

## FCC Test Report (WLAN)

**Report No.:** RF161216E08H-1

**FCC ID:** UAY-W8997-M1216

**Test Model:** W8997-M1216

**Received Date:** Aug. 15, 2019

**Test Date:** Sep. 04 to 07, 2019

**Issued Date:** Sep. 16, 2019

**Applicant:** Marvell Semiconductor, Inc.

**Address:** 5488 Marvell Lane, Santa Clara CA95054 USA

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

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Taiwan

**Test Location:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan

**FCC Registration /  
Designation Number:** 723255 / TW2022



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### Release Control Record

Issue No.	Description	Date Issued
RF161216E08H-1	Original release.	Sep. 16, 2019

## 1 Certificate of Conformity

**Product:** IEEE 802.11 2X2 MU-MIMO ac/a/b/g/n Wireless LAN + Bluetooth NGFF Module

**Brand:** Marvell

**Test Model:** W8997-M1216


**Sample Status:** ENGINEERING SAMPLE

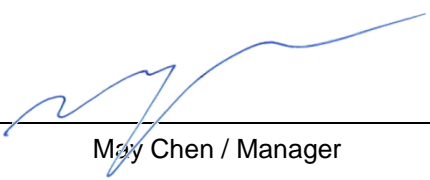
**Applicant:** Marvell Semiconductor, Inc.

**Test Date:** Sep. 04 to 07, 2019

**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:** Sep. 16, 2019  
Claire Kuan / Specialist

**Approved by :**  , **Date:** Sep. 16, 2019  
May Chen / 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) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.3dB at 5150.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF), RP-SMA, I-pex not a standard connector.

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

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 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) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.0 dB
	30MHz ~ 1GHz	5.1 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.1 dB
	6GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.2 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	IEEE 802.11 2X2 MU-MIMO ac/a/b/g/n Wireless LAN + Bluetooth NGFF Module
Brand	Marvell
Test Model	W8997-M1216
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	DC 3.3V from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	<b>2.4GHz:</b> 2.412 ~ 2.462GHz <b>5GHz:</b> 5.18~5.24GHz, 5.26~5.32GHz, 5.50~5.70GHz, 5.745~5.825GHz
Number of Channel	<b>2.4GHz:</b> 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 <b>5GHz:</b> 802.11a, 802.11n (HT20), 802.11ac (VHT20): 24 802.11n (HT40), 802.11ac (VHT40): 11 802.11ac (VHT80): 5
Output Power	<b>2.4GHz:</b> 885.515mW <b>5.18GHz ~ 5.24GHz:</b> 129.286mW <b>5.26~5.32GHz:</b> 131.893mW <b>5.50~5.70GHz:</b> 134.915mW <b>5.745GHz ~ 5.825GHz:</b> 178.919mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RF161216E08C-1 as the following:

◆ Add new antennas as following table:

Original									
Antenna Set.	Brand	Model	Chain No.	Antenna Net. Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length	
1	MAG.LAYERS	MSA-4008-25GC1-A1	Chain 0(Aux)	2.98	2400~2500	PIFA	i-pex(MHF)	15cm	
				5.16	4900~5900			15cm	
			Chain 1(Main)	2.98	2400~2500				4900~5900
				5.16	4900~5900				
2	Bondale	G-RA0K10090176-1436B	Chain 0(Aux)	1.9	2400~2500	Dipole	RP-SMA	120mm	
				3.6	4900~5800			120mm	
			Chain 1(Main)	1.9	2400~2500				4900~5800
				3.6	4900~5800				
3	San Jose	UEN-201	Chain 0(Aux)	2.4	2400~2500	Dipole	RP-SMA	120mm	
				4.4	4900~5800			120mm	
			Chain 1(Main)	2.4	2400~2500				4900~5800
				4.4	4900~5800				
Newly									
Antenna Set.	Brand	Model	chain no.	Antenna Net Gain(dBi) included cable loss	Frequency range	Antenna Type	Connector Type	Cable Length	
4	Unictron	H2B1PC1A1C175L	Chain 0(Aux)	1.6	2400-2500	PCB	I-pex	100±5mm	
				4.8	5150~5850			100±5mm	
			Chain 1(Main)	1.6	2400-2500	PCB	I-pex		
				4.8	5150~5850				
5	LSR	001-0012	Chain 0(Aux)	2	2400-2500	Dipole	RP-SMA	100mm	
				2	5150~5850			100mm	
			Chain 1(Main)	2	2400-2500	Dipole	RP-SMA		
				2	5150~5850				
6	Laird	MAF94051	Chain 0(Aux)	2.4	2400-2500	Dipole	RP-SMA	100mm	
				3.4	5150~5850			100mm	
			Chain 1(Main)	2.4	2400-2500	Dipole	RP-SMA		
				3.4	5150~5850				
7	Taoglas	GW.59.3153	Chain 0(Aux)	2.86	2400-2500	Dipole	RP-SMA	100mm	
				4.74	5150~5850			100mm	
			Chain 1(Main)	2.86	2400-2500	Dipole	RP-SMA		
				4.74	5150~5850				
8	Chang Hong	DA-2458-02-SMR	Chain 0(Aux)	2.85	2400-2500	Dipole	RP-SMA	100mm	
				2.17	5150~5850			100mm	
			Chain 1(Main)	2.85	2400-2500	Dipole	RP-SMA		
				3.13	5150~5850				
9	Unictron	H2B1PD1A1C385L	Chain 0(Aux)	2.8	2400-2500	PCB	I-pex	100mm	
				4.2	5150~5850			100mm	
			Chain 1(Main)	2.8	2400-2500	PCB	I-pex		
				4.2	5150~5850				



10	Molex	2042811100	Chain 0(Aux)	2.562	2400-2500	PCB	I-pex	100mm
				3.094	5150~5850			
			Chain 1(Main)	2.562	2400-2500	PCB	I-pex	100mm
				3.094	5150~5850			
11	Molex	1461531100	Chain 0(Aux)	1.829	2400-2500	PCB	I-pex	100mm
				2.485	5150~5850			
			Chain 1(Main)	1.829	2400-2500	PCB	I-pex	100mm
				2.485	5150~5850			
12	MAG.LAYERS	MSA-4008-25GC1-A2	Chain 0(Aux)	2.98	2400-2500	PIFA	i-pex(MHF)	NA
				5.16	5150~5850			
			Chain 1(Main)	2.98	2400-2500	PIFA	i-pex(MHF)	
				5.16	5150~5850			

Note:

1. Max. gain was selected for Antenna Port Conducted Measurement test.
2. Antenna Set. 4, 7 were selected for radiated emissions test.

2. According to above condition, all test items (Except AC Power Conducted Emissions and Frequency Stability) need to be performed. And all data were verified to meet the requirements.
3. There are WLAN, BT technology used for the EUT.
4. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4GHz)	Bluetooth
2	WLAN (5GHz)	Bluetooth

**Note:** The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The EUT incorporates a MIMO function.

2.4GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11b	2TX	2RX
802.11g	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
5GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

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

## 3.2 Description of Test Modes

### FOR 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

### FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

### FOR 5500 ~ 5700MHz

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz

### FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To			Description
	RE $\geq$ 1G	RE<1G	APCM	
1	-	-	√	PIFA antenna
2	√	√	-	PCB antenna
3	√	√	-	Dipole antenna

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

**RE<1G**: Radiated Emission below 1GHz

**APCM**: Antenna Port Conducted Measurement

**NOTE:** The EUT's PCB antenna had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.

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

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5320, 5500-5700, 5745-5825	36 to 64, 100 to 140, 149 to 165	149	OFDM	BPSK	6.5

### Antenna Port Conducted Measurement:

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

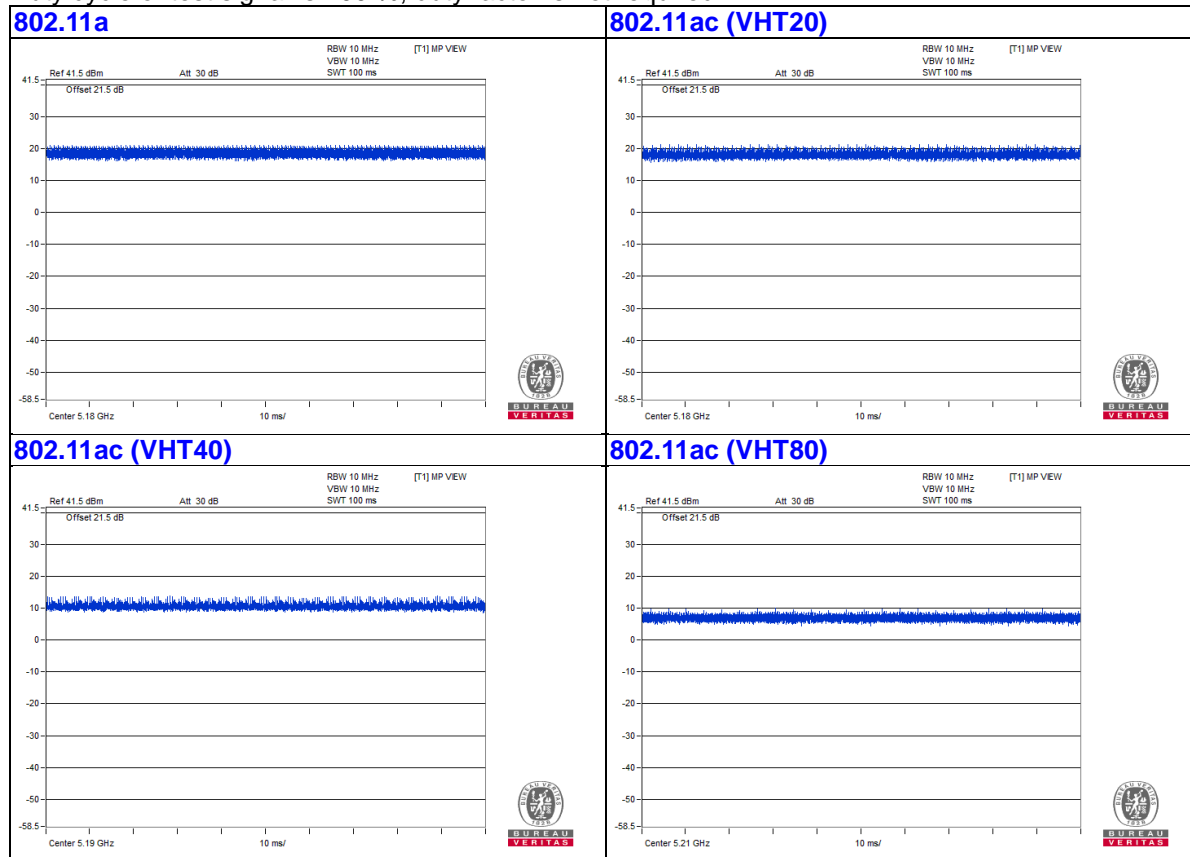
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

### Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE $\geq$ 1G	24deg. C, 65%RH	120Vac, 60Hz	Nelson Teng
RE<1G	22deg. C, 67%RH	120Vac, 60Hz	Tom Yang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin

### 3.3 Duty Cycle of Test Signal

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



### 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.	Laptop	DELL	E6420	482T3R1	FCC DoC	Provided by Lab
B.	USB Dongle	AzureWave	USB Dongle	NA	NA	Supplied by client
C.	PCIE Card	AzureWave	PCIE Card	NA	NA	Supplied by client
D.	Test Tool	AzureWave	Test Tool	NA	NA	Supplied by client
E.	Adapter	DELL	LA65NS2-01	NA	NA	Provided by Lab
F.	Laptop	DELL	P88G	G1WJL42	NA	Provided by Lab

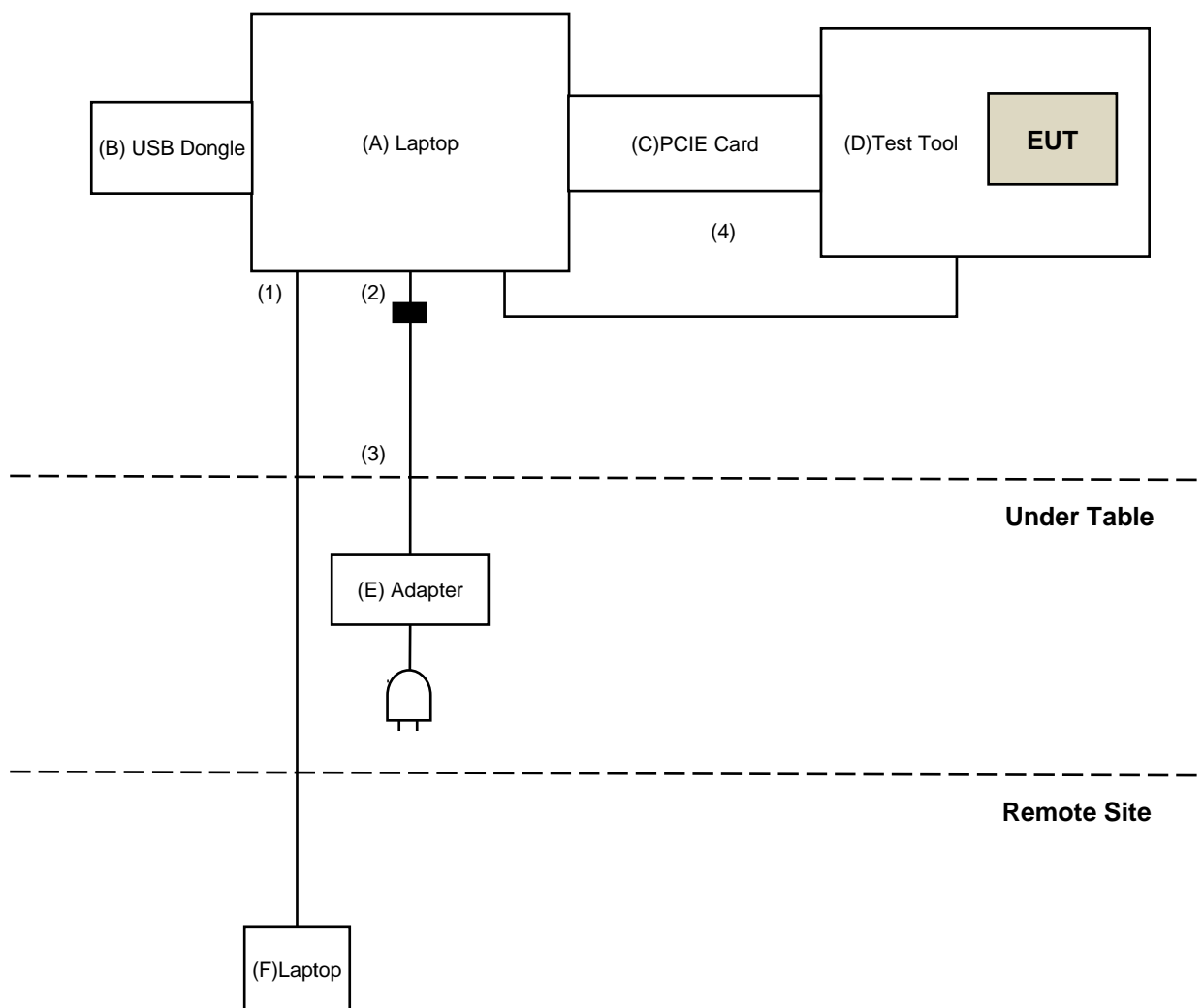
Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	DC Cable	1	1.8	No	1	Provided by Lab
3.	AC Cable	1	1	No	0	Provided by Lab
4.	Type C Cable	1	1.5	Yes	0	Provided by Lab

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

### 3.4.1 Configuration of System under Test





### 3.5 General Description of Applied Standard

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

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

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

**KDB 662911 D01 Multiple Transmitter Output v02r01**

**ANSI C63.10-2013**

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

## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

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

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

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

#### NOTE:

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

Limits of unwanted emission out of the restricted bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v02r01			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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 17, 2019	July 16, 2020
Pre-Amplifier EMCI	EMC001340	980142	May 30, 2019	May 29, 2020
Loop Antenna Electro-Metrics	EM-6879	264	Jan. 22, 2019	Jan. 21, 2020
RF Cable	NA	LOOPCAB-001	Jan. 14, 2019	Jan. 13, 2020
RF Cable	NA	LOOPCAB-002	Jan. 14, 2019	Jan. 13, 2020
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 30, 2019	Apr. 29, 2020
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 22, 2018	Nov. 21, 2019
RF Cable	8D	966-3-1	Mar. 18, 2019	Mar. 17, 2020
RF Cable	8D	966-3-2	Mar. 18, 2019	Mar. 17, 2020
RF Cable	8D	966-3-3	Mar. 18, 2019	Mar. 17, 2020
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 27, 2018	Sep. 26, 2019
Horn Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 25, 2018	Nov. 24, 2019
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC104-SM-SM-1200	160922	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC104-SM-SM-2000	180601	June 10, 2019	June 09, 2020
RF Cable	EMC104-SM-SM-6000	180602	June 10, 2019	June 09, 2020
Spectrum Analyzer Keysight	N9030A	MY54490679	July 17, 2019	July 16, 2020
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 28, 2019	Jan. 27, 2020
Horn Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 25, 2018	Nov. 24, 2019
RF Cable	EMC102-KM-KM-1200	160924	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC102-KM-KM-1200	160925	Jan. 28, 2019	Jan. 27, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Spectrum Analyzer R&S	FSV40	100964	June 04, 2019	June 03, 2020
Spectrum Analyzer Agilent	E4446A	MY48250253	July 24, 2019	July 23, 2020
Power meter Anritsu	ML2495A	1014008	May 13, 2019	May 12, 2020
Power sensor Anritsu	MA2411B	0917122	May 13, 2019	May 12, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020

#### 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 966 Chamber No. 3.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: Sep. 04 to 07, 2019

#### 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

##### **Note:**

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

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

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

##### **Note:**

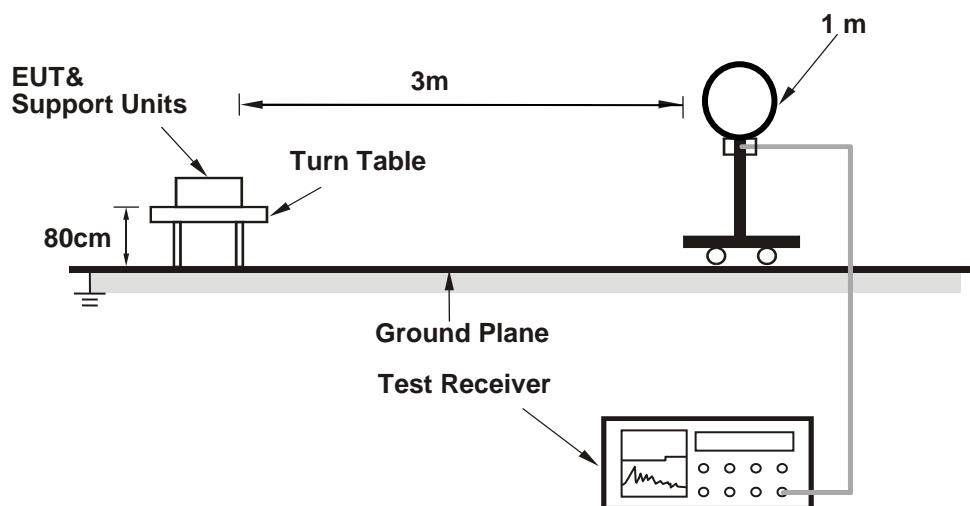
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

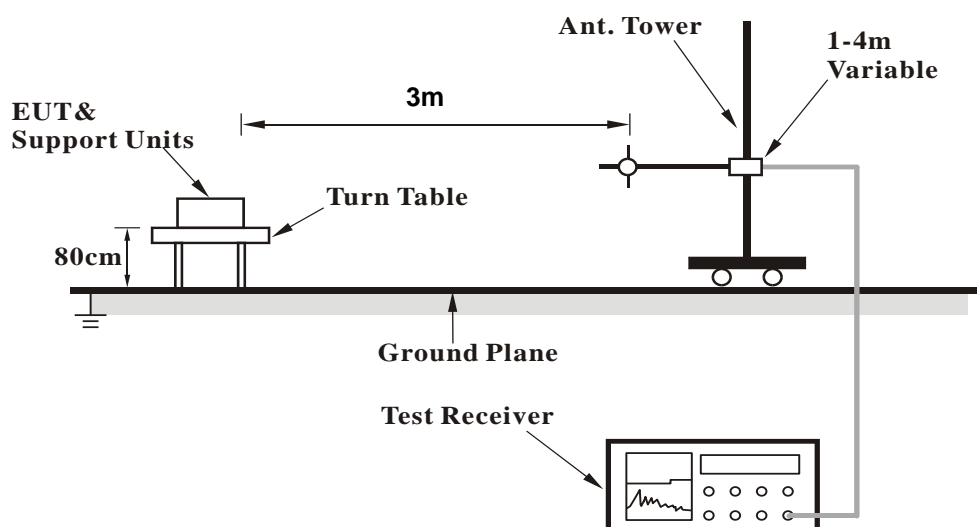
No deviation.

#### 4.1.5 Test Setup

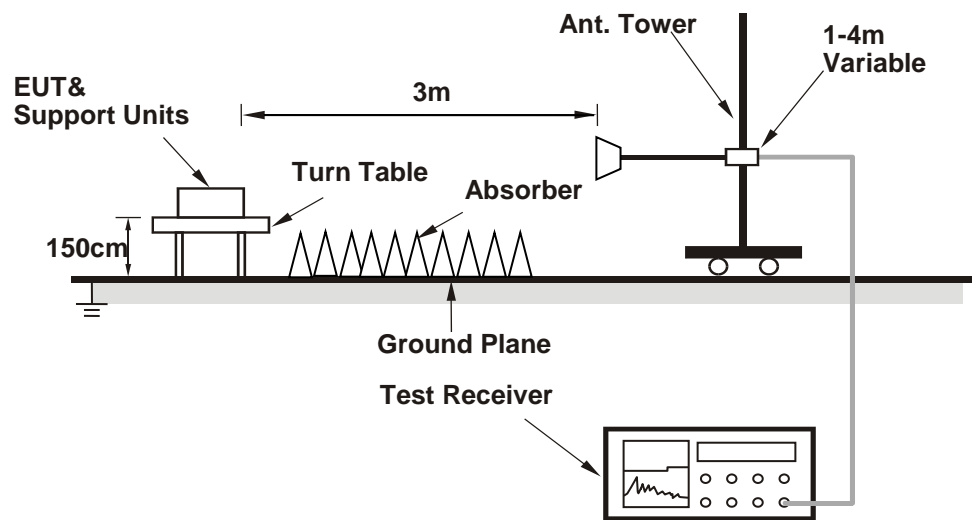
##### For Radiated emission below 30MHz



##### 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.
- Controlling software (DUT labtool (1.0.0.109)) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

#### 4.1.7 Test Results (PCB antenna)

##### Above 1GHz Data:

##### 802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.7 PK	74.0	-4.3	3.44 H	282	66.4	3.3
2	5150.00	50.7 AV	54.0	-3.3	3.44 H	282	47.4	3.3
3	*5180.00	110.7 PK			3.44 H	282	107.4	3.3
4	*5180.00	101.3 AV			3.44 H	282	98.0	3.3
5	#10360.00	59.8 PK	68.2	-8.4	1.07 H	294	47.6	12.2
6	15540.00	44.9 PK	74.0	-29.1	1.17 H	134	31.7	13.2
7	15540.00	32.6 AV	54.0	-21.4	1.17 H	134	19.4	13.2
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	5150.00	68.3 PK	74.0	-5.7	3.80 V	8	65.0	3.3
2	5150.00	53.5 AV	54.0	-0.5	3.80 V	8	50.2	3.3
3	*5180.00	107.4 PK			3.80 V	8	104.1	3.3
4	*5180.00	97.9 AV			3.80 V	8	94.6	3.3
5	#10360.00	59.9 PK	68.2	-8.3	1.05 V	34	47.7	12.2
6	15540.00	44.6 PK	74.0	-29.4	1.58 V	111	31.4	13.2
7	15540.00	32.5 AV	54.0	-21.5	1.58 V	111	19.3	13.2

#### REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.3 PK			3.79 H	292	106.2	3.1
2	*5200.00	100.0 AV			3.79 H	292	96.9	3.1
3	#10400.00	59.7 PK	68.2	-8.5	1.08 H	297	47.3	12.4
4	15600.00	45.7 PK	74.0	-28.3	1.20 H	135	32.5	13.2
5	15600.00	32.9 AV	54.0	-21.1	1.20 H	135	19.7	13.2
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	*5200.00	109.0 PK			3.71 V	21	105.9	3.1
2	*5200.00	99.3 AV			3.71 V	21	96.2	3.1
3	#10400.00	59.6 PK	68.2	-8.6	1.09 V	32	47.2	12.4
4	15600.00	44.5 PK	74.0	-29.5	1.52 V	97	31.3	13.2
5	15600.00	32.6 AV	54.0	-21.4	1.52 V	97	19.4	13.2

#### REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	113.8 PK			3.68 H	257	111.0	2.8
2	*5240.00	104.5 AV			3.68 H	257	101.7	2.8
3	5350.00	61.7 PK	74.0	-12.3	3.68 H	257	58.7	3.0
4	5350.00	45.0 AV	54.0	-9.0	3.68 H	257	42.0	3.0
5	#10480.00	63.7 PK	68.2	-4.5	1.16 H	321	51.2	12.5
6	15720.00	44.1 PK	74.0	-29.9	1.19 H	112	31.8	12.3
7	15720.00	32.3 AV	54.0	-21.7	1.19 H	112	20.0	12.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	112.2 PK			3.70 V	4	109.4	2.8
2	*5240.00	103.1 AV			3.70 V	4	100.3	2.8
3	5350.00	57.5 PK	74.0	-16.5	3.70 V	4	54.5	3.0
4	5350.00	42.5 AV	54.0	-11.5	3.70 V	4	39.5	3.0
5	#10480.00	64.3 PK	68.2	-3.9	1.08 V	21	51.8	12.5
6	15720.00	44.2 PK	74.0	-29.8	1.56 V	127	31.9	12.3
7	15720.00	32.2 AV	54.0	-21.8	1.56 V	127	19.9	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.3 PK	74.0	-20.7	3.65 H	262	50.0	3.3
2	5150.00	43.5 AV	54.0	-10.5	3.65 H	262	40.2	3.3
3	*5260.00	114.8 PK			3.65 H	262	112.1	2.7
4	*5260.00	105.8 AV			3.65 H	262	103.1	2.7
5	#10520.00	64.1 PK	68.2	-4.1	1.12 H	306	51.5	12.6
6	15780.00	44.8 PK	74.0	-29.2	1.19 H	118	32.8	12.0
7	15780.00	32.8 AV	54.0	-21.2	1.19 H	118	20.8	12.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	3.61 V	8	51.7	3.3
2	5150.00	43.2 AV	54.0	-10.8	3.61 V	8	39.9	3.3
3	*5260.00	112.6 PK			3.61 V	8	109.9	2.7
4	*5260.00	102.7 AV			3.61 V	8	100.0	2.7
5	#10520.00	63.9 PK	68.2	-4.3	1.18 V	11	51.3	12.6
6	15780.00	44.8 PK	74.0	-29.2	1.49 V	119	32.8	12.0
7	15780.00	32.9 AV	54.0	-21.1	1.49 V	119	20.9	12.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.9 PK			3.70 H	274	113.1	2.8
2	*5300.00	106.2 AV			3.70 H	274	103.4	2.8
3	10600.00	64.0 PK	74.0	-10.0	1.11 H	310	51.5	12.5
4	10600.00	50.7 AV	54.0	-3.3	1.11 H	310	38.2	12.5
5	15900.00	44.5 PK	74.0	-29.5	1.24 H	109	32.2	12.3
6	15900.00	32.4 AV	54.0	-21.6	1.24 H	109	20.1	12.3
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	*5300.00	111.7 PK			3.63 V	10	108.9	2.8
2	*5300.00	101.8 AV			3.63 V	10	99.0	2.8
3	10600.00	64.0 PK	74.0	-10.0	1.13 V	20	51.5	12.5
4	10600.00	51.5 AV	54.0	-2.5	1.13 V	20	39.0	12.5
5	15900.00	44.4 PK	74.0	-29.6	1.53 V	117	32.1	12.3
6	15900.00	32.5 AV	54.0	-21.5	1.53 V	117	20.2	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.3 PK			3.06 H	279	107.5	2.8
2	*5320.00	101.2 AV			3.06 H	279	98.4	2.8
3	5350.00	59.3 PK	74.0	-14.7	3.06 H	279	56.3	3.0
4	5350.00	45.8 AV	54.0	-8.2	3.06 H	279	42.8	3.0
5	10640.00	55.4 PK	74.0	-18.6	1.17 H	318	42.9	12.5
6	10640.00	40.7 AV	54.0	-13.3	1.17 H	318	28.2	12.5
7	15960.00	44.8 PK	74.0	-29.2	1.18 H	97	32.1	12.7
8	15960.00	32.5 AV	54.0	-21.5	1.18 H	97	19.8	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	106.7 PK			3.79 V	6	103.9	2.8
2	*5320.00	96.5 AV			3.79 V	6	93.7	2.8
3	5350.00	65.8 PK	74.0	-8.2	3.79 V	6	62.8	3.0
4	5350.00	50.4 AV	54.0	-3.6	3.79 V	6	47.4	3.0
5	10640.00	59.3 PK	74.0	-14.7	1.04 V	41	46.8	12.5
6	10640.00	42.9 AV	54.0	-11.1	1.04 V	41	30.4	12.5
7	15960.00	44.7 PK	74.0	-29.3	1.55 V	117	32.0	12.7
8	15960.00	32.4 AV	54.0	-21.6	1.55 V	117	19.7	12.7

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	53.5 PK	74.0	-20.5	3.10 H	273	50.2	3.3
2	5460.00	41.6 AV	54.0	-12.4	3.10 H	273	38.3	3.3
3	#5470.00	59.5 PK	68.2	-8.7	3.10 H	273	56.2	3.3
4	*5500.00	105.8 PK			3.10 H	273	102.5	3.3
5	*5500.00	96.7 AV			3.10 H	273	93.4	3.3
6	11000.00	50.8 PK	74.0	-23.2	1.19 H	318	37.7	13.1
7	11000.00	39.0 AV	54.0	-15.0	1.19 H	318	25.9	13.1
8	#16500.00	44.6 PK	68.2	-23.6	1.22 H	82	30.3	14.3

**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	5460.00	53.5 PK	74.0	-20.5	3.62 V	8	50.2	3.3
2	5460.00	39.9 AV	54.0	-14.1	3.62 V	8	36.6	3.3
3	#5470.00	62.2 PK	68.2	-6.0	3.62 V	8	58.9	3.3
4	*5500.00	103.1 PK			3.62 V	8	99.8	3.3
5	*5500.00	94.7 AV			3.62 V	8	91.4	3.3
6	11000.00	54.3 PK	74.0	-19.7	1.02 V	30	41.2	13.1
7	11000.00	39.8 AV	54.0	-14.2	1.02 V	30	26.7	13.1
8	#16500.00	44.5 PK	68.2	-23.7	1.49 V	132	30.2	14.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	115.2 PK			3.65 H	276	111.9	3.3
2	*5580.00	105.7 AV			3.65 H	276	102.4	3.3
3	11160.00	64.3 PK	74.0	-9.7	1.13 H	298	51.4	12.9
4	11160.00	50.9 AV	54.0	-3.1	1.13 H	298	38.0	12.9
5	#16740.00	44.7 PK	68.2	-23.5	1.28 H	121	29.3	15.4
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	*5580.00	112.0 PK			3.59 V	13	108.7	3.3
2	*5580.00	101.9 AV			3.59 V	13	98.6	3.3
3	11160.00	64.5 PK	74.0	-9.5	1.10 V	9	51.6	12.9
4	11160.00	51.8 AV	54.0	-2.2	1.10 V	9	38.9	12.9
5	#16740.00	43.8 PK	68.2	-24.4	1.49 V	111	28.4	15.4

#### REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	105.8 PK			3.36 H	302	102.4	3.4
2	*5700.00	96.4 AV			3.36 H	302	93.0	3.4
3	#5725.00	58.2 PK	68.2	-10.0	3.36 H	302	54.7	3.5
4	11400.00	50.9 PK	74.0	-23.1	1.17 H	315	37.6	13.3
5	11400.00	39.3 AV	54.0	-14.7	1.17 H	315	26.0	13.3
6	#17100.00	44.8 PK	68.2	-23.4	1.18 H	81	28.4	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.6 PK			3.87 V	6	101.2	3.4
2	*5700.00	94.2 AV			3.87 V	6	90.8	3.4
3	#5725.00	59.9 PK	68.2	-8.3	3.87 V	6	56.4	3.5
4	11400.00	53.9 PK	74.0	-20.1	1.07 V	34	40.6	13.3
5	11400.00	39.4 AV	54.0	-14.6	1.07 V	34	26.1	13.3
6	#17100.00	44.4 PK	68.2	-23.8	1.44 V	138	28.0	16.4

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5590.16	61.9 PK	68.2	-6.3	3.13 H	280	58.6	3.3
2	*5745.00	114.9 PK			3.13 H	280	111.3	3.6
3	*5745.00	105.8 AV			3.13 H	280	102.2	3.6
4	#5976.27	61.9 PK	68.2	-6.3	3.13 H	280	57.8	4.1
5	11490.00	66.5 PK	74.0	-7.5	1.13 H	304	53.4	13.1
6	11490.00	52.6 AV	54.0	-1.4	1.13 H	304	39.5	13.1
7	#17235.00	45.0 PK	68.2	-23.2	1.23 H	131	28.0	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5582.80	62.9 PK	68.2	-5.3	1.07 V	105	59.6	3.3
2	*5745.00	111.0 PK			1.07 V	105	107.4	3.6
3	*5745.00	101.8 AV			1.07 V	105	98.2	3.6
4	#5956.21	63.3 PK	68.2	-4.9	1.07 V	105	59.1	4.2
5	11490.00	64.6 PK	74.0	-9.4	1.16 V	11	51.5	13.1
6	11490.00	51.9 AV	54.0	-2.1	1.16 V	11	38.8	13.1
7	#17235.00	43.9 PK	68.2	-24.3	1.57 V	121	26.9	17.0

**REMARKS:**

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5602.05	61.8 PK	68.2	-6.4	3.26 H	296	58.5	3.3
2	*5785.00	114.5 PK			3.26 H	296	110.7	3.8
3	*5785.00	104.5 AV			3.26 H	296	100.7	3.8
4	#5952.63	62.3 PK	68.2	-5.9	3.26 H	296	58.1	4.2
5	11570.00	66.8 PK	74.0	-7.2	1.12 H	290	54.1	12.7
6	11570.00	53.0 AV	54.0	-1.0	1.12 H	290	40.3	12.7
7	#17355.00	44.4 PK	68.2	-23.8	1.21 H	135	27.5	16.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5577.27	62.3 PK	68.2	-5.9	1.07 V	104	59.0	3.3
2	*5785.00	111.8 PK			1.07 V	104	108.0	3.8
3	*5785.00	102.5 AV			1.07 V	104	98.7	3.8
4	#5956.40	61.7 PK	68.2	-6.5	1.07 V	104	57.5	4.2
5	11570.00	63.6 PK	74.0	-10.4	1.12 V	16	50.9	12.7
6	11570.00	51.0 AV	54.0	-3.0	1.12 V	16	38.3	12.7
7	#17355.00	44.9 PK	68.2	-23.3	1.48 V	109	28.0	16.9

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5605.57	63.5 PK	68.2	-4.7	3.40 H	287	60.2	3.3
2	*5825.00	115.2 PK			3.40 H	287	111.3	3.9
3	*5825.00	104.6 AV			3.40 H	287	100.7	3.9
4	#5939.17	65.2 PK	68.2	-3.0	3.40 H	287	61.0	4.2
5	11650.00	66.6 PK	74.0	-7.4	1.12 H	301	53.8	12.8
6	11650.00	52.9 AV	54.0	-1.1	1.12 H	301	40.1	12.8
7	#17475.00	45.0 PK	68.2	-23.2	1.22 H	137	27.5	17.5

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5642.78	62.4 PK	68.2	-5.8	1.08 V	105	59.1	3.3
2	*5825.00	112.4 PK			1.08 V	105	108.5	3.9
3	*5825.00	102.7 AV			1.08 V	105	98.8	3.9
4	#5942.18	65.5 PK	68.2	-2.7	1.08 V	105	61.3	4.2
5	11650.00	64.3 PK	74.0	-9.7	1.16 V	34	51.5	12.8
6	11650.00	51.6 AV	54.0	-2.4	1.16 V	34	38.8	12.8
7	#17475.00	44.5 PK	68.2	-23.7	1.57 V	104	27.0	17.5

**REMARKS:**

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

## 802.11ac (VHT20)

CHANNEL	TX Channel 36	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	5150.00	69.9 PK	74.0	-4.1	3.39 H	277	66.6	3.3
2	5150.00	50.7 AV	54.0	-3.3	3.39 H	277	47.4	3.3
3	*5180.00	110.6 PK			3.39 H	277	107.3	3.3
4	*5180.00	101.3 AV			3.39 H	277	98.0	3.3
5	#10360.00	60.0 PK	68.2	-8.2	1.16 H	300	47.8	12.2
6	15540.00	45.9 PK	74.0	-28.1	1.21 H	134	32.7	13.2
7	15540.00	33.0 AV	54.0	-21.0	1.21 H	134	19.8	13.2
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	5150.00	68.5 PK	74.0	-5.5	3.78 V	2	65.2	3.3
2	5150.00	53.7 AV	54.0	-0.3	3.78 V	2	50.4	3.3
3	*5180.00	107.6 PK			3.78 V	2	104.3	3.3
4	*5180.00	98.0 AV			3.78 V	2	94.7	3.3
5	#10360.00	59.4 PK	68.2	-8.8	1.10 V	27	47.2	12.2
6	15540.00	44.2 PK	74.0	-29.8	1.59 V	112	31.0	13.2
7	15540.00	32.4 AV	54.0	-21.6	1.59 V	112	19.2	13.2

## REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.8 PK			3.79 H	289	106.7	3.1
2	*5200.00	100.4 AV			3.79 H	289	97.3	3.1
3	#10400.00	59.4 PK	68.2	-8.8	1.08 H	297	47.0	12.4
4	15600.00	45.6 PK	74.0	-28.4	1.11 H	147	32.4	13.2
5	15600.00	32.8 AV	54.0	-21.2	1.11 H	147	19.6	13.2
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	*5200.00	108.4 PK			3.72 V	9	105.3	3.1
2	*5200.00	98.9 AV			3.72 V	9	95.8	3.1
3	#10400.00	60.1 PK	68.2	-8.1	1.10 V	43	47.7	12.4
4	15600.00	44.3 PK	74.0	-29.7	1.60 V	126	31.1	13.2
5	15600.00	32.2 AV	54.0	-21.8	1.60 V	126	19.0	13.2

#### REMARKS:

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	114.1 PK			3.72 H	271	111.3	2.8
2	*5240.00	104.7 AV			3.72 H	271	101.9	2.8
3	5350.00	61.4 PK	74.0	-12.6	3.72 H	271	58.4	3.0
4	5350.00	44.7 AV	54.0	-9.3	3.72 H	271	41.7	3.0
5	5354.15	61.8 PK	74.0	-12.2	3.72 H	271	58.8	3.0
6	5354.15	44.9 AV	54.0	-9.1	3.72 H	271	41.9	3.0
7	#10480.00	64.0 PK	68.2	-4.2	1.13 H	294	51.5	12.5
8	15720.00	44.7 PK	74.0	-29.3	1.24 H	105	32.4	12.3
9	15720.00	32.9 AV	54.0	-21.1	1.24 H	105	20.6	12.3

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	112.4 PK			3.69 V	6	109.6	2.8
2	*5240.00	103.0 AV			3.69 V	6	100.2	2.8
3	5350.00	58.2 PK	74.0	-15.8	3.69 V	6	55.2	3.0
4	5350.00	43.0 AV	54.0	-11.0	3.69 V	6	40.0	3.0
5	#10480.00	64.2 PK	68.2	-4.0	1.13 V	28	51.7	12.5
6	15720.00	44.1 PK	74.0	-29.9	1.57 V	114	31.8	12.3
7	15720.00	32.0 AV	54.0	-22.0	1.57 V	114	19.7	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.7 PK	74.0	-20.3	3.70 H	271	50.4	3.3
2	5150.00	43.8 AV	54.0	-10.2	3.70 H	271	40.5	3.3
3	*5260.00	114.9 PK			3.70 H	271	112.2	2.7
4	*5260.00	105.6 AV			3.70 H	271	102.9	2.7
5	#10520.00	64.1 PK	68.2	-4.1	1.09 H	294	51.5	12.6
6	15780.00	44.2 PK	74.0	-29.8	1.25 H	118	32.2	12.0
7	15780.00	32.0 AV	54.0	-22.0	1.25 H	118	20.0	12.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.8 PK	74.0	-19.2	3.63 V	6	51.5	3.3
2	5150.00	43.0 AV	54.0	-11.0	3.63 V	6	39.7	3.3
3	*5260.00	112.1 PK			3.63 V	6	109.4	2.7
4	*5260.00	102.3 AV			3.63 V	6	99.6	2.7
5	#10520.00	64.0 PK	68.2	-4.2	1.12 V	20	51.4	12.6
6	15780.00	44.1 PK	74.0	-29.9	1.54 V	107	32.1	12.0
7	15780.00	32.2 AV	54.0	-21.8	1.54 V	107	20.2	12.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.5 PK			3.70 H	274	112.7	2.8
2	*5300.00	106.0 AV			3.70 H	274	103.2	2.8
3	10600.00	63.8 PK	74.0	-10.2	1.12 H	314	51.3	12.5
4	10600.00	50.6 AV	54.0	-3.4	1.12 H	314	38.1	12.5
5	15900.00	44.3 PK	74.0	-29.7	1.23 H	117	32.0	12.3
6	15900.00	32.2 AV	54.0	-21.8	1.23 H	117	19.9	12.3
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	*5300.00	112.1 PK			3.63 V	8	109.3	2.8
2	*5300.00	102.1 AV			3.63 V	8	99.3	2.8
3	10600.00	63.5 PK	74.0	-10.5	1.14 V	6	51.0	12.5
4	10600.00	51.1 AV	54.0	-2.9	1.14 V	6	38.6	12.5
5	15900.00	44.6 PK	74.0	-29.4	1.55 V	113	32.3	12.3
6	15900.00	32.8 AV	54.0	-21.2	1.55 V	113	20.5	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.2 PK			3.10 H	285	107.4	2.8
2	*5320.00	101.2 AV			3.10 H	285	98.4	2.8
3	5350.00	59.2 PK	74.0	-14.8	3.10 H	285	56.2	3.0
4	5350.00	45.6 AV	54.0	-8.4	3.10 H	285	42.6	3.0
5	10640.00	55.6 PK	74.0	-18.4	1.18 H	333	43.1	12.5
6	10640.00	40.8 AV	54.0	-13.2	1.18 H	333	28.3	12.5
7	15960.00	44.8 PK	74.0	-29.2	1.22 H	92	32.1	12.7
8	15960.00	32.7 AV	54.0	-21.3	1.22 H	92	20.0	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	106.8 PK			3.75 V	9	104.0	2.8
2	*5320.00	96.6 AV			3.75 V	9	93.8	2.8
3	5350.00	66.1 PK	74.0	-7.9	3.75 V	9	63.1	3.0
4	5350.00	50.8 AV	54.0	-3.2	3.75 V	9	47.8	3.0
5	10640.00	59.2 PK	74.0	-14.8	1.06 V	29	46.7	12.5
6	10640.00	42.6 AV	54.0	-11.4	1.06 V	29	30.1	12.5
7	15960.00	45.1 PK	74.0	-28.9	1.53 V	123	32.4	12.7
8	15960.00	32.7 AV	54.0	-21.3	1.53 V	123	20.0	12.7

**REMARKS:**

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



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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	53.8 PK	74.0	-20.2	3.14 H	276	50.5	3.3
2	5460.00	41.9 AV	54.0	-12.1	3.14 H	276	38.6	3.3
3	#5470.00	59.5 PK	68.2	-8.7	3.14 H	276	56.2	3.3
4	*5500.00	105.9 PK			3.14 H	276	102.6	3.3
5	*5500.00	96.5 AV			3.14 H	276	93.2	3.3
6	11000.00	50.9 PK	74.0	-23.1	1.15 H	319	37.8	13.1
7	11000.00	39.1 AV	54.0	-14.9	1.15 H	319	26.0	13.1
8	#16500.00	44.4 PK	68.2	-23.8	1.18 H	84	30.1	14.3

**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	5460.00	54.1 PK	74.0	-19.9	3.67 V	11	50.8	3.3
2	5460.00	40.3 AV	54.0	-13.7	3.67 V	11	37.0	3.3
3	#5470.00	62.2 PK	68.2	-6.0	3.67 V	11	58.9	3.3
4	*5500.00	102.9 PK			3.67 V	11	99.6	3.3
5	*5500.00	94.4 AV			3.67 V	11	91.1	3.3
6	11000.00	53.9 PK	74.0	-20.1	1.00 V	33	40.8	13.1
7	11000.00	39.4 AV	54.0	-14.6	1.00 V	33	26.3	13.1
8	#16500.00	43.8 PK	68.2	-24.4	1.54 V	124	29.5	14.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	114.8 PK			3.67 H	274	111.5	3.3
2	*5580.00	105.4 AV			3.67 H	274	102.1	3.3
3	11160.00	64.1 PK	74.0	-9.9	1.17 H	316	51.2	12.9
4	11160.00	50.6 AV	54.0	-3.4	1.17 H	316	37.7	12.9
5	#16740.00	44.7 PK	68.2	-23.5	1.21 H	122	29.3	15.4
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	*5580.00	112.1 PK			3.61 V	18	108.8	3.3
2	*5580.00	102.1 AV			3.61 V	18	98.8	3.3
3	11160.00	64.0 PK	74.0	-10.0	1.12 V	19	51.1	12.9
4	11160.00	51.4 AV	54.0	-2.6	1.12 V	19	38.5	12.9
5	#16740.00	44.4 PK	68.2	-23.8	1.48 V	125	29.0	15.4

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	106.0 PK			3.36 H	296	102.6	3.4
2	*5700.00	96.3 AV			3.36 H	296	92.9	3.4
3	#5725.00	58.7 PK	68.2	-9.5	3.36 H	296	55.2	3.5
4	11400.00	50.6 PK	74.0	-23.4	1.24 H	309	37.3	13.3
5	11400.00	38.7 AV	54.0	-15.3	1.24 H	309	25.4	13.3
6	#17100.00	45.0 PK	68.2	-23.2	1.17 H	98	28.6	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.4 PK			3.96 V	10	101.0	3.4
2	*5700.00	94.4 AV			3.96 V	10	91.0	3.4
3	#5725.00	59.6 PK	68.2	-8.6	3.96 V	10	56.1	3.5
4	11400.00	54.5 PK	74.0	-19.5	1.00 V	32	41.2	13.3
5	11400.00	39.8 AV	54.0	-14.2	1.00 V	32	26.5	13.3
6	#17100.00	44.7 PK	68.2	-23.5	1.47 V	143	28.3	16.4

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.89	61.5 PK	68.2	-6.7	3.16 H	280	58.2	3.3
2	*5745.00	115.1 PK			3.16 H	280	111.5	3.6
3	*5745.00	105.8 AV			3.16 H	280	102.2	3.6
4	#5947.50	61.4 PK	68.2	-6.8	3.16 H	280	57.2	4.2
5	11490.00	66.7 PK	74.0	-7.3	1.12 H	297	53.6	13.1
6	11490.00	52.9 AV	54.0	-1.1	1.12 H	297	39.8	13.1
7	#17235.00	45.1 PK	68.2	-23.1	1.20 H	136	28.1	17.0

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5614.99	61.7 PK	68.2	-6.5	1.05 V	105	58.4	3.3
2	*5745.00	111.0 PK			1.05 V	105	107.4	3.6
3	*5745.00	101.8 AV			1.05 V	105	98.2	3.6
4	#5992.59	61.9 PK	68.2	-6.3	1.05 V	105	57.8	4.1
5	11490.00	64.2 PK	74.0	-9.8	1.10 V	8	51.1	13.1
6	11490.00	51.7 AV	54.0	-2.3	1.10 V	8	38.6	13.1
7	#17235.00	45.1 PK	68.2	-23.1	1.49 V	102	28.1	17.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5557.49	62.1 PK	68.2	-6.1	3.11 H	283	58.8	3.3
2	*5785.00	115.0 PK			3.11 H	283	111.2	3.8
3	*5785.00	105.7 AV			3.11 H	283	101.9	3.8
4	#5952.10	62.4 PK	68.2	-5.8	3.11 H	283	58.2	4.2
5	11570.00	66.7 PK	74.0	-7.3	1.13 H	292	54.0	12.7
6	11570.00	52.6 AV	54.0	-1.4	1.13 H	292	39.9	12.7
7	#17355.00	44.6 PK	68.2	-23.6	1.18 H	135	27.7	16.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5587.36	62.1 PK	68.2	-6.1	1.03 V	119	58.8	3.3
2	*5785.00	111.4 PK			1.03 V	119	107.6	3.8
3	*5785.00	102.0 AV			1.03 V	119	98.2	3.8
4	#5932.04	62.7 PK	68.2	-5.5	1.03 V	119	58.6	4.1
5	11570.00	63.7 PK	74.0	-10.3	1.18 V	30	51.0	12.7
6	11570.00	51.3 AV	54.0	-2.7	1.18 V	30	38.6	12.7
7	#17355.00	44.8 PK	68.2	-23.4	1.49 V	112	27.9	16.9

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5595.89	62.3 PK	68.2	-5.9	3.08 H	267	59.0	3.3
2	*5825.00	115.3 PK			3.08 H	267	111.4	3.9
3	*5825.00	105.5 AV			3.08 H	267	101.6	3.9
4	#5936.66	65.2 PK	68.2	-3.0	3.08 H	267	61.0	4.2
5	11650.00	66.5 PK	74.0	-7.5	1.15 H	304	53.7	12.8
6	11650.00	52.7 AV	54.0	-1.3	1.15 H	304	39.9	12.8
7	#17475.00	45.1 PK	68.2	-23.1	1.18 H	132	27.6	17.5

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.66	62.2 PK	68.2	-6.0	1.02 V	115	58.9	3.3
2	*5825.00	110.9 PK			1.02 V	115	107.0	3.9
3	*5825.00	101.7 AV			1.02 V	115	97.8	3.9
4	#5929.31	65.2 PK	68.2	-3.0	1.02 V	115	61.1	4.1
5	11650.00	64.0 PK	74.0	-10.0	1.11 V	24	51.2	12.8
6	11650.00	51.6 AV	54.0	-2.4	1.11 V	24	38.8	12.8
7	#17475.00	44.8 PK	68.2	-23.4	1.53 V	106	27.3	17.5

**REMARKS:**

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

# 802.11ac (VHT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5148.12	60.0 PK	74.0	-14.0	3.17 H	279	56.7	3.3
2	5148.12	48.7 AV	54.0	-5.3	3.17 H	279	45.4	3.3
3	5150.00	59.7 PK	74.0	-14.3	3.17 H	279	56.4	3.3
4	5150.00	48.2 AV	54.0	-5.8	3.17 H	279	44.9	3.3
5	*5190.00	105.6 PK			3.17 H	279	102.4	3.2
6	*5190.00	96.5 AV			3.17 H	279	93.3	3.2
7	#10380.00	50.8 PK	68.2	-17.4	1.19 H	304	38.4	12.4
8	15570.00	44.5 PK	74.0	-29.5	1.21 H	95	31.2	13.3
9	15570.00	32.3 AV	54.0	-21.7	1.21 H	95	19.0	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.3 PK	74.0	-9.7	3.71 V	9	61.0	3.3
2	5150.00	52.6 AV	54.0	-1.4	3.71 V	9	49.3	3.3
3	*5190.00	103.7 PK			3.71 V	9	100.5	3.2
4	*5190.00	93.9 AV			3.71 V	9	90.7	3.2
5	#10380.00	53.5 PK	68.2	-14.7	1.06 V	37	41.1	12.4
6	15570.00	44.4 PK	74.0	-29.6	1.44 V	135	31.1	13.3
7	15570.00	31.6 AV	54.0	-22.4	1.44 V	135	18.3	13.3

## REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.5 PK	74.0	-13.5	3.19 H	286	57.2	3.3
2	5150.00	48.0 AV	54.0	-6.0	3.19 H	286	44.7	3.3
3	*5230.00	109.8 PK			3.19 H	286	106.9	2.9
4	*5230.00	100.9 AV			3.19 H	286	98.0	2.9
5	5350.00	62.3 PK	74.0	-11.7	3.19 H	286	59.3	3.0
6	5350.00	43.9 AV	54.0	-10.1	3.19 H	286	40.9	3.0
7	5357.11	62.2 PK	74.0	-11.8	3.19 H	286	59.2	3.0
8	5357.11	44.3 AV	54.0	-9.7	3.19 H	286	41.3	3.0
9	#10460.00	59.3 PK	68.2	-8.9	1.11 H	302	46.8	12.5
10	15690.00	45.6 PK	74.0	-28.4	1.15 H	140	33.1	12.5
11	15690.00	33.0 AV	54.0	-21.0	1.15 H	140	20.5	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	3.71 V	4	56.1	3.3
2	5150.00	47.3 AV	54.0	-6.7	3.71 V	4	44.0	3.3
3	*5230.00	107.1 PK			3.71 V	4	104.2	2.9
4	*5230.00	98.5 AV			3.71 V	4	95.6	2.9
5	5350.00	60.1 PK	74.0	-13.9	3.71 V	4	57.1	3.0
6	5350.00	43.8 AV	54.0	-10.2	3.71 V	4	40.8	3.0
7	5353.85	60.0 PK	74.0	-14.0	3.71 V	4	57.0	3.0
8	5353.85	44.1 AV	54.0	-9.9	3.71 V	4	41.1	3.0
9	#10460.00	59.5 PK	68.2	-8.7	1.10 V	19	47.0	12.5
10	15690.00	44.0 PK	74.0	-30.0	1.47 V	91	31.5	12.5
11	15690.00	32.1 AV	54.0	-21.9	1.47 V	91	19.6	12.5

**REMARKS:**

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



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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	3.18 H	292	51.8	3.3
2	5150.00	43.0 AV	54.0	-11.0	3.18 H	292	39.7	3.3
3	*5270.00	108.3 PK			3.18 H	292	105.6	2.7
4	*5270.00	99.8 AV			3.18 H	292	97.1	2.7
5	5350.00	63.1 PK	74.0	-10.9	3.18 H	292	60.1	3.0
6	5350.00	44.8 AV	54.0	-9.2	3.18 H	292	41.8	3.0
7	5355.38	63.8 PK	74.0	-10.2	3.18 H	292	60.8	3.0
8	5355.38	46.0 AV	54.0	-8.0	3.18 H	292	43.0	3.0
9	#10540.00	59.9 PK	68.2	-8.3	1.10 H	313	47.3	12.6
10	15810.00	45.4 PK	74.0	-28.6	1.16 H	147	33.4	12.0
11	15810.00	32.8 AV	54.0	-21.2	1.16 H	147	20.8	12.0

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.0 PK	74.0	-14.0	3.71 V	4	56.7	3.3
2	5150.00	44.0 AV	54.0	-10.0	3.71 V	4	40.7	3.3
3	*5270.00	107.3 PK			3.71 V	4	104.6	2.7
4	*5270.00	98.5 AV			3.71 V	4	95.8	2.7
5	5350.00	60.0 PK	74.0	-14.0	3.71 V	4	57.0	3.0
6	5350.00	47.7 AV	54.0	-6.3	3.71 V	4	44.7	3.0
7	#10540.00	59.8 PK	68.2	-8.4	1.07 V	18	47.2	12.6
8	15810.00	44.6 PK	74.0	-29.4	1.53 V	83	32.6	12.0
9	15810.00	32.7 AV	54.0	-21.3	1.53 V	83	20.7	12.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	107.1 PK			3.73 H	271	104.3	2.8
2	*5310.00	98.3 AV			3.73 H	271	95.5	2.8
3	5350.00	59.3 PK	74.0	-14.7	3.73 H	271	56.3	3.0
4	5350.00	46.5 AV	54.0	-7.5	3.73 H	271	43.5	3.0
5	10620.00	55.8 PK	74.0	-18.2	1.15 H	334	43.3	12.5
6	10620.00	41.1 AV	54.0	-12.9	1.15 H	334	28.6	12.5
7	15930.00	45.0 PK	74.0	-29.0	1.12 H	109	32.6	12.4
8	15930.00	32.5 AV	54.0	-21.5	1.12 H	109	20.1	12.4
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	*5310.00	106.7 PK			3.72 V	5	103.9	2.8
2	*5310.00	98.1 AV			3.72 V	5	95.3	2.8
3	5350.00	66.6 PK	74.0	-7.4	3.72 V	5	63.6	3.0
4	5350.00	53.5 AV	54.0	-0.5	3.72 V	5	50.5	3.0
5	10620.00	59.1 PK	74.0	-14.9	1.07 V	34	46.6	12.5
6	10620.00	42.6 AV	54.0	-11.4	1.07 V	34	30.1	12.5
7	15930.00	44.5 PK	74.0	-29.5	1.48 V	132	32.1	12.4
8	15930.00	32.2 AV	54.0	-21.8	1.48 V	132	19.8	12.4

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	55.7 PK	74.0	-18.3	3.33 H	282	52.4	3.3
2	5460.00	44.4 AV	54.0	-9.6	3.33 H	282	41.1	3.3
3	#5470.00	60.8 PK	68.2	-7.4	3.33 H	282	57.5	3.3
4	*5510.00	102.7 PK			3.33 H	282	99.4	3.3
5	*5510.00	93.7 AV			3.33 H	282	90.4	3.3
6	11020.00	50.4 PK	74.0	-23.6	1.24 H	327	37.4	13.0
7	11020.00	38.8 AV	54.0	-15.2	1.24 H	327	25.8	13.0
8	#16530.00	44.3 PK	68.2	-23.9	1.23 H	91	29.7	14.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.0 PK	74.0	-15.0	3.77 V	9	55.7	3.3
2	5460.00	44.8 AV	54.0	-9.2	3.77 V	9	41.5	3.3
3	#5470.00	66.3 PK	68.2	-1.9	3.77 V	9	63.0	3.3
4	*5510.00	102.5 PK			3.77 V	9	99.2	3.3
5	*5510.00	92.2 AV			3.77 V	9	88.9	3.3
6	11020.00	53.5 PK	74.0	-20.5	1.10 V	48	40.5	13.0
7	11020.00	38.9 AV	54.0	-15.1	1.10 V	48	25.9	13.0
8	#16530.00	44.5 PK	68.2	-23.7	1.42 V	142	29.9	14.6

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.8 PK	74.0	-16.2	2.92 H	291	54.5	3.3
2	5460.00	45.0 AV	54.0	-9.0	2.92 H	291	41.7	3.3
3	#5470.00	63.8 PK	68.2	-4.4	2.92 H	291	60.5	3.3
4	*5550.00	108.1 PK			2.92 H	291	104.8	3.3
5	*5550.00	98.3 AV			2.92 H	291	95.0	3.3
6	11100.00	59.3 PK	74.0	-14.7	1.10 H	308	46.6	12.7
7	11100.00	45.9 AV	54.0	-8.1	1.10 H	308	33.2	12.7
8	#16650.00	45.3 PK	68.2	-22.9	1.11 H	140	30.1	15.2

**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	5460.00	65.4 PK	74.0	-8.6	3.83 V	11	62.1	3.3
2	5460.00	49.4 AV	54.0	-4.6	3.83 V	11	46.1	3.3
3	#5470.00	67.1 PK	68.2	-1.1	3.83 V	11	63.8	3.3
4	*5550.00	106.2 PK			3.83 V	11	102.9	3.3
5	*5550.00	97.1 AV			3.83 V	11	93.8	3.3
6	11100.00	58.3 PK	74.0	-15.7	1.06 V	38	45.6	12.7
7	11100.00	47.6 AV	54.0	-6.4	1.06 V	38	34.9	12.7
8	#16650.00	44.7 PK	68.2	-23.5	1.45 V	127	29.5	15.2

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	105.6 PK			3.22 H	292	102.2	3.4
2	*5670.00	96.6 AV			3.22 H	292	93.2	3.4
3	#5725.00	58.4 PK	68.2	-9.8	3.22 H	292	54.9	3.5
4	11340.00	50.9 PK	74.0	-23.1	1.15 H	330	37.5	13.4
5	11340.00	39.0 AV	54.0	-15.0	1.15 H	330	25.6	13.4
6	#17010.00	44.5 PK	68.2	-23.7	1.19 H	71	28.3	16.2
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	*5670.00	99.5 PK			1.64 V	348	96.1	3.4
2	*5670.00	90.8 AV			1.64 V	348	87.4	3.4
3	#5725.00	67.0 PK	68.2	-1.2	1.59 V	340	63.5	3.5
4	11340.00	53.9 PK	74.0	-20.1	1.12 V	21	40.5	13.4
5	11340.00	39.2 AV	54.0	-14.8	1.12 V	21	25.8	13.4
6	#17010.00	44.1 PK	68.2	-24.1	1.44 V	128	27.9	16.2

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5567.19	63.8 PK	68.2	-4.4	3.15 H	283	60.5	3.3
2	*5755.00	111.4 PK			3.15 H	283	107.7	3.7
3	*5755.00	102.0 AV			3.15 H	283	98.3	3.7
4	#5946.51	65.9 PK	68.2	-2.3	3.15 H	283	61.7	4.2
5	11510.00	66.7 PK	74.0	-7.3	1.17 H	298	53.7	13.0
6	11510.00	52.7 AV	54.0	-1.3	1.17 H	298	39.7	13.0
7	#17265.00	44.8 PK	68.2	-23.4	1.23 H	141	27.9	16.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.49	62.0 PK	68.2	-6.2	1.01 V	76	58.7	3.3
2	*5755.00	106.6 PK			1.01 V	76	102.9	3.7
3	*5755.00	97.3 AV			1.01 V	76	93.6	3.7
4	#5926.59	63.3 PK	68.2	-4.9	1.01 V	76	59.2	4.1
5	11510.00	64.6 PK	74.0	-9.4	1.19 V	35	51.6	13.0
6	11510.00	51.8 AV	54.0	-2.2	1.19 V	35	38.8	13.0
7	#17265.00	44.3 PK	68.2	-23.9	1.52 V	105	27.4	16.9

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.19	63.6 PK	68.2	-4.6	3.09 H	289	60.3	3.3
2	*5795.00	110.3 PK			3.09 H	289	106.5	3.8
3	*5795.00	101.3 AV			3.09 H	289	97.5	3.8
4	#5925.08	66.0 PK	68.2	-2.2	3.09 H	289	61.9	4.1
5	11590.00	63.9 PK	74.0	-10.1	1.06 H	294	51.1	12.8
6	11590.00	50.9 AV	54.0	-3.1	1.06 H	294	38.1	12.8
7	#17385.00	44.3 PK	68.2	-23.9	1.20 H	104	27.5	16.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5573.56	62.0 PK	68.2	-6.2	1.03 V	310	58.7	3.3
2	*5795.00	106.5 PK			1.03 V	310	102.7	3.8
3	*5795.00	97.5 AV			1.03 V	310	93.7	3.8
4	#5953.71	63.7 PK	68.2	-4.5	1.03 V	310	59.5	4.2
5	11590.00	64.8 PK	74.0	-9.2	1.18 V	35	52.0	12.8
6	11590.00	51.9 AV	54.0	-2.1	1.18 V	35	39.1	12.8
7	#17385.00	44.1 PK	68.2	-24.1	1.61 V	113	27.3	16.8

**REMARKS:**

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

## 802.11ac (VHT80)

CHANNEL	TX Channel 42	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	5150.00	62.4 PK	74.0	-11.6	3.21 H	273	59.1	3.3
2	5150.00	51.9 AV	54.0	-2.1	3.21 H	273	48.6	3.3
3	*5210.00	100.8 PK			3.21 H	273	97.8	3.0
4	*5210.00	91.9 AV			3.21 H	273	88.9	3.0
5	5350.00	53.4 PK	74.0	-20.6	3.21 H	273	50.4	3.0
6	5350.00	40.7 AV	54.0	-13.3	3.21 H	273	37.7	3.0
7	#10420.00	50.6 PK	68.2	-17.6	1.21 H	302	38.1	12.5
8	15630.00	44.7 PK	74.0	-29.3	1.17 H	79	31.8	12.9
9	15630.00	32.4 AV	54.0	-21.6	1.17 H	79	19.5	12.9

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	5150.00	64.8 PK	74.0	-9.2	3.87 V	14	61.5	3.3
2	5150.00	52.2 AV	54.0	-1.8	3.87 V	14	48.9	3.3
3	*5210.00	100.0 PK			3.87 V	14	97.0	3.0
4	*5210.00	90.8 AV			3.87 V	14	87.8	3.0
5	5350.00	52.2 PK	74.0	-21.8	3.87 V	14	49.2	3.0
6	5350.00	40.0 AV	54.0	-14.0	3.87 V	14	37.0	3.0
7	#10420.00	54.6 PK	68.2	-13.6	1.09 V	47	42.1	12.5
8	15630.00	44.4 PK	74.0	-29.6	1.49 V	134	31.5	12.9
9	15630.00	31.7 AV	54.0	-22.3	1.49 V	134	18.8	12.9

## REMARKS:

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



<b>CHANNEL</b>	TX Channel 58	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.7 PK	74.0	-18.3	3.15 H	287	52.4	3.3
2	5150.00	43.6 AV	54.0	-10.4	3.15 H	287	40.3	3.3
3	*5290.00	102.5 PK			3.15 H	287	99.8	2.7
4	*5290.00	93.5 AV			3.15 H	287	90.8	2.7
5	5350.00	65.4 PK	74.0	-8.6	3.15 H	287	62.4	3.0
6	5350.00	52.7 AV	54.0	-1.3	3.15 H	287	49.7	3.0
7	#10580.00	51.1 PK	68.2	-17.1	1.17 H	326	38.5	12.6
8	15870.00	44.6 PK	74.0	-29.4	1.20 H	86	32.5	12.1
9	15870.00	32.3 AV	54.0	-21.7	1.20 H	86	20.2	12.1
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	5150.00	54.9 PK	74.0	-19.1	3.82 V	16	51.6	3.3
2	5150.00	43.1 AV	54.0	-10.9	3.82 V	16	39.8	3.3
3	*5290.00	101.3 PK			3.82 V	16	98.6	2.7
4	*5290.00	92.5 AV			3.82 V	16	89.8	2.7
5	5350.00	63.4 PK	74.0	-10.6	3.82 V	16	60.4	3.0
6	5350.00	50.9 AV	54.0	-3.1	3.82 V	16	47.9	3.0
7	#10580.00	53.4 PK	68.2	-14.8	1.09 V	40	40.8	12.6
8	15870.00	44.6 PK	74.0	-29.4	1.49 V	127	32.5	12.1
9	15870.00	31.9 AV	54.0	-22.1	1.49 V	127	19.8	12.1

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 106	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.2 PK	74.0	-13.8	3.14 H	280	56.9	3.3
2	5460.00	48.8 AV	54.0	-5.2	3.14 H	280	45.5	3.3
3	#5470.00	61.7 PK	68.2	-6.5	3.14 H	280	58.4	3.3
4	*5530.00	99.3 PK			3.14 H	280	96.0	3.3
5	*5530.00	89.6 AV			3.14 H	280	86.3	3.3
6	11060.00	51.1 PK	74.0	-22.9	1.22 H	303	38.2	12.9
7	11060.00	39.0 AV	54.0	-15.0	1.22 H	303	26.1	12.9
8	#16590.00	44.3 PK	68.2	-23.9	1.18 H	97	29.4	14.9

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.8 PK	74.0	-10.2	3.78 V	13	60.5	3.3
2	5460.00	52.4 AV	54.0	-1.6	3.78 V	13	49.1	3.3
3	#5470.00	65.6 PK	68.2	-2.6	3.78 V	13	62.3	3.3
4	*5530.00	98.8 PK			3.78 V	13	95.5	3.3
5	*5530.00	90.1 AV			3.78 V	13	86.8	3.3
6	11060.00	54.2 PK	74.0	-19.8	1.03 V	42	41.3	12.9
7	11060.00	39.6 AV	54.0	-14.4	1.03 V	42	26.7	12.9
8	#16590.00	44.7 PK	68.2	-23.5	1.42 V	151	29.8	14.9

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 122	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	100.7 PK			3.04 H	276	97.4	3.3
2	*5610.00	91.7 AV			3.04 H	276	88.4	3.3
3	#5725.00	56.3 PK	68.2	-11.9	3.04 H	276	52.8	3.5
4	11220.00	51.3 PK	74.0	-22.7	1.17 H	310	38.3	13.0
5	11220.00	39.4 AV	54.0	-14.6	1.17 H	310	26.4	13.0
6	#16830.00	44.8 PK	68.2	-23.4	1.17 H	79	29.5	15.3
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	*5610.00	99.8 PK			3.72 V	18	96.5	3.3
2	*5610.00	91.1 AV			3.72 V	18	87.8	3.3
3	#5725.00	64.9 PK	68.2	-3.3	3.72 V	18	61.4	3.5
4	11220.00	53.7 PK	74.0	-20.3	1.09 V	44	40.7	13.0
5	11220.00	39.4 AV	54.0	-14.6	1.09 V	44	26.4	13.0
6	#16830.00	44.8 PK	68.2	-23.4	1.44 V	148	29.5	15.3

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 155	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.37	63.3 PK	68.2	-4.9	3.10 H	269	60.0	3.3
2	*5775.00	105.6 PK			3.10 H	269	101.9	3.7
3	*5775.00	96.5 AV			3.10 H	269	92.8	3.7
4	#5932.21	67.1 PK	68.2	-1.1	3.10 H	269	63.0	4.1
5	11550.00	59.4 PK	74.0	-14.6	1.07 H	303	46.5	12.9
6	11550.00	46.5 AV	54.0	-7.5	1.07 H	303	33.6	12.9
7	#17325.00	45.9 PK	68.2	-22.3	1.14 H	143	28.9	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.14	63.0 PK	68.2	-5.2	1.02 V	310	59.7	3.3
2	*5775.00	100.5 PK			1.02 V	310	96.8	3.7
3	*5775.00	91.3 AV			1.02 V	310	87.6	3.7
4	#5931.51	67.0 PK	68.2	-1.2	1.02 V	310	62.9	4.1
5	11550.00	58.0 PK	74.0	-16.0	1.01 V	45	45.1	12.9
6	11550.00	47.1 AV	54.0	-6.9	1.01 V	45	34.2	12.9
7	#17325.00	44.8 PK	68.2	-23.4	1.51 V	119	27.8	17.0

**REMARKS:**

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

# Below 1GHz Data:

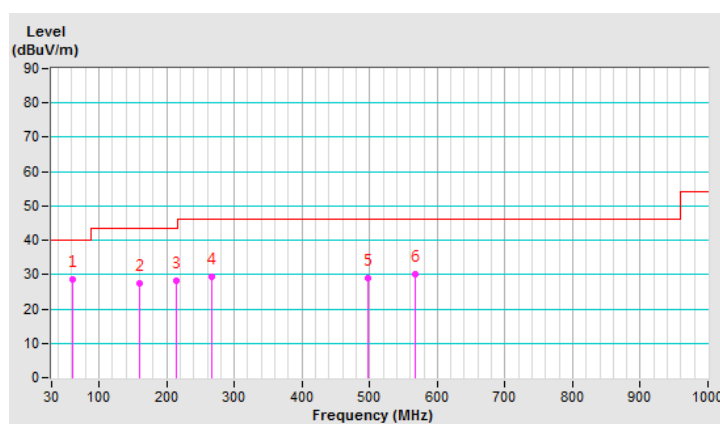
## 802.11ac (VHT20)

CHANNEL	TX Channel 149	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	60.55	28.6 QP	40.0	-11.4	1.50 H	333	37.5	-8.9
2	160.49	27.4 QP	43.5	-16.1	2.00 H	274	35.4	-8.0
3	214.51	28.2 QP	43.5	-15.3	1.50 H	315	38.2	-10.0
4	266.26	29.4 QP	46.0	-16.6	2.00 H	212	37.1	-7.7
5	496.96	28.9 QP	46.0	-17.1	1.50 H	37	30.4	-1.5
6	567.26	30.1 QP	46.0	-15.9	1.00 H	278	30.3	-0.2

### REMARKS:

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

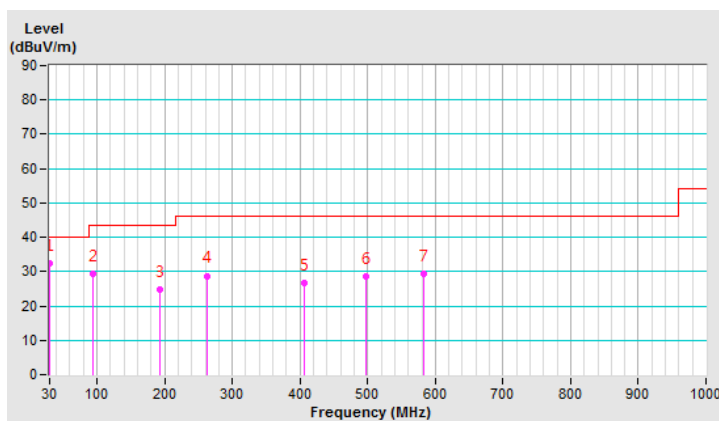


<b>CHANNEL</b>	TX Channel 149	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.28	32.4 QP	40.0	-7.6	1.50 V	176	41.7	-9.3
2	94.48	29.5 QP	43.5	-14.0	1.50 V	297	42.4	-12.9
3	192.04	24.7 QP	43.5	-18.8	1.50 V	71	34.6	-9.9
4	261.93	28.8 QP	46.0	-17.2	1.00 V	175	36.6	-7.8
5	406.07	26.5 QP	46.0	-19.5	1.00 V	200	30.5	-4.0
6	496.91	28.6 QP	46.0	-17.4	1.00 V	147	30.1	-1.5
7	583.70	29.3 QP	46.0	-16.7	1.00 V	140	28.9	0.4

#### REMARKS:

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



#### 4.1.8 Test Results (Dipole antenna)

#### ABOVE 1GHz DATA

#### 802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.5 PK	74.0	-6.5	1.12 H	242	64.2	3.3
2	5150.00	48.5 AV	54.0	-5.5	1.12 H	242	45.2	3.3
3	*5180.00	100.5 PK			1.12 H	242	97.2	3.3
4	*5180.00	91.1 AV			1.12 H	242	87.8	3.3
5	#10360.00	56.7 PK	68.2	-11.5	1.15 H	113	44.5	12.2
6	15540.00	45.3 PK	74.0	-28.7	2.25 H	159	32.1	13.2
7	15540.00	32.7 AV	54.0	-21.3	2.25 H	159	19.5	13.2
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	5150.00	69.2 PK	74.0	-4.8	3.61 V	78	65.9	3.3
2	5150.00	51.7 AV	54.0	-2.3	3.61 V	78	48.4	3.3
3	*5180.00	110.3 PK			3.61 V	78	107.0	3.3
4	*5180.00	101.1 AV			3.61 V	78	97.8	3.3
5	#10360.00	64.5 PK	68.2	-3.7	3.68 V	268	52.3	12.2
6	15540.00	46.3 PK	74.0	-27.7	2.97 V	178	33.1	13.2
7	15540.00	33.1 AV	54.0	-20.9	2.97 V	178	19.9	13.2

#### REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.5 PK			1.12 H	237	97.4	3.1
2	*5200.00	91.7 AV			1.12 H	237	88.6	3.1
3	#10400.00	57.1 PK	68.2	-11.1	1.19 H	100	44.7	12.4
4	15600.00	45.8 PK	74.0	-28.2	2.19 H	169	32.6	13.2
5	15600.00	32.7 AV	54.0	-21.3	2.19 H	169	19.5	13.2
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	*5200.00	111.2 PK			3.61 V	79	108.1	3.1
2	*5200.00	101.7 AV			3.61 V	79	98.6	3.1
3	#10400.00	64.9 PK	68.2	-3.3	3.64 V	279	52.5	12.4
4	15600.00	46.2 PK	74.0	-27.8	2.98 V	167	33.0	13.2
5	15600.00	33.0 AV	54.0	-21.0	2.98 V	167	19.8	13.2

**REMARKS:**

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	105.7 PK			1.13 H	239	102.9	2.8
2	*5240.00	95.0 AV			1.13 H	239	92.2	2.8
3	5350.00	53.9 PK	74.0	-20.1	1.13 H	239	50.9	3.0
4	5350.00	38.9 AV	54.0	-15.1	1.13 H	239	35.9	3.0
5	#10480.00	56.8 PK	68.2	-11.4	1.20 H	118	44.3	12.5
6	15720.00	45.4 PK	74.0	-28.6	2.24 H	159	33.1	12.3
7	15720.00	32.7 AV	54.0	-21.3	2.24 H	159	20.4	12.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	114.9 PK			3.54 V	68	112.1	2.8
2	*5240.00	105.3 AV			3.54 V	68	102.5	2.8
3	5350.00	61.5 PK	74.0	-12.5	3.54 V	68	58.5	3.0
4	5350.00	44.8 AV	54.0	-9.2	3.54 V	68	41.8	3.0
5	#10480.00	64.5 PK	68.2	-3.7	3.69 V	276	52.0	12.5
6	15720.00	46.2 PK	74.0	-27.8	3.01 V	164	33.9	12.3
7	15720.00	33.2 AV	54.0	-20.8	3.01 V	164	20.9	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.8 PK	74.0	-20.2	1.11 H	237	50.5	3.3
2	5150.00	38.8 AV	54.0	-15.2	1.11 H	237	35.5	3.3
3	*5260.00	105.5 PK			1.11 H	237	102.8	2.7
4	*5260.00	94.7 AV			1.11 H	237	92.0	2.7
5	#10520.00	56.2 PK	68.2	-12.0	1.16 H	118	43.6	12.6
6	15780.00	44.8 PK	74.0	-29.2	2.20 H	172	32.8	12.0
7	15780.00	32.3 AV	54.0	-21.7	2.20 H	172	20.3	12.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.3 PK	74.0	-13.7	3.51 V	77	57.0	3.3
2	5150.00	43.6 AV	54.0	-10.4	3.51 V	77	40.3	3.3
3	*5260.00	115.1 PK			3.51 V	77	112.4	2.7
4	*5260.00	105.1 AV			3.51 V	77	102.4	2.7
5	#10520.00	64.5 PK	68.2	-3.7	3.71 V	278	51.9	12.6
6	15780.00	45.9 PK	74.0	-28.1	2.97 V	174	33.9	12.0
7	15780.00	32.7 AV	54.0	-21.3	2.97 V	174	20.7	12.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	105.6 PK			1.08 H	232	102.8	2.8
2	*5300.00	95.1 AV			1.08 H	232	92.3	2.8
3	10600.00	57.0 PK	74.0	-17.0	1.15 H	124	44.5	12.5
4	10600.00	43.8 AV	54.0	-10.2	1.15 H	124	31.3	12.5
5	15900.00	44.6 PK	74.0	-29.4	2.27 H	169	32.3	12.3
6	15900.00	32.2 AV	54.0	-21.8	2.27 H	169	19.9	12.3
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	*5300.00	115.0 PK			3.56 V	90	112.2	2.8
2	*5300.00	104.9 AV			3.56 V	90	102.1	2.8
3	10600.00	64.3 PK	74.0	-9.7	3.74 V	284	51.8	12.5
4	10600.00	52.1 AV	54.0	-1.9	3.74 V	284	39.6	12.5
5	15900.00	46.4 PK	74.0	-27.6	3.03 V	166	34.1	12.3
6	15900.00	33.6 AV	54.0	-20.4	3.03 V	166	21.3	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	97.3 PK			1.13 H	241	94.5	2.8
2	*5320.00	87.8 AV			1.13 H	241	85.0	2.8
3	5350.00	63.6 PK	74.0	-10.4	1.13 H	241	60.6	3.0
4	5350.00	42.9 AV	54.0	-11.1	1.13 H	241	39.9	3.0
5	10640.00	56.6 PK	74.0	-17.4	1.16 H	123	44.1	12.5
6	10640.00	43.3 AV	54.0	-10.7	1.16 H	123	30.8	12.5
7	15960.00	45.5 PK	74.0	-28.5	2.25 H	154	32.8	12.7
8	15960.00	32.8 AV	54.0	-21.2	2.25 H	154	20.1	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.2 PK			2.93 V	81	107.4	2.8
2	*5320.00	99.6 AV			2.93 V	81	96.8	2.8
3	5350.00	68.0 PK	74.0	-6.0	2.93 V	81	65.0	3.0
4	5350.00	50.0 AV	54.0	-4.0	2.93 V	81	47.0	3.0
5	10640.00	63.8 PK	74.0	-10.2	3.65 V	280	51.3	12.5
6	10640.00	50.6 AV	54.0	-3.4	3.65 V	280	38.1	12.5
7	15960.00	46.3 PK	74.0	-27.7	2.98 V	184	33.6	12.7
8	15960.00	33.3 AV	54.0	-20.7	2.98 V	184	20.6	12.7

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.3 PK	74.0	-22.7	1.16 H	325	48.0	3.3
2	5460.00	38.4 AV	54.0	-15.6	1.16 H	325	35.1	3.3
3	#5470.00	54.3 PK	68.2	-13.9	1.16 H	325	51.0	3.3
4	*5500.00	96.3 PK			1.16 H	325	93.0	3.3
5	*5500.00	87.3 AV			1.16 H	325	84.0	3.3
6	11000.00	56.7 PK	74.0	-17.3	1.12 H	118	43.6	13.1
7	11000.00	43.2 AV	54.0	-10.8	1.12 H	118	30.1	13.1
8	#16500.00	45.5 PK	68.2	-22.7	2.20 H	147	31.2	14.3

**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	5460.00	53.8 PK	74.0	-20.2	3.50 V	76	50.5	3.3
2	5460.00	41.3 AV	54.0	-12.7	3.50 V	76	38.0	3.3
3	#5470.00	66.7 PK	68.2	-1.5	3.50 V	76	63.4	3.3
4	*5500.00	107.1 PK			3.50 V	76	103.8	3.3
5	*5500.00	98.1 AV			3.50 V	76	94.8	3.3
6	11000.00	63.9 PK	74.0	-10.1	3.68 V	267	50.8	13.1
7	11000.00	50.7 AV	54.0	-3.3	3.68 V	267	37.6	13.1
8	#16500.00	46.0 PK	68.2	-22.2	2.92 V	186	31.7	14.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	105.5 PK			1.08 H	227	102.2	3.3
2	*5580.00	94.9 AV			1.08 H	227	91.6	3.3
3	11160.00	57.1 PK	74.0	-16.9	1.21 H	108	44.2	12.9
4	11160.00	43.7 AV	54.0	-10.3	1.21 H	108	30.8	12.9
5	#16740.00	45.0 PK	68.2	-23.2	2.28 H	148	29.6	15.4
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	*5580.00	115.7 PK			3.55 V	82	112.4	3.3
2	*5580.00	105.5 AV			3.55 V	82	102.2	3.3
3	11160.00	65.0 PK	74.0	-9.0	3.66 V	264	52.1	12.9
4	11160.00	52.8 AV	54.0	-1.2	3.66 V	264	39.9	12.9
5	#16740.00	46.7 PK	68.2	-21.5	3.02 V	164	31.3	15.4

#### REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	96.2 PK			1.20 H	338	92.8	3.4
2	*5700.00	86.9 AV			1.20 H	338	83.5	3.4
3	#5725.00	54.7 PK	68.2	-13.5	1.20 H	338	51.2	3.5
4	11400.00	56.8 PK	74.0	-17.2	1.12 H	111	43.5	13.3
5	11400.00	43.7 AV	54.0	-10.3	1.12 H	111	30.4	13.3
6	#17100.00	45.3 PK	68.2	-22.9	2.23 H	159	28.9	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	105.4 PK			3.55 V	106	102.0	3.4
2	*5700.00	96.4 AV			3.55 V	106	93.0	3.4
3	#5725.00	66.0 PK	68.2	-2.2	3.55 V	106	62.5	3.5
4	11400.00	64.4 PK	74.0	-9.6	3.63 V	266	51.1	13.3
5	11400.00	50.9 AV	54.0	-3.1	3.63 V	266	37.6	13.3
6	#17100.00	45.8 PK	68.2	-22.4	2.98 V	172	29.4	16.4

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5590.14	62.2 PK	68.2	-6.0	1.27 H	99	58.9	3.3
2	*5745.00	107.5 PK			1.27 H	99	103.9	3.6
3	*5745.00	97.7 AV			1.27 H	99	94.1	3.6
4	#5977.84	62.3 PK	68.2	-5.9	1.27 H	99	58.2	4.1
5	11490.00	56.3 PK	74.0	-17.7	1.14 H	100	43.2	13.1
6	11490.00	43.0 AV	54.0	-11.0	1.14 H	100	29.9	13.1
7	#17235.00	45.4 PK	68.2	-22.8	2.30 H	163	28.4	17.0

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5618.57	64.1 PK	68.2	-4.1	3.64 V	257	60.8	3.3
2	*5745.00	115.3 PK			3.64 V	257	111.7	3.6
3	*5745.00	106.0 AV			3.64 V	257	102.4	3.6
4	#5977.27	62.4 PK	68.2	-5.8	3.64 V	257	58.3	4.1
5	11490.00	65.0 PK	74.0	-9.0	3.65 V	301	51.9	13.1
6	11490.00	52.8 AV	54.0	-1.2	3.65 V	301	39.7	13.1
7	#17235.00	45.7 PK	68.2	-22.5	3.02 V	155	28.7	17.0

**REMARKS:**

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



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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5639.17	62.6 PK	68.2	-5.6	1.36 H	99	59.3	3.3
2	*5785.00	108.6 PK			1.36 H	99	104.8	3.8
3	*5785.00	99.0 AV			1.36 H	99	95.2	3.8
4	#5945.41	62.6 PK	68.2	-5.6	1.36 H	99	58.4	4.2
5	11570.00	57.2 PK	74.0	-16.8	1.14 H	118	44.5	12.7
6	11570.00	43.6 AV	54.0	-10.4	1.14 H	118	30.9	12.7
7	#17355.00	44.5 PK	68.2	-23.7	2.30 H	165	27.6	16.9

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.98	62.8 PK	68.2	-5.4	3.60 V	258	59.5	3.3
2	*5785.00	114.9 PK			3.60 V	258	111.1	3.8
3	*5785.00	105.8 AV			3.60 V	258	102.0	3.8
4	#5932.56	62.3 PK	68.2	-5.9	3.60 V	258	58.2	4.1
5	11570.00	64.8 PK	74.0	-9.2	3.58 V	285	52.1	12.7
6	11570.00	52.7 AV	54.0	-1.3	3.58 V	285	40.0	12.7
7	#17355.00	46.2 PK	68.2	-22.0	2.92 V	144	29.3	16.9

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.19	61.2 PK	68.2	-7.0	1.33 H	99	57.9	3.3
2	*5825.00	107.8 PK			1.33 H	99	103.9	3.9
3	*5825.00	98.1 AV			1.33 H	99	94.2	3.9
4	#5931.96	63.3 PK	68.2	-4.9	1.33 H	99	59.2	4.1
5	11650.00	56.5 PK	74.0	-17.5	1.18 H	100	43.7	12.8
6	11650.00	43.0 AV	54.0	-11.0	1.18 H	100	30.2	12.8
7	#17475.00	45.1 PK	68.2	-23.1	2.28 H	161	27.6	17.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5599.48	62.8 PK	68.2	-5.4	3.58 V	261	59.5	3.3
2	*5825.00	115.0 PK			3.58 V	261	111.1	3.9
3	*5825.00	105.9 AV			3.58 V	261	102.0	3.9
4	#5932.33	63.8 PK	68.2	-4.4	3.58 V	261	59.7	4.1
5	11650.00	64.9 PK	74.0	-9.1	3.64 V	285	52.1	12.8
6	11650.00	52.6 AV	54.0	-1.4	3.64 V	285	39.8	12.8
7	#17475.00	46.0 PK	68.2	-22.2	2.96 V	169	28.5	17.5

**REMARKS:**

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

## 802.11ac (VHT20)

CHANNEL	TX Channel 36	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	5150.00	66.9 PK	74.0	-7.1	1.17 H	258	63.6	3.3
2	5150.00	48.2 AV	54.0	-5.8	1.17 H	258	44.9	3.3
3	*5180.00	100.5 PK			1.17 H	258	97.2	3.3
4	*5180.00	91.3 AV			1.17 H	258	88.0	3.3
5	#10360.00	56.3 PK	68.2	-11.9	1.19 H	117	44.1	12.2
6	15540.00	45.8 PK	74.0	-28.2	2.26 H	152	32.6	13.2
7	15540.00	33.0 AV	54.0	-21.0	2.26 H	152	19.8	13.2
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	5150.00	69.4 PK	74.0	-4.6	3.60 V	76	66.1	3.3
2	5150.00	51.8 AV	54.0	-2.2	3.60 V	76	48.5	3.3
3	*5180.00	110.6 PK			3.60 V	76	107.3	3.3
4	*5180.00	101.3 AV			3.60 V	76	98.0	3.3
5	#10360.00	64.1 PK	68.2	-4.1	3.73 V	279	51.9	12.2
6	15540.00	46.9 PK	74.0	-27.1	3.01 V	174	33.7	13.2
7	15540.00	33.5 AV	54.0	-20.5	3.01 V	174	20.3	13.2

## REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.1 PK			1.11 H	250	97.0	3.1
2	*5200.00	91.4 AV			1.11 H	250	88.3	3.1
3	#10400.00	57.0 PK	68.2	-11.2	1.10 H	118	44.6	12.4
4	15600.00	44.9 PK	74.0	-29.1	2.26 H	166	31.7	13.2
5	15600.00	32.5 AV	54.0	-21.5	2.26 H	166	19.3	13.2
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	*5200.00	111.6 PK			3.62 V	77	108.5	3.1
2	*5200.00	101.9 AV			3.62 V	77	98.8	3.1
3	#10400.00	64.4 PK	68.2	-3.8	3.68 V	275	52.0	12.4
4	15600.00	46.6 PK	74.0	-27.4	3.03 V	188	33.4	13.2
5	15600.00	33.1 AV	54.0	-20.9	3.03 V	188	19.9	13.2

#### REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	105.5 PK			1.13 H	246	102.7	2.8
2	*5240.00	94.9 AV			1.13 H	246	92.1	2.8
3	5350.00	54.4 PK	74.0	-19.6	1.13 H	246	51.4	3.0
4	5350.00	39.3 AV	54.0	-14.7	1.13 H	246	36.3	3.0
5	#10480.00	56.5 PK	68.2	-11.7	1.15 H	98	44.0	12.5
6	15720.00	45.4 PK	74.0	-28.6	2.19 H	147	33.1	12.3
7	15720.00	32.8 AV	54.0	-21.2	2.19 H	147	20.5	12.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	114.9 PK			3.59 V	69	112.1	2.8
2	*5240.00	105.2 AV			3.59 V	69	102.4	2.8
3	5350.00	61.9 PK	74.0	-12.1	3.59 V	69	58.9	3.0
4	5350.00	45.0 AV	54.0	-9.0	3.59 V	69	42.0	3.0
5	#10480.00	64.8 PK	68.2	-3.4	3.60 V	274	52.3	12.5
6	15720.00	46.9 PK	74.0	-27.1	2.91 V	154	34.6	12.3
7	15720.00	33.7 AV	54.0	-20.3	2.91 V	154	21.4	12.3

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	1.16 H	240	51.7	3.3
2	5150.00	39.7 AV	54.0	-14.3	1.16 H	240	36.4	3.3
3	*5260.00	105.4 PK			1.16 H	240	102.7	2.7
4	*5260.00	94.8 AV			1.16 H	240	92.1	2.7
5	#10520.00	57.0 PK	68.2	-11.2	1.18 H	104	44.4	12.6
6	15780.00	45.2 PK	74.0	-28.8	2.26 H	169	33.2	12.0
7	15780.00	32.8 AV	54.0	-21.2	2.26 H	169	20.8	12.0

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	3.47 V	65	56.8	3.3
2	5150.00	43.3 AV	54.0	-10.7	3.47 V	65	40.0	3.3
3	*5260.00	115.1 PK			3.47 V	65	112.4	2.7
4	*5260.00	105.0 AV			3.47 V	65	102.3	2.7
5	#10520.00	64.5 PK	68.2	-3.7	3.61 V	300	51.9	12.6
6	15780.00	46.5 PK	74.0	-27.5	2.99 V	172	34.5	12.0
7	15780.00	33.5 AV	54.0	-20.5	2.99 V	172	21.5	12.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	106.1 PK			1.04 H	224	103.3	2.8
2	*5300.00	95.3 AV			1.04 H	224	92.5	2.8
3	10600.00	57.3 PK	74.0	-16.7	1.16 H	113	44.8	12.5
4	10600.00	43.8 AV	54.0	-10.2	1.16 H	113	31.3	12.5
5	15900.00	45.1 PK	74.0	-28.9	2.20 H	172	32.8	12.3
6	15900.00	32.3 AV	54.0	-21.7	2.20 H	172	20.0	12.3
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	*5300.00	115.2 PK			3.56 V	78	112.4	2.8
2	*5300.00	105.4 AV			3.56 V	78	102.6	2.8
3	10600.00	64.2 PK	74.0	-9.8	3.61 V	275	51.7	12.5
4	10600.00	52.0 AV	54.0	-2.0	3.61 V	275	39.5	12.5
5	15900.00	46.3 PK	74.0	-27.7	2.95 V	171	34.0	12.3
6	15900.00	33.4 AV	54.0	-20.6	2.95 V	171	21.1	12.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	96.7 PK			1.11 H	239	93.9	2.8
2	*5320.00	87.4 AV			1.11 H	239	84.6	2.8
3	5350.00	63.9 PK	74.0	-10.1	1.11 H	239	60.9	3.0
4	5350.00	43.3 AV	54.0	-10.7	1.11 H	239	40.3	3.0
5	10640.00	56.6 PK	74.0	-17.4	1.10 H	123	44.1	12.5
6	10640.00	43.4 AV	54.0	-10.6	1.10 H	123	30.9	12.5
7	15960.00	45.2 PK	74.0	-28.8	2.27 H	157	32.5	12.7
8	15960.00	32.8 AV	54.0	-21.2	2.27 H	157	20.1	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.6 PK			2.91 V	87	106.8	2.8
2	*5320.00	99.2 AV			2.91 V	87	96.4	2.8
3	5350.00	67.4 PK	74.0	-6.6	2.91 V	87	64.4	3.0
4	5350.00	49.6 AV	54.0	-4.4	2.91 V	87	46.6	3.0
5	10640.00	64.4 PK	74.0	-9.6	3.66 V	277	51.9	12.5
6	10640.00	50.7 AV	54.0	-3.3	3.66 V	277	38.2	12.5
7	15960.00	46.6 PK	74.0	-27.4	3.02 V	163	33.9	12.7
8	15960.00	33.6 AV	54.0	-20.4	3.02 V	163	20.9	12.7

**REMARKS:**

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



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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.2 PK	74.0	-22.8	1.10 H	311	47.9	3.3
2	5460.00	38.4 AV	54.0	-15.6	1.10 H	311	35.1	3.3
3	#5470.00	54.6 PK	68.2	-13.6	1.10 H	311	51.3	3.3
4	*5500.00	96.8 PK			1.10 H	311	93.5	3.3
5	*5500.00	87.8 AV			1.10 H	311	84.5	3.3
6	11000.00	56.5 PK	74.0	-17.5	1.14 H	97	43.4	13.1
7	11000.00	42.9 AV	54.0	-11.1	1.14 H	97	29.8	13.1
8	#16500.00	45.1 PK	68.2	-23.1	2.21 H	153	30.8	14.3

**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	5460.00	54.0 PK	74.0	-20.0	3.54 V	76	50.7	3.3
2	5460.00	41.3 AV	54.0	-12.7	3.54 V	76	38.0	3.3
3	#5470.00	66.6 PK	68.2	-1.6	3.54 V	76	63.3	3.3
4	*5500.00	107.0 PK			3.54 V	76	103.7	3.3
5	*5500.00	98.2 AV			3.54 V	76	94.9	3.3
6	11000.00	64.5 PK	74.0	-9.5	3.69 V	276	51.4	13.1
7	11000.00	51.2 AV	54.0	-2.8	3.69 V	276	38.1	13.1
8	#16500.00	45.6 PK	68.2	-22.6	2.97 V	181	31.3	14.3

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	106.2 PK			1.04 H	211	102.9	3.3
2	*5580.00	95.5 AV			1.04 H	211	92.2	3.3
3	11160.00	57.3 PK	74.0	-16.7	1.13 H	109	44.4	12.9
4	11160.00	43.8 AV	54.0	-10.2	1.13 H	109	30.9	12.9
5	#16740.00	45.3 PK	68.2	-22.9	2.30 H	167	29.9	15.4
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	*5580.00	113.7 PK			3.23 V	282	110.4	3.3
2	*5580.00	103.9 AV			3.23 V	282	100.6	3.3
3	11160.00	64.0 PK	74.0	-10.0	3.69 V	297	51.1	12.9
4	11160.00	52.1 AV	54.0	-1.9	3.69 V	297	39.2	12.9
5	#16740.00	45.7 PK	68.2	-22.5	3.01 V	157	30.3	15.4

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	96.0 PK			1.20 H	323	92.6	3.4
2	*5700.00	86.5 AV			1.20 H	323	83.1	3.4
3	#5725.00	54.5 PK	68.2	-13.7	1.20 H	323	51.0	3.5
4	11400.00	57.0 PK	74.0	-17.0	1.10 H	107	43.7	13.3
5	11400.00	43.9 AV	54.0	-10.1	1.10 H	107	30.6	13.3
6	#17100.00	45.6 PK	68.2	-22.6	2.27 H	169	29.2	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	105.4 PK			3.54 V	95	102.0	3.4
2	*5700.00	96.3 AV			3.54 V	95	92.9	3.4
3	#5725.00	66.5 PK	68.2	-1.7	3.54 V	95	63.0	3.5
4	11400.00	65.2 PK	74.0	-8.8	3.73 V	254	51.9	13.3
5	11400.00	51.4 AV	54.0	-2.6	3.73 V	254	38.1	13.3
6	#17100.00	46.4 PK	68.2	-21.8	3.03 V	187	30.0	16.4

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5638.97	61.5 PK	68.2	-6.7	1.36 H	101	58.2	3.3
2	*5745.00	107.1 PK			1.36 H	101	103.5	3.6
3	*5745.00	97.9 AV			1.36 H	101	94.3	3.6
4	#5945.60	62.3 PK	68.2	-5.9	1.36 H	101	58.1	4.2
5	11490.00	57.1 PK	74.0	-16.9	1.16 H	115	44.0	13.1
6	11490.00	43.6 AV	54.0	-10.4	1.16 H	115	30.5	13.1
7	#17235.00	45.1 PK	68.2	-23.1	2.19 H	152	28.1	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5623.96	62.5 PK	68.2	-5.7	3.65 V	258	59.2	3.3
2	*5745.00	115.2 PK			3.65 V	258	111.6	3.6
3	*5745.00	106.2 AV			3.65 V	258	102.6	3.6
4	#5949.55	62.7 PK	68.2	-5.5	3.65 V	258	58.5	4.2
5	11490.00	64.7 PK	74.0	-9.3	3.60 V	283	51.6	13.1
6	11490.00	52.8 AV	54.0	-1.2	3.60 V	283	39.7	13.1
7	#17235.00	46.0 PK	68.2	-22.2	2.98 V	156	29.0	17.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5626.88	61.9 PK	68.2	-6.3	1.23 H	100	58.6	3.3
2	*5785.00	107.7 PK			1.23 H	100	103.9	3.8
3	*5785.00	98.5 AV			1.23 H	100	94.7	3.8
4	#5934.03	62.9 PK	68.2	-5.3	1.23 H	100	58.7	4.2
5	11570.00	56.7 PK	74.0	-17.3	1.19 H	105	44.0	12.7
6	11570.00	43.3 AV	54.0	-10.7	1.19 H	105	30.6	12.7
7	#17355.00	45.6 PK	68.2	-22.6	2.21 H	152	28.7	16.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.43	62.8 PK	68.2	-5.4	3.60 V	257	59.5	3.3
2	*5785.00	115.1 PK			3.60 V	257	111.3	3.8
3	*5785.00	105.7 AV			3.60 V	257	101.9	3.8
4	#5929.00	63.1 PK	68.2	-5.1	3.60 V	257	59.0	4.1
5	11570.00	64.9 PK	74.0	-9.1	3.62 V	296	52.2	12.7
6	11570.00	52.9 AV	54.0	-1.1	3.62 V	296	40.2	12.7
7	#17355.00	46.2 PK	68.2	-22.0	2.94 V	174	29.3	16.9

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5574.57	61.8 PK	68.2	-6.4	1.32 H	99	58.5	3.3
2	*5825.00	107.8 PK			1.32 H	99	103.9	3.9
3	*5825.00	98.7 AV			1.32 H	99	94.8	3.9
4	#5930.19	62.4 PK	68.2	-5.8	1.32 H	99	58.3	4.1
5	11650.00	56.9 PK	74.0	-17.1	1.11 H	126	44.1	12.8
6	11650.00	43.7 AV	54.0	-10.3	1.11 H	126	30.9	12.8
7	#17475.00	45.2 PK	68.2	-23.0	2.30 H	146	27.7	17.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5637.00	63.3 PK	68.2	-4.9	3.72 V	257	60.0	3.3
2	*5825.00	114.7 PK			3.72 V	257	110.8	3.9
3	*5825.00	105.6 AV			3.72 V	257	101.7	3.9
4	#5928.31	66.7 PK	68.2	-1.5	3.72 V	257	62.6	4.1
5	11650.00	64.3 PK	74.0	-9.7	3.65 V	286	51.5	12.8
6	11650.00	52.2 AV	54.0	-1.8	3.65 V	286	39.4	12.8
7	#17475.00	46.2 PK	68.2	-22.0	2.97 V	160	28.7	17.5

**REMARKS:**

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

# 802.11ac (VHT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	1.38 H	105	52.6	3.3
2	5150.00	46.3 AV	54.0	-7.7	1.38 H	105	43.0	3.3
3	*5190.00	94.2 PK			1.38 H	105	91.0	3.2
4	*5190.00	83.6 AV			1.38 H	105	80.4	3.2
5	#10380.00	56.7 PK	68.2	-11.5	1.19 H	106	44.3	12.4
6	15570.00	45.2 PK	74.0	-28.8	2.23 H	174	31.9	13.3
7	15570.00	32.5 AV	54.0	-21.5	2.23 H	174	19.2	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.3 PK	74.0	-10.7	1.69 V	321	60.0	3.3
2	5150.00	53.0 AV	54.0	-1.0	1.69 V	321	49.7	3.3
3	*5190.00	103.0 PK			1.69 V	321	99.8	3.2
4	*5190.00	94.5 AV			1.69 V	321	91.3	3.2
5	#10380.00	64.8 PK	68.2	-3.4	3.68 V	270	52.4	12.4
6	15570.00	46.5 PK	74.0	-27.5	2.93 V	164	33.2	13.3
7	15570.00	33.6 AV	54.0	-20.4	2.93 V	164	20.3	13.3

## REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.4 PK	74.0	-13.6	1.26 H	91	57.1	3.3
2	5150.00	46.3 AV	54.0	-7.7	1.26 H	91	43.0	3.3
3	*5230.00	97.6 PK			1.26 H	91	94.7	2.9
4	*5230.00	86.2 AV			1.26 H	91	83.3	2.9
5	5350.00	53.7 PK	74.0	-20.3	1.26 H	91	50.7	3.0
6	5350.00	38.6 AV	54.0	-15.4	1.26 H	91	35.6	3.0
7	#10460.00	56.1 PK	68.2	-12.1	1.10 H	98	43.6	12.5
8	15690.00	45.0 PK	74.0	-29.0	2.22 H	174	32.5	12.5
9	15690.00	32.6 AV	54.0	-21.4	2.22 H	174	20.1	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.7 PK	74.0	-7.3	1.82 V	322	63.4	3.3
2	5150.00	51.6 AV	54.0	-2.4	1.82 V	322	48.3	3.3
3	*5230.00	106.5 PK			1.82 V	322	103.6	2.9
4	*5230.00	98.0 AV			1.82 V	322	95.1	2.9
5	5350.00	58.4 PK	74.0	-15.6	1.82 V	322	55.4	3.0
6	5350.00	42.9 AV	54.0	-11.1	1.82 V	322	39.9	3.0
7	#10460.00	65.0 PK	68.2	-3.2	3.72 V	258	52.5	12.5
8	15690.00	46.0 PK	74.0	-28.0	3.02 V	187	33.5	12.5
9	15690.00	32.7 AV	54.0	-21.3	3.02 V	187	20.2	12.5

**REMARKS:**

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.7 PK	74.0	-22.3	1.21 H	94	48.4	3.3
2	5150.00	38.5 AV	54.0	-15.5	1.21 H	94	35.2	3.3
3	*5270.00	97.1 PK			1.21 H	94	94.4	2.7
4	*5270.00	86.4 AV			1.21 H	94	83.7	2.7
5	5350.00	63.1 PK	74.0	-10.9	1.21 H	94	60.1	3.0
6	5350.00	45.9 AV	54.0	-8.1	1.21 H	94	42.9	3.0
7	#10540.00	56.4 PK	68.2	-11.8	1.18 H	127	43.8	12.6
8	15810.00	45.6 PK	74.0	-28.4	2.20 H	169	33.6	12.0
9	15810.00	32.9 AV	54.0	-21.1	2.20 H	169	20.9	12.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.15 V	320	52.1	3.3
2	5150.00	43.0 AV	54.0	-11.0	1.15 V	320	39.7	3.3
3	*5270.00	106.6 PK			1.15 V	320	103.9	2.7
4	*5270.00	98.0 AV			1.15 V	320	95.3	2.7
5	5350.00	68.4 PK	74.0	-5.6	1.15 V	320	65.4	3.0
6	5350.00	50.2 AV	54.0	-3.8	1.15 V	320	47.2	3.0
7	#10540.00	64.0 PK	68.2	-4.2	3.70 V	270	51.4	12.6
8	15810.00	46.0 PK	74.0	-28.0	3.02 V	171	34.0	12.0
9	15810.00	33.0 AV	54.0	-21.0	3.02 V	171	21.0	12.0

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	93.8 PK			1.17 H	107	91.0	2.8
2	*5310.00	82.8 AV			1.17 H	107	80.0	2.8
3	5350.00	61.4 PK	74.0	-12.6	1.17 H	107	58.4	3.0
4	5350.00	49.2 AV	54.0	-4.8	1.17 H	107	46.2	3.0
5	10620.00	56.8 PK	74.0	-17.2	1.21 H	102	44.3	12.5
6	10620.00	43.5 AV	54.0	-10.5	1.21 H	102	31.0	12.5
7	15930.00	45.7 PK	74.0	-28.3	2.29 H	166	33.3	12.4
8	15930.00	32.8 AV	54.0	-21.2	2.29 H	166	20.4	12.4
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	*5310.00	103.2 PK			1.55 V	321	100.4	2.8
2	*5310.00	94.1 AV			1.55 V	321	91.3	2.8
3	5350.00	67.1 PK	74.0	-6.9	1.55 V	321	64.1	3.0
4	5350.00	53.5 AV	54.0	-0.5	1.55 V	321	50.5	3.0
5	10620.00	64.6 PK	74.0	-9.4	3.67 V	278	52.1	12.5
6	10620.00	51.1 AV	54.0	-2.9	3.67 V	278	38.6	12.5
7	15930.00	46.8 PK	74.0	-27.2	2.94 V	176	34.4	12.4
8	15930.00	33.4 AV	54.0	-20.6	2.94 V	176	21.0	12.4

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	53.5 PK	74.0	-20.5	1.22 H	99	50.2	3.3
2	5460.00	39.5 AV	54.0	-14.5	1.22 H	99	36.2	3.3
3	#5470.00	60.8 PK	68.2	-7.4	1.22 H	99	57.5	3.3
4	*5510.00	90.1 PK			1.22 H	99	86.8	3.3
5	*5510.00	80.2 AV			1.22 H	99	76.9	3.3
6	11020.00	56.8 PK	74.0	-17.2	1.16 H	114	43.8	13.0
7	11020.00	43.6 AV	54.0	-10.4	1.16 H	114	30.6	13.0
8	#16530.00	45.7 PK	68.2	-22.5	2.31 H	146	31.1	14.6

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.1 PK	74.0	-14.9	1.40 V	330	55.8	3.3
2	5460.00	44.8 AV	54.0	-9.2	1.40 V	330	41.5	3.3
3	#5470.00	66.6 PK	68.2	-1.6	1.40 V	330	63.3	3.3
4	*5510.00	99.2 PK			1.40 V	330	95.9	3.3
5	*5510.00	90.2 AV			1.40 V	330	86.9	3.3
6	11020.00	64.8 PK	74.0	-9.2	3.70 V	277	51.8	13.0
7	11020.00	51.3 AV	54.0	-2.7	3.70 V	277	38.3	13.0
8	#16530.00	46.4 PK	68.2	-21.8	3.01 V	189	31.8	14.6

**REMARKS:**

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

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.2 PK	74.0	-13.8	1.27 H	102	56.9	3.3
2	5460.00	46.0 AV	54.0	-8.0	1.27 H	102	42.7	3.3
3	#5470.00	62.1 PK	68.2	-6.1	1.27 H	102	58.8	3.3
4	*5550.00	98.0 PK			1.27 H	102	94.7	3.3
5	*5550.00	85.8 AV			1.27 H	102	82.5	3.3
6	11100.00	56.2 PK	74.0	-17.8	1.17 H	114	43.5	12.7
7	11100.00	42.9 AV	54.0	-11.1	1.17 H	114	30.2	12.7
8	#16650.00	44.6 PK	68.2	-23.6	2.20 H	152	29.4	15.2

**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	5460.00	65.5 PK	74.0	-8.5	1.51 V	333	62.2	3.3
2	5460.00	49.4 AV	54.0	-4.6	1.51 V	333	46.1	3.3
3	#5470.00	67.2 PK	68.2	-1.0	1.51 V	333	63.9	3.3
4	*5550.00	105.2 PK			1.51 V	333	101.9	3.3
5	*5550.00	95.8 AV			1.51 V	333	92.5	3.3
6	11100.00	64.5 PK	74.0	-9.5	3.68 V	264	51.8	12.7
7	11100.00	51.2 AV	54.0	-2.8	3.68 V	264	38.5	12.7
8	#16650.00	46.5 PK	68.2	-21.7	2.95 V	174	31.3	15.2

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	89.9 PK			1.23 H	110	86.5	3.4
2	*5670.00	80.3 AV			1.23 H	110	76.9	3.4
3	#5725.00	61.7 PK	68.2	-6.5	1.23 H	110	58.2	3.5
4	11340.00	57.1 PK	74.0	-16.9	1.16 H	105	43.7	13.4
5	11340.00	43.7 AV	54.0	-10.3	1.16 H	105	30.3	13.4
6	#17010.00	44.7 PK	68.2	-23.5	2.27 H	165	28.5	16.2
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	*5670.00	99.2 PK			1.62 V	335	95.8	3.4
2	*5670.00	90.6 AV			1.62 V	335	87.2	3.4
3	#5725.00	67.2 PK	68.2	-1.0	1.62 V	335	63.7	3.5
4	11340.00	64.6 PK	74.0	-9.4	3.72 V	277	51.2	13.4
5	11340.00	50.9 AV	54.0	-3.1	3.72 V	277	37.5	13.4
6	#17010.00	45.8 PK	68.2	-22.4	2.99 V	185	29.6	16.2

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.02	65.9 PK	68.2	-2.3	1.24 H	99	62.6	3.3
2	*5755.00	104.8 PK			1.24 H	99	101.1	3.7
3	*5755.00	96.2 AV			1.24 H	99	92.5	3.7
4	#5931.46	63.7 PK	68.2	-4.5	1.24 H	99	59.6	4.1
5	11510.00	57.0 PK	74.0	-17.0	1.15 H	103	44.0	13.0
6	11510.00	43.7 AV	54.0	-10.3	1.15 H	103	30.7	13.0
7	#17265.00	45.6 PK	68.2	-22.6	2.23 H	160	28.7	16.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5598.26	66.1 PK	68.2	-2.1	3.85 V	258	62.8	3.3
2	*5755.00	112.1 PK			3.85 V	258	108.4	3.7
3	*5755.00	102.9 AV			3.85 V	258	99.2	3.7
4	#5942.86	65.4 PK	68.2	-2.8	3.85 V	258	61.2	4.2
5	11510.00	64.0 PK	74.0	-10.0	3.72 V	281	51.0	13.0
6	11510.00	50.7 AV	54.0	-3.3	3.72 V	281	37.7	13.0
7	#17265.00	46.3 PK	68.2	-21.9	2.95 V	173	29.4	16.9

**REMARKS:**

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.38	62.4 PK	68.2	-5.8	1.43 H	100	59.1	3.3
2	*5795.00	103.5 PK			1.43 H	100	99.7	3.8
3	*5795.00	94.5 AV			1.43 H	100	90.7	3.8
4	#5927.34	63.1 PK	68.2	-5.1	1.43 H	100	59.0	4.1
5	11590.00	56.8 PK	74.0	-17.2	1.13 H	101	44.0	12.8
6	11590.00	43.4 AV	54.0	-10.6	1.13 H	101	30.6	12.8
7	#17385.00	45.2 PK	68.2	-23.0	2.23 H	169	28.4	16.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5637.08	63.4 PK	68.2	-4.8	3.94 V	259	60.1	3.3
2	*5795.00	110.2 PK			3.94 V	259	106.4	3.8
3	*5795.00	100.9 AV			3.94 V	259	97.1	3.8
4	#5928.61	65.3 PK	68.2	-2.9	3.94 V	259	61.2	4.1
5	11590.00	64.3 PK	74.0	-9.7	3.63 V	256	51.5	12.8
6	11590.00	50.9 AV	54.0	-3.1	3.63 V	256	38.1	12.8
7	#17385.00	46.2 PK	68.2	-22.0	3.00 V	166	29.4	16.8

**REMARKS:**

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

## 802.11ac (VHT80)

CHANNEL	TX Channel 42	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	5145.97	59.9 PK	74.0	-14.1	1.32 H	107	56.6	3.3
2	5145.97	47.6 AV	54.0	-6.4	1.32 H	107	44.3	3.3
3	5150.00	59.3 PK	74.0	-14.7	1.32 H	107	56.0	3.3
4	5150.00	47.3 AV	54.0	-6.7	1.32 H	107	44.0	3.3
5	*5210.00	101.8 PK			1.32 H	107	98.8	3.0
6	*5210.00	83.9 AV			1.32 H	107	80.9	3.0
7	5350.00	48.1 PK	74.0	-25.9	1.32 H	107	45.1	3.0
8	5350.00	36.8 AV	54.0	-17.2	1.32 H	107	33.8	3.0
9	#10420.00	57.2 PK	68.2	-11.0	1.16 H	105	44.7	12.5
10	15630.00	45.0 PK	74.0	-29.0	2.31 H	159	32.1	12.9
11	15630.00	32.4 AV	54.0	-21.6	2.31 H	159	19.5	12.9
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	5145.97	64.5 PK	74.0	-9.5	3.17 V	75	61.2	3.3
2	5145.97	52.9 AV	54.0	-1.1	3.17 V	75	49.6	3.3
3	5150.00	64.6 PK	74.0	-9.4	3.17 V	75	61.3	3.3
4	5150.00	52.7 AV	54.0	-1.3	3.17 V	75	49.4	3.3
5	*5210.00	100.1 PK			3.17 V	75	97.1	3.0
6	*5210.00	91.0 AV			3.17 V	75	88.0	3.0
7	5350.00	52.7 PK	74.0	-21.3	3.17 V	75	49.7	3.0
8	5350.00	40.4 AV	54.0	-13.6	3.17 V	75	37.4	3.0
9	#10420.00	64.2 PK	68.2	-4.0	3.69 V	268	51.7	12.5
10	15630.00	46.8 PK	74.0	-27.2	2.92 V	189	33.9	12.9
11	15630.00	33.3 AV	54.0	-20.7	2.92 V	189	20.4	12.9

## REMARKS:

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



<b>CHANNEL</b>	TX Channel 58	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.2 PK	74.0	-24.8	1.25 H	100	45.9	3.3
2	5150.00	38.5 AV	54.0	-15.5	1.25 H	100	35.2	3.3
3	*5290.00	94.7 PK			1.25 H	100	92.0	2.7
4	*5290.00	86.6 AV			1.25 H	100	83.9	2.7
5	5350.00	58.3 PK	74.0	-15.7	1.25 H	100	55.3	3.0
6	5350.00	45.8 AV	54.0	-8.2	1.25 H	100	42.8	3.0
7	#10580.00	56.8 PK	68.2	-11.4	1.20 H	114	44.2	12.6
8	15870.00	45.0 PK	74.0	-29.0	2.21 H	143	32.9	12.1
9	15870.00	32.5 AV	54.0	-21.5	2.21 H	143	20.4	12.1
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	5150.00	54.8 PK	74.0	-19.2	2.96 V	70	51.5	3.3
2	5150.00	43.3 AV	54.0	-10.7	2.96 V	70	40.0	3.3
3	*5290.00	101.2 PK			2.96 V	70	98.5	2.7
4	*5290.00	92.4 AV			2.96 V	70	89.7	2.7
5	5350.00	63.7 PK	74.0	-10.3	2.96 V	70	60.7	3.0
6	5350.00	51.1 AV	54.0	-2.9	2.96 V	70	48.1	3.0
7	#10580.00	64.7 PK	68.2	-3.5	3.70 V	263	52.1	12.6
8	15870.00	46.7 PK	74.0	-27.3	2.98 V	171	34.6	12.1
9	15870.00	33.5 AV	54.0	-20.5	2.98 V	171	21.4	12.1

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 106	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.6 PK	74.0	-16.4	1.16 H	110	54.3	3.3
2	5460.00	46.3 AV	54.0	-7.7	1.16 H	110	43.0	3.3
3	#5470.00	59.4 PK	68.2	-8.8	1.16 H	110	56.1	3.3
4	*5530.00	93.6 PK			1.16 H	110	90.3	3.3
5	*5530.00	84.0 AV			1.16 H	110	80.7	3.3
6	11060.00	56.3 PK	74.0	-17.7	1.12 H	126	43.4	12.9
7	11060.00	42.9 AV	54.0	-11.1	1.12 H	126	30.0	12.9
8	#16590.00	45.2 PK	68.2	-23.0	2.20 H	149	30.3	14.9

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.3 PK	74.0	-10.7	2.94 V	88	60.0	3.3
2	5460.00	51.9 AV	54.0	-2.1	2.94 V	88	48.6	3.3
3	#5470.00	65.6 PK	68.2	-2.6	2.94 V	88	62.3	3.3
4	*5530.00	99.1 PK			2.94 V	88	95.8	3.3
5	*5530.00	90.2 AV			2.94 V	88	86.9	3.3
6	11060.00	64.7 PK	74.0	-9.3	3.67 V	253	51.8	12.9
7	11060.00	51.1 AV	54.0	-2.9	3.67 V	253	38.2	12.9
8	#16590.00	46.5 PK	68.2	-21.7	2.99 V	165	31.6	14.9

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 122	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	93.5 PK			1.17 H	93	90.2	3.3
2	*5610.00	83.2 AV			1.17 H	93	79.9	3.3
3	#5725.00	59.7 PK	68.2	-8.5	1.17 H	93	56.2	3.5
4	11220.00	56.9 PK	74.0	-17.1	1.10 H	125	43.9	13.0
5	11220.00	43.4 AV	54.0	-10.6	1.10 H	125	30.4	13.0
6	#16830.00	45.0 PK	68.2	-23.2	2.28 H	148	29.7	15.3
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	*5610.00	100.5 PK			2.91 V	78	97.2	3.3
2	*5610.00	91.6 AV			2.91 V	78	88.3	3.3
3	#5725.00	65.3 PK	68.2	-2.9	2.91 V	78	61.8	3.5
4	11220.00	64.8 PK	74.0	-9.2	3.62 V	264	51.8	13.0
5	11220.00	51.3 AV	54.0	-2.7	3.62 V	264	38.3	13.0
6	#16830.00	46.1 PK	68.2	-22.1	2.92 V	182	30.8	15.3

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 155	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 40GHz		Average (AV)

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5614.41	64.9 PK	68.2	-3.3	1.36 H	99	61.6	3.3
2	*5775.00	97.7 PK			1.36 H	99	94.0	3.7
3	*5775.00	88.6 AV			1.36 H	99	84.9	3.7
4	#5933.74	65.8 PK	68.2	-2.4	1.36 H	99	61.6	4.2
5	11550.00	56.5 PK	74.0	-17.5	1.18 H	124	43.6	12.9
6	11550.00	43.4 AV	54.0	-10.6	1.18 H	124	30.5	12.9
7	#17325.00	45.4 PK	68.2	-22.8	2.23 H	172	28.4	17.0

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.43	64.3 PK	68.2	-3.9	3.65 V	259	61.0	3.3
2	*5775.00	105.1 PK			3.65 V	259	101.4	3.7
3	*5775.00	95.8 AV			3.65 V	259	92.1	3.7
4	#5996.38	64.7 PK	68.2	-3.5	3.65 V	259	60.6	4.1
5	11550.00	65.1 PK	74.0	-8.9	3.63 V	257	52.2	12.9
6	11550.00	51.4 AV	54.0	-2.6	3.63 V	257	38.5	12.9
7	#17325.00	45.9 PK	68.2	-22.3	2.91 V	172	28.9	17.0

**REMARKS:**

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

# Below 1GHz Data:

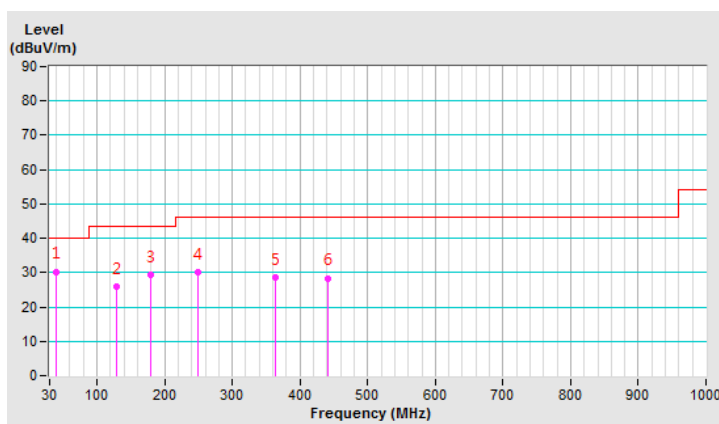
## 802.11ac (VHT20)

CHANNEL	TX Channel 149	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	39.99	30.3 QP	40.0	-9.7	1.50 H	360	39.6	-9.3
2	128.43	26.0 QP	43.5	-17.5	1.50 H	288	35.4	-9.4
3	180.33	29.3 QP	43.5	-14.2	1.50 H	360	38.5	-9.2
4	248.95	30.0 QP	46.0	-16.0	1.00 H	66	38.4	-8.4
5	363.53	28.5 QP	46.0	-17.5	1.00 H	191	33.5	-5.0
6	440.58	28.4 QP	46.0	-17.6	1.00 H	183	31.4	-3.0

### REMARKS:

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

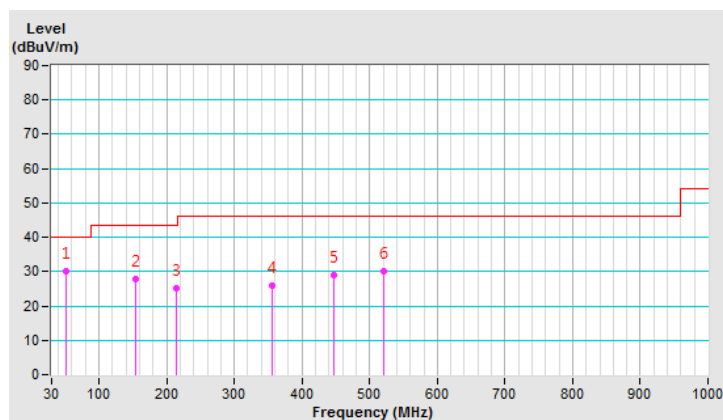


<b>CHANNEL</b>	TX Channel 149	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	50.47	30.0 QP	40.0	-10.0	1.00 V	235	38.5	-8.5
2	154.72	27.8 QP	43.5	-15.7	1.00 V	317	35.5	-7.7
3	214.18	25.0 QP	43.5	-18.5	1.00 V	299	35.0	-10.0
4	355.68	25.9 QP	46.0	-20.1	1.00 V	257	31.0	-5.1
5	446.54	28.8 QP	46.0	-17.2	1.00 V	42	31.7	-2.9
6	520.67	30.2 QP	46.0	-15.8	1.00 V	360	31.3	-1.1

#### REMARKS:

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



## 4.2 Transmit Power Measurement

### 4.2.1 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)
	√	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  $N_{ANT} \leq 4$ ;

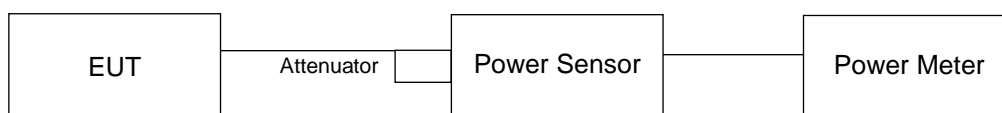
Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

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

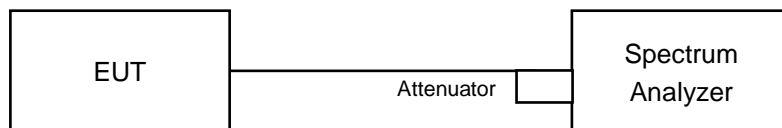
For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS})$  dB.

### 4.2.2 Test Setup

#### FOR POWER OUTPUT MEASUREMENT



#### FOR 26dB OCCUPIED BANDWIDTH



### 4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.2.4 Test Procedure

##### FOR POWER OUTPUT MEASUREMENT

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

##### FOR 26dB OCCUPIED BANDWIDTH

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

#### 4.2.5 Deviation from Test Standard

No deviation.

#### 4.2.6 EUT Operating Condition

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



#### 4.2.7 Test Results

##### 802.11a

##### POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	14.20	14.39	53.782	17.31	24.00	Pass
40	5200	14.92	15.15	63.78	18.05	24.00	Pass
48	5240	17.83	17.99	123.625	20.92	24.00	Pass
52	5260	17.71	17.75	118.586	20.74	24.00	Pass
60	5300	17.97	17.71	121.681	20.85	24.00	Pass
64	5320	13.47	13.50	44.62	16.50	24.00	Pass
100	5500	12.03	11.55	30.248	14.81	24.00	Pass
116	5580	18.33	17.82	128.611	21.09	24.00	Pass
140	5700	11.15	10.33	23.821	13.77	24.00	Pass
149	5745	19.62	18.87	168.712	22.27	30.00	Pass
157	5785	19.66	18.95	170.994	22.33	30.00	Pass
165	5825	19.61	18.82	167.619	22.24	30.00	Pass

## 26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	43.53	39.83
60	5300	43.67	41.44
64	5320	20.36	20.11
100	5500	25.66	20.06
116	5580	59.42	40.43
140	5700	36.92	20.18

**Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth**

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	39.83	27 > 24
60	5300	41.44	27.17 > 24
64	5320	20.11	24.03 > 24
100	5500	20.06	24.02 > 24
116	5580	40.43	27.06 > 24
140	5700	20.18	24.04 > 24

## 802.11ac (VHT20)

### POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	14.36	14.54	55.735	17.46	24.00	Pass
40	5200	15.14	15.17	65.544	18.17	24.00	Pass
48	5240	18.15	18.06	129.286	21.12	24.00	Pass
52	5260	17.91	18.44	131.625	21.19	24.00	Pass
60	5300	17.94	18.43	131.893	21.20	24.00	Pass
64	5320	13.42	13.84	46.189	16.65	24.00	Pass
100	5500	11.92	12.06	31.629	15.00	24.00	Pass
116	5580	18.34	18.24	134.915	21.30	24.00	Pass
140	5700	10.87	11.02	24.865	13.96	24.00	Pass
149	5745	19.41	19.62	178.919	22.53	30.00	Pass
157	5785	19.21	19.48	172.084	22.36	30.00	Pass
165	5825	19.27	19.37	171.025	22.33	30.00	Pass

### 26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	45.49	43.56
60	5300	45.29	43.26
64	5320	20.54	20.35
100	5500	20.72	20.37
116	5580	62.94	41.43
140	5700	43.20	20.34

**Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth**

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	43.56	27.39 > 24
60	5300	43.26	27.36 > 24
64	5320	20.35	24.08 > 24
100	5500	20.37	24.08 > 24
116	5580	41.43	27.17 > 24
140	5700	20.34	24.08 > 24

## 802.11ac (VHT40)

### POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	10.77	11.63	26.495	14.23	24.00	Pass
46	5230	15.87	16.48	83.1	19.20	24.00	Pass
54	5270	15.83	16.45	82.439	19.16	24.00	Pass
62	5310	13.02	13.12	40.557	16.08	24.00	Pass
102	5510	10.82	11.15	25.11	14.00	24.00	Pass
110	5550	16.57	16.83	93.589	19.71	24.00	Pass
134	5670	12.62	13.00	38.234	15.82	24.00	Pass
151	5755	19.34	19.62	177.523	22.49	30.00	Pass
159	5795	17.98	18.32	130.726	21.16	30.00	Pass

### 26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	45.45	54.42
62	5310	42.25	42.33
102	5510	42.57	42.14
110	5550	85.81	44.00
134	5670	71.18	42.26

**Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth**

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	45.45	27.57 > 24
62	5310	42.25	27.25 > 24
102	5510	42.14	27.24 > 24
110	5550	44.00	27.43 > 24
134	5670	42.26	27.25 > 24

## 802.11ac (VHT80)

### POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	9.49	10.48	20.061	13.02	24.00	Pass
58	5290	11.67	12.31	31.711	15.01	24.00	Pass
106	5530	10.28	10.52	21.938	13.41	24.00	Pass
122	5610	12.26	12.24	33.576	15.26	24.00	Pass
155	5775	15.19	15.28	66.766	18.25	30.00	Pass

### 26dB OCCUPIED BANDWIDTH

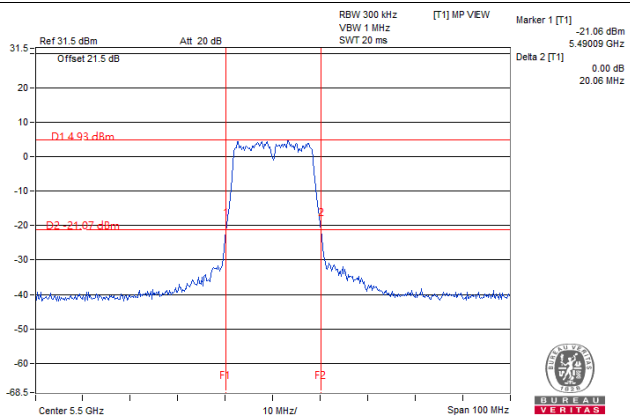
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.79	82.26
106	5530	83.30	82.41
122	5610	128.23	82.42

**Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth**

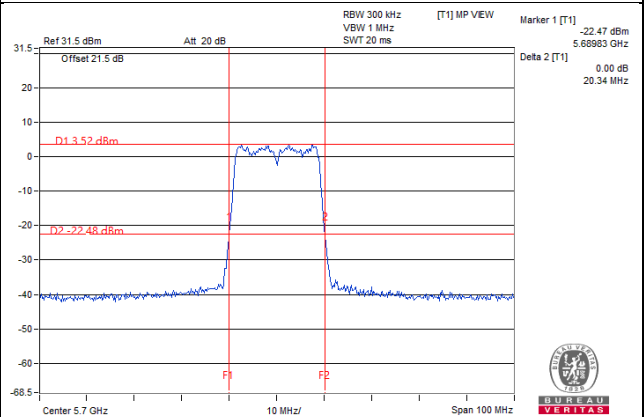
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.26	30.15 > 24
106	5530	82.41	30.15 > 24
122	5610	82.42	30.16 > 24

# Spectrum Plot of Worst Value

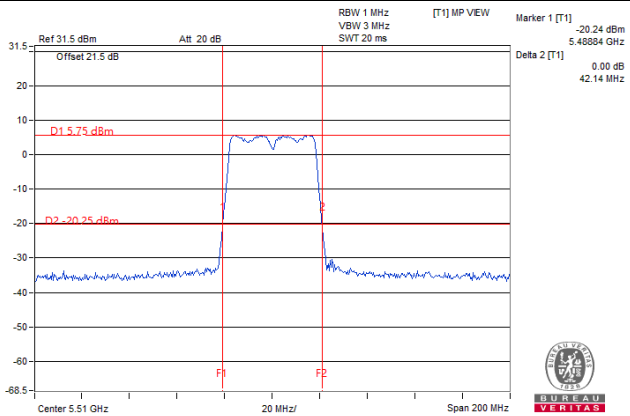
## 802.11a\_Chain 1 / CH100



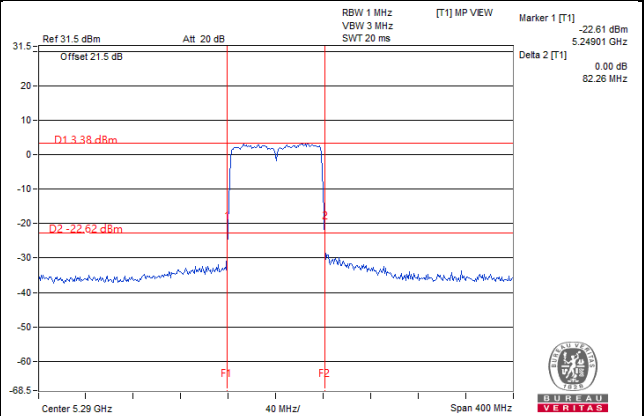
## 802.11ac (VHT20)\_Chain 1 / CH140



## 802.11ac (VHT40)\_Chain 1 / CH102

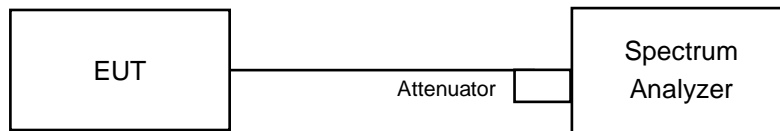


## 802.11ac (VHT80)\_Chain 1 / CH58



### 4.3 Occupied Bandwidth Measurement

#### 4.3.1 Test Setup



#### 4.3.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.3 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.

#### 4.3.4 Test Results

##### 802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.68	16.80
40	5200	16.92	16.92
48	5240	17.76	17.40
52	5260	17.64	17.40
60	5300	17.76	17.64
64	5320	16.68	16.68
100	5500	16.80	16.80
116	5580	20.28	16.92
140	5700	17.16	16.68
149	5745	27.60	19.32
157	5785	27.12	18.48
165	5825	27.24	18.60

##### 802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.76
40	5200	17.88	17.76
48	5240	23.04	20.04
52	5260	18.00	18.00
60	5300	18.00	18.12
64	5320	17.88	17.64
100	5500	17.88	17.76
116	5580	19.68	17.76
140	5700	18.00	17.76
149	5745	25.56	18.36
157	5785	26.28	18.48
165	5825	27.36	18.72



### 802.11ac (VHT40)

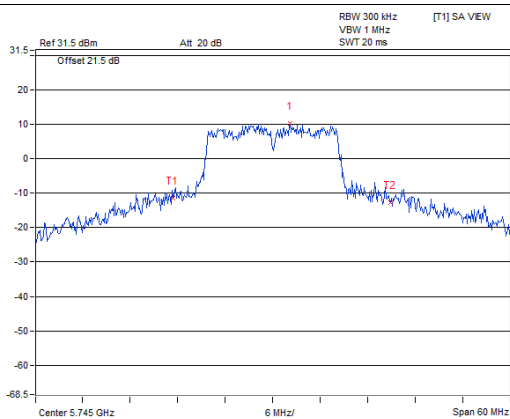
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.48	36.48
46	5230	36.72	36.96
54	5270	36.72	36.48
62	5310	36.72	36.48
102	5510	36.72	36.48
110	5550	37.44	36.48
134	5670	37.20	36.72
151	5755	46.80	37.68
159	5795	43.92	36.96

### 802.11ac (VHT80)

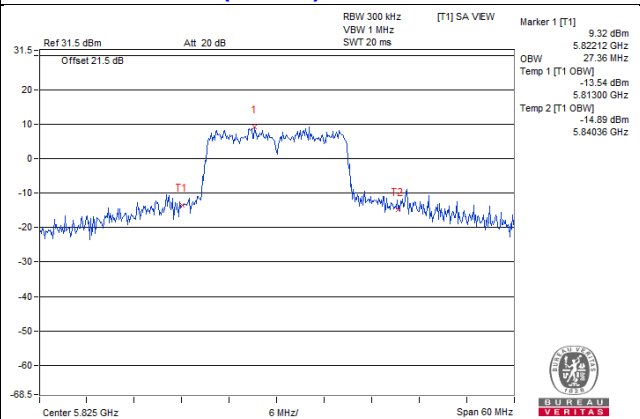
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	76.32	75.84
58	5290	76.32	76.32
106	5530	76.32	76.32
122	5610	76.32	76.32
155	5775	85.92	76.32

# Spectrum Plot of Max. Value

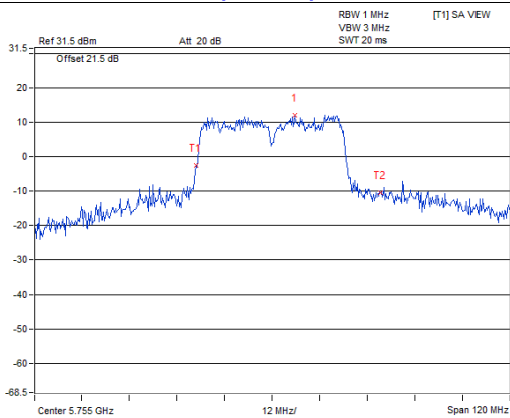
## 802.11a\_Chain 0 / CH149



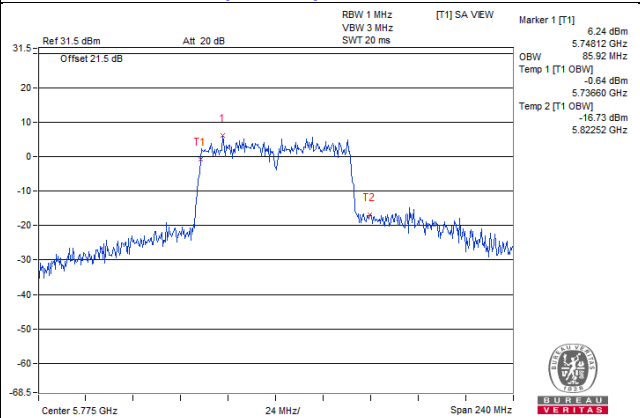
## 802.11ac (VHT20)\_Chain 0 / CH165



## 802.11ac (VHT40)\_Chain 0 / CH151

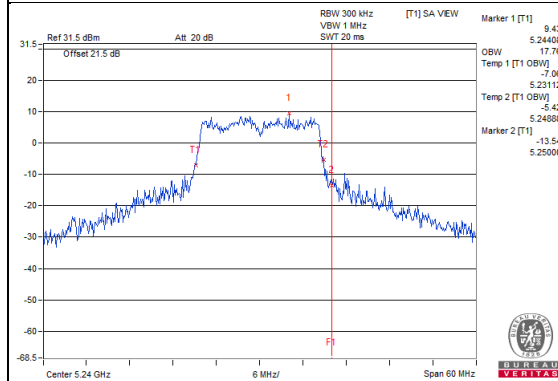


## 802.11ac (VHT80)\_Chain 0 / CH155

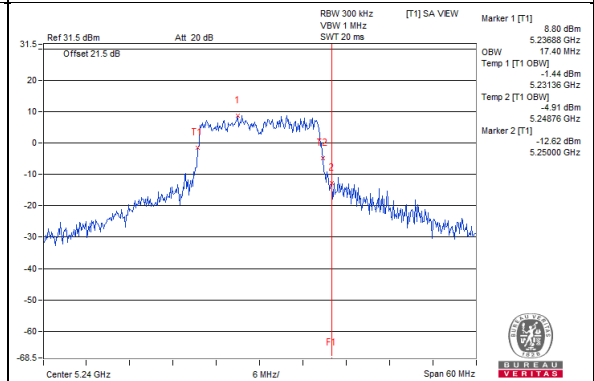


**Spectrum Plot for near by DFS band**  
(DFS is required, if 99% OCP straddle into U-NII-2A band)

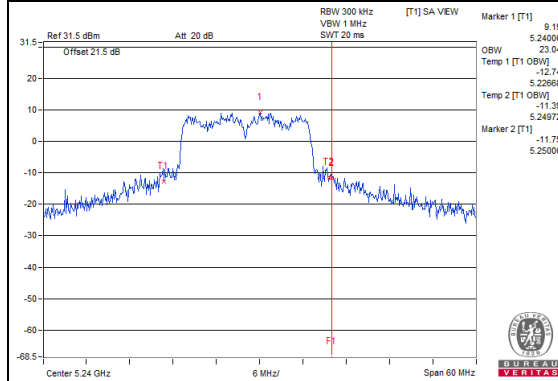
**802.11a\_Chain 0 / CH48**



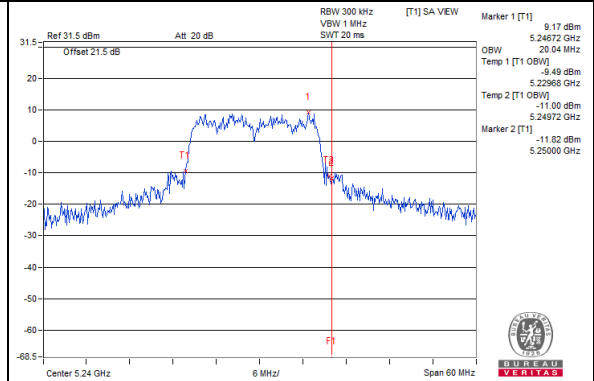
**802.11a\_Chain 1 / CH48**



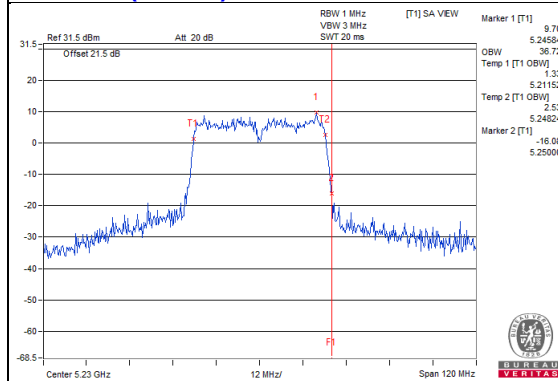
**802.11ac (VHT20)\_Chain 0 / CH48**



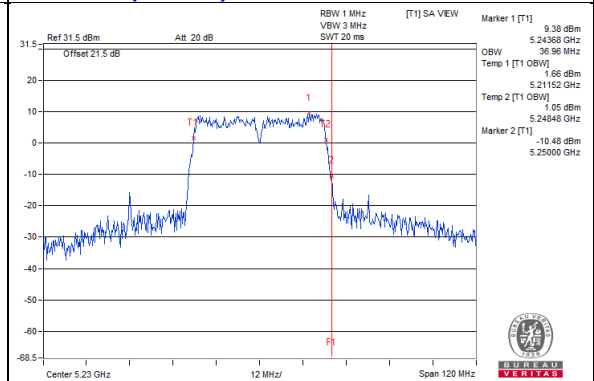
**802.11ac (VHT20)\_Chain 1 / CH48**



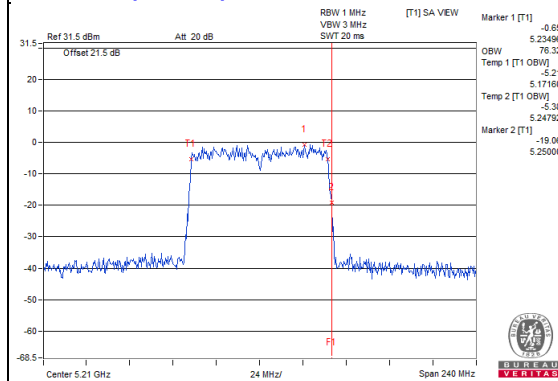
**802.11ac (VHT40)\_Chain 0 / CH46**



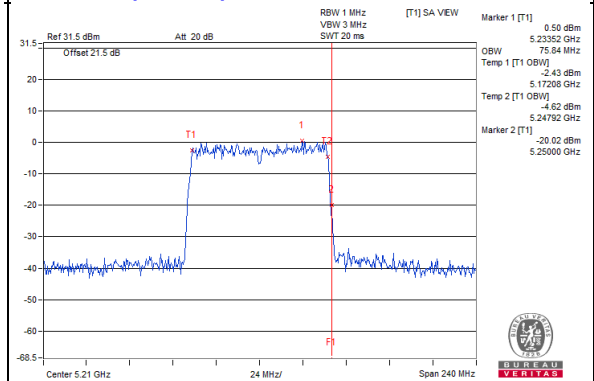
**802.11ac (VHT40)\_Chain 1 / CH46**



**802.11ac (VHT80)\_Chain 0 / CH42**

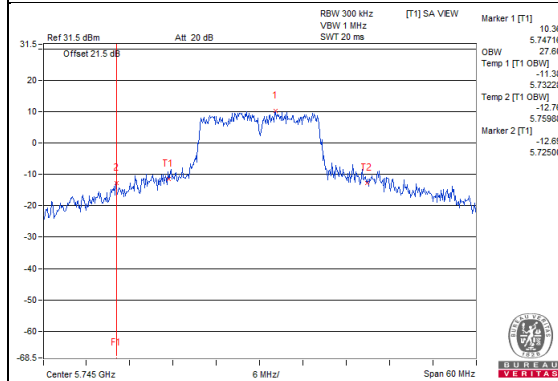


**802.11ac (VHT80)\_Chain 1 / CH42**

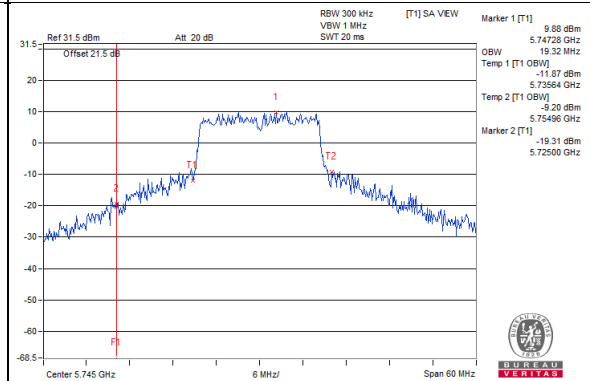


**Spectrum Plot for near by DFS band**  
(DFS is required, if 99% OCP straddle into U-NII-2C band)

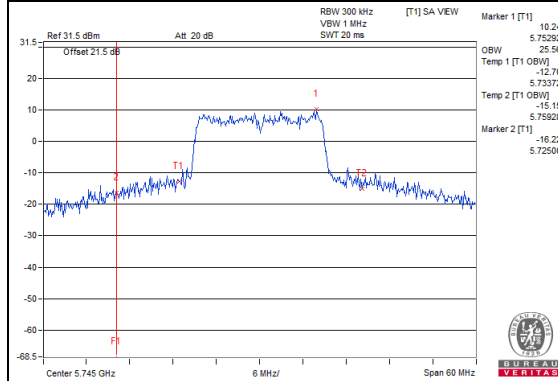
**802.11a\_Chain 0 / CH149**



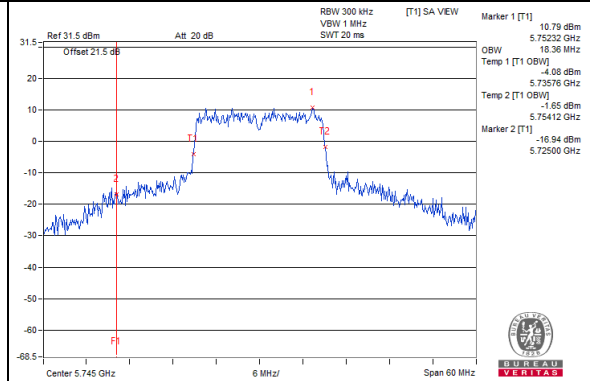
**802.11a\_Chain 1 / CH149**



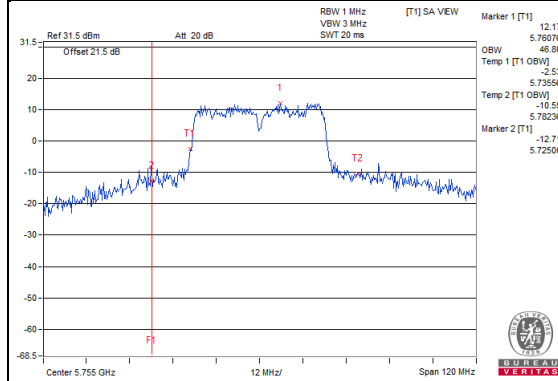
**802.11ac (VHT20)\_Chain 0 / CH149**



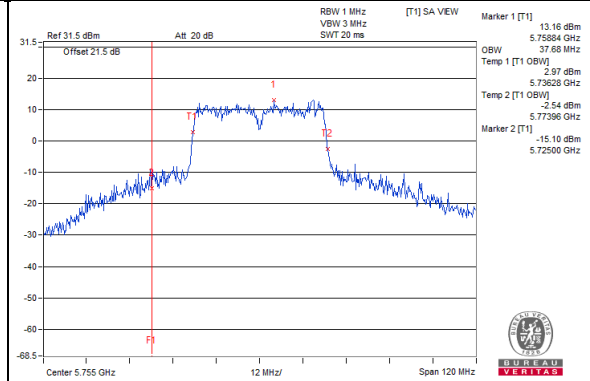
**802.11ac (VHT20)\_Chain 1 / CH149**



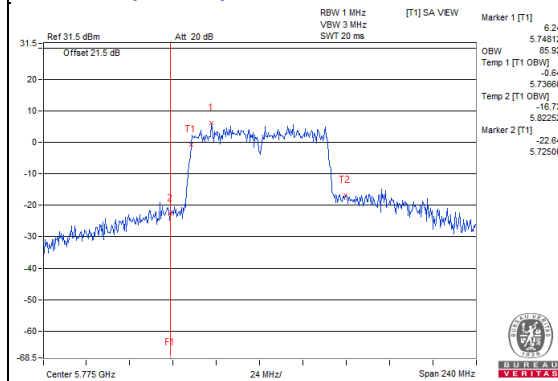
**802.11ac (VHT40)\_Chain 0 / CH151**



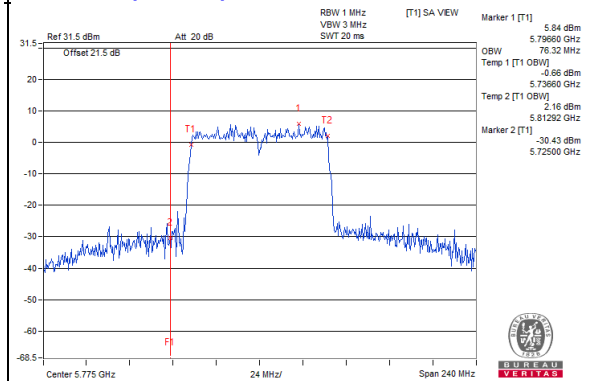
**802.11ac (VHT40)\_Chain 1 / CH151**



**802.11ac (VHT80)\_Chain 0 / CH155**



**802.11ac (VHT80)\_Chain 1 / CH155**

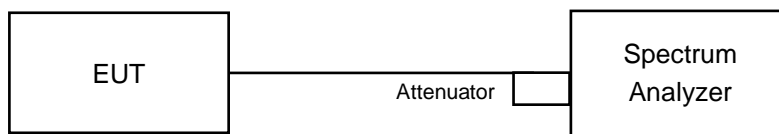


#### 4.4 Peak Power Spectral Density Measurement

##### 4.4.1 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	
	√	Client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

##### 4.4.2 Test Setup



##### 4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

##### 4.4.4 Test Procedure

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

Using method SA-1

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

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

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. 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  $BWCF = 10\log(500\text{ kHz}/300\text{ kHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value

#### 4.4.5 Deviation from Test Standard

No deviation.

#### 4.4.6 EUT Operating Condition

Same as Item 4.3.6.

#### 4.4.7 Test Results

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

##### 802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	0.90	1.18	4.05	8.83	Pass
40	5200	2.13	1.56	4.86	8.83	Pass
48	5240	4.94	4.55	7.76	8.83	Pass
52	5260	4.96	4.69	7.84	8.83	Pass
60	5300	4.86	4.85	7.87	8.83	Pass
64	5320	0.39	0.36	3.39	8.83	Pass
100	5500	-0.96	-0.94	2.06	8.83	Pass
116	5580	4.48	5.17	7.85	8.83	Pass
140	5700	-1.95	-2.24	0.92	8.83	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.  
2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.17-6)=8.83\text{dBm}$ .

##### 802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	1.20	1.69	4.46	8.83	Pass
40	5200	2.33	1.56	4.97	8.83	Pass
48	5240	5.68	3.63	7.79	8.83	Pass
52	5260	5.04	4.99	8.03	8.83	Pass
60	5300	5.03	5.16	8.11	8.83	Pass
64	5320	0.49	0.67	3.59	8.83	Pass
100	5500	-2.03	-0.62	1.74	8.83	Pass
116	5580	4.62	5.52	8.10	8.83	Pass
140	5700	-2.24	-2.00	0.89	8.83	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.  
2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.17-6)=8.83\text{dBm}$ .

### 802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-5.28	-4.17	-1.68	8.83	Pass
46	5230	-0.43	0.22	2.92	8.83	Pass
54	5270	-0.32	0.32	3.02	8.83	Pass
62	5310	-3.41	-2.51	0.07	8.83	Pass
102	5510	-5.67	-4.73	-2.16	8.83	Pass
110	5550	0.74	0.50	3.63	8.83	Pass
134	5670	-3.85	-3.12	-0.46	8.83	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.17-6)=8.83\text{dBm}$ .

### 802.11ac (VHT80)

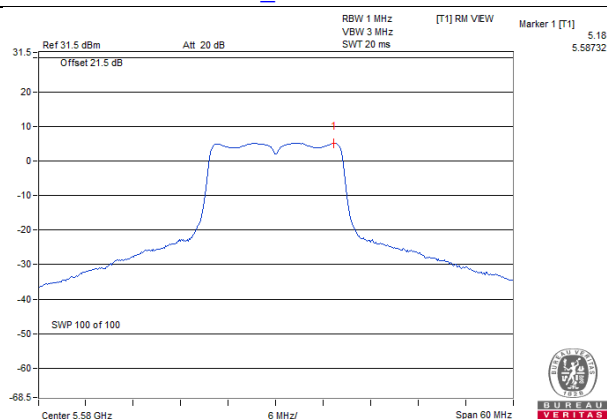
Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	-9.93	-8.98	-6.42	8.83	Pass
58	5290	-8.23	-7.62	-4.90	8.83	Pass
106	5530	-9.92	-8.47	-6.12	8.83	Pass
122	5610	-8.73	-6.69	-4.58	8.83	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.17-6)=8.83\text{dBm}$ .

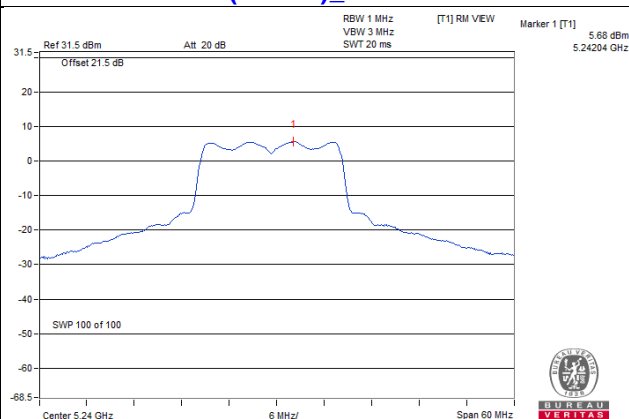


# Spectrum Plot of Worst Value

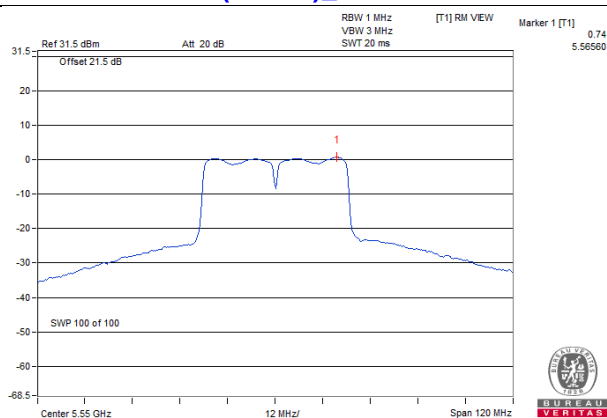
## 802.11a\_Chain 1 / CH116



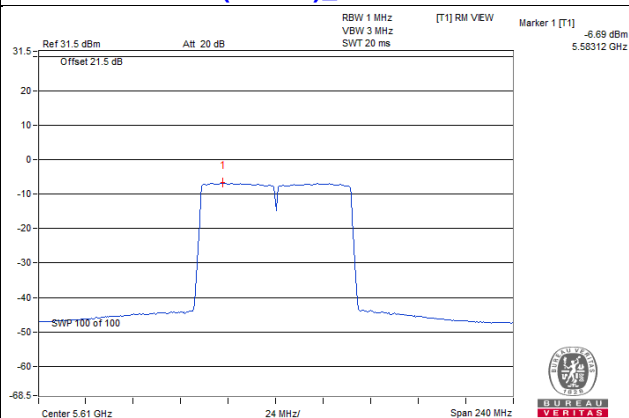
## 802.11ac (VHT20)\_Chain 0 / CH48



## 802.11ac (VHT40)\_Chain 0 / CH110



## 802.11ac (VHT80)\_Chain 1 / CH122



### For U-NII-3:

#### 802.11a

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
149	5745	-1.61	-1.93	1.3314	1.24	3.46	27.83	Pass
157	5785	-1.65	-2.15	1.2934	1.12	3.34	27.83	Pass
165	5825	-1.88	-1.69	1.3263	1.23	3.45	27.83	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (8.17 - 6) = 27.83\text{dBm}$ .

#### 802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
149	5745	-2.63	-1.83	1.2019	0.80	3.02	27.83	Pass
157	5785	-2.79	-2.20	1.1286	0.53	2.75	27.83	Pass
165	5825	-2.70	-1.56	1.2353	0.92	3.14	27.83	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (8.17 - 6) = 27.83\text{dBm}$ .

#### 802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
151	5755	-5.80	-5.62	0.5372	-2.70	-0.48	27.83	Pass
159	5795	-7.82	-6.58	0.385	-4.15	-1.93	27.83	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (8.17 - 6) = 27.83\text{dBm}$ .

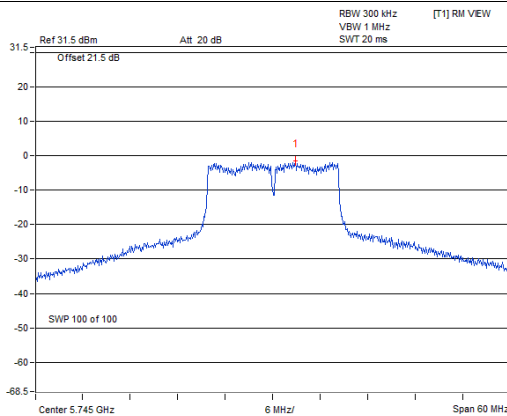
#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
155	5775	-13.19	-13.29	0.09485	-10.23	-8.01	27.83	Pass

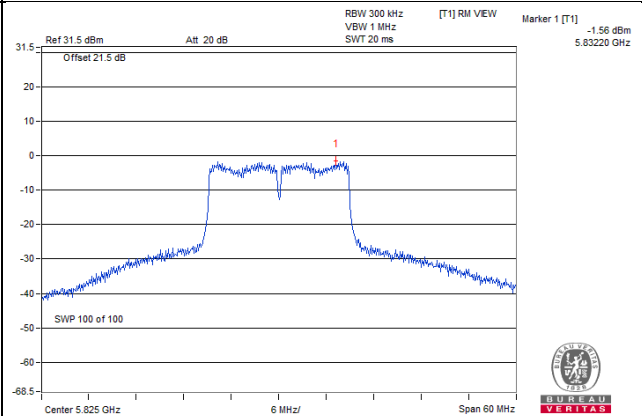
- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain =  $5.16\text{dBi} + 10\log(2) = 8.17\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (8.17 - 6) = 27.83\text{dBm}$ .

# Spectrum Plot of Worst Value

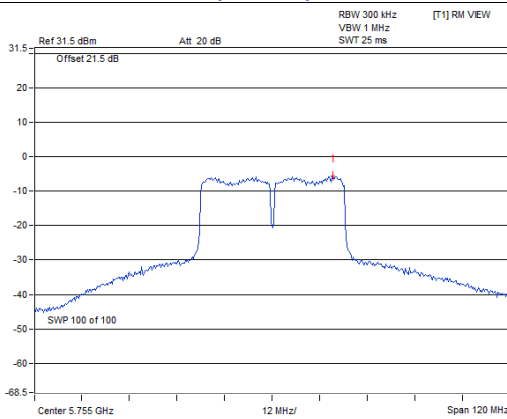
802.11a\_Chain 0 / CH149



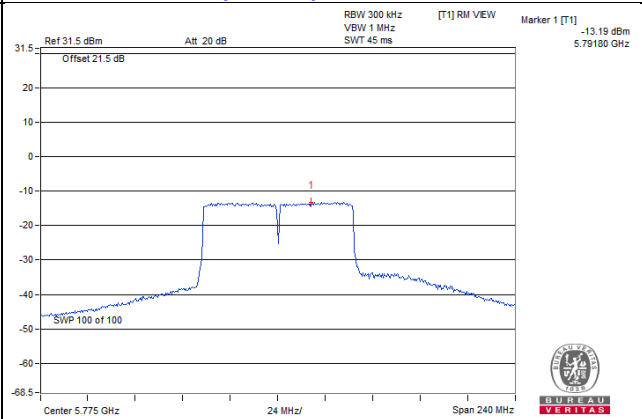
802.11ac (VHT20)\_Chain 1 / CH165



802.11ac (VHT40)\_Chain 1 / CH151



802.11ac (VHT80)\_Chain 0 / CH155

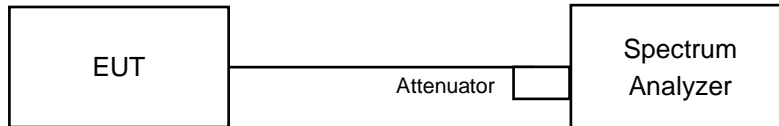


## 4.5 6dB Bandwidth Measurement

### 4.5.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

### 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

#### 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.

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Condition

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

#### 4.5.7 Test Results

##### 802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.62	16.61	0.5	Pass
157	5785	16.65	16.64	0.5	Pass
165	5825	16.62	16.64	0.5	Pass

##### 802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.81	17.75	0.5	Pass
157	5785	17.80	17.78	0.5	Pass
165	5825	17.77	17.72	0.5	Pass

##### 802.11ac (VHT40)

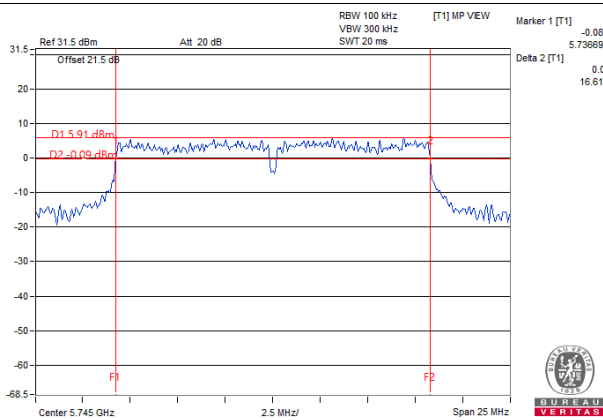
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.60	36.54	0.5	Pass
159	5795	36.60	36.56	0.5	Pass

##### 802.11ac (VHT80)

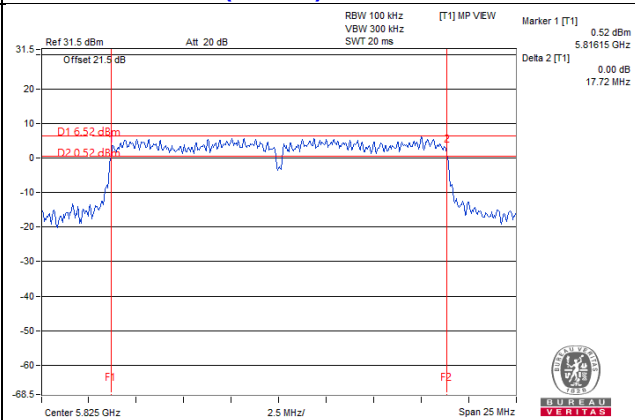
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.75	76.72	0.5	Pass

# Spectrum Plot of Worst Value

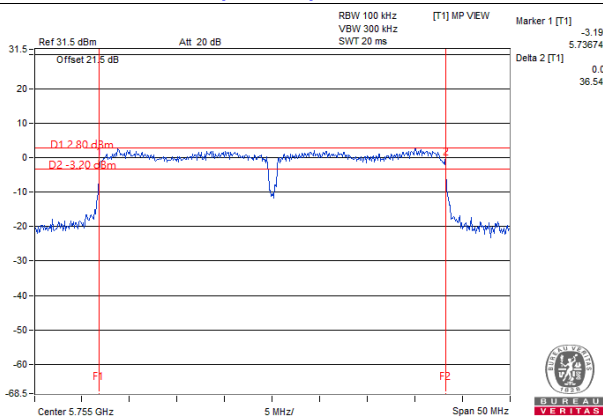
802.11a\_Chain 1 / CH149



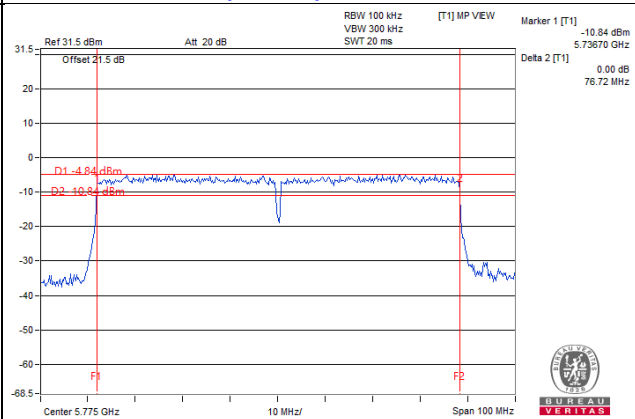
802.11ac (VHT20)\_Chain 1 / CH165



802.11ac (VHT40)\_Chain 1 / CH151



802.11ac (VHT80)\_Chain 1 / CH155



## 5 Pictures of Test Arrangements

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

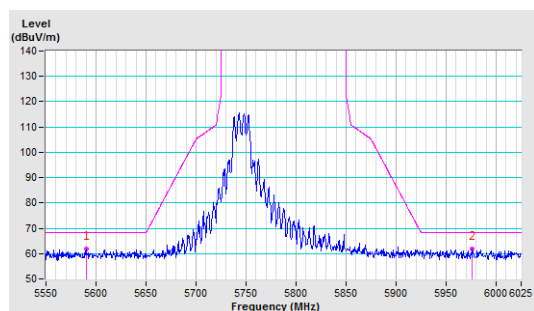
## Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

For PCB antenna

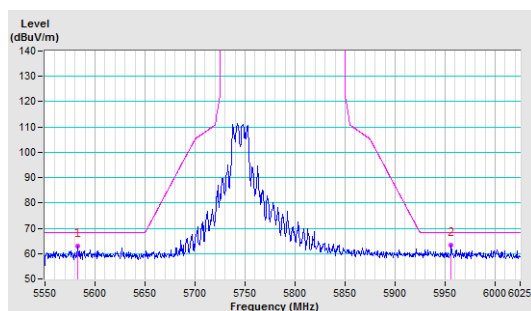
802.11a

**CH 149 5745 MHz**

**Horizontal**

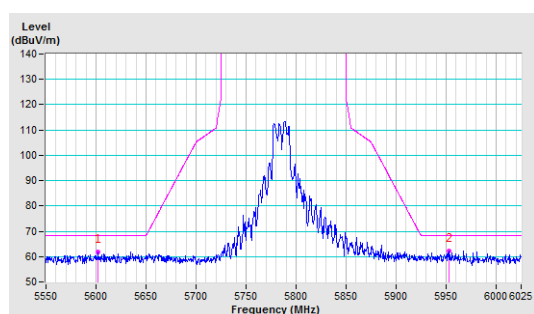


**Vertical**

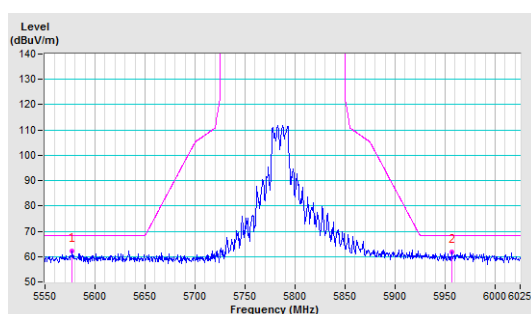


**CH 157 5785 MHz**

**Horizontal**

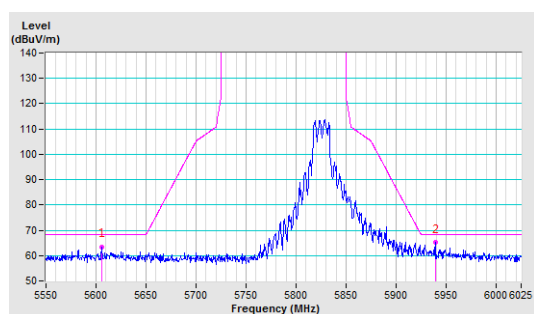


**Vertical**

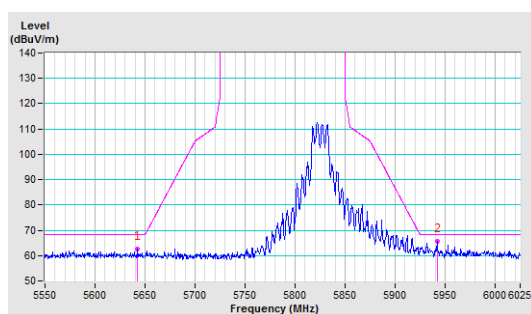


**CH 165 5825 MHz**

**Horizontal**



**Vertical**

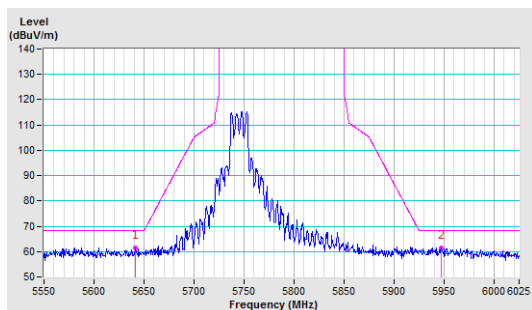




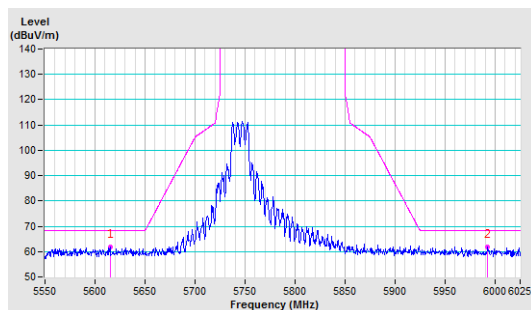
## 802.11ac (VHT20)

### CH 149 5745 MHz

#### Horizontal

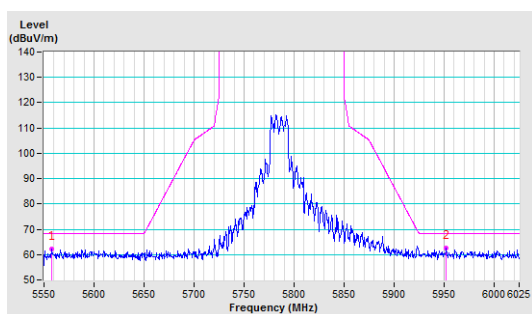


#### Vertical

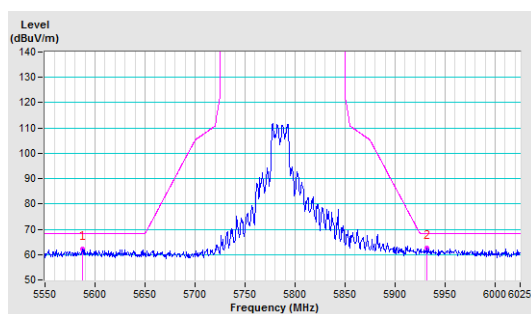


### CH 157 5785 MHz

#### Horizontal

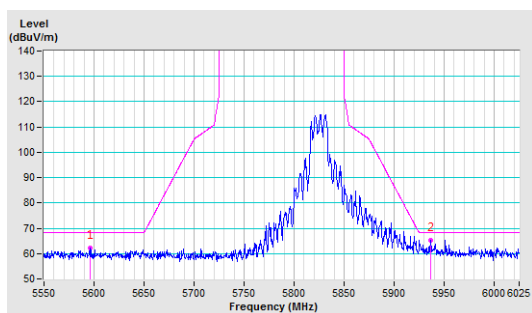


#### Vertical

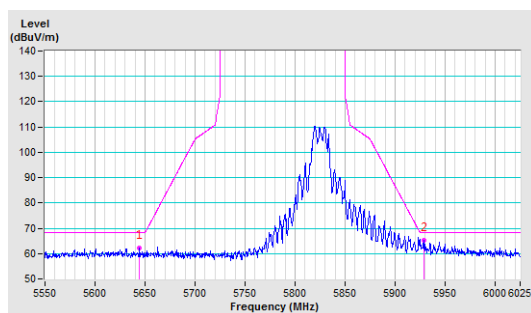


### CH 165 5825 MHz

#### Horizontal



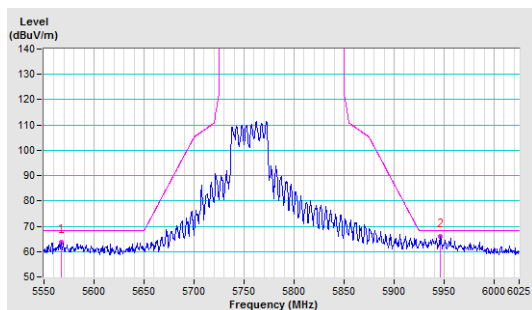
#### Vertical



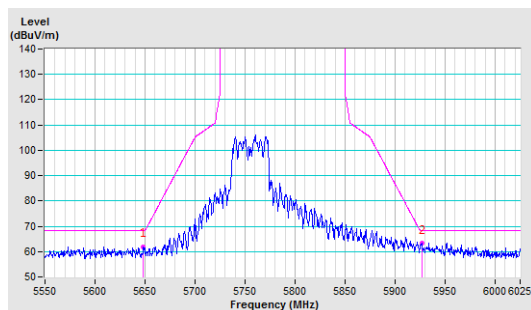
## 802.11ac (VHT40)

### CH 151 5755 MHz

#### Horizontal

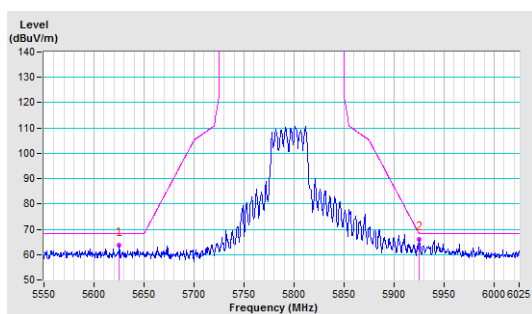


#### Vertical

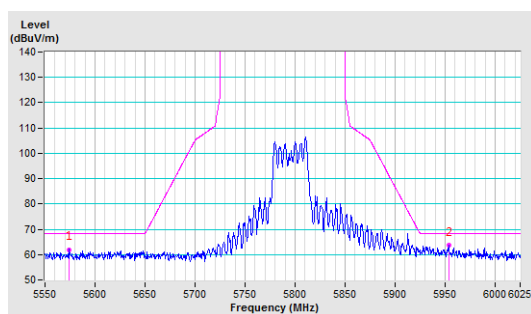


### CH 159 5795 MHz

#### Horizontal



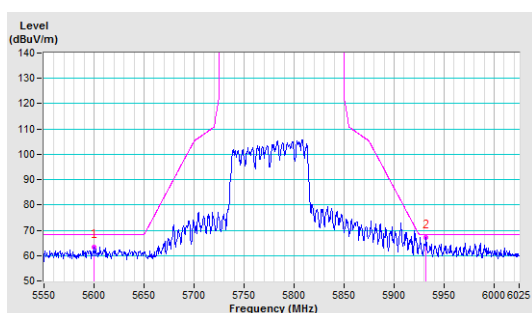
#### Vertical



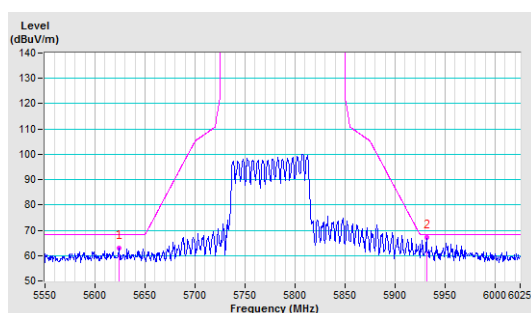
## 802.11ac (VHT80)

### CH 155 5775 MHz

#### Horizontal



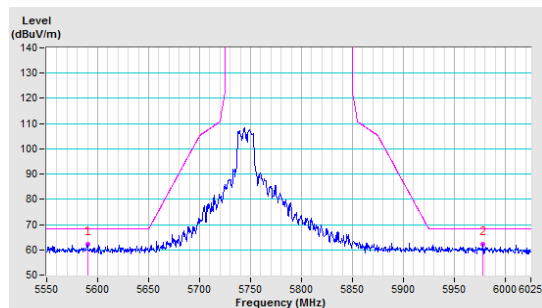
#### Vertical



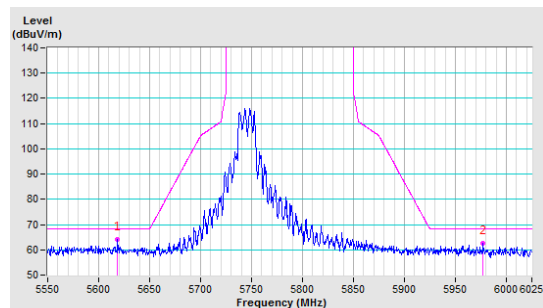
For Dipole antenna  
802.11a

CH 149 5745 MHz

Horizontal

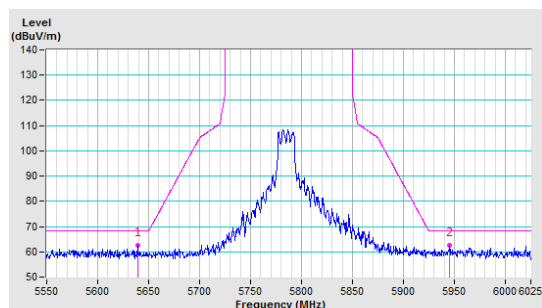


Vertical

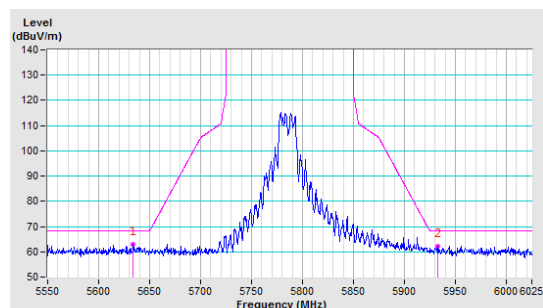


CH 157 5785 MHz

Horizontal

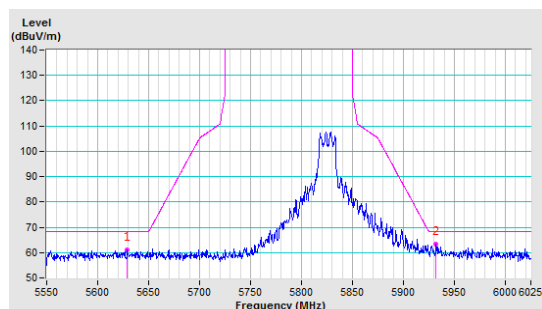


Vertical

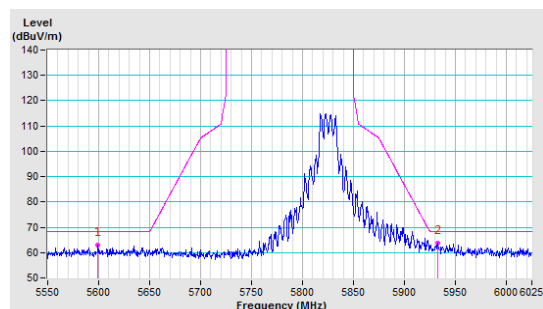


CH 165 5825 MHz

Horizontal



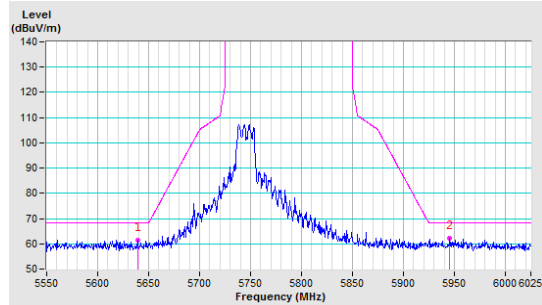
Vertical



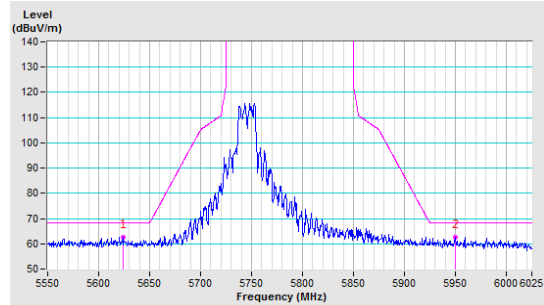
## 802.11ac (VHT20)

### CH 149 5745 MHz

#### Horizontal

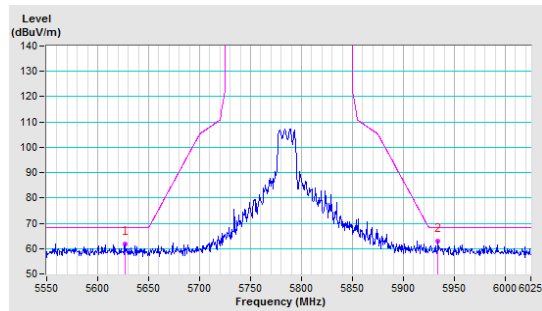


#### Vertical

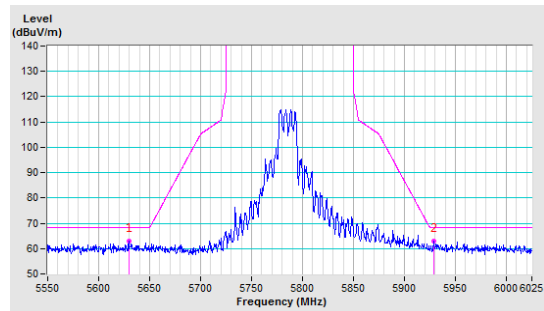


### CH 157 5785 MHz

#### Horizontal

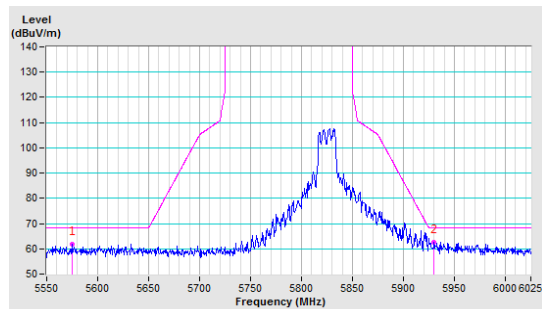


#### Vertical

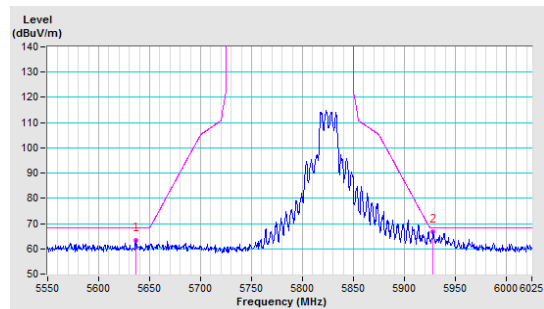


### CH 165 5825 MHz

#### Horizontal



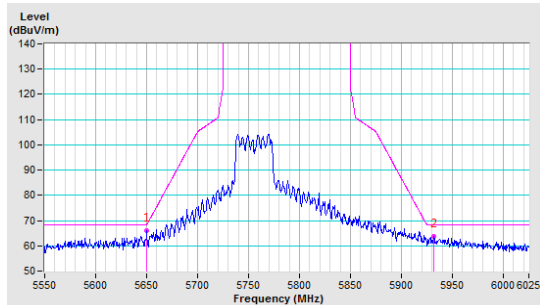
#### Vertical



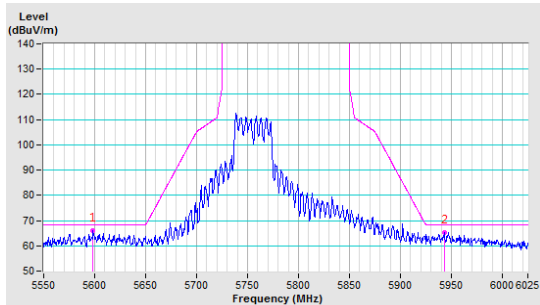
## 802.11ac (VHT40)

### CH 151 5755 MHz

#### Horizontal

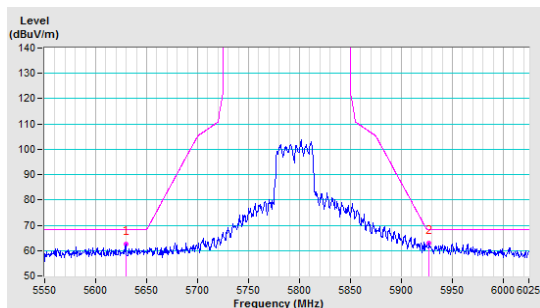


#### Vertical

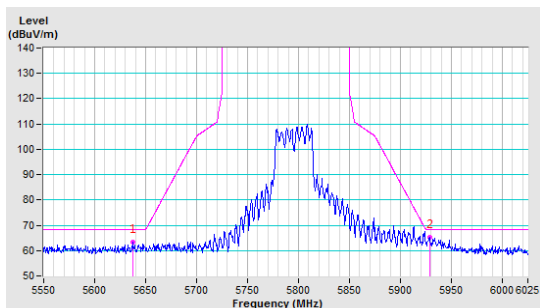


### CH 159 5795 MHz

#### Horizontal



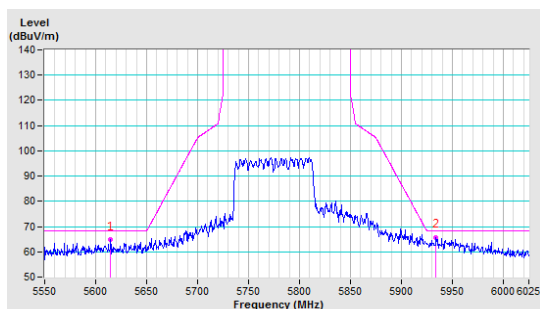
#### Vertical



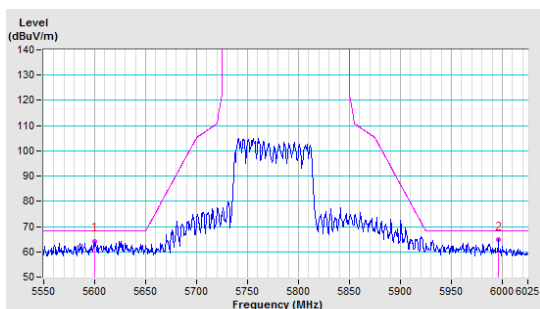
## 802.11ac (VHT80)

### CH 155 5775 MHz

#### Horizontal



#### Vertical



## Appendix – Information of the Testing Laboratories

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

--- END ---