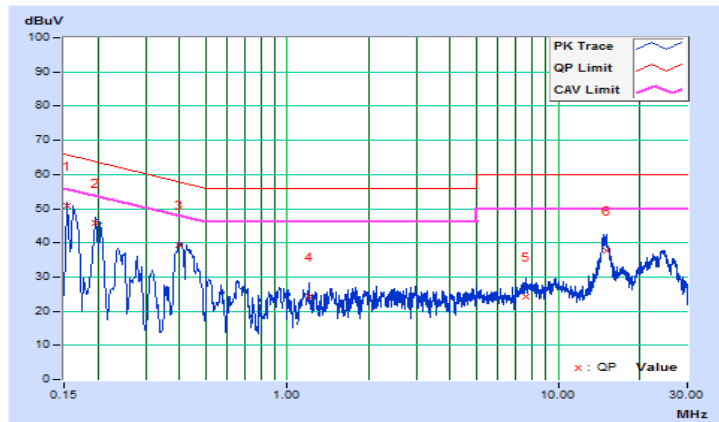


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15391	10.03	40.86	26.60	50.89	36.63	65.79
2	0.19692	10.04	35.78	25.60	45.82	35.64	63.74	53.74	-17.92	-18.10
3	0.40055	10.13	29.22	22.08	39.35	32.21	57.84	47.84	-18.49	-15.63
4	1.19788	10.22	14.15	6.13	24.37	16.35	56.00	46.00	-31.63	-29.65
5	7.63765	10.65	13.54	7.64	24.19	18.29	60.00	50.00	-35.81	-31.71
6	15.05101	11.11	26.71	22.14	37.82	33.25	60.00	50.00	-22.18	-16.75

**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  $N_{ANT}$ ;

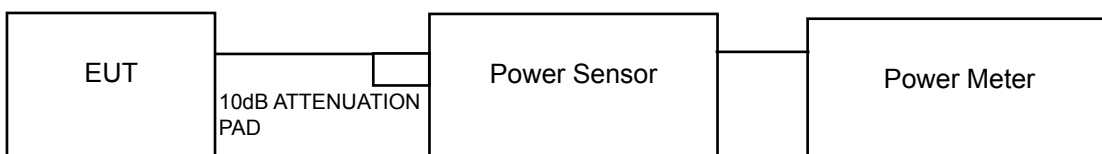
Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

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

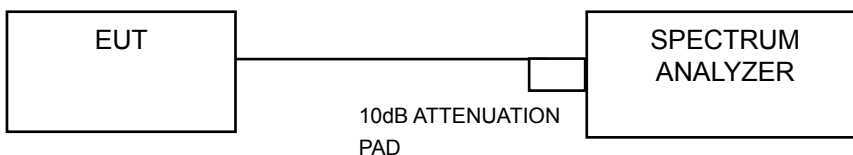
#### 4.3.2 Test Setup

For Power Output Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40)



For 802.11ac (VHT80)



#### 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

###### For 802.11a, 802.11n (HT20), 802.11n (HT40)

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

###### For 802.11ac (VHT80)

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

#### 4.3.5 Deviation 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:

#### Test Mode C

#### 1TX

#### 802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
149	5745	186.638	22.71	30	Pass
157	5785	<b>226.986</b>	23.56	30	Pass
165	5825	209.894	23.22	30	Pass

#### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
149	5745	183.654	22.64	30	Pass
157	5785	225.944	23.54	30	Pass
165	5825	214.289	23.31	30	Pass

#### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
151	5755	173.380	22.39	30	Pass
159	5795	183.654	22.64	30	Pass

#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
155	5775	70.146	18.46	30	Pass

## Test Mode C

### 2TX

#### 802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	22.71	22.82	378.064	25.78	30	Pass
157	5785	23.56	23.52	<b>451.891</b>	26.55	30	Pass
165	5825	22.74	22.56	368.234	25.66	30	Pass

#### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	22.64	22.51	361.892	25.59	26.99	Pass
157	5785	23.54	23.49	449.301	26.53	26.99	Pass
165	5825	22.77	22.62	372.044	25.71	26.99	Pass

Note: Directional gain = 6dBi + 10 log(2) = 9.01dBi > 6dBi, so the power limit shall be reduced to 30-(9.01-6) = 26.99dBm.

#### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	21.89	21.84	307.282	24.88	26.99	Pass
159	5795	22.02	21.98	316.982	25.01	26.99	Pass

Note: Directional gain = 6dBi + 10 log(2) = 9.01dBi > 6dBi, so the power limit shall be reduced to 30-(9.01-6) = 26.99dBm.

#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	16.42	16.88	92.606	19.67	26.99	Pass

Note: Directional gain = 6dBi + 10 log(2) = 9.01dBi > 6dBi, so the power limit shall be reduced to 30-(9.01-6) = 26.99dBm.

### Test Mode C

### 3TX

#### 802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
149	5745	22.71	22.82	22.69	563.844	27.51	30.00	Pass
157	5785	23.45	23.32	23.95	<b>684.405</b>	28.35	30.00	Pass
165	5825	22.74	22.48	23.11	569.587	27.56	30.00	Pass

#### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
149	5745	20.16	20.22	20.76	328.073	25.16	25.23	Pass
157	5785	20.12	20.18	20.66	323.447	25.10	25.23	Pass
165	5825	20.09	20.16	20.63	321.458	25.07	25.23	Pass

Note: Directional gain = 6dBi + 10 log(3) = 10.77dBi > 6dBi, so the power limit shall be reduced to 30-(10.77-6) = 25.23dBm.

#### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
151	5755	20.06	19.98	20.56	314.695	24.98	25.23	Pass
159	5795	20.12	20.16	20.61	321.635	25.07	25.23	Pass

Note: Directional gain = 6dBi + 10 log(3) = 10.77dBi > 6dBi, so the power limit shall be reduced to 30-(10.77-6) = 25.23dBm.

#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
155	5775	17.78	17.93	18.41	191.409	22.82	25.23	Pass

Note: Directional gain = 6dBi + 10 log(3) = 10.77dBi > 6dBi, so the power limit shall be reduced to 30-(10.77-6) = 25.23dBm.

## Test Mode C

### 4TX

#### 802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.28	22.30	22.26	22.32	677.743	28.31	30.00	Pass
157	5785	23.56	23.09	23.99	23.70	<b>915.724</b>	29.62	30.00	Pass
165	5825	21.68	21.69	21.97	21.56	595.419	27.75	30.00	Pass

#### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	17.62	17.52	17.63	17.49	228.352	23.59	23.98	Pass
157	5785	17.59	17.38	17.86	17.55	230.093	23.62	23.98	Pass
165	5825	17.72	17.35	17.62	17.69	230.040	23.62	23.98	Pass

Note: Directional gain = 6 dBi + 10 log(4) = 12.02dBi > 6dBi, so the power limit shall be reduced to 30-(12.02-6) = 23.98dBm.

#### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	17.98	17.26	17.65	17.33	228.302	23.59	23.98	Pass
159	5795	17.71	17.65	17.49	17.66	231.680	23.65	23.98	Pass

Note: Directional gain = 6 dBi + 10 log(4) = 12.02dBi > 6dBi, so the power limit shall be reduced to 30-(12.02-6) = 23.98dBm.

#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	17.58	17.81	17.31	18.06	235.475	23.72	23.98	Pass

Note: Directional gain = 6 dBi + 10 log(4) = 12.02dBi > 6dBi, so the power limit shall be reduced to 30-(12.02-6) = 23.98dBm.

## 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

##### Test Mode C

##### 1TX

##### 802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
149	5745	39.56
157	5785	42.36
165	5825	42.24

##### 802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
149	5745	39.44
157	5785	44.16
165	5825	44.52

##### 802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
151	5755	49.20
159	5795	53.16

##### 802.11ac (VHT80)

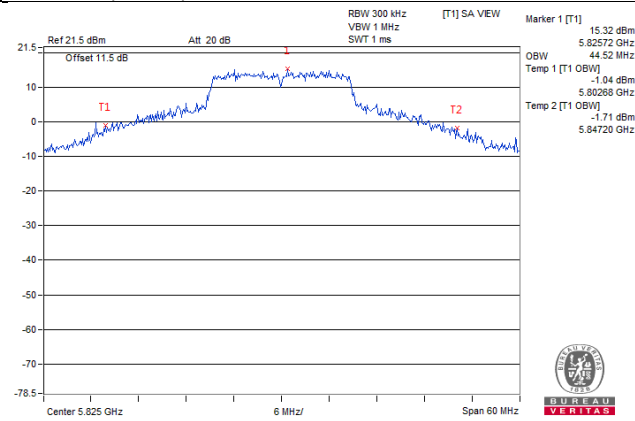
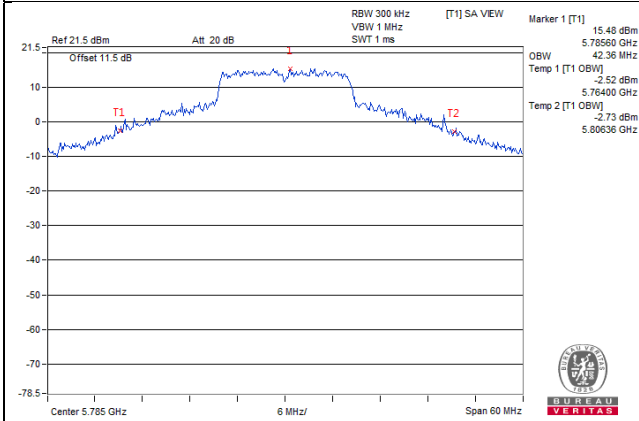
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
155	5775	76.32



Spectrum Plot of Worst Value

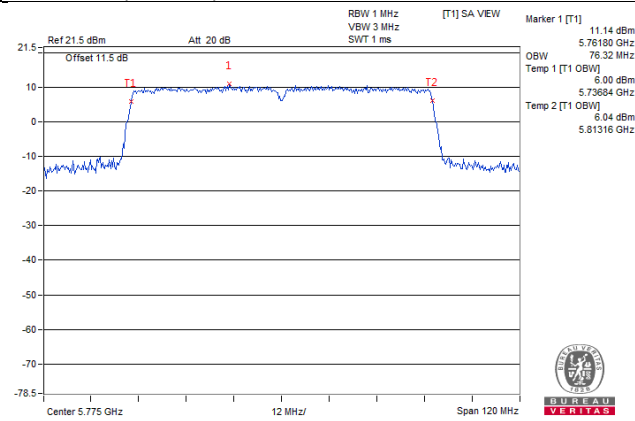
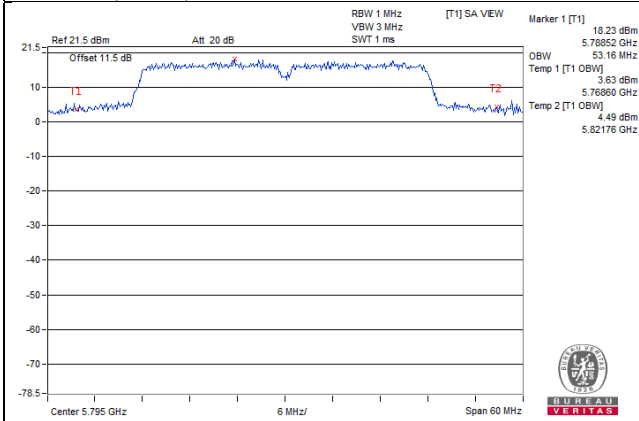
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



**Test Mode C**

**2TX**

**802.11a**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
149	5745	39.56	39.82
157	5785	43.08	43.08
165	5825	46.08	40.08

**802.11n (HT20)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
149	5745	39.56	39.82
157	5785	44.52	44.88
165	5825	40.80	42.12

**802.11n (HT40)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
151	5755	46.56	47.76
159	5795	49.56	49.92

**802.11ac (VHT80)**

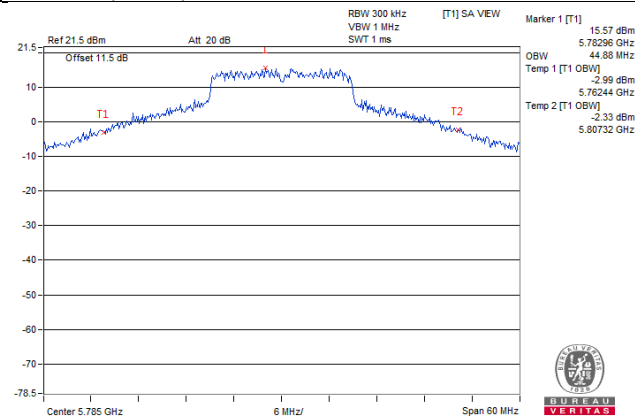
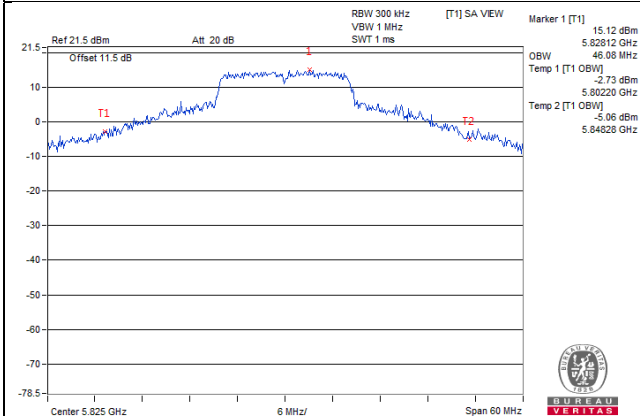
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
155	5775	76.32	76.56



### Spectrum Plot of Worst Value

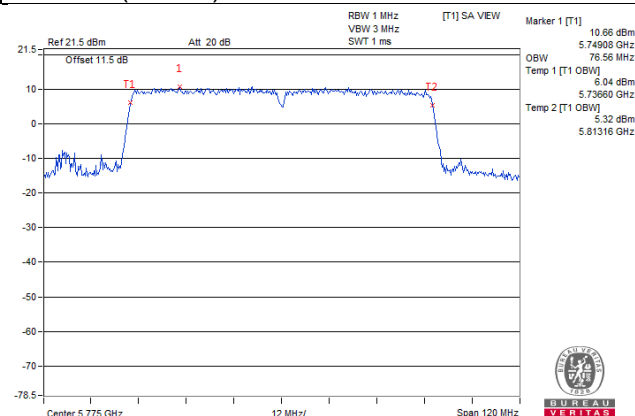
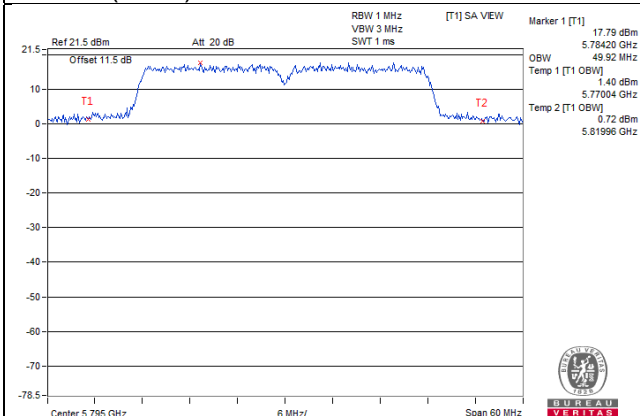
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



**Test Mode C**
**3TX**
**802.11a**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
149	5745	39.56	39.82	39.82
157	5785	43.80	44.28	39.24
165	5825	39.36	40.32	37.92

**802.11n (HT20)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
149	5745	30.96	32.16	28.20
157	5785	33.60	34.32	31.68
165	5825	33.00	33.60	31.92

**802.11n (HT40)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
151	5755	43.68	44.52	38.28
159	5795	47.76	48.12	40.80

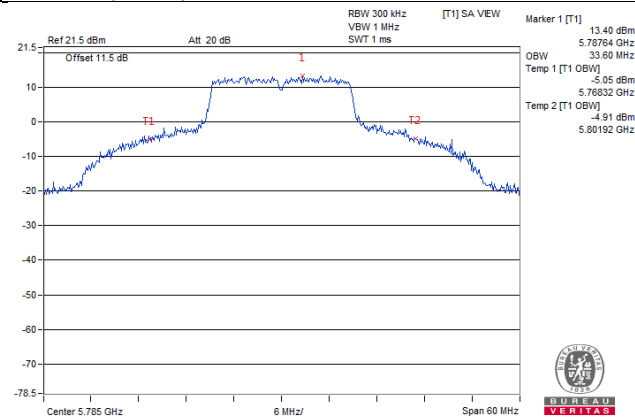
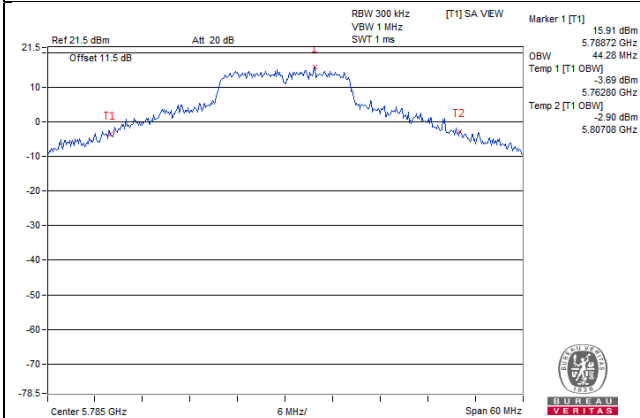
**802.11ac (VHT80)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
155	5775	76.32	76.56	76.56

Spectrum Plot of Worst Value

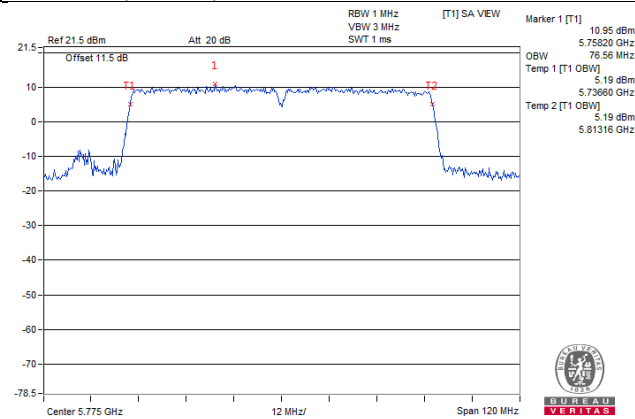
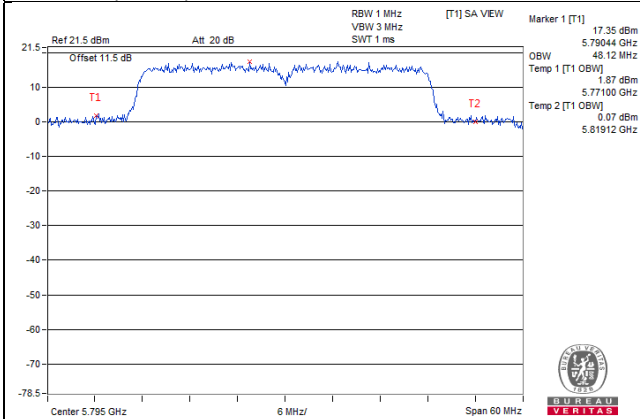
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



**Test Mode C**

**4TX**

**802.11a**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
149	5745	32.34	33.65	31.30	32.30
157	5785	44.88	44.64	44.76	45.24
165	5825	32.64	34.08	32.40	44.28

**802.11n (HT20)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
149	5745	33.96	35.40	32.16	35.40
157	5785	41.76	43.20	41.88	46.56
165	5825	33.84	35.88	33.72	41.88

**802.11n (HT40)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
151	5755	40.08	39.96	37.80	46.20
159	5795	39.96	42.12	38.04	46.92

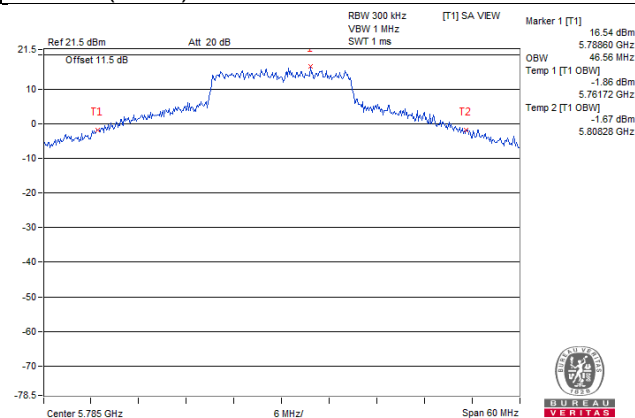
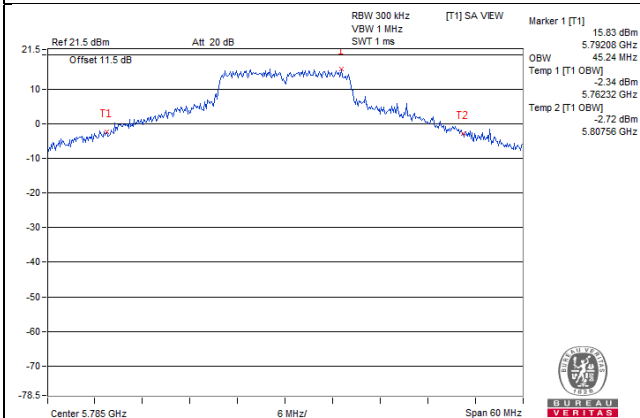
**802.11ac (VHT80)**

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
155	5775	76.08	76.08	76.08	76.32

Spectrum Plot of Worst Value

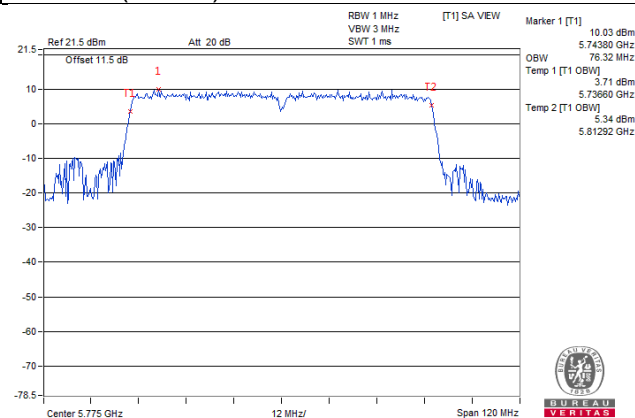
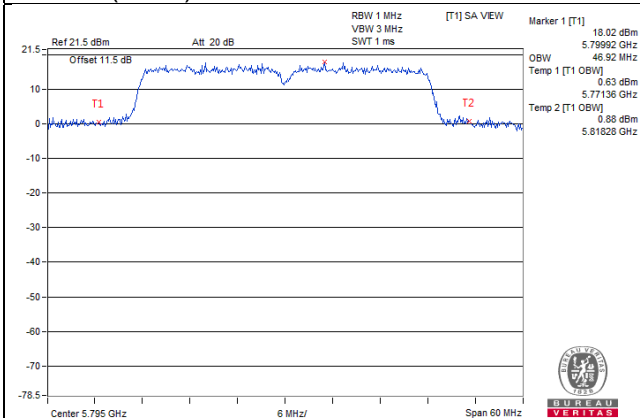
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)

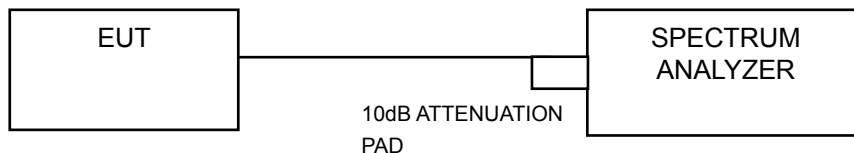


## 4.5 Peak Power Spectral Density Measurement

### 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-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 and add  $10 \log(1/\text{duty cycle})$
- 6) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where  $BWCF = 10 \log(500\text{kHz}/300\text{kHz})$

### 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

#### Test Mode C

#### 1TX

#### 802.11a

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
149	5745	2.09	4.31	0.23	4.54	30.00	Pass
157	5785	2.09	4.31	0.23	4.54	30.00	Pass
165	5825	1.87	4.09	0.23	4.32	30.00	Pass

#### 802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
149	5745	1.64	3.86	0.24	4.10	30.00	Pass
157	5785	1.54	3.76	0.24	4.00	30.00	Pass
165	5825	1.50	3.72	0.24	3.96	30.00	Pass

#### 802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
151	5755	-2.76	-0.54	0.45	-0.09	30.00	Pass
159	5795	-2.27	-0.05	0.45	0.40	30.00	Pass

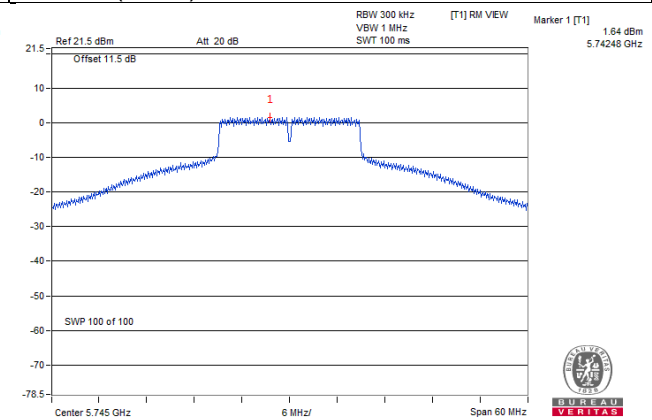
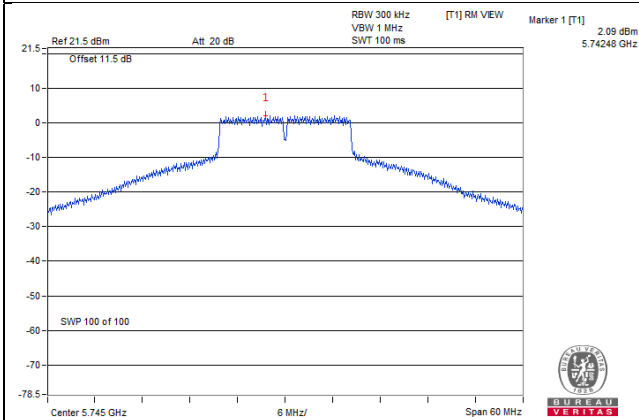
#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
155	5775	-8.41	-6.19	0.27	-5.92	30.00	Pass

### Spectrum Plot of Worst Value

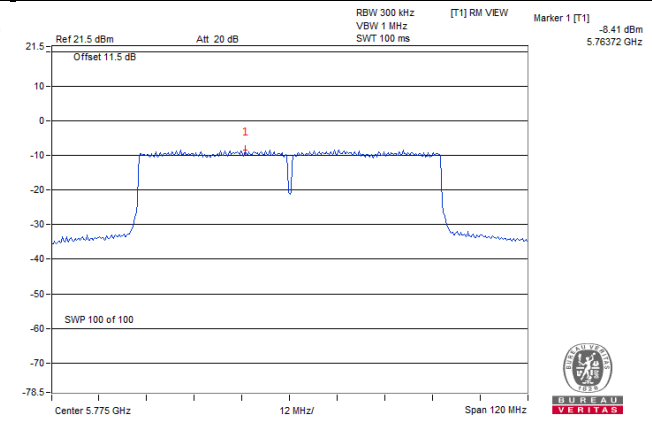
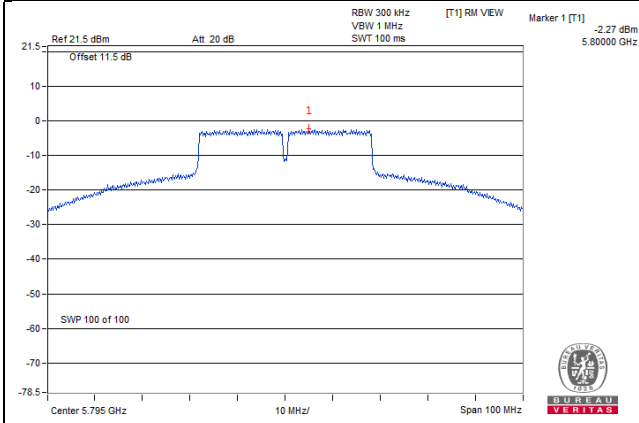
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



## Test Mode C

### 2TX

#### 802.11a

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	2.02	4.24	3.01	0.23	7.48	26.99	Pass
	157	5785	1.88	4.10	3.01	0.23	7.34	26.99	Pass
	165	5825	1.78	4.00	3.01	0.23	7.24	26.99	Pass
1	149	5745	1.96	4.18	3.01	0.23	7.42	26.99	Pass
	157	5785	1.74	3.96	3.01	0.23	7.20	26.99	Pass
	165	5825	1.53	3.75	3.01	0.23	6.99	26.99	Pass

Note:

1. Directional gain =  $6\text{dBi} + 10 \log(2) = 9.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.01 - 6) = 26.99\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	1.41	3.63	3.01	0.25	6.89	26.99	Pass
	157	5785	1.45	3.67	3.01	0.25	6.93	26.99	Pass
	165	5825	1.08	3.30	3.01	0.25	6.56	26.99	Pass
1	149	5745	1.44	3.66	3.01	0.25	6.92	26.99	Pass
	157	5785	1.33	3.55	3.01	0.25	6.81	26.99	Pass
	165	5825	1.08	3.30	3.01	0.25	6.56	26.99	Pass

Note:

1. Directional gain =  $6\text{dBi} + 10 \log(2) = 9.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.01 - 6) = 26.99\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	151	5755	-3.34	-1.12	3.01	0.50	2.39	26.99	Pass
	159	5795	-2.91	-0.69	3.01	0.50	2.82	26.99	Pass
1	151	5755	-3.02	-0.80	3.01	0.50	2.71	26.99	Pass
	159	5795	-2.74	-0.52	3.01	0.50	2.99	26.99	Pass

Note:

1. Directional gain =  $6\text{dBi} + 10 \log(2) = 9.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.01 - 6) = 26.99\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

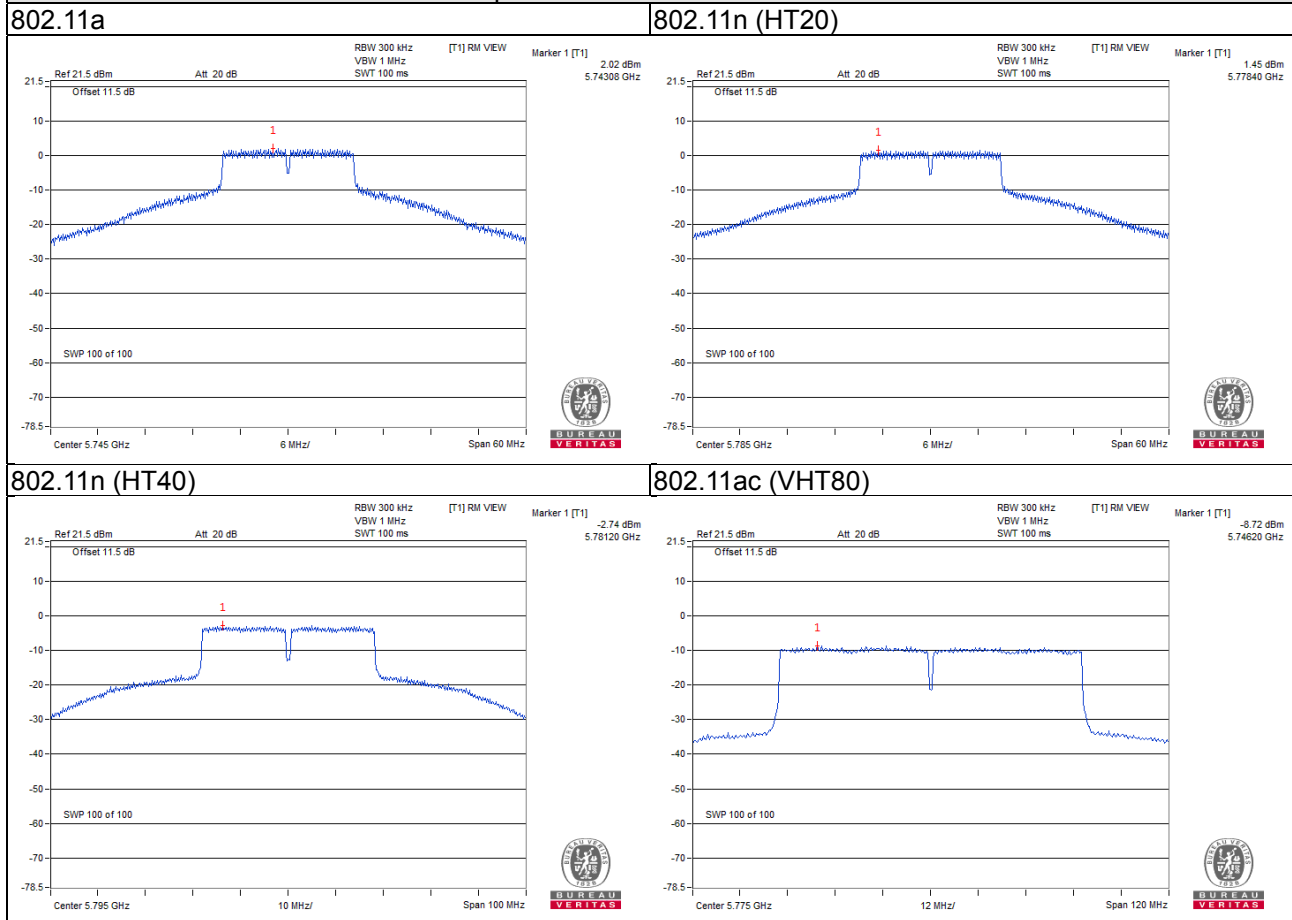
### 802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	155	5775	-9.24	-7.02	3.01	0.59	-3.42	26.99	Pass
1	155	5775	-8.72	-6.50	3.01	0.59	-2.90	26.99	Pass

Note:

- Directional gain =  $6\text{dBi} + 10 \log(2) = 9.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.01 - 6) = 26.99\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value



## Test Mode E

### 3TX

#### 802.11a

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=3) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	1.68	3.90	4.77	0.23	8.90	25.23	Pass
	157	5785	1.75	3.97	4.77	0.23	8.97	25.23	Pass
	165	5825	1.34	3.56	4.77	0.23	8.56	25.23	Pass
1	149	5745	1.58	3.80	4.77	0.23	8.80	25.23	Pass
	157	5785	1.63	3.85	4.77	0.23	8.85	25.23	Pass
	165	5825	1.24	3.46	4.77	0.23	8.46	25.23	Pass
2	149	5745	2.53	4.75	4.77	0.23	9.75	25.23	Pass
	157	5785	1.96	4.18	4.77	0.23	9.18	25.23	Pass
	165	5825	1.70	3.92	4.77	0.23	8.92	25.23	Pass

Note:

1. Directional gain =  $6\text{dBi} + 10 \log(3) = 10.77\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (10.77 - 6) = 25.23\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=3) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-0.31	1.91	4.77	0.41	7.09	25.23	Pass
	157	5785	0.04	2.26	4.77	0.41	7.44	25.23	Pass
	165	5825	0.07	2.29	4.77	0.41	7.47	25.23	Pass
1	149	5745	-0.05	2.17	4.77	0.41	7.35	25.23	Pass
	157	5785	0.22	2.44	4.77	0.41	7.62	25.23	Pass
	165	5825	-0.10	2.12	4.77	0.41	7.30	25.23	Pass
2	149	5745	0.01	2.23	4.77	0.41	7.41	25.23	Pass
	157	5785	0.18	2.40	4.77	0.41	7.58	25.23	Pass
	165	5825	0.12	2.34	4.77	0.41	7.52	25.23	Pass

Note:

1. Directional gain =  $6\text{dBi} + 10 \log(3) = 10.77\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (10.77 - 6) = 25.23\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=3) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-3.75	-1.53	4.77	0.50	3.74	25.23	Pass
	159	5795	-3.33	-1.11	4.77	0.50	4.16	25.23	Pass
1	151	5755	-3.44	-1.22	4.77	0.50	4.05	25.23	Pass
	159	5795	-3.22	-1.00	4.77	0.50	4.27	25.23	Pass
2	151	5755	-3.70	-1.48	4.77	0.50	3.79	25.23	Pass
	159	5795	-3.42	-1.20	4.77	0.50	4.07	25.23	Pass

Note:

1. Directional gain =  $6\text{dBi} + 10 \log(3) = 10.77\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (10.77 - 6) = 25.23\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=3) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-9.75	-7.53	4.77	0.27	-2.49	25.23	Pass
1	155	5775	-9.07	-6.85	4.77	0.27	-1.81	25.23	Pass
2	155	5775	-9.41	-7.19	4.77	0.27	-2.15	25.23	Pass

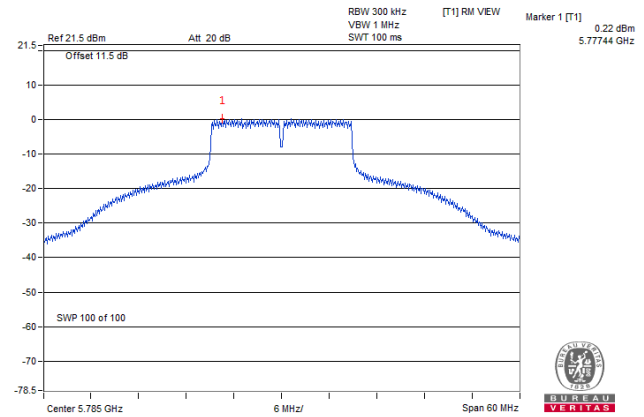
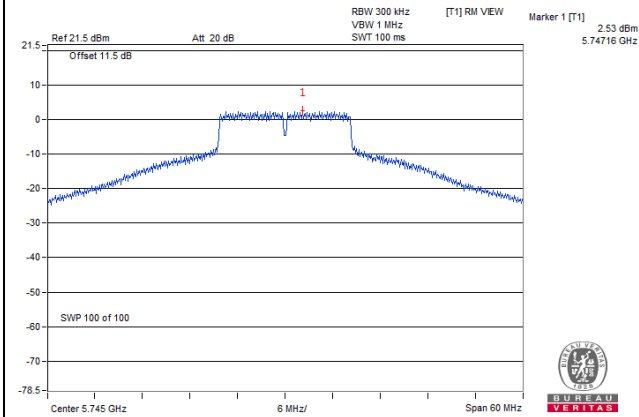
Note:

1. Directional gain =  $6\text{dBi} + 10 \log(3) = 10.77\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (10.77 - 6) = 25.23\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

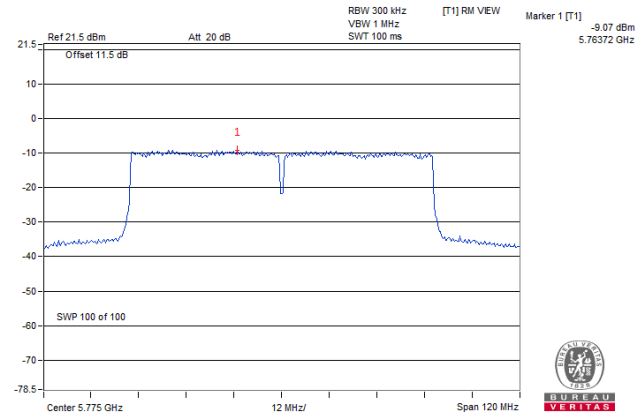
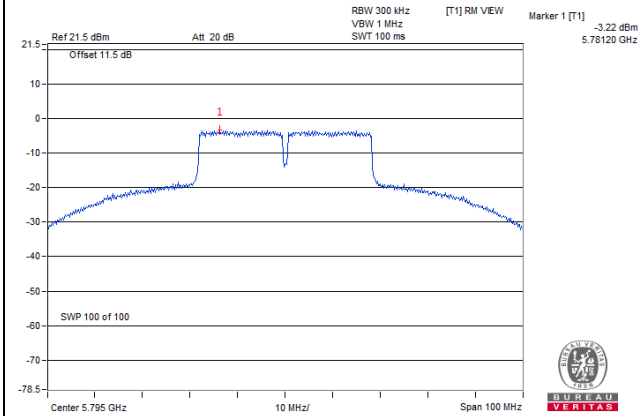
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



## Test Mode C

### 4TX

#### 802.11a

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	0.58	2.80	6.02	0.23	9.05	23.98	Pass
	157	5785	1.50	3.72	6.02	0.23	9.97	23.98	Pass
	165	5825	0.39	2.61	6.02	0.23	8.86	23.98	Pass
1	149	5745	0.79	3.01	6.02	0.23	9.26	23.98	Pass
	157	5785	1.14	3.36	6.02	0.23	9.61	23.98	Pass
	165	5825	0.46	2.68	6.02	0.23	8.93	23.98	Pass
2	149	5745	0.93	3.15	6.02	0.23	9.40	23.98	Pass
	157	5785	2.02	4.24	6.02	0.23	10.49	23.98	Pass
	165	5825	0.63	2.85	6.02	0.23	9.10	23.98	Pass
3	149	5745	2.50	4.72	6.02	0.23	10.97	23.98	Pass
	157	5785	1.96	4.18	6.02	0.23	10.43	23.98	Pass
	165	5825	2.18	4.40	6.02	0.23	10.65	23.98	Pass

Note:

- Directional gain =  $6\text{dBi} + 10 \log(4) = 12.02\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (12.02 - 6) = 23.98\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-0.04	2.18	6.02	0.24	8.44	23.98	Pass
	157	5785	0.93	3.15	6.02	0.24	9.41	23.98	Pass
	165	5825	-0.08	2.14	6.02	0.24	8.40	23.98	Pass
1	149	5745	0.33	2.55	6.02	0.24	8.81	23.98	Pass
	157	5785	1.00	3.22	6.02	0.24	9.48	23.98	Pass
	165	5825	0.03	2.25	6.02	0.24	8.51	23.98	Pass
2	149	5745	1.96	4.18	6.02	0.24	10.44	23.98	Pass
	157	5785	1.15	3.37	6.02	0.24	9.63	23.98	Pass
	165	5825	0.24	2.46	6.02	0.24	8.72	23.98	Pass
3	149	5745	1.61	3.83	6.02	0.24	10.09	23.98	Pass
	157	5785	1.72	3.94	6.02	0.24	10.20	23.98	Pass
	165	5825	1.44	3.66	6.02	0.24	9.92	23.98	Pass

Note:

- Directional gain =  $6\text{dBi} + 10 \log(4) = 12.02\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (12.02 - 6) = 23.98\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.



### 802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-4.25	-2.03	6.02	0.44	4.43	23.98	Pass
	159	5795	-4.32	-2.10	6.02	0.44	4.36	23.98	Pass
1	151	5755	-4.09	-1.87	6.02	0.44	4.59	23.98	Pass
	159	5795	-3.88	-1.66	6.02	0.44	4.80	23.98	Pass
2	151	5755	-4.24	-2.02	6.02	0.44	4.44	23.98	Pass
	159	5795	-4.45	-2.23	6.02	0.44	4.23	23.98	Pass
3	151	5755	-2.94	-0.72	6.02	0.44	5.74	23.98	Pass
	159	5795	-2.96	-0.74	6.02	0.44	5.72	23.98	Pass

**Note:**

1. Directional gain =  $6\text{dBi} + 10 \log(4) = 12.02\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (12.02 - 6) = 23.98\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-10.79	-8.57	6.02	0.27	-2.28	23.98	Pass
1	155	5775	-9.76	-7.54	6.02	0.27	-1.25	23.98	Pass
2	155	5775	-10.68	-8.46	6.02	0.27	-2.17	23.98	Pass
3	155	5775	-10.08	-7.86	6.02	0.27	-1.57	23.98	Pass

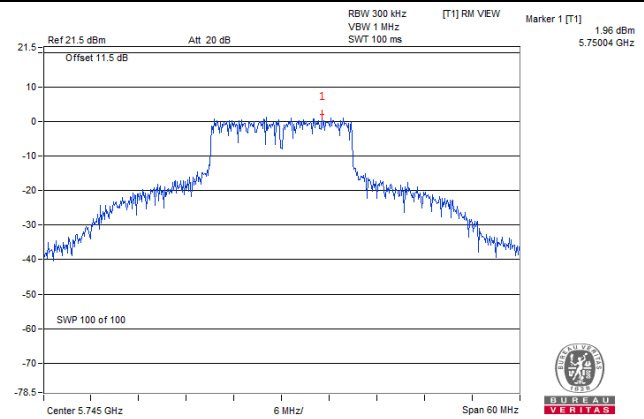
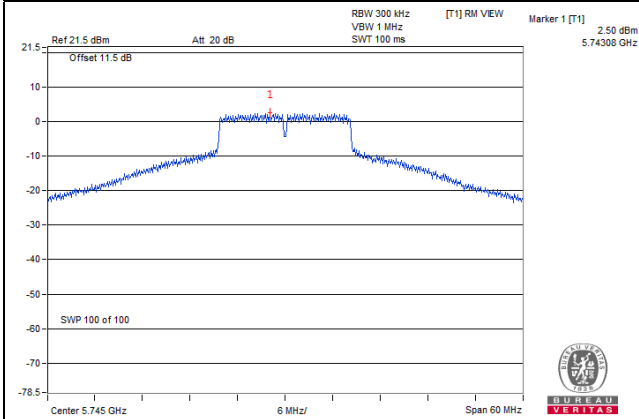
**Note:**

1. Directional gain =  $6\text{dBi} + 10 \log(4) = 12.02\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (12.02 - 6) = 23.98\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

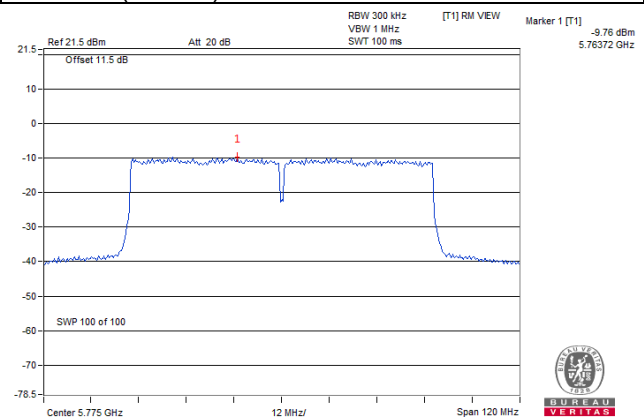
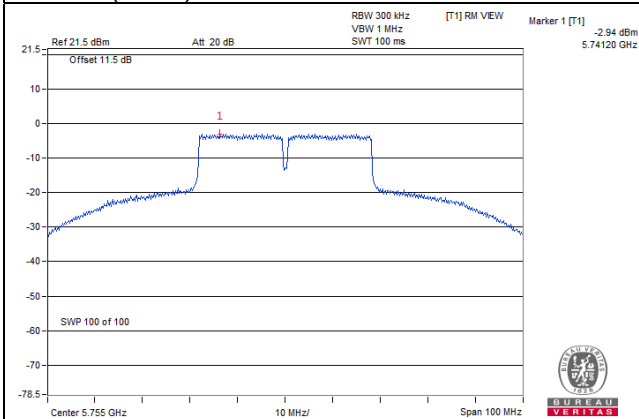
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)

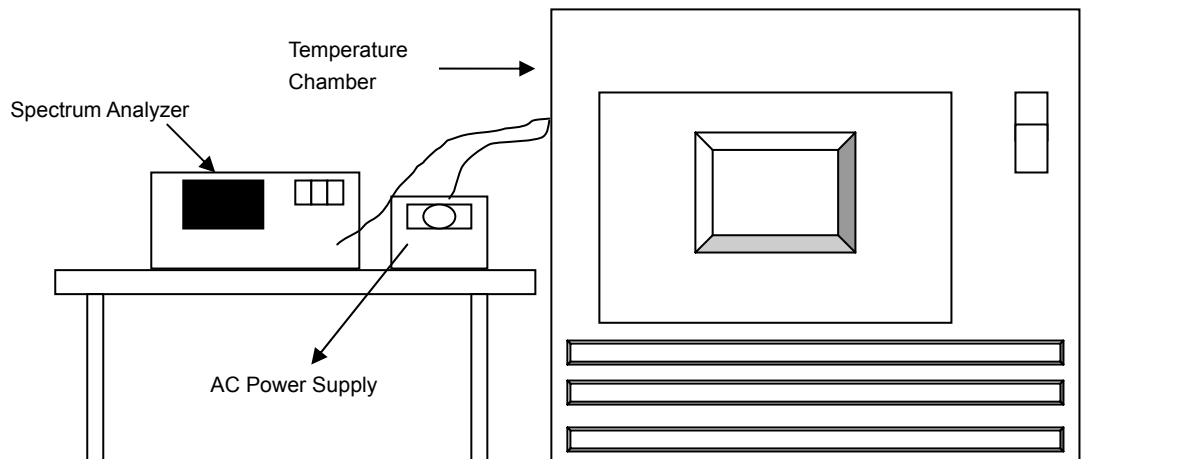


## 4.6 Frequency Stability Measurement

### 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: 5745MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5745.0186	0.00032	5745.0191	0.00033	5745.0202	0.00035	5745.0184	0.00032
40	120	5744.9970	-0.00005	5744.9932	-0.00012	5744.9956	-0.00008	5744.9922	-0.00014
30	120	5744.9732	-0.00047	5744.9713	-0.00050	5744.9765	-0.00041	5744.9751	-0.00043
20	120	5744.9935	-0.00011	5744.9974	-0.00005	5744.9949	-0.00009	5744.9949	-0.00009
10	120	5745.0192	0.00033	5745.0186	0.00032	5745.0206	0.00036	5745.0181	0.00032
0	120	5745.0160	0.00028	5745.0180	0.00031	5745.0167	0.00029	5745.0177	0.00031
-10	120	5744.9747	-0.00044	5744.9750	-0.00044	5744.9759	-0.00042	5744.9744	-0.00045
-20	120	5744.9755	-0.00043	5744.9766	-0.00041	5744.9802	-0.00034	5744.9793	-0.00036
-30	120	5745.0243	0.00042	5745.0214	0.00037	5745.0243	0.00042	5745.0195	0.00034

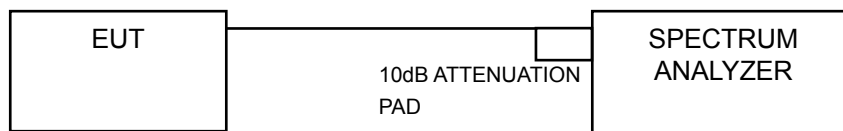
FREQUENCY STABILITY VERSUS VOLTAGE.									
OPERATING FREQUENCY: 5745MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5744.9933	-0.00012	5744.9971	-0.00005	5744.9949	-0.00009	5744.9951	-0.00009
	120	5744.9935	-0.00011	5744.9974	-0.00005	5744.9949	-0.00009	5744.9949	-0.00009
	102	5744.9925	-0.00013	5744.9967	-0.00006	5744.9942	-0.00010	5744.9955	-0.00008

## 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

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- 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

##### Test Mode C

##### 1TX

##### 802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.41	0.5	Pass
157	5785	16.44	0.5	Pass
165	5825	16.46	0.5	Pass

##### 802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.66	0.5	Pass
157	5785	17.67	0.5	Pass
165	5825	17.64	0.5	Pass

##### 802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.51	0.5	Pass
159	5795	36.48	0.5	Pass

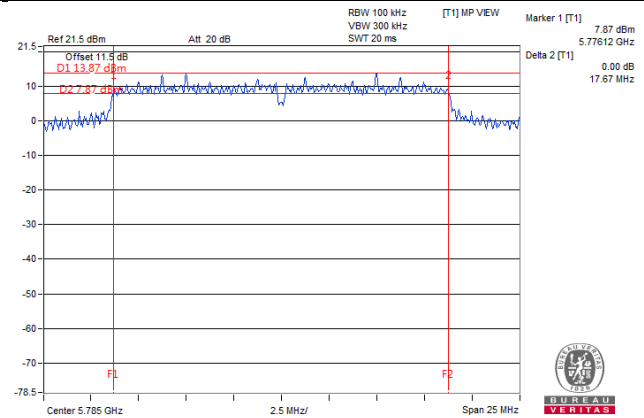
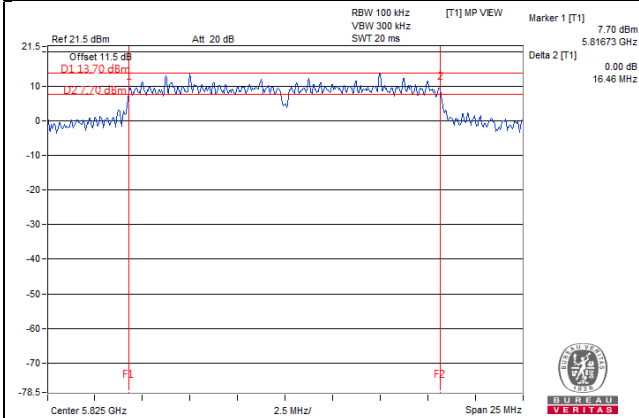
##### 802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	76.24	0.5	Pass

### Spectrum Plot of Worst Value

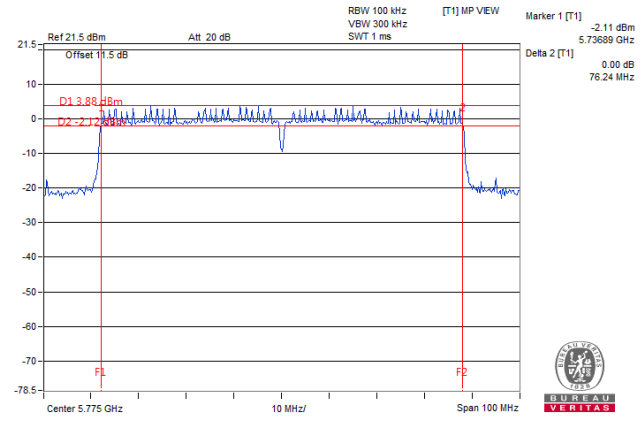
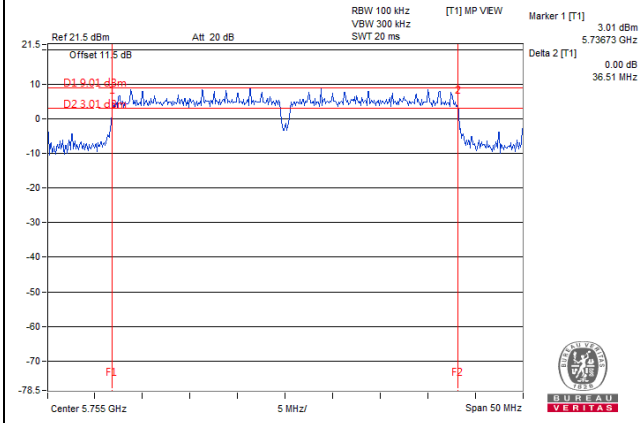
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



**Test Mode C**
**2TX**
**802.11a**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.42	16.39	0.5	Pass
157	5785	16.44	16.43	0.5	Pass
165	5825	16.45	16.40	0.5	Pass

**802.11n (HT20)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.67	17.67	0.5	Pass
157	5785	17.70	17.65	0.5	Pass
165	5825	17.64	17.67	0.5	Pass

**802.11n (HT40)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.46	36.50	0.5	Pass
159	5795	36.46	36.50	0.5	Pass

**802.11ac (VHT80)**

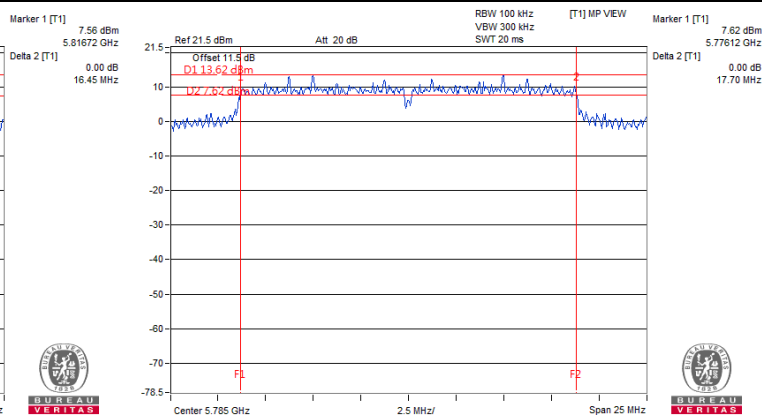
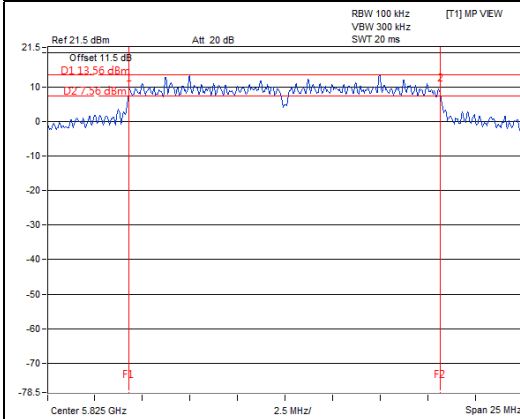
Chan.	Freq. (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.37	76.04	0.5	Pass



Spectrum Plot of Worst Value

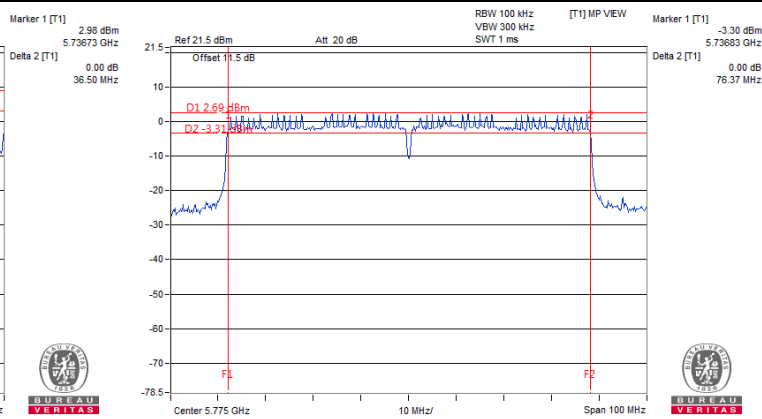
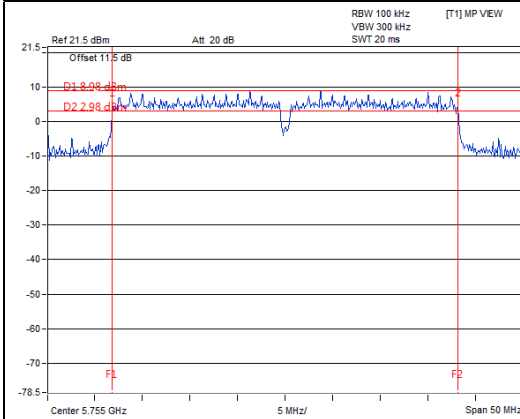
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



**Test Mode C**

**3TX**

**802.11a**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
149	5745	16.42	16.38	16.39	0.5	Pass
157	5785	16.45	16.42	16.40	0.5	Pass
165	5825	16.42	16.43	16.43	0.5	Pass

**802.11n (HT20)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
149	5745	17.61	17.63	17.61	0.5	Pass
157	5785	17.62	17.62	17.63	0.5	Pass
165	5825	17.64	17.65	17.63	0.5	Pass

**802.11n (HT40)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
151	5755	36.49	36.50	36.46	0.5	Pass
159	5795	36.43	36.49	36.46	0.5	Pass

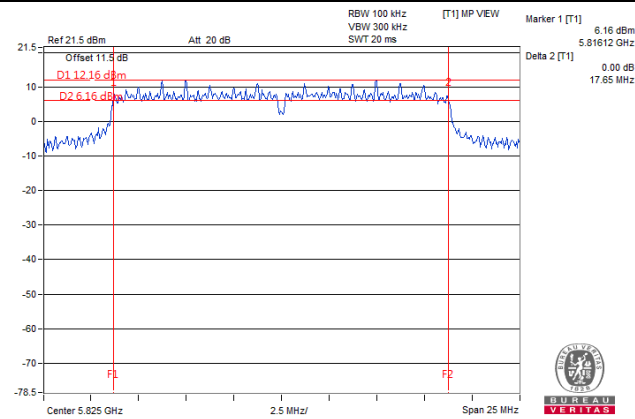
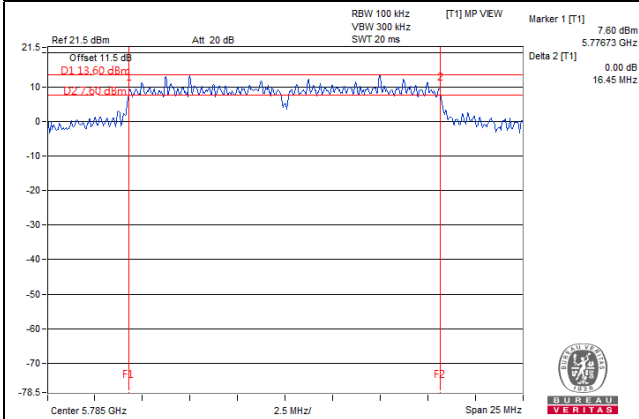
**802.11ac (VHT80)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
155	5775	76.40	76.47	76.46	0.5	Pass

### Spectrum Plot of Worst Value

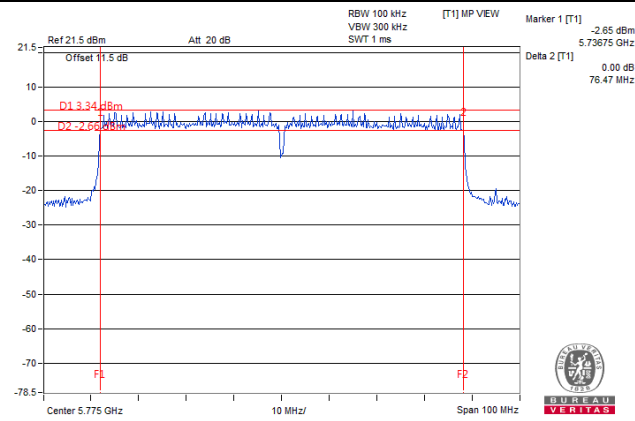
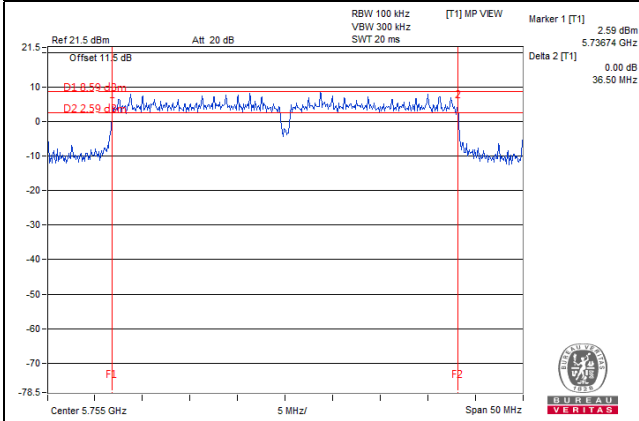
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



**Test Mode C**

**4TX**

**802.11a**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.33	16.35	16.37	0.5	Pass
157	5785	16.44	16.41	16.42	16.48	0.5	Pass
165	5825	16.38	16.38	16.36	16.42	0.5	Pass

**802.11n (HT20)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.63	17.64	17.64	17.65	0.5	Pass
157	5785	17.64	17.69	17.65	17.66	0.5	Pass
165	5825	17.63	17.65	17.63	17.63	0.5	Pass

**802.11n (HT40)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	36.43	36.48	36.45	36.48	0.5	Pass
159	5795	36.40	36.46	36.47	36.48	0.5	Pass

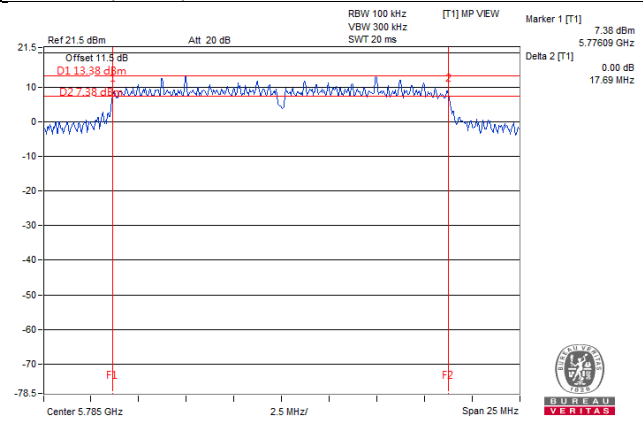
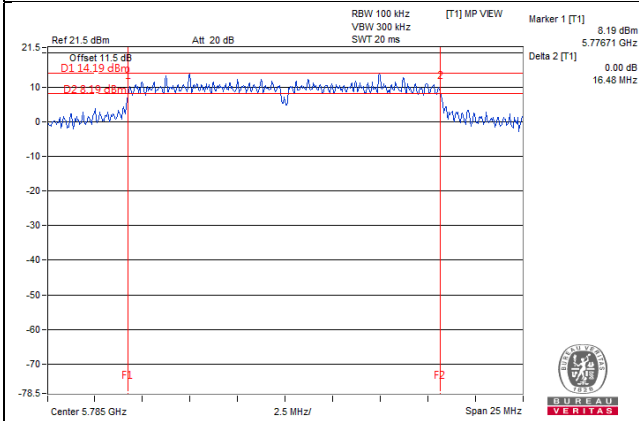
**802.11ac (VHT80)**

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	76.37	76.53	76.51	76.46	0.5	Pass

Spectrum Plot of Worst Value

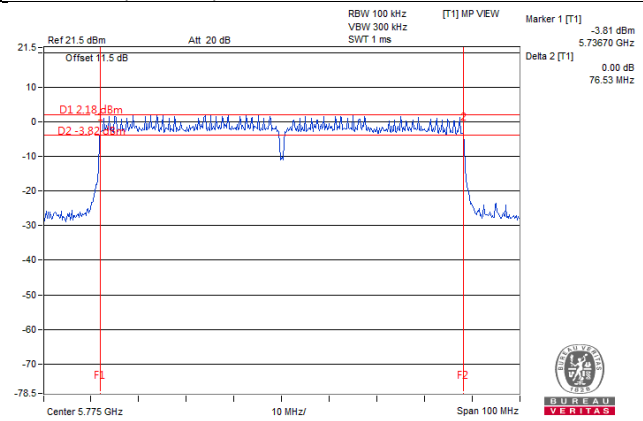
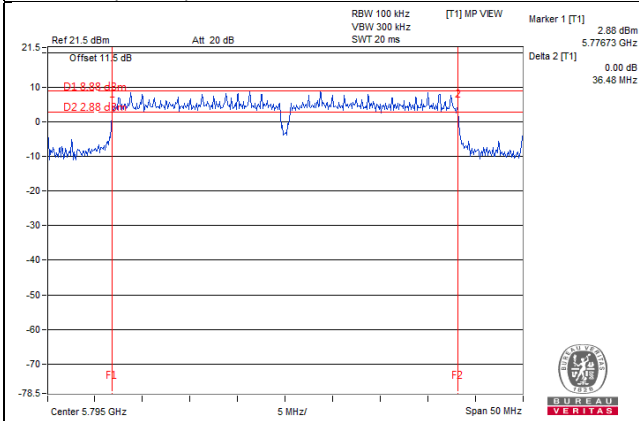
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



## 5 Pictures of Test Arrangements

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

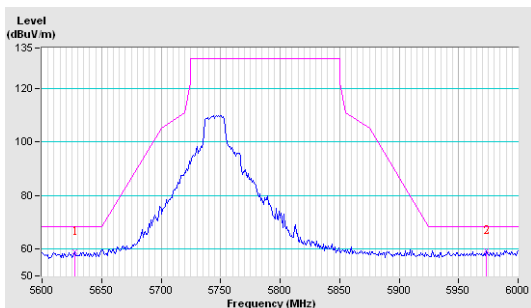
### Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Test Mode B\_1TX

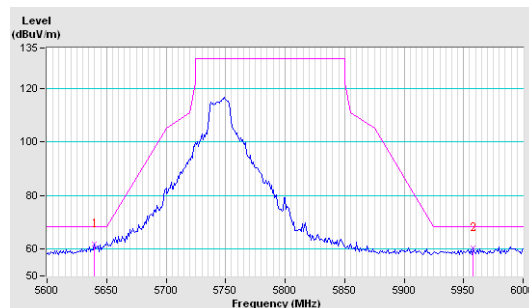
802.11a

CH149

Horizontal

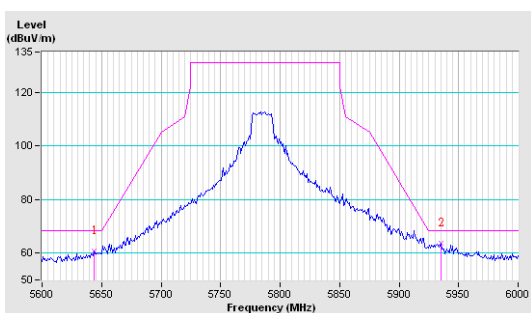


Vertical

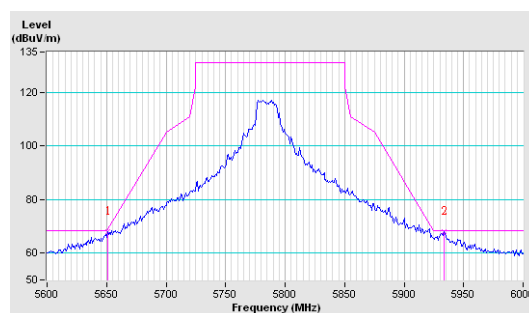


CH157

Horizontal

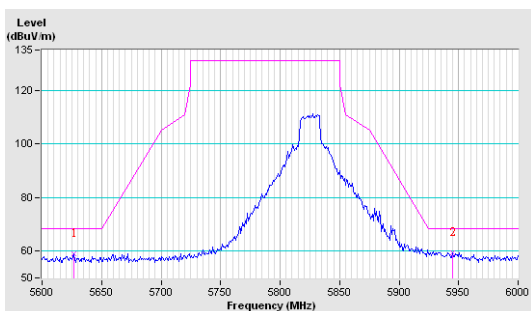


Vertical

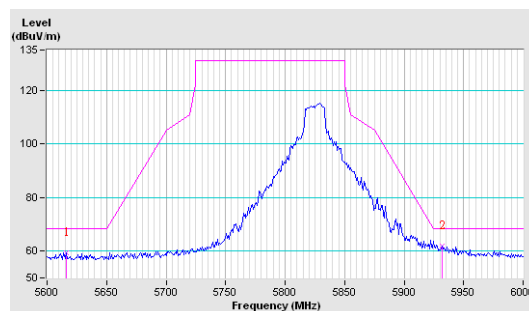


CH165

Horizontal



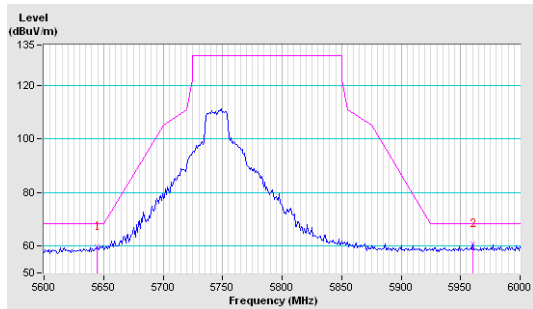
Vertical



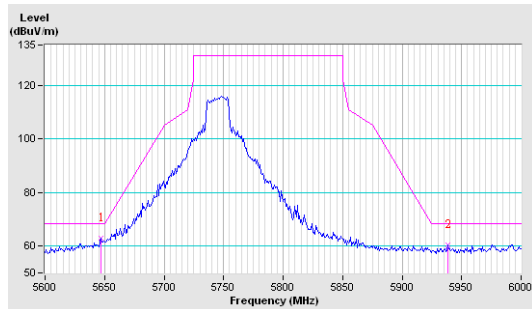
802.11n (HT20)

CH149

Horizontal

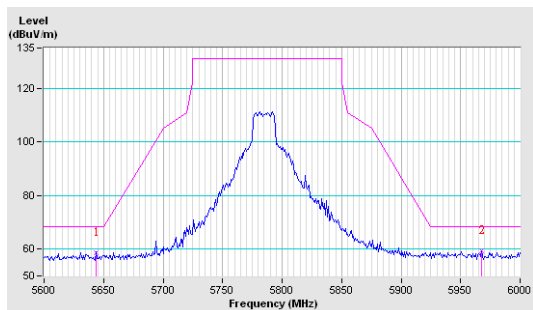


Vertical

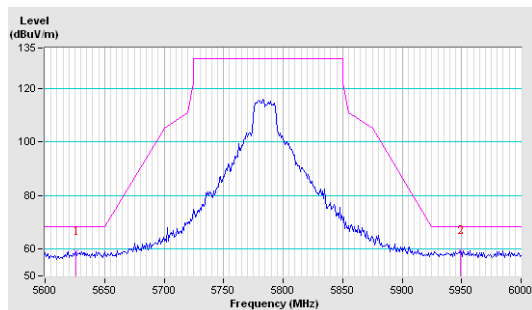


CH157

Horizontal

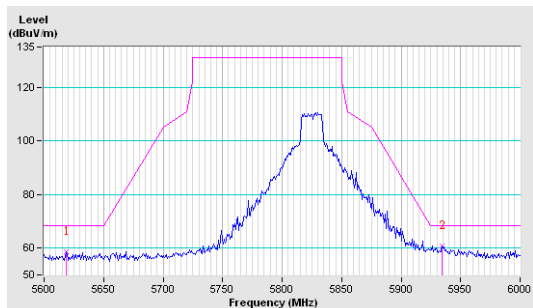


Vertical

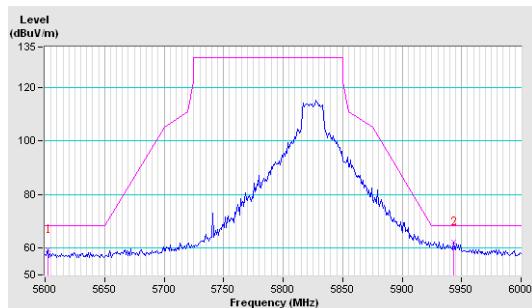


CH165

Horizontal



Vertical

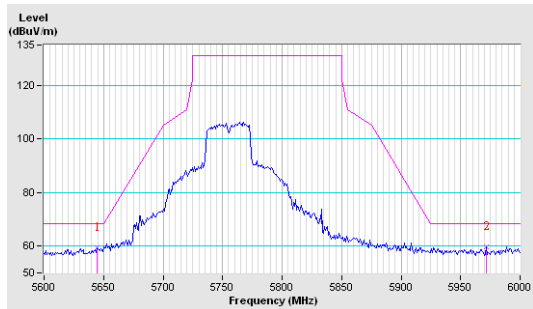




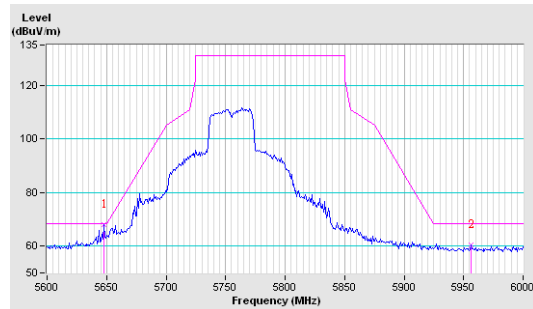
**802.11n (HT40)**

**CH151**

**Horizontal**

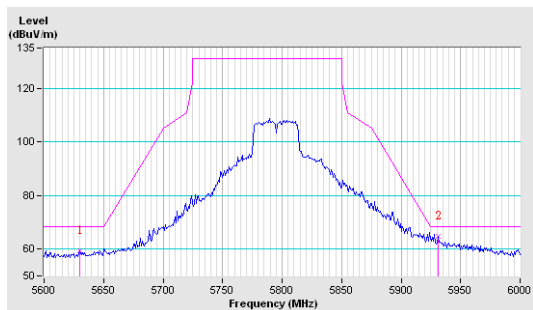


**Vertical**

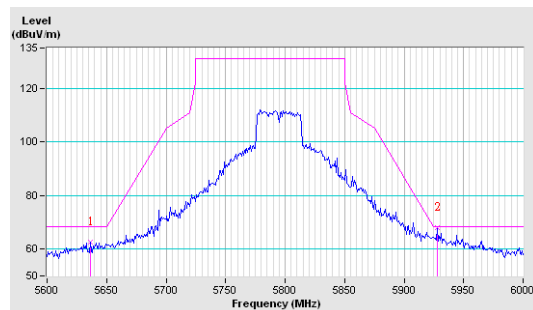


**CH159**

**Horizontal**



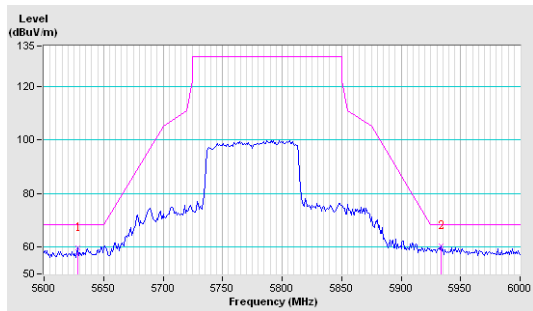
**Vertical**



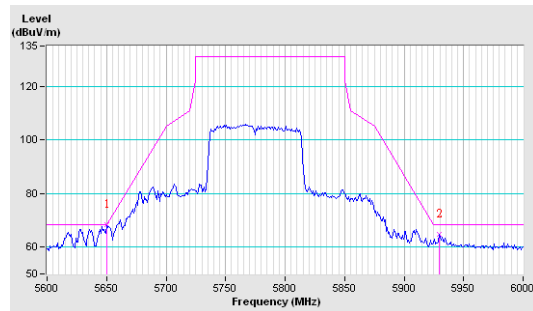
**802.11ac (VHT80)**

**CH155**

**Horizontal**



**Vertical**

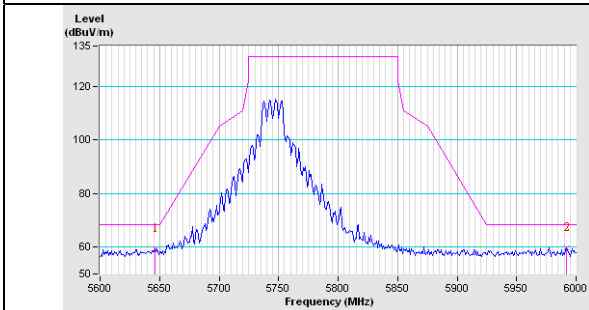


Test Mode B\_2TX

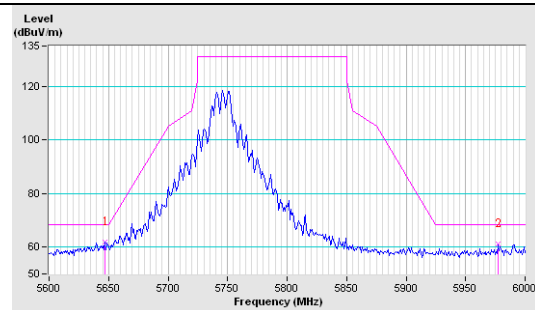
802.11a

CH149

Horizontal

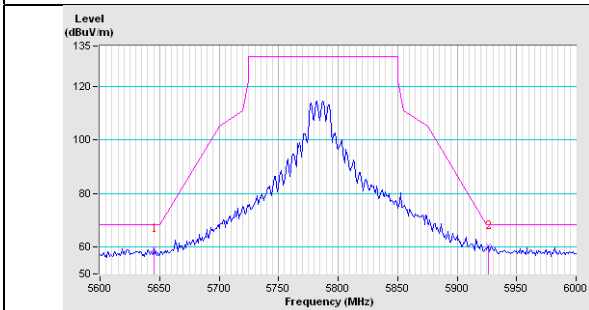


Vertical

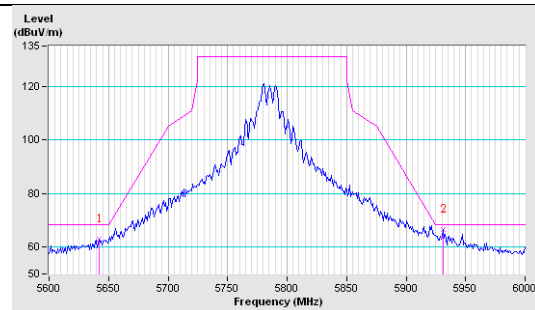


CH157

Horizontal

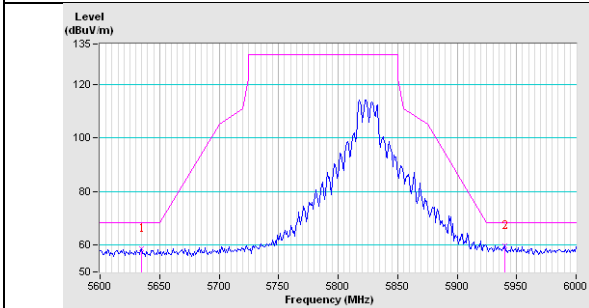


Vertical

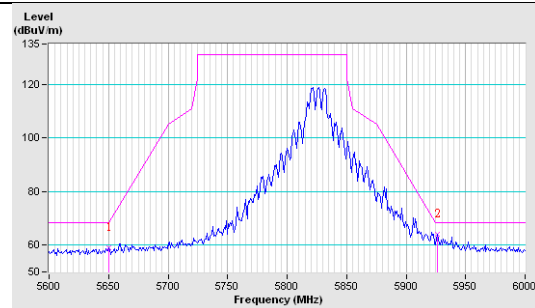


CH165

Horizontal



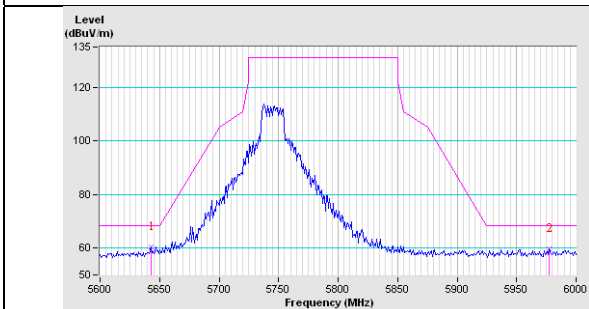
Vertical



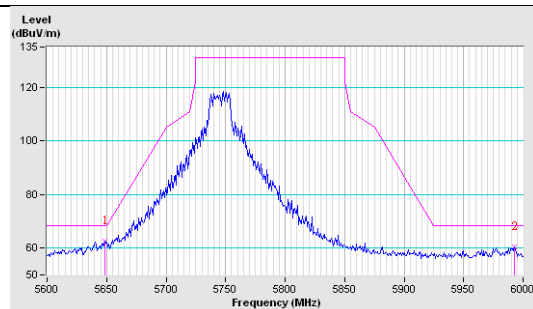
802.11n (HT20)

CH149

Horizontal

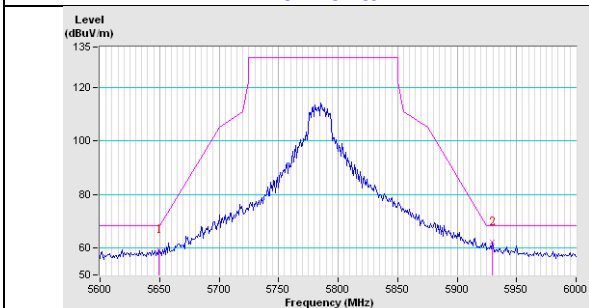


Vertical

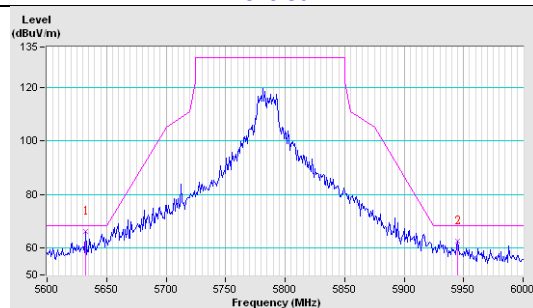


CH157

Horizontal

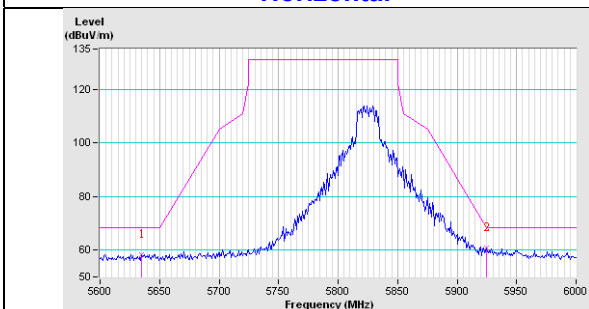


Vertical

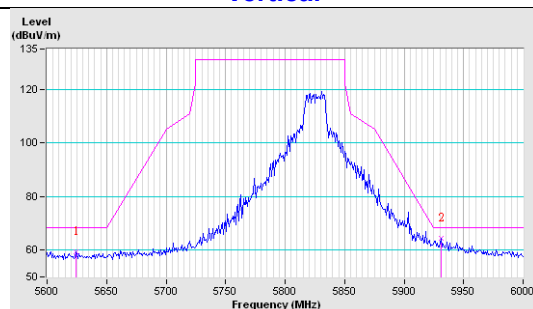


CH165

Horizontal



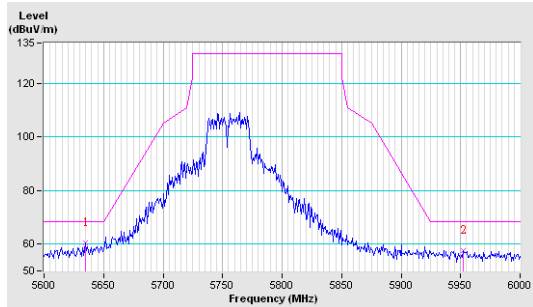
Vertical



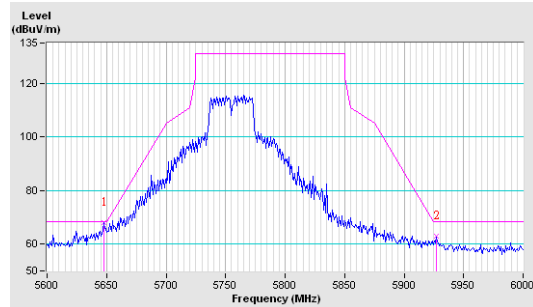
### 802.11n (HT40)

#### CH151

Horizontal

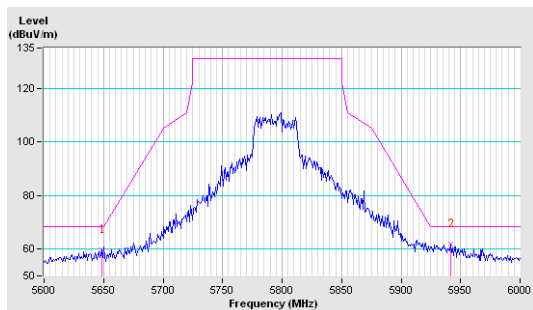


Vertical

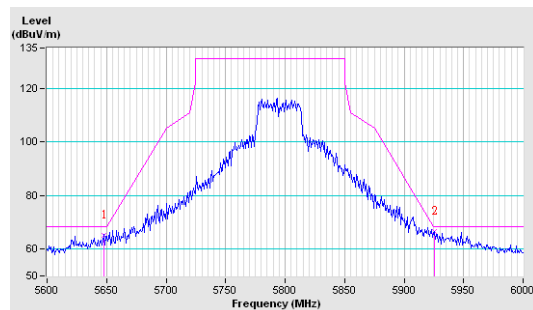


#### CH159

Horizontal



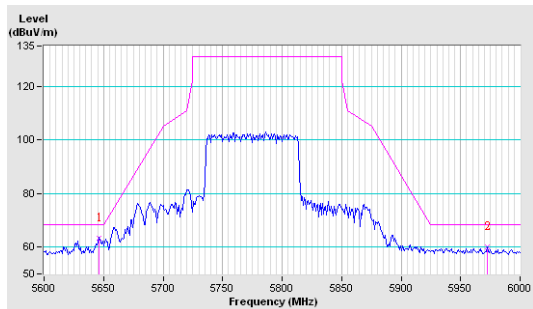
Vertical



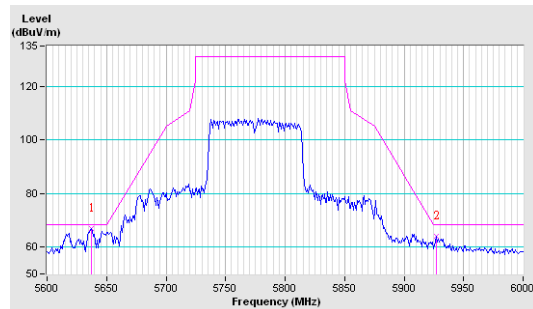
### 802.11ac (VHT80)

#### CH155

Horizontal



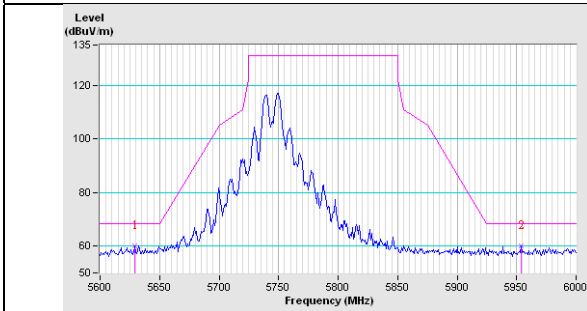
Vertical



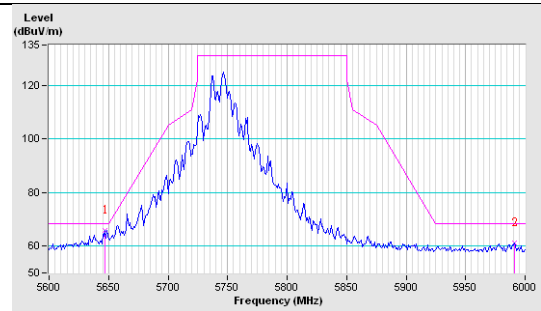
**Test Mode B\_3TX**  
**802.11a**

**CH149**

**Horizontal**

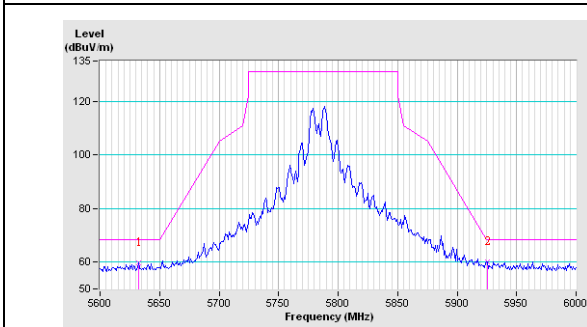


**Vertical**

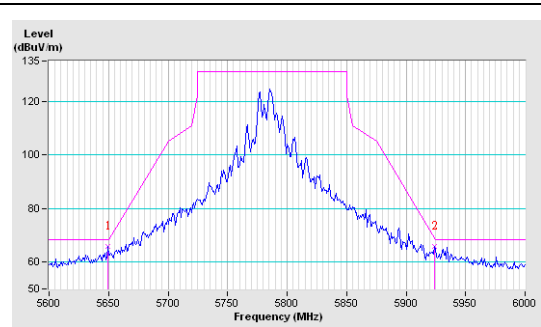


**CH157**

**Horizontal**

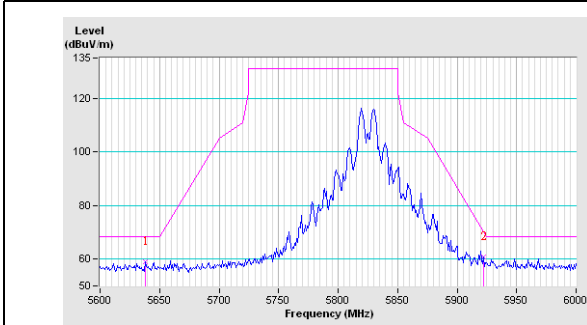


**Vertical**

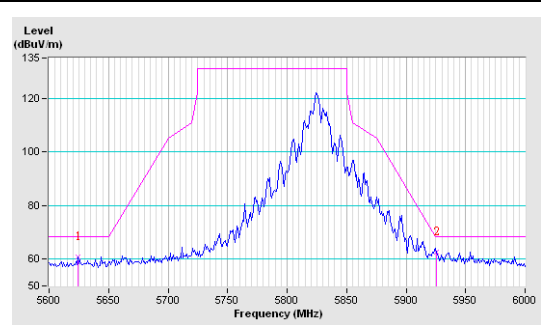


**CH165**

**Horizontal**



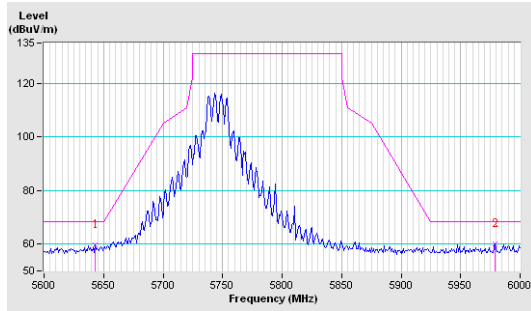
**Vertical**



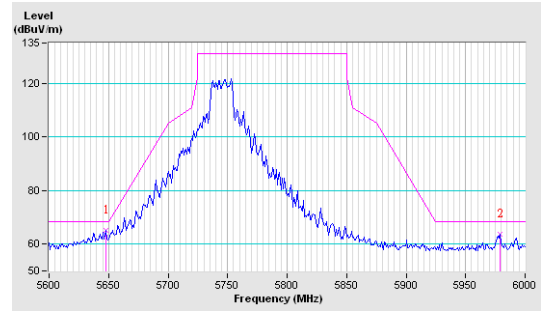
802.11n (HT20)

CH149

Horizontal

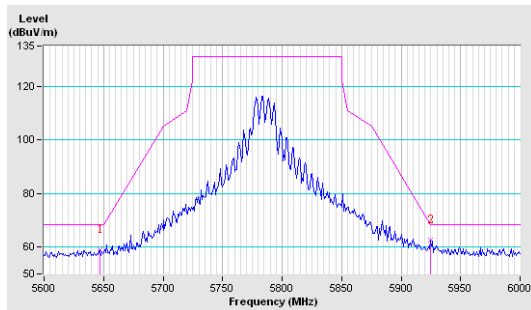


Vertical

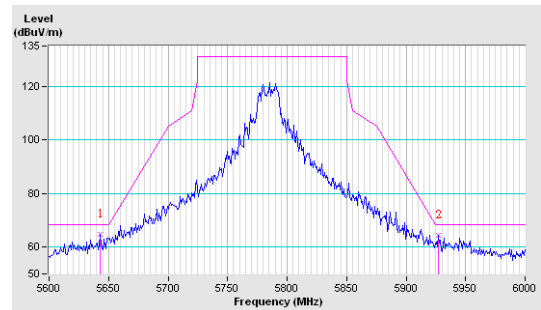


CH157

Horizontal

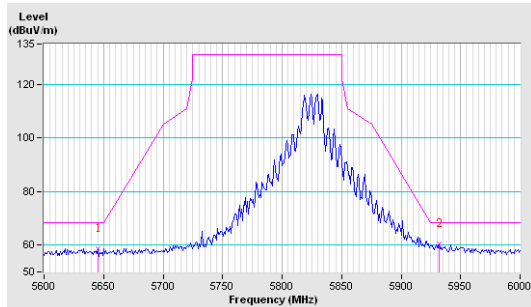


Vertical

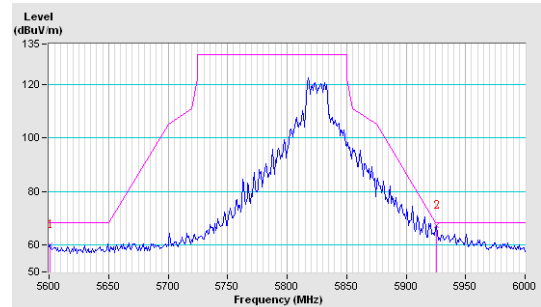


CH165

Horizontal



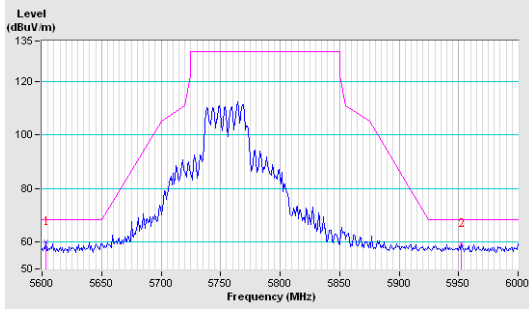
Vertical



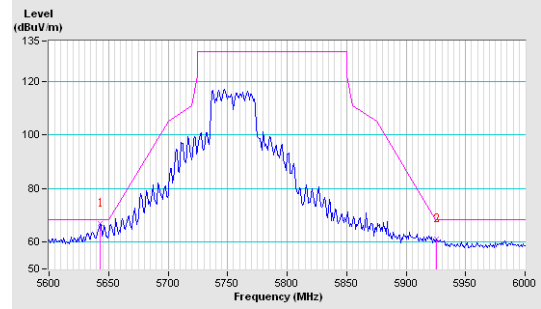
**802.11n (HT40)**

**CH151**

**Horizontal**

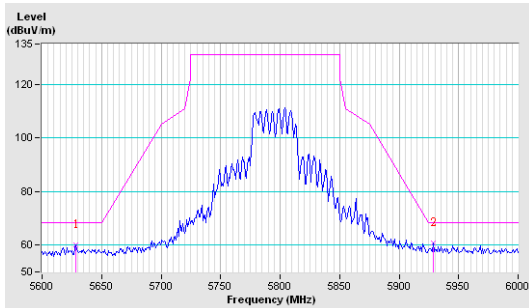


**Vertical**

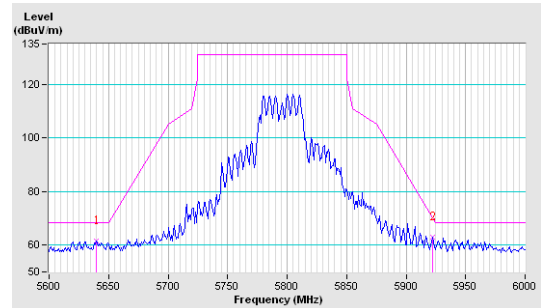


**CH159**

**Horizontal**



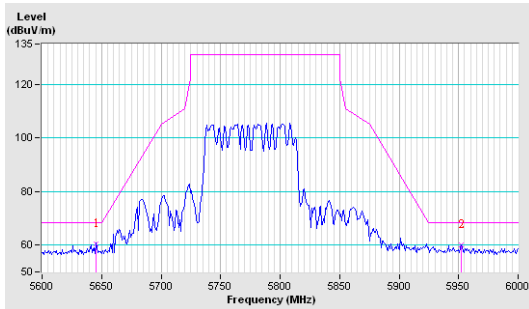
**Vertical**



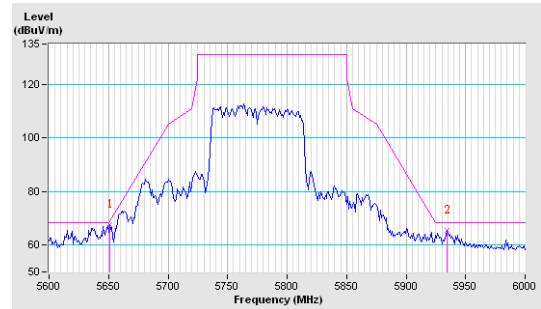
**802.11ac (VHT80)**

**CH155**

**Horizontal**



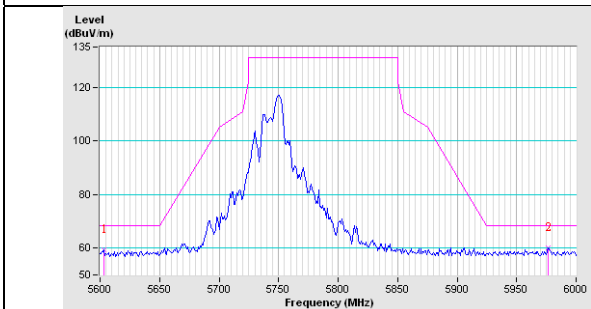
**Vertical**



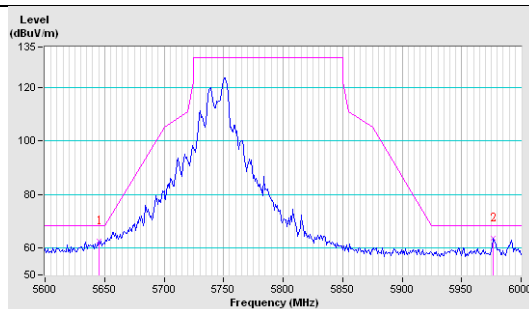
Test Mode B\_4TX  
802.11a

CH149

Horizontal

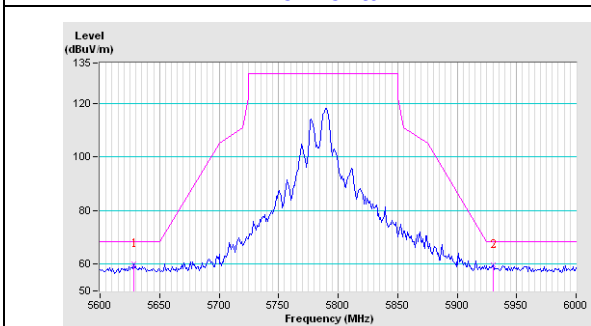


Vertical

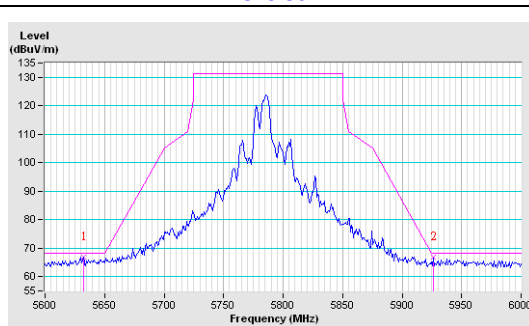


CH157

Horizontal

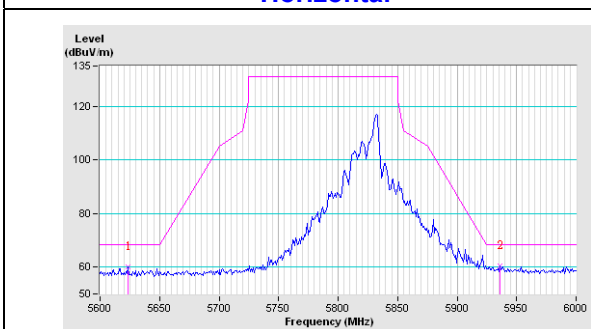


Vertical

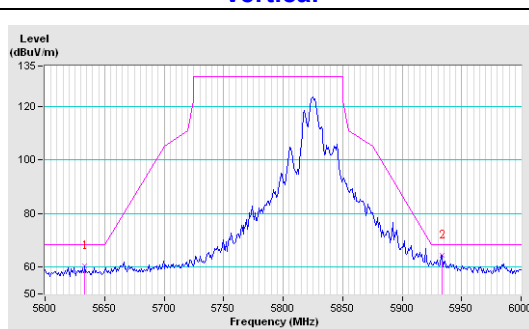


CH165

Horizontal



Vertical

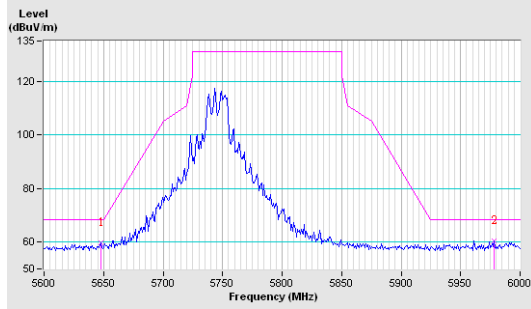




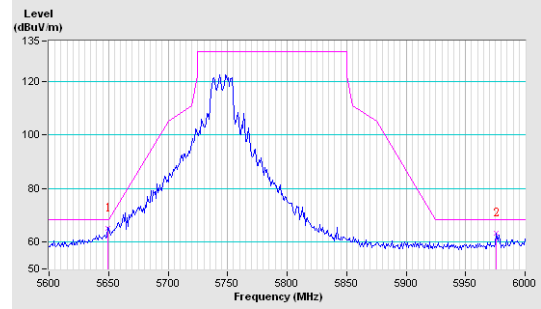
802.11n (HT20)

CH149

Horizontal

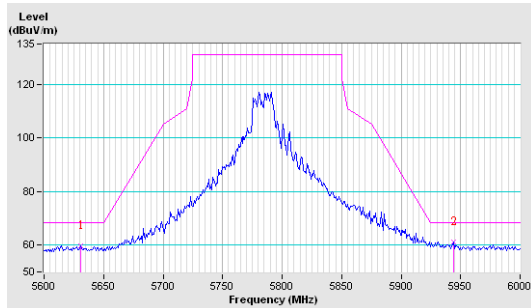


Vertical

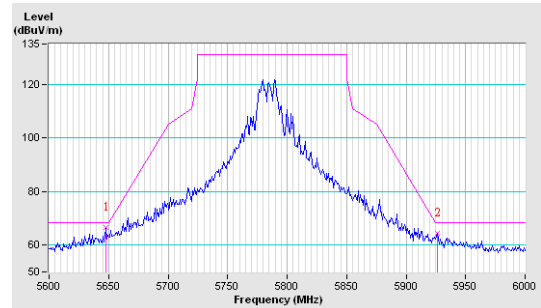


CH157

Horizontal

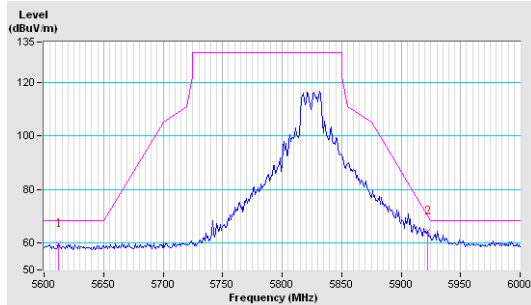


Vertical

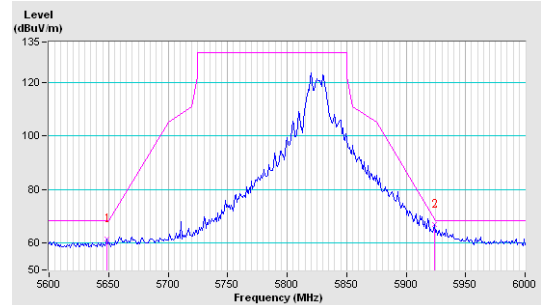


CH165

Horizontal



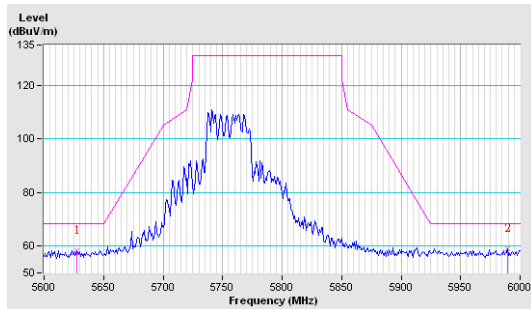
Vertical



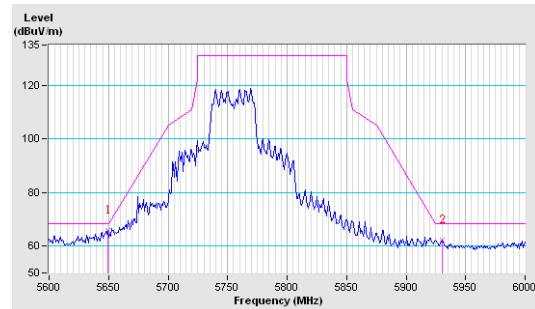
### 802.11n (HT40)

#### CH151

Horizontal

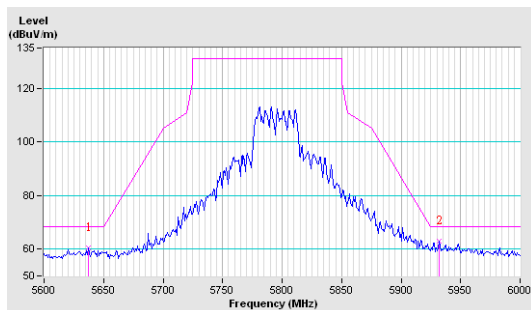


Vertical

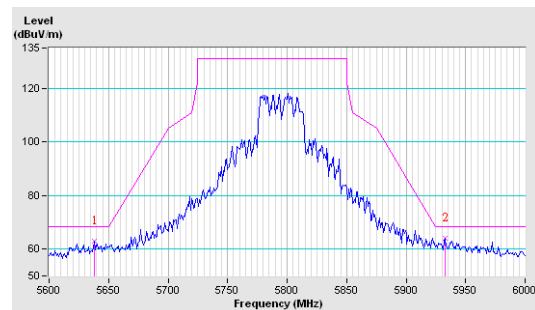


#### CH159

Horizontal



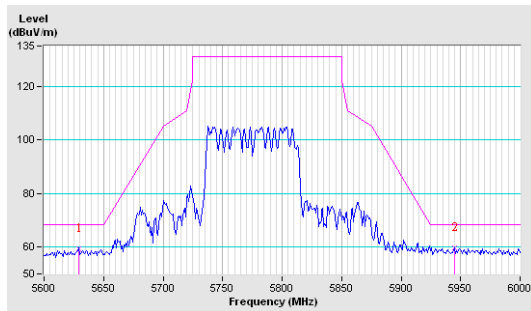
Vertical



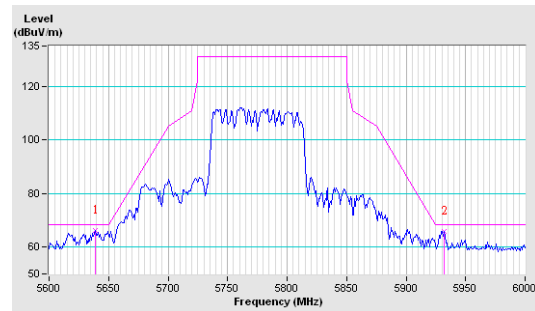
### 802.11ac (VHT80)

#### CH155

Horizontal



Vertical

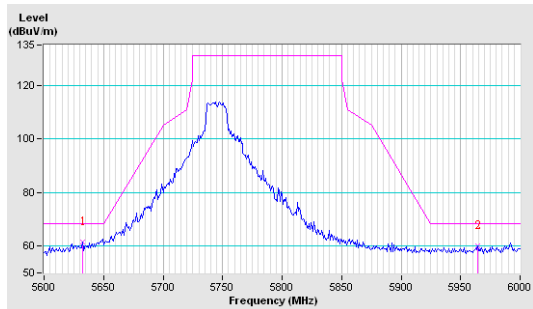


Test Mode D\_1TX

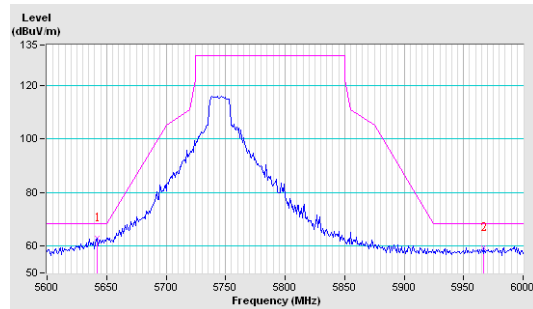
802.11a

CH149

Horizontal

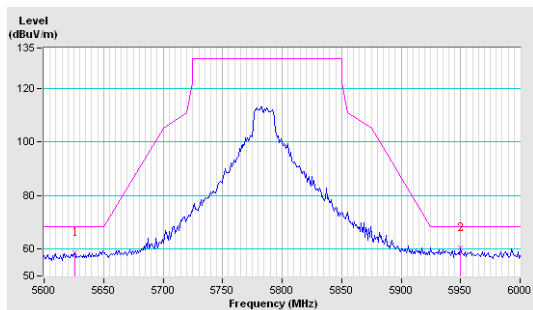


Vertical

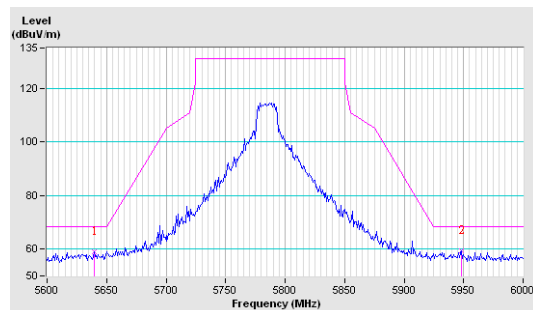


CH157

Horizontal

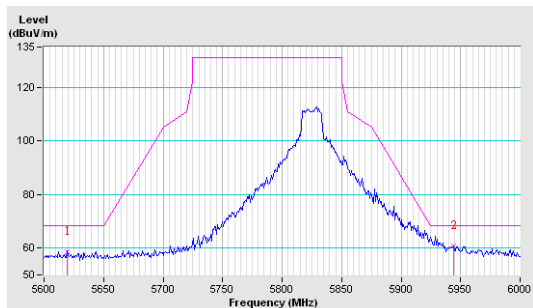


Vertical

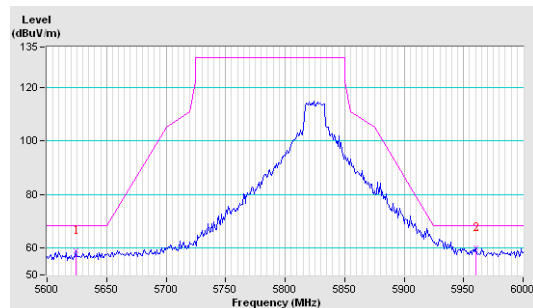


CH165

Horizontal



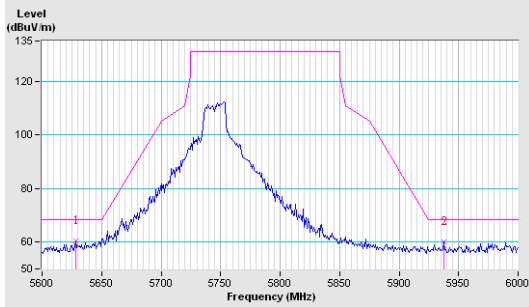
Vertical



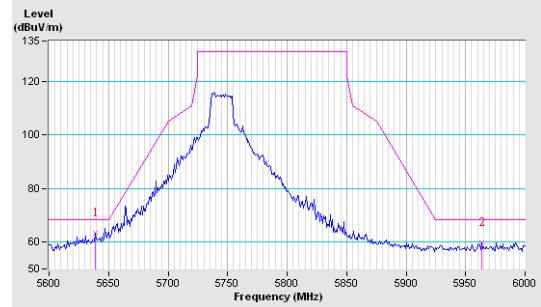
802.11n (HT20)

CH149

Horizontal

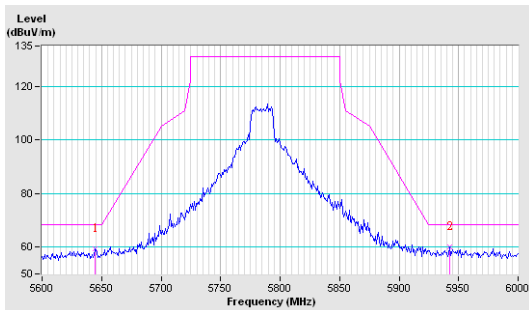


Vertical

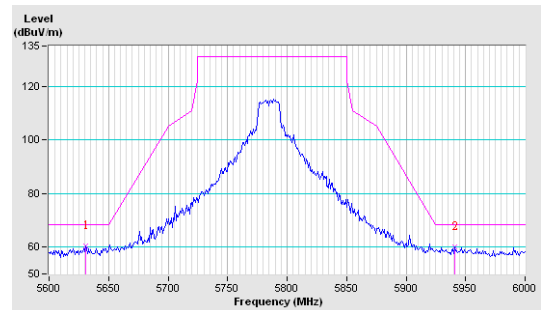


CH157

Horizontal

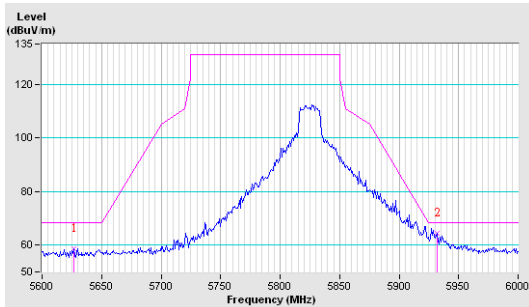


Vertical

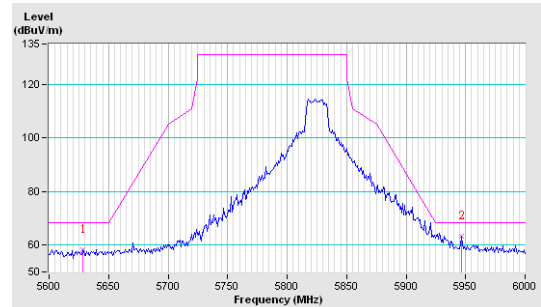


CH165

Horizontal



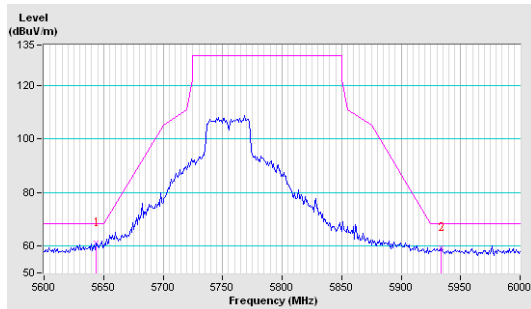
Vertical



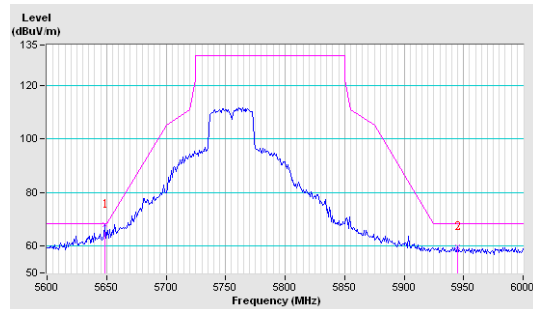
### 802.11n (HT40)

#### CH151

Horizontal

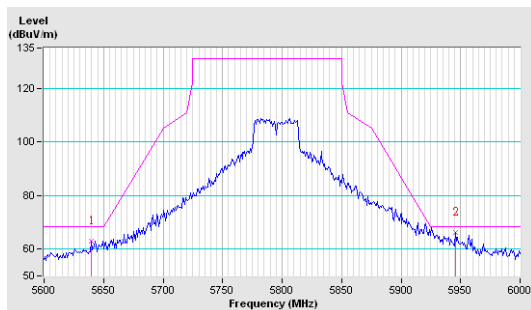


Vertical

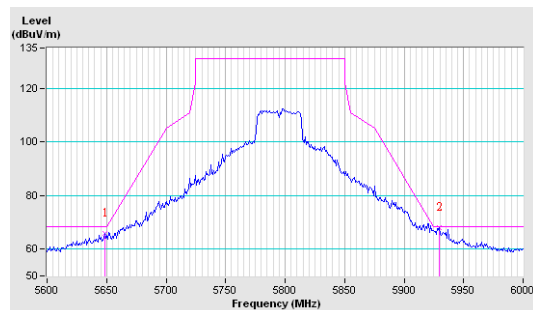


#### CH159

Horizontal



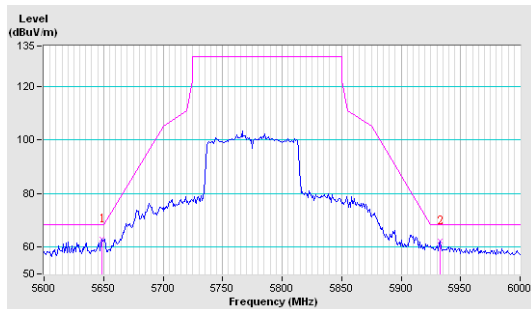
Vertical



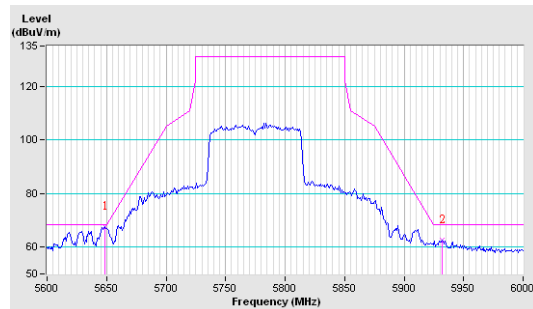
### 802.11ac (VHT80)

#### CH155

Horizontal



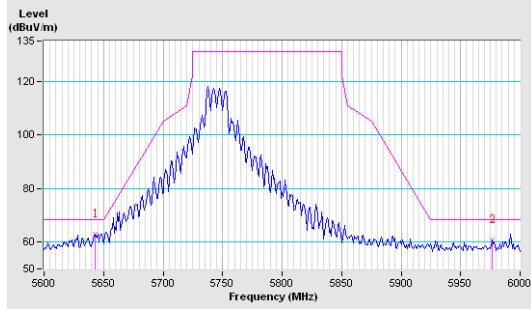
Vertical



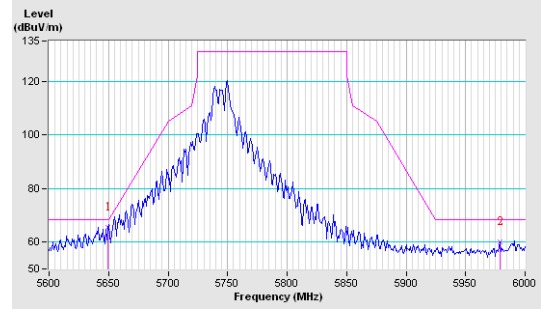
Test Mode D\_2TX  
802.11a

CH149

Horizontal

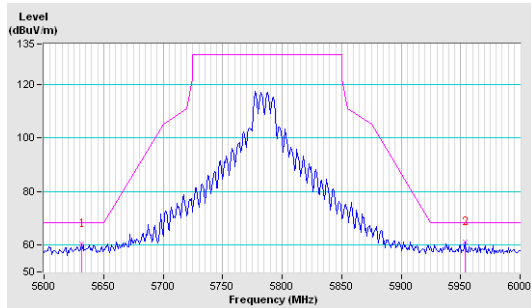


Vertical

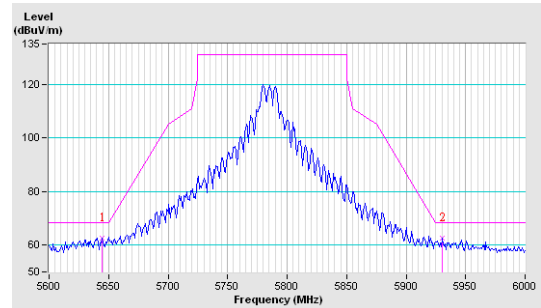


CH157

Horizontal

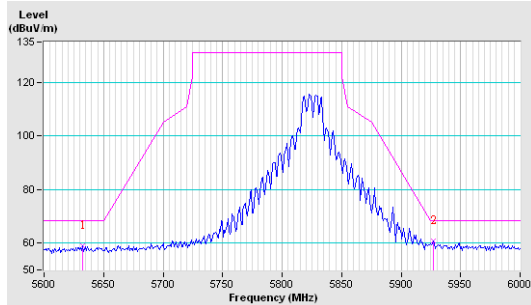


Vertical

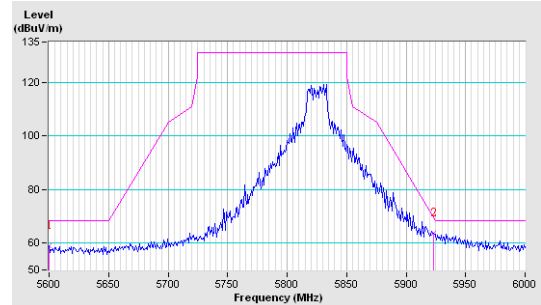


CH165

Horizontal



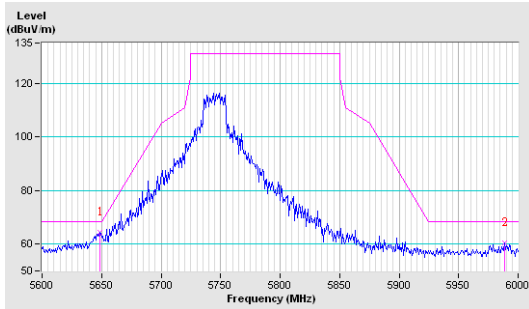
Vertical



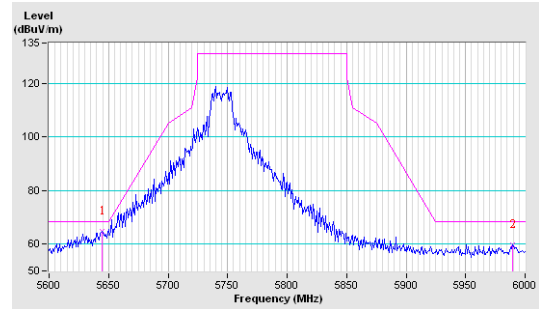
802.11n (HT20)

CH149

Horizontal

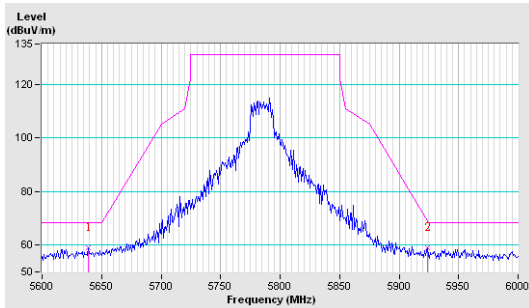


Vertical

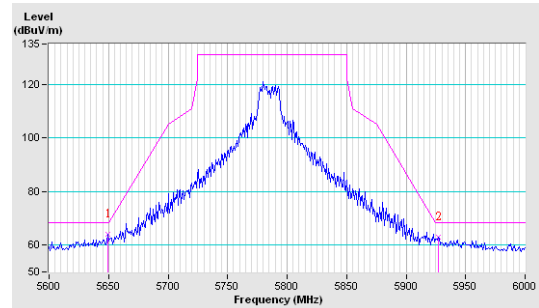


CH157

Horizontal

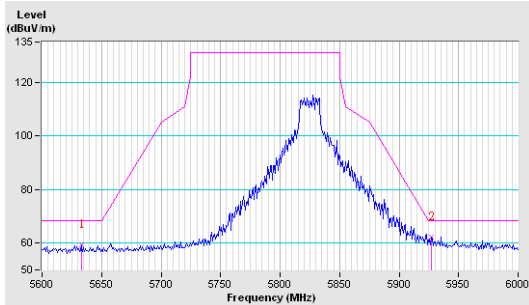


Vertical

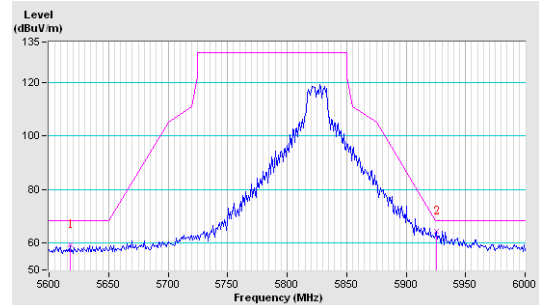


CH165

Horizontal



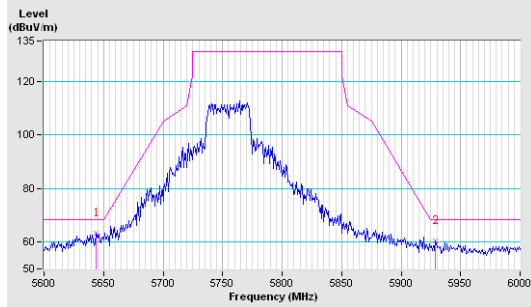
Vertical



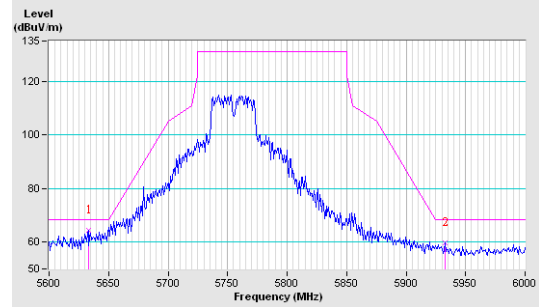
### 802.11n (HT40)

#### CH151

Horizontal

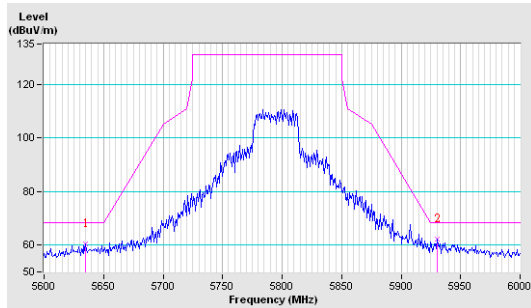


Vertical

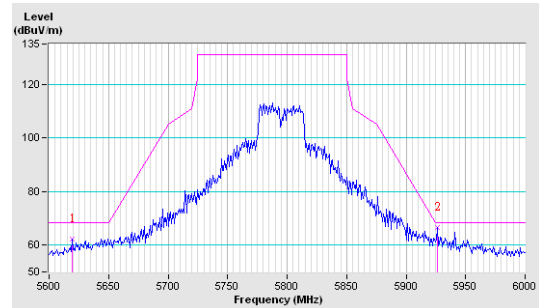


#### CH159

Horizontal



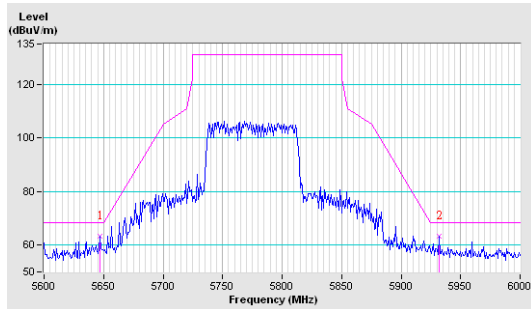
Vertical



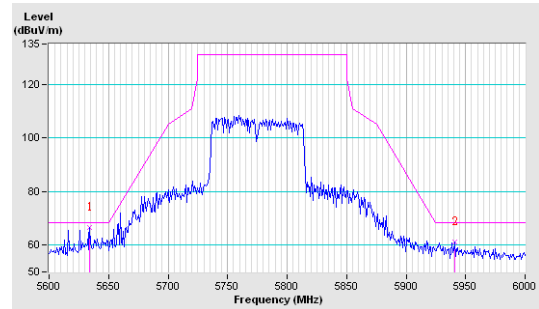
### 802.11ac (VHT80)

#### CH155

Horizontal



Vertical

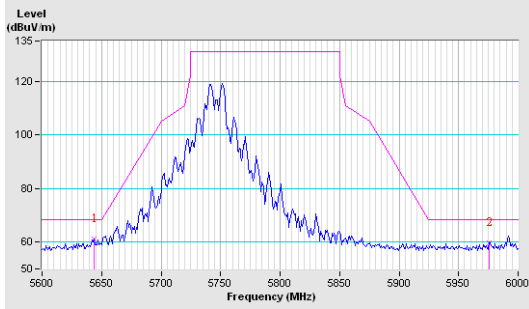




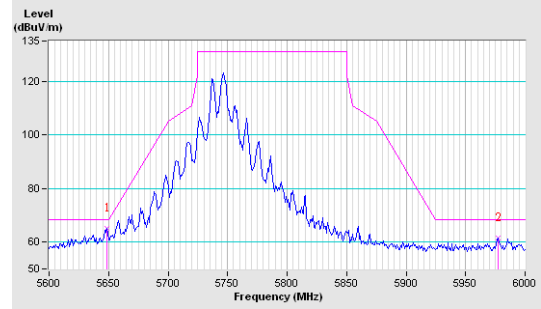
Test Mode D\_3TX  
802.11a

CH149

Horizontal

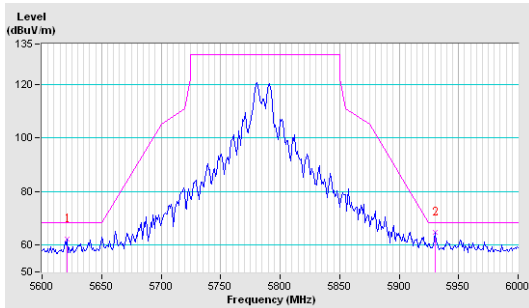


Vertical

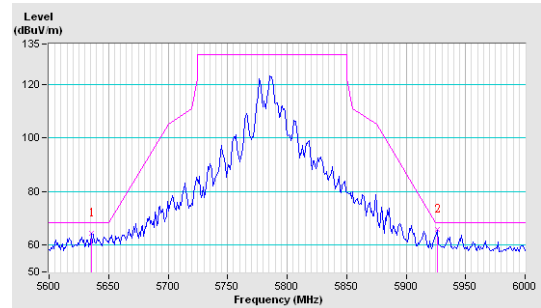


CH157

Horizontal

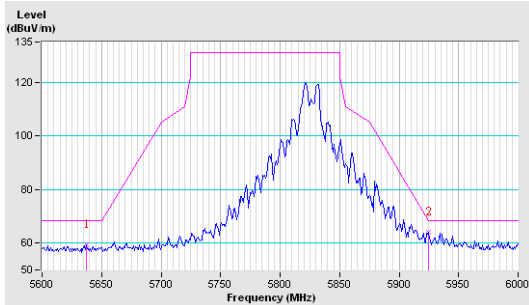


Vertical

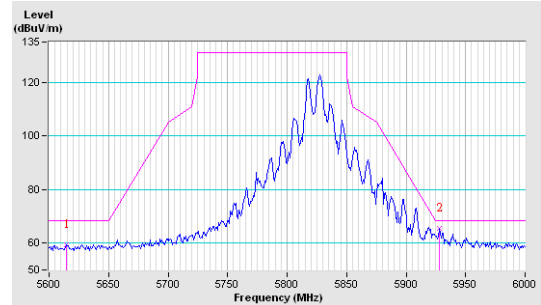


CH165

Horizontal



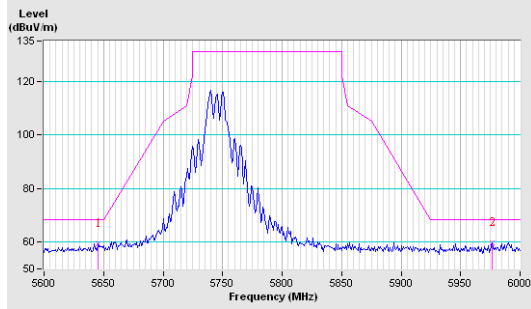
Vertical



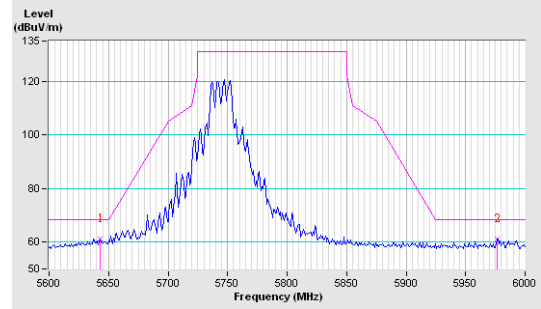
802.11n (HT20)

CH149

Horizontal

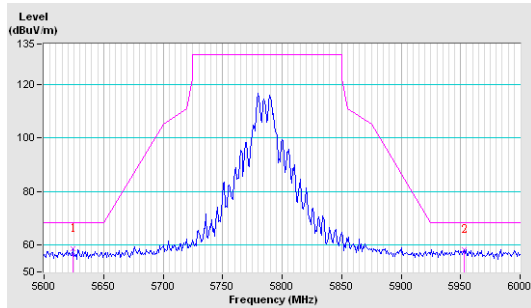


Vertical

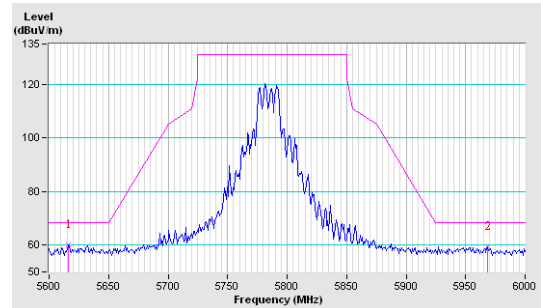


CH157

Horizontal

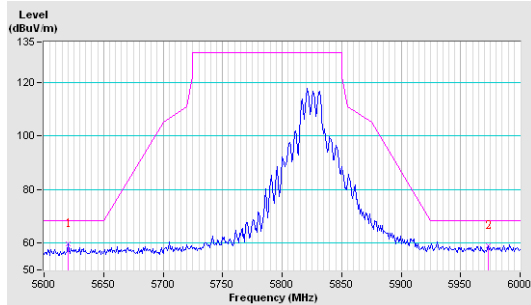


Vertical

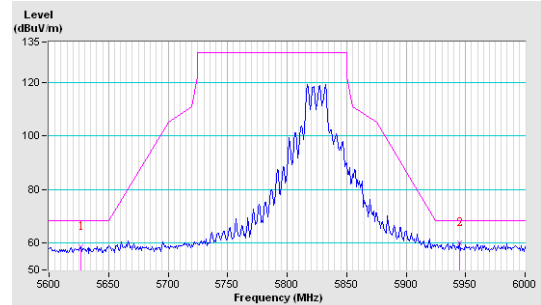


CH165

Horizontal



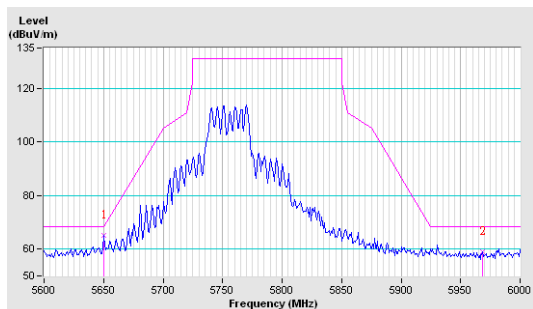
Vertical



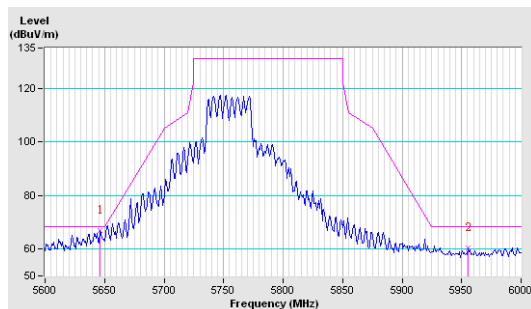
### 802.11n (HT40)

#### CH151

Horizontal

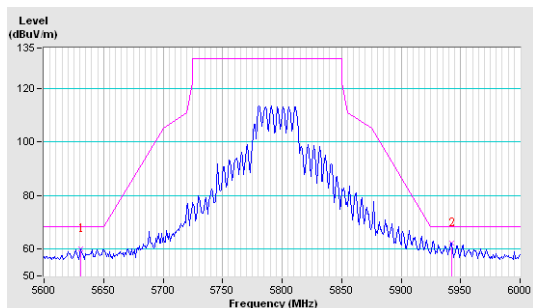


Vertical

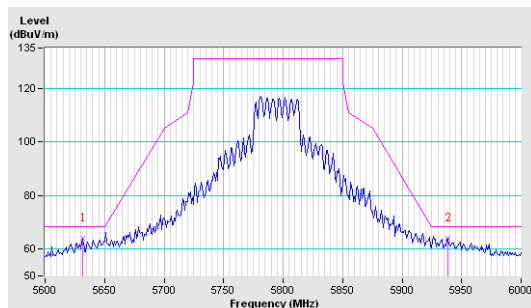


#### CH159

Horizontal



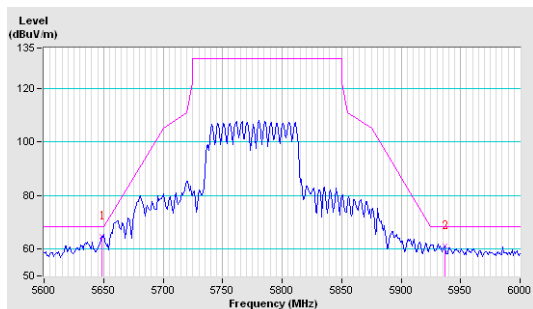
Vertical



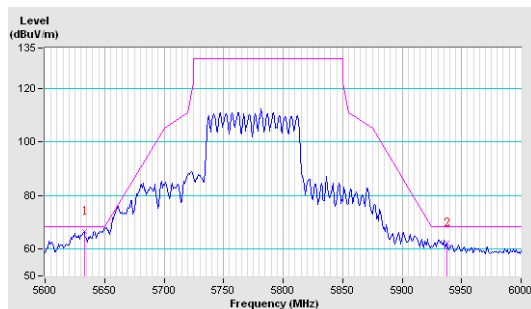
### 802.11ac (VHT80)

#### CH155

Horizontal



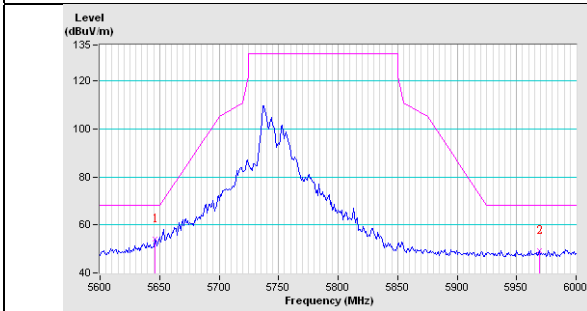
Vertical



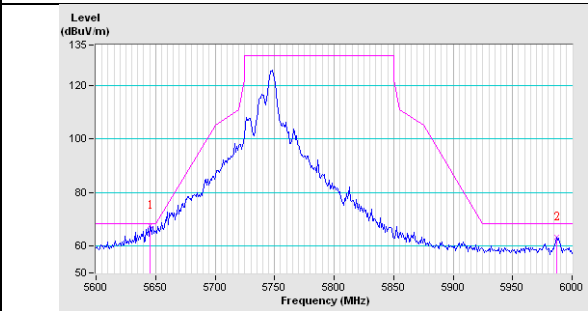
**Test Mode D\_4TX**  
**802.11a**

**CH149**

**Horizontal**

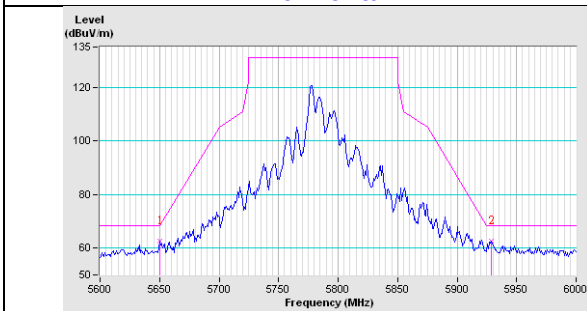


**Vertical**

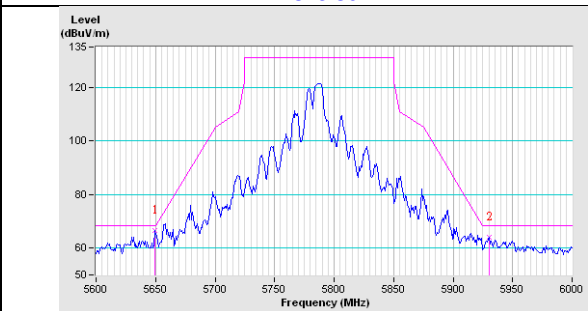


**CH157**

**Horizontal**

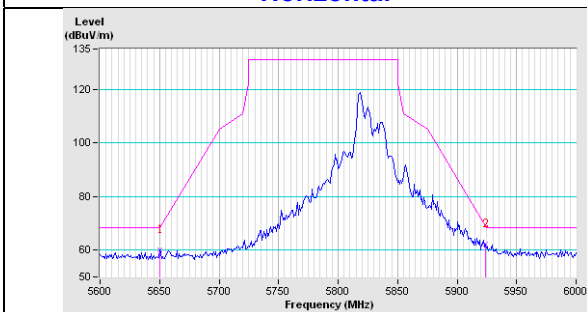


**Vertical**

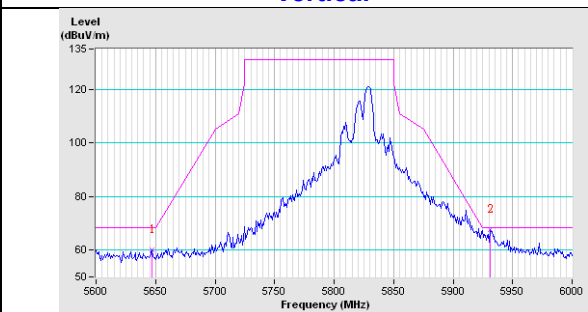


**CH165**

**Horizontal**



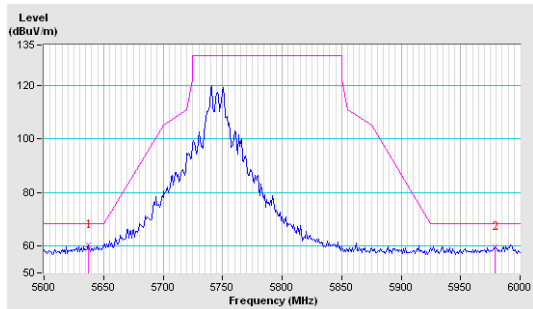
**Vertical**



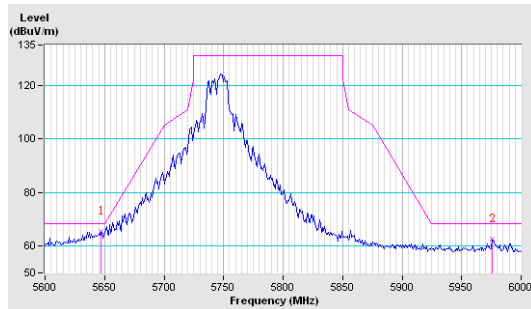
802.11n (HT20)

CH149

Horizontal

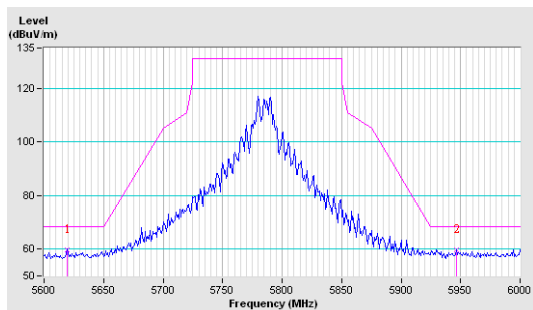


Vertical

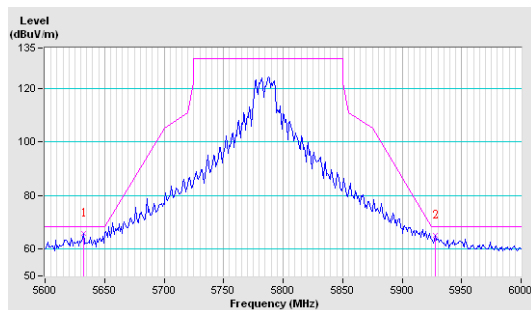


CH157

Horizontal

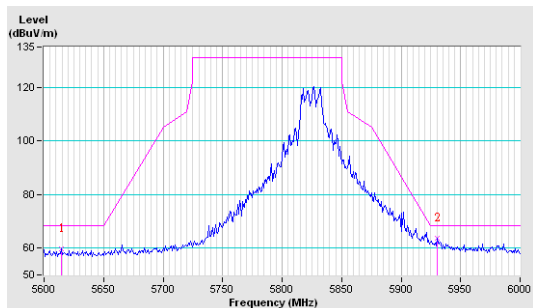


Vertical

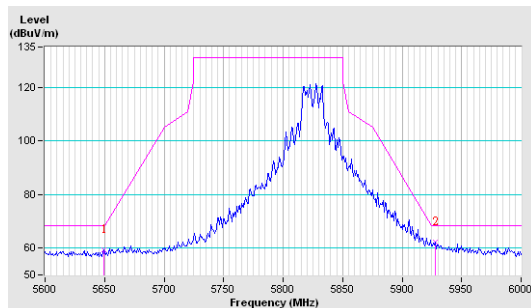


CH165

Horizontal



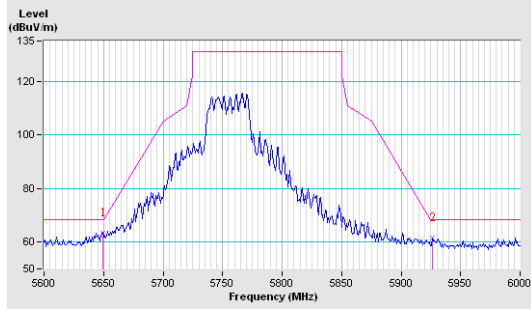
Vertical



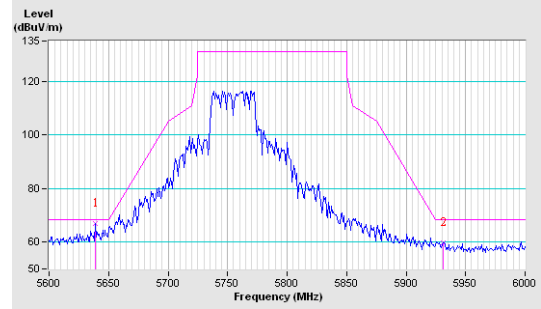
### 802.11n (HT40)

#### CH151

Horizontal

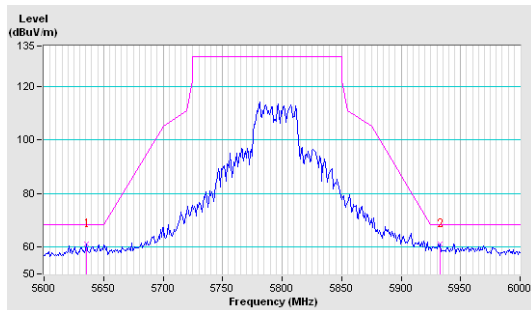


Vertical

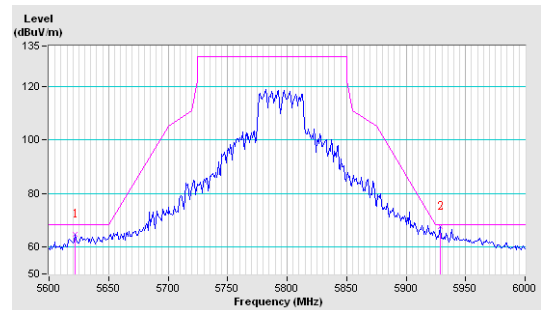


#### CH159

Horizontal



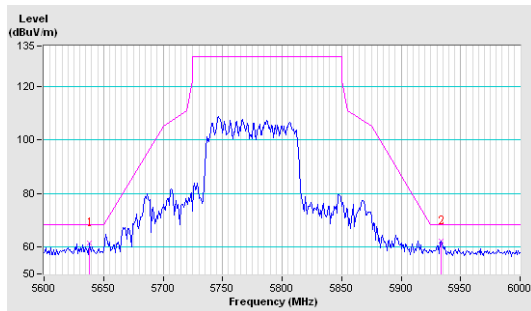
Vertical



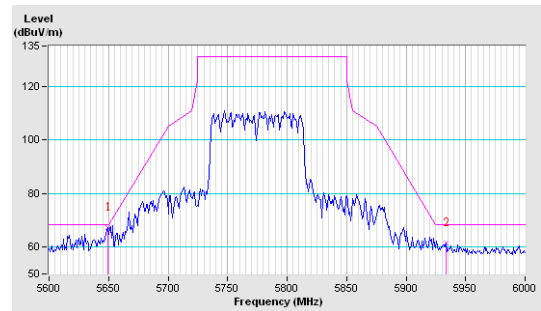
### 802.11ac (VHT80)

#### CH155

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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**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

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

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