

## FCC Test Report

**Report No.:** RF200601E06-1

**FCC ID:** MQT-AT100R3

**Test Model:** xCL\_AT-100-R3-18U

**Received Date:** June 01, 2020

**Test Date:** July 06 to 15, 2020

**Issued Date:** Oct. 16, 2020

**Applicant:** XAC AUTOMATION CORP.

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PARK,HSINCHU,TAIWAN

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

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Taiwan

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



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### Release Control Record

Issue No.	Description	Date Issued
RF200601E06-1	Original release.	Oct. 16, 2020

## 1 Certificate of Conformity

**Product:** Terminal

**Brand:** XAC

**Test Model:** xCL\_AT-100-R3-18U

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** XAC AUTOMATION CORP.

**Test Date:** July 06 to 15, 2020

**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:**

Oct. 16, 2020

Joyce Kuo / Specialist

**Approved by :**



, **Date:**

Oct. 16, 2020

Clark Lin / Technical Manager

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -19.56dB at 16.14453MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 5470.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is i-pex(MHF) not a standard connector.

Note:

- For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
- For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
- 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) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.9 dB
Conducted emissions	-	2.5 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	Terminal
Brand	XAC
Test Model	xCL_AT-100-R3-18U
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	Refer to note 3
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 150 Mbps
Operating Frequency	<b>2.4GHz:</b> 2.412 ~ 2.462 GHz <b>5GHz:</b> 5.18 ~ 5.24 GHz, 5.26 ~ 5.32 GHz, 5.50 ~ 5.72 GHz, 5.745 ~ 5.825 GHz
Number of Channel	<b>2.4GHz:</b> 802.11b, 802.11g, 802.11n (HT20): 11 <b>5GHz:</b> 802.11a, 802.11n (HT20): 25 802.11n (HT40): 12
Output Power	<b>2.4 GHz:</b> 275.423 mW <b>5.18 ~ 5.24 GHz:</b> 52.36 mW <b>5.26 ~ 5.32 GHz:</b> 22.542 mW <b>5.5 ~ 5.72 GHz:</b> 23.768 mW <b>5.745 ~ 5.825 GHz:</b> 59.841 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Battery x1 (Option)
Cable Supplied	NA

Note:

1. The EUT has three radios as following table:

Radio 1	Radio 2	Radio 3
WLAN(2.4GHz + 5GHz) + Bluetooth	WWAN(LTE + WCDMA)	NFC

2. Simultaneously transmission condition.

Condition	Technology	
1	WWAN	NFC
2	WWAN	Bluetooth
3	WLAN 2.4GHz	NFC
4	WLAN 5GHz	NFC
5	Bluetooth	NFC

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

3. The EUT must be supplied power adapter and battery as following table:

Adapter (Only test not for sale)		
Brand	Model	Specification
MASS POWER	NBS10B050200VUU	AC Input: 100-240Vac, 0.3A, 50-60Hz DC Output: 5Vdc, 2A
Battery (Option)		
Brand	Model	Specification
Shenzhen Rishengzhi Electronics Technology Co., Ltd.	J625	3.7V, 3000mAh, 11.1Wh

4. The antennas provided to the EUT, please refer to the following table:

Antenna Set	RF Chain NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
NFC	Main	XAC	RTOS	13	13.56MHz	wire	None
Wi-Fi BT	Main	AWAN	AYF6P-100002	2.31	2.4~2.4835GHz	PIFA	i-pex(MHF)
				2.99	5.15~5.85GHz		
LTE	Main(B2) TX	AWAN	AXF6P-100013	1.19	1850 MHz to 1910 MHz	PIFA	i-pex(MHF)
	Main(B4) TX			2.67	1710 MHz to 1755 MHz		
	Main(B12) TX			0.82	699 MHz to 715 MHz		
	Main(B2) RX			2.35	1930 MHz to 1990 MHz		i-pex(MHF)
	Main(B4) RX			2.05	2110 MHz to 2155 MHz		
	Main(B12) RX			2.45	729 MHz to 745 MHz		
LTE	Aux(B2) RX	AWAN	AXF6P-100005	2.54	1930 MHz to 1990 MHz	PIFA	i-pex(MHF)
	Aux(B4) RX			-0.26	2110 MHz to 2155 MHz		
	Aux(B12) RX			-1.21	729 MHz to 746 MHz		
WCDMA	Main(B2) TX	AWAN	AXF6P-100013	1.19	1850 MHz to 1910 MHz	PIFA	i-pex(MHF)
	Main(B5) TX			0.12	824 MHz to 849 MHz		
	Main(B2) RX			2.35	1930 MHz to 1990 MHz		i-pex(MHF)
	Main(B5) RX			2.62	869 MHz to 894 MHz		
WCDMA	Aux(B2) RX	AWAN	AXF6P-100005	2.54	1930 MHz to 1990 MHz	PIFA	i-pex(MHF)
	Aux(B5) RX			1.19	869 MHz to 894 MHz		

5. The EUT was pre-tested for radiated test under following test modes:

Pre-test Mode	Power
<b>Mode A</b>	<b>Power from Adapter</b>
Mode B	Power from Battery
From the above modes, the worst radiated test was found in <b>Mode A</b> .	

6. The EUT was pre-tested for conducted test under following test modes:

Pre-test Mode	Power
<b>Mode A</b>	<b>Power from Adapter</b>
Mode B	Power from Laptop
From the above modes, the worst radiated test was found in <b>Mode A</b> .	



7. The EUT incorporates a SISO function.

<b>2.4GHz Band</b>		
<b>MODULATION MODE</b>	<b>TX &amp; RX CONFIGURATION</b>	
<b>802.11b</b>	1TX	1RX
<b>802.11g</b>	1TX	1RX
<b>802.11n (HT20)</b>	1TX	1RX
<b>5GHz Band</b>		
<b>MODULATION MODE</b>	<b>TX &amp; RX CONFIGURATION</b>	
<b>802.11a</b>	1TX	1RX
<b>802.11n (HT20)</b>	1TX	1RX
<b>802.11n (HT40)</b>	1TX	1RX

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

9. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

### 3.2 Description of Test Modes

#### FOR 5180 ~ 5240MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

#### FOR 5260 ~ 5320MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

#### FOR 5500 ~ 5720MHz

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

**FOR 5745 ~ 5825MHz:**

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE $\geq$ 1G	RE $<$ 1G	PLC	APCM	
-	√	√	√	√	-

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

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

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

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
802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5

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

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11n (HT20)	5180-5240, 5260-5320, 5500-5720 5745-5825	36 to 48, 52 to 64, 100 to 144, 149 to 165	149	OFDM	BPSK	6.5

### Power Line Conducted Emission Test:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11n (HT20)	5180-5240, 5260-5320, 5500-5720 5745-5825	36 to 48 52 to 64, 100 to 144, 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
802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5

### Test Condition:

Applicable To	Environmental Conditions	Input Power (System)	Tested By
RE $\geq$ 1G	22deg. C, 70%RH	120Vac, 60Hz	Nelson Teng
RE $<$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Kevin Ko
PLC	25deg. C, 75%RH	120Vac, 60Hz	Kevin Ko
APCM	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin

### 3.3 Duty Cycle of Test Signal

If duty cycle of test signal is < 98%, duty factor shall be considered.

**802.11a:** Duty cycle = 1.364 ms/1.564 ms = 0.872, Duty factor = 10 \* log (1/Duty cycle) = 0.59dB

**802.11n (HT20):** Duty cycle = 1.275 ms/1.476 ms = 0.864, Duty factor = 10 \* log (1/Duty cycle) = 0.64dB

**802.11n (HT40):** Duty cycle = 0.634 ms/0.844 ms = 0.751, Duty factor = 10 \* log (1/Duty cycle) = 1.24dB



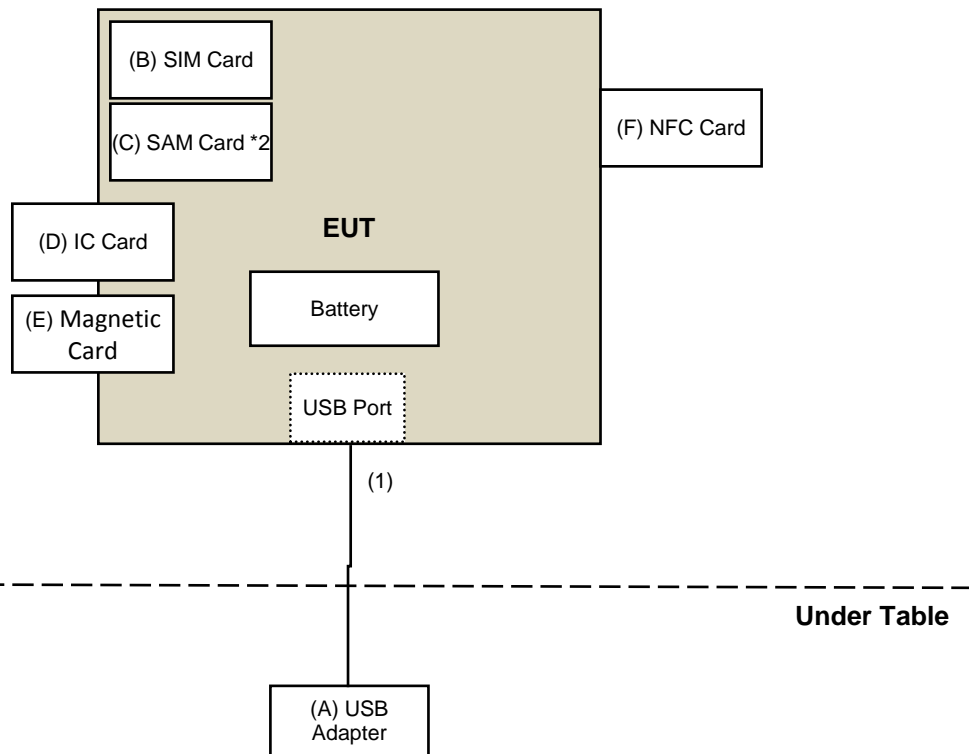
### 3.4 Description of Support Units

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.	USB Adapter	MASS POWER	NBS10B050200VUU	NA	NA	Supplied by client
B.	SIM Card	Keysight	NA	NA	NA	Provided by Lab
C.	SAM Card *2	XAC	NA	NA	NA	Supplied by client
D.	IC Card	XAC	NA	NA	NA	Supplied by client
E.	Magnetic Card	XAC	NA	NA	NA	Supplied by client
F.	NFC Card	XAC	NA	NA	NA	Supplied by client

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Type C to USB Cable	1	1.2	Yes	0	Supplied by client

### 3.4.1 Configuration of System under Test





### 3.5 General Description of Applied Standard and references

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

**Test standard:**

**FCC Part 15, Subpart E (15.407)**  
**ANSI C63.10-2013**

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

**References Test Guidance :**

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

All test items have been performed as a reference to the above KDB test guidance.

## 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 (dBuV/m)	AV:54 (dBuV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBuV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) <sup>*1</sup> PK:10 (dBm/MHz) <sup>*2</sup> PK:15.6 (dBm/MHz) <sup>*3</sup> PK:27 (dBm/MHz) <sup>*4</sup>	PK: 68.2(dBuV/m) <sup>*1</sup> PK:105.2 (dBuV/m) <sup>*2</sup> PK: 110.8(dBuV/m) <sup>*3</sup> PK:122.2 (dBuV/m) <sup>*4</sup>
<sup>*1</sup> beyond 75 MHz or more above of the band edge. <sup>*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.		<sup>*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. <sup>*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

#### Note:

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

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

## 4.1.2 Test Instruments

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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Pre-Amplifier EMCI	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 28, 2020	Apr. 27, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 11, 2019	Nov. 10, 2020
RF Cable	8D	966-3-1	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-2	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-3	Mar. 17, 2020	Mar. 16, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 26, 2019	Sep. 25, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. Tested Date: July 06, 2020

**For Radiated Emission (Above 1GHz) & Bangedge test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-1200	160922	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 09, 2020	June 08, 2021
RF Cable	EMC104-SM-SM-6000	180602	June 09, 2020	June 08, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
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

**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. Tested Date: July 15, 2020

**For other test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021
Power meter Anritsu	ML2495A	1529002	July 26, 2019	July 25, 2020
Power sensor Anritsu	MA2411B	1339443	July 26, 2019	July 25, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
AC Power Source Extech Electronics	6205	1440452	NA	NA
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 16, 2020	Jan. 15, 2021
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021
Voltage Meter FLUKE	179	89610322	Sep. 25, 2019	Sep. 24, 2020
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

- NOTE:**
1. The test was performed in Oven room 2.
  2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  3. Tested Date: July 15, 2020

#### 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:**

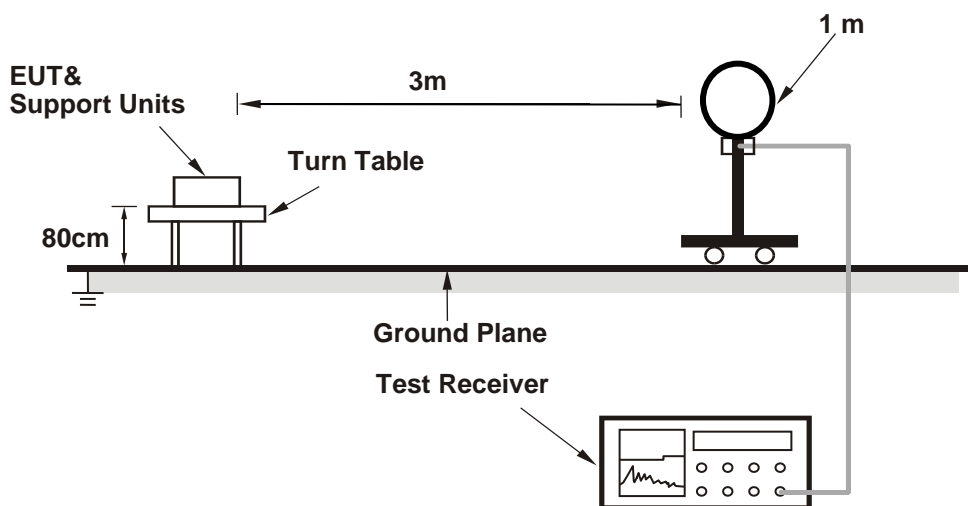
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

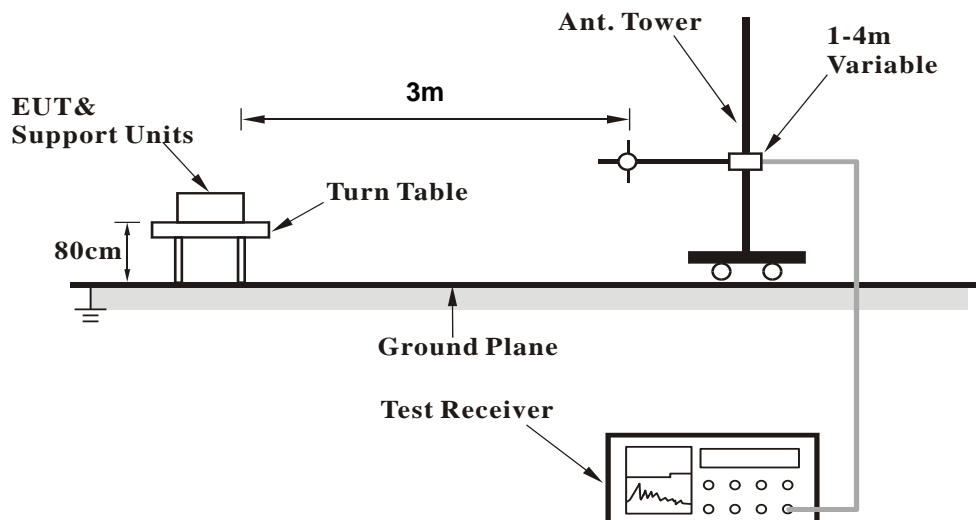
No deviation.

4.1.5 Test Setup

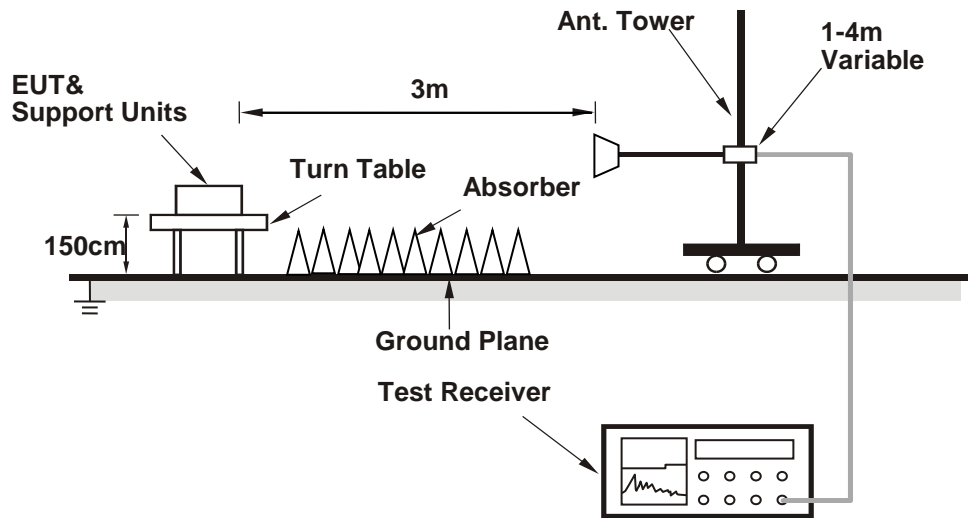
**For Radiated emission below 30MHz**



**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**

- a. Placed the EUT on the testing table.
- b. Controlling software (QDART 4.8.29) has been activated to set the EUT under transmission condition continuously at specific channel frequency.



#### 4.1.7 Test Results

#### Above 1GHz Data:

#### 802.11a

<b>Channel</b>	TX Channel 36	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

#### Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.9 PK	74.0	-12.1	2.44 H	286	58.2	3.7
2	5150.00	49.2 AV	54.0	-4.8	2.44 H	286	45.5	3.7
3	*5180.00	105.3 PK			2.44 H	286	101.7	3.6
4	*5180.00	97.5 AV			2.44 H	286	93.9	3.6
5	#10360.00	44.5 PK	68.2	-23.7	2.66 H	68	31.8	12.7
6	15540.00	43.4 PK	74.0	-30.6	2.12 H	114	30.2	13.2
7	15540.00	32.1 AV	54.0	-21.9	2.12 H	114	18.9	13.2

#### Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (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	71.9 PK	74.0	-2.1	2.60 V	210	68.2	3.7
2	5150.00	53.6 AV	54.0	-0.4	2.60 V	210	49.9	3.7
3	*5180.00	106.4 PK			2.60 V	210	102.8	3.6
4	*5180.00	97.9 AV			2.60 V	210	94.3	3.6
5	#10360.00	48.9 PK	68.2	-19.3	3.15 V	128	36.2	12.7
6	15540.00	45.3 PK	74.0	-28.7	1.55 V	88	32.1	13.2
7	15540.00	32.1 AV	54.0	-21.9	1.55 V	88	18.9	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	Frequency (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	105.1 PK			2.43 H	277	101.6	3.5
2	*5200.00	97.2 AV			2.43 H	277	93.7	3.5
3	#10400.00	44.8 PK	68.2	-23.4	2.61 H	91	32.0	12.8
4	15600.00	43.0 PK	74.0	-31.0	2.08 H	123	29.5	13.5
5	15600.00	31.9 AV	54.0	-22.1	2.08 H	123	18.4	13.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	106.2 PK			2.61 V	208	102.7	3.5
2	*5200.00	97.8 AV			2.61 V	208	94.3	3.5
3	#10400.00	48.9 PK	68.2	-19.3	3.14 V	146	36.1	12.8
4	15600.00	45.5 PK	74.0	-28.5	1.58 V	61	32.0	13.5
5	15600.00	32.4 AV	54.0	-21.6	1.58 V	61	18.9	13.5

**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 48	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	105.3 PK			2.40 H	277	101.8	3.5
2	*5240.00	97.4 AV			2.40 H	277	93.9	3.5
3	#10480.00	44.8 PK	68.2	-23.4	2.67 H	89	31.7	13.1
4	15720.00	43.8 PK	74.0	-30.2	2.04 H	116	30.0	13.8
5	15720.00	32.1 AV	54.0	-21.9	2.04 H	116	18.3	13.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	106.7 PK			2.61 V	222	103.2	3.5
2	*5240.00	98.2 AV			2.61 V	222	94.7	3.5
3	#10480.00	49.1 PK	68.2	-19.1	3.25 V	154	36.0	13.1
4	15720.00	46.1 PK	74.0	-27.9	1.53 V	91	32.3	13.8
5	15720.00	32.8 AV	54.0	-21.2	1.53 V	91	19.0	13.8

**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.

<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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	105.5 PK			2.44 H	281	102.1	3.4
2	*5260.00	97.9 AV			2.44 H	281	94.5	3.4
3	#10520.00	45.4 PK	68.2	-22.8	2.69 H	73	32.3	13.1
4	15780.00	43.8 PK	74.0	-30.2	2.12 H	120	30.3	13.5
5	15780.00	32.1 AV	54.0	-21.9	2.12 H	120	18.6	13.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	105.9 PK			2.63 V	215	102.5	3.4
2	*5260.00	97.7 AV			2.63 V	215	94.3	3.4
3	#10520.00	49.2 PK	68.2	-19.0	3.16 V	136	36.1	13.1
4	15780.00	45.3 PK	74.0	-28.7	1.58 V	88	31.8	13.5
5	15780.00	32.3 AV	54.0	-21.7	1.58 V	88	18.8	13.5

**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 60	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	105.4 PK			2.43 H	273	102.1	3.3
2	*5300.00	97.7 AV			2.43 H	273	94.4	3.3
3	10600.00	44.6 PK	74.0	-29.4	2.66 H	92	31.7	12.9
4	10600.00	41.1 AV	54.0	-12.9	2.66 H	92	28.2	12.9
5	15900.00	44.0 PK	74.0	-30.0	2.11 H	125	31.2	12.8
6	15900.00	32.5 AV	54.0	-21.5	2.11 H	125	19.7	12.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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			2.55 V	215	102.8	3.3
2	*5300.00	97.8 AV			2.55 V	215	94.5	3.3
3	10600.00	48.7 PK	74.0	-25.3	3.24 V	126	35.8	12.9
4	10600.00	45.7 AV	54.0	-8.3	3.24 V	126	32.8	12.9
5	15900.00	45.6 PK	74.0	-28.4	1.59 V	93	32.8	12.8
6	15900.00	32.5 AV	54.0	-21.5	1.59 V	93	19.7	12.8

**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.

<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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	105.7 PK			2.49 H	261	102.3	3.4
2	*5320.00	96.6 AV			2.49 H	261	93.2	3.4
3	5350.00	61.4 PK	74.0	-12.6	2.49 H	261	58.0	3.4
4	5350.00	50.0 AV	54.0	-4.0	2.49 H	261	46.6	3.4
5	10640.00	45.1 PK	74.0	-28.9	2.60 H	93	32.2	12.9
6	10640.00	41.8 AV	54.0	-12.2	2.60 H	93	28.9	12.9
7	15960.00	43.9 PK	74.0	-30.1	2.08 H	114	31.1	12.8
8	15960.00	32.4 AV	54.0	-21.6	2.08 H	114	19.6	12.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	106.6 PK			2.43 V	199	103.2	3.4
2	*5320.00	98.2 AV			2.43 V	199	94.8	3.4
3	5350.00	65.7 PK	74.0	-8.3	2.43 V	199	62.3	3.4
4	5350.00	53.7 AV	54.0	-0.3	2.43 V	199	50.3	3.4
5	10640.00	48.5 PK	74.0	-25.5	3.21 V	141	35.6	12.9
6	10640.00	45.7 AV	54.0	-8.3	3.21 V	141	32.8	12.9
7	15960.00	45.4 PK	74.0	-28.6	1.56 V	67	32.6	12.8
8	15960.00	32.5 AV	54.0	-21.5	1.56 V	67	19.7	12.8

**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.

<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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.4 PK	74.0	-12.6	2.53 H	270	57.6	3.8
2	5460.00	49.0 AV	54.0	-5.0	2.53 H	270	45.2	3.8
3	#5470.00	64.7 PK	68.2	-3.5	2.53 H	270	60.8	3.9
4	*5500.00	106.4 PK			2.53 H	270	102.5	3.9
5	*5500.00	97.2 AV			2.53 H	270	93.3	3.9
6	11000.00	45.1 PK	74.0	-28.9	2.62 H	75	32.1	13.0
7	11000.00	41.6 AV	54.0	-12.4	2.62 H	75	28.6	13.0
8	#16500.00	43.9 PK	68.2	-24.3	2.15 H	137	29.3	14.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	65.1 PK	74.0	-8.9	2.53 V	207	61.3	3.8
2	5460.00	53.0 AV	54.0	-1.0	2.53 V	207	49.2	3.8
3	#5470.00	68.1 PK	68.2	-0.1	2.53 V	207	64.2	3.9
4	*5500.00	107.1 PK			2.53 V	207	103.2	3.9
5	*5500.00	98.5 AV			2.53 V	207	94.6	3.9
6	11000.00	49.2 PK	74.0	-24.8	3.22 V	146	36.2	13.0
7	11000.00	46.4 AV	54.0	-7.6	3.22 V	146	33.4	13.0
8	#16500.00	45.8 PK	68.2	-22.4	1.50 V	85	31.2	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 116	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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			2.43 H	298	101.7	3.8
2	*5580.00	97.6 AV			2.43 H	298	93.8	3.8
3	11160.00	45.6 PK	74.0	-28.4	2.61 H	88	32.5	13.1
4	11160.00	42.0 AV	54.0	-12.0	2.61 H	88	28.9	13.1
5	#16740.00	43.8 PK	68.2	-24.4	2.15 H	121	27.6	16.2

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	106.5 PK			2.49 V	219	102.7	3.8
2	*5580.00	98.0 AV			2.49 V	219	94.2	3.8
3	11160.00	48.8 PK	74.0	-25.2	3.15 V	146	35.7	13.1
4	11160.00	45.8 AV	54.0	-8.2	3.15 V	146	32.7	13.1
5	#16740.00	45.6 PK	68.2	-22.6	1.55 V	88	29.4	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 140	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	105.2 PK			2.47 H	294	101.2	4.0
2	*5700.00	97.5 AV			2.47 H	294	93.5	4.0
3	#5725.00	55.4 PK	68.2	-12.8	2.47 H	294	51.4	4.0
4	11400.00	45.0 PK	74.0	-29.0	2.66 H	85	31.8	13.2
5	11400.00	41.6 AV	54.0	-12.4	2.66 H	85	28.4	13.2
6	#17100.00	44.3 PK	68.2	-23.9	2.13 H	136	27.1	17.2

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	106.2 PK			2.51 V	228	102.2	4.0
2	*5700.00	98.1 AV			2.51 V	228	94.1	4.0
3	#5725.00	56.2 PK	68.2	-12.0	2.51 V	228	52.2	4.0
4	11400.00	48.6 PK	74.0	-25.4	3.17 V	157	35.4	13.2
5	11400.00	45.9 AV	54.0	-8.1	3.17 V	157	32.7	13.2
6	#17100.00	45.7 PK	68.2	-22.5	1.51 V	63	28.5	17.2

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 144	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	2.41 H	276	51.0	3.8
2	5460.00	44.3 AV	54.0	-9.7	2.41 H	276	40.5	3.8
3	#5470.00	56.2 PK	68.2	-12.0	2.41 H	276	52.3	3.9
4	*5720.00	105.6 PK			2.41 H	276	101.7	3.9
5	*5720.00	97.8 AV			2.41 H	276	93.9	3.9
6	#5850.00	55.3 PK	68.2	-12.9	2.41 H	276	50.9	4.4
7	11440.00	45.4 PK	74.0	-28.6	2.65 H	87	32.1	13.3
8	11440.00	42.0 AV	54.0	-12.0	2.65 H	87	28.7	13.3
9	#17160.00	43.0 PK	68.2	-25.2	2.16 H	129	25.6	17.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	55.1 PK	74.0	-18.9	2.50 V	224	51.3	3.8
2	5460.00	44.6 AV	54.0	-9.4	2.50 V	224	40.8	3.8
3	#5470.00	55.7 PK	68.2	-12.5	2.50 V	224	51.8	3.9
4	*5720.00	105.4 PK			2.50 V	224	101.5	3.9
5	*5720.00	97.4 AV			2.50 V	224	93.5	3.9
6	#5850.00	55.5 PK	68.2	-12.7	2.50 V	224	51.1	4.4
7	11440.00	49.2 PK	74.0	-24.8	3.14 V	131	35.9	13.3
8	11440.00	46.2 AV	54.0	-7.8	3.14 V	131	32.9	13.3
9	#17160.00	45.5 PK	68.2	-22.7	1.49 V	73	28.1	17.4

**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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5647.49	60.6 PK	68.2	-7.6	2.33 H	12	56.2	4.4
2	*5745.00	110.2 PK			2.33 H	12	106.2	4.0
3	*5745.00	99.9 AV			2.33 H	12	95.9	4.0
4	#5937.42	53.2 PK	68.2	-15.0	2.33 H	12	48.2	5.0
5	11490.00	44.5 PK	74.0	-29.5	2.66 H	81	31.2	13.3
6	11490.00	41.1 AV	54.0	-12.9	2.66 H	81	27.8	13.3
7	#17235.00	43.9 PK	68.2	-24.3	2.06 H	128	26.3	17.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.04	57.5 PK	68.2	-10.7	2.50 V	257	53.2	4.3
2	*5745.00	111.7 PK			2.50 V	257	107.7	4.0
3	*5745.00	101.3 AV			2.50 V	257	97.3	4.0
4	#5950.60	52.5 PK	68.2	-15.7	2.50 V	257	47.6	4.9
5	11490.00	48.5 PK	74.0	-25.5	3.24 V	139	35.2	13.3
6	11490.00	45.7 AV	54.0	-8.3	3.24 V	139	32.4	13.3
7	#17235.00	45.5 PK	68.2	-22.7	1.48 V	86	27.9	17.6

**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 157	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.20	56.0 PK	68.2	-12.2	2.36 H	11	51.7	4.3
2	*5785.00	109.7 PK			2.36 H	11	105.6	4.1
3	*5785.00	99.5 AV			2.36 H	11	95.4	4.1
4	#5935.30	54.0 PK	68.2	-14.2	2.36 H	11	49.1	4.9
5	11570.00	45.1 PK	74.0	-28.9	2.59 H	75	31.9	13.2
6	11570.00	41.4 AV	54.0	-12.6	2.59 H	75	28.2	13.2
7	#17355.00	43.9 PK	68.2	-24.3	2.10 H	126	26.3	17.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.63	56.1 PK	68.2	-12.1	2.47 V	252	51.8	4.3
2	*5785.00	111.3 PK			2.47 V	252	107.2	4.1
3	*5785.00	100.7 AV			2.47 V	252	96.6	4.1
4	#5928.36	56.1 PK	68.2	-12.1	2.47 V	252	51.2	4.9
5	11570.00	48.8 PK	74.0	-25.2	3.22 V	157	35.6	13.2
6	11570.00	45.7 AV	54.0	-8.3	3.22 V	157	32.5	13.2
7	#17355.00	45.8 PK	68.2	-22.4	1.53 V	72	28.2	17.6

**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 165	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.02	56.1 PK	68.2	-12.1	2.32 H	10	51.8	4.3
2	*5825.00	109.9 PK			2.32 H	10	105.6	4.3
3	*5825.00	99.6 AV			2.32 H	10	95.3	4.3
4	#5933.65	56.5 PK	68.2	-11.7	2.32 H	10	51.6	4.9
5	11650.00	45.4 PK	74.0	-28.6	2.61 H	80	32.1	13.3
6	11650.00	41.6 AV	54.0	-12.4	2.61 H	80	28.3	13.3
7	#17475.00	43.8 PK	68.2	-24.4	2.06 H	123	25.9	17.9

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5573.50	55.4 PK	68.2	-12.8	2.52 V	247	51.1	4.3
2	*5825.00	111.6 PK			2.52 V	247	107.3	4.3
3	*5825.00	101.1 AV			2.52 V	247	96.8	4.3
4	#5927.44	57.3 PK	68.2	-10.9	2.52 V	247	52.4	4.9
5	11650.00	48.6 PK	74.0	-25.4	3.24 V	150	35.3	13.3
6	11650.00	45.5 AV	54.0	-8.5	3.24 V	150	32.2	13.3
7	#17475.00	45.9 PK	68.2	-22.3	1.51 V	67	28.0	17.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.

**802.11n (HT20)**

<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	Frequency (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	67.1 PK	74.0	-6.9	2.68 H	301	63.4	3.7
2	5150.00	48.4 AV	54.0	-5.6	2.68 H	301	44.7	3.7
3	*5180.00	103.4 PK			2.68 H	301	99.8	3.6
4	*5180.00	97.3 AV			2.68 H	301	93.7	3.6
5	#10360.00	45.8 PK	68.2	-22.4	2.60 H	87	33.1	12.7
6	15540.00	43.2 PK	74.0	-30.8	2.11 H	140	30.0	13.2
7	15540.00	31.9 AV	54.0	-22.1	2.11 H	140	18.7	13.2

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	69.1 PK	74.0	-4.9	3.07 V	148	65.4	3.7
2	5150.00	53.1 AV	54.0	-0.9	3.07 V	148	49.4	3.7
3	*5180.00	107.0 PK			3.07 V	148	103.4	3.6
4	*5180.00	99.0 AV			3.07 V	148	95.4	3.6
5	#10360.00	49.2 PK	68.2	-19.0	3.13 V	128	36.5	12.7
6	15540.00	45.4 PK	74.0	-28.6	1.56 V	92	32.2	13.2
7	15540.00	32.6 AV	54.0	-21.4	1.56 V	92	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 40	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	103.9 PK			2.66 H	287	100.4	3.5
2	*5200.00	97.6 AV			2.66 H	287	94.1	3.5
3	#10400.00	44.7 PK	68.2	-23.5	2.62 H	78	31.9	12.8
4	15600.00	43.5 PK	74.0	-30.5	2.14 H	126	30.0	13.5
5	15600.00	32.1 AV	54.0	-21.9	2.14 H	126	18.6	13.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	108.9 PK			3.24 V	148	105.4	3.5
2	*5200.00	100.2 AV			3.24 V	148	96.7	3.5
3	#10400.00	49.1 PK	68.2	-19.1	3.15 V	126	36.3	12.8
4	15600.00	45.5 PK	74.0	-28.5	1.49 V	90	32.0	13.5
5	15600.00	32.3 AV	54.0	-21.7	1.49 V	90	18.8	13.5

**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 48	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	103.4 PK			2.70 H	314	99.9	3.5
2	*5240.00	97.1 AV			2.70 H	314	93.6	3.5
3	#10480.00	45.1 PK	68.2	-23.1	2.68 H	88	32.0	13.1
4	15720.00	43.4 PK	74.0	-30.6	2.08 H	122	29.6	13.8
5	15720.00	32.1 AV	54.0	-21.9	2.08 H	122	18.3	13.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	109.1 PK			3.25 V	151	105.6	3.5
2	*5240.00	100.1 AV			3.25 V	151	96.6	3.5
3	#10480.00	49.1 PK	68.2	-19.1	3.25 V	154	36.0	13.1
4	15720.00	45.5 PK	74.0	-28.5	1.59 V	91	31.7	13.8
5	15720.00	32.5 AV	54.0	-21.5	1.59 V	91	18.7	13.8

**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.



<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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	103.5 PK			2.73 H	286	100.1	3.4
2	*5260.00	97.6 AV			2.73 H	286	94.2	3.4
3	#10520.00	45.8 PK	68.2	-22.4	2.64 H	84	32.7	13.1
4	15780.00	43.2 PK	74.0	-30.8	2.06 H	109	29.7	13.5
5	15780.00	31.9 AV	54.0	-22.1	2.06 H	109	18.4	13.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	109.0 PK			3.19 V	147	105.6	3.4
2	*5260.00	100.1 AV			3.19 V	147	96.7	3.4
3	#10520.00	49.2 PK	68.2	-19.0	3.22 V	154	36.1	13.1
4	15780.00	45.3 PK	74.0	-28.7	1.57 V	61	31.8	13.5
5	15780.00	32.1 AV	54.0	-21.9	1.57 V	61	18.6	13.5

**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 60	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	103.5 PK			2.67 H	302	100.2	3.3
2	*5300.00	97.2 AV			2.67 H	302	93.9	3.3
3	10600.00	44.7 PK	74.0	-29.3	2.64 H	69	31.8	12.9
4	10600.00	41.1 AV	54.0	-12.9	2.64 H	69	28.2	12.9
5	15900.00	42.9 PK	74.0	-31.1	2.07 H	140	30.1	12.8
6	15900.00	31.8 AV	54.0	-22.2	2.07 H	140	19.0	12.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	109.2 PK			3.19 V	140	105.9	3.3
2	*5300.00	100.5 AV			3.19 V	140	97.2	3.3
3	10600.00	48.6 PK	74.0	-25.4	3.19 V	121	35.7	12.9
4	10600.00	45.9 AV	54.0	-8.1	3.19 V	121	33.0	12.9
5	15900.00	45.4 PK	74.0	-28.6	1.56 V	85	32.6	12.8
6	15900.00	32.5 AV	54.0	-21.5	1.56 V	85	19.7	12.8

**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.

<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	Frequency (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	108.2 PK			2.56 H	282	104.8	3.4
2	*5320.00	99.4 AV			2.56 H	282	96.0	3.4
3	5350.00	60.7 PK	74.0	-13.3	2.56 H	282	57.3	3.4
4	5350.00	49.3 AV	54.0	-4.7	2.56 H	282	45.9	3.4
5	10640.00	45.3 PK	74.0	-28.7	2.61 H	93	32.4	12.9
6	10640.00	41.8 AV	54.0	-12.2	2.61 H	93	28.9	12.9
7	15960.00	44.0 PK	74.0	-30.0	2.04 H	125	31.2	12.8
8	15960.00	32.3 AV	54.0	-21.7	2.04 H	125	19.5	12.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	108.3 PK			3.19 V	153	104.9	3.4
2	*5320.00	98.2 AV			3.19 V	153	94.8	3.4
3	5350.00	72.8 PK	74.0	-1.2	3.19 V	153	69.4	3.4
4	5350.00	53.5 AV	54.0	-0.5	3.19 V	153	50.1	3.4
5	10640.00	48.5 PK	74.0	-25.5	3.14 V	157	35.6	12.9
6	10640.00	46.0 AV	54.0	-8.0	3.14 V	157	33.1	12.9
7	15960.00	45.4 PK	74.0	-28.6	1.55 V	63	32.6	12.8
8	15960.00	32.5 AV	54.0	-21.5	1.55 V	63	19.7	12.8

**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.

<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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.6 PK	74.0	-12.4	2.57 H	283	57.8	3.8
2	5460.00	50.2 AV	54.0	-3.8	2.57 H	283	46.4	3.8
3	#5470.00	64.2 PK	68.2	-4.0	2.57 H	283	60.3	3.9
4	*5500.00	108.7 PK			2.57 H	283	104.8	3.9
5	*5500.00	96.3 AV			2.57 H	283	92.4	3.9
6	11000.00	45.7 PK	74.0	-28.3	2.62 H	79	32.7	13.0
7	11000.00	41.8 AV	54.0	-12.2	2.62 H	79	28.8	13.0
8	#16500.00	43.9 PK	68.2	-24.3	2.13 H	115	29.3	14.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5448.01	53.3 PK	74.0	-20.7	2.32 V	130	49.6	3.7
2	5448.01	46.1 AV	54.0	-7.9	2.32 V	130	42.4	3.7
3	#5470.00	67.1 PK	68.2	-1.1	2.32 V	130	63.2	3.9
4	*5500.00	105.1 PK			2.32 V	130	101.2	3.9
5	*5500.00	94.8 AV			2.32 V	130	90.9	3.9
6	11000.00	48.5 PK	74.0	-25.5	3.19 V	144	35.5	13.0
7	11000.00	45.5 AV	54.0	-8.5	3.19 V	144	32.5	13.0
8	#16500.00	45.1 PK	68.2	-23.1	1.54 V	63	30.5	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 116	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	109.0 PK			2.55 H	268	105.2	3.8
2	*5580.00	96.5 AV			2.55 H	268	92.7	3.8
3	11160.00	45.4 PK	74.0	-28.6	2.60 H	69	32.3	13.1
4	11160.00	41.9 AV	54.0	-12.1	2.60 H	69	28.8	13.1
5	#16740.00	43.4 PK	68.2	-24.8	2.09 H	136	27.2	16.2

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	108.3 PK			2.41 V	131	104.5	3.8
2	*5580.00	98.6 AV			2.41 V	131	94.8	3.8
3	11160.00	48.8 PK	74.0	-25.2	3.18 V	143	35.7	13.1
4	11160.00	46.0 AV	54.0	-8.0	3.18 V	143	32.9	13.1
5	#16740.00	45.9 PK	68.2	-22.3	1.52 V	83	29.7	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 140	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	109.0 PK			2.53 H	270	105.0	4.0
2	*5700.00	96.7 AV			2.53 H	270	92.7	4.0
3	#5725.00	55.4 PK	68.2	-12.8	2.53 H	270	51.4	4.0
4	11400.00	44.7 PK	74.0	-29.3	2.61 H	97	31.5	13.2
5	11400.00	41.4 AV	54.0	-12.6	2.61 H	97	28.2	13.2
6	#17100.00	43.7 PK	68.2	-24.5	2.14 H	117	26.5	17.2

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	101.1 PK			2.40 V	138	97.1	4.0
2	*5700.00	93.8 AV			2.40 V	138	89.8	4.0
3	#5725.00	57.6 PK	68.2	-10.6	2.40 V	138	53.6	4.0
4	11400.00	48.9 PK	74.0	-25.1	3.17 V	126	35.7	13.2
5	11400.00	46.2 AV	54.0	-7.8	3.17 V	126	33.0	13.2
6	#17100.00	45.2 PK	68.2	-23.0	1.48 V	66	28.0	17.2

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 144	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	55.6 PK	74.0	-18.4	2.57 H	260	51.8	3.8
2	5460.00	44.8 AV	54.0	-9.2	2.57 H	260	41.0	3.8
3	#5470.00	55.6 PK	68.2	-12.6	2.57 H	260	51.7	3.9
4	*5720.00	109.1 PK			2.57 H	260	105.2	3.9
5	*5720.00	96.9 AV			2.57 H	260	93.0	3.9
6	#5850.00	55.8 PK	68.2	-12.4	2.57 H	260	51.4	4.4
7	11440.00	44.9 PK	74.0	-29.1	2.66 H	92	31.6	13.3
8	11440.00	41.2 AV	54.0	-12.8	2.66 H	92	27.9	13.3
9	#17160.00	43.4 PK	68.2	-24.8	2.06 H	120	26.0	17.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	55.8 PK	74.0	-18.2	2.39 V	140	52.0	3.8
2	5460.00	45.0 AV	54.0	-9.0	2.39 V	140	41.2	3.8
3	#5470.00	55.6 PK	68.2	-12.6	2.39 V	140	51.7	3.9
4	*5720.00	100.4 PK			2.39 V	140	96.5	3.9
5	*5720.00	93.4 AV			2.39 V	140	89.5	3.9
6	#5850.00	56.1 PK	68.2	-12.1	2.39 V	140	51.7	4.4
7	11440.00	48.9 PK	74.0	-25.1	3.14 V	133	35.6	13.3
8	11440.00	46.0 AV	54.0	-8.0	3.14 V	133	32.7	13.3
9	#17160.00	45.0 PK	68.2	-23.2	1.57 V	83	27.6	17.4

**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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.14	60.5 PK	68.2	-7.7	2.27 H	14	56.2	4.3
2	*5745.00	110.5 PK			2.27 H	14	106.5	4.0
3	*5745.00	98.9 AV			2.27 H	14	94.9	4.0
4	#5950.44	53.3 PK	68.2	-14.9	2.27 H	14	48.4	4.9
5	11490.00	45.5 PK	74.0	-28.5	2.65 H	70	32.2	13.3
6	11490.00	41.8 AV	54.0	-12.2	2.65 H	70	28.5	13.3
7	#17235.00	43.8 PK	68.2	-24.4	2.08 H	120	26.2	17.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5639.22	59.2 PK	68.2	-9.0	2.29 V	258	54.9	4.3
2	*5745.00	111.8 PK			2.29 V	258	107.8	4.0
3	*5745.00	99.8 AV			2.29 V	258	95.8	4.0
4	#5935.76	53.8 PK	68.2	-14.4	2.29 V	258	48.8	5.0
5	11490.00	49.0 PK	74.0	-25.0	3.24 V	127	35.7	13.3
6	11490.00	45.9 AV	54.0	-8.1	3.24 V	127	32.6	13.3
7	#17235.00	46.0 PK	68.2	-22.2	1.48 V	91	28.4	17.6

**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 157	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.97	57.8 PK	68.2	-10.4	2.32 H	12	53.5	4.3
2	*5785.00	110.2 PK			2.32 H	12	106.1	4.1
3	*5785.00	98.3 AV			2.32 H	12	94.2	4.1
4	#5932.47	55.6 PK	68.2	-12.6	2.32 H	12	50.7	4.9
5	11570.00	45.1 PK	74.0	-28.9	2.64 H	83	31.9	13.2
6	11570.00	41.5 AV	54.0	-12.5	2.64 H	83	28.3	13.2
7	#17355.00	43.7 PK	68.2	-24.5	2.10 H	124	26.1	17.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.52	56.7 PK	68.2	-11.5	2.34 V	267	52.3	4.4
2	*5785.00	111.4 PK			2.34 V	267	107.3	4.1
3	*5785.00	99.4 AV			2.34 V	267	95.3	4.1
4	#5940.93	55.3 PK	68.2	-12.9	2.34 V	267	50.3	5.0
5	11570.00	48.9 PK	74.0	-25.1	3.19 V	145	35.7	13.2
6	11570.00	45.8 AV	54.0	-8.2	3.19 V	145	32.6	13.2
7	#17355.00	45.1 PK	68.2	-23.1	1.57 V	76	27.5	17.6

**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 165	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.81	56.0 PK	68.2	-12.2	2.17 H	14	51.7	4.3
2	*5825.00	110.6 PK			2.17 H	14	106.3	4.3
3	*5825.00	98.6 AV			2.17 H	14	94.3	4.3
4	#5927.42	58.4 PK	68.2	-9.8	2.17 H	14	53.5	4.9
5	11650.00	45.4 PK	74.0	-28.6	2.69 H	98	32.1	13.3
6	11650.00	42.0 AV	54.0	-12.0	2.69 H	98	28.7	13.3
7	#17475.00	43.9 PK	68.2	-24.3	2.16 H	139	26.0	17.9

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5645.59	58.4 PK	68.2	-9.8	2.28 V	259	54.1	4.3
2	*5825.00	111.5 PK			2.28 V	259	107.2	4.3
3	*5825.00	99.6 AV			2.28 V	259	95.3	4.3
4	#5942.93	58.9 PK	68.2	-9.3	2.28 V	259	54.0	4.9
5	11650.00	49.0 PK	74.0	-25.0	3.16 V	130	35.7	13.3
6	11650.00	46.0 AV	54.0	-8.0	3.16 V	130	32.7	13.3
7	#17475.00	45.4 PK	68.2	-22.8	1.59 V	67	27.5	17.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.

**802.11n (HT40)**

<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	Frequency (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	3.01 H	310	64.6	3.7
2	5150.00	49.5 AV	54.0	-4.5	3.01 H	310	45.8	3.7
3	*5190.00	103.1 PK			3.01 H	310	99.5	3.6
4	*5190.00	92.6 AV			3.01 H	310	89.0	3.6
5	#10380.00	44.8 PK	68.2	-23.4	2.66 H	95	32.1	12.7
6	15570.00	43.6 PK	74.0	-30.4	2.14 H	129	30.2	13.4
7	15570.00	32.0 AV	54.0	-22.0	2.14 H	129	18.6	13.4

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	65.1 PK	74.0	-8.9	2.38 V	138	61.4	3.7
2	5150.00	53.7 AV	54.0	-0.3	2.38 V	138	50.0	3.7
3	*5190.00	102.2 PK			2.38 V	138	98.6	3.6
4	*5190.00	91.9 AV			2.38 V	138	88.3	3.6
5	#10380.00	49.1 PK	68.2	-19.1	3.14 V	145	36.4	12.7
6	15570.00	46.2 PK	74.0	-27.8	1.51 V	81	32.8	13.4
7	15570.00	33.0 AV	54.0	-21.0	1.51 V	81	19.6	13.4

**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 46	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	108.4 PK			2.96 H	316	104.9	3.5
2	*5230.00	99.6 AV			2.96 H	316	96.1	3.5
3	5350.00	52.7 PK	74.0	-21.3	2.96 H	316	49.3	3.4
4	5350.00	40.8 AV	54.0	-13.2	2.96 H	316	37.4	3.4
5	#10460.00	45.7 PK	68.2	-22.5	2.63 H	100	32.7	13.0
6	15690.00	43.6 PK	74.0	-30.4	2.14 H	151	29.7	13.9
7	15690.00	31.9 AV	54.0	-22.1	2.14 H	151	18.0	13.9

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	107.8 PK			2.37 V	139	104.3	3.5
2	*5230.00	98.9 AV			2.37 V	139	95.4	3.5
3	5350.00	52.9 PK	74.0	-21.1	2.37 V	139	49.5	3.4
4	5350.00	41.0 AV	54.0	-13.0	2.37 V	139	37.6	3.4
5	#10460.00	48.7 PK	68.2	-19.5	3.19 V	129	35.7	13.0
6	15690.00	45.6 PK	74.0	-28.4	1.53 V	72	31.7	13.9
7	15690.00	32.7 AV	54.0	-21.3	1.53 V	72	18.8	13.9

**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 54	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	50.5 PK	74.0	-23.5	2.97 H	316	46.8	3.7
2	5150.00	40.6 AV	54.0	-13.4	2.97 H	316	36.9	3.7
3	*5270.00	107.7 PK			2.97 H	316	104.3	3.4
4	*5270.00	99.1 AV			2.97 H	316	95.7	3.4
5	5350.00	62.7 PK	74.0	-11.3	2.97 H	316	59.3	3.4
6	5350.00	49.6 AV	54.0	-4.4	2.97 H	316	46.2	3.4
7	#10540.00	45.1 PK	68.2	-23.1	2.66 H	97	32.1	13.0
8	15810.00	43.8 PK	74.0	-30.2	2.16 H	151	30.6	13.2
9	15810.00	32.4 AV	54.0	-21.6	2.16 H	151	19.2	13.2

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	50.2 PK	74.0	-23.8	2.35 V	140	46.5	3.7
2	5150.00	40.4 AV	54.0	-13.6	2.35 V	140	36.7	3.7
3	*5270.00	109.0 PK			2.35 V	140	105.6	3.4
4	*5270.00	99.6 AV			2.35 V	140	96.2	3.4
5	5350.00	63.3 PK	74.0	-10.7	2.35 V	140	59.9	3.4
6	5350.00	50.1 AV	54.0	-3.9	2.35 V	140	46.7	3.4
7	#10540.00	49.0 PK	68.2	-19.2	3.16 V	129	36.0	13.0
8	15810.00	45.5 PK	74.0	-28.5	1.53 V	74	32.3	13.2
9	15810.00	32.5 AV	54.0	-21.5	1.53 V	74	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 62	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	104.2 PK			2.57 H	282	100.9	3.3
2	*5310.00	93.5 AV			2.57 H	282	90.2	3.3
3	5350.00	65.1 PK	74.0	-8.9	2.57 H	282	61.7	3.4
4	5350.00	49.7 AV	54.0	-4.3	2.57 H	282	46.3	3.4
5	10620.00	45.4 PK	74.0	-28.6	2.70 H	90	32.5	12.9
6	10620.00	41.4 AV	54.0	-12.6	2.70 H	90	28.5	12.9
7	15930.00	43.8 PK	74.0	-30.2	2.14 H	136	31.0	12.8
8	15930.00	32.1 AV	54.0	-21.9	2.14 H	136	19.3	12.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	104.4 PK			2.33 V	140	101.1	3.3
2	*5310.00	93.7 AV			2.33 V	140	90.4	3.3
3	5350.00	64.8 PK	74.0	-9.2	2.33 V	140	61.4	3.4
4	5350.00	53.2 AV	54.0	-0.8	2.33 V	140	49.8	3.4
5	10620.00	49.4 PK	74.0	-24.6	3.25 V	138	36.5	12.9
6	10620.00	46.5 AV	54.0	-7.5	3.25 V	138	33.6	12.9
7	15930.00	45.2 PK	74.0	-28.8	1.54 V	70	32.4	12.8
8	15930.00	32.1 AV	54.0	-21.9	1.54 V	70	19.3	12.8

**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.

<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	Frequency (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	59.2 PK	74.0	-14.8	2.57 H	271	55.4	3.8
2	5460.00	45.3 AV	54.0	-8.7	2.57 H	271	41.5	3.8
3	#5470.00	64.4 PK	68.2	-3.8	2.57 H	271	60.5	3.9
4	*5510.00	101.6 PK			2.57 H	271	97.7	3.9
5	*5510.00	92.5 AV			2.57 H	271	88.6	3.9
6	11020.00	45.7 PK	74.0	-28.3	2.67 H	95	32.7	13.0
7	11020.00	42.0 AV	54.0	-12.0	2.67 H	95	29.0	13.0
8	#16530.00	43.5 PK	68.2	-24.7	2.18 H	137	28.8	14.7

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	57.5 PK	74.0	-16.5	2.38 V	129	53.7	3.8
2	5460.00	42.6 AV	54.0	-11.4	2.38 V	129	38.8	3.8
3	#5470.00	67.4 PK	68.2	-0.8	2.38 V	129	63.5	3.9
4	*5510.00	101.2 PK			2.38 V	129	97.3	3.9
5	*5510.00	92.6 AV			2.38 V	129	88.7	3.9
6	11020.00	49.6 PK	74.0	-24.4	3.18 V	153	36.6	13.0
7	11020.00	46.5 AV	54.0	-7.5	3.18 V	153	33.5	13.0
8	#16530.00	45.6 PK	68.2	-22.6	1.50 V	65	30.9	14.7

**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.
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	Frequency (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	56.3 PK	74.0	-17.7	2.63 H	273	52.5	3.8
2	5460.00	44.1 AV	54.0	-9.9	2.63 H	273	40.3	3.8
3	#5470.00	65.7 PK	68.2	-2.5	2.63 H	273	61.8	3.9
4	*5550.00	109.5 PK			2.63 H	273	105.7	3.8
5	*5550.00	99.7 AV			2.63 H	273	95.9	3.8
6	11100.00	45.1 PK	74.0	-28.9	2.67 H	95	32.1	13.0
7	11100.00	41.6 AV	54.0	-12.4	2.67 H	95	28.6	13.0
8	#16650.00	43.7 PK	68.2	-24.5	2.15 H	148	28.0	15.7

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	56.6 PK	74.0	-17.4	2.37 V	130	52.8	3.8
2	5460.00	44.4 AV	54.0	-9.6	2.37 V	130	40.6	3.8
3	#5470.00	66.8 PK	68.2	-1.4	2.37 V	130	62.9	3.9
4	*5550.00	109.1 PK			2.37 V	130	105.3	3.8
5	*5550.00	99.4 AV			2.37 V	130	95.6	3.8
6	11100.00	48.3 PK	74.0	-25.7	3.19 V	142	35.3	13.0
7	11100.00	45.7 AV	54.0	-8.3	3.19 V	142	32.7	13.0
8	#16650.00	45.7 PK	68.2	-22.5	1.53 V	80	30.0	15.7

**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.
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	Frequency (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	106.6 PK			2.63 H	280	102.6	4.0
2	*5670.00	97.0 AV			2.63 H	280	93.0	4.0
3	#5725.00	65.7 PK	68.2	-2.5	2.63 H	280	61.7	4.0
4	11340.00	45.3 PK	74.0	-28.7	2.68 H	90	32.1	13.2
5	11340.00	41.8 AV	54.0	-12.2	2.68 H	90	28.6	13.2
6	#17010.00	43.9 PK	68.2	-24.3	2.14 H	129	26.9	17.0

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	105.7 PK			2.36 V	124	101.7	4.0
2	*5670.00	96.4 AV			2.36 V	124	92.4	4.0
3	#5725.00	66.7 PK	68.2	-1.5	2.36 V	124	62.7	4.0
4	11340.00	48.5 PK	74.0	-25.5	3.21 V	148	35.3	13.2
5	11340.00	45.7 AV	54.0	-8.3	3.21 V	148	32.5	13.2
6	#17010.00	45.7 PK	68.2	-22.5	1.58 V	63	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 142	<b>Detector Function</b>	Peak (PK)
<b>Frequency Range</b>	1GHz ~ 40GHz		Average (AV)

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (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	50.9 PK	74.0	-23.1	2.58 H	274	47.1	3.8
2	5460.00	38.7 AV	54.0	-15.3	2.58 H	274	34.9	3.8
3	#5470.00	50.7 PK	68.2	-17.5	2.58 H	274	46.8	3.9
4	*5710.00	108.5 PK			2.58 H	274	104.5	4.0
5	*5710.00	98.9 AV			2.58 H	274	94.9	4.0
6	#5850.00	51.0 PK	68.2	-17.2	2.58 H	274	46.6	4.4
7	11420.00	45.0 PK	74.0	-29.0	2.66 H	95	31.8	13.2
8	11420.00	41.4 AV	54.0	-12.6	2.66 H	95	28.2	13.2
9	#17130.00	43.5 PK	68.2	-24.7	2.18 H	123	26.3	17.2

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (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	50.6 PK	74.0	-23.4	2.41 V	124	46.8	3.8
2	5460.00	38.6 AV	54.0	-15.4	2.41 V	124	34.8	3.8
3	#5470.00	51.2 PK	68.2	-17.0	2.41 V	124	47.3	3.9
4	*5710.00	109.0 PK			2.41 V	124	105.0	4.0
5	*5710.00	99.2 AV			2.41 V	124	95.2	4.0
6	#5850.00	50.8 PK	68.2	-17.4	2.41 V	124	46.4	4.4
7	11420.00	49.3 PK	74.0	-24.7	3.17 V	148	36.1	13.2
8	11420.00	46.4 AV	54.0	-7.6	3.17 V	148	33.2	13.2
9	#17130.00	46.2 PK	68.2	-22.0	1.50 V	89	29.0	17.2

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5607.17	61.0 PK	68.2	-7.2	2.48 H	10	56.8	4.2
2	*5755.00	106.5 PK			2.48 H	10	102.5	4.0
3	*5755.00	96.9 AV			2.48 H	10	92.9	4.0
4	#5985.72	54.0 PK	68.2	-14.2	2.48 H	10	49.0	5.0
5	11510.00	44.7 PK	74.0	-29.3	2.67 H	86	31.4	13.3
6	11510.00	41.3 AV	54.0	-12.7	2.67 H	86	28.0	13.3
7	#17265.00	44.2 PK	68.2	-24.0	2.16 H	142	26.7	17.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.54	56.2 PK	68.2	-12.0	2.57 V	143	51.8	4.4
2	*5755.00	106.1 PK			2.57 V	143	102.1	4.0
3	*5755.00	96.7 AV			2.57 V	143	92.7	4.0
4	#6012.53	52.3 PK	68.2	-15.9	2.57 V	143	47.2	5.1
5	11510.00	48.4 PK	74.0	-25.6	3.18 V	149	35.1	13.3
6	11510.00	45.6 AV	54.0	-8.4	3.18 V	149	32.3	13.3
7	#17265.00	45.6 PK	68.2	-22.6	1.56 V	90	28.1	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.

<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	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.50	64.8 PK	68.2	-3.4	2.40 H	9	60.5	4.3
2	*5795.00	108.2 PK			2.40 H	9	104.0	4.2
3	*5795.00	97.8 AV			2.40 H	9	93.6	4.2
4	#5945.45	59.6 PK	68.2	-8.6	2.40 H	9	54.7	4.9
5	11590.00	45.6 PK	74.0	-28.4	2.68 H	97	32.3	13.3
6	11590.00	42.0 AV	54.0	-12.0	2.68 H	97	28.7	13.3
7	#17385.00	43.6 PK	68.2	-24.6	2.12 H	128	25.9	17.7

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.85	64.1 PK	68.2	-4.1	2.69 V	253	59.8	4.3
2	*5795.00	108.7 PK			2.69 V	253	104.5	4.2
3	*5795.00	98.3 AV			2.69 V	253	94.1	4.2
4	#5931.15	63.3 PK	68.2	-4.9	2.69 V	253	58.4	4.9
5	11590.00	49.4 PK	74.0	-24.6	3.13 V	145	36.1	13.3
6	11590.00	46.3 AV	54.0	-7.7	3.13 V	145	33.0	13.3
7	#17385.00	45.5 PK	68.2	-22.7	1.58 V	66	27.8	17.7

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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:

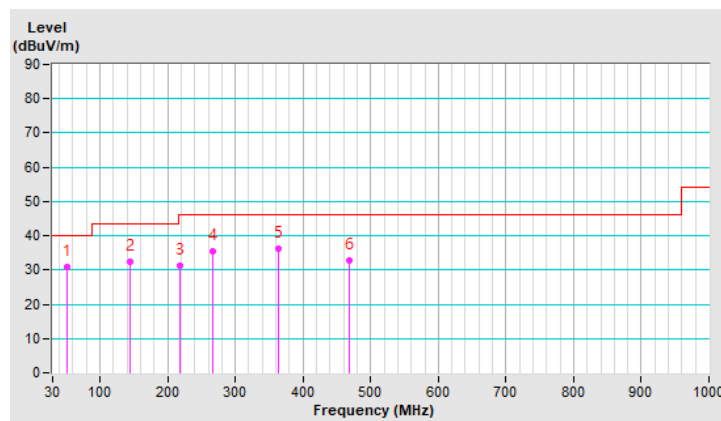
#### 802.11n (HT20)

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	50.66	31.0 QP	40.0	-9.0	3.00 H	53	38.5	-7.5
2	145.11	32.4 QP	43.5	-11.1	2.00 H	69	39.5	-7.1
3	217.55	31.1 QP	46.0	-14.9	1.00 H	255	40.9	-9.8
4	266.36	35.6 QP	46.0	-10.4	1.00 H	94	42.8	-7.2
5	364.02	36.2 QP	46.0	-9.8	1.00 H	228	40.1	-3.9
6	468.03	32.9 QP	46.0	-13.1	2.00 H	45	34.0	-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.



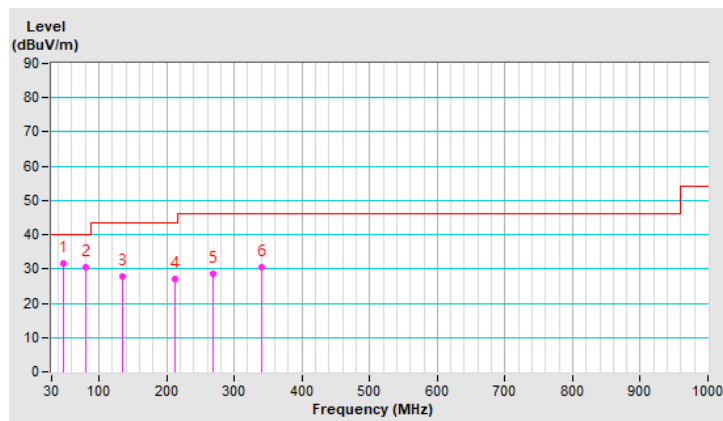
<b>CHANNEL</b>	TX Channel 149	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	48.41	31.6 QP	40.0	-8.4	1.00 V	146	39.2	-7.6
2	80.83	30.6 QP	40.0	-9.4	1.50 V	85	43.3	-12.7
3	134.86	27.9 QP	43.5	-15.6	2.00 V	139	35.7	-7.8
4	212.00	27.2 QP	43.5	-16.3	1.50 V	7	37.1	-9.9
5	267.99	28.7 QP	46.0	-17.3	1.50 V	145	35.8	-7.1
6	339.99	30.6 QP	46.0	-15.4	1.50 V	26	35.2	-4.6

**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 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 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

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

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

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

### 4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 23, 2019	Oct. 22, 2020
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 23, 2019	Oct. 22, 2020
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 19, 2020	Mar. 18, 2021
50 ohms Terminator	50	3	Oct. 23, 2019	Oct. 22, 2020
RF Cable	5D-FB	COCCAB-001	Sep. 27, 2019	Sep. 26, 2020
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 30, 2019	Aug. 29, 2020
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

**Note:**

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
- 3 Tested Date: July 05, 2020

#### 4.2.3 Test Procedure

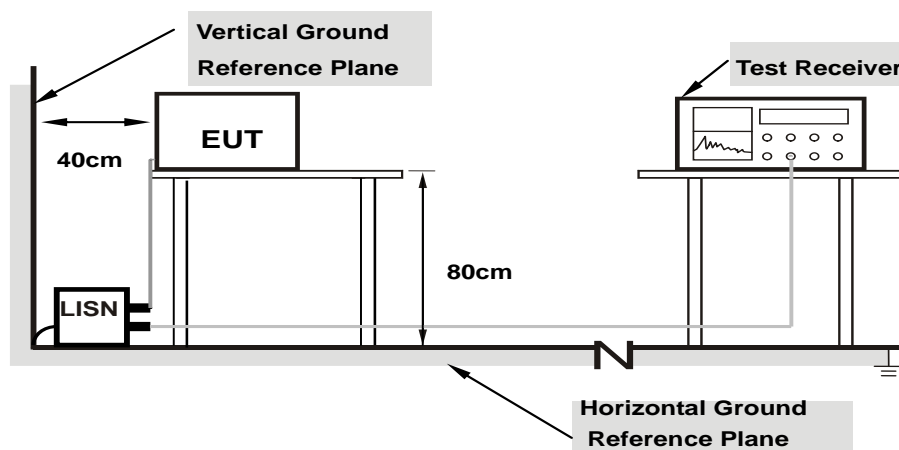
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

#### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



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

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

#### 4.2.6 EUT Operating Condition

Same as 4.1.6.



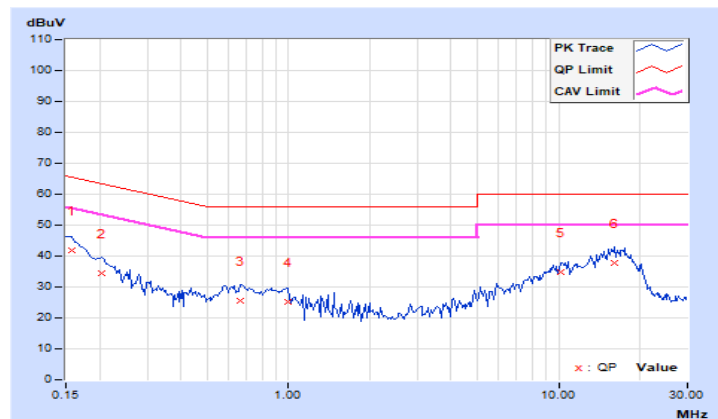
#### 4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	10.02	31.88	15.33	41.90	25.35	65.58	55.58	-23.68	-30.23
2	0.20469	10.04	24.23	12.48	34.27	22.52	63.42	53.42	-29.15	-30.90
3	0.66563	10.08	15.64	6.67	25.72	16.75	56.00	46.00	-30.28	-29.25
4	0.99375	10.10	15.08	7.53	25.18	17.63	56.00	46.00	-30.82	-28.37
5	10.16797	10.79	24.15	14.97	34.94	25.76	60.00	50.00	-25.06	-24.24
6	16.14453	11.21	26.66	19.23	37.87	30.44	60.00	50.00	-22.13	-19.56

#### Remarks:

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

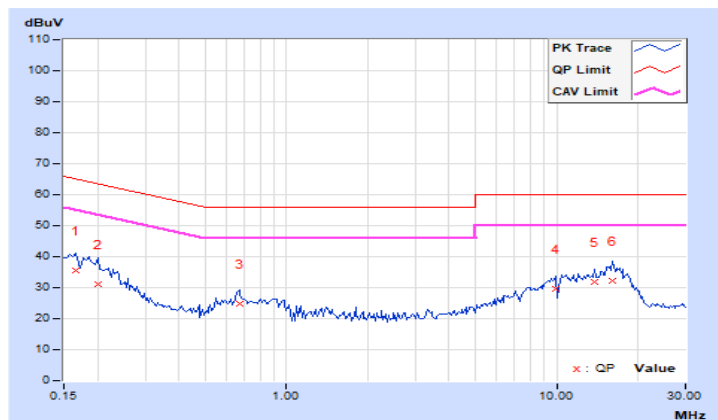


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	1	0.16562	10.03	25.71	7.68	35.74	17.71	65.18	55.18	-29.44
2	0.20078	10.04	21.14	5.17	31.18	15.21	63.58	53.58	-32.40	-38.37
3	0.66953	10.09	14.73	7.96	24.82	18.05	56.00	46.00	-31.18	-27.95
4	9.93359	10.69	18.91	7.84	29.60	18.53	60.00	50.00	-30.40	-31.47
5	13.76953	10.89	20.97	10.00	31.86	20.89	60.00	50.00	-28.14	-29.11
6	16.12891	11.01	21.23	12.63	32.24	23.64	60.00	50.00	-27.76	-26.36

#### Remarks:

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



### 4.3 Transmit Power Measurement

#### 4.3.1 Limits of Transmit Power Measurement

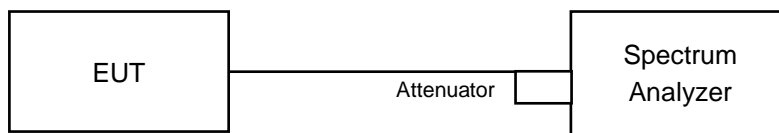
Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (24 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

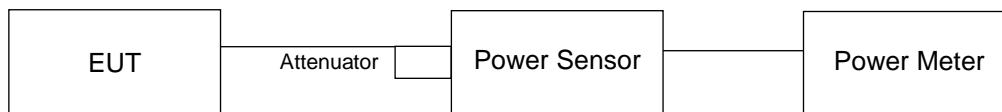
#### 4.3.2 Test Setup

##### FOR POWER OUTPUT MEASUREMENT

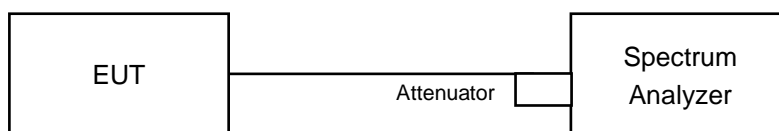
For channel straddling 5725MHz:



For other channels:



##### FOR 26dB OCCUPIED BANDWIDTH



#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.4 Test Procedure

##### FOR POWER OUTPUT MEASUREMENT

###### For channel straddling 5725MHz:

Follow FCC KDB 789033 UNII test procedure:

Method SA-2

1. Set span to encompass the emission bandwidth (EBW) of the signal.
2. Set RBW = 1MHz.
3. Set the VBW  $\geq 3 \times$  RBW.
4. Number of points in sweep  $\geq 2$  Span / RBW.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

###### For other channels:

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

##### FOR 26dB OCCUPIED BANDWIDTH

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

#### 4.3.5 Deviation from Test Standard

No deviation.

#### 4.3.6 EUT Operating Condition

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

## 4.3.7 Test Results

**POWER OUTPUT**
**802.11a**

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	41.976	16.23	30.00	Pass
40	5200	47.098	16.73	30.00	Pass
48	5240	51.761	17.14	24.00	Pass
52	5260	19.861	12.98	24.00	Pass
60	5300	21.281	13.28	24.00	Pass
64	5320	22.284	13.48	24.00	Pass
100	5500	16.406	12.15	24.00	Pass
116	5580	23.55	13.72	24.00	Pass
140	5700	21.184	13.26	24.00	Pass
*144 (U-NII-2C Band)	5720	6.144	7.88	30.00	Pass
*144 (U-NII-3 Band)	5720	1.398	1.46	30.00	Pass
149	5745	57.943	17.63	30.00	Pass
157	5785	51.404	17.11	30.00	Pass
165	5825	44.771	16.51	30.00	Pass

Note: \* Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel and power meter value for reference only:

Chan.	Chan. Freq. (MHz)	Total Power (mW)	Total Power (dBm)	Average Power (dBm)	Total Average Power (mW)	Total Average Power (dBm)
144	5720	7.542	8.77	13.33	21.528	13.33

**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	26.6	25.24 > 24
60	5300	28.25	25.51 > 24
64	5320	27.55	25.4 > 24
100	5500	23.99	24.8 > 24
116	5580	40.03	27.02 > 24
140	5700	40.33	27.05 > 24
144 (U-NII-2C Band)	5720	22.62	24.54 > 24

**802.11n (HT20)**

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	42.17	16.25	30.00	Pass
40	5200	47.206	16.74	30.00	Pass
48	5240	52.36	17.19	30.00	Pass
52	5260	20.091	13.03	24.00	Pass
60	5300	22.029	13.43	24.00	Pass
64	5320	22.542	13.53	24.00	Pass
100	5500	16.788	12.25	24.00	Pass
116	5580	23.768	13.76	24.00	Pass
140	5700	21.232	13.27	24.00	Pass
*144 (U-NII-2C Band)	5720	7.321	8.65	24.00	Pass
*144 (U-NII-3 Band)	5720	2.262	3.54	30.00	Pass
149	5745	59.841	17.77	30.00	Pass
157	5785	41.783	16.21	30.00	Pass
165	5825	46.559	16.68	30.00	Pass

Note: \* Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel and power meter value for reference only:

Chan.	Chan. Freq. (MHz)	Total Power (mW)	Total Power (dBm)	Average Power (dBm)	Total Average Power (mW)	Total Average Power (dBm)
144	5720	9.583	9.82	13.35	21.627	13.35

**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	29.68	25.72 > 24
60	5300	29.16	25.64 > 24
64	5320	37.89	26.78 > 24
100	5500	26.09	25.16 > 24
116	5580	44.24	27.45 > 24
140	5700	45.06	27.53 > 24
144 (U-NII-2C Band)	5720	23.47	24.7 > 24

**802.11n (HT40)**

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
38	5190	12.106	10.83	30.00	Pass
46	5230	50.699	17.05	30.00	Pass
54	5270	20.464	13.11	24.00	Pass
62	5310	14.158	11.51	24.00	Pass
102	5510	7.852	8.95	24.00	Pass
110	5550	23.067	13.63	24.00	Pass
134	5670	22.182	13.46	24.00	Pass
*142 (U-NII-2C Band)	5710	2.973	4.73	24.00	Pass
*142 (U-NII-3 Band)	5710	0.2287	-6.41	30.00	Pass
151	5755	55.463	17.44	30.00	Pass
159	5795	50.816	17.06	30.00	Pass

Note: \* Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel and power meter value for reference only:

Chan.	Chan. Freq. (MHz)	Total Power (mW)	Total Power (dBm)	Average Power (dBm)	Total Average Power (mW)	Total Average Power (dBm)
142	5710	3.2017	5.05	13.55	22.646	13.55

**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	77.32	29.88 > 24
62	5310	52.93	28.23 > 24
102	5510	46.08	27.63 > 24
110	5550	79.67	30.01 > 24
134	5670	88.21	30.45 > 24
142 (U-NII-2C Band)	5710	57.51	28.59 > 24

## 26dB OCCUPIED BANDWIDTH

### 802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	26.6
60	5300	28.25
64	5320	27.55
100	5500	23.99
116	5580	40.03
140	5700	40.33
144 (U-NII-2C Band)	5720	22.62

### 802.11n (HT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	29.68
60	5300	29.16
64	5320	37.89
100	5500	26.09
116	5580	44.24
140	5700	45.06
144 (U-NII-2C Band)	5720	23.47

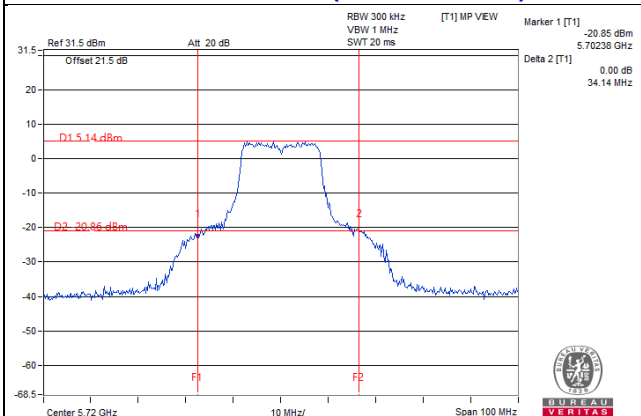
### 802.11n (HT40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
54	5270	77.32
62	5310	52.93
102	5510	46.08
110	5550	79.67
134	5670	88.21
142 (U-NII-2C Band)	5710	57.51

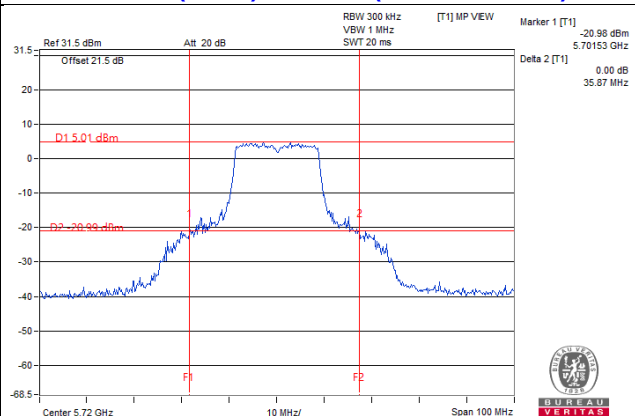


**Spectrum Plot of Worst Value**

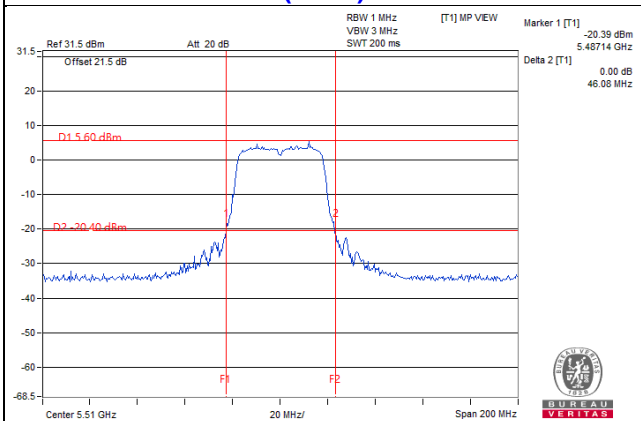
**802.11a / CH144 (U-NII-2C Band)**



**802.11n (HT20) / CH144 (U-NII-2C Band)**



**802.11n (HT40) / CH102**

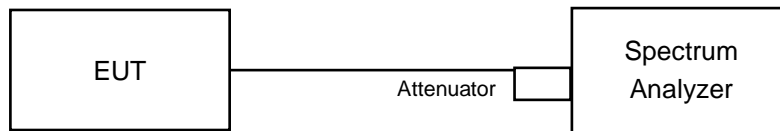


**Note:**

For CH144 (U-NII-2C) = 5725MHz - Marker 1

## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Setup



### 4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.3 Test Procedure

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

#### 4.4.4 Test Results

##### 802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	22.44
40	5200	23.4
48	5240	18.84
52	5260	17.4
60	5300	17.4
64	5320	17.4
100	5500	17.28
116	5580	17.4
140	5700	17.76
144 (U-NII-2C Band)	5720	14
144 (U-NII-3 Band)	5720	3.76
149	5745	32.79
157	5785	30.96
165	5825	28.56

##### 802.11n (HT20)

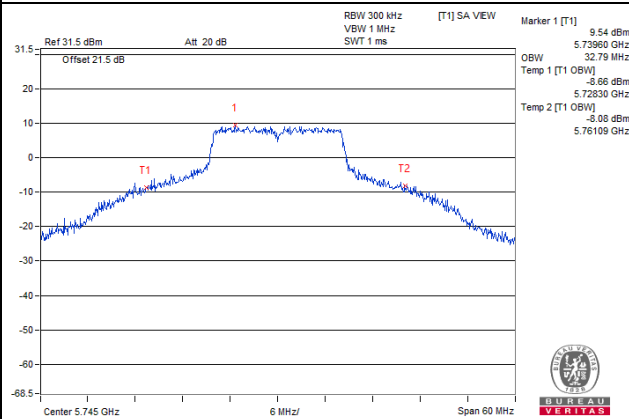
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	24
40	5200	25.2
48	5240	19.8
52	5260	18.24
60	5300	18.36
64	5320	18.36
100	5500	18.24
116	5580	18.48
140	5700	18.6
144 (U-NII-2C Band)	5720	14.48
144 (U-NII-3 Band)	5720	4.36
149	5745	34.68
157	5785	32.28
165	5825	30.72

### 802.11n (HT40)

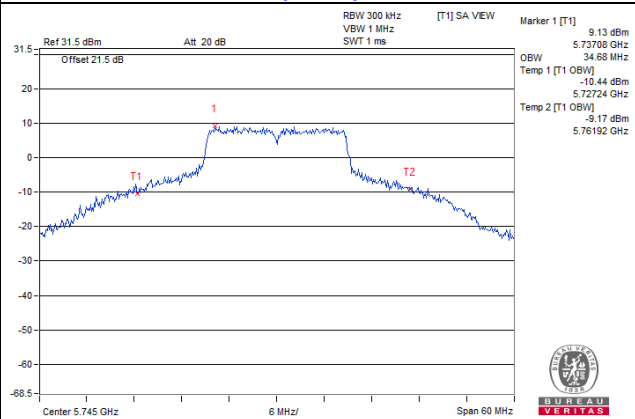
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.96
46	5230	39.84
54	5270	37.44
62	5310	36.96
102	5510	36.72
110	5550	37.2
134	5670	37.68
142 (U-NII-2C Band)	5710	34.2
142 (U-NII-3 Band)	5710	3.72
151	5755	54.61
159	5795	62.4

### Spectrum Plot of Max. Value

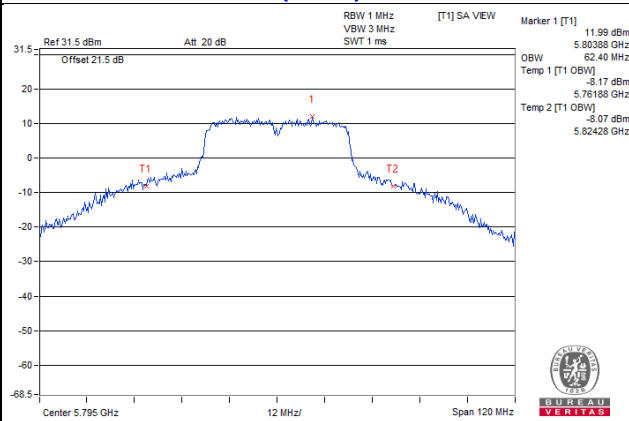
#### 802.11a / CH149



#### 802.11n (HT20) / CH149

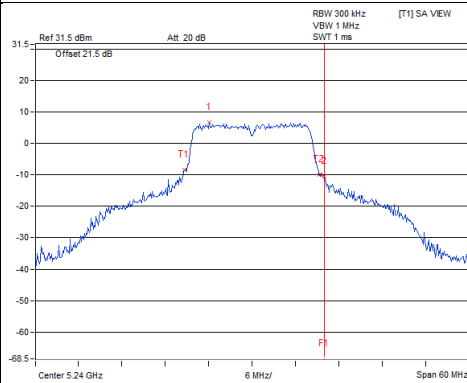


#### 802.11n (HT40) / CH159

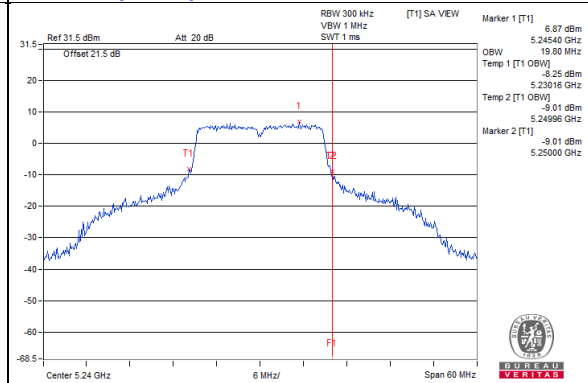


**Spectrum Plot for near by DFS band  
(DFS is required, if 99% OCP straddle into U-NII-2A band)**

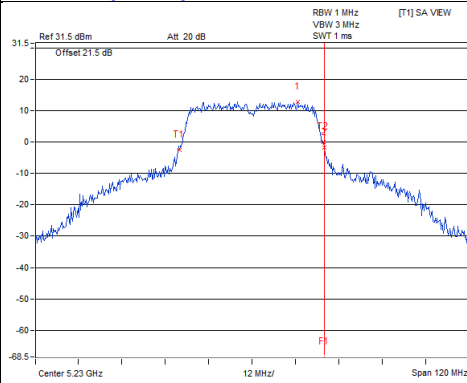
**802.11a / CH48**



**802.11n (HT20) / CH48**

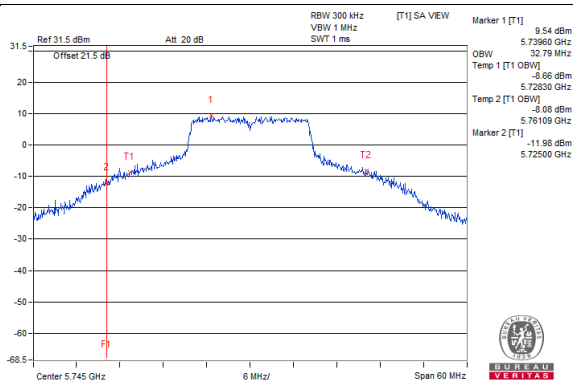


**802.11n (HT40) / CH46**

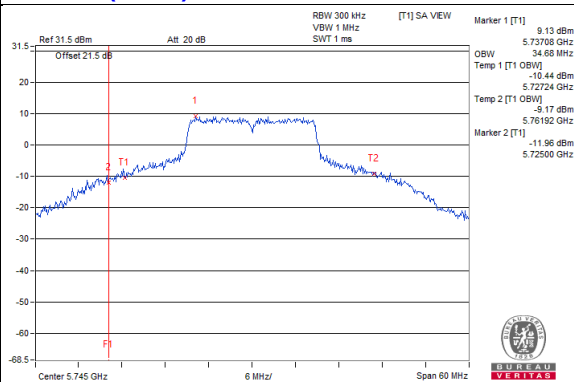


**Spectrum Plot for near by DFS band  
(DFS is required, if 99% OCP straddle into U-NII-2C band)**

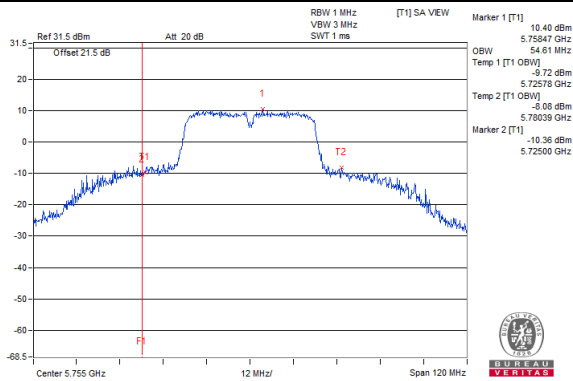
**802.11a / CH149**



**802.11n (HT20) / CH149**



**802.11n (HT40) / CH151**

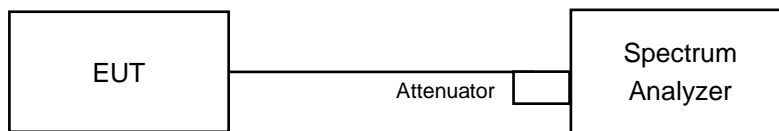


## 4.5 Peak Power Spectral Density Measurement

### 4.5.1 Limits of Peak Power Spectral Density Measurement

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

### 4.5.2 Test Setup



### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedure

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

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 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 and add 10 log (1/duty cycle)

#### For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 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 and add 10 log (1/duty cycle)

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Condition

Same as Item 4.3.6.

#### 4.5.7 Test Results

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

##### 802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	0.76	0.59	1.35	17.00	PASS
40	5200	0.97	0.59	1.56	17.00	PASS
48	5240	0.61	0.59	1.20	17.00	PASS
52	5260	-2.75	0.59	-2.16	11.00	PASS
60	5300	-2.07	0.59	-1.48	11.00	PASS
64	5320	-2.51	0.59	-1.92	11.00	PASS
100	5500	-3.04	0.59	-2.45	11.00	PASS
116	5580	-2.14	0.59	-1.55	11.00	PASS
140	5700	-2.14	0.59	-1.55	11.00	PASS
144 (U-NII-2C Band)	5720	-2.47	0.59	-1.88	11.00	PASS

##### 802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	0.28	0.64	0.92	17.00	PASS
40	5200	0.56	0.64	1.20	17.00	PASS
48	5240	-1.53	0.64	-0.89	17.00	PASS
52	5260	-3.59	0.64	-2.95	11.00	PASS
60	5300	-3.17	0.64	-2.53	11.00	PASS
64	5320	-1.54	0.64	-0.90	11.00	PASS
100	5500	-4.05	0.64	-3.41	11.00	PASS
116	5580	-2.83	0.64	-2.19	11.00	PASS
140	5700	-1.49	0.64	-0.85	11.00	PASS
144 (U-NII-2C Band)	5720	-1.96	0.64	-1.32	11.00	PASS

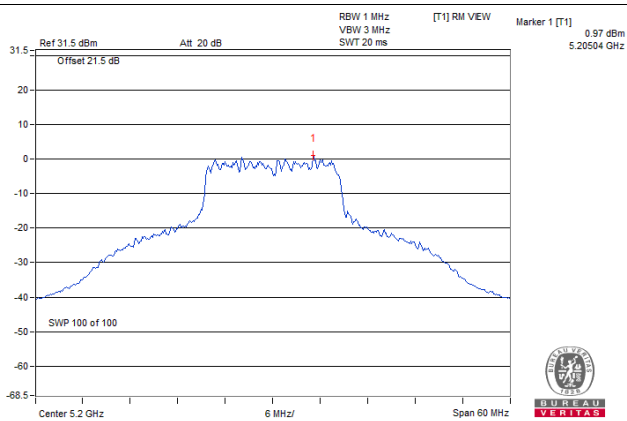


### 802.11n (HT40)

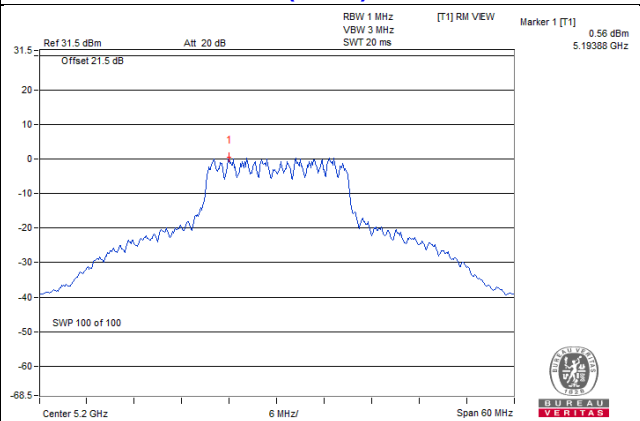
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
38	5190	-11.20	1.24	-9.96	17.00	PASS
46	5230	-7.59	1.24	-6.35	17.00	PASS
54	5270	-8.56	1.24	-7.32	11.00	PASS
62	5310	-11.03	1.24	-9.79	11.00	PASS
102	5510	-9.81	1.24	-8.57	11.00	PASS
110	5550	-6.07	1.24	-4.83	11.00	PASS
134	5670	-8.59	1.24	-7.35	11.00	PASS
142 (U-NII-2C Band)	5710	-3.46	1.24	-2.22	11.00	PASS

### Spectrum Plot of Worst Value

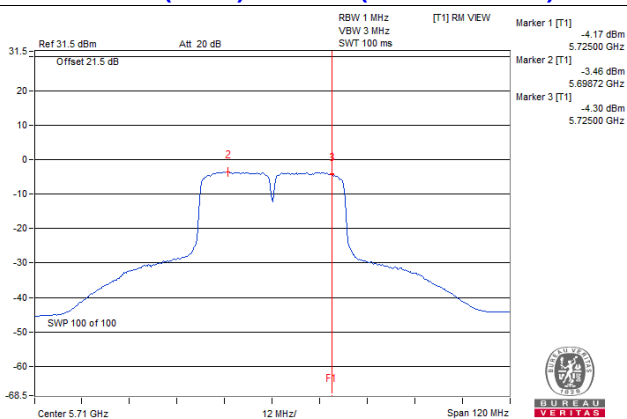
#### 802.11a / CH40



#### 802.11n (HT20) / CH40



#### 802.11n (HT40) / CH142 (U-NII-2C Band)



**Note:**

For CH142 (U-NII-2C) = 5725MHz - Marker 1

**For U-NII-3:**
**802.11a**

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
144 (U-NII-3 Band)	5720	-10.26	0.59	0.10789	-9.67	-7.45	30.00	PASS
149	5745	-7.43	0.59	0.207	-6.84	-4.62	30.00	PASS
157	5785	-7.50	0.59	0.2037	-6.91	-4.69	30.00	PASS
165	5825	-7.23	0.59	0.2168	-6.64	-4.42	30.00	PASS

**802.11n (HT20)**

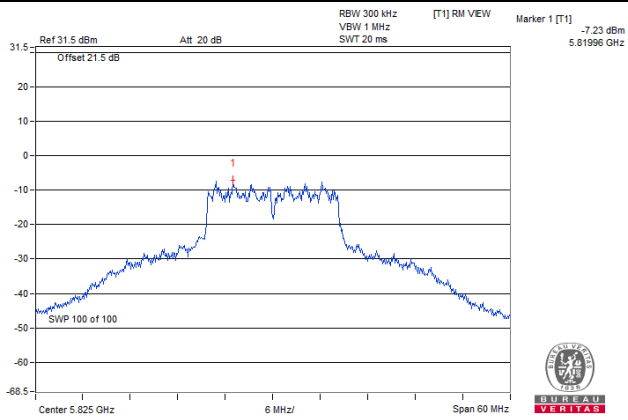
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
144 (U-NII-3 Band)	5720	-12.91	0.64	0.05929	-12.27	-10.05	30.00	PASS
149	5745	-7.62	0.64	0.2004	-6.98	-4.76	30.00	PASS
157	5785	-8.09	0.64	0.1799	-7.45	-5.23	30.00	PASS
165	5825	-9.05	0.64	0.1442	-8.41	-6.19	30.00	PASS

**802.11n (HT40)**

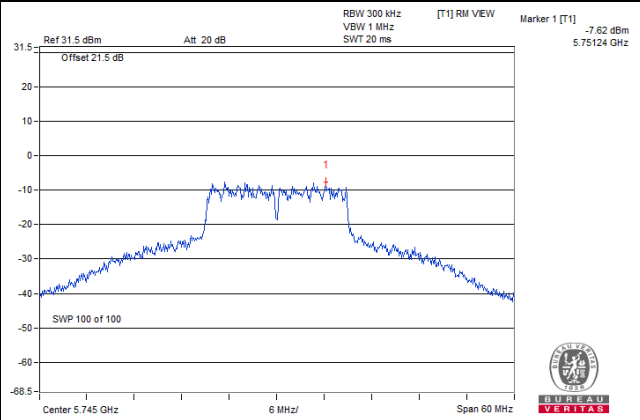
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
142 (U-NII-3 Band)	5710	-13.96	1.24	0.05346	-12.72	-10.50	30.00	PASS
151	5755	-11.19	1.24	0.10116	-9.95	-7.73	30.00	PASS
159	5795	-14.23	1.24	0.05023	-12.99	-10.77	30.00	PASS

Spectrum Plot of Worst Value

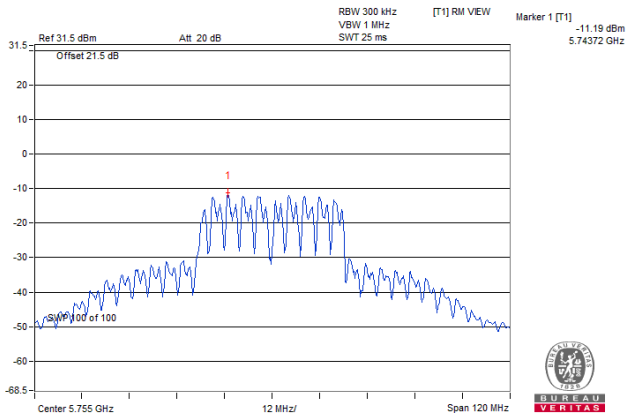
802.11a / CH165



802.11n (HT20) / CH149



802.11n (HT40) / CH151

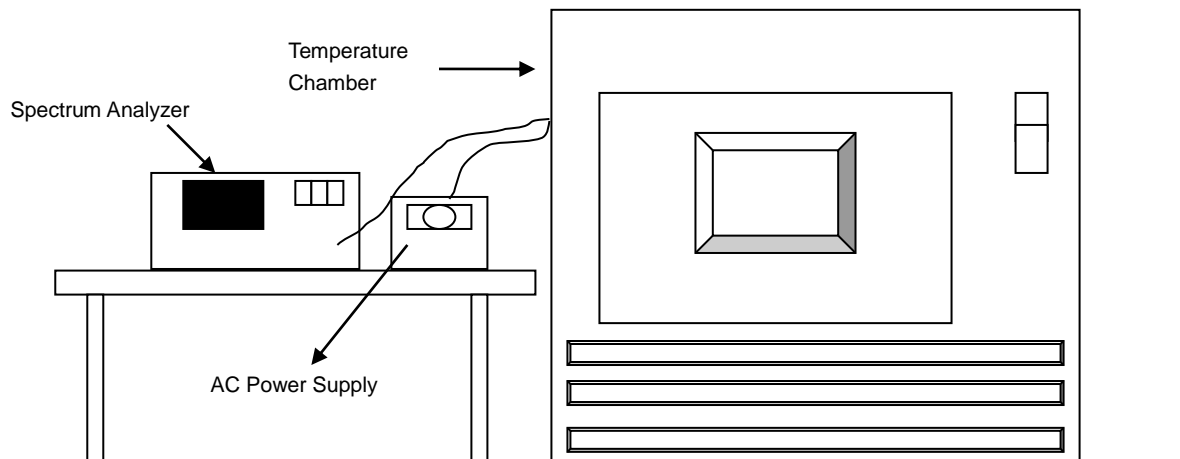


## 4.6 Frequency Stability Measurement

### 4.6.1 Limits of Frequency Stability Measurement

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

### 4.6.2 Test Setup



### 4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.6.4 Test Procedure

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

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

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

#### 4.6.7 Test Results

<b>Frequency Stability Versus Temp.</b>									
<b>Operating Frequency: 5180 MHz</b>									
<b>TEMP. (°C)</b>	<b>Power Supply (Vac)</b>	<b>0 Minute</b>		<b>2 Minutes</b>		<b>5 Minutes</b>		<b>10 Minutes</b>	
		<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>	<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>	<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>	<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>
40	120	5179.9831	PASS	5179.9834	PASS	5179.9844	PASS	5179.9847	PASS
30	120	5180.0067	PASS	5180.0076	PASS	5180.009	PASS	5180.0078	PASS
20	120	5180.0047	PASS	5180.0095	PASS	5180.0093	PASS	5180.0094	PASS
10	120	5180.0107	PASS	5180.0105	PASS	5180.0108	PASS	5180.013	PASS
0	120	5180.0065	PASS	5180.0029	PASS	5180.0029	PASS	5180.0028	PASS

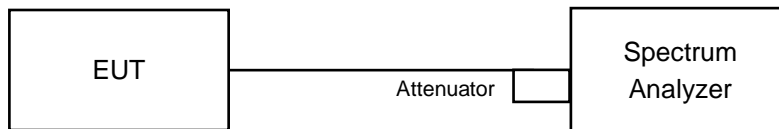
<b>Frequency Stability Versus Voltage</b>									
<b>Operating Frequency: 5180 MHz</b>									
<b>TEMP. (°C)</b>	<b>Power Supply (Vac)</b>	<b>0 Minute</b>		<b>2 Minutes</b>		<b>5 Minutes</b>		<b>10 Minutes</b>	
		<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>	<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>	<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>	<b>Measured Frequency (MHz)</b>	<b>Pass/Fail</b>
20	138	5180.0115	PASS	5180.0107	PASS	5180.0116	PASS	5180.0136	PASS
	120	5180.0107	PASS	5180.0105	PASS	5180.0108	PASS	5180.013	PASS
	102	5180.011	PASS	5180.0111	PASS	5180.011	PASS	5180.014	PASS

## 4.7 6dB Bandwidth Measurement

### 4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

### 4.7.2 Test Setup



### 4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.7.4 Test Procedure

#### MEASUREMENT PROCEDURE REF

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

### 4.7.5 Deviation from Test Standard

No deviation.

### 4.7.6 EUT Operating Condition

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

#### 4.7.7 Test Results

##### 802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Pass / Fail
144 (U-NII-3 Band)	5720	3.19	Pass
149	5745	16.39	Pass
157	5785	16.41	Pass
165	5825	16.42	Pass

##### 802.11n (HT20)

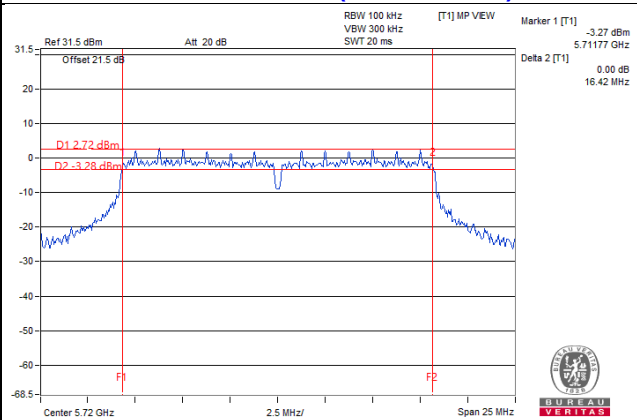
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Pass / Fail
144 (U-NII-3 Band)	5720	3.81	Pass
149	5745	17.65	Pass
157	5785	17.63	Pass
165	5825	17.64	Pass

##### 802.11n (HT40)

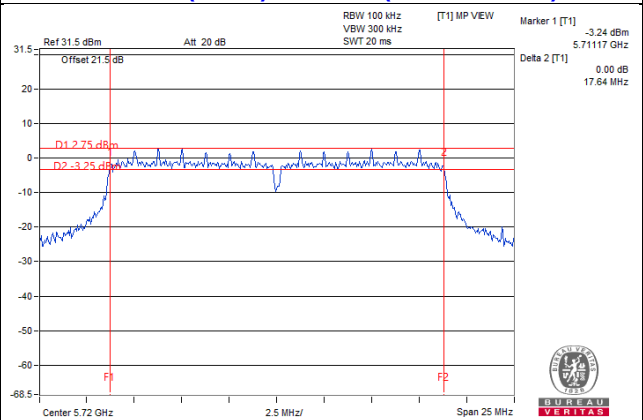
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Pass / Fail
142 (U-NII-3 Band)	5710	2.67	Pass
151	5755	35.55	Pass
159	5795	35.87	Pass

Spectrum Plot of Worst Value

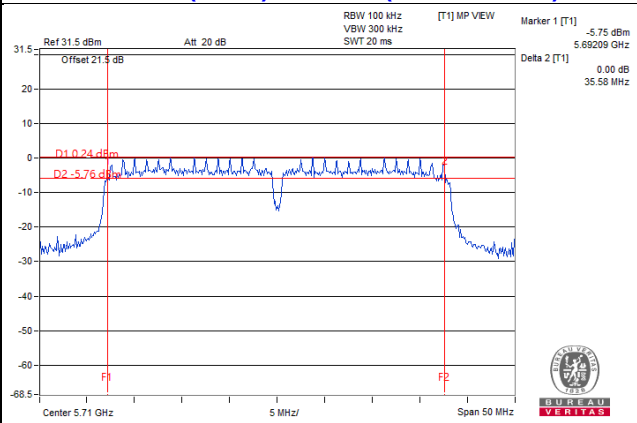
802.11a / CH144 (U-NII-3 Band)



802.11n (HT20) / CH144 (U-NII-3 Band)



802.11n (HT40) / CH142 (U-NII-3 Band)



**Note:**

- For CH144 (U-NII-2C) = 5725MHz - Marker 1
- For CH142 (U-NII-2C) = 5725MHz - Marker 1



## 5 Pictures of Test Arrangements

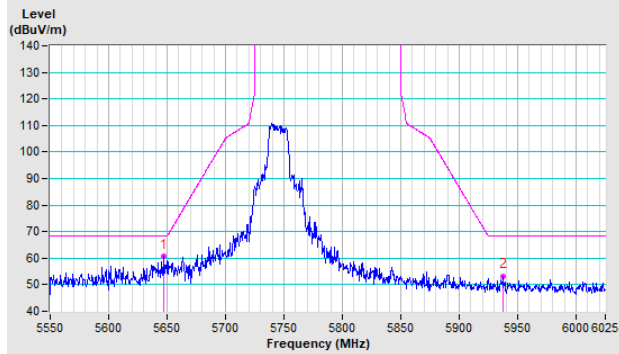
Please refer to the attached file (Test Setup Photo).

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

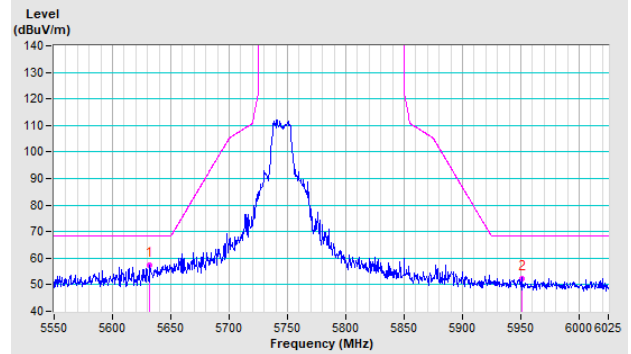
802.11a

**CH 149 5745 MHz**

**Horizontal**

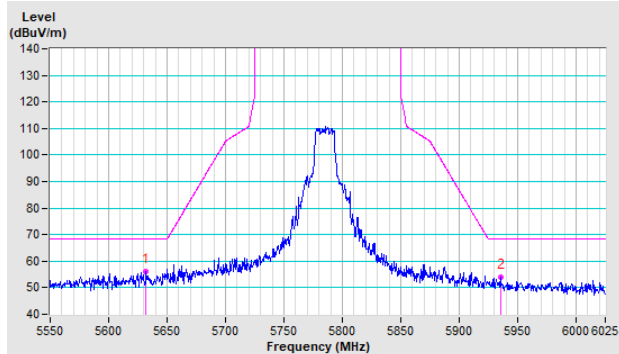


**Vertical**

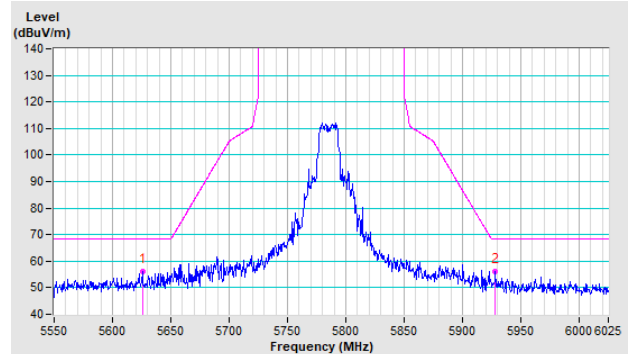


**CH 157 5785 MHz**

**Horizontal**

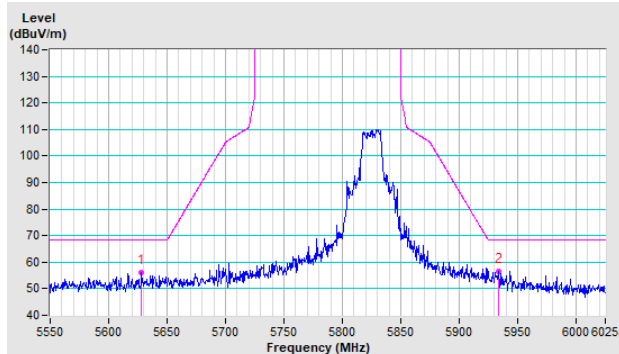


**Vertical**

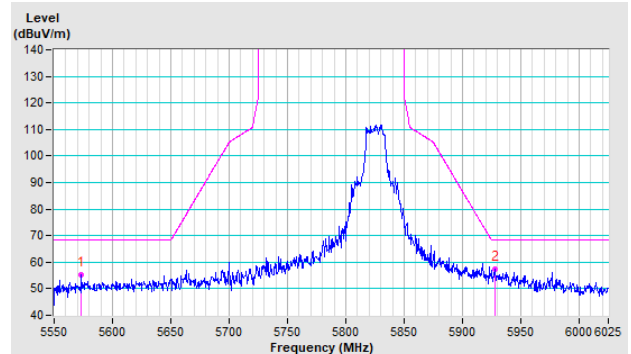


**CH 165 5825 MHz**

**Horizontal**



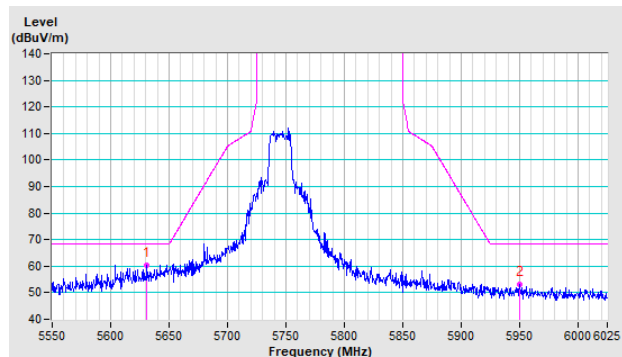
**Vertical**



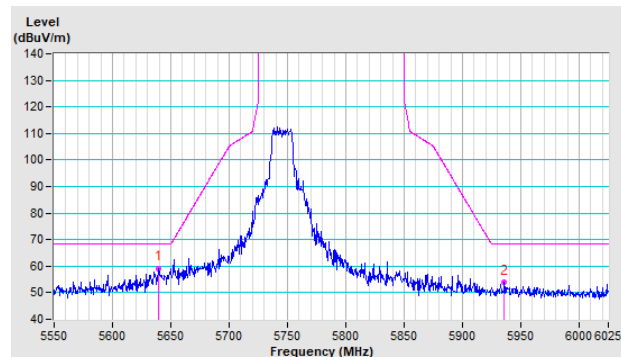
802.11n (HT20)

CH 149 5745 MHz

Horizontal

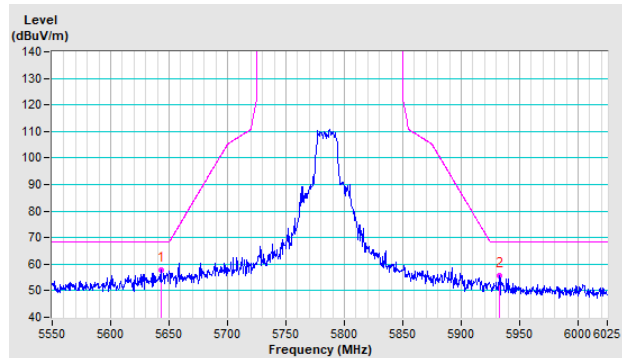


Vertical

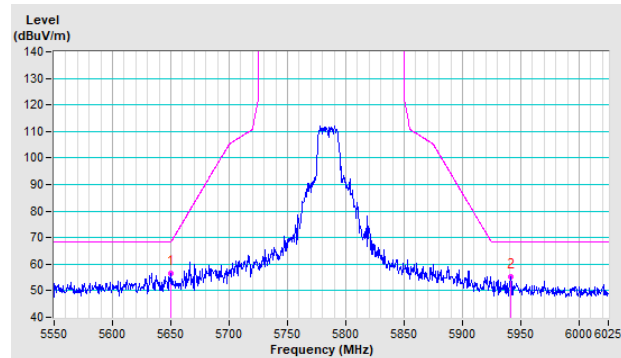


CH 157 5785 MHz

Horizontal

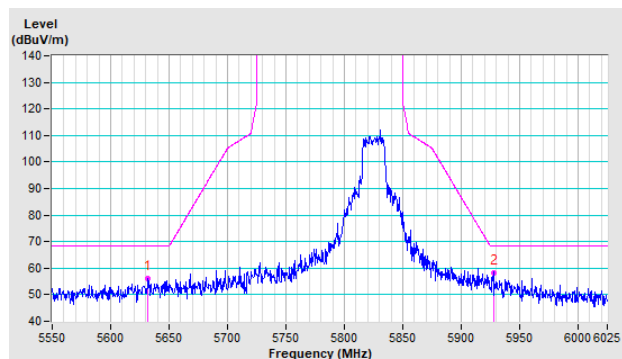


Vertical

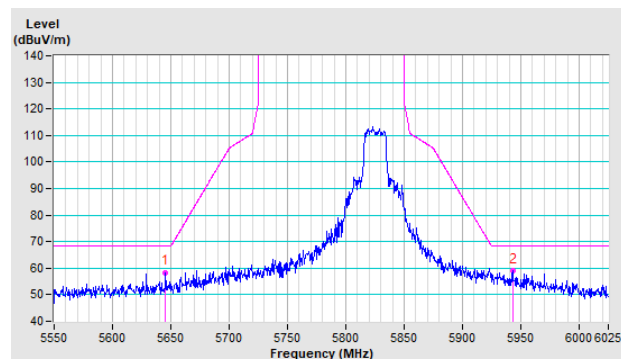


CH 165 5825 MHz

Horizontal



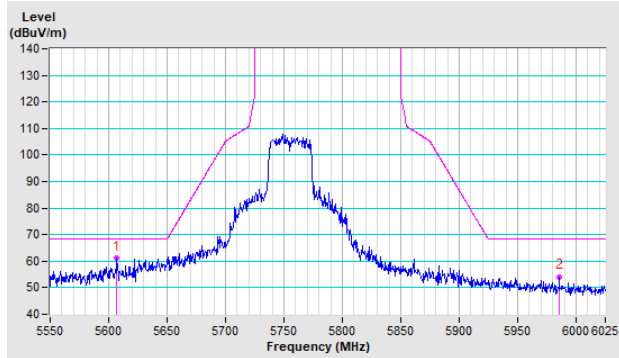
Vertical



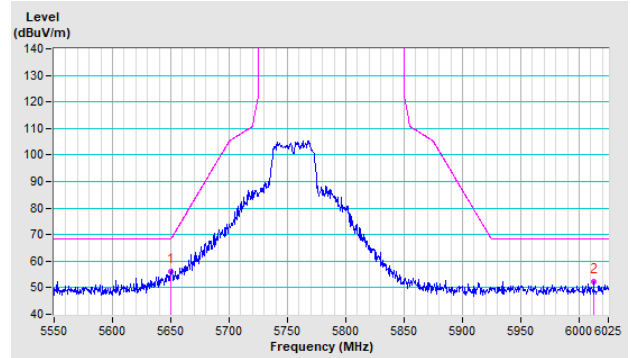
802.11n (HT40)

CH 151 5755 MHz

Horizontal

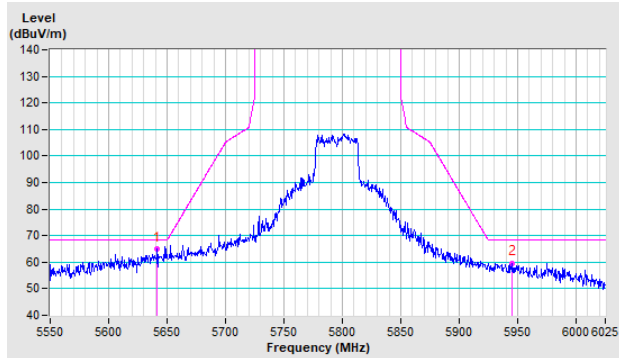


Vertical

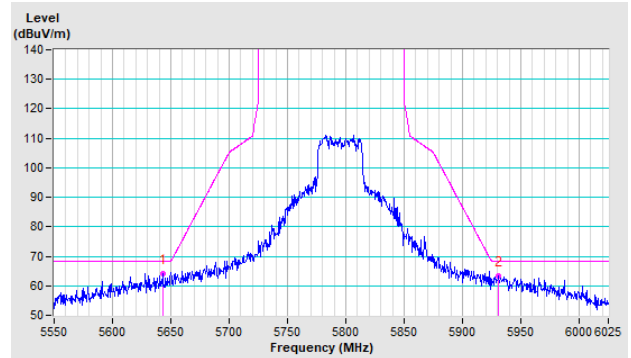


CH 159 5795 MHz

Horizontal

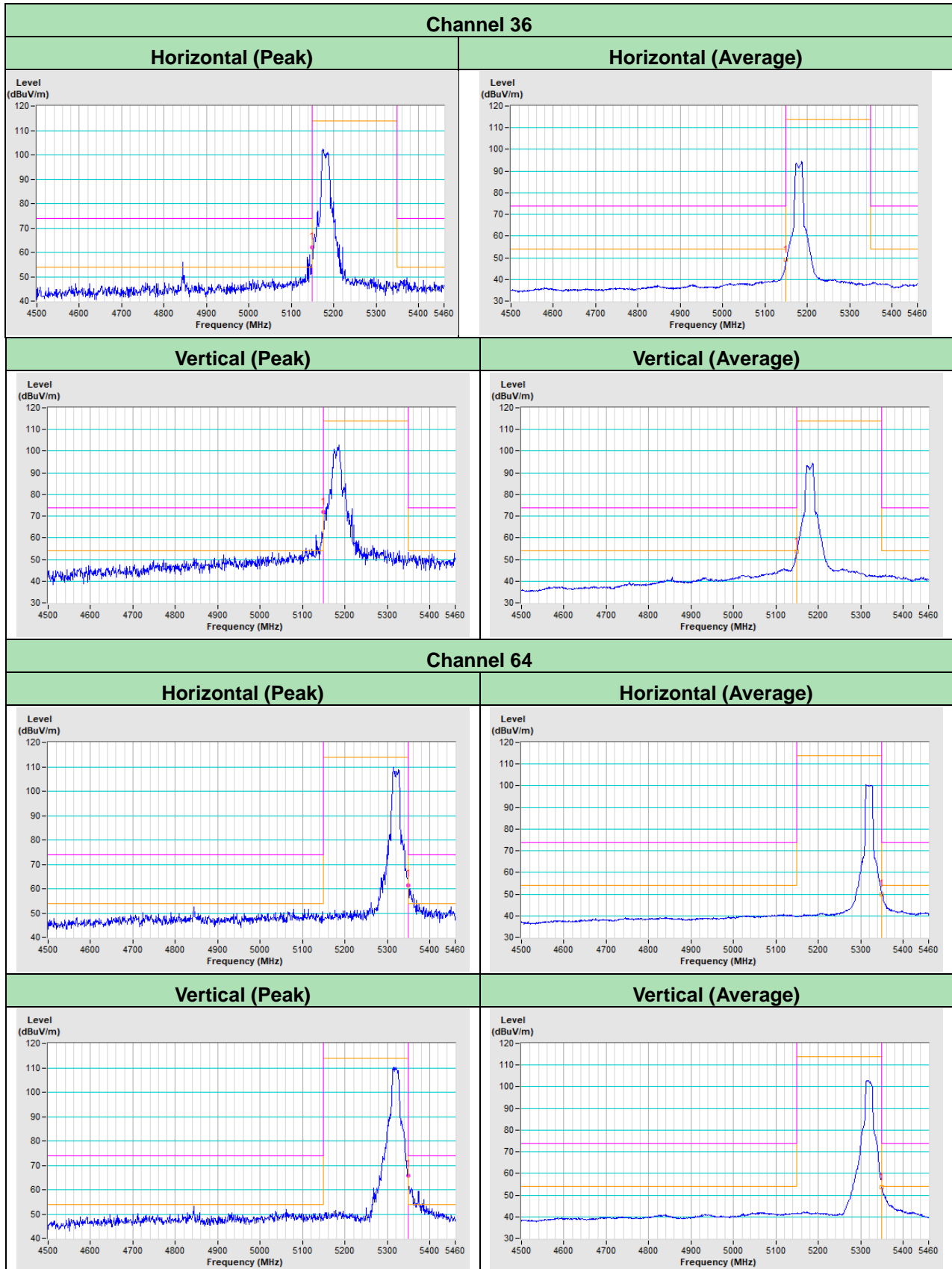


Vertical



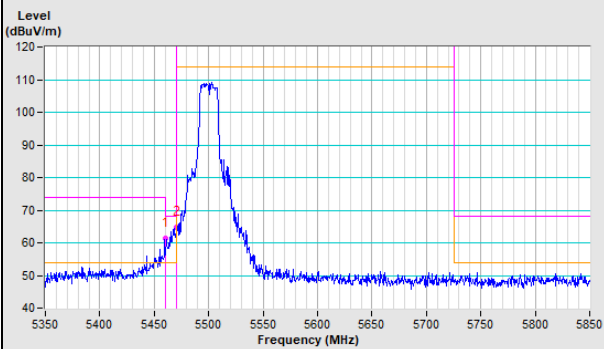
# Annex B- Band-edge measurement (For U-NII-1 band)

## 802.11a

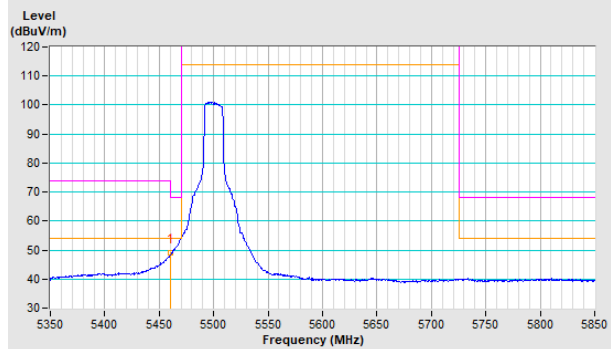


### Channel 100

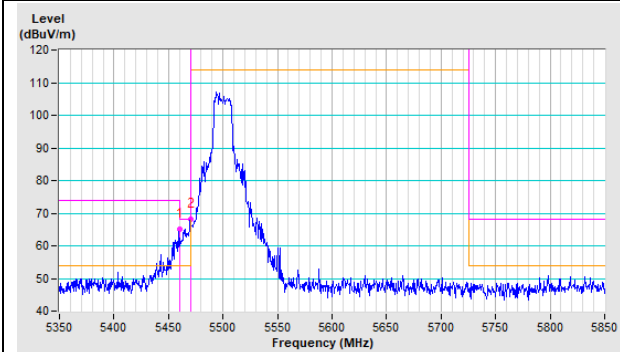
#### Horizontal (Peak)



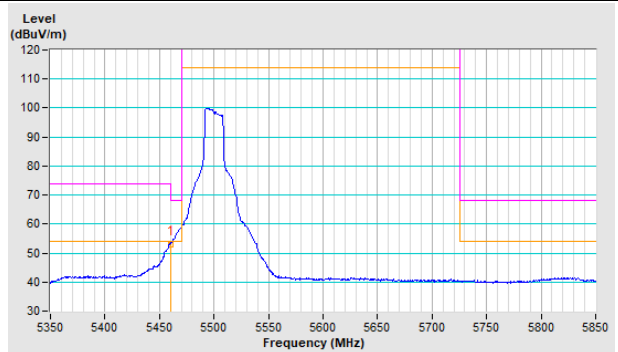
#### Horizontal (Average)



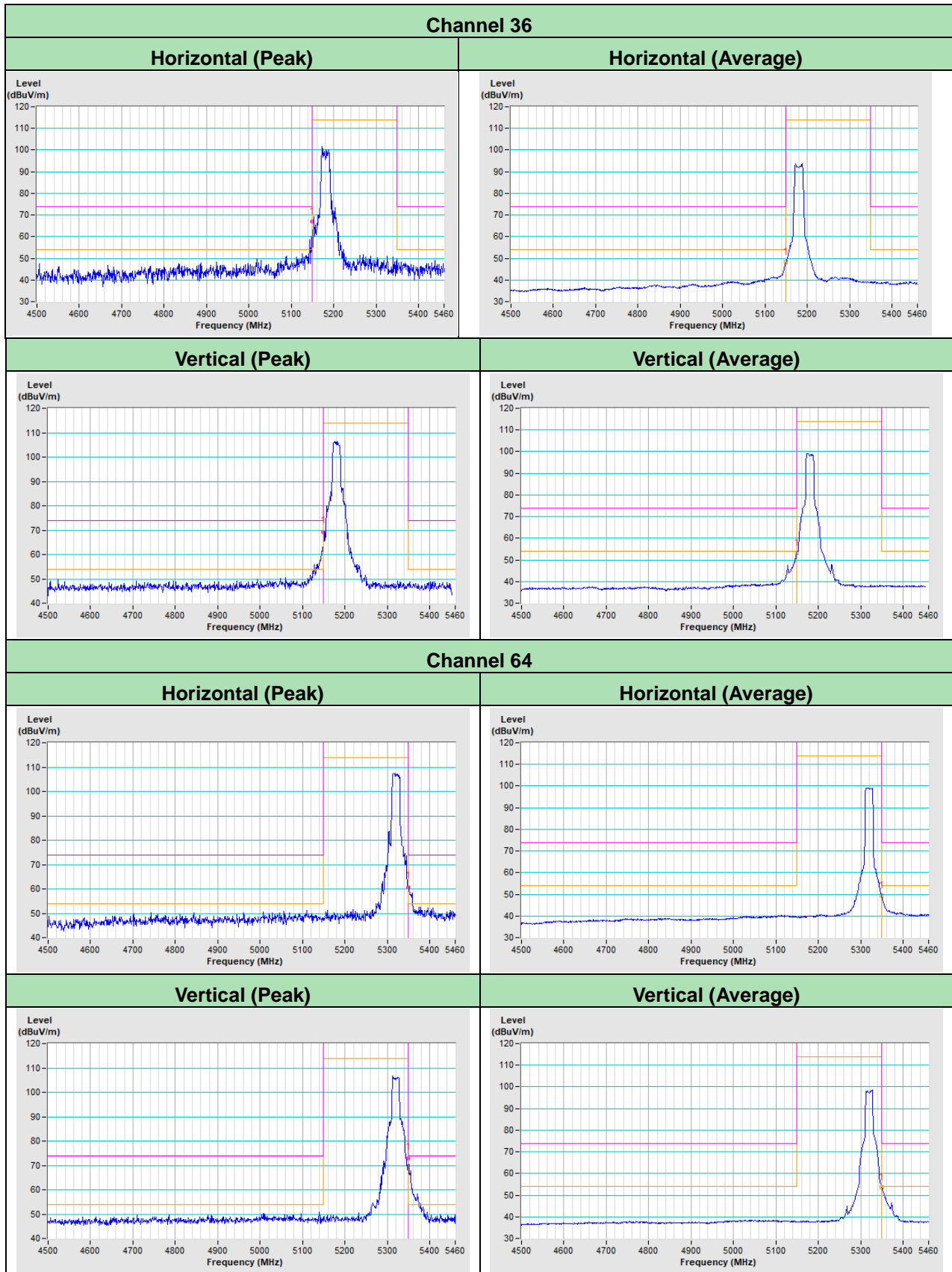
#### Vertical (Peak)



#### Vertical (Average)

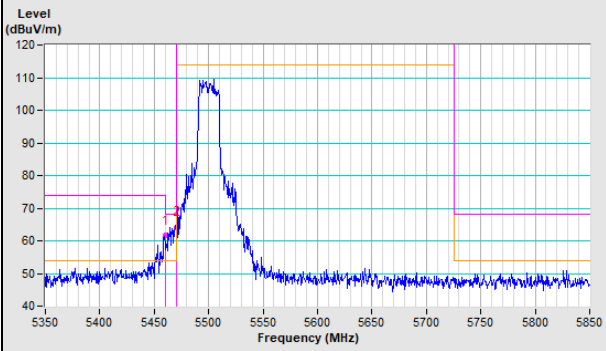


802.11n (HT20)

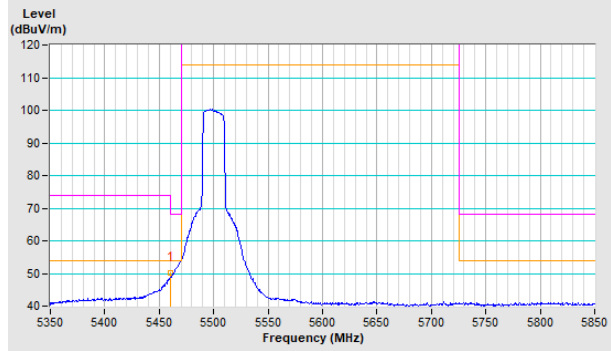


### Channel 100

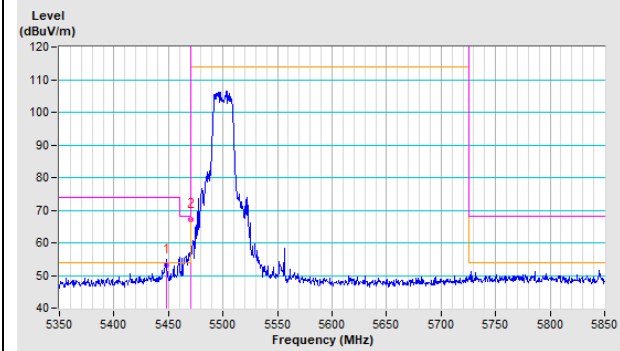
#### Horizontal (Peak)



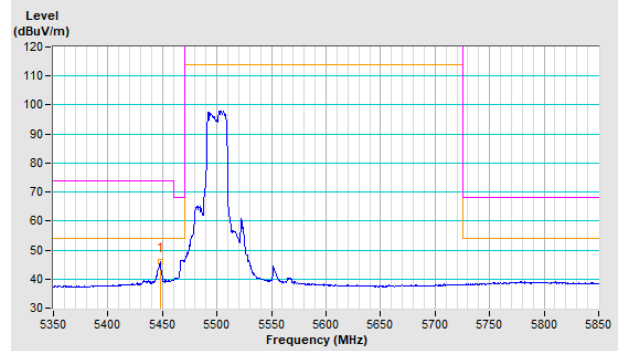
#### Horizontal (Average)



#### Vertical (Peak)

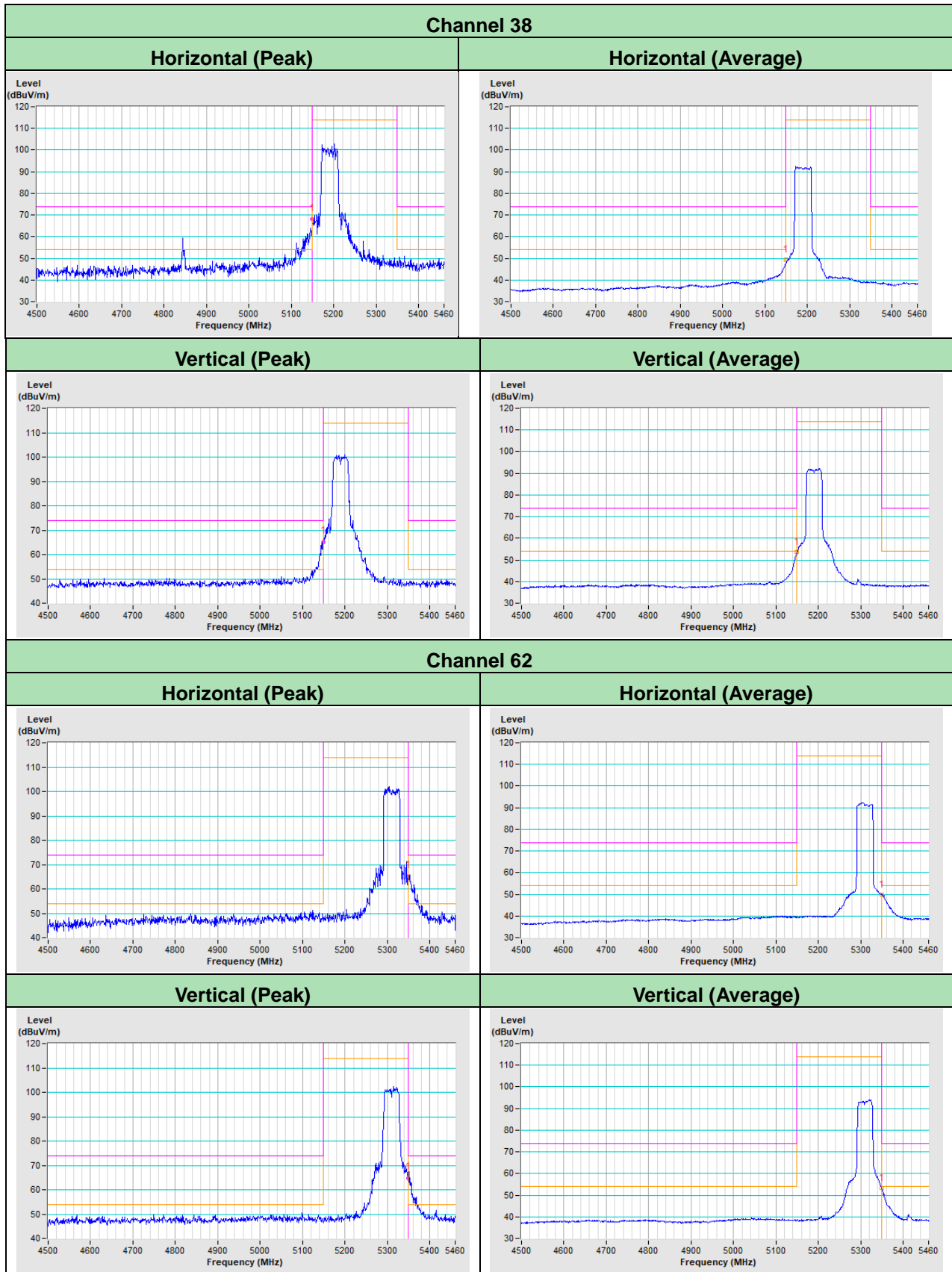


#### Vertical (Average)



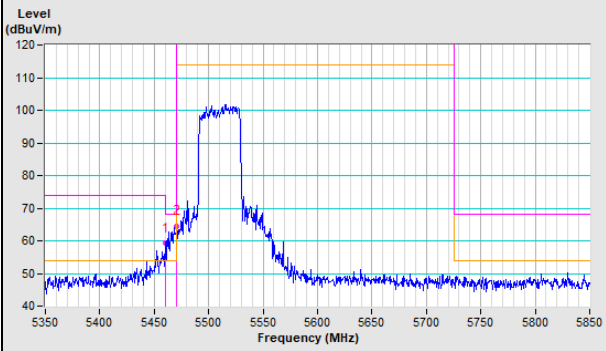


802.11n (HT40)

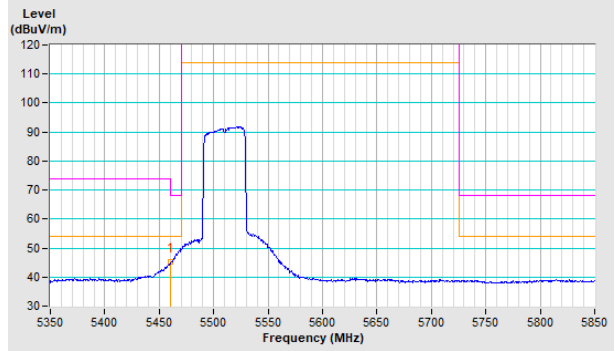


### Channel 102

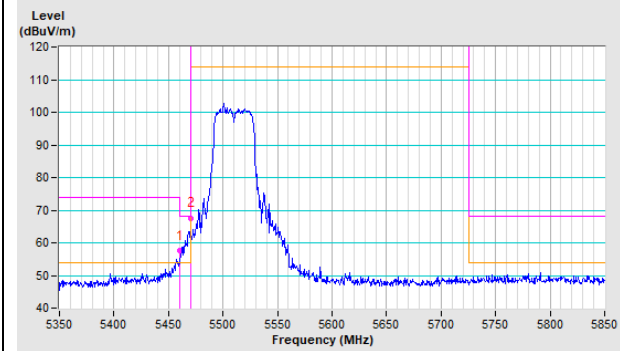
#### Horizontal (Peak)



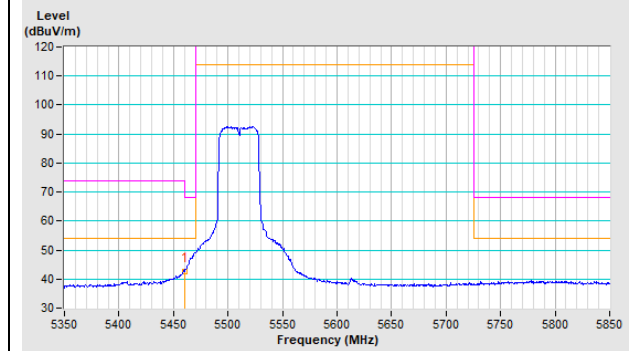
#### Horizontal (Average)



#### Vertical (Peak)



#### Vertical (Average)



## 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.

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

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