



FCC/IC TEST REPORT

according to

FCC CFR Title 47 Part 15 Subpart E(15.407)/ RSS-247 Issue 1

Applicant	: Toshiba Corporation
Address	: Personal & Client Solutions Company 2-9, Suehiro-cho, Ome-shi, Tokyo 198-8710, Japan
Equipment	: dynadock WiAC
FCC Model No.	: PA5238*-**** (* means 0-9, A-Z or blank)
IC Model No.	: PA5238C-1PRP, PA5238U-1PRP
Brand name	: TOSHIBA
FCC ID	: CJ6UPA5238WL
IC	: 248H-DPA5238WL

■ The test result refers exclusively to the test presented test model / sample.,

■ Without written approval of **Cerpass Technology (Suzhou) Co.,Ltd.** the test report shall not be reproduced except in full.

■ The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Rules and Regulations Part 15/RSS-247 Issue 1. The test report has been issued separately.

■ The test report must not be used by the clients to claim product certification approval by **NVLAP** or any agency of the Government.

Laboratory Accreditation:

☐ Cerpass Technology Corporation Test Laboratory

☒ Cerpass Technology(SuZhou) Co., Ltd.





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History of this test report

Report No.	Issue Date	Description
SEDL1505113	2015-07-20	Initial release



CERTIFICATE OF COMPLIANCE

according to

FCC CFR Title 47 Part 15 Subpart E(15.407)/ RSS-247 Issue 1

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IC Model No.	: PA5238C-1PRP, PA5238U-1PRP
Brand name	: TOSHIBA
FCC ID	: CJ6UPA5238WL
IC	: 248H-DPA5238WL

I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.10**. The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart E (15.407) / RSS-247 Issue 1**

The test was carried out on Jun 20, 2015 at **Cerpass Technology (Suzhou) Co.,Ltd**

Approved by:

Miro Chueh
EMC/RF Manager



1. Test Configuration of Equipment under Test

1.1 Feature of Equipment under Test

Product	dynadock WiAC
Frequency Range	802.11n/a/ac(20MHz): 5180~5240MHz, 5745~5825MHz 802.11n/ac(40MHz): 5190~5230MHz, 5755~5795MHz 802.11ac(80MHz): 5210MHz, 5775MHz
Channel Number	802.11n/a /ac(20MHz) : 6 802.11n/ac(40MHz): 4 802.11ac(80MHz): 2
Type of Modulation	802.11a/g/n/ac: OFDM
Data Rate	802.11a: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 450 Mbps 802.11ac: up to 1299.9 Mbps
Channel Control	Auto
Antenna Delivery	2*Tx + 2*Rx
Antenna Type/ gain	PCB Antenna;5.15~5.25GHz Gain = 4dBi , 5.725~5.85GHz Gain = 4dBi;Beaforming Gain=3dBi



2. Carrier Frequency of Channels

802.11a/n/ac(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	N/A	N/A	N/A	N/A	N/A	N/A
802.11n/ac(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz	159	5795 MHz
802.11ac(80MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775MHz	N/A	N/A	N/A	N/A

The test mode of the test software can support.

Test Mode	Ant 0	Ant 1	Ant 0+1
802.11a	√	√	×
802.11n(20MHz)	√	√	√
802.11n(40MHz)	√	√	√
802.11ac(20MHz)	√	√	√
802.11ac(40MHz)	√	√	√
802.11ac(80MHz)	√	√	√



Power Parameter Value of the test software

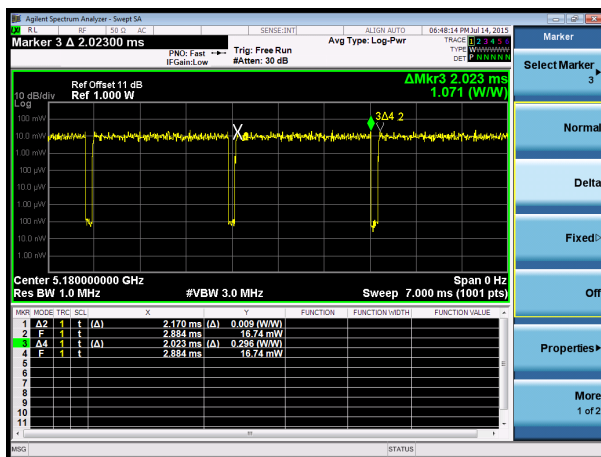
Mode	Frequency (MHz)	Setting level		
		Ant 0	Ant 1	Ant 0+1
802.11a	5180	68	68	N/A
	5200	68	68	N/A
	5240	68	68	N/A
	5745	68	68	N/A
	5785	68	68	N/A
	5825	68	68	N/A
802.11n20	5180	68	68	68
	5200	68	68	68
	5240	68	68	68
	5745	67	64	63
	5785	68	68	68
	5825	68	68	68
802.11n40	5190	68	68	68
	5230	68	68	68
	5755	68	68	68
	5795	68	68	68
802.11ac20	5180	68	68	68
	5200	68	68	68
	5240	68	68	68
	5745	65	66	68
	5785	68	68	68
	5825	68	68	68
802.11ac40	5190	68	68	68
	5230	68	68	68
	5755	68	68	68
	5795	68	68	68
802.11ac80	5210	68	68	68
	5775	68	68	66

**Duty Cycle**

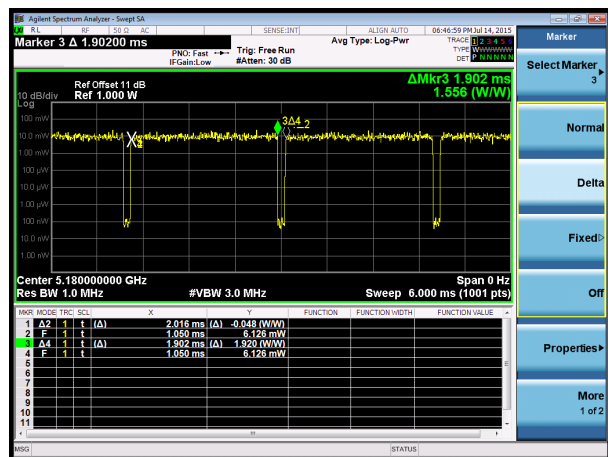
Test Mode	Frequency (MHz)	Duty Cycle
802.11a	5180	93%
802.11n(20MHz)	5180	94%
802.11n(40MHz)	5190	87%
802.11ac(20MHz)	5180	99%
802.11ac(40MHz)	5190	93%
802.11ac(80MHz)	5210	87%



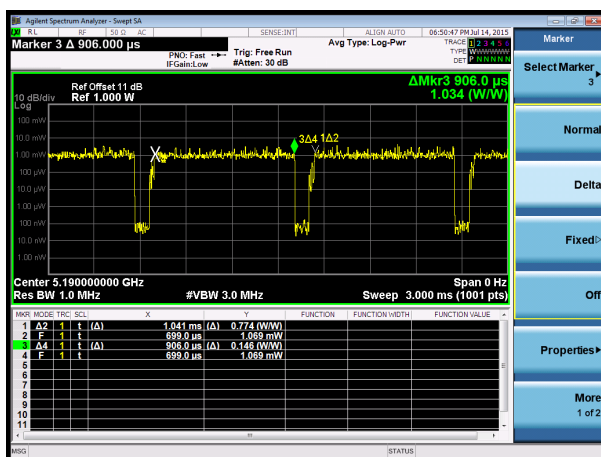
Transmit at channel 36 by 802.11a



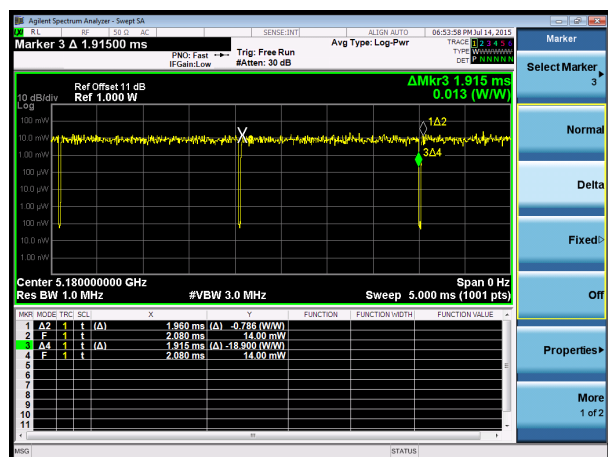
Transmit at channel 36 by 802.11 n(20MHz)



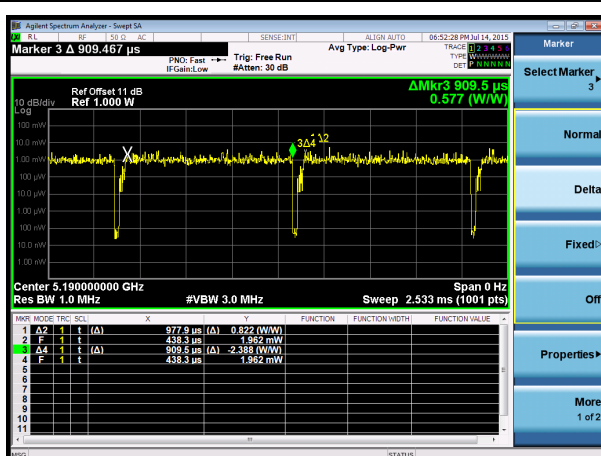
Transmit at channel 38 by 802.11 n(40MHz)



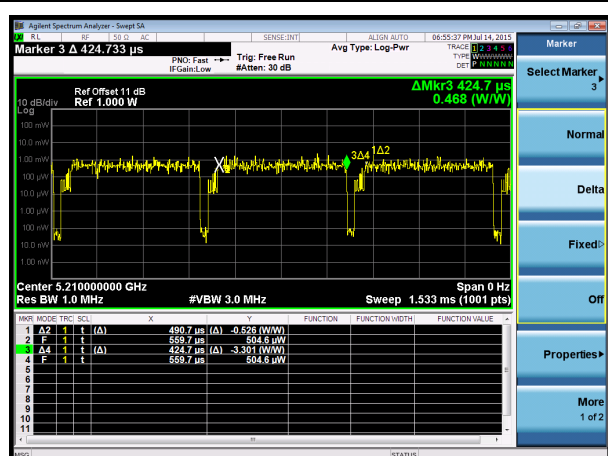
Transmit at channel 36 by 802.11 ac(20MHz)



Transmit at channel 38 by 802.11 ac(40MHz)



Transmit at channel 42 by 802.11 ac(80MHz)





2.1 Test Manner

Test Manner	
a	During testing, the interface cables and equipment positions were varied according to ANSI C63.10
b	Adjust the EUT at the test mode and the test channel. Then test.

Test Mode
Mode 1: Transmit by 802.11 a
Mode 2: Transmit by 802.11n(20MHz)
Mode 3: Transmit by 802.11n(40MHz)
Mode 4: Transmit by 802.11ac(20MHz)
Mode 5: Transmit by 802.11ac40MHz)
Mode 6: Transmit by 802.11ac(80MHz)

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.



3. Technical Test

3.1 Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

FCC Part Section(s)	Test Description	Test Result	Reference
15.407(a)	26dB Bandwidth	Pass	Section 7.2
15.407(e)	6dB Bandwidth	Pass	Section 7.3
15.407(a)(1)(ii), (2), (3)	Maximum Conducted Output Power	Pass	Section 7.4
15.407(h)(1)	Transmit Power Control	Pass	Section 7.5
15.407(a)(1)(ii), (2), (3), (5)	Peak Power Spectral Density	Pass	Section 7.6
15.407(g)	Frequency Stability	Pass	Section 7.7
15.407(b)(1), (2), (3), (4)	Undesirable Emissions	Pass	Section 7.8 & 7.9
15.205, 15.209 15.407(b)(5), (6), (7)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Pass	Section 7.8 & 7.9
15.207	AC Conducted Emissions 150kHz - 30MHz	Pass	Section 7.10

ANSI C63.10: 2014; RSS-247 issue 1; RSS-Gen issue 3

IC Rule	Description of Test	Result
Item 4	AC Power Line Conducted Emission	Pass
Item 6	Spurious Emission(Radiated)	Pass
Item 6	Spurious Emission(Conducted)	Pass
Item 6	Occupied Bandwidth	Pass
Item 6	Maximum Peak Output Power	Pass
Item 6	Power Spectral Density	Pass

**3.2 General Information of Test**

Test Site	CerpPASS Technology (Suzhou) Co.,Ltd
Test Site Location	No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China
NVLAP LAB Code	200814-0
FCC Registration Number	916572, 331395
IC Registration Number	7290A-1, 7290A-2
VCCI Registration Number	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test below 1GHz G-227 for Radiated emission test above 1GHz
Frequency Range Investigated	Conducted: from 150kHz to 30MHz Radiation: from 30MHz to 25000MHz
Test Distance	The test distance of radiated emission from antenna to EUT is 3 M.



3.3 Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE/NEUTRAL	±2.71 dB
Radiated Emission	30 MHz ~ 25GHz	Vertical	±4.11 dB
		Horizontal	±4.10 dB
Occupied Bandwidth	---	---	±7500 Hz
Maximum Peak Output Power	---	---	±1.4 dB
Band Edges	---	---	±2.2 dB
Power Spectral Density	---	---	±2.2 dB



4. Test of Conducted Emission

4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.10-2013 Section 6.2. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 6.2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	AVG (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

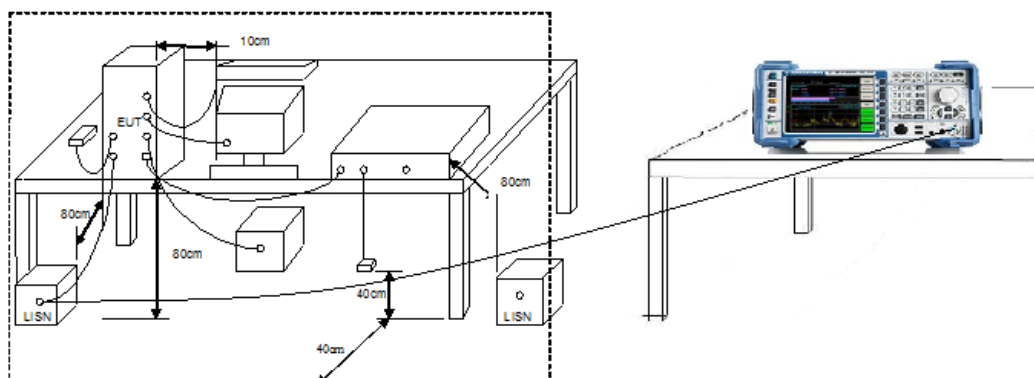
*Decreases with the logarithm of the frequency.

4.2 Test Procedures

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of Jun 2014 KDB789033 for compliance to FCC 47CFR 15.407 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.



4.3 Typical Test Setup



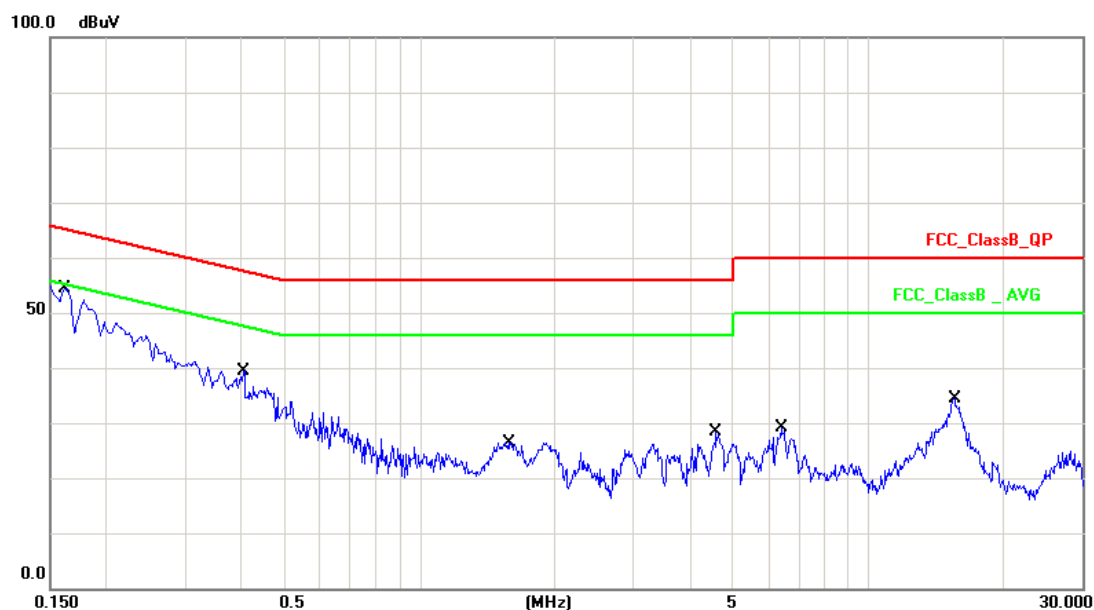
4.4 Measurement Equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2015.03.24	2016.03.23
AMN	R&S	ESH2-Z5	100182	2014.09.04	2015.09.03
Two-Line V-Network	R&S	ENV216	100325	2014.12.04	2015.12.03
ISN	FCC	FCC-TLISN-T2-02	20379	2015.03.24	2016.03.23
ISN	FCC	FCC-TLISN-T4-02	20380	2015.03.24	2016.03.23
ISN	FCC	FCC-TLISN-T8-02	20381	2015.03.24	2016.03.23
ISN	TESEQ	ISN ST08	30175	2015.03.24	2016.03.23
Current Probe	R&S	EZ-17	100303	2015.04.04	2016.04.03
Passive Voltage Probe	R&S	ESH2-Z3	100026	2015.03.29	2016.03.28
Pulse Limiter	R&S	ESH3-Z2	100529	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2015.03.31	2016.03.30



4.5 Test Result and Data

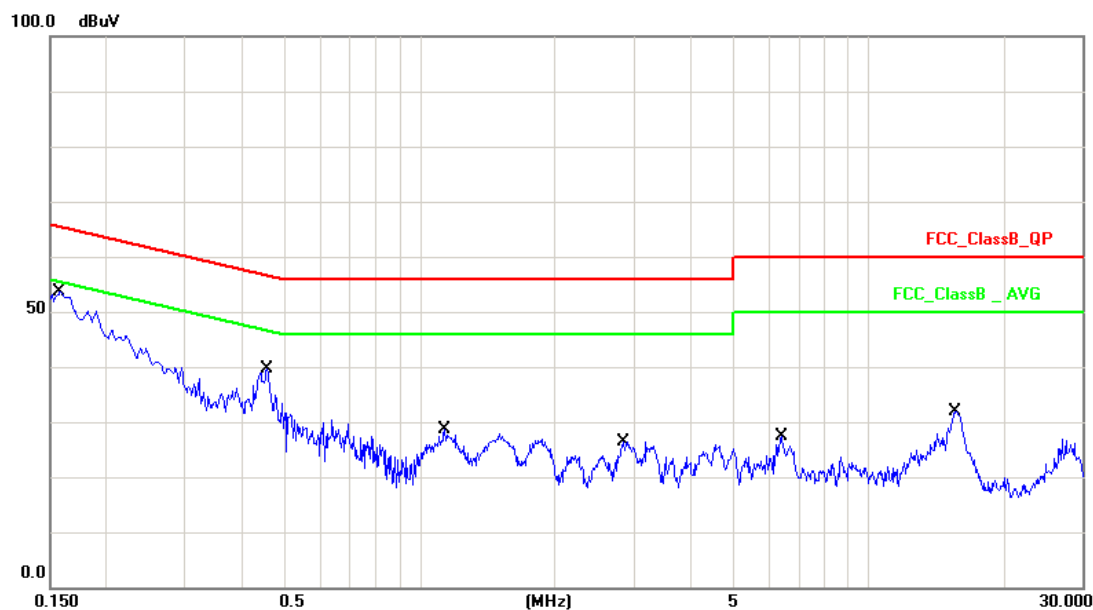
Test Mode :	Normal Operation with wifi on		
AC Power :	AC 120V/60Hz	Phase :	LINE
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2015/07/16



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	10.13	44.43	54.56	65.36	-10.80	QP
2	0.1620	10.13	26.56	36.69	55.36	-18.67	AVG
3	0.4060	10.15	21.38	31.53	57.73	-26.20	QP
4	0.4060	10.15	12.09	22.24	47.73	-25.49	AVG
5	1.5820	10.17	11.40	21.57	56.00	-34.43	QP
6	1.5820	10.17	7.44	17.61	46.00	-28.39	AVG
7	4.5900	10.22	10.87	21.09	56.00	-34.91	QP
8	4.5900	10.22	3.62	13.84	46.00	-32.16	AVG
9	6.4180	10.25	11.95	22.20	60.00	-37.80	QP
10	6.4180	10.25	4.76	15.01	50.00	-34.99	AVG
11	15.6180	10.50	17.09	27.59	60.00	-32.41	QP
12	15.6180	10.50	10.75	21.25	50.00	-28.75	AVG



Test Mode :	Normal Operation with wifi on		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2015/07/16



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	10.13	43.81	53.94	65.57	-11.63	QP
2	0.1580	10.13	25.75	35.88	55.57	-19.69	AVG
3	0.4580	10.15	22.69	32.84	56.73	-23.89	QP
4	0.4580	10.15	17.95	28.10	46.73	-18.63	AVG
5	1.1380	10.18	13.37	23.55	56.00	-32.45	QP
6	1.1380	10.18	8.58	18.76	46.00	-27.24	AVG
7	2.8540	10.20	11.12	21.32	56.00	-34.68	QP
8	2.8540	10.20	5.98	16.18	46.00	-29.82	AVG
9	6.4060	10.27	9.77	20.04	60.00	-39.96	QP
10	6.4060	10.27	1.62	11.89	50.00	-38.11	AVG
11	15.6260	10.52	14.04	24.56	60.00	-35.44	QP
12	15.6260	10.52	8.07	18.59	50.00	-31.41	AVG



5. Test of Radiated Emission

5.1 Test Limit

5.1.1 Limits of radiated emission

According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (μ V/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB.

3.1.2 Limits of unwanted emission out of the restricted bands

LIMIT	
Field strength at 3M (dB μ V/ M)	
PK	AV
74	54

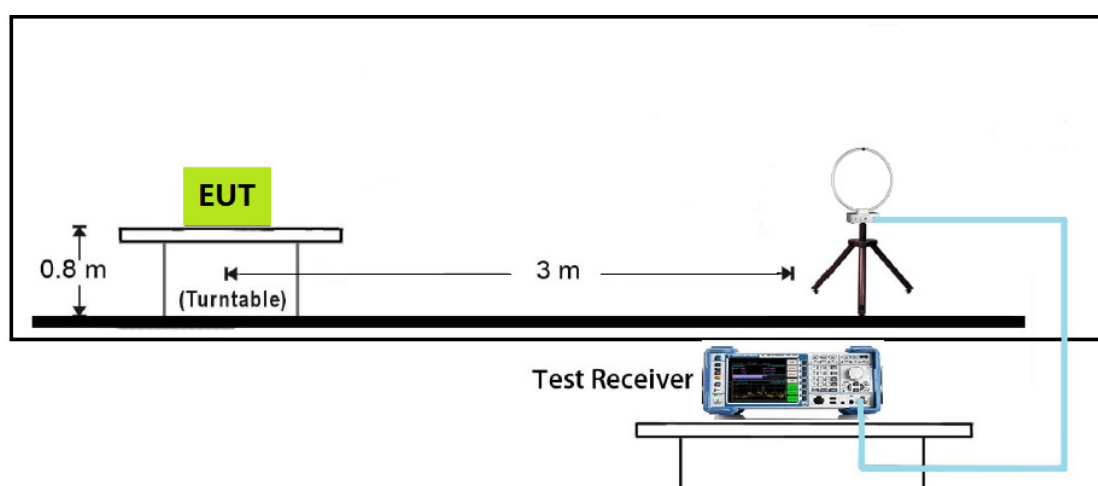


5.2 Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter for frequency below 1GHz and 1.5meter for frequency above 1GHz above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

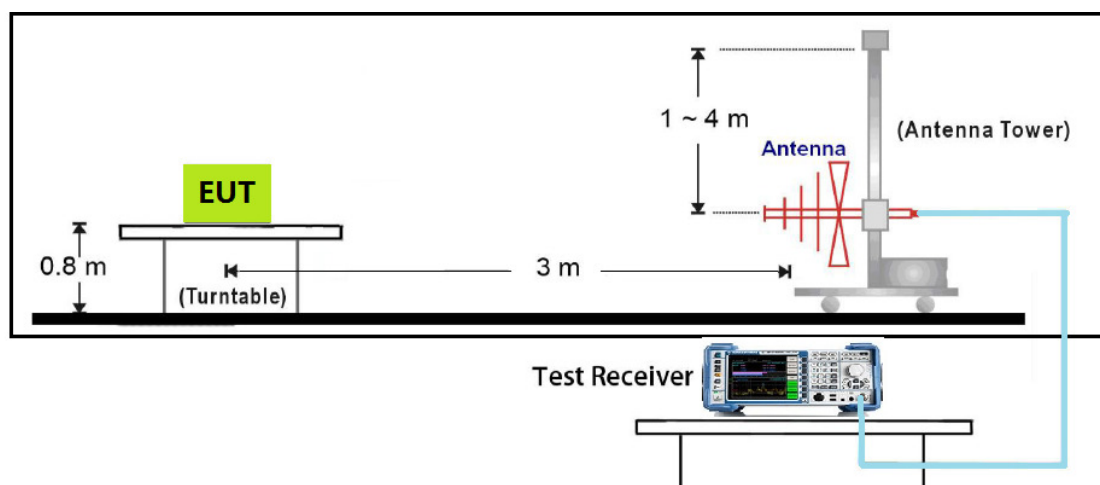
5.3 Typical Test Setup

9KHZ~30MHz Test Setup

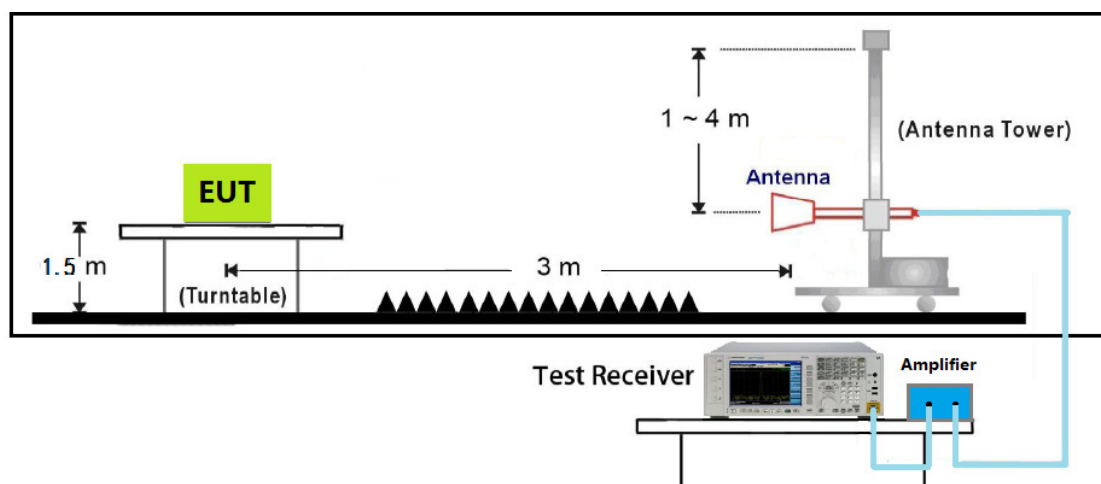




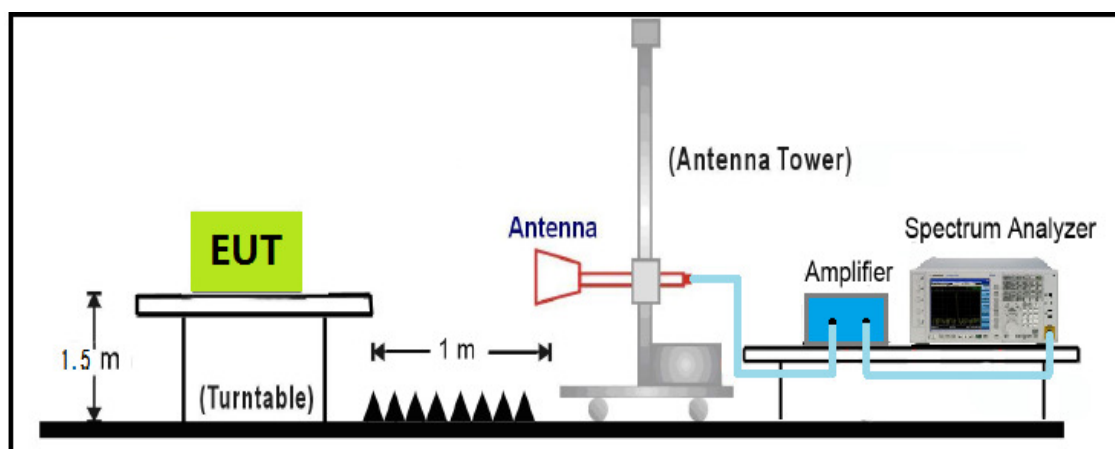
Below 1GHz Test Setup



1GHz~18GHz Test Setup



18GHz~40GHz Test Setup



**5.4 Measurement equipment**

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	100563	2015.03.10	2016.03.09
H64 Preamplifier	HP	8447F	3113A05582	2015.03.10	2016.03.09
Preamplifier	Agilent	8449B	3008A02342	2015.03.10	2016.03.09
Preamplifier	COM-POWER	PA-840	711885	2015.03.24	2016.03.23
Ultra Broadband Antenna	R&S	HL562	100362	2015.05.03	2016.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2015.05.03	2016.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-347	2015.05.03	2016.05.02
Spectrum Analyzer	Agilent	E4407B	MY44211883	2014.09.25	2015.09.25
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2015.03.10	2016.03.09

**Test Result and Data****Under 1G:**

Engineer :Wind	Time : 2015-07-18
Site : EMC Lab AC 102	Margin : 6
Limit : FCC_CLASS_B_03M_QP	Probe : VERTICAL/ HORIZONTAL
EUT : PA5238U-1PRP	Power : AC 120V/60Hz

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
1	39.7200	-8.20	32.84	24.64	40.00	-15.36	peak	H
2	49.1699	-14.42	26.87	12.45	40.00	-27.55	peak	H
3	59.1600	-15.59	27.78	12.19	40.00	-27.81	peak	H
4	71.0400	-20.59	26.80	6.21	40.00	-33.79	peak	H
5	94.8000	-17.05	27.01	9.96	43.50	-33.54	peak	H
6	128.8200	-13.82	27.30	13.48	43.50	-30.02	peak	H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
1	31.0800	-6.67	25.31	18.64	40.00	-21.36	peak	V
2	39.9900	-8.25	35.25	27.00	40.00	-13.00	peak	V
3	47.5500	-13.33	32.96	19.63	40.00	-20.37	peak	V
4	63.2100	-17.25	34.38	17.13	40.00	-22.87	peak	V
5	73.4700	-20.45	28.38	7.93	40.00	-32.07	peak	V
6	99.6600	-15.87	36.50	20.63	43.50	-22.87	peak	V

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or AVG measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



Above 1G:

Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 a

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant0	5180	10360.000	15.39	34.59	49.98	74.00	-24.02	peak	H
		15840.000	54.93	-3.38	51.55	74.00	-22.45	peak	H
		10360.000	15.39	35.08	50.47	74.00	-23.53	peak	V
		15840.000	54.93	-4.64	50.29	74.00	-23.71	peak	V
	5200	10400.000	15.60	33.97	49.57	74.00	-24.43	peak	H
		15600.000	54.14	-2.72	51.42	74.00	-22.58	peak	H
		10400.000	15.60	33.44	49.04	74.00	-24.96	peak	V
		15600.000	54.14	-2.90	51.24	74.00	-22.76	peak	V
	5240	10480.000	15.97	33.41	49.38	74.00	-24.62	peak	H
		15720.000	54.54	-2.73	51.81	74.00	-22.19	peak	H
		10480.000	15.97	32.96	48.93	74.00	-25.07	peak	V
		15720.000	54.54	-2.85	51.69	74.00	-22.31	peak	V
	5745	11490.000	48.42	1.74	50.16	74.00	-23.84	peak	H
		17235.000	58.17	-6.80	51.37	74.00	-22.63	peak	H
		11490.000	48.42	0.29	48.71	74.00	-25.29	peak	V
		17235.000	58.17	-5.89	52.28	74.00	-21.72	peak	V
	5785	11570.000	48.51	1.30	49.81	74.00	-24.19	peak	H
		17335.000	58.83	-7.07	51.76	74.00	-22.24	peak	H
		11570.000	48.51	-0.84	47.67	74.00	-26.33	peak	V
		17355.000	58.95	-8.32	50.63	74.00	-23.37	peak	V
	5825	11650.000	48.61	1.77	50.38	74.00	-23.62	peak	H
		17475.000	59.74	-10.02	49.72	74.00	-24.28	peak	H
		11650.000	48.61	-0.32	48.29	74.00	-25.71	peak	V
		17475.000	59.74	-11.03	48.71	74.00	-25.29	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 a

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant1	5180	10360.000	15.39	36.58	51.97	74.00	-22.03	peak	H
		15840.000	54.93	-3.14	51.79	74.00	-22.21	peak	H
		10360.000	15.39	35.09	50.48	74.00	-23.52	peak	V
		15840.000	54.93	-2.88	52.05	74.00	-21.95	peak	V
	5200	10400.000	15.60	34.94	50.54	74.00	-23.46	peak	H
		15600.000	54.14	-1.90	52.24	74.00	-21.76	peak	H
		10400.000	15.60	34.47	50.07	74.00	-23.93	peak	V
		15600.000	54.14	-1.22	52.92	74.00	-21.08	peak	V
	5240	10480.000	15.97	34.96	50.93	74.00	-23.07	peak	H
		15720.000	54.54	-2.35	52.19	74.00	-21.81	peak	H
		10480.000	15.97	34.91	50.88	74.00	-23.12	peak	V
		15720.000	54.54	-2.23	52.31	74.00	-21.69	peak	V
	5745	11490.000	48.42	1.79	50.21	74.00	-23.79	peak	H
		17235.000	58.17	-7.89	50.28	74.00	-23.72	peak	H
		11490.000	48.42	3.24	51.66	74.00	-22.34	peak	V
		17235.000	58.17	-6.80	51.37	74.00	-22.63	peak	V
	5785	11570.000	48.51	1.16	49.67	74.00	-24.33	peak	H
		17355.000	58.95	-9.32	49.63	74.00	-24.37	peak	H
		11570.000	48.51	3.80	52.31	74.00	-21.69	peak	V
		17355.000	58.95	-7.42	51.53	74.00	-22.47	peak	V
	5825	11650.000	48.61	0.68	49.29	74.00	-24.71	peak	H
		17475.000	59.74	-12.53	47.21	74.00	-26.79	peak	H
		11650.000	48.61	4.77	53.38	74.00	-20.62	peak	V
		17475.000	59.74	-8.52	51.22	74.00	-22.78	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 n (20MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant0	5180	10360.000	15.39	33.58	48.97	74.00	-25.03	peak	H
		15840.000	54.93	-7.64	47.29	74.00	-26.71	peak	H
		10360.000	15.39	33.59	48.98	74.00	-25.02	peak	V
		15840.000	54.93	-2.88	52.05	74.00	-21.95	peak	V
	5200	10400.000	15.60	31.94	47.54	74.00	-26.46	peak	H
		15600.000	54.14	-5.40	48.74	74.00	-25.26	peak	H
		10400.000	15.60	32.97	48.57	74.00	-25.43	peak	V
		15600.000	54.14	-1.72	52.42	74.00	-21.58	peak	V
	5240	10480.000	15.97	31.46	47.43	74.00	-26.57	peak	H
		15600.000	54.14	-5.40	48.74	74.00	-25.26	peak	H
		10480.000	15.97	32.41	48.38	74.00	-25.62	peak	V
		15720.000	54.54	-2.23	52.31	74.00	-21.69	peak	V
	5745	11490.000	48.42	-1.21	47.21	74.00	-26.79	peak	H
		17235.000	58.17	-7.89	50.28	74.00	-23.72	peak	H
		11490.000	48.42	1.74	50.16	74.00	-23.84	peak	V
		17235.000	58.17	-7.30	50.87	74.00	-23.13	peak	V
	5785	11570.000	48.51	-1.34	47.17	74.00	-26.83	peak	H
		17355.000	58.95	-10.32	48.63	74.00	-25.37	peak	H
		11570.000	48.51	1.30	49.81	74.00	-24.19	peak	V
		17355.000	58.95	-9.92	49.03	74.00	-24.97	peak	V
	5825	11650.000	48.61	-1.82	46.79	74.00	-27.21	peak	H
		17475.000	59.74	-13.03	46.71	74.00	-27.29	peak	H
		11650.000	48.61	1.77	50.38	74.00	-23.62	peak	V
		17475.000	59.74	-11.52	48.22	74.00	-25.78	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 n (20MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant1	5180	10360.000	15.39	35.58	50.97	74.00	-23.03	peak	H
		15840.000	54.93	-5.14	49.79	74.00	-24.21	peak	H
		10360.000	15.39	35.09	50.48	74.00	-23.52	peak	V
		15840.000	54.93	-4.88	50.05	74.00	-23.95	peak	V
	5200	10400.000	15.60	33.94	49.54	74.00	-24.46	peak	H
		15600.000	54.14	-3.40	50.74	74.00	-23.26	peak	H
		10400.000	15.60	34.47	50.07	74.00	-23.93	peak	V
		15600.000	54.14	-4.22	49.92	74.00	-24.08	peak	V
	5240	10480.000	15.97	33.96	49.93	74.00	-24.07	peak	H
		15720.000	54.54	-4.35	50.19	74.00	-23.81	peak	H
		10480.000	15.97	34.91	50.88	74.00	-23.12	peak	V
		15720.000	54.54	-4.73	49.81	74.00	-24.19	peak	V
	5745	11490.000	48.42	0.29	48.71	74.00	-25.29	peak	H
		17235.000	58.17	-9.39	48.78	74.00	-25.22	peak	H
		11490.000	48.42	1.24	49.66	74.00	-24.34	peak	V
		17235.000	58.17	-6.30	51.87	74.00	-22.13	peak	V
	5785	11570.000	48.51	-0.34	48.17	74.00	-25.83	peak	H
		17355.000	58.95	-10.82	48.13	74.00	-25.87	peak	H
		11570.000	48.51	1.80	50.31	74.00	-23.69	peak	V
		17355.000	58.95	-7.42	51.53	74.00	-22.47	peak	V
	5825	11650.000	48.61	-0.82	47.79	74.00	-26.21	peak	H
		17475.000	59.74	-14.53	45.21	74.00	-28.79	peak	H
		11650.000	48.61	2.77	51.38	74.00	-22.62	peak	V
		17475.000	59.74	-8.52	51.22	74.00	-22.78	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (20MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant0	5180	10360.000	15.39	35.08	50.47	74.00	-23.53	peak	H
		15840.000	54.93	-4.64	50.29	74.00	-23.71	peak	H
		10360.000	15.39	33.59	48.98	74.00	-25.02	peak	V
		15840.000	54.93	-3.38	51.55	74.00	-22.45	peak	V
	5200	10400.000	15.60	33.44	49.04	74.00	-24.96	peak	H
		15600.000	54.14	-1.90	52.24	74.00	-21.76	peak	H
		10400.000	15.60	32.97	48.57	74.00	-25.43	peak	V
		15600.000	54.14	-1.72	52.42	74.00	-21.58	peak	V
	5240	10480.000	15.97	32.96	48.93	74.00	-25.07	peak	H
		15720.000	54.54	-2.35	52.19	74.00	-21.81	peak	H
		10480.000	15.97	32.41	48.38	74.00	-25.62	peak	V
		15720.000	54.54	-2.73	51.81	74.00	-22.19	peak	V
	5745	11490.000	48.42	-0.21	48.21	74.00	-25.79	peak	H
		17235.000	58.17	-6.89	51.28	74.00	-22.72	peak	H
		11490.000	48.42	0.24	48.66	74.00	-25.34	peak	V
		17235.000	58.17	-6.30	51.87	74.00	-22.13	peak	V
	5785	11570.000	48.51	-0.34	48.17	74.00	-25.83	peak	H
		17355.000	58.95	-9.32	49.63	74.00	-24.37	peak	H
		11570.000	48.51	-0.20	48.31	74.00	-25.69	peak	V
		17355.000	58.95	-7.92	51.03	74.00	-22.97	peak	V
	5825	11650.000	48.61	-0.32	48.29	74.00	-25.71	peak	H
		17475.000	59.74	-12.53	47.21	74.00	-26.79	peak	H
		11650.000	48.61	0.27	48.88	74.00	-25.12	peak	V
		17475.000	59.74	-10.02	49.72	74.00	-24.28	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (20MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant1	5180	10360.000	15.39	34.58	49.97	74.00	-24.03	peak	H
		15840.000	54.93	-6.14	48.79	74.00	-25.21	peak	H
		10360.000	15.39	34.09	49.48	74.00	-24.52	peak	V
		15840.000	54.93	-5.38	49.55	74.00	-24.45	peak	V
	5200	10400.000	15.60	32.94	48.54	74.00	-25.46	peak	H
		15600.000	54.14	-4.40	49.74	74.00	-24.26	peak	H
		10400.000	15.60	33.47	49.07	74.00	-24.93	peak	V
		15600.000	54.14	-4.22	49.92	74.00	-24.08	peak	V
	5240	10480.000	15.97	32.96	48.93	74.00	-25.07	peak	H
		15720.000	54.54	-5.35	49.19	74.00	-24.81	peak	H
		10480.000	15.97	33.91	49.88	74.00	-24.12	peak	V
		15720.000	54.54	-4.73	49.81	74.00	-24.19	peak	V
	5745	11490.000	48.42	-1.21	47.21	74.00	-26.79	peak	H
		17235.000	58.17	-10.39	47.78	74.00	-26.22	peak	H
		11490.000	48.42	0.74	49.16	74.00	-24.84	peak	V
		17235.000	58.17	-8.80	49.37	74.00	-24.63	peak	V
	5785	11570.000	48.51	-1.34	47.17	74.00	-26.83	peak	H
		17355.000	58.95	-11.32	47.63	74.00	-26.37	peak	H
		11570.000	48.51	1.30	49.81	74.00	-24.19	peak	V
		17355.000	58.95	-9.92	49.03	74.00	-24.97	peak	V
	5825	11650.000	48.61	-1.82	46.79	74.00	-27.21	peak	H
		17475.000	59.74	-15.03	44.71	74.00	-29.29	peak	H
		11650.000	48.61	2.27	50.88	74.00	-23.12	peak	V
		17475.000	59.74	-11.02	48.72	74.00	-25.28	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 n (40MHz)

Ant0	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
	5190	10380.000	15.50	33.76	49.26	74.00	-24.74	peak	H
		15570.000	54.05	-3.75	50.30	74.00	-23.70	peak	H
		10380.000	15.50	34.13	49.63	74.00	-24.37	peak	V
		15570.000	54.05	-2.78	51.27	74.00	-22.73	peak	V
	5230	10460.000	15.88	33.22	49.10	74.00	-24.90	peak	H
		15690.000	54.44	-3.41	51.03	74.00	-22.97	peak	H
		10460.000	15.88	33.30	49.18	74.00	-24.82	peak	V
		15690.000	54.44	-2.48	51.96	74.00	-22.04	peak	V
	5755	11510.000	48.44	-0.13	48.31	74.00	-25.69	peak	H
		17625.000	59.82	-8.99	50.83	74.00	-23.17	peak	H
		11510.000	48.44	1.65	50.09	74.00	-23.91	peak	V
		17265.000	58.36	-7.17	51.19	74.00	-22.81	peak	V
	5795	11590.000	48.53	-0.29	48.24	74.00	-25.76	peak	H
		17385.000	59.15	-8.35	50.80	74.00	-23.20	peak	H
		11590.000	48.53	1.39	49.92	74.00	-24.08	peak	V
		17385.000	59.15	-8.71	50.44	74.00	-23.56	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 n (40MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant1	5190	10380.000	15.50	35.26	50.76	74.00	-23.24	peak	H
		15570.000	54.05	-2.75	51.30	74.00	-22.70	peak	H
		10380.000	15.50	34.63	50.13	74.00	-23.87	peak	V
		15570.000	54.05	-1.28	52.77	74.00	-21.23	peak	V
	5230	10460.000	15.88	35.22	51.10	74.00	-22.90	peak	H
		15690.000	54.44	-2.91	51.53	74.00	-22.47	peak	H
		10460.000	15.88	34.80	50.68	74.00	-23.32	peak	V
		15690.000	54.44	-2.48	51.96	74.00	-22.04	peak	V
	5755	11510.000	48.44	1.37	49.81	74.00	-24.19	peak	H
		17265.000	58.36	-7.83	50.53	74.00	-23.47	peak	H
		11510.000	48.44	3.15	51.59	74.00	-22.41	peak	V
		17265.000	58.36	-6.17	52.19	74.00	-21.81	peak	V
	5795	11590.000	48.53	1.71	50.24	74.00	-23.76	peak	H
		17385.000	59.15	-9.85	49.30	74.00	-24.70	peak	H
		11590.000	48.53	3.89	52.42	74.00	-21.58	peak	V
		17385.000	59.15	-7.21	51.94	74.00	-22.06	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (40MHz)

Ant0	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
	5190	10380.000	15.50	32.26	47.76	74.00	-26.24	peak	H
		15570.000	54.05	-6.25	47.80	74.00	-26.20	peak	H
		10380.000	15.50	33.13	48.63	74.00	-25.37	peak	V
		15570.000	54.05	-1.78	52.27	74.00	-21.73	peak	V
	5230	10460.000	15.88	31.72	47.60	74.00	-26.40	peak	H
		15690.000	54.44	-5.91	48.53	74.00	-25.47	peak	H
		10460.000	15.88	32.30	48.18	74.00	-25.82	peak	V
		15690.000	54.44	-2.48	51.96	74.00	-22.04	peak	V
	5755	11510.000	48.44	-1.63	46.81	74.00	-27.19	peak	H
		17625.000	59.82	-10.99	48.83	74.00	-25.17	peak	H
		11510.000	48.44	1.65	50.09	74.00	-23.91	peak	V
		17625.000	59.82	-11.12	48.70	74.00	-25.30	peak	V
	5795	11590.000	48.53	-0.79	47.74	74.00	-26.26	peak	H
		17385.000	59.15	-10.35	48.80	74.00	-25.20	peak	H
		11590.000	48.53	1.39	49.92	74.00	-24.08	peak	V
		17385.000	59.15	-9.71	49.44	74.00	-24.56	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (40MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant1	5190	10380.000	15.50	34.26	49.76	74.00	-24.24	peak	H
		15570.000	54.05	-4.25	49.80	74.00	-24.20	peak	H
		10380.000	15.50	34.63	50.13	74.00	-23.87	peak	V
		15570.000	54.05	-4.28	49.77	74.00	-24.23	peak	V
	5230	10460.000	15.88	34.22	50.10	74.00	-23.90	peak	H
		15690.000	54.44	-4.91	49.53	74.00	-24.47	peak	H
		10460.000	15.88	34.80	50.68	74.00	-23.32	peak	V
		15690.000	54.44	-4.98	49.46	74.00	-24.54	peak	V
	5755	11510.000	48.44	-0.13	48.31	74.00	-25.69	peak	H
		17265.000	58.36	-9.33	49.03	74.00	-24.97	peak	H
		11510.000	48.44	1.15	49.59	74.00	-24.41	peak	V
		17625.000	59.82	-7.12	52.70	74.00	-21.30	peak	V
	5795	11590.000	48.53	0.21	48.74	74.00	-25.26	peak	H
		17385.000	59.15	-11.35	47.80	74.00	-26.20	peak	H
		11590.000	48.53	1.89	50.42	74.00	-23.58	peak	V
		17385.000	59.15	-7.21	51.94	74.00	-22.06	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (80MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant0	5210	10420.000	15.69	32.73	48.42	74.00	-25.58	peak	H
		15630.000	54.24	-3.74	50.50	74.00	-23.50	peak	H
		10420.000	15.69	34.13	49.82	74.00	-24.18	peak	V
		15630.000	54.24	-2.65	51.59	74.00	-22.41	peak	V
	5775	11550.000	48.49	0.12	48.61	74.00	-25.39	peak	H
		17325.000	58.76	-7.43	51.33	74.00	-22.67	peak	H
		11550.000	48.49	2.05	50.54	74.00	-23.46	peak	V
		17325.000	58.76	-7.00	51.76	74.00	-22.24	peak	V
Ant1	5210	10420.000	15.69	34.73	50.42	74.00	-23.58	peak	H
		15630.000	54.24	-2.24	52.00	74.00	-22.00	peak	H
		10420.000	15.69	34.63	50.32	74.00	-23.68	peak	V
		15630.000	54.24	-1.65	52.59	74.00	-21.41	peak	V
	5775	11550.000	48.49	1.12	49.61	74.00	-24.39	peak	H
		17385.000	59.15	-9.85	49.30	74.00	-24.70	peak	H
		11550.000	48.49	4.05	52.54	74.00	-21.46	peak	V
		17325.000	58.76	-6.00	52.76	74.00	-21.24	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 n (20MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant0+1	5180	10360.000	15.39	34.58	49.97	74.00	-24.03	peak	H
		15840.000	54.93	-5.14	49.79	74.00	-24.21	peak	H
		10360.000	15.39	35.59	50.98	74.00	-23.02	peak	V
		15840.000	54.93	-3.38	51.55	74.00	-22.45	peak	V
	5200	10400.000	15.60	32.94	48.54	74.00	-25.46	peak	H
		15600.000	54.14	-2.90	51.24	74.00	-22.76	peak	H
		10400.000	15.60	34.97	50.57	74.00	-23.43	peak	V
		15600.000	54.14	-2.22	51.92	74.00	-22.08	peak	V
	5240	10480.000	15.97	32.96	48.93	74.00	-25.07	peak	H
		15720.000	54.54	-4.35	50.19	74.00	-23.81	peak	H
		10480.000	15.97	34.91	50.88	74.00	-23.12	peak	V
		15720.000	54.54	-2.73	51.81	74.00	-22.19	peak	V
	5745	11490.000	48.42	1.79	50.21	74.00	-23.79	peak	H
		17235.000	58.17	-7.39	50.78	74.00	-23.22	peak	H
		11490.000	48.42	2.24	50.66	74.00	-23.34	peak	V
		17235.000	58.17	-7.30	50.87	74.00	-23.13	peak	V
	5785	11570.000	48.51	1.16	49.67	74.00	-24.33	peak	H
		17355.000	58.95	-8.32	50.63	74.00	-23.37	peak	H
		11570.000	48.51	3.30	51.81	74.00	-22.19	peak	V
		17355.000	58.95	-7.92	51.03	74.00	-22.97	peak	V
	5825	11650.000	48.61	0.68	49.29	74.00	-24.71	peak	H
		17475.000	59.74	-12.03	47.71	74.00	-26.29	peak	H
		11650.000	48.61	4.27	52.88	74.00	-21.12	peak	V
		17475.000	59.74	-9.02	50.72	74.00	-23.28	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (20MHz)

	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
Ant0+1	5180	10360.000	15.39	33.58	48.97	74.00	-25.03	peak	H
		15840.000	54.93	-5.64	49.29	74.00	-24.71	peak	H
		10360.000	15.39	36.09	51.48	74.00	-22.52	peak	V
		15840.000	54.93	-2.38	52.55	74.00	-21.45	peak	V
	5200	10400.000	15.60	32.94	48.54	74.00	-25.46	peak	H
		15600.000	54.14	-3.40	50.74	74.00	-23.26	peak	H
		10400.000	15.60	35.47	51.07	74.00	-22.93	peak	V
		15600.000	54.14	-2.22	51.92	74.00	-22.08	peak	V
	5240	10480.000	15.97	32.96	48.93	74.00	-25.07	peak	H
		15720.000	54.54	-4.35	50.19	74.00	-23.81	peak	H
		10480.000	15.97	35.91	51.88	74.00	-22.12	peak	V
		15720.000	54.54	-2.23	52.31	74.00	-21.69	peak	V
	5745	11490.000	48.42	0.79	49.21	74.00	-24.79	peak	H
		17235.000	58.17	-7.39	50.78	74.00	-23.22	peak	H
		11490.000	48.42	3.74	52.16	74.00	-21.84	peak	V
		17235.000	58.17	-6.80	51.37	74.00	-22.63	peak	V
	5785	11570.000	48.51	0.66	49.17	74.00	-24.83	peak	H
		17355.000	58.95	-9.32	49.63	74.00	-24.37	peak	H
		11570.000	48.51	3.80	52.31	74.00	-21.69	peak	V
		17355.000	58.95	-7.42	51.53	74.00	-22.47	peak	V
	5825	11650.000	48.61	0.68	49.29	74.00	-24.71	peak	H
		17475.000	59.74	-11.53	48.21	74.00	-25.79	peak	H
		11650.000	48.61	4.77	53.38	74.00	-20.62	peak	V
		17475.000	59.74	-8.02	51.72	74.00	-22.28	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 n (40MHz)

Ant0+1	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
	5190	10380.000	15.50	33.26	48.76	74.00	-25.24	peak	H
		15570.000	54.05	-3.75	50.30	74.00	-23.70	peak	H
		10380.000	15.50	35.13	50.63	74.00	-23.37	peak	V
		15570.000	54.05	-2.28	51.77	74.00	-22.23	peak	V
	5230	10460.000	15.88	33.22	49.10	74.00	-24.90	peak	H
		15690.000	54.44	-4.41	50.03	74.00	-23.97	peak	H
		10460.000	15.88	34.80	50.68	74.00	-23.32	peak	V
		15690.000	54.44	-2.98	51.46	74.00	-22.54	peak	V
	5755	11510.000	48.44	1.37	49.81	74.00	-24.19	peak	H
		17265.000	58.36	-7.83	50.53	74.00	-23.47	peak	H
		11510.000	48.44	2.65	51.09	74.00	-22.91	peak	V
		17265.000	58.36	-6.67	51.69	74.00	-22.31	peak	V
	5795	11590.000	48.53	1.71	50.24	74.00	-23.76	peak	H
		17385.000	59.15	-8.85	50.30	74.00	-23.70	peak	H
		11590.000	48.53	3.39	51.92	74.00	-22.08	peak	V
		17385.000	59.15	-7.71	51.44	74.00	-22.56	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (40MHz)

Ant0+1	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
	5190	10380.000	15.50	33.26	48.76	74.00	-25.24	peak	H
		15570.000	54.05	-3.25	50.80	74.00	-23.20	peak	H
		10380.000	15.50	35.63	51.13	74.00	-22.87	peak	V
		15570.000	54.05	-2.28	51.77	74.00	-22.23	peak	V
	5230	10460.000	15.88	33.22	49.10	74.00	-24.90	peak	H
		15690.000	54.44	-4.41	50.03	74.00	-23.97	peak	H
		10460.000	15.88	35.80	51.68	74.00	-22.32	peak	V
		15690.000	54.44	-2.48	51.96	74.00	-22.04	peak	V
	5755	11510.000	48.44	0.37	48.81	74.00	-25.19	peak	H
		17265.000	58.36	-8.33	50.03	74.00	-23.97	peak	H
		11510.000	48.44	4.15	52.59	74.00	-21.41	peak	V
		17265.000	58.36	-6.67	51.69	74.00	-22.31	peak	V
	5795	11590.000	48.53	0.71	49.24	74.00	-24.76	peak	H
		17385.000	59.15	-8.85	50.30	74.00	-23.70	peak	H
		11590.000	48.53	3.89	52.42	74.00	-21.58	peak	V
		17385.000	59.15	-8.21	50.94	74.00	-23.06	peak	V



Engineer : Wind	
Site : EMC Lab AC 102	Time : 2015-07-18
Limit : FCC_15_03M_PK	Margin : 6
EUT : PA5238U-1PRP	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac (80MHz)

Ant0+1	CH	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
	5210	10420.000	15.69	32.73	48.42	74.00	-25.58	peak	H
		15630.000	54.24	-3.24	51.00	74.00	-23.00	peak	H
		10420.000	15.69	34.63	50.32	74.00	-23.68	peak	V
		15630.000	54.24	-2.15	52.09	74.00	-21.91	peak	V
	5775	11550.000	48.49	0.62	49.11	74.00	-24.89	peak	H
		17235.000	58.17	-7.39	50.78	74.00	-23.22	peak	H
		11550.000	48.49	3.55	52.04	74.00	-21.96	peak	V
		17235.000	58.17	-7.30	50.87	74.00	-23.13	peak	V

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or AVG measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or AVG measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



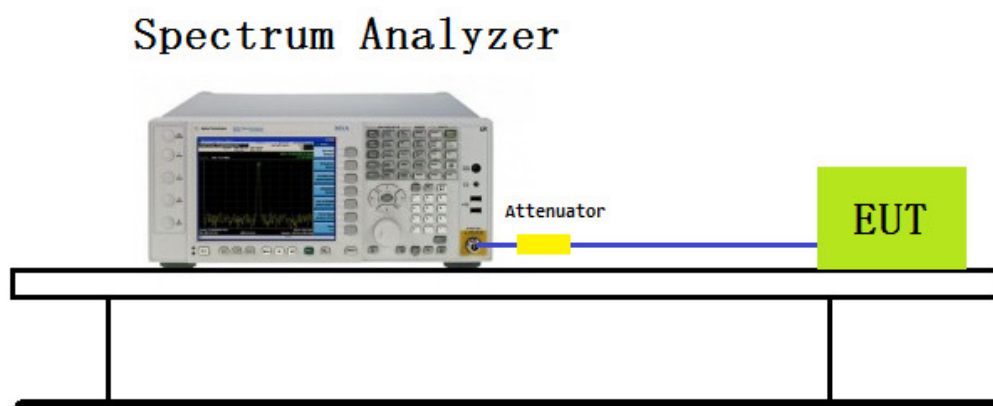
6. Occupied Bandwidth

6.1 Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Calibration Date	Valid Date.
Spectrum Analyzer	Agilent	N9010A	MY53400169	2014.11.03	2016.11.03
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-003	20155.03.31	2016.03.30

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

6.2 Test Setup



6.3 Test Limit

N/A



6.4 Test Procedure

The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

Emission Bandwidth

- Use a RBW = approximately 1% of the emission bandwidth.
- Set the VBW > 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.

Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

99% Occupied Bandwidth

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

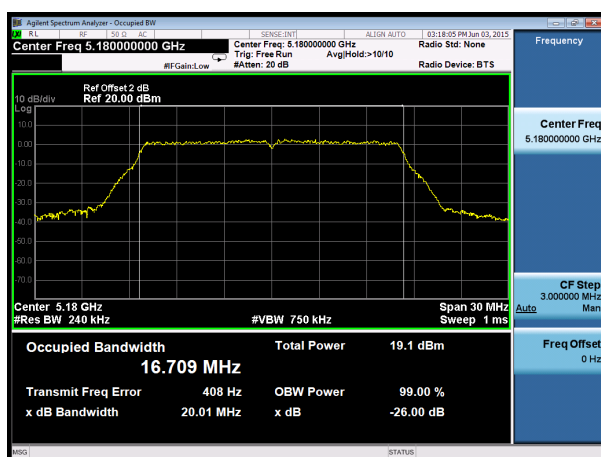


6.5 Test Result and Data

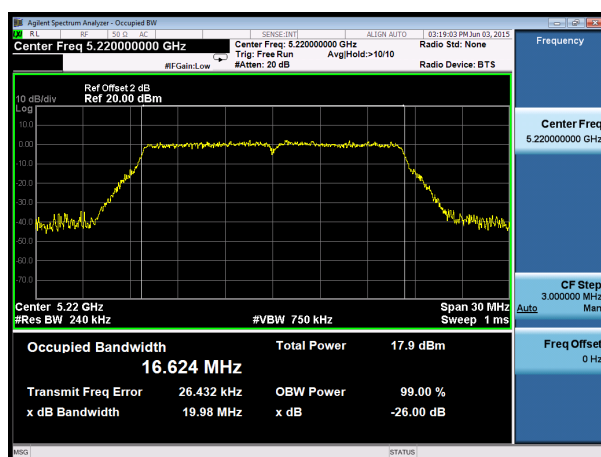
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11a Ant 0
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
36	5180	20.01	16709	Pass
44	5220	19.98	16624	Pass
48	5240	19.94	16652	Pass
149	5745	20.06	16642	Pass

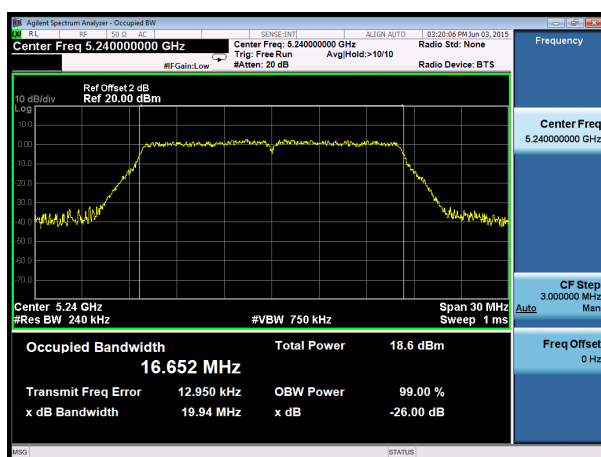
Channel 36 (5180MHz)



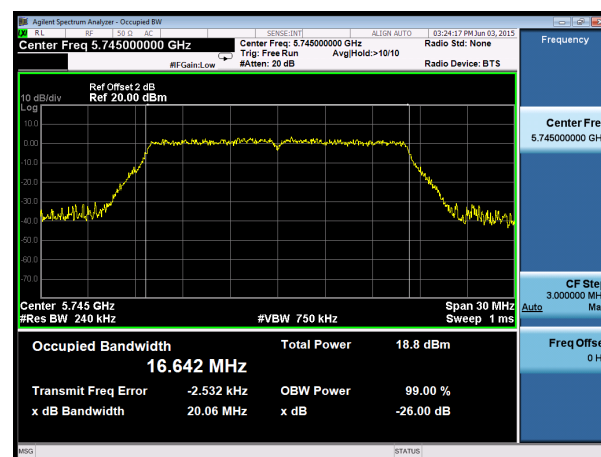
Channel 44 (5220MHz)



Channel 48 (5240MHz)

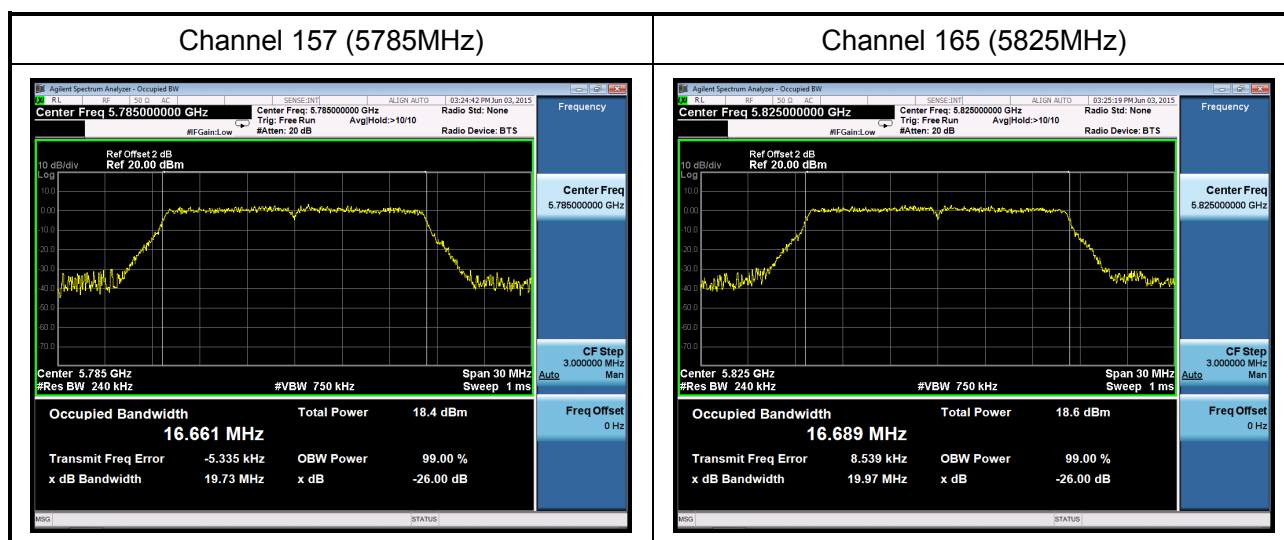


Channel 149 (5745MHz)





Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
157	5785	19.73	16661	Pass
165	5825	19.97	16689	Pass

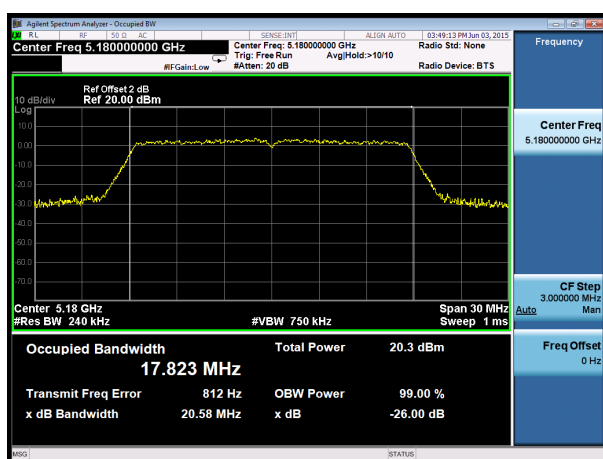




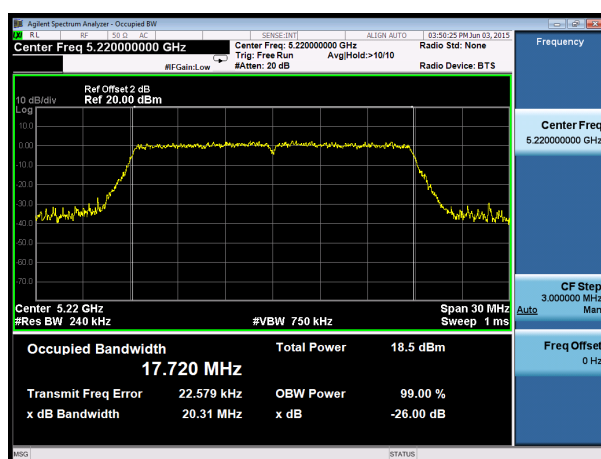
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11n(20MHz) Ant 0
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
36	5180	20.58	17823	Pass
44	5220	20.31	17720	Pass
48	5240	20.42	17738	Pass
149	5745	20.68	17741	Pass

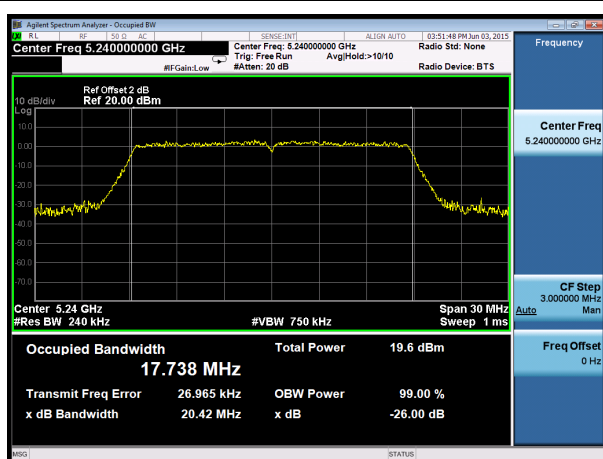
Channel 36 (5180MHz)



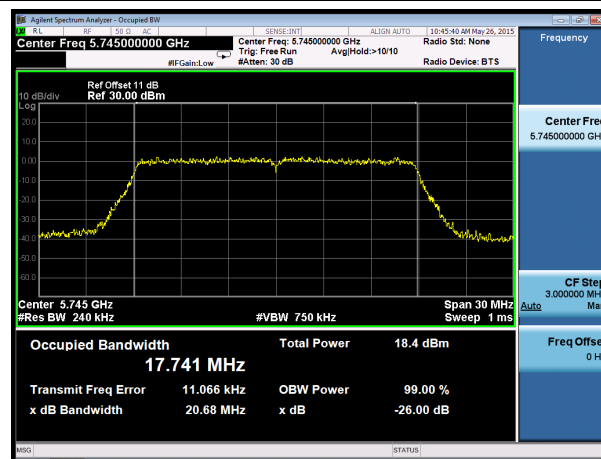
Channel 44 (5220MHz)



Channel 48 (5240MHz)

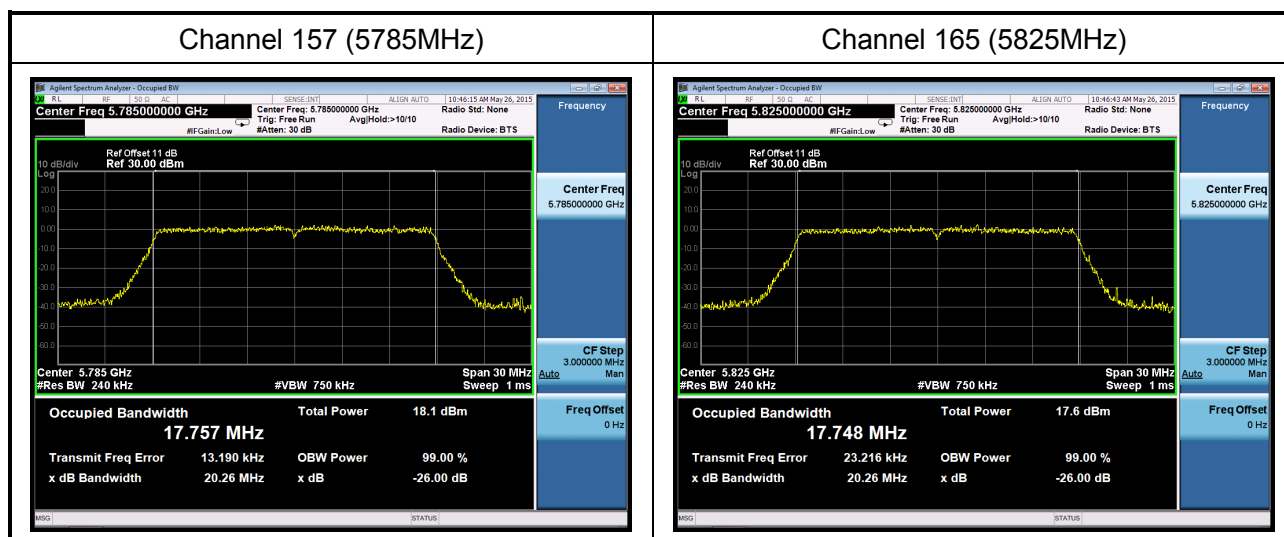


Channel 149 (5745MHz)





Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
157	5785	20.26	17757	Pass
165	5825	20.26	17748	Pass

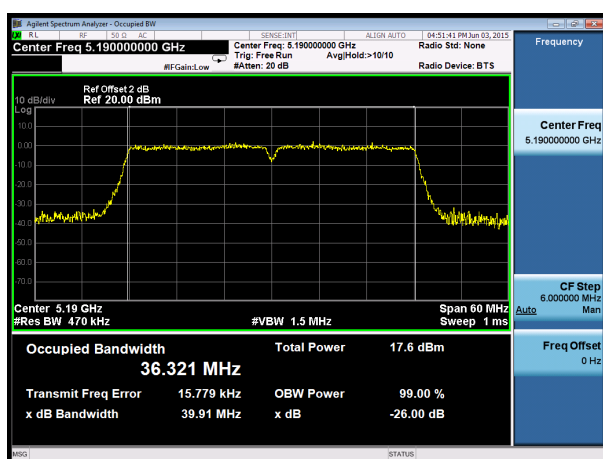




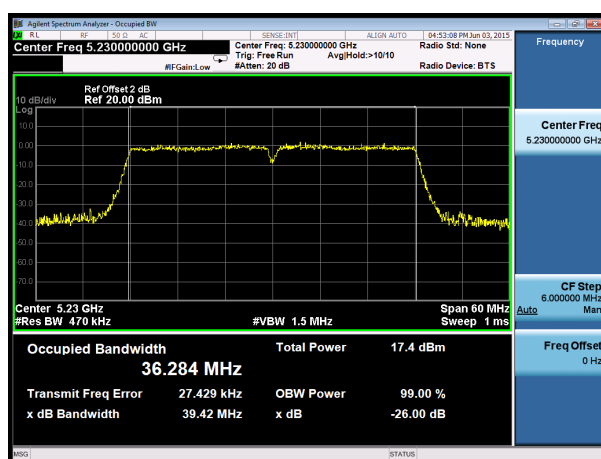
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11n(40MHz) Ant 0
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
38	5190	39.91	36321	Pass
46	5230	39.42	36284	Pass
151	5755	39.63	36287	Pass
159	5795	39.91	36295	Pass

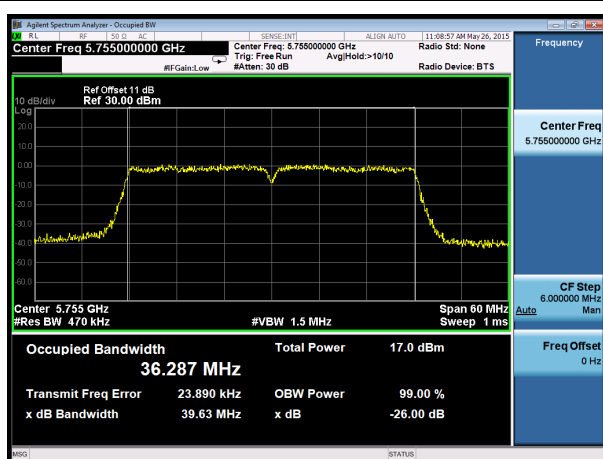
Channel 38 (5190MHz)



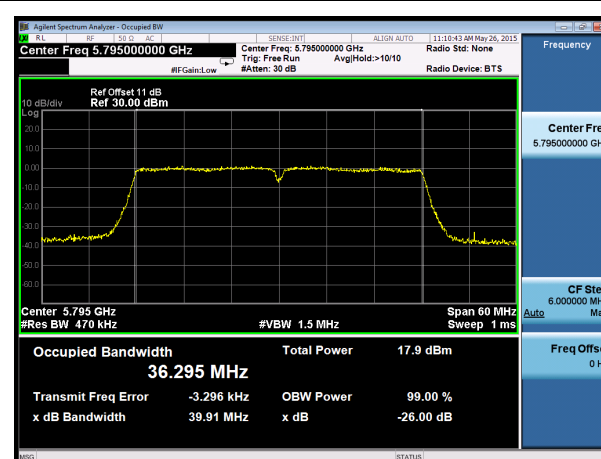
Channel 46 (5230MHz)



Channel 151(5755MHz)



Channel 159 (5795MHz)

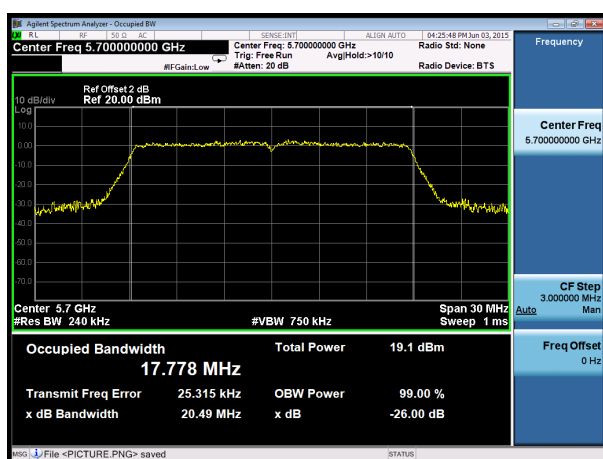




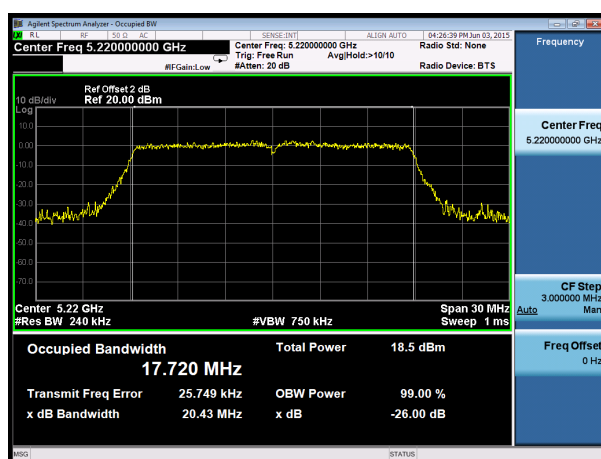
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11ac(20MHz) Ant 0
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
36	5180	20.49	17778	Pass
44	5220	20.43	17720	Pass
48	5240	20.58	17789	Pass
149	5745	20.32	17745	Pass

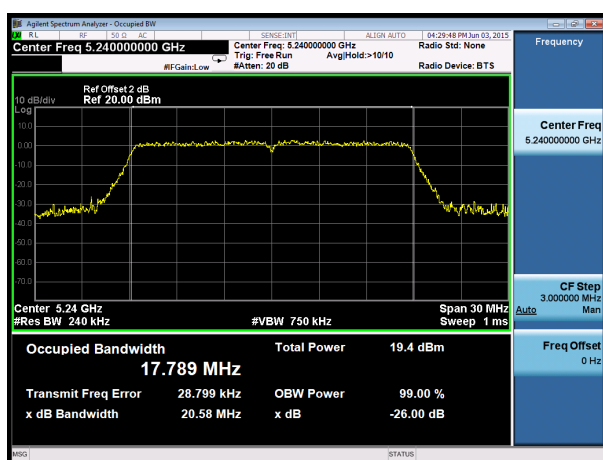
Channel 36 (5180MHz)



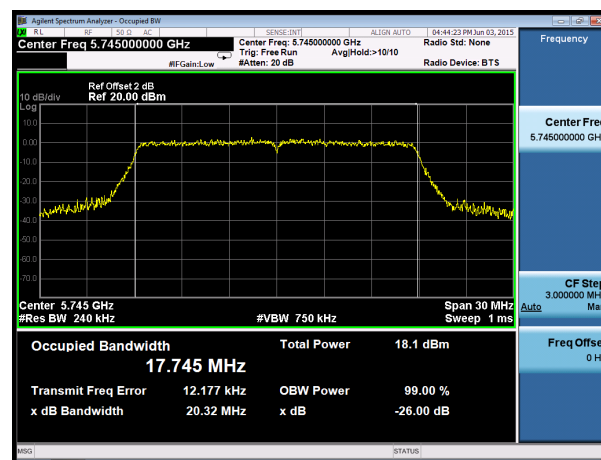
Channel 44 (5220MHz)



Channel 48 (5240MHz)

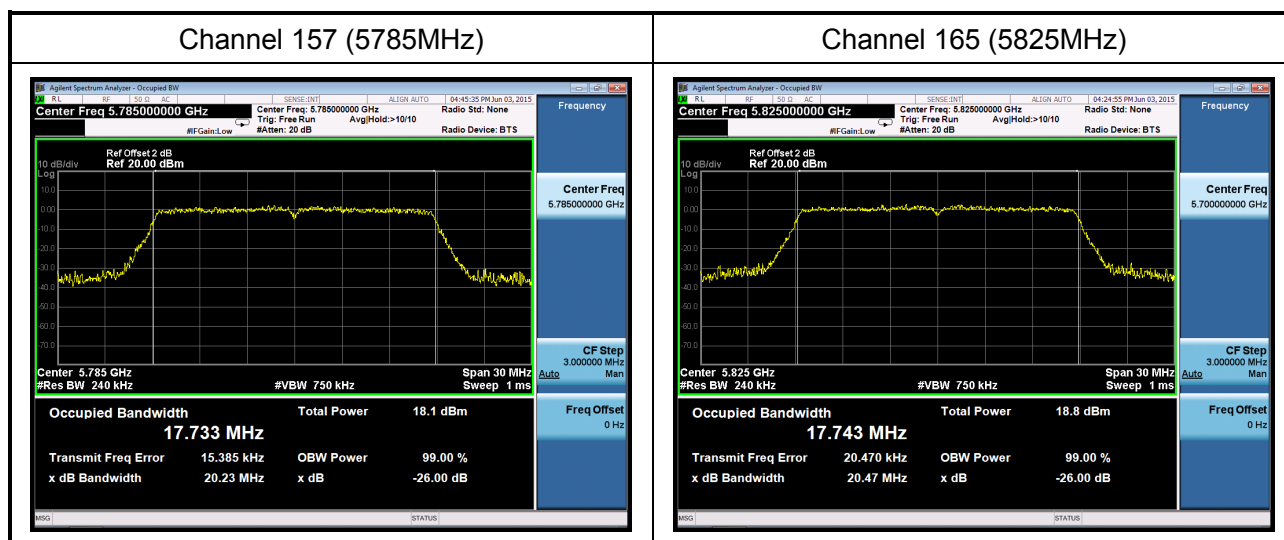


Channel 149 (5745MHz)





Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
157	5785	20.23	17733	Pass
165	5825	20.47	17743	Pass

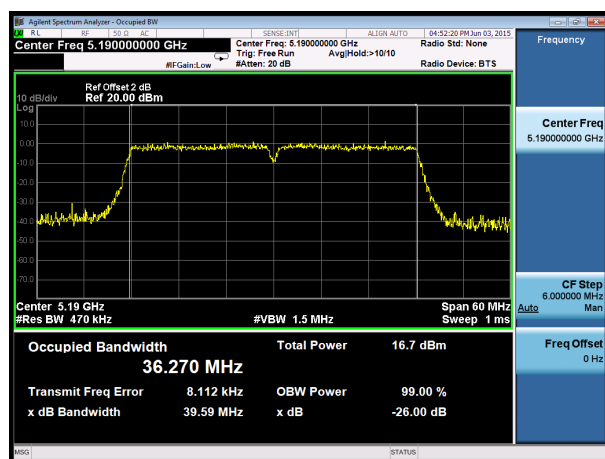




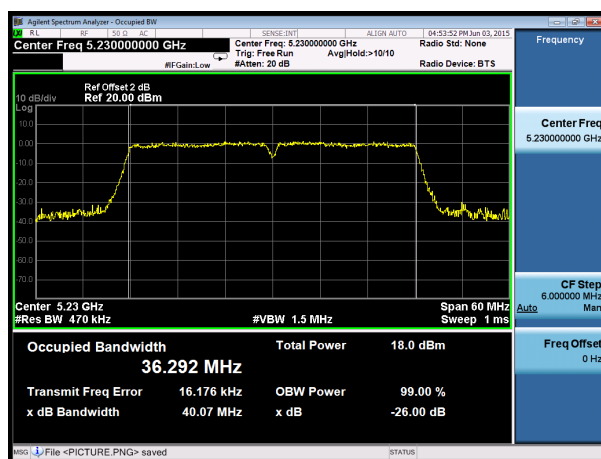
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11ac(40MHz) Ant 0
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
38	5190	39.59	36270	Pass
46	5230	40.07	36292	Pass
151	5755	39.57	36295	Pass
159	5795	39.45	36309	Pass

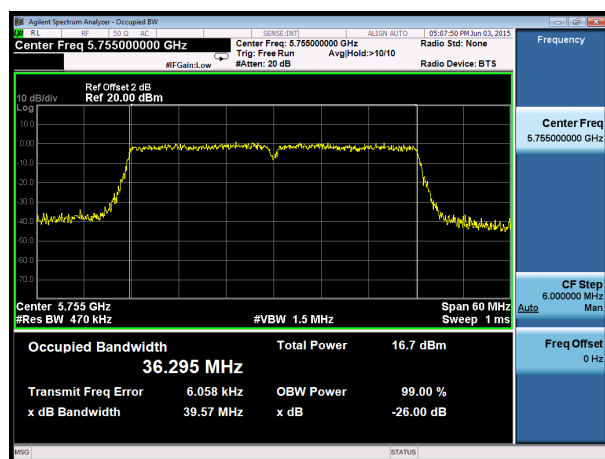
Channel 38 (5190MHz)



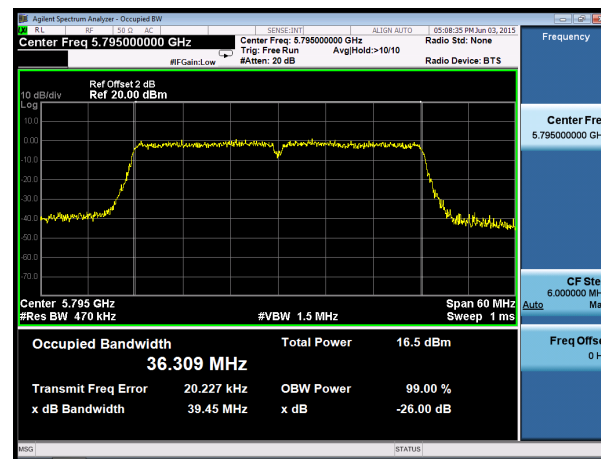
Channel 46 (5230MHz)



Channel 151 (5755MHz)



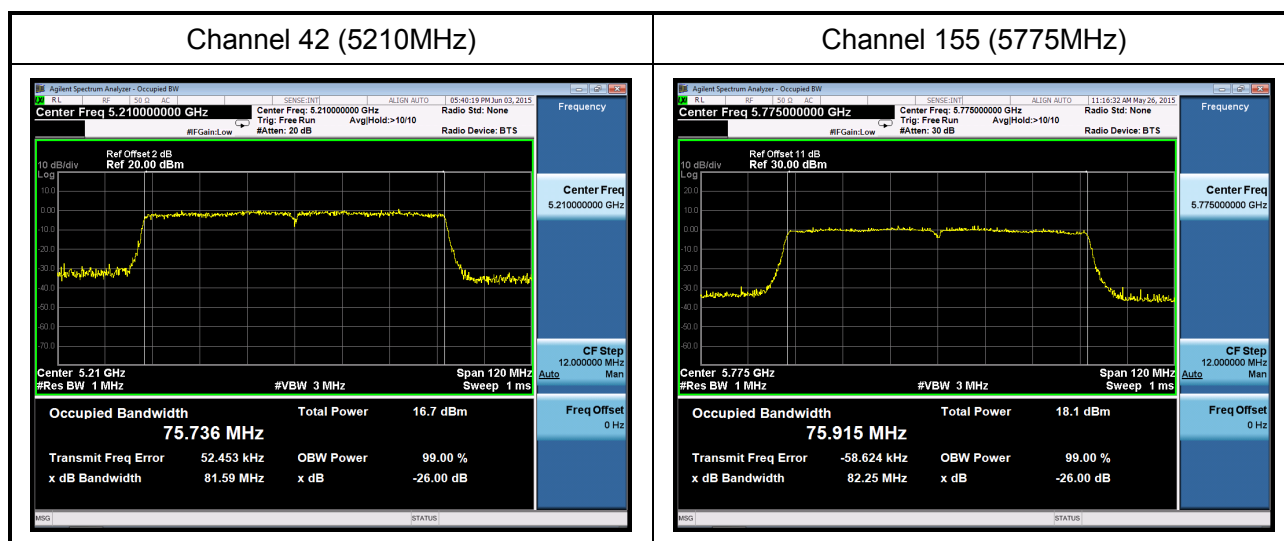
Channel 159(5795MHz)





Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11ac(80MHz) Ant 0
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
42	5210	81.59	75736	Pass
155	5775	82.25	75915	Pass

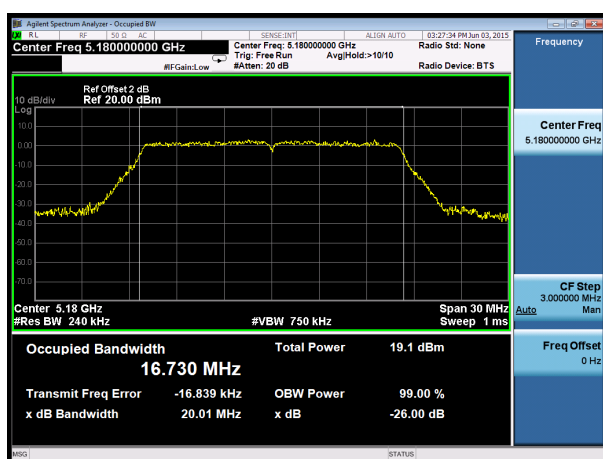




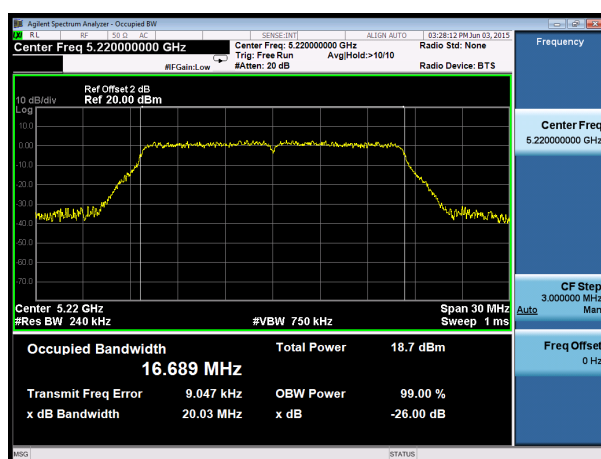
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11a Ant 1
Test Date	2015-06-29

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
36	5180	20.01	16730	Pass
44	5220	20.03	16689	Pass
48	5240	19.91	16640	Pass
149	5745	20.13	16714	Pass

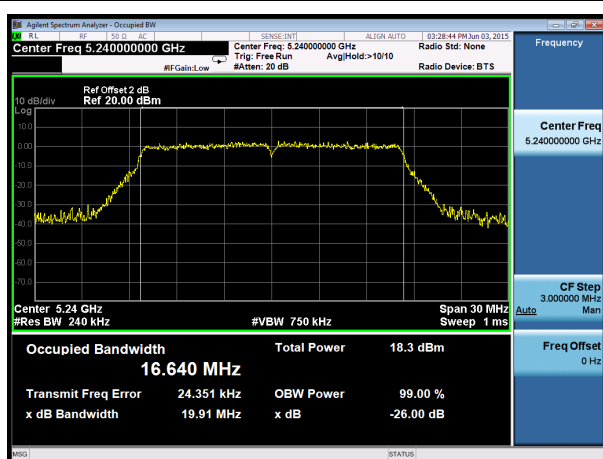
Channel 36 (5180MHz)



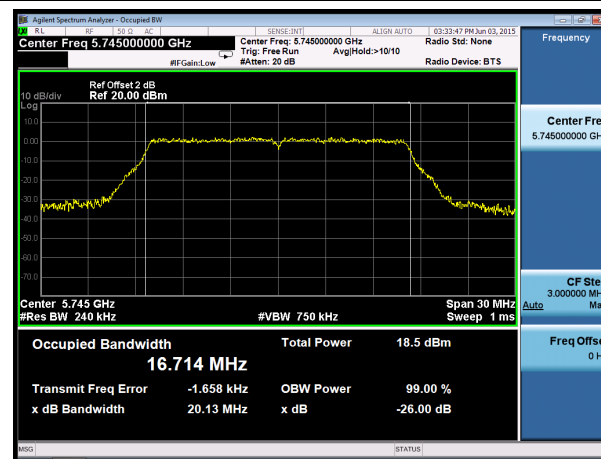
Channel 44 (5220MHz)



Channel 48 (5240MHz)

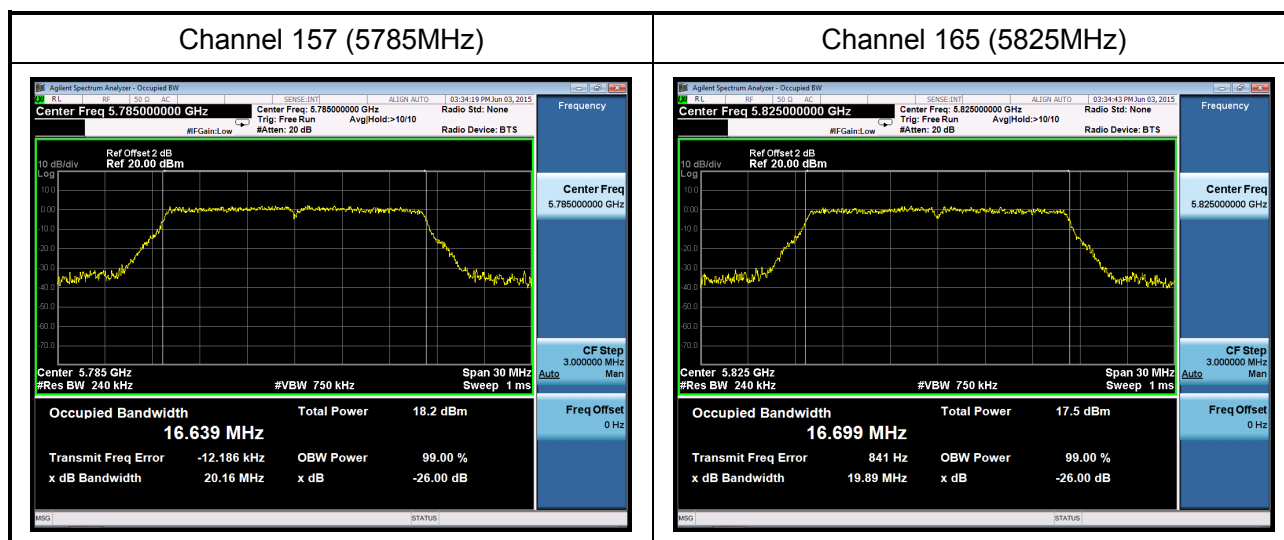


Channel 149 (5745MHz)





Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
157	5785	20.16	16639	Pass
165	5825	19.89	16699	Pass

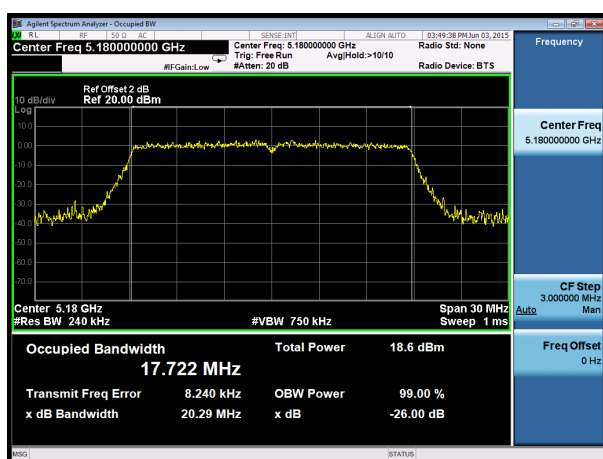




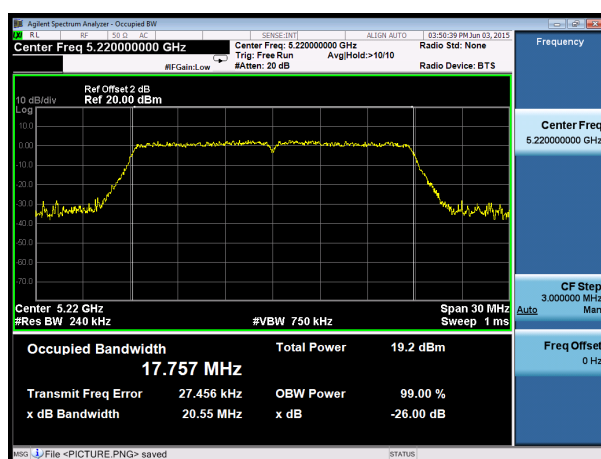
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11n(20MHz) Ant 1
Test Date	2015-06-29

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
36	5180	20.29	17722	Pass
44	5220	20.55	17757	Pass
48	5240	20.42	17743	Pass
149	5745	20.39	17747	Pass

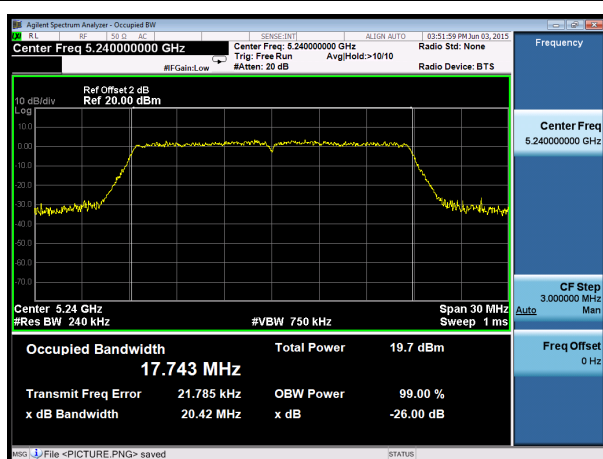
Channel 36 (5180MHz)



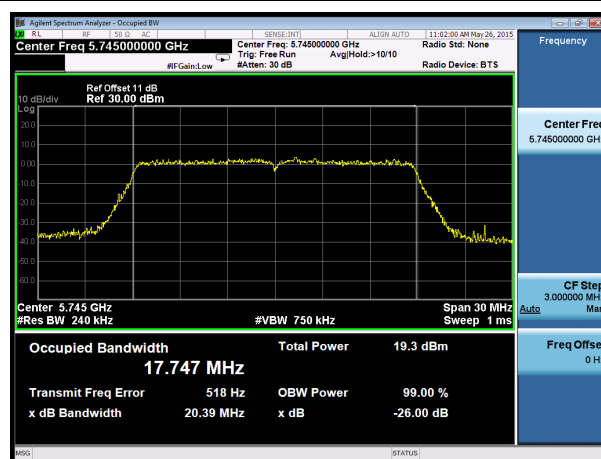
Channel 44 (5220MHz)



Channel 48 (5240MHz)

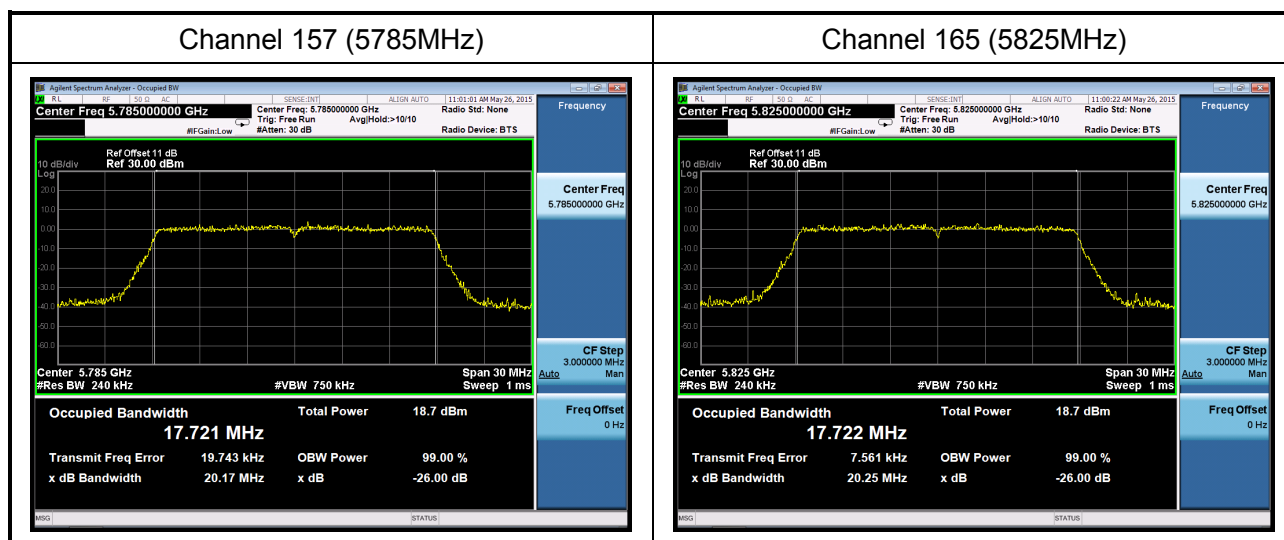


Channel 149 (5745MHz)





Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
157	5785	20.17	17721	Pass
165	5825	20.25	17722	Pass

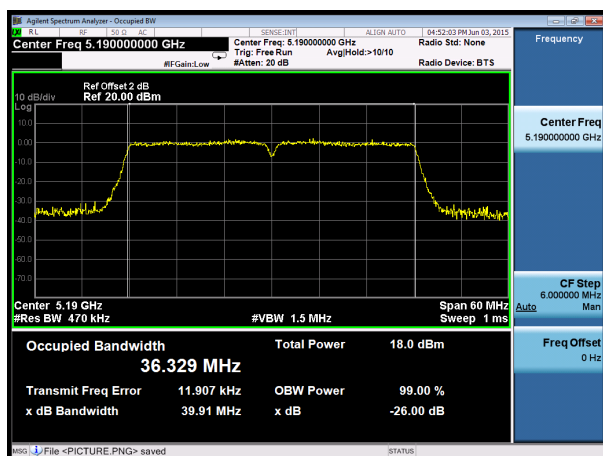




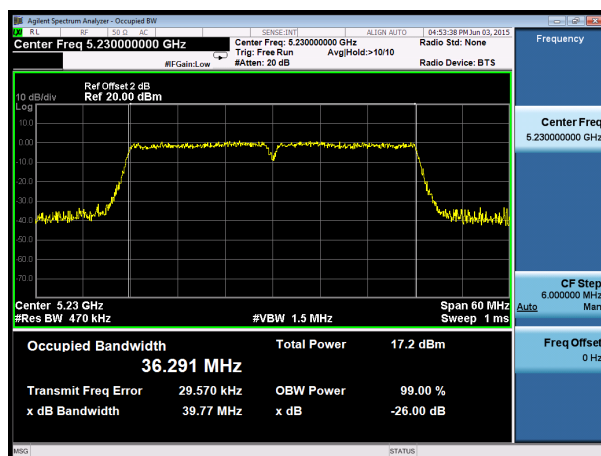
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11n(40MHz) Ant 1
Test Date	2015-06-29

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
38	5190	39.91	36329	Pass
46	5230	39.77	36291	Pass
151	5755	39.77	36283	Pass
159	5795	39.76	36295	Pass

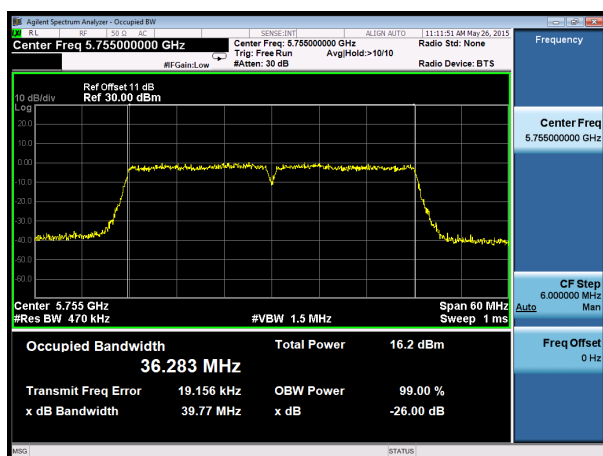
Channel 38 (5190MHz)



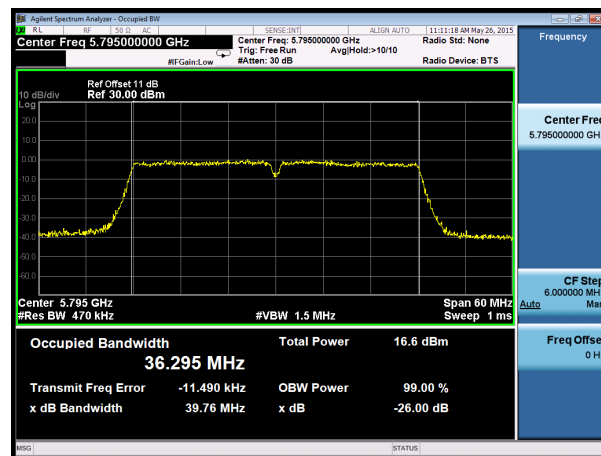
Channel 46 (5230MHz)



Channel 151(5755MHz)



Channel 159 (5795MHz)

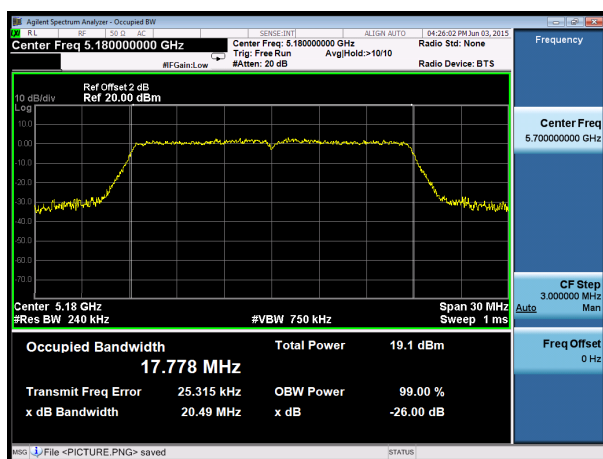




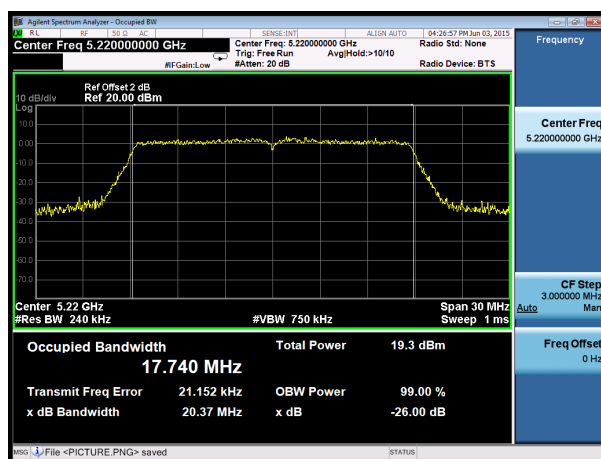
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11ac(20MHz) Ant 1
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
36	5180	20.49	17778	Pass
44	5200	20.37	17740	Pass
48	5240	20.37	17759	Pass
149	5745	20.48	17770	Pass

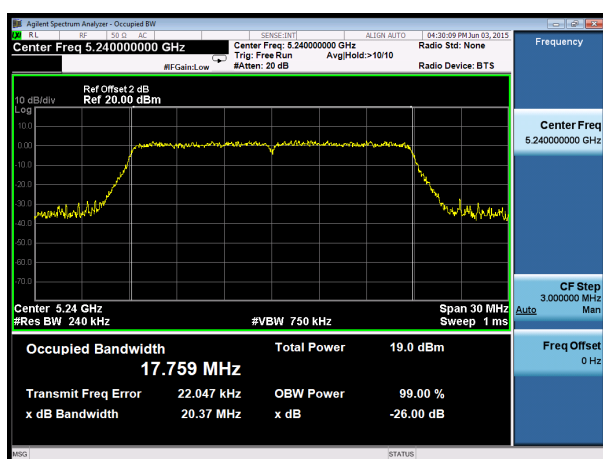
Channel 36 (5180MHz)



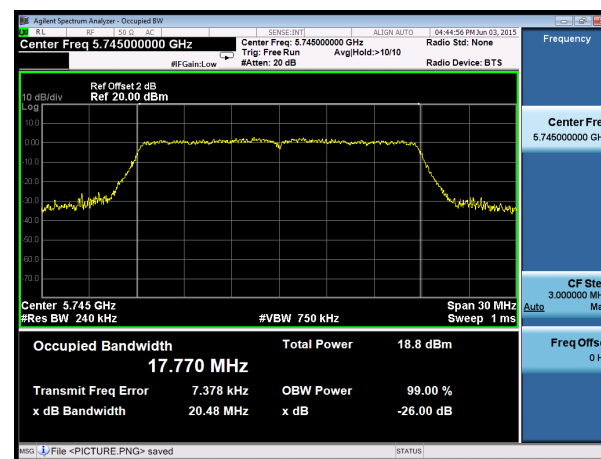
Channel 44 (5220MHz)



Channel 48 (5240MHz)

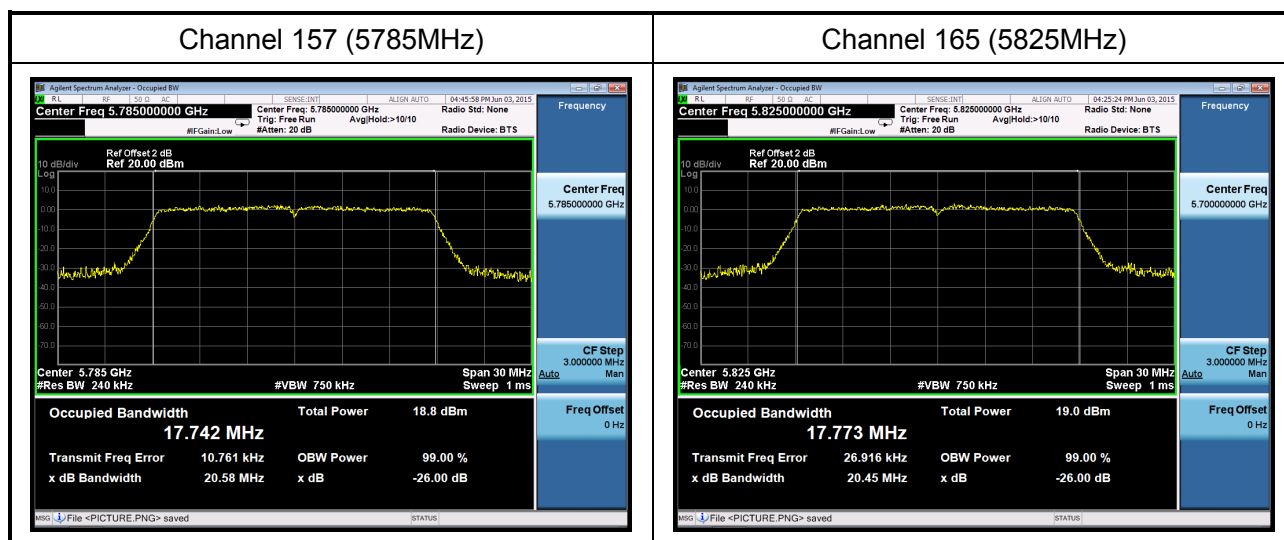


Channel 149 (5745MHz)





Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
157	5785	20.58	17742	Pass
165	5825	20.45	17773	Pass

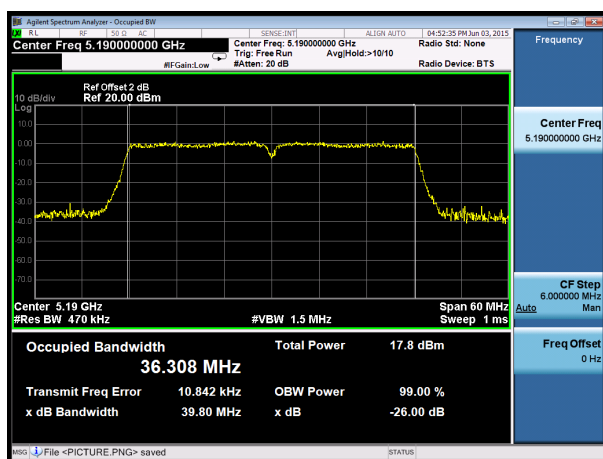




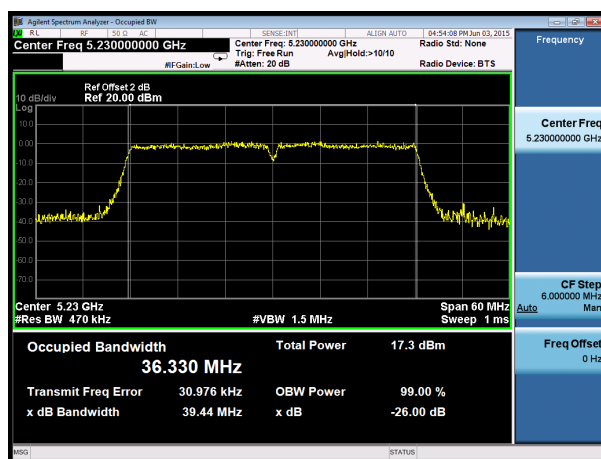
Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11ac(40MHz) Ant 1
Test Date	2015-06-03

Channel No.	Frequency (MHz)	Measurement Level (MHz)	99% Occupied Bandwidth (kHz)	Result
38	5190	39.80	36308	Pass
46	5230	39.44	36330	Pass
151	5755	39.74	36294	Pass
159	5795	39.48	36279	Pass

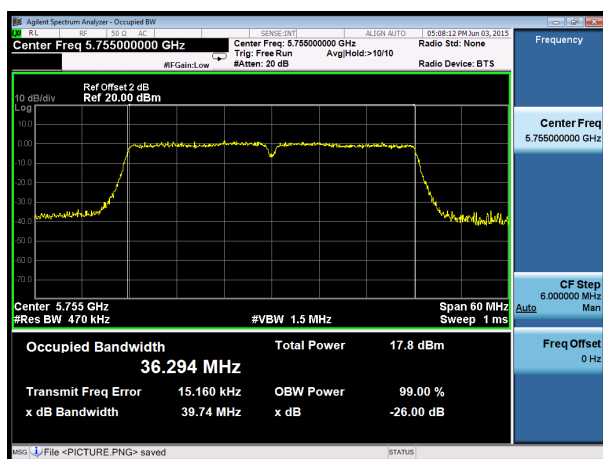
Channel 38 (5190MHz)



Channel 46 (5230MHz)



Channel 151 (5755MHz)



Channel 159(5795MHz)

