

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Report No.: RFCJWN-WTW-P26060606-1

FCC ID: 2AEUP-5CFYB5

Product: Security Camera

Brand: ring

Model No.: 5CFYB5

Received Date: 2026/7/13

Test Date: 2026/7/13 ~ 2026/8/27

Issued Date: 2026/9/18

Applicant: Ring LLC

Address: 12515 Cerise Ave, Hawthorne, CA 90250, USA

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

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City 244, Taiwan

Test Location(1): No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 333, Taiwan

Test Location(2): No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan

FCC Registration / 788550 / TW0003 for Test Location(1)

Designation Number: 281270 / TW0032 for Test Location(2)

Approved by:

Jeremy Lin

Date:

2026/9/18

Jeremy Lin / Project Engineer

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Prepared by : Jessica Cheng / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFCJWN-WTW-P26060606-1	Original release.	2026/9/18

1 Certificate

Product: Security Camera

Brand: ring

Test Model: 5CFYB5

Sample Status: Engineering sample

Applicant: Ring LLC

Test Date: 2026/7/13 ~ 2026/8/27

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Measurement procedure: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
KDB 558074 D01 15.247 Meas Guidance v05r02

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 C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -29.53 dB at 0.54600 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -6.6 dB at 263.77 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -3.0 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

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:

Parameter	Specification	Expanded Uncertainty (k=2) (±)
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	3.23 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 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	Security Camera
Brand	ring
Test Model	5CFYB5
Status of EUT	Engineering sample
Power Supply Rating	5Vdc/3A & battery 3.6Vdc
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	Up to 143.4 Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20):11
Partial RU Mode	Single RU
Channel Puncturing	Not support
Output Power	145.546 mW (21.63 dBm)

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
Rechargeable Lithium-ion Battery	ring	6BCEAB	3.60Vdc, 9400mAh, 33.84Wh / Input: 5Vdc, 3A
Rechargeable Lithium-ion Battery	ring	5AT3S3	3.6Vdc, 5960mAh, 21.456Wh / Micro USB Input: 5Vdc, 800mA
Rechargeable Lithium-ion Battery	ring	5F53E9	3.6Vdc, 5800mAh, 20.88Wh / Micro USB Input: 5Vdc, 1A
Power Adapter	ring	6PCEA3	AC Input: 100-240Vac, 0.5A, 50/60Hz DC Output: 5.0Vdc, 3.0A, 15.0W, 9.0Vdc, 2.22A, 20.0W AC Input Cable: Non-shielded 2-pin cable (2.3m) DC Output Cable: Shielded USB-C cable (3.0m)

2. There are Bluetooth and WLAN (2.4 GHz & 5 GHz) and 60 GHz radar technologies used for the EUT.

3. Bluetooth and WLAN (2.4 GHz & 5 GHz) and 60 GHz radar technologies cannot operate simultaneously.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Gain (dBi)	Frequency Range	Antenna Type	Connector Type
2.3	2.4~2.4835GHz	PIFA	NA
4	5GHz		
3	60~61GHz		

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

2. The EUT incorporates a SISO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	1TX	1RX
802.11g	1TX	1RX
802.11n (HT20)	1TX	1RX
VHT20	1TX	1RX
802.11ax (HE20)	1TX	1RX
802.11ax (RU26/52/106/242)	1TX	1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz, VHT mode for 20 MHz and 802.11ax mode for 20 MHz. Therefore the investigated worst case is the representative mode in test report.

3.3 Channel List

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20), VHT20 and 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

3.4 Test Mode Applicability and Tested Channel Detail

Worst Case:	1. EUT can be used in the following ways: X-axis/ Y-axis / Z-axis. Pre-scan these ways and find the worst case: Y-axis as a representative test condition. 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates. 3. The worst-case Partial RU modes have been determined via pre-scan. The worst case occurs in 20 MHz bandwidth (RU 26/ 52/106).
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Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter	RU/MRU Index
RF Output Power	802.11b	1, 6, 11	DBPSK	1Mb/s	NA
	802.11g	1, 2, 6, 10, 11	BPSK	6Mb/s	NA
	802.11ax (HE20)	1, 2, 6, 10, 11	BPSK	MCS0	NA
	802.11ax (HE20) 26-tone RU	1, 6, 11	BPSK	MCS0	0, 0, 8
	802.11ax (HE20) 52-tone RU	1, 6, 11	BPSK	MCS0	37, 37, 40
	802.11ax (HE20) 106-tone RU	1, 6, 11	BPSK	MCS0	53, 53, 54
Power Spectral Density	802.11b	1, 6, 11	DBPSK	1Mb/s	NA
	802.11g	1, 6, 11	BPSK	6Mb/s	NA
	802.11ax (HE20)	1, 6, 11	BPSK	MCS0	NA
	802.11ax (HE20) 26-tone RU	1, 6, 11	BPSK	MCS0	0, 0, 8
	802.11ax (HE20) 52-tone RU	1, 6, 11	BPSK	MCS0	37, 37, 40
	802.11ax (HE20) 106-tone RU	1, 6, 11	BPSK	MCS0	53, 53, 54
6 dB Bandwidth / Conducted Out of Band Emissions	802.11b	1, 6, 11	DBPSK	1Mb/s	NA
	802.11g	1, 6, 11	BPSK	6Mb/s	NA
	802.11ax (HE20)	1, 6, 11	BPSK	MCS0	NA
	802.11ax (HE20) 26-tone RU	1, 6, 11	BPSK	MCS0	0, 0, 8
	802.11ax (HE20) 52-tone RU	1, 6, 11	BPSK	MCS0	37, 37, 40
	802.11ax (HE20) 106-tone RU	1, 6, 11	BPSK	MCS0	53, 53, 54
AC Power Conducted Emissions	802.11b	11	DBPSK	1Mb/s	NA
Unwanted Emissions below 1 GHz	802.11b	11	DBPSK	1Mb/s	NA
Unwanted Emissions above 1 GHz	802.11b	1, 6, 11	DBPSK	1Mb/s	NA
	802.11g	1, 2, 6, 10, 11	BPSK	6Mb/s	NA
	802.11ax (HE20)	1, 2, 6, 10, 11	BPSK	MCS0	NA

3.5 Duty Cycle of Test Signal

802.11b: Duty cycle = 4.431 ms / 4.484 ms x 100% = 98.8%

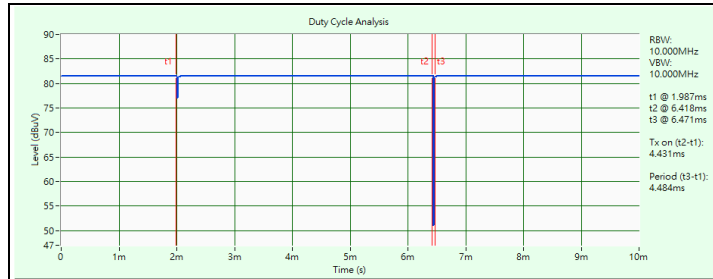
802.11g: Duty cycle = 0.128 ms / 0.148 ms x 100% = 86.5%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.63 \text{ dB}$

802.11ax (HE20): Duty cycle = 0.311 ms / 0.329 ms x 100% = 94.5%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.24 \text{ dB}$

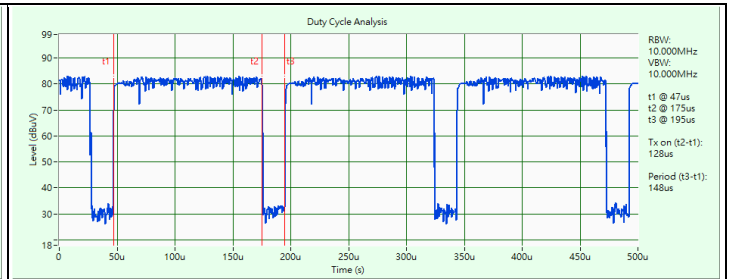
802.11ax (HE20) 26-tone RU: Duty cycle = 5.355 ms / 6.315 ms x 100% = 84.8%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.72 \text{ dB}$

802.11ax (HE20) 52-tone RU: Duty cycle = 2.72 ms / 3.7 ms x 100% = 73.5%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 1.34 \text{ dB}$

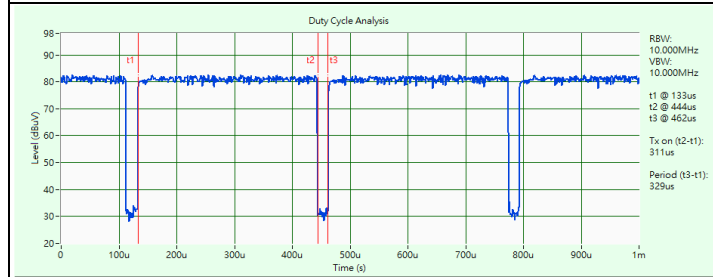
802.11ax (HE20) 106-tone RU: Duty cycle = 1.31 ms / 2.29 ms x 100% = 57.2%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 2.43 \text{ dB}$



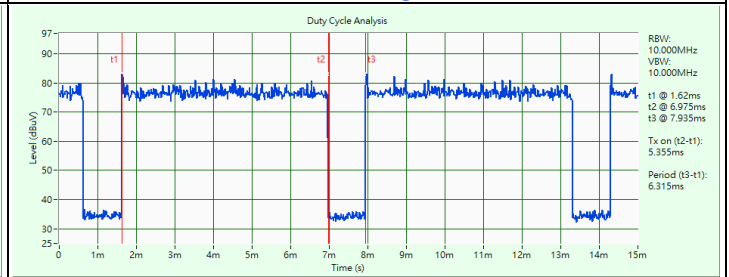
802.11b



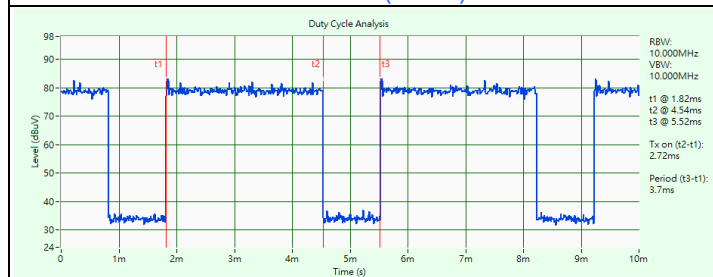
802.11g



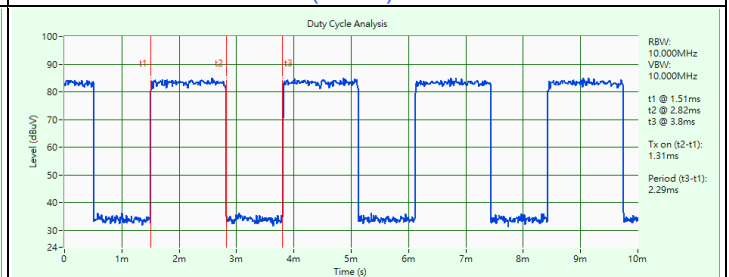
802.11ax (HE20)



802.11ax (HE20) 26-tone RU



802.11ax (HE20) 52-tone RU

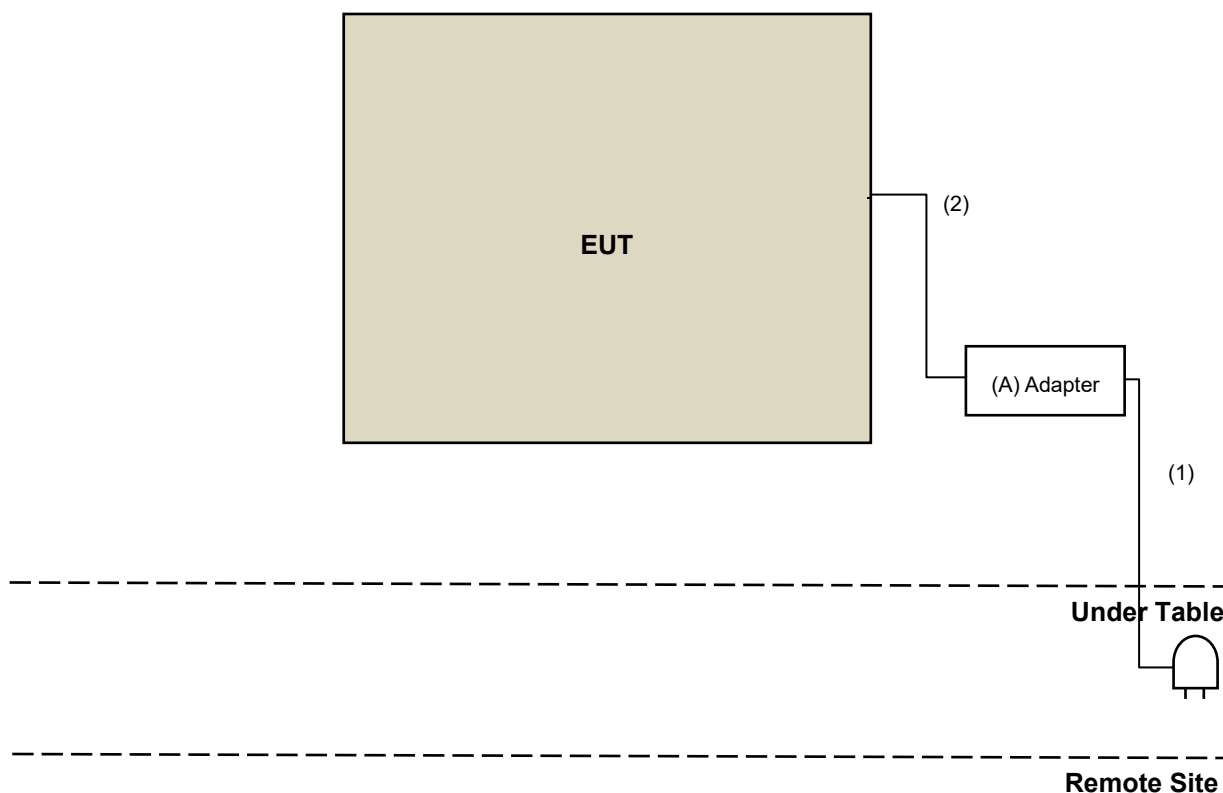


802.11ax (HE20) 106-tone RU

3.6 Test Program Used and Operation Descriptions

Controlling software Tera Term_Ver 4.106 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	Adapter	Ring	6PCEA3	GP43WG0452520 8MM	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	AC input Cable	1	2.3	No	0	Supplied by applicant
2	DC Output Cable(USB Type C)	1	3	Yes	0	Supplied by applicant

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	2026/5/21	2027/5/20
Peak Power Analyzer Keysight	8990B	MY51000485	2026/1/23	2027/1/22
USB Power Sensor Anritsu	MA24408A	12994	2025/12/5	2026/12/4
Wideband Power Sensor Keysight	N1923A	MY58020002	2026/1/26	2027/1/25
		MY58140009	2026/1/26	2027/1/25

Notes:

1. The test was performed in HY - Oven room(Hwaya).
2. Tested Date: 2026/8/25 ~ 2026/8/27

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2026/5/21	2027/5/20
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSU43	101261	2026/5/4	2027/5/3

Notes:

1. The test was performed in HY - Oven room(Hwaya).
2. Tested Date: 2026/8/25 ~ 2026/8/27

4.3 6 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2025/12/4	2026/12/3
	E1-011280	05	2025/12/4	2026/12/3
	E1-011311	09	2025/12/4	2026/12/3
DC LISN Schwarzbeck	NNBM 8126G	8126G-069	2025/11/3	2026/11/2
Diode Pulse Limiter Schwarzbeck	VTSD 9561 F-N	01445	2026/4/18	2027/4/17
EMI Test Receiver R&S	ESCI	100613	2025/11/27	2026/11/26
Extension Power Line EMCI	EMCI-EXP-EU-US	023	2026/3/6	2027/3/5
LISN R&S	ENV216	101826	2026/3/6	2027/3/5
	ESH3-Z5	100311	2025/8/28	2026/8/27
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2026/1/3	2027/1/2
Software BVADT	BVADT_Conc_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2025/8/27	2026/8/26

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2026/7/28

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1213	2025/9/18	2026/9/17
Loop Antenna TESEQ	HLA 6121	45745	2025/9/1	2026/8/31
MXE EMI Receiver Keysight	N9038B	MY60180019	2026/1/14	2027/1/13
Preamplifier EMCI	EMC330N	980782	2026/1/13	2027/1/12
RF Coaxial Cable EMCI	EMCCFD400-NM-NM-500	201233	2026/1/13	2027/1/12
	EMCCFD400-NM-NM-3000	201235	2026/1/13	2027/1/12
	EMCCFD400-NM-NM-9000	201236(with PAD)	2026/1/13	2027/1/12
Signal & Spectrum Analyzer R&S	FSW43	101867	2026/2/11	2027/2/10
Software BV ADT	ADT_Radiated_ V7.7.1.1.1	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8(Wenming).
2. Tested Date: 2026/8/4

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Horn Antenna RFSPIN	DRH18-E	210103A18E	2025/11/9	2026/11/8
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2025/11/9	2026/11/8
MXE EMI Receiver Keysight	N9038B	MY60180019	2026/1/14	2027/1/13
Preamplifier EMCI	EMC118A45SE	980808	2025/12/24	2026/12/23
	EMC184045SE	980788	2026/1/13	2027/1/12
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2026/1/13	2027/1/12
		201255	2026/1/13	2027/1/12
	EMC101G-KM-KM-5000	201261	2026/1/13	2027/1/12
	EMC104-SM-SM-1000	210102	2026/1/13	2027/1/12
	EMC104-SM-SM-3000	201231	2026/1/13	2027/1/12
	EMC104-SM-SM-9000	201243	2026/1/13	2027/1/12
Signal & Spectrum Analyzer R&S	FSW43	101867	2026/2/11	2027/2/10
Software BV ADT	ADT_Radiated_ V7.7.1.1.1	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8(Wenming).
2. Tested Date: 2026/7/13 ~ 2026/8/19

5 Limits of Test Items

5.1 RF Output Power

For systems using digital modulation in the 2400-2483.5 MHz bands: 1 Watt (30 dBm)

5.2 Power Spectral Density

The maximum of power spectral density measurement is 8 dBm in any 3 kHz.

5.3 6 dB Bandwidth

The minimum of 6 dB bandwidth measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

Below 30 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

5.5 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.

5.6 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30 dB below the highest level of the desired power:

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).

5.7 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

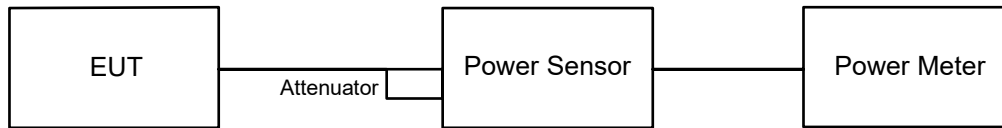
Notes:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



Note: The correction factor has already been compensated by the instrument.

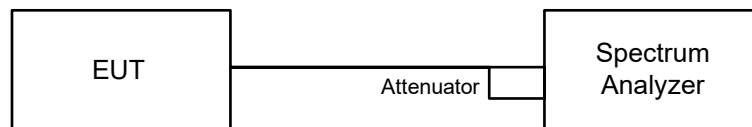
6.1.2 Test Procedure

Average Power:

Average power sensor was 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.

6.2 Power Spectral Density

6.2.1 Test Setup



Note: The correction factor has already been compensated by the instrument.

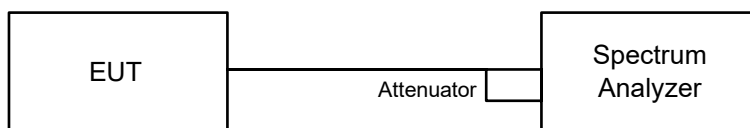
6.2.2 Test Procedure

- a. Measure the duty cycle (x).
- b. Set instrument center frequency to DTS channel center frequency.
- c. Set span to > 1.5 times the OBW.
- d. Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- e. Set VBW $\geq 3 \times \text{RBW}$.
- f. Detector = power averaging (RMS) or sample detector (when RMS not available).
- g. Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$.
- h. Sweep time = auto couple.
- i. Do not use sweep triggering. Allow sweep to "free run".
- j. Employ trace averaging (RMS) mode over a minimum of 100 traces.
- k. Use the peak marker function to determine the maximum amplitude level.

Note: If Duty cycle < 98%, Add $10 \log (1/x)$, where x is the duty cycle measured in step (a), to the measured PSD to compute the average PSD during the actual transmission time.

6.3 6 dB Bandwidth

6.3.1 Test Setup



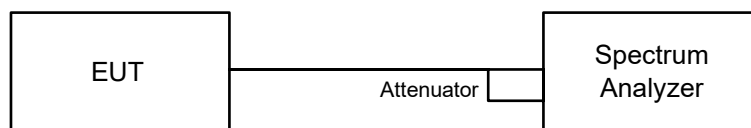
Note: The correction factor has already been compensated by the instrument.

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 by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB down amplitude” value, then it shall be as close as possible to this value.

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



Note: The correction factor has already been compensated by the instrument.

6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

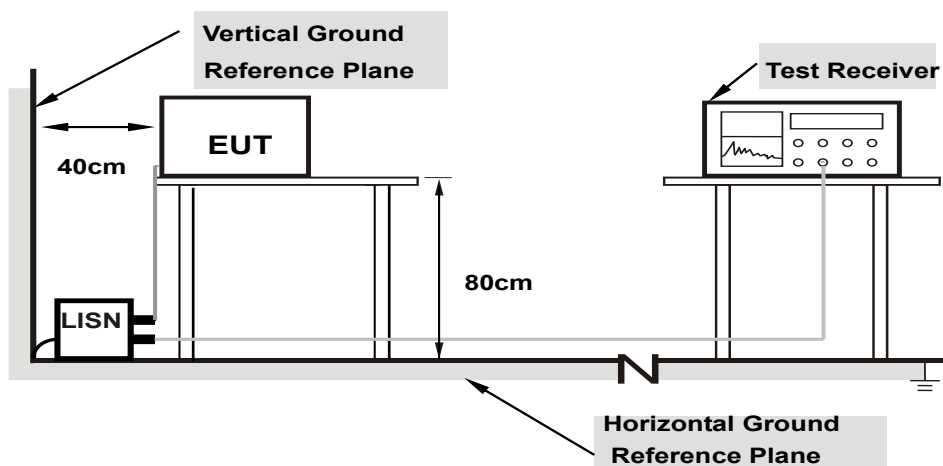
- Set instrument center frequency to DTS channel center frequency.
- Set the span to ≥ 1.5 times the DTS bandwidth.
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum PSD level.

MEASUREMENT PROCEDURE OOB

- Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.
- Set RBW = 100 kHz.
- Set VBW ≥ 300 kHz.
- Detector = peak.
- Sweep = No faster than coupled (auto) time.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

6.5 AC Power Conducted Emissions

6.5.1 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).

6.5.2 Test Procedure

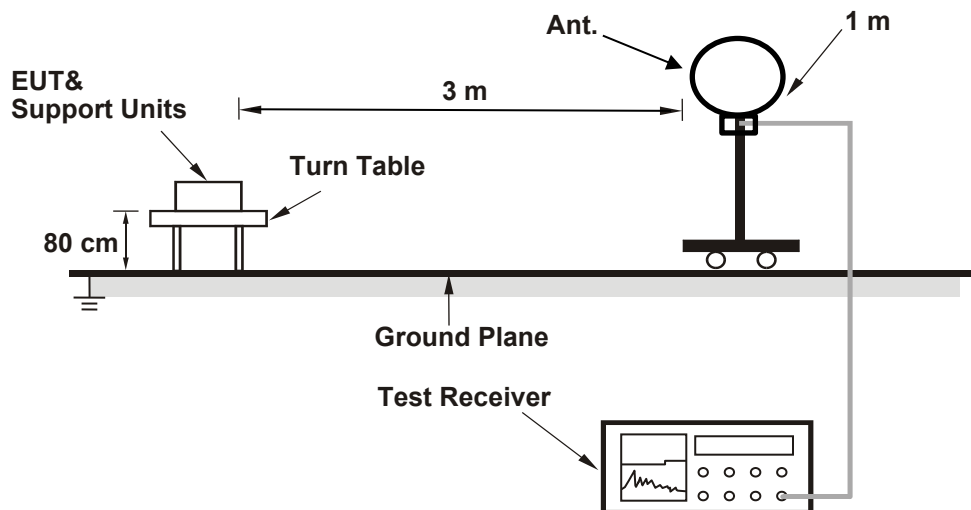
- Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.
- The 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.

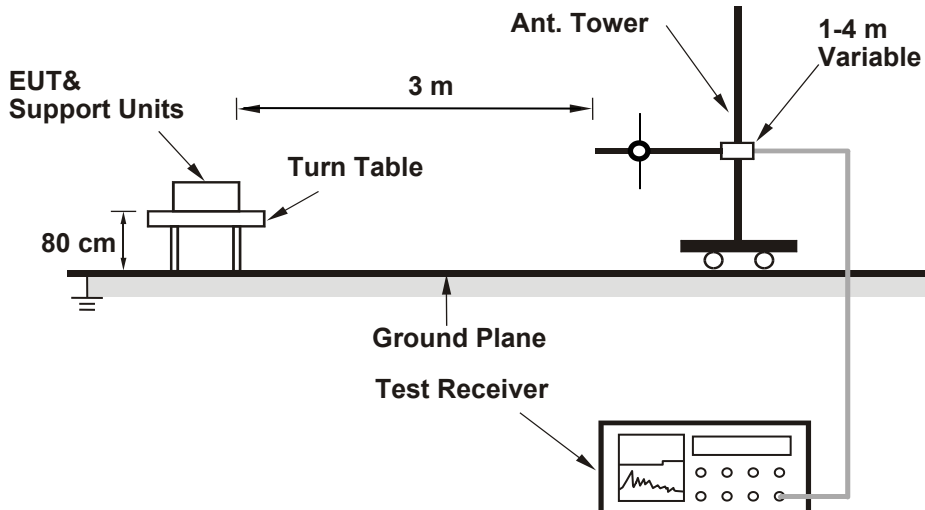
6.6 Unwanted Emissions below 1 GHz

6.6.1 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).

6.6.2 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 (however, peak detector measurements may be used to determine compliance with QP requirements), 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

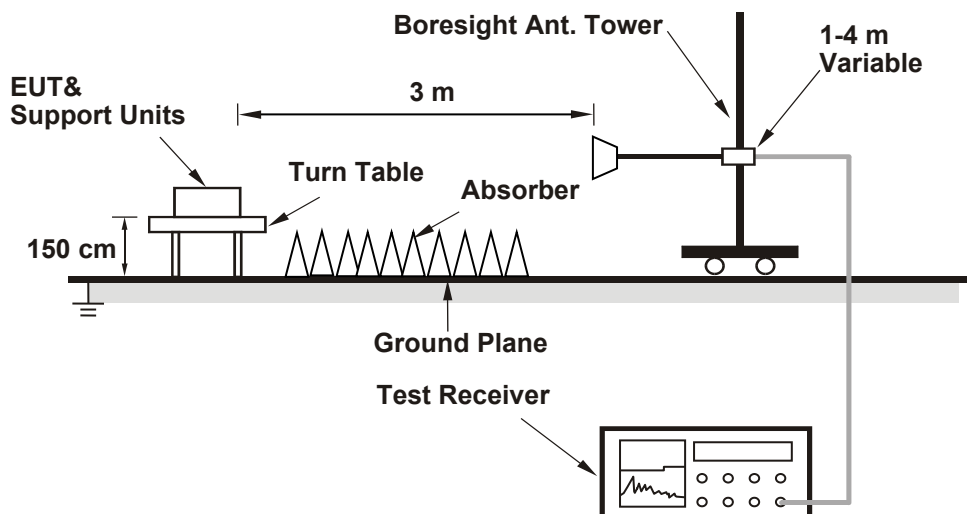
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequencies less than or equal to 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 (however, peak detector measurements may be used to determine compliance with QP requirements).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 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

Environmental Conditions:	25°C, 60% RH	Tested By:	Match Tsui
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802.11b

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
1	2412	143.549	21.57	30	Pass
6	2437	145.211	21.62	30	Pass
11	2462	145.546	21.63	30	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
1	2412	47.098	16.73	30	Pass
2	2417	58.749	17.69	30	Pass
6	2437	84.14	19.25	30	Pass
10	2457	74.131	18.70	30	Pass
11	2462	53.211	17.26	30	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
1	2412	43.451	16.38	30	Pass
2	2417	67.453	18.29	30	Pass
6	2437	85.507	19.32	30	Pass
10	2457	73.282	18.65	30	Pass
11	2462	52	17.16	30	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) 26-tone RU

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
1	2412	9.638	9.84	30	Pass
6	2437	17.824	12.51	30	Pass
11	2462	9.931	9.97	30	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) 52-tone RU

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
1	2412	14.191	11.52	30	Pass
6	2437	28.184	14.50	30	Pass
11	2462	16.711	12.23	30	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) 106-tone RU

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
1	2412	25.235	14.02	30	Pass
6	2437	50.816	17.06	30	Pass
11	2462	29.648	14.72	30	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Environmental Conditions:	25°C, 60% RH	Tested By:	Match Tsui
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802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
1	2412	-10.06	8	Pass
6	2437	-9.96	8	Pass
11	2462	-9.88	8	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)	Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
1	2412	-10.49	0.63	-10.49	-9.86	8	Pass
6	2437	-8.3	0.63	-8.30	-7.67	8	Pass
11	2462	-10.07	0.63	-10.07	-9.44	8	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)	Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
1	2412	-14.65	0.24	-14.65	-14.41	8	Pass
6	2437	-11.7	0.24	-11.70	-11.46	8	Pass
11	2462	-14.01	0.24	-14.01	-13.77	8	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20) 26-tone RU

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)	Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
1	2412	-15.39	0.72	-15.39	-14.67	8	Pass
6	2437	-13.23	0.72	-13.23	-12.51	8	Pass
11	2462	-14.75	0.72	-14.75	-14.03	8	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20) 52-tone RU

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)	Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
1	2412	-16.32	1.34	-16.32	-14.98	8	Pass
6	2437	-14.07	1.34	-14.07	-12.73	8	Pass
11	2462	-15.49	1.34	-15.49	-14.15	8	Pass

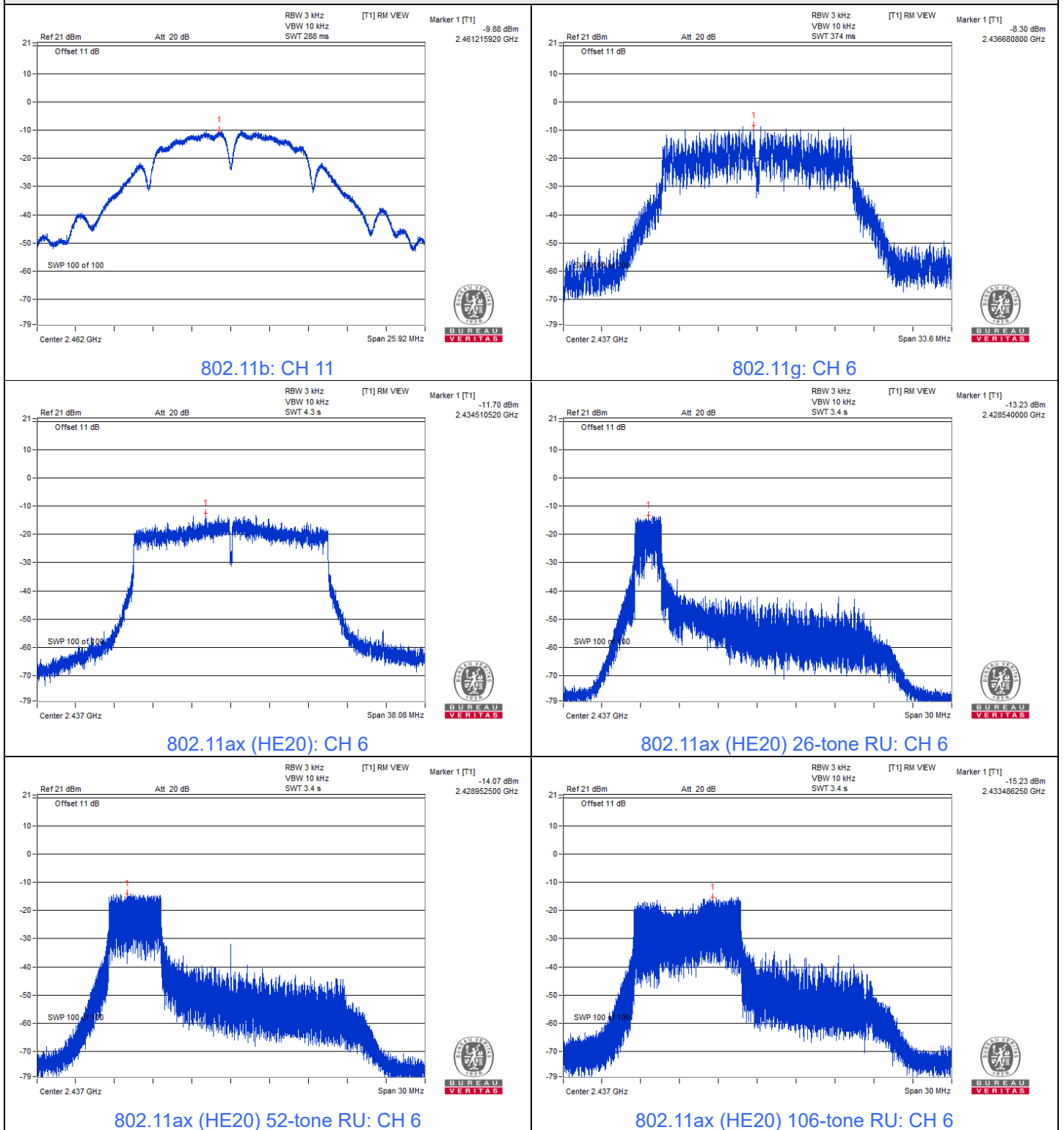
Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20) 106-tone RU

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)	Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
1	2412	-17.29	2.43	-17.29	-14.86	8	Pass
6	2437	-15.23	2.43	-15.23	-12.80	8	Pass
11	2462	-16.74	2.43	-16.74	-14.31	8	Pass

Note: The antenna gain is 2.3 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value



7.3 6 dB Bandwidth

Environmental Conditions:	25°C, 60% RH	Tested By:	Match Tsui
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802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
1	2412	9.29	0.5	Pass
6	2437	9.31	0.5	Pass
11	2462	9.32	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
1	2412	16.19	0.5	Pass
6	2437	16.24	0.5	Pass
11	2462	16.2	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
1	2412	18.62	0.5	Pass
6	2437	18.83	0.5	Pass
11	2462	18.83	0.5	Pass

802.11ax (HE20) 26-tone RU

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
1	2412	2.33	0.5	Pass
6	2437	2.15	0.5	Pass
11	2462	2.18	0.5	Pass

802.11ax (HE20) 52-tone RU

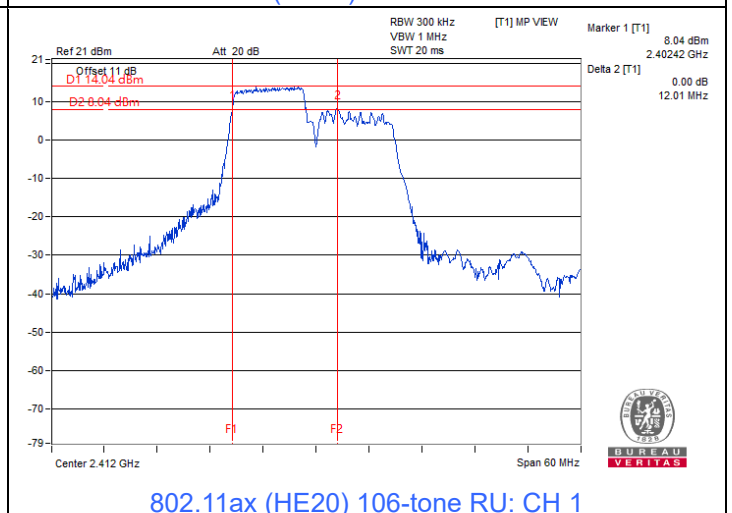
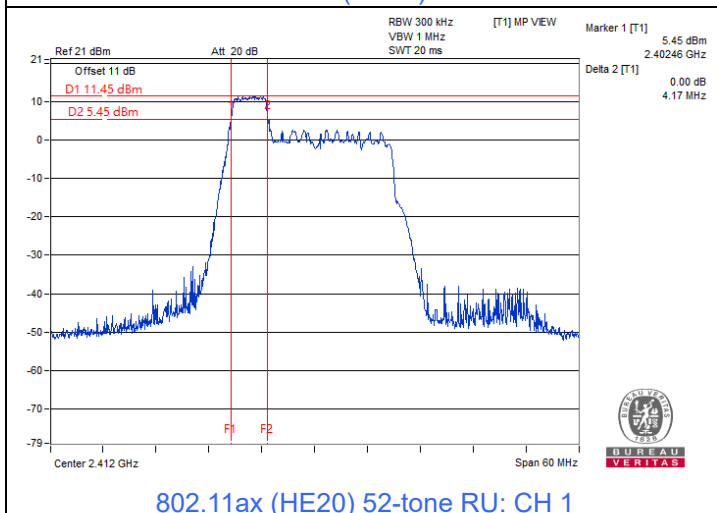
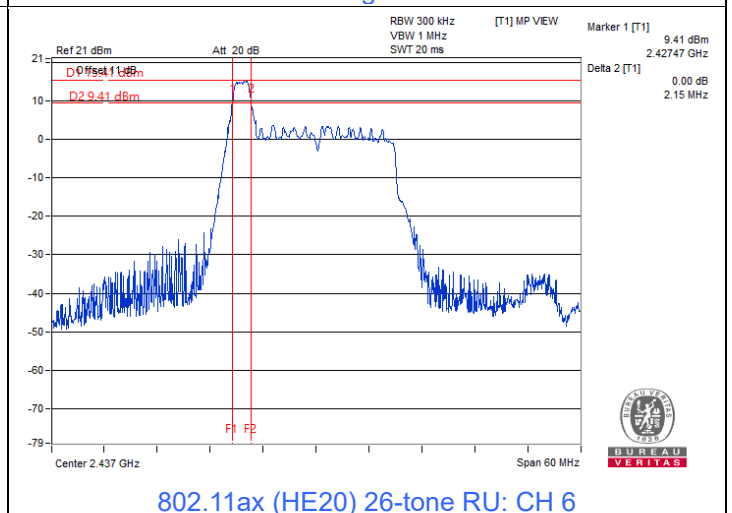
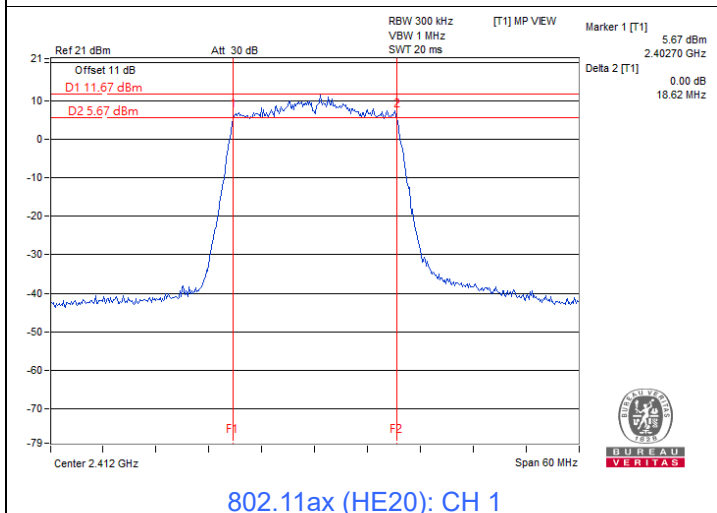
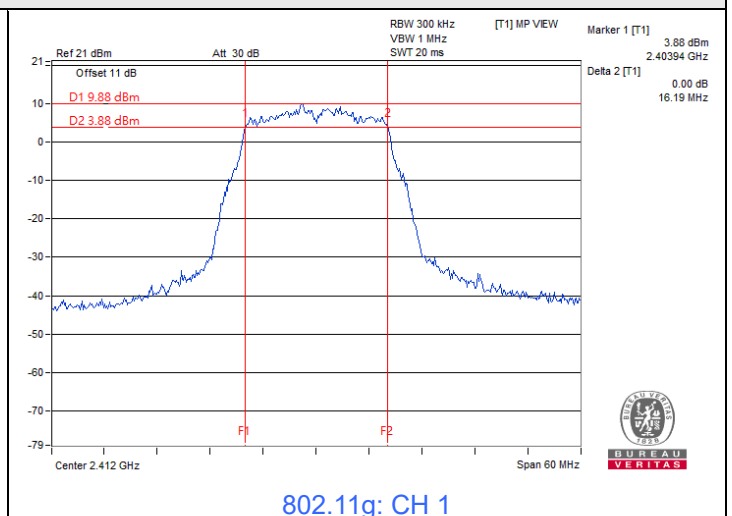
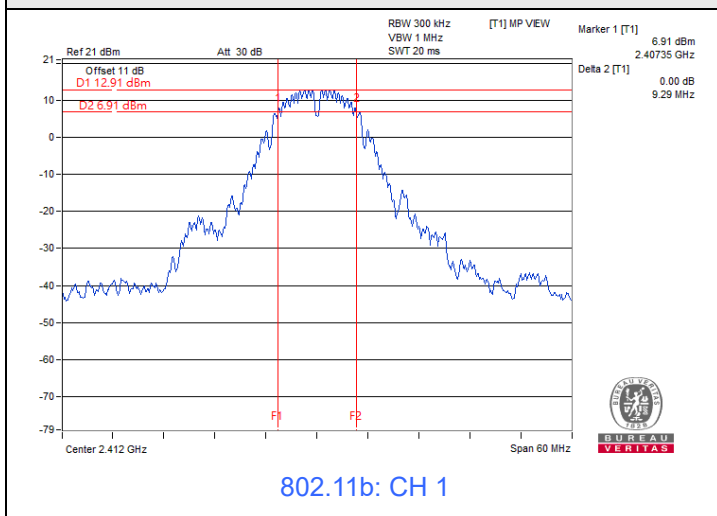
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
1	2412	4.17	0.5	Pass
6	2437	4.18	0.5	Pass

11	2462	4.34	0.5	Pass
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802.11ax (HE20) 106-tone RU

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
1	2412	12.01	0.5	Pass
6	2437	12.14	0.5	Pass
11	2462	13.39	0.5	Pass

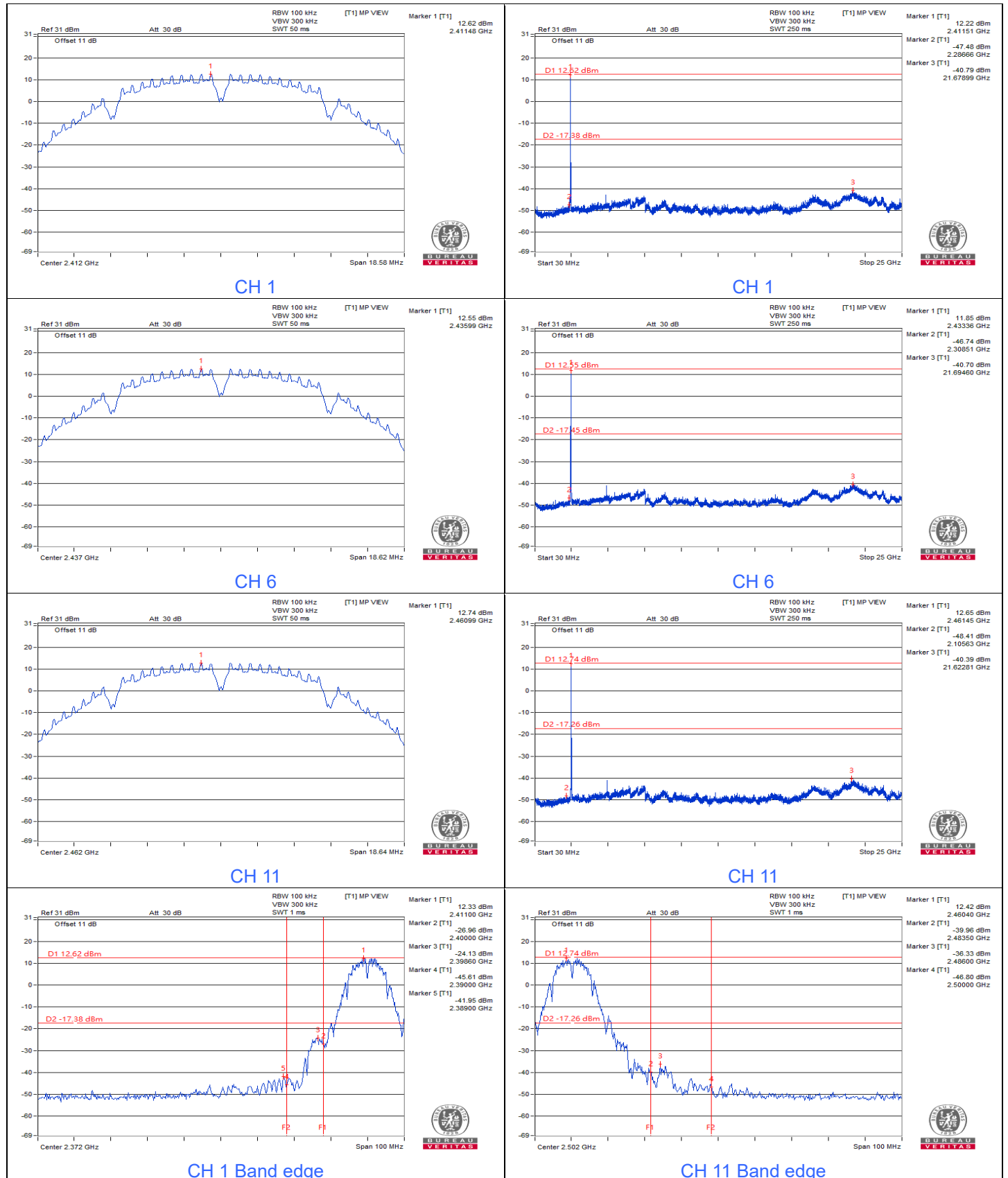
Spectrum Plot of Minimum Value



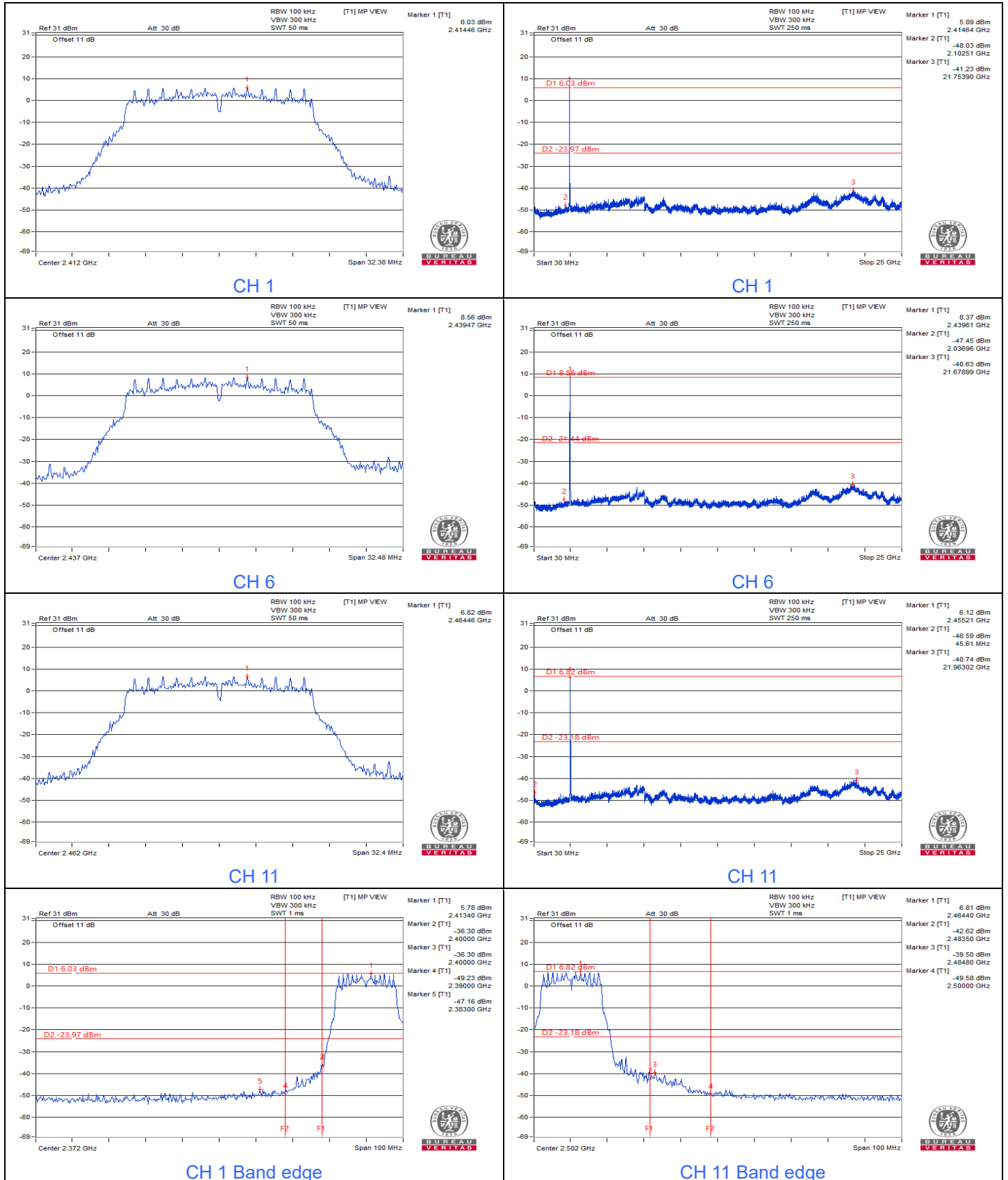
7.4 Conducted Out of Band Emissions

Environmental Conditions:	25°C, 60% RH	Tested By:	Match Tsui
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802.11b



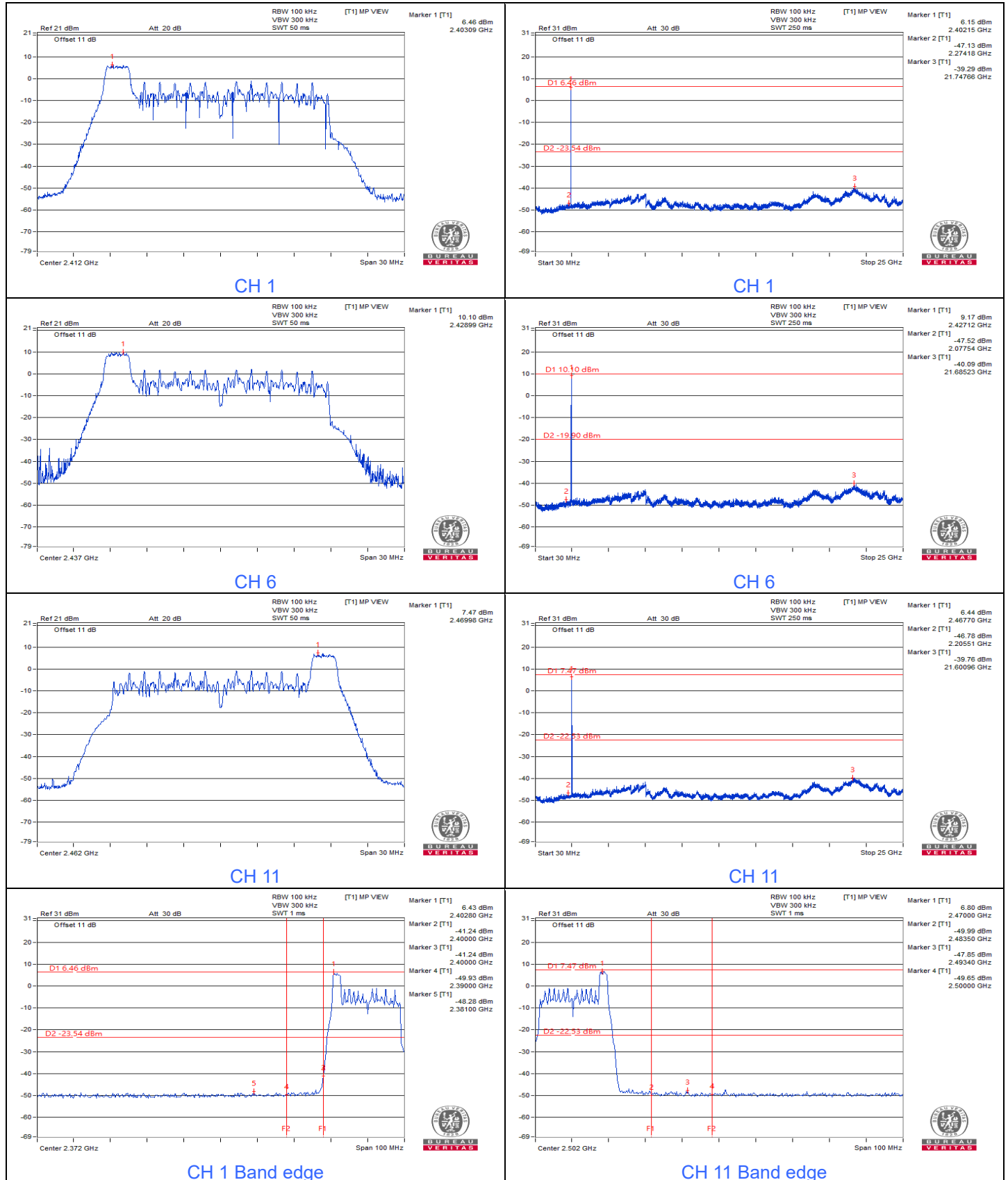
802.11g



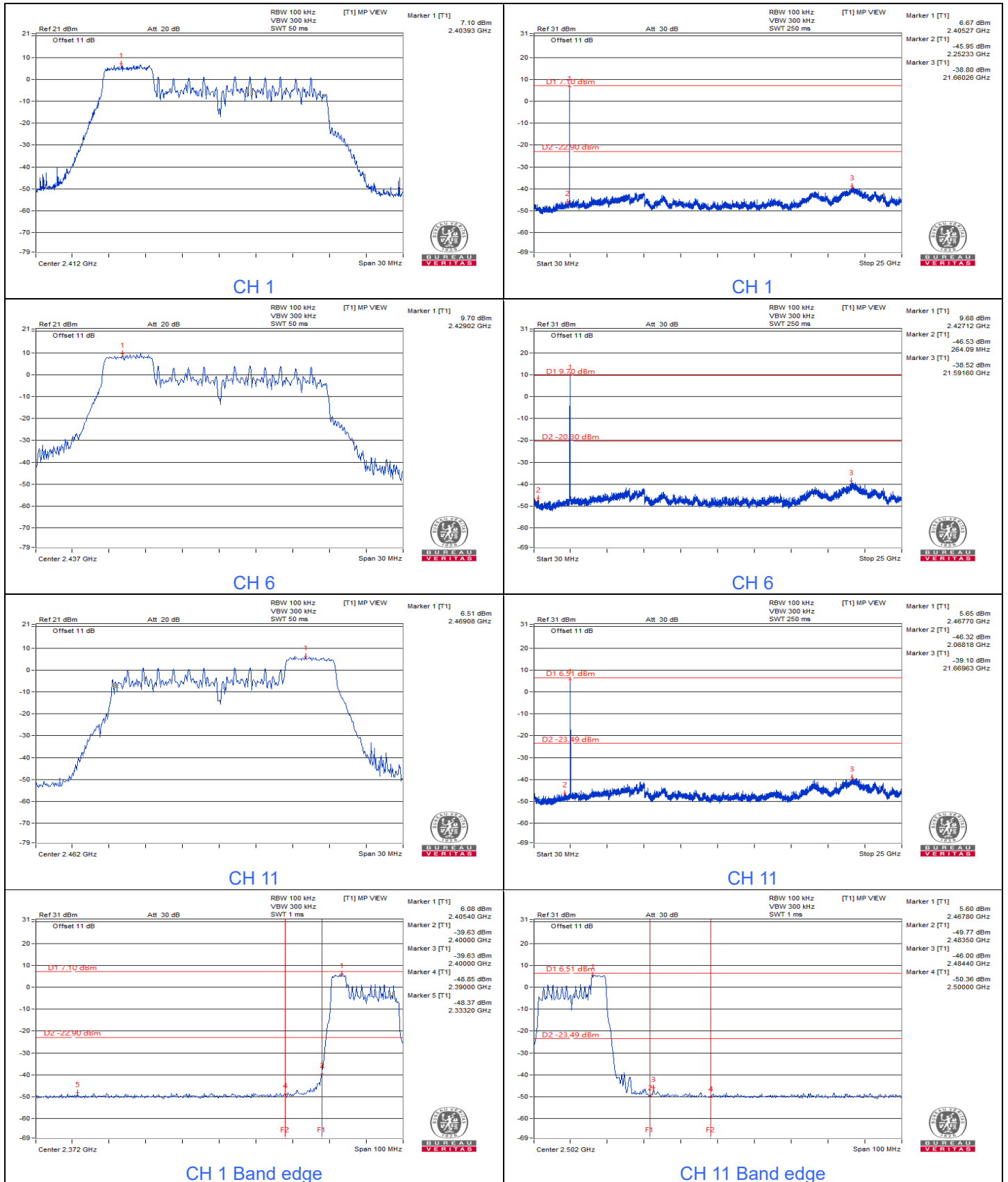
802.11ax (HE20)



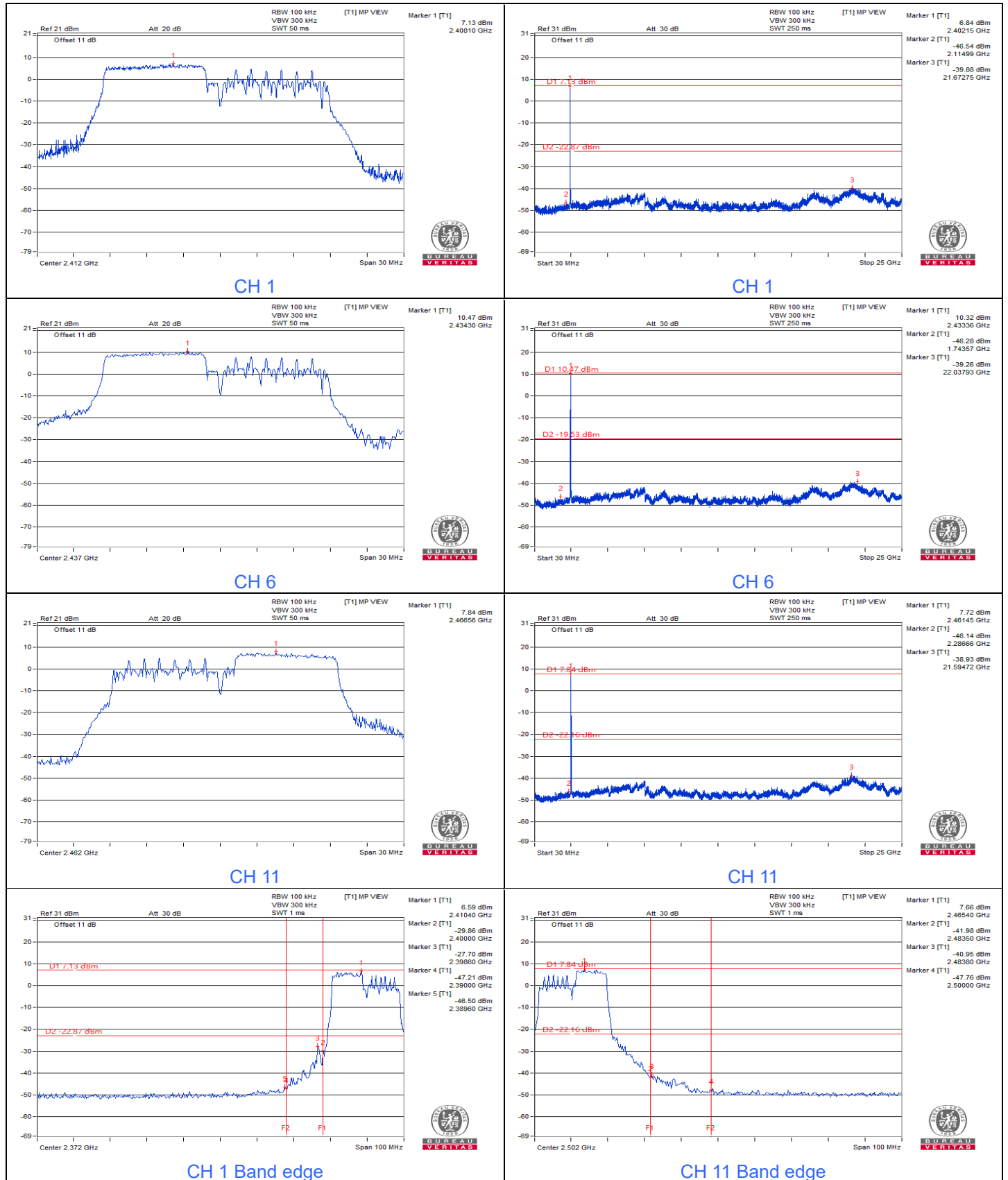
802.11ax (HE20) 26-tone RU



802.11ax (HE20) 52-tone RU



802.11ax (HE20) 106-tone RU



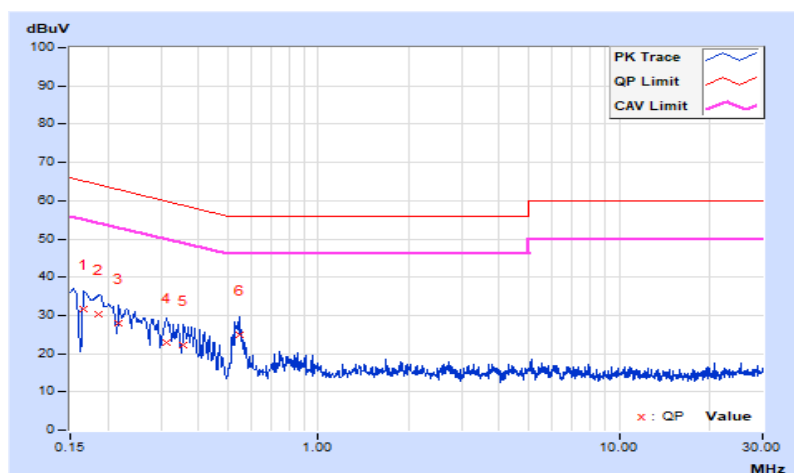
7.5 AC Power Conducted Emissions

RF Mode	802.11b	Channel	CH 11 : 2462 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, 75% RH
Tested By	Vanness Huang		

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	0.16579	9.77	21.73	5.13	31.50	14.90	65.17	55.17	-33.67	-40.27
2	0.18568	9.77	20.41	4.82	30.18	14.59	64.23	54.23	-34.05	-39.64
3	0.21800	9.76	18.28	3.88	28.04	13.64	62.89	52.89	-34.85	-39.25
4	0.31400	9.77	13.29	2.74	23.06	12.51	59.86	49.86	-36.80	-37.35
5	0.35800	9.78	12.51	2.95	22.29	12.73	58.77	48.77	-36.48	-36.04
6	0.54600	9.79	15.28	6.68	25.07	16.47	56.00	46.00	-30.93	-29.53

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

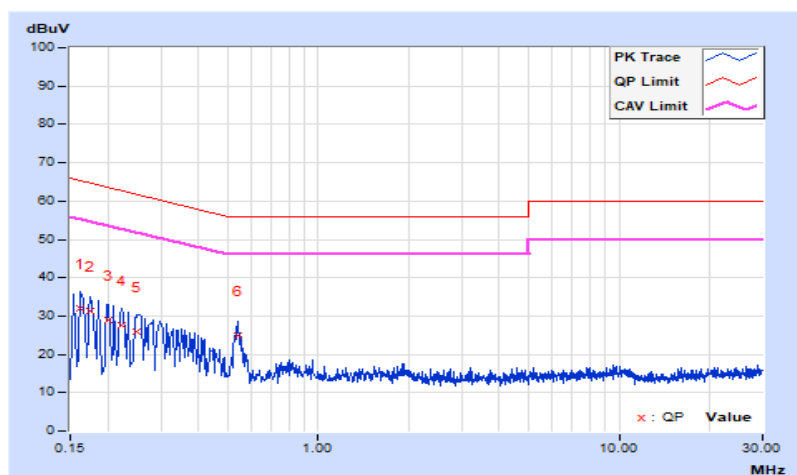


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Vanness Huang		

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	0.16200	9.78	22.07	5.09	31.85	14.87	65.36	55.36	-33.51	-40.49
2	0.17400	9.78	21.44	4.79	31.22	14.57	64.77	54.77	-33.55	-40.20
3	0.19989	9.76	19.36	3.36	29.12	13.12	63.62	53.62	-34.50	-40.50
4	0.22200	9.76	17.94	2.97	27.70	12.73	62.74	52.74	-35.04	-40.01
5	0.24875	9.77	16.11	1.76	25.88	11.53	61.80	51.80	-35.92	-40.27
6	0.54114	9.79	15.22	3.72	25.01	13.51	56.00	46.00	-30.99	-32.49

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



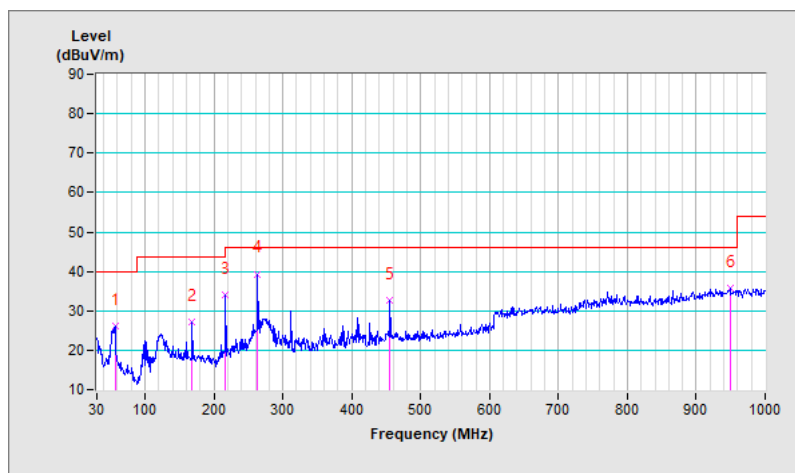
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11b	Channel	CH 11 : 2462 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, 67% RH
Tested By	Sian Chen		

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	56.19	26.1 QP	40.0	-13.9	2.00 H	352	39.0	-12.9
2	167.74	27.3 QP	43.5	-16.2	1.00 H	237	39.8	-12.5
3	216.24	34.0 QP	46.0	-12.0	1.00 H	248	50.0	-16.0
4	263.77	39.4 QP	46.0	-6.6	1.00 H	221	52.6	-13.2
5	455.83	32.7 QP	46.0	-13.3	1.00 H	64	40.0	-7.3
6	949.56	35.9 QP	46.0	-10.1	2.00 H	323	34.3	1.6

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.

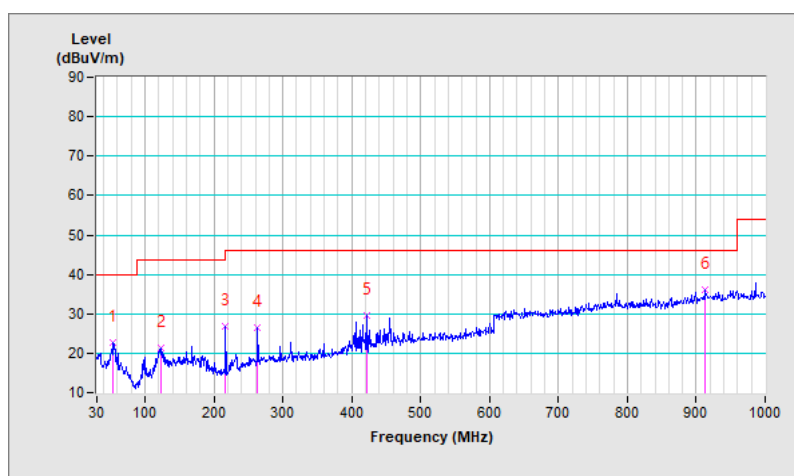


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	53.28	22.8 QP	40.0	-17.2	1.00 V	134	35.6	-12.8
2	122.15	21.4 QP	43.5	-22.1	1.00 V	247	36.0	-14.6
3	216.24	26.8 QP	46.0	-19.2	1.00 V	214	42.8	-16.0
4	263.77	26.5 QP	46.0	-19.5	2.00 V	313	39.7	-13.2
5	420.91	29.6 QP	46.0	-16.4	1.00 V	250	38.1	-8.5
6	913.67	36.2 QP	46.0	-9.8	1.00 V	244	34.9	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 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.



7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	59.3 PK	74.0	-14.7	2.31 H	308	27.1	32.2
2	2390.00	48.6 AV	54.0	-5.4	2.31 H	308	16.4	32.2
3	*2412.00	107.6 PK			2.31 H	308	75.4	32.2
4	*2412.00	104.8 AV			2.31 H	308	72.6	32.2
5	4824.00	51.3 PK	74.0	-22.7	2.31 H	216	47.7	3.6
6	4824.00	44.1 AV	54.0	-9.9	2.31 H	216	40.5	3.6
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	2390.00	59.2 PK	74.0	-14.8	1.94 V	276	27.0	32.2
2	2390.00	48.9 AV	54.0	-5.1	1.94 V	276	16.7	32.2
3	*2412.00	108.5 PK			1.94 V	276	76.3	32.2
4	*2412.00	105.4 AV			1.94 V	276	73.2	32.2
5	4824.00	51.5 PK	74.0	-22.5	2.06 V	294	47.9	3.6
6	4824.00	45.9 AV	54.0	-8.1	2.06 V	294	42.3	3.6

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.

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	*2437.00	107.9 PK			2.31 H	308	75.7	32.2
2	*2437.00	104.7 AV			2.31 H	308	72.5	32.2
3	4874.00	52.7 PK	74.0	-21.3	2.01 H	290	49.0	3.7
4	4874.00	44.1 AV	54.0	-9.9	2.01 H	290	40.4	3.7
5	7311.00	57.3 PK	74.0	-16.7	2.11 H	317	48.5	8.8
6	7311.00	45.7 AV	54.0	-8.3	2.11 H	317	36.9	8.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.8 PK			1.88 V	276	76.6	32.2
2	*2437.00	105.2 AV			1.88 V	276	73.0	32.2
3	4874.00	52.9 PK	74.0	-21.1	1.89 V	297	49.2	3.7
4	4874.00	44.4 AV	54.0	-9.6	1.89 V	297	40.7	3.7
5	7311.00	57.6 PK	74.0	-16.4	1.99 V	311	48.8	8.8
6	7311.00	45.8 AV	54.0	-8.2	1.99 V	311	37.0	8.8

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, the limit was restricted at the RF Output Power.

RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Karl 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	*2462.00	108.0 PK			2.26 H	295	75.7	32.3
2	*2462.00	105.1 AV			2.26 H	295	72.8	32.3
3	2483.50	58.5 PK	74.0	-15.5	2.26 H	295	26.2	32.3
4	2483.50	48.2 AV	54.0	-5.8	2.26 H	295	15.9	32.3
5	4924.00	51.6 PK	74.0	-22.4	1.94 H	287	47.9	3.7
6	4924.00	45.3 AV	54.0	-8.7	1.94 H	287	41.6	3.7
7	7386.00	57.2 PK	74.0	-16.8	2.77 H	290	48.5	8.7
8	7386.00	47.1 AV	54.0	-6.9	2.77 H	290	38.4	8.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.7 PK			1.87 V	354	76.4	32.3
2	*2462.00	105.8 AV			1.87 V	354	73.5	32.3
3	2483.50	59.6 PK	74.0	-14.4	1.87 V	354	27.3	32.3
4	2483.50	49.1 AV	54.0	-4.9	1.87 V	354	16.8	32.3
5	4924.00	51.8 PK	74.0	-22.2	1.00 V	323	48.1	3.7
6	4924.00	45.5 AV	54.0	-8.5	1.00 V	323	41.8	3.7
7	7386.00	56.8 PK	74.0	-17.2	2.28 V	304	48.1	8.7
8	7386.00	46.7 AV	54.0	-7.3	2.28 V	304	38.0	8.7

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, the limit was restricted at the RF Output Power.

RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	61.3 PK	74.0	-12.7	2.31 H	308	29.1	32.2
2	2390.00	49.6 AV	54.0	-4.4	2.31 H	308	17.4	32.2
3	*2412.00	107.9 PK			2.31 H	308	75.7	32.2
4	*2412.00	98.3 AV			2.31 H	308	66.1	32.2
5	4824.00	50.7 PK	74.0	-23.3	2.04 H	284	47.1	3.6
6	4824.00	40.8 AV	54.0	-13.2	2.04 H	284	37.2	3.6
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	2390.00	59.5 PK	74.0	-14.5	1.94 V	276	27.3	32.2
2	2390.00	50.1 AV	54.0	-3.9	1.94 V	276	17.9	32.2
3	*2412.00	108.4 PK			1.96 V	276	76.2	32.2
4	*2412.00	99.4 AV			1.96 V	276	67.2	32.2
5	4824.00	53.2 PK	74.0	-20.8	1.00 V	301	49.6	3.6
6	4824.00	43.1 AV	54.0	-10.9	1.00 V	301	39.5	3.6

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.

RF Mode	802.11g	Channel	CH 2 : 2417 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	58.9 PK	74.0	-15.1	1.95 H	338	26.7	32.2
2	2390.00	48.8 AV	54.0	-5.2	1.95 H	338	16.6	32.2
3	*2417.00	106.5 PK			1.95 H	338	74.3	32.2
4	*2417.00	98.6 AV			1.95 H	338	66.4	32.2
5	4834.00	49.0 PK	74.0	-25.0	2.98 H	139	45.4	3.6
6	4834.00	38.8 AV	54.0	-15.2	2.98 H	139	35.2	3.6
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	2390.00	58.5 PK	74.0	-15.5	2.24 V	309	26.3	32.2
2	2390.00	49.8 AV	54.0	-4.2	2.24 V	309	17.6	32.2
3	*2417.00	108.6 PK			2.24 V	309	76.4	32.2
4	*2417.00	100.4 AV			2.24 V	309	68.2	32.2
5	4834.00	49.2 PK	74.0	-24.8	1.12 V	153	45.6	3.6
6	4834.00	39.1 AV	54.0	-14.9	1.12 V	153	35.5	3.6

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.

RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	61.3 PK	74.0	-12.7	2.31 H	308	29.1	32.2
2	2390.00	48.6 AV	54.0	-5.4	2.31 H	308	16.4	32.2
3	*2437.00	110.7 PK			2.31 H	308	78.5	32.2
4	*2437.00	101.5 AV			2.31 H	308	69.3	32.2
5	2483.50	57.7 PK	74.0	-16.3	2.31 H	308	25.4	32.3
6	2483.50	47.6 AV	54.0	-6.4	2.31 H	308	15.3	32.3
7	4874.00	51.5 PK	74.0	-22.5	2.10 H	237	47.8	3.7
8	4874.00	40.2 AV	54.0	-13.8	2.10 H	237	36.5	3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.9 PK	74.0	-14.1	1.88 V	276	27.7	32.2
2	2390.00	48.3 AV	54.0	-5.7	1.88 V	276	16.1	32.2
3	*2437.00	111.7 PK			1.88 V	273	79.5	32.2
4	*2437.00	102.2 AV			1.88 V	273	70.0	32.2
5	2483.50	57.1 PK	74.0	-16.9	1.88 V	276	24.8	32.3
6	2483.50	47.6 AV	54.0	-6.4	1.88 V	276	15.3	32.3
7	4874.00	50.7 PK	74.0	-23.3	1.00 V	291	47.0	3.7
8	4874.00	41.9 AV	54.0	-12.1	1.00 V	291	38.2	3.7

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, the limit was restricted at the RF Output Power.

RF Mode	802.11g	Channel	CH 10 : 2457 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	*2457.00	106.3 PK			1.95 H	338	74.1	32.2
2	*2457.00	98.5 AV			1.95 H	338	66.3	32.2
3	2483.50	61.8 PK	74.0	-12.2	1.95 H	338	29.5	32.3
4	2483.50	49.8 AV	54.0	-4.2	1.95 H	338	17.5	32.3
5	4914.00	49.1 PK	74.0	-24.9	2.94 H	128	45.4	3.7
6	4914.00	39.1 AV	54.0	-14.9	2.94 H	128	35.4	3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2457.00	108.9 PK			2.24 V	298	76.7	32.2
2	*2457.00	100.5 AV			2.24 V	298	68.3	32.2
3	2483.50	61.4 PK	74.0	-12.6	2.24 V	298	29.1	32.3
4	2483.50	51.0 AV	54.0	-3.0	2.24 V	298	18.7	32.3
5	4914.00	49.5 PK	74.0	-24.5	1.35 V	178	45.8	3.7
6	4914.00	39.3 AV	54.0	-14.7	1.35 V	178	35.6	3.7

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, the limit was restricted at the RF Output Power.

RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Karl 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	*2462.00	107.6 PK			2.26 H	295	75.3	32.3
2	*2462.00	99.4 AV			2.26 H	295	67.1	32.3
3	2483.50	60.7 PK	74.0	-13.3	2.26 H	295	28.4	32.3
4	2483.50	49.5 AV	54.0	-4.5	2.26 H	295	17.2	32.3
5	4924.00	49.8 PK	74.0	-24.2	1.94 H	287	46.1	3.7
6	4924.00	38.9 AV	54.0	-15.1	1.94 H	287	35.2	3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.5 PK			1.87 V	354	76.2	32.3
2	*2462.00	100.3 AV			1.87 V	354	68.0	32.3
3	2483.50	61.6 PK	74.0	-12.4	1.87 V	354	29.3	32.3
4	2483.50	50.5 AV	54.0	-3.5	1.87 V	354	18.2	32.3
5	4924.00	50.2 PK	74.0	-23.8	1.00 V	329	46.5	3.7
6	4924.00	39.2 AV	54.0	-14.8	1.00 V	329	35.5	3.7

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	61.5 PK	74.0	-12.5	2.31 H	308	29.3	32.2
2	2390.00	49.9 AV	54.0	-4.1	2.31 H	308	17.7	32.2
3	*2412.00	109.0 PK			2.31 H	308	76.8	32.2
4	*2412.00	97.6 AV			2.31 H	308	65.4	32.2
5	4824.00	49.7 PK	74.0	-24.3	2.11 H	230	46.1	3.6
6	4824.00	41.1 AV	54.0	-12.9	2.11 H	230	37.5	3.6
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	2390.00	65.7 PK	74.0	-8.3	1.94 V	276	33.5	32.2
2	2390.00	50.1 AV	54.0	-3.9	1.94 V	276	17.9	32.2
3	*2412.00	110.1 PK			1.94 V	276	77.9	32.2
4	*2412.00	98.3 AV			1.94 V	276	66.1	32.2
5	4824.00	49.8 PK	74.0	-24.2	1.00 V	297	46.2	3.6
6	4824.00	41.4 AV	54.0	-12.6	1.00 V	297	37.8	3.6

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.

RF Mode	802.11ax (HE20)	Channel	CH 2 : 2417 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	66.2 PK	74.0	-7.8	2.12 H	312	34.0	32.2
2	2390.00	49.9 AV	54.0	-4.1	2.12 H	312	17.7	32.2
3	*2417.00	110.7 PK			2.12 H	312	78.5	32.2
4	*2417.00	99.9 AV			2.12 H	312	67.7	32.2
5	4834.00	49.1 PK	74.0	-24.9	2.84 H	132	45.5	3.6
6	4834.00	37.1 AV	54.0	-16.9	2.84 H	132	33.5	3.6
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	2390.00	65.0 PK	74.0	-9.0	2.24 V	307	32.8	32.2
2	2390.00	50.3 AV	54.0	-3.7	2.24 V	307	18.1	32.2
3	*2417.00	111.7 PK			2.24 V	307	79.5	32.2
4	*2417.00	100.3 AV			2.24 V	307	68.1	32.2
5	4834.00	49.4 PK	74.0	-24.6	2.95 V	155	45.8	3.6
6	4834.00	39.2 AV	54.0	-14.8	2.95 V	155	35.6	3.6

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.

RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	2390.00	62.4 PK	74.0	-11.6	2.31 H	271	66.2	-3.8
2	2390.00	48.0 AV	54.0	-6.0	2.31 H	271	51.8	-3.8
3	*2437.00	111.4 PK			2.31 H	271	79.2	32.2
4	*2437.00	100.7 AV			2.31 H	271	68.5	32.2
5	2483.50	60.5 PK	74.0	-13.5	2.31 H	271	64.2	-3.7
6	2483.50	47.9 AV	54.0	-6.1	2.31 H	271	51.6	-3.7
7	4874.00	48.9 PK	74.0	-25.1	1.97 H	201	45.2	3.7
8	4874.00	40.6 AV	54.0	-13.4	1.97 H	201	36.9	3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.4 PK	74.0	-10.6	1.88 V	276	31.2	32.2
2	2390.00	48.5 AV	54.0	-5.5	1.88 V	276	16.3	32.2
3	*2437.00	112.2 PK			1.88 V	276	80.0	32.2
4	*2437.00	101.1 AV			1.88 V	276	68.9	32.2
5	2483.50	59.9 PK	74.0	-14.1	1.88 V	276	63.6	-3.7
6	2483.50	48.1 AV	54.0	-5.9	1.88 V	276	51.8	-3.7
7	4874.00	49.4 PK	74.0	-24.6	1.57 V	301	45.7	3.7
8	4874.00	40.9 AV	54.0	-13.1	1.57 V	301	37.2	3.7

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 10 : 2457 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Sian Chen		

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	*2457.00	110.4 PK			2.12 H	332	78.2	32.2
2	*2457.00	99.4 AV			2.12 H	332	67.2	32.2
3	2483.50	64.5 PK	74.0	-9.5	2.12 H	332	32.2	32.3
4	2483.50	50.8 AV	54.0	-3.2	2.12 H	332	18.5	32.3
5	4914.00	49.2 PK	74.0	-24.8	2.88 H	135	45.5	3.7
6	4914.00	37.0 AV	54.0	-17.0	2.88 H	135	33.3	3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2457.00	112.0 PK			2.24 V	307	79.8	32.2
2	*2457.00	100.4 AV			2.24 V	307	68.2	32.2
3	2483.50	64.3 PK	74.0	-9.7	2.24 V	307	32.0	32.3
4	2483.50	50.9 AV	54.0	-3.1	2.24 V	307	18.6	32.3
5	4914.00	49.5 PK	74.0	-24.5	1.61 V	134	45.8	3.7
6	4914.00	37.3 AV	54.0	-16.7	1.61 V	134	33.6	3.7

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Karl Lee		

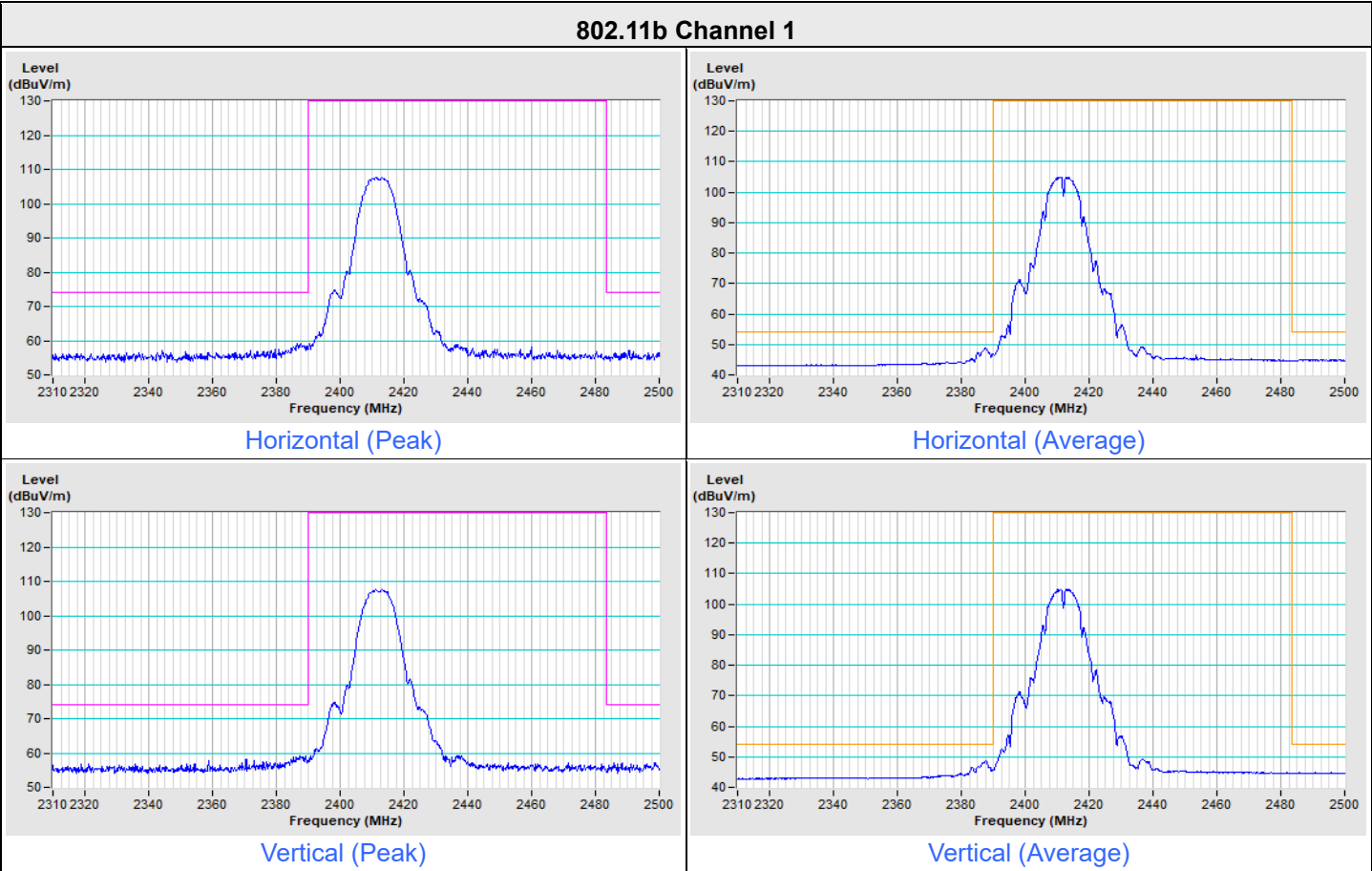
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.4 PK			2.26 H	295	78.1	32.3
2	*2462.00	98.1 AV			2.26 H	295	65.8	32.3
3	2483.50	63.6 PK	74.0	-10.4	2.26 H	295	31.3	32.3
4	2483.50	49.8 AV	54.0	-4.2	2.26 H	295	17.5	32.3
5	4924.00	50.4 PK	74.0	-23.6	1.94 H	287	46.7	3.7
6	4924.00	36.5 AV	54.0	-17.5	1.94 H	287	32.8	3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	111.3 PK			1.87 V	354	79.0	32.3
2	*2462.00	98.9 AV			1.87 V	354	66.6	32.3
3	2483.50	64.7 PK	74.0	-9.3	1.87 V	354	32.4	32.3
4	2483.50	50.7 AV	54.0	-3.3	1.87 V	354	18.4	32.3
5	4924.00	50.7 PK	74.0	-23.3	1.00 V	323	47.0	3.7
6	4924.00	36.8 AV	54.0	-17.2	1.00 V	323	33.1	3.7

Remarks:

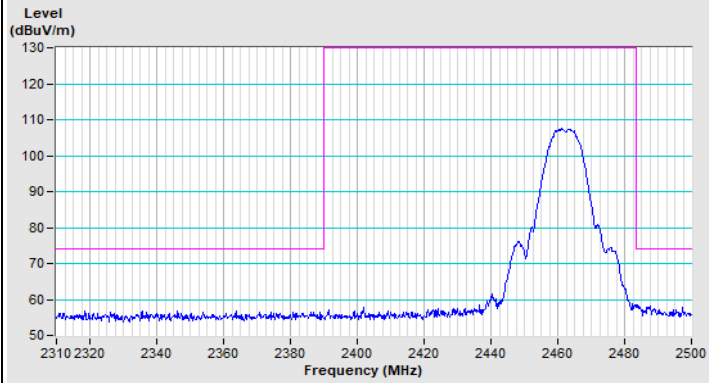
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

Plot of Band Edge

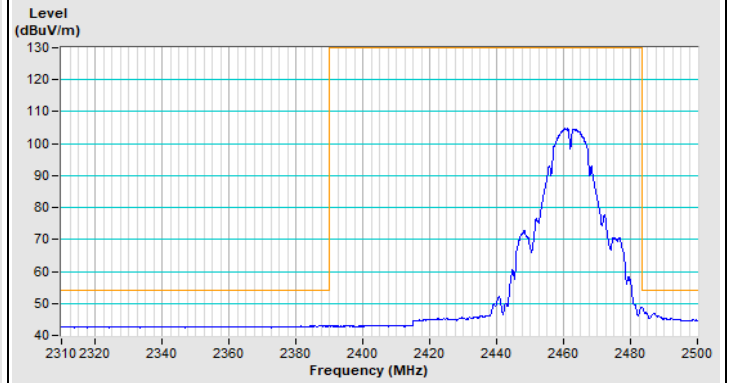
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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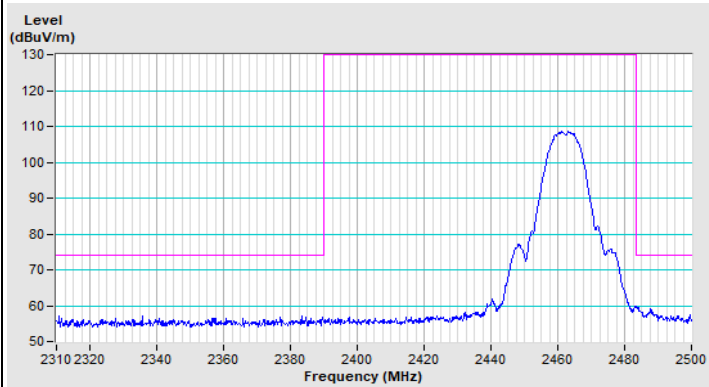
802.11b Channel 11



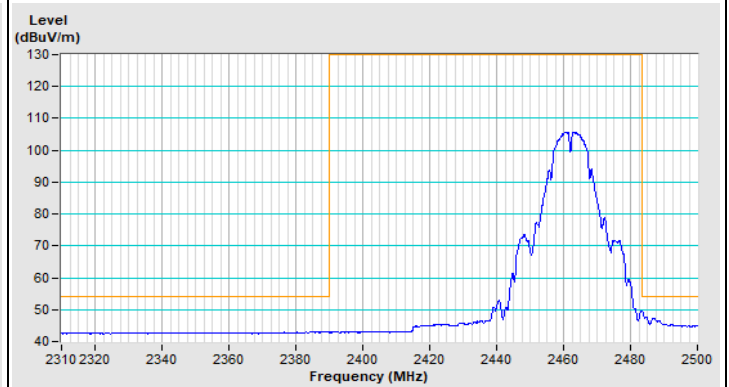
Horizontal (Peak)



Horizontal (Average)



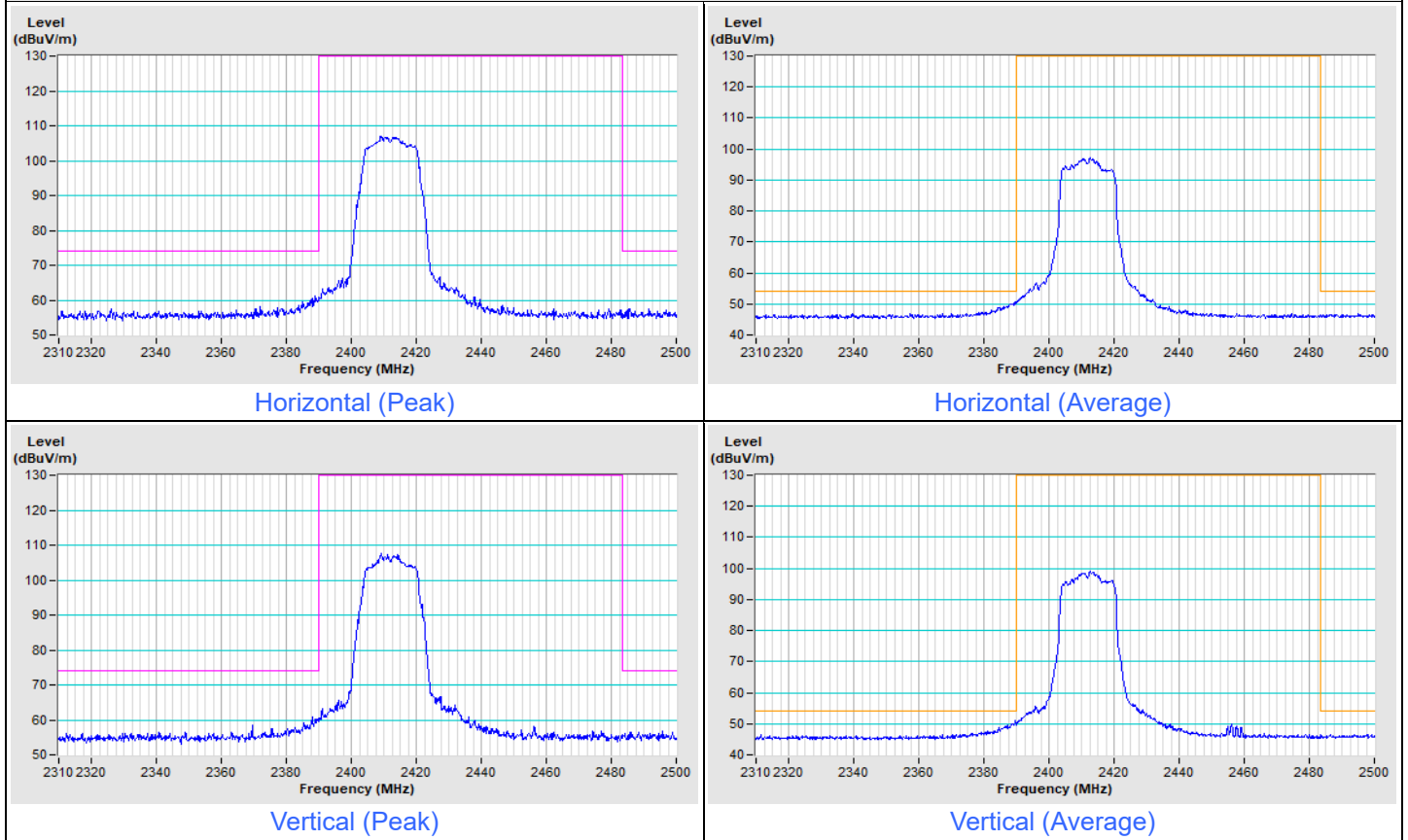
Vertical (Peak)



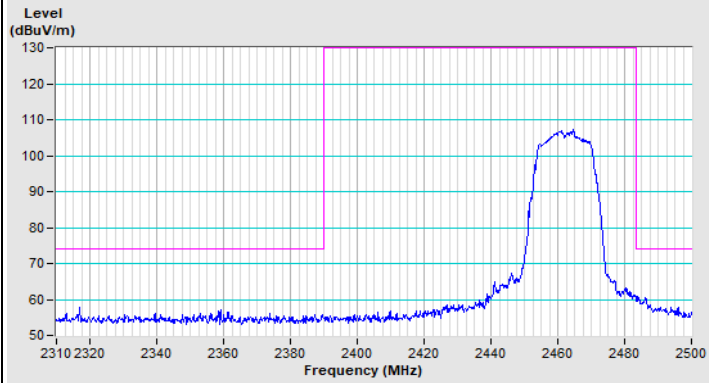
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
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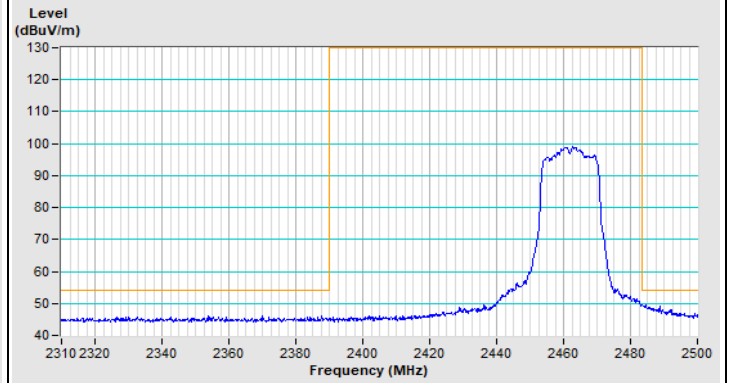
802.11g Channel 1



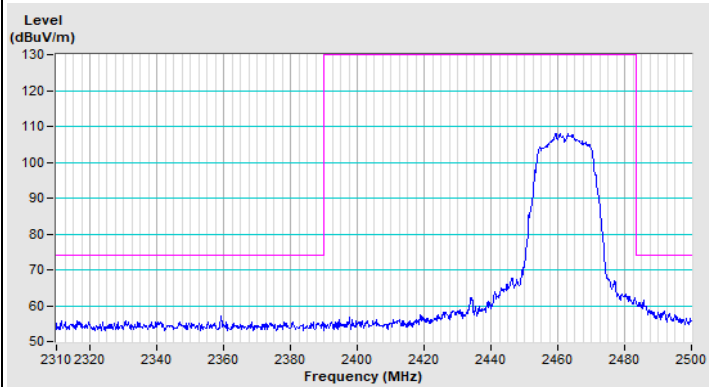
802.11g Channel 11



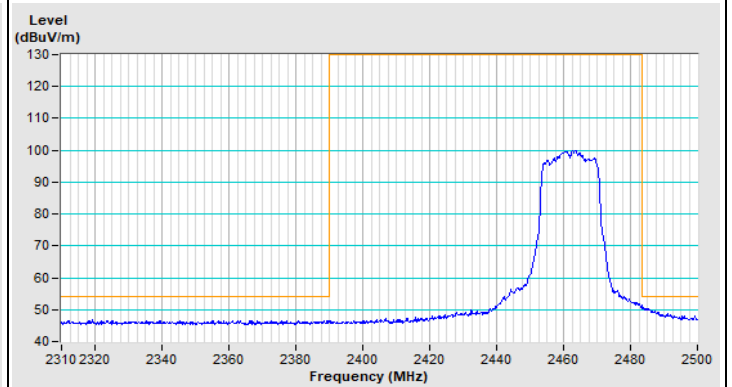
Horizontal (Peak)



Horizontal (Average)

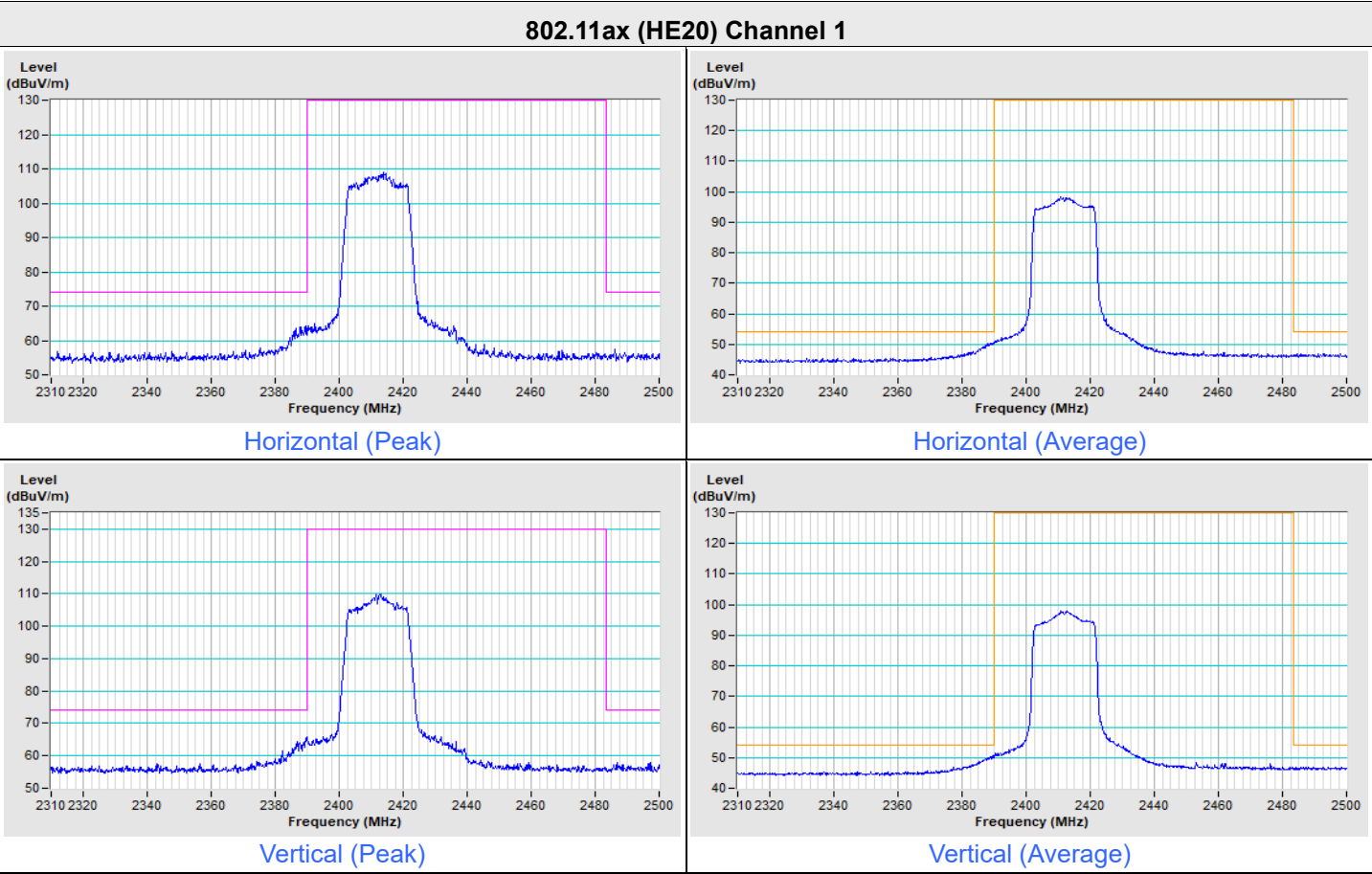


Vertical (Peak)

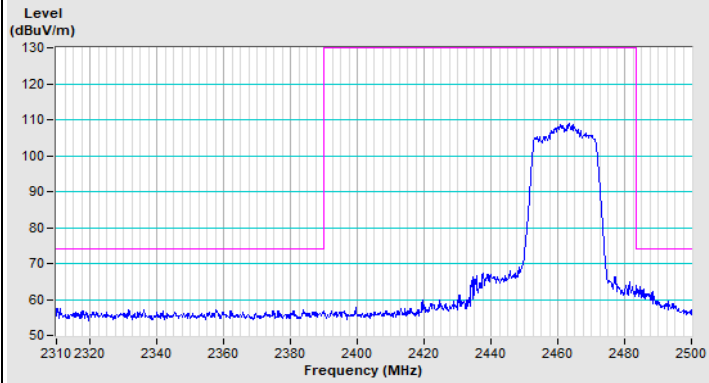


Vertical (Average)

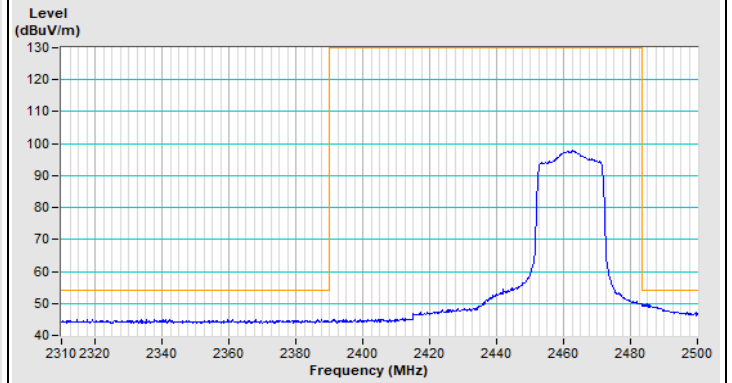
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
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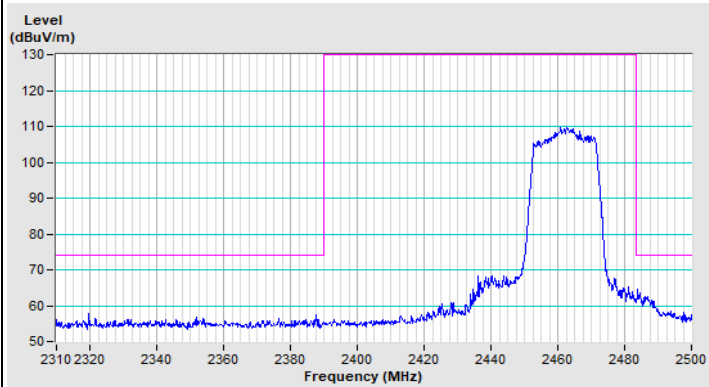
802.11ax (HE20) Channel 11



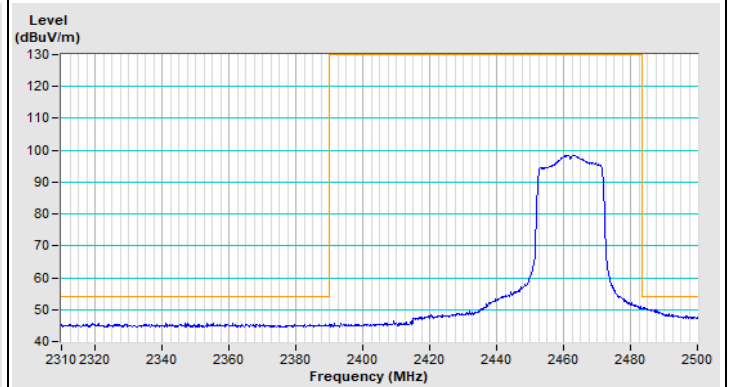
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

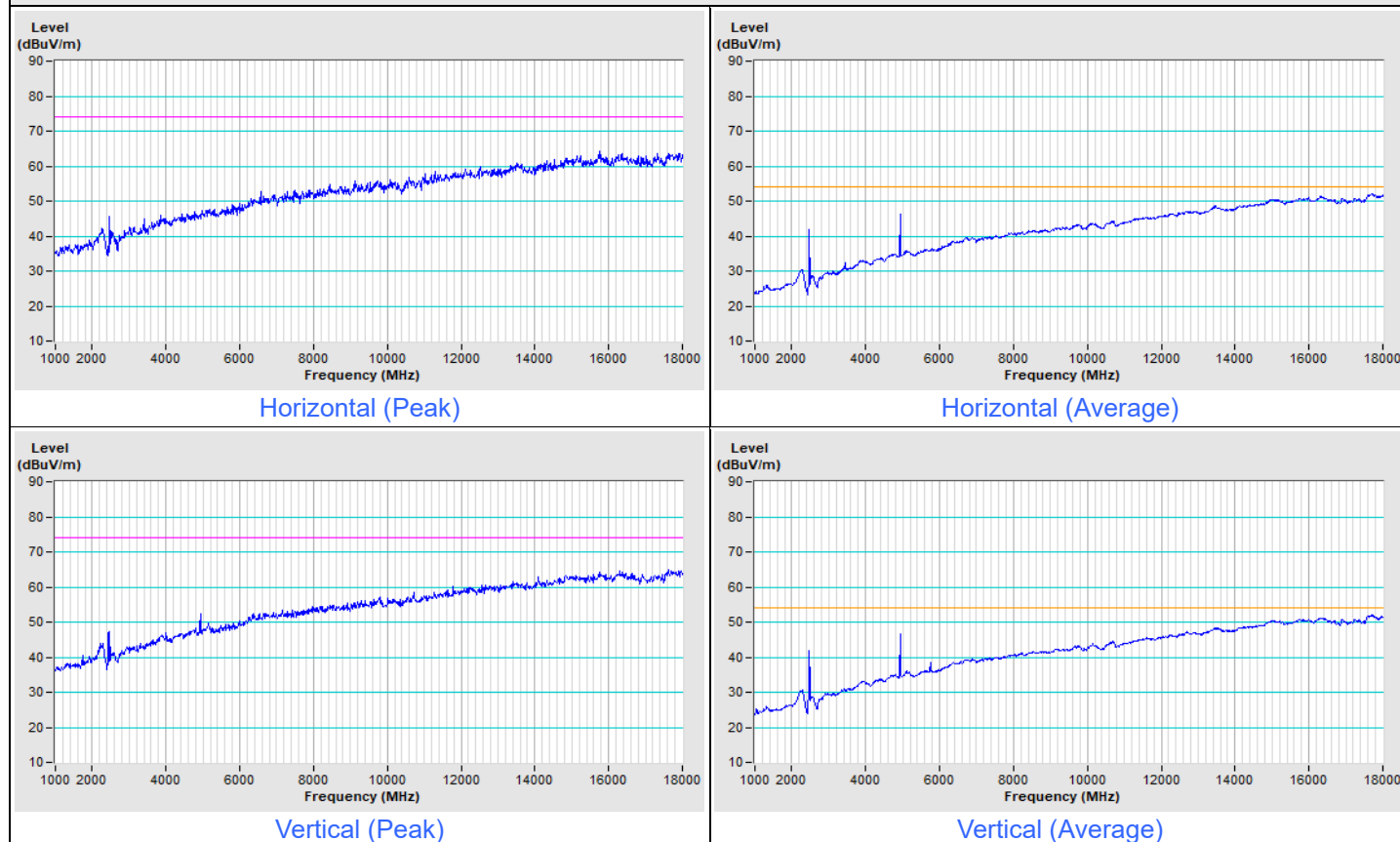


Vertical (Average)

Plot of Other Emission

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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802.11b Channel 11

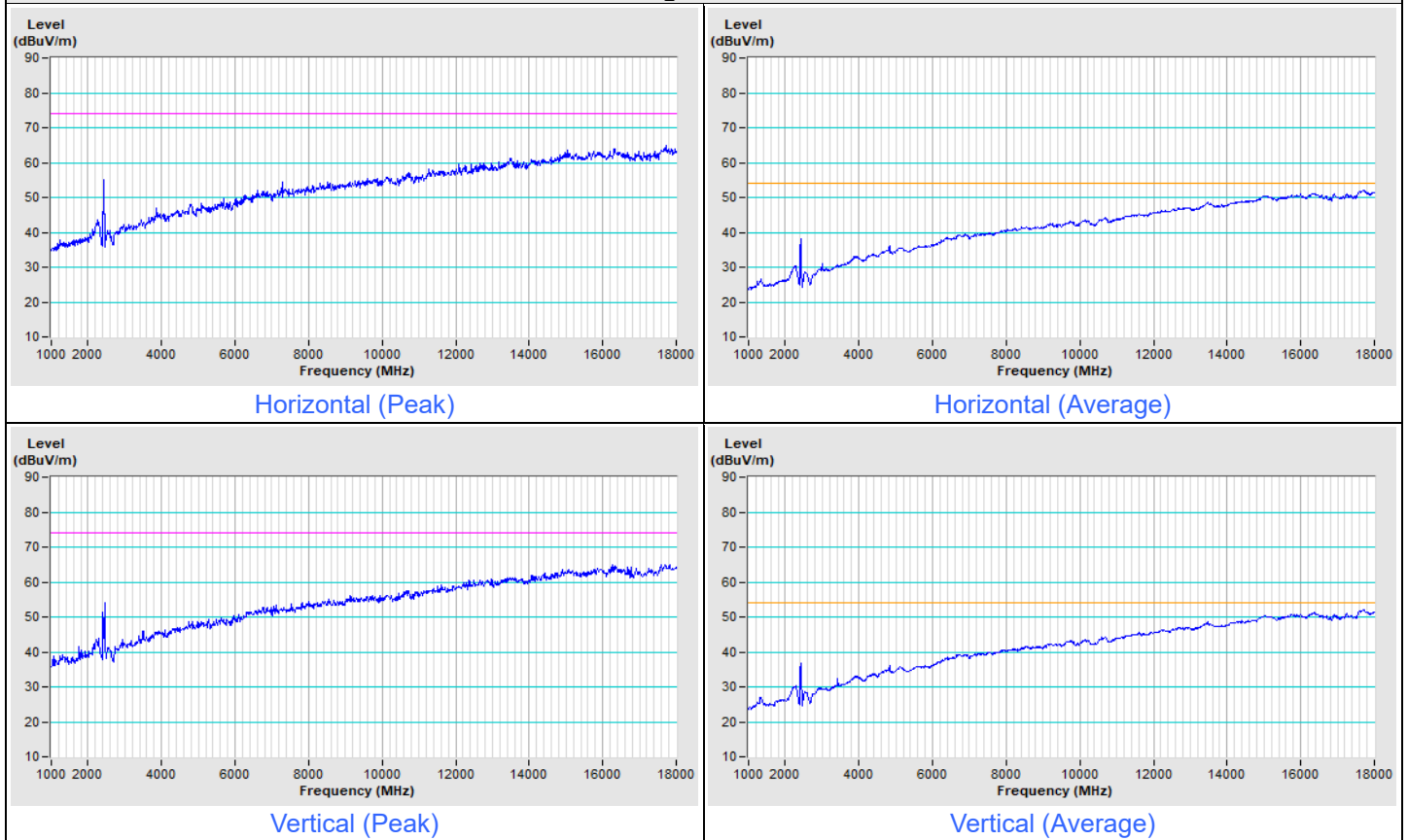


Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 kHz, DET=Peak
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802.11g Channel 10

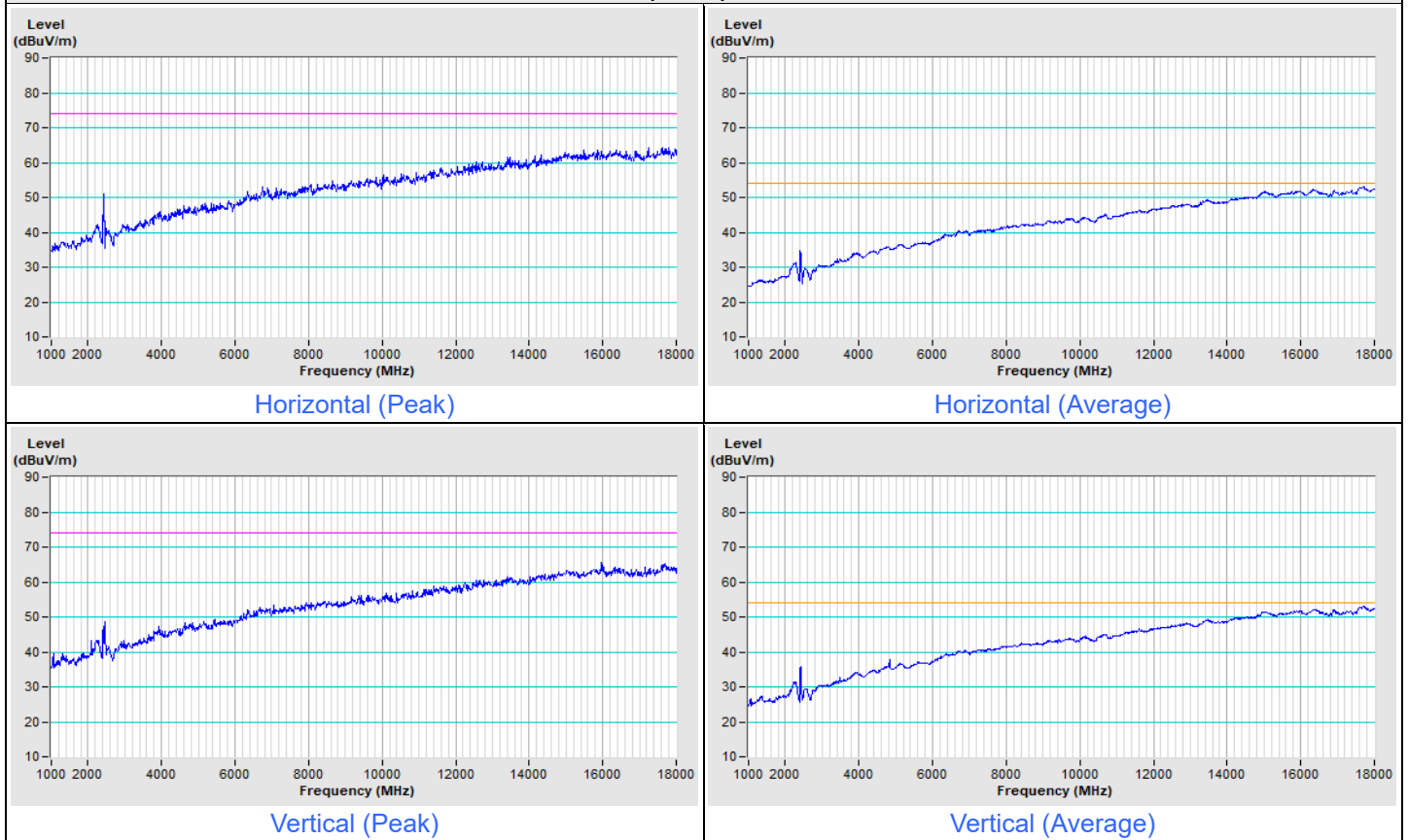


Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=5.1 kHz, DET=Peak
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802.11ax (HE20) Channel 10



Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

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:

Lin Kou EMC/RF Lab

Tel: 886-(0)2-26052180

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-(0)3-6668565 (SIP)

Tel: 886-(0)3-5120595 (WD)

Hwa Ya EMC/RF/Safety/SAR Lab & Wenming EMC/RF Lab

Tel: 886-(0)3-3183232

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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