

## FCC Test Report

**Report No.:** RFBCKS-WTW-P22040223A

**FCC ID:** UXX-S5A235A

**Test Model:** S5A235A

**Received Date:** Apr. 08, 2022

**Test Date:** Apr. 21 ~ Aug. 03, 2022

**Issued Date:** Dec. 02, 2022

**Applicant:** Cradlepoint, Inc.

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

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**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P22040223A	Original release.	Dec. 02, 2022

## 1 Certificate of Conformity

**Product:** Ruggedized LTE Router

**Brand:** Cradlepoint, Inc.

**Test Model:** S5A235A

**Sample Status:** Engineering sample

**Applicant:** Cradlepoint, Inc.

**Test Date:** Apr. 21 ~ Aug. 03, 2022

**Standards:** 47 CFR FCC Part 15, Subpart E (Section 15.407)  
ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :**                     *Polly Chien*                     , **Date:**                     Dec. 02, 2022                      
Polly Chien / Specialist

**Approved by :**                     *Jeremy Lin*                     , **Date:**                     Dec. 02, 2022                      
Jeremy Lin / Project Engineer

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(9)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -15.21dB at 0.34943MHz.
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 -0.4dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is R-SMA and SMA not a standard connector.

### Note:

- For 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 A. 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	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	Ruggedized LTE Router
Brand	Cradlepoint, Inc.
Test Model	S5A235A
Sample Status	Engineering sample
Power Supply Rating	12Vdc from adapter 12-24V from DC Source
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 886.7Mbps 802.11ax: up to 1201Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5720MHz
Number of Channel	5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 5500 ~ 5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 12 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 6 802.11ac (VHT80), 802.11ax (HE80): 3
Output Power	CDD Mode: 5260 ~ 5320MHz: 119.557mW 5500 ~ 5720MHz: 125.326mW Beamforming Mode: 5260 ~ 5320MHz: 117.925mW 5500 ~ 5720MHz: 116.699mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Refer to Note
Cable Supplied	Refer to Note
Contains FCC ID (WWAN module)	N7NEM74B

**Note:**

1. This report is prepared for FCC class III permissive change. The differences compared with the original report (BV CPS report no.: RFBCKS-WTW-P22040223-1) are adding 5.26GHz to 5.32GHz and 5.50GHz to 5.72GHz, straddle channels (CH144, CH142, CH138) by software and DC source.

2. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	Beamforming Mode	TX Function
802.11a	Not Support	2TX
802.11n (HT20)	Support	2TX
802.11n (HT40)	Support	2TX
802.11ac (VHT20)	Support	2TX
802.11ac (VHT40)	Support	2TX
802.11ac (VHT80)	Support	2TX
802.11ax (HE20)	Support	2TX
802.11ax (HE40)	Support	2TX
802.11ax (HE80)	Support	2TX

\* The bandwidth and modulation are similar for 802.11n mode for 20MHz (40MHz), 802.11ac mode for 20MHz (40MHz, 80MHz) and 802.11ax mode for 20MHz (40MHz, 80MHz). Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

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

3. After pretest OFDMA mode, the Full RU is the worst case and record in this report.

4. The following antennas were provided to the EUT.

Ant. No.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (MHz)	Antenna Type	Connector Type
Wi-Fi Set1	1	Cradlepoint	test antenna 1	5.5069	2400-2483.5	Monopole	R-SMA
				5.8125	5150-5250	Monopole	R-SMA
				5.7725	5250-5350	Monopole	R-SMA
				5.7133	5425-5725	Monopole	R-SMA
				5.9957	5725-5850	Monopole	R-SMA
	2	Cradlepoint	test antenna 1	5.5069	2400-2483.5	Monopole	R-SMA
				5.8125	5150-5250	Monopole	R-SMA
				5.7725	5250-5350	Monopole	R-SMA
				5.7133	5425-5725	Monopole	R-SMA
				5.9957	5725-5850	Monopole	R-SMA
Wi-Fi Set2	1	PANORAMA	LG-IN2457	2	2400-2483.5	Monopole	R-SMA
				1.1	5150-5250	Monopole	R-SMA
				2.4	5250-5350	Monopole	R-SMA
				3.1	5425-5725	Monopole	R-SMA
				3.5	5725-5850	Monopole	R-SMA
	2	PANORAMA	LG-IN2457	2.4	2400-2483.5	Monopole	R-SMA
				0.9	5150-5250	Monopole	R-SMA
				1.7	5250-5350	Monopole	R-SMA
				2.9	5425-5725	Monopole	R-SMA
				3.5	5725-5850	Monopole	R-SMA



Ant. No.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (MHz)	Antenna Type	Connector Type
Wi-Fi Set3	1	WNC	170836-000	2.47	2400-2483.5	Dipole	R-SMA
				2.18	5150-5250	Dipole	R-SMA
				2.19	5250-5350	Dipole	R-SMA
				2.14	5425-5725	Dipole	R-SMA
				2.47	5725-5850	Dipole	R-SMA
	2	WNC	170836-000	2.47	2400-2483.5	Dipole	R-SMA
				2.18	5150-5250	Dipole	R-SMA
				2.19	5250-5350	Dipole	R-SMA
				2.14	5425-5725	Dipole	R-SMA
				2.47	5725-5850	Dipole	R-SMA
BT	1	Cradlepoint	170847-000	2.16	2400-2500	Dipole	R-SMA
GPS	1	PANORAMA	LG-IN2457	26	1562-1612	Dipole	SMA
GPS	2	Taoglas	AA.162	30	1562-1612	Dipole	SMA
LTE Set1	1	Cradlepoint	170801-000	1.42	619-790	Dipole	SMA
				0.88	1445-1515	Dipole	SMA
				2.69	1710-2700	Dipole	SMA
				4.13	3400-3700	Dipole	SMA
				4.29	5150-5925	Dipole	SMA
LTE Set2	2	Cradlepoint	170801-000	1.42	619-790	Dipole	SMA
				0.88	1445-1515	Dipole	SMA
				2.69	1710-2700	Dipole	SMA
				4.13	3400-3700	Dipole	SMA
				4.29	5150-5925	Dipole	SMA
LTE Set1	1	PANORAMA	LG-IN2457	0.5	617-698	Monopole	SMA
				1.3	699-798	Monopole	SMA
				1.9	807- 862	Monopole	SMA
				1.6	880-960	Monopole	SMA
				1.5	1427-1518	Monopole	SMA
				2	1625-1661	Monopole	SMA
				1.6	1710-1920	Monopole	SMA
				2.2	1920-2170	Monopole	SMA
				1.2	2300-2400	Monopole	SMA
				1.3	2496-2690	Monopole	SMA
				2.2	3300-4200	Monopole	SMA
				1.9	4400-5000	Monopole	SMA
LTE Set2	2	PANORAMA	LG-IN2457	0.15	617-698	Monopole	SMA
				1.5	699-798	Monopole	SMA
				2	807- 862	Monopole	SMA
				2	880-960	Monopole	SMA
				2.6	1427-1518	Monopole	SMA
				1.8	1625-1661	Monopole	SMA
				1.6	1710-1920	Monopole	SMA
				2	1920-2170	Monopole	SMA
				1.5	2300-2400	Monopole	SMA
				1.4	2496-2690	Monopole	SMA
				2.6	3300-4200	Monopole	SMA
				1.7	4400-5000	Monopole	SMA

\*Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

\*After the monopole antennas pre-test, the worst case is the Wi-Fi Set1 antenna with maximum antenna gain, so it was finally selected for testing. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

5. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter 1	ADP	WA-36N12R	I/P: 100-240Vac, 50-60Hz, 0.9A O/P: 12.0Vdc, 3.0A Power cable: 1.5m without core
Adapter 2	Ktec	KSA-36W-120300D5	I/P: 100-240V~50/60Hz, 1.0A O/P: 12.0Vdc, 3.0A, 36.0W Power cable: 1.42m without core
DC Cable	Cradlepoint	170864-000	3m meter (Nien-Yi NYS4862)
Nebula dock (Expansion dock) Support Unit	Cradlepoint, Inc.	S0A235A	-

6. The EUT has two different configuration, after pretest the original one was the worst case for final test.

Configuration		
PCBA	PHY IC	eMMC
Original	QCA-8081	MTFC8GAMALGT-AAT
2nd Source	QCA-8080	THGBMJG6C1LBAU7

7. The EUT has two Power Supply mode, after pretest the AC Adapter was the worst case for final test.

Pre-Scan:	The Power Supply have the following modes: AC Adapter / DC source (12Vdc and 24Vdc). Pre-scan these modes of Power Supply and find the worst case as a representative test condition.
Worst Case:	Power Supply Worst Condition: AC Adapter

### 3.2 Description of Test Modes

#### 5260~5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

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

Channel	Frequency
58	5290MHz

#### For 5500 ~ 5720MHz:

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

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

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

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

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

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

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Antenna	Description
	RE $\geq$ 1G	RE<1G	PLC	APCM		
A1	√	√	√	√	Wi-Fi Set1 (Monopole)	EUT + Adapter 1
A2	-	√	√	-		EUT + Adapter 2
B1	√	√	√	-	Wi-Fi Set3 (Dipole)	EUT + Adapter 1
B2	-	√	√	-		EUT + Adapter 2

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

Note:

- The EUT's antenna was positioned and tested under the listed conditions:
  - The Monopole Antenna Parallel (A1, A2)
  - The Dipole Antenna's angle of 90 degrees (B1, B2)
- Radiated emission (below 1GHz) and power line conducted emission test items chosen the worst maximum power.
- "-" means no effect.

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1, B1	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ax (HE20)		52 to 64	52, 60, 64	OFDMA	MCS0
	802.11ax (HE40)		54 to 62	54, 62	OFDMA	MCS0
	802.11ax (HE80)		58	58	OFDMA	MCS0
A1, B1	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	MCS0
	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	MCS0
	802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	MCS0

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1, A2, B1, B2	802.11a	5260-5320	52 to 64	116	OFDMA	6.0
	802.11a	5500-5720	100 to 144		OFDMA	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	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1, A2, B1, B2	802.11a	5260-5320	52 to 64	116	OFDMA	6.0
	802.11a	5500-5720	100 to 144		OFDMA	6.0

**Antenna Port Conducted Measurement:**

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	MCS0
	802.11n (HT40)		54 to 62	54, 62	OFDM	MCS0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	MCS0
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	MCS0
	802.11ac (VHT80)		58	58	OFDM	MCS0
	802.11ax (HE20)		52 to 64	52, 60, 64	OFDMA	MCS0
	802.11ax (HE40)		54 to 62	54, 62	OFDMA	MCS0
	802.11ax (HE80)		58	58	OFDMA	MCS0
A1	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	MCS0
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	MCS0
	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	MCS0
	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	MCS0
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	MCS0
	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	MCS0
	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	MCS0
	802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	MCS0

\* 802.11n, 802.11ac modes are for conducted output power measurement only. For other test items, only test 802.11a, 802.11ax modes.

**Test Condition:**

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	22 deg. C, 70% RH	120Vac, 60Hz	Greg Lin,
RE<1G	23 deg. C, 67% RH	120Vac, 60Hz	Greg Lin,
PLC	24 deg. C, 76% RH	120Vac, 60Hz	Greg Lin,
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Ivan Tseng

### 3.3 Duty Cycle of Test Signal

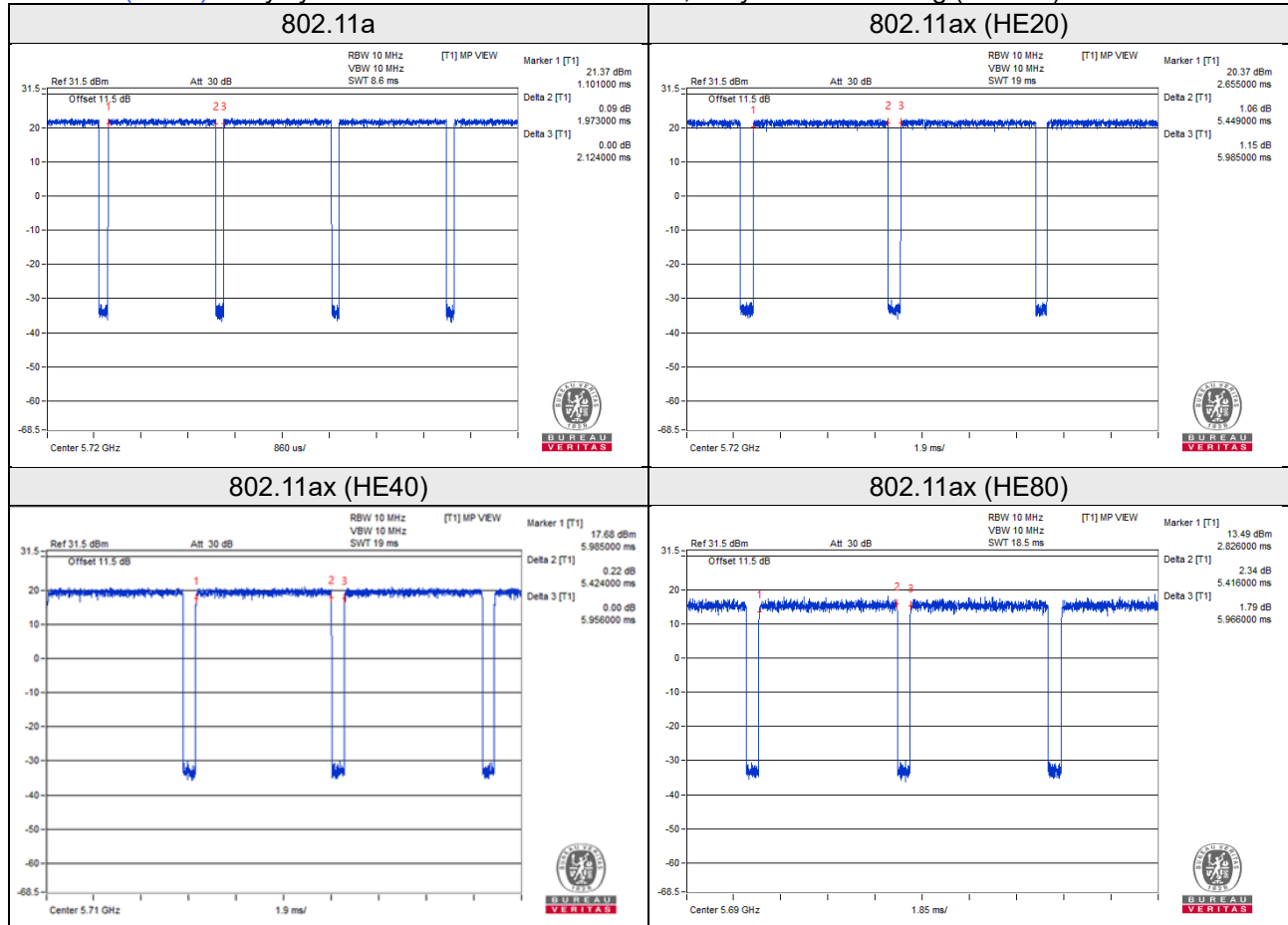
Duty cycle of test signal is < 98%, duty factor is required.

802.11a: Duty cycle = 1.973ms/2.124ms = 0.929, Duty factor =  $10 * \log(1/0.929) = 0.32$

802.11ax (HE20): Duty cycle = 5.449ms/5.985ms = 0.910, Duty factor =  $10 * \log(1/0.910) = 0.41$

802.11ax (HE40): Duty cycle = 5.424ms/5.956ms = 0.911, Duty factor =  $10 * \log(1/0.911) = 0.41$

802.11ax (HE80): Duty cycle = 5.416ms/5.966ms = 0.908, Duty factor =  $10 * \log(1/0.908) = 0.42$



### 3.4 Description of Support Units

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

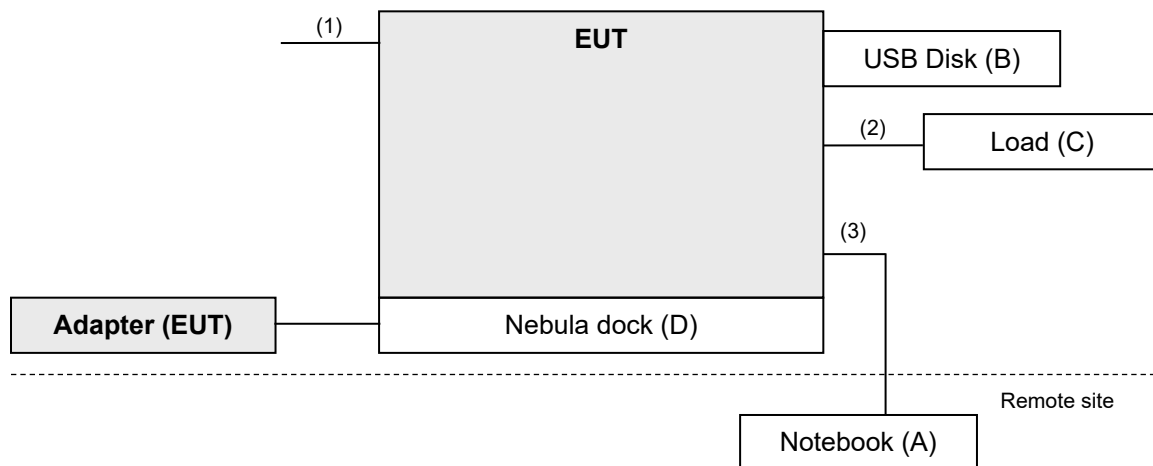
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	Inspiron 14R	8LRKKW1	FCC DoC Approved	Provided by Lab
B.	USB Disk	SanDisk	SDDDC3	NA	NA	Provided by Lab
C.	Load	NA	NA	NA	NA	Provided by Lab
D.	Nebula dock (Expansion dock)	Cradlepoint, Inc.	S0A235A	NA	NA	Provided by client

Note:

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

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RS232 Cable	1	1	N	0	Provided by Lab
2.	LAN Cable	1	1.5	N	0	Provided by Lab RJ45, Cat.5e
3.	LAN Cable	1	10	N	0	Provided by Lab RJ45, Cat.5e

#### 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 Procedure New Rules v02r01**

**KDB 662911 D01 Multiple Transmitter Output v02r01**

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



## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

#### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

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

Limits of unwanted emission out of the restricted bands

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

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

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

#### 4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	Mar. 25, 2022	Mar. 24, 2023
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 27, 2022	Apr. 26, 2023
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101867	Jan. 07, 2022	Jan. 06, 2023
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 14, 2021	Nov. 13, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Oct. 26, 2021	Oct. 25, 2022
Loop Antenna TESEQ	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
			Jul. 27, 2022	Jul. 26, 2023
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 05, 2021	Jun. 04, 2022
			May 14, 2022	May 13, 2023
Preamplifier Agilent (Above 1GHz)	8449B	3008A01962	Oct. 05, 2021	Oct. 04, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8 000	CABLE-CH9-02 (248780+171006)	Jan. 15, 2022	Jan. 14, 2023
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jan. 15, 2022	Jan. 14, 2023
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 05, 2021	Jun. 04, 2022
			May 14, 2022	May 13, 2023
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2021	Sep. 03, 2022
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	Jan. 18, 2022	Jan. 17, 2023
Wideband Power Sensor KEYSIGHT	N1923A	MY58020002	Jan. 17, 2022	Jan. 16, 2023

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. The test was performed in HwaYa Chamber 9.  
3. Tested data: Apr. 21 ~ Jul. 22, 2022 & Aug. 03, 2022

### 4.1.3 Test Procedures

#### For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

#### For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

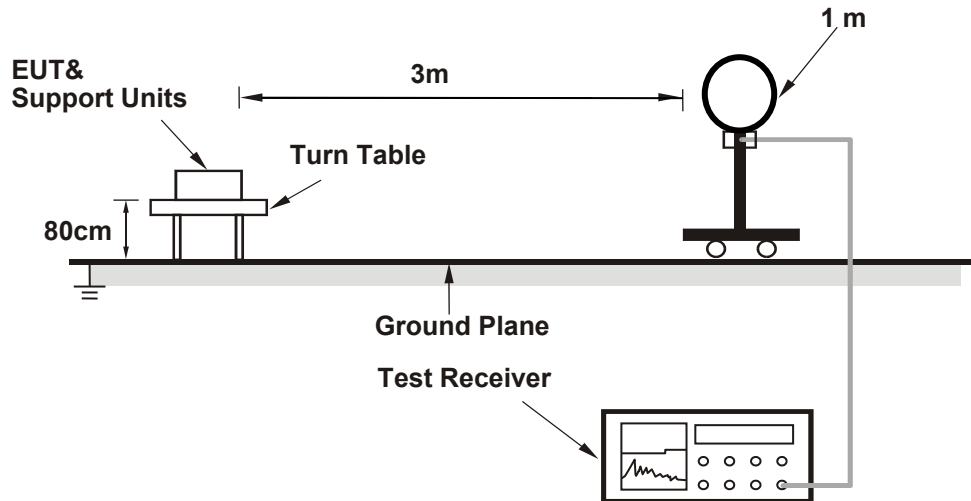
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

#### 4.1.4 Deviation from Test Standard

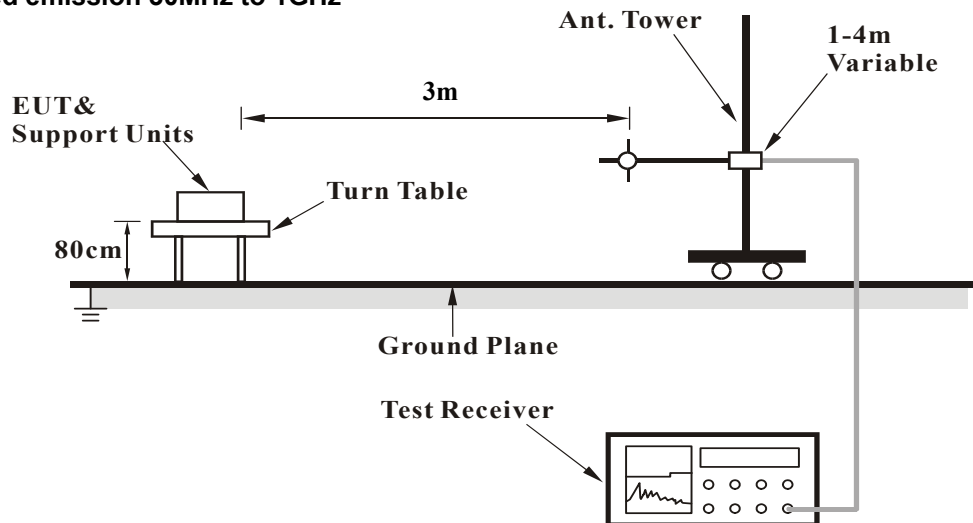
No deviation.

#### 4.1.5 Test Setup

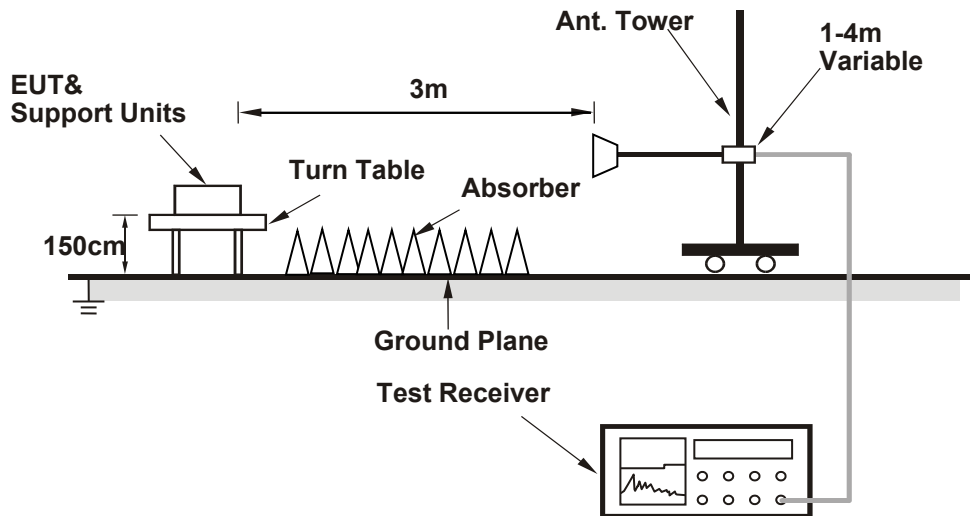
##### For Radiated emission below 30MHz



##### For Radiated emission 30MHz to 1GHz



### For Radiated emission above 1GHz



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

#### 4.1.6 EUT Operating Conditions

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

#### 4.1.7 Test Results

Above 1GHz data:

Mode A1

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	60.2 PK	74.0	-13.8	1.71 H	71	54.6	5.6
2	5150.00	45.0 AV	54.0	-9.0	1.71 H	71	39.4	5.6
3	*5260.00	119.3 PK			1.71 H	71	79.4	39.9
4	*5260.00	109.9 AV			1.71 H	71	70.0	39.9
5	#10520.00	58.7 PK	68.2	-9.5	3.30 H	205	41.1	17.6

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.7 PK	74.0	-18.3	3.55 V	26	50.1	5.6
2	5150.00	43.6 AV	54.0	-10.4	3.55 V	26	38.0	5.6
3	*5260.00	108.7 PK			3.55 V	26	68.8	39.9
4	*5260.00	99.1 AV			3.55 V	26	59.2	39.9
5	#10520.00	58.2 PK	68.2	-10.0	2.84 V	320	40.6	17.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	120.4 PK			1.76 H	71	80.8	39.6
2	*5300.00	111.1 AV			1.76 H	71	71.5	39.6
3	10600.00	59.5 PK	74.0	-14.5	3.31 H	204	41.5	18.0
4	10600.00	46.4 AV	54.0	-7.6	3.31 H	204	28.4	18.0

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	114.2 PK			3.95 V	11	74.6	39.6
2	*5300.00	104.6 AV			3.95 V	11	65.0	39.6
3	10600.00	58.9 PK	74.0	-15.1	2.85 V	323	40.9	18.0
4	10600.00	46.1 AV	54.0	-7.9	2.85 V	323	28.1	18.0

**Remarks:**

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

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	116.8 PK			1.79 H	70	77.2	39.6
2	*5320.00	107.7 AV			1.79 H	70	68.1	39.6
3	5350.00	66.2 PK	74.0	-7.8	1.79 H	70	60.9	5.3
4	5350.00	53.0 AV	54.0	-1.0	1.79 H	70	47.7	5.3
5	10640.00	59.2 PK	74.0	-14.8	3.28 H	203	41.3	17.9
6	10640.00	46.2 AV	54.0	-7.8	3.28 H	203	28.3	17.9

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	109.6 PK			3.73 V	12	70.0	39.6
2	*5320.00	99.9 AV			3.73 V	12	60.3	39.6
3	5350.00	55.7 PK	74.0	-18.3	3.73 V	12	50.4	5.3
4	5350.00	44.3 AV	54.0	-9.7	3.73 V	12	39.0	5.3
5	10640.00	58.7 PK	74.0	-15.3	2.80 V	322	40.8	17.9
6	10640.00	45.7 AV	54.0	-8.3	2.80 V	322	27.8	17.9

**Remarks:**

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



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	60.9 PK	74.0	-13.1	1.65 H	74	54.7	6.2
2	5460.00	47.2 AV	54.0	-6.8	1.65 H	74	41.0	6.2
3	#5470.00	67.3 PK	68.2	-0.9	1.65 H	74	61.1	6.2
4	*5500.00	114.8 PK			1.65 H	74	74.3	40.5
5	*5500.00	105.1 AV			1.65 H	74	64.6	40.5
6	11000.00	60.2 PK	74.0	-13.8	3.25 H	203	41.4	18.8
7	11000.00	47.1 AV	54.0	-6.9	3.25 H	203	28.3	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	3.79 V	15	50.5	6.2
2	5460.00	44.0 AV	54.0	-10.0	3.79 V	15	37.8	6.2
3	#5470.00	61.7 PK	68.2	-6.5	3.79 V	15	55.5	6.2
4	*5500.00	111.0 PK			3.79 V	15	70.5	40.5
5	*5500.00	101.6 AV			3.79 V	15	61.1	40.5
6	11000.00	59.7 PK	74.0	-14.3	2.81 V	320	40.9	18.8
7	11000.00	46.0 AV	54.0	-8.0	2.81 V	320	27.2	18.8

**Remarks:**

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

RF Mode	TX 802.11a	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	116.2 PK			1.67 H	72	75.9	40.3
2	*5580.00	106.8 AV			1.67 H	72	66.5	40.3
3	11160.00	59.7 PK	74.0	-14.3	3.28 H	204	41.6	18.1
4	11160.00	45.4 AV	54.0	-8.6	3.28 H	204	27.3	18.1

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	113.3 PK			3.87 V	15	73.0	40.3
2	*5580.00	104.3 AV			3.87 V	15	64.0	40.3
3	11160.00	58.8 PK	74.0	-15.2	2.80 V	327	40.7	18.1
4	11160.00	44.7 AV	54.0	-9.3	2.80 V	327	26.6	18.1

**Remarks:**

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

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	115.6 PK			1.51 H	76	74.9	40.7
2	*5700.00	106.3 AV			1.51 H	76	65.6	40.7
3	#5725.00	67.3 PK	68.2	-0.9	1.51 H	76	60.8	6.5
4	11400.00	60.1 PK	74.0	-13.9	3.33 H	206	41.3	18.8
5	11400.00	46.2 AV	54.0	-7.8	3.33 H	206	27.4	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	111.5 PK			3.84 V	15	70.8	40.7
2	*5700.00	102.1 AV			3.84 V	15	61.4	40.7
3	#5725.00	62.5 PK	68.2	-5.7	3.84 V	15	56.0	6.5
4	11400.00	59.6 PK	74.0	-14.4	2.79 V	316	40.8	18.8
5	11400.00	45.9 AV	54.0	-8.1	2.79 V	316	27.1	18.8

**Remarks:**

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

RF Mode	TX 802.11a	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	56.7 PK	68.2	-11.5	1.52 H	76	50.5	6.2
2	*5720.00	117.6 PK			1.52 H	76	76.8	40.8
3	*5720.00	108.1 AV			1.52 H	76	67.3	40.8
4	#5850.00	57.8 PK	68.2	-10.4	1.52 H	76	50.8	7.0
5	11440.00	59.9 PK	74.0	-14.1	3.28 H	204	41.2	18.7
6	11440.00	46.0 AV	54.0	-8.0	3.28 H	204	27.3	18.7

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	56.3 PK	68.2	-11.9	3.81 V	11	50.1	6.2
2	*5720.00	112.8 PK			3.81 V	11	72.0	40.8
3	*5720.00	103.5 AV			3.81 V	11	62.7	40.8
4	#5850.00	57.5 PK	68.2	-10.7	3.81 V	11	50.5	7.0
5	11440.00	59.7 PK	74.0	-14.3	2.86 V	324	41.0	18.7
6	11440.00	45.7 AV	54.0	-8.3	2.86 V	324	27.0	18.7

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	62.4 PK	74.0	-11.6	1.72 H	71	56.8	5.6
2	5150.00	46.0 AV	54.0	-8.0	1.72 H	71	40.4	5.6
3	*5260.00	121.7 PK			1.72 H	71	81.8	39.9
4	*5260.00	109.5 AV			1.72 H	71	69.6	39.9
5	#10520.00	59.0 PK	68.2	-9.2	3.22 H	207	41.4	17.6

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	3.73 V	1	51.3	5.6
2	5150.00	44.1 AV	54.0	-9.9	3.73 V	1	38.5	5.6
3	*5260.00	112.7 PK			3.73 V	1	72.8	39.9
4	*5260.00	100.5 AV			3.73 V	1	60.6	39.9
5	#10520.00	58.4 PK	68.2	-9.8	2.81 V	318	40.8	17.6

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	121.8 PK			1.77 H	69	82.2	39.6
2	*5300.00	109.6 AV			1.77 H	69	70.0	39.6
3	5350.00	68.6 PK	74.0	-5.4	1.77 H	69	63.3	5.3
4	5350.00	53.0 AV	54.0	-1.0	1.77 H	69	47.7	5.3
5	10600.00	59.4 PK	74.0	-14.6	3.25 H	211	41.4	18.0
6	10600.00	45.9 AV	54.0	-8.1	3.25 H	211	27.9	18.0

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	115.6 PK			3.93 V	14	76.0	39.6
2	*5300.00	103.6 AV			3.93 V	14	64.0	39.6
3	5350.00	57.3 PK	74.0	-16.7	3.93 V	14	52.0	5.3
4	5350.00	43.9 AV	54.0	-10.1	3.93 V	14	38.6	5.3
5	10600.00	58.9 PK	74.0	-15.1	2.84 V	320	40.9	18.0
6	10600.00	45.6 AV	54.0	-8.4	2.84 V	320	27.6	18.0

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	119.8 PK			1.68 H	69	80.2	39.6
2	*5320.00	106.9 AV			1.68 H	69	67.3	39.6
3	5350.00	67.2 PK	74.0	-6.8	1.68 H	69	61.9	5.3
4	5350.00	53.5 AV	54.0	-0.5	1.68 H	69	48.2	5.3
5	10640.00	59.1 PK	74.0	-14.9	3.29 H	205	41.2	17.9
6	10640.00	45.7 AV	54.0	-8.3	3.29 H	205	27.8	17.9

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	111.2 PK			3.93 V	6	71.6	39.6
2	*5320.00	99.5 AV			3.93 V	6	59.9	39.6
3	5350.00	58.0 PK	74.0	-16.0	3.93 V	6	52.7	5.3
4	5350.00	46.2 AV	54.0	-7.8	3.93 V	6	40.9	5.3
5	10640.00	58.7 PK	74.0	-15.3	3.93 V	6	40.8	17.9
6	10640.00	45.5 AV	54.0	-8.5	3.93 V	6	27.6	17.9

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.8 PK	74.0	-15.2	1.74 H	75	52.6	6.2
2	5460.00	46.0 AV	54.0	-8.0	1.74 H	75	39.8	6.2
3	#5470.00	67.2 PK	68.2	-1.0	1.74 H	75	61.0	6.2
4	*5500.00	116.2 PK			1.74 H	75	75.7	40.5
5	*5500.00	103.4 AV			1.74 H	75	62.9	40.5
6	11000.00	60.2 PK	74.0	-13.8	3.32 H	201	41.4	18.8
7	11000.00	46.1 AV	54.0	-7.9	3.32 H	201	27.3	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.7 PK	74.0	-16.3	3.82 V	12	51.5	6.2
2	5460.00	44.4 AV	54.0	-9.6	3.82 V	12	38.2	6.2
3	#5470.00	64.0 PK	68.2	-4.2	3.82 V	12	57.8	6.2
4	*5500.00	112.8 PK			3.82 V	12	72.3	40.5
5	*5500.00	100.1 AV			3.82 V	12	59.6	40.5
6	11000.00	59.6 PK	74.0	-14.4	2.83 V	321	40.8	18.8
7	11000.00	45.6 AV	54.0	-8.4	2.83 V	321	26.8	18.8

**Remarks:**

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



RF Mode	TX 802.11ax (HE20)	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	119.6 PK			1.75 H	73	79.3	40.3
2	*5580.00	106.6 AV			1.75 H	73	66.3	40.3
3	11160.00	58.9 PK	74.0	-15.1	3.31 H	208	40.8	18.1
4	11160.00	45.5 AV	54.0	-8.5	3.31 H	208	27.4	18.1

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	115.5 PK			3.96 V	20	75.2	40.3
2	*5580.00	102.6 AV			3.96 V	20	62.3	40.3
3	11160.00	58.7 PK	74.0	-15.3	2.88 V	324	40.6	18.1
4	11160.00	44.7 AV	54.0	-9.3	2.88 V	324	26.6	18.1

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	117.3 PK			1.70 H	70	76.6	40.7
2	*5700.00	104.5 AV			1.70 H	70	63.8	40.7
3	#5725.00	67.1 PK	68.2	-1.1	1.70 H	70	60.6	6.5
4	11400.00	60.1 PK	74.0	-13.9	3.25 H	200	41.3	18.8
5	11400.00	46.1 AV	54.0	-7.9	3.25 H	200	27.3	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	112.6 PK			3.95 V	20	71.9	40.7
2	*5700.00	99.6 AV			3.95 V	20	58.9	40.7
3	#5725.00	58.3 PK	68.2	-9.9	3.95 V	20	51.8	6.5
4	11400.00	59.7 PK	74.0	-14.3	2.81 V	319	40.9	18.8
5	11400.00	45.4 AV	54.0	-8.6	2.81 V	319	26.6	18.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.7 PK	68.2	-10.5	1.67 H	70	51.5	6.2
2	*5720.00	119.1 PK			1.67 H	70	78.3	40.8
3	*5720.00	107.1 AV			1.67 H	70	66.3	40.8
4	#5850.00	58.8 PK	68.2	-9.4	1.67 H	70	51.8	7.0
5	11440.00	59.8 PK	74.0	-14.2	3.35 H	209	41.1	18.7
6	11440.00	45.9 AV	54.0	-8.1	3.35 H	209	27.2	18.7

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.0 PK	68.2	-11.2	3.99 V	4	50.8	6.2
2	*5720.00	117.3 PK			3.99 V	4	76.5	40.8
3	*5720.00	104.5 AV			3.99 V	4	63.7	40.8
4	#5850.00	57.9 PK	68.2	-10.3	3.99 V	4	50.9	7.0
5	11440.00	59.5 PK	74.0	-14.5	2.85 V	322	40.8	18.7
6	11440.00	45.2 AV	54.0	-8.8	2.85 V	322	26.5	18.7

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 54 : 5270 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.0 PK	74.0	-13.0	1.81 H	70	55.4	5.6
2	5150.00	47.1 AV	54.0	-6.9	1.81 H	70	41.5	5.6
3	*5270.00	118.1 PK			1.81 H	70	78.3	39.8
4	*5270.00	105.9 AV			1.81 H	70	66.1	39.8
5	5350.00	68.4 PK	74.0	-5.6	1.81 H	70	63.1	5.3
6	5350.00	52.9 AV	54.0	-1.1	1.81 H	70	47.6	5.3
7	#10540.00	59.0 PK	68.2	-9.2	3.29 H	207	41.3	17.7

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	3.82 V	5	51.3	5.6
2	5150.00	44.5 AV	54.0	-9.5	3.82 V	5	38.9	5.6
3	*5270.00	111.3 PK			3.82 V	5	71.5	39.8
4	*5270.00	98.9 AV			3.82 V	5	59.1	39.8
5	5350.00	56.6 PK	74.0	-17.4	3.82 V	5	51.3	5.3
6	5350.00	44.7 AV	54.0	-9.3	3.82 V	5	39.4	5.3
7	#10540.00	58.7 PK	68.2	-9.5	2.85 V	320	41.0	17.7

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	111.7 PK			1.74 H	70	72.1	39.6
2	*5310.00	98.6 AV			1.74 H	70	59.0	39.6
3	5350.00	66.3 PK	74.0	-7.7	1.74 H	70	61.0	5.3
4	5350.00	53.1 AV	54.0	-0.9	1.74 H	70	47.8	5.3
5	10620.00	59.5 PK	74.0	-14.5	3.31 H	210	41.5	18.0
6	10620.00	45.8 AV	54.0	-8.2	3.31 H	210	27.8	18.0

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	100.8 PK			3.83 V	25	61.2	39.6
2	*5310.00	88.5 AV			3.83 V	25	48.9	39.6
3	5350.00	56.8 PK	74.0	-17.2	3.83 V	25	51.5	5.3
4	5350.00	44.7 AV	54.0	-9.3	3.83 V	25	39.4	5.3
5	10620.00	58.8 PK	74.0	-15.2	2.86 V	321	40.8	18.0
6	10620.00	45.5 AV	54.0	-8.5	2.86 V	321	27.5	18.0

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.7 PK	74.0	-12.3	2.30 H	67	55.5	6.2
2	5460.00	48.6 AV	54.0	-5.4	2.30 H	67	42.4	6.2
3	#5470.00	67.2 PK	68.2	-1.0	2.30 H	67	61.0	6.2
4	*5510.00	111.2 PK			2.30 H	67	70.7	40.5
5	*5510.00	98.6 AV			2.30 H	67	58.1	40.5
6	11020.00	59.9 PK	74.0	-14.1	3.32 H	205	41.2	18.7
7	11020.00	45.5 AV	54.0	-8.5	3.32 H	205	26.8	18.7

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.9 PK	74.0	-17.1	4.00 V	11	50.7	6.2
2	5460.00	44.9 AV	54.0	-9.1	4.00 V	11	38.7	6.2
3	#5470.00	60.8 PK	68.2	-7.4	4.00 V	11	54.6	6.2
4	*5510.00	108.0 PK			4.00 V	11	67.5	40.5
5	*5510.00	95.8 AV			4.00 V	11	55.3	40.5
6	11020.00	59.5 PK	74.0	-14.5	2.84 V	329	40.8	18.7
7	11020.00	45.2 AV	54.0	-8.8	2.84 V	329	26.5	18.7

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 110 : 5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	62.2 PK	74.0	-11.8	1.62 H	75	56.0	6.2
2	5460.00	46.4 AV	54.0	-7.6	1.62 H	75	40.2	6.2
3	#5470.00	67.3 PK	68.2	-0.9	1.62 H	75	61.1	6.2
4	*5550.00	115.4 PK			1.62 H	75	75.0	40.4
5	*5550.00	103.5 AV			1.62 H	75	63.1	40.4
6	11100.00	58.8 PK	74.0	-15.2	3.34 H	208	41.0	17.8
7	11100.00	45.1 AV	54.0	-8.9	3.34 H	208	27.3	17.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	4.00 V	21	50.5	6.2
2	5460.00	44.6 AV	54.0	-9.4	4.00 V	21	38.4	6.2
3	#5470.00	61.6 PK	68.2	-6.6	4.00 V	21	55.4	6.2
4	*5550.00	110.8 PK			4.00 V	21	70.4	40.4
5	*5550.00	98.9 AV			4.00 V	21	58.5	40.4
6	11100.00	58.4 PK	74.0	-15.6	2.81 V	320	40.6	17.8
7	11100.00	44.8 AV	54.0	-9.2	2.81 V	320	27.0	17.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 134 : 5670 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	115.4 PK			1.63 H	75	75.0	40.4
2	*5670.00	102.8 AV			1.63 H	75	62.4	40.4
3	#5725.00	67.4 PK	68.2	-0.8	1.63 H	75	60.9	6.5
4	11340.00	59.8 PK	74.0	-14.2	3.28 H	210	40.9	18.9
5	11340.00	46.3 AV	54.0	-7.7	3.28 H	210	27.4	18.9

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	110.4 PK			4.00 V	21	70.0	40.4
2	*5670.00	98.3 AV			4.00 V	21	57.9	40.4
3	#5725.00	60.1 PK	68.2	-8.1	4.00 V	21	53.6	6.5
4	11340.00	59.5 PK	74.0	-14.5	2.78 V	323	40.6	18.9
5	11340.00	46.0 AV	54.0	-8.0	2.78 V	323	27.1	18.9

**Remarks:**

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



RF Mode	TX 802.11ax (HE40)	Channel	CH 142 : 5710 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.0 PK	68.2	-11.2	1.60 H	70	50.8	6.2
2	*5710.00	116.2 PK			1.60 H	70	75.5	40.7
3	*5710.00	104.4 AV			1.60 H	70	63.7	40.7
4	#5850.00	60.1 PK	68.2	-8.1	1.60 H	70	53.1	7.0
5	11420.00	60.0 PK	74.0	-14.0	3.39 H	204	41.2	18.8
6	11420.00	46.3 AV	54.0	-7.7	3.39 H	204	27.5	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	56.9 PK	68.2	-11.3	4.00 V	4	50.7	6.2
2	*5710.00	112.5 PK			4.00 V	4	71.8	40.7
3	*5710.00	100.5 AV			4.00 V	4	59.8	40.7
4	#5850.00	58.7 PK	68.2	-9.5	4.00 V	4	51.7	7.0
5	11420.00	59.4 PK	74.0	-14.6	2.82 V	325	40.6	18.8
6	11420.00	45.7 AV	54.0	-8.3	2.82 V	325	26.9	18.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	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	*5290.00	109.4 PK			1.72 H	71	69.7	39.7
2	*5290.00	96.1 AV			1.72 H	71	56.4	39.7
3	5350.00	66.1 PK	74.0	-7.9	1.72 H	71	60.8	5.3
4	5350.00	53.5 AV	54.0	-0.5	1.72 H	71	48.2	5.3
5	#10580.00	59.3 PK	68.2	-8.9	3.27 H	206	41.5	17.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	98.1 PK			3.51 V	25	58.4	39.7
2	*5290.00	86.0 AV			3.51 V	25	46.3	39.7
3	5350.00	56.9 PK	74.0	-17.1	3.51 V	25	51.6	5.3
4	5350.00	44.8 AV	54.0	-9.2	3.51 V	25	39.5	5.3
5	#10580.00	58.7 PK	68.2	-9.5	2.88 V	315	40.9	17.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	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	5443.50	66.8 PK	74.0	-7.2	1.76 H	69	60.7	6.1
2	5443.50	52.9 AV	54.0	-1.1	1.76 H	69	46.8	6.1
3	#5470.00	66.8 PK	68.2	-1.4	1.76 H	69	60.6	6.2
4	*5530.00	109.0 PK			1.76 H	69	68.6	40.4
5	*5530.00	96.6 AV			1.76 H	69	56.2	40.4
6	#5760.00	58.7 PK	68.2	-9.5	1.76 H	69	52.1	6.6
7	11060.00	59.1 PK	74.0	-14.9	3.27 H	206	40.8	18.3
8	11060.00	45.7 AV	54.0	-8.3	3.27 H	206	27.4	18.3

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	64.1 PK	74.0	-9.9	3.95 V	4	57.9	6.2
2	5460.00	49.1 AV	54.0	-4.9	3.95 V	4	42.9	6.2
3	#5470.00	60.0 PK	68.2	-8.2	3.95 V	4	53.8	6.2
4	*5530.00	104.9 PK			3.95 V	4	64.5	40.4
5	*5530.00	93.6 AV			3.95 V	4	53.2	40.4
6	#5760.00	58.6 PK	68.2	-9.6	3.95 V	4	52.0	6.6
7	11060.00	58.8 PK	74.0	-15.2	2.80 V	322	40.5	18.3
8	11060.00	45.4 AV	54.0	-8.6	2.80 V	322	27.1	18.3

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 122 : 5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.3 PK	74.0	-14.7	1.70 H	71	53.1	6.2
2	5460.00	45.9 AV	54.0	-8.1	1.70 H	71	39.7	6.2
3	#5470.00	64.3 PK	68.2	-3.9	1.70 H	71	58.1	6.2
4	*5610.00	112.8 PK			1.70 H	71	72.6	40.2
5	*5610.00	99.0 AV			1.70 H	71	58.8	40.2
6	#5725.00	67.0 PK	68.2	-1.2	1.70 H	71	60.5	6.5
7	11220.00	59.0 PK	74.0	-15.0	3.28 H	201	40.7	18.3
8	11220.00	45.7 AV	54.0	-8.3	3.28 H	201	27.4	18.3

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.4 PK	74.0	-16.6	4.00 V	14	51.2	6.2
2	5460.00	44.5 AV	54.0	-9.5	4.00 V	14	38.3	6.2
3	#5470.00	61.0 PK	68.2	-7.2	4.00 V	14	54.8	6.2
4	*5610.00	107.7 PK			4.00 V	14	67.5	40.2
5	*5610.00	96.3 AV			4.00 V	14	56.1	40.2
6	#5725.00	64.3 PK	68.2	-3.9	4.00 V	14	57.8	6.5
7	11220.00	58.6 PK	74.0	-15.4	2.88 V	326	40.3	18.3
8	11220.00	45.1 AV	54.0	-8.9	2.88 V	326	26.8	18.3

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 138 : 5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	58.3 PK	68.2	-9.9	1.60 H	70	52.1	6.2
2	*5690.00	113.2 PK			1.60 H	70	72.7	40.5
3	*5690.00	100.7 AV			1.60 H	70	60.2	40.5
4	#5850.00	67.1 PK	68.2	-1.1	1.60 H	70	60.1	7.0
5	11380.00	59.9 PK	74.0	-14.1	3.30 H	203	41.1	18.8
6	11380.00	45.9 AV	54.0	-8.1	3.30 H	203	27.1	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	58.4 PK	68.2	-9.8	3.96 V	20	52.2	6.2
2	*5690.00	108.3 PK			3.96 V	20	67.8	40.5
3	*5690.00	96.4 AV			3.96 V	20	55.9	40.5
4	#5850.00	59.8 PK	68.2	-8.4	3.96 V	20	52.8	7.0
5	11380.00	59.8 PK	74.0	-14.2	2.83 V	322	41.0	18.8
6	11380.00	45.4 AV	54.0	-8.6	2.83 V	322	26.6	18.8

**Remarks:**

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

Mode B1

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	55.7 PK	74.0	-18.3	1.33 H	126	50.1	5.6
2	5150.00	43.4 AV	54.0	-10.6	1.33 H	126	37.8	5.6
3	*5260.00	111.4 PK			1.33 H	126	71.5	39.9
4	*5260.00	101.8 AV			1.33 H	126	61.9	39.9
5	#10520.00	57.9 PK	68.2	-10.3	3.11 H	205	40.3	17.6

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.8 PK	74.0	-16.2	2.29 V	333	52.2	5.6
2	5150.00	44.7 AV	54.0	-9.3	2.29 V	333	39.1	5.6
3	*5260.00	120.1 PK			2.29 V	333	80.2	39.9
4	*5260.00	110.7 AV			2.29 V	333	70.8	39.9
5	#10520.00	58.7 PK	68.2	-9.5	1.58 V	110	41.1	17.6

Remarks:

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

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	112.1 PK			1.79 H	158	72.5	39.6
2	*5300.00	102.4 AV			1.79 H	158	62.8	39.6
3	5350.00	63.1 PK	74.0	-10.9	1.79 H	158	57.8	5.3
4	5350.00	47.8 AV	54.0	-6.2	1.79 H	158	42.5	5.3
5	10600.00	58.9 PK	74.0	-15.1	3.16 H	211	40.9	18.0
6	10600.00	45.4 AV	54.0	-8.6	3.16 H	211	27.4	18.0

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	119.7 PK			2.33 V	329	80.1	39.6
2	*5300.00	110.3 AV			2.33 V	329	70.7	39.6
3	5350.00	70.6 PK	74.0	-3.4	2.33 V	329	65.3	5.3
<b>4</b>	<b>5350.00</b>	<b>53.6 AV</b>	<b>54.0</b>	<b>-0.4</b>	<b>2.33 V</b>	<b>329</b>	<b>48.3</b>	<b>5.3</b>
5	10600.00	59.5 PK	74.0	-14.5	1.55 V	118	41.5	18.0
6	10600.00	45.8 AV	54.0	-8.2	1.55 V	118	27.8	18.0

**Remarks:**

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

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	109.6 PK			1.74 H	163	70.0	39.6
2	*5320.00	99.9 AV			1.74 H	163	60.3	39.6
3	5350.00	57.4 PK	74.0	-16.6	1.74 H	163	52.1	5.3
4	5350.00	45.3 AV	54.0	-8.7	1.74 H	163	40.0	5.3
5	10640.00	58.7 PK	74.0	-15.3	3.12 H	203	40.8	17.9
6	10640.00	45.4 AV	54.0	-8.6	3.12 H	203	27.5	17.9

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	117.8 PK			2.30 V	335	78.2	39.6
2	*5320.00	108.4 AV			2.30 V	335	68.8	39.6
3	5350.00	67.2 PK	74.0	-6.8	2.30 V	335	61.9	5.3
4	5350.00	52.9 AV	54.0	-1.1	2.30 V	335	47.6	5.3
5	10640.00	59.2 PK	74.0	-14.8	1.58 V	122	41.3	17.9
6	10640.00	45.8 AV	54.0	-8.2	1.58 V	122	27.9	17.9

**Remarks:**

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



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	59.9 PK	74.0	-14.1	1.76 H	166	53.7	6.2
2	5460.00	46.9 AV	54.0	-7.1	1.76 H	166	40.7	6.2
3	#5470.00	62.7 PK	68.2	-5.5	1.76 H	166	56.5	6.2
4	*5500.00	110.9 PK			1.76 H	166	70.4	40.5
5	*5500.00	101.3 AV			1.76 H	166	60.8	40.5
6	11000.00	59.5 PK	74.0	-14.5	1.62 H	107	40.7	18.8
7	11000.00	46.4 AV	54.0	-7.6	1.62 H	107	27.6	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	65.3 PK	74.0	-8.7	2.06 V	8	59.1	6.2
2	5460.00	49.0 AV	54.0	-5.0	2.06 V	8	42.8	6.2
3	#5470.00	67.7 PK	68.2	-0.5	2.06 V	8	61.5	6.2
4	*5500.00	119.4 PK			2.06 V	8	78.9	40.5
5	*5500.00	109.7 AV			2.06 V	8	69.2	40.5
6	11000.00	60.0 PK	74.0	-14.0	1.59 V	114	41.2	18.8
7	11000.00	47.0 AV	54.0	-7.0	1.59 V	114	28.2	18.8

**Remarks:**

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

RF Mode	TX 802.11a	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	112.7 PK			1.77 H	154	72.4	40.3
2	*5580.00	103.1 AV			1.77 H	154	62.8	40.3
3	11160.00	59.0 PK	74.0	-15.0	3.09 H	205	40.9	18.1
4	11160.00	45.6 AV	54.0	-8.4	3.09 H	205	27.5	18.1

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	121.4 PK			2.14 V	11	81.1	40.3
2	*5580.00	111.8 AV			2.14 V	11	71.5	40.3
3	11160.00	59.6 PK	74.0	-14.4	1.58 V	127	41.5	18.1
4	11160.00	46.5 AV	54.0	-7.5	1.58 V	127	28.4	18.1

**Remarks:**

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

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	109.8 PK			1.80 H	164	69.1	40.7
2	*5700.00	100.1 AV			1.80 H	164	59.4	40.7
3	#5725.00	62.2 PK	68.2	-6.0	1.80 H	164	55.7	6.5
4	11400.00	59.4 PK	74.0	-14.6	3.06 H	213	40.6	18.8
5	11400.00	46.3 AV	54.0	-7.7	3.06 H	213	27.5	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	118.5 PK			1.76 V	354	77.8	40.7
2	*5700.00	108.7 AV			1.76 V	354	68.0	40.7
3	#5725.00	67.1 PK	68.2	-1.1	1.76 V	354	60.6	6.5
4	11400.00	60.0 PK	74.0	-14.0	1.47 V	106	41.2	18.8
5	11400.00	47.1 AV	54.0	-6.9	1.47 V	106	28.3	18.8

**Remarks:**

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

RF Mode	TX 802.11a	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.0 PK	68.2	-11.2	1.82 H	151	50.8	6.2
2	*5720.00	112.6 PK			1.82 H	151	71.8	40.8
3	*5720.00	103.1 AV			1.82 H	151	62.3	40.8
4	#5850.00	58.1 PK	68.2	-10.1	1.82 H	151	51.1	7.0
5	11440.00	59.4 PK	74.0	-14.6	3.09 H	201	40.7	18.7
6	11440.00	46.3 AV	54.0	-7.7	3.09 H	201	27.6	18.7

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.6 PK	68.2	-10.6	1.92 V	11	51.4	6.2
2	*5720.00	121.4 PK			1.92 V	11	80.6	40.8
3	*5720.00	111.8 AV			1.92 V	11	71.0	40.8
4	#5850.00	58.3 PK	68.2	-9.9	1.92 V	11	51.3	7.0
5	11440.00	60.0 PK	74.0	-14.0	1.62 V	103	41.3	18.7
6	11440.00	47.1 AV	54.0	-6.9	1.62 V	103	28.4	18.7

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.4 PK	74.0	-17.6	1.76 H	155	50.8	5.6
2	5150.00	43.4 AV	54.0	-10.6	1.76 H	155	37.8	5.6
3	*5260.00	113.5 PK			1.76 H	155	73.6	39.9
4	*5260.00	101.5 AV			1.76 H	155	61.6	39.9
5	#10520.00	58.4 PK	68.2	-9.8	3.16 H	219	40.8	17.6

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.3 PK	74.0	-16.7	2.25 V	333	51.7	5.6
2	5150.00	44.7 AV	54.0	-9.3	2.25 V	333	39.1	5.6
3	*5260.00	122.4 PK			2.25 V	333	82.5	39.9
4	*5260.00	110.5 AV			2.25 V	333	70.6	39.9
5	#10520.00	59.0 PK	68.2	-9.2	1.58 V	113	41.4	17.6

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	113.0 PK			1.77 H	150	73.4	39.6
2	*5300.00	99.8 AV			1.77 H	150	60.2	39.6
3	5350.00	60.9 PK	74.0	-13.1	1.77 H	150	55.6	5.3
4	5350.00	46.0 AV	54.0	-8.0	1.77 H	150	40.7	5.3
5	10600.00	58.5 PK	74.0	-15.5	3.11 H	210	40.5	18.0
6	10600.00	45.5 AV	54.0	-8.5	3.11 H	210	27.5	18.0

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	120.1 PK			2.22 V	333	80.5	39.6
2	*5300.00	109.0 AV			2.22 V	333	69.4	39.6
3	5350.00	65.5 PK	74.0	-8.5	2.22 V	333	60.2	5.3
4	5350.00	48.8 AV	54.0	-5.2	2.22 V	333	43.5	5.3
5	10600.00	59.2 PK	74.0	-14.8	1.58 V	123	41.2	18.0
6	10600.00	46.2 AV	54.0	-7.8	1.58 V	123	28.2	18.0

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	112.9 PK			1.75 H	158	73.3	39.6
2	*5320.00	99.9 AV			1.75 H	158	60.3	39.6
3	5350.00	60.7 PK	74.0	-13.3	1.75 H	158	55.4	5.3
4	5350.00	45.8 AV	54.0	-8.2	1.75 H	158	40.5	5.3
5	10640.00	58.6 PK	74.0	-15.4	3.11 H	207	40.7	17.9
6	10640.00	45.4 AV	54.0	-8.6	3.11 H	207	27.5	17.9

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	120.4 PK			2.20 V	352	80.8	39.6
2	*5320.00	108.1 AV			2.20 V	352	68.5	39.6
3	5350.00	66.5 PK	74.0	-7.5	2.20 V	352	61.2	5.3
4	5350.00	52.9 AV	54.0	-1.1	2.20 V	352	47.6	5.3
5	10640.00	59.2 PK	74.0	-14.8	1.55 V	117	41.3	17.9
6	10640.00	45.7 AV	54.0	-8.3	1.55 V	117	27.8	17.9

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.5 PK	74.0	-15.5	1.79 H	152	52.3	6.2
2	5460.00	45.9 AV	54.0	-8.1	1.79 H	152	39.7	6.2
3	#5470.00	60.5 PK	68.2	-7.7	1.79 H	152	54.3	6.2
4	*5500.00	112.0 PK			1.79 H	152	71.5	40.5
5	*5500.00	99.4 AV			1.79 H	152	58.9	40.5
6	11000.00	59.4 PK	74.0	-14.6	3.03 H	198	40.6	18.8
7	11000.00	46.0 AV	54.0	-8.0	3.03 H	198	27.2	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.6 PK	74.0	-12.4	2.10 V	6	55.4	6.2
2	5460.00	48.0 AV	54.0	-6.0	2.10 V	6	41.8	6.2
3	#5470.00	67.1 PK	68.2	-1.1	2.10 V	6	60.9	6.2
4	*5500.00	120.8 PK			2.10 V	6	80.3	40.5
5	*5500.00	108.0 AV			2.10 V	6	67.5	40.5
6	11000.00	60.1 PK	74.0	-13.9	1.46 V	104	41.3	18.8
7	11000.00	47.0 AV	54.0	-7.0	1.46 V	104	28.2	18.8

**Remarks:**

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



RF Mode	TX 802.11ax (HE20)	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	116.4 PK			1.86 H	169	76.1	40.3
2	*5580.00	103.7 AV			1.86 H	169	63.4	40.3
3	11160.00	58.8 PK	74.0	-15.2	3.28 H	216	40.7	18.1
4	11160.00	45.6 AV	54.0	-8.4	3.28 H	216	27.5	18.1

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	124.9 PK			2.02 V	1	84.6	40.3
2	*5580.00	112.2 AV			2.02 V	1	71.9	40.3
3	11160.00	59.4 PK	74.0	-14.6	1.67 V	129	41.3	18.1
4	11160.00	46.5 AV	54.0	-7.5	1.67 V	129	28.4	18.1

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	112.5 PK			1.70 H	157	71.8	40.7
2	*5700.00	100.1 AV			1.70 H	157	59.4	40.7
3	#5725.00	61.4 PK	68.2	-6.8	1.70 H	157	54.9	6.5
4	11400.00	59.5 PK	74.0	-14.5	3.17 H	218	40.7	18.8
5	11400.00	46.2 AV	54.0	-7.8	3.17 H	218	27.4	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	121.3 PK			1.82 V	356	80.6	40.7
2	*5700.00	108.7 AV			1.82 V	356	68.0	40.7
3	#5725.00	67.6 PK	68.2	-0.6	1.82 V	356	61.1	6.5
4	11400.00	59.9 PK	74.0	-14.1	1.55 V	119	41.1	18.8
5	11400.00	47.0 AV	54.0	-7.0	1.55 V	119	28.2	18.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	56.8 PK	68.2	-11.4	1.71 H	158	50.6	6.2
2	*5720.00	115.7 PK			1.71 H	158	74.9	40.8
3	*5720.00	103.2 AV			1.71 H	158	62.4	40.8
4	#5850.00	58.1 PK	68.2	-10.1	1.71 H	158	51.1	7.0
5	11440.00	59.3 PK	74.0	-14.7	3.12 H	215	40.6	18.7
6	11440.00	46.0 AV	54.0	-8.0	3.12 H	215	27.3	18.7

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.6 PK	68.2	-10.6	1.86 V	5	51.4	6.2
2	*5720.00	124.3 PK			1.86 V	5	83.5	40.8
3	*5720.00	111.7 AV			1.86 V	5	70.9	40.8
4	#5850.00	58.8 PK	68.2	-9.4	1.86 V	5	51.8	7.0
5	11440.00	59.9 PK	74.0	-14.1	1.61 V	117	41.2	18.7
6	11440.00	47.0 AV	54.0	-7.0	1.61 V	117	28.3	18.7

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 54 : 5270 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	110.7 PK			1.72 H	165	70.9	39.8
2	*5270.00	98.2 AV			1.72 H	165	58.4	39.8
3	5350.00	64.4 PK	74.0	-9.6	1.72 H	165	59.1	5.3
4	5350.00	48.6 AV	54.0	-5.4	1.72 H	165	43.3	5.3
5	#10540.00	58.0 PK	68.2	-10.2	3.17 H	205	40.3	17.7

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	119.5 PK			2.22 V	347	79.7	39.8
2	*5270.00	106.9 AV			2.22 V	347	67.1	39.8
3	5350.00	66.2 PK	74.0	-7.8	2.22 V	347	60.9	5.3
4	5350.00	51.8 AV	54.0	-2.2	2.22 V	347	46.5	5.3
5	#10540.00	58.5 PK	68.2	-9.7	1.59 V	116	40.8	17.7

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	104.5 PK			1.79 H	161	64.9	39.6
2	*5310.00	92.0 AV			1.79 H	161	52.4	39.6
3	5350.00	58.9 PK	74.0	-15.1	1.79 H	161	53.6	5.3
4	5350.00	45.8 AV	54.0	-8.2	1.79 H	161	40.5	5.3
5	10620.00	58.2 PK	74.0	-15.8	3.16 H	197	40.2	18.0
6	10620.00	44.9 AV	54.0	-9.1	3.16 H	197	26.9	18.0

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	113.3 PK			2.12 V	343	73.7	39.6
2	*5310.00	100.7 AV			2.12 V	343	61.1	39.6
3	5350.00	63.0 PK	74.0	-11.0	2.12 V	343	57.7	5.3
4	5350.00	49.6 AV	54.0	-4.4	2.12 V	343	44.3	5.3
5	10620.00	58.7 PK	74.0	-15.3	1.67 V	128	40.7	18.0
6	10620.00	45.4 AV	54.0	-8.6	1.67 V	128	27.4	18.0

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.4 PK	74.0	-14.6	1.77 H	165	53.2	6.2
2	5460.00	46.5 AV	54.0	-7.5	1.77 H	165	40.3	6.2
3	#5470.00	60.7 PK	68.2	-7.5	1.77 H	165	54.5	6.2
4	*5510.00	106.8 PK			1.77 H	165	66.3	40.5
5	*5510.00	94.2 AV			1.77 H	165	53.7	40.5
6	11020.00	58.9 PK	74.0	-15.1	3.14 H	206	40.2	18.7
7	11020.00	45.7 AV	54.0	-8.3	3.14 H	206	27.0	18.7

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	64.0 PK	74.0	-10.0	2.18 V	4	57.8	6.2
2	5460.00	50.5 AV	54.0	-3.5	2.18 V	4	44.3	6.2
3	#5470.00	66.9 PK	68.2	-1.3	2.18 V	4	60.7	6.2
4	*5510.00	115.2 PK			2.18 V	4	74.7	40.5
5	*5510.00	102.8 AV			2.18 V	4	62.3	40.5
6	11020.00	59.6 PK	74.0	-14.4	1.43 V	115	40.9	18.7
7	11020.00	46.5 AV	54.0	-7.5	1.43 V	115	27.8	18.7

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 110 : 5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.5 PK	74.0	-16.5	1.86 H	162	51.3	6.2
2	5460.00	45.7 AV	54.0	-8.3	1.86 H	162	39.5	6.2
3	#5470.00	59.3 PK	68.2	-8.9	1.86 H	162	53.1	6.2
4	*5550.00	110.8 PK			1.86 H	162	70.4	40.4
5	*5550.00	98.2 AV			1.86 H	162	57.8	40.4
6	11100.00	58.1 PK	74.0	-15.9	3.03 H	196	40.3	17.8
7	11100.00	44.9 AV	54.0	-9.1	3.03 H	196	27.1	17.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	63.1 PK	74.0	-10.9	1.87 V	6	56.9	6.2
2	5460.00	48.0 AV	54.0	-6.0	1.87 V	6	41.8	6.2
3	#5470.00	66.0 PK	68.2	-2.2	1.87 V	6	59.8	6.2
4	*5550.00	119.2 PK			1.87 V	6	78.8	40.4
5	*5550.00	106.8 AV			1.87 V	6	66.4	40.4
6	11100.00	58.6 PK	74.0	-15.4	1.59 V	107	40.8	17.8
7	11100.00	45.4 AV	54.0	-8.6	1.59 V	107	27.6	17.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 134 : 5670 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	110.0 PK			1.88 H	154	69.6	40.4
2	*5670.00	97.5 AV			1.88 H	154	57.1	40.4
3	#5725.00	61.7 PK	68.2	-6.5	1.88 H	154	55.2	6.5
4	11340.00	59.2 PK	74.0	-14.8	3.08 H	215	40.3	18.9
5	11340.00	45.8 AV	54.0	-8.2	3.08 H	215	26.9	18.9

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	118.7 PK			1.89 V	6	78.3	40.4
2	*5670.00	106.1 AV			1.89 V	6	65.7	40.4
3	#5725.00	67.6 PK	68.2	-0.6	1.89 V	6	61.1	6.5
4	11340.00	59.6 PK	74.0	-14.4	1.55 V	113	40.7	18.9
5	11340.00	46.2 AV	54.0	-7.8	1.55 V	113	27.3	18.9

**Remarks:**

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



RF Mode	TX 802.11ax (HE40)	Channel	CH 142 : 5710 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	56.9 PK	68.2	-11.3	1.76 H	156	50.7	6.2
2	*5710.00	108.5 PK			1.76 H	156	67.8	40.7
3	*5710.00	95.9 AV			1.76 H	156	55.2	40.7
4	#5850.00	62.3 PK	68.2	-5.9	1.76 H	156	55.3	7.0
5	11420.00	59.1 PK	74.0	-14.9	3.26 H	217	40.3	18.8
6	11420.00	45.9 AV	54.0	-8.1	3.26 H	217	27.1	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.4 PK	68.2	-10.8	1.90 V	9	51.2	6.2
2	*5710.00	120.2 PK			1.90 V	9	79.5	40.7
3	*5710.00	108.6 AV			1.90 V	9	67.9	40.7
4	#5850.00	67.4 PK	68.2	-0.8	1.90 V	9	60.4	7.0
5	11420.00	59.7 PK	74.0	-14.3	1.47 V	108	40.9	18.8
6	11420.00	46.9 AV	54.0	-7.1	1.47 V	108	28.1	18.8

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	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	*5290.00	100.5 PK			1.85 H	155	60.8	39.7
2	*5290.00	87.9 AV			1.85 H	155	48.2	39.7
3	5350.00	56.8 PK	74.0	-17.2	1.85 H	155	51.5	5.3
4	5350.00	44.0 AV	54.0	-10.0	1.85 H	155	38.7	5.3
5	#10580.00	57.6 PK	68.2	-10.6	3.14 H	202	39.8	17.8

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	109.0 PK			2.11 V	340	69.3	39.7
2	*5290.00	96.4 AV			2.11 V	340	56.7	39.7
3	5350.00	59.7 PK	74.0	-14.3	2.11 V	340	54.4	5.3
4	5350.00	46.9 AV	54.0	-7.1	2.11 V	340	41.6	5.3
5	#10580.00	58.5 PK	68.2	-9.7	1.58 V	107	40.7	17.8

Remarks:

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

RF Mode	TX 802.11ax (HE80)	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	5439.00	61.2 PK	74.0	-12.8	1.74 H	161	55.1	6.1
2	5439.00	47.7 AV	54.0	-6.3	1.74 H	161	41.6	6.1
3	#5470.00	61.5 PK	68.2	-6.7	1.74 H	161	55.3	6.2
4	*5530.00	103.8 PK			1.74 H	161	63.4	40.4
5	*5530.00	91.2 AV			1.74 H	161	50.8	40.4
6	#5760.00	60.3 PK	68.2	-7.9	1.74 H	161	53.7	6.6
7	11060.00	58.5 PK	74.0	-15.5	3.14 H	203	40.2	18.3
8	11060.00	45.1 AV	54.0	-8.9	3.14 H	203	26.8	18.3

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5439.00	66.6 PK	74.0	-7.4	2.09 V	6	60.5	6.1
2	5439.00	52.0 AV	54.0	-2.0	2.09 V	6	45.9	6.1
3	#5470.00	67.5 PK	68.2	-0.7	2.09 V	6	61.3	6.2
4	*5530.00	112.3 PK			2.09 V	6	71.9	40.4
5	*5530.00	99.8 AV			2.09 V	6	59.4	40.4
6	#5760.00	61.1 PK	68.2	-7.1	2.09 V	6	54.5	6.6
7	11060.00	59.1 PK	74.0	-14.9	1.62 V	127	40.8	18.3
8	11060.00	46.3 AV	54.0	-7.7	1.62 V	127	28.0	18.3

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 122 : 5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.6 PK	74.0	-17.4	1.74 H	158	50.4	6.2
2	5460.00	45.0 AV	54.0	-9.0	1.74 H	158	38.8	6.2
3	#5470.00	58.1 PK	68.2	-10.1	1.74 H	158	51.9	6.2
4	*5610.00	106.5 PK			1.74 H	158	66.3	40.2
5	*5610.00	93.9 AV			1.74 H	158	53.7	40.2
6	#5725.00	62.1 PK	68.2	-6.1	1.74 H	158	55.6	6.5
7	11220.00	58.5 PK	74.0	-15.5	3.04 H	200	40.2	18.3
8	11220.00	45.1 AV	54.0	-8.9	3.04 H	200	26.8	18.3

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.8 PK	74.0	-15.2	2.05 V	3	52.6	6.2
2	5460.00	46.6 AV	54.0	-7.4	2.05 V	3	40.4	6.2
3	#5470.00	60.5 PK	68.2	-7.7	2.05 V	3	54.3	6.2
4	*5610.00	115.0 PK			2.05 V	3	74.8	40.2
5	*5610.00	102.5 AV			2.05 V	3	62.3	40.2
6	#5725.00	67.1 PK	68.2	-1.1	2.05 V	3	60.6	6.5
7	11220.00	59.0 PK	74.0	-15.0	1.76 V	150	40.7	18.3
8	11220.00	46.1 AV	54.0	-7.9	1.76 V	150	27.8	18.3

**Remarks:**

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 138 : 5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.7 PK	68.2	-10.5	1.78 H	154	51.5	6.2
2	*5690.00	107.4 PK			1.78 H	154	66.9	40.5
3	*5690.00	94.9 AV			1.78 H	154	54.4	40.5
4	#5850.00	59.7 PK	68.2	-8.5	1.78 H	154	52.7	7.0
5	11380.00	58.9 PK	74.0	-15.1	3.18 H	204	40.1	18.8
6	11380.00	45.4 AV	54.0	-8.6	3.18 H	204	26.6	18.8

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

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.7 PK	68.2	-10.5	1.82 V	1	51.5	6.2
2	*5690.00	116.1 PK			1.82 V	1	75.6	40.5
3	*5690.00	103.5 AV			1.82 V	1	63.0	40.5
4	#5850.00	67.4 PK	68.2	-0.8	1.82 V	1	60.4	7.0
5	11380.00	59.5 PK	74.0	-14.5	1.61 V	109	40.7	18.8
6	11380.00	46.4 AV	54.0	-7.6	1.61 V	109	27.6	18.8

**Remarks:**

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

Below 1GHz Worst-Case Data:

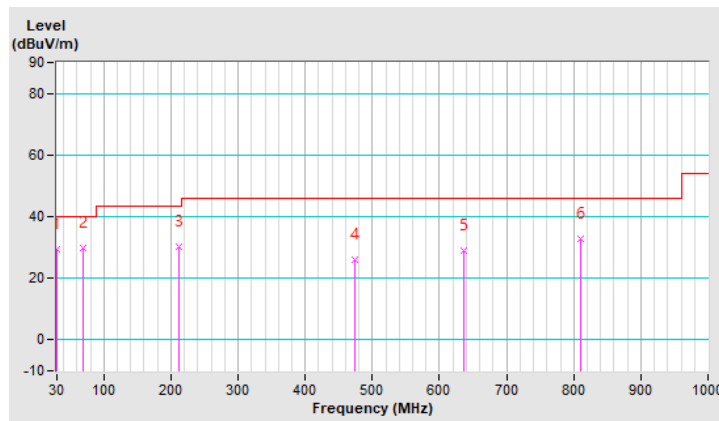
Mode A1

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	29.4 QP	40.0	-10.6	1.25 H	332	39.6	-10.2
2	68.80	29.7 QP	40.0	-10.3	1.00 H	81	40.7	-11.0
3	212.36	30.3 QP	43.5	-13.2	1.25 H	115	41.6	-11.3
4	473.29	26.1 QP	46.0	-19.9	1.50 H	222	29.1	-3.0
5	635.28	29.1 QP	46.0	-16.9	1.00 H	73	29.0	0.1
6	809.88	32.9 QP	46.0	-13.1	1.25 H	314	29.7	3.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.

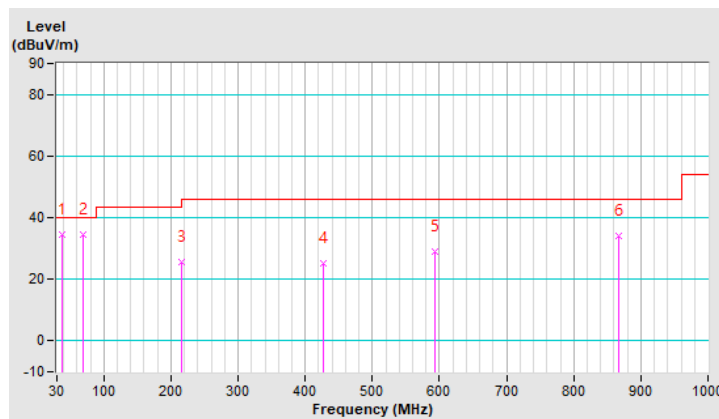


RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.76	34.4 QP	40.0	-5.6	1.00 V	172	44.1	-9.7
2	69.77	34.4 QP	40.0	-5.6	1.25 V	5	45.4	-11.0
3	216.24	25.8 QP	46.0	-20.2	1.50 V	95	37.0	-11.2
4	426.73	25.3 QP	46.0	-20.7	1.25 V	83	29.4	-4.1
5	592.60	29.0 QP	46.0	-17.0	1.00 V	172	29.4	-0.4
6	866.14	33.9 QP	46.0	-12.1	1.50 V	338	29.7	4.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.



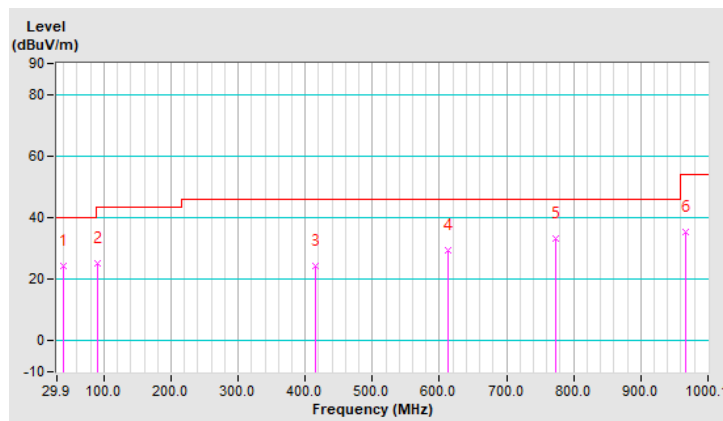
Mode A2

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	38.73	24.4 QP	40.0	-15.6	1.50 H	85	34.3	-9.9
2	90.14	25.1 QP	43.5	-18.4	1.00 H	291	39.9	-14.8
3	416.06	24.3 QP	46.0	-21.7	1.25 H	183	28.9	-4.6
4	612.00	29.5 QP	46.0	-16.5	1.00 H	68	29.7	-0.2
5	773.99	33.2 QP	46.0	-12.8	1.25 H	238	30.2	3.0
6	966.05	35.3 QP	54.0	-18.7	1.00 H	304	28.9	6.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.



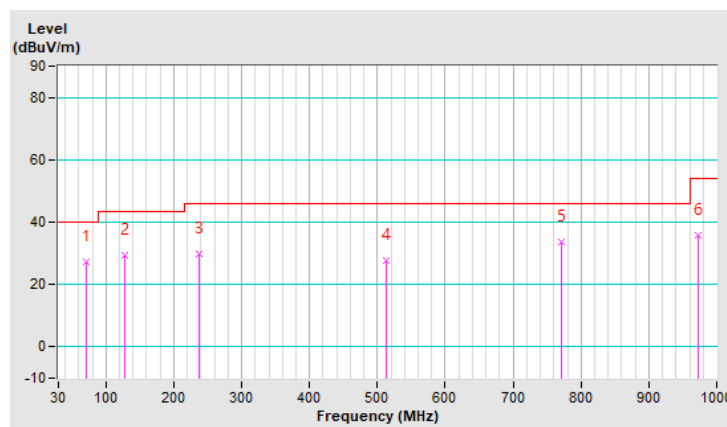


RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	70.74	27.1 QP	40.0	-12.9	1.00 V	145	38.3	-11.2
2	127.97	29.6 QP	43.5	-13.9	1.50 V	145	40.0	-10.4
3	236.61	29.7 QP	46.0	-16.3	1.25 V	143	39.5	-9.8
4	512.09	27.7 QP	46.0	-18.3	1.00 V	6	29.9	-2.2
5	772.05	33.7 QP	46.0	-12.3	1.25 V	145	30.8	2.9
6	972.84	35.8 QP	54.0	-18.2	1.50 V	167	29.6	6.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.



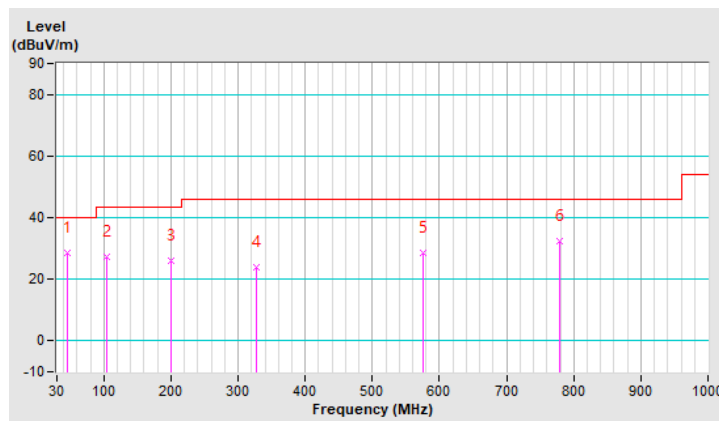
Mode B1

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	46.49	28.4 QP	40.0	-11.6	1.00 H	18	37.5	-9.1
2	103.72	27.3 QP	43.5	-16.2	1.00 H	94	40.3	-13.0
3	199.75	26.2 QP	43.5	-17.3	1.25 H	202	37.7	-11.5
4	326.82	23.8 QP	46.0	-22.2	1.50 H	169	29.9	-6.1
5	576.11	28.5 QP	46.0	-17.5	1.00 H	19	29.5	-1.0
6	778.84	32.5 QP	46.0	-13.5	1.25 H	159	29.4	3.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.

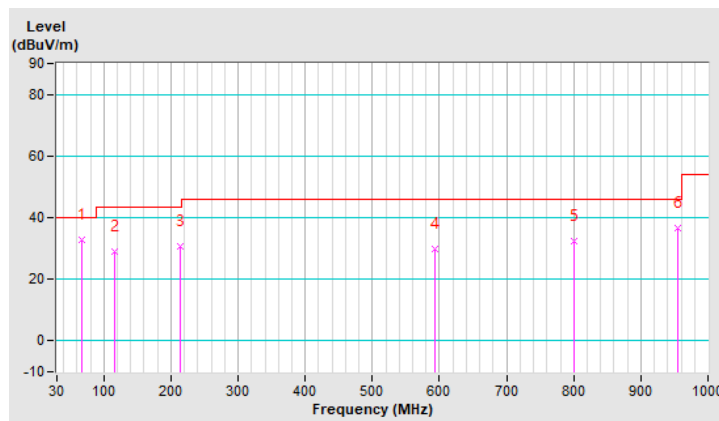


RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	66.86	32.9 QP	40.0	-7.1	1.25 V	22	43.2	-10.3
2	116.33	29.1 QP	43.5	-14.4	1.50 V	126	40.8	-11.7
3	214.30	30.7 QP	43.5	-12.8	1.00 V	80	41.9	-11.2
4	593.57	29.9 QP	46.0	-16.1	1.25 V	180	30.3	-0.4
5	800.18	32.4 QP	46.0	-13.6	1.00 V	293	29.1	3.3
6	954.41	36.6 QP	46.0	-9.4	1.25 V	111	30.4	6.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.



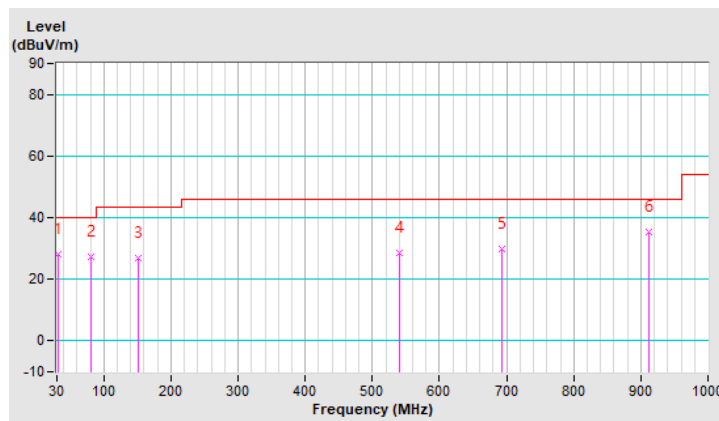
Mode B2

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	28.0 QP	40.0	-12.0	1.00 H	171	38.6	-10.6
2	80.44	27.5 QP	40.0	-12.5	1.50 H	206	41.2	-13.7
3	152.22	27.0 QP	43.5	-16.5	1.25 H	19	35.9	-8.9
4	541.19	28.7 QP	46.0	-17.3	1.25 H	333	30.4	-1.7
5	693.48	29.8 QP	46.0	-16.2	1.00 H	300	29.0	0.8
6	911.73	35.2 QP	46.0	-10.8	1.50 H	19	29.5	5.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
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.

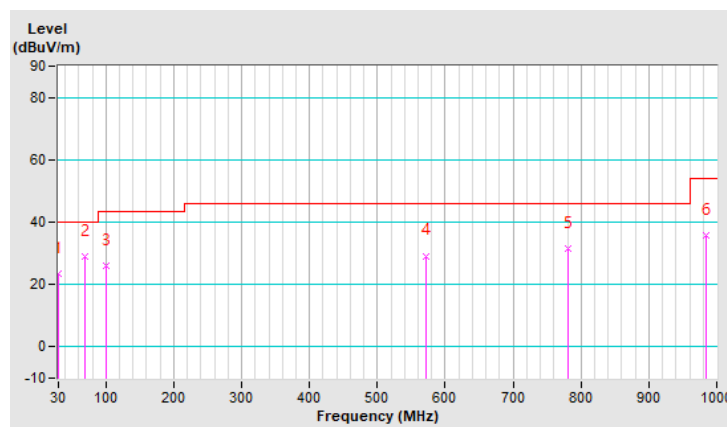


RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	23.4 QP	40.0	-16.6	1.25 V	194	33.6	-10.2
2	68.80	28.9 QP	40.0	-11.1	1.00 V	249	39.9	-11.0
3	100.81	26.0 QP	43.5	-17.5	1.50 V	353	39.4	-13.4
4	572.23	29.2 QP	46.0	-16.8	1.00 V	309	30.3	-1.1
5	780.78	31.7 QP	46.0	-14.3	1.25 V	59	28.6	3.1
6	983.51	35.6 QP	54.0	-18.4	1.00 V	108	29.4	6.2

Remarks:

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



## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

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

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

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

### 4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102412	Jan. 22, 2022	Jan. 21, 2023
RF signal cable Woken	5D-FB	Cable-cond2-01	Sep. 04, 2021	Sep. 03, 2022
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Feb. 17, 2022	Feb. 16, 2023
V-LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Sep. 17, 2021	Sep. 16, 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 2 (Conduction 2).

3. The VCCI Site Registration No. is C-12047.

4. Tested date: Jul. 23, 2022

### 4.2.3 Test Procedures

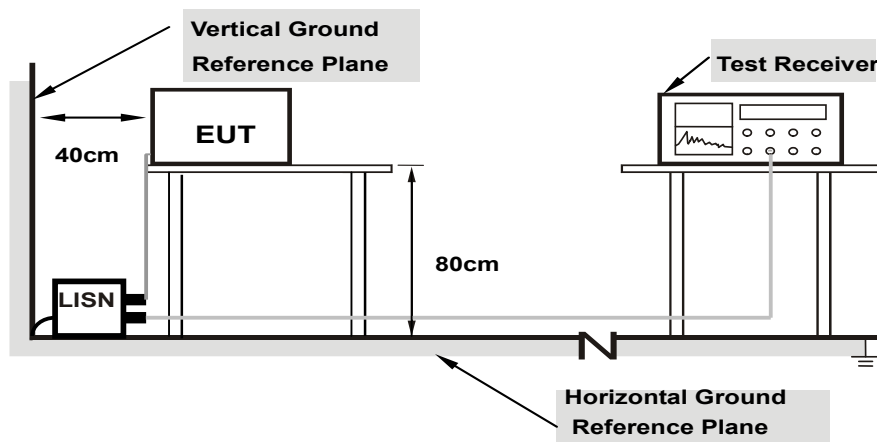
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

### 4.2.4 Deviation from Test Standard

No deviation.

### 4.2.5 Test Setup



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

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

### 4.2.6 EUT Operating Conditions

Same as 4.1.6.

#### 4.2.7 Test Results

Worst-case data:

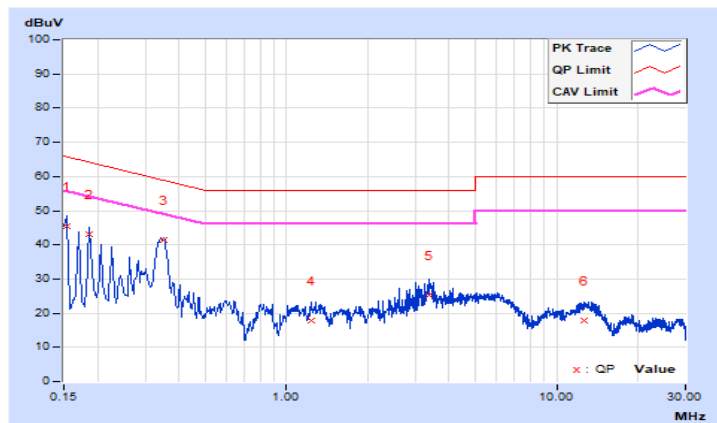
802.11a

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15400	10.13	35.44	16.04	45.57	26.17	65.78
2	0.18600	10.15	32.82	17.56	42.97	27.71	64.21	54.21	-21.24	-26.50
<b>3</b>	<b>0.34943</b>	<b>10.22</b>	<b>31.35</b>	<b>23.55</b>	<b>41.57</b>	<b>33.77</b>	<b>58.98</b>	<b>48.98</b>	<b>-17.41</b>	<b>-15.21</b>
4	1.23000	10.32	7.53	1.86	17.85	12.18	56.00	46.00	-38.15	-33.82
5	3.38200	10.39	14.90	5.01	25.29	15.40	56.00	46.00	-30.71	-30.60
6	12.69800	10.49	7.38	1.82	17.87	12.31	60.00	50.00	-42.13	-37.69

Remarks:

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



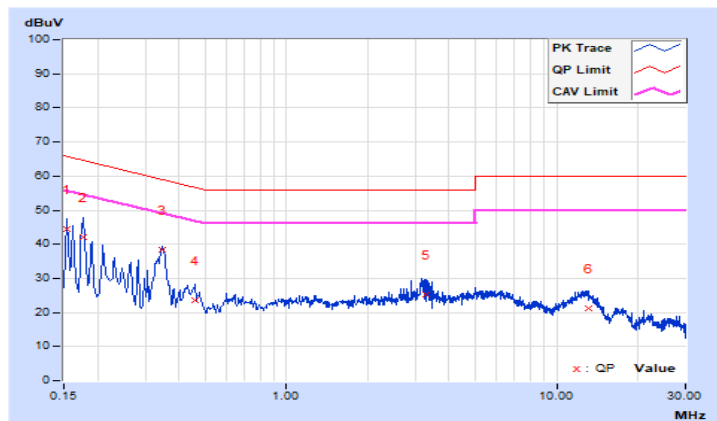


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15400	10.14	34.29	15.32	44.43	25.46	65.78
2	0.17800	10.17	31.89	14.61	42.06	24.78	64.58	54.58	-22.52	-29.80
3	0.34577	10.24	28.00	20.36	38.24	30.60	59.06	49.06	-20.82	-18.46
4	0.45800	10.26	13.37	5.71	23.63	15.97	56.73	46.73	-33.10	-30.76
5	3.27400	10.39	14.74	4.90	25.13	15.29	56.00	46.00	-30.87	-30.71
6	13.07400	10.57	10.67	5.06	21.24	15.63	60.00	50.00	-38.76	-34.37

Remarks:

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

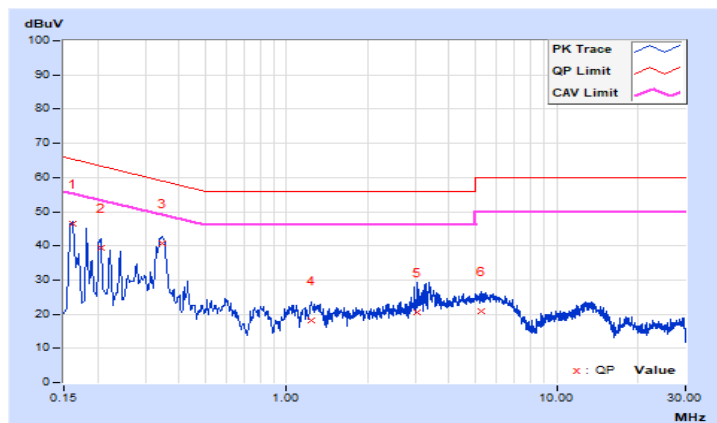


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16105	10.14	36.36	18.49	46.50	28.63	65.41
2	0.20577	10.16	29.37	13.77	39.53	23.93	63.37	53.37	-23.84	-29.44
3	0.34486	10.22	30.37	22.51	40.59	32.73	59.09	49.09	-18.50	-16.36
4	1.23800	10.32	7.82	1.35	18.14	11.67	56.00	46.00	-37.86	-34.33
5	3.04200	10.39	10.21	1.38	20.60	11.77	56.00	46.00	-35.40	-34.23
6	5.29400	10.41	10.54	3.91	20.95	14.32	60.00	50.00	-39.05	-35.68

Remarks:

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

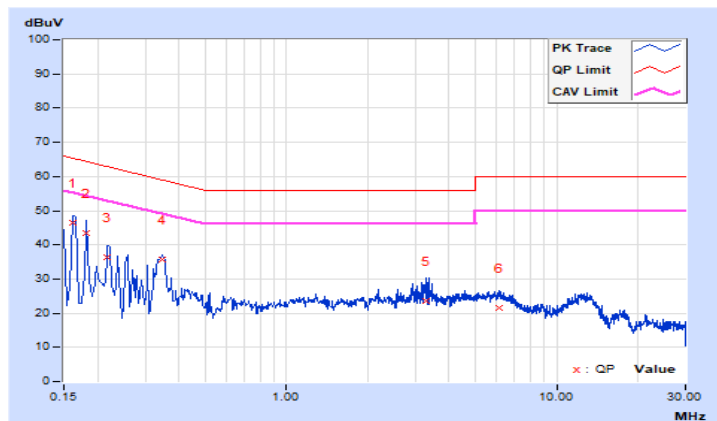


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16200	10.15	36.29	20.51	46.44	30.66	65.36
2	0.18200	10.17	33.23	17.96	43.40	28.13	64.39	54.39	-20.99	-26.26
3	0.21800	10.20	26.10	10.47	36.30	20.67	62.89	52.89	-26.59	-32.22
4	0.34577	10.24	25.56	17.73	35.80	27.97	59.06	49.06	-23.26	-21.09
5	3.29800	10.39	13.26	3.83	23.65	14.22	56.00	46.00	-32.35	-31.78
6	6.12200	10.44	11.16	5.25	21.60	15.69	60.00	50.00	-38.40	-34.31

Remarks:

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

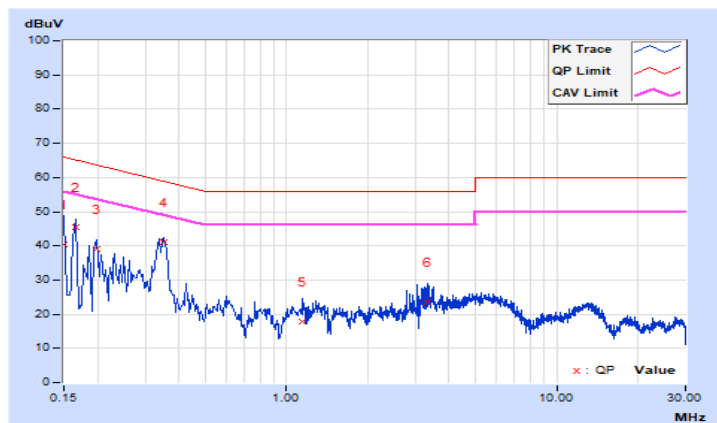


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15000	10.13	30.44	10.38	40.57	20.51	66.00
2	0.16600	10.14	35.47	17.41	45.61	27.55	65.16	55.16	-19.55	-27.61
3	0.19800	10.16	28.80	10.23	38.96	20.39	63.69	53.69	-24.73	-33.30
4	0.34943	10.22	30.88	22.34	41.10	32.56	58.98	48.98	-17.88	-16.42
5	1.15000	10.31	7.44	1.59	17.75	11.90	56.00	46.00	-38.25	-34.10
6	3.34600	10.39	13.26	2.29	23.65	12.68	56.00	46.00	-32.35	-33.32

Remarks:

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

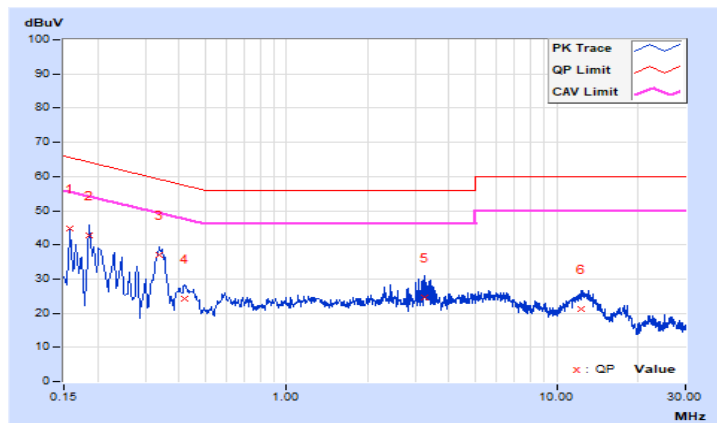


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15800	10.15	34.61	19.66	44.76	29.81	65.57
2	0.18600	10.18	32.51	19.04	42.69	29.22	64.21	54.21	-21.52	-24.99
3	0.33800	10.24	26.80	19.24	37.04	29.48	59.25	49.25	-22.21	-19.77
4	0.41799	10.26	14.14	6.59	24.40	16.85	57.49	47.49	-33.09	-30.64
5	3.24595	10.38	14.10	5.45	24.48	15.83	56.00	46.00	-31.52	-30.17
6	12.35800	10.56	10.62	4.61	21.18	15.17	60.00	50.00	-38.82	-34.83

Remarks:

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

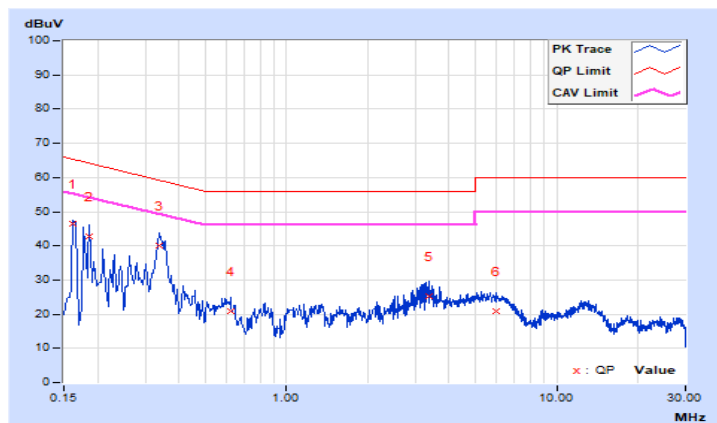


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16200	10.14	36.43	19.45	46.57	29.59	65.36
2	0.18600	10.15	32.54	17.02	42.69	27.17	64.21	54.21	-21.52	-27.04
3	0.33800	10.22	30.01	22.12	40.23	32.34	59.25	49.25	-19.02	-16.91
4	0.62200	10.26	10.54	4.59	20.80	14.85	56.00	46.00	-35.20	-31.15
5	3.38200	10.39	14.91	5.01	25.30	15.40	56.00	46.00	-30.70	-30.60
6	5.99000	10.42	10.41	4.20	20.83	14.62	60.00	50.00	-39.17	-35.38

Remarks:

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

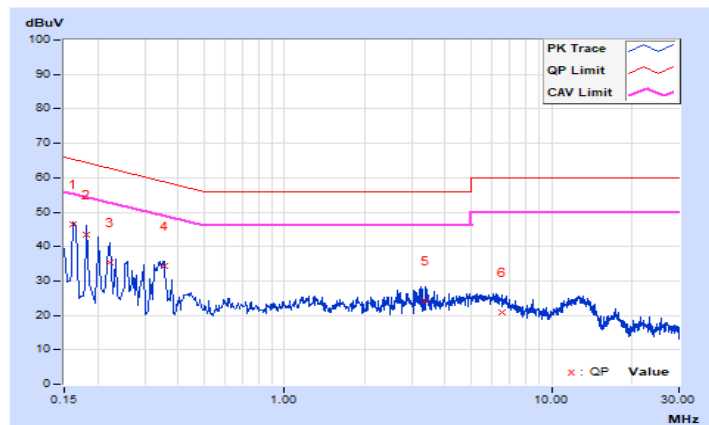


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16200	10.15	36.17	20.53	46.32	30.68	65.36
2	0.18200	10.17	33.15	17.89	43.32	28.06	64.39	54.39	-21.07	-26.33
3	0.22200	10.20	25.01	10.29	35.21	20.49	62.74	52.74	-27.53	-32.25
4	0.35400	10.24	24.26	16.91	34.50	27.15	58.87	48.87	-24.37	-21.72
5	3.36200	10.39	13.94	4.94	24.33	15.33	56.00	46.00	-31.67	-30.67
6	6.53400	10.45	10.50	5.31	20.95	15.76	60.00	50.00	-39.05	-34.24

Remarks:

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



### 4.3 Transmit Power Measurement

#### 4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√	1 Watt (30 dBm)

\*B is the 26 dB emission bandwidth in megahertz

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

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

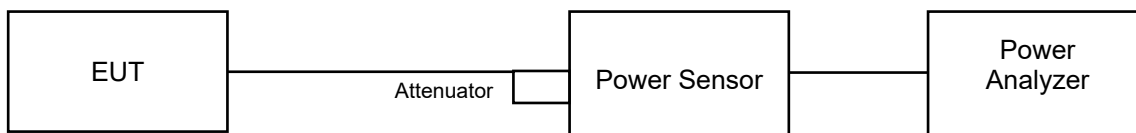
Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

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

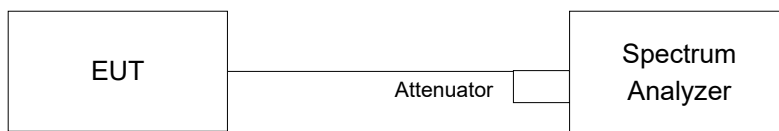
For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS})$  dB.

#### 4.3.2 Test Setup

For Power Output



For 26dB Bandwidth and power output of transmission above 5.725 GHz where the EBW crosses 5.725 GHz



#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.



#### 4.3.4 Test Procedure

##### For Average Power Measurement

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 and set the detector to average. Duty factor is not added to measured value.

For transmission above 5.725 GHz where the EBW crosses 5.725 GHz

For channel aggregation (channel 138, 142, 144) measurement refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II E 2 b) method SA-1.

##### For 26dB Bandwidth

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

#### 4.3.5 Deviation from Test Standard

No deviation.

#### 4.3.6 EUT Operating Conditions

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

### 4.3.7 Test Result

Power Output:

CDD Mode

802.11a

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	18.20	17.25	119.158	20.76	24.00	Pass
60	5300	18.25	17.22	<b>119.557</b>	20.78	24.00	Pass
64	5320	17.64	16.85	106.494	20.27	23.78	Pass
100	5500	16.83	16.67	94.646	19.76	23.80	Pass
116	5580	18.31	17.45	123.355	20.91	24.00	Pass
140	5700	16.01	15.15	72.637	18.61	23.80	Pass
144	5720 (For U-NII-2C)	18.09	17.16	<b>125.326</b>	20.98	22.70	Pass
144	5720 (For U-NII-3)	9.78	8.96	18.706	12.72	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(22.60) = 24.54 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(22.91) = 24.60 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(19.04) = 23.79 < 24\text{dBm}$
4.  $11\text{dBm} + 10\log(20.23) = 24.05 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(37.05) = 26.68 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(19.09) = 23.80 < 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5708.87) = 23.07 < 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(21.78) = 24.38 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(23.78) = 24.76 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(19.00) = 23.78 < 24\text{dBm}$
4.  $11\text{dBm} + 10\log(19.08) = 23.80 < 24\text{dBm}$
5.  $11\text{dBm} + 10\log(29.65) = 25.72 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(19.27) = 23.84 < 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5710.20) = 22.70 < 24\text{dBm}$

802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	17.95	17.18	114.613	20.59	24.00	Pass
60	5300	18.02	17.20	115.868	20.64	24.00	Pass
64	5320	16.42	15.79	81.785	19.13	24.00	Pass
100	5500	14.85	14.92	61.595	17.90	24.00	Pass
116	5580	17.94	17.31	116.057	20.65	24.00	Pass
140	5700	16.04	15.29	73.986	18.69	24.00	Pass
144	5720 (For U-NII-2C)	16.49	15.85	91.192	19.60	22.90	Pass
144	5720 (For U-NII-3)	9.21	8.57	17.059	12.32	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(21.46) = 24.31 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(22.90) = 24.59 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(20.95) = 24.21 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(21.14) = 24.25 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(28.13) = 25.49 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(21.13) = 24.24 > 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5709.42) = 22.92 < 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(21.41) = 24.30 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(21.51) = 24.32 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(20.94) = 24.20 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(21.04) = 24.23 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(26.30) = 25.19 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(21.14) = 24.25 > 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5709.50) = 22.90 < 24\text{dBm}$

802.11n (HT40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	17.62	16.68	104.368	20.19	24.00	Pass
62	5310	10.62	10.75	23.420	13.70	24.00	Pass
102	5510	12.63	12.20	34.919	15.43	24.00	Pass
110	5550	16.96	16.59	95.263	19.79	24.00	Pass
134	5670	16.23	15.43	76.890	18.86	24.00	Pass
142	5710 (For U-NII-2C)	16.79	16.15	97.688	19.90	24.00	Pass
142	5710 (For U-NII-3)	4.97	4.30	6.404	8.06	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(41.61) = 27.19 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(41.55) = 27.18 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(41.51) = 27.18 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(41.65) = 27.19 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(41.36) = 27.16 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(5725.00 - 5689.33) = 26.52 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(41.82) = 27.21 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(41.66) = 27.19 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(41.74) = 27.20 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(41.41) = 27.17 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(5725.00 - 5689.30) = 26.52 > 24\text{dBm}$

802.11ac (VHT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	18.01	17.20	115.722	20.63	24.00	Pass
60	5300	18.07	17.23	116.965	20.68	24.00	Pass
64	5320	16.44	15.85	82.515	19.17	24.00	Pass
100	5500	14.96	14.88	62.094	17.93	24.00	Pass
116	5580	17.93	17.34	116.287	20.66	24.00	Pass
140	5700	16.06	15.34	74.562	18.73	24.00	Pass
144	5720 (For U-NII-2C)	16.53	15.87	91.840	19.63	22.90	Pass
144	5720 (For U-NII-3)	9.25	8.59	17.180	12.35	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(21.46) = 24.31 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(22.90) = 24.59 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(20.95) = 24.21 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(21.14) = 24.25 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(28.13) = 25.49 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(21.13) = 24.24 > 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5709.42) = 22.92 < 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(21.41) = 24.30 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(21.51) = 24.32 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(20.94) = 24.20 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(21.04) = 24.23 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(26.30) = 25.19 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(21.14) = 24.25 > 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5709.50) = 22.90 < 24\text{dBm}$

802.11ac (VHT40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	17.64	16.73	105.174	20.22	24.00	Pass
62	5310	11.64	10.78	26.556	14.24	24.00	Pass
102	5510	12.68	12.23	35.246	15.47	24.00	Pass
110	5550	17.02	16.63	96.376	19.84	24.00	Pass
134	5670	16.25	15.55	78.062	18.92	24.00	Pass
142	5710 (For U-NII-2C)	16.93	16.19	99.825	19.99	24.00	Pass
142	5710 (For U-NII-3)	5.11	4.34	6.544	8.16	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(41.61) = 27.19 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(41.55) = 27.18 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(41.51) = 27.18 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(41.65) = 27.19 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(41.36) = 27.16 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(5725.00 - 5689.33) = 26.52 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(41.82) = 27.21 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(41.66) = 27.19 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(41.74) = 27.20 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(41.41) = 27.17 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(5725.00 - 5689.30) = 26.52 > 24\text{dBm}$

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
58	5290	9.98	9.33	18.524	12.68	24.00	Pass
106	5530	12.79	12.42	36.469	15.62	24.00	Pass
122	5610	15.63	14.96	67.892	18.32	24.00	Pass
138	5690 (For U-NII-2C)	14.76	14.22	62.069	17.93	24.00	Pass
138	5690 (For U-NII-3)	-1.07	-1.51	1.639	2.15	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(82.42) = 30.16 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(82.00) = 30.13 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(82.30) = 30.15 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(5725.00 - 5648.88) = 29.81 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(82.51) = 30.16 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(82.74) = 30.17 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(82.45) = 30.16 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(5725.00 - 5648.42) = 29.84 > 24\text{dBm}$

802.11ax (HE20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	18.05	17.23	116.671	20.67	24.00	Pass
60	5300	18.11	17.26	117.925	20.72	24.00	Pass
64	5320	16.49	15.89	83.381	19.21	24.00	Pass
100	5500	15.03	14.93	62.959	17.99	24.00	Pass
116	5580	17.95	17.35	116.699	20.67	24.00	Pass
140	5700	16.12	15.37	75.361	18.77	24.00	Pass
144	5720 (For U-NII-2C)	16.61	15.94	93.448	19.71	22.90	Pass
144	5720 (For U-NII-3)	9.33	8.66	2.197	3.42	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(21.46) = 24.31 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(22.90) = 24.59 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(20.95) = 24.21 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(21.14) = 24.25 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(28.13) = 25.49 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(21.13) = 24.24 > 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5709.42) = 22.92 < 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(21.41) = 24.30 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(21.51) = 24.32 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(20.94) = 24.20 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(21.04) = 24.23 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(26.30) = 25.19 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(21.14) = 24.25 > 24\text{dBm}$
7.  $11\text{dBm} + 10\log(5725.00 - 5709.50) = 22.90 < 24\text{dBm}$



802.11ax (HE40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	17.71	16.82	107.104	20.30	24.00	Pass
62	5310	11.70	10.84	26.925	14.30	24.00	Pass
102	5510	12.75	12.29	35.780	15.54	24.00	Pass
110	5550	17.05	16.68	97.258	19.88	24.00	Pass
134	5670	16.28	15.56	78.437	18.95	24.00	Pass
142	5710 (For U-NII-2C)	16.93	16.29	100.889	20.04	24.00	Pass
142	5710 (For U-NII-3)	5.11	4.44	6.614	8.20	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(41.61) = 27.19 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(41.55) = 27.18 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(41.51) = 27.18 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(41.65) = 27.19 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(41.36) = 27.16 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(5725.00 - 5689.33) = 26.52 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(41.82) = 27.21 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(41.66) = 27.19 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(41.74) = 27.20 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log(41.41) = 27.17 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log(5725.00 - 5689.30) = 26.52 > 24\text{dBm}$

802.11ax (HE80)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
58	5290	10.01	9.35	18.633	12.70	24.00	Pass
106	5530	12.83	12.44	36.725	15.65	24.00	Pass
122	5610	15.67	15.01	68.593	18.36	24.00	Pass
138	5690 (For U-NII-2C)	14.79	14.25	62.499	17.96	24.00	Pass
138	5690 (For U-NII-3)	-1.04	-1.48	1.6504	2.18	30.00	Pass

Note:

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

Chain 0

1.  $11\text{dBm} + 10\log(82.42) = 30.16 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(82.00) = 30.13 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(82.30) = 30.15 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(5725.00 - 5648.88) = 29.81 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log(82.51) = 30.16 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log(82.74) = 30.17 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log(82.45) = 30.16 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log(5725.00 - 5648.42) = 29.84 > 24\text{dBm}$

## Beamforming Mode

### 802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	17.95	17.18	114.613	20.59	21.22	Pass
60	5300	18.02	17.20	115.868	20.64	21.22	Pass
64	5320	16.42	15.79	81.785	19.13	21.22	Pass
100	5500	14.85	14.92	61.595	17.90	21.28	Pass
116	5580	17.94	17.31	116.057	20.65	21.28	Pass
140	5700	16.04	15.29	73.986	18.69	21.28	Pass
144	5720 (For U-NII-2C)	16.49	15.85	91.192	19.60	20.18	Pass
144	5720 (For U-NII-3)	9.21	8.57	17.059	12.32	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5720MHz (For U-NII-2C): Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 22.90 - (8.72 - 6) = 20.18dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (21.46) = 24.31 > 24dBm
- 11dBm + 10log (22.90) = 24.59 > 24dBm
- 11dBm + 10log (20.95) = 24.21 > 24dBm
- 11dBm + 10log (21.14) = 24.25 > 24dBm
- 11dBm + 10log (28.13) = 25.49 > 24dBm
- 11dBm + 10log (21.13) = 24.24 > 24dBm
- 11dBm + 10log (5725.00 - 5709.42) = 22.92 < 24dBm

Chain 1

- 11dBm + 10log (21.41) = 24.30 > 24dBm
- 11dBm + 10log (21.51) = 24.32 > 24dBm
- 11dBm + 10log (20.94) = 24.20 > 24dBm
- 11dBm + 10log (21.04) = 24.23 > 24dBm
- 11dBm + 10log (26.30) = 25.19 > 24dBm
- 11dBm + 10log (21.14) = 24.25 > 24dBm
- 11dBm + 10log (5725.00 - 5709.50) = 22.90 < 24dBm

802.11n (HT40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	17.62	16.68	104.368	20.19	21.22	Pass
62	5310	10.62	10.75	23.420	13.70	21.22	Pass
102	5510	12.63	12.20	34.919	15.43	21.28	Pass
110	5550	16.96	16.59	95.263	19.79	21.28	Pass
134	5670	16.23	15.43	76.890	18.86	21.28	Pass
142	5710 (For U-NII-2C)	16.79	16.15	97.688	19.90	21.28	Pass
142	5710 (For U-NII-3)	4.97	4.30	6.404	8.06	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (41.61) = 27.19 > 24dBm
- 11dBm + 10log (41.55) = 27.18 > 24dBm
- 11dBm + 10log (41.51) = 27.18 > 24dBm
- 11dBm + 10log (41.65) = 27.19 > 24dBm
- 11dBm + 10log (41.36) = 27.16 > 24dBm
- 11dBm + 10log (5725.00 - 5689.33) = 26.52 > 24dBm

Chain 1

- 11dBm + 10log (41.82) = 27.21 > 24dBm
- 11dBm + 10log (41.24) = 27.15 > 24dBm
- 11dBm + 10log (41.66) = 27.19 > 24dBm
- 11dBm + 10log (41.74) = 27.20 > 24dBm
- 11dBm + 10log (41.41) = 27.17 > 24dBm
- 11dBm + 10log (5725.00 - 5689.30) = 26.52 > 24dBm

802.11ac (VHT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	18.01	17.20	115.722	20.63	21.22	Pass
60	5300	18.07	17.23	116.965	20.68	21.22	Pass
64	5320	16.44	15.85	82.515	19.17	21.22	Pass
100	5500	14.96	14.88	62.094	17.93	21.28	Pass
116	5580	17.93	17.34	116.287	20.66	21.28	Pass
140	5700	16.06	15.34	74.562	18.73	21.28	Pass
144	5720 (For U-NII-2C)	16.53	15.87	91.840	19.63	20.18	Pass
144	5720 (For U-NII-3)	9.25	8.59	17.180	12.35	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5720MHz (For U-NII-2C): Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 22.90 - (8.72 - 6) = 20.18dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (21.46) = 24.31 > 24dBm
- 11dBm + 10log (22.90) = 24.59 > 24dBm
- 11dBm + 10log (20.95) = 24.21 > 24dBm
- 11dBm + 10log (21.14) = 24.25 > 24dBm
- 11dBm + 10log (28.13) = 25.49 > 24dBm
- 11dBm + 10log (21.13) = 24.24 > 24dBm
- 11dBm + 10log (5725.00 - 5709.42) = 22.92 < 24dBm

Chain 1

- 11dBm + 10log (21.41) = 24.30 > 24dBm
- 11dBm + 10log (21.51) = 24.32 > 24dBm
- 11dBm + 10log (20.94) = 24.20 > 24dBm
- 11dBm + 10log (21.04) = 24.23 > 24dBm
- 11dBm + 10log (26.30) = 25.19 > 24dBm
- 11dBm + 10log (21.14) = 24.25 > 24dBm
- 11dBm + 10log (5725.00 - 5709.50) = 22.90 < 24dBm

802.11ac (VHT40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	17.64	16.73	105.174	20.22	21.22	Pass
62	5310	11.64	10.78	26.556	14.24	21.22	Pass
102	5510	12.68	12.23	35.246	15.47	21.28	Pass
110	5550	17.02	16.63	96.376	19.84	21.28	Pass
134	5670	16.25	15.55	78.062	18.92	21.28	Pass
142	5710 (For U-NII-2C)	16.93	16.19	99.825	19.99	21.28	Pass
142	5710 (For U-NII-3)	5.11	4.34	6.544	8.16	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (41.61) = 27.19 > 24dBm
- 11dBm + 10log (41.55) = 27.18 > 24dBm
- 11dBm + 10log (41.51) = 27.18 > 24dBm
- 11dBm + 10log (41.65) = 27.19 > 24dBm
- 11dBm + 10log (41.36) = 27.16 > 24dBm
- 11dBm + 10log (5725.00 - 5689.33) = 26.52 > 24dBm

Chain 1

- 11dBm + 10log (41.82) = 27.21 > 24dBm
- 11dBm + 10log (41.24) = 27.15 > 24dBm
- 11dBm + 10log (41.66) = 27.19 > 24dBm
- 11dBm + 10log (41.74) = 27.20 > 24dBm
- 11dBm + 10log (41.41) = 27.17 > 24dBm
- 11dBm + 10log (5725.00 - 5689.30) = 26.52 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
58	5290	9.98	9.33	18.524	12.68	21.22	Pass
106	5530	12.79	12.42	36.469	15.62	21.28	Pass
122	5610	15.63	14.96	67.892	18.32	21.28	Pass
138	5690 (For U-NII-2C)	14.76	14.22	62.069	17.93	21.28	Pass
138	5690 (For U-NII-3)	-1.07	-1.51	1.639	2.15	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (82.42) = 30.16 > 24dBm
- 11dBm + 10log (82.00) = 30.13 > 24dBm
- 11dBm + 10log (82.30) = 30.15 > 24dBm
- 11dBm + 10log (5725.00 - 5648.88) = 29.81 > 24dBm

Chain 1

- 11dBm + 10log (82.51) = 30.16 > 24dBm
- 11dBm + 10log (82.74) = 30.17 > 24dBm
- 11dBm + 10log (82.45) = 30.16 > 24dBm
- 11dBm + 10log (5725.00 - 5648.42) = 29.84 > 24dBm

802.11ax (HE20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	18.05	17.23	116.671	20.67	21.22	Pass
60	5300	18.11	17.26	<b>117.925</b>	20.72	21.22	Pass
64	5320	16.49	15.89	83.381	19.21	21.22	Pass
100	5500	15.03	14.93	62.959	17.99	21.28	Pass
116	5580	17.95	17.35	<b>116.699</b>	20.67	21.28	Pass
140	5700	16.12	15.37	75.361	18.77	21.28	Pass
144	5720 (For U-NII-2C)	16.61	15.94	93.448	19.71	20.18	Pass
144	5720 (For U-NII-3)	9.33	8.66	17.481	12.43	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5720MHz (For U-NII-2C): Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 22.90 - (8.72 - 6) = 20.18dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (21.46) = 24.31 > 24dBm
- 11dBm + 10log (22.90) = 24.59 > 24dBm
- 11dBm + 10log (20.95) = 24.21 > 24dBm
- 11dBm + 10log (21.14) = 24.25 > 24dBm
- 11dBm + 10log (28.13) = 25.49 > 24dBm
- 11dBm + 10log (21.13) = 24.24 > 24dBm
- 11dBm + 10log (5725.00 - 5709.42) = 22.92 < 24dBm

Chain 1

- 11dBm + 10log (21.41) = 24.30 > 24dBm
- 11dBm + 10log (21.51) = 24.32 > 24dBm
- 11dBm + 10log (20.94) = 24.20 > 24dBm
- 11dBm + 10log (21.04) = 24.23 > 24dBm
- 11dBm + 10log (26.30) = 25.19 > 24dBm
- 11dBm + 10log (21.14) = 24.25 > 24dBm
- 11dBm + 10log (5725.00 - 5709.50) = 22.90 < 24dBm



802.11ax (HE40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	17.71	16.82	107.104	20.30	21.22	Pass
62	5310	11.70	10.84	26.925	14.30	21.22	Pass
102	5510	12.75	12.29	35.780	15.54	21.28	Pass
110	5550	17.05	16.68	97.258	19.88	21.28	Pass
134	5670	16.28	15.56	78.437	18.95	21.28	Pass
142	5710 (For U-NII-2C)	16.93	16.29	100.889	20.04	21.28	Pass
142	5710 (For U-NII-3)	5.11	4.44	6.614	8.20	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (41.61) = 27.19 > 24dBm
- 11dBm + 10log (41.55) = 27.18 > 24dBm
- 11dBm + 10log (41.51) = 27.18 > 24dBm
- 11dBm + 10log (41.65) = 27.19 > 24dBm
- 11dBm + 10log (41.36) = 27.16 > 24dBm
- 11dBm + 10log (5725.00 - 5689.33) = 26.52 > 24dBm

Chain 1

- 11dBm + 10log (41.82) = 27.21 > 24dBm
- 11dBm + 10log (41.24) = 27.15 > 24dBm
- 11dBm + 10log (41.66) = 27.19 > 24dBm
- 11dBm + 10log (41.74) = 27.20 > 24dBm
- 11dBm + 10log (41.41) = 27.17 > 24dBm
- 11dBm + 10log (5725.00 - 5689.30) = 26.52 > 24dBm

802.11ax (HE80)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
58	5290	10.01	9.35	18.633	12.70	21.22	Pass
106	5530	12.83	12.44	36.725	15.65	21.28	Pass
122	5610	15.67	15.01	68.593	18.36	21.28	Pass
138	5690 (For U-NII-2C)	14.79	14.25	62.499	17.96	21.28	Pass
138	5690 (For U-NII-3)	-1.04	-1.48	1.6504	2.18	27.00	Pass

Note:

- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power limit shall be reduced to 24 - (8.78 - 6) = 21.22dBm.
- 5500-5700MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power limit shall be reduced to 24 - (8.72 - 6) = 21.28dBm.
- 5725-5850MHz: Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power limit shall be reduced to 30 - (9.00 - 6) = 27.00dBm.

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

Chain 0

- 11dBm + 10log (82.42) = 30.16 > 24dBm
- 11dBm + 10log (82.00) = 30.13 > 24dBm
- 11dBm + 10log (82.30) = 30.15 > 24dBm
- 11dBm + 10log (5725.00 - 5648.88) = 29.81 > 24dBm

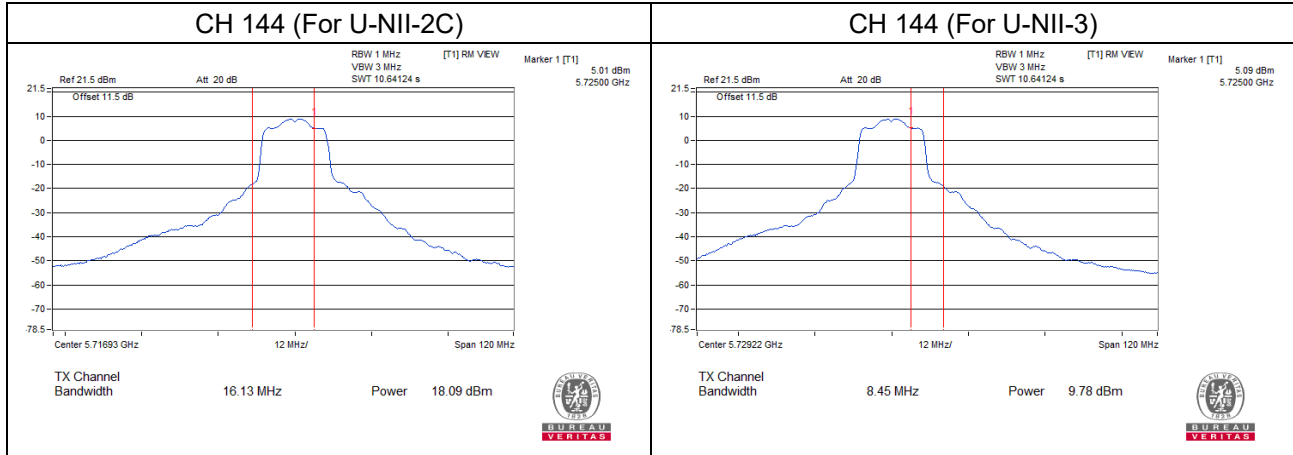
Chain 1

- 11dBm + 10log (82.51) = 30.16 > 24dBm
- 11dBm + 10log (82.74) = 30.17 > 24dBm
- 11dBm + 10log (82.45) = 30.16 > 24dBm
- 11dBm + 10log (5725.00 - 5648.42) = 29.84 > 24dBm

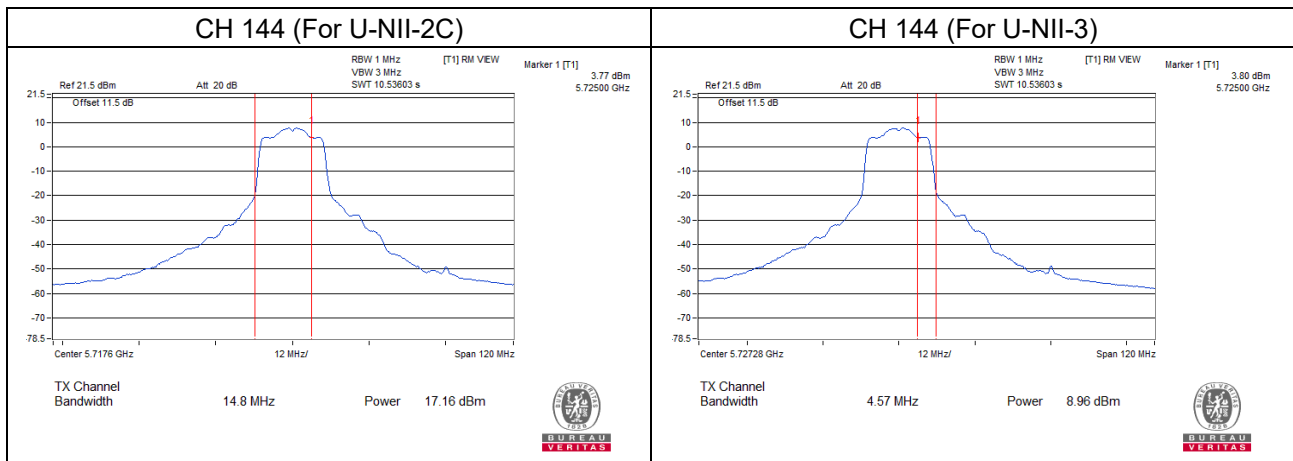
### Straddle channel power plots:

802.11a

Chain 0

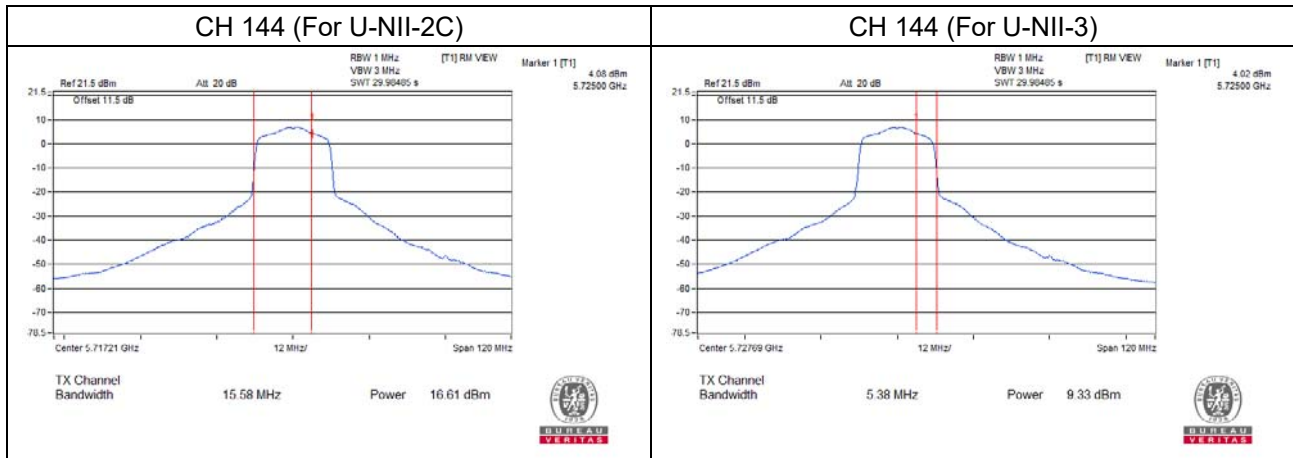


Chain 1

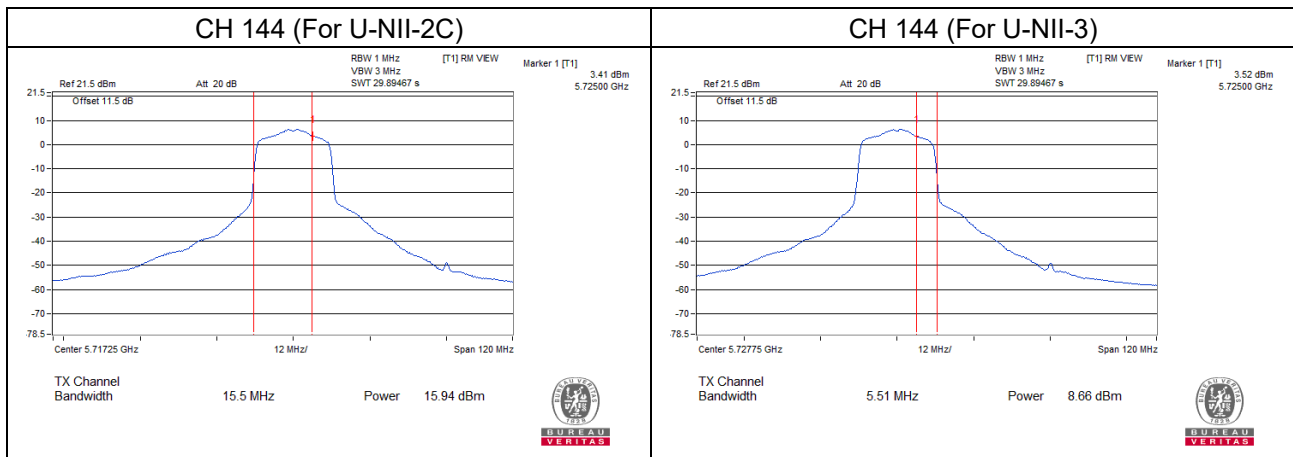


802.11ax (HE20)

Chain 0

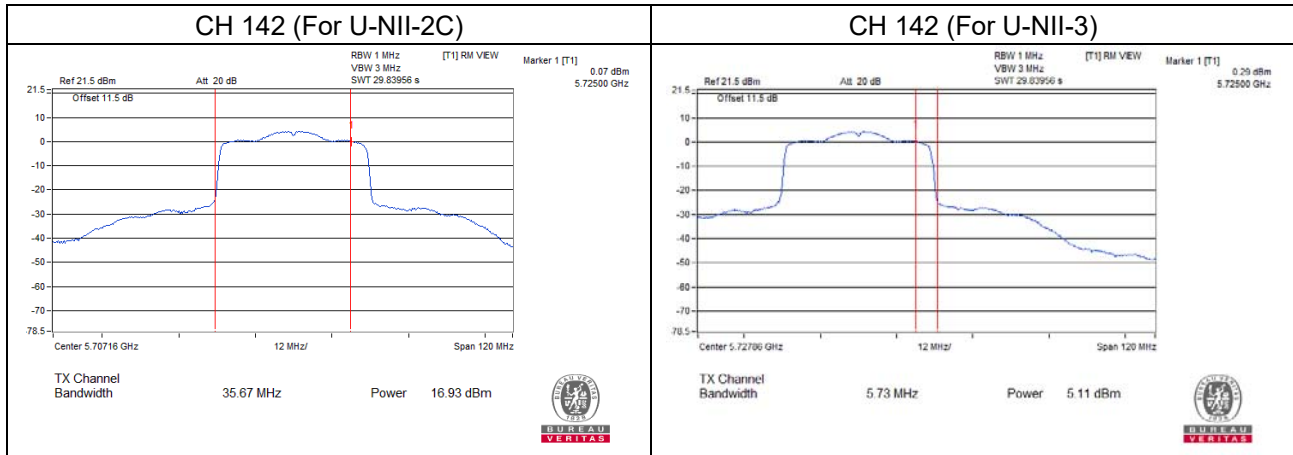


Chain 1

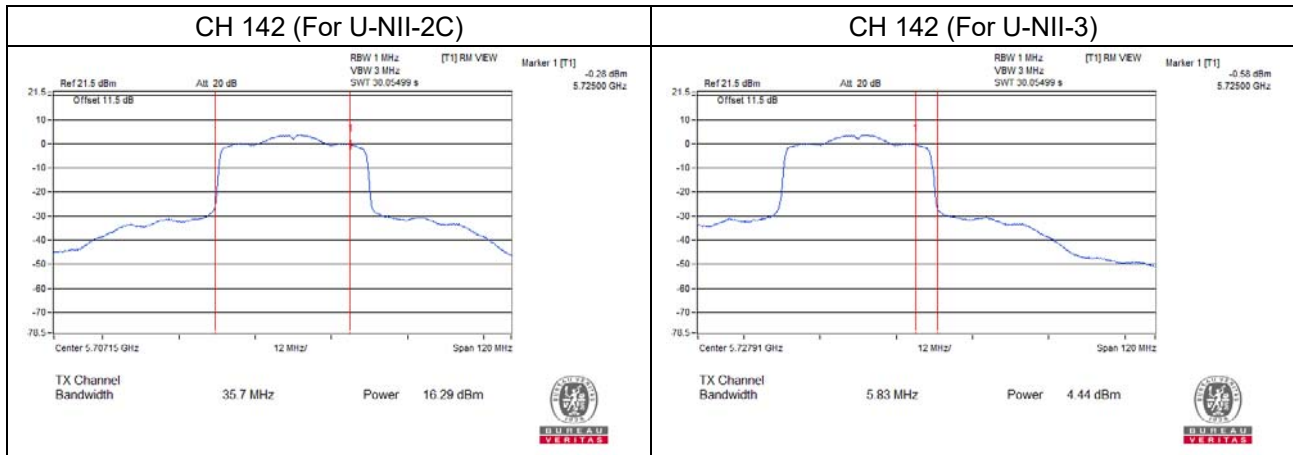


802.11ax (HE40)

Chain 0

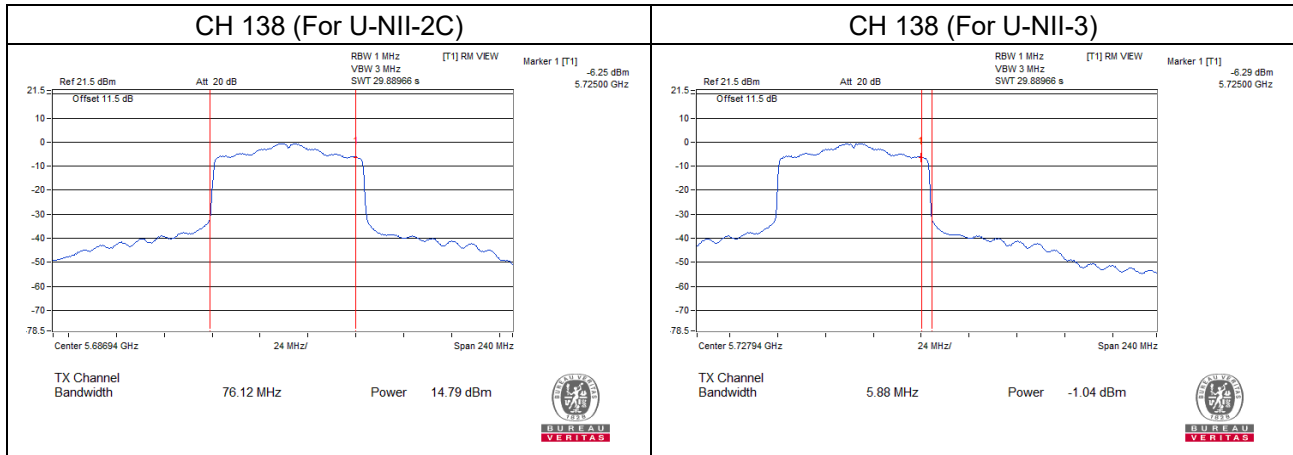


Chain 1

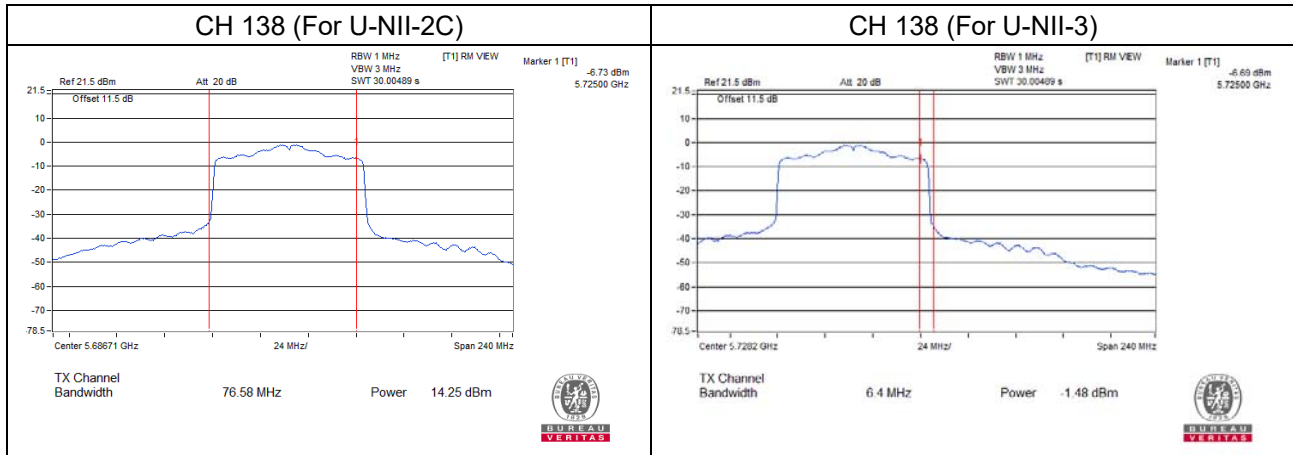


802.11ax (HE80)

Chain 0



Chain 1



26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	22.60	21.78
60	5300	22.91	23.78
64	5320	19.04	19.00
100	5500	20.23	19.08
116	5580	37.05	29.65
140	5700	19.09	19.27
144	5720 (For U-NII-2C)	16.13	14.80

For CH144 (U-NII-2C Band): The 26dBc bandwidth below 5725MHz = 5725MHz - Marker 1

802.11ax (HE20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.46	21.41
60	5300	22.90	21.51
64	5320	20.95	20.94
100	5500	21.14	21.04
116	5580	28.13	26.30
140	5700	21.13	21.14
144	5720 (For U-NII-2C)	15.58	15.50

For CH144 (U-NII-2C Band): The 26dBc bandwidth below 5725MHz = 5725MHz - Marker 1

802.11ax (HE40)

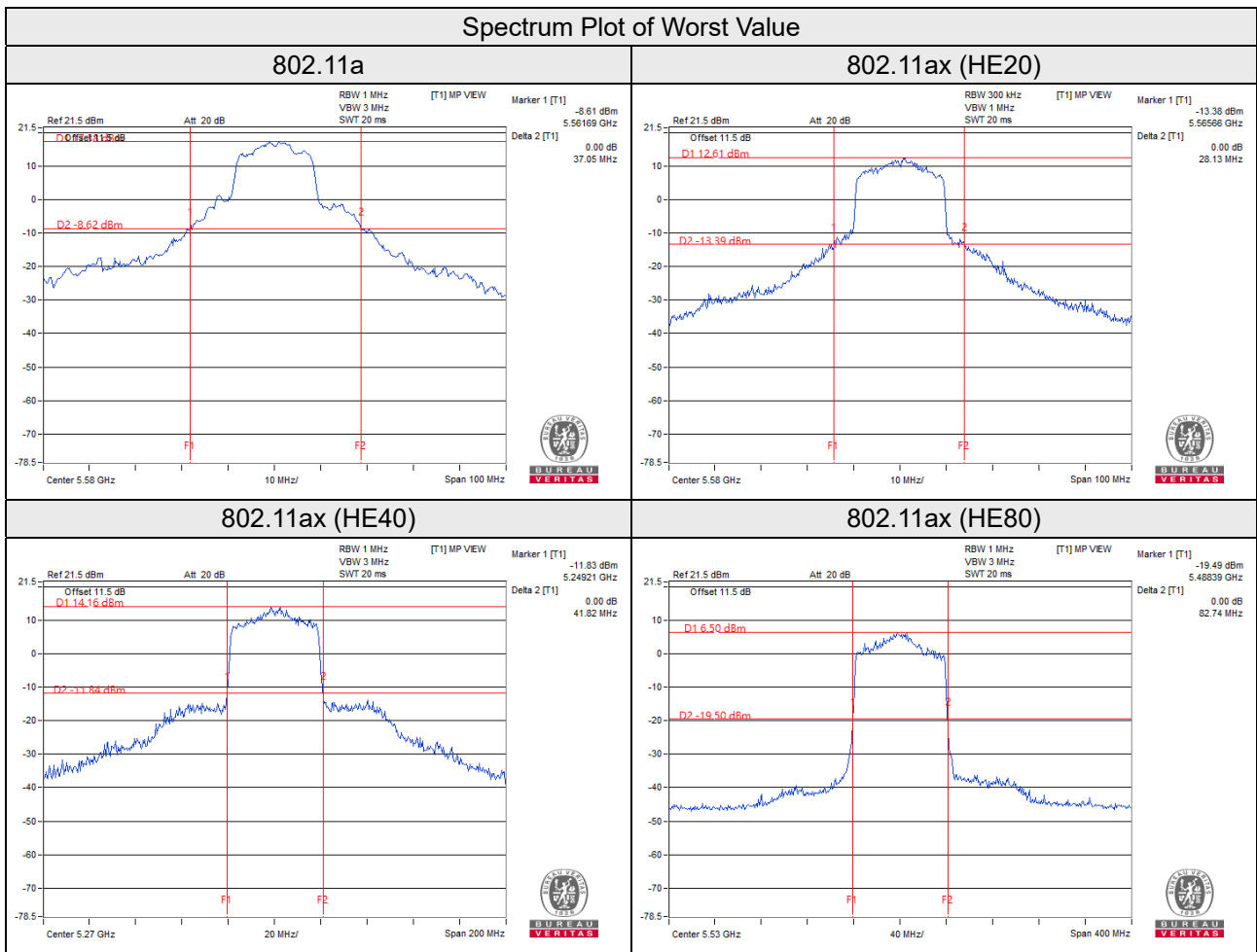
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.61	41.82
62	5310	41.55	41.24
102	5510	41.51	41.66
110	5550	41.65	41.74
134	5670	41.36	41.41
142	5710 (For U-NII-2C)	35.67	35.70

For CH142 (U-NII-2C Band): The 26dBc bandwidth below 5725MHz = 5725MHz - Marker 1

802.11ax (HE80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.42	82.51
106	5530	82.00	82.74
122	5610	82.30	82.45
138	5690 (For U-NII-2C)	76.12	76.58

For CH138 (U-NII-2C Band): The 26dBc bandwidth below 5725MHz = 5725MHz - Marker 1





## EUT Average Power

### CDD Mode

#### 802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	119.557	20.78
5470~5725	125.326	20.98

#### 802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	115.868	20.64
5470~5725	116.057	20.65

#### 802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	104.368	20.19
5470~5725	97.688	19.90

#### 802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	116.965	20.68
5470~5725	116.287	20.66

#### 802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	105.174	20.22
5470~5725	99.825	19.99

#### 802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	18.524	12.68
5470~5725	67.892	18.32

802.11ax (HE20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	117.925	20.72
5470~5725	116.699	20.67

802.11ax (HE40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	107.104	20.30
5470~5725	100.889	20.04

802.11ax (HE80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	18.633	12.70
5470~5725	68.593	18.36

## Beamforming Mode

### 802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	115.868	20.64
5470~5725	116.057	20.65

### 802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	104.368	20.19
5470~5725	97.688	19.90

### 802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	116.965	20.68
5470~5725	116.287	20.66

### 802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	105.174	20.22
5470~5725	99.825	19.99

### 802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	18.524	12.68
5470~5725	67.892	18.32

802.11ax (HE20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	117.925	20.72
5470~5725	116.699	20.67

802.11ax (HE40)

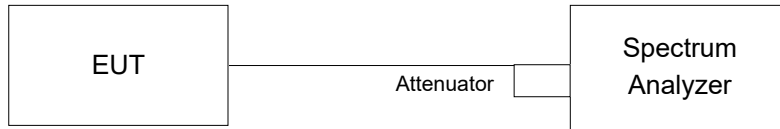
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	107.104	20.30
5470~5725	100.889	20.04

802.11ax (HE80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	18.633	12.70
5470~5725	68.593	18.36

## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Setup



### 4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.3 Test Procedure

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

#### 4.4.4 Test Result

##### 802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.44	16.44
60	5300	16.44	16.44
64	5320	16.20	16.20
100	5500	16.44	16.32
116	5580	16.62	16.62
140	5700	16.32	16.32
144	5720 (For U-NII-2C)	13.28	13.28
144	5720 (For U-NII-3)	3.40	3.16

For CH144 (U-NII-2C Band): The Occupied bandwidth below 5725MHz = 5725MHz - Temp 1

For CH144 (U-NII-3 Band): The Occupied bandwidth above 5725MHz = Temp 2 - 5725MHz

##### 802.11ax (HE20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.84	18.84
60	5300	18.84	18.84
64	5320	18.84	18.84
100	5500	18.84	18.84
116	5580	19.08	18.84
140	5700	18.84	18.84
144	5720 (For U-NII-2C)	14.48	14.48
144	5720 (For U-NII-3)	4.36	4.36

For CH144 (U-NII-2C Band): The Occupied bandwidth below 5725MHz = 5725MHz - Temp 1

For CH144 (U-NII-3 Band): The Occupied bandwidth above 5725MHz = Temp 2 - 5725MHz

802.11ax (HE40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	37.68	37.80
62	5310	37.68	37.56
102	5510	37.56	37.56
110	5550	37.92	37.92
134	5670	37.44	37.68
142	5710 (For U-NII-2C)	34.20	33.96
142	5710 (For U-NII-3)	3.72	3.72

For CH142 (U-NII-2C Band): The Occupied bandwidth below 5725MHz = 5725MHz - Temp 1

For CH142 (U-NII-3 Band): The Occupied bandwidth above 5725MHz = Temp 2 - 5725MHz

802.11ax (HE80)

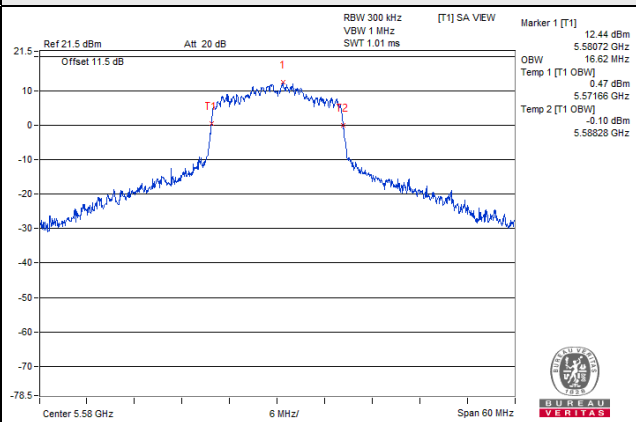
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	76.56	76.80
106	5530	76.32	76.32
122	5610	76.80	76.56
138	5690 (For U-NII-2C)	73.40	73.88
138	5690 (For U-NII-3)	2.92	2.92

For CH138 (U-NII-2C Band): The Occupied bandwidth below 5725MHz = 5725MHz - Temp 1

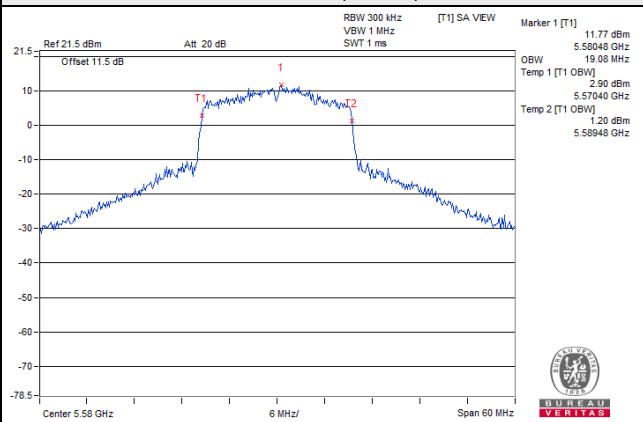
For CH138 (U-NII-3 Band): The Occupied bandwidth above 5725MHz = Temp 2 - 5725MHz

### Spectrum Plot of Worst Value

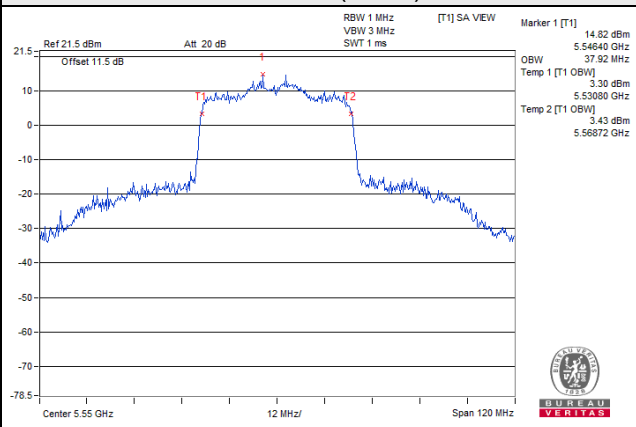
#### 802.11a



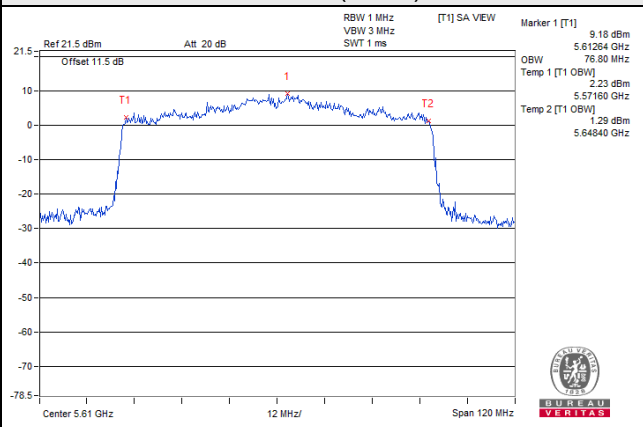
#### 802.11ax (HE20)



#### 802.11ax (HE40)



#### 802.11ax (HE80)



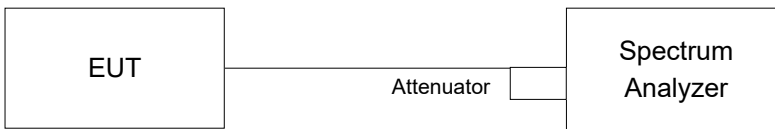


## 4.5 Peak Power Spectral Density Measurement

### 4.5.1 Limits of Peak Power Spectral Density Measurement

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

### 4.5.2 Test Setup



### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedures

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

Duty cycle of test signal is < 98%

Using method SA-2

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

#### For U-NII-3 band

Duty cycle <98%

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- 3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- 4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where  $BWCF = 10\log(500\text{ kHz}/300\text{kHz})$
- 5) Sweep time = auto, trigger set to “free run”.
- 6) Trace average at least 100 traces in power averaging mode.
- 7) Record the max value and add 10 log (1/duty cycle)

#### **4.5.5 Deviation from Test Standard**

No deviation.

#### **4.5.6 EUT Operating Conditions**

Same as 4.3.6.

#### 4.5.7 Test Results

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

##### 802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
52	5260	4.97	4.16	0.32	7.91	8.22	Pass
60	5300	5.13	4.11	0.32	7.98	8.22	Pass
64	5320	4.46	3.77	0.32	7.46	8.22	Pass
100	5500	3.61	3.48	0.32	6.88	8.28	Pass
116	5580	5.15	4.23	0.32	8.04	8.28	Pass
140	5700	2.80	2.09	0.32	5.79	8.28	Pass
144	5720 (For U-NII-2C)	5.10	4.39	0.32	8.09	8.28	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.78 - 6) =8.22dBm.
- 5500-5720MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.72 - 6) =8.28dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
52	5260	4.85	4.17	0.41	7.94	8.22	Pass
60	5300	5.06	4.18	0.41	8.06	8.22	Pass
64	5320	3.30	2.79	0.41	6.47	8.22	Pass
100	5500	1.97	1.85	0.41	5.33	8.28	Pass
116	5580	5.19	4.19	0.41	8.14	8.28	Pass
140	5700	2.95	2.19	0.41	6.01	8.28	Pass
144	5720 (For U-NII-2C)	5.00	4.30	0.41	8.08	8.28	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.78 - 6) =8.22dBm.
- 5500-5720MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.72 - 6) =8.28dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
54	5270	1.43	0.78	0.41	4.54	8.22	Pass
62	5310	-4.45	-5.22	0.41	-1.40	8.22	Pass
102	5510	-3.39	-3.72	0.41	-0.13	8.28	Pass
110	5550	0.89	0.66	0.41	4.20	8.28	Pass
134	5670	0.20	-0.46	0.41	3.30	8.28	Pass
142	5710 (For U-NII-2C)	2.10	1.25	0.41	5.12	8.28	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.78 - 6) =8.22dBm.
- 5500-5720MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.72 - 6) =8.28dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

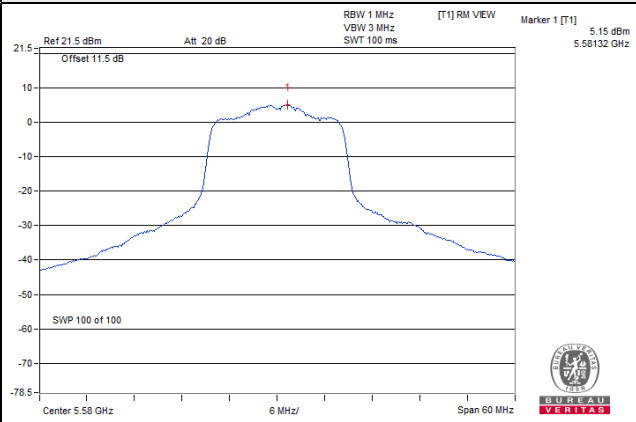
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
58	5290	-5.92	-6.72	0.42	-2.87	8.22	Pass
106	5530	-3.50	-3.45	0.42	-0.04	8.28	Pass
122	5610	-0.32	-1.05	0.42	2.76	8.28	Pass
138	5690 (For U-NII-2C)	-0.78	-1.50	0.42	2.31	8.28	Pass

Note:

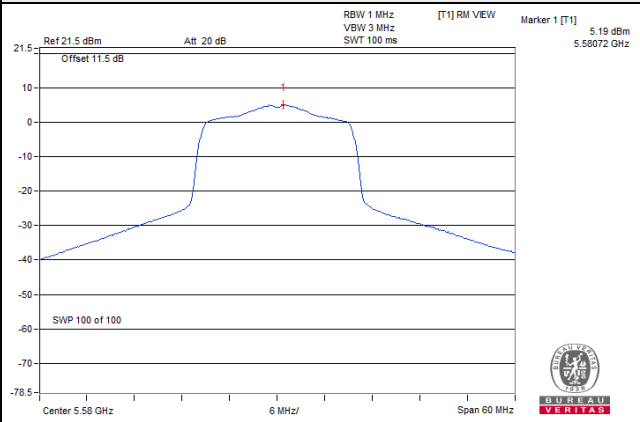
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- 5260-5320MHz: Directional gain = 5.77dBi + 10log(2)=8.78dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.78 - 6) =8.22dBm.
- 5500-5720MHz: Directional gain = 5.71dBi + 10log(2)=8.72dBi > 6dBi, so the power density limit shall be reduced to 11 - (8.72 - 6) =8.28dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

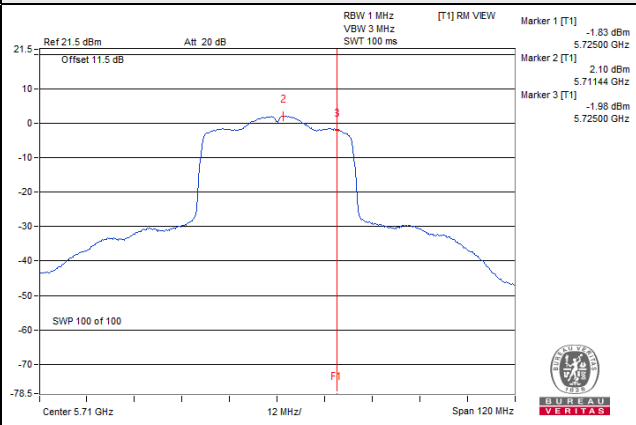
**802.11a / Chain 0 / CH 116**



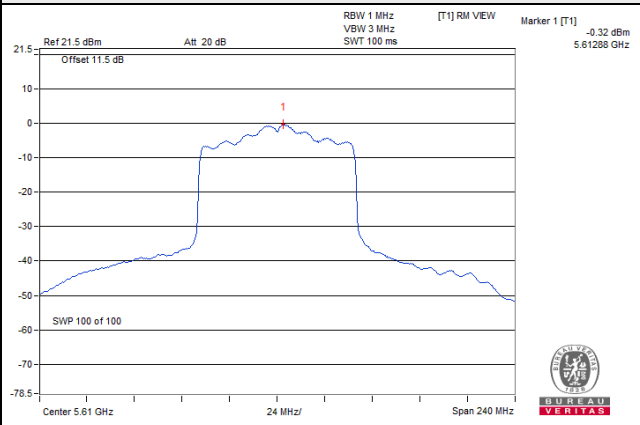
**802.11ax (HE20) / Chain 0 / CH 116**



**802.11ax (HE40) / Chain 0 / CH 142**



**802.11ax (HE80) / Chain 0 / CH 122**



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	144	5720 (For U-NII-3)	-3.99	-1.77	3.01	0.32	1.56	27.00	Pass
1	144	5720 (For U-NII-3)	-4.56	-2.34	3.01	0.32	0.99	27.00	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add  $10 \log(N_{ANT})$  dB.
2. Directional gain =  $5.99\text{dBi} + 10\log(2) = 9.00\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.00 - 6) = 27.00\text{dBm}$ .
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	144	5720 (For U-NII-3)	-3.20	-0.98	3.01	0.41	2.44	27.00	Pass
1	144	5720 (For U-NII-3)	-3.92	-1.70	3.01	0.41	1.72	27.00	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add  $10 \log(N_{ANT})$  dB.
2. Directional gain =  $5.99\text{dBi} + 10\log(2) = 9.00\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.00 - 6) = 27.00\text{dBm}$ .
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	142	5710 (For U-NII-3)	-7.20	-4.98	3.01	0.41	-1.56	27.00	Pass
1	142	5710 (For U-NII-3)	-7.98	-5.76	3.01	0.41	-2.34	27.00	Pass

Note:

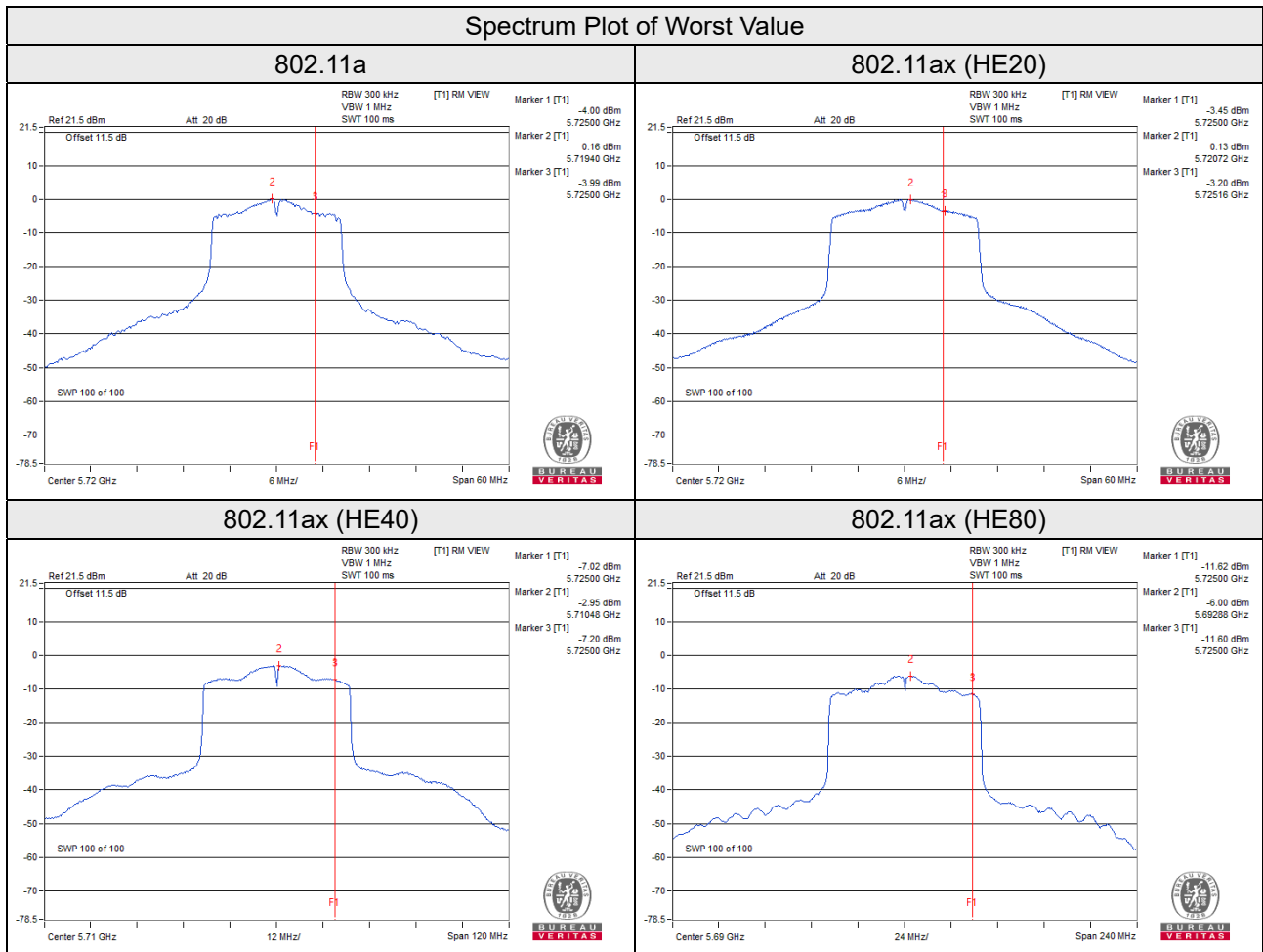
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add  $10 \log(N_{ANT})$  dB.
2. Directional gain =  $5.99\text{dBi} + 10\log(2) = 9.00\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $30 - (9.00 - 6) = 27.00\text{dBm}$ .
3. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (HE80)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	138	5690 (For U-NII-3)	-11.60	-9.38	3.01	0.42	-5.95	27.00	Pass
1	138	5690 (For U-NII-3)	-12.03	-9.81	3.01	0.42	-6.38	27.00	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N<sub>ANT</sub>) dB.
- Directional gain = 5.99dBi + 10log(2)=9.00dBi > 6dBi, so the power density limit shall be reduced to 30 - (9.00 - 6) =27.00dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

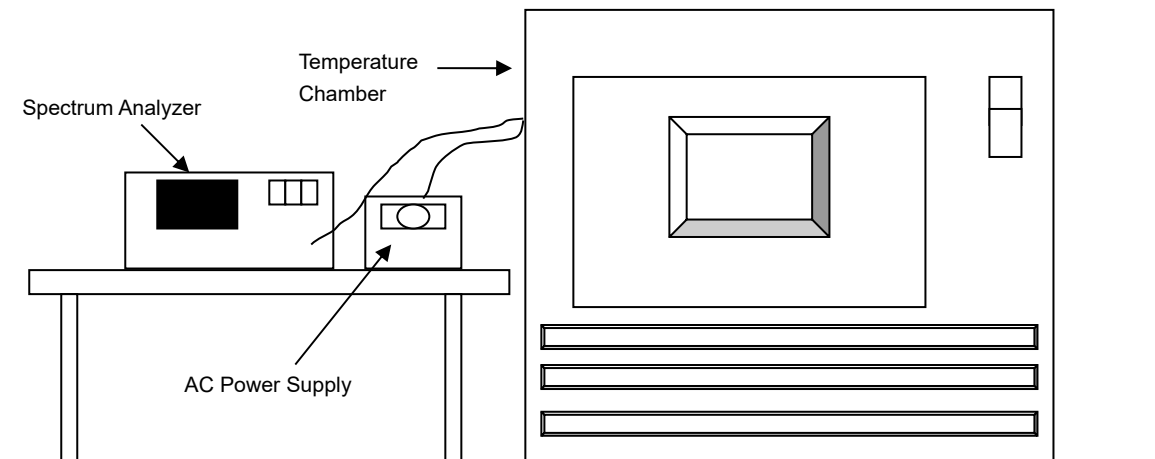


## 4.6 Frequency Stability

### 4.6.1 Limits of Frequency Stability Measurement

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

### 4.6.2 Test Setup



### 4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jun. 01, 2022	May 31, 2023
Standard Temperature And Humidity Chamber TERCHY	MHU-225AU	920842	Jun. 21, 2022	Jun. 20, 2023
Three-phase coupling / decoupling network TESEQ	CDN 3063	4006	Mar. 08, 2022	Mar. 07, 2023
AC Power Supply Extech	CFW-105	E000603	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. Tested date: Jul. 23, 2022

### 4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- Repeat step d with every 10 degrees reduction until the lowest temperature achieved.
- 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: 5260MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
70	120	5259.9845	Pass	5259.9840	Pass	5259.9871	Pass	5259.9822	Pass
60	120	5259.9874	Pass	5259.9897	Pass	5259.9881	Pass	5259.9875	Pass
50	120	5260.0241	Pass	5260.0283	Pass	5260.0274	Pass	5260.0278	Pass
40	120	5259.9912	Pass	5259.9934	Pass	5259.9903	Pass	5259.9918	Pass
30	120	5260.0010	Pass	5260.0027	Pass	5260.0021	Pass	5259.9994	Pass
20	120	5259.9798	Pass	5259.9807	Pass	5259.9799	Pass	5259.9812	Pass
10	120	5260.0022	Pass	5259.9995	Pass	5260.0003	Pass	5259.9996	Pass
0	120	5260.0229	Pass	5260.0267	Pass	5260.0222	Pass	5260.0227	Pass
-10	120	5259.9756	Pass	5259.9794	Pass	5259.9774	Pass	5259.9797	Pass
-20	120	5260.0095	Pass	5260.0068	Pass	5260.0057	Pass	5260.0099	Pass
-30	120	5259.9887	Pass	5259.9901	Pass	5259.9877	Pass	5259.9905	Pass

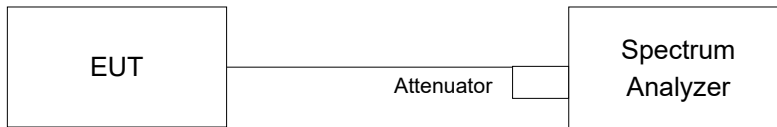
Frequency Stability Versus Voltage									
Operating Frequency: 5260MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5259.9757	Pass	5259.9735	Pass	5259.9740	Pass	5259.9721	Pass
	120	5259.9798	Pass	5259.9807	Pass	5259.9799	Pass	5259.9812	Pass
	102	5259.9720	Pass	5259.9720	Pass	5259.9718	Pass	5259.9715	Pass

## 4.7 6dB Bandwidth Measurement

### 4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

### 4.7.2 Test Setup



### 4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.7.4 Test Procedure

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

### 4.7.5 Deviation from Test Standard

No deviation.

### 4.7.6 EUT Operating Condition

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

#### 4.7.7 Test Results

##### 802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (For U-NII-3)	2.56	2.53	0.5	Pass

For CH144 (U-NII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

##### 802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (For U-NII-3)	2.56	2.48	0.5	Pass

For CH144 (U-NII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

##### 802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (For U-NII-3)	2.54	2.56	0.5	Pass

For CH142 (U-NII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

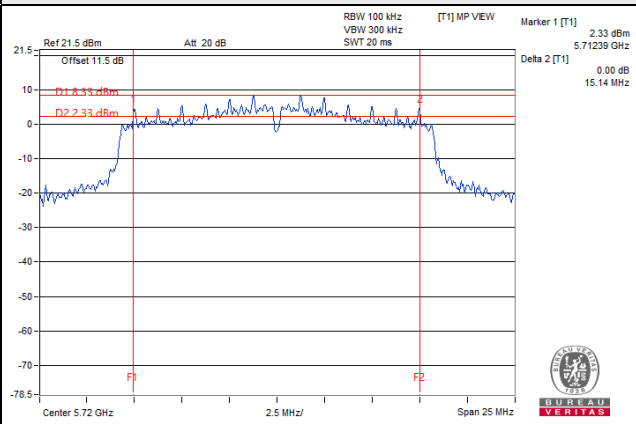
##### 802.11ax (HE80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138	5690 (For U-NII-3)	2.51	2.50	0.5	Pass

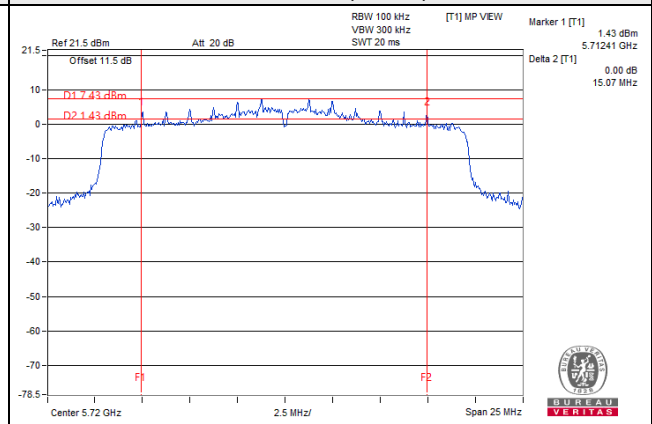
For CH138 (U-NII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

### Spectrum Plot of Worst Value

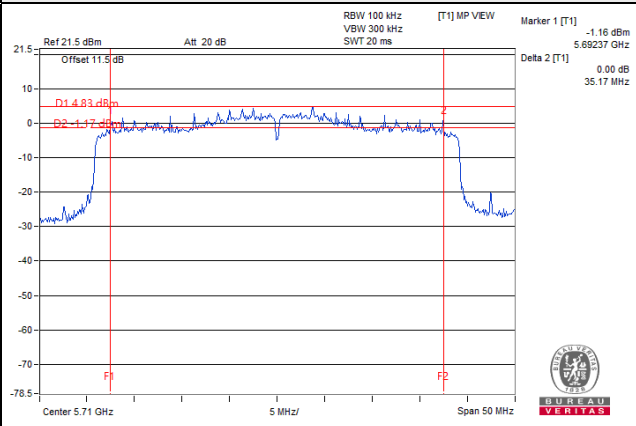
#### 802.11a



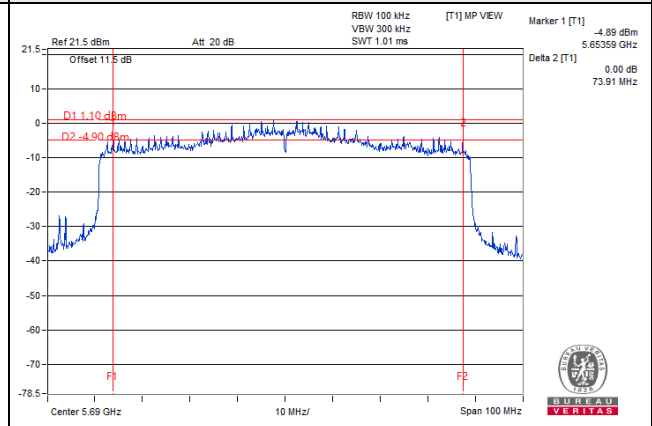
#### 802.11ax (HE20)



#### 802.11ax (HE40)



#### 802.11ax (HE80)

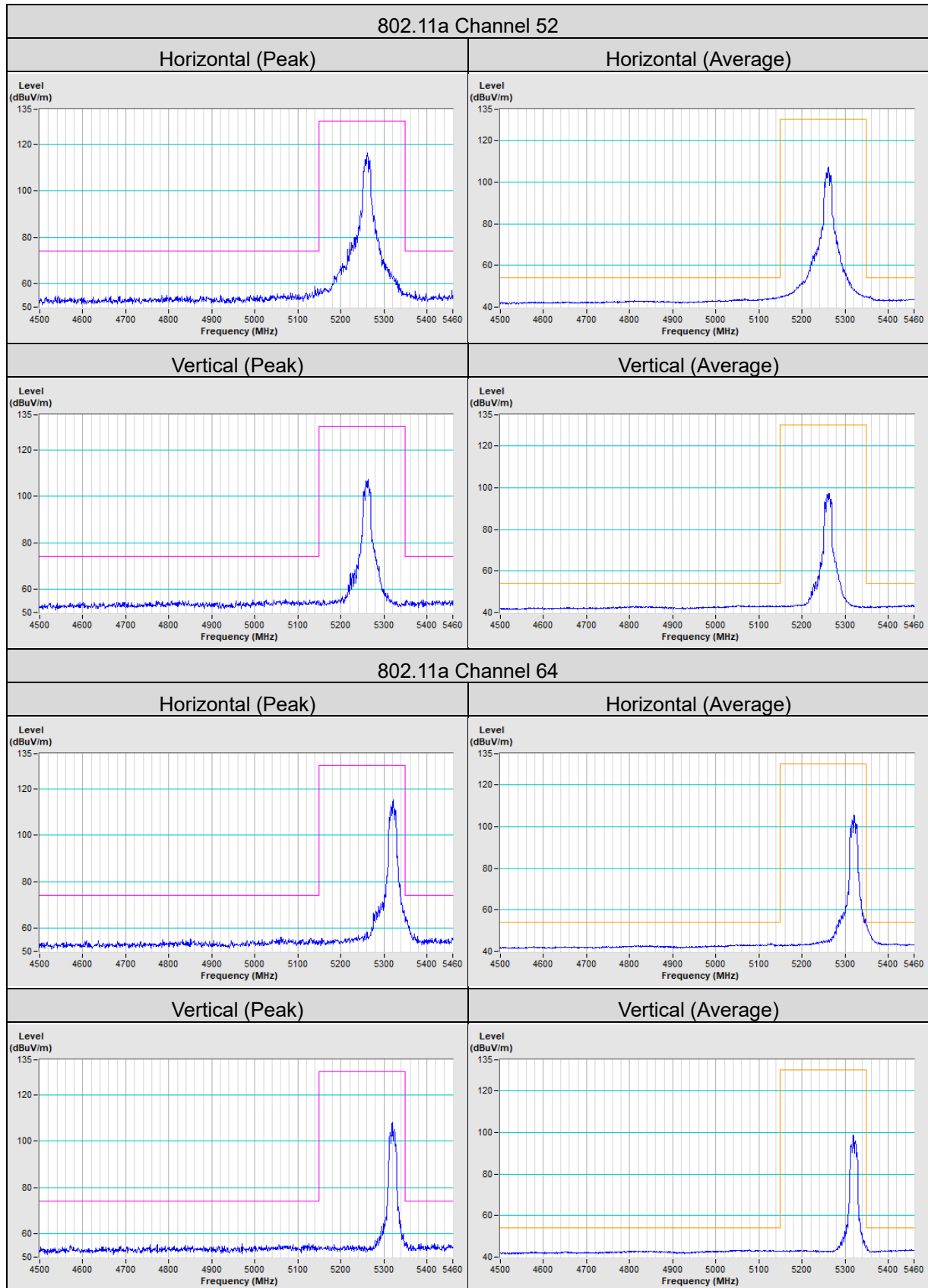


## 5 Pictures of Test Arrangements

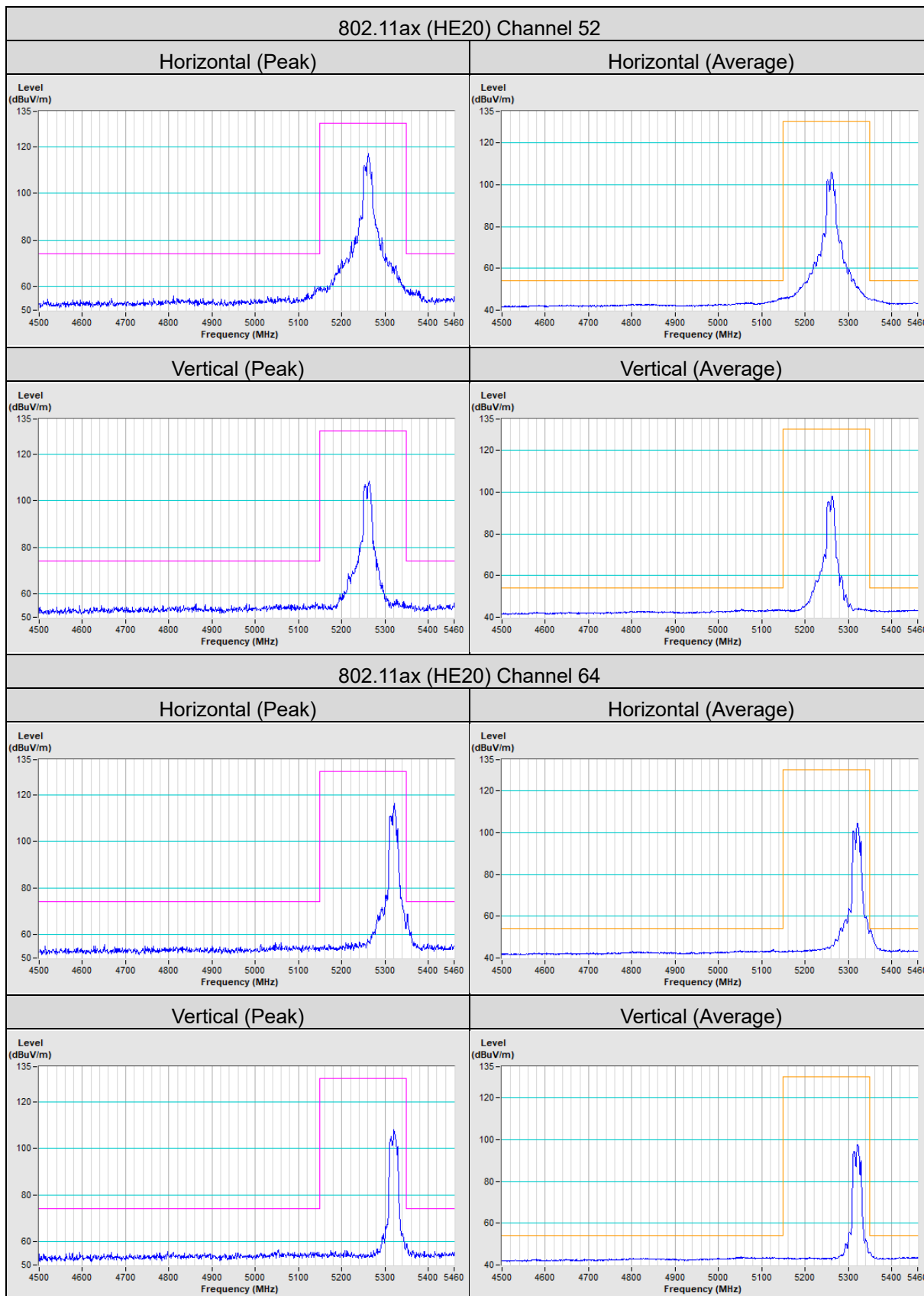
Please refer to the attached file (Test Setup Photo).

## Annex A - Band Edge Measurement

Mode A1

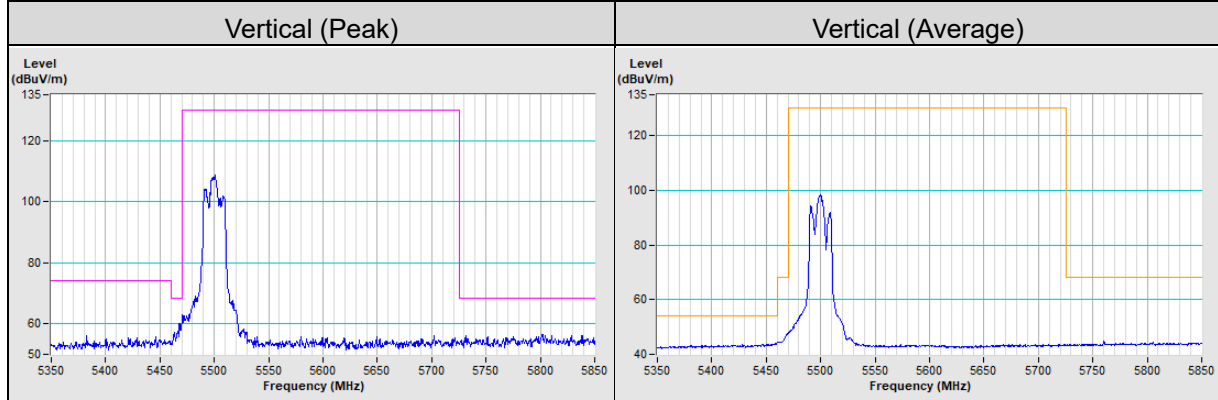
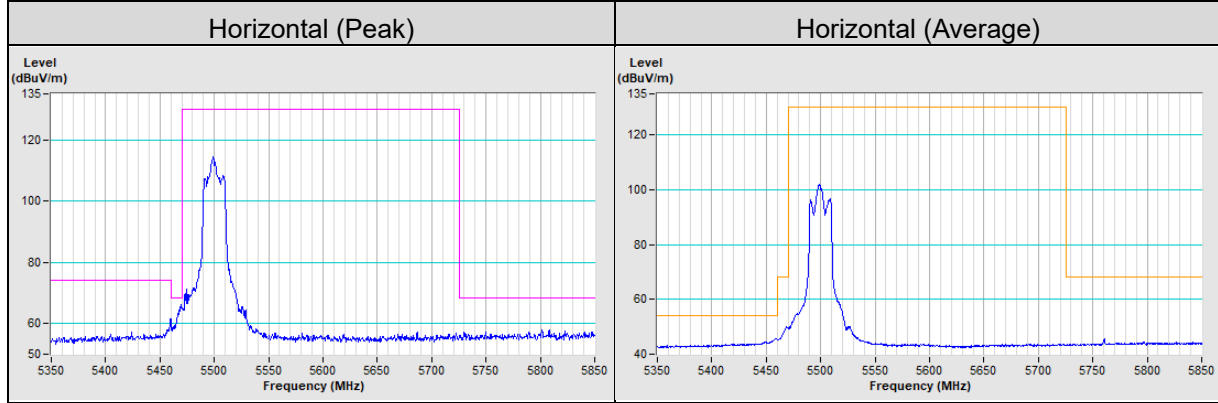




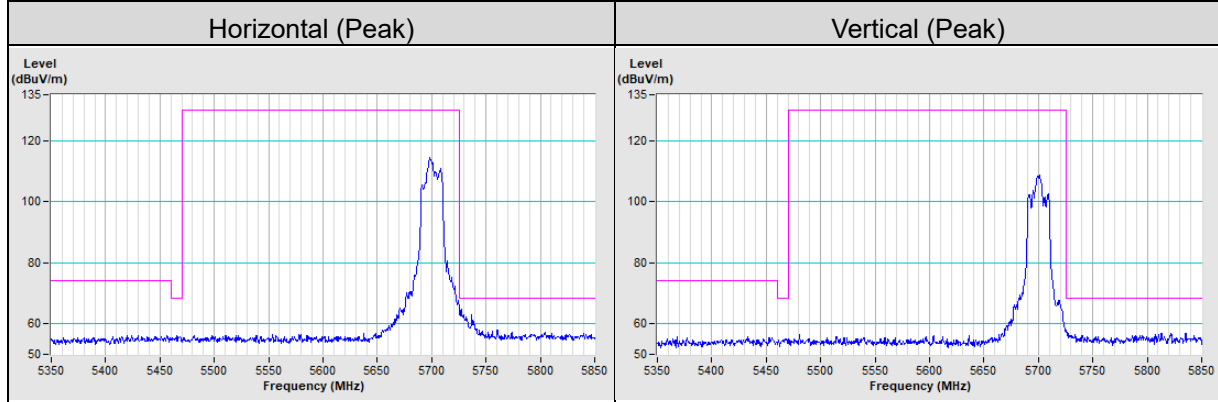




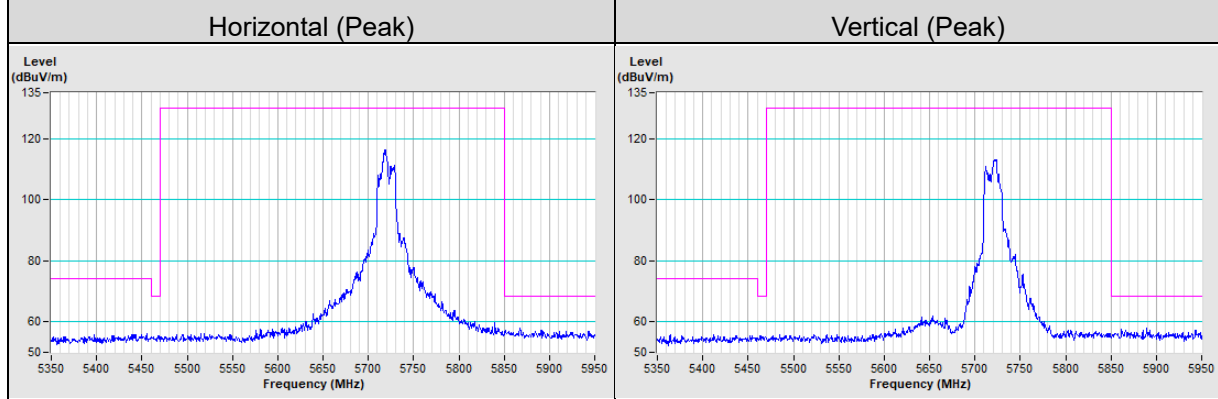
802.11ax (HE20) Channel 100

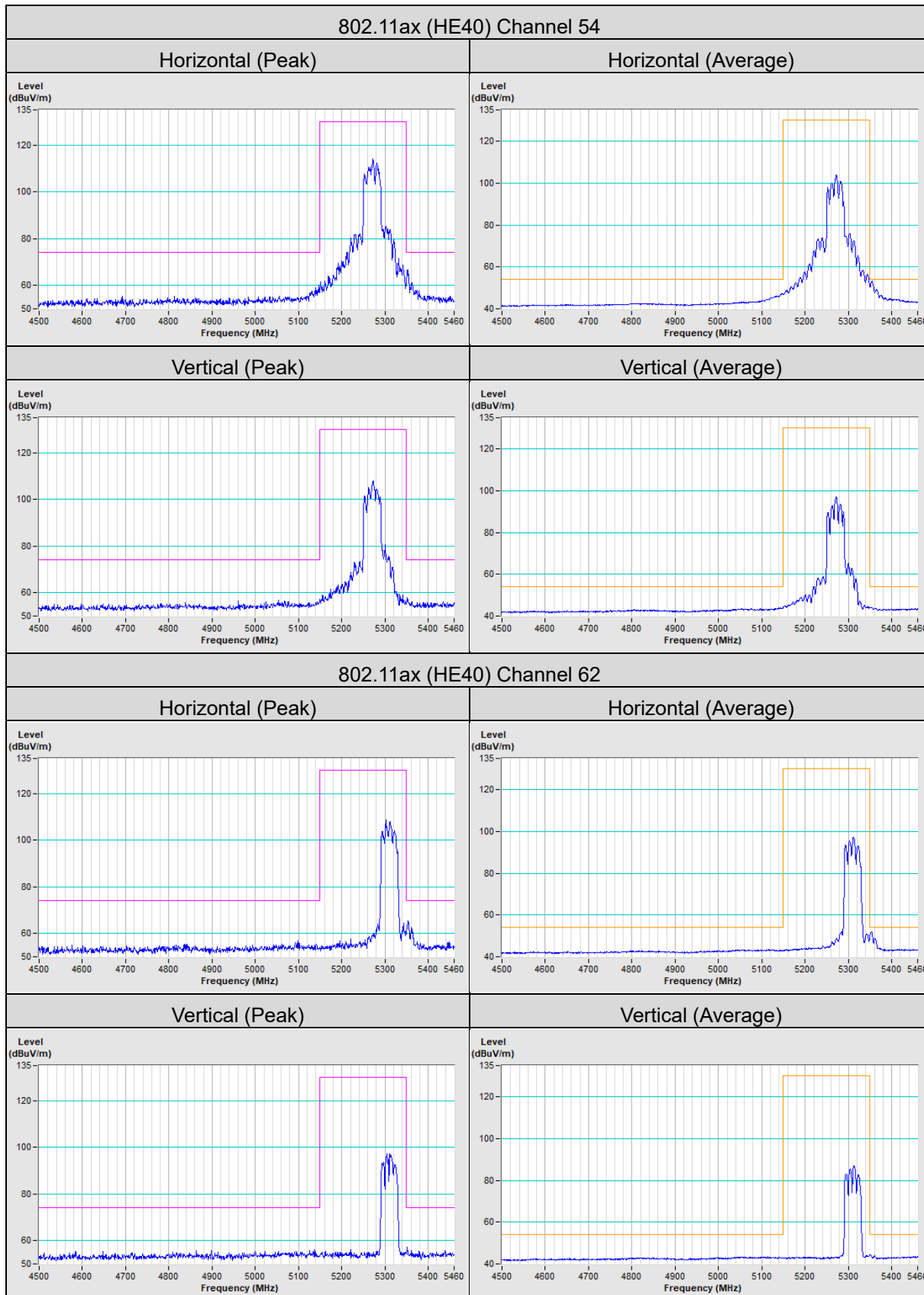


802.11ax (HE20) Channel 140



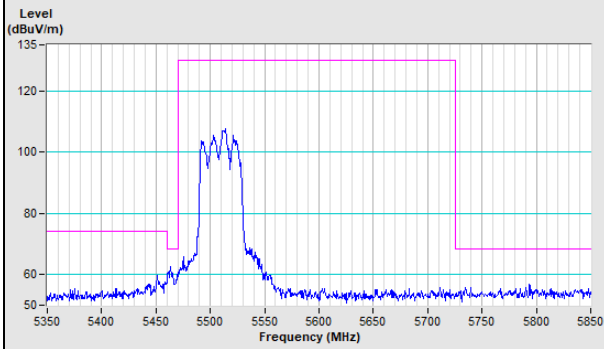
802.11ax (HE20) Channel 144



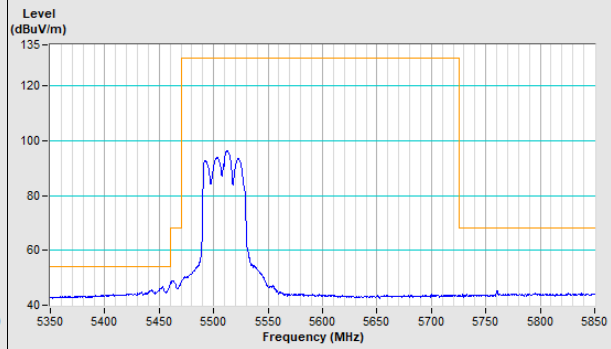


### 802.11ax (HE40) Channel 102

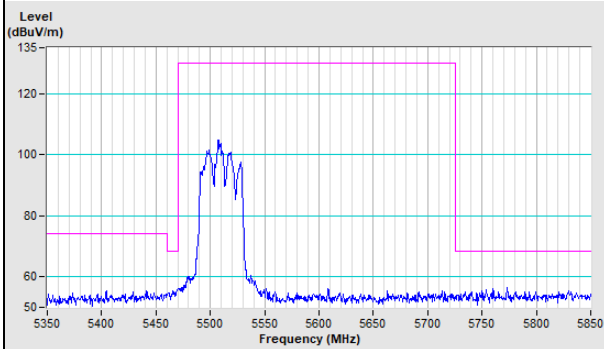
Horizontal (Peak)



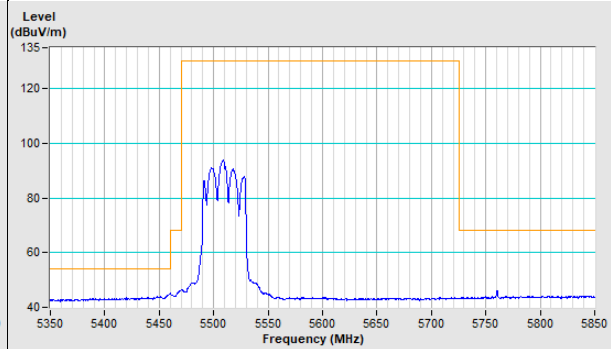
Horizontal (Average)



Vertical (Peak)

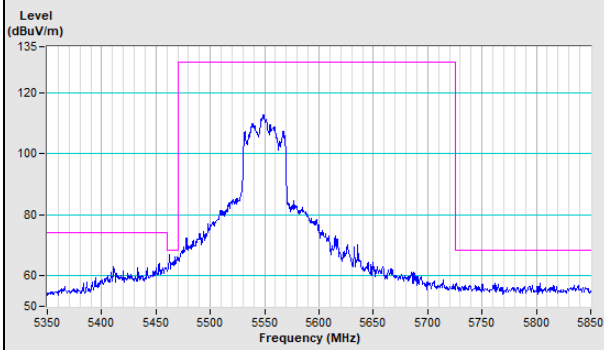


Vertical (Average)

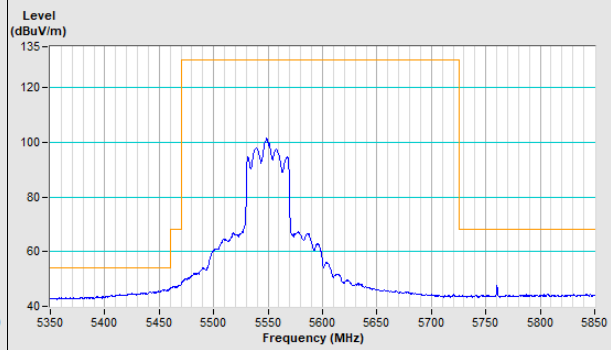


### 802.11ax (HE40) Channel 110

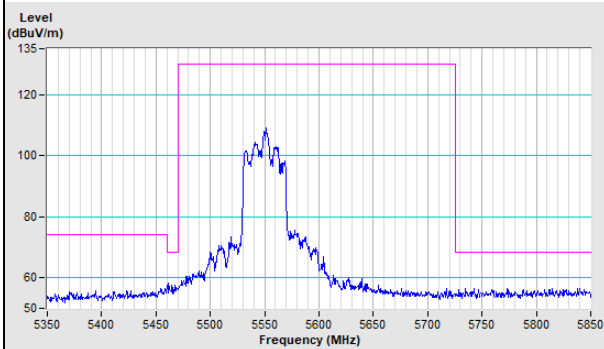
Horizontal (Peak)



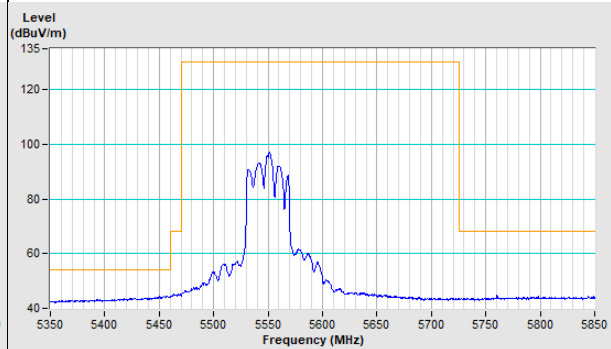
Horizontal (Average)



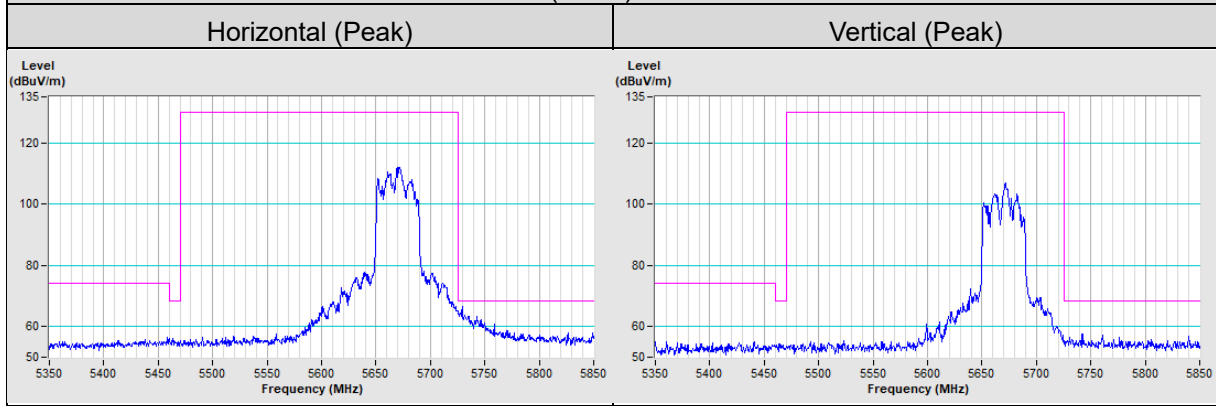
Vertical (Peak)



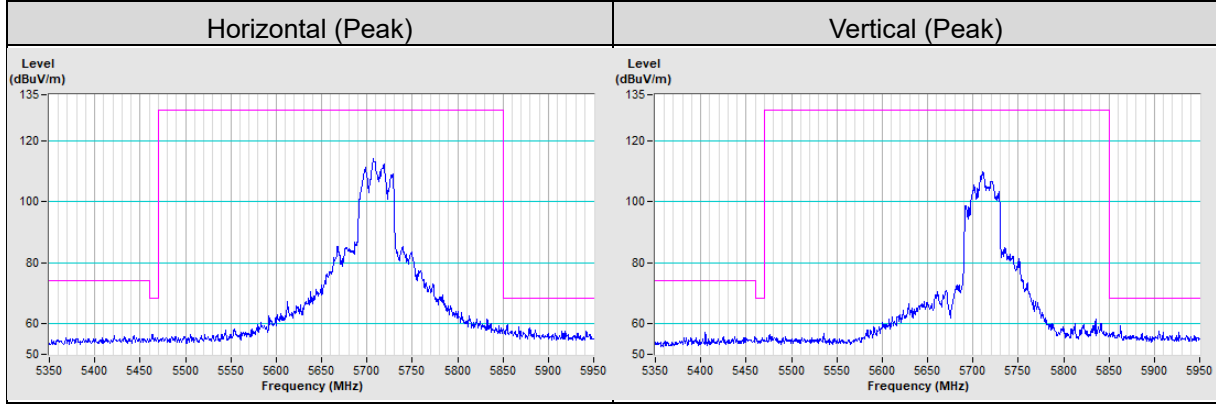
Vertical (Average)



802.11ax (HE40) Channel 134



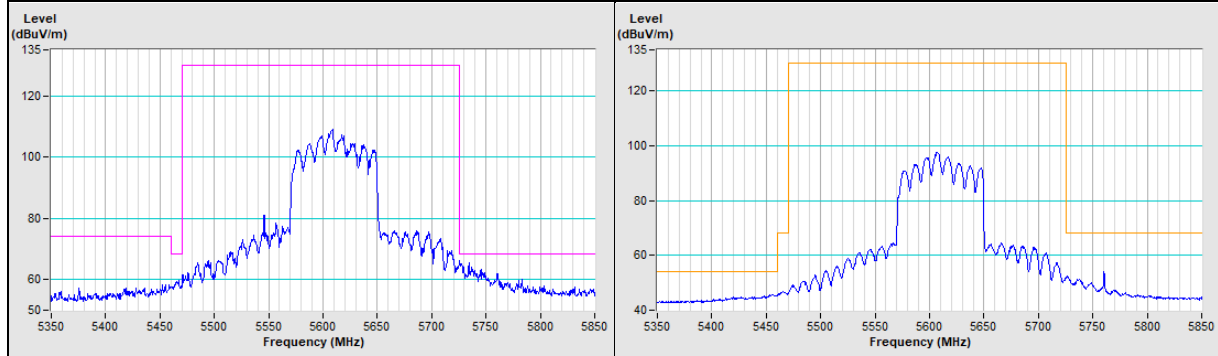
802.11ax (HE40) Channel 142



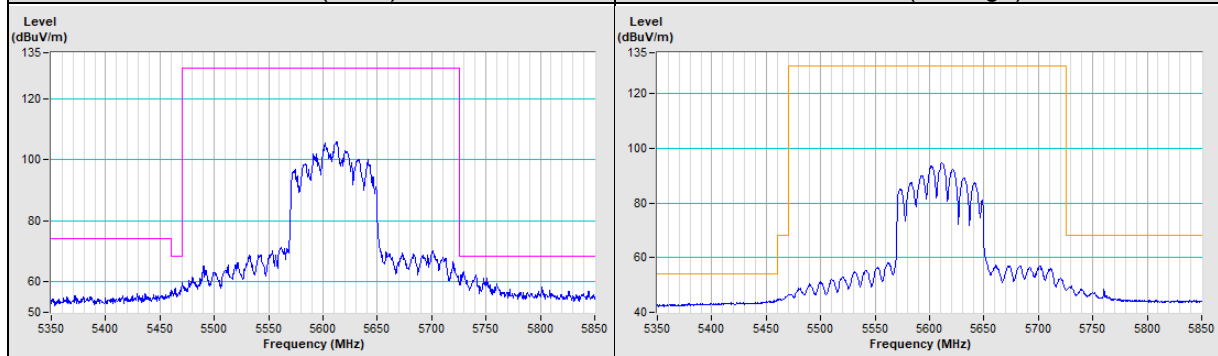


**802.11ax (HE80) Channel 122**

<b>Horizontal (Peak)</b>	<b>Horizontal (Average)</b>
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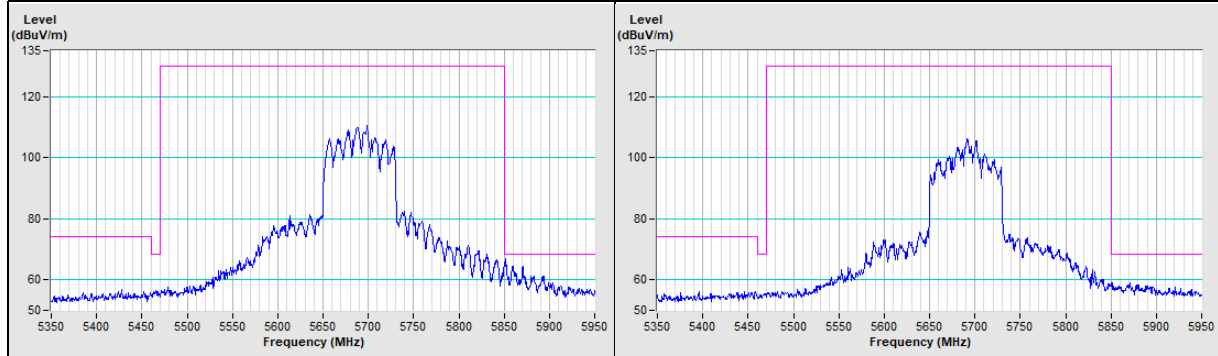


<b>Vertical (Peak)</b>	<b>Vertical (Average)</b>
------------------------	---------------------------

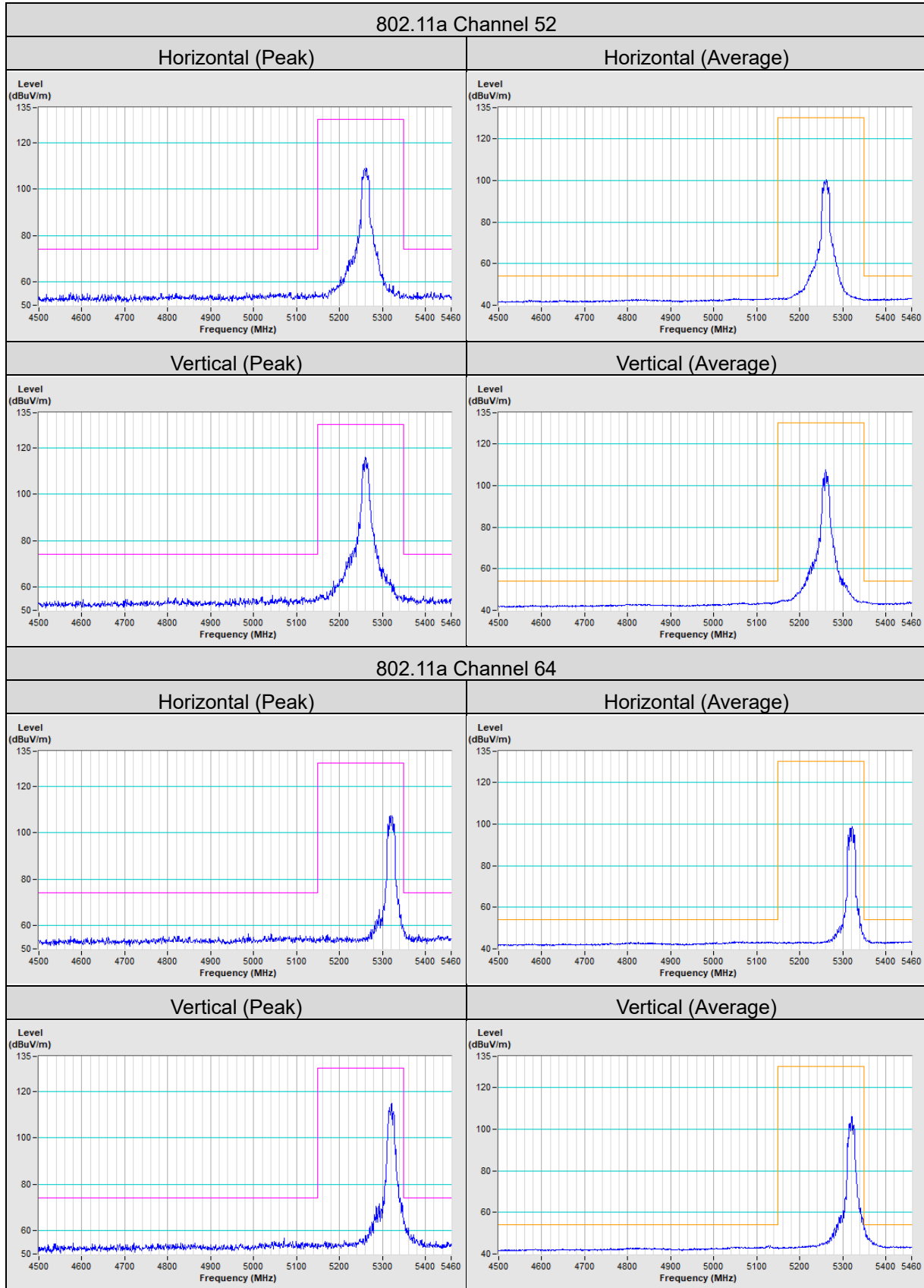


**802.11ax (HE80) Channel 138**

<b>Horizontal (Peak)</b>	<b>Vertical (Peak)</b>
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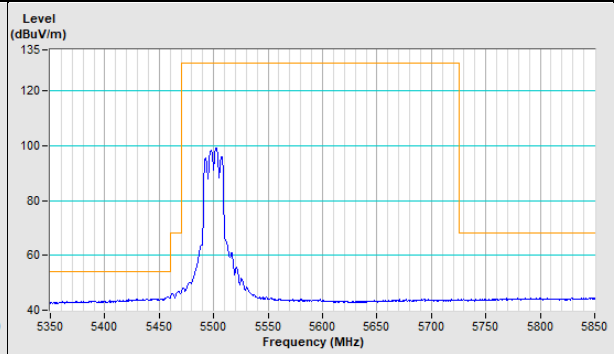
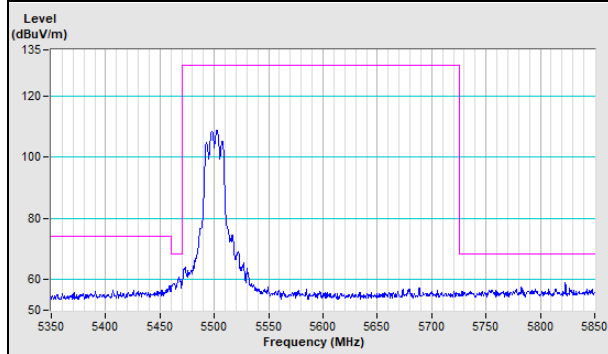


Mode B1

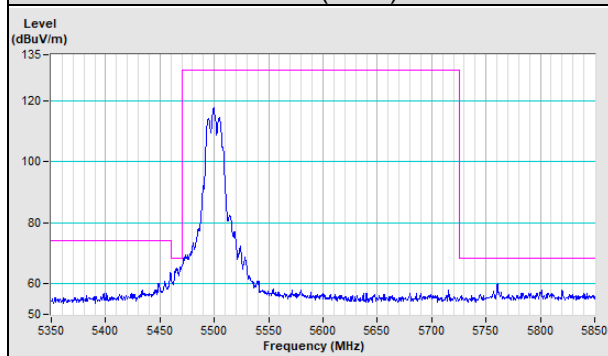


802.11a Channel 100

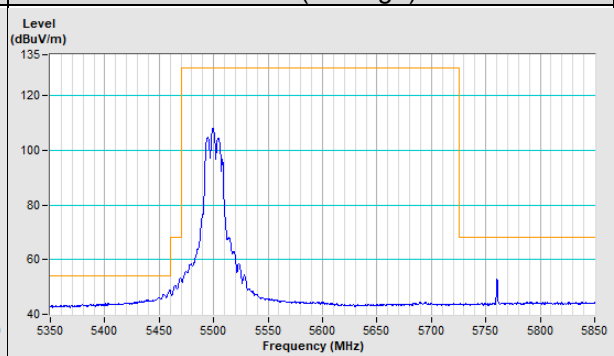
Horizontal (Peak)                      Horizontal (Average)



Vertical (Peak)

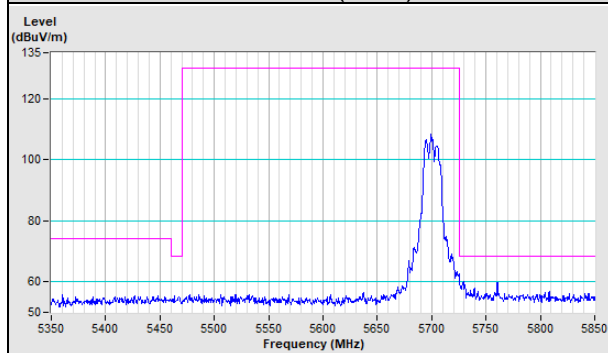


Vertical (Average)

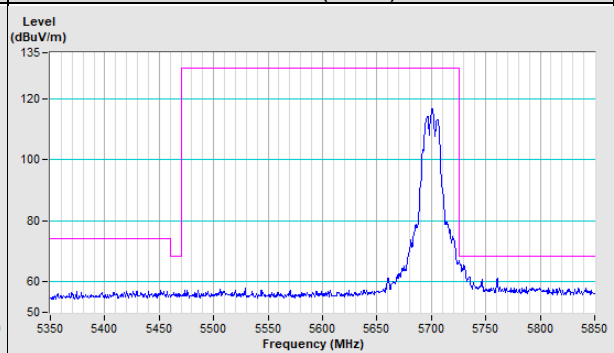


802.11a Channel 140

Horizontal (Peak)

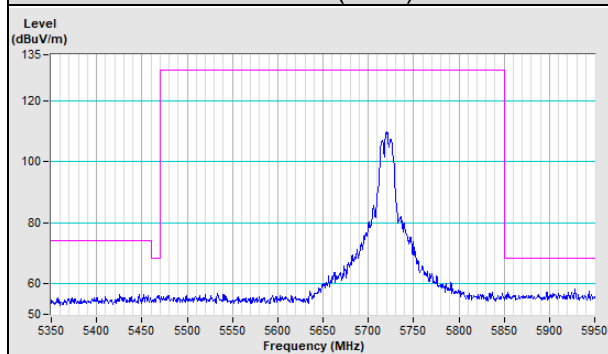


Vertical (Peak)

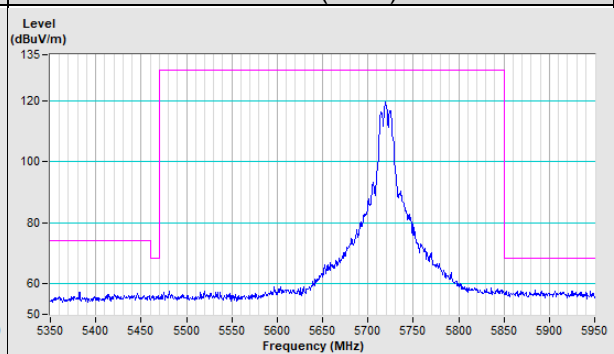


802.11a Channel 144

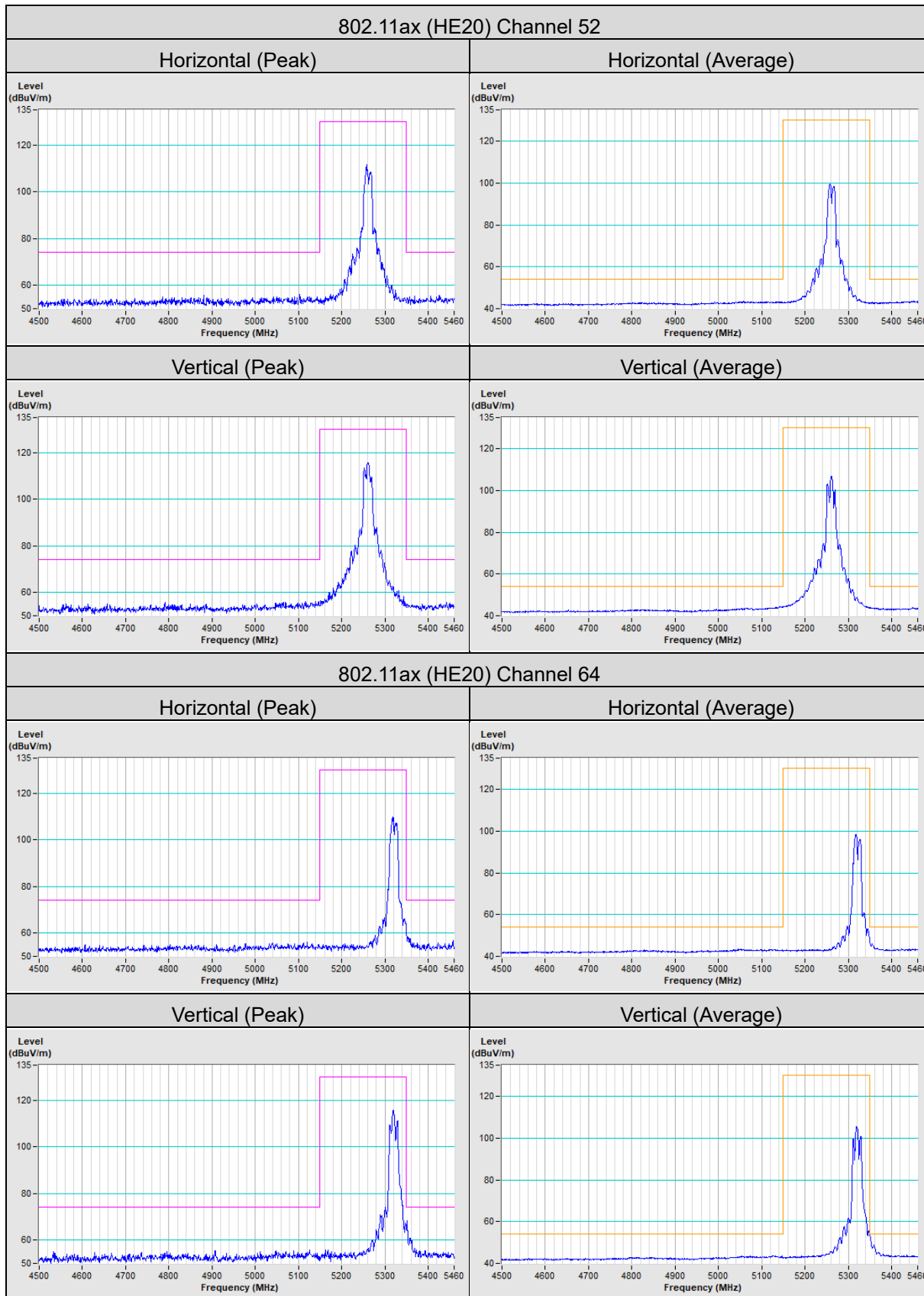
Horizontal (Peak)



Vertical (Peak)

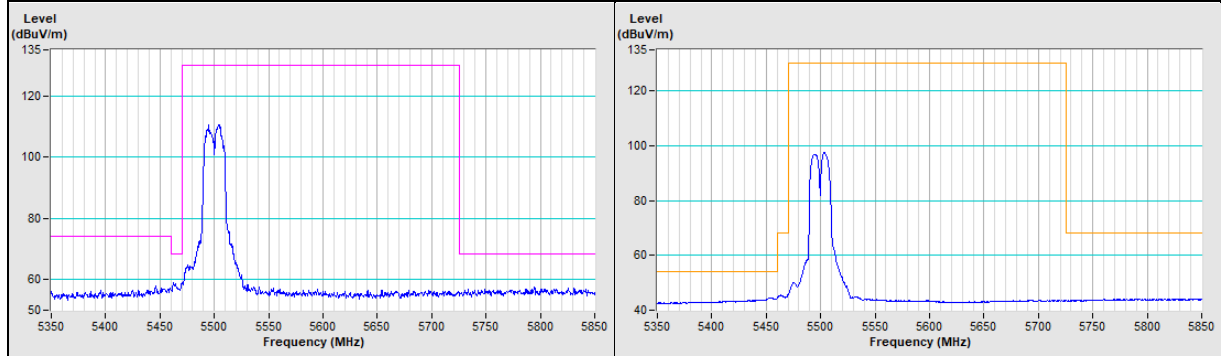




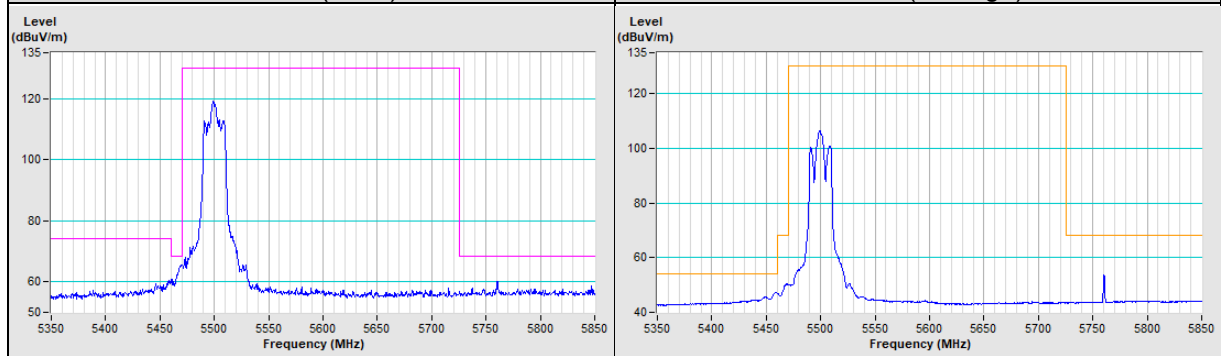


**802.11ax (HE20) Channel 100**

<b>Horizontal (Peak)</b>	<b>Horizontal (Average)</b>
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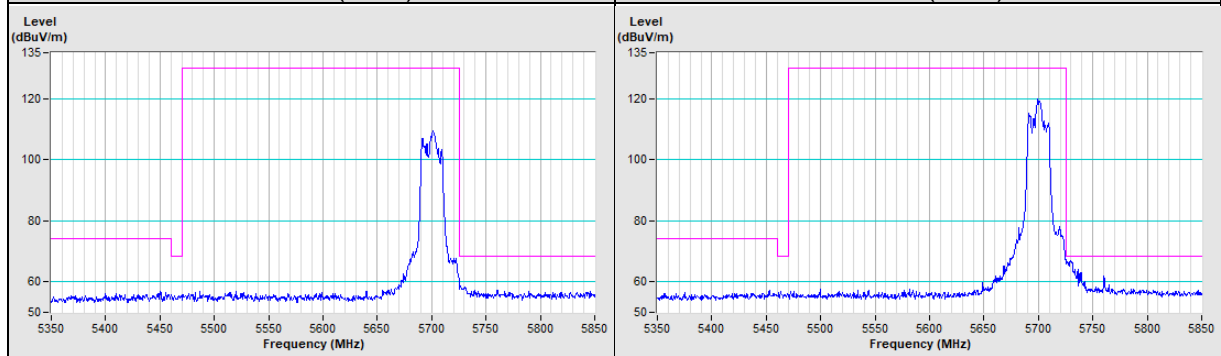


<b>Vertical (Peak)</b>	<b>Vertical (Average)</b>
------------------------	---------------------------



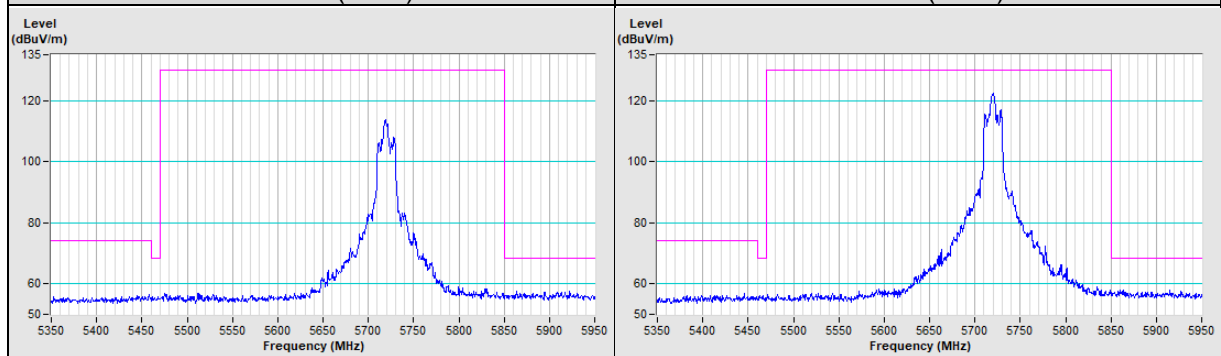
**802.11ax (HE20) Channel 140**

<b>Horizontal (Peak)</b>	<b>Vertical (Peak)</b>
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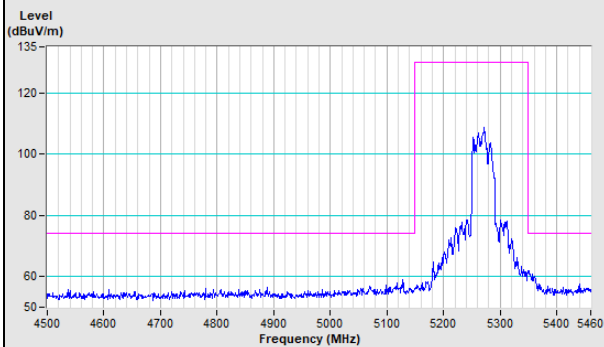
**802.11ax (HE20) Channel 144**

<b>Horizontal (Peak)</b>	<b>Vertical (Peak)</b>
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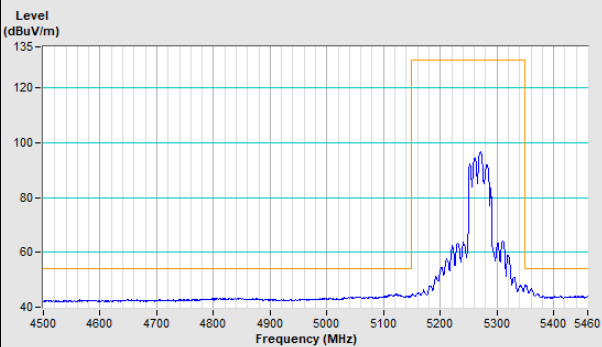


### 802.11ax (HE40) Channel 54

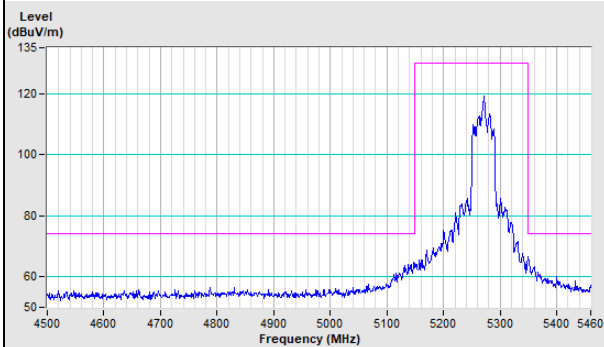
Horizontal (Peak)



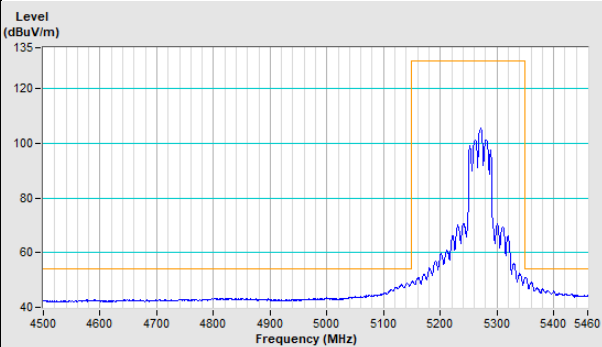
Horizontal (Average)



Vertical (Peak)

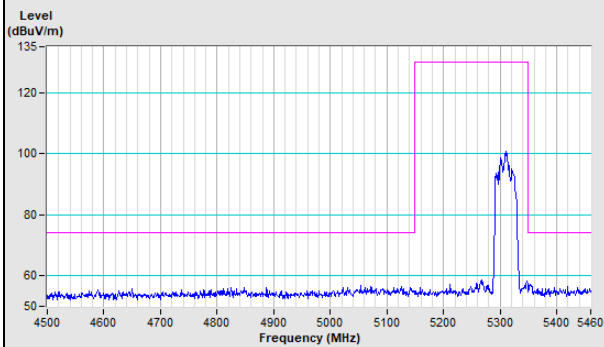


Vertical (Average)

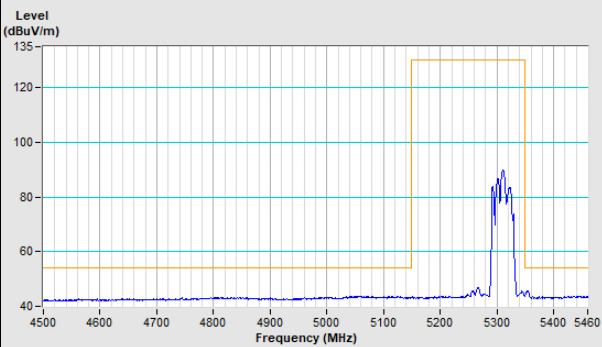


### 802.11ax (HE40) Channel 62

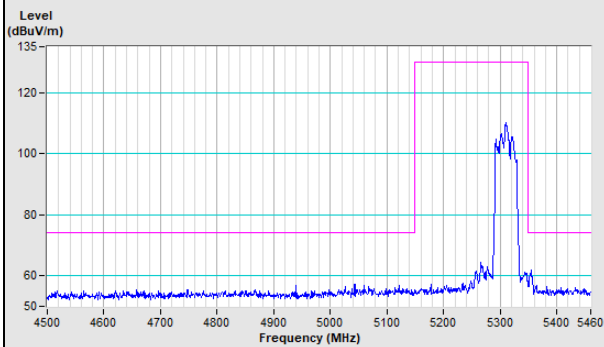
Horizontal (Peak)



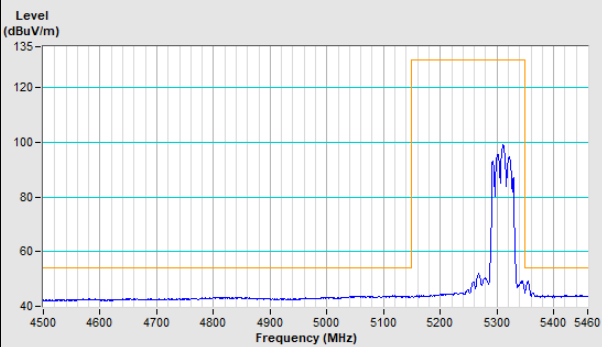
Horizontal (Average)



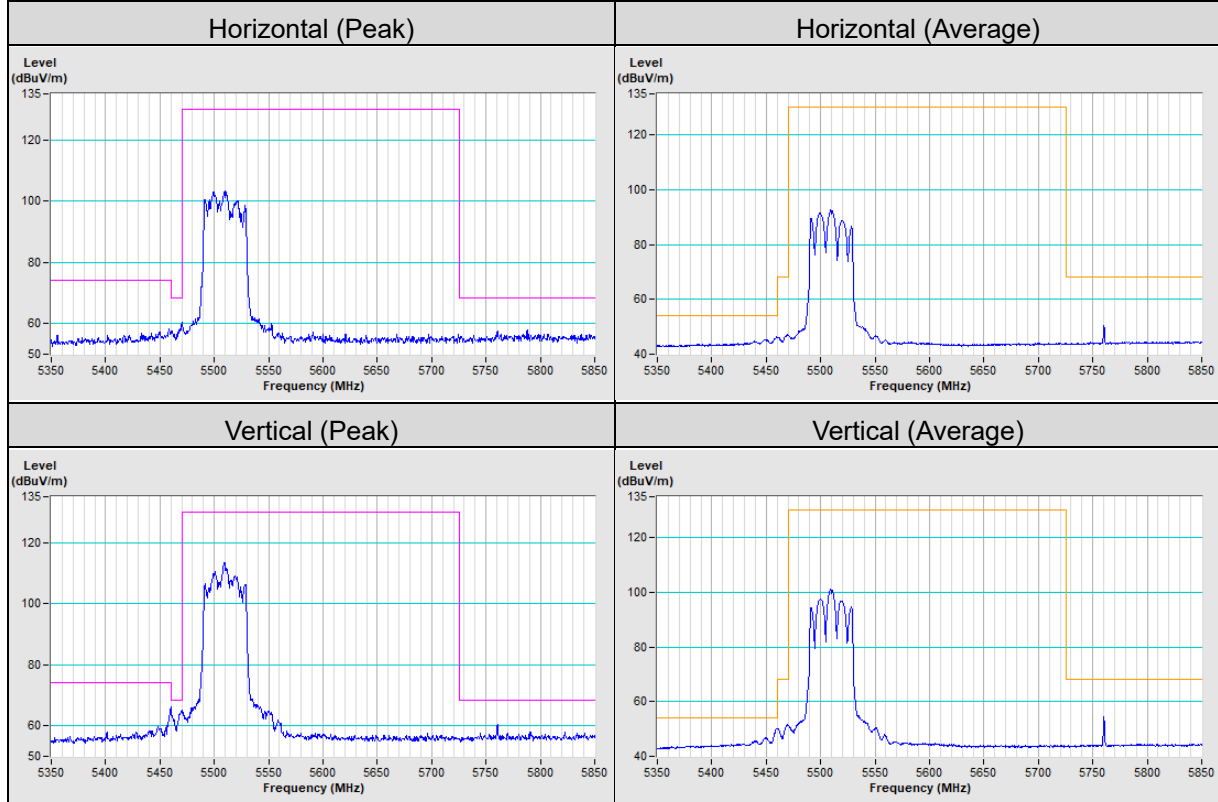
Vertical (Peak)



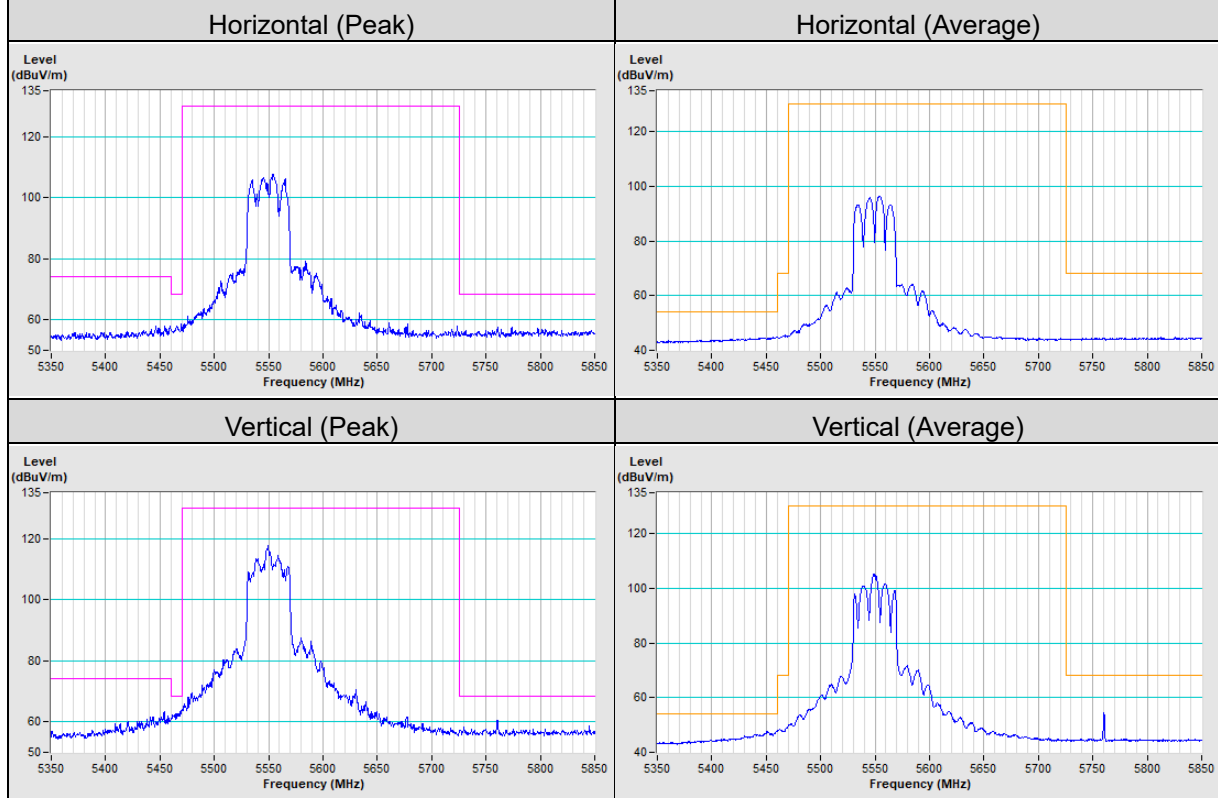
Vertical (Average)



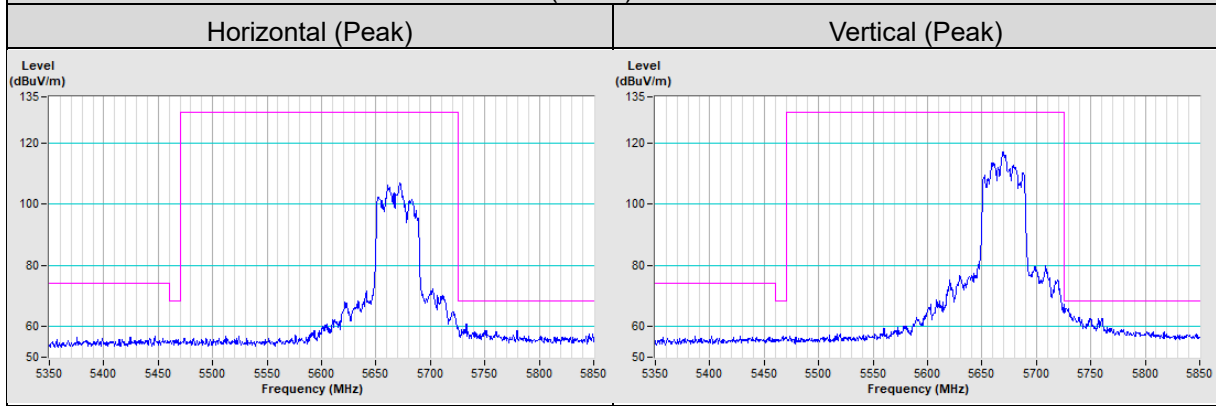
### 802.11ax (HE40) Channel 102



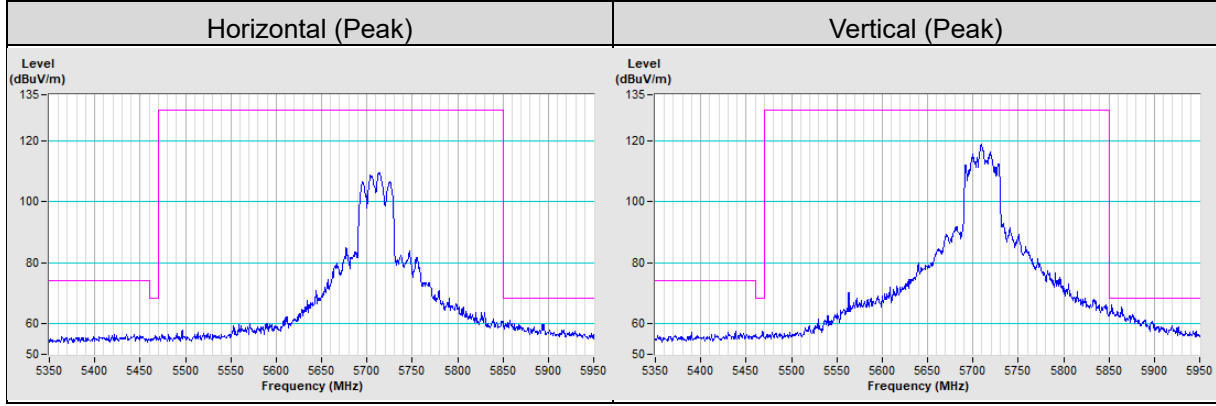
### 802.11ax (HE40) Channel 110



**802.11ax (HE40) Channel 134**



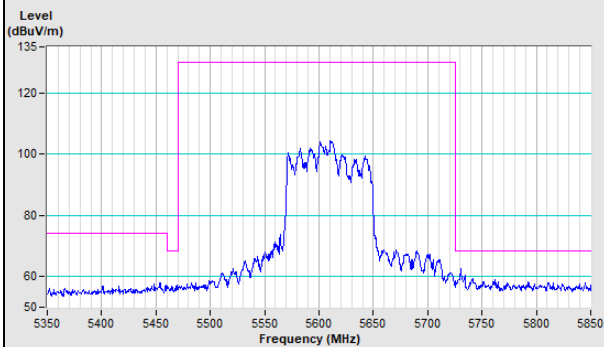
**802.11ax (HE40) Channel 142**



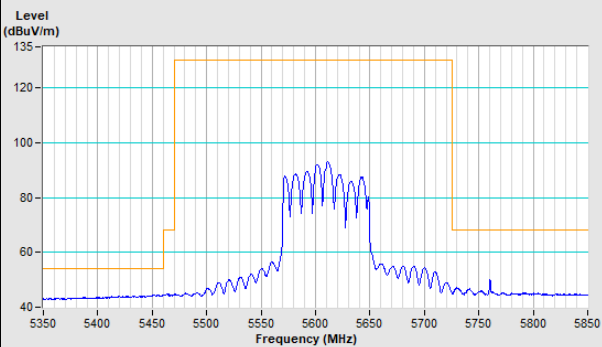


### 802.11ax (HE80) Channel 122

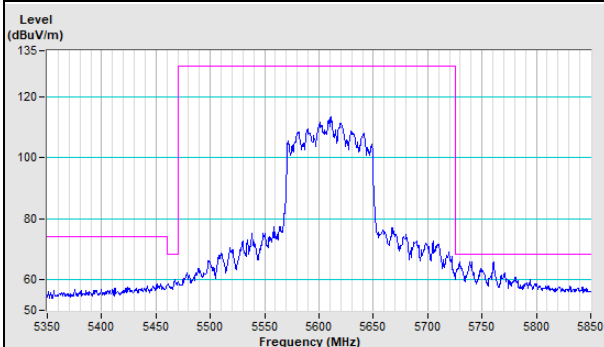
Horizontal (Peak)



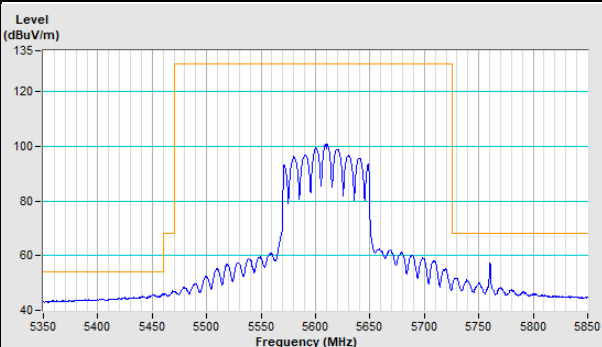
Horizontal (Average)



Vertical (Peak)

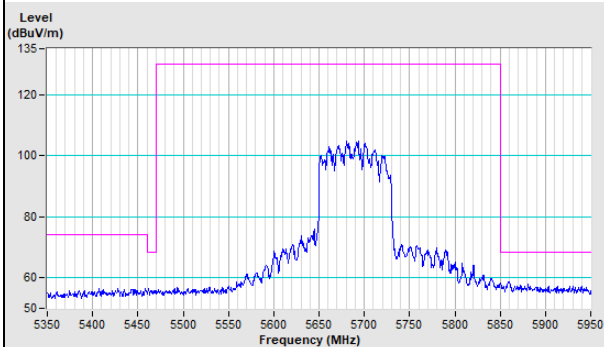


Vertical (Average)

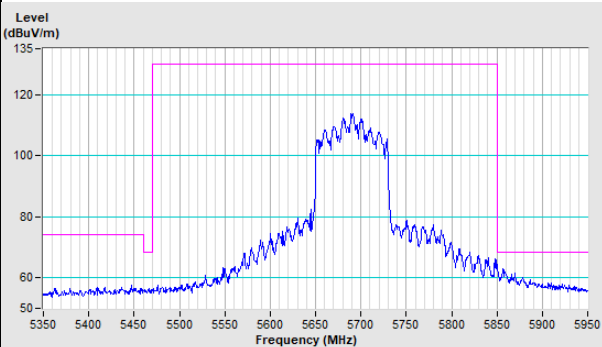


### 802.11ax (HE80) Channel 138

Horizontal (Peak)



Vertical (Peak)



## Appendix – Information of the Testing Laboratories

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

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

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

--- END ---