

FCC Test Report

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Test Model: e235-4G-1

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Applicant: Verifone, Inc.

Address: 1400 West Stanford Ranch Road Suite 150 Rocklin CA 95765 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 (1): No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, Taiwan

Test Location (2): B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231,
Taiwan

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Release Control Record

Issue No.	Description	Date Issued
RFBFMG-WTW-P22010752-7	Original Release	Jul. 22, 2022

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(9)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -9.09 dB at 0.63379 MHz.
15.407(b) (1/2/3/4(i/ii)/ 9)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.82 dB at 5350.00 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note:

- For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
- For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (\pm)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Point of Sale Terminal
Brand	Verifone
Test Model	e235-4G-1
Status of EUT	Engineering Sample
Power Supply Rating	5.0 Vdc (adapter or host equipment) 3.8 Vdc (Li-ion battery)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5500 ~ 5700 MHz: 11 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 5 for 802.11n (HT40), 802.11ac (VHT40) 2 for 802.11ac (VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	18.967 mW for 5180 ~ 5240 MHz 20.512 mW for 5260 ~ 5320 MHz 18.664 mW for 5500 ~ 5700 MHz 20.512 mW for 5745 ~ 5825 MHz
Antenna Type	Dipole antenna with 3.7 dBi gain (5180 ~ 5240 MHz) Dipole antenna with 3.8 dBi gain (5260 ~ 5320 MHz) Dipole antenna with 3.9 dBi gain (5500 ~ 5700 MHz) Dipole antenna with 3.4 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT provides one completed transmitter and receiver.

Modulation Mode	Tx Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT20)	1TX
802.11ac (VHT40)	1TX
802.11ac (VHT80)	1TX

* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT's accessories list refers to Ext. Pho.
3. The above Antenna information refers to the manufacturer's antenna specifications, the laboratory shall not be held responsible.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
42	5210

For 5260 ~ 5320 MHz

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
58	5290

For 5500 ~ 5700 MHz

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	122	5610

For 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
155	5775

3.2.1 Test Mode Applicability and Tested Channel Detail

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

Where **RE \geq 1G**: Radiated Emission above 1 GHz **RE $<$ 1G**: Radiated Emission below 1 GHz
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 **Y-plane**.
2. "-" means no effect.
3. Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst maximum power.

Radiated Emission Test (Above 1 GHz):

- 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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
-	5500-5700	802.11a	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-		802.11ac (VHT20)	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	106 to 122	106, 122	OFDM	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

Radiated Emission Test (Below 1 GHz):

- 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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5745-5825	802.11a	149 to 165	157	OFDM	BPSK	6.0

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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5745-5825	802.11a	149 to 165	157	OFDM	BPSK	6.0

Bandwidth, Power Spectral Density and Frequency Stability 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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
-	5500-5700	802.11a	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-		802.11ac (VHT20)	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	106 to 122	106, 122	OFDM	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

Conducted Output Power 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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
-		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
-	5500-5700	802.11a	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
-		802.11n (HT40)	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
-		802.11ac (VHT20)	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	106 to 122	106, 122	OFDM	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
-		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE \geq 1G	25 deg. C, 60 % RH	120 Vac, 60 Hz	Charles Hsiao, Karl Lee
RE $<$ 1G	25 deg. C, 60 % RH	120 Vac, 60 Hz	Karl Lee
PLC	25 deg. C, 75 % RH	120 Vac, 60 Hz	Rex Wang
APCM	25 deg. C, 60 % RH	3.7 Vdc	Alan Wu, Frank FI Liu

3.3 Duty Cycle of Test Signal

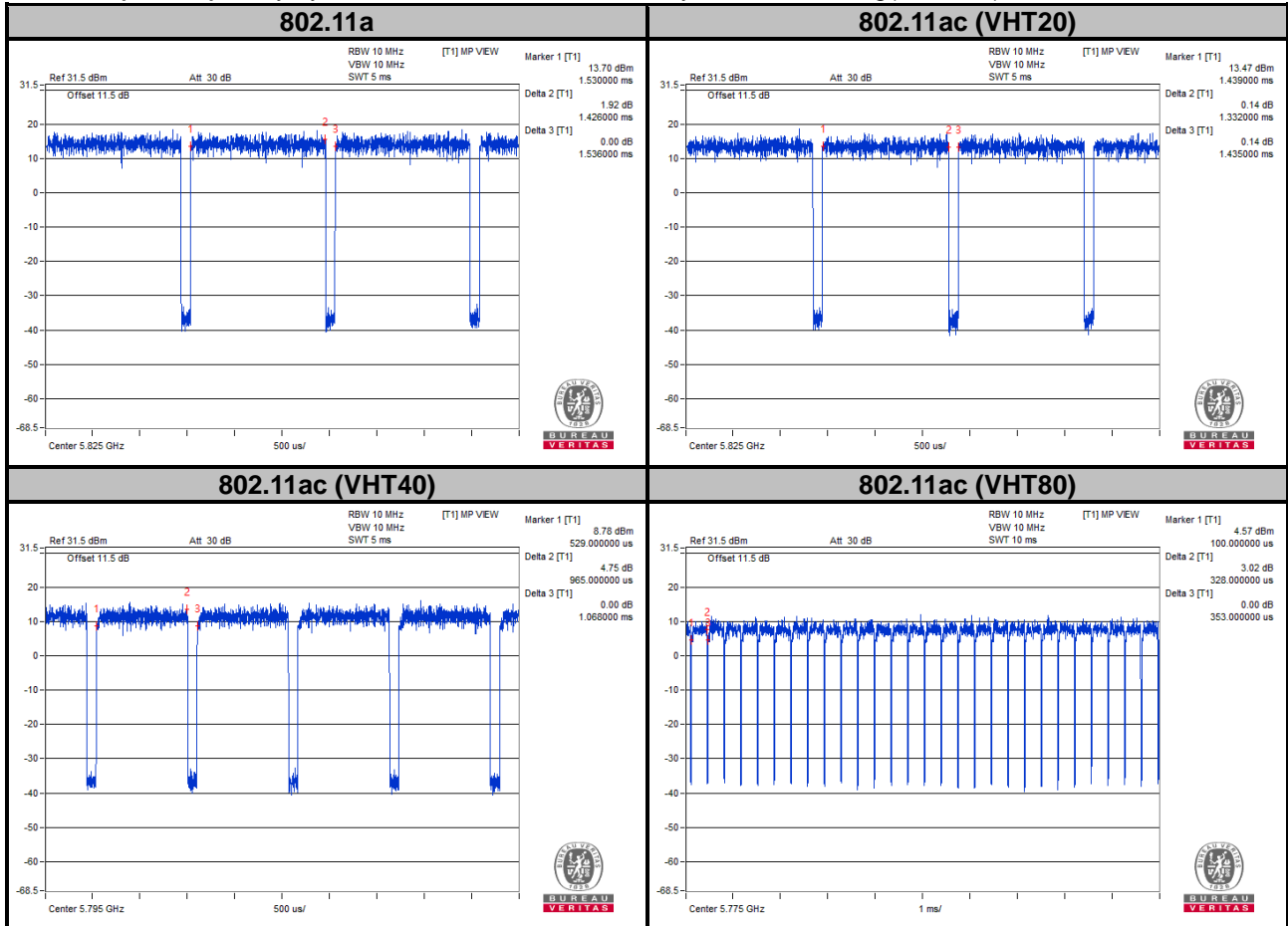
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle = 1.426/1.536 = 0.928, Duty factor = $10 * \log(1/0.928) = 0.32$

802.11ac (VHT20): Duty cycle = 1.332/1.435 = 0.928, Duty factor = $10 * \log(1/0.928) = 0.32$

802.11ac (VHT40): Duty cycle = 0.965/1.068 = 0.904, Duty factor = $10 * \log(1/0.904) = 0.44$

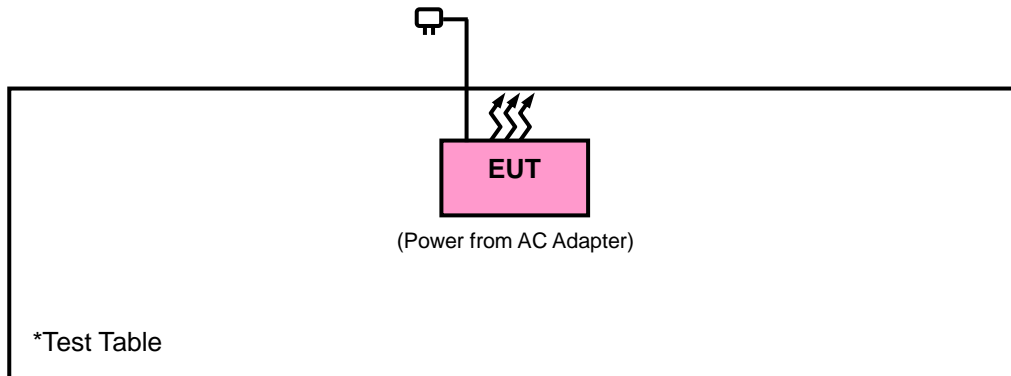
802.11ac (VHT80): Duty cycle = 0.328/0.353 = 0.929, Duty factor = $10 * \log(1/0.929) = 0.32$



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

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.

References Test Guidance:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, 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 20 dB under any condition of modulation.

Limits of Unwanted Emission Out of the Restricted Bands

Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v02r01		Field Strength at 3 m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	<input checked="" type="checkbox"/> 15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2 (dBµV/m) *1 PK:105.2 (dBµV/m) *2 PK: 110.8 (dBµV/m) *3 PK:122.2 (dBµV/m) *4
	<input type="checkbox"/> 15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
<p>*1 beyond 75 MHz or more above of the band edge.</p> <p>*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.</p> <p>*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.</p> <p>*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</p>			

Note:

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Sep. 01, 2021	Aug. 31, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 12, 2021	Apr. 11, 2022
			Apr. 11, 2022	Apr. 10, 2023
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 14, 2021	Nov. 13, 2022
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Oct. 27, 2021	Oct. 26, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 14, 2021	Nov. 13, 2022
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
			Apr. 05, 2022	Apr. 04, 2023
Loop Antenna TESEQ	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
Preamplifier Agilent	310N	187226	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
Preamplifier Agilent	83017A	MY39501357	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
Preamplifier EMCI	EMC 184045	980116	Oct. 05, 2021	Oct. 04, 2022
Power Meter Anritsu	ML2495A	1012010	Sep. 09, 2021	Sep. 08, 2022
Power Sensor Anritsu	MA2411B	1315050	Sep. 09, 2021	Sep. 08, 2022
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	ADT_Radiated_V7.6.15.9.5	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	Mar. 29, 2021	Mar. 28, 2022
			Mar. 25, 2022	Mar. 24, 2023
Wideband Power Sensor KEYSIGHT	N1923A	MY58020002	Jan. 17, 2022	Jan. 16, 2023
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	Jan. 18, 2022	Jan. 17, 2023
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	Jan. 03, 2022	Jan. 02, 2023
DC Power Supply Keysight	U8002A	MY56330015	NA	NA
Digital Multimeter Fluke	87-III	70360755	Jul. 08, 2021	Jul. 07, 2022

- 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 HsinTien Chamber 6.

4.1.3 Test Procedures

For Radiated Emission below 30 MHz

- 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 9 kHz at frequency below 30 MHz.

For Radiated Emission above 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) 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 detected 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:

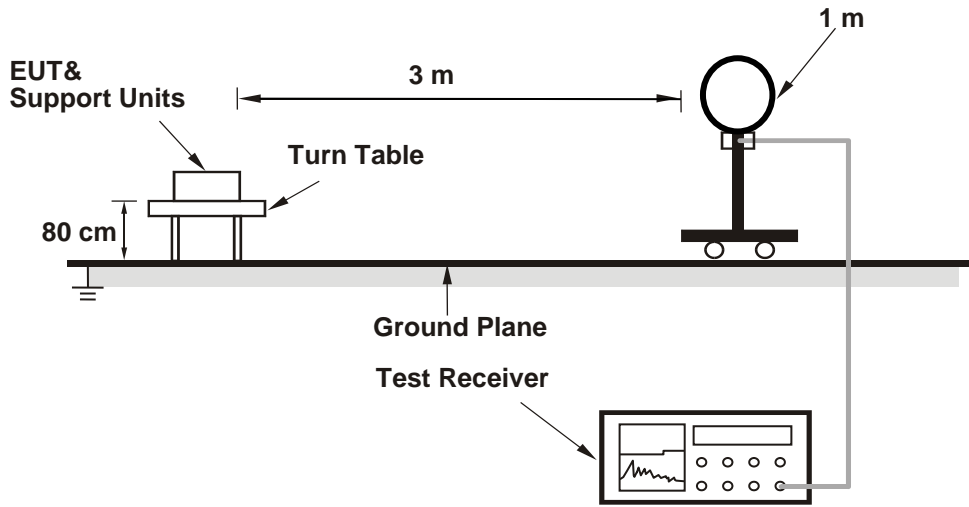
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
(11a: RBW = 1 MHz, VBW = 1 kHz ; 11ac (VHT20): RBW = 1 MHz, VBW = 1 kHz ;
11ac (VHT40): RBW = 1 MHz, VBW = 2 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 4 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

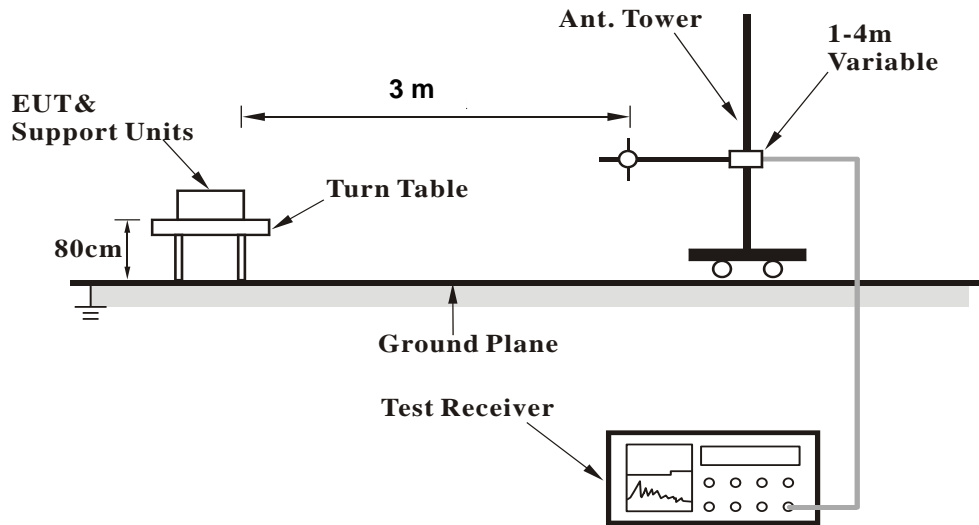
No deviation.

4.1.5 Test Setup

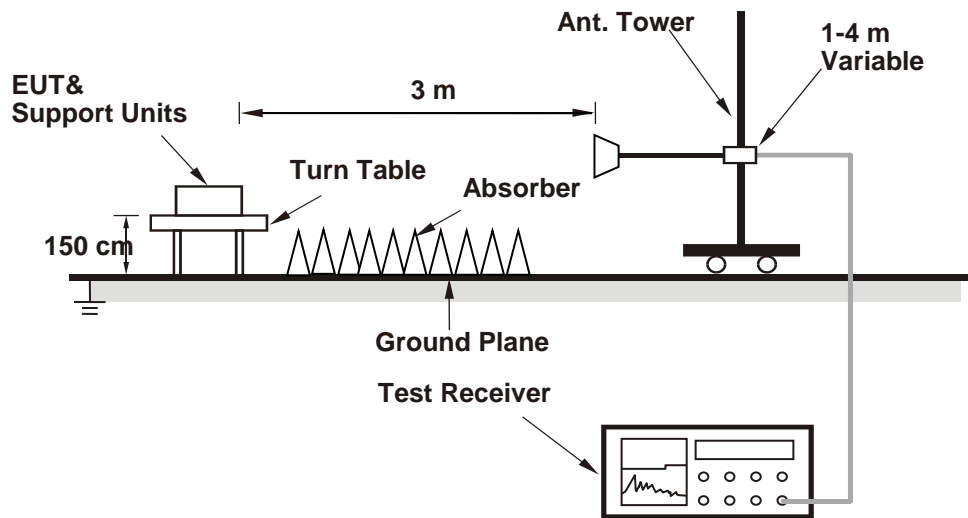
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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 a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1 GHz Data :

802.11a

RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.87 PK	74.00	-14.13	1.00 H	215	50.12	9.75
2	5150.00	49.56 AV	54.00	-4.44	1.00 H	215	39.81	9.75
3	*5180.00	94.07 PK			1.00 H	215	52.79	41.28
4	*5180.00	87.84 AV			1.00 H	215	46.56	41.28
5	#10360.00	56.70 PK	68.20	-11.50	1.14 H	145	41.63	15.07

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.41 PK	74.00	-12.59	2.01 V	142	51.66	9.75
2	5150.00	50.29 AV	54.00	-3.71	2.01 V	142	40.54	9.75
3	*5180.00	106.21 PK			2.01 V	142	64.93	41.28
4	*5180.00	99.85 AV			2.01 V	142	58.57	41.28
5	#10360.00	56.78 PK	68.20	-11.42	1.48 V	88	41.71	15.07

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	94.14 PK			1.00 H	215	52.78	41.36
2	*5200.00	87.09 AV			1.00 H	215	45.73	41.36
3	#10400.00	56.63 PK	68.20	-11.57	1.78 H	8	41.56	15.07
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	106.08 PK			2.01 V	142	64.72	41.36
2	*5200.00	99.29 AV			2.01 V	142	57.93	41.36
3	#10400.00	56.65 PK	68.20	-11.55	1.15 V	147	41.58	15.07

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	93.84 PK			1.00 H	215	52.46	41.38
2	*5240.00	86.55 AV			1.00 H	215	45.17	41.38
3	5350.00	58.74 PK	74.00	-15.26	1.00 H	215	48.99	9.75
4	5350.00	48.86 AV	54.00	-5.14	1.00 H	215	39.11	9.75
5	#10480.00	56.36 PK	68.20	-11.84	1.95 H	265	41.18	15.18

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	105.50 PK			2.01 V	142	64.12	41.38
2	*5240.00	98.88 AV			2.01 V	142	57.50	41.38
3	5350.00	58.87 PK	74.00	-15.13	2.01 V	142	49.12	9.75
4	5350.00	48.89 AV	54.00	-5.11	2.01 V	142	39.14	9.75
5	#10480.00	56.54 PK	68.20	-11.66	1.48 V	87	41.36	15.18

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 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	58.56 PK	74.00	-15.44	1.21 H	115	48.81	9.75
2	5150.00	48.70 AV	54.00	-5.30	1.21 H	115	38.95	9.75
3	*5260.00	94.17 PK			1.00 H	215	52.81	41.36
4	*5260.00	87.28 AV			1.00 H	215	45.92	41.36
5	#10520.00	56.20 PK	68.20	-12.00	1.88 H	54	41.05	15.15

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	58.82 PK	74.00	-15.18	2.01 V	142	49.07	9.75
2	5150.00	48.78 AV	54.00	-5.22	2.01 V	142	39.03	9.75
3	*5260.00	105.42 PK			2.01 V	142	64.06	41.36
4	*5260.00	98.63 AV			2.01 V	142	57.27	41.36
5	#10520.00	56.32 PK	68.20	-11.88	1.87 V	85	41.17	15.15

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	94.19 PK			1.00 H	215	52.89	41.30
2	*5300.00	87.45 AV			1.00 H	215	46.15	41.30
3	10600.00	56.54 PK	74.00	-17.46	1.14 H	174	41.62	14.92
4	10600.00	48.38 AV	54.00	-5.62	1.14 H	174	33.46	14.92

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	105.77 PK			2.01 V	142	64.47	41.30
2	*5300.00	98.36 AV			2.01 V	142	57.06	41.30
3	10600.00	56.64 PK	74.00	-17.36	1.21 V	115	41.72	14.92
4	10600.00	48.40 AV	54.00	-5.60	1.21 V	115	33.48	14.92

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	93.87 PK			1.00 H	215	52.57	41.30
2	*5320.00	86.33 AV			1.00 H	215	45.03	41.30
3	5350.00	59.14 PK	74.00	-14.86	1.00 H	215	49.39	9.75
4	5350.00	49.60 AV	54.00	-4.40	1.00 H	215	39.85	9.75
5	10640.00	56.45 PK	74.00	-17.55	1.14 H	151	41.35	15.10
6	10640.00	48.31 AV	54.00	-5.69	1.14 H	151	33.21	15.10

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	105.51 PK			2.01 V	142	64.21	41.30
2	*5320.00	98.29 AV			2.01 V	142	56.99	41.30
3	5350.00	61.12 PK	74.00	-12.88	2.01 V	142	51.37	9.75
4	5350.00	49.58 AV	54.00	-4.42	2.01 V	142	39.83	9.75
5	10640.00	56.78 PK	74.00	-17.22	1.17 V	48	41.68	15.10
6	10640.00	48.42 AV	54.00	-5.58	1.17 V	48	33.32	15.10

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	58.26 PK	74.00	-15.74	1.00 H	201	48.62	9.64
2	5460.00	48.14 AV	54.00	-5.86	1.00 H	201	38.50	9.64
3	#5470.00	58.89 PK	68.20	-9.31	1.00 H	201	49.33	9.56
4	*5500.00	95.14 PK			1.00 H	201	53.89	41.25
5	*5500.00	88.59 AV			1.00 H	201	47.34	41.25
6	11000.00	55.84 PK	74.00	-18.16	1.54 H	198	40.07	15.77
7	11000.00	48.36 AV	54.00	-5.64	1.54 H	198	32.59	15.77
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	58.57 PK	74.00	-15.43	2.00 V	111	48.93	9.64
2	5460.00	48.53 AV	54.00	-5.47	2.00 V	111	38.89	9.64
3	#5470.00	59.29 PK	68.20	-8.91	2.00 V	111	49.73	9.56
4	*5500.00	106.39 PK			2.00 V	111	65.14	41.25
5	*5500.00	99.87 AV			2.00 V	111	58.62	41.25
6	11000.00	56.00 PK	74.00	-18.00	1.04 V	145	40.23	15.77
7	11000.00	48.38 AV	54.00	-5.62	1.04 V	145	32.61	15.77

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	95.14 PK			1.00 H	201	53.87	41.27
2	*5580.00	88.36 AV			1.00 H	201	47.09	41.27
3	11160.00	55.86 PK	74.00	-18.14	1.32 H	226	40.05	15.81
4	11160.00	48.25 AV	54.00	-5.75	1.32 H	226	32.44	15.81

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	105.57 PK			2.00 V	111	64.30	41.27
2	*5580.00	98.77 AV			2.00 V	111	57.50	41.27
3	11160.00	55.74 PK	74.00	-18.26	1.05 V	252	39.93	15.81
4	11160.00	48.27 AV	54.00	-5.73	1.05 V	252	32.46	15.81

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	93.65 PK			1.00 H	254	52.15	41.50
2	*5700.00	86.77 AV			1.00 H	254	45.27	41.50
3	#5725.00	59.84 PK	68.20	-8.36	1.00 H	254	49.74	10.10
4	11400.00	56.45 PK	74.00	-17.55	1.05 H	221	41.12	15.33
5	11400.00	48.52 AV	54.00	-5.48	1.05 H	221	33.19	15.33

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	105.84 PK			2.00 V	111	64.34	41.50
2	*5700.00	98.87 AV			2.00 V	111	57.37	41.50
3	#5725.00	60.21 PK	68.20	-7.99	2.00 V	111	50.11	10.10
4	11400.00	56.23 PK	74.00	-17.77	1.48 V	87	40.90	15.33
5	11400.00	48.38 AV	54.00	-5.62	1.48 V	87	33.05	15.33

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.65	59.52 PK	68.20	-8.68	1.02 H	222	49.78	9.74
2	*5745.00	92.54 PK			1.02 H	222	50.95	41.59
3	*5745.00	85.54 AV			1.02 H	222	43.95	41.59
4	#5983.58	59.24 PK	68.20	-8.96	1.02 H	222	48.65	10.59
5	11490.00	56.53 PK	74.00	-17.47	1.57 H	77	40.62	15.91
6	11490.00	48.54 AV	54.00	-5.46	1.57 H	77	32.63	15.91
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	#5610.01	59.24 PK	68.20	-8.96	2.00 V	111	49.79	9.45
2	*5745.00	104.48 PK			2.00 V	111	62.89	41.59
3	*5745.00	97.84 AV			2.00 V	111	56.25	41.59
4	#5976.78	60.14 PK	68.20	-8.06	2.00 V	111	49.62	10.52
5	11490.00	55.87 PK	74.00	-18.13	1.13 V	329	39.96	15.91
6	11490.00	48.29 AV	54.00	-5.71	1.13 V	329	32.38	15.91

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.44	58.72 PK	68.20	-9.48	1.02 H	262	49.08	9.64
2	*5785.00	92.14 PK			1.02 H	262	50.49	41.65
3	*5785.00	85.46 AV			1.02 H	262	43.81	41.65
4	#5978.78	59.70 PK	68.20	-8.50	1.02 H	262	49.17	10.53
5	11570.00	55.75 PK	74.00	-18.25	1.62 H	162	40.16	15.59
6	11570.00	48.42 AV	54.00	-5.58	1.62 H	162	32.83	15.59
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	#5624.82	58.54 PK	68.20	-9.66	2.00 V	111	48.99	9.55
2	*5785.00	104.26 PK			2.00 V	111	62.61	41.65
3	*5785.00	97.29 AV			2.00 V	111	55.64	41.65
4	#5975.18	60.04 PK	68.20	-8.16	2.00 V	111	49.53	10.51
5	11570.00	56.00 PK	74.00	-18.00	1.47 V	77	40.41	15.59
6	11570.00	48.47 AV	54.00	-5.53	1.47 V	77	32.88	15.59

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5622.02	58.79 PK	68.20	-9.41	1.02 H	194	49.26	9.53
2	*5825.00	91.15 PK			1.02 H	194	49.45	41.70
3	*5825.00	84.26 AV			1.02 H	194	42.56	41.70
4	#5986.39	59.83 PK	68.20	-8.37	1.02 H	194	49.22	10.61
5	11650.00	55.77 PK	74.00	-18.23	1.16 H	285	39.87	15.90
6	11650.00	48.31 AV	54.00	-5.69	1.16 H	285	32.41	15.90

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.23	58.84 PK	68.20	-9.36	2.00 V	111	49.28	9.56
2	*5825.00	101.15 PK			2.00 V	111	59.45	41.70
3	*5825.00	94.53 AV			2.00 V	111	52.83	41.70
4	#5966.77	59.86 PK	68.20	-8.34	2.00 V	111	49.44	10.42
5	11650.00	55.89 PK	74.00	-18.11	1.32 V	226	39.99	15.90
6	11650.00	48.41 AV	54.00	-5.59	1.32 V	226	32.51	15.90

Remarks:

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

802.11ac (VHT20)

RF Mode	TX 802.11ac (VHT20)	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.88 PK	74.00	-15.12	1.00 H	206	49.13	9.75
2	5150.00	49.30 AV	54.00	-4.70	1.00 H	206	39.55	9.75
3	*5180.00	96.40 PK			1.00 H	206	55.12	41.28
4	*5180.00	89.31 AV			1.00 H	206	48.03	41.28
5	#10360.00	55.82 PK	68.20	-12.38	2.74 H	152	40.75	15.07

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	59.98 PK	74.00	-14.02	2.01 V	136	50.23	9.75
2	5150.00	50.21 AV	54.00	-3.79	2.01 V	136	40.46	9.75
3	*5180.00	105.75 PK			2.01 V	136	64.47	41.28
4	*5180.00	98.98 AV			2.01 V	136	57.70	41.28
5	#10360.00	55.74 PK	68.20	-12.46	1.22 V	196	40.67	15.07

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 (VHT20)	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	96.63 PK			1.00 H	208	55.27	41.36
2	*5200.00	89.49 AV			1.00 H	208	48.13	41.36
3	#10400.00	55.55 PK	68.20	-12.65	1.05 H	178	40.48	15.07
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	105.98 PK			2.04 V	127	64.62	41.36
2	*5200.00	99.16 AV			2.04 V	127	57.80	41.36
3	#10400.00	55.78 PK	68.20	-12.42	1.62 V	91	40.71	15.07

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 (VHT20)	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	96.26 PK			1.02 H	212	54.88	41.38
2	*5240.00	89.16 AV			1.02 H	212	47.78	41.38
3	5350.00	58.33 PK	74.00	-15.67	1.02 H	212	48.58	9.75
4	5350.00	48.94 AV	54.00	-5.06	1.02 H	212	39.19	9.75
5	#10480.00	55.80 PK	68.20	-12.40	1.54 H	17	40.62	15.18

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	105.77 PK			2.18 V	122	64.39	41.38
2	*5240.00	99.42 AV			2.18 V	122	58.04	41.38
3	5350.00	58.78 PK	74.00	-15.22	2.18 V	122	49.03	9.75
4	5350.00	49.07 AV	54.00	-4.93	2.18 V	122	39.32	9.75
5	#10480.00	55.84 PK	68.20	-12.36	1.38 V	113	40.66	15.18

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 (VHT20)	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	58.01 PK	74.00	-15.99	1.00 H	205	48.26	9.75
2	5150.00	48.80 AV	54.00	-5.20	1.00 H	205	39.05	9.75
3	*5260.00	98.47 PK			1.00 H	205	57.11	41.36
4	*5260.00	90.80 AV			1.00 H	205	49.44	41.36
5	#10520.00	55.68 PK	68.20	-12.52	1.95 H	182	40.53	15.15

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	58.44 PK	74.00	-15.56	2.02 V	153	48.69	9.75
2	5150.00	48.73 AV	54.00	-5.27	2.02 V	153	38.98	9.75
3	*5260.00	107.90 PK			2.02 V	153	66.54	41.36
4	*5260.00	99.64 AV			2.02 V	153	58.28	41.36
5	#10520.00	55.90 PK	68.20	-12.30	1.34 V	79	40.75	15.15

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 (VHT20)	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	98.38 PK			1.05 H	204	57.08	41.30
2	*5300.00	90.64 AV			1.05 H	204	49.34	41.30
3	10600.00	55.53 PK	74.00	-18.47	1.71 H	48	40.61	14.92
4	10600.00	45.80 AV	54.00	-8.20	1.71 H	48	30.88	14.92

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	107.45 PK			2.07 V	142	66.15	41.30
2	*5300.00	99.57 AV			2.07 V	142	58.27	41.30
3	10600.00	55.77 PK	74.00	-18.23	2.25 V	176	40.85	14.92
4	10600.00	46.02 AV	54.00	-7.98	2.25 V	176	31.10	14.92

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 802.11ac (VHT20)	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	97.12 PK			1.00 H	188	55.82	41.30
2	*5320.00	89.78 AV			1.00 H	188	48.48	41.30
3	5350.00	58.92 PK	74.00	-15.08	1.00 H	188	49.17	9.75
4	5350.00	48.91 AV	54.00	-5.09	1.00 H	188	39.16	9.75
5	10640.00	55.84 PK	74.00	-18.16	1.21 H	149	40.74	15.10
6	10640.00	46.06 AV	54.00	-7.94	1.21 H	149	30.96	15.10

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	107.34 PK			1.85 V	151	66.04	41.30
2	*5320.00	99.72 AV			1.85 V	151	58.42	41.30
3	5350.00	59.33 PK	74.00	-14.67	1.85 V	151	49.58	9.75
4	5350.00	49.31 AV	54.00	-4.69	1.85 V	151	39.56	9.75
5	10640.00	55.65 PK	74.00	-18.35	1.43 V	149	40.55	15.10
6	10640.00	45.83 AV	54.00	-8.17	1.43 V	149	30.73	15.10

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 802.11ac (VHT20)	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	59.16 PK	74.00	-14.84	1.13 H	162	49.52	9.64
2	5460.00	48.97 AV	54.00	-5.03	1.13 H	162	39.33	9.64
3	#5470.00	59.03 PK	68.20	-9.17	1.13 H	162	49.47	9.56
4	*5500.00	96.40 PK			1.13 H	162	55.15	41.25
5	*5500.00	88.33 AV			1.13 H	162	47.08	41.25
6	11000.00	56.40 PK	74.00	-17.60	2.96 H	104	40.63	15.77
7	11000.00	46.71 AV	54.00	-7.29	2.96 H	104	30.94	15.77
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	59.03 PK	74.00	-14.97	2.15 V	131	49.39	9.64
2	5460.00	49.37 AV	54.00	-4.63	2.15 V	131	39.73	9.64
3	#5470.00	62.23 PK	68.20	-5.97	2.15 V	131	52.67	9.56
4	*5500.00	107.72 PK			2.15 V	131	66.47	41.25
5	*5500.00	100.38 AV			2.15 V	131	59.13	41.25
6	11000.00	56.61 PK	74.00	-17.39	2.04 V	137	40.84	15.77
7	11000.00	47.03 AV	54.00	-6.97	2.04 V	137	31.26	15.77

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 (VHT20)	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	96.50 PK			1.19 H	182	55.23	41.27
2	*5580.00	88.39 AV			1.19 H	182	47.12	41.27
3	11160.00	56.43 PK	74.00	-17.57	1.83 H	54	40.62	15.81
4	11160.00	46.66 AV	54.00	-7.34	1.83 H	54	30.85	15.81

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	107.84 PK			2.14 V	125	66.57	41.27
2	*5580.00	100.43 AV			2.14 V	125	59.16	41.27
3	11160.00	56.85 PK	74.00	-17.15	2.06 V	127	41.04	15.81
4	11160.00	47.20 AV	54.00	-6.80	2.06 V	127	31.39	15.81

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 802.11ac (VHT20)	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	94.30 PK			1.10 H	162	52.80	41.50
2	*5700.00	87.54 AV			1.10 H	162	46.04	41.50
3	#5725.00	59.95 PK	68.20	-8.25	1.10 H	162	49.85	10.10
4	11400.00	56.60 PK	74.00	-17.40	1.93 H	134	41.27	15.33
5	11400.00	46.87 AV	54.00	-7.13	1.93 H	134	31.54	15.33

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	106.93 PK			2.11 V	128	65.43	41.50
2	*5700.00	100.02 AV			2.11 V	128	58.52	41.50
3	#5725.00	63.72 PK	68.20	-4.48	2.11 V	128	53.62	10.10
4	11400.00	56.37 PK	74.00	-17.63	1.89 V	247	41.04	15.33
5	11400.00	46.75 AV	54.00	-7.25	1.89 V	247	31.42	15.33

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 (VHT20)	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.04	59.58 PK	68.20	-8.62	1.02 H	222	49.92	9.66
2	*5745.00	91.44 PK			1.02 H	222	49.85	41.59
3	*5745.00	84.58 AV			1.02 H	222	42.99	41.59
4	#5952.35	59.86 PK	68.20	-8.34	1.02 H	222	49.58	10.28
5	11490.00	55.84 PK	74.00	-18.16	1.03 H	326	39.93	15.91
6	11490.00	48.26 AV	54.00	-5.74	1.03 H	326	32.35	15.91
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	#5646.05	59.94 PK	68.20	-8.26	2.00 V	111	50.22	9.72
2	*5745.00	103.36 PK			2.00 V	111	61.77	41.59
3	*5745.00	96.57 AV			2.00 V	111	54.98	41.59
4	#5996.40	59.52 PK	68.20	-8.68	2.00 V	111	48.81	10.71
5	11490.00	56.12 PK	74.00	-17.88	1.47 V	78	40.21	15.91
6	11490.00	48.37 AV	54.00	-5.63	1.47 V	78	32.46	15.91

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 (VHT20)	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5623.62	59.04 PK	68.20	-9.16	1.02 H	262	49.50	9.54
2	*5785.00	90.32 PK			1.02 H	262	48.67	41.65
3	*5785.00	83.66 AV			1.02 H	262	42.01	41.65
4	#5977.18	59.95 PK	68.20	-8.25	1.02 H	262	49.43	10.52
5	11570.00	55.86 PK	74.00	-18.14	1.78 H	8	40.27	15.59
6	11570.00	48.28 AV	54.00	-5.72	1.78 H	8	32.69	15.59
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.83	60.71 PK	68.20	-7.49	2.00 V	111	51.10	9.61
2	*5785.00	102.25 PK			2.00 V	111	60.60	41.65
3	*5785.00	95.55 AV			2.00 V	111	53.90	41.65
4	#5964.76	59.98 PK	68.20	-8.22	2.00 V	111	49.59	10.39
5	11570.00	56.17 PK	74.00	-17.83	1.62 V	321	40.58	15.59
6	11570.00	48.43 AV	54.00	-5.57	1.62 V	321	32.84	15.59

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 (VHT20)	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.23	58.72 PK	68.20	-9.48	1.02 H	221	49.16	9.56
2	*5825.00	90.20 PK			1.02 H	221	48.50	41.70
3	*5825.00	83.17 AV			1.02 H	221	41.47	41.70
4	#5941.14	59.37 PK	68.20	-8.83	1.02 H	221	49.22	10.15
5	11650.00	55.78 PK	74.00	-18.22	1.95 H	8	39.88	15.90
6	11650.00	48.20 AV	54.00	-5.80	1.95 H	8	32.30	15.90

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	#5602.00	59.47 PK	68.20	-8.73	2.00 V	111	50.09	9.38
2	*5825.00	101.15 PK			2.00 V	111	59.45	41.70
3	*5825.00	94.77 AV			2.00 V	111	53.07	41.70
4	#5983.58	60.17 PK	68.20	-8.03	2.00 V	111	49.58	10.59
5	11650.00	56.00 PK	74.00	-18.00	1.32 V	195	40.10	15.90
6	11650.00	48.36 AV	54.00	-5.64	1.32 V	195	32.46	15.90

Remarks:

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

802.11ac (VHT40)

RF Mode	TX 802.11ac (VHT40)	Channel	CH 38 : 5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.09 PK	74.00	-15.91	1.00 H	252	48.34	9.75
2	5150.00	49.51 AV	54.00	-4.49	1.00 H	252	39.76	9.75
3	*5190.00	92.48 PK			1.00 H	252	51.16	41.32
4	*5190.00	85.51 AV			1.00 H	252	44.19	41.32
5	5350.00	58.08 PK	74.00	-15.92	1.00 H	252	48.33	9.75
6	5350.00	49.35 AV	54.00	-4.65	1.00 H	252	39.60	9.75
7	#10380.00	55.33 PK	68.20	-12.87	1.51 H	241	40.27	15.06

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.15 PK	74.00	-12.85	2.24 V	123	51.40	9.75
2	5150.00	51.81 AV	54.00	-2.19	2.24 V	123	42.06	9.75
3	*5190.00	102.38 PK			2.24 V	123	61.06	41.32
4	*5190.00	95.53 AV			2.24 V	123	54.21	41.32
5	5350.00	58.91 PK	74.00	-15.09	2.24 V	123	49.16	9.75
6	5350.00	48.49 AV	54.00	-5.51	2.24 V	123	38.74	9.75
7	#10380.00	55.80 PK	68.20	-12.40	1.29 V	342	40.74	15.06

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 (VHT40)	Channel	CH 46 : 5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.45 PK	74.00	-15.55	1.02 H	212	48.70	9.75
2	5150.00	49.38 AV	54.00	-4.62	1.02 H	212	39.63	9.75
3	*5230.00	93.12 PK			1.02 H	212	51.75	41.37
4	*5230.00	86.23 AV			1.02 H	212	44.86	41.37
5	5350.00	58.20 PK	74.00	-15.80	1.02 H	212	48.45	9.75
6	5350.00	49.41 AV	54.00	-4.59	1.02 H	212	39.66	9.75
7	#10460.00	55.95 PK	68.20	-12.25	1.42 H	39	40.80	15.15
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	58.75 PK	74.00	-15.25	2.27 V	122	49.00	9.75
2	5150.00	49.37 AV	54.00	-4.63	2.27 V	122	39.62	9.75
3	*5230.00	103.22 PK			2.27 V	122	61.85	41.37
4	*5230.00	96.69 AV			2.27 V	122	55.32	41.37
5	5350.00	58.63 PK	74.00	-15.37	2.27 V	122	48.88	9.75
6	5350.00	49.58 AV	54.00	-4.42	2.27 V	122	39.83	9.75
7	#10460.00	55.82 PK	68.20	-12.38	1.14 V	294	40.67	15.15

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 (VHT40)	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	58.39 PK	74.00	-15.61	1.01 H	205	48.64	9.75
2	5150.00	49.15 AV	54.00	-4.85	1.01 H	205	39.40	9.75
3	*5270.00	94.06 PK			1.01 H	205	52.71	41.35
4	*5270.00	87.54 AV			1.01 H	205	46.19	41.35
5	5350.00	58.50 PK	74.00	-15.50	1.01 H	205	48.75	9.75
6	5350.00	49.22 AV	54.00	-4.78	1.01 H	205	39.47	9.75
7	#10540.00	55.57 PK	68.20	-12.63	1.68 H	206	40.48	15.09

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	58.91 PK	74.00	-15.09	2.16 V	141	49.16	9.75
2	5150.00	49.18 AV	54.00	-4.82	2.16 V	141	39.43	9.75
3	*5270.00	104.36 PK			2.16 V	141	63.01	41.35
4	*5270.00	97.32 AV			2.16 V	141	55.97	41.35
5	5350.00	58.77 PK	74.00	-15.23	2.16 V	141	49.02	9.75
6	5350.00	49.60 AV	54.00	-4.40	2.16 V	141	39.85	9.75
7	#10540.00	55.72 PK	68.20	-12.48	2.17 V	136	40.63	15.09

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 (VHT40)	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	58.14 PK	74.00	-15.86	1.00 H	188	48.39	9.75
2	5150.00	49.00 AV	54.00	-5.00	1.00 H	188	39.25	9.75
3	*5310.00	93.48 PK			1.00 H	188	52.18	41.30
4	*5310.00	86.58 AV			1.00 H	188	45.28	41.30
5	5350.00	58.34 PK	74.00	-15.66	1.00 H	188	48.59	9.75
6	5350.00	49.40 AV	54.00	-4.60	1.00 H	188	39.65	9.75
7	10620.00	55.69 PK	74.00	-18.31	2.56 H	172	40.69	15.00
8	10620.00	45.92 AV	54.00	-8.08	2.56 H	172	30.92	15.00

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	57.96 PK	74.00	-16.04	2.14 V	141	48.21	9.75
2	5150.00	48.91 AV	54.00	-5.09	2.14 V	141	39.16	9.75
3	*5310.00	103.67 PK			2.14 V	141	62.37	41.30
4	*5310.00	96.90 AV			2.14 V	141	55.60	41.30
5	5350.00	62.80 PK	74.00	-11.20	2.14 V	141	53.05	9.75
6	5350.00	53.18 AV	54.00	-0.82	2.14 V	141	43.43	9.75
7	10620.00	55.73 PK	74.00	-18.27	1.82 V	46	40.73	15.00
8	10620.00	46.10 AV	54.00	-7.90	1.82 V	46	31.10	15.00

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 802.11ac (VHT40)	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	59.11 PK	74.00	-14.89	1.04 H	252	49.47	9.64
2	5460.00	49.76 AV	54.00	-4.24	1.04 H	252	40.12	9.64
3	#5470.00	59.77 PK	68.20	-8.43	1.04 H	252	50.21	9.56
4	*5510.00	93.91 PK			1.04 H	252	52.66	41.25
5	*5510.00	86.28 AV			1.04 H	252	45.03	41.25
6	#5725.00	59.78 PK	68.20	-8.42	1.04 H	252	49.68	10.10
7	11000.00	56.31 PK	74.00	-17.69	2.35 H	72	40.54	15.77
8	11000.00	46.59 AV	54.00	-7.41	2.35 H	72	30.82	15.77

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	59.13 PK	74.00	-14.87	2.15 V	131	49.49	9.64
2	5460.00	51.29 AV	54.00	-2.71	2.15 V	131	41.65	9.64
3	#5470.00	66.57 PK	68.20	-1.63	2.15 V	131	57.01	9.56
4	*5510.00	104.52 PK			2.15 V	131	63.27	41.25
5	*5510.00	97.69 AV			2.15 V	131	56.44	41.25
6	#5725.00	59.96 PK	68.20	-8.24	2.15 V	131	49.86	10.10
7	11020.00	56.95 PK	74.00	-17.05	2.41 V	182	41.26	15.69
8	11020.00	46.50 AV	54.00	-7.50	2.41 V	182	30.81	15.69

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 (VHT40)	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	93.41 PK			1.16 H	133	52.14	41.27
2	*5550.00	86.64 AV			1.16 H	133	45.37	41.27
3	11100.00	56.52 PK	74.00	-17.48	2.65 H	192	41.14	15.38
4	11100.00	46.80 AV	54.00	-7.20	2.65 H	192	31.42	15.38

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	104.66 PK			2.07 V	129	63.39	41.27
2	*5550.00	97.75 AV			2.07 V	129	56.48	41.27
3	11100.00	56.34 PK	74.00	-17.66	1.57 V	65	40.96	15.38
4	11100.00	46.73 AV	54.00	-7.27	1.57 V	65	31.35	15.38

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 802.11ac (VHT40)	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	5460.00	58.44 PK	74.00	-15.56	1.12 H	176	48.80	9.64
2	5460.00	49.35 AV	54.00	-4.65	1.12 H	176	39.71	9.64
3	#5470.00	58.55 PK	68.20	-9.65	1.12 H	176	48.99	9.56
4	*5670.00	91.12 PK			1.12 H	176	49.72	41.40
5	*5670.00	85.26 AV			1.12 H	176	43.86	41.40
6	#5725.00	59.89 PK	68.20	-8.31	1.12 H	176	49.79	10.10
7	11340.00	56.76 PK	74.00	-17.24	2.04 H	192	41.06	15.70
8	11340.00	47.18 AV	54.00	-6.82	2.04 H	192	31.48	15.70

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	58.68 PK	74.00	-15.32	2.11 V	N/A	49.04	9.64
2	5460.00	49.40 AV	54.00	-4.60	2.11 V	N/A	39.76	9.64
3	#5470.00	58.83 PK	68.20	-9.37	2.11 V	128	49.27	9.56
4	*5670.00	103.87 PK			2.11 V	120	62.47	41.40
5	*5670.00	97.25 AV			2.11 V	120	55.85	41.40
6	#5725.00	60.08 PK	68.20	-8.12	2.11 V	128	49.98	10.10
7	11340.00	56.91 PK	74.00	-17.09	2.23 V	164	41.21	15.70
8	11340.00	47.28 AV	54.00	-6.72	2.23 V	164	31.58	15.70

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 (VHT40)	Channel	CH 151 : 5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5600.00	58.71 PK	68.20	-9.49	1.02 H	260	49.34	9.37
2	*5755.00	88.57 PK			1.02 H	260	46.96	41.61
3	*5755.00	81.29 AV			1.02 H	260	39.68	41.61
4	#6000.00	59.19 PK	68.20	-9.01	1.02 H	260	48.44	10.75
5	11510.00	55.88 PK	74.00	-18.12	1.42 H	215	39.96	15.92
6	11510.00	48.59 AV	54.00	-5.41	1.42 H	215	32.67	15.92

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	#5628.83	58.60 PK	68.20	-9.60	2.00 V	111	49.01	9.59
2	*5755.00	99.58 PK			2.00 V	111	57.97	41.61
3	*5755.00	92.39 AV			2.00 V	111	50.78	41.61
4	#5959.16	59.48 PK	68.20	-8.72	2.00 V	111	49.15	10.33
5	11510.00	56.06 PK	74.00	-17.94	1.21 V	185	40.14	15.92
6	11510.00	48.60 AV	54.00	-5.40	1.21 V	185	32.68	15.92

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 (VHT40)	Channel	CH 159 : 5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5615.22	57.82 PK	68.20	-10.38	1.02 H	218	48.33	9.49
2	*5795.00	87.45 PK			1.02 H	218	45.79	41.66
3	*5795.00	80.22 AV			1.02 H	218	38.56	41.66
4	#5996.00	59.08 PK	68.20	-9.12	1.02 H	218	48.37	10.71
5	11590.00	55.83 PK	74.00	-18.17	1.05 H	223	40.35	15.48
6	11590.00	48.53 AV	54.00	-5.47	1.05 H	223	33.05	15.48

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.44	58.45 PK	68.20	-9.75	2.00 V	111	48.74	9.71
2	*5795.00	98.85 PK			2.00 V	111	57.19	41.66
3	*5795.00	91.22 AV			2.00 V	111	49.56	41.66
4	#5987.59	59.73 PK	68.20	-8.47	2.00 V	111	49.11	10.62
5	11590.00	56.16 PK	74.00	-17.84	1.16 V	151	40.68	15.48
6	11590.00	48.64 AV	54.00	-5.36	1.16 V	151	33.16	15.48

Remarks:

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

802.11ac (VHT80)

RF Mode	TX 802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.01 PK	74.00	-15.99	1.04 H	243	48.26	9.75
2	5150.00	49.83 AV	54.00	-4.17	1.04 H	243	40.08	9.75
3	*5210.00	88.68 PK			1.04 H	243	47.32	41.36
4	*5210.00	81.04 AV			1.04 H	243	39.68	41.36
5	5350.00	58.91 PK	74.00	-15.09	1.04 H	243	49.16	9.75
6	5350.00	50.22 AV	54.00	-3.78	1.04 H	243	40.47	9.75
7	#10420.00	55.82 PK	68.20	-12.38	1.60 H	192	40.72	15.10
8	#10420.00	46.13 AV	54.00	-7.87	1.60 H	192	31.03	15.10

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	58.79 PK	74.00	-15.21	1.78 V	155	49.04	9.75
2	5150.00	52.66 AV	54.00	-1.34	1.78 V	155	42.91	9.75
3	*5210.00	97.55 PK			1.78 V	155	56.19	41.36
4	*5210.00	90.13 AV			1.78 V	155	48.77	41.36
5	5350.00	59.07 PK	74.00	-14.93	1.78 V	155	49.32	9.75
6	5350.00	50.12 AV	54.00	-3.88	1.78 V	155	40.37	9.75
7	#10420.00	55.48 PK	68.20	-12.72	1.96 V	220	40.38	15.10
8	#10420.00	45.72 AV	54.00	-8.28	1.96 V	220	30.62	15.10

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	58.97 PK	74.00	-15.03	1.00 H	245	49.22	9.75
2	5150.00	49.79 AV	54.00	-4.21	1.00 H	245	40.04	9.75
3	*5290.00	88.12 PK			1.00 H	245	46.80	41.32
4	*5290.00	80.73 AV			1.00 H	245	39.41	41.32
5	5350.00	58.87 PK	74.00	-15.13	1.00 H	245	49.12	9.75
6	5350.00	50.08 AV	54.00	-3.92	1.00 H	245	40.33	9.75
7	#10580.00	55.26 PK	68.20	-12.94	1.04 H	189	40.28	14.98

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	58.89 PK	74.00	-15.11	1.85 V	163	49.14	9.75
2	5150.00	49.75 AV	54.00	-4.25	1.85 V	163	40.00	9.75
3	*5290.00	97.66 PK			1.85 V	163	56.34	41.32
4	*5290.00	90.38 AV			1.85 V	163	49.06	41.32
5	5350.00	59.03 PK	74.00	-14.97	1.85 V	163	49.28	9.75
6	5350.00	51.02 AV	54.00	-2.98	1.85 V	163	41.27	9.75
7	#10580.00	55.42 PK	68.20	-12.78	1.28 V	146	40.44	14.98

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	58.57 PK	74.00	-15.43	1.03 H	242	48.93	9.64
2	5460.00	49.93 AV	54.00	-4.07	1.03 H	242	40.29	9.64
3	#5470.00	60.03 PK	68.20	-8.17	1.03 H	242	50.47	9.56
4	*5530.00	87.01 PK			1.03 H	242	45.75	41.26
5	*5530.00	79.95 AV			1.03 H	242	38.69	41.26
6	#5725.00	60.01 PK	68.20	-8.19	1.03 H	242	49.91	10.10
7	11060.00	56.11 PK	74.00	-17.89	1.12 H	48	40.58	15.53
8	11060.00	46.42 AV	54.00	-7.58	1.12 H	48	30.89	15.53

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	59.70 PK	74.00	-14.30	1.91 V	150	50.06	9.64
2	5460.00	51.83 AV	54.00	-2.17	1.91 V	150	42.19	9.64
3	#5470.00	62.93 PK	68.20	-5.27	1.91 V	150	53.37	9.56
4	*5530.00	97.82 PK			1.91 V	150	56.56	41.26
5	*5530.00	91.29 AV			1.91 V	150	50.03	41.26
6	#5725.00	59.47 PK	68.20	-8.73	1.91 V	150	49.37	10.10
7	11060.00	55.82 PK	74.00	-18.18	1.58 V	246	40.29	15.53
8	11060.00	46.08 AV	54.00	-7.92	1.58 V	246	30.55	15.53

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	58.35 PK	74.00	-15.65	1.12 H	163	48.71	9.64
2	5460.00	48.66 AV	54.00	-5.34	1.12 H	163	39.02	9.64
3	#5470.00	58.78 PK	68.20	-9.42	1.12 H	163	49.22	9.56
4	*5610.00	88.74 PK			1.12 H	163	47.45	41.29
5	*5610.00	81.16 AV			1.12 H	163	39.87	41.29
6	#5725.00	58.43 PK	68.20	-9.77	1.12 H	163	48.33	10.10
7	11220.00	55.84 PK	74.00	-18.16	1.09 H	97	39.78	16.06
8	11220.00	48.77 AV	54.00	-5.23	1.09 H	97	32.71	16.06

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	58.74 PK	74.00	-15.26	2.05 V	155	49.10	9.64
2	5460.00	48.66 AV	54.00	-5.34	2.05 V	155	39.02	9.64
3	#5470.00	59.33 PK	68.20	-8.87	2.05 V	155	49.77	9.56
4	*5610.00	99.65 PK			2.05 V	155	58.36	41.29
5	*5610.00	92.47 AV			2.05 V	155	51.18	41.29
6	#5725.00	59.50 PK	68.20	-8.70	2.05 V	155	49.40	10.10
7	11220.00	56.27 PK	74.00	-17.73	1.12 V	25	40.21	16.06
8	11220.00	49.11 AV	54.00	-4.89	1.12 V	25	33.05	16.06

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 155 : 5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5633.23	58.64 PK	68.20	-9.56	1.02 H	260	49.02	9.62
2	*5775.00	85.20 PK			1.02 H	260	43.57	41.63
3	*5775.00	78.90 AV			1.02 H	260	37.27	41.63
4	#5981.98	59.74 PK	68.20	-8.46	1.02 H	260	49.18	10.56
5	11550.00	55.90 PK	74.00	-18.10	1.45 H	157	40.20	15.70
6	11550.00	48.88 AV	54.00	-5.12	1.45 H	157	33.18	15.70

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5645.25	58.79 PK	68.20	-9.41	2.00 V	111	49.08	9.71
2	*5775.00	97.32 PK			2.00 V	111	55.69	41.63
3	*5775.00	90.58 AV			2.00 V	111	48.95	41.63
4	#5965.97	59.58 PK	68.20	-8.62	2.00 V	111	49.17	10.41
5	11550.00	56.16 PK	74.00	-17.84	1.52 V	241	40.46	15.70
6	11550.00	49.03 AV	54.00	-4.97	1.52 V	241	33.33	15.70

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.

9 kHz ~ 30 MHz Data:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

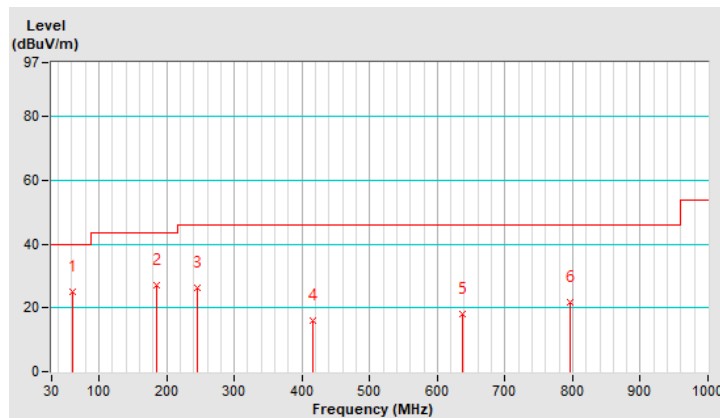
802.11a

RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	61.59	25.06 QP	40.00	-14.94	2.42 H	138	43.05	-17.99
2	185.52	27.28 QP	43.50	-16.22	1.61 H	294	46.10	-18.82
3	245.46	26.41 QP	46.00	-19.59	1.85 H	22	12.71	13.70
4	416.20	15.96 QP	46.00	-30.04	1.16 H	250	28.82	-12.86
5	636.70	18.19 QP	46.00	-27.81	2.61 H	35	26.44	-8.25
6	795.60	21.59 QP	46.00	-24.41	1.62 H	191	27.51	-5.92

Remarks:

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

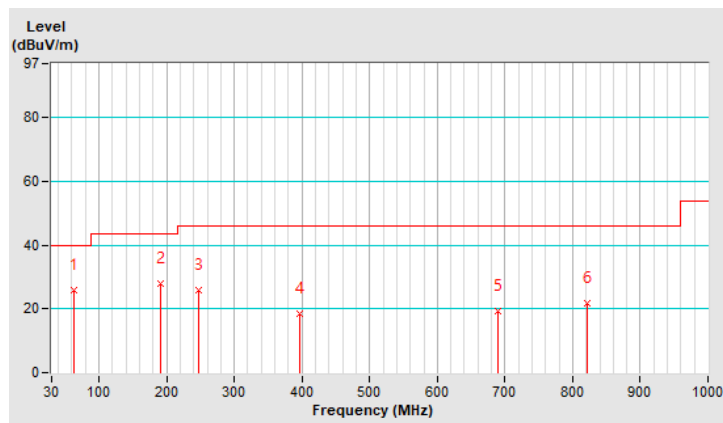


RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	62.94	25.92 QP	40.00	-14.08	1.35 V	247	44.08	-18.16
2	190.11	27.87 QP	43.50	-15.63	1.67 V	224	47.28	-19.41
3	247.08	25.73 QP	46.00	-20.27	1.65 V	248	43.44	-17.71
4	395.90	18.55 QP	46.00	-27.45	1.81 V	24	31.94	-13.39
5	689.20	19.16 QP	46.00	-26.84	2.54 V	161	26.97	-7.81
6	821.50	21.59 QP	46.00	-24.41	1.49 V	284	27.03	-5.44

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

- Note: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 03, 2021	Dec. 02, 2022
RF signal cable Woken	5D-FB	Cable-cond1-01	Jan. 15, 2022	Jan. 14, 2023
LISN/AMN ROHDE & SCHWARZ (EUT)	ENV216	101826	Mar. 14, 2022	Mar. 13, 2023
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Sep. 07, 2021	Sep. 06, 2022
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 1.
 3. The VCCI Site Registration No. is C-12040.
 4. Test date: 2022/6/29

4.2.3 Test Procedures

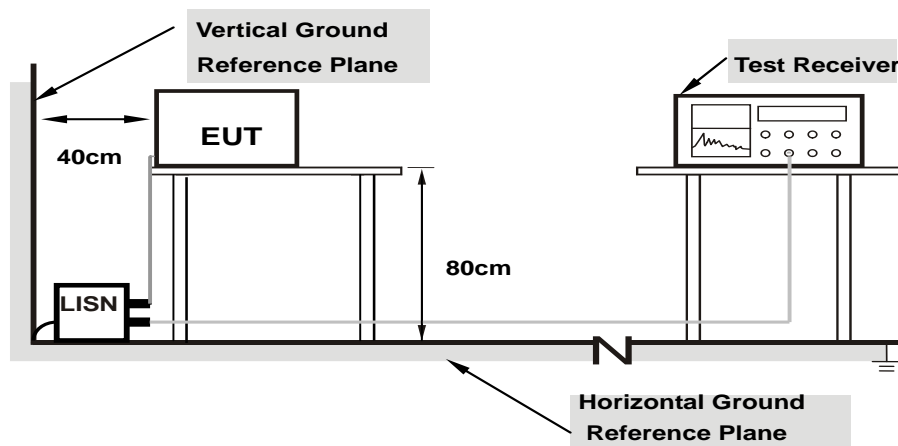
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

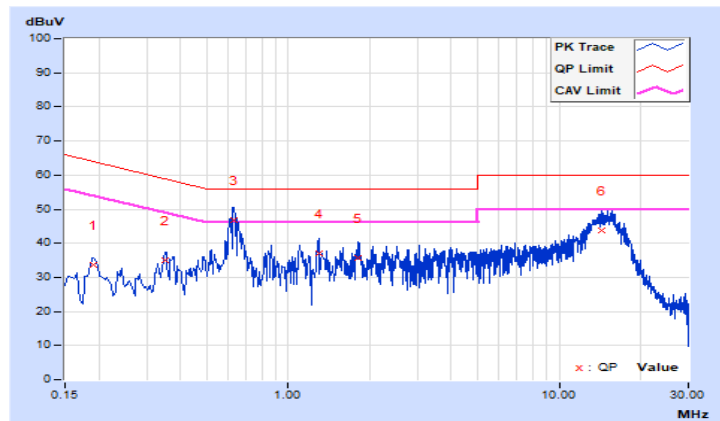
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested by	Rex Wang	Test Date	2022/6/29

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19000	9.71	24.11	13.83	33.82	23.54	64.04	54.04	-30.22	-30.50
2	0.35220	9.78	25.37	16.77	35.15	26.55	58.91	48.91	-23.76	-22.36
3	0.63379	9.82	37.08	27.09	46.90	36.91	56.00	46.00	-9.10	-9.09
4	1.29768	9.86	27.30	15.67	37.16	25.53	56.00	46.00	-18.84	-20.47
5	1.81800	9.89	25.95	16.39	35.84	26.28	56.00	46.00	-20.16	-19.72
6	14.29000	10.11	33.68	23.92	43.79	34.03	60.00	50.00	-16.21	-15.97

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

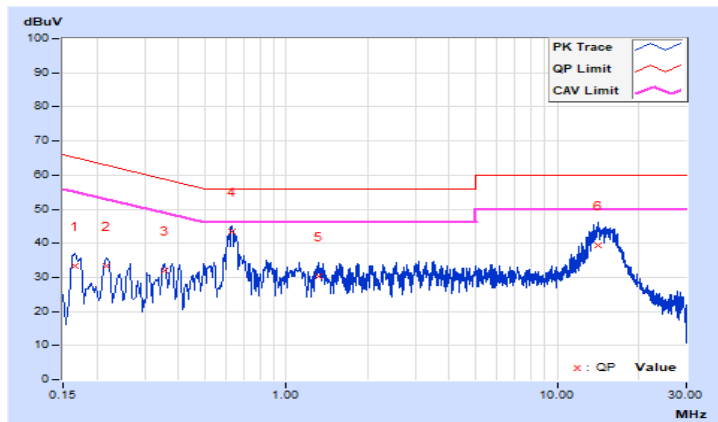


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested by	Rex Wang	Test Date	2022/6/29

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16535	9.69	23.64	9.47	33.33	19.16	65.19	55.19	-31.86	-36.03
2	0.21748	9.73	23.46	11.76	33.19	21.49	62.91	52.91	-29.72	-31.42
3	0.35400	9.79	22.27	15.43	32.06	25.22	58.87	48.87	-26.81	-23.65
4	0.62715	9.83	33.58	26.49	43.41	36.32	56.00	46.00	-12.59	-9.68
5	1.31400	9.88	20.46	13.41	30.34	23.29	56.00	46.00	-25.66	-22.71
6	14.22600	10.12	29.44	16.91	39.56	27.03	60.00	50.00	-20.44	-22.97

Remarks:

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



4.3 Transmit Power Measurement

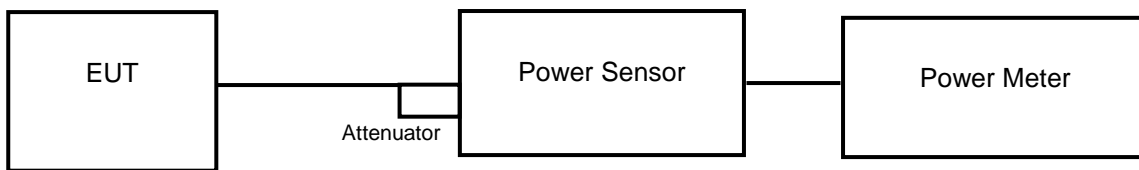
4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125 mW (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	250 mW (24 dBm)
U-NII-2A		√	250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-2C		√	250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-3		√	1 Watt (30 dBm)

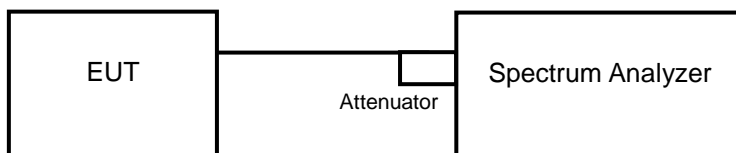
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

<Power Output Measurement>



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

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

26 dB Bandwidth

- a. Set RBW = approximately 1 % of the emission bandwidth.
- b. Set the VBW $\geq 3 \times$ 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 Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	18.967	12.78	24	Pass
40	5200	18.493	12.67	24	Pass
48	5240	16.711	12.23	24	Pass
52	5260	18.535	12.68	24	Pass
60	5300	20.512	13.12	24	Pass
64	5320	20.091	13.03	24	Pass
100	5500	16.866	12.27	24	Pass
116	5580	18.03	12.56	24	Pass
140	5700	18.664	12.71	24	Pass
149	5745	20.464	13.11	30	Pass
157	5785	20.512	13.12	30	Pass
165	5825	20.045	13.02	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (21.79) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.74) = 24.37 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.68) = 24.36 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.87) = 24.39 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.89) = 24.40 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.81) = 24.38 \text{ dBm} > 24 \text{ dBm}$.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	17.701	12.48	24	Pass
40	5200	17.62	12.46	24	Pass
48	5240	17.022	12.31	24	Pass
52	5260	16.444	12.16	24	Pass
60	5300	15.922	12.02	24	Pass
64	5320	16.904	12.28	24	Pass
100	5500	15.922	12.02	24	Pass
116	5580	16.406	12.15	24	Pass
140	5700	17.498	12.43	24	Pass
149	5745	18.967	12.78	30	Pass
157	5785	17.742	12.49	30	Pass
165	5825	17.66	12.47	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (21.85) = 24.39 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.92) = 24.40 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.79) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.78) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.80) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.79) = 24.38 \text{ dBm} > 24 \text{ dBm}$.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	17.14	12.34	24	Pass
46	5230	17.1	12.33	24	Pass
54	5270	16.711	12.23	24	Pass
62	5310	16.749	12.24	24	Pass
102	5510	15.959	12.03	24	Pass
110	5550	17.906	12.53	24	Pass
134	5670	17.66	12.47	24	Pass
151	5755	17.298	12.38	30	Pass
159	5795	16.943	12.29	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (41.53) = 27.18 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (41.37) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (41.38) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (41.51) = 27.18 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (41.33) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (41.53) = 27.18 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	18.408	12.65	24	Pass
40	5200	18.365	12.64	24	Pass
48	5240	17.498	12.43	24	Pass
52	5260	17.258	12.37	24	Pass
60	5300	16.634	12.21	24	Pass
64	5320	17.022	12.31	24	Pass
100	5500	16.293	12.12	24	Pass
116	5580	16.788	12.25	24	Pass
140	5700	17.947	12.54	24	Pass
149	5745	19.275	12.85	30	Pass
157	5785	18.707	12.72	30	Pass
165	5825	18.072	12.57	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log(21.85) = 24.39 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(21.92) = 24.40 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(21.79) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(21.78) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(21.80) = 24.38 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(21.79) = 24.38 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	17.298	12.38	24	Pass
46	5230	17.258	12.37	24	Pass
54	5270	16.904	12.28	24	Pass
62	5310	16.788	12.25	24	Pass
102	5510	16.672	12.22	24	Pass
110	5550	18.365	12.64	24	Pass
134	5670	17.865	12.52	24	Pass
151	5755	17.418	12.41	30	Pass
159	5795	17.022	12.31	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log(41.53) = 27.18 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(41.37) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(41.38) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(41.51) = 27.18 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(41.33) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(41.53) = 27.18 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	9.183	9.63	24	Pass
58	5290	8.375	9.23	24	Pass
106	5530	8.185	9.13	24	Pass
122	5610	17.458	12.42	24	Pass
155	5775	19.099	12.81	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log(196.41) = 33.93 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(82.47) = 30.16 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(82.81) = 30.18 \text{ dBm} > 24 \text{ dBm}$.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
52	5260	21.79
60	5300	21.74
64	5320	21.68
100	5500	21.87
116	5580	21.89
140	5700	21.81

802.11ac (VHT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
52	5260	21.85
60	5300	21.92
64	5320	21.79
100	5500	21.78
116	5580	21.80
140	5700	21.79

802.11ac (VHT40)

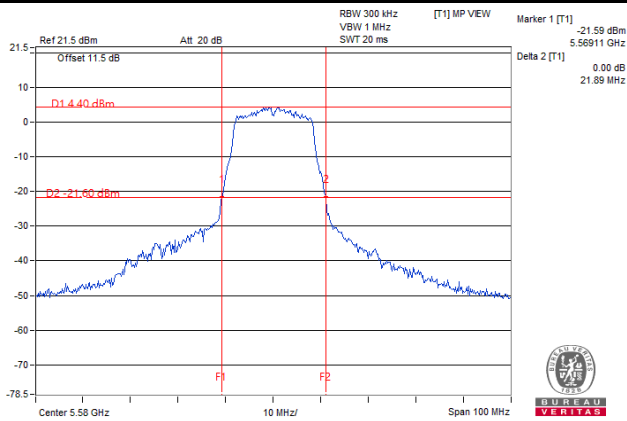
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
54	5270	41.53
62	5310	41.37
102	5510	41.38
110	5550	41.51
134	5670	41.33

802.11ac (VHT80)

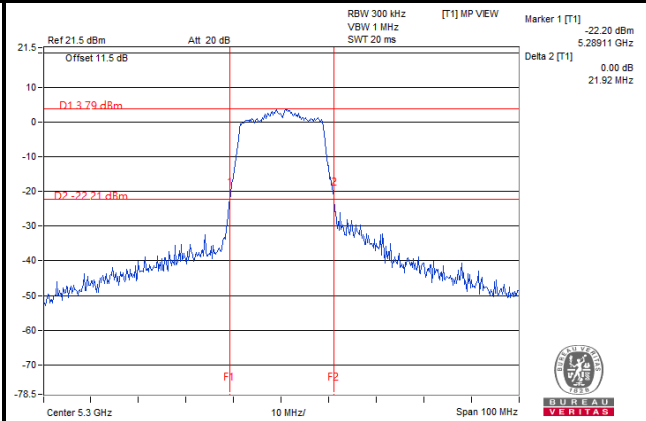
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
58	5290	196.41
106	5530	82.47
122	5610	82.81

Spectrum Plot of Worst Value

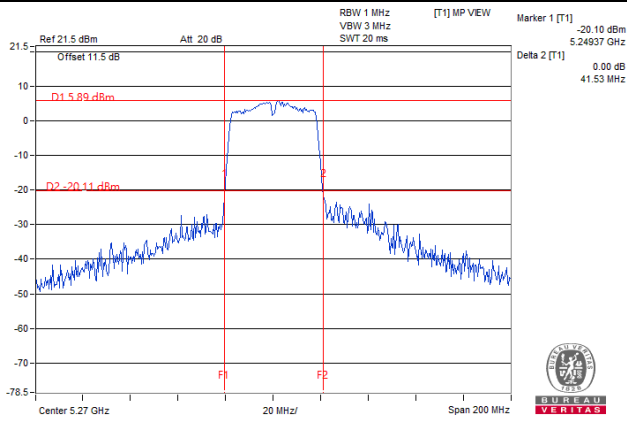
802.11a



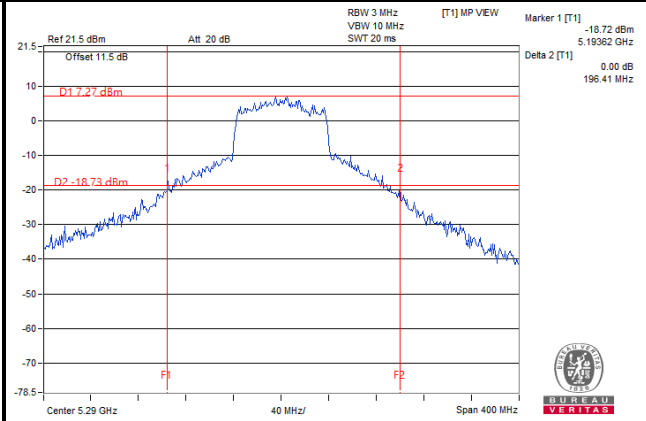
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	20.512	13.12
5470~5725	18.664	12.71

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	16.904	12.28
5470~5725	17.498	12.43

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	16.749	12.24
5470~5725	17.906	12.53

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	17.258	12.37
5470~5725	17.947	12.54

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	16.904	12.28
5470~5725	18.365	12.64

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

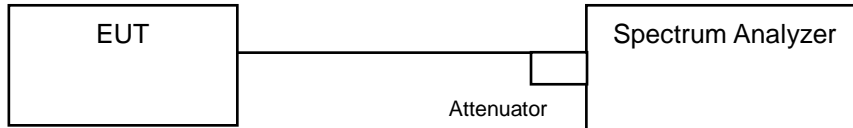
802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	8.375	9.23
5470~5725	17.458	12.42

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.92
40	5200	16.92
48	5240	17.04
52	5260	16.80
60	5300	17.04
64	5320	16.92
100	5500	16.80
116	5580	16.92
140	5700	16.80
149	5745	16.93
157	5785	16.83
165	5825	16.92

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.00
40	5200	18.00
48	5240	17.88
52	5260	17.88
60	5300	17.88
64	5320	18.00
100	5500	17.88
116	5580	18.00
140	5700	18.12
149	5745	17.98
157	5785	17.98
165	5825	17.98

802.11ac (VHT40)

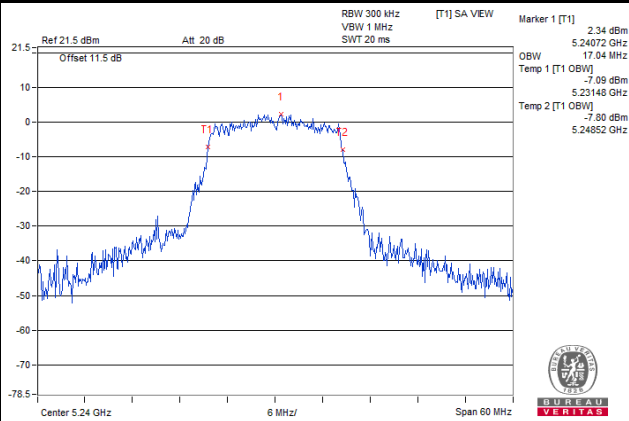
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.48
46	5230	36.48
54	5270	36.48
62	5310	36.48
102	5510	36.48
110	5550	36.72
134	5670	36.72
151	5755	36.24
159	5795	36.48

802.11ac (VHT80)

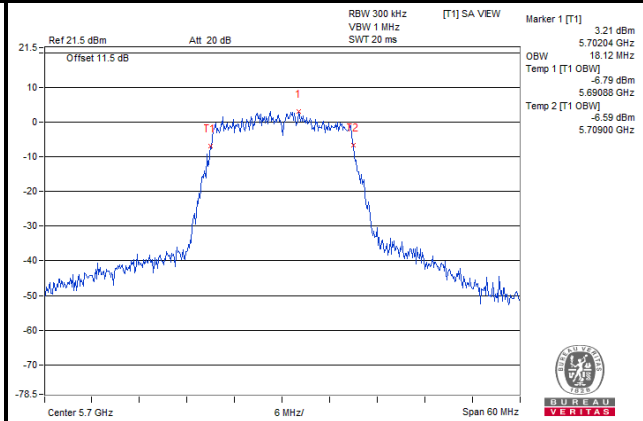
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.36
58	5290	84.48
106	5530	75.36
122	5610	75.84
155	5775	75.38

Spectrum Plot of Worst Value

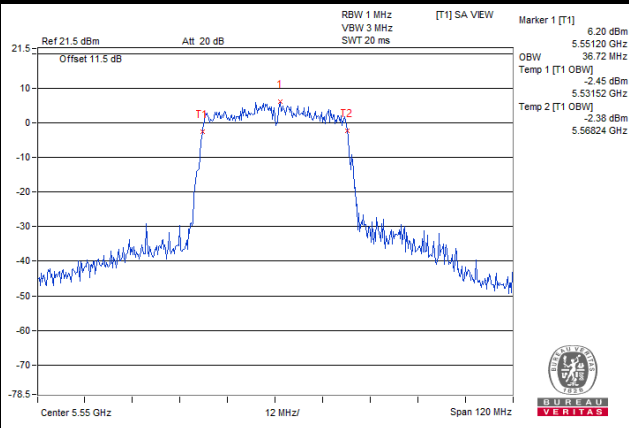
802.11a



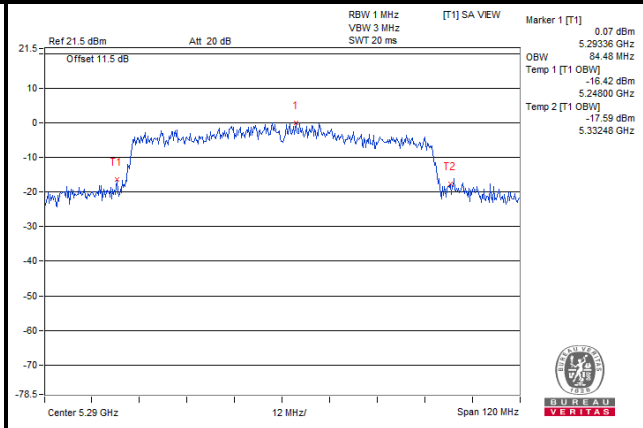
802.11ac (VHT20)



802.11ac (VHT40)

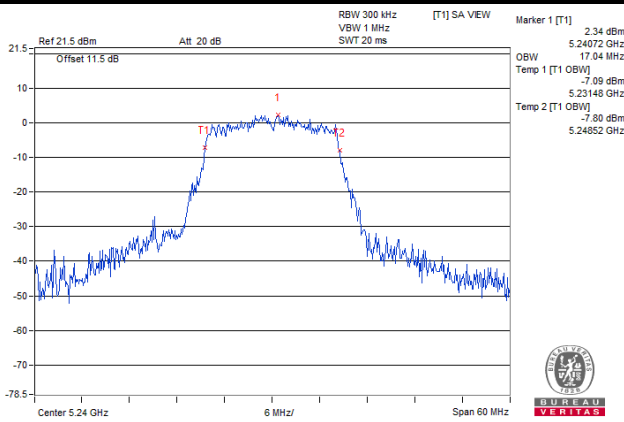


802.11ac (VHT80)

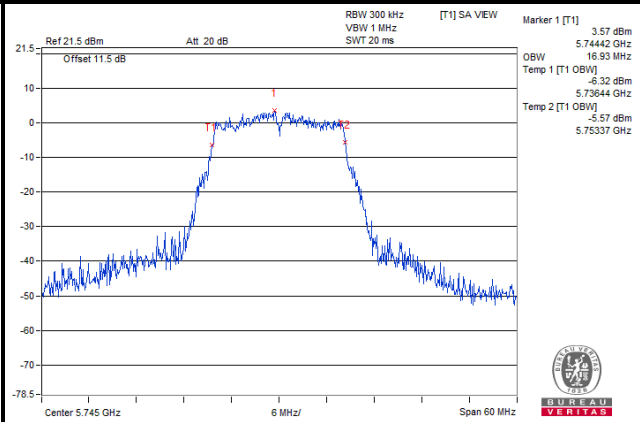


Spectrum Plot for Nearby DFS Band 802.11a

Ch 48 (5240 MHz)

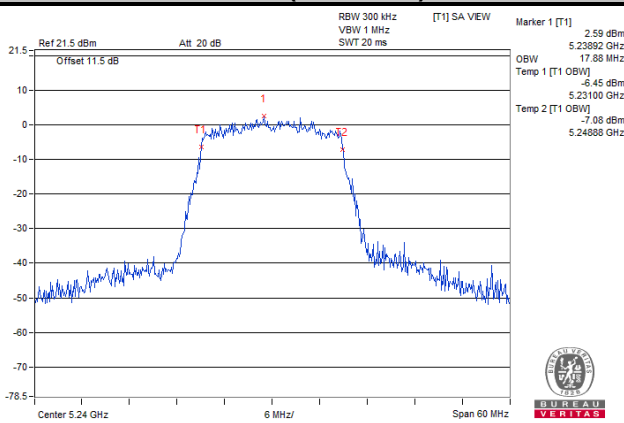


Ch 149 (5745 MHz)

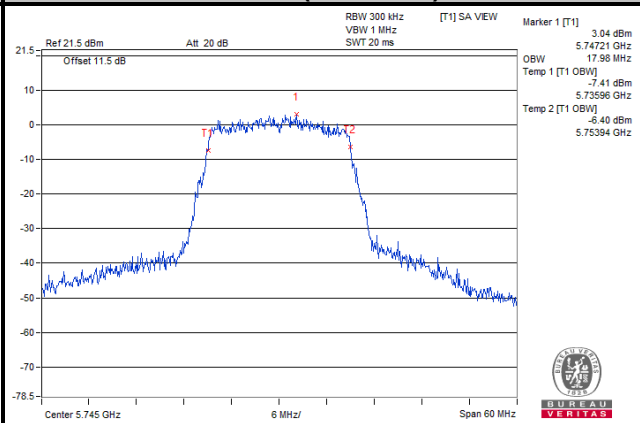


802.11ac (VHT20)

Ch 48 (5240 MHz)

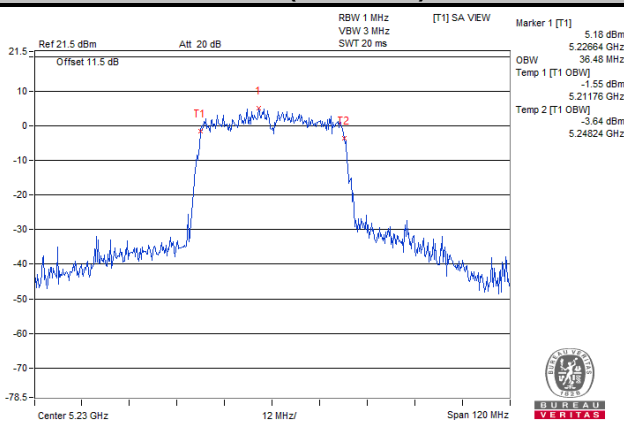


Ch 149 (5745 MHz)

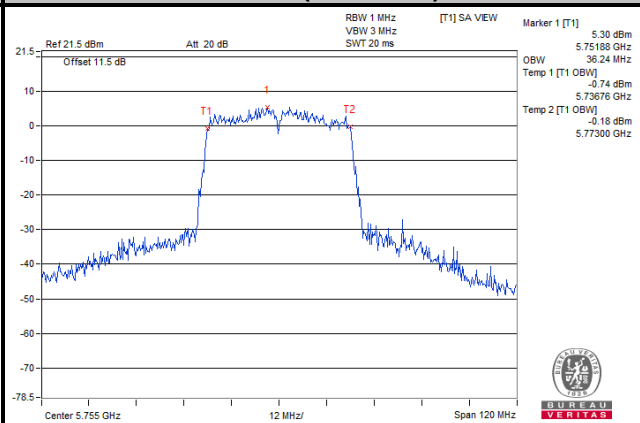


802.11ac (VHT40)

Ch 46 (5230 MHz)

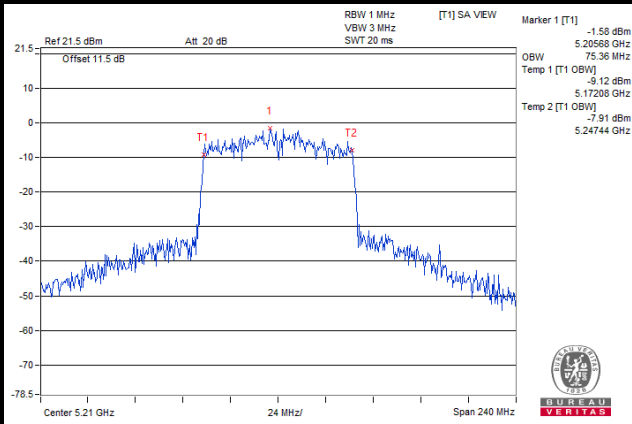


Ch 151 (5755 MHz)

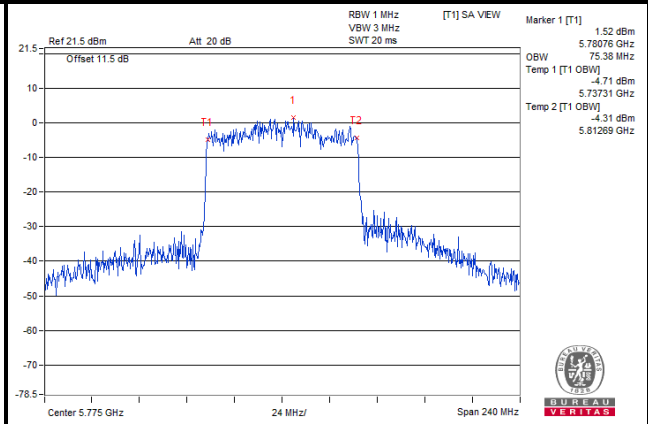


Spectrum Plot for Nearby DFS Band 802.11ac (VHT80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)

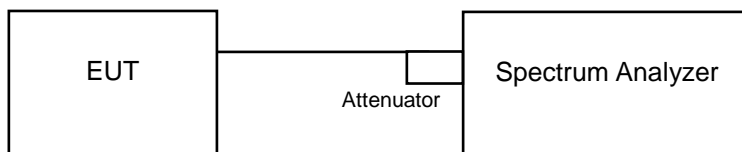


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

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

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW $\geq 3 \times$ RBW, Detector = RMS
3. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add $10 \log (1/\text{duty cycle})$

※ For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW $\geq 3 \times$ RBW, 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 $\text{BWCF} = 10 \log (500 \text{ kHz} / 300 \text{ kHz})$.
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add $10 \log (1/\text{duty cycle})$

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

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

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	-1.00	0.32	-0.68	11	Pass
40	5200	-1.07	0.32	-0.75	11	Pass
48	5240	-1.19	0.32	-0.87	11	Pass
52	5260	-1.29	0.32	-0.97	11	Pass
60	5300	-0.60	0.32	-0.28	11	Pass
64	5320	-0.35	0.32	-0.03	11	Pass
100	5500	-1.40	0.32	-1.08	11	Pass
116	5580	-1.14	0.32	-0.82	11	Pass
140	5700	-1.36	0.32	-1.04	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	-1.59	0.32	-1.27	11	Pass
40	5200	-1.72	0.32	-1.40	11	Pass
48	5240	-1.85	0.32	-1.53	11	Pass
52	5260	-1.45	0.32	-1.13	11	Pass
60	5300	-1.67	0.32	-1.35	11	Pass
64	5320	-1.33	0.32	-1.01	11	Pass
100	5500	-1.49	0.32	-1.17	11	Pass
116	5580	-1.29	0.32	-0.97	11	Pass
140	5700	-1.42	0.32	-1.10	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
38	5190	-4.62	0.44	-4.18	11	Pass
46	5230	-4.88	0.44	-4.44	11	Pass
54	5270	-4.55	0.44	-4.11	11	Pass
62	5310	-4.84	0.44	-4.40	11	Pass
102	5510	-4.53	0.44	-4.09	11	Pass
110	5550	-4.38	0.44	-3.94	11	Pass
134	5670	-4.45	0.44	-4.01	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

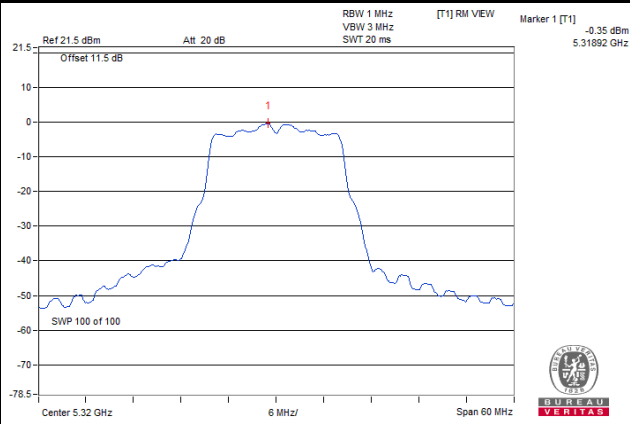
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
42	5210	-10.48	0.32	-10.16	11	Pass
58	5290	-10.72	0.32	-10.40	11	Pass
106	5530	-10.81	0.32	-10.49	11	Pass
122	5610	-7.45	0.32	-7.13	11	Pass

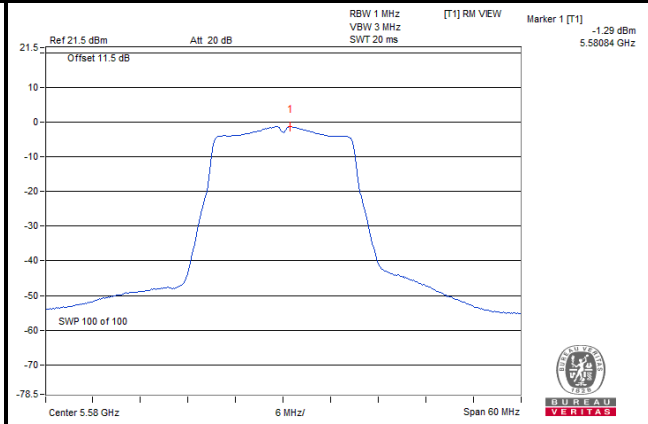
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

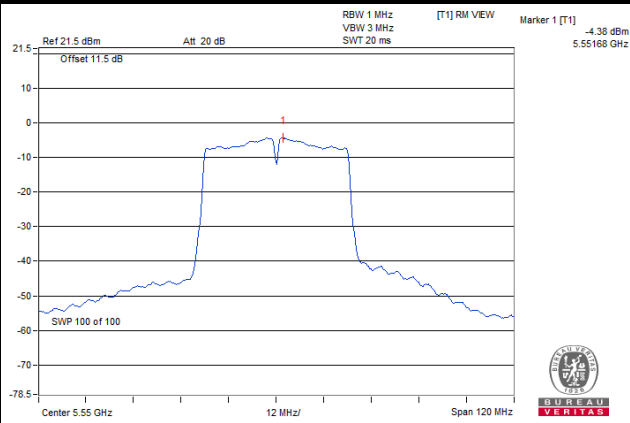
802.11a



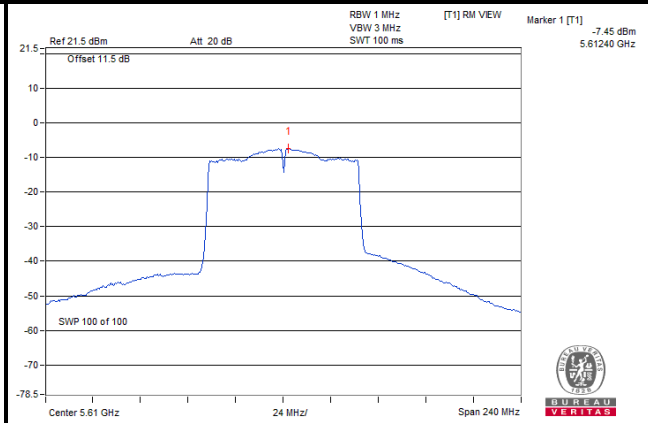
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
149	5745	-8.3	-6.08	0.32	-5.76	30	Pass
157	5785	-8.51	-6.29	0.32	-5.97	30	Pass
165	5825	-8.58	-6.36	0.32	-6.04	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
149	5745	-9.19	-6.97	0.32	-6.65	30	Pass
157	5785	-9.26	-7.04	0.32	-6.72	30	Pass
165	5825	-9.3	-7.08	0.32	-6.76	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
151	5755	-12.53	-10.31	0.44	-9.87	30	Pass
159	5795	-12.83	-10.61	0.44	-10.17	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

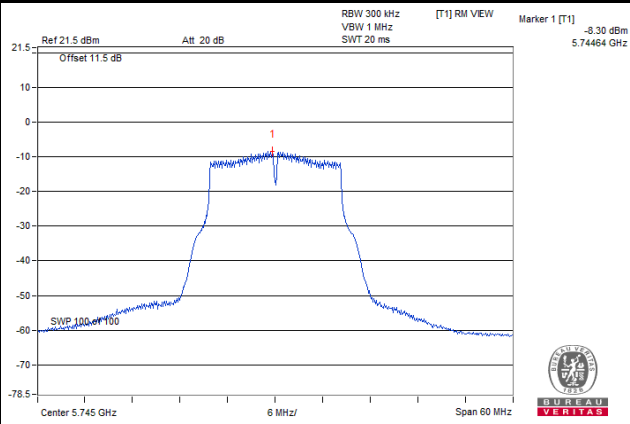
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
155	5775	-16.31	-14.09	0.32	-13.77	30	Pass

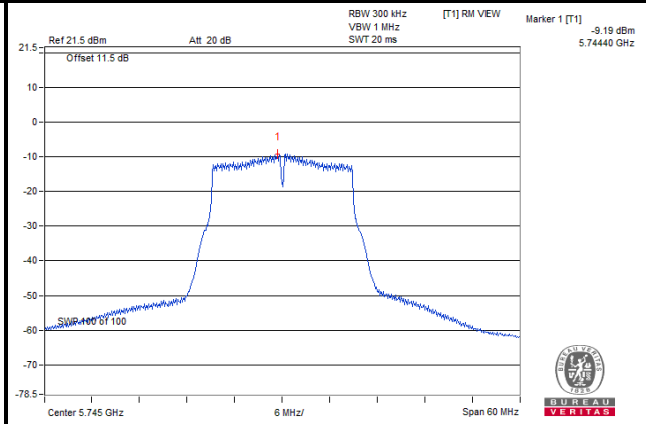
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

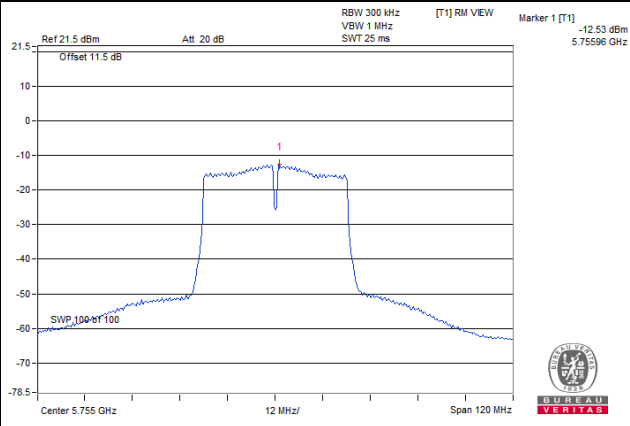
802.11a



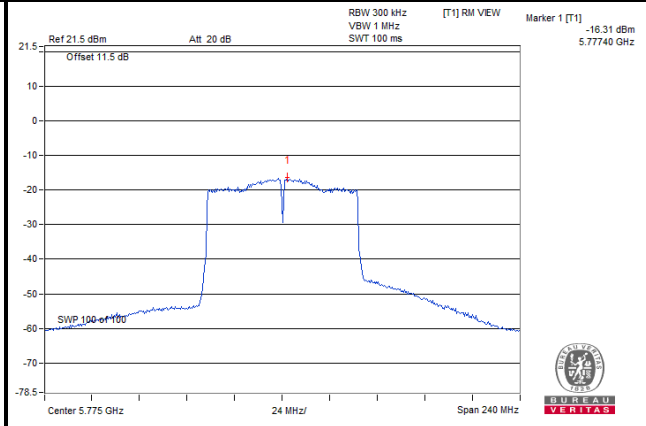
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

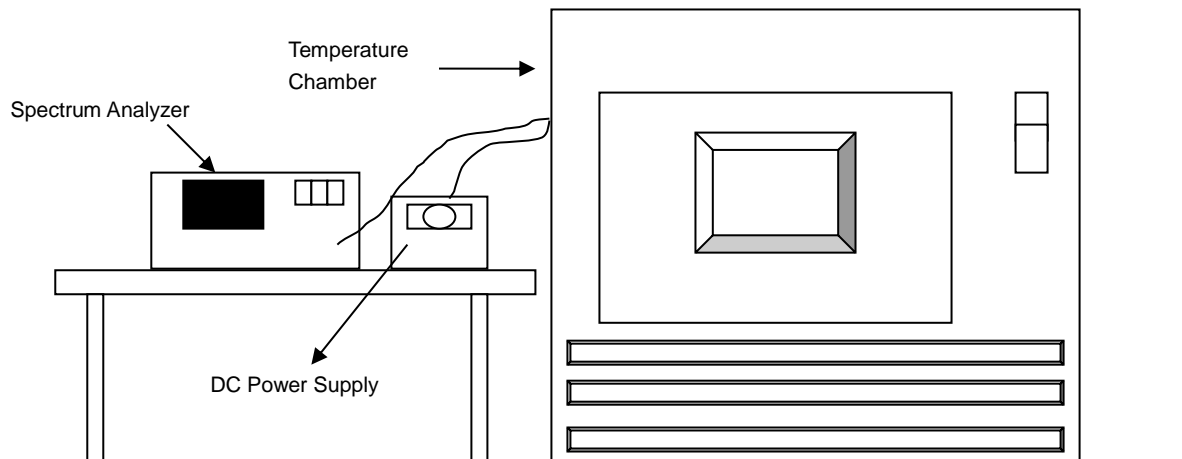


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
55	3.7	5179.9996	Pass	5180.002	Pass	5180.002	Pass	5179.999	Pass
50	3.7	5180.0069	Pass	5180.0089	Pass	5180.0061	Pass	5180.01	Pass
40	3.7	5179.9934	Pass	5179.9933	Pass	5179.9902	Pass	5179.9952	Pass
30	3.7	5179.9769	Pass	5179.9723	Pass	5179.972	Pass	5179.9761	Pass
20	3.7	5179.9851	Pass	5179.9841	Pass	5179.9818	Pass	5179.9825	Pass
10	3.7	5179.9991	Pass	5179.9972	Pass	5179.9976	Pass	5179.9961	Pass
0	3.7	5179.9995	Pass	5179.9985	Pass	5179.9951	Pass	5179.9997	Pass
-10	3.7	5180.0218	Pass	5180.0196	Pass	5180.0208	Pass	5180.0204	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	4.255	5179.9796	Pass	5179.9831	Pass	5179.9826	Pass	5179.9836	Pass
	3.7	5179.9851	Pass	5179.9841	Pass	5179.9818	Pass	5179.9825	Pass
	3.145	5179.9896	Pass	5179.9864	Pass	5179.9852	Pass	5179.9852	Pass

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.36	0.5	Pass
157	5785	16.37	0.5	Pass
165	5825	16.37	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.33	0.5	Pass
157	5785	17.13	0.5	Pass
165	5825	17.56	0.5	Pass

802.11ac (VHT40)

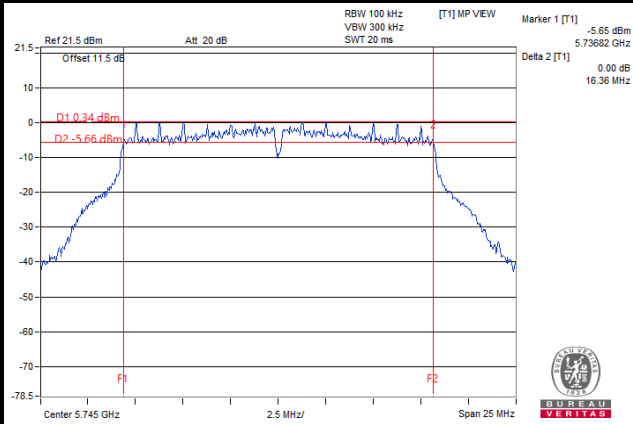
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.11	0.5	Pass
159	5795	35.65	0.5	Pass

802.11ac (VHT80)

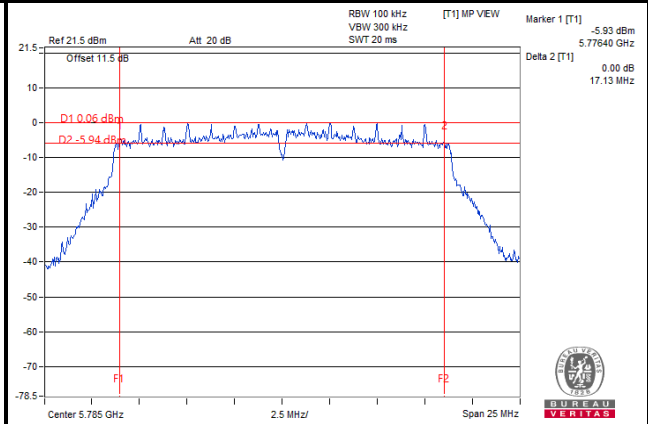
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.67	0.5	Pass

Spectrum Plot of Worst Value

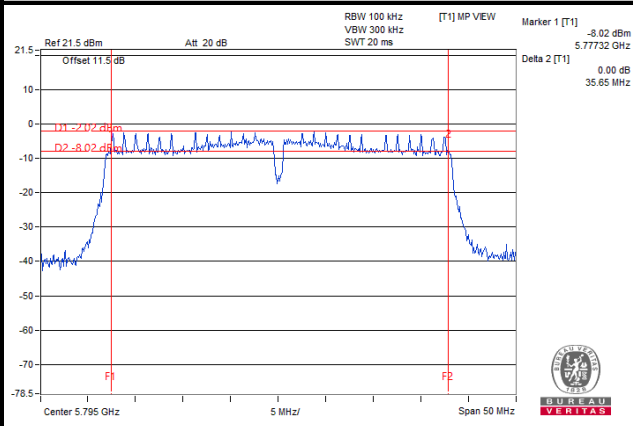
802.11a



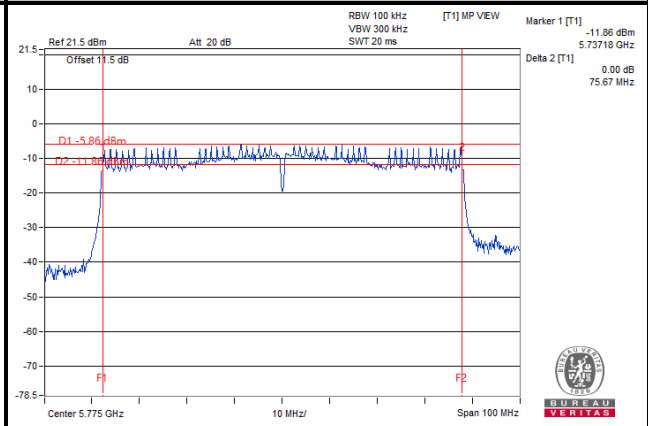
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



5 Pictures of Test Arrangements

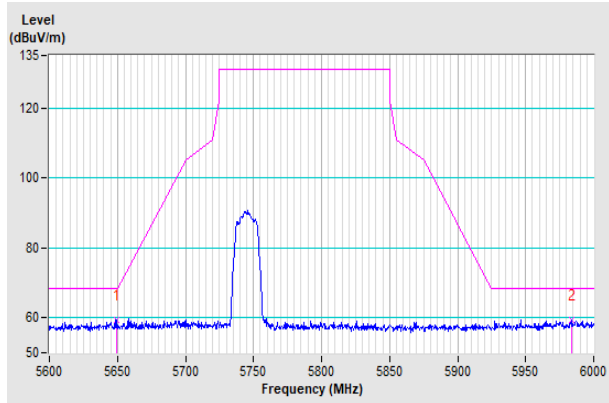
Please refer to the attached file (Test Setup Photo).

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

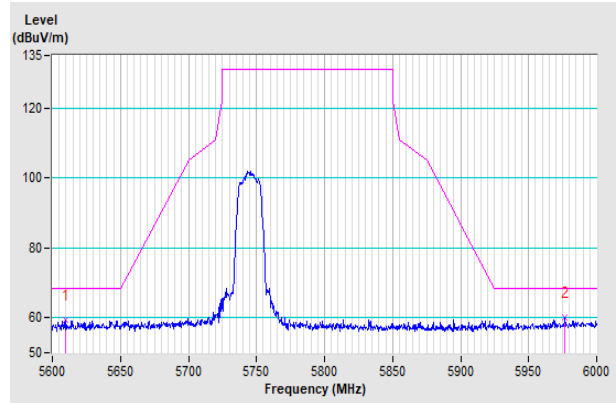
802.11a

CH 149 5745 MHz

Horizontal

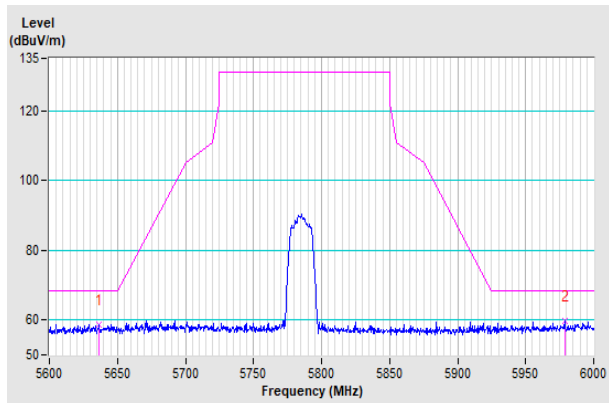


Vertical

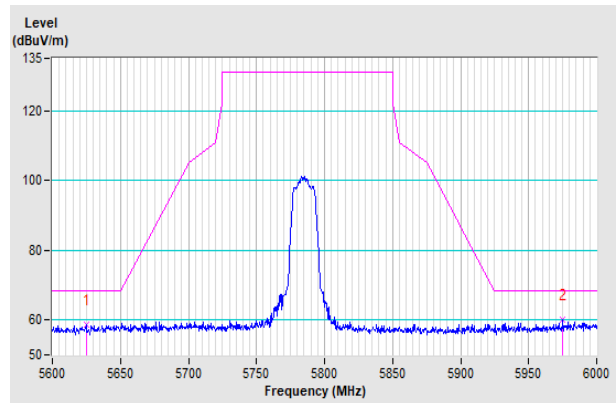


CH 157 5785 MHz

Horizontal

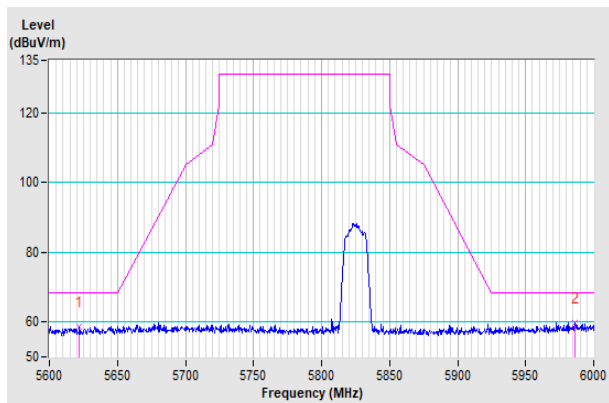


Vertical

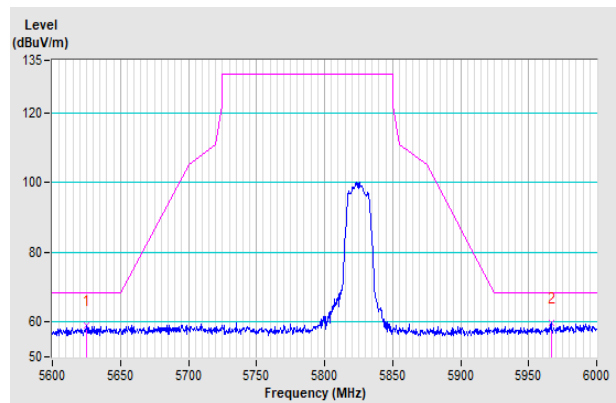


CH 165 5825 MHz

Horizontal



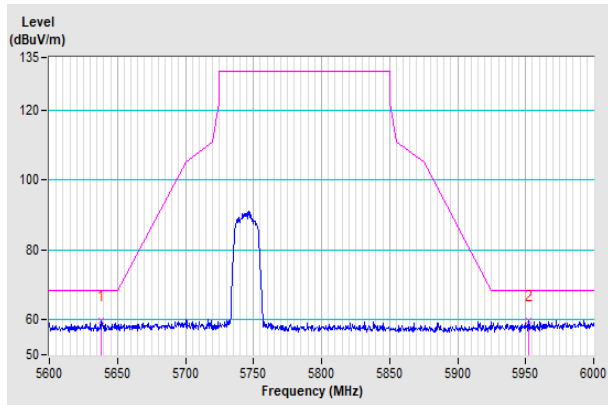
Vertical



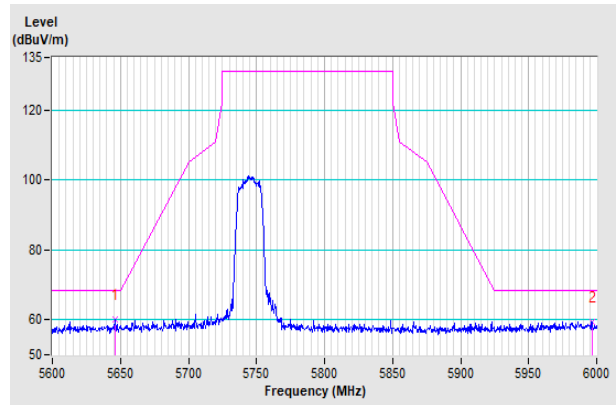
802.11ac (VHT20)

CH 149 5745 MHz

Horizontal

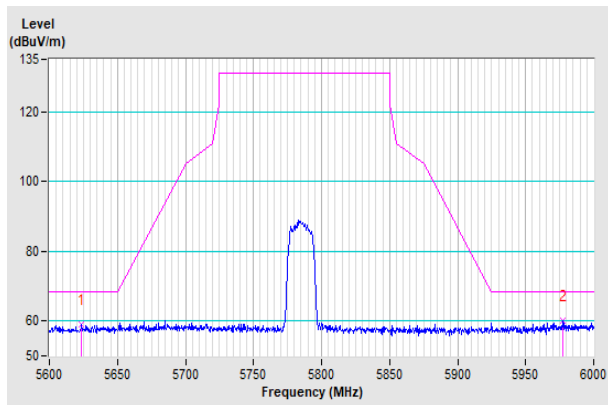


Vertical

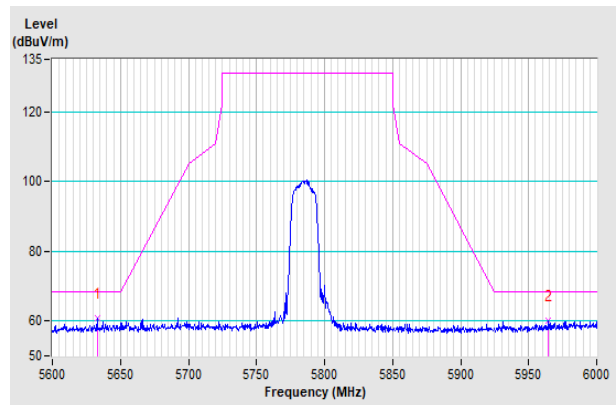


CH 157 5785 MHz

Horizontal

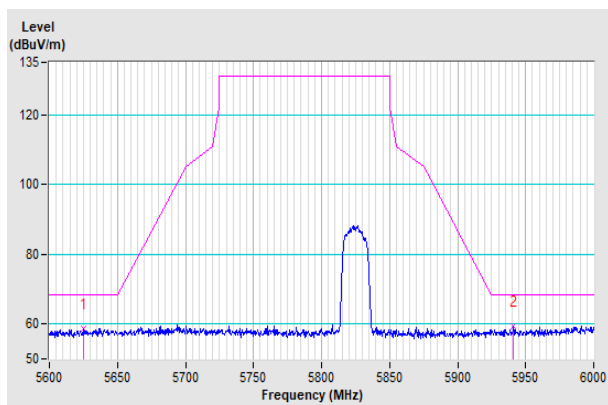


Vertical

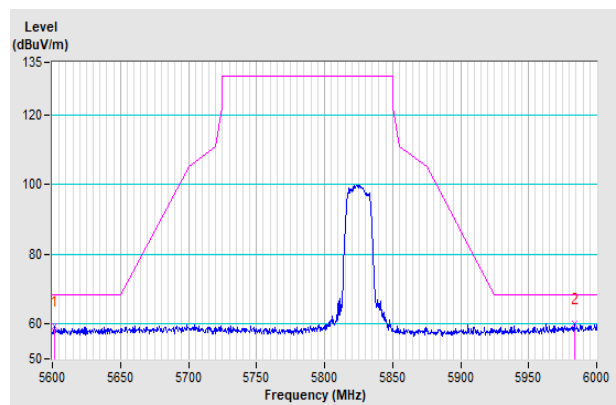


CH 165 5825 MHz

Horizontal



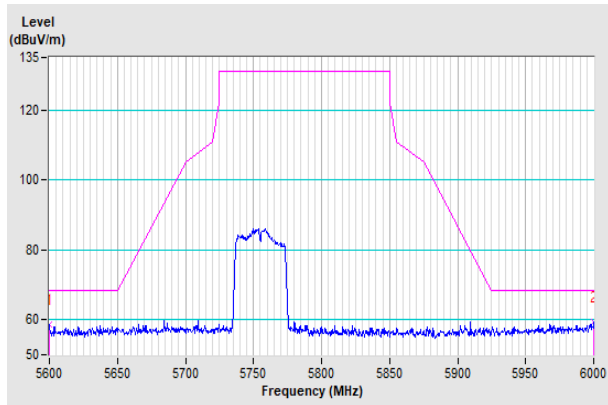
Vertical



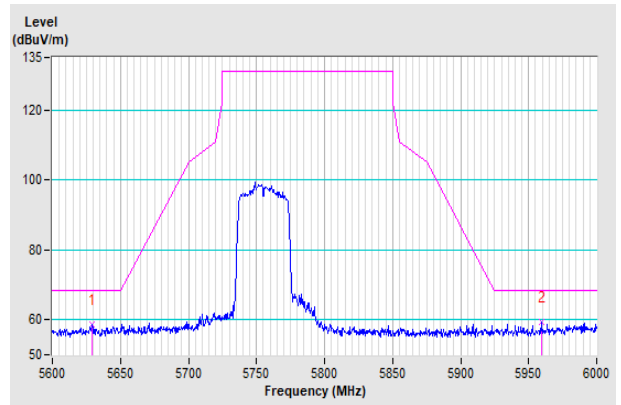
802.11ac (VHT40)

CH 151 5755 MHz

Horizontal

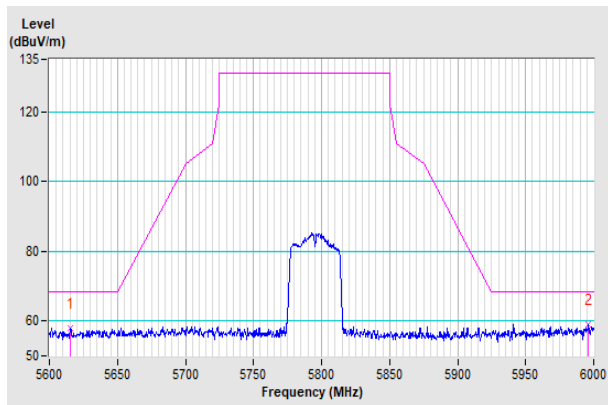


Vertical

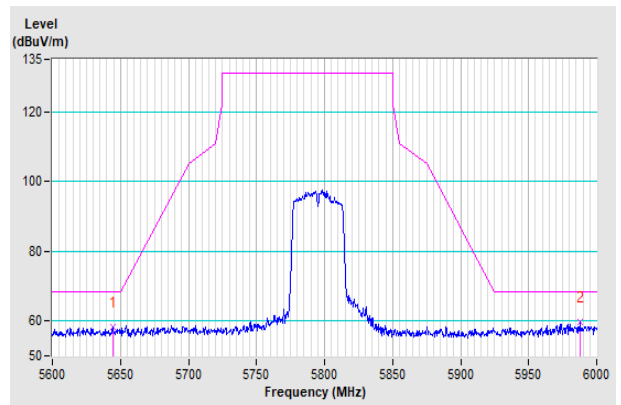


CH 159 5795 MHz

Horizontal



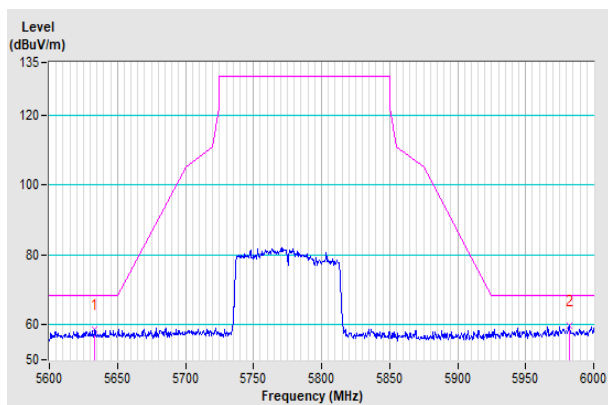
Vertical



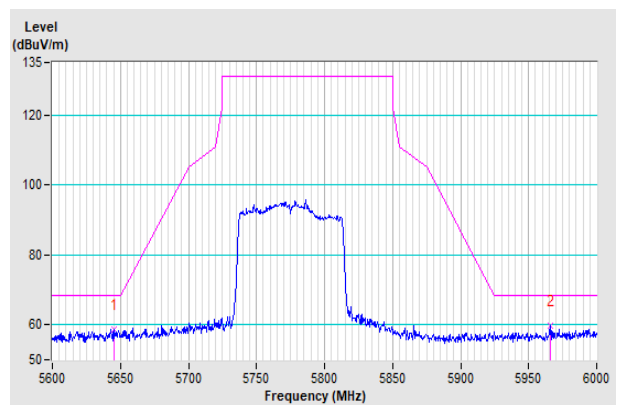
802.11ac (VHT80)

CH 155 5775 MHz

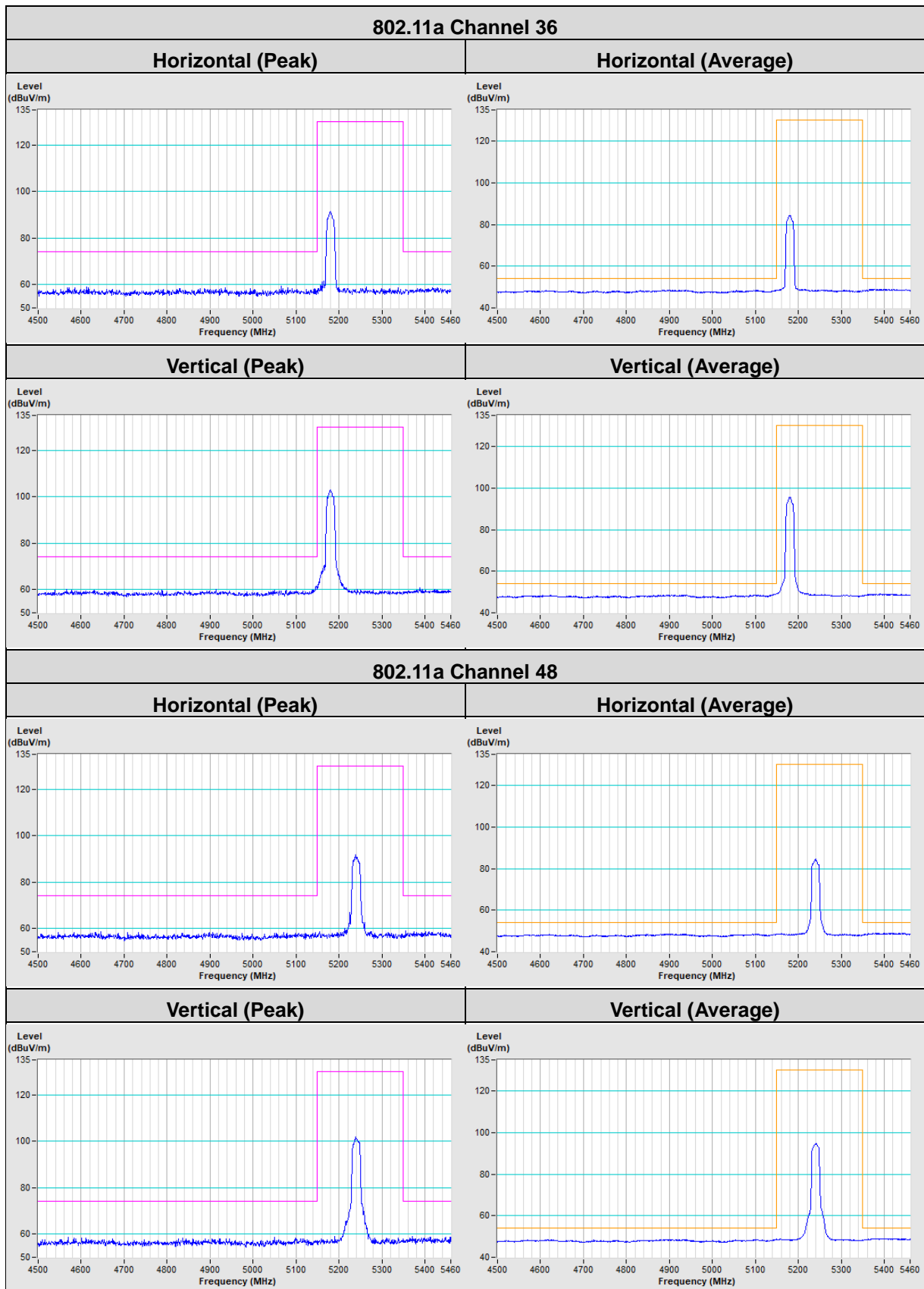
Horizontal



Vertical

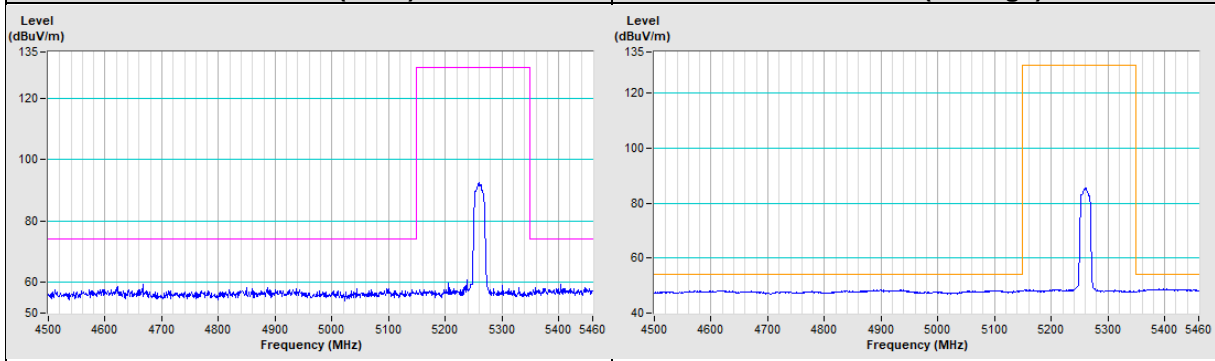


Annex B- Band Edge Measurement

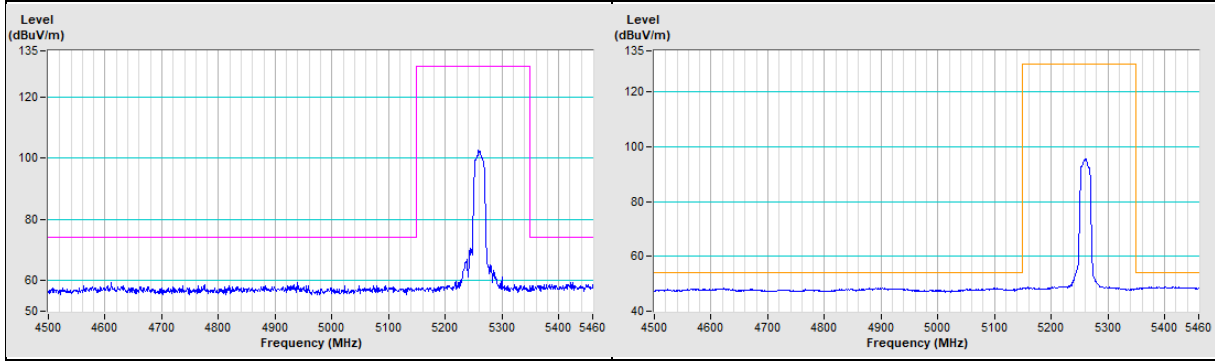


802.11a Channel 52

Horizontal (Peak)	Horizontal (Average)
--------------------------	-----------------------------

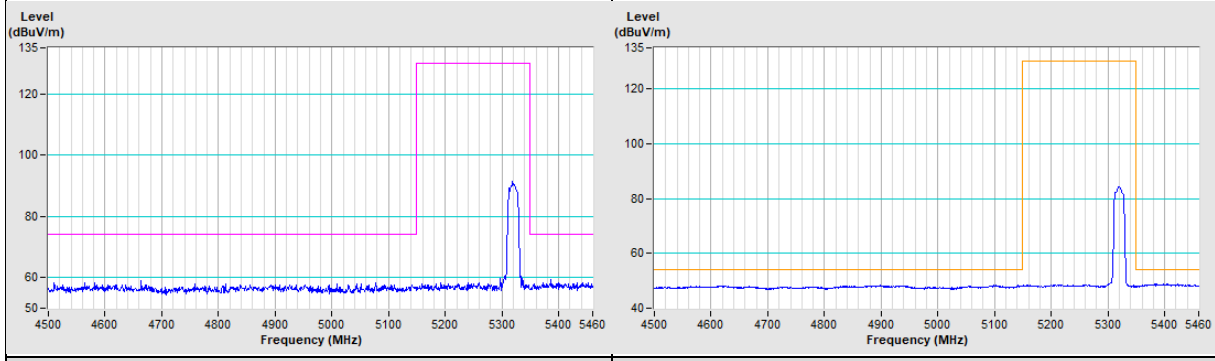


Vertical (Peak)	Vertical (Average)
------------------------	---------------------------

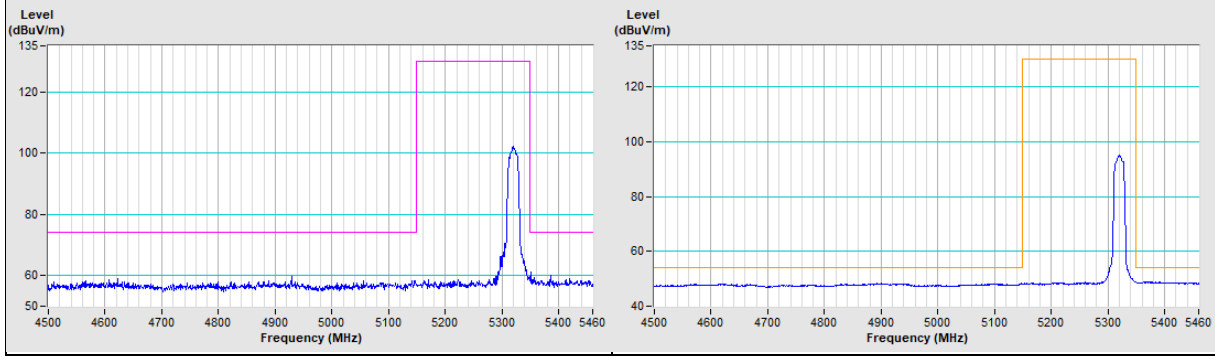


802.11a Channel 64

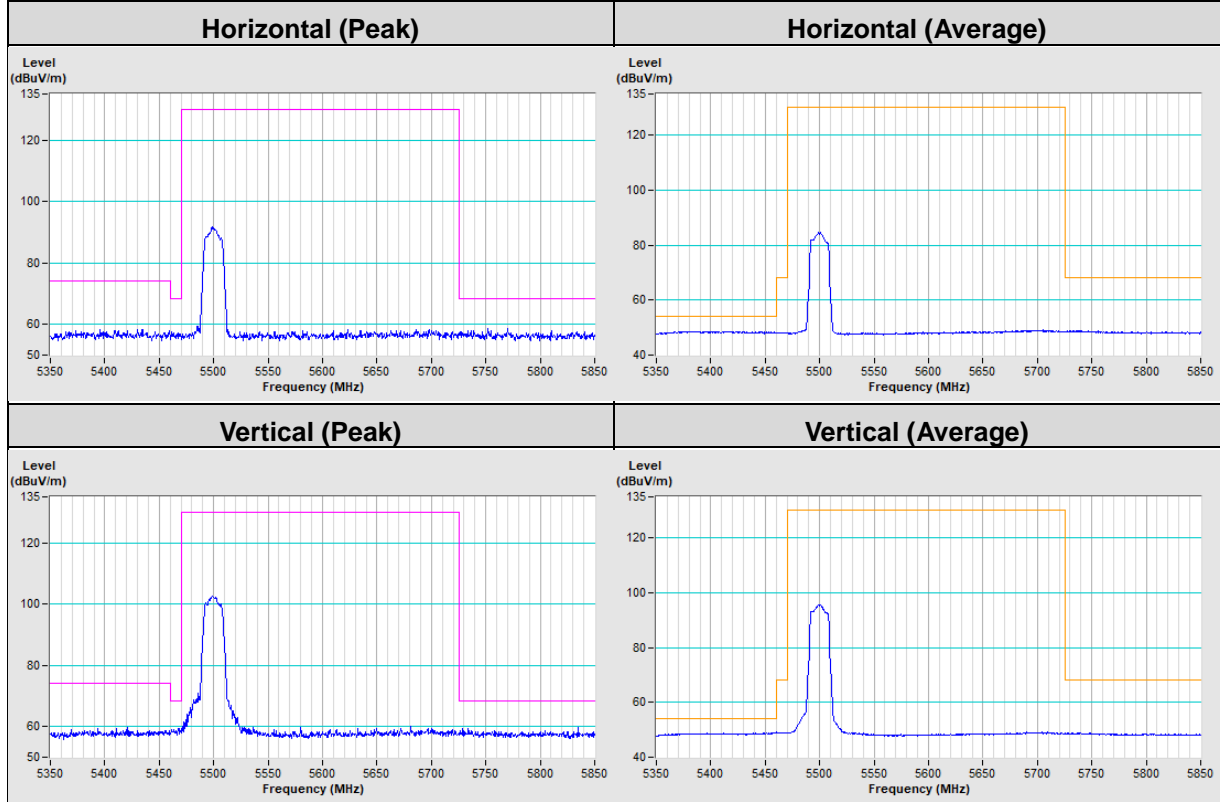
Horizontal (Peak)	Horizontal (Average)
--------------------------	-----------------------------



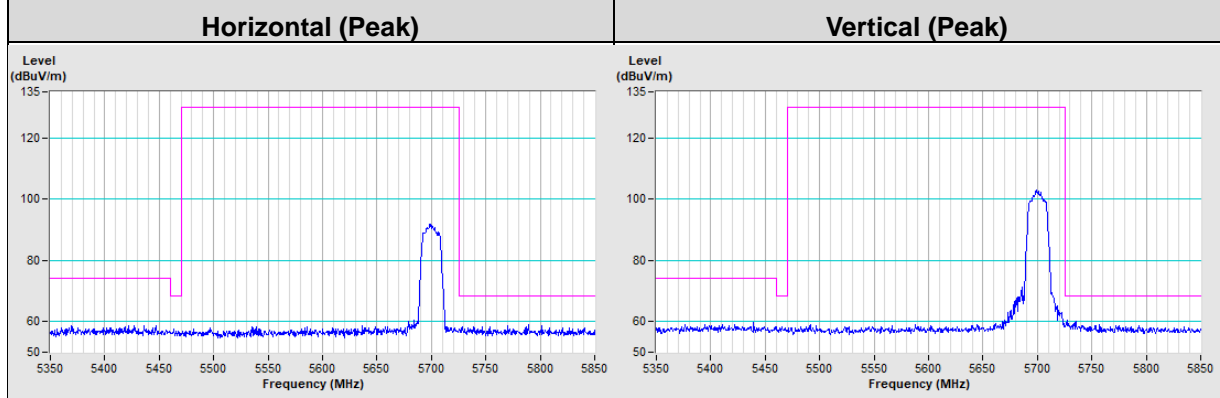
Vertical (Peak)	Vertical (Average)
------------------------	---------------------------



802.11a Channel 100

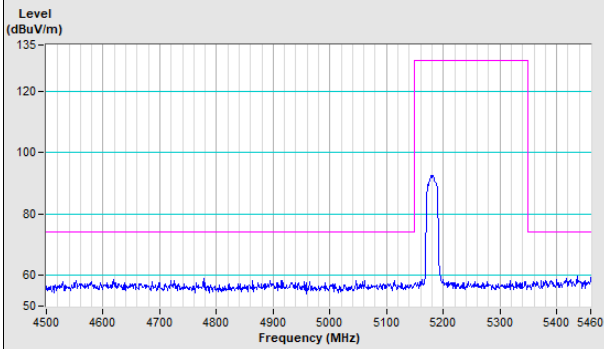


802.11a Channel 140

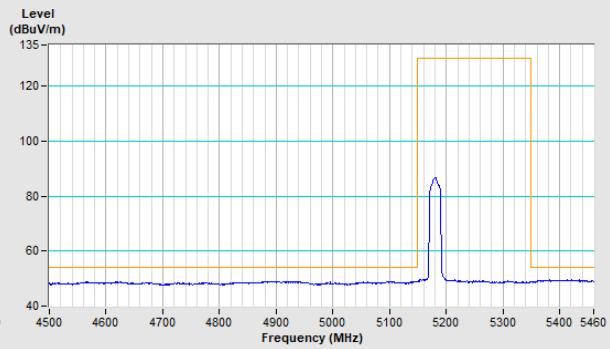


802.11ac (VHT20) Channel 36

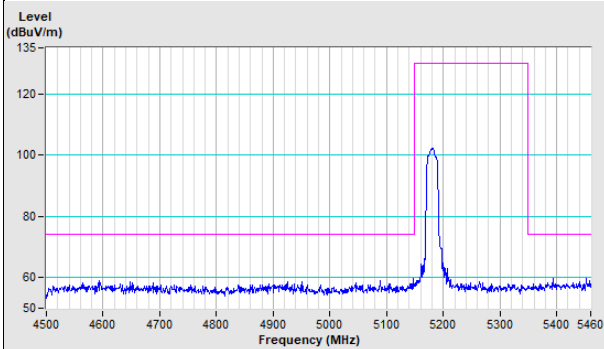
Horizontal (Peak)



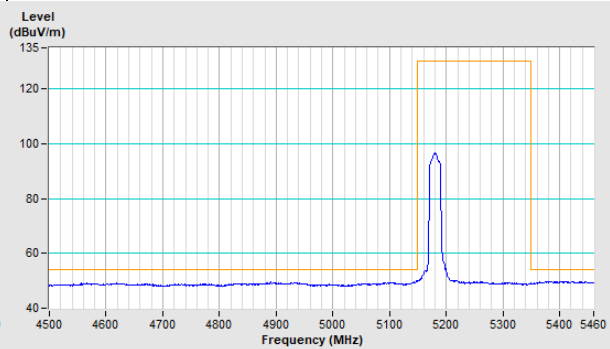
Horizontal (Average)



Vertical (Peak)

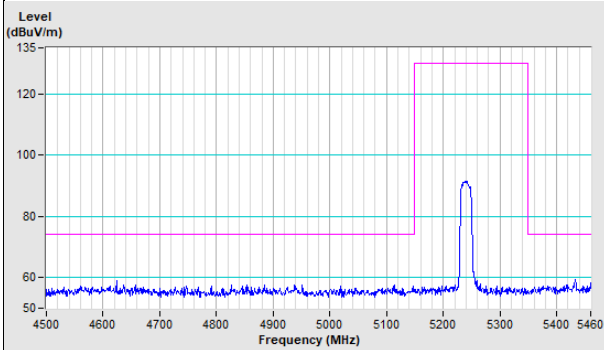


Vertical (Average)

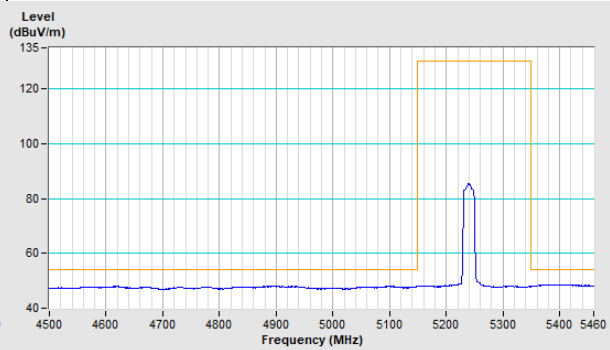


802.11ac (VHT20) Channel 48

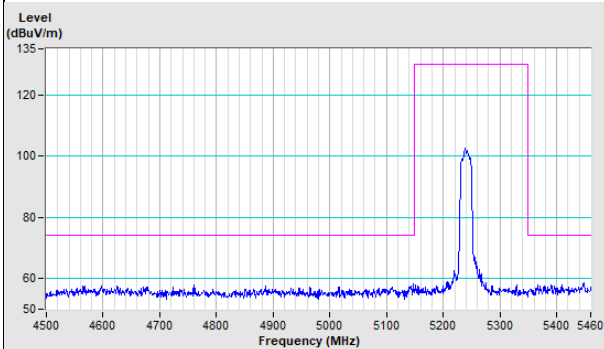
Horizontal (Peak)



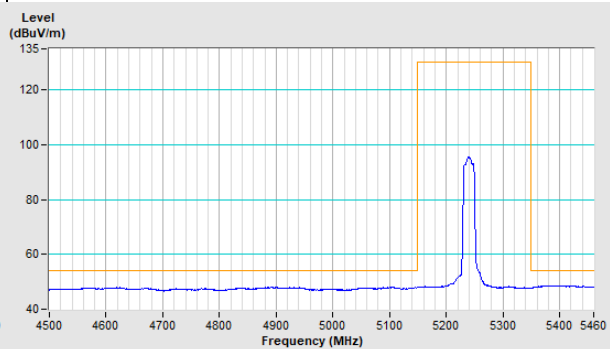
Horizontal (Average)



Vertical (Peak)

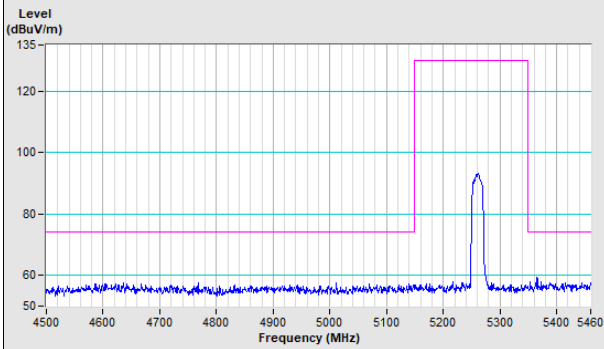


Vertical (Average)

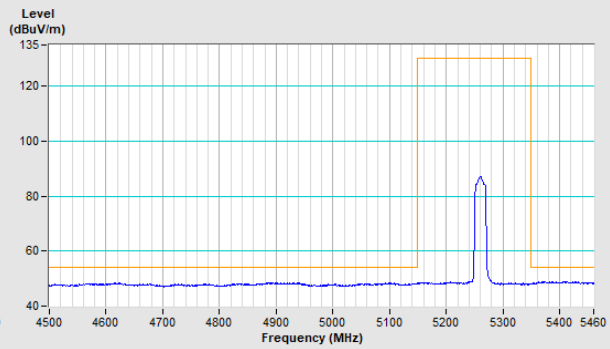


802.11ac (VHT20) Channel 52

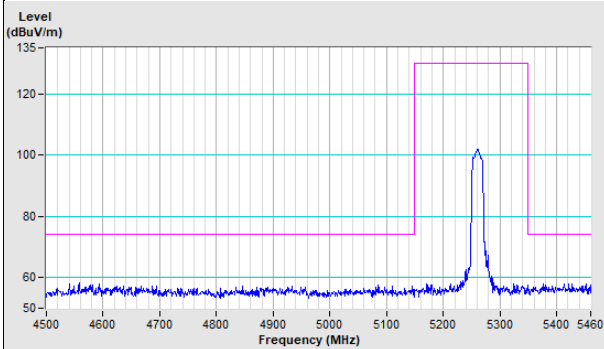
Horizontal (Peak)



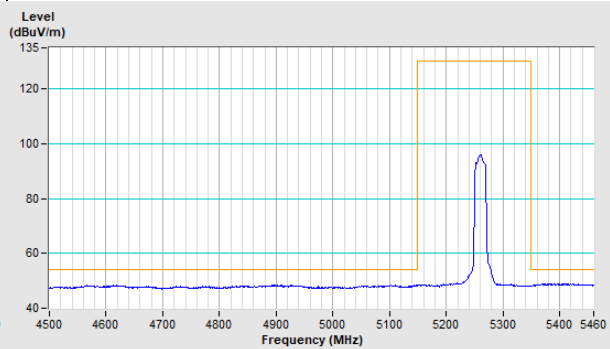
Horizontal (Average)



Vertical (Peak)

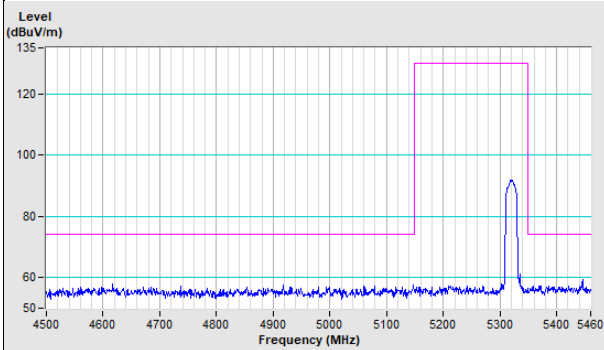


Vertical (Average)

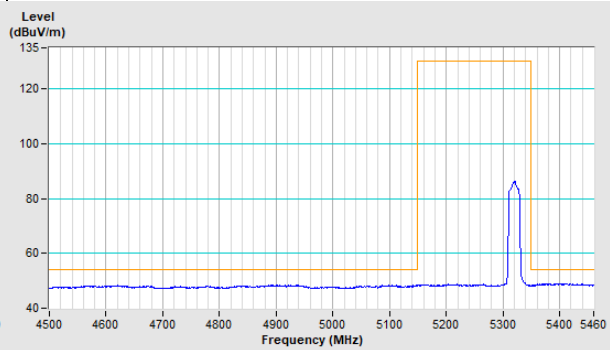


802.11ac (VHT20) Channel 64

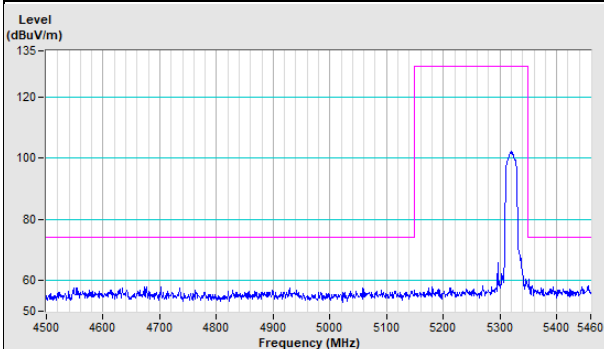
Horizontal (Peak)



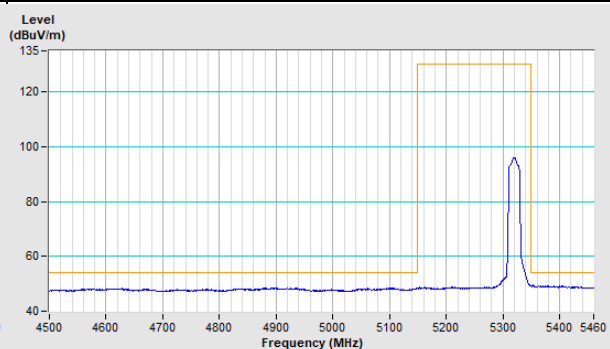
Horizontal (Average)



Vertical (Peak)

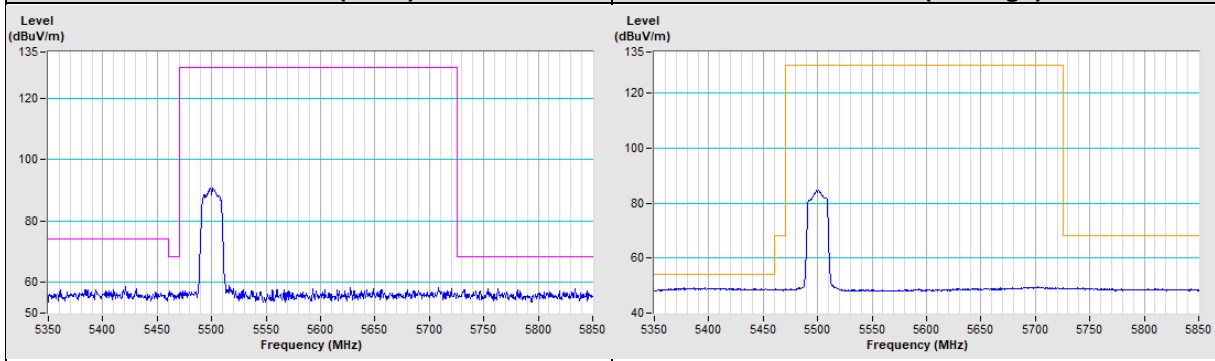


Vertical (Average)

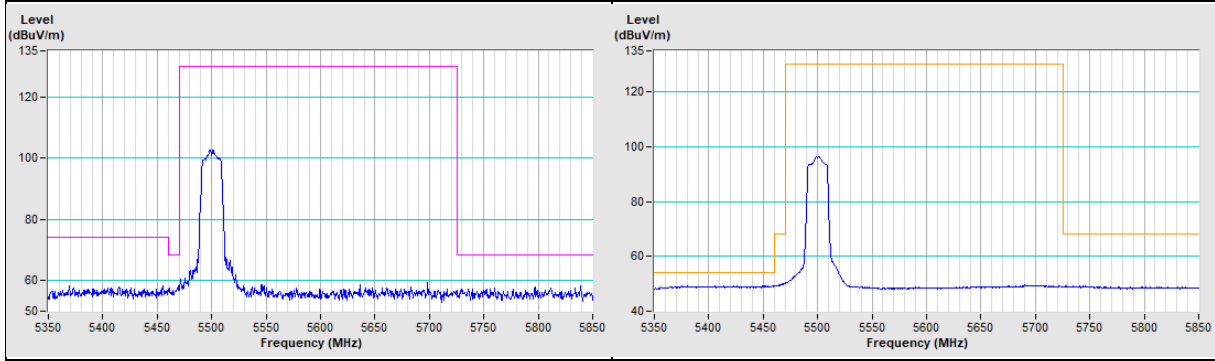


802.11ac (VHT20) Channel 100

Horizontal (Peak)	Horizontal (Average)
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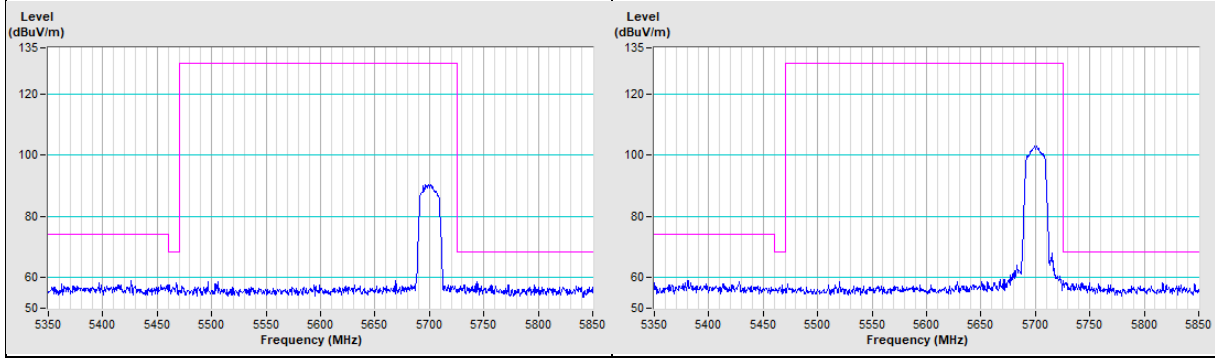


Vertical (Peak)	Vertical (Average)
------------------------	---------------------------



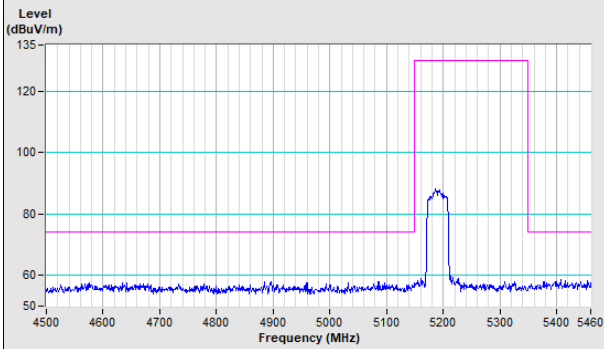
802.11ac (VHT20) Channel 140

Horizontal (Peak)	Vertical (Peak)
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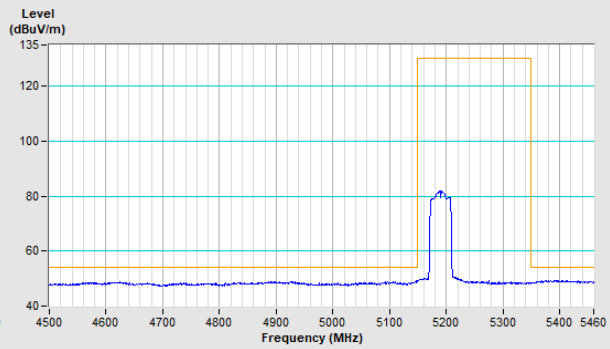


802.11ac (VHT40) Channel 38

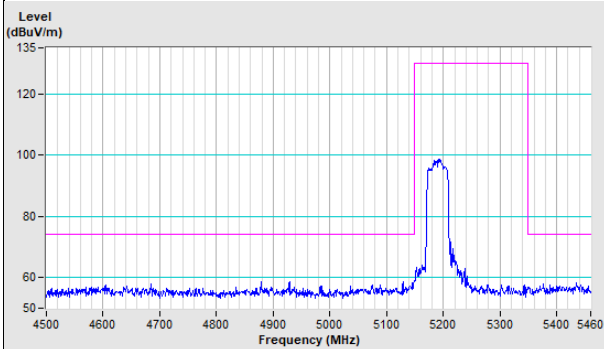
Horizontal (Peak)



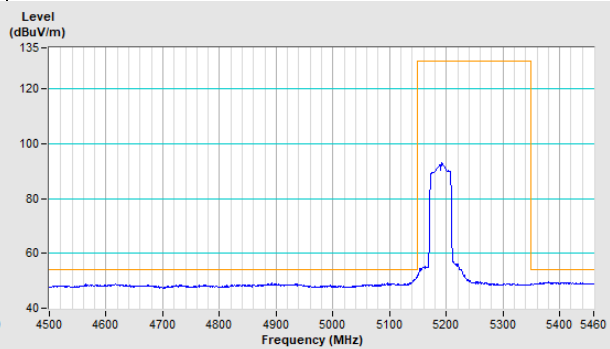
Horizontal (Average)



Vertical (Peak)

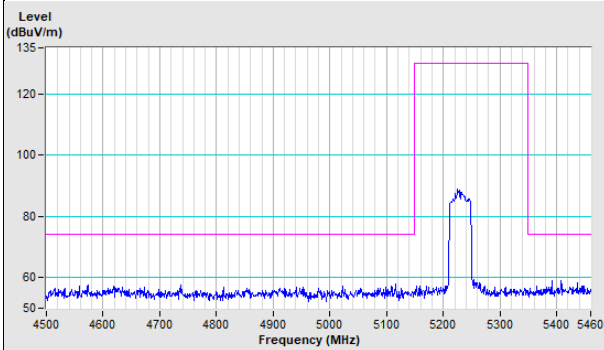


Vertical (Average)

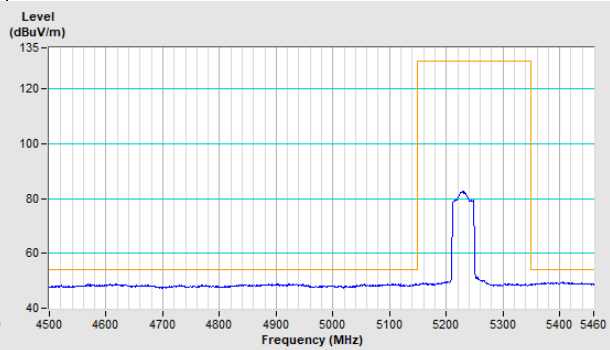


802.11ac (VHT40) Channel 46

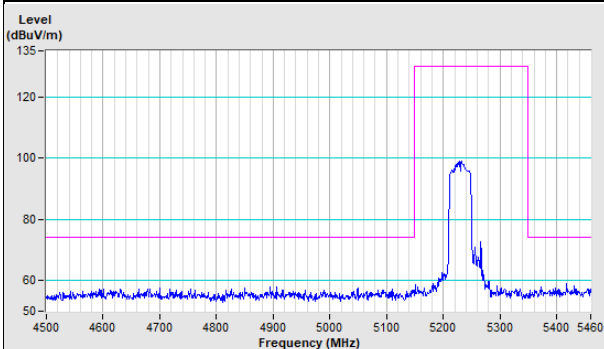
Horizontal (Peak)



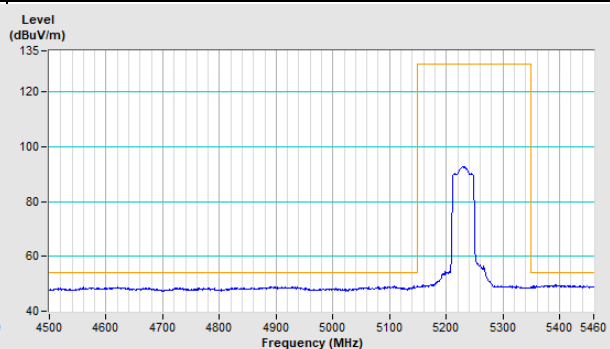
Horizontal (Average)



Vertical (Peak)

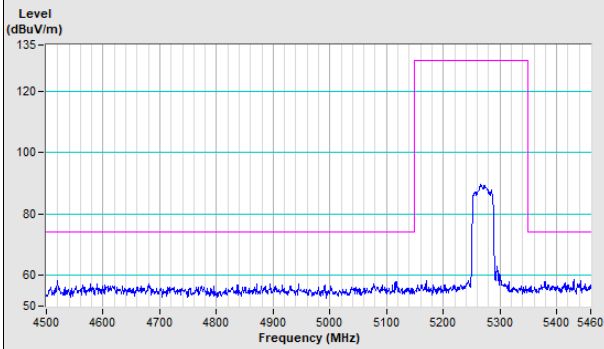


Vertical (Average)

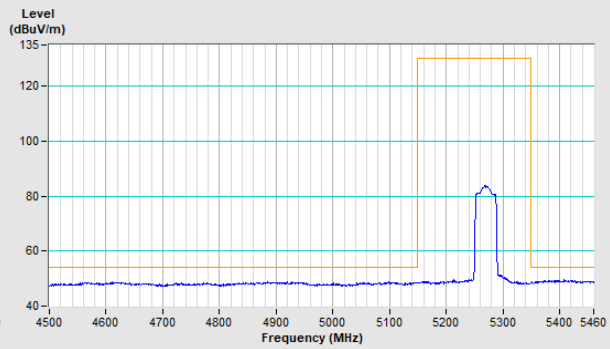


802.11ac (VHT40) Channel 54

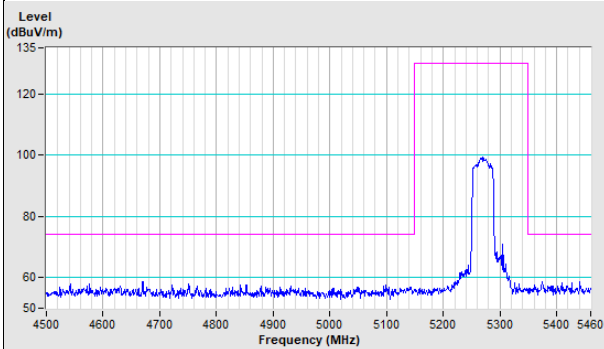
Horizontal (Peak)



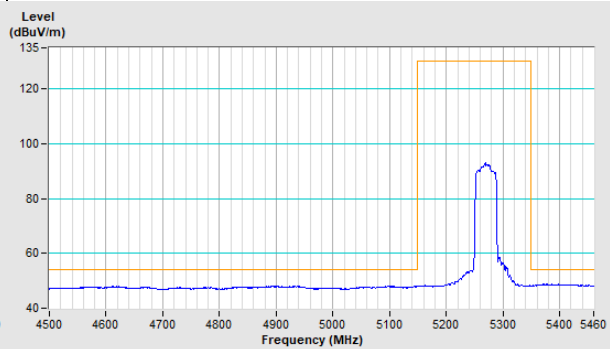
Horizontal (Average)



Vertical (Peak)

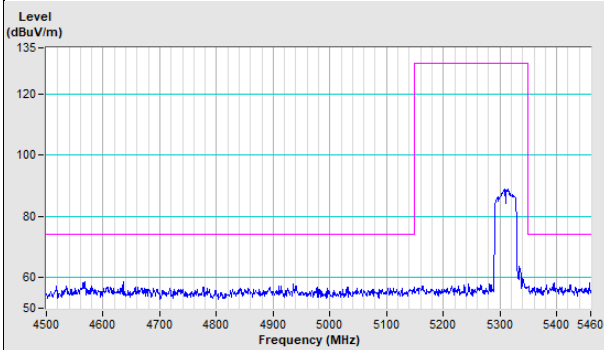


Vertical (Average)

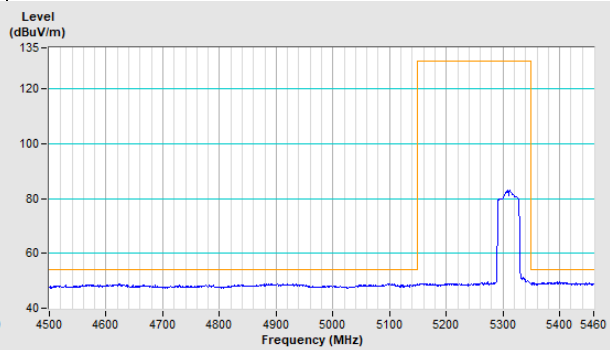


802.11ac (VHT40) Channel 62

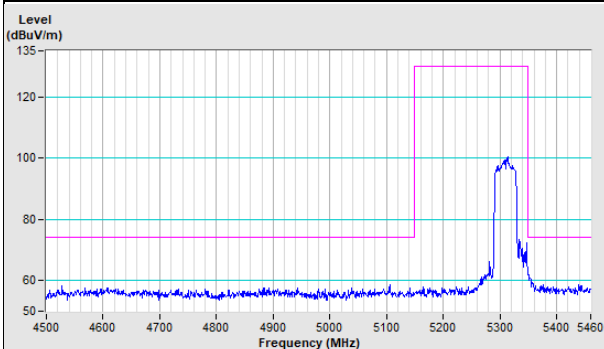
Horizontal (Peak)



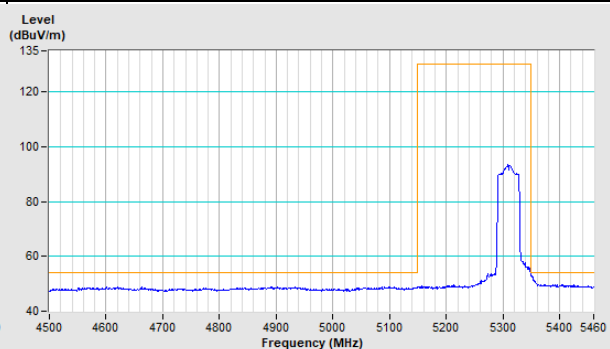
Horizontal (Average)



Vertical (Peak)

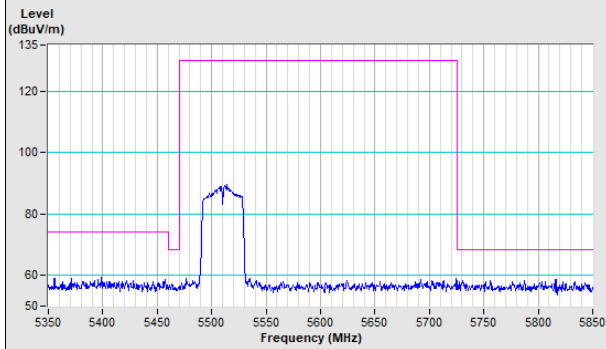


Vertical (Average)

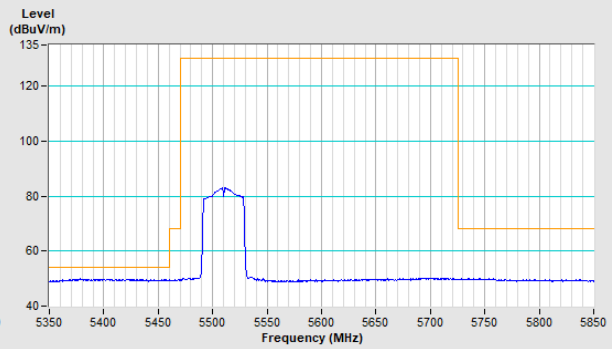


802.11ac (VHT40) Channel 102

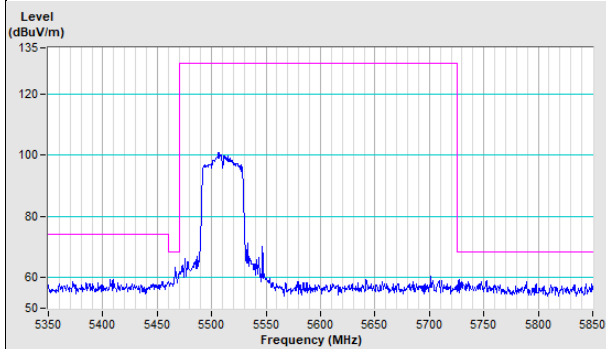
Horizontal (Peak)



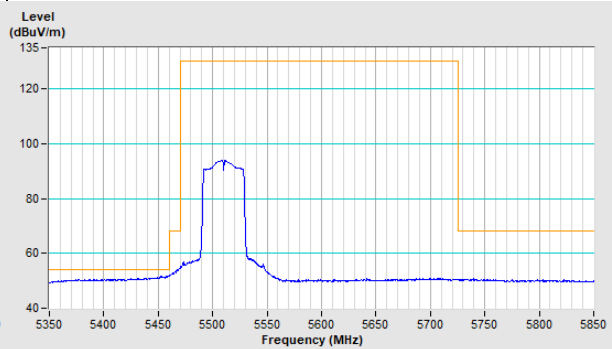
Horizontal (Average)



Vertical (Peak)

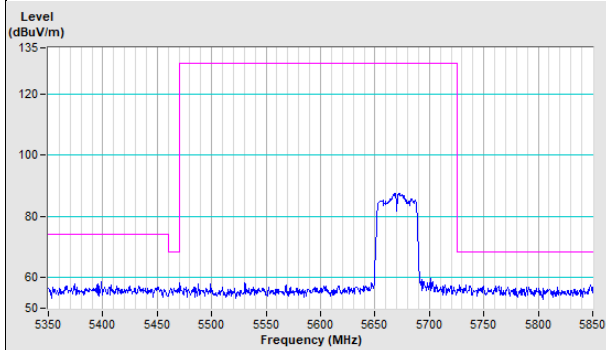


Vertical (Average)

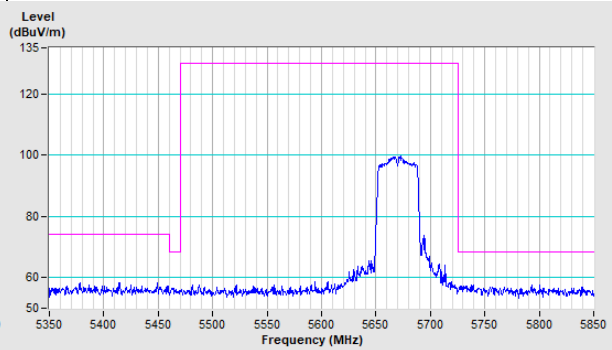


802.11ac (VHT40) Channel 134

Horizontal (Peak)

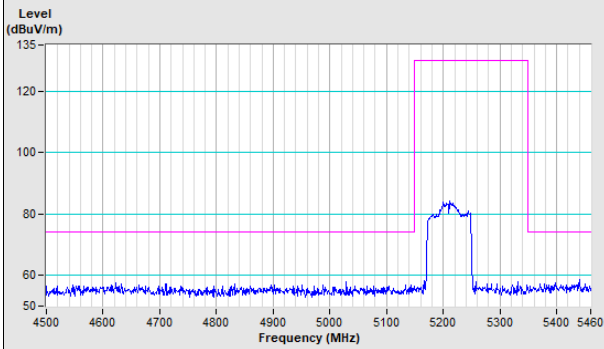


Vertical (Peak)

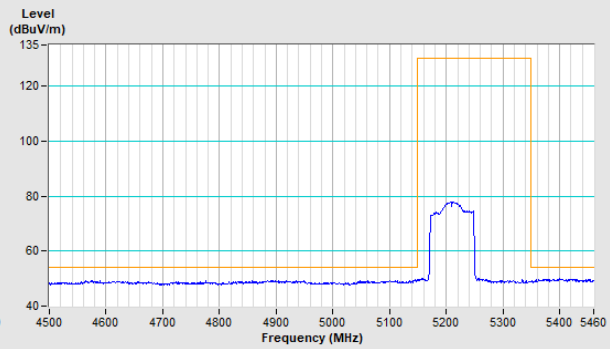


802.11ac (VHT80) Channel 42

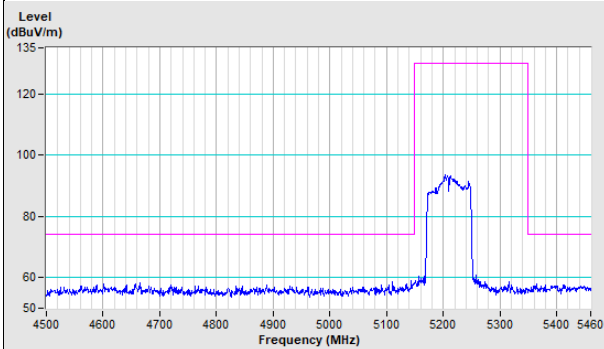
Horizontal (Peak)



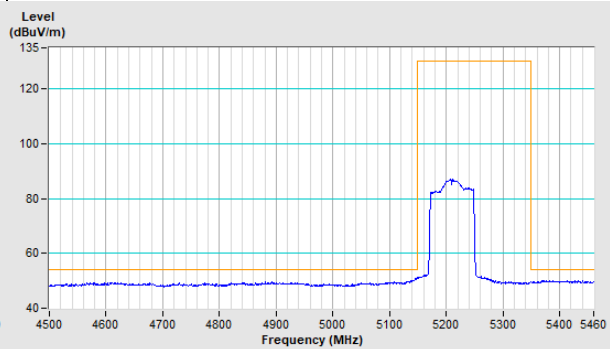
Horizontal (Average)



Vertical (Peak)

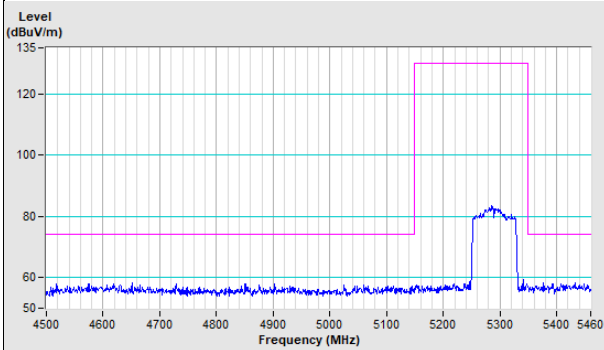


Vertical (Average)

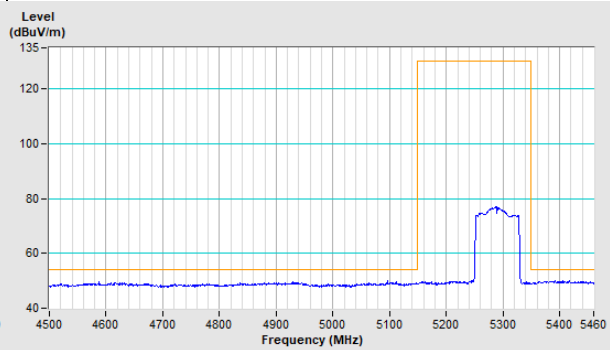


802.11ac (VHT80) Channel 58

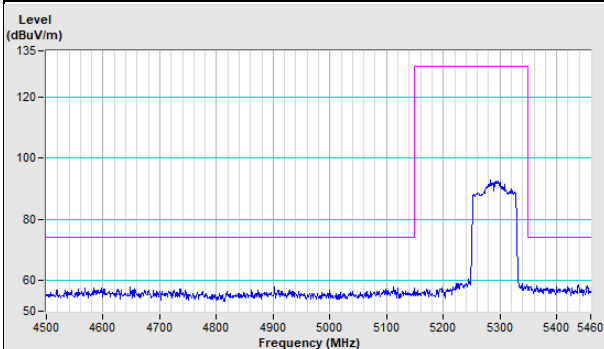
Horizontal (Peak)



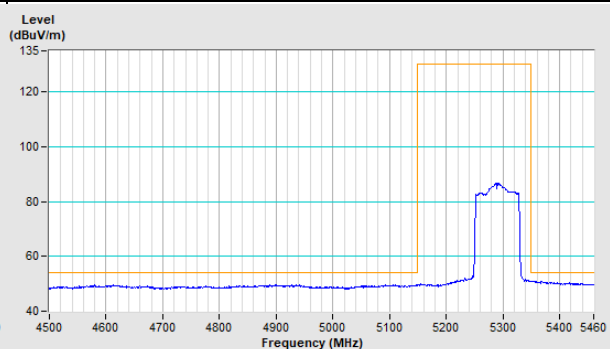
Horizontal (Average)



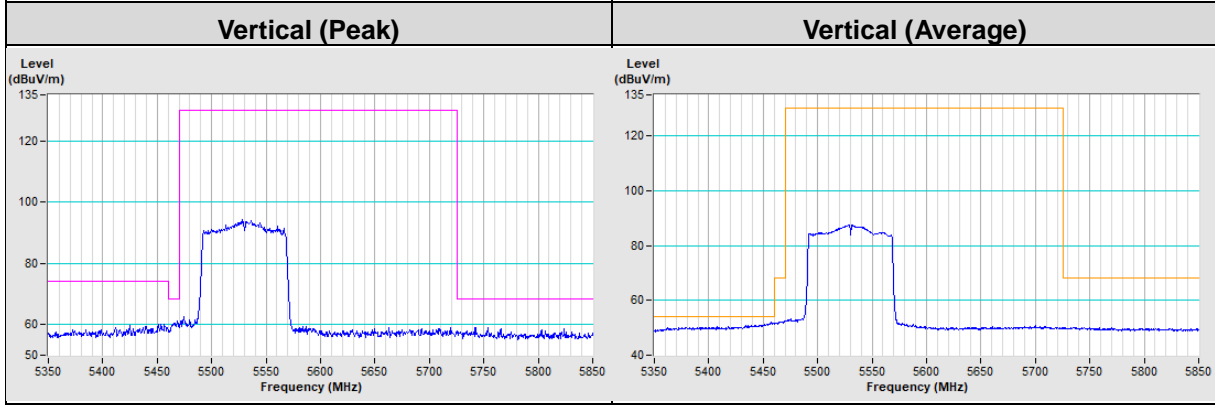
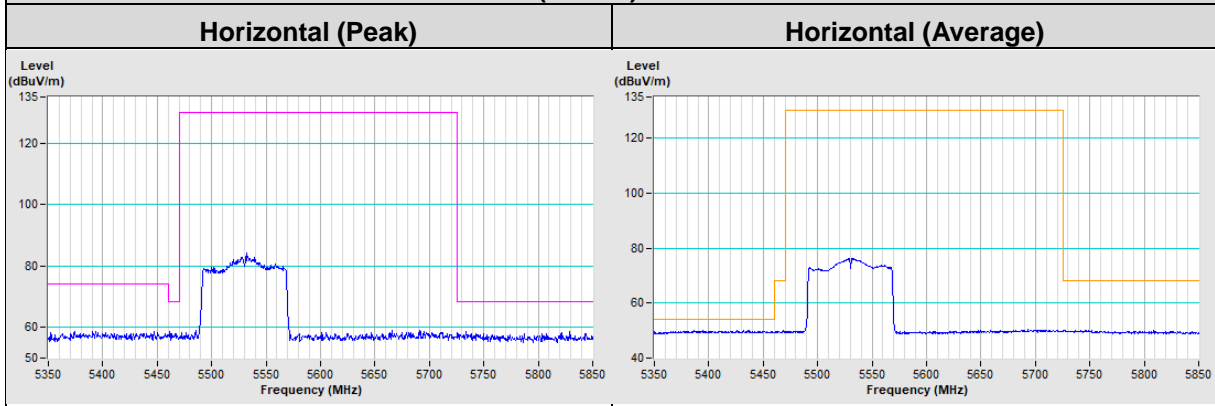
Vertical (Peak)



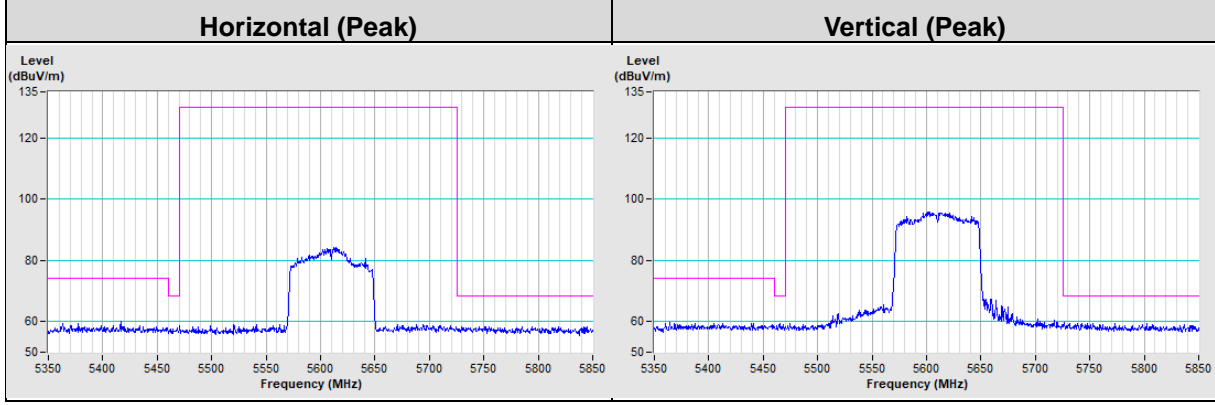
Vertical (Average)



802.11ac (VHT80) Channel 106



802.11ac (VHT80) Channel 122



Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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