

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
Report No.: RFBIDGE-WTW-P22050781-3
FCC ID: EHTPERS3
Model No.: 6940w
Received Date: 2022/5/24
Test Date: 2022/7/6 ~ 2022/7/19
Issued Date: 2022/8/12

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FCC Registration / 788550 / TW0003
Designation Number:

Approved by: Jeremy Lin , **Date:** 2022/8/12
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
RFBDGE-WTW-P22050781-3	Original Release	2022/8/12

1 Certificate

Product: IP Phone

Brand: Mitel

Test Model: 6940w

Sample Status: Engineering Sample

Applicant: Mitel Networks Corporation

Test Date: 2022/7/6 ~ 2022/7/19

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

Measurement ANSI C63.10-2013

procedure: KDB 789033 D02 General UNII Test Procedure New Rules 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)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	Pass	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -5.62 dB at 19.91800 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -14.0 dB at 397.63 MHz
15.407(b)(1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.5 dB at 5150.00 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) (±)
Occupied Bandwidth	-	±491.896 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.79 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.92 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	IP Phone
Brand	Mitel
Test Model	6940w
Status of EUT	Engineering Sample
Power Supply Rating	48Vdc from adapter 56Vdc from POE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 72.2 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz, 5745 ~ 5825 MHz
Number of Channel	802.11a, 802.11n (HT20): 24
Output Power	5180 ~ 5240 MHz : 44.259 mW (16.46 dBm) 5260 ~ 5320 MHz : 44.157 mW (16.45 dBm) 5500 ~ 5700 MHz : 15.56 mW (11.92 dBm) 5745 ~ 5825 MHz : 15.668 mW (11.95 dBm)
EUT Category	Client device

Note:

- The EUT use the following devices.

Product	Brand	Model	Description	Remark
Adapter	FSP	FSP030-DFMN3	I/P: 100-240 Vac, 50-60 Hz, 1.2 A O/P: 48 Vdc, 0.625 A DC Output Cable: 1.78m cable with one core attached on adapter	Support Unit
POE	Phihong	POE15M-1AF	I/P: 100-240 Vac, 50-60 Hz, 0.8 A O/P: 56 Vdc, 0.275 A, 15.4W	Support Unit
Network Cable (RJ45)	N/A	N/A	2.1 m non-shielded cable w/o core	Accessory

- There are Bluetooth and WLAN (2.4 GHz & 5 GHz) technology used for the EUT.
- 2.4GHz & 5GHz & BT technology cannot transmit at same time.
- 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

- The antenna information is listed as below.

Antenna No.	Gain (dBi)								Antenna Type	Connector Type
	5150	5250	5350	5470	5600	5725	5785	5850		
1	2.84	2.55	2.81	3.50	3.31	3.15	3.42	3.48	Chip	N/A

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

- The EUT provides 1 completed transmitter and 1 receiver:

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	1TX	1RX
802.11n (HT20)	1TX	1RX

3.3 Channel List

FOR 5180 ~ 5320 MHz

8 channels are provided for 802.11a and 802.11n (HT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

FOR 5500 ~ 5700 MHz

11 channels are provided for 802.11a and 802.11n (HT20):

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

FOR 5745 ~ 5825 MHz:

5 channels are provided for 802.11a and 802.11n (HT20):

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

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	EUT can be used in the following ways: X-axis / Z-axis. Pre-scan in these ways and find the worst case as a representative test condition.
Worst Case:	The worst case was found when positioned on X-plane.
EUT Configure Mode:	Mode A: EUT with Adapter Mode B: EUT with POE

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

EUT Configure Mode	Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
A, B	AC Power Conducted Emissions	802.11a	40	BPSK	6Mb/s
A, B	Unwanted Emissions below 1 GHz	802.11a	40	BPSK	6Mb/s
A	Unwanted Emissions above 1 GHz	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
		802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
A	RF Output Power / Power Spectral Density	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
		802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
A	Occupied Bandwidth	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
		802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
A	26 dB Bandwidth	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
		802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
A	6 dB Bandwidth	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
		802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
A	Frequency Stability	802.11a	36	un-modulation	-

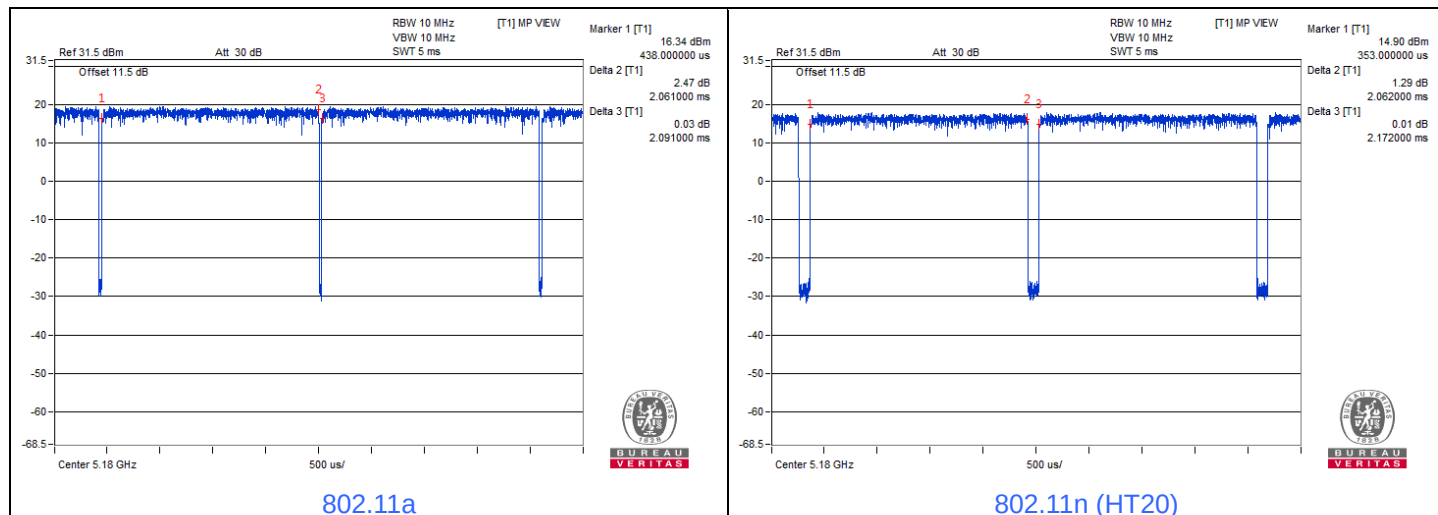
3.5 Duty Cycle of Test Signal

Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

Duty cycle of test signal is $< 98\%$, duty factor shall be considered.

802.11a: Duty cycle = $2.061 \text{ ms} / 2.091 \text{ ms} \times 100\% = 98.6\%$

802.11n (HT20): Duty cycle = $2.062 \text{ ms} / 2.172 \text{ ms} \times 100\% = 94.9\%$, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.23 \text{ dB}$

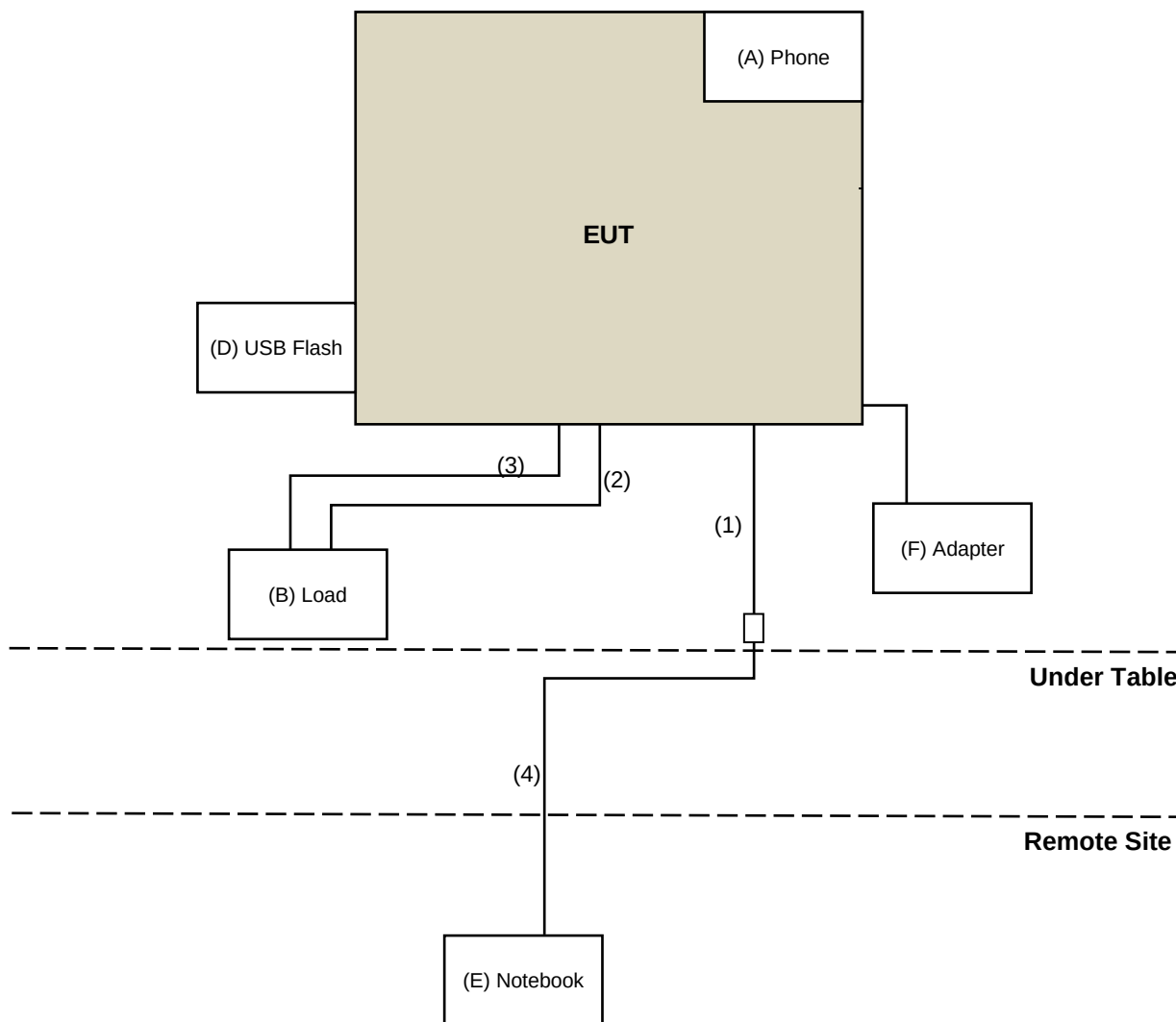


3.6 Test Program Used and Operation Descriptions

Controlling software Tera term v4.83 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

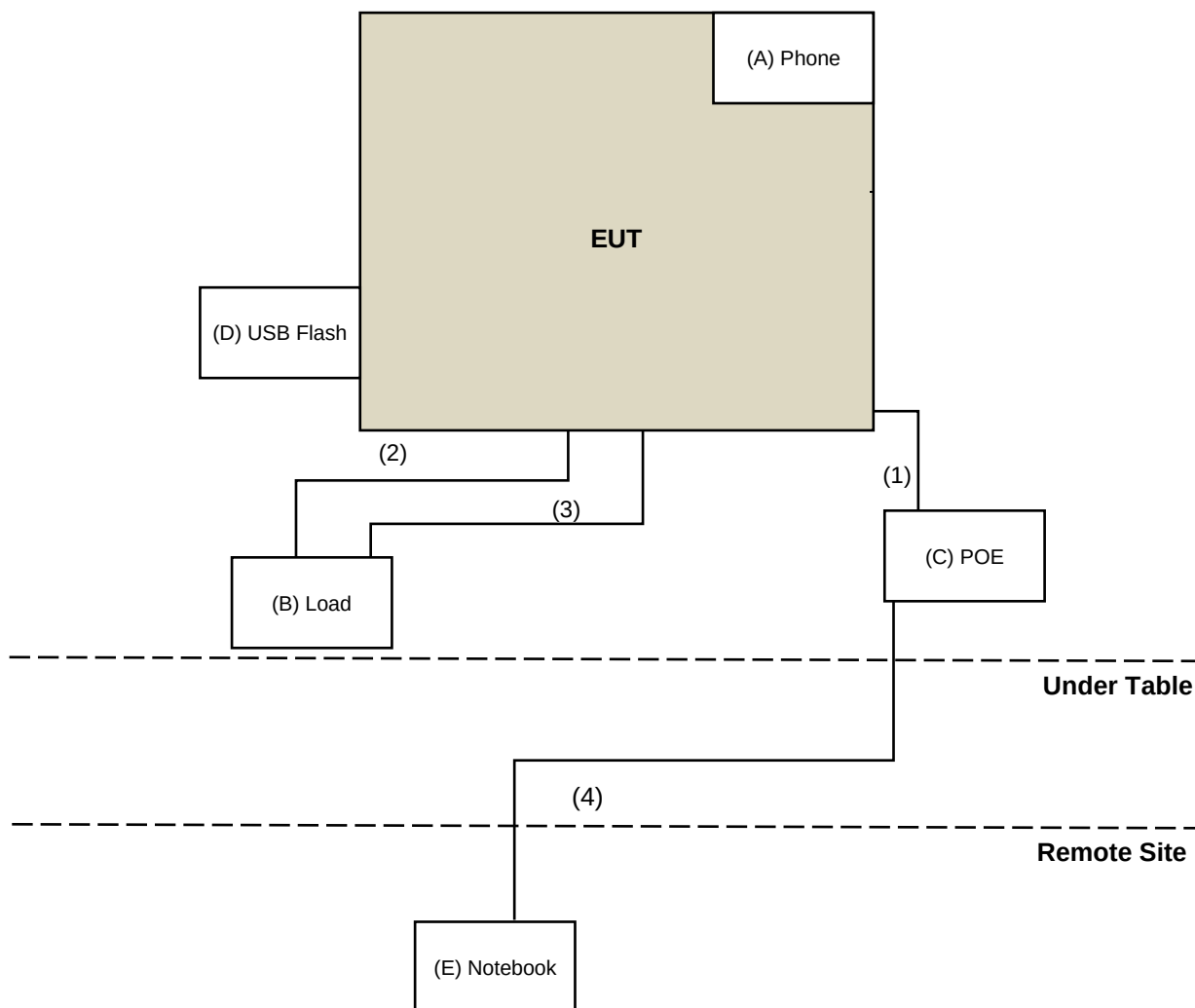
3.7 Connection Diagram of EUT and Peripheral Devices

Mode A





Mode B



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Phone	N/A	N/A	N/A	N/A	Supplied by applicant
B	Load	N/A	N/A	N/A	N/A	Provided by Lab
C	POE	N/A	N/A	N/A	N/A	Supplied by applicant
D	USB Flash	San Disk	SDDDC3-032G	N/A	N/A	Provided by Lab
E	Notebook	DELL	E5410	1HC2XM1	N/A	Provided by Lab
F	Adapter	FSP	FSP030-DFMN3	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45Cable	1	2.1	N	N	Supplied by applicant
2	LAN Cable	1	1.5	N	N	Provided by Lab
3	Tel. Cable	1	2	N	NO	Provided by Lab
4	LAN Cable	1	10	N	N	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 26 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/7/6

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	2022/1/18	2023/1/17
Power sensor Keysight	U2021XA	MY55380009	2022/3/23	2023/3/22
Wideband Power Sensor(N1923A) KEYSIGHT	N1923A	MY58020002	2022/1/17	2023/1/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/7/6

4.3 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get information of the instruments.

4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Source ExTech	CFW-105	E000603	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2022/6/23	2023/6/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/1/3	2023/1/2

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/7/6

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
DC LISN R&S	ESH3-Z6	100219	2021/7/25	2022/7/24
		844950/018	2021/7/25	2022/7/24
DC-LISN SCHWARZBECK MESS- ELETRONIK	NNBM 8126G	8126G-069	2021/11/10	2022/11/9
LISN R&S	ESH2-Z5	100100	2022/2/17	2023/2/16
	ESH3-Z5	100312	2021/9/17	2022/9/16
RF Coaxial Cable WORKEN	5D-FB	Cable-cond2-01	2021/9/4	2022/9/3
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
Test Receiver R&S	ESR3	102783	2021/12/20	2022/12/19
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2021/8/20	2022/8/19

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2022/7/15 ~ 2022/7/19

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower KaiTuo	N/A	N/A	N/A	N/A
Antenna Tower Controller KaiTuo	KT-2000	N/A	N/A	N/A
Bi-log Broadband Antenna Schwarzbeck	VULB9168	9168-995	2021/10/28	2022/10/27
Loop Antenna TESEQ	HLA 6121	45745	2021/7/21	2022/7/20
Loop Antenna EMCI	EM-6879	269	2021/9/16	2022/9/15
MXA Signal Analyzer KEYSIGHT	N9020B	MY60110462	2021/12/21	2022/12/20
Pre_Amplifier EMCI	EMC330N	980783	2022/1/17	2023/1/16
Pre-amplifier EMCI	EMC001340	980201	2021/9/15	2022/9/14
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/1/15	2023/1/14
	EMCCFD400-NM-NM-9000	201252	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-3000	201250	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-500	201245	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_V7.6.15.9.5	N/A	N/A	N/A
Test Receiver R&S	ESR3	102579	2022/7/1	2023/6/30
Turn Table Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208675	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 7.
2. Tested Date: 2022/7/15 ~ 2022/7/19

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower KaiTuo	N/A	N/A	N/A	N/A
Antenna Tower Controller KaiTuo	KT-2000	N/A	N/A	N/A
Horn Antenna RFSPIN	DRH18-E	210104A18E	2021/11/14	2022/11/13
Horn Antenna Schwarzbeck	BBHA 9170	9170-1048	2021/11/14	2022/11/13
MXA Signal Analyzer KEYSIGHT	N9020B	MY60110462	2021/12/21	2022/12/20
Pre_Amplifier EMCI	EMC118A45SE	980810	2021/12/30	2022/12/29
	EMC184045SE	980787	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	EMC104-SM-SM-9000	201230	2022/1/17	2023/1/16
	EMC104-SM-SM-3000	201242	2022/1/17	2023/1/16
	EMC104-SM-SM-1000	210101	2022/1/17	2023/1/16
	EMC101G-KM-KM-5000	201259	2022/1/17	2023/1/16
	EMC101G-KM-KM-3000	201256	2022/1/17	2023/1/16
	EMC101G-KM-KM-2000	201253	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Test Receiver R&S	ESR3	102579	2022/7/1	2023/6/30
Turn Table Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208675	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 7.
2. Tested Date: 2022/7/7 ~ 2022/7/9

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

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

Operation Band	Limit
U-NII-2A	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

5.3 Power Spectral Density

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/ MHz
	Fixed point-to-point Access Point	
	Indoor Access Point	
	Mobile and Portable client device	11 dBm/ MHz

Operation Band	Limit
U-NII-2A	11 dBm/ MHz
U-NII-2C	11 dBm/ MHz
U-NII-3	30 dBm/ 500 kHz

5.4 6 dB Bandwidth

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

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 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.

5.8 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).

5.9 Unwanted Emissions above 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)
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.

Limits of unwanted emission out of the restricted bands

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

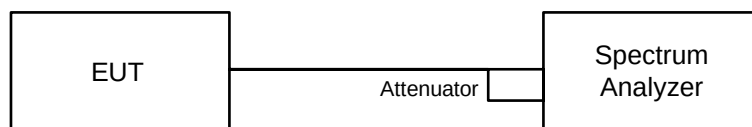
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

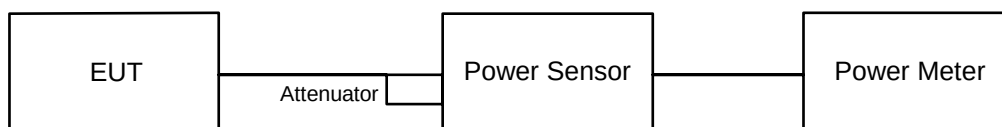


6.1.2 Test Procedure

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

6.2 RF Output Power

6.2.1 Test Setup

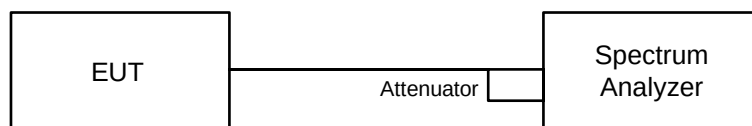


6.2.2 Test Procedure

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.

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:

Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Sweep points ≥ $[2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Record the max value

For specified measurement bandwidth 1 MHz:

Method SA-2

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 1 MHz, Set VBW $\geq$ 3 MHz, Detector = RMS
- c. Sweep points $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- d. Sweep time = auto, trigger set to “free run”.
- e. Trace average at least 100 traces in power averaging mode.
- f. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- g. Record the max value and add 10 log (1/duty cycle).

For specified measurement bandwidth 500 kHz:

Method SA-1

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- d. Sweep points $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- e. Sweep time = auto, trigger set to “free run”.
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value

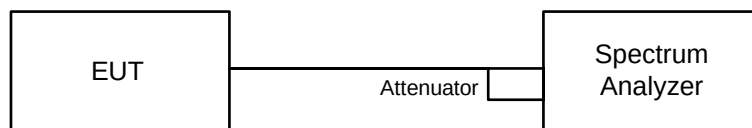
For specified measurement bandwidth 500 kHz:

Method SA-2

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- d. Sweep points $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- e. Sweep time = auto, trigger set to “free run”.
- f. Trace average at least 100 traces in power averaging mode.
- g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- h. Record the max value and add 10 log (1/duty cycle).

6.4 6 dB Bandwidth

6.4.1 Test Setup

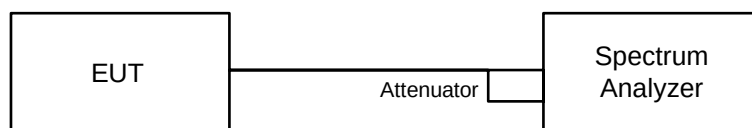


6.4.2 Test Procedure

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

6.5 Occupied Bandwidth

6.5.1 Test Setup

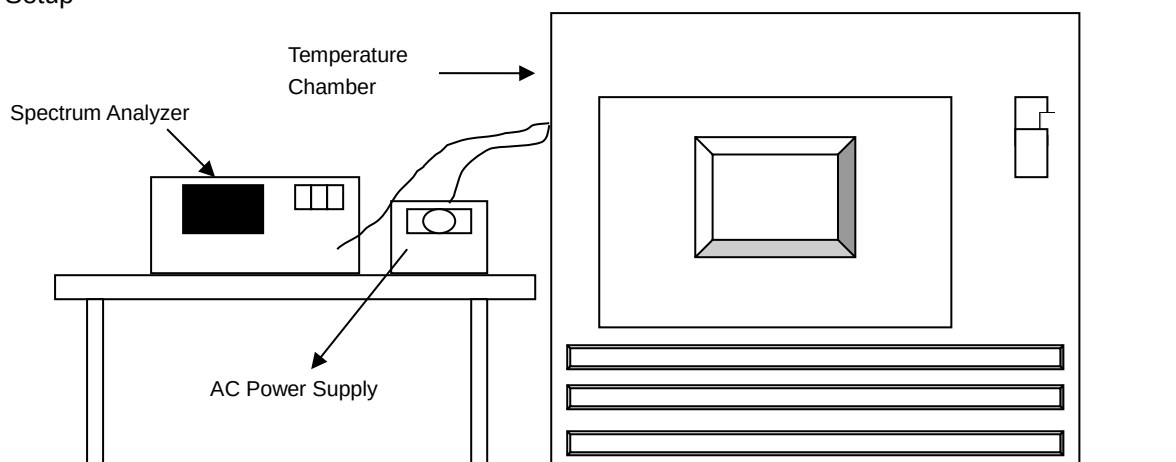


6.5.2 Test Procedure

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

6.6 Frequency Stability

6.6.1 Test Setup

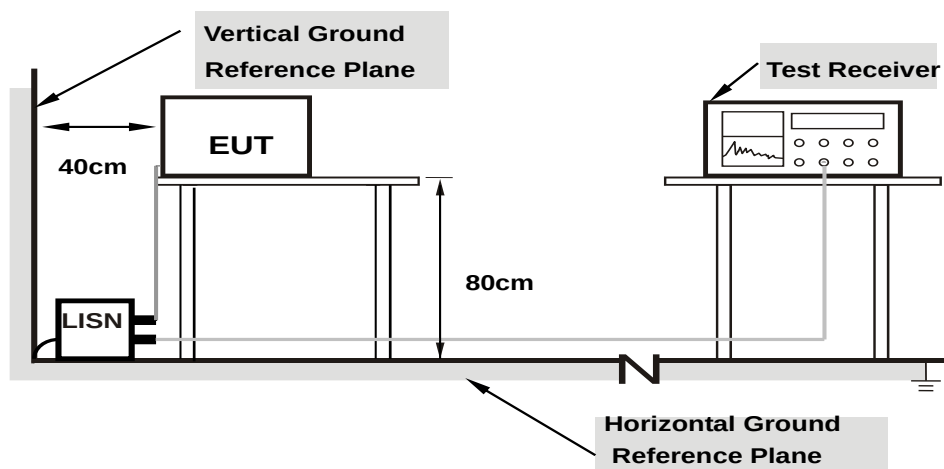


6.6.2 Test Procedure

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

6.7 AC Power Conducted Emissions

6.7.1 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).

6.7.2 Test Procedure

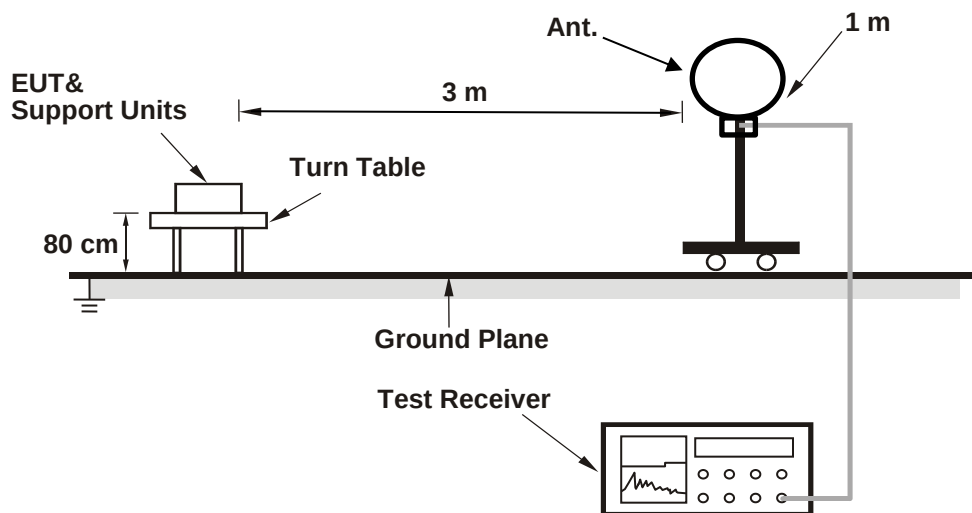
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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.

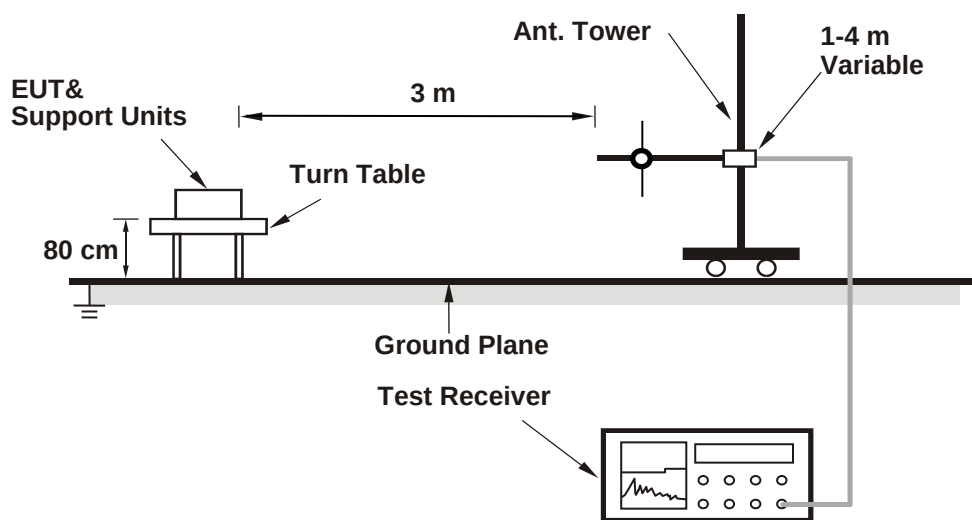
6.8 Unwanted Emissions below 1 GHz

6.8.1 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).

6.8.2 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.

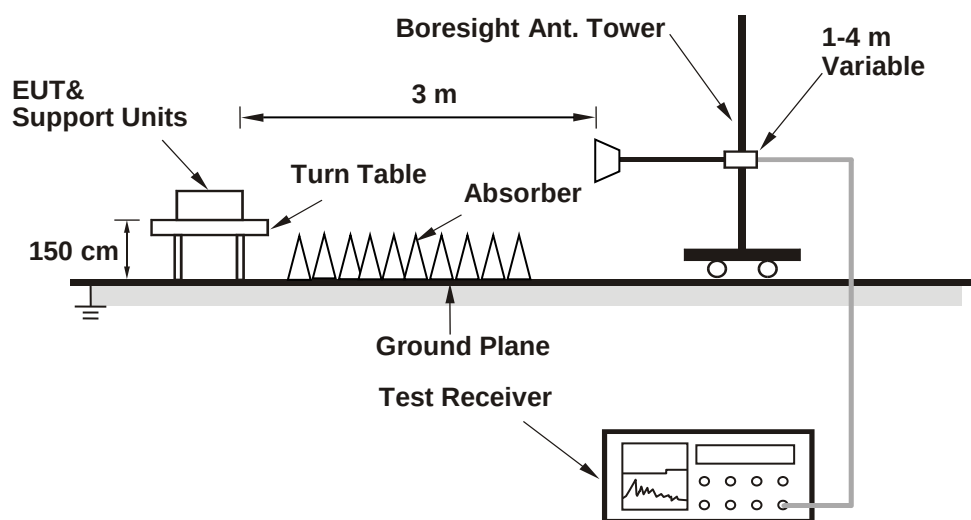
Notes:

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.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup

For Radiated emission above 1 GHz



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

6.9.2 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 26 dB Bandwidth

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

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	22.08
60	5300	22.27
64	5320	21.92
100	5500	21.93
116	5580	21.93
140	5700	21.96

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	22.08	24.43	>	24
60	5300	22.27	24.47	>	24
64	5320	21.92	24.4	>	24
100	5500	21.93	24.41	>	24
116	5580	21.93	24.41	>	24
140	5700	21.96	24.41	>	24

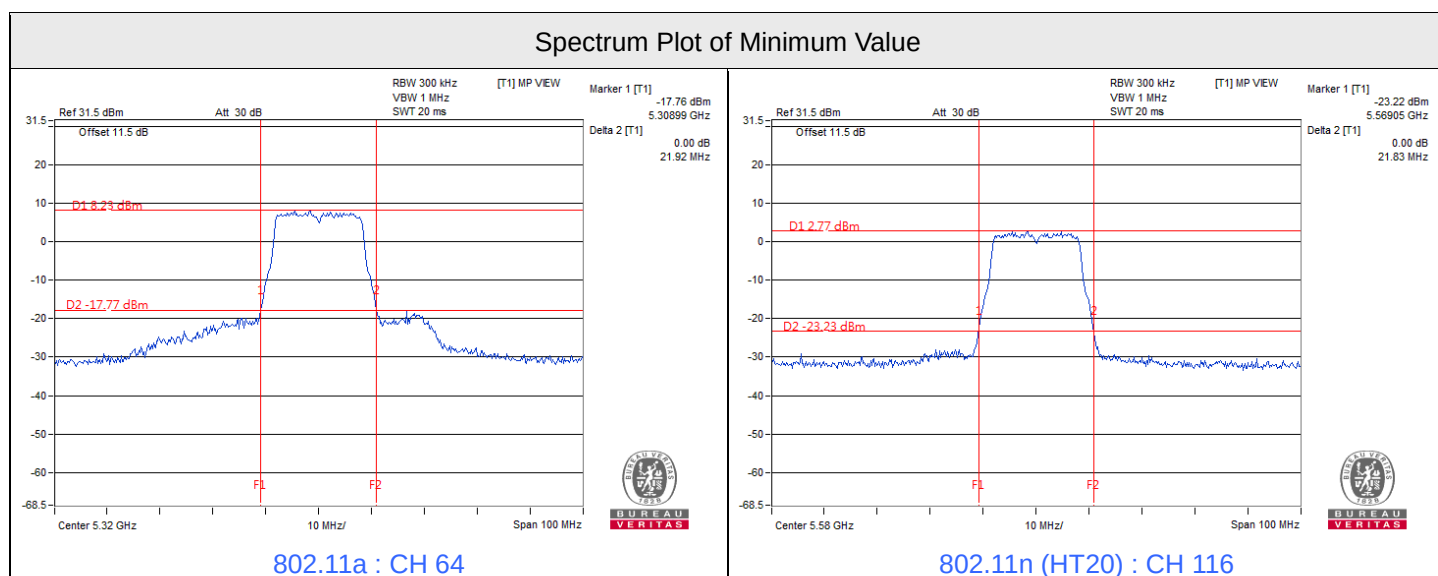
Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11n (HT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	23.56
60	5300	26.68
64	5320	22.04
100	5500	21.94
116	5580	21.83
140	5700	21.94

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	23.56	24.72 > 24
60	5300	26.68	25.26 > 24
64	5320	22.04	24.43 > 24
100	5500	21.94	24.41 > 24
116	5580	21.83	24.39 > 24
140	5700	21.94	24.41 > 24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.



7.2 RF Output Power

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

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	34.914	15.43	24	Pass
40	5200	44.259	16.46	24	Pass
48	5240	43.752	16.41	24	Pass
52	5260	44.157	16.45	24	Pass
60	5300	43.152	16.35	24	Pass
64	5320	42.954	16.33	24	Pass
100	5500	15.56	11.92	24	Pass
116	5580	15.382	11.87	24	Pass
140	5700	15.524	11.91	24	Pass
149	5745	15.382	11.87	30	Pass
157	5785	15.56	11.92	30	Pass
165	5825	15.668	11.95	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.81 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 3.48 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	27.606	14.41	24	Pass
40	5200	34.356	15.36	24	Pass
48	5240	34.995	15.44	24	Pass
52	5260	34.834	15.42	24	Pass
60	5300	33.343	15.23	24	Pass
64	5320	35.237	15.47	24	Pass
100	5500	13.932	11.44	24	Pass
116	5580	13.032	11.15	24	Pass
140	5700	13.996	11.46	24	Pass
149	5745	13.868	11.42	30	Pass
157	5785	13.9	11.43	30	Pass
165	5825	13.002	11.14	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.81 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 3.48 dBi < 6 dBi, so the output power limit shall not be reduced.

7.3 Power Spectral Density

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

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	2.36	11.00	Pass
40	5200	3.27	11.00	Pass
48	5240	3.31	11.00	Pass
52	5260	3.83	11.00	Pass
60	5300	3.61	11.00	Pass
64	5320	3.58	11.00	Pass
100	5500	-1.26	11.00	Pass
116	5580	-0.90	11.00	Pass
140	5700	-0.68	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.84 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.81 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.5 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	0.73	0.23	0.96	11.00	Pass
40	5200	1.93	0.23	2.16	11.00	Pass
48	5240	1.87	0.23	2.10	11.00	Pass
52	5260	2.28	0.23	2.51	11.00	Pass
60	5300	2.15	0.23	2.38	11.00	Pass
64	5320	2.34	0.23	2.57	11.00	Pass
100	5500	-1.55	0.23	-1.32	11.00	Pass
116	5580	-2.23	0.23	-2.00	11.00	Pass
140	5700	-1.79	0.23	-1.56	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.84 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.81 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.5 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	-9.16	-6.94	30	Pass
157	5785	-8.89	-6.67	30	Pass
165	5825	-9.54	-7.32	30	Pass

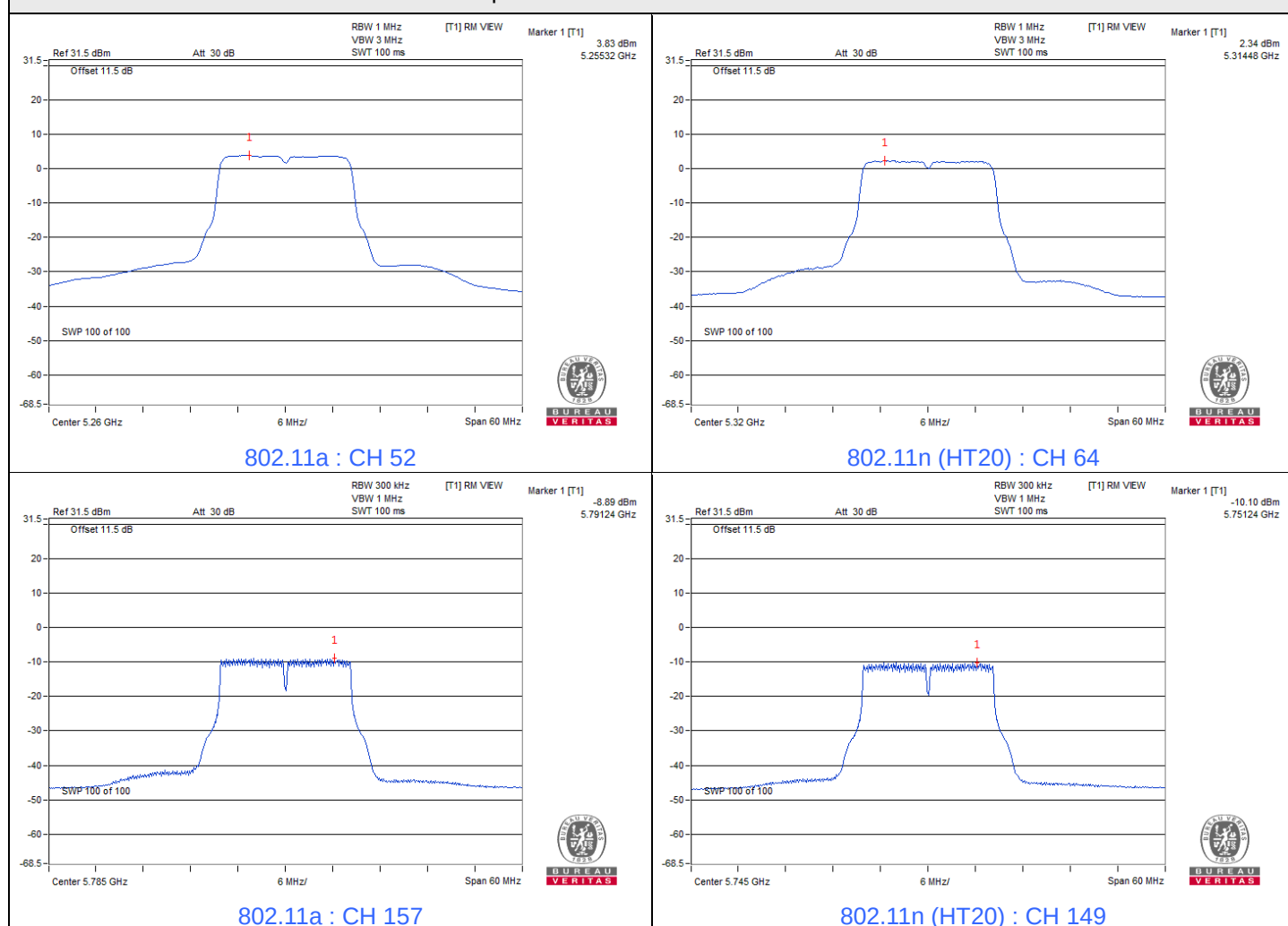
Note: For U-NII-3, the antenna gain is 3.48 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	-10.1	0.23	-7.65	30	Pass
157	5785	-10.27	0.23	-7.82	30	Pass
165	5825	-10.72	0.23	-8.27	30	Pass

Note: For U-NII-3, the antenna gain is 3.48 dBi < 6 dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value



7.4 6 dB Bandwidth

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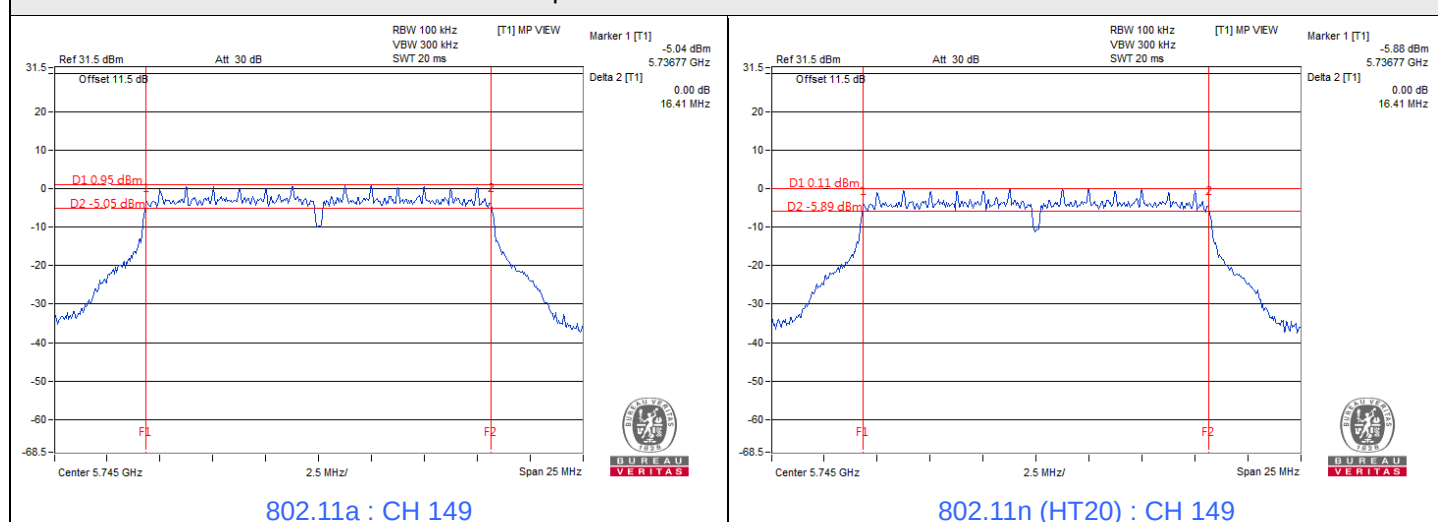
802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	16.41	0.5	Pass
157	5785	16.43	0.5	Pass
165	5825	16.42	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	16.41	0.5	Pass
157	5785	16.41	0.5	Pass
165	5825	16.41	0.5	Pass

Spectrum Plot of Minimum Value



7.5 Occupied Bandwidth

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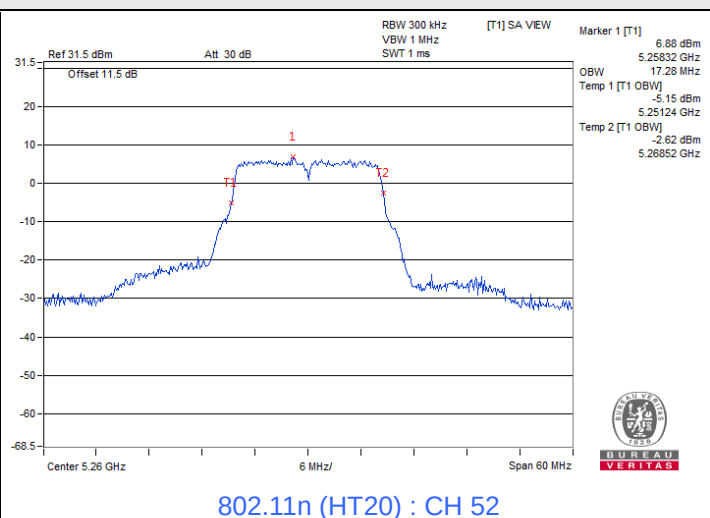
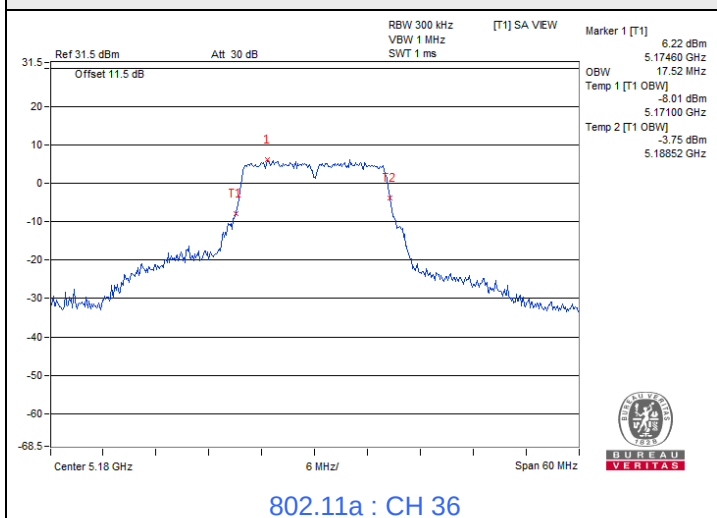
802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.52
40	5200	17.28
48	5240	17.28
52	5260	17.28
60	5300	17.4
64	5320	17.28
100	5500	17.16
116	5580	17.04
140	5700	17.16
149	5745	17.16
157	5785	17.16
165	5825	17.16

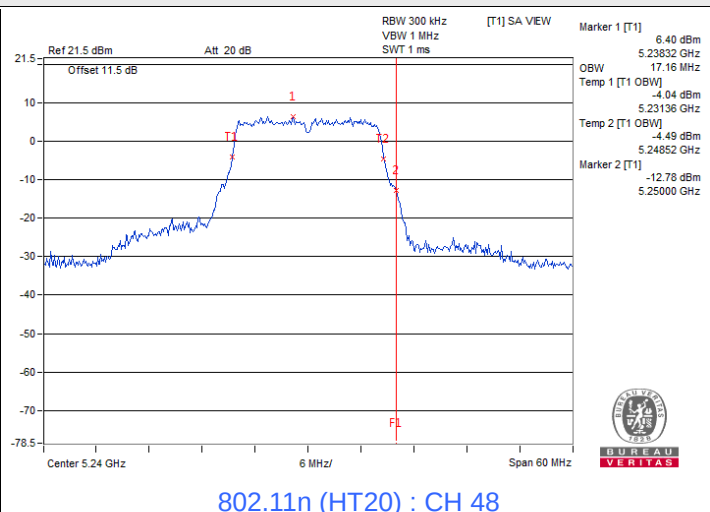
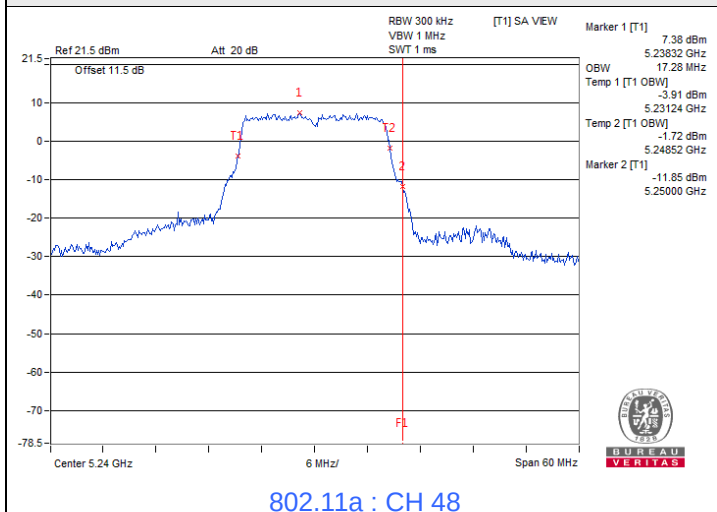
802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.04
40	5200	17.16
48	5240	17.16
52	5260	17.28
60	5300	17.28
64	5320	17.16
100	5500	17.16
116	5580	17.04
140	5700	17.16
149	5745	17.16
157	5785	17.16
165	5825	17.16

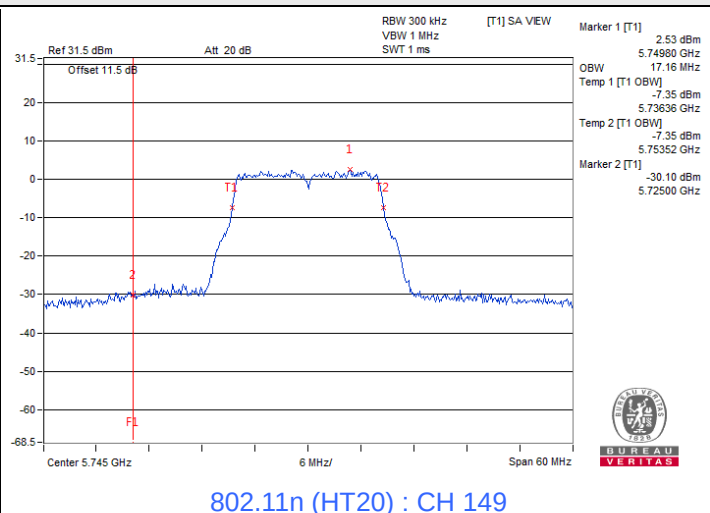
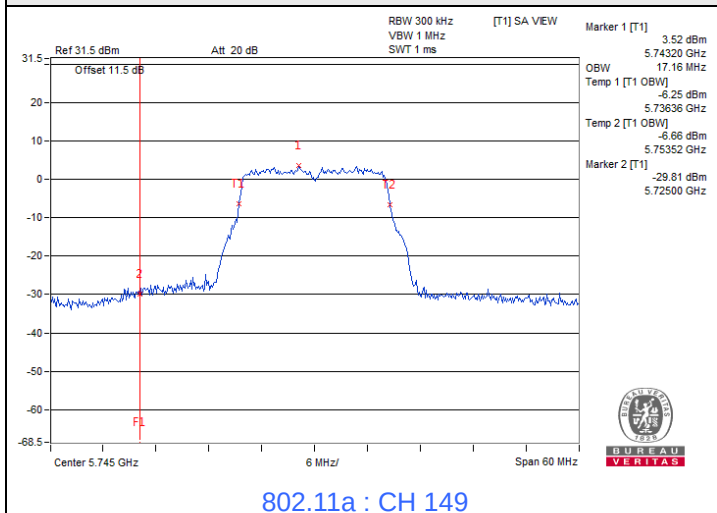
Spectrum Plot of Maximum Value



Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A band)



Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C band)



7.6 Frequency Stability

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

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
49	120	5180.0176	Pass	5180.0178	Pass	5180.0147	Pass	5180.0138	Pass
40	120	5180.0149	Pass	5180.0159	Pass	5180.0194	Pass	5180.0156	Pass
30	120	5180.0257	Pass	5180.0232	Pass	5180.0255	Pass	5180.0267	Pass
20	120	5179.9852	Pass	5179.9831	Pass	5179.9817	Pass	5179.9821	Pass
10	120	5180.0272	Pass	5180.0269	Pass	5180.0263	Pass	5180.0282	Pass
0	120	5180.0197	Pass	5180.0219	Pass	5180.0206	Pass	5180.0212	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5179.9872	Pass	5179.9876	Pass	5179.9852	Pass	5179.9874	Pass
	120	5179.9852	Pass	5179.9831	Pass	5179.9817	Pass	5179.9821	Pass
	102	5179.9941	Pass	5179.9913	Pass	5179.9908	Pass	5179.9937	Pass

7.7 AC Power Conducted Emissions

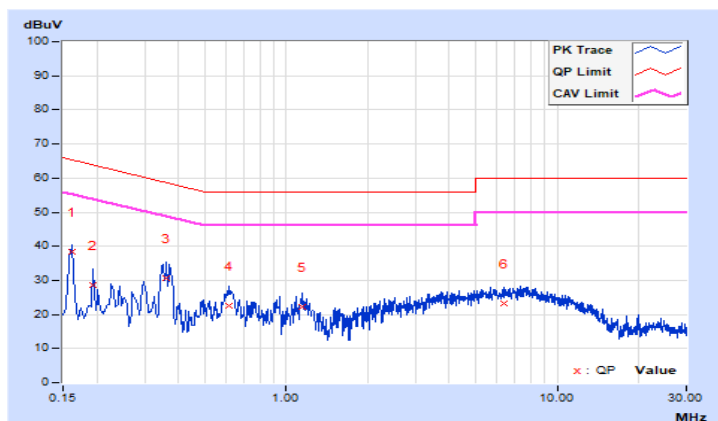
Mode A

RF Mode	TX 802.11a	Channel	CH 40 : 5200 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	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	0.16190	10.14	28.10	7.65	38.24	17.79	65.37	55.37	-27.13	-37.58
2	0.19400	10.16	18.35	1.90	28.51	12.06	63.86	53.86	-35.35	-41.80
3	0.36200	10.22	20.41	4.08	30.63	14.30	58.68	48.68	-28.05	-34.38
4	0.61800	10.26	12.30	6.06	22.56	16.32	56.00	46.00	-33.44	-29.68
5	1.15000	10.31	11.78	5.56	22.09	15.87	56.00	46.00	-33.91	-30.13
6	6.37000	10.42	12.75	4.32	23.17	14.74	60.00	50.00	-36.83	-35.26

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

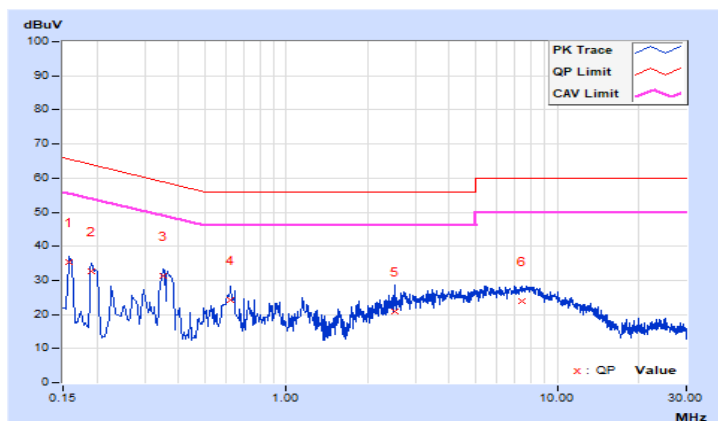


RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Edison Lee		

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	0.15800	10.15	25.21	6.23	35.36	16.38	65.57	55.57	-30.21	-39.19
2	0.19000	10.18	22.50	1.60	32.68	11.78	64.04	54.04	-31.36	-42.26
3	0.35000	10.24	21.08	18.72	31.32	28.96	58.96	48.96	-27.64	-20.00
4	0.62600	10.28	13.93	7.57	24.21	17.85	56.00	46.00	-31.79	-28.15
5	2.53400	10.37	10.45	1.63	20.82	12.00	56.00	46.00	-35.18	-34.00
6	7.41400	10.46	13.60	5.33	24.06	15.79	60.00	50.00	-35.94	-34.21

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



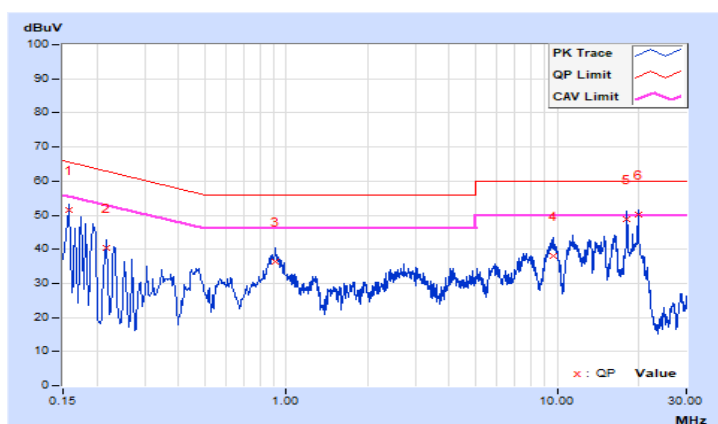
Mode B

RF Mode	TX 802.11a	Channel	CH 40 : 5200 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	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	0.15800	10.12	41.40	22.94	51.52	33.06	65.57	55.57	-14.05	-22.51
2	0.21800	10.13	30.17	13.90	40.30	24.03	62.89	52.89	-22.59	-28.86
3	0.91000	10.17	26.27	20.56	36.44	30.73	56.00	46.00	-19.56	-15.27
4	9.68200	10.26	27.73	21.72	37.99	31.98	60.00	50.00	-22.01	-18.02
5	18.12200	10.32	38.55	32.76	48.87	43.08	60.00	50.00	-11.13	-6.92
6	19.91800	10.34	39.82	34.04	50.16	44.38	60.00	50.00	-9.84	-5.62

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

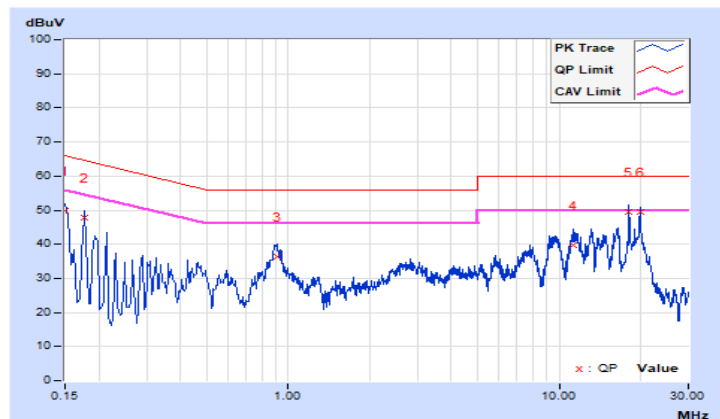


RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Edison Lee		

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	0.15000	10.13	39.58	22.27	49.71	32.40	66.00	56.00	-16.29	-23.60
2	0.17800	10.14	37.81	19.38	47.95	29.52	64.58	54.58	-16.63	-25.06
3	0.91400	10.18	26.12	20.25	36.30	30.43	56.00	46.00	-19.70	-15.57
4	11.33000	10.35	29.40	23.32	39.75	33.67	60.00	50.00	-20.25	-16.33
5	18.11400	10.45	39.08	33.33	49.53	43.78	60.00	50.00	-10.47	-6.22
6	19.89800	10.48	39.07	33.27	49.55	43.75	60.00	50.00	-10.45	-6.25

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



7.8 Unwanted Emissions below 1 GHz

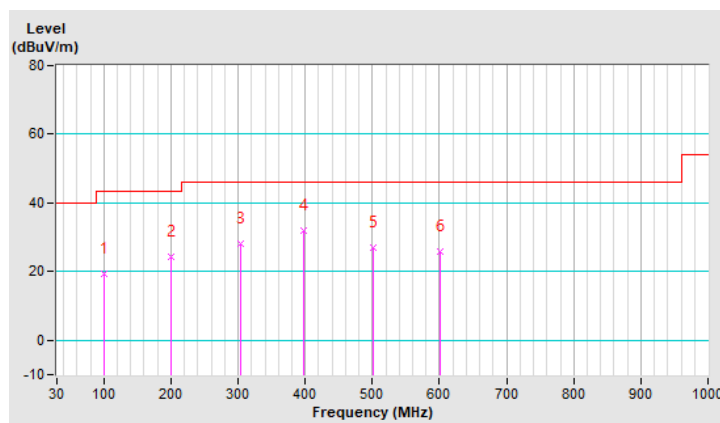
Mode A

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	14°C, 63% 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	100.81	19.2 QP	43.5	-24.3	2.00 H	104	36.6	-17.4
2	199.75	24.3 QP	43.5	-19.2	1.00 H	2	40.7	-16.4
3	304.51	28.3 QP	46.0	-17.7	1.00 H	14	40.7	-12.4
4	397.63	32.0 QP	46.0	-14.0	1.00 H	333	42.1	-10.1
5	500.45	27.0 QP	46.0	-19.0	1.00 H	69	34.9	-7.9
6	601.33	26.0 QP	46.0	-20.0	1.50 H	172	31.4	-5.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

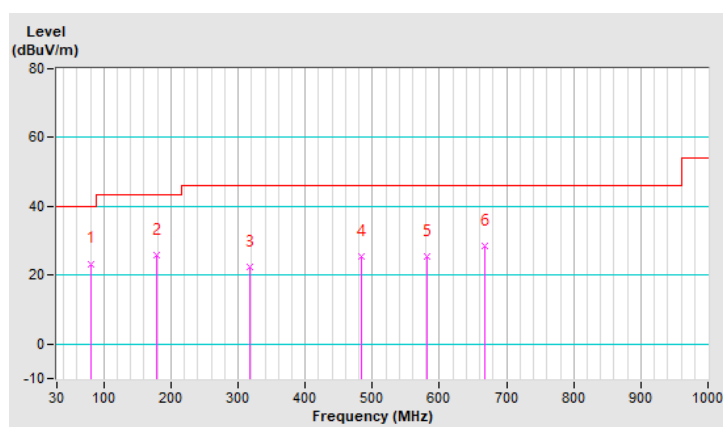


RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	14°C, 63% RH
Tested By	Edison Lee		

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	80.44	23.4 QP	40.0	-16.6	1.50 V	312	41.5	-18.1
2	178.41	25.8 QP	43.5	-17.7	1.00 V	250	40.1	-14.3
3	317.12	22.4 QP	46.0	-23.6	2.00 V	146	34.4	-12.0
4	482.99	25.5 QP	46.0	-20.5	1.00 V	72	33.6	-8.1
5	581.93	25.5 QP	46.0	-20.5	2.00 V	150	31.4	-5.9
6	668.26	28.5 QP	46.0	-17.5	1.00 V	106	33.0	-4.5

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



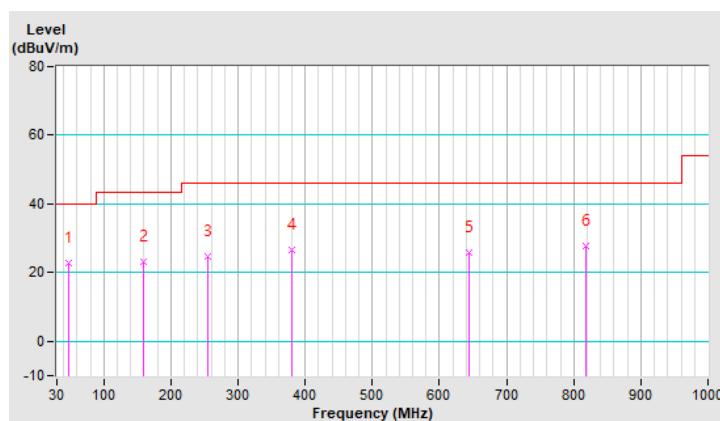
Mode B

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	14°C, 63% 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	47.46	22.8 QP	40.0	-17.2	1.00 H	148	35.9	-13.1
2	159.98	23.0 QP	43.5	-20.5	1.00 H	104	36.0	-13.0
3	255.04	24.8 QP	46.0	-21.2	1.50 H	355	38.9	-14.1
4	379.20	26.6 QP	46.0	-19.4	2.00 H	209	37.1	-10.5
5	644.98	25.8 QP	46.0	-20.2	1.00 H	170	30.4	-4.6
6	818.61	27.9 QP	46.0	-18.1	1.50 H	93	30.3	-2.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

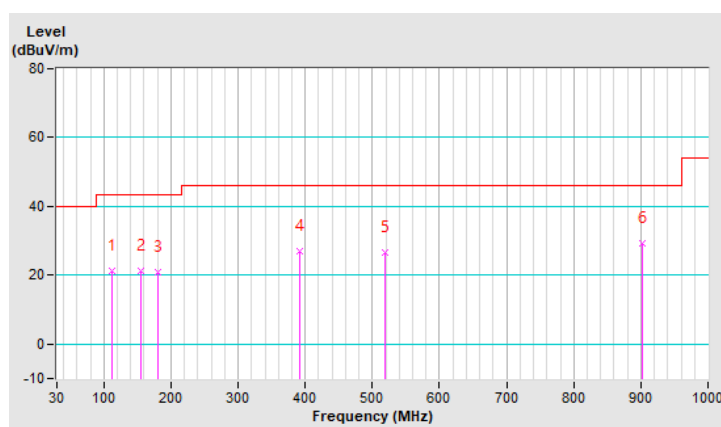


RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	14°C, 63% RH
Tested By	Edison Lee		

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	111.48	21.2 QP	43.5	-22.3	1.50 V	141	37.4	-16.2
2	155.13	21.4 QP	43.5	-22.1	1.00 V	268	34.3	-12.9
3	180.35	20.9 QP	43.5	-22.6	1.00 V	273	35.5	-14.6
4	391.81	27.1 QP	46.0	-18.9	2.00 V	177	37.3	-10.2
5	519.85	26.7 QP	46.0	-19.3	1.00 V	174	34.1	-7.4
6	903.00	29.3 QP	46.0	-16.7	1.00 V	75	30.7	-1.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



7.9 Unwanted Emissions above 1 GHz

RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	5150.00	70.0 PK	74.0	-4.0	1.54 H	230	70.0	0.0
2	5150.00	53.0 AV	54.0	-1.0	1.54 H	230	53.0	0.0
3	*5180.00	110.0 PK			1.54 H	230	71.5	38.5
4	*5180.00	100.4 AV			1.54 H	230	61.9	38.5
5	#10360.00	50.5 PK	68.2	-17.7	2.03 H	172	45.9	4.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.0 PK	74.0	-6.0	1.01 V	271	68.0	0.0
2	5150.00	51.9 AV	54.0	-2.1	1.01 V	271	51.9	0.0
3	*5180.00	105.1 PK			1.01 V	271	66.6	38.5
4	*5180.00	95.7 AV			1.01 V	271	57.2	38.5
5	#10360.00	50.8 PK	68.2	-17.4	1.62 V	321	46.2	4.6

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.

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5200.00	110.9 PK			1.55 H	229	72.5	38.4
2	*5200.00	101.6 AV			1.55 H	229	63.2	38.4
3	#10400.00	51.3 PK	68.2	-16.9	2.01 H	175	46.6	4.7
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	*5200.00	106.8 PK			1.03 V	277	68.4	38.4
2	*5200.00	96.3 AV			1.03 V	277	57.9	38.4
3	#10400.00	51.1 PK	68.2	-17.1	1.66 V	324	46.4	4.7

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5240.00	111.1 PK			1.63 H	237	72.7	38.4
2	*5240.00	102.0 AV			1.63 H	237	63.6	38.4
3	5350.00	53.3 PK	74.0	-20.7	1.63 H	237	53.7	-0.4
4	5350.00	41.8 AV	54.0	-12.2	1.63 H	237	42.2	-0.4
5	#10480.00	51.2 PK	68.2	-17.0	2.00 H	174	46.7	4.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	105.1 PK			1.11 V	279	66.7	38.4
2	*5240.00	96.3 AV			1.11 V	279	57.9	38.4
3	5350.00	52.6 PK	74.0	-21.4	1.11 V	279	53.0	-0.4
4	5350.00	41.5 AV	54.0	-12.5	1.11 V	279	41.9	-0.4
5	#10480.00	50.7 PK	68.2	-17.5	1.68 V	320	46.2	4.5

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	5150.00	67.3 PK	74.0	-6.7	2.12 H	180	67.3	0.0
2	5150.00	53.5 AV	54.0	-0.5	1.53 H	233	53.5	0.0
3	*5180.00	108.7 PK			1.53 H	233	70.2	38.5
4	*5180.00	99.3 AV			1.53 H	233	60.8	38.5
5	#10360.00	50.7 PK	68.2	-17.5	1.62 H	312	46.1	4.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.7 PK	74.0	-12.3	1.00 V	270	61.7	0.0
2	5150.00	51.0 AV	54.0	-3.0	1.00 V	270	51.0	0.0
3	*5180.00	102.7 PK			1.00 V	270	64.2	38.5
4	*5180.00	94.1 AV			1.00 V	270	55.6	38.5
5	#10360.00	50.6 PK	68.2	-17.6	1.66 V	317	46.0	4.6

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.

RF Mode	TX 802.11n (HT20)	Channel	CH 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5200.00	109.9 PK			1.61 H	240	71.5	38.4
2	*5200.00	100.5 AV			1.61 H	240	62.1	38.4
3	#10400.00	51.3 PK	68.2	-16.9	2.06 H	185	46.6	4.7
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	*5200.00	103.7 PK			1.03 V	275	65.3	38.4
2	*5200.00	95.3 AV			1.03 V	275	56.9	38.4
3	#10400.00	51.0 PK	68.2	-17.2	1.58 V	310	46.3	4.7

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11n (HT20)	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5240.00	110.0 PK			1.63 H	236	71.6	38.4
2	*5240.00	100.7 AV			1.63 H	236	62.3	38.4
3	5350.00	53.7 PK	74.0	-20.3	1.63 H	236	54.1	-0.4
4	5350.00	42.0 AV	54.0	-12.0	1.63 H	236	42.4	-0.4
5	#10480.00	51.3 PK	68.2	-16.9	2.08 H	162	46.8	4.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	101.8 PK			1.01 V	273	63.4	38.4
2	*5240.00	94.0 AV			1.01 V	273	55.6	38.4
3	5350.00	54.1 PK	74.0	-19.9	1.01 V	273	54.5	-0.4
4	5350.00	41.6 AV	54.0	-12.4	1.01 V	273	42.0	-0.4
5	#10480.00	50.9 PK	68.2	-17.3	1.66 V	321	46.4	4.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	5150.00	54.8 PK	74.0	-19.2	1.63 H	233	54.8	0.0
2	5150.00	43.2 AV	54.0	-10.8	1.63 H	233	43.2	0.0
3	*5260.00	112.1 PK			1.63 H	233	73.8	38.3
4	*5260.00	102.8 AV			1.63 H	233	64.5	38.3
5	#10520.00	51.0 PK	68.2	-17.2	2.01 H	175	46.7	4.3
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	5150.00	54.0 PK	74.0	-20.0	1.63 V	273	54.0	0.0
2	5150.00	42.2 AV	54.0	-11.8	1.63 V	273	42.2	0.0
3	*5260.00	105.6 PK			1.63 V	273	67.3	38.3
4	*5260.00	96.8 AV			1.63 V	273	58.5	38.3
5	#10520.00	50.5 PK	68.2	-17.7	1.66 V	332	46.2	4.3

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	TX 802.11a	Channel	CH 60 : 5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5300.00	112.3 PK			1.68 H	233	74.1	38.2
2	*5300.00	103.1 AV			1.68 H	231	64.9	38.2
3	10600.00	51.0 PK	74.0	-23.0	2.01 H	177	46.6	4.4
4	10600.00	40.1 AV	54.0	-13.9	2.01 H	177	35.7	4.4
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	*5300.00	106.2 PK			1.62 V	271	68.0	38.2
2	*5300.00	97.4 AV			1.62 V	271	59.2	38.2
3	10600.00	50.7 PK	74.0	-23.3	1.62 V	329	46.3	4.4
4	10600.00	39.7 AV	54.0	-14.3	1.62 V	329	35.3	4.4

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.

RF Mode	TX 802.11a	Channel	CH 64 : 5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5320.00	111.9 PK			1.54 H	234	73.7	38.2
2	*5320.00	102.7 AV			1.54 H	234	64.5	38.2
3	5350.00	61.4 PK	74.0	-12.6	1.54 H	234	61.8	-0.4
4	5350.00	48.3 AV	54.0	-5.7	1.54 H	234	48.7	-0.4
5	10640.00	50.7 PK	74.0	-23.3	2.03 H	178	46.4	4.3
6	10640.00	39.9 AV	54.0	-14.1	2.03 H	178	35.6	4.3
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	*5320.00	106.7 PK			1.57 V	272	68.5	38.2
2	*5320.00	97.2 AV			1.57 V	272	59.0	38.2
3	5350.00	60.1 PK	74.0	-13.9	1.57 V	272	60.5	-0.4
4	5350.00	45.0 AV	54.0	-9.0	1.57 V	272	45.4	-0.4
5	10640.00	50.3 PK	74.0	-23.7	1.62 V	308	46.0	4.3
6	10640.00	39.4 AV	54.0	-14.6	1.62 V	308	35.1	4.3

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.

RF Mode	TX 802.11n (HT20)	Channel	CH 52 : 5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	5150.00	53.8 PK	74.0	-20.2	1.68 H	237	53.8	0.0
2	5150.00	42.5 AV	54.0	-11.5	1.68 H	237	42.5	0.0
3	*5260.00	111.0 PK			1.68 H	237	72.7	38.3
4	*5260.00	101.5 AV			1.68 H	237	63.2	38.3
5	#10520.00	50.5 PK	68.2	-17.7	1.98 H	171	46.2	4.3
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	5150.00	53.2 PK	74.0	-20.8	1.63 V	273	53.2	0.0
2	5150.00	41.7 AV	54.0	-12.3	1.63 V	273	41.7	0.0
3	*5260.00	104.9 PK			1.63 V	273	66.6	38.3
4	*5260.00	95.6 AV			1.63 V	273	57.3	38.3
5	#10520.00	50.1 PK	68.2	-18.1	1.66 V	323	45.8	4.3

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	TX 802.11n (HT20)	Channel	CH 60 : 5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5300.00	111.3 PK			1.70 H	233	73.1	38.2
2	*5300.00	101.8 AV			1.70 H	233	63.6	38.2
3	10600.00	51.1 PK	74.0	-22.9	2.03 H	178	46.7	4.4
4	10600.00	40.2 AV	54.0	-13.8	2.03 H	178	35.8	4.4
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	*5300.00	105.7 PK			1.66 V	277	67.5	38.2
2	*5300.00	96.1 AV			1.66 V	277	57.9	38.2
3	10600.00	50.4 PK	74.0	-23.6	1.62 V	321	46.0	4.4
4	10600.00	39.5 AV	54.0	-14.5	1.62 V	321	35.1	4.4

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.

RF Mode	TX 802.11n (HT20)	Channel	CH 64 : 5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5320.00	110.3 PK			1.72 H	239	72.1	38.2
2	*5320.00	101.3 AV			1.72 H	239	63.1	38.2
3	5350.00	60.2 PK	74.0	-13.8	1.72 H	239	60.6	-0.4
4	5350.00	48.6 AV	54.0	-5.4	1.72 H	239	49.0	-0.4
5	10640.00	50.8 PK	74.0	-23.2	2.08 H	180	46.5	4.3
6	10640.00	39.9 AV	54.0	-14.1	2.08 H	180	35.6	4.3
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	*5320.00	104.9 PK			1.50 V	277	66.7	38.2
2	*5320.00	95.6 AV			1.50 V	277	57.4	38.2
3	5350.00	58.4 PK	74.0	-15.6	1.50 V	277	58.8	-0.4
4	5350.00	45.2 AV	54.0	-8.8	1.50 V	277	45.6	-0.4
5	10640.00	50.3 PK	74.0	-23.7	1.60 V	312	46.0	4.3
6	10640.00	39.3 AV	54.0	-14.7	1.60 V	312	35.0	4.3

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.

RF Mode	TX 802.11a	Channel	CH 100 : 5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	5460.00	55.0 PK	74.0	-19.0	1.63 H	240	55.4	-0.4
2	5460.00	44.7 AV	54.0	-9.3	1.63 H	240	45.1	-0.4
3	#5470.00	56.8 PK	68.2	-11.4	1.63 H	240	57.2	-0.4
4	*5500.00	108.5 PK			1.63 H	240	70.0	38.5
5	*5500.00	98.0 AV			1.63 H	240	59.5	38.5
6	11000.00	50.8 PK	74.0	-23.2	2.01 H	178	46.7	4.1
7	11000.00	39.8 AV	54.0	-14.2	2.01 H	178	35.7	4.1
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	5460.00	53.2 PK	74.0	-20.8	1.22 V	276	53.6	-0.4
2	5460.00	42.5 AV	54.0	-11.5	1.22 V	276	42.9	-0.4
3	#5470.00	54.1 PK	68.2	-14.1	1.22 V	276	54.5	-0.4
4	*5500.00	102.2 PK			1.22 V	276	63.7	38.5
5	*5500.00	96.2 AV			1.22 V	276	57.7	38.5
6	11000.00	50.1 PK	74.0	-23.9	1.61 V	311	46.0	4.1
7	11000.00	39.2 AV	54.0	-14.8	1.61 V	311	35.1	4.1

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	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5580.00	108.0 PK			1.59 H	240	69.1	38.9
2	*5580.00	98.3 AV			1.59 H	240	59.4	38.9
3	11160.00	51.7 PK	74.0	-22.3	2.08 H	181	46.7	5.0
4	11160.00	40.8 AV	54.0	-13.2	2.08 H	181	35.8	5.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	103.2 PK			1.24 V	277	64.3	38.9
2	*5580.00	95.1 AV			1.24 V	277	56.2	38.9
3	11160.00	51.2 PK	74.0	-22.8	1.63 V	313	46.2	5.0
4	11160.00	40.4 AV	54.0	-13.6	1.63 V	313	35.4	5.0

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 140 : 5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5700.00	107.0 PK			1.54 H	243	67.7	39.3
2	*5700.00	98.0 AV			1.54 H	243	58.7	39.3
3	#5725.00	59.8 PK	68.2	-8.4	1.54 H	243	59.0	0.8
4	11400.00	51.6 PK	74.0	-22.4	2.05 H	176	46.7	4.9
5	11400.00	40.4 AV	54.0	-13.6	2.05 H	176	35.5	4.9
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	*5700.00	104.8 PK			1.17 V	276	65.5	39.3
2	*5700.00	95.4 AV			1.17 V	276	56.1	39.3
3	#5725.00	58.8 PK	68.2	-9.4	1.17 V	276	58.0	0.8
4	11400.00	51.2 PK	74.0	-22.8	1.62 V	311	46.3	4.9
5	11400.00	40.1 AV	54.0	-13.9	1.62 V	311	35.2	4.9

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	TX 802.11n (HT20)	Channel	CH 100 : 5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	5460.00	54.6 PK	74.0	-19.4	1.64 H	238	55.0	-0.4
2	5460.00	46.4 AV	54.0	-7.6	1.64 H	238	46.8	-0.4
3	#5470.00	55.7 PK	68.2	-12.5	1.64 H	238	56.1	-0.4
4	*5500.00	106.2 PK			1.64 H	238	67.7	38.5
5	*5500.00	97.5 AV			1.64 H	238	59.0	38.5
6	11000.00	51.0 PK	74.0	-23.0	2.10 H	179	46.9	4.1
7	11000.00	40.1 AV	54.0	-13.9	2.10 H	179	36.0	4.1
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	5460.00	53.6 PK	74.0	-20.4	1.17 V	271	54.0	-0.4
2	5460.00	42.7 AV	54.0	-11.3	1.17 V	271	43.1	-0.4
3	#5470.00	54.1 PK	68.2	-14.1	1.17 V	271	54.5	-0.4
4	*5500.00	103.0 PK			1.17 V	271	64.5	38.5
5	*5500.00	93.0 AV			1.17 V	271	54.5	38.5
6	11000.00	50.1 PK	74.0	-23.9	1.70 V	309	46.0	4.1
7	11000.00	39.4 AV	54.0	-14.6	1.70 V	309	35.3	4.1

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	TX 802.11n (HT20)	Channel	CH 116 : 5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5580.00	106.4 PK			1.56 H	244	67.5	38.9
2	*5580.00	96.9 AV			1.56 H	244	58.0	38.9
3	11160.00	51.8 PK	74.0	-22.2	2.01 H	170	46.8	5.0
4	11160.00	41.0 AV	54.0	-13.0	2.01 H	170	36.0	5.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	103.7 PK			1.20 V	280	64.8	38.9
2	*5580.00	94.5 AV			1.20 V	180	55.6	38.9
3	11160.00	51.5 PK	74.0	-22.5	1.65 V	317	46.5	5.0
4	11160.00	40.6 AV	54.0	-13.4	1.65 V	317	35.6	5.0

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 140 : 5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	*5700.00	104.9 PK			1.50 H	237	65.6	39.3
2	*5700.00	96.3 AV			1.50 H	237	57.0	39.3
3	#5725.00	58.8 PK	68.2	-9.4	4.00 H	237	58.0	0.8
4	11400.00	51.7 PK	74.0	-22.3	2.12 H	176	46.8	4.9
5	11400.00	40.9 AV	54.0	-13.1	2.12 H	176	36.0	4.9
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	*5700.00	104.0 PK			1.20 V	277	64.7	39.3
2	*5700.00	94.0 AV			1.20 V	277	54.7	39.3
3	#5725.00	56.8 PK	68.2	-11.4	1.20 V	277	56.0	0.8
4	11400.00	51.1 PK	74.0	-22.9	1.62 V	310	46.2	4.9
5	11400.00	40.1 AV	54.0	-13.9	1.62 V	310	35.2	4.9

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	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	#5635.20	54.7 PK	68.2	-13.5	1.48 H	252	54.2	0.5
2	*5745.00	105.9 PK			1.48 H	252	66.1	39.8
3	*5745.00	97.4 AV			1.48 H	252	57.6	39.8
4	#5979.20	55.2 PK	68.2	-13.0	1.48 H	252	54.1	1.1
5	11490.00	52.9 PK	74.0	-21.1	2.08 H	177	47.7	5.2
6	11490.00	41.8 AV	54.0	-12.2	2.08 H	177	36.6	5.2
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	#5637.60	54.6 PK	68.2	-13.6	1.00 V	271	54.0	0.6
2	*5745.00	104.1 PK			1.00 V	271	64.3	39.8
3	*5745.00	95.6 AV			1.00 V	271	55.8	39.8
4	#5994.00	56.7 PK	68.2	-11.5	1.00 V	271	55.6	1.1
5	11490.00	52.7 PK	74.0	-21.3	1.62 V	318	47.5	5.2
6	11490.00	41.4 AV	54.0	-12.6	1.62 V	318	36.2	5.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	#5637.20	54.8 PK	68.2	-13.4	1.59 H	239	54.3	0.5
2	*5785.00	107.7 PK			1.53 H	239	67.8	39.9
3	*5785.00	97.7 AV			1.53 H	239	57.8	39.9
4	#5955.20	55.2 PK	68.2	-13.0	1.59 H	239	54.1	1.1
5	11570.00	52.8 PK	74.0	-21.2	2.11 H	181	47.8	5.0
6	11570.00	41.8 AV	54.0	-12.2	2.11 H	181	36.8	5.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.20	55.0 PK	68.2	-13.2	1.05 V	278	54.5	0.5
2	*5785.00	104.9 PK			1.05 V	278	65.0	39.9
3	*5785.00	95.3 AV			1.05 V	278	55.4	39.9
4	#5939.20	56.4 PK	68.2	-11.8	1.05 V	278	55.3	1.1
5	11570.00	52.3 PK	74.0	-21.7	1.63 V	301	47.3	5.0
6	11570.00	41.4 AV	54.0	-12.6	1.63 V	301	36.4	5.0

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	#5628.80	55.2 PK	68.2	-13.0	1.54 H	241	54.7	0.5
2	*5825.00	107.2 PK			1.54 H	241	67.2	40.0
3	*5825.00	97.9 AV			1.54 H	241	57.9	40.0
4	#5930.80	55.9 PK	68.2	-12.3	1.54 H	241	54.8	1.1
5	11650.00	52.7 PK	74.0	-21.3	2.07 H	177	47.7	5.0
6	11650.00	41.5 AV	54.0	-12.5	2.07 H	177	36.5	5.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.40	55.2 PK	68.2	-13.0	1.06 V	276	54.6	0.6
2	*5825.00	104.7 PK			1.06 V	276	64.7	40.0
3	*5825.00	95.5 AV			1.06 V	276	55.5	40.0
4	#5942.40	57.7 PK	68.2	-10.5	1.06 V	276	56.6	1.1
5	11650.00	52.0 PK	74.0	-22.0	1.63 V	312	47.0	5.0
6	11650.00	41.2 AV	54.0	-12.8	1.63 V	312	36.2	5.0

Remarks:

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

RF Mode	TX 802.11n (HT20)	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	#5616.00	55.3 PK	68.2	-12.9	1.35 H	238	54.9	0.4
2	*5745.00	105.2 PK			1.35 H	238	65.4	39.8
3	*5745.00	96.8 AV			1.35 H	238	57.0	39.8
4	#5950.40	56.2 PK	68.2	-12.0	1.35 H	238	55.1	1.1
5	11490.00	52.5 PK	74.0	-21.5	2.01 H	174	47.3	5.2
6	11490.00	41.4 AV	54.0	-12.6	2.01 H	174	36.2	5.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5624.40	55.7 PK	68.2	-12.5	1.05 V	277	55.2	0.5
2	*5745.00	104.4 PK			1.05 V	277	64.6	39.8
3	*5745.00	94.3 AV			1.05 V	277	54.5	39.8
4	#5943.60	55.7 PK	68.2	-12.5	1.05 V	277	54.6	1.1
5	11490.00	52.2 PK	74.0	-21.8	1.62 V	314	47.0	5.2
6	11490.00	41.2 AV	54.0	-12.8	1.62 V	314	36.0	5.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	TX 802.11n (HT20)	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% 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	#5616.40	54.6 PK	68.2	-13.6	1.53 H	241	54.2	0.4
2	*5785.00	106.2 PK			1.55 H	241	66.3	39.9
3	*5785.00	96.4 AV			1.55 H	241	56.5	39.9
4	#5960.80	57.5 PK	68.2	-10.7	1.53 H	241	56.4	1.1
5	11570.00	52.5 PK	74.0	-21.5	2.12 H	180	47.5	5.0
6	11570.00	41.6 AV	54.0	-12.4	2.12 H	180	36.6	5.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.80	55.5 PK	68.2	-12.7	1.04 V	277	54.9	0.6
2	*5785.00	103.6 PK			1.04 V	277	63.7	39.9
3	*5785.00	94.4 AV			1.04 V	277	54.5	39.9
4	#5956.40	55.4 PK	68.2	-12.8	1.04 V	277	54.3	1.1
5	11570.00	52.1 PK	74.0	-21.9	1.60 V	300	47.1	5.0
6	11570.00	41.3 AV	54.0	-12.7	1.60 V	300	36.3	5.0

Remarks:

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

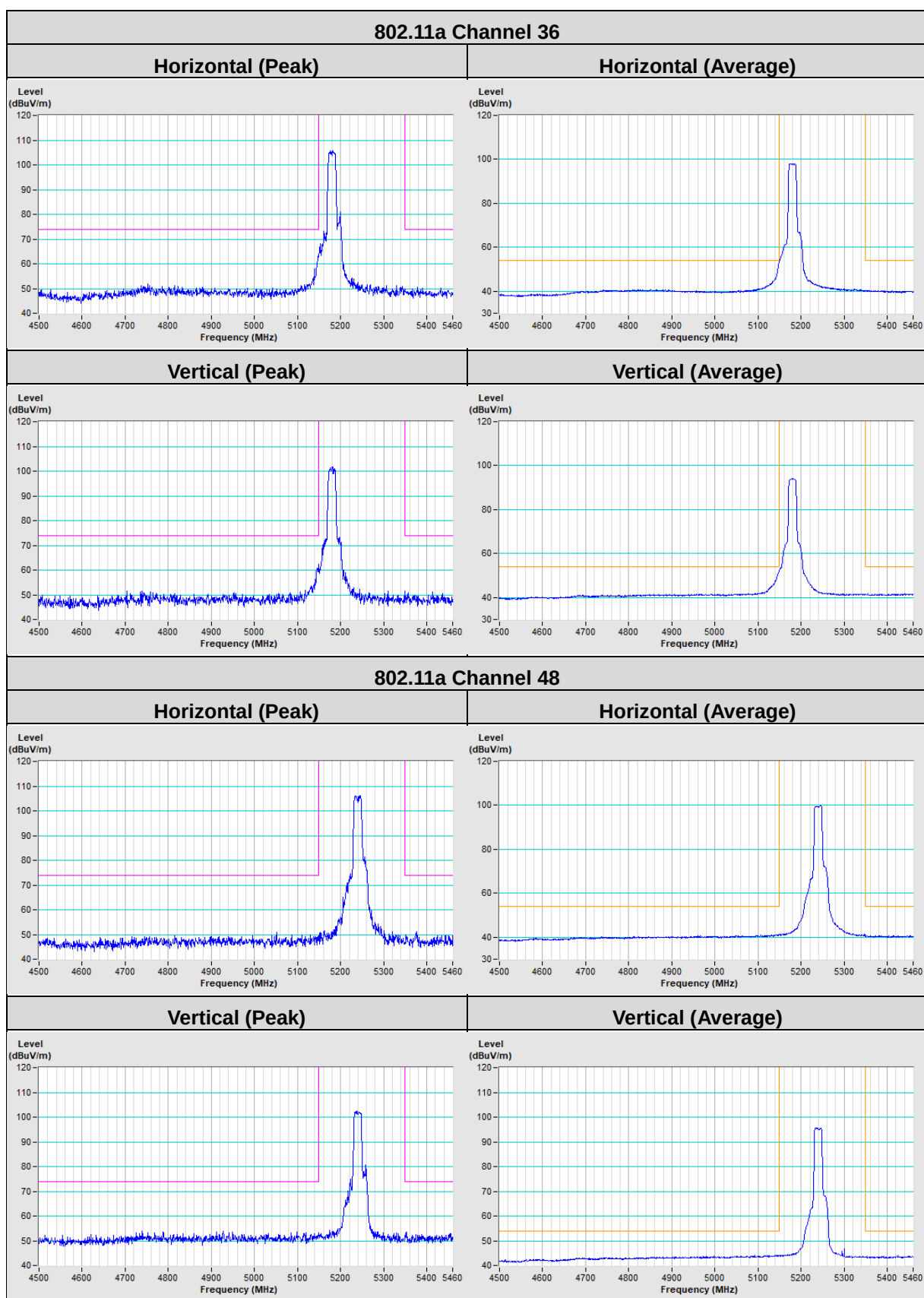
RF Mode	TX 802.11n (HT20)	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Edison Lee		

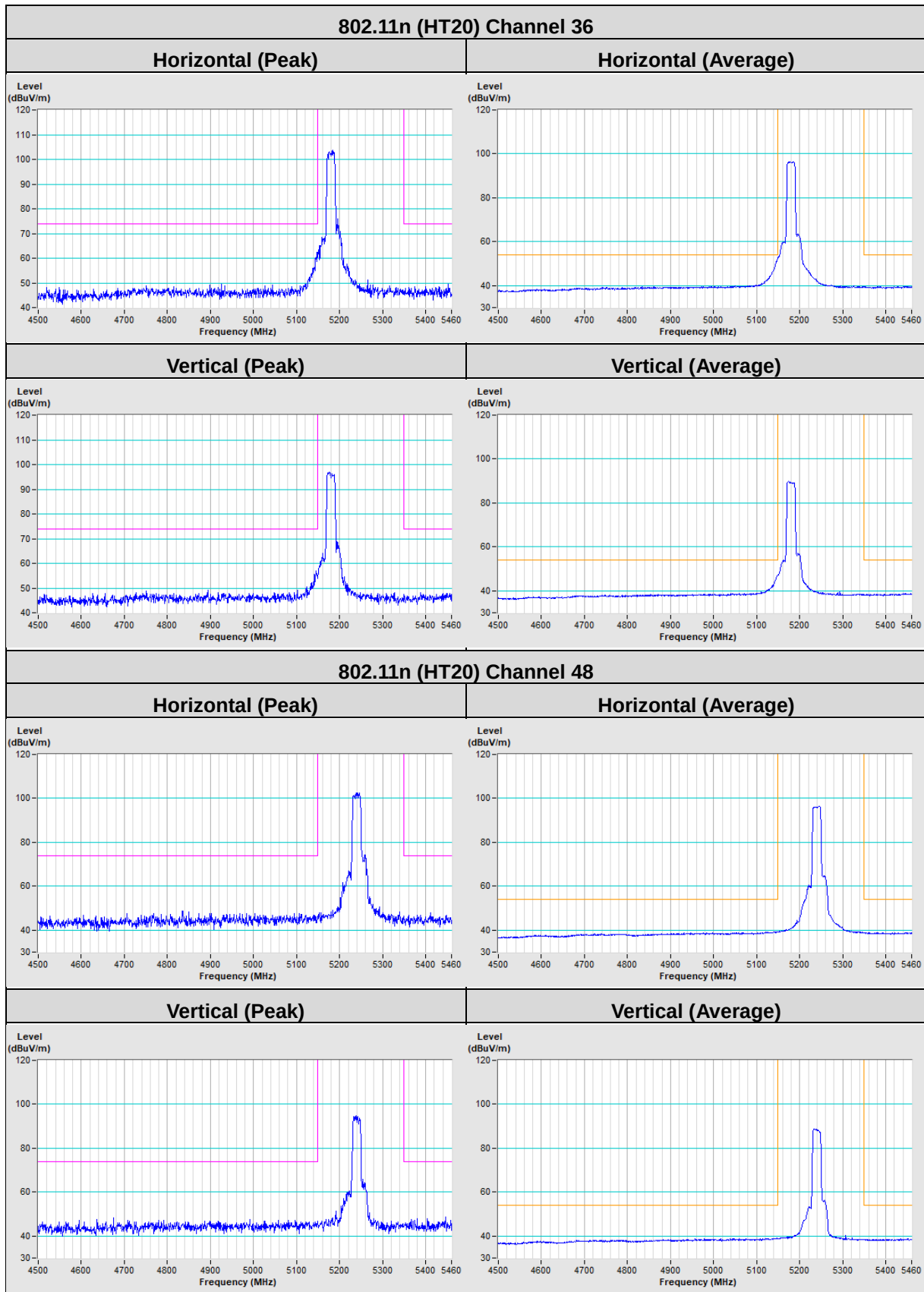
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5609.60	55.5 PK	68.2	-12.7	1.61 H	238	55.1	0.4
2	*5825.00	105.5 PK			1.61 H	238	65.5	40.0
3	*5825.00	96.2 AV			1.61 H	238	56.2	40.0
4	#5982.40	56.1 PK	68.2	-12.1	1.61 H	238	54.9	1.2
5	11650.00	52.5 PK	74.0	-21.5	2.00 H	181	47.5	5.0
6	11650.00	41.4 AV	54.0	-12.6	2.00 H	181	36.4	5.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.40	54.6 PK	68.2	-13.6	1.00 V	273	54.0	0.6
2	*5825.00	103.8 PK			1.00 V	273	63.8	40.0
3	*5825.00	93.8 AV			1.00 V	273	53.8	40.0
4	#5936.40	56.4 PK	68.2	-11.8	1.00 V	273	55.3	1.1
5	11650.00	52.1 PK	74.0	-21.9	1.62 V	303	47.1	5.0
6	11650.00	41.3 AV	54.0	-12.7	1.62 V	303	36.3	5.0

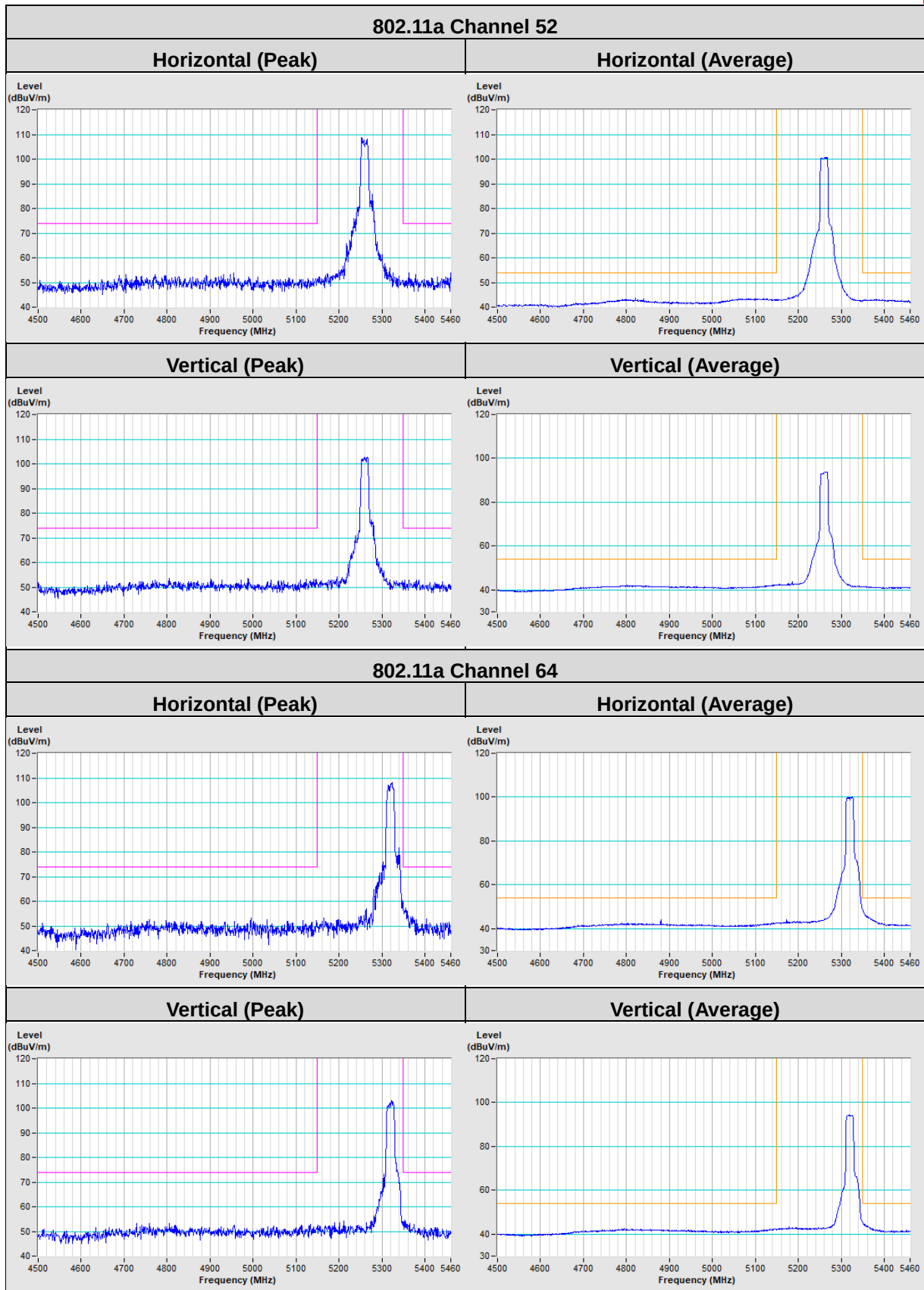
Remarks:

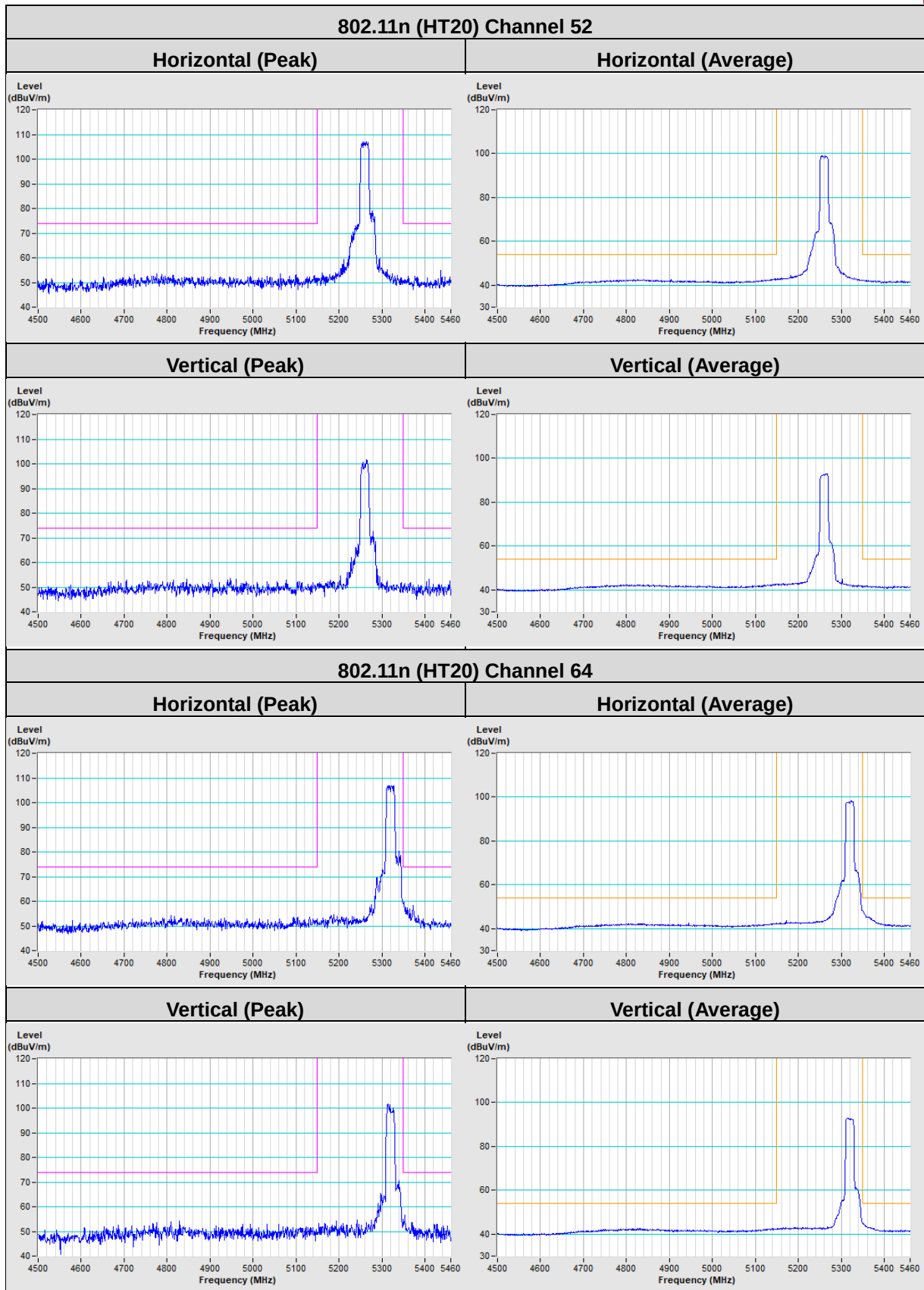
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

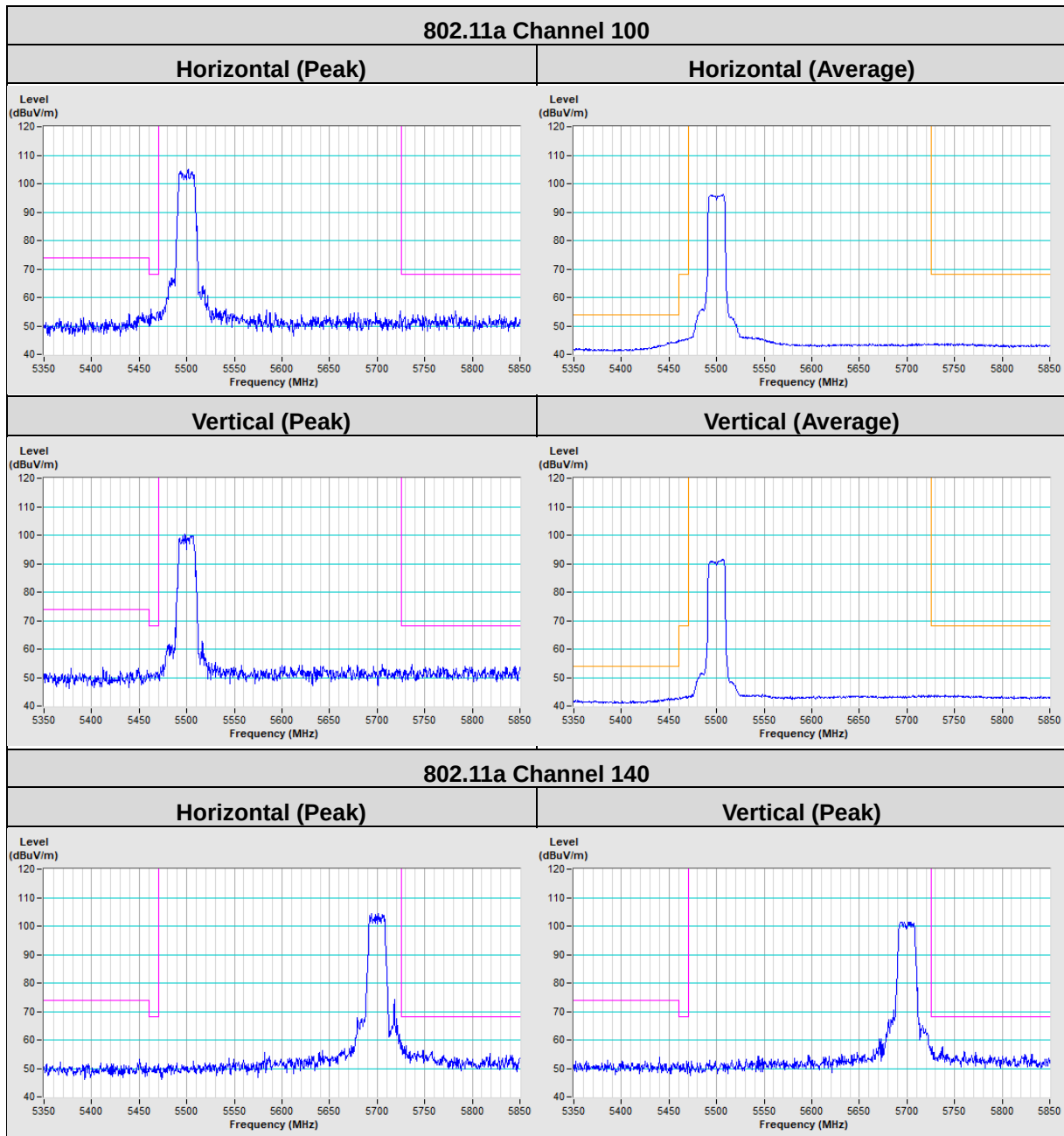
Plot of Band Edge

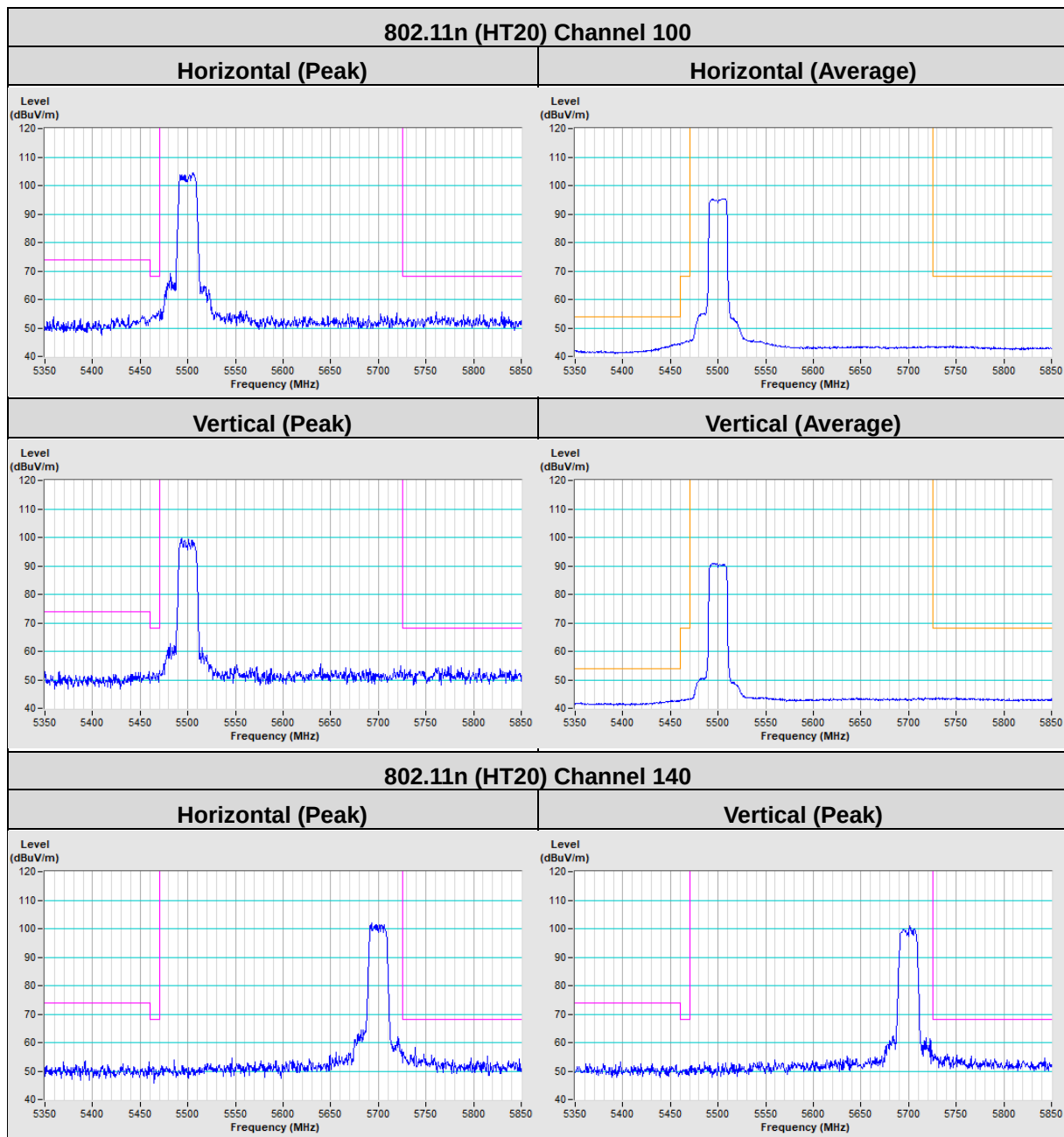


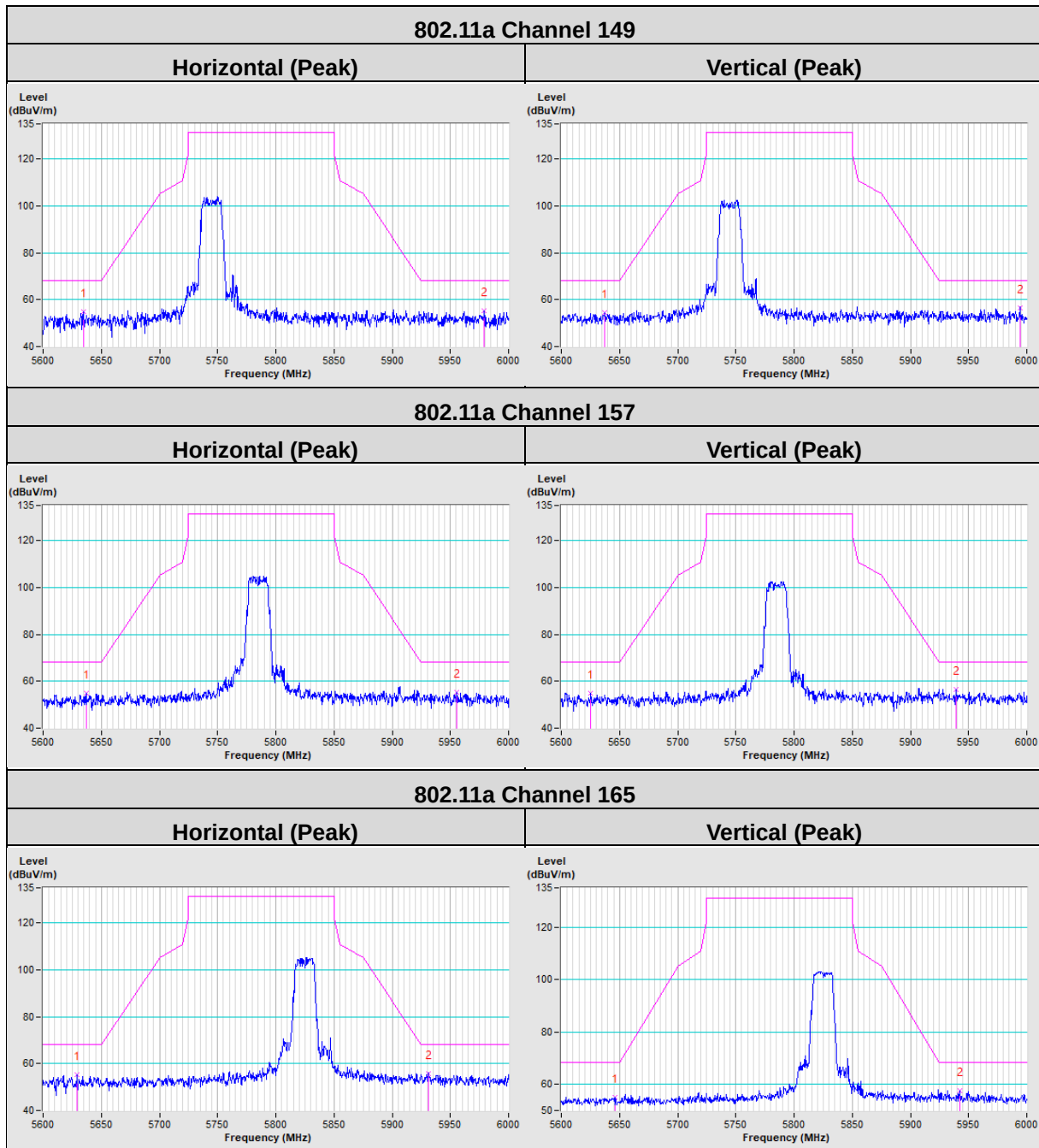


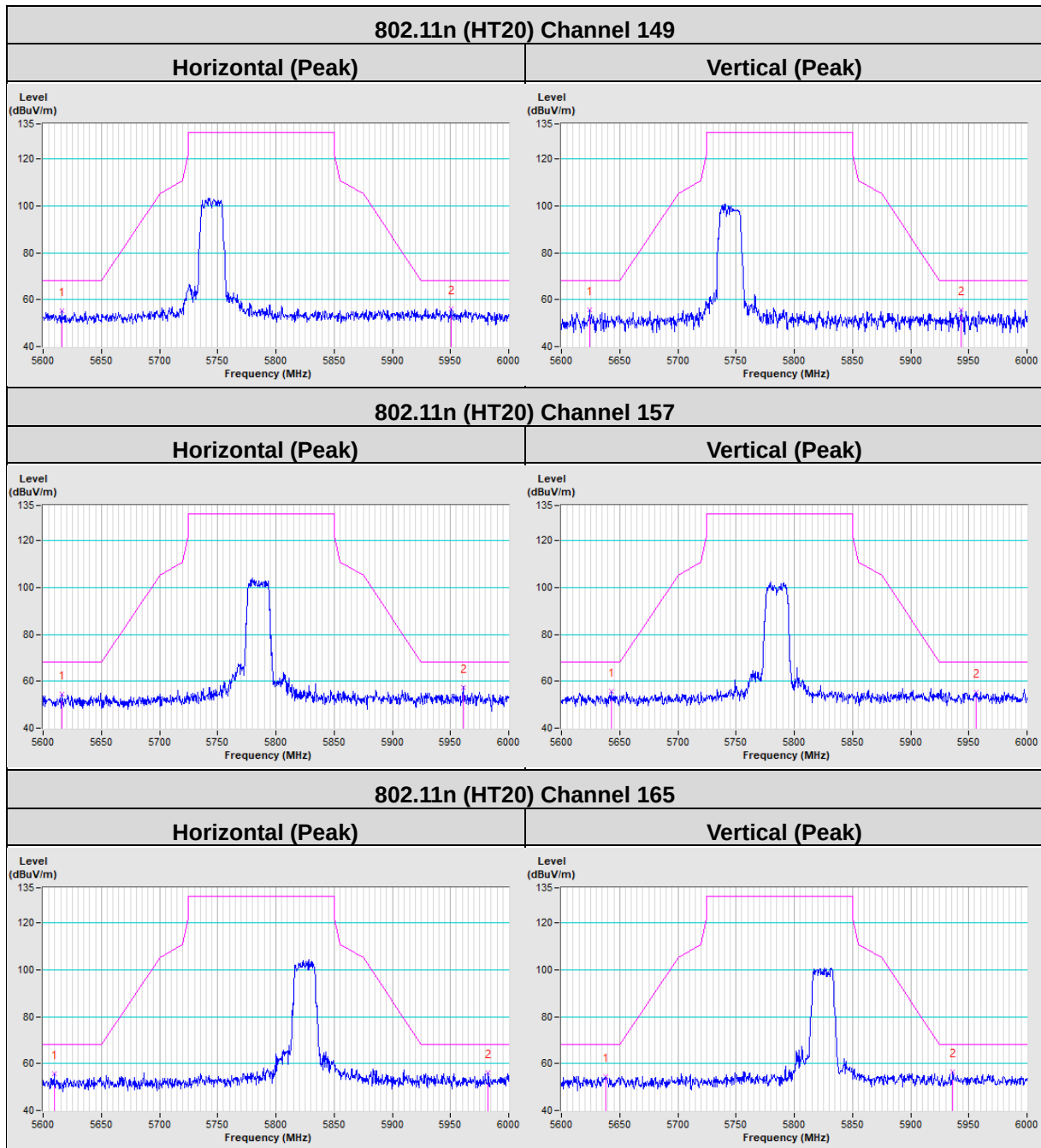












8 Pictures of Test Arrangements

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.

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

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