

# Test Report

FCC ID:2ARY6-Z21116G

Date of issue: Dec. 19, 2018

Report Number:	MTi181210E039
Sample Description:	10.1" Wifi Tablets
Model(s):	Z21116G, A10QI18G, Z3211G
Applicant:	D2D Distributors LLC
Address:	110, ROLFE STREET SMETHWICK B66 2BD, BIRMINGHAM WEST MIDLANDS, UK
Date of Test:	Aug. 02, 2018 to Dec. 12, 2018

Shenzhen Microtest Co., Ltd.  
<http://www.mtitest.com>

## Table of Contents

<b>1</b>	<b>GENERAL INFORMATION.....</b>	<b>4</b>
1.1	DESCRIPTION OF EUT .....	4
1.2	OPERATION CHANNEL LIST .....	5
1.3	TEST CHANNEL LIST .....	5
1.4	ANCILLARY EQUIPMENT LIST .....	6
1.5	DESCRIPTION OF SUPPORT UNITS .....	7
<b>2</b>	<b>SUMMARY OF THE TEST RESULTS .....</b>	<b>8</b>
<b>3</b>	<b>TEST FACILITIES AND ACCREDITATIONS.....</b>	<b>9</b>
3.1	TEST LABORATORY .....	9
3.2	ENVIRONMENTAL CONDITIONS .....	9
3.3	MEASUREMENT UNCERTAINTY .....	10
3.4	TEST SOFTWARE .....	10
<b>4</b>	<b>EQUIPMENT LIST .....</b>	<b>11</b>
<b>5</b>	<b>TEST RESULTS .....</b>	<b>12</b>
5.1	ANTENNA REQUIREMENT .....	12
5.1.1	<i>Standard requirement</i> .....	12
5.1.2	<i>EUT Antenna</i> .....	12
5.2	RF OUTPUT POWER .....	13
5.2.1	<i>Limit</i> .....	13
5.2.2	<i>Test procedure</i> .....	13
5.2.3	<i>Test setup</i> .....	13
5.2.4	<i>Test results</i> .....	14
5.3	POWER LINE CONDUCTED EMISSION .....	16
5.3.1	<i>Limits</i> .....	16
5.3.2	<i>Test setup</i> .....	16
5.3.3	<i>Test procedure</i> .....	16
5.3.4	<i>Test results</i> .....	18
5.4	26dB EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH .....	22
5.4.1	<i>Limit</i> .....	22
5.4.2	<i>Test procedure</i> .....	22
5.4.3	<i>Test setup</i> .....	22
5.4.4	<i>Test results</i> .....	23
5.5	6dB BANDWIDTH.....	31
5.5.1	<i>Limit</i> .....	31
5.5.2	<i>Test procedure</i> .....	31
5.5.3	<i>Test setup</i> .....	31
5.5.4	<i>Test results</i> .....	31
5.6	RADIATED SPURIOUS EMISSION.....	39
5.6.1	<i>Test procedure</i> .....	39
5.6.2	<i>Test setup</i> .....	40
5.6.3	<i>Test results</i> .....	42
5.7	POWER SPECTRAL DENSITY .....	57
5.7.1	<i>Limit</i> .....	57
5.7.2	<i>Test procedure</i> .....	57
5.7.3	<i>Test results</i> .....	58
	<b>PHOTOGRAPHS OF THE TEST SETUP .....</b>	<b>70</b>
	<b>PHOTOGRAPHS OF THE EUT .....</b>	<b>72</b>

# Test Result Certification

Applicant's name: D2D Distributors LLC

Address: 110, ROLFE STREET SMETHWICK B66 2BD, BIRMINGHAM WEST MIDLANDS, UK

Manufacture's Name: SHENZHEN AE TECHNOLOGY CO., LTD

Address: 4F, BoZhi Center, ChenTian Industrial Park, Xixiang, BaoAn District, Shenzhen, China

Product name: 10.1" Wifi Tablets

Trademark: ZAITH / ANOC

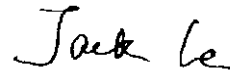
Model name: Z21116G, A10QI18G, Z3211G

Standards: FCC Part 15.407

Test Procedure: ANSI C63.10-2013  
KDB 789033 D02 General UNII Test Procedures New Rules v02r01

*This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.*

Tested by:



Jack Le

Dec. 12, 2018

Reviewed by:



Blue Zheng

Dec. 19, 2018

Approved by:



Smith Chen

Dec. 19, 2018

## 1 General information

### 1.1 Description of EUT

Equipment:	10.1" Wifi Tablets
Trade name:	ZAITH / ANOC
Model name:	Z21116G
Serial model:	A10QI18G, Z3211G
Difference in series models:	All the model are the same circuit and RF module, except the color and model No.
Frequency range:	Band I: 5150 MHz to 5250 MHz, Band II:5250 MHz to 5350 MHz, Band III:5470 MHz to 5725 MHz, Band IV: 5725 MHz to 5850 MHz
Modulation type:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n;
Transfer rate:	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15;
Channel bandwidth:	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz
Antenna type:	Integrated antenna
Antenna gain:	2.0dBi
Max. output power:	Band I: 13.90 dBm Band II: 13.84 dBm Band III: 13.76 dBm Band IV: 13.82 dBm
Hardware version:	N/A
Software version:	Android 7.0
Power supply:	DC 3.7V from Battery or DC 5V from adapter
Adapter information:	Model: XS-0502000DHU Input: 100-240V~50/60Hz 0.3A Output: 5V 2A
Battery:	DC 3.7V 5800mAh

## 1.2 Operation channel list

For band I:

20 MHz		40 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	5180	38	5190
40	5200	46	5230
48	5240	--	--

For band II:

20 MHz		40 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
52	5260	54	5270
56	5280	62	5310
64	5320	--	--

For band III:

20 MHz		40 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
100	5500	102	5510
120	5600	118	5590
140	5700	134	5670

For band IV:

20 MHz		40 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
149	5745	151	5755
157	5785	159	5795
165	5825	--	--

## 1.3 Test channel list

For 802.11a/n (HT20)

Band I (5150 - 5250 MHz)			Band II (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
36	Low	5180	52	Low	5260
44	Mid	5220	56	Mid	5280
48	High	5240	64	High	5320

Band III (5470 - 5725 MHz)			Band IV (5725 - 5850 MHz)		
Channel	Channel	Frequency	Channel	Channel	Frequency

Number		(MHz)	Number		(MHz)
100	Low	5500	149	Low	5745
120	Mid	5600	157	Mid	5785
140	High	5700	165	High	5825

For 802.11n (HT40)

Band I (5150 - 5250 MHz)			Band II (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
38	Low	5190	54	Low	5270
46	High	5230	62	High	5310

Band III (5470 - 5725 MHz)			Band IV (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
102	Low	5510	151	Low	5755
118	Mid	5590	159	High	5795
134	High	5670	--	--	--

#### 1.4 Ancillary equipment list

Equipment	Model	S/N	Manufacturer	Certificate type
/	/	/	/	/

## 1.5 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
/	/	/	/	/	/
/	/	/	/	/	/

**Note:**

- (1)The support equipment was authorized by Declaration of Confirmation.
- (2)For detachable type I/O cable should be specified the length in cm in 『Length』 column.

## 2 Summary of the Test Results

Test procedures according to the technical standards:

No.	Standard Section	Test Item	Result	Remark
1	15.203/15.407	Antenna Requirement	Pass	
2	15.407(a)	RF Output Power	Pass	
3	15.207	Power Line Conducted Emission	Pass	
4	15.407(a)	26dB Emission Bandwidth and Occupied bandwidth	Pass	
5	15.407(e)	6 dB bandwidth	Pass	
6	15.407(a)	Power Spectral Density	Pass	
7	15.407(b) 15.209	Radiation Spurious Emission	Pass	
8	15.407(b) 15.209	Conducted Spurious Emission	Pass	



### 3 Test Facilities and Accreditations

#### 3.1 Test laboratory

Test Laboratory	Shenzhen Microtest Co., Ltd
Location	No.102A & 302A, East Block, Hengfang Industrial Park, Xingye Road, Xixiang, Bao'an District, Shenzhen, Guangdong, China
FCC Registration No.:	448573

#### 3.2 Environmental conditions

Temperature:	20°C~30°C
Humidity	30%~70%
Atmospheric pressure	98kPa~101kPa

### 3.3 Measurement uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power, conducted	$\pm 0.16\text{dB}$
3	Spurious emissions, conducted	$\pm 0.21\text{dB}$
4	All emissions, radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions, radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^\circ\text{C}$
7	Humidity	$\pm 2\%$

### 3.4 Test software

Software Name	Manufacturer	Model	Version
RF Test System	Farad	LZ-RF	Lz_Rf 3A3

## 4 Equipment list

Equipment No.	Equipment Name	Manufacturer	Model	Serial No.	Calibration date	Due date
MTI-E001	Spectrum Analyzer	Agilent	E4407B	MY41441082	2018/09/18	2019/09/17
MTI-E002	CMU 200 universal radio communication tester	Rohde&schwarz	CMU 200	114587	2018/09/18	2019/09/17
MTI-E004	EMI Test Receiver	Rohde&schwarz	ESPI	1000314	2018/09/18	2019/09/17
MTI-E006	Broadband antenna	schwarzbeck	VULB9163	872	2018/09/18	2019/09/17
MTI-E007	Horn antenna	schwarzbeck	BBHA9120D	1201	2018/09/18	2019/09/17
MTI-E014	amplifier	America	8447D	3113A06150	2018/09/18	2019/09/17
MTI-E015	Conduction Immunity Signal Generator	Schloder	CDG6000	126A1343/2015	2018/09/18	2019/09/17
MTI-E016	Coupled decoupling network	Schloder	CDA M2/M3	A2210332/2015	2018/09/18	2019/09/17
MTI-E032	Comprehensive test instrument	Rohde&schwarz	CMW500	124192	2018/09/18	2019/09/17
MTI-E034	amplifier	Agilent	8449B	3008A02400	2018/09/18	2019/09/17
MTI-E037	Artificial power network	Schwarzbeck	NSLK8127	#841	2018/09/18	2019/09/17
MTI-E040	Spectrum analyzer	Agilent	N9020A	MY49100060	2018/09/18	2019/09/17
MTI-E041	Signal generator	Agilent	N5182A	MY49060455	2018/09/18	2019/09/17
MTI-E042	Analog signal generator	Agilent	E4421B	GB40051240	2018/09/18	2019/09/17
MTI-E043	Power probe	Dare Instruments	RPR3006W	16I00054SN016	2018/09/18	2019/09/17
MTI-E047	10dB attenuator	Mini-Circuits	UNAT-10+	15542	2018/09/18	2019/09/17
MTI-E049	spectrum analyzer	Rohde&schwarz	FSP-38	100019	2018/09/18	2019/09/17
MTI-E050	PSG Signal generator	Agilent	E8257D	MY46520873	2018/09/18	2019/09/17
MTI-E051	Active Loop Antenna 9kHz - 30MHz	Schwarzbeck	FMZB 1519 B	00044	2018/09/18	2019/09/17
MTI-E052	18-40GHz amplifier	Chengdu step Micro Technology	ZLNA-18-40G-21	1608001	2018/09/18	2019/09/17
MTI-E053	15-40G Antenna	Schwarzbeck	BBHA9170	BBHA9170582	2018/09/18	2019/09/17
MTI-E058	Artificial power network	Schwarzbeck	NSLK8127	#841	2018/09/18	2019/09/17

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

## 5 Test Results

### 5.1 Antenna requirement

#### 5.1.1 Standard requirement

15.203 requirement: For intentional device, according to 15.203: 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.

#### 5.1.2 EUT Antenna

The antenna is an integral antenna, which was permanently affixed to the device and un-replaced, complies with 15.203. In addition, the maximum antenna gain is 2.0dBi.

## 5.2 RF output power

### 5.2.1 Limit

#### For the 5.15-5.25 GHz band

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### For the 5.25-5.35 GHz and 5.47-5.725 GHz band

The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

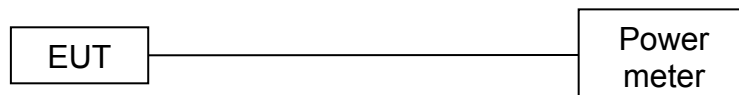
#### For the band 5.725-5.85 GHz

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 5.2.2 Test procedure

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

### 5.2.3 Test setup



5.2.4 Test results

For Band I

Modulation mode	Test Channel	Frequency(MHz)	Maximum Peak Conducted Power		Limit(mW)
			(dBm)	(mW)	
11a	CH36	5180	13.85	24.27	250
11a	CH40	5200	13.79	23.93	250
11a	CH48	5240	13.90	24.55	250
11n (HT20)	CH36	5180	13.71	23.50	250
11n (HT20)	CH40	5200	13.75	23.71	250
11n (HT20)	CH48	5240	13.68	23.33	250
11n (HT40)	CH38	5190	11.54	14.26	250
11n (HT40)	CH46	5230	11.55	14.29	250

For Band II

Modulation mode	Test Channel	Frequency(MHz)	Maximum Peak Conducted Power		Limit(mW)
			(dBm)	(mW)	
11a	CH52	5260	13.82	24.10	250
11a	CH56	5280	13.84	24.21	250
11a	CH64	5320	13.78	23.88	250
11n (HT20)	CH52	5260	13.57	22.75	250
11n (HT20)	CH56	5280	13.61	22.96	250
11n (HT20)	CH64	5320	13.65	23.17	250
11n (HT40)	CH54	5270	11.53	14.22	250
11n (HT40)	CH62	5310	11.52	14.19	250

For Band III

Modulation mode	Test Channel	Frequency(MHz)	Maximum Peak Conducted Power		Limit(mW)
			(dBm)	(mW)	
11a	CH100	5500	13.76	23.77	250
11a	CH120	5600	13.70	23.44	250
11a	CH140	5700	13.74	23.66	250
11n (HT20)	CH100	5500	13.57	22.75	250
11n (HT20)	CH120	5600	13.59	22.86	250
11n (HT20)	CH140	5700	13.62	23.01	250
11n (HT40)	CH102	5510	11.54	14.26	250
11n (HT40)	CH118	5590	11.50	14.13	250
11n (HT40)	CH134	5670	11.51	14.16	250

For Band IV

Modulation mode	Test Channel	Frequency(MHz)	Maximum Peak Conducted Power		Limit(mW)
			(dBm)	(mW)	
11a	CH149	5745	13.82	24.10	1000
11a	CH157	5785	13.79	23.93	1000
11a	CH165	5825	13.78	23.88	1000
11n (HT20)	CH149	5745	13.51	22.44	1000
11n (HT20)	CH157	5785	13.53	22.54	1000
11n (HT20)	CH165	5825	13.62	23.01	1000
11n (HT40)	CH151	5755	11.52	14.19	1000
11n (HT40)	CH159	5795	11.53	14.22	1000

### 5.3 Power line conducted emission

#### 5.3.1 Limits

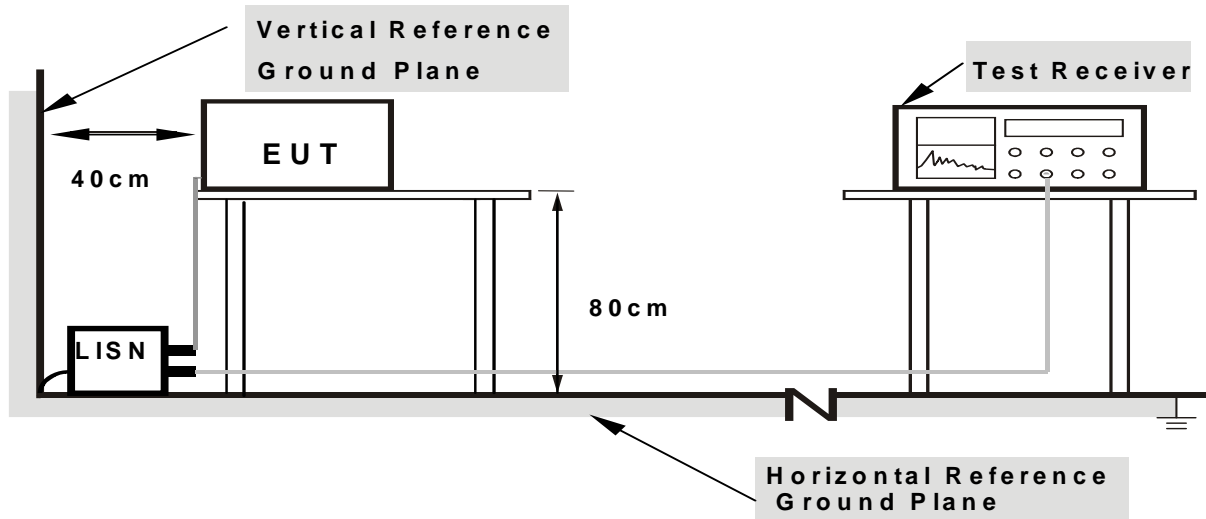
FREQUENCY (MHz)	Class B (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

**Note**

(1)The tighter limit applies at the band edges.

(2)The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### 5.3.2 Test setup



**Note: 1.Support units were connected to second LISN.**

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

#### 5.3.3 Test procedure

##### a. EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

##### b. The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

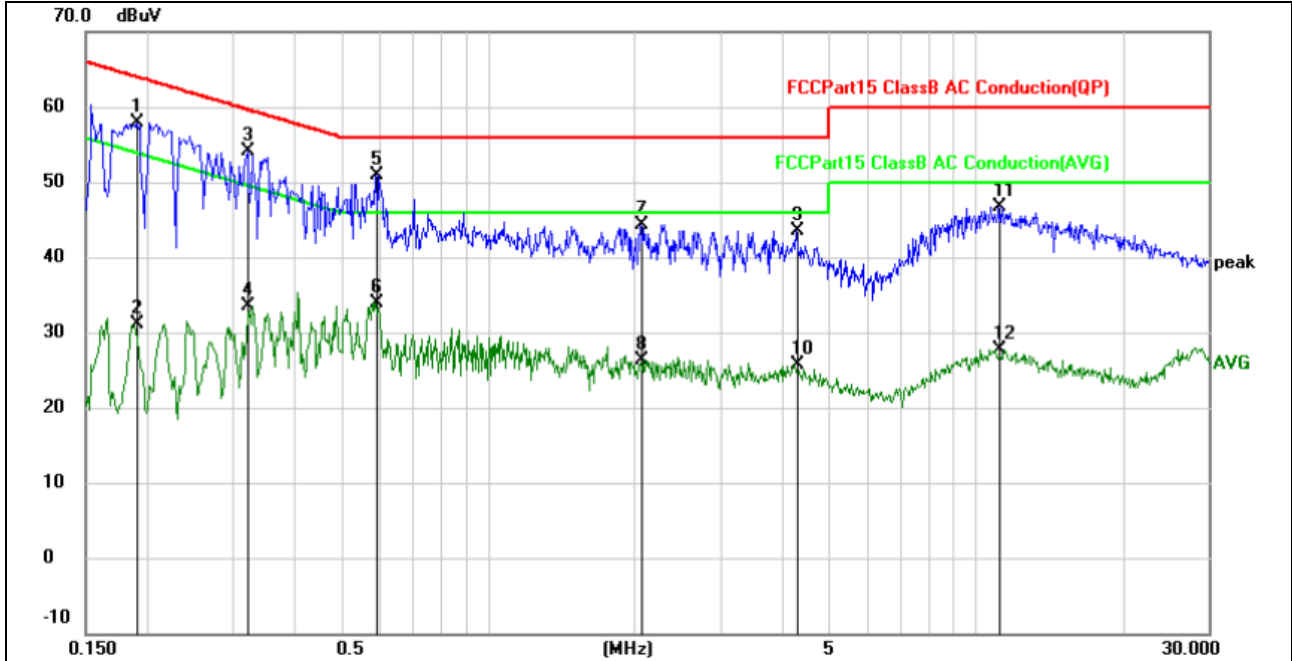


- c. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- d. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- e. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- f. LISN at least 80 cm from nearest part of EUT chassis.

For the actual test configuration, please refer to the related Item –EUT Test Photos.

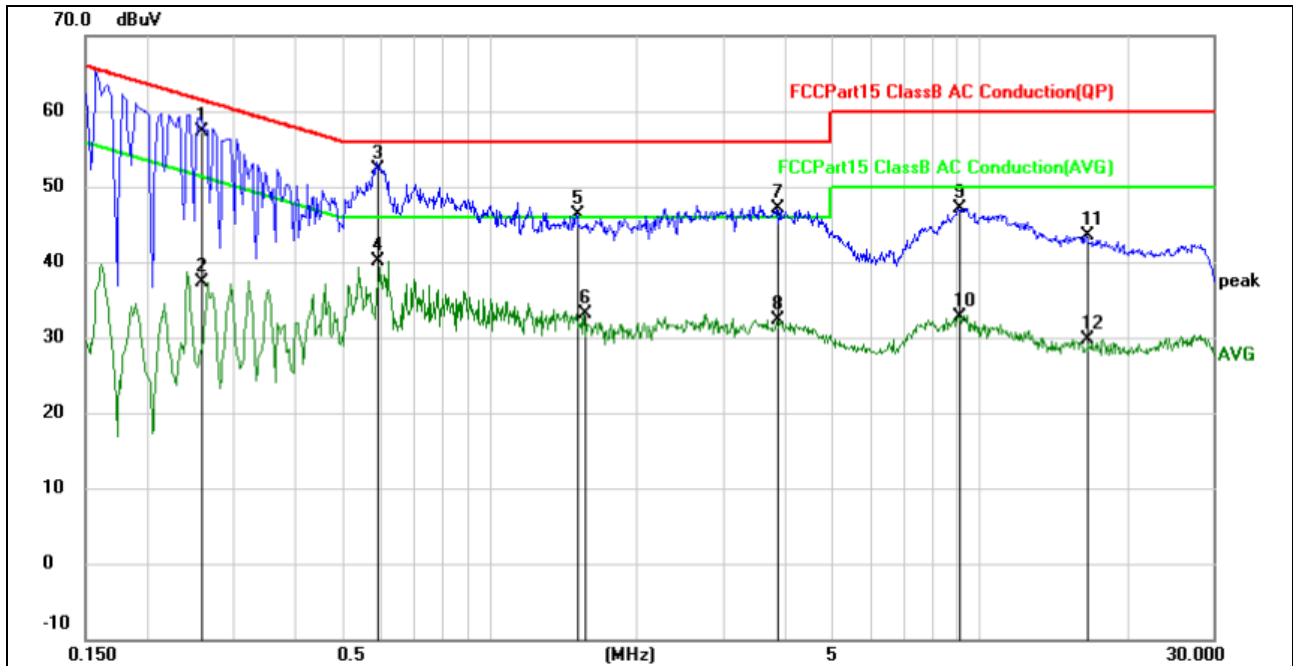
5.3.4 Test results

EUT :	10.1" Wifi Tablets	Model Name. :	Z21116G
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from adapter AC 120V/60Hz	Test Mode :	TX Mode



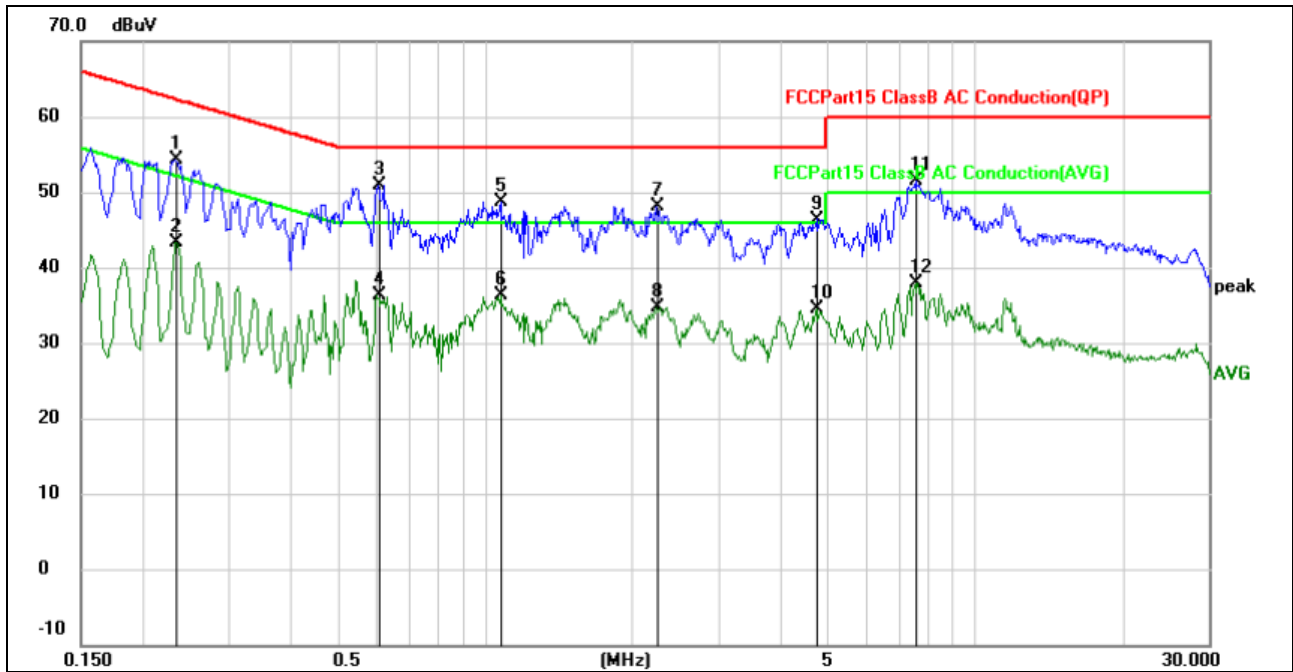
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1912	56.31	1.57	57.88	63.98	-6.10	QP	
2		0.1912	29.49	1.57	31.06	53.98	-22.92	AVG	
3		0.3220	52.44	1.57	54.01	59.66	-5.65	QP	
4		0.3220	32.02	1.57	33.59	49.66	-16.07	AVG	
5	*	0.5899	49.29	1.57	50.86	56.00	-5.14	QP	
6		0.5899	32.38	1.57	33.95	46.00	-12.05	AVG	
7		2.0579	42.79	1.55	44.34	56.00	-11.66	QP	
8		2.0579	24.68	1.55	26.23	46.00	-19.77	AVG	
9		4.3139	42.80	0.71	43.51	56.00	-12.49	QP	
10		4.3139	25.06	0.71	25.77	46.00	-20.23	AVG	
11		11.1659	46.42	0.37	46.79	60.00	-13.21	QP	
12		11.1659	27.31	0.37	27.68	50.00	-22.32	AVG	

EUT :	10.1" Wifi Tablets	Model Name. :	Z21116G
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from adapter AC 120V/60Hz	Test Mode :	Normal link



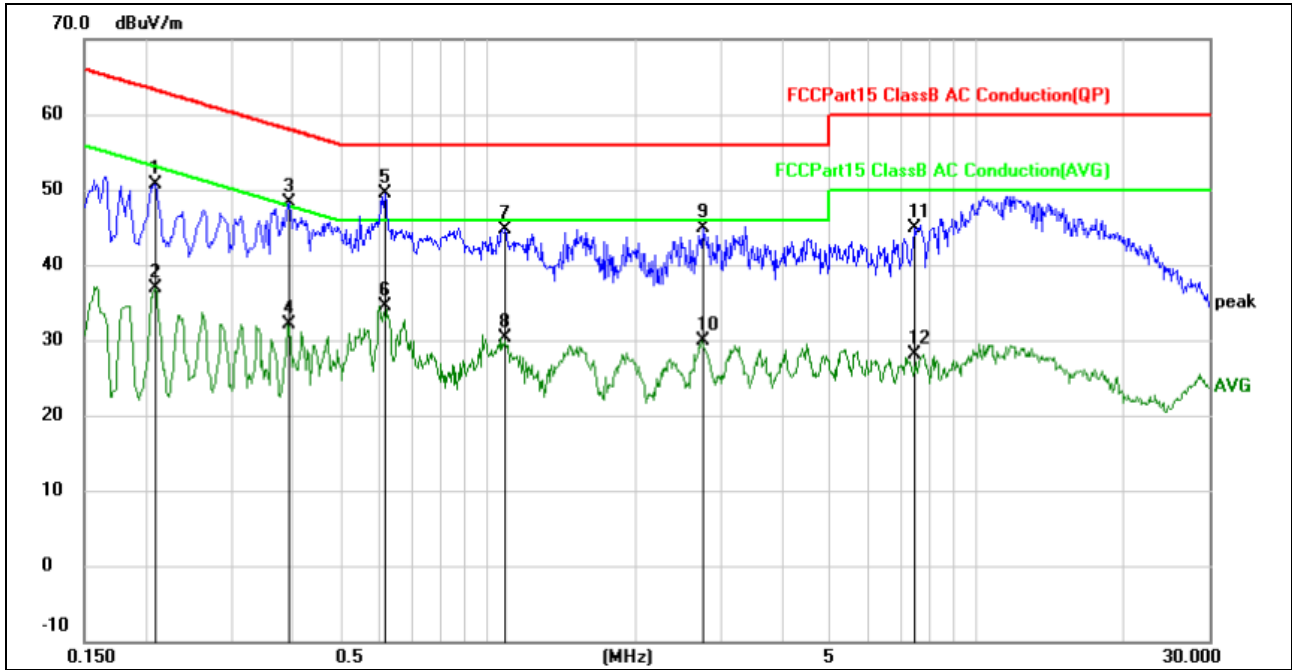
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.2580	55.65	1.57	57.22	61.50	-4.28	QP	
2		0.2580	35.72	1.57	37.29	51.50	-14.21	AVG	
3	*	0.5899	50.69	1.57	52.26	56.00	-3.74	QP	
4		0.5899	38.60	1.57	40.17	46.00	-5.83	AVG	
5		1.5060	44.78	1.58	46.36	56.00	-9.64	QP	
6		1.5660	31.61	1.58	33.19	46.00	-12.81	AVG	
7		3.8660	46.26	0.91	47.17	56.00	-8.83	QP	
8		3.8660	31.32	0.91	32.23	46.00	-13.77	AVG	
9		9.0900	46.74	0.39	47.13	60.00	-12.87	QP	
10		9.0900	32.39	0.39	32.78	50.00	-17.22	AVG	
11		16.4900	43.29	0.30	43.59	60.00	-16.41	QP	
12		16.4900	29.38	0.30	29.68	50.00	-20.32	AVG	

EUT :	10.1" Wifi Tablets	Model Name. :	Z21116G
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from adapter AC 240V/60Hz	Test Mode :	Normal link



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2340	52.81	1.57	54.38	62.31	-7.93	QP	
2	0.2340	41.81	1.57	43.38	52.31	-8.93	AVG	
3 *	0.6058	49.28	1.57	50.85	56.00	-5.15	QP	
4	0.6058	34.68	1.57	36.25	46.00	-9.75	AVG	
5	1.0820	47.13	1.58	48.71	56.00	-7.29	QP	
6	1.0820	34.79	1.58	36.37	46.00	-9.63	AVG	
7	2.2458	46.77	1.41	48.18	56.00	-7.82	QP	
8	2.2458	33.32	1.41	34.73	46.00	-11.27	AVG	
9	4.7579	45.93	0.47	46.40	56.00	-9.60	QP	
10	4.7579	34.09	0.47	34.56	46.00	-11.44	AVG	
11	7.5739	51.03	0.38	51.41	60.00	-8.59	QP	
12	7.5739	37.53	0.38	37.91	50.00	-12.09	AVG	

EUT :	10.1" Wifi Tablets	Model Name. :	Z21116G
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from adapter AC 240V/60Hz	Test Mode :	Normal link



No. Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	0.2094	49.12	1.64	50.76	63.23	-12.47	QP	
2	0.2094	35.29	1.64	36.93	53.23	-16.30	AVG	
3	0.3936	46.61	1.64	48.25	57.99	-9.74	QP	
4	0.3936	30.41	1.64	32.05	47.99	-15.94	AVG	
5 *	0.6179	47.77	1.65	49.42	56.00	-6.58	QP	
6	0.6179	32.82	1.65	34.47	46.00	-11.53	AVG	
7	1.0902	43.09	1.70	44.79	56.00	-11.21	QP	
8	1.0902	28.66	1.70	30.36	46.00	-15.64	AVG	
9	2.7581	43.36	1.45	44.81	56.00	-11.19	QP	
10	2.7581	28.40	1.45	29.85	46.00	-16.15	AVG	
11	7.4756	44.00	0.94	44.94	60.00	-15.06	QP	
12	7.4756	27.07	0.94	28.01	50.00	-21.99	AVG	

## 5.4 26dB Emission Bandwidth and Occupied bandwidth

### 5.4.1 Limit

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier

### 5.4.2 Test procedure

#### 26d Emission bandwidth

Set RBW = approximately 1% of the emission bandwidth.

Set VBW  $\geq 3 \times$  RBW

Detector = Peak.

Trace mode = Max hold.

Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

#### Occupied Bandwidth

Set Span = 1.5 times to 5.0 times the OBW

Set RBW = 1% to 5% of the OBW.

Set VBW  $\geq 3 \times$  RBW, Detector = Peak.

Trace mode = Max hold.

Use the 99% power bandwidth function of the instrument.

### 5.4.3 Test setup



5.4.4 Test results

For Band I

Channel	Test Channel	Frequency(MHz)	26dB bandwidth(MHz)	99% bandwidth	Limit(kHz)	Result
11a	CH36	5180	28.77	18.233	/	Pass
11a	CH40	5200	28.41	18.067	/	Pass
11a	CH48	5240	29.80	18.134	/	Pass
11n (HT20)	CH36	5180	28.90	18.024	/	Pass
11n (HT20)	CH40	5200	27.84	18.115	/	Pass
11n (HT20)	CH48	5240	29.05	18.140	/	Pass
11n (HT40)	CH38	5190	59.79	36.388	/	Pass
11n (HT40)	CH46	5230	60.19	36.426	/	Pass

For Band II

Channel	Test Channel	Frequency(MHz)	26dB bandwidth(MHz)	99% bandwidth	Limit(kHz)	Result
11a	CH52	5260	28.23	18.125	/	Pass
11a	CH56	5280	25.93	17.983	/	Pass
11a	CH64	5320	27.86	17.978	/	Pass
11n (HT20)	CH52	5260	26.09	18.014	/	Pass
11n (HT20)	CH56	5280	29.92	18.064	/	Pass
11n (HT20)	CH64	5320	27.73	18.083	/	Pass
11n (HT40)	CH54	5270	63.53	36.334	/	Pass
11n (HT40)	CH62	5310	62.18	36.318	/	Pass

For Band III

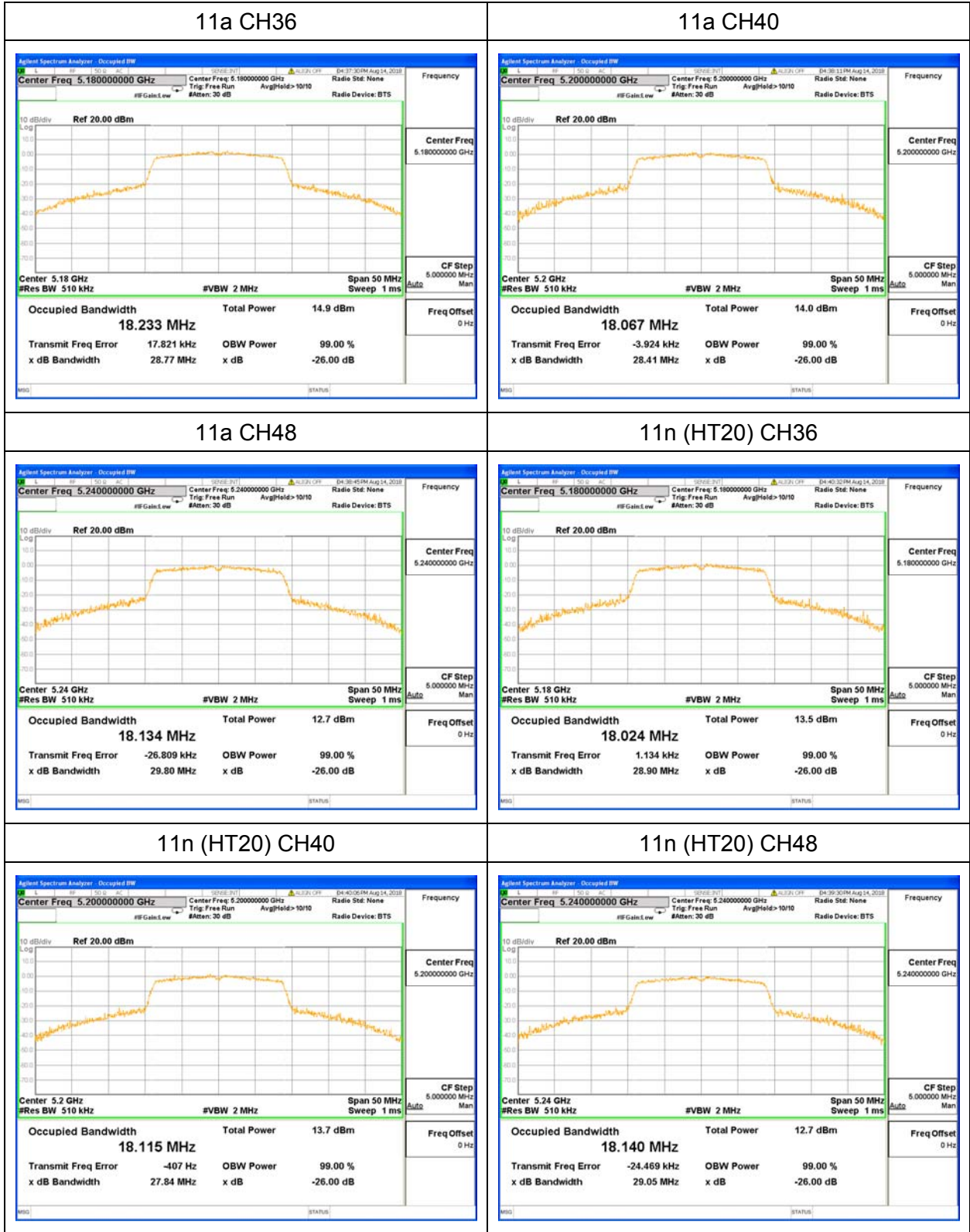
Channel	Test Channel	Frequency(MHz)	26dB bandwidth(MHz)	99% bandwidth	Limit(kHz)	Result
11a	CH100	5500	31.83	18.278	/	Pass
11a	CH120	5600	30.89	18.165	/	Pass
11a	CH140	5700	31.87	18.138	/	Pass
11n (HT20)	CH100	5500	29.48	18.142	/	Pass
11n (HT20)	CH120	5600	32.87	18.269	/	Pass
11n (HT20)	CH140	5700	31.69	18.368	/	Pass
11n (HT40)	CH102	5510	65.08	36.484	/	Pass
11n (HT40)	CH118	5590	69.42	36.946	/	Pass
11n (HT40)	CH134	5670	68.52	36.713	/	Pass

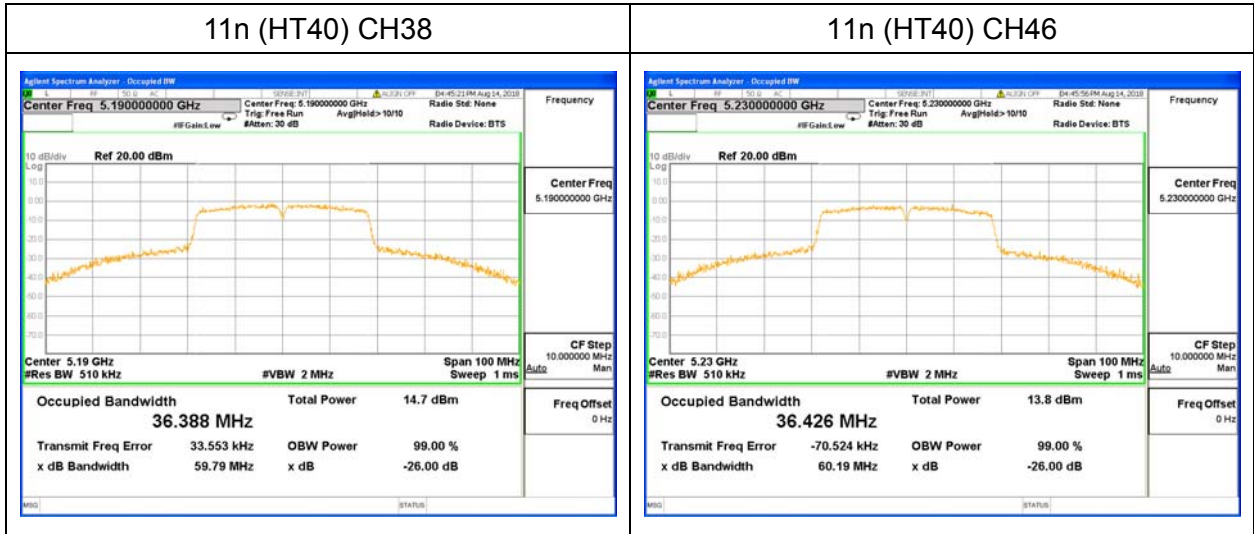
For Band IV

Channel	Test Channel	Frequency(MHz)	26dB bandwidth(MHz)	99% bandwidth	Limit(kHz)	Result
11a	CH149	5745	29.12	18.081	/	Pass
11a	CH157	5785	22.61	17.881	/	Pass
11a	CH165	5825	24.91	17.931	/	Pass
11n (HT20)	CH149	5745	25.32	17.920	/	Pass
11n (HT20)	CH157	5785	27.33	17.935	/	Pass
11n (HT20)	CH165	5825	27.54	17.856	/	Pass
11n (HT40)	CH151	5755	52.44	36.145	/	Pass
11n (HT40)	CH159	5795	60.16	36.198	/	Pass

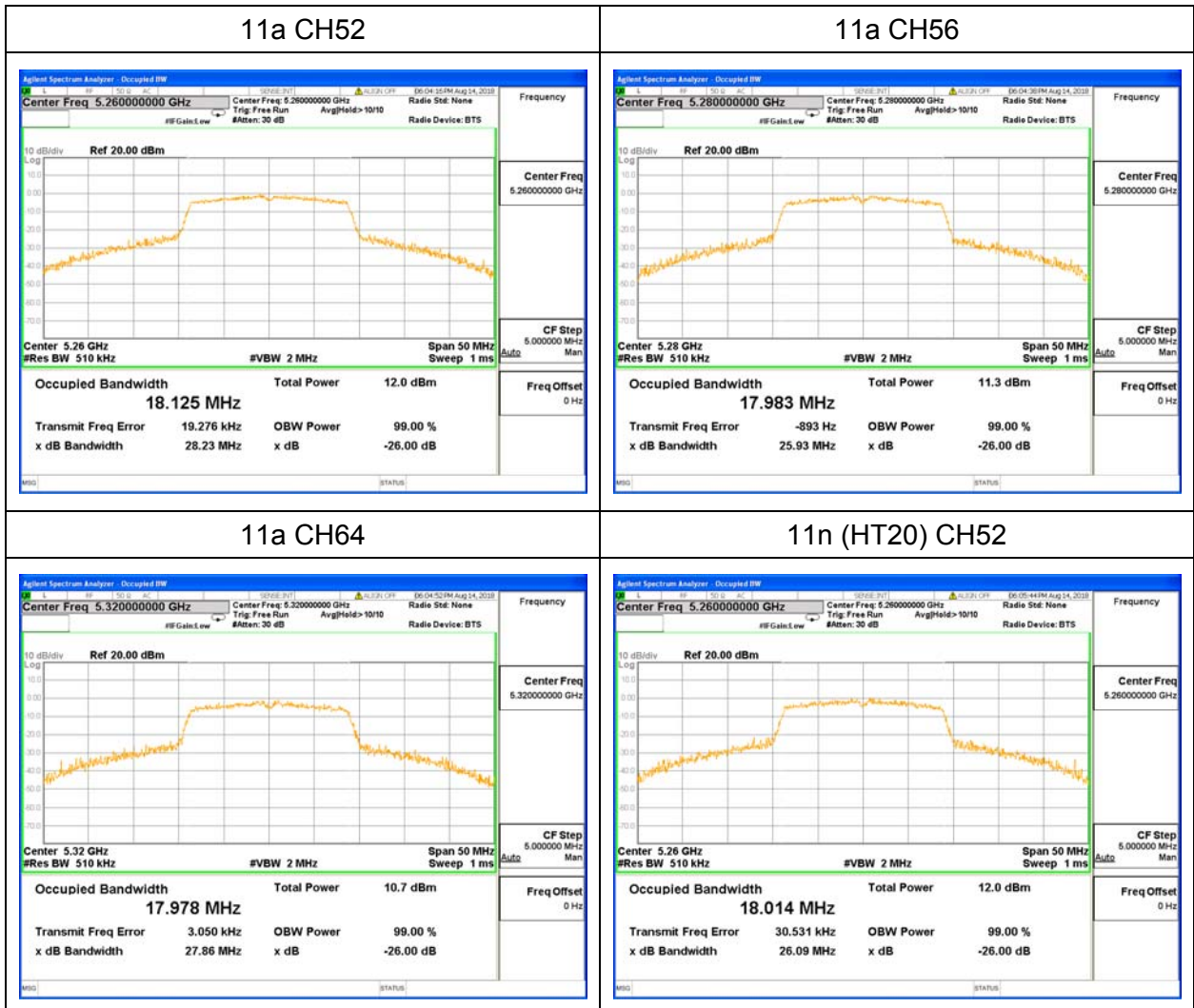


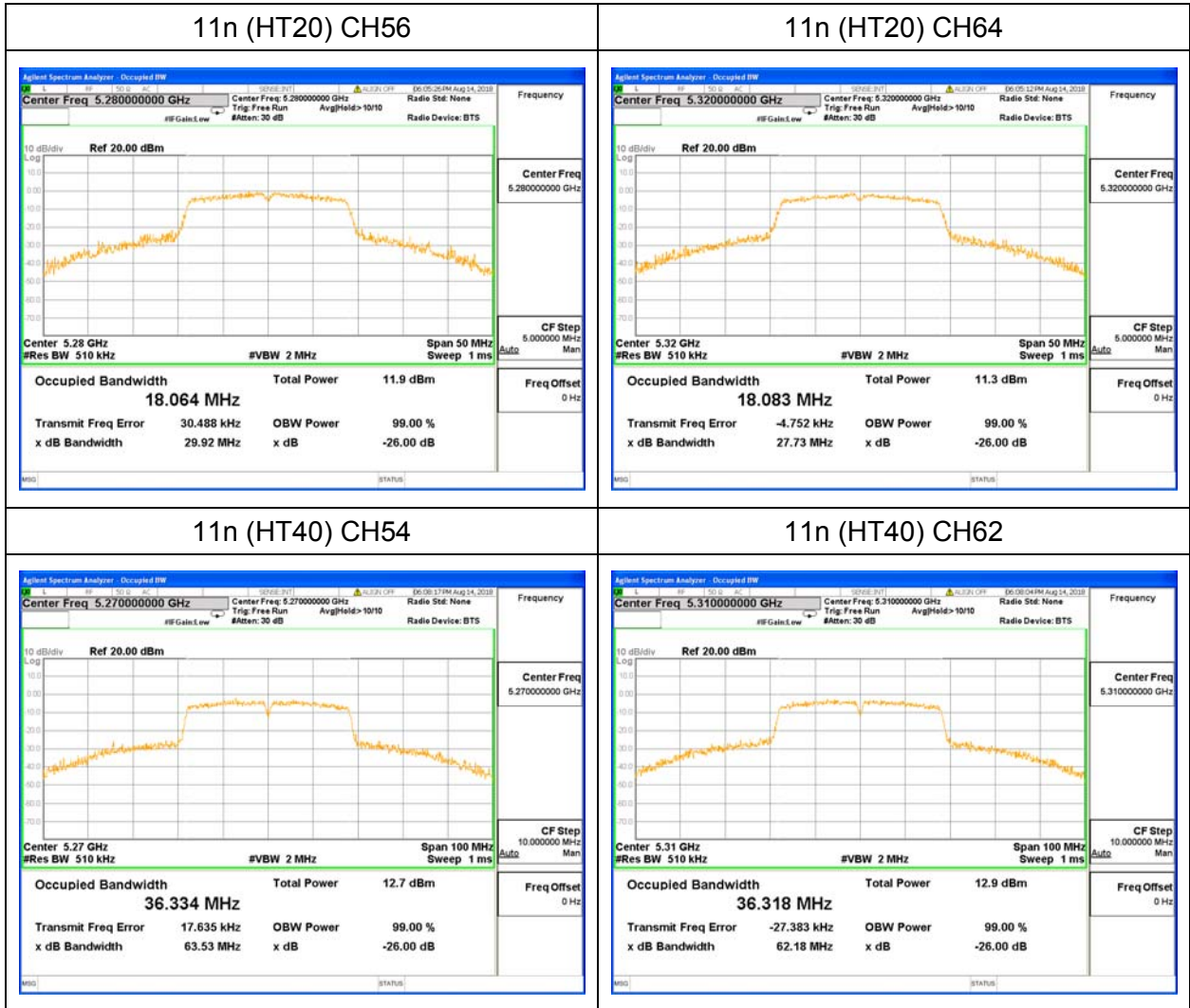
Test plots:  
For Band I





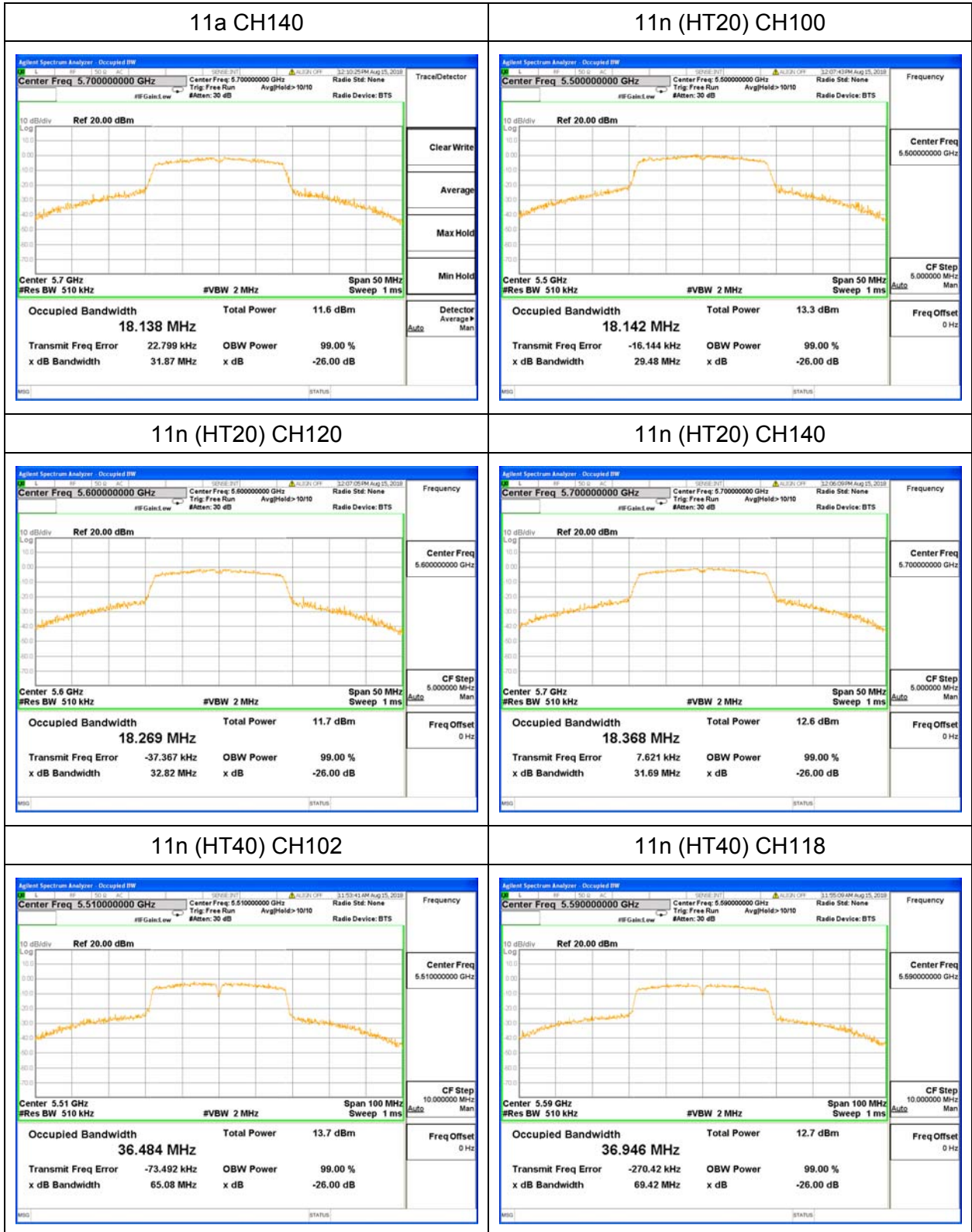
For Band II



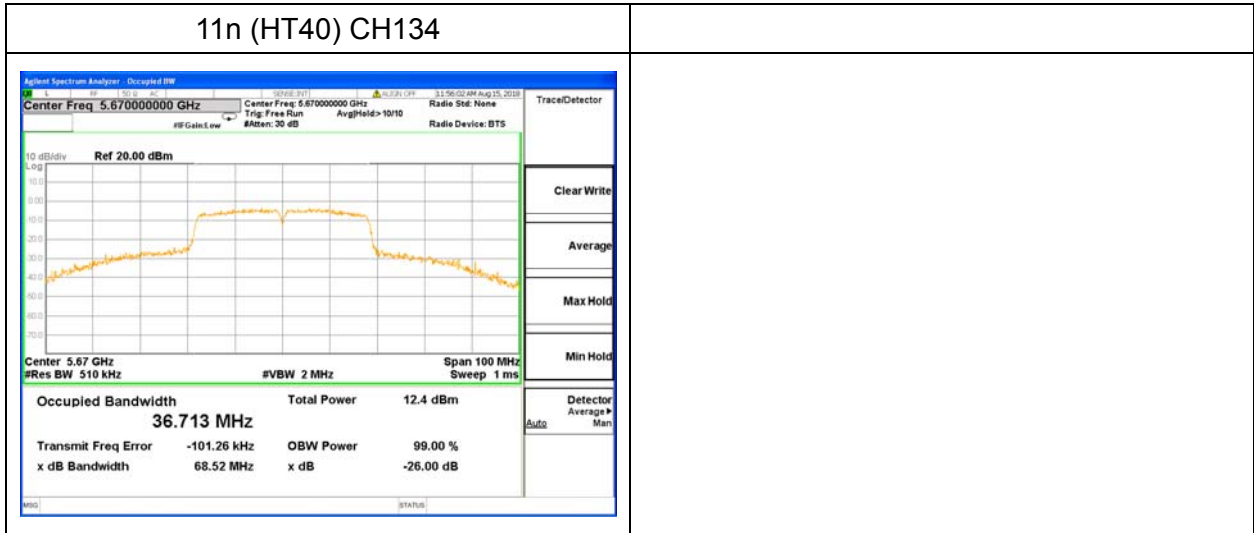


For Band III

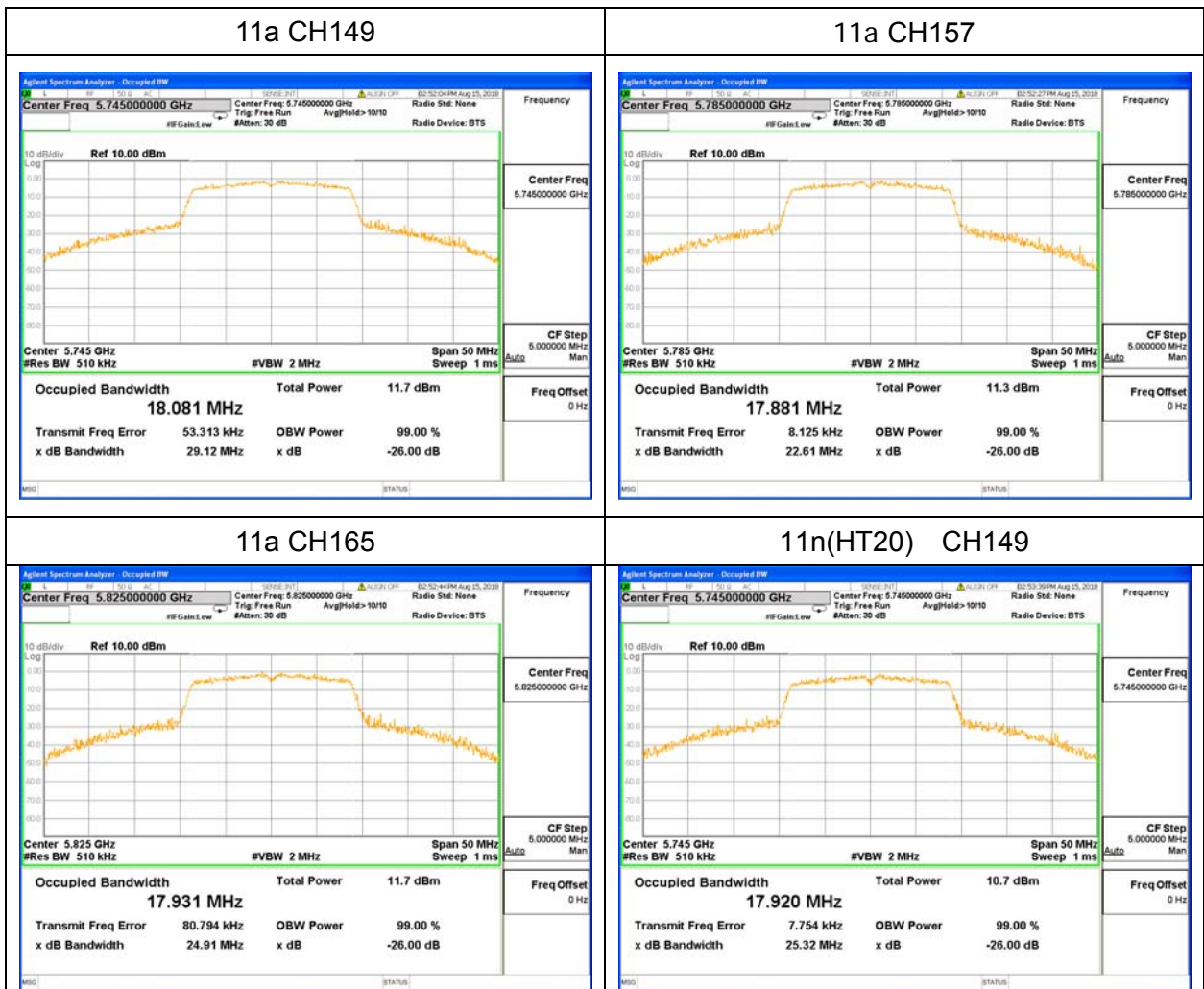


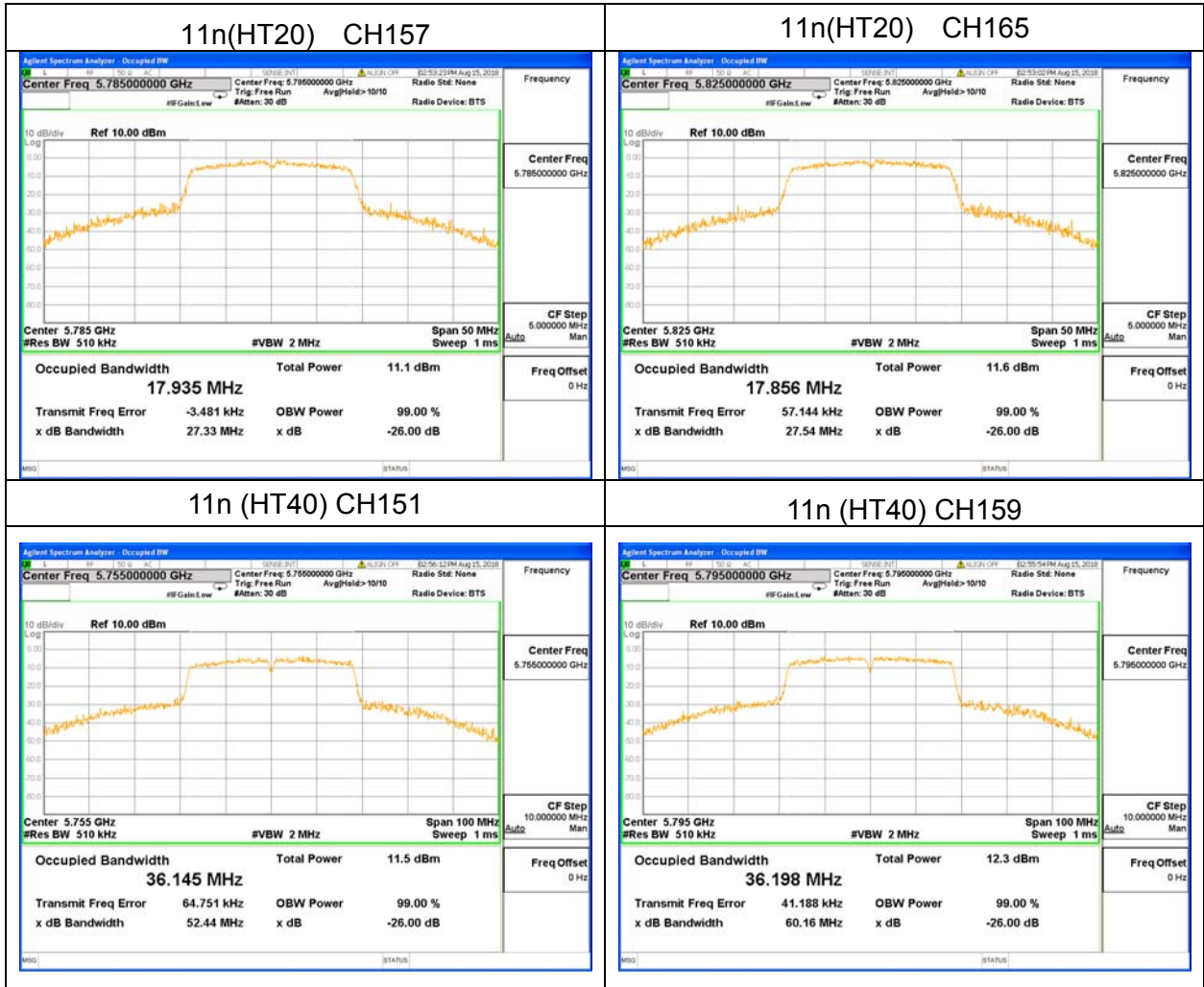






For Band IV





## 5.5 6dB Bandwidth

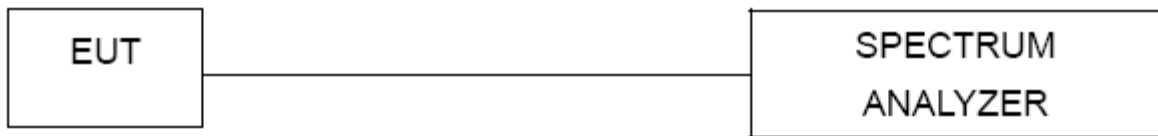
### 5.5.1 Limit

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier

### 5.5.2 Test procedure

1. Set RBW= 100 kHz.
2. Set the Video bandwidth (VBW)  $\geq 3 \times$  RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

### 5.5.3 Test setup



### 5.5.4 Test results

#### For Band I

Channel	Test Channel	Frequency(MHz)	6dB bandwidth(MHz)	Limit(kHz)	Result
11a	CH36	5180	15.11	500	Pass
11a	CH40	5200	15.13	500	Pass
11a	CH48	5240	16.51	500	Pass
11n (HT20)	CH36	5180	15.04	500	Pass
11n (HT20)	CH40	5200	14.45	500	Pass
11n (HT20)	CH48	5240	16.09	500	Pass
11n (HT40)	CH38	5190	35.42	500	Pass
11n (HT40)	CH46	5230	35.45	500	Pass

For Band II

Channel	Test Channel	Frequency(MHz)	6dB bandwidth(MHz)	Limit(kHz)	Result
11a	CH52	5260	17.28	500	Pass
11a	CH56	5280	17.29	500	Pass
11a	CH64	5320	16.93	500	Pass
11n (HT20)	CH52	5260	15.12	500	Pass
11n (HT20)	CH56	5280	20.29	500	Pass
11n (HT20)	CH64	5320	16.54	500	Pass
11n (HT40)	CH54	5270	35.15	500	Pass
11n (HT40)	CH62	5310	35.12	500	Pass

For Band III

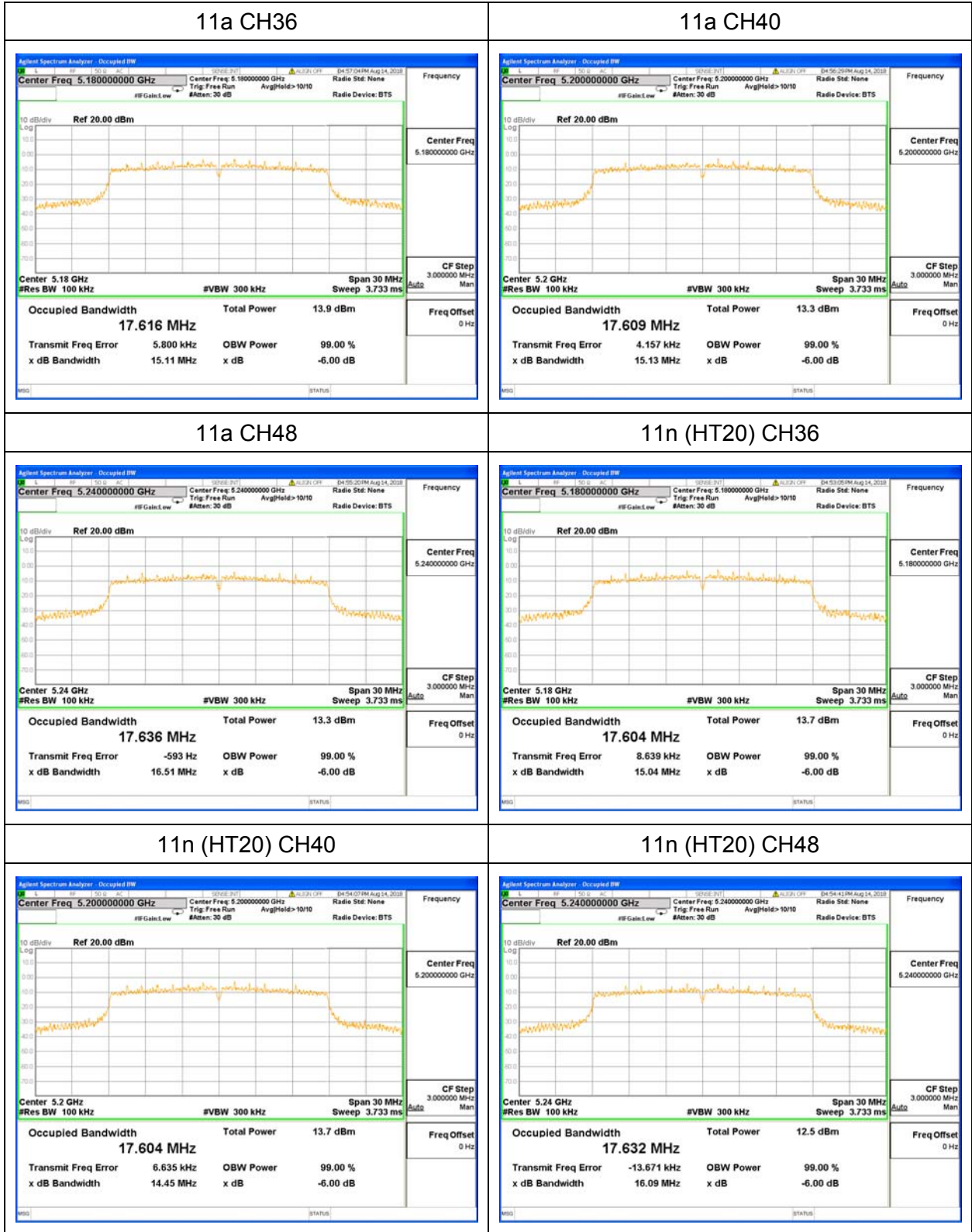
Channel	Test Channel	Frequency(MHz)	6dB bandwidth(MHz)	Limit(kHz)	Result
11a	CH100	5500	17.66	500	Pass
11a	CH120	5600	17.66	500	Pass
11a	CH140	5700	17.66	500	Pass
11n (HT20)	CH100	5500	17.64	500	Pass
11n (HT20)	CH120	5600	17.66	500	Pass
11n (HT20)	CH140	5700	17.62	500	Pass
11n (HT40)	CH102	5510	36.33	500	Pass
11n (HT40)	CH118	5590	36.02	500	Pass
11n (HT40)	CH134	5670	36.25	500	Pass

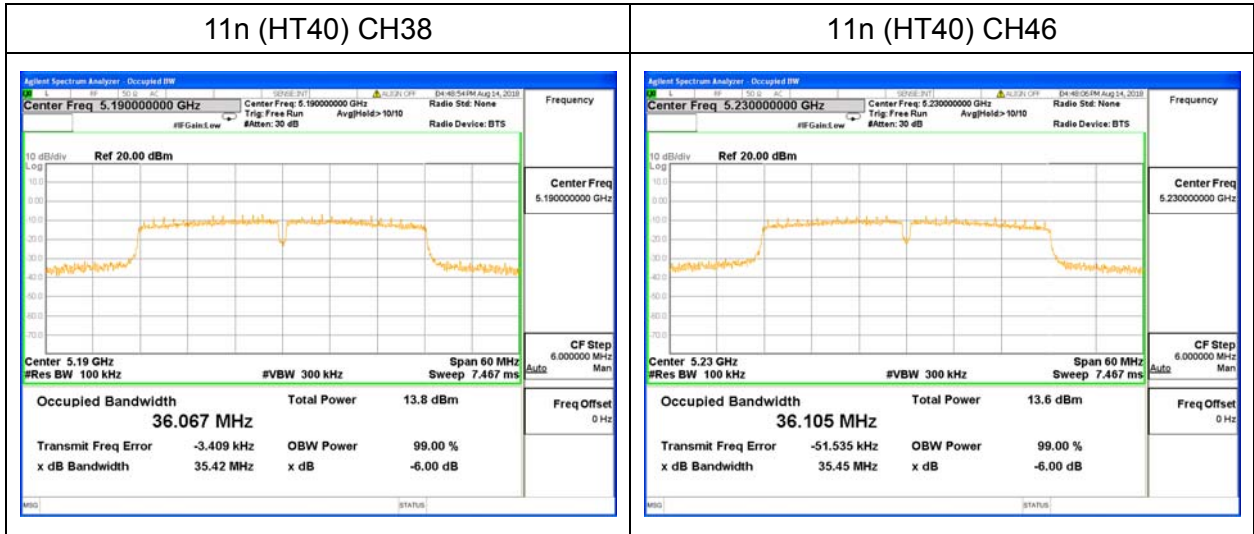
For Band IV

Channel	Test Channel	Frequency(MHz)	6dB bandwidth(MHz)	Limit(kHz)	Result
11a	CH149	5745	15.98	500	Pass
11a	CH157	5785	15.13	500	Pass
11a	CH165	5825	17.58	500	Pass
11n (HT20)	CH149	5745	14.44	500	Pass
11n (HT20)	CH157	5785	15.12	500	Pass
11n (HT20)	CH165	5825	15.10	500	Pass
11n (HT40)	CH151	5755	35.15	500	Pass
11n (HT40)	CH159	5795	35.37	500	Pass

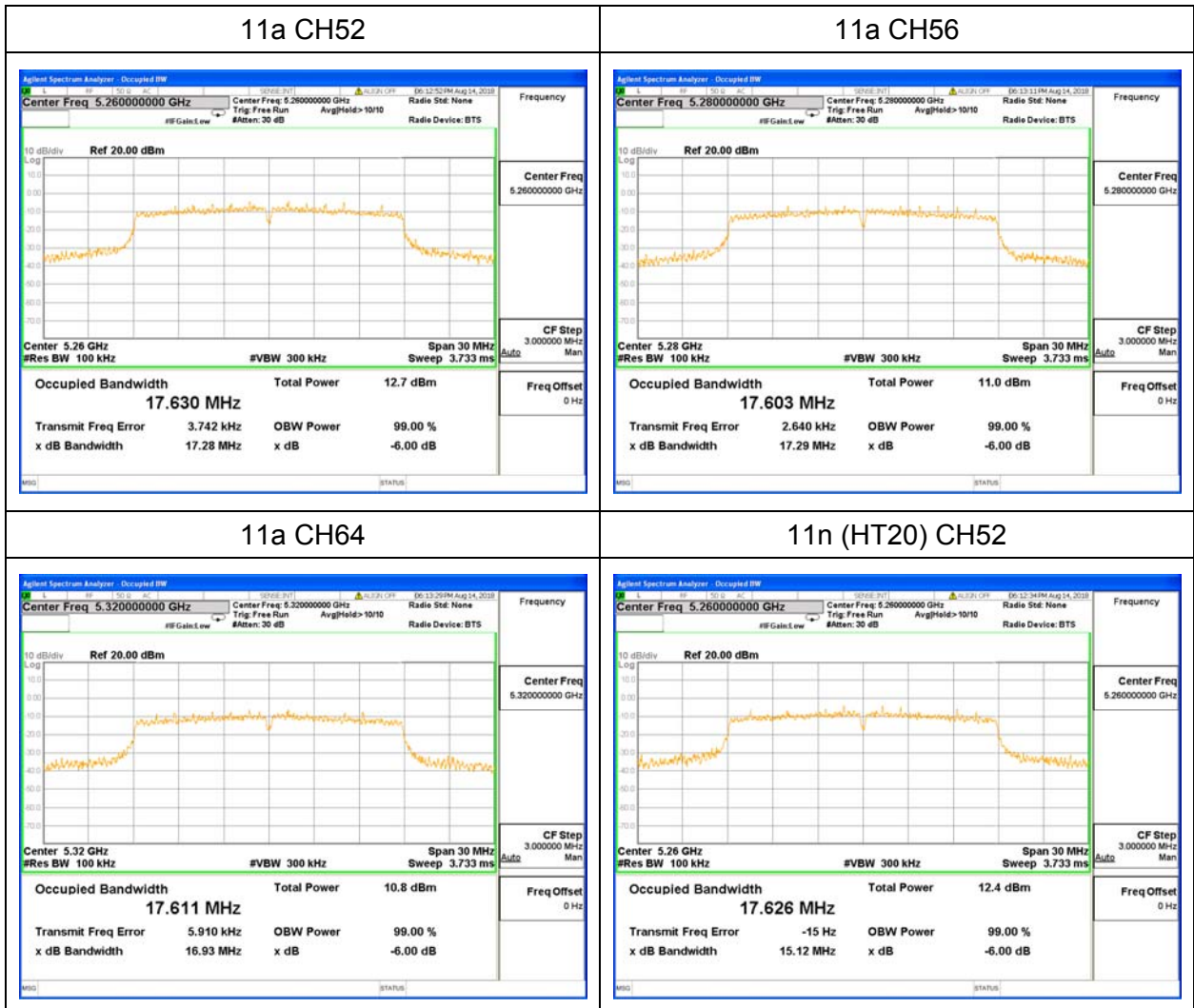


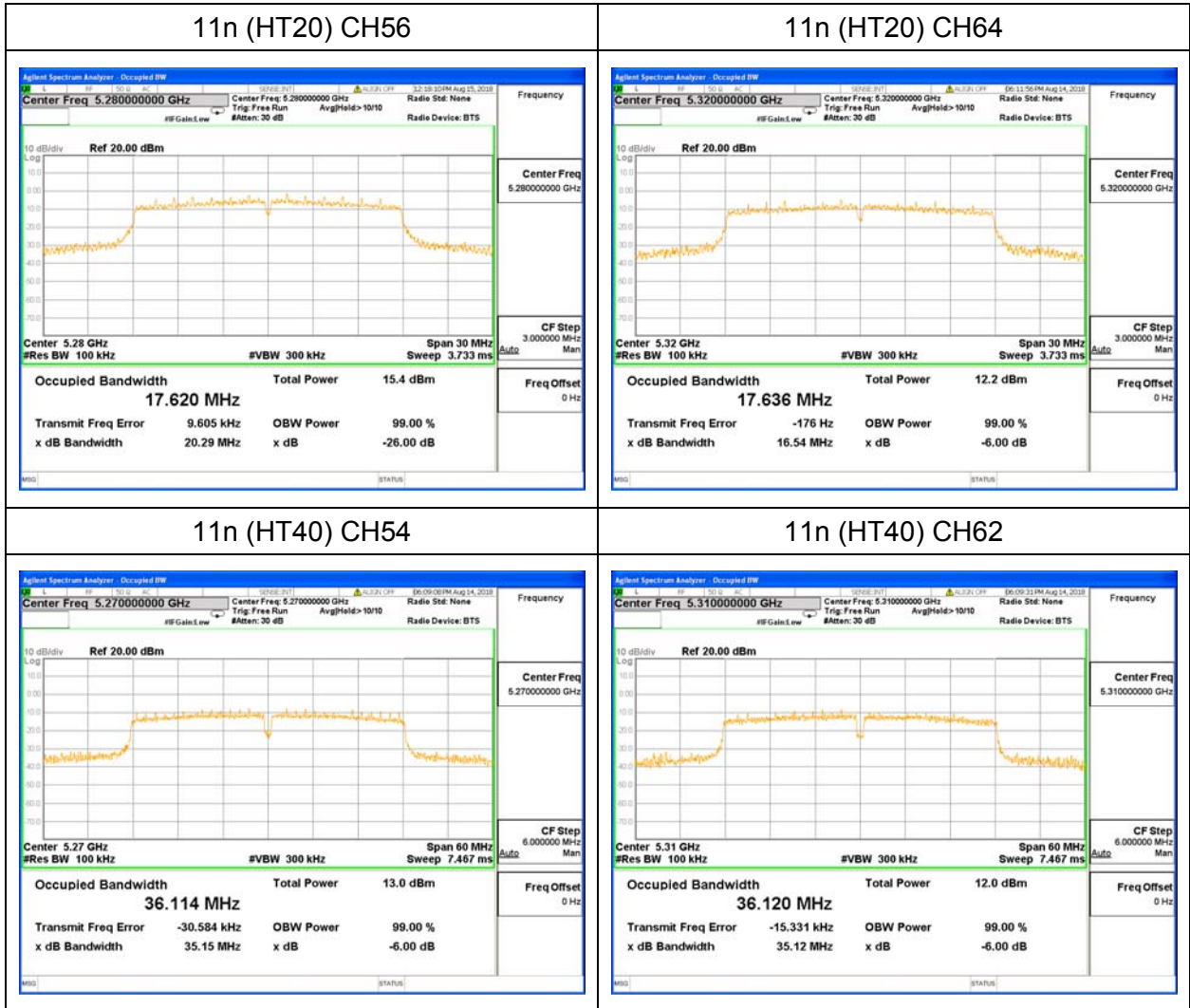
Test plots:  
For Band I



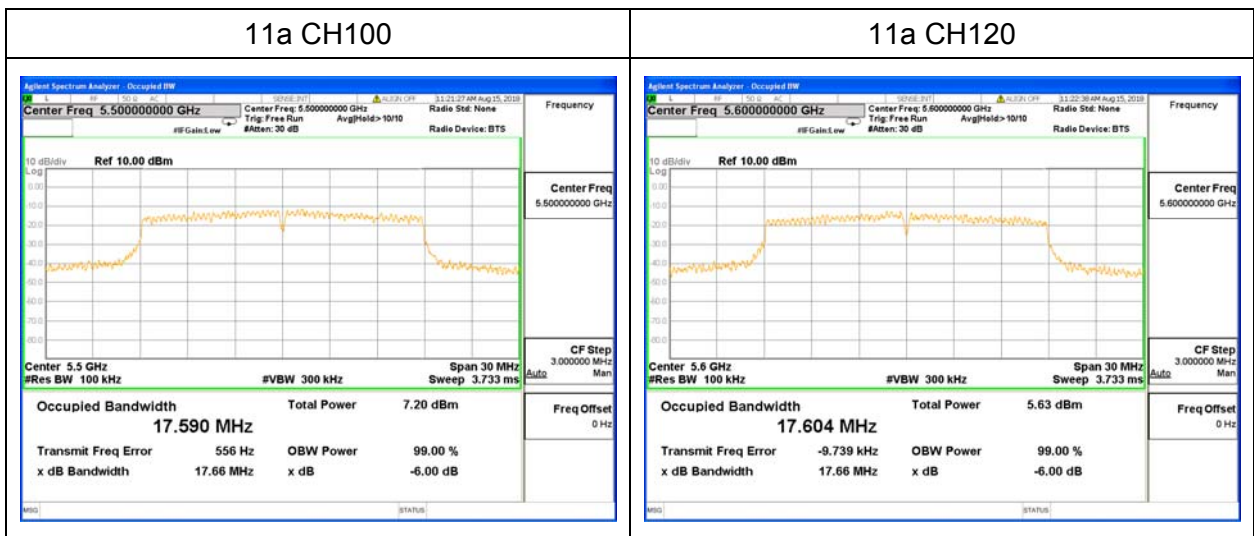


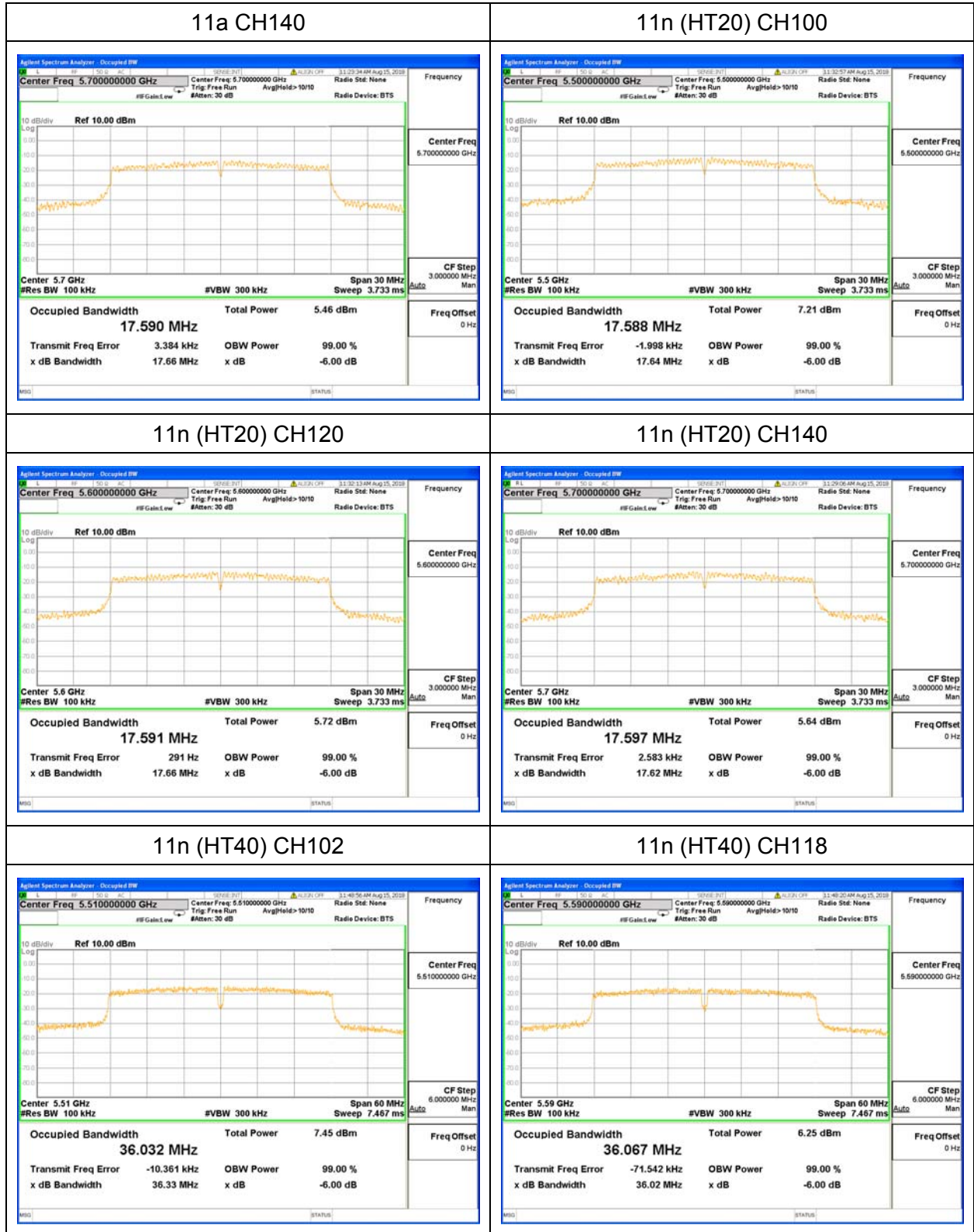
For Band II

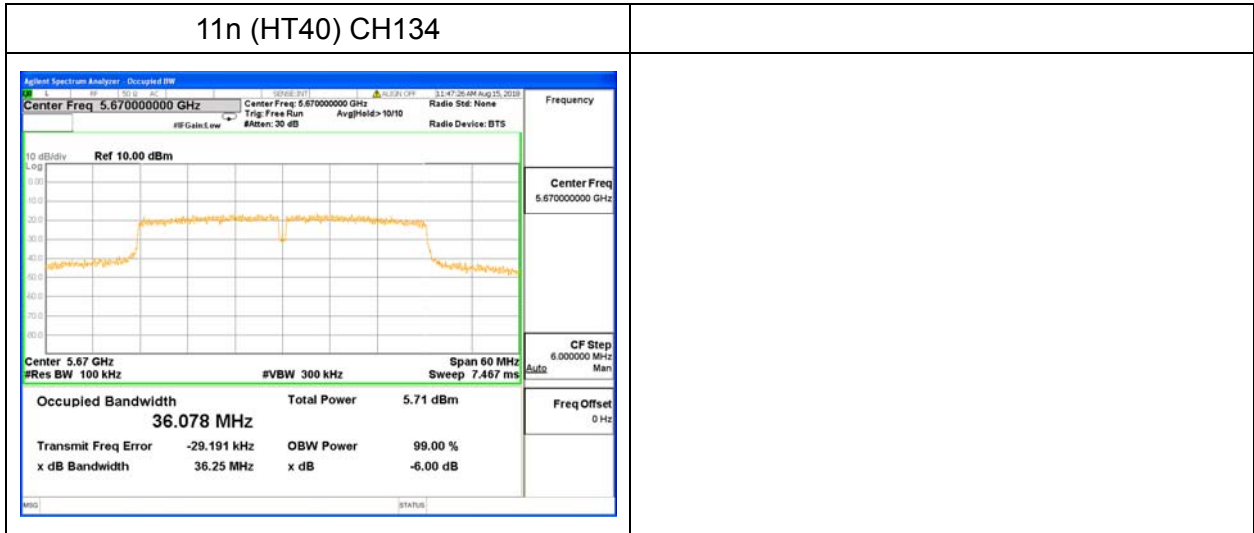




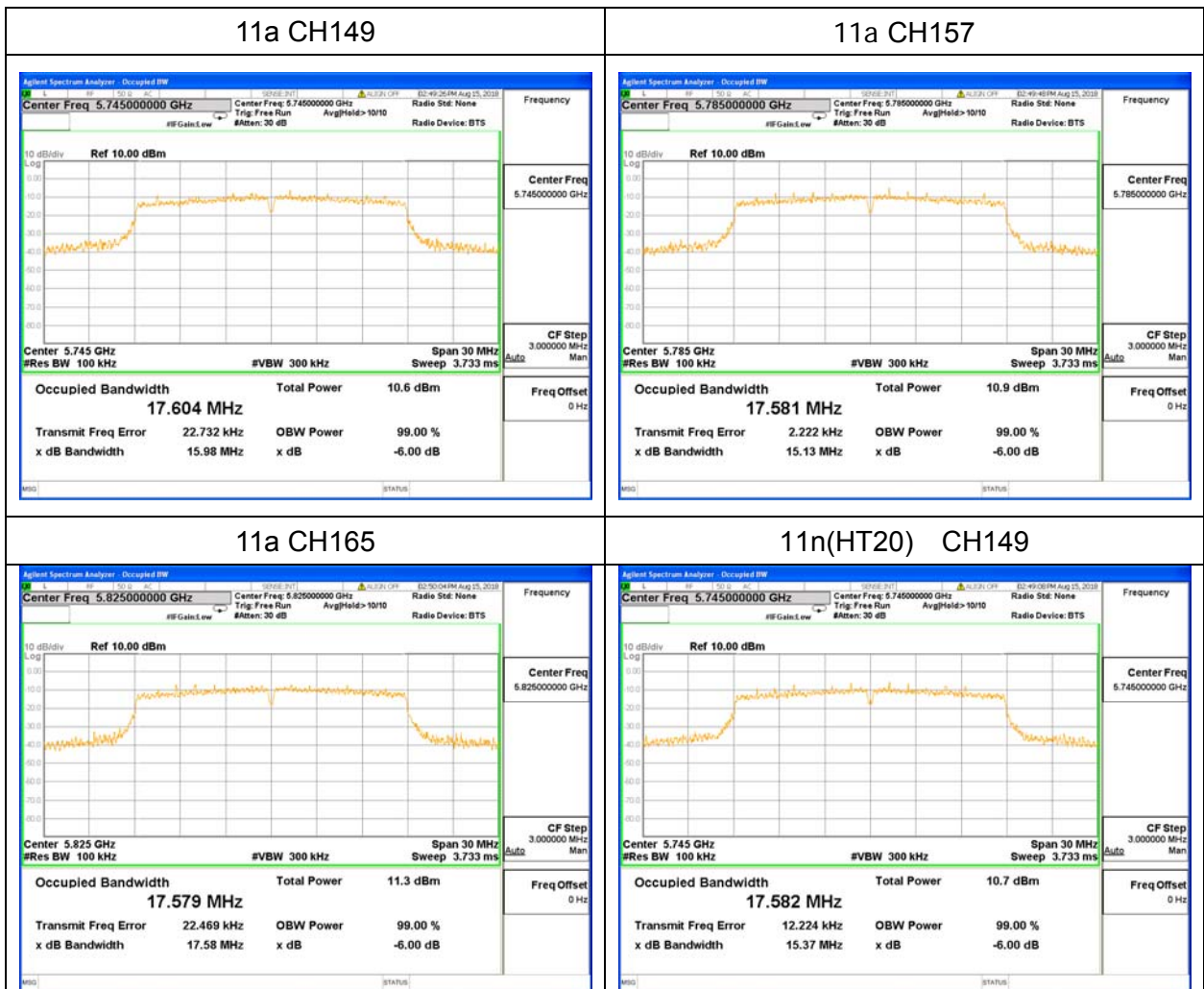
For Band III



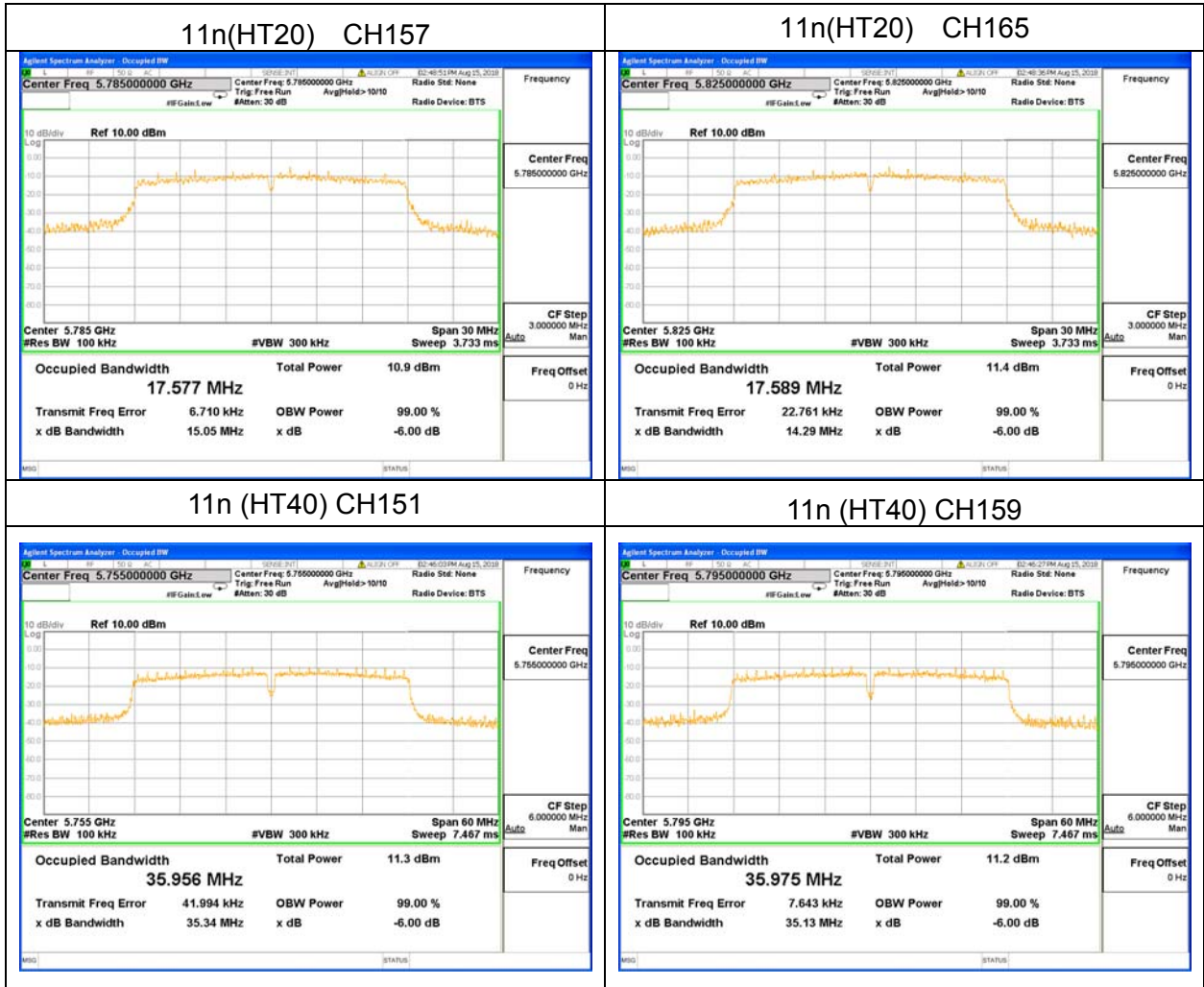




For Band IV







## 5.6 Radiated spurious emission

### Radiated Emission Limits

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

### 5.6.1 Test procedure

The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

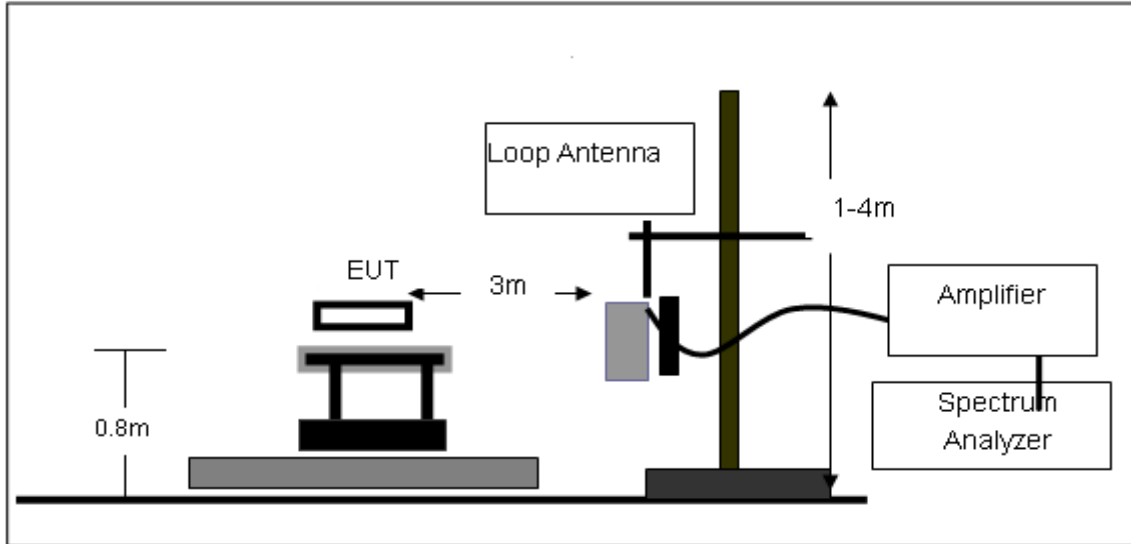
If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT

shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. For the actual test configuration, please refer to the related Item –EUT Test Photos.

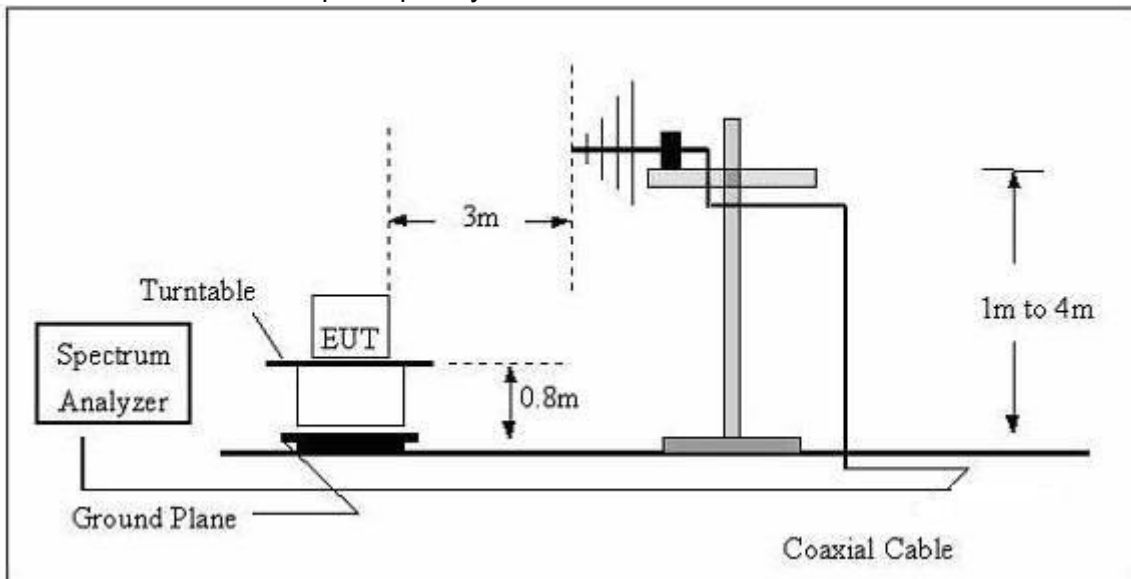
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

**5.6.2 Test setup**

(A) Radiated Emission test-up Frequency Below 30MHz

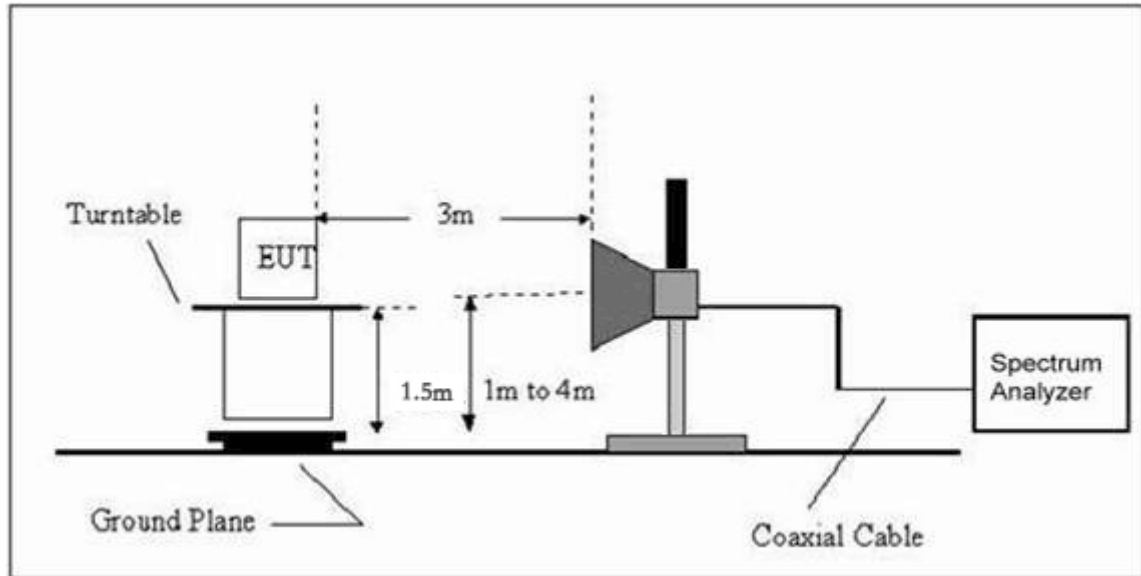


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz





5.6.3 Test results

EUT:	10.1" Wifi Tablets	Model Name:	Z21116G
Temperature:	20 °C	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage:	DC 5V from adapter AC 120V/60Hz
Test Mode:	TX	Polarization :	--

Below 30MHz

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	Pass
--	--	--	--	Pass

Note1: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

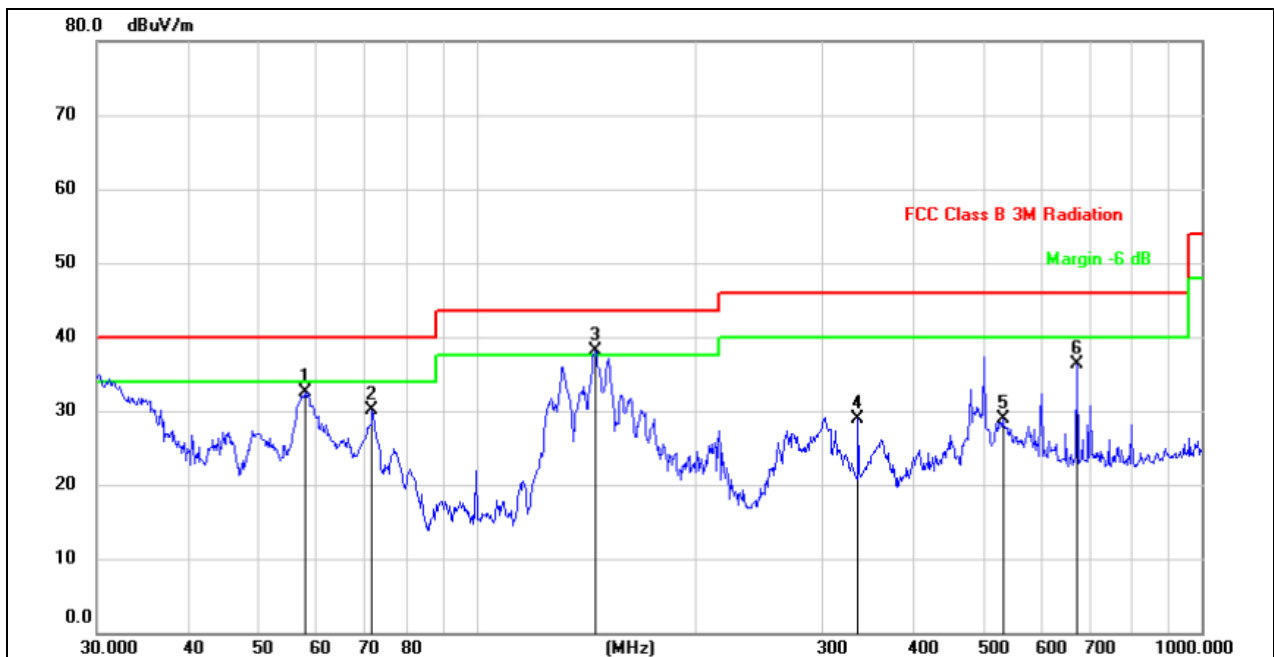
Note2: Distance extrapolation factor =  $40 \log(\text{specific distance}/\text{test distance})(\text{dB})$ ; Limit line = specific limits(dBuV) + distance extrapolation factor.

**Between 30MHz – 1GHz**

Note1 : Emission Level = Meter Reading + Factor, Margin= Emission Level- Limit, Factor = Antenna Factor + Cable Loss – Pre-amplifier.

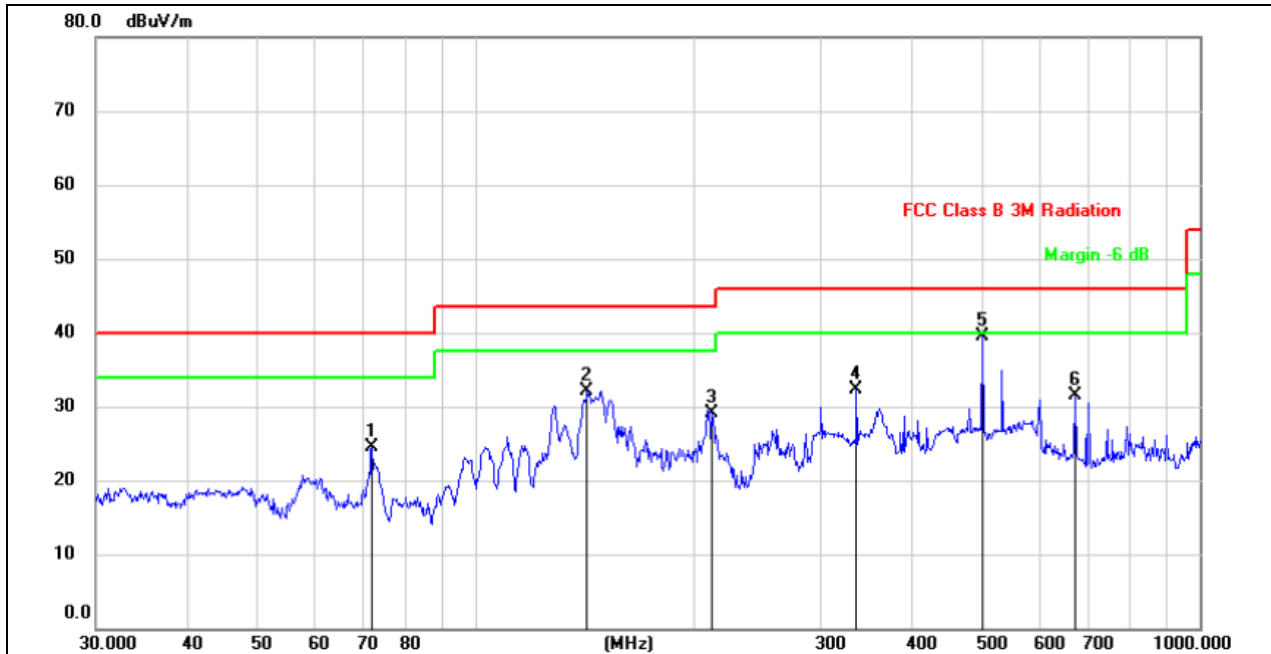
Note2 : The peak value is less than the AV value, AV value is not required Factor added by measurement software automatically.

EUT :	10.1" Wifi Tablets	Model Name :	Z21116G
Temperature :	20 °C	Relative Humidity :	48%
Pressure:	1010 hPa	Phase :	V
Test Voltage :	DC 5V from adapter AC 120V/60Hz	Mode:	Normal link



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dBuV/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		57.9992	43.38	-10.87	32.51	40.00	-7.49	QP
2		71.8319	43.76	-13.65	30.11	40.00	-9.89	QP
3	*	145.8608	51.76	-13.65	38.11	43.50	-5.39	QP
4		336.0350	36.73	-7.87	28.86	46.00	-17.14	QP
5		531.9633	34.48	-5.52	28.96	46.00	-17.04	QP
6		672.8444	40.73	-4.52	36.21	46.00	-9.79	QP

EUT :	10.1" Wifi Tablets	Model Name :	Z21116G
Temperature :	20 °C	Relative Humidity :	48%
Pressure:	1010 hPa	Phase :	H
Test Voltage :	DC 5V from adapter AC 120V/60Hz	Mode:	Normal link



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	
1		72.0841	38.51	-14.07	24.44	40.00	-15.56	QP
2		142.8240	46.92	-14.79	32.13	43.50	-11.37	QP
3		212.2692	40.51	-11.31	29.20	43.50	-14.30	QP
4		336.0350	40.15	-7.87	32.28	46.00	-13.72	QP
5	*	501.1788	44.50	-5.08	39.42	46.00	-6.58	QP
6		672.8444	35.96	-4.52	31.44	46.00	-14.56	QP

**1G-40GHz**

Note1 : Emission Level = Meter Reading + Factor, Margin= Emission Level- Limit, Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Note2 : The peak value is less than the AV value, AV value is not required Factor added by measurement software automatically.

Note3 : The spurious emission of 25GHz – 40GHz band which the margin is lower more than 20dB, So that it is not reported in this test report.

**For Band I**

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5180 MHz)-Above 1G</b>									
Vertical	4434.205	55.78	5.94	35.40	44.00	53.12	74.00	-21.12	Pk
Vertical	4434.205	44.40	5.94	35.40	44.00	41.74	54.00	-12.73	AV
Vertical	10370.169	63.32	8.46	39.75	44.50	67.03	74.00	-8.46	Pk
Vertical	10370.169	43.20	8.46	39.75	44.50	46.91	54.00	-7.23	AV
Vertical	15540.124	55.75	10.12	38.80	44.10	60.57	74.00	-12.49	Pk
Vertical	15540.124	42.38	10.12	38.80	42.70	48.60	54.00	-5.17	AV
Horizontal	4434.249	57.87	5.94	35.18	44.00	54.99	74.00	-17.75	Pk
Horizontal	4434.249	42.27	5.94	35.18	44.00	39.39	54.00	-13.41	AV
Horizontal	10370.126	60.51	8.46	38.71	44.50	63.18	74.00	-9.19	Pk
Horizontal	10730.126	45.39	8.46	38.71	44.50	48.06	54.00	-6.36	AV
Horizontal	15540.103	58.20	10.12	38.38	44.10	62.60	74.00	-11.31	Pk
Horizontal	15540.103	43.51	10.12	38.38	44.10	47.91	54.00	-6.49	AV
<b>middle Channel (5200 MHz)-Above 1G</b>									
Vertical	4592.154	57.32	6.48	36.35	44.05	56.10	74.00	-17.90	Pk
Vertical	4592.154	43.07	6.48	36.35	44.05	41.85	54.00	-12.15	AV
Vertical	10401.223	62.45	8.47	37.88	44.51	64.29	74.00	-9.71	Pk
Vertical	10401.223	45.70	8.47	37.88	44.51	47.54	54.00	-6.46	AV
Vertical	15600.182	56.61	10.12	38.8	44.10	61.43	74.00	-12.57	Pk
Vertical	15600.182	42.57	10.12	38.8	42.70	48.79	54.00	-5.21	AV
Horizontal	4592.315	59.17	6.48	36.37	44.05	57.97	74.00	-16.03	Pk
Horizontal	4592.315	41.91	6.48	36.37	44.05	40.71	54.00	-13.29	AV
Horizontal	10400.206	60.46	8.47	38.64	44.50	63.07	74.00	-10.93	Pk
Horizontal	10400.206	46.89	8.47	38.64	44.50	49.50	54.00	-4.50	AV
Horizontal	15600.179	58.68	10.12	38.38	44.10	63.08	74.00	-10.92	Pk
Horizontal	15600.179	43.49	10.12	38.38	44.10	47.89	54.00	-6.11	AV

High Channel (5240 MHz)-Above 1G									
Vertical	4739.216	60.55	7.10	37.24	43.50	61.39	74.00	-12.61	Pk
Vertical	4739.216	45.44	7.10	37.24	43.50	46.28	54.00	-7.72	AV
Vertical	10480.274	60.95	8.46	37.68	44.50	62.59	74.00	-11.41	Pk
Vertical	10480.274	46.33	8.46	37.68	44.50	47.97	54.00	-6.03	AV
Vertical	15720.189	58.58	10.12	38.8	44.10	63.40	74.00	-10.60	Pk
Vertical	15720.189	43.27	10.12	38.8	42.70	49.49	54.00	-4.51	AV
Horizontal	4739.116	60.59	7.10	37.24	43.50	61.43	74.00	-12.57	Pk
Horizontal	4739.116	43.71	7.10	37.24	43.50	44.55	54.00	-9.45	AV
Horizontal	10481.402	58.48	8.46	38.57	44.50	61.01	74.00	-12.99	Pk
Horizontal	10481.402	42.95	8.46	38.57	44.50	45.48	54.00	-8.52	AV
Horizontal	15720.263	56.67	10.12	38.38	44.10	61.07	74.00	-12.93	Pk
Horizontal	15720.263	41.87	10.12	38.38	44.10	46.27	54.00	-7.73	AV

Note: Both horizontal and vertical antenna polarities were tested and only the worst case (horizontal) emissions were reported.

**For Band II**

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5260 MHz)-Above 1G</b>									
Vertical	4856.105	56.33	5.94	35.40	44.00	53.67	74.00	-20.33	Pk
Vertical	4856.105	45.10	5.94	35.40	44.00	42.44	54.00	-11.56	AV
Vertical	10520.558	62.52	8.46	39.75	44.50	66.23	74.00	-7.77	Pk
Vertical	10520.558	44.06	8.46	39.75	44.50	47.77	54.00	-6.23	AV
Vertical	15785.124	56.96	10.12	38.80	44.10	61.78	74.00	-12.22	Pk
Vertical	15785.124	43.32	10.12	38.80	42.70	49.54	54.00	-4.46	AV
Horizontal	4856.205	58.48	5.94	35.18	44.00	55.60	74.00	-18.40	Pk
Horizontal	4856.205	42.52	5.94	35.18	44.00	39.64	54.00	-14.36	AV
Horizontal	10520.650	61.74	8.46	38.71	44.50	64.41	74.00	-9.59	Pk
Horizontal	10520.650	45.53	8.46	38.71	44.50	48.20	54.00	-5.80	AV
Horizontal	15785.128	57.48	10.12	38.38	44.10	61.88	74.00	-12.12	Pk
Horizontal	15785.128	44.03	10.12	38.38	44.10	48.43	54.00	-5.57	AV
<b>middle Channel (5280 MHz)-Above 1G</b>									
Vertical	4950.265	58.21	6.48	36.35	44.05	56.99	74.00	-17.01	Pk
Vertical	4950.265	41.84	6.48	36.35	44.05	40.62	54.00	-13.38	AV
Vertical	10560.336	62.25	8.47	37.88	44.51	64.09	74.00	-9.91	Pk
Vertical	10560.336	46.73	8.47	37.88	44.51	48.57	54.00	-5.43	AV
Vertical	15845.196	57.89	10.12	38.8	44.10	62.71	74.00	-11.29	Pk
Vertical	15845.196	42.74	10.12	38.8	42.70	48.96	54.00	-5.04	AV
Horizontal	4950.324	60.51	6.48	36.37	44.05	59.31	74.00	-14.69	Pk
Horizontal	4950.324	41.87	6.48	36.37	44.05	40.67	54.00	-13.33	AV
Horizontal	10560.485	61.79	8.47	38.64	44.50	64.40	74.00	-9.60	Pk
Horizontal	10560.485	46.36	8.47	38.64	44.50	48.97	54.00	-5.03	AV
Horizontal	15845.237	57.50	10.12	38.38	44.10	61.90	74.00	-12.10	Pk
Horizontal	15845.237	42.10	10.12	38.38	44.10	46.50	54.00	-7.50	AV

<b>High Channel (5320 MHz)-Above 1G</b>
---

Vertical	4900.324	58.75	7.10	37.24	43.50	59.59	74.00	-14.41	Pk
Vertical	4900.324	46.20	7.10	37.24	43.50	47.04	54.00	-6.96	AV
Vertical	10642.158	62.50	8.46	37.68	44.50	64.14	74.00	-9.86	Pk
Vertical	10642.158	46.48	8.46	37.68	44.50	48.12	54.00	-5.88	AV
Vertical	15960.332	57.30	10.12	38.8	44.10	62.12	74.00	-11.88	Pk
Vertical	15960.332	44.05	10.12	38.8	42.70	50.27	54.00	-3.73	AV
Horizontal	4900.461	60.69	7.10	37.24	43.50	61.53	74.00	-12.47	Pk
Horizontal	4900.461	44.47	7.10	37.24	43.50	45.31	54.00	-8.69	AV
Horizontal	10642.245	58.64	8.46	38.57	44.50	61.17	74.00	-12.83	Pk
Horizontal	10642.245	42.49	8.46	38.57	44.50	45.02	54.00	-8.98	AV
Horizontal	15960.193	57.06	10.12	38.38	44.10	61.46	74.00	-12.54	Pk
Horizontal	15960.193	42.58	10.12	38.38	44.10	46.98	54.00	-7.02	AV



**For Band III**

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5500 MHz)-Above 1G</b>									
Vertical	4861.247	59.36	5.94	35.40	44.00	56.70	74.00	-17.30	Pk
Vertical	4861.247	46.63	5.94	35.40	44.00	43.97	54.00	-10.03	AV
Vertical	11003.152	59.20	8.46	39.75	44.50	62.91	74.00	-11.09	Pk
Vertical	11003.152	45.75	8.46	39.75	44.50	49.46	54.00	-4.54	AV
Vertical	16500.425	56.58	10.12	38.80	44.10	61.40	74.00	-12.60	Pk
Vertical	16500.425	41.01	10.12	38.80	42.70	47.23	54.00	-6.77	AV
Horizontal	4861.249	58.02	5.94	35.18	44.00	55.14	74.00	-18.86	Pk
Horizontal	4861.249	46.01	5.94	35.18	44.00	43.13	54.00	-10.87	AV
Horizontal	11003.155	60.90	8.46	38.71	44.50	63.57	74.00	-10.43	Pk
Horizontal	11003.155	44.68	8.46	38.71	44.50	47.35	54.00	-6.65	AV
Horizontal	16500.428	59.97	10.12	38.38	44.10	64.37	74.00	-9.63	Pk
Horizontal	16500.428	44.27	10.12	38.38	44.10	48.67	54.00	-5.33	AV
<b>middle Channel (5600 MHz)-Above 1G</b>									
Vertical	4892.354	58.18	6.48	36.35	44.05	56.96	74.00	-17.04	Pk
Vertical	4892.354	43.68	6.48	36.35	44.05	42.46	54.00	-11.54	AV
Vertical	11203.281	61.12	8.47	37.88	44.51	62.96	74.00	-11.04	Pk
Vertical	11203.281	45.33	8.47	37.88	44.51	47.17	54.00	-6.83	AV
Vertical	16804.362	59.35	10.12	38.8	44.10	64.17	74.00	-9.83	Pk
Vertical	16804.362	42.30	10.12	38.8	42.70	48.52	54.00	-5.48	AV
Horizontal	4892.355	60.08	6.48	36.37	44.05	58.88	74.00	-15.12	Pk
Horizontal	4892.355	45.54	6.48	36.37	44.05	44.34	54.00	-9.66	AV
Horizontal	11203.280	60.70	8.47	38.64	44.50	63.31	74.00	-10.69	Pk
Horizontal	11203.280	46.45	8.47	38.64	44.50	49.06	54.00	-4.94	AV
Horizontal	16804.364	60.88	10.12	38.38	44.10	65.28	74.00	-8.72	Pk
Horizontal	16804.364	44.79	10.12	38.38	44.10	49.19	54.00	-4.81	AV

<b>High Channel (5700 MHz)-Above 1G</b>
---

Vertical	4933.432	61.05	7.10	37.24	43.50	61.89	74.00	-12.11	Pk
Vertical	4933.432	48.00	7.10	37.24	43.50	48.84	54.00	-5.16	AV
Vertical	11400.367	55.39	8.46	37.68	44.50	57.03	74.00	-16.97	Pk
Vertical	11400.367	43.33	8.46	37.68	44.50	44.97	54.00	-9.03	AV
Vertical	17102.846	60.34	10.12	38.8	44.10	65.16	74.00	-8.84	Pk
Vertical	17102.846	41.09	10.12	38.8	42.70	47.31	54.00	-6.69	AV
Horizontal	4933.437	67.68	7.10	37.24	43.50	68.52	74.00	-5.48	Pk
Horizontal	4933.437	44.30	7.10	37.24	43.50	45.14	54.00	-8.86	AV
Horizontal	11400.369	58.51	8.46	38.57	44.50	61.04	74.00	-12.96	Pk
Horizontal	11400.369	45.13	8.46	38.57	44.50	47.66	54.00	-6.34	AV
Horizontal	17102.841	61.17	10.12	38.38	44.10	65.57	74.00	-8.43	Pk
Horizontal	17102.841	45.27	10.12	38.38	44.10	49.67	54.00	-4.33	AV

**For Band IV**

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5745 MHz)-Above 1G</b>									
Vertical	4679.136	58.22	5.94	35.40	44.00	55.56	74.00	-18.44	Pk
Vertical	4679.136	47.46	5.94	35.40	44.00	44.80	54.00	-9.20	AV
Vertical	11490.052	59.89	8.46	39.75	44.50	63.60	74.00	-10.40	Pk
Vertical	11490.052	45.06	8.46	39.75	44.50	48.77	54.00	-5.23	AV
Vertical	17235.261	57.19	10.12	38.80	44.10	62.01	74.00	-11.99	Pk
Vertical	17235.261	41.05	10.12	38.80	42.70	47.27	54.00	-6.73	AV
Horizontal	4679.135	58.87	5.94	35.18	44.00	55.99	74.00	-18.01	Pk
Horizontal	4679.135	45.06	5.94	35.18	44.00	42.18	54.00	-11.82	AV
Horizontal	11490.302	60.64	8.46	38.71	44.50	63.31	74.00	-10.69	Pk
Horizontal	11490.302	46.14	8.46	38.71	44.50	48.81	54.00	-5.19	AV
Horizontal	17235.246	58.66	10.12	38.38	44.10	63.06	74.00	-10.94	Pk
Horizontal	17235.246	43.19	10.12	38.38	44.10	47.59	54.00	-6.41	AV
<b>middle Channel (5785 MHz)-Above 1G</b>									
Vertical	4592.208	58.96	6.48	36.35	44.05	57.74	74.00	-16.26	Pk
Vertical	4592.208	44.24	6.48	36.35	44.05	43.02	54.00	-10.98	AV
Vertical	11570.136	60.91	8.47	37.88	44.51	62.75	74.00	-11.25	Pk
Vertical	11570.136	43.69	8.47	37.88	44.51	45.53	54.00	-8.47	AV
Vertical	17355.249	58.05	10.12	38.8	44.10	62.87	74.00	-11.13	Pk
Vertical	17355.249	42.50	10.12	38.8	42.70	48.72	54.00	-5.28	AV
Horizontal	4592.138	60.12	6.48	36.37	44.05	58.92	74.00	-15.08	Pk
Horizontal	4592.138	44.04	6.48	36.37	44.05	42.84	54.00	-11.16	AV
Horizontal	11570.256	60.91	8.47	38.64	44.50	63.52	74.00	-10.48	Pk
Horizontal	11570.256	47.20	8.47	38.64	44.50	49.81	54.00	-4.19	AV
Horizontal	17355.127	61.45	10.12	38.38	44.10	65.85	74.00	-8.15	Pk
Horizontal	17355.127	45.82	10.12	38.38	44.10	50.22	54.00	-3.78	AV

<b>High Channel (5825 MHz)-Above 1G</b>
---

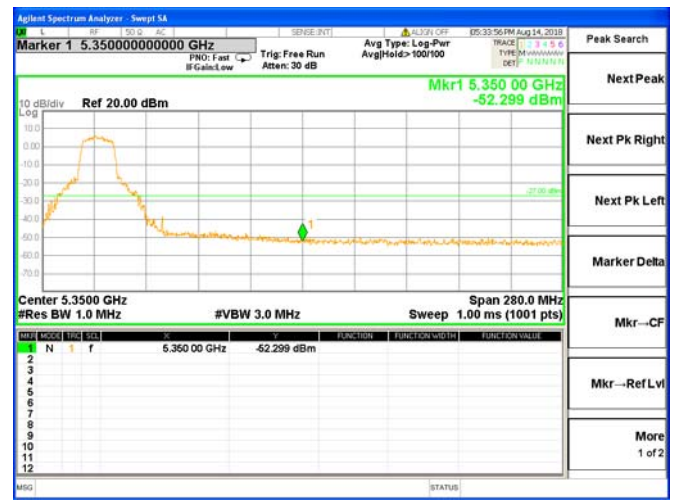
Vertical	5039.156	60.61	7.10	37.24	43.50	61.45	74.00	-12.55	Pk
Vertical	5039.156	47.64	7.10	37.24	43.50	48.48	54.00	-5.52	AV
Vertical	11650.131	56.61	8.46	37.68	44.50	58.25	74.00	-15.75	Pk
Vertical	11650.131	44.09	8.46	37.68	44.50	45.73	54.00	-8.27	AV
Vertical	17475.289	61.19	10.12	38.8	44.10	66.01	74.00	-7.99	Pk
Vertical	17475.289	40.24	10.12	38.8	42.70	46.46	54.00	-7.54	AV
Horizontal	5039.316	68.51	7.10	37.24	43.50	69.35	74.00	-4.65	Pk
Horizontal	5039.316	42.35	7.10	37.24	43.50	43.19	54.00	-10.81	AV
Horizontal	11650.203	58.57	8.46	38.57	44.50	61.10	74.00	-12.90	Pk
Horizontal	11650.203	45.01	8.46	38.57	44.50	47.54	54.00	-6.46	AV
Horizontal	17475.152	60.28	10.12	38.38	44.10	64.68	74.00	-9.32	Pk
Horizontal	17475.152	46.57	10.12	38.38	44.10	50.97	54.00	-3.03	AV

**For band I**

11a

Bandedge-Left

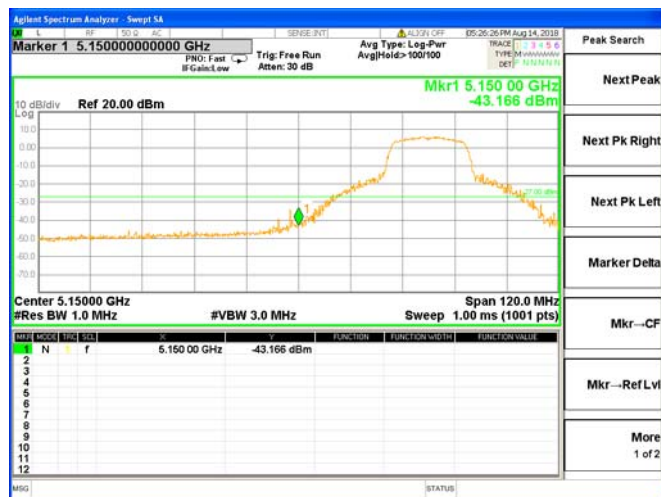
Bandedge-Right



11n20

Bandedge-Left

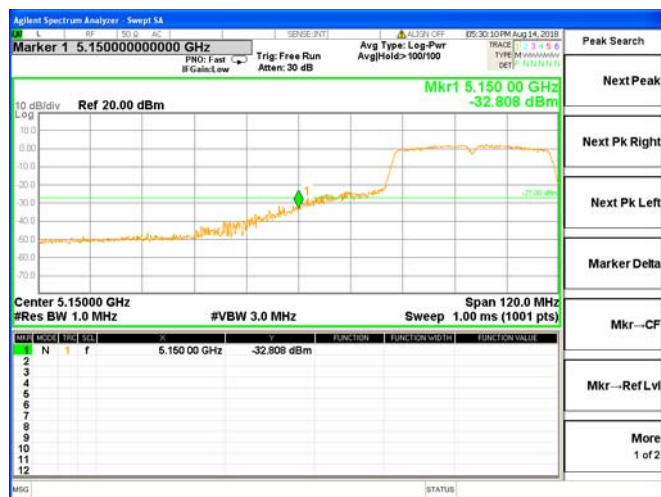
Bandedge-Right



11n40

Bandedge-Left

Bandedge-Right



**For band II**

11a

Bandedge-Left



Bandedge-Right



11n20

Bandedge-Left



Bandedge-Right

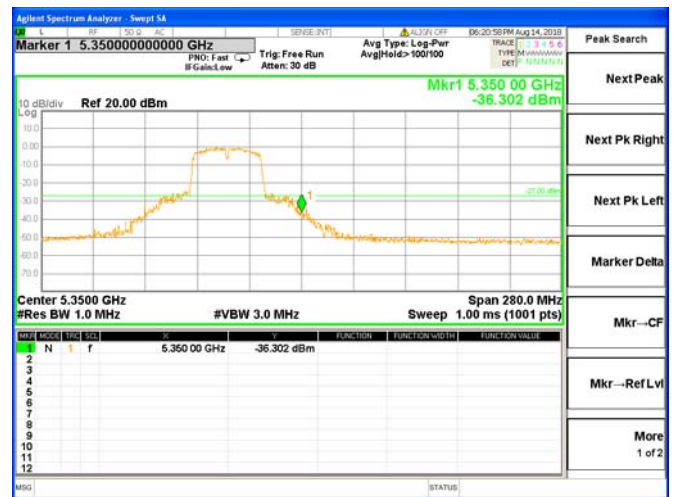


11n40

Bandedge-Left



Bandedge-Right





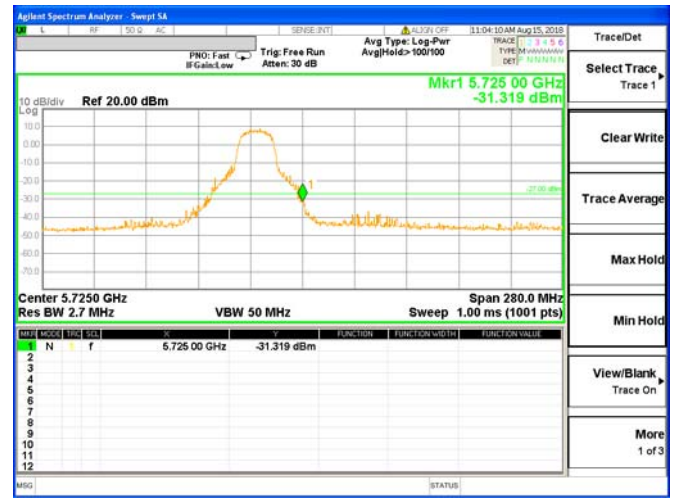
**For band III**

11a

Bandedge-Left

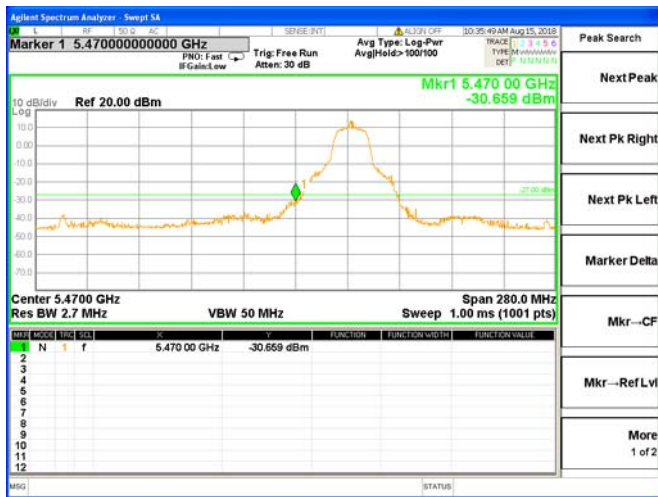


Bandedge-Right

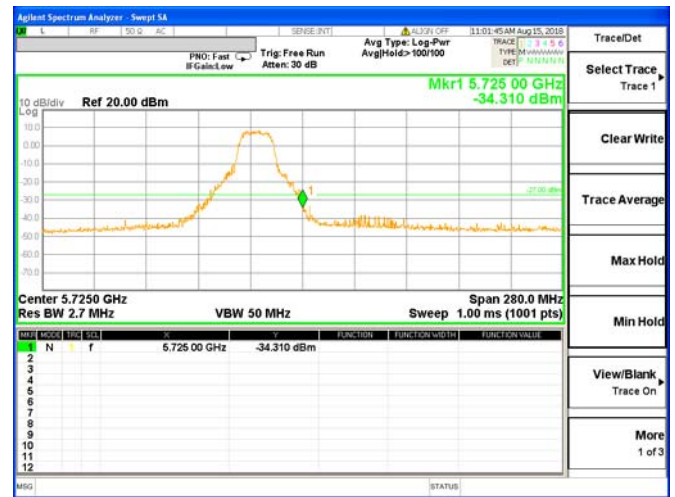


11n20

Bandedge-Left



Bandedge-Right

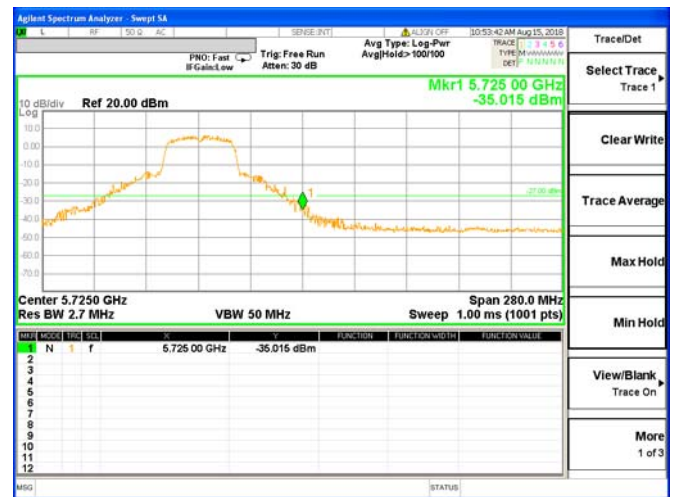


11n40

Bandedge-Left



Bandedge-Right

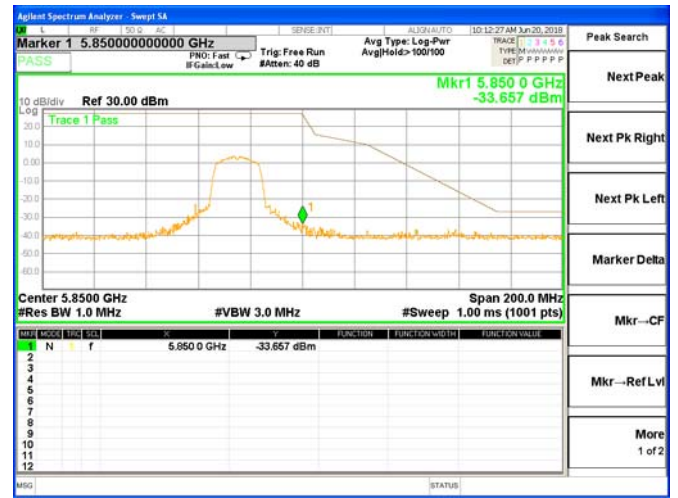
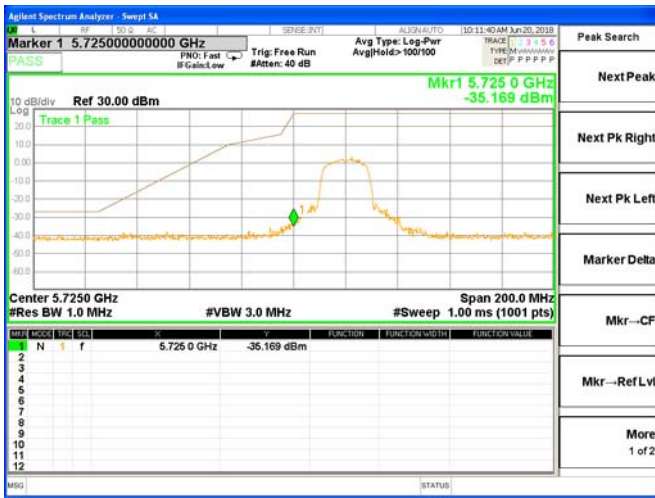


**For band IV**

11a

Bandedge-Left

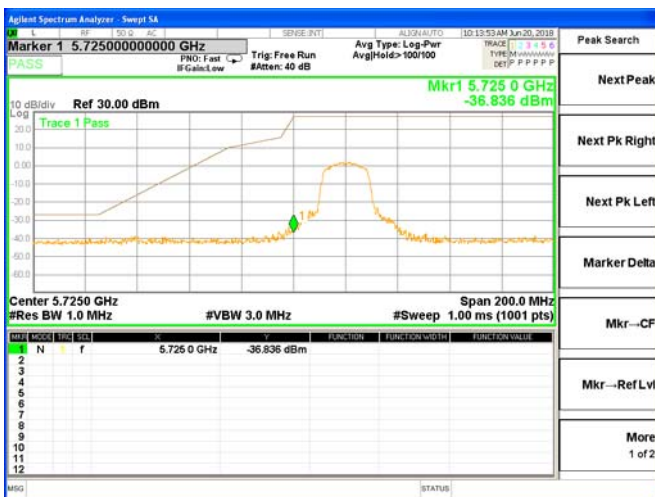
Bandedge-Right



11n20

Bandedge-Left

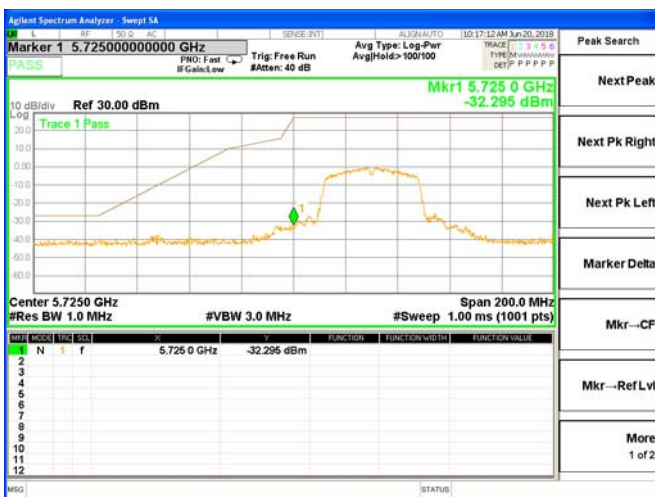
Bandedge-Right



11n40

Bandedge-Left

Bandedge-Right





## 5.7 Power spectral density

### 5.7.1 Limit

#### For the band 5.15-5.25 GHz

For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### For the band 5.25-5.35 GHz and 5.47-5.725 GHz

The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

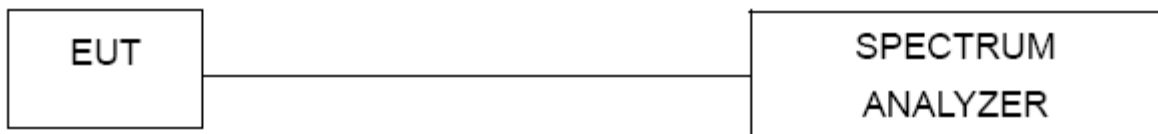
#### For the band 5.725-5.85 GHz

The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 5.7.2 Test procedure

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW  $\geq$  3 kHz.
4. Set the VBW  $\geq$  3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

#### Test setup



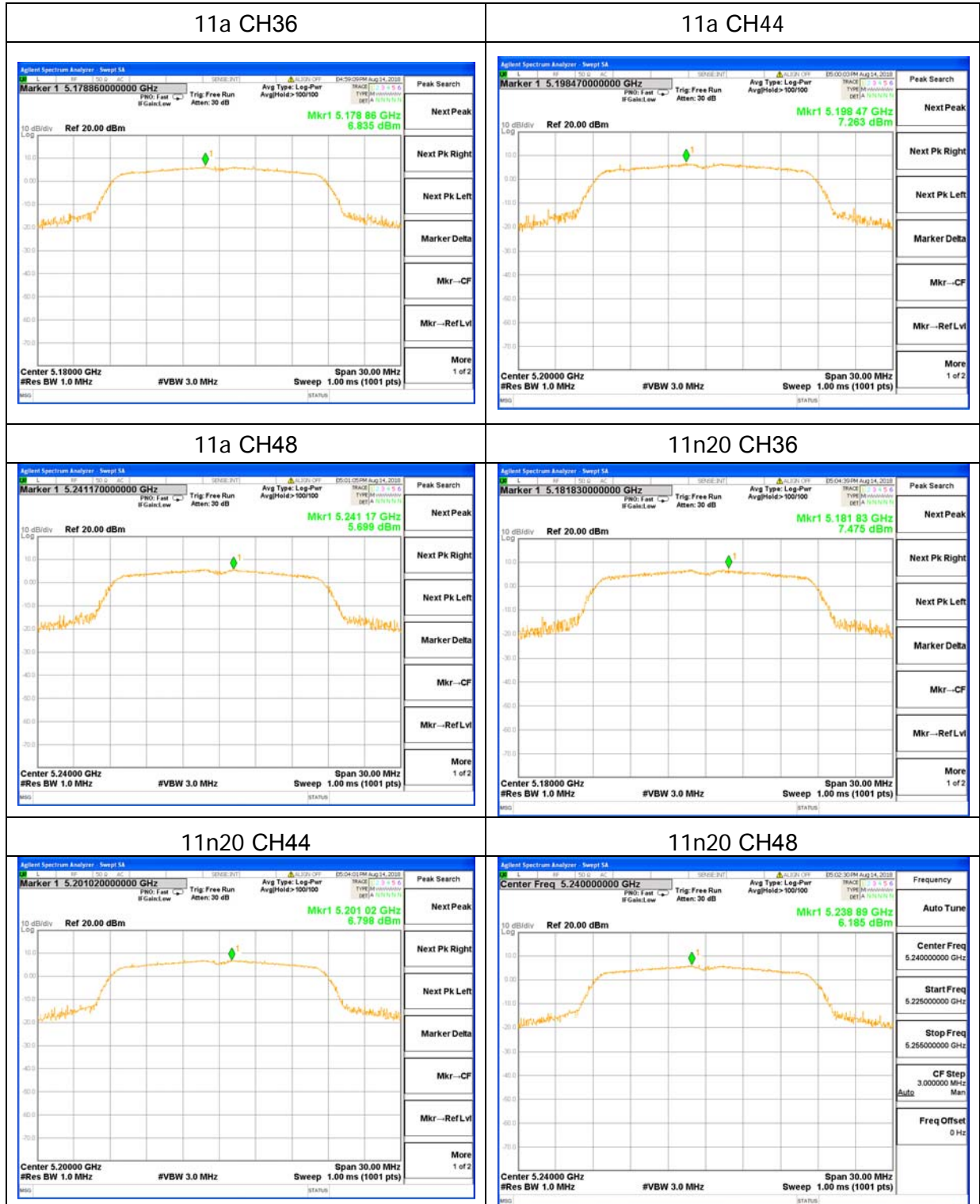
5.7.3 Test results

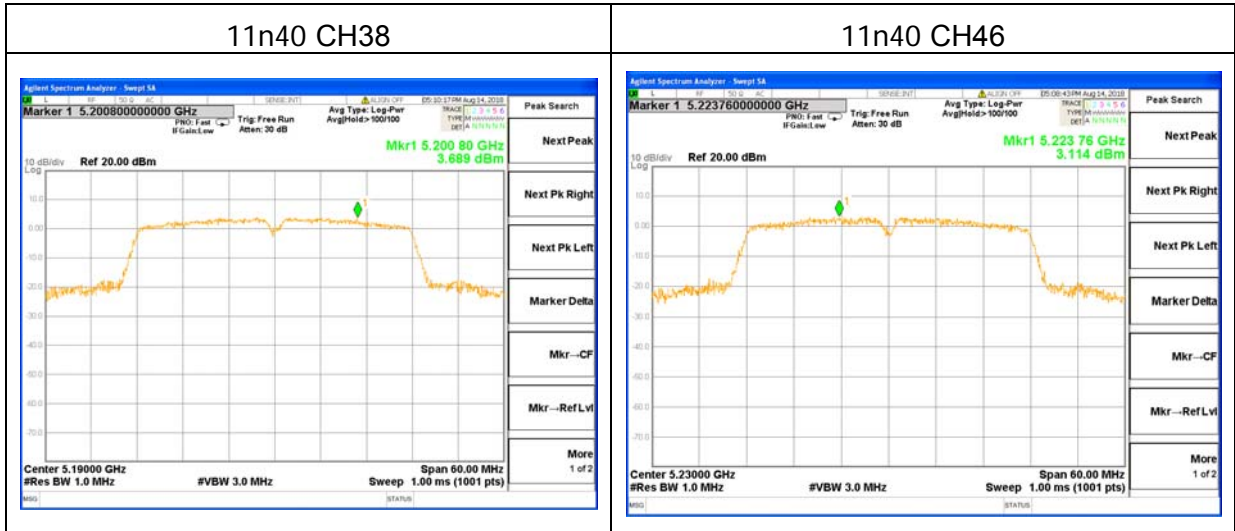
For Band I

Mode	Channel	Frequency(MHz)	Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
11a	CH36	5180	6.835	11	Pass
11a	CH44	5220	7.263	11	Pass
11a	CH48	5240	5.699	11	Pass
11n(HT20)	CH36	5180	7.475	11	Pass
11n(HT20)	CH44	5220	6.798	11	Pass
11n(HT20)	CH48	5240	6.185	11	Pass
11n(HT40)	CH38	5190	3.698	11	Pass
11n(HT40)	CH46	5230	3.114	11	Pass

Test plots

For Band I



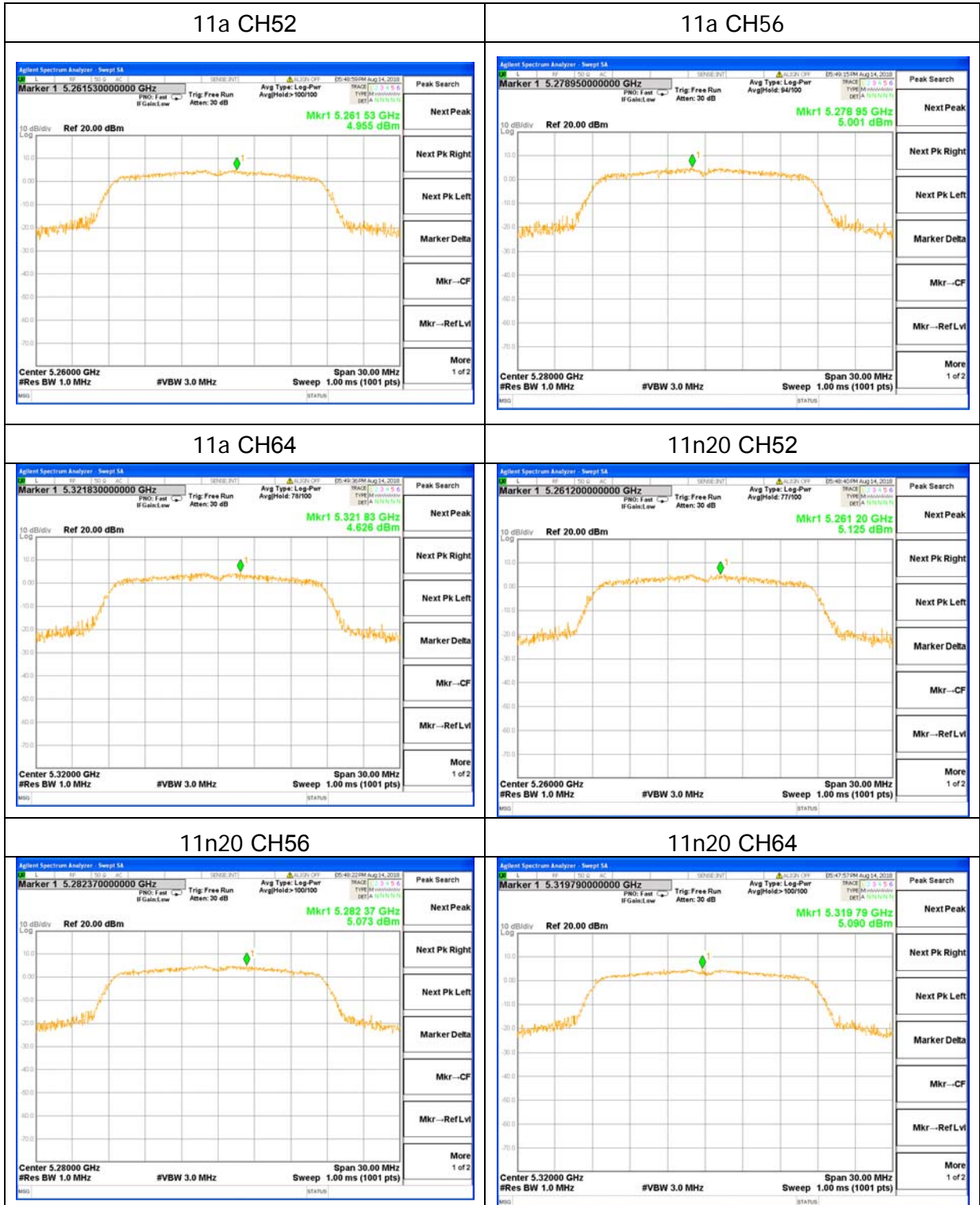


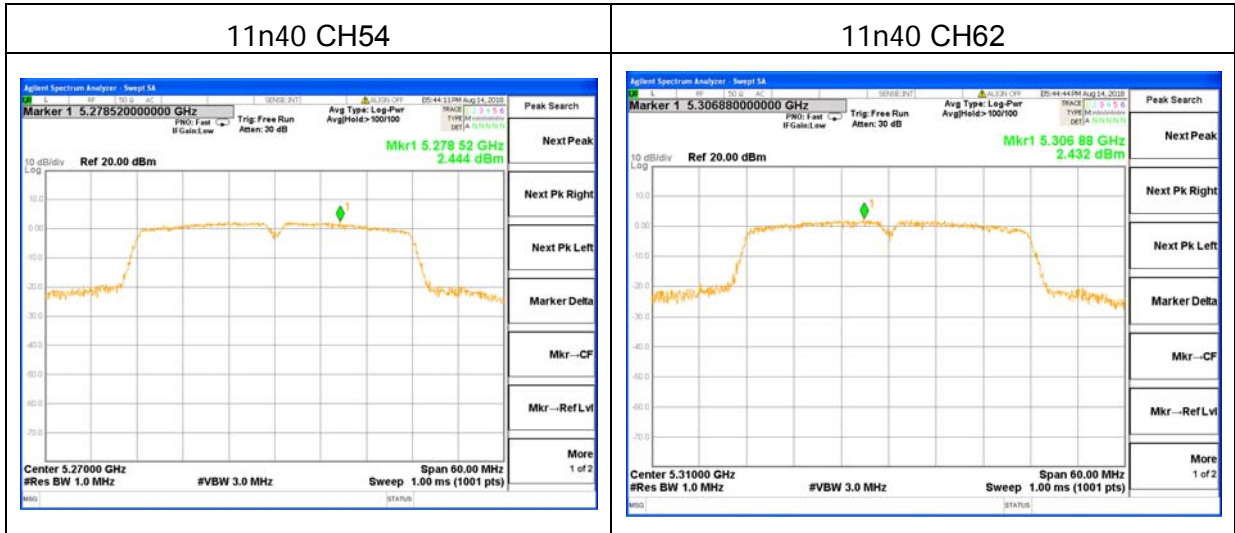
For Band II

Mode	Channel	Frequency(MHz)	Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
11a	CH52	5260	4.955	11	Pass
11a	CH56	5280	5.001	11	Pass
11a	CH64	5320	4.626	11	Pass
11n(HT20)	CH52	5260	5.125	11	Pass
11n(HT20)	CH56	5280	5.073	11	Pass
11n(HT20)	CH64	5320	5.090	11	Pass
11n(HT40)	CH54	5270	2.444	11	Pass
11n(HT40)	CH62	5310	2.432	11	Pass

Test plots

For Band II





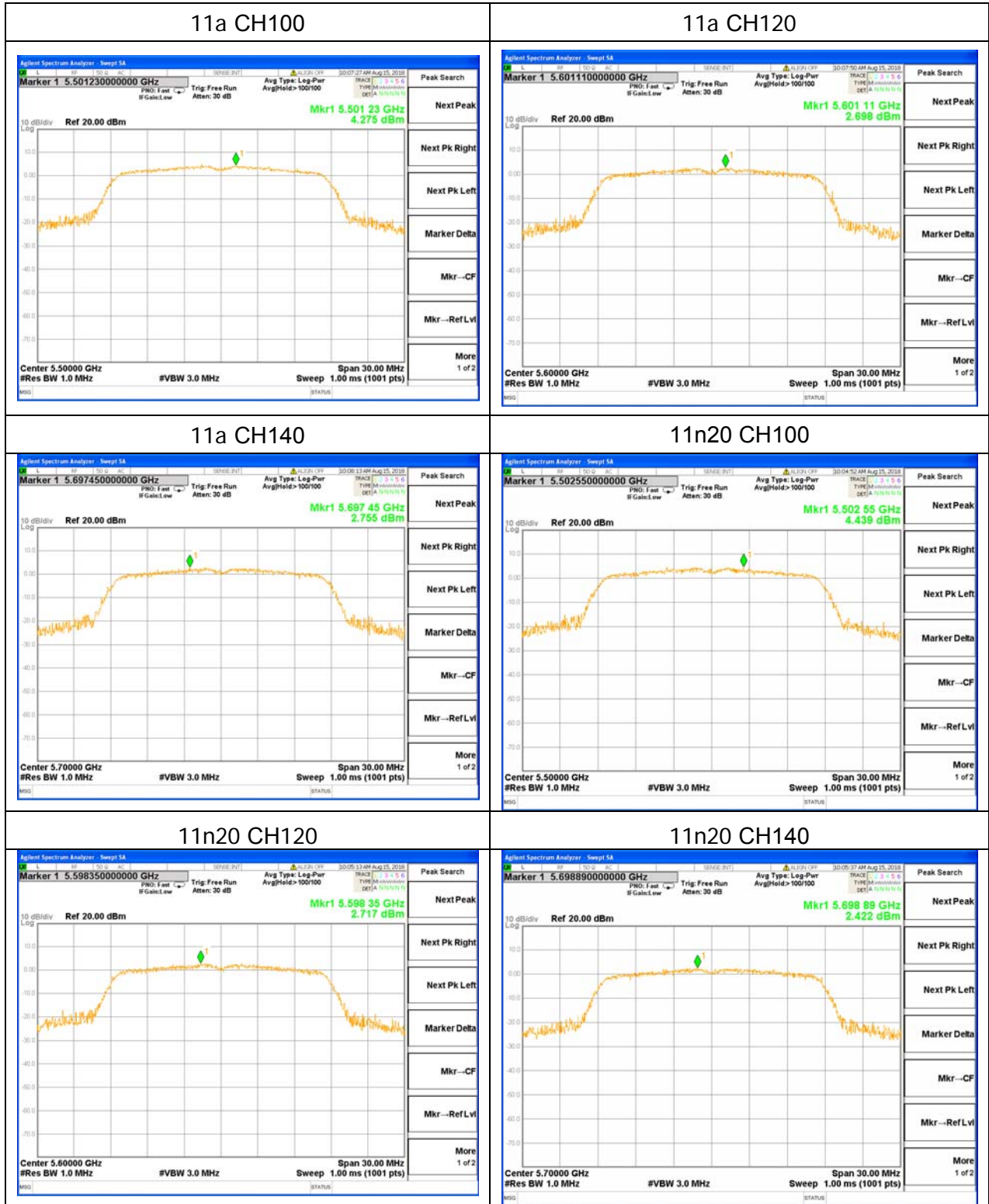
For Band III

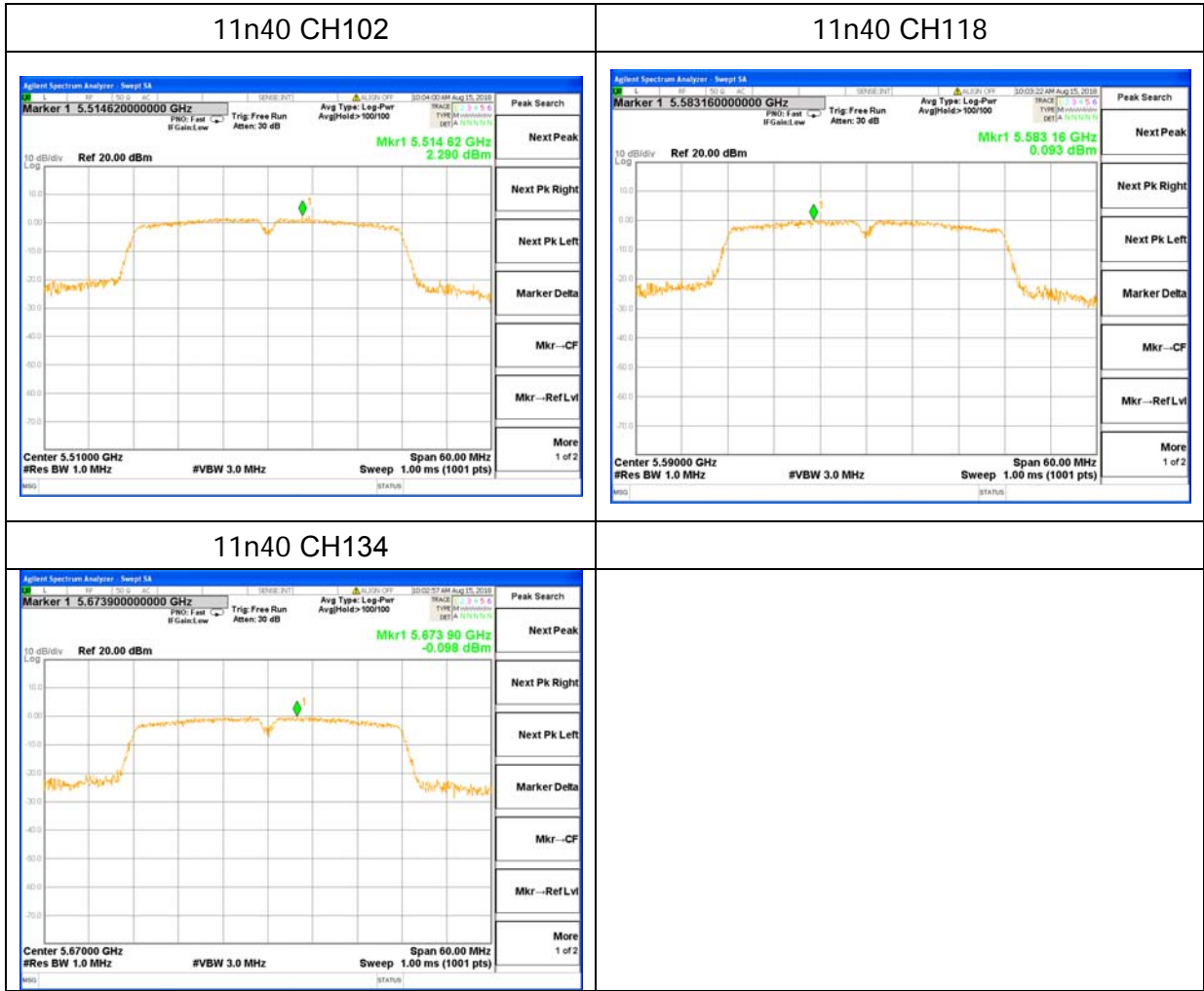
Mode	Channel	Frequency(MHz)	Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
11a	CH100	5500	4.275	11	Pass
11a	CH120	5600	2.698	11	Pass
11a	CH140	5700	2.755	11	Pass
11n(HT20)	CH100	5500	4.210	11	Pass
11n(HT20)	CH120	5600	2.739	11	Pass
11n(HT20)	CH140	5700	2.364	11	Pass
11n(HT40)	CH102	5510	1.631	11	Pass
11n(HT40)	CH118	5590	0.093	11	Pass
11n(HT40)	CH134	5670	-0.098	11	Pass



Test plots

For Band III





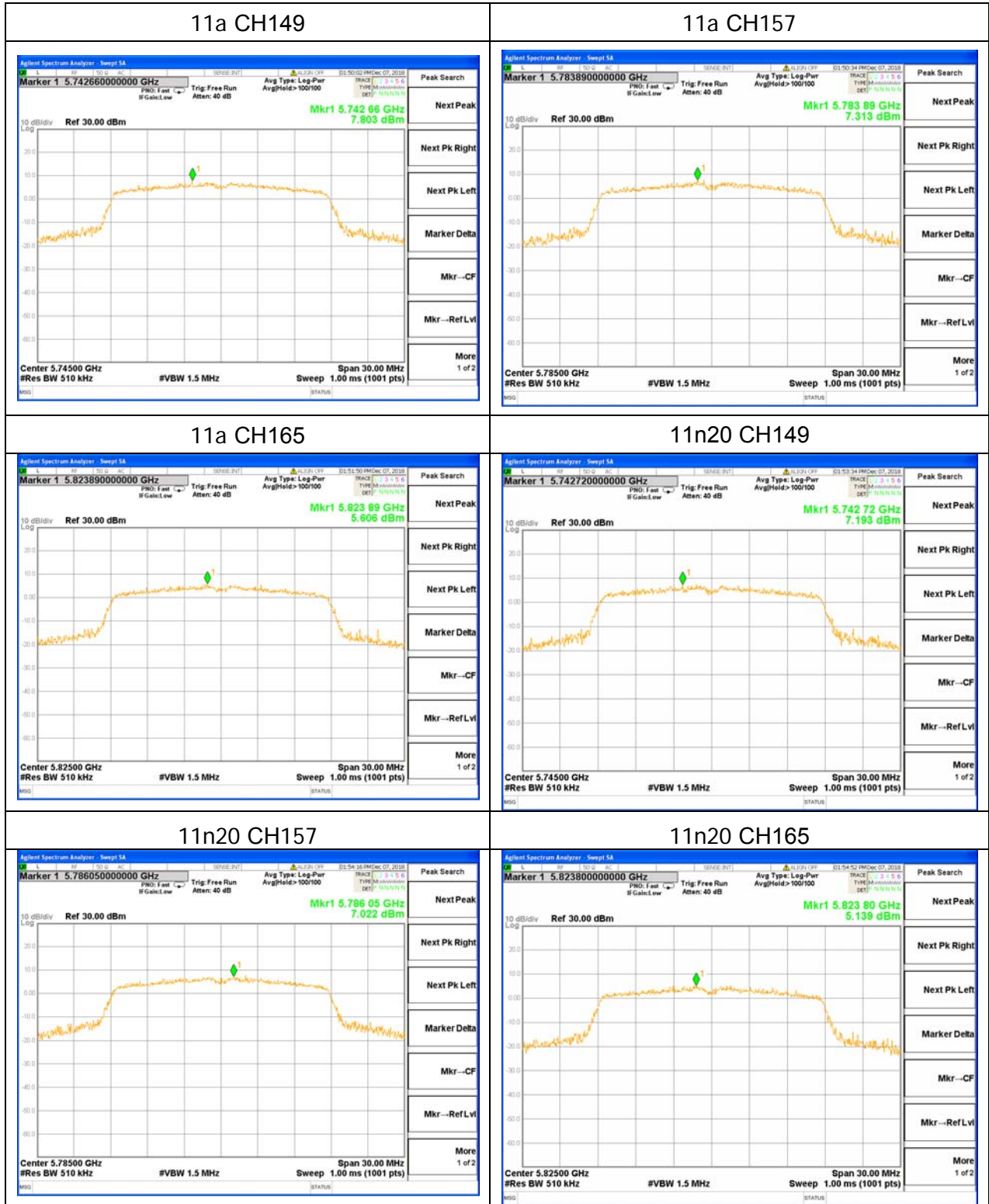
For Band IV

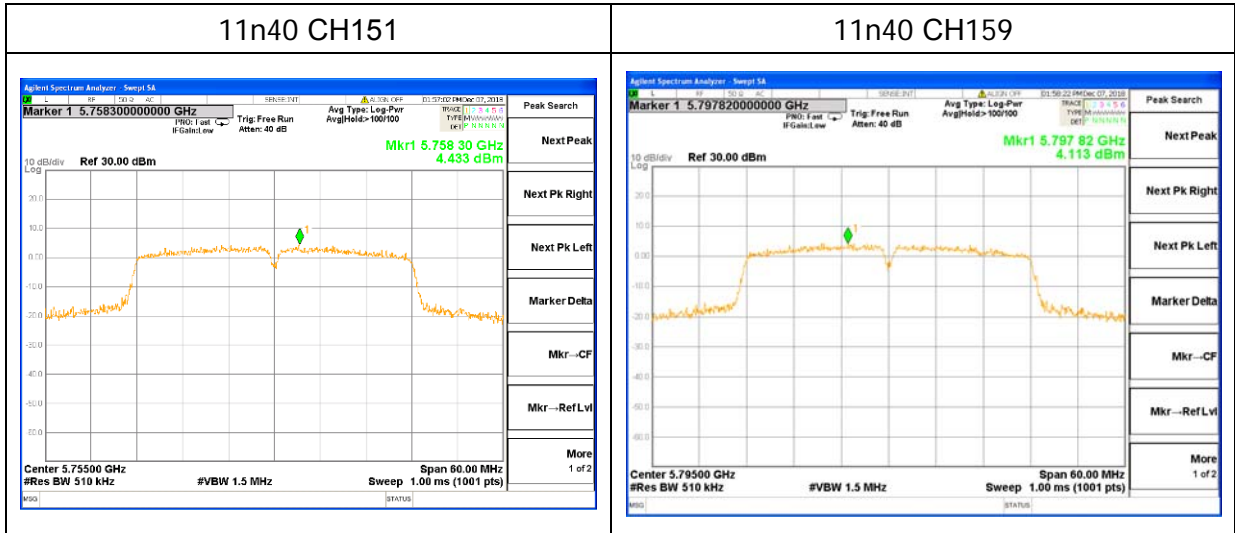
Mode	Channel	Frequency(MHz)	PSD (dBm/510kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
11a	CH149	5745	7.803	7.717	30	Pass
11a	CH157	5785	7.313	7.227	30	Pass
11a	CH165	5825	5.606	5.520	30	Pass
11n20	CH149	5745	7.193	7.107	30	Pass
11n20	CH157	5785	7.022	6.936	30	Pass
11n20	CH165	5825	5.139	5.053	30	Pass
11n40	CH151	5755	4.433	4.347	30	Pass
11n40	CH159	5795	4.113	4.027	30	Pass

Note: If the measurement is X dBm/510kHz, thus  $X \text{ dBm/510kHz} = (10^{X/10}) * (500 / 510) \text{ dBm/500kHz}$

Test plots

For Band IV

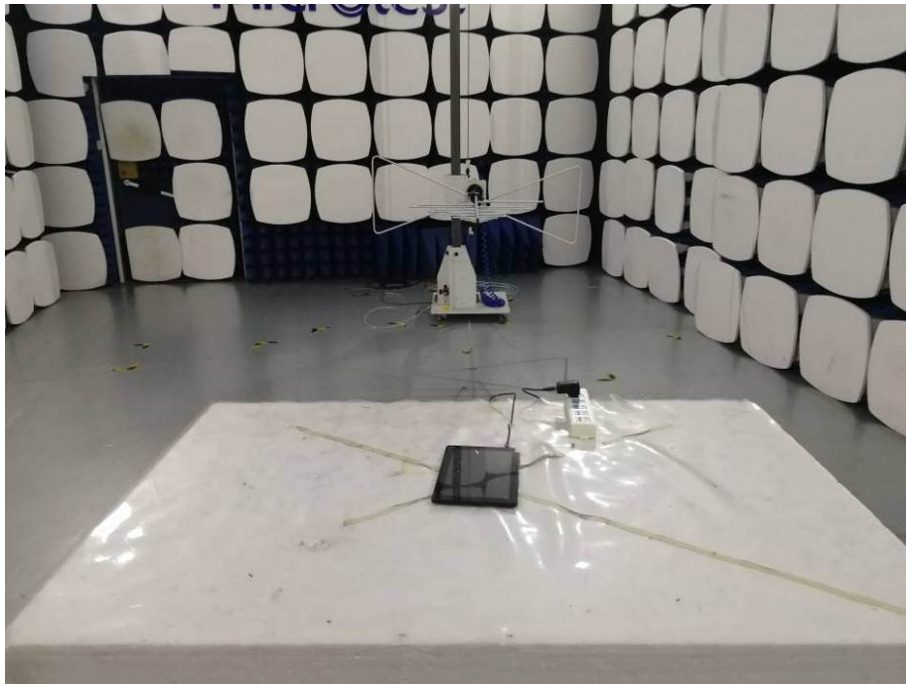






**Photographs of the Test Setup**

Radiated emission



Conducted emission



## Photographs of the EUT

See the APPENDIX 1: EUT PHOTO in the report No.: MTi181210E036-1.

----END OF REPORT----