

FCC RF TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
LTE WIFI Router

ISSUED TO
Asiatelco Technologies Co.

289 Bisheng Road, Building 8, 3F, Zhangjiang Hi-Tech Park, Pudong,
Shanghai 201204, China



Prepared by: Ye Hongji
Ye Hongji
Date: Aug 05, 2020

Approved by: Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date: Aug 05, 2020

Report No.: BL-EC2060316-602
EUT Name: LTE WIFI Router
Model Name: W01
Brand Name: ATEL
Test Standard: 47 CFR Part 15 Subpart E
FCC ID: XYO-W01

Test Conclusion: Pass
Test Date: Jun. 10, 2020 ~ Jun. 15, 2020
Date of Issue: Aug. 05, 2020

NOTE: This test report of test results only related to testing samples, which can be duplicated completely for the legal use with the approval of the applicant; it shall not be reproduced except in full, without the written approval of Shenzhen BALUN Technology Co., Ltd. Any objections should be raised within thirty days from the date of issue. To validate the report, please contact us.

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Jul. 07, 2020</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Aug. 05, 2020</u>	<u>Updated the EUT Name</u>

TABLE OF CONTENTS

1	ADMINISTRATIVE DATA (GENERAL INFORMATION)	4
1.1	Identification of the Testing Laboratory	4
1.2	Identification of the Responsible Testing Location	4
1.3	Laboratory Condition	4
1.4	Announce	5
2	PRODUCT INFORMATION	6
2.1	Applicant	6
2.2	Manufacturer	6
2.3	Factory	6
2.4	General Description for Equipment under Test (EUT)	6
2.5	Technical Information	7
2.6	Additional Instructions	8
2.7	Channel List	10
3	SUMMARY OF TEST RESULTS	12
3.1	Test Standards	12
3.2	Verdict	12
4	GENERAL TEST CONFIGURATIONS	13
4.1	Test Environments	13
4.2	Test Equipment List	13
4.3	Measurement Uncertainty	14
4.4	Description of Test Setup	15
5	TEST ITEMS	18
5.1	RF Output Power	18
5.2	Emission Bandwidth and 6 dB Bandwidth	19
5.3	Power Spectral density (PSD)	20
5.4	Conducted Emission	21
5.5	Radiated Spurious Emissions and Band Edge (Restricted-band)	22

ANNEX A	TEST RESULT	27
A.1	RF Output Power	27
A.2	Emission Bandwidth & 99% Bandwidth	28
A.3	6 dB Bandwidth	39
A.4	Power Spectral Density	43
A.5	Conducted Emissions	49
A.6	Radiated Spurious Emissions and Band Edge (Restricted-band).....	51
ANNEX B	TEST SETUP PHOTOS	87
ANNEX C	EUT EXTERNAL PHOTOS	87
ANNEX D	EUT INTERNAL PHOTOS	87

1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025.The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v4.3.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 PRODUCT INFORMATION

2.1 Applicant

Applicant	Asiatelco Technologies Co.
Address	289 Bisheng Road, Building 8, 3F, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201204, China

2.2 Manufacturer

Manufacturer	Asiatelco Technologies Co.
Address	289 Bisheng Road, Building 8, 3F, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201204, China

2.3 Factory

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	LTE WIFI Router
Model Name Under Test	W01
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	P1
Software Version	QC25_W01_1.0.6.901
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Technical Information

Network and Wireless connectivity	2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80)
-----------------------------------	---

The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	Band I: 5150 MHz to 5250 MHz Band IV: 5725 MHz to 5850 MHz
Product Type	☐ Mobile ☐ Portable ☒ Fix Location
Modulation technology	OFDM
Modulation Type	256QAM, 64QAM, 16QAM, BPSK, QPSK
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 150 Mbps 802.11ac: up to VHT-MCS9
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz 802.11ac: 20 MHz, 40 MHz, 80 MHz
Antenna Type	FPC Antenna
Antenna Gain	Band 1: 2.7 dBi (This value is provided by the applicant) Band 4: 2.7 dBi (This value is provided by the applicant)
About the Product	The equipment is LTE WiFi Router, intended for used with information technology equipment.

2.6 Additional Instructions

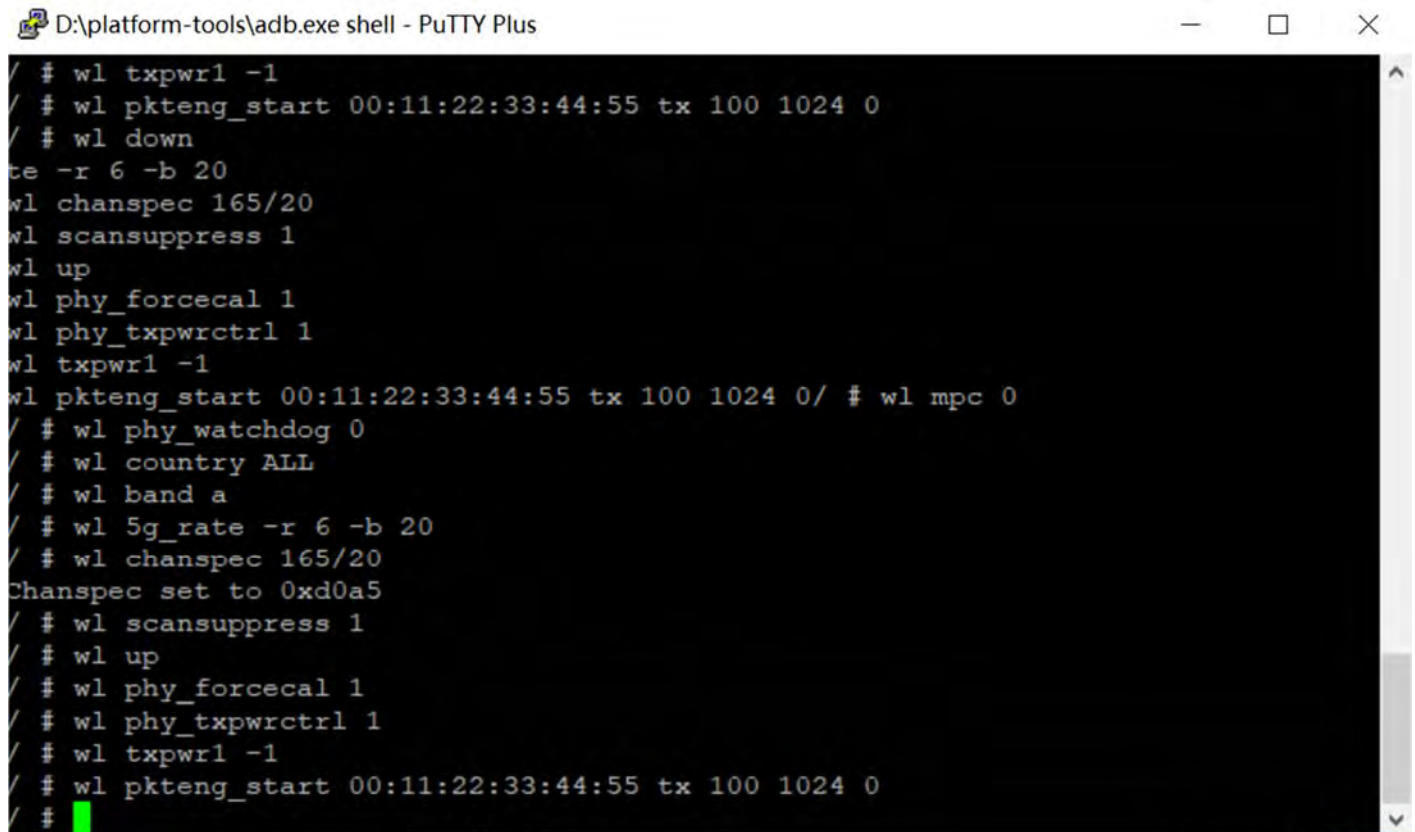
EUT Software Settings:

Mode	☒ Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.
------	--

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Test Software Version	Puttyplus		
Support Units(Software installation media)	Description	Manufacturer	Model
	Notebook	Lenovo	K43c-80
Band I (5150 - 5250 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH36	5180	1
11a	CH44	5220	1
11a	CH48	5240	1
11n (HT20)	CH36	5180	1
11n (HT20)	CH44	5220	1
11n (HT20)	CH48	5240	1
11n (HT40)	CH38	5190	1
11n (HT40)	CH46	5230	1
11ac (VHT20)	CH36	5180	1
11ac (VHT20)	CH44	5220	1
11ac (VHT20)	CH48	5240	1
11ac (VHT40)	CH38	5190	1
11ac (VHT40)	CH46	5230	1
11ac (VHT80)	CH42	5210	1
Band IV (5725 - 5850 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH149	5745	1
11a	CH157	5785	1
11a	CH165	5825	1
11n (HT20)	CH149	5745	1
11n (HT20)	CH157	5785	1
11n (HT20)	CH165	5825	1
11n (HT40)	CH151	5755	1
11n (HT40)	CH159	5795	1
11ac (VHT20)	CH149	5745	1
11ac (VHT20)	CH157	5785	1
11ac (VHT20)	CH165	5825	1
11ac (VHT40)	CH151	5755	1
11ac (VHT40)	CH159	5795	1
11ac (VHT80)	CH155	5775	1

Run Software:



```
D:\platform-tools\adb.exe shell - PuTTY Plus

/ # wl txpwr1 -1
/ # wl pkteng_start 00:11:22:33:44:55 tx 100 1024 0
/ # wl down
te -r 6 -b 20
wl chanspec 165/20
wl scansuppress 1
wl up
wl phy_forcecal 1
wl phy_txpwrctrl 1
wl txpwr1 -1
wl pkteng_start 00:11:22:33:44:55 tx 100 1024 0/ # wl mpc 0
/ # wl phy_watchdog 0
/ # wl country ALL
/ # wl band a
/ # wl 5g_rate -r 6 -b 20
/ # wl chanspec 165/20
Chanspec set to 0xd0a5
/ # wl scansuppress 1
/ # wl up
/ # wl phy_forcecal 1
/ # wl phy_txpwrctrl 1
/ # wl txpwr1 -1
/ # wl pkteng_start 00:11:22:33:44:55 tx 100 1024 0
/ #
```

SS

2.7 Channel List

20 MHz		40 MHz		80 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	155	5775
44	5220	151	5755		
48	5240	159	5795		
149	5745				
153	5765				
157	5785				
161	5805				
165	5825				

The Lowest frequency, the middle frequency and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n(HT20)/ac(VHT20)

Band I (5150 - 5250 MHz)		Band IV (5725 - 5850 MHz)	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	5180	149	5745
44	5220	157	5785
48	5240	165	5825

For 802.11n(HT40)/ac(VHT40)

Band I (5150 - 5250 MHz)		Band IV (5725 - 5850 MHz)	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
38	5190	151	5755
46	5230	159	5795

For 802.11ac(VHT80)

Band I (5150 - 5250 MHz)		Band IV (5725 - 5850 MHz)	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
42	5210	155	5775

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Modulation Type	Band I	Band IV
				Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
6 dB bandwidth	11a	6	BPSK	N/A	165/157/149
	11n(20 MHz)	6.5		N/A	165/157/149
	11n(40 MHz)	13.5		N/A	159/151
	11ac(20 MHz)	6.5		N/A	165/157/149
	11ac(40 MHz)	13.5		N/A	159/151
	11ac(80 MHz)	MCS0		N/A	155
Power Spectral Density	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Band Edge (Restricted-band)	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E (10-1-16 Edition)	Unlicensed National Information Infrastructure Devices
2	KDB Publication 789033 D02 v02r01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E

3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	--	Pass ^{Note1}
2	RF Output Power	15.407(a)	ANNEX A.1	Pass
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	ANNEX A.2	Pass
4	6 dB bandwidth	15.407(e)	ANNEX A.3	Pass
5	Power Spectral Density	15.407(a)	ANNEX A.4	Pass
6	Conducted Emission	15.207	ANNEX A.5	Pass
7	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	ANNEX A.6	Pass
8	Receiver Spurious Emissions	--	--	N/A ^{Note2}

Note ¹: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

Note ²: Only radio communication receivers operating in stand-alone mode within the band 30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	DC 3.85 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2020.06.08	2021.06.07
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2020.06.08	2021.06.07
Spectrum Analyzer	Agilent	E4440A	MY45304434	2019.10.30	2020.10.29
Spectrum Analyzer	Agilent	E4440A	MY46181663	2019.10.30	2020.10.29
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2020.06.09	2021.06.08
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2020.06.09	2021.06.08
LISN	SCHWARZBECK	NSLK 8127	8127-687	2020.06.09	2021.06.08
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2020.06.08	2021.06.07
Bluetooth Signaling Unit	ROHDE&SCHWARZ	CMW270	100607	2020.06.08	2021.06.07
Bluetooth Signaling Unit	ROHDE&SCHWARZ	CMW500	142028	2020.06.08	2021.06.07
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2020.06.08	2021.06.07
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2020.06.08	2021.06.07
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
Temperature Chamber	AHK	SP20	1412	2020.06.10	2021.06.09
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2017.11.09	2020.11.08
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2018.08.22	2020.08.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2019.07.22	2021.07.21
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400KF	J211060273	2019.01.06	2021.01.05
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2022.02.20
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	N/A	2018.08.08	2021.08.07
Shielded Enclosure	ChangNing	CN-130701	130703	--	--
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2020.06.08	2021.06.07
Power Amplifier	OPHIR RF	5225F	1037	2020.02.19	2021.02.18
Power Amplifier	OPHIR RF	5273F	1016	2020.02.19	2021.02.18
Directional Coupler	Werlantone	C5982-10	109275	N/A	N/A
Directional Coupler	Werlantone	CHP-273E	S00801z-01	N/A	N/A

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Sound Level Meter	B&K	NL-20	00844023	2019.11.12	2020.11.11
Ear Simulator	B&K	4185	2409449	2019.11.12	2020.11.11

4.3 Measurement Uncertainty

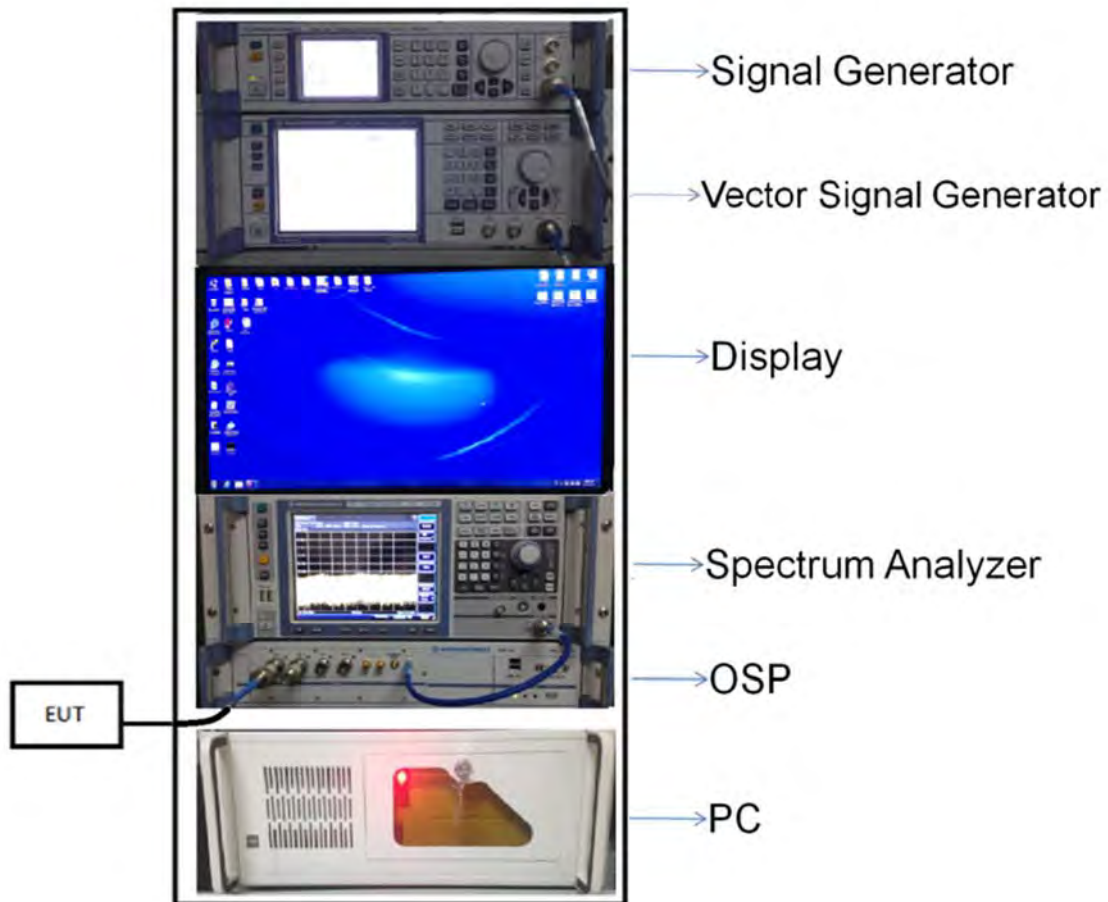
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

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

Measurement	Value
Occupied Channel Bandwidth	±4%
RF output power, conducted	±1.4 dB
Power Spectral Density, conducted	±2.5 dB
Unwanted Emissions, conducted	±2.8 dB
All emissions, radiated	±5.4 dB
Temperature	±1°C
Humidity	±4%

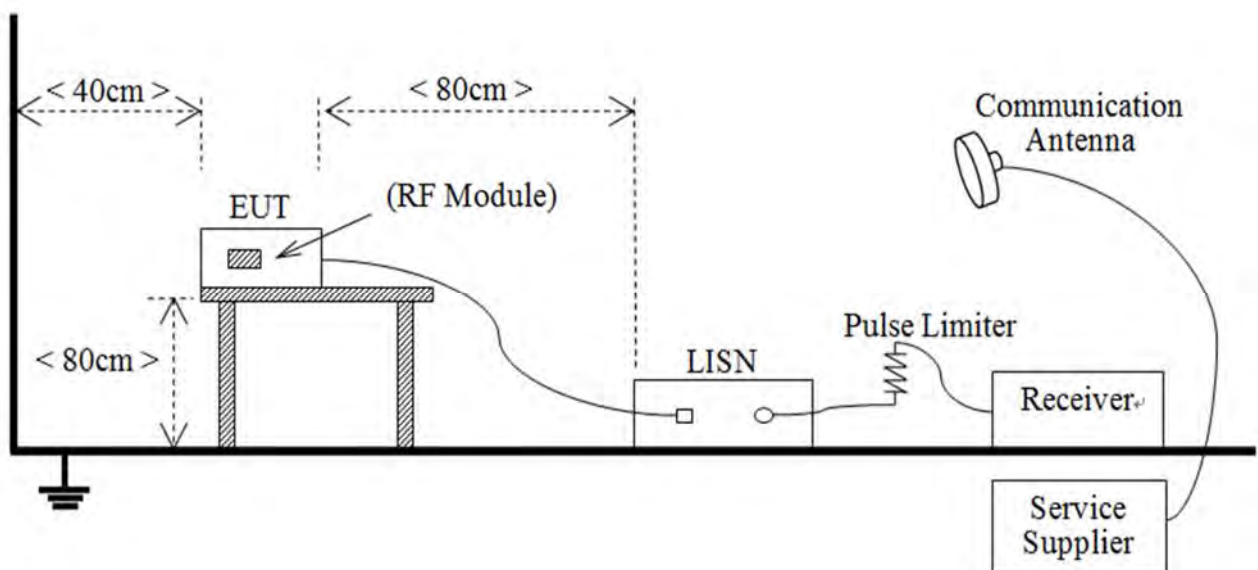
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



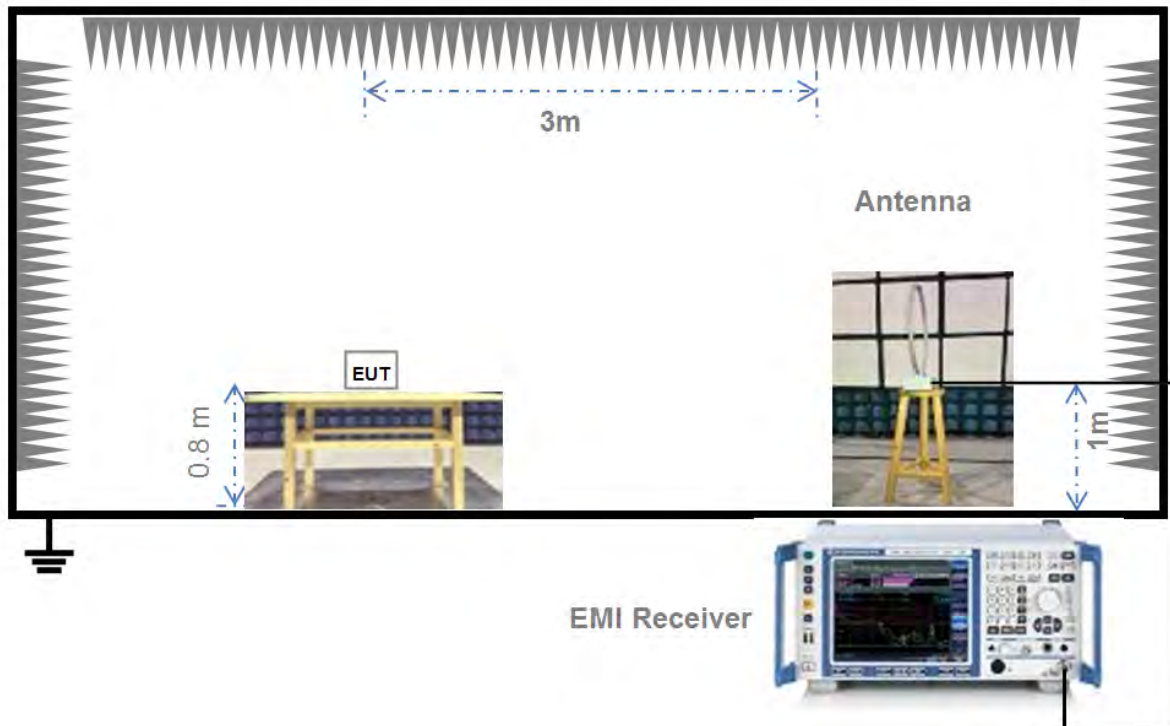
(Diagram 1)

4.4.2 For AC Power Supply Port Test



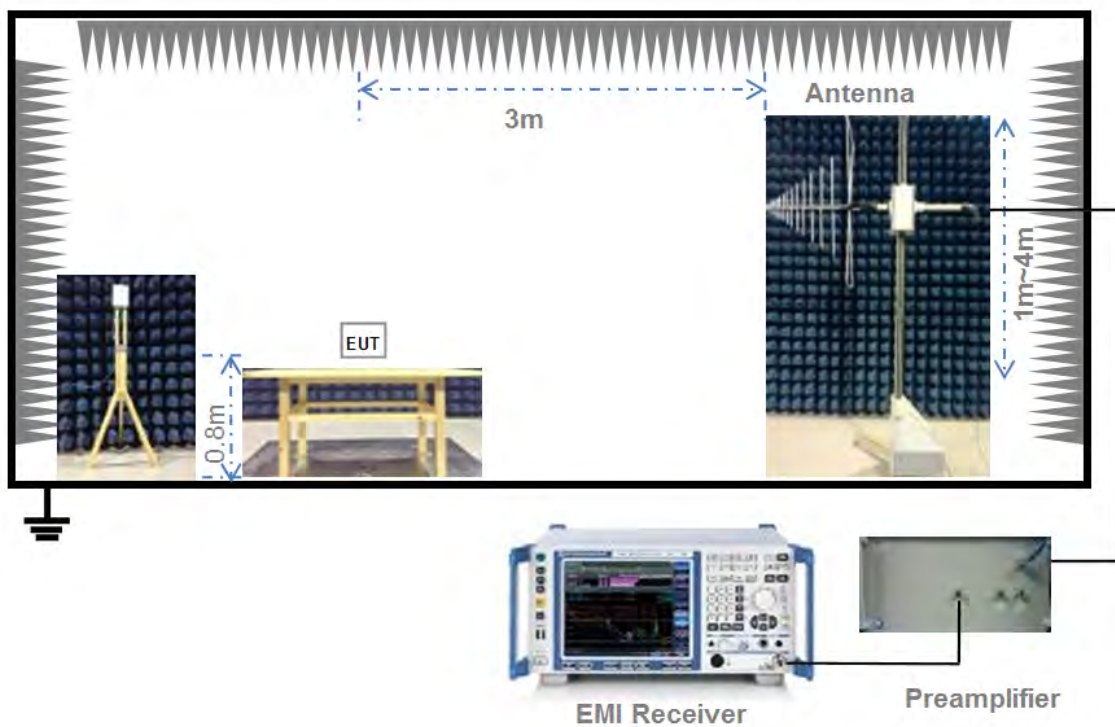
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



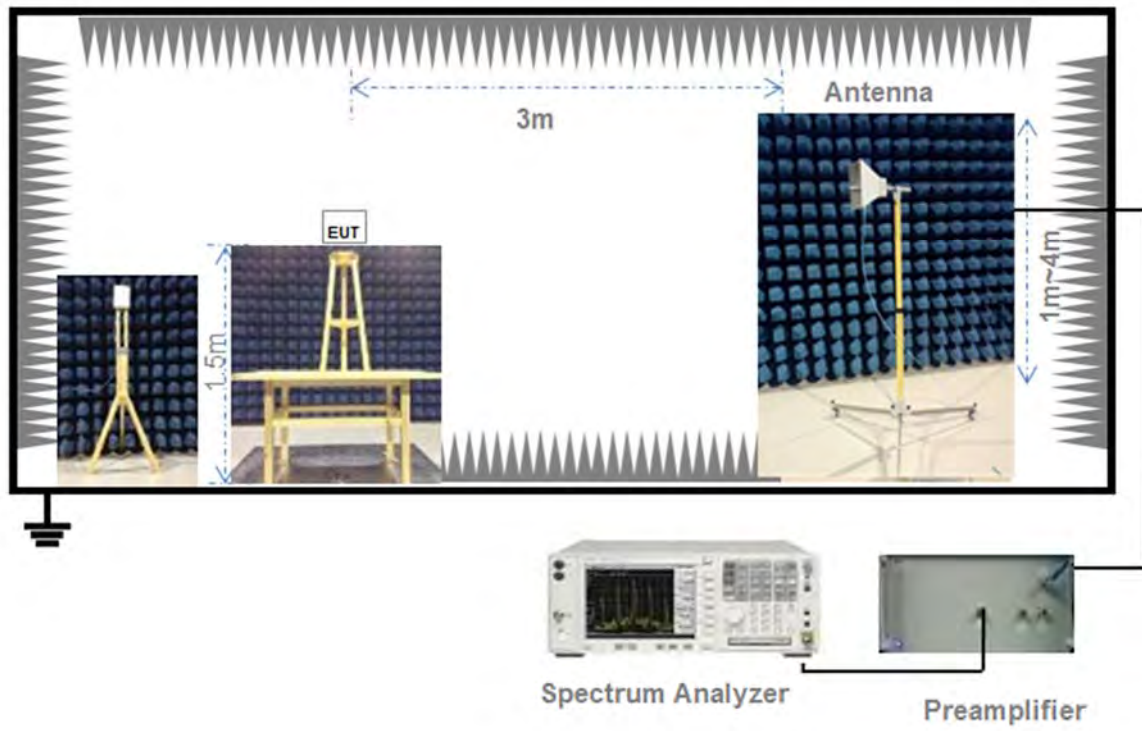
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

5 TEST ITEMS

5.1 RF Output Power

5.1.1 Test Limit

FCC §15.407(a)

The maximum conducted output power should not exceed:

Frequency Band (MHz)	Limit
5150-5250	1 W
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where "B" is the 26 dB emissions bandwidth in MHz.	

5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

The maximum peak conducted output power may be measured using a broadband Average RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector.

The E.I.R.P used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Emission Bandwidth and 6 dB Bandwidth

5.2.1 Limit

FCC §15.407(a)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.2.2 Test Setup

The test setup photo please refer to 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Emission bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set VBW $\geq 3 \times$ RBW,
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

1. Set Span = 1.5 times to 5.0 times the OBW
2. Set RBW = 1% to 5% of the OBW.
3. Set VBW $\geq 3 \times$ RBW, Detector = Peak.
4. Trace mode = Max hold.
5. Use the 99% power bandwidth function of the instrument.

6 dB bandwidth

1. Set RBW = 100 kHz, VBW = 300 kHz.
2. Detector = Peak. Trace mode = Max hold.
3. Allow the trace to stabilize.
4. 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.

5.2.4 Test Result

Please refer to ANNEX A.2 and ANNEX A.3.

5.3 Power Spectral density (PSD)

5.3.1 Limit

FCC §15.407(a)

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	17 dBm/MHz
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

1. Set RBW = 510 kHz/1 MHz, VBW $\geq 3 \times$ RBW, Sweep time = Auto, Detector = RMS.
2. Allow the sweeps to continue until the trace stabilizes.
3. Use the peak marker function to determine the maximum amplitude level.
4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.3.4 Test Result

Please refer to ANNEX A.4.

5.4 Conducted Emission

5.4.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.4.2 Test Setup

The section 4.4.2 (Diagram 2) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

5.4.4 Test Result

Please refer to ANNEX A.5.

5.5 Radiated Spurious Emissions and Band Edge (Restricted-band)

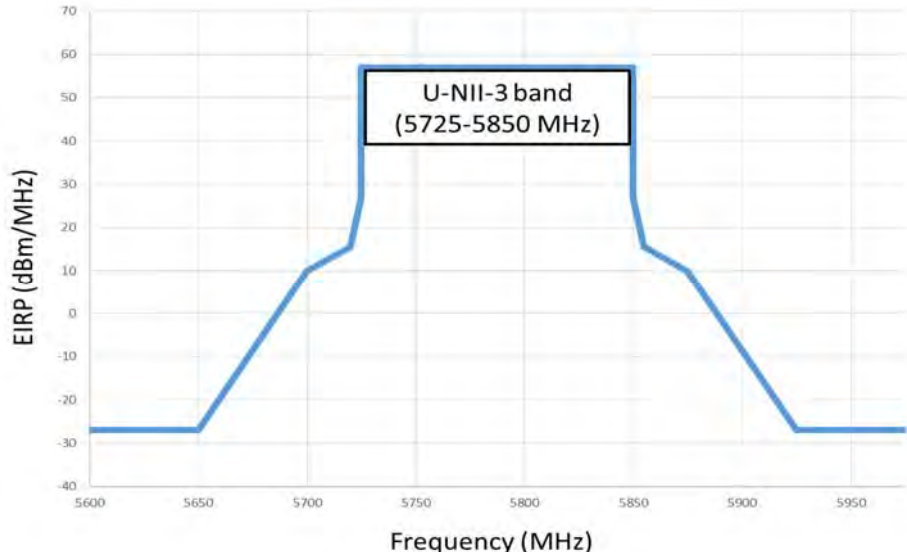
5.5.1 Limit

FCC §15.209 & 15.407(b)

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
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

Note¹: The Limit for radiated test was performed according to FCC Part 15C

Note²: The tighter limit applies at the band edge.

Un-restricted band emissions	
Out Operating Band (MHz)	Limit
5150 - 5250	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5250 - 5350	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5470 - 5725	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5725 - 5850	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and 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.

5.5.2 Test Setup

The section 4.4.3-4.4.5 (Diagram 3 - Diagram 5) test setup description was used for this test. The photo of test

setup please refer to ANNEX B.

5.5.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20 \log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- f) Compare the resultant electric field strength level to the applicable limit.
- g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 1.
- b) VBW $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle, x , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.
 - 2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.
 - 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band

emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.5.4 Test Result

Please refer to ANNEX A.6 and Please refer to ANNEX A.8.

ANNEX A TEST RESULT

A.1 RF Output Power

Note 1: For FCC standard, if transmitting antennas of directional gain greater than 6 dBi are used, all band maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note 2: For IC standard, the band IV (5725 - 5850 MHz) maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Data

Conducted Power

Band I (5150 - 5250 MHz)						
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (W)	Verdict
11a	CH36	5180	12.30	16.98	1.00	Pass
11a	CH44	5220	12.37	17.26	1.00	Pass
11a	CH48	5240	12.24	16.75	1.00	Pass
11n (HT20)	CH36	5180	11.83	15.24	1.00	Pass
11n (HT20)	CH44	5220	11.84	15.28	1.00	Pass
11n (HT20)	CH48	5240	11.92	15.56	1.00	Pass
11n (HT40)	CH38	5190	11.85	15.31	1.00	Pass
11n (HT40)	CH46	5230	11.93	12.45	1.00	Pass
11ac (VHT20)	CH36	5180	11.84	15.28	1.00	Pass
11ac (VHT20)	CH44	5220	11.91	15.52	1.00	Pass
11ac (VHT20)	CH48	5240	11.94	15.63	1.00	Pass
11ac (VHT40)	CH38	5190	11.90	15.49	1.00	Pass
11ac (VHT40)	CH46	5230	11.92	15.56	1.00	Pass
11ac (VHT80)	CH42	5210	11.02	12.65	1.00	Pass

Band IV (5725 - 5850 MHz)						
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (W)	Verdict
11a	CH149	5745	11.36	13.68	1.00	Pass
11a	CH157	5785	10.89	12.27	1.00	Pass
11a	CH165	5825	10.43	11.04	1.00	Pass
11n (HT20)	CH149	5745	10.82	12.08	1.00	Pass
11n (HT20)	CH157	5785	10.35	10.84	1.00	Pass
11n (HT20)	CH165	5825	10.09	10.21	1.00	Pass
11n (HT40)	CH151	5755	9.97	9.93	1.00	Pass
11n (HT40)	CH159	5795	9.68	9.29	1.00	Pass
11ac (VHT20)	CH149	5745	10.84	12.13	1.00	Pass
11ac (VHT20)	CH157	5785	10.56	11.38	1.00	Pass
11ac (VHT20)	CH165	5825	10.06	10.14	1.00	Pass
11ac (VHT40)	CH151	5755	9.88	9.73	1.00	Pass
11ac (VHT40)	CH159	5795	9.71	9.35	1.00	Pass
11ac (VHT80)	CH155	5775	9.76	9.46	1.00	Pass

A.2 Emission Bandwidth & 99% Bandwidth

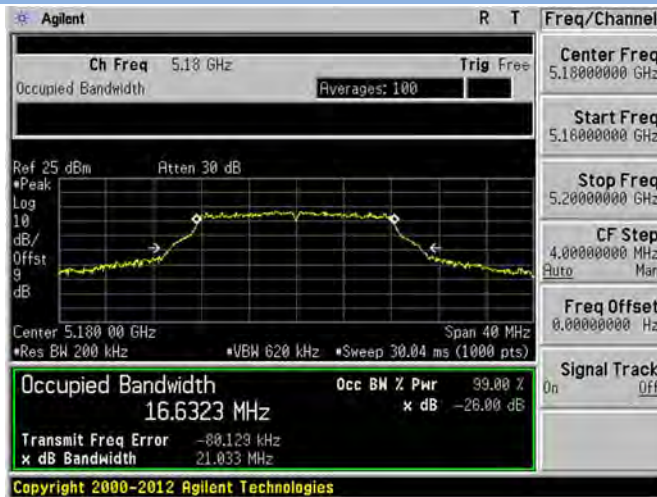
Test Data

Band I (5150 - 5250 MHz)				
Mode	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	5180	21.03	16.61
11a	CH44	5220	21.07	16.65
11a	CH48	5240	21.02	16.64
11n (HT20)	CH36	5180	21.56	17.75
11n (HT20)	CH44	5220	21.52	17.78
11n (HT20)	CH48	5240	21.37	17.73
11n (HT40)	CH38	5190	39.91	36.19
11n (HT40)	CH46	5230	39.77	36.17
11ac (VHT20)	CH36	5180	21.50	17.75
11ac (VHT20)	CH44	5220	21.56	17.77
11ac (VHT20)	CH48	5240	21.46	17.76
11ac (VHT40)	CH38	5190	39.80	32.20
11ac (VHT40)	CH46	5230	39.77	36.15
11ac (VHT80)	CH42	5210	81.36	75.53

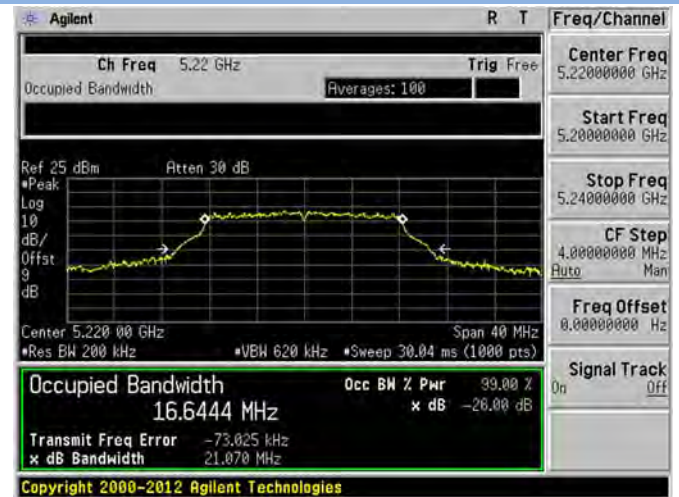
Band IV (5725 - 5850 MHz)				
Mode	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	5745	21.45	16.68
11a	CH157	5785	21.11	16.70
11a	CH165	5825	21.52	16.70
11n (HT20)	CH149	5745	21.88	17.81
11n (HT20)	CH157	5785	21.66	17.80
11n (HT20)	CH165	5825	22.10	17.80
11n (HT40)	CH151	5755	43.32	36.15
11n (HT40)	CH159	5795	43.55	36.20
11ac (VHT20)	CH149	5745	21.82	17.77
11ac (VHT20)	CH157	5785	21.42	17.76
11ac (VHT20)	CH165	5825	22.34	17.79
11ac (VHT40)	CH151	5755	40.76	36.46
11ac (VHT40)	CH159	5795	55.83	36.75
11ac (VHT80)	CH155	5775	86.00	75.45

Test plots (26dB Bandwidth)

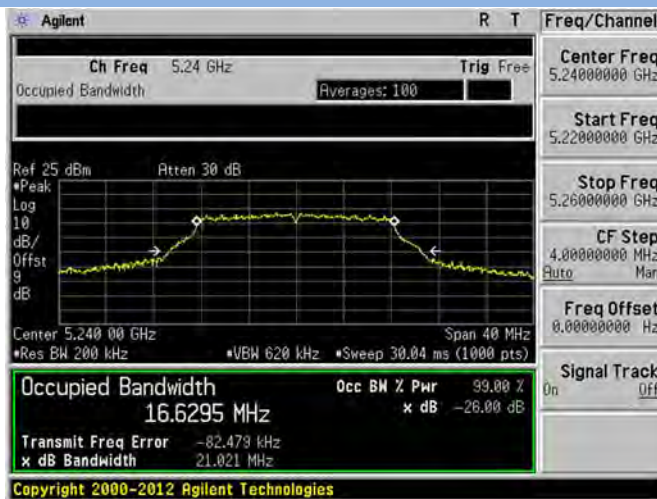
802.11a Band I LOW CHANNEL



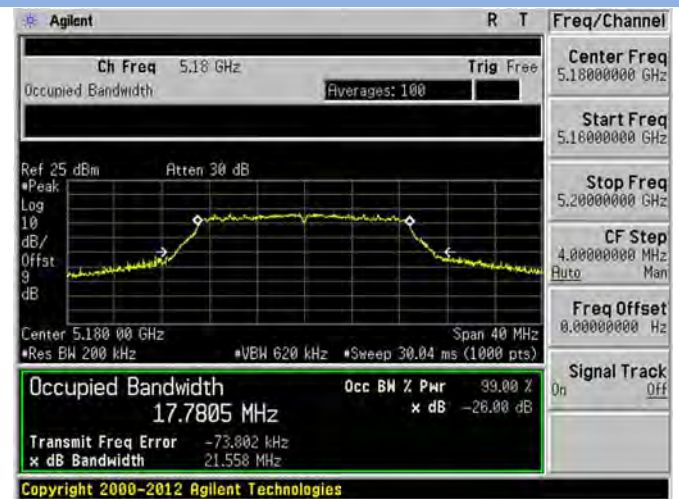
802.11a Band I MIDDLE CHANNEL



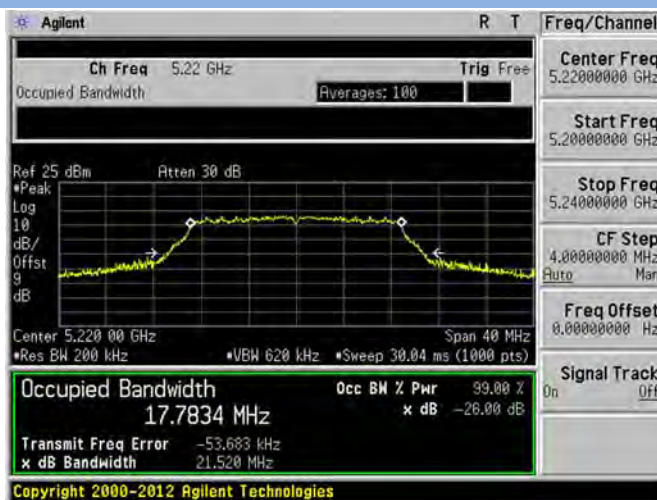
802.11a Band I HIGH CHANNEL



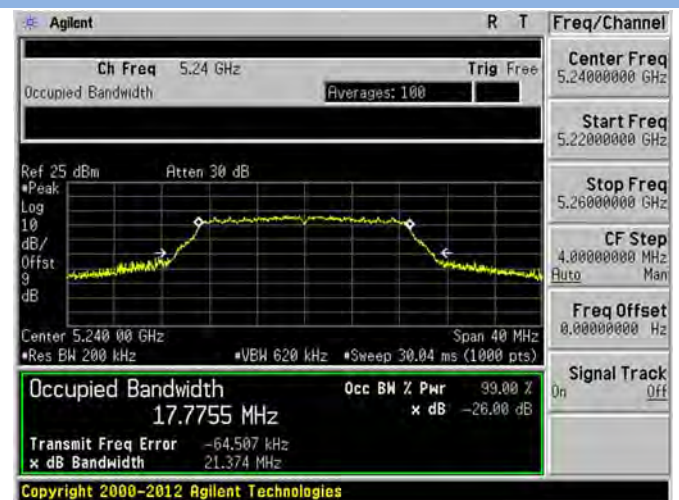
802.11n20 Band I LOW CHANNEL



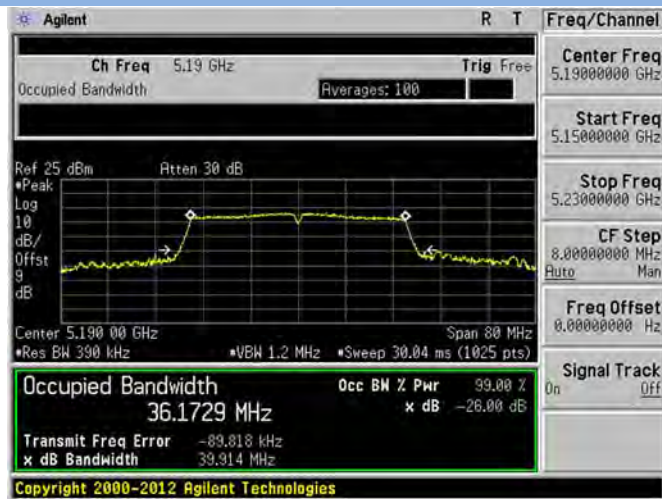
802.11n20 Band I MIDDLE CHANNEL



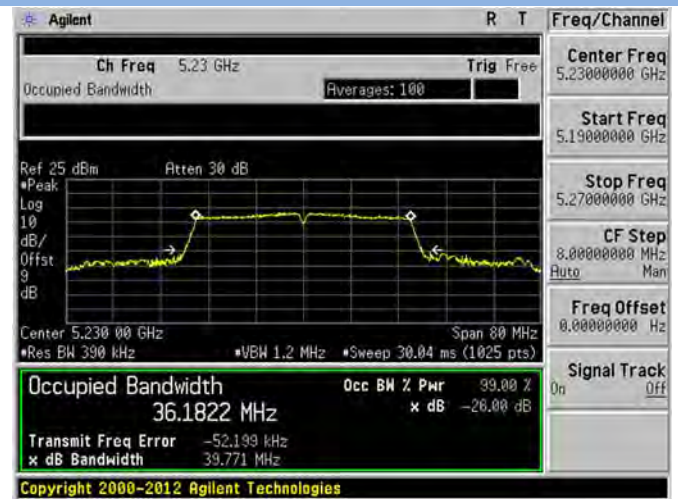
802.11n20 Band I HIGH CHANNEL



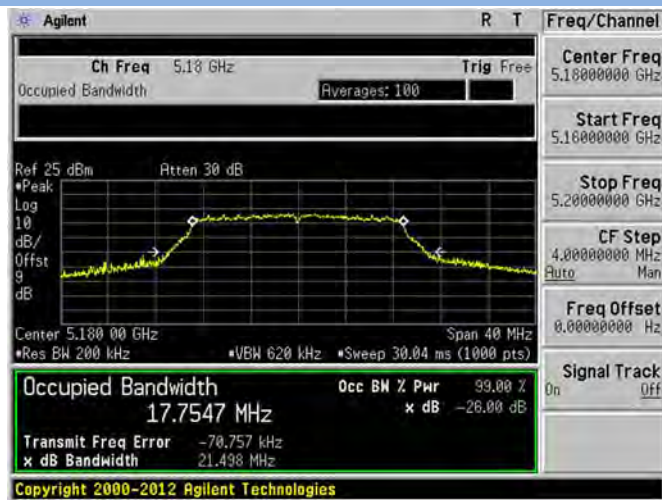
802.11n40 Band I LOW CHANNEL



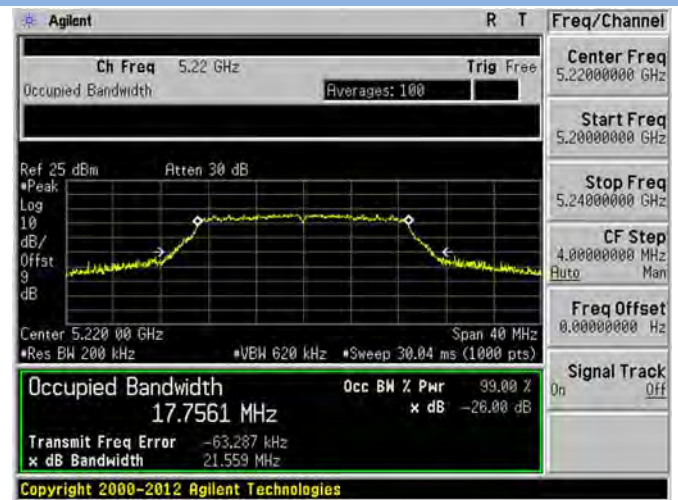
802.11n40 Band I HIGH CHANNEL



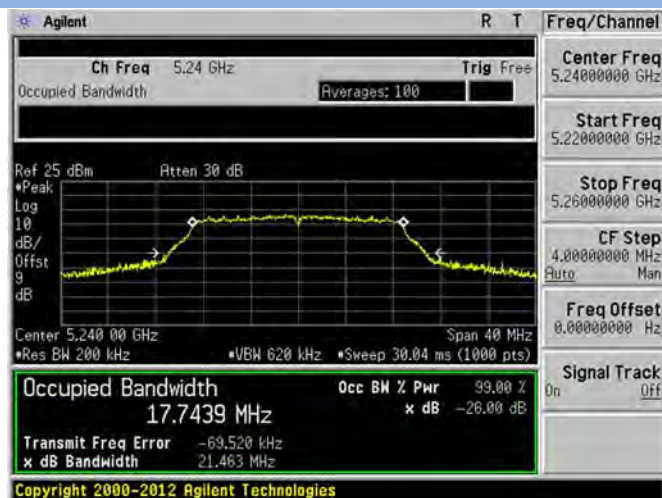
802.11ac20 Band I LOW CHANNEL



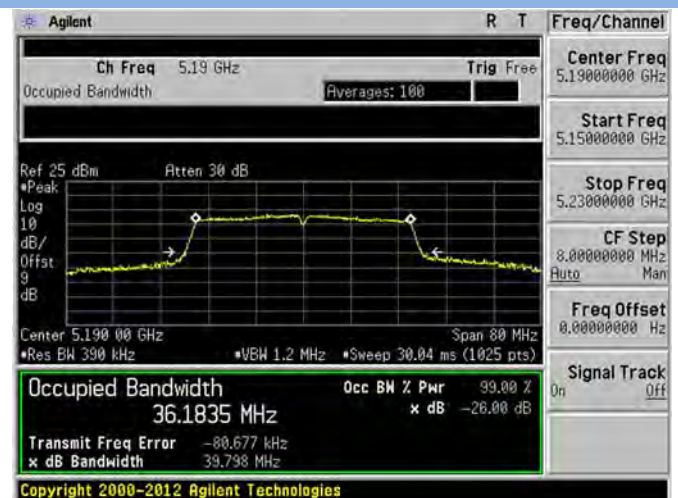
802.11ac20 Band I MIDDLE CHANNEL



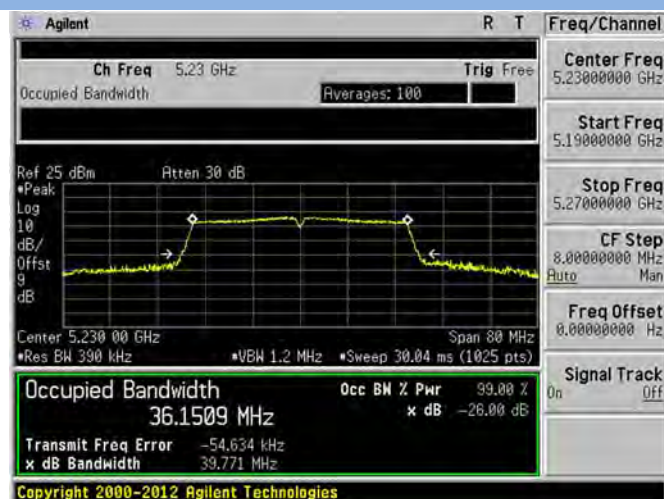
802.11ac20 Band I HIGH CHANNEL



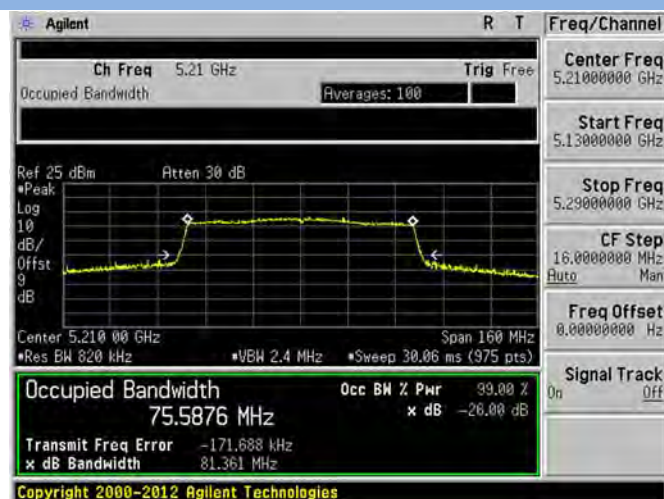
802.11ac40 Band I LOW CHANNEL



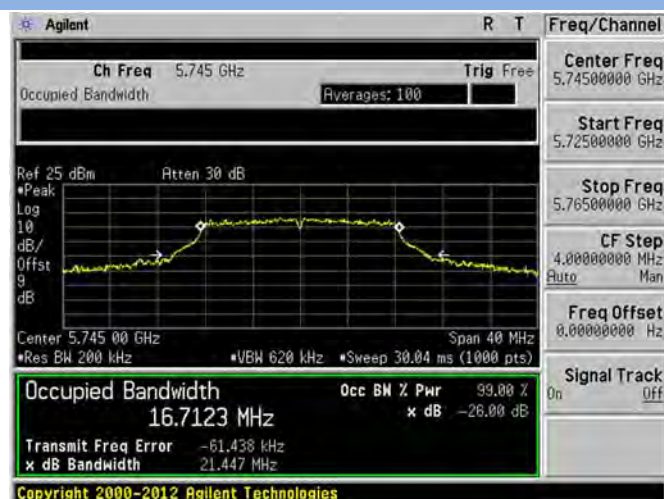
802.11ac40 Band I HIGH CHANNEL



802.11ac80 Band I MIDDLE CHANNEL



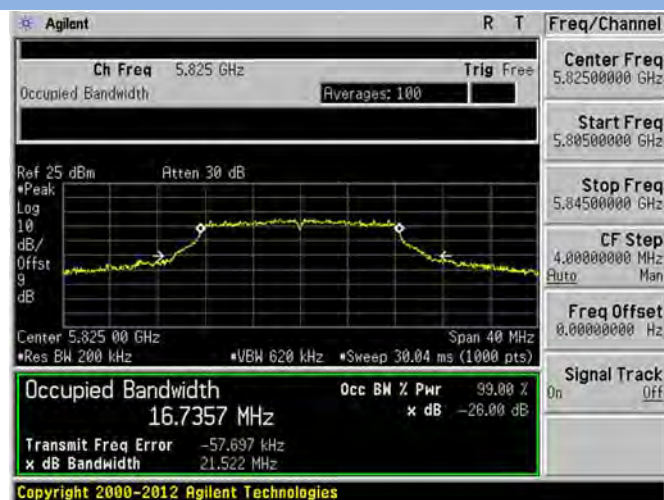
802.11a Band IV LOW CHANNEL



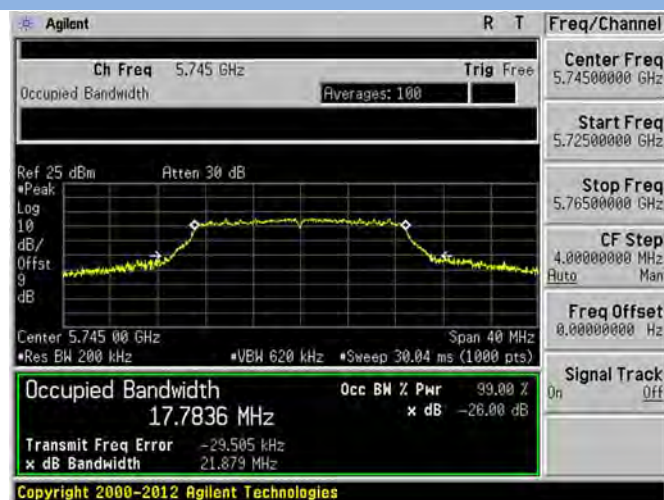
802.11a Band IV MIDDLE CHANNEL



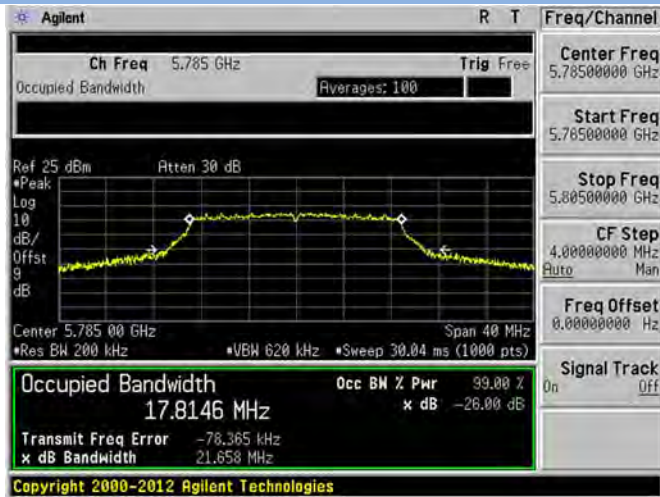
802.11a Band IV HIGH CHANNEL



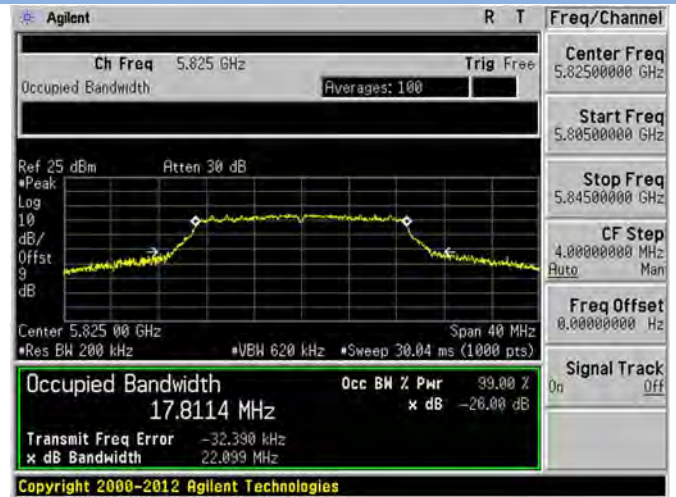
802.11n20 Band IV LOW CHANNEL



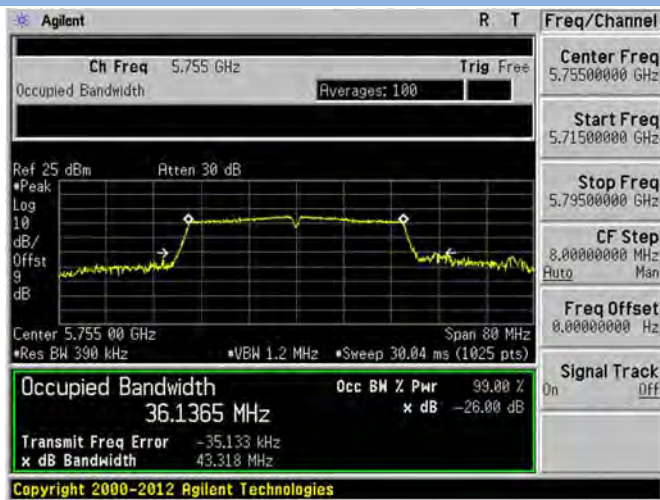
802.11n20 Band IV MIDDLE CHANNEL



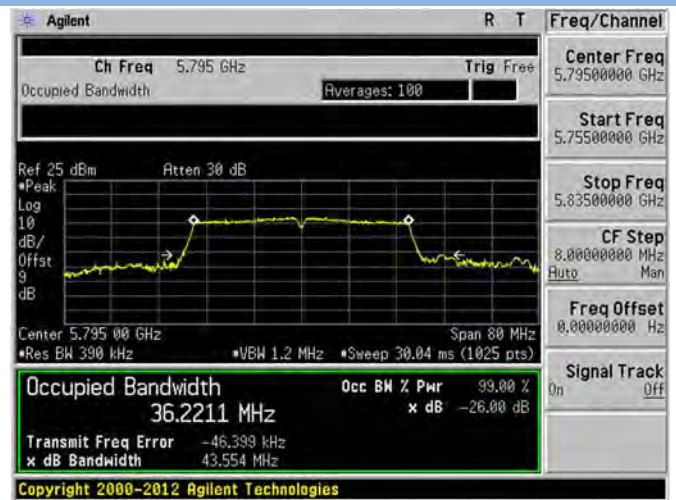
802.11n20 Band IV HIGH CHANNEL



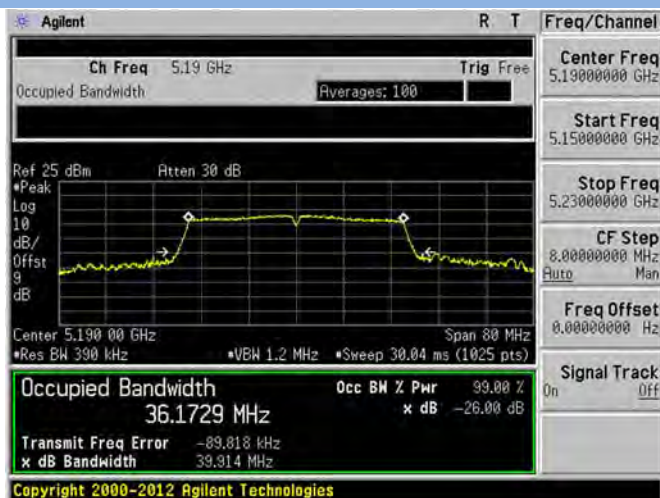
802.11n40 Band IV LOW CHANNEL



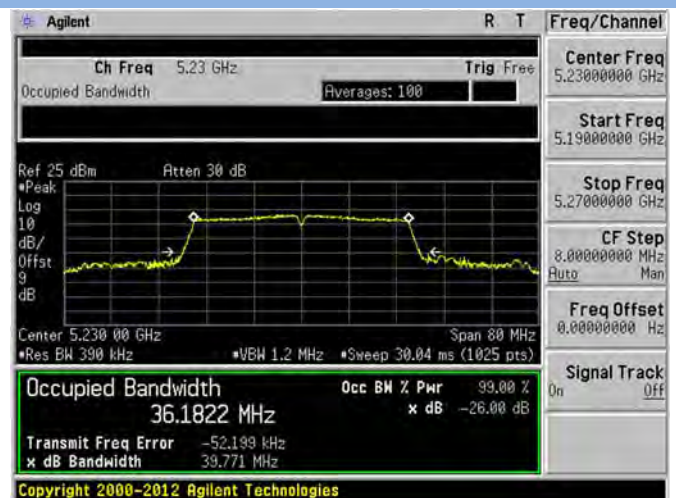
802.11n40 Band IV HIGH CHANNEL



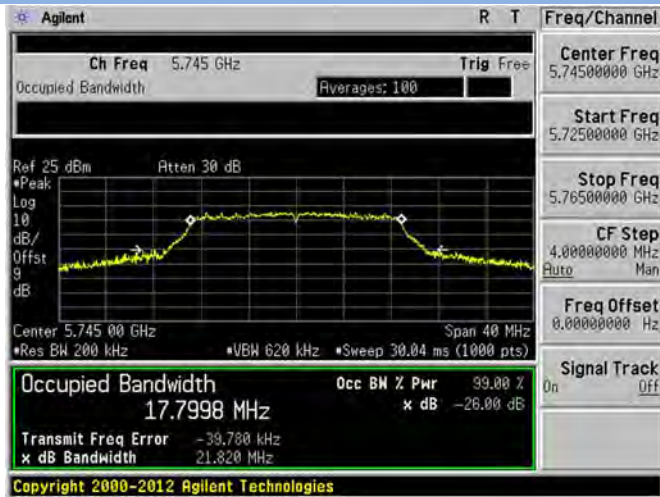
802.11ac20 Band I HIGH CHANNEL



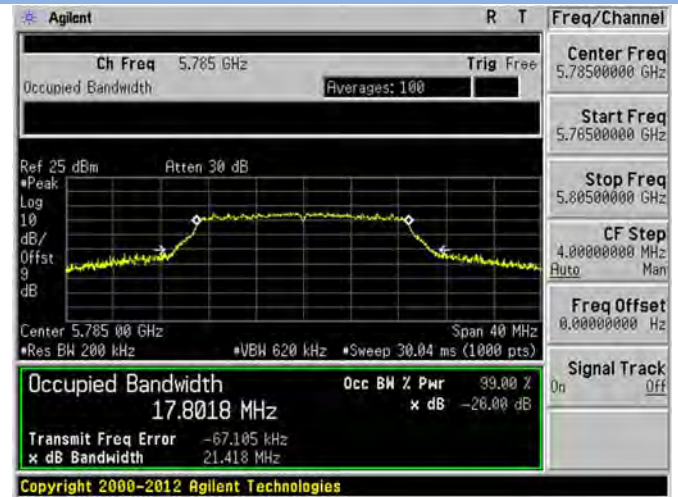
802.11ac40 Band I LOW CHANNEL



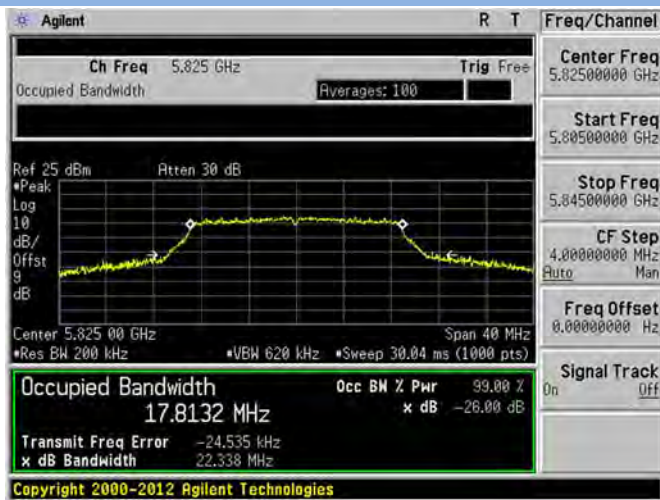
802.11ac20 Band IV LOW CHANNEL



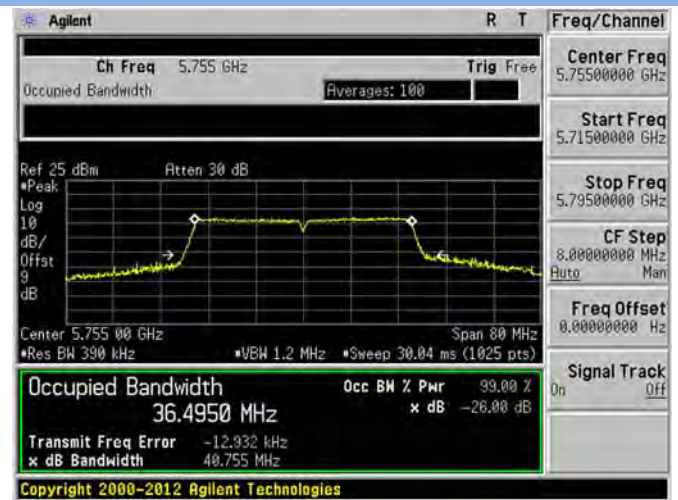
802.11ac20 Band IV MIDDLE CHANNEL



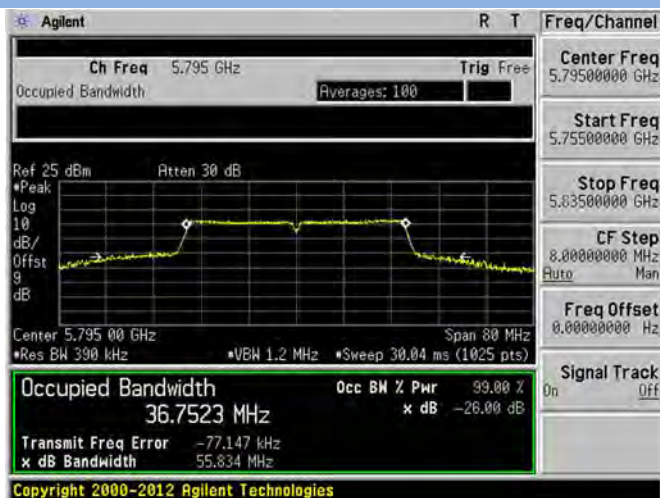
802.11ac20 Band IV HIGH CHANNEL



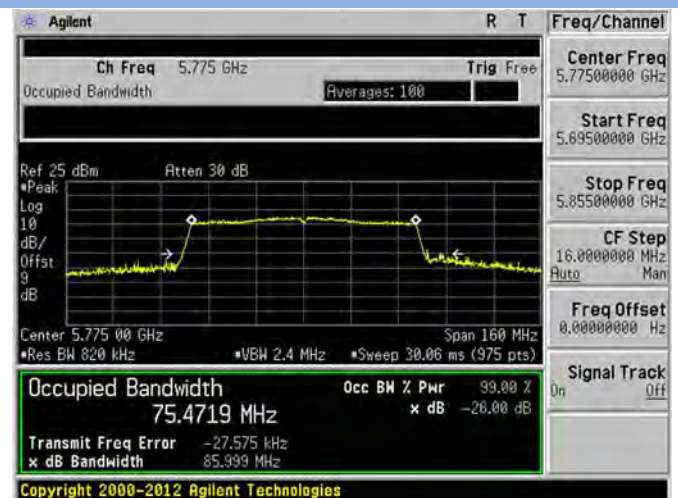
802.11ac40 Band IV LOW CHANNEL



802.11ac40 Band IV HIGH CHANNEL

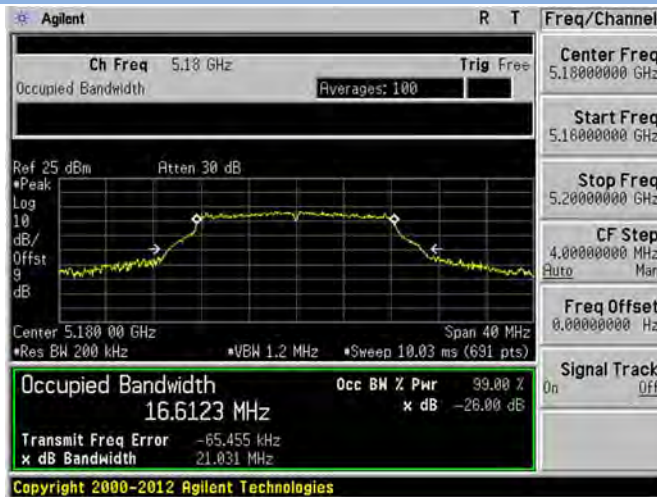


802.11ac80 Band IV MIDDLE CHANNEL

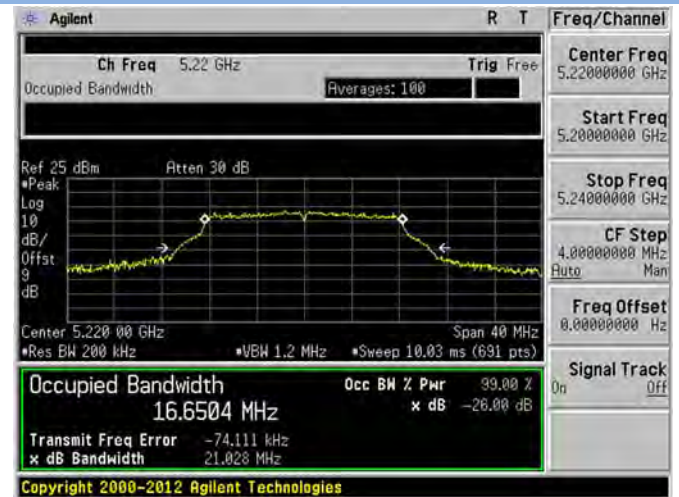


Test plots (99% Bandwidth)

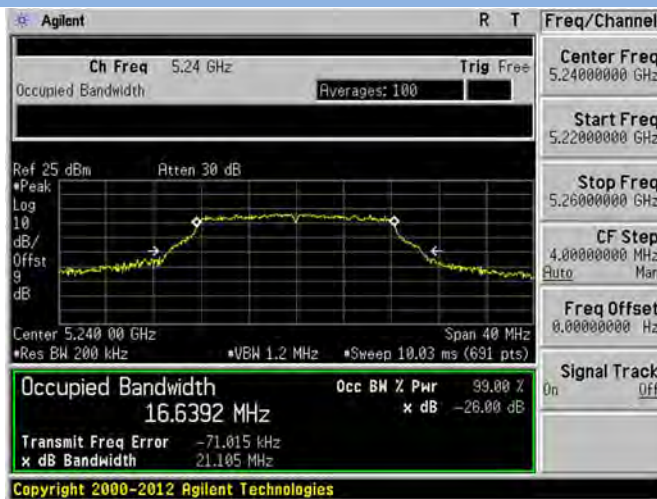
802.11a Band I LOW CHANNEL



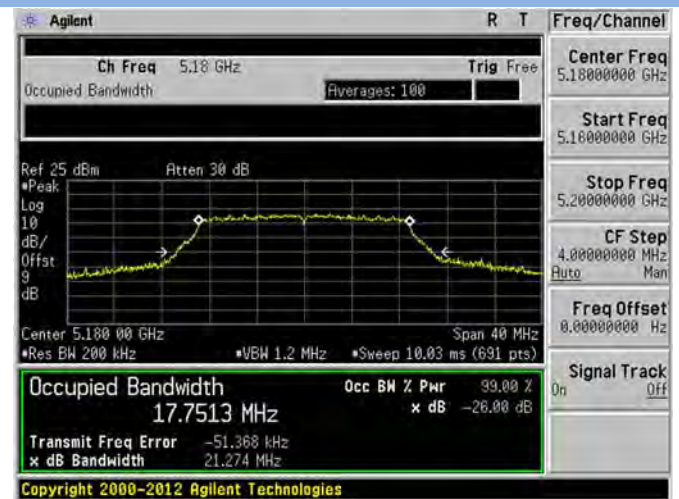
802.11a Band I MIDDLE CHANNEL



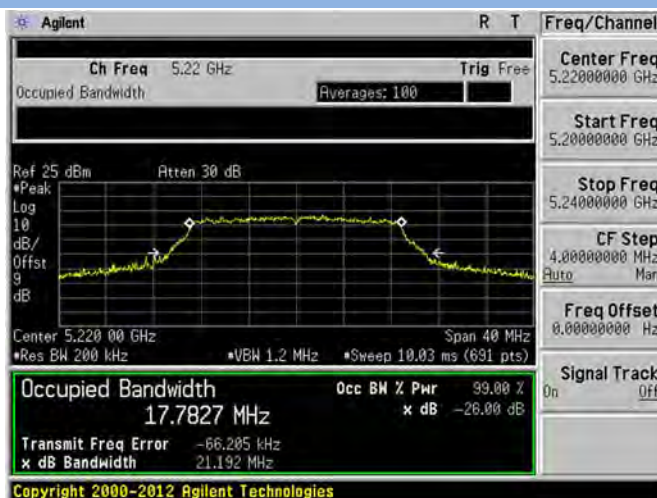
802.11a Band I HIGH CHANNEL



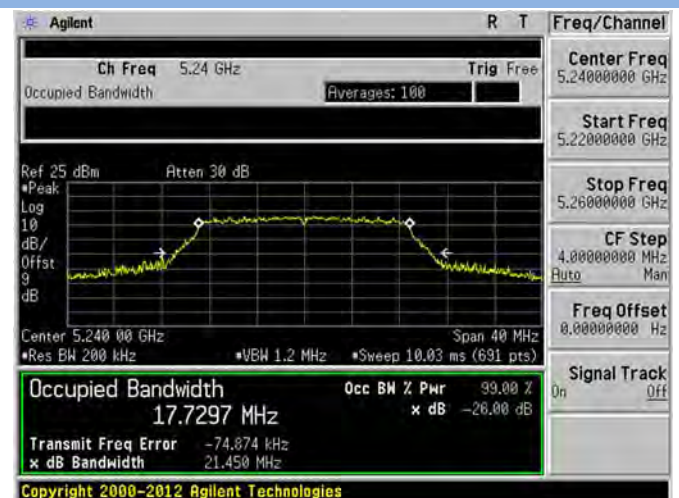
802.11n20 Band I LOW CHANNEL



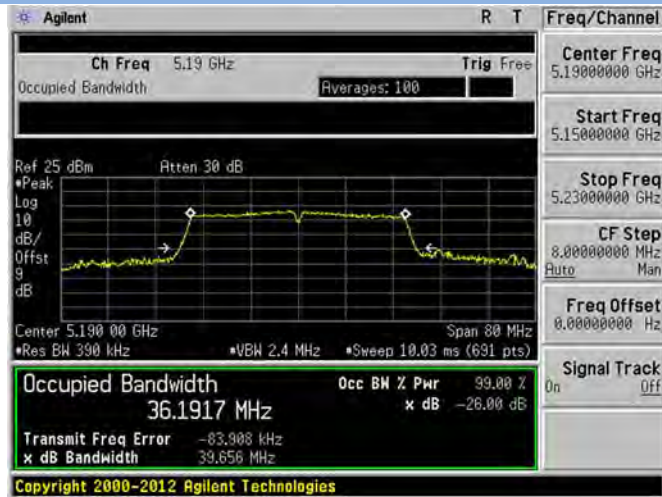
802.11n20 Band I MIDDLE CHANNEL



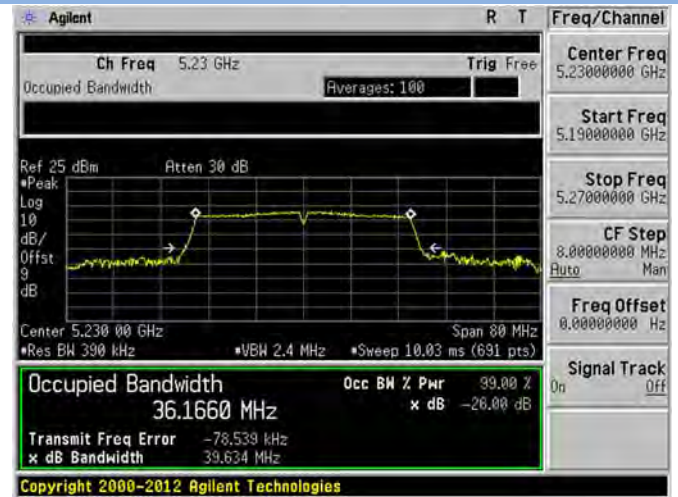
802.11n20 Band I HIGH CHANNEL



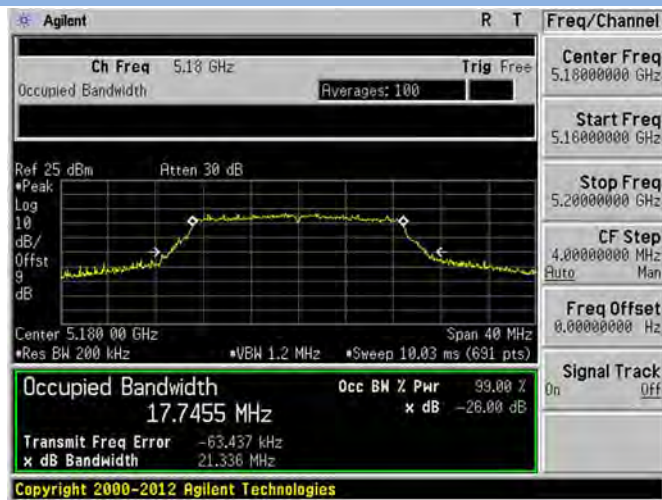
802.11n40 Band I LOW CHANNEL



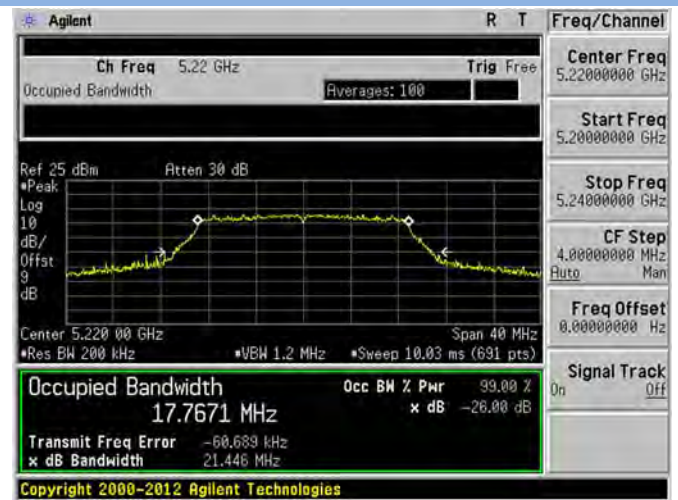
802.11n40 Band I HIGH CHANNEL



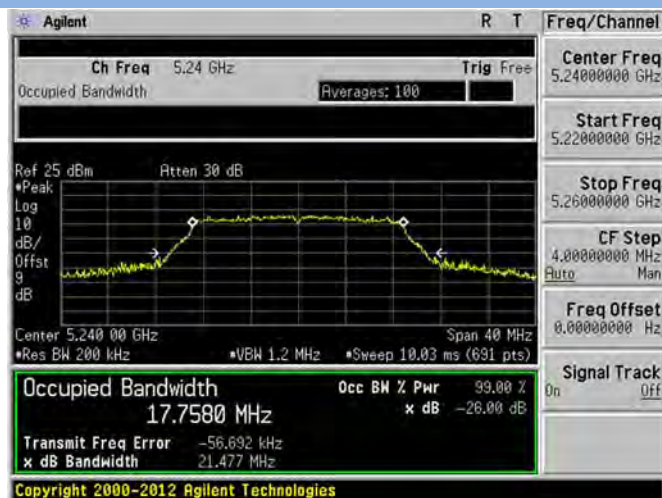
802.11ac20 Band I LOW CHANNEL



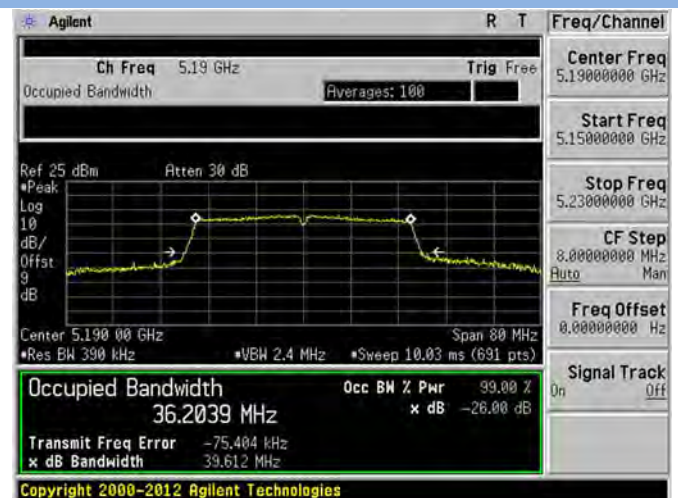
802.11ac20 Band I MIDDLE CHANNEL



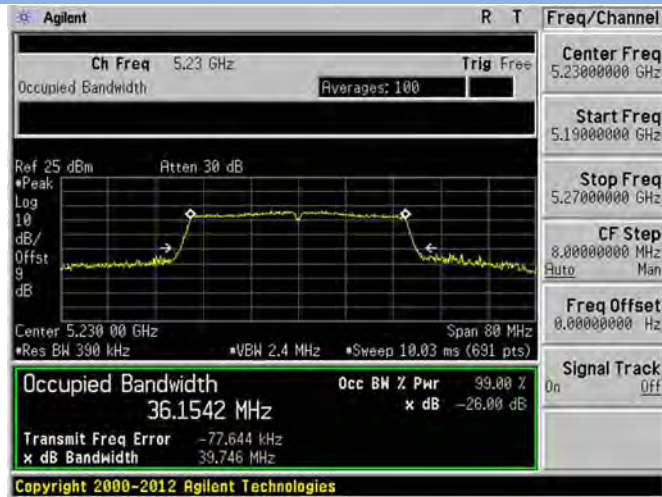
802.11ac20 Band I HIGH CHANNEL



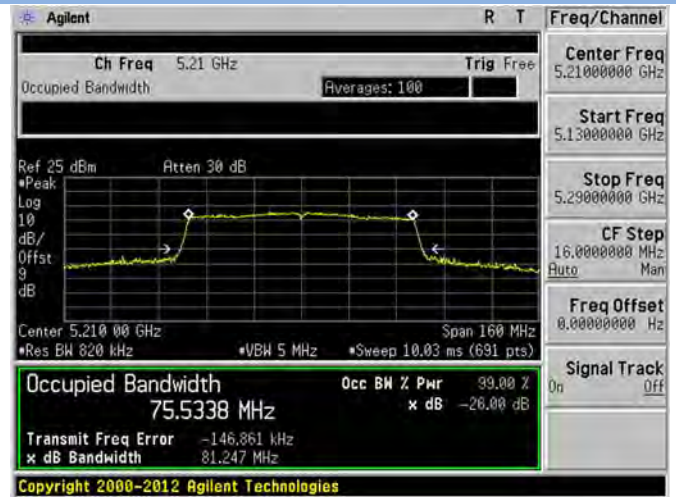
802.11ac40 Band I LOW CHANNEL



802.11ac40 Band I HIGH CHANNEL



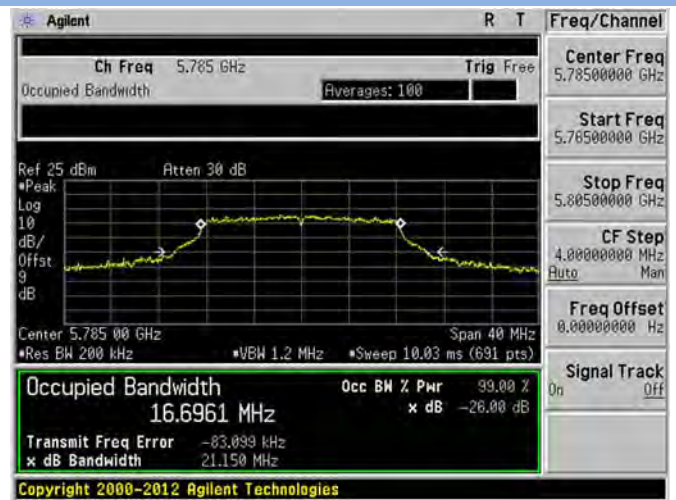
802.11ac80 Band I MIDDLE CHANNEL



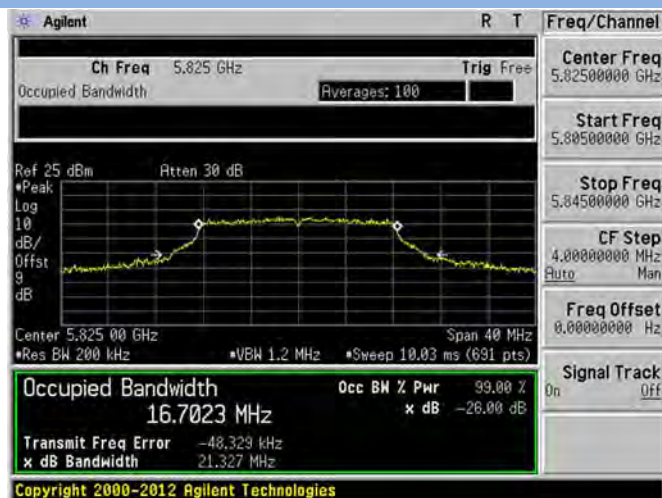
802.11a Band IV LOW CHANNEL



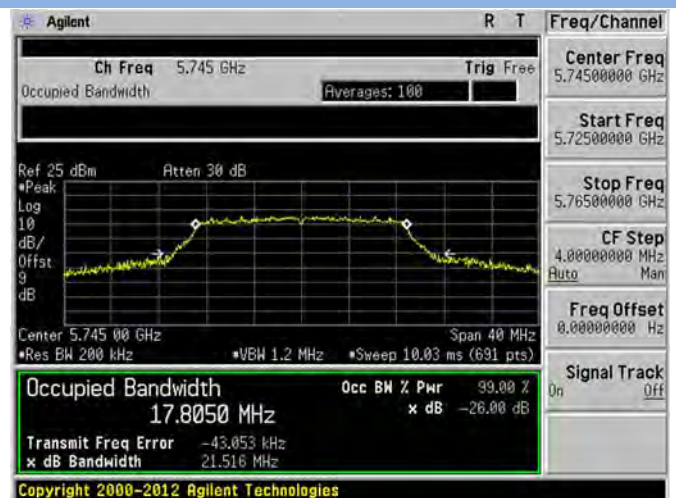
802.11a Band IV MIDDLE CHANNEL



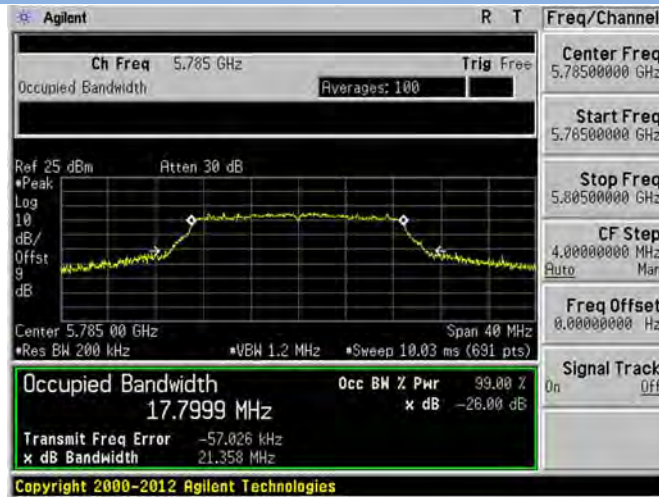
802.11a Band IV HIGH CHANNEL



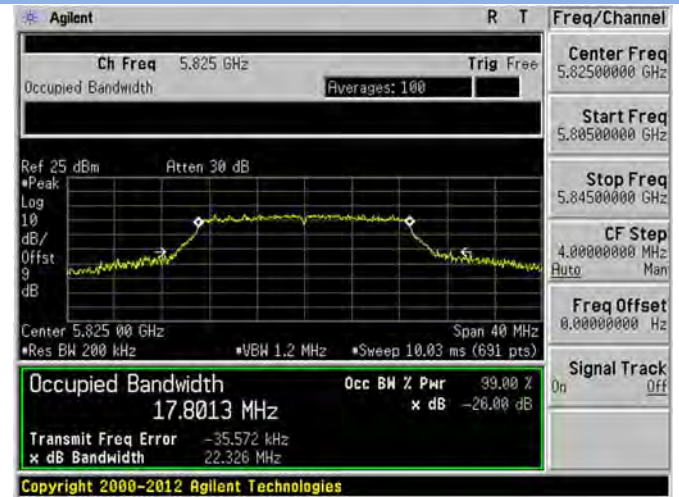
802.11n20 Band IV LOW CHANNEL



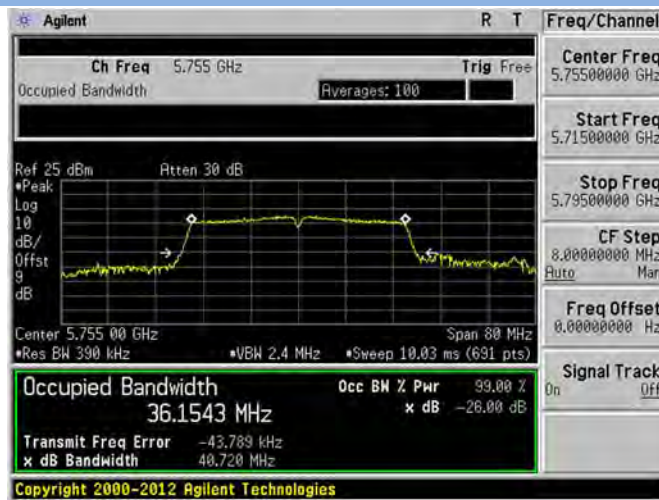
802.11n20 Band IV MIDDLE CHANNEL



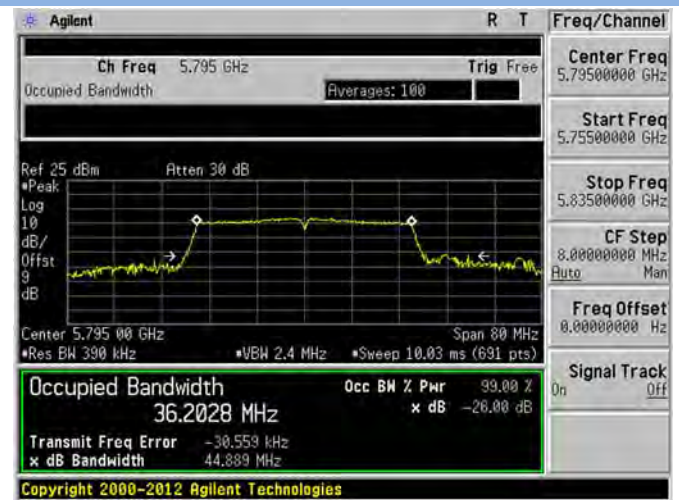
802.11n20 Band IV HIGH CHANNEL



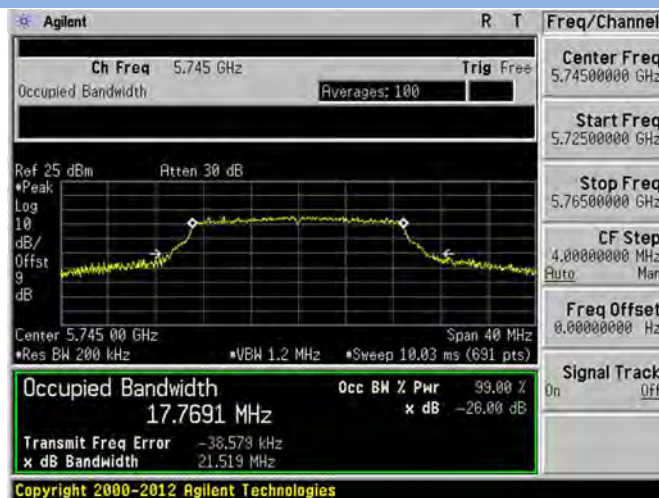
802.11n40 Band IV LOW CHANNEL



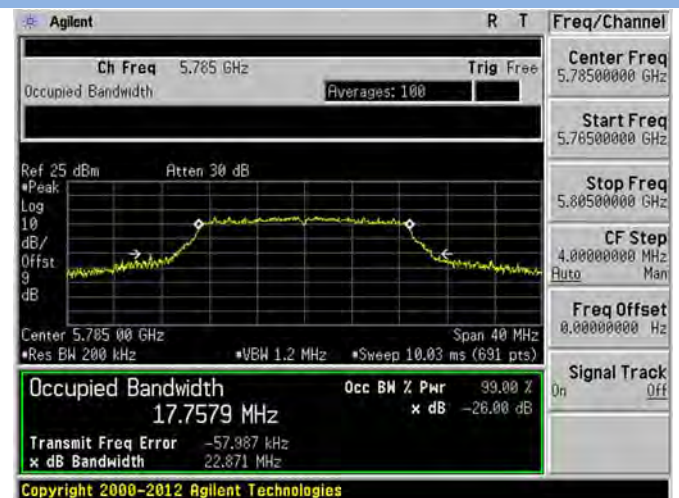
802.11n40 Band IV HIGH CHANNEL



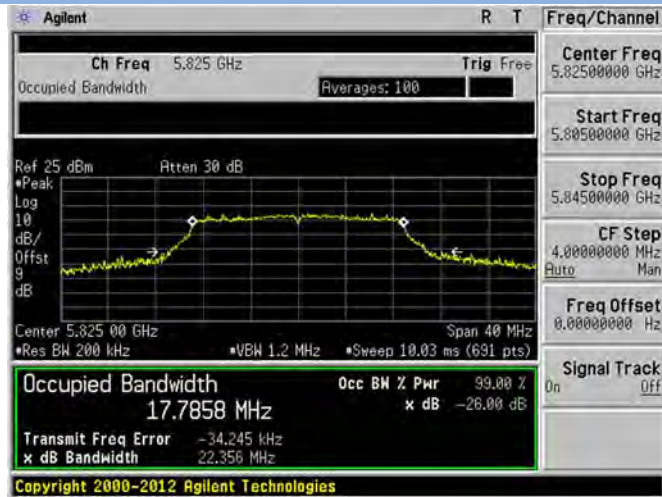
802.11ac20 Band IV LOW CHANNEL



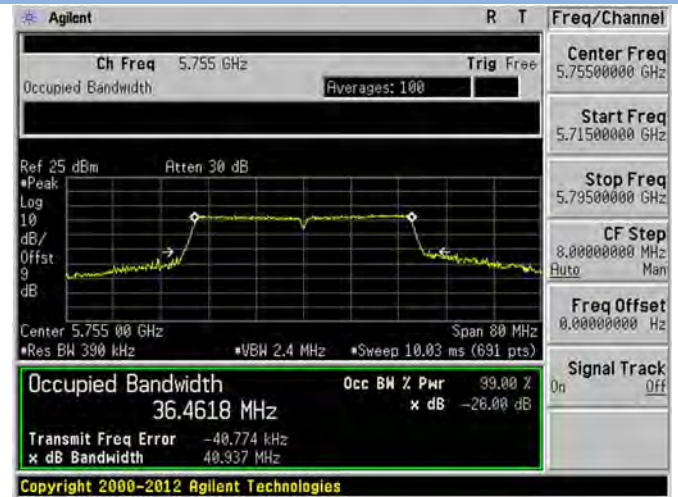
802.11ac20 Band IV MIDDLE CHANNEL



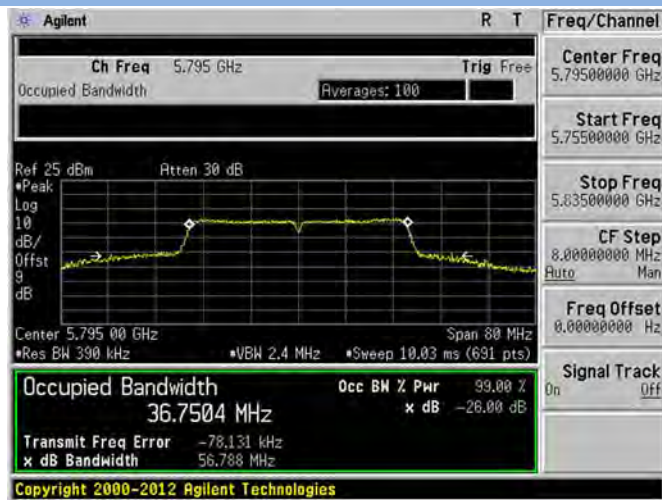
802.11ac20 Band IV HIGH CHANNEL



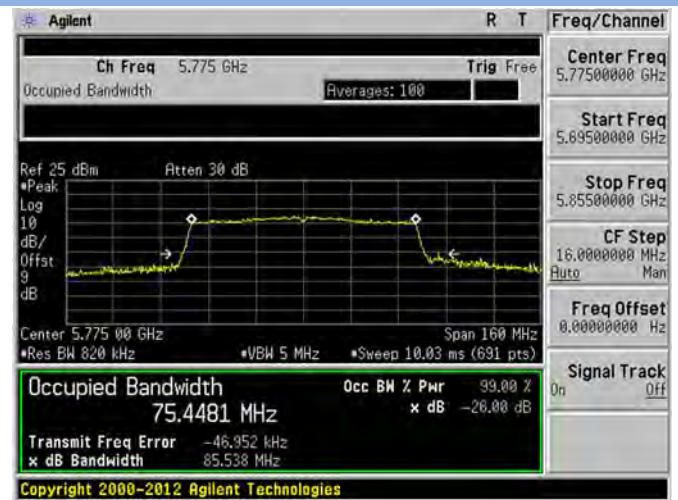
802.11ac40 Band IV LOW CHANNEL



802.11ac40 Band IV HIGH CHANNEL



802.11ac80 Band IV MIDDLE CHANNEL



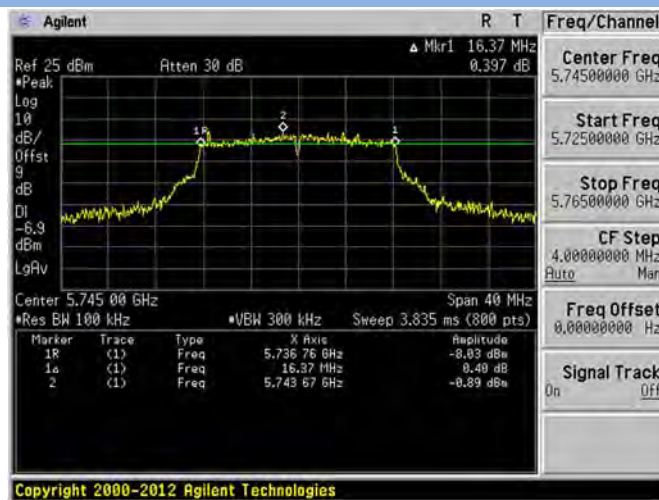
A.3 6 dB Bandwidth

Test Data

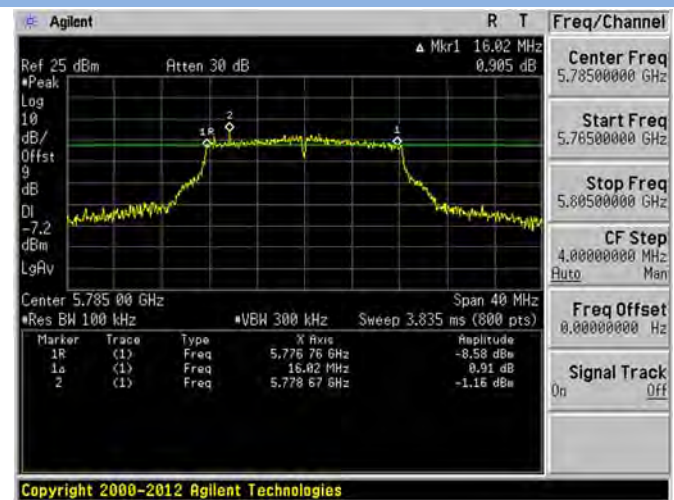
Band IV (5725 - 5850 MHz)					
Mode	Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	5745	16.37	500	Pass
11a	CH157	5785	16.02	500	Pass
11a	CH165	5825	16.42	500	Pass
11n (HT20)	CH149	5745	15.67	500	Pass
11n (HT20)	CH157	5785	15.97	500	Pass
11n (HT20)	CH165	5825	17.67	500	Pass
11n (HT40)	CH151	5755	34.02	500	Pass
11n (HT40)	CH159	5795	35.52	500	Pass
11ac (VHT20)	CH149	5745	16.27	500	Pass
11ac (VHT20)	CH157	5785	17.27	500	Pass
11ac (VHT20)	CH165	5825	17.27	500	Pass
11ac (VHT40)	CH151	5755	36.12	500	Pass
11ac (VHT40)	CH159	5795	36.42	500	Pass
11ac (VHT80)	CH155	5775	75.17	500	Pass

Test plots

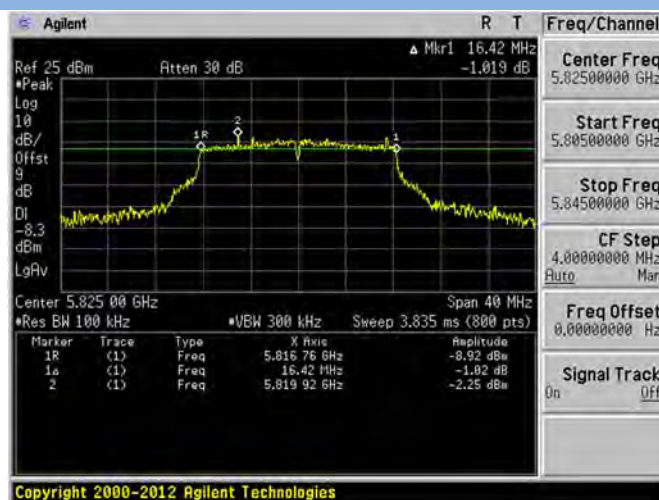
802.11a Band IV LOW CHANNEL



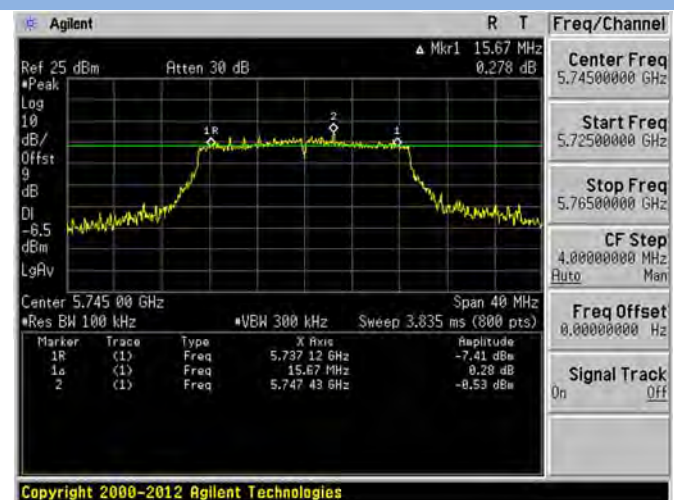
802.11a Band IV MIDDLE CHANNEL



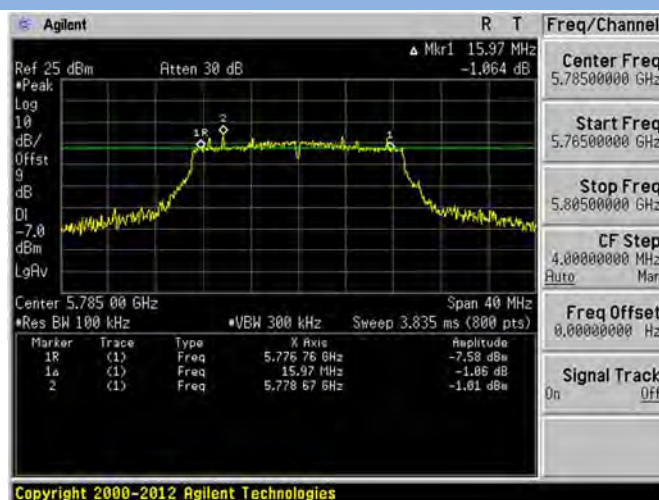
802.11a Band IV HIGH CHANNEL



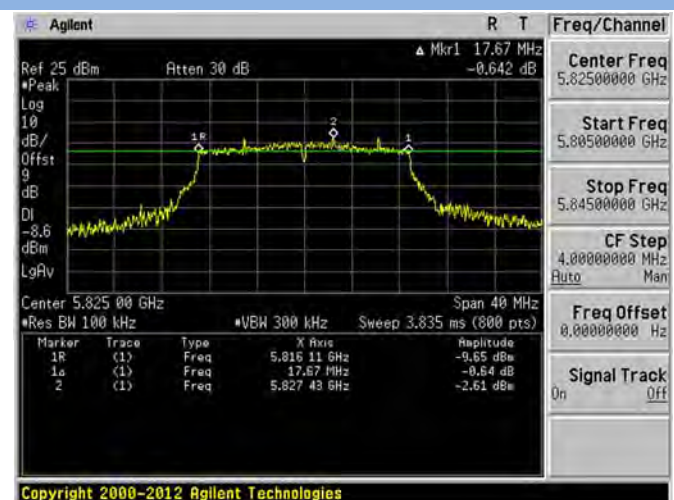
802.11n20 Band IV LOW CHANNEL



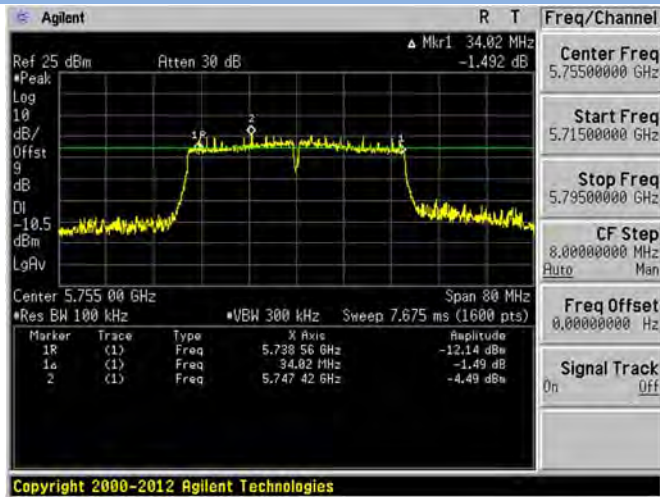
802.11n20 Band IV MIDDLE CHANNEL



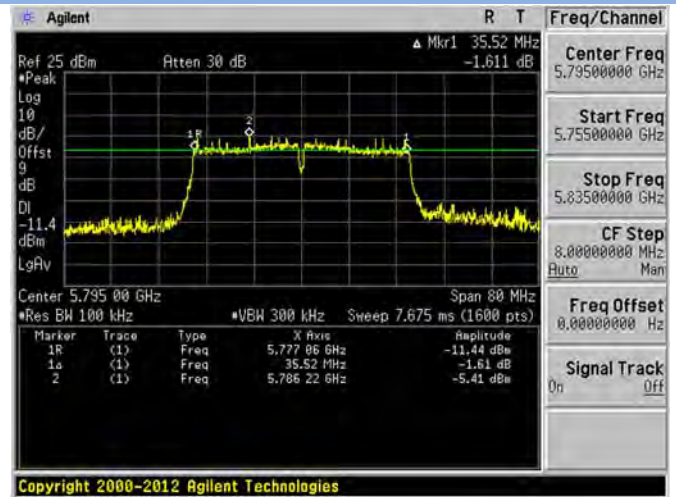
802.11n20 Band IV HIGH CHANNEL



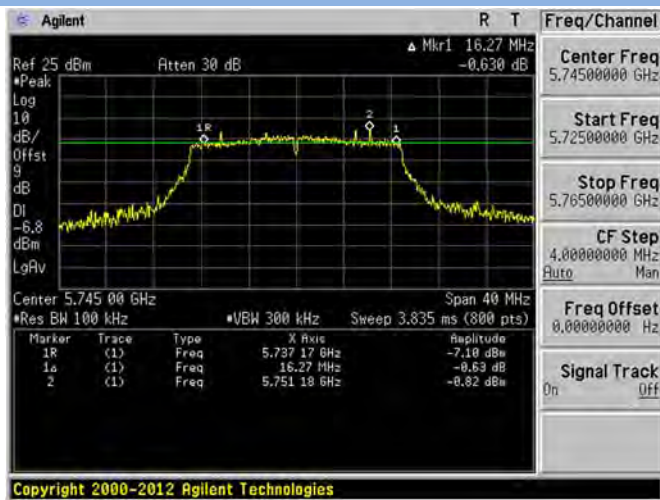
802.11 n40 Band IV LOW CHANNEL



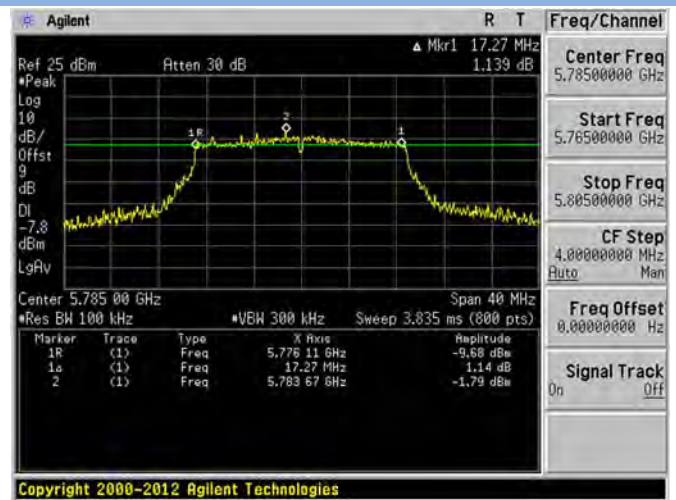
802.11 n40 Band IV HIGH CHANNEL



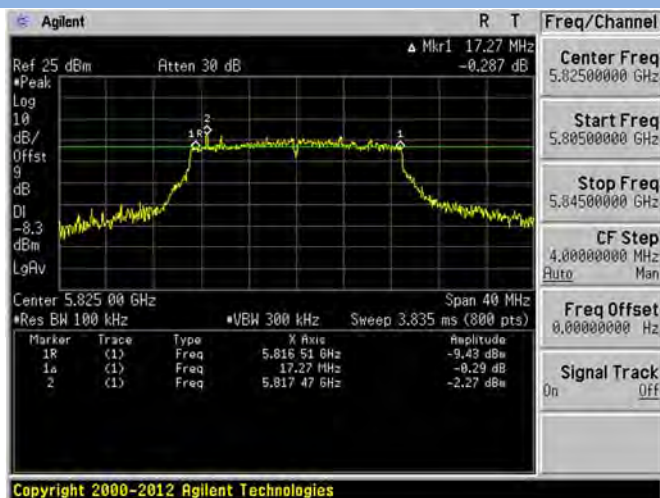
802.11ac20 Band IV LOW CHANNEL



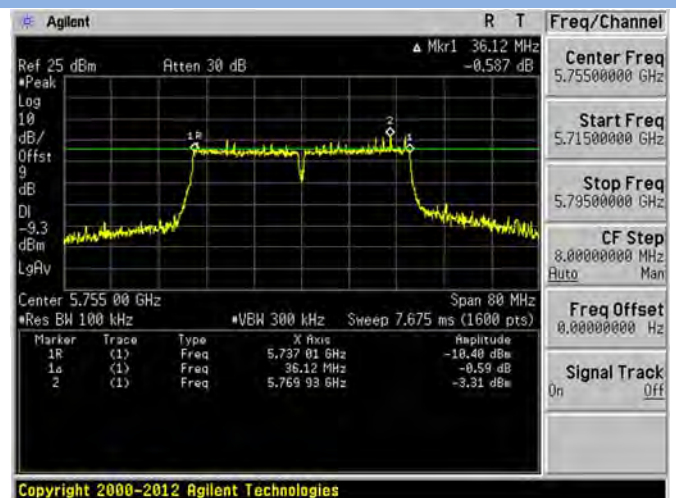
802.11ac20 Band IV MIDDLE CHANNEL



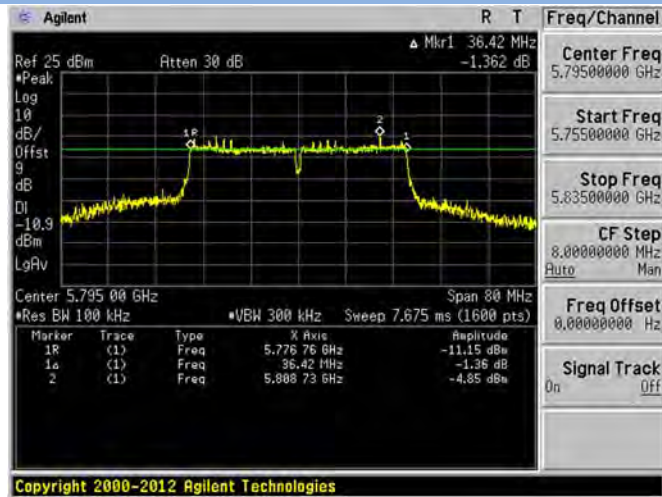
802.11ac20 Band IV HIGH CHANNEL



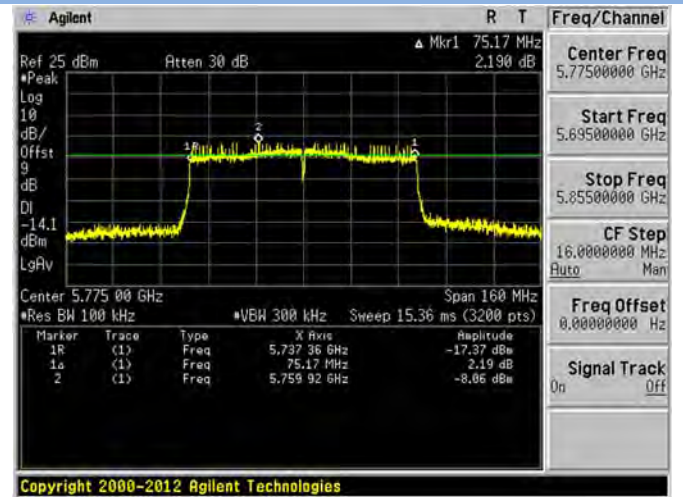
802.11ac40 Band IV LOW CHANNEL



802.11ac40 Band IV HIGH CHANNEL



802.11ac80 Band IV MIDDLE CHANNEL



A.4 Power Spectral Density

Test Data

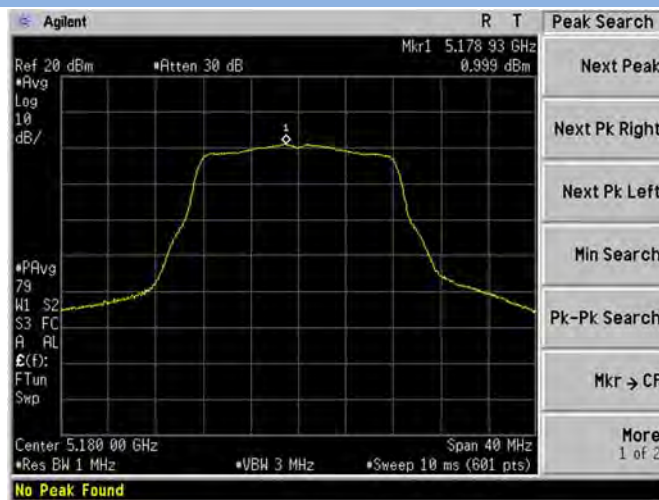
Band I (5150 - 5250 MHz)					
Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Verdict
11a	CH36	5180	0.999	17.00	Pass
11a	CH44	5220	0.896	17.00	Pass
11a	CH48	5240	0.761	17.00	Pass
11n (HT20)	CH36	5180	0.092	17.00	Pass
11n (HT20)	CH44	5220	0.178	17.00	Pass
11n (HT20)	CH48	5240	0.164	17.00	Pass
11n (HT40)	CH38	5190	-2.888	17.00	Pass
11n (HT40)	CH46	5230	-3.251	17.00	Pass
11ac (VHT20)	CH36	5180	0.265	17.00	Pass
11ac (VHT20)	CH44	5220	0.030	17.00	Pass
11ac (VHT20)	CH48	5240	0.135	17.00	Pass
11ac (VHT40)	CH38	5190	-3.163	17.00	Pass
11ac (VHT40)	CH46	5230	-2.786	17.00	Pass
11ac (VHT80)	CH42	5210	-7.850	17.00	Pass

Band IV (5725 - 5850 MHz)					
Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	FCC Limit (dBm/500 kHz)	Verdict
11a	CH149	5745	-2.677	30	Pass
11a	CH157	5785	-3.188	30	Pass
11a	CH165	5825	-3.966	30	Pass
11n (HT20)	CH149	5745	-3.419	30	Pass
11n (HT20)	CH157	5785	-3.902	30	Pass
11n (HT20)	CH165	5825	-5.016	30	Pass
11n (HT40)	CH151	5755	-7.401	30	Pass
11n (HT40)	CH159	5795	-8.579	30	Pass
11ac (VHT20)	CH149	5745	-3.494	30	Pass
11ac (VHT20)	CH157	5785	-3.886	30	Pass
11ac (VHT20)	CH165	5825	-4.777	30	Pass
11ac (VHT40)	CH151	5755	-8.385	30	Pass
11ac (VHT40)	CH159	5795	-8.964	30	Pass
11ac (VHT80)	CH155	5775	-11.670	30	Pass

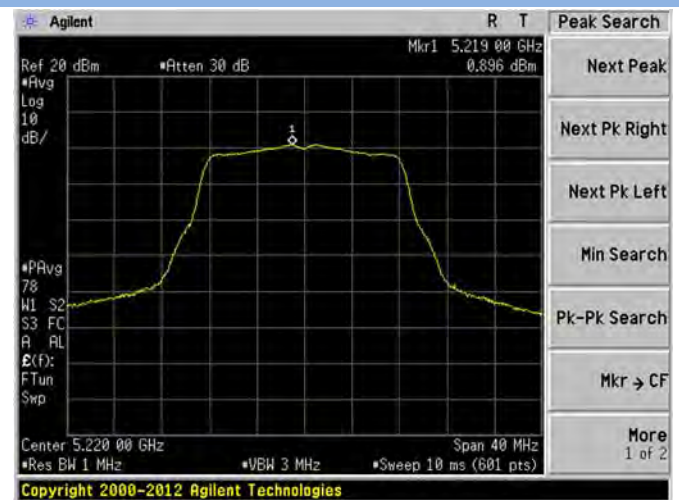
Note: The RBW used in Band IV is 510 kHz, and the PSD factor is: $10 \cdot \log(500 \text{ kHz/RBW}) = -0.09 \text{ dBm}$.

Test plots

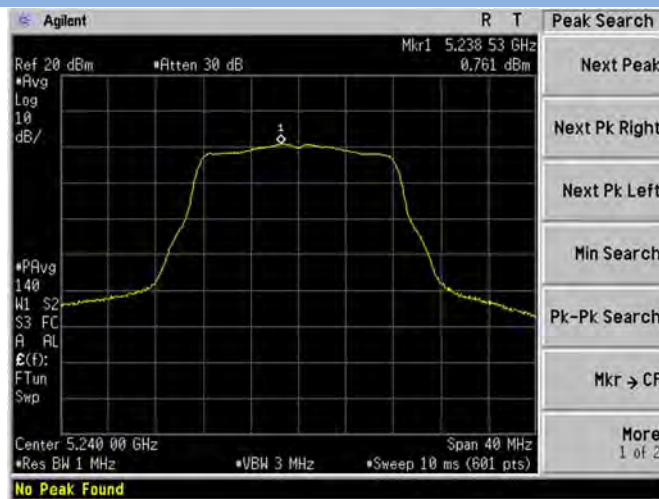
802.11a Band I LOW CHANNEL



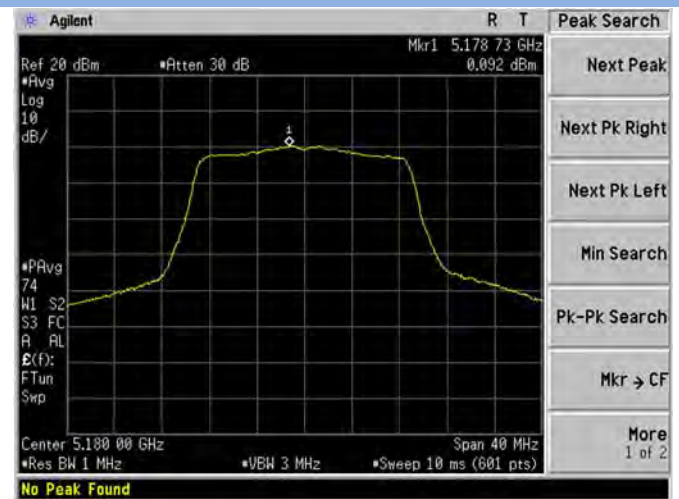
802.11a Band I MIDDLE CHANNEL



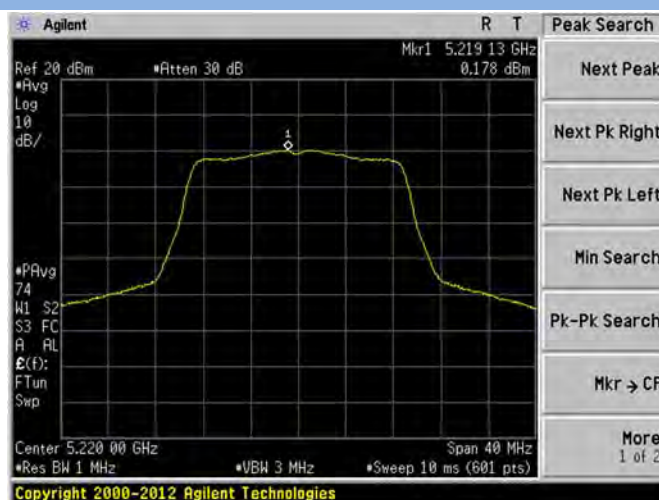
802.11a Band I HIGH CHANNEL



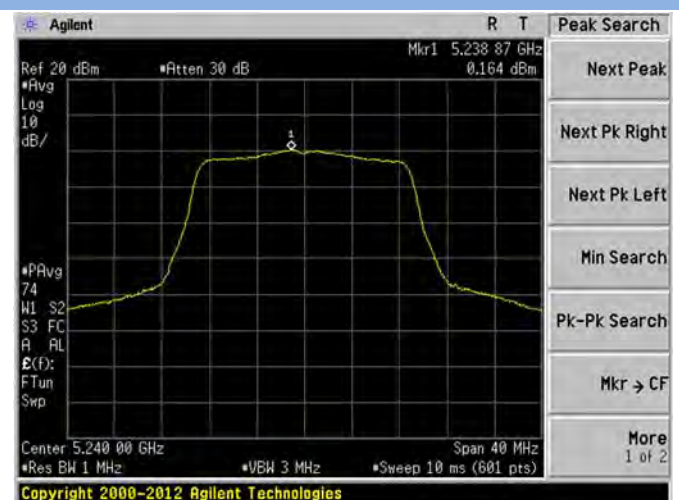
802.11n20 Band I LOW CHANNEL



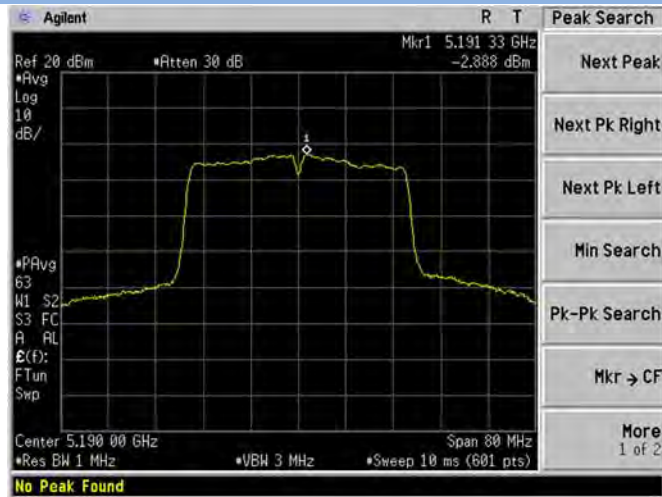
802.11n20 Band I MIDDLE CHANNEL



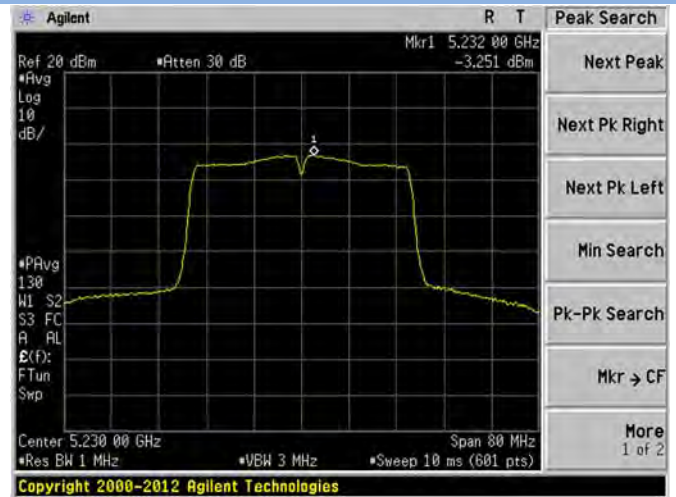
802.11n20 Band I HIGH CHANNEL



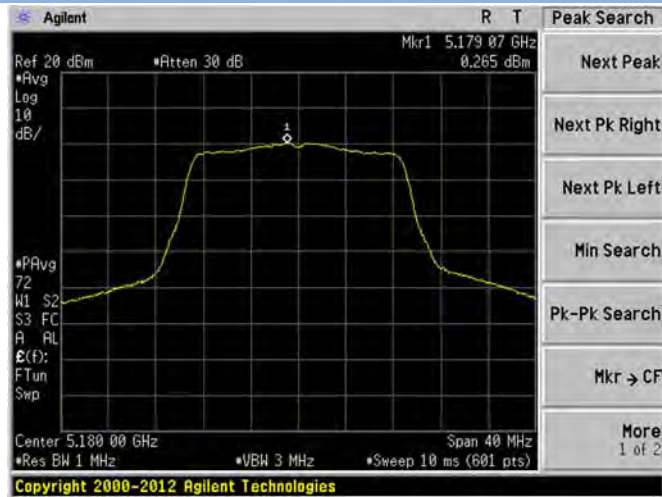
802.11n40 Band I LOW CHANNEL



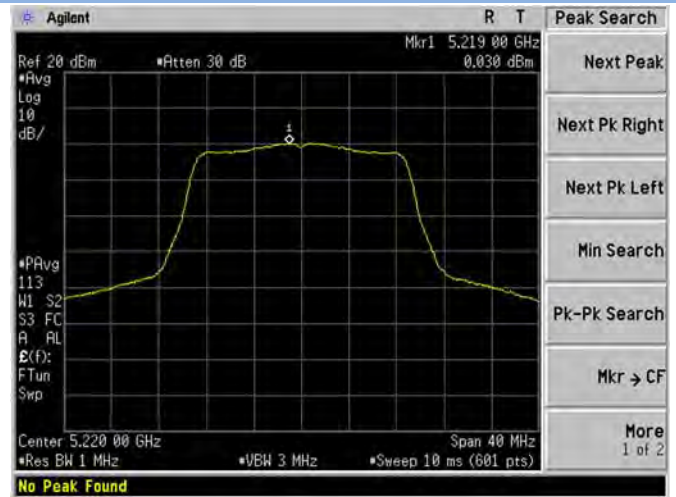
802.11n40 Band I HIGH CHANNEL



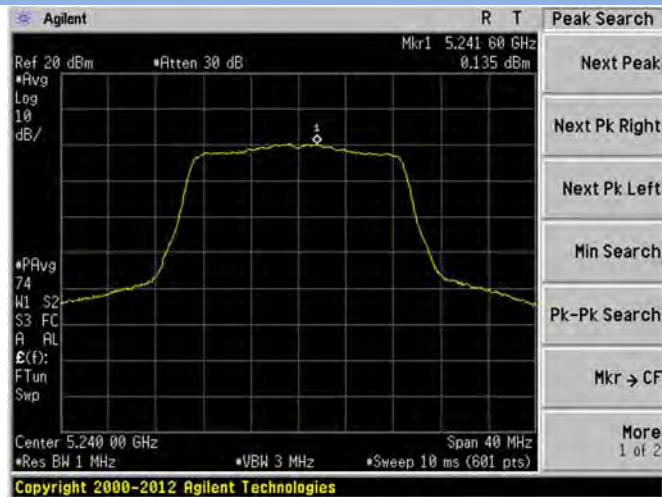
802.11ac20 Band I LOW CHANNEL



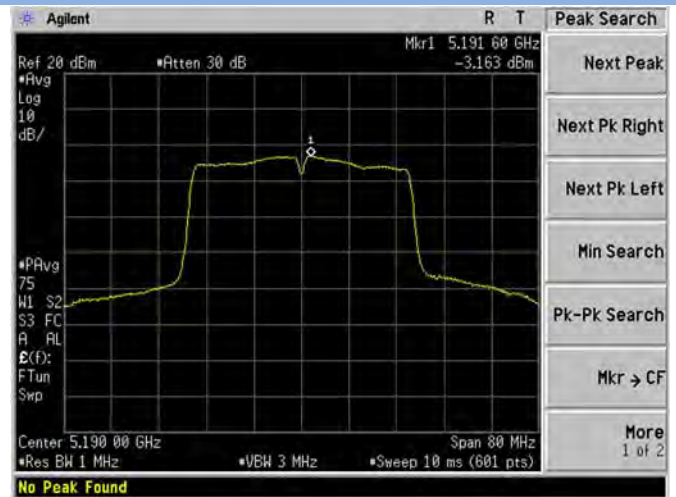
802.11ac20 Band I MIDDLE CHANNEL



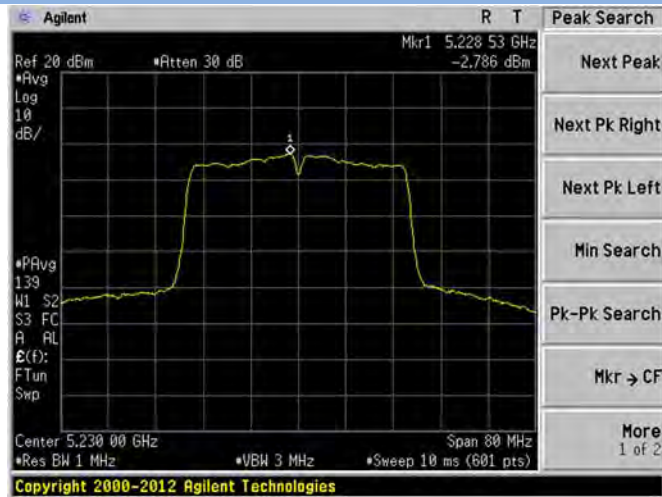
802.11ac20 Band I HIGH CHANNEL



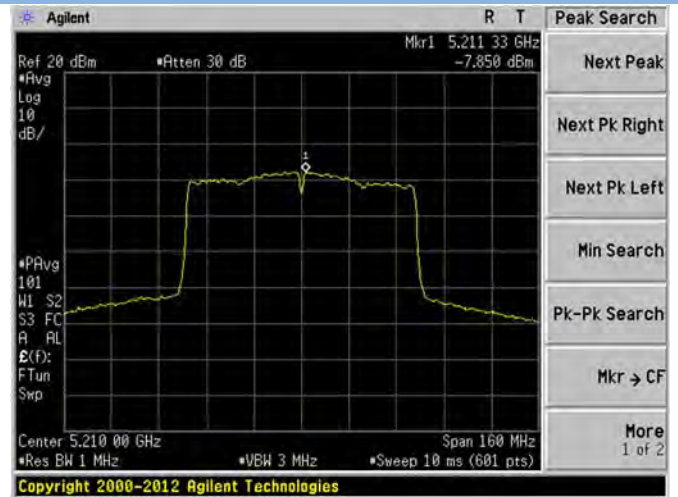
802.11ac40 Band I LOW CHANNEL



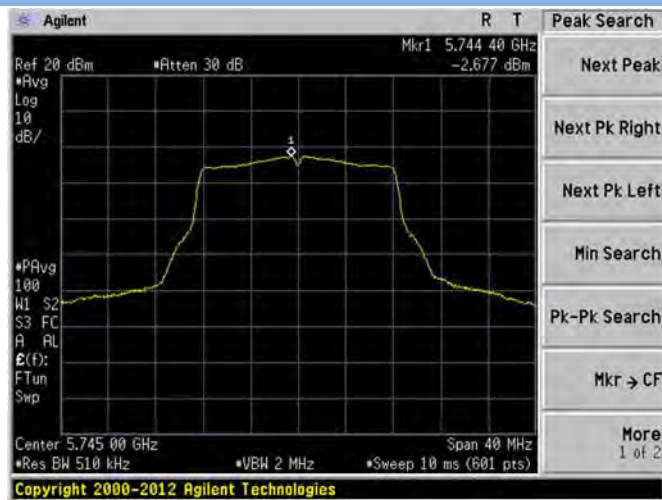
802.11ac40 Band I HIGH CHANNEL



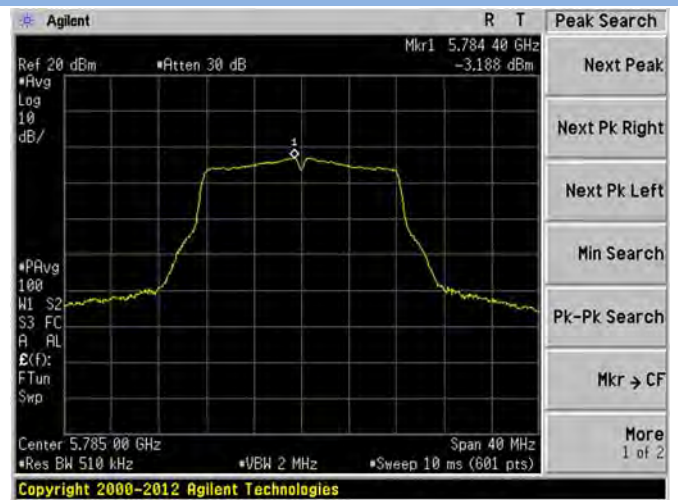
802.11ac80 Band I MIDDLE CHANNEL



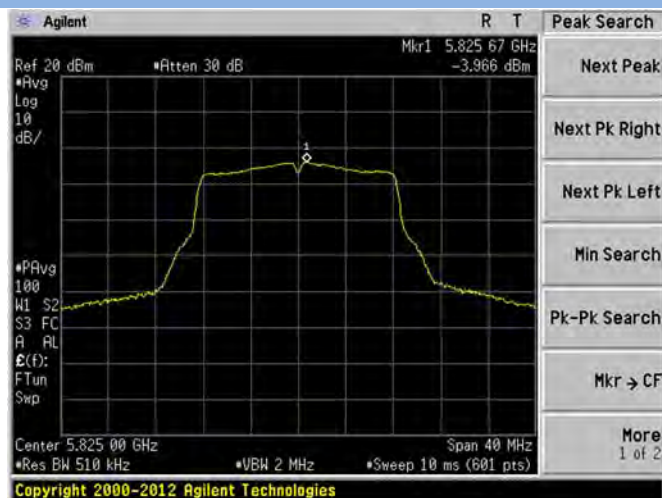
802.11a Band IV LOW CHANNEL



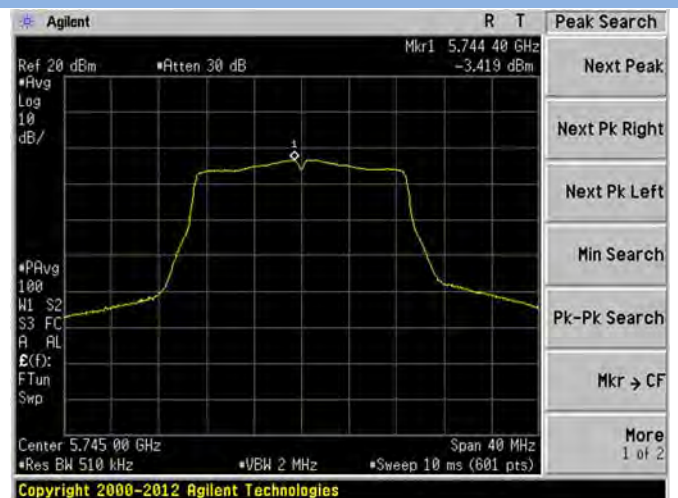
802.11a Band IV MIDDLE CHANNEL



802.11a Band IV HIGH CHANNEL

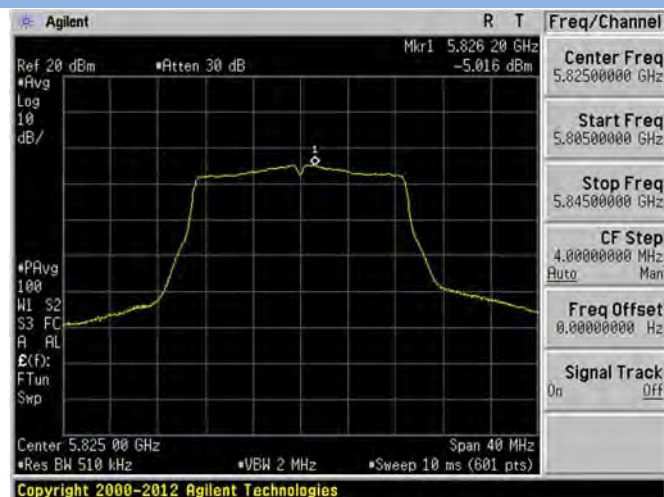
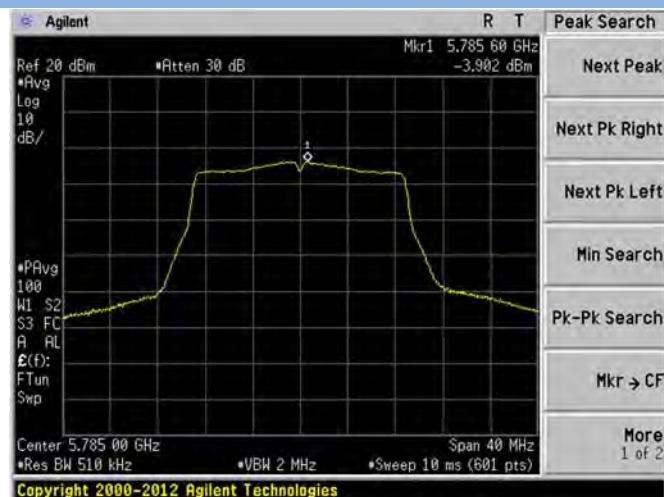


802.11n20 Band IV LOW CHANNEL



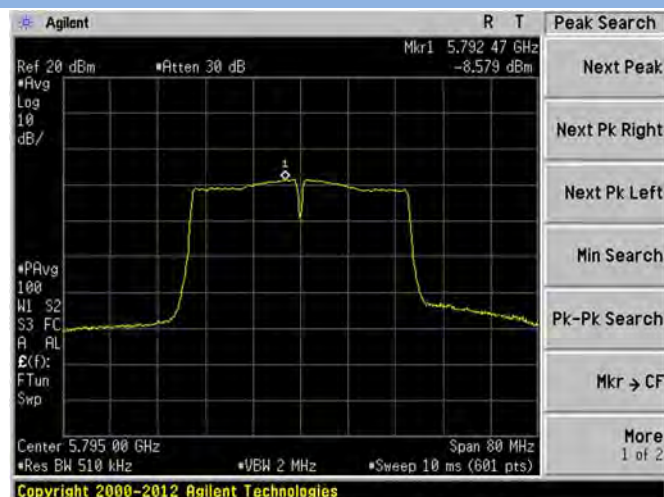
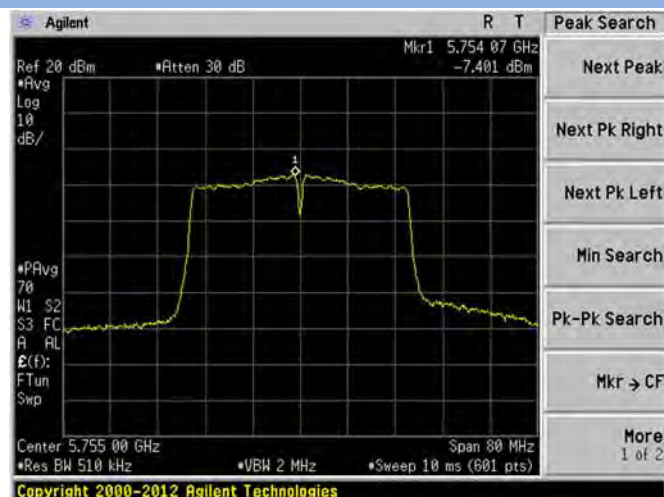
802.11n20 Band IV MIDDLE CHANNEL

802.11n20 Band IV HIGH CHANNEL



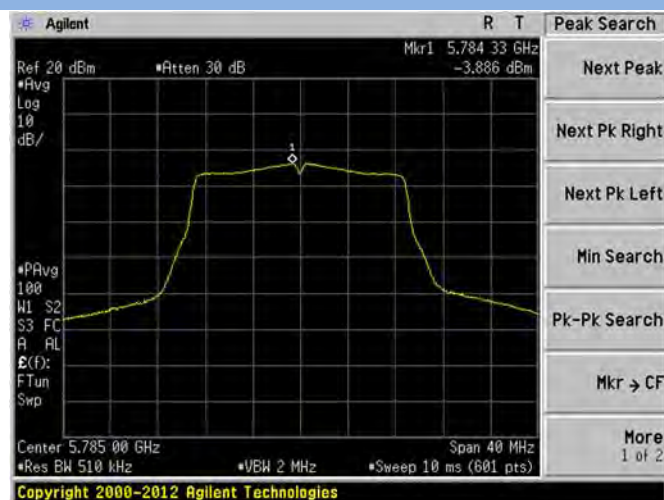
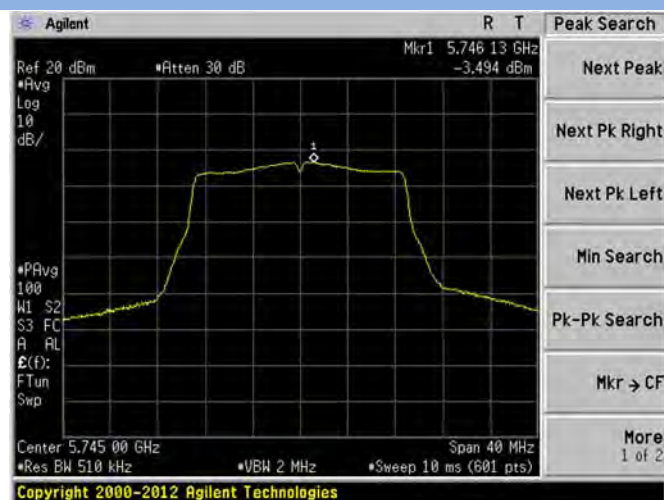
802.11n40 Band IV LOW CHANNEL

802.11n40 Band IV HIGH CHANNEL

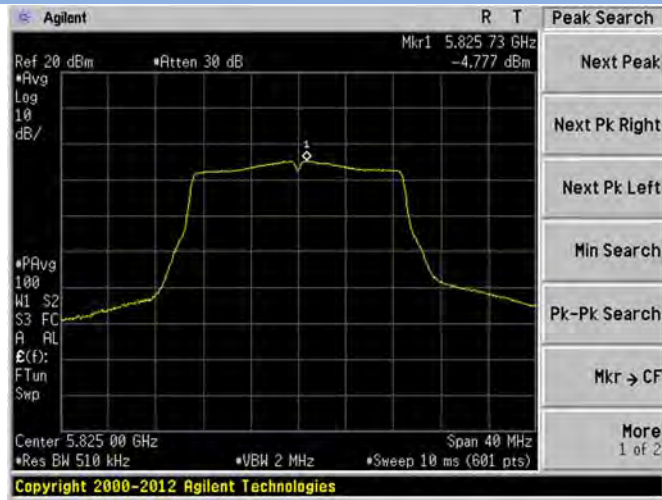


802.11ac20 Band IV LOW CHANNEL

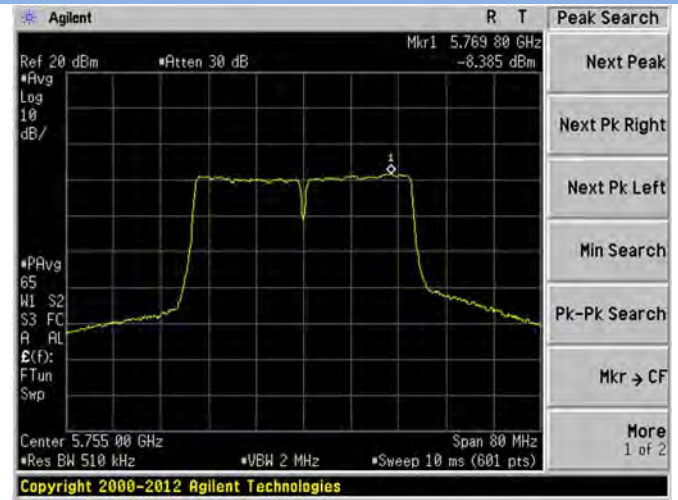
802.11ac20 Band IV MIDDLE CHANNEL



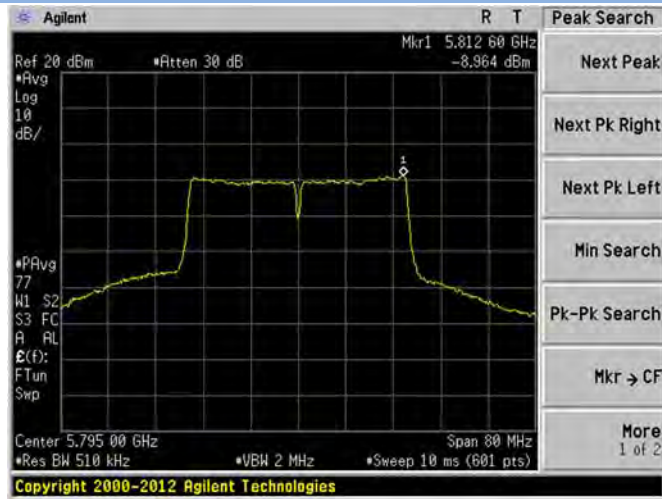
802.11ac20 Band IV HIGH CHANNEL



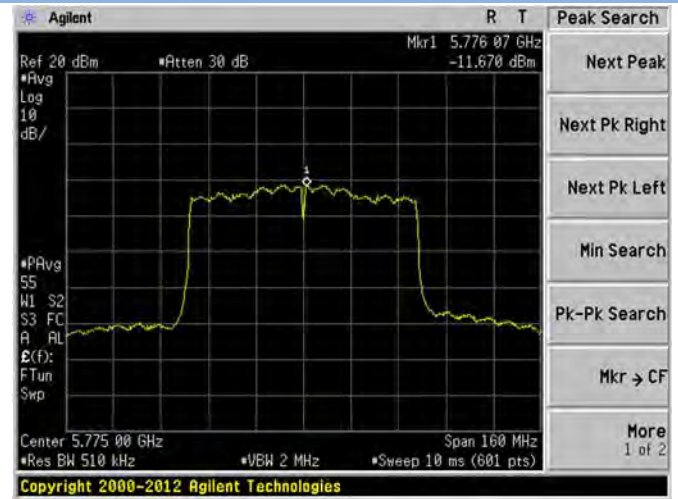
802.11ac40 Band IV LOW CHANNEL



802.11ac40 Band IV HIGH CHANNEL



802.11ac80 Band IV MIDDLE CHANNEL

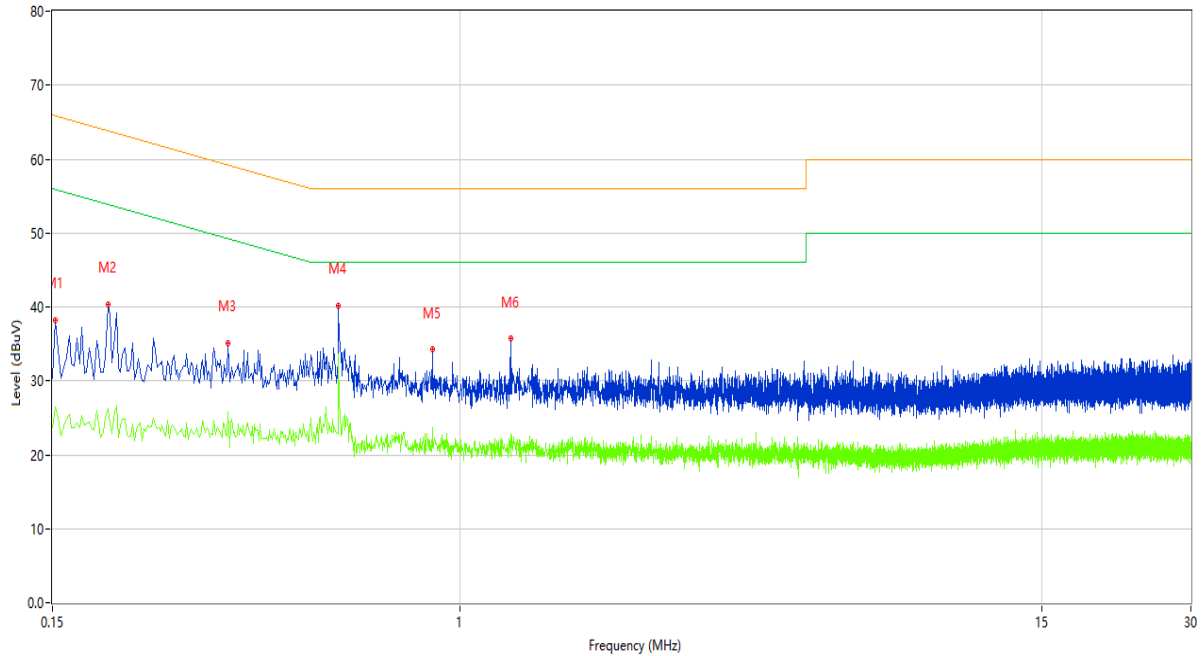


A.5 Conducted Emissions

Note ¹: The EUT is working in the Normal link mode.

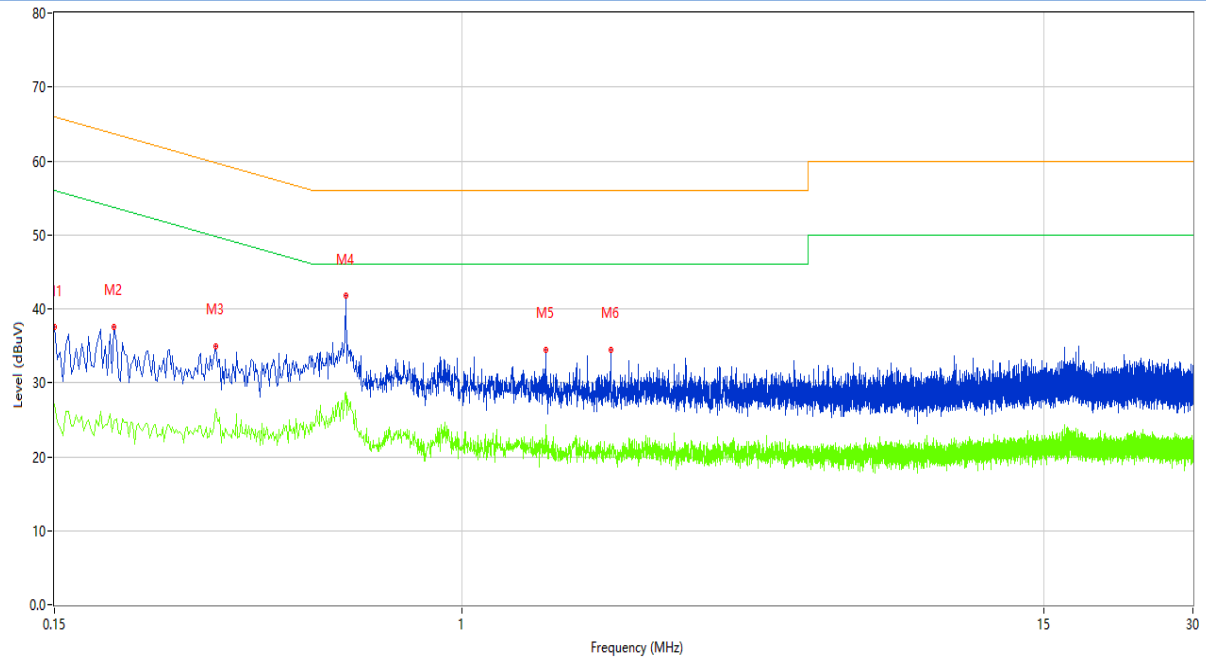
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	30.33	11.16	66.00	-35.67	Peak	L	Pass
1**	0.150	23.75	11.16	56.00	-32.25	AV	L	Pass
2	0.194	40.31	11.21	63.86	-23.55	Peak	L	Pass
2**	0.194	26.36	11.21	53.86	-27.50	AV	L	Pass
3	0.340	35.16	11.43	59.20	-24.04	Peak	L	Pass
3**	0.340	25.78	11.43	49.20	-23.42	AV	L	Pass
4	0.568	40.15	11.05	56.00	-15.85	Peak	L	Pass
4**	0.568	33.58	11.05	46.00	-12.42	AV	L	Pass
5	0.878	34.23	11.19	56.00	-21.77	Peak	L	Pass
5**	0.878	23.70	11.19	46.00	-22.30	AV	L	Pass
6	1.264	35.70	11.22	56.00	-20.30	Peak	L	Pass
6**	1.264	22.92	11.22	46.00	-23.08	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	37.51	11.16	66.00	-28.49	Peak	N	Pass
1**	0.150	27.13	11.16	56.00	-28.87	AV	N	Pass
2	0.198	37.62	11.23	63.69	-26.07	Peak	N	Pass
2**	0.198	24.88	11.23	53.69	-28.81	AV	N	Pass
3	0.318	34.92	11.40	59.76	-24.84	Peak	N	Pass
3**	0.318	26.48	11.40	49.76	-23.28	AV	N	Pass
4	0.582	41.78	11.04	56.00	-14.22	Peak	N	Pass
4**	0.582	28.72	11.04	46.00	-17.28	AV	N	Pass
5	1.474	34.52	11.13	56.00	-21.48	Peak	N	Pass
5**	1.474	24.36	11.13	46.00	-21.64	AV	N	Pass
6	1.996	34.43	11.18	56.00	-21.57	Peak	N	Pass
6**	1.996	20.67	11.18	46.00	-25.33	AV	N	Pass

A.6 Radiated Spurious Emissions and Band Edge (Restricted-band)

Test Data

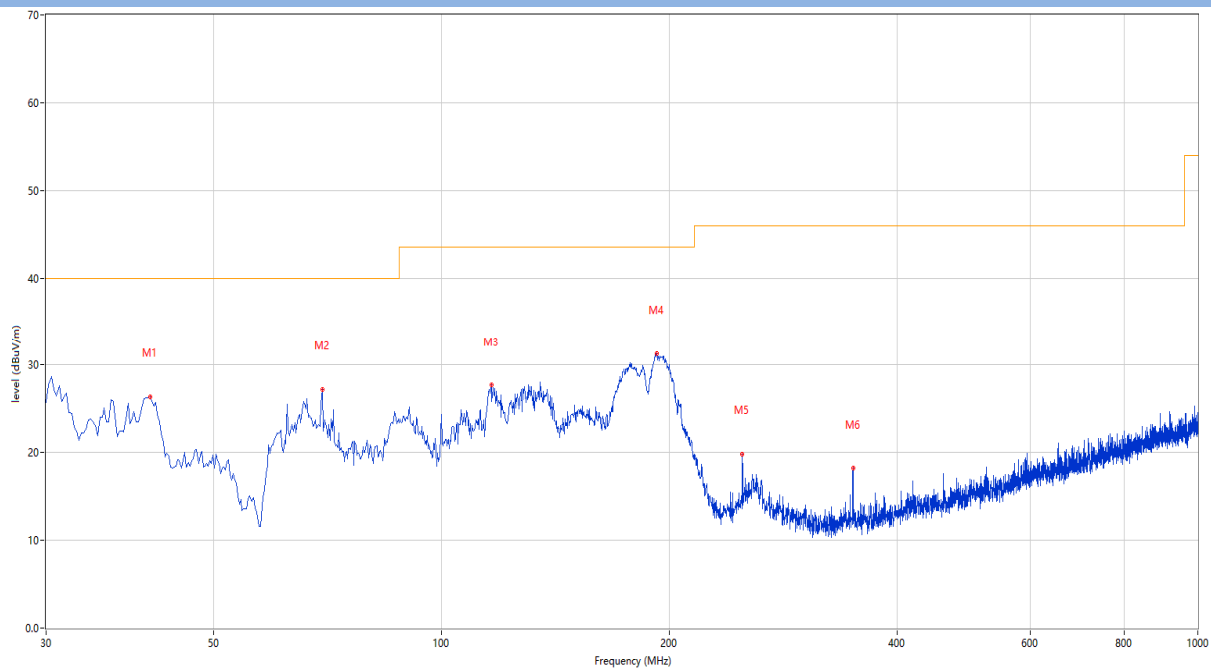
Note¹: The symbol of "--" in the table which means not application.

Note²: For the test data above 1 GHz, According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

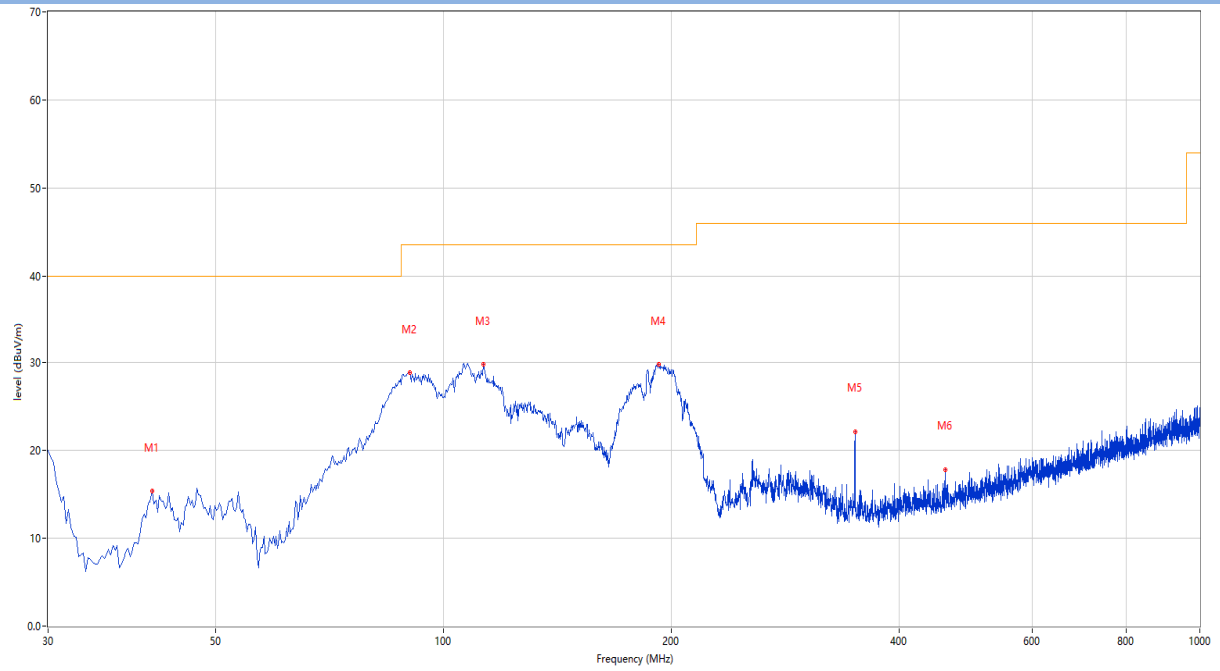
Note⁴: The EUT is working in the Normal link mode below 1 GHz.

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	41.155	26.38	-24.97	40.0	-13.62	Peak	0.00	100	Vertical	Pass
2	69.527	27.22	-28.04	40.0	-12.78	Peak	100.00	100	Vertical	Pass
3	116.330	27.69	-26.73	43.5	-15.81	Peak	151.00	100	Vertical	Pass
4	192.718	31.33	-26.37	43.5	-12.17	Peak	68.00	100	Vertical	Pass
5	249.947	19.83	-24.72	46.0	-26.17	Peak	123.00	200	Vertical	Pass
6	350.100	18.20	-21.79	46.0	-27.80	Peak	49.00	100	Vertical	Pass

30 MHz to 1 GHz, ANT H



Note 1: The device was evaluated/tested in XYZ orientation for radiated spurious emissions. And only the worst orientation of EUT was reported, which is the horizontal orientation.

Note 2: The spurious from 18G-40G is noise only, do not show on the report.

1 GHz to 18 GHz, Band I 11a ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1207.000	36.01	-15.96	74.0	-37.99	Peak	171.00	100	Vertical	Pass
1**	1207.000	25.55	-15.96	54.0	-28.45	AV	171.00	100	Vertical	Pass
2	2295.000	41.50	-11.95	74.0	-32.50	Peak	279.00	100	Vertical	Pass
2**	2295.000	25.79	-11.95	54.0	-28.21	AV	279.00	100	Vertical	Pass
3	3633.000	43.73	-6.26	74.0	-30.27	Peak	41.00	100	Vertical	Pass
3**	3633.000	31.25	-6.26	54.0	-22.75	AV	41.00	100	Vertical	Pass
4	5181.000	90.71	-1.97	--	--	Peak	89.00	100	Vertical	N/A
4**	5181.000	83.40	-1.97	--	--	AV	89.00	100	Vertical	N/A
5	9420.000	48.14	4.03	74.0	-25.86	Peak	153.00	100	Vertical	Pass
5**	9420.000	39.33	4.03	54.0	-14.67	AV	153.00	100	Vertical	Pass
6	14023.500	53.87	10.37	68.2	-14.33	Peak	291.00	100	Vertical	Pass
6**	14023.500	43.36	10.37	54.0	-10.64	AV	291.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11a ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1256.500	36.82	-16.04	68.2	-31.38	Peak	175.00	100	Horizontal	Pass
1**	1256.500	24.65	-16.04	54.0	-29.35	AV	175.00	100	Horizontal	Pass
2	2335.000	41.74	-12.09	74.0	-32.26	Peak	292.00	100	Horizontal	Pass
2**	2335.000	26.72	-12.09	54.0	-27.28	AV	292.00	100	Horizontal	Pass
3	3567.000	44.04	-5.54	68.2	-24.16	Peak	74.00	100	Horizontal	Pass
3**	3567.000	32.52	-5.54	54.0	-21.48	AV	74.00	100	Horizontal	Pass
4	5179.000	104.42	-1.96	--	--	Peak	43.00	100	Horizontal	N/A
4**	5179.000	97.11	-1.96	--	--	AV	43.00	100	Horizontal	N/A
5	11364.250	51.47	6.88	74.0	-22.53	Peak	202.00	100	Horizontal	Pass
5**	11364.250	40.45	6.88	54.0	-13.55	AV	202.00	100	Horizontal	Pass
6	15387.500	53.78	9.28	74.0	-20.22	Peak	359.00	100	Horizontal	Pass
6**	15387.500	42.87	9.28	54.0	-11.13	AV	359.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11a ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.500	37.56	-15.89	74.0	-36.44	Peak	249.00	100	Vertical	Pass
1**	1331.500	24.82	-15.89	54.0	-29.18	AV	249.00	100	Vertical	Pass
2	3050.000	43.74	-7.32	68.2	-24.46	Peak	325.00	100	Vertical	Pass
2**	3050.000	30.71	-7.32	54.0	-23.29	AV	325.00	100	Vertical	Pass
3	5219.000	93.07	-1.76	--	--	Peak	278.00	100	Vertical	N/A
3**	5219.000	85.50	-1.76	--	--	AV	278.00	100	Vertical	N/A
4	6636.000	52.93	2.52	68.2	-15.27	Peak	-1.00	100	Vertical	Pass
4**	6636.000	40.93	2.52	54.0	-13.07	AV	-1.00	100	Vertical	Pass
5	10638.250	50.00	6.84	74.0	-24.00	Peak	163.00	100	Vertical	Pass
5**	10638.250	41.53	6.84	54.0	-12.47	AV	163.00	100	Vertical	Pass
6	14606.500	55.31	12.32	68.2	-12.89	Peak	320.00	100	Vertical	Pass
6**	14606.500	46.98	12.32	54.0	-7.02	AV	320.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11a ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1351.000	37.05	-15.44	74.0	-36.95	Peak	81.00	100	Horizontal	Pass
1**	1351.000	24.76	-15.44	54.0	-29.24	AV	81.00	100	Horizontal	Pass
2	2196.500	40.72	-11.95	68.2	-27.48	Peak	314.00	100	Horizontal	Pass
2**	2196.500	25.75	-11.95	54.0	-28.25	AV	314.00	100	Horizontal	Pass
3	2820.000	43.15	-9.17	74.0	-30.85	Peak	225.00	100	Horizontal	Pass
3**	2820.000	26.03	-9.17	54.0	-27.97	AV	225.00	100	Horizontal	Pass
4	5219.000	105.20	-1.76	--	--	Peak	182.00	100	Horizontal	N/A
4**	5219.000	97.44	-1.76	--	--	AV	182.00	100	Horizontal	N/A
5	10476.000	50.72	7.01	68.2	-17.48	Peak	116.00	100	Horizontal	Pass
5**	10476.000	40.21	7.01	54.0	-13.79	AV	116.00	100	Horizontal	Pass
6	14606.500	56.09	12.32	68.2	-12.11	Peak	16.00	100	Horizontal	Pass
6**	14606.500	46.19	12.32	54.0	-7.81	AV	16.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11a ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.000	36.54	-15.86	74.0	-37.46	Peak	198.00	100	Vertical	Pass
1**	1329.000	25.45	-15.86	54.0	-28.55	AV	198.00	100	Vertical	Pass
2	2360.500	40.37	-12.01	74.0	-33.63	Peak	243.00	100	Vertical	Pass
2**	2360.500	26.06	-12.01	54.0	-27.94	AV	243.00	100	Vertical	Pass
3	3439.000	43.24	-7.14	68.2	-24.96	Peak	247.00	100	Vertical	Pass
3**	3439.000	30.57	-7.14	54.0	-23.43	AV	247.00	100	Vertical	Pass
4	5239.000	85.77	-2.40	--	--	Peak	146.00	100	Vertical	N/A
4**	5239.000	79.20	-2.40	--	--	AV	146.00	100	Vertical	N/A
5	10272.500	49.13	7.43	68.2	-19.07	Peak	219.00	100	Vertical	Pass
5**	10272.500	40.02	7.43	54.0	-13.98	AV	219.00	100	Vertical	Pass
6	14576.250	55.16	12.06	68.2	-13.04	Peak	3.00	100	Vertical	Pass
6**	14576.250	45.84	12.06	54.0	-8.16	AV	3.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11a ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1426.500	36.78	-15.38	74.0	-37.22	Peak	55.00	100	Horizontal	Pass
1**	1426.500	25.57	-15.38	54.0	-28.43	AV	55.00	100	Horizontal	Pass
2	2242.500	40.99	-12.14	74.0	-33.01	Peak	169.00	100	Horizontal	Pass
2**	2242.500	25.47	-12.14	54.0	-28.53	AV	169.00	100	Horizontal	Pass
3	4057.000	44.91	-4.12	74.0	-29.09	Peak	182.00	100	Horizontal	Pass
3**	4057.000	33.13	-4.12	54.0	-20.87	AV	182.00	100	Horizontal	Pass
4	5238.000	103.32	-2.37	--	--	Peak	182.00	100	Horizontal	N/A
4**	5238.000	96.18	-2.37	--	--	AV	182.00	100	Horizontal	N/A
5	10080.000	49.71	6.50	68.2	-18.49	Peak	1.00	100	Horizontal	Pass
5**	10080.000	40.13	6.50	54.0	-13.87	AV	1.00	100	Horizontal	Pass
6	16787.250	56.28	12.58	68.2	-11.92	Peak	323.00	100	Horizontal	Pass
6**	16787.250	46.41	12.58	54.0	-7.59	AV	323.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11n20 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1294.500	36.60	-15.66	68.2	-31.60	Peak	273.00	100	Vertical	Pass
1**	1294.500	24.22	-15.66	54.0	-29.78	AV	273.00	100	Vertical	Pass
2	2460.500	41.58	-11.49	68.2	-26.62	Peak	323.00	100	Vertical	Pass
2**	2460.500	24.60	-11.49	54.0	-29.40	AV	323.00	100	Vertical	Pass
3	4217.000	45.30	-3.51	74.0	-28.70	Peak	38.00	100	Vertical	Pass
3**	4217.000	34.01	-3.51	54.0	-19.99	AV	38.00	100	Vertical	Pass
4	5180.000	91.16	-1.85	--	--	Peak	127.00	100	Vertical	N/A
4**	5180.000	84.87	-1.85	--	--	AV	127.00	100	Vertical	N/A
5	10470.500	50.33	6.99	68.2	-17.87	Peak	352.00	100	Vertical	Pass
5**	10470.500	39.60	6.99	54.0	-14.40	AV	352.00	100	Vertical	Pass
6	17139.250	57.17	15.25	68.2	-11.03	Peak	246.00	100	Vertical	Pass
6**	17139.250	45.87	15.25	54.0	-8.13	AV	246.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11n20 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1130.500	36.57	-16.97	74.0	-37.43	Peak	352.00	100	Horizontal	Pass
1**	1130.500	23.65	-16.97	54.0	-30.35	AV	352.00	100	Horizontal	Pass
2	2067.000	40.59	-13.37	68.2	-27.61	Peak	191.00	100	Horizontal	Pass
2**	2067.000	26.60	-13.37	54.0	-27.40	AV	191.00	100	Horizontal	Pass
3	3102.000	43.32	-6.71	68.2	-24.88	Peak	243.00	100	Horizontal	Pass
3**	3102.000	30.77	-6.71	54.0	-23.23	AV	243.00	100	Horizontal	Pass
4	5181.000	103.52	-1.97	--	--	Peak	0.00	100	Horizontal	N/A
4**	5181.000	96.39	-1.97	--	--	AV	0.00	100	Horizontal	N/A
5	10847.250	50.71	7.37	74.0	-23.29	Peak	360.00	100	Horizontal	Pass
5**	10847.250	41.73	7.37	54.0	-12.27	AV	360.00	100	Horizontal	Pass
6	17898.250	59.81	17.43	74.0	-14.19	Peak	246.00	100	Horizontal	Pass
6**	17898.250	49.38	17.43	54.0	-4.62	AV	246.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11n20 ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1348.000	37.08	-15.53	74.0	-36.92	Peak	180.00	100	Vertical	Pass
1**	1348.000	25.20	-15.53	54.0	-28.80	AV	180.00	100	Vertical	Pass
2	2329.000	41.03	-12.03	74.0	-32.97	Peak	220.00	100	Vertical	Pass
2**	2329.000	25.73	-12.03	54.0	-28.27	AV	220.00	100	Vertical	Pass
3	3017.000	43.33	-8.00	68.2	-24.87	Peak	308.00	100	Vertical	Pass
3**	3017.000	31.38	-8.00	54.0	-22.62	AV	308.00	100	Vertical	Pass
4	5217.000	85.12	-1.77	--	--	Peak	185.00	100	Vertical	N/A
4**	5217.000	77.65	-1.77	--	--	AV	185.00	100	Vertical	N/A
5	10000.250	50.03	6.38	68.2	-18.17	Peak	208.00	100	Vertical	Pass
5**	10000.250	39.19	6.38	54.0	-14.81	AV	208.00	100	Vertical	Pass
6	17898.250	60.39	17.43	74.0	-13.61	Peak	189.00	100	Vertical	Pass
6**	17898.250	49.05	17.43	54.0	-4.95	AV	189.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11n20 ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.500	37.58	-15.99	74.0	-36.42	Peak	89.00	100	Horizontal	Pass
1**	1440.500	25.20	-15.99	54.0	-28.80	AV	89.00	100	Horizontal	Pass
2	2349.000	41.30	-12.09	74.0	-32.70	Peak	203.00	100	Horizontal	Pass
2**	2349.000	24.62	-12.09	54.0	-29.38	AV	203.00	100	Horizontal	Pass
3	2905.000	43.16	-9.26	68.2	-25.04	Peak	21.00	100	Horizontal	Pass
3**	2905.000	26.26	-9.26	54.0	-27.74	AV	21.00	100	Horizontal	Pass
4	5221.000	104.09	-1.69	--	--	Peak	122.00	100	Horizontal	N/A
4**	5221.000	96.80	-1.69	--	--	AV	122.00	100	Horizontal	N/A
5	11515.500	51.25	7.29	74.0	-22.75	Peak	186.00	100	Horizontal	Pass
5**	11515.500	40.98	7.29	54.0	-13.02	AV	186.00	100	Horizontal	Pass
6	14625.750	56.01	12.04	68.2	-12.19	Peak	50.00	100	Horizontal	Pass
6**	14625.750	45.40	12.04	54.0	-8.60	AV	50.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11n20 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1390.500	37.46	-16.11	74.0	-36.54	Peak	3.00	100	Vertical	Pass
1**	1390.500	24.12	-16.11	54.0	-29.88	AV	3.00	100	Vertical	Pass
2	2187.500	40.35	-12.51	68.2	-27.85	Peak	21.00	100	Vertical	Pass
2**	2187.500	26.59	-12.51	54.0	-27.41	AV	21.00	100	Vertical	Pass
3	3045.000	43.76	-7.50	68.2	-24.44	Peak	229.00	100	Vertical	Pass
3**	3045.000	31.63	-7.50	54.0	-22.37	AV	229.00	100	Vertical	Pass
4	5236.000	85.79	-2.35	--	--	Peak	158.00	100	Vertical	N/A
4**	5236.000	77.43	-2.35	--	--	AV	158.00	100	Vertical	N/A
5	10806.000	51.13	7.15	74.0	-22.87	Peak	0.00	100	Vertical	Pass
5**	10806.000	41.00	7.15	54.0	-13.00	AV	0.00	100	Vertical	Pass
6	14397.500	54.93	11.86	68.2	-13.27	Peak	83.00	100	Vertical	Pass
6**	14397.500	45.53	11.86	54.0	-8.47	AV	83.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11n20 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.000	36.90	-16.09	74.0	-37.10	Peak	106.00	100	Horizontal	Pass
1**	1330.000	24.07	-16.09	54.0	-29.93	AV	106.00	100	Horizontal	Pass
2	2413.000	42.80	-11.74	68.2	-25.40	Peak	43.00	100	Horizontal	Pass
2**	2413.000	31.03	-11.74	54.0	-22.97	AV	43.00	100	Horizontal	Pass
3	3577.000	43.42	-5.76	68.2	-24.78	Peak	229.00	100	Horizontal	Pass
3**	3577.000	31.23	-5.76	54.0	-22.77	AV	229.00	100	Horizontal	Pass
4	5238.000	104.64	-2.37	--	--	Peak	126.00	100	Horizontal	N/A
4**	5238.000	96.28	-2.37	--	--	AV	126.00	100	Horizontal	N/A
5	9103.750	48.44	2.93	74.0	-25.56	Peak	55.00	100	Horizontal	Pass
5**	9103.750	37.69	2.93	54.0	-16.31	AV	55.00	100	Horizontal	Pass
6	14749.500	54.87	10.43	68.2	-13.33	Peak	72.00	100	Horizontal	Pass
6**	14749.500	43.69	10.43	54.0	-10.31	AV	72.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11n40 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1620.000	39.39	-16.54	74.0	-34.61	Peak	172.00	100	Vertical	Pass
1**	1620.000	27.55	-16.54	54.0	-26.45	AV	172.00	100	Vertical	Pass
2	1766.000	42.04	-15.39	68.2	-26.16	Peak	71.00	100	Vertical	Pass
2**	1766.000	32.22	-15.39	54.0	-21.78	AV	71.00	100	Vertical	Pass
3	3078.000	42.71	-7.37	68.2	-25.49	Peak	259.00	100	Vertical	Pass
3**	3078.000	30.98	-7.37	54.0	-23.02	AV	259.00	100	Vertical	Pass
4	5189.000	86.55	-2.15	--	--	Peak	113.00	100	Vertical	N/A
4**	5189.000	80.13	-2.15	--	--	AV	113.00	100	Vertical	N/A
5	9312.750	46.76	4.58	74.0	-27.24	Peak	0.00	100	Vertical	Pass
5**	9312.750	39.06	4.58	54.0	-14.94	AV	0.00	100	Vertical	Pass
6	14584.500	53.61	12.31	68.2	-14.59	Peak	235.00	100	Vertical	Pass
6**	14584.500	43.04	12.31	54.0	-10.96	AV	235.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11n40 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1318.000	36.22	-15.75	74.0	-37.78	Peak	32.00	100	Horizontal	Pass
1**	1318.000	23.53	-15.75	54.0	-30.47	AV	32.00	100	Horizontal	Pass
2	2221.000	39.60	-12.22	74.0	-34.40	Peak	241.00	100	Horizontal	Pass
2**	2221.000	25.26	-12.22	54.0	-28.74	AV	241.00	100	Horizontal	Pass
3	3313.000	42.39	-7.54	68.2	-25.81	Peak	155.00	100	Horizontal	Pass
3**	3313.000	29.46	-7.54	54.0	-24.54	AV	155.00	100	Horizontal	Pass
4	5188.000	97.71	-2.03	--	--	Peak	171.00	100	Horizontal	N/A
4**	5188.000	91.20	-2.03	--	--	AV	171.00	100	Horizontal	N/A
5	9315.500	47.20	4.53	74.0	-26.80	Peak	167.00	100	Horizontal	Pass
5**	9315.500	38.76	4.53	54.0	-15.24	AV	167.00	100	Horizontal	Pass
6	14590.000	53.29	12.45	68.2	-14.91	Peak	301.00	100	Horizontal	Pass
6**	14590.000	43.70	12.45	54.0	-10.30	AV	301.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11n40 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1263.500	36.65	-16.10	68.2	-31.55	Peak	263.00	100	Vertical	Pass
1**	1263.500	23.58	-16.10	54.0	-30.42	AV	263.00	100	Vertical	Pass
2	1950.000	38.34	-14.11	68.2	-29.86	Peak	200.00	100	Vertical	Pass
2**	1950.000	24.12	-14.11	54.0	-29.88	AV	200.00	100	Vertical	Pass
3	3004.000	42.45	-7.94	68.2	-25.75	Peak	50.00	100	Vertical	Pass
3**	3004.000	30.96	-7.94	54.0	-23.04	AV	50.00	100	Vertical	Pass
4	5234.000	86.90	-2.10	--	--	Peak	113.00	100	Vertical	N/A
4**	5234.000	79.35	-2.10	--	--	AV	113.00	100	Vertical	N/A
5	11103.000	48.65	6.78	74.0	-25.35	Peak	0.00	100	Vertical	Pass
5**	11103.000	38.80	6.78	54.0	-15.20	AV	0.00	100	Vertical	Pass
6	14595.500	54.13	12.45	68.2	-14.07	Peak	183.00	100	Vertical	Pass
6**	14595.500	44.77	12.45	54.0	-9.23	AV	183.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11n40 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1291.000	36.22	-15.77	68.2	-31.98	Peak	31.00	100	Horizontal	Pass
1**	1291.000	22.98	-15.77	54.0	-31.02	AV	31.00	100	Horizontal	Pass
2	2212.500	39.92	-12.07	74.0	-34.08	Peak	154.00	100	Horizontal	Pass
2**	2212.500	24.43	-12.07	54.0	-29.57	AV	154.00	100	Horizontal	Pass
3	3525.000	43.66	-6.39	68.2	-24.54	Peak	158.00	100	Horizontal	Pass
3**	3525.000	31.74	-6.39	54.0	-22.26	AV	158.00	100	Horizontal	Pass
4	5229.000	97.68	-1.99	--	--	Peak	174.00	100	Horizontal	N/A
4**	5229.000	91.25	-1.99	--	--	AV	174.00	100	Horizontal	N/A
5	8809.500	46.01	3.33	68.2	-22.19	Peak	108.00	100	Horizontal	Pass
5**	8809.500	36.21	3.33	54.0	-17.79	AV	108.00	100	Horizontal	Pass
6	14590.000	54.30	12.45	68.2	-13.90	Peak	275.00	100	Horizontal	Pass
6**	14590.000	44.16	12.45	54.0	-9.84	AV	275.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11ac20 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1164.500	36.09	-16.89	74.0	-37.91	Peak	156.00	100	Vertical	Pass
1**	1164.500	22.16	-16.89	54.0	-31.84	AV	156.00	100	Vertical	Pass
2	2522.000	41.89	-11.80	68.2	-26.31	Peak	90.00	100	Vertical	Pass
2**	2522.000	24.98	-11.80	54.0	-29.02	AV	90.00	100	Vertical	Pass
3	5179.000	86.27	-1.96	--	--	Peak	269.00	100	Vertical	N/A
3**	5179.000	79.29	-1.96	--	--	AV	269.00	100	Vertical	N/A
4	6948.000	53.89	3.43	68.2	-14.31	Peak	75.00	100	Vertical	Pass
4**	6948.000	42.76	3.43	54.0	-11.24	AV	75.00	100	Vertical	Pass
5	10935.250	50.43	7.39	74.0	-23.57	Peak	322.00	100	Vertical	Pass
5**	10935.250	41.17	7.39	54.0	-12.83	AV	322.00	100	Vertical	Pass
6	17716.750	59.31	16.18	74.0	-14.69	Peak	263.00	100	Vertical	Pass
6**	17716.750	48.60	16.18	54.0	-5.40	AV	263.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11ac20 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1645.500	37.24	-16.07	68.2	-30.96	Peak	284.00	100	Horizontal	Pass
1**	1645.500	24.33	-16.07	54.0	-29.67	AV	284.00	100	Horizontal	Pass
2	2193.000	41.37	-12.46	68.2	-26.83	Peak	284.00	100	Horizontal	Pass
2**	2193.000	26.03	-12.46	54.0	-27.97	AV	284.00	100	Horizontal	Pass
3	2816.500	42.30	-9.07	74.0	-31.70	Peak	30.00	100	Horizontal	Pass
3**	2816.500	27.58	-9.07	54.0	-26.42	AV	30.00	100	Horizontal	Pass
4	5183.000	103.54	-1.95	--	--	Peak	103.00	100	Horizontal	N/A
4**	5183.000	96.53	-1.95	--	--	AV	103.00	100	Horizontal	N/A
5	9827.000	49.39	5.97	68.2	-18.81	Peak	90.00	100	Horizontal	Pass
5**	9827.000	39.27	5.97	54.0	-14.73	AV	90.00	100	Horizontal	Pass
6	14581.750	54.45	12.24	68.2	-13.75	Peak	222.00	100	Horizontal	Pass
6**	14581.750	46.04	12.24	54.0	-7.96	AV	222.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11ac20 ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1595.000	44.73	-16.48	74.0	-29.27	Peak	136.00	100	Vertical	Pass
1**	1595.000	27.72	-16.48	54.0	-26.28	AV	136.00	100	Vertical	Pass
2	2799.000	45.61	-10.37	74.0	-28.39	Peak	381.00	100	Vertical	Pass
2**	2799.000	27.90	-10.37	54.0	-26.10	AV	381.00	100	Vertical	Pass
3	3197.000	50.33	-6.66	68.2	-17.87	Peak	157.00	100	Vertical	Pass
3**	3197.000	33.37	-6.66	54.0	-20.63	AV	157.00	100	Vertical	Pass
4	5219.000	98.26	-1.76	--	--	Peak	198.00	100	Vertical	N/A
4**	5219.000	91.58	-1.76	--	--	AV	198.00	100	Vertical	N/A
5	11488.000	51.42	7.59	74.0	-22.58	Peak	84.00	100	Vertical	Pass
5**	11488.000	41.92	7.59	54.0	-12.08	AV	84.00	100	Vertical	Pass
6	17881.750	59.47	16.75	74.0	-14.53	Peak	20.00	100	Vertical	Pass
6**	17881.750	49.36	16.75	54.0	-4.64	AV	20.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11ac20 ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1309.500	37.86	-15.78	74.0	-36.14	Peak	266.00	100	Horizontal	Pass
1**	1309.500	25.48	-15.78	54.0	-28.52	AV	266.00	100	Horizontal	Pass
2	2248.000	40.74	-12.29	74.0	-33.26	Peak	164.00	100	Horizontal	Pass
2**	2248.000	28.04	-12.29	54.0	-25.96	AV	164.00	100	Horizontal	Pass
3	4383.000	46.20	-3.81	74.0	-27.80	Peak	20.00	100	Horizontal	Pass
3**	4383.000	34.78	-3.81	54.0	-19.22	AV	20.00	100	Horizontal	Pass
4	5218.000	102.15	-1.74	--	--	Peak	250.00	100	Horizontal	N/A
4**	5218.000	92.94	-1.74	--	--	AV	250.00	100	Horizontal	N/A
5	10440.250	51.33	7.15	68.2	-16.87	Peak	284.00	100	Horizontal	Pass
5**	10440.250	42.84	7.15	54.0	-11.16	AV	284.00	100	Horizontal	Pass
6	14529.500	55.68	11.63	68.2	-12.52	Peak	36.00	100	Horizontal	Pass
6**	14529.500	46.00	11.63	54.0	-8.00	AV	36.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11ac20 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1337.500	36.72	-15.66	74.0	-37.28	Peak	84.00	100	Vertical	Pass
1**	1337.500	25.14	-15.66	54.0	-28.86	AV	84.00	100	Vertical	Pass
2	2412.500	42.44	-11.53	68.2	-25.76	Peak	0.00	100	Vertical	Pass
2**	2412.500	24.83	-11.53	54.0	-29.17	AV	0.00	100	Vertical	Pass
3	3937.000	44.64	-4.29	74.0	-29.36	Peak	299.00	100	Vertical	Pass
3**	3937.000	33.37	-4.29	54.0	-20.63	AV	299.00	100	Vertical	Pass
4	5239.000	82.64	-2.40	--	--	Peak	164.00	100	Vertical	N/A
4**	5239.000	74.92	-2.40	--	--	AV	164.00	100	Vertical	N/A
5	8727.000	47.89	3.37	68.2	-20.31	Peak	360.00	100	Vertical	Pass
5**	8727.000	37.37	3.37	54.0	-16.63	AV	360.00	100	Vertical	Pass
6	14735.750	55.36	10.55	68.2	-12.84	Peak	83.00	100	Vertical	Pass
6**	14735.750	44.36	10.55	54.0	-9.64	AV	83.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11ac20 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1444.500	37.31	-16.35	74.0	-36.69	Peak	12.00	100	Horizontal	Pass
1**	1444.500	25.30	-16.35	54.0	-28.70	AV	12.00	100	Horizontal	Pass
2	2364.500	40.72	-12.09	74.0	-33.28	Peak	101.00	100	Horizontal	Pass
2**	2364.500	25.14	-12.09	54.0	-28.86	AV	101.00	100	Horizontal	Pass
3	3534.000	44.04	-6.06	68.2	-24.16	Peak	30.00	100	Horizontal	Pass
3**	3534.000	32.87	-6.06	54.0	-21.13	AV	30.00	100	Horizontal	Pass
4	5239.000	103.44	-2.40	--	--	Peak	176.00	100	Horizontal	N/A
4**	5239.000	96.67	-2.40	--	--	AV	176.00	100	Horizontal	N/A
5	9948.000	48.96	6.09	68.2	-19.24	Peak	149.00	100	Horizontal	Pass
5**	9948.000	40.25	6.09	54.0	-13.75	AV	149.00	100	Horizontal	Pass
6	14675.250	55.39	11.53	68.2	-12.81	Peak	232.00	100	Horizontal	Pass
6**	14675.250	44.71	11.53	54.0	-9.29	AV	232.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11ac40 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1148.000	35.81	-17.03	74.0	-38.19	Peak	155.00	100	Vertical	Pass
1**	1148.000	23.30	-17.03	54.0	-30.70	AV	155.00	100	Vertical	Pass
2	2154.500	40.08	-12.79	68.2	-28.12	Peak	99.00	100	Vertical	Pass
2**	2154.500	26.45	-12.79	54.0	-27.55	AV	99.00	100	Vertical	Pass
3	3652.000	44.05	-5.26	74.0	-29.95	Peak	-1.00	100	Vertical	Pass
3**	3652.000	32.31	-5.26	54.0	-21.69	AV	-1.00	100	Vertical	Pass
4	5187.000	89.67	-2.05	--	--	Peak	281.00	100	Vertical	N/A
4**	5187.000	82.72	-2.05	--	--	AV	281.00	100	Vertical	N/A
5	10305.500	49.72	7.45	68.2	-18.48	Peak	360.00	100	Vertical	Pass
5**	10305.500	40.61	7.45	54.0	-13.39	AV	360.00	100	Vertical	Pass
6	14601.000	55.48	12.44	68.2	-12.72	Peak	161.00	100	Vertical	Pass
6**	14601.000	45.94	12.44	54.0	-8.06	AV	161.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11ac40 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.000	37.73	-16.03	74.0	-36.27	Peak	-1.00	100	Horizontal	Pass
1**	1442.000	24.85	-16.03	54.0	-29.15	AV	-1.00	100	Horizontal	Pass
2	3013.000	43.10	-7.46	68.2	-25.10	Peak	219.00	100	Horizontal	Pass
2**	3013.000	32.01	-7.46	54.0	-21.99	AV	219.00	100	Horizontal	Pass
3	3976.000	44.97	-4.80	74.0	-29.03	Peak	361.00	100	Horizontal	Pass
3**	3976.000	33.19	-4.80	54.0	-20.81	AV	361.00	100	Horizontal	Pass
4	5188.000	101.18	-2.03	--	--	Peak	361.00	100	Horizontal	N/A
4**	5188.000	93.91	-2.03	--	--	AV	361.00	100	Horizontal	N/A
5	10509.000	49.88	6.93	68.2	-18.32	Peak	309.00	100	Horizontal	Pass
5**	10509.000	39.81	6.93	54.0	-14.19	AV	309.00	100	Horizontal	Pass
6	14590.000	54.95	12.45	68.2	-13.25	Peak	309.00	100	Horizontal	Pass
6**	14590.000	45.57	12.45	54.0	-8.43	AV	309.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11ac40 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1621.000	40.14	-16.40	74.0	-33.86	Peak	189.00	100	Vertical	Pass
1**	1621.000	29.01	-16.40	54.0	-24.99	AV	189.00	100	Vertical	Pass
2	2188.000	40.51	-12.47	68.2	-27.69	Peak	225.00	100	Vertical	Pass
2**	2188.000	25.71	-12.47	54.0	-28.29	AV	225.00	100	Vertical	Pass
3	3213.000	43.74	-7.18	68.2	-24.46	Peak	172.00	100	Vertical	Pass
3**	3213.000	30.68	-7.18	54.0	-23.32	AV	172.00	100	Vertical	Pass
4	5230.000	88.84	-2.41	--	--	Peak	282.00	100	Vertical	N/A
4**	5230.000	77.96	-2.41	--	--	AV	282.00	100	Vertical	N/A
5	10847.250	51.08	7.37	74.0	-22.92	Peak	110.00	100	Vertical	Pass
5**	10847.250	41.75	7.37	54.0	-12.25	AV	110.00	100	Vertical	Pass
6	14433.250	55.35	10.66	68.2	-12.85	Peak	257.00	100	Vertical	Pass
6**	14433.250	44.76	10.66	54.0	-9.24	AV	257.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11ac40 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1305.500	36.61	-15.74	74.0	-37.39	Peak	106.00	100	Horizontal	Pass
1**	1305.500	24.54	-15.74	54.0	-29.46	AV	106.00	100	Horizontal	Pass
2	1952.000	38.44	-14.30	68.2	-29.76	Peak	48.00	100	Horizontal	Pass
2**	1952.000	26.10	-14.30	54.0	-27.90	AV	48.00	100	Horizontal	Pass
3	3275.000	43.24	-7.31	68.2	-24.96	Peak	79.00	100	Horizontal	Pass
3**	3275.000	30.69	-7.31	54.0	-23.31	AV	79.00	100	Horizontal	Pass
4	5230.000	100.81	-2.03	--	--	Peak	299.00	100	Horizontal	N/A
4**	5230.000	93.97	-2.03	--	--	AV	299.00	100	Horizontal	N/A
5	10753.750	50.67	7.29	74.0	-23.33	Peak	265.00	100	Horizontal	Pass
5**	10753.750	42.57	7.29	54.0	-11.43	AV	265.00	100	Horizontal	Pass
6	14570.750	55.14	11.86	68.2	-13.06	Peak	142.00	100	Horizontal	Pass
6**	14570.750	46.27	11.86	54.0	-7.73	AV	142.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band I 11ac80 ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1621.500	39.16	-16.40	74.0	-34.84	Peak	201.00	100	Vertical	Pass
1**	1621.500	29.12	-16.40	54.0	-24.88	AV	201.00	100	Vertical	Pass
2	2173.000	40.86	-12.69	68.2	-27.34	Peak	295.00	100	Vertical	Pass
2**	2173.000	26.70	-12.69	54.0	-27.30	AV	295.00	100	Vertical	Pass
3	3324.000	43.44	-7.14	68.2	-24.76	Peak	198.00	100	Vertical	Pass
3**	3324.000	31.17	-7.14	54.0	-22.83	AV	198.00	100	Vertical	Pass
4	5212.000	85.18	-1.86	--	--	Peak	293.00	100	Vertical	N/A
4**	5212.000	77.96	-1.86	--	--	AV	293.00	100	Vertical	N/A
5	11402.750	50.81	7.15	74.0	-23.19	Peak	198.00	100	Vertical	Pass
5**	11402.750	41.33	7.15	54.0	-12.67	AV	198.00	100	Vertical	Pass
6	14590.000	56.40	12.45	68.2	-11.80	Peak	160.00	100	Vertical	Pass
6**	14590.000	46.53	12.45	54.0	-7.47	AV	160.00	100	Vertical	Pass

1 GHz to 18 GHz, Band I 11ac80 ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1359.500	37.44	-15.84	74.0	-36.56	Peak	31.00	100	Horizontal	Pass
1**	1359.500	24.84	-15.84	54.0	-29.16	AV	31.00	100	Horizontal	Pass
2	1786.000	38.31	-15.41	68.2	-29.89	Peak	215.00	100	Horizontal	Pass
2**	1786.000	25.18	-15.41	54.0	-28.82	AV	215.00	100	Horizontal	Pass
3	2420.500	41.18	-11.99	68.2	-27.02	Peak	160.00	100	Horizontal	Pass
3**	2420.500	26.69	-11.99	54.0	-27.31	AV	160.00	100	Horizontal	Pass
4	5213.000	98.17	-1.98	--	--	Peak	193.00	100	Horizontal	N/A
4**	5213.000	90.41	-1.98	--	--	AV	193.00	100	Horizontal	N/A
5	10808.750	50.95	7.15	74.0	-23.05	Peak	225.00	100	Horizontal	Pass
5**	10808.750	41.44	7.15	54.0	-12.56	AV	225.00	100	Horizontal	Pass
6	16460.000	55.17	11.40	68.2	-13.03	Peak	78.00	100	Horizontal	Pass
6**	16460.000	46.22	11.40	54.0	-7.78	AV	78.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11a ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1322.000	37.40	-16.00	74.0	-36.60	Peak	280.00	100	Vertical	Pass
1**	1322.000	23.87	-16.00	54.0	-30.13	AV	280.00	100	Vertical	Pass
2	2192.000	40.38	-12.36	68.2	-27.82	Peak	128.00	100	Vertical	Pass
2**	2192.000	26.30	-12.36	54.0	-27.70	AV	128.00	100	Vertical	Pass
3	2727.000	42.05	-10.78	74.0	-31.95	Peak	37.00	100	Vertical	Pass
3**	2727.000	26.20	-10.78	54.0	-27.80	AV	37.00	100	Vertical	Pass
4	5747.000	85.61	-1.02	--	--	Peak	92.00	100	Vertical	N/A
4**	5747.000	77.69	-1.02	--	--	AV	92.00	100	Vertical	N/A
5	10641.000	50.02	6.79	74.0	-23.98	Peak	91.00	100	Vertical	Pass
5**	10641.000	40.15	6.79	54.0	-13.85	AV	91.00	100	Vertical	Pass
6	14603.750	54.94	12.38	68.2	-13.26	Peak	209.00	100	Vertical	Pass
6**	14603.750	45.24	12.38	54.0	-8.76	AV	209.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11a ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1437.000	38.32	-16.15	74.0	-35.68	Peak	188.00	100	Horizontal	Pass
1**	1437.000	24.89	-16.15	54.0	-29.11	AV	188.00	100	Horizontal	Pass
2	2655.500	41.33	-9.85	68.2	-26.87	Peak	338.00	100	Horizontal	Pass
2**	2655.500	26.17	-9.85	54.0	-27.83	AV	338.00	100	Horizontal	Pass
3	3665.000	43.50	-5.63	74.0	-30.50	Peak	252.00	100	Horizontal	Pass
3**	3665.000	33.12	-5.63	54.0	-20.88	AV	252.00	100	Horizontal	Pass
4	5748.000	100.50	-0.75	--	--	Peak	35.00	100	Horizontal	N/A
4**	5748.000	93.76	-0.75	--	--	AV	35.00	100	Horizontal	N/A
5	11397.250	50.84	7.07	74.0	-23.16	Peak	269.00	100	Horizontal	Pass
5**	11397.250	41.34	7.07	54.0	-12.66	AV	269.00	100	Horizontal	Pass
6	14601.000	56.06	12.44	68.2	-12.14	Peak	322.00	100	Horizontal	Pass
6**	14601.000	46.14	12.44	54.0	-7.86	AV	322.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11a ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1299.000	36.76	-15.43	68.2	-31.44	Peak	160.00	100	Vertical	Pass
1**	1299.000	25.52	-15.43	54.0	-28.48	AV	160.00	100	Vertical	Pass
2	2292.500	40.64	-11.87	74.0	-33.36	Peak	239.00	100	Vertical	Pass
2**	2292.500	27.45	-11.87	54.0	-26.55	AV	239.00	100	Vertical	Pass
3	3025.000	43.48	-8.07	68.2	-24.72	Peak	132.00	100	Vertical	Pass
3**	3025.000	31.52	-8.07	54.0	-22.48	AV	132.00	100	Vertical	Pass
4	5788.000	84.17	-1.20	--	--	Peak	182.00	100	Vertical	N/A
4**	5788.000	76.54	-1.20	--	--	AV	182.00	100	Vertical	N/A
5	10693.250	51.34	6.68	74.0	-22.66	Peak	35.00	100	Vertical	Pass
5**	10693.250	41.02	6.68	54.0	-12.98	AV	35.00	100	Vertical	Pass
6	17100.750	57.55	13.24	68.2	-10.65	Peak	297.00	100	Vertical	Pass
6**	17100.750	46.28	13.24	54.0	-7.72	AV	297.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11a ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1224.000	36.24	-16.19	74.0	-37.76	Peak	332.00	100	Horizontal	Pass
1**	1224.000	24.01	-16.19	54.0	-29.99	AV	332.00	100	Horizontal	Pass
2	1998.000	39.19	-14.22	68.2	-29.01	Peak	306.00	100	Horizontal	Pass
2**	1998.000	26.74	-14.22	54.0	-27.26	AV	306.00	100	Horizontal	Pass
3	3463.000	43.64	-6.28	68.2	-24.56	Peak	9.00	100	Horizontal	Pass
3**	3463.000	31.38	-6.28	54.0	-22.62	AV	9.00	100	Horizontal	Pass
4	5783.000	95.17	-1.21	--	--	Peak	48.00	100	Horizontal	N/A
4**	5783.000	86.17	-1.21	--	--	AV	48.00	100	Horizontal	N/A
5	10844.500	50.47	7.34	74.0	-23.53	Peak	300.00	100	Horizontal	Pass
5**	10844.500	40.30	7.34	54.0	-13.70	AV	300.00	100	Horizontal	Pass
6	14581.750	55.09	12.24	68.2	-13.11	Peak	144.00	100	Horizontal	Pass
6**	14581.750	45.85	12.24	54.0	-8.15	AV	144.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11a ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1622.000	45.52	-16.38	74.0	-28.48	Peak	175.00	100	Vertical	Pass
1**	1622.000	31.49	-16.38	54.0	-22.51	AV	175.00	100	Vertical	Pass
2	2413.500	44.97	-11.70	68.2	-23.23	Peak	121.00	100	Vertical	Pass
2**	2413.500	25.10	-11.70	54.0	-28.90	AV	121.00	100	Vertical	Pass
3	3568.000	43.87	-5.51	68.2	-24.33	Peak	168.00	100	Vertical	Pass
3**	3568.000	31.29	-5.51	54.0	-22.71	AV	168.00	100	Vertical	Pass
4	5823.000	88.60	-0.88	--	--	Peak	101.00	100	Vertical	N/A
4**	5823.000	80.62	-0.88	--	--	AV	101.00	100	Vertical	N/A
5	11380.750	51.31	6.59	74.0	-22.69	Peak	21.00	100	Vertical	Pass
5**	11380.750	41.22	6.59	54.0	-12.78	AV	21.00	100	Vertical	Pass
6	14592.750	55.26	12.45	68.2	-12.94	Peak	58.00	100	Vertical	Pass
6**	14592.750	47.23	12.45	54.0	-6.77	AV	58.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11a ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1239.500	36.51	-16.10	74.0	-37.49	Peak	309.00	100	Horizontal	Pass
1**	1239.500	24.72	-16.10	54.0	-29.28	AV	309.00	100	Horizontal	Pass
2	1951.000	37.78	-14.28	68.2	-30.42	Peak	188.00	100	Horizontal	Pass
2**	1951.000	25.34	-14.28	54.0	-28.66	AV	188.00	100	Horizontal	Pass
3	3009.000	43.08	-7.49	68.2	-25.12	Peak	5.00	100	Horizontal	Pass
3**	3009.000	31.89	-7.49	54.0	-22.11	AV	5.00	100	Horizontal	Pass
4	5824.000	94.43	-0.76	--	--	Peak	325.00	100	Horizontal	N/A
4**	5824.000	87.72	-0.76	--	--	AV	325.00	100	Horizontal	N/A
5	11122.250	50.65	6.41	74.0	-23.35	Peak	301.00	100	Horizontal	Pass
5**	11122.250	41.75	6.41	54.0	-12.25	AV	301.00	100	Horizontal	Pass
6	14631.250	56.19	12.01	68.2	-12.01	Peak	106.00	100	Horizontal	Pass
6**	14631.250	46.96	12.01	54.0	-7.04	AV	106.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11n20 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1339.000	37.73	-15.62	74.0	-36.27	Peak	359.00	100	Vertical	Pass
1**	1339.000	25.53	-15.62	54.0	-28.47	AV	359.00	100	Vertical	Pass
2	2235.000	40.39	-12.44	74.0	-33.61	Peak	103.00	100	Vertical	Pass
2**	2235.000	26.70	-12.44	54.0	-27.30	AV	103.00	100	Vertical	Pass
3	3467.000	44.31	-6.38	68.2	-23.89	Peak	321.00	100	Vertical	Pass
3**	3467.000	31.45	-6.38	54.0	-22.55	AV	321.00	100	Vertical	Pass
4	5745.000	84.46	-1.09	--	--	Peak	17.00	100	Vertical	N/A
4**	5745.000	78.29	-1.09	--	--	AV	17.00	100	Vertical	N/A
5	11463.250	51.79	6.87	74.0	-22.21	Peak	282.00	100	Vertical	Pass
5**	11463.250	39.82	6.87	54.0	-14.18	AV	282.00	100	Vertical	Pass
6	14576.250	55.66	12.06	68.2	-12.54	Peak	361.00	100	Vertical	Pass
6**	14576.250	46.14	12.06	54.0	-7.86	AV	361.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11n20 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1384.000	37.12	-15.76	74.0	-36.88	Peak	153.00	100	Horizontal	Pass
1**	1384.000	24.24	-15.76	54.0	-29.76	AV	153.00	100	Horizontal	Pass
2	2420.000	43.76	-11.95	68.2	-24.44	Peak	297.00	100	Horizontal	Pass
2**	2420.000	25.07	-11.95	54.0	-28.93	AV	297.00	100	Horizontal	Pass
3	3423.000	43.35	-6.69	68.2	-24.85	Peak	202.00	100	Horizontal	Pass
3**	3423.000	31.03	-6.69	54.0	-22.97	AV	202.00	100	Horizontal	Pass
4	5747.000	100.05	-1.02	--	--	Peak	39.00	100	Horizontal	N/A
4**	5747.000	93.60	-1.02	--	--	AV	39.00	100	Horizontal	N/A
5	11265.250	51.07	6.77	74.0	-22.93	Peak	12.00	100	Horizontal	Pass
5**	11265.250	42.28	6.77	54.0	-11.72	AV	12.00	100	Horizontal	Pass
6	14419.500	54.82	10.90	68.2	-13.38	Peak	12.00	100	Horizontal	Pass
6**	14419.500	46.04	10.90	54.0	-7.96	AV	12.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11n20 ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1288.000	37.17	-15.73	68.2	-31.03	Peak	100.00	100	Vertical	Pass
1**	1288.000	24.63	-15.73	54.0	-29.37	AV	100.00	100	Vertical	Pass
2	2203.500	41.07	-11.66	74.0	-32.93	Peak	198.00	100	Vertical	Pass
2**	2203.500	26.77	-11.66	54.0	-27.23	AV	198.00	100	Vertical	Pass
3	4256.000	45.55	-3.53	74.0	-28.45	Peak	153.00	100	Vertical	Pass
3**	4256.000	34.41	-3.53	54.0	-19.59	AV	153.00	100	Vertical	Pass
4	5783.000	85.52	-1.21	--	--	Peak	163.00	100	Vertical	N/A
4**	5783.000	76.35	-1.21	--	--	AV	163.00	100	Vertical	N/A
5	11471.500	50.98	7.01	74.0	-23.02	Peak	317.00	100	Vertical	Pass
5**	11471.500	40.31	7.01	54.0	-13.69	AV	317.00	100	Vertical	Pass
6	17692.000	58.93	16.02	68.2	-9.27	Peak	0.00	100	Vertical	Pass
6**	17692.000	49.72	16.02	54.0	-4.28	AV	0.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11n20 ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1289.500	37.28	-15.67	68.2	-30.92	Peak	120.00	100	Horizontal	Pass
1**	1289.500	25.48	-15.67	54.0	-28.52	AV	120.00	100	Horizontal	Pass
2	2154.000	40.92	-12.86	68.2	-27.28	Peak	314.00	100	Horizontal	Pass
2**	2154.000	27.68	-12.86	54.0	-26.32	AV	314.00	100	Horizontal	Pass
3	3196.000	43.56	-6.55	68.2	-24.64	Peak	148.00	100	Horizontal	Pass
3**	3196.000	32.02	-6.55	54.0	-21.98	AV	148.00	100	Horizontal	Pass
4	5786.000	98.92	-1.18	--	--	Peak	321.00	100	Horizontal	N/A
4**	5786.000	91.62	-1.18	--	--	AV	321.00	100	Horizontal	N/A
5	11353.250	51.50	6.86	74.0	-22.50	Peak	326.00	100	Horizontal	Pass
5**	11353.250	42.79	6.86	54.0	-11.21	AV	326.00	100	Horizontal	Pass
6	14642.250	56.10	11.95	68.2	-12.10	Peak	99.00	100	Horizontal	Pass
6**	14642.250	46.49	11.95	54.0	-7.51	AV	99.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11n20 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1620.500	40.18	-16.64	74.0	-33.82	Peak	203.00	100	Vertical	Pass
1**	1620.500	30.59	-16.64	54.0	-23.41	AV	203.00	100	Vertical	Pass
2	2234.500	41.24	-12.37	74.0	-32.76	Peak	300.00	100	Vertical	Pass
2**	2234.500	28.32	-12.37	54.0	-25.68	AV	300.00	100	Vertical	Pass
3	3616.000	44.62	-5.55	74.0	-29.38	Peak	-1.00	100	Vertical	Pass
3**	3616.000	33.19	-5.55	54.0	-20.81	AV	-1.00	100	Vertical	Pass
4	5824.000	87.58	-0.76	--	--	Peak	97.00	100	Vertical	N/A
4**	5824.000	80.49	-0.76	--	--	AV	97.00	100	Vertical	N/A
5	11529.250	50.94	7.12	74.0	-23.06	Peak	146.00	100	Vertical	Pass
5**	11529.250	40.79	7.12	54.0	-13.21	AV	146.00	100	Vertical	Pass
6	14592.750	56.37	12.45	68.2	-11.83	Peak	302.00	100	Vertical	Pass
6**	14592.750	46.64	12.45	54.0	-7.36	AV	302.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11n20 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1295.500	37.06	-15.73	68.2	-31.14	Peak	21.00	100	Horizontal	Pass
1**	1295.500	24.71	-15.73	54.0	-29.29	AV	21.00	100	Horizontal	Pass
2	2577.000	42.46	-11.15	68.2	-25.74	Peak	227.00	100	Horizontal	Pass
2**	2577.000	25.77	-11.15	54.0	-28.23	AV	227.00	100	Horizontal	Pass
3	4533.000	47.10	-3.53	74.0	-26.90	Peak	361.00	100	Horizontal	Pass
3**	4533.000	35.19	-3.53	54.0	-18.81	AV	361.00	100	Horizontal	Pass
4	5824.000	99.03	-0.76	--	--	Peak	335.00	100	Horizontal	N/A
4**	5824.000	92.41	-0.76	--	--	AV	335.00	100	Horizontal	N/A
5	10291.750	50.55	7.20	68.2	-17.65	Peak	190.00	100	Horizontal	Pass
5**	10291.750	40.23	7.20	54.0	-13.77	AV	190.00	100	Horizontal	Pass
6	14576.250	55.72	12.06	68.2	-12.48	Peak	11.00	100	Horizontal	Pass
6**	14576.250	46.70	12.06	54.0	-7.30	AV	11.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11n40 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1361.000	36.80	-15.76	74.0	-37.20	Peak	314.00	100	Vertical	Pass
1**	1361.000	23.36	-15.76	54.0	-30.64	AV	314.00	100	Vertical	Pass
2	2482.500	41.77	-11.43	68.2	-26.43	Peak	299.00	100	Vertical	Pass
2**	2482.500	24.63	-11.43	54.0	-29.37	AV	299.00	100	Vertical	Pass
3	3767.000	43.34	-5.12	74.0	-30.66	Peak	11.00	100	Vertical	Pass
3**	3767.000	31.52	-5.12	54.0	-22.48	AV	11.00	100	Vertical	Pass
4	5750.000	82.27	-0.65	--	--	Peak	309.00	100	Vertical	N/A
4**	5750.000	75.77	-0.65	--	--	AV	309.00	100	Vertical	N/A
5	11270.750	49.67	6.75	74.0	-24.33	Peak	361.00	100	Vertical	Pass
5**	11270.750	40.17	6.75	54.0	-13.83	AV	361.00	100	Vertical	Pass
6	14612.000	53.08	12.21	68.2	-15.12	Peak	353.00	100	Vertical	Pass
6**	14612.000	42.49	12.21	54.0	-11.51	AV	353.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11n40 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1360.500	36.93	-15.68	74.0	-37.07	Peak	63.00	100	Horizontal	Pass
1**	1360.500	24.00	-15.68	54.0	-30.00	AV	63.00	100	Horizontal	Pass
2	2164.000	39.45	-12.70	68.2	-28.75	Peak	194.00	100	Horizontal	Pass
2**	2164.000	24.26	-12.70	54.0	-29.74	AV	194.00	100	Horizontal	Pass
3	3525.000	43.00	-6.39	68.2	-25.20	Peak	361.00	100	Horizontal	Pass
3**	3525.000	30.56	-6.39	54.0	-23.44	AV	361.00	100	Horizontal	Pass
4	5757.000	93.33	-0.86	--	--	Peak	164.00	100	Horizontal	N/A
4**	5757.000	86.27	-0.86	--	--	AV	164.00	100	Horizontal	N/A
5	10440.250	49.05	7.15	68.2	-19.15	Peak	51.00	100	Horizontal	Pass
5**	10440.250	39.26	7.15	54.0	-14.74	AV	51.00	100	Horizontal	Pass
6	14587.250	53.00	12.38	68.2	-15.20	Peak	244.00	100	Horizontal	Pass
6**	14587.250	42.64	12.38	54.0	-11.36	AV	244.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11n40 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1622.000	38.81	-16.38	74.0	-35.19	Peak	169.00	100	Vertical	Pass
1**	1622.000	28.99	-16.38	54.0	-25.01	AV	169.00	100	Vertical	Pass
2	2616.000	41.02	-10.58	68.2	-27.18	Peak	69.00	100	Vertical	Pass
2**	2616.000	24.23	-10.58	54.0	-29.77	AV	69.00	100	Vertical	Pass
3	4326.000	44.43	-3.72	74.0	-29.57	Peak	337.00	100	Vertical	Pass
3**	4326.000	33.75	-3.72	54.0	-20.25	AV	337.00	100	Vertical	Pass
4	5794.000	81.63	-1.12	--	--	Peak	288.00	100	Vertical	N/A
4**	5794.000	74.98	-1.12	--	--	AV	288.00	100	Vertical	N/A
5	11125.000	49.26	6.43	74.0	-24.74	Peak	-1.00	100	Vertical	Pass
5**	11125.000	40.87	6.43	54.0	-13.13	AV	-1.00	100	Vertical	Pass
6	14427.750	53.04	10.72	68.2	-15.16	Peak	322.00	100	Vertical	Pass
6**	14427.750	43.42	10.72	54.0	-10.58	AV	322.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11n40 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1231.000	36.56	-16.59	74.0	-37.44	Peak	87.00	100	Horizontal	Pass
1**	1231.000	22.83	-16.59	54.0	-31.17	AV	87.00	100	Horizontal	Pass
2	2398.000	41.01	-11.80	68.2	-27.19	Peak	153.00	100	Horizontal	Pass
2**	2398.000	23.52	-11.80	54.0	-30.48	AV	153.00	100	Horizontal	Pass
3	4293.000	44.01	-4.19	74.0	-29.99	Peak	243.00	100	Horizontal	Pass
3**	4293.000	32.26	-4.19	54.0	-21.74	AV	243.00	100	Horizontal	Pass
4	5799.000	91.48	-1.05	--	--	Peak	162.00	100	Horizontal	N/A
4**	5799.000	85.24	-1.05	--	--	AV	162.00	100	Horizontal	N/A
5	10847.250	49.25	7.37	74.0	-24.75	Peak	21.00	100	Horizontal	Pass
5**	10847.250	39.62	7.37	54.0	-14.38	AV	21.00	100	Horizontal	Pass
6	14601.000	52.74	12.44	68.2	-15.46	Peak	282.00	100	Horizontal	Pass
6**	14601.000	44.00	12.44	54.0	-10.00	AV	282.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11ac20 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1347.000	37.07	-15.51	74.0	-36.93	Peak	190.00	100	Vertical	Pass
1**	1347.000	24.80	-15.51	54.0	-29.20	AV	190.00	100	Vertical	Pass
2	2251.500	40.80	-12.23	74.0	-33.20	Peak	21.00	100	Vertical	Pass
2**	2251.500	26.09	-12.23	54.0	-27.91	AV	21.00	100	Vertical	Pass
3	3945.000	45.25	-4.48	74.0	-28.75	Peak	340.00	100	Vertical	Pass
3**	3945.000	32.81	-4.48	54.0	-21.19	AV	340.00	100	Vertical	Pass
4	5744.000	84.59	-1.47	--	--	Peak	80.00	100	Vertical	N/A
4**	5744.000	77.74	-1.47	--	--	AV	80.00	100	Vertical	N/A
5	11273.500	50.48	6.72	74.0	-23.52	Peak	101.00	100	Vertical	Pass
5**	11273.500	40.93	6.72	54.0	-13.07	AV	101.00	100	Vertical	Pass
6	14378.250	54.80	12.50	68.2	-13.40	Peak	258.00	100	Vertical	Pass
6**	14378.250	44.18	12.50	54.0	-9.82	AV	AV	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11ac20 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1250.500	36.74	-16.13	68.2	-31.46	Peak	201.00	100	Horizontal	Pass
1**	1250.500	23.67	-16.13	54.0	-30.33	AV	201.00	100	Horizontal	Pass
2	2295.500	40.63	-11.96	74.0	-33.37	Peak	166.00	100	Horizontal	Pass
2**	2295.500	26.59	-11.96	54.0	-27.41	AV	166.00	100	Horizontal	Pass
3	5075.000	48.64	-1.74	74.0	-25.36	Peak	58.00	100	Horizontal	Pass
3**	5075.000	37.05	-1.74	54.0	-16.95	AV	58.00	100	Horizontal	Pass
4	5746.000	100.55	-1.16	--	--	Peak	93.00	100	Horizontal	N/A
4**	5746.000	93.05	-1.16	--	--	AV	93.00	100	Horizontal	N/A
5	11273.500	51.32	6.72	74.0	-22.68	Peak	29.00	100	Horizontal	Pass
5**	11273.500	41.37	6.72	54.0	-12.63	AV	29.00	100	Horizontal	Pass
6	14361.750	55.17	13.11	68.2	-13.03	Peak	290.00	100	Horizontal	Pass
6**	14361.750	44.93	13.11	54.0	-9.07	AV	290.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11ac20 ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1201.000	36.24	-16.42	74.0	-37.76	Peak	83.00	100	Vertical	Pass
1**	1201.000	23.54	-16.42	54.0	-30.46	AV	83.00	100	Vertical	Pass
2	1947.500	38.86	-13.95	68.2	-29.34	Peak	17.00	100	Vertical	Pass
2**	1947.500	26.43	-13.95	54.0	-27.57	AV	17.00	100	Vertical	Pass
3	3938.000	44.82	-4.24	74.0	-29.18	Peak	13.00	100	Vertical	Pass
3**	3938.000	33.51	-4.24	54.0	-20.49	AV	13.00	100	Vertical	Pass
4	5788.000	84.59	-1.20	--	--	Peak	163.00	100	Vertical	N/A
4**	5788.000	77.05	-1.20	--	--	AV	163.00	100	Vertical	N/A
5	10685.000	50.21	6.66	74.0	-23.79	Peak	23.00	100	Vertical	Pass
5**	10685.000	41.50	6.66	54.0	-12.50	AV	23.00	100	Vertical	Pass
6	14672.500	54.84	11.51	68.2	-13.36	Peak	82.00	100	Vertical	Pass
6**	14672.500	44.21	11.51	54.0	-9.79	AV	82.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11ac20 ANT H Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1240.500	35.41	-16.08	68.2	-32.79	Peak	315.00	100	Horizontal	Pass
1**	1240.500	24.76	-16.08	54.0	-29.24	AV	315.00	100	Horizontal	Pass
2	1861.000	37.54	-14.83	68.2	-30.66	Peak	71.00	100	Horizontal	Pass
2**	1861.000	26.32	-14.83	54.0	-27.68	AV	71.00	100	Horizontal	Pass
3	3041.000	43.18	-7.52	68.2	-25.02	Peak	26.00	100	Horizontal	Pass
3**	3041.000	30.23	-7.52	54.0	-23.77	AV	26.00	100	Horizontal	Pass
4	5786.000	93.64	-1.18	--	--	Peak	51.00	100	Horizontal	N/A
4**	5786.000	86.76	-1.18	--	--	AV	51.00	100	Horizontal	N/A
5	10399.000	50.47	7.07	68.2	-17.73	Peak	282.00	100	Horizontal	Pass
5**	10399.000	40.60	7.07	54.0	-13.40	AV	282.00	100	Horizontal	Pass
6	14350.750	54.92	12.73	68.2	-13.28	Peak	265.00	100	Horizontal	Pass
6**	14350.750	45.39	12.73	54.0	-8.61	AV	265.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11ac20 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1278.500	36.71	-16.18	68.2	-31.49	Peak	176.00	100	Vertical	Pass
1**	1278.500	24.48	-16.18	54.0	-29.52	AV	176.00	100	Vertical	Pass
2	1813.000	40.21	-15.59	68.2	-27.99	Peak	210.00	100	Vertical	Pass
2**	1813.000	27.57	-15.59	54.0	-26.43	AV	210.00	100	Vertical	Pass
3	2832.000	43.27	-9.17	74.0	-30.73	Peak	17.00	100	Vertical	Pass
3**	2832.000	26.72	-9.17	54.0	-27.28	AV	17.00	100	Vertical	Pass
4	5824.000	87.36	-0.76	--	--	Peak	104.00	100	Vertical	N/A
4**	5824.000	80.80	-0.76	--	--	AV	104.00	100	Vertical	N/A
5	10814.250	50.42	7.17	74.0	-23.58	Peak	65.00	100	Vertical	Pass
5**	10814.250	41.75	7.17	54.0	-12.25	AV	65.00	100	Vertical	Pass
6	14634.000	56.26	12.01	68.2	-11.94	Peak	1.00	100	Vertical	Pass
6**	14634.000	47.06	12.01	54.0	-6.94	AV	1.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11ac20 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.500	36.95	-16.26	74.0	-37.05	Peak	353.00	100	Horizontal	Pass
1**	1439.500	24.65	-16.26	54.0	-29.35	AV	353.00	100	Horizontal	Pass
2	2203.000	41.16	-11.72	74.0	-32.84	Peak	193.00	100	Horizontal	Pass
2**	2203.000	27.33	-11.72	54.0	-26.67	AV	193.00	100	Horizontal	Pass
3	4258.000	46.09	-3.52	74.0	-27.91	Peak	39.00	100	Horizontal	Pass
3**	4258.000	34.15	-3.52	54.0	-19.85	AV	39.00	100	Horizontal	Pass
4	5827.000	99.18	-0.80	--	--	Peak	323.00	100	Horizontal	N/A
4**	5827.000	92.44	-0.80	--	--	AV	323.00	100	Horizontal	N/A
5	11050.750	50.82	7.03	74.0	-23.18	Peak	361.00	100	Horizontal	Pass
5**	11050.750	41.39	7.03	54.0	-12.61	AV	361.00	100	Horizontal	Pass
6	14705.500	55.60	10.81	68.2	-12.60	Peak	251.00	100	Horizontal	Pass
6**	14705.500	46.24	10.81	54.0	-7.76	AV	251.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11ac40 ANT V Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1619.000	40.10	-16.67	74.0	-33.90	Peak	201.00	100	Vertical	Pass
1**	1619.000	31.55	-16.67	54.0	-22.45	AV	201.00	100	Vertical	Pass
2	2420.000	41.00	-11.95	68.2	-27.20	Peak	3.00	100	Vertical	Pass
2**	2420.000	27.93	-11.95	54.0	-26.07	AV	3.00	100	Vertical	Pass
3	4130.000	45.87	-4.14	74.0	-28.13	Peak	120.00	100	Vertical	Pass
3**	4130.000	34.27	-4.14	54.0	-19.73	AV	120.00	100	Vertical	Pass
4	5759.000	85.14	-0.69	--	--	Peak	210.00	100	Vertical	N/A
4**	5759.000	78.18	-0.69	--	--	AV	210.00	100	Vertical	N/A
5	11279.000	51.35	6.66	74.0	-22.65	Peak	167.00	100	Vertical	Pass
5**	11279.000	41.42	6.66	54.0	-12.58	AV	167.00	100	Vertical	Pass
6	14562.500	55.68	11.59	68.2	-12.52	Peak	156.00	100	Vertical	Pass
6**	14562.500	46.41	11.59	54.0	-7.59	AV	156.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11ac40 ANT H Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1479.000	37.19	-16.06	74.0	-36.81	Peak	2.00	100	Horizontal	Pass
1**	1479.000	24.43	-16.06	54.0	-29.57	AV	2.00	100	Horizontal	Pass
2	2200.000	40.65	-11.92	68.2	-27.55	Peak	167.00	100	Horizontal	Pass
2**	2200.000	25.84	-11.92	54.0	-28.16	AV	167.00	100	Horizontal	Pass
3	4173.000	44.73	-4.06	74.0	-29.27	Peak	233.00	100	Horizontal	Pass
3**	4173.000	34.58	-4.06	54.0	-19.42	AV	233.00	100	Horizontal	Pass
4	5754.000	96.89	-0.70	--	--	Peak	317.00	100	Horizontal	N/A
4**	5754.000	90.05	-0.70	--	--	AV	317.00	100	Horizontal	N/A
5	10861.000	51.19	7.19	74.0	-22.81	Peak	224.00	100	Horizontal	Pass
5**	10861.000	42.22	7.19	54.0	-11.78	AV	224.00	100	Horizontal	Pass
6	14612.000	55.37	12.21	68.2	-12.83	Peak	361.00	100	Horizontal	Pass
6**	14612.000	46.82	12.21	54.0	-7.18	AV	361.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11ac40 ANT V High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1623.500	42.39	-16.64	74.0	-31.61	Peak	185.00	100	Vertical	Pass
1**	1623.500	33.12	-16.64	54.0	-20.88	AV	185.00	100	Vertical	Pass
2	2252.500	41.44	-11.91	74.0	-32.56	Peak	345.00	100	Vertical	Pass
2**	2252.500	26.81	-11.91	54.0	-27.19	AV	345.00	100	Vertical	Pass
3	3619.000	43.96	-5.59	74.0	-30.04	Peak	163.00	100	Vertical	Pass
3**	3619.000	32.75	-5.59	54.0	-21.25	AV	163.00	100	Vertical	Pass
4	5794.000	83.88	-1.12	--	--	Peak	106.00	100	Vertical	N/A
4**	5794.000	77.44	-1.12	--	--	AV	106.00	100	Vertical	N/A
5	11270.750	50.75	6.75	74.0	-23.25	Peak	151.00	100	Vertical	Pass
5**	11270.750	42.06	6.75	54.0	-11.94	AV	151.00	100	Vertical	Pass
6	14551.500	55.19	11.43	68.2	-13.01	Peak	311.00	100	Vertical	Pass
6**	14551.500	45.60	11.43	54.0	-8.40	AV	311.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11ac40 ANT H High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1298.000	38.22	-15.59	68.2	-29.98	Peak	284.00	100	Horizontal	Pass
1**	1298.000	24.84	-15.59	54.0	-29.16	AV	284.00	100	Horizontal	Pass
2	2224.000	41.20	-12.42	74.0	-32.80	Peak	144.00	100	Horizontal	Pass
2**	2224.000	26.69	-12.42	54.0	-27.31	AV	144.00	100	Horizontal	Pass
3	4219.000	46.77	-3.31	74.0	-27.23	Peak	242.00	100	Horizontal	Pass
3**	4219.000	34.00	-3.31	54.0	-20.00	AV	242.00	100	Horizontal	Pass
4	5798.000	96.81	-1.10	--	--	Peak	330.00	100	Horizontal	N/A
4**	5798.000	88.16	-1.10	--	--	AV	330.00	100	Horizontal	N/A
5	10828.000	50.66	7.09	74.0	-23.34	Peak	0.00	100	Horizontal	Pass
5**	10828.000	40.97	7.09	54.0	-13.03	AV	0.00	100	Horizontal	Pass
6	14590.000	55.65	12.45	68.2	-12.55	Peak	82.00	100	Horizontal	Pass
6**	14590.000	47.60	12.45	54.0	-6.40	AV	82.00	100	Horizontal	Pass

1 GHz to 18 GHz, Band IV 11ac80 ANT V Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1620.000	41.81	-16.54	74.0	-32.19	Peak	198.00	100	Vertical	Pass
1**	1620.000	29.69	-16.54	54.0	-24.31	AV	198.00	100	Vertical	Pass
2	2834.500	41.88	-9.18	74.0	-32.12	Peak	255.00	100	Vertical	Pass
2**	2834.500	26.48	-9.18	54.0	-27.52	AV	255.00	100	Vertical	Pass
3	3655.000	44.84	-5.51	74.0	-29.16	Peak	3.00	100	Vertical	Pass
3**	3655.000	33.35	-5.51	54.0	-20.65	AV	3.00	100	Vertical	Pass
4	5772.000	81.22	-1.36	--	--	Peak	261.00	100	Vertical	N/A
4**	5772.000	73.85	-1.36	--	--	AV	261.00	100	Vertical	N/A
5	10998.500	49.95	7.10	74.0	-24.05	Peak	13.00	100	Vertical	Pass
5**	10998.500	41.89	7.10	54.0	-12.11	AV	13.00	100	Vertical	Pass
6	14620.250	55.66	12.08	68.2	-12.54	Peak	203.00	100	Vertical	Pass
6**	14620.250	47.31	12.08	54.0	-6.69	AV	203.00	100	Vertical	Pass

1 GHz to 18 GHz, Band IV 11ac80 ANT H Middle channel

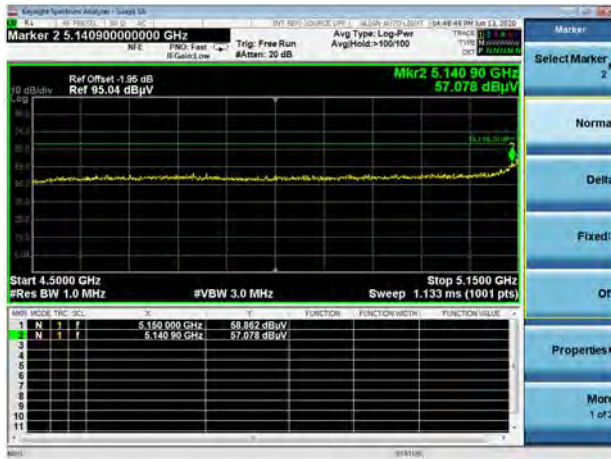
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1527.000	37.13	-16.16	74.0	-36.87	Peak	27.00	100	Horizontal	Pass
1**	1527.000	24.74	-16.16	54.0	-29.26	AV	27.00	100	Horizontal	Pass
2	2142.500	40.19	-12.71	68.2	-28.01	Peak	232.00	100	Horizontal	Pass
2**	2142.500	25.87	-12.71	54.0	-28.13	AV	232.00	100	Horizontal	Pass
3	3990.000	44.82	-4.85	74.0	-29.18	Peak	211.00	100	Horizontal	Pass
3**	3990.000	33.57	-4.85	54.0	-20.43	AV	211.00	100	Horizontal	Pass
4	5764.000	91.70	-0.91	--	--	Peak	333.00	100	Horizontal	N/A
4**	5764.000	84.51	-0.91	--	--	AV	333.00	100	Horizontal	N/A
5	11424.750	50.89	6.86	74.0	-23.11	Peak	359.00	100	Horizontal	Pass
5**	11424.750	41.62	6.86	54.0	-12.38	AV	359.00	100	Horizontal	Pass
6	14502.000	55.22	12.32	68.2	-12.98	Peak	126.00	100	Horizontal	Pass
6**	14502.000	45.71	12.32	54.0	-8.29	AV	126.00	100	Horizontal	Pass

A.6.2 Band Edge (Restricted-band)

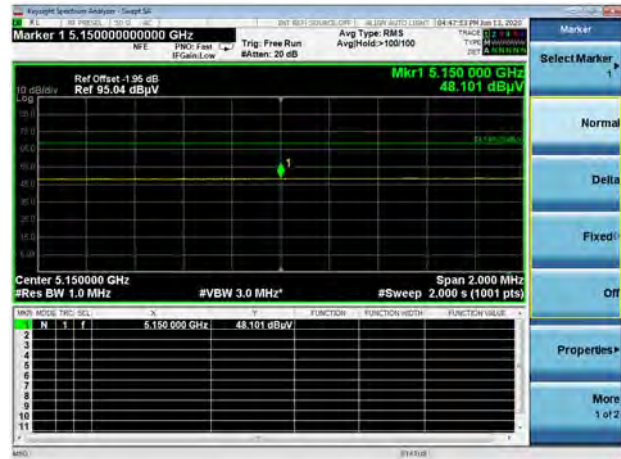
Test Band	Mode	Channel	Verdict
Band I	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
	802.11ac(VHT40)	Low	Pass
		High	Pass
	802.11ac(VHT80)	Middle	Pass
Band IV	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
	802.11ac(VHT40)	Low	Pass
		High	Pass
	802.11ac(VHT80)	Middle	Pass

Test Plots

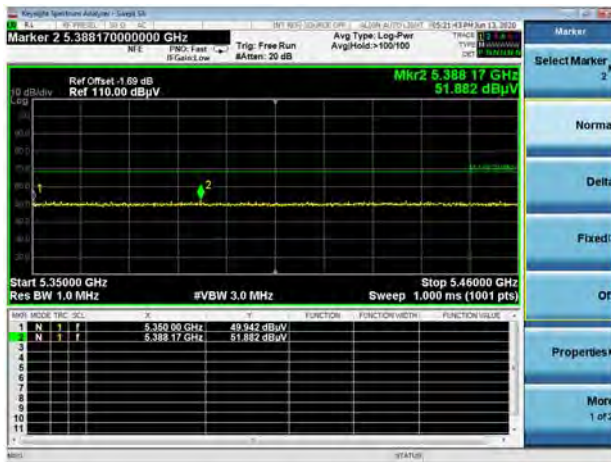
Band I 11a CH36 Peak



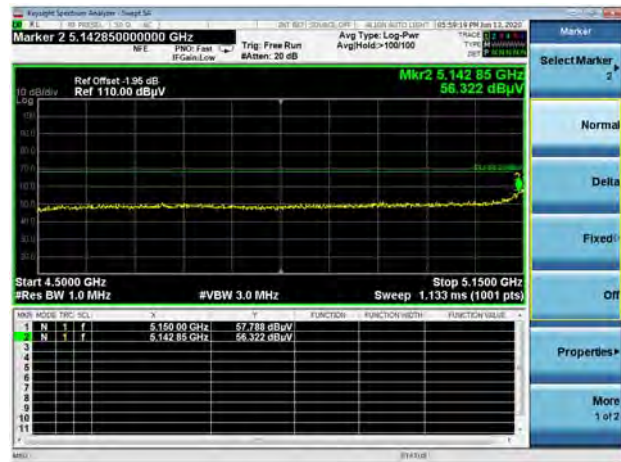
Band I 11a CH36 AV



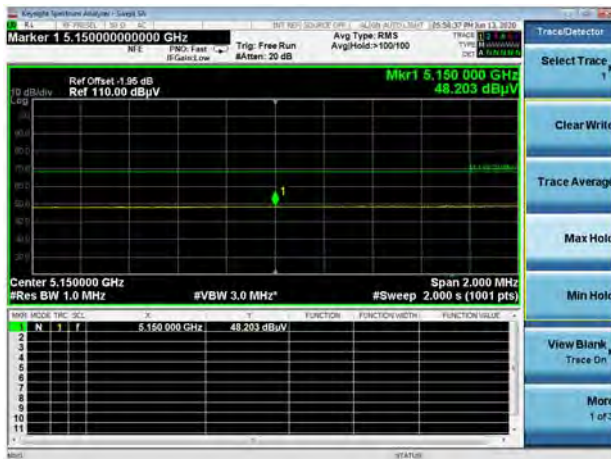
Band I 11a CH48 Peak



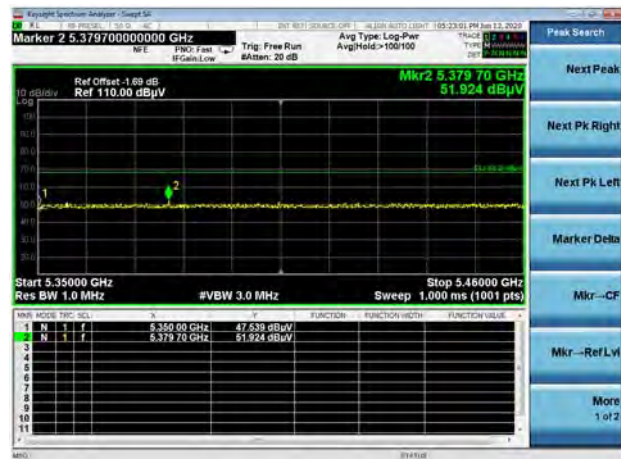
Band I 11n20 CH36 Peak



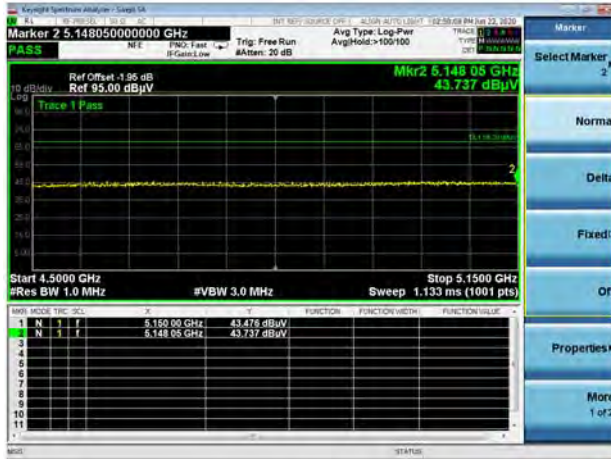
Band I 11n20 CH36 AV



Band I 11n20 CH48 PK



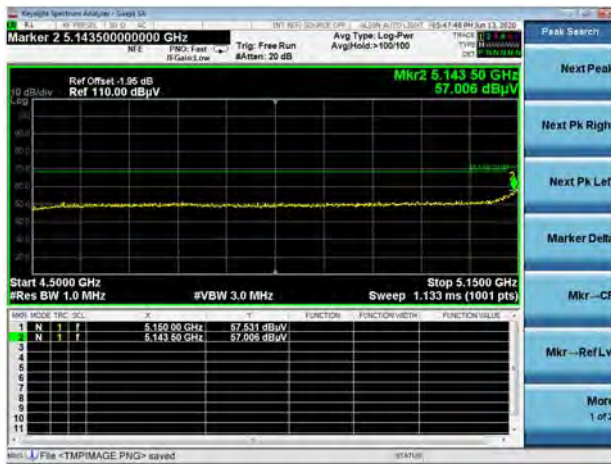
Band I 11n40 CH38 AV



Band I 11n40 CH46 PK



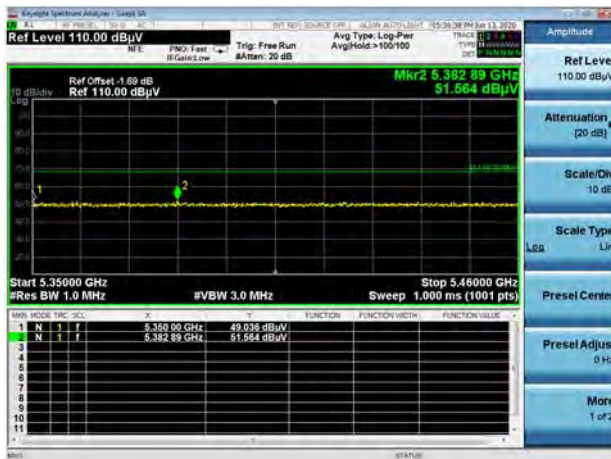
Band I 11ac20 CH36 Peak



Band I 11ac20 CH36 AV



Band I 11ac20 CH48 Peak



Band I 11ac40 CH38 Peak



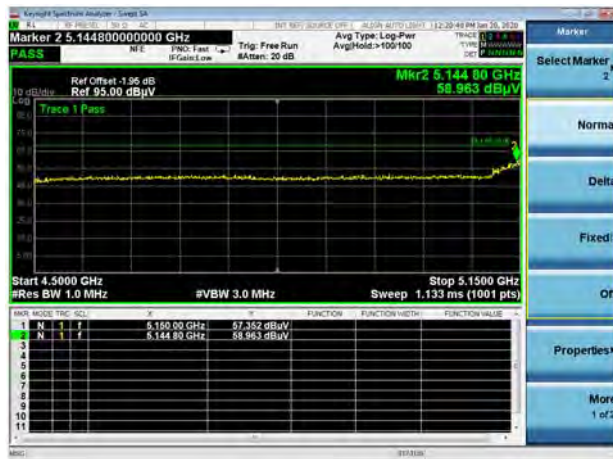
Band I 11ac40 CH38 AV



Band I 11ac40 CH46 Peak



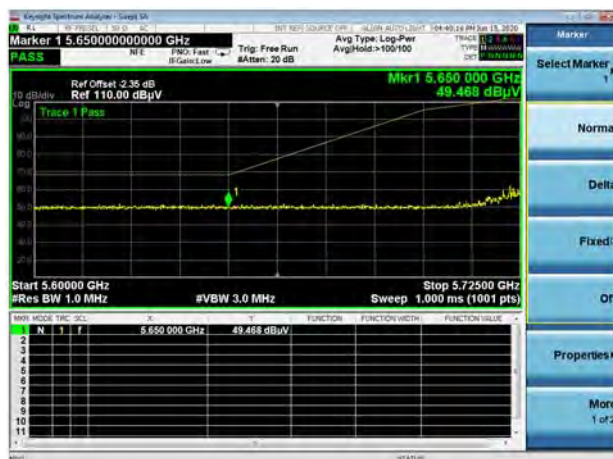
Band I 11ac80 CH42 Peak



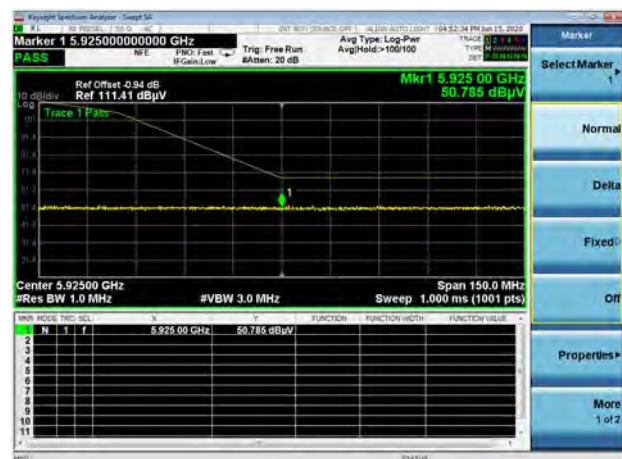
Band I 11ac80 CH42 AV



Band IV 11a CH149 Peak



Band IV 11a CH165 Peak



Band IV 11n20 CH149 Peak



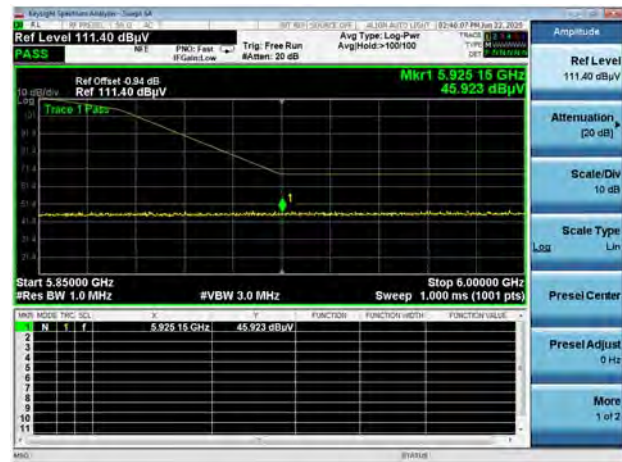
Band IV 11n20 CH165 Peak



Band IV 11n40 CH151 Peak



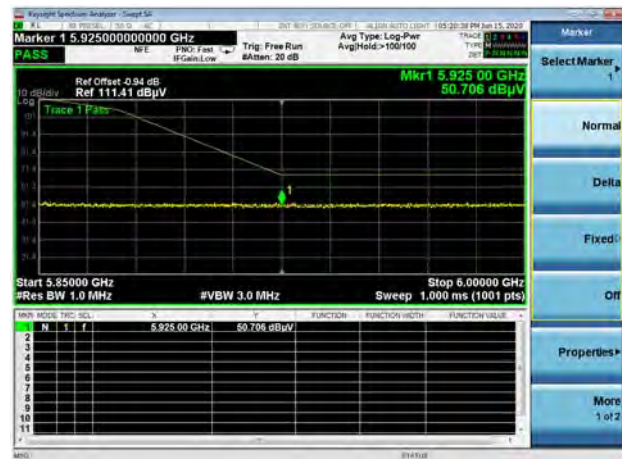
Band IV 11n40 CH159 Peak



Band IV 11ac20 CH149 Peak



Band IV 11ac20 CH165 Peak



Band IV 11ac40 CH151 Peak



Band IV 11ac40 CH159 Peak



Band IV 11ac80 CH155 Peak



ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-EC2060316-AR.PDF".

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-EC2060316-AW.PDF".

ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-EC2060316-AI.PDF".

--END OF REPORT--