FCC Test Report

Report No.:	RFBDYS-WTW-P20110432A
FCC ID:	TVE-4617T111266
Test Model:	FAP-432F
Series Model:	FortiAP 432Fxxxxxx, FAP-432Fxxxxxx, FORTIAP-432Fxxxxxx (Where “x” can be used as “A-Z”, or “0-9”, or “-”, or blank for software changes or marketing purposes only) (refer to item 3.1 for more details)
Received Date:	Nov. 13, 2020
Test Date:	Dec. 31, 2020 ~ Mar. 24, 2021
Issued Date:	Apr. 08, 2021
Applicant:	Fortinet Inc.
Address:	899 Kifer Road Sunnyvale, CA 94086 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RFBDYS-WTW-P20110432A	Original release.	Apr. 08, 2021

1 Certificate of Conformity

Product:	Secured Wireless Access Point
Brand:	Fortinet
Test Model:	FAP-432F
Series Model:	FortiAP 432Fxxxxxx, FAP-432Fxxxxxx, FORTIAP-432Fxxxxxx (Where “x” can be used as “A-Z”, or “0-9”, or “-”, or blank for software changes or marketing purposes only) (refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	Fortinet Inc.
Test Date:	Dec. 31, 2020 ~ Mar. 24, 2021
Standards:	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 RF characteristics under the conditions specified in this report.

Prepared by : Polly Chien , **Date:** Apr. 08, 2021

Polly Chien / Specialist

Approved by : Bruce Chen , **Date:** Apr. 08, 2021

Bruce Chen / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -14.35dB at 0.15000MHz.
15.407(b) (1/2/3/4(i/ii)/8)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.3dB at 5150.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	EUT uses standard N connector (but subject to professional installation).

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. For U-NII-1, U-NII-2A and U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex A. Test Procedures refer to report 4.1.3.

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	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Secured Wireless Access Point
Brand	Fortinet
Test Model	FAP-432F
Series Model	FortiAP 432Fxxxxxx, FAP-432Fxxxxxx, FORTIAP-432Fxxxxxx (Where “x” can be used as “A-Z”, or “0-9”, or “-”, or blank for software changes or marketing purposes only)
Model Difference	Refer to note
Sample Status	Engineering sample
Power Supply Rating	54Vdc from POE
Modulation Type	802.11a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n (HT20/40): up to 600Mbps 802.11ac (VHT20/40): up to 800Mbps 802.11ax: up to 4803.9Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5720MHz
Number of Channel	5GHz traffic radio: 5180 ~ 5240MHz: 802.11ac (VHT80+VHT80), 802.11ax (HE80+HE80): 1 5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 802.11ac (VHT80+VHT80), 802.11ax (HE80+HE80): 1 5500 ~ 5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 12 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 6 802.11ac (VHT80), 802.11ax (HE80): 3 802.11ac (VHT80+VHT80), 802.11ax (HE80+HE80): 2 Scanning radio: 5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500 ~ 5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3

Output Power	5180~5240MHz: 5G traffic radio: CDD Mode: 65.379mW 5G traffic radio: Beamforming Mode: 56.923mW 5260 ~ 5320MHz: 5G traffic radio: CDD Mode: 117.022mW 5G traffic radio: Beamforming Mode: 54.658mW Scanning radio: CDD Mode: 37.497mW 5500 ~ 5720MHz: 5G traffic radio: CDD Mode: 179.567mW 5G traffic radio: Beamforming Mode: 47.407mW Scanning radio: CDD Mode: 37.940mW
Antenna Type	Refer to note
Antenna Connector	N-type Plug
Accessory Device	POE
Cable Supplied	NA

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the original report (BV CPS report no.: RFBDYS-WTW-P20110432-1) is adding 5.26GHz to 5.32GHz, 5.50GHz to 5.72GHz and 5180~5240MHz [802ac (VHT80+VHT80), 802.11ax (HE80+HE80)] mode by software.
2. The following models are provided to this EUT. The model FAP-432F was chosen for final test.

Brand	Model	Description
Fortinet	FAP-432F	Series model for marketing purpose
	FortiAP 432Fxxxxxx, FAP-432Fxxxxxx, FORTIAP-432Fxxxxxx (Where “x” can be used as “A-Z”, or “0-9”, or “-”, or blank for software changes or marketing purposes only)	

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

Modulation Mode	CDD Mode	Beamforming Mode	TX Function	Radio
802.11a	Support	Not Support	4TX	5G traffic radio (Radio 2)
802.11n (HT20)	Support	Not Support	4TX	
802.11n (HT40)	Support	Not Support	4TX	
802.11ac (VHT20)	Support	Support	4TX	
802.11ac (VHT40)	Support	Support	4TX	
802.11ac (VHT80)	Support	Support	4TX	
802.11ac (VHT80+80)	Support	Support	2TX+2TX	
802.11ax (HE20)	Support	Support	4TX	
802.11ax (HE40)	Support	Support	4TX	
802.11ax (HE80)	Support	Support	4TX	
802.11ax (HE80+80)	Support	Support	2TX+2TX	
802.11a	Support	Not Support	1TX	Scanning radio (Radio 3)
802.11n (HT20)	Support	Not Support	1TX	
802.11n (HT40)	Support	Not Support	1TX	
802.11ac (VHT20)	Support	Not Support	1TX	
802.11ac (VHT40)	Support	Not Support	1TX	
802.11ac (VHT80)	Support	Not Support	1TX	

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40/VHT80/ VHT80+80 on 802.11ac mode and HE20/HE40/HE80/HE80+80 on 802.11ax mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

* For 802.11n, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

4. The EUT consumes power from the following POE.

POE	
Brand	SENAO
Model	PIN060-54PR
Input Power	100-240Vac, 50-60Hz, 1.5A
Output Power	54V, 1.11A

5. The following antennas were provided to the EUT.

Antenna Type	Dipole
Frequency (MHz)	Gain (dBi)
2400	5.1
2450	5.0
2500	5.5
4900	6.1
5150	6.5
5250	6.4
5350	6.7
5450	7.2
5550	6.6
5650	6.6
5750	7.0
5850	6.9

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

*The EUT will install at outdoor area, the highest antenna gain from the horizon above 30 degrees as below, for more detail information please refer to antenna specification and user manual.

Item	Antenna gain	Antenna install degree
Radio 2 Band 1	-2.59 dBi	
Radio 3 Band 1	-2.59 dBi	

* Due to device Will restriced installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from XY and YZ Plane (antenna specification of 30~150 dug and 210~330 dug)

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

6. The simultaneous operation mode was determined by client.

No	Mode
1	2G traffic radio (Radio 1) + 5GHz traffic radio (Radio 2) + 5G Scanning radio (Radio 3) + BLE
2	2G traffic radio (Radio 1) + 5GHz traffic radio (Radio 2) + 5G Scanning radio (Radio 3) + Zigbee
3	5GHz traffic radio (Radio 2) + 2G Scanning radio (Radio 3) + BLE
4	5GHz traffic radio (Radio 2) + 2G Scanning radio (Radio 3) + Zigbee

* 5GHz traffic radio (Radio 2) and 5G Scanning radio (Radio 3) cannot transmit in the same band at same time. 2G traffic radio (Radio 1) and 2G Scanning radio (Radio 3) cannot transmit at same time.

* Zigbee and BT technologies cannot transmit at same time.

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

3.2 Description of Test Modes

5180~5240MHz:

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

Channel	Frequency
42	5210MHz

5260~5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

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

Channel	Frequency
58	5290MHz

5500~5720MHz:

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

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

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

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

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	138	5690 MHz
122	5610 MHz		

2 channels are provided for 802.11ac (VHT80+VHT80), 802.11ax (HE80+HE80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 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 & Bandedge Measurement RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission APCM: Antenna Port Conducted Measurement

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.
2. Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst maximum power.

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
CDD Mode							
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0	5G traffic radio
-	802.11ax (HE20)		52 to 64	52, 60, 64	OFDMA	MCS0	
-	802.11ax (HE40)		54 to 62	54, 62	OFDMA	MCS0	
-	802.11ax (HE80)		58	58	OFDMA	MCS0	
-	802.11ax (HE80+80)		42+58	42+58	OFDMA	MCS0	
-	802.11a		52 to 64	52, 60, 64	OFDM	6.0	Scanning radio
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5	
-	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5	
-	802.11ac (VHT80)		58	58	OFDM	65.0	
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0	5G traffic radio
-	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	MCS0	
-	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	MCS0	
-	802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	MCS0	
-	802.11ax (HE80+80)		106+122	106+122	OFDMA	MCS0	
-	802.11a		100 to 144	100, 116, 140, 144	OFDM	6.0	Scanning radio
-	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5	
-	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5	
-	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	65.0	

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
CDD Mode							
-	802.11ax (HE20)	5500-5720	100 to 144	144	OFDMA	MCS0	5G traffic radio
	802.11a	5500-5720	100 to 144	140	OFDM	6.0	Scanning radio

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
CDD Mode							
-	802.11ax (HE20)	5500-5720	100 to 144	144	OFDMA	MCS0	5G traffic radio
	802.11a	5500-5720	100 to 144	140	OFDM	6.0	Scanning radio

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
CDD Mode							
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0	5G traffic radio
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5	
-	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5	
-	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5	
-	802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5	
-	802.11ac (VHT80)		58	58	OFDM	65.0	
-	802.11ax (HE20)		52 to 64	52, 60, 64	OFDMA	MCS0	
-	802.11ax (HE80)		58	58	OFDMA	MCS0	
-	802.11ax (HE80+80)		42+58	42+58	OFDMA	MCS0	
-	802.11ax (HE80)		58	58	OFDMA	MCS0	
-	802.11a		52 to 64	52, 60, 64	OFDM	6.0	Scanning radio
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5	
-	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5	
-	802.11ac (VHT80)		58	58	OFDM	65.0	
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0	5G traffic radio
-	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5	
-	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5	
-	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	6.5	
-	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	13.5	
-	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	65.0	
-	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	MCS0	
-	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	MCS0	
-	802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	MCS0	
-	802.11ax (HE80+80)		106+122	106+122	OFDMA	MCS0	
-	802.11a		100 to 144	100, 116, 140, 144	OFDM	6.0	Scanning radio
-	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5	
-	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5	
-	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	65.0	

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
Beamforming Mode							
-	802.11ac (VHT20)	5260-5320	52 to 64	52, 60, 64	OFDM	6.5	5G traffic radio
-	802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5	
-	802.11ac (VHT80)		58	58	OFDM	65.0	
-	802.11ax (HE20)		52 to 64	52, 60, 64	OFDMA	MCS0	
-	802.11ax (HE40)		54 to 62	54, 62	OFDMA	MCS0	
-	802.11ax (HE80)		58	58	OFDMA	MCS0	
-	802.11ax (HE80+80)		42+58	42+58	OFDMA	MCS0	
-	802.11ac (VHT20)	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.5	5G traffic radio
-	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	13.5	
-	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	65.0	
-	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	MCS0	
-	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	MCS0	
-	802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	MCS0	
-	802.11ax (HE80+80)		106+122	106+122	OFDMA	MCS0	

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	23 deg. C, 67% RH 23 deg. C, 66% RH	54Vdc	Adair Peng Edison
RE<1G	23 deg. C, 66% RH	54Vdc	Titan Hsu
PLC	25 deg. C, 75% RH	54Vdc	Rex Wang
APCM	25 deg. C, 60% RH	54Vdc	Jisyong Wang

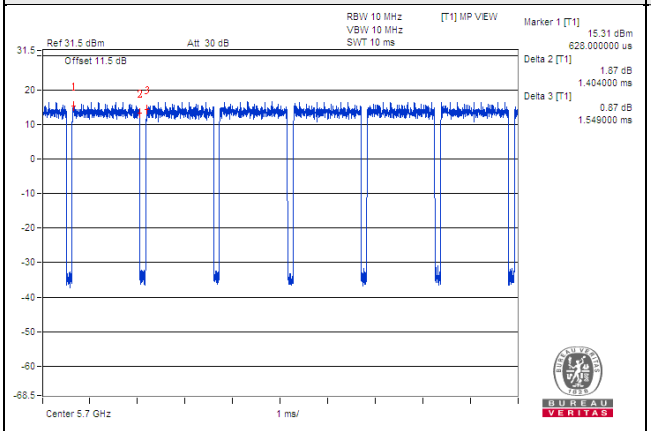
3.3 Duty Cycle of Test Signal

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

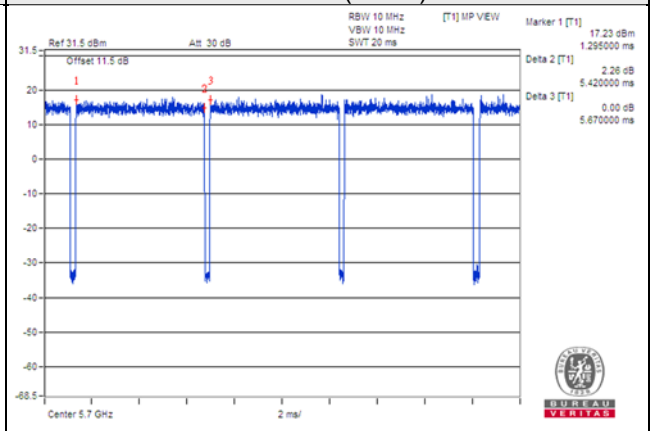
5G traffic radio

802.11a: Duty cycle = 1.404/1.549 = 0.906, Duty factor = 10 * log (1/0.906) = 0.43
802.11ax (HE20): Duty cycle = 5.420/5.670 = 0.956, Duty factor = 10 * log (1/0.956) = 0.20
802.11ax (HE40): Duty cycle = 5.425/5.670 = 0.957, Duty factor = 10 * log (1/0.957) = 0.19
802.11ax (HE80): Duty cycle = 5.425/5.760 = 0.942, Duty factor = 10 * log (1/0.942) = 0.26
802.11ax (HE80+80): Duty cycle = 5.425/5.760 = 0.942, Duty factor = 10 * log (1/0.942) = 0.26

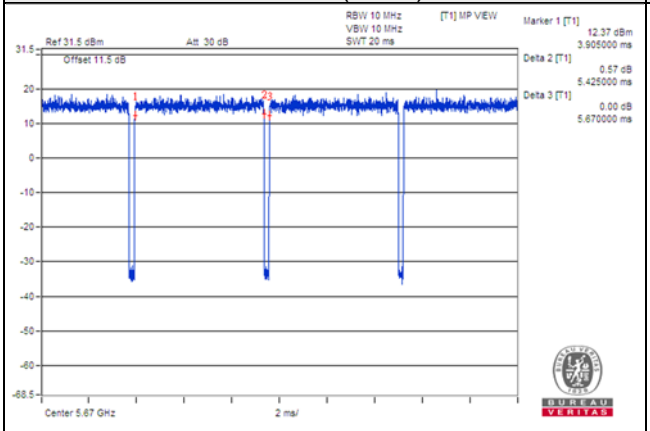
802.11a



802.11ax (HE20)



802.11ax (HE40)



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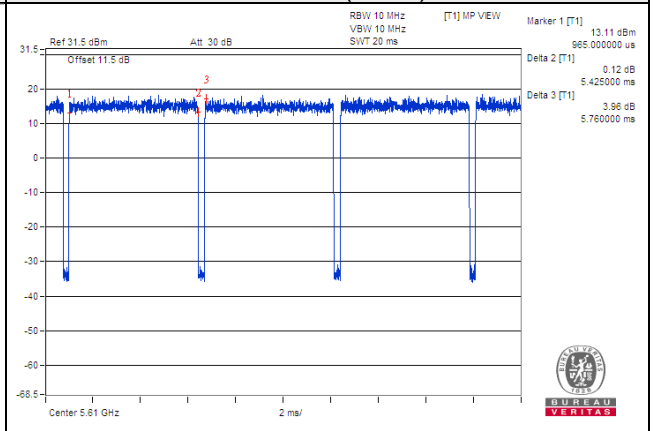
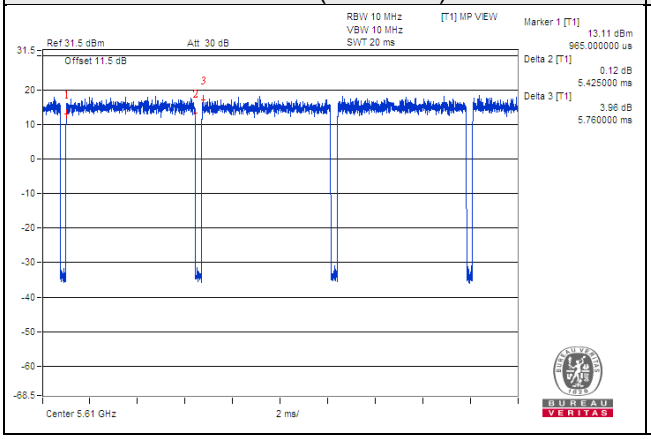
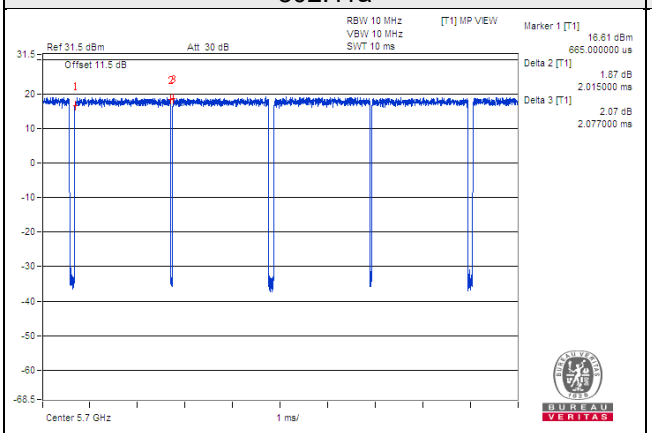
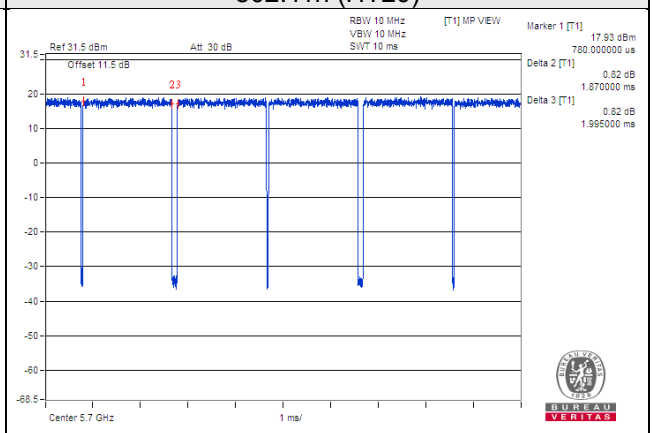
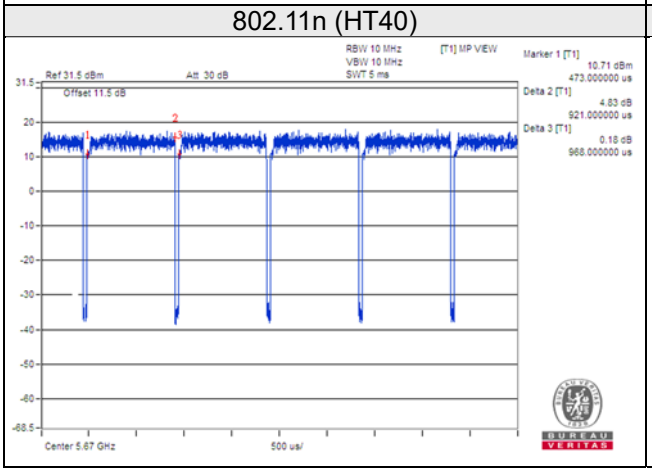
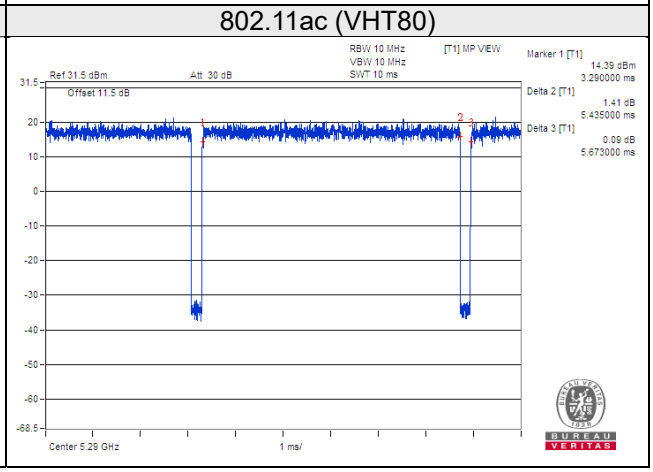


802.11ax (HE80+80)



Scanning radio

802.11a: Duty cycle = 2.015/2.077 = 0.970, Duty factor = 10 * log (1/0.970) = 0.13
802.11n (HT20): Duty cycle = 1.870/1.995 = 0.937, Duty factor = 10 * log (1/0.937) = 0.28
802.11n (HT40): Duty cycle = 0.921/0.968 = 0.951, Duty factor = 10 * log (1/0.951) = 0.22
802.11ac (VHT80): Duty cycle = 5.435/5.673 = 0.958, Duty factor = 10 * log (1/0.958) = 0.19

802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

3.4 Description of Support Units

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

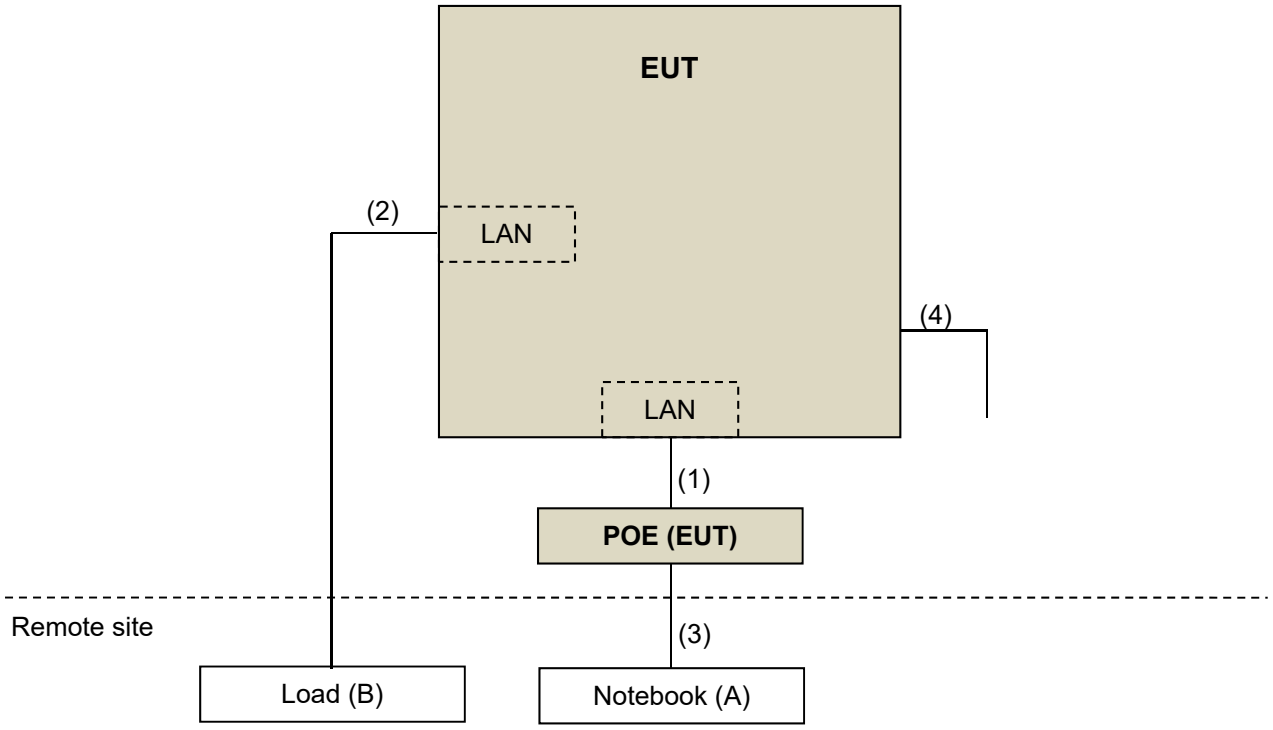
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	NA	NA	NA	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN	1	1.5	N	0	RJ45, Cat5e
2.	LAN	1	1.5	N	0	RJ45, Cat5e
3.	LAN	1	6	N	0	RJ45, Cat5e
4.	Console	1	1.5	N	0	-

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards 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.

KDB 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

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v02r01</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK: 74 (dBμV/m)</td><td>AV: 54 (dBμV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2(dBμV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK: -27 (dBm/MHz) *1
PK: 10 (dBm/MHz) *2
PK: 15.6 (dBm/MHz) *3
PK: 27 (dBm/MHz) *4</td><td>PK: 68.2(dBμV/m) *1
PK: 105.2 (dBμV/m) *2
PK: 110.8(dBμV/m) *3
PK: 122.2 (dBμV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*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.</td></tr>
</table>

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102579	Jul. 07, 2020	Jul. 06, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jun. 09, 2020	Jun. 08, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	9120D	209	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 16, 2020	Aug. 15, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 23, 2020	Mar. 22, 2021
			Mar. 22, 2021	Mar. 21, 2022
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM- SM-8000	Cable-CH3-03 (309224+170907)	Aug. 16, 2020	Aug. 15, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY5519 0004/MY55190007/MY 55210005	Jul. 13, 2020	Jul. 12, 2021

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.

4.1.3 Test Procedures

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 detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

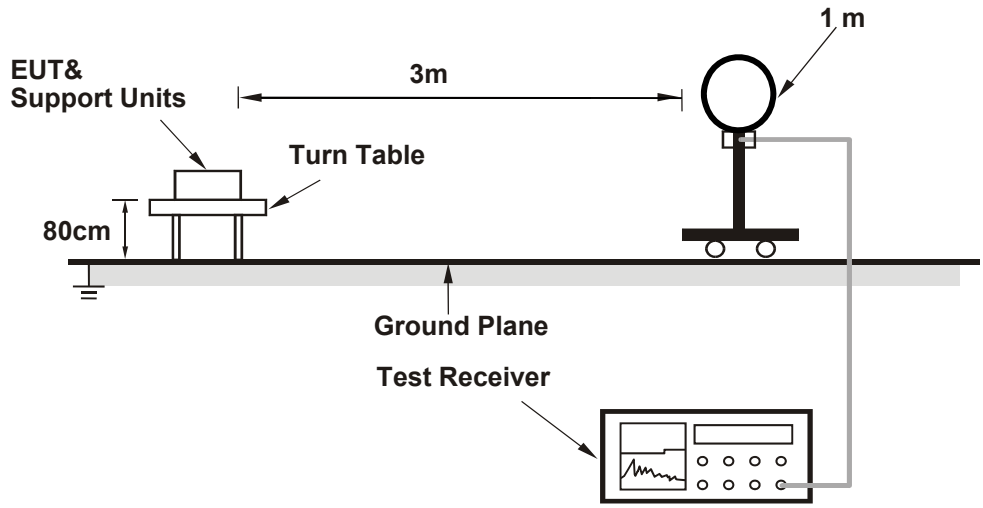
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
   (5G traffic radio: 802.11a: RBW = 1MHz, VBW = 1kHz; 802.11ax (HE20): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE40): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE80): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE80+80): RBW = 1MHz, VBW = 1kHz
   Scanning radio: 802.11a: RBW = 1MHz, VBW = 1kHz; 802.11n (HT20): RBW = 1MHz, VBW = 1kHz; 802.11n (HT40): RBW = 1MHz, VBW = 3kHz; 802.11ac (VHT80): RBW = 1MHz, VBW = 1kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

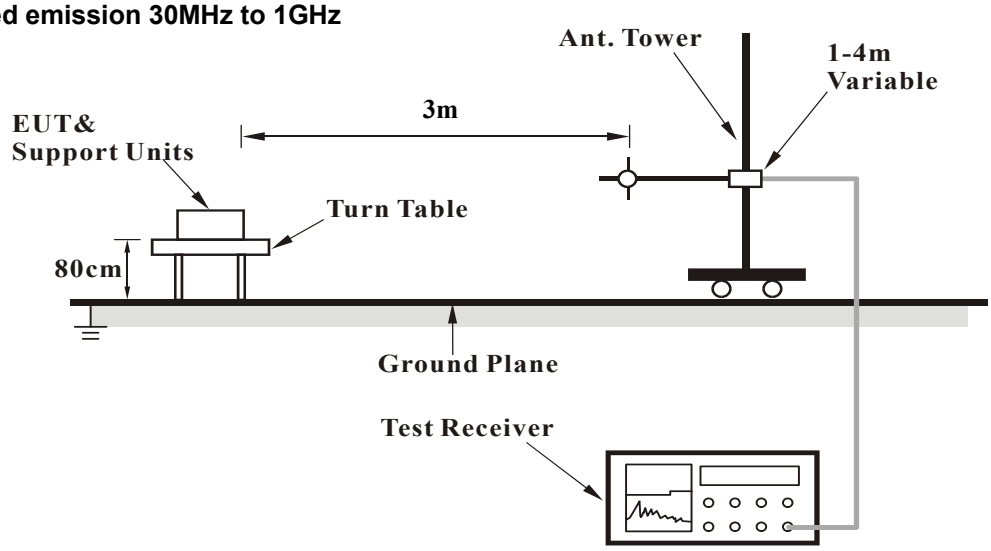
No deviation.

4.1.5 Test Setup

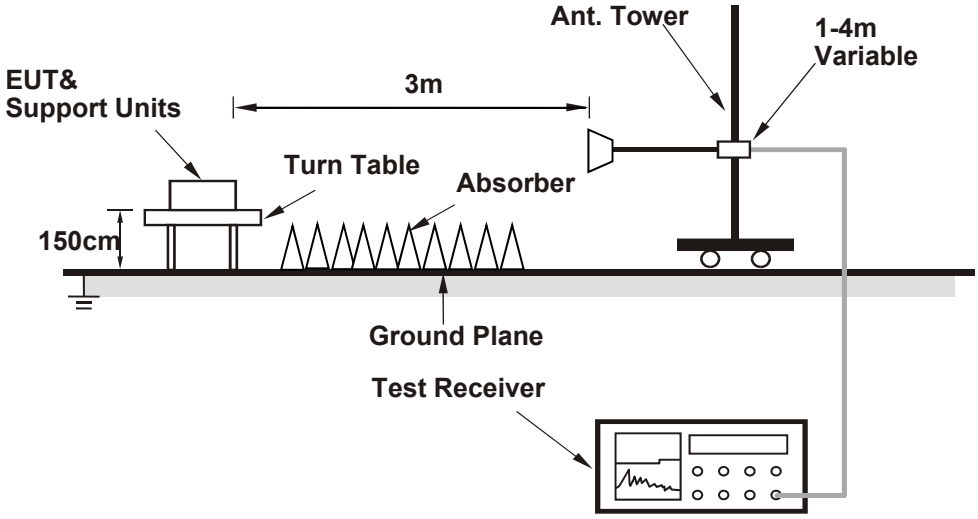
For Radiated emission below 30MHz



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 Conditions

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

Above 1GHz data:

5G traffic radio:

ABOVE 1GHz DATA

RF Mode	TX 802.11a	Channel	CH 52：5260 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	58.2 PK	74.0	-15.8	1.39 H	192	51.6	6.6
2	5150.00	44.8 AV	54.0	-9.2	1.39 H	192	38.2	6.6
3	*5260.00	102.4 PK			1.32 H	189	60.5	41.9
4	*5260.00	92.1 AV			1.32 H	189	50.2	41.9
5	#10520.00	60.3 PK	68.2	-7.9	1.63 H	175	42.7	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	1.91 V	350	52.1	6.6
2	5150.00	45.4 AV	54.0	-8.6	1.91 V	350	38.8	6.6
3	*5260.00	121.1 PK			1.85 V	342	79.2	41.9
4	*5260.00	111.6 AV			1.85 V	342	69.7	41.9
5	#10520.00	61.0 PK	68.2	-7.2	1.08 V	354	43.4	17.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 60：5300 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	*5300.00	102.1 PK			1.43 H	188	60.2	41.9
2	*5300.00	92.4 AV			1.43 H	188	50.5	41.9
3	10600.00	59.7 PK	74.0	-14.3	1.81 H	170	42.5	17.2
4	10600.00	45.1 AV	54.0	-8.9	1.81 H	170	27.9	17.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	122.9 PK			1.87 V	343	81.0	41.9
2	*5300.00	112.6 AV			1.87 V	343	70.7	41.9
3	10600.00	60.7 PK	74.0	-13.3	1.21 V	349	43.5	17.2
4	10600.00	45.9 AV	54.0	-8.1	1.21 V	349	28.7	17.2

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 64：5320 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	*5320.00	101.0 PK			1.48 H	187	59.0	42.0
2	*5320.00	91.3 AV			1.48 H	187	49.3	42.0
3	5350.00	57.2 PK	74.0	-16.8	1.53 H	193	50.8	6.4
4	5350.00	44.1 AV	54.0	-9.9	1.53 H	193	37.7	6.4
5	10640.00	60.1 PK	74.0	-13.9	1.71 H	171	42.7	17.4
6	10640.00	45.5 AV	54.0	-8.5	1.71 H	171	28.1	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	120.7 PK			1.54 V	341	78.7	42.0
2	*5320.00	111.0 AV			1.54 V	341	69.0	42.0
3	5350.00	60.4 PK	74.0	-13.6	1.69 V	350	54.0	6.4
4	5350.00	47.5 AV	54.0	-6.5	1.69 V	350	41.1	6.4
5	10640.00	60.5 PK	74.0	-13.5	1.17 V	357	43.1	17.4
6	10640.00	46.3 AV	54.0	-7.7	1.17 V	357	28.9	17.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 100：5500 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	5460.00	56.2 PK	74.0	-17.8	1.58 H	209	49.9	6.3
2	5460.00	42.6 AV	54.0	-11.4	1.58 H	209	36.3	6.3
3	#5470.00	56.8 PK	68.2	-11.4	1.61 H	199	50.5	6.3
4	*5500.00	100.9 PK			1.52 H	204	58.8	42.1
5	*5500.00	91.3 AV			1.52 H	204	49.2	42.1
6	11000.00	61.9 PK	74.0	-12.1	1.29 H	53	43.3	18.6
7	11000.00	50.4 AV	54.0	-3.6	1.29 H	53	31.8	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.9 PK	74.0	-14.1	1.51 V	350	53.6	6.3
2	5460.00	47.0 AV	54.0	-7.0	1.51 V	350	40.7	6.3
3	#5470.00	58.8 PK	68.2	-9.4	1.59 V	344	52.5	6.3
4	*5500.00	123.3 PK			1.47 V	357	81.2	42.1
5	*5500.00	113.0 AV			1.47 V	357	70.9	42.1
6	11000.00	61.6 PK	74.0	-12.4	1.22 V	352	43.0	18.6
7	11000.00	49.6 AV	54.0	-4.4	1.22 V	352	31.0	18.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 116：5580 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	*5580.00	100.7 PK			1.34 H	204	58.6	42.1
2	*5580.00	90.8 AV			1.34 H	204	48.7	42.1
3	11160.00	60.7 PK	74.0	-13.3	1.41 H	59	42.2	18.5
4	11160.00	49.0 AV	54.0	-5.0	1.41 H	59	30.5	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	*5580.00	122.3 PK			2.06 V	344	80.2	42.1
2	*5580.00	111.7 AV			2.06 V	344	69.6	42.1
3	11160.00	60.5 PK	74.0	-13.5	1.16 V	339	42.0	18.5
4	11160.00	48.1 AV	54.0	-5.9	1.16 V	339	29.6	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.

RF Mode	TX 802.11a	Channel	CH 140：5700 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	*5700.00	103.6 PK			1.49 H	193	61.3	42.3
2	*5700.00	93.5 AV			1.49 H	193	51.2	42.3
3	#5725.00	57.2 PK	68.2	-11.0	1.58 H	201	50.7	6.5
4	11400.00	61.6 PK	74.0	-12.4	1.41 H	57	43.7	17.9
5	11400.00	48.3 AV	54.0	-5.7	1.41 H	57	30.4	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	123.9 PK			1.95 V	152	81.6	42.3
2	*5700.00	113.6 AV			1.95 V	152	71.3	42.3
3	#5725.00	61.1 PK	68.2	-7.1	1.70 V	351	54.6	6.5
4	11400.00	60.6 PK	74.0	-13.4	1.94 V	359	42.7	17.9
5	11400.00	47.1 AV	54.0	-6.9	1.94 V	359	29.2	17.9

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 144：5720 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	#5470.00	56.9 PK	68.2	-11.3	1.50 H	200	50.6	6.3
2	*5720.00	102.1 PK			1.43 H	202	59.9	42.2
3	*5720.00	92.1 AV			1.43 H	202	49.9	42.2
4	#5850.00	58.3 PK	68.2	-9.9	1.49 H	209	51.5	6.8
5	11440.00	60.8 PK	74.0	-13.2	1.30 H	42	42.8	18.0
6	11440.00	49.2 AV	54.0	-4.8	1.30 H	42	31.2	18.0
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	#5470.00	58.8 PK	68.2	-9.4	1.63 V	350	52.5	6.3
2	*5720.00	124.2 PK			1.52 V	345	82.0	42.2
3	*5720.00	114.0 AV			1.52 V	345	71.8	42.2
4	#5850.00	59.3 PK	68.2	-8.9	1.59 V	341	52.5	6.8
5	11440.00	60.5 PK	74.0	-13.5	1.22 V	14	42.5	18.0
6	11440.00	46.9 AV	54.0	-7.1	1.22 V	14	28.9	18.0

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 52：5260 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	58.6 PK	74.0	-15.4	1.92 H	233	52.0	6.6
2	5150.00	44.6 AV	54.0	-9.4	1.92 H	233	38.0	6.6
3	*5260.00	107.1 PK			2.14 H	222	65.2	41.9
4	*5260.00	93.9 AV			2.14 H	222	52.0	41.9
5	#10520.00	60.4 PK	68.2	-7.8	1.82 H	161	42.8	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.3 PK	74.0	-14.7	1.66 V	158	52.7	6.6
2	5150.00	45.6 AV	54.0	-8.4	1.66 V	158	39.0	6.6
3	*5260.00	126.2 PK			1.73 V	160	84.3	41.9
4	*5260.00	112.5 AV			1.73 V	160	70.6	41.9
5	#10520.00	61.1 PK	68.2	-7.1	1.19 V	347	43.5	17.6

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 60：5300 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	*5300.00	107.3 PK			1.92 H	223	65.4	41.9
2	*5300.00	94.0 AV			1.92 H	223	52.1	41.9
3	10600.00	60.0 PK	74.0	-14.0	1.75 H	174	42.8	17.2
4	10600.00	45.6 AV	54.0	-8.4	1.75 H	174	28.4	17.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	126.5 PK			1.66 V	159	84.6	41.9
2	*5300.00	112.2 AV			1.66 V	159	70.3	41.9
3	10600.00	60.5 PK	74.0	-13.5	1.25 V	339	43.3	17.2
4	10600.00	46.2 AV	54.0	-7.8	1.25 V	339	29.0	17.2

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 64：5320 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	*5320.00	106.6 PK			1.84 H	223	64.6	42.0
2	*5320.00	92.7 AV			1.84 H	223	50.7	42.0
3	5350.00	57.8 PK	74.0	-16.2	1.91 H	233	51.4	6.4
4	5350.00	44.1 AV	54.0	-9.9	1.91 H	233	37.7	6.4
5	10640.00	60.1 PK	74.0	-13.9	1.85 H	174	42.7	17.4
6	10640.00	45.7 AV	54.0	-8.3	1.85 H	174	28.3	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	126.0 PK			1.83 V	159	84.0	42.0
2	*5320.00	112.0 AV			1.83 V	159	70.0	42.0
3	5350.00	65.4 PK	74.0	-8.6	1.84 V	168	59.0	6.4
4	5350.00	51.6 AV	54.0	-2.4	1.84 V	168	45.2	6.4
5	10640.00	60.7 PK	74.0	-13.3	1.17 V	342	43.3	17.4
6	10640.00	46.2 AV	54.0	-7.8	1.17 V	342	28.8	17.4

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 100：5500 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	5460.00	57.2 PK	74.0	-16.8	1.35 H	254	50.9	6.3
2	5460.00	44.0 AV	54.0	-10.0	1.35 H	254	37.7	6.3
3	#5470.00	57.2 PK	68.2	-11.0	1.44 H	250	50.9	6.3
4	*5500.00	103.3 PK			1.32 H	228	61.2	42.1
5	*5500.00	89.3 AV			1.32 H	228	47.2	42.1
6	11000.00	60.9 PK	74.0	-13.1	1.31 H	54	42.3	18.6
7	11000.00	50.1 AV	54.0	-3.9	1.31 H	54	31.5	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	1.90 V	170	54.6	6.3
2	5460.00	48.1 AV	54.0	-5.9	1.90 V	170	41.8	6.3
3	#5470.00	61.4 PK	68.2	-6.8	1.82 V	177	55.1	6.3
4	*5500.00	127.7 PK			1.87 V	169	85.6	42.1
5	*5500.00	113.9 AV			1.87 V	169	71.8	42.1
6	11000.00	60.8 PK	74.0	-13.2	1.40 V	349	42.2	18.6
7	11000.00	49.3 AV	54.0	-4.7	1.40 V	349	30.7	18.6

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 116：5580 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	*5580.00	106.2 PK			1.45 H	204	64.1	42.1
2	*5580.00	91.9 AV			1.45 H	204	49.8	42.1
3	11160.00	60.9 PK	74.0	-13.1	1.46 H	40	42.4	18.5
4	11160.00	52.1 AV	54.0	-1.9	1.46 H	40	33.6	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	*5580.00	127.1 PK			1.81 V	169	85.0	42.1
2	*5580.00	113.2 AV			1.81 V	169	71.1	42.1
3	11160.00	60.9 PK	74.0	-13.1	1.19 V	355	42.4	18.5
4	11160.00	48.0 AV	54.0	-6.0	1.19 V	355	29.5	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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 140：5700 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	*5700.00	104.8 PK			1.58 H	192	62.5	42.3
2	*5700.00	91.8 AV			1.58 H	192	49.5	42.3
3	#5725.00	57.3 PK	68.2	-10.9	1.58 H	187	50.8	6.5
4	11400.00	60.3 PK	74.0	-13.7	1.49 H	42	42.4	17.9
5	11400.00	50.1 AV	54.0	-3.9	1.49 H	42	32.2	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	125.8 PK			1.64 V	345	83.5	42.3
2	*5700.00	112.0 AV			1.64 V	345	69.7	42.3
3	#5725.00	62.3 PK	68.2	-5.9	1.58 V	343	55.8	6.5
4	11400.00	60.2 PK	74.0	-13.8	1.22 V	345	42.3	17.9
5	11400.00	47.1 AV	54.0	-6.9	1.22 V	345	29.2	17.9

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 144：5720 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	#5470.00	57.7 PK	68.2	-10.5	1.46 H	200	51.4	6.3
2	*5720.00	104.6 PK			1.43 H	191	62.4	42.2
3	*5720.00	91.6 AV			1.43 H	191	49.4	42.2
4	#5850.00	58.5 PK	68.2	-9.7	1.50 H	197	51.7	6.8
5	11440.00	59.9 PK	74.0	-14.1	1.42 H	42	41.9	18.0
6	11440.00	48.7 AV	54.0	-5.3	1.42 H	42	30.7	18.0
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	#5470.00	57.8 PK	68.2	-10.4	1.80 V	177	51.5	6.3
2	*5720.00	128.0 PK			1.72 V	168	85.8	42.2
3	*5720.00	114.4 AV			1.72 V	168	72.2	42.2
4	#5850.00	59.3 PK	68.2	-8.9	1.77 V	169	52.5	6.8
5	11440.00	60.0 PK	74.0	-14.0	1.88 V	344	42.0	18.0
6	11440.00	46.3 AV	54.0	-7.7	1.88 V	344	28.3	18.0

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 (HE40)	Channel	CH 54：5270 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	58.1 PK	74.0	-15.9	1.66 H	229	51.5	6.6
2	5150.00	44.6 AV	54.0	-9.4	1.66 H	229	38.0	6.6
3	*5270.00	102.4 PK			1.84 H	225	60.5	41.9
4	*5270.00	89.6 AV			1.84 H	225	47.7	41.9
5	#10540.00	59.7 PK	68.2	-8.5	1.67 H	179	42.1	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.2 PK	74.0	-13.8	1.63 V	341	53.6	6.6
2	5150.00	45.6 AV	54.0	-8.4	1.63 V	341	39.0	6.6
3	*5270.00	123.8 PK			1.52 V	352	81.9	41.9
4	*5270.00	110.6 AV			1.52 V	352	68.7	41.9
5	#10540.00	60.4 PK	68.2	-7.8	1.31 V	329	42.8	17.6

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 62：5310 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	*5310.00	100.3 PK			1.82 H	225	58.3	42.0
2	*5310.00	87.4 AV			1.82 H	225	45.4	42.0
3	5350.00	57.9 PK	74.0	-16.1	1.77 H	221	51.5	6.4
4	5350.00	44.4 AV	54.0	-9.6	1.77 H	221	38.0	6.4
5	10620.00	59.5 PK	74.0	-14.5	1.63 H	166	42.1	17.4
6	10620.00	45.9 AV	54.0	-8.1	1.63 H	166	28.5	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	121.6 PK			1.81 V	172	79.6	42.0
2	*5310.00	109.0 AV			1.81 V	172	67.0	42.0
3	5350.00	65.8 PK	74.0	-8.2	1.84 V	145	59.4	6.4
4	5350.00	52.7 AV	54.0	-1.3	1.84 V	145	46.3	6.4
5	10620.00	59.4 PK	74.0	-14.6	1.45 V	359	42.0	17.4
6	10620.00	46.3 AV	54.0	-7.7	1.45 V	359	28.9	17.4

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 102：5510 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	5460.00	57.8 PK	74.0	-16.2	1.30 H	197	51.5	6.3
2	5460.00	44.1 AV	54.0	-9.9	1.30 H	197	37.8	6.3
3	#5470.00	57.6 PK	68.2	-10.6	1.33 H	204	51.3	6.3
4	*5510.00	102.5 PK			1.26 H	206	60.4	42.1
5	*5510.00	90.0 AV			1.26 H	206	47.9	42.1
6	11020.00	60.5 PK	74.0	-13.5	1.37 H	38	41.9	18.6
7	11020.00	49.9 AV	54.0	-4.1	1.37 H	38	31.3	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.8 PK	74.0	-14.2	1.66 V	170	53.5	6.3
2	5460.00	47.4 AV	54.0	-6.6	1.66 V	170	41.1	6.3
3	#5470.00	66.6 PK	68.2	-1.6	1.70 V	167	60.3	6.3
4	*5510.00	122.2 PK			1.74 V	168	80.1	42.1
5	*5510.00	109.3 AV			1.74 V	168	67.2	42.1
6	11020.00	60.7 PK	74.0	-13.3	2.05 V	319	42.1	18.6
7	11020.00	48.8 AV	54.0	-5.2	2.05 V	319	30.2	18.6

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 110：5550 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	*5550.00	102.3 PK			1.61 H	204	60.2	42.1
2	*5550.00	89.6 AV			1.61 H	204	47.5	42.1
3	11100.00	60.5 PK	74.0	-13.5	1.49 H	39	42.2	18.3
4	11100.00	50.5 AV	54.0	-3.5	1.49 H	39	32.2	18.3
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	*5550.00	122.3 PK			1.76 V	171	80.2	42.1
2	*5550.00	109.6 AV			1.76 V	171	67.5	42.1
3	11100.00	60.0 PK	74.0	-14.0	2.00 V	323	41.7	18.3
4	11100.00	47.9 AV	54.0	-6.1	2.00 V	323	29.6	18.3

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 134：5670 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	*5670.00	100.4 PK			1.32 H	190	58.2	42.2
2	*5670.00	87.5 AV			1.32 H	190	45.3	42.2
3	#5725.00	57.0 PK	68.2	-11.2	1.35 H	200	50.5	6.5
4	11340.00	60.3 PK	74.0	-13.7	1.29 H	42	42.2	18.1
5	11340.00	48.9 AV	54.0	-5.1	1.29 H	42	30.8	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	121.6 PK			1.57 V	174	79.4	42.2
2	*5670.00	108.6 AV			1.57 V	174	66.4	42.2
3	#5725.00	60.2 PK	68.2	-8.0	1.69 V	161	53.7	6.5
4	11340.00	59.5 PK	74.0	-14.5	1.61 V	339	41.4	18.1
5	11340.00	47.0 AV	54.0	-7.0	1.61 V	339	28.9	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 142：5710 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	#5470.00	57.2 PK	68.2	-11.0	1.50 H	204	50.9	6.3
2	*5710.00	101.0 PK			1.43 H	192	58.7	42.3
3	*5710.00	88.6 AV			1.43 H	192	46.3	42.3
4	#5850.00	58.3 PK	68.2	-9.9	1.44 H	198	51.5	6.8
5	11420.00	59.8 PK	74.0	-14.2	1.32 H	51	41.9	17.9
6	11420.00	47.9 AV	54.0	-6.1	1.32 H	51	30.0	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	58.5 PK	68.2	-9.7	1.69 V	169	52.2	6.3
2	*5710.00	122.4 PK			1.58 V	168	80.1	42.3
3	*5710.00	109.5 AV			1.58 V	168	67.2	42.3
4	#5850.00	59.0 PK	68.2	-9.2	1.61 V	172	52.2	6.8
5	11420.00	60.2 PK	74.0	-13.8	1.75 V	341	42.3	17.9
6	11420.00	47.6 AV	54.0	-6.4	1.75 V	341	29.7	17.9

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 58：5290 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	57.8 PK	74.0	-16.2	1.50 H	203	51.2	6.6
2	5150.00	44.7 AV	54.0	-9.3	1.50 H	203	38.1	6.6
3	*5290.00	99.2 PK			1.34 H	193	57.3	41.9
4	*5290.00	86.2 AV			1.34 H	193	44.3	41.9
5	5350.00	57.1 PK	74.0	-16.9	1.45 H	199	50.7	6.4
6	5350.00	44.4 AV	54.0	-9.6	1.45 H	199	38.0	6.4
7	#10580.00	59.4 PK	68.2	-8.8	1.79 H	166	42.0	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.6 PK	74.0	-14.4	1.72 V	339	53.0	6.6
2	5150.00	46.3 AV	54.0	-7.7	1.72 V	339	39.7	6.6
3	*5290.00	119.1 PK			1.81 V	168	77.2	41.9
4	*5290.00	106.0 AV			1.81 V	168	64.1	41.9
5	5350.00	65.5 PK	74.0	-8.5	1.65 V	342	59.1	6.4
6	5350.00	52.4 AV	54.0	-1.6	1.65 V	342	46.0	6.4
7	#10580.00	59.5 PK	68.2	-8.7	1.33 V	351	42.1	17.4

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 106：5530 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	5460.00	58.0 PK	74.0	-16.0	1.50 H	190	51.7	6.3
2	5460.00	44.0 AV	54.0	-10.0	1.50 H	190	37.7	6.3
3	#5470.00	57.2 PK	68.2	-11.0	1.55 H	196	50.9	6.3
4	*5530.00	96.3 PK			1.57 H	194	54.2	42.1
5	*5530.00	83.7 AV			1.57 H	194	41.6	42.1
6	#5725.00	58.0 PK	68.2	-10.2	1.60 H	201	51.5	6.5
7	11060.00	60.2 PK	74.0	-13.8	1.33 H	27	41.8	18.4
8	11060.00	49.0 AV	54.0	-5.0	1.33 H	27	30.6	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	66.6 PK	74.0	-7.4	1.70 V	167	60.3	6.3
2	5460.00	52.5 AV	54.0	-1.5	1.70 V	167	46.2	6.3
3	#5470.00	66.8 PK	68.2	-1.4	1.55 V	175	60.5	6.3
4	*5530.00	118.3 PK			1.75 V	168	76.2	42.1
5	*5530.00	105.5 AV			1.75 V	168	63.4	42.1
6	#5725.00	60.0 PK	68.2	-8.2	1.67 V	170	53.5	6.5
7	11060.00	60.9 PK	74.0	-13.1	1.61 V	350	42.5	18.4
8	11060.00	47.4 AV	54.0	-6.6	1.61 V	350	29.0	18.4

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 (HE80)	Channel	CH 122：5610 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	5460.00	57.7 PK	74.0	-16.3	1.49 H	203	51.4	6.3
2	5460.00	44.0 AV	54.0	-10.0	1.49 H	203	37.7	6.3
3	#5470.00	57.6 PK	68.2	-10.6	1.44 H	199	51.3	6.3
4	*5610.00	97.8 PK			1.45 H	205	55.7	42.1
5	*5610.00	85.5 AV			1.45 H	205	43.4	42.1
6	#5725.00	58.0 PK	68.2	-10.2	1.51 H	207	51.5	6.5
7	11220.00	60.7 PK	74.0	-13.3	1.49 H	49	42.2	18.5
8	11220.00	50.1 AV	54.0	-3.9	1.49 H	49	31.6	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	5460.00	58.9 PK	74.0	-15.1	1.75 V	161	52.6	6.3
2	5460.00	45.3 AV	54.0	-8.7	1.75 V	161	39.0	6.3
3	#5470.00	58.5 PK	68.2	-9.7	1.70 V	166	52.2	6.3
4	*5610.00	118.1 PK			1.75 V	167	76.0	42.1
5	*5610.00	106.0 AV			1.75 V	167	63.9	42.1
6	#5725.00	59.7 PK	68.2	-8.5	1.63 V	165	53.2	6.5
7	11220.00	61.0 PK	74.0	-13.0	1.75 V	353	42.5	18.5
8	11220.00	47.6 AV	54.0	-6.4	1.75 V	353	29.1	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 (HE80)	Channel	CH 138：5690 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	#5470.00	57.0 PK	68.2	-11.2	1.40 H	199	50.7	6.3
2	*5690.00	99.4 PK			1.35 H	193	57.1	42.3
3	*5690.00	86.2 AV			1.35 H	193	43.9	42.3
4	#5850.00	58.6 PK	68.2	-9.6	1.33 H	200	51.8	6.8
5	11380.00	59.6 PK	74.0	-14.4	1.36 H	43	41.8	17.8
6	11380.00	49.0 AV	54.0	-5.0	1.36 H	43	31.2	17.8
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	#5470.00	59.2 PK	68.2	-9.0	1.63 V	170	52.9	6.3
2	*5690.00	118.6 PK			1.73 V	165	76.3	42.3
3	*5690.00	105.8 AV			1.73 V	165	63.5	42.3
4	#5850.00	58.9 PK	68.2	-9.3	1.61 V	173	52.1	6.8
5	11380.00	60.4 PK	74.0	-13.6	1.85 V	350	42.6	17.8
6	11380.00	46.7 AV	54.0	-7.3	1.85 V	350	28.9	17.8

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.

RF Mode	TX 802.11ax (HE80+80)	Channel	CH 42+58： 5210 MHz+5290 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	58.2 PK	74.0	-15.8	1.66 H	215	51.6	6.6
2	5150.00	44.8 AV	54.0	-9.2	1.66 H	215	38.2	6.6
3	*5210.00	94.4 PK			1.67 H	236	52.4	42.0
4	*5210.00	82.1 AV			1.67 H	236	40.1	42.0
5	*5290.00	95.1 PK			1.67 H	187	53.2	41.9
6	*5290.00	82.1 AV			1.67 H	187	40.2	41.9
7	5350.00	58.0 PK	74.0	-16.0	1.77 H	230	51.6	6.4
8	5350.00	44.6 AV	54.0	-9.4	1.77 H	230	38.2	6.4
9	#10420.00	59.1 PK	68.2	-9.1	1.55 H	191	41.9	17.2
10	#10580.00	42.1 PK	68.2	-26.1	1.58 H	193	24.7	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.7 PK	74.0	-9.3	1.63 V	176	58.1	6.6
2	5150.00	47.2 AV	54.0	-6.8	1.63 V	176	40.6	6.6
3	*5210.00	111.1 PK			1.54 V	169	69.1	42.0
4	*5210.00	97.7 AV			1.54 V	169	55.7	42.0
5	*5290.00	113.4 PK			1.94 V	178	71.5	41.9
6	*5290.00	100.3 AV			1.94 V	178	58.4	41.9
7	5350.00	59.7 PK	74.0	-14.3	1.56 V	161	53.3	6.4
8	5350.00	48.2 AV	54.0	-5.8	1.56 V	161	41.8	6.4
9	#10420.00	58.5 PK	68.2	-9.7	1.58 V	355	41.3	17.2
10	#10580.00	58.9 PK	68.2	-9.3	1.57 V	349	41.5	17.4

Remarks:

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

RF Mode	TX 802.11ax (HE80+80)	Channel	CH 106+122： 5530 MHz+5610 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	5460.00	58.0 PK	74.0	-16.0	1.60 H	180	51.7	6.3
2	5460.00	44.4 AV	54.0	-9.6	1.60 H	180	38.1	6.3
3	#5470.00	58.1 PK	68.2	-10.1	1.57 H	183	51.9	6.2
4	*5530.00	93.0 PK			1.57 H	184	50.9	42.1
5	*5530.00	79.7 AV			1.57 H	184	37.6	42.1
6	*5610.00	97.2 PK			1.57 H	178	55.1	42.1
7	*5610.00	84.2 AV			1.57 H	178	42.1	42.1
8	#5725.00	57.8 PK	68.2	-10.4	1.62 H	186	51.6	6.2
9	11060.00	60.4 PK	74.0	-13.6	1.66 H	150	42.3	18.1
10	11060.00	47.0 AV	54.0	-7.0	1.66 H	150	28.9	18.1
11	11220.00	60.6 PK	74.0	-13.4	1.79 H	162	42.1	18.5
12	11220.00	47.0 AV	54.0	-7.0	1.79 H	162	28.5	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	5460.00	58.5 PK	74.0	-15.5	1.83 V	177	52.2	6.3
2	5460.00	47.0 AV	54.0	-7.0	1.83 V	177	40.7	6.3
3	#5470.00	60.3 PK	68.2	-7.9	1.53 V	166	54.1	6.2
4	*5530.00	111.8 PK			1.54 V	177	69.7	42.1
5	*5530.00	97.9 AV			1.54 V	177	55.8	42.1
6	*5610.00	114.6 PK			1.99 V	178	72.5	42.1
7	*5610.00	100.8 AV			1.99 V	178	58.7	42.1
8	#5725.00	59.1 PK	68.2	-9.1	1.60 V	163	52.9	6.2
9	11060.00	60.1 PK	74.0	-13.9	1.82 V	347	42.0	18.1
10	11060.00	46.9 AV	54.0	-7.1	1.82 V	347	28.8	18.1
11	11220.00	60.5 PK	74.0	-13.5	1.67 V	350	42.0	18.5
12	11220.00	46.8 AV	54.0	-7.2	1.67 V	350	28.3	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.

Scanning radio:

RF Mode	TX 802.11a	Channel	CH 52：5260 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	58.2 PK	74.0	-15.8	1.52 H	11	51.6	6.6
2	5150.00	45.0 AV	54.0	-9.0	1.52 H	11	38.4	6.6
3	*5260.00	96.8 PK			1.51 H	6	54.9	41.9
4	*5260.00	86.9 AV			1.51 H	6	45.0	41.9
5	#10520.00	59.3 PK	68.2	-8.9	1.99 H	119	41.7	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	1.51 V	167	53.5	6.6
2	5150.00	51.5 AV	54.0	-2.5	1.51 V	167	44.9	6.6
3	*5260.00	114.1 PK			1.53 V	158	72.2	41.9
4	*5260.00	104.0 AV			1.53 V	158	62.1	41.9
5	#10520.00	59.1 PK	68.2	-9.1	1.69 V	81	41.5	17.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 60：5300 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	*5300.00	96.0 PK			1.49 H	7	54.1	41.9
2	*5300.00	86.4 AV			1.49 H	7	44.5	41.9
3	10600.00	58.9 PK	74.0	-15.1	1.98 H	118	41.7	17.2
4	10600.00	45.7 AV	54.0	-8.3	1.98 H	118	28.5	17.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	113.9 PK			1.58 V	167	72.0	41.9
2	*5300.00	103.9 AV			1.58 V	167	62.0	41.9
3	10600.00	59.0 PK	74.0	-15.0	1.72 V	85	41.8	17.2
4	10600.00	46.0 AV	54.0	-8.0	1.72 V	85	28.8	17.2

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 64：5320 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	58.1 PK	74.0	-15.9	1.44 H	11	51.5	6.6
2	5150.00	44.8 AV	54.0	-9.2	1.44 H	11	38.2	6.6
3	*5320.00	93.3 PK			1.38 H	9	51.3	42.0
4	*5320.00	83.6 AV			1.38 H	9	41.6	42.0
5	5350.00	58.0 PK	74.0	-16.0	1.40 H	15	51.6	6.4
6	5350.00	44.7 AV	54.0	-9.3	1.40 H	15	38.3	6.4
7	10640.00	59.0 PK	74.0	-15.0	2.05 H	128	41.6	17.4
8	10640.00	46.0 AV	54.0	-8.0	2.05 H	128	28.6	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.1 PK	74.0	-14.9	1.47 V	165	52.5	6.6
2	5150.00	51.0 AV	54.0	-3.0	1.47 V	165	44.4	6.6
3	*5320.00	111.5 PK			1.58 V	170	69.5	42.0
4	*5320.00	100.8 AV			1.58 V	170	58.8	42.0
5	5350.00	59.4 PK	74.0	-14.6	1.59 V	171	53.0	6.4
6	5350.00	46.7 AV	54.0	-7.3	1.59 V	171	40.3	6.4
7	10640.00	59.1 PK	74.0	-14.9	1.58 V	84	41.7	17.4
8	10640.00	46.2 AV	54.0	-7.8	1.58 V	84	28.8	17.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 100：5500 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	5460.00	57.8 PK	74.0	-16.2	1.49 H	195	51.5	6.3
2	5460.00	44.6 AV	54.0	-9.4	1.49 H	195	38.3	6.3
3	#5470.00	58.1 PK	68.2	-10.1	1.47 H	200	51.8	6.3
4	*5500.00	99.6 PK			1.45 H	193	57.5	42.1
5	*5500.00	89.6 AV			1.45 H	193	47.5	42.1
6	11000.00	60.2 PK	74.0	-13.8	2.05 H	123	41.6	18.6
7	11000.00	47.1 AV	54.0	-6.9	2.05 H	123	28.5	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.9 PK	74.0	-14.1	1.43 V	170	53.6	6.3
2	5460.00	46.9 AV	54.0	-7.1	1.43 V	170	40.6	6.3
3	#5470.00	60.4 PK	68.2	-7.8	1.47 V	169	54.1	6.3
4	*5500.00	115.7 PK			1.42 V	169	73.6	42.1
5	*5500.00	105.5 AV			1.42 V	169	63.4	42.1
6	11000.00	60.2 PK	74.0	-13.8	1.72 V	85	41.6	18.6
7	11000.00	47.1 AV	54.0	-6.9	1.72 V	85	28.5	18.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 116：5580 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	*5580.00	99.4 PK			1.45 H	193	57.3	42.1
2	*5580.00	89.4 AV			1.45 H	193	47.3	42.1
3	11160.00	60.0 PK	74.0	-14.0	2.02 H	125	41.5	18.5
4	11160.00	46.9 AV	54.0	-7.1	2.02 H	125	28.4	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	*5580.00	116.2 PK			1.46 V	168	74.1	42.1
2	*5580.00	106.2 AV			1.46 V	168	64.1	42.1
3	11160.00	60.1 PK	74.0	-13.9	1.75 V	86	41.6	18.5
4	11160.00	47.0 AV	54.0	-7.0	1.75 V	86	28.5	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.

RF Mode	TX 802.11a	Channel	CH 140：5700 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	*5700.00	98.3 PK			1.51 H	180	56.0	42.3
2	*5700.00	87.7 AV			1.51 H	180	45.4	42.3
3	#5725.00	58.8 PK	68.2	-9.4	1.53 H	178	52.3	6.5
4	11400.00	59.6 PK	74.0	-14.4	2.09 H	125	41.7	17.9
5	11400.00	46.5 AV	54.0	-7.5	2.09 H	125	28.6	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	116.8 PK			1.50 V	169	74.5	42.3
2	*5700.00	106.5 AV			1.50 V	169	64.2	42.3
3	#5725.00	65.3 PK	68.2	-2.9	1.54 V	168	58.8	6.5
4	11400.00	59.5 PK	74.0	-14.5	1.73 V	85	41.6	17.9
5	11400.00	46.5 AV	54.0	-7.5	1.73 V	85	28.6	17.9

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 144：5720 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	*5720.00	97.7 PK			1.49 H	182	55.5	42.2
2	*5720.00	88.0 AV			1.49 H	182	45.8	42.2
3	#5850.00	58.6 PK	68.2	-9.6	1.51 H	184	51.8	6.8
4	11440.00	59.5 PK	74.0	-14.5	2.11 H	125	41.5	18.0
5	11440.00	46.4 AV	54.0	-7.6	2.11 H	125	28.4	18.0
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	#5470.00	59.6 PK	68.2	-8.6	1.66 V	169	53.3	6.3
2	*5720.00	116.4 PK			1.45 V	166	74.2	42.2
3	*5720.00	106.4 AV			1.45 V	166	64.2	42.2
4	#5850.00	59.3 PK	68.2	-8.9	1.67 V	170	52.5	6.8
5	11440.00	59.6 PK	74.0	-14.4	1.75 V	88	41.6	18.0
6	11440.00	46.5 AV	54.0	-7.5	1.75 V	88	28.5	18.0

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 802.11n (HT20)	Channel	CH 52：5260 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	58.2 PK	74.0	-15.8	1.55 H	11	51.6	6.6
2	5150.00	45.1 AV	54.0	-8.9	1.55 H	11	38.5	6.6
3	*5260.00	96.6 PK			1.52 H	7	54.7	41.9
4	*5260.00	86.7 AV			1.52 H	7	44.8	41.9
5	#10520.00	59.1 PK	68.2	-9.1	2.02 H	115	41.5	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	1.52 V	167	52.1	6.6
2	5150.00	50.6 AV	54.0	-3.4	1.52 V	167	44.0	6.6
3	*5260.00	113.7 PK			1.50 V	160	71.8	41.9
4	*5260.00	103.5 AV			1.50 V	160	61.6	41.9
5	#10520.00	59.3 PK	68.2	-8.9	1.48 V	71	41.7	17.6

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 60：5300 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	*5300.00	95.5 PK			1.49 H	7	53.6	41.9
2	*5300.00	85.7 AV			1.49 H	7	43.8	41.9
3	10600.00	58.8 PK	74.0	-15.2	2.02 H	114	41.6	17.2
4	10600.00	45.7 AV	54.0	-8.3	2.02 H	114	28.5	17.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	114.1 PK			1.57 V	171	72.2	41.9
2	*5300.00	103.3 AV			1.57 V	171	61.4	41.9
3	10600.00	59.0 PK	74.0	-15.0	1.58 V	77	41.8	17.2
4	10600.00	46.0 AV	54.0	-8.0	1.58 V	77	28.8	17.2

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 64：5320 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	58.1 PK	74.0	-15.9	1.52 H	11	51.5	6.6
2	5150.00	44.8 AV	54.0	-9.2	1.52 H	11	38.2	6.6
3	*5320.00	93.2 PK			1.47 H	6	51.2	42.0
4	*5320.00	83.2 AV			1.47 H	6	41.2	42.0
5	5350.00	58.1 PK	74.0	-15.9	1.51 H	14	51.7	6.4
6	5350.00	44.8 AV	54.0	-9.2	1.51 H	14	38.4	6.4
7	10640.00	58.9 PK	74.0	-15.1	2.11 H	123	41.5	17.4
8	10640.00	45.9 AV	54.0	-8.1	2.11 H	123	28.5	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.8 PK	74.0	-14.2	1.54 V	169	53.2	6.6
2	5150.00	51.2 AV	54.0	-2.8	1.54 V	169	44.6	6.6
3	*5320.00	110.9 PK			1.49 V	169	68.9	42.0
4	*5320.00	100.6 AV			1.49 V	169	58.6	42.0
5	5350.00	59.6 PK	74.0	-14.4	1.53 V	168	53.2	6.4
6	5350.00	46.3 AV	54.0	-7.7	1.53 V	168	39.9	6.4
7	10640.00	59.1 PK	74.0	-14.9	1.47 V	88	41.7	17.4
8	10640.00	46.0 AV	54.0	-8.0	1.47 V	88	28.6	17.4

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 100：5500 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	5460.00	57.9 PK	74.0	-16.1	1.43 H	192	51.6	6.3
2	5460.00	44.7 AV	54.0	-9.3	1.43 H	192	38.4	6.3
3	#5470.00	58.5 PK	68.2	-9.7	1.47 H	196	52.2	6.3
4	*5500.00	99.3 PK			1.45 H	194	57.2	42.1
5	*5500.00	89.1 AV			1.45 H	194	47.0	42.1
6	11000.00	60.1 PK	74.0	-13.9	2.03 H	125	41.5	18.6
7	11000.00	47.0 AV	54.0	-7.0	2.03 H	125	28.4	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.4 PK	74.0	-14.6	1.47 V	165	53.1	6.3
2	5460.00	46.6 AV	54.0	-7.4	1.47 V	165	40.3	6.3
3	#5470.00	61.2 PK	68.2	-7.0	1.50 V	169	54.9	6.3
4	*5500.00	115.7 PK			1.49 V	167	73.6	42.1
5	*5500.00	105.3 AV			1.49 V	167	63.2	42.1
6	11000.00	60.1 PK	74.0	-13.9	1.76 V	90	41.5	18.6
7	11000.00	47.2 AV	54.0	-6.8	1.76 V	90	28.6	18.6

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 116：5580 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	*5580.00	98.2 PK			1.44 H	192	56.1	42.1
2	*5580.00	88.7 AV			1.44 H	192	46.6	42.1
3	11160.00	60.0 PK	74.0	-14.0	2.02 H	125	41.5	18.5
4	11160.00	46.8 AV	54.0	-7.2	2.02 H	125	28.3	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	*5580.00	115.7 PK			1.47 V	167	73.6	42.1
2	*5580.00	105.7 AV			1.47 V	167	63.6	42.1
3	11160.00	60.2 PK	74.0	-13.8	1.78 V	89	41.7	18.5
4	11160.00	47.1 AV	54.0	-6.9	1.78 V	89	28.6	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.

RF Mode	TX 802.11n (HT20)	Channel	CH 140：5700 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	*5700.00	98.3 PK			1.52 H	182	56.0	42.3
2	*5700.00	87.6 AV			1.52 H	182	45.3	42.3
3	#5725.00	58.7 PK	68.2	-9.5	1.53 H	190	52.2	6.5
4	11400.00	59.4 PK	74.0	-14.6	2.02 H	128	41.5	17.9
5	11400.00	46.5 AV	54.0	-7.5	2.02 H	128	28.6	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	116.0 PK			1.48 V	167	73.7	42.3
2	*5700.00	106.3 AV			1.48 V	167	64.0	42.3
3	#5725.00	64.8 PK	68.2	-3.4	1.48 V	170	58.3	6.5
4	11400.00	59.4 PK	74.0	-14.6	1.82 V	91	41.5	17.9
5	11400.00	46.3 AV	54.0	-7.7	1.82 V	91	28.4	17.9

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 144：5720 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	*5720.00	97.7 PK			1.49 H	182	55.5	42.2
2	*5720.00	88.0 AV			1.49 H	182	45.8	42.2
3	#5850.00	58.6 PK	68.2	-9.6	1.51 H	184	51.8	6.8
4	11440.00	59.5 PK	74.0	-14.5	2.11 H	125	41.5	18.0
5	11440.00	46.4 AV	54.0	-7.6	2.11 H	125	28.4	18.0
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	*5720.00	116.4 PK			1.45 V	166	74.2	42.2
2	*5720.00	106.4 AV			1.45 V	166	64.2	42.2
3	#5850.00	59.3 PK	68.2	-8.9	1.67 V	170	52.5	6.8
4	11440.00	59.6 PK	74.0	-14.4	1.75 V	88	41.6	18.0
5	11440.00	46.5 AV	54.0	-7.5	1.75 V	88	28.5	18.0

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 802.11n (HT40)	Channel	CH 54：5270 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	58.1 PK	74.0	-15.9	1.55 H	11	51.5	6.6
2	5150.00	45.0 AV	54.0	-9.0	1.55 H	11	38.4	6.6
3	*5270.00	93.1 PK			1.49 H	7	51.2	41.9
4	*5270.00	82.5 AV			1.49 H	7	40.6	41.9
5	#10540.00	59.1 PK	68.2	-9.1	2.02 H	117	41.5	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	1.50 V	164	52.1	6.6
2	5150.00	50.3 AV	54.0	-3.7	1.50 V	164	43.7	6.6
3	*5270.00	110.9 PK			1.46 V	169	69.0	41.9
4	*5270.00	100.1 AV			1.46 V	169	58.2	41.9
5	#10540.00	59.4 PK	68.2	-8.8	1.52 V	77	41.8	17.6

Remarks:

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

RF Mode	TX 802.11n (HT40)	Channel	CH 62：5310 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	58.1 PK	74.0	-15.9	1.49 H	10	51.5	6.6
2	5150.00	44.9 AV	54.0	-9.1	1.49 H	10	38.3	6.6
3	*5310.00	92.0 PK			1.48 H	5	50.0	42.0
4	*5310.00	81.2 AV			1.48 H	5	39.2	42.0
5	5350.00	57.8 PK	74.0	-16.2	1.52 H	7	51.4	6.4
6	5350.00	44.9 AV	54.0	-9.1	1.52 H	7	38.5	6.4
7	10620.00	58.9 PK	74.0	-15.1	2.02 H	119	41.5	17.4
8	10620.00	45.8 AV	54.0	-8.2	2.02 H	119	28.4	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	1.52 V	171	52.8	6.6
2	5150.00	50.4 AV	54.0	-3.6	1.52 V	171	43.8	6.6
3	*5310.00	109.7 PK			1.51 V	162	67.7	42.0
4	*5310.00	99.1 AV			1.51 V	162	57.1	42.0
5	5350.00	62.5 PK	74.0	-11.5	1.50 V	168	56.1	6.4
6	5350.00	49.0 AV	54.0	-5.0	1.50 V	168	42.6	6.4
7	10620.00	59.0 PK	74.0	-15.0	1.55 V	79	41.6	17.4
8	10620.00	46.0 AV	54.0	-8.0	1.55 V	79	28.6	17.4

Remarks:

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

RF Mode	TX 802.11n (HT40)	Channel	CH 102：5510 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	5460.00	58.0 PK	74.0	-16.0	1.35 H	177	51.7	6.3
2	5460.00	45.3 AV	54.0	-8.7	1.35 H	177	39.0	6.3
3	#5470.00	57.3 PK	68.2	-10.9	1.41 H	180	51.0	6.3
4	*5510.00	95.6 PK			1.34 H	183	53.5	42.1
5	*5510.00	85.1 AV			1.34 H	183	43.0	42.1
6	11020.00	60.1 PK	74.0	-13.9	2.00 H	132	41.5	18.6
7	11020.00	46.9 AV	54.0	-7.1	2.00 H	132	28.3	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.1 PK	74.0	-13.9	1.52 V	164	53.8	6.3
2	5460.00	47.3 AV	54.0	-6.7	1.52 V	164	41.0	6.3
3	#5470.00	64.2 PK	68.2	-4.0	1.51 V	166	57.9	6.3
4	*5510.00	111.8 PK			1.56 V	172	69.7	42.1
5	*5510.00	101.3 AV			1.56 V	172	59.2	42.1
6	11020.00	60.3 PK	74.0	-13.7	1.75 V	90	41.7	18.6
7	11020.00	47.2 AV	54.0	-6.8	1.75 V	90	28.6	18.6

Remarks:

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

RF Mode	TX 802.11n (HT40)	Channel	CH 110：5550 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	*5550.00	96.6 PK			1.59 H	183	54.5	42.1
2	*5550.00	85.9 AV			1.59 H	183	43.8	42.1
3	11100.00	59.6 PK	74.0	-14.4	2.01 H	119	41.3	18.3
4	11100.00	46.7 AV	54.0	-7.3	2.01 H	119	28.4	18.3
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	*5550.00	112.4 PK			1.52 V	168	70.3	42.1
2	*5550.00	101.8 AV			1.52 V	168	59.7	42.1
3	11100.00	59.9 PK	74.0	-14.1	1.68 V	75	41.6	18.3
4	11100.00	46.8 AV	54.0	-7.2	1.68 V	75	28.5	18.3

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.

RF Mode	TX 802.11n (HT40)	Channel	CH 134：5670 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	*5670.00	93.5 PK			1.44 H	182	51.3	42.2
2	*5670.00	83.4 AV			1.44 H	182	41.2	42.2
3	#5725.00	57.8 PK	68.2	-10.4	1.46 H	181	51.3	6.5
4	11340.00	60.0 PK	74.0	-14.0	1.93 H	118	41.9	18.1
5	11340.00	46.0 AV	54.0	-8.0	1.93 H	118	27.9	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	112.1 PK			1.47 V	168	69.9	42.2
2	*5670.00	101.5 AV			1.47 V	168	59.3	42.2
3	#5725.00	62.5 PK	68.2	-5.7	1.38 V	168	56.0	6.5
4	11340.00	59.6 PK	74.0	-14.4	1.78 V	90	41.5	18.1
5	11340.00	46.7 AV	54.0	-7.3	1.78 V	90	28.6	18.1

Remarks:

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

RF Mode	TX 802.11n (HT40)	Channel	CH 142：5710 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	#5470.00	57.7 PK	68.2	-10.5	1.30 H	180	51.4	6.3
2	*5710.00	94.0 PK			1.27 H	183	51.7	42.3
3	*5710.00	83.7 AV			1.27 H	183	41.4	42.3
4	#5850.00	59.2 PK	68.2	-9.0	1.29 H	181	52.4	6.8
5	11420.00	59.7 PK	74.0	-14.3	1.86 H	127	41.8	17.9
6	11420.00	46.1 AV	54.0	-7.9	1.86 H	127	28.2	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	59.0 PK	68.2	-9.2	1.52 V	163	52.7	6.3
2	*5710.00	113.3 PK			1.47 V	165	71.0	42.3
3	*5710.00	102.8 AV			1.47 V	165	60.5	42.3
4	#5850.00	59.0 PK	68.2	-9.2	1.49 V	161	52.2	6.8
5	11420.00	59.6 PK	74.0	-14.4	1.82 V	88	41.7	17.9
6	11420.00	46.5 AV	54.0	-7.5	1.82 V	88	28.6	17.9

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 58：5290 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	58.2 PK	74.0	-15.8	1.50 H	11	51.6	6.6
2	5150.00	44.8 AV	54.0	-9.2	1.50 H	11	38.2	6.6
3	*5290.00	82.5 PK			1.48 H	6	40.6	41.9
4	*5290.00	71.9 AV			1.48 H	6	30.0	41.9
5	5350.00	57.8 PK	74.0	-16.2	1.52 H	10	51.4	6.4
6	5350.00	44.7 AV	54.0	-9.3	1.52 H	10	38.3	6.4
7	#10580.00	59.0 PK	68.2	-9.2	1.92 H	116	41.6	17.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	1.49 V	171	53.5	6.6
2	5150.00	51.6 AV	54.0	-2.4	1.49 V	171	45.0	6.6
3	*5290.00	100.3 PK			1.60 V	168	58.4	41.9
4	*5290.00	89.5 AV			1.60 V	168	47.6	41.9
5	5350.00	64.7 PK	74.0	-9.3	1.52 V	170	58.3	6.4
6	5350.00	53.3 AV	54.0	-0.7	1.52 V	170	46.9	6.4
7	#10580.00	58.9 PK	68.2	-9.3	1.58 V	81	41.5	17.4

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 106：5530 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	5460.00	57.1 PK	74.0	-16.9	1.33 H	190	50.8	6.3
2	5460.00	44.0 AV	54.0	-10.0	1.33 H	190	37.7	6.3
3	#5470.00	58.2 PK	68.2	-10.0	1.26 H	186	51.9	6.3
4	*5530.00	86.3 PK			1.25 H	185	44.2	42.1
5	*5530.00	75.1 AV			1.25 H	185	33.0	42.1
6	#5725.00	59.6 PK	68.2	-8.6	1.31 H	185	53.1	6.5
7	11060.00	60.5 PK	74.0	-13.5	2.09 H	132	42.1	18.4
8	11060.00	46.5 AV	54.0	-7.5	2.09 H	132	28.1	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	62.7 PK	74.0	-11.3	1.47 V	169	56.4	6.3
2	5460.00	48.9 AV	54.0	-5.1	1.47 V	169	42.6	6.3
3	#5470.00	67.4 PK	68.2	-0.8	1.45 V	167	61.1	6.3
4	*5530.00	103.0 PK			1.50 V	170	60.9	42.1
5	*5530.00	92.9 AV			1.50 V	170	50.8	42.1
6	#5725.00	59.8 PK	68.2	-8.4	1.50 V	166	53.3	6.5
7	11060.00	60.0 PK	74.0	-14.0	1.75 V	81	41.6	18.4
8	11060.00	46.8 AV	54.0	-7.2	1.75 V	81	28.4	18.4

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 802.11ac (VHT80)	Channel	CH 122：5610 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	5460.00	57.0 PK	74.0	-17.0	1.38 H	190	50.7	6.3
2	5460.00	44.1 AV	54.0	-9.9	1.38 H	190	37.8	6.3
3	#5470.00	57.3 PK	68.2	-10.9	1.38 H	189	51.0	6.3
4	*5610.00	91.3 PK			1.39 H	193	49.2	42.1
5	*5610.00	80.4 AV			1.39 H	193	38.3	42.1
6	#5725.00	60.3 PK	68.2	-7.9	1.33 H	187	53.8	6.5
7	11220.00	60.6 PK	74.0	-13.4	2.01 H	131	42.1	18.5
8	11220.00	46.4 AV	54.0	-7.6	2.01 H	131	27.9	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	5460.00	59.2 PK	74.0	-14.8	1.48 V	166	52.9	6.3
2	5460.00	47.3 AV	54.0	-6.7	1.48 V	166	41.0	6.3
3	#5470.00	60.2 PK	68.2	-8.0	1.42 V	170	53.9	6.3
4	*5610.00	109.7 PK			1.44 V	169	67.6	42.1
5	*5610.00	99.2 AV			1.44 V	169	57.1	42.1
6	#5725.00	61.2 PK	68.2	-7.0	1.45 V	169	54.7	6.5
7	11220.00	60.0 PK	74.0	-14.0	1.77 V	90	41.5	18.5
8	11220.00	46.9 AV	54.0	-7.1	1.77 V	90	28.4	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 802.11ac (VHT80)	Channel	CH 138：5690 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	#5470.00	57.3 PK	68.2	-10.9	1.49 H	177	51.0	6.3
2	*5690.00	91.3 PK			1.51 H	180	49.0	42.3
3	*5690.00	80.5 AV			1.51 H	180	38.2	42.3
4	#5850.00	58.5 PK	68.2	-9.7	1.47 H	181	51.7	6.8
5	11380.00	59.8 PK	74.0	-14.2	2.01 H	123	42.0	17.8
6	11380.00	45.9 AV	54.0	-8.1	2.01 H	123	28.1	17.8
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	#5470.00	58.5 PK	68.2	-9.7	1.52 V	165	52.2	6.3
2	*5690.00	110.3 PK			1.50 V	167	68.0	42.3
3	*5690.00	99.3 AV			1.50 V	167	57.0	42.3
4	#5850.00	59.1 PK	68.2	-9.1	1.55 V	166	52.3	6.8
5	11380.00	59.4 PK	74.0	-14.6	1.82 V	91	41.6	17.8
6	11380.00	46.3 AV	54.0	-7.7	1.82 V	91	28.5	17.8

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 Worst-Case

5G traffic radio:

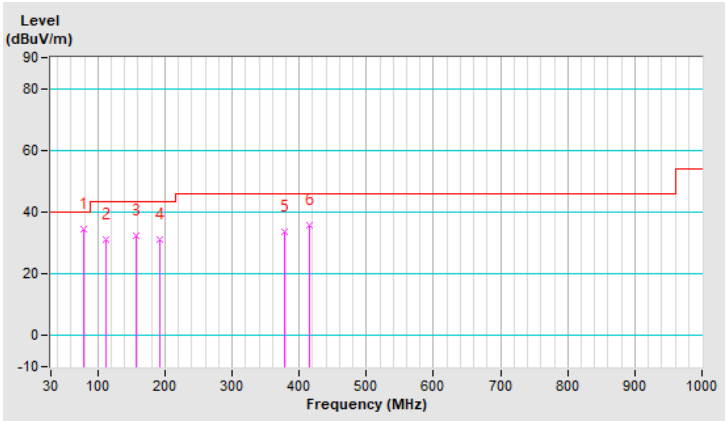
802.11ax (HE20)

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	79.20	34.5 QP	40.0	-5.5	1.49 H	46	47.6	-13.1
2	112.94	31.3 QP	43.5	-12.2	1.49 H	40	43.0	-11.7
3	156.52	32.5 QP	43.5	-11.0	1.49 H	215	40.9	-8.4
4	191.67	31.1 QP	43.5	-12.4	1.01 H	3	42.1	-11.0
5	378.64	33.6 QP	46.0	-12.4	1.01 H	175	38.6	-5.0
6	415.19	35.7 QP	46.0	-10.3	1.01 H	249	40.1	-4.4

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 emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

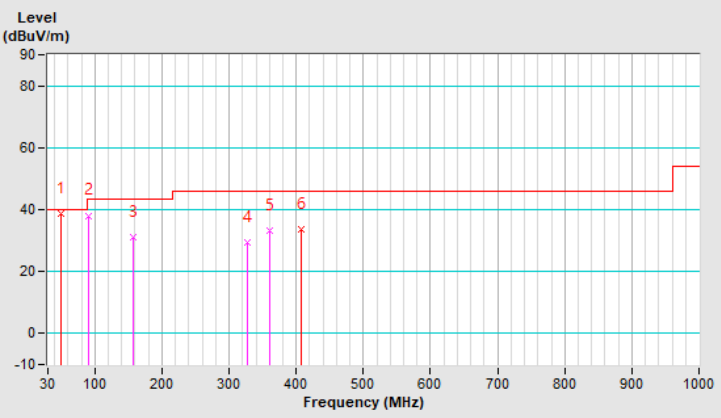


CHANNEL	TX Channel 144	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.27	38.7 QP	40.0	-1.3	1.00 V	21	47.8	-9.1
2	90.45	38.1 QP	43.5	-5.4	1.00 V	112	52.5	-14.4
3	157.93	31.1 QP	43.5	-12.4	1.00 V	276	39.5	-8.4
4	326.62	29.5 QP	46.0	-16.5	1.00 V	86	35.3	-5.8
5	360.36	33.3 QP	46.0	-12.7	1.00 V	123	38.7	-5.4
6	408.31	33.5 QP	46.0	-12.5	1.49 V	13	38.1	-4.6

Remarks:

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



Scanning radio: CDD Mode

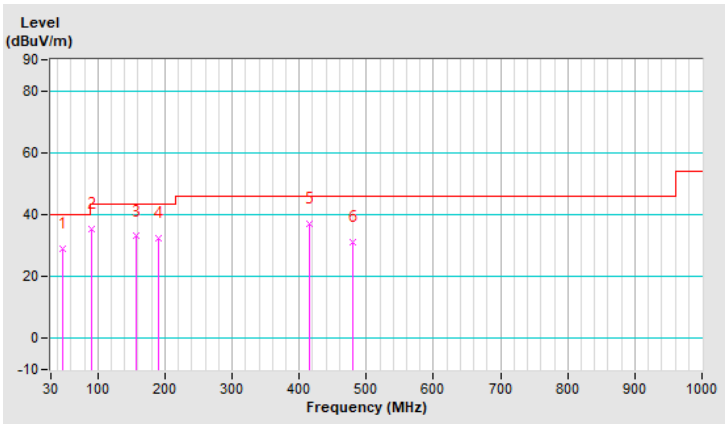
802.11a

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.28	29.0 QP	40.0	-11.0	1.49 H	109	38.1	-9.1
2	90.45	35.2 QP	43.5	-8.3	1.49 H	236	49.6	-14.4
3	156.52	33.0 QP	43.5	-10.5	1.00 H	79	41.4	-8.4
4	190.26	32.3 QP	43.5	-11.2	1.00 H	23	43.2	-10.9
5	415.19	37.1 QP	46.0	-8.9	1.49 H	5	41.5	-4.4
6	479.86	31.2 QP	46.0	-14.8	1.49 H	5	33.8	-2.6

Remarks:

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

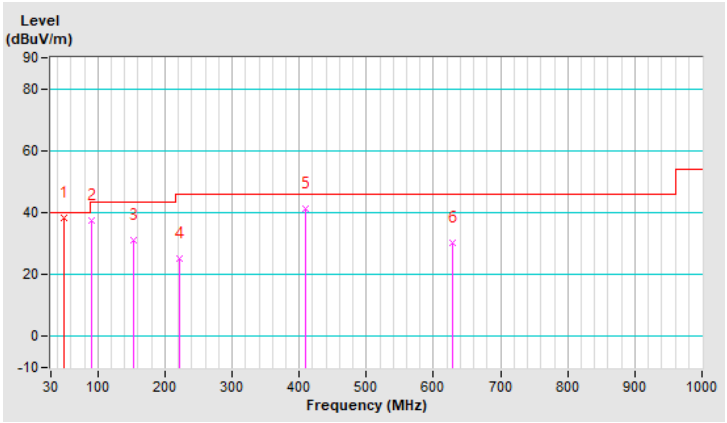


CHANNEL	TX Channel 140	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.70	38.2 QP	40.0	-1.8	1.00 V	39	47.3	-9.1
2	90.45	37.4 QP	43.5	-6.1	1.49 V	114	51.8	-14.4
3	153.71	31.2 QP	43.5	-12.3	1.00 V	120	39.6	-8.4
4	222.59	25.0 QP	46.0	-21.0	1.00 V	35	35.6	-10.6
5	409.57	41.1 QP	46.0	-4.9	1.00 V	332	45.6	-4.5
6	628.87	30.3 QP	46.0	-15.7	1.49 V	21	29.4	0.9

Remarks:

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

Tested date: Feb. 25, 2021

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102783	Jan. 06, 2021	Jan. 05, 2022
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2020	Sep. 03, 2021
V-LISN SCHWARZBECK (EUT)	NNBL 8226-2	8226-142	Jul. 31, 2020	Jul. 30, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 18, 2020	Aug. 17, 2021
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

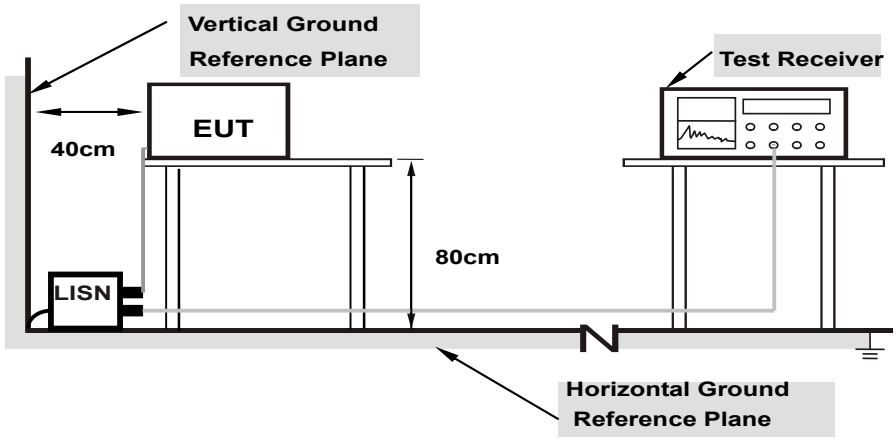
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

Worst-case data:

5G traffic radio:

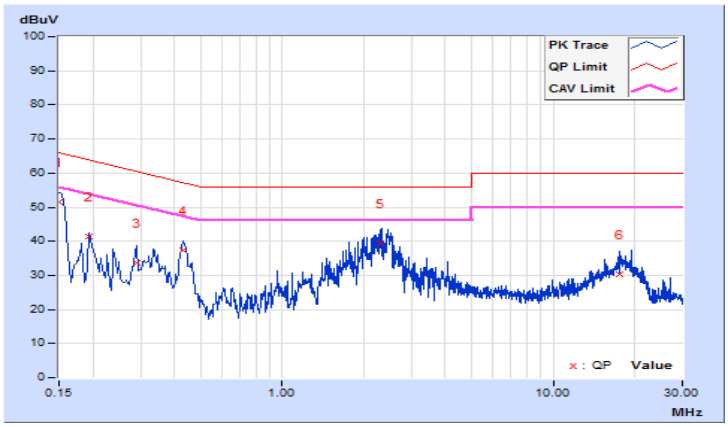
802.11ax (HE20)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.15000**	**10.05**	**41.60**	**26.54**	**51.65**	**36.59**	**66.00**	**56.00**	**-14.35**	**-19.41**
2	0.19265	10.05	31.30	16.13	41.35	26.18	63.92	53.92	-22.57	-27.74
3	0.28906	10.07	23.55	13.43	33.62	23.50	60.55	50.55	-26.93	-27.05
4	0.42802	10.09	27.29	20.65	37.38	30.74	57.29	47.29	-19.91	-16.55
5	2.29400	10.21	29.27	20.17	39.48	30.38	56.00	46.00	-16.52	-15.62
6	17.51000	10.95	19.49	13.66	30.44	24.61	60.00	50.00	-29.56	-25.39

Remarks:

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

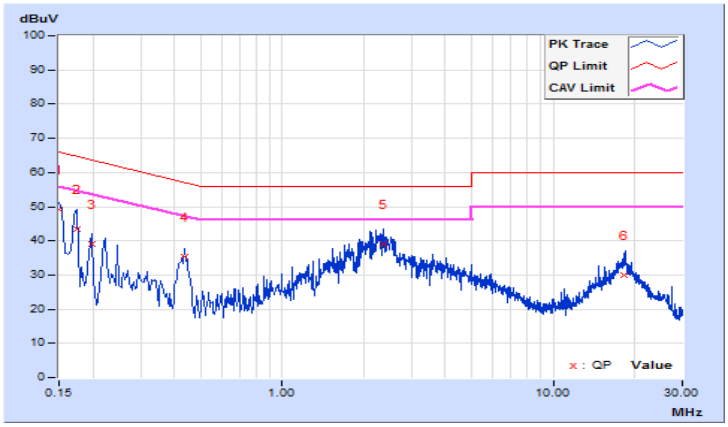


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.04	39.14	24.75	49.18	34.79	66.00	56.00	-16.82	-21.21
2	0.17384	10.04	33.44	19.35	43.48	29.39	64.77	54.77	-21.29	-25.38
3	0.19728	10.04	29.07	15.40	39.11	25.44	63.72	53.72	-24.61	-28.28
4	0.43370	10.08	25.17	18.24	35.25	28.32	57.18	47.18	-21.93	-18.86
5	2.35000	10.20	28.86	19.35	39.06	29.55	56.00	46.00	-16.94	-16.45
6	18.19800	10.76	19.25	13.54	30.01	24.30	60.00	50.00	-29.99	-25.70

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.



Scanning radio:

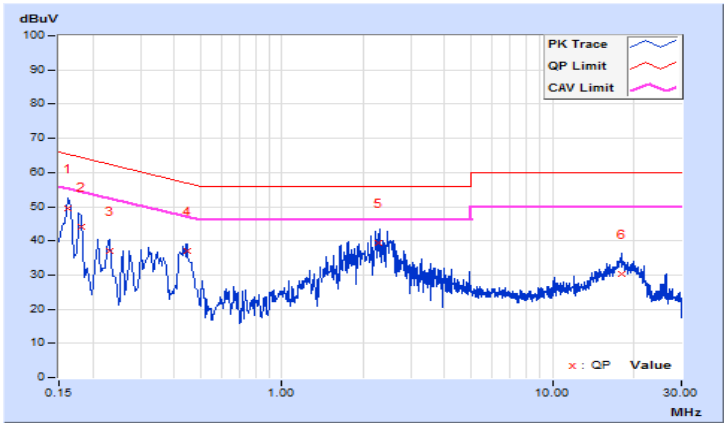
802.11a

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16105	10.05	39.61	24.49	49.66	34.54	65.41	55.41	-15.75	-20.87
2	0.18200	10.05	34.14	18.85	44.19	28.90	64.39	54.39	-20.20	-25.49
3	0.22985	10.06	26.90	15.72	36.96	25.78	62.46	52.46	-25.50	-26.68
4	0.44600	10.09	27.00	21.54	37.09	31.63	56.95	46.95	-19.86	-15.32
5	2.26847	10.21	29.02	20.46	39.23	30.67	56.00	46.00	-16.77	-15.33
6	17.93800	10.97	19.47	13.59	30.44	24.56	60.00	50.00	-29.56	-25.44

Remarks:

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

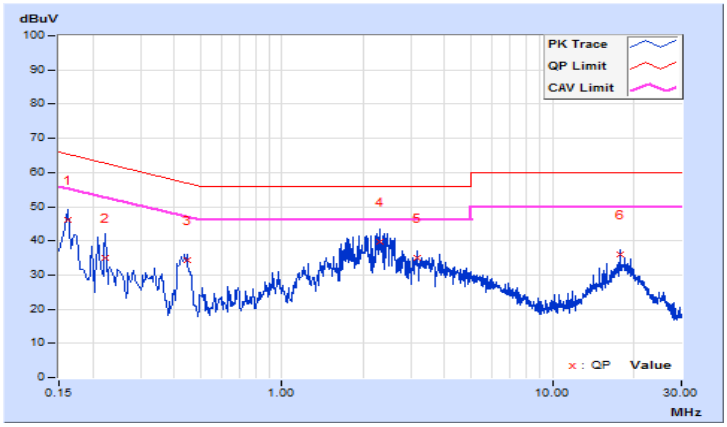


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16105	10.04	36.23	22.11	46.27	32.15	65.41	55.41	-19.14	-23.26
2	0.22152	10.04	24.94	13.86	34.98	23.90	62.76	52.76	-27.78	-28.86
3	0.44527	10.09	24.35	18.31	34.44	28.40	56.96	46.96	-22.52	-18.56
4	2.29250	10.20	29.47	21.17	39.67	31.37	56.00	46.00	-16.33	-14.63
5	3.16155	10.23	24.88	14.47	35.11	24.70	56.00	46.00	-20.89	-21.30
6	17.72200	10.74	25.44	13.09	36.18	23.83	60.00	50.00	-23.82	-26.17

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 ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	√	Indoor Access Point	1 Watt (30 dBm)
		Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

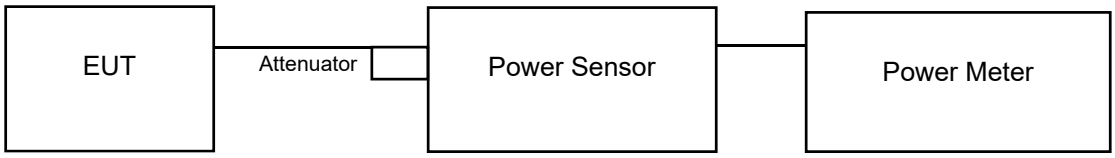
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

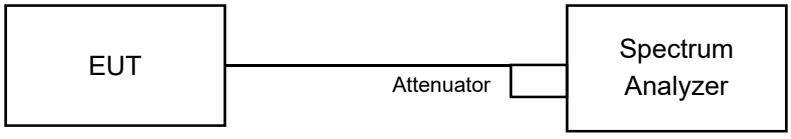
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

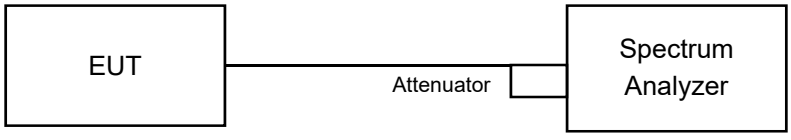
For Power Output
802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ax (HE20), 802.11ax (HE40)



802.11ac (VHT80), 802.11ax (HE80), 802.11ac (VHT80+VHT80), 802.11ac (HE80+HE80)



For 26dB Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ax (HE20), 802.11ax (HE40)
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

For 802.11ac (VHT80), 802.11ax (HE80), 802.11ac (VHT80+VHT80), 802.11ac (HE80+HE80)

a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
b. Set sweep trigger to “free run”.
c. Set RBW = 1 MHz
d. Set VBW ≥ 3 MHz
e. Number of points in sweep ≥ 2 Span / RBW
f. Sweep time ≤ (number of points in sweep) * T
g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
h. Detector = RMS
i. Trace mode = max hold
j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

For 26dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

5G traffic radio: CDD Mode

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	10.06	10.05	9.99	10.00	40.232	16.05	22.71	Pass
60	5300	10.23	10.09	10.03	10.01	40.846	16.11	22.69	Pass
64	5320	10.01	10.05	10.10	10.25	40.964	16.12	22.72	Pass
100	5500	10.52	10.31	10.62	10.42	44.562	16.49	22.72	Pass
116	5580	10.37	10.25	10.37	10.03	42.440	16.28	22.70	Pass
140	5700	10.23	10.02	10.25	9.92	41.000	16.13	22.63	Pass
144	5720 For U-NII-2C	10.32	10.29	10.03	10.26	46.494	16.67	21.53	Pass
144	5720 For U-NII-3	-3.13	0.15	4.06	4.50	7.598	8.81	28.80	Pass

* For U-NII-2A: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 52: The power limit shall be reduced to 23.91-(7.2-6) = 22.71dBm.
Ch 60: The power limit shall be reduced to 23.89-(7.2-6) = 22.69dBm.
Ch 64: The power limit shall be reduced to 23.92-(7.2-6) = 22.72dBm.
For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 100: The power limit shall be reduced to 23.92-(7.2-6) = 22.72dBm.
Ch 116: The power limit shall be reduced to 23.90-(7.2-6) = 22.70dBm.
Ch 140: The power limit shall be reduced to 23.83-(7.2-6) = 22.63dBm.
Ch 144: The power limit shall be reduced to 22.73-(7.2-6) = 21.53dBm.
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (19.58) = 23.91 < 24dBm
2. 11dBm + 10log (19.68) = 23.94 < 24dBm
3. 11dBm + 10log (19.62) = 23.92 < 24dBm
4. 11dBm + 10log (19.59) = 23.92 < 24dBm
5. 11dBm + 10log (19.53) = 23.90 < 24dBm
6. 11dBm + 10log (19.42) = 23.88 < 24dBm
7. 11dBm + 10log (5725.00 - 5709.94) = 22.77 < 24dBm

Chain 1

1. 11dBm + 10log (19.69) = 23.94 < 24dBm
2. 11dBm + 10log (19.63) = 23.92 < 24dBm
3. 11dBm + 10log (19.85) = 23.97 < 24dBm
4. 11dBm + 10log (19.74) = 23.95 < 24dBm
5. 11dBm + 10log (19.72) = 23.94 < 24dBm
6. 11dBm + 10log (19.50) = 23.90 < 24dBm
7. 11dBm + 10log (5725.00 - 5710.08) = 22.73 < 24dBm

Chain 2

1. 11dBm + 10log (19.62) = 23.92 < 24dBm
2. 11dBm + 10log (19.64) = 23.93 < 24dBm
3. 11dBm + 10log (19.59) = 23.92 < 24dBm
4. 11dBm + 10log (19.84) = 23.97 < 24dBm
5. 11dBm + 10log (19.78) = 23.96 < 24dBm
6. 11dBm + 10log (19.38) = 23.87 < 24dBm
7. 11dBm + 10log (5725.00 - 5709.95) = 22.77 < 24dBm

Chain 3

1. 11dBm + 10log (19.71) = 23.94 < 24dBm
2. 11dBm + 10log (19.48) = 23.89 < 24dBm
3. 11dBm + 10log (19.76) = 23.95 < 24dBm
4. 11dBm + 10log (19.72) = 23.94 < 24dBm
5. 11dBm + 10log (19.66) = 23.93 < 24dBm
6. 11dBm + 10log (19.23) = 23.83 < 24dBm
7. 11dBm + 10log (5725.00 - 5709.96) = 22.77 < 24dBm

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	10.58	10.47	10.58	10.76	45.913	16.62	22.80	Pass
60	5300	10.65	10.43	10.62	10.77	46.130	16.64	22.80	Pass
64	5320	10.53	10.57	10.73	10.67	46.199	16.65	22.80	Pass
100	5500	10.38	10.45	10.60	10.48	44.656	16.50	22.80	Pass
116	5580	10.41	10.40	10.41	10.30	43.660	16.40	22.80	Pass
140	5700	10.12	10.11	10.30	9.95	41.137	16.14	22.80	Pass
144	5720 For U-NII-2C	10.12	10.13	10.17	10.40	43.883	16.42	21.78	Pass
144	5720 For U-NII-3	2.75	6.97	4.81	3.02	12.441	10.95	28.80	Pass

* For U-NII-2A: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 100, 116, 140: The power limit shall be reduced to 23.92-(7.2-6) = 22.80dBm.
Ch 144: The power limit shall be reduced to 22.98-(7.2-6) = 21.78dBm
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:
For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11dBm + 10log (21.65) = 24.35 > 24dBm
2. 11dBm + 10log (21.42) = 24.30 > 24dBm
3. 11dBm + 10log (21.31) = 24.28 > 24dBm
4. 11dBm + 10log (21.39) = 24.30 > 24dBm
5. 11dBm + 10log (21.50) = 24.32 > 24dBm
6. 11dBm + 10log (21.87) = 24.39 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.13) = 23.00 < 24dBm

Chain 1

1. 11dBm + 10log (21.48) = 24.32 > 24dBm
2. 11dBm + 10log (21.20) = 24.26 > 24dBm
3. 11dBm + 10log (21.38) = 24.30 > 24dBm
4. 11dBm + 10log (21.62) = 24.34 > 24dBm
5. 11dBm + 10log (21.36) = 24.29 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.21) = 22.98 < 24dBm

Chain 2

1. 11dBm + 10log (21.39) = 24.30 > 24dBm
2. 11dBm + 10log (21.29) = 24.28 > 24dBm
3. 11dBm + 10log (21.26) = 24.27 > 24dBm
4. 11dBm + 10log (21.42) = 24.30 > 24dBm
5. 11dBm + 10log (21.43) = 24.31 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.02) = 23.03 < 24dBm

Chain 3

1. 11dBm + 10log (21.56) = 24.33 > 24dBm
2. 11dBm + 10log (21.68) = 24.36 > 24dBm
3. 11dBm + 10log (21.47) = 24.31 > 24dBm
4. 11dBm + 10log (21.26) = 24.27 > 24dBm
5. 11dBm + 10log (21.25) = 24.27 > 24dBm
6. 11dBm + 10log (21.57) = 24.33 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.19) = 22.98 < 24dBm

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	13.60	13.15	13.37	13.55	87.936	19.44	22.80	Pass
62	5310	13.58	13.40	13.75	13.37	90.122	19.55	22.80	Pass
102	5510	13.61	13.42	13.76	13.30	90.088	19.55	22.80	Pass
110	5550	13.62	13.43	13.86	13.42	91.344	19.61	22.80	Pass
134	5670	13.70	13.20	13.53	13.16	87.579	19.42	22.80	Pass
142	5710 For U-NII-2C	13.23	13.25	13.36	13.30	89.078	19.50	22.80	Pass
142	5710 For U-NII-3	3.91	3.05	4.15	2.61	9.305	9.69	28.80	Pass

* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (42.15) = 27.24 > 24dBm
2. 11dBm + 10log (42.20) = 27.25 > 24dBm
3. 11dBm + 10log (42.28) = 27.26 > 24dBm
4. 11dBm + 10log (42.50) = 27.28 > 24dBm
5. 11dBm + 10log (42.17) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.03) = 26.55 > 24dBm

Chain 1

1. 11dBm + 10log (42.44) = 27.27 > 24dBm
2. 11dBm + 10log (42.09) = 27.24 > 24dBm
3. 11dBm + 10log (42.22) = 27.25 > 24dBm
4. 11dBm + 10log (42.12) = 27.24 > 24dBm
5. 11dBm + 10log (42.06) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.05) = 26.55 > 24dBm

Chain 2

1. 11dBm + 10log (42.01) = 27.23 > 24dBm
2. 11dBm + 10log (42.08) = 27.24 > 24dBm
3. 11dBm + 10log (42.21) = 27.25 > 24dBm
4. 11dBm + 10log (41.92) = 27.22 > 24dBm
5. 11dBm + 10log (42.21) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.09) = 26.55 > 24dBm

Chain 3

1. 11dBm + 10log (42.81) = 27.31 > 24dBm
2. 11dBm + 10log (42.48) = 27.28 > 24dBm
3. 11dBm + 10log (42.42) = 27.27 > 24dBm
4. 11dBm + 10log (42.23) = 27.25 > 24dBm
5. 11dBm + 10log (42.05) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5688.80) = 26.58 > 24dBm

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	10.60	10.50	10.60	10.80	46.206	16.65	22.80	Pass
60	5300	10.70	10.46	10.65	10.79	46.476	16.67	22.80	Pass
64	5320	10.58	10.60	10.78	10.70	46.627	16.69	22.80	Pass
100	5500	10.41	10.47	10.62	10.50	44.888	16.52	22.80	Pass
116	5580	10.43	10.42	10.43	10.32	43.862	16.42	22.80	Pass
140	5700	10.15	10.13	10.32	9.96	41.328	16.16	22.80	Pass
144	5720 For U-NII-2C	10.15	10.16	10.20	10.42	44.160	16.45	21.78	Pass
144	5720 For U-NII-3	2.80	7.00	4.85	3.05	12.544	10.98	28.80	Pass

* For U-NII-2A: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 100, 116, 140: The power limit shall be reduced to 23.92-(7.2-6) = 22.80dBm.
Ch 144: The power limit shall be reduced to 22.98-(7.2-6) = 21.78dBm
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (21.65) = 24.35 > 24dBm
2. 11dBm + 10log (21.42) = 24.30 > 24dBm
3. 11dBm + 10log (21.31) = 24.28 > 24dBm
4. 11dBm + 10log (21.39) = 24.30 > 24dBm
5. 11dBm + 10log (21.50) = 24.32 > 24dBm
6. 11dBm + 10log (21.87) = 24.39 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.13) = 23.00 < 24dBm

Chain 1

1. 11dBm + 10log (21.48) = 24.32 > 24dBm
2. 11dBm + 10log (21.20) = 24.26 > 24dBm
3. 11dBm + 10log (21.38) = 24.30 > 24dBm
4. 11dBm + 10log (21.62) = 24.34 > 24dBm
5. 11dBm + 10log (21.36) = 24.29 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.21) = 22.98 < 24dBm

Chain 2

1. 11dBm + 10log (21.39) = 24.30 > 24dBm
2. 11dBm + 10log (21.29) = 24.28 > 24dBm
3. 11dBm + 10log (21.26) = 24.27 > 24dBm
4. 11dBm + 10log (21.42) = 24.30 > 24dBm
5. 11dBm + 10log (21.43) = 24.31 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.02) = 23.03 < 24dBm

Chain 3

1. 11dBm + 10log (21.56) = 24.33 > 24dBm
2. 11dBm + 10log (21.68) = 24.36 > 24dBm
3. 11dBm + 10log (21.47) = 24.31 > 24dBm
4. 11dBm + 10log (21.26) = 24.27 > 24dBm
5. 11dBm + 10log (21.25) = 24.27 > 24dBm
6. 11dBm + 10log (21.57) = 24.33 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.19) = 22.98 < 24dBm

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	13.63	13.18	13.41	13.58	88.596	19.47	22.80	Pass
62	5310	13.60	13.42	13.80	13.40	90.753	19.58	22.80	Pass
102	5510	13.62	13.45	13.80	13.33	90.662	19.57	22.80	Pass
110	5550	13.67	13.47	13.90	13.45	92.192	19.65	22.80	Pass
134	5670	13.72	13.23	13.59	13.20	88.337	19.46	22.80	Pass
142	5710 For U-NII-2C	13.23	13.25	13.36	13.30	89.078	19.50	22.80	Pass
142	5710 For U-NII-3	3.91	3.05	4.15	2.61	9.305	9.69	28.80	Pass

* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
  For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (42.15) = 27.24 > 24dBm
2. 11dBm + 10log (42.20) = 27.25 > 24dBm
3. 11dBm + 10log (42.28) = 27.26 > 24dBm
4. 11dBm + 10log (42.50) = 27.28 > 24dBm
5. 11dBm + 10log (42.17) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.03) = 26.55 > 24dBm

Chain 1

1. 11dBm + 10log (42.44) = 27.27 > 24dBm
2. 11dBm + 10log (42.09) = 27.24 > 24dBm
3. 11dBm + 10log (42.22) = 27.25 > 24dBm
4. 11dBm + 10log (42.12) = 27.24 > 24dBm
5. 11dBm + 10log (42.06) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.05) = 26.55 > 24dBm

Chain 2

1. 11dBm + 10log (42.01) = 27.23 > 24dBm
2. 11dBm + 10log (42.08) = 27.24 > 24dBm
3. 11dBm + 10log (42.21) = 27.25 > 24dBm
4. 11dBm + 10log (41.92) = 27.22 > 24dBm
5. 11dBm + 10log (42.21) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.09) = 26.55 > 24dBm

Chain 3

1. 11dBm + 10log (42.81) = 27.31 > 24dBm
2. 11dBm + 10log (42.48) = 27.28 > 24dBm
3. 11dBm + 10log (42.42) = 27.27 > 24dBm
4. 11dBm + 10log (42.23) = 27.25 > 24dBm
5. 11dBm + 10log (42.05) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5688.80) = 26.58 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	14.62	14.31	15.07	14.45	115.949	20.64	22.80	Pass
106	5530	16.07	15.83	16.43	16.00	162.505	22.11	22.80	Pass
122	5610	16.21	15.92	16.40	15.93	163.693	22.14	22.80	Pass
138	5690 For U-NII-2C	16.35	16.16	16.35	16.10	178.742	22.52	22.80	Pass
138	5690 For U-NII-3	1.11	3.25	-1.28	0.07	5.485	7.39	28.80	Pass

* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
  For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (82.54) = 30.16 > 24dBm
2. 11dBm + 10log (82.69) = 30.17 > 24dBm
3. 11dBm + 10log (82.97) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.61) = 29.83 > 24dBm

Chain 1

1. 11dBm + 10log (82.64) = 30.17 > 24dBm
2. 11dBm + 10log (82.79) = 30.17 > 24dBm
3. 11dBm + 10log (82.94) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.48) = 29.83 > 24dBm

Chain 2

1. 11dBm + 10log (82.50) = 30.16 > 24dBm
2. 11dBm + 10log (82.74) = 30.17 > 24dBm
3. 11dBm + 10log (83.03) = 30.19 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.18) = 29.85 > 24dBm

Chain 3

1. 11dBm + 10log (83.12) = 30.19 > 24dBm
2. 11dBm + 10log (82.94) = 30.18 > 24dBm
3. 11dBm + 10log (83.22) = 30.20 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.10) = 29.85 > 24dBm

802.11ac (VHT80+80)

Outdoor Access Point

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	15.70	14.46	-	-	65.079	18.13	28.80	-2.59	15.54	21.00	Pass

Note:

1. Antenna gain = -2.59dBi (above 30 degrees from the horizon).
2. EIRP = average power + (-2.59dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

Indoor Access Point

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	15.70	14.46	-	-	65.079	18.13	28.80	Pass
58	5290	-	-	15.56	14.35	63.202	18.01	22.80	Pass
106	5530	16.76	16.50	-	-	92.093	19.64	22.80	Pass
122	5610	-	-	16.67	16.45	90.609	19.57	22.80	Pass

* For U-NII-1: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.
  For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (82.30) = 30.15 > 24dBm
2. 11dBm + 10log (83.05) = 30.19 > 24dBm

Chain 1

1. 11dBm + 10log (82.85) = 30.18 > 24dBm
2. 11dBm + 10log (83.17) = 30.19 > 24dBm

Chain 2

1. 11dBm + 10log (124.91) = 31.96 > 24dBm
2. 11dBm + 10log (151.31) = 32.79 > 24dBm

Chain 3

1. 11dBm + 10log (125.10) = 31.97 > 24dBm
2. 11dBm + 10log (151.75) = 32.81 > 24dBm

802.11ax (HE20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	10.62	10.52	10.62	10.82	46.419	16.67	22.80	Pass
60	5300	10.72	10.50	10.70	10.82	46.851	16.71	22.80	Pass
64	5320	10.60	10.63	10.80	10.73	46.896	16.71	22.80	Pass
100	5500	10.43	10.50	10.65	10.52	45.147	16.55	22.80	Pass
116	5580	10.50	10.45	10.47	10.34	44.269	16.46	22.80	Pass
140	5700	10.21	10.19	10.35	9.99	41.759	16.21	22.80	Pass
144	5720 For U-NII-2C	10.17	10.18	10.22	10.44	44.364	16.47	21.78	Pass
144	5720 For U-NII-3	2.82	7.01	5.00	3.07	12.687	11.03	28.80	Pass

* For U-NII-2A: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 100, 116, 140: The power limit shall be reduced to 23.92-(7.2-6) = 22.80dBm.
Ch 144: The power limit shall be reduced to 22.98-(7.2-6) = 21.78dBm
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (21.65) = 24.35 > 24dBm
2. 11dBm + 10log (21.42) = 24.30 > 24dBm
3. 11dBm + 10log (21.31) = 24.28 > 24dBm
4. 11dBm + 10log (21.39) = 24.30 > 24dBm
5. 11dBm + 10log (21.50) = 24.32 > 24dBm
6. 11dBm + 10log (21.87) = 24.39 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.13) = 23.00 < 24dBm

Chain 1
1. 11dBm + 10log (21.48) = 24.32 > 24dBm
2. 11dBm + 10log (21.20) = 24.26 > 24dBm
3. 11dBm + 10log (21.38) = 24.30 > 24dBm
4. 11dBm + 10log (21.62) = 24.34 > 24dBm
5. 11dBm + 10log (21.36) = 24.29 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.21) = 22.98 < 24dBm

Chain 2

1. 11dBm + 10log (21.39) = 24.30 > 24dBm
2. 11dBm + 10log (21.29) = 24.28 > 24dBm
3. 11dBm + 10log (21.26) = 24.27 > 24dBm
4. 11dBm + 10log (21.42) = 24.30 > 24dBm
5. 11dBm + 10log (21.43) = 24.31 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.02) = 23.03 < 24dBm

Chain 3

1. 11dBm + 10log (21.56) = 24.33 > 24dBm
2. 11dBm + 10log (21.68) = 24.36 > 24dBm
3. 11dBm + 10log (21.47) = 24.31 > 24dBm
4. 11dBm + 10log (21.26) = 24.27 > 24dBm
5. 11dBm + 10log (21.25) = 24.27 > 24dBm
6. 11dBm + 10log (21.57) = 24.33 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.19) = 22.98 < 24dBm

802.11ax (HE40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	13.69	13.20	13.42	13.60	89.169	19.50	22.80	Pass
62	5310	13.62	13.45	13.82	13.42	91.223	19.60	22.80	Pass
102	5510	13.63	13.50	13.83	13.35	91.236	19.60	22.80	Pass
110	5550	13.70	13.50	13.92	13.47	92.723	19.67	22.80	Pass
134	5670	13.75	13.28	13.63	13.23	89.100	19.50	22.80	Pass
142	5710 For U-NII-2C	13.26	13.27	13.39	13.32	89.593	19.52	22.80	Pass
142	5710 For U-NII-3	3.95	3.10	4.17	2.63	9.374	9.72	28.80	Pass

* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
  For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

Chain 0

1. 11dBm + 10log (42.15) = 27.24 > 24dBm
2. 11dBm + 10log (42.20) = 27.25 > 24dBm
3. 11dBm + 10log (42.28) = 27.26 > 24dBm
4. 11dBm + 10log (42.50) = 27.28 > 24dBm
5. 11dBm + 10log (42.17) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.03) = 26.55 > 24dBm

Chain 1

1. 11dBm + 10log (42.44) = 27.27 > 24dBm
2. 11dBm + 10log (42.09) = 27.24 > 24dBm
3. 11dBm + 10log (42.22) = 27.25 > 24dBm
4. 11dBm + 10log (42.12) = 27.24 > 24dBm
5. 11dBm + 10log (42.06) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.05) = 26.55 > 24dBm

Chain 2

1. 11dBm + 10log (42.01) = 27.23 > 24dBm
2. 11dBm + 10log (42.08) = 27.24 > 24dBm
3. 11dBm + 10log (42.21) = 27.25 > 24dBm
4. 11dBm + 10log (41.92) = 27.22 > 24dBm
5. 11dBm + 10log (42.21) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.09) = 26.55 > 24dBm

Chain 3

1. 11dBm + 10log (42.81) = 27.31 > 24dBm
2. 11dBm + 10log (42.48) = 27.28 > 24dBm
3. 11dBm + 10log (42.42) = 27.27 > 24dBm
4. 11dBm + 10log (42.23) = 27.25 > 24dBm
5. 11dBm + 10log (42.05) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5688.80) = 26.58 > 24dBm

802.11ax (HE80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	14.66	14.35	15.11	14.49	**117.022**	20.68	22.80	Pass
106	5530	16.11	15.86	16.48	16.02	163.837	22.14	22.80	Pass
122	5610	16.25	16.01	16.42	16.01	165.828	22.20	22.80	Pass
138	5690 For U-NII-2C	16.37	16.18	16.37	16.12	**179.567**	22.54	22.80	Pass
138	5690 For U-NII-3	1.16	3.29	-1.26	0.09	5.5299	7.43	28.80	Pass

* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
  For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:
For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11dBm + 10log (82.54) = 30.16 > 24dBm
2. 11dBm + 10log (82.69) = 30.17 > 24dBm
3. 11dBm + 10log (82.97) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.61) = 29.83 > 24dBm

Chain 1
1. 11dBm + 10log (82.64) = 30.17 > 24dBm
2. 11dBm + 10log (82.79) = 30.17 > 24dBm
3. 11dBm + 10log (82.94) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.48) = 29.83 > 24dBm
Chain 2
1. 11dBm + 10log (82.50) = 30.16 > 24dBm
2. 11dBm + 10log (82.74) = 30.17 > 24dBm
3. 11dBm + 10log (83.03) = 30.19 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.18) = 29.85 > 24dBm
Chain 3
1. 11dBm + 10log (83.12) = 30.19 > 24dBm
2. 11dBm + 10log (82.94) = 30.18 > 24dBm
3. 11dBm + 10log (83.22) = 30.20 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.10) = 29.85 > 24dBm

802.11ax (HE80+80)

Outdoor Access Point

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	15.72	14.48	-	-	65.379	18.15	28.80	-2.59	15.56	21.00	Pass

Note:
1. Antenna gain = -2.59dBi (above 30 degrees from the horizon).
2. EIRP = average power + (-2.59dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

Indoor Access Point

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	15.72	14.48	-	-	65.379	18.15	28.80	Pass
58	5290	-	-	15.58	14.37	63.494	18.03	22.80	Pass
106	5530	16.78	16.53	-	-	92.621	19.67	22.80	Pass
122	5610	-	-	16.69	16.47	91.027	19.59	22.80	Pass

* For U-NII-1: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.
For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (82.30) = 30.15 > 24dBm
2. 11dBm + 10log (83.05) = 30.19 > 24dBm
Chain 1
1. 11dBm + 10log (82.85) = 30.18 > 24dBm
2. 11dBm + 10log (83.17) = 30.19 > 24dBm
Chain 2
1. 11dBm + 10log (124.91) = 31.96 > 24dBm
2. 11dBm + 10log (151.31) = 32.79 > 24dBm
Chain 3
1. 11dBm + 10log (125.10) = 31.97 > 24dBm
2. 11dBm + 10log (151.75) = 32.81 > 24dBm

5G traffic radio: Beamforming Mode

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	10.56	10.45	10.57	10.75	45.756	16.60	16.78	Pass
60	5300	10.59	10.47	10.52	10.74	45.728	16.60	16.78	Pass
64	5320	10.57	10.46	10.75	10.58	45.834	16.61	16.78	Pass
100	5500	10.32	10.37	10.56	10.52	44.302	16.46	16.78	Pass
116	5580	10.47	10.32	10.46	10.20	43.496	16.38	16.78	Pass
140	5700	8.97	9.10	8.90	8.67	31.141	14.93	16.78	Pass
144	5720 For U-NII-2C	9.59	9.28	9.30	9.52	37.037	15.69	15.76	Pass
144	5720 For U-NII-3	5.03	4.71	5.52	4.16	13.016	11.14	22.78	Pass

*For U-NII-2A: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.
For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced.
Ch 100, 116, 140: The limit shall be reduced to 24-(13.22-6) = 16.78dBm.
Ch 144: The limit shall be reduced to 22.98-(13.22-6) = 15.76dBm.
For U-NII-3: Directional gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 30-(13.22-6) = 22.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0

1. 11dBm + 10log (21.65) = 24.35 > 24dBm
2. 11dBm + 10log (21.42) = 24.30 > 24dBm
3. 11dBm + 10log (21.31) = 24.28 > 24dBm
4. 11dBm + 10log (21.39) = 24.30 > 24dBm
5. 11dBm + 10log (21.50) = 24.32 > 24dBm
6. 11dBm + 10log (21.87) = 24.39 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.13) = 23.00 < 24dBm

Chain 1

1. 11dBm + 10log (21.48) = 24.32 > 24dBm
2. 11dBm + 10log (21.20) = 24.26 > 24dBm
3. 11dBm + 10log (21.38) = 24.30 > 24dBm
4. 11dBm + 10log (21.62) = 24.34 > 24dBm
5. 11dBm + 10log (21.36) = 24.29 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.21) = 22.98 < 24dBm

Chain 2

1. 11dBm + 10log (21.39) = 24.30 > 24dBm
2. 11dBm + 10log (21.29) = 24.28 > 24dBm
3. 11dBm + 10log (21.26) = 24.27 > 24dBm
4. 11dBm + 10log (21.42) = 24.30 > 24dBm
5. 11dBm + 10log (21.43) = 24.31 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.02) = 23.03 < 24dBm

Chain 3

1. 11dBm + 10log (21.56) = 24.33 > 24dBm
2. 11dBm + 10log (21.68) = 24.36 > 24dBm
3. 11dBm + 10log (21.47) = 24.31 > 24dBm
4. 11dBm + 10log (21.26) = 24.27 > 24dBm
5. 11dBm + 10log (21.25) = 24.27 > 24dBm
6. 11dBm + 10log (21.57) = 24.33 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.19) = 22.98 < 24dBm

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	10.55	10.10	10.37	10.55	43.822	16.42	16.78	Pass
62	5310	10.57	10.30	10.72	10.34	44.735	16.51	16.78	Pass
102	5510	10.21	10.32	10.36	10.30	42.840	16.32	16.78	Pass
110	5550	10.65	10.37	10.76	10.37	45.306	16.56	16.78	Pass
134	5670	10.60	10.25	10.52	10.05	43.462	16.38	16.78	Pass
142	5710 For U-NII-2C	10.05	10.45	10.37	10.50	45.513	16.58	16.78	Pass
142	5710 For U-NII-3	-1.48	0.01	0.25	1.55	4.4147	6.45	22.78	Pass

*For U-NII-2A & For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.
For U-NII-3: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 30-(13.22-6) = 22.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11dBm + 10log (42.15) = 27.24 > 24dBm
2. 11dBm + 10log (42.20) = 27.25 > 24dBm
3. 11dBm + 10log (42.28) = 27.26 > 24dBm
4. 11dBm + 10log (42.50) = 27.28 > 24dBm
5. 11dBm + 10log (42.17) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.03) = 26.55 > 24dBm

Chain 1

1. 11dBm + 10log (42.44) = 27.27 > 24dBm
2. 11dBm + 10log (42.09) = 27.24 > 24dBm
3. 11dBm + 10log (42.22) = 27.25 > 24dBm
4. 11dBm + 10log (42.12) = 27.24 > 24dBm
5. 11dBm + 10log (42.06) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.05) = 26.55 > 24dBm

Chain 2

1. 11dBm + 10log (42.01) = 27.23 > 24dBm
2. 11dBm + 10log (42.08) = 27.24 > 24dBm
3. 11dBm + 10log (42.21) = 27.25 > 24dBm
4. 11dBm + 10log (41.92) = 27.22 > 24dBm
5. 11dBm + 10log (42.21) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.09) = 26.55 > 24dBm

Chain 3

1. 11dBm + 10log (42.81) = 27.31 > 24dBm
2. 11dBm + 10log (42.48) = 27.28 > 24dBm
3. 11dBm + 10log (42.42) = 27.27 > 24dBm
4. 11dBm + 10log (42.23) = 27.25 > 24dBm
5. 11dBm + 10log (42.05) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5688.80) = 26.58 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	10.51	10.34	10.96	10.35	45.373	16.57	16.78	Pass
106	5530	10.55	11.05	10.75	10.40	46.935	16.71	16.78	Pass
122	5610	10.80	11.11	10.52	10.16	46.582	16.68	16.78	Pass
138	5690 For U-NII-2C	10.32	10.48	10.55	10.41	47.135	16.73	16.78	Pass
138	5690 For U-NII-3	-5.29	-4.69	-3.25	-3.45	1.661	2.20	22.78	Pass

*For U-NII-2A & For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.
For U-NII-3: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 30-(13.22-6) = 22.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11dBm + 10log (82.54) = 30.16 > 24dBm
2. 11dBm + 10log (82.69) = 30.17 > 24dBm
3. 11dBm + 10log (82.97) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.61) = 29.83 > 24dBm

Chain 1
1. 11dBm + 10log (82.64) = 30.17 > 24dBm
2. 11dBm + 10log (82.79) = 30.17 > 24dBm
3. 11dBm + 10log (82.94) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.48) = 29.83 > 24dBm

Chain 2
1. 11dBm + 10log (82.50) = 30.16 > 24dBm
2. 11dBm + 10log (82.74) = 30.17 > 24dBm
3. 11dBm + 10log (83.03) = 30.19 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.18) = 29.85 > 24dBm

Chain 3
1. 11dBm + 10log (83.12) = 30.19 > 24dBm
2. 11dBm + 10log (82.94) = 30.18 > 24dBm
3. 11dBm + 10log (83.22) = 30.20 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.10) = 29.85 > 24dBm

802.11ac (VHT80+80)

Outdoor Access Point

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	14.67	14.32	-	-	56.349	17.51	25.79	3.43	20.94	21.00	Pass

Note:
1. Directional gain = Antenna gain (-2.59dBi (above 30 degrees from the horizon))+ Beamforming gain (6.02dBi) = 3.43dBi
2. EIRP = average power + Directional gain.

Indoor Access Point

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	14.67	14.32	-	-	56.349	17.51	25.79	Pass
58	5290	-	-	14.45	14.23	54.346	17.35	19.79	Pass
106	5530	13.60	13.45	-	-	45.040	16.54	16.78	Pass
122	5610	-	-	13.52	13.30	43.870	16.42	16.78	Pass

*For U-NII-1: Directional gain = 7.2 dBi + 10log(2) = 10.21dBi > 6dBi, so the limit shall be reduced to 30-(10.21-6) = 25.79dBm.
For U-NII-2A: Directional Gain = 7.2 dBi + 10log(2) = 10.21dBi > 6dBi, so the limit shall be reduced to 24-(10.21-6) = 19.79dBm.
For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (82.76) = 30.17 > 24dBm
2. 11dBm + 10log (82.72) = 30.17 > 24dBm

Chain 1
1. 11dBm + 10log (82.56) = 30.16 > 24dBm
2. 11dBm + 10log (82.36) = 30.15 > 24dBm

Chain 2
1. 11dBm + 10log (82.57) = 30.16 > 24dBm
2. 11dBm + 10log (82.89) = 30.18 > 24dBm

Chain 3
1. 11dBm + 10log (83.12) = 30.19 > 24dBm
2. 11dBm + 10log (83.07) = 30.19 > 24dBm

802.11ax (HE20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	10.58	10.47	10.61	10.78	46.047	16.63	16.78	Pass
60	5300	10.71	10.49	10.55	10.76	46.233	16.65	16.78	Pass
64	5320	10.59	10.49	10.77	10.61	46.097	16.64	16.78	Pass
100	5500	10.35	10.39	10.58	10.54	44.532	16.49	16.78	Pass
116	5580	10.49	10.35	10.48	10.22	43.722	16.41	16.78	Pass
140	5700	8.99	9.12	8.92	8.69	31.285	14.95	16.78	Pass
144	5720 For U-NII-2C	9.61	9.31	9.32	9.54	37.228	15.71	15.76	Pass
144	5720 For U-NII-3	5.08	4.73	5.54	4.19	13.106	11.17	22.78	Pass

*For U-NII-2A: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.
For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced.
Ch 100, 116, 140: The limit shall be reduced to 24-(13.22-6) = 16.78dBm.
Ch 144: The limit shall be reduced to 22.98-(13.22-6) = 15.76dBm.
For U-NII-3: Directional gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 30-(13.22-6) = 22.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (21.65) = 24.35 > 24dBm
2. 11dBm + 10log (21.42) = 24.30 > 24dBm
3. 11dBm + 10log (21.31) = 24.28 > 24dBm
4. 11dBm + 10log (21.39) = 24.30 > 24dBm
5. 11dBm + 10log (21.50) = 24.32 > 24dBm
6. 11dBm + 10log (21.87) = 24.39 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.13) = 23.00 < 24dBm

Chain 1
1. 11dBm + 10log (21.48) = 24.32 > 24dBm
2. 11dBm + 10log (21.20) = 24.26 > 24dBm
3. 11dBm + 10log (21.38) = 24.30 > 24dBm
4. 11dBm + 10log (21.62) = 24.34 > 24dBm
5. 11dBm + 10log (21.36) = 24.29 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.21) = 22.98 < 24dBm

Chain 2

1. 11dBm + 10log (21.39) = 24.30 > 24dBm
2. 11dBm + 10log (21.29) = 24.28 > 24dBm
3. 11dBm + 10log (21.26) = 24.27 > 24dBm
4. 11dBm + 10log (21.42) = 24.30 > 24dBm
5. 11dBm + 10log (21.43) = 24.31 > 24dBm
6. 11dBm + 10log (21.31) = 24.28 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.02) = 23.03 < 24dBm

Chain 3

1. 11dBm + 10log (21.56) = 24.33 > 24dBm
2. 11dBm + 10log (21.68) = 24.36 > 24dBm
3. 11dBm + 10log (21.47) = 24.31 > 24dBm
4. 11dBm + 10log (21.26) = 24.27 > 24dBm
5. 11dBm + 10log (21.25) = 24.27 > 24dBm
6. 11dBm + 10log (21.57) = 24.33 > 24dBm
7. 11dBm + 10log (5725.00 - 5709.19) = 22.98 < 24dBm

802.11ax (HE40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	10.58	10.14	10.39	10.57	44.098	16.44	16.78	Pass
62	5310	10.59	10.32	10.75	10.36	44.969	16.53	16.78	Pass
102	5510	10.22	10.35	10.38	10.32	43.038	16.34	16.78	Pass
110	5550	10.68	10.39	10.78	10.39	45.542	16.58	16.78	Pass
134	5670	10.62	10.27	10.54	10.09	43.709	16.41	16.78	Pass
142	5710 For U-NII-2C	10.12	10.51	10.39	10.53	45.982	16.63	16.78	Pass
142	5710 For U-NII-3	-1.44	0.02	0.29	1.59	4.4482	6.48	22.78	Pass

*For U-NII-2A & For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.
For U-NII-3: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 30-(13.22-6) = 22.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11dBm + 10log (42.15) = 27.24 > 24dBm
2. 11dBm + 10log (42.20) = 27.25 > 24dBm
3. 11dBm + 10log (42.28) = 27.26 > 24dBm
4. 11dBm + 10log (42.50) = 27.28 > 24dBm
5. 11dBm + 10log (42.17) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.03) = 26.55 > 24dBm

Chain 1

1. 11dBm + 10log (42.44) = 27.27 > 24dBm
2. 11dBm + 10log (42.09) = 27.24 > 24dBm
3. 11dBm + 10log (42.22) = 27.25 > 24dBm
4. 11dBm + 10log (42.12) = 27.24 > 24dBm
5. 11dBm + 10log (42.06) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.05) = 26.55 > 24dBm

Chain 2

1. 11dBm + 10log (42.01) = 27.23 > 24dBm
2. 11dBm + 10log (42.08) = 27.24 > 24dBm
3. 11dBm + 10log (42.21) = 27.25 > 24dBm
4. 11dBm + 10log (41.92) = 27.22 > 24dBm
5. 11dBm + 10log (42.21) = 27.25 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.09) = 26.55 > 24dBm

Chain 3

1. 11dBm + 10log (42.81) = 27.31 > 24dBm
2. 11dBm + 10log (42.48) = 27.28 > 24dBm
3. 11dBm + 10log (42.42) = 27.27 > 24dBm
4. 11dBm + 10log (42.23) = 27.25 > 24dBm
5. 11dBm + 10log (42.05) = 27.23 > 24dBm
6. 11dBm + 10log (5725.00 - 5688.80) = 26.58 > 24dBm

802.11ax (HE80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	10.54	10.36	10.98	10.37	45.609	16.59	16.78	Pass
106	5530	10.57	11.09	10.78	10.42	47.238	16.74	16.78	Pass
122	5610	10.82	11.13	10.54	10.18	46.797	16.70	16.78	Pass
138	5690 For U-NII-2C	10.35	10.51	10.57	10.43	**47.407**	16.76	16.78	Pass
138	5690 For U-NII-3	-5.26	-4.65	-3.20	-3.42	1.676	2.24	22.78	Pass

*For U-NII-2A & For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.
For U-NII-3: Directional Gain = 7.2 dBi + 10log(4) = 13.22 dBi > 6dBi, so the limit shall be reduced to 30-(13.22-6) = 22.78dBm.

Note:
For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11dBm + 10log (82.54) = 30.16 > 24dBm
2. 11dBm + 10log (82.69) = 30.17 > 24dBm
3. 11dBm + 10log (82.97) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.61) = 29.83 > 24dBm

Chain 1
1. 11dBm + 10log (82.64) = 30.17 > 24dBm
2. 11dBm + 10log (82.79) = 30.17 > 24dBm
3. 11dBm + 10log (82.94) = 30.18 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.48) = 29.83 > 24dBm
Chain 2
1. 11dBm + 10log (82.50) = 30.16 > 24dBm
2. 11dBm + 10log (82.74) = 30.17 > 24dBm
3. 11dBm + 10log (83.03) = 30.19 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.18) = 29.85 > 24dBm
Chain 3
1. 11dBm + 10log (83.12) = 30.19 > 24dBm
2. 11dBm + 10log (82.94) = 30.18 > 24dBm
3. 11dBm + 10log (83.22) = 30.20 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.10) = 29.85 > 24dBm

802.11ax (HE80+80)

Outdoor Access Point

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	14.69	14.39	-	-	56.923	17.55	25.79	3.43	20.98	21.00	Pass

Note:
1. Directional gain = Antenna gain (-2.59dBi (above 30 degrees from the horizon))+ Beamforming gain (6.02dBi) = 3.43dBi
2. EIRP = average power + Directional gain.

Indoor Access Point

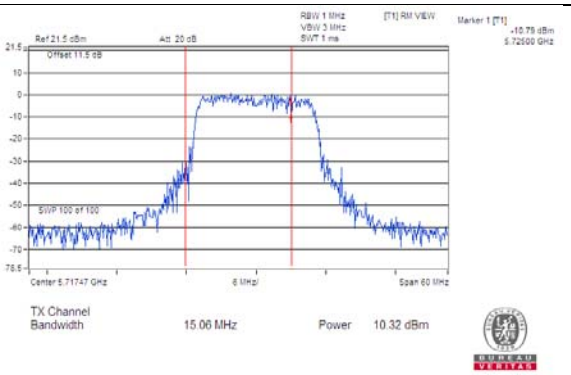
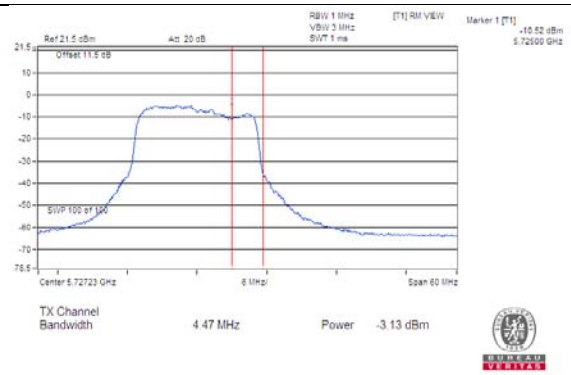
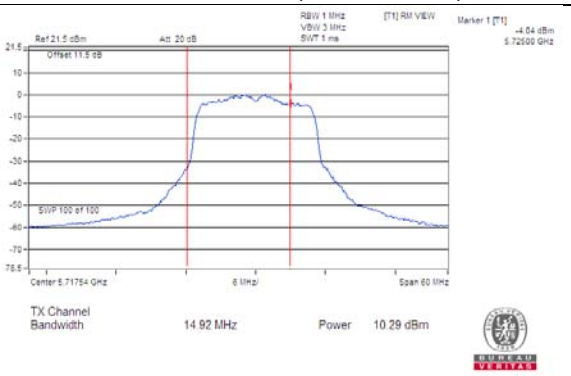
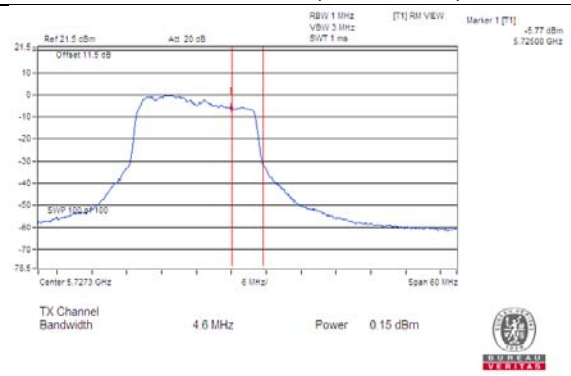
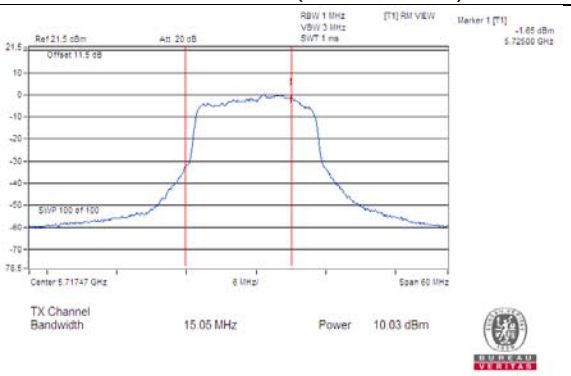
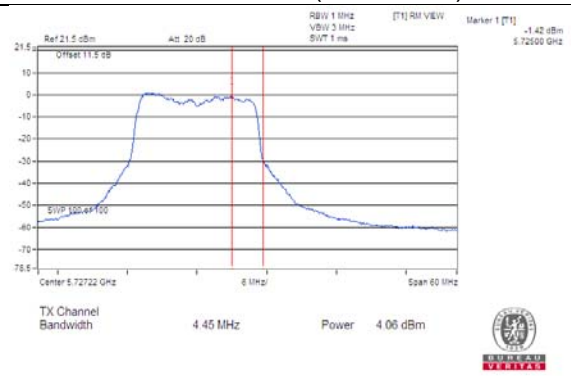
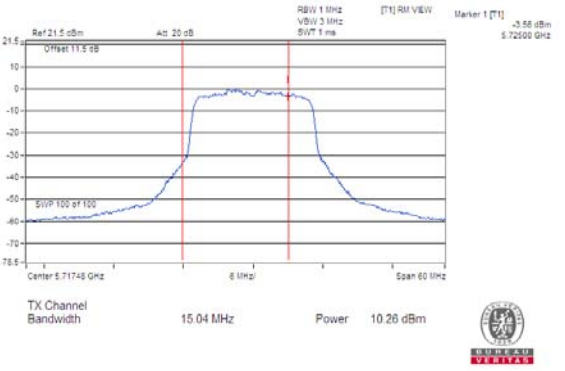
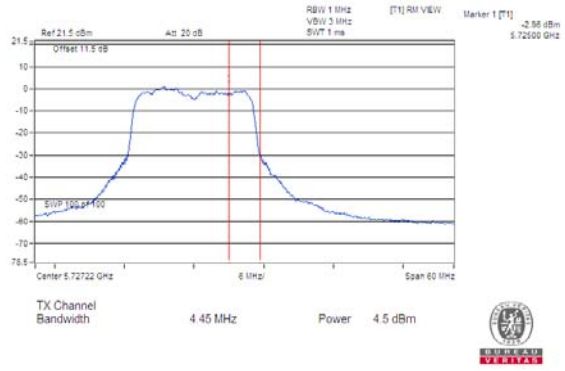
Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	14.69	14.39	-	-	56.923	17.55	25.79	Pass
58	5290	-	-	14.47	14.26	**54.658**	17.38	19.79	Pass
106	5530	13.62	13.49	-	-	45.350	16.57	16.78	Pass
122	5610	-	-	13.55	13.32	44.125	16.45	16.78	Pass

*For U-NII-1: Directional gain = 7.2 dBi + 10log(2) = 10.21dBi > 6dBi, so the limit shall be reduced to 30-(10.21-6) = 25.79dBm.
For U-NII-2A: Directional Gain = 7.2 dBi + 10log(2) = 10.21dBi > 6dBi, so the limit shall be reduced to 24-(10.21-6) = 19.79dBm.
For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the limit shall be reduced to 24-(13.22-6) = 16.78dBm.

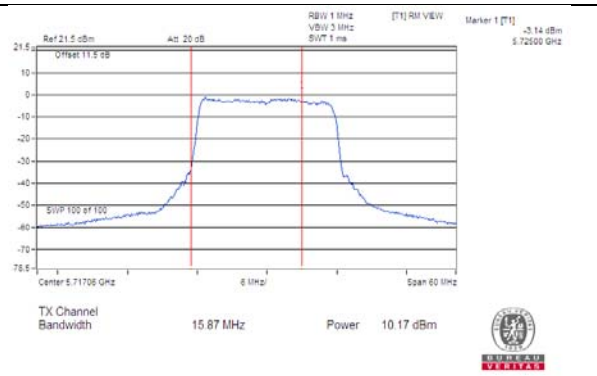
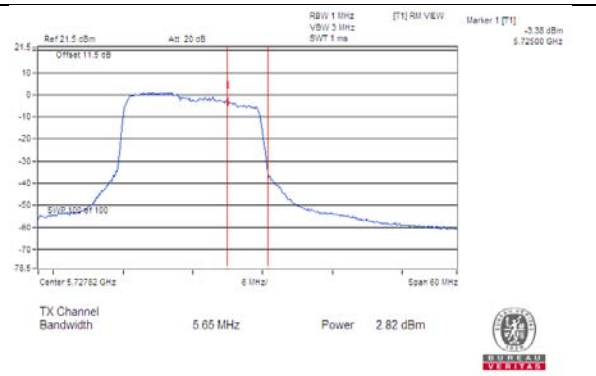
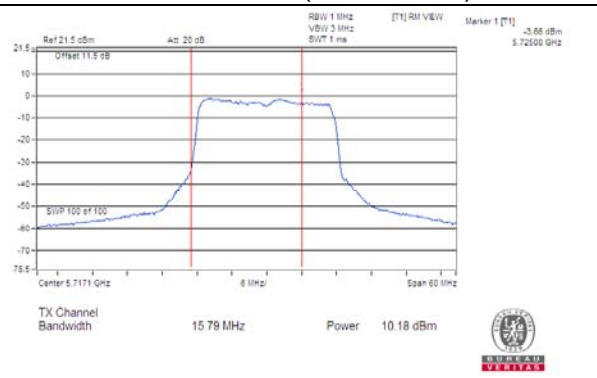
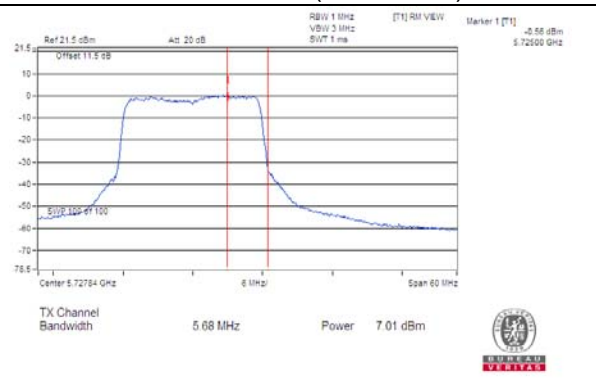
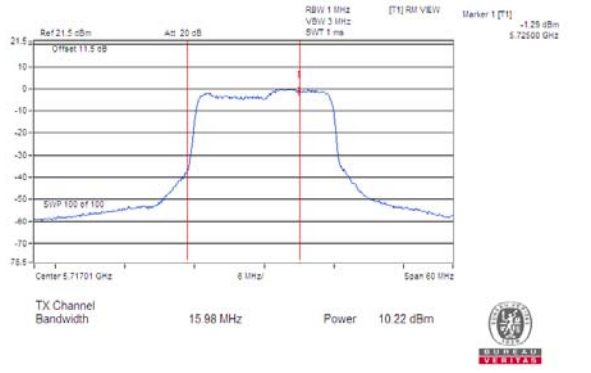
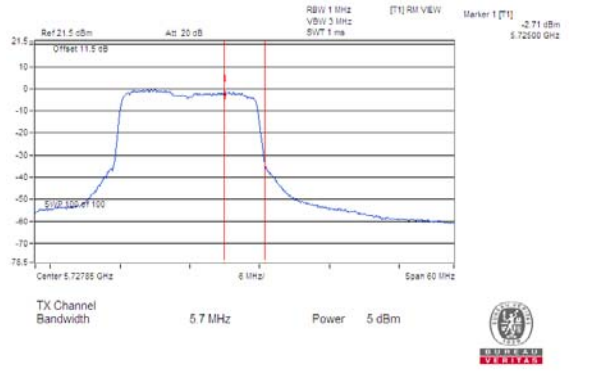
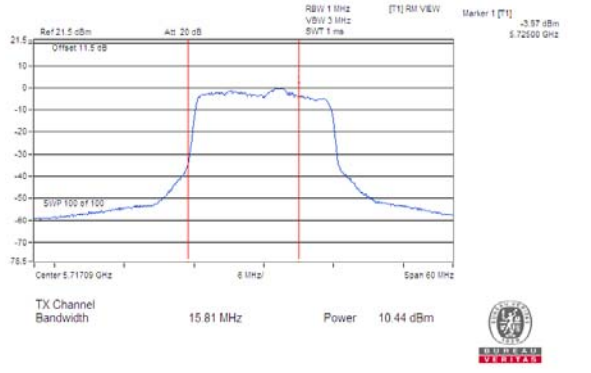
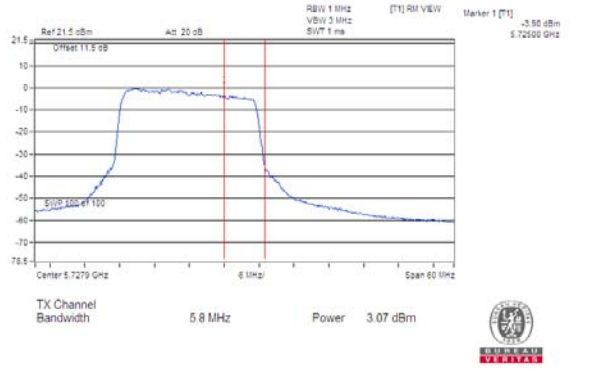
Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (82.76) = 30.17 > 24dBm
2. 11dBm + 10log (82.72) = 30.17 > 24dBm
Chain 1
1. 11dBm + 10log (82.56) = 30.16 > 24dBm
2. 11dBm + 10log (82.36) = 30.15 > 24dBm
Chain 2
1. 11dBm + 10log (82.57) = 30.16 > 24dBm
2. 11dBm + 10log (82.89) = 30.18 > 24dBm
Chain 3
1. 11dBm + 10log (83.12) = 30.19 > 24dBm
2. 11dBm + 10log (83.07) = 30.19 > 24dBm

Straddle channel power plots:

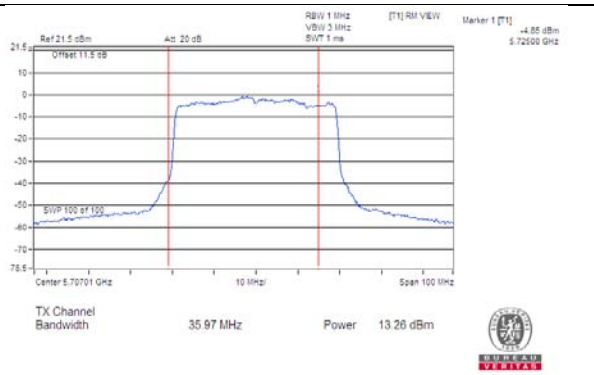
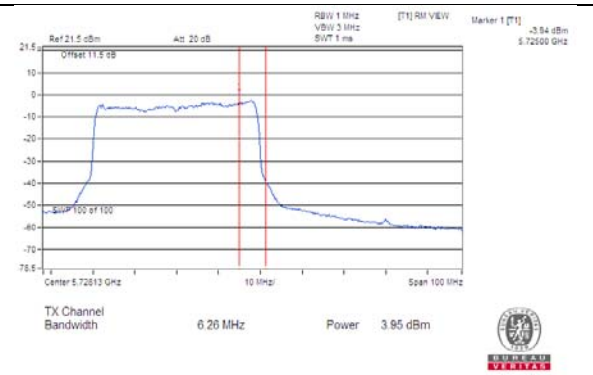
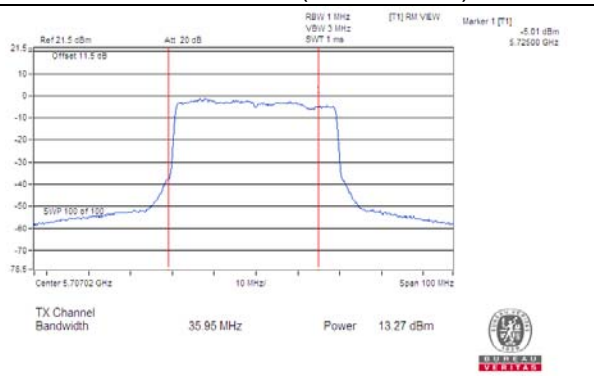
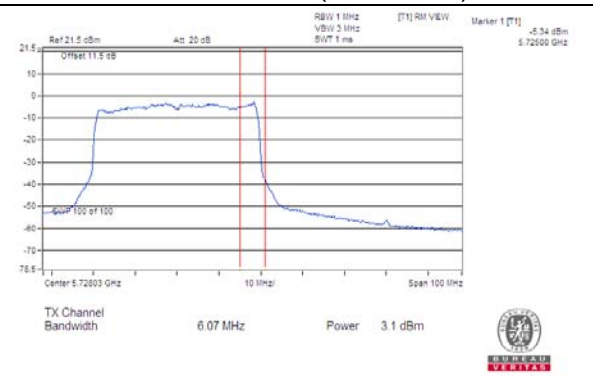
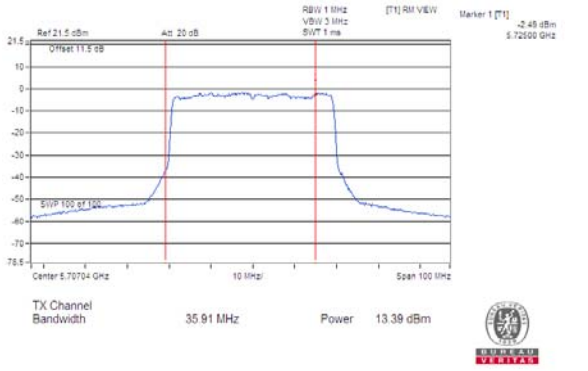
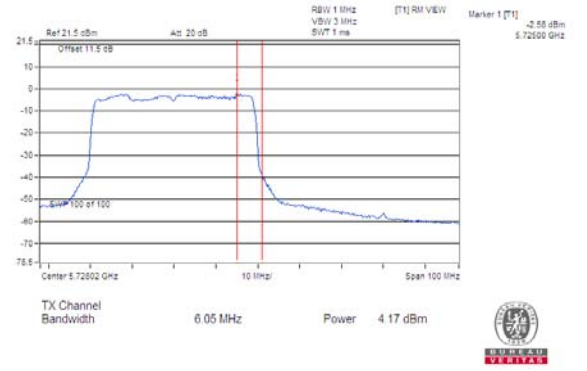
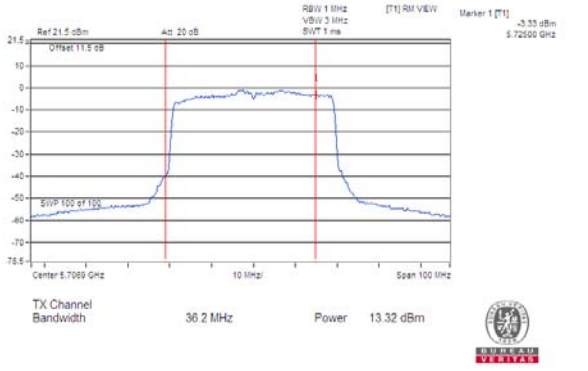
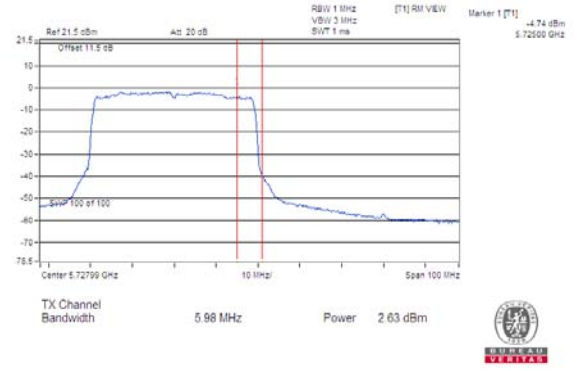
802.11a

Chain 0/CH 144 (For U-NII-2C)	Chain 0/CH 144 (For U-NII-3)
	
Chain 1/CH 144 (For U-NII-2C)	Chain 1/CH 144 (For U-NII-3)
	
Chain 2/CH 144 (For U-NII-2C)	Chain 2/CH 144 (For U-NII-3)
	
Chain 3/CH 144 (For U-NII-2C)	Chain 3/CH 144 (For U-NII-3)
	

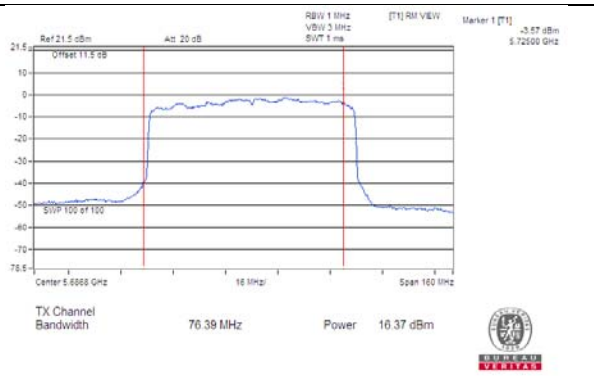
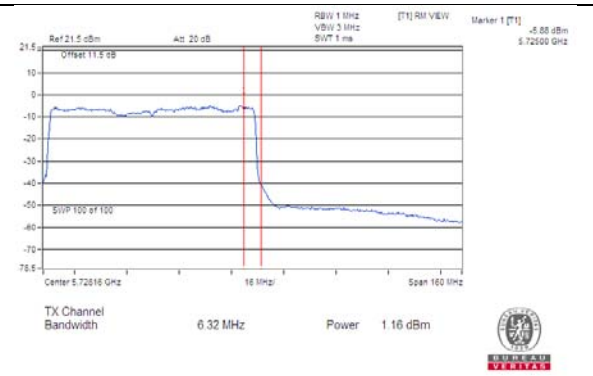
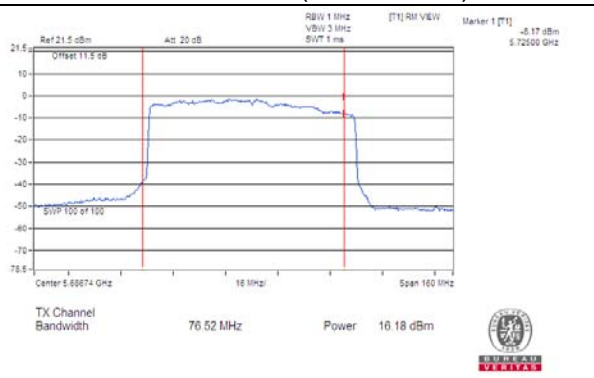
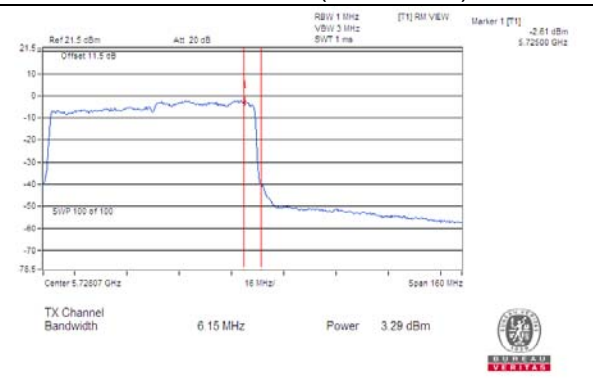
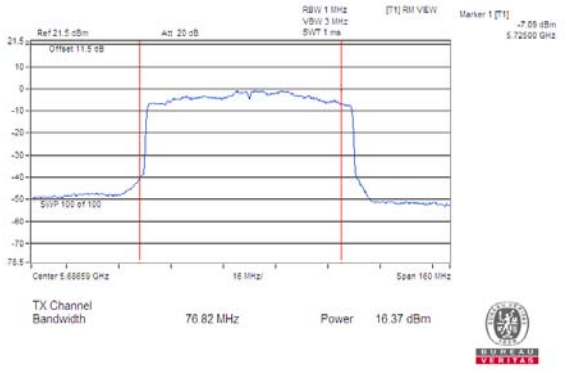
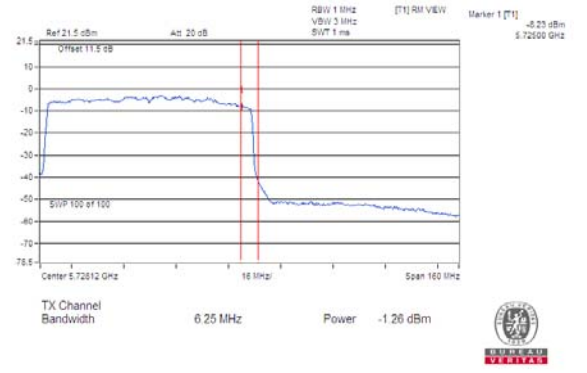
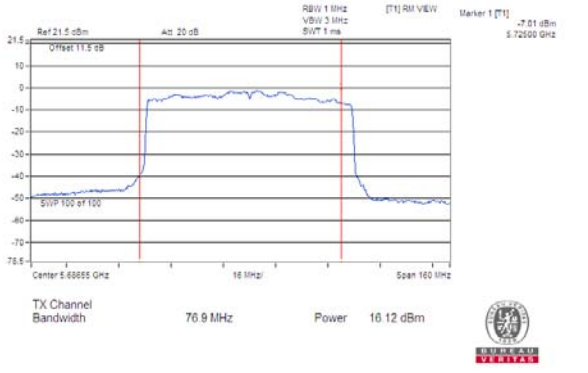
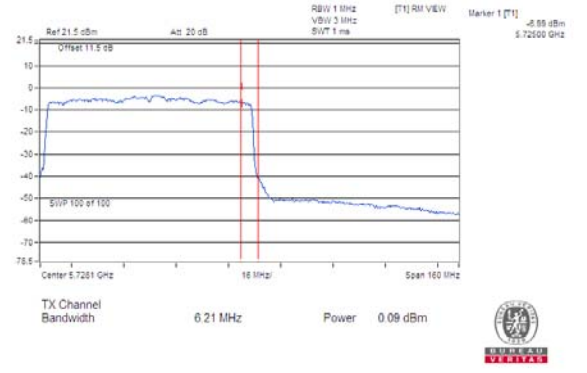
802.11ax (HE20)

Chain 0/CH 144 (For U-NII-2C)	Chain 0/CH 144 (For U-NII-3)
	
Chain 1/CH 144 (For U-NII-2C)	**Chain 1/CH 144 (For U-NII-3)**
	
Chain 2/CH 144 (For U-NII-2C)	**Chain 2/CH 144 (For U-NII-3)**
	
Chain 3/CH 144 (For U-NII-2C)	**Chain 3/CH 144 (For U-NII-3)**
	

802.11ax (HE40)

Chain 0/CH 142 (For U-NII-2C)	Chain 0/CH 142 (For U-NII-3)
	
Chain 1/CH 142 (For U-NII-2C)	**Chain 1/CH 142 (For U-NII-3)**
	
Chain 2/CH 142 (For U-NII-2C)	**Chain 2/CH 142 (For U-NII-3)**
	
Chain 3/CH 142 (For U-NII-2C)	**Chain 3/CH 142 (For U-NII-3)**
	

802.11ax (HE80)

Chain 0/CH 138 (For U-NII-2C)	Chain 0/CH 138 (For U-NII-3)
	
Chain 1/CH 138 (For U-NII-2C)	Chain 1/CH 138 (For U-NII-3)
	
Chain 2/CH 138 (For U-NII-2C)	Chain 2/CH 138 (For U-NII-3)
	
Chain 3/CH 138 (For U-NII-2C)	Chain 3/CH 138 (For U-NII-3)
	

Scanning radio:

802.11a

Chan.	Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	37.239	15.71	22.80	Pass
60	5300	31.046	14.92	22.80	Pass
64	5320	27.479	14.39	22.80	Pass
100	5500	37.497	15.74	22.80	Pass
116	5580	36.898	15.67	22.80	Pass
140	5700	37.670	15.76	22.80	Pass
144	5720 For U-NII-2C	36.238	15.59	22.33	Pass
144	5720 For U-NII-3	9.208	9.64	28.80	Pass

* For U-NII-2A: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 100, 116, 140: The power limit shall be reduced to 23.92-(7.2-6) = 22.80dBm.
Ch 144: The power limit shall be reduced to 23.53-(7.2-6) = 22.33dBm
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

1. 11dBm + 10log (26.90) = 25.29 > 24dBm
2. 11dBm + 10log (27.30) = 25.36 > 24dBm
3. 11dBm + 10log (25.61) = 25.08 > 24dBm
4. 11dBm + 10log (24.64) = 24.91 > 24dBm
5. 11dBm + 10log (25.77) = 25.11 > 24dBm
6. 11dBm + 10log (25.31) = 25.03 > 24dBm
7. 11dBm + 10log (5725.00 - 5707.09) = 23.53 < 24dBm

802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	**37.497**	15.74	22.80	Pass
60	5300	30.974	14.91	22.80	Pass
64	5320	27.040	14.32	22.80	Pass
100	5500	37.068	15.69	22.80	Pass
116	5580	36.392	15.61	22.80	Pass
140	5700	36.898	15.67	22.80	Pass
144	5720 For U-NII-2C	**37.940**	15.79	22.38	Pass
144	5720 For U-NII-3	9.685	9.86	28.80	Pass

* For U-NII-2A: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced.
Ch 100, 116, 140: The power limit shall be reduced to 23.92-(7.2-6) = 22.80dBm.
Ch 144: The power limit shall be reduced to 23.58-(7.2-6) = 22.38dBm
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

1. 11dBm + 10log (27.10) = 25.32 > 24dBm
2. 11dBm + 10log (26.65) = 25.25 > 24dBm
3. 11dBm + 10log (25.43) = 25.05 > 24dBm
4. 11dBm + 10log (26.06) = 25.15 > 24dBm
5. 11dBm + 10log (26.25) = 25.19 > 24dBm
6. 11dBm + 10log (25.88) = 25.12 > 24dBm
7. 11dBm + 10log (5725.00 - 5706.87) = 23.58 < 24dBm

802.11n (HT40)

Chan.	Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Pass / Fail
54	5270	34.119	15.33	22.80	Pass
62	5310	26.546	14.24	22.80	Pass
102	5510	34.356	15.36	22.80	Pass
110	5550	34.754	15.41	22.80	Pass
134	5670	32.885	15.17	22.80	Pass
142	5710 For U-NII-2C	33.854	15.30	22.80	Pass
142	5710 For U-NII-3	1.020	0.09	28.80	Pass

* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

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

1. 11dBm + 10log (51.08) = 28.08 > 24dBm
2. 11dBm + 10log (51.69) = 28.13 > 24dBm
3. 11dBm + 10log (51.09) = 28.08 > 24dBm
4. 11dBm + 10log (50.87) = 28.06 > 24dBm
5. 11dBm + 10log (50.78) = 28.05 > 24dBm
6. 11dBm + 10log (5725.00 - 5684.49) = 27.07 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Pass / Fail
58	5290	6.592	8.19	22.80	Pass
106	5530	7.962	9.01	22.80	Pass
122	5610	32.734	15.15	22.80	Pass
138	5690 For U-NII-2C	32.256	15.09	22.80	Pass
138	5690 For U-NII-3	1.096	0.40	28.80	Pass

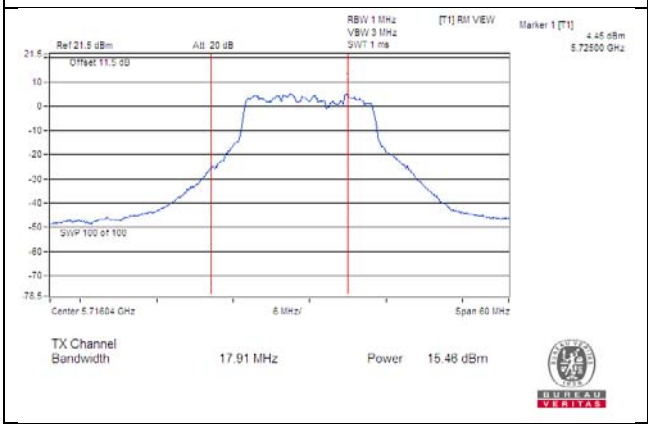
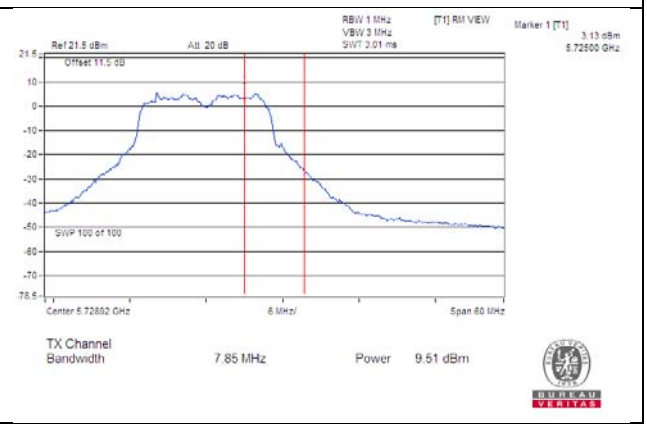
* For U-NII-2A & For U-NII-2C: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 24-(7.2-6) = 22.80dBm.
For U-NII-3: Max. gain = 7.2dBi > 6dBi, so the power limit shall be reduced to 30-(7.2-6) = 28.80dBm.

Note:

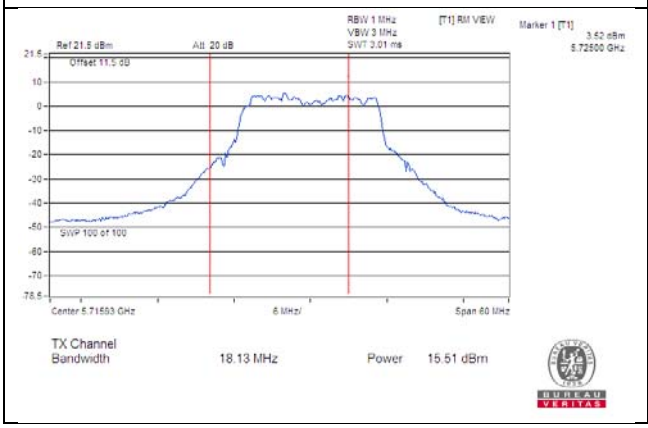
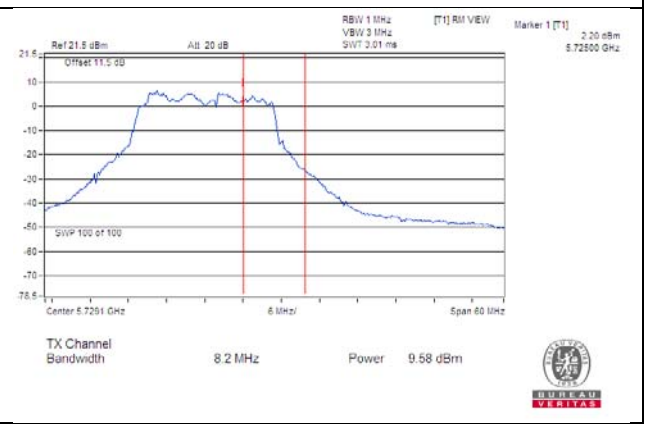
For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log (99.72) = 30.98 > 24dBm
2. 11dBm + 10log (98.45) = 30.93 > 24dBm
3. 11dBm + 10log (100.35) = 31.01 > 24dBm
4. 11dBm + 10log (5725.00 - 5637.13) = 30.43 > 24dBm

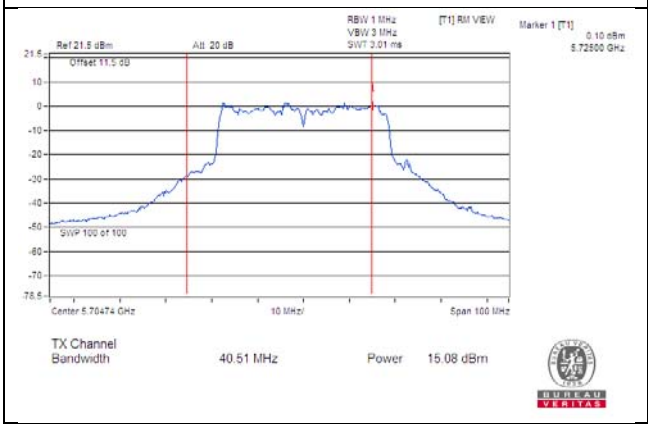
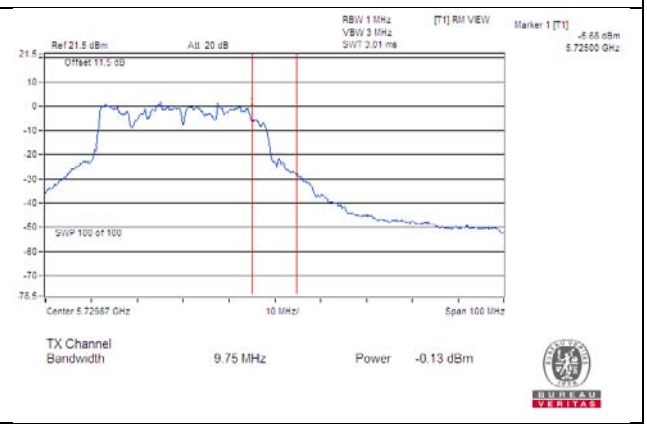
802.11a

CH 144 (For U-NII-2C)	CH 144 (For U-NII-3)
	
TX Channel Bandwidth 17.91 MHz Power 15.46 dBm	TX Channel Bandwidth 7.85 MHz Power 9.51 dBm

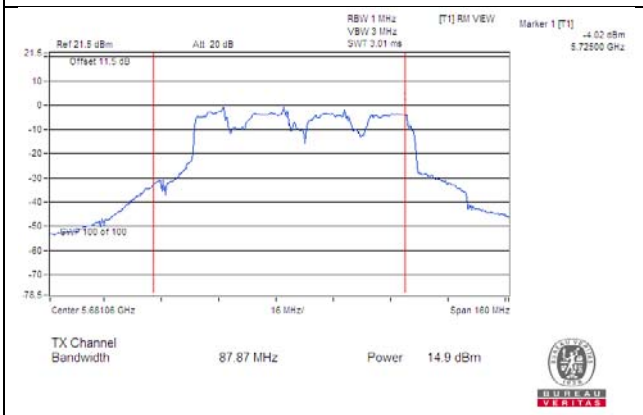
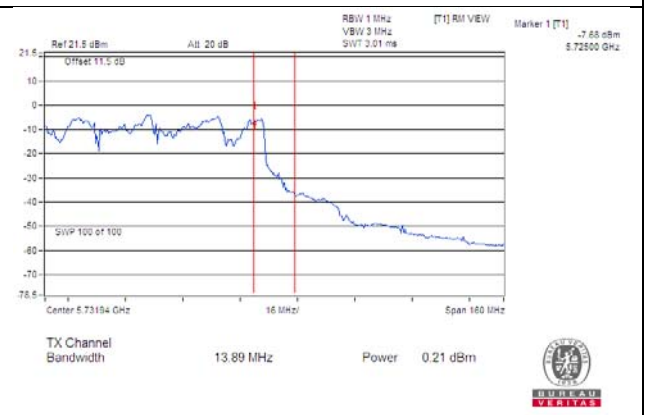
802.11n (HT20)

CH 144 (For U-NII-2C)	CH 144 (For U-NII-3)
	
TX Channel Bandwidth 18.13 MHz Power 15.51 dBm	TX Channel Bandwidth 8.2 MHz Power 9.58 dBm

802.11n (HT40)

CH 142 (For U-NII-2C)	CH 142 (For U-NII-3)
	
TX Channel Bandwidth 40.51 MHz Power 15.08 dBm	TX Channel Bandwidth 9.75 MHz Power -0.13 dBm

802.11ac (VHT80)

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

26dB Bandwidth:

5G traffic radio:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	19.58	19.69	19.62	19.71
60	5300	19.68	19.63	19.64	19.48
64	5320	19.62	19.85	19.59	19.76
100	5500	19.59	19.74	19.84	19.72
116	5580	19.53	19.72	19.78	19.66
140	5700	19.42	19.50	19.38	19.23
144	5720 For U-NII-2C	15.06	14.92	15.05	15.04

802.11ax (HE20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	21.65	21.48	21.39	21.56
60	5300	21.42	21.20	21.29	21.68
64	5320	21.31	21.38	21.26	21.47
100	5500	21.39	21.62	21.42	21.26
116	5580	21.50	21.36	21.43	21.25
140	5700	21.87	21.31	21.31	21.57
144	5720 For U-NII-2C	15.87	15.79	15.98	15.81

802.11ax (HE40)

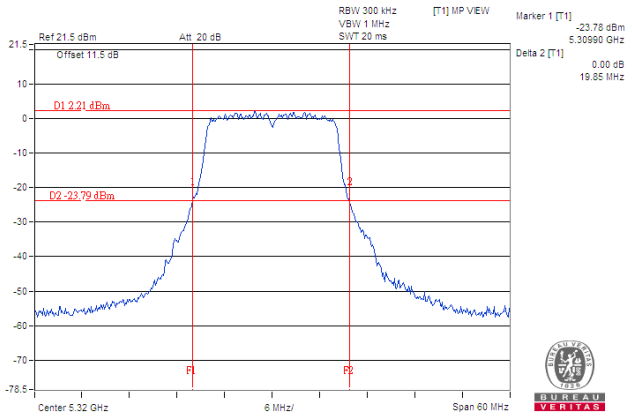
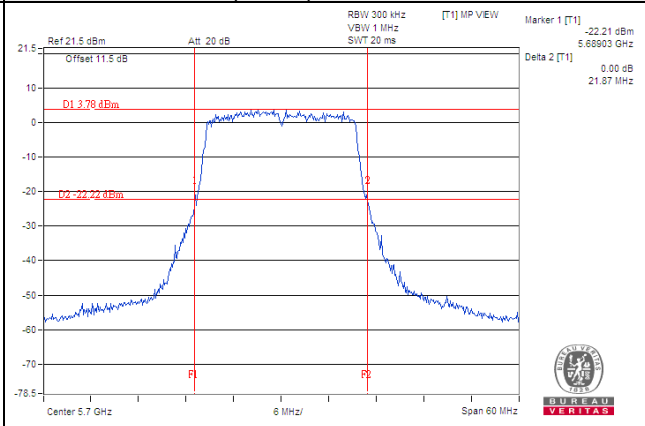
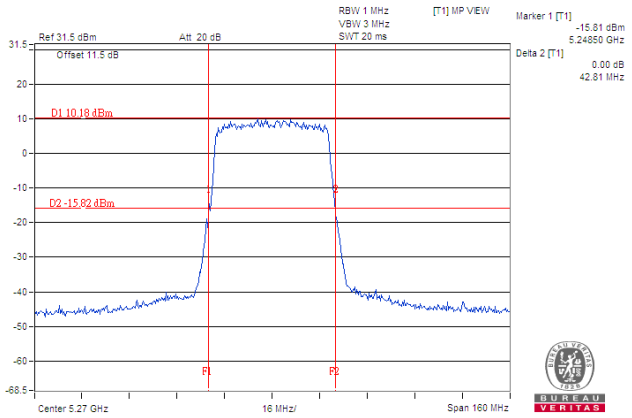
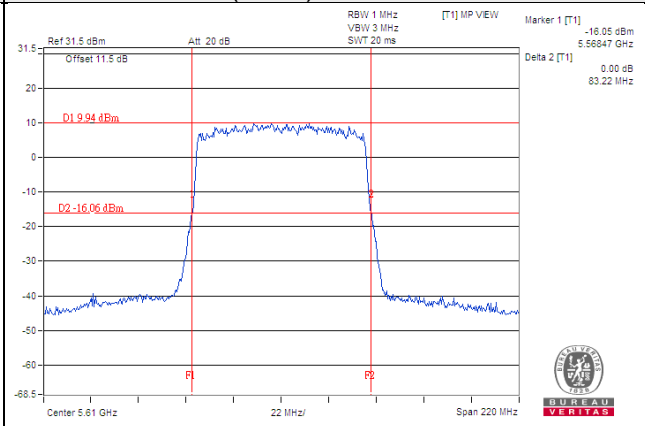
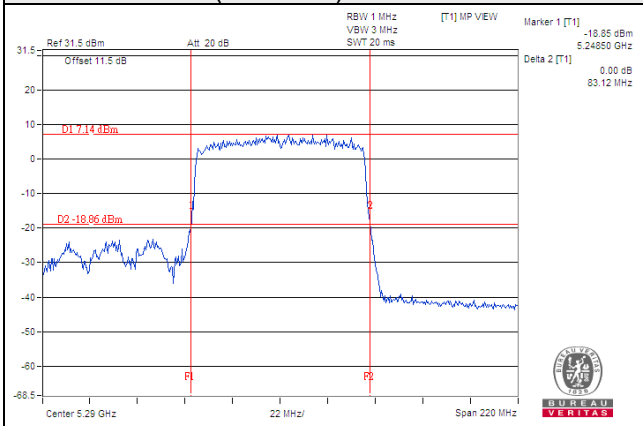
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	42.15	42.44	42.01	42.81
62	5310	42.20	42.09	42.08	42.48
102	5510	42.28	42.22	42.21	42.42
110	5550	42.50	42.12	41.92	42.23
134	5670	42.17	42.06	42.21	42.05
142	5710 For U-NII-2C	35.97	35.95	35.91	36.20

802.11ax (HE80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	82.54	82.64	82.50	83.12
106	5530	82.69	82.79	82.74	82.94
122	5610	82.97	82.94	83.03	83.22
138	5690 For U-NII-2C	76.39	76.52	76.82	76.90

802.11ax (HE80+80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	82.76	82.56	-	-
58	5290	-	-	82.57	83.12
106	5530	82.72	82.36	-	-
122	5610	-	-	82.89	83.07

Spectrum Plot of Worst Value	
802.11a / Chain 1 / Ch 64	802.11ax (HE20) / Chain 0 / Ch 140
	
802.11ax (HE40) / Chain 3 / Ch 54	802.11ax (HE80) / Chain 3 / Ch 122
	
802.11ax (HE80+80) / Chain 3 / Ch 58	
	

Scanning radio:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
52	5260	26.90
60	5300	27.30
64	5320	25.61
100	5500	24.64
116	5580	25.77
140	5700	25.31
144	5720 For U-NII-2C	17.91

802.11n (HT20)

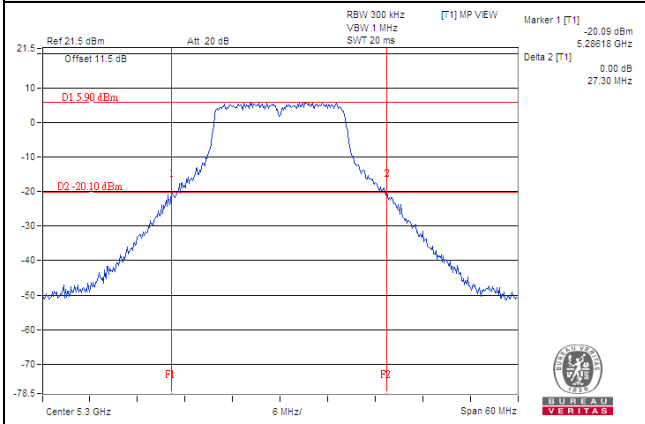
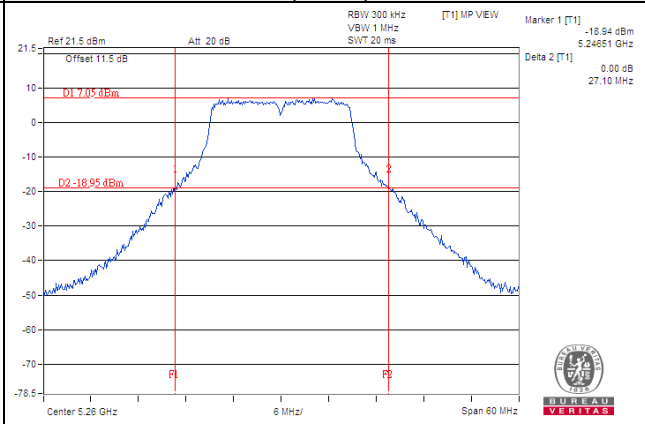
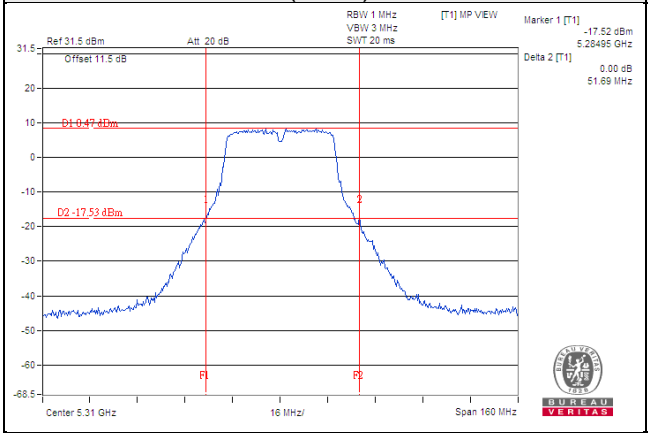
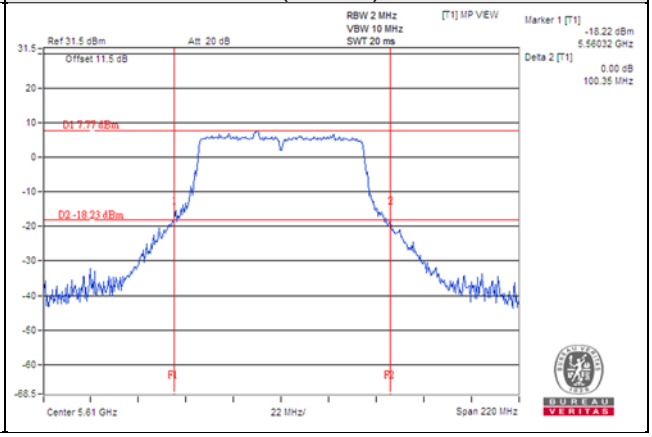
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
52	5260	27.10
60	5300	26.65
64	5320	25.43
100	5500	26.06
116	5580	26.25
140	5700	25.88
144	5720 For U-NII-2C	18.13

802.11n (HT40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
54	5270	51.08
62	5310	51.69
102	5510	51.09
110	5550	50.87
134	5670	50.78
142	5710 For U-NII-2C	40.51

802.11ac (VHT80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
58	5290	99.72
106	5530	98.45
122	5610	100.35
138	5690 For U-NII-2C	87.87

Spectrum Plot of Worst Value	
802.11a / Ch 60	802.11n (HT20) / Ch 52
	
802.11n (HT40) / Ch 62	802.11ac (VHT80) / Ch 122
	

EUT Maximum Conducted Power

5G traffic radio: CDD Mode

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	40.964	16.12
5470~5725	46.494	16.67

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	46.199	16.65
5470~5725	44.656	16.50

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	90.122	19.55
5470~5725	91.344	19.61

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	46.627	16.69
5470~5725	44.888	16.52

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	90.753	19.58
5470~5725	92.192	19.65

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	115.949	20.64
5470~5725	178.742	22.52

802.11ac (VHT80+80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	63.202	18.01
5470~5725	92.093	19.64

802.11ax (HE20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	46.896	16.71
5470~5725	45.147	16.55

802.11ax (HE40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	91.223	19.60
5470~5725	92.723	19.67

802.11ax (HE80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	117.022	20.68
5470~5725	179.567	22.54

802.11ax (HE80+80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	63.494	18.03
5470~5725	92.621	19.67

5G traffic radio: Beamforming Mode

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	45.834	16.61
5470~5725	44.302	16.46

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	44.735	16.51
5470~5725	45.513	16.58

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	45.373	16.57
5470~5725	47.135	16.73

802.11ac (VHT80+80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	54.346	17.35
5470~5725	45.040	16.54

802.11ax (HE20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	46.233	16.65
5470~5725	44.532	16.49

802.11ax (HE40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	44.969	16.53
5470~5725	45.982	16.63

802.11ax (HE80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	45.609	16.59
5470~5725	47.407	16.76

802.11ax (HE80+80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	54.658	17.38
5470~5725	45.350	16.57

Scanning radio:

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	37.239	15.71
5470~5725	37.670	15.76

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	37.497	15.74
5470~5725	37.940	15.79

802.11n (HT40)

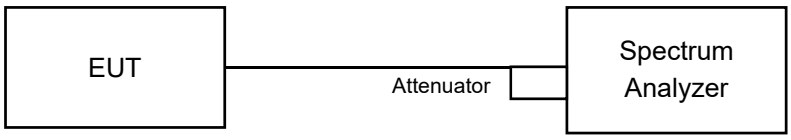
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	34.119	15.33
5470~5725	34.754	15.41

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	6.592	8.19
5470~5725	32.734	15.15

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 sampling. 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 Result

5G traffic radio:

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	16.44	16.56	16.44	16.44
60	5300	16.44	16.44	16.56	16.56
64	5320	16.44	16.44	16.44	16.56
100	5500	16.44	16.44	16.56	16.56
116	5580	16.44	16.56	16.44	16.44
140	5700	16.44	16.56	16.56	16.44
144	5720 For U-NII-2C	13.40	13.40	13.40	13.28
144	5720 For U-NII-3	3.04	3.04	3.04	3.04

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	18.96	19.08	18.96	18.96
60	5300	18.96	18.96	18.96	18.96
64	5320	19.08	18.96	18.96	18.96
100	5500	18.96	18.96	18.96	18.96
116	5580	18.96	18.96	18.96	18.96
140	5700	18.84	18.96	18.96	18.96
144	5720 For U-NII-2C	14.60	14.60	14.60	14.60
144	5720 For U-NII-3	4.36	4.36	4.36	4.36

802.11ax (HE40)

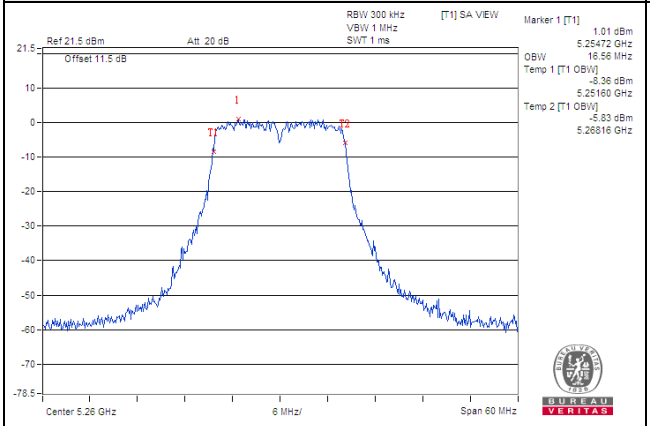
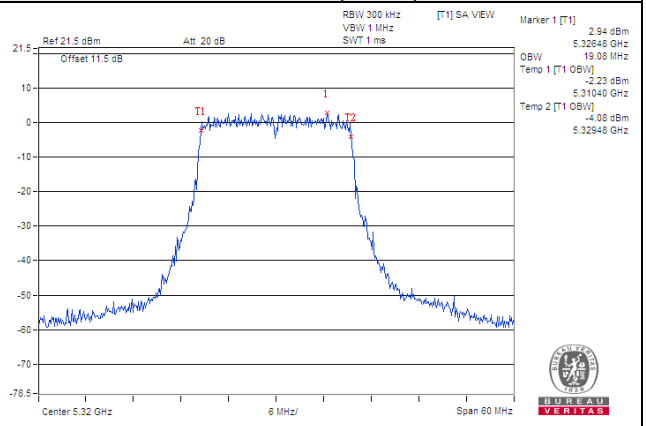
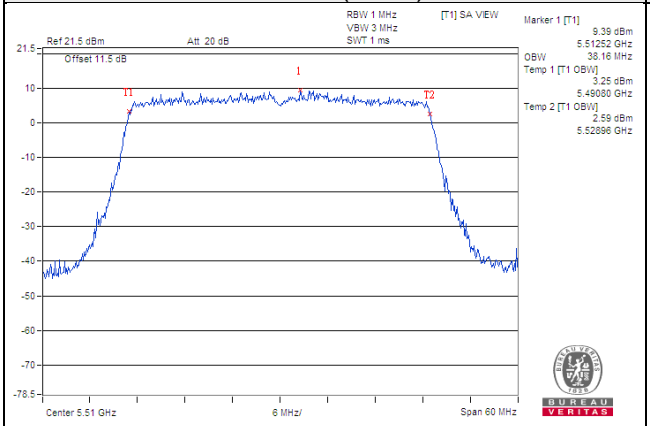
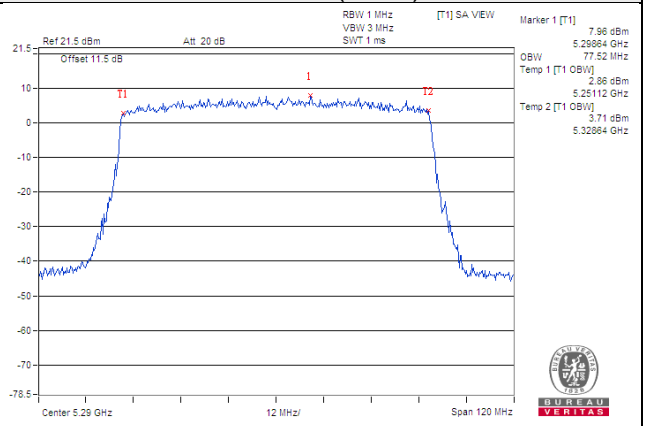
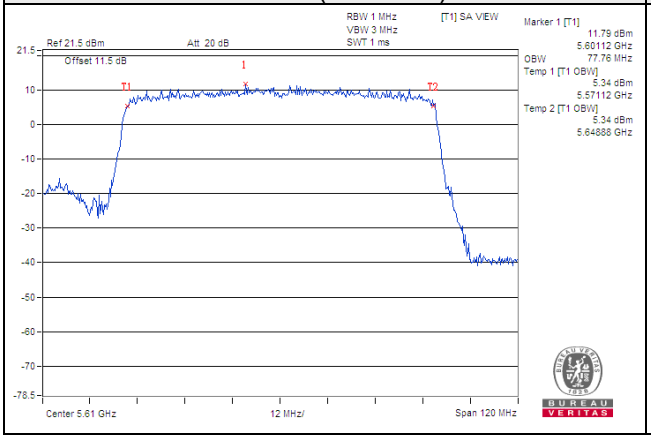
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	38.04	38.04	37.92	38.04
62	5310	38.04	38.04	38.04	38.16
102	5510	38.16	38.04	38.04	38.04
110	5550	37.92	38.04	38.04	38.04
134	5670	38.04	37.92	37.92	38.04
142	5710 For U-NII-2C	34.08	33.96	34.08	34.08
142	5710 For U-NII-3	3.96	3.96	3.96	3.96

802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	77.04	77.52	77.28	77.04
106	5530	77.04	77.04	77.28	77.04
122	5610	77.04	77.28	77.04	77.28
138	5690 For U-NII-2C	73.64	73.88	73.88	73.88
138	5690 For U-NII-3	3.40	3.40	3.40	3.40

802.11ax (HE80+80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	77.52	77.28	-	-
58	5290	-	-	77.76	77.52
106	5530	77.04	77.28	-	-
122	5610	-	-	77.76	77.52

Spectrum Plot of Worst Value	
802.11a	802.11ax (HE20)
	
802.11ax (HE40)	802.11ax (HE80)
	
802.11ax (HE80+80)	
	

Scanning radio: CDD Mode

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
52	5260	17.16
60	5300	17.04
64	5320	17.04
100	5500	17.04
116	5580	16.92
140	5700	16.92
144	5720 For U-NII-2C	13.52
144	5720 For U-NII-3	3.40

802.11n (HT20)

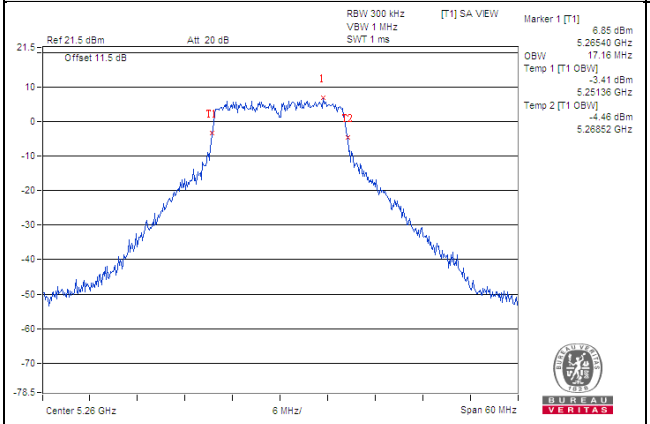
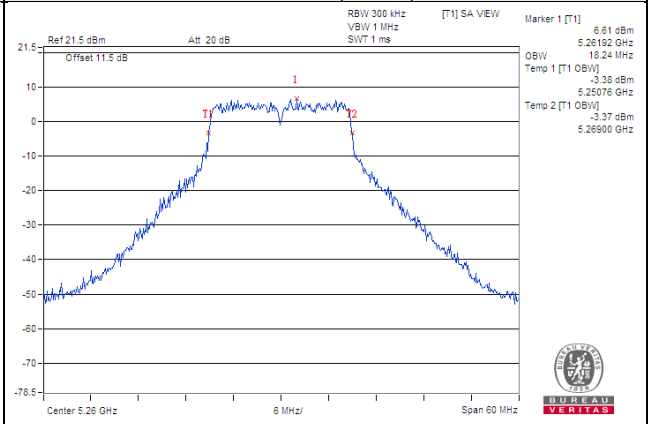
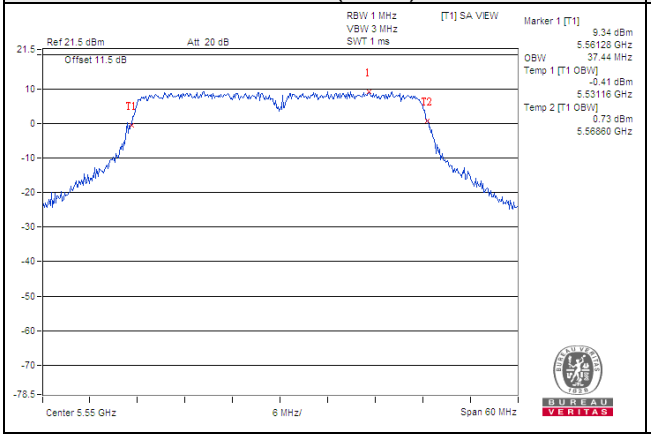
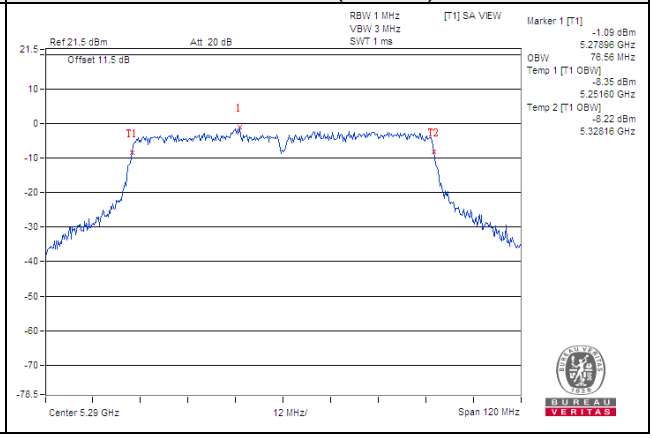
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
52	5260	18.24
60	5300	18.00
64	5320	18.00
100	5500	18.24
116	5580	18.12
140	5700	18.24
144	5720 For U-NII-2C	14.24
144	5720 For U-NII-3	4.00

802.11n (HT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
54	5270	37.20
62	5310	37.32
102	5510	37.20
110	5550	37.44
134	5670	37.32
142	5710 For U-NII-2C	33.72
142	5710 For U-NII-3	3.48

802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
58	5290	76.56
106	5530	76.56
122	5610	76.32
138	5690 For U-NII-2C	73.40
138	5690 For U-NII-3	2.92

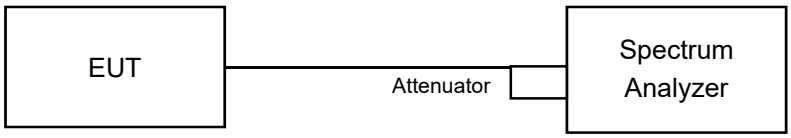
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Duty cycle of test signal is < 98%
Using method SA-2
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band
Duty cycle <98%
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 = 10log(500 kHz/300kHz)
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 Conditions

Same as 4.3.6.

4.5.7 Test Results

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

5G traffic radio:

802.11a

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				
52	5260	-2.72	-3.03	-2.80	-2.81	0.43	3.61	3.78	Pass
60	5300	-2.89	-2.80	-2.86	-2.57	0.43	3.67	3.78	Pass
64	5320	-2.77	-2.79	-2.77	-3.04	0.43	3.61	3.78	Pass
100	5500	-2.89	-2.82	-2.69	-2.97	0.43	3.61	3.78	Pass
116	5580	-3.45	-2.92	-3.09	-2.83	0.43	3.38	3.78	Pass
140	5700	-3.46	-2.89	-2.76	-2.37	0.43	3.59	3.78	Pass
144	5720 For U-NII-2C	-2.63	-2.61	-2.90	-2.81	0.43	3.71	3.78	Pass

Note:

1. Method E) 2) 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 = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 11 - (13.22 - 6) = 3.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

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				
52	5260	-4.52	-3.21	-3.48	-1.78	0.20	3.08	3.78	Pass
60	5300	-4.42	-3.53	-2.65	-1.47	0.20	3.34	3.78	Pass
64	5320	-3.44	-2.71	-3.83	-2.83	0.20	3.04	3.78	Pass
100	5500	-3.38	-3.18	-3.33	-2.24	0.20	3.21	3.78	Pass
116	5580	-3.42	-3.02	-2.55	-1.71	0.20	3.59	3.78	Pass
140	5700	-4.26	-2.57	-3.34	-2.46	0.20	3.12	3.78	Pass
144	5720 For U-NII-2C	-3.78	-2.74	-2.51	-3.88	0.20	3.03	3.78	Pass

Note:

1. Method E) 2) 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 = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 11 - (13.22 - 6) = 3.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

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				
54	5270	-2.17	-3.57	-3.19	-3.31	0.19	3.19	3.78	Pass
62	5310	-2.02	-3.23	-4.31	-3.42	0.19	3.05	3.78	Pass
102	5510	-1.84	-3.42	-3.38	-2.59	0.19	3.45	3.78	Pass
110	5550	-1.70	-3.01	-2.60	-3.97	0.19	3.47	3.78	Pass
134	5670	-0.84	-2.64	-5.71	-3.04	0.19	3.48	3.78	Pass
142	5710 For U-NII-2C	-2.95	-3.32	-3.05	-2.77	0.19	3.19	3.78	Pass

Note:
1. Method E) 2) 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 = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 11 - (13.22 - 6) = 3.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

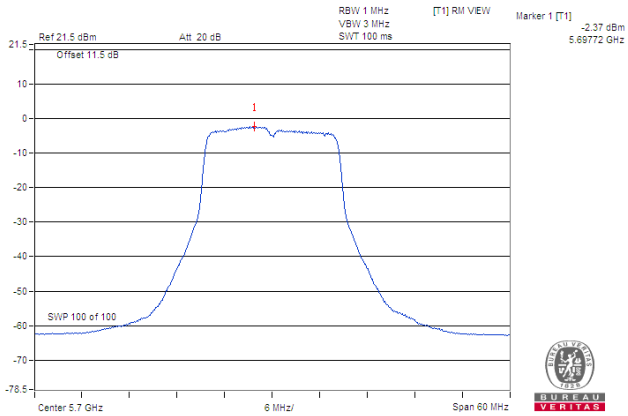
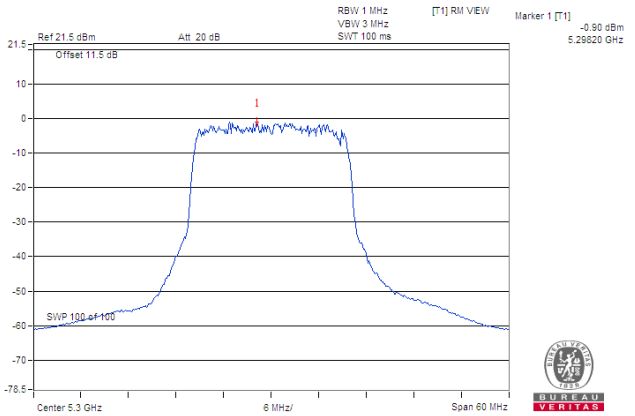
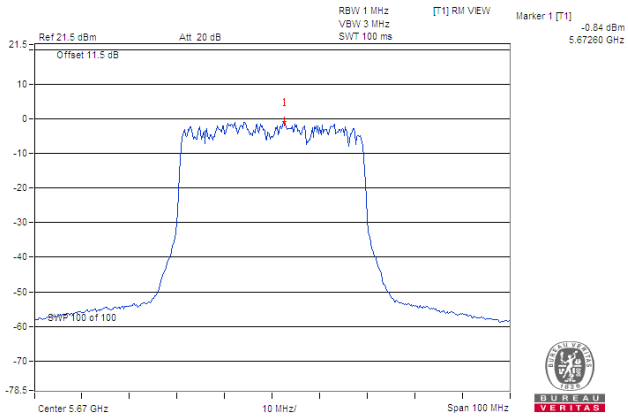
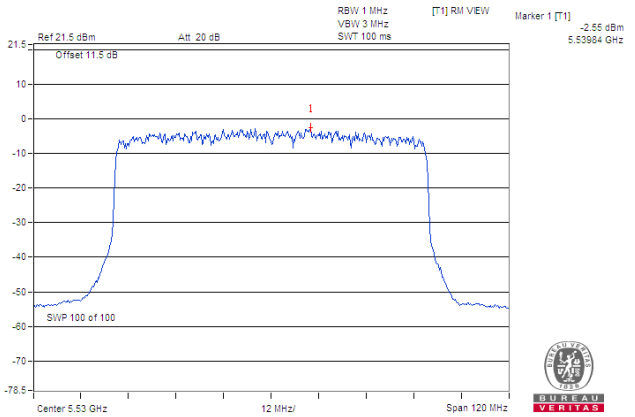
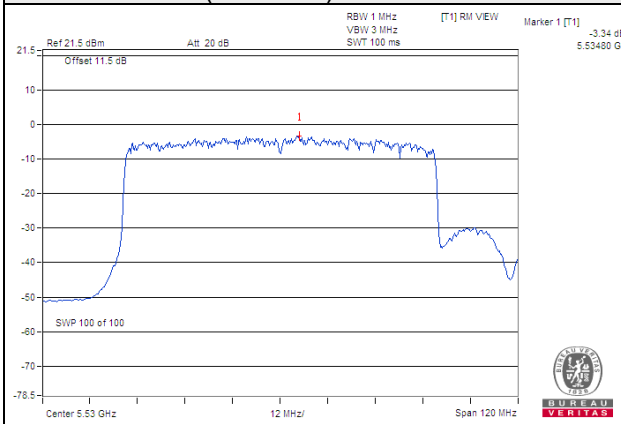
Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	-5.34	-4.80	-4.54	-5.17	0.26	1.33	3.78	Pass
106	5530	-5.05	-3.57	-2.55	-3.76	0.26	2.64	3.78	Pass
122	5610	-3.46	-3.34	-3.08	-2.79	0.26	3.12	3.78	Pass
138	5690 For U-NII-2C	-4.14	-3.59	-2.90	-3.23	0.26	2.84	3.78	Pass

Note:
1. Method E) 2) 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 = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 11 - (13.22 - 6) = 3.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80+80)

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	-6.78	-6.48	-	-	0.26	-3.36	12.79	Pass
58	5290	-	-	-6.51	-6.38	0.26	-3.17	6.79	Pass
106	5530	-4.18	-3.34	-	-	0.26	-0.47	3.78	Pass
122	5610	-	-	-4.02	-3.98	0.26	-0.73	3.78	Pass

Note:
1. Method E) 2) 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. For U-NII-1: Directional Gain = 7.2 dBi + 10log(2) = 10.21dBi > 6dBi, so the power density limit shall be reduced to 17 - (10.21 - 6) = 12.79dBm.
   For U-NII-2A: Directional Gain = 7.2 dBi + 10log(2) = 10.21dBi > 6dBi, so the power density limit shall be reduced to 11 - (10.21 - 6) = 6.79dBm.
   For U-NII-2C: Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the limit shall be reduced to 11-(13.22-6) = 3.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 3 / CH 140	802.11ax (HE20) / Chain 3 / CH 60
	
802.11ax (HE40) / Chain 0 / CH 134	802.11ax (HE80) / Chain 2 / CH 106
	
802.11ax (HE80+80) / Chain 1 / CH 106	
	

Scanning radio:

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
52	5260	2.50	0.13	2.63	9.80	Pass
60	5300	1.31	0.13	1.44	9.80	Pass
64	5320	0.71	0.13	0.84	9.80	Pass
100	5500	2.66	0.13	2.79	9.80	Pass
116	5580	2.40	0.13	2.53	9.80	Pass
140	5700	2.33	0.13	2.46	9.80	Pass
144	5720 For U-NII-2C	2.59	0.13	2.72	9.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 11 - (7.2 - 6) = 9.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
52	5260	2.22	0.28	2.50	9.80	Pass
60	5300	0.97	0.28	1.25	9.80	Pass
64	5320	0.36	0.28	0.64	9.80	Pass
100	5500	2.25	0.28	2.53	9.80	Pass
116	5580	2.00	0.28	2.28	9.80	Pass
140	5700	1.92	0.28	2.20	9.80	Pass
144	5720 For U-NII-2C	2.11	0.28	2.39	9.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 11 - (7.2 - 6) = 9.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

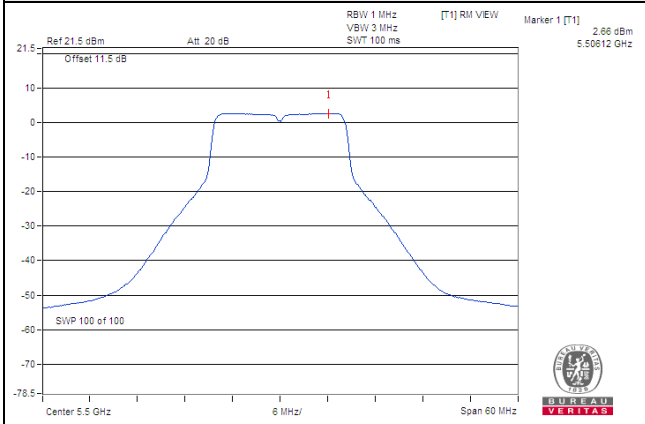
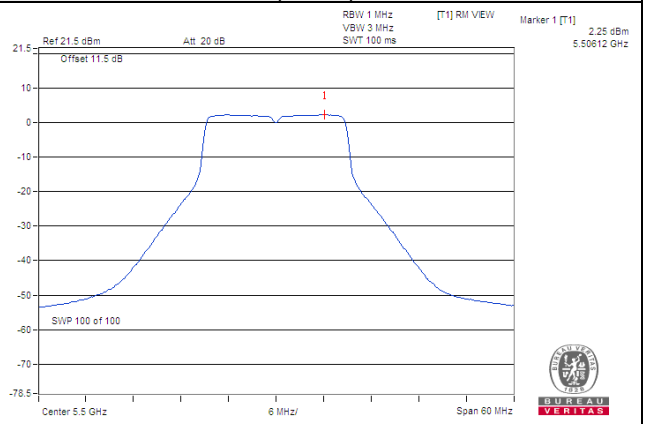
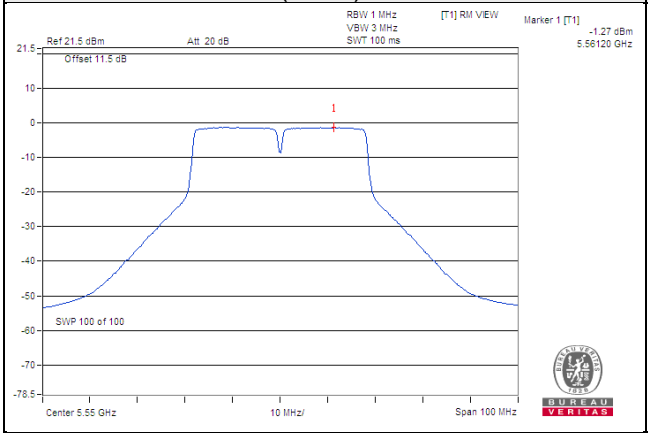
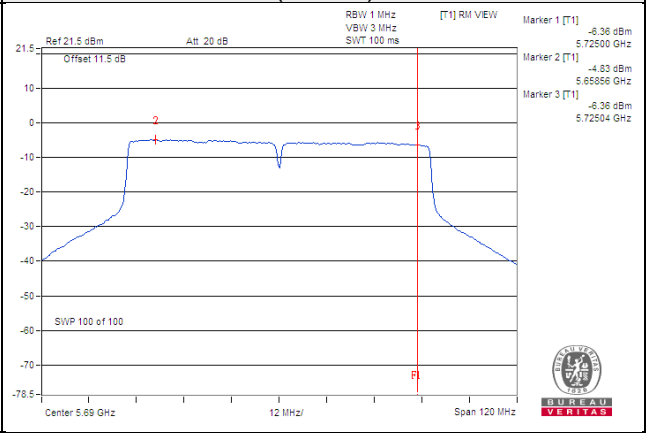
Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
54	5270	-1.51	0.22	-1.29	9.80	Pass
62	5310	-2.92	0.22	-2.70	9.80	Pass
102	5510	-1.31	0.22	-1.09	9.80	Pass
110	5550	-1.27	0.22	-1.05	9.80	Pass
134	5670	-1.77	0.22	-1.55	9.80	Pass
142	5710 For U-NII-2C	-1.31	0.22	-1.09	9.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 11 - (7.2 - 6) = 9.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
58	5290	-13.33	0.19	-13.14	9.80	Pass
106	5530	-10.97	0.19	-10.78	9.80	Pass
122	5610	-5.16	0.19	-4.97	9.80	Pass
138	5690 For U-NII-2C	-4.83	0.19	-4.64	9.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 11 - (7.2 - 6) = 9.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / CH 100	802.11n (HT20) / CH 100
	
802.11n (HT40) / CH 110	802.11ac (VHT80) / CH 138
	

For U-NII-3 band:

5G traffic radio:

802.11a

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	144	5720 For U-NII-3	-12.24	-10.02	6.02	0.43	-3.57	22.78	Pass
1	144	5720 For U-NII-3	-12.17	-9.95	6.02	0.43	-3.50	22.78	Pass
2	144	5720 For U-NII-3	-12.44	-10.22	6.02	0.43	-3.77	22.78	Pass
3	144	5720 For U-NII-3	-12.36	-10.14	6.02	0.43	-3.69	22.78	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 30 - (13.22 - 6) = 22.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	144	5720 For U-NII-3	-12.97	-10.75	6.02	0.20	-4.53	22.78	Pass
1	144	5720 For U-NII-3	-12.92	-10.70	6.02	0.20	-4.48	22.78	Pass
2	144	5720 For U-NII-3	-12.32	-10.10	6.02	0.20	-3.88	22.78	Pass
3	144	5720 For U-NII-3	-11.57	-9.35	6.02	0.20	-3.13	22.78	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 30 - (13.22 - 6) = 22.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

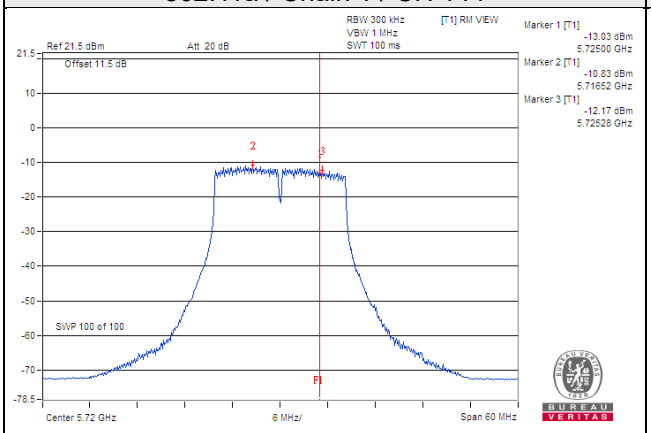
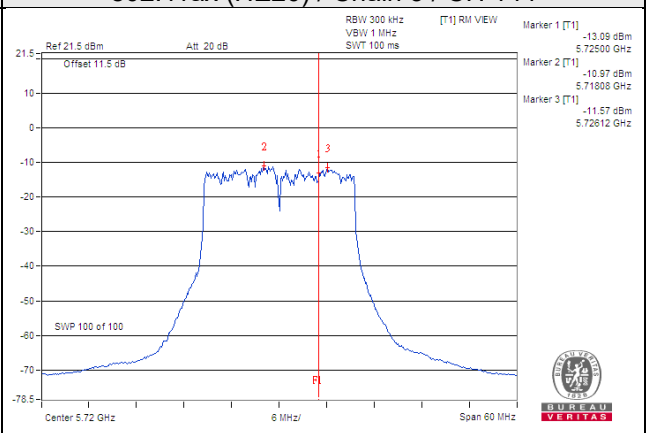
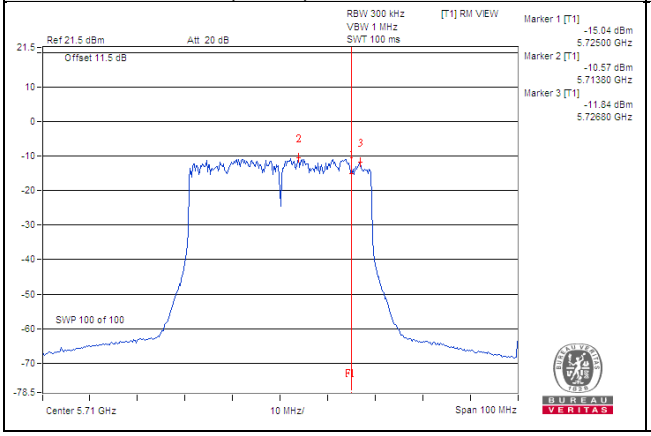
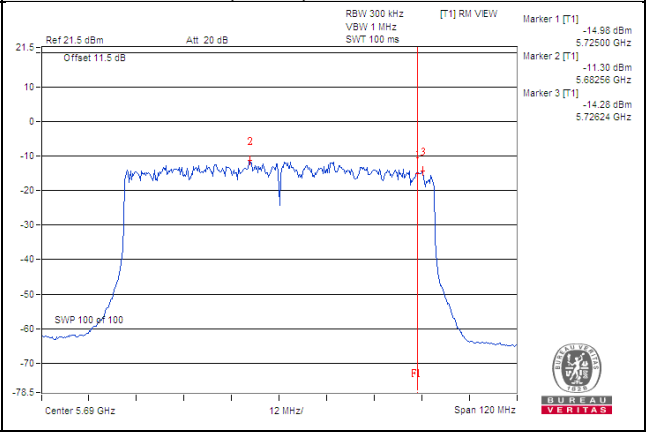
TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	142	5710 For U-NII-3	-11.84	-9.62	6.02	0.19	-3.41	22.78	Pass
1	142	5710 For U-NII-3	-13.53	-11.31	6.02	0.19	-5.10	22.78	Pass
2	142	5710 For U-NII-3	-13.06	-10.84	6.02	0.19	-4.63	22.78	Pass
3	142	5710 For U-NII-3	-13.05	-10.83	6.02	0.19	-4.62	22.78	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 30 - (13.22 - 6) = 22.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	138	5690 For U-NII-3	-14.32	-12.1	6.02	0.26	-5.82	22.78	Pass
1	138	5690 For U-NII-3	-14.88	-12.66	6.02	0.26	-6.38	22.78	Pass
2	138	5690 For U-NII-3	-15.06	-12.84	6.02	0.26	-6.56	22.78	Pass
3	138	5690 For U-NII-3	-14.28	-12.06	6.02	0.26	-5.78	22.78	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional Gain = 7.2 dBi + 10log(4) = 13.22dBi > 6dBi, so the power density limit shall be reduced to 30 - (13.22 - 6) = 22.78dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 1 / CH 144	802.11ax (HE20) / Chain 3 / CH 144
	
802.11ax (HE40) / Chain 0 / CH 142	802.11ax (HE80) / Chain 3 / CH 138
	

Scanning radio:

802.11a

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
144	5720 For U-NII-3	-6.07	-3.85	0.13	-3.72	28.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 30 - (7.2 - 6) = 28.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
144	5720 For U-NII-3	-6.43	-4.21	0.28	-3.93	28.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 30 - (7.2 - 6) = 28.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

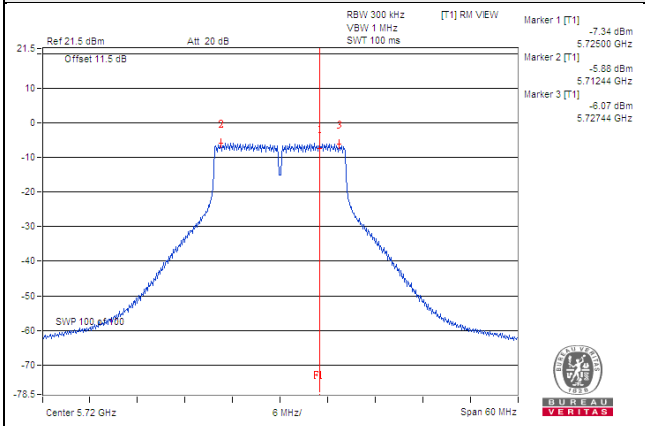
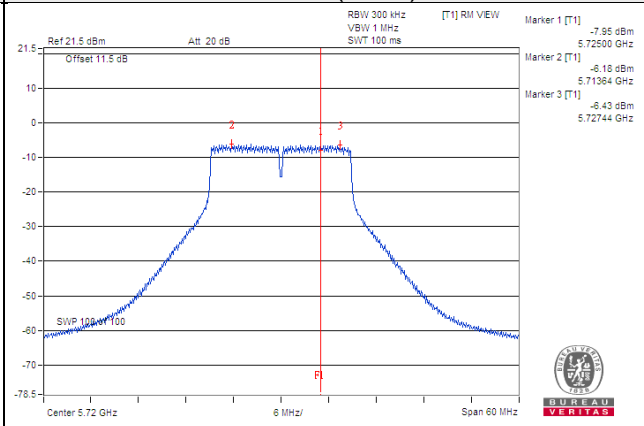
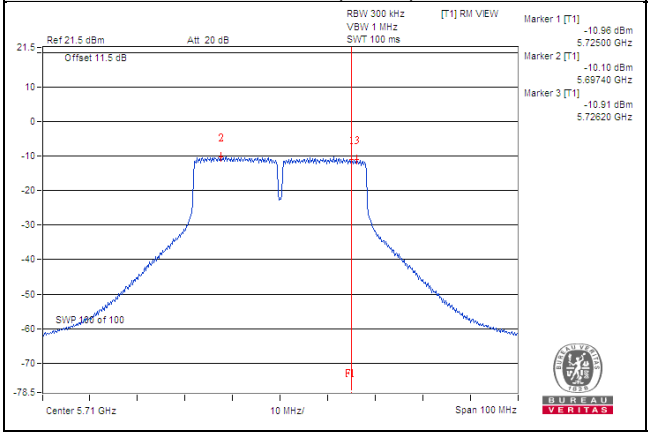
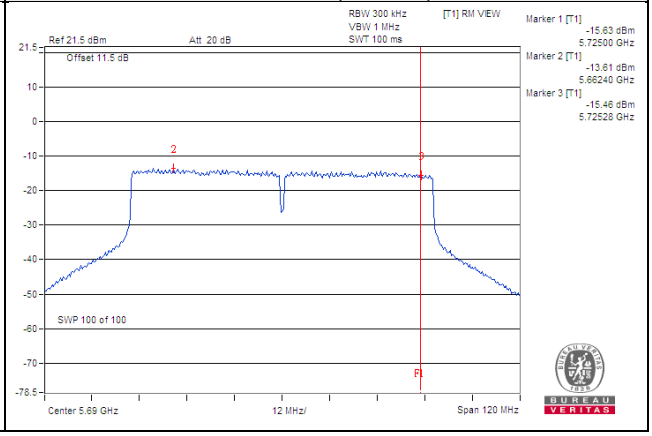
Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
142	5710 For U-NII-3	-10.91	-8.69	0.22	-8.47	28.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 30 - (7.2 - 6) = 28.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
138	5690 For U-NII-3	-15.46	-13.24	0.19	-13.05	28.80	Pass

Note:
1. Max. Gain = 7.2 dBi > 6dBi, so the power density limit shall be reduced to 30 - (7.2 - 6) = 28.80dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

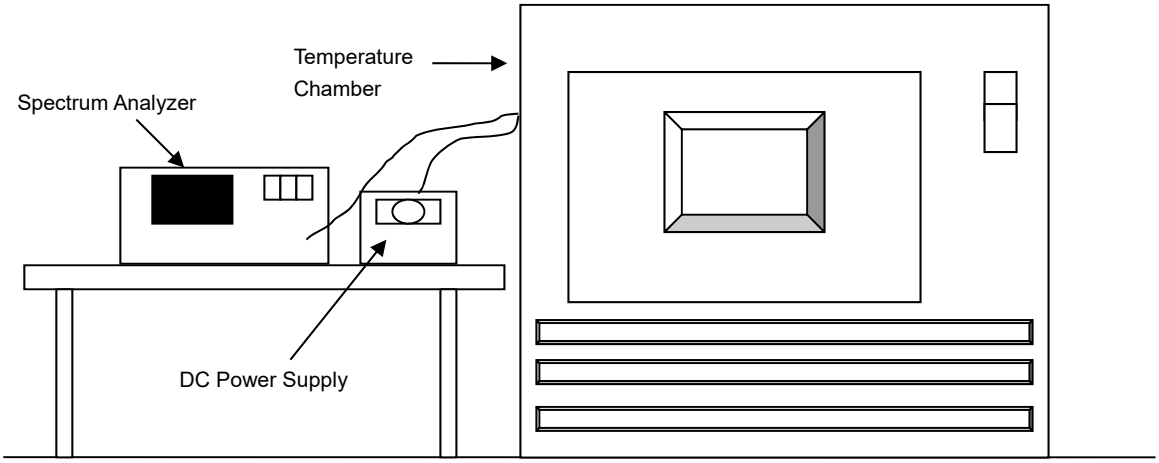
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

4.6 Frequency Stability

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

Test Date: Mar. 11, 2021

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 16, 2020	Sep. 15, 2021
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 01, 2020	May 31, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 23, 2020	Jun. 22, 2021
DC Power Supply TOPWARD	6306A	727263	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.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. 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.

e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.

f. 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

5G traffic radio:

Frequency Stability Versus Temp.									
Operating Frequency: 5260MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	54	5260.0144	PASS	5260.0153	PASS	5260.0171	PASS	5260.0178	PASS
50	54	5260.0253	PASS	5260.0272	PASS	5260.0281	PASS	5260.0256	PASS
40	54	5260.0225	PASS	5260.0203	PASS	5260.0179	PASS	5260.0216	PASS
30	54	5260.0251	PASS	5260.0241	PASS	5260.0242	PASS	5260.0245	PASS
20	54	5259.9825	PASS	5259.9794	PASS	5259.9802	PASS	5259.9802	PASS
10	54	5259.9744	PASS	5259.9726	PASS	5259.9765	PASS	5259.9746	PASS
0	54	5259.9843	PASS	5259.9838	PASS	5259.9839	PASS	5259.9841	PASS
-10	54	5260.0092	PASS	5260.0087	PASS	5260.0108	PASS	5260.0103	PASS
-20	54	5259.9853	PASS	5259.9843	PASS	5259.9841	PASS	5259.9825	PASS
-30	54	5259.9902	PASS	5259.9919	PASS	5259.9899	PASS	5259.9919	PASS

Frequency Stability Versus Voltage									
Operating Frequency: 5260MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	62.1	5259.9817	PASS	5259.9802	PASS	5259.9798	PASS	5259.9799	PASS
	54	5259.9825	PASS	5259.9794	PASS	5259.9802	PASS	5259.9802	PASS
	45.9	5259.9832	PASS	5259.9787	PASS	5259.9799	PASS	5259.9810	PASS

Scanning radio:

Frequency Stability Versus Temp.									
Operating Frequency: 5260MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	54	5259.9922	PASS	5259.9926	PASS	5259.9924	PASS	5259.9940	PASS
50	54	5260.0188	PASS	5260.0186	PASS	5260.0158	PASS	5260.0183	PASS
40	54	5260.0153	PASS	5260.0156	PASS	5260.0203	PASS	5260.0164	PASS
30	54	5259.9785	PASS	5259.9814	PASS	5259.9780	PASS	5259.9799	PASS
20	54	5260.0168	PASS	5260.0207	PASS	5260.0180	PASS	5260.0184	PASS
10	54	5260.0007	PASS	5259.9988	PASS	5259.9979	PASS	5259.9989	PASS
0	54	5260.0229	PASS	5260.0246	PASS	5260.0274	PASS	5260.0225	PASS
-10	54	5259.9849	PASS	5259.9883	PASS	5259.9869	PASS	5259.9881	PASS
-20	54	5260.0061	PASS	5260.0055	PASS	5260.0056	PASS	5260.0036	PASS
-30	54	5259.9913	PASS	5259.9911	PASS	5259.9896	PASS	5259.9891	PASS

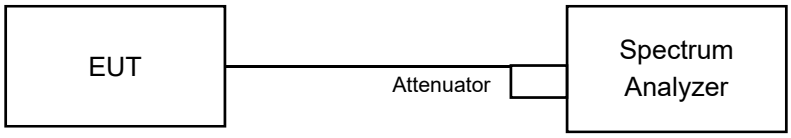
Frequency Stability Versus Voltage									
Operating Frequency: 5260MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	62.1	5260.0177	PASS	5260.0215	PASS	5260.0175	PASS	5260.0179	PASS
	54	5260.0168	PASS	5260.0207	PASS	5260.018	PASS	5260.0184	PASS
	45.9	5260.0158	PASS	5260.0207	PASS	5260.0187	PASS	5260.0182	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

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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

5G traffic radio:

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
144	5720 For U-NII-3	2.90	2.85	2.86	2.76	0.5	Pass

802.11ax (HE20)

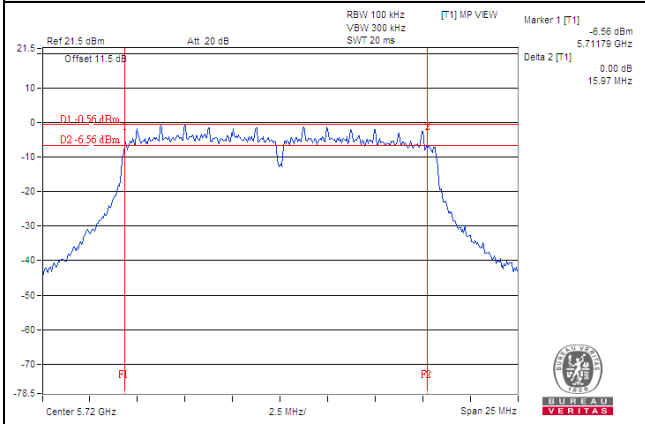
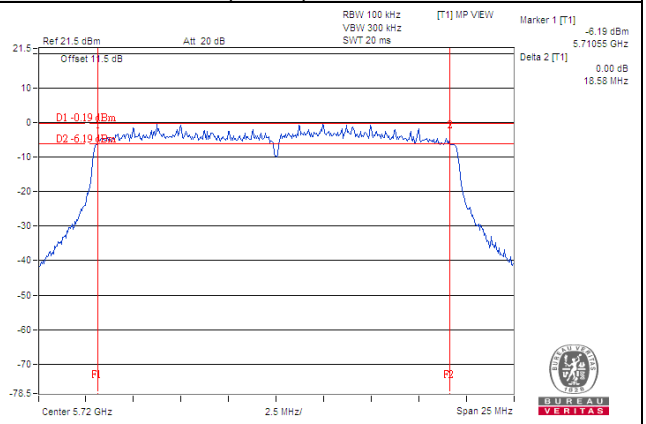
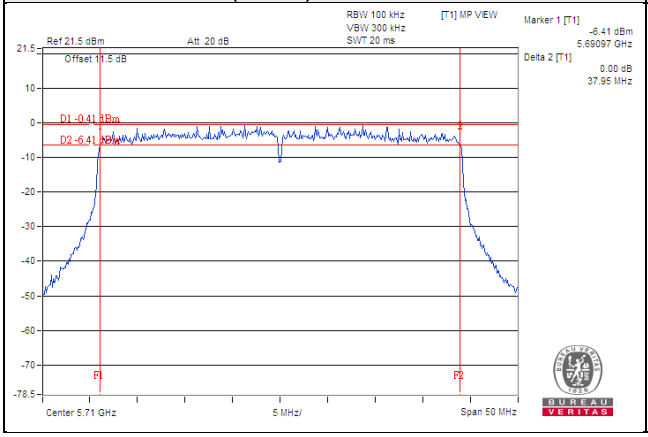
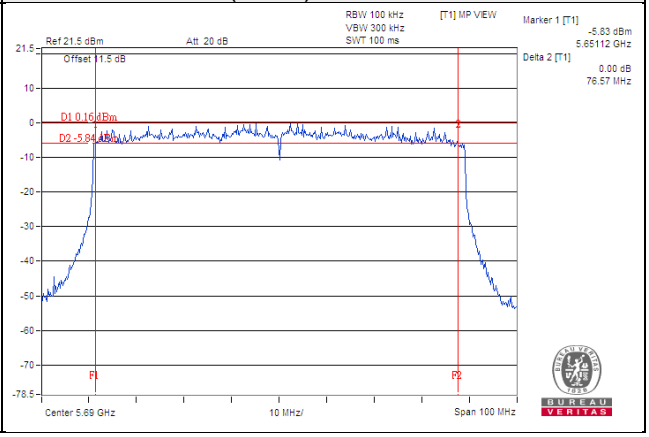
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
144	5720 For U-NII-3	4.36	4.14	4.13	4.23	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
142	5710 For U-NII-3	4.01	3.98	4.00	3.92	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		
138	5690 For U-NII-3	2.73	2.86	3.69	2.69	0.5	Pass

Spectrum Plot of Worst Value	
802.11a / Chain 3 / Ch 144	802.11ax (HE20) / Chain 2 / Ch 144
	
802.11ax (HE40) / Chain 3 / Ch 142	802.11ax (HE80) / Chain 3 / Ch 138
	

*802.11a: Ch 144 (5720MHz for U-NII-3): 15.97-(5725-5711.79) = 2.76
*802.11ax (HE20): Ch 144 (5720MHz for U-NII-3): 18.58-(5725-5710.55) = 4.13
*802.11ax (HE40): Ch 142 (5710MHz for U-NII-3): 37.95-(5725-5690.97) = 3.92
*802.11ax (HE80): Ch 138 (5690MHz for U-NII-3): 76.57-(5725-5651.12) = 2.69

Scanning radio:

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.13	0.5	Pass

802.11n (HT20)

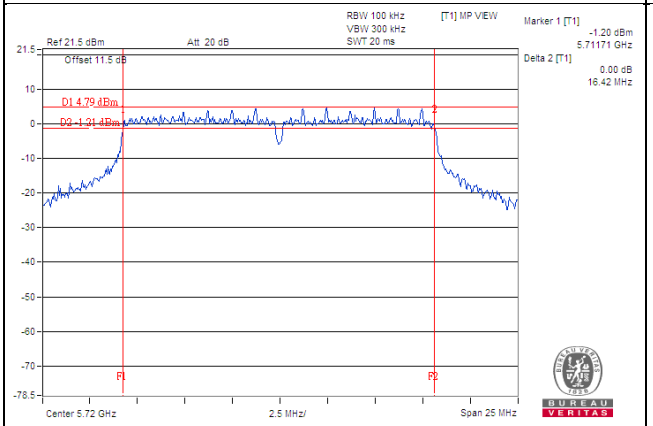
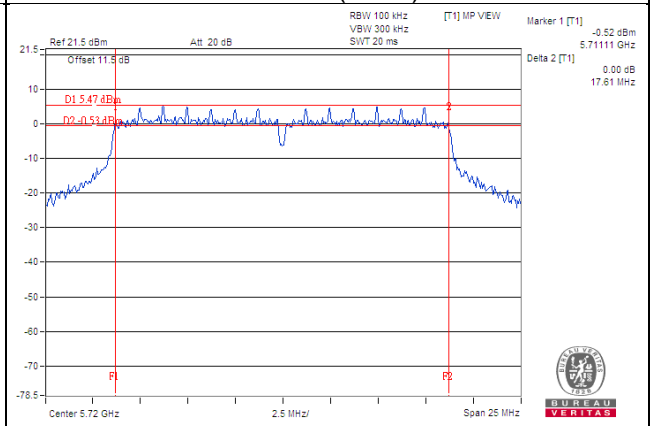
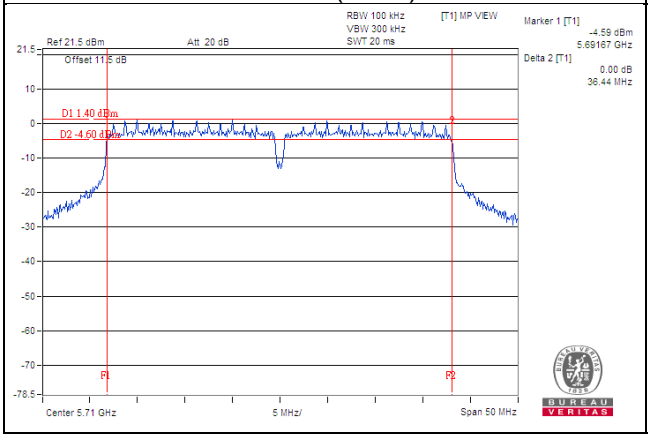
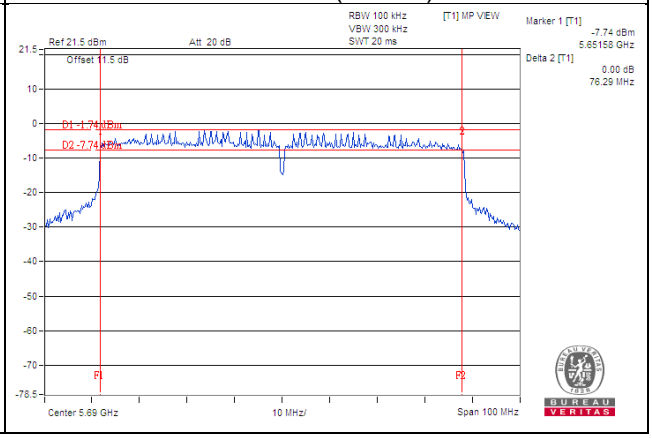
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.72	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 For U-NII-3	3.11	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 For U-NII-3	2.87	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

*802.11a: Ch 144 (5720MHz for U-NII-3): 16.42-(5725-5711.71) = 3.13
*802.11n (HT20): Ch 144 (5720MHz for U-NII-3): 17.81-(5725-5711.11) = 3.72
*802.11n (HT40): Ch 142 (5710MHz for U-NII-3): 36.44-(5725-5691.67) = 3.11
*802.11ac (VHT80): Ch 138 (5690MHz for U-NII-3): 76.29-(5725-5651.58) = 2.87

4.8 Transmit Power Control (TPC)

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is required for systems with an e.i.r.p. of more than 500 mW.

Applicable	E.I.R.P	FCC 15.407 (h)(1)
√	>500mW	The TPC mechanism is required for system with an E.I.R.P of above 500mW
	<500mW	The TPC mechanism is not required for system with an E.I.R.P of less 500mW

The UUT can adjust a transmiter's output power based on the signal level present at the reveiver. TPC is auto controlled by software.

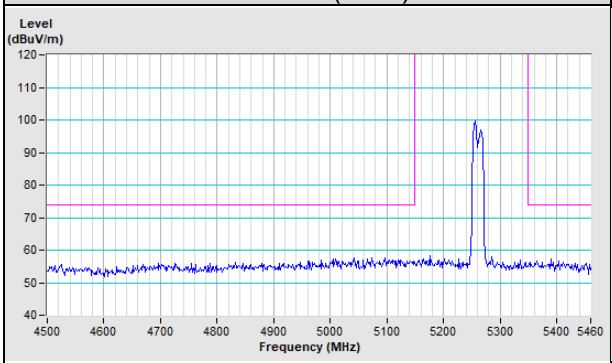
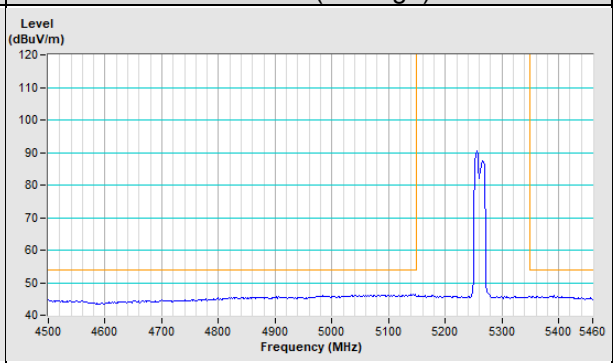
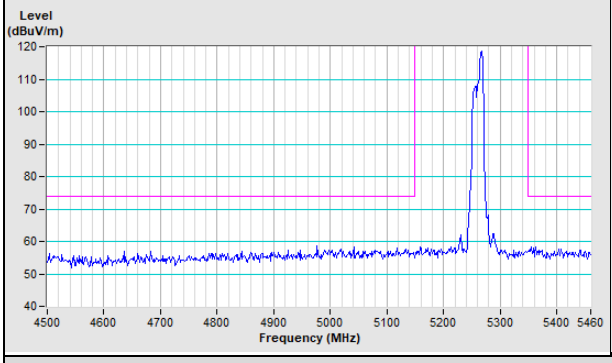
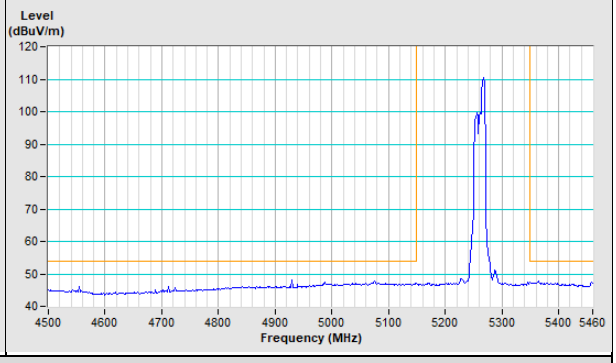
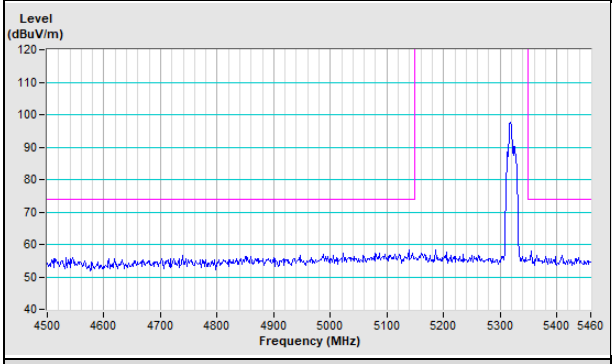
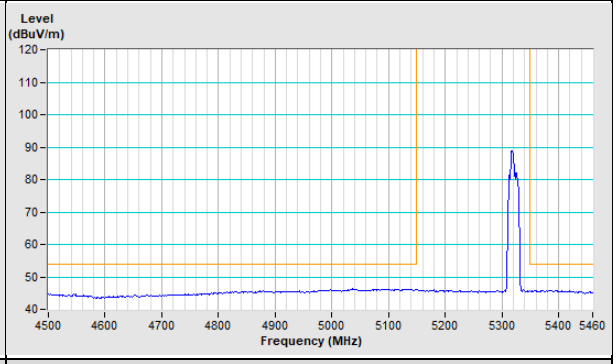
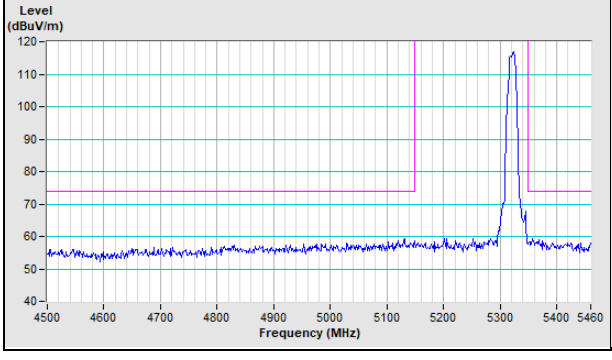
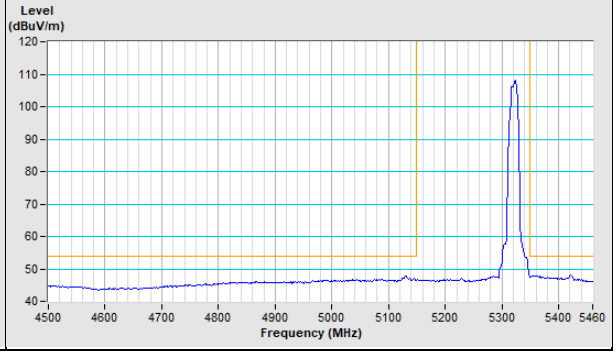
5 Pictures of Test Arrangements

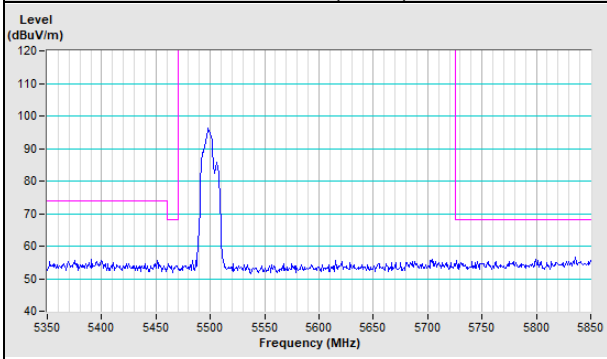
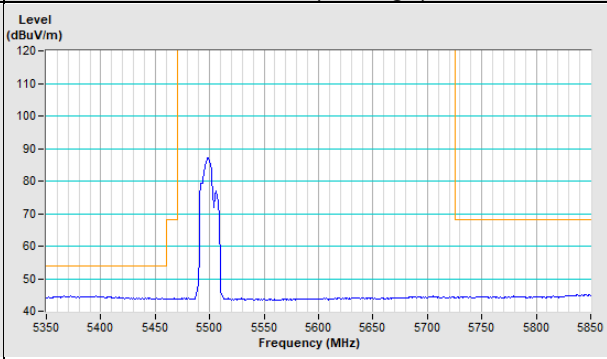
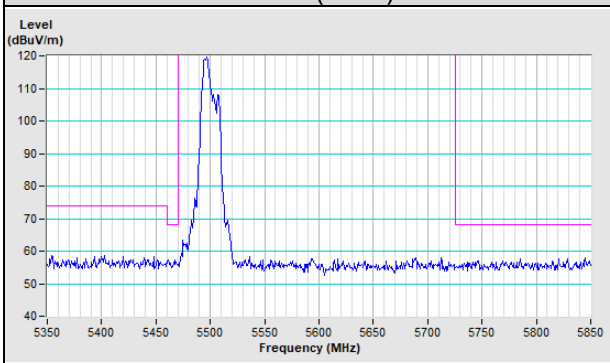
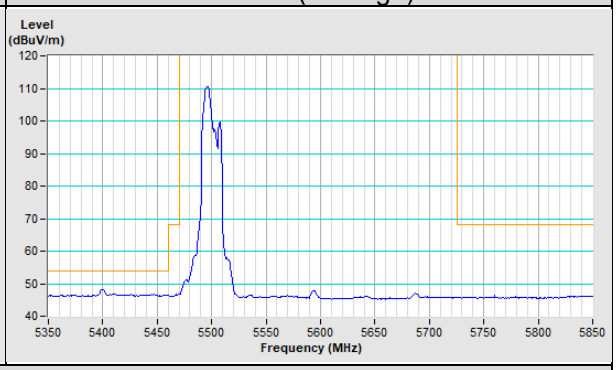
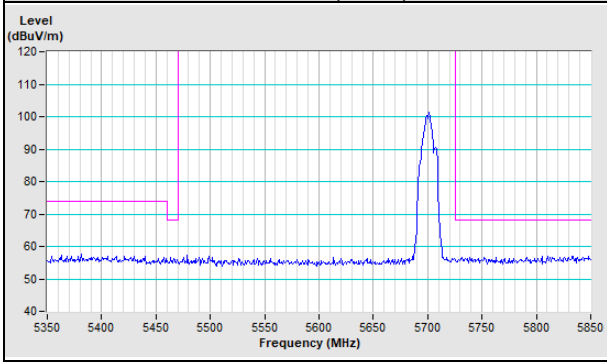
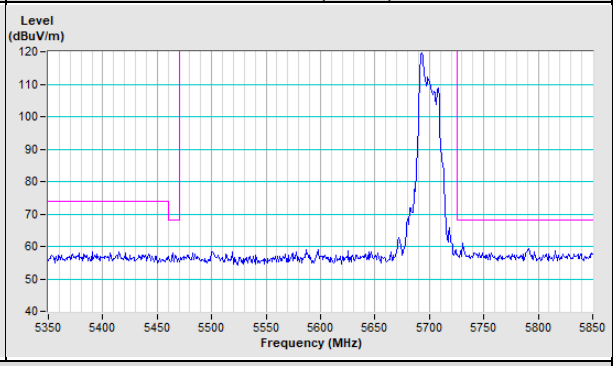
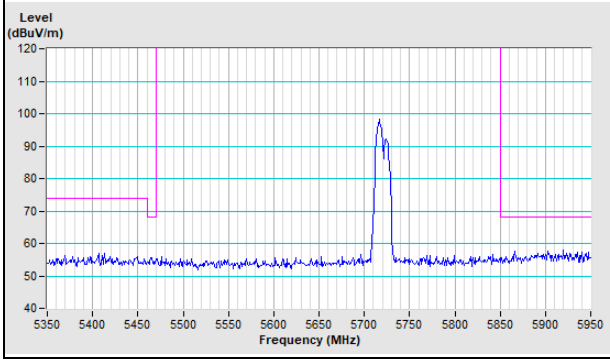
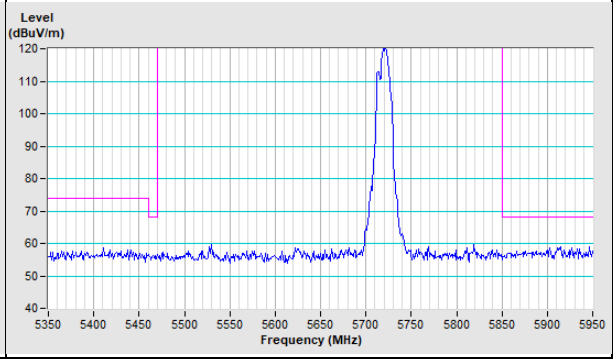
Please refer to the attached file (Test Setup Photo).

Annex A- Band Edge Measurement

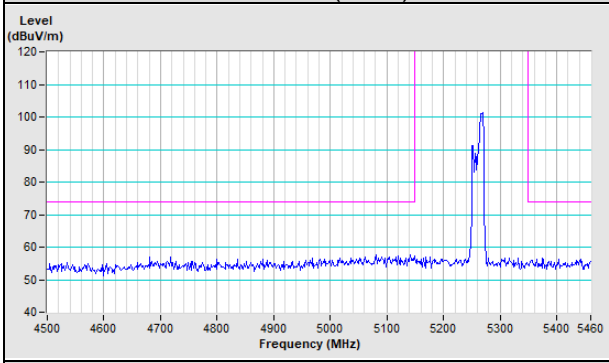
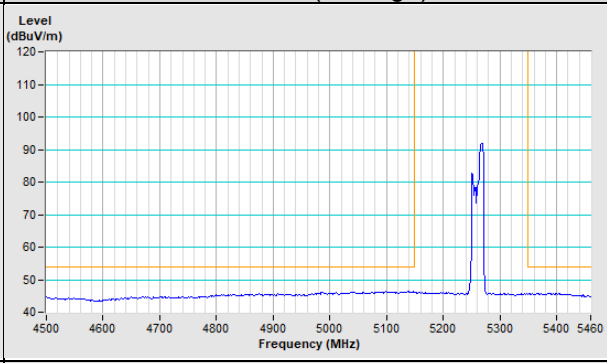
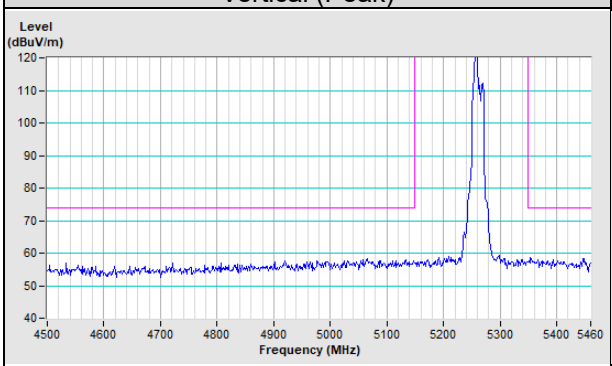
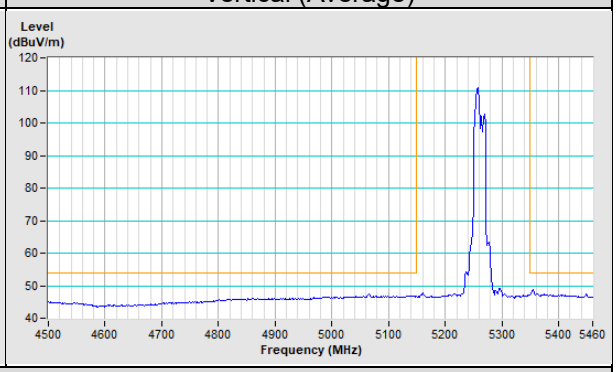
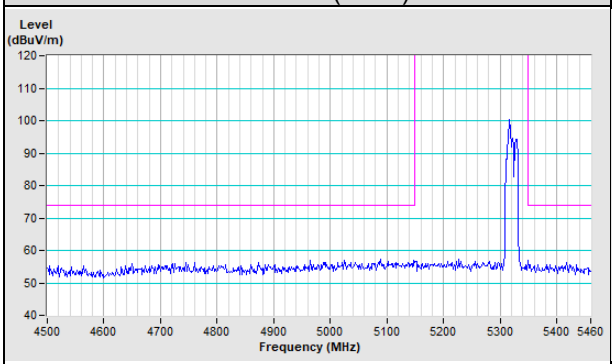
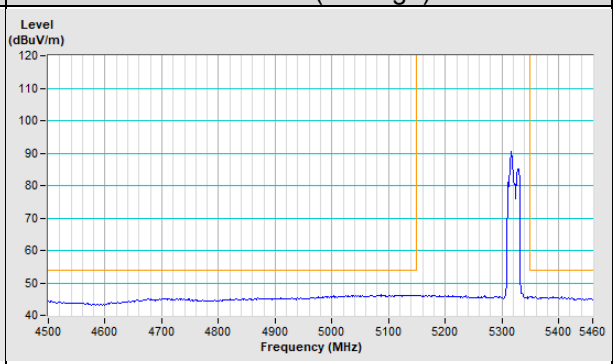
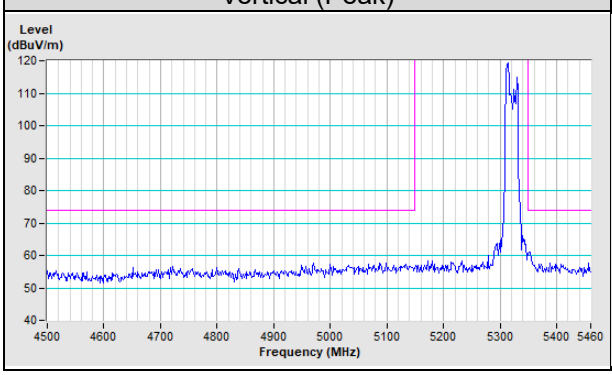
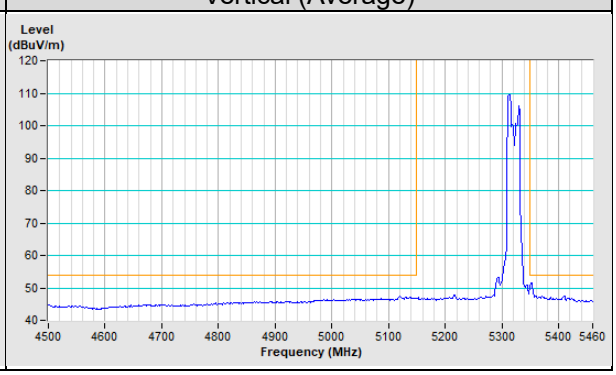
5G traffic radio:

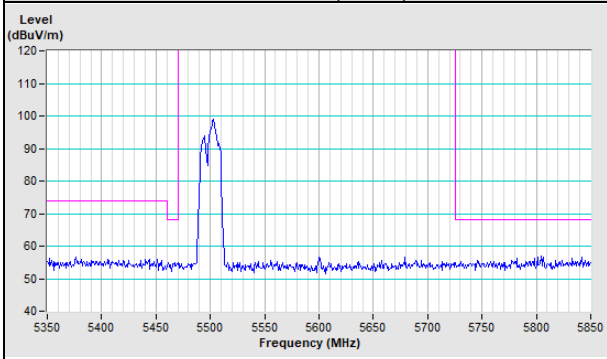
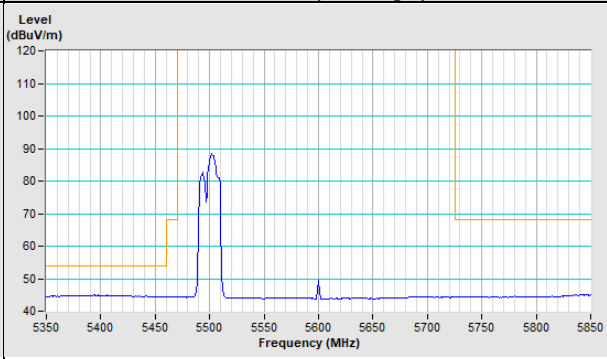
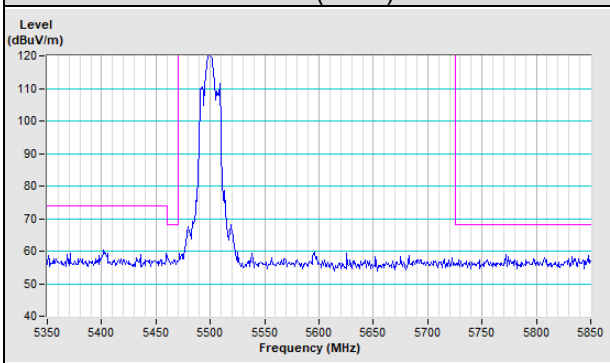
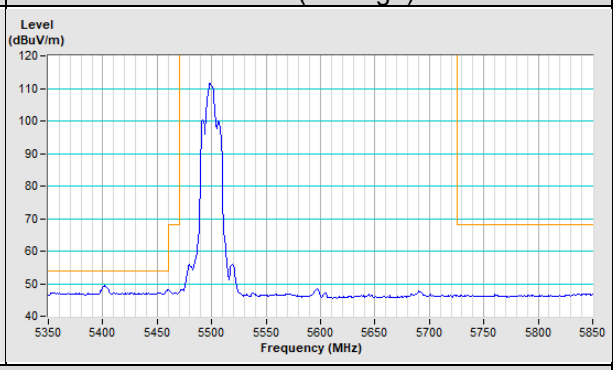
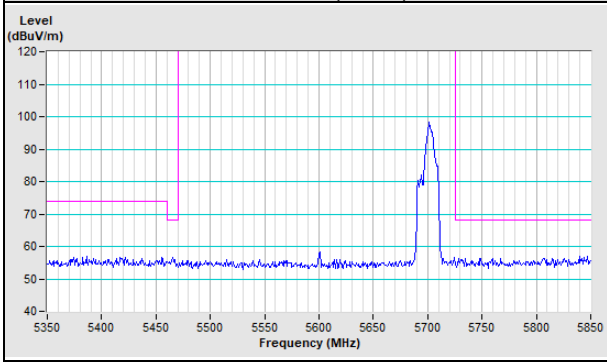
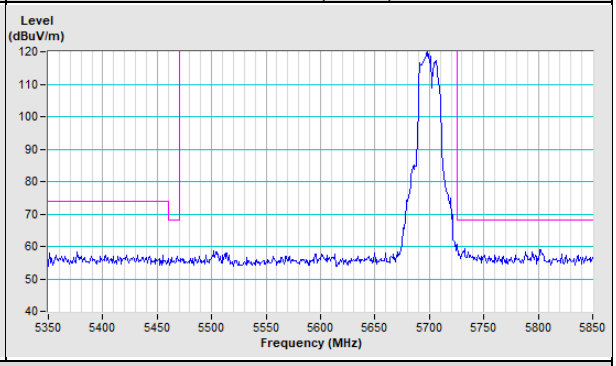
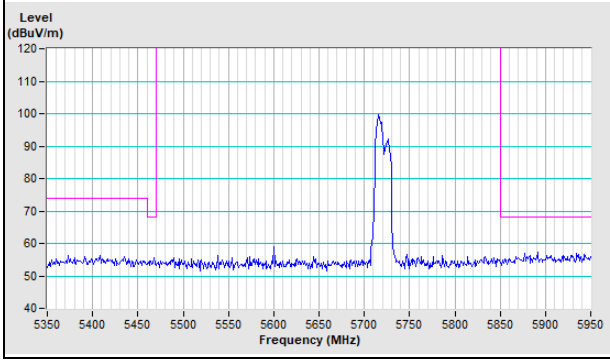
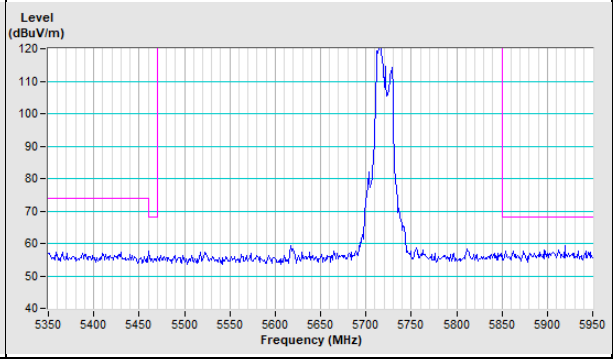
802.11a

Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

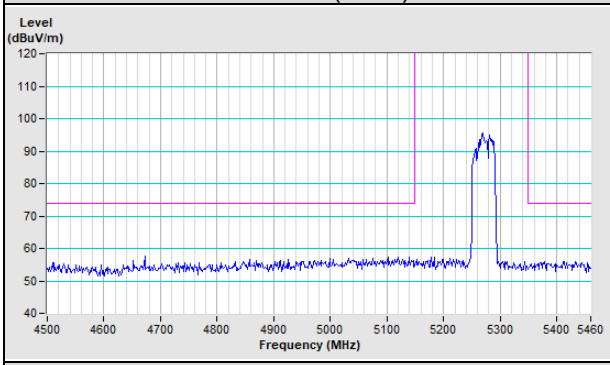
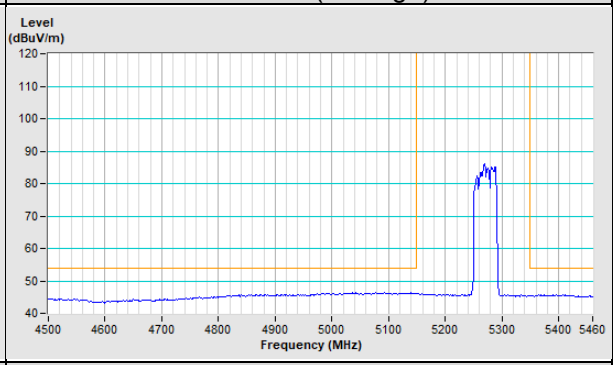
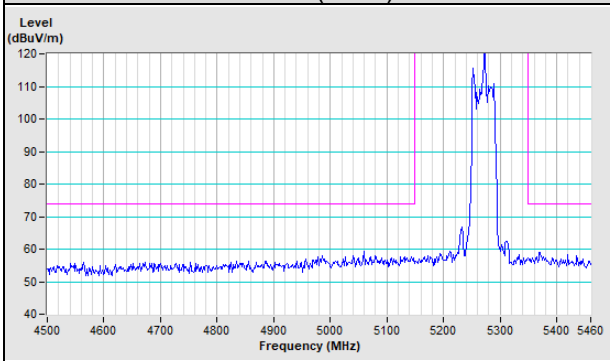
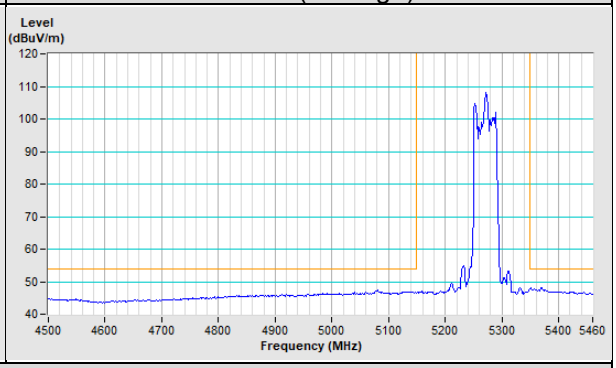
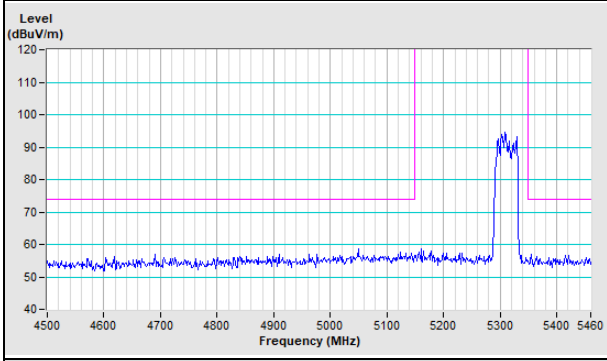
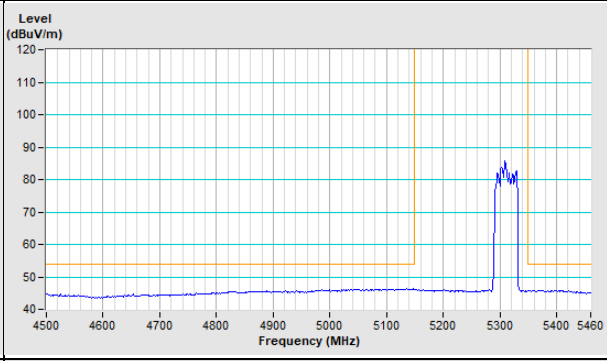
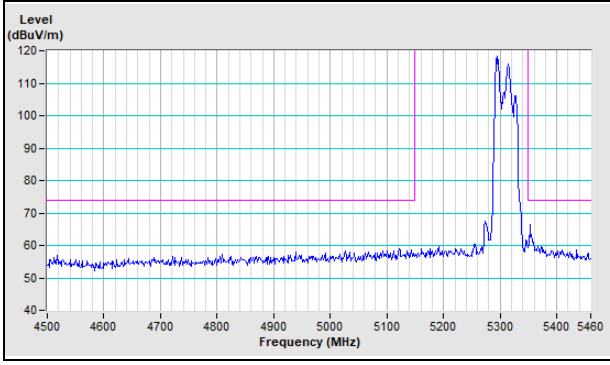
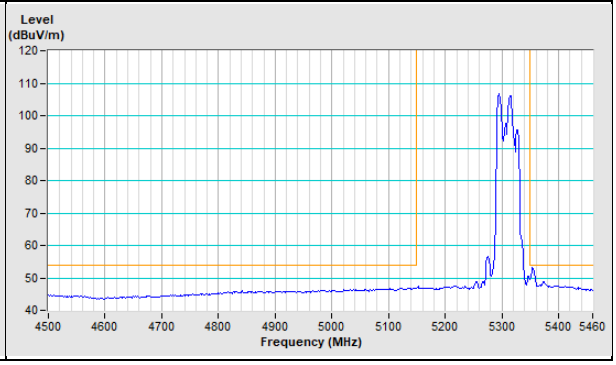
Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 140	
Horizontal (Peak)	Vertical (Peak)
	
Channel 144	
Horizontal (Peak)	Vertical (Peak)
	

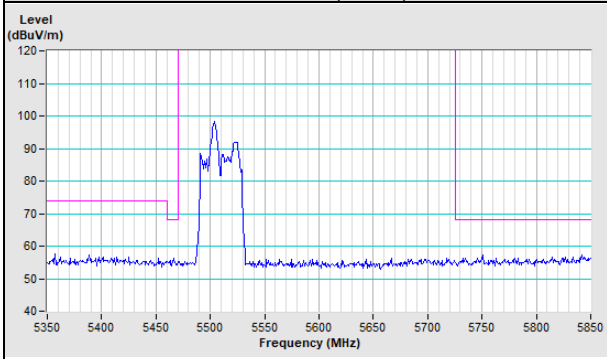
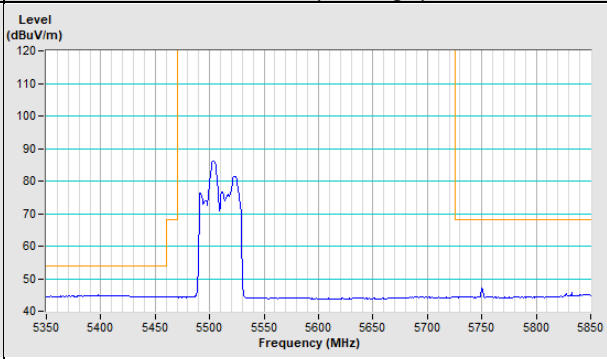
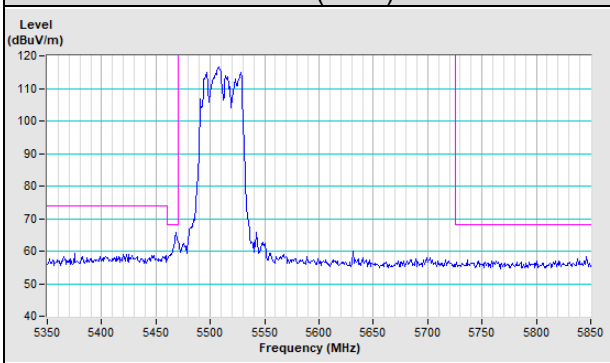
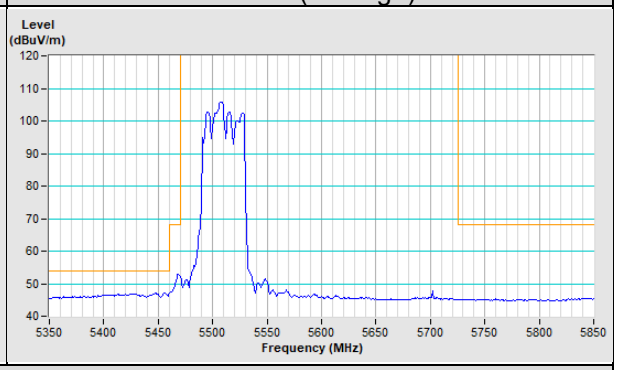
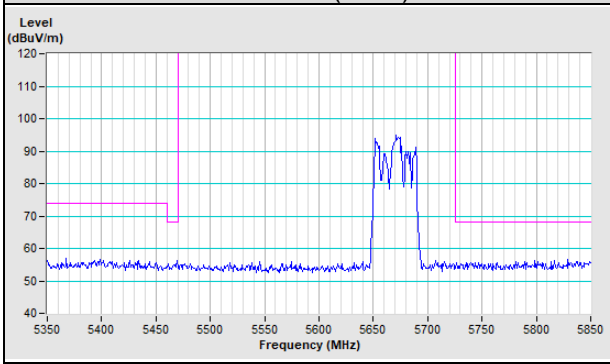
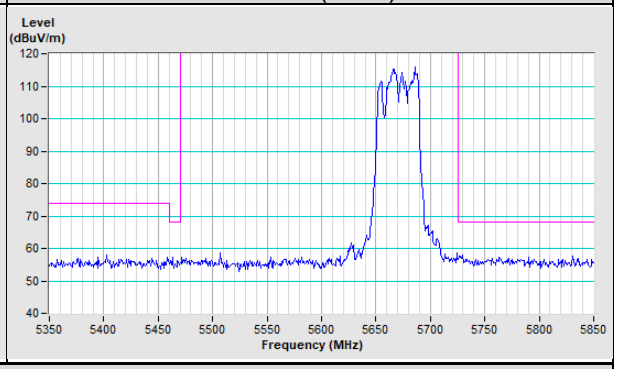
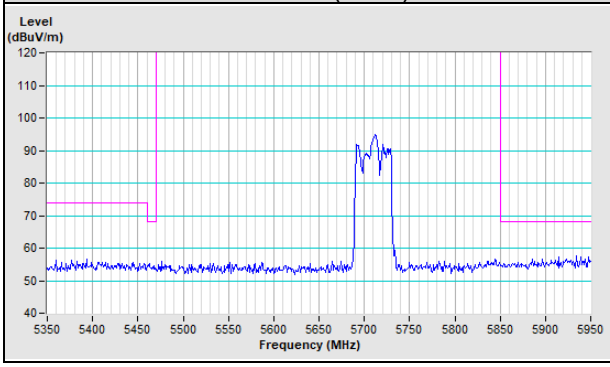
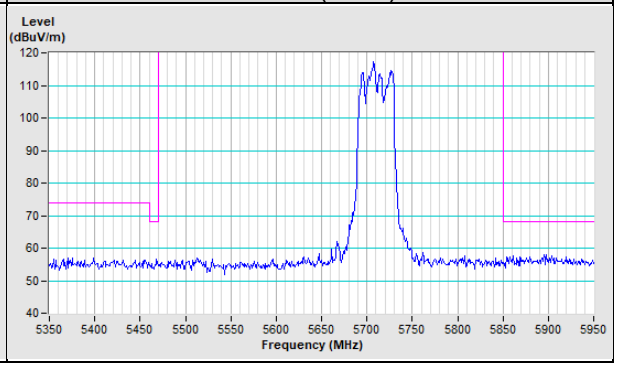
802.11ax (HE20)

Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

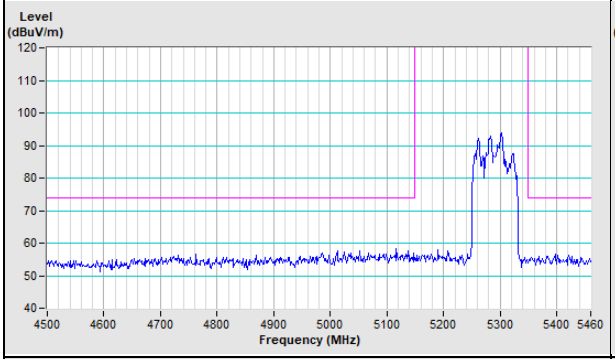
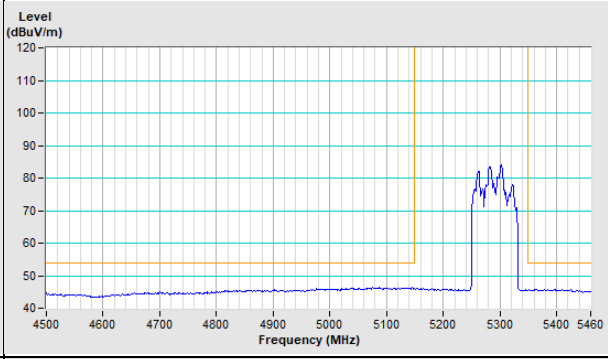
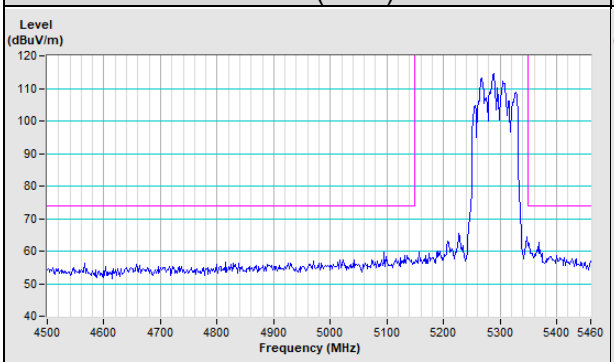
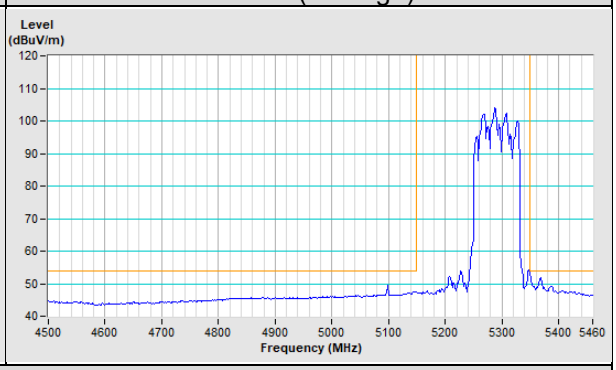
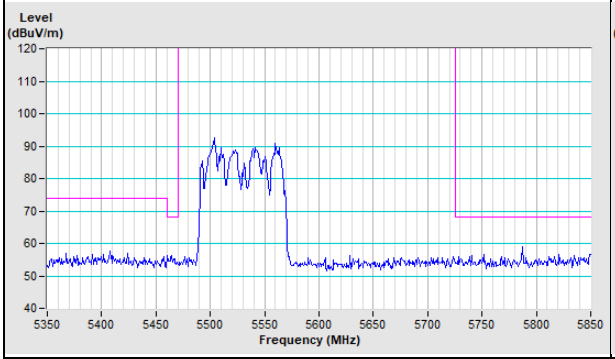
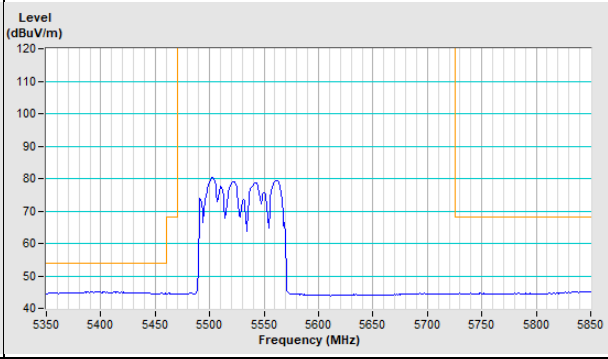
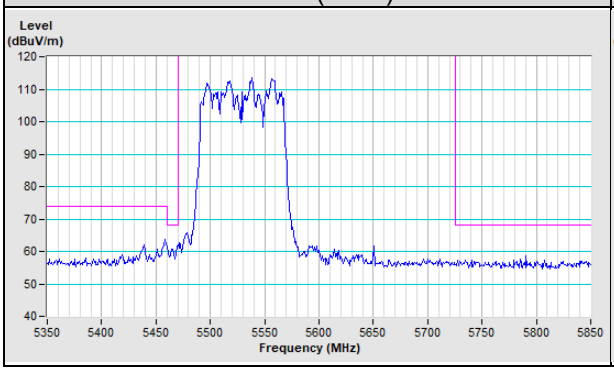
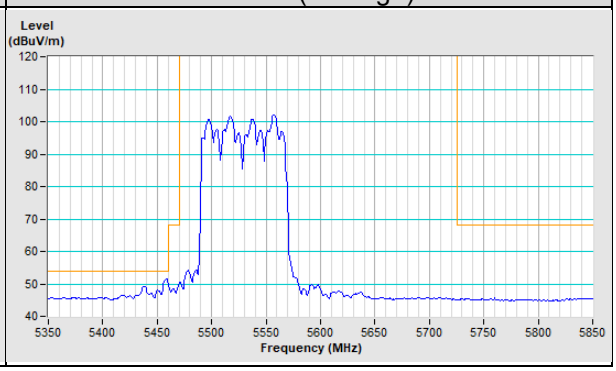
Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 140	
Horizontal (Peak)	Vertical (Peak)
	
Channel 144	
Horizontal (Peak)	Vertical (Peak)
	

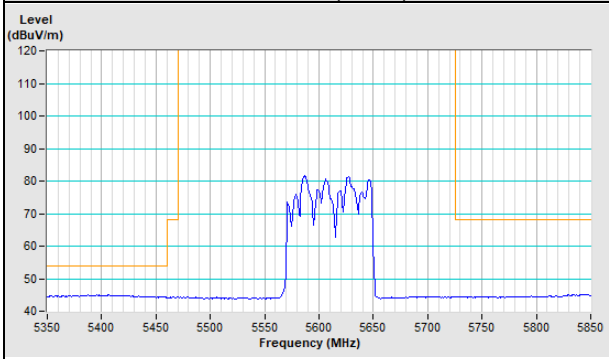
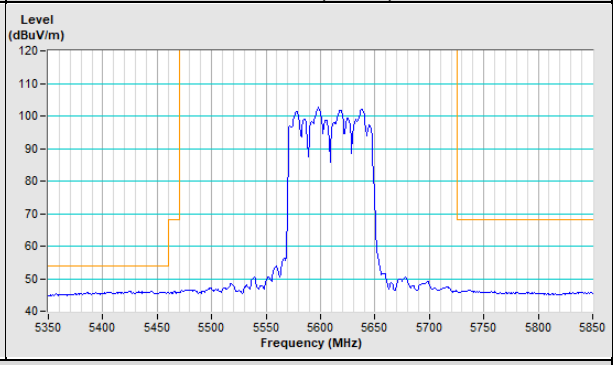
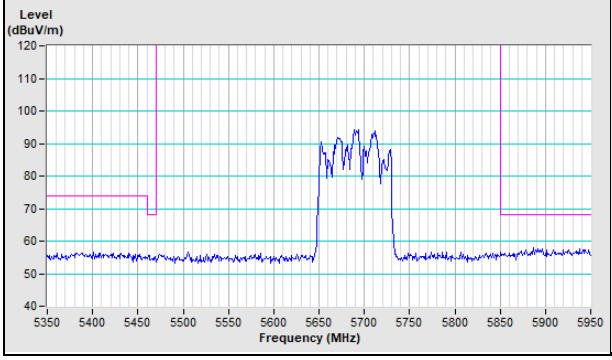
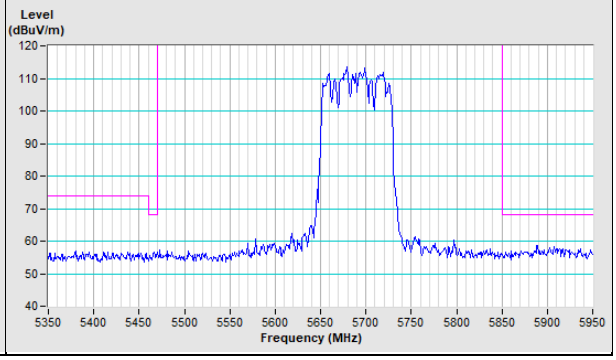
802.11ax (HE40)

Channel 54	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 62	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

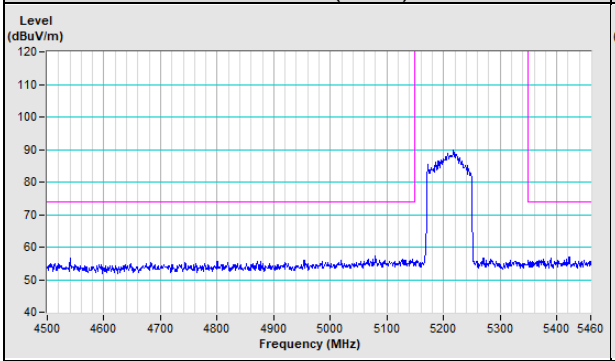
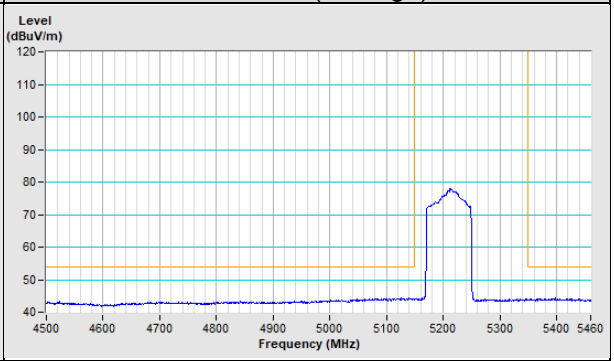
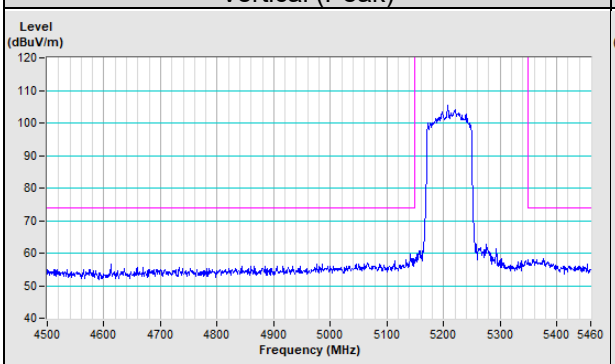
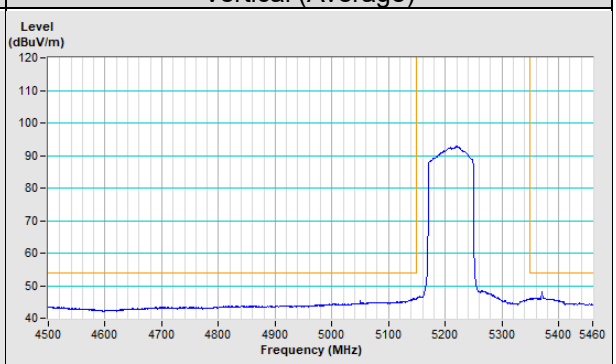
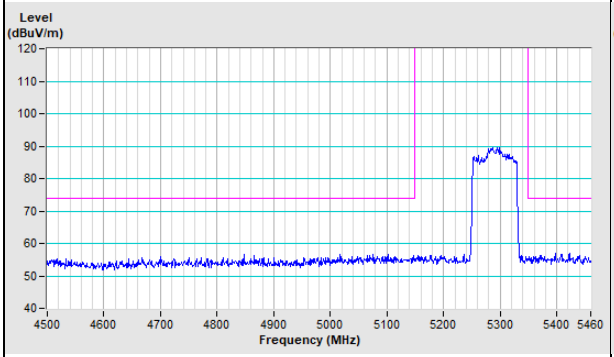
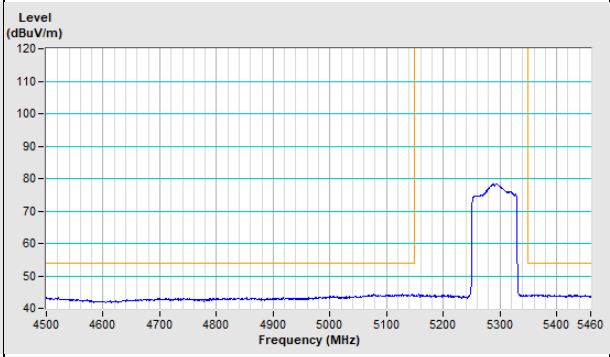
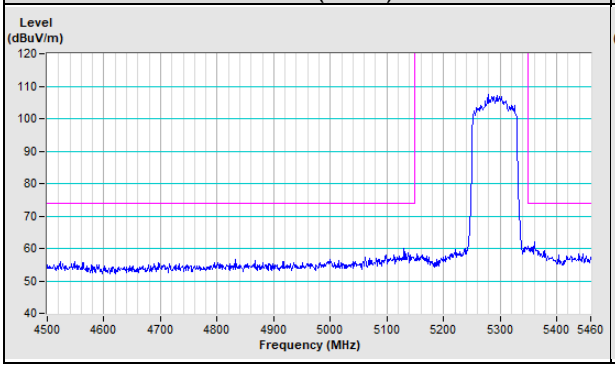
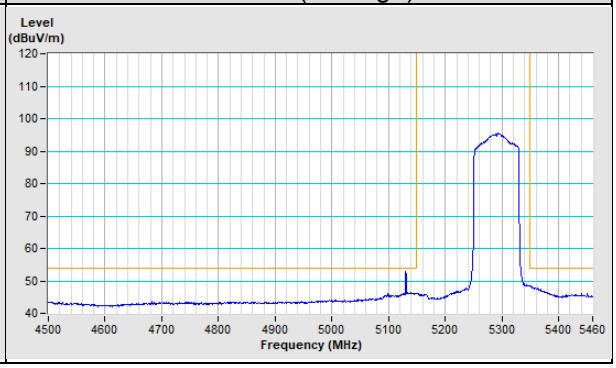
Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 134	
Horizontal (Peak)	Vertical (Peak)
	
Channel 142	
Horizontal (Peak)	Vertical (Peak)
	

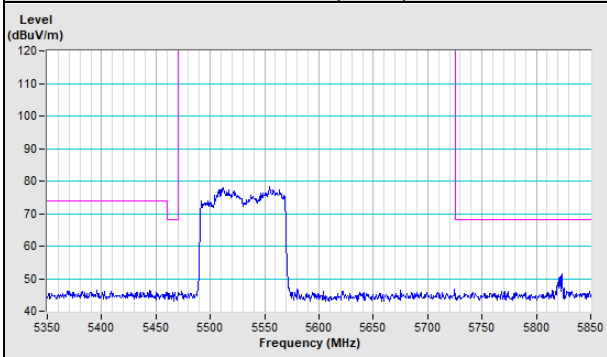
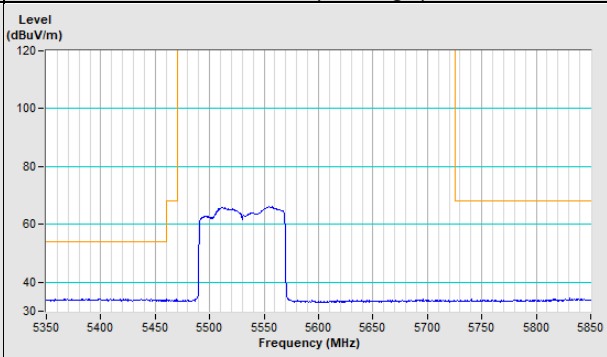
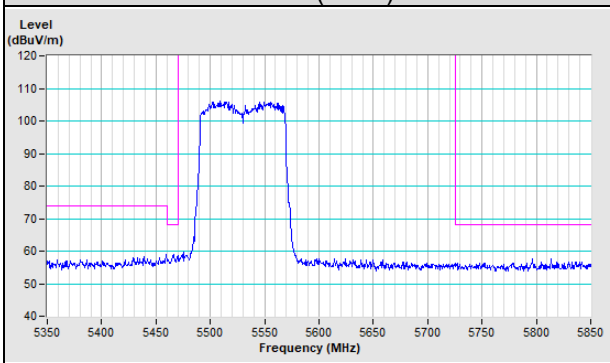
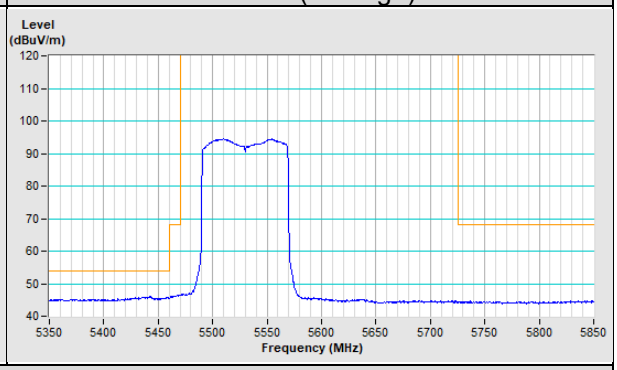
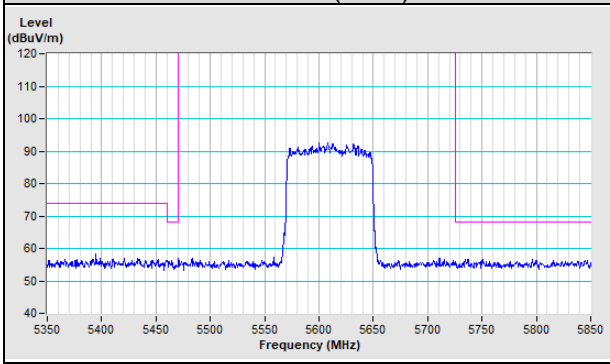
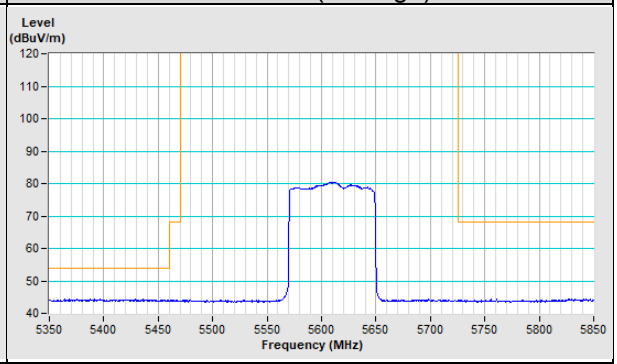
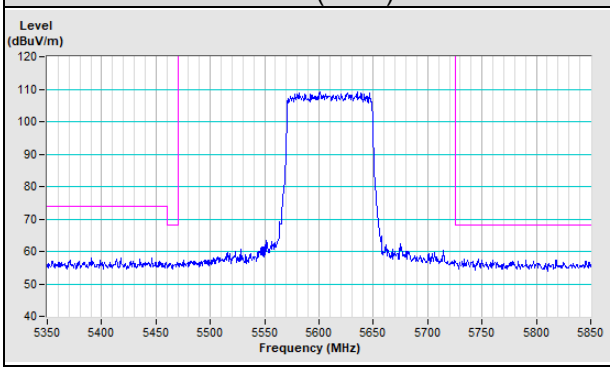
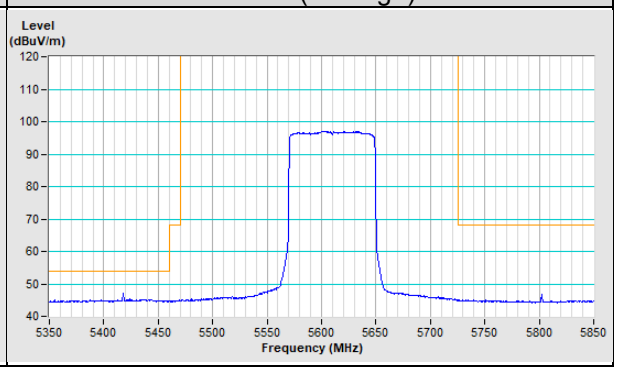
802.11ax (HE80)

Channel 58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 106	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

Channel 122	
Horizontal (Peak)	Vertical (Peak)
	
Channel 138	
Horizontal (Peak)	Vertical (Peak)
	

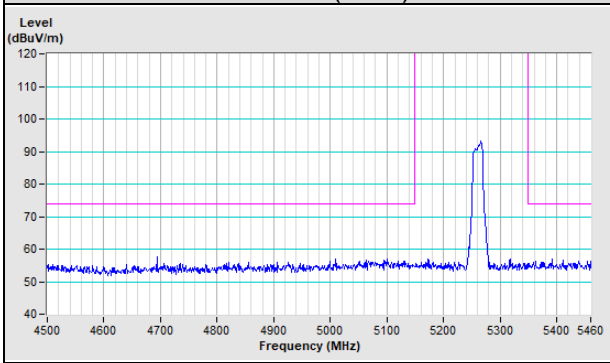
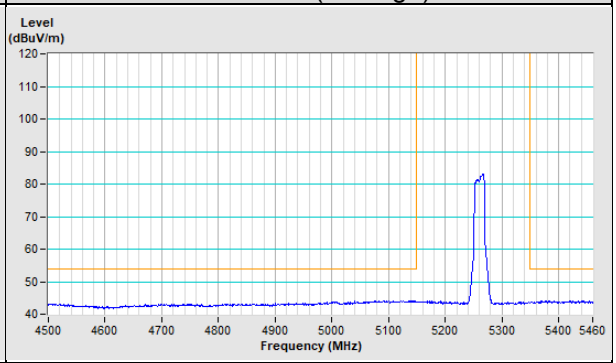
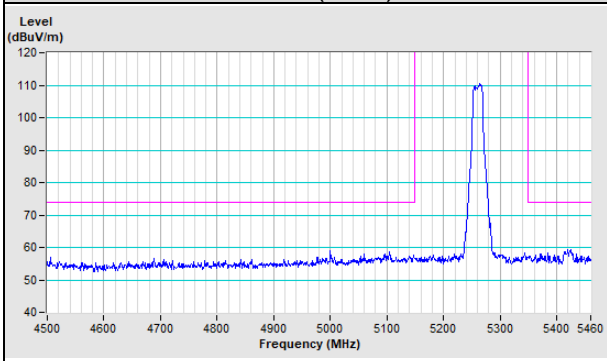
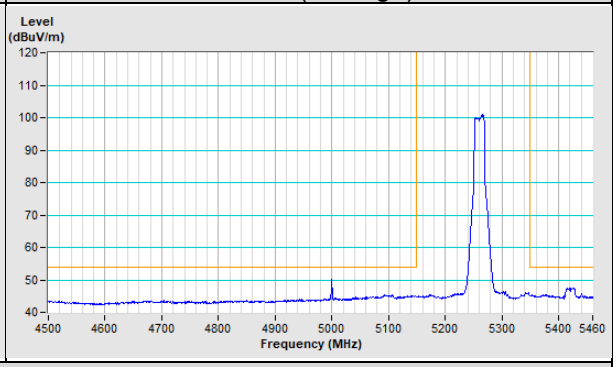
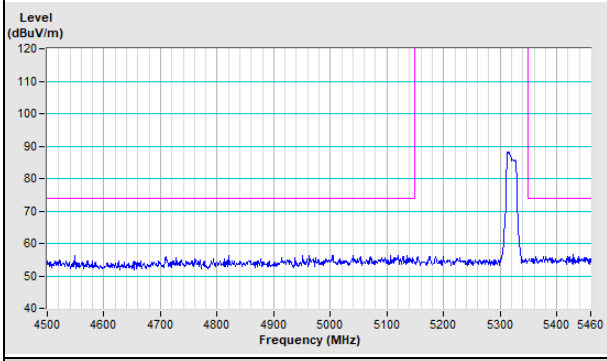
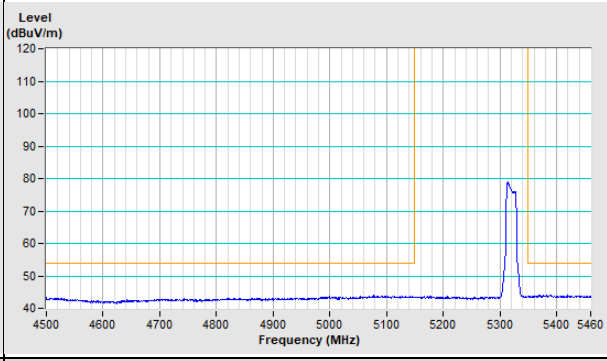
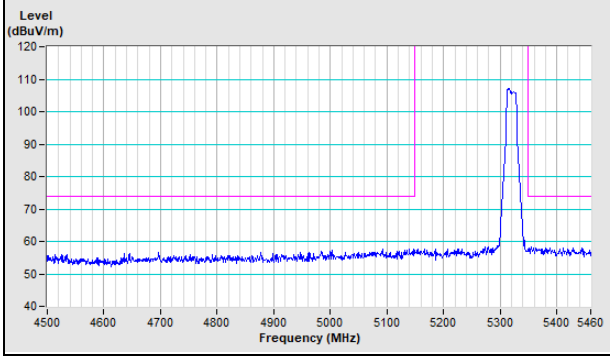
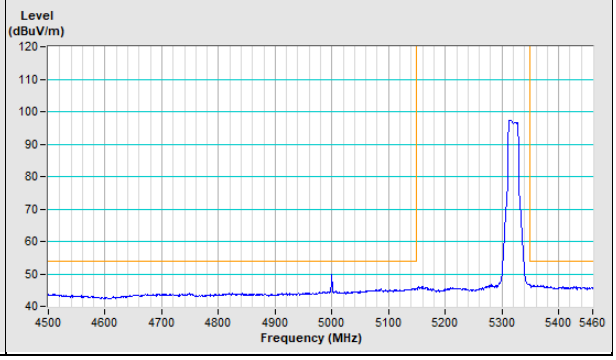
802.11ax (HE80+80)

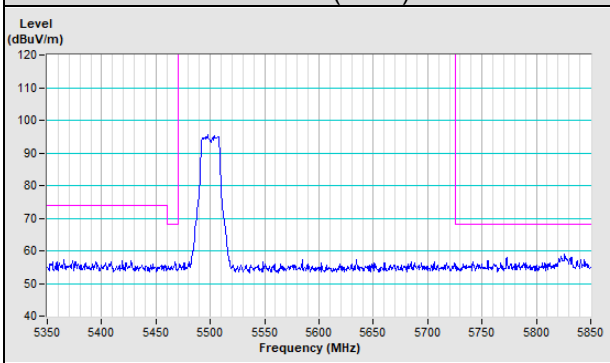
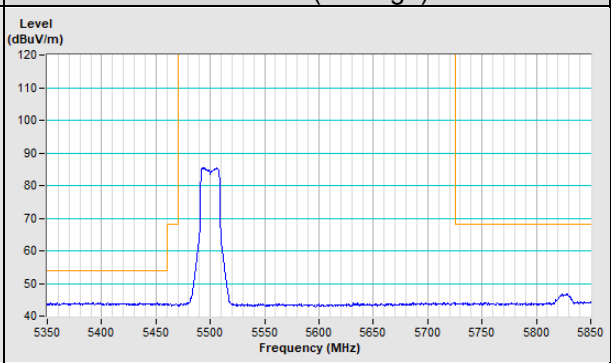
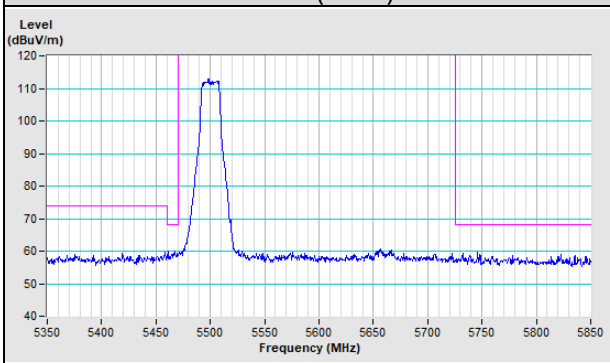
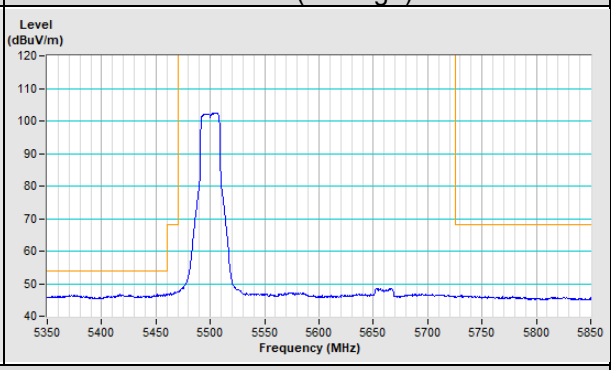
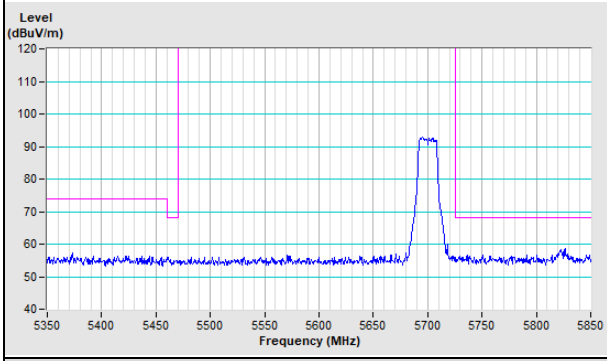
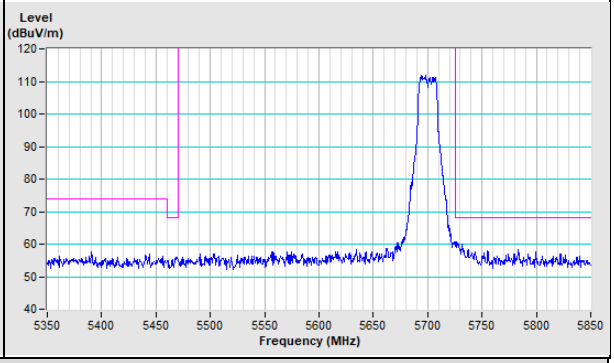
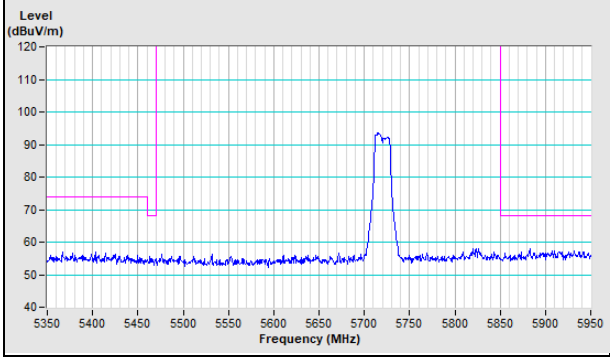
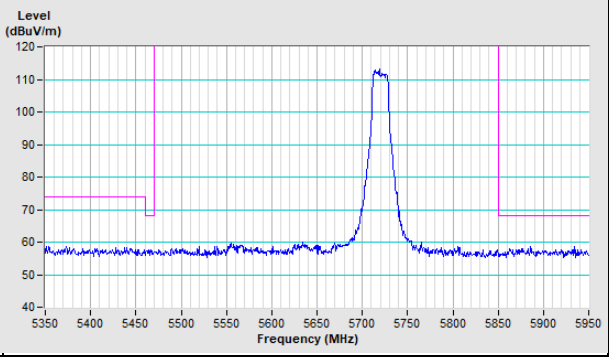
Channel 42+58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 42+58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

Channel 106+122	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 106+122	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

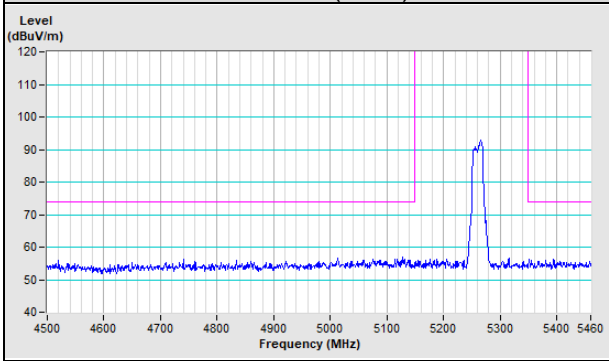
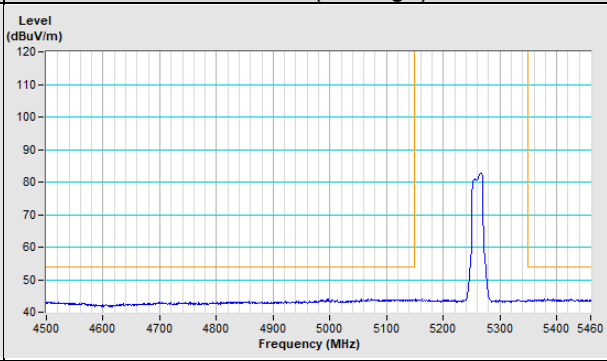
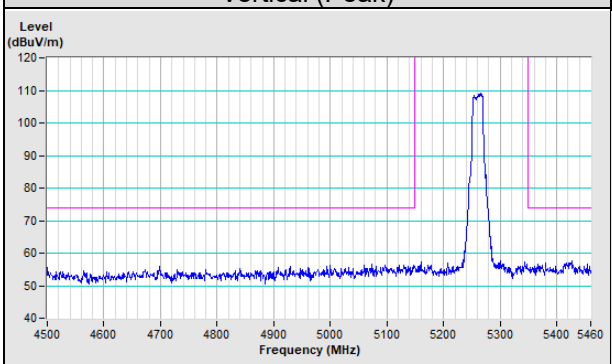
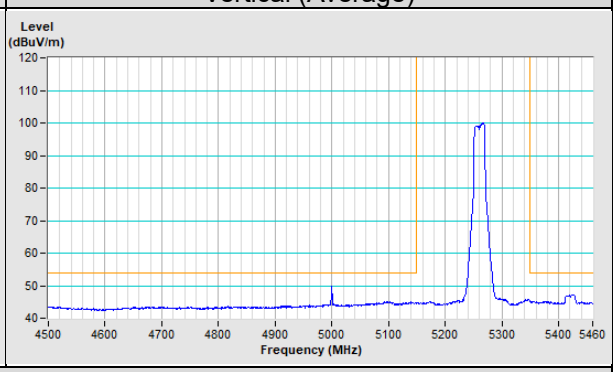
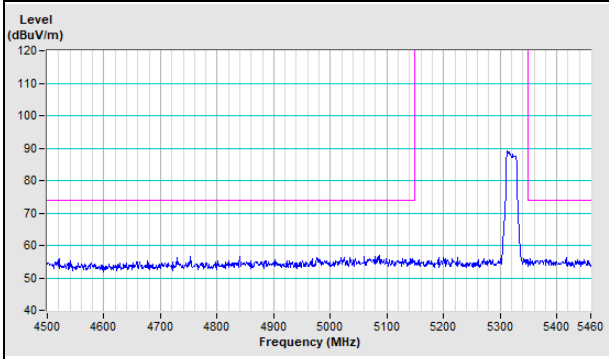
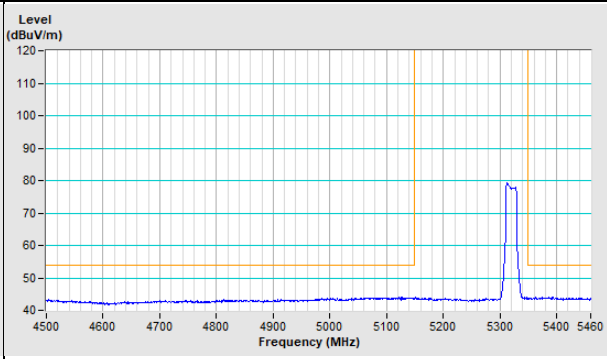
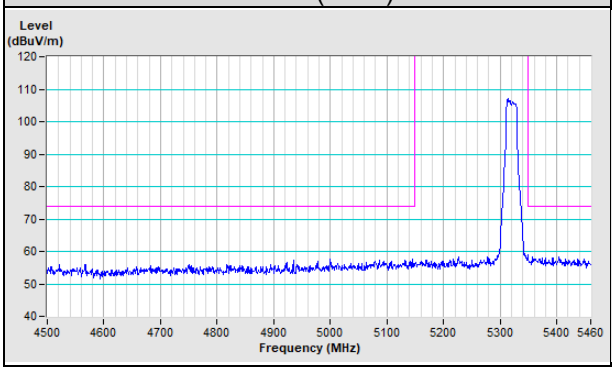
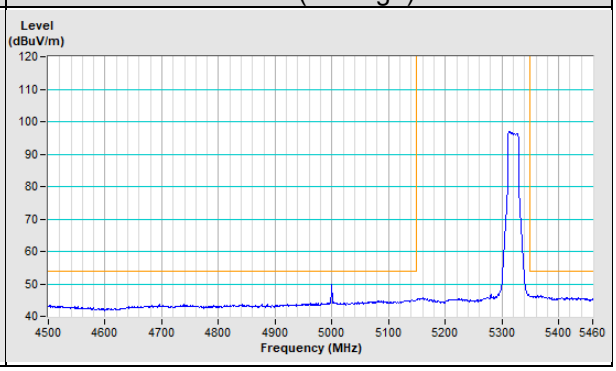
Scanning radio:

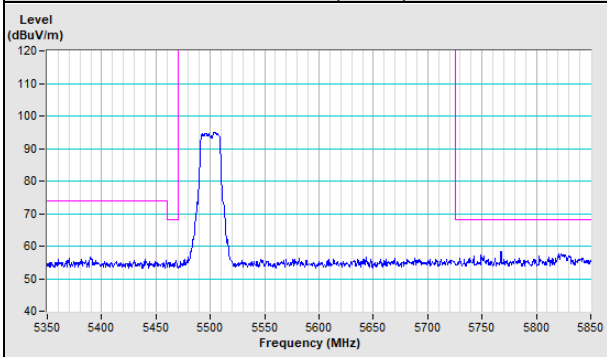
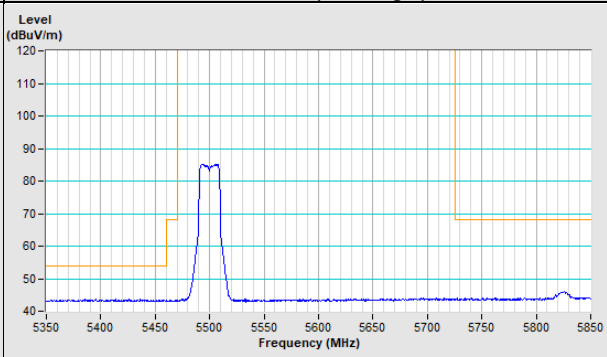
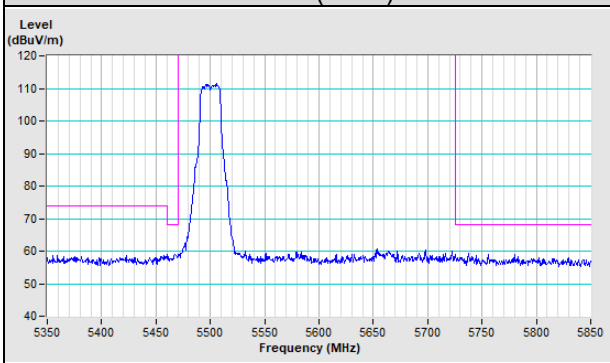
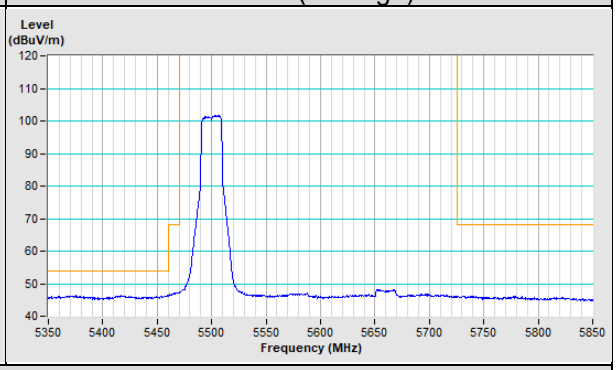
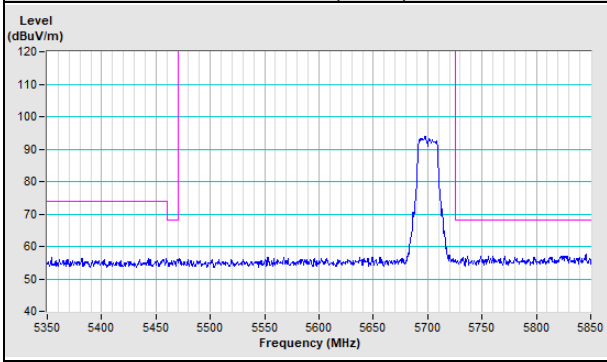
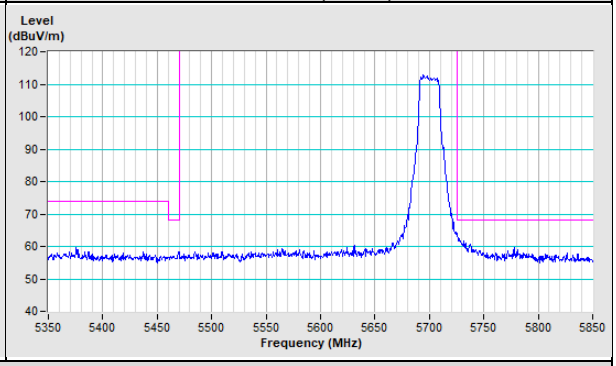
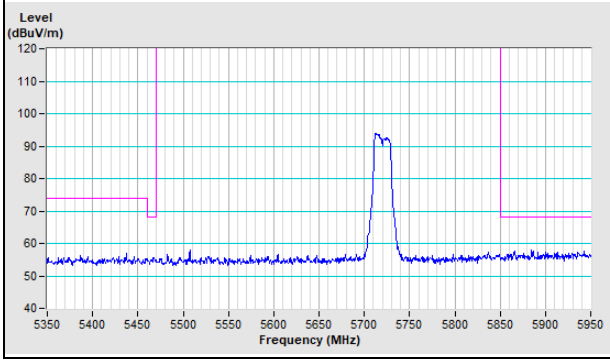
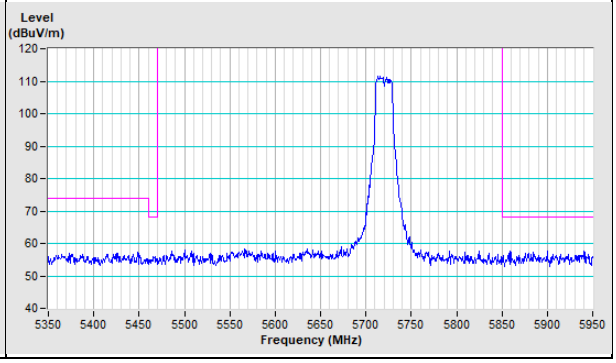
802.11a

Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

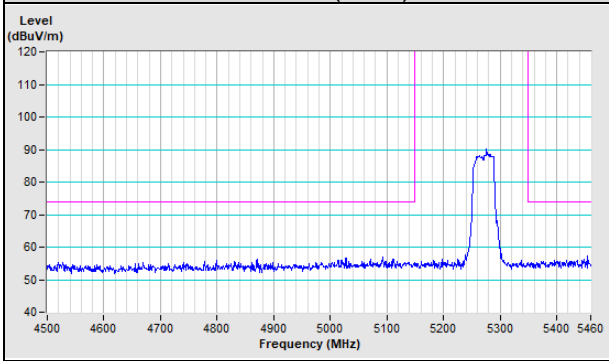
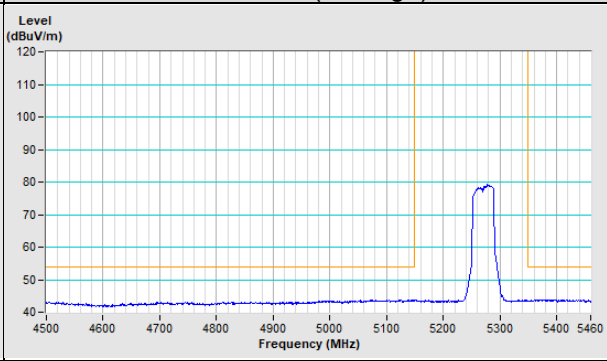
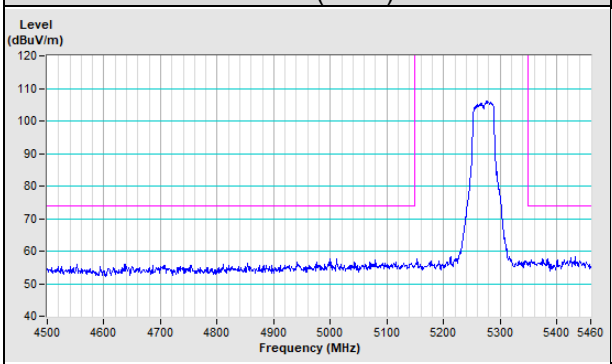
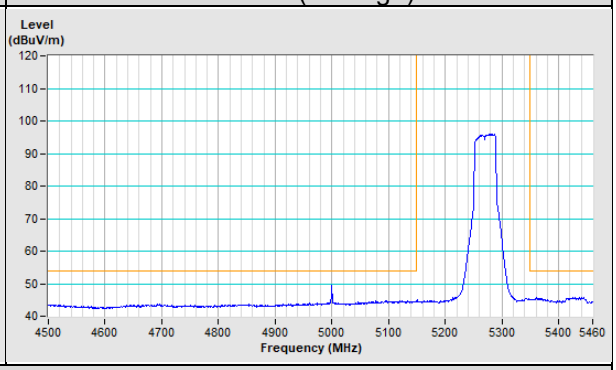
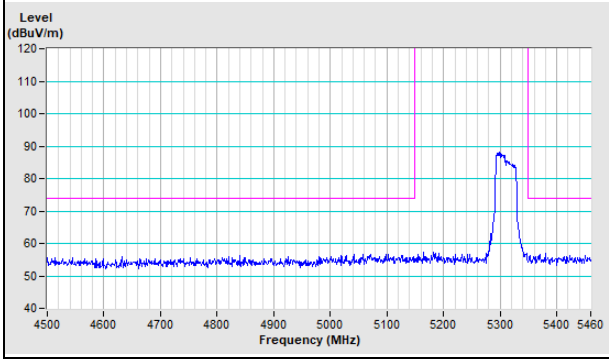
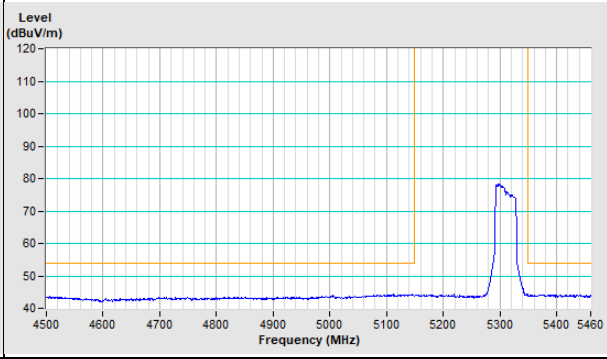
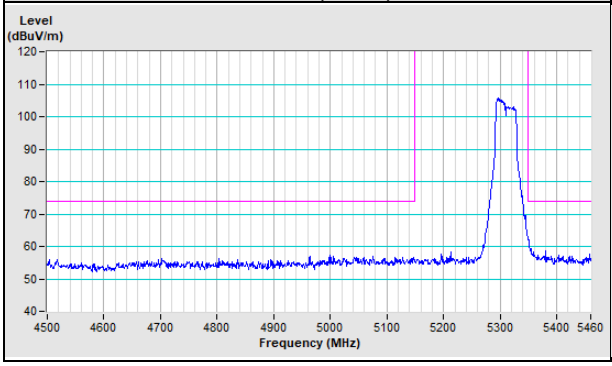
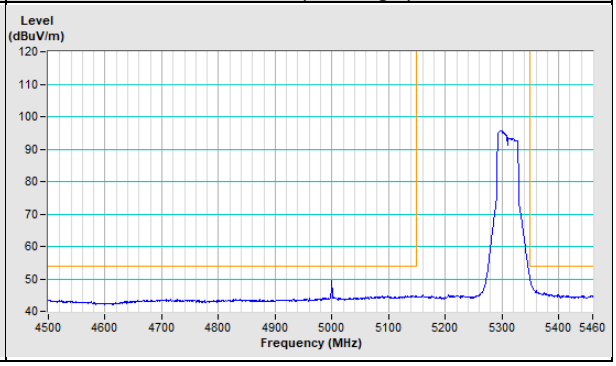
Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 140	
Horizontal (Peak)	Vertical (Peak)
	
Channel 144	
Horizontal (Peak)	Vertical (Peak)
	

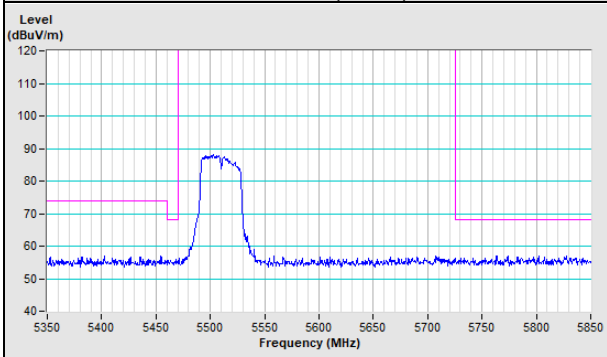
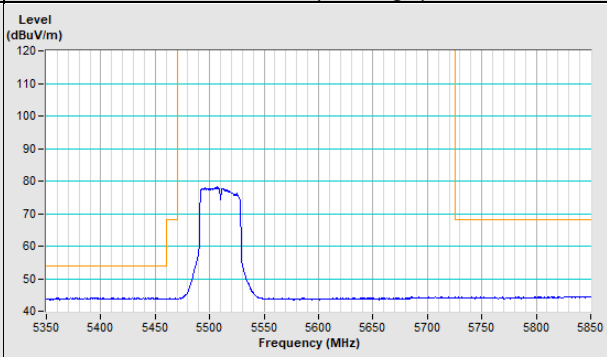
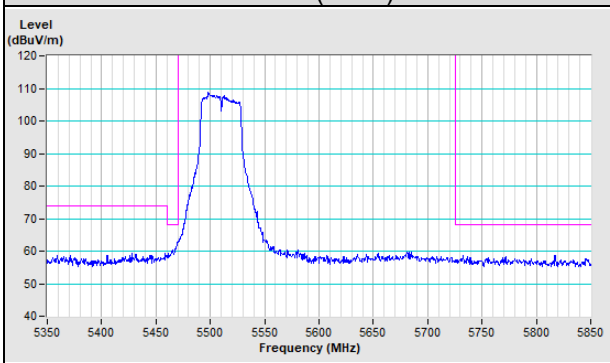
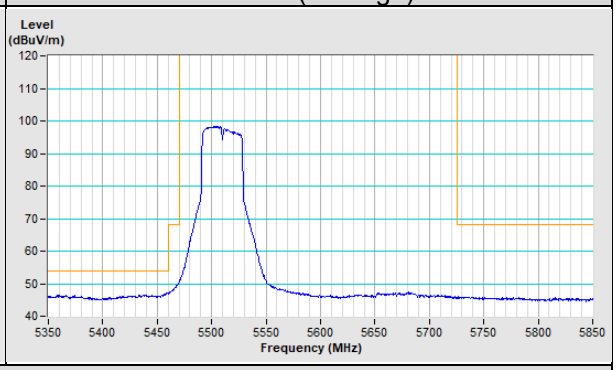
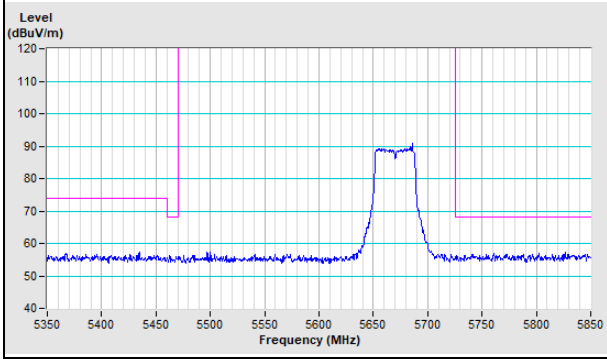
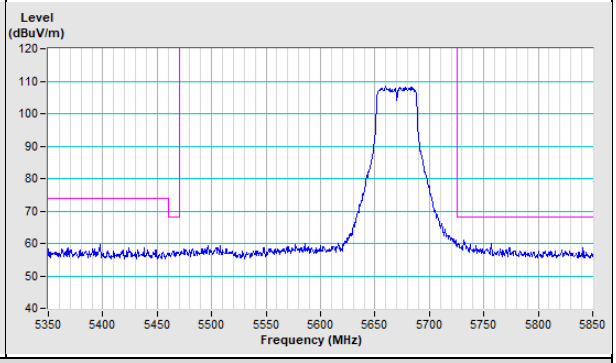
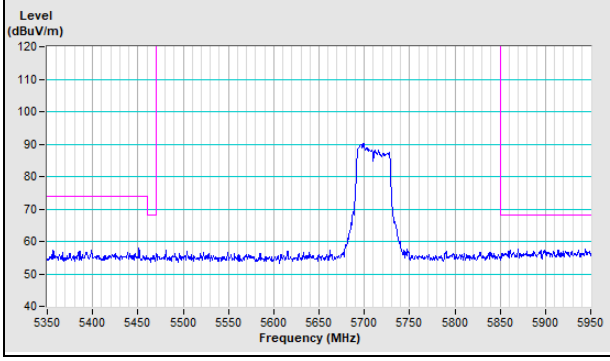
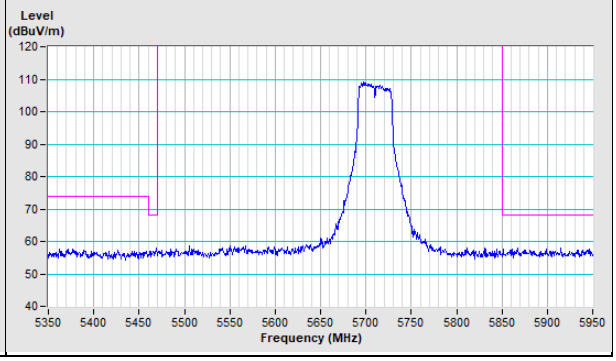
802.11ac (VHT20)

Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

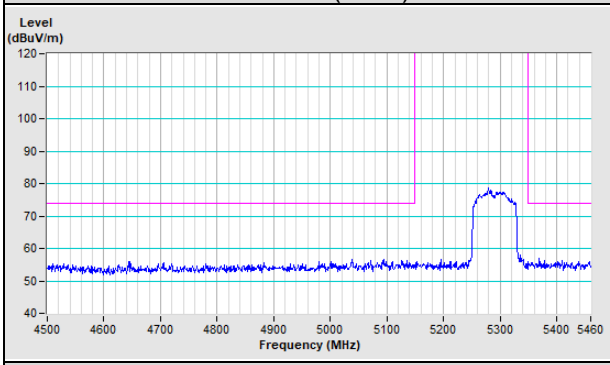
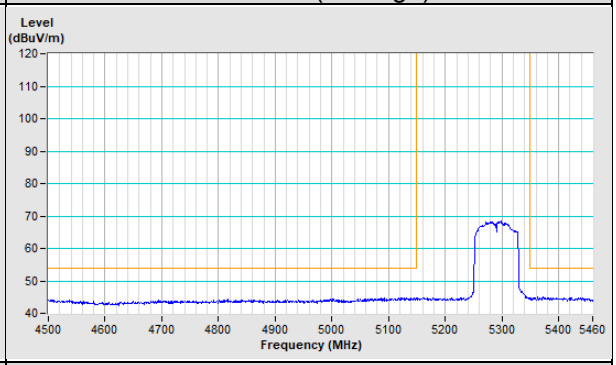
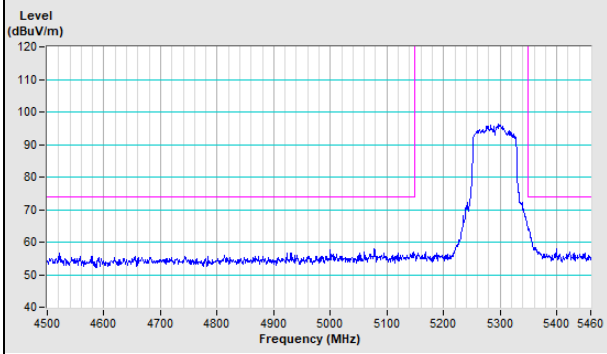
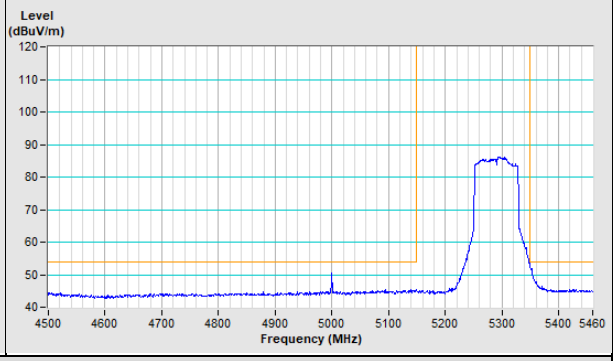
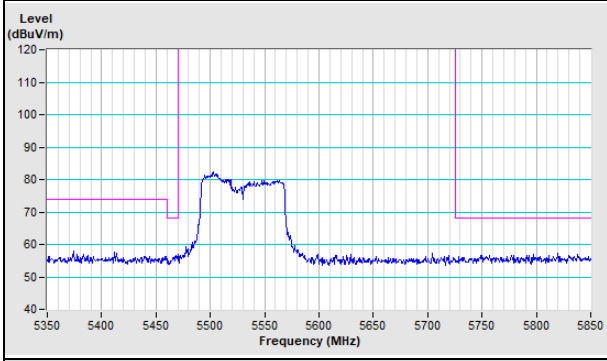
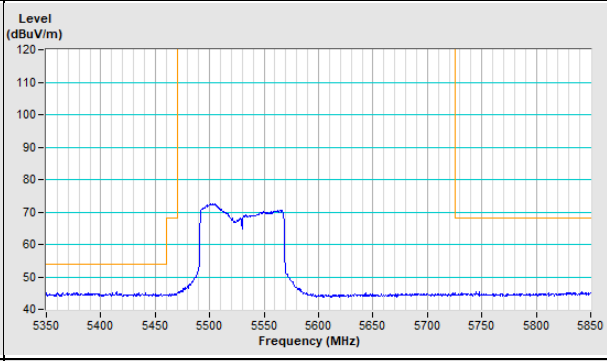
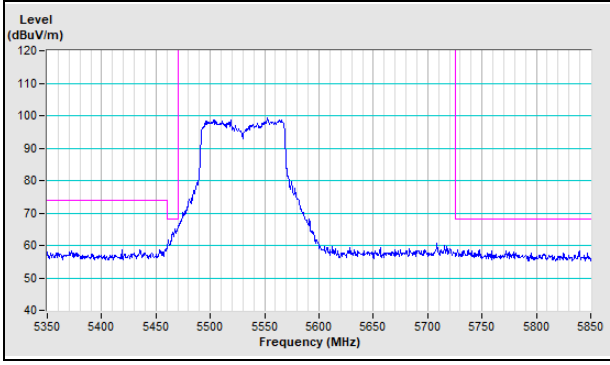
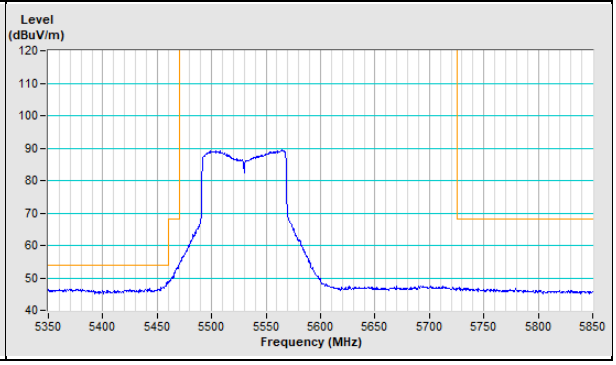
Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 140	
Horizontal (Peak)	Vertical (Peak)
	
Channel 144	
Horizontal (Peak)	Vertical (Peak)
	

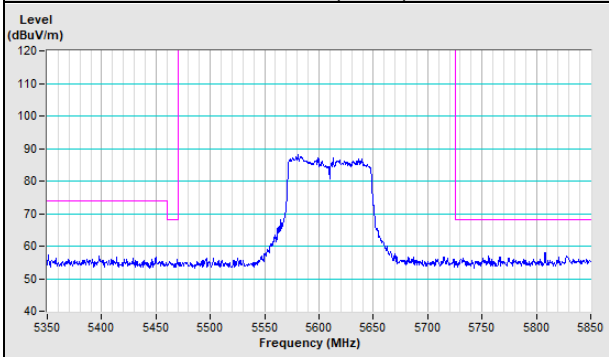
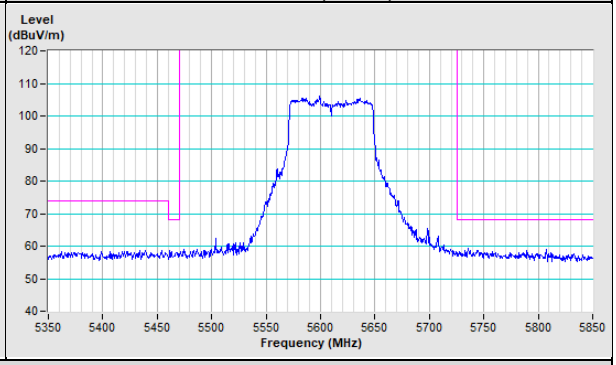
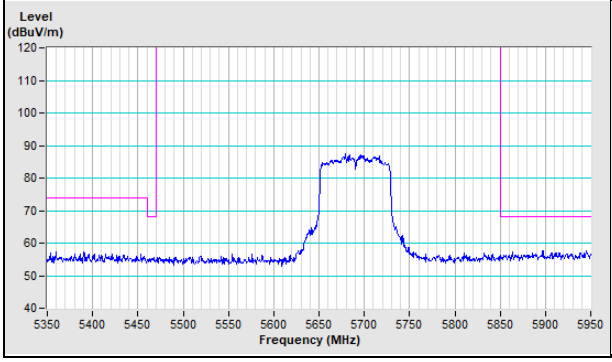
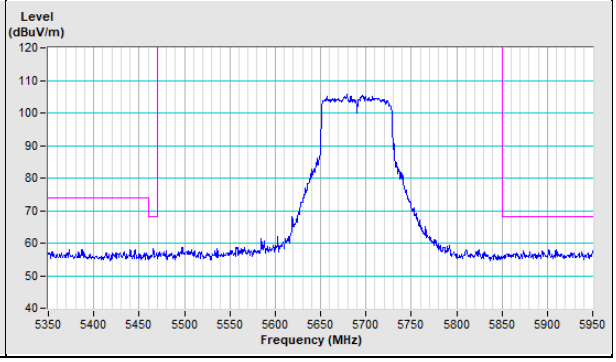
802.11ac (VHT40)

Channel 54	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 62	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 134	
Horizontal (Peak)	Vertical (Peak)
	
Channel 142	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT80)

Channel 58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 106	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

Channel 122	
Horizontal (Peak)	Vertical (Peak)
	
Channel 138	
Horizontal (Peak)	Vertical (Peak)
	

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 and approved according to ISO/IEC 17025.

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Web Site: www.bureauveritas-adt.com

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

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