Land America Health & Fitness Co., Ltd

RF TEST REPORT

Report Type:
FCC Part 15.407 & ISED RSS-247 RF report

Model:
700-0554, 700-0555

REPORT NUMBER:
2410B0258SHA-004

ISSUE DATE:
April 8, 2025

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 2410B0258SHA-004

Applicant:	Land America Health & Fitness Co., Ltd No. 25 North 2nd Road, Xinglin, Jimei, Xiamen, 361022, China
Manufacturer:	Land America Health & Fitness Co., Ltd No. 25 North 2nd Road, Xinglin, Jimei, Xiamen, 361022, China
Manufacturer Site:	Land America Health & Fitness Co., Ltd No. 25 North 2nd Road, Xinglin, Jimei, Xiamen, 361022, China
Product Name:	Embedded Console
Type/Model:	700-0554, 700-0555
FCC ID:	2BNWO-7000554
IC:	33606-7000554

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

47CFR Part 15 (2023): Radio Frequency Devices (Subpart E)
ANSI C63.10 (2020): American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
RSS-247 Issue 3 (August 2023): Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS-Gen Issue 5 (February 2021) Amendment 2: General Requirements for Compliance of Radio Apparatus

PREPARED BY:	**REVIEWED BY:**
	
Project Engineer Scout Gong	Reviewer Eric Li

Content

Revision History

Report No.	Version	Description	Issued Date
2410B0258SHA-004	Rev. 01	Initial issue of report	April 8, 2025

TEST REPORT

Measurement Result Summary

TEST ITEM	FCC REFERENCE	IC REFERENCE	RESULT
26 dB Bandwidth & 99% Occupied Bandwidth	15.407(a)	RSS-247 Issue 3 Clause 6	Pass
Minimum 6dB Bandwidth	15.407(e)	RSS-247 Issue 3 Clause 6	Pass
Maximum Conducted Output Power	15.407(a)	RSS-247 Issue 3 Clause 6	Pass
Power spectral density	15.407(a)	RSS-247 Issue 3 Clause 6	Pass
Radiated emission	15.407(b) 15.205 15.209	RSS-247 Issue 3 Clause 6 RSS-Gen Issue 5 Clause 8.9&8.10	Pass
Power line conducted emission	15.407(b) 15.207	RSS-Gen Issue 5 Clause 8.8	Pass
Frequency Stability	15.407(g)	RSS-Gen Issue 5 Clause 8.11	Pass
Antenna requirement	15.203	-	Pass

Notes:

1. *NA =Not Applicable*
2. *Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.*
3. *Additions, Deviations and Exclusions from Standards: None.*

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Embedded console
Type/Model:	700-0554, 700-0555
Description of EUT:	The EUT is an embedded console which supports Wi-Fi/BT/BLE function. There are two models, the key components and electrical schematics of the product are the same, the only difference is the size of the display screen. There is also a BT+NFC module designed which is certificated. The information of the BT+NFC module is: FCC ID: XRH-NPE105 IC: 11922A-NPE105
Rating:	12V DC, 5A
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Product Marketing Name:	700-0554, 700-0555
HVIN:	700-0554, 700-0555
Software Version:	-
Hardware Version:	-
Serial numbers:	A241024-36-001
Sample received date:	October 24, 2024
Date of test:	January 12, 2025, to March 20, 2025

1.2 Technical Specification

FCC

Frequency Range:	5150 ~ 5250MHz 5250 ~ 5350MHz 5470 ~ 5725MHz 5725 ~ 5850MHz
Support Standards:	802.11a, 802.11n(HT20), 802.11n(HT40), 802.11ac(VHT20), 802.11ac(VHT40), 802.11ac(VHT80)
Type of Modulation:	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM,1024QAM)
Channel Number:	For 5180 ~ 5240MHz band: Channel 36 - 48 For 5260 ~ 5320MHz Band: Channel 52 - 64 For 5500 ~ 5700MHz Band: Channel 100 - 140 For 5745 ~ 5825MHz band: Channel 149 - 165

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IC

Frequency Range:	5150 ~ 5250MHz 5250 ~ 5350MHz 5470 ~ 5600MHz 5650 ~ 5725MHz 5725 ~ 5850MHz
Support Standards:	802.11a, 802.11n(HT20), 802.11n(HT40), 802.11ac(VHT20), 802.11ac(VHT40), 802.11ac(VHT80)
Type of Modulation:	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Channel Number:	For 5180 ~ 5240MHz band: Channel 36 - 48 For 5260 ~ 5320MHz Band: Channel 52 - 64 For 5500 ~ 5590MHz Band: Channel 100 - 118 For 5660 ~ 5700MHz Band: Channel 132 - 140 For 5745 ~ 5825MHz band: Channel 149 - 165

1.3 Working Frequencies for this report

FCC

802.11a/n(HT20)/ac(HT20)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	40	5200MHz	44	5220MHz
48	5240MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	149	5745 MHz	153	5765 MHz
157	5785 MHz	161	5805 MHz	165	5825 MHz
802.11n(HT40)/ac(HT40)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
151	5755 MHz	159	5795 MHz	-	-
802.11ac(HT80)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210MHz	58	5290MHz	106	5530 MHz
112	5610 MHz	155	5775 MHz	-	-

IC

802.11a/n(HT20)/ac(HT20)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	40	5200MHz	44	5220MHz
48	5240MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	149	5745 MHz	153	5765 MHz
157	5785 MHz	161	5805 MHz	165	5825 MHz
802.11n(HT40)/ac(HT40)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550MHz
134	5670 MHz	151	5755 MHz	159	5795 MHz
802.11ac(HT80)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210MHz	58	5290MHz	106	5530 MHz
155	5775 MHz	-	-	-	-

1.4 Antenna information

No.	Antenna Type	Gain	Note
Wi-Fi 0	FPCB antenna	1.80 dBi	External type
Wi-Fi 1	FPCB antenna	0.53 dBi	External type

Mode	Tx/Rx Function	Beamforming function	CDD function	Directional gain (dBi)
802.11a	1Tx/1Rx	NO	NO	--
802.11n(HT20)	2Tx/2Rx	NO	NO	--
802.11n(HT40)	2Tx/2Rx	NO	NO	--
802.11ac(HT20)	2Tx/2Rx	NO	NO	--
802.11ac(HT40)	2Tx/2Rx	NO	NO	--
802.11ac(HT80)	2Tx/2Rx	NO	NO	--
Note: For 802.11a mode, it only supports 1TX. For 802.11n/ac modes, it can support 2TX, all the two transmit signals are completely correlated with each other, so the directional gain = 10 log $((10^{G1/20} + 10^{G2/20} + \ldots + 10^{Gn/20})^2 / N_{ANT})$				

1.5 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road (North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2023)
ANSI C63.10 (2020)
RSS-247 Issue 3 (August 2023)
RSS-Gen Issue 5 (February 2021) Amendment 2
KDB 789033 D02 (v02r01)

2.2 Mode of operation during the test

While testing transmitting mode of EUT, the continuously transmission was applied by following software.

Software name	Manufacturer	Version	Supplied by
MT7663 test commands	--	--	Client

The lowest, middle and highest channel for the following modes were tested as representatives.

Frequency Band (MHz)	Mode	Lowest (MHz)	Middle (MHz)	Highest (MHz)
5150 - 5250	802.11a	5180	5200	5240
	802.11n(HT20)	5180	5200	5240
	802.11n(HT40)	5190	/	5230
	802.11ac(VHT20)	5180	5200	5240
	802.11ac(VHT40)	5190	/	5230
	802.11ac(VHT80)	5210	/	/
5250 - 5350	802.11a	5260	5300	5320
	802.11n(HT20)	5260	5300	5320
	802.11n(HT40)	5270	/	5310
	802.11ac(VHT20)	5260	5300	5320
	802.11ac(VHT40)	5270	/	5310
	802.11ac(VHT80)	5290	/	/
5470 - 5725	802.11a	5500	5580	5700
	802.11n(HT20)	5500	5580	5700
	802.11n(HT40)	5510	5550	5670
	802.11ac(VHT20)	5500	5580	5700
	802.11ac(VHT40)	5510	5550	5670
	802.11ac(VHT80)	5530	/	/

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5725 - 5850	802.11a	5745	5785	5825
	802.11n(HT20)	5745	5785	5825
	802.11n(HT40)	5755	/	5795
	802.11ac(VHT20)	5745	5785	5825
	802.11ac(VHT40)	5755	/	5795
	802.11ac(VHT80)	5775	/	/

Data rate and Power setting:

The pre-scan for the conducted power with all data rates in each modulation and band was used, and the worst case was found and used in all test cases. After this pre-scan, we choose the following table of the data rata as the worst case.

Frequency Band (MHz)	Mode	Worst case data rate
5150 - 5250	802.11a	6Mbps
	802.11n(HT20)	MCS0
	802.11n(HT40)	MCS0
	802.11ac(VHT20)	MCS0
	802.11ac(VHT40)	MCS0
	802.11ac(VHT80)	MCS0
5250 - 5350	802.11a	6Mbps
	802.11n(HT20)	MCS0
	802.11n(HT40)	MCS0
	802.11ac(VHT20)	MCS0
	802.11ac(VHT40)	MCS0
	802.11ac(VHT80)	MCS0
5500 - 5725	802.11a	6Mbps
	802.11n(HT20)	MCS0
	802.11n(HT40)	MCS0
	802.11ac(VHT20)	MCS0
	802.11ac(VHT40)	MCS0
	802.11ac(VHT80)	MCS0
5725 - 5850	802.11a	6Mbps
	802.11n(HT20)	MCS0
	802.11n(HT40)	MCS0
	802.11ac(VHT20)	MCS0
	802.11ac(VHT40)	MCS0
	802.11ac(VHT80)	MCS0

2.3 Test software list

Test Items	Software	Manufacturer	Version
Conducted emission	ESxS-K1	R&S	V2.1.0
Radiated emission	ES-K1	R&S	V1.71

2.4 Test peripherals list

Item No.	Name	Band and Model	Description
1	Laptop	HP ProBook 6470b	100-240V AC, 50/60Hz
2	RF cable	/	0.2m length; 0.5dB loss

2.5 Test environment condition:

Test items	Temperature	Humidity
26 dB Bandwidth & 99% Occupied Bandwidth	19°C	53% RH
Minimum 6dB Bandwidth		
Maximum Conducted Output Power		
Power spectral density		
Radiated Emissions in restricted frequency bands	20°C	53% RH
Power line conducted emission	20°C	53% RH

2.6 Instrument list

Conducted Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	Test Receiver	R&S	ESR7	EC 6194	2026-02-17
☑	A.M.N.	R&S	ESH2-Z5	EC 3119	2025-07-23
☑	Attenuator	Hua Xiang	Ts5-10db-6g	EC 6194-1	2025-12-06
☑	Shielded room	Zhongyu	-	EC 2838	2026-01-09
Radiated Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	Test Receiver	R&S	ESIB 26	EC 3045	2025-08-18
☑	Test Receiver	R&S	ESR	EC6501	2025-09-10
☑	Bilog Antenna	TESEQ	CBL 6112B	EC 6411	2025-09-11
☑	TRILOG broadband Antenna	Schwarzbeck	VULB9168	EC 6402	2026-03-18
☑	Pre-amplifier	R&S	AFS42-00101800-25-S-42	EC 5262	2025-11-06
☑	Pre-amplifier	Tonscend	tap01018050	EC 6432-1	2025-12-03
☑	Horn antenna	Tonscend	bha9120d	EC 6432-2	2026-03-19
☑	Horn antenna	ETS	3117	EC 4792-1	2025-09-13
☑	Horn antenna	TOYO	HAP18-26W	EC 4792-3	2026-09-12
☐	Active loop antenna	Schwarzbeck	FMZB1519	EC 5345	2025-08-10
☑	Horn antenna	ETS	3116c	EC 5955	2025-08-14
☑	Semi-anechoic chamber	Albatross project	-	EC 3048	2026-07-11
RF test					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	PXA Signal Analyzer	Keysight	N9030A	EC 5338	2026-03-11
☑	Vector Signal Generator	Agilent	N5182B	EC 5175	2026-03-11
☑	Universal Radio Communication Tester	R&S	CMW500	EC5944	2027-03-11
☑	MXG Analog Signal Generator	Agilent	N5181A	EC 5338-2	2026-03-11
☐	Mobile Test System	Litepoint	Iqxel	EC 5176	2026-01-10
☑	Test Receiver	R&S	ESCI 7	EC 4501	2026-03-08
☑	Spectrum Analyzer	Keysight	N9030B	EC 6078	2026-03-17
☑	Universal Radio Communication Tester	R&S	CMW500	EC 6209	2027-01-14
☑	Signal generator	Agilent	N5182A	EC 6172	2025-08-06
☑	Signal generator	Agilent	N5181A	EC 6171	2025-08-06
☑	Climate chamber	GWS	MT3065	EC 6021	2025-03-06

Additional instrument					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	Thermo-Hygrograph	Testo	175h1	EC 6640	2025-08-29
☑	Thermo-Hygrograph	Testo	175h1	EC 6643	2025-08-29
☑	Thermo-Hygrograph	Testo	175h1	EC 6644	2025-08-29
☑	Pressure meter	YM3	Shanghai Mengde	EC 3320	2025-08-16

2.7 Measurement uncertainty

The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Measurement uncertainty
Maximum peak output power	± 0.74dB
26 dB Bandwidth & 99% Occupied Bandwidth	
Minimum 6dB Bandwidth	
Power spectral density	
Radiated Emissions in restricted frequency bands below 1GHz	± 4.90dB
Radiated Emissions in restricted frequency bands above 1GHz	± 5.02dB
Emission outside the frequency band	± 2.89dB
Power line conducted emission	± 3.19dB

3 26 dB Bandwidth & 99% Occupied Bandwidth

Test Result: **Pass**

3.1 Limit

None

3.2 Measurement Procedure

The EUT was tested according to test procedure of "KDB789033 D02 General UNII Test Procedures New Rules"

26 dB Bandwidth

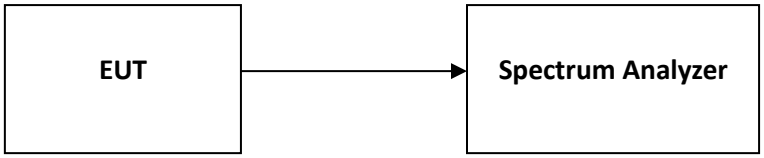
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement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

99% Occupied Bandwidth

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

3.3 Test Configuration



3.4 The results of 26 dB Bandwidth & 99% Occupied Bandwidth

Please refer to Appendix A.

4 Minimum 6dB Bandwidth

Test Result: **Pass**

4.1 Limit

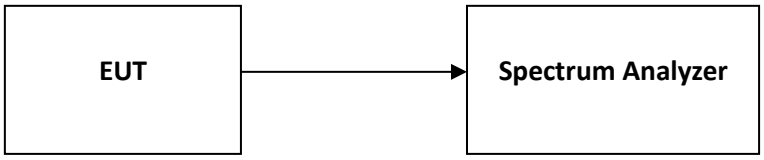
For systems using digital modulation techniques that may operate in the 5725 - 5850 MHz band, the minimum 6 dB bandwidth shall be at least 500 kHz.

4.2 Measurement Procedure

The EUT was tested according to test procedure of "KDB789033 D02 General UNII Test Procedures New Rules"

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 x RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

4.3 Test Configuration



4.4 The results of Minimum 6dB Bandwidth

Please refer to Appendix A.

5 Maximum conducted output power and e.i.r.p.

Test Result: **Pass**

5.1 Limit

☐ For an outdoor access point operating in the band 5.15-5.25GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1W provided the maximum antenna gain does not exceed 6dBi.
The maximum e.i.r.p. at any elevation angle above 30 degrees from the horizon must not exceed 125mW (21 dBm).

☐ For an indoor access point operating in the band 5.15-5.25GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6dBi.

☐ For fixed point-to-point access points operating in the band 5.15-5.25GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1W.

☒ For client devices in the 5.15-5.25GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250mW provided the maximum antenna gain does not exceed 6dBi. (FCC Limit)

☒ For the 5.25-5.35GHz and 5.47-5.725GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or 11dBm + 10logB, where B is the 26dB emission bandwidth in megahertz. (FCC limit)

☒ For the band 5.725-5.85GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1W. (FCC limit)

☒ For Frequency Band 5150-5250 MHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. (IC limit)

☒ For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 99% emission bandwidth in megahertz. (IC limit)

☒ For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. (IC limit)

☒ For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. (IC limit)

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.2 Measurement Procedure

The EUT was tested according to test procedure of "KDB789033 D02 General UNII Test Procedures New Rules"

(i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

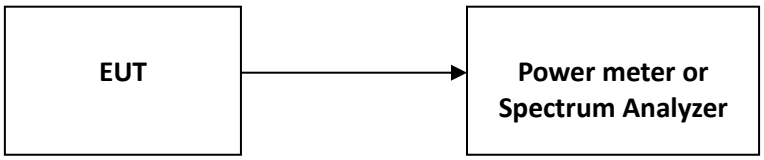
(vi) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."

(viii) Trace average at least 100 traces in power averaging (rms) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

5.3 Test Configuration



5.4 Test Results of Maximum conducted output power and e.i.r.p.

Please refer to Appendix A.

6 Power spectrum density

Test Result: **Pass**

6.1 Limit

☐ For an outdoor access point operating in the band 5.15-5.25GHz, the maximum power spectral density shall not exceed 17dBm in any 1 megahertz band.

☐ For an indoor access point operating in the band 5.15-5.25GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

☒ For client devices in the 5.15-5.25GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. (FCC limit)

☒ For the 5.25-5.35 GHz and 5.47-5.725GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. (FCC limit)

☒ For the band 5.725-5.85GHz, the maximum power spectral density shall not exceed 30dBm in any 500kHz band. (FCC limit)

☒For the 5.15-5.25GHz band, the e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. (IC limit)

☒ For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. (IC limit)

☒ For the 5.725-5.85GHz band, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. (IC limit)

If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the less of original and original + (6 - antenna gain - beamforming gain).

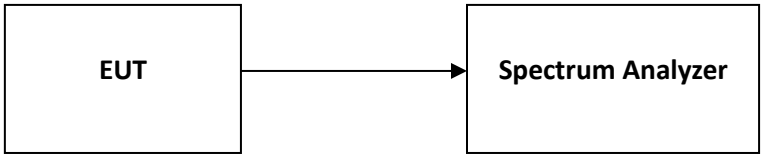
6.2 Measurement Procedure

The EUT was tested according to test procedure of "KDB789033 D02 General UNII Test Procedures New Rules"

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power…." (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
   a) If Method SA-2 or SA-2 Alternative was used, add 10 log (1/x), where x is the duty cycle, to the peak of the spectrum.
   b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15 5.25 GHz, 5.25 5.35 GHz, and 5.47 5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725 5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
   a) Set RBW ≥ 1/*T*, where *T* is defined in II.B.l.a).
   b) Set VBW ≥ 3 RBW.
   c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
   d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
   e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for steps 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

6.3 Test Configuration



6.4 Test Results of Power spectrum density

Please refer to Appendix A.

7 Radiated Emissions

Test Result: **Pass**

7.1 Limit

The radiated emissions which fall in the restricted bands, and the radiated emissions below 1GHz, must comply with the radiated emission limits specified showed as below:

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

The radiated emissions which fall outside the restrict bands, should comply with the EIRP limit as below:

For transmitters operating in the 5.15 - 5.25 / 5.25 - 5.35 / 5.47 - 5.725GHz band:

Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dBµV/m)
<5150	-27	68.20
>5350		
<5470		
>5725		

For transmitters operating in the 5.725 - 5.85GHz band:

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (3m) (dBµV/m)
<5650	-27	68.20
5650 ~ 5700	-27 ~ 10	68.20 ~ 105.20
5700 ~ 5720	10 ~ 15.6	105.20 ~ 110.80
5720 ~ 5725	15.6 ~ 27	110.80 ~ 122.20
5850 ~ 5855	27 ~ 15.6	122.20 ~ 110.80
5855 ~ 5875	15.6 ~ 10	110.80 ~ 105.20
5875 ~ 5925	10 ~ -27	105.20 ~ 68.20
>5925	-27	68.20

7.2 Measurement Procedure

For Radiated emission below 30MHz:

a) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c) Both X and Y axes 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 peak or quasi-peak detect function and specified bandwidth with maximum hold mode.

NOTE:

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

For Radiated emission above 30MHz:

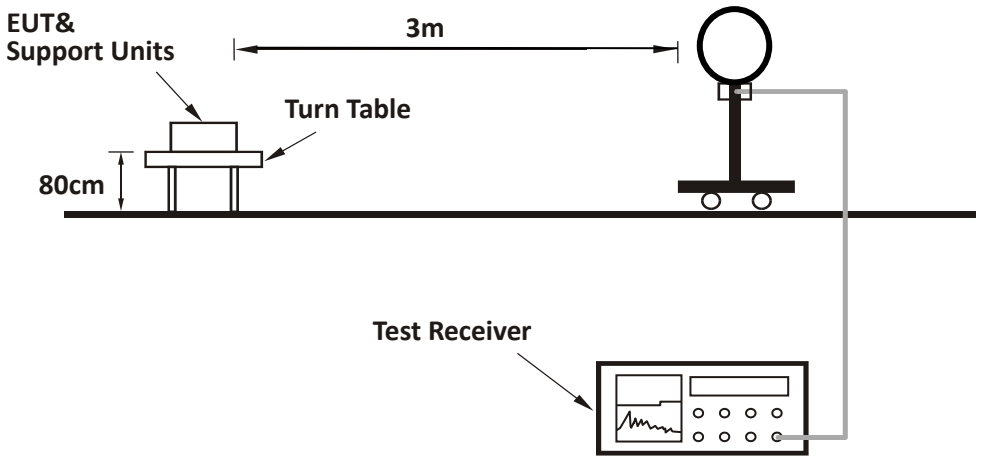
a) The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meters chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b) The EUT was set 3 meters away from the interference-receiving 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 peak or quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

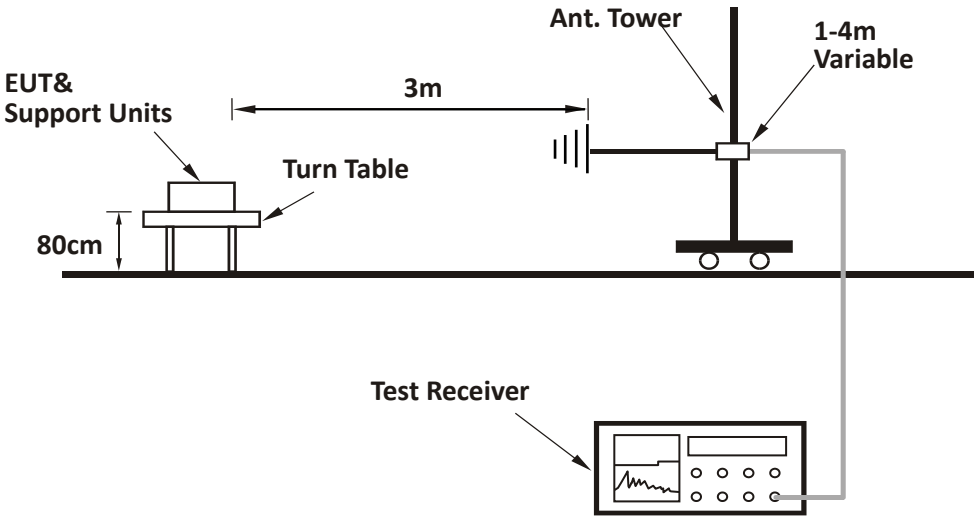
1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for peak or quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz at frequency above 1GHz for peak detection above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 3 x RBW (Duty cycle ≥ 98%) for average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

7.3 Test Configuration

For Radiated emission below 30MHz:

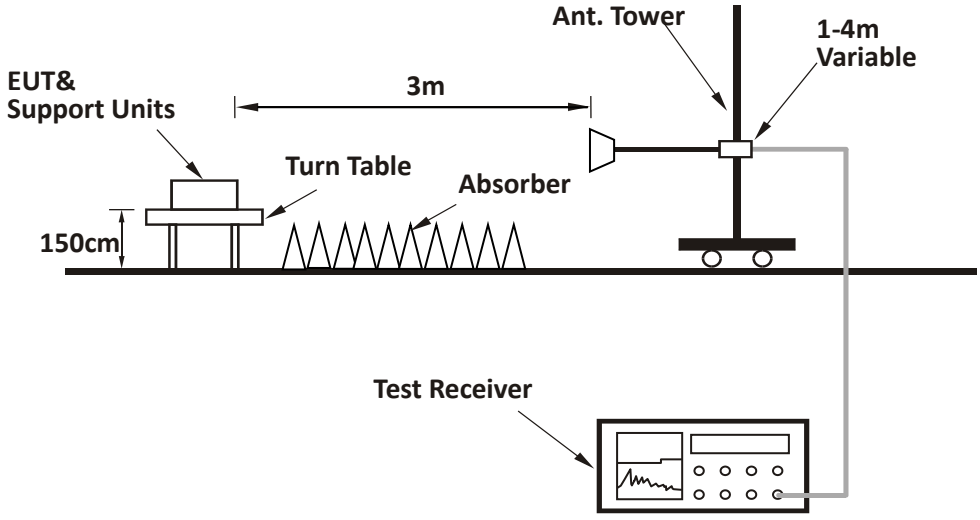


For Radiated emission 30MHz to 1GHz:



TEST REPORT

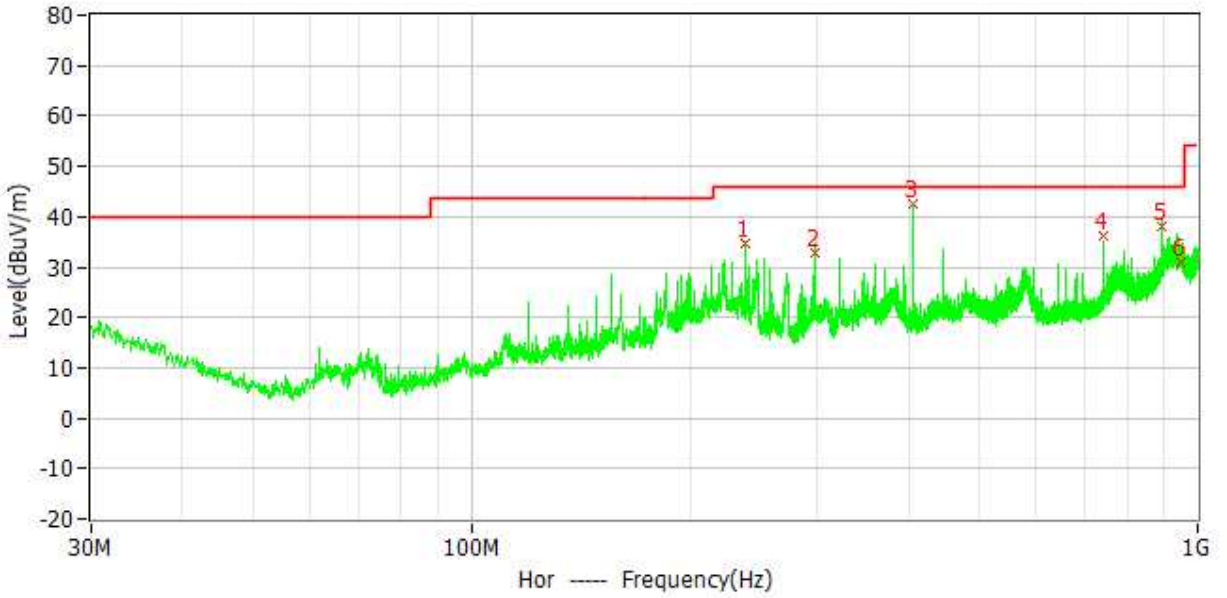
For Radiated emission above 1GHz:



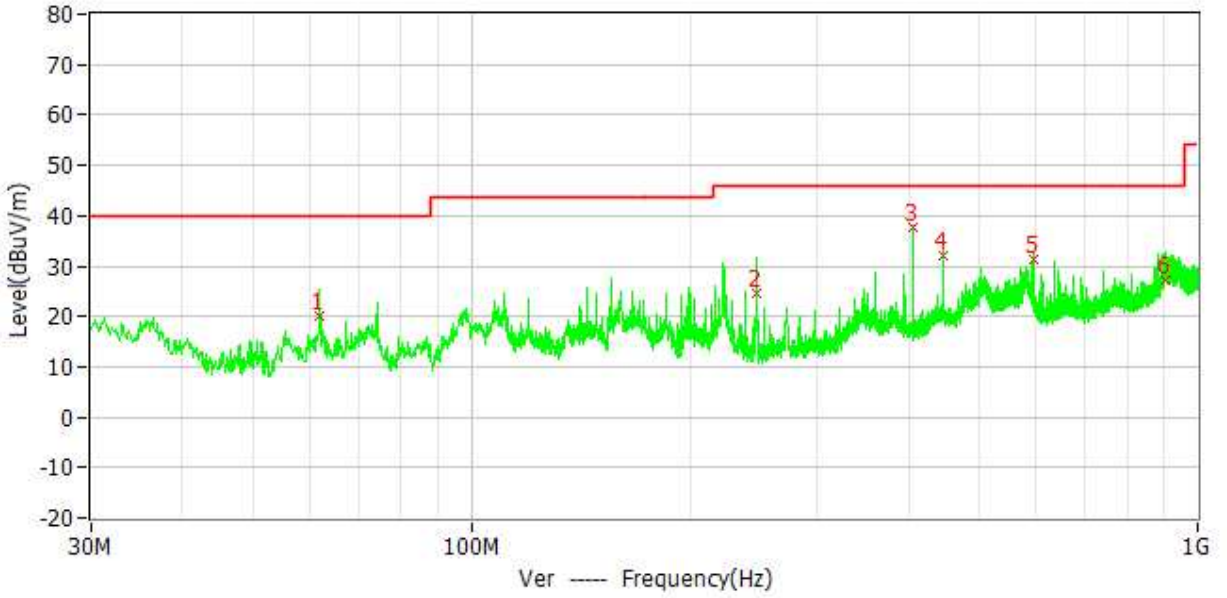
7.4 Test Results of Radiated Emissions

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Horizontal



Vertical



Test data below 1GHz

Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	238.875	34.50	13.00	46.00	11.50	QP
H	296.986	32.70	15.20	46.00	13.30	QP
H	405.010	42.50	18.20	46.00	3.50	QP
H	742.469	36.00	22.30	46.00	10.00	QP
H	890.967	38.20	24.00	46.00	7.80	QP
H	947.922	30.90	24.60	46.00	15.10	QP
V	61.872	20.20	7.40	40.00	19.80	QP
V	247.289	24.60	14.00	46.00	21.40	QP
V	405.010	37.80	18.20	46.00	8.20	QP
V	445.496	32.00	18.90	46.00	14.00	QP
V	593.995	31.40	21.30	46.00	14.60	QP
V	903.000	27.10	24.10	46.00	18.90	QP

TEST REPORT

Test result above 1GHz:

The emission was conducted from 1GHz to 40GHz

U-NII-1 Band:

802.11a

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5180.00	105.4	41.1	Fundamental	/	PK
	V	5180.00	106.2	41.1	Fundamental	/	PK
	H	5150.00	63.8	41.1	74.00	10.2	PK
	H	5150.00	48.7	41.1	54.00	5.3	AV
	V	5150.00	65.1	41.1	74.00	8.9	PK
	V	5150.00	49.8	41.1	54.00	4.2	AV
	H	10360.00	48.5	13.2	68.20	19.7	PK
	H	15540.00	47.3	15.5	68.20	20.9	PK
	V	10360.00	45.3	13.2	68.20	22.9	PK
	V	15540.00	44.5	15.5	68.20	23.7	PK
M	H	10400.00	48.3	13.2	68.20	19.9	PK
	H	15600.00	50.9	15.8	68.20	17.3	PK
	V	10400.00	48.8	13.2	68.20	19.4	PK
	V	15600.00	48.0	15.8	68.20	20.2	PK
H	H	5240.00	105.0	41.1	Fundamental	/	PK
	V	5240.00	104.9	41.1	Fundamental	/	PK
	H	5350.00	58.8	41.3	74.00	15.2	PK
	H	5350.00	47.8	41.3	54.00	6.2	AV
	V	5350.00	58.9	41.3	74.00	15.1	PK
	V	5350.00	47.1	41.3	54.00	6.9	AV
	H	10480.00	49.9	13.2	68.20	18.3	PK
	H	15720.00	48.4	16.2	68.20	19.8	PK
	V	10480.00	49.6	13.2	68.20	18.6	PK
	V	15720.00	48.2	16.2	68.20	20.0	PK

TEST REPORT

802.11n20

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5180.00	106.0	41.1	Fundamental	/	PK
	V	5180.00	106.7	41.1	Fundamental	/	PK
	H	5150.00	65.1	41.1	74.00	8.9	PK
	H	5150.00	48.5	41.1	54.00	5.5	AV
	V	5150.00	65.0	41.1	74.00	9.0	PK
	V	5150.00	48.9	41.1	54.00	5.1	AV
	H	10360.00	49.8	13.2	68.20	18.4	PK
	H	15540.00	50.3	15.5	68.20	17.9	PK
	V	10360.00	52.9	13.2	68.20	15.3	PK
	V	15540.00	50.9	15.5	68.20	17.3	PK
M	H	10400.00	50.2	13.2	68.20	18.0	PK
	H	15600.00	51.7	15.8	68.20	16.5	PK
	V	10400.00	49.5	13.2	68.20	18.7	PK
	V	15600.00	51.2	15.8	68.20	17.0	PK
H	H	5240.00	102.3	41.1	Fundamental	/	PK
	V	5240.00	102.7	41.1	Fundamental	/	PK
	H	5350.00	57.6	41.3	74.00	16.4	PK
	H	5350.00	46.1	41.3	54.00	7.9	AV
	V	5350.00	58.3	41.3	74.00	15.7	PK
	V	5350.00	46.4	41.3	54.00	7.6	AV
	H	10480.00	52.6	13.2	68.20	15.6	PK
	H	15720.00	51.9	16.2	68.20	16.3	PK
	V	10480.00	52.8	13.2	68.20	15.4	PK
	V	15720.00	51.1	16.2	68.20	17.1	PK

TEST REPORT

802.11n40

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5190.00	102.8	41.1	Fundamental	/	PK
	V	5190.00	103.5	41.1	Fundamental	/	PK
	H	5150.00	65.2	41.1	74.00	8.8	PK
	H	5150.00	51.3	41.1	54.00	2.7	AV
	V	5150.00	68.3	41.1	74.00	5.7	PK
	V	5150.00	50.4	41.1	54.00	3.6	AV
	H	10380.00	52.0	13.2	68.20	16.2	PK
	H	15570.00	50.8	15.8	68.20	17.4	PK
	V	10380.00	52.9	13.2	68.20	15.3	PK
	V	15570.00	50.5	15.8	68.20	17.7	PK
H	H	5230.00	102.9	41.1	Fundamental	/	PK
	V	5230.00	103.5	41.1	Fundamental	/	PK
	H	5350.00	58.1	41.3	74.00	15.9	PK
	H	5350.00	45.7	41.3	54.00	8.3	AV
	V	5350.00	58.3	41.3	74.00	15.7	PK
	V	5350.00	46.1	41.3	54.00	7.9	AV
	H	10460.00	51.3	13.2	68.20	16.9	PK
	H	15690.00	49.4	16.0	68.20	18.8	PK
	V	10460.00	51.8	13.2	68.20	16.4	PK
	V	15690.00	49.5	16.0	68.20	18.7	PK

TEST REPORT

802.11ac20

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5180.00	105.0	41.1	Fundamental	/	PK
	V	5180.00	103.9	41.1	Fundamental	/	PK
	H	5150.00	59.4	41.1	74.00	14.6	PK
	H	5150.00	48.7	41.1	54.00	5.3	AV
	V	5150.00	59.2	41.1	74.00	14.8	PK
	V	5150.00	48.1	41.1	54.00	5.9	AV
	H	10360.00	51.0	13.2	68.20	17.2	PK
	H	15540.00	50.4	15.5	68.20	17.8	PK
	V	10360.00	51.4	13.2	68.20	16.8	PK
	V	15540.00	50.9	15.5	68.20	17.3	PK
M	H	10400.00	50.5	13.2	68.20	17.7	PK
	H	15600.00	49.2	15.8	68.20	19.0	PK
	V	10400.00	51.8	13.2	68.20	16.4	PK
	V	15600.00	50.7	15.8	68.20	17.5	PK
H	H	5240.00	100.6	41.1	Fundamental	/	PK
	V	5240.00	103.6	41.1	Fundamental	/	PK
	H	5350.00	59.7	41.3	74.00	14.3	PK
	H	5350.00	48.1	41.3	54.00	5.9	AV
	V	5350.00	59.9	41.3	74.00	14.1	PK
	V	5350.00	48.3	41.3	54.00	5.7	AV
	H	10480.00	51.6	13.2	68.20	16.6	PK
	H	15720.00	49.0	16.2	68.20	19.2	PK
	V	10480.00	52.5	13.2	68.20	15.7	PK
	V	15720.00	50.4	16.2	68.20	17.8	PK

TEST REPORT

802.11ac40

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5190.00	101.8	61.7	Fundamental	/	PK
	V	5190.00	103.8	61.7	Fundamental	/	PK
	H	5150.00	61.9	41.1	74.00	12.1	PK
	H	5150.00	49.8	41.1	54.00	4.2	AV
	V	5150.00	62.8	41.1	74.00	11.2	PK
	V	5150.00	51.0	41.1	54.00	3.0	AV
	H	10380.00	53.8	13.2	68.20	14.4	PK
	H	15570.00	52.9	15.6	68.20	15.3	PK
	V	10380.00	53.7	13.2	68.20	14.5	PK
	V	15570.00	51.1	15.6	68.20	17.1	PK
H	H	5230.00	100.5	41.1	Fundamental	/	PK
	V	5230.00	103.9	41.1	Fundamental	/	PK
	H	5350.00	61.2	41.3	74.00	12.8	PK
	H	5350.00	48.7	41.3	54.00	5.3	AV
	V	5350.00	60.5	41.3	74.00	13.5	PK
	V	5350.00	47.3	41.3	54.00	6.7	AV
	H	10460.00	53.0	13.2	68.20	15.2	PK
	H	15690.00	51.4	16.2	68.20	16.8	PK
	V	10460.00	53.5	13.2	68.20	14.7	PK
	V	15690.00	51.5	16.2	68.20	16.7	PK

TEST REPORT

802.11ac80

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5210.00	98.7	41.3	Fundamental	/	PK
	V	5210.00	99.3	41.3	Fundamental	/	PK
	H	5150.00	62.5	41.1	74.00	11.5	PK
	H	5150.00	51.7	41.1	54.00	2.3	AV
	V	5150.00	62.7	41.1	74.00	11.3	PK
	V	5150.00	49.5	41.1	54.00	4.5	AV
	H	10420.00	51.6	13.2	68.20	16.6	PK
	H	15630.00	50.5	15.8	68.20	17.7	PK
	V	10420.00	51.8	13.2	68.20	16.4	PK
	V	15630.00	50.9	15.8	68.20	17.3	PK

TEST REPORT

U-NII-2A Band:

802.11a

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	10520.00	51.3	13.1	68.20	16.9	PK
	H	15780.00	52.1	16.4	68.20	16.1	PK
	V	10520.00	51.3	13.1	68.20	16.9	PK
	V	15780.00	52.9	16.4	68.20	15.3	PK
M	H	10560.00	51.0	13.1	68.20	17.2	PK
	H	15840.00	54.8	17.0	68.20	13.4	PK
	V	10560.00	52.5	13.1	68.20	15.7	PK
	V	15840.00	54.9	17.0	68.20	13.3	PK
H	H	5320.00	102.3	41.3	Fundamental	/	PK
	V	5320.00	103.4	41.3	Fundamental	/	PK
	H	5350.00	62.7	41.3	74.00	11.3	PK
	H	5350.00	50.9	41.3	54.00	3.1	AV
	V	5350.00	62.3	41.3	74.00	11.7	PK
	V	5350.00	51.0	41.3	54.00	3.0	AV
	H	10640.00	51.3	13.1	68.20	16.9	PK
	H	15960.00	50.8	17.1	68.20	17.4	PK
	V	10640.00	52.6	13.1	68.20	15.6	PK
	V	15960.00	50.7	17.1	68.20	17.5	PK

802.11n20

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	10520.00	51.1	13.1	68.20	17.1	PK
	H	15780.00	53.0	16.4	68.20	15.2	PK
	V	10520.00	52.1	13.1	68.20	16.1	PK
	V	15780.00	53.1	16.4	68.20	15.1	PK
M	H	10560.00	52.5	13.1	68.20	15.7	PK
	H	15840.00	53.0	17.0	68.20	15.2	PK
	V	10560.00	52.0	13.1	68.20	16.2	PK
	V	15840.00	53.3	17.0	68.20	14.9	PK
H	H	5320.00	102.3	41.3	Fundamental	/	PK
	V	5320.00	103.6	41.3	Fundamental	/	PK
	H	5350.00	62.8	41.3	74.00	11.2	PK
	H	5350.00	51.3	41.3	54.00	2.7	AV
	V	5350.00	62.3	41.3	74.00	11.7	PK
	V	5350.00	51.8	41.3	54.00	2.2	AV
	H	10640.00	51.4	13.1	68.20	16.8	PK
	H	15960.00	52.7	17.1	68.20	15.5	PK
	V	10640.00	51.8	13.1	68.20	16.4	PK
	V	15960.00	53.2	17.1	68.20	15.0	PK

TEST REPORT

802.11n40

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	10540.00	52.5	13.1	68.20	15.7	PK
	H	15810.00	53.1	16.6	68.20	15.1	PK
	V	10540.00	52.7	13.1	68.20	15.5	PK
	V	15810.00	53.6	16.6	68.20	14.6	PK
H	H	5310.00	101.0	41.3	Fundamental	/	PK
	V	5310.00	103.7	41.3	Fundamental	/	PK
	H	5350.00	66.9	41.3	74.00	7.1	PK
	H	5350.00	53.9	41.3	54.00	0.1	AV
	V	5350.00	65.9	41.3	74.00	8.1	PK
	V	5350.00	53.7	41.3	54.00	0.3	AV
	H	10620.00	52.1	13.1	68.20	16.1	PK
	H	15930.00	53.4	17.0	68.20	14.8	PK
	V	10620.00	52.1	13.1	68.20	16.1	PK
	V	15930.00	54.0	17.0	68.20	14.2	PK

TEST REPORT

802.11ac20

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	10520.00	51.4	13.1	68.20	16.8	PK
	H	15780.00	52.3	16.4	68.20	15.9	PK
	V	10520.00	51.6	13.1	68.20	16.6	PK
	V	15780.00	52.8	16.4	68.20	15.4	PK
M	H	10560.00	52.4	13.1	68.20	15.8	PK
	H	15840.00	54.7	17.0	68.20	13.5	PK
	V	10560.00	52.8	13.1	68.20	15.4	PK
	V	15840.00	54.8	17.0	68.20	13.4	PK
H	H	5320.00	102.9	41.3	Fundamental	/	PK
	V	5320.00	104.8	41.3	Fundamental	/	PK
	H	5350.00	62.4	41.3	74.00	11.6	PK
	H	5350.00	51.7	41.3	54.00	2.3	AV
	V	5350.00	63.5	41.3	74.00	10.5	PK
	V	5350.00	51.8	41.3	54.00	2.2	AV
	H	10640.00	52.1	13.1	68.20	16.1	PK
	H	15960.00	52.8	17.1	68.20	15.4	PK
	V	10640.00	51.1	13.1	68.20	17.1	PK
	V	15960.00	52.2	17.1	68.20	16.0	PK

TEST REPORT

802.11ac40

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	10540.00	51.2	13.1	68.20	17.0	PK
	H	15810.00	52.5	16.6	68.20	15.7	PK
	V	10540.00	51.9	13.1	68.20	16.3	PK
	V	15810.00	52.9	16.6	68.20	15.3	PK
H	H	5310.00	101.3	41.3	Fundamental	/	PK
	V	5310.00	102.5	41.3	Fundamental	/	PK
	H	5350.00	63.2	41.3	74.00	10.8	PK
	H	5350.00	51.8	41.3	54.00	2.2	AV
	V	5350.00	64.9	41.3	74.00	9.1	PK
	V	5350.00	52.0	41.3	54.00	2.0	AV
	H	10620.00	51.6	13.1	68.20	16.6	PK
	H	15930.00	52.7	17.0	68.20	15.5	PK
	V	10620.00	51.6	13.1	68.20	16.6	PK
	V	15930.00	52.9	17.0	68.20	15.3	PK

TEST REPORT

802.11ac80

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5290.00	98.7	41.2	Fundamental	/	PK
	V	5290.00	98.7	41.2	Fundamental	/	PK
	H	5350.00	62.1	41.3	74.00	11.9	PK
	H	5350.00	49.5	41.3	54.00	4.5	AV
	V	5350.00	62.5	41.3	74.00	11.5	PK
	V	5350.00	50.3	41.3	54.00	3.7	AV
	H	10580.00	51.0	13.1	68.20	17.2	PK
	H	15870.00	52.6	16.7	68.20	15.6	PK
	V	10580.00	52.7	13.1	68.20	15.5	PK
	V	15870.00	52.2	16.7	68.20	16.0	PK

TEST REPORT

U-NII-2C Band:
802.11a

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
L	H	5500.00	107.5	41.3	Fundamental	/	PK
	V	5500.00	107.4	41.3	Fundamental	/	PK
	H	5460.00	63.4	41.3	74.00	10.6	PK
	H	5460.00	52.3	41.3	54.00	1.7	AV
	V	5460.00	63.3	41.3	74.00	10.7	PK
	V	5460.00	52.1	41.3	54.00	1.9	AV
	H	11000.00	50.4	13.1	68.20	17.8	PK
	H	16500.00	52.2	18.3	68.20	16.0	PK
	V	11000.00	50.0	13.1	68.20	18.2	PK
	V	16500.00	52.1	18.3	68.20	16.1	PK
M	H	11160.00	52.4	13.1	68.20	15.8	PK
	H	16740.00	54.1	18.3	68.20	14.1	PK
	V	11160.00	52.8	13.1	68.20	15.4	PK
	V	16740.00	53.9	18.3	68.20	14.3	PK
H	H	11400.00	51.8	13.8	68.20	16.4	PK
	H	17100.00	52.2	20.1	68.20	16.0	PK
	V	11400.00	51.7	13.8	68.20	16.5	PK
	V	17100.00	52.3	20.1	68.20	15.9	PK

TEST REPORT

802.11n20

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
L	H	5500.00	104.8	41.3	Fundamental	/	PK
	V	5500.00	105.4	41.3	Fundamental	/	PK
	H	5460.00	63.5	41.3	74.00	10.5	PK
	H	5460.00	51.0	41.3	54.00	3.0	AV
	V	5460.00	63.7	41.3	74.00	10.3	PK
	V	5460.00	51.4	41.3	54.00	2.6	AV
	H	11000.00	51.6	13.1	68.20	16.6	PK
	H	16500.00	53.3	18.3	68.20	14.9	PK
	V	11000.00	51.1	13.1	68.20	17.1	PK
	V	16500.00	53.1	18.3	68.20	15.1	PK
M	H	11160.00	52.2	13.1	68.20	16.0	PK
	H	16740.00	54.0	18.3	68.20	14.2	PK
	V	11160.00	52.0	13.1	68.20	16.2	PK
	V	16740.00	54.4	18.3	68.20	13.8	PK
H	H	11400.00	52.4	13.8	68.20	15.8	PK
	H	17100.00	54.3	20.1	68.20	13.9	PK
	V	11400.00	52.3	13.8	68.20	15.9	PK
	V	17100.00	54.7	20.1	68.20	13.5	PK

TEST REPORT

802.11n40

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5510.00	103.7	41.2	Fundamental	/	PK
	V	5510.00	104.4	41.2	Fundamental	/	PK
	H	5460.00	64.0	41.3	74.00	10.0	PK
	H	5460.00	51.7	41.3	54.00	2.3	AV
	V	5460.00	64.2	41.3	74.00	9.8	PK
	V	5460.00	51.3	41.3	54.00	2.7	AV
	H	11020.00	51.4	13.1	68.20	16.8	PK
	H	16530.00	53.8	18.4	68.20	14.4	PK
	V	11020.00	51.8	13.1	68.20	16.4	PK
	V	16530.00	54.9	18.4	68.20	13.3	PK
M	H	11100.00	51.5	13.3	68.20	16.7	PK
	H	16650.00	53.4	18.8	68.20	14.8	PK
	V	11100.00	51.7	13.3	68.20	16.5	PK
	V	16650.00	53.6	18.8	68.20	14.6	PK
H	H	11340.00	52.0	13.7	68.20	16.2	PK
	H	17010.00	54.0	20.1	68.20	14.2	PK
	V	11340.00	52.7	13.7	68.20	15.5	PK
	V	17010.00	53.9	20.1	68.20	14.3	PK

TEST REPORT

802.11ac20

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
L	H	5500.00	107.2	41.3	Fundamental	/	PK
	V	5500.00	107.4	41.3	Fundamental	/	PK
	H	5460.00	62.8	41.3	74.00	11.2	PK
	H	5460.00	51.0	41.3	54.00	3.0	AV
	V	5460.00	62.5	41.3	74.00	11.5	PK
	V	5460.00	51.3	41.3	54.00	2.7	AV
	H	16500.00	51.1	13.1	68.20	17.1	PK
	H	11000.00	52.1	18.3	68.20	16.1	PK
	V	16500.00	51.9	13.1	68.20	16.3	PK
	V	11000.00	52.5	18.3	68.20	15.7	PK
M	H	11160.00	52.8	13.1	68.20	15.4	PK
	H	16740.00	53.4	18.3	68.20	14.8	PK
	V	11160.00	52.8	13.1	68.20	15.4	PK
	V	16740.00	54.1	18.3	68.20	14.1	PK
H	H	11400.00	51.8	13.8	68.20	16.4	PK
	H	17100.00	53.5	20.1	68.20	14.7	PK
	V	11400.00	51.6	13.8	68.20	16.6	PK
	V	17100.00	54.6	20.1	68.20	13.6	PK

TEST REPORT

802.11ac40

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5510.00	104.6	41.2	Fundamental	/	PK
	V	5510.00	105.0	41.2	Fundamental	/	PK
	H	5460.00	64.8	41.3	74.00	9.2	PK
	H	5460.00	51.1	41.3	54.00	2.9	AV
	V	5460.00	64.6	41.3	74.00	9.4	PK
	V	5460.00	51.9	41.3	54.00	2.1	AV
	H	11020.00	52.0	13.1	68.20	16.2	PK
	H	16530.00	53.5	18.4	68.20	14.7	PK
	V	11020.00	52.1	13.1	68.20	16.1	PK
	V	16530.00	53.7	18.4	68.20	14.5	PK
M	H	11100.00	52.4	13.3	68.20	15.8	PK
	H	16650.00	54.8	18.8	68.20	13.4	PK
	V	11100.00	52.6	13.3	68.20	15.6	PK
	V	16650.00	54.7	18.8	68.20	13.5	PK
H	H	11340.00	52.5	13.7	68.20	15.7	PK
	H	17010.00	54.1	20.1	68.20	14.1	PK
	V	11340.00	52.4	13.7	68.20	15.8	PK
	V	17010.00	54.3	20.1	68.20	13.9	PK

TEST REPORT

802.11ac80

Channel	Polarity	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	5530.00	102.1	41.2	Fundamental	/	PK
	V	5530.00	102.8	41.2	Fundamental	/	PK
	H	5460.00	64.2	41.3	74.00	9.8	PK
	H	5460.00	52.5	41.3	54.00	1.5	AV
	V	5460.00	64.6	41.3	74.00	9.4	PK
	V	5460.00	52.9	41.3	54.00	1.1	AV
	H	11060.00	52.9	13.2	68.20	15.3	PK
	H	16590.00	54.5	18.7	68.20	13.7	PK
	V	11060.00	52.7	13.2	68.20	15.5	PK
	V	16590.00	54.3	18.7	68.20	13.9	PK

TEST REPORT

U-NII-3 Band:
802.11a

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5745.00	105.4	42.0	Fundamental	/	PK
	V	5745.00	107.8	42.0	Fundamental	/	PK
	H	11490.00	52.4	13.9	68.20	15.8	PK
	H	17235.00	53.5	20.1	68.20	14.7	PK
	V	11490.00	52.0	13.9	68.20	16.2	PK
	V	17235.00	53.3	20.1	68.20	14.9	PK
M	H	11570.00	52.3	14.0	68.20	15.9	PK
	H	17355.00	53.8	20.1	68.20	14.4	PK
	V	11570.00	52.1	14.0	68.20	16.1	PK
	V	17355.00	53.6	20.1	68.20	14.6	PK
H	H	5825.00	109.4	42.3	Fundamental	/	PK
	V	5825.00	108.2	42.3	Fundamental	/	PK
	H	11650.00	54.9	14.0	68.20	13.3	PK
	H	17475.00	53.5	20.1	68.20	14.7	PK
	V	11650.00	54.5	14.0	68.20	13.7	PK
	V	17475.00	53.7	20.1	68.20	14.5	PK

TEST REPORT

802.11n20

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5745.00	107.9	42.0	Fundamental	/	PK
	V	5745.00	106.4	42.0	Fundamental	/	PK
	H	11490.00	52.0	13.9	68.20	16.2	PK
	H	17235.00	53.3	20.1	68.20	14.9	PK
	V	11490.00	51.6	13.9	68.20	16.6	PK
	V	17235.00	53.4	20.1	68.20	14.8	PK
M	H	11570.00	53.6	14.0	68.20	14.6	PK
	H	17355.00	53.5	20.1	68.20	14.7	PK
	V	11570.00	53.4	14.0	68.20	14.8	PK
	V	17355.00	52.9	20.1	68.20	15.3	PK
H	H	5825.00	107.3	42.3	Fundamental	/	PK
	V	5825.00	106.8	42.3	Fundamental	/	PK
	H	11650.00	53.3	14.0	68.20	14.9	PK
	H	17475.00	54.7	20.1	68.20	13.5	PK
	V	11650.00	53.0	14.0	68.20	15.2	PK
	V	17475.00	54.1	20.1	68.20	14.1	PK

TEST REPORT

802.11n40

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5755.00	106.1	42.0	Fundamental	/	PK
	V	5755.00	105.8	42.0	Fundamental	/	PK
	H	11510.00	52.9	13.9	68.20	15.3	PK
	H	17265.00	54.3	20.1	68.20	13.9	PK
	V	11510.00	52.9	13.9	68.20	15.3	PK
	V	17265.00	53.9	20.1	68.20	14.3	PK
H	H	5795.00	104.2	42.1	Fundamental	/	PK
	V	5795.00	102.8	42.1	Fundamental	/	PK
	H	11590.00	54.0	14.0	68.20	14.2	PK
	H	17385.00	52.9	20.1	68.20	15.3	PK
	V	11590.00	54.2	14.0	68.20	14.0	PK
	V	17385.00	52.5	20.1	68.20	15.7	PK

802.11ac20

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5745.00	106.0	42.0	Fundamental	/	PK
	V	5745.00	105.3	42.0	Fundamental	/	PK
	H	11490.00	53.3	13.9	68.20	14.9	PK
	H	17235.00	54.5	20.1	68.20	13.7	PK
	V	11490.00	53.7	13.9	68.20	14.5	PK
	V	17235.00	54.1	20.1	68.20	14.1	PK
M	H	11570.00	53.4	14.0	68.20	14.8	PK
	H	17355.00	54.6	20.1	68.20	13.6	PK
	V	11570.00	53.8	14.0	68.20	14.4	PK
	V	17355.00	54.7	20.1	68.20	13.5	PK
H	H	5825.00	107.7	42.3	Fundamental	/	PK
	V	5825.00	106.5	42.3	Fundamental	/	PK
	H	11650.00	53.0	14.0	68.20	15.2	PK
	H	17475.00	54.2	20.1	68.20	14.0	PK
	V	11650.00	53.1	14.0	68.20	15.1	PK
	V	17475.00	53.6	20.1	68.20	14.6	PK

802.11ac40

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5755.00	102.9	42.2	Fundamental	/	PK
	V	5755.00	102.7	42.2	Fundamental	/	PK
	H	11510.00	52.3	13.9	68.20	15.9	PK
	H	17265.00	53.2	20.1	68.20	15.0	PK
	V	11510.00	52.9	13.9	68.20	15.3	PK
	V	17265.00	54.2	20.1	68.20	14.0	PK
H	H	5795.00	106.0	42.0	Fundamental	/	PK
	V	5795.00	105.4	42.0	Fundamental	/	PK
	H	11590.00	53.1	14.0	68.20	15.1	PK
	H	17385.00	53.6	20.1	68.20	14.6	PK
	V	11590.00	53.1	14.0	68.20	15.1	PK
	V	17385.00	53.3	20.1	68.20	14.9	PK

TEST REPORT

802.11ac80

Channel	Polarity	Frequency	Corrected Reading	Correct Factor	Limit	Margin	Detector
		(MHz)	(dBuV/m)	(dB/m)	(dBuV/m)	(dB)	
L	H	5775.00	101.1	42.0	Fundamental	/	PK
	V	5775.00	99.3	42.0	Fundamental	/	PK
	H	11550.00	52.9	14.0	68.20	15.3	PK
	H	17325.00	51.3	20.1	68.20	16.9	PK
	V	11550.00	52.7	14.0	68.20	15.5	PK
	V	17325.00	51.3	20.1	68.20	16.9	PK

Remark: 1. Correct Factor = Antenna Factor + Cable Loss (- Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
2. Corrected Reading = Original Receiver Reading + Correct Factor
3. Margin = Limit - Corrected Reading
4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Example: Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,
Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV,
Limit = 40.00dBuV/m.
Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m;
Corrected Reading = 10dBuV + 0.20dB/m = 10.20dBuV/m;
Margin = 40.00dBuV/m - 10.20dBuV/m = 29.80dB.

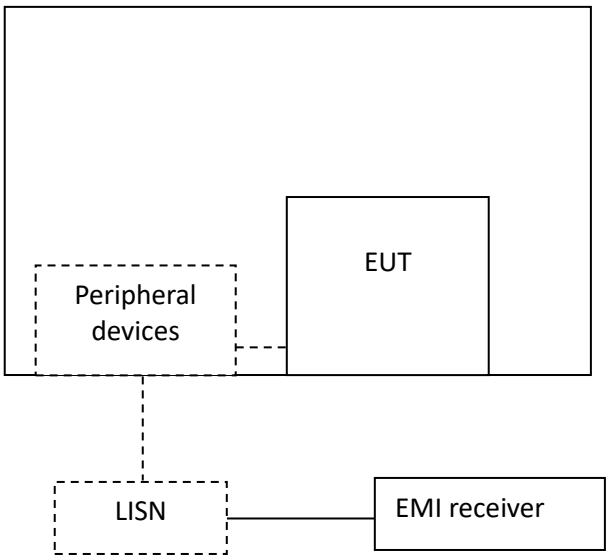
8 Power line conducted emission

Test Result: **Pass**

8.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

8.2 Test Configuration



TEST REPORT

8.3 Measurement Procedure

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

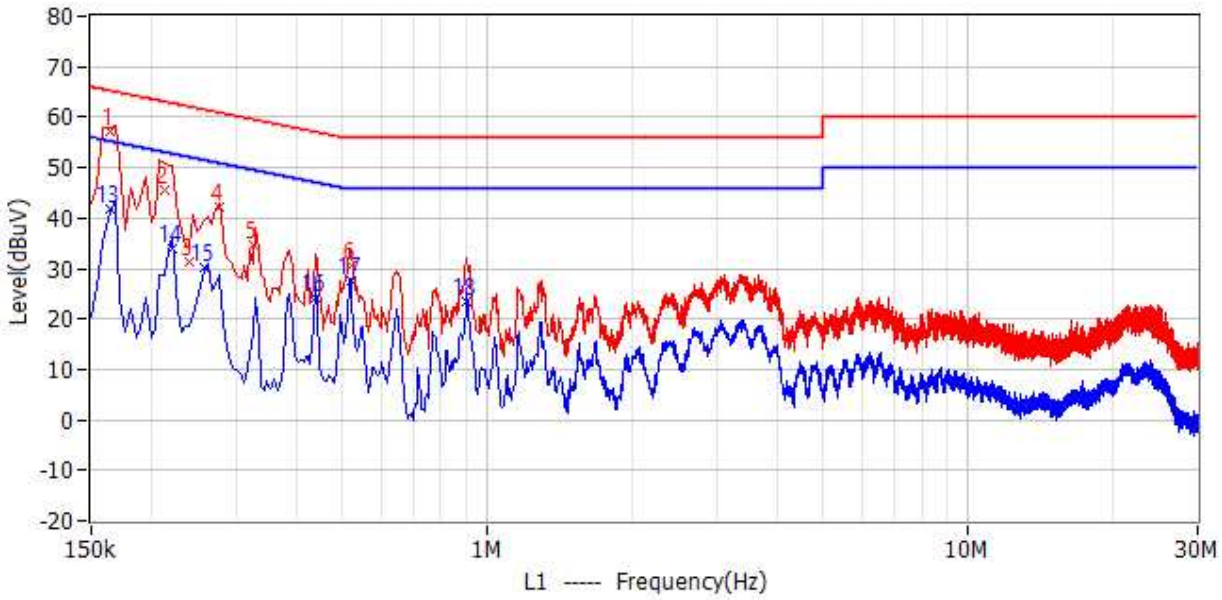
Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

The bandwidth of the test receiver is set at 9 kHz.

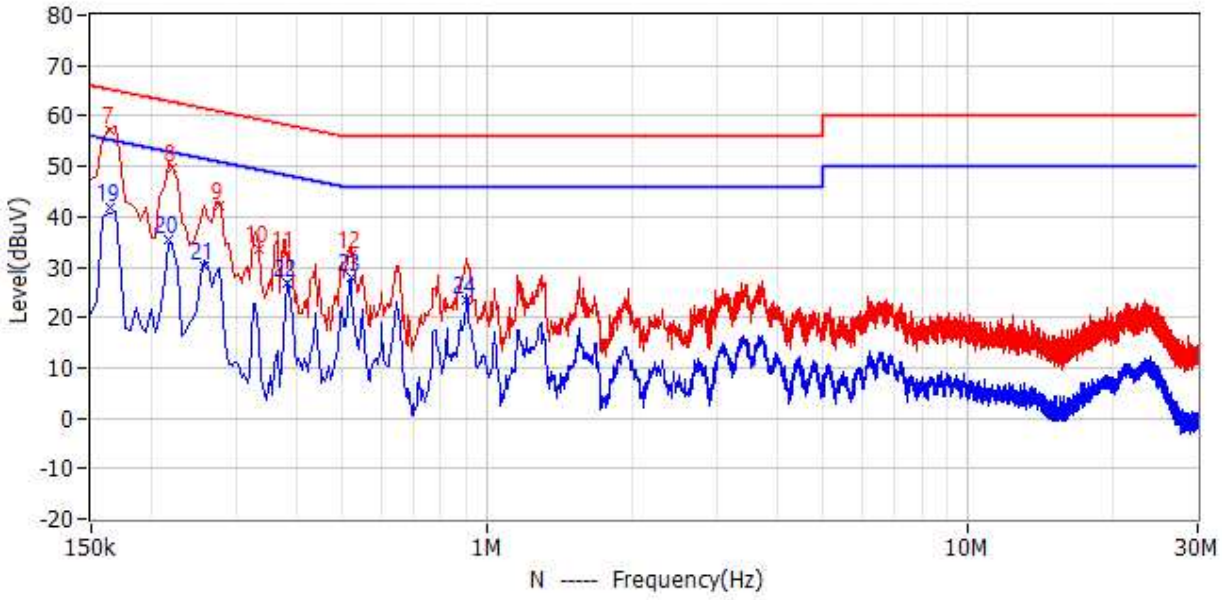
TEST REPORT

8.4 Test Results of Power line conducted emission

L line



N line



TEST REPORT

Test Data:

No.	Frequency	Limit dBuV	Level dBuV	Margin dB	Reading dBuV	Factor dB	Detector	Phase
1	163.500kHz	65.28	57.06	-8.22	50.86	6.20	QP	L1
2	213.000kHz	63.09	45.72	-17.37	39.52	6.20	QP	L1
3	240.000kHz	62.10	31.27	-30.83	25.07	6.20	QP	L1
4	276.000kHz	60.94	42.13	-18.81	35.93	6.20	QP	L1
5	325.500kHz	59.57	34.69	-24.88	28.49	6.20	QP	L1
6	523.500kHz	56.00	30.58	-25.42	24.38	6.20	QP	L1
7	163.500kHz	65.28	57.12	-8.16	51.02	6.10	QP	N
8	222.000kHz	62.74	49.69	-13.05	43.59	6.10	QP	N
9	276.000kHz	60.94	42.29	-18.65	36.19	6.10	QP	N
10	334.500kHz	59.34	33.50	-25.84	27.40	6.10	QP	N
11	379.500kHz	58.29	32.46	-25.83	26.36	6.10	QP	N
12	519.000kHz	56.00	32.28	-23.72	26.08	6.20	QP	N
13	163.500kHz	55.28	41.79	-13.49	35.59	6.20	CAV	L1
14	222.000kHz	52.74	33.91	-18.83	27.71	6.20	CAV	L1
15	258.000kHz	51.50	30.25	-21.25	24.05	6.20	CAV	L1
16	438.000kHz	47.10	24.30	-22.80	18.10	6.20	CAV	L1
17	519.000kHz	46.00	27.75	-18.25	21.55	6.20	CAV	L1
18	906.000kHz	46.00	23.32	-22.68	17.12	6.20	CAV	L1
19	163.500kHz	55.28	41.96	-13.32	35.86	6.10	CAV	N
20	217.500kHz	52.91	35.58	-17.33	29.48	6.10	CAV	N
21	258.000kHz	51.50	30.27	-21.23	24.17	6.10	CAV	N
22	384.000kHz	48.19	26.76	-21.43	20.66	6.10	CAV	N
23	519.000kHz	46.00	27.88	-18.12	21.68	6.20	CAV	N
24	906.000kHz	46.00	23.60	-22.40	17.40	6.20	CAV	N

Remark: 1. Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.
2. Level = Reading + Factor
3. Margin = Limit - Level
4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

9 Frequency Stability

Test Result: **Pass**

9.1 Limit

The frequency stability shall be sufficient to ensure that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

9.2 Test Result

Frequency Error - Temperature Variation

Supply Voltage DC (V)	Temperature (°C)	Frequency Deviation (ppm)
		Channel (5180MHz)
12	-20	0.000000
	-10	-3.861004
	0	-3.861004
	10	-3.861004
	20	-3.861004
	30	0.000000
	40	-3.861004
	50	0.000000

Frequency Error - Voltage Variation

Supply Voltage DC (V)	Temperature (°C)	Frequency Deviation (ppm)
		Channel (5180MHz)
10.8	20	0.000000
12		0.000000
13.2		3.861004

TEST REPORT

10 Antenna requirement

Requirement:
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Result:
EUT use of a permanently attached antenna and a unique coupling to the intentional radiator, so it can comply with the provisions of this section.

Appendix A: Test results

Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.720	5170.200	5189.920	---	---
11A	Ant2	5180	19.880	5170.120	5190.000	---	---
11A	Ant1	5200	20.400	5189.600	5210.000	---	---
11A	Ant2	5200	31.320	5185.880	5217.200	---	---
11A	Ant1	5240	19.960	5230.000	5249.960	---	---
11A	Ant2	5240	28.120	5225.880	5254.000	---	---
11A	Ant1	5260	20.000	5250.120	5270.120	---	---
11A	Ant2	5260	33.760	5243.520	5277.280	---	---
11A	Ant1	5280	19.920	5269.960	5289.880	---	---
11A	Ant2	5280	32.320	5264.640	5296.960	---	---
11A	Ant1	5320	19.960	5310.040	5330.000	---	---
11A	Ant2	5320	20.120	5310.000	5330.120	---	---
11A	Ant1	5500	19.960	5489.960	5509.920	---	---
11A	Ant2	5500	19.840	5490.040	5509.880	---	---
11A	Ant1	5580	19.880	5570.000	5589.880	---	---
11A	Ant2	5580	20.160	5569.720	5589.880	---	---
11A	Ant1	5700	19.960	5689.840	5709.800	---	---
11A	Ant2	5700	20.280	5689.800	5710.080	---	---
11A	Ant1	5745	27.680	5732.080	5759.760	---	---
11A	Ant2	5745	20.000	5734.880	5754.880	---	---
11A	Ant1	5785	26.280	5772.120	5798.400	---	---
11A	Ant2	5785	20.280	5774.880	5795.160	---	---
11A	Ant1	5825	26.920	5811.800	5838.720	---	---
11A	Ant2	5825	20.040	5814.920	5834.960	---	---
11N20MIMO	Ant1	5180	20.040	5169.840	5189.880	---	---
11N20MIMO	Ant2	5180	20.240	5169.800	5190.040	---	---
11N20MIMO	Ant1	5200	20.360	5189.840	5210.200	---	---
11N20MIMO	Ant2	5200	25.920	5187.120	5213.040	---	---
11N20MIMO	Ant1	5240	20.120	5229.800	5249.920	---	---
11N20MIMO	Ant2	5240	26.280	5227.240	5253.520	---	---
11N20MIMO	Ant1	5260	20.160	5250.000	5270.160	---	---
11N20MIMO	Ant2	5260	31.320	5243.600	5274.920	---	---
11N20MIMO	Ant1	5280	20.080	5270.040	5290.120	---	---
11N20MIMO	Ant2	5280	31.760	5263.840	5295.600	---	---
11N20MIMO	Ant1	5320	20.280	5309.840	5330.120	---	---
11N20MIMO	Ant2	5320	20.120	5309.920	5330.040	---	---
11N20MIMO	Ant1	5500	20.000	5490.000	5510.000	---	---
11N20MIMO	Ant2	5500	20.440	5489.760	5510.200	---	---
11N20MIMO	Ant1	5580	20.000	5570.000	5590.000	---	---
11N20MIMO	Ant2	5580	20.440	5569.840	5590.280	---	---
11N20MIMO	Ant1	5700	20.080	5690.000	5710.080	---	---
11N20MIMO	Ant2	5700	20.280	5689.800	5710.080	---	---
11N20MIMO	Ant1	5745	22.880	5732.320	5755.200	---	---
11N20MIMO	Ant2	5745	20.240	5734.760	5755.000	---	---
11N20MIMO	Ant1	5785	23.640	5774.480	5798.120	---	---
11N20MIMO	Ant2	5785	20.320	5774.880	5795.200	---	---
11N20MIMO	Ant1	5825	25.800	5812.440	5838.240	---	---
11N20MIMO	Ant2	5825	20.160	5814.840	5835.000	---	---
11N40MIMO	Ant1	5190	39.360	5170.320	5209.680	---	---
11N40MIMO	Ant2	5190	40.880	5169.520	5210.400	---	---
11N40MIMO	Ant1	5230	40.400	5209.760	5250.160	---	---

11N40MIMO	Ant2	5230	63.440	5196.400	5259.840	---	---
11N40MIMO	Ant1	5270	39.760	5249.920	5289.680	---	---
11N40MIMO	Ant2	5270	73.680	5236.320	5310.000	---	---
11N40MIMO	Ant1	5310	39.920	5289.920	5329.840	---	---
11N40MIMO	Ant2	5310	40.800	5289.760	5330.560	---	---
11N40MIMO	Ant1	5510	39.680	5490.160	5529.840	---	---
11N40MIMO	Ant2	5510	40.480	5489.840	5530.320	---	---
11N40MIMO	Ant1	5550	40.000	5529.840	5569.840	---	---
11N40MIMO	Ant2	5550	44.960	5525.840	5570.800	---	---
11N40MIMO	Ant1	5670	40.080	5650.240	5690.320	---	---
11N40MIMO	Ant2	5670	40.720	5649.840	5690.560	---	---
11N40MIMO	Ant1	5755	42.000	5735.000	5777.000	---	---
11N40MIMO	Ant2	5755	40.240	5734.600	5774.840	---	---
11N40MIMO	Ant1	5795	45.920	5771.160	5817.080	---	---
11N40MIMO	Ant2	5795	40.640	5774.760	5815.400	---	---
11AC20MIMO	Ant1	5180	19.840	5170.000	5189.840	---	---
11AC20MIMO	Ant2	5180	20.520	5169.600	5190.120	---	---
11AC20MIMO	Ant1	5200	20.080	5189.960	5210.040	---	---
11AC20MIMO	Ant2	5200	27.680	5186.400	5214.080	---	---
11AC20MIMO	Ant1	5240	20.280	5229.800	5250.080	---	---
11AC20MIMO	Ant2	5240	26.040	5227.640	5253.680	---	---
11AC20MIMO	Ant1	5260	19.920	5249.880	5269.800	---	---
11AC20MIMO	Ant2	5260	31.320	5243.680	5275.000	---	---
11AC20MIMO	Ant1	5280	20.240	5269.960	5290.200	---	---
11AC20MIMO	Ant2	5280	32.120	5264.520	5296.640	---	---
11AC20MIMO	Ant1	5320	20.040	5310.000	5330.040	---	---
11AC20MIMO	Ant2	5320	20.600	5309.720	5330.320	---	---
11AC20MIMO	Ant1	5500	20.040	5489.960	5510.000	---	---
11AC20MIMO	Ant2	5500	20.400	5489.840	5510.240	---	---
11AC20MIMO	Ant1	5580	20.120	5569.840	5589.960	---	---
11AC20MIMO	Ant2	5580	20.320	5569.920	5590.240	---	---
11AC20MIMO	Ant1	5700	20.400	5689.800	5710.200	---	---
11AC20MIMO	Ant2	5700	20.520	5689.520	5710.040	---	---
11AC20MIMO	Ant1	5745	20.600	5734.880	5755.480	---	---
11AC20MIMO	Ant2	5745	20.320	5734.760	5755.080	---	---
11AC20MIMO	Ant1	5785	21.080	5774.520	5795.600	---	---
11AC20MIMO	Ant2	5785	20.280	5774.840	5795.120	---	---
11AC20MIMO	Ant1	5825	23.040	5814.480	5837.520	---	---
11AC20MIMO	Ant2	5825	20.280	5814.840	5835.120	---	---
11AC40MIMO	Ant1	5190	39.280	5170.240	5209.520	---	---
11AC40MIMO	Ant2	5190	40.400	5169.680	5210.080	---	---
11AC40MIMO	Ant1	5230	39.760	5210.000	5249.760	---	---
11AC40MIMO	Ant2	5230	58.400	5200.880	5259.280	---	---
11AC40MIMO	Ant1	5270	40.320	5249.760	5290.080	---	---
11AC40MIMO	Ant2	5270	73.120	5234.560	5307.680	---	---
11AC40MIMO	Ant1	5310	39.760	5289.840	5329.600	---	---
11AC40MIMO	Ant2	5310	41.040	5289.680	5330.720	---	---
11AC40MIMO	Ant1	5510	39.760	5489.920	5529.680	---	---
11AC40MIMO	Ant2	5510	40.880	5489.440	5530.320	---	---
11AC40MIMO	Ant1	5550	39.760	5530.080	5569.840	---	---
11AC40MIMO	Ant2	5550	53.280	5520.880	5574.160	---	---
11AC40MIMO	Ant1	5670	39.520	5650.240	5689.760	---	---
11AC40MIMO	Ant2	5670	40.400	5650.080	5690.480	---	---
11AC40MIMO	Ant1	5755	42.080	5734.920	5777.000	---	---
11AC40MIMO	Ant2	5755	40.320	5734.680	5775.000	---	---
11AC40MIMO	Ant1	5795	45.440	5775.080	5820.520	---	---
11AC40MIMO	Ant2	5795	40.320	5774.840	5815.160	---	---
11AC80MIMO	Ant1	5210	80.000	5169.680	5249.680	---	---
11AC80MIMO	Ant2	5210	81.600	5169.040	5250.640	---	---
11AC80MIMO	Ant1	5290	79.840	5250.160	5330.000	---	---
11AC80MIMO	Ant2	5290	116.160	5235.440	5351.600	---	---

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11AC80MIMO	Ant1	5530	80.160	5490.160	5570.320	---	---
11AC80MIMO	Ant2	5530	81.600	5489.520	5571.120	---	---
11AC80MIMO	Ant1	5610	80.480	5569.680	5650.160	---	---
11AC80MIMO	Ant2	5610	81.440	5569.200	5650.640	---	---
11AC80MIMO	Ant1	5775	82.240	5734.360	5816.600	---	---
11AC80MIMO	Ant2	5775	81.760	5734.360	5816.120	---	---

TEST REPORT

Test Graphs

11A-Ant1-5180

11A-Ant2-5180

11A-Ant1-5200

TEST REPORT

11A-Ant2-5200

11A-Ant1-5240

11A-Ant2-5240

TEST REPORT

11A-Ant1-5260

11A-Ant2-5260

11A-Ant1-5280

TEST REPORT

11A-Ant2-5280

11A-Ant1-5320

11A-Ant2-5320

TEST REPORT

11A-Ant1-5500

11A-Ant2-5500

11A-Ant1-5580

TEST REPORT

11A-Ant2-5580

11A-Ant1-5700

11A-Ant2-5700

TEST REPORT

11A-Ant1-5745

11A-Ant2-5745

11A-Ant1-5785

TEST REPORT

11A-Ant2-5785

11A-Ant1-5825

11A-Ant2-5825

TEST REPORT

11N20MIMO-Ant1-5180

11N20MIMO-Ant2-5180

11N20MIMO-Ant1-5200

TEST REPORT

11N20MIMO-Ant2-5200

11N20MIMO-Ant1-5240

11N20MIMO-Ant2-5240

TEST REPORT

11N20MIMO-Ant1-5260

11N20MIMO-Ant2-5260

11N20MIMO-Ant1-5280

TEST REPORT

11N20MIMO-Ant2-5280

11N20MIMO-Ant1-5320

11N20MIMO-Ant2-5320

TEST REPORT

11N20MIMO-Ant1-5500

11N20MIMO-Ant2-5500

11N20MIMO-Ant1-5580

TEST REPORT

11N20MIMO-Ant2-5580

11N20MIMO-Ant1-5700

11N20MIMO-Ant2-5700

TEST REPORT

11N20MIMO-Ant1-5745

11N20MIMO-Ant2-5745

11N20MIMO-Ant1-5785

TEST REPORT

11N20MIMO-Ant2-5785

11N20MIMO-Ant1-5825

11N20MIMO-Ant2-5825

TEST REPORT

11N40MIMO-Ant1-5190

11N40MIMO-Ant2-5190

11N40MIMO-Ant1-5230

TEST REPORT

11N40MIMO-Ant2-5230

11N40MIMO-Ant1-5270

11N40MIMO-Ant2-5270

TEST REPORT

11N40MIMO-Ant1-5310

11N40MIMO-Ant2-5310

11N40MIMO-Ant1-5510

TEST REPORT

11N40MIMO-Ant2-5510

11N40MIMO-Ant1-5550

11N40MIMO-Ant2-5550

TEST REPORT

11N40MIMO-Ant1-5670

11N40MIMO-Ant2-5670

11N40MIMO-Ant1-5755

11N40MIMO-Ant2-5755

11N40MIMO-Ant1-5795

11N40MIMO-Ant2-5795

TEST REPORT

11AC20MIMO-Ant1-5180

11AC20MIMO-Ant2-5180

11AC20MIMO-Ant1-5200

11AC20MIMO-Ant2-5200

11AC20MIMO-Ant1-5240

11AC20MIMO-Ant2-5240

TEST REPORT

11AC20MIMO-Ant1-5260

11AC20MIMO-Ant2-5260

11AC20MIMO-Ant1-5280

TEST REPORT

11AC20MIMO-Ant2-5280

11AC20MIMO-Ant1-5320

11AC20MIMO-Ant2-5320