FCC REPORT

Applicant:	Nuvyyo Inc.
Address of Applicant:	555 Legget Drive Tower B Suite 836 Kanata, ON K2K2X3, Canada
Manufacturer:	Nuvyyo Inc.
Address of Manufacturer:	555 Legget Drive Tower B Suite 836 Kanata, ON K2K2X3, Canada
Factory:	SHENZHEN GIEC DIGITAL CO., LTD
Address of Factory:	1st&3rd Building, No.26 Puzai Road, Pingdi, Longgang District, Shenzhen, China

Equipment Under Test (EUT)

Product Name:	OTA streamer
Model No.:	TABLO DUAL LITE DVR, TABLO DUAL 64 DVR, TDNS2B-01-CN, TDNS2B-02-CN, TDNS2B-03-CN, TDSS2B-01-CN, TDSS2B-02-CN, TDSS2B-03-CN
FCC ID:	2AOR7-TABLO400
Applicable standards:	FCC CFR Title 47 Part 15 Subpart E Section 15.407
Date of sample receipt:	July 18, 2019
Date of Test:	July 19, 2019- August 08, 2019
Date of report issued:	August 09, 2019
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	*August 09, 2019*	*Original*

Prepared By: ***Date:*** *August 09, 2019*

Project Engineer

Check By: ***Date:*** *August 09, 2019*

Reviewer

3 Contents

Page

1 COVER PAGE 1

2 VERSION 2

3 CONTENTS 3

4 TEST SUMMARY 4

4.1 MEASUREMENT UNCERTAINTY 4

5 GENERAL INFORMATION 5

5.1 GENERAL DESCRIPTION OF EUT 5
5.2 TEST MODE 7
5.3 DESCRIPTION OF SUPPORT UNITS 7
5.4 DEVIATION FROM STANDARDS 7
5.5 ABNORMALITIES FROM STANDARD CONDITIONS 7
5.6 TEST FACILITY 7
5.7 TEST LOCATION 7
5.8 ADDITIONAL INSTRUCTIONS 8

6 TEST INSTRUMENTS LIST 9

7 TEST RESULTS AND MEASUREMENT DATA 11

7.1 ANTENNA REQUIREMENT 11
7.2 CONDUCTED EMISSIONS 12
7.3 CONDUCTED PEAK OUTPUT POWER 15
7.4 CHANNEL BANDWIDTH 17
7.5 POWER SPECTRAL DENSITY 24
7.6 BAND EDGE 32
7.6.1 Radiated Emission Method 32
7.7 SPURIOUS EMISSION 40
7.7.1 Radiated Emission Method 40
7.8 FREQUENCY STABILITY 47

8 TEST SETUP PHOTO 51

9 EUT CONSTRUCTIONAL DETAILS 51

4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.407(a)(3)	Pass
Channel Bandwidth	15.407(e)	Pass
Power Spectral Density	15.407(a)(3)	Pass
Band Edge	15.407(b)(4)	Pass
Spurious Emission	15.205/15.209/15.407(b)(4)	Pass
Frequency Stability	15.407(g)	Pass

Remarks：

1. *Pass: The EUT complies with the essential requirements in the standard.*
2. *Test according to ANSI C63.10:2013.*

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz ~ 30MHz	± 3.80dB	(1)
Radiated Emission	30MHz ~ 1000MHz	± 3.97dB	(1)
Radiated Emission	1GHz ~ 40GHz	± 4.29dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	± 3.44dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

5 General Information

5.1 General Description of EUT

Product Name:	OTA streamer
Model No.:	TABLO DUAL LITE DVR, TABLO DUAL 64 DVR, TDNS2B-01-CN, TDNS2B-02-CN, TDNS2B-03-CN, TDSS2B-01-CN, TDSS2B-02-CN, TDSS2B-03-CN
Model No.:	TDNS2B-02-CN
Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The only difference is model name for commercial purpose.	
Serial No.:	GI-C02205463 ~GI-C16777215
Hardware Version:	ATSC-MPEG-13G/VER1.0-1-20180115
Software Version:	2.2.26 1919814
Test sample(s) ID:	GTS201907000127 -1
Sample(s) Status:	Engineer sample
Operation Frequency:	802.11a/802.11n(HT20)/802.11ac(HT20): 5745MHz ~ 5825MHz 802.11n(HT40)/ 802.11ac(HT40): 5755MHz ~ 5795MHz 802.11ac(HT80): 5775MHz
Channel numbers:	802.11a/802.11n(HT20)/802.11ac(HT20): 5 802.11n(HT40)/ 802.11ac(HT40): 2 802.11ac(HT80): 1
Channel bandwidth:	802.11a/802.11n(HT20)/802.11ac(HT20) : 20MHz 802.11n(HT40)/802.11ac(HT40) : 40MHz 802.11ac(HT80): 80MHz
Modulation technology:	Orthogonal Frequency Division Multiplexing (OFDM) MIMO: 802.11n/ac SISO: 802.11a
Antenna Type:	Integral Antenna
Antenna gain:	ANT 1: 2.5dBi ANT 2: 2.5dBi
Power supply:	Adapter Model No: TEKA018-1201500UK Input: AC 100-240V, 50/60Hz, 0.5A MAX Output: DC 12V, 1.5 A

Note: The 2 transmit signals are completely uncorrelated with each other,Directional gain = G ANT=2.5dBi

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	153	5765MHz	155	5775MHz
157	5785MHz	159	5795MHz	161	5805MHz	163	5815MHz
165	5825MHz						

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	**Frequency (MHz)**		
	802.11 a/n/ac(HT20)	802.11 n/ac(HT40)	802.11ac(HT80)
Lowest channel	5745	5755	
Middle channel	5785		5775
Highest channel	5825	5795	

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode

Remark: During the test,dutycycle>98%,the test voltage was tuned from 85% to 115% of the nominal rated supply voltage,and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	Data rate
802.11a	6Mbps
802.11n/ac(HT20)	6.5Mbps
802.11n/ac(HT40)	13Mbps
802.11ac(HT80)	29.3Mbps

5.3 Description of Support Units

Manufacturer	Description	Model	Serial Number
IBM Thinkpad	Notebook PC	2374	L3-G0686

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

● **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2.

● **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.7 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone,
Xixiang Road, Baoan District, Shenzhen, Guangdong, China
Tel: 0755-27798480
Fax: 0755-27798960

5.8 Additional Instructions

Test Software	Special test command provided by manufacturer
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 03 2015	July. 02 2020
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 26 2019	June. 25 2020
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 26 2019	June. 25 2020
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 26 2019	June. 25 2020
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 26 2019	June. 25 2020
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 26 2019	June. 25 2020
9	Coaxial Cable	GTS	N/A	GTS211	June. 26 2019	June. 25 2020
10	Coaxial cable	GTS	N/A	GTS210	June. 26 2019	June. 25 2020
11	Coaxial Cable	GTS	N/A	GTS212	June. 26 2019	June. 25 2020
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 26 2019	June. 25 2020
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 26 2019	June. 25 2020
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 26 2019	June. 25 2020
15	Band filter	Amindeon	82346	GTS219	June. 26 2019	June. 25 2020
16	Power Meter	Anritsu	ML2495A	GTS540	June. 26 2019	June. 25 2020
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 26 2019	June. 25 2020
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 26 2019	June. 25 2020
19	Splitter	Agilent	11636B	GTS237	June. 26 2019	June. 25 2020
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 26 2019	June. 25 2020
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 20 2018	Oct. 19 2019
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 20 2018	Oct. 19 2019
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 20 2018	Oct. 19 2019
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 26 2019	June. 25 2020

Conducted Emission						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 26 2019	June. 25 2020
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 26 2019	June. 25 2020
4	Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	GTS226	June. 26 2019	June. 25 2020
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 26 2019	June. 25 2020
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 26 2019	June. 25 2020
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 26 2019	June. 25 2020

RF Conducted Test:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 26 2019	June. 25 2020
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 26 2019	June. 25 2020
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 26 2019	June. 25 2020
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 26 2019	June. 25 2020
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 26 2019	June. 25 2020
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 26 2019	June. 25 2020
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 26 2019	June. 25 2020
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 26 2019	June. 25 2020

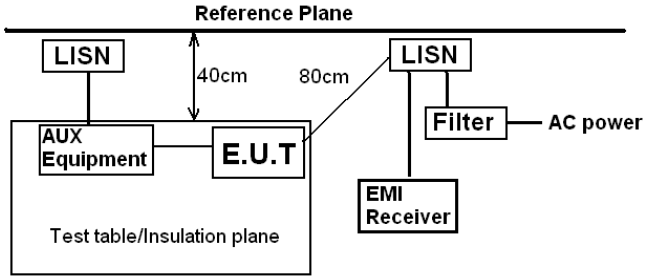
General used equipment:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 26 2019	June. 25 2020
2	Barometer	ChangChun	DYM3	GTS255	June. 26 2019	June. 25 2020

7 Test results and Measurement Data

7.1 Antenna requirement

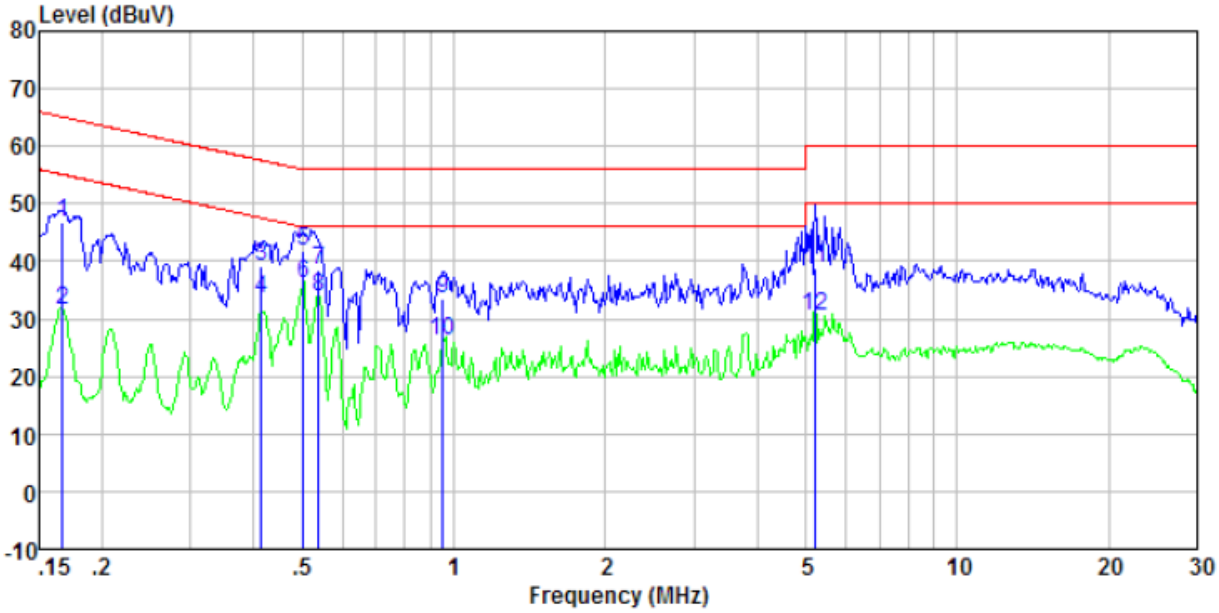
Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: *An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.*	
E.U.T Antenna:	
The antennas are integral antenna, the best case gain of the antennas are 2.5dBi, reference to the appendix II for details	

7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto
Limit:	Frequency range (MHz) / Limit (dBuV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 * Decreases with the logarithm of the frequency.
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test environment:	Temp.: 25 °C / Humid.: 52% / Press.: 1012mbar
Test voltage:	AC 120V, 60Hz
Test results:	Pass

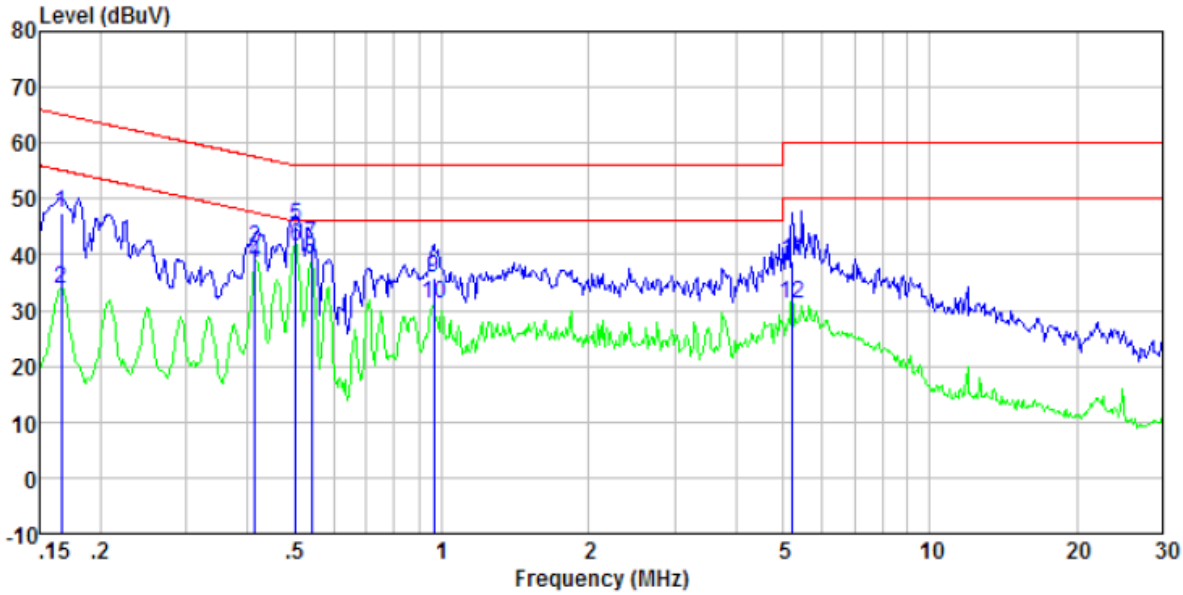
Remark: Both high and low voltages have been tested to show only the worst low voltage test data.

Measurement data
Line:



Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.17	46.36	0.40	0.08	46.84	65.12	-18.28	QP
0.17	31.19	0.40	0.08	31.67	55.12	-23.45	Average
0.41	38.81	0.35	0.11	39.27	57.55	-18.28	QP
0.41	33.19	0.35	0.11	33.65	47.55	-13.90	Average
0.50	41.30	0.31	0.11	41.72	56.00	-14.28	QP
0.50	35.73	0.31	0.11	36.15	46.00	-9.85	Average
0.54	38.20	0.30	0.11	38.61	56.00	-17.39	QP
0.54	33.42	0.30	0.11	33.83	46.00	-12.17	Average
0.95	33.21	0.21	0.15	33.57	56.00	-22.43	QP
0.95	25.84	0.21	0.15	26.20	46.00	-19.80	Average
5.22	38.40	0.20	0.17	38.77	60.00	-21.23	QP
5.22	30.31	0.20	0.17	30.68	50.00	-19.32	Average

Neutral:

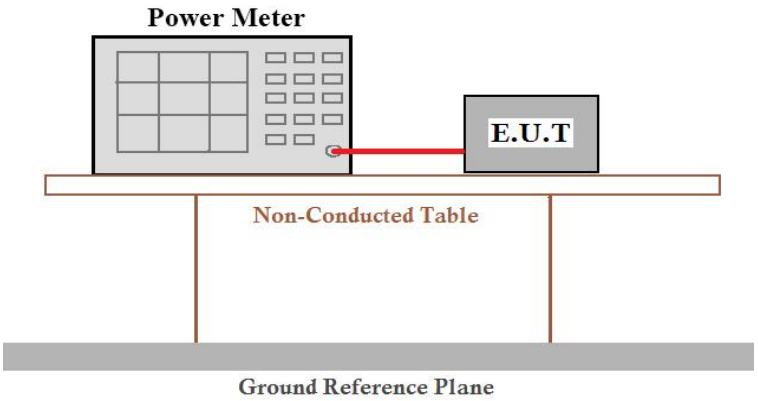


Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.17	46.92	0.40	0.08	47.40	65.16	-17.76	QP
0.17	33.35	0.40	0.08	33.83	55.16	-21.33	Average
0.41	40.76	0.35	0.11	41.22	57.55	-16.33	QP
0.41	37.92	0.35	0.11	38.38	47.55	-9.17	Average
0.50	44.56	0.31	0.11	44.98	56.00	-11.02	QP
0.50	40.95	0.31	0.11	41.37	46.00	-4.63	Average
0.54	41.25	0.30	0.11	41.66	56.00	-14.34	QP
0.54	38.60	0.30	0.11	39.01	46.00	-6.99	Average
0.96	35.41	0.21	0.15	35.77	56.00	-20.23	QP
0.96	30.71	0.21	0.15	31.07	46.00	-14.93	Average
5.22	38.44	0.20	0.17	38.81	60.00	-21.19	QP
5.22	30.67	0.20	0.17	31.04	50.00	-18.96	Average

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both *limits and measurement with the average detector receiver is unnecessary.*

7.3 Conducted Peak Output Power

Test Requirement:	FCC Part15 E Section 15.407(a)(3)
Test Method:	ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

ANT 1:

Test CH	Peak Output Power (dBm)						Limit(dBm)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	6.77	6.78	6.83	7.66	7.79	---	30.00	Pass
Middle	6.79	8.40	8.50	---	---	10.37		
Highest	8.53	7.12	6.68	9.58	8.53	---		

ANT 2:

Test CH	Peak Output Power (dBm)						Limit(dBm)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	5.54	5.79	5.35	6.19	6.19	---	30.00	Pass
Middle	6.49	6.46	6.45	---	---	6.12		
Highest	5.20	5.88	5.55	6.79	6.78	---		

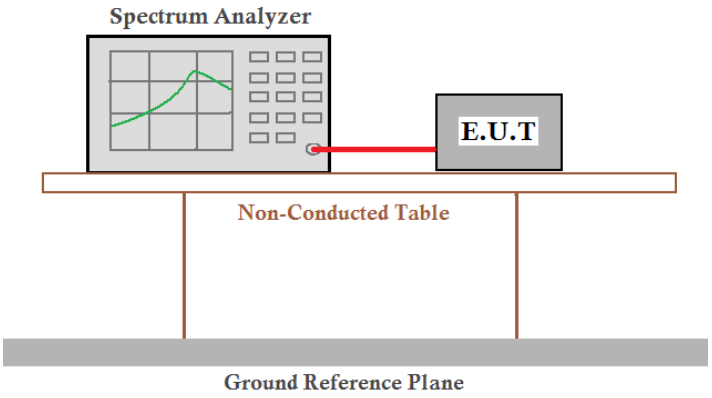
Remark: “---“is not applicable

MIMO:

Test mode	Channel	ANT 1 power (dBm)	ANT 2 power (dBm)	MIMO power (dBm)	Limit (dBm)	Result
802.11n(HT20)	Lowest	6.78	5.79	9.32	30	Pass
	Middle	8.40	6.46	10.55		
	Highest	7.12	5.88	9.55		
802.11ac(HT20)	Lowest	6.83	5.35	9.16		
	Middle	8.50	6.45	10.60		
	Highest	6.68	5.55	9.16		
802.11n(HT40)	Lowest	7.66	6.19	10.00		
	Highest	9.58	6.79	11.42		
802.11ac(HT40)	Lowest	7.79	6.19	10.07		
	Highest	8.53	6.78	10.75		
802.11ac(HT80)	Middle	10.37	6.12	11.76		

Note:The 2 transmit signals are completely uncorrelated with each other,Directional gain = G ANT=2.5dBi

7.4 Channel Bandwidth

Test Requirement:	FCC Part15 E Section 15.407(e)
Test Method:	ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Limit:	>500KHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

ANT 1:

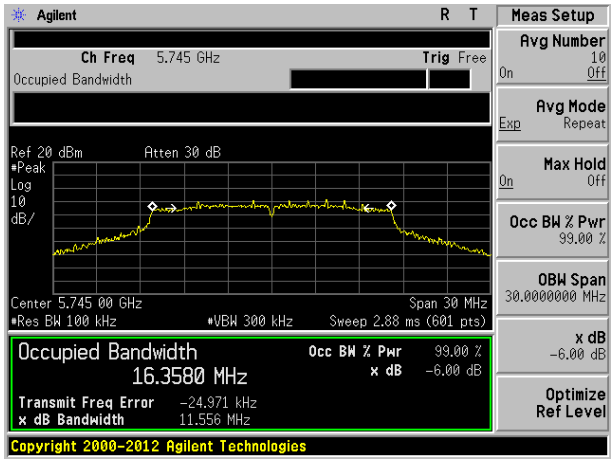
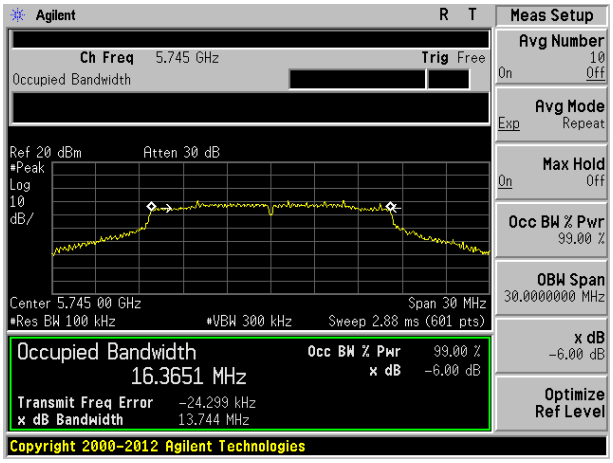
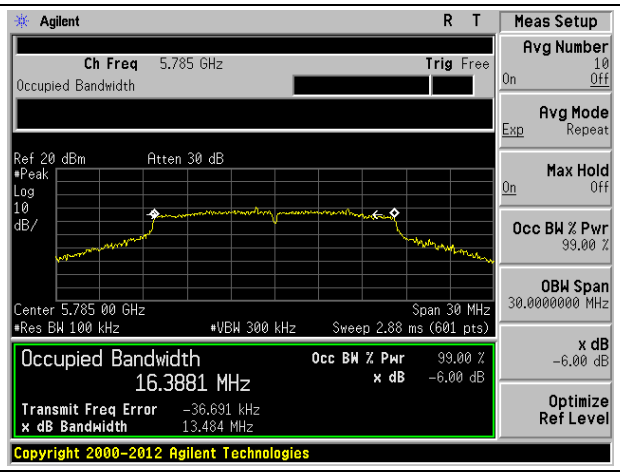
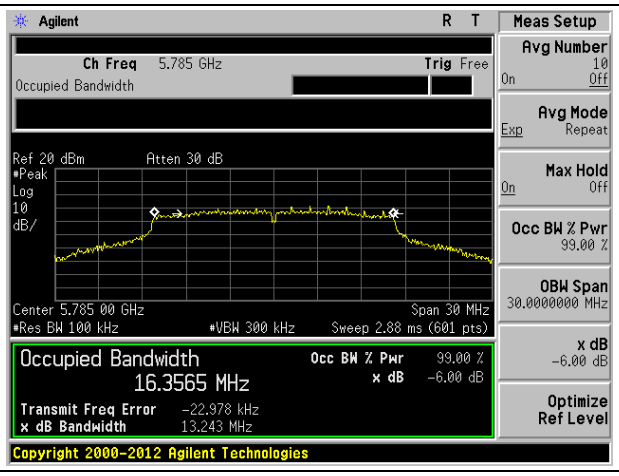
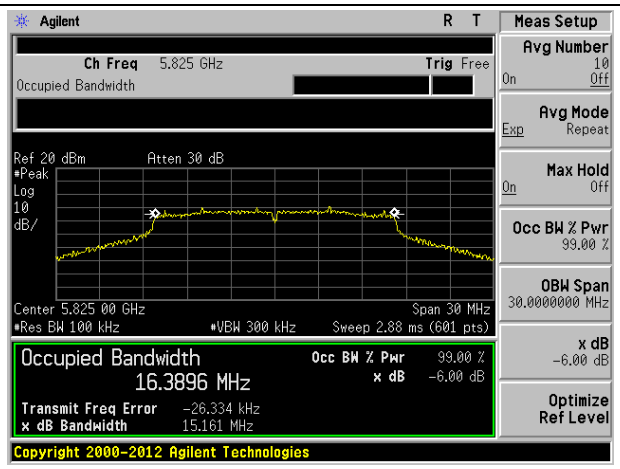
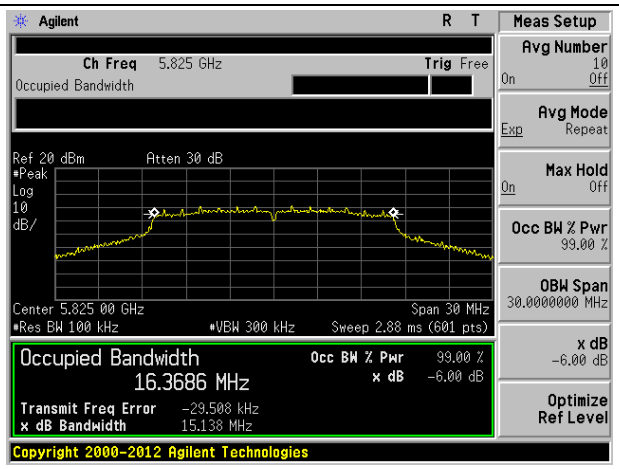
Test CH	Channel Bandwidth (MHz)						Limit (KHz)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	11.556	16.247	15.652	35.153	35.084	---	>500	Pass
Middle	13.484	15.348	13.931	---	---	75.368		
Highest	15.161	13.871	12.631	33.886	32.750	---		

ANT 2:

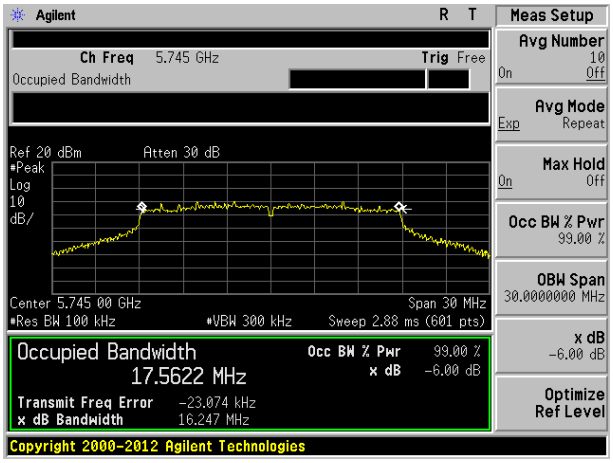
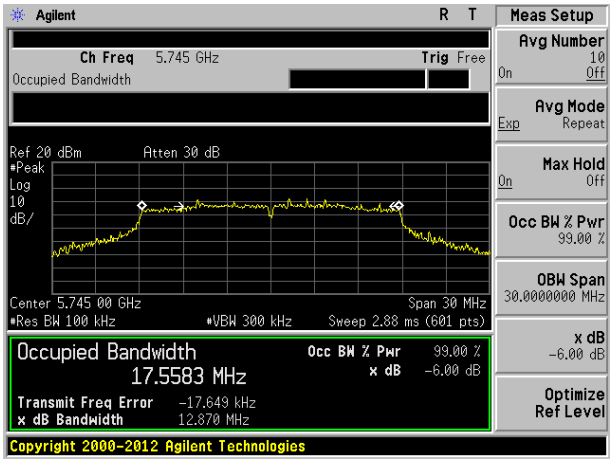
Test CH	Channel Bandwidth (MHz)						Limit (KHz)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	13.744	12.870	13.904	35.226	30.363	---	>500	Pass
Middle	13.243	12.942	15.059	---	---	75.358		
Highest	15.138	13.872	13.445	31.330	35.181	---		

Remark: “---“is not applicable

Test plot as follows:

802.11a	
ANT 1	**ANT 2**
	
Lowest channel	
	
Middle channel	
	
Highest channel	

802.11n(HT20)

ANT 1	ANT 2
	
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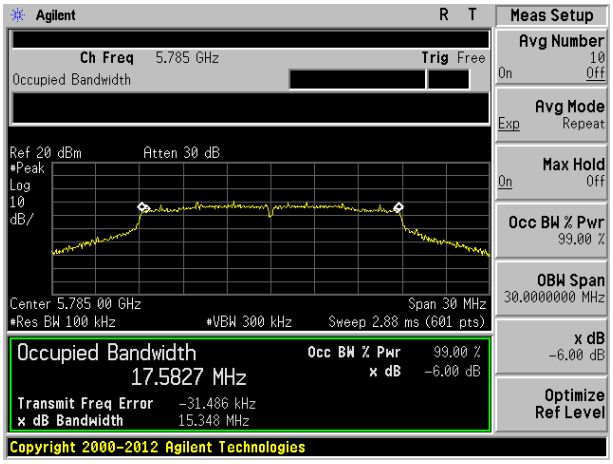
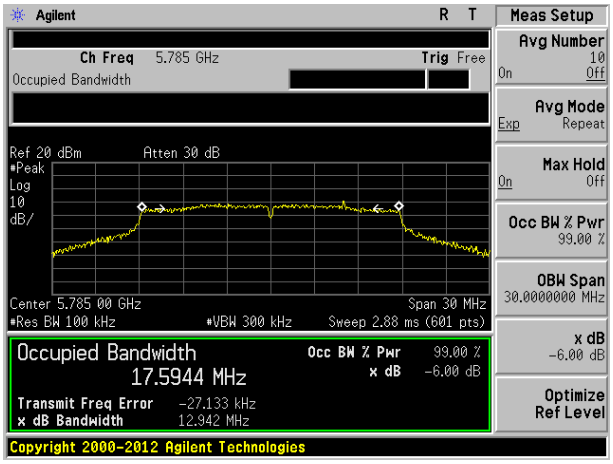
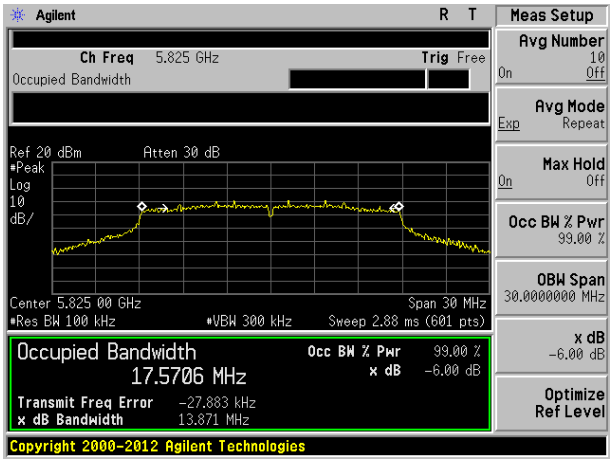
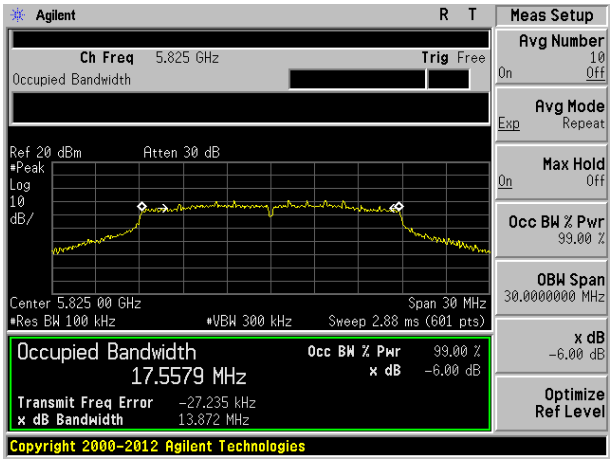
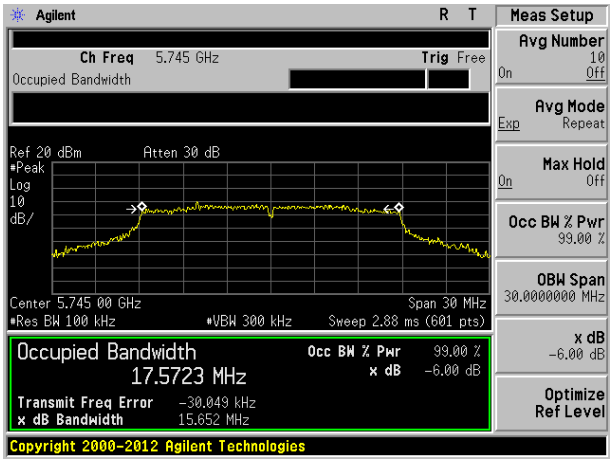
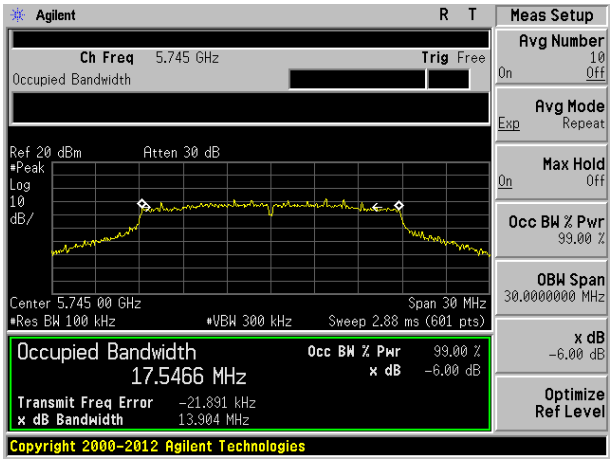
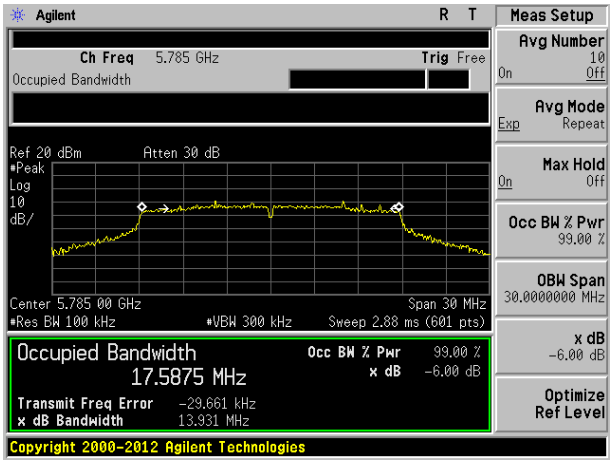
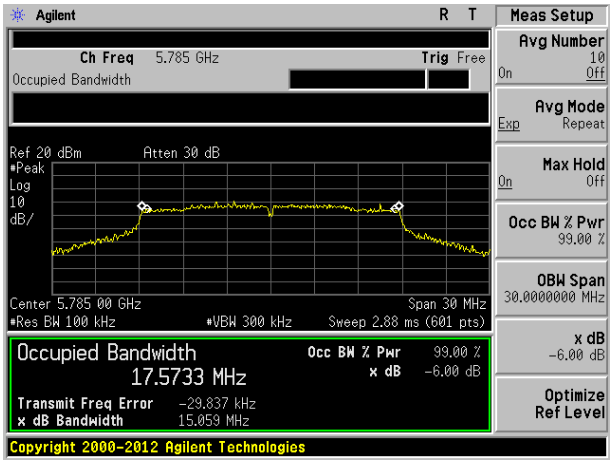
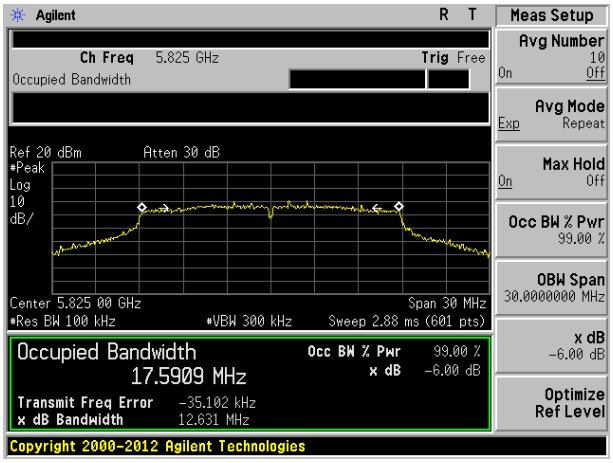
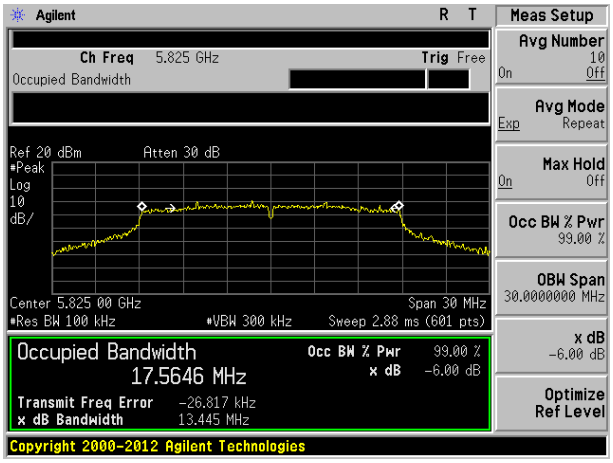
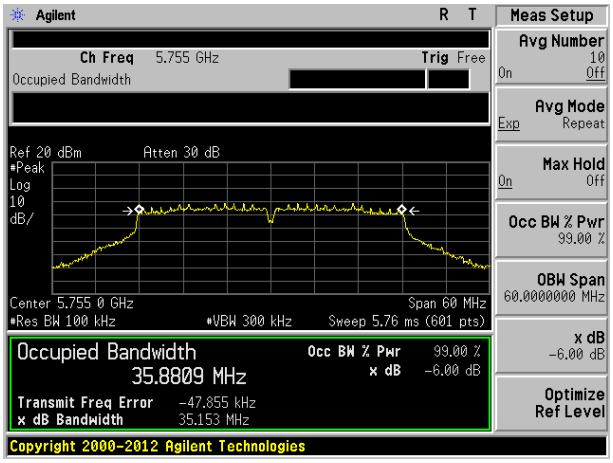
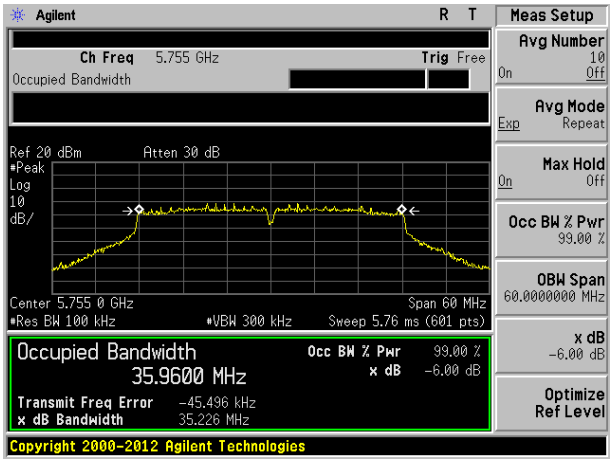
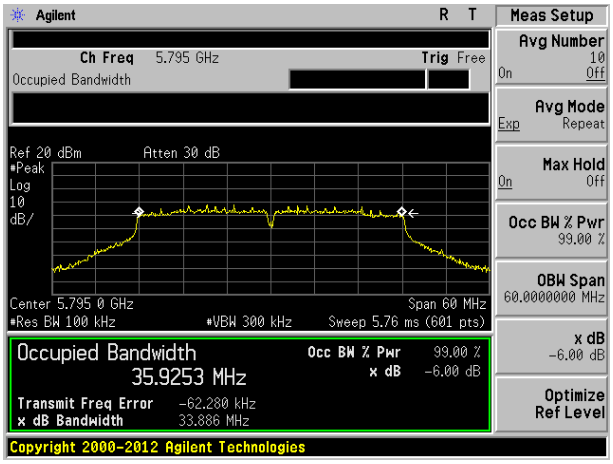
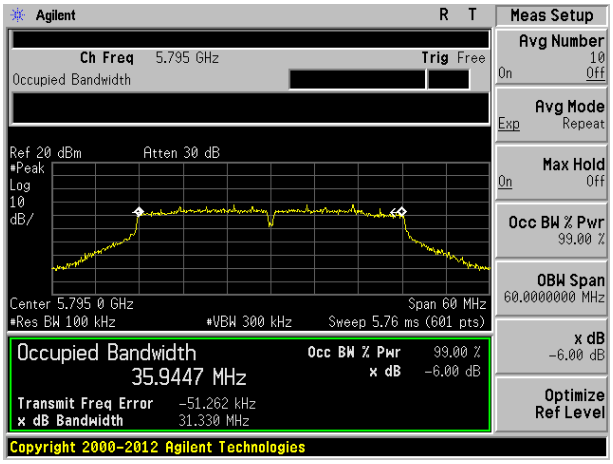
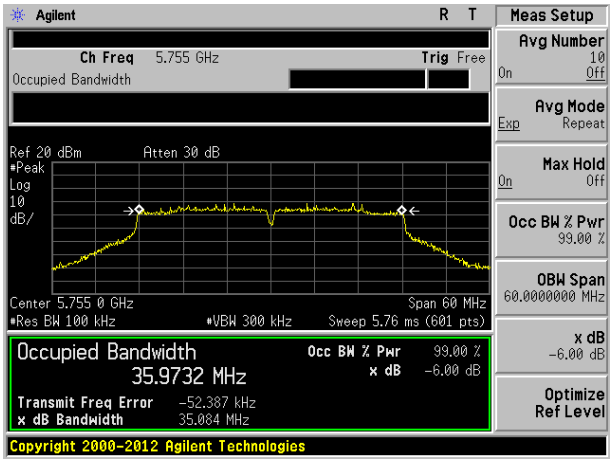
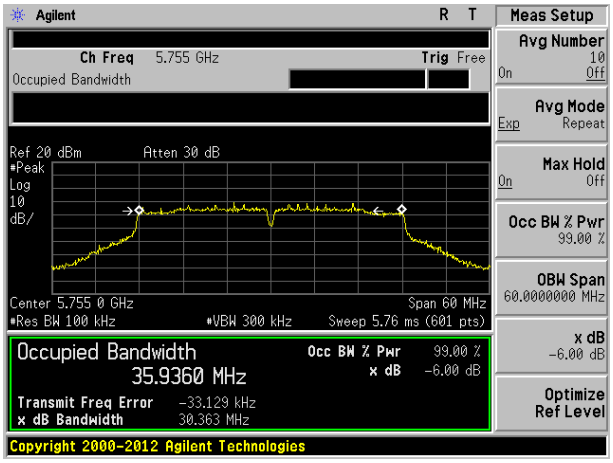
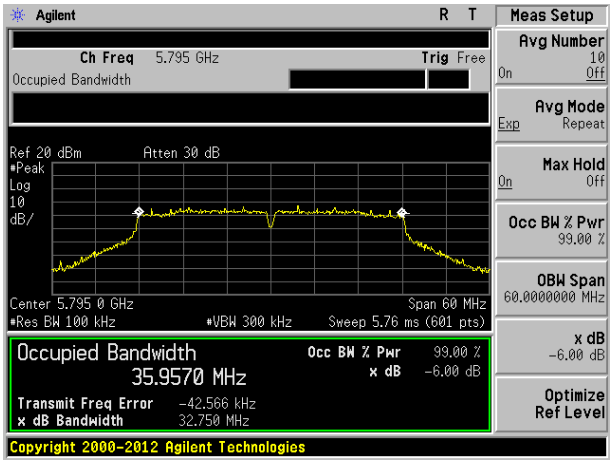
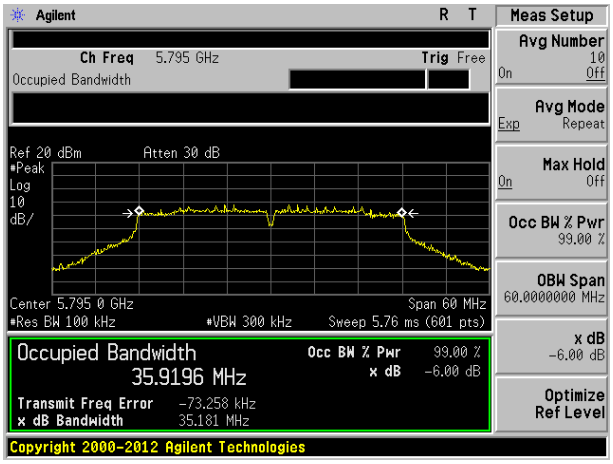
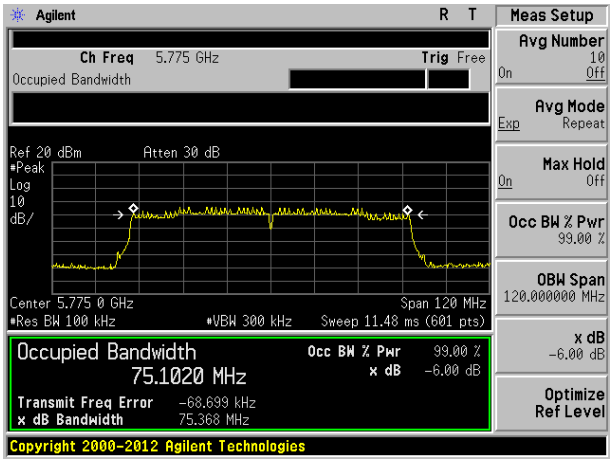
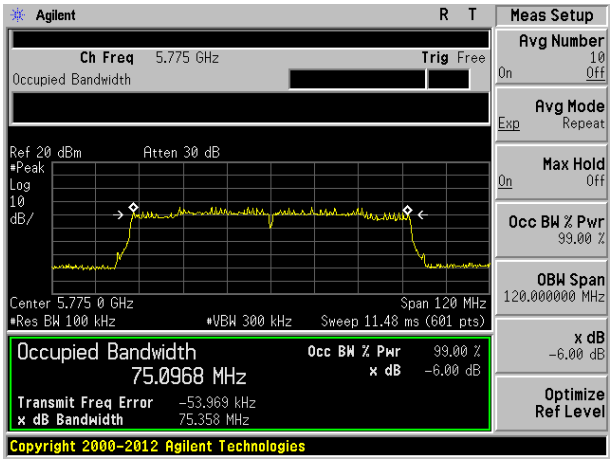
	
Middle channel	
	
Highest channel	

802.11ac(HT20)

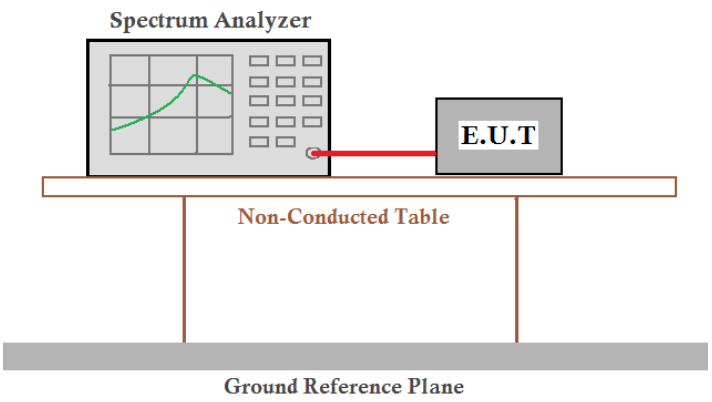
ANT 1	ANT 2
	
Lowest channel	
	
Middle channel	
	
Highest channel	

802.11n(HT40)	
ANT 1	**ANT 2**
	
Lowest channel	
	
Highest channel	

802.11ac(HT40)	
ANT 1	**ANT 2**
	
Lowest channel	
	
Highest channel	

802.11ac(HT80)	
ANT 1	**ANT 2**
	
Middle channel	

7.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407(a)(3)
Test Method:	ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Limit:	30dBm/500kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

ANT 1:

Test CH	Power Spectral Density (dBm/500kHz)						Limit (dBm/500kHz)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	-1.230	-1.030	-0.604	-2.843	-2.596	---	30.00	Pass
Middle	1.048	0.604	0.575	---	---	-5.611		
Highest	-0.556	-0.154	-0.144	-2.884	-0.659	---		

ANT 2:

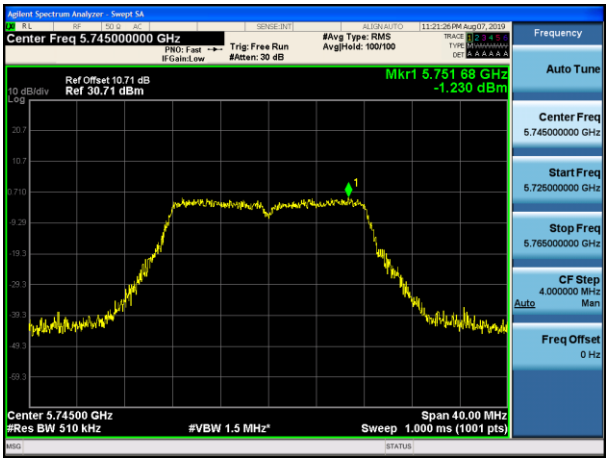
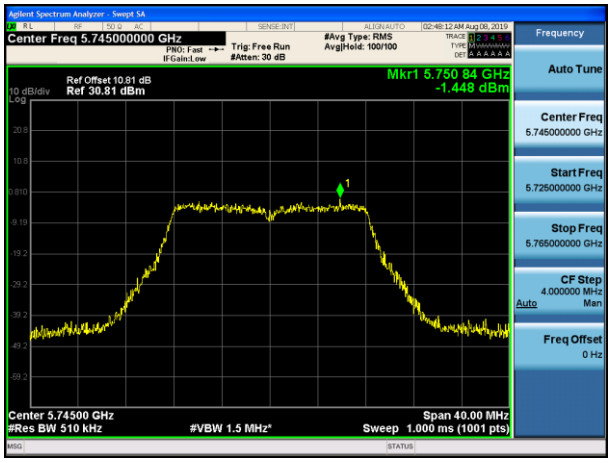
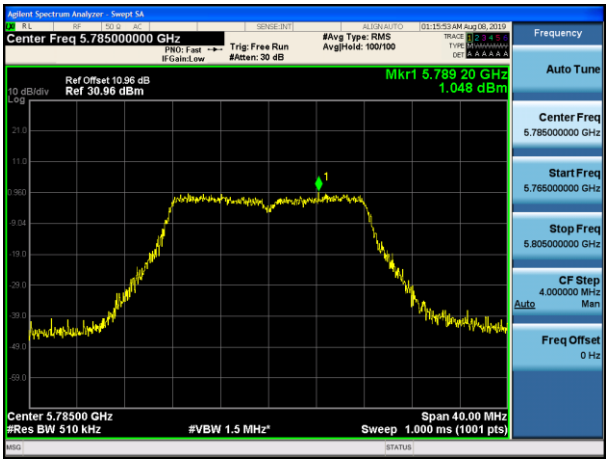
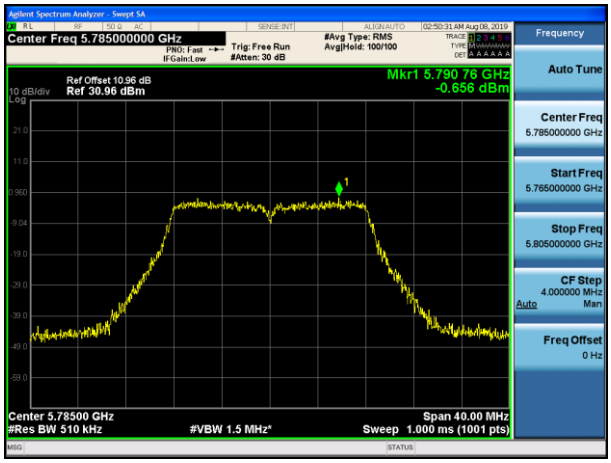
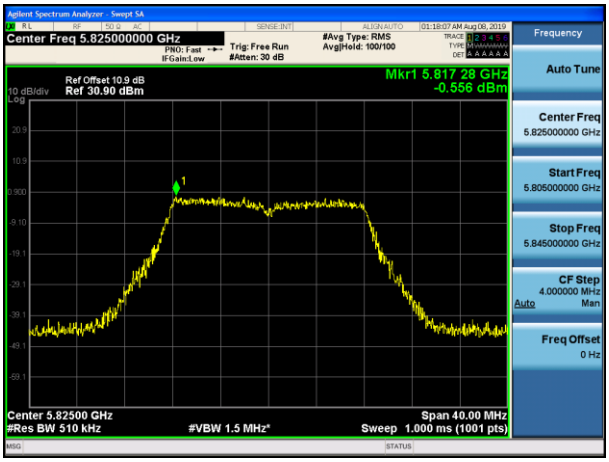
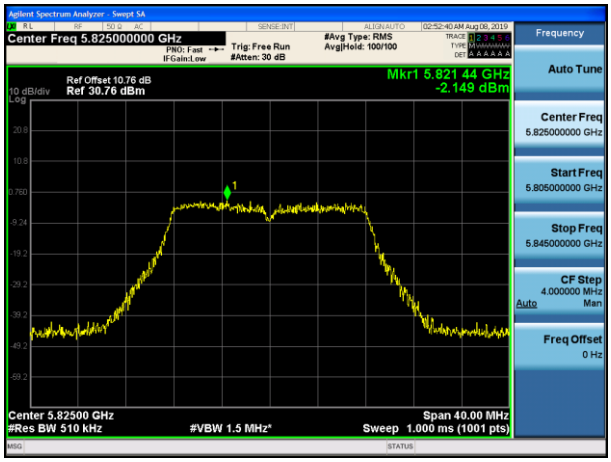
Test CH	Power Spectral Density (dBm/500kHz)						Limit (dBm/500kHz)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	-1.448	-1.593	-2.191	-5.269	-3.529	---	30.00	Pass
Middle	-0.656	-0.769	-0.513	---	---	-5.888		
Highest	-2.149	-1.443	-1.617	-3.662	-2.887	---		

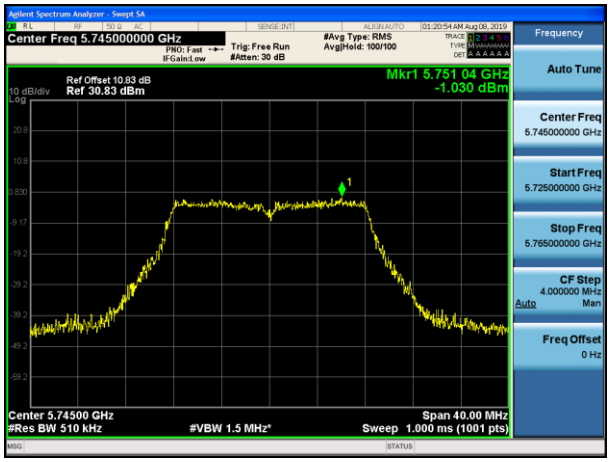
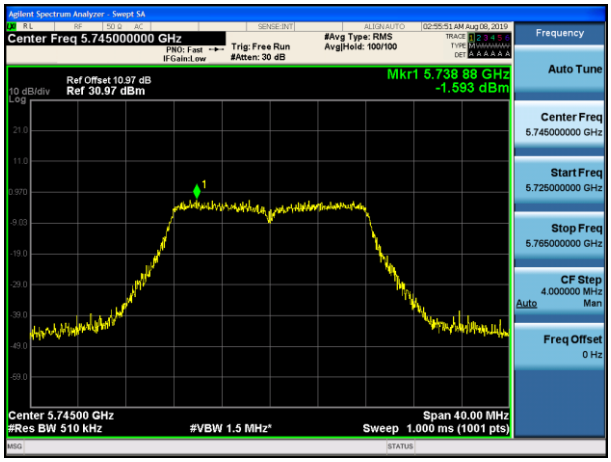
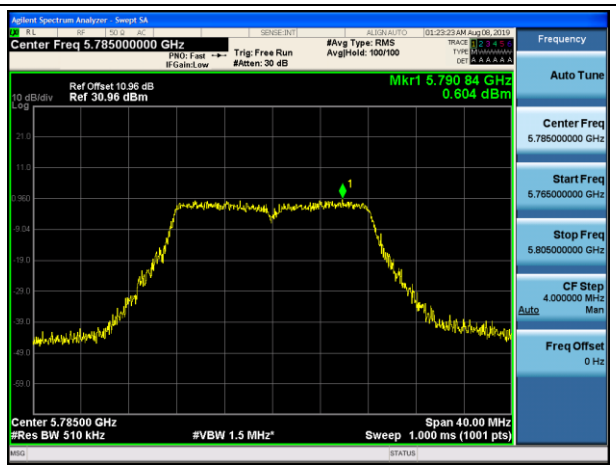
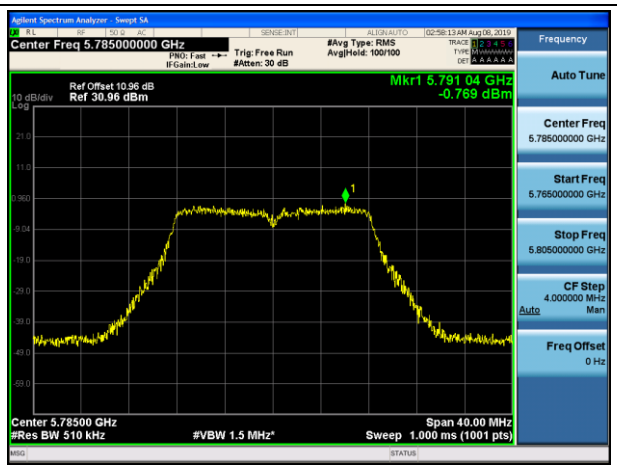
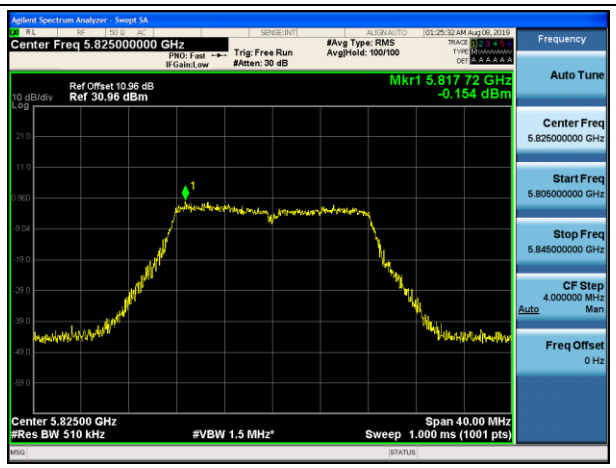
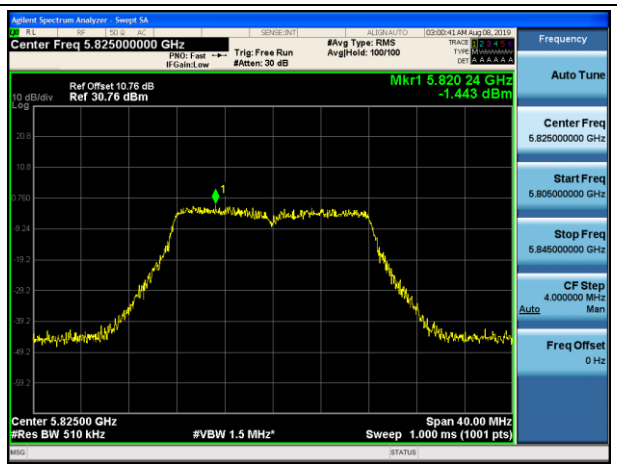
Remark: “---“is not applicable

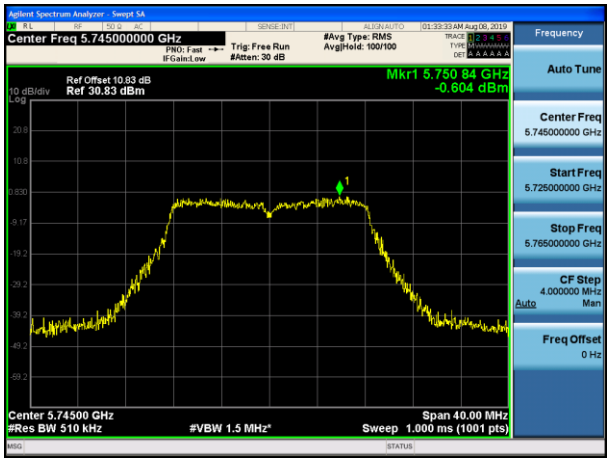
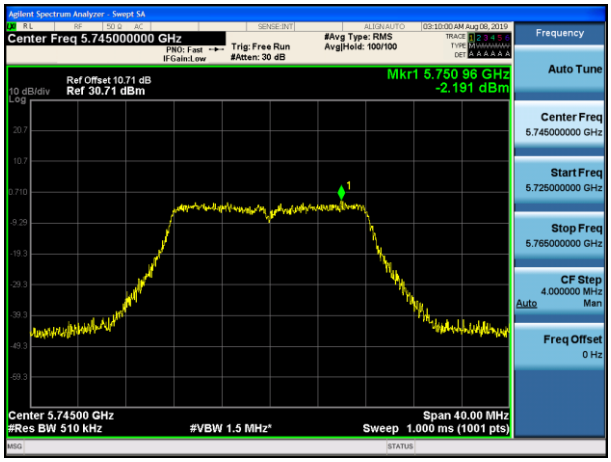
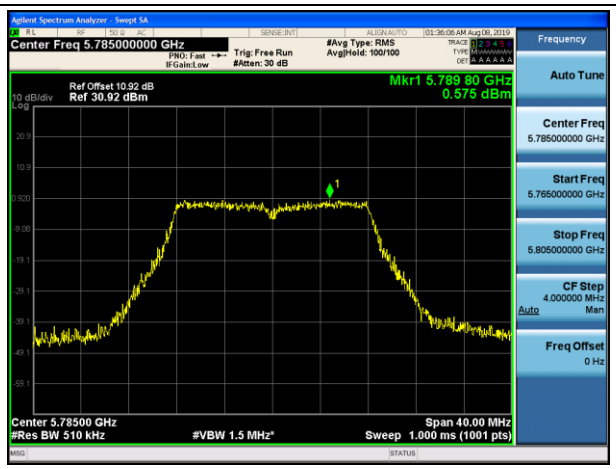
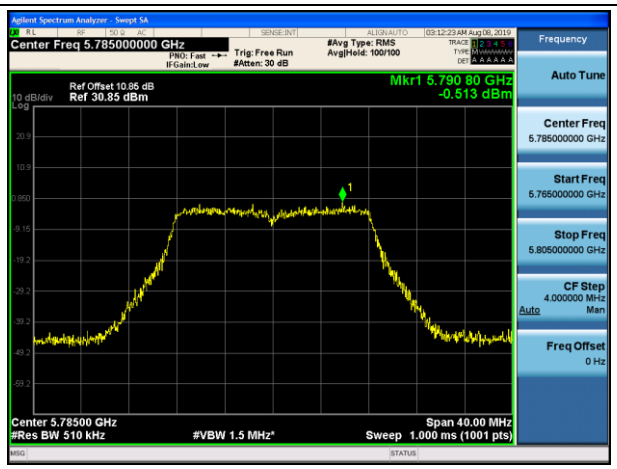
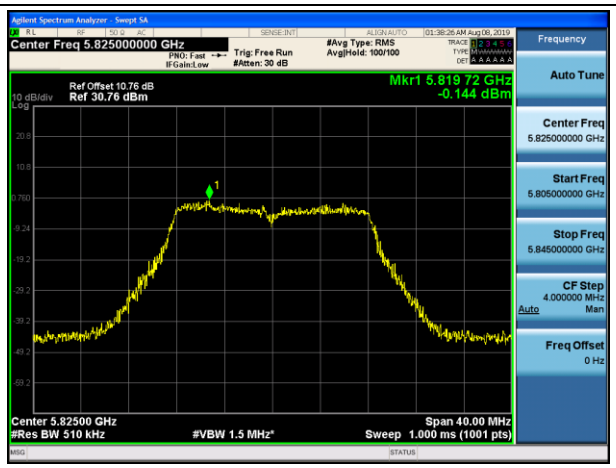
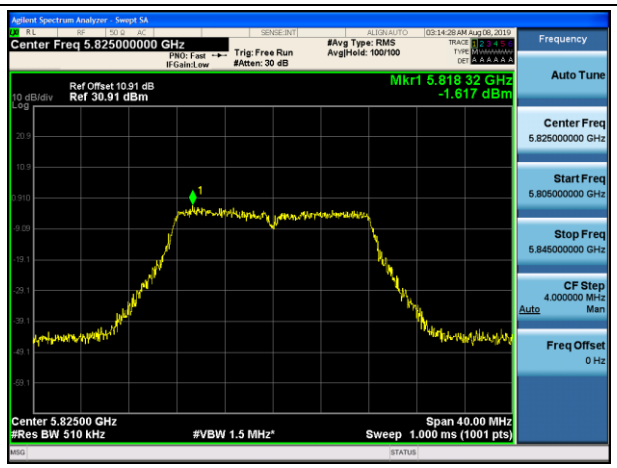
MIMO:

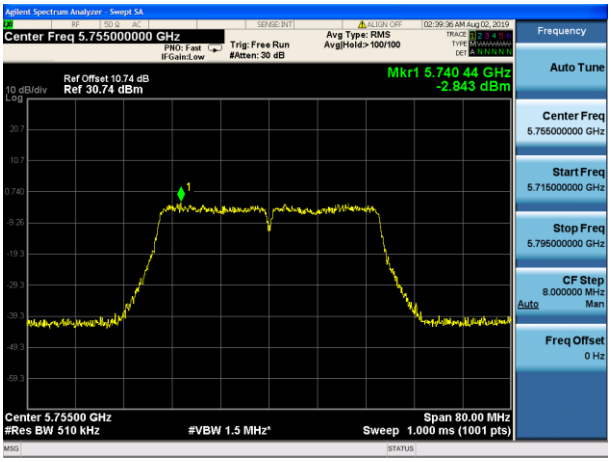
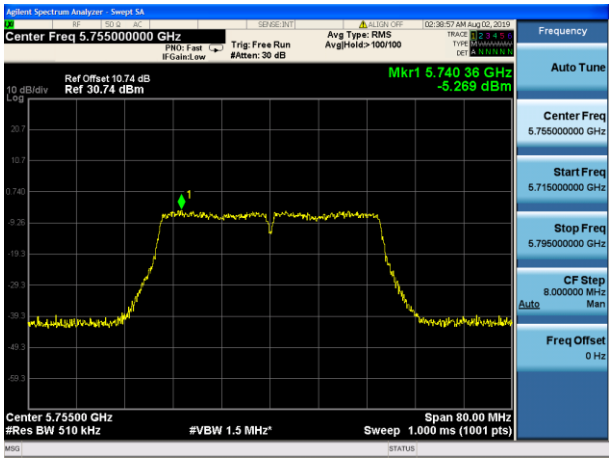
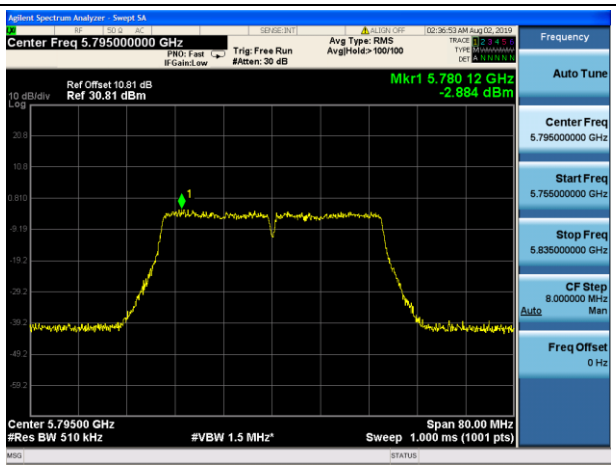
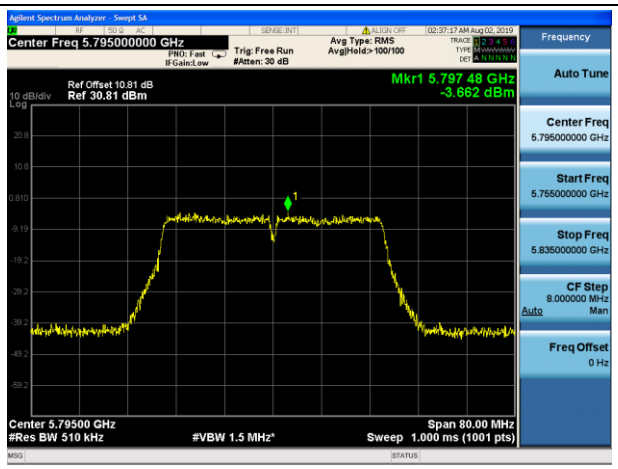
Test mode	Channel	ANT 1 power (dBm/500khz)	ANT 2 power (dBm/500kHz)	MIMO power (dBm/500kHz)	Limit dBm/500kHz	Result
802.11n(HT20)	Lowest	-1.030	-1.593	1.71	30	Pass
	Middle	0.604	-0.769	2.98		
	Highest	-0.154	-1.443	2.26		
802.11ac(HT20)	Lowest	-0.604	-2.191	1.68		
	Middle	0.575	-0.513	3.08		
	Highest	-0.144	-1.617	2.19		
802.11n(HT40)	Lowest	-2.843	-5.269	-0.88		
	Highest	-2.884	-3.662	-0.25		
802.11ac(HT40)	Lowest	-2.596	-3.529	-0.03		
	Highest	-0.659	-2.887	1.38		
802.11ac(HT80)	Middle	-5.611	-5.888	-2.74		

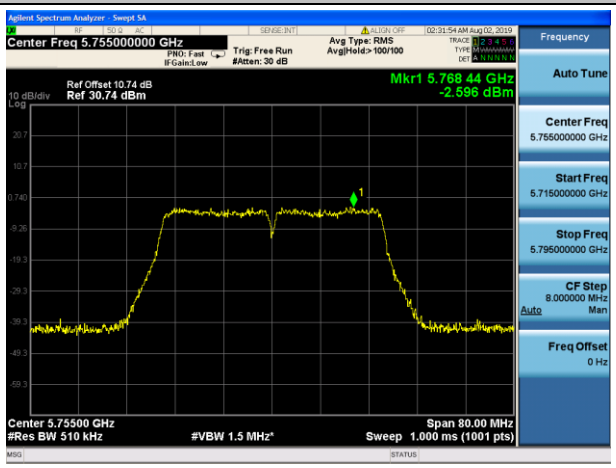
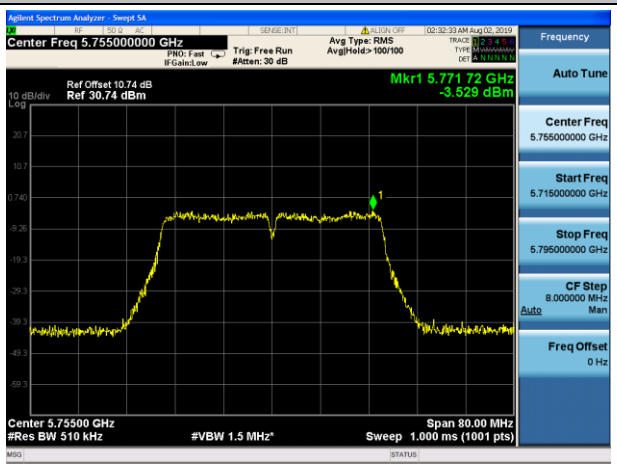
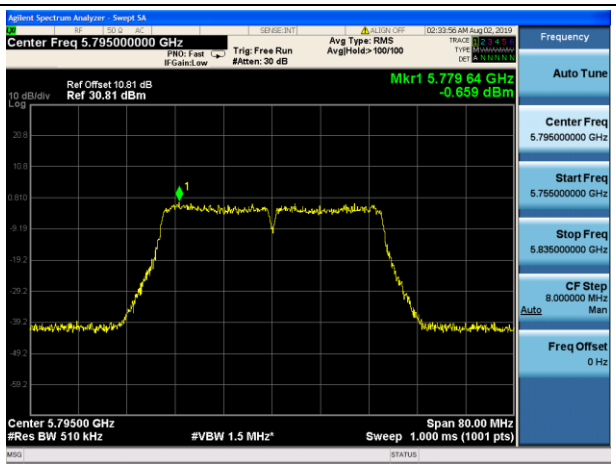
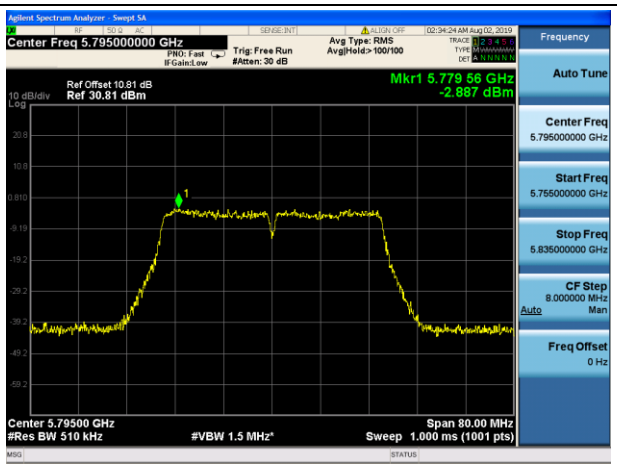
Test plot as follows:

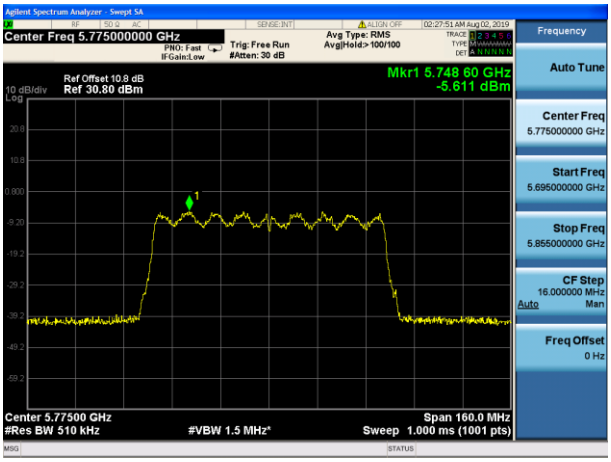
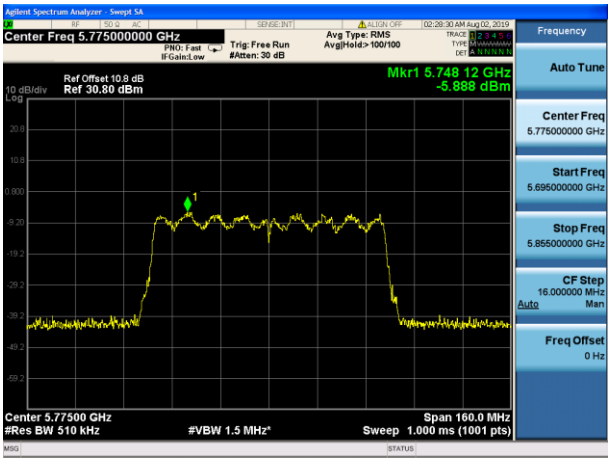
802.11a	
ANT 1	**ANT 2**
	
Lowest channel	
	
Middle channel	
	
Highest channel	

802.11n(HT20)	
ANT 1	**ANT 2**
	
Lowest channel	
	
Middle channel	
	
Highest channel	

802.11ac(HT20)	
ANT 1	**ANT 2**
	
Lowest channel	
	
Middle channel	
	
Highest channel	

802.11n(HT40)	
ANT 1	**ANT 2**
	
Lowest channel	
	
Highest channel	

802.11ac(HT40)	
ANT 1	**ANT 2**
	
Lowest channel	
	
Highest channel	

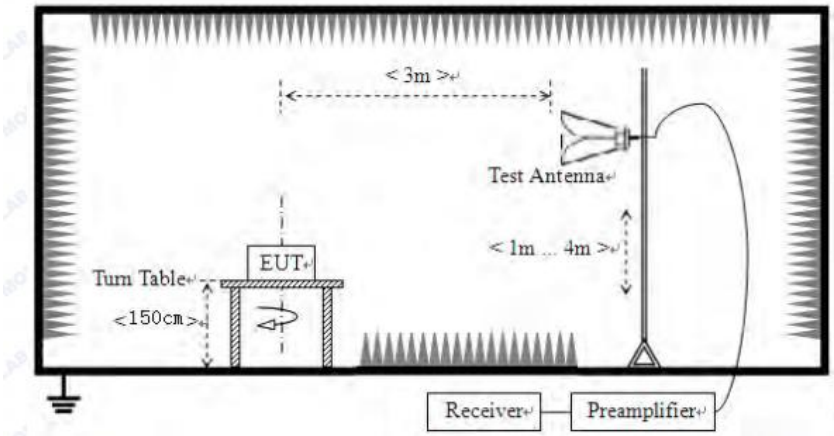
802.11ac(HT80)	
ANT 1	**ANT 2**
	
Middle channel	

7.6 Band edge

7.6.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	9kHz to 40GHz, only worse case is reported
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
Above 1GHz	Peak	1MHz	3MHz	PASS
	RMS	1MHz	3MHz	PASS

Limit:	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.
Test setup:	
Test Procedure:	1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

	7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Remarks:

1. *Only the worst case Main Antenna test data..*
2. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.*
5. *According to KDB 789033 D02v02r01 section G) 1) d),for measurements above 1000 MHz @3m distance, the limit of field strength is computed as follows:*

   E[dBuV/m] = EIRP[dBm] + 95.2;

   E[dBuV/m] = -27 + 95.2 = 68.2dBuV/m.

   E[dBuV/m] = 10 + 95.2 = 105.2dBuV/m.

   E[dBuV/m] = 15.6 + 95.2 = 110.8dBuV/m.

   E[dBuV/m] = 27 + 95.2 = 122.2dBuV/m

Measurement data:

				IEEE 802.11a				SISO mode ANT 1 is worse case
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	31.99	32.36	9.72	23.83	50.24	68.20	-17.96	Horizontal
5700.00	32.50	32.50	9.79	23.84	50.95	105.20	-54.25	Horizontal
5720.00	29.45	32.53	9.81	23.85	47.94	110.80	-62.86	Horizontal
5725.00	31.52	32.53	9.83	23.86	50.02	122.20	-72.18	Horizontal
5850.00	30.66	32.70	9.99	23.87	49.48	122.20	-72.72	Horizontal
5855.00	31.04	32.72	9.99	23.88	49.87	110.80	-60.93	Horizontal
5875.00	32.92	32.74	10.04	23.89	51.81	105.20	-53.39	Horizontal
5925.00	28.94	32.80	10.11	23.90	47.95	68.20	-20.25	Horizontal
5650.00	29.23	32.36	9.72	23.83	47.48	68.20	-20.72	Vertical
5700.00	31.79	32.50	9.79	23.84	50.24	105.20	-54.96	Vertical
5720.00	29.85	32.53	9.81	23.85	48.34	110.80	-62.46	Vertical
5725.00	33.85	32.53	9.83	23.86	52.35	122.20	-69.85	Vertical
5850.00	29.08	32.70	9.99	23.87	47.90	122.20	-74.30	Vertical
5855.00	32.95	32.72	9.99	23.88	51.78	110.80	-59.02	Vertical
5875.00	30.02	32.74	10.04	23.89	48.91	105.20	-56.29	Vertical
5925.00	30.95	32.80	10.11	23.90	49.96	68.20	-18.24	Vertical

IEEE 802.11n HT20								MIMO mode
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	29.28	32.36	9.72	23.83	47.53	68.20	-20.67	Horizontal
5700.00	28.98	32.50	9.79	23.84	47.43	105.20	-57.77	Horizontal
5720.00	30.61	32.53	9.81	23.85	49.10	110.80	-61.70	Horizontal
5725.00	31.74	32.53	9.83	23.86	50.24	122.20	-71.96	Horizontal
5850.00	31.32	32.70	9.99	23.87	50.14	122.20	-72.06	Horizontal
5855.00	29.93	32.72	9.99	23.88	48.76	110.80	-62.04	Horizontal
5875.00	32.21	32.74	10.04	23.89	51.10	105.20	-54.10	Horizontal
5925.00	30.60	32.80	10.11	23.90	49.61	68.20	-18.59	Horizontal
5650.00	29.05	32.36	9.72	23.83	47.30	68.20	-20.90	Vertical
5700.00	33.70	32.50	9.79	23.84	52.15	105.20	-53.05	Vertical
5720.00	29.01	32.53	9.81	23.85	47.50	110.80	-63.30	Vertical
5725.00	28.90	32.53	9.83	23.86	47.40	122.20	-74.80	Vertical
5850.00	32.49	32.70	9.99	23.87	51.31	122.20	-70.89	Vertical
5855.00	31.11	32.72	9.99	23.88	49.94	110.80	-60.86	Vertical
5875.00	33.09	32.74	10.04	23.89	51.98	105.20	-53.22	Vertical
5925.00	29.58	32.80	10.11	23.90	48.59	68.20	-19.61	Vertical

IEEE 802.11ac HT20								MIMO mode
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	28.15	32.36	9.72	23.83	46.40	68.20	-21.80	Horizontal
5700.00	29.84	32.50	9.79	23.84	48.29	105.20	-56.91	Horizontal
5720.00	29.57	32.53	9.81	23.85	48.06	110.80	-62.74	Horizontal
5725.00	29.30	32.53	9.83	23.86	47.80	122.20	-74.40	Horizontal
5850.00	28.77	32.70	9.99	23.87	47.59	122.20	-74.61	Horizontal
5855.00	29.36	32.72	9.99	23.88	48.19	110.80	-62.61	Horizontal
5875.00	31.80	32.74	10.04	23.89	50.69	105.20	-54.51	Horizontal
5925.00	28.06	32.80	10.11	23.90	47.07	68.20	-21.13	Horizontal
5650.00	29.56	32.36	9.72	23.83	47.81	68.20	-20.39	Vertical
5700.00	30.03	32.50	9.79	23.84	48.48	105.20	-56.72	Vertical
5720.00	33.78	32.53	9.81	23.85	52.27	110.80	-58.53	Vertical
5725.00	32.53	32.53	9.83	23.86	51.03	122.20	-71.17	Vertical
5850.00	32.55	32.70	9.99	23.87	51.37	122.20	-70.83	Vertical
5855.00	31.62	32.72	9.99	23.88	50.45	110.80	-60.35	Vertical
5875.00	31.53	32.74	10.04	23.89	50.42	105.20	-54.78	Vertical
5925.00	28.54	32.80	10.11	23.90	47.55	68.20	-20.65	Vertical

IEEE 802.11n HT40								MIMO mode
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	30.95	32.36	9.72	23.83	49.20	68.20	-19.00	Horizontal
5700.00	28.45	32.50	9.79	23.84	46.90	105.20	-58.30	Horizontal
5720.00	31.59	32.53	9.81	23.85	50.08	110.80	-60.72	Horizontal
5725.00	32.56	32.53	9.83	23.86	51.06	122.20	-71.14	Horizontal
5850.00	32.59	32.70	9.99	23.87	51.41	122.20	-70.79	Horizontal
5855.00	33.33	32.72	9.99	23.88	52.16	110.80	-58.64	Horizontal
5875.00	31.65	32.74	10.04	23.89	50.54	105.20	-54.66	Horizontal
5925.00	32.49	32.80	10.11	23.90	51.50	68.20	-16.70	Horizontal
5650.00	28.85	32.36	9.72	23.83	47.10	68.20	-21.10	Vertical
5700.00	32.00	32.50	9.79	23.84	50.45	105.20	-54.75	Vertical
5720.00	31.05	32.53	9.81	23.85	49.54	110.80	-61.26	Vertical
5725.00	29.43	32.53	9.83	23.86	47.93	122.20	-74.27	Vertical
5850.00	30.42	32.70	9.99	23.87	49.24	122.20	-72.96	Vertical
5855.00	28.13	32.72	9.99	23.88	46.96	110.80	-63.84	Vertical
5875.00	28.69	32.74	10.04	23.89	47.58	105.20	-57.62	Vertical
5925.00	29.23	32.80	10.11	23.90	48.24	68.20	-19.96	Vertical

IEEE 802.11ac HT40								MIMO mode
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	33.76	32.36	9.72	23.83	52.01	68.20	-16.19	Horizontal
5700.00	32.94	32.50	9.79	23.84	51.39	105.20	-53.81	Horizontal
5720.00	32.53	32.53	9.81	23.85	51.02	110.80	-59.78	Horizontal
5725.00	28.58	32.53	9.83	23.86	47.08	122.20	-75.12	Horizontal
5850.00	31.55	32.70	9.99	23.87	50.37	122.20	-71.83	Horizontal
5855.00	30.93	32.72	9.99	23.88	49.76	110.80	-61.04	Horizontal
5875.00	30.01	32.74	10.04	23.89	48.90	105.20	-56.30	Horizontal
5925.00	31.23	32.80	10.11	23.90	50.24	68.20	-17.96	Horizontal
5650.00	31.70	32.36	9.72	23.83	49.95	68.20	-18.25	Vertical
5700.00	33.40	32.50	9.79	23.84	51.85	105.20	-53.35	Vertical
5720.00	30.20	32.53	9.81	23.85	48.69	110.80	-62.11	Vertical
5725.00	31.86	32.53	9.83	23.86	50.36	122.20	-71.84	Vertical
5850.00	31.69	32.70	9.99	23.87	50.51	122.20	-71.69	Vertical
5855.00	32.44	32.72	9.99	23.88	51.27	110.80	-59.53	Vertical
5875.00	29.68	32.74	10.04	23.89	48.57	105.20	-56.63	Vertical
5925.00	32.53	32.80	10.11	23.90	51.54	68.20	-16.66	Vertical

IEEE 802.11ac HT80								MIMO mode
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	30.97	32.36	9.72	23.83	49.22	68.20	-18.98	Horizontal
5700.00	29.17	32.50	9.79	23.84	47.62	105.20	-57.58	Horizontal
5720.00	28.21	32.53	9.81	23.85	46.70	110.80	-64.10	Horizontal
5725.00	29.66	32.53	9.83	23.86	48.16	122.20	-74.04	Horizontal
5850.00	29.58	32.70	9.99	23.87	48.40	122.20	-73.80	Horizontal
5855.00	32.59	32.72	9.99	23.88	51.42	110.80	-59.38	Horizontal
5875.00	31.51	32.74	10.04	23.89	50.40	105.20	-54.80	Horizontal
5925.00	28.40	32.80	10.11	23.90	47.41	68.20	-20.79	Horizontal
5650.00	32.23	32.36	9.72	23.83	50.48	68.20	-17.72	Vertical
5700.00	28.73	32.50	9.79	23.84	47.18	105.20	-58.02	Vertical
5720.00	33.45	32.53	9.81	23.85	51.94	110.80	-58.86	Vertical
5725.00	32.41	32.53	9.83	23.86	50.91	122.20	-71.29	Vertical
5850.00	30.61	32.70	9.99	23.87	49.43	122.20	-72.77	Vertical
5855.00	30.98	32.72	9.99	23.88	49.81	110.80	-60.99	Vertical
5875.00	28.18	32.74	10.04	23.89	47.07	105.20	-58.13	Vertical
5925.00	32.08	32.80	10.11	23.90	51.09	68.20	-17.11	Vertical

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*

7.7 Spurious Emission

7.7.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 40GHz
Test site:	Measurement Distance: 3m

Receiver setup:

Frequency	Detector	RBW	VBW	Value
9kHz-150KHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
Above 1GHz	Peak	1MHz	3MHz	Peak Value
	RMS	1MHz	3MHz	Average Value

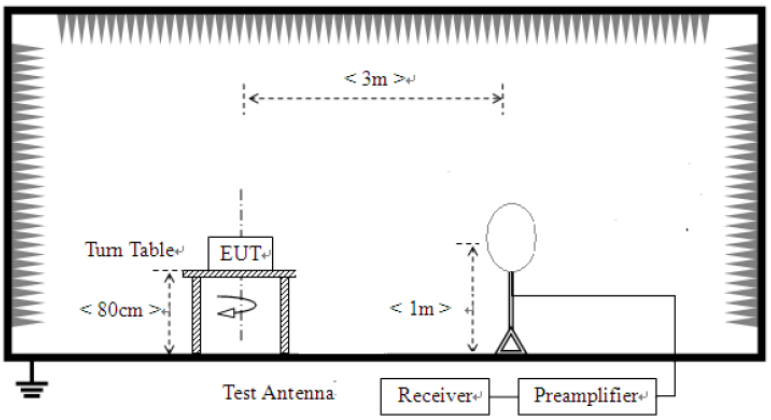
Limit:

Frequency	Limit (uV/m)	Value	Measurement Distance
0.009MHz-0.490MHz	2400/F(KHz)	QP	300m
0.490MHz-1.705MHz	24000/F(KHz)	QP	30m
1.705MHz-30MHz	30	QP	30m
30MHz-88MHz	100	QP	3m
88MHz-216MHz	150	QP	
216MHz-960MHz	200	QP	
960MHz-1GHz	500	QP	

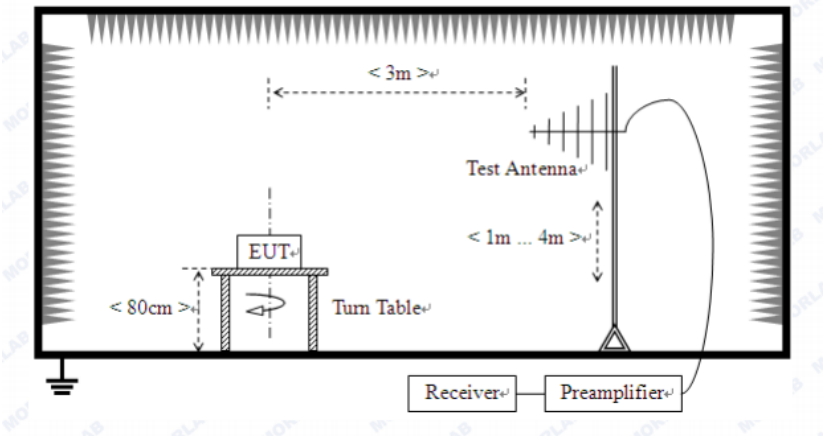
Frequency	Limit (dBm/MHz)	Remark
Above 1GHz	-27.0	Peak Value

Test setup:

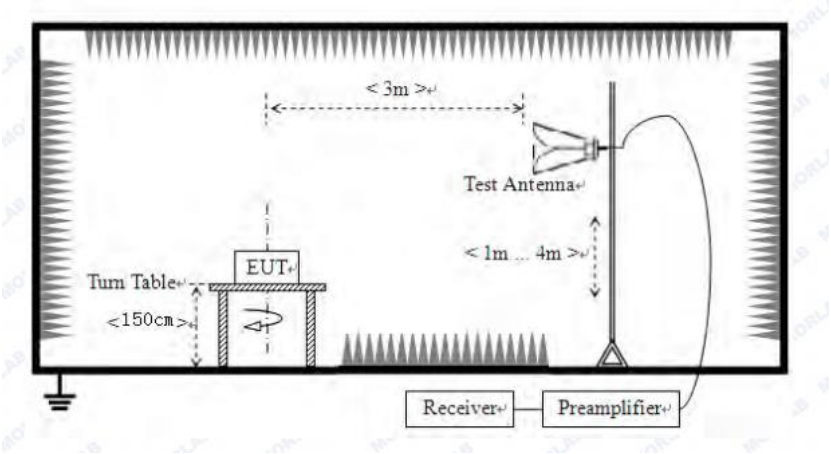
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



Test Procedure:

1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have

	10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remarks:

1. *Only the worst case Main Antenna test data.*
2. *Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.*

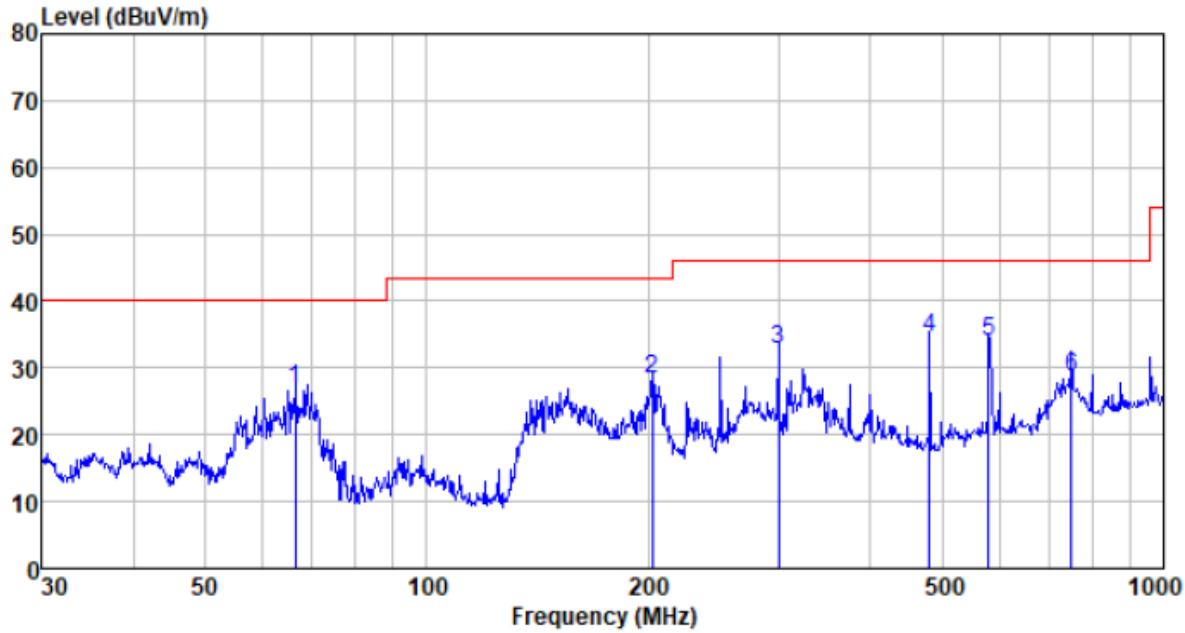
Measurement Data:

9 kHz ~ 30 MHz

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.

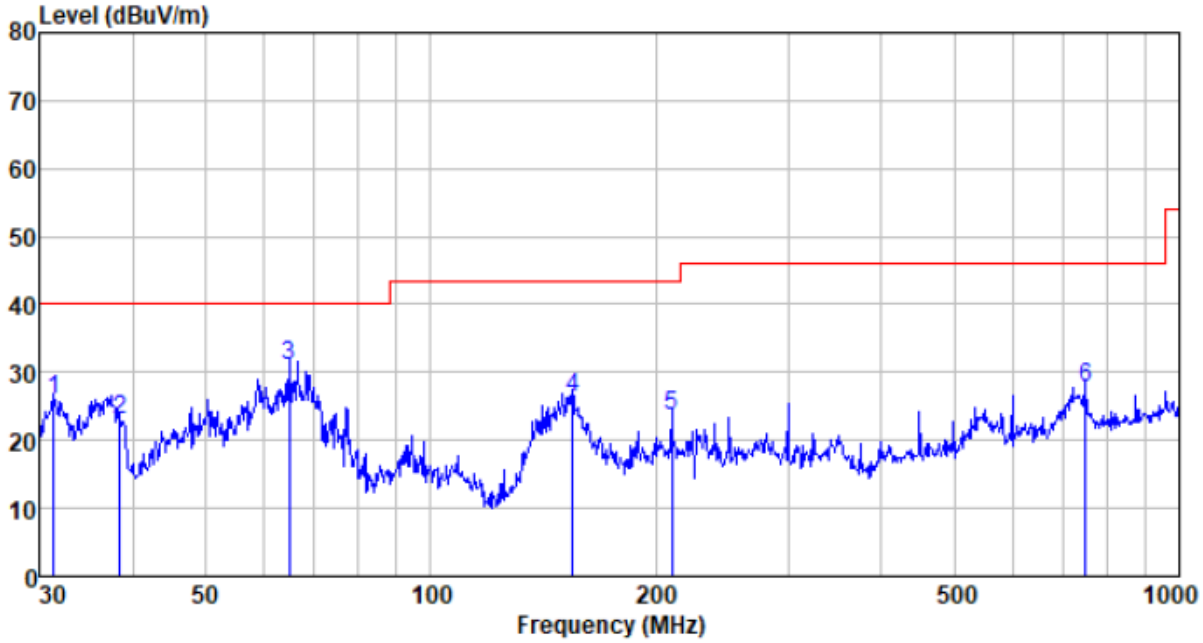
Below 1GHz

Horizontal:



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
66.266	53.49	8.88	0.91	36.40	26.88	40.00	-13.12	QP
202.100	53.49	10.47	1.85	37.33	28.48	43.50	-15.02	QP
300.367	54.08	13.60	2.36	37.42	32.62	46.00	-13.38	QP
480.528	51.82	16.93	3.22	37.51	34.46	46.00	-11.54	QP
578.670	48.83	19.06	3.64	37.53	34.00	46.00	-12.00	QP
750.108	41.34	20.53	4.28	37.62	28.53	46.00	-17.47	QP

Vertical:



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
31.399	49.25	11.23	0.57	35.11	25.94	40.00	-14.06	QP
38.481	45.97	11.95	0.65	35.58	22.99	40.00	-17.01	QP
64.659	57.11	9.46	0.90	36.38	31.09	40.00	-8.91	QP
154.821	53.94	7.95	1.60	37.10	26.39	43.50	-17.11	QP
210.048	48.33	10.80	1.90	37.34	23.69	43.50	-19.81	QP
750.108	40.58	20.53	4.28	37.62	27.77	46.00	-18.23	QP

Above 1GHz:

802.11a SISO,11n(HT20) MIMO,11ac(HT20) MIMO,11n(HT40) MIMO,11ac(HT40) MIMO,11ac(HT80) MIMO all have been tested, Only worst case is reported

NOTE:ANT 1 is worse case

Test mode:		802.11a SISO		Test channel:		lowest	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dBuV/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
V	11490	21.15	21.64	42.79	54(Note3)	-11.21	PK
V	17235	20.75	21.8	42.55	54(Note3)	-11.45	PK
H	11490	21.95	21.83	43.78	54(Note3)	-10.22	PK
H	17235	19.61	21.67	41.28	54(Note3)	-12.72	PK

Test mode:		802.11a SISO		Test channel:		Middle	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dBuV/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
V	11570	22.31	21.64	43.95	54(Note3)	-10.05	PK
V	17355	23.75	21.8	45.55	54(Note3)	-8.45	PK
H	11570	24.92	21.83	46.75	54(Note3)	-7.25	PK
H	17355	25.13	21.67	46.80	54(Note3)	-7.20	PK

Test mode:		802.11a SISO		Test channel:		Highest	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dBuV/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
V	11650	21.25	21.64	42.89	54(Note3)	-11.11	PK
V	17475	21.58	21.8	43.38	54(Note3)	-10.62	PK
H	11650	20.35	21.83	42.18	54(Note3)	-11.82	PK
H	17475	19.19	21.67	40.86	54(Note3)	-13.14	PK

Test mode:		802.11ac(HT40) MIMO		Test channel:		Lowest	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dBuV/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
V	11510	22.94	21.67	44.61	54(Note3)	-9.39	PK
V	17265	22.12	21.83	43.95	54(Note3)	-10.05	PK
H	11510	20.32	21.67	41.99	54(Note3)	-12.01	PK
H	17265	22.26	21.83	44.09	54(Note3)	-9.91	PK

Test mode:		802.11ac(HT40) MIMO		Test channel:		Highest	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dBuV/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
V	11590	21.34	21.67	43.01	54(Note3)	-10.99	PK
V	17385	25.08	21.83	46.91	54(Note3)	-7.09	PK
H	11590	24.36	21.67	46.03	54(Note3)	-7.97	PK
H	17385	23.00	21.83	44.83	54(Note3)	-9.17	PK

Test mode:		802.11ac(HT80) MIMO		Test channel:		Middle	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dBuV/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
V	11550	24.68	21.65	46.33	54(Note3)	-7.67	PK
V	17325	25.92	21.81	47.73	54(Note3)	-6.27	PK
H	11550	25.48	21.65	47.13	54(Note3)	-6.87	PK
H	17325	23.66	21.81	45.47	54(Note3)	-8.53	PK

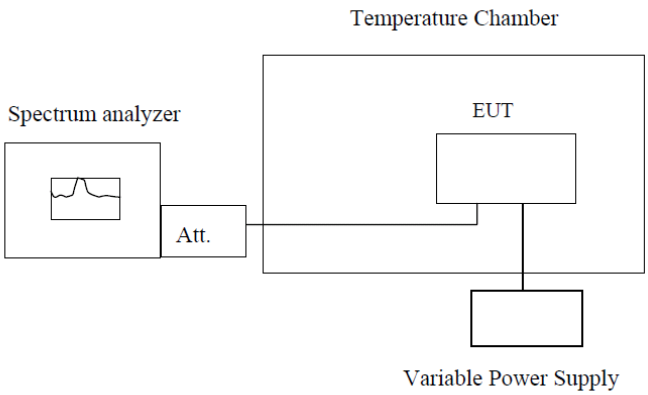
Notes:

1. Measure Level = Reading Level + Factor.

2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

7.8 Frequency stability

Test Requirement:	FCC Part15 C Section 15.407(g)
Test Method:	ANSI C63.10:2013, FCC Part 2.1055
Limit:	Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified
Test Procedure:	The EUT was setup to ANSI C63.4, 2003; tested to 2.1055 for compliance to FCC Part 15.407(g) requirements.
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement data:

HT 20MHz					
Frequency stability versus Temp.					
Power Supply: AC 120V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5745	5745.2111	5744.3518	5743.7418	5745.9423
	5785	5785.9074	5784.8230	5783.9103	5785.9676
	5825	5825.7316	5824.7613	5823.8800	5825.6167
-20	5745	5745.2606	5744.4896	5743.2474	5745.1213
	5785	5785.0246	5784.6380	5783.9583	5785.6092
	5825	5825.2037	5824.7680	5824.6603	5825.9678
-10	5745	5745.9397	5744.9597	5744.1107	5745.1337
	5785	5785.3782	5784.0965	5784.3147	5785.0668
	5825	5825.6048	5824.8947	5824.4193	5825.5757
0	5745	5745.6384	5744.1322	5744.1473	5745.0484
	5785	5785.5709	5784.2273	5784.7112	5785.7616
	5825	5825.1361	5824.3194	5824.2553	5825.5414
10	5745	5745.2856	5744.1961	5744.6210	5745.5739
	5785	5785.1896	5784.3994	5784.7122	5785.3565
	5825	5825.7337	5824.5732	5824.4927	5825.1028
20	5745	5745.3365	5744.1474	5744.5663	5745.8285
	5785	5785.0144	5784.8115	5784.0315	5785.8905
	5825	5825.9002	5824.4372	5824.0651	5825.9230
30	5745	5745.5847	5744.7714	5744.9151	5745.1459
	5785	5785.5344	5784.0208	5784.4699	5785.3400
	5825	5825.3070	5824.3561	5824.5839	5825.9434
40	5745	5745.9591	5744.8275	5744.4190	5745.6214
	5785	5785.2306	5784.2375	5784.2707	5785.3462
	5825	5825.4808	5824.7962	5824.1536	5825.6045
50	5745	5745.5995	5744.9327	5744.6373	5745.2315
	5785	5785.8436	5784.0723	5784.6557	5785.0287
	5825	5825.9470	5824.4179	5824.8495	5825.5067

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VAC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
102	5745	5745.6241	5745.2356	5743.2662	5744.3623
	5785	5785.7197	5785.0170	5783.6832	5784.6234
	5825	5825.8774	5825.9256	5823.4374	5824.8905
120	5745	5745.4933	5745.6525	5743.8391	5744.5971
	5785	5785.7247	5785.5613	5783.0078	5784.4985
	5825	5825.5304	5825.3786	5824.9892	5824.0952
138	5745	5745.3597	5745.0233	5744.7284	5744.4802
	5785	5785.7252	5785.4562	5784.1601	5784.2674
	5825	5825.7619	5825.9951	5824.9290	5824.7846

HT40 MHz					
Frequency stability versus Temp.					
Power Supply: AC 120V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5755	5755.3961	5753.0688	5753.4465	5755.4833
	5795	5795.2551	5794.5492	5794.8446	5795.5978
-20	5755	5755.3746	5754.8275	5754.6690	5755.8279
	5795	5795.3143	5794.5494	5794.7674	5795.6327
-10	5755	5755.4580	5754.8914	5754.2686	5755.0840
	5795	5795.2813	5794.0128	5794.7560	5795.6432
0	5755	5755.5384	5754.6316	5754.0906	5755.3809
	5795	5795.6663	5794.6675	5794.5424	5795.9095
10	5755	5755.5202	5754.4251	5754.1688	5755.9956
	5795	5795.7721	5794.8150	5794.1305	5795.3806
20	5755	5755.9030	5754.0028	5754.4478	5755.4078
	5795	5795.8334	5794.5198	5794.5448	5795.0802
30	5755	5755.1659	5754.8192	5754.8514	5755.3159
	5795	5795.4456	5794.4830	5794.6017	5795.5436
40	5755	5755.2481	5754.5821	5754.5339	5755.7970
	5795	5795.2757	5794.7865	5794.0191	5795.7477
50	5755	5755.4283	5754.1210	5754.2532	5755.9664
	5795	5795.6200	5794.9576	5794.6713	5795.1432

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VAC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
102	5755	5755.5108	5754.5470	5755.2635	5753.6716
	5795	5795.4593	5794.8476	5795.2777	5793.9022
120	5755	5755.2947	5754.2311	5755.3130	5754.3286
	5795	5795.2470	5794.9168	5795.0142	5794.8914
138	5755	5755.5721	5754.7758	5755.1203	5754.0679
	5795	5795.9584	5794.1044	5795.1967	5794.9245

HT80 MHz					
Frequency stability versus Temp.					
Power Supply: AC 120V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5775	5776.9211	5775.9779	5774.2296	5773.1769
-20	5775	5776.5039	5775.0500	5774.2738	5773.6869
-10	5775	5776.7078	5775.4713	5774.1546	5773.5380
0	5775	5775.2687	5775.0052	5774.1975	5774.7914
10	5775	5775.1628	5775.0889	5774.0574	5774.4813
20	5775	5775.6159	5775.3166	5774.7403	5774.9187
30	5775	5775.6316	5775.5820	5774.1156	5774.8505
40	5775	5775.3003	5775.6807	5774.3060	5774.4088
50	5775	5775.2926	5775.3735	5774.9905	5774.1597

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VAC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
102	5775	5774.4499	5776.0340	5775.3122	5775.9799
120	5775	5773.5660	5776.9365	5775.7443	5775.6145
138	5775	5774.2934	5776.9338	5775.2593	5776.9820

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

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