

FCC Test Report

Report No.: RF191129E09D-1

FCC ID: PY319400470

Test Model: RBR750

Series Model: RBS750

Received Date: May 08, 2020

Test Date: May 11 to 13, 2020

Issued Date: June 01, 2020

Applicant: NETGEAR, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 723255 / TW2022
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
RF191129E09D-1	Original release.	June 01, 2020

1 Certificate of Conformity

Product: Orbi Router, Orbi Satellite

Brand: NETGEAR

Test Model: RBR750

Series Model: RBS750

Sample Status: ENGINEERING SAMPLE

Applicant: NETGEAR, Inc.

Test Date: May 11 to 13, 2020

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

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

Prepared by :



Date: June 01, 2020

Joyce Kuo / Specialist

Approved by :



Date: June 01, 2020

Clark Lin / Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 5650.66MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF) not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. This report is prepared for supplementary report.

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) ($\pm$)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.5 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Orbi Router, Orbi Satellite
Brand	NETGEAR
Test Model	RBR750
Series Model	RBS750
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2401.9Mbps
Operating Frequency	2.4GHz: 2.412 ~ 2.462GHz 5GHz: 5.18~ 5.24GHz, 5.745 ~ 5.825GHz
Number of Channel	2.4GHz: 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7 5GHz (U-NII-1): 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 5GHz (U-NII-3): 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 5 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1
Output Power	CDD Mode: 2.412 ~ 2.462 GHz: 958.897 mW 5.18 ~ 5.24GHz: 666.121mW 5.745 ~ 5.825GHz: 948.986mW Beamforming Mode: 2.412 ~ 2.462 GHz: 646.447 mW 5.18 ~ 5.24GHz: 665.956mW 5.745 ~ 5.825GHz: 798.119mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	RJ45 cable x 1 (Unshielded, 1.8m)

Note:

- This report is prepared for FCC class II change. The difference compared with the Report No.: RF191129E09-1 as the following:
 - ◆ Change RF FEM from Skyworks to Qorvo: Pin to Pin, draws 50mA more current
 - ◆ The new chip component is pin-for-pin compatible.
 - ◆ The new chip has the same basic function as the old chip, from an external perspective (internal circuitry may differ).
 - ◆ No change in radio parameters has occurred.

- ◆ The same conditions apply when a small area (approximately the same area as the chip) of the PCB is replaced with an equivalent chip

2. According to above conditions, all test items except Conducted Emissions, Occupied Bandwidth, 6dB bandwidth and Frequency Stability test items need to be performed and all data was verified to meet the requirements.

3. All models are listed as below.

Brand	Product Name	Model	Difference
NETGEAR	Orbi Router	RBR750	Function: Master WAN port*1; LAN port*3
	Orbi Satellite	RBS750	Function: Master + Client LAN port*2

From the above models, model: **RBR750** was the worst case and it was selected as representative model for the test and its data was recorded in this report.

4. Simultaneously transmission condition.

Condition	Technology		
1	WLAN 2.4GHz	WLAN 5GHz (low band)	WLAN 5GHz (high band)

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

5. The EUT must be supplied power adapter and following different models could be chosen as following table:

No.	Brand	Model No.	P/N	Spec.
1	NETGEAR	2ABL030F1 NJ	332-10948-01	Input: 100-120Vac, 1.0A, 50/60Hz Output: 12.0V, 2.5A DC Output cable: Unshielded, 1.8m
2	NETGEAR	AD2067F10	332-11509-01	Input: 100-120Vac, 1.0A, 50/60Hz Output: 12.0V, 2.5A DC Output cable: Unshielded, 1.8m
3	NETGEAR	AD2067M20	332-11074-01	Input: 100-240Vac, 1.0A, 50/60Hz Output: 12.0V, 2.5A DC Output cable: Unshielded, 1.8m

For conducted and radiated emissions test, the EUT was pre-tested worst case was found in **adapter 3**. Therefore the test and its data was recorded in this report.

6. The EUT uses following antennas.

Antenna Type	Dipole		
Antenna Connector	i-pex(MHF)		
Directional Gain (dBi)			
2.4GHz Band	5GHz U-NII-1		5GHz U-NII-3
5.46	5.67		6.94

7. The EUT incorporates a MIMO function:

2.4GHz Band				
MODULATION MODE	TX & RX CONFIGURATION			
802.11b	2TX		2RX	
802.11g	2TX		2RX	
802.11n (HT20)	2TX		2RX	
802.11n (HT40)	2TX		2RX	
VHT20	2TX		2RX	
VHT40	2TX		2RX	
802.11ax (HE20)	2TX		2RX	
802.11ax (HE40)	2TX		2RX	
5GHz Band				
MODULATION MODE	TX & RX CONFIGURATION		TX & RX CONFIGURATION	
	5180 ~ 5240MHz		5745 ~ 5825MHz	
802.11a	2TX	2RX	4TX	4RX
802.11n (HT20)	2TX	2RX	4TX	4RX
802.11n (HT40)	2TX	2RX	4TX	4RX
802.11ac (VHT20)	2TX	2RX	4TX	4RX
802.11ac (VHT40)	2TX	2RX	4TX	4RX
802.11ac (VHT80)	2TX	2RX	4TX	4RX
802.11ax (HE20)	2TX	2RX	4TX	4RX
802.11ax (HE40)	2TX	2RX	4TX	4RX
802.11ax (HE80)	2TX	2RX	4TX	4RX

Note:

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

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

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

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

Channel	Frequency
42	5210 MHz

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

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

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To			Description
	RE $\geq$ 1G	RE<1G	APCM	
1	√	√	√	WALN 5GHz Low band
2	√	√	√	WALN 5GHz High band

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

Radiated Emission Test (Above 1GHz):

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

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

Radiated Emission Test (Below 1GHz):

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

CDD Mode (low band)						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5180-5240	36 to 48	48	OFDMA	BPSK	MCS0
CDD Mode (high band)						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE40)	5745-5825	151 to 159	159	OFDM	BPSK	MCS0

Antenna Port Conducted Measurement:

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

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

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

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	23deg. C, 71%RH	120Vac, 60Hz	Robert Cheng
RE<1G	22deg. C, 69%RH	120Vac, 60Hz	Ryan Du
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

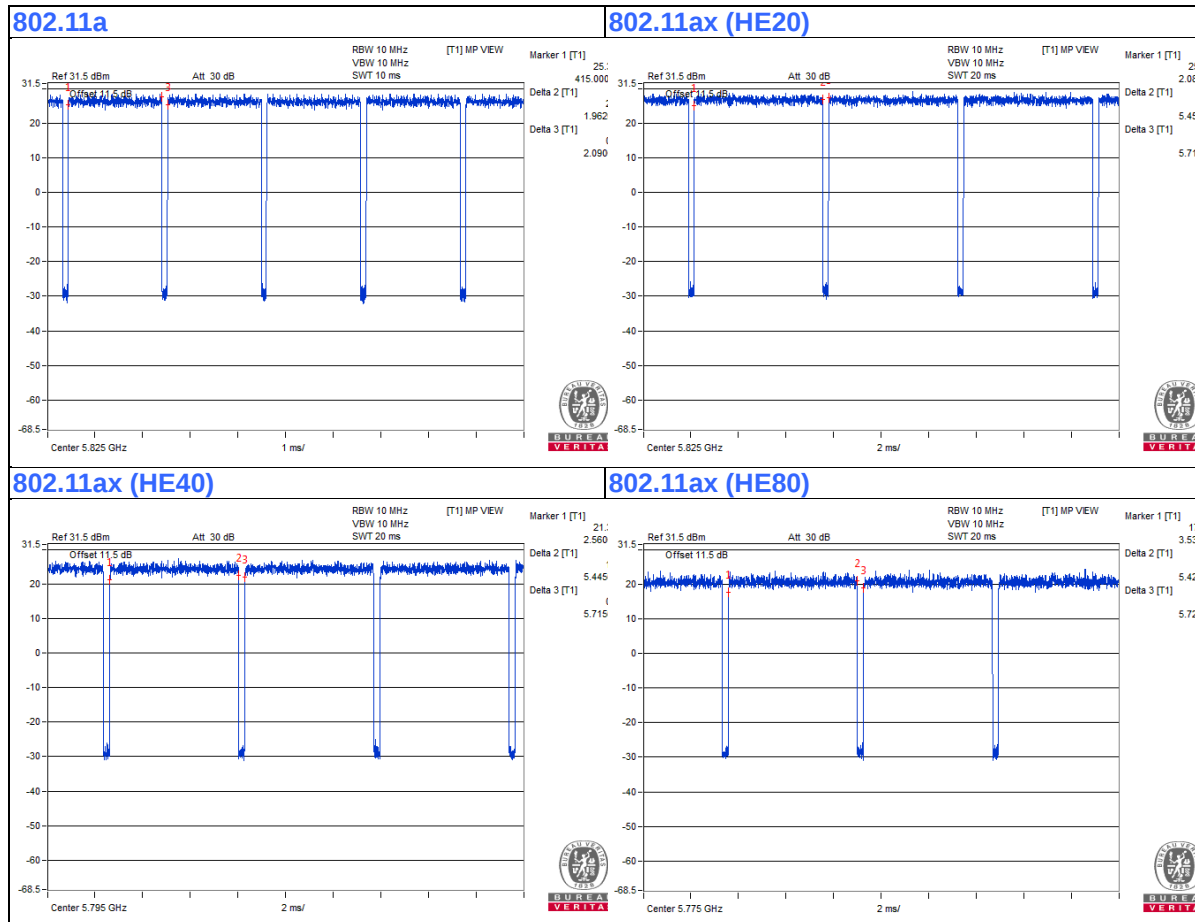
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 1.962 ms/2.09 ms = 0.939, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.27$

802.11ax (HE20): Duty cycle = 5.45 ms/5.715 ms = 0.954, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.21$

802.11ax (HE40): Duty cycle = 5.445 ms/5.715 ms = 0.953, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.21$

802.11ax (HE80): Duty cycle = 5.425 ms/5.72 ms = 0.948, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.23$



3.4 Description of Support Units

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

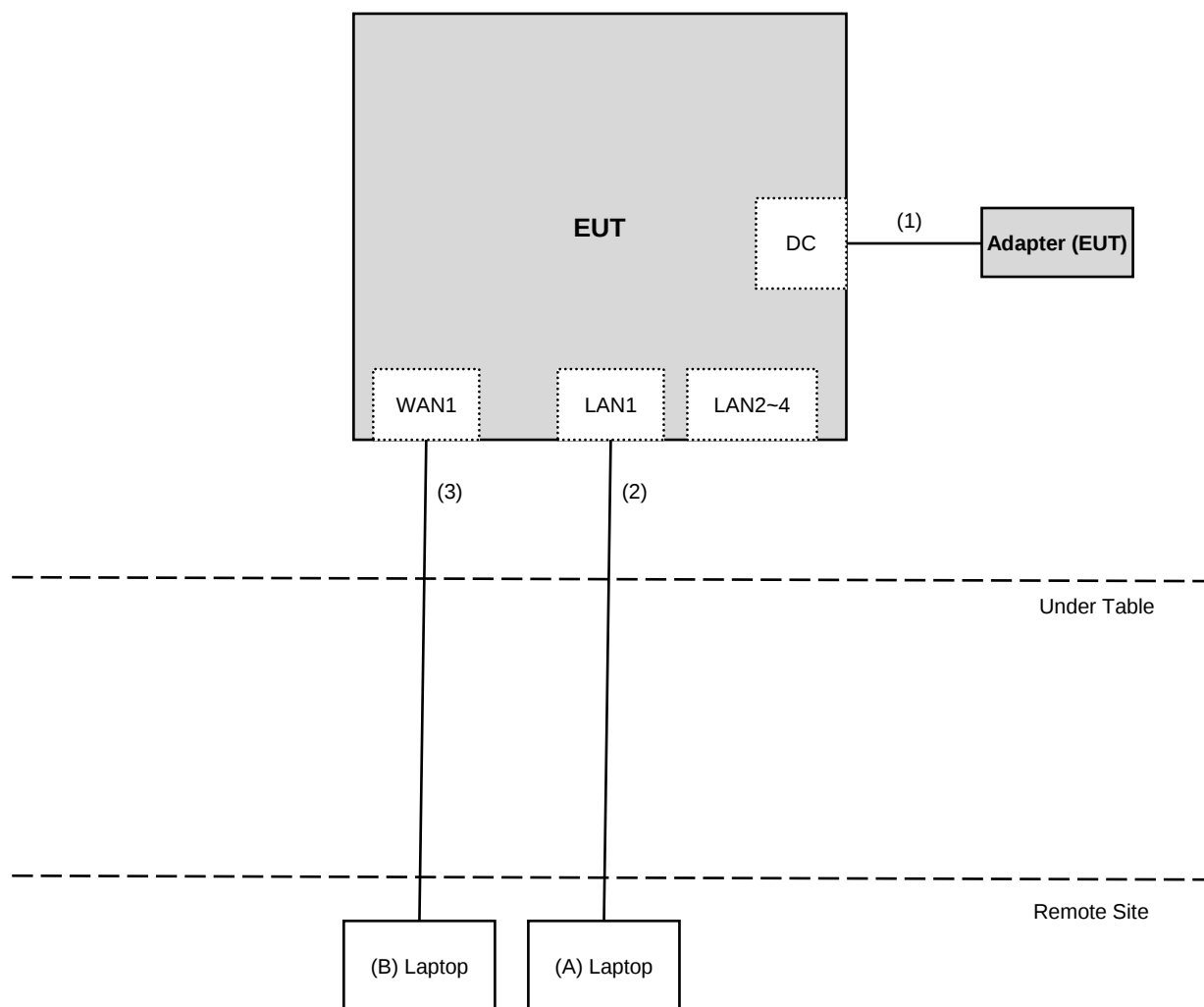
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
B.	Laptop	DELL	E5430	GM1SKV1	FCC DoC	Provided by Lab

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.8	N	0	Supplied by client
2.	RJ45 cable	1	10	N	0	Provided by Lab
3.	RJ45 cable	1	10	N	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard and references

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed and recorded as per the above standards.

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:

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

Limits of unwanted emission out of the restricted bands

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

Note:

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

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 13, 2019	Dec. 12, 2020
Pre-Amplifier EMCI	EMC001340	980142	May 30, 2019	May 29, 2020
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Oct. 23, 2019	Oct. 22, 2020
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 11, 2019	Nov. 10, 2020
RF Cable	8D	966-4-1	Mar. 18, 2020	Mar. 17, 2021
RF Cable	8D	966-4-2	Mar. 18, 2020	Mar. 17, 2021
RF Cable	8D	966-4-3	Mar. 18, 2020	Mar. 17, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Sep. 26, 2019	Sep. 25, 2020
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980385	Aug. 15, 2019	Aug. 14, 2020
RF Cable	EMC104-SM-SM-1200	160923	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-2000	180502	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-6000	180418	Apr. 29, 2020	Apr. 28, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: May 11 to 13, 2020

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 04, 2019	June 03, 2020
Power meter Anritsu	ML2495A	1529002	July 26, 2019	July 25, 2020
Power sensor Anritsu	MA2411B	1339443	July 26, 2019	July 25, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
AC Power Source Extech Electronics	6205	1440452	NA	NA
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 16, 2020	Jan. 15, 2021
True RMS Clamp Meter FLUKE	325	31130711WS	May 21, 2019	May 20, 2020
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

Note:

1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: May 13, 2020

4.1.3 Test Procedure

For Radiated emission below 30MHz

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

NOTE:

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

For Radiated emission above 30MHz

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

Note:

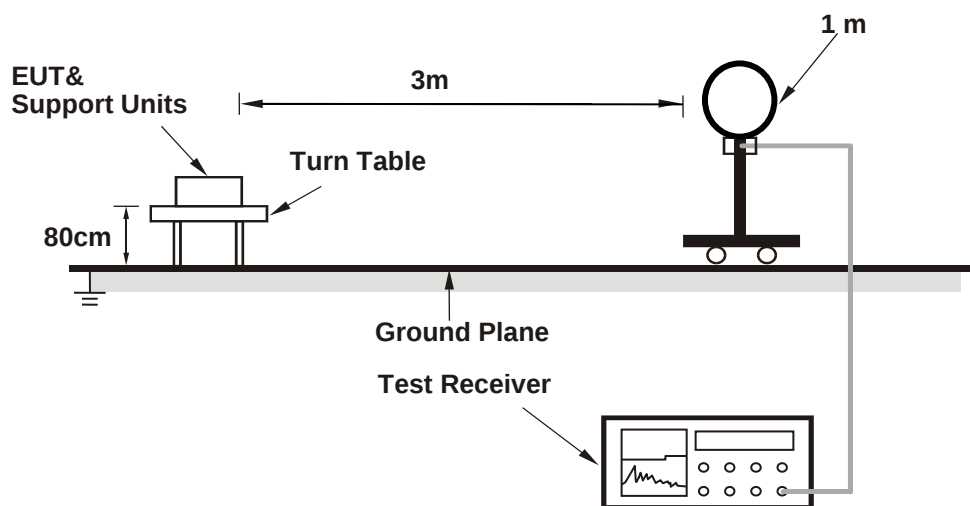
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

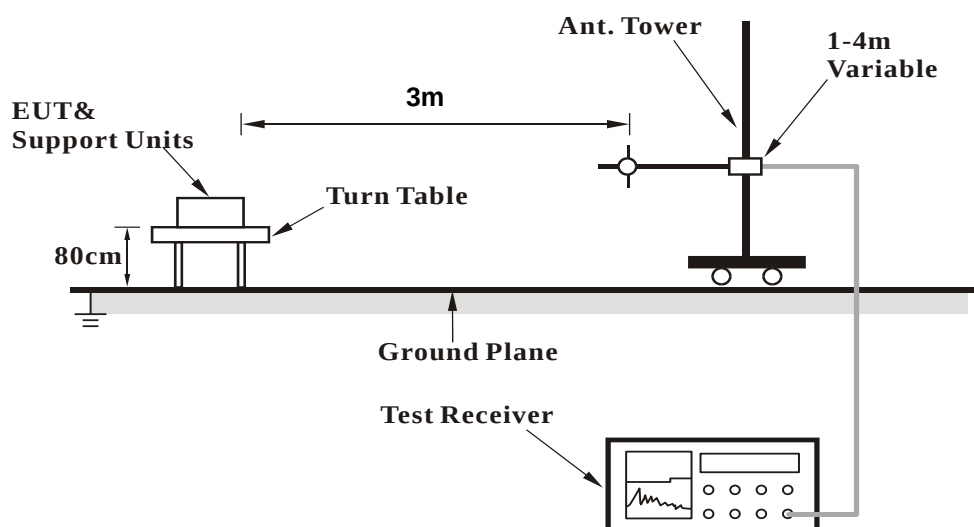
No deviation.

4.1.5 Test Setup

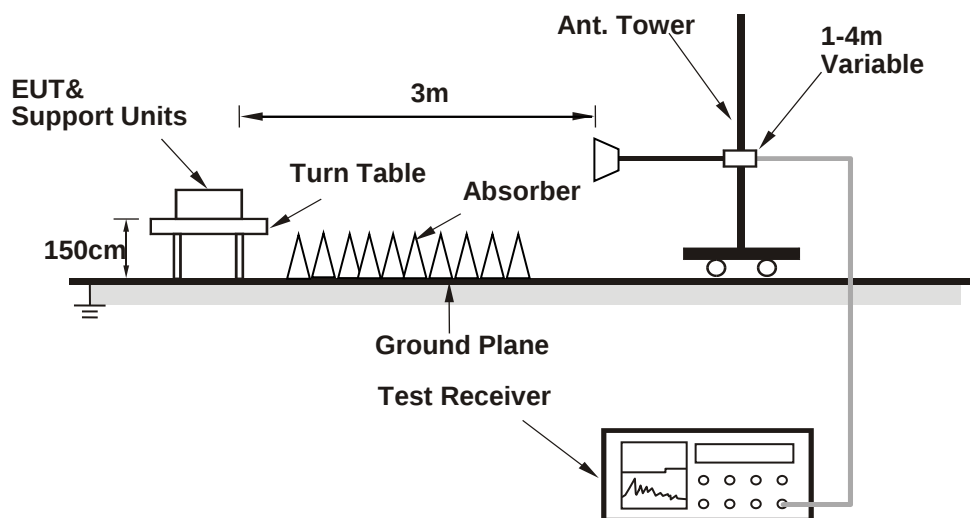
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Condition

- Connected the EUT with the Laptop which is placed on remote site.
- Controlling software (QSPR (5.0-00140)) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results (Mode 1)

Above 1GHz Data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.6 PK	74.0	-21.4	1.38 H	198	49.6	3.0
2	5150.00	48.3 AV	54.0	-5.7	1.38 H	198	45.3	3.0
3	*5180.00	115.0 PK			1.38 H	198	112.0	3.0
4	*5180.00	106.2 AV			1.38 H	198	103.2	3.0
5	#10360.00	53.9 PK	68.2	-14.3	1.92 H	101	40.7	13.2
6	15540.00	54.1 PK	74.0	-19.9	3.71 H	121	40.5	13.6
7	15540.00	42.1 AV	54.0	-11.9	3.71 H	121	28.5	13.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.5 PK	74.0	-7.5	1.80 V	192	63.5	3.0
2	5150.00	53.7 AV	54.0	-0.3	1.80 V	192	50.7	3.0
3	*5180.00	117.8 PK			1.80 V	192	114.8	3.0
4	*5180.00	109.1 AV			1.80 V	192	106.1	3.0
5	#10360.00	57.5 PK	68.2	-10.7	1.41 V	351	44.3	13.2
6	15540.00	54.6 PK	74.0	-19.4	3.21 V	218	41.0	13.6
7	15540.00	41.9 AV	54.0	-12.1	3.21 V	218	28.3	13.6

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.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.9 PK	74.0	-21.1	1.32 H	196	49.9	3.0
2	5150.00	48.5 AV	54.0	-5.5	1.32 H	196	45.5	3.0
3	*5200.00	118.3 PK			1.32 H	196	115.4	2.9
4	*5200.00	109.3 AV			1.32 H	196	106.4	2.9
5	#10400.00	53.3 PK	68.2	-14.9	1.95 H	108	40.0	13.3
6	15600.00	54.2 PK	74.0	-19.8	3.67 H	112	40.3	13.9
7	15600.00	42.1 AV	54.0	-11.9	3.67 H	112	28.2	13.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	70.6 PK	74.0	-3.4	1.49 V	189	67.6	3.0
2	5150.00	53.8 AV	54.0	-0.2	1.49 V	189	50.8	3.0
3	*5200.00	121.2 PK			1.49 V	189	118.3	2.9
4	*5200.00	112.2 AV			1.49 V	189	109.3	2.9
5	#10400.00	57.2 PK	68.2	-11.0	1.39 V	359	43.9	13.3
6	15600.00	54.6 PK	74.0	-19.4	3.25 V	231	40.7	13.9
7	15600.00	41.7 AV	54.0	-12.3	3.25 V	231	27.8	13.9

REMARKS:

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

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	117.9 PK			1.32 H	194	115.0	2.9
2	*5240.00	109.2 AV			1.32 H	194	106.3	2.9
3	5350.00	52.9 PK	74.0	-21.1	1.32 H	194	49.9	3.0
4	5350.00	48.8 AV	54.0	-5.2	1.32 H	194	45.8	3.0
5	#10480.00	53.6 PK	68.2	-14.6	1.89 H	112	40.1	13.5
6	15720.00	54.4 PK	74.0	-19.6	3.63 H	122	41.0	13.4
7	15720.00	42.1 AV	54.0	-11.9	3.63 H	122	28.7	13.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	121.1 PK			1.55 V	185	118.2	2.9
2	*5240.00	112.1 AV			1.55 V	185	109.2	2.9
3	5350.00	70.4 PK	74.0	-3.6	1.46 V	186	67.4	3.0
4	5350.00	53.3 AV	54.0	-0.7	1.46 V	186	50.3	3.0
5	#10480.00	57.3 PK	68.2	-10.9	1.40 V	359	43.8	13.5
6	15720.00	54.9 PK	74.0	-19.1	3.23 V	221	41.5	13.4
7	15720.00	42.1 AV	54.0	-11.9	3.23 V	221	28.7	13.4

REMARKS:

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

802.11ax (HE20)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.7 PK	74.0	-21.3	1.31 H	186	49.7	3.0
2	5150.00	48.4 AV	54.0	-5.6	1.31 H	186	45.4	3.0
3	*5180.00	117.4 PK			1.31 H	186	114.4	3.0
4	*5180.00	106.0 AV			1.31 H	186	103.0	3.0
5	#10360.00	53.8 PK	68.2	-14.4	1.92 H	120	40.6	13.2
6	15540.00	54.1 PK	74.0	-19.9	3.69 H	114	40.5	13.6
7	15540.00	42.1 AV	54.0	-11.9	3.69 H	114	28.5	13.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	1.79 V	193	63.4	3.0
2	5150.00	53.6 AV	54.0	-0.4	1.79 V	193	50.6	3.0
3	*5180.00	119.7 PK			1.79 V	193	116.7	3.0
4	*5180.00	108.1 AV			1.79 V	193	105.1	3.0
5	#10360.00	56.8 PK	68.2	-11.4	1.39 V	355	43.6	13.2
6	15540.00	54.9 PK	74.0	-19.1	3.30 V	241	41.3	13.6
7	15540.00	41.9 AV	54.0	-12.1	3.30 V	241	28.3	13.6

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.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.3 PK	74.0	-20.7	1.32 H	178	50.3	3.0
2	5150.00	49.1 AV	54.0	-4.9	1.32 H	178	46.1	3.0
3	*5200.00	120.9 PK			1.32 H	178	118.0	2.9
4	*5200.00	109.7 AV			1.32 H	178	106.8	2.9
5	#10400.00	53.4 PK	68.2	-14.8	1.93 H	101	40.1	13.3
6	15600.00	54.3 PK	74.0	-19.7	3.67 H	120	40.4	13.9
7	15600.00	42.0 AV	54.0	-12.0	3.67 H	120	28.1	13.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.8 PK	74.0	-8.2	1.49 V	189	62.8	3.0
2	5150.00	53.7 AV	54.0	-0.3	1.49 V	189	50.7	3.0
3	*5200.00	123.1 PK			1.49 V	189	120.2	2.9
4	*5200.00	111.8 AV			1.49 V	189	108.9	2.9
5	#10400.00	57.3 PK	68.2	-10.9	1.44 V	347	44.0	13.3
6	15600.00	54.5 PK	74.0	-19.5	3.26 V	241	40.6	13.9
7	15600.00	41.9 AV	54.0	-12.1	3.26 V	241	28.0	13.9

REMARKS:

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

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.3 PK	74.0	-18.7	1.26 H	190	52.3	3.0
2	5150.00	45.6 AV	54.0	-8.4	1.26 H	190	42.6	3.0
3	*5240.00	121.2 PK			1.26 H	190	118.3	2.9
4	*5240.00	109.7 AV			1.26 H	190	106.8	2.9
5	5350.00	53.3 PK	74.0	-20.7	1.26 H	190	50.3	3.0
6	5350.00	43.2 AV	54.0	-10.8	1.26 H	190	40.2	3.0
7	#10480.00	53.2 PK	68.2	-15.0	1.91 H	99	39.7	13.5
8	15720.00	54.5 PK	74.0	-19.5	3.62 H	128	41.1	13.4
9	15720.00	42.4 AV	54.0	-11.6	3.62 H	128	29.0	13.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.2 PK	74.0	-20.8	1.39 V	170	50.2	3.0
2	5150.00	41.6 AV	54.0	-12.4	1.39 V	170	38.6	3.0
3	*5240.00	123.1 PK			1.39 V	170	120.2	2.9
4	*5240.00	111.9 AV			1.39 V	170	109.0	2.9
5	5350.00	52.9 PK	74.0	-21.1	1.39 V	170	49.9	3.0
6	5350.00	41.2 AV	54.0	-12.8	1.39 V	170	38.2	3.0
7	#10480.00	57.8 PK	68.2	-10.4	1.38 V	360	44.3	13.5
8	15720.00	54.5 PK	74.0	-19.5	3.25 V	216	41.1	13.4
9	15720.00	41.5 AV	54.0	-12.5	3.25 V	216	28.1	13.4

REMARKS:

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

802.11ax (HE40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.8 PK	74.0	-20.2	1.24 H	187	50.8	3.0
2	5150.00	49.5 AV	54.0	-4.5	1.24 H	187	46.5	3.0
3	*5190.00	110.5 PK			1.24 H	187	107.5	3.0
4	*5190.00	100.3 AV			1.24 H	187	97.3	3.0
5	#10380.00	53.0 PK	68.2	-15.2	1.96 H	122	39.8	13.2
6	15570.00	54.1 PK	74.0	-19.9	3.69 H	119	40.3	13.8
7	15570.00	41.7 AV	54.0	-12.3	3.69 H	119	27.9	13.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.7 PK	74.0	-6.3	1.53 V	195	64.7	3.0
2	5150.00	53.7 AV	54.0	-0.3	1.53 V	195	50.7	3.0
3	*5190.00	114.5 PK			1.53 V	195	111.5	3.0
4	*5190.00	104.1 AV			1.53 V	195	101.1	3.0
5	#10380.00	57.2 PK	68.2	-11.0	1.33 V	354	44.0	13.2
6	15570.00	55.2 PK	74.0	-18.8	3.29 V	233	41.4	13.8
7	15570.00	42.0 AV	54.0	-12.0	3.29 V	233	28.2	13.8

REMARKS:

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

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.8 PK	74.0	-19.2	1.22 H	204	51.8	3.0
2	5150.00	45.3 AV	54.0	-8.7	1.22 H	204	42.3	3.0
3	*5230.00	114.2 PK			1.22 H	204	111.3	2.9
4	*5230.00	103.4 AV			1.22 H	204	100.5	2.9
5	5350.00	53.4 PK	74.0	-20.6	1.22 H	204	50.4	3.0
6	5350.00	43.2 AV	54.0	-10.8	1.22 H	204	40.2	3.0
7	#10460.00	53.4 PK	68.2	-14.8	1.97 H	100	39.9	13.5
8	15690.00	54.3 PK	74.0	-19.7	3.68 H	106	40.8	13.5
9	15690.00	42.1 AV	54.0	-11.9	3.68 H	106	28.6	13.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	1.47 V	183	63.4	3.0
2	5150.00	53.6 AV	54.0	-0.4	1.47 V	183	50.6	3.0
3	*5230.00	118.3 PK			1.47 V	183	115.4	2.9
4	*5230.00	107.7 AV			1.47 V	183	104.8	2.9
5	5350.00	55.7 PK	74.0	-18.3	1.47 V	183	52.7	3.0
6	5350.00	43.6 AV	54.0	-10.4	1.47 V	183	40.6	3.0
7	#10460.00	57.2 PK	68.2	-11.0	1.44 V	360	43.7	13.5
8	15690.00	54.4 PK	74.0	-19.6	3.21 V	221	40.9	13.5
9	15690.00	41.5 AV	54.0	-12.5	3.21 V	221	28.0	13.5

REMARKS:

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

802.11ax (HE80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.29 H	203	51.9	3.0
2	5150.00	45.2 AV	54.0	-8.8	1.29 H	203	42.2	3.0
3	*5210.00	106.9 PK			1.29 H	203	103.9	3.0
4	*5210.00	96.8 AV			1.29 H	203	93.8	3.0
5	5350.00	54.3 PK	74.0	-19.7	1.29 H	203	51.3	3.0
6	5350.00	40.2 AV	54.0	-13.8	1.29 H	203	37.2	3.0
7	#10420.00	53.6 PK	68.2	-14.6	1.96 H	97	40.3	13.3
8	15630.00	54.4 PK	74.0	-19.6	3.63 H	111	40.7	13.7
9	15630.00	42.0 AV	54.0	-12.0	3.63 H	111	28.3	13.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.3 PK	74.0	-6.7	1.50 V	194	64.3	3.0
2	5150.00	53.6 AV	54.0	-0.4	1.50 V	194	50.6	3.0
3	*5210.00	110.6 PK			1.50 V	194	107.6	3.0
4	*5210.00	100.2 AV			1.50 V	194	97.2	3.0
5	5350.00	53.8 PK	74.0	-20.2	1.50 V	194	50.8	3.0
6	5350.00	42.3 AV	54.0	-11.7	1.50 V	194	39.3	3.0
7	#10420.00	57.4 PK	68.2	-10.8	1.34 V	358	44.1	13.3
8	15630.00	54.1 PK	74.0	-19.9	3.30 V	215	40.4	13.7
9	15630.00	41.2 AV	54.0	-12.8	3.30 V	215	27.5	13.7

REMARKS:

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

Below 1GHz Data:

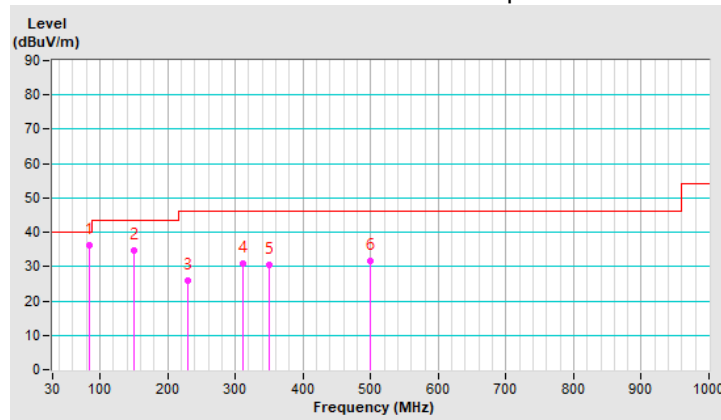
802.11ax (HE20)

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	84.60	36.1 QP	40.0	-3.9	2.50 H	186	49.6	-13.5
2	149.99	34.6 QP	43.5	-8.9	2.00 H	192	42.0	-7.4
3	230.52	25.8 QP	46.0	-20.2	1.00 H	91	35.8	-10.0
4	311.50	30.9 QP	46.0	-15.1	1.50 H	71	37.0	-6.1
5	350.72	30.5 QP	46.0	-15.5	1.00 H	351	35.8	-5.3
6	499.99	31.7 QP	46.0	-14.3	2.00 H	259	33.0	-1.3

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

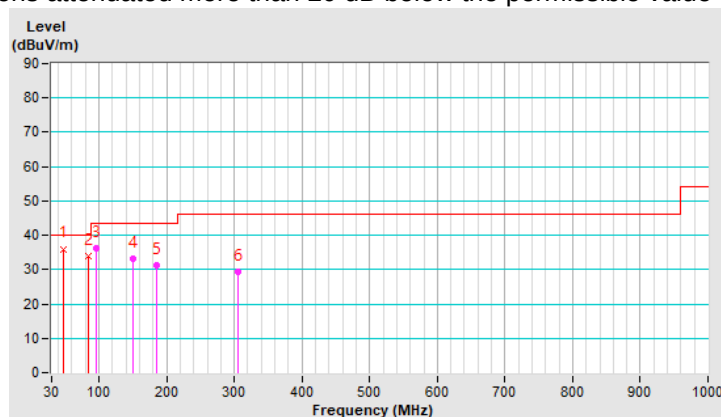


CHANNEL	TX Channel 48	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	46.75	36.0 QP	40.0	-4.0	1.00 V	35	43.9	-7.9
2	83.87	33.9 QP	40.0	-6.1	1.00 V	134	47.3	-13.4
3	96.77	36.3 QP	43.5	-7.2	1.50 V	96	48.9	-12.6
4	151.18	33.1 QP	43.5	-10.4	1.00 V	246	40.5	-7.4
5	185.71	31.3 QP	43.5	-12.2	1.00 V	298	41.2	-9.9
6	305.13	29.5 QP	46.0	-16.5	2.00 V	357	35.8	-6.3

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.1.8 Test Results (Mode 2)

Above 1GHz Data:

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.07	54.7 PK	68.2	-13.5	1.37 H	180	51.2	3.5
2	*5745.00	121.4 PK			1.37 H	180	117.6	3.8
3	*5745.00	112.7 AV			1.37 H	180	108.9	3.8
4	#5934.76	51.7 PK	68.2	-16.5	1.37 H	180	47.7	4.0
5	11490.00	54.2 PK	74.0	-19.8	1.33 H	341	40.2	14.0
6	11490.00	50.0 AV	54.0	-4.0	1.33 H	341	36.0	14.0
7	#17235.00	54.6 PK	68.2	-13.6	1.96 H	202	38.1	16.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5641.79	53.9 PK	68.2	-14.3	1.37 V	240	50.4	3.5
2	*5745.00	120.4 PK			1.37 V	240	116.6	3.8
3	*5745.00	111.6 AV			1.37 V	240	107.8	3.8
4	#5929.19	51.4 PK	68.2	-16.8	1.37 V	240	47.4	4.0
5	11490.00	52.7 PK	74.0	-21.3	1.77 V	288	38.7	14.0
6	11490.00	46.3 AV	54.0	-7.7	1.77 V	288	32.3	14.0
7	#17235.00	53.9 PK	68.2	-14.3	2.24 V	143	37.4	16.5

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.89	52.7 PK	68.2	-15.5	1.34 H	183	49.3	3.4
2	*5785.00	119.3 PK			1.34 H	183	115.4	3.9
3	*5785.00	110.8 AV			1.34 H	183	106.9	3.9
4	#5959.47	51.6 PK	68.2	-16.6	1.34 H	183	47.5	4.1
5	11570.00	53.7 PK	74.0	-20.3	1.36 H	344	40.1	13.6
6	11570.00	49.7 AV	54.0	-4.3	1.36 H	344	36.1	13.6
7	#17355.00	53.9 PK	68.2	-14.3	1.91 H	208	36.9	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.06	54.4 PK	68.2	-13.8	1.35 V	267	50.9	3.5
2	*5785.00	122.1 PK			1.35 V	267	118.2	3.9
3	*5785.00	112.9 AV			1.35 V	267	109.0	3.9
4	#5936.60	52.1 PK	68.2	-16.1	1.35 V	267	48.1	4.0
5	11570.00	52.2 PK	74.0	-21.8	1.72 V	289	38.6	13.6
6	11570.00	45.8 AV	54.0	-8.2	1.72 V	289	32.2	13.6
7	#17355.00	53.3 PK	68.2	-14.9	2.20 V	132	36.3	17.0

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.09	52.6 PK	68.2	-15.6	1.28 H	170	49.2	3.4
2	*5825.00	120.8 PK			1.28 H	170	116.7	4.1
3	*5825.00	111.8 AV			1.28 H	170	107.7	4.1
4	#6015.25	50.8 PK	68.2	-17.4	1.28 H	170	46.7	4.1
5	11650.00	54.6 PK	74.0	-19.4	1.34 H	327	41.1	13.5
6	11650.00	50.2 AV	54.0	-3.8	1.34 H	327	36.7	13.5
7	#17475.00	54.5 PK	68.2	-13.7	1.98 H	206	35.9	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.54	53.7 PK	68.2	-14.5	1.32 V	264	50.2	3.5
2	*5825.00	121.6 PK			1.32 V	264	117.5	4.1
3	*5825.00	112.4 AV			1.32 V	264	108.3	4.1
4	#5950.65	51.3 PK	68.2	-16.9	1.32 V	264	47.2	4.1
5	11650.00	52.5 PK	74.0	-21.5	1.72 V	298	39.0	13.5
6	11650.00	46.1 AV	54.0	-7.9	1.72 V	298	32.6	13.5
7	#17475.00	53.6 PK	68.2	-14.6	2.26 V	131	35.0	18.6

REMARKS:

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

802.11ax (HE20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.99	57.0 PK	68.2	-11.2	1.98 H	341	53.5	3.5
2	*5745.00	122.2 PK			1.98 H	341	118.4	3.8
3	*5745.00	110.9 AV			1.98 H	341	107.1	3.8
4	#5941.38	52.2 PK	68.2	-16.0	1.98 H	341	48.2	4.0
5	11490.00	54.3 PK	74.0	-19.7	1.32 H	354	40.3	14.0
6	11490.00	50.3 AV	54.0	-3.7	1.32 H	354	36.3	14.0
7	#17235.00	54.5 PK	68.2	-13.7	1.95 H	201	38.0	16.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.95	57.2 PK	68.2	-11.0	1.44 V	271	53.7	3.5
2	*5745.00	124.7 PK			1.44 V	271	120.9	3.8
3	*5745.00	113.4 AV			1.44 V	271	109.6	3.8
4	#5937.77	53.0 PK	68.2	-15.2	1.44 V	271	49.0	4.0
5	11490.00	52.6 PK	74.0	-21.4	1.81 V	287	38.6	14.0
6	11490.00	46.5 AV	54.0	-7.5	1.81 V	287	32.5	14.0
7	#17235.00	53.9 PK	68.2	-14.3	2.27 V	138	37.4	16.5

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5588.62	53.7 PK	68.2	-14.5	2.07 H	349	50.4	3.3
2	*5785.00	125.0 PK			2.07 H	349	121.1	3.9
3	*5785.00	112.2 AV			2.07 H	349	108.3	3.9
4	#5947.16	51.9 PK	68.2	-16.3	2.07 H	349	47.9	4.0
5	11570.00	54.1 PK	74.0	-19.9	1.31 H	347	40.5	13.6
6	11570.00	50.0 AV	54.0	-4.0	1.31 H	347	36.4	13.6
7	#17355.00	54.1 PK	68.2	-14.1	1.93 H	208	37.1	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.73	54.0 PK	68.2	-14.2	1.49 V	268	50.6	3.4
2	*5785.00	125.3 PK			1.49 V	268	121.4	3.9
3	*5785.00	113.2 AV			1.49 V	268	109.3	3.9
4	#5926.41	52.7 PK	68.2	-15.5	1.49 V	268	48.8	3.9
5	11570.00	52.9 PK	74.0	-21.1	1.77 V	297	39.3	13.6
6	11570.00	46.4 AV	54.0	-7.6	1.77 V	297	32.8	13.6
7	#17355.00	54.4 PK	68.2	-13.8	2.19 V	140	37.4	17.0

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5627.90	54.1 PK	68.2	-14.1	2.05 H	345	50.7	3.4
2	*5825.00	122.6 PK			2.05 H	345	118.5	4.1
3	*5825.00	111.1 AV			2.05 H	345	107.0	4.1
4	#5933.81	51.1 PK	68.2	-17.1	2.05 H	345	47.1	4.0
5	11650.00	54.0 PK	74.0	-20.0	1.29 H	338	40.5	13.5
6	11650.00	49.6 AV	54.0	-4.4	1.29 H	338	36.1	13.5
7	#17475.00	54.0 PK	68.2	-14.2	2.00 H	187	35.4	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.69	54.8 PK	68.2	-13.4	1.53 V	264	51.4	3.4
2	*5825.00	124.3 PK			1.53 V	264	120.2	4.1
3	*5825.00	112.6 AV			1.53 V	264	108.5	4.1
4	#5932.92	52.6 PK	68.2	-15.6	1.53 V	264	48.6	4.0
5	11650.00	52.5 PK	74.0	-21.5	1.79 V	278	39.0	13.5
6	11650.00	46.4 AV	54.0	-7.6	1.79 V	278	32.9	13.5
7	#17475.00	54.5 PK	68.2	-13.7	2.18 V	145	35.9	18.6

REMARKS:

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

802.11ax (HE40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.92	59.0 PK	68.2	-9.2	1.94 H	345	55.5	3.5
2	*5755.00	121.4 PK			1.94 H	345	117.6	3.8
3	*5755.00	110.3 AV			1.94 H	345	106.5	3.8
4	#5946.38	51.3 PK	68.2	-16.9	1.94 H	345	47.3	4.0
5	11510.00	54.9 PK	74.0	-19.1	1.32 H	344	41.1	13.8
6	11510.00	50.5 AV	54.0	-3.5	1.32 H	344	36.7	13.8
7	#17265.00	54.5 PK	68.2	-13.7	1.92 H	201	37.9	16.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.85	59.6 PK	68.2	-8.6	1.48 V	271	56.1	3.5
2	*5755.00	122.8 PK			1.48 V	271	119.0	3.8
3	*5755.00	111.6 AV			1.48 V	271	107.8	3.8
4	#5934.73	52.7 PK	68.2	-15.5	1.48 V	271	48.7	4.0
5	11510.00	52.1 PK	74.0	-21.9	1.76 V	295	38.3	13.8
6	11510.00	45.9 AV	54.0	-8.1	1.76 V	295	32.1	13.8
7	#17265.00	54.3 PK	68.2	-13.9	2.21 V	142	37.7	16.6

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.

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.71	53.6 PK	68.2	-14.6	1.89 H	333	50.1	3.5
2	*5795.00	119.7 PK			1.89 H	333	115.8	3.9
3	*5795.00	108.8 AV			1.89 H	333	104.9	3.9
4	#5947.90	52.1 PK	68.2	-16.1	1.89 H	333	48.1	4.0
5	11590.00	54.0 PK	74.0	-20.0	1.39 H	344	40.4	13.6
6	11590.00	49.8 AV	54.0	-4.2	1.39 H	344	36.2	13.6
7	#17385.00	54.7 PK	68.2	-13.5	2.01 H	217	37.3	17.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5566.58	54.3 PK	68.2	-13.9	1.44 V	268	51.0	3.3
2	*5795.00	121.1 PK			1.44 V	268	117.2	3.9
3	*5795.00	110.2 AV			1.44 V	268	106.3	3.9
4	#5930.66	52.7 PK	68.2	-15.5	1.44 V	268	48.7	4.0
5	11590.00	52.7 PK	74.0	-21.3	1.82 V	302	39.1	13.6
6	11590.00	46.1 AV	54.0	-7.9	1.82 V	302	32.5	13.6
7	#17385.00	53.9 PK	68.2	-14.3	2.21 V	147	36.5	17.4

REMARKS:

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

802.11ax (HE40)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.64	66.6 PK	68.2	-1.6	2.03 H	343	63.1	3.5
2	*5775.00	116.9 PK			2.03 H	343	113.0	3.9
3	*5775.00	104.7 AV			2.03 H	343	100.8	3.9
4	#5927.40	59.8 PK	68.2	-8.4	2.03 H	343	55.9	3.9
5	11550.00	54.7 PK	74.0	-19.3	1.30 H	355	41.0	13.7
6	11550.00	50.4 AV	54.0	-3.6	1.30 H	355	36.7	13.7
7	#17325.00	55.2 PK	68.2	-13.0	2.01 H	191	38.4	16.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.66	68.6 PK	68.7	-0.1	1.49 V	270	65.1	3.5
2	*5775.00	118.4 PK			1.49 V	270	114.5	3.9
3	*5775.00	106.1 AV			1.49 V	270	102.2	3.9
4	#5931.58	59.1 PK	68.2	-9.1	1.49 V	270	55.1	4.0
5	11550.00	53.2 PK	74.0	-20.8	1.72 V	280	39.5	13.7
6	11550.00	46.8 AV	54.0	-7.2	1.72 V	280	33.1	13.7
7	#17325.00	53.9 PK	68.2	-14.3	2.22 V	143	37.1	16.8

REMARKS:

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

Below 1GHz Data:

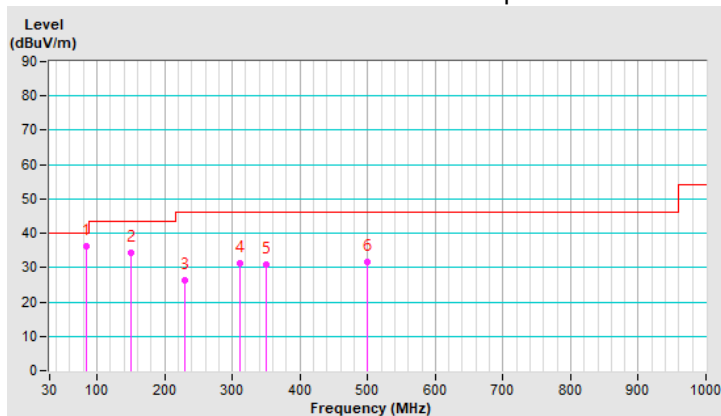
802.11ax (HE40)

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	84.66	36.3 QP	40.0	-3.7	2.50 H	146	49.8	-13.5
2	150.02	34.3 QP	43.5	-9.2	2.00 H	206	41.7	-7.4
3	230.46	26.2 QP	46.0	-19.8	1.00 H	117	36.2	-10.0
4	311.56	31.2 QP	46.0	-14.8	1.50 H	103	37.3	-6.1
5	350.61	30.8 QP	46.0	-15.2	1.00 H	346	36.1	-5.3
6	500.01	31.5 QP	46.0	-14.5	2.00 H	277	32.8	-1.3

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

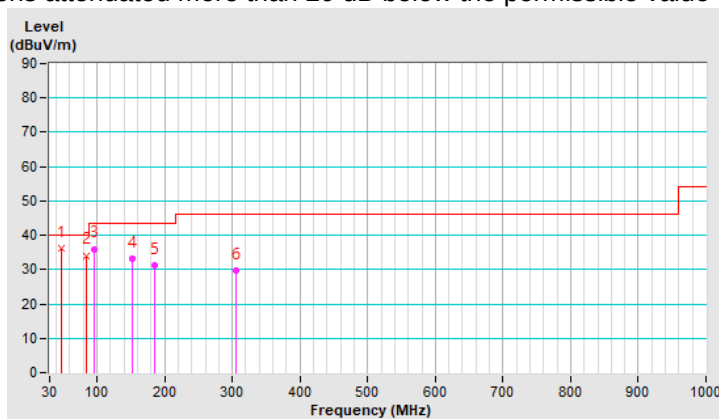


CHANNEL	TX Channel 159	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	46.87	36.3 QP	40.0	-3.7	1.00 V	84	44.2	-7.9
2	84.04	34.1 QP	40.0	-5.9	1.00 V	106	47.5	-13.4
3	96.62	36.0 QP	43.5	-7.5	1.50 V	76	48.6	-12.6
4	151.29	33.0 QP	43.5	-10.5	1.00 V	287	40.4	-7.4
5	185.85	31.1 QP	43.5	-12.4	1.00 V	281	41.0	-9.9
6	305.25	29.7 QP	46.0	-16.3	2.00 V	346	36.0	-6.3

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Transmit Power Measurement

4.2.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

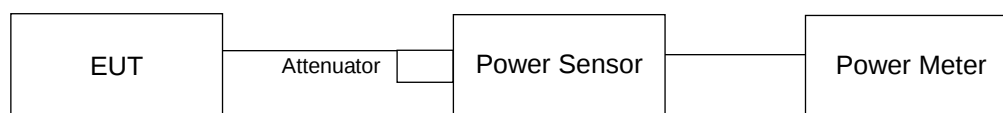
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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

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

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

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

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

4.2.7 Test Result (Mode 1)

CDD Mode

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	22.44	22.02	334.609	25.25	30.00	Pass
40	5200	25.27	25.18	666.121	28.24	30.00	Pass
48	5240	25.35	25.01	659.725	28.19	30.00	Pass

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	22.43	21.94	331.299	25.20	30.00	Pass
40	5200	25.05	25.02	637.577	28.05	30.00	Pass
48	5240	25.08	24.69	616.549	27.90	30.00	Pass

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	19.79	19.64	187.325	22.73	30.00	Pass
46	5230	24.61	24.42	565.762	27.53	30.00	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.14	19.07	162.759	22.12	30.00	Pass

802.11ax (HE20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	22.57	22.20	346.676	25.40	30.00	Pass
40	5200	25.23	25.19	663.796	28.22	30.00	Pass
48	5240	25.41	25.03	665.956	28.23	30.00	Pass

802.11ax (HE40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	20.08	19.92	200.034	23.01	30.00	Pass
46	5230	24.86	24.69	600.639	27.79	30.00	Pass

802.11ax (HE80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.37	19.22	170.057	22.31	30.00	Pass

Beamforming Mode

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	22.43	21.94	331.299	25.20	30.00	Pass
40	5200	25.05	25.02	637.577	28.05	30.00	Pass
48	5240	25.08	24.69	616.549	27.90	30.00	Pass

Note: 1. Directional gain = 5.67dBi < 6dBi , so the power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	19.79	19.64	187.325	22.73	30.00	Pass
46	5230	24.61	24.42	565.762	27.53	30.00	Pass

Note: 1. Directional gain = 5.67dBi < 6dBi , so the power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.14	19.07	162.759	22.12	30.00	Pass

Note: 1. Directional gain = 5.67dBi < 6dBi , so the power limit shall not be reduced.

802.11ax (HE20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	22.57	22.20	346.676	25.40	30.00	Pass
40	5200	25.23	25.19	663.796	28.22	30.00	Pass
48	5240	25.41	25.03	665.956	28.23	30.00	Pass

Note: 1. Directional gain = 5.67dBi < 6dBi , so the power limit shall not be reduced.

802.11ax (HE40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	20.08	19.92	200.034	23.01	30.00	Pass
46	5230	24.86	24.69	600.639	27.79	30.00	Pass

Note: 1. Directional gain = 5.67dBi < 6dBi , so the power limit shall not be reduced.

802.11ax (HE80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.37	19.22	170.057	22.31	30.00	Pass

Note: 1. Directional gain = 5.67dBi < 6dBi , so the power limit shall not be reduced.

4.2.8 Test Result (Mode 2)

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.22	23.92	23.67	22.78	878.978	29.44	30.00	Pass
157	5785	23.54	23.87	23.92	22.88	910.417	29.59	30.00	Pass
165	5825	23.55	23.91	23.87	23.27	928.607	29.68	30.00	Pass

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.99	23.32	23.07	23.63	847.293	29.28	30.00	Pass
157	5785	23.11	23.58	23.88	22.69	862.802	29.36	30.00	Pass
165	5825	23.29	23.69	23.54	23.48	895.975	29.52	30.00	Pass

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	23.33	23.77	23.85	23.08	899.407	29.54	30.00	Pass
159	5795	23.15	23.33	23.76	23.51	883.888	29.46	30.00	Pass

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	22.04	22.55	22.90	22.13	698.133	28.44	30.00	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.23	23.55	23.33	23.86	895.341	29.52	30.00	Pass
157	5785	23.46	23.93	23.95	23.15	923.843	29.66	30.00	Pass
165	5825	23.56	23.94	23.95	23.54	948.986	29.77	30.00	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	23.39	23.88	23.91	23.58	936.687	29.72	30.00	Pass
159	5795	23.44	23.67	23.91	23.67	932.455	29.70	30.00	Pass

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	22.31	22.76	22.96	22.36	728.899	28.63	30.00	Pass

Beamforming Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.74	22.79	22.72	22.57	745.825	28.73	29.06	Pass
157	5785	22.66	23.09	23.46	22.14	773.707	28.89	29.06	Pass
165	5825	22.44	22.77	22.83	22.76	745.288	28.72	29.06	Pass

Note: 1. Directional gain = 6.94dBi > 6dBi , so the power limit shall be reduced to $30-(6.94-6) = 29.06\text{dBm}$.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	22.48	23.01	23.31	22.07	752.351	28.76	29.06	Pass
159	5795	22.83	22.44	22.89	22.67	746.718	28.73	29.06	Pass

Note: 1. Directional gain = 6.94dBi > 6dBi , so the power limit shall be reduced to $30-(6.94-6) = 29.06\text{dBm}$.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	22.04	22.55	22.90	22.13	698.133	28.44	29.06	Pass

Note: 1. Directional gain = 6.94dBi > 6dBi , so the power limit shall be reduced to $30-(6.94-6) = 29.06\text{dBm}$.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.87	22.91	22.83	22.75	769.308	28.86	29.06	Pass
157	5785	22.77	23.21	23.64	22.26	798.119	29.02	29.06	Pass
165	5825	22.60	22.89	22.97	22.90	769.643	28.86	29.06	Pass

Note: 1. Directional gain = 6.94dBi > 6dBi , so the power limit shall be reduced to $30-(6.94-6) = 29.06\text{dBm}$.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	22.62	23.21	23.43	22.23	779.623	28.92	29.06	Pass
159	5795	22.95	22.56	22.92	22.77	762.663	28.82	29.06	Pass

Note: 1. Directional gain = 6.94dBi > 6dBi , so the power limit shall be reduced to $30-(6.94-6) = 29.06\text{dBm}$.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	22.31	22.76	22.96	22.36	728.899	28.63	29.06	Pass

Note: 1. Directional gain = 6.94dBi > 6dBi , so the power limit shall be reduced to $30-(6.94-6) = 29.06\text{dBm}$.

5 Pictures of Test Arrangements

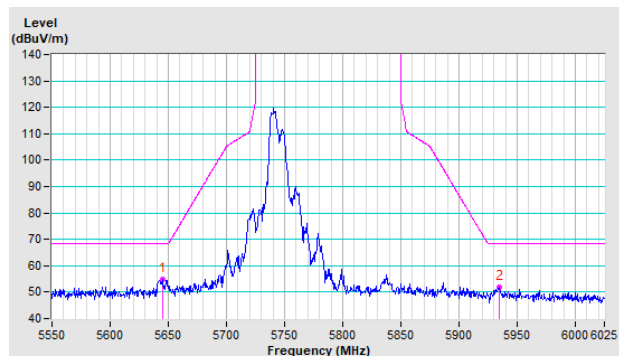
Please refer to the attached file (Test Setup Photo).

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

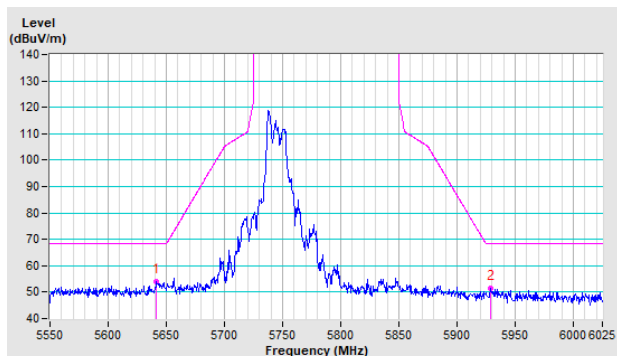
802.11a

CH 149 5745 MHz

Horizontal

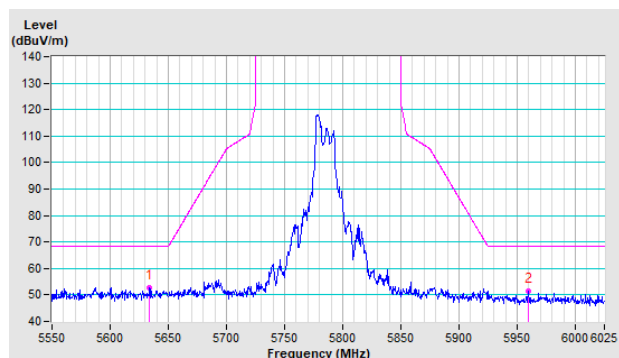


Vertical

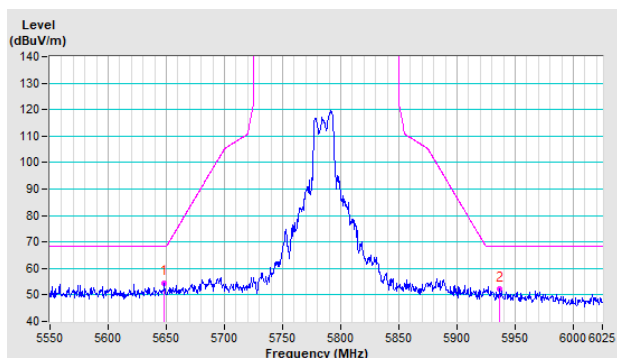


CH 157 5785 MHz

Horizontal

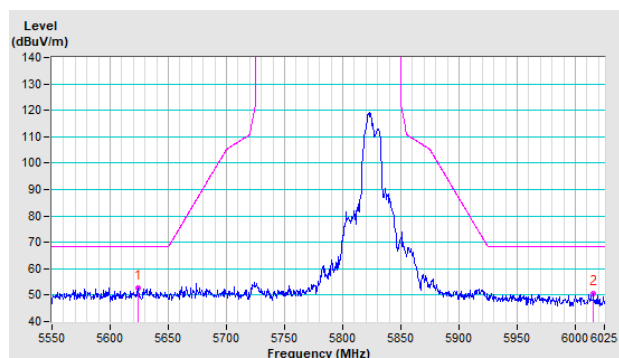


Vertical

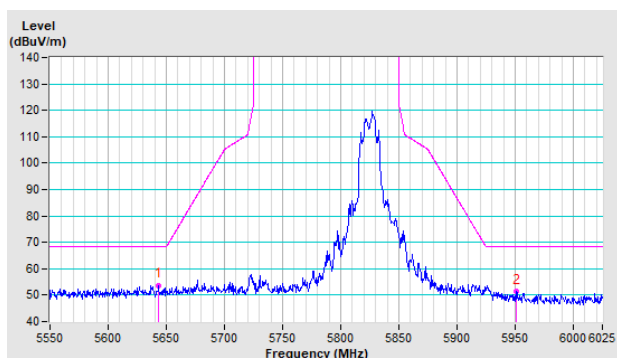


CH 165 5825 MHz

Horizontal



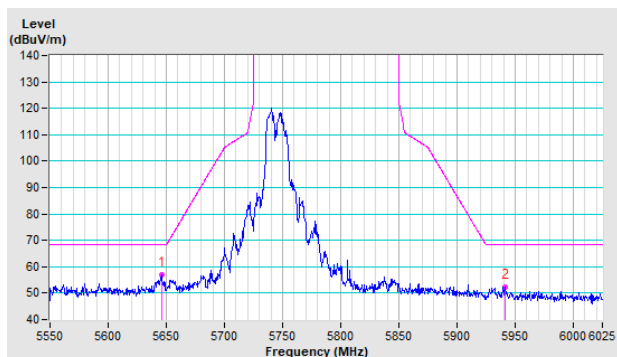
Vertical



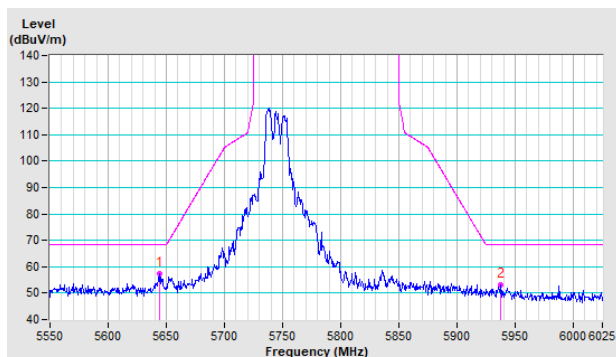
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

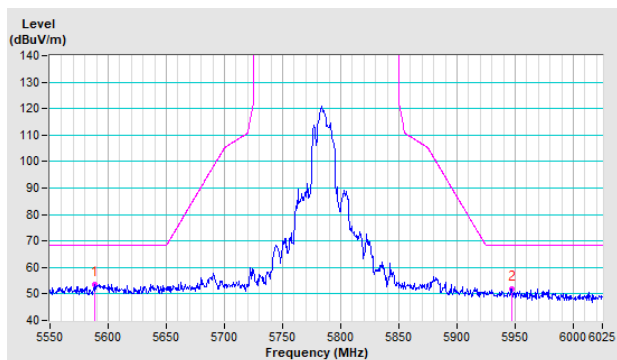


Vertical

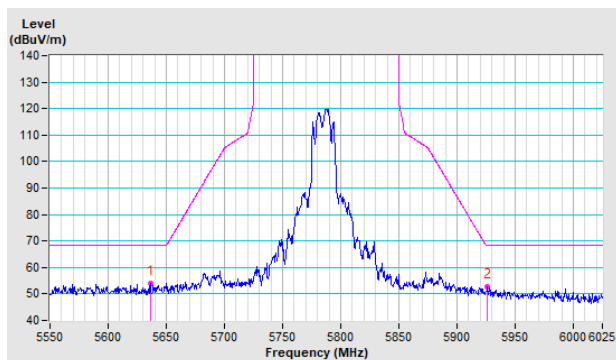


CH 157 5785 MHz

Horizontal

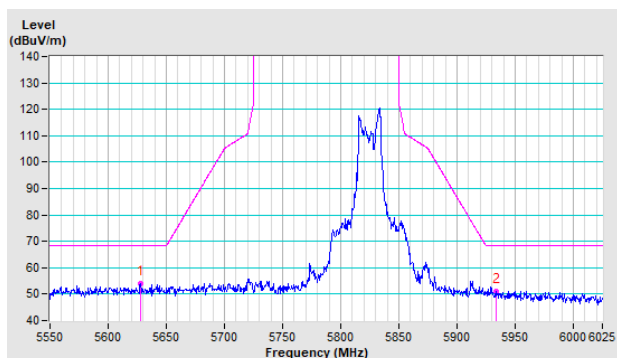


Vertical

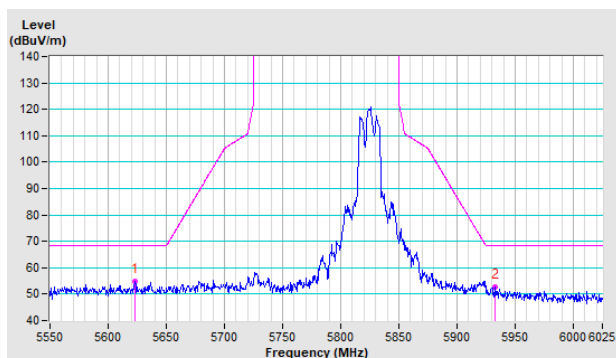


CH 165 5825 MHz

Horizontal



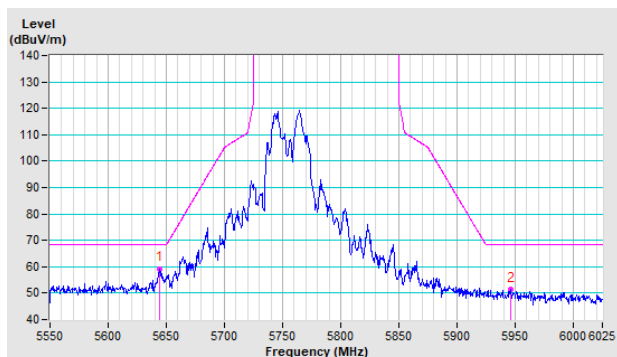
Vertical



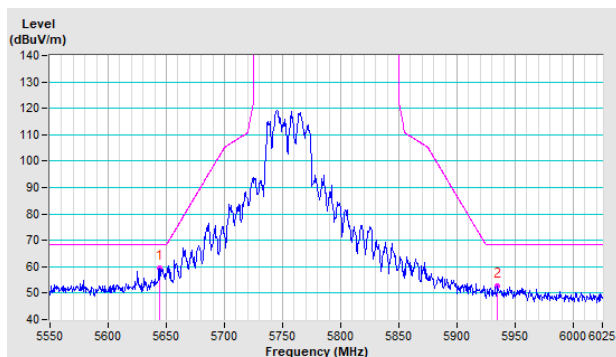
802.11ax (HE40)

CH 151 5755 MHz

Horizontal

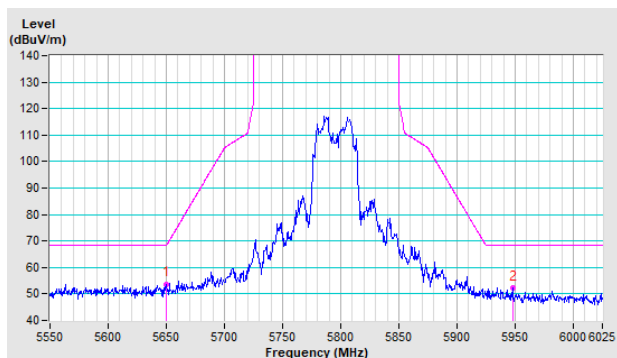


Vertical

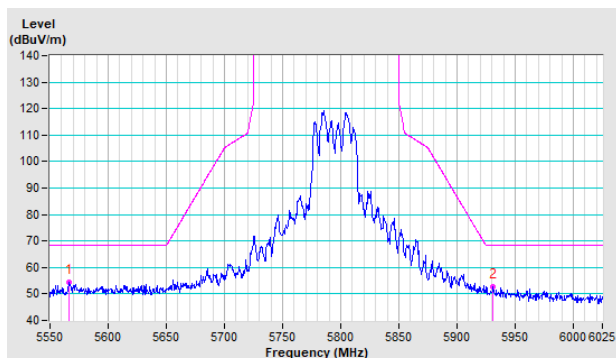


CH 159 5795 MHz

Horizontal



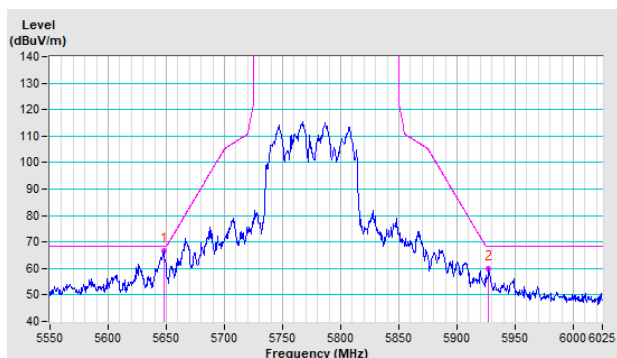
Vertical



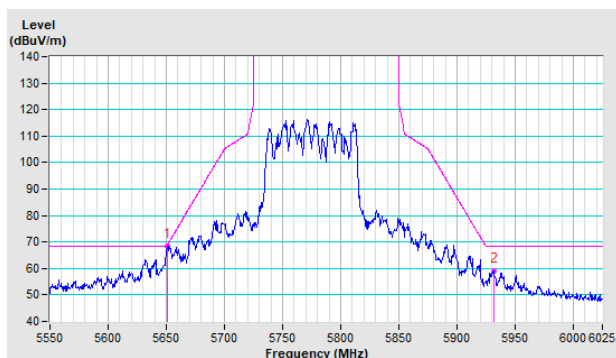
802.11ax (HE80)

CH 155 5775 MHz

Horizontal



Vertical



Appendix – Information of the Testing Laboratories

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

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

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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