

## FCC Test Report

**Report No.:** RF200518E05-1

**FCC ID:** MQT-AT150R3

**Test Model:** xCL\_AT-150-R3-18U

**Received Date:** May 26, 2020

**Test Date:** June 05 to 17, 2020

**Issued Date:** Sep. 18, 2020

**Applicant:** XAC AUTOMATION CORP.

**Address:** 4F, No. 30, INDUSTRY E. RD. IX, SCIENCE-BASED INDUSTRIAL  
PARK,HSINCHU,TAIWAN

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

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

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



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### Release Control Record

Issue No.	Description	Date Issued
RF200518E05-1	Original release.	Sep. 18, 2020

## 1 Certificate of Conformity

**Product:** Terminal

**Brand:** XAC

**Test Model:** xCL\_AT-150-R3-18U

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** XAC AUTOMATION CORP.

**Test Date:** June 05 to 17, 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:**

Sep. 18, 2020

Joyce Kuo / Specialist

**Approved by :**



, **Date:**

Sep. 18, 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 -12.83dB at 0.48203MHz.
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 5725.00MHz, 5150.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is 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
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.5 dB
	30MHz ~ 1GHz	3.1 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.4 dB
	6GHz ~ 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-150-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): 13 <b>5GHz:</b> 802.11a, 802.11n (HT20): 25 802.11n (HT40): 12
Output Power	<b>2.4 GHz:</b> 267.917 mW <b>5.18 ~ 5.24 GHz:</b> 40.272 mW <b>5.26 ~ 5.32 GHz:</b> 47.863 mW <b>5.5 ~ 5.72 GHz:</b> 34.674 mW <b>5.745 ~ 5.825 GHz:</b> 27.704 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 No.	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	-2.7	2.4~2.4835GHz	PIFA	i-pex(MHF)
				2.19	5.15~5.85GHz		
				-2.7	2.4~2.4835GHz		
LTE	Main(B2) TX	AWAN	AXF6P-100004	1.55	1850 MHz to 1910 MHz	PIFA	i-pex(MHF)
	Main(B4) TX			1.48	1710 MHz to 1755 MHz		
	Main(B12) TX			2.87	699 MHz to 716 MHz		
	Aux(B2) RX	AWAN	AXF6P-100005	2.36	1930 MHz to 1990 MHz	PIFA	i-pex(MHF)
	Aux(B4) RX			2.91	2110 MHz to 2155 MHz		
	Aux(B12) RX			2.8	729 MHz to 746 MHz		
WCDMA	Main(B2) TX	AWAN	AXF6P-100004	1.55	1850 MHz to 1910 MHz	PIFA	i-pex(MHF)
	Main(B5) TX			1.23	824 MHz to 849 MHz		
	Aux(B2) RX	AWAN	AXF6P-100005	2.36	1930 MHz to 1990 MHz	PIFA	i-pex(MHF)
	Aux(B5) RX			2.84	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 Laptop

From the above modes, the worst radiated test was found in **Mode A**.

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 Battery

From the above modes, the worst radiated test was found in **Mode A**.



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.

### 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≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

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

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

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)
802.11a	5180-5240, 5260-5320, 5500-5720 5745-5825	36 to 48 52 to 64, 100 to 140, 149 to 165	60	OFDM	BPSK	6

### 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)
802.11a	5180-5240, 5260-5320, 5500-5720 5745-5825	36 to 48 52 to 64, 100 to 140, 149 to 165	60	OFDM	BPSK	6

### 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	25deg. C, 75%RH	120Vac, 60Hz	Kevin Ko
RE $<$ 1G	29deg. C, 71%RH	120Vac, 60Hz	Kevin Ko
PLC	21deg. C, 60%RH	120Vac, 60Hz	Sampson Chen
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

### 3.3 Duty Cycle of Test Signal

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

**802.11a:** Duty cycle = 2.028 ms/2.23 ms = 0.909, Duty factor = 10 \* log (1/Duty cycle) = 0.41dB

**802.11n (HT20):** Duty cycle = 2.565 ms/2.783 ms = 0.922, Duty factor = 10 \* log (1/Duty cycle) = 0.35dB

**802.11n (HT40):** Duty cycle = 2.467 ms/2.685 ms = 0.919, Duty factor = 10 \* log (1/Duty cycle) = 0.37dB



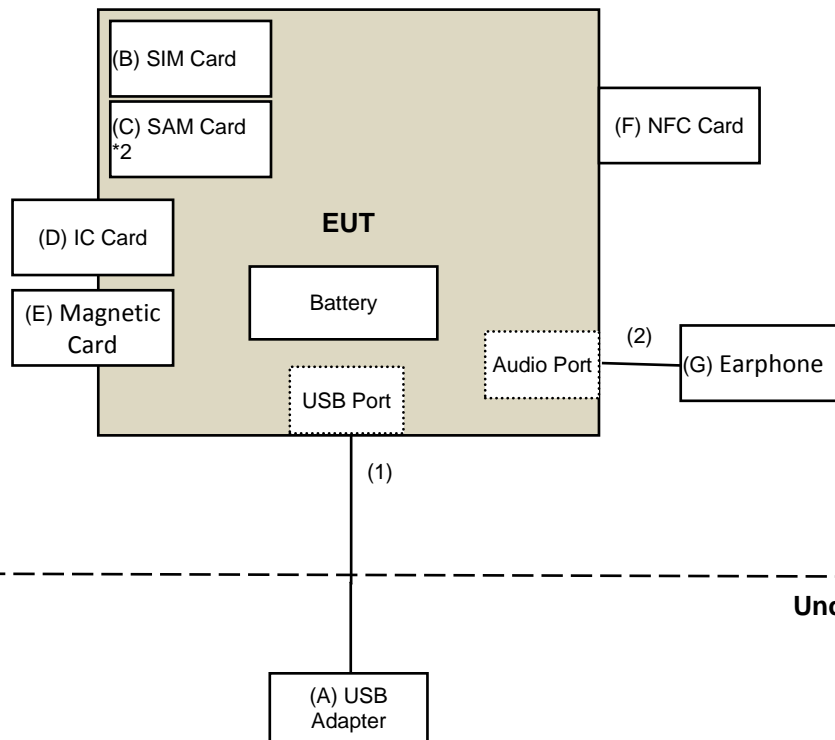
### 3.4 Description of Support Units

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
G.	Earphone	Infinix	NA	NA	NA	Provided by Lab

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
2.	Earphone Cable	1	1.1	Yes	0	Provided by Lab

### 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(dBμV/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(dBμV/m) <sup>*1</sup> PK:105.2 (dBμV/m) <sup>*2</sup> PK: 110.8(dBμV/m) <sup>*3</sup> PK:122.2 (dBμV/m) <sup>*4</sup>
<sup>*1</sup> beyond 75 MHz or more above of the band edge.		<sup>*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
<sup>*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.		<sup>*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

#### Note:

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

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

## 4.1.2 Test Instruments

## For OOB test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 03, 2019	July 02, 2020
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 10, 2019	June 09, 2020
RF Cable	EMC104-SM-SM-6000	180602	June 10, 2019	June 09, 2020
Spectrum Analyzer Keysight	N9030A	MY54490679	July 17, 2019	July 16, 2020
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 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: June 05, 2020

**For Radiated Emission & Bangedge test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 03, 2019	July 02, 2020
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
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 17, 2019	July 16, 2020
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. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: June 11, 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
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: June 17, 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:**

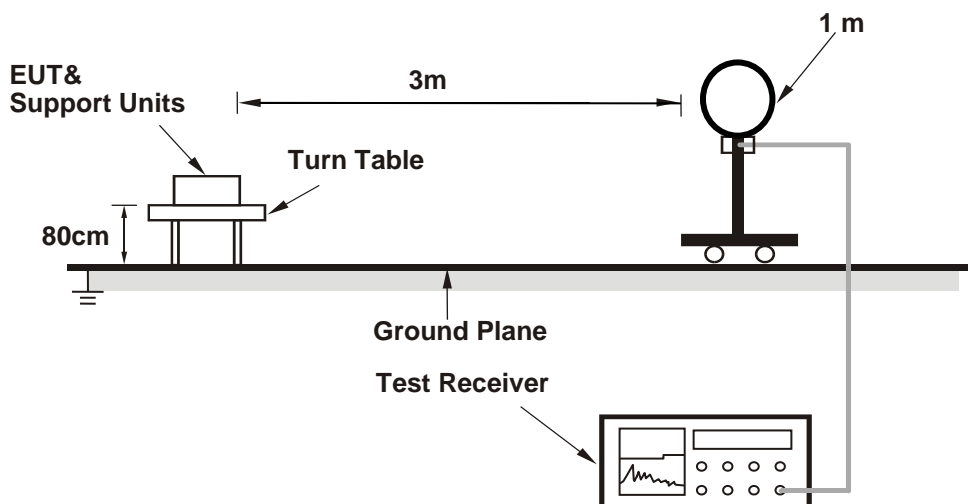
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

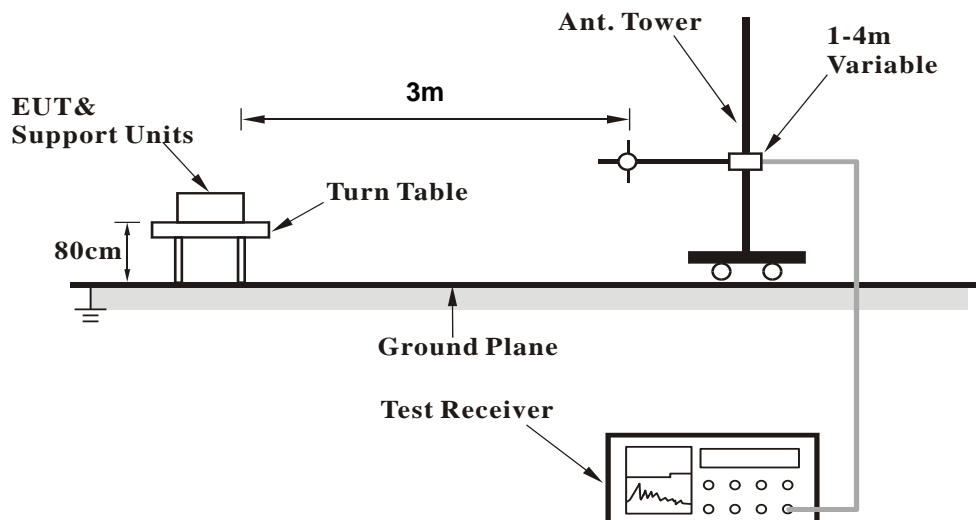
No deviation.

4.1.5 Test Setup

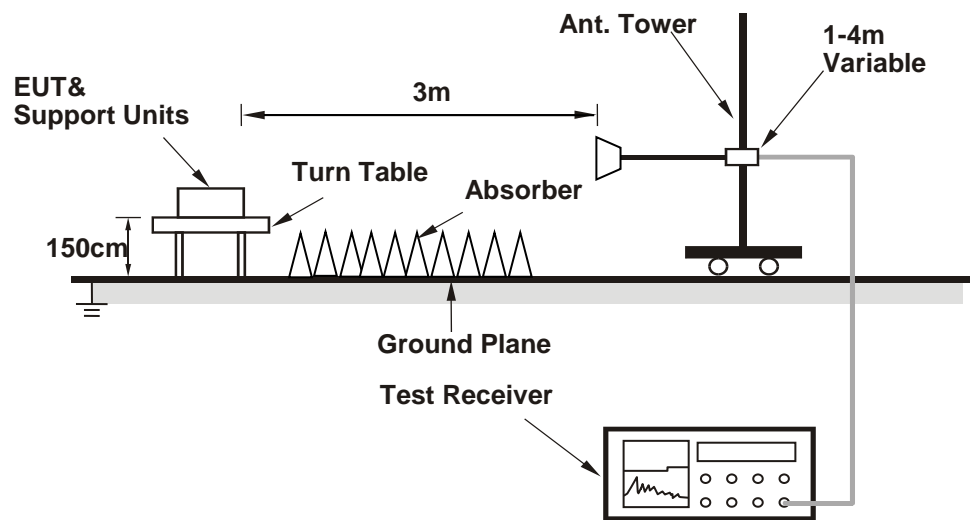
**For Radiated emission below 30MHz**



**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

- Placed the EUT on the testing table.
- 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	58.3 PK	74.0	-15.7	1.14 H	239	54.6	3.7
2	5150.00	45.8 AV	54.0	-8.2	1.14 H	239	42.1	3.7
3	*5180.00	101.3 PK			1.14 H	239	97.7	3.6
4	*5180.00	92.6 AV			1.14 H	239	89.0	3.6
5	#10360.00	45.4 PK	68.2	-22.8	3.15 H	199	32.7	12.7
6	15540.00	46.4 PK	74.0	-27.6	1.59 H	224	33.2	13.2
7	15540.00	34.8 AV	54.0	-19.2	1.59 H	224	21.6	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	65.7 PK	74.0	-8.3	2.70 V	151	62.0	3.7
2	5150.00	51.4 AV	54.0	-2.6	2.70 V	151	47.7	3.7
3	*5180.00	106.7 PK			2.70 V	151	103.1	3.6
4	*5180.00	97.2 AV			2.70 V	151	93.6	3.6
5	#10360.00	45.2 PK	68.2	-23.0	1.88 V	248	32.5	12.7
6	15540.00	45.9 PK	74.0	-28.1	1.50 V	164	32.7	13.2
7	15540.00	34.3 AV	54.0	-19.7	1.50 V	164	21.1	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	101.6 PK			1.06 H	251	98.1	3.5
2	*5200.00	92.4 AV			1.06 H	251	88.9	3.5
3	#10400.00	45.3 PK	68.2	-22.9	3.20 H	188	32.5	12.8
4	15600.00	46.6 PK	74.0	-27.4	1.60 H	209	33.1	13.5
5	15600.00	35.1 AV	54.0	-18.9	1.60 H	209	21.6	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	106.5 PK			2.81 V	151	103.0	3.5
2	*5200.00	97.8 AV			2.81 V	151	94.3	3.5
3	#10400.00	45.4 PK	68.2	-22.8	1.86 V	244	32.6	12.8
4	15600.00	45.9 PK	74.0	-28.1	1.48 V	177	32.4	13.5
5	15600.00	34.4 AV	54.0	-19.6	1.48 V	177	20.9	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	103.6 PK			1.13 H	252	100.1	3.5
2	*5240.00	93.1 AV			1.13 H	252	89.6	3.5
3	5350.00	45.7 PK	74.0	-28.3	1.13 H	252	42.3	3.4
4	5350.00	36.8 AV	54.0	-17.2	1.13 H	252	33.4	3.4
5	#10480.00	45.3 PK	68.2	-22.9	3.11 H	197	32.2	13.1
6	15720.00	46.2 PK	74.0	-27.8	1.63 H	214	32.4	13.8
7	15720.00	34.5 AV	54.0	-19.5	1.63 H	214	20.7	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	107.4 PK			2.93 V	166	103.9	3.5
2	*5240.00	98.3 AV			2.93 V	166	94.8	3.5
3	5350.00	48.6 PK	74.0	-25.4	2.93 V	166	45.2	3.4
4	5350.00	37.2 AV	54.0	-16.8	2.93 V	166	33.8	3.4
5	#10480.00	45.1 PK	68.2	-23.1	1.91 V	237	32.0	13.1
6	15720.00	45.7 PK	74.0	-28.3	1.48 V	171	31.9	13.8
7	15720.00	34.4 AV	54.0	-19.6	1.48 V	171	20.6	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	5150.00	46.5 PK	74.0	-27.5	1.13 H	254	42.8	3.7
2	5150.00	37.2 AV	54.0	-16.8	1.13 H	254	33.5	3.7
3	*5260.00	102.8 PK			1.13 H	254	99.4	3.4
4	*5260.00	93.2 AV			1.13 H	254	89.8	3.4
5	#10520.00	46.0 PK	68.2	-22.2	3.21 H	190	32.9	13.1
6	15780.00	46.5 PK	74.0	-27.5	1.62 H	239	33.0	13.5
7	15780.00	34.9 AV	54.0	-19.1	1.62 H	239	21.4	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	5150.00	48.9 PK	74.0	-25.1	2.90 V	166	45.2	3.7
2	5150.00	37.4 AV	54.0	-16.6	2.90 V	166	33.7	3.7
3	*5260.00	107.2 PK			2.90 V	166	103.8	3.4
4	*5260.00	98.6 AV			2.90 V	166	95.2	3.4
5	#10520.00	44.8 PK	68.2	-23.4	1.94 V	239	31.7	13.1
6	15780.00	45.8 PK	74.0	-28.2	1.50 V	160	32.3	13.5
7	15780.00	34.5 AV	54.0	-19.5	1.50 V	160	21.0	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	105.9 PK			1.04 H	257	102.6	3.3
2	*5300.00	94.1 AV			1.04 H	257	90.8	3.3
3	10600.00	45.9 PK	74.0	-28.1	3.11 H	198	33.0	12.9
4	10600.00	35.5 AV	54.0	-18.5	3.11 H	198	22.6	12.9
5	15900.00	46.2 PK	74.0	-27.8	1.60 H	213	33.4	12.8
6	15900.00	34.4 AV	54.0	-19.6	1.60 H	213	21.6	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	*5300.00	108.2 PK			2.99 V	164	104.9	3.3
2	*5300.00	99.2 AV			2.99 V	164	95.9	3.3
3	10600.00	44.9 PK	74.0	-29.1	1.88 V	244	32.0	12.9
4	10600.00	34.5 AV	54.0	-19.5	1.88 V	244	21.6	12.9
5	15900.00	46.0 PK	74.0	-28.0	1.50 V	164	33.2	12.8
6	15900.00	34.2 AV	54.0	-19.8	1.50 V	164	21.4	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	100.1 PK			1.12 H	239	96.7	3.4
2	*5320.00	91.1 AV			1.12 H	239	87.7	3.4
3	5350.00	56.2 PK	74.0	-17.8	1.12 H	239	52.8	3.4
4	5350.00	46.7 AV	54.0	-7.3	1.12 H	239	43.3	3.4
5	10640.00	45.0 PK	74.0	-29.0	3.13 H	211	32.1	12.9
6	10640.00	34.7 AV	54.0	-19.3	3.13 H	211	21.8	12.9
7	15960.00	46.6 PK	74.0	-27.4	1.58 H	236	33.8	12.8
8	15960.00	34.8 AV	54.0	-19.2	1.58 H	236	22.0	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	*5320.00	107.4 PK			2.88 V	152	104.0	3.4
2	*5320.00	98.5 AV			2.88 V	152	95.1	3.4
3	5350.00	64.7 PK	74.0	-9.3	2.88 V	152	61.3	3.4
4	5350.00	53.7 AV	54.0	-0.3	2.88 V	152	50.3	3.4
5	10640.00	45.1 PK	74.0	-28.9	1.85 V	261	32.2	12.9
6	10640.00	34.8 AV	54.0	-19.2	1.85 V	261	21.9	12.9
7	15960.00	45.8 PK	74.0	-28.2	1.44 V	151	33.0	12.8
8	15960.00	34.3 AV	54.0	-19.7	1.44 V	151	21.5	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	5447.90	51.9 PK	74.0	-22.1	1.03 H	240	48.2	3.7
2	5447.90	40.7 AV	54.0	-13.3	1.03 H	240	37.0	3.7
3	#5470.00	61.2 PK	68.2	-7.0	1.03 H	240	57.3	3.9
4	*5500.00	101.3 PK			1.03 H	240	97.4	3.9
5	*5500.00	92.2 AV			1.03 H	240	88.3	3.9
6	11000.00	45.9 PK	74.0	-28.1	3.12 H	186	32.9	13.0
7	11000.00	35.4 AV	54.0	-18.6	3.12 H	186	22.4	13.0
8	#16500.00	46.9 PK	68.2	-21.3	1.55 H	224	32.3	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	5447.90	53.0 PK	74.0	-21.0	2.57 V	157	49.3	3.7
2	5447.90	43.2 AV	54.0	-10.8	2.57 V	157	39.5	3.7
3	#5470.00	67.9 PK	68.2	-0.3	2.57 V	157	64.0	3.9
4	*5500.00	104.9 PK			2.57 V	157	101.0	3.9
5	*5500.00	95.4 AV			2.57 V	157	91.5	3.9
6	11000.00	44.7 PK	74.0	-29.3	1.94 V	240	31.7	13.0
7	11000.00	34.6 AV	54.0	-19.4	1.94 V	240	21.6	13.0
8	#16500.00	46.1 PK	68.2	-22.1	1.45 V	173	31.5	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	100.5 PK			1.13 H	260	96.7	3.8
2	*5580.00	90.3 AV			1.13 H	260	86.5	3.8
3	11160.00	45.7 PK	74.0	-28.3	3.09 H	201	32.6	13.1
4	11160.00	35.2 AV	54.0	-18.8	3.09 H	201	22.1	13.1
5	#16740.00	46.8 PK	68.2	-21.4	1.62 H	235	30.6	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	105.6 PK			2.12 V	168	101.8	3.8
2	*5580.00	95.8 AV			2.12 V	168	92.0	3.8
3	11160.00	45.6 PK	74.0	-28.4	1.92 V	244	32.5	13.1
4	11160.00	35.1 AV	54.0	-18.9	1.92 V	244	22.0	13.1
5	#16740.00	46.3 PK	68.2	-21.9	1.46 V	154	30.1	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	97.4 PK			1.10 H	234	93.4	4.0
2	*5700.00	89.7 AV			1.10 H	234	85.7	4.0
3	#5725.00	62.4 PK	68.2	-5.8	1.10 H	234	58.4	4.0
4	11400.00	45.2 PK	74.0	-28.8	3.20 H	185	32.0	13.2
5	11400.00	34.8 AV	54.0	-19.2	3.20 H	185	21.6	13.2
6	#17100.00	46.4 PK	68.2	-21.8	1.62 H	220	29.2	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	102.6 PK			2.86 V	142	98.6	4.0
2	*5700.00	94.3 AV			2.86 V	142	90.3	4.0
3	#5725.00	67.9 PK	68.2	-0.3	2.86 V	142	63.9	4.0
4	11400.00	45.4 PK	74.0	-28.6	1.88 V	247	32.2	13.2
5	11400.00	34.8 AV	54.0	-19.2	1.88 V	247	21.6	13.2
6	#17100.00	45.8 PK	68.2	-22.4	1.55 V	174	28.6	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	46.6 PK	74.0	-27.4	1.04 H	232	42.8	3.8
2	5460.00	36.9 AV	54.0	-17.1	1.04 H	232	33.1	3.8
3	#5470.00	47.4 PK	68.2	-20.8	1.04 H	232	43.5	3.9
4	*5720.00	100.5 PK			1.04 H	232	96.6	3.9
5	*5720.00	91.8 AV			1.04 H	232	87.9	3.9
6	#5850.00	48.2 PK	68.2	-20.0	1.04 H	232	43.8	4.4
7	11440.00	44.9 PK	74.0	-29.1	3.14 H	198	31.6	13.3
8	11440.00	34.8 AV	54.0	-19.2	3.14 H	198	21.5	13.3
9	#17160.00	46.8 PK	68.2	-21.4	1.55 H	227	29.4	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	48.7 PK	74.0	-25.3	2.90 V	141	44.9	3.8
2	5460.00	37.3 AV	54.0	-16.7	2.90 V	141	33.5	3.8
3	#5470.00	48.5 PK	68.2	-19.7	2.90 V	141	44.6	3.9
4	*5720.00	105.8 PK			2.90 V	141	101.9	3.9
5	*5720.00	96.1 AV			2.90 V	141	92.2	3.9
6	#5850.00	49.2 PK	68.2	-19.0	2.90 V	141	44.8	4.4
7	11440.00	45.0 PK	74.0	-29.0	1.90 V	242	31.7	13.3
8	11440.00	34.4 AV	54.0	-19.6	1.90 V	242	21.1	13.3
9	#17160.00	45.5 PK	68.2	-22.7	1.53 V	161	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	*5745.00	102.8 PK			1.08 H	246	98.8	4.0
2	*5745.00	96.5 AV			1.08 H	246	92.5	4.0
3	11490.00	45.5 PK	74.0	-28.5	3.17 H	201	32.2	13.3
4	11490.00	35.2 AV	54.0	-18.8	3.17 H	201	21.9	13.3
5	#17235.00	46.4 PK	68.2	-21.8	1.54 H	225	28.8	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	*5745.00	104.9 PK			2.73 V	219	100.9	4.0
2	*5745.00	97.2 AV			2.73 V	219	93.2	4.0
3	11490.00	45.6 PK	74.0	-28.4	1.92 V	233	32.3	13.3
4	11490.00	35.1 AV	54.0	-18.9	1.92 V	233	21.8	13.3
5	#17235.00	46.0 PK	68.2	-22.2	1.51 V	154	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	*5785.00	101.5 PK			1.09 H	239	97.4	4.1
2	*5785.00	95.4 AV			1.09 H	239	91.3	4.1
3	11570.00	45.9 PK	74.0	-28.1	3.11 H	183	32.7	13.2
4	11570.00	35.4 AV	54.0	-18.6	3.11 H	183	22.2	13.2
5	#17355.00	45.7 PK	68.2	-22.5	1.62 H	230	28.1	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	*5785.00	103.9 PK			2.99 V	217	99.8	4.1
2	*5785.00	96.9 AV			2.99 V	217	92.8	4.1
3	11570.00	45.1 PK	74.0	-28.9	1.94 V	235	31.9	13.2
4	11570.00	34.7 AV	54.0	-19.3	1.94 V	235	21.5	13.2
5	#17355.00	45.9 PK	68.2	-22.3	1.54 V	174	28.3	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	*5825.00	102.2 PK			1.14 H	245	97.9	4.3
2	*5825.00	93.1 AV			1.14 H	245	88.8	4.3
3	11650.00	45.3 PK	74.0	-28.7	3.20 H	190	32.0	13.3
4	11650.00	34.9 AV	54.0	-19.1	3.20 H	190	21.6	13.3
5	#17475.00	46.1 PK	68.2	-22.1	1.55 H	236	28.2	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	*5825.00	104.2 PK			2.83 V	213	99.9	4.3
2	*5825.00	96.6 AV			2.83 V	213	92.3	4.3
3	11650.00	45.6 PK	74.0	-28.4	1.86 V	263	32.3	13.3
4	11650.00	35.2 AV	54.0	-18.8	1.86 V	263	21.9	13.3
5	#17475.00	46.3 PK	68.2	-21.9	1.47 V	169	28.4	17.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	58.6 PK	74.0	-15.4	1.03 H	236	54.9	3.7
2	5150.00	45.7 AV	54.0	-8.3	1.03 H	236	42.0	3.7
3	*5180.00	98.9 PK			1.03 H	236	95.3	3.6
4	*5180.00	89.7 AV			1.03 H	236	86.1	3.6
5	#10360.00	46.1 PK	68.2	-22.1	3.16 H	198	33.4	12.7
6	15540.00	46.0 PK	74.0	-28.0	1.60 H	237	32.8	13.2
7	15540.00	34.4 AV	54.0	-19.6	1.60 H	237	21.2	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	67.4 PK	74.0	-6.6	2.99 V	164	63.7	3.7
2	<b>5150.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>2.99 V</b>	<b>164</b>	<b>50.2</b>	<b>3.7</b>
3	*5180.00	106.9 PK			2.99 V	164	103.3	3.6
4	*5180.00	97.4 AV			2.99 V	164	93.8	3.6
5	#10360.00	44.9 PK	68.2	-23.3	1.84 V	257	32.2	12.7
6	15540.00	45.6 PK	74.0	-28.4	1.49 V	166	32.4	13.2
7	15540.00	33.8 AV	54.0	-20.2	1.49 V	166	20.6	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	103.8 PK			1.12 H	234	100.3	3.5
2	*5200.00	94.1 AV			1.12 H	234	90.6	3.5
3	#10400.00	45.4 PK	68.2	-22.8	3.12 H	213	32.6	12.8
4	15600.00	46.2 PK	74.0	-27.8	1.53 H	219	32.7	13.5
5	15600.00	34.4 AV	54.0	-19.6	1.53 H	219	20.9	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	107.3 PK			2.99 V	162	103.8	3.5
2	*5200.00	98.3 AV			2.99 V	162	94.8	3.5
3	#10400.00	44.9 PK	68.2	-23.3	1.93 V	251	32.1	12.8
4	15600.00	46.7 PK	74.0	-27.3	1.45 V	174	33.2	13.5
5	15600.00	34.8 AV	54.0	-19.2	1.45 V	174	21.3	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	101.7 PK			1.10 H	257	98.2	3.5
2	*5240.00	92.9 AV			1.10 H	257	89.4	3.5
3	5350.00	46.5 PK	74.0	-27.5	1.10 H	257	43.1	3.4
4	5350.00	37.2 AV	54.0	-16.8	1.10 H	257	33.8	3.4
5	#10480.00	45.0 PK	68.2	-23.2	3.14 H	203	31.9	13.1
6	15720.00	46.8 PK	74.0	-27.2	1.64 H	212	33.0	13.8
7	15720.00	35.1 AV	54.0	-18.9	1.64 H	212	21.3	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	106.9 PK			2.98 V	162	103.4	3.5
2	*5240.00	97.4 AV			2.98 V	162	93.9	3.5
3	5350.00	49.1 PK	74.0	-24.9	2.98 V	162	45.7	3.4
4	5350.00	37.6 AV	54.0	-16.4	2.98 V	162	34.2	3.4
5	#10480.00	45.4 PK	68.2	-22.8	1.94 V	258	32.3	13.1
6	15720.00	46.5 PK	74.0	-27.5	1.53 V	160	32.7	13.8
7	15720.00	34.6 AV	54.0	-19.4	1.53 V	160	20.8	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	5150.00	46.7 PK	74.0	-27.3	1.06 H	250	43.0	3.7
2	5150.00	37.2 AV	54.0	-16.8	1.06 H	250	33.5	3.7
3	*5260.00	102.2 PK			1.06 H	250	98.8	3.4
4	*5260.00	93.7 AV			1.06 H	250	90.3	3.4
5	#10520.00	45.6 PK	68.2	-22.6	3.20 H	209	32.5	13.1
6	15780.00	46.4 PK	74.0	-27.6	1.55 H	218	32.9	13.5
7	15780.00	34.8 AV	54.0	-19.2	1.55 H	218	21.3	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	5150.00	49.5 PK	74.0	-24.5	2.80 V	169	45.8	3.7
2	5150.00	37.6 AV	54.0	-16.4	2.80 V	169	33.9	3.7
3	*5260.00	107.2 PK			2.80 V	169	103.8	3.4
4	*5260.00	98.3 AV			2.80 V	169	94.9	3.4
5	#10520.00	45.8 PK	68.2	-22.4	1.87 V	254	32.7	13.1
6	15780.00	45.7 PK	74.0	-28.3	1.45 V	160	32.2	13.5
7	15780.00	34.0 AV	54.0	-20.0	1.45 V	160	20.5	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	102.5 PK			1.03 H	242	99.2	3.3
2	*5300.00	93.6 AV			1.03 H	242	90.3	3.3
3	10600.00	45.6 PK	74.0	-28.4	3.19 H	209	32.7	12.9
4	10600.00	35.3 AV	54.0	-18.7	3.19 H	209	22.4	12.9
5	15900.00	47.0 PK	74.0	-27.0	1.57 H	229	34.2	12.8
6	15900.00	35.1 AV	54.0	-18.9	1.57 H	229	22.3	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	*5300.00	107.3 PK			2.99 V	162	104.0	3.3
2	*5300.00	98.5 AV			2.99 V	162	95.2	3.3
3	10600.00	44.7 PK	74.0	-29.3	1.92 V	248	31.8	12.9
4	10600.00	34.5 AV	54.0	-19.5	1.92 V	248	21.6	12.9
5	15900.00	45.2 PK	74.0	-28.8	1.51 V	164	32.4	12.8
6	15900.00	33.8 AV	54.0	-20.2	1.51 V	164	21.0	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	100.1 PK			1.03 H	241	96.7	3.4
2	*5320.00	90.1 AV			1.03 H	241	86.7	3.4
3	5350.00	59.9 PK	74.0	-14.1	1.03 H	241	56.5	3.4
4	5350.00	47.6 AV	54.0	-6.4	1.03 H	241	44.2	3.4
5	10640.00	45.3 PK	74.0	-28.7	3.15 H	200	32.4	12.9
6	10640.00	34.8 AV	54.0	-19.2	3.15 H	200	21.9	12.9
7	15960.00	46.1 PK	74.0	-27.9	1.64 H	219	33.3	12.8
8	15960.00	34.4 AV	54.0	-19.6	1.64 H	219	21.6	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	105.5 PK			2.71 V	159	102.1	3.4
2	*5320.00	96.9 AV			2.71 V	159	93.5	3.4
3	5350.00	65.6 PK	74.0	-8.4	2.71 V	159	62.2	3.4
4	5350.00	53.6 AV	54.0	-0.4	2.71 V	159	50.2	3.4
5	10640.00	44.7 PK	74.0	-29.3	1.87 V	259	31.8	12.9
6	10640.00	34.6 AV	54.0	-19.4	1.87 V	259	21.7	12.9
7	15960.00	45.6 PK	74.0	-28.4	1.55 V	155	32.8	12.8
8	15960.00	34.0 AV	54.0	-20.0	1.55 V	155	21.2	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	5448.50	49.9 PK	74.0	-24.1	1.12 H	235	46.2	3.7
2	5448.50	40.7 AV	54.0	-13.3	1.12 H	235	37.0	3.7
3	#5470.00	58.6 PK	68.2	-9.6	1.12 H	235	54.7	3.9
4	*5500.00	99.9 PK			1.12 H	235	96.0	3.9
5	*5500.00	91.3 AV			1.12 H	235	87.4	3.9
6	11000.00	44.8 PK	74.0	-29.2	3.16 H	215	31.8	13.0
7	11000.00	34.8 AV	54.0	-19.2	3.16 H	215	21.8	13.0
8	#16500.00	46.4 PK	68.2	-21.8	1.63 H	232	31.8	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	5448.50	57.5 PK	74.0	-16.5	2.92 V	157	53.8	3.7
2	5448.50	43.4 AV	54.0	-10.6	2.92 V	157	39.7	3.7
3	#5470.00	67.6 PK	68.2	-0.6	2.92 V	157	63.7	3.9
4	*5500.00	103.8 PK			2.92 V	157	99.9	3.9
5	*5500.00	93.9 AV			2.92 V	157	90.0	3.9
6	11000.00	44.7 PK	74.0	-29.3	1.85 V	259	31.7	13.0
7	11000.00	34.6 AV	54.0	-19.4	1.85 V	259	21.6	13.0
8	#16500.00	45.7 PK	68.2	-22.5	1.48 V	154	31.1	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	100.6 PK			1.07 H	252	96.8	3.8
2	*5580.00	91.4 AV			1.07 H	252	87.6	3.8
3	11160.00	45.5 PK	74.0	-28.5	3.19 H	202	32.4	13.1
4	11160.00	35.0 AV	54.0	-19.0	3.19 H	202	21.9	13.1
5	#16740.00	46.3 PK	68.2	-21.9	1.58 H	223	30.1	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	105.2 PK			3.02 V	168	101.4	3.8
2	*5580.00	96.5 AV			3.02 V	168	92.7	3.8
3	11160.00	44.7 PK	74.0	-29.3	1.93 V	259	31.6	13.1
4	11160.00	34.5 AV	54.0	-19.5	1.93 V	259	21.4	13.1
5	#16740.00	46.3 PK	68.2	-21.9	1.52 V	157	30.1	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	97.1 PK			1.14 H	238	93.1	4.0
2	*5700.00	89.9 AV			1.14 H	238	85.9	4.0
3	#5725.00	62.6 PK	68.2	-5.6	1.14 H	238	58.6	4.0
4	11400.00	44.7 PK	74.0	-29.3	3.09 H	211	31.5	13.2
5	11400.00	34.7 AV	54.0	-19.3	3.09 H	211	21.5	13.2
6	#17100.00	46.1 PK	68.2	-22.1	1.63 H	232	28.9	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	103.3 PK			3.00 V	147	99.3	4.0
2	*5700.00	94.4 AV			3.00 V	147	90.4	4.0
<b>3</b>	<b>#5725.00</b>	<b>68.1 PK</b>	<b>68.2</b>	<b>-0.1</b>	<b>3.00 V</b>	<b>147</b>	<b>64.1</b>	<b>4.0</b>
4	11400.00	45.8 PK	74.0	-28.2	1.86 V	243	32.6	13.2
5	11400.00	35.3 AV	54.0	-18.7	1.86 V	243	22.1	13.2
6	#17100.00	45.6 PK	68.2	-22.6	1.54 V	154	28.4	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	45.9 PK	74.0	-28.1	1.05 H	256	42.1	3.8
2	5460.00	37.8 AV	54.0	-16.2	1.05 H	256	34.0	3.8
3	#5470.00	48.1 PK	68.2	-20.1	1.05 H	256	44.2	3.9
4	*5720.00	99.1 PK			1.05 H	256	95.2	3.9
5	*5720.00	89.4 AV			1.05 H	256	85.5	3.9
6	#5850.00	47.9 PK	68.2	-20.3	1.05 H	256	43.5	4.4
7	11440.00	44.9 PK	74.0	-29.1	3.11 H	188	31.6	13.3
8	11440.00	34.8 AV	54.0	-19.2	3.11 H	188	21.5	13.3
9	#17160.00	46.6 PK	68.2	-21.6	1.62 H	219	29.2	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	49.1 PK	74.0	-24.9	2.90 V	141	45.3	3.8
2	5460.00	37.6 AV	54.0	-16.4	2.90 V	141	33.8	3.8
3	#5470.00	49.2 PK	68.2	-19.0	2.90 V	141	45.3	3.9
4	*5720.00	104.8 PK			2.90 V	141	100.9	3.9
5	*5720.00	95.6 AV			2.90 V	141	91.7	3.9
6	#5850.00	49.1 PK	68.2	-19.1	2.90 V	141	44.7	4.4
7	11440.00	45.1 PK	74.0	-28.9	1.87 V	241	31.8	13.3
8	11440.00	34.8 AV	54.0	-19.2	1.87 V	241	21.5	13.3
9	#17160.00	45.6 PK	68.2	-22.6	1.53 V	149	28.2	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	*5745.00	103.2 PK			1.06 H	260	99.2	4.0
2	*5745.00	96.4 AV			1.06 H	260	92.4	4.0
3	11490.00	45.2 PK	74.0	-28.8	3.11 H	189	31.9	13.3
4	11490.00	35.0 AV	54.0	-19.0	3.11 H	189	21.7	13.3
5	#17235.00	46.7 PK	68.2	-21.5	1.63 H	233	29.1	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	*5745.00	106.9 PK			2.51 V	133	102.9	4.0
2	*5745.00	98.0 AV			2.51 V	133	94.0	4.0
3	11490.00	44.9 PK	74.0	-29.1	1.83 V	259	31.6	13.3
4	11490.00	34.3 AV	54.0	-19.7	1.83 V	259	21.0	13.3
5	#17235.00	45.7 PK	68.2	-22.5	1.46 V	164	28.1	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	*5785.00	106.8 PK			1.05 H	243	102.7	4.1
2	*5785.00	96.5 AV			1.05 H	243	92.4	4.1
3	11570.00	45.8 PK	74.0	-28.2	3.18 H	185	32.6	13.2
4	11570.00	35.2 AV	54.0	-18.8	3.18 H	185	22.0	13.2
5	#17355.00	46.1 PK	68.2	-22.1	1.59 H	231	28.5	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	*5785.00	107.6 PK			2.64 V	130	103.5	4.1
2	*5785.00	97.9 AV			2.64 V	130	93.8	4.1
3	11570.00	45.4 PK	74.0	-28.6	1.91 V	259	32.2	13.2
4	11570.00	35.2 AV	54.0	-18.8	1.91 V	259	22.0	13.2
5	#17355.00	45.8 PK	68.2	-22.4	1.52 V	163	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	*5825.00	103.8 PK			1.05 H	232	99.5	4.3
2	*5825.00	93.7 AV			1.05 H	232	89.4	4.3
3	11650.00	44.9 PK	74.0	-29.1	3.14 H	211	31.6	13.3
4	11650.00	34.7 AV	54.0	-19.3	3.14 H	211	21.4	13.3
5	#17475.00	45.9 PK	68.2	-22.3	1.57 H	230	28.0	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	*5825.00	104.7 PK			2.65 V	143	100.4	4.3
2	*5825.00	95.8 AV			2.65 V	143	91.5	4.3
3	11650.00	45.3 PK	74.0	-28.7	1.85 V	239	32.0	13.3
4	11650.00	35.0 AV	54.0	-19.0	1.85 V	239	21.7	13.3
5	#17475.00	45.8 PK	68.2	-22.4	1.55 V	161	27.9	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	59.9 PK	74.0	-14.1	1.13 H	238	56.2	3.7
2	5150.00	48.6 AV	54.0	-5.4	1.13 H	238	44.9	3.7
3	*5190.00	93.3 PK			1.13 H	238	89.7	3.6
4	*5190.00	84.4 AV			1.13 H	238	80.8	3.6
5	#10380.00	45.4 PK	68.2	-22.8	3.10 H	204	32.7	12.7
6	15570.00	46.6 PK	74.0	-27.4	1.61 H	210	33.2	13.4
7	15570.00	35.2 AV	54.0	-18.8	1.61 H	210	21.8	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	69.1 PK	74.0	-4.9	3.15 V	219	65.4	3.7
2	5150.00	53.7 AV	54.0	-0.3	3.15 V	219	50.0	3.7
3	*5190.00	98.8 PK			3.15 V	219	95.2	3.6
4	*5190.00	89.7 AV			3.15 V	219	86.1	3.6
5	#10380.00	45.0 PK	68.2	-23.2	1.87 V	241	32.3	12.7
6	15570.00	45.7 PK	74.0	-28.3	1.52 V	154	32.3	13.4
7	15570.00	33.8 AV	54.0	-20.2	1.52 V	154	20.4	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	97.6 PK			1.13 H	260	94.1	3.5
2	*5230.00	88.4 AV			1.13 H	260	84.9	3.5
3	5350.00	49.5 PK	74.0	-24.5	1.13 H	260	46.1	3.4
4	5350.00	37.1 AV	54.0	-16.9	1.13 H	260	33.7	3.4
5	#10460.00	45.2 PK	68.2	-23.0	3.09 H	201	32.2	13.0
6	15690.00	46.3 PK	74.0	-27.7	1.55 H	219	32.4	13.9
7	15690.00	34.7 AV	54.0	-19.3	1.55 H	219	20.8	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	102.7 PK			2.77 V	243	99.2	3.5
2	*5230.00	93.0 AV			2.77 V	243	89.5	3.5
3	5350.00	50.2 PK	74.0	-23.8	2.77 V	243	46.8	3.4
4	5350.00	38.3 AV	54.0	-15.7	2.77 V	243	34.9	3.4
5	#10460.00	45.4 PK	68.2	-22.8	1.84 V	255	32.4	13.0
6	15690.00	46.2 PK	74.0	-27.8	1.52 V	149	32.3	13.9
7	15690.00	34.8 AV	54.0	-19.2	1.52 V	149	20.9	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	49.9 PK	74.0	-24.1	1.08 H	232	46.2	3.7
2	5150.00	37.2 AV	54.0	-16.8	1.08 H	232	33.5	3.7
3	*5270.00	97.5 PK			1.08 H	232	94.1	3.4
4	*5270.00	89.1 AV			1.08 H	232	85.7	3.4
5	#10540.00	45.4 PK	68.2	-22.8	3.14 H	194	32.4	13.0
6	15810.00	46.5 PK	74.0	-27.5	1.58 H	210	33.3	13.2
7	15810.00	35.0 AV	54.0	-19.0	1.58 H	210	21.8	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	50.8 PK	74.0	-23.2	2.62 V	220	47.1	3.7
2	5150.00	38.4 AV	54.0	-15.6	2.62 V	220	34.7	3.7
3	*5270.00	103.4 PK			2.62 V	220	100.0	3.4
4	*5270.00	94.3 AV			2.62 V	220	90.9	3.4
5	#10540.00	45.1 PK	68.2	-23.1	1.88 V	236	32.1	13.0
6	15810.00	45.7 PK	74.0	-28.3	1.45 V	160	32.5	13.2
7	15810.00	33.9 AV	54.0	-20.1	1.45 V	160	20.7	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	95.2 PK			1.13 H	262	91.9	3.3
2	*5310.00	86.0 AV			1.13 H	262	82.7	3.3
3	5350.00	63.5 PK	74.0	-10.5	1.13 H	262	60.1	3.4
4	5350.00	50.9 AV	54.0	-3.1	1.13 H	262	47.5	3.4
5	10620.00	45.6 PK	74.0	-28.4	3.14 H	186	32.7	12.9
6	10620.00	35.4 AV	54.0	-18.6	3.14 H	186	22.5	12.9
7	15930.00	46.4 PK	74.0	-27.6	1.59 H	213	33.6	12.8
8	15930.00	35.0 AV	54.0	-19.0	1.59 H	213	22.2	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	100.3 PK			2.64 V	221	97.0	3.3
2	*5310.00	91.2 AV			2.64 V	221	87.9	3.3
3	5350.00	69.4 PK	74.0	-4.6	2.64 V	221	66.0	3.4
4	5350.00	53.8 AV	54.0	-0.2	2.64 V	221	50.4	3.4
5	10620.00	45.6 PK	74.0	-28.4	1.87 V	233	32.7	12.9
6	10620.00	35.0 AV	54.0	-19.0	1.87 V	233	22.1	12.9
7	15930.00	46.3 PK	74.0	-27.7	1.51 V	161	33.5	12.8
8	15930.00	34.6 AV	54.0	-19.4	1.51 V	161	21.8	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	58.2 PK	74.0	-15.8	1.03 H	236	54.4	3.8
2	5460.00	44.0 AV	54.0	-10.0	1.03 H	236	40.2	3.8
3	#5470.00	67.8 PK	68.2	-0.4	1.03 H	236	63.9	3.9
4	*5510.00	97.6 PK			1.03 H	236	93.7	3.9
5	*5510.00	88.4 AV			1.03 H	236	84.5	3.9
6	11020.00	45.2 PK	74.0	-28.8	3.14 H	201	32.2	13.0
7	11020.00	34.7 AV	54.0	-19.3	3.14 H	201	21.7	13.0
8	#16530.00	46.1 PK	68.2	-22.1	1.63 H	216	31.4	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	60.0 PK	74.0	-14.0	2.57 V	213	56.2	3.8
2	5460.00	45.3 AV	54.0	-8.7	2.57 V	213	41.5	3.8
3	#5470.00	68.0 PK	68.2	-0.2	2.57 V	213	64.1	3.9
4	*5510.00	98.6 PK			2.57 V	213	94.7	3.9
5	*5510.00	89.7 AV			2.57 V	213	85.8	3.9
6	11020.00	45.6 PK	74.0	-28.4	1.90 V	256	32.6	13.0
7	11020.00	34.9 AV	54.0	-19.1	1.90 V	256	21.9	13.0
8	#16530.00	45.8 PK	68.2	-22.4	1.55 V	151	31.1	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	*5550.00	99.4 PK			1.12 H	257	95.6	3.8
2	*5550.00	86.5 AV			1.12 H	257	82.7	3.8
3	11100.00	45.3 PK	74.0	-28.7	3.13 H	205	32.3	13.0
4	11100.00	35.1 AV	54.0	-18.9	3.13 H	205	22.1	13.0
5	#16650.00	46.2 PK	68.2	-22.0	1.63 H	236	30.5	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	*5550.00	102.8 PK			2.72 V	204	99.0	3.8
2	*5550.00	92.4 AV			2.72 V	204	88.6	3.8
3	11100.00	44.6 PK	74.0	-29.4	1.92 V	236	31.6	13.0
4	11100.00	34.4 AV	54.0	-19.6	1.92 V	236	21.4	13.0
5	#16650.00	46.2 PK	68.2	-22.0	1.52 V	151	30.5	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	95.2 PK			1.12 H	252	91.2	4.0
2	*5670.00	87.2 AV			1.12 H	252	83.2	4.0
3	#5725.00	61.4 PK	68.2	-6.8	1.12 H	252	57.4	4.0
4	11340.00	45.7 PK	74.0	-28.3	3.11 H	193	32.5	13.2
5	11340.00	35.4 AV	54.0	-18.6	3.11 H	193	22.2	13.2
6	#17010.00	46.2 PK	68.2	-22.0	1.60 H	225	29.2	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	101.2 PK			2.64 V	212	97.2	4.0
2	*5670.00	92.2 AV			2.64 V	212	88.2	4.0
3	#5725.00	67.9 PK	68.2	-0.3	2.64 V	212	63.9	4.0
4	11340.00	44.8 PK	74.0	-29.2	1.88 V	240	31.6	13.2
5	11340.00	34.4 AV	54.0	-19.6	1.88 V	240	21.2	13.2
6	#17010.00	45.3 PK	68.2	-22.9	1.50 V	163	28.3	17.0

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	48.1 PK	74.0	-25.9	1.12 H	251	44.3	3.8
2	5460.00	37.5 AV	54.0	-16.5	1.12 H	251	33.7	3.8
3	#5470.00	48.4 PK	68.2	-19.8	1.12 H	251	44.5	3.9
4	*5710.00	95.1 PK			1.12 H	251	91.1	4.0
5	*5710.00	88.6 AV			1.12 H	251	84.6	4.0
6	#5850.00	49.0 PK	68.2	-19.2	1.12 H	251	44.6	4.4
7	11420.00	46.1 PK	74.0	-27.9	3.18 H	187	32.9	13.2
8	11420.00	35.5 AV	54.0	-18.5	3.18 H	187	22.3	13.2
9	#17130.00	46.5 PK	68.2	-21.7	1.56 H	213	29.3	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	49.2 PK	74.0	-24.8	2.79 V	213	45.4	3.8
2	5460.00	36.8 AV	54.0	-17.2	2.79 V	213	33.0	3.8
3	#5470.00	47.9 PK	68.2	-20.3	2.79 V	213	44.0	3.9
4	*5710.00	100.7 PK			2.79 V	213	96.7	4.0
5	*5710.00	91.6 AV			2.79 V	213	87.6	4.0
6	#5850.00	49.2 PK	68.2	-19.0	2.79 V	213	44.8	4.4
7	11420.00	45.1 PK	74.0	-28.9	1.93 V	257	31.9	13.2
8	11420.00	34.7 AV	54.0	-19.3	1.93 V	257	21.5	13.2
9	#17130.00	46.2 PK	68.2	-22.0	1.55 V	153	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	*5755.00	98.4 PK			1.08 H	249	94.4	4.0
2	*5755.00	89.6 AV			1.08 H	249	85.6	4.0
3	11510.00	45.1 PK	74.0	-28.9	3.18 H	201	31.8	13.3
4	11510.00	34.8 AV	54.0	-19.2	3.18 H	201	21.5	13.3
5	#17265.00	46.9 PK	68.2	-21.3	1.55 H	215	29.4	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	*5755.00	100.9 PK			2.76 V	215	96.9	4.0
2	*5755.00	91.8 AV			2.76 V	215	87.8	4.0
3	11510.00	44.6 PK	74.0	-29.4	1.84 V	256	31.3	13.3
4	11510.00	34.3 AV	54.0	-19.7	1.84 V	256	21.0	13.3
5	#17265.00	45.7 PK	68.2	-22.5	1.50 V	170	28.2	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	*5795.00	98.9 PK			1.07 H	234	94.7	4.2
2	*5795.00	88.9 AV			1.07 H	234	84.7	4.2
3	11590.00	45.5 PK	74.0	-28.5	3.09 H	197	32.2	13.3
4	11590.00	35.2 AV	54.0	-18.8	3.09 H	197	21.9	13.3
5	#17385.00	46.1 PK	68.2	-22.1	1.64 H	227	28.4	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	*5795.00	100.5 PK			2.30 V	215	96.3	4.2
2	*5795.00	91.6 AV			2.30 V	215	87.4	4.2
3	11590.00	44.9 PK	74.0	-29.1	1.83 V	259	31.6	13.3
4	11590.00	34.7 AV	54.0	-19.3	1.83 V	259	21.4	13.3
5	#17385.00	46.2 PK	68.2	-22.0	1.49 V	158	28.5	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:

802.11a

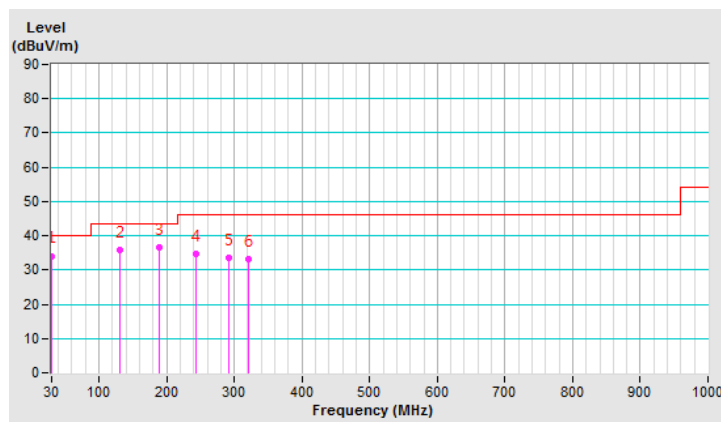
<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.19	34.1 QP	40.0	-5.9	1.00 H	210	42.8	-8.7
2	131.63	35.9 QP	43.5	-7.6	1.50 H	306	44.0	-8.1
3	189.95	36.5 QP	43.5	-7.0	1.50 H	259	46.0	-9.5
4	244.08	34.8 QP	46.0	-11.2	1.50 H	360	42.9	-8.1
5	292.00	33.7 QP	46.0	-12.3	1.00 H	120	39.9	-6.2
6	321.29	33.2 QP	46.0	-12.8	1.00 H	125	38.2	-5.0

**REMARKS:**

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



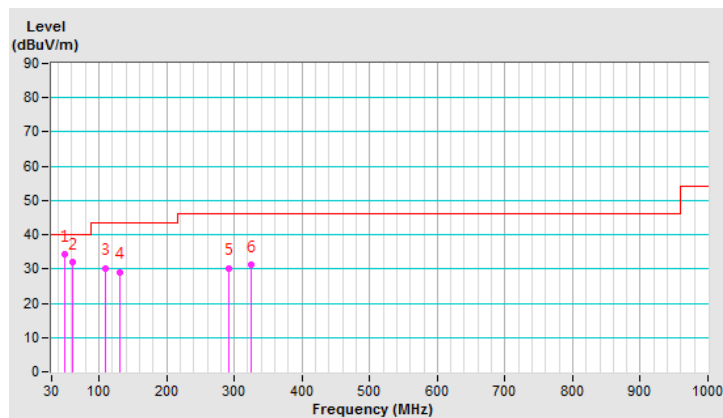
<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.76	34.3 QP	40.0	-5.7	1.00 V	197	41.8	-7.5
2	60.09	32.1 QP	40.0	-7.9	1.00 V	1	40.4	-8.3
3	109.20	30.3 QP	43.5	-13.2	1.00 V	360	40.5	-10.2
4	130.90	29.2 QP	43.5	-14.3	2.00 V	48	37.3	-8.1
5	292.02	30.3 QP	46.0	-15.7	1.50 V	8	36.5	-6.2
6	324.03	31.4 QP	46.0	-14.6	1.00 V	0	36.4	-5.0

**REMARKS:**

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



## 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: June 09, 2020

#### 4.2.3 Test Procedure

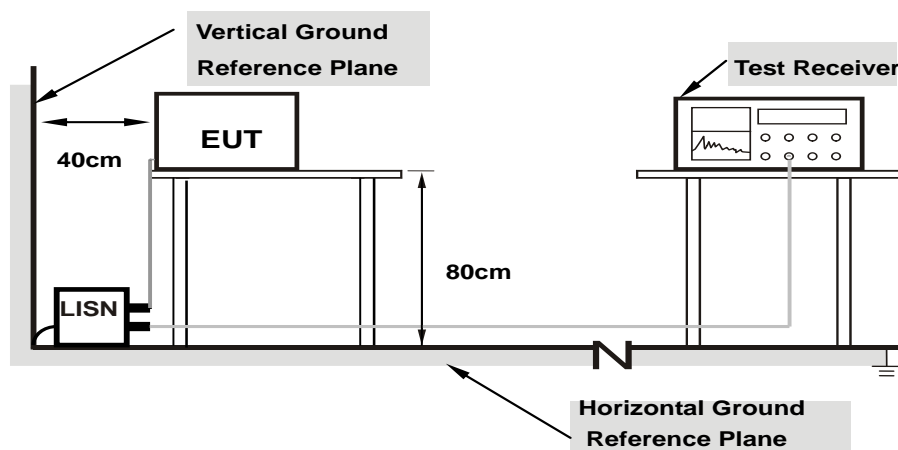
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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



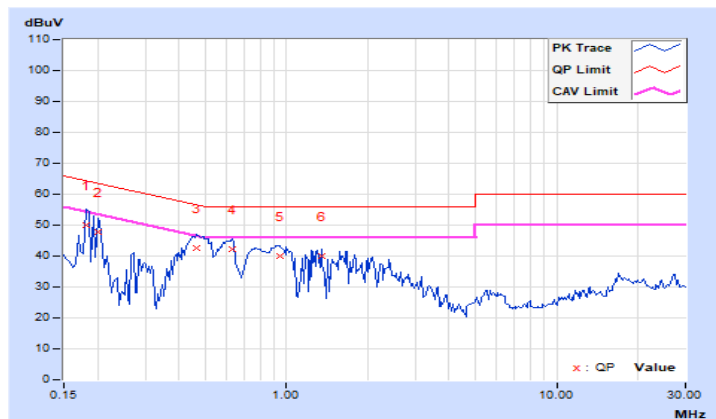
#### 4.2.7 Test Results

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

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.18125	9.97	39.98	19.01	49.95	28.98	64.43	54.43	-14.48	-25.45
2	0.20078	9.97	37.86	18.52	47.83	28.49	63.58	53.58	-15.75	-25.09
3	0.46250	9.98	32.61	17.35	42.59	27.33	56.65	46.65	-14.06	-19.32
4	0.63047	10.00	32.27	20.33	42.27	30.33	56.00	46.00	-13.73	-15.67
5	0.94297	10.02	29.92	14.56	39.94	24.58	56.00	46.00	-16.06	-21.42
6	1.34766	10.04	29.86	16.52	39.90	26.56	56.00	46.00	-16.10	-19.44

#### Remarks:

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

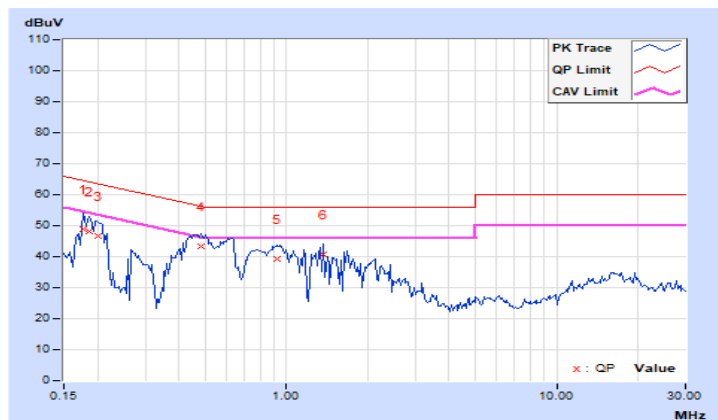


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

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	0.17734	9.97	38.78	16.24	48.75	26.21	64.61	54.61	-15.86
2	0.18516	9.97	38.13	17.32	48.10	27.29	64.25	54.25	-16.15	-26.96
3	0.20078	9.97	36.81	17.00	46.78	26.97	63.58	53.58	-16.80	-26.61
<b>4</b>	<b>0.48203</b>	<b>9.99</b>	<b>33.48</b>	<b>17.83</b>	<b>43.47</b>	<b>27.82</b>	<b>56.30</b>	<b>46.30</b>	<b>-12.83</b>	<b>-18.48</b>
5	0.91953	10.01	29.12	12.86	39.13	22.87	56.00	46.00	-16.87	-23.13
6	1.37109	10.03	30.81	17.56	40.84	27.59	56.00	46.00	-15.16	-18.41

#### 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

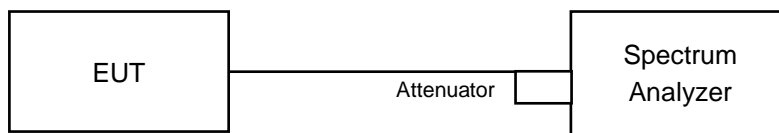
Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (24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

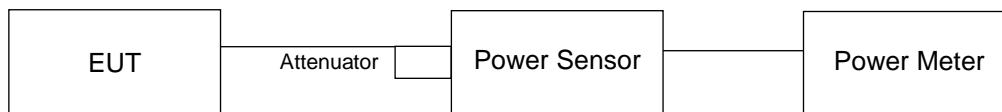
#### 4.3.2 Test Setup

##### FOR POWER OUTPUT MEASUREMENT

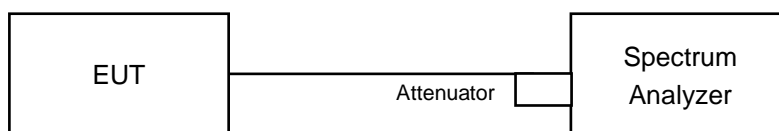
For channel straddling 5725MHz:



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-1

1. Set span to encompass the entire 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. Set trigger to free run (duty cycle  $\geq 98$  percent)
7. Detector = RMS.
8. Trace average at least 100 traces in power averaging mode
9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

###### 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	27.733	14.43	24.00	Pass
40	5200	31.117	14.93	24.00	Pass
48	5240	35.975	15.56	24.00	Pass
52	5260	40.926	16.12	24.00	Pass
60	5300	47.863	16.80	24.00	Pass
64	5320	34.754	15.41	24.00	Pass
100	5500	23.281	13.67	24.00	Pass
116	5580	32.137	15.07	24.00	Pass
140	5700	15.382	11.87	24.00	Pass
*144 (U-NII-2C Band)	5720	4.036	6.06	24.00	Pass
*144 (U-NII-3 Band)	5720	1.866	2.71	30.00	Pass
149	5745	25.351	14.04	30.00	Pass
157	5785	25.41	14.05	30.00	Pass
165	5825	26.002	14.15	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	5.902	7.71	12.81	19.099	12.81

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	43.45	27.37 > 24
60	5300	45.25	27.55 > 24
64	5320	41.88	27.22 > 24
100	5500	40.72	27.09 > 24
116	5580	46.73	27.69 > 24
140	5700	44.05	27.43 > 24
144 (U-NII-2C Band)	5720	27.03	25.31 > 24

**802.11n (HT20)**

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	27.797	14.44	24.00	Pass
40	5200	29.923	14.76	24.00	Pass
48	5240	32.734	15.15	24.00	Pass
52	5260	37.844	15.78	24.00	Pass
60	5300	44.157	16.45	24.00	Pass
64	5320	35.481	15.50	24.00	Pass
100	5500	18.621	12.70	24.00	Pass
116	5580	31.405	14.97	24.00	Pass
140	5700	16.368	12.14	24.00	Pass
*144 (U-NII-2C Band)	5720	2.547	4.06	24.00	Pass
*144 (U-NII-3 Band)	5720	0.7447	-1.28	30.00	Pass
149	5745	26.062	14.16	30.00	Pass
157	5785	25.882	14.13	30.00	Pass
165	5825	26.242	14.19	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	3.2917	5.17	12.92	19.588	12.92

**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	44.2	27.45 > 24
60	5300	47.2	27.73 > 24
64	5320	45.69	27.59 > 24
100	5500	43.53	27.38 > 24
116	5580	50.47	28.03 > 24
140	5700	47.79	27.79 > 24
144 (U-NII-2C Band)	5720	27.57	25.4 > 24

**802.11n (HT40)**

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
38	5190	13.932	11.44	24.00	Pass
46	5230	40.272	16.05	24.00	Pass
54	5270	21.928	13.41	24.00	Pass
62	5310	21.429	13.31	24.00	Pass
102	5510	16.749	12.24	24.00	Pass
110	5550	34.674	15.40	24.00	Pass
134	5670	23.988	13.80	24.00	Pass
*142 (U-NII-2C Band)	5710	4.385	6.42	24.00	Pass
*142 (U-NII-3 Band)	5710	0.3373	-4.72	30.00	Pass
151	5755	27.542	14.40	30.00	Pass
159	5795	25.704	14.10	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	4.7223	6.74	12.92	19.588	12.92

**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	86.08	30.34 > 24
62	5310	81.68	30.12 > 24
102	5510	79.4	29.99 > 24
110	5550	95.77	30.81 > 24
134	5670	89.04	30.49 > 24
142 (U-NII-2C Band)	5710	60.44	28.81 > 24

## 26dB OCCUPIED BANDWIDTH

### 802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	43.45
60	5300	45.25
64	5320	41.88
100	5500	40.72
116	5580	46.73
140	5700	44.05
144 (U-NII-2C Band)	5720	27.03

### 802.11n (HT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	44.2
60	5300	47.2
64	5320	45.69
100	5500	43.53
116	5580	50.47
140	5700	47.79
144 (U-NII-2C Band)	5720	27.57

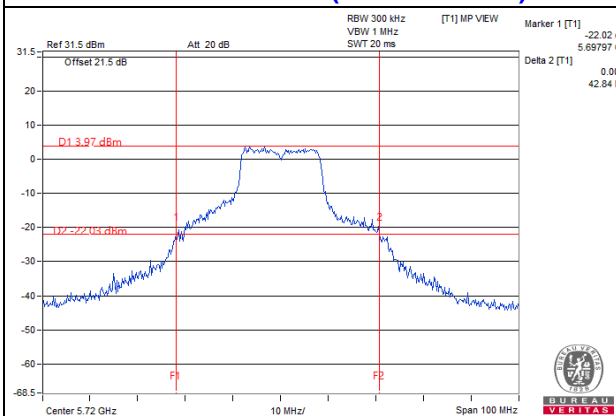
### 802.11n (HT40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
54	5270	86.08
62	5310	81.68
102	5510	79.4
110	5550	95.77
134	5670	89.04
142 (U-NII-2C Band)	5710	60.44

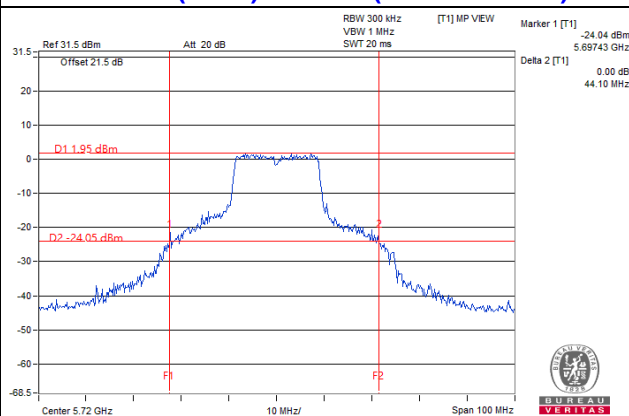


### Spectrum Plot of Worst Value

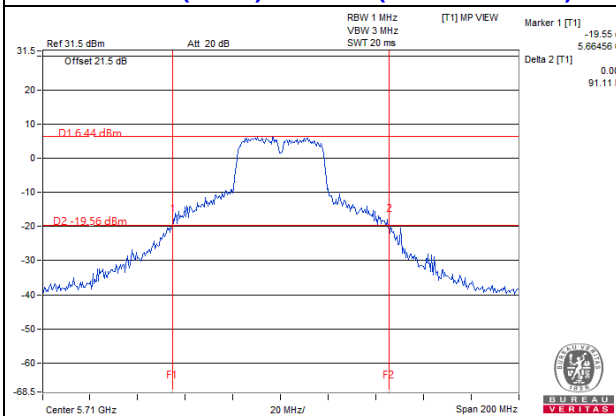
#### 802.11a / CH144 (U-NII-2C Band)



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



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

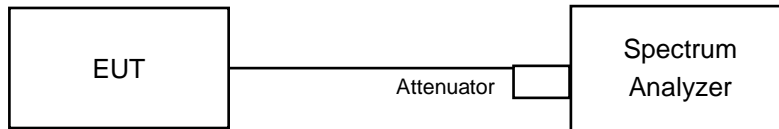


**Note:**

For CH144 (U-NII-2C) = 5725MHz - Marker 1  
 For CH142 (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	21.96
40	5200	22.92
48	5240	19.2
52	5260	19.68
60	5300	19.56
64	5320	17.88
100	5500	17.4
116	5580	19.2
140	5700	19.56
144 (U-NII-2C Band)	5720	15.8
144 (U-NII-3 Band)	5720	4
149	5745	29.88
157	5785	28.56
165	5825	25.56

##### 802.11n (HT20)

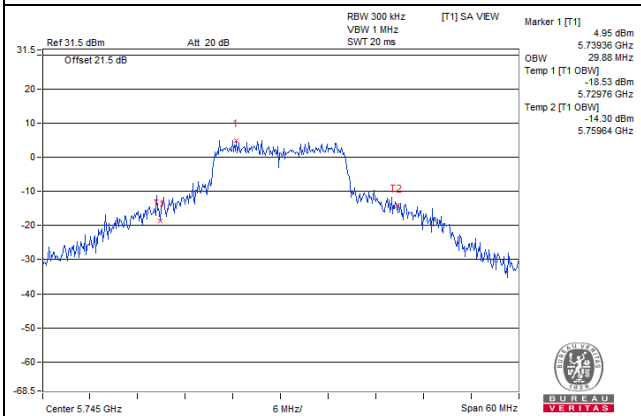
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	19.92
40	5200	19.68
48	5240	19.08
52	5260	19.32
60	5300	19.68
64	5320	18.96
100	5500	19.08
116	5580	19.56
140	5700	19.68
144 (U-NII-2C Band)	5720	15.56
144 (U-NII-3 Band)	5720	4.24
149	5745	29.4
157	5785	27.24
165	5825	24.6

**802.11n (HT40)**

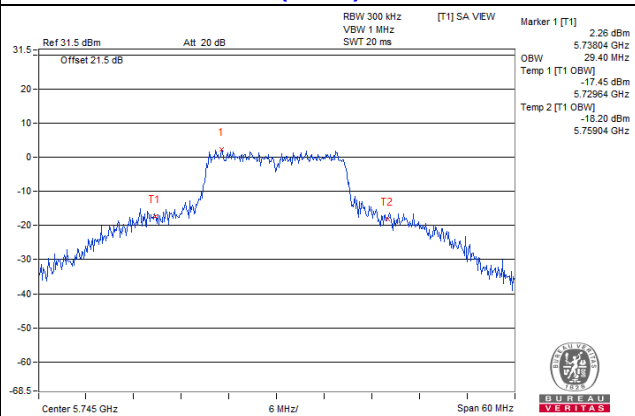
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	38.88
46	5230	39.12
54	5270	39.84
62	5310	37.2
102	5510	36.96
110	5550	50.4
134	5670	37.68
142 (U-NII-2C Band)	5710	34.68
142 (U-NII-3 Band)	5710	3.72
151	5755	55.92
159	5795	51.12

### Spectrum Plot of Max. Value

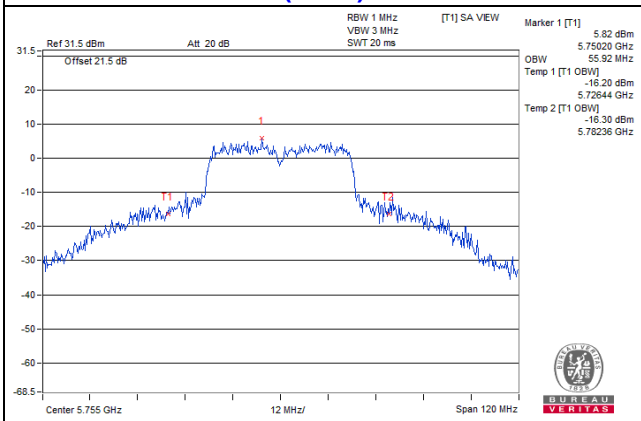
#### 802.11a / CH149



#### 802.11n (HT20) / CH149

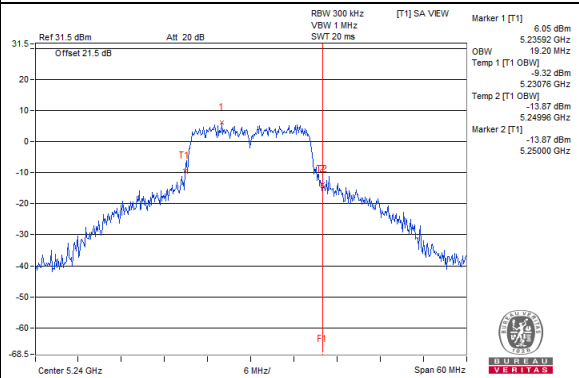


#### 802.11n (HT40) / CH151

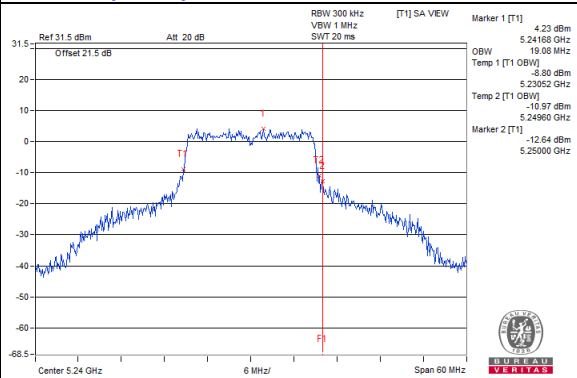


**Spectrum Plot for near by DFS band  
(DFS is required, if 99% OCP straddle into U-NII-2A band)**

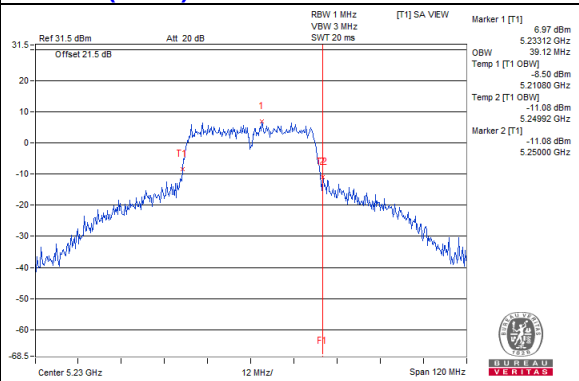
**802.11a / CH48**



**802.11n (HT20) / CH48**

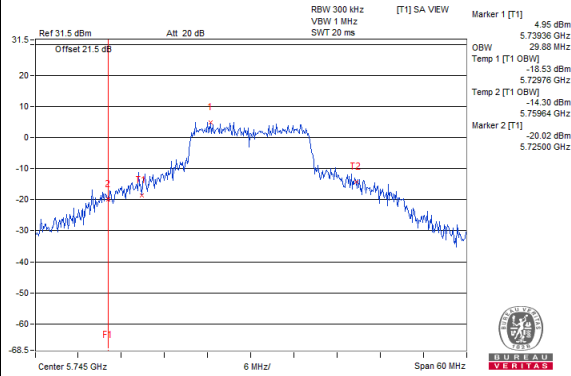


**802.11n (HT40) / CH46**

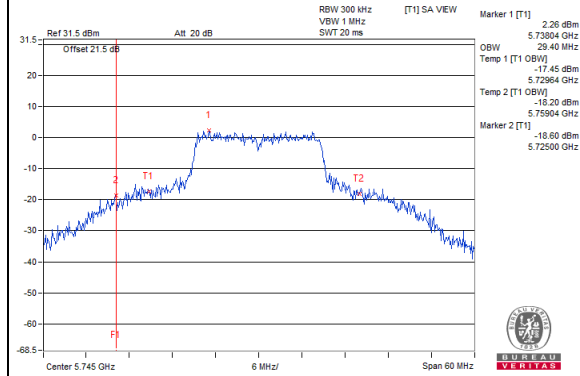


**Spectrum Plot for near by DFS band  
(DFS is required, if 99% OCP straddle into U-NII-2C band)**

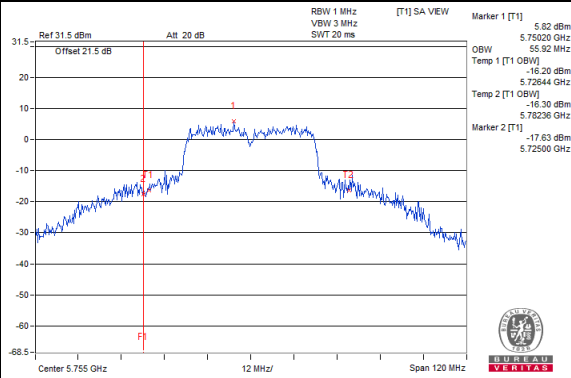
**802.11a / CH149**



**802.11n (HT20) / CH149**



**802.11n (HT40) / CH151**

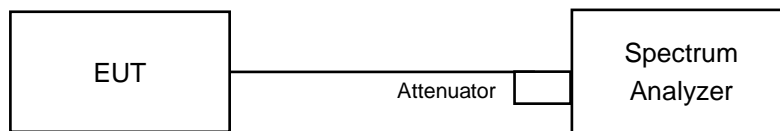


## 4.5 Peak Power Spectral Density Measurement

### 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	0.01	0.41	0.42	11.00	PASS
40	5200	0.68	0.41	1.09	11.00	PASS
48	5240	0.18	0.41	0.59	11.00	PASS
52	5260	0.73	0.41	1.14	11.00	PASS
60	5300	2.46	0.41	2.87	11.00	PASS
64	5320	1.43	0.41	1.84	11.00	PASS
100	5500	-0.87	0.41	-0.46	11.00	PASS
116	5580	-0.68	0.41	-0.27	11.00	PASS
140	5700	-2.11	0.41	-1.70	11.00	PASS
144 (U-NII-2C Band)	5720	-2.13	0.41	-1.72	11.00	PASS

##### 802.11n (HT20)

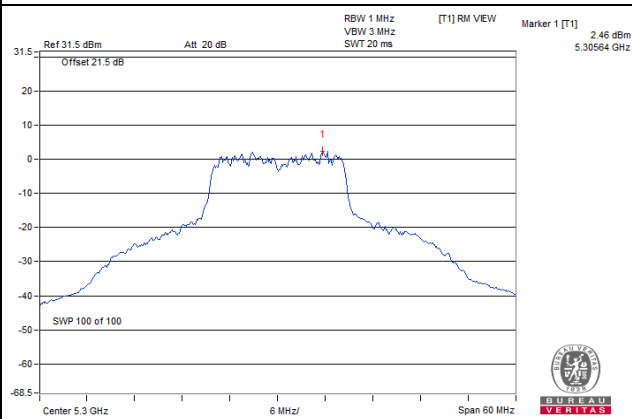
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
38	5190	-1.14	0.35	-0.79	11.00	PASS
40	5200	-0.51	0.35	-0.16	11.00	PASS
48	5240	-0.30	0.35	0.05	11.00	PASS
52	5260	1.06	0.35	1.41	11.00	PASS
60	5300	2.10	0.35	2.45	11.00	PASS
64	5320	0.11	0.35	0.46	11.00	PASS
100	5500	-1.52	0.35	-1.17	11.00	PASS
116	5580	-1.68	0.35	-1.33	11.00	PASS
140	5700	-3.42	0.35	-3.07	11.00	PASS
144 (U-NII-2C Band)	5720	-2.64	0.35	-2.29	11.00	PASS

### 802.11n (HT40)

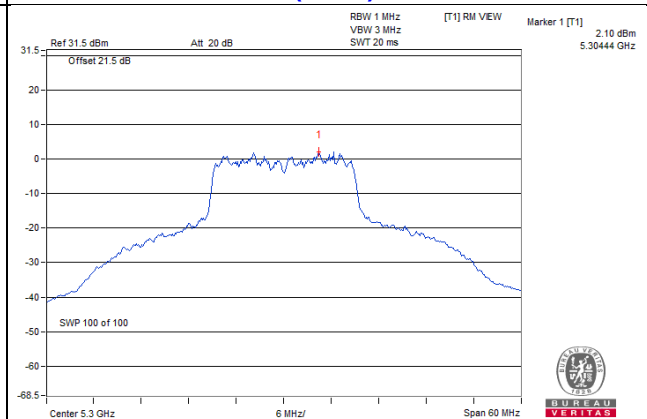
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
38	5190	-5.53	0.37	-5.16	11.00	PASS
46	5230	-3.61	0.37	-3.24	11.00	PASS
54	5270	-4.25	0.37	-3.88	11.00	PASS
62	5310	-4.14	0.37	-3.77	11.00	PASS
102	5510	-5.13	0.37	-4.76	11.00	PASS
110	5550	-2.82	0.37	-2.45	11.00	PASS
134	5670	-6.71	0.37	-6.34	11.00	PASS
142 (U-NII-2C Band)	5710	-5.28	0.37	-4.91	11.00	PASS

### Spectrum Plot of Worst Value

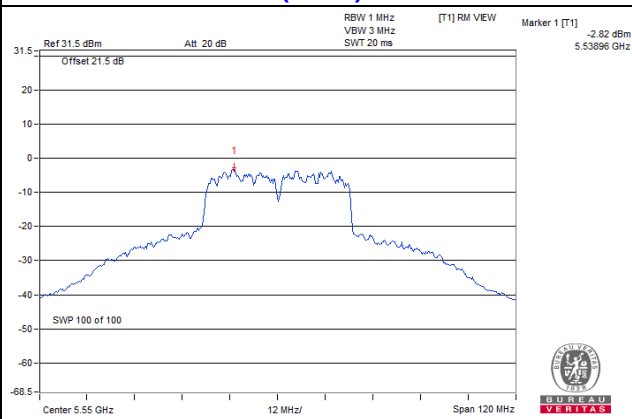
#### 802.11a / CH60



#### 802.11n (HT20) / CH60



#### 802.11n (HT40) / CH110



**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	-10.77	0.41	0.09204	-10.36	-8.14	30.00	PASS
149	5745	-8.98	0.41	0.139	-8.57	-6.35	30.00	PASS
157	5785	-8.35	0.41	0.1607	-7.94	-5.72	30.00	PASS
165	5825	-7.64	0.41	0.1892	-7.23	-5.01	30.00	PASS

**802.11n (HT20)**

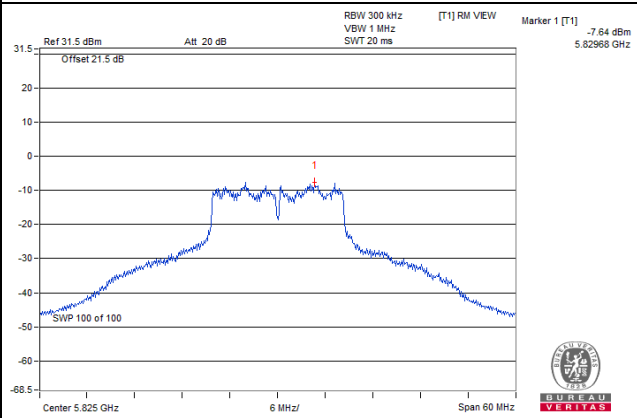
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
144 (U-NII-3 Band)	5720	-11.29	0.35	0.08054	-10.94	-8.72	30.00	PASS
149	5745	-11.81	0.35	0.07145	-11.46	-9.24	30.00	PASS
157	5785	-10.96	0.35	0.0869	-10.61	-8.39	30.00	PASS
165	5825	-11.09	0.35	0.08433	-10.74	-8.52	30.00	PASS

**802.11n (HT40)**

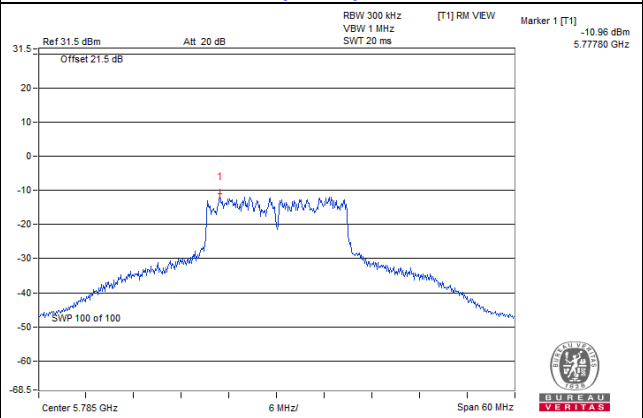
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
142 (U-NII-3 Band)	5710	-15.24	0.37	0.03258	-14.87	-12.65	30.00	PASS
151	5755	-14.39	0.37	0.03963	-14.02	-11.80	30.00	PASS
159	5795	-14.27	0.37	0.04074	-13.90	-11.68	30.00	PASS

Spectrum Plot of Worst Value

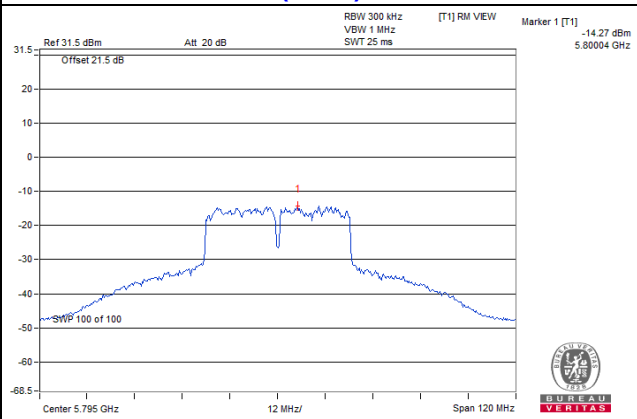
802.11a / CH165



802.11n (HT20) / CH157



802.11n (HT40) / CH159

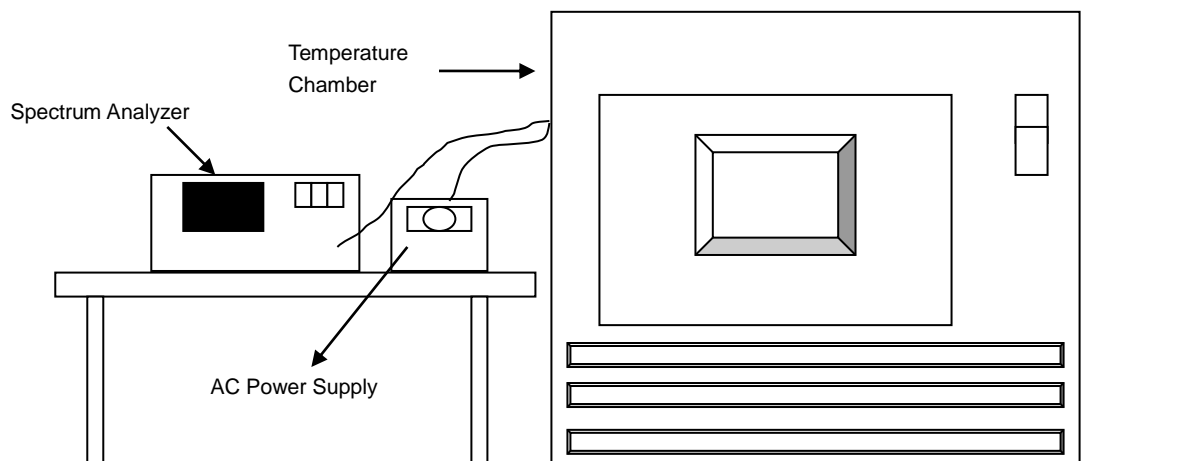


## 4.6 Frequency Stability Measurement

### 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

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
40	120	5179.9865	Pass	5179.9874	Pass	5179.9872	Pass	5179.984	Pass
30	120	5179.9886	Pass	5179.9877	Pass	5179.9874	Pass	5179.9866	Pass
20	120	5179.9856	Pass	5179.9884	Pass	5179.9847	Pass	5179.9879	Pass
10	120	5180.0181	Pass	5180.0208	Pass	5180.0209	Pass	5180.0191	Pass
0	120	5180.0261	Pass	5180.0232	Pass	5180.0269	Pass	5180.0242	Pass

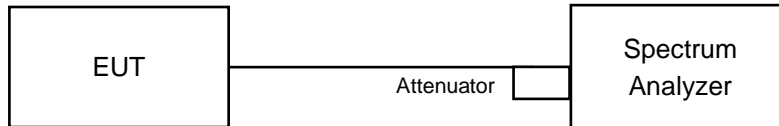
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5179.9864	Pass	5179.9888	Pass	5179.984	Pass	5179.9879	Pass
	120	5179.9856	Pass	5179.9884	Pass	5179.9847	Pass	5179.9879	Pass
	102	5179.9861	Pass	5179.9888	Pass	5179.9849	Pass	5179.9882	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	3.18	Pass
149	5745	16.4	Pass
157	5785	16.4	Pass
165	5825	16.42	Pass

##### 802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Pass / Fail
144 (U-NII-3 Band)	5720	3.79	Pass
149	5745	17.64	Pass
157	5785	17.64	Pass
165	5825	17.61	Pass

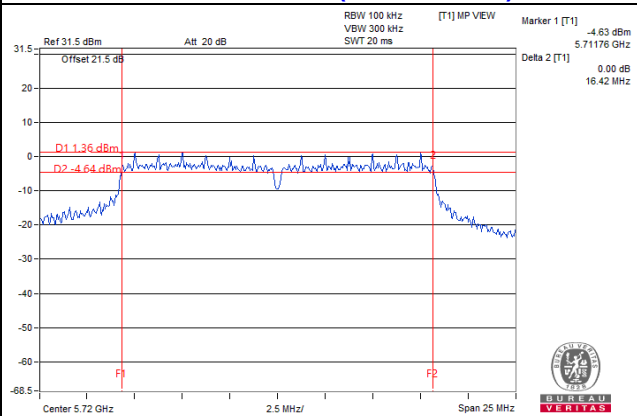
##### 802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Pass / Fail
142 (U-NII-3 Band)	5710	2.66	Pass
151	5755	35.66	Pass
159	5795	35.21	Pass

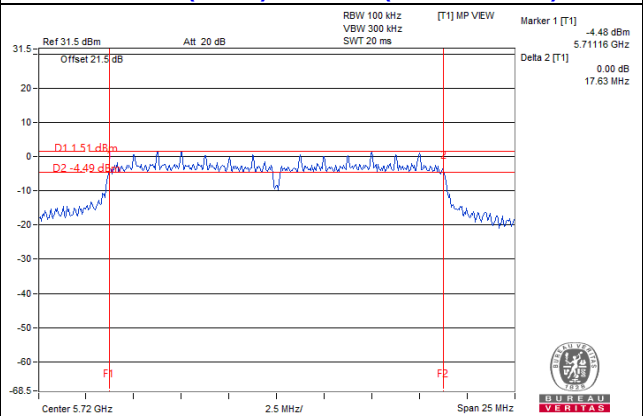


Spectrum Plot of Worst Value

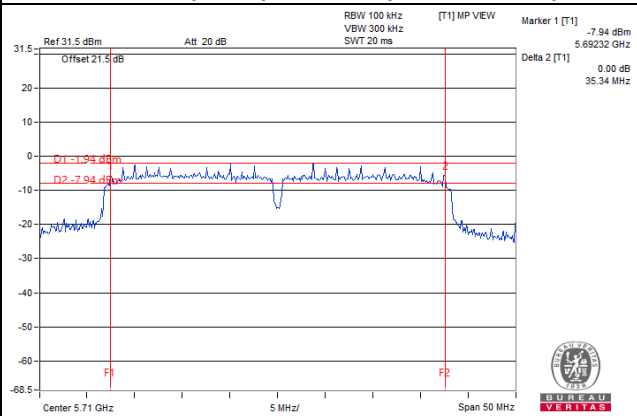
802.11a / CH144 (U-NII-3 Band)



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

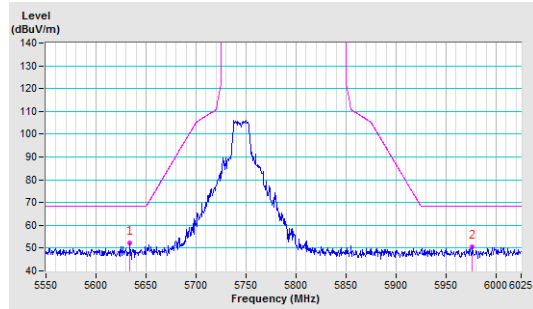
Please refer to the attached file (Test Setup Photo).

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

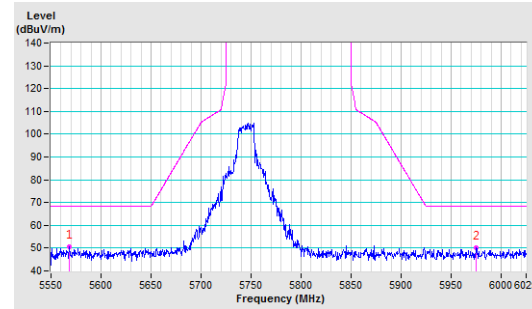
802.11a

**CH 149 5745 MHz**

**Horizontal**

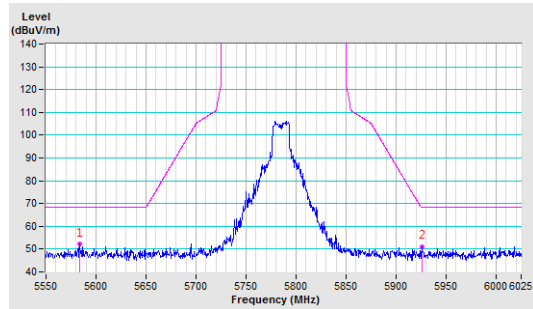


**Vertical**

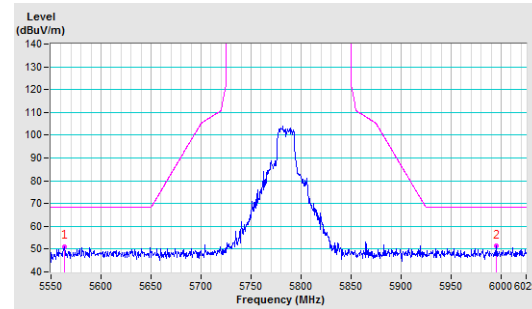


**CH 157 5785 MHz**

**Horizontal**

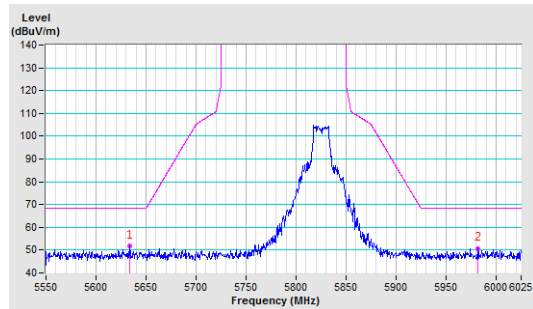


**Vertical**

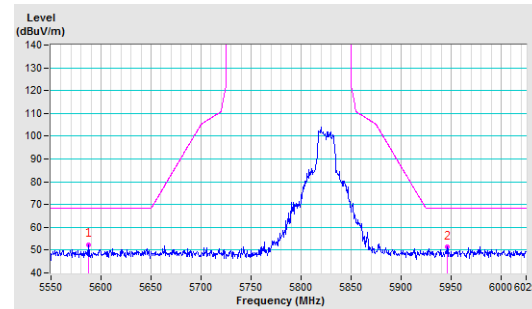


**CH 165 5825 MHz**

**Horizontal**



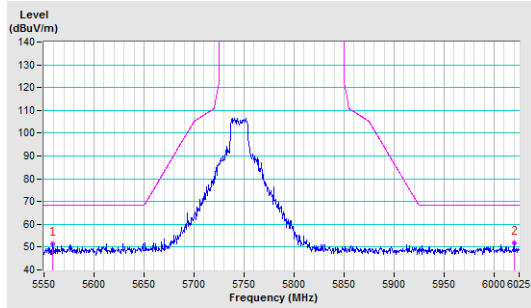
**Vertical**



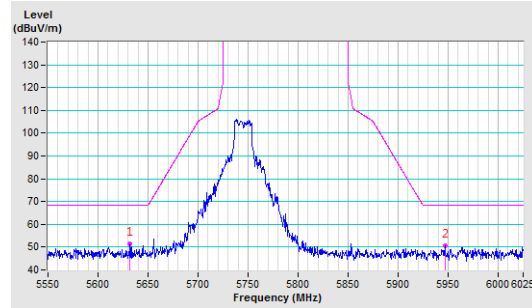
802.11n (HT20)

CH 149 5745 MHz

Horizontal

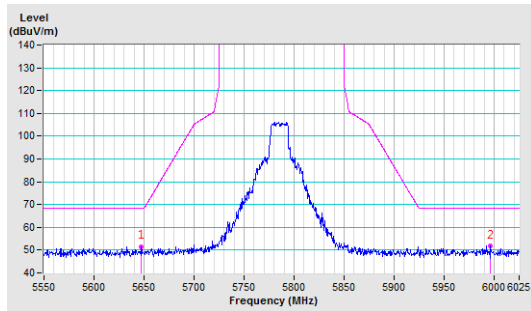


Vertical

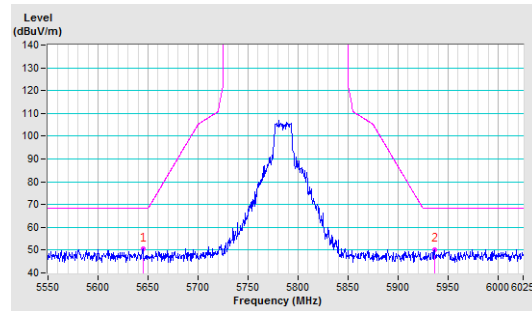


CH 157 5785 MHz

Horizontal

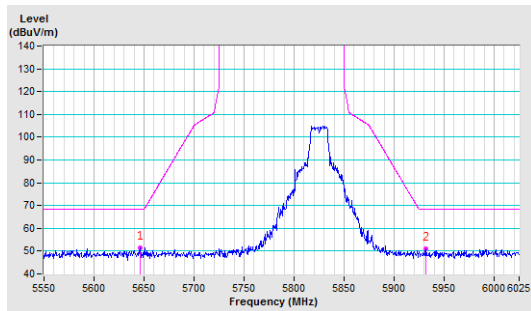


Vertical

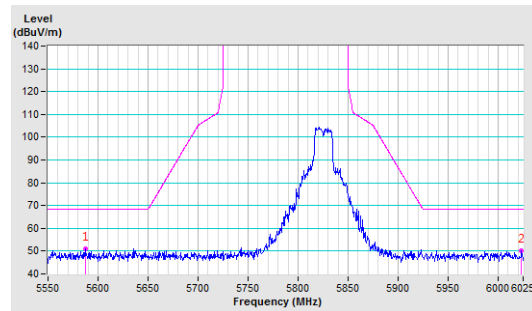


CH 165 5825 MHz

Horizontal



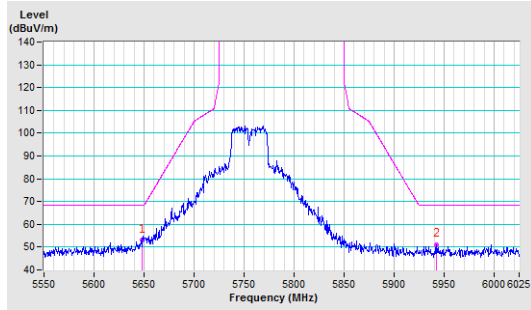
Vertical



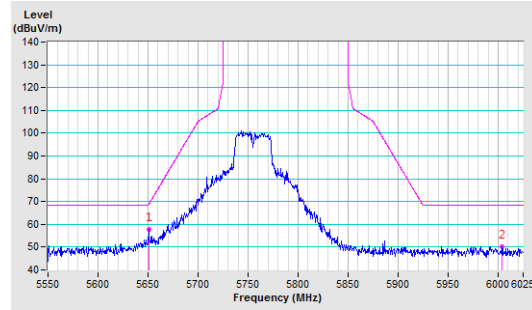
802.11n (HT40)

CH 151 5755 MHz

Horizontal

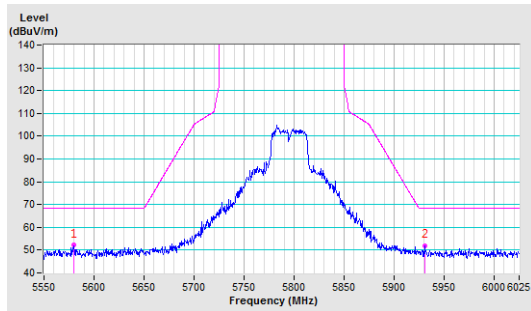


Vertical

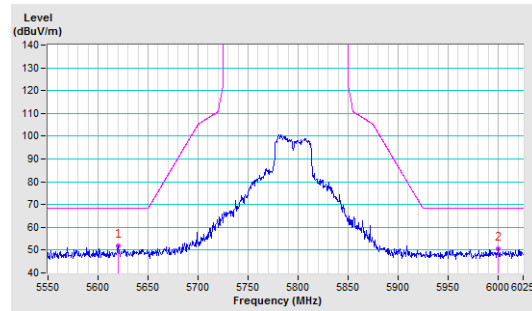


CH 159 5795 MHz

Horizontal

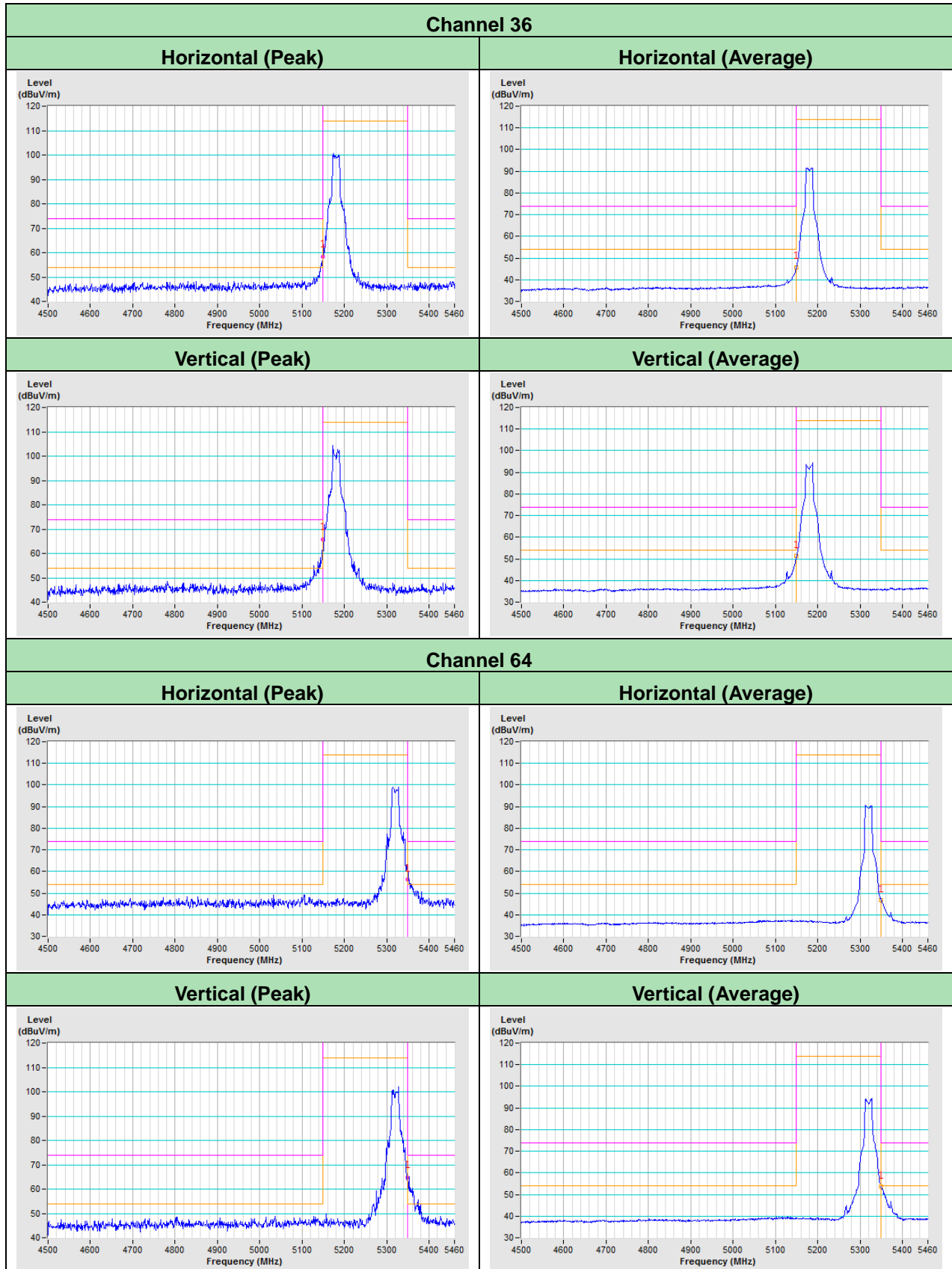


Vertical



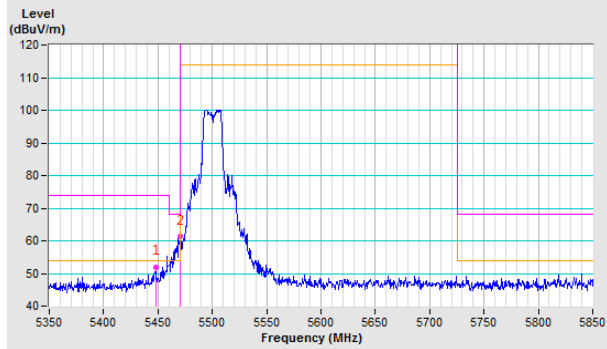
## Annex B- Band-edge measurement (For U-NII-1 band)

### 802.11a

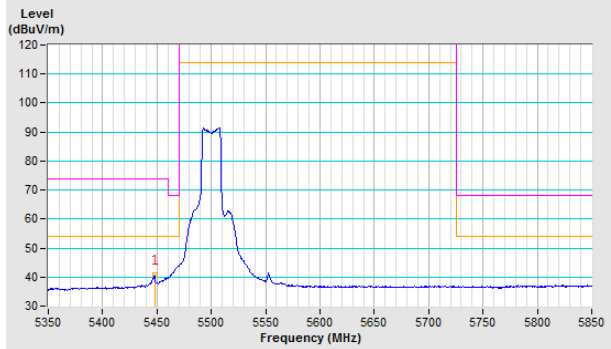


**Channel 100**

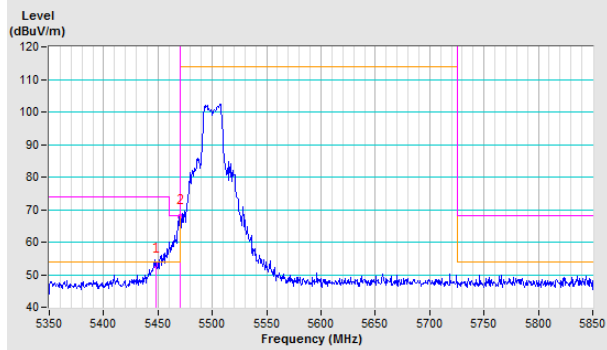
**Horizontal (Peak)**



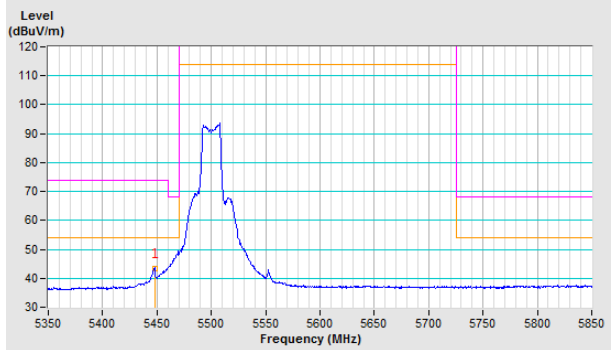
**Horizontal (Average)**



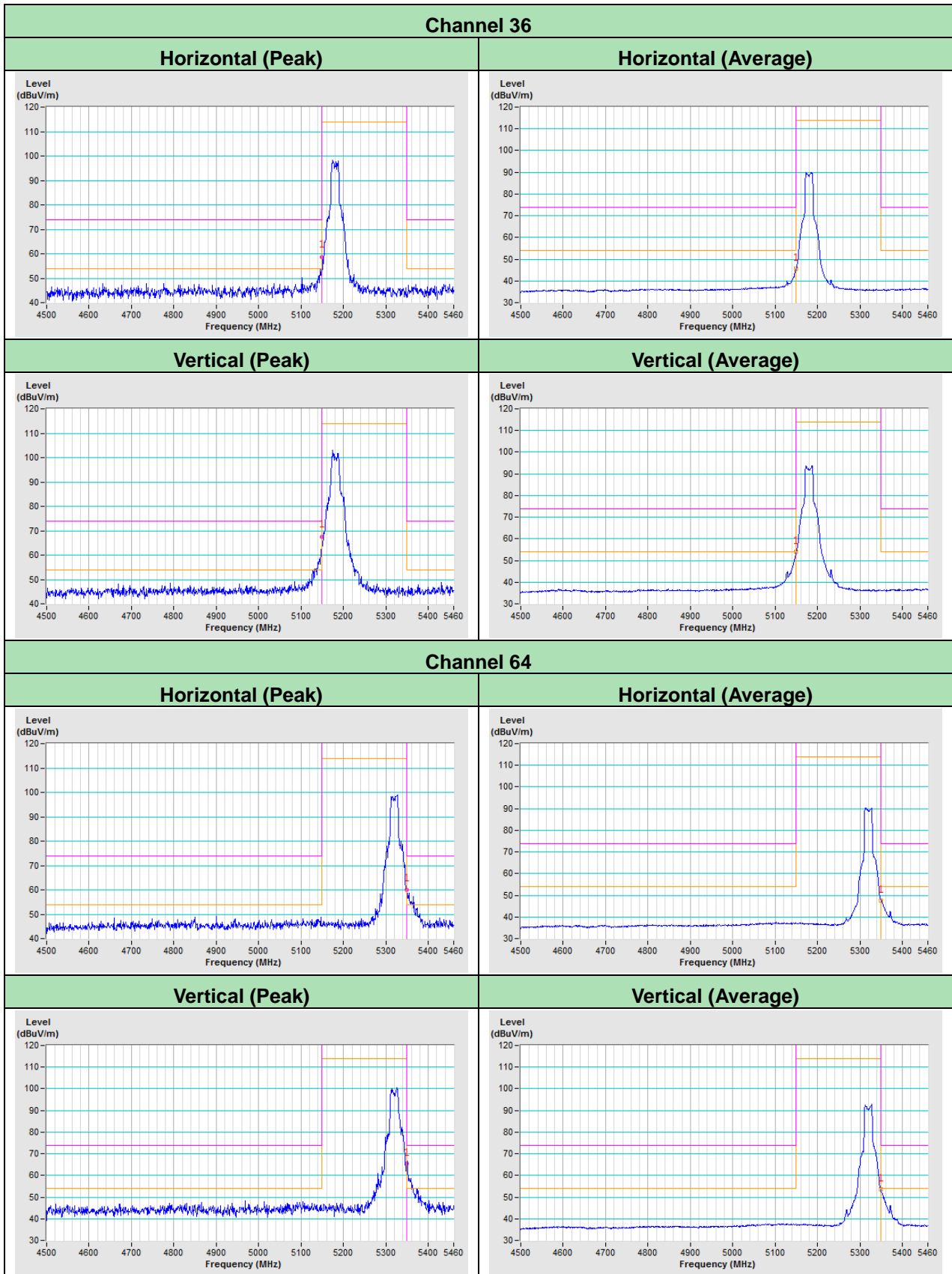
**Vertical (Peak)**



**Vertical (Average)**



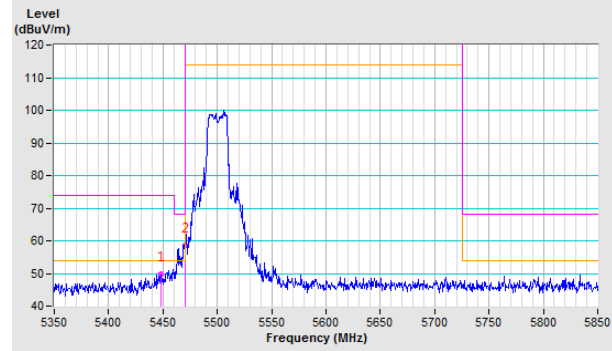
802.11n (HT20)



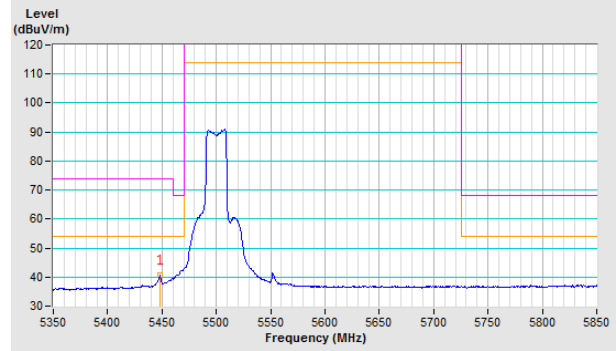


**Channel 100**

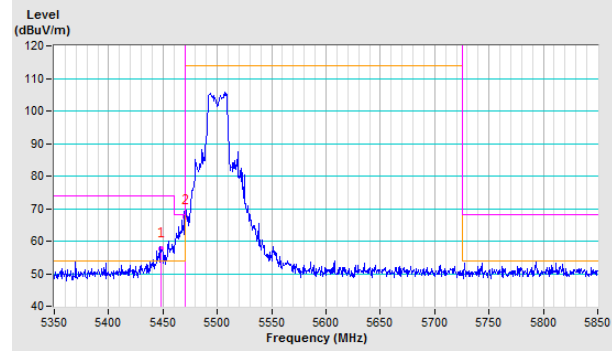
**Horizontal (Peak)**



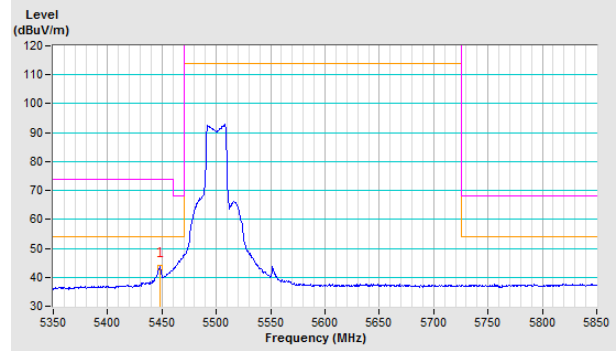
**Horizontal (Average)**



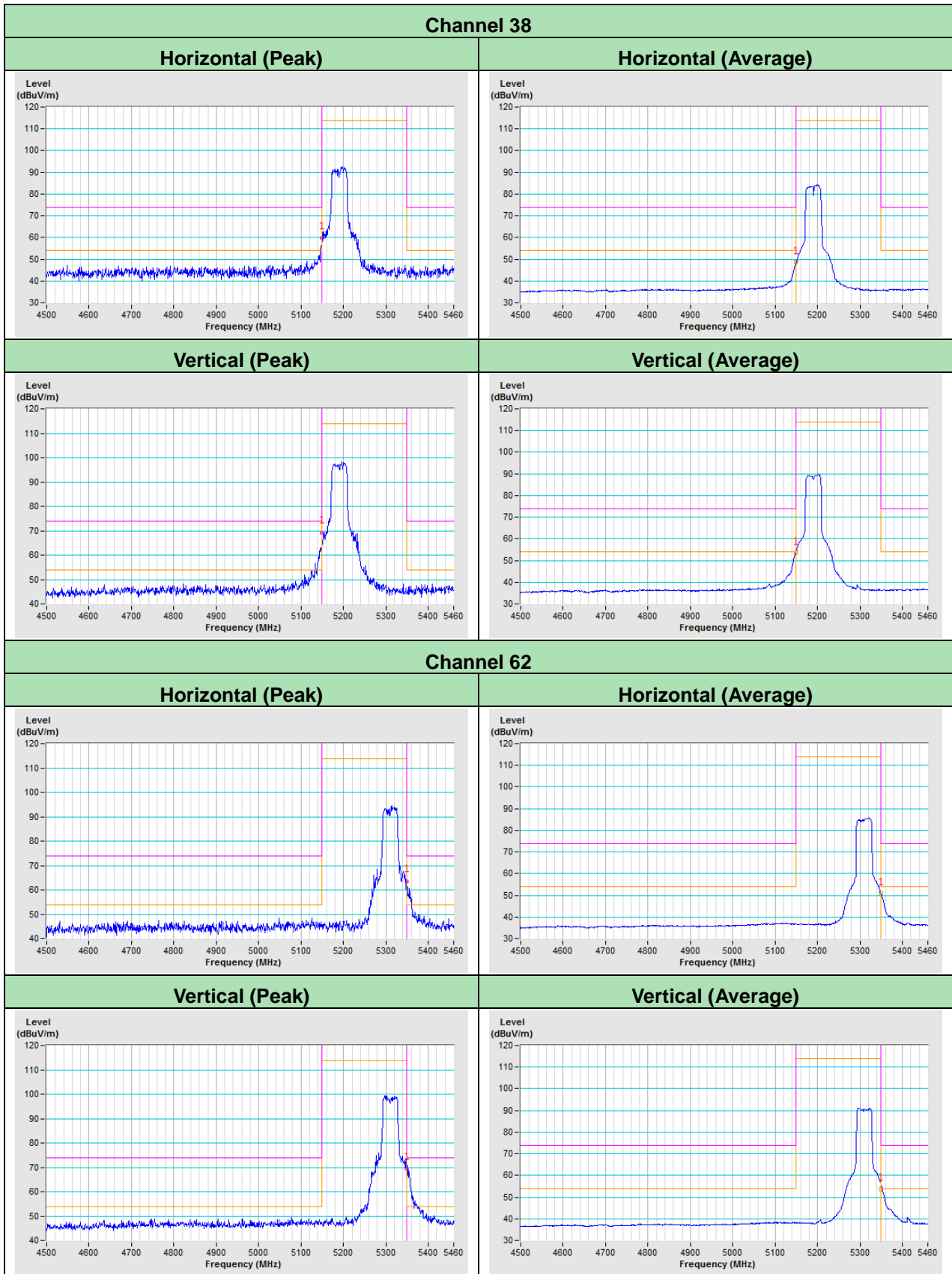
**Vertical (Peak)**



**Vertical (Average)**

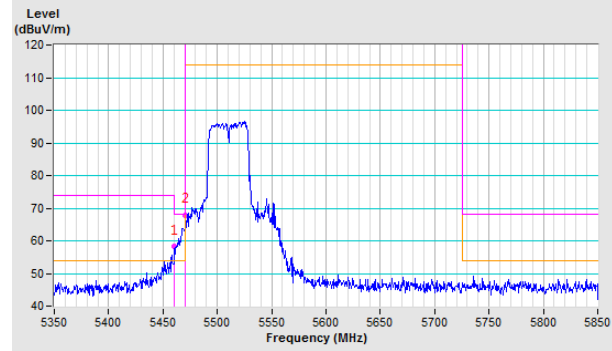


802.11n (HT40)

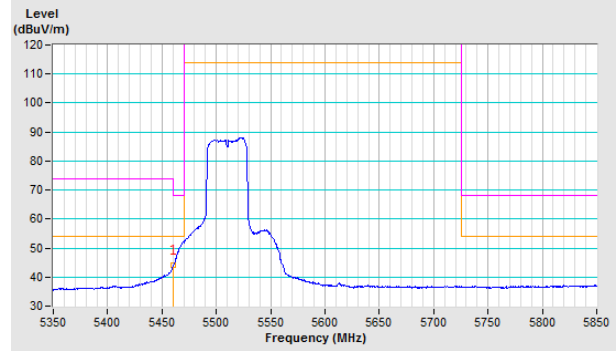


### Channel 102

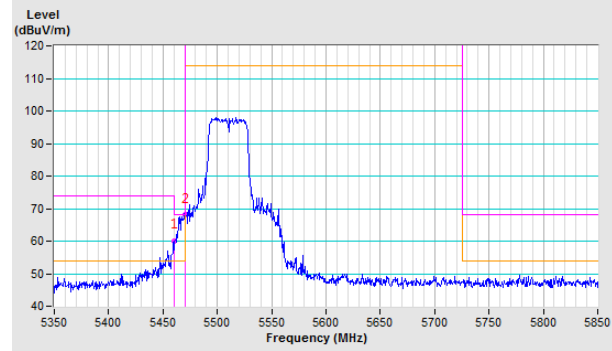
#### Horizontal (Peak)



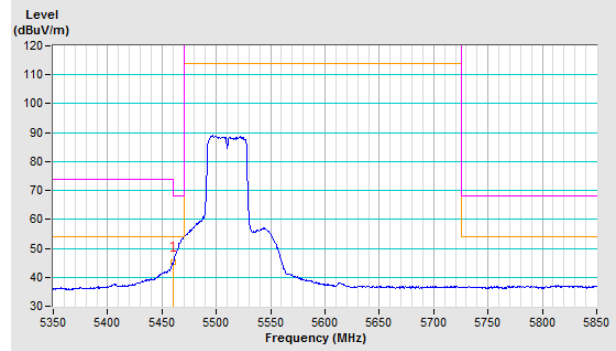
#### Horizontal (Average)



#### 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.

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

**Lin Kou EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

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

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

--- END ---