

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)

Report No.: RFBAPP-WTW-P25060159-4

FCC ID: UDX-600196027

Product: C8121-CW-G2, C8121-W-G2

Brand: Cisco

Model No.: C8121-CW-G2

Series Model.: C8121-W-G2 (refer to item 3.1 for more details)

Received Date: 2025/6/3

Test Date: 2025/6/13 ~ 2025/9/3

Issued Date: 2025/11/21

Applicant: Cisco Systems, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: Jeremy Lin, Date: 2025/11/21
Jeremy Lin / Project Engineer

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Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBAPP-WTW-P25060159-4	Original release.	2025/11/21

1 Certificate

Product: C8121-CW-G2, C8121-W-G2

Brand: Cisco

Test Model: C8121-CW-G2

Series Model: C8121-W-G2 (refer to item 3.1 for more details)

Sample Status: Engineering sample

Applicant: Cisco Systems, Inc.

Test Date: 2025/6/13 ~ 2025/9/3

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)

Measurement ANSI C63.10-2020

procedure: KDB 291074 D02 EMC Measurement v01

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

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.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -2.52 dB at 0.27400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.9 dB at 32.81 MHz
15.407(b)(5) 15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.6 dB at 5650.00 MHz
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

Note: 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	Specification	Expanded Uncertainty (k=2) (±)
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.88 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	C8121-CW-G2, C8121-W-G2
Brand	Cisco
Test Model	C8121-CW-G2
Series Model	C8121-W-G2
Model Difference	Refer to Note as below
Status of EUT	Engineering sample
Power Supply Rating	54 Vdc (Adapter)
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	Up to 2401.9 Mbps
Operating Frequency	5.815 GHz ~ 5.885 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):3 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):2 802.11ac (VHT80), 802.11ax (HE80):1 802.11ac (VHT160), 802.11ax (HE160):1
Output Power	EIRP: 1486.925 mW (31.72 dBm)
EUT Category	Indoor access point

Note:

1. All models are listed as below.

Brand	Model	Difference
Cisco	C8121-CW-G2	WIFI+WWAN (Contains FCCC ID: N7NEM92)
	C8121-W-G2	WIFI only

2. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter 1	LITE-ON	PA-1251-54	AC Input : 100-240V, 4A, 50-60Hz DC Output : 54V, 4.63A, 250W DC Output Cable : 1.45M with 2 core
AC Adapter 2	DELTA	ADH-250AR B	AC Input : 100-240V, 3.2A, 50-60Hz DC Output : 54V, 4.63A, 250.02W DC Output Cable : 1.47M with 1 core
AC Adapter 3	PHIHONG	AM250U-540A	AC Input : 100-240V, 3.5A, 50-60Hz DC Output : 54V, 4.63A, 250W DC Output Cable : 1.47M with 1 core

3. There are WLAN (2.4 GHz & 5 GHz & 5.9 GHz) technology used for the EUT.

4. Simultaneously transmission combination.

Combination	Technology		
1	WLAN (2.4 GHz)	WLAN (5 GHz)	WWAN

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

5. 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 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
0	Aristotle	RFA-12-AUX-P6	2.28	2.4~2.4835GHz	Dipole	ipex(MHF)
			1.47	5.15~5.25GHz		
			2.19	5.25~5.35GHz		
			3.8	5.47~5.725GHz		
			3.8	5.725~5.85GHz		
			3.32	5.85~5.895GHz		
1	Aristotle	RFA-12-MAIN-P5	3.31	2.4~2.4835GHz	Dipole	ipex(MHF)
			5.01	5.15~5.25GHz		
			4.44	5.25~5.35GHz		
			4.67	5.47~5.725GHz		
			5.97	5.725~5.85GHz		
			5.26	5.85~5.895GHz		

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

2. The EUT incorporates a MIMO function:

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
802.11ac (VHT160)	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX
802.11ax (HE160)	2TX	2RX

Note:

1. All of modulation mode support beamforming function except 802.11a 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 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz, 160 MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160 MHz). Therefore the investigated worst case is the representative mode in test report.
4. The EUT does not use channel puncturing, but does use bandwidth reduction.

3.3 Channel List

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

Channel	Frequency	Channel	Frequency	Channel	Frequency
*169	5845 MHz	173	5865 MHz	177	5885 MHz

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

Channel	Frequency	Channel	Frequency
*167	5835 MHz	175	5875 MHz

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

Channel	Frequency
*171	5855 MHz

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency
*163	5815 MHz

Note: * U-NII-3 & -4 span channels.

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The AC Adapter has the following models: PA-1251-54/ADH-250AR B/AM250U-540A. Pre-scan these models of AC Adapters and find the worst case as a representative test condition. 2. EUT can be used in the following ways: Lying/ Wall Mount. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	1. AC Adapter Worst Condition: LITE-ON PA-1251-54 2. Lying/ Wall Mount Worst Condition:Lying Mount

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11a	CDD	169, 173, 177	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	169, 173, 177	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	167, 175	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	171	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	163	BPSK	MCS0
Power Spectral Density	A	802.11a	CDD	169, 173, 177	BPSK	6Mb/s
		802.11ax (HE20)	CDD	169, 173, 177	BPSK	MCS0
		802.11ax (HE40)	CDD	167, 175	BPSK	MCS0
		802.11ax (HE80)	CDD	171	BPSK	MCS0
		802.11ax (HE160)	CDD	163	BPSK	MCS0
6 dB Bandwidth	A	802.11a	CDD	169, 173, 177	BPSK	6Mb/s
		802.11ax (HE20)	CDD	169, 173, 177	BPSK	MCS0
		802.11ax (HE40)	CDD	167, 175	BPSK	MCS0
		802.11ax (HE80)	CDD	171	BPSK	MCS0
		802.11ax (HE160)	CDD	163	BPSK	MCS0
AC Power Conducted Emissions	A, B	802.11ax (HE80)	CDD	171	BPSK	MCS0
Unwanted Emissions below 1 GHz	A, B	802.11ax (HE80)	CDD	171	BPSK	MCS0
Unwanted Emissions above 1 GHz	A	802.11a	CDD	169, 173, 177	BPSK	6Mb/s
		802.11ax (HE20)	CDD	169, 173, 177	BPSK	MCS0
		802.11ax (HE40)	CDD	167, 175	BPSK	MCS0
		802.11ax (HE80)	CDD	171	BPSK	MCS0
		802.11ax (HE160)	CDD	163	BPSK	MCS0
EUT Configure Mode:	A	C8121-CW-G2				
	B	C8121-W-G2				

3.5 Duty Cycle of Test Signal

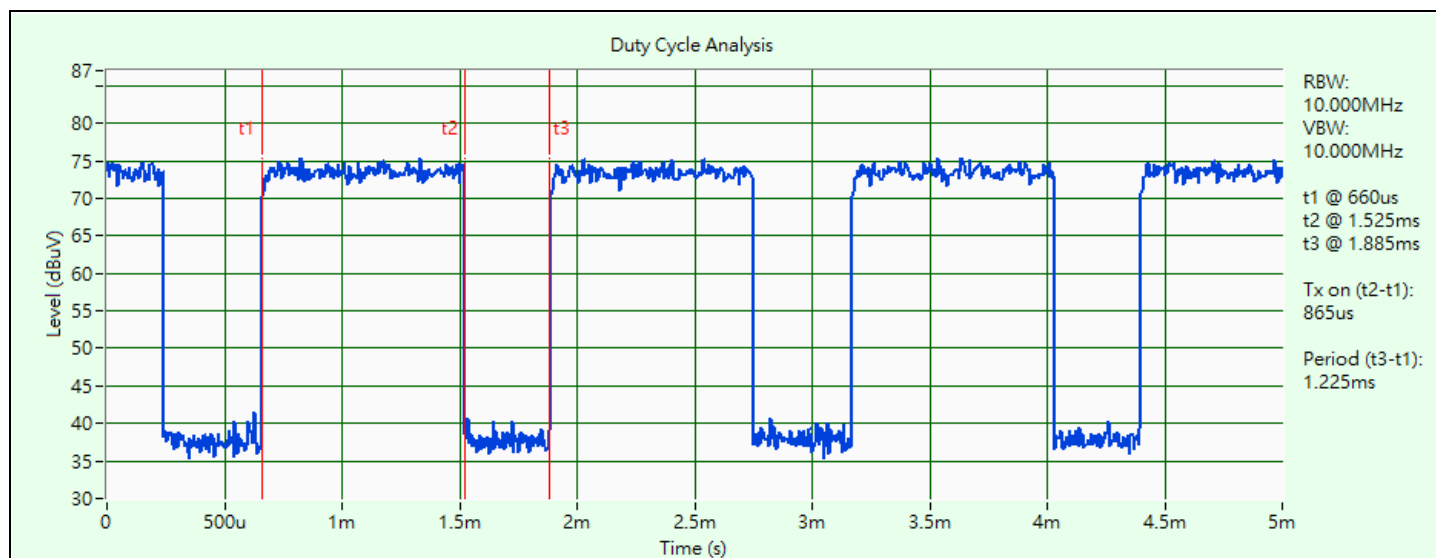
802.11a: Duty cycle = $0.865 \text{ ms} / 1.225 \text{ ms} \times 100\% = 70.6\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 1.51 \text{ dB}$

802.11ax (HE20): Duty cycle = $1.76 \text{ ms} / 2.11 \text{ ms} \times 100\% = 83.4\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.79 \text{ dB}$

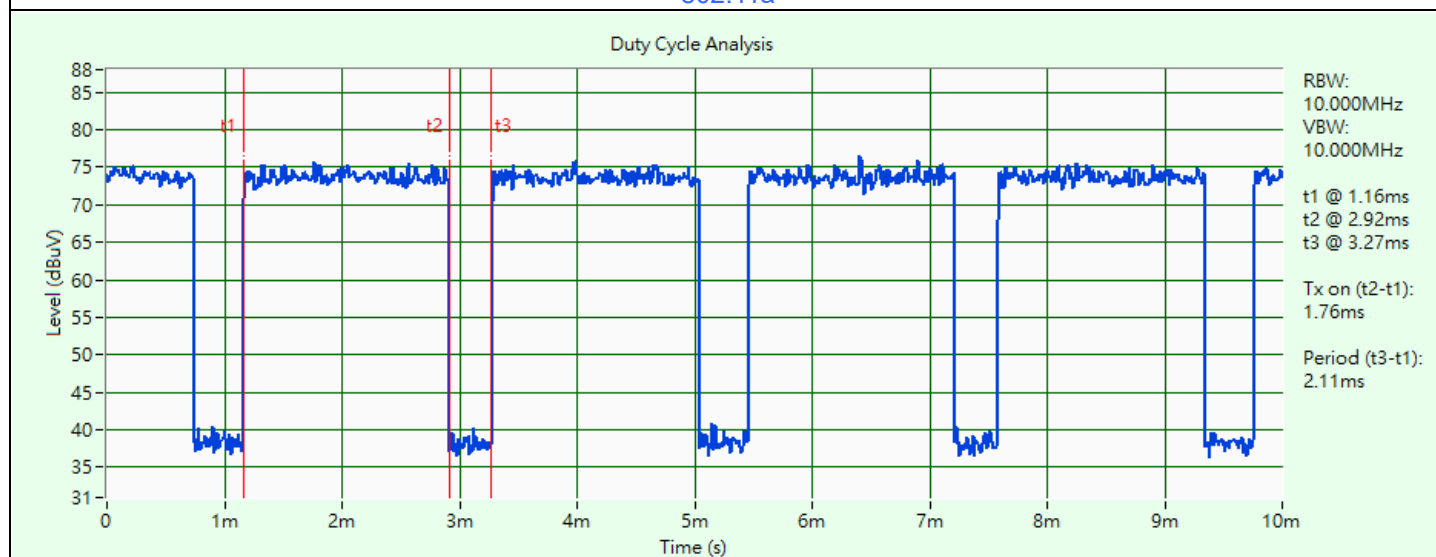
802.11ax (HE40): Duty cycle = $0.915 \text{ ms} / 1.33 \text{ ms} \times 100\% = 68.8\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 1.62 \text{ dB}$

802.11ax (HE80): Duty cycle = $0.48 \text{ ms} / 0.84 \text{ ms} \times 100\% = 57.1\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 2.43 \text{ dB}$

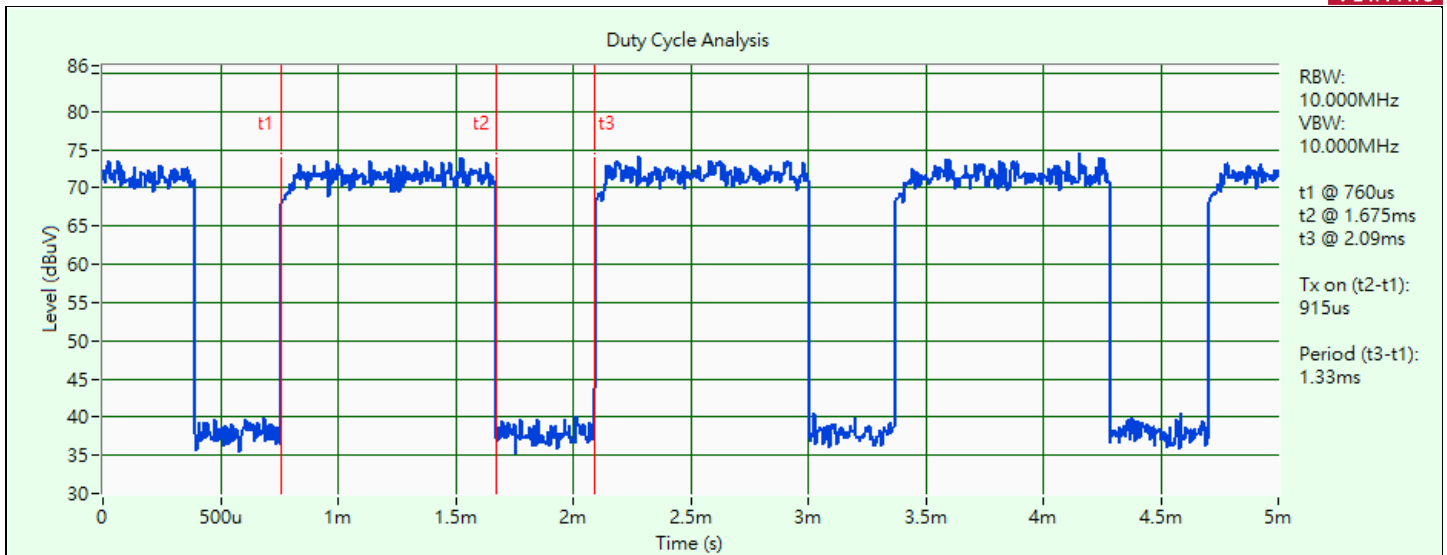
802.11ax (HE160): Duty cycle = $0.34 \text{ ms} / 0.74 \text{ ms} \times 100\% = 45.9\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 3.38 \text{ dB}$



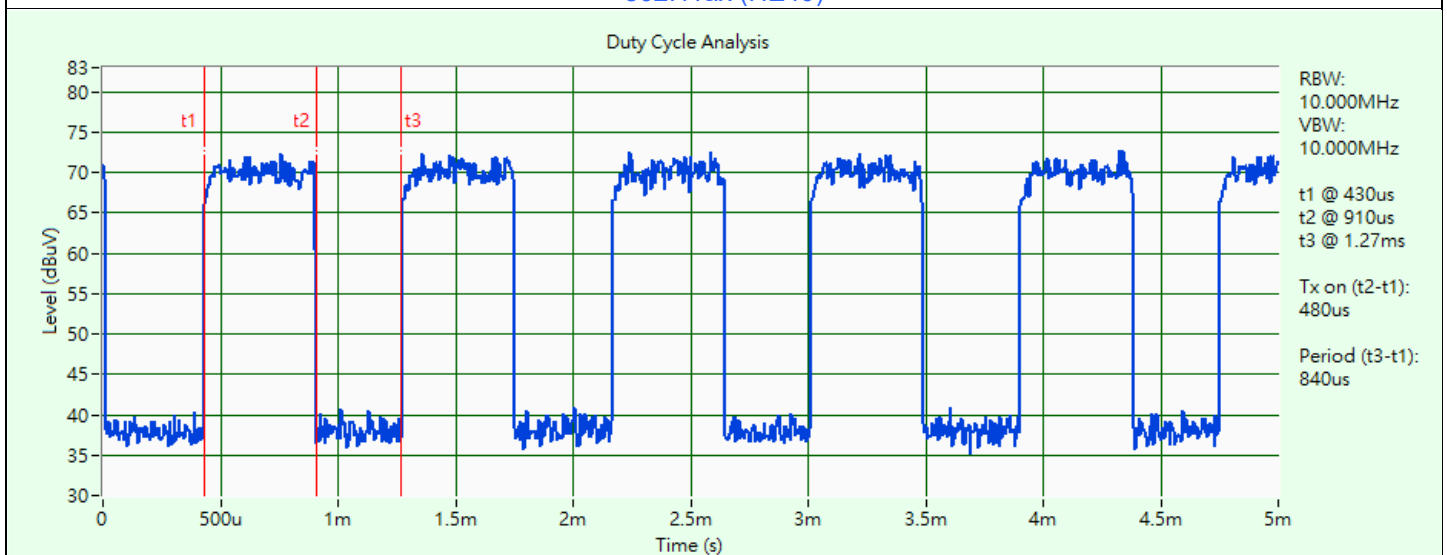
802.11a



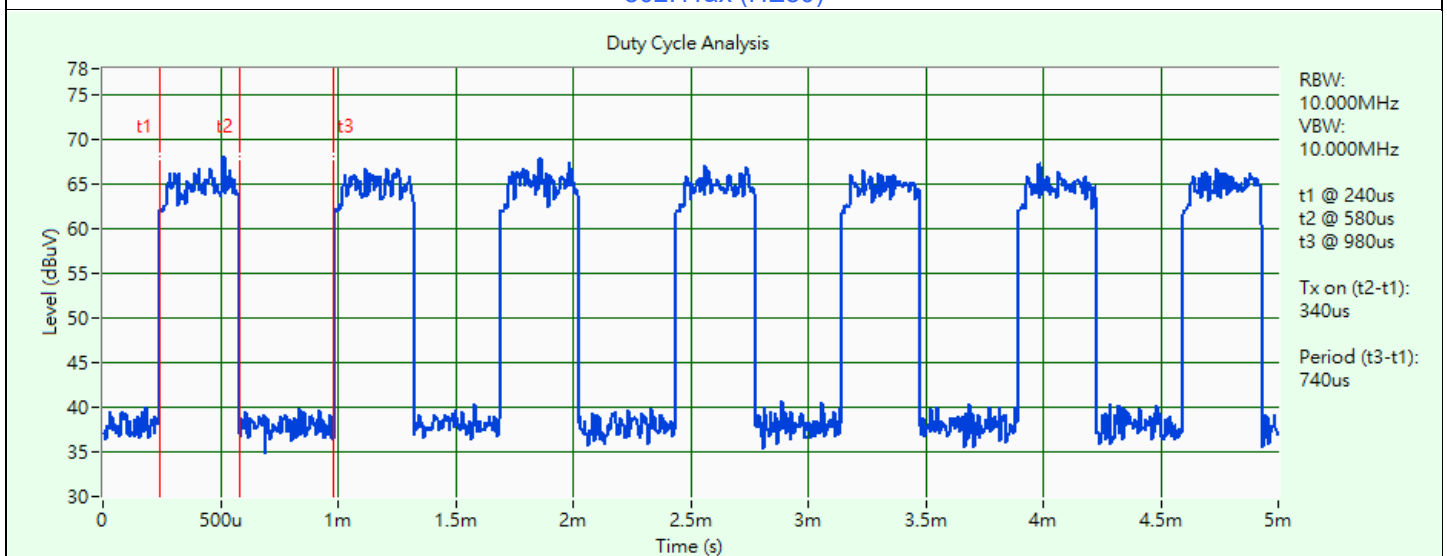
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

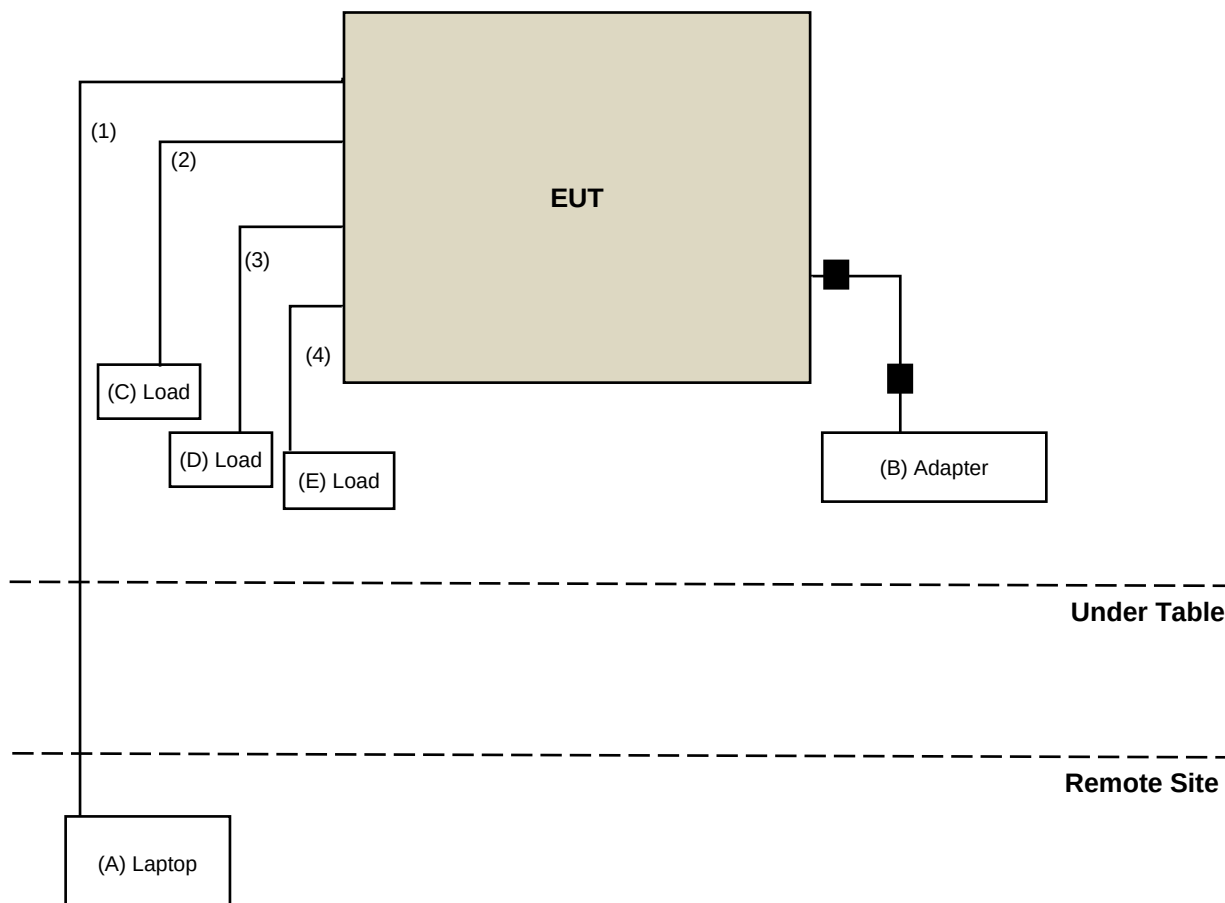


802.11ax (HE160)

3.6 Test Program Used and Operation Descriptions

Controlling software QSPR V6.00.00209.1 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5430	2RL3YW1	N/A	Provided by Lab
B	Adapter	LITE-ON	PA-1251-54	N/A	N/A	Accessory of the EUT
C	Load	N/A	N/A	N/A	N/A	Provided by Lab
D	Load	N/A	N/A	N/A	N/A	Provided by Lab
E	Load	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	N	0	Provided by Lab
2	RJ-45 Cable	4	1.5	N	0	Provided by Lab
3	RJ-45 Cable	4	1.5	N	0	Provided by Lab
4	RJ-45 Cable	3	1.5	N	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
USB Power Sensor Anritsu	MA24408A	12994	2024/12/4	2025/12/3

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/7/18

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
MXA Signal Analyzer Keysight	N9020B	MY60110462	2025/4/22	2026/4/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/7/18

4.3 6 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
MXA Signal Analyzer Keysight	N9020B	MY60110462	2025/4/22	2026/4/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/9/3

4.4 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2024/11/28	2025/11/27
	E1-011280	05	2024/11/28	2025/11/27
	E1-011311	09	2024/11/28	2025/11/27
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESCI	100613	2024/11/25	2025/11/24
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2025/1/5	2026/1/4
LISN R&S	ENV216	101826	2025/3/24	2026/3/23
	ESH3-Z5	100311	2024/9/5	2025/9/4
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2025/1/5	2026/1/4
Software BVADT	BVADT_Conf_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2025/6/24 ~ 2025/7/25

4.5 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2024/10/14	2025/10/13
EMI Test Receiver R&S	ESR3	102782	2024/12/10	2025/12/9
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
Preamplifier Agilent	8447D	2944A10631	2025/4/27	2026/4/26
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2024/7/6 2025/6/30	2025/7/5 2026/6/29
Signal & Spectrum Analyzer R&S	FSV3044	101105	2025/2/25	2026/2/24
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2025/6/23 ~ 2025/7/25

4.6 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2024/12/10	2025/12/9
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2024/11/10	2025/11/9
	BBHA 9170	9170-480	2024/11/10	2025/11/9
		BBHA9170241	2024/10/18	2025/10/17
		BBHA9170243	2024/11/10	2025/11/9
Preamplifier EMCI	EMC 184045	980116	2024/9/24	2025/9/23
Preamplifier Keysight	83017A	MY53270295	2025/4/27	2026/4/26
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
RF Coaxial Cable HUBER+SUHNER	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4)	2025/4/27	2026/4/26
	SUCOFLEX 104	Cable-CH4-03(250724)	2025/4/27	2026/4/26
Signal & Spectrum Analyzer R&S	FSV3044	101105	2025/2/25	2026/2/24
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2025/6/13

5 Limits of Test Items

5.1 RF Output Power

Device Category	Limit (Max Average Power)
Indoor access point	EIRP 36 dBm
Subordinate device	EIRP 36 dBm
Client device	EIRP 30 dBm
Note: For all U-NII-4 and U-NII-3 & -4 span channels shall met above EIRP values.	

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.

5.2 Power Spectral Density

Device Category	Limit
Indoor access point	EIRP 20 dBm/MHz
Subordinate device	EIRP 20 dBm/MHz
Client device	EIRP 14 dBm/MHz
Note: For all U-NII-4 and U-NII-3 & -4 span channels shall met above EIRP values.	

5.3 6 dB Bandwidth

Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.4 AC Power Conducted Emissions

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

Notes:

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

5.5 Unwanted Emissions below 1 GHz

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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.6 Unwanted Emissions above 1 GHz

- (i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of -7 dBm/MHz at or above 5.925 GHz.
- (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz.
- (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.

Note:

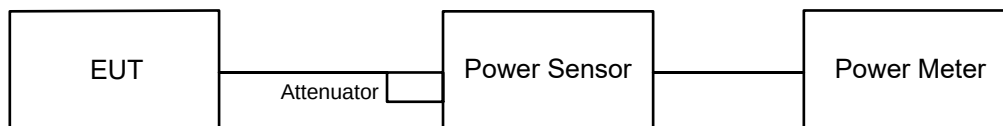
The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



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

6.2 Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

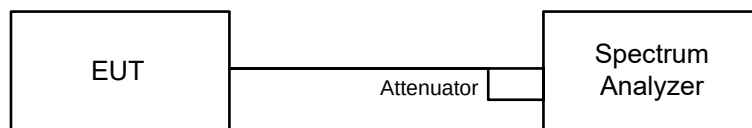
For specified measurement bandwidth 1 MHz:

Method SA-2

- a. Measure the duty cycle D of the transmitter output signal.
- b. Set span to encompass the entire 99% OBW of the signal.
- c. Set RBW = 1 MHz.
- d. Set VBW $\geq$ 3 MHz.
- e. Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- f. Sweep time = auto.
- g. Detector = Power averaging (rms), if available. Otherwise, use sample detector mode.
- h. Do not use sweep triggering. Allow the sweep to "free run."
- i. Trace average at least 100 traces in power averaging (rms) mode;.
- j. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- k. Record the max value and add $10 \log (1/\text{duty cycle})$.

6.3 6 dB Bandwidth

6.3.1 Test Setup

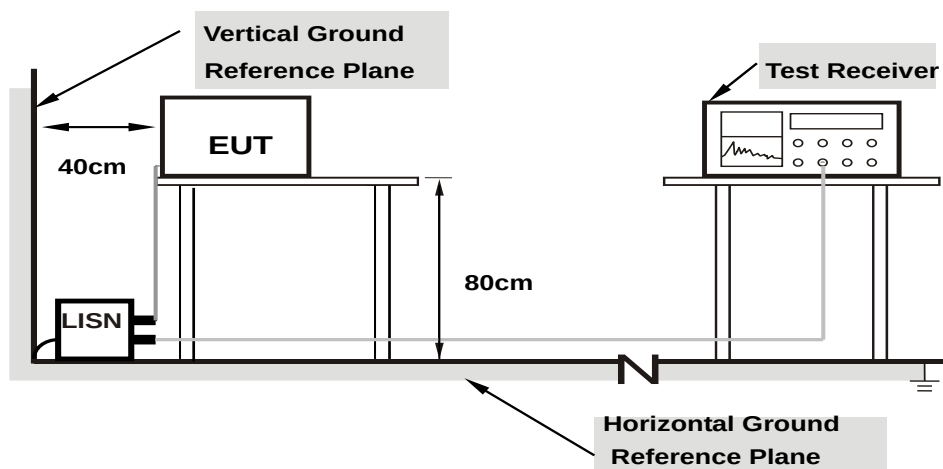


6.3.2 Test Procedure

- a. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- b. Set the VBW $\geq [3 \times \text{RBW}]$.
- c. Detector = peak.
- d. Trace mode = max-hold.
- e. Sweep = No faster than coupled (auto) time.
- f. Allow the trace to stabilize.
- g. 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 instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is in the range of 1% to 5%.

6.4 AC Power Conducted Emissions

6.4.1 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).

6.4.2 Test Procedure

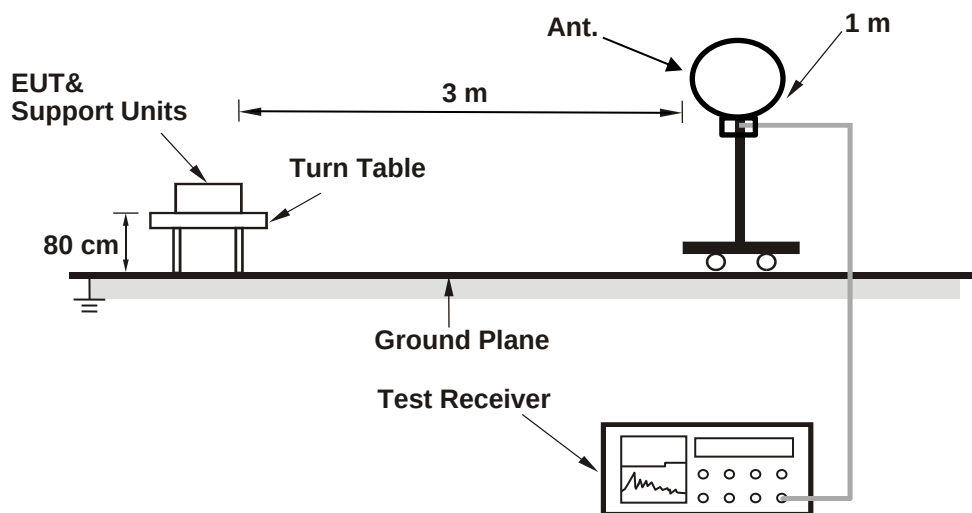
- Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.
- The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH 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 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

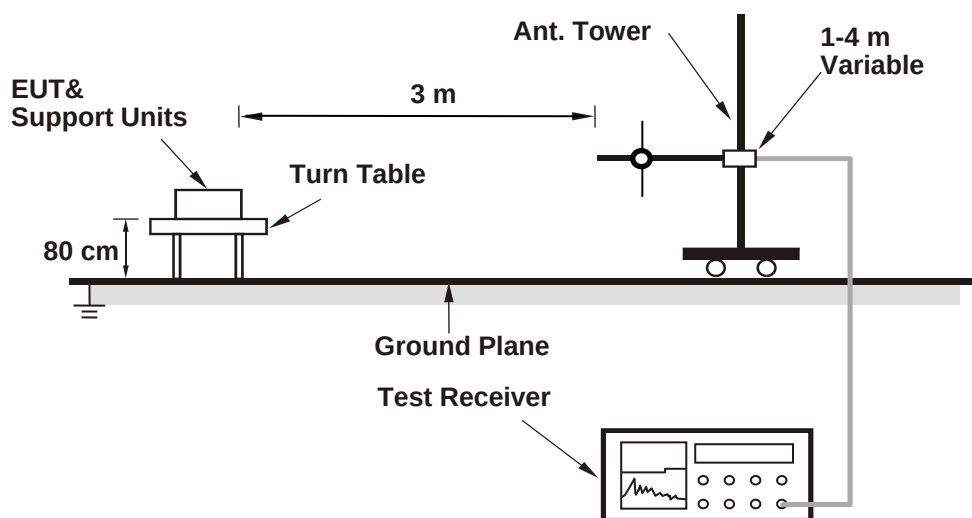
6.5 Unwanted Emissions below 1 GHz

6.5.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.5.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 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. 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

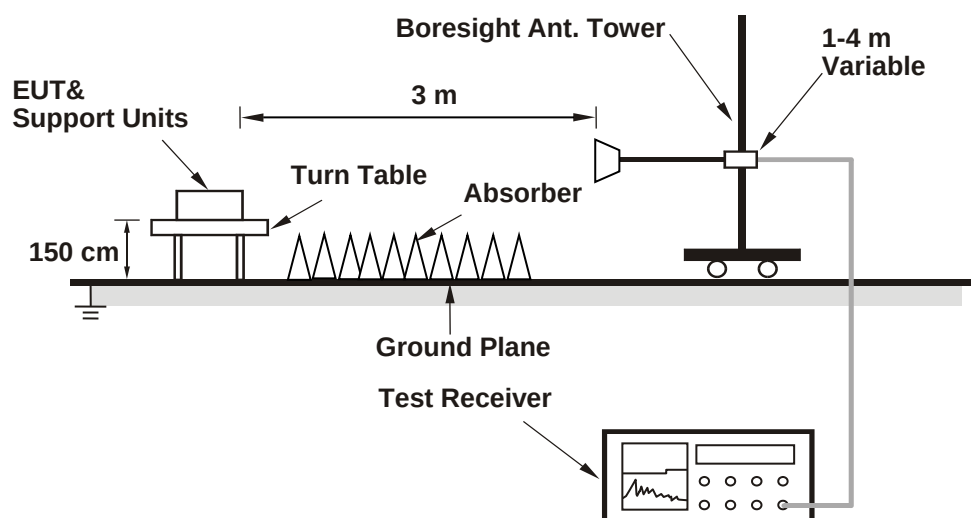
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.6 Unwanted Emissions above 1 GHz

6.6.1 Test Setup



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

6.6.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- 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.

Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Kevin Kuo
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802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
169	5845	19.70	20.32	200.972	23.03	5.26	674.739	28.29	36	Pass
173	5865	19.80	20.21	200.454	23.02	5.26	672.999	28.28	36	Pass
177	5885	19.66	20.30	199.622	23.00	5.26	670.206	28.26	36	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.26 dBi.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
169	5845	21.23	21.93	288.695	24.60	5.26	969.258	29.86	36	Pass
173	5865	20.89	21.27	256.712	24.09	5.26	861.879	29.35	36	Pass
177	5885	20.66	21.25	249.765	23.98	5.26	838.555	29.24	36	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.26 dBi.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
167	5835	23.07	23.66	435.042	26.39	5.26	1460.6	31.65	36	Pass
175	5875	23.15	23.40	425.314	26.29	5.26	1427.939	31.55	36	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.26 dBi.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
171	5855	23.30	23.60	442.883	26.46	5.26	1486.925	31.72	36	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.26 dBi.

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
163	5815	17.68	18.44	128.437	21.09	5.26	431.211	26.35	36	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.26 dBi.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
169	5845	21.23	21.93	288.695	24.60	5.26	969.258	29.86	36	Pass
173	5865	20.89	21.27	256.712	24.09	5.26	861.879	29.35	36	Pass
177	5885	20.66	21.25	249.765	23.98	5.26	838.555	29.24	36	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
167	5835	23.07	23.66	435.042	26.39	5.26	1460.6	31.65	36	Pass
175	5875	23.15	23.40	425.314	26.29	5.26	1427.939	31.55	36	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
171	5855	23.30	23.60	442.883	26.46	5.26	1486.925	31.72	36	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

802.11ax (HE160) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1							
163	5815	17.68	18.44	128.437	21.09	5.26	431.211	26.35	36	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Kevin Kuo
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802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
169	5845	4.61	5.09	1.51	9.38	5.26	14.64	20	Pass
173	5865	5.08	4.41	1.51	9.28	5.26	14.54	20	Pass
177	5885	4.72	4.81	1.51	9.29	5.26	14.55	20	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
169	5845	6.48	6.81	0.79	10.45	5.26	15.71	20	Pass
173	5865	6.61	6.91	0.79	10.56	5.26	15.82	20	Pass
177	5885	6.42	6.88	0.79	10.46	5.26	15.72	20	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
167	5835	4.74	5.73	1.62	9.89	5.26	15.15	20	Pass
175	5875	5.33	5.29	1.62	9.94	5.26	15.2	20	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
171	5855	1.35	1.40	2.43	6.82	5.26	12.08	20	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

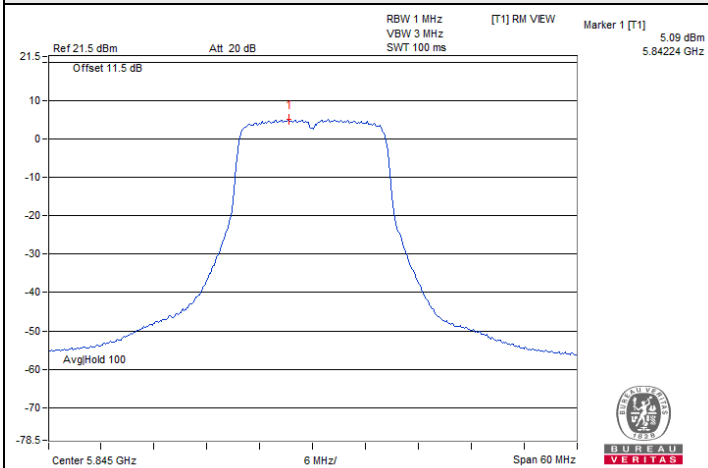
802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1						
163	5815	-6.30	-6.42	3.38	0.03	5.26	5.29	20	Pass

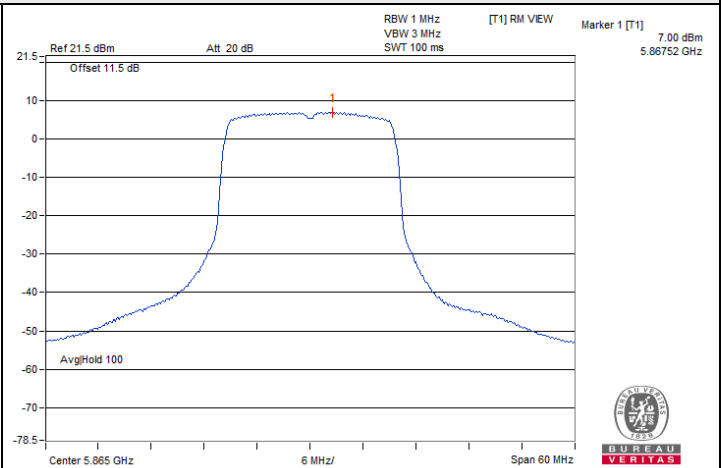
Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.26 dBi.

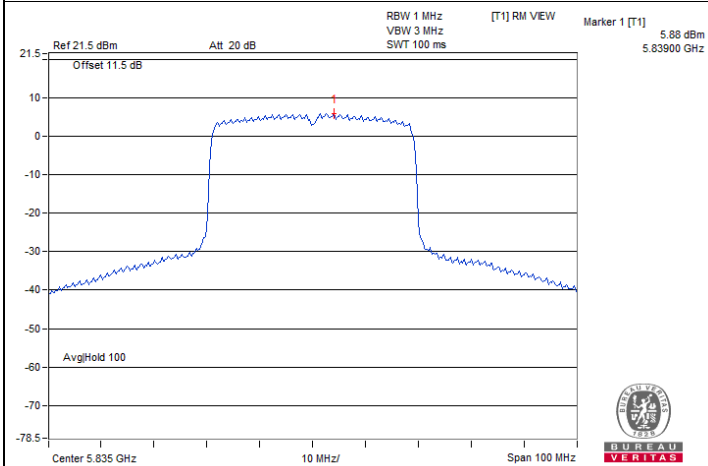
Spectrum Plot of Maximum Value



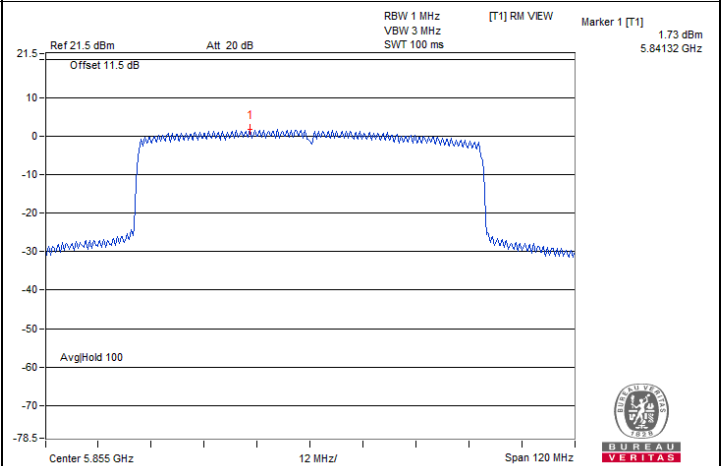
802.11a / Chain 1 : CH 169



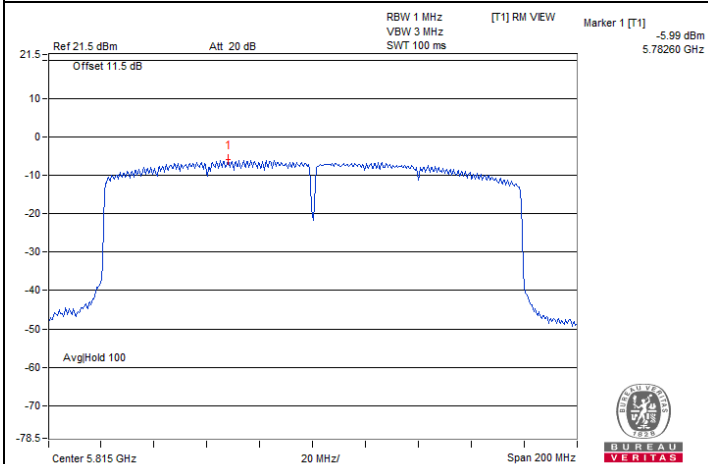
802.11ax (HE20) / Chain 1 : CH 173



802.11ax (HE40) / Chain 1 : CH 167



802.11ax (HE80) / Chain 1 : CH 171



802.11ax (HE160) / Chain 0 : CH 163

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Kevin Kuo
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802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
169	5845	16.33	16.39	0.5	Pass
173	5865	16.34	16.42	0.5	Pass
177	5885	16.33	16.44	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
169	5845	19.10	19.06	0.5	Pass
173	5865	19.11	19.04	0.5	Pass
177	5885	19.04	19.08	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
167	5835	37.63	37.87	0.5	Pass
175	5875	37.71	37.41	0.5	Pass

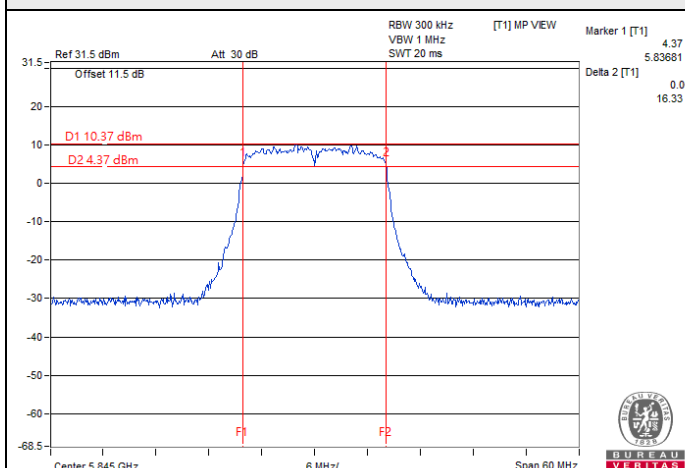
802.11ax (HE80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
171	5855	77.87	77.90	0.5	Pass

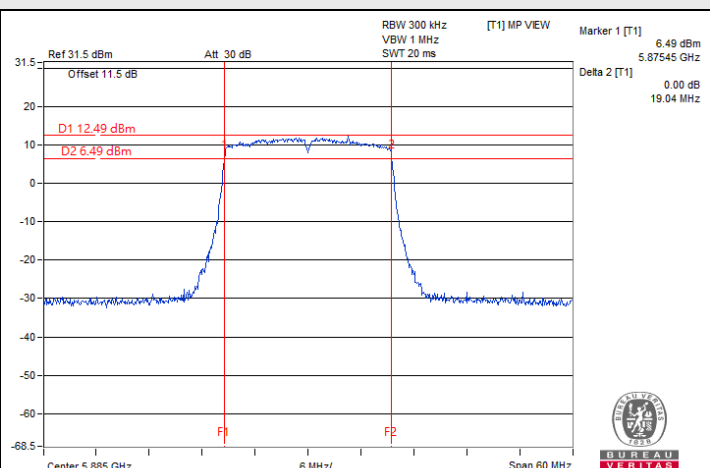
802.11ax (HE160)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
163	5815	147.79	155.08	0.5	Pass

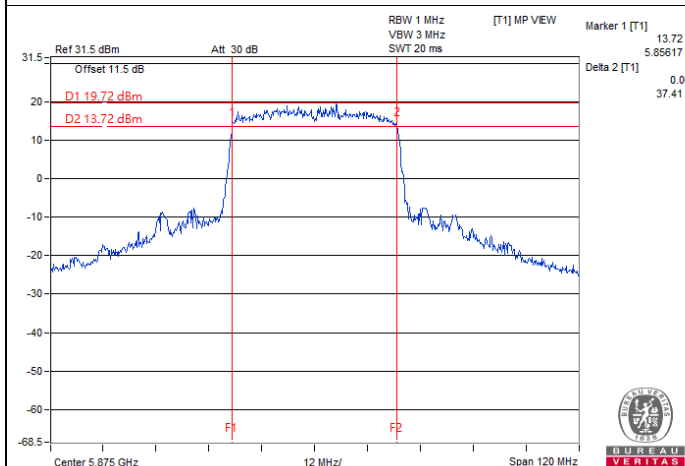
Spectrum Plot of Minimum Value



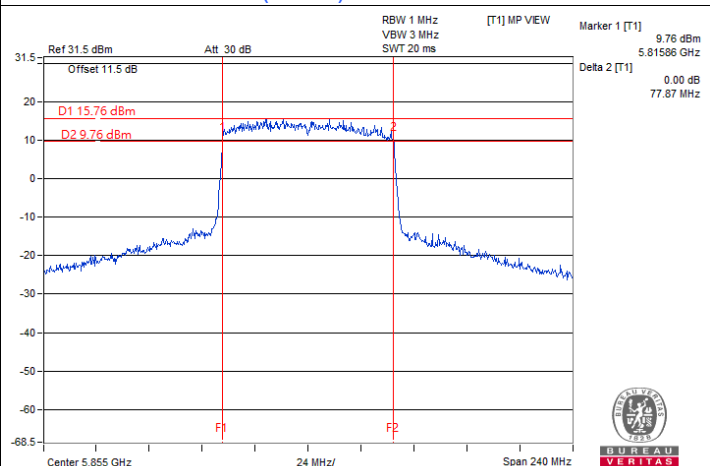
802.11a / Chain 0 : CH 169



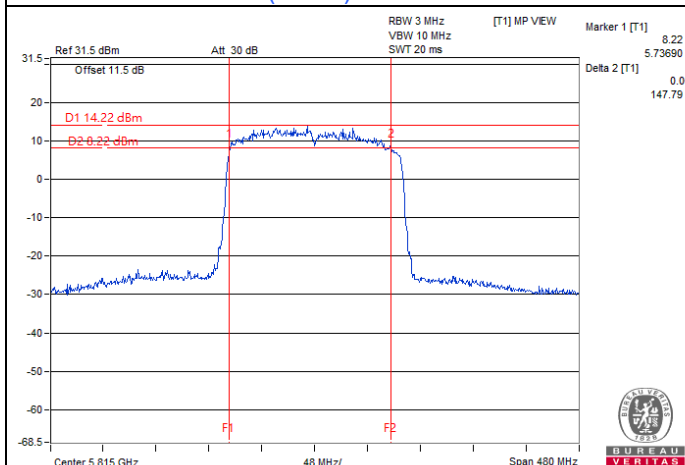
802.11ax (HE20) / Chain 0 : CH 177



802.11ax (HE40) / Chain 1 : CH 175



802.11ax (HE80) / Chain 0 : CH 171



802.11ax (HE160) / Chain 0 : CH 163

7.4 AC Power Conducted Emissions

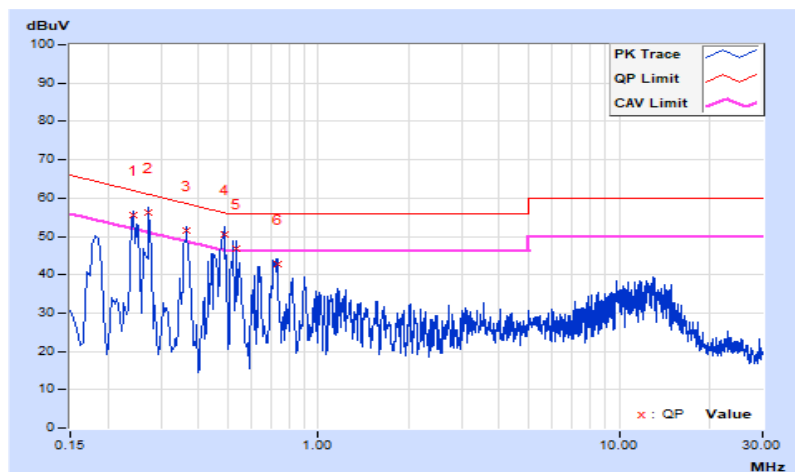
Mode A

RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 70% RH
Tested By	Luis Lee		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.24200	9.71	45.71	35.71	55.42	45.42	62.03	52.03	-6.61	-6.61
2	0.27400	9.71	46.49	38.77	56.20	48.48	61.00	51.00	-4.80	-2.52
3	0.36545	9.72	41.76	34.13	51.48	43.85	58.60	48.60	-7.12	-4.75
4	0.48959	9.73	40.80	25.10	50.53	34.83	56.17	46.17	-5.64	-11.34
5	0.53400	9.74	37.19	18.67	46.93	28.41	56.00	46.00	-9.07	-17.59
6	0.73000	9.76	33.09	25.23	42.85	34.99	56.00	46.00	-13.15	-11.01

Remarks:

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

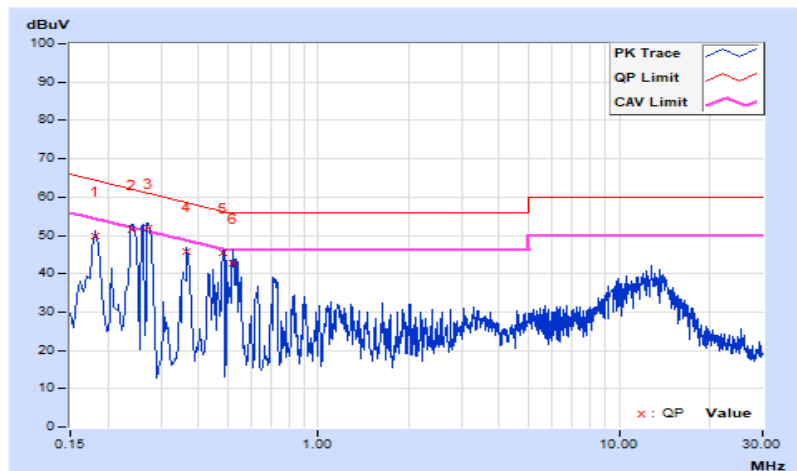


RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 70% RH
Tested By	Luis Lee		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18200	9.66	40.31	31.68	49.97	41.34	64.39	54.39	-14.42	-13.05
2	0.24038	9.67	41.97	32.78	51.64	42.45	62.08	52.08	-10.44	-9.63
3	0.27400	9.69	42.28	35.03	51.97	44.72	61.00	51.00	-9.03	-6.28
4	0.36600	9.72	36.06	29.71	45.78	39.43	58.59	48.59	-12.81	-9.16
5	0.48318	9.74	35.60	22.86	45.34	32.60	56.28	46.28	-10.94	-13.68
6	0.52155	9.75	32.92	16.06	42.67	25.81	56.00	46.00	-13.33	-20.19

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



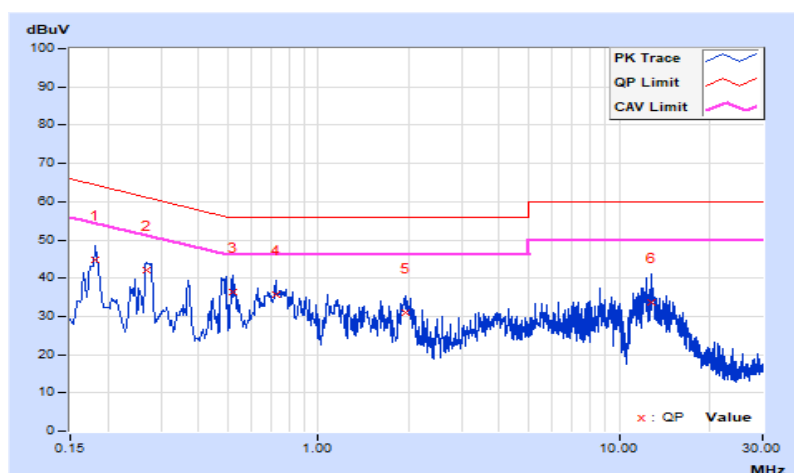
Mode B

RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18200	9.70	34.93	26.74	44.63	36.44	64.39	54.39	-19.76	-17.95
2	0.26992	9.71	32.26	23.74	41.97	33.45	61.12	51.12	-19.15	-17.67
3	0.51800	9.73	26.55	14.63	36.28	24.36	56.00	46.00	-19.72	-21.64
4	0.72200	9.76	25.78	18.17	35.54	27.93	56.00	46.00	-20.46	-18.07
5	1.94200	9.79	21.17	13.15	30.96	22.94	56.00	46.00	-25.04	-23.06
6	12.79400	10.00	23.77	9.37	33.77	19.37	60.00	50.00	-26.23	-30.63

Remarks:

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

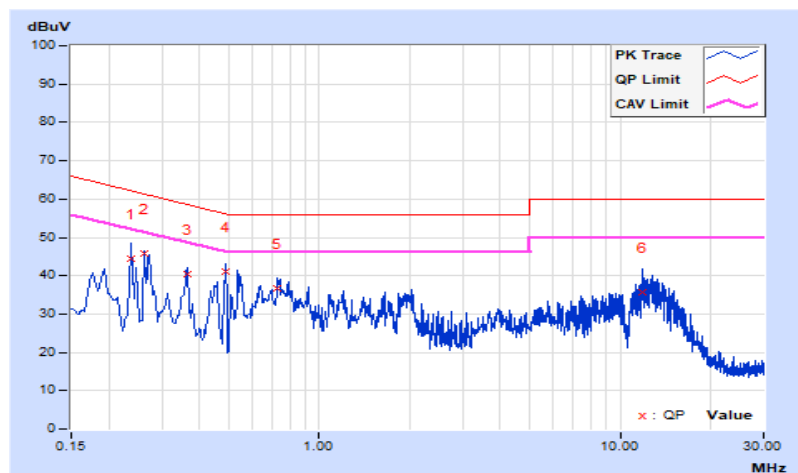


RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.23800	9.67	34.66	23.88	44.33	33.55	62.17	52.17	-17.84	-18.62
2	0.26200	9.68	35.99	20.37	45.67	30.05	61.37	51.37	-15.70	-21.32
3	0.36352	9.72	30.62	23.09	40.34	32.81	58.65	48.65	-18.31	-15.84
4	0.49000	9.74	31.24	16.67	40.98	26.41	56.17	46.17	-15.19	-19.76
5	0.72600	9.77	27.00	19.70	36.77	29.47	56.00	46.00	-19.23	-16.53
6	11.93400	10.06	25.75	10.00	35.81	20.06	60.00	50.00	-24.19	-29.94

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



7.5 Unwanted Emissions below 1 GHz

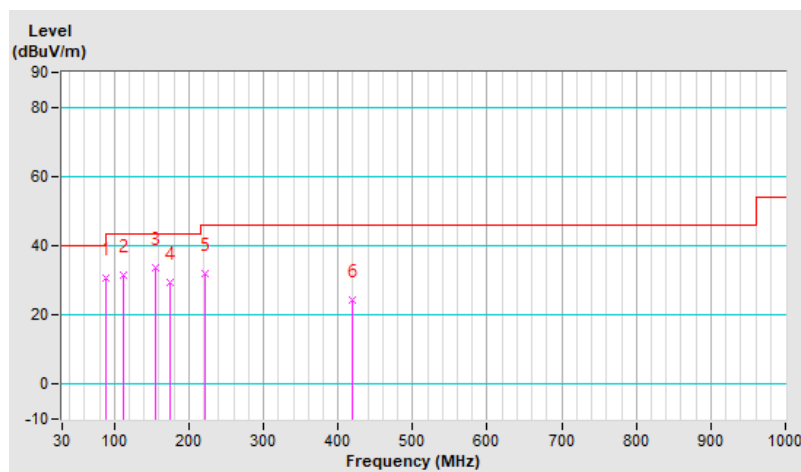
Mode A

RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	Luis Lee		

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	89.04	30.6 QP	43.5	-12.9	1.50 H	209	45.2	-14.6
2	111.54	31.7 QP	43.5	-11.8	1.50 H	281	43.4	-11.7
3	155.12	33.6 QP	43.5	-9.9	1.50 H	252	42.1	-8.5
4	174.80	29.6 QP	43.5	-13.9	1.50 H	214	38.9	-9.3
5	222.59	32.0 QP	46.0	-14.0	1.50 H	224	43.1	-11.1
6	419.41	24.3 QP	46.0	-21.7	1.01 H	235	29.4	-5.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

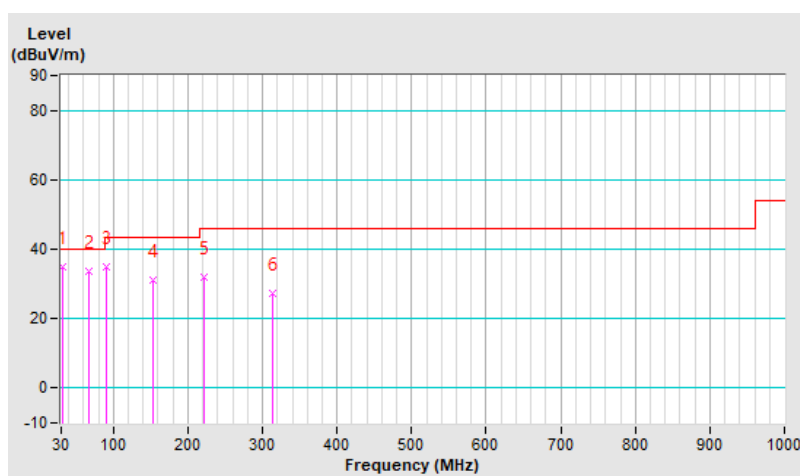


RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	Luis Lee		

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	32.81	35.1 QP	40.0	-4.9	1.00 V	174	45.6	-10.5
2	66.55	33.5 QP	40.0	-6.5	1.00 V	282	43.6	-10.1
3	90.45	35.0 QP	43.5	-8.5	1.00 V	208	49.6	-14.6
4	153.71	31.2 QP	43.5	-12.3	1.00 V	354	39.6	-8.4
5	221.19	32.0 QP	46.0	-14.0	1.00 V	150	43.1	-11.1
6	313.97	27.2 QP	46.0	-18.8	1.50 V	348	34.0	-6.8

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



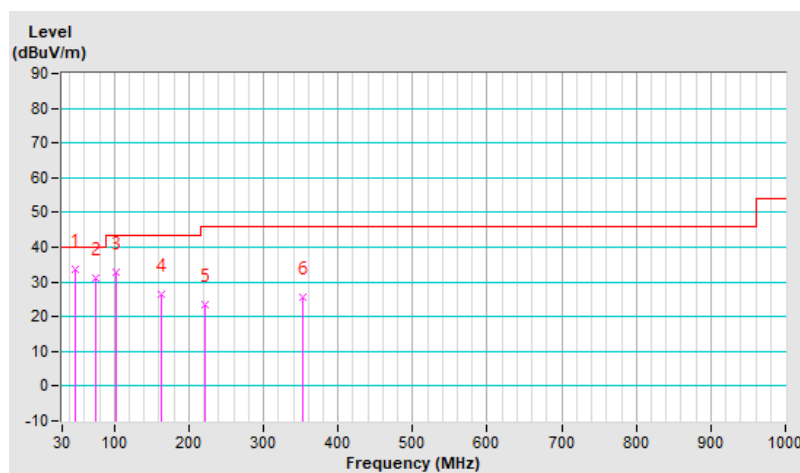
Mode B

RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

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	48.28	33.6 QP	40.0	-6.4	1.50 H	7	42.4	-8.8
2	74.99	30.9 QP	40.0	-9.1	1.01 H	151	42.6	-11.7
3	101.70	32.9 QP	43.5	-10.6	1.01 H	113	45.9	-13.0
4	163.55	26.4 QP	43.5	-17.1	1.50 H	237	34.9	-8.5
5	221.19	23.4 QP	46.0	-22.6	1.50 H	59	34.6	-11.2
6	353.33	25.4 QP	46.0	-20.6	1.01 H	84	32.0	-6.6

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

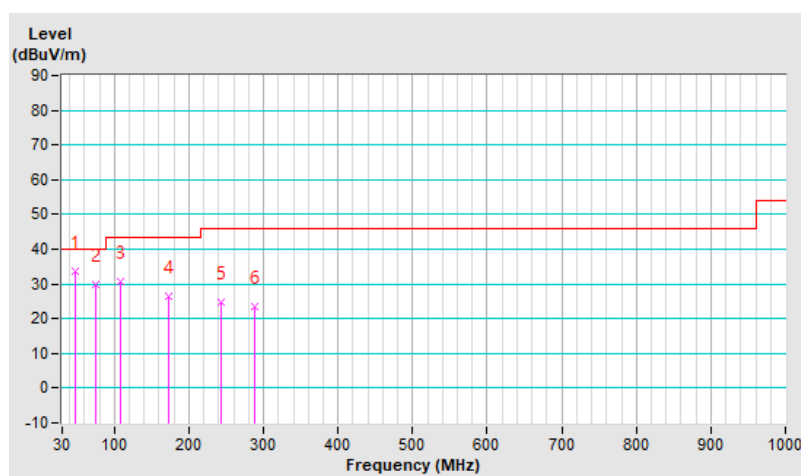


RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

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	46.87	33.8 QP	40.0	-6.2	1.00 V	342	42.8	-9.0
2	74.99	29.8 QP	40.0	-10.2	1.00 V	179	41.5	-11.7
3	107.32	30.6 QP	43.5	-12.9	1.00 V	10	42.8	-12.2
4	171.99	26.3 QP	43.5	-17.2	1.49 V	271	35.4	-9.1
5	243.68	24.8 QP	46.0	-21.2	1.00 V	258	34.2	-9.4
6	288.67	23.5 QP	46.0	-22.5	1.00 V	105	31.0	-7.5

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.6 Unwanted Emissions above 1 GHz

RF Mode	802.11a	Channel	CH 169 : 5845 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.6 PK	68.2	-9.6	1.00 H	241	47.0	11.6
2	*5845.00	111.8 PK			1.00 H	241	69.2	42.6
3	*5845.00	101.9 AV			1.00 H	241	59.3	42.6
4	#5895.00	59.1 PK	110.2	-51.1	1.00 H	241	47.0	12.1
5	#5925.00	59.6 PK	88.2	-28.6	1.00 H	241	47.3	12.3
6	11690.00	59.8 PK	74.0	-14.2	3.22 H	188	38.5	21.3
7	11690.00	46.6 AV	54.0	-7.4	3.22 H	188	25.3	21.3
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	#5650.00	58.8 PK	68.2	-9.4	1.08 V	293	47.2	11.6
2	*5845.00	115.6 PK			1.08 V	293	73.0	42.6
3	*5845.00	106.0 AV			1.08 V	293	63.4	42.6
4	#5895.00	59.3 PK	110.2	-50.9	1.08 V	293	47.2	12.1
5	#5925.00	60.0 PK	88.2	-28.2	1.08 V	293	47.7	12.3
6	11690.00	60.0 PK	74.0	-14.0	2.25 V	188	38.7	21.3
7	11690.00	46.8 AV	54.0	-7.2	2.25 V	188	25.5	21.3

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 173 : 5865 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.6 PK	68.2	-9.6	1.02 H	236	47.0	11.6
2	*5865.00	111.6 PK			1.02 H	236	69.0	42.6
3	*5865.00	101.0 AV			1.02 H	236	58.4	42.6
4	#5895.00	59.6 PK	110.2	-50.6	1.02 H	236	47.5	12.1
5	#5925.00	59.6 PK	88.2	-28.6	1.02 H	236	47.3	12.3
6	11730.00	59.5 PK	74.0	-14.5	3.15 H	192	38.4	21.1
7	11730.00	46.3 AV	54.0	-7.7	3.15 H	192	25.2	21.1
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	#5650.00	58.8 PK	68.2	-9.4	1.05 V	294	47.2	11.6
2	*5865.00	115.7 PK			1.05 V	294	73.1	42.6
3	*5865.00	105.9 AV			1.05 V	294	63.3	42.6
4	#5895.00	59.9 PK	110.2	-50.3	1.05 V	294	47.8	12.1
5	#5925.00	59.8 PK	88.2	-28.4	1.05 V	294	47.5	12.3
6	11730.00	59.7 PK	74.0	-14.3	2.28 V	190	38.6	21.1
7	11730.00	46.5 AV	54.0	-7.5	2.28 V	190	25.4	21.1

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 177 : 5885 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.4 PK	68.2	-9.8	1.03 H	239	46.8	11.6
2	*5885.00	112.0 PK			1.03 H	239	69.3	42.7
3	*5885.00	101.1 AV			1.03 H	239	58.4	42.7
4	#5895.00	82.1 PK	110.2	-28.1	1.03 H	239	70.0	12.1
5	#5925.00	59.8 PK	88.2	-28.4	1.03 H	239	47.5	12.3
6	11770.00	59.2 PK	74.0	-14.8	3.09 H	189	38.3	20.9
7	11770.00	46.1 AV	54.0	-7.9	3.09 H	189	25.2	20.9
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	#5650.00	58.6 PK	68.2	-9.6	1.02 V	297	47.0	11.6
2	*5885.00	115.2 PK			1.02 V	297	72.5	42.7
3	*5885.00	105.5 AV			1.02 V	297	62.8	42.7
4	#5895.00	85.9 PK	110.2	-24.3	1.02 V	297	73.8	12.1
5	#5925.00	59.8 PK	88.2	-28.4	1.02 V	297	47.5	12.3
6	11770.00	59.4 PK	74.0	-14.6	2.28 V	182	38.5	20.9
7	11770.00	46.3 AV	54.0	-7.7	2.28 V	182	25.4	20.9

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	Channel	CH 169 : 5845 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.6 PK	68.2	-9.6	1.07 H	235	47.0	11.6
2	*5845.00	116.0 PK			1.07 H	235	73.4	42.6
3	*5845.00	102.9 AV			1.07 H	235	60.3	42.6
4	#5895.00	59.6 PK	110.2	-50.6	1.07 H	235	47.5	12.1
5	#5925.00	60.1 PK	88.2	-28.1	1.07 H	235	47.8	12.3
6	11690.00	59.7 PK	74.0	-14.3	3.11 H	188	38.4	21.3
7	11690.00	46.5 AV	54.0	-7.5	3.11 H	188	25.2	21.3
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	#5650.00	58.8 PK	68.2	-9.4	1.00 V	296	47.2	11.6
2	*5845.00	120.2 PK			1.00 V	296	77.6	42.6
3	*5845.00	107.8 AV			1.00 V	296	65.2	42.6
4	#5895.00	59.9 PK	110.2	-50.3	1.00 V	296	47.8	12.1
5	#5925.00	60.3 PK	88.2	-27.9	1.00 V	296	48.0	12.3
6	11690.00	59.9 PK	74.0	-14.1	2.28 V	190	38.6	21.3
7	11690.00	46.6 AV	54.0	-7.4	2.28 V	190	25.3	21.3

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	Channel	CH 173 : 5865 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.8 PK	68.2	-9.4	1.06 H	238	47.2	11.6
2	*5865.00	115.8 PK			1.06 H	238	73.2	42.6
3	*5865.00	102.6 AV			1.06 H	238	60.0	42.6
4	#5895.00	59.3 PK	110.2	-50.9	1.06 H	238	47.2	12.1
5	#5925.00	59.6 PK	88.2	-28.6	1.06 H	238	47.3	12.3
6	11730.00	59.4 PK	74.0	-14.6	3.11 H	185	38.3	21.1
7	11730.00	46.3 AV	54.0	-7.7	3.11 H	185	25.2	21.1
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	#5650.00	59.1 PK	68.2	-9.1	1.06 V	294	47.5	11.6
2	*5865.00	119.8 PK			1.06 V	294	77.2	42.6
3	*5865.00	107.6 AV			1.06 V	294	65.0	42.6
4	#5895.00	63.6 PK	110.2	-46.6	1.06 V	294	51.5	12.1
5	#5925.00	59.8 PK	88.2	-28.4	1.06 V	294	47.5	12.3
6	11730.00	59.6 PK	74.0	-14.4	2.31 V	189	38.5	21.1
7	11730.00	46.4 AV	54.0	-7.6	2.31 V	189	25.3	21.1

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	Channel	CH 177 : 5885 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.8 PK	68.2	-9.4	1.08 H	247	47.2	11.6
2	*5885.00	115.3 PK			1.08 H	247	72.6	42.7
3	*5885.00	102.3 AV			1.08 H	247	59.6	42.7
4	#5895.00	91.9 PK	110.2	-18.3	1.08 H	247	79.8	12.1
5	#5925.00	59.8 PK	88.2	-28.4	1.08 H	247	47.5	12.3
6	11770.00	59.1 PK	74.0	-14.9	3.12 H	182	38.2	20.9
7	11770.00	46.0 AV	54.0	-8.0	3.12 H	182	25.1	20.9
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	#5650.00	59.1 PK	68.2	-9.1	1.02 V	296	47.5	11.6
2	*5885.00	120.2 PK			1.02 V	296	77.5	42.7
3	*5885.00	107.2 AV			1.02 V	296	64.5	42.7
4	#5895.00	100.9 PK	110.2	-9.3	1.02 V	296	88.8	12.1
5	#5925.00	60.0 PK	88.2	-28.2	1.02 V	296	47.7	12.3
6	11770.00	59.4 PK	74.0	-14.6	2.27 V	182	38.5	20.9
7	11770.00	46.2 AV	54.0	-7.8	2.27 V	182	25.3	20.9

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 167 : 5835 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.6 PK	68.2	-9.6	1.09 H	237	47.0	11.6
2	*5835.00	115.1 PK			1.09 H	237	72.5	42.6
3	*5835.00	102.7 AV			1.09 H	237	60.1	42.6
4	#5895.00	65.7 PK	110.2	-44.5	1.09 H	237	53.6	12.1
5	#5925.00	59.8 PK	88.2	-28.4	1.09 H	237	47.5	12.3
6	11670.00	59.7 PK	74.0	-14.3	3.11 H	189	38.3	21.4
7	11670.00	46.5 AV	54.0	-7.5	3.11 H	189	25.1	21.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5650.00	58.8 PK	68.2	-9.4	1.01 V	296	47.2	11.6
2	*5835.00	120.0 PK			1.01 V	296	77.4	42.6
3	*5835.00	107.7 AV			1.01 V	296	65.1	42.6
4	#5895.00	73.1 PK	110.2	-37.1	1.01 V	296	61.0	12.1
5	#5925.00	61.3 PK	88.2	-26.9	1.01 V	296	49.0	12.3
6	11670.00	59.9 PK	74.0	-14.1	2.26 V	192	38.5	21.4
7	11670.00	46.7 AV	54.0	-7.3	2.26 V	192	25.3	21.4

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 175 : 5875 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.6 PK	68.2	-9.6	1.14 H	250	47.0	11.6
2	*5875.00	115.2 PK			1.14 H	250	72.6	42.6
3	*5875.00	102.3 AV			1.14 H	250	59.7	42.6
4	#5895.00	87.4 PK	110.2	-22.8	1.14 H	250	75.3	12.1
5	#5925.00	70.3 PK	88.2	-17.9	1.14 H	250	58.0	12.3
6	11750.00	59.2 PK	74.0	-14.8	3.18 H	195	38.3	20.9
7	11750.00	46.1 AV	54.0	-7.9	3.18 H	195	25.2	20.9
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	#5650.00	58.8 PK	68.2	-9.4	1.06 V	295	47.2	11.6
2	*5875.00	119.6 PK			1.06 V	295	77.0	42.6
3	*5875.00	107.2 AV			1.06 V	295	64.6	42.6
4	#5895.00	93.1 PK	110.2	-17.1	1.06 V	295	81.0	12.1
5	#5925.00	75.3 PK	88.2	-12.9	1.06 V	295	63.0	12.3
6	11750.00	59.5 PK	74.0	-14.5	2.30 V	189	38.6	20.9
7	11750.00	46.3 AV	54.0	-7.7	2.30 V	189	25.4	20.9

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 171 : 5855 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

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	#5650.00	58.8 PK	68.2	-9.4	1.27 H	242	47.2	11.6
2	*5855.00	111.3 PK			1.27 H	242	68.7	42.6
3	*5855.00	99.7 AV			1.27 H	242	57.1	42.6
4	#5895.00	85.6 PK	110.2	-24.6	1.27 H	242	73.5	12.1
5	#5925.00	75.0 PK	88.2	-13.2	1.27 H	242	62.7	12.3
6	11710.00	59.4 PK	74.0	-14.6	3.12 H	182	38.3	21.1
7	11710.00	46.1 AV	54.0	-7.9	3.12 H	182	25.0	21.1
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	#5650.00	60.1 PK	68.2	-8.1	1.01 V	296	48.5	11.6
2	*5855.00	116.4 PK			1.01 V	296	73.8	42.6
3	*5855.00	104.5 AV			1.01 V	296	61.9	42.6
4	#5895.00	92.5 PK	110.2	-17.7	1.01 V	296	80.4	12.1
5	#5925.00	82.3 PK	88.2	-5.9	1.01 V	296	70.0	12.3
6	11710.00	59.6 PK	74.0	-14.4	2.22 V	185	38.5	21.1
7	11710.00	46.3 AV	54.0	-7.7	2.22 V	185	25.2	21.1

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE160)	Channel	CH 163 : 5815 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66% RH
Tested By	TitanHSU		

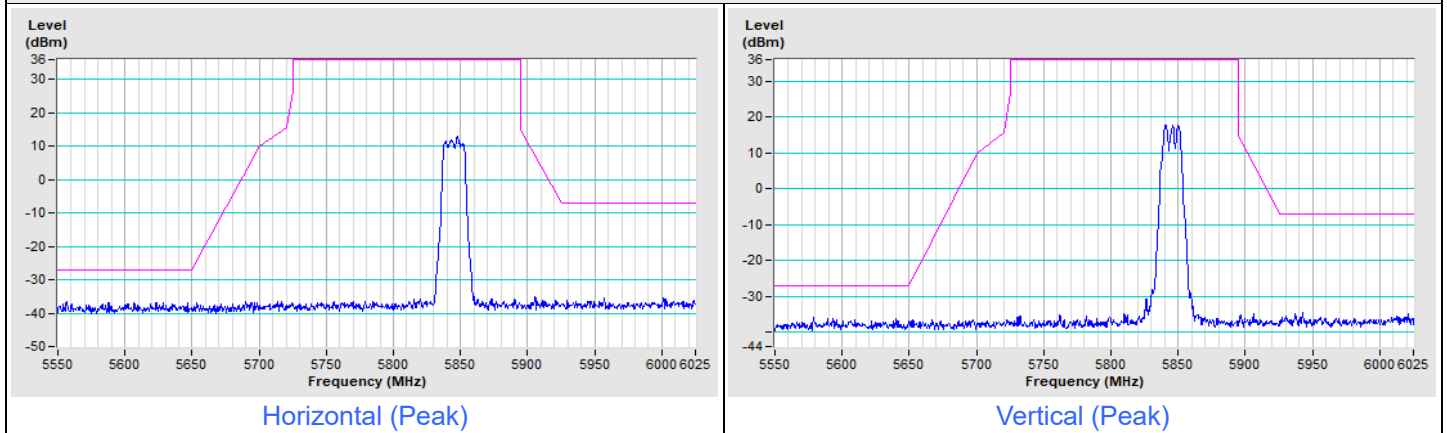
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5650.00	63.8 PK	68.2	-4.4	1.06 H	240	52.2	11.6
2	*5815.00	105.8 PK			1.06 H	240	63.2	42.6
3	*5815.00	93.8 AV			1.06 H	240	51.2	42.6
4	#5895.00	79.6 PK	110.2	-30.6	1.06 H	240	67.5	12.1
5	#5925.00	64.5 PK	88.2	-23.7	1.06 H	240	52.2	12.3
6	11630.00	59.6 PK	74.0	-14.4	3.19 H	185	38.0	21.6
7	11630.00	46.5 AV	54.0	-7.5	3.19 H	185	24.9	21.6
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	#5650.00	66.6 PK	68.2	-1.6	1.04 V	296	55.0	11.6
2	*5815.00	109.9 PK			1.04 V	296	67.3	42.6
3	*5815.00	97.9 AV			1.04 V	296	55.3	42.6
4	#5895.00	83.4 PK	110.2	-26.8	1.04 V	296	71.3	12.1
5	#5925.00	65.8 PK	88.2	-22.4	1.04 V	296	53.5	12.3
6	11630.00	59.8 PK	74.0	-14.2	2.21 V	190	38.2	21.6
7	11630.00	46.6 AV	54.0	-7.4	2.21 V	190	25.0	21.6

Remarks:

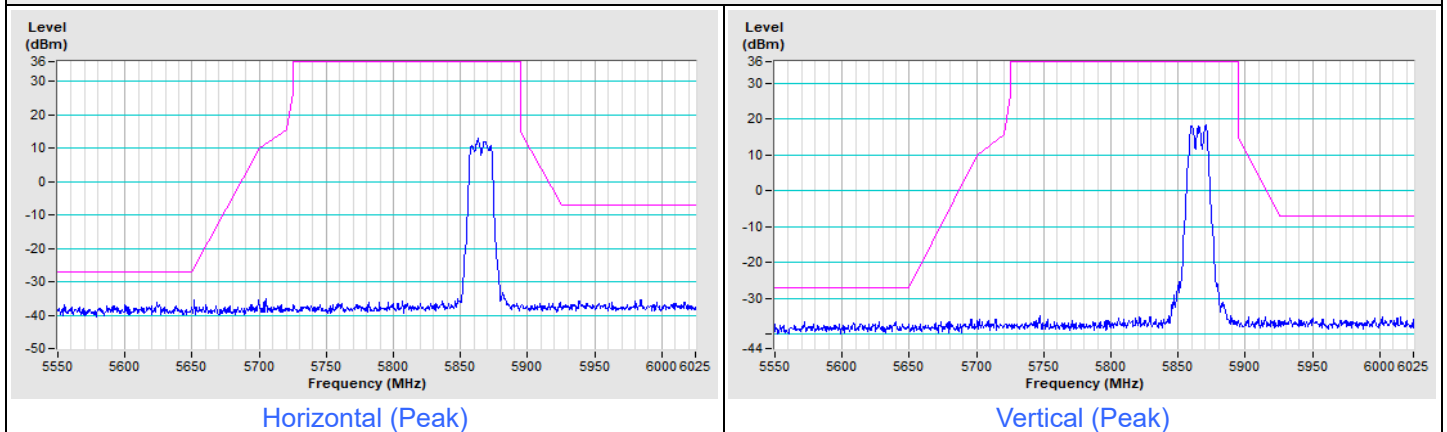
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

Frequency Range	5.55 GHz ~ 6.025 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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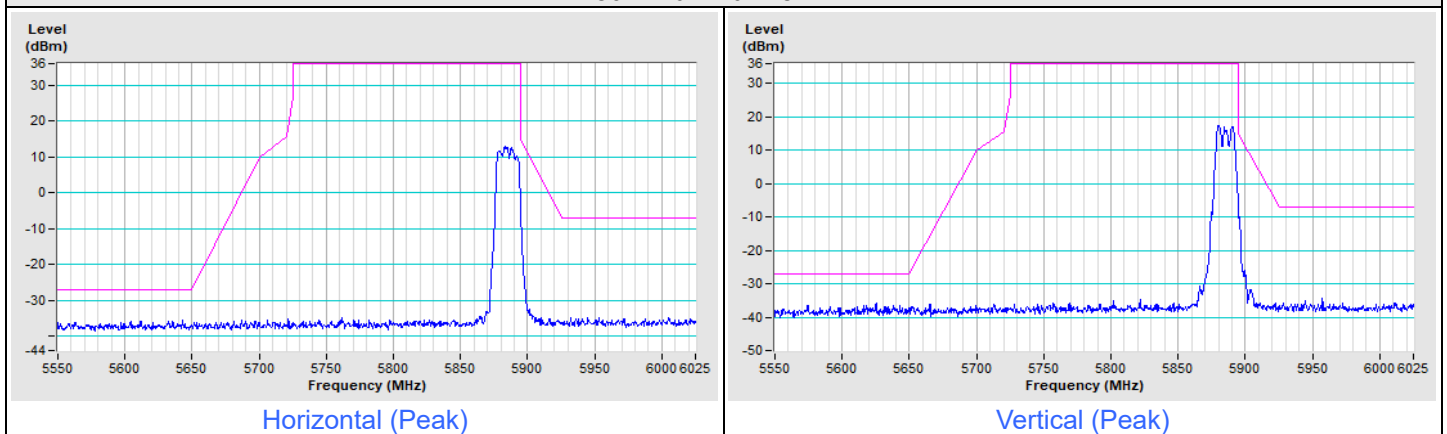
802.11a Channel 169



802.11a Channel 173

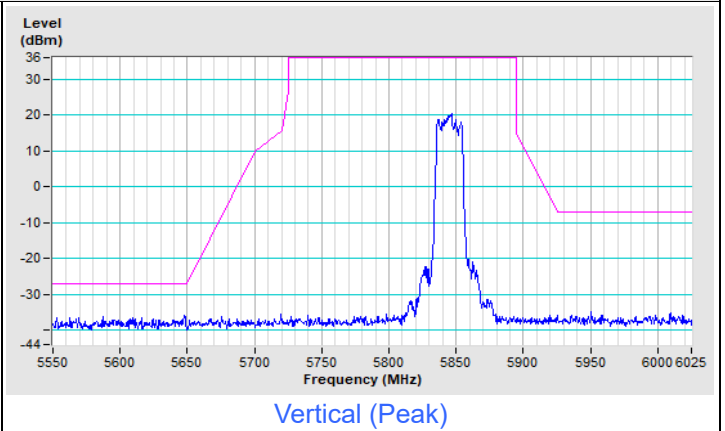
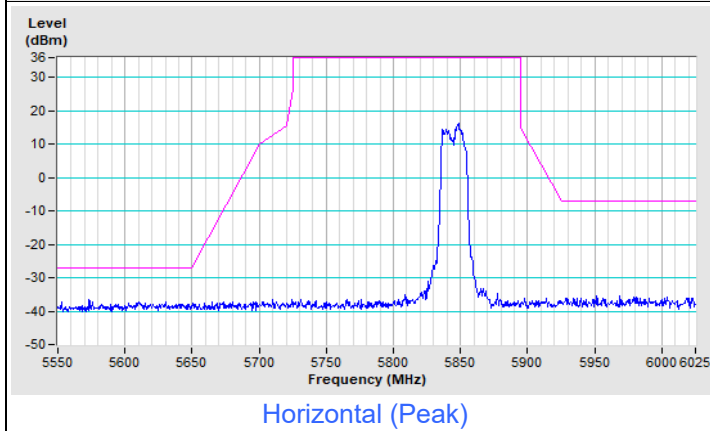


802.11a Channel 177

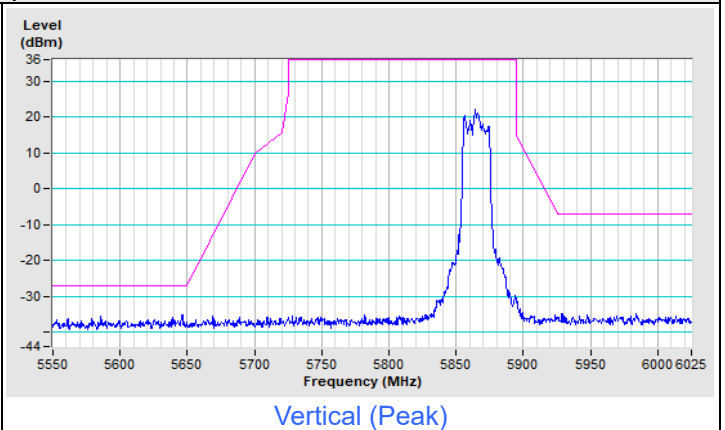
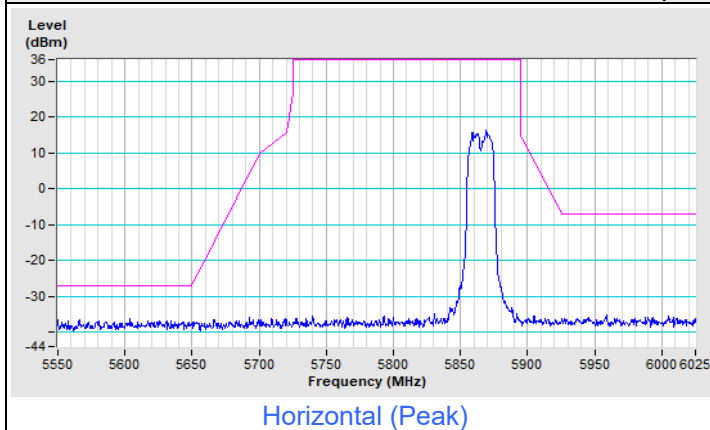


Frequency Range	5.55 GHz ~ 6.025 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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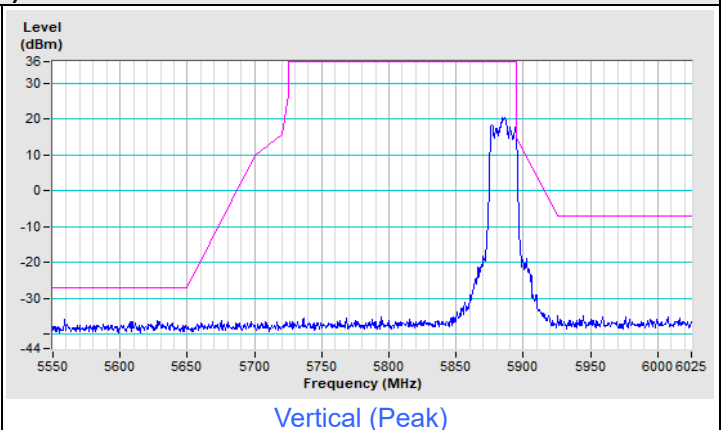
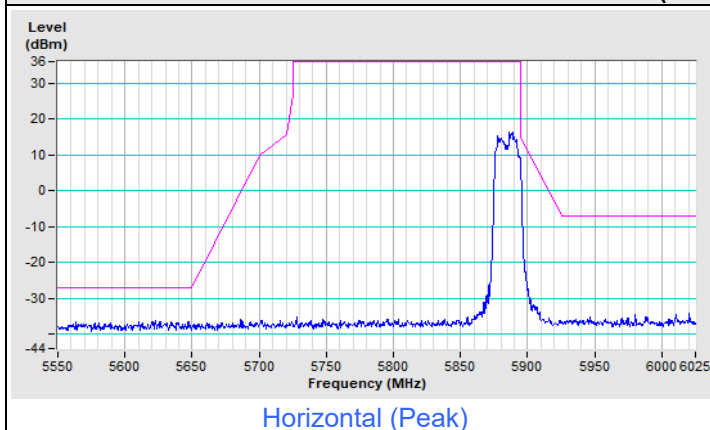
802.11ax (HE20) Channel 169



802.11ax (HE20) Channel 173

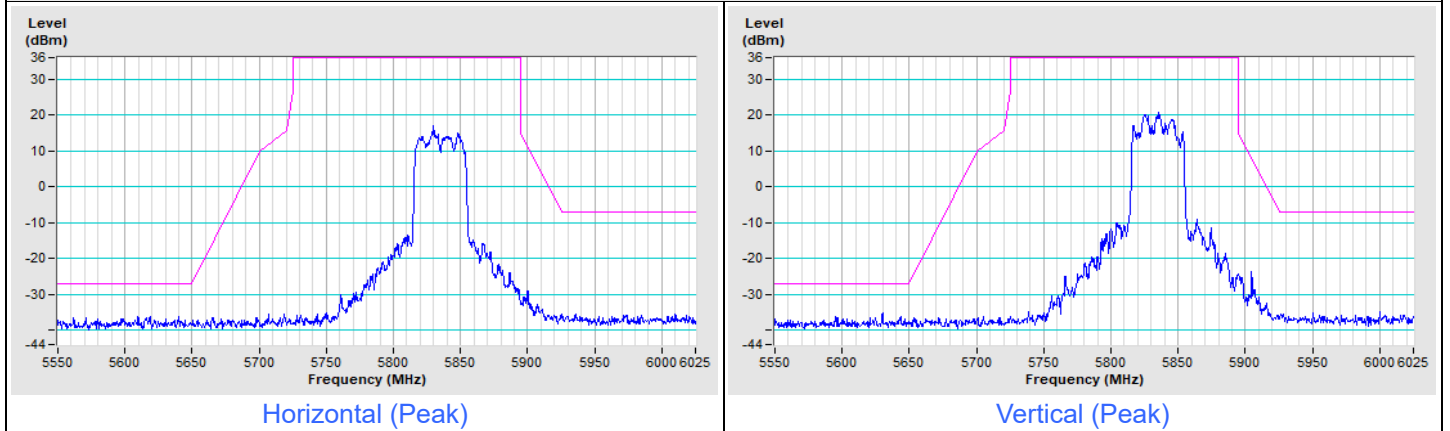


802.11ax (HE20) Channel 177

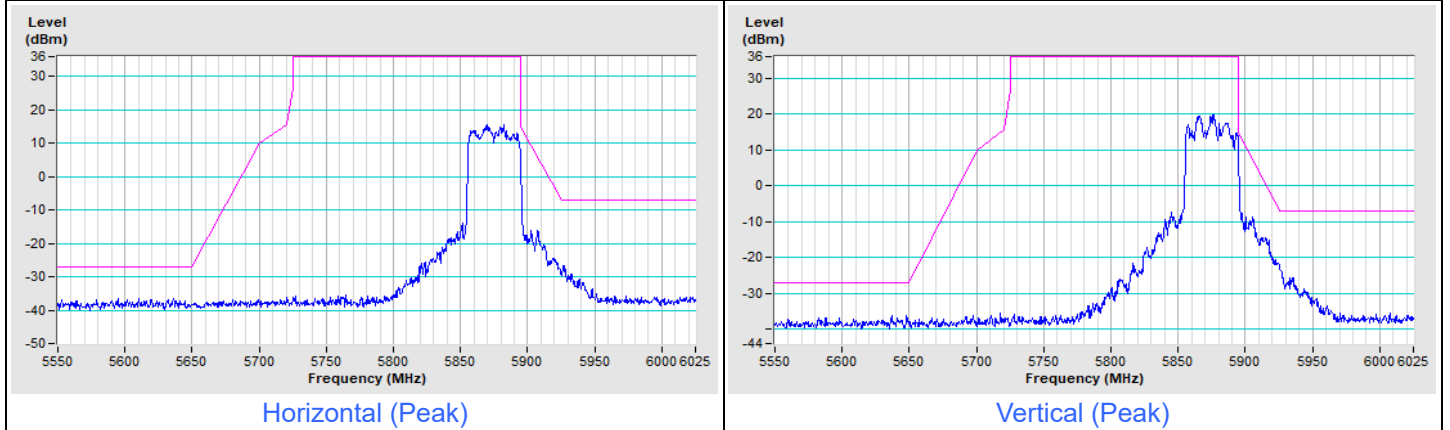


Frequency Range	5.55 GHz ~ 6.025 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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802.11ax (HE40) Channel 167

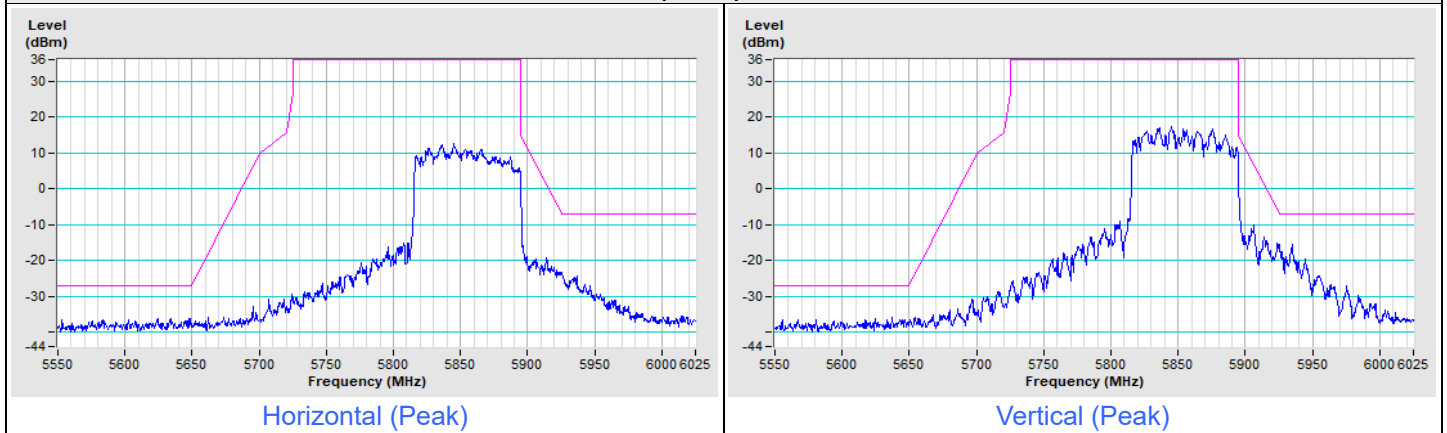


802.11ax (HE40) Channel 175



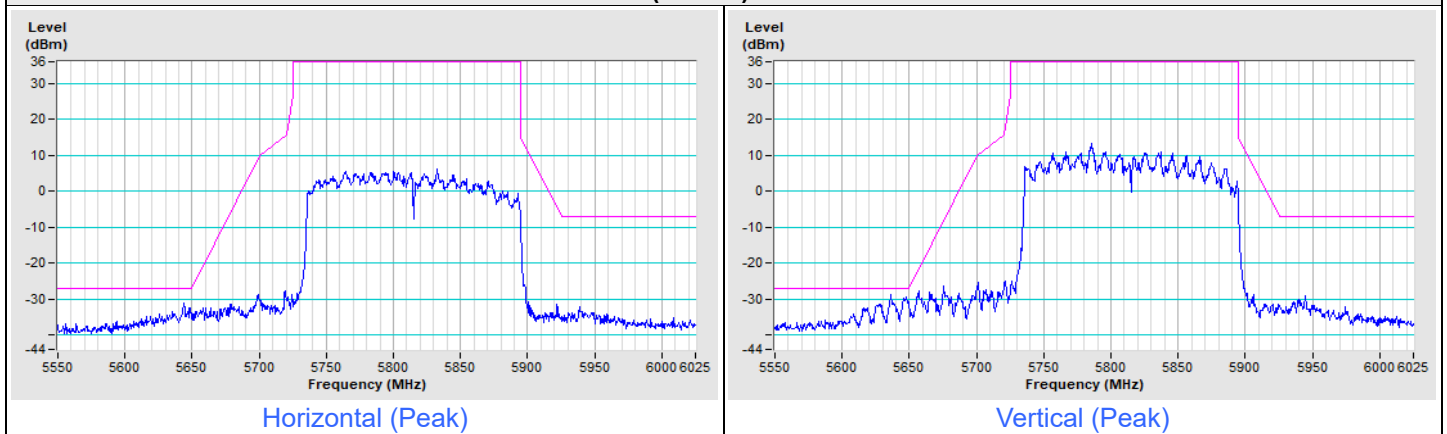
Frequency Range	5.55 GHz ~ 6.025 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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802.11ax (HE80) Channel 171



Frequency Range	5.55 GHz ~ 6.025 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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802.11ax (HE160) Channel 163



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

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

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