

FCC REPORT

(UNII)

Applicant: Libre Wireless Technologies Inc.

Address of Applicant: R2100 Geng Road, Suite 210 Palo Alto, CA 94303, USA

Equipment Under Test (EUT)

Product Name: WiFi Media Streaming Module

Model No.: LS9-AC11DBT

Trade mark: 

FCC ID: 2ADBML-LS9AC11DBT

Applicable standards: FCC CFR Title 47 Part 15 Subpart E Section 15.407

Date of sample receipt: 01 Jul., 2017

Date of Test: 01 Jul., to 11 Jul., 2017

Date of report issued: 12 Jul., 2017

Test Result: PASS*

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

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
00	12 Jul., 2017	Original

Tested by:



Test Engineer

Date:

12 Jul., 2017

Reviewed by:



Project Engineer

Date:

12 Jul., 2017

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4 Test Summary

Test Item	Section in CFR 47	Test Result
Antenna requirement	15.203/15.407 (g)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.407 (a) (1) (iv) & (a) (3)	Pass
26dB Occupied Bandwidth	15.407 (a) (5)	Pass
6dB Emission Bandwidth	15.407(e)	Pass
Power Spectral Density	15.407 (a) (1) (iv) &(a) (3)	Pass
Band Edge	15.407(b)	Pass
Spurious Emission	15.205/15.209	Pass
Frequency Stability	15.407(g)	Pass

Pass: The EUT complies with the essential requirements in the standard.

5 General Information

5.1 Client Information

Applicant:	Libre Wireless Technologies Inc.
Address:	R2100 Geng Road, Suite 210 Palo Alto, CA 94303, USA
Manufacturer	Shenzhen Zowee Technology Co., Ltd.
Address:	NO.5 Zowee technology building, Science & Technology industrial park of privately owned enterprises, Pingshan, Xili, Nanshan district, Shenzhen
Factory:	Shenzhen Zowee Technology Co., Ltd.
Address:	No 149, Tongfuyu Industrial Zone Songgang, Baoan District Shenzhen Guangdong 518105 China

5.2 General Description of E.U.T.

Product Name:	WiFi Media Streaming Module
Model No.:	LS9-AC11DBT
Operation Frequency:	Band 1: 5150MHz-5250MHz, Band 2: 5250MHz-5350MHz Band 3: 5470MHz-5725MHz, Band 4: 5725MHz-5825MHz
Channel numbers:	Band 1: 802.11a/802.11n20: 4, 802.11n40: 2, 802.11ac: 1 Band 2: 802.11a/802.11n20: 4, 802.11n40: 2, 802.11ac: 1 Band 3: 802.11a/802.11n20: 11, 802.11n40: 5, 802.11ac: 2 Band 4: 802.11a/802.11n20: 5, 802.11n40: 2, 802.11ac: 1
Channel separation:	802.11a/802.11n20: 20MHz, 802.11n40: 40MHz, 802.11ac: 80MHz
Modulation technology: (IEEE 802.11a)	BPSK, QPSK, 16-QAM, 64-QAM
Modulation technology: (IEEE 802.11n)	BPSK, QPSK, 16-QAM, 64-QAM
Modulation technology: (IEEE 802.11ac)	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Data speed (IEEE 802.11a)	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps
Data speed (IEEE 802.11n20):	MCS0: 6.5Mbps, MCS1: 13Mbps, MCS2: 19.5Mbps, MCS3: 26Mbps, MCS4: 39Mbps, MCS5: 52Mbps, MCS6: 58.5Mbps, MCS7: 65Mbps
Data speed (IEEE 802.11n40):	MCS0: 15Mbps, MCS1: 30Mbps, MCS2: 45Mbps, MCS3: 60Mbps, MCS4: 90Mbps, MCS5: 120Mbps, MCS6: 135Mbps, MCS7: 150Mbps
Data speed (IEEE 802.11ac):	Up to 433.3Mbps
Antenna Type:	External Antenna
Antenna gain:	5.9 dBi
Power supply:	DC3.3V

Operation Frequency each of channel

Band 1					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	38	5190MHz	42	5210MHz
40	5200MHz	46	5230MHz		
44	5220MHz				
48	5240MHz				
Band 2					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
52	5260MHz	54	5270MHz	58	5290MHz
56	5280MHz	62	5310MHz		
60	5300MHz				
64	5320MHz				
Band 3					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
100	5500MHz	102	5510MHz	106	5530MHz
104	5520MHz	110	5550MHz	122	5610MHz
108	5540MHz	118	5590MHz		
112	5560MHz	126	5630MHz		
116	5580MHz	134	5670MHz		
120	5600MHz				
124	5620MHz				
128	5640MHz				
132	5660MHz				
136	5680MHz				
140	5700MHz				
Band 4					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	155	5775MHz
153	5765MHz	159	5795MHz		
157	5785MHz				
161	5805MHz				
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:

Band 1					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest channel	5180MHz	Lowest channel	5190MHz	Middle channel	5210MHz
Middle channel	5200MHz	Highest channel	5230MHz		
Highest channel	5240MHz				
Band 2					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest channel	5260MHz	Lowest channel	5270MHz	Middle channel	5290MHz
Middle channel	5280MHz	Highest channel	5310MHz		
Highest channel	5320MHz				
Band 3					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest channel	5500MHz	Lowest channel	5510MHz	Lowest channel	5530MHz
Middle channel	5600MHz	Middle channel	5590MHz	Highest channel	5610MHz
Highest channel	5700MHz	Highest channel	5670MHz		
Band 4					
802.11a/802.11n20		802.11n40		802.11ac	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest channel	5745MHz	Lowest channel	5755MHz	Middle channel	5775MHz
Middle channel	5785MHz	Highest channel	5795MHz		
Highest channel	5825MHz				

5.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Continuously transmitting mode	Keep the EUT in 100% duty cycle transmitting with modulation.
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	6 Mbps
802.11n20	6.5 Mbps
802.11n40	13 Mbps
802.11ac	29.3 Mbps
Final Test Mode:	
According to ANSI C63.4 standards, the test results are both the “worst case” and “worst setup” 6 Mbps for 802.11a, 6.5 Mbps for 802.11n20, 13 Mbps for 802.11n40 and 29.3Mbps for 802.11ac. All test items for 802.11a, 802.11ac and 802.11n were performed with duty cycle above 98%, meet the requirements of KDB789033.	

5.4 Measurement Uncertainty

Items	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 30MHz)	2.14 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	4.24 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	4.35 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	4.44 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	4.56 dB (k=2)

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745	N/A	DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	SK-8115	N/A	DoC
DELL	MOUSE	MOC5UO	N/A	DoC
FLY POWER	Switching Adapter	PS24A120K2000UD	N/A	N/A

5.6 Laboratory Facility

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

● **FCC- Registration No.: 817957**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. 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 out files. Registration 817957, February 27, 2012.

● **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

5.7 Laboratory Location

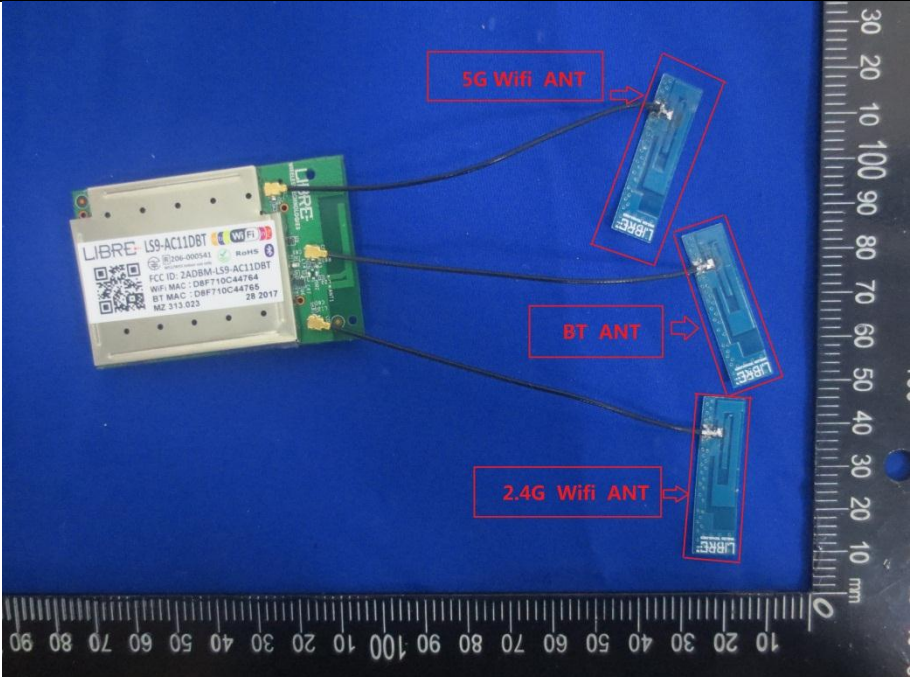
Shenzhen Zhongjian Nanfang Testing Co., Ltd.
 Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
 Bao'an District, Shenzhen, Guangdong, China
 Tel: +86-755-23118282, Fax: +86-755-23116366
 Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>

5.8 Test Instruments list

Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017
BiConiLog Antenna	Schwarzbeck	VULB9163	CCIS0005	02-25-2017	02-24-2018
Horn Antenna	Schwarzbeck	BBHA9120D	CCIS0006	02-25-2017	02-24-2018
Pre-amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	02-25-2017	02-24-2018
Pre-amplifier (1GHz-18GHz)	CDS	PAP-1G18	CCIS0011	02-25-2017	02-24-2018
Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	02-25-2017	02-24-2018
Horn Antenna	ETS-LINDGREN	3160	GTS217	02-25-2017	02-24-2018
Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP30	CCIS0023	02-25-2017	02-24-2018
EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	02-25-2017	02-24-2018
Loop antenna	Schwarzbeck	FMZB1519B	CCIS0188	02-25-2017	02-24-2018
Spectrum Analyzer	Keysight	N9020A	CCIS0174	10-24-2016	10-23-2017
EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	02-25-2017	02-24-2018
LISN	CHASE	MN2050D	CCIS0074	02-25-2017	02-24-2018
LISN	ESH3-Z5	Rohde & Schwarz	CCIS0198	07-21-2017	07-20-2018
Coaxial Cable	CCIS	N/A	CCIS0086	02-25-2017	02-24-2018
EMI Test Software	AUDIX	E3	N/A	N/A	N/A

6 Test results and Measurement Data

6.1 Antenna requirement

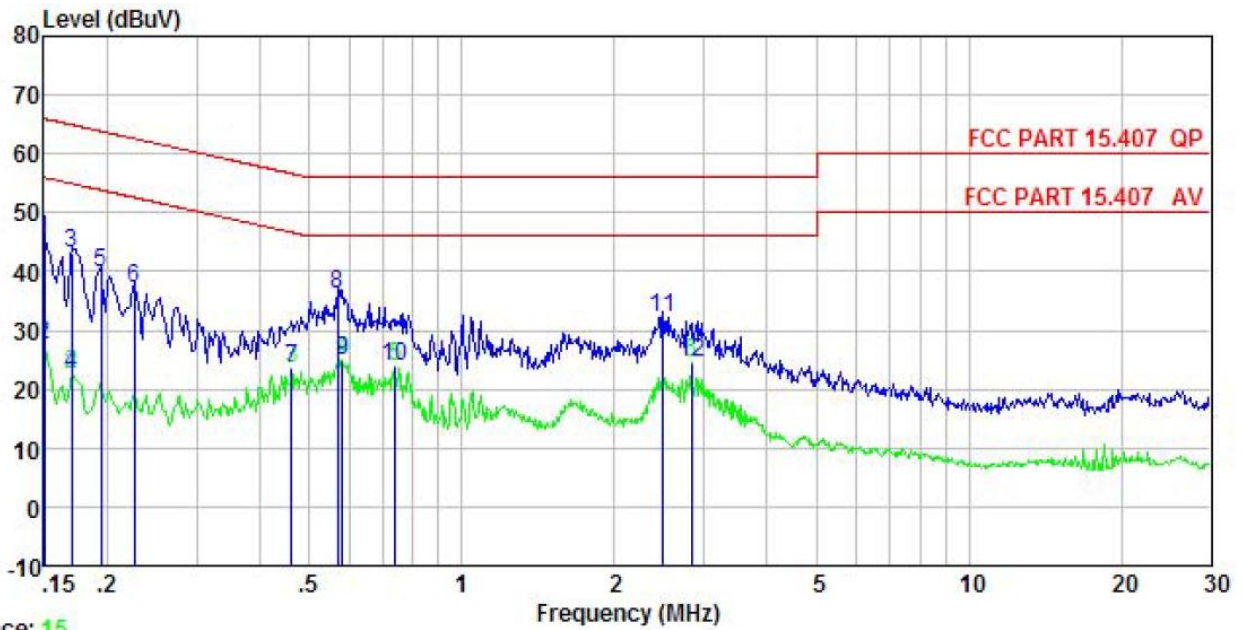
Standard requirement:	FCC Part15 E Section 15.203 /407(a)
<p><i>15.203 requirement:</i> <i>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that 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.</i> <i>This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</i></p>	
E.U.T Antenna:	
<p><i>The WiFi antenna is an External antenna which cannot replace by end-user, the best case gain of the antenna is 5.9 dBi.</i></p>	
	

6.2 Conducted Emission

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														
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th></th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>0.15-0.5</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>0.5-5</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>5-30</td> </tr> </tbody> </table>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak		0.15-0.5	66 to 56*	0.15-0.5	0.5-5	56	0.5-5	5-30	60	5-30
	Frequency range (MHz)		Limit (dBuV)												
		Quasi-peak													
	0.15-0.5	66 to 56*	0.15-0.5												
0.5-5	56	0.5-5													
5-30	60	5-30													
* Decreases with the logarithm of the frequency.															
Test procedure	<ol style="list-style-type: none"> The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). It provides a 50ohm/50uH coupling impedance for the measuring equipment. 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). 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 setup:	<p><i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>														
Test Instruments:	Refer to section 5.8 for details														
Test mode:	Refer to section 5.3 for details.														
Test results:	Passed														

Measurement Data:

Line:

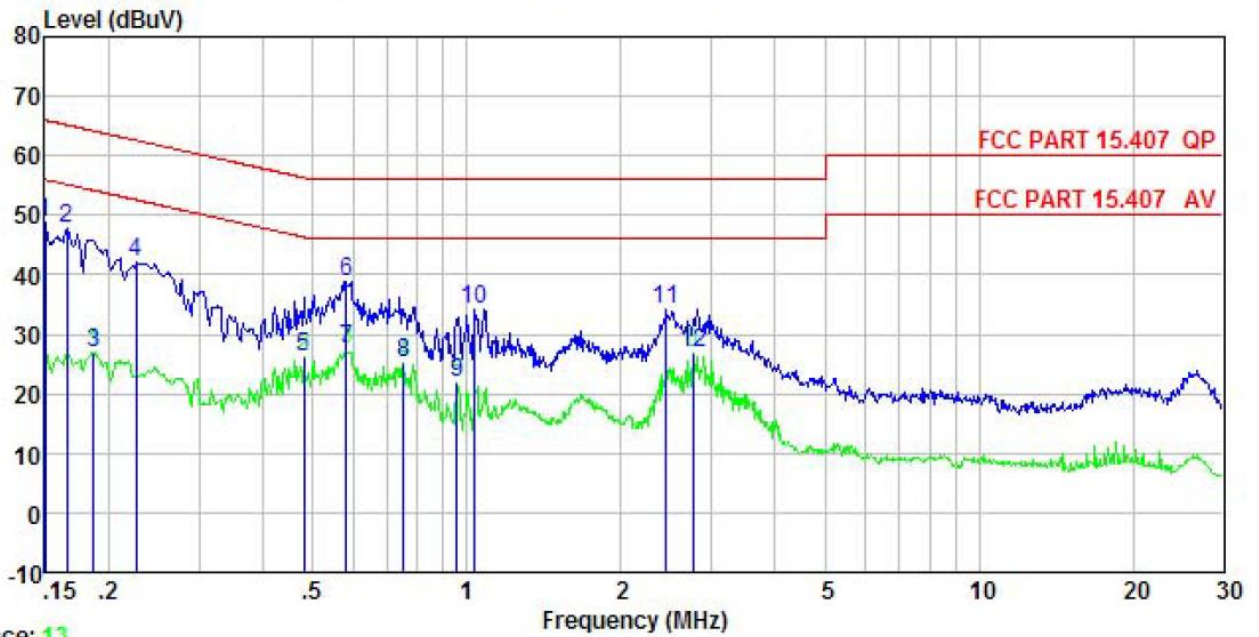


Trace: 15

Site : CCIS Shielding Room
 Condition : FCC PART 15.407 QP LISN LINE
 EUT : WiFi Media Streaming Module
 Model : LS9AD-AC11DBT
 Test Mode : 5GWIFI mode
 Power Rating : AC 120V/60Hz
 Environment : Temp: 23 °C Humi:56% Atmos:101KPa
 Test Engineer: YT
 Remark :

	Read Freq	Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	35.08	-0.56	10.78	45.30	66.00	-20.70	QP
2	0.150	17.38	-0.56	10.78	27.60	56.00	-28.40	Average
3	0.170	32.75	-0.54	10.77	42.98	64.94	-21.96	QP
4	0.170	12.27	-0.54	10.77	22.50	54.94	-32.44	Average
5	0.194	29.58	-0.52	10.76	39.82	63.84	-24.02	QP
6	0.226	26.76	-0.52	10.75	36.99	62.61	-25.62	QP
7	0.461	13.13	-0.49	10.74	23.38	46.67	-23.29	Average
8	0.570	25.82	-0.49	10.76	36.09	56.00	-19.91	QP
9	0.582	14.71	-0.49	10.76	24.98	46.00	-21.02	Average
10	0.739	13.56	-0.48	10.79	23.87	46.00	-22.13	Average
11	2.487	21.67	-0.44	10.94	32.17	56.00	-23.83	QP
12	2.839	14.04	-0.44	10.93	24.53	46.00	-21.47	Average

Neutral:



Trace: 13

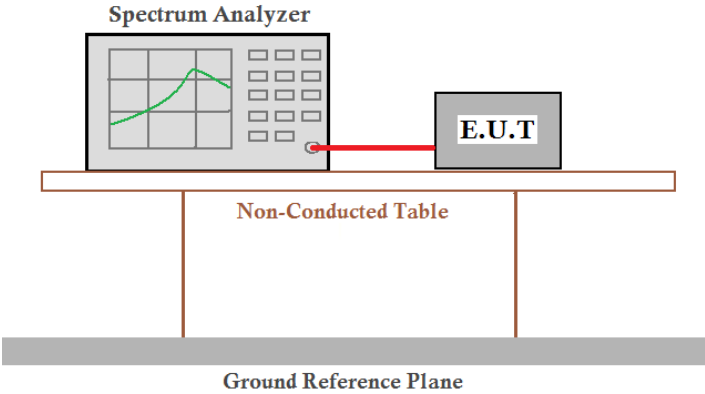
Site : CCIS Shielding Room
 Condition : FCC PART 15.407 QP LISN NEUTRAL
 EUT : WiFi Media Streaming Module
 Model : LS9-AC11DBT
 Test Mode : 5GWIFI mode
 Power Rating : AC 120V/60Hz
 Environment : Temp: 23 °C Humi:56% Atmos:101KPa
 Test Engineer: MT
 Remark :

	Read	LISN	Cable	Limit	Over		
Freq	Level	Factor	Loss	Line	Limit	Remark	
MHz	dBuV	dB	dB	dBuV	dB		
1	0.150	38.51	-0.38	10.78	48.91	66.00	-17.09 QP
2	0.166	37.43	-0.37	10.77	47.83	65.16	-17.33 QP
3	0.186	16.51	-0.35	10.76	26.92	54.20	-27.28 Average
4	0.226	31.62	-0.33	10.75	42.04	62.61	-20.57 QP
5	0.481	15.76	-0.30	10.75	26.21	46.32	-20.11 Average
6	0.582	28.49	-0.30	10.76	38.95	56.00	-17.05 QP
7	0.582	16.95	-0.30	10.76	27.41	46.00	-18.59 Average
8	0.751	14.64	-0.30	10.79	25.13	46.00	-20.87 Average
9	0.958	11.19	-0.29	10.86	21.76	46.00	-24.24 Average
10	1.037	23.66	-0.29	10.87	34.24	56.00	-21.76 QP
11	2.448	23.43	-0.23	10.94	34.14	56.00	-21.86 QP
12	2.765	16.08	-0.21	10.93	26.80	46.00	-19.20 Average

Notes:

1. An initial pre-scan was performed on the live 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

6.3 Conducted Output Power

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (ii) & (a) (3)
Test Method:	ANSI C63.10: 2013, KDB789033
Limit:	Band 1: 24dBm Band 2: 24dBm Band 3: 24dBm Band 4: 30dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer and an E.U.T. (Equipment Under Test) are connected by a red cable. Both are placed on a Non-Conducted Table, which is supported by two legs. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

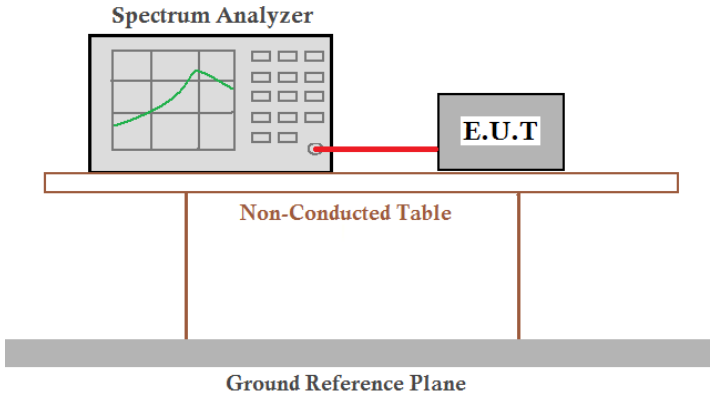
Band 1				
Mode	Test CH	Conducted Output power (dBm)	Limit (dBm)	Result
802.11a	Lowest	13.79	24.00	Pass
	Middle	13.82	24.00	Pass
	Highest	13.31	24.00	Pass
802.11n20	Lowest	13.18	24.00	Pass
	Middle	12.84	24.00	Pass
	Highest	12.03	24.00	Pass
802.11n40	Lowest	12.89	24.00	Pass
	Highest	12.47	24.00	Pass
802.11ac20	Lowest	12.76	24.00	Pass
	Middle	12.55	24.00	Pass
	Highest	12.10	24.00	Pass
802.11ac40	Lowest	13.27	24.00	Pass
	Highest	12.41	24.00	Pass
802.11ac80	Lowest	10.79	24.00	Pass

Band 2				
Mode	Test CH	Conducted Output power (dBm)	Limit (dBm)	Result
802.11a	Lowest	13.11	24.00	Pass
	Middle	12.85	24.00	Pass
	Highest	12.38	24.00	Pass
802.11n20	Lowest	11.82	24.00	Pass
	Middle	11.73	24.00	Pass
	Highest	11.43	24.00	Pass
802.11n40	Lowest	11.95	24.00	Pass
	Highest	11.53	24.00	Pass
802.11ac20	Lowest	11.84	24.00	Pass
	Middle	11.87	24.00	Pass
	Highest	11.15	24.00	Pass
802.11ac40	Lowest	11.99	24.00	Pass
	Highest	11.18	24.00	Pass
802.11ac80	Lowest	10.00	24.00	Pass

Band 3				
Mode	Test CH	Conducted Output power (dBm)	Limit (dBm)	Result
802.11a	Lowest	11.09	24.00	Pass
	Middle	11.99	24.00	Pass
	Highest	12.79	24.00	Pass
802.11n20	Lowest	10.04	24.00	Pass
	Middle	11.27	24.00	Pass
	Highest	11.79	24.00	Pass
802.11n40	Lowest	10.20	24.00	Pass
	Middle	11.33	24.00	Pass
	Highest	12.03	24.00	Pass
802.11ac20	Lowest	10.08	24.00	Pass
	Middle	11.27	24.00	Pass
	Highest	11.83	24.00	Pass
802.11ac40	Lowest	10.42	24.00	Pass
	Middle	11.61	24.00	Pass
	Highest	12.20	24.00	Pass
802.11ac80	Lowest	9.13	24.00	Pass
	Highest	10.29	24.00	Pass

Band 4				
Mode	Test CH	Conducted Output power (dBm)	Limit (dBm)	Result
802.11a	Lowest	13.81	30.00	Pass
	Middle	11.61	30.00	Pass
	Highest	11.56	30.00	Pass
802.11n20	Lowest	11.65	30.00	Pass
	Middle	11.66	30.00	Pass
	Highest	12.11	30.00	Pass
802.11n40	Lowest	12.66	30.00	Pass
	Highest	12.72	30.00	Pass
802.11ac20	Lowest	12.77	30.00	Pass
	Middle	12.75	30.00	Pass
	Highest	11.73	30.00	Pass
802.11ac40	Lowest	11.22	30.00	Pass
	Highest	11.17	30.00	Pass
802.11ac80	Lowest	10.10	30.00	Pass

6.4 Occupy Bandwidth

Test Requirement:	FCC Part15 E Section 15.407 (a) (5) and Section 15.407 (e)
Test Method:	ANSI C63.10:2013 and KDB 789033
Limit:	Band 1/2/3/4: N/A (26dB Emission Bandwidth and 99% Occupy Bandwidth) Band 4: >500kHz (6dB Bandwidth)
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

Band 1:

Test Channel	26dB Emission Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	20.16	20.64	40.32	20.56	40.64	---	N/A	PASS
Middle	20.16	20.48	---	20.56	---	81.28		
Highest	20.24	20.48	40.32	20.40	40.32	---		
Test Channel	99% Occupy Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	16.88	17.84	36.16	17.84	36.16	---	N/A	PASS
Middle	16.88	17.84	---	17.84	---	76.48		
Highest	16.96	17.76	36.16	17.76	36.16	---		

Band 2:

Test Channel	26dB Emission Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	20.24	17.76	40.64	20.40	40.64	---	N/A	PASS
Middle	20.24	20.48	---	20.56	---	82.56		
Highest	20.24	20.48	40.64	20.48	40.80	---		
Test Channel	99% Occupy Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	16.96	17.76	36.16	17.76	36.16	---	N/A	PASS
Middle	16.96	17.84	---	17.76	---	76.16		
Highest	16.96	17.76	36.16	17.92	36.16	---		

Band 3:

Test Channel	26dB Emission Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	20.40	20.56	40.48	20.48	40.32	81.60	N/A	PASS
Middle	20.08	20.48	40.16	20.56	40.48	---		
Highest	20.16	20.48	40.96	20.40	40.64	81.60		
Test Channel	99% Occupy Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	17.84	17.84	36.16	17.84	40.48	76.16	N/A	PASS
Middle	16.96	17.76	36.16	17.76	36.16	---		
Highest	16.96	17.76	36.16	17.76	36.16	76.16		

Band 4:

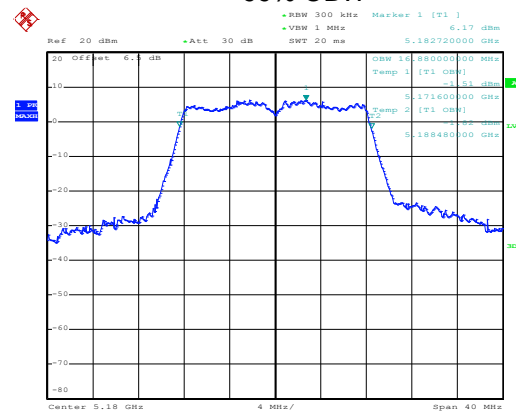
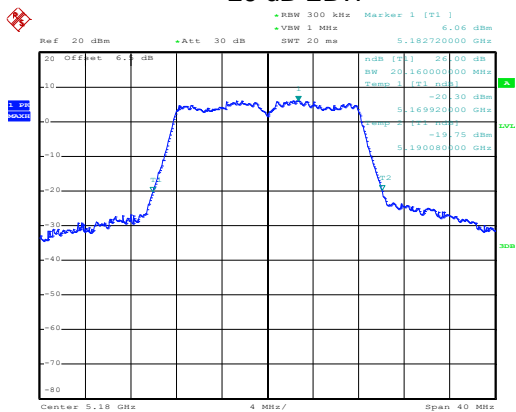
Test Channel	26dB Emission Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	20.24	20.64	40.64	20.56	40.48	---	N/A	PASS
Middle	20.16	20.48	---	20.40	---	81.28		
Highest	20.16	20.48	40.48	20.40	40.80	---		
Test Channel	99% Occupy Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	16.88	17.84	36.16	17.84	36.16	---	N/A	PASS
Middle	16.96	17.84	---	17.84	---	76.48		
Highest	16.88	17.84	36.32	17.84	36.16	---		
Test Channel	6dB Emission Bandwidth (MHz)						Limit	Result
	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80		
Lowest	16.56	17.76	36.32	17.76	36.16	---	>500kHz	PASS
Middle	16.56	17.76	---	17.76	---	77.12		
Highest	16.56	17.76	36.32	17.76	36.48	---		

Test plot as follows:
Band 1:

802.11a

26 dB EBW

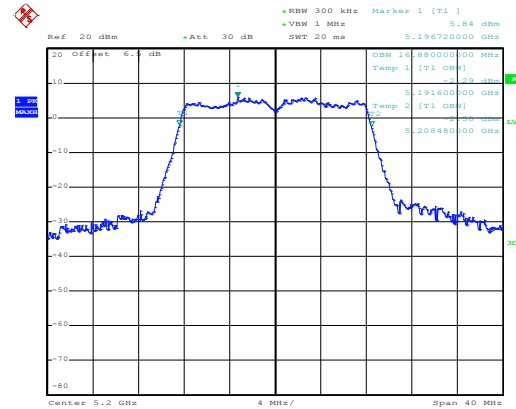
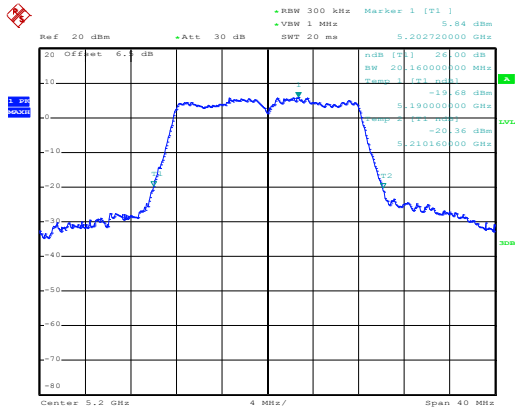
99% OBW



Date: 2.JUL.2017 17:00:15

Date: 2.JUL.2017 16:59:37

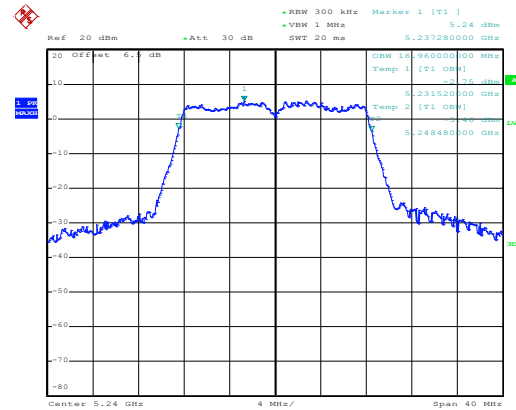
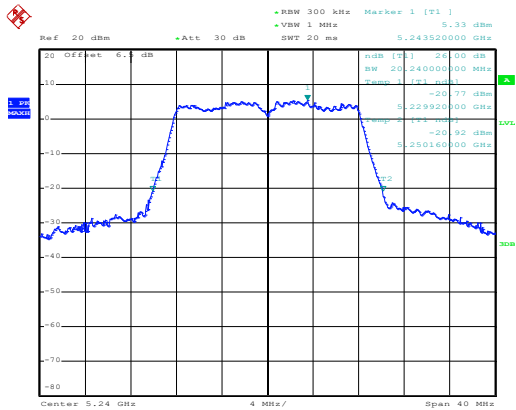
Lowest channel



Date: 2.JUL.2017 17:01:02

Date: 2.JUL.2017 17:01:25

Middle channel

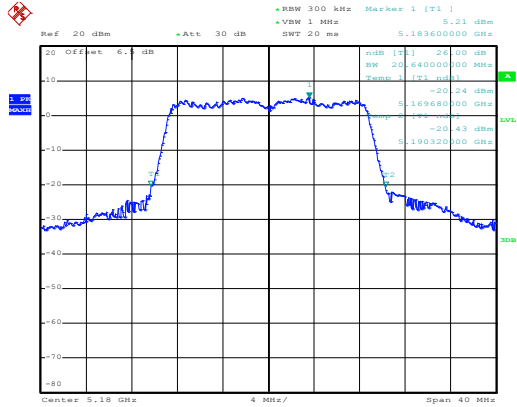


Date: 2.JUL.2017 17:02:56

Date: 2.JUL.2017 17:02:02

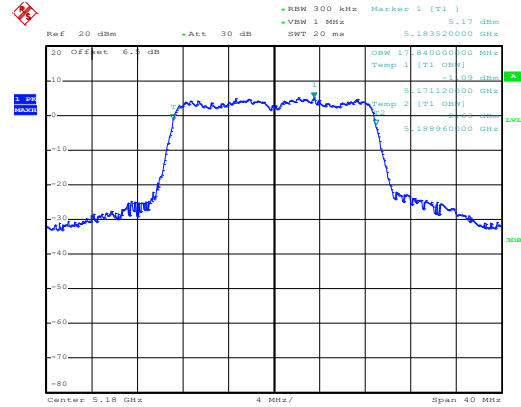
Highest channel

26dB EBW



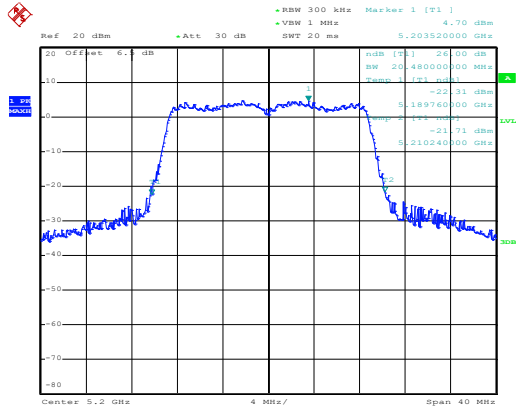
Date: 2.JUL.2017 17:03:58

802.11n20

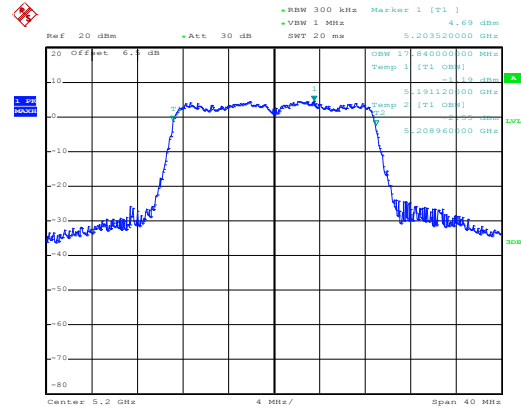


Date: 2.JUL.2017 17:04:23

Lowest channel

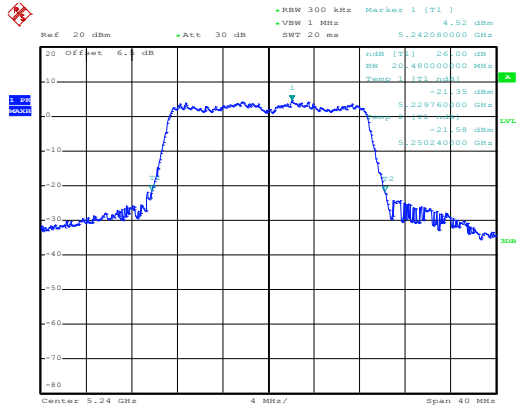


Date: 2.JUL.2017 17:05:11

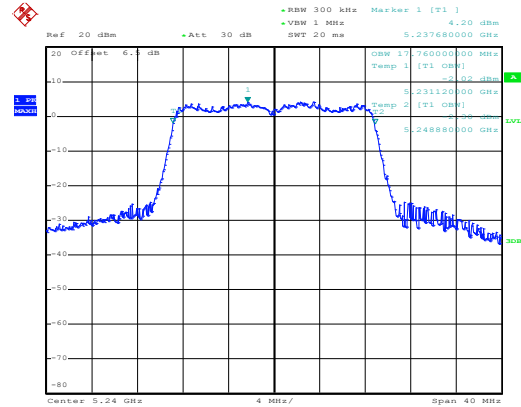


Date: 2.JUL.2017 17:05:00

Middle channel



Date: 2.JUL.2017 17:05:50

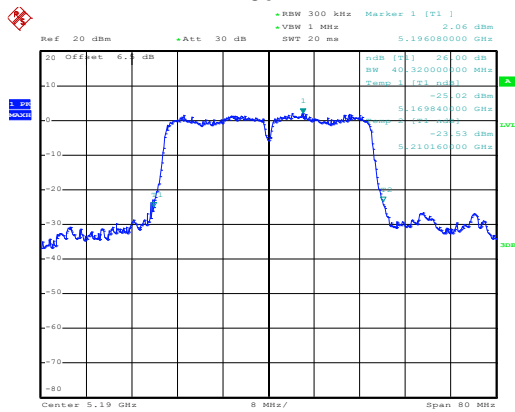


Date: 2.JUL.2017 17:06:05

Highest channel

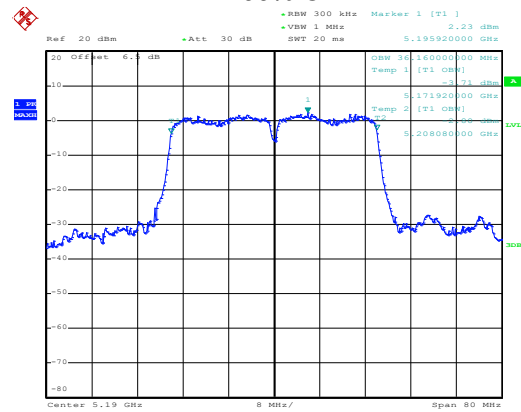
802.11n40

26dB EBW



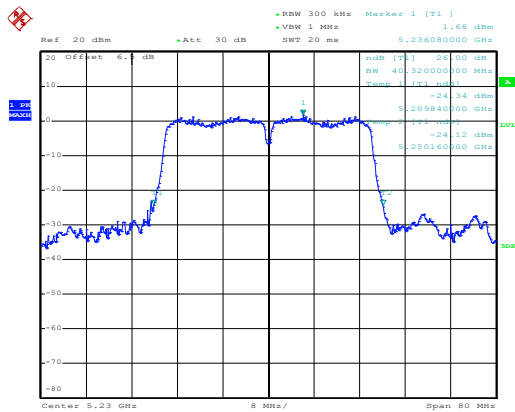
Date: 2.JUL.2017 17:13:56

99% OBW

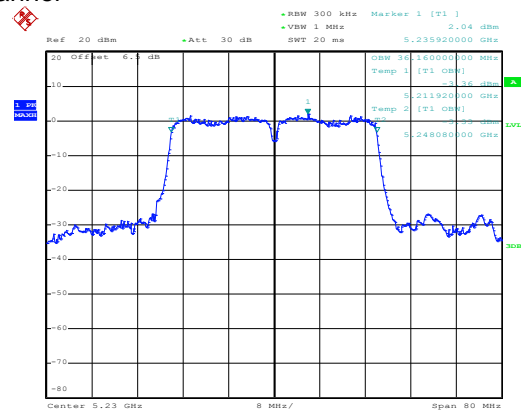


Date: 2.JUL.2017 17:12:14

Lowest channel



Date: 2.JUL.2017 17:13:25

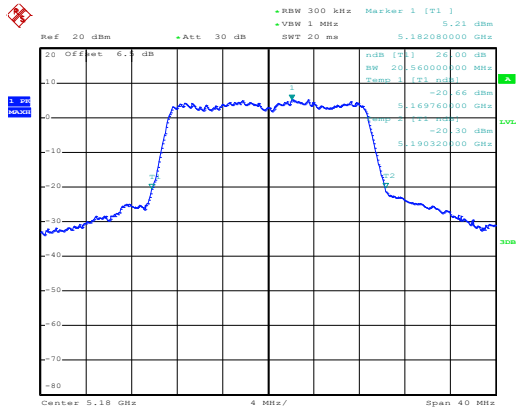


Date: 2.JUL.2017 17:13:12

Highest channel

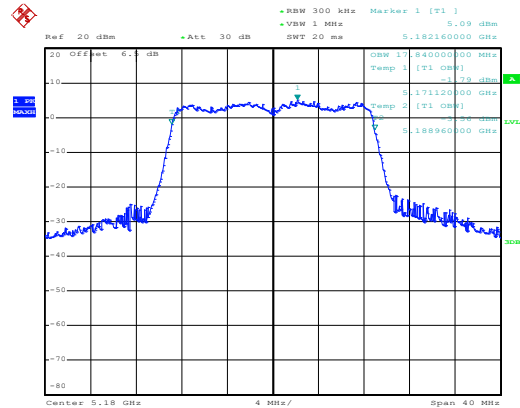
802.11ac20

26dB EBW



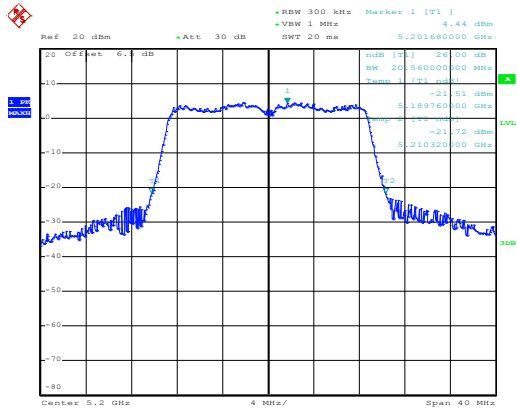
Date: 2.JUL.2017 17:16:40

99% OBW

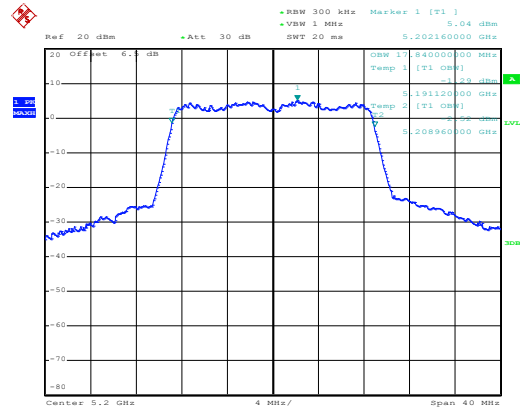


Date: 2.JUL.2017 17:16:53

Lowest channel

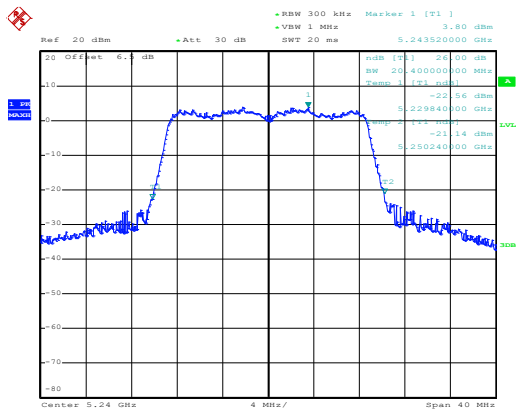


Date: 2.JUL.2017 17:19:31

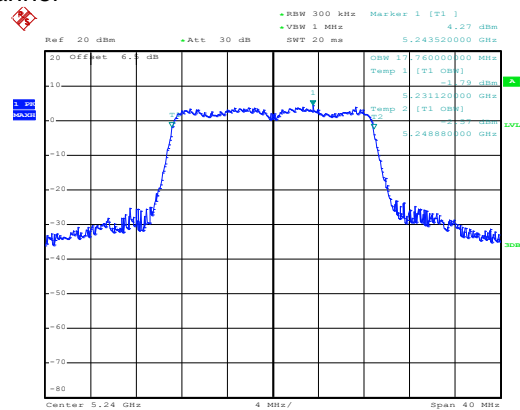


Date: 2.JUL.2017 17:19:18

Middle channel



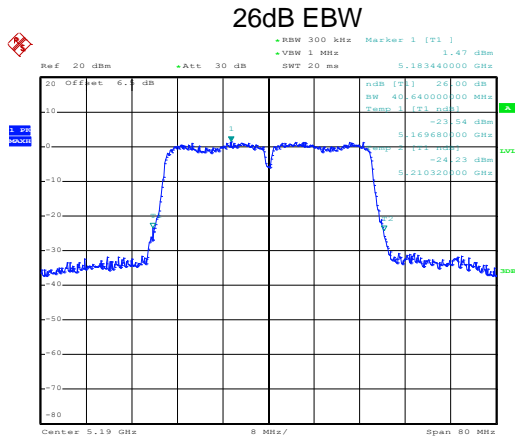
Date: 2.JUL.2017 17:20:13



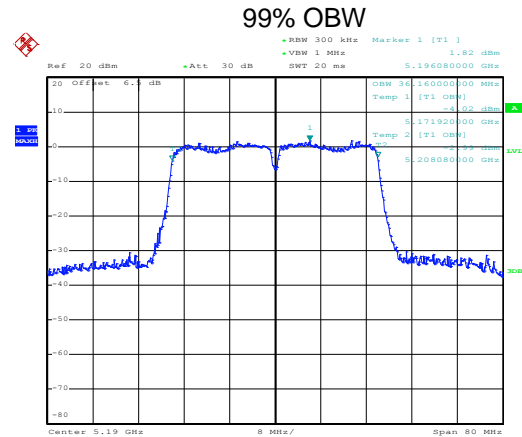
Date: 2.JUL.2017 17:20:24

Highest channel

802.11ac40

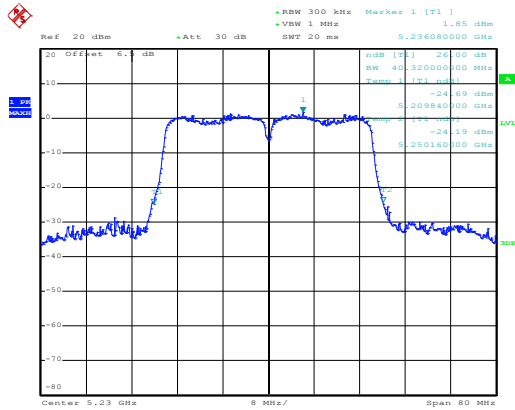


Date: 2.JUL.2017 17:21:12

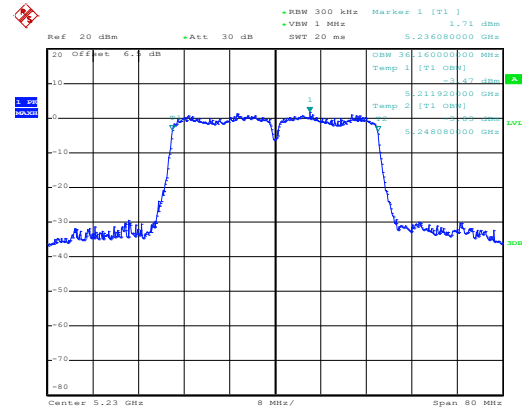


Date: 2.JUL.2017 17:21:02

Lowest channel



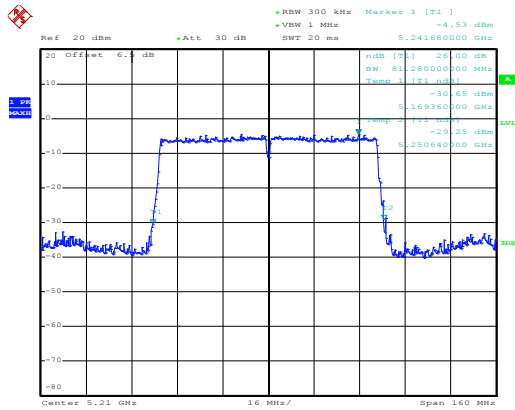
Date: 2.JUL.2017 17:22:07



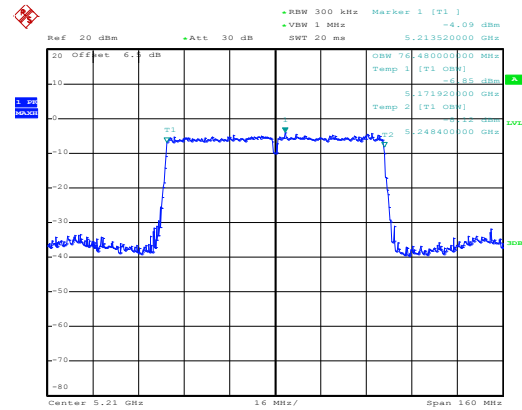
Date: 2.JUL.2017 17:22:18

Highest channel

802.11ac80



Date: 2.JUL.2017 17:23:14



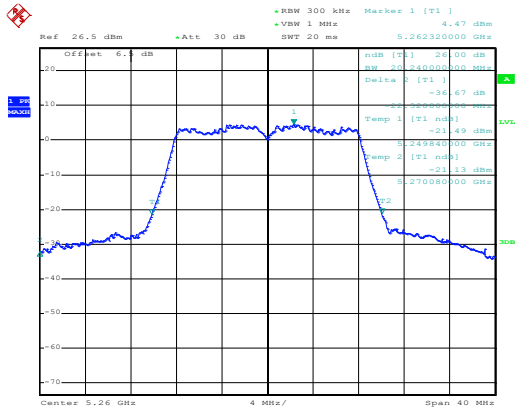
Date: 2.JUL.2017 17:23:02

Middle channel

Band 2:

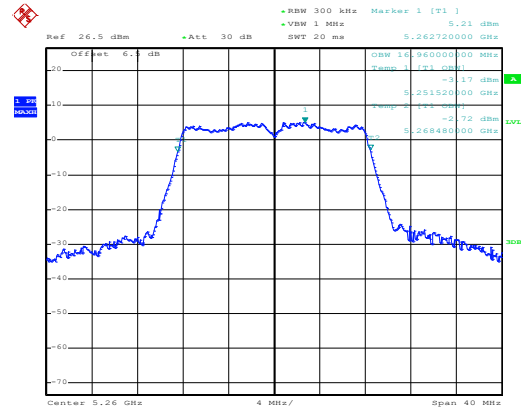
802.11a

26dB EBW



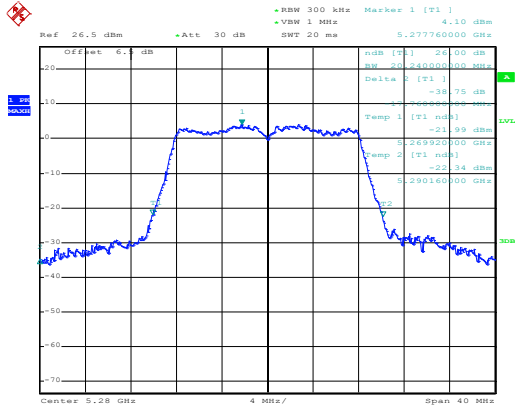
Date: 2.JUL.2017 16:42:45

99% OBW

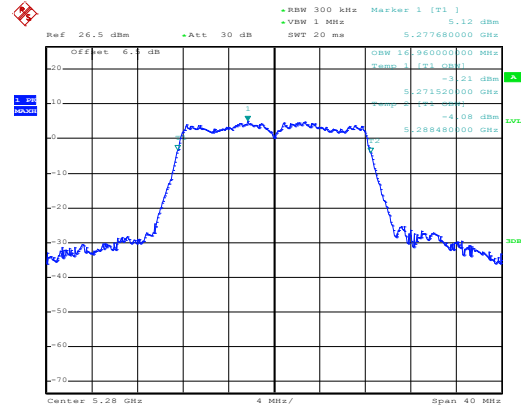


Date: 2.JUL.2017 19:30:22

Lowest channel

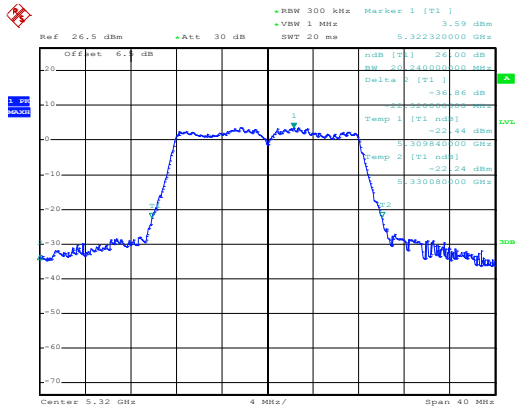


Date: 2.JUL.2017 16:44:57

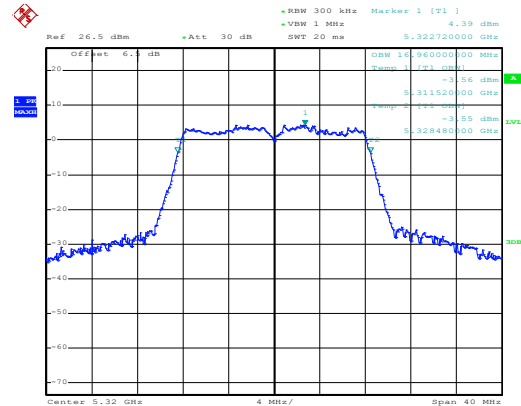


Date: 2.JUL.2017 19:31:01

Middle channel



Date: 2.JUL.2017 16:46:11

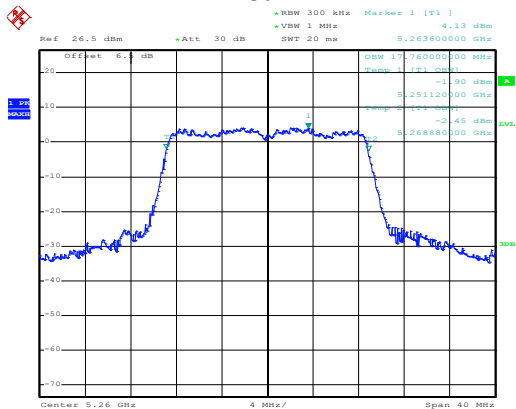


Date: 2.JUL.2017 19:32:14

Highest channel

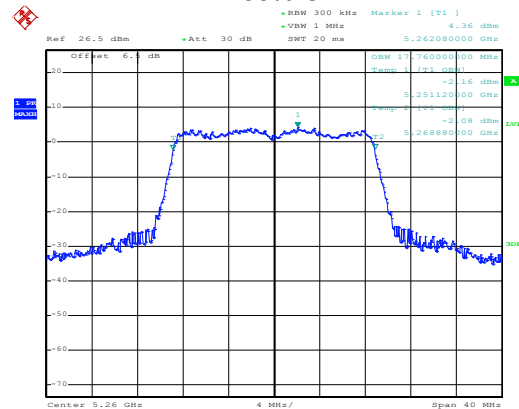
802.11n20

26dB EBW



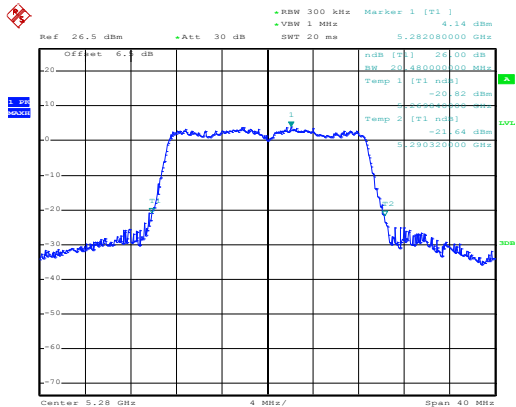
Date: 2.JUL.2017 19:34:10

99% OBW

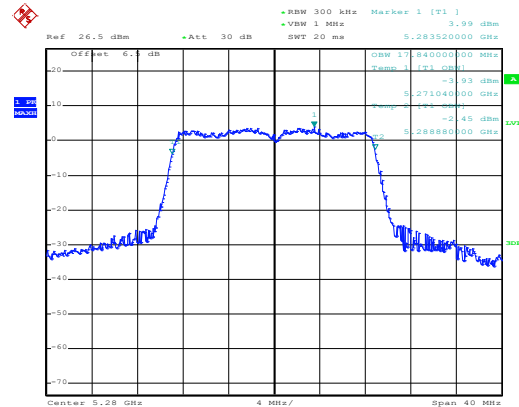


Date: 2.JUL.2017 19:37:57

Lowest channel

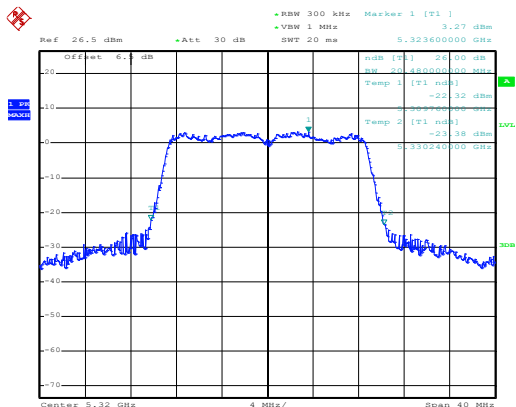


Date: 2.JUL.2017 19:36:13

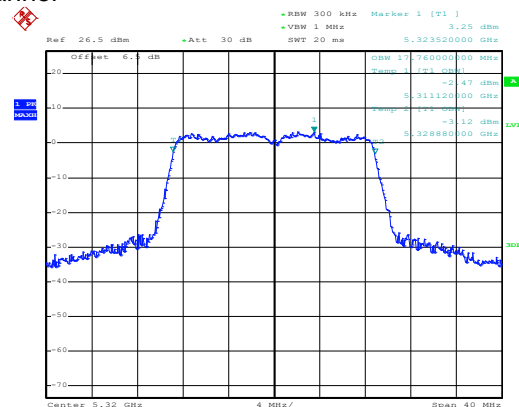


Date: 2.JUL.2017 19:36:22

Middle channel



Date: 2.JUL.2017 19:35:45

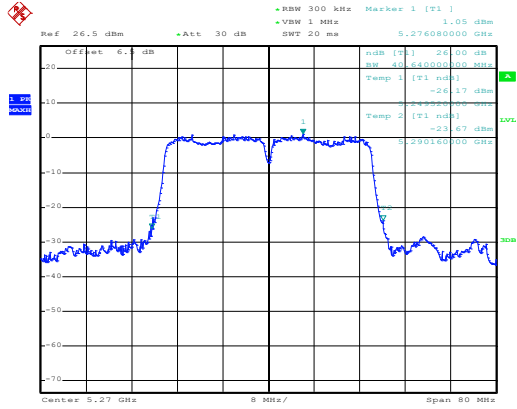


Date: 2.JUL.2017 19:35:34

Highest channel

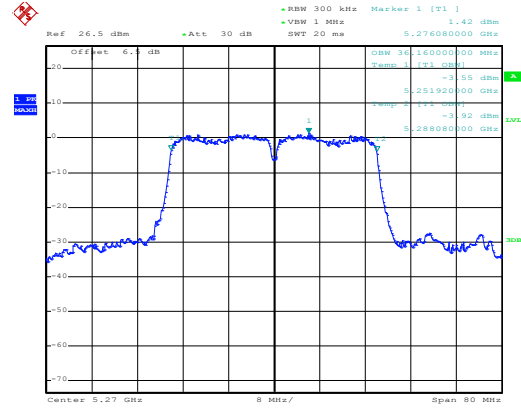
802.11n40

26dB EBW



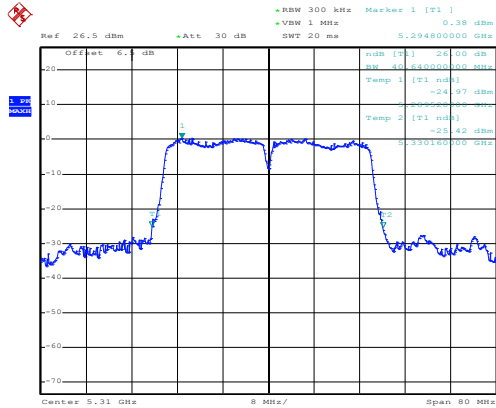
Date: 2.JUL.2017 19:41:43

99% OBW

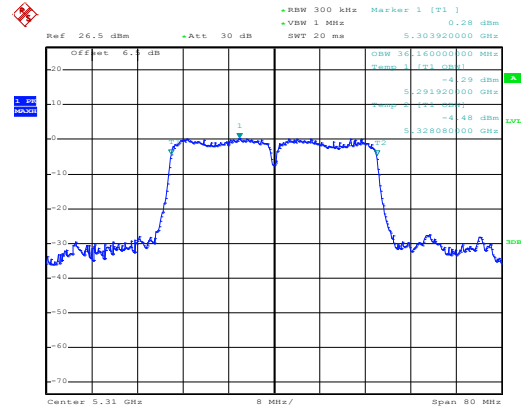


Date: 2.JUL.2017 19:40:14

Lowest channel



Date: 2.JUL.2017 19:41:11

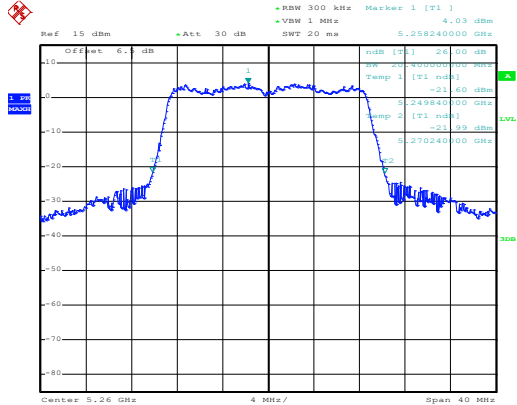


Date: 2.JUL.2017 19:40:55

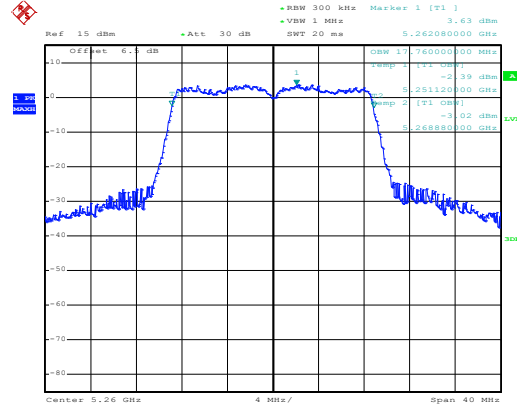
Highest channel

802.11ac20

26dB EBW



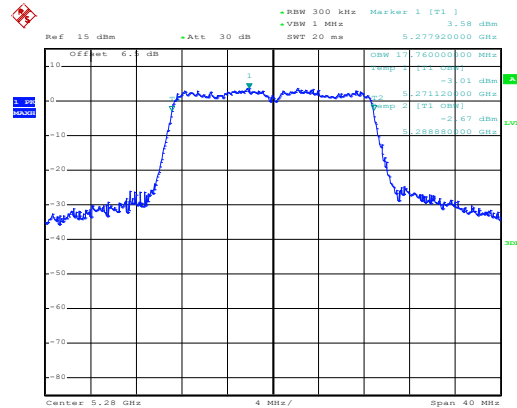
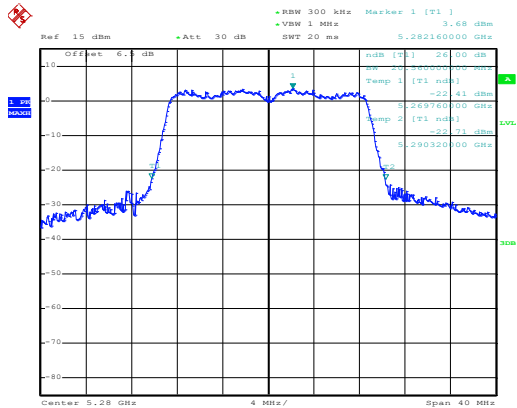
99% OBW



Date: 2.JUL.2017 20:23:52

Date: 2.JUL.2017 20:24:03

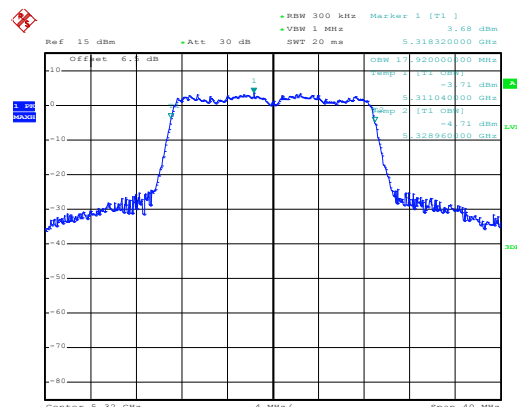
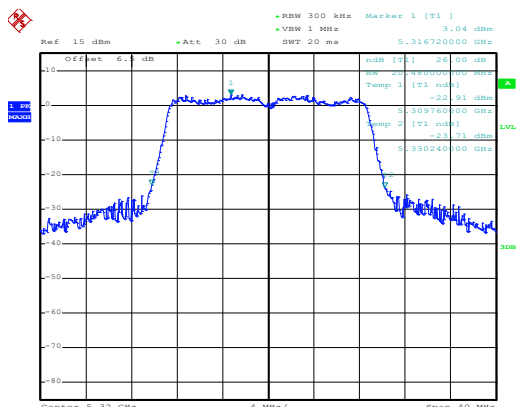
Lowest channel



Date: 2.JUL.2017 20:24:54

Date: 2.JUL.2017 20:24:42

Middle channel

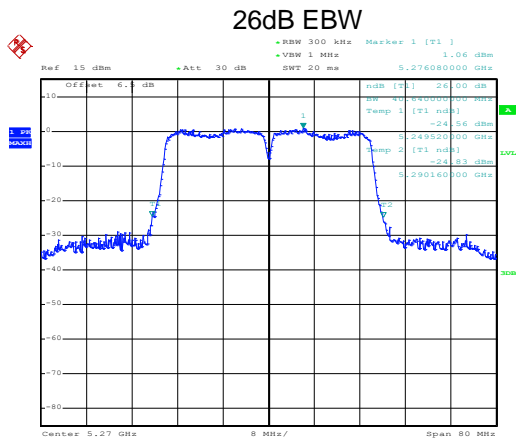


Date: 2.JUL.2017 20:26:51

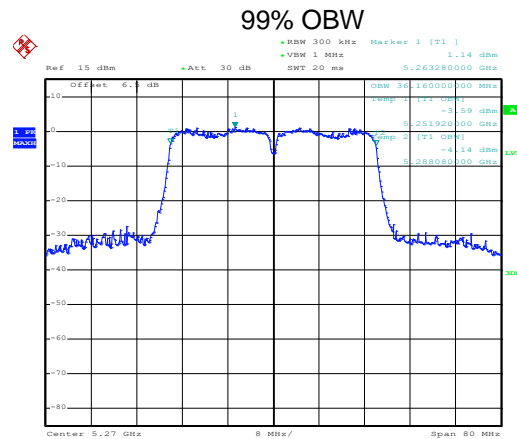
Date: 2.JUL.2017 20:27:15

Highest channel

802.11ac40

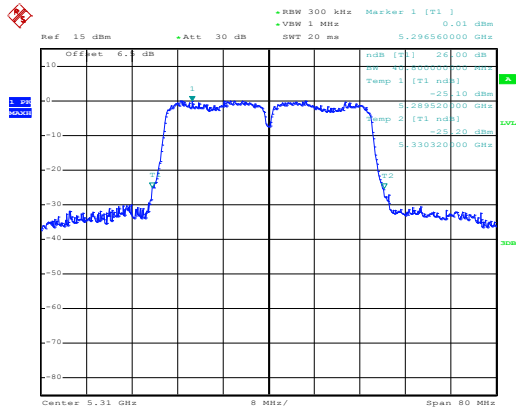


Date: 2.JUL.2017 20:30:01

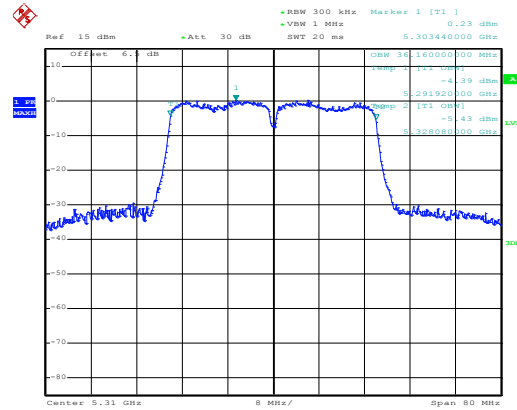


Date: 2.JUL.2017 20:29:49

Lowest channel



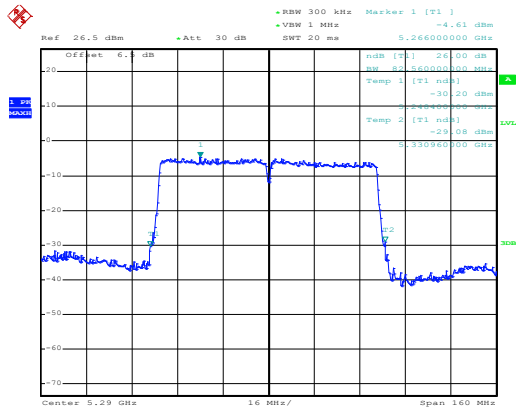
Date: 2.JUL.2017 20:32:57



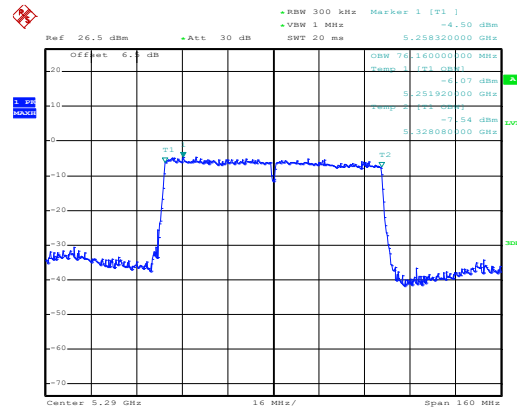
Date: 2.JUL.2017 20:33:21

Highest channel

802.11ac80



Date: 2.JUL.2017 19:56:51



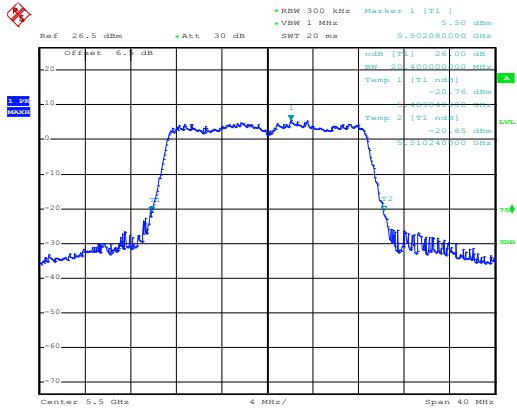
Date: 2.JUL.2017 19:57:04

Middle channel

Band 3:

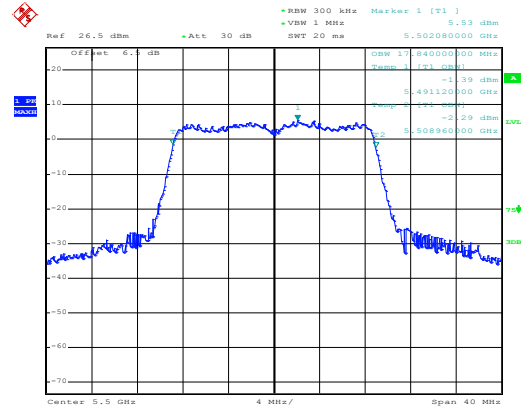
802.11a

26 dB EBW



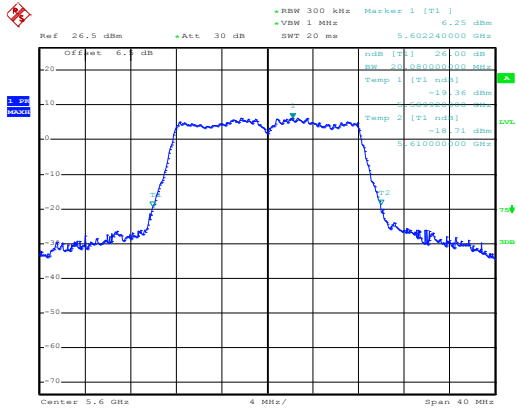
Date: 3.JUL.2017 14:17:43

99% OBW

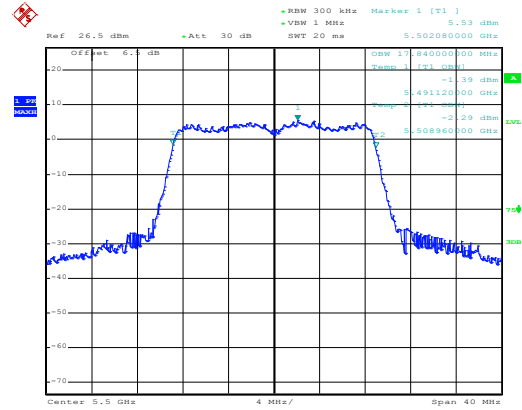


Date: 3.JUL.2017 14:17:31

Lowest channel

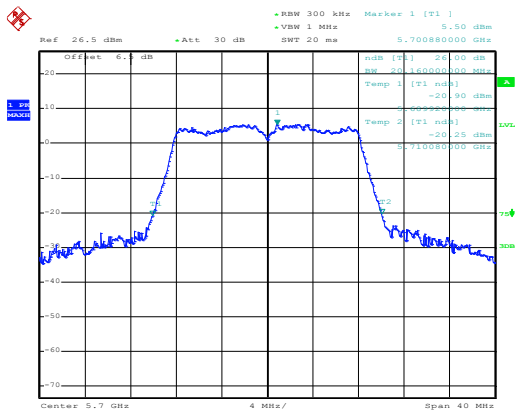


Date: 3.JUL.2017 14:14:13

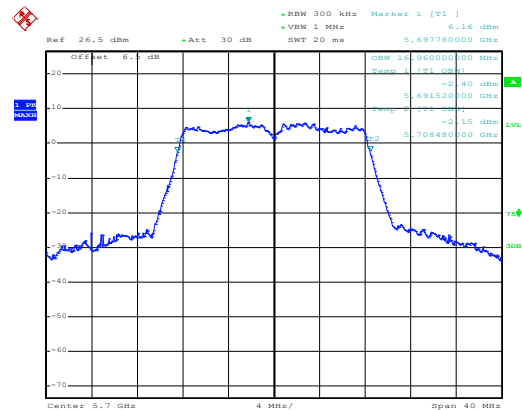


Date: 3.JUL.2017 14:17:31

Middle channel



Date: 3.JUL.2017 14:15:23

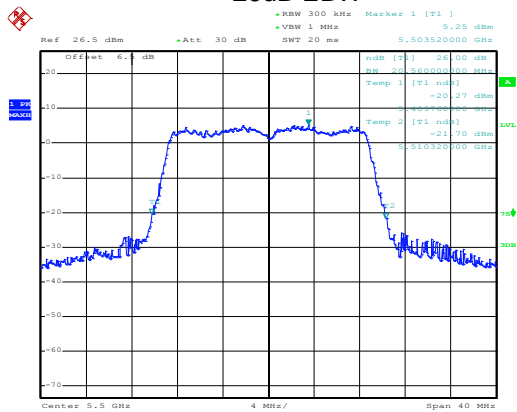


Date: 3.JUL.2017 14:15:14

Highest channel

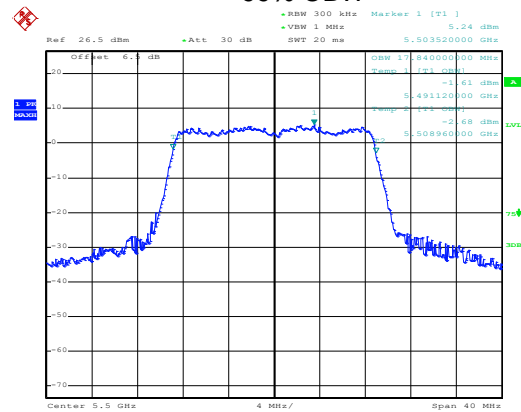
802.11n20

26dB EBW



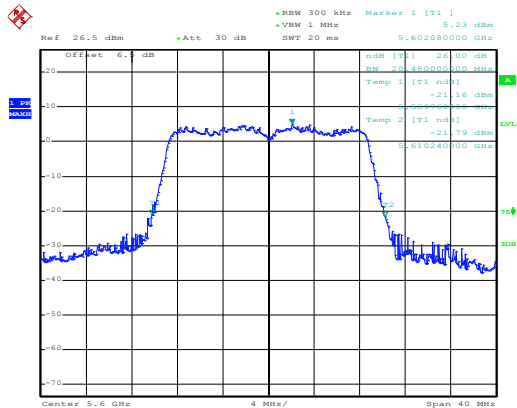
Date: 3.JUL.2017 14:19:06

99% OBW

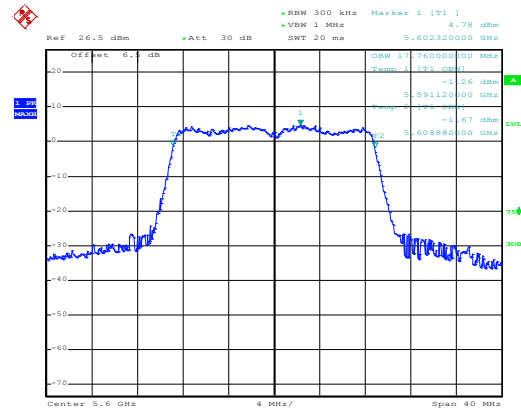


Date: 3.JUL.2017 14:18:53

Lowest channel

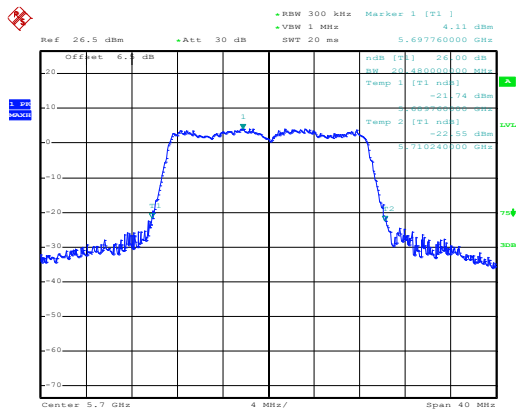


Date: 3.JUL.2017 14:16:34

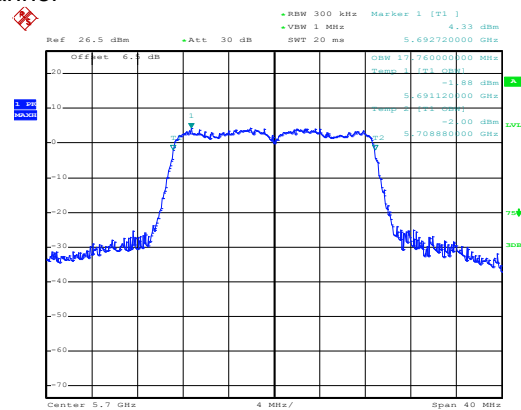


Date: 3.JUL.2017 14:16:56

Middle channel



Date: 3.JUL.2017 14:19:54

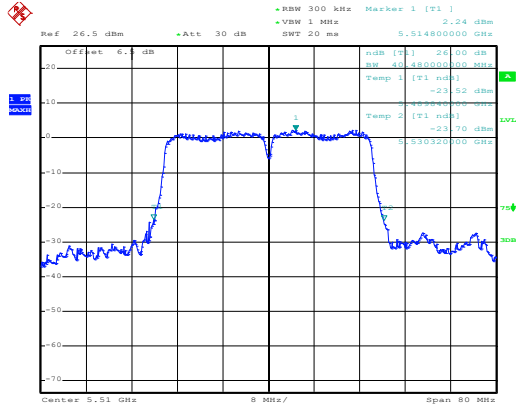


Date: 3.JUL.2017 14:20:05

Highest channel

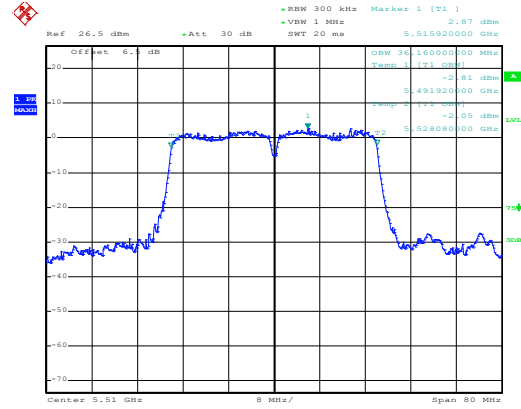
802.11n40

26dB EBW



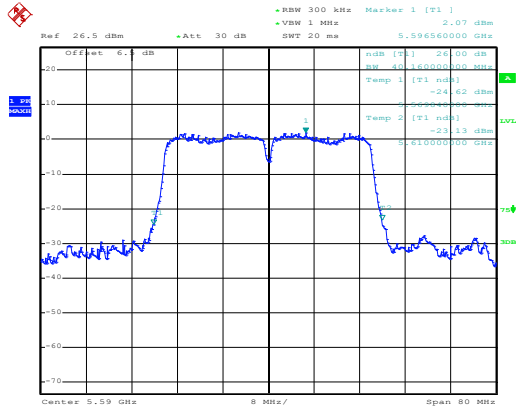
Date: 3.JUL.2017 14:23:34

99% OBW

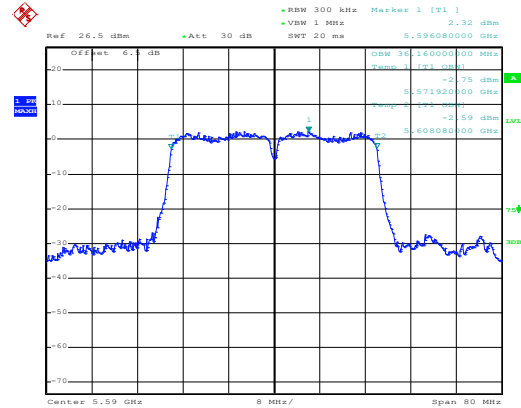


Date: 3.JUL.2017 14:21:33

Lowest channel

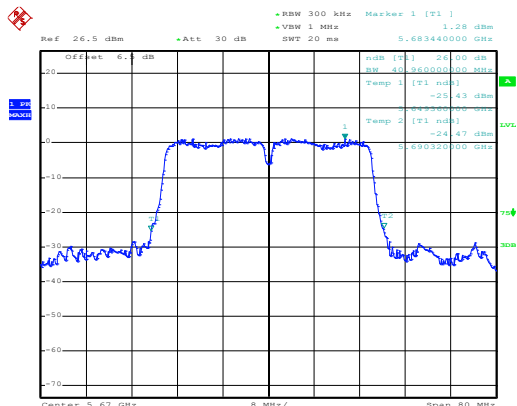


Date: 3.JUL.2017 14:22:38

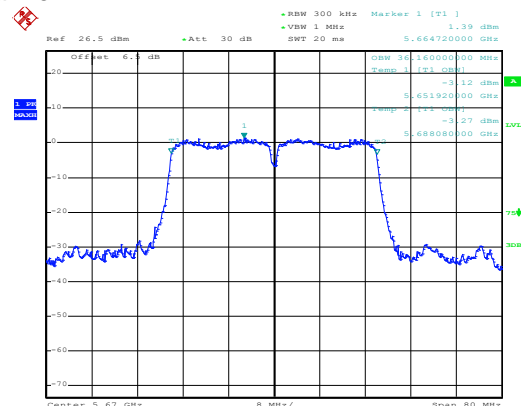


Date: 3.JUL.2017 14:22:27

Middle channel



Date: 3.JUL.2017 14:24:28

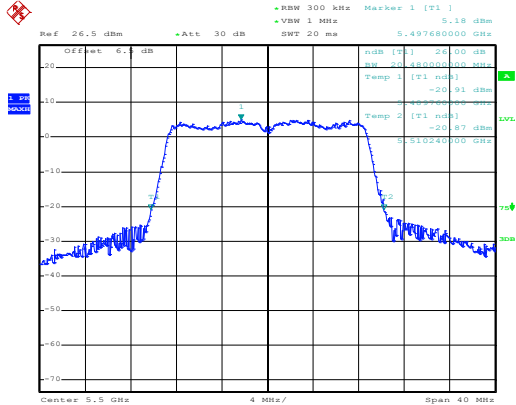


Date: 3.JUL.2017 14:24:46

Highest channel

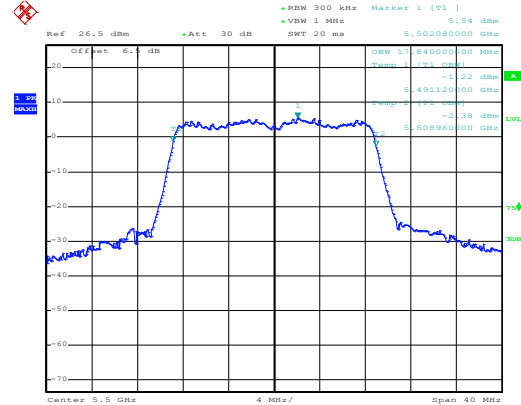
802.11ac20

26dB EBW



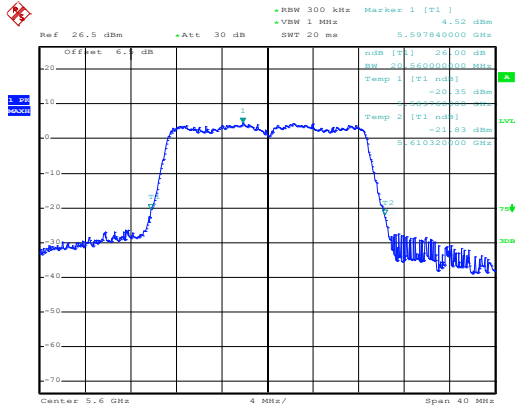
Date: 3.JUL.2017 14:27:40

99% OBW

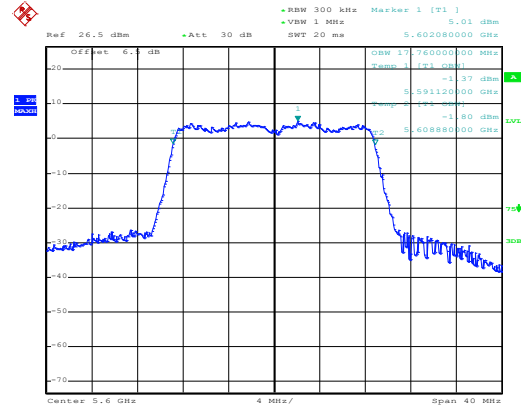


Date: 3.JUL.2017 14:26:33

Lowest channel

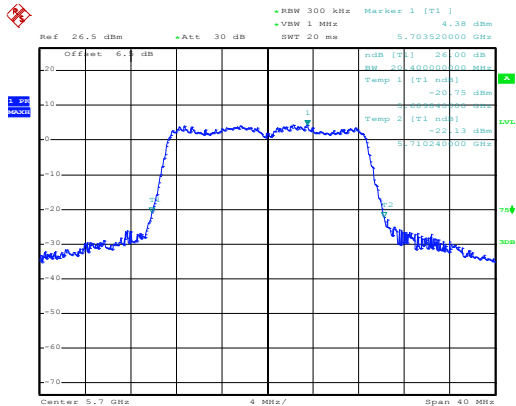


Date: 3.JUL.2017 14:27:15

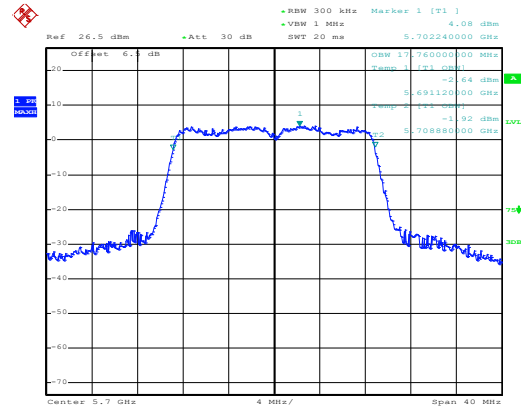


Date: 3.JUL.2017 14:27:04

Middle channel



Date: 3.JUL.2017 14:29:49

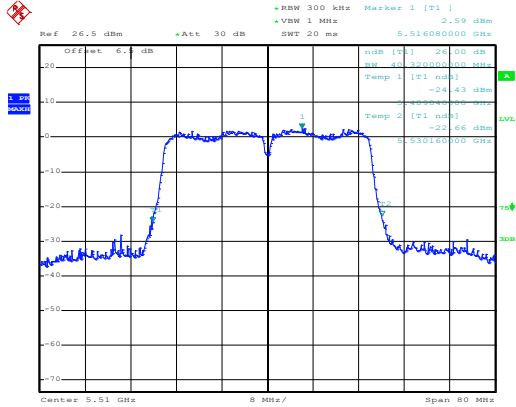


Date: 3.JUL.2017 14:30:07

Highest channel

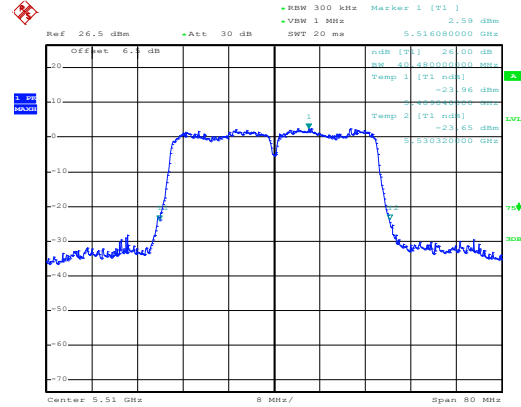
802.11ac40

26dB EBW



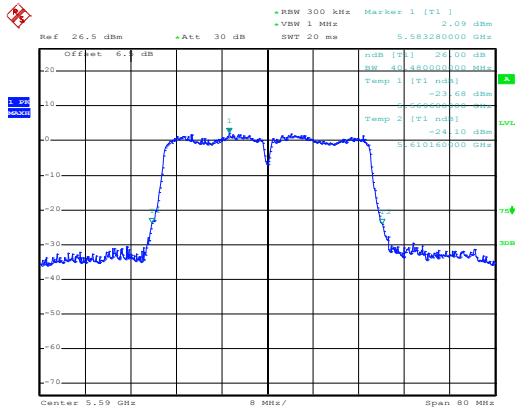
Date: 3.JUL.2017 14:32:04

99% OBW

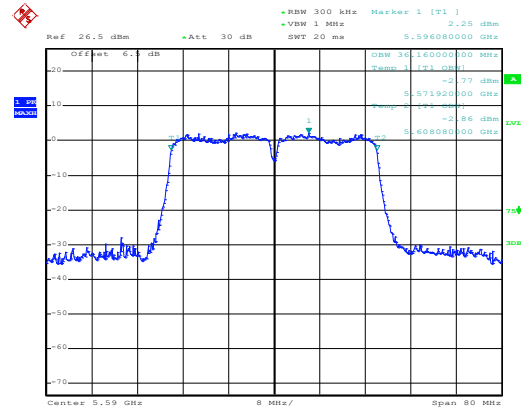


Date: 3.JUL.2017 14:32:14

Lowest channel

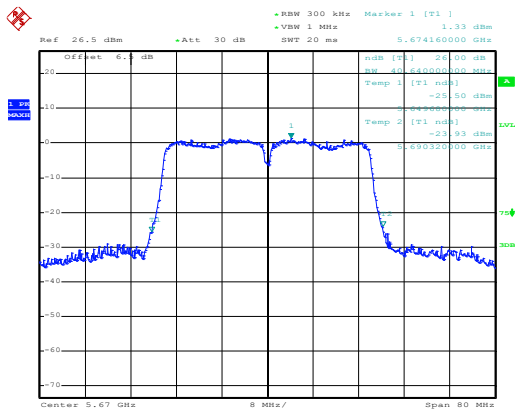


Date: 3.JUL.2017 14:31:39

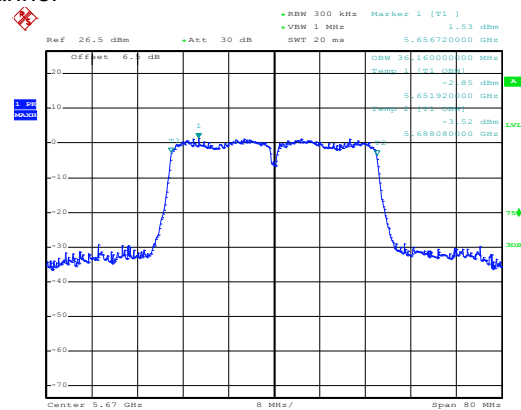


Date: 3.JUL.2017 14:31:29

Middle channel



Date: 3.JUL.2017 14:32:49

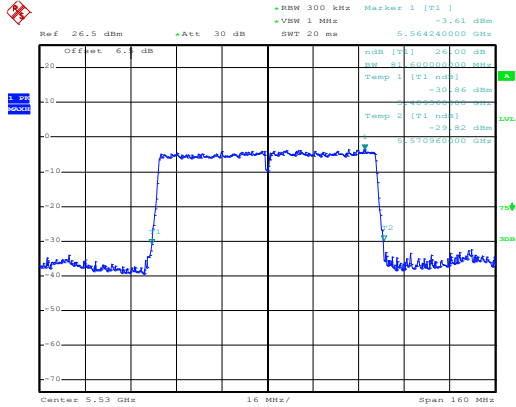


Date: 3.JUL.2017 14:33:01

Highest channel

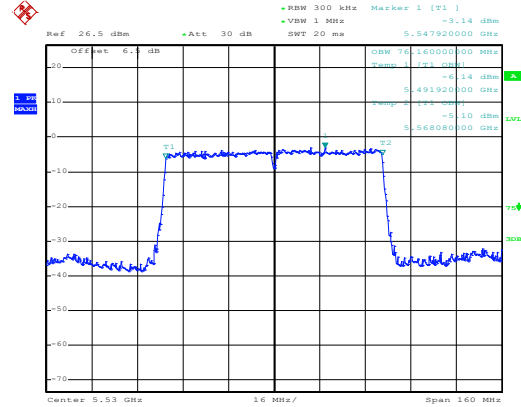
802.11ac80

26dB EBW



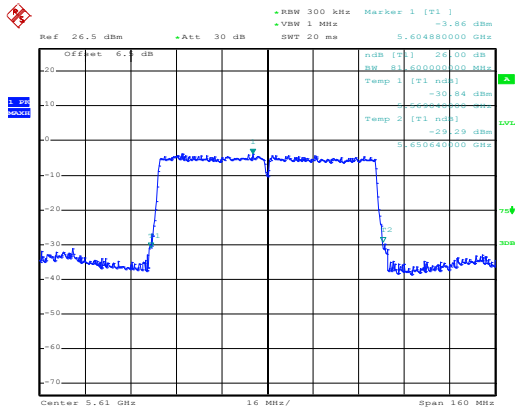
Date: 3.JUL.2017 14:34:27

99% OBW

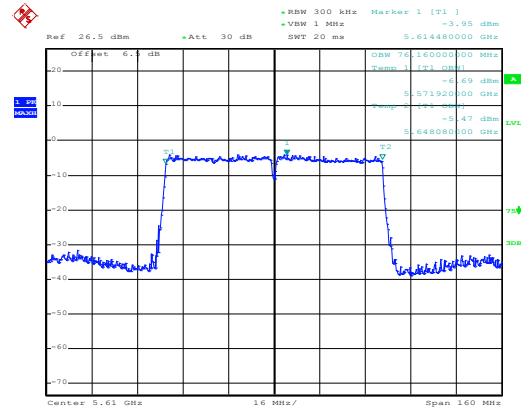


Date: 3.JUL.2017 14:34:15

Lowest channel



Date: 3.JUL.2017 14:34:57

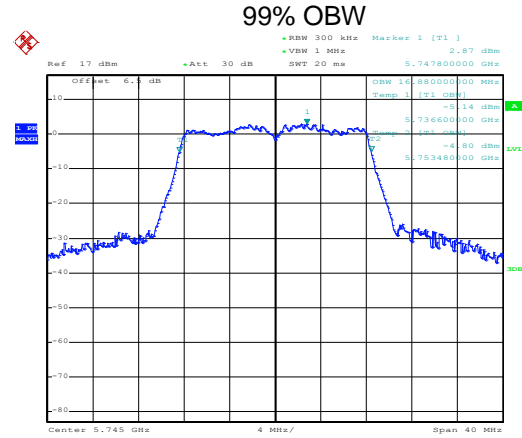
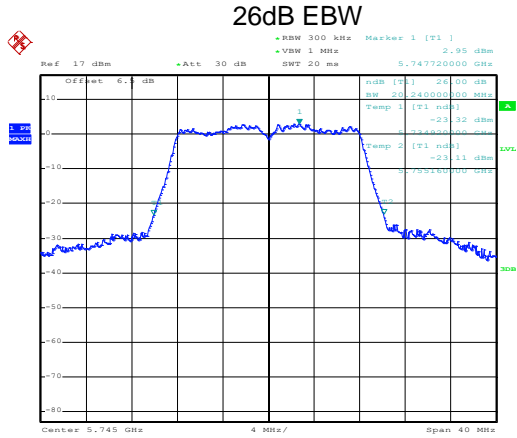


Date: 3.JUL.2017 14:35:11

Highest channel

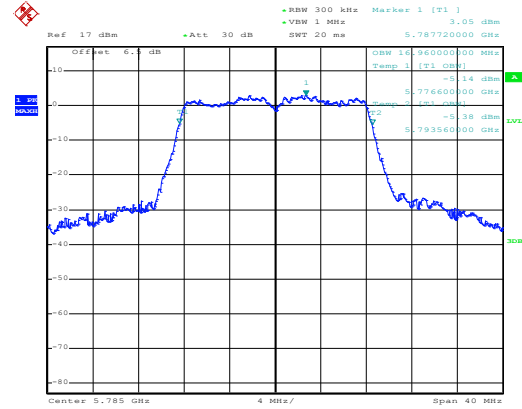
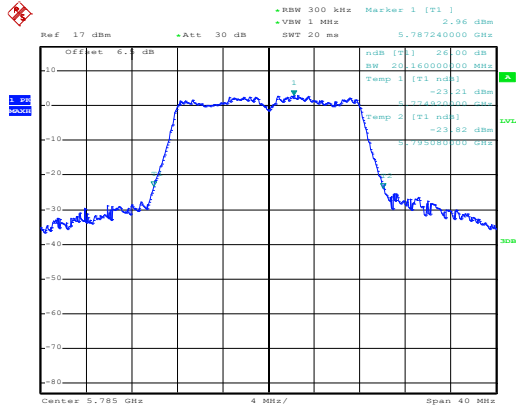
Band 4:

802.11a



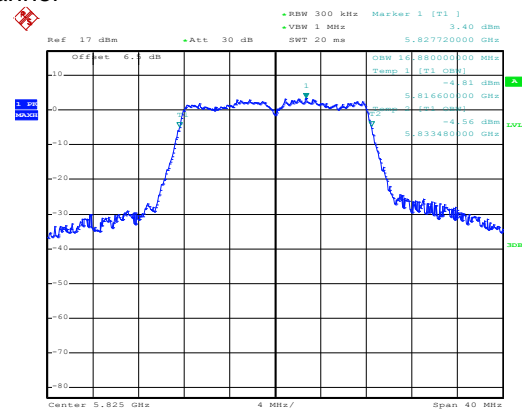
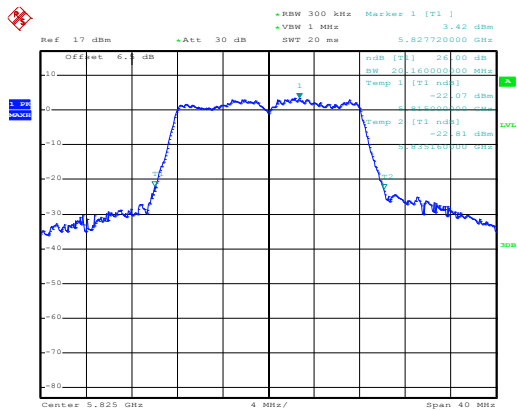
Date: 3.JUL.2017 16:08:17

Date: 3.JUL.2017 16:08:27



Date: 3.JUL.2017 16:09:22

Date: 3.JUL.2017 16:09:09



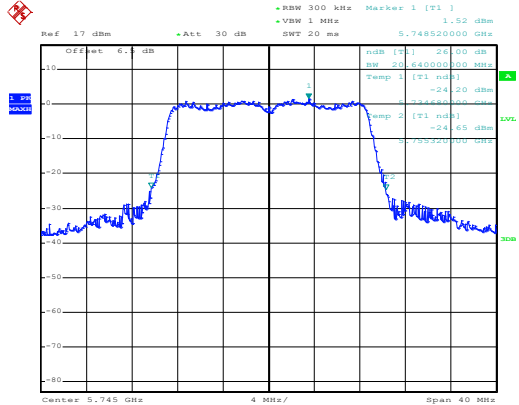
Date: 3.JUL.2017 16:10:22

Date: 3.JUL.2017 16:10:31

Highest channel

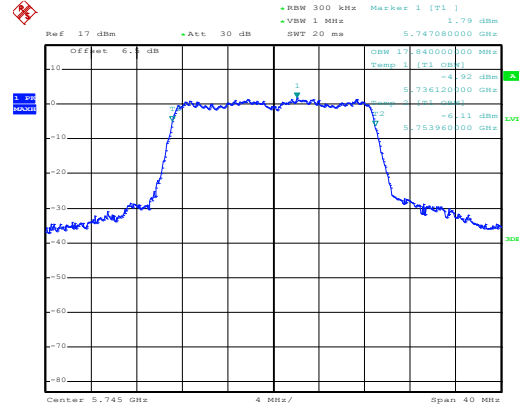
802.11n20

26dB EBW



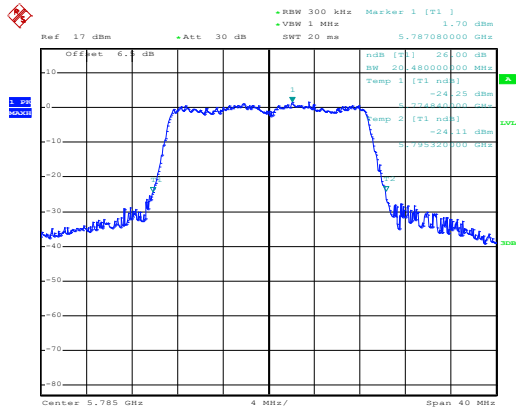
Date: 3.JUL.2017 16:11:56

99% OBW

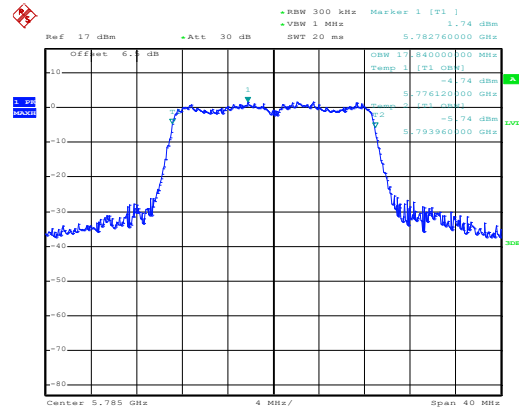


Date: 3.JUL.2017 16:11:44

Lowest channel

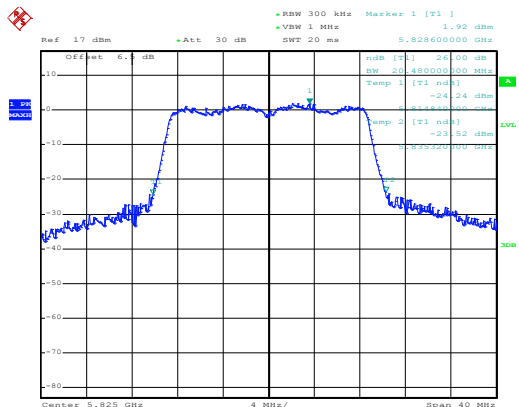


Date: 3.JUL.2017 16:12:34

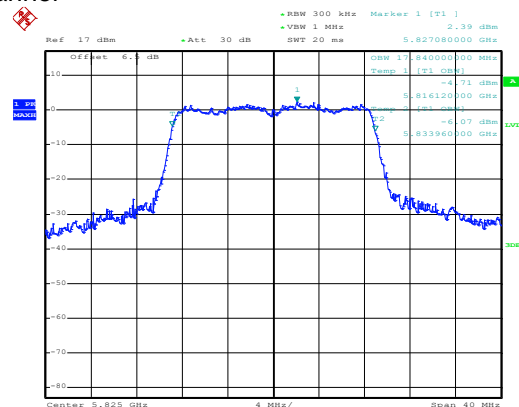


Date: 3.JUL.2017 16:12:49

Middle channel



Date: 3.JUL.2017 16:13:33

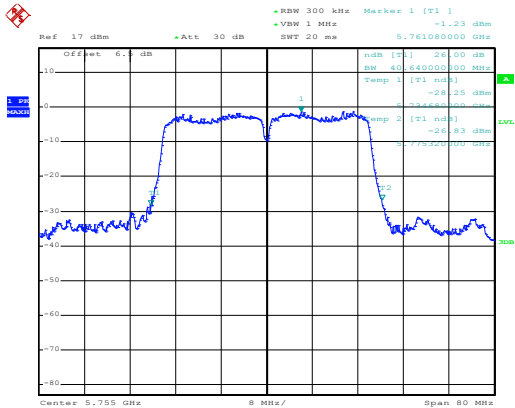


Date: 3.JUL.2017 16:13:20

Highest channel

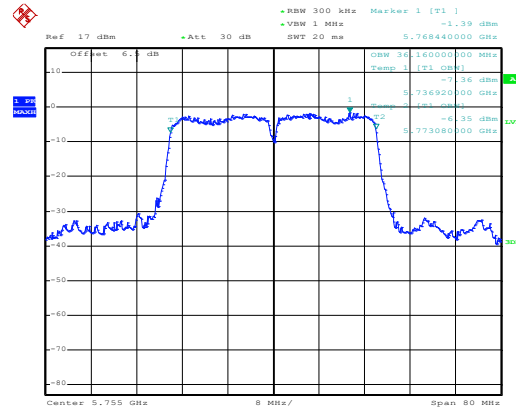
802.11n40

26dB EBW



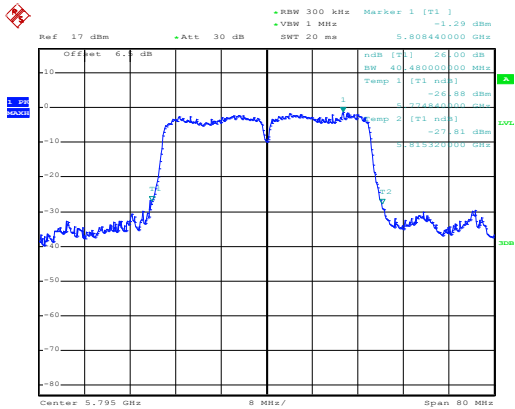
Date: 3.JUL.2017 16:14:21

99% OBW

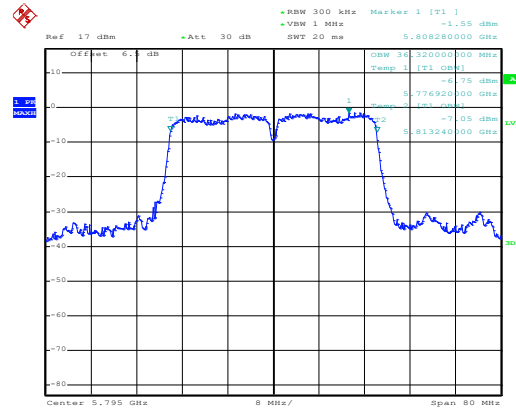


Date: 3.JUL.2017 16:14:32

Lowest channel



Date: 3.JUL.2017 16:15:55

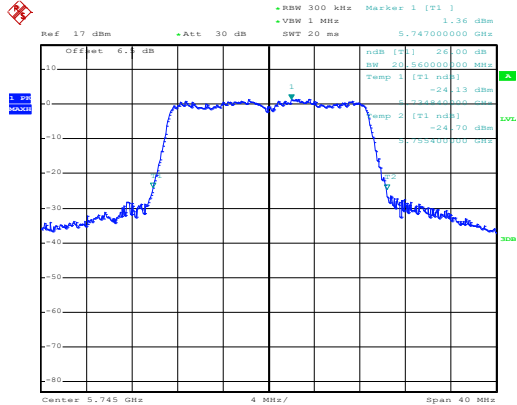


Date: 3.JUL.2017 16:15:42

Highest channel

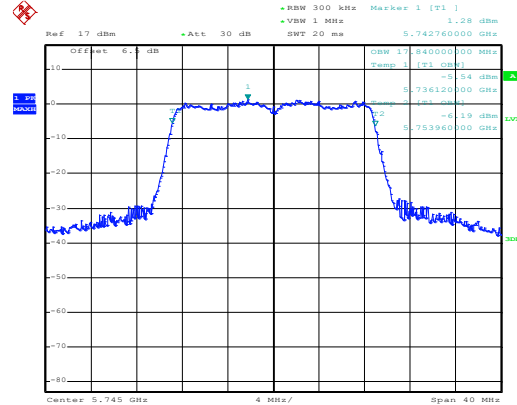
802.11ac20

26dB EBW



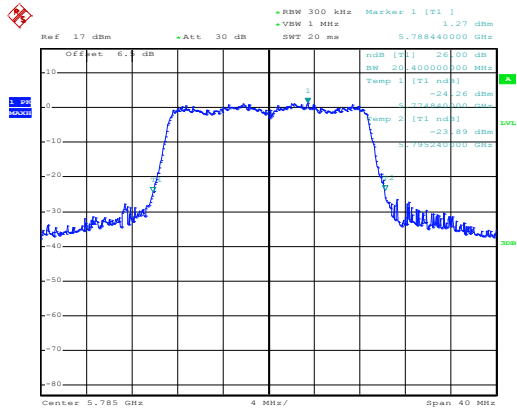
Date: 3.JUL.2017 16:16:52

99% OBW

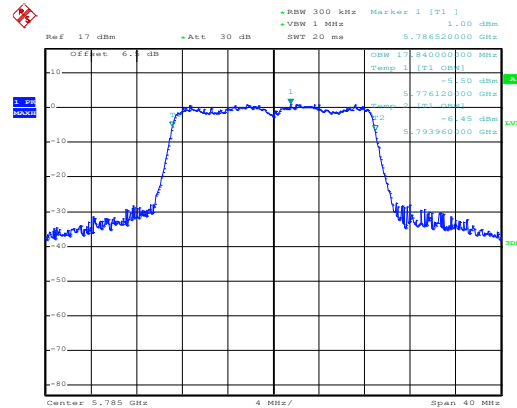


Date: 3.JUL.2017 16:17:03

Lowest channel

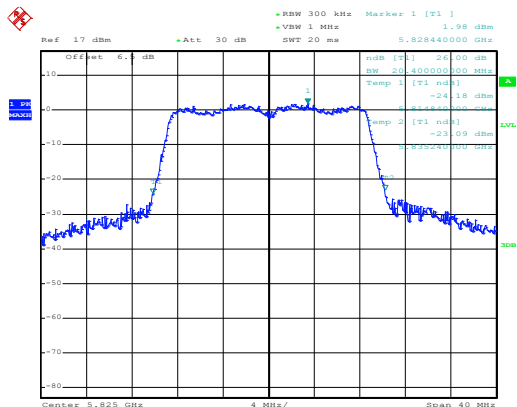


Date: 3.JUL.2017 16:17:50

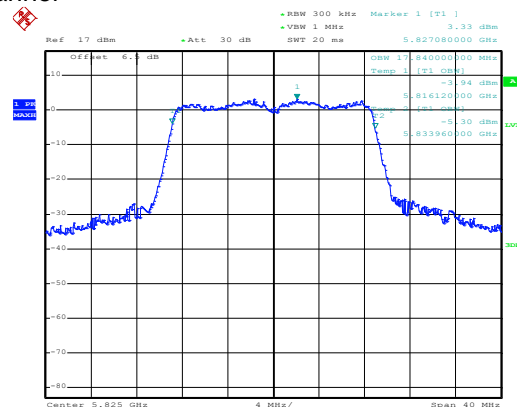


Date: 3.JUL.2017 16:17:39

Middle channel



Date: 3.JUL.2017 16:18:22

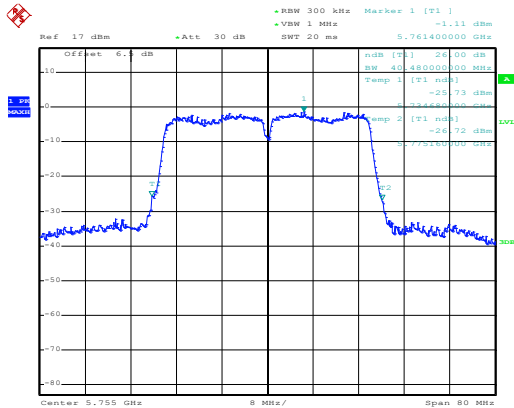


Date: 3.JUL.2017 16:18:41

Highest channel

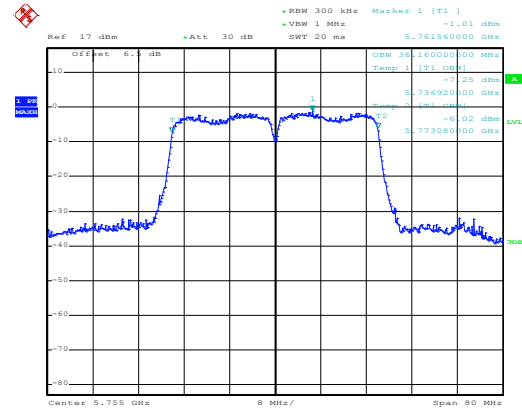
802.11ac40

26dB EBW



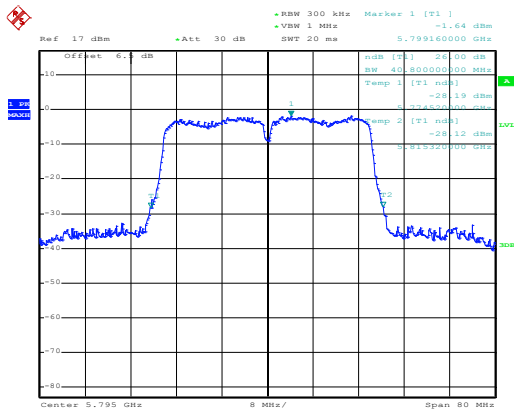
Date: 3.JUL.2017 16:19:49

99% OBW

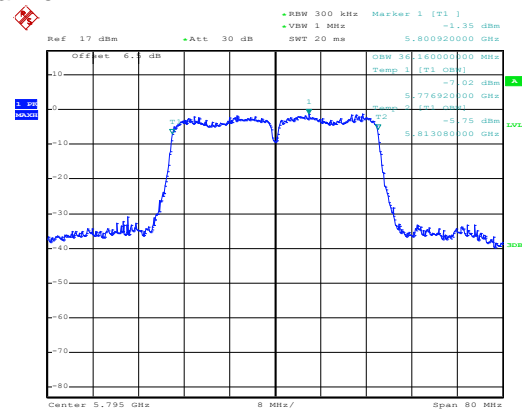


Date: 3.JUL.2017 16:19:38

Lowest channel



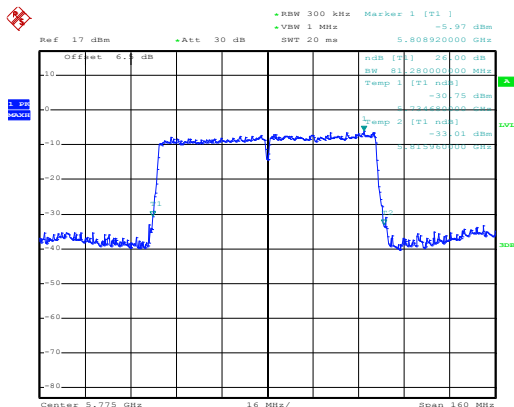
Date: 3.JUL.2017 16:20:14



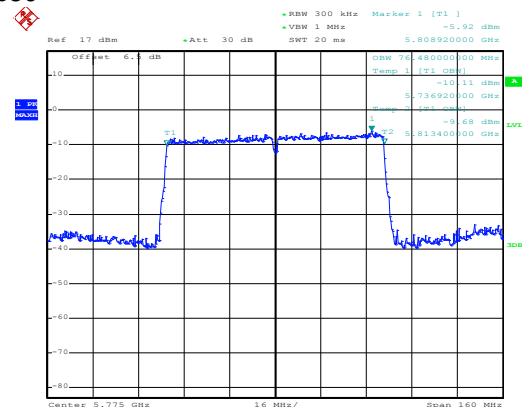
Date: 3.JUL.2017 16:20:30

Highest channel

802.11ac80



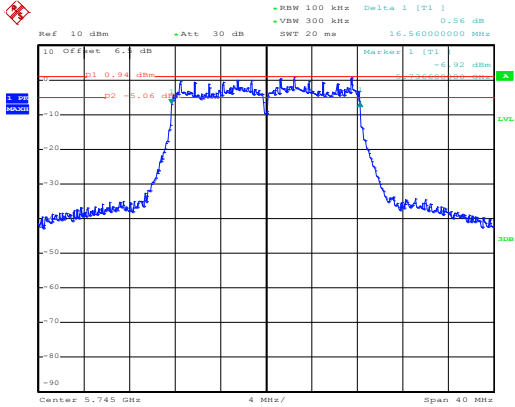
Date: 3.JUL.2017 16:21:30



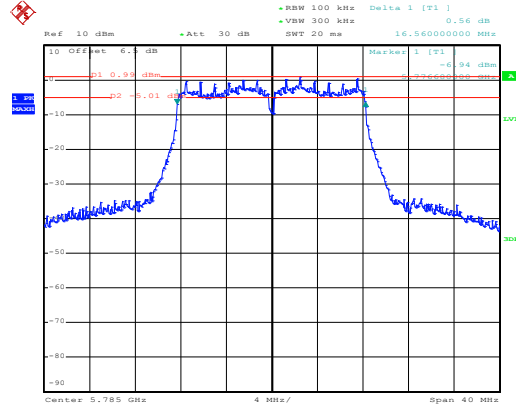
Date: 3.JUL.2017 16:21:19

Middle channel

6dB BW
802.11a

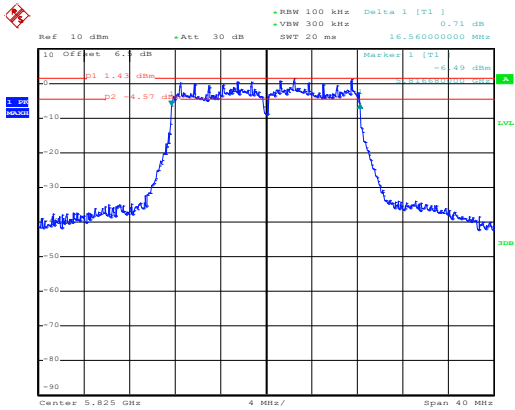


Date: 3.JUL.2017 15:59:49



Date: 3.JUL.2017 16:01:08

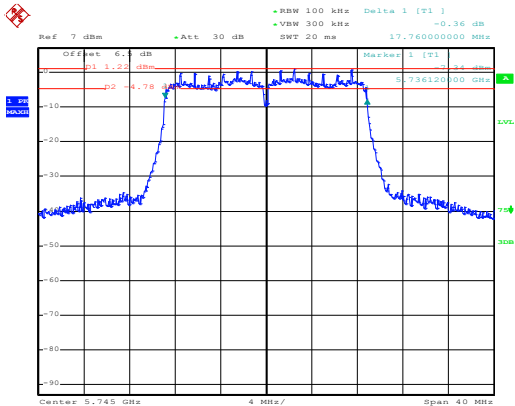
Lowest channel



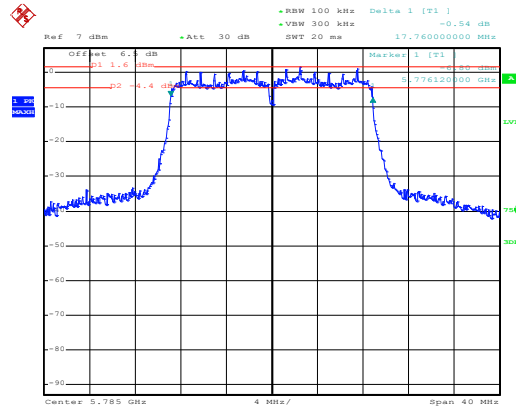
Date: 3.JUL.2017 16:03:26

Middle channel

802.11n20



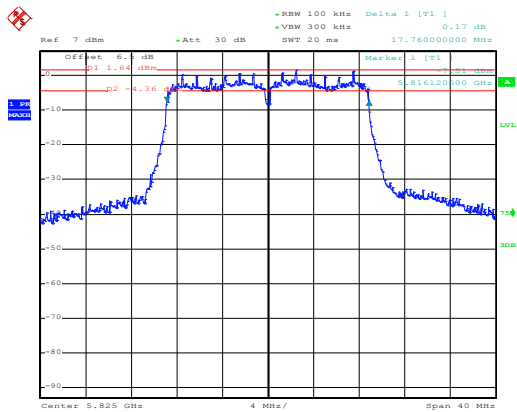
Date: 3.JUL.2017 15:48:45



Date: 3.JUL.2017 15:49:48

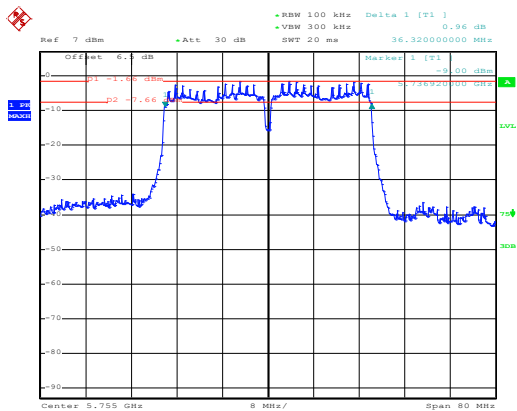
Lowest channel

Middle channel



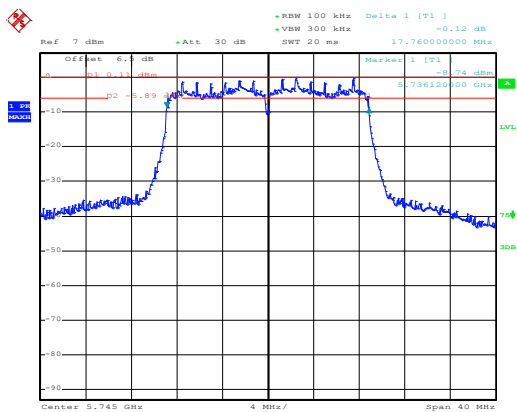
Date: 3.JUL.2017 15:50:51

Highest channel



Date: 3.JUL.2017 15:42:16

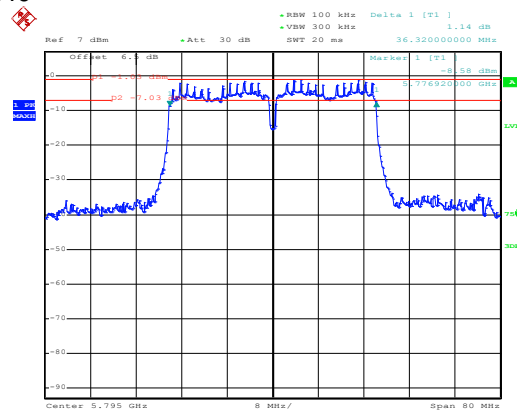
Lowest channel



Date: 3.JUL.2017 15:33:34

Lowest channel

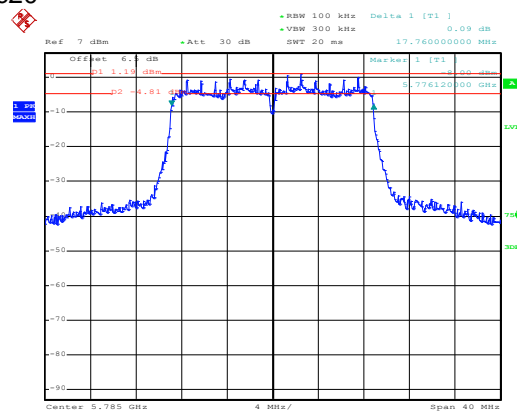
802.11n40



Date: 3.JUL.2017 15:47:21

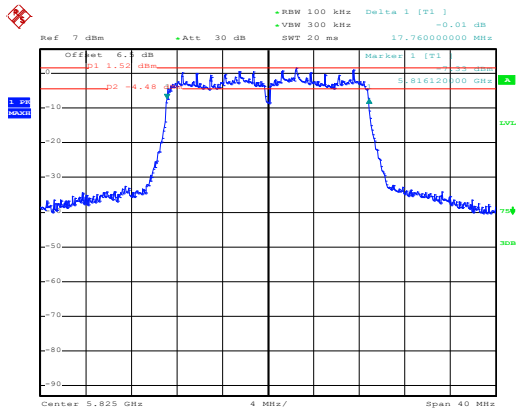
Highest channel

802.11ac20



Date: 3.JUL.2017 15:34:32

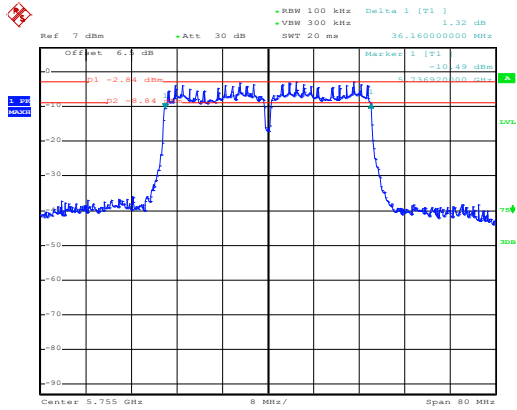
Middle channel



Date: 3.JUL.2017 15:40:15

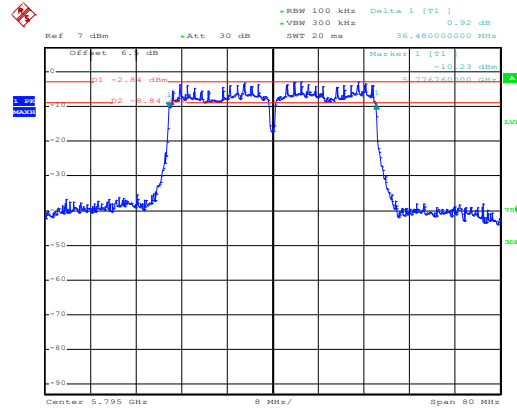
Highest channel

802.11ac40



Date: 3.JUL.2017 15:28:53

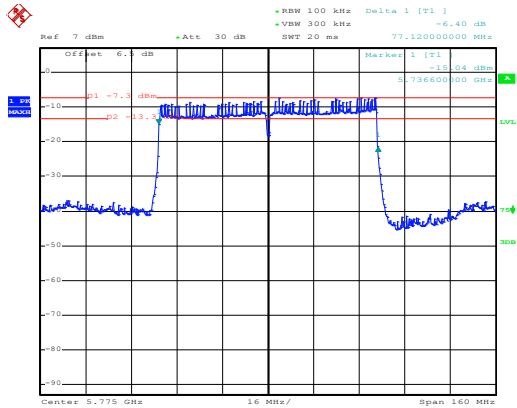
Lowest channel



Date: 3.JUL.2017 15:31:57

Highest channel

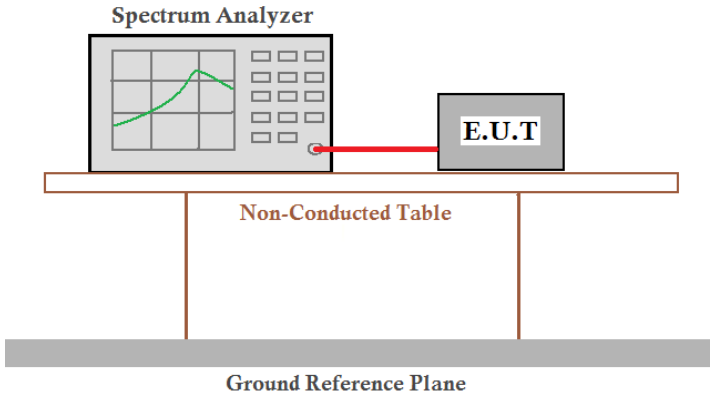
802.11ac80



Date: 3.JUL.2017 15:27:17

Middle channel

6.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (ii) &(a) (3)
Test Method:	ANSI C63.10:2013, KDB 789033
Limit:	Band 1: 11 dBm/MHz Band 2: 11 dBm/MHz Band 3: 11 dBm/MHz Band 4: 30 dBm/500kHz
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

Band 1				
Mode	Test CH	PSD (dBm)	Limit (dBm)	Result
802.11a	Lowest	3.63	11.00	Pass
	Middle	3.60	11.00	Pass
	Highest	2.66	11.00	Pass
802.11n20	Lowest	1.88	11.00	Pass
	Middle	2.42	11.00	Pass
	Highest	1.77	11.00	Pass
802.11n40	Lowest	-0.48	11.00	Pass
	Highest	-1.48	11.00	Pass
802.11ac20	Lowest	2.34	11.00	Pass
	Middle	2.22	11.00	Pass
	Highest	1.73	11.00	Pass
802.11ac40	Lowest	-0.56	11.00	Pass
	Highest	-1.59	11.00	Pass
802.11ac80	Middle	-6.40	11.00	Pass

Band 2				
Mode	Test CH	PSD (dBm)	Limit (dBm)	Result
802.11a	Lowest	2.62	11.00	Pass
	Middle	2.46	11.00	Pass
	Highest	1.53	11.00	Pass
802.11n20	Lowest	1.23	11.00	Pass
	Middle	0.90	11.00	Pass
	Highest	0.97	11.00	Pass
802.11n40	Lowest	-1.90	11.00	Pass
	Highest	-2.09	11.00	Pass
802.11ac20	Lowest	1.56	11.00	Pass
	Middle	1.01	11.00	Pass
	Highest	0.47	11.00	Pass
802.11ac40	Lowest	-2.11	11.00	Pass
	Highest	-2.26	11.00	Pass
802.11ac80	Middle	-7.29	11.00	Pass

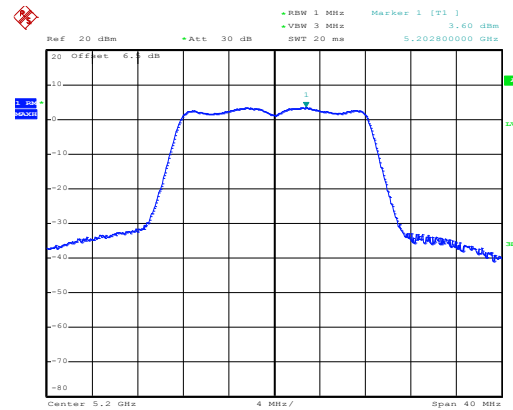
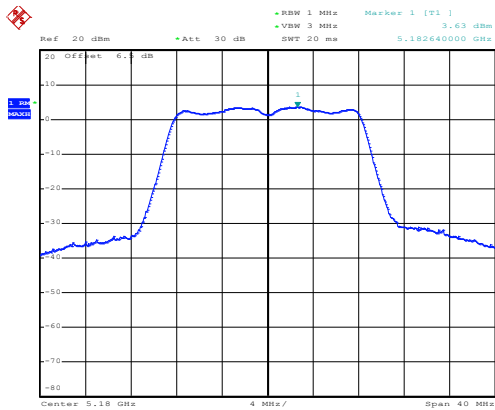
Band 3				
Mode	Test CH	PSD (dBm)	Limit (dBm)	Result
802.11a	Lowest	4.17	11.00	Pass
	Middle	3.58	11.00	Pass
	Highest	3.32	11.00	Pass
802.11n20	Lowest	2.56	11.00	Pass
	Middle	2.13	11.00	Pass
	Highest	1.61	11.00	Pass
802.11n40	Lowest	-0.25	11.00	Pass
	Middle	-0.46	11.00	Pass
	Highest	-1.27	11.00	Pass
802.11ac20	Lowest	2.59	11.00	Pass
	Middle	2.22	11.00	Pass
	Highest	1.61	11.00	Pass
802.11ac40	Lowest	-0.31	11.00	Pass
	Middle	-0.69	11.00	Pass
	Highest	-1.19	11.00	Pass
802.11ac80	Lowest	-6.87	11.00	Pass
	Highest	-6.26	11.00	Pass

Band 4				
Mode	Test CH	PSD (dBm)	Limit (dBm)	Result
802.11a	Lowest	4.24	30.00	Pass
	Middle	5.88	30.00	Pass
	Highest	5.75	30.00	Pass
802.11n20	Lowest	3.69	30.00	Pass
	Middle	4.30	30.00	Pass
	Highest	3.04	30.00	Pass
802.11n40	Lowest	0.63	30.00	Pass
	Highest	0.37	30.00	Pass
802.11ac20	Lowest	3.69	30.00	Pass
	Middle	3.44	30.00	Pass
	Highest	3.64	30.00	Pass
802.11ac40	Lowest	0.89	30.00	Pass
	Highest	0.70	30.00	Pass
802.11ac80	Middle	-3.79	30.00	Pass

Test plot as follows:

Band 1:

Test mode:802.11a

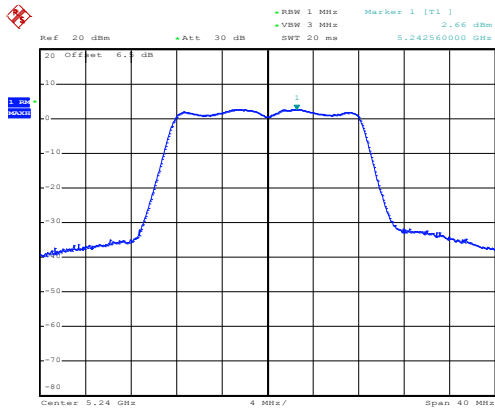


Date: 2.JUL.2017 17:34:36

Date: 2.JUL.2017 17:35:04

Lowest channel

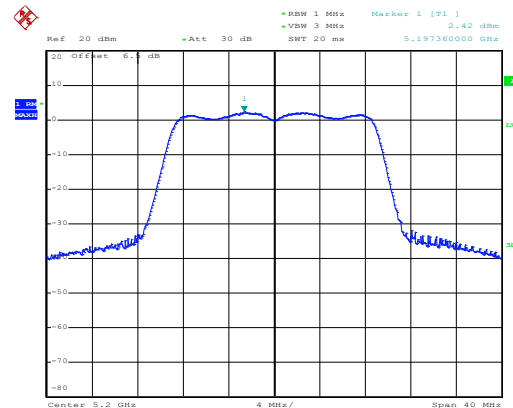
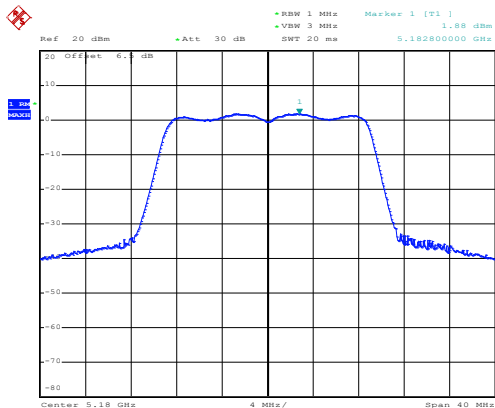
Middle channel



Date: 2.JUL.2017 17:35:32

Highest channel

Test mode:802.11n20

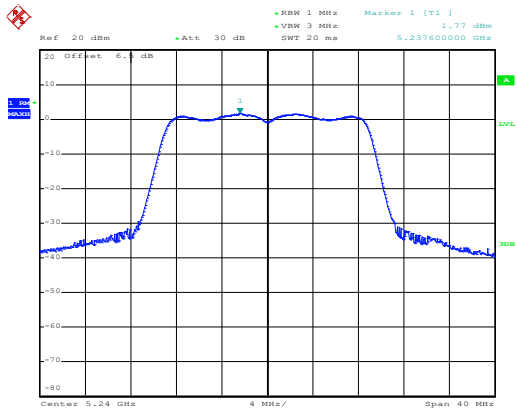


Date: 2.JUL.2017 17:32:50

Date: 2.JUL.2017 17:33:16

Lowest channel

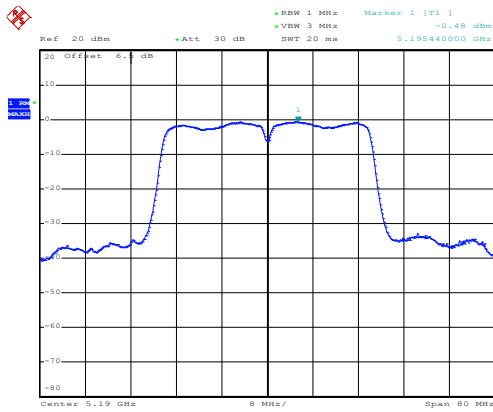
Middle channel



Date: 2.JUL.2017 17:33:49

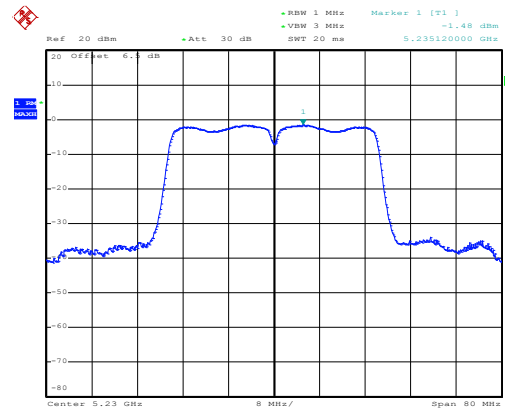
Highest channel

Test mode:802.11n40



Date: 2.JUL.2017 17:31:13

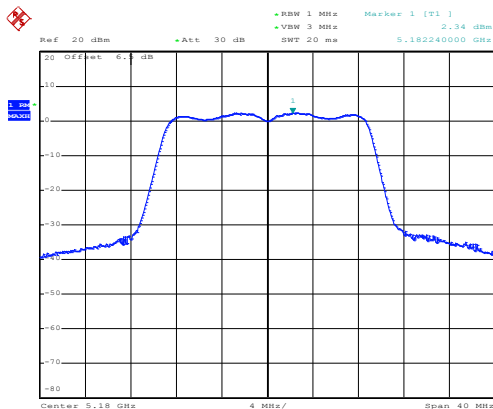
Lowest channel



Date: 2.JUL.2017 17:31:58

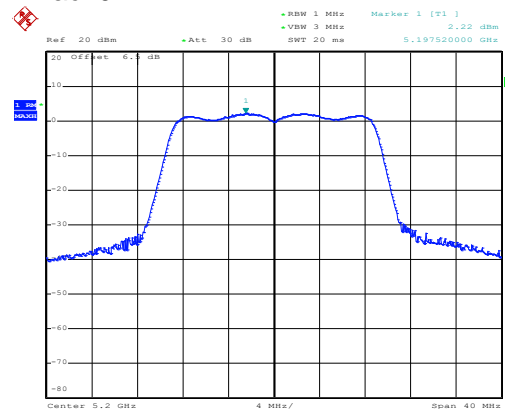
Highest channel

Test mode:802.11ac20



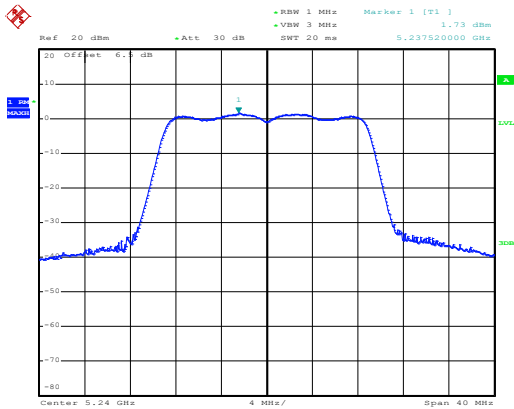
Date: 2.JUL.2017 17:29:18

Lowest channel



Date: 2.JUL.2017 17:29:45

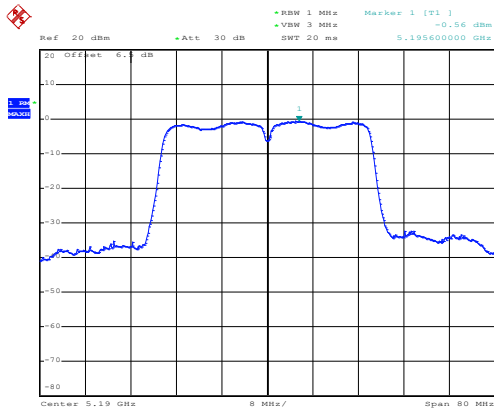
Middle channel



Date: 2.JUL.2017 17:30:11

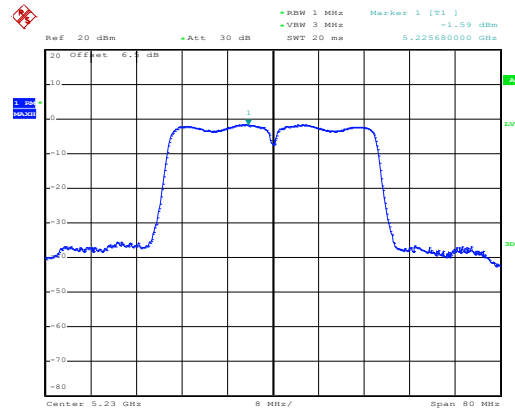
Highest channel

Test mode:802.11ac40



Date: 2.JUL.2017 17:27:48

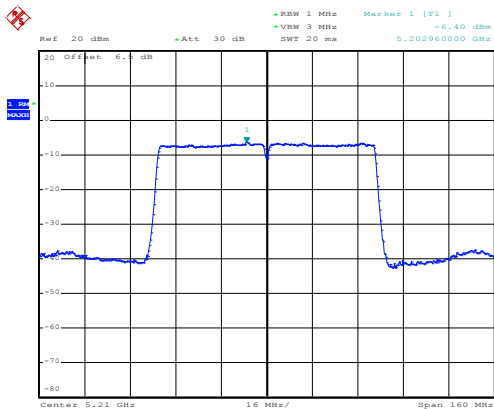
Lowest channel



Date: 2.JUL.2017 17:28:19

Highest channel

Test mode:802.11ac80

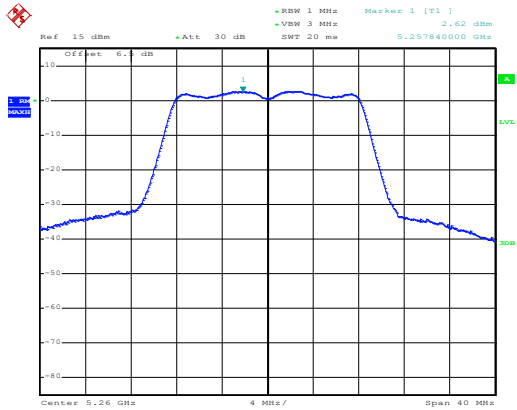


Date: 2.JUL.2017 17:26:27

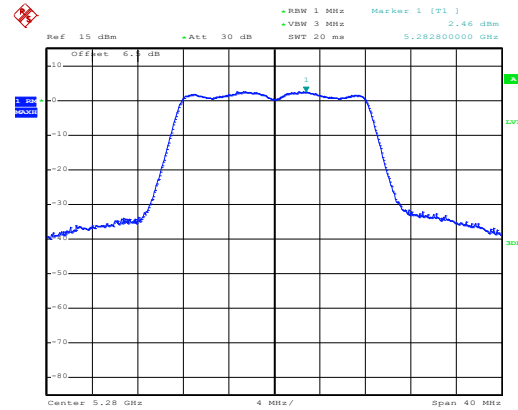
Middle channel

Band 2:

Test mode:802.11a



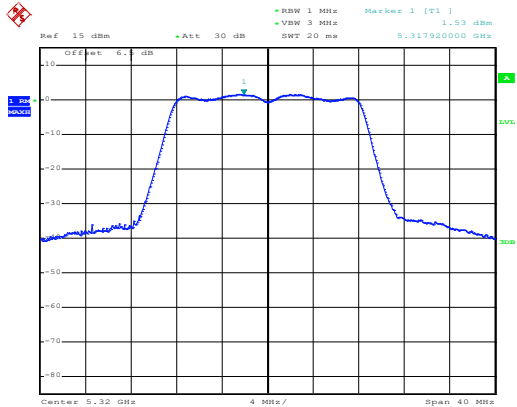
Date: 2.JUL.2017 20:04:17



Date: 2.JUL.2017 20:09:58

Lowest channel

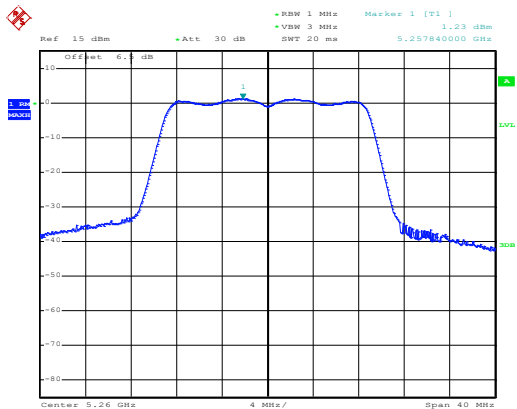
Middle channel



Date: 2.JUL.2017 20:10:31

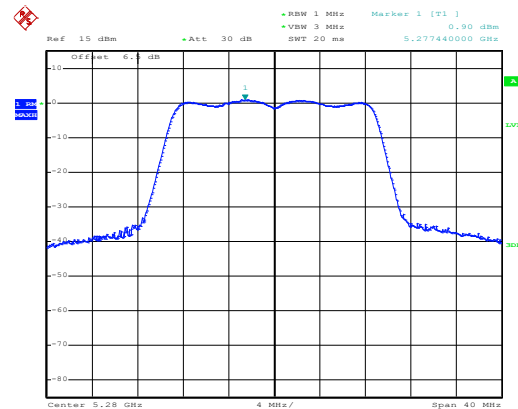
Highest channel

Test mode:802.11n20



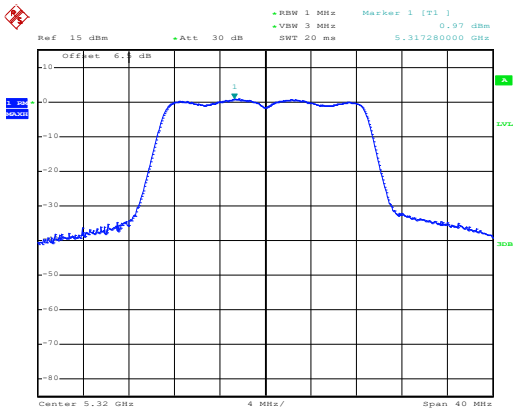
Date: 2.JUL.2017 20:16:47

Lowest channel



Date: 2.JUL.2017 20:17:29

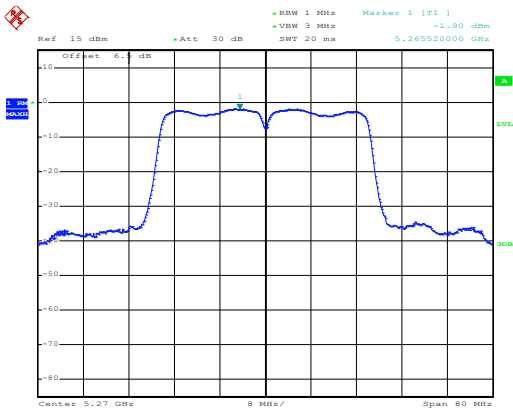
Middle channel



Date: 2.JUL.2017 20:18:15

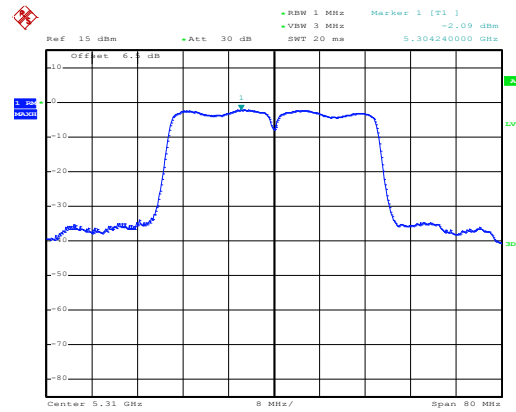
Highest channel

Test mode:802.11n40



Date: 2.JUL.2017 20:19:57

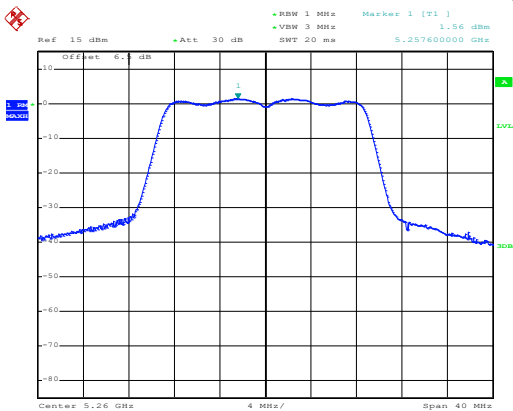
Lowest channel



Date: 2.JUL.2017 20:21:15

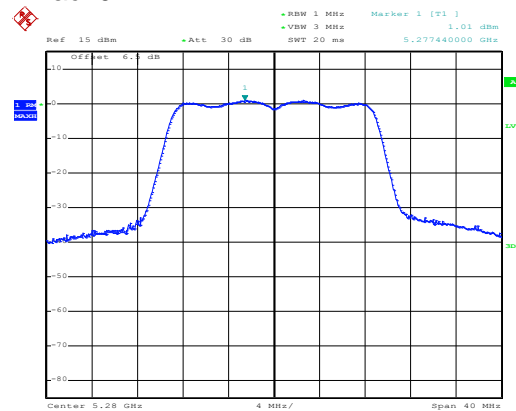
Highest channel

Test mode:802.11ac20



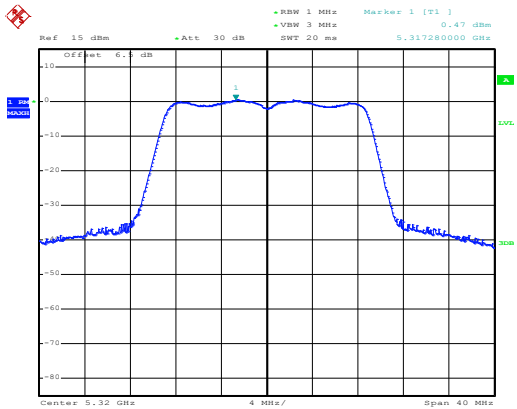
Date: 2.JUL.2017 20:22:51

Lowest channel



Date: 2.JUL.2017 20:25:38

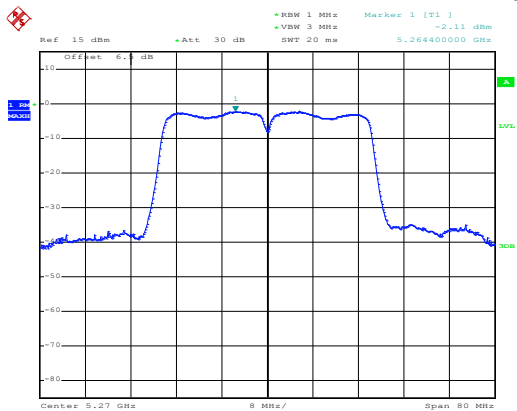
Middle channel



Date: 2.JUL.2017 20:26:09

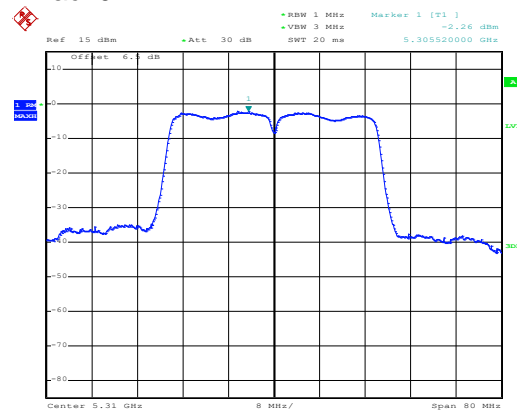
Highest channel

Test mode:802.11ac40



Date: 2.JUL.2017 20:32:06

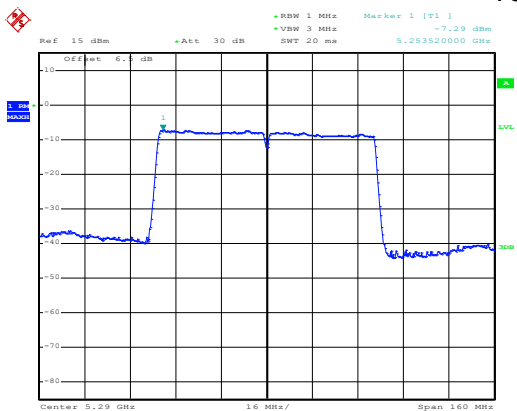
Lowest channel



Date: 2.JUL.2017 20:31:34

Highest channel

Test mode:802.11ac80

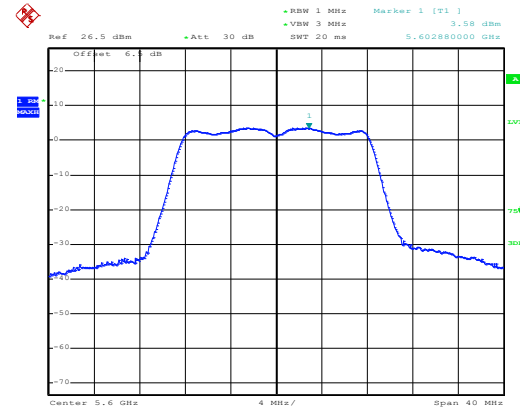
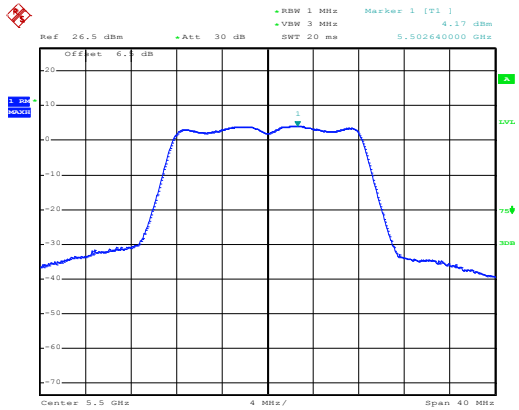


Date: 2.JUL.2017 20:42:30

Middle channel

Band 3:

Test mode:802.11a

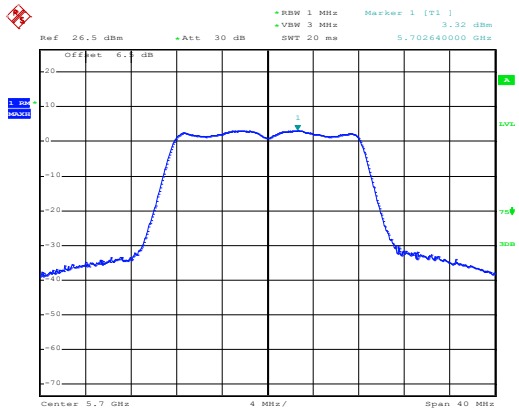


Date: 3.JUL.2017 14:37:01

Date: 3.JUL.2017 14:37:30

Lowest channel

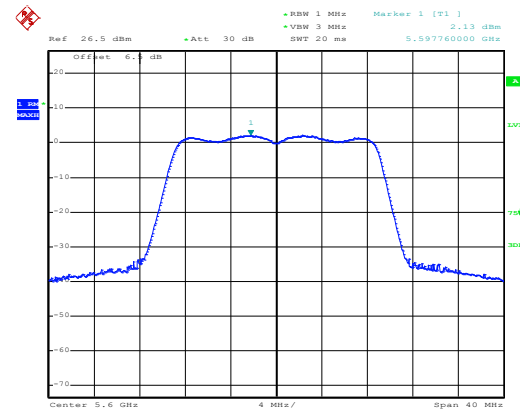
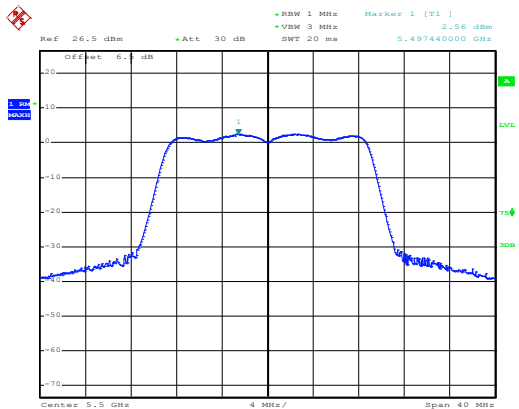
Middle channel



Date: 3.JUL.2017 14:38:06

Highest channel

Test mode:802.11n20

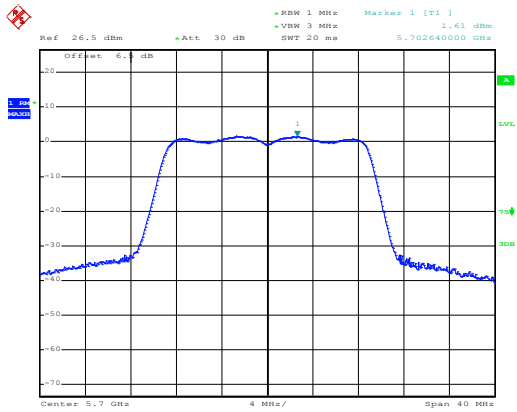


Date: 3.JUL.2017 14:38:55

Date: 3.JUL.2017 14:39:41

Lowest channel

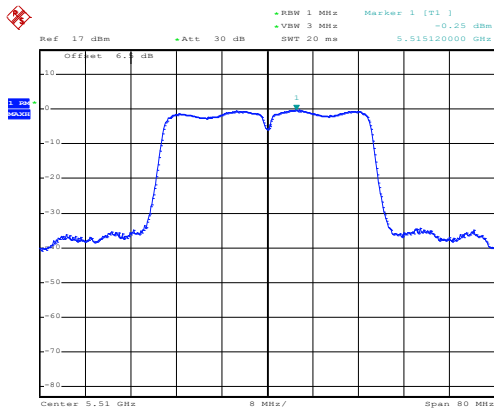
Middle channel



Date: 3.JUL.2017 14:40:03

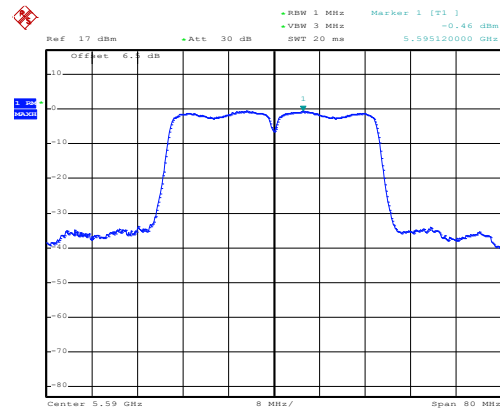
Highest channel

Test mode:802.11n40



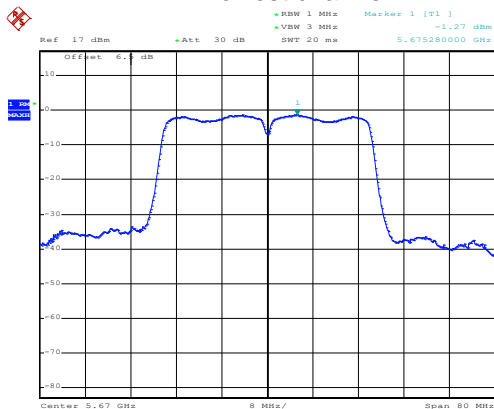
Date: 3.JUL.2017 14:41:02

Lowest channel



Date: 3.JUL.2017 14:41:31

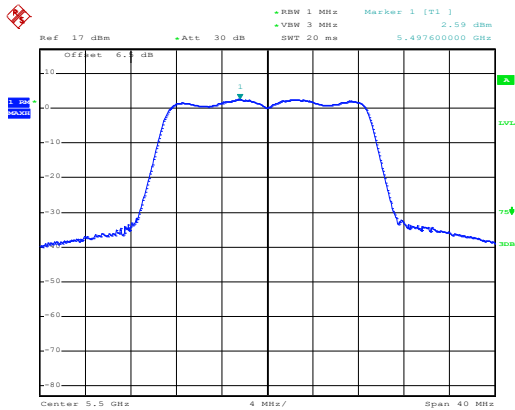
Middle channel



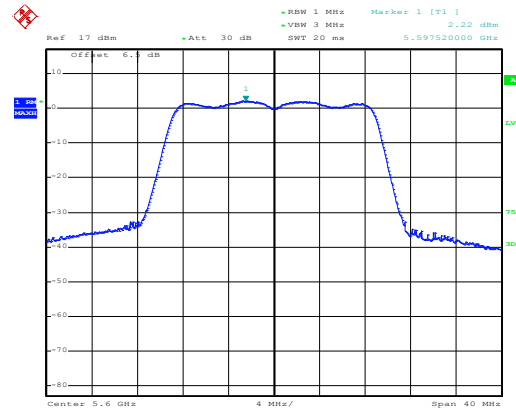
Date: 3.JUL.2017 14:41:57

Highest channel

Test mode:802.11ac20

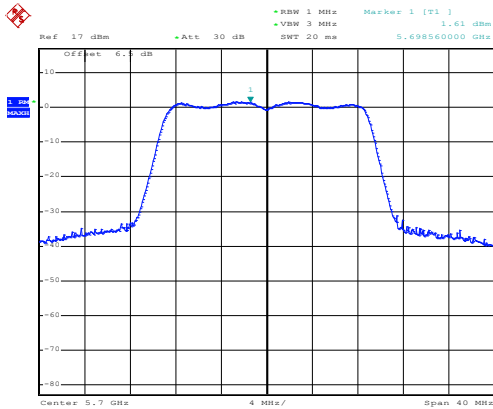


Date: 3.JUL.2017 14:43:08



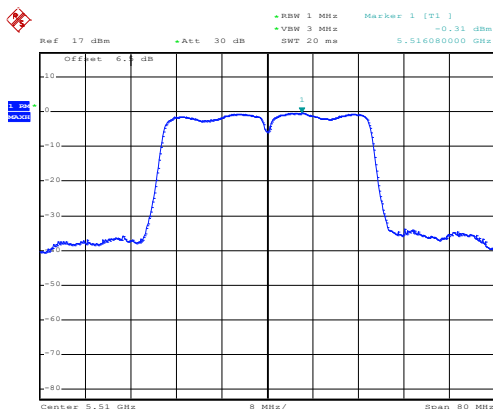
Date: 3.JUL.2017 14:43:41

Lowest channel



Date: 3.JUL.2017 14:44:34

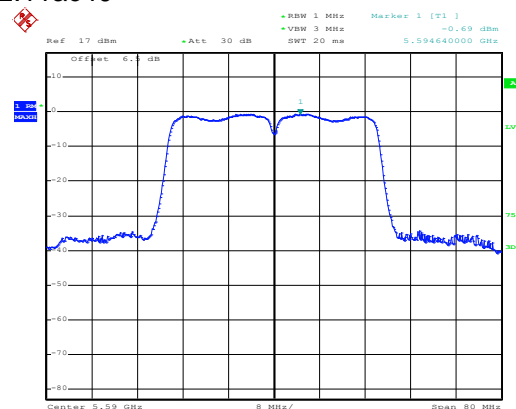
Middle channel



Date: 3.JUL.2017 14:45:35

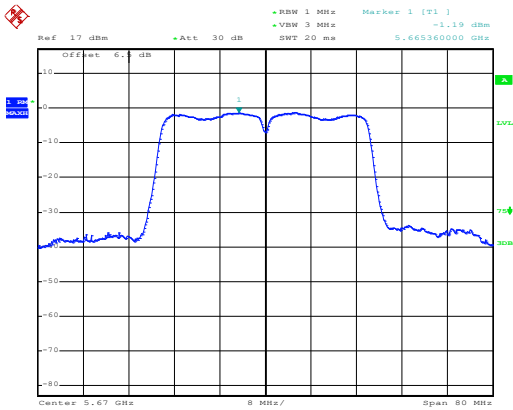
Lowest channel

Test mode:802.11ac40



Date: 3.JUL.2017 14:47:47

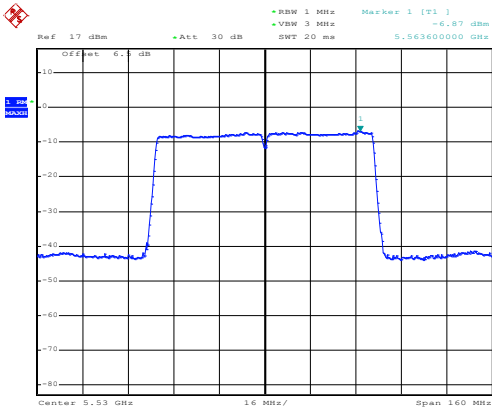
Middle channel



Date: 3.JUL.2017 14:48:22

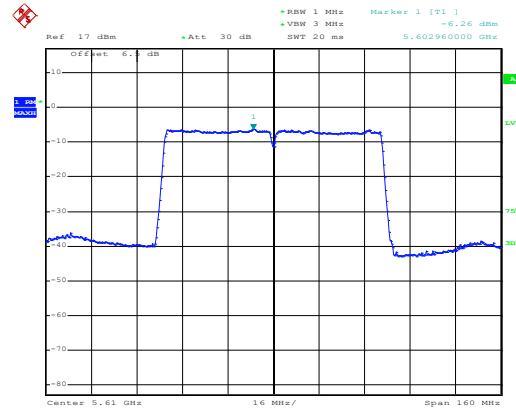
Highest channel

Test mode:802.11ac80



Date: 3.JUL.2017 14:49:41

Lowest channel



Date: 3.JUL.2017 14:50:17

Highest channel

Band 4:

Test mode:802.11a



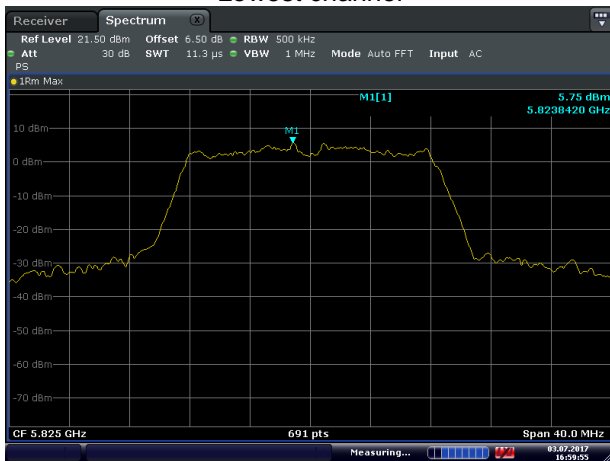
Date: 3.JUL.2017 16:59:11



Date: 3.JUL.2017 16:58:40

Lowest channel

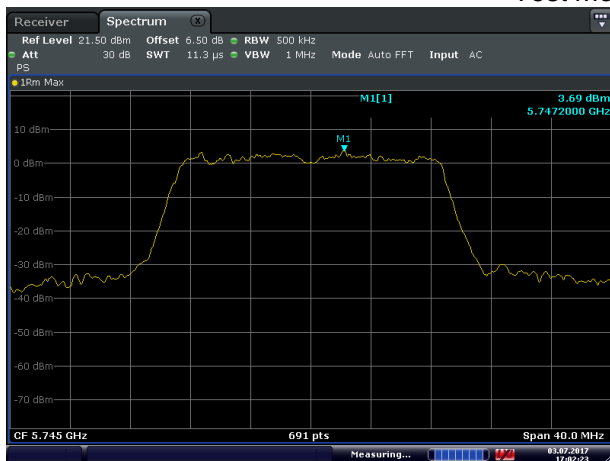
Middle channel



Date: 3.JUL.2017 16:59:55

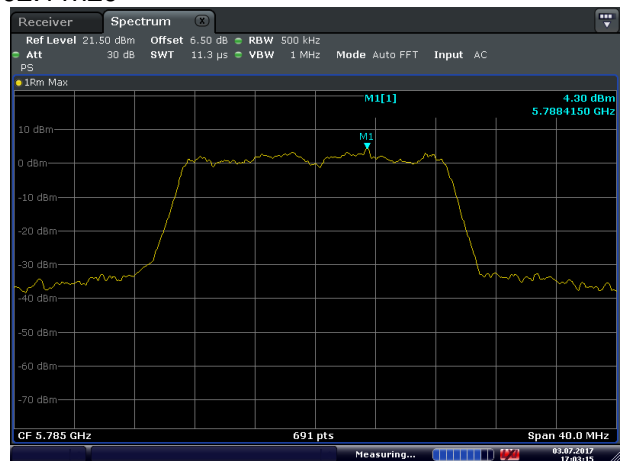
Highest channel

Test mode:802.11n20



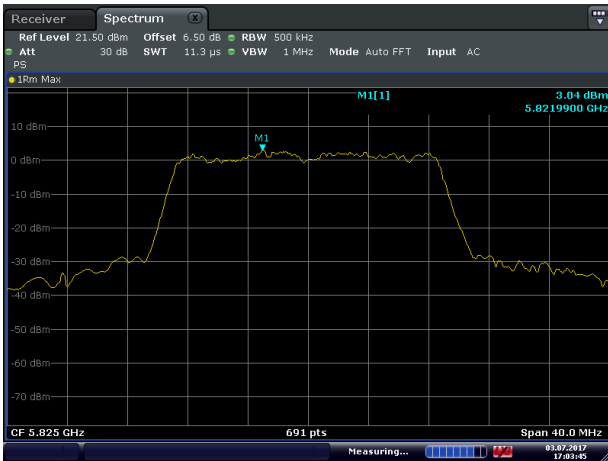
Date: 3.JUL.2017 17:02:23

Lowest channel



Date: 3.JUL.2017 17:03:15

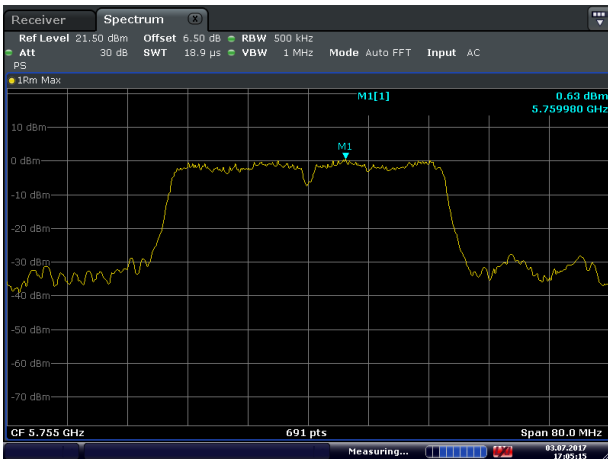
Middle channel



Date: 3.JUL.2017 17:03:45

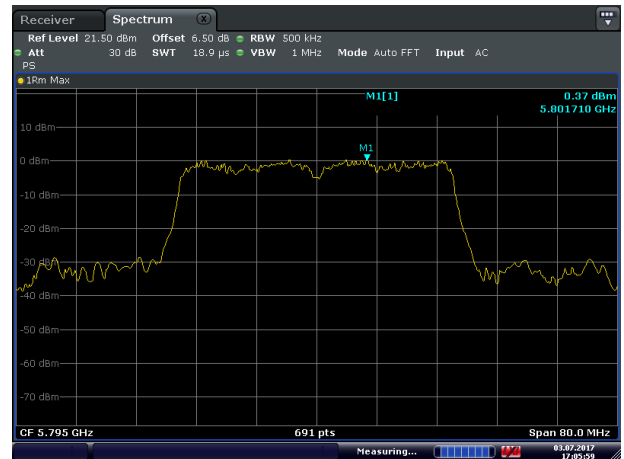
Highest channel

Test mode:802.11n40



Date: 3.JUL.2017 17:05:15

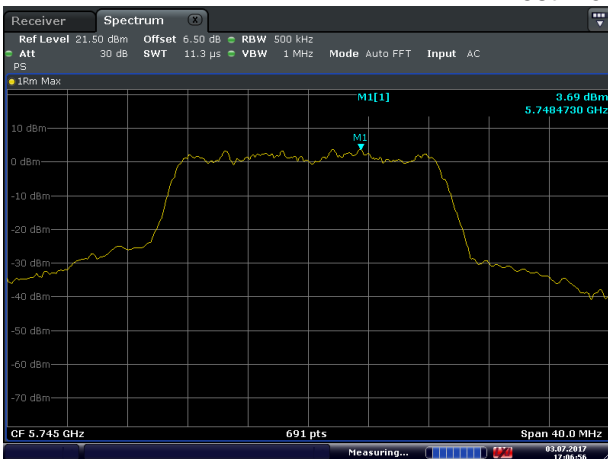
Lowest channel



Date: 3.JUL.2017 17:05:59

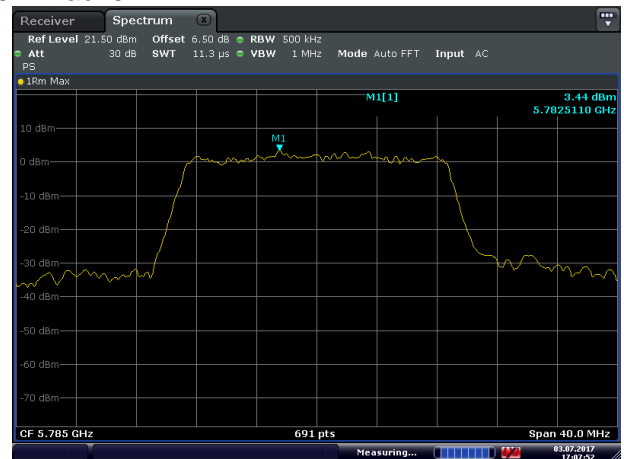
Highest channel

Test mode:802.11ac20



Date: 3.JUL.2017 17:06:56

Lowest channel



Date: 3.JUL.2017 17:07:52

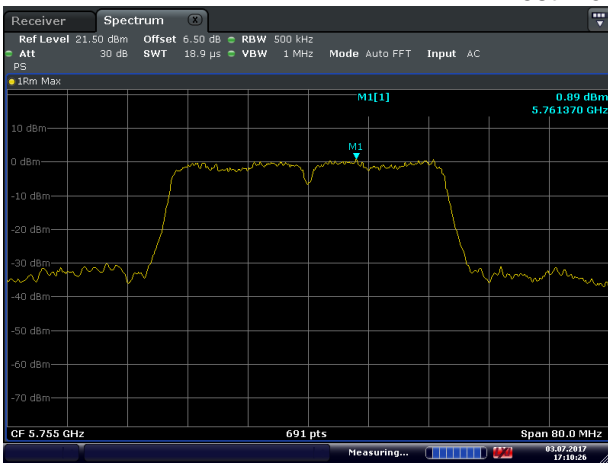
Middle channel



Date: 3.JUL.2017 17:08:25

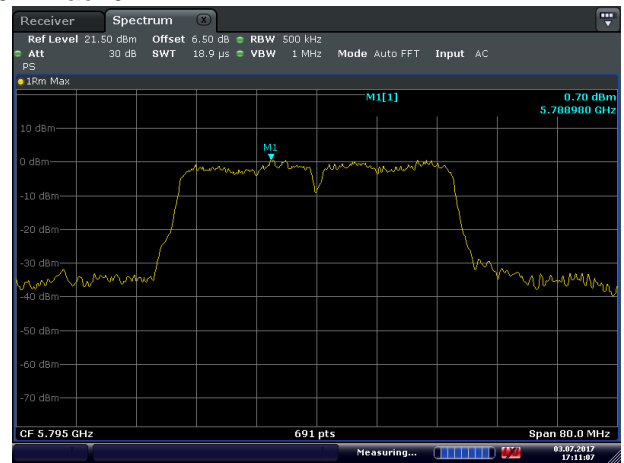
Highest channel

Test mode:802.11ac40



Date: 3.JUL.2017 17:10:26

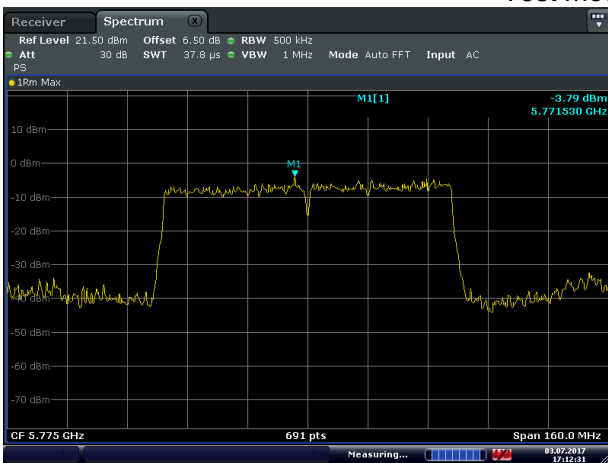
Lowest channel



Date: 3.JUL.2017 17:11:07

Highest channel

Test mode:802.11ac80



Date: 3.JUL.2017 17:12:31

Middle channel

6.6 Band Edge

Test Requirement:	FCC Part 15 E Section 15.407 (b)			
Test Method:	ANSI C63.10:2013 , KDB 789033			
Receiver setup:	Detector	RBW	VBW	Remark
	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	RMS	1MHz	3MHz	Average Value
Limit:	Band	Limit (dBuV/m @3m)		Remark
	Band 1/2/3	68.20		Peak Value
		54.00		Average Value
	Band 4	78.20		Peak Value
		54.00		Average Value
Remark: 1. Band 1/2/3 limit: $E[dB\mu V/m] = EIRP[dBm] + 95.2 = 68.2 \text{ dBuV/m}$, for $EIRP[dBm] = -27 \text{ dBm}$. 2. Band 4 limit: $E[dB\mu V/m] = EIRP[dBm] + 95.2 = 78.2 \text{ dBuV/m}$, for $EIRP[dBm] = -17 \text{ dBm}$.				
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The 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. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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. 			
Test setup:	<p>The diagram illustrates the test setup within an anechoic chamber. An EUT (Equipment Under Test) is placed on a turntable at a height of 0.8m. The turntable is positioned 3m away from a horn antenna mounted on an antenna tower. The antenna tower is adjustable in height. The test receiver system, including a Test Receiver, Pre-Amplifier, and Controller, is located on a ground reference plane. The chamber walls are lined with pyramidal absorbers to eliminate reflections.</p>			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			

Band 1:

802.11a								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	55.03	36.23	10.96	40.06	62.16	68.20	-6.04	Horizontal
5150.00	55.17	36.23	10.96	40.06	62.30	68.20	-5.90	Vertical
802.11a								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	32.06	36.23	10.96	40.06	39.19	54.00	-14.81	Horizontal
5150.00	31.47	36.23	10.96	40.06	38.60	54.00	-15.40	Vertical
802.11a								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.58	35.37	11.19	40.18	52.96	68.20	-15.24	Horizontal
5350.00	50.16	35.37	11.19	40.18	56.54	68.20	-11.66	Vertical
802.11a								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.15	35.37	11.19	40.18	43.53	54.00	-10.47	Horizontal
5350.00	38.38	35.37	11.19	40.18	44.76	54.00	-9.24	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT20								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	54.58	36.23	10.96	40.06	61.71	68.20	-6.49	Horizontal
5150.00	55.36	36.23	10.96	40.06	62.49	68.20	-5.71	Vertical
802.11n-HT20								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	32.71	36.23	10.96	40.06	39.84	54.00	-14.16	Horizontal
5150.00	31.54	36.23	10.96	40.06	38.67	54.00	-15.33	Vertical
802.11n-HT20								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.30	35.37	11.19	40.18	53.68	68.20	-14.52	Horizontal
5350.00	51.24	35.37	11.19	40.18	57.62	68.20	-10.58	Vertical
802.11n-HT20								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.69	35.37	11.19	40.18	43.07	54.00	-10.93	Horizontal
5350.00	37.77	35.37	11.19	40.18	44.15	54.00	-9.85	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n-HT40								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	55.11	36.23	10.96	40.06	62.24	68.20	-5.96	Horizontal
5150.00	56.03	36.23	10.96	40.06	63.16	68.20	-5.04	Vertical
802.11n-HT40								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	32.14	36.23	10.96	40.06	39.27	54.00	-14.73	Horizontal
5150.00	32.82	36.23	10.96	40.06	39.95	54.00	-14.05	Vertical
802.11n-HT40								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.63	35.37	11.19	40.18	53.01	68.20	-15.19	Horizontal
5350.00	50.87	35.37	11.19	40.18	57.25	68.20	-10.95	Vertical
802.11n-HT40								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	35.58	35.37	11.19	40.18	41.96	54.00	-12.04	Horizontal
5350.00	36.42	35.37	11.19	40.18	42.80	54.00	-11.20	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11ac-HT80								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	55.46	36.23	10.96	40.06	62.59	68.20	-5.61	Horizontal
5150.00	55.82	36.23	10.96	40.06	62.95	68.20	-5.25	Vertical
802.11ac-HT80								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	31.36	36.23	10.96	40.06	38.49	54.00	-15.51	Horizontal
5150.00	32.42	36.23	10.96	40.06	39.55	54.00	-14.45	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.36	35.37	11.19	40.18	52.74	68.20	-15.46	Horizontal
5350.00	50.89	35.37	11.19	40.18	57.27	68.20	-10.93	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	34.58	35.37	11.19	40.18	40.96	54.00	-13.04	Horizontal
5350.00	35.76	35.37	11.19	40.18	42.14	54.00	-11.86	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 2:

802.11a								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	55.14	36.14	11.12	40.11	62.29	68.20	-5.91	Horizontal
5250.00	55.06	36.14	11.12	40.11	62.21	68.20	-5.99	Vertical
802.11a								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	32.17	36.14	11.12	40.11	39.32	54.00	-14.68	Horizontal
5250.00	31.54	36.14	11.12	40.11	38.69	54.00	-15.31	Vertical
802.11a								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	48.26	35.37	11.19	40.18	54.64	68.20	-13.56	Horizontal
5350.00	51.17	35.37	11.19	40.18	57.55	68.20	-10.65	Vertical
802.11a								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.26	35.37	11.19	40.18	43.64	54.00	-10.36	Horizontal
5350.00	38.69	35.37	11.19	40.18	45.07	54.00	-8.93	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT20								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	55.03	36.14	11.12	40.11	62.18	68.20	-6.02	Horizontal
5250.00	54.87	36.14	11.12	40.11	62.02	68.20	-6.18	Vertical
802.11n-HT20								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	33.03	36.14	11.12	40.11	40.18	54.00	-13.82	Horizontal
5250.00	31.28	36.14	11.12	40.11	38.43	54.00	-15.57	Vertical
802.11n-HT20								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	48.11	35.37	11.19	40.18	54.49	68.20	-13.71	Horizontal
5350.00	50.09	35.37	11.19	40.18	56.47	68.20	-11.73	Vertical
802.11n-HT20								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.76	35.37	11.19	40.18	43.14	54.00	-10.86	Horizontal
5350.00	37.64	35.37	11.19	40.18	44.02	54.00	-9.98	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n-HT40								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	55.11	36.14	11.12	40.11	62.26	68.20	-5.94	Horizontal
5250.00	55.69	36.14	11.12	40.11	62.84	68.20	-5.36	Vertical
802.11n-HT40								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	33.14	36.14	11.12	40.11	40.29	54.00	-13.71	Horizontal
5250.00	32.69	36.14	11.12	40.11	39.84	54.00	-14.16	Vertical
802.11n-HT40								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	48.63	35.37	11.19	40.18	55.01	68.20	-13.19	Horizontal
5350.00	49.78	35.37	11.19	40.18	56.16	68.20	-12.04	Vertical
802.11n-HT40								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.36	35.37	11.19	40.18	42.74	54.00	-11.26	Horizontal
5350.00	37.14	35.37	11.19	40.18	43.52	54.00	-10.48	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11ac-HT80								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	55.03	36.14	11.12	40.11	62.18	68.20	-6.02	Horizontal
5250.00	55.42	36.14	11.12	40.11	62.57	68.20	-5.63	Vertical
802.11ac-HT80								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5250.00	31.39	36.14	11.12	40.11	38.54	54.00	-15.46	Horizontal
5250.00	32.71	36.14	11.12	40.11	39.86	54.00	-14.14	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	48.51	35.37	11.19	40.18	54.89	68.20	-13.31	Horizontal
5350.00	49.23	35.37	11.19	40.18	55.61	68.20	-12.59	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.13	35.37	11.19	40.18	43.51	54.00	-10.50	Horizontal
5350.00	36.64	35.37	11.19	40.18	43.02	54.00	-10.98	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 3:

802.11a								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	45.81	34.58	11.58	40.41	51.56	78.20	-26.64	Horizontal
5470.00	46.23	34.58	11.58	40.41	51.98	78.20	-26.22	Vertical
802.11a								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	34.17	34.58	11.58	40.41	39.92	54.00	-14.08	Horizontal
5470.00	37.05	34.58	11.58	40.41	42.80	54.00	-11.20	Vertical
802.11a								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	45.15	34.61	11.68	40.63	50.81	78.20	-27.39	Horizontal
5725.00	45.03	34.61	11.68	40.63	50.69	78.20	-27.51	Vertical
802.11a								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	34.17	34.61	11.68	40.63	39.83	54.00	-14.17	Horizontal
5725.00	33.06	34.61	11.68	40.63	38.72	54.00	-15.28	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT20								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	45.62	34.58	11.58	40.41	51.37	78.20	-26.83	Horizontal
5470.00	46.15	34.58	11.58	40.41	51.90	78.20	-26.30	Vertical
802.11n-HT20								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	34.69	34.58	11.58	40.41	40.44	54.00	-13.56	Horizontal
5470.00	36.22	34.58	11.58	40.41	41.97	54.00	-12.03	Vertical
802.11n-HT20								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	45.28	34.61	11.68	40.63	50.94	78.20	-27.26	Horizontal
5725.00	45.01	34.61	11.68	40.63	50.67	78.20	-27.53	Vertical
802.11n-HT20								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	34.18	34.61	11.68	40.63	39.84	54.00	-14.16	Horizontal
5725.00	33.02	34.61	11.68	40.63	38.68	54.00	-15.32	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n-HT40								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	45.51	34.58	11.58	40.41	51.26	78.20	-26.94	Horizontal
5470.00	46.27	34.58	11.58	40.41	52.02	78.20	-26.18	Vertical
802.11n-HT40								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	36.01	34.58	11.58	40.41	41.76	54.00	-12.24	Horizontal
5470.00	35.12	34.58	11.58	40.41	40.87	54.00	-13.13	Vertical
802.11n-HT40								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	46.18	34.61	11.68	40.63	51.84	78.20	-26.36	Horizontal
5725.00	45.07	34.61	11.68	40.63	50.73	78.20	-27.47	Vertical
802.11n-HT40								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	36.68	34.61	11.68	40.63	42.34	54.00	-11.66	Horizontal
5725.00	36.11	34.61	11.68	40.63	41.77	54.00	-12.23	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11ac-HT80								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	45.27	34.58	11.58	40.41	51.02	78.20	-27.18	Horizontal
5470.00	44.16	34.58	11.58	40.41	49.91	78.20	-28.29	Vertical
802.11ac-HT80								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5470.00	34.25	34.58	11.58	40.41	40.00	54.00	-14.00	Horizontal
5470.00	33.81	34.58	11.58	40.41	39.56	54.00	-14.44	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	45.71	34.61	11.68	40.63	51.37	78.20	-26.83	Horizontal
5725.00	46.02	34.61	11.68	40.63	51.68	78.20	-26.52	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	32.12	34.61	11.68	40.63	37.78	54.00	-16.22	Horizontal
5725.00	33.09	34.61	11.68	40.63	38.75	54.00	-15.25	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4:

802.11a								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	45.68	34.65	11.62	40.54	51.41	78.20	-26.79	Horizontal
5725.00	46.09	34.65	11.62	40.54	51.82	78.20	-26.38	Vertical
802.11a								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	32.86	34.65	11.62	40.54	38.59	54.00	-15.41	Horizontal
5725.00	37.12	34.65	11.62	40.54	42.85	54.00	-11.15	Vertical
802.11a								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	44.65	34.63	11.75	40.69	50.34	78.20	-27.86	Horizontal
5850.00	44.80	34.63	11.75	40.69	50.49	78.20	-27.71	Vertical
802.11a								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	32.59	34.63	11.75	40.69	38.28	54.00	-15.72	Horizontal
5850.00	32.64	34.63	11.75	40.69	38.33	54.00	-15.67	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT20								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	45.31	34.65	11.62	40.54	51.04	78.20	-27.16	Horizontal
5725.00	45.85	34.65	11.62	40.54	51.58	78.20	-26.62	Vertical
802.11n-HT20								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	32.71	34.65	11.62	40.54	38.44	54.00	-15.56	Horizontal
5725.00	36.69	34.65	11.62	40.54	42.42	54.00	-11.58	Vertical
802.11n-HT20								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	45.01	34.63	11.75	40.69	50.70	78.20	-27.50	Horizontal
5850.00	44.25	34.63	11.75	40.69	49.94	78.20	-28.26	Vertical
802.11n-HT20								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	32.25	34.63	11.75	40.69	37.94	54.00	-16.06	Horizontal
5850.00	31.86	34.63	11.75	40.69	37.55	54.00	-16.45	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n-HT40								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	46.03	34.65	11.62	40.54	51.76	78.20	-26.44	Horizontal
5725.00	44.15	34.65	11.62	40.54	49.88	78.20	-28.32	Vertical
802.11n-HT40								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	32.56	34.65	11.62	40.54	38.29	54.00	-15.71	Horizontal
5725.00	35.24	34.65	11.62	40.54	40.97	54.00	-13.03	Vertical
802.11n-HT40								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	46.35	34.63	11.75	40.69	52.04	78.20	-26.16	Horizontal
5850.00	44.82	34.63	11.75	40.69	50.51	78.20	-27.69	Vertical
802.11n-HT40								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	32.12	34.63	11.75	40.69	37.81	54.00	-16.19	Horizontal
5850.00	32.03	34.63	11.75	40.69	37.72	54.00	-16.28	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11ac-HT80								
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	45.53	34.65	11.62	40.54	51.26	78.20	-26.94	Horizontal
5725.00	43.37	34.65	11.62	40.54	49.10	78.20	-29.10	Vertical
802.11ac-HT80								
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	32.25	34.65	11.62	40.54	37.98	54.00	-16.02	Horizontal
5725.00	34.48	34.65	11.62	40.54	40.21	54.00	-13.79	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	46.36	34.63	11.75	40.69	52.05	78.20	-26.15	Horizontal
5850.00	45.02	34.63	11.75	40.69	50.71	78.20	-27.49	Vertical
802.11ac-HT80								
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	31.48	34.63	11.75	40.69	37.17	54.00	-16.83	Horizontal
5850.00	31.27	34.63	11.75	40.69	36.96	54.00	-17.04	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

6.7 Spurious Emission

6.7.1 Restricted Band

Test Requirement:	FCC Part15 E Section 15.407(b)				
Test Method:	ANSI C63.10: 2013				
Test Frequency Range:	4.5 GHz to 5.15 GHz and 5.35GHz to 5.46GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak RMS	1MHz 1MHz	3MHz 3MHz	Peak Value Average Value
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	Above 1GHz	74.00 54.00		Peak Value Average Value	
Test Procedure:	<ol style="list-style-type: none"> 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. 				
Test setup:					
Test Instruments:	Refer to section 5.8 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

Band 1:

802.11a

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	43.25	34.50	10.22	40.67	47.30	74.00	-26.70	Horizontal
4500.00	42.27	34.50	10.22	40.67	46.32	74.00	-27.68	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	32.69	34.50	10.22	40.67	36.74	54.00	-17.26	Horizontal
4500.00	32.01	34.50	10.22	40.67	36.06	54.00	-17.94	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	42.12	34.90	11.32	40.23	48.11	74.00	-25.89	Horizontal
5460.00	41.78	34.90	11.32	40.23	47.77	74.00	-26.23	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	32.23	34.90	11.32	40.23	38.22	54.00	-15.78	Horizontal
5460.00	32.51	34.90	11.32	40.23	38.50	54.00	-15.50	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT20

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	42.27	34.50	10.22	40.67	46.32	74.00	-27.68	Horizontal
4500.00	42.12	34.50	10.22	40.67	46.17	74.00	-27.83	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	31.03	34.50	10.22	40.67	35.08	54.00	-18.92	Horizontal
4500.00	32.59	34.50	10.22	40.67	36.64	54.00	-17.36	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	41.75	34.90	11.32	40.23	47.74	74.00	-26.26	Horizontal
5460.00	42.36	34.90	11.32	40.23	48.35	74.00	-25.65	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	32.23	34.90	11.32	40.23	38.22	54.00	-15.78	Horizontal
5460.00	32.58	34.90	11.32	40.23	38.57	54.00	-15.43	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n-HT40

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	42.25	34.50	10.22	40.67	46.30	74.00	-27.70	Horizontal
4500.00	41.63	34.50	10.22	40.67	45.68	74.00	-28.32	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	32.62	34.50	10.22	40.67	36.67	54.00	-17.33	Horizontal
4500.00	31.54	34.50	10.22	40.67	35.59	54.00	-18.41	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	41.89	34.90	11.32	40.23	47.88	74.00	-26.12	Horizontal
5460.00	42.25	34.90	11.32	40.23	48.24	74.00	-25.76	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	31.25	34.90	11.32	40.23	37.24	54.00	-16.76	Horizontal
5460.00	32.86	34.90	11.32	40.23	38.85	54.00	-15.15	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11ac-HT80

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	41.73	34.50	10.22	40.67	45.78	74.00	-28.22	Horizontal
4500.00	42.62	34.50	10.22	40.67	46.67	74.00	-27.33	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	32.02	34.50	10.22	40.67	36.07	54.00	-17.93	Horizontal
4500.00	32.45	34.50	10.22	40.67	36.50	54.00	-17.50	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	41.75	34.90	11.32	40.23	47.74	74.00	-26.26	Horizontal
5460.00	42.26	34.90	11.32	40.23	48.25	74.00	-25.75	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	32.77	34.90	11.32	40.23	38.76	54.00	-15.24	Horizontal
5460.00	31.63	34.90	11.32	40.23	37.62	54.00	-16.38	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4:

802.11a

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	43.17	35.37	11.19	40.18	49.55	74.00	-24.45	Horizontal
5350.00	42.01	35.37	11.19	40.18	48.39	74.00	-25.61	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	32.58	35.37	11.19	40.18	38.96	54.00	-15.04	Horizontal
5350.00	31.25	35.37	11.19	40.18	37.63	54.00	-16.37	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	42.58	34.90	11.32	40.23	48.57	74.00	-25.43	Horizontal
5460.00	41.75	34.90	11.32	40.23	47.74	74.00	-26.26	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	33.58	34.90	11.32	40.23	39.57	54.00	-14.43	Horizontal
5460.00	32.24	34.90	11.32	40.23	38.23	54.00	-15.77	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT20

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	42.52	35.37	11.19	40.18	48.90	74.00	-25.10	Horizontal
5350.00	42.03	35.37	11.19	40.18	48.41	74.00	-25.59	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	32.68	35.37	11.19	40.18	39.06	54.00	-14.94	Horizontal
5350.00	31.33	35.37	11.19	40.18	37.71	54.00	-16.29	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	43.01	34.90	11.32	40.23	49.00	74.00	-25.00	Horizontal
5460.00	42.28	34.90	11.32	40.23	48.27	74.00	-25.73	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	32.25	34.90	11.32	40.23	38.24	54.00	-15.76	Horizontal
5460.00	32.14	34.90	11.32	40.23	38.13	54.00	-15.87	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n-HT40

Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	42.15	35.37	11.19	40.18	48.53	74.00	-25.47	Horizontal
5350.00	42.28	35.37	11.19	40.18	48.66	74.00	-25.34	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	32.71	35.37	11.19	40.18	39.09	54.00	-14.91	Horizontal
5350.00	32.03	35.37	11.19	40.18	38.41	54.00	-15.59	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	42.25	34.90	11.32	40.23	48.24	74.00	-25.76	Horizontal
5460.00	42.07	34.90	11.32	40.23	48.06	74.00	-25.94	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	32.36	34.90	11.32	40.23	38.35	54.00	-15.65	Horizontal
5460.00	31.18	34.90	11.32	40.23	37.17	54.00	-16.83	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor .*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11ac-HT80

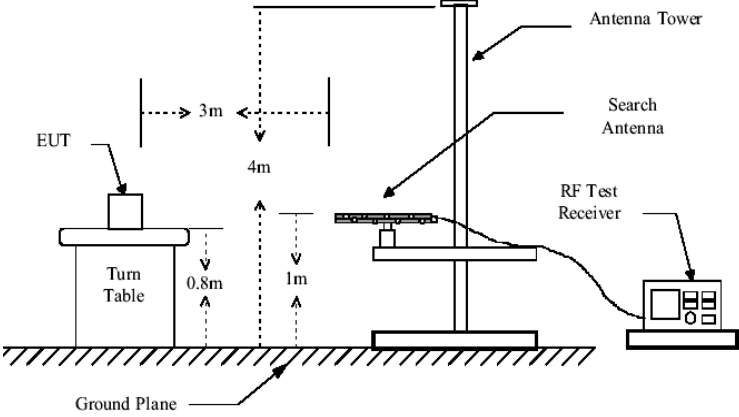
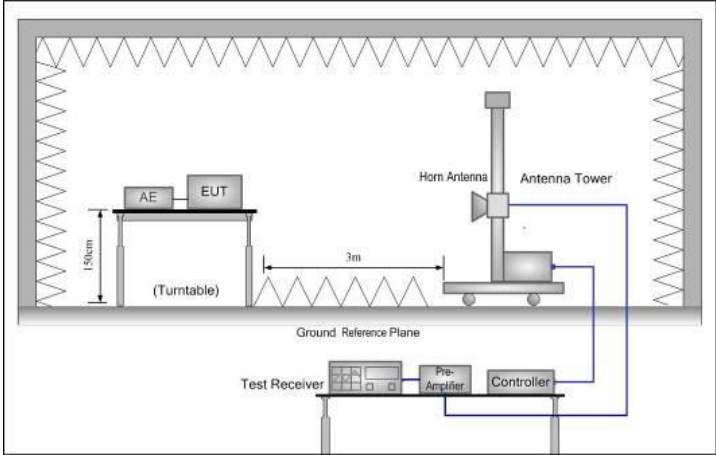
Test channel		Lowest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	41.71	35.37	11.19	40.18	48.09	74.00	-25.91	Horizontal
5350.00	42.05	35.37	11.19	40.18	48.43	74.00	-25.57	Vertical
Test channel		Lowest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	32.56	35.37	11.19	40.18	38.94	54.00	-15.06	Horizontal
5350.00	31.12	35.37	11.19	40.18	37.50	54.00	-16.50	Vertical
Test channel		Highest			Level		Peak	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	41.76	34.90	11.32	40.23	47.75	74.00	-26.25	Horizontal
5460.00	41.18	34.90	11.32	40.23	47.17	74.00	-26.83	Vertical
Test channel		Highest			Level		Average	
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	32.22	34.90	11.32	40.23	38.21	54.00	-15.79	Horizontal
5460.00	31.37	34.90	11.32	40.23	37.36	54.00	-16.64	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

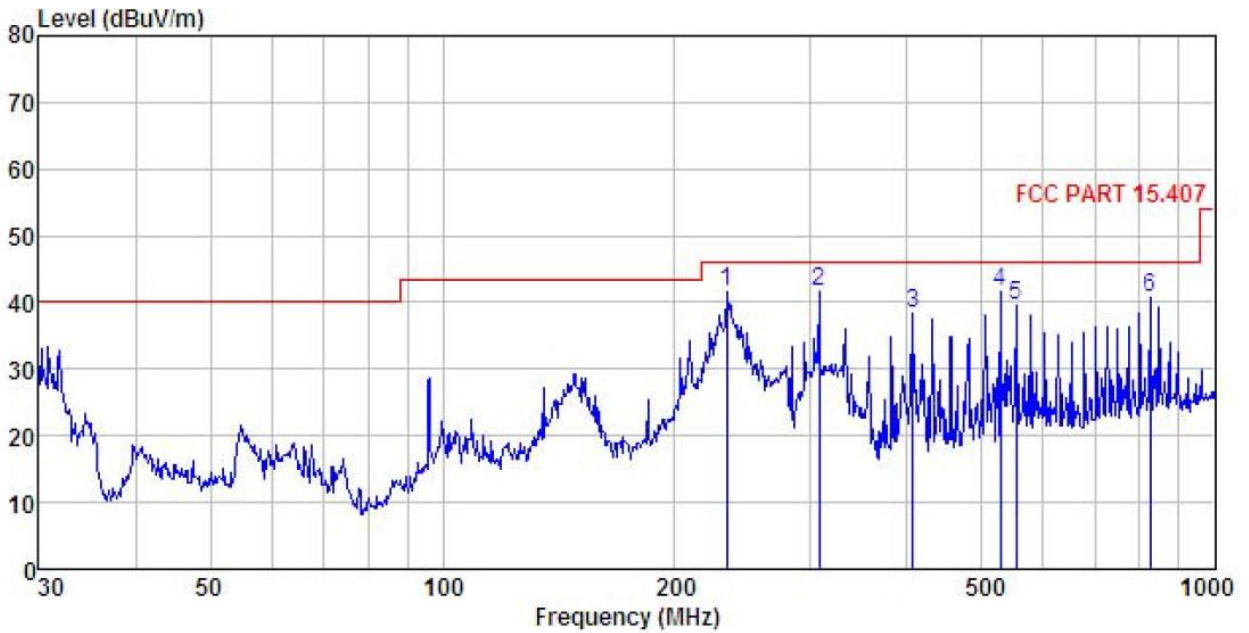
6.7.2 Unwanted Emissions out of the Restricted Bands

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10: 2013				
Test Frequency Range:	30MHz to 40GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
RMS		1MHz	3MHz	Average Value	
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	68.20		Peak Value	
		54.00		Average Value	
<i>Remark:</i> <i>Above 1GHz limit:</i> $E[dBuV/m] = EIRP[dBm] + 95.2 = 68.2 \text{ dBuV/m}$, for $EIPR[dBm] = -27dBm$.					
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The 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. 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. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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. 				

<p>Test setup:</p>	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
<p>Test Instruments:</p>	<p>Refer to section 5.8 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.3 for details</p>
<p>Test results:</p>	<p>Passed</p>

Below 1GHz

Horizontal:

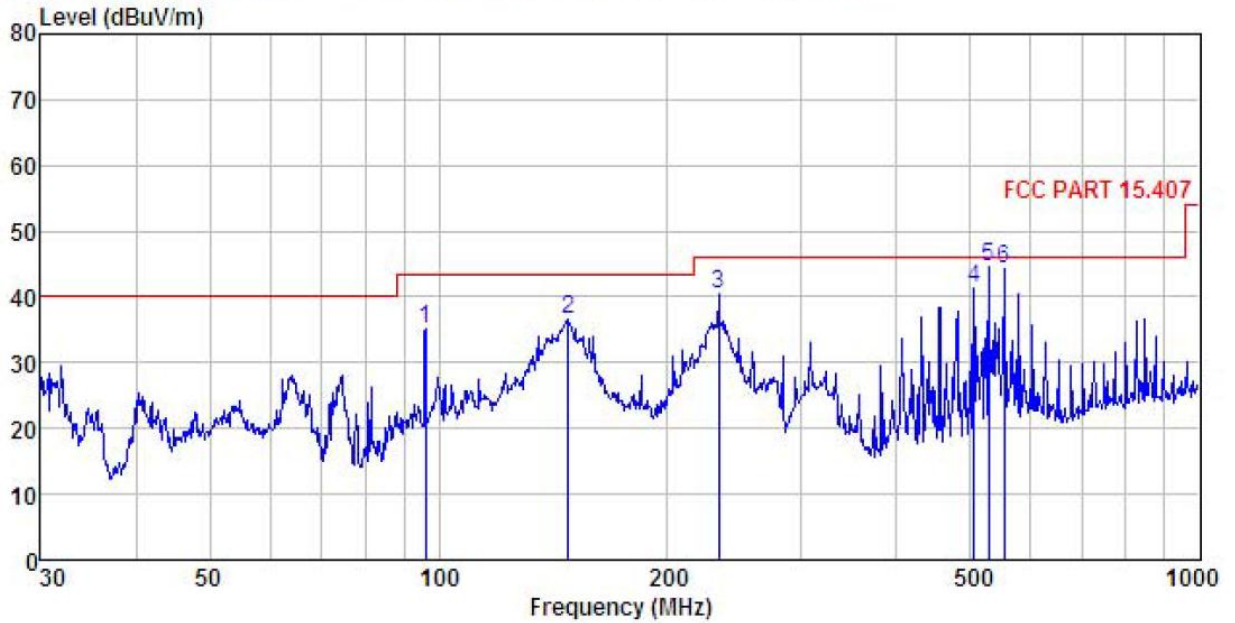


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Site       : 3m chamber
Condition  : FCC PART 15.407 3m VULB9163(30M2G) HORIZONTAL
EUT        : WiFi Media Streaming Module
Model      : LS9-AC11DBT
Test mode  : 5Gwifi Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Humi:55%
Test Engineer: MT
REMARK     :
    
```

	Freq	ReadAntenna Level	Cable Factor	Preamp Loss	Preamp Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	233.349	55.84	11.58	2.83	28.63	41.62	46.00	-4.38	QP
2	307.831	53.69	13.46	2.97	28.47	41.65	46.00	-4.35	QP
3	406.088	49.10	14.98	3.09	28.79	38.38	46.00	-7.62	QP
4	528.246	50.14	16.76	3.77	29.04	41.63	46.00	-4.37	QP
5	552.883	47.58	17.17	3.89	29.09	39.55	46.00	-6.45	QP
6	824.597	44.41	20.24	4.27	28.10	40.82	46.00	-5.18	QP

Vertical:



Site : 3m chamber
 Condition : FCC PART 15.407 3m VULB9163(30M2G) VERTICAL
 EUI : WiFi Media Streaming Module
 Model : LS9-AC11DBT
 Test mode : 5Gwifi Mode
 Power Rating : AC 120V/60Hz
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: MT
 REMARK :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit	Over	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	96.099	50.88	11.67	2.00	29.55	35.00	43.50	-8.50	QP
2	147.921	55.01	8.46	2.50	29.23	36.74	43.50	-6.76	QP
3	233.349	54.54	11.58	2.83	28.63	40.32	46.00	-5.68	QP
4	504.706	50.04	16.70	3.65	28.97	41.42	46.00	-4.58	QP
5	528.246	53.00	16.76	3.77	29.04	44.49	46.00	-1.51	QP
6	552.883	52.36	17.17	3.89	29.09	44.33	46.00	-1.67	QP

Above 1GHz:

Band 1:

802.11a mode Lowest channel (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
10360.00	41.63	40.10	15.37	41.34	55.76	68.20	-12.44	Vertical
10360.00	42.27	40.10	15.37	41.34	56.40	68.20	-11.80	Horizontal
802.11a mode Lowest channel (Average 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
10360.00	31.58	40.10	15.37	41.34	45.71	54.00	-8.29	Vertical
10360.00	32.15	40.10	15.37	41.34	46.28	54.00	-7.72	Horizontal

802.11a mode Middle channel (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
10400.00	41.25	40.00	15.42	41.27	55.40	68.20	-12.80	Vertical
10400.00	41.02	40.00	15.42	41.27	55.17	68.20	-13.03	Horizontal
802.11a mode Middle channel (Average 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
10400.00	32.06	40.00	15.42	41.27	46.21	54.00	-7.79	Vertical
10400.00	31.44	40.00	15.42	41.27	45.59	54.00	-8.41	Horizontal

802.11a mode Highest channel (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
10480.00	40.45	39.70	15.55	41.10	54.60	68.20	-13.60	Vertical
10480.00	40.23	39.70	15.55	41.10	54.38	68.20	-13.82	Horizontal
802.11a mode Highest channel (Average 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
10480.00	30.12	39.70	15.55	41.10	44.27	54.00	-9.73	Vertical
10480.00	30.76	39.70	15.55	41.10	44.91	54.00	-9.09	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n20 mode Lowest channel (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
10360.00	42.03	40.10	15.37	41.34	56.16	68.20	-12.04	Vertical
10360.00	40.69	40.10	15.37	41.34	54.82	68.20	-13.38	Horizontal
802.11n20 mode Lowest channel (Average 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
10360.00	32.25	40.10	15.37	41.34	46.38	54.00	-7.62	Vertical
10360.00	31.13	40.10	15.37	41.34	45.26	54.00	-8.74	Horizontal

802.11n20 mode Middle channel (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
10400.00	42.67	40.00	15.42	41.27	56.82	68.20	-11.38	Vertical
10400.00	41.25	40.00	15.42	41.27	55.40	68.20	-12.80	Horizontal
802.11n20 mode Middle channel (Average 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
10400.00	32.41	40.00	15.42	41.27	46.56	54.00	-7.44	Vertical
10400.00	30.12	40.00	15.42	41.27	44.27	54.00	-9.73	Horizontal

802.11n20 mode Highest channel (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
10480.00	42.05	39.70	15.55	41.10	56.20	68.20	-12.00	Vertical
10480.00	42.36	39.70	15.55	41.10	56.51	68.20	-11.69	Horizontal
802.11n20 mode Highest channel (Average 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
10480.00	32.03	39.70	15.55	41.10	46.18	54.00	-7.82	Vertical
10480.00	32.47	39.70	15.55	41.10	46.62	54.00	-7.38	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n40 mode Lowest channel (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
10380.00	41.05	40.00	15.42	41.31	55.16	68.20	-13.04	Vertical
10380.00	40.63	40.00	15.42	41.31	54.74	68.20	-13.46	Horizontal
802.11n40 mode Lowest channel (Average 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
10380.00	31.48	40.00	15.42	41.31	45.59	54.00	-8.41	Vertical
10380.00	30.29	40.00	15.42	41.31	44.40	54.00	-9.60	Horizontal

802.11n40 mode Highest channel (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
10460.00	40.25	39.80	15.51	41.17	54.39	68.20	-13.81	Vertical
10460.00	41.48	39.80	15.51	41.17	55.62	68.20	-12.58	Horizontal
802.11n40 mode Highest channel (Average 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
10460.00	31.12	39.80	15.51	41.17	45.26	54.00	-8.74	Vertical
10460.00	31.65	39.80	15.51	41.17	45.79	54.00	-8.21	Horizontal

802.11ac-HT80MHz mode Middle channel (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
10420.00	42.13	39.90	15.46	41.24	56.25	68.20	-11.95	Vertical
10420.00	42.01	39.90	15.46	41.24	56.13	68.20	-12.07	Horizontal
802.11ac-HT80MHz mode Middle channel (Average 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
10420.00	32.58	39.90	15.46	41.24	46.70	54.00	-7.30	Vertical
10420.00	30.12	39.90	15.46	41.24	44.24	54.00	-9.76	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 2:

802.11a mode Lowest channel (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
10520.00	49.71	40.10	9.82	41.97	57.66	68.20	-10.54	Vertical
10520.00	48.69	40.10	9.82	41.97	56.64	68.20	-11.56	Horizontal
802.11a mode Lowest channel (Average 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
10520.00	41.02	40.10	9.82	41.97	48.97	54.00	-5.03	Vertical
10520.00	40.11	40.10	9.82	41.97	48.06	54.00	-5.94	Horizontal

802.11a mode Middle channel (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
10560.00	50.29	40.00	9.85	41.95	58.19	68.20	-10.01	Vertical
10560.00	50.37	40.00	9.85	41.95	58.27	68.20	-9.93	Horizontal
802.11a mode Middle channel (Average 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
10560.00	41.02	40.00	9.85	41.95	48.92	54.00	-5.08	Vertical
10560.00	40.16	40.00	9.85	41.95	48.06	54.00	-5.94	Horizontal

802.11a mode Highest channel (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
10640.00	50.25	39.70	9.96	41.88	58.03	68.20	-10.17	Vertical
10640.00	50.14	39.70	9.96	41.88	57.92	68.20	-10.28	Horizontal
802.11a mode Highest channel (Average 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
10640.00	41.03	39.70	9.96	41.88	48.81	54.00	-5.19	Vertical
10640.00	41.69	39.70	9.96	41.88	49.47	54.00	-4.53	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n20 mode Lowest channel (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
10520.00	48.74	40.10	9.82	41.97	56.69	68.20	-11.51	Vertical
10520.00	48.63	40.10	9.82	41.97	56.58	68.20	-11.62	Horizontal
802.11n20 mode Lowest channel (Average 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
10520.00	38.14	40.10	9.82	41.97	46.09	54.00	-7.91	Vertical
10520.00	39.21	40.10	9.82	41.97	47.16	54.00	-6.84	Horizontal

802.11n20 mode Middle channel (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
10560.00	50.04	40.00	9.85	41.95	57.94	68.20	-10.26	Vertical
10560.00	49.32	40.00	9.85	41.95	57.22	68.20	-10.98	Horizontal
802.11n20 mode Middle channel (Average 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
10560.00	40.84	40.00	9.85	41.95	48.74	54.00	-5.26	Vertical
10560.00	40.28	40.00	9.85	41.95	48.18	54.00	-5.82	Horizontal

802.11n20 mode Highest channel (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
10640.00	50.02	39.70	9.96	41.88	57.80	68.20	-10.40	Vertical
10640.00	49.89	39.70	9.96	41.88	57.67	68.20	-10.53	Horizontal
802.11n20 mode Highest channel (Average 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
10640.00	40.06	39.70	9.96	41.88	47.84	54.00	-6.16	Vertical
10640.00	40.12	39.70	9.96	41.88	47.90	54.00	-6.10	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n40 mode Lowest channel (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
10540.00	48.72	39.64	10.05	41.89	56.52	68.20	-11.68	Vertical
10540.00	48.36	39.64	10.05	41.89	56.16	68.20	-12.04	Horizontal
802.11n40 mode Lowest channel (Average 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
10540.00	39.35	39.64	10.05	41.89	47.15	54.00	-6.85	Vertical
10540.00	38.07	39.64	10.05	41.89	45.87	54.00	-8.13	Horizontal

802.11n40 mode Highest channel (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
10620.00	49.81	39.73	10.16	41.95	57.75	68.20	-10.45	Vertical
10620.00	49.78	39.73	10.16	41.95	57.72	68.20	-10.48	Horizontal
802.11n40 mode Highest channel (Average 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
10620.00	40.85	39.73	10.16	41.95	48.79	54.00	-5.21	Vertical
10620.00	40.06	39.73	10.16	41.95	48.00	54.00	-6.00	Horizontal

802.11ac-HT80MHz mode Middle channel (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
10580.00	48.73	39.90	15.46	41.24	62.85	68.20	-5.35	Vertical
10580.00	48.16	39.90	15.46	41.24	62.28	68.20	-5.92	Horizontal
802.11ac-HT80MHz mode Middle channel (Average 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
10580.00	35.27	39.90	15.46	41.24	49.39	54.00	-4.61	Vertical
10580.00	35.18	39.90	15.46	41.24	49.30	54.00	-4.70	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 3:

802.11a mode Lowest channel (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
11000.00	42.25	40.10	15.37	41.34	56.38	68.20	-11.82	Vertical
11000.00	41.17	40.10	15.37	41.34	55.30	68.20	-12.90	Horizontal
802.11a mode Lowest channel (Average 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
11000.00	32.36	40.10	15.37	41.34	46.49	54.00	-7.51	Vertical
11000.00	32.05	40.10	15.37	41.34	46.18	54.00	-7.82	Horizontal

802.11a mode Middle channel (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
11200.00	41.25	40.00	15.42	41.27	55.40	68.20	-12.80	Vertical
11200.00	41.02	40.00	15.42	41.27	55.17	68.20	-13.03	Horizontal
802.11a mode Middle channel (Average 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
11200.00	32.06	40.00	15.42	41.27	46.21	54.00	-7.79	Vertical
11200.00	31.44	40.00	15.42	41.27	45.59	54.00	-8.41	Horizontal

802.11a mode Highest channel (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
11400.00	41.02	39.70	15.55	41.10	55.17	68.20	-13.03	Vertical
11400.00	40.58	39.70	15.55	41.10	54.73	68.20	-13.47	Horizontal
802.11a mode Highest channel (Average 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
11400.00	30.26	39.70	15.55	41.10	44.41	54.00	-9.59	Vertical
11400.00	31.07	39.70	15.55	41.10	45.22	54.00	-8.78	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n20 mode Lowest channel (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
11000.00	42.58	40.10	15.37	41.34	56.71	68.20	-11.49	Vertical
11000.00	41.09	40.10	15.37	41.34	55.22	68.20	-12.98	Horizontal
802.11n20 mode Lowest channel (Average 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
11000.00	33.01	40.10	15.37	41.34	47.14	54.00	-6.86	Vertical
11000.00	31.04	40.10	15.37	41.34	45.17	54.00	-8.83	Horizontal

802.11n20 mode Middle channel (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
11200.00	42.71	40.00	15.42	41.27	56.86	68.20	-11.34	Vertical
11200.00	42.09	40.00	15.42	41.27	56.24	68.20	-11.96	Horizontal
802.11n20 mode Middle channel (Average 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
11200.00	32.41	40.00	15.42	41.27	46.56	54.00	-7.44	Vertical
11200.00	30.12	40.00	15.42	41.27	44.27	54.00	-9.73	Horizontal

802.11n20 mode Highest channel (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
11400.00	42.25	39.70	15.55	41.10	56.40	68.20	-11.80	Vertical
11400.00	42.11	39.70	15.55	41.10	56.26	68.20	-11.94	Horizontal
802.11n20 mode Highest channel (Average 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
11400.00	33.08	39.70	15.55	41.10	47.23	54.00	-6.77	Vertical
11400.00	32.49	39.70	15.55	41.10	46.64	54.00	-7.36	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n40 mode Lowest channel (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
11020.00	43.02	40.00	15.42	41.31	57.13	68.20	-11.07	Vertical
11020.00	41.01	40.00	15.42	41.31	55.12	68.20	-13.08	Horizontal
802.11n40 mode Lowest channel (Average 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
11020.00	32.23	40.00	15.42	41.31	46.34	54.00	-7.66	Vertical
11020.00	30.69	40.00	15.42	41.31	44.80	54.00	-9.20	Horizontal

802.11n40 mode Middle channel (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
11180.00	41.07	39.87	15.48	41.22	55.20	68.20	-13.00	Vertical
11180.00	41.24	39.87	15.48	41.22	55.37	68.20	-12.83	Horizontal
802.11n20 mode Middle channel (Average 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
11180.00	32.03	39.87	15.48	41.22	46.16	54.00	-7.84	Vertical
11180.00	31.14	39.87	15.48	41.22	45.27	54.00	-8.73	Horizontal

802.11n40 mode Highest channel (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
11340.00	42.79	39.80	15.51	41.17	56.93	68.20	-11.27	Vertical
11340.00	41.13	39.80	15.51	41.17	55.27	68.20	-12.93	Horizontal
802.11n40 mode Highest channel (Average 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
11340.00	33.24	39.80	15.51	41.17	47.38	54.00	-6.62	Vertical
11340.00	33.18	39.80	15.51	41.17	47.32	54.00	-6.68	Horizontal

802.11ac-HT80MHz mode Middle channel (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
11060.00	43.06	39.90	15.46	41.24	57.18	68.20	-11.02	Vertical
11060.00	42.17	39.90	15.46	41.24	56.29	68.20	-11.91	Horizontal
802.11ac-HT80MHz mode Middle channel (Average 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
11060.00	32.16	39.90	15.46	41.24	46.28	54.00	-7.72	Vertical
11060.00	31.13	39.90	15.46	41.24	45.25	54.00	-8.75	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4:

802.11a mode Lowest channel (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
11490.00	42.03	41.50	16.83	40.75	59.61	74.00	-14.39	Vertical
11490.00	41.96	41.50	16.83	40.75	59.54	74.00	-14.46	Horizontal
802.11a mode Lowest channel (Average 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
11490.00	32.03	41.50	16.83	40.75	49.61	54.00	-4.39	Vertical
11490.00	32.71	41.50	16.83	40.75	50.29	54.00	-3.71	Horizontal

802.11a mode Middle channel (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
11570.00	40.56	41.38	16.90	40.91	57.93	74.00	-16.07	Vertical
11570.00	40.39	41.38	16.90	40.91	57.76	74.00	-16.24	Horizontal
802.11a mode Middle channel (Average 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
11570.00	31.62	41.38	16.90	40.91	48.99	54.00	-5.01	Vertical
11570.00	31.53	41.38	16.90	40.91	48.90	54.00	-5.10	Horizontal

802.11a mode Highest channel (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
11650.00	40.96	41.26	16.97	41.06	58.13	74.00	-15.87	Vertical
11650.00	40.25	41.26	16.97	41.06	57.42	74.00	-16.58	Horizontal
802.11a mode Highest channel (Average 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
11650.00	32.02	41.26	16.97	41.06	49.19	54.00	-4.81	Vertical
11650.00	31.14	41.26	16.97	41.06	48.31	54.00	-5.69	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

802.11n20 mode Lowest channel (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
11490.00	41.25	41.50	16.83	40.75	58.83	74.00	-15.17	Vertical
11490.00	40.16	41.50	16.83	40.75	57.74	74.00	-16.26	Horizontal
802.11n20 mode Lowest channel (Average 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
11490.00	31.52	41.50	16.83	40.75	49.10	54.00	-4.90	Vertical
11490.00	31.36	41.50	16.83	40.75	48.94	54.00	-5.06	Horizontal

802.11n20 mode Middle channel (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
11570.00	41.36	41.38	16.90	40.91	58.73	74.00	-15.27	Vertical
11570.00	42.05	41.38	16.90	40.91	59.42	74.00	-14.58	Horizontal
802.11n20 mode Middle channel (Average 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
11570.00	31.56	41.38	16.90	40.91	48.93	54.00	-5.07	Vertical
11570.00	31.27	41.38	16.90	40.91	48.64	54.00	-5.36	Horizontal

802.11n20 mode Highest channel (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
11650.00	41.25	41.26	16.97	41.06	58.42	74.00	-15.58	Vertical
11650.00	41.75	41.26	16.97	41.06	58.92	74.00	-15.08	Horizontal
802.11n20 mode Highest channel (Average 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
11650.00	31.25	41.26	16.97	41.06	48.42	54.00	-5.58	Vertical
11650.00	30.53	41.26	16.97	41.06	47.70	54.00	-6.30	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n40 mode Lowest channel (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
11510.00	41.25	41.50	16.83	40.77	58.81	74.00	-15.19	Vertical
11510.00	40.23	41.50	16.83	40.77	57.79	74.00	-16.21	Horizontal
802.11n40 mode Lowest channel (Average 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
11510.00	31.23	41.50	16.83	40.77	48.79	54.00	-5.21	Vertical
11510.00	31.26	41.50	16.83	40.77	48.82	54.00	-5.18	Horizontal

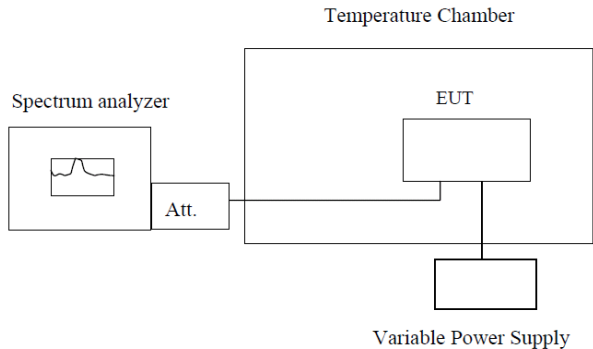
802.11n40 mode Highest channel (Peak Value)								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.00	42.03	41.32	16.93	40.95	59.33	74.00	-14.67	Vertical
11590.00	41.11	41.32	16.93	40.95	58.41	74.00	-15.59	Horizontal
802.11n40 mode Highest channel (Average 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
11590.00	32.03	41.32	16.93	40.95	49.33	54.00	-4.67	Vertical
11590.00	31.25	41.32	16.93	40.95	48.55	54.00	-5.45	Horizontal

802.11ac-HT80 mode Middle channel (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
11550.00	42.17	41.44	16.86	40.88	59.59	74.00	-14.41	Vertical
11550.00	41.25	41.44	16.86	40.88	58.67	74.00	-15.33	Horizontal
802.11ac-HT80 mode Middle channel (Average 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
11550.00	31.62	41.44	16.86	40.88	49.04	54.00	-4.96	Vertical
11550.00	31.53	41.44	16.86	40.88	48.95	54.00	-5.05	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

6.8 Frequency stability

Test Requirement:	FCC Part15 E Section 15.407 (g)
Limit:	Manufacturers 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 in the user's manual.
Test setup:	 <p style="text-align: center;">Temperature Chamber</p> <p style="text-align: center;">Spectrum analyzer Att. EUT</p> <p style="text-align: center;">Variable Power Supply</p> <p>Note : Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> 1. The EUT is installed in an environment test chamber with external power source. 2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT. 3. A sufficient stabilization period at each temperature is used prior to each frequency measurement. 4. When temperature is stabled, measure the frequency stability. 5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (the worst channel):

Band 1:

Voltage vs. Frequency Stability (Lowest channel=5180MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Temp(°C)	Voltage(ac)		
20	102V	5179.997643	0.45
	120V	5179.974779	4.87
	138V	5179.963951	6.96

Temperature vs. Frequency Stability (Lowest channel=5180MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Voltage(ac)	Temp(°C)		
120V	-20	5179.987033	2.50
	-10	5179.995377	0.89
	0	5179.968421	6.10
	10	5179.987556	2.40
	20	5179.996681	0.64
	30	5179.974290	4.96
	40	5179.963775	6.99
	50	5179.974929	4.84

Band 2:

Voltage vs. Frequency Stability (Lowest channel=5260MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Temp(°C)	Voltage(ac)		
20	102V	5259.968471	5.99
	120V	5259.996387	0.69
	138V	5259.993659	1.21

Temperature vs. Frequency Stability (Lowest channel=5260MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Voltage(ac)	Temp(°C)		
120V	-20	5259.996412	0.68
	-10	5259.984786	2.89
	0	5259.996328	0.70
	10	5259.981478	3.52
	20	5259.996480	0.67
	30	5259.969578	5.78
	40	5259.979896	3.82
	50	5259.956548	8.26

Band 3:

Voltage vs. Frequency Stability (Lowest channel=5500MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Temp(°C)	Voltage(ac)		
20	102V	5499.997640	0.43
	120V	5499.974756	4.59
	138V	5499.963990	6.55

Temperature vs. Frequency Stability (Lowest channel=5500MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Voltage(ac)	Temp(°C)		
120V	-20	5499.987055	2.35
	-10	5499.995381	0.84
	0	5499.968493	5.73
	10	5499.987569	2.26
	20	5499.996647	6.10
	30	5499.974284	4.68
	40	5499.963785	6.58
	50	5499.974999	4.55

Band 4:

Voltage vs. Frequency Stability (Lowest channel=5745MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Temp(°C)	Voltage(ac)		
20	102V	5744.974766	4.39
	120V	5744.993381	1.15
	138V	5744.998588	0.25

Temperature vs. Frequency Stability (Lowest channel=5745MHz)

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Voltage(ac)	Temp(°C)		
120V	-20	5744.994798	0.91
	-10	5744.993693	1.10
	0	5744.994771	0.91
	10	5744.985355	2.55
	20	5744.993864	1.07
	30	5744.994481	0.96
	40	5744.999347	0.11
	50	5744.992458	1.31