

FCC Test Report

Report No.: RFBBQZ-WTW-P20110514-1

FCC ID: PY321200536

Test Model: Perseverance

Serialized Model: Ingenuity, Phobos, Deimos

Received Date: Nov. 17, 2020

Test Date: Nov. 23, 2020 to Jan. 14, 2021

Issued Date: July 19, 2021

Applicant: NETGEAR, Inc.

Address: 350 East Plumeria Drive San Jose, CA 95134

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

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwa.

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
RFBBQZ-WTW-P20110514-1	Original release.	July 19, 2021

1 Certificate of Conformity

Product: WiFi Device

Brand: NETGEAR

Test Model: Perseverance

Series Model: Ingenuity, Phobos, Deimos

Sample Status: Engineering sample

Applicant: NETGEAR, Inc

Test Date: Nov. 23, 2020 to Jan. 14, 2021

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:** July 19, 2021
Claire Kuan / Specialist

Approved by :  , **Date:** July 19, 2021
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 -17.46dB at 0.48871MHz.
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 5644.17MHz.
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:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OBE test plots were recorded in Annex A.
2. For U-NII-1 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.
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	3.1 dB
	30MHz ~ 1GHz	5.5 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 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	WiFi Device
Brand	NETGEAR
Test Model	Perseverance
Series Model	Ingenuity, Phobos, Deimos
Status of EUT	Engineering sample
Power Supply Rating	19Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9 Mbps
Operating Frequency	2.4GHz: 2.412GHz ~ 2.462GHz 5GHz: 5.18 ~ 5.24GHz, 5.745 ~ 5.825GHz
Number of Channel	2.4GHz: 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7 5GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 9 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 4 802.11ac (VHT80), 802.11ax (HE80): 2
Output Power	CDD Mode: 2.412 ~ 2.462 GHz: 992.242 mW 5.18 ~ 5.24 GHz: 961.831 mW 5.745 ~ 5.825 GHz: 974.358 mW Beamforming Mode: 2.412 ~ 2.462 GHz: 857.979 mW 5.18 ~ 5.24 GHz: 885.88 mW 5.745 ~ 5.825 GHz: 937.7 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x1
Data Cable Supplied	NA

Note:

1. The EUT has below product names and model names which are identical to each other in all aspects except for the followings:

Product Name	Model Name	Description
WiFi Device	Perseverance	Function: Master WAN port*1; LAN port*4
WiFi Device	Ingenuity	Function: Master WAN port*1; LAN port*4
WiFi Device	Phobos	Function: Master + Client LAN port*4
WiFi Device	Deimos	Function: Master + Client LAN port*4

Note: From the above models, model: Perseverance was selected as representative model for the test and its data was recorded in this report.

2. The EUT has two radios as following table:

Radio 1	Radio 2	Radio 3	Radio 3
WLAN 2.4GHz	WLAN 5GHz (Low Band)	WLAN 5GHz (High Band)	WLAN 6GHz

3. Simultaneously transmission condition.

Condition	Technology			
1	WLAN 2.4GHz	WLAN 5GHz (Low Band)	WLAN 5GHz (High Band)	WLAN 6GHz

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

4. The device has two kinds pin to pin FEM as following table:

No.	FEM
1	1 st source
2	2 nd source

Note: From the above FEMs, the worse case was found in 1st source. Therefore only the test data of the mode was recorded in this report.

5. The EUT must be supplied with a power adapter as following table:

No.	Brand	Model No.	P/N	Spec.
1	NETGEAR	AD2003F10	332-11488-01	Input: 100-240Vac, 1.5A, 0-60Hz Output: 19Vdc, 3.16A DC Output cable: Unshielded, 1.8m
2	NETGEAR	2AEC060K1 L	332-11578-01	Input: 100-240Vac, 1.5A, 0-60Hz Output: 19Vdc, 3.16A DC Output cable: Unshielded, 1.8m

Note: From the above adapters, the AC Power Conducted Emissions and Radiated Emissions worse case was found in **Adapter 1**. Therefore only the test data of the mode was recorded in this report.

6. The directional antenna gain, please refer to the following table:

Channel	Directional Antenna Gain (dBi)
2.4GHz	6.66
UNII-1	6.43
UNII-2A	6.45
UNII-2C	6.3
UNII-3	6.21

Note: More detailed information, please refer to antenna specification.

7. The EUT incorporates a MIMO function:

2.4GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11b	4TX	4RX
802.11g	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
VHT20	4TX	4RX
VHT40	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
5GHz Band (For U-NII-1 Band)		
MODULATION MODE	TX & RX CONFIGURATION	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
5GHz Band (For U-NII-3 Band)		
MODULATION MODE	TX & RX CONFIGURATION	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX

Note:

1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz), 802.11ac mode for 20MHz (40MHz, 80MHz) and 802.11ax mode for 20MHz (40MHz, 80MHz), therefore the manufacturer will control the power for 802.11ac mode is the same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report. (Final test mode refer to section 3.2.1)

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

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
42	5210 MHz

FOR 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
155	5775 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
PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz
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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6Mb/s
802.11ax (HE20)		36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
802.11ax (HE40)		38 to 46	38, 46	OFDMA	BPSK	MCS0
802.11ax (HE80)		42	42	OFDMA	BPSK	MCS0
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6Mb/s
802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
802.11ax (HE40)		151 to 159	151, 159	OFDMA	BPSK	MCS0
802.11ax (HE80)		155	155	OFDMA	BPSK	MCS0

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5180-5240	36 to 48	40	OFDM	BPSK	6Mb/s
802.11a	5745-5825	149 to 165	149	OFDM	BPSK	6Mb/s

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5180-5240	36 to 48	40	OFDM	BPSK	6Mb/s
802.11a	5745-5825	149 to 165	149	OFDM	BPSK	6Mb/s

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6Mb/s
802.11ac (VHT20) (for output power)		36 to 48	36, 40, 48	OFDM	BPSK	MCS0
802.11ac (VHT40) (for output power)		38 to 46	38, 46	OFDM	BPSK	MCS0
802.11ac (VHT80) (for output power)		42	42	OFDM	BPSK	MCS0
802.11ax (HE20)		36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
802.11ax (HE40)		38 to 46	38, 46	OFDMA	BPSK	MCS0
802.11ax (HE80)		42	42	OFDMA	BPSK	MCS0
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6Mb/s
802.11ac (VHT20) (for output power)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
802.11ac (VHT40) (for output power)		151 to 159	151, 159	OFDM	BPSK	MCS0
802.11ac (VHT80) (for output power)		155	155	OFDM	BPSK	MCS0
802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
802.11ax (HE40)		151 to 159	151, 159	OFDMA	BPSK	MCS0
802.11ax (HE80)		155	155	OFDMA	BPSK	MCS0
Beamforming Mode (output power only)						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ac (VHT20)	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	MCS0
802.11ac (VHT80)		42	42	OFDM	BPSK	MCS0
802.11ax (HE20)		36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
802.11ax (HE40)		38 to 46	38, 46	OFDMA	BPSK	MCS0
802.11ax (HE80)		42	42	OFDMA	BPSK	MCS0
802.11ac (VHT20)	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	MCS0
802.11ac (VHT80)		155	155	OFDM	BPSK	MCS0
802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
802.11ax (HE40)		151 to 159	151, 159	OFDMA	BPSK	MCS0
802.11ax (HE80)		155	155	OFDMA	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE$\geq$1G	24deg. C, 68%RH	120Vac, 60Hz	Carter Lin
	25deg. C, 65%RH		Ryan Du
	24deg. C, 67%RH		Tom Yang
RE<1G	22deg. C, 70%RH	120Vac, 60Hz	Ryan Du
PLC	25deg. C, 69%RH	120Vac, 60Hz	Sampson Chen
	25deg. C, 72%RH		
APCM	25deg. C, 60%RH	120Vac, 60Hz	Eric Peng

3.3 Duty Cycle of Test Signal

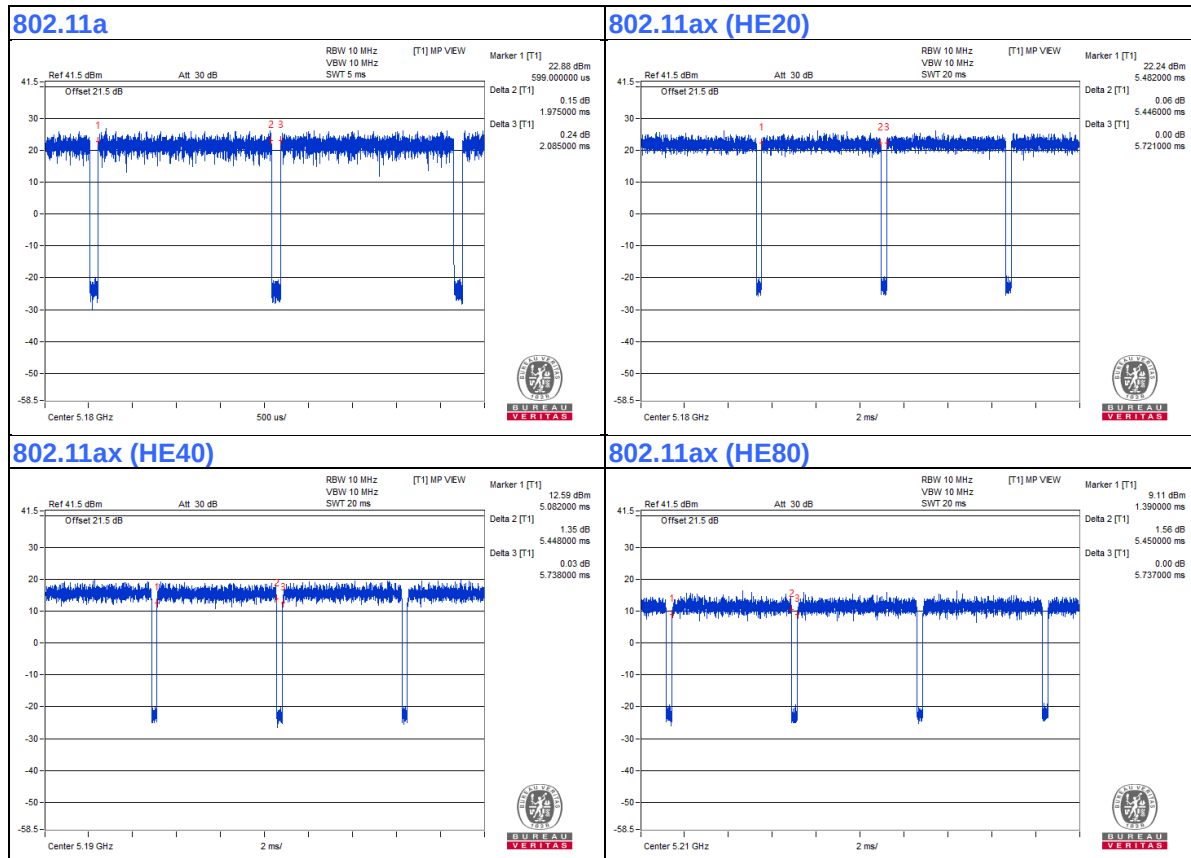
Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 1.975 ms / 2.085 ms = 0.947, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.24 \text{ dB}$

802.11ax (HE20): Duty cycle = 5.446 ms / 5.721 ms = 0.952, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.21 \text{ dB}$

802.11ax (HE40): Duty cycle = 5.448 ms / 5.738 ms = 0.949, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.23 \text{ dB}$

802.11ax (HE80): Duty cycle = 8.45 ms / 5.737 ms = 0.95, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.22 \text{ dB}$



3.4 Description of Support Units

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

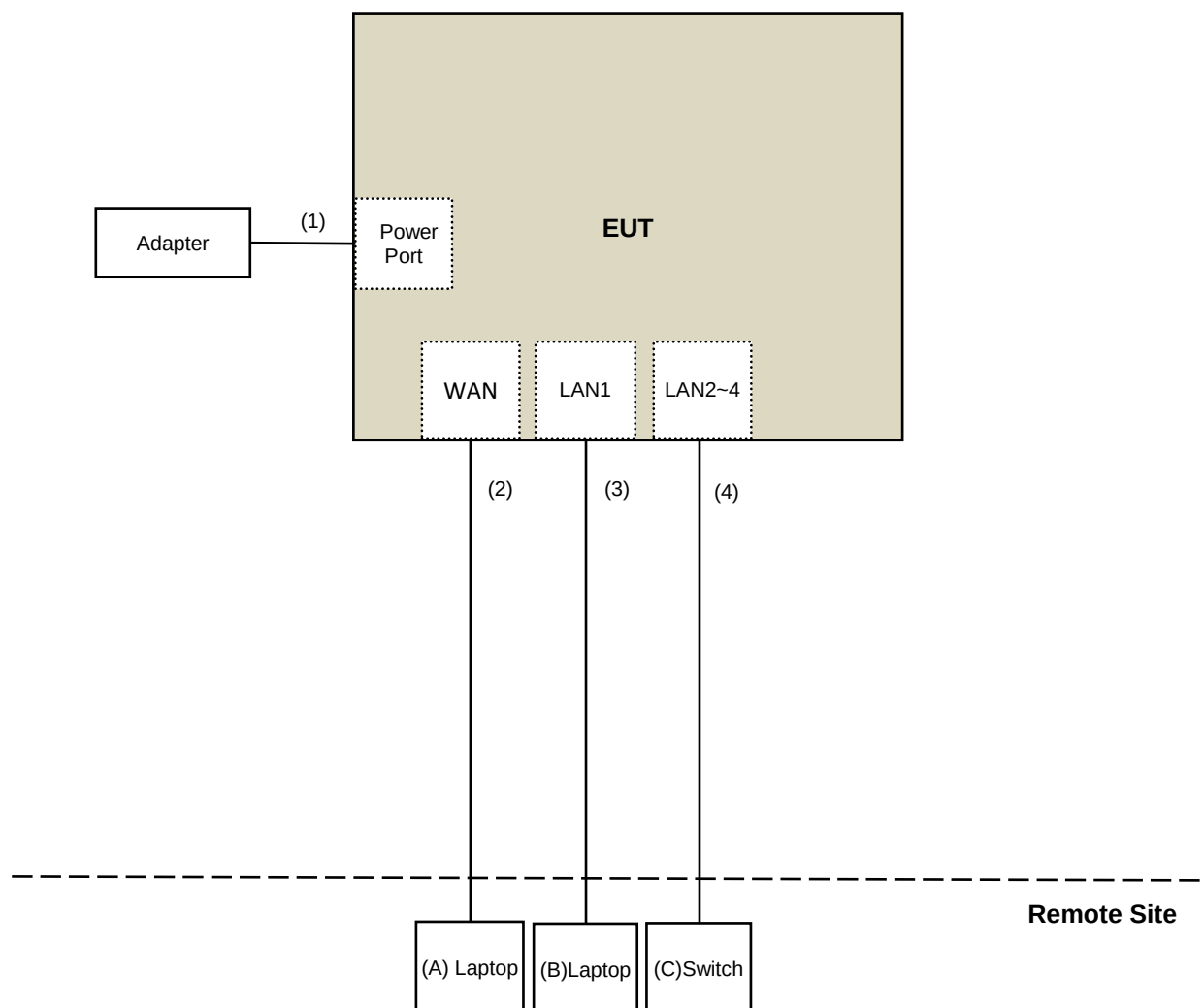
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	Inspiron 7570	DW3CSJ2	NA	Provided by Lab
B.	Laptop	DELL	E6420	482T3R1	DoC	Provided by Lab
C.	Switch	D-Link	DGS-1005D	DR8WC92000523	NA	Provided by Lab

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Cable	1	1.8	No	0	Supplied by client
2.	RJ-45 Cable	1	10	No	0	Provided by Lab
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	RJ-45 Cable	3	10	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
KDB 662911 D01 Multiple Transmitter Output v02r01

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK:74 (dBuV/m)	AV:54 (dBuV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBuV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBuV/m) ^{*1} PK:105.2 (dBuV/m) ^{*2} PK: 110.8(dBuV/m) ^{*3} PK:122.2 (dBuV/m) ^{*4}
^{*1} beyond 75 MHz or more above of the band edge. ^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. ^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. ^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.			

Note:

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

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

4.1.2 Test Instruments

For Radiated emission & OOB & Bandedged test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 13, 2019	Dec. 12, 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	5D-FB	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	5D-FB	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	9168-406	Nov. 06, 2020	Nov. 05, 2021
RF Cable	8D	966-6-1	Apr. 04, 2020	Apr. 03, 2021
RF Cable	8D	966-4-2	Mar. 18, 2020	Mar. 17, 2021
RF Cable	8D	966-4-3	Mar. 18, 2020	Mar. 17, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Sep. 24, 2020	Sep. 23, 2021
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 22, 2020	Nov. 21, 2021
Pre-Amplifier EMCI	EMC 12630 SE	980638	Apr. 08, 2020	Apr. 07, 2021
RF Cable	EMC104-SM-SM-1200	160923	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-2000	180502	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-6000	180418	Apr. 29, 2020	Apr. 28, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 22, 2020	Nov. 21, 2021
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
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	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. 4.
3. Tested Date: Nov. 23 to 26, 2020

For other test items:

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 22, 2020	July 21, 2021
Power sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
AC Power Source Extech Electronics	6905S	1991551	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 16, 2020	Jan. 15, 2021
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021
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: Jan. 14, 2021

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:

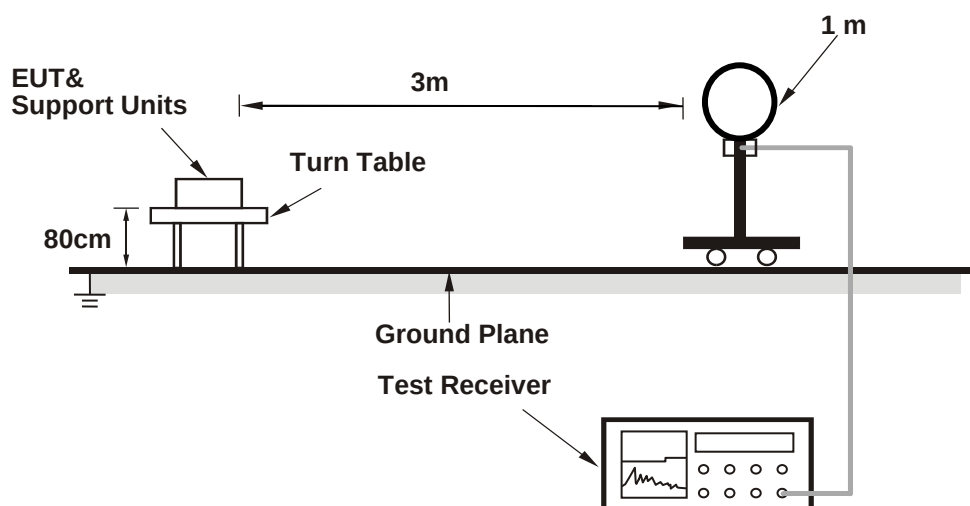
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

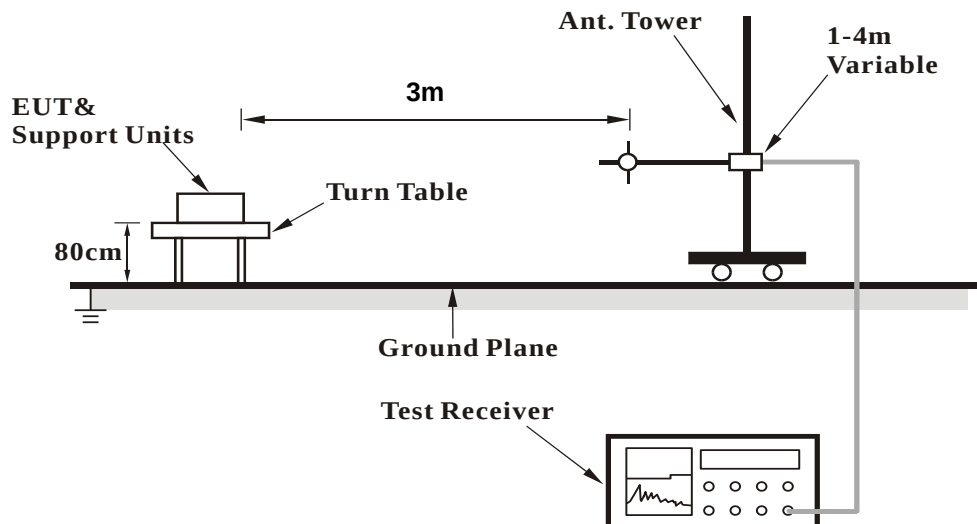
No deviation.

4.1.5 Test Setup

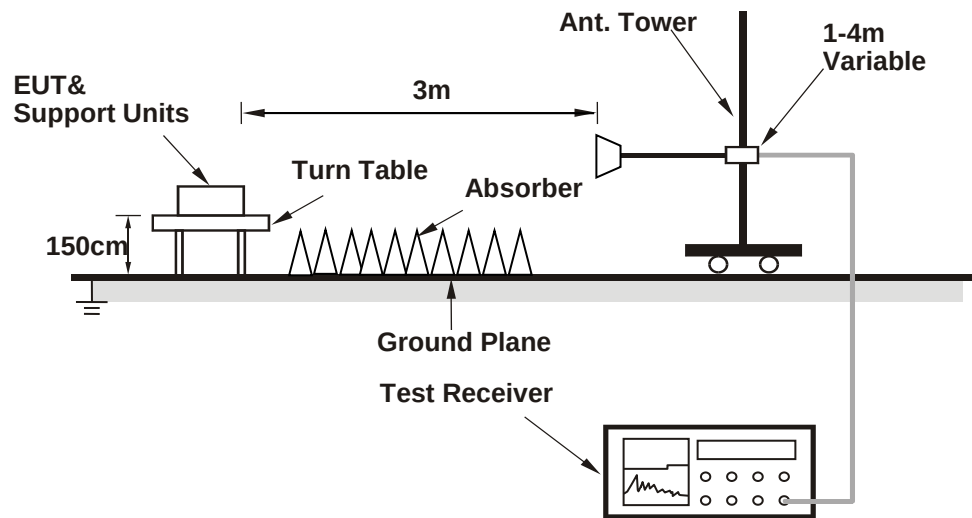
For Radiated emission below 30MHz



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

- Connected the EUT with the Laptop Computer which is placed on remote site.
- Controlling software (V2HK01p2_TX_RX_Verify_All_rate_Jason_20190122) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	5138.57	51.0 PK	74.0	-23.0	1.63 H	63	50.3	0.7
2	5138.57	41.2 AV	54.0	-12.8	1.63 H	63	40.5	0.7
3	*5180.00	109.8 PK			1.63 H	63	109.1	0.7
4	*5180.00	102.3 AV			1.63 H	63	101.6	0.7
5	#10360.00	47.5 PK	68.2	-20.7	1.56 H	250	37.0	10.5
6	15540.00	48.2 PK	74.0	-25.8	1.39 H	288	36.2	12.0
7	15540.00	37.9 AV	54.0	-16.1	1.39 H	288	25.9	12.0
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	5150.00	64.4 PK	74.0	-9.6	1.68 V	188	63.7	0.7
2	5150.00	53.7 AV	54.0	-0.3	1.68 V	188	53.0	0.7
3	*5180.00	121.3 PK			1.68 V	188	120.6	0.7
4	*5180.00	114.6 AV			1.68 V	188	113.9	0.7
5	#10360.00	45.8 PK	68.2	-22.4	2.66 V	239	35.3	10.5
6	15540.00	46.3 PK	74.0	-27.7	1.50 V	17	34.3	12.0
7	15540.00	34.5 AV	54.0	-19.5	1.50 V	17	22.5	12.0

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	51.6 PK	74.0	-22.4	1.60 H	74	50.9	0.7
2	5150.00	41.5 AV	54.0	-12.5	1.60 H	74	40.8	0.7
3	*5200.00	110.4 PK			1.60 H	74	109.8	0.6
4	*5200.00	102.6 AV			1.60 H	74	102.0	0.6
5	5350.00	50.9 PK	74.0	-23.1	1.60 H	74	50.3	0.6
6	5350.00	40.3 AV	54.0	-13.7	1.60 H	74	39.7	0.6
7	#10400.00	49.0 PK	68.2	-19.2	1.58 H	254	38.4	10.6
8	15600.00	50.2 PK	74.0	-23.8	1.45 H	286	37.9	12.3
9	15600.00	39.7 AV	54.0	-14.3	1.45 H	286	27.4	12.3
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	64.3 PK	74.0	-9.7	2.39 V	177	63.6	0.7
2	5150.00	51.6 AV	54.0	-2.4	2.39 V	177	50.9	0.7
3	*5200.00	126.1 PK			2.39 V	177	125.5	0.6
4	*5200.00	117.6 AV			2.39 V	177	117.0	0.6
5	5350.00	56.2 PK	74.0	-17.8	2.39 V	177	55.6	0.6
6	5350.00	43.3 AV	54.0	-10.7	2.39 V	177	42.7	0.6
7	#10400.00	49.1 PK	68.2	-19.1	2.83 V	228	38.5	10.6
8	15600.00	47.8 PK	74.0	-26.2	1.58 V	16	35.5	12.3
9	15600.00	37.2 AV	54.0	-16.8	1.58 V	16	24.9	12.3

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	110.8 PK			1.49 H	14	110.2	0.6
2	*5240.00	103.0 AV			1.49 H	14	102.4	0.6
3	5375.85	52.1 PK	74.0	-21.9	1.49 H	14	51.4	0.7
4	5375.85	40.8 AV	54.0	-13.2	1.49 H	14	40.1	0.7
5	#10480.00	49.3 PK	68.2	-18.9	1.58 H	245	38.8	10.5
6	15720.00	50.6 PK	74.0	-23.4	1.42 H	273	39.3	11.3
7	15720.00	40.2 AV	54.0	-13.8	1.42 H	273	28.9	11.3
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	124.3 PK			2.31 V	171	123.7	0.6
2	*5240.00	117.3 AV			2.31 V	171	116.7	0.6
3	5375.85	53.4 PK	74.0	-20.6	2.31 V	171	52.7	0.7
4	5375.85	45.2 AV	54.0	-8.8	2.31 V	171	44.5	0.7
5	#10480.00	48.2 PK	68.2	-20.0	2.69 V	231	37.7	10.5
6	15720.00	48.0 PK	74.0	-26.0	1.54 V	18	36.7	11.3
7	15720.00	36.2 AV	54.0	-17.8	1.54 V	18	24.9	11.3

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5644.52	54.5 PK	68.2	-13.7	1.50 H	233	53.4	1.1
2	*5745.00	115.7 PK			1.50 H	233	114.3	1.4
3	*5745.00	108.4 AV			1.50 H	233	107.0	1.4
4	#5953.04	50.4 PK	68.2	-17.8	1.50 H	233	48.7	1.7
5	11490.00	56.9 PK	74.0	-17.1	1.60 H	205	45.1	11.8
6	11490.00	45.6 AV	54.0	-8.4	1.60 H	205	33.8	11.8
7	#17235.00	54.4 PK	68.2	-13.8	1.49 H	235	39.0	15.4
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	#5643.48	56.7 PK	68.2	-11.5	1.49 V	217	55.6	1.1
2	*5745.00	121.0 PK			1.49 V	217	119.6	1.4
3	*5745.00	113.9 AV			1.49 V	217	112.5	1.4
4	#5987.26	48.2 PK	68.2	-20.0	1.49 V	217	46.5	1.7
5	11490.00	59.4 PK	74.0	-14.6	2.55 V	233	47.6	11.8
6	11490.00	48.9 AV	54.0	-5.1	2.55 V	233	37.1	11.8
7	#17235.00	50.6 PK	68.2	-17.6	1.86 V	177	35.2	15.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5599.57	53.2 PK	68.2	-15.0	1.54 H	229	52.1	1.1
2	*5785.00	116.2 PK			1.54 H	229	114.7	1.5
3	*5785.00	108.6 AV			1.54 H	229	107.1	1.5
4	#5929.61	50.3 PK	68.2	-17.9	1.54 H	229	48.7	1.6
5	11570.00	56.7 PK	74.0	-17.3	1.60 H	209	45.2	11.5
6	11570.00	45.4 AV	54.0	-8.6	1.60 H	209	33.9	11.5
7	#17355.00	54.0 PK	68.2	-14.2	1.50 H	244	37.7	16.3
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	#5641.47	50.9 PK	68.2	-17.3	1.97 V	123	49.9	1.0
2	*5785.00	120.7 PK			1.97 V	123	119.2	1.5
3	*5785.00	113.0 AV			1.97 V	123	111.5	1.5
4	#5974.63	47.1 PK	68.2	-21.1	1.97 V	123	45.4	1.7
5	11570.00	59.1 PK	74.0	-14.9	2.60 V	201	47.6	11.5
6	11570.00	48.3 AV	54.0	-5.7	2.60 V	201	36.8	11.5
7	#17355.00	50.8 PK	68.2	-17.4	1.80 V	160	34.5	16.3

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5567.78	51.5 PK	68.2	-16.7	1.47 H	232	50.5	1.0
2	*5825.00	115.7 PK			1.47 H	232	114.0	1.7
3	*5825.00	108.0 AV			1.47 H	232	106.3	1.7
4	#6019.94	51.2 PK	68.2	-17.0	1.47 H	232	49.5	1.7
5	11650.00	56.3 PK	74.0	-17.7	1.64 H	213	45.0	11.3
6	11650.00	45.2 AV	54.0	-8.8	1.64 H	213	33.9	11.3
7	#17475.00	54.4 PK	68.2	-13.8	1.56 H	246	35.9	18.5
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	#5589.47	53.8 PK	68.2	-14.4	1.54 V	47	52.8	1.0
2	*5825.00	121.3 PK			1.54 V	47	119.6	1.7
3	*5825.00	113.3 AV			1.54 V	47	111.6	1.7
4	#6006.05	47.7 PK	68.2	-20.5	1.54 V	47	46.0	1.7
5	11650.00	59.3 PK	74.0	-14.7	2.59 V	217	48.0	11.3
6	11650.00	48.6 AV	54.0	-5.4	2.59 V	217	37.3	11.3
7	#17475.00	50.9 PK	68.2	-17.3	1.81 V	172	32.4	18.5

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	5146.58	54.7 PK	74.0	-19.3	1.51 H	12	54.0	0.7
2	5146.58	44.0 AV	54.0	-10.0	1.51 H	12	43.3	0.7
3	*5180.00	111.5 PK			1.51 H	12	110.8	0.7
4	*5180.00	100.8 AV			1.51 H	12	100.1	0.7
5	#10360.00	47.5 PK	68.2	-20.7	1.52 H	213	37.0	10.5
6	15540.00	44.6 PK	74.0	-29.4	1.58 H	223	32.6	12.0
7	15540.00	32.1 AV	54.0	-21.9	1.58 H	223	20.1	12.0
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	5150.00	62.8 PK	74.0	-11.2	1.69 V	194	62.1	0.7
2	5150.00	53.7 AV	54.0	-0.3	1.69 V	194	53.0	0.7
3	*5180.00	121.6 PK			1.69 V	194	120.9	0.7
4	*5180.00	112.3 AV			1.69 V	194	111.6	0.7
5	#10360.00	47.2 PK	68.2	-21.0	2.30 V	233	36.7	10.5
6	15540.00	43.1 PK	74.0	-30.9	2.15 V	225	31.1	12.0
7	15540.00	31.5 AV	54.0	-22.5	2.15 V	225	19.5	12.0

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	55.2 PK	74.0	-18.8	1.54 H	66	54.5	0.7
2	5150.00	44.3 AV	54.0	-9.7	1.54 H	66	43.6	0.7
3	*5200.00	115.1 PK			1.54 H	66	114.5	0.6
4	*5200.00	104.0 AV			1.54 H	66	103.4	0.6
5	5350.00	51.5 PK	74.0	-22.5	1.54 H	66	50.9	0.6
6	5350.00	40.5 AV	54.0	-13.5	1.54 H	66	39.9	0.6
7	#10400.00	47.9 PK	68.2	-20.3	1.50 H	216	37.3	10.6
8	15600.00	45.9 PK	74.0	-28.1	1.55 H	209	33.6	12.3
9	15600.00	33.7 AV	54.0	-20.3	1.55 H	209	21.4	12.3
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	61.3 PK	74.0	-12.7	1.95 V	161	60.6	0.7
2	5150.00	53.1 AV	54.0	-0.9	1.95 V	161	52.4	0.7
3	*5200.00	126.3 PK			1.95 V	161	125.7	0.6
4	*5200.00	115.9 AV			1.95 V	161	115.3	0.6
5	5350.00	54.8 PK	74.0	-19.2	1.95 V	161	54.2	0.6
6	5350.00	44.8 AV	54.0	-9.2	1.95 V	161	44.2	0.6
7	#10400.00	47.7 PK	68.2	-20.5	2.26 V	218	37.1	10.6
8	15600.00	44.8 PK	74.0	-29.2	2.16 V	208	32.5	12.3
9	15600.00	33.4 AV	54.0	-20.6	2.16 V	208	21.1	12.3

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	51.8 PK	74.0	-22.2	1.51 H	64	51.1	0.7
2	5150.00	40.7 AV	54.0	-13.3	1.51 H	64	40.0	0.7
3	*5240.00	114.8 PK			1.51 H	64	114.2	0.6
4	*5240.00	103.5 AV			1.51 H	64	102.9	0.6
5	#10480.00	47.7 PK	68.2	-20.5	1.47 H	231	37.2	10.5
6	15720.00	46.0 PK	74.0	-28.0	1.55 H	224	34.7	11.3
7	15720.00	33.8 AV	54.0	-20.2	1.55 H	224	22.5	11.3
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	124.5 PK			1.74 V	174	123.9	0.6
2	*5240.00	114.5 AV			1.74 V	174	113.9	0.6
3	5350.00	53.4 PK	74.0	-20.6	1.74 V	174	52.8	0.6
4	5350.00	45.5 AV	54.0	-8.5	1.74 V	174	44.9	0.6
5	#10480.00	48.4 PK	68.2	-19.8	2.26 V	223	37.9	10.5
6	15720.00	45.1 PK	74.0	-28.9	2.20 V	214	33.8	11.3
7	15720.00	33.6 AV	54.0	-20.4	2.20 V	214	22.3	11.3

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.33	54.4 PK	68.2	-13.8	1.48 H	202	53.4	1.0
2	*5745.00	120.0 PK			1.48 H	202	118.6	1.4
3	*5745.00	108.6 AV			1.48 H	202	107.2	1.4
4	#6022.00	50.5 PK	68.2	-17.7	1.48 H	202	48.8	1.7
5	11490.00	54.3 PK	74.0	-19.7	1.68 H	205	42.5	11.8
6	11490.00	42.7 AV	54.0	-11.3	1.68 H	205	30.9	11.8
7	#17235.00	53.9 PK	68.2	-14.3	1.52 H	236	38.5	15.4
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	#5648.10	60.2 PK	68.2	-8.0	1.68 V	182	59.1	1.1
2	*5745.00	124.5 PK			1.68 V	182	123.1	1.4
3	*5745.00	113.7 AV			1.68 V	182	112.3	1.4
4	#6002.69	49.0 PK	68.2	-19.2	1.68 V	182	47.3	1.7
5	11490.00	57.6 PK	74.0	-16.4	2.85 V	127	45.8	11.8
6	11490.00	45.4 AV	54.0	-8.6	2.85 V	127	33.6	11.8
7	#17235.00	50.3 PK	68.2	-17.9	1.55 V	183	34.9	15.4

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5552.51	52.1 PK	68.2	-16.1	1.54 H	200	51.1	1.0
2	*5785.00	116.1 PK			1.54 H	200	114.6	1.5
3	*5785.00	108.3 AV			1.54 H	200	106.8	1.5
4	#5940.84	50.4 PK	68.2	-17.8	1.54 H	200	48.8	1.6
5	11570.00	53.8 PK	74.0	-20.2	1.65 H	218	42.3	11.5
6	11570.00	42.4 AV	54.0	-11.6	1.65 H	218	30.9	11.5
7	#17355.00	54.5 PK	68.2	-13.7	1.53 H	245	38.2	16.3
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	#5638.50	52.4 PK	68.2	-15.8	1.81 V	220	51.4	1.0
2	*5785.00	123.7 PK			1.81 V	220	122.2	1.5
3	*5785.00	113.9 AV			1.81 V	220	112.4	1.5
4	#6007.54	48.6 PK	68.2	-19.6	1.81 V	220	46.9	1.7
5	11570.00	57.8 PK	74.0	-16.2	2.80 V	132	46.3	11.5
6	11570.00	45.9 AV	54.0	-8.1	2.80 V	132	34.4	11.5
7	#17355.00	50.5 PK	68.2	-17.7	1.56 V	190	34.2	16.3

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5630.29	52.2 PK	68.2	-16.0	1.58 H	198	51.2	1.0
2	*5825.00	118.4 PK			1.58 H	198	116.7	1.7
3	*5825.00	108.3 AV			1.58 H	198	106.6	1.7
4	#5999.60	49.8 PK	68.2	-18.4	1.58 H	198	48.1	1.7
5	11650.00	53.9 PK	74.0	-20.1	1.64 H	193	42.6	11.3
6	11650.00	42.3 AV	54.0	-11.7	1.64 H	193	31.0	11.3
7	#17475.00	54.3 PK	68.2	-13.9	1.55 H	232	35.8	18.5
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	#5554.52	54.2 PK	68.2	-14.0	1.54 V	50	53.2	1.0
2	*5825.00	123.5 PK			1.54 V	50	121.8	1.7
3	*5825.00	113.3 AV			1.54 V	50	111.6	1.7
4	#5961.64	48.1 PK	68.2	-20.1	1.54 V	50	46.4	1.7
5	11650.00	57.8 PK	74.0	-16.2	2.78 V	137	46.5	11.3
6	11650.00	46.1 AV	54.0	-7.9	2.78 V	137	34.8	11.3
7	#17475.00	49.8 PK	68.2	-18.4	1.51 V	192	31.3	18.5

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 38 : 5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	52.2 PK	74.0	-21.8	1.51 H	17	51.5	0.7
2	5150.00	41.2 AV	54.0	-12.8	1.51 H	17	40.5	0.7
3	*5190.00	101.5 PK			1.51 H	17	100.8	0.7
4	*5190.00	92.1 AV			1.51 H	17	91.4	0.7
5	#10380.00	47.4 PK	68.2	-20.8	1.52 H	225	36.9	10.5
6	15570.00	44.7 PK	74.0	-29.3	1.60 H	232	32.4	12.3
7	15570.00	32.4 AV	54.0	-21.6	1.60 H	232	20.1	12.3
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	63.5 PK	74.0	-10.5	1.88 V	177	62.8	0.7
2	5150.00	53.6 AV	54.0	-0.4	1.88 V	177	52.9	0.7
3	*5190.00	114.9 PK			1.88 V	177	114.2	0.7
4	*5190.00	105.1 AV			1.88 V	177	104.4	0.7
5	#10380.00	46.8 PK	68.2	-21.4	2.24 V	225	36.3	10.5
6	15570.00	43.6 PK	74.0	-30.4	2.16 V	219	31.3	12.3
7	15570.00	30.2 AV	54.0	-23.8	2.16 V	219	17.9	12.3

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 46 : 5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	54.6 PK	74.0	-19.4	1.52 H	16	53.9	0.7
2	5150.00	43.5 AV	54.0	-10.5	1.52 H	16	42.8	0.7
3	*5230.00	109.3 PK			1.52 H	16	108.7	0.6
4	*5230.00	99.7 AV			1.52 H	16	99.1	0.6
5	#10460.00	47.7 PK	68.2	-20.5	1.46 H	206	37.0	10.7
6	15690.00	45.8 PK	74.0	-28.2	1.57 H	200	34.4	11.4
7	15690.00	33.6 AV	54.0	-20.4	1.57 H	200	22.2	11.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.7 PK	74.0	-8.3	1.97 V	179	65.0	0.7
2	5150.00	53.7 AV	54.0	-0.3	1.97 V	179	53.0	0.7
3	*5230.00	122.9 PK			1.97 V	179	122.3	0.6
4	*5230.00	113.9 AV			1.97 V	179	113.3	0.6
5	5354.33	58.7 PK	74.0	-15.3	1.97 V	179	58.1	0.6
6	5354.33	49.0 AV	54.0	-5.0	1.97 V	179	48.4	0.6
7	#10460.00	47.6 PK	68.2	-20.6	1.46 V	227	36.9	10.7
8	15690.00	45.1 PK	74.0	-28.9	1.38 V	235	33.7	11.4
9	15690.00	33.5 AV	54.0	-20.5	1.38 V	235	22.1	11.4

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5648.68	60.4 PK	68.2	-7.8	1.55 H	89	59.3	1.1
2	*5755.00	117.8 PK			1.55 H	89	116.4	1.4
3	*5755.00	107.2 AV			1.55 H	89	105.8	1.4
4	#5979.11	49.6 PK	68.2	-18.6	1.55 H	89	47.9	1.7
5	11510.00	54.1 PK	74.0	-19.9	1.65 H	182	42.5	11.6
6	11510.00	42.3 AV	54.0	-11.7	1.65 H	182	30.7	11.6
7	#17265.00	54.9 PK	68.2	-13.3	1.52 H	247	39.4	15.5
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	#5647.97	64.7 PK	68.2	-3.5	1.34 V	41	63.6	1.1
2	*5755.00	121.7 PK			1.34 V	41	120.3	1.4
3	*5755.00	112.3 AV			1.34 V	41	110.9	1.4
4	#5941.73	48.1 PK	68.2	-20.1	1.34 V	41	46.5	1.6
5	11510.00	57.5 PK	74.0	-16.5	2.49 V	212	45.9	11.6
6	11510.00	46.8 AV	54.0	-7.2	2.49 V	212	35.2	11.6
7	#17265.00	51.4 PK	68.2	-16.8	1.55 V	186	35.9	15.5

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 159 : 5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5619.11	52.8 PK	68.2	-15.4	1.54 H	202	51.8	1.0
2	*5795.00	116.5 PK			1.54 H	202	115.0	1.5
3	*5795.00	106.7 AV			1.54 H	202	105.2	1.5
4	#6019.32	49.9 PK	68.2	-18.3	1.54 H	202	48.2	1.7
5	11590.00	54.2 PK	74.0	-19.8	1.62 H	182	42.7	11.5
6	11590.00	42.6 AV	54.0	-11.4	1.62 H	182	31.1	11.5
7	#17385.00	54.5 PK	68.2	-13.7	1.60 H	235	37.5	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	#5612.96	56.3 PK	68.2	-11.9	1.48 V	45	55.3	1.0
2	*5795.00	121.5 PK			1.48 V	45	120.0	1.5
3	*5795.00	111.7 AV			1.48 V	45	110.2	1.5
4	#6013.35	48.2 PK	68.2	-20.0	1.48 V	45	46.5	1.7
5	11590.00	57.4 PK	74.0	-16.6	2.48 V	204	45.9	11.5
6	11590.00	46.8 AV	54.0	-7.2	2.48 V	204	35.3	11.5
7	#17385.00	52.1 PK	68.2	-16.1	1.52 V	170	35.1	17.0

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	51.5 PK	74.0	-22.5	1.54 H	15	50.8	0.7
2	5150.00	41.2 AV	54.0	-12.8	1.54 H	15	40.5	0.7
3	*5210.00	100.2 PK			1.54 H	15	99.5	0.7
4	*5210.00	90.3 AV			1.54 H	15	89.6	0.7
5	#10420.00	46.8 PK	68.2	-21.4	1.55 H	238	36.2	10.6
6	15630.00	44.7 PK	74.0	-29.3	1.62 H	221	32.7	12.0
7	15630.00	32.2 AV	54.0	-21.8	1.62 H	221	20.2	12.0
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	5150.00	65.6 PK	74.0	-8.4	2.17 V	9	64.9	0.7
2	5150.00	53.5 AV	54.0	-0.5	2.17 V	9	52.8	0.7
3	*5210.00	112.5 PK			2.17 V	9	111.8	0.7
4	*5210.00	101.0 AV			2.17 V	9	100.3	0.7
5	5350.00	52.0 PK	74.0	-22.0	2.17 V	9	51.4	0.6
6	5350.00	40.8 AV	54.0	-13.2	2.17 V	9	40.2	0.6
7	#10420.00	46.4 PK	68.2	-21.8	2.20 V	219	35.8	10.6
8	15630.00	43.8 PK	74.0	-30.2	2.11 V	225	31.8	12.0
9	15630.00	30.4 AV	54.0	-23.6	2.11 V	225	18.4	12.0

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	#5645.12	65.0 PK	68.2	-3.2	1.67 H	89	63.9	1.1
2	*5775.00	111.3 PK			1.67 H	89	109.8	1.5
3	*5775.00	101.0 AV			1.67 H	89	99.5	1.5
4	#5965.89	48.6 PK	68.2	-19.6	1.67 H	89	46.9	1.7
5	11550.00	52.8 PK	74.0	-21.2	1.59 H	194	41.2	11.6
6	11550.00	40.3 AV	54.0	-13.7	1.59 H	194	28.7	11.6
7	#17325.00	52.6 PK	68.2	-15.6	1.58 H	249	36.8	15.8
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	#5644.17	68.1 PK	68.2	-0.1	1.73 V	46	67.0	1.1
2	*5775.00	114.3 PK			1.50 V	45	112.8	1.5
3	*5775.00	104.9 AV			1.50 V	45	103.4	1.5
4	#5991.09	51.9 PK	68.2	-16.3	1.73 V	46	50.2	1.7
5	11550.00	55.8 PK	74.0	-18.2	2.49 V	202	44.2	11.6
6	11550.00	44.3 AV	54.0	-9.7	2.49 V	202	32.7	11.6
7	#17325.00	49.8 PK	68.2	-18.4	1.67 V	198	34.0	15.8

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.

Below 1GHz Data:

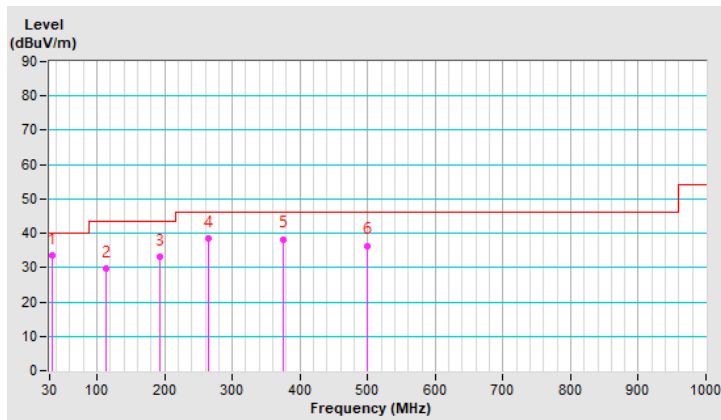
For U-NII-1:

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	33.89	33.5 QP	40.0	-6.5	1.00 H	32	42.3	-8.8
2	113.70	29.6 QP	43.5	-13.9	2.50 H	75	39.7	-10.1
3	192.03	33.3 QP	43.5	-10.2	1.50 H	324	43.8	-10.5
4	265.65	38.5 QP	46.0	-7.5	1.00 H	337	46.2	-7.7
5	374.44	38.3 QP	46.0	-7.7	2.50 H	351	42.5	-4.2
6	500.00	36.4 QP	46.0	-9.6	2.00 H	221	37.5	-1.1

Remarks:

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

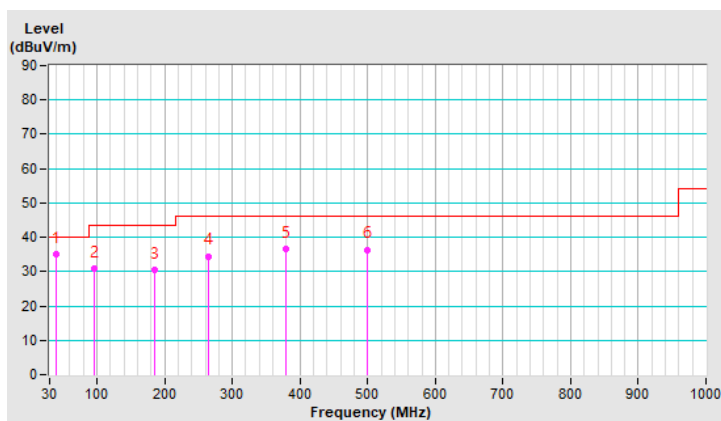


RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	39.99	35.1 QP	40.0	-4.9	1.00 V	214	43.6	-8.5
2	96.19	30.8 QP	43.5	-12.7	1.00 V	297	43.6	-12.8
3	186.13	30.5 QP	43.5	-13.0	1.00 V	127	40.4	-9.9
4	265.66	34.5 QP	46.0	-11.5	1.50 V	13	42.2	-7.7
5	379.24	36.5 QP	46.0	-9.5	1.00 V	248	40.7	-4.2
6	500.00	36.4 QP	46.0	-9.6	1.00 V	351	37.5	-1.1

Remarks:

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



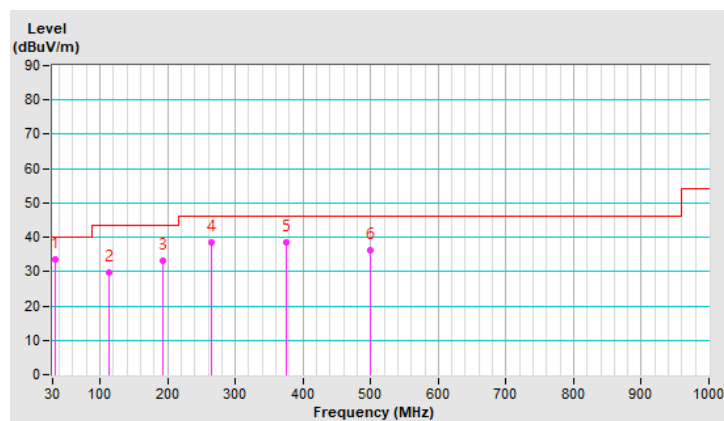
For U-NII-3:

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	33.92	33.4 QP	40.0	-6.6	1.00 H	35	42.2	-8.8
2	113.74	29.8 QP	43.5	-13.7	2.50 H	65	39.9	-10.1
3	192.06	33.2 QP	43.5	-10.3	1.50 H	319	43.7	-10.5
4	265.70	38.4 QP	46.0	-7.6	1.00 H	328	46.1	-7.7
5	374.49	38.6 QP	46.0	-7.4	2.50 H	318	42.8	-4.2
6	500.01	36.3 QP	46.0	-9.7	2.00 H	209	37.4	-1.1

Remarks:

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

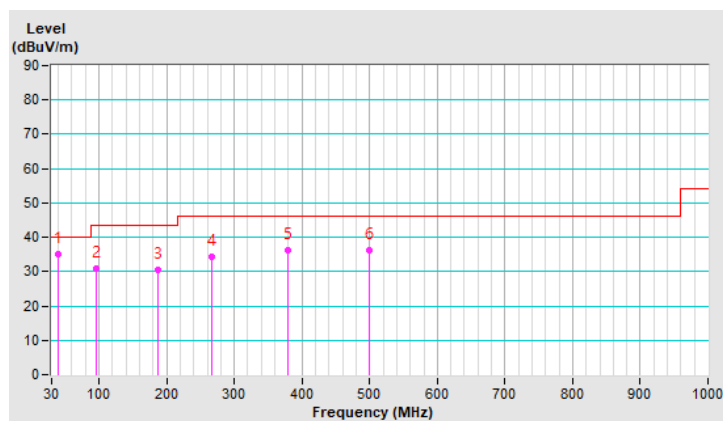


RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	39.98	35.2 QP	40.0	-4.8	1.00 V	231	43.7	-8.5
2	96.23	30.7 QP	43.5	-12.8	1.00 V	276	43.5	-12.8
3	186.18	30.6 QP	43.5	-12.9	1.00 V	134	40.5	-9.9
4	265.72	34.4 QP	46.0	-11.6	1.50 V	18	42.1	-7.7
5	379.18	36.3 QP	46.0	-9.7	1.00 V	254	40.5	-4.2
6	500.02	36.3 QP	46.0	-9.7	1.00 V	342	37.4	-1.1

Remarks:

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



4.2 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. 20, 2020	Oct. 19, 2021
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 27, 2020	Oct. 26, 2021
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 19, 2020	Mar. 18, 2021
50 ohms Terminator	50	3	Oct. 26, 2020	Oct. 25, 2021
RF Cable	5D-FB	COCCAB-001	Sep. 26, 2020	Sep. 25, 2021
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 29, 2020	Aug. 28, 2021
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: Nov. 26, 2020

4.2.3 Test Procedure

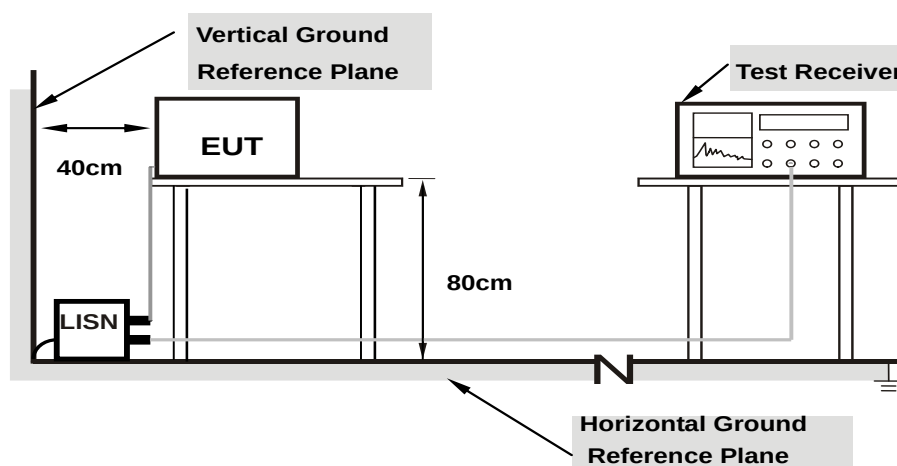
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

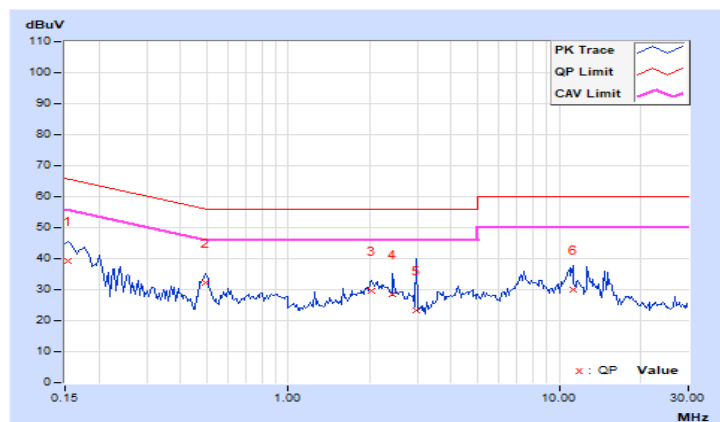
For U-NII-1:

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.96	29.21	14.24	39.17	24.20	65.79	55.79	-26.62	-31.59
2	0.49766	10.03	22.13	17.25	32.16	27.28	56.04	46.04	-23.88	-18.76
3	2.03125	10.14	19.42	14.56	29.56	24.70	56.00	46.00	-26.44	-21.30
4	2.42578	10.17	18.41	13.30	28.58	23.47	56.00	46.00	-27.42	-22.53
5	2.96094	10.21	13.06	6.23	23.27	16.44	56.00	46.00	-32.73	-29.56
6	11.22266	10.81	19.03	13.58	29.84	24.39	60.00	50.00	-30.16	-25.61

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

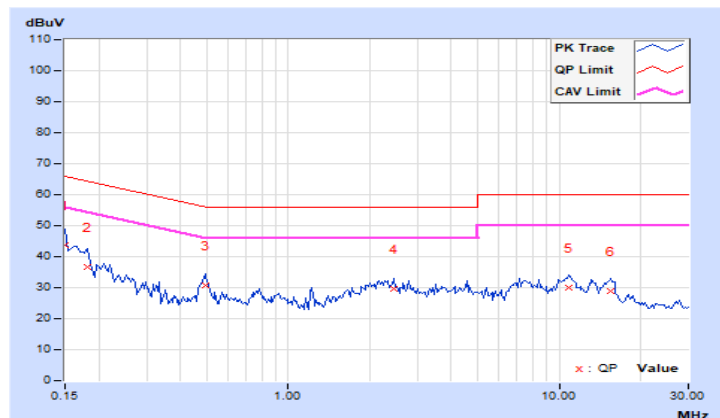


RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.94	33.90	22.02	43.84	31.96	66.00	56.00	-22.16	-24.04
2	0.18125	9.97	26.62	14.50	36.59	24.47	64.43	54.43	-27.84	-29.96
3	0.49375	10.02	20.67	16.72	30.69	26.74	56.10	46.10	-25.41	-19.36
4	2.46875	10.17	19.41	14.14	29.58	24.31	56.00	46.00	-26.42	-21.69
5	10.85156	10.67	19.46	13.91	30.13	24.58	60.00	50.00	-29.87	-25.42
6	15.51953	10.93	17.89	12.64	28.82	23.57	60.00	50.00	-31.18	-26.43

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



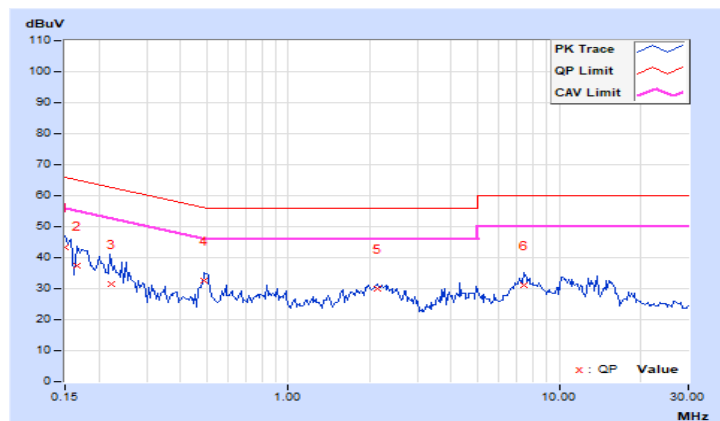
For U-NII-3:

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15015	9.96	33.40	21.41	43.36	31.37	65.99	55.99	-22.63	-24.62
2	0.16662	9.97	27.38	12.64	37.35	22.61	65.13	55.13	-27.78	-32.52
3	0.22211	9.99	21.59	9.69	31.58	19.68	62.74	52.74	-31.16	-33.06
4	0.48871	10.03	22.57	18.70	32.60	28.73	56.19	46.19	-23.59	-17.46
5	2.12880	10.15	19.90	15.24	30.05	25.39	56.00	46.00	-25.95	-20.61
6	7.39395	10.53	20.50	15.25	31.03	25.78	60.00	50.00	-28.97	-24.22

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

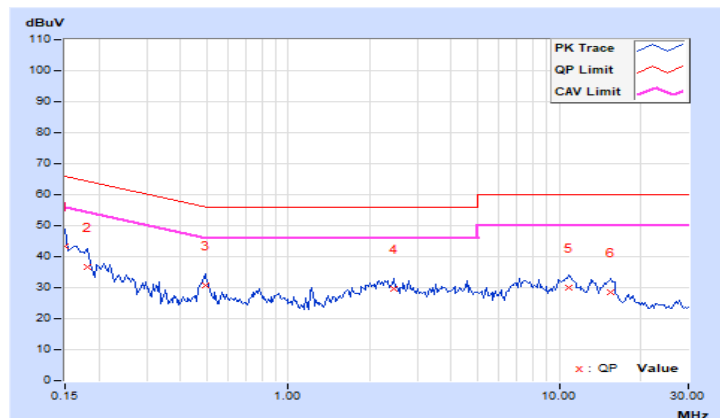


RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15023	9.94	33.41	22.12	43.35	32.06	65.99	55.99	-22.64	-23.93
2	0.18150	9.97	26.69	14.63	36.66	24.60	64.42	54.42	-27.76	-29.82
3	0.49312	10.02	20.60	16.70	30.62	26.72	56.12	46.12	-25.50	-19.40
4	2.46923	10.17	19.49	14.15	29.66	24.32	56.00	46.00	-26.34	-21.68
5	10.85214	10.67	19.40	13.90	30.07	24.57	60.00	50.00	-29.93	-25.43
6	15.51813	10.93	17.49	12.45	28.42	23.38	60.00	50.00	-31.58	-26.62

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

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

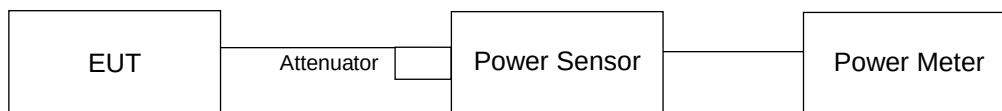
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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

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

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

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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.

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

For U-NII-1:

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	22.69	22.85	22.78	22.68	753.557	28.77	30.00	Pass
40	5200	22.93	24.33	24.03	23.83	961.831	29.83	30.00	Pass
48	5240	23.46	23.69	23.75	23.97	942.3	29.74	30.00	Pass
149	5745	23.77	23.74	24.03	23.92	974.358	29.89	30.00	Pass
157	5785	23.56	23.23	23.92	23.76	921.652	29.65	30.00	Pass
165	5825	23.56	23.49	23.97	23.68	933.149	29.70	30.00	Pass

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	23.10	23.19	23.30	22.92	822.304	29.15	30.00	Pass
40	5200	22.45	24.01	23.54	23.65	885.243	29.47	30.00	Pass
48	5240	23.14	23.42	23.75	23.59	891.546	29.50	30.00	Pass
149	5745	23.65	23.08	23.43	23.76	892.952	29.51	30.00	Pass
157	5785	23.05	22.92	24.07	23.61	882.606	29.46	30.00	Pass
165	5825	23.69	23.86	23.83	23.72	954.155	29.80	30.00	Pass

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	18.85	19.98	20.05	19.77	372.276	25.71	30.00	Pass
46	5230	22.78	23.72	23.73	23.61	890.838	29.50	30.00	Pass
151	5755	23.27	23.16	23.86	23.88	906.902	29.58	30.00	Pass
159	5795	23.69	23.66	24.08	23.56	949.002	29.77	30.00	Pass

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.59	18.71	18.92	18.35	278.088	24.44	30.00	Pass
155	5775	21.86	21.88	22.44	22.85	675.772	28.30	30.00	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	23.15	23.31	23.36	23.09	841.302	29.25	30.00	Pass
40	5200	22.68	24.22	23.75	23.95	935.045	29.71	30.00	Pass
48	5240	23.44	23.72	23.95	23.80	944.502	29.75	30.00	Pass
149	5745	23.88	23.30	23.63	23.96	937.7	29.72	30.00	Pass
157	5785	23.25	23.12	24.29	23.91	931.036	29.69	30.00	Pass
165	5825	23.77	23.89	23.85	23.75	962.937	29.84	30.00	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	19.02	20.13	20.23	19.92	386.452	25.87	30.00	Pass
46	5230	23.03	23.94	23.93	23.91	941.861	29.74	30.00	Pass
151	5755	23.57	23.46	24.06	24.09	960.461	29.82	30.00	Pass
159	5795	23.66	23.30	24.38	23.76	957.911	29.81	30.00	Pass

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.74	18.85	19.09	18.55	288.876	24.61	30.00	Pass
155	5775	22.02	22.03	22.58	22.69	685.723	28.36	30.00	Pass

Beamforming Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	22.59	22.68	22.78	22.40	730.355	28.64	29.57	Pass
40	5200	21.97	23.65	23.20	23.46	819.887	29.14	29.57	Pass
48	5240	22.74	23.02	23.31	23.06	804.97	29.06	29.57	Pass
149	5745	23.65	23.08	23.43	23.76	892.952	29.51	29.79	Pass
157	5785	23.05	22.92	24.07	23.61	882.606	29.46	29.79	Pass
165	5825	23.39	23.40	23.31	23.28	864.152	29.37	29.79	Pass

Note: 1. For U-NII-1: Directional gain = 6.43 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.43-6) = 29.57$ dBm.
 2. For U-NII-3: Directional gain = 6.21 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.21-6) = 29.79$ dBm.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	18.85	19.98	20.05	19.77	372.276	25.71	29.57	Pass
46	5230	23.32	23.15	23.18	23.13	834.88	29.22	29.57	Pass
151	5755	22.87	22.74	23.40	23.40	819.126	29.13	29.79	Pass
159	5795	22.95	22.78	23.42	23.07	809.467	29.08	29.79	Pass

Note: 1. For U-NII-1: Directional gain = 6.43 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.43-6) = 29.57$ dBm.
 2. For U-NII-3: Directional gain = 6.21 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.21-6) = 29.79$ dBm.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.59	18.71	18.92	18.35	278.088	24.44	29.57	Pass
155	5775	21.86	21.88	22.44	22.85	675.772	28.30	29.79	Pass

Note: 1. For U-NII-1: Directional gain = 6.43 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.43-6) = 29.57$ dBm.
 2. For U-NII-3: Directional gain = 6.21 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.21-6) = 29.79$ dBm.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	22.63	22.79	22.86	22.56	746.838	28.73	29.57	Pass
40	5200	22.20	23.80	23.31	23.47	842.462	29.26	29.57	Pass
48	5240	23.01	23.25	23.51	23.31	850.012	29.29	29.57	Pass
149	5745	23.88	23.30	23.63	23.96	937.7	29.72	29.79	Pass
157	5785	23.25	23.12	24.29	23.91	931.036	29.69	29.79	Pass
165	5825	23.48	23.43	23.39	23.30	875.205	29.42	29.79	Pass

Note: 1. For U-NII-1: Directional gain = 6.43 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.43-6) = 29.57$ dBm.
2. For U-NII-3: Directional gain = 6.21 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.21-6) = 29.79$ dBm.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	19.09	20.13	20.23	19.92	387.748	25.89	29.57	Pass
46	5230	23.58	23.41	23.43	23.39	885.88	29.47	29.57	Pass
151	5755	23.12	23.00	23.61	23.61	863.872	29.36	29.79	Pass
159	5795	23.19	23.05	23.67	23.30	856.891	29.33	29.79	Pass

Note: 1. For U-NII-1: Directional gain = 6.43 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.43-6) = 29.57$ dBm.
2. For U-NII-3: Directional gain = 6.21 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.21-6) = 29.79$ dBm.

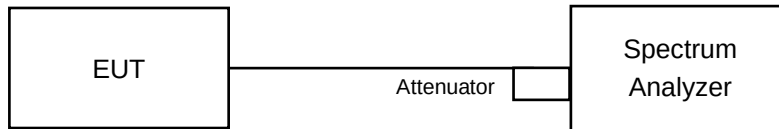
802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.74	18.85	19.09	18.55	288.876	24.61	29.57	Pass
155	5775	22.02	22.03	22.58	22.69	685.723	28.36	29.79	Pass

Note: 1. For U-NII-1: Directional gain = 6.43 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.43-6) = 29.57$ dBm.
2. For U-NII-3: Directional gain = 6.21 dBi > 6dBi, so the so the power limit shall be reduced to $30-(6.21-6) = 29.79$ dBm.

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)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.68	16.56	16.44	16.44
40	5200	16.44	16.44	16.56	16.56
48	5240	16.56	16.56	16.56	16.44
149	5745	16.56	16.44	16.56	16.56
157	5785	16.56	16.56	16.56	16.68
165	5825	16.56	16.56	18.36	16.8

802.11ax (HE20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	19.08	19.08	19.08	18.96
40	5200	18.96	19.08	18.96	19.08
48	5240	19.08	19.2	19.08	19.08
149	5745	18.96	18.96	19.08	19.08
157	5785	19.08	19.08	18.96	19.08
165	5825	18.96	19.08	23.16	19.2

802.11ax (HE40)

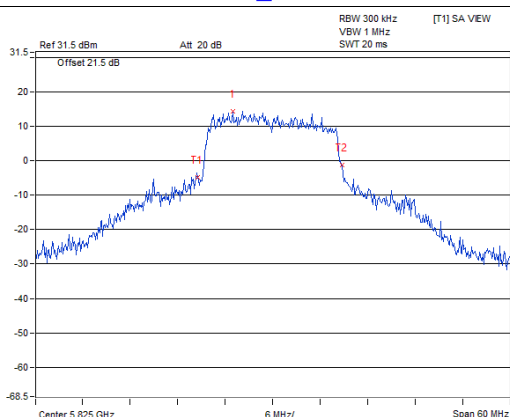
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	37.92	38.16	38.16	38.16
46	5230	38.16	38.16	38.16	38.16
151	5755	37.92	38.16	38.16	38.16
159	5795	38.4	37.92	39.6	38.16

802.11ax (HE80)

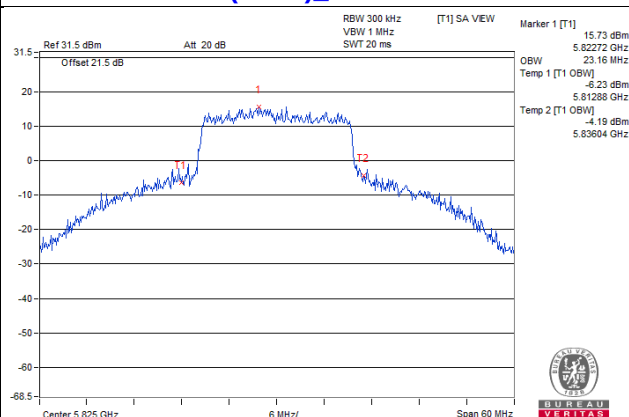
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	77.28	76.8	77.28	77.28
155	5775	77.76	77.76	77.28	77.76

Spectrum Plot of Max. Value

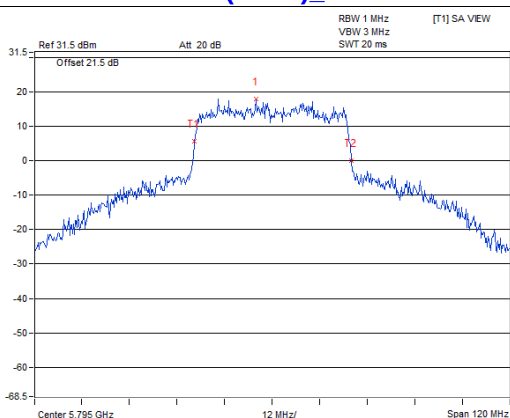
802.11a_Chain 2 / CH165



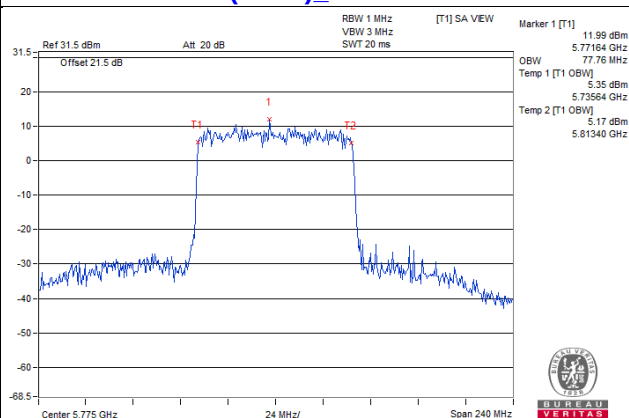
802.11ax (HE20)_Chain 2 / CH165



802.11ax (HE40)_Chain 2 / CH159

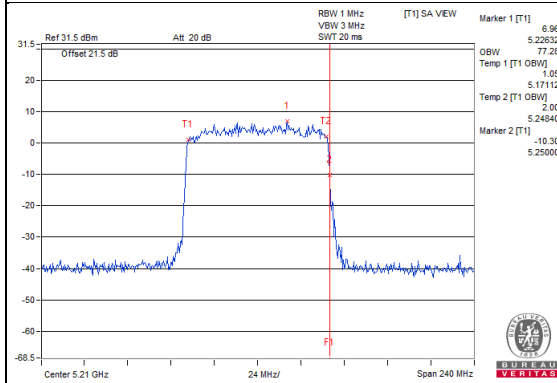


802.11ax (HE80)_Chain 0 / CH155

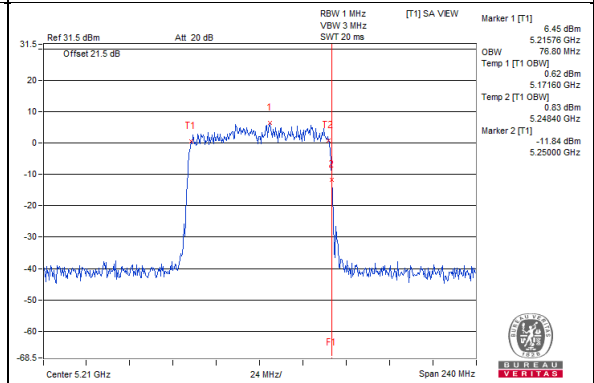


Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2A band)

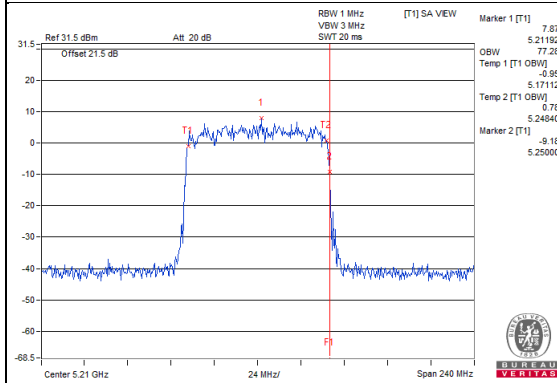
802.11a / Chain 0 : CH48



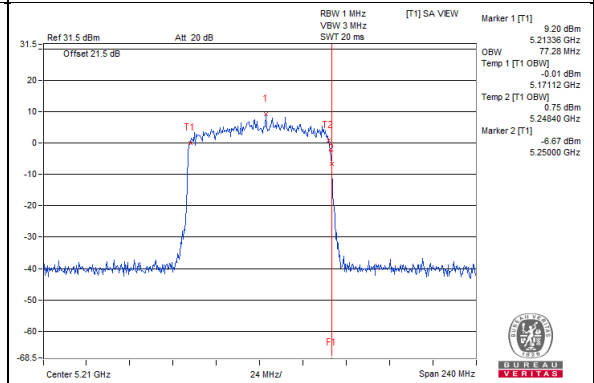
802.11a / Chain 1 : CH48



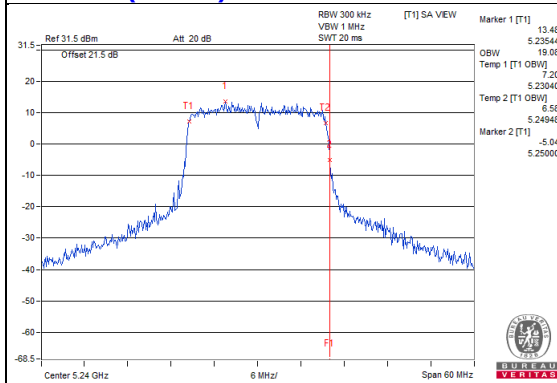
802.11a / Chain 2 : CH48



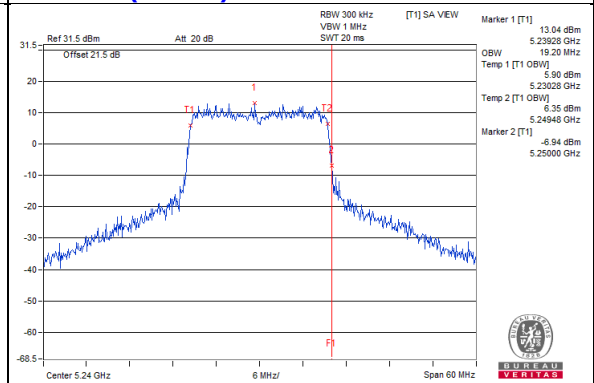
802.11a / Chain 3 : CH48



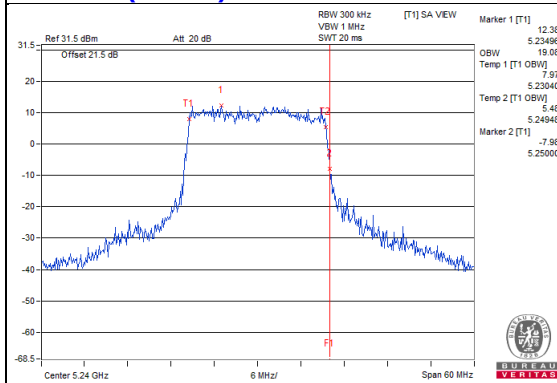
802.11ac (VHT20) / Chain 0 : CH48



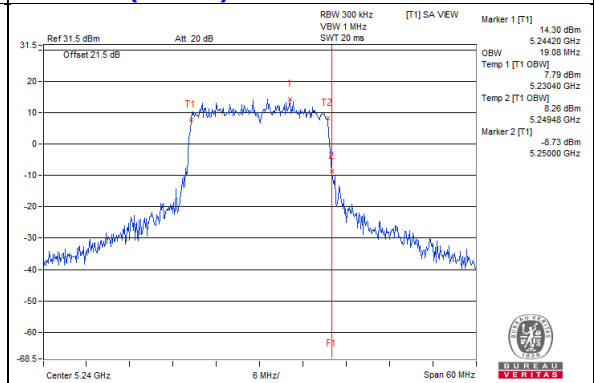
802.11ac (VHT20) / Chain 1 : CH48



802.11ac (VHT20) / Chain 2 : CH48

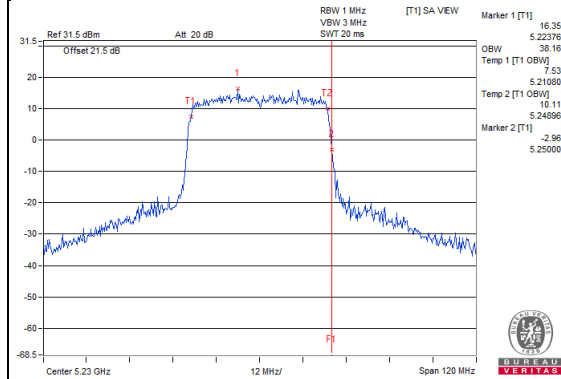


802.11ac (VHT20) / Chain 3 : CH48

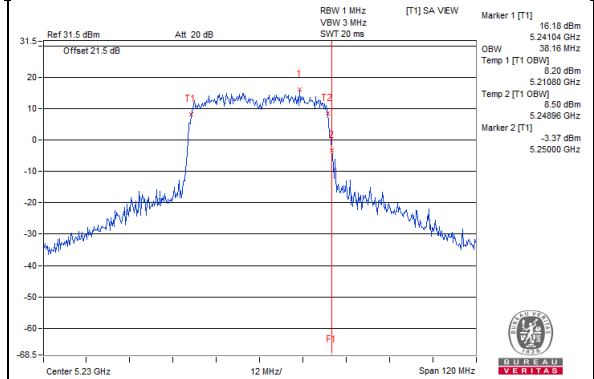


Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2A band)

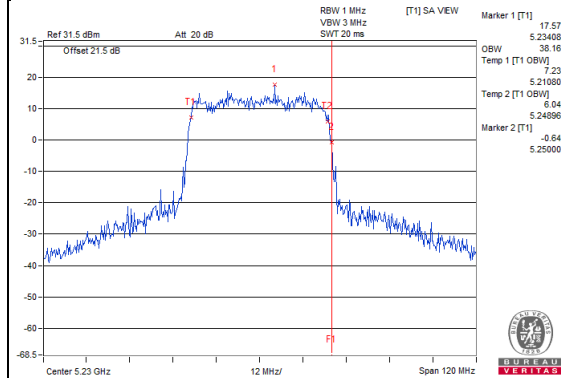
802.11ac (VHT40) / Chain 0 : CH46



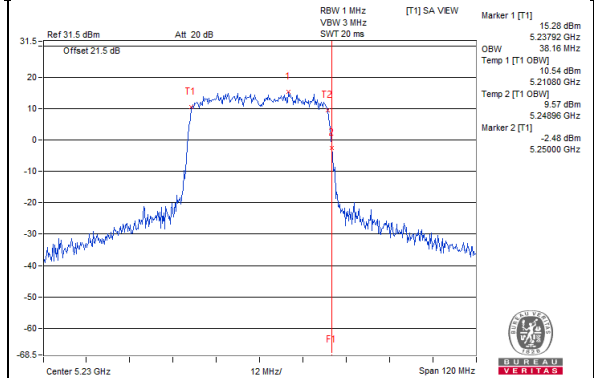
802.11ac (VHT40) / Chain 1 : CH46



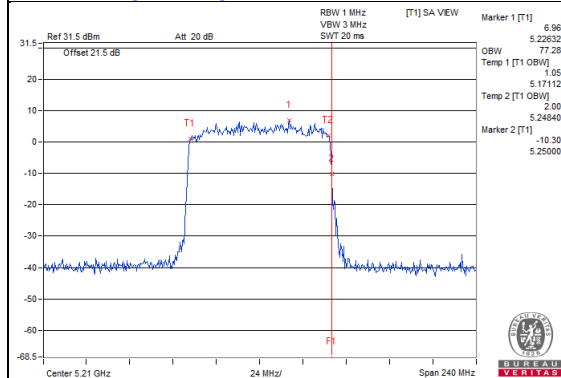
802.11ac (VHT40) / Chain 2 : CH46



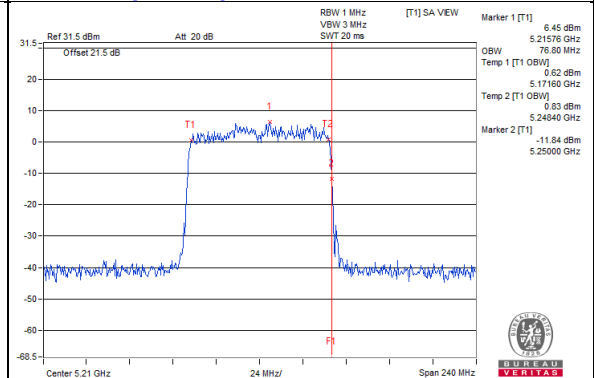
802.11ac (VHT40) / Chain 3 : CH46



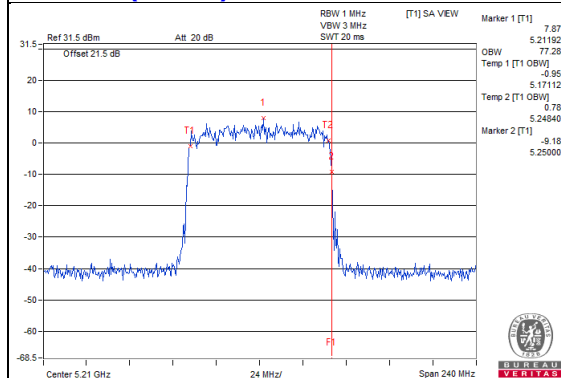
802.11ac (VHT80) / Chain 0 : CH42



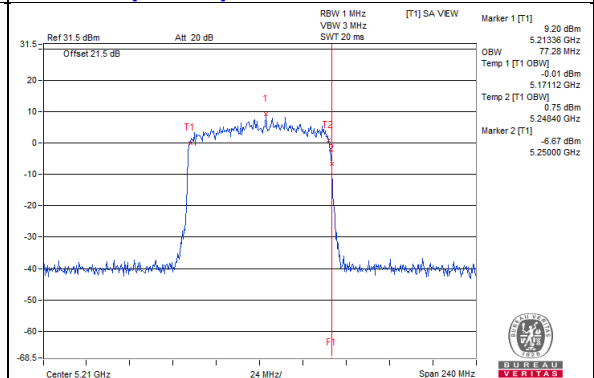
802.11ac (VHT80) / Chain 1 : CH42



802.11ac (VHT80) / Chain 2 : CH42

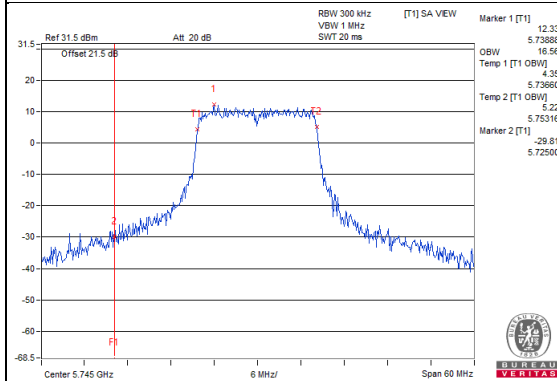


802.11ac (VHT80) / Chain 3 : CH42

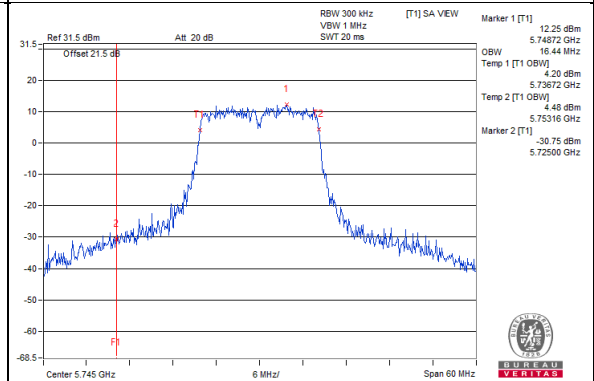


Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2C band)

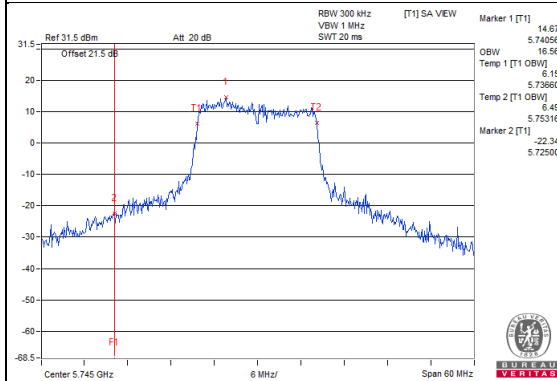
802.11a / Chain 0 : CH149



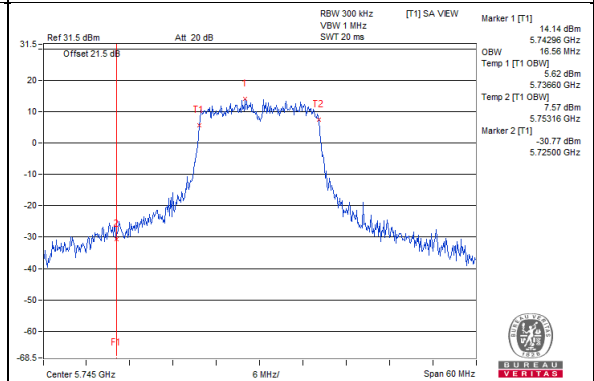
802.11a / Chain 1 : CH149



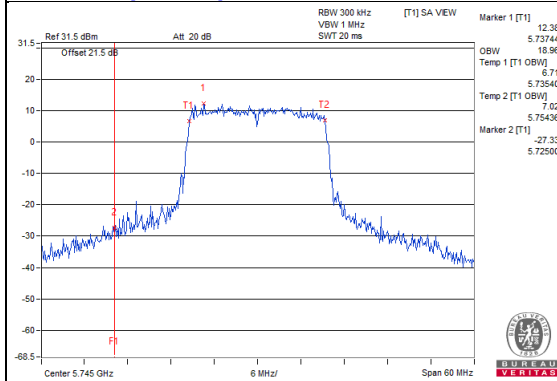
802.11a / Chain 2 : CH149



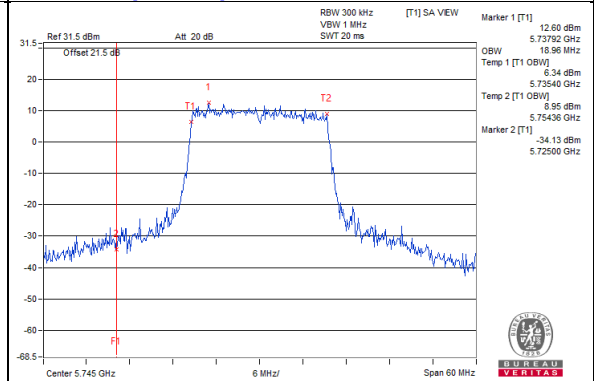
802.11a / Chain 3 : CH149



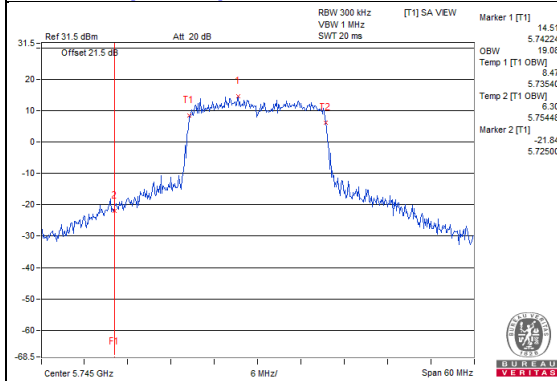
802.11ac (VHT20) / Chain 0 : CH149



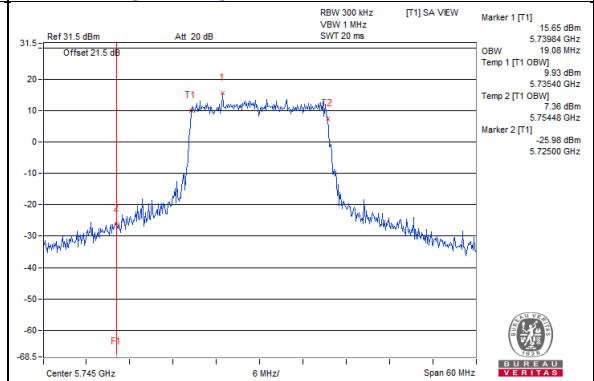
802.11ac (VHT20) / Chain 1 : CH149



802.11ac (VHT20) / Chain 2 : CH149

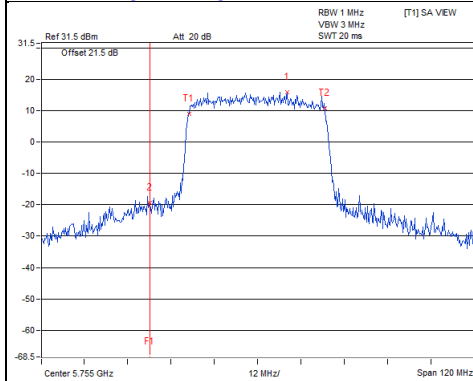


802.11ac (VHT20) / Chain 3 : CH149

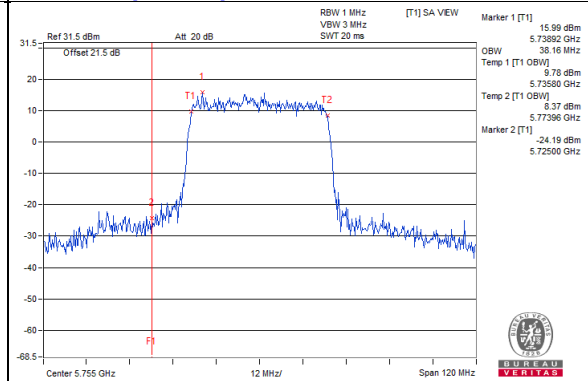


Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2C band)

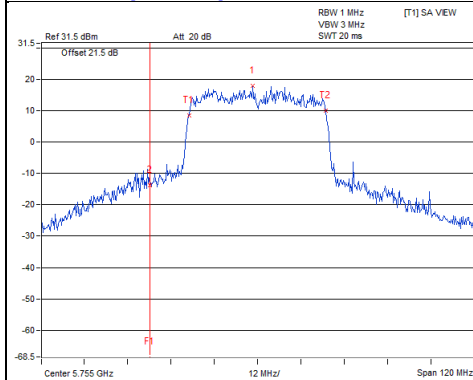
802.11ac (VHT40) / Chain 0 : CH151



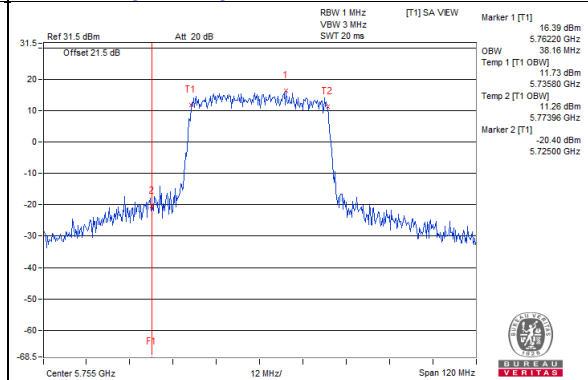
802.11ac (VHT40) / Chain 1 : CH151



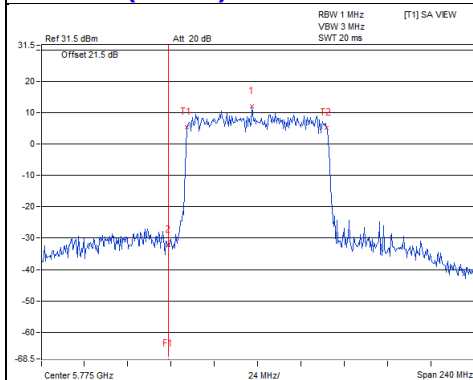
802.11ac (VHT40) / Chain 2 : CH151



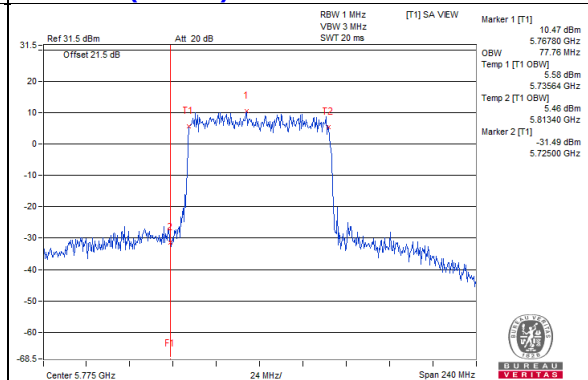
802.11ac (VHT40) / Chain 3 : CH151



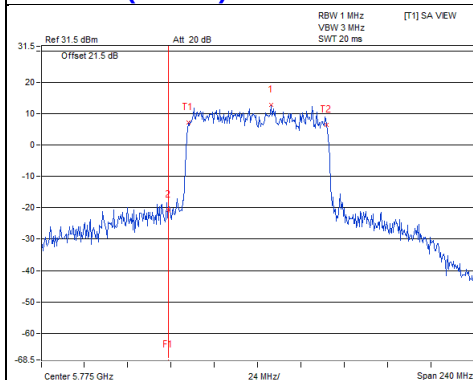
802.11ac (VHT80) / Chain 0 : CH155



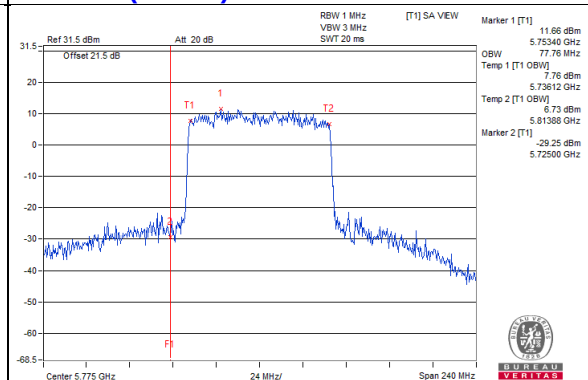
802.11ac (VHT80) / Chain 1 : CH155



802.11ac (VHT80) / Chain 2 : CH155



802.11ac (VHT80) / Chain 3 : CH155



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 band:

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 band:

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 (increasing) 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

CDD Mode

For U-NII-1:

802.11a

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	5.28	3.21	4.93	6.58	0.24	11.42	16.57	Pass
40	5200	5.74	5.66	6.82	8.08	0.24	12.95	16.57	Pass
48	5240	6.86	6.50	6.14	8.05	0.24	13.20	16.57	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 6.43dBi > 6dBi , so the power density limit shall be reduced to $17-(6.43-6) = 16.57\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	3.89	3.75	5.07	5.23	0.21	10.77	16.57	Pass
40	5200	5.20	5.41	4.53	7.68	0.21	12.11	16.57	Pass
48	5240	6.92	5.59	7.50	7.57	0.21	13.20	16.57	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 6.43dBi > 6dBi , so the power density limit shall be reduced to $17-(6.43-6) = 16.57\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-1.97	-1.54	-0.66	0.61	0.23	5.47	16.57	Pass
46	5230	3.01	3.38	3.64	4.66	0.23	9.96	16.57	Pass

- Note:**
1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
 2. Directional gain = 6.43dBi > 6dBi , so the power density limit shall be reduced to $17-(6.43-6) = 16.57\text{dBm}$.
 3. Refer to section 3.3 for duty cycle spectrum plot.

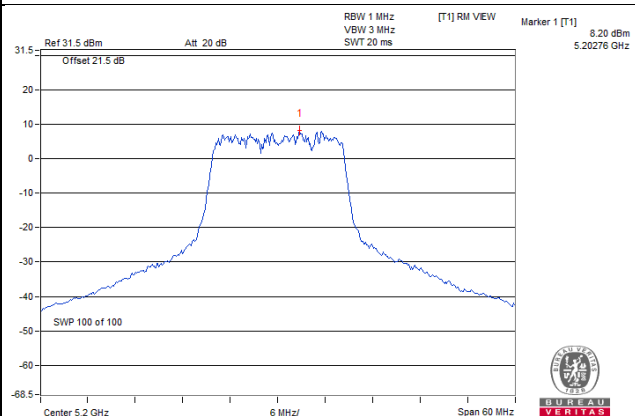
802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-5.66	-5.16	-5.16	-4.32	0.22	1.20	16.57	Pass

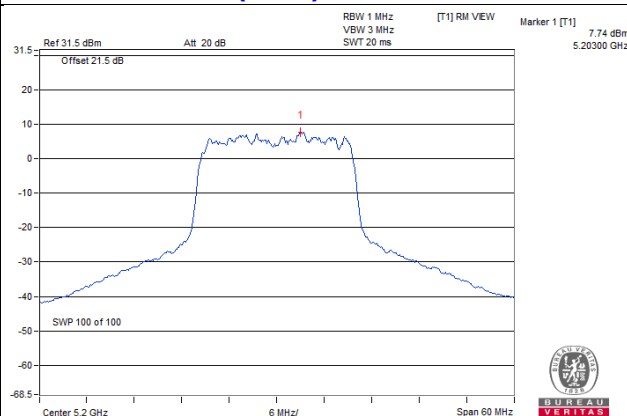
- Note:**
1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
 2. Directional gain = 6.43dBi > 6dBi , so the power density limit shall be reduced to $17-(6.43-6) = 16.57\text{dBm}$.
 3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

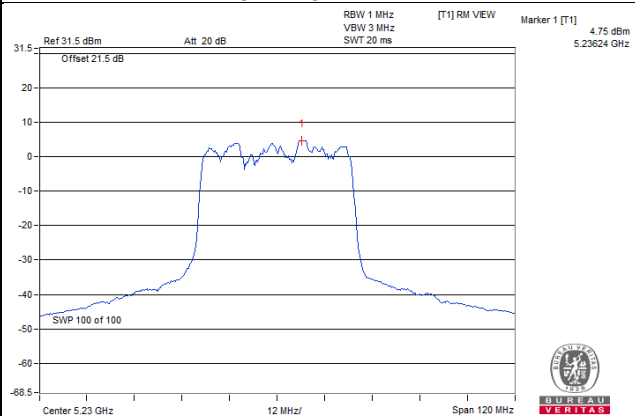
802.11a_Chain 3 / CH40



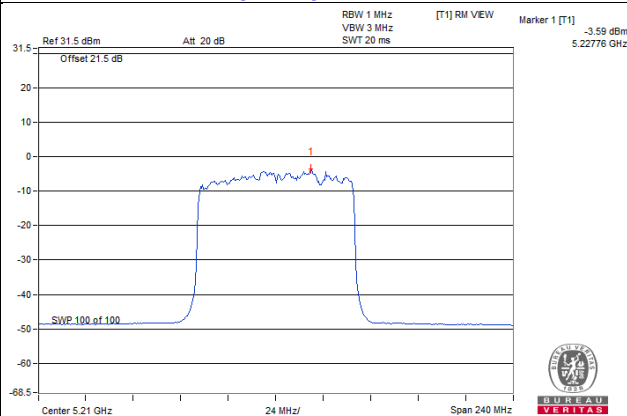
802.11ax (HE20)_Chain 3 / CH40



802.11ax (HE40)_Chain 3 / CH46



802.11ax (HE80)_Chain 3 / CH42



For U-NII-3:

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)				Duty Factor (dB)	Total PSD With Duty Factor		Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	Chain 2	Chain 3		mW/ 300kHz	dBm/ 300kHz			
149	5745	-0.60	-1.06	0.88	0.21	0.24	4.1474	6.18	8.40	29.79	Pass
157	5785	-1.25	-0.15	-0.36	0.99	0.24	4.1092	6.14	8.36	29.79	Pass
165	5825	-1.31	-1.38	0.64	0.86	0.24	4.0593	6.08	8.30	29.79	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 6.21dBi > 6dBi , so the power density limit shall be reduced to $30-(6.21-6) = 29.79\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)				Duty Factor (dB)	Total PSD With Duty Factor		Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	Chain 2	Chain 3		mW/ 300kHz	dBm/ 300kHz			
149	5745	-1.64	-1.61	-0.18	-0.07	0.21	3.4867	5.42	7.64	29.79	Pass
157	5785	-1.89	-1.98	-1.02	0.43	0.21	3.3361	5.23	7.45	29.79	Pass
165	5825	-1.65	-2.63	0.60	-0.57	0.21	3.4192	5.34	7.56	29.79	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 6.21dBi > 6dBi , so the power density limit shall be reduced to $30-(6.21-6) = 29.79\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

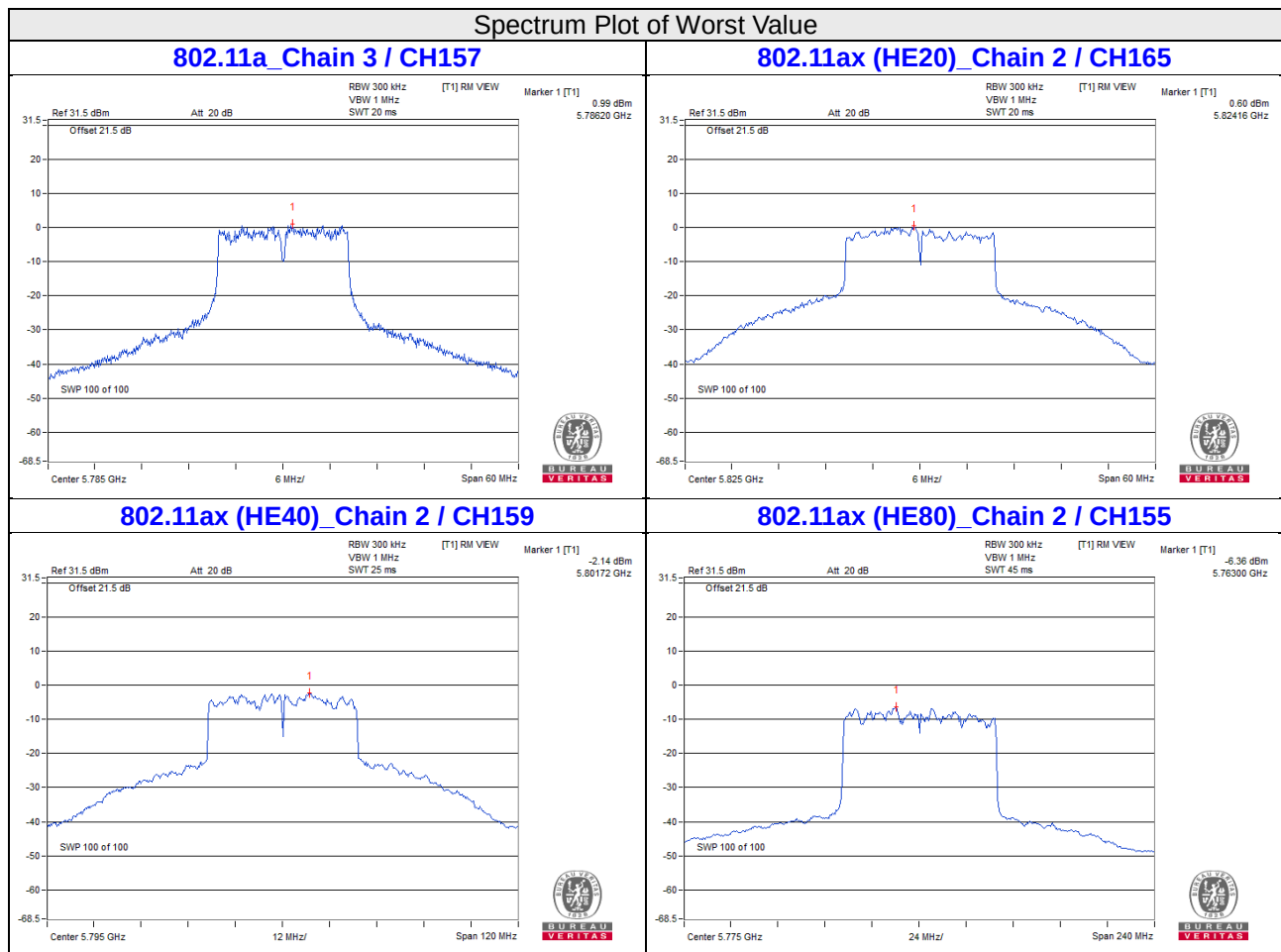
Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)				Duty Factor (dB)	Total PSD With Duty Factor		Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	Chain 2	Chain 3		mW/ 300kHz	dBm/ 300kHz			
151	5755	-4.05	-4.07	-2.95	-3.05	0.23	1.8829	2.75	4.97	29.79	Pass
159	5795	-2.87	-4.85	-2.14	-2.96	0.23	2.0649	3.15	5.37	29.79	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 6.21dBi > 6dBi , so the power density limit shall be reduced to $30-(6.21-6) = 29.79\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)				Duty Factor (dB)	Total PSD With Duty Factor		Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1	Chain 2	Chain 3		mW/300kHz	dBm/300kHz			
155	5775	-8.50	-8.75	-6.36	-6.99	0.22	0.743	-1.29	0.93	29.79	Pass

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 6.21dBi > 6dBi , so the power density limit shall be reduced to 30-(6.21-6) = 29.79dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

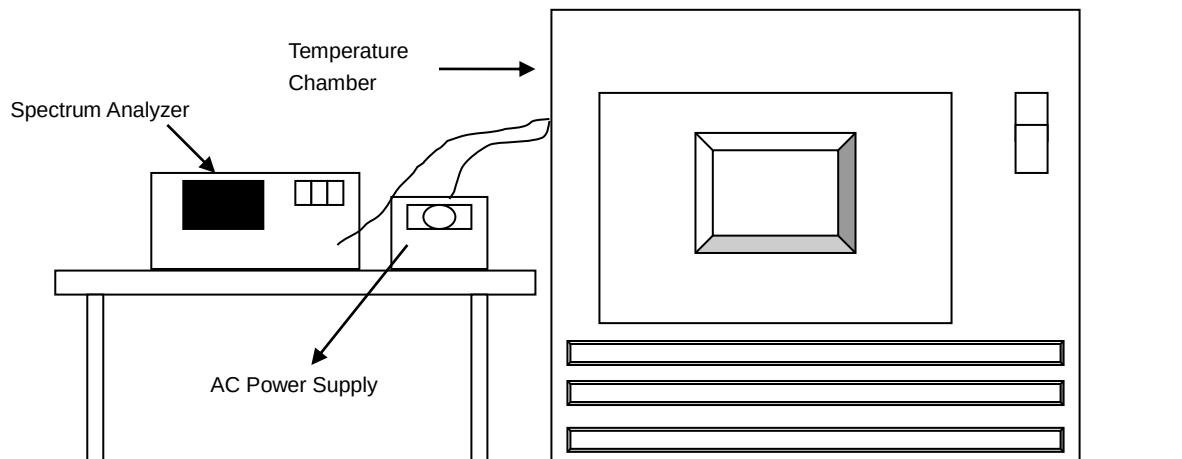


4.6 Frequency Stability Measurement

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	5180.0243	Pass	5180.0255	Pass	5180.0235	Pass	5180.0232	Pass
30	120	5179.9823	Pass	5179.9827	Pass	5179.9868	Pass	5179.9848	Pass
20	120	5180.0242	Pass	5180.0222	Pass	5180.0243	Pass	5180.0207	Pass
10	120	5180.0268	Pass	5180.0234	Pass	5180.0265	Pass	5180.025	Pass
0	120	5179.9958	Pass	5179.9957	Pass	5179.9952	Pass	5179.9975	Pass

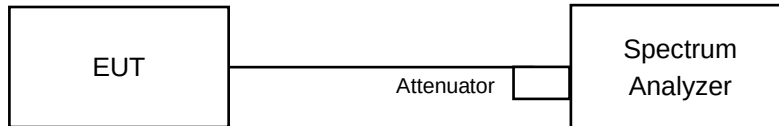
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5180.0244	Pass	5180.0224	Pass	5180.024	Pass	5180.02	Pass
	120	5180.0242	Pass	5180.0222	Pass	5180.0243	Pass	5180.0207	Pass
	102	5180.0238	Pass	5180.0215	Pass	5180.0243	Pass	5180.0208	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)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	15.57	15.44	15.4	16.36	0.5	Pass
157	5785	15.37	15.36	15.2	15.79	0.5	Pass
165	5825	15.16	15.73	15.19	15.53	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	18.24	16.34	16.92	18.8	0.5	Pass
157	5785	18.08	17.81	16.39	17.98	0.5	Pass
165	5825	15.34	15.9	18.31	18.07	0.5	Pass

802.11ax (HE40)

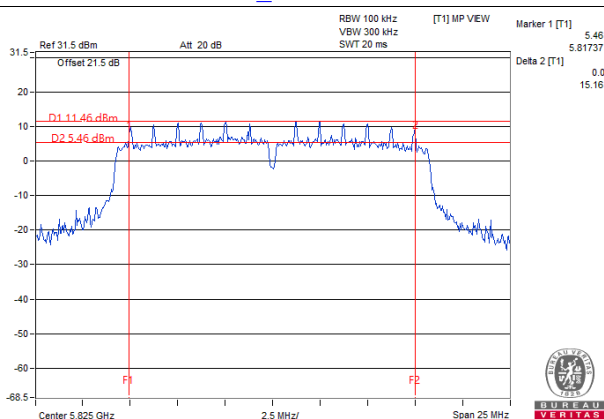
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	38.12	35.25	37.64	37.74	0.5	Pass
159	5795	37.82	37.48	37.93	37.82	0.5	Pass

802.11ax (HE80)

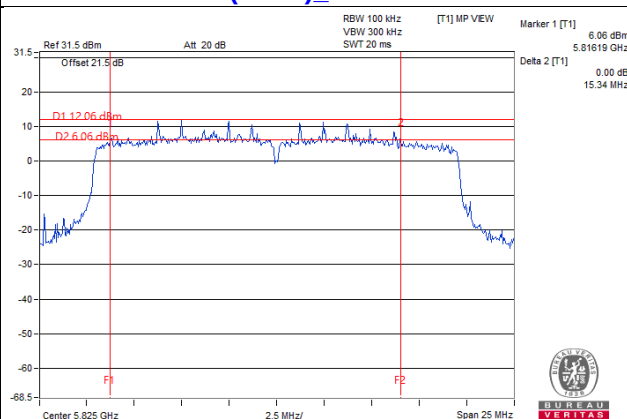
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	77.91	77.64	75.55	76.34	0.5	Pass

Spectrum Plot of Worst Value

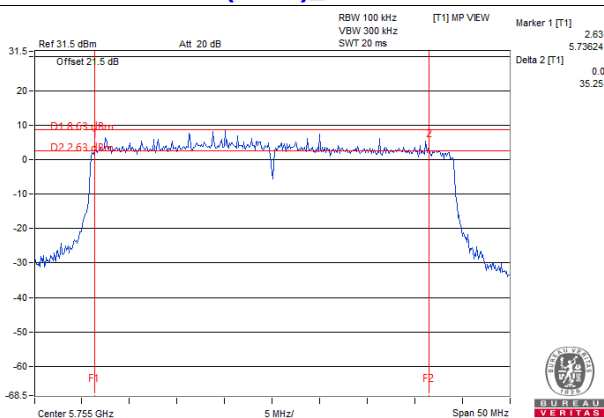
802.11a_Chain 0 / CH165



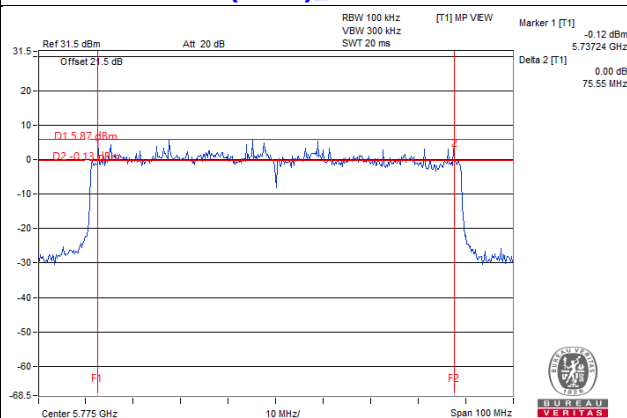
802.11ax (HE20)_Chain 0 / CH165



802.11ax (HE40)_Chain 1 / CH151



802.11ax (HE80)_Chain 2 / CH155



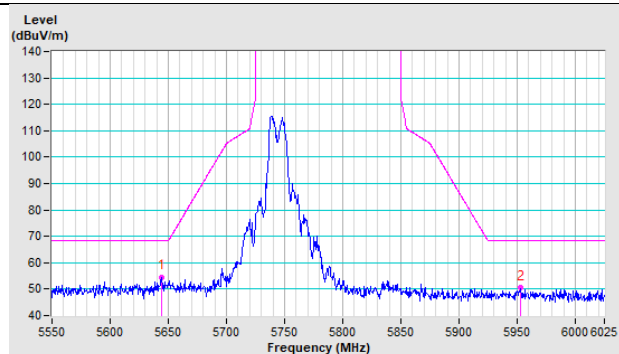
5 Pictures of Test Arrangements

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

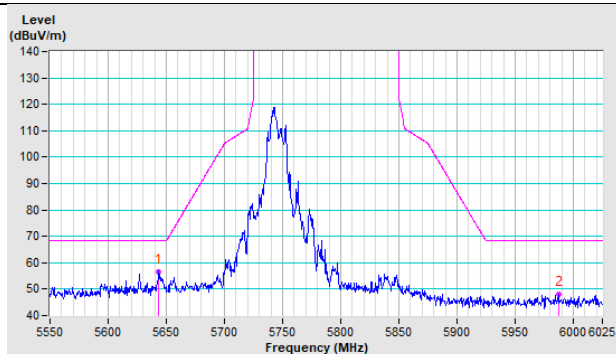
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149 : 5745 MHz

Horizontal

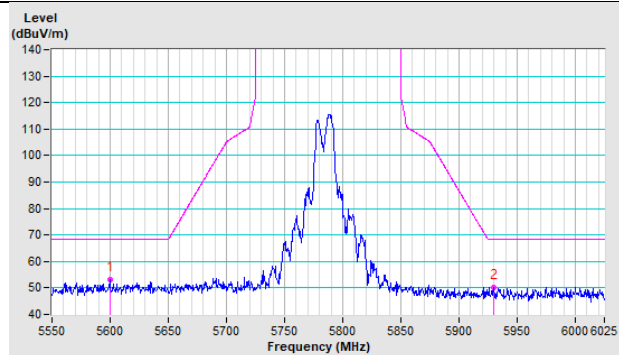


Vertical

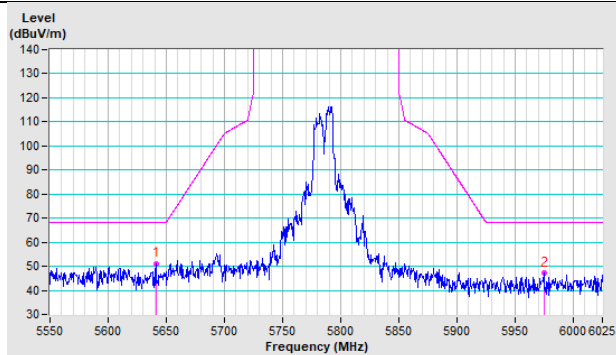


802.11a CH 157 : 5785 MHz

Horizontal

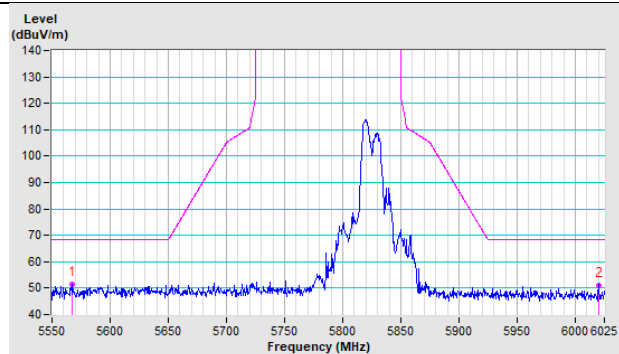


Vertical

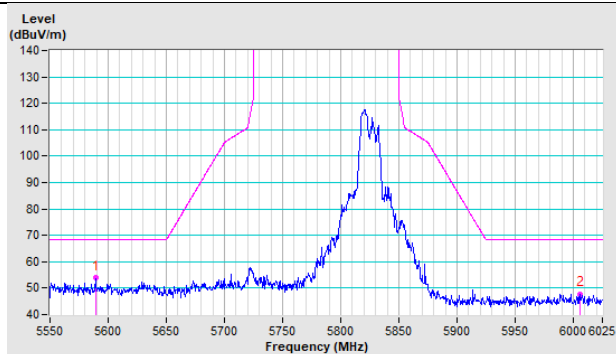


802.11a CH 165 : 5825 MHz

Horizontal

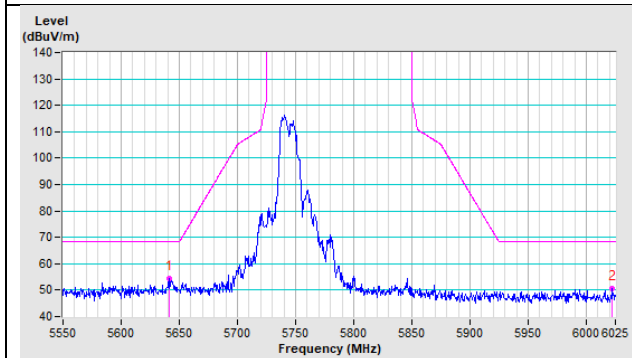


Vertical

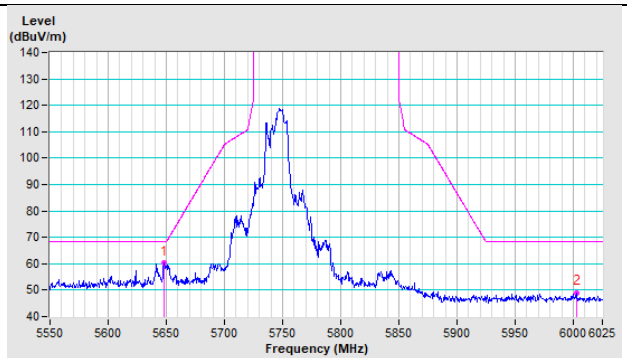


802.11ax (HE20) CH 149 : 5745 MHz

Horizontal

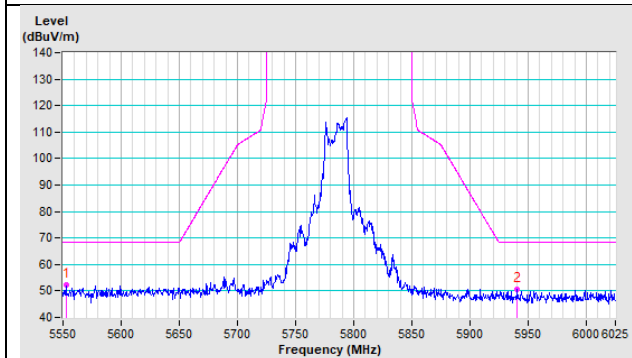


Vertical

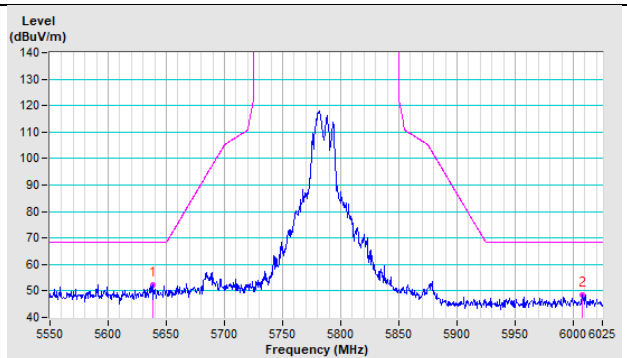


802.11ax (HE20) CH 157 : 5785 MHz

Horizontal

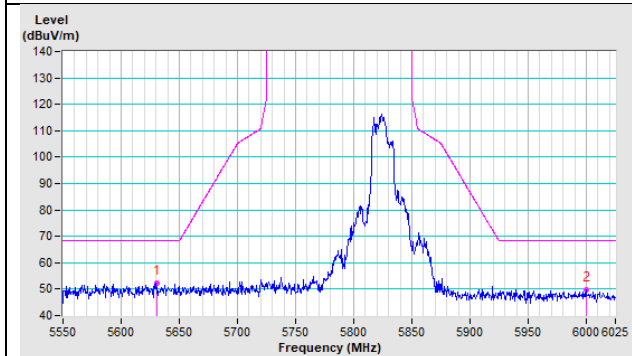


Vertical

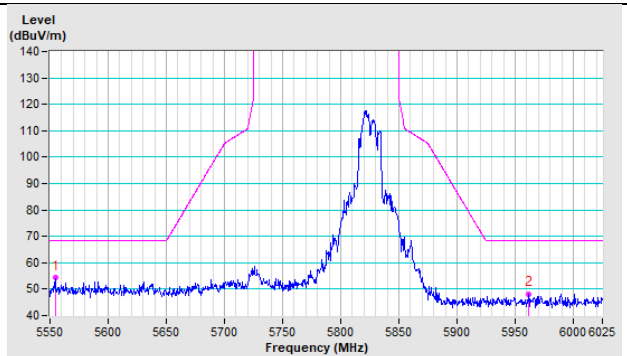


802.11ax (HE20) CH 165 : 5825 MHz

Horizontal

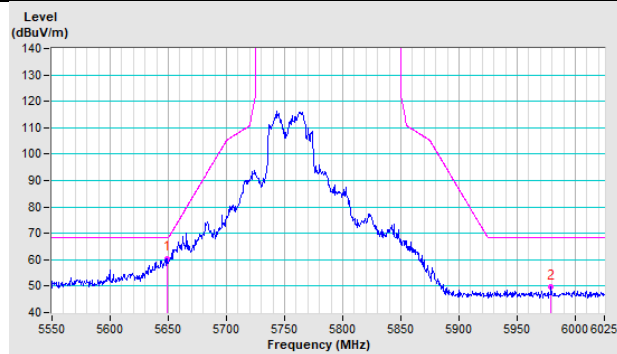


Vertical

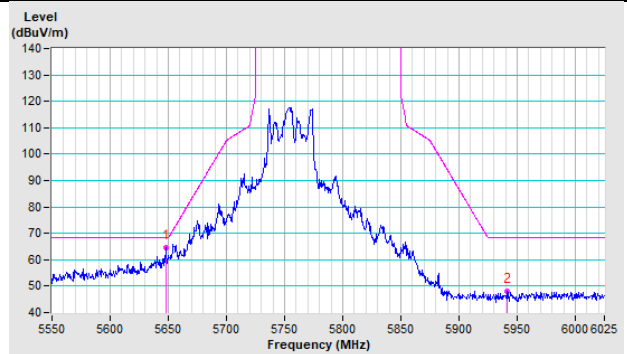


802.11ax (HE40) CH 151 : 5755 MHz

Horizontal

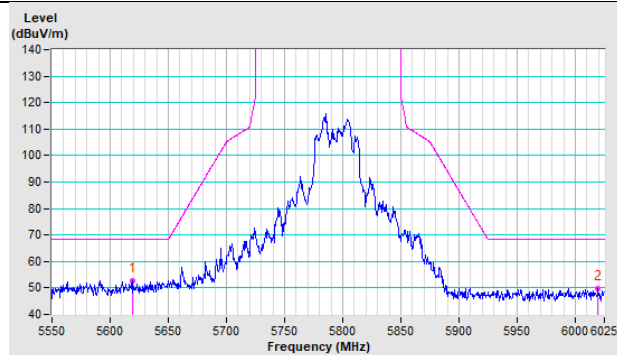


Vertical

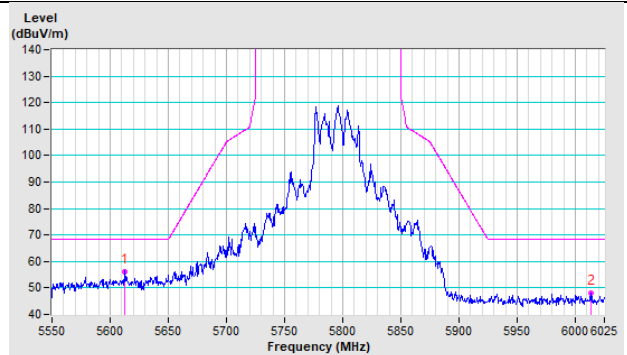


802.11ax (HE40) CH 159 : 5795 MHz

Horizontal

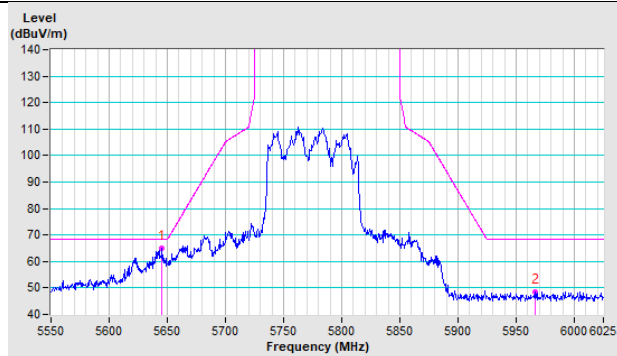


Vertical

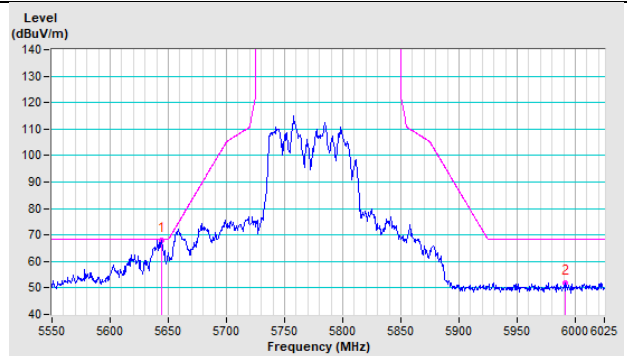


802.11ax (HE80) CH 155 : 5775 MHz

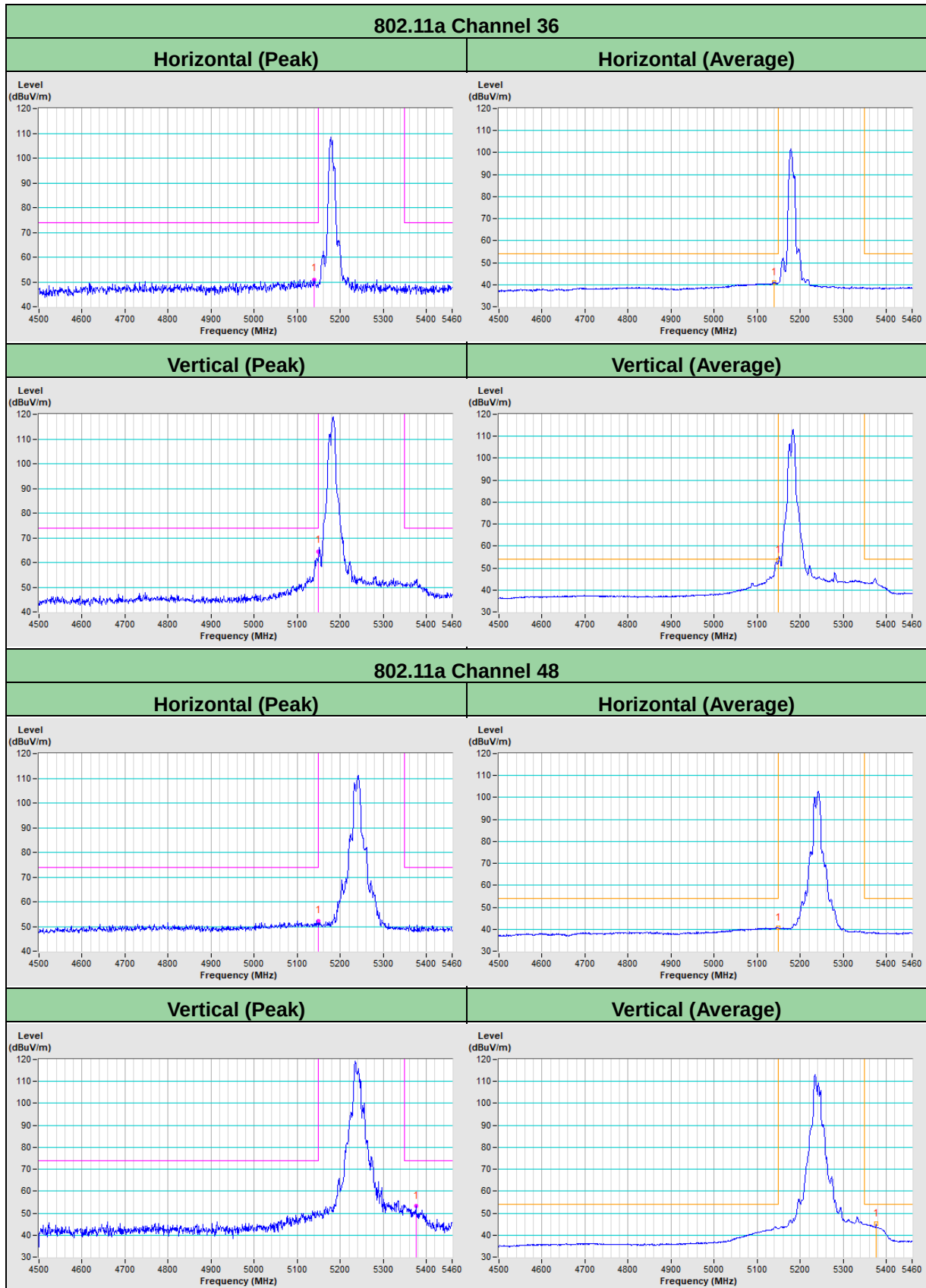
Horizontal

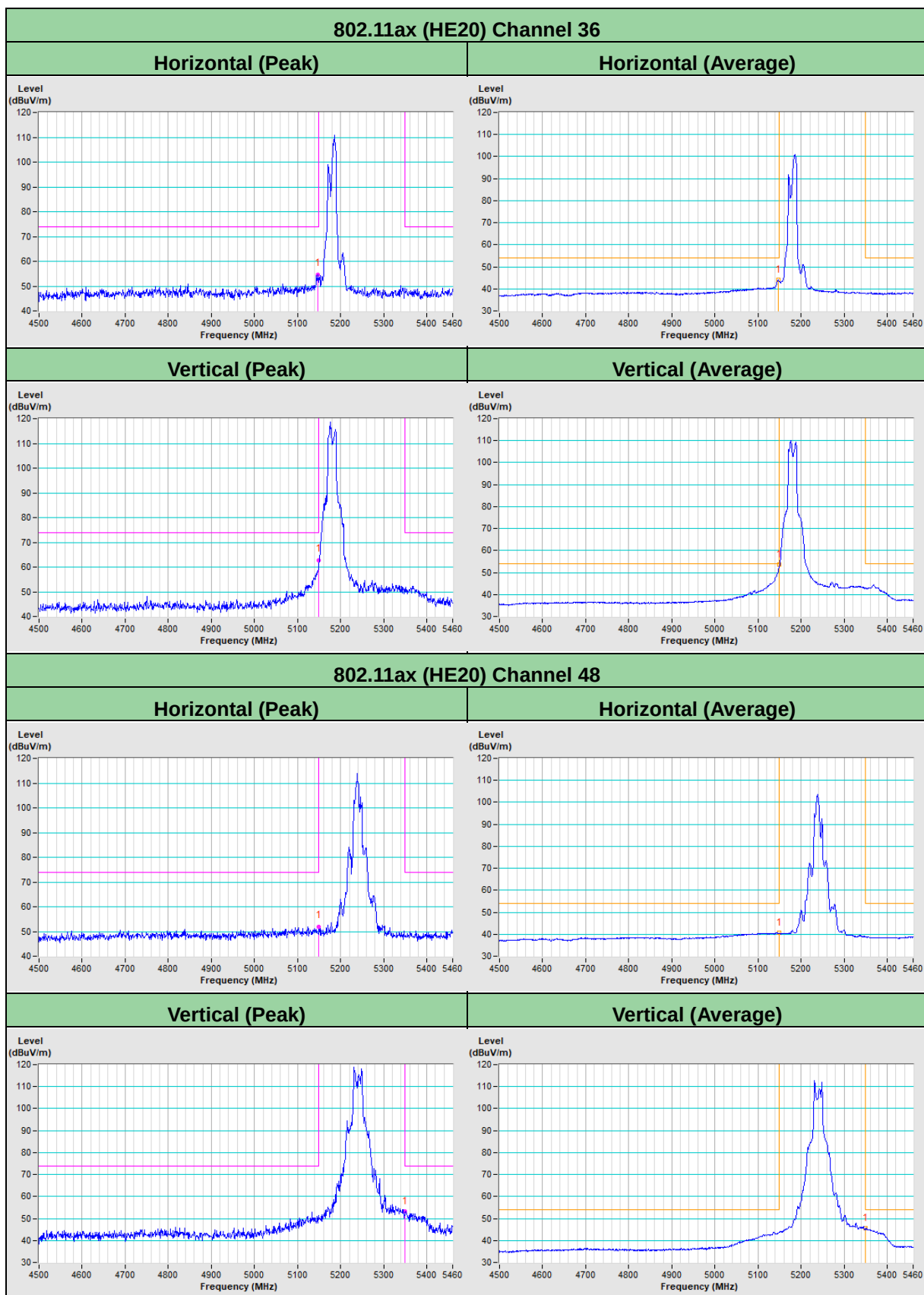


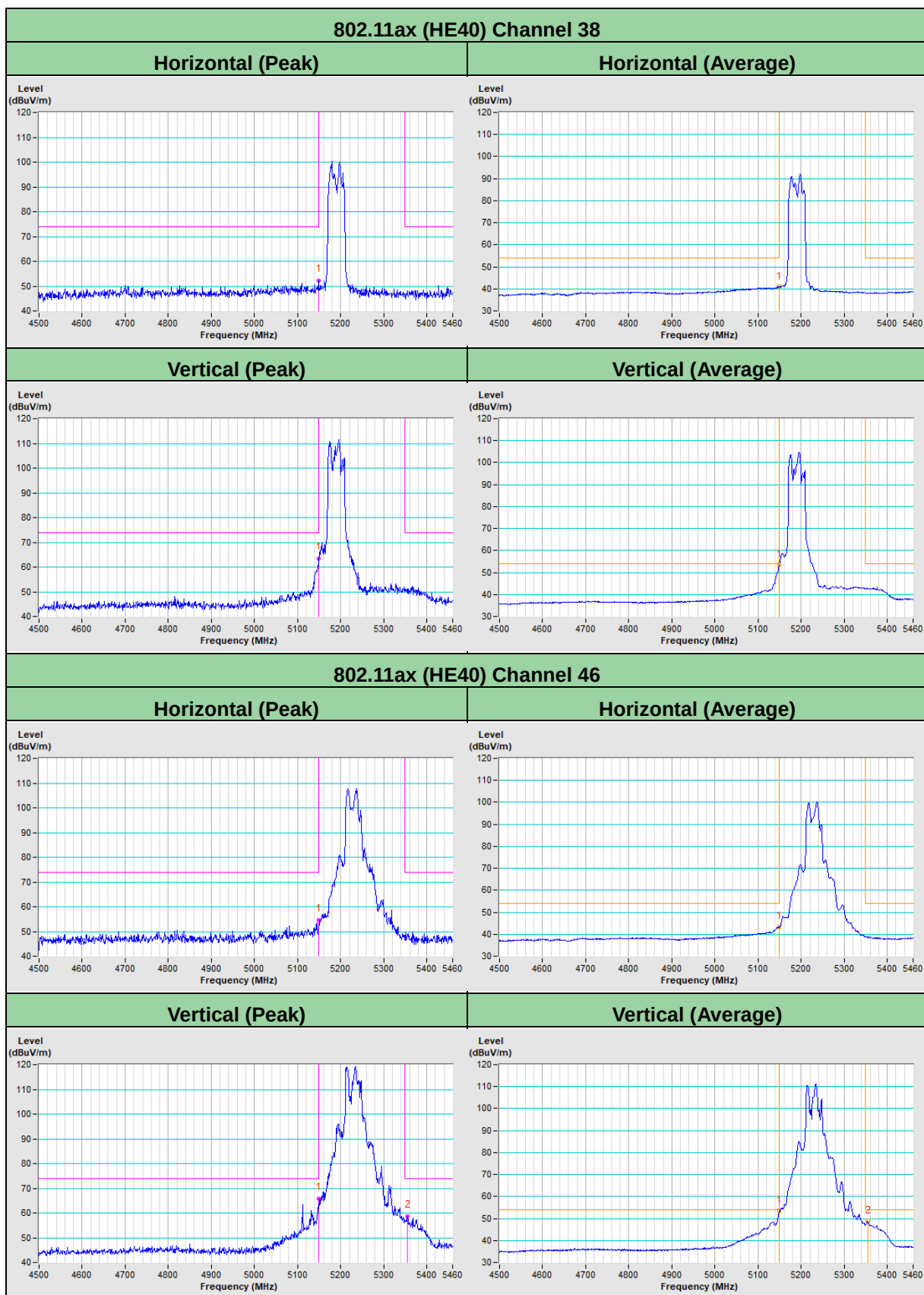
Vertical

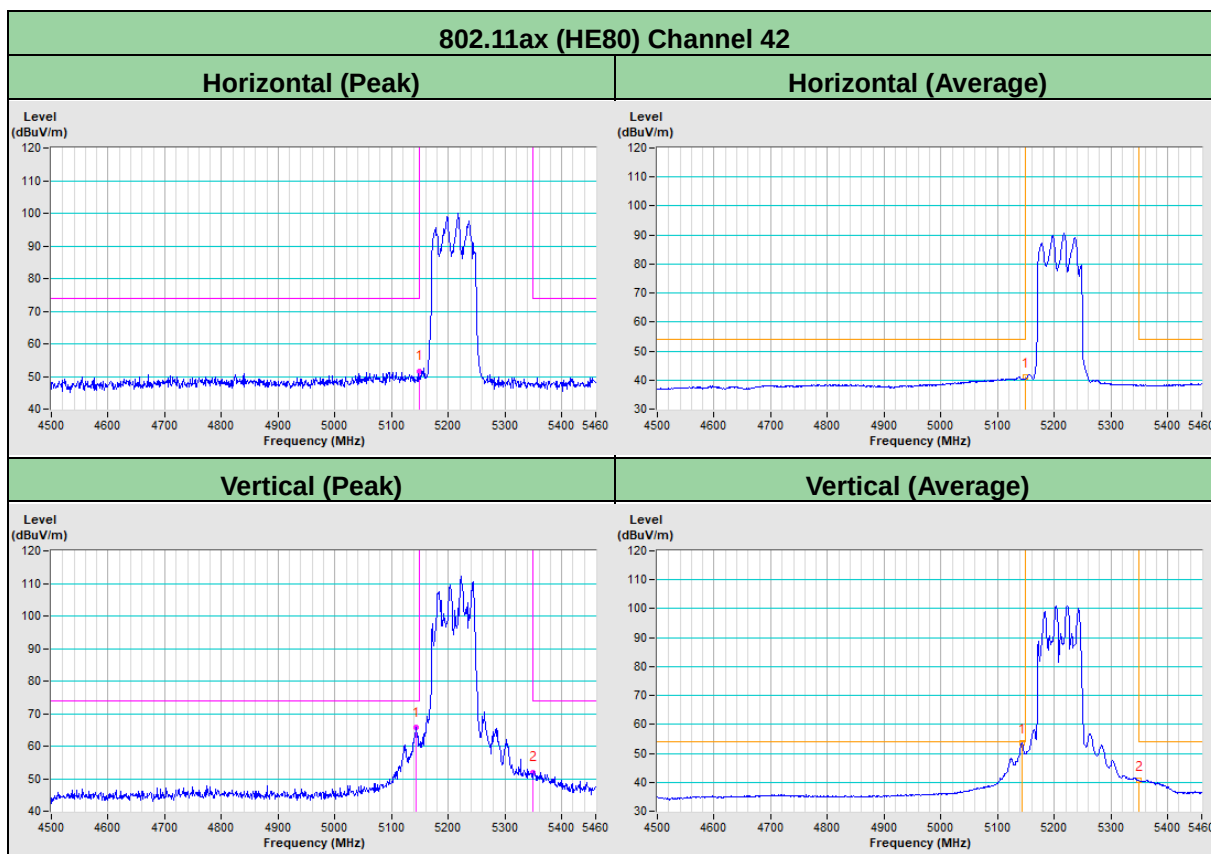


Annex B- Band-edge measurement (For U-NII-1 band)









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

Web Site: www.bureauveritas-adt.com

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

--- END ---