

FCC Test Report

Product Name : Wireless-AC2900 Dual Band Gigabit Router
ROG Rapture GT-AC2900 Dual-band Gaming Router
Trade Name : ASUS
Model No. : RT-AC86U, RT-AC68U Extreme, RT-AC86A, RT-AC86P,
RT-AC86R, RT-AC86X, RT-AC2900, AC2900, GT-AC2900
FCC ID. : MSQ-RTACHN00

Applicant : ASUSTeK COMPUTER INC.

Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt : Oct. 12, 2018 ~ Dec. 27, 2018

Issued Date : Dec. 27, 2018

Report No. : 18A0006R-RFUSP63V00

Report Version : V1.0



The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd..

Test Report Certification

Issued Date : Dec. 27, 2018

Report No. : 18A0006R-RFUSP63V00



Product Name : Wireless-AC2900 Dual Band Gigabit Router
ROG Rapture GT-AC2900 Dual-band Gaming Router

Applicant : ASUSTeK COMPUTER INC.

Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Manufacturer : ASUSTeK COMPUTER INC.

Model No. : RT-AC86U, RT-AC68U Extreme, RT-AC86A, RT-AC86P,
RT-AC86R, RT-AC86X, RT-AC2900, AC2900, GT-AC2900

Trade Name : ASUS

FCC ID. : MSQ-RTACHN00

EUT Voltage : AC 100-240V, 50-60Hz

Testing Voltage : AC 120V/60Hz

Applicable Standard : FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2017
ANSI C63.10: 2013
KDB 789033 D02 v02r01
KDB 662911 D01 v02r01

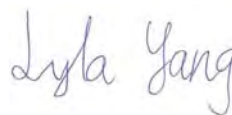
Laboratory Name : Hsin Chu Laboratory

Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township,
Hsinchu County 31061, Taiwan, R.O.C.
TEL: +886-3-582-8001 / FAX: +886-3-582-8958

Test Result : Complied

Documented By

:



(Lyla Yang / Engineering Adm. Specialist)

Tested By

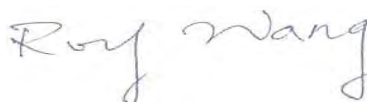
:



(Scott Chang / Engineer)

Approved By

:



(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
1720225R-RFUSP43V00	V1.0	Initial issue of report	Apr. 11, 2017
1720225R-RFUSP43V00	V2.0	Add LAN Cable (Black flat wire), and verify Radiated Emission(Under 1GHz) tested.	Jun. 23, 2017
1720225R-RFUSP65V00	V1.0	Add WLAN 5G band 2 and band 3 functions. Add all test item for band 2 and band 3 data in test report.	Jun. 26, 2017
1770027R-RFUSP65V00	V1.0	Change the regulator from PCB board (PCB board version R1.50), and verify Conducted Emission, Radiated Emission (Under 1GHz) tested.	Jul. 25, 2017
1890171R-RFUSP65V00	V1.0	Add Power Adapter 4~5 (DELTA, ADP-33AW Y/PI, AD2088320), and verify Conducted Emission and Radiated Emission (Under 1GHz) tested. Update WLAN 5G standard 15.407 from 2016 to 2017.	Oct. 05, 2018
18A0006R-RFUSP63V00	V1.0	- Add one product name and one model name: ROG Rapture GT-AC2900 Dual-band Gaming Router / GT-AC2900. - Change the housing and add LED light for Aura sync. - Add two antenna and change the housing: - WHA YU, C660-510456-A - Walsin, ASC_RFDPA141500SBLB801 - Add 80+80MHz function (for 5G band 1/2) and add 160MHz function (for 5G band 3). - Add NSS2 data for BF mode and replace CDD mode of 802.11a, BF mode of 802.11n/ac data by customers' requirements. Verify Conducted Emission , 99% Bandwidth, Maximum conducted output power, Maximum power spectral density, Radiated Emission (Under 1GHz) and Band Edge test, and update test photo, EUT photo.	Dec. 27, 2018

TABLE OF CONTENTS

Description	Page
1. General Information	6
1.1. EUT Description	6
1.2. Test Mode	17
1.3. Tested System Details	18
1.4. Configuration of tested System	19
1.5. EUT Exercise Software	19
1.6. Test Facility	20
1.7. List of Test Equipment	21
1.8. Uncertainty	26
2. Conducted Emission	27
2.1. Test Setup	27
2.2. Limits	27
2.3. Test Procedure	28
2.4. Test Specification	28
2.5. Test Result	29
3. 26dB & 99% & DTS Bandwidth	45
3.1. Test Setup	45
3.2. Limits	45
3.3. Test Procedure	45
3.4. Test Result	46
4. Maximum conducted output power	104
4.1. Test Setup	104
4.2. Limits	104
4.3. Test Procedure	105
4.4. Test Result	106
5. Maximum power spectral density	218
5.1. Test Setup	218
5.2. Limits	218
5.3. Test Procedure	218
5.4. Test Result	219
6. Radiated Emission	245
6.1. Test Setup	245
6.2. Limits	246
6.3. Test Procedure	247
6.4. Test Result	248

7.	Band Edge	264
7.1.	Test Setup	264
7.2.	Limits	265
7.3.	Test Procedure	267
7.4.	Test Result	268
Attachment 1		366
Test Setup Photograph.....		366
Attachment 2		374
EUT External Photograph		374
Attachment 3		392
EUT Internal Photograph		392

1. General Information

1.1. EUT Description

Product Name	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	
Trade Name	ASUS	
Model No.	RT-AC86U, RT-AC68U Extreme, RT-AC86A, RT-AC86P, RT-AC86R, RT-AC86X, RT-AC2900, AC2900, GT-AC2900	
Frequency Range/ Channel Number	IEEE 802.11a /	5180~5240MHz / 4 Channels
	IEEE 802.11n (20MHz) /	5260~5320MHz / 4 Channels
	IEEE 802.11ac (20MHz)	5500~5700MHz / 11 Channels 5745~5825MHz / 5 Channels
	IEEE 802.11n (40MHz) /	5190~5230MHz / 2 Channels
	IEEE 802.11ac (40MHz)	5270~5310MHz / 2 Channels 5510~5670MHz / 5 Channels 5755~5795MHz / 2 Channels
	IEEE 802.11ac (80MHz)	5210~5210MHz / 1 Channel 5290~5290MHz / 1 Channel 5530~5610MHz / 2 Channel 5775~5775MHz / 1 Channel
Type of Modulation	IEEE 802.11ac (80+80MHz)	5210MHz (Channel 42) 5290MHz (Channel 58)
	IEEE 802.11ac (160MHz)	5570MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac	Orthogonal Frequency Division Multiplexing (OFDM)
Data Speed	IEEE 802.11a	6, 9, 18, 24, 36, 48, 54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS0~MCS 31 and bandwidth defined in 802.11n
	IEEE 802.11ac	Support a subset of the combination of GI, MCS0~MCS 9 and bandwidth defined in 802.11ac

Antenna Information			
Manufacturer	Model No.	Antenna Type	Effective Peak Gain Per Chain [dBi]
WHA YU	C660-510389-A C660-510397-A (Without ASUS logo)	Dipole antenna	5.2GHz Gain: 1.306 dBi 5.3GHz Gain: 1.494 dBi 5.5GHz Gain: 1.474 dBi 5.8GHz Gain: 1.567 dBi
WHA YU	C660-510390-A	PCB Antenna	5.2GHz Gain: 1.306 dBi 5.3GHz Gain: 1.494 dBi 5.5GHz Gain: 1.474 dBi 5.8GHz Gain: 1.567 dBi
Beamforming Gain		4.77 dBi	

Antenna Model No.	Brand	5G Gain			
		Band 1	Band 2	Band 3	Band 4
C660-510389-A C660-510397-A (Without ASUS logo)	WHA YU	1.57	1.6	1.78	1.85
ASC_RFDPA161300SBLB804 ASC_RFDPA161300SBLB805 ASC_RFDPA161300SBLB806 (Without ASUS logo)	Walsin	1.0	1.46	1.38	1.73
C660-510456-A	WHA YU	1.49	1.49	1.58	1.51
ASC_RFDPA141500SBLB801	Walsin	-0.38	0.13	1.6	1.54
C660-510390-A (PCB Antenna)	WHA YU	2.9	2.9	3.0	2.52
ASC_RFPCA302603IM5B301 (PCB Antenna)	Walsin	2.17	2.30	2.20	2.49

Note:

1. All of Dipole antenna with an ASUS logo, except the C660-510397-A and ASC_RFDPA161300SBLB806 antenna. Please find the antenna photograph in attachment.

Accessories Information	
LAN Cable (Round wire)	Non-Shielded, 1.5m
LAN Cable (Flat wire)	Non-Shielded, 2m
Power Adapter 1 (Level 6)	ASUS, AD890326010-2LF I/P : 100-240V~ 50/60Hz 0.8A O/P : 19V $\equiv$ 1.75A Cable Out: Non-Shielded, 2.4m
Power Adapter 2 (Level 6)	ASUS, AD890M26010-3LF I/P : 100-240V~ 50/60Hz 0.8A O/P : 19V $\equiv$ 1.75A Cable Out: Non-Shielded, 2.4m
Power Adapter 3 (Level 6)	ASUS, ADP-33AW I/P : 100-240V~1A 50-60Hz O/P : 19V $\equiv$ 1.75A Cable Out: Non-shielded, 2.2m
Power Adapter 4 (Level 6)	DELTA, ADP-33AW Y I/P : 100-240V~1A 50-60Hz O/P : 19V $\equiv$ 1.75A Cable Out: Non-shielded, 2.2m
Power Adapter 5 (Level 6)	PI, AD2088320 I/P : 100-240V~ 50/60Hz 0.8A O/P : 19V $\equiv$ 1.75A Cable Out: Non-Shielded, 2.2m

Note:

1. Adapter 1 and adapter 2 have the same PCB layout, and adapter 1 has been tested.

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX				RX			
Mode/ Channel Bandwidth	20MHz	40MHz	80MHz	160MHz	20MHz	40MHz	80MHz	160MHz
IEEE802.11a	✓				✓			
IEEE802.11n	✓	✓			✓	✓		
IEEE802.11ac	✓	✓	✓	✓	✓	✓	✓	✓

Frequency	Modulation	Support Mode	ANT-TX
5GHz	802.11a	CDD	4TX
	802.11n(HT20)	CDD/BF (NSS1/NSS2)	4TX
	802.11n(HT40)	CDD/BF (NSS1/NSS2)	4TX
	802.11ac(VHT20)	CDD/BF (NSS1/NSS2)	4TX
	802.11ac(VHT40)	CDD/BF (NSS1/NSS2)	4TX
	802.11ac(VHT80)	CDD/BF (NSS1/NSS2)	4TX
	802.11ac(VHT80+80)	CDD/BF (NSS1)	2TX+2TX
	802.11ac(VHT160)	CDD/BF (NSS1)	2TX+2TX

IEEE 802.11n

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
8	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.4	30.0
9	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.9	60.0
10	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.3	90.0
11	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.8	120.0
12	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.7	180.0
13	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.6	240.0
14	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.0	270.0
15	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.4	300.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 2 – MCS parameters for TX Antenna number = 2

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
16	BPSK	1/2	1	156	324	78	162	19.5	40.5	21.7	45.0
17	QPSK	1/2	2	312	648	156	324	39.0	81.0	43.3	90.0
18	QPSK	3/4	2	312	648	234	486	58.5	121.5	65.0	135.0
19	16-QAM	1/2	4	624	1296	312	648	78.0	162.0	86.7	180.0
20	16-QAM	3/4	4	624	1296	468	972	117.0	243.0	130.0	270.0
21	64-QAM	2/3	6	936	1944	624	1296	156.0	324.0	173.3	360.0
22	64-QAM	3/4	6	936	1944	702	1458	175.5	364.5	195.0	405.0
23	64-QAM	5/6	6	936	1944	780	1620	195.0	405.0	216.7	450.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 3 – MCS parameters for TX Antenna number = 3

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
24	BPSK	1/2	1	208	432	104	216	26.00	54.00	28.80	60.00
25	QPSK	1/2	2	416	864	208	432	52.00	108.00	57.60	120.00
26	QPSK	3/4	2	416	864	312	648	78.00	162.00	86.80	180.00
27	16-QAM	1/2	4	832	1728	416	864	104.00	216.00	115.60	240.00
28	16-QAM	3/4	4	832	1728	624	1296	156.00	324.00	172.20	360.00
29	64-QAM	2/3	6	1248	2592	832	1728	208.00	432.00	231.20	480.00
30	64-QAM	3/4	6	1248	2592	936	1944	234.00	486.00	260.00	540.00
31	64-QAM	5/6	6	1248	2592	1040	2040	260.00	540.00	288.80	600.00

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 4 – MCS parameters for TX Antenna number = 4

Symbol	Explanation
R	Code rate
N_{BPSCS}	Number of coded bits per single carrier
N_{CBPS}	Number of coded bits per symbol
N_{DBPS}	Number of data bits per symbol
GI	guard interval

IEEE 802.11ac Data Rate

Spatial Streams (Note1)	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)					
				20 MHz		40 MHz		80 MHz	
				Guard Interval		Guard Interval		Guard Interval	
				800ns	400ns	800ns	400ns	800ns	400ns
1	0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5
	1	QPSK	1/2	13	14.4	27	30	58.5	65
	2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5
	3	16-QAM	1/2	26	28.9	54	60	117	130
	4	16-QAM	3/4	39	43.3	81	90	175.5	195
	5	64-QAM	2/3	52	57.8	108	120	234	260
	6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5
	7	64-QAM	5/6	65	72.2	135	150	292.5	325
	8	256-QAM	3/4	78	86.7	162	180	351	390
	9	256-QAM	5/6	N/A	N/A	180	200	390	433.3
2	0	BPSK	1/2	13	14.4	27	30	58.6	65
	1	QPSK	1/2	26	28.8	54	60	117	130
	2	QPSK	3/4	39	43.4	81	90	175.6	195
	3	16-QAM	1/2	52	57.8	108	120	234	260
	4	16-QAM	3/4	78	86.6	162	180	351	390
	5	64-QAM	2/3	104	115.6	216	240	468	520
	6	64-QAM	3/4	117	130	243	270	526.6	585
	7	64-QAM	5/6	130	144.4	270	300	585	650
	8	256-QAM	3/4	156	173.4	324	360	702	780
	9	256-QAM	5/6	N/A	N/A	360	400	780	866.6
3	0	BPSK	1/2	19.5	21.6	40.5	45	87.9	97.5
	1	QPSK	1/2	39	43.2	81	90	175.5	195
	2	QPSK	3/4	58.5	65.1	121.5	135	263.4	292.5
	3	16-QAM	1/2	78	86.7	162	180	351	390
	4	16-QAM	3/4	117	129.9	243	270	526.5	585
	5	64-QAM	2/3	156	173.4	324	360	702	780
	6	64-QAM	3/4	175.5	195	364.5	405	789.9	877.5
	7	64-QAM	5/6	195	216.6	405	450	877.5	975
	8	256-QAM	3/4	234	260.1	486	540	1053	1170
	9	256-QAM	5/6	N/A	N/A	540	600	1170	1299.9

4	0	BPSK	1/2	26.0	28.9	54.0	60.0	117.0	130.0
	1	QPSK	1/2	52.0	57.8	108.0	120.0	234.0	260.0
	2	QPSK	3/4	78.0	86.7	162.0	180.0	351.0	390.0
	3	16-QAM	1/2	104.0	115.6	216.0	240.0	468.0	520.0
	4	16-QAM	3/4	156.0	173.3	342.0	360.0	702.0	780.0
	5	64-QAM	2/3	208.0	231.1	432.0	480.0	936.0	1040.0
	6	64-QAM	3/4	234.0	260.0	486.0	540.0	1053.0	1170.0
	7	64-QAM	5/6	260.0	288.9	540.0	600.0	1170.0	1300.0
	8	256-QAM	3/4	312.0	346.7	648.0	720.0	1404.0	1560.0
	9	256-QAM	5/6	N/A	N/A	720.0	800.0	1560.0	1733.3

IEEE 802.11a & IEEE 802.11n (20MHz) & IEEE 802.11ac (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
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz	165	5825 MHz

IEEE 802.11n (40MHz) & IEEE 802.11ac (40MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270MHz	62	5310 MHz
102	5510 MHz	110	5550 MHz	118	5590MHz	126	5630 MHz
134	5670 MHz	151	5755 MHz	159	5795 MHz		

IEEE 802.11ac (80MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz	122	5610 MHz
155	5775 MHz						

IEEE 802.11ac (160MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
114	5570 MHz						

Note:

1. This device including 2.4GHz b/g/n (3x3) and 5GHz a/n/ac (4x4) transmitting and receiving function.
2. The variation of model number is for different strategy of marketing.

3. The different of each model is shown as below:

Equipment Name	Wireless-AC2900 Dual Band Gigabit Router	ROG Rapture GT-AC2900 Dual-band Gaming Router
Model Name	RT-AC86U, RT-AC68U Extreme, RT-AC86A, RT-AC86P, RT-AC86R, RT-AC86X, RT-AC2900, AC2900	GT-AC2900
Difference	Housing without LED light.	Housing add LED light for Aura sync.

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

5. The GT-AC2900 PCB board have two connector type, the information as below:

Connector	Brand/ Model	
Type A	SUYIN/800163FA080S100ZR	SUYIN/800130MA080S100ZR
Type B	ACES/60325-01471-001	ACES/60326-01471-001

6. The laptop computer was used to configure the EUT to continuously transmit at a specified output power in all channels with different modes and modulation schemes, testing software power setting as below.

Modulation	Channel	Power setting		
		CDD Mode	BF mode (NSS 1)	BF mode (NSS2)
802.11a	36	81	--	--
	44	80	--	--
	48	81	--	--
	149	90	--	--
	157	90	--	--
	165	88	--	--
802.11ac(VHT20)	36	--	80	87
	44	--	81	89
	48	--	82	89
	149	--	89	94
	157	--	88	94
	165	--	86	93
802.11ac(VHT40)	38	--	73	78
	46	--	85	91
	151	--	91	96
	159	--	89	96
802.11ac(VHT80)	42	--	72	77
	155	--	88	88
802.11ac(VHT80+80)	42+58	--	80	--
802.11ac(VHT160)	114	--	65	--

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

Test Mode
Mode 1: Tx_ CDD Mode_ ADP1
Mode 2: Tx_ CDD Mode_ ADP3
Mode 3: Tx_ CDD Mode_ ADP4
Mode 4: Tx_ CDD Mode_ ADP5
Mode 5: TX_ CDD Mode_ ac(80MHz+80MHz)
Mode 6: TX_ CDD Mode_ ac(160MHz)
Mode 7: TX_ BF Mode_ NSS1
Mode 8: TX_ BF Mode_ NSS2

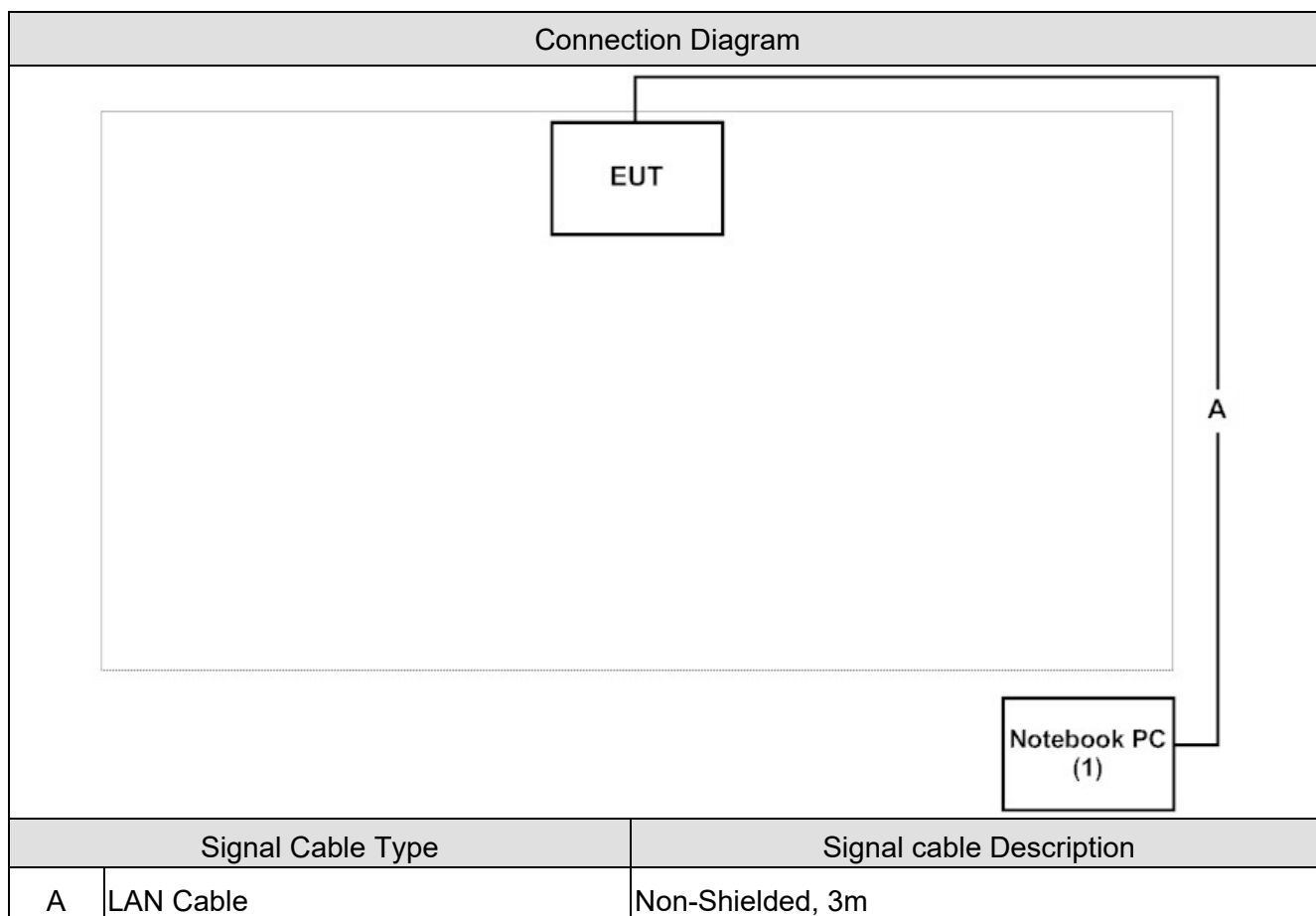
Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11ac(80MHz)	42/155	0+1+2+3	Complies
26dB& 99% & DTS Bandwidth	a	36/44/48/149/157/165	0/1/2/3	Complies
	11ac(20MHz)	36/44/48/149/157/165	0/1/2/3	Complies
	11ac(40MHz)	38/46/151/159	0/1/2/3	Complies
	11ac(80MHz)	42/155	0/1/2/3	Complies
	11ac(80+80MHz)	42/58	0/1/2/3	Complies
	11ac(160MHz)	114	0/1/2/3	Complies
Maximum conducted output power	a	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(20MHz)	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(40MHz)	38/46/151/159	0+1+2+3	Complies
	11ac(80MHz)	42/155	0+1+2+3	Complies
	11ac(80+80MHz)	42/58	0+1+2+3	Complies
	11ac(160MHz)	114	0+1+2+3	Complies
Maximum power spectral density	a	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(20MHz)	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(40MHz)	38/46/151/159	0+1+2+3	Complies
	11ac(80MHz)	42/155	0+1+2+3	Complies
	11ac(80+80MHz)	42/58	0+1+2+3	Complies
	11ac(160MHz)	114	0+1+2+3	Complies
Radiated Emission	a	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(20MHz)	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(40MHz)	38/46/151/159	0+1+2+3	Complies
	11ac(80MHz)	42/155	0+1+2+3	Complies
Band Edge	a	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(20MHz)	36/44/48/149/157/165	0+1+2+3	Complies
	11ac(40MHz)	38/46/151/159	0+1+2+3	Complies
	11ac(80MHz)	42/155	0+1+2+3	Complies
	11ac(80+80MHz)	42/58	0+1+2+3	Complies
	11ac(160MHz)	114	0+1+2+3	Complies

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1 Notebook PC	Lenovo	B590	WB15330091	DoC	Non-Shielded, 1.8m, one ferrite core bonded

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the "MTool 2.0.0.7" on the EUT.
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	FCC PART 15 E 15.407 Conducted Emission	15 - 35	20°C	3
Humidity (%RH)		25 - 75	50%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 E 15.407 26dB& 99% & DTS	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 E 15.407 Maximum conducted output power	15 - 35	25°C	3
Humidity (%RH)		25 - 75	65%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 E 15.407 Maximum power spectral density	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 E 15.407 Radiated Emission	15 - 35	25°C	2
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 E 15.407 Band Edge	15 - 35	25°C	2
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	

Note: Test site information refers to Laboratory Information.

Laboratory Information

USA : **FCC Registration Number: TW3024**
Canada **IC Registration Number: 22397-1 / 22397-2 / 22397-3**

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

- No. 75-2, 3rd Lin, WangYe Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan (R.O.C.)
TEL: +886-3-592-8858 / FAX: +886-3-592-8859 E-Mail : info.tw@dekra.com
- No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail : info.tw@dekra.com
- No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail : info.tw@dekra.com

1.7. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB) linear voltage	Power	1/T Minimum VBW (kHz)
802.11ac (VHT20)	2.968	3.016	98.41%	0.139349	0.070	0.01
802.11 ac (VHT40)	0.648	0.680	95.34%	0.414658	0.207	1.54
802.11ac (VHT80)	0.330	0.357	92.44%	0.683086	0.342	3.03

Note:

Offset = $20 \log(1/\text{duty cycle})$

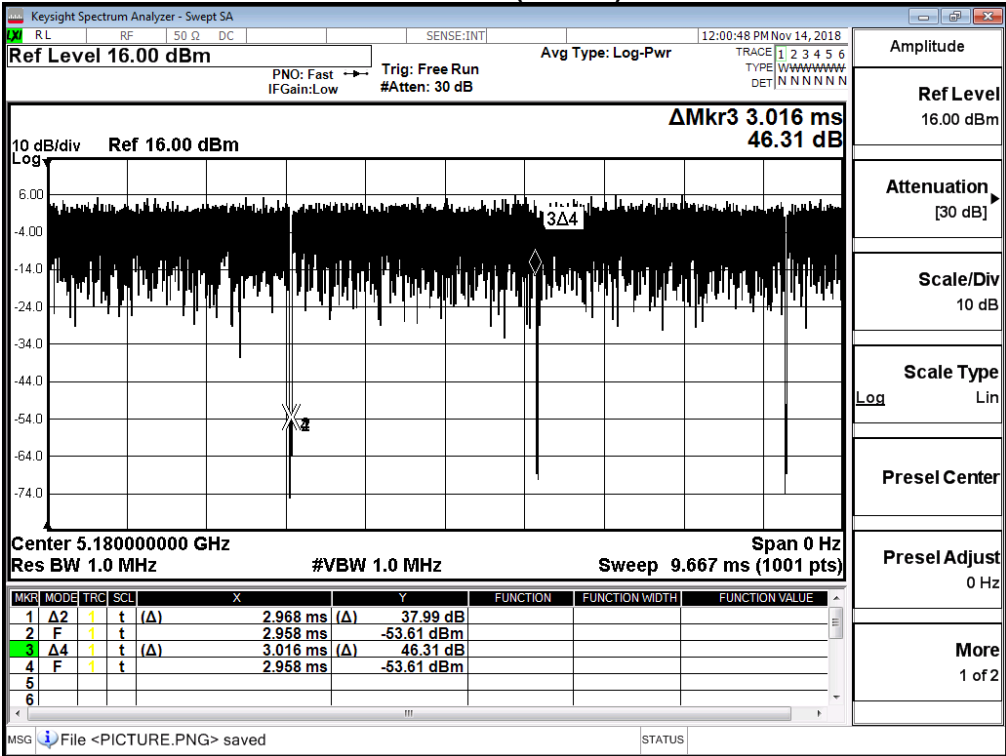
Accotding to KDB 789033

If power averaging (rms) mode was used in step (iv) above, the correction factor is $10 \log (1/x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB must be added to the measured emission levels.

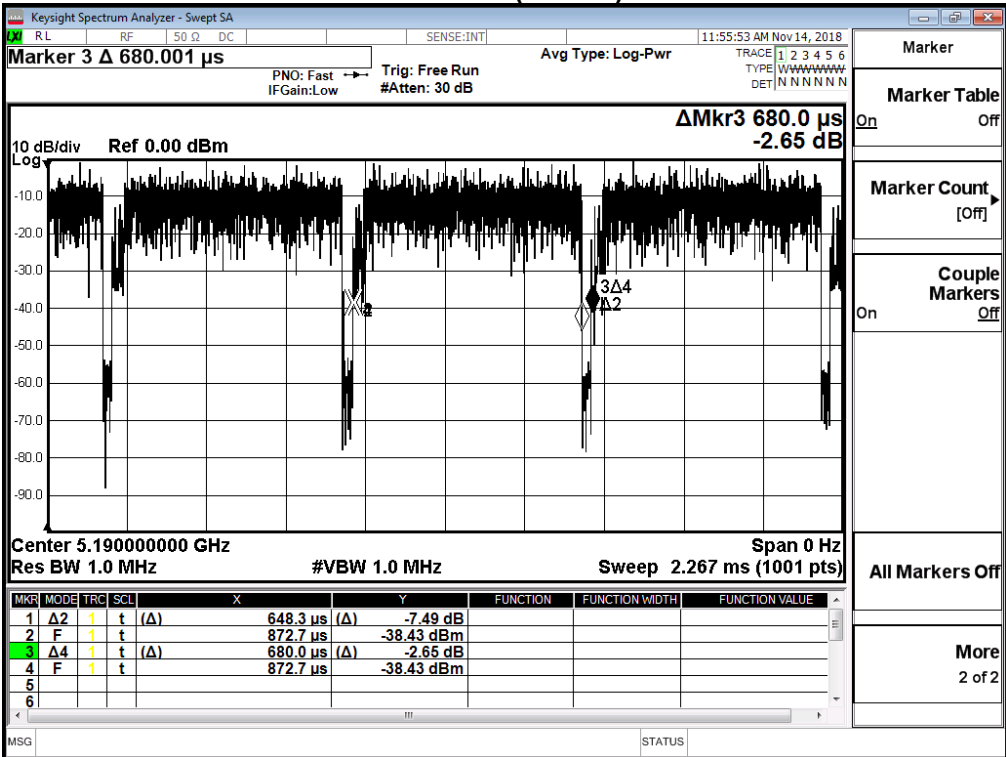
If linear voltage averaging mode was used in step (iv) above, the correction factor is $20 \log (1/x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB must be added to the measured emission levels.

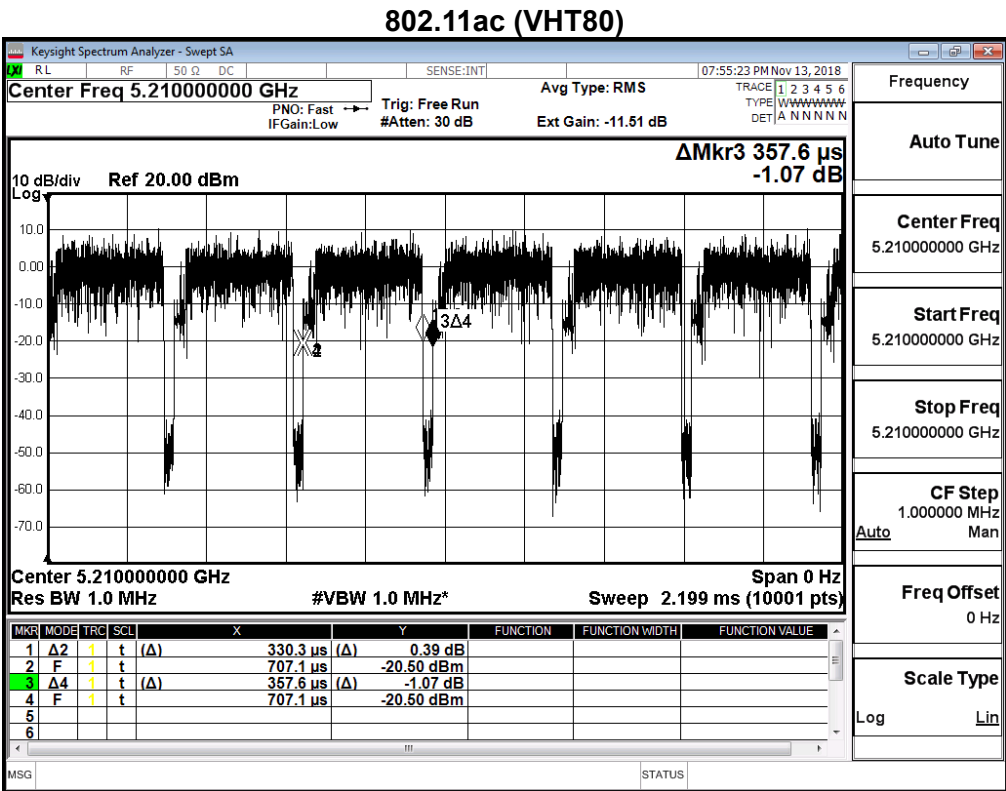
Accotding to KDB 789033 H)6) Method VB(Reduce VBW). $\text{VBW}=1/T$, T is pulse time.

802.11ac (VHT20)



802.11ac (VHT40)





1.8. List of Test Equipment

Conducted Emission / SR2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2018/01/22	2019/01/21
Test Receiver	R&S	ESCS 30	836858/022	2018/03/30	2019/03/29
LISN	R&S	ENV216	100092	2018/07/23	2019/07/22

26dB& 99% & DTS Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Spectrum Analyzer	Agilent	N9010A	US47140172	2018/07/18	2019/07/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09

Maximum conducted output power / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Spectrum Analyzer	Agilent	N9010A	US47140172	2018/07/18	2019/07/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09

Maximum power spectral density / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Spectrum Analyzer	Agilent	N9010A	US47140172	2018/07/18	2019/07/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09

Radiated Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2018/11/05	2019/11/04
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
Signal Analyzer	R&S	FSV40	101435	2018/07/19	2019/07/18
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2018/03/05	2019/03/04
Bilog Antenna	Teseq	CBL6112D	23191	2018/06/26	2019/06/25
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2018/06/01	2019/05/31
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2018/10/17	2019/10/16
Horn Antenna	Schwarzbeck	BBHA 9170	202	2018/01/31	2019/01/30
Horn Antenna	Schwarzbeck	BBHA 9170	203	2018/03/01	2019/02/28
Pre-Amplifier	Dekra	AP-025C	201801236	2018/02/26	2019/02/25
Pre-Amplifier	EMCI	EMC11830I	980366	2018/01/08	2019/01/07
Pre-Amplifier	Dekra	AP-400C	201801231	2018/12/05	2019/12/04
Band Reject Filter	Micro-Tronics	BRM50716	G089	2018/04/11	2019/04/10
Band Reject Filter	Micro-Tronics	BRM50716	G068	2018/04/11	2019/04/10
Coaxial Cable	Suhner	SF104_SF106_ SF104_SF102(23.5m)	CB4_1	2018/08/21	2019/08/20

Band Edge / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2018/11/05	2019/11/04
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
Signal Analyzer	R&S	FSV40	101435	2018/07/19	2019/07/18
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2018/03/05	2019/03/04
Bilog Antenna	Teseq	CBL6112D	23191	2018/06/26	2019/06/25
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2018/06/01	2019/05/31
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2018/10/17	2019/10/16
Horn Antenna	Schwarzbeck	BBHA 9170	202	2018/01/31	2019/01/30
Horn Antenna	Schwarzbeck	BBHA 9170	203	2018/03/01	2019/02/28
Pre-Amplifier	Dekra	AP-025C	201801236	2018/02/26	2019/02/25
Pre-Amplifier	EMCI	EMC11830I	980366	2018/01/08	2019/01/07
Band Reject Filter	Micro-Tronics	BRM50716	G089	2018/04/11	2019/04/10
Band Reject Filter	Micro-Tronics	BRM50716	G068	2018/04/11	2019/04/10
Coaxial Cable	Huber+Suhner	SF104_SF104_ SF104_SF104(16.0m)	CB2-H	2018/08/21	2019/08/20

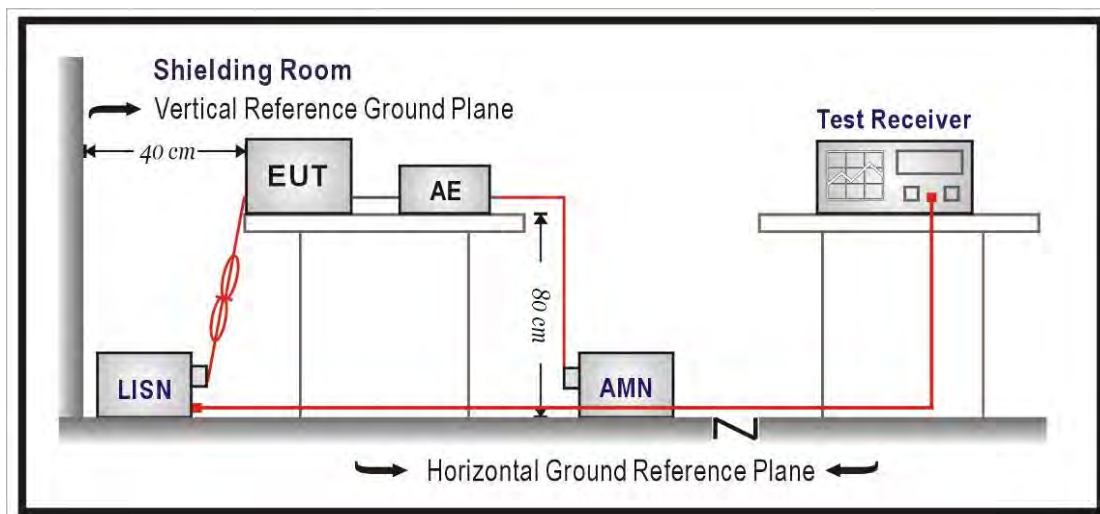
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

1.9. Uncertainty

Test item	Uncertainty
Conducted Emission	± 2.26 dB
26dB $\&$ 26dB $\&$ 99% & DTS Bandwidth	± 50 Hz
Maximum conducted output power	± 1.27 dB
Maximum power spectral density	± 1.27 dB
Radiated Emission	30MHz~1GHz as ± 3.43 dB 1GHz~26.5GHz as ± 3.65 dB
Band Edge	± 3.65 dB

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remark: In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013. 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.

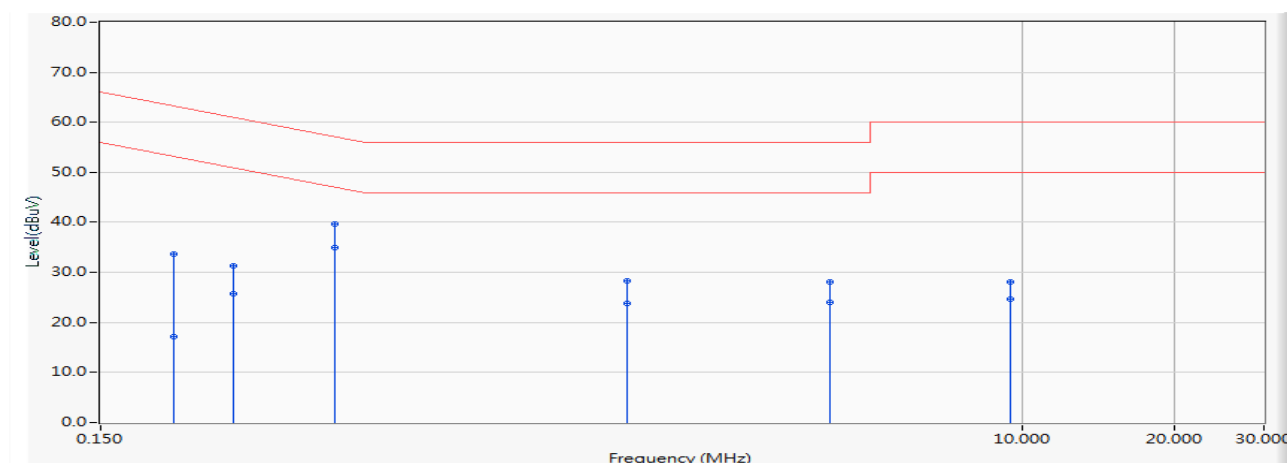
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2017

2.5. Test Result

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 1: Tx_ CDD Mode_ ADP1_ 802.11ac(80M)_ 5210MHz

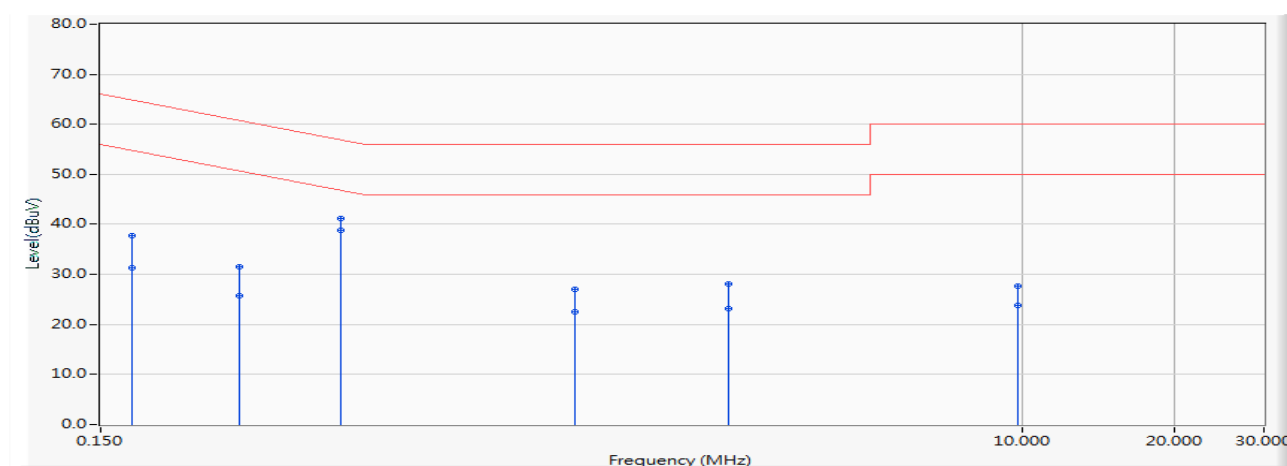


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.209	9.680	24.010	33.690	-29.571	63.261	QUASIPeAK
2		0.209	9.680	7.470	17.150	-36.111	53.261	AVERAGE
3		0.275	9.680	21.630	31.310	-29.656	60.966	QUASIPeAK
4		0.275	9.680	16.090	25.770	-25.196	50.966	AVERAGE
5		0.435	9.681	30.060	39.741	-17.413	57.154	QUASIPeAK
6	*	0.435	9.681	25.330	35.011	-12.143	47.154	AVERAGE
7		1.650	9.797	18.540	28.337	-27.663	56.000	QUASIPeAK
8		1.650	9.797	13.930	23.727	-22.273	46.000	AVERAGE
9		4.146	9.812	18.240	28.052	-27.948	56.000	QUASIPeAK
10		4.146	9.812	14.220	24.032	-21.968	46.000	AVERAGE
11		9.427	10.059	18.120	28.179	-31.821	60.000	QUASIPeAK
12		9.427	10.059	14.520	24.579	-25.421	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 1: Tx_ CDD Mode_ ADP1_ 802.11ac(80M)_ 5210MHz

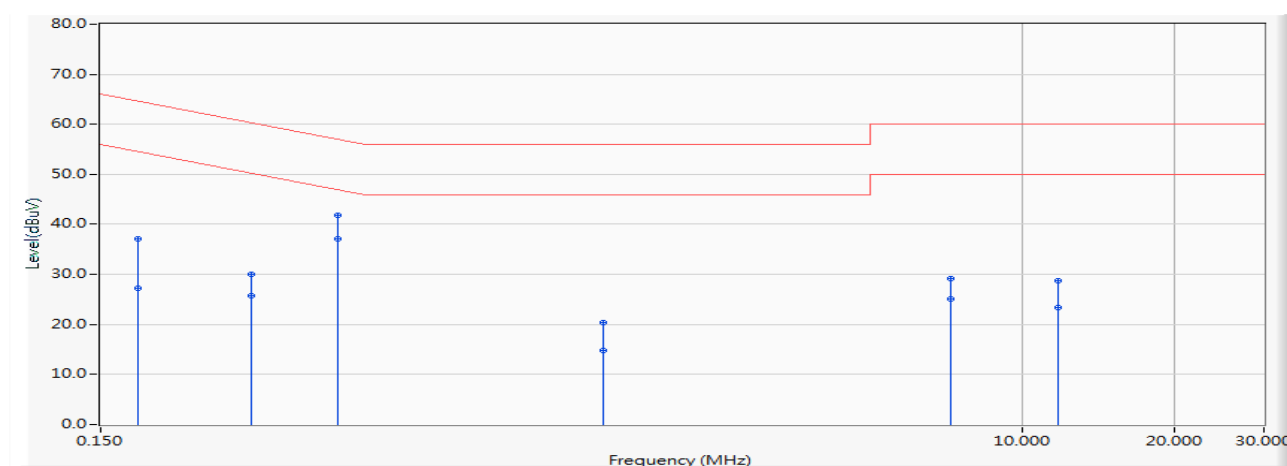


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.680	28.160	37.840	-26.954	64.794	QUASIPeAK
2		0.173	9.680	21.690	31.370	-23.424	54.794	AVERAGE
3		0.283	9.680	21.890	31.570	-29.163	60.733	QUASIPeAK
4		0.283	9.680	15.960	25.640	-25.093	50.733	AVERAGE
5		0.447	9.681	31.560	41.241	-15.692	56.933	QUASIPeAK
6	*	0.447	9.681	29.190	38.871	-8.062	46.933	AVERAGE
7		1.302	9.793	17.200	26.993	-29.007	56.000	QUASIPeAK
8		1.302	9.793	12.800	22.593	-23.407	46.000	AVERAGE
9		2.623	9.806	18.290	28.096	-27.904	56.000	QUASIPeAK
10		2.623	9.806	13.420	23.226	-22.774	46.000	AVERAGE
11		9.767	10.069	17.700	27.768	-32.232	60.000	QUASIPeAK
12		9.767	10.069	13.800	23.868	-26.132	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 1: Tx_ CDD Mode_ ADP1_ 802.11ac(80M)_5775MHz

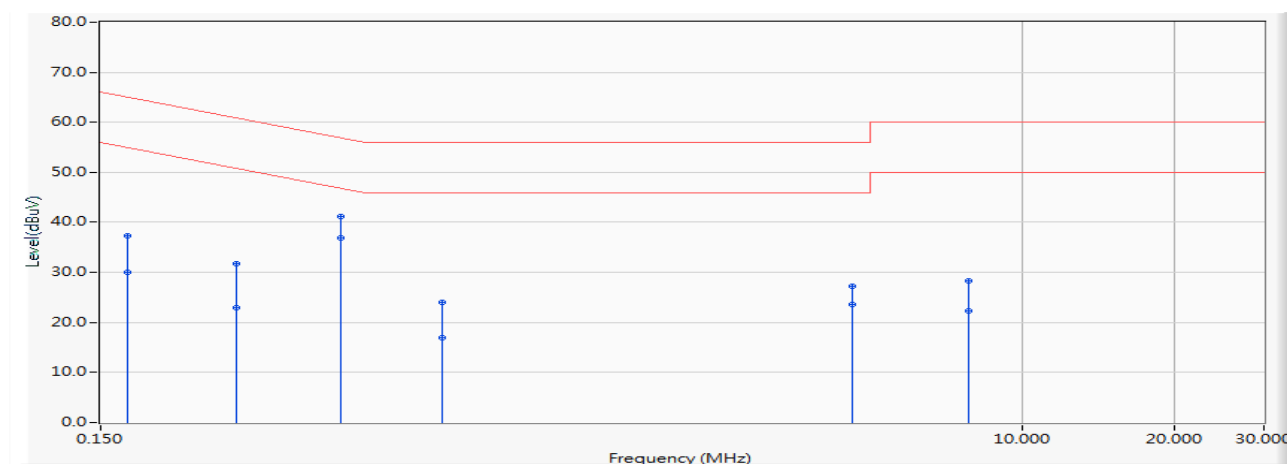


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.680	27.370	37.050	-27.559	64.609	QUASIPeAK
2		0.177	9.680	17.600	27.280	-27.329	54.609	AVERAGE
3		0.298	9.680	20.290	29.970	-30.316	60.286	QUASIPeAK
4		0.298	9.680	16.040	25.720	-24.566	50.286	AVERAGE
5		0.443	9.681	32.120	41.801	-15.205	57.006	QUASIPeAK
6	*	0.443	9.681	27.420	37.101	-9.905	47.006	AVERAGE
7		1.478	9.795	10.670	20.465	-35.535	56.000	QUASIPeAK
8		1.478	9.795	4.930	14.725	-31.275	46.000	AVERAGE
9		7.216	9.942	19.260	29.202	-30.798	60.000	QUASIPeAK
10		7.216	9.942	15.250	25.192	-24.808	50.000	AVERAGE
11		11.716	10.180	18.560	28.739	-31.261	60.000	QUASIPeAK
12		11.716	10.180	13.270	23.449	-26.551	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 1: Tx_ CDD Mode_ ADP1_ 802.11ac(80M)_5775MHz

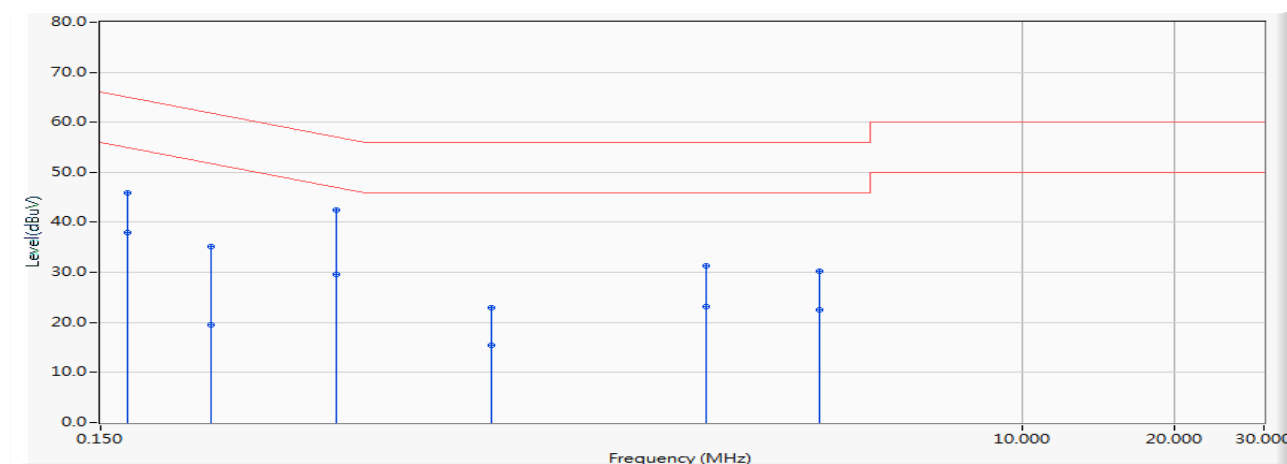


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.680	27.690	37.370	-27.613	64.983	QUASIPeAK
2		0.170	9.680	20.250	29.930	-25.053	54.983	AVERAGE
3		0.279	9.680	22.160	31.840	-29.008	60.848	QUASIPeAK
4		0.279	9.680	13.230	22.910	-27.938	50.848	AVERAGE
5		0.447	9.681	31.600	41.281	-15.652	56.933	QUASIPeAK
6	*	0.447	9.681	27.110	36.791	-10.142	46.933	AVERAGE
7		0.709	9.727	14.230	23.957	-32.043	56.000	QUASIPeAK
8		0.709	9.727	7.300	17.027	-28.973	46.000	AVERAGE
9		4.595	9.826	17.440	27.266	-28.734	56.000	QUASIPeAK
10		4.595	9.826	13.660	23.486	-22.514	46.000	AVERAGE
11		7.830	9.971	18.400	28.372	-31.628	60.000	QUASIPeAK
12		7.830	9.971	12.280	22.252	-27.748	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 2: Tx_ CDD Mode_ ADP3_ 802.11ac(80M)_5210MHz

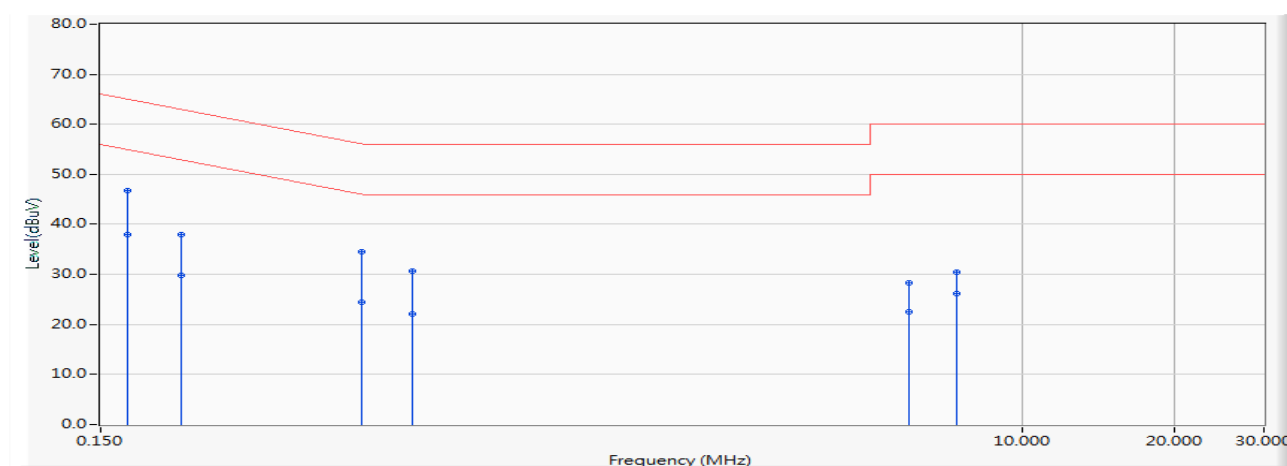


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.680	36.300	45.980	-19.003	64.983	QUASIPeAK
2		0.170	9.680	28.280	37.960	-17.023	54.983	AVERAGE
3		0.248	9.680	25.580	35.260	-26.575	61.835	QUASIPeAK
4		0.248	9.680	9.900	19.580	-32.255	51.835	AVERAGE
5	*	0.439	9.681	32.810	42.491	-14.589	57.079	QUASIPeAK
6		0.439	9.681	20.000	29.681	-17.399	47.079	AVERAGE
7		0.888	9.765	13.150	22.916	-33.084	56.000	QUASIPeAK
8		0.888	9.765	5.720	15.486	-30.514	46.000	AVERAGE
9		2.361	9.802	21.480	31.282	-24.718	56.000	QUASIPeAK
10		2.361	9.802	13.280	23.082	-22.918	46.000	AVERAGE
11		3.955	9.810	20.480	30.290	-25.710	56.000	QUASIPeAK
12		3.955	9.810	12.710	22.520	-23.480	46.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 2: Tx_ CDD Mode_ ADP3_ 802.11ac(80M)_5210MHz

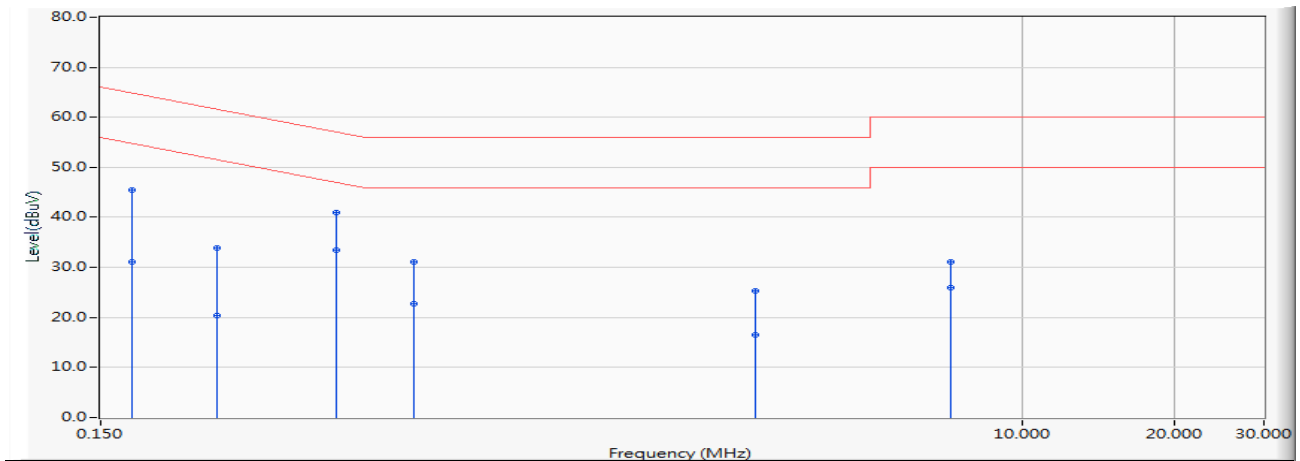


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.680	36.970	46.650	-18.333	64.983	QUASIPeAK
2	*	0.170	9.680	28.350	38.030	-16.953	54.983	AVERAGE
3		0.216	9.680	28.330	38.010	-24.946	62.956	QUASIPeAK
4		0.216	9.680	20.170	29.850	-23.106	52.956	AVERAGE
5		0.494	9.682	24.760	34.442	-21.662	56.104	QUASIPeAK
6		0.494	9.682	14.870	24.552	-21.552	46.104	AVERAGE
7		0.619	9.708	20.900	30.607	-25.393	56.000	QUASIPeAK
8		0.619	9.708	12.330	22.037	-23.963	46.000	AVERAGE
9		5.943	9.877	18.500	28.377	-31.623	60.000	QUASIPeAK
10		5.943	9.877	12.570	22.447	-27.553	50.000	AVERAGE
11		7.392	9.950	20.440	30.390	-29.610	60.000	QUASIPeAK
12		7.392	9.950	16.230	26.180	-23.820	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 2: Tx_ CDD Mode_ ADP3_ 802.11ac(80M)_5775MHz

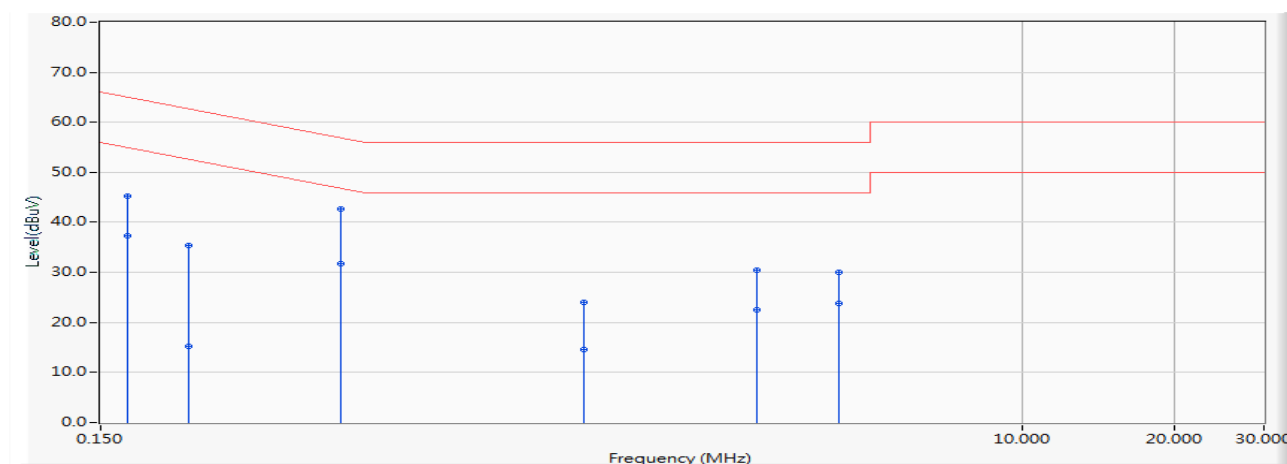


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.680	35.890	45.570	-19.224	64.794	QUASIPeAK
2		0.173	9.680	21.510	31.190	-23.604	54.794	AVERAGE
3		0.255	9.680	24.140	33.820	-27.757	61.577	QUASIPeAK
4		0.255	9.680	10.660	20.340	-31.237	51.577	AVERAGE
5		0.439	9.681	31.320	41.001	-16.079	57.079	QUASIPeAK
6	*	0.439	9.681	23.740	33.421	-13.659	47.079	AVERAGE
7		0.623	9.708	21.450	31.158	-24.842	56.000	QUASIPeAK
8		0.623	9.708	13.110	22.818	-23.182	46.000	AVERAGE
9		2.959	9.805	15.600	25.405	-30.595	56.000	QUASIPeAK
10		2.959	9.805	6.740	16.545	-29.455	46.000	AVERAGE
11		7.205	9.941	21.200	31.141	-28.859	60.000	QUASIPeAK
12		7.205	9.941	15.930	25.871	-24.129	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/10/12
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 2: Tx_ CDD Mode_ ADP3_ 802.11ac(80M)_5775MHz

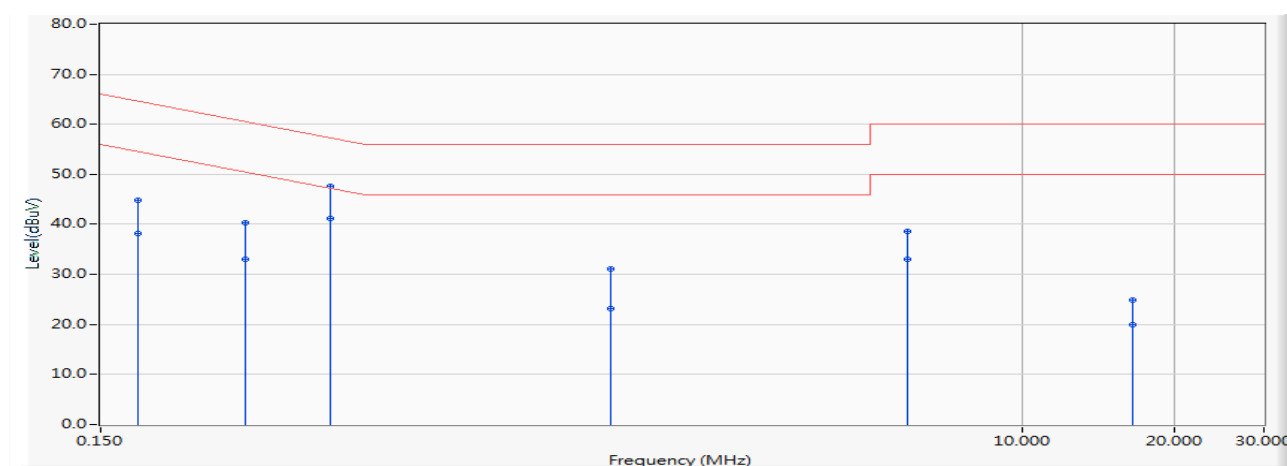


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.680	35.670	45.350	-19.633	64.983	QUASIPeAK
2		0.170	9.680	27.730	37.410	-17.573	54.983	AVERAGE
3		0.224	9.680	25.760	35.440	-27.221	62.661	QUASIPeAK
4		0.224	9.680	5.530	15.210	-37.451	52.661	AVERAGE
5	*	0.447	9.681	33.070	42.751	-14.182	56.933	QUASIPeAK
6		0.447	9.681	22.070	31.751	-15.182	46.933	AVERAGE
7		1.357	9.794	14.180	23.974	-32.026	56.000	QUASIPeAK
8		1.357	9.794	4.740	14.534	-31.466	46.000	AVERAGE
9		2.978	9.810	20.640	30.450	-25.550	56.000	QUASIPeAK
10		2.978	9.810	12.690	22.500	-23.500	46.000	AVERAGE
11		4.314	9.823	20.170	29.993	-26.007	56.000	QUASIPeAK
12		4.314	9.823	14.070	23.893	-22.107	46.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 3: Tx_ CDD Mode_ ADP4_ 802.11ac(80M)_5210MHz

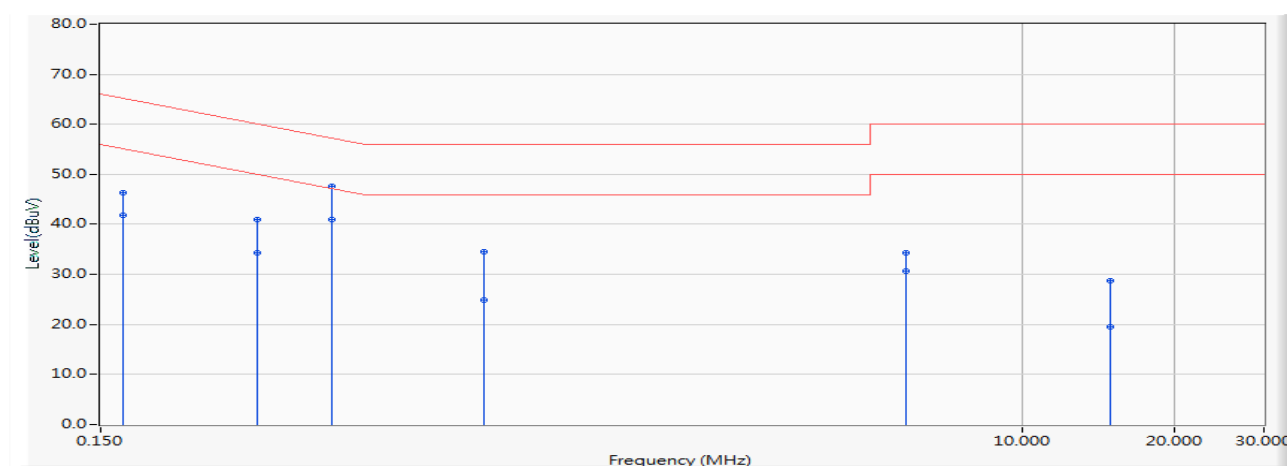


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.680	35.180	44.860	-19.749	64.609	QUASIPeAK
2		0.177	9.680	28.470	38.150	-16.459	54.609	AVERAGE
3		0.291	9.680	30.560	40.240	-20.267	60.507	QUASIPeAK
4		0.291	9.680	23.370	33.050	-17.457	50.507	AVERAGE
5		0.427	9.680	38.010	47.690	-9.614	57.304	QUASIPeAK
6	*	0.427	9.680	31.430	41.110	-6.194	47.304	AVERAGE
7		1.529	9.795	21.300	31.095	-24.905	56.000	QUASIPeAK
8		1.529	9.795	13.300	23.095	-22.905	46.000	AVERAGE
9		5.923	9.873	28.640	38.513	-21.487	60.000	QUASIPeAK
10		5.923	9.873	23.230	33.103	-16.897	50.000	AVERAGE
11		16.517	10.368	14.590	24.958	-35.042	60.000	QUASIPeAK
12		16.517	10.368	9.600	19.968	-30.032	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 3: Tx_ CDD Mode_ ADP4_ 802.11ac(80M)_5210MHz

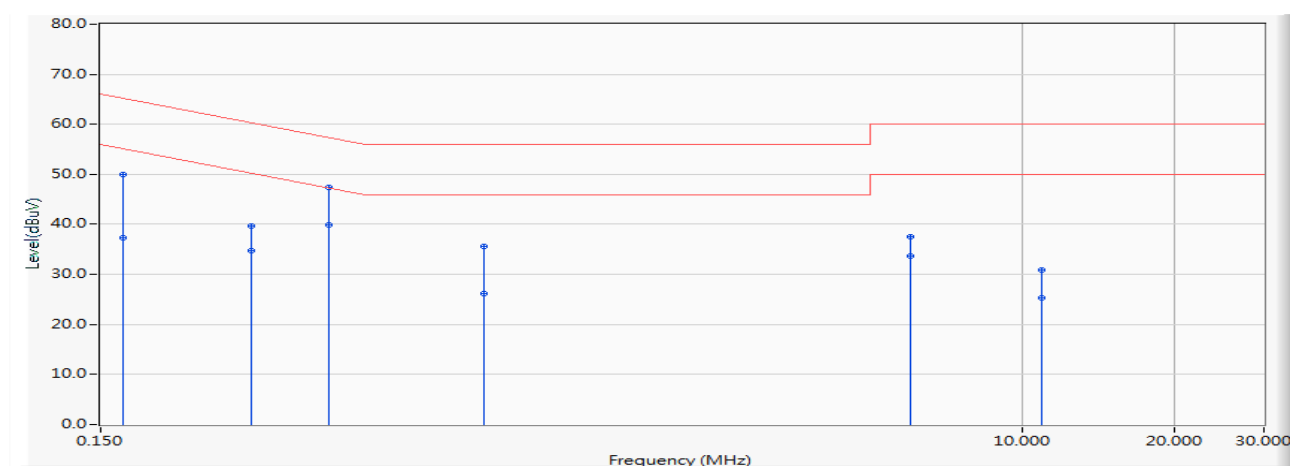


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.680	36.740	46.420	-18.757	65.177	QUASIPeAK
2		0.166	9.680	32.150	41.830	-13.347	55.177	AVERAGE
3		0.306	9.680	31.330	41.010	-19.062	60.072	QUASIPeAK
4		0.306	9.680	24.600	34.280	-15.792	50.072	AVERAGE
5		0.431	9.681	37.850	47.531	-9.698	57.229	QUASIPeAK
6	*	0.431	9.681	31.200	40.881	-6.348	47.229	AVERAGE
7		0.861	9.760	24.730	34.490	-21.510	56.000	QUASIPeAK
8		0.861	9.760	15.030	24.790	-21.210	46.000	AVERAGE
9		5.869	9.874	24.420	34.293	-25.707	60.000	QUASIPeAK
10		5.869	9.874	20.770	30.643	-19.357	50.000	AVERAGE
11		14.908	10.315	18.350	28.666	-31.334	60.000	QUASIPeAK
12		14.908	10.315	9.280	19.596	-30.404	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 3: Tx_ CDD Mode_ ADP4_ 802.11ac(80M)_ 5775MHz

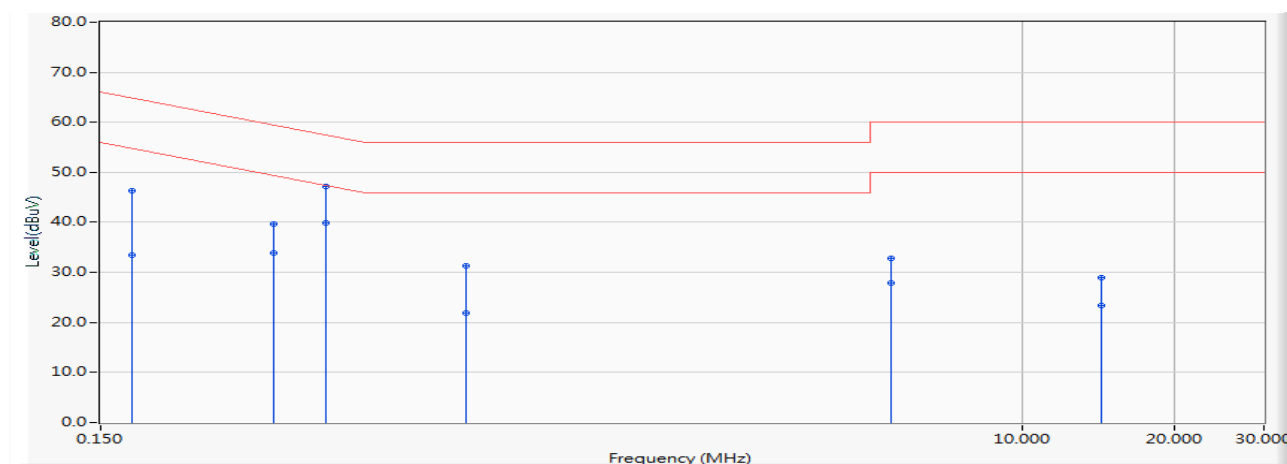


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.680	40.360	50.040	-15.137	65.177	QUASIPeAK
2		0.166	9.680	27.700	37.380	-17.797	55.177	AVERAGE
3		0.298	9.680	29.990	39.670	-20.616	60.286	QUASIPeAK
4		0.298	9.680	24.980	34.660	-15.626	50.286	AVERAGE
5		0.423	9.680	37.730	47.410	-9.970	57.380	QUASIPeAK
6	*	0.423	9.680	30.250	39.930	-7.450	47.380	AVERAGE
7		0.861	9.760	25.810	35.570	-20.430	56.000	QUASIPeAK
8		0.861	9.760	16.510	26.270	-19.730	46.000	AVERAGE
9		6.009	9.877	27.550	37.427	-22.573	60.000	QUASIPeAK
10		6.009	9.877	23.700	33.577	-16.423	50.000	AVERAGE
11		10.912	10.137	20.760	30.897	-29.103	60.000	QUASIPeAK
12		10.912	10.137	15.110	25.247	-24.753	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 3: Tx_ CDD Mode_ ADP4_ 802.11ac(80M)_5775MHz

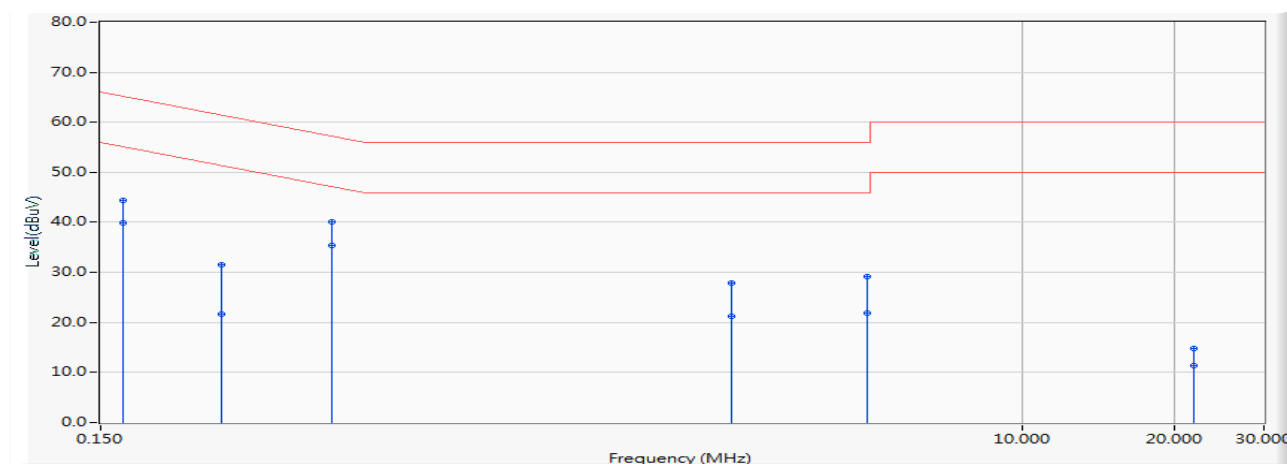


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.680	36.660	46.340	-18.454	64.794	QUASIPeAK
2		0.173	9.680	23.710	33.390	-21.404	54.794	AVERAGE
3		0.330	9.680	29.900	39.580	-19.879	59.459	QUASIPeAK
4		0.330	9.680	24.130	33.810	-15.649	49.459	AVERAGE
5		0.420	9.680	37.510	47.190	-10.267	57.457	QUASIPeAK
6	*	0.420	9.680	30.210	39.890	-7.567	47.457	AVERAGE
7		0.791	9.745	21.540	31.284	-24.716	56.000	QUASIPeAK
8		0.791	9.745	12.050	21.794	-24.206	46.000	AVERAGE
9		5.482	9.854	22.940	32.794	-27.206	60.000	QUASIPeAK
10		5.482	9.854	18.050	27.904	-22.096	50.000	AVERAGE
11		14.283	10.285	18.600	28.886	-31.114	60.000	QUASIPeAK
12		14.283	10.285	13.160	23.446	-26.554	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 4: Tx_ CDD Mode_ ADP5_ 802.11ac(80M)_5210MHz

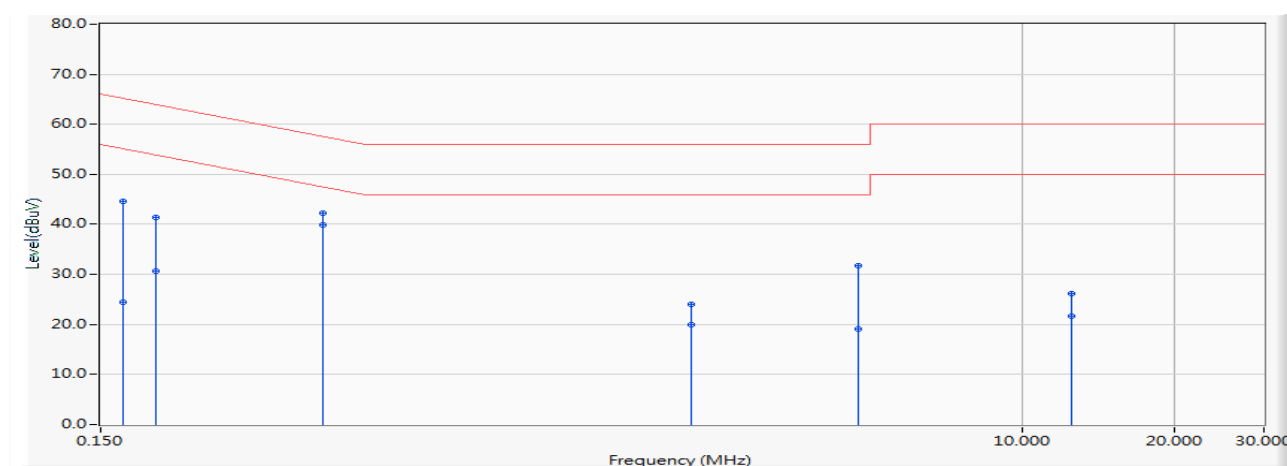


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.680	34.610	44.290	-20.887	65.177	QUASIPeAK
2		0.166	9.680	30.140	39.820	-15.357	55.177	AVERAGE
3		0.259	9.680	21.950	31.630	-29.821	61.451	QUASIPeAK
4		0.259	9.680	12.070	21.750	-29.701	51.451	AVERAGE
5		0.431	9.681	30.370	40.051	-17.178	57.229	QUASIPeAK
6	*	0.431	9.681	25.690	35.371	-11.858	47.229	AVERAGE
7		2.650	9.803	18.050	27.853	-28.147	56.000	QUASIPeAK
8		2.650	9.803	11.440	21.243	-24.757	46.000	AVERAGE
9		4.939	9.823	19.240	29.063	-26.937	56.000	QUASIPeAK
10		4.939	9.823	12.040	21.863	-24.137	46.000	AVERAGE
11		21.849	10.423	4.460	14.883	-45.117	60.000	QUASIPeAK
12		21.849	10.423	1.020	11.443	-38.557	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 4: Tx_ CDD Mode_ ADP5_ 802.11ac(80M)_5210MHz

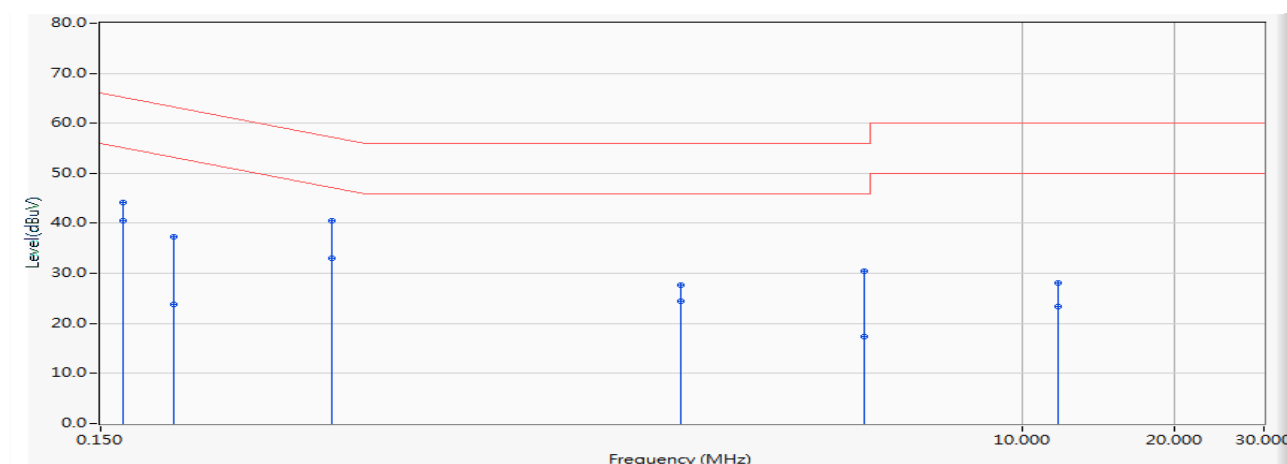


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.680	34.860	44.540	-20.637	65.177	QUASIPeAK
2		0.166	9.680	14.810	24.490	-30.687	55.177	AVERAGE
3		0.193	9.680	31.690	41.370	-22.538	63.908	QUASIPeAK
4		0.193	9.680	20.940	30.620	-23.288	53.908	AVERAGE
5		0.412	9.680	32.530	42.210	-15.403	57.614	QUASIPeAK
6	*	0.412	9.680	30.280	39.960	-7.653	47.614	AVERAGE
7		2.216	9.802	14.210	24.012	-31.988	56.000	QUASIPeAK
8		2.216	9.802	10.220	20.022	-25.978	46.000	AVERAGE
9		4.720	9.827	21.870	31.697	-24.303	56.000	QUASIPeAK
10		4.720	9.827	9.220	19.047	-26.953	46.000	AVERAGE
11		12.502	10.200	16.060	26.260	-33.740	60.000	QUASIPeAK
12		12.502	10.200	11.450	21.650	-28.350	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line1	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 4: Tx_ CDD Mode_ ADP5_ 802.11ac(80M)_5775MHz

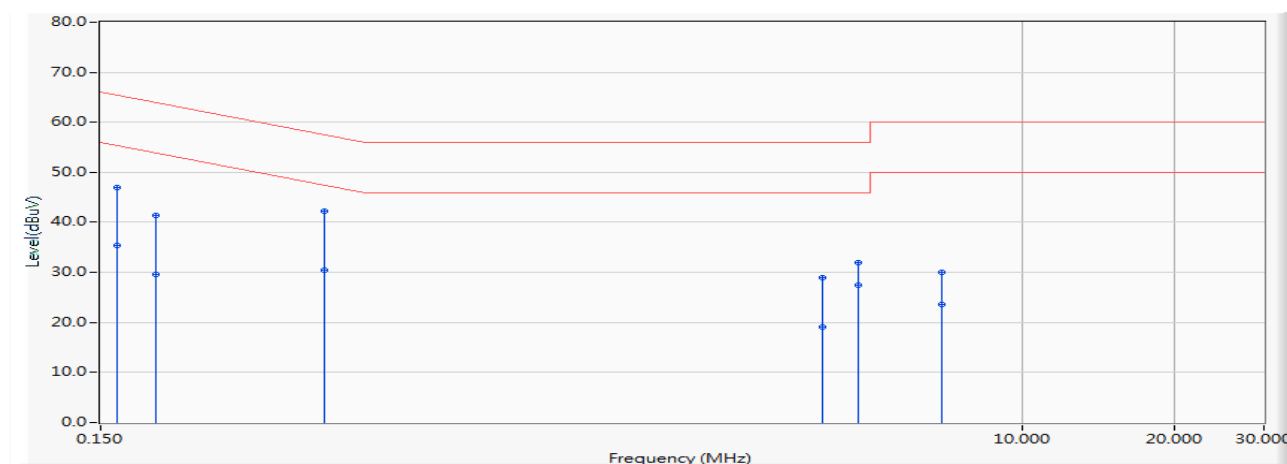


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.680	34.590	44.270	-20.907	65.177	QUASIPeAK
2		0.166	9.680	30.750	40.430	-14.747	55.177	AVERAGE
3		0.209	9.680	27.540	37.220	-26.041	63.261	QUASIPeAK
4		0.209	9.680	14.100	23.780	-29.481	53.261	AVERAGE
5		0.431	9.681	30.890	40.571	-16.658	57.229	QUASIPeAK
6	*	0.431	9.681	23.330	33.011	-14.218	47.229	AVERAGE
7		2.111	9.801	17.870	27.671	-28.329	56.000	QUASIPeAK
8		2.111	9.801	14.590	24.391	-21.609	46.000	AVERAGE
9		4.845	9.821	20.530	30.351	-25.649	56.000	QUASIPeAK
10		4.845	9.821	7.490	17.311	-28.689	46.000	AVERAGE
11		11.728	10.180	17.990	28.170	-31.830	60.000	QUASIPeAK
12		11.728	10.180	13.140	23.320	-26.680	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/12/05
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-B127_LISN(16A)-8 - Line2	Power : AC 120V/60Hz
EUT : Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router	Note : Mode 4: Tx_ CDD Mode_ ADP5_ 802.11ac(80M)_5775MHz



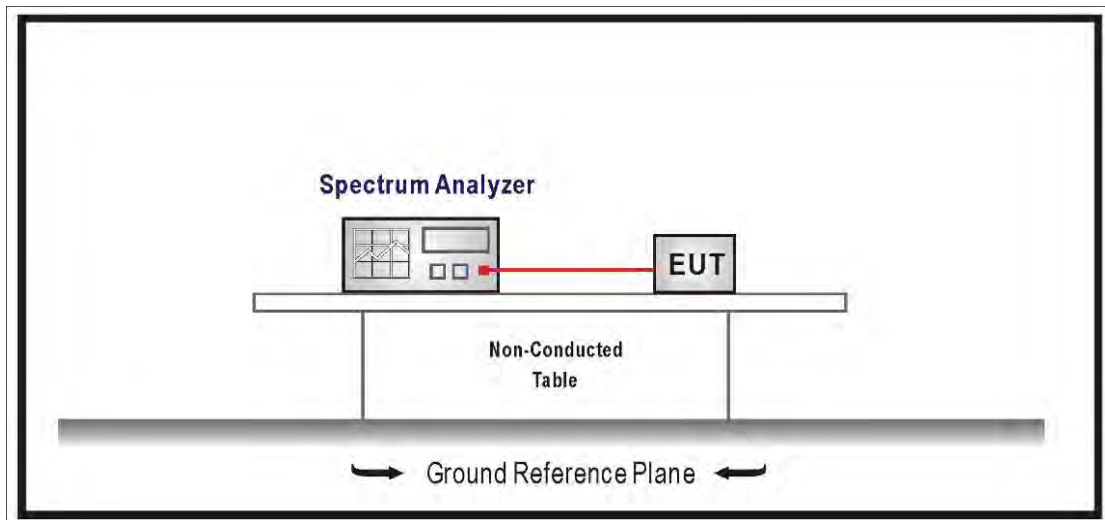
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.680	37.320	47.000	-18.375	65.375	QUASIPeAK
2		0.162	9.680	25.710	35.390	-19.985	55.375	AVERAGE
3		0.193	9.680	31.650	41.330	-22.578	63.908	QUASIPeAK
4		0.193	9.680	20.000	29.680	-24.228	53.908	AVERAGE
5	*	0.416	9.680	32.550	42.230	-15.305	57.535	QUASIPeAK
6		0.416	9.680	20.730	30.410	-17.125	47.535	AVERAGE
7		4.025	9.820	19.110	28.930	-27.070	56.000	QUASIPeAK
8		4.025	9.820	9.200	19.020	-26.980	46.000	AVERAGE
9		4.740	9.827	22.030	31.857	-24.143	56.000	QUASIPeAK
10		4.740	9.827	17.620	27.447	-18.553	46.000	AVERAGE
11		6.904	9.925	20.070	29.995	-30.005	60.000	QUASIPeAK
12		6.904	9.925	13.690	23.615	-26.385	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. 26dB & 99% & DTS Bandwidth

3.1. Test Setup



3.2. Limits

99% & 26dB Bandwidth : No Required

6dB Bandwidth $\geq$ 500KHz

3.3. Test Procedure

99% & 26dB Bandwidth :

The EUT was tested according to U-NII test procedure of KDB 789033.v01r02

Set RBW 1% of the emission bandwidth, VBW equal to 3 times the RBW.

DTS Bandwidth :

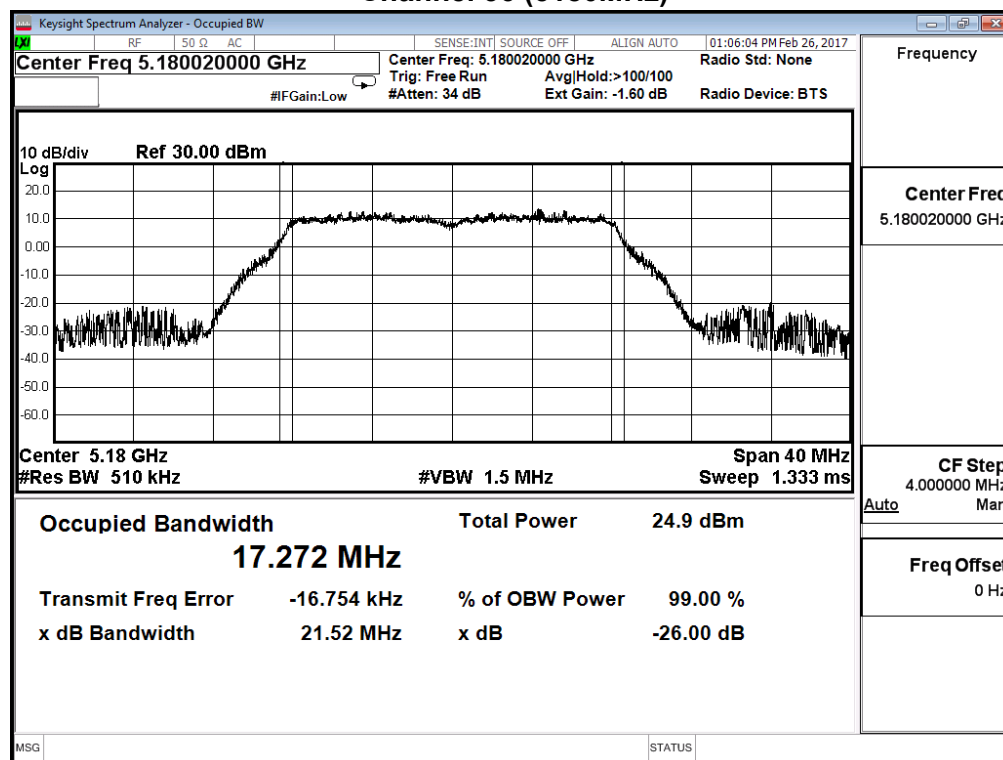
Set RBW = 100KHz, VBW $\geq$ 3xRBW, Sweep time=Auto, Set Peak detector.

3.4. Test Result

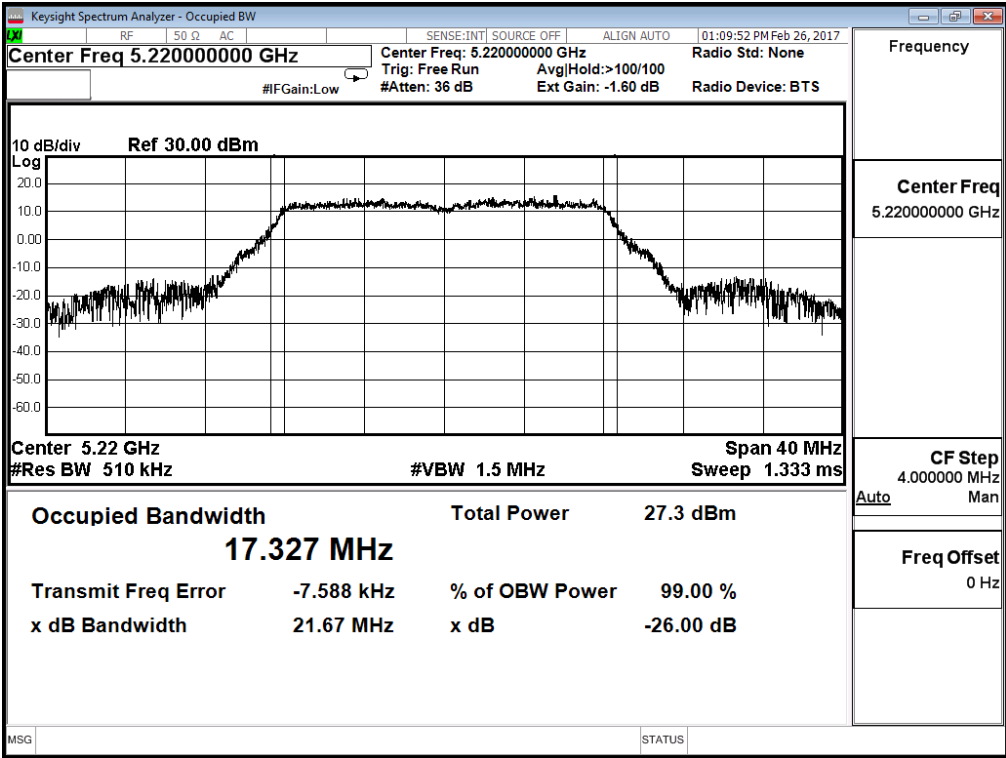
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_CDD Mode_ADPI		
Date of Test	2017/02/26	Test Site	SR10-H

IEEE 802.11a (ANT 0)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	17.272	--
44	5220	17.327	--
48	5240	19.200	--

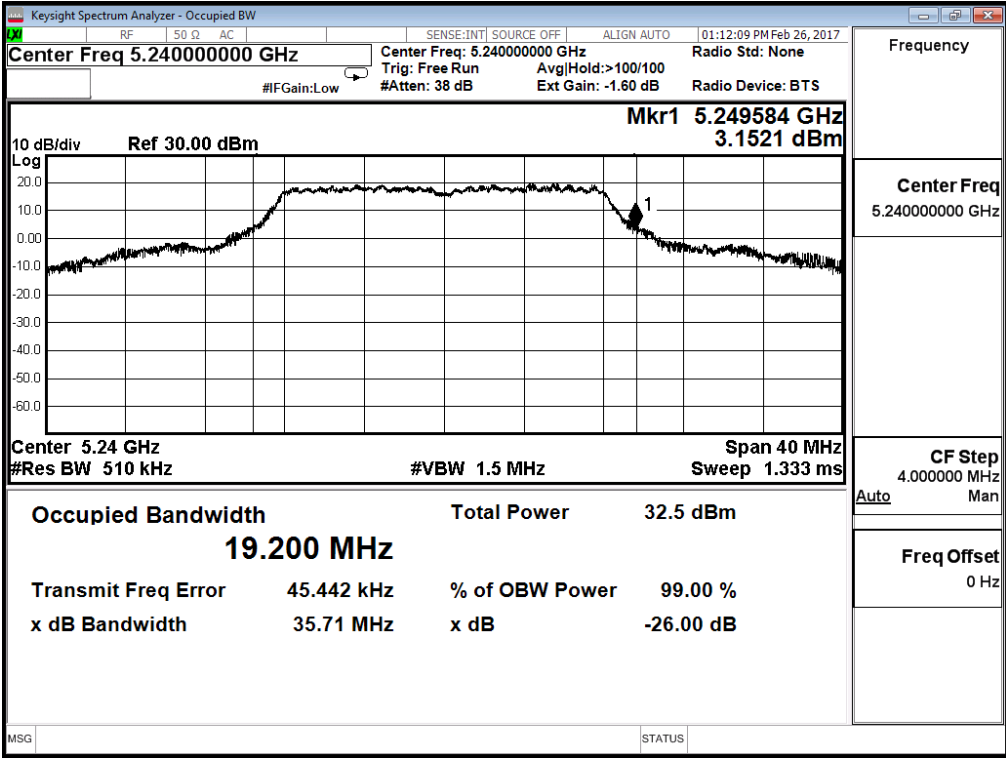
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)

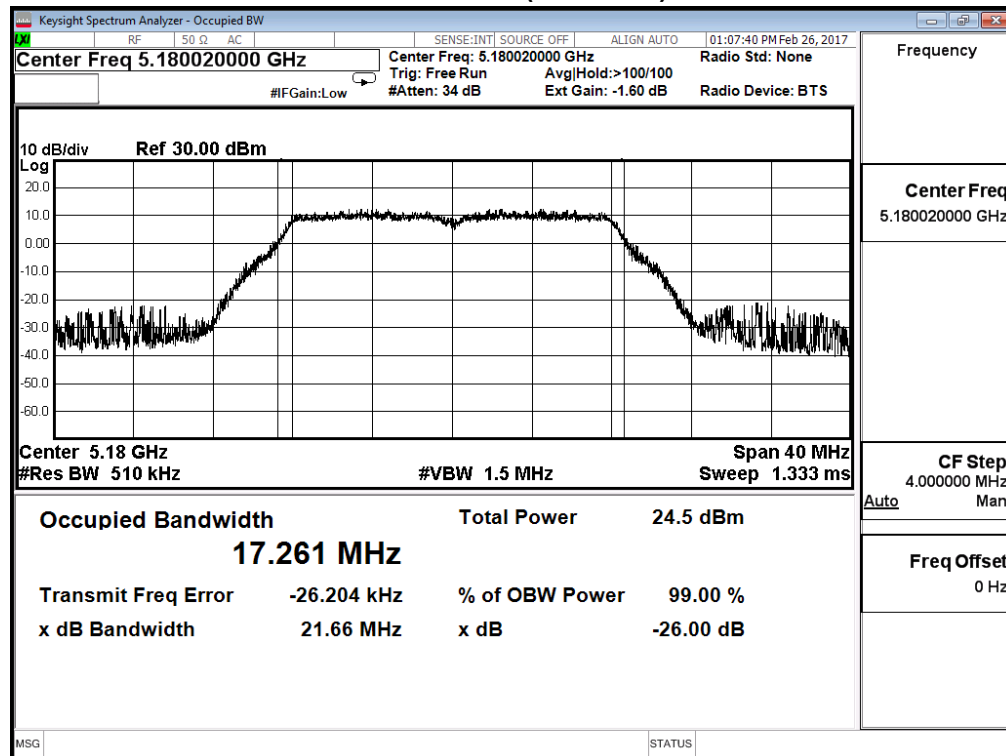


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_ CDD Mode_ ADP1		
Date of Test	2017/02/26	Test Site	SR10-H

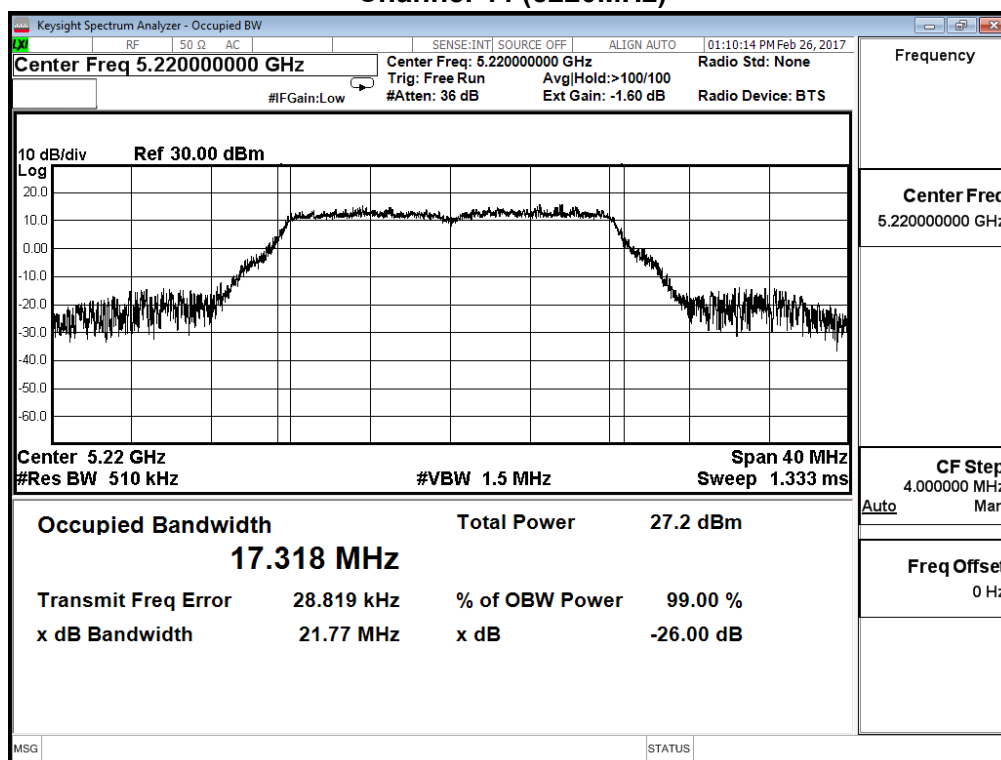
IEEE 802.11a (ANT 1)

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	17.261	--
44	5220	17.318	--
48	5240	19.172	--

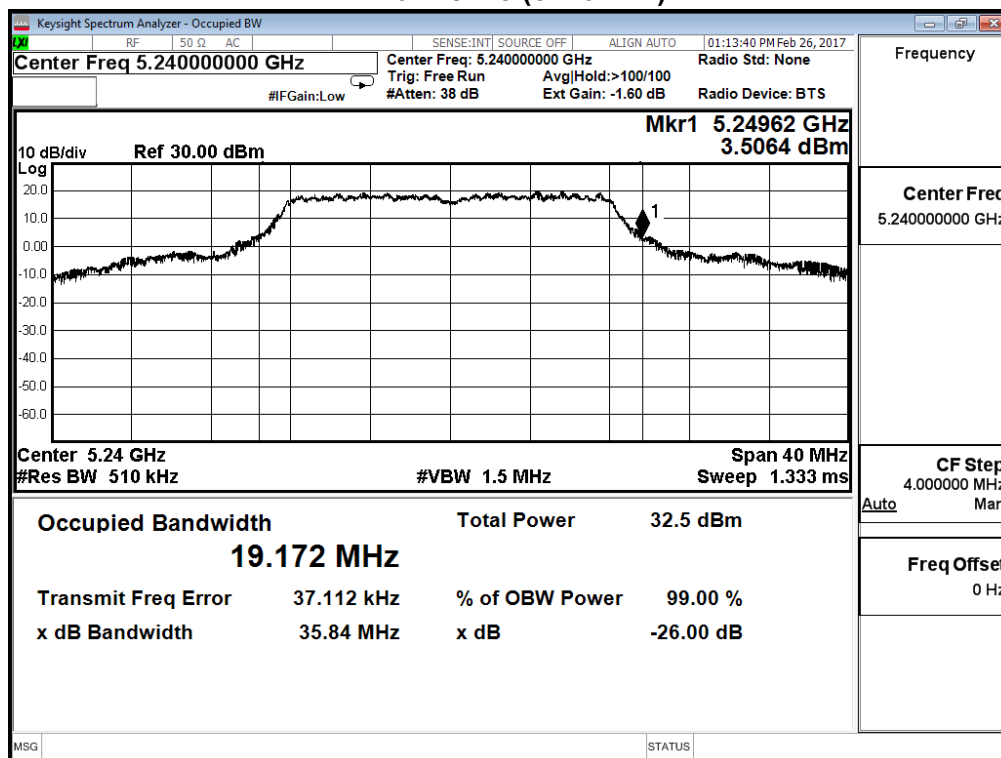
Channel 36 (5180MHz)



Channel 44 (5220MHz)



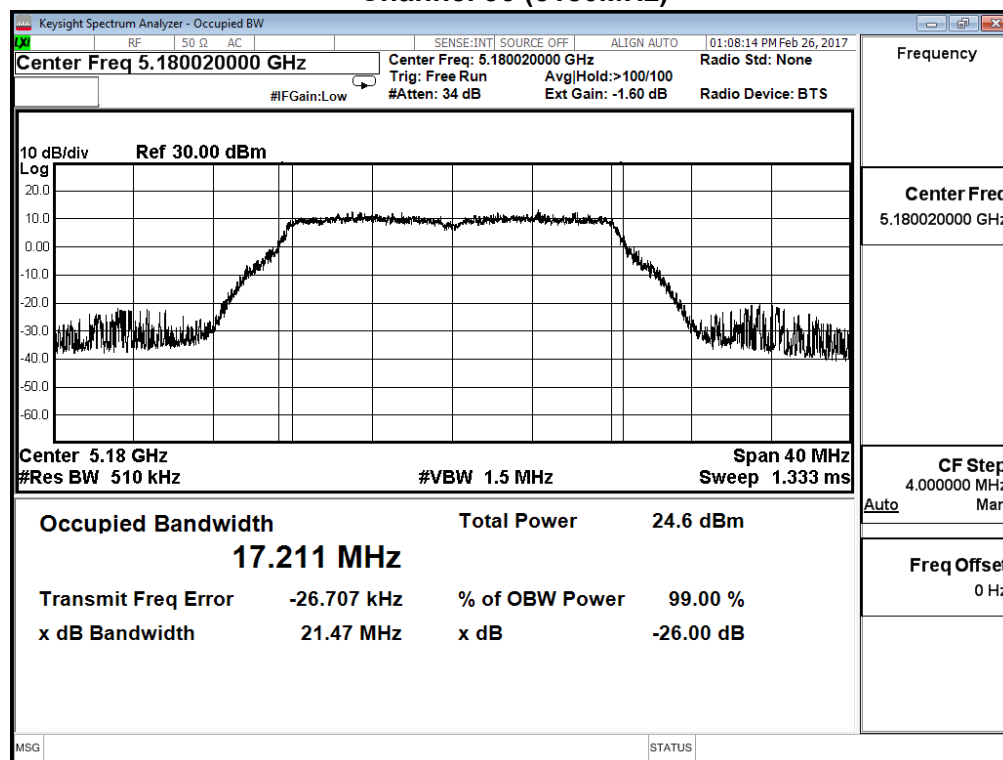
Channel 48 (5240MHz)



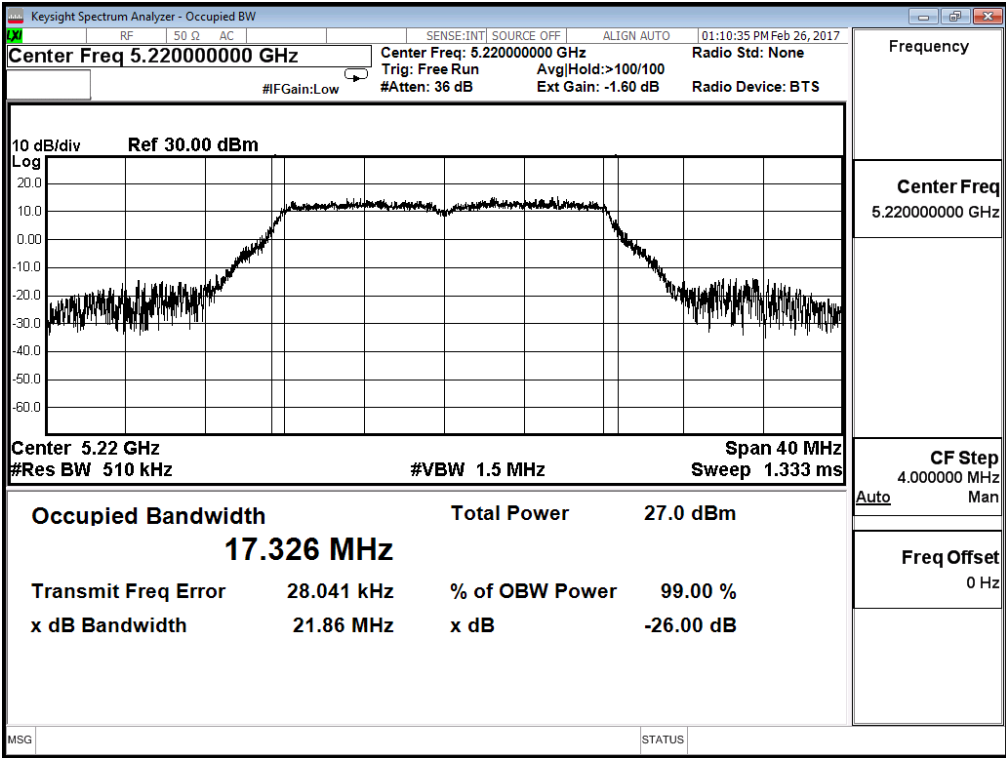
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_CDD Mode_ADPI		
Date of Test	2017/02/26	Test Site	SR10-H

IEEE 802.11a (ANT 2)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	17.211	--
44	5220	17.326	--
48	5240	18.863	--

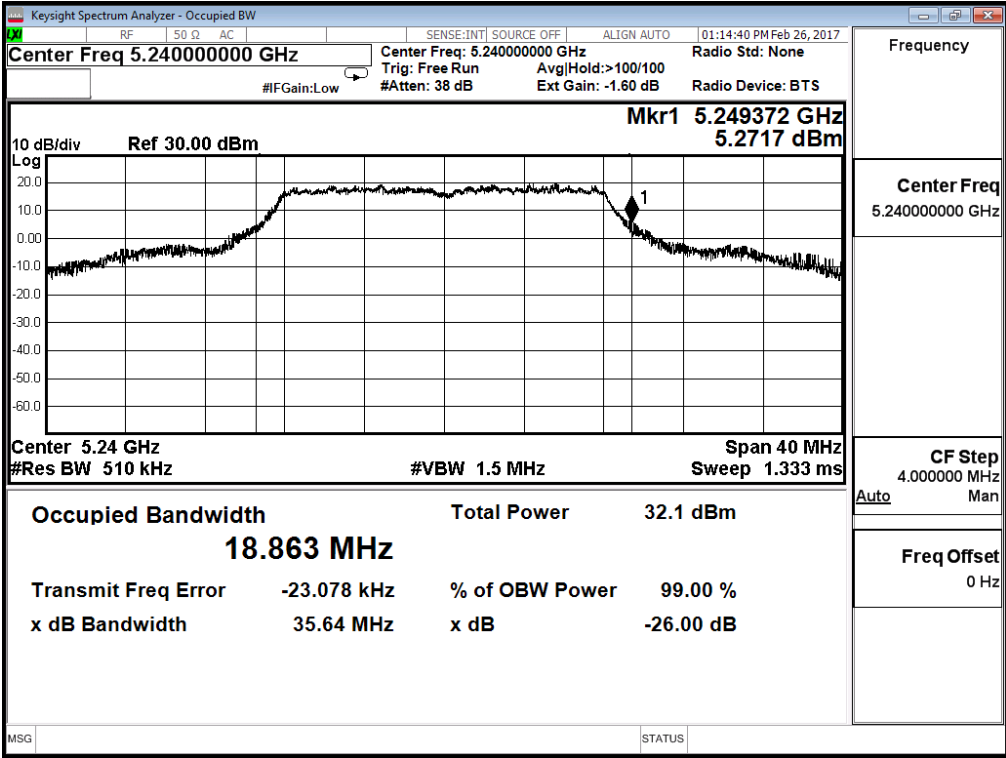
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)

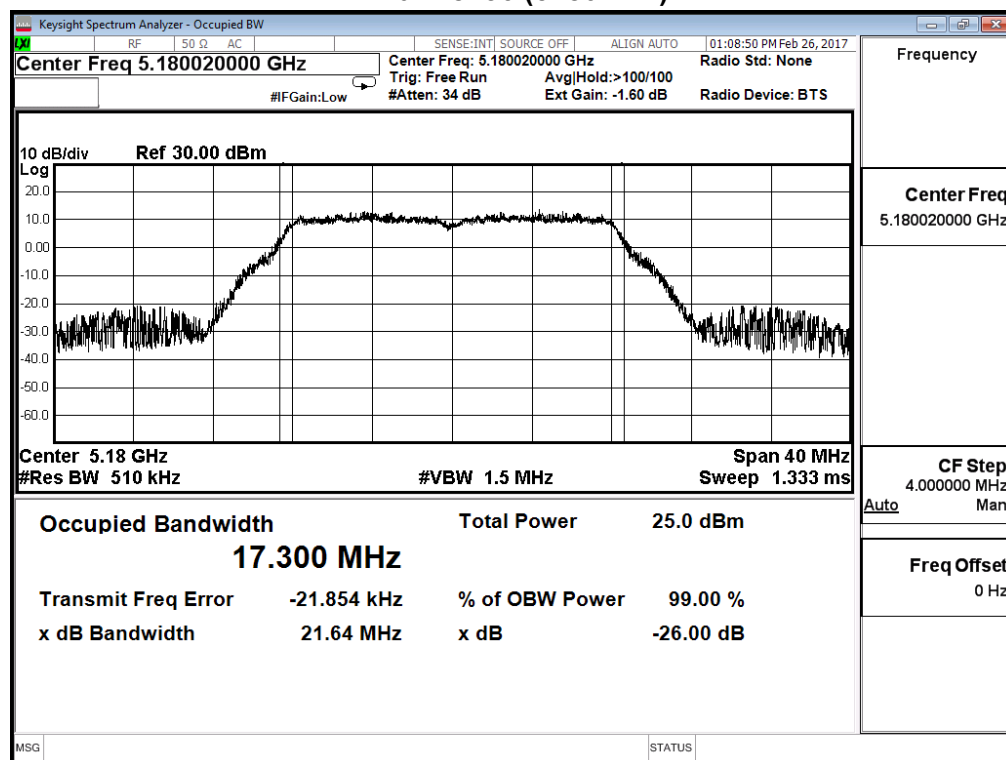


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_ CDD Mode_ ADP1		
Date of Test	2017/02/26	Test Site	SR10-H

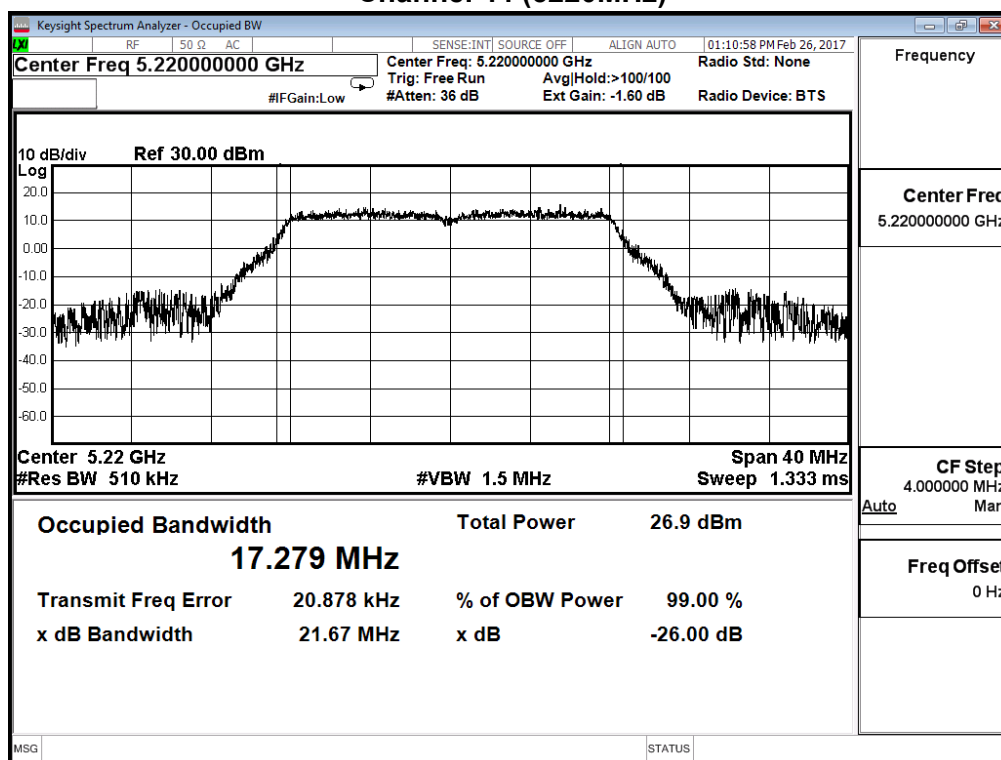
IEEE 802.11a (ANT 3)

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	17.300	--
44	5220	17.279	--
48	5240	18.926	--

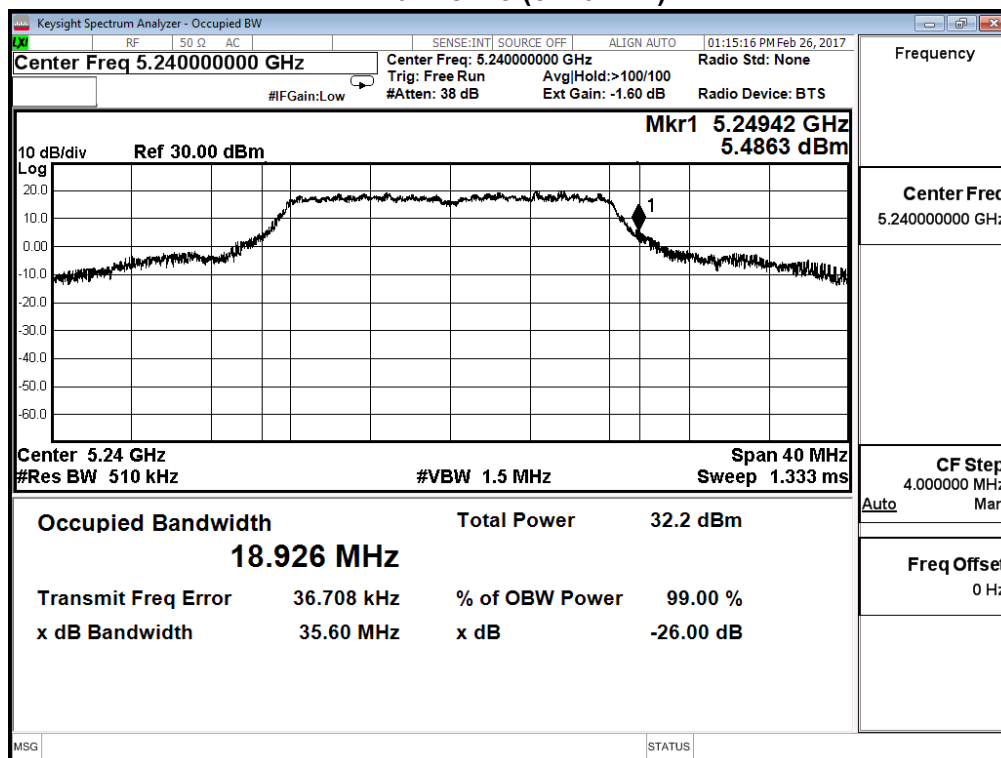
Channel 36 (5180MHz)



Channel 44 (5220MHz)



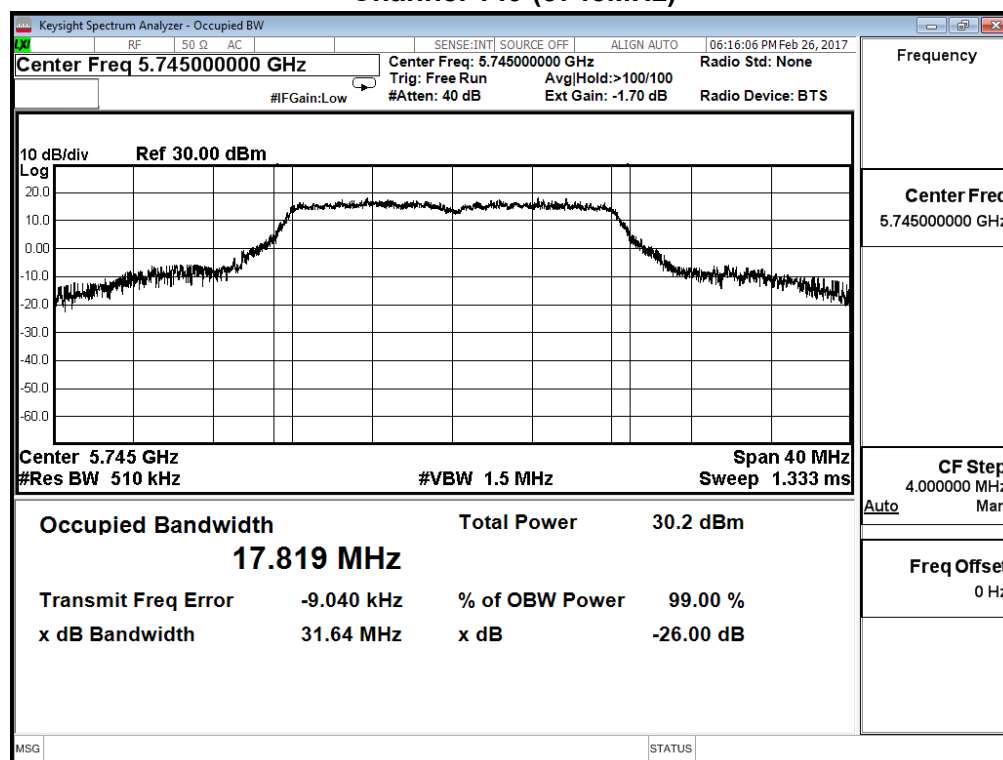
Channel 48 (5240MHz)



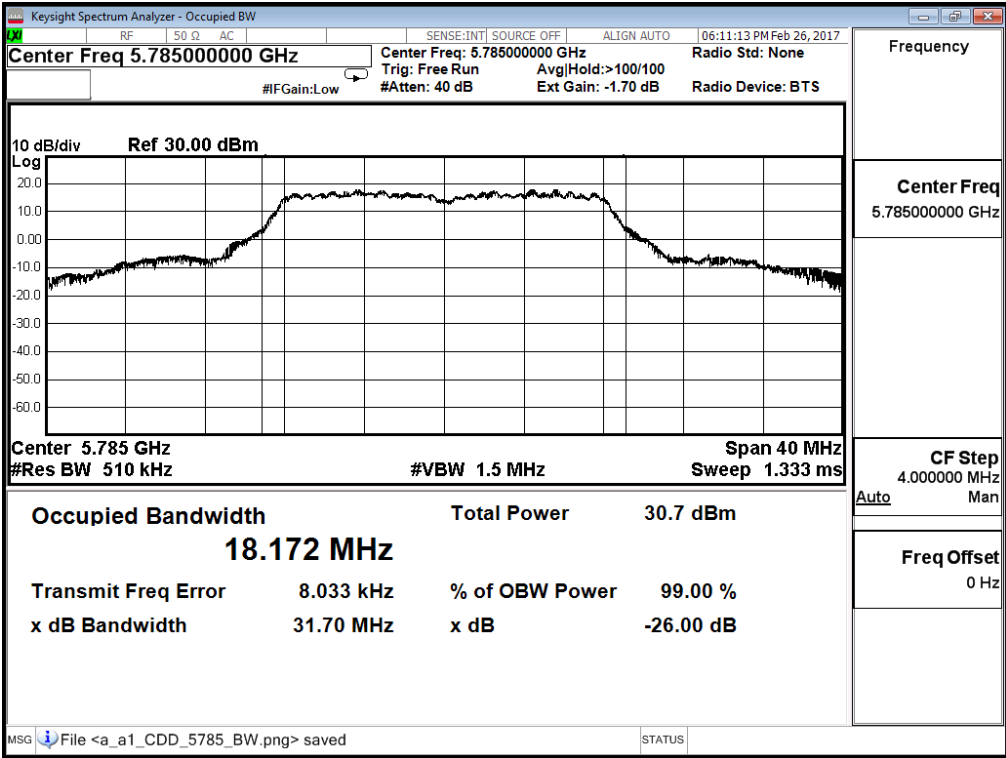
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_CDD Mode_ADPI		
Date of Test	2017/02/26	Test Site	SR10-H

IEEE 802.11a (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	17.819	---
157	5785	18.172	---
165	5825	18.470	---

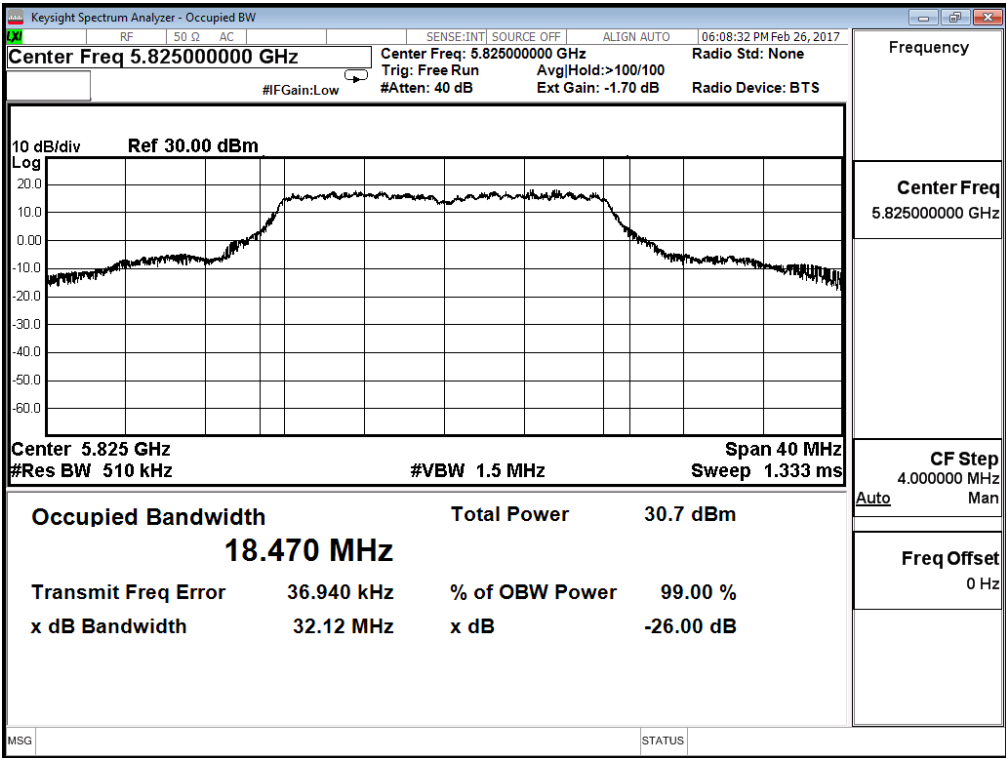
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

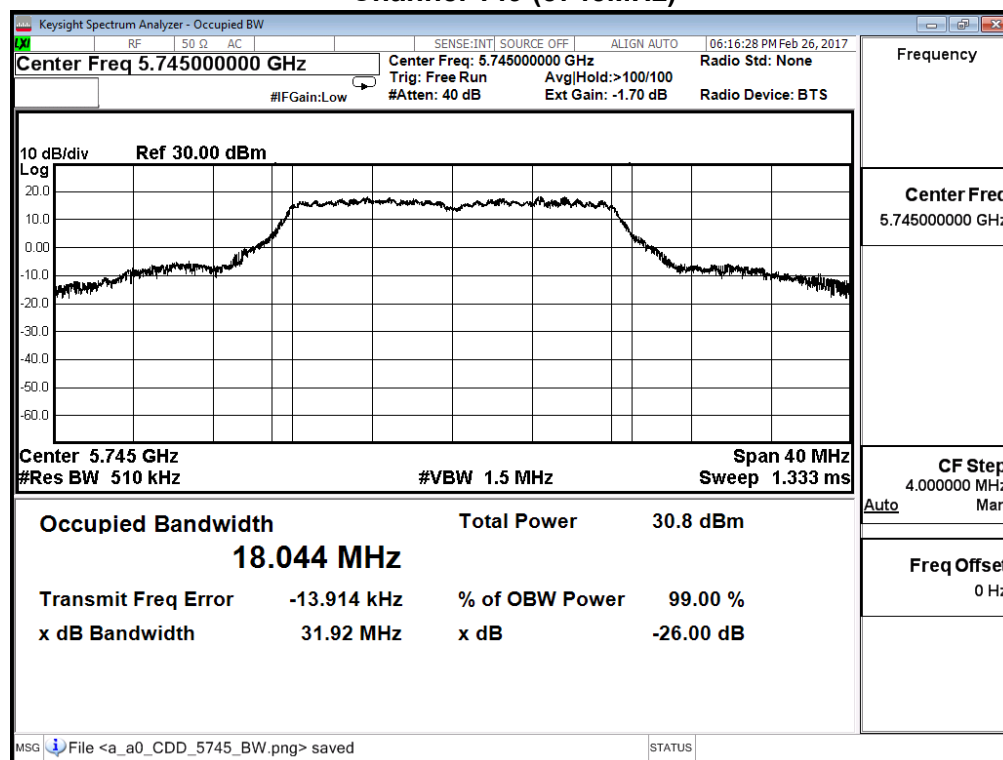


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_CDD Mode_AD P1		
Date of Test	2017/02/26	Test Site	SR10-H

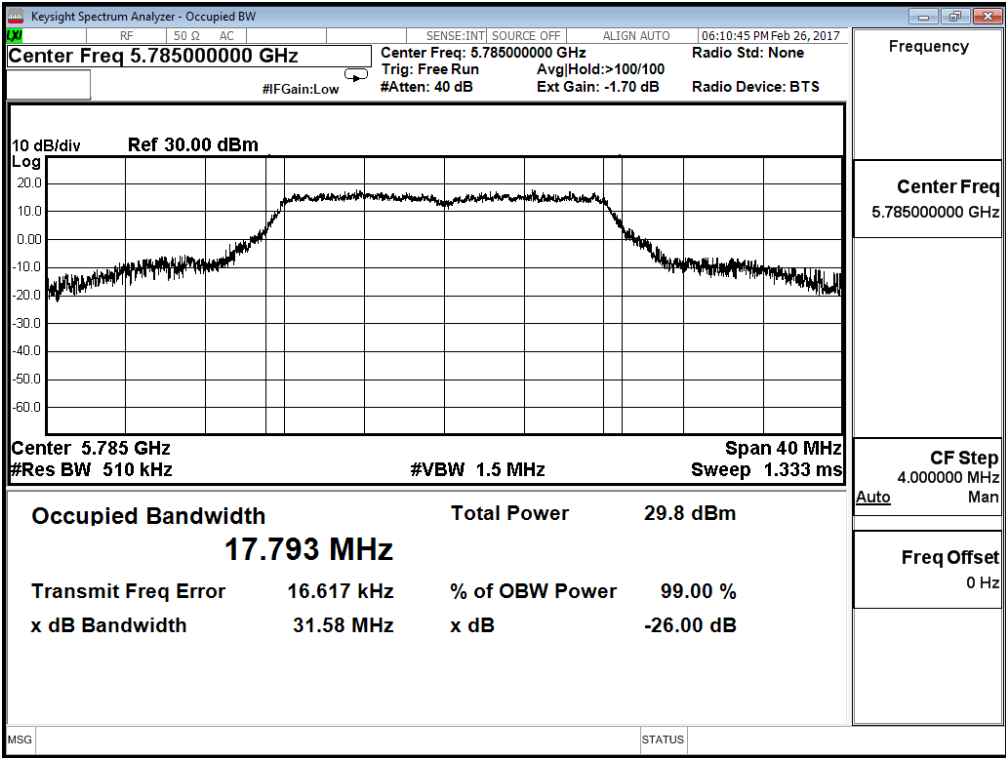
IEEE 802.11a (ANT 1)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	18.044	---
157	5785	17.793	---
165	5825	18.566	---

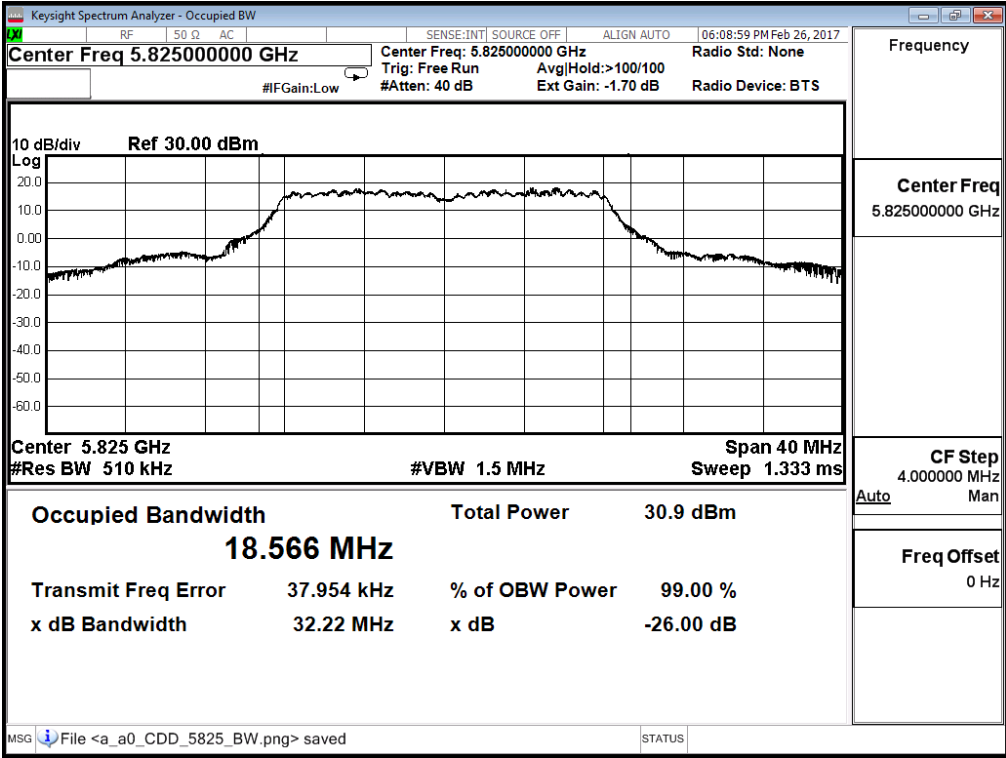
Channel 149 (5745MHz)



Channel 157 (5785MHz)



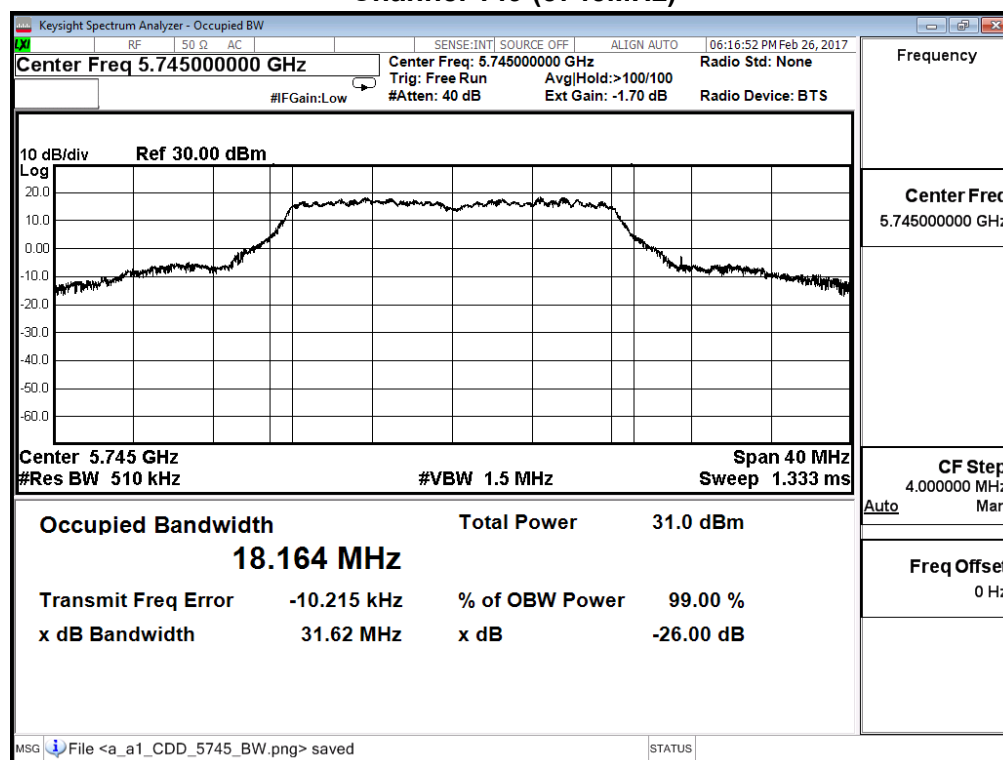
Channel 165 (5825MHz)



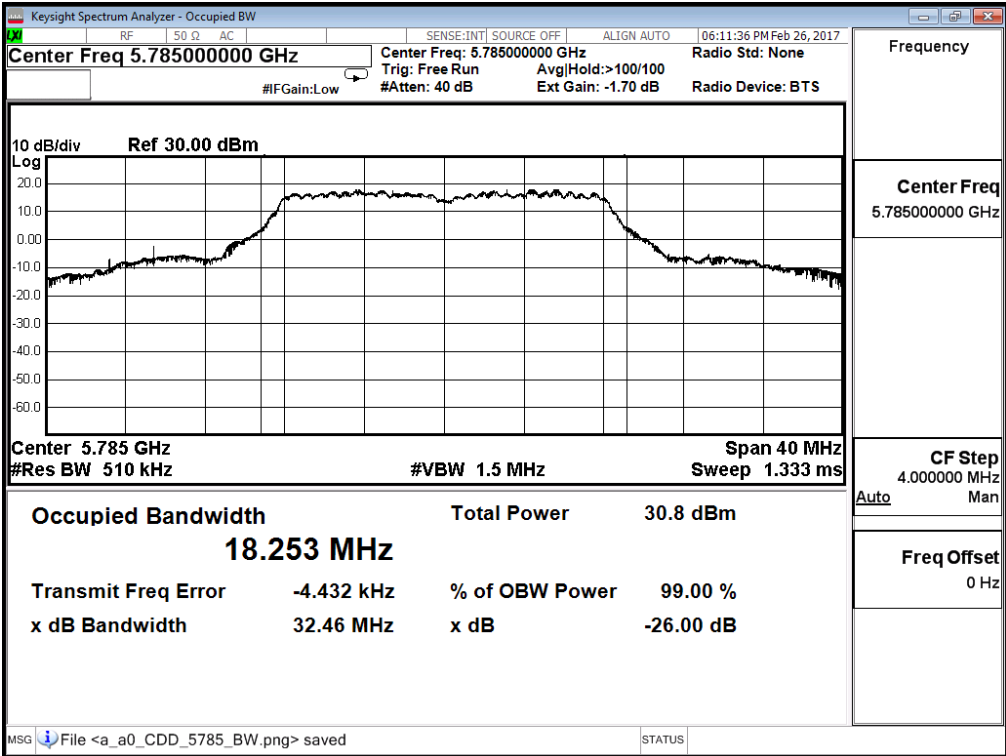
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_CDD Mode_ADPI		
Date of Test	2017/02/26	Test Site	SR10-H

IEEE 802.11a (ANT 2)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	18.164	---
157	5785	18.253	---
165	5825	18.217	---

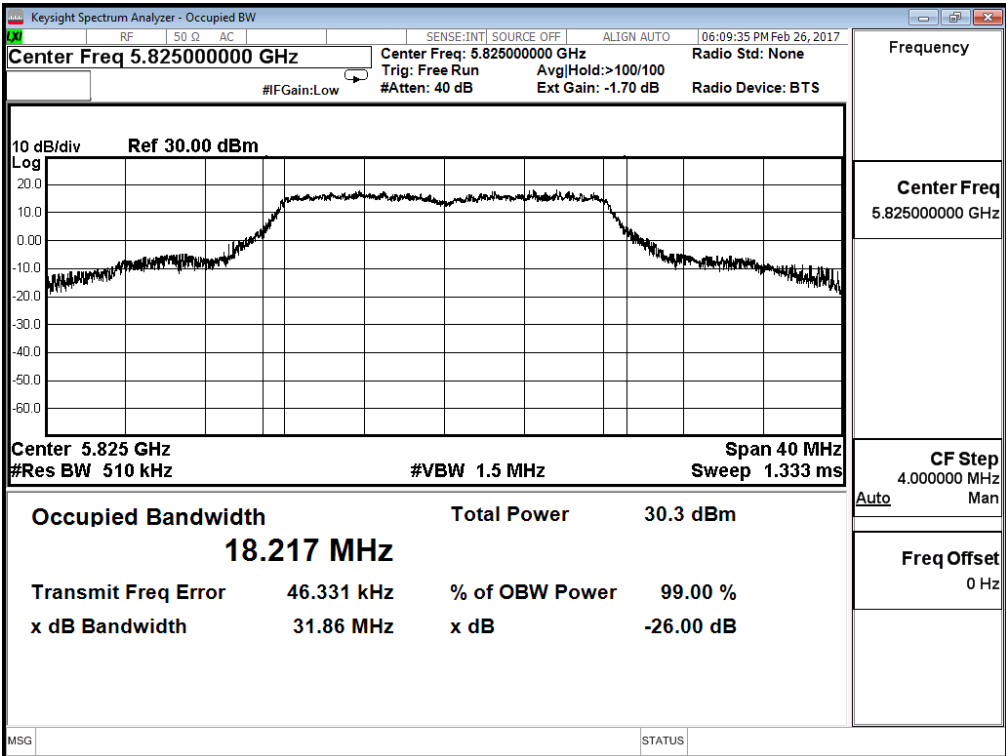
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

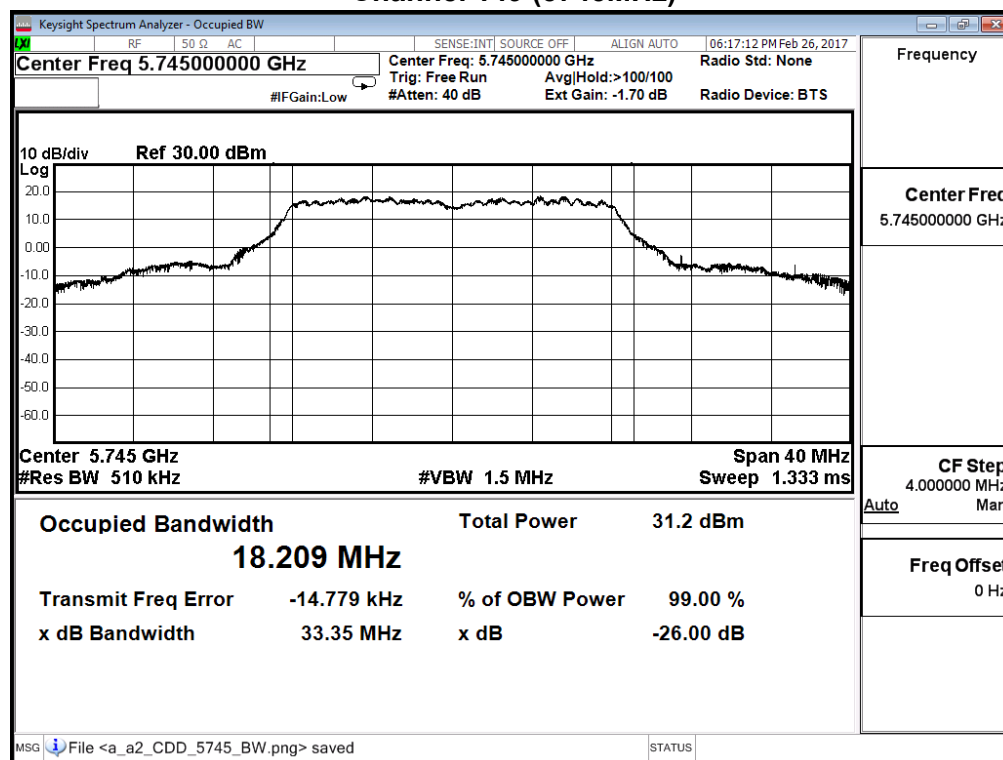


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx_CDD Mode_AD P1		
Date of Test	2017/02/26	Test Site	SR10-H

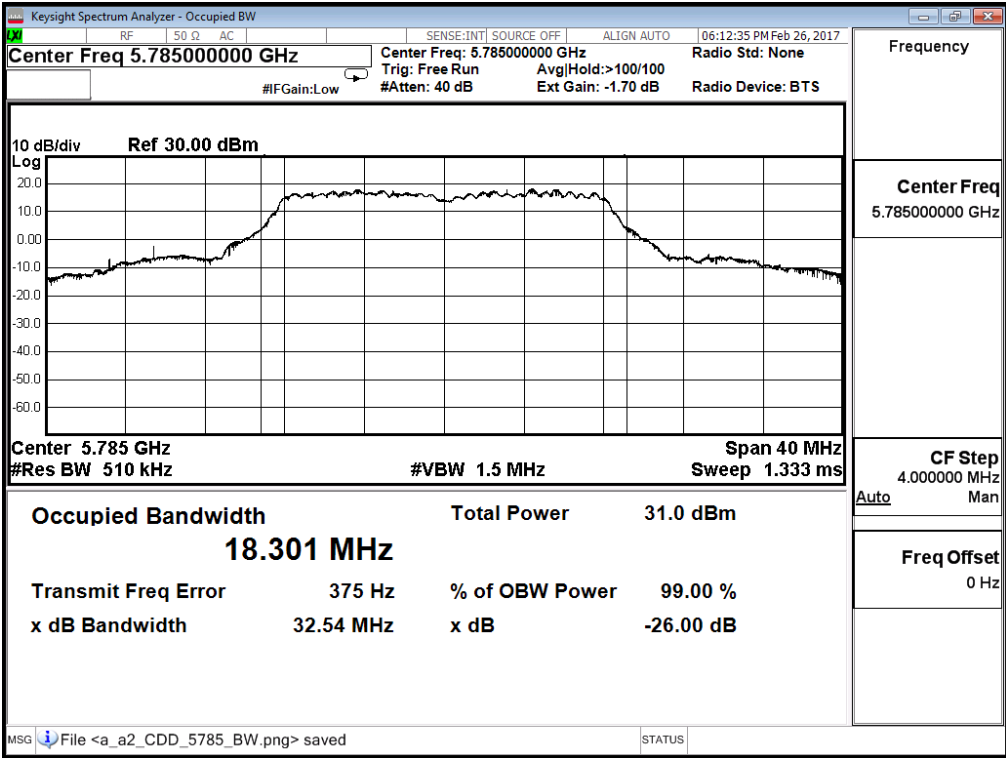
IEEE 802.11a (ANT 3)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	18.209	---
157	5785	18.301	---
165	5825	18.465	---

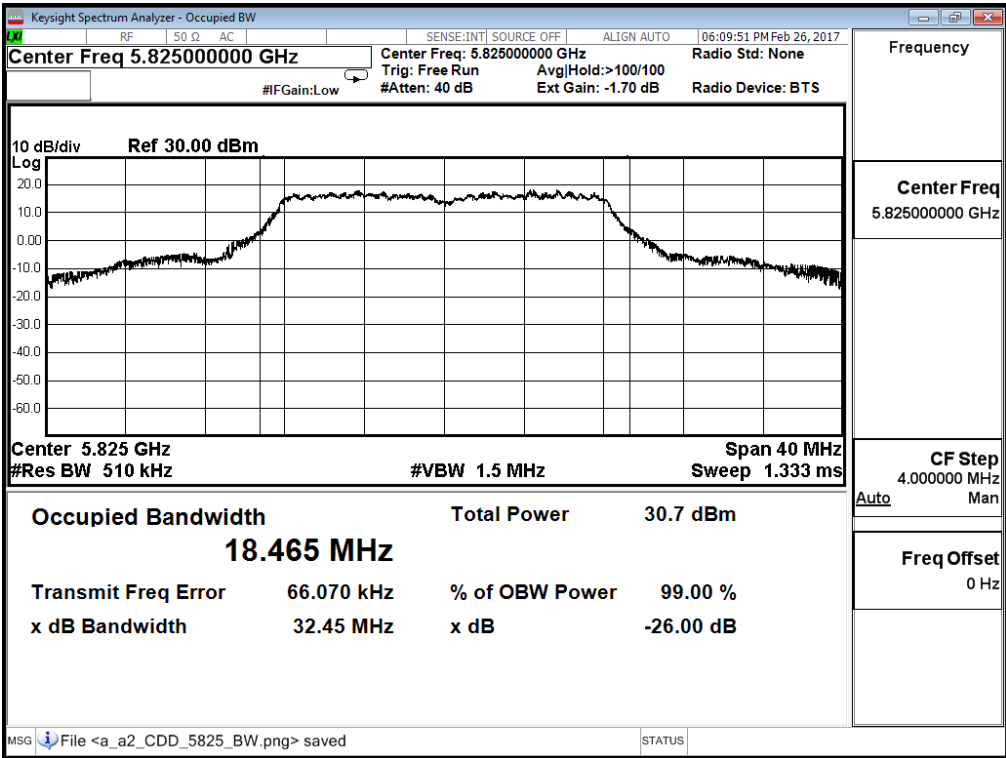
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 5: TX_ CDD Mode_ ac(80MHz+80MHz)		
Date of Test	2018/11/07	Test Site	SR10-H

Channel	Frequency (MHz)	ANT0 Measure Value (MHz)	ANT1 Measure Value (MHz)	ANT2 Measure Value (MHz)	ANT3 Measure Value (MHz)	Limit (MHz)
42+58	5210	74.999	75.053	-	--	--
	5290	--	--	75.765	75.982	--

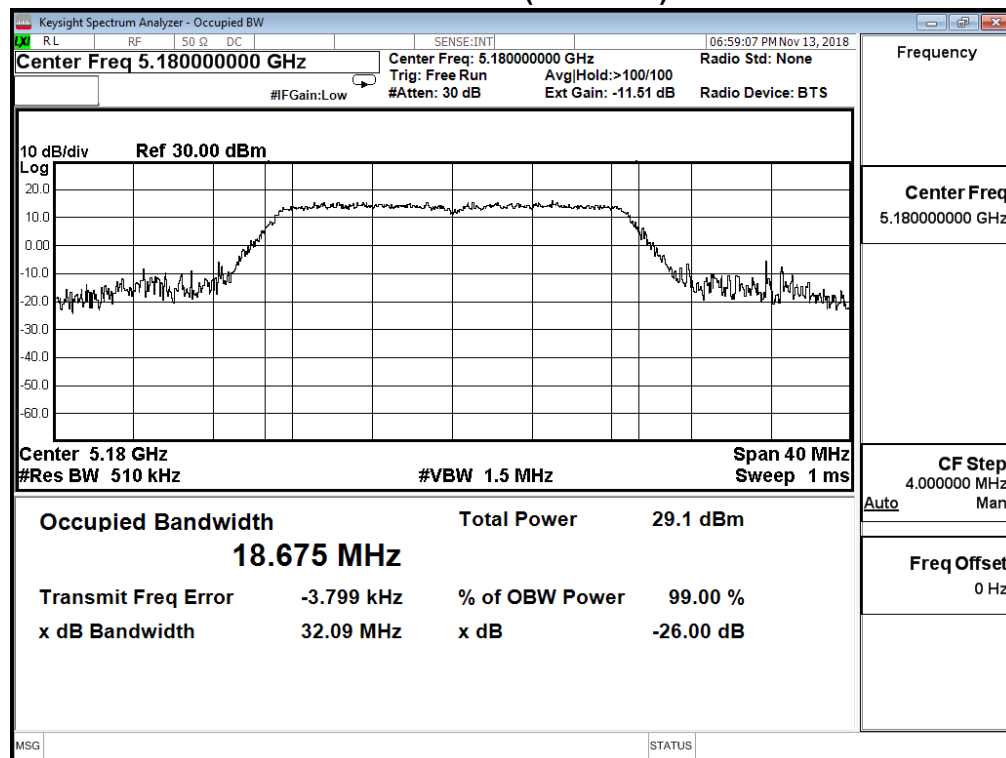
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 6: TX_ CDD Mode_ ac(160MHz)		
Date of Test	2018/11/07	Test Site	SR10-H

Channel	Frequency (MHz)	ANT0 Measure Value (MHz)	ANT1 Measure Value (MHz)	ANT2 Measure Value (MHz)	ANT3 Measure Value (MHz)	Limit (MHz)
114	5530	75.768	75.902	-	--	--
	5610	--	--	75.757	75.688	--

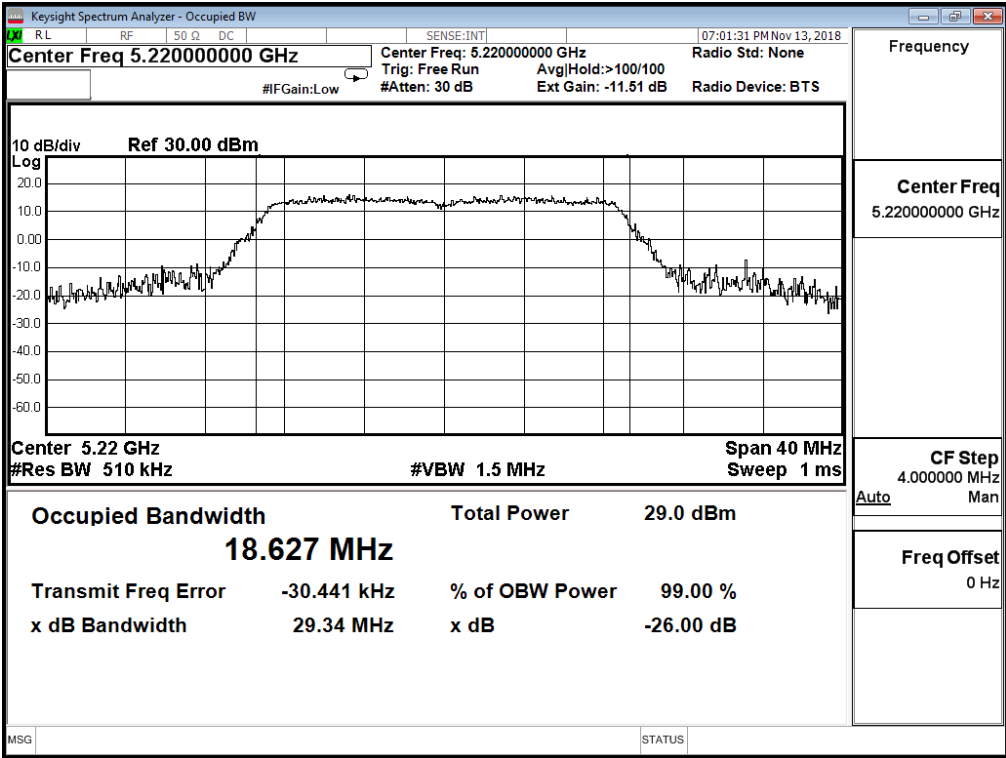
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

IEEE 802.11ac (VHT20)(ANT 0)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	18.675	--
44	5220	18.627	--
48	5240	18.681	--

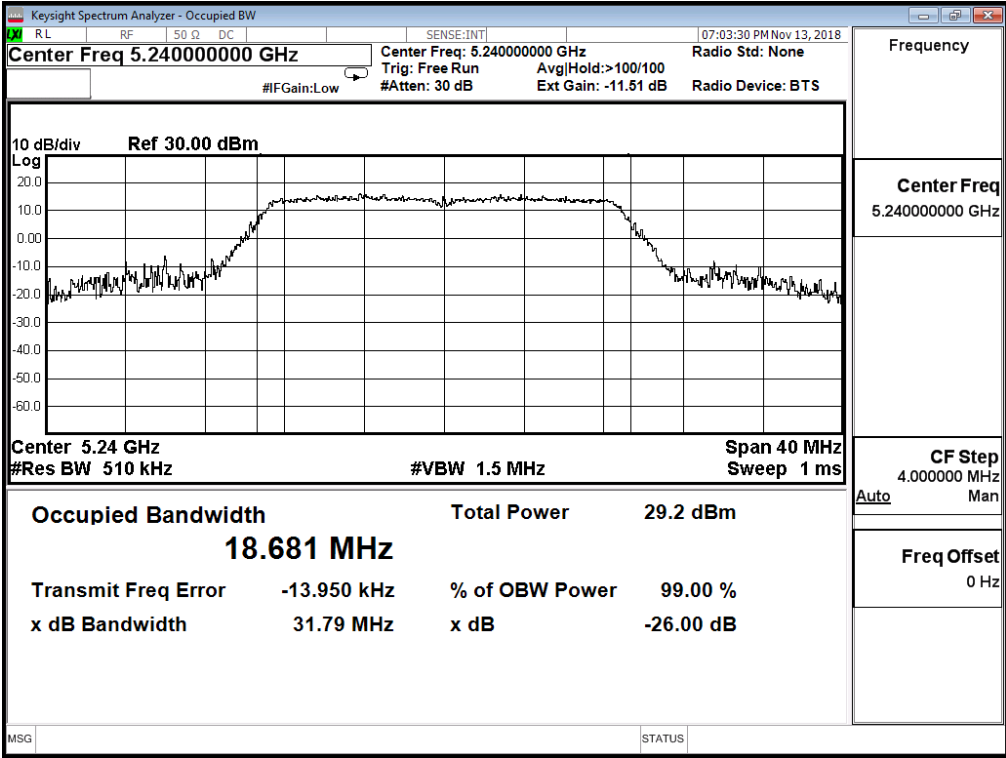
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)

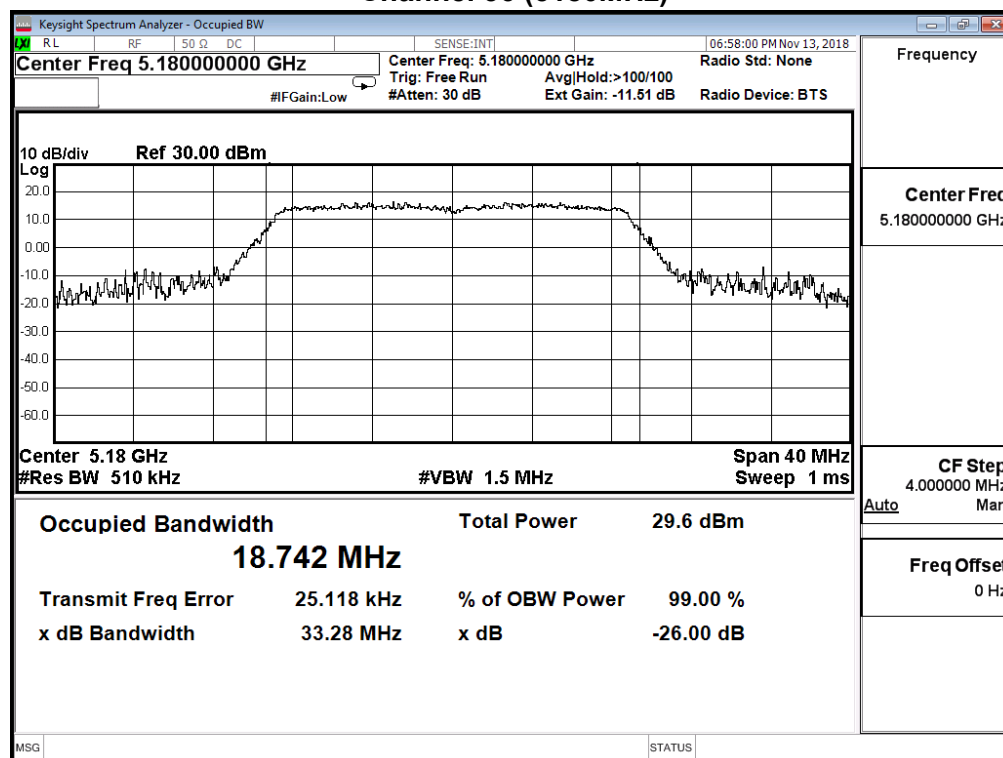


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

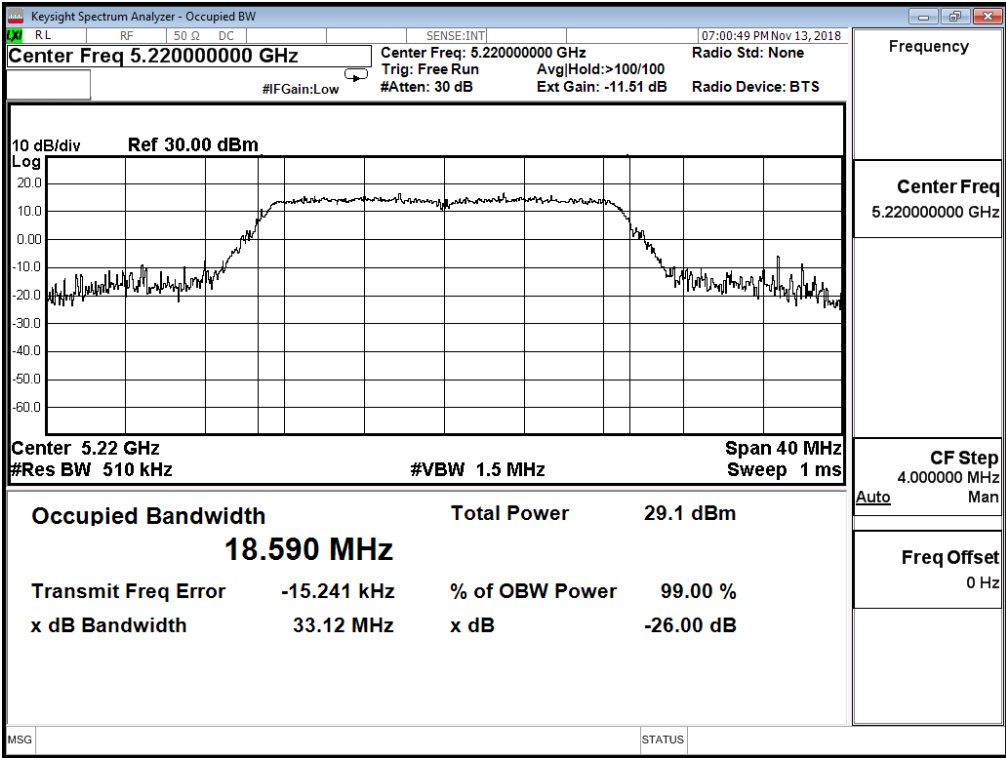
IEEE 802.11ac (VHT20)(ANT 1)

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	18.742	--
44	5220	18.590	--
48	5240	18.712	--

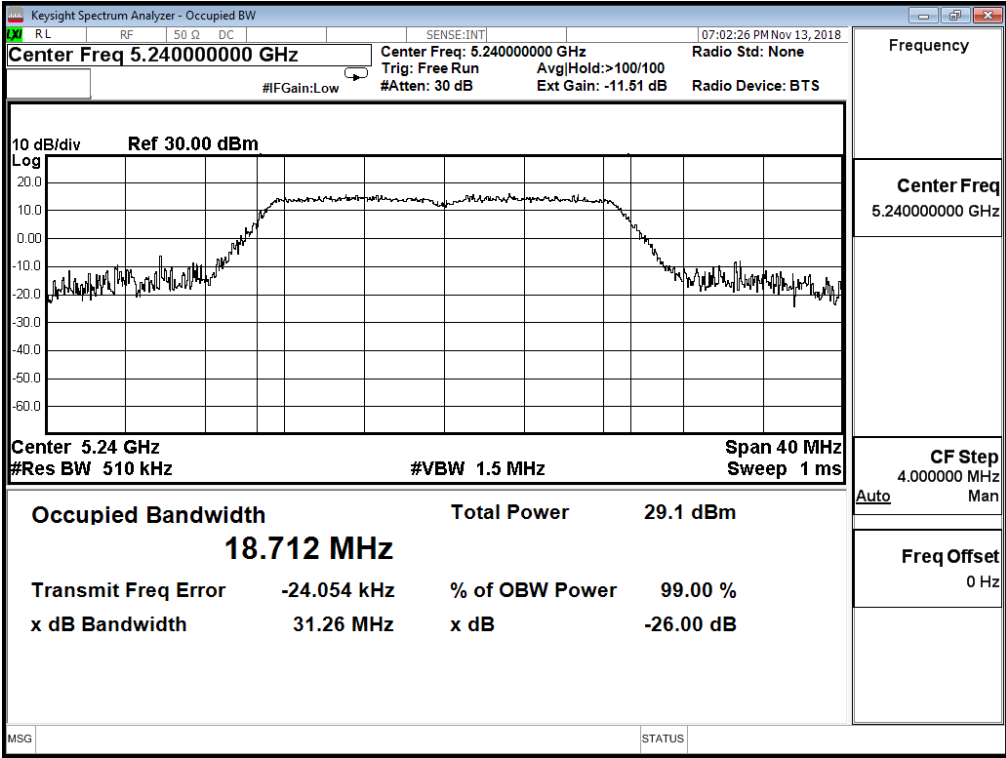
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)

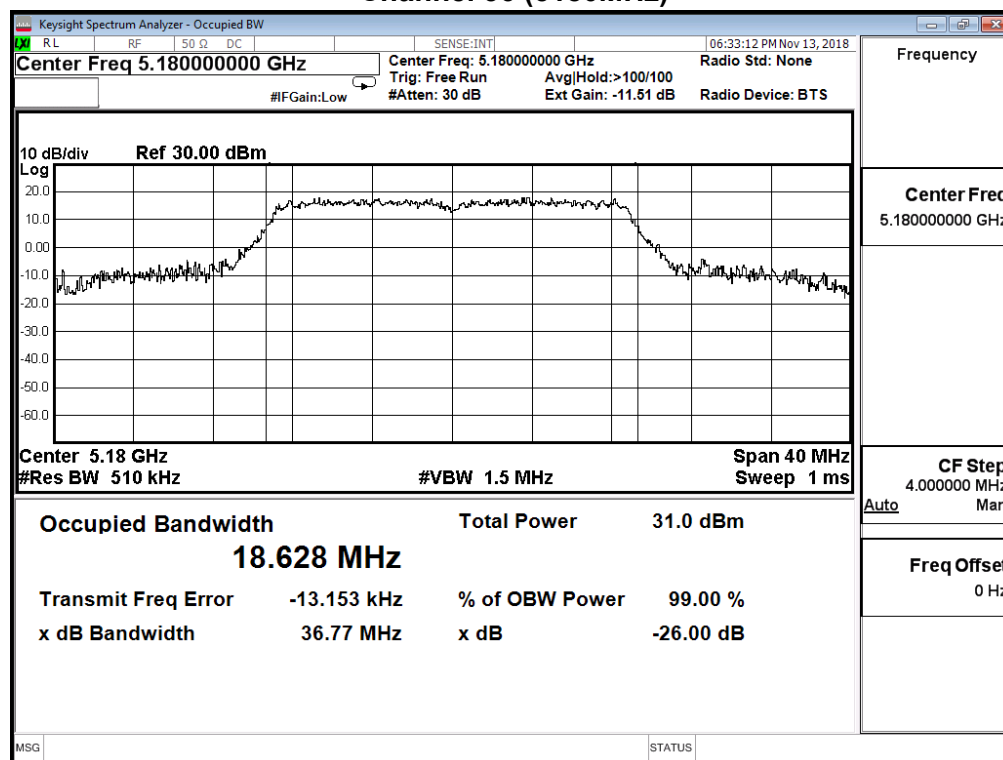


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

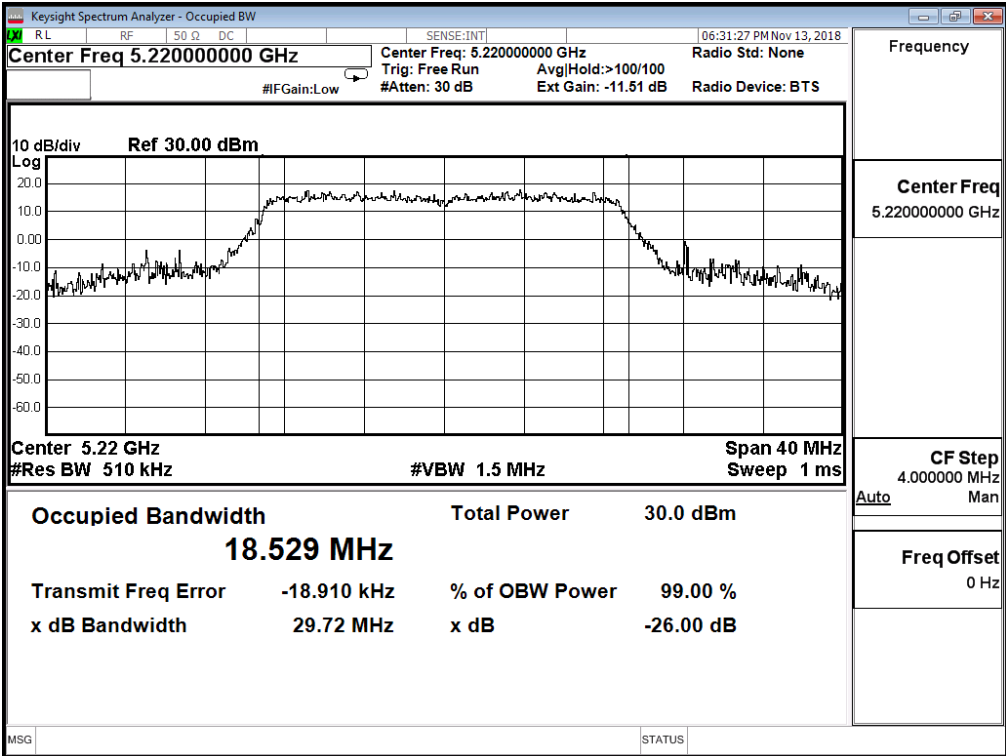
IEEE 802.11ac (VHT20)(ANT 2)

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	18.628	--
44	5220	18.529	--
48	5240	18.647	--

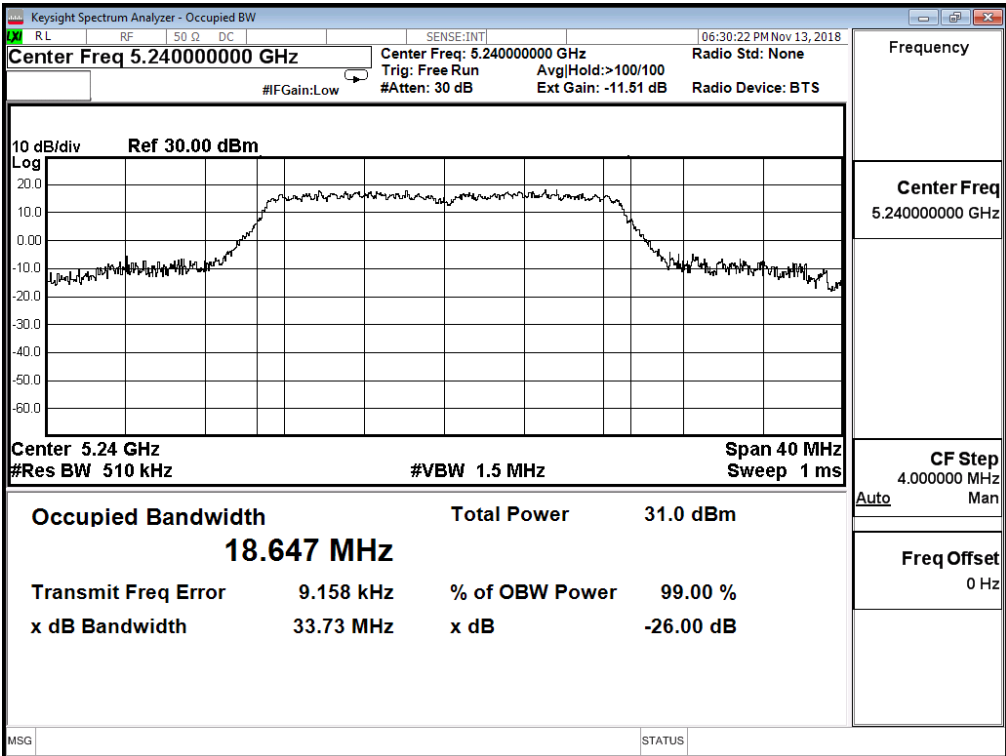
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



IEEE 802.11ac (VHT20)(ANT 3)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
36	5180	18.727	--
44	5220	18.426	--
48	5240	18.533	--

Keysight Spectrum Analyzer - Occupied BW

RL RF 50 Ω DC SENSE:INT 06:24:52 PM Nov 13, 2018

Center Freq 5.18000000 GHz

Trig: Free Run Avg/Hold: >100/100

#FGain: Low #Atten: 30 dB Ext Gain: -11.51 dB Radio Device: BTS

Frequency

Center Freq 5.18000000 GHz

10 dB/div Ref 30.00 dBm

Log

Center 5.18 GHz Span 40 MHz

#Res BW 510 kHz #VBW 1.5 MHz Sweep 1 ms

Occupied Bandwidth	Total Power
18.727 MHz	31.1 dBm

Transmit Freq Error	% of OBW Power
-6.035 kHz	99.00 %

x dB Bandwidth	x dB
34.58 MHz	-26.00 dB

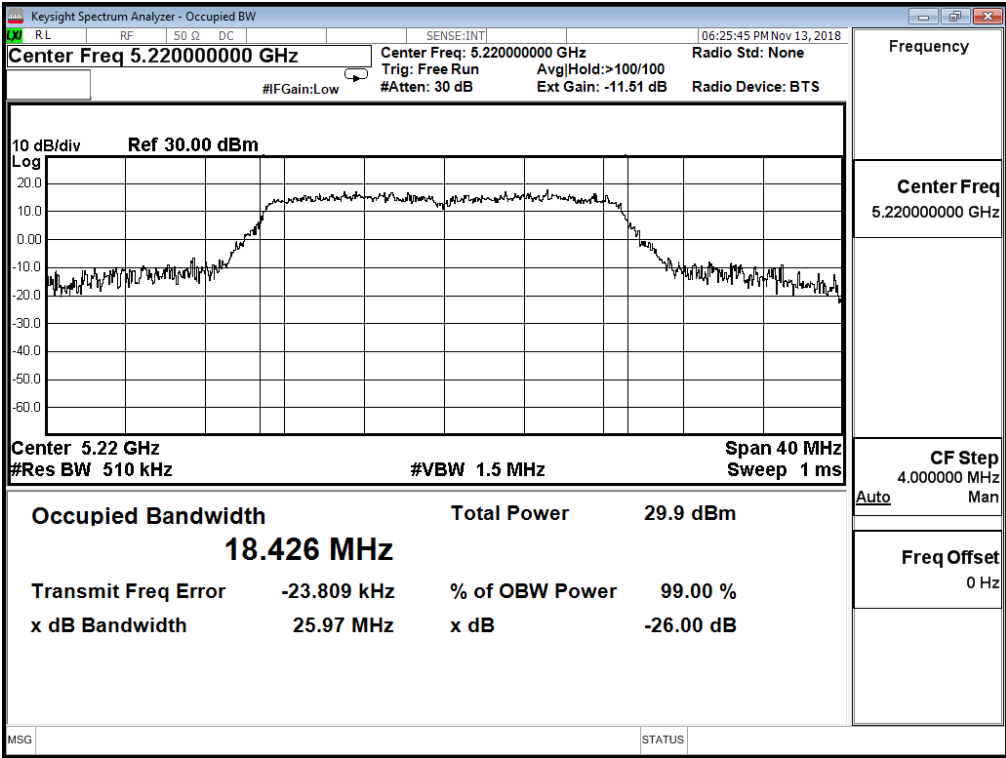
CF Step 4.000000 MHz

Auto Mar

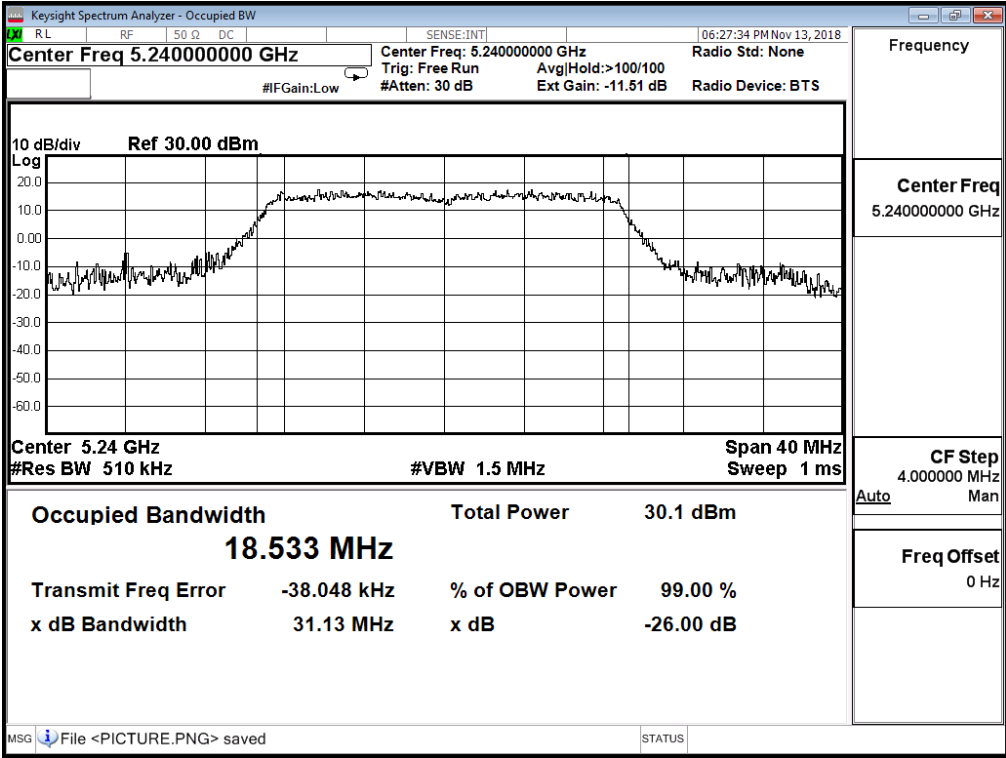
Freq Offset 0 Hz

MSG STATUS

Channel 44 (5220MHz)



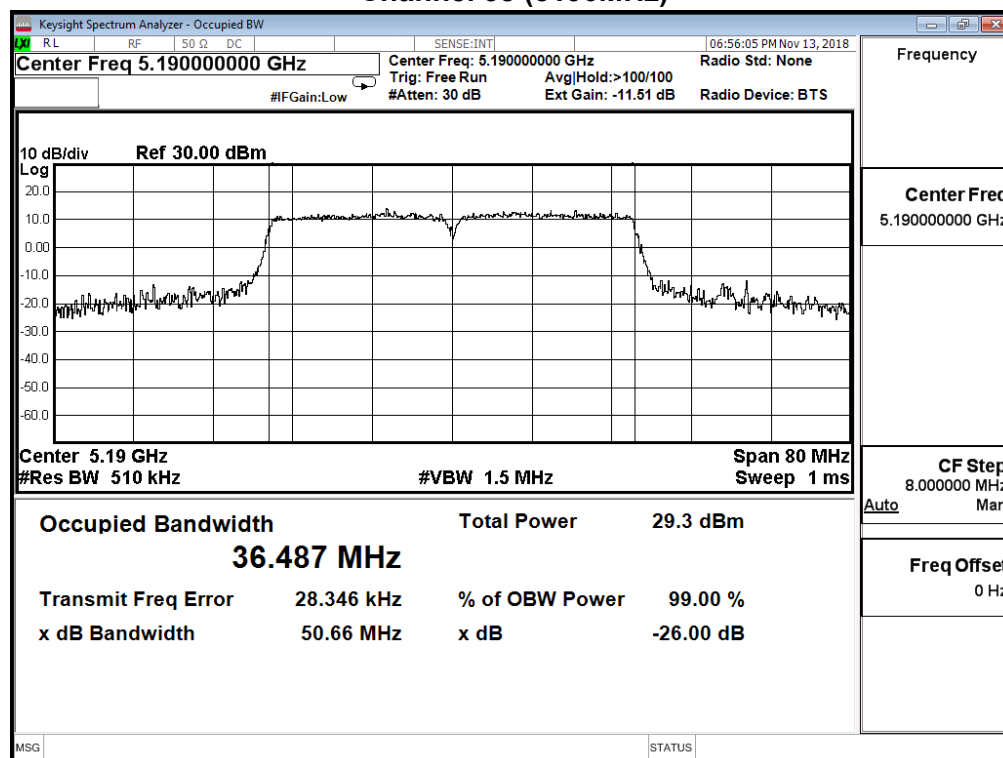
Channel 48 (5240MHz)



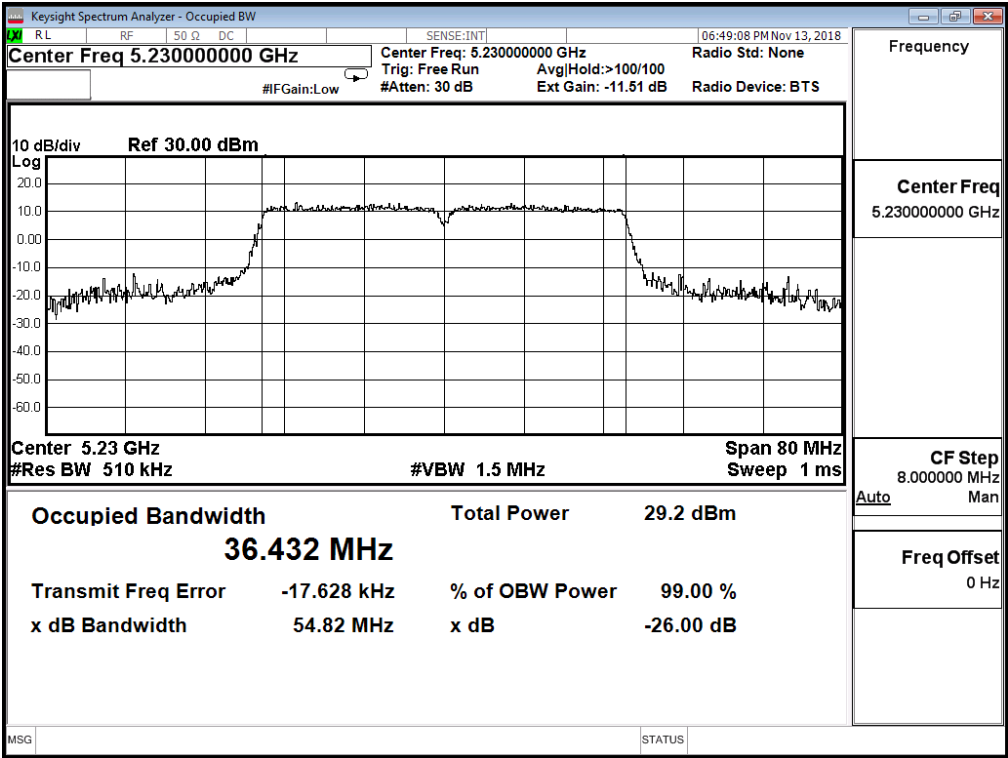
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

IEEE 802.11ac (VHT40)(ANT 0)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
38	5190	36.487	--
46	5230	36.432	--

Channel 38 (5190MHz)



Channel 46 (5230MHz)

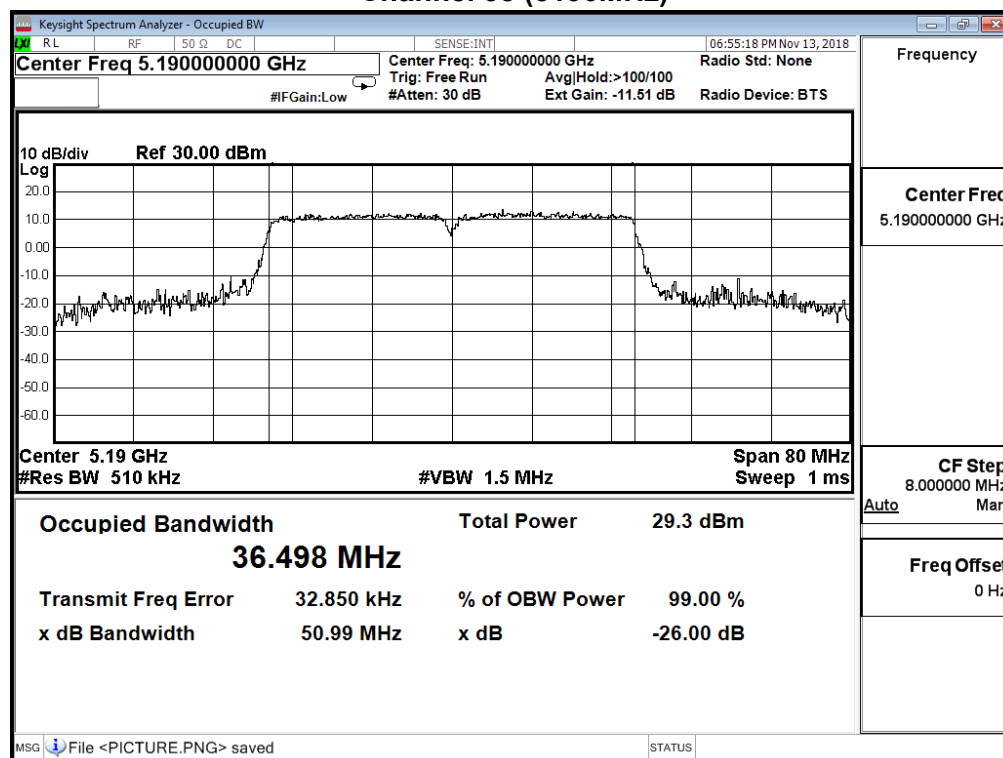


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

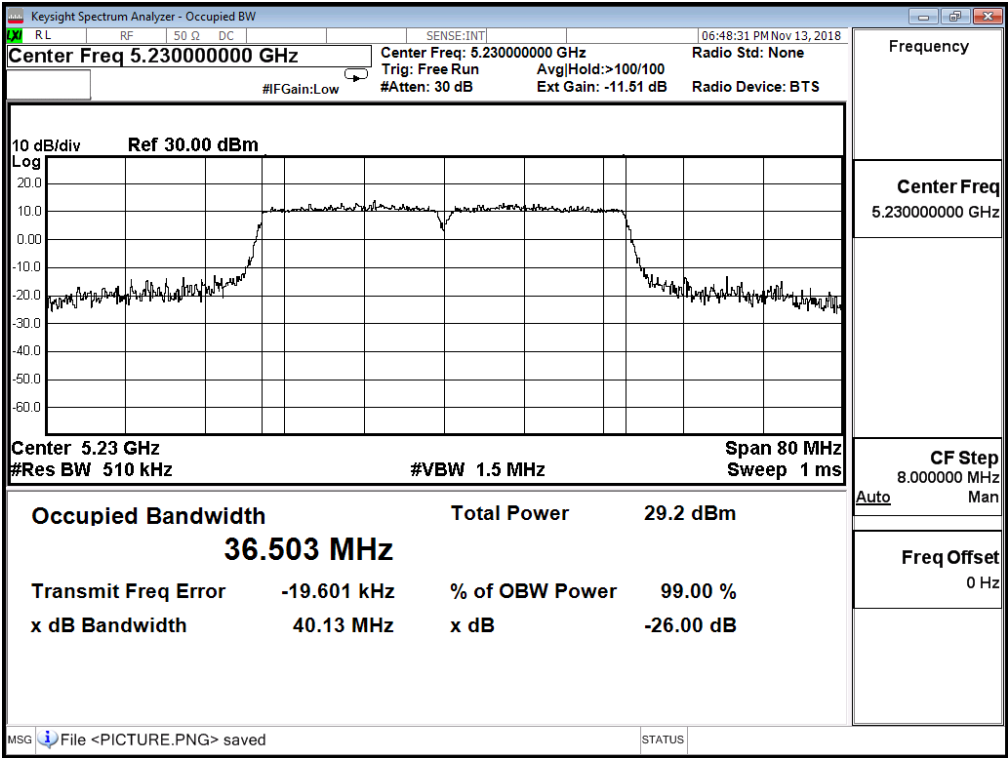
IEEE 802.11ac (VHT40)(ANT 1)

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
38	5190	36.498	--
46	5230	36.503	--

Channel 38 (5190MHz)



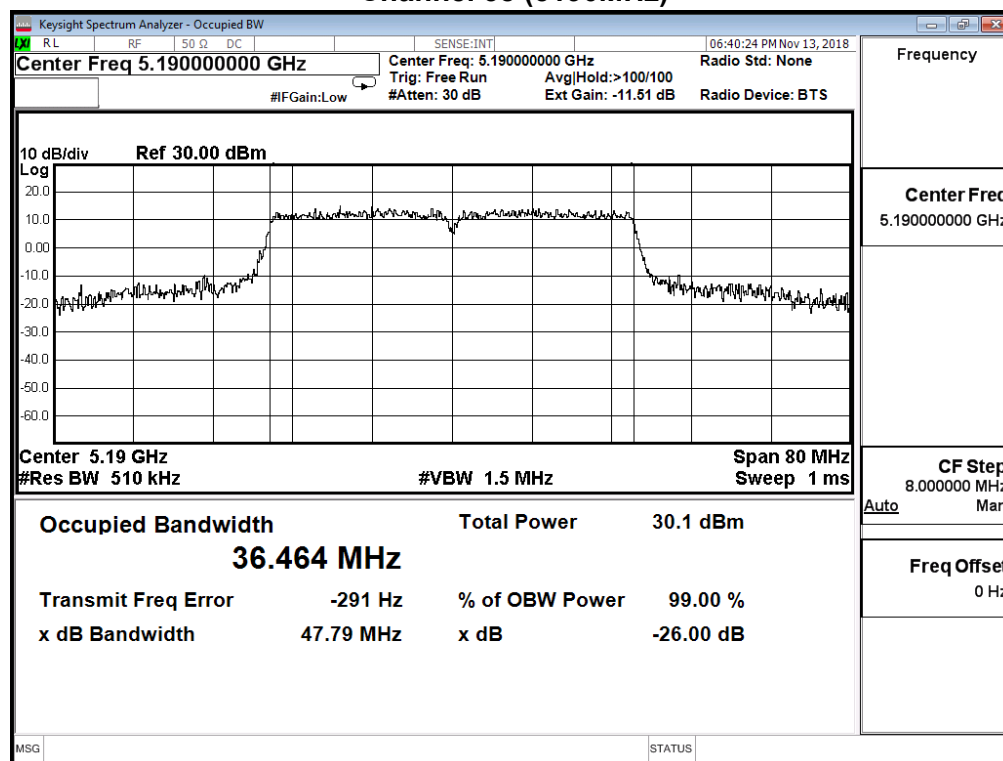
Channel 46 (5230MHz)



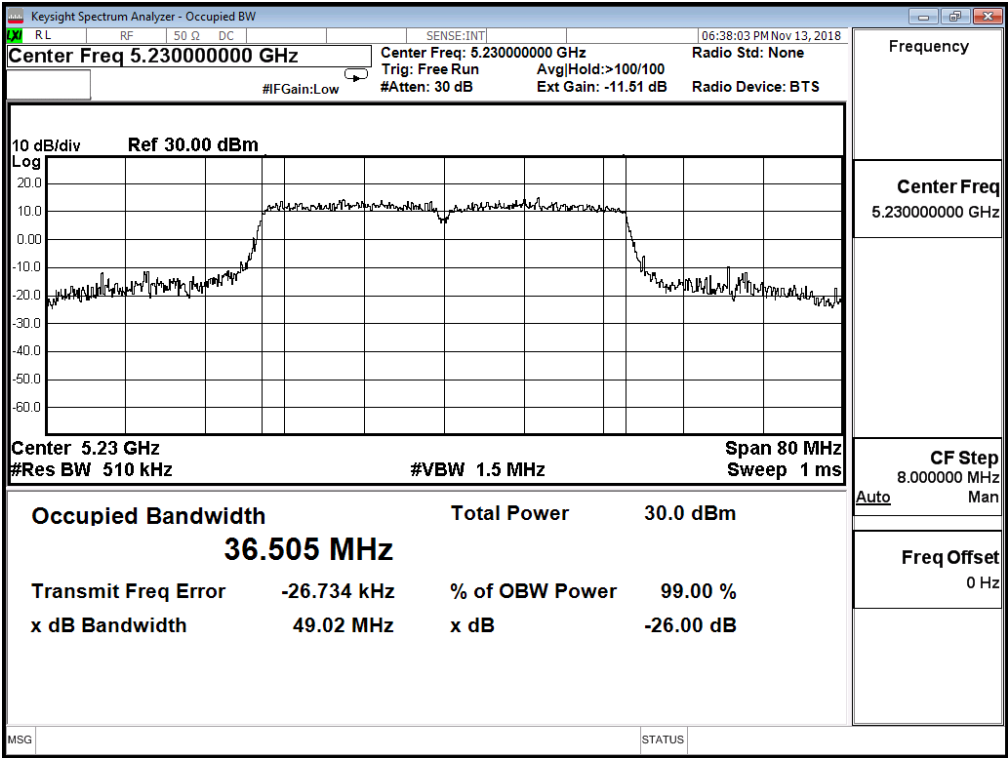
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

IEEE 802.11ac (VHT40)(ANT 2)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
38	5190	36.464	--
46	5230	36.505	--

Channel 38 (5190MHz)



Channel 46 (5230MHz)

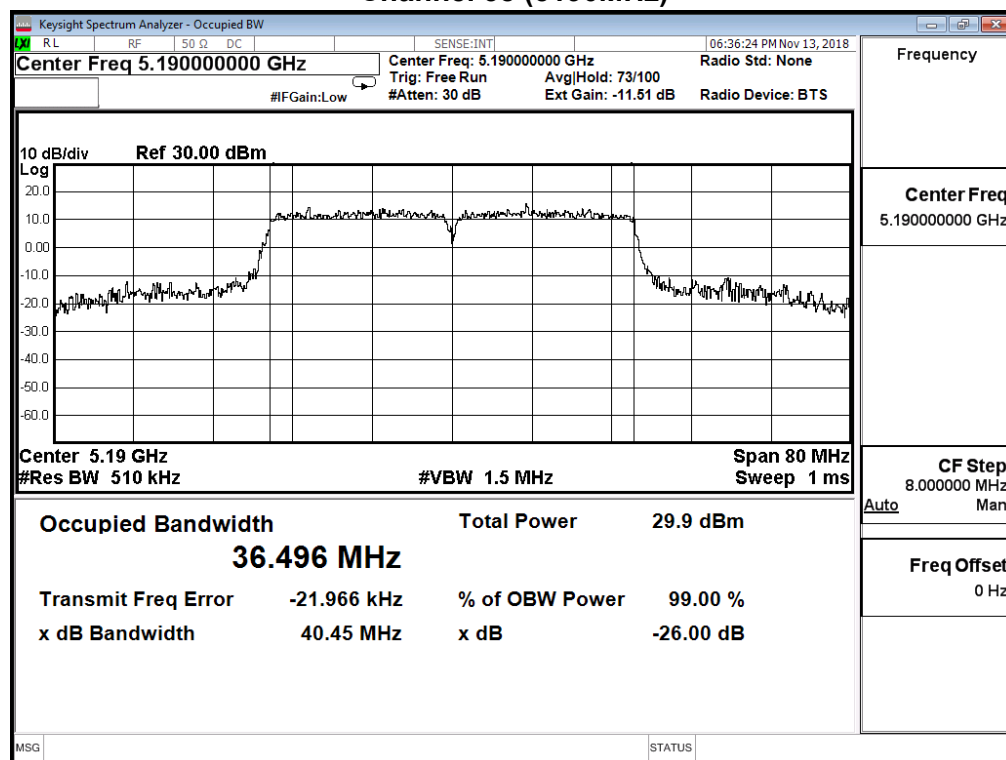


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

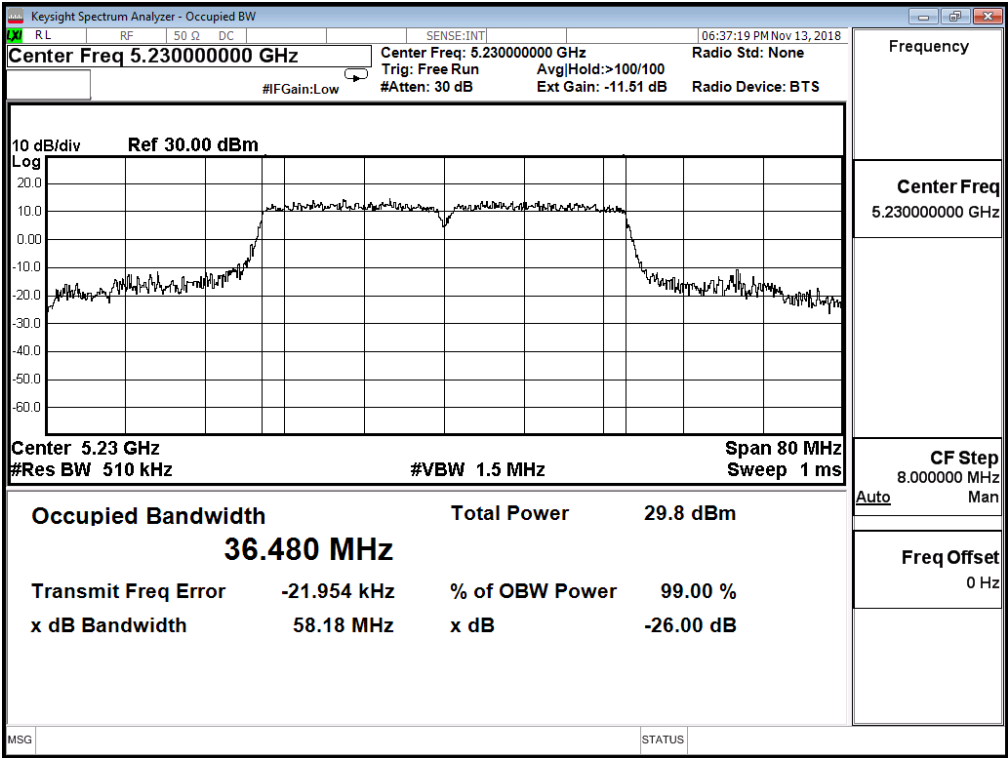
IEEE 802.11ac (VHT40)(ANT 3)

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
38	5190	36.496	--
46	5230	36.480	--

Channel 38 (5190MHz)



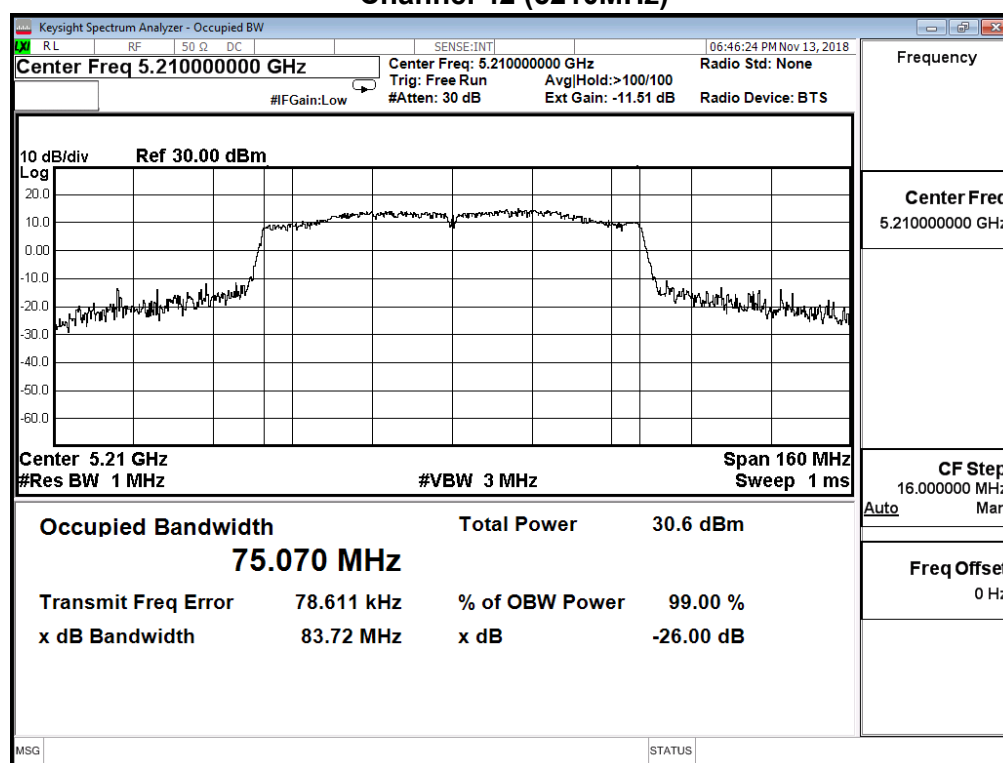
Channel 46 (5230MHz)



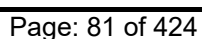
Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

IEEE 802.11ac (VHT80)(ANT 0)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
42	5210	75.070	--

Channel 42 (5210MHz)



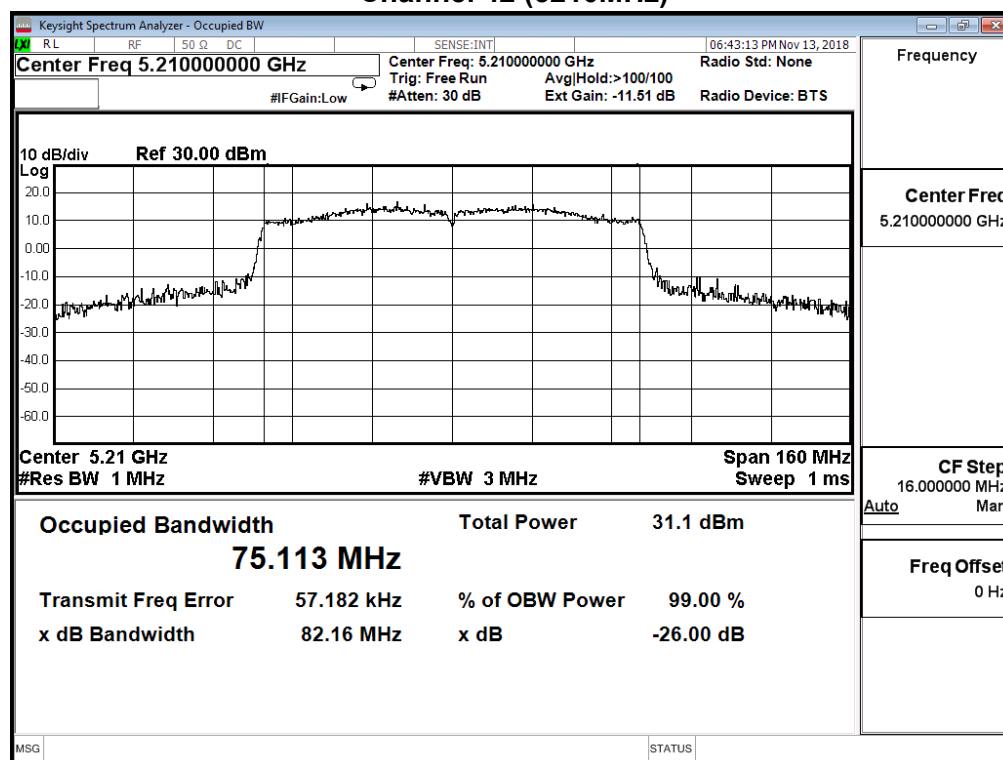
IEEE 802.11ac (VHT80)(ANT 1)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
42	5210	75.131	--



Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

IEEE 802.11ac (VHT80)(ANT 2)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
42	5210	75.113	--

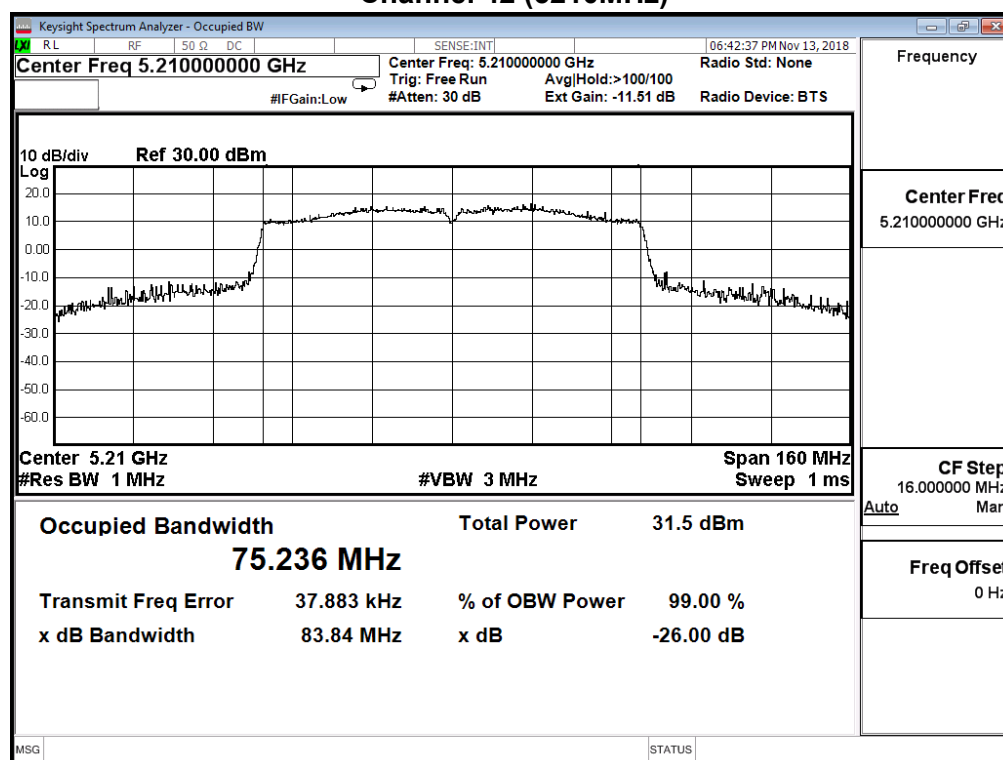
Channel 42 (5210MHz)



Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/13	Test Site	SR10-H

IEEE 802.11ac (VHT80)(ANT 3)			
Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
42	5210	75.236	--

Channel 42 (5210MHz)

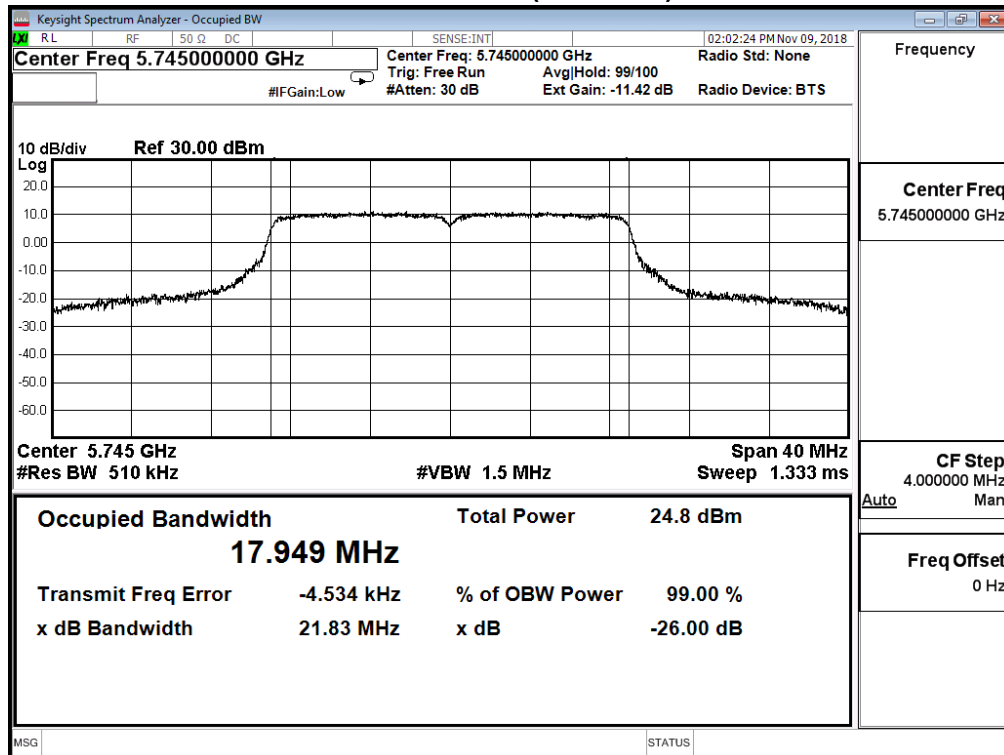


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

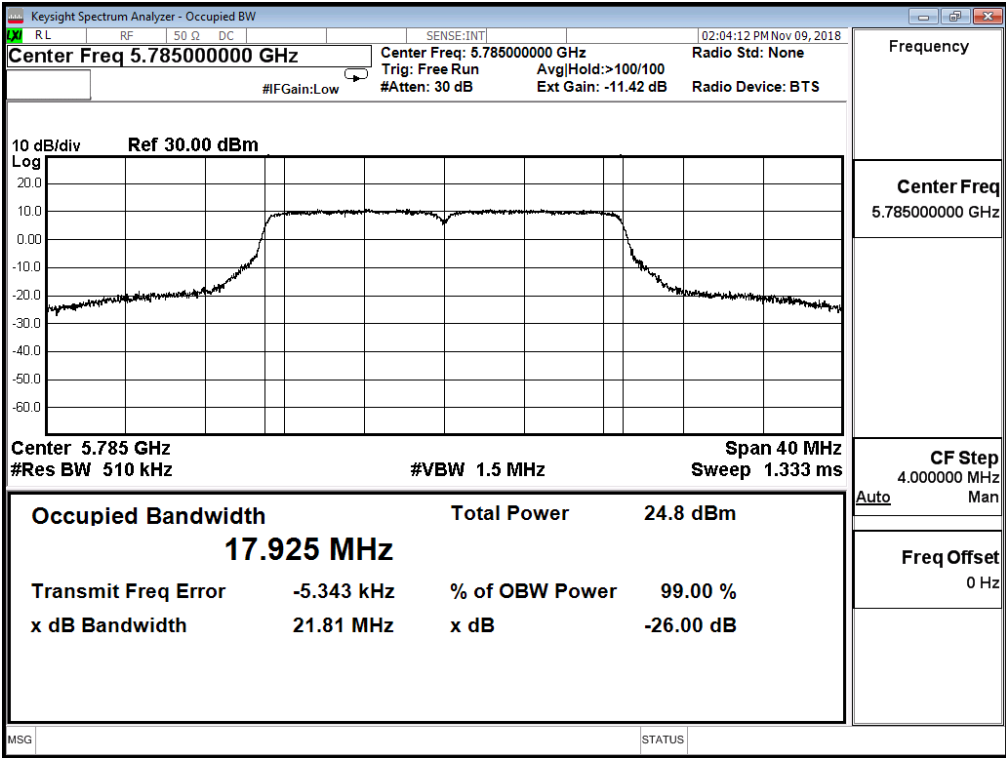
IEEE 802.11ac (VHT20) (ANT 0)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	17.949	---
157	5785	17.925	---
165	5825	17.905	---

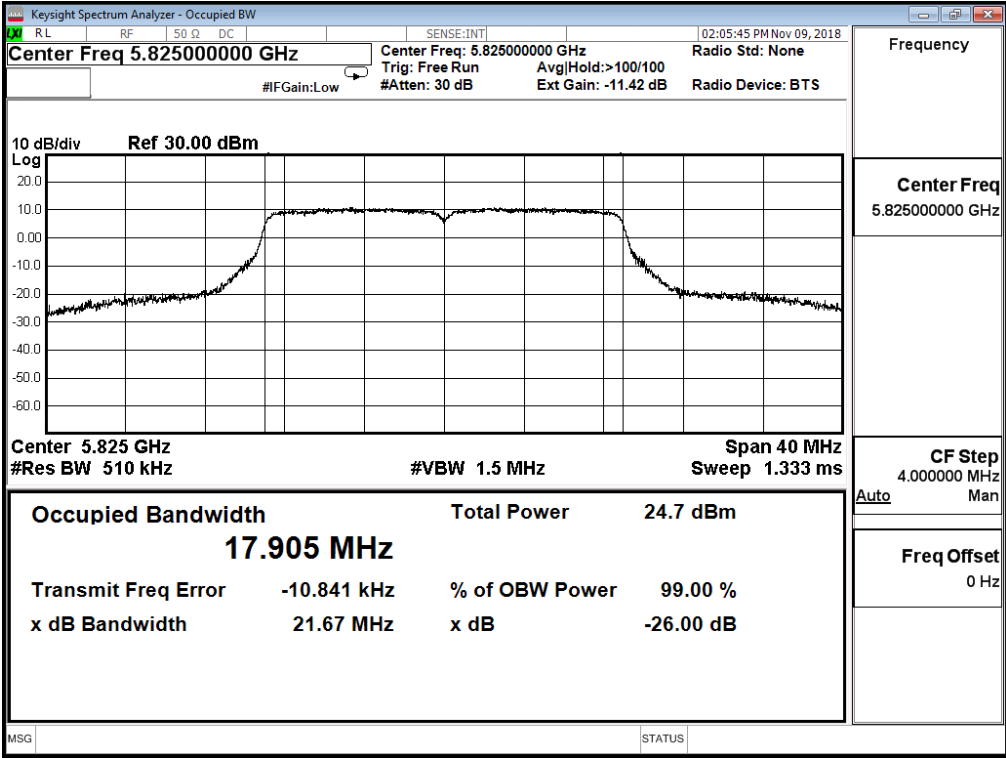
Channel 149 (5745MHz)



Channel 157 (5785MHz)

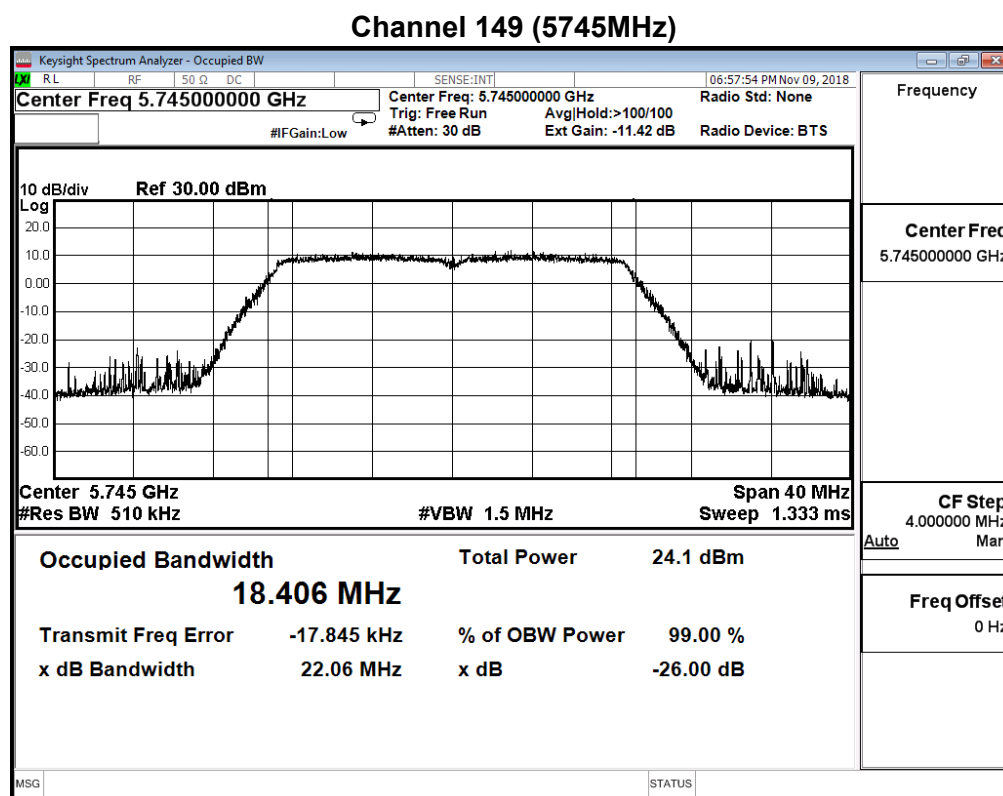


Channel 165 (5825MHz)

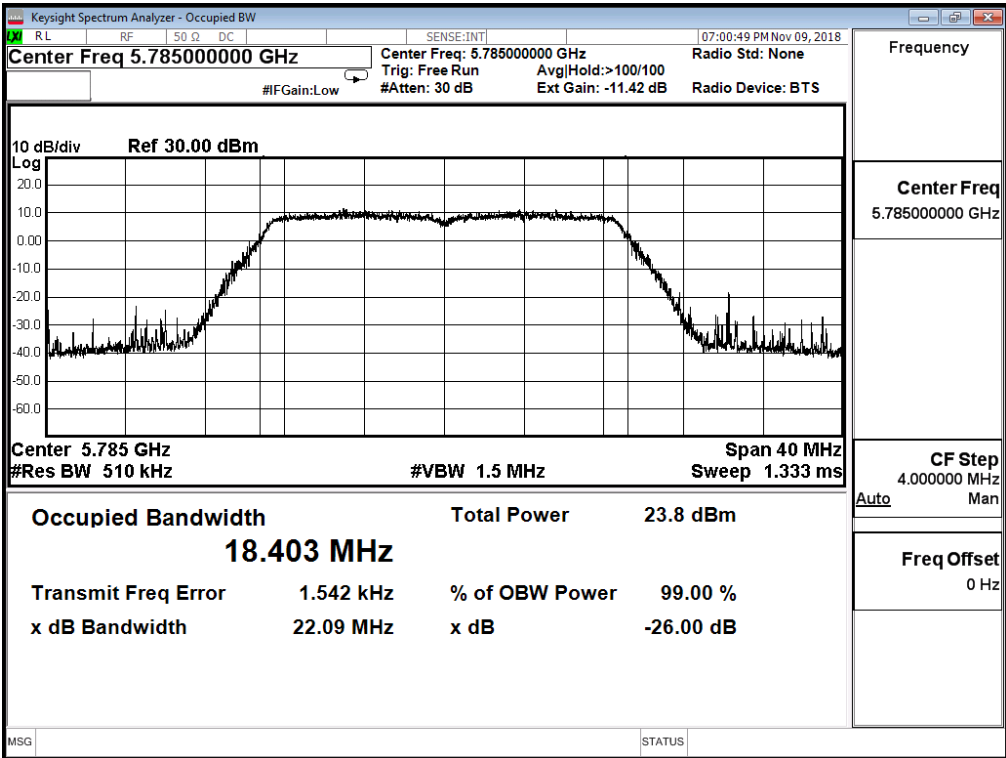


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

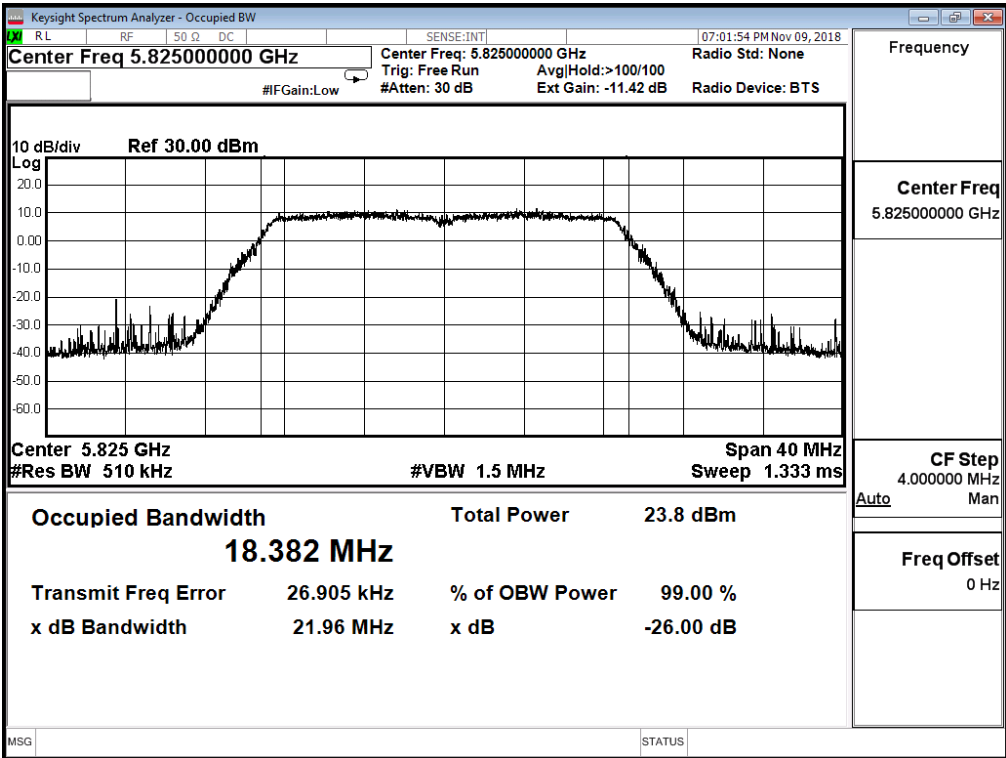
IEEE 802.11ac (VHT20) (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	18.406	---
157	5785	18.403	---
165	5825	18.382	---



Channel 157 (5785MHz)



Channel 165 (5825MHz)

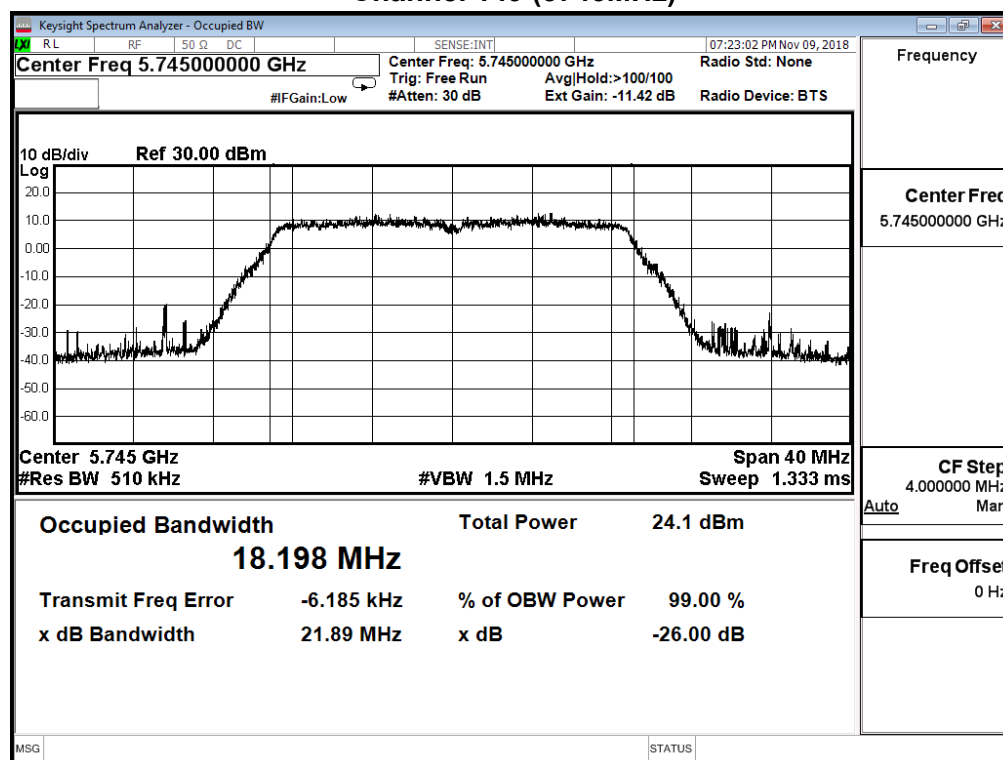


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

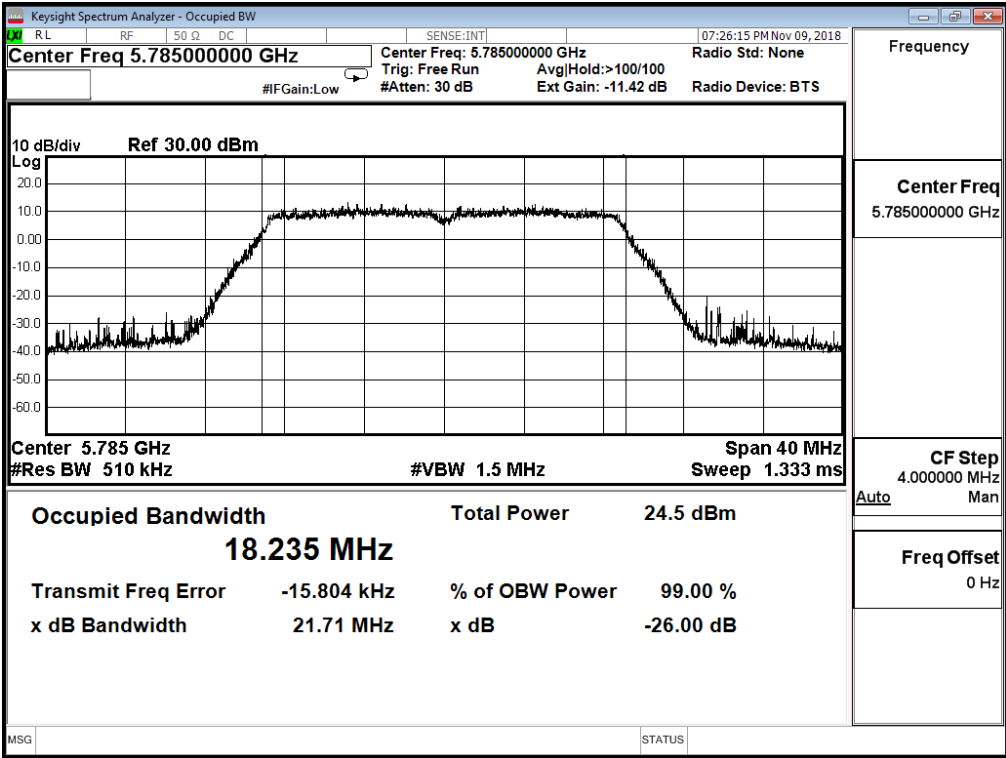
IEEE 802.11ac (VHT20) (ANT 2)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	18.198	---
157	5785	18.235	---
165	5825	18.176	---

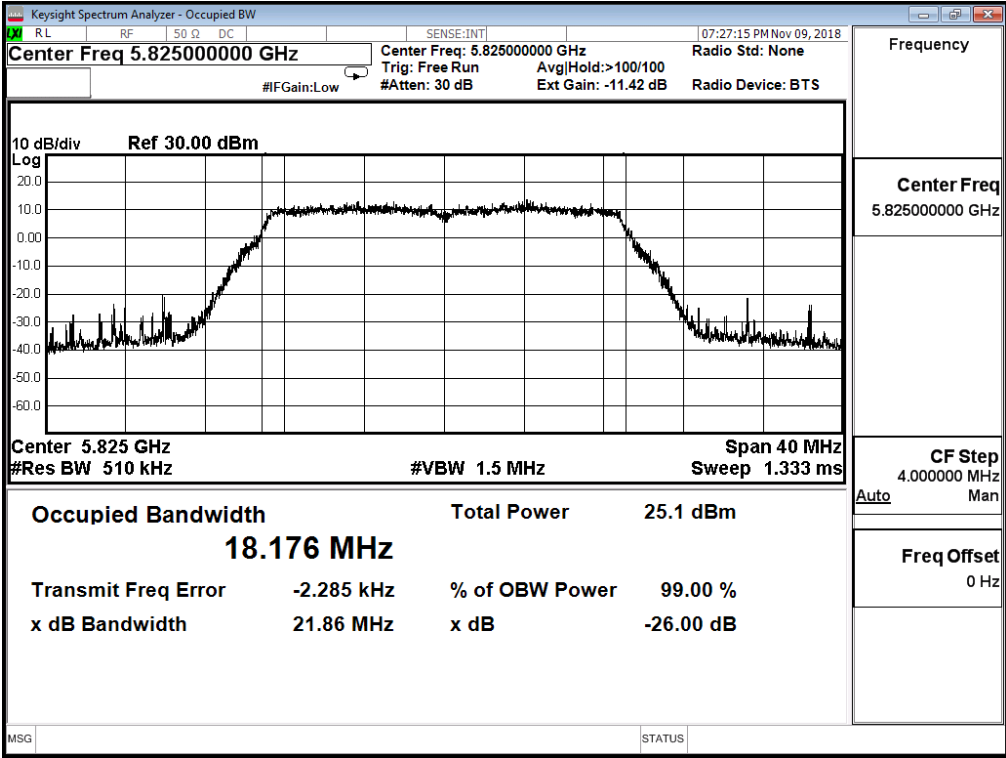
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

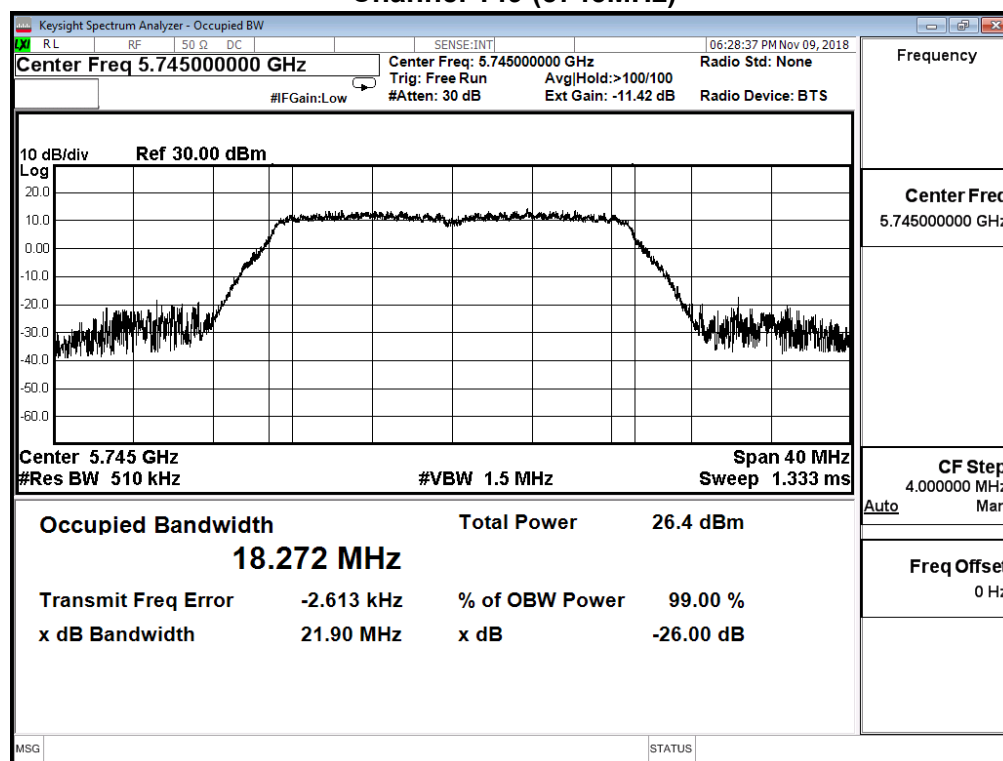


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

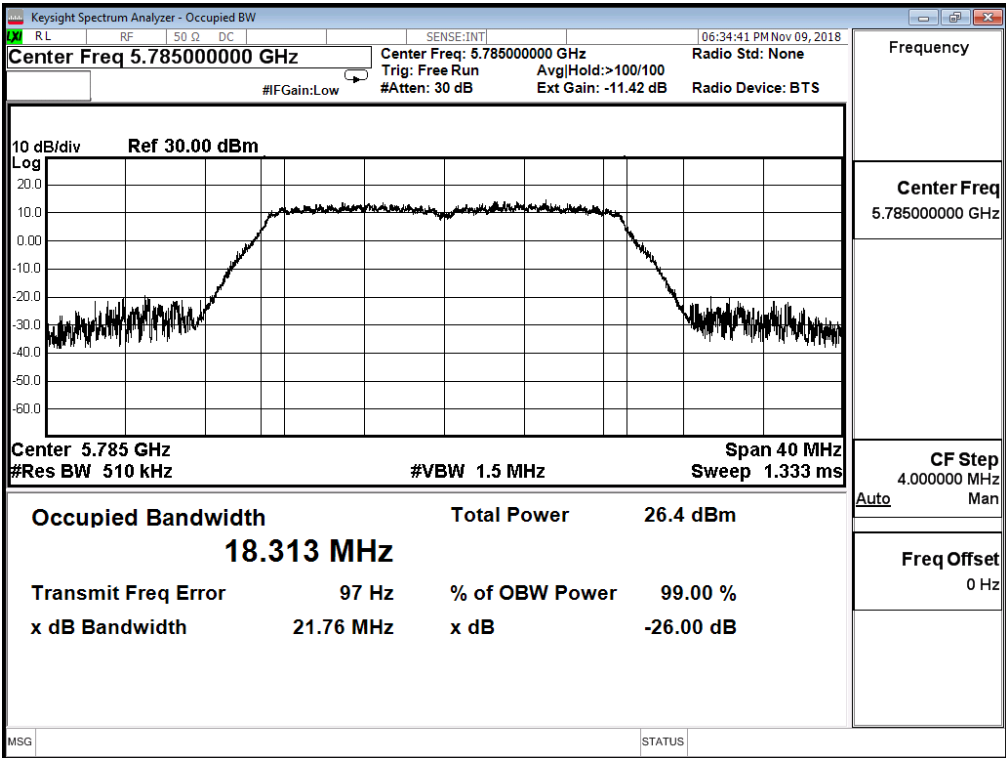
IEEE 802.11ac (VHT20) (ANT 3)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	18.272	---
157	5785	18.313	---
165	5825	18.273	---

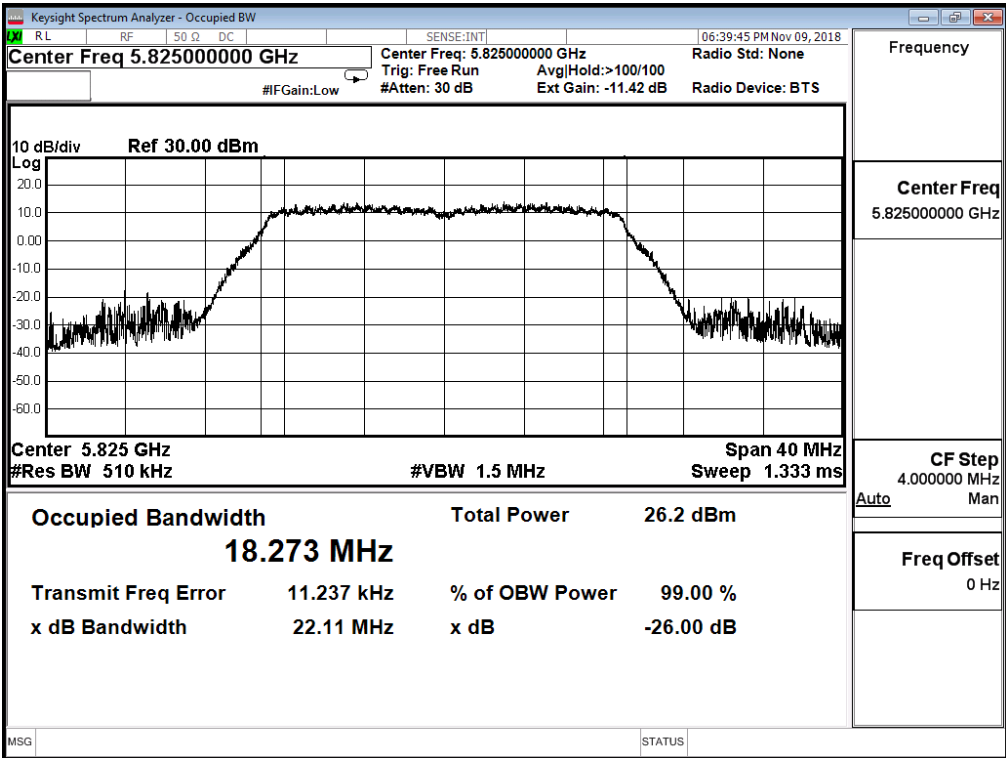
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

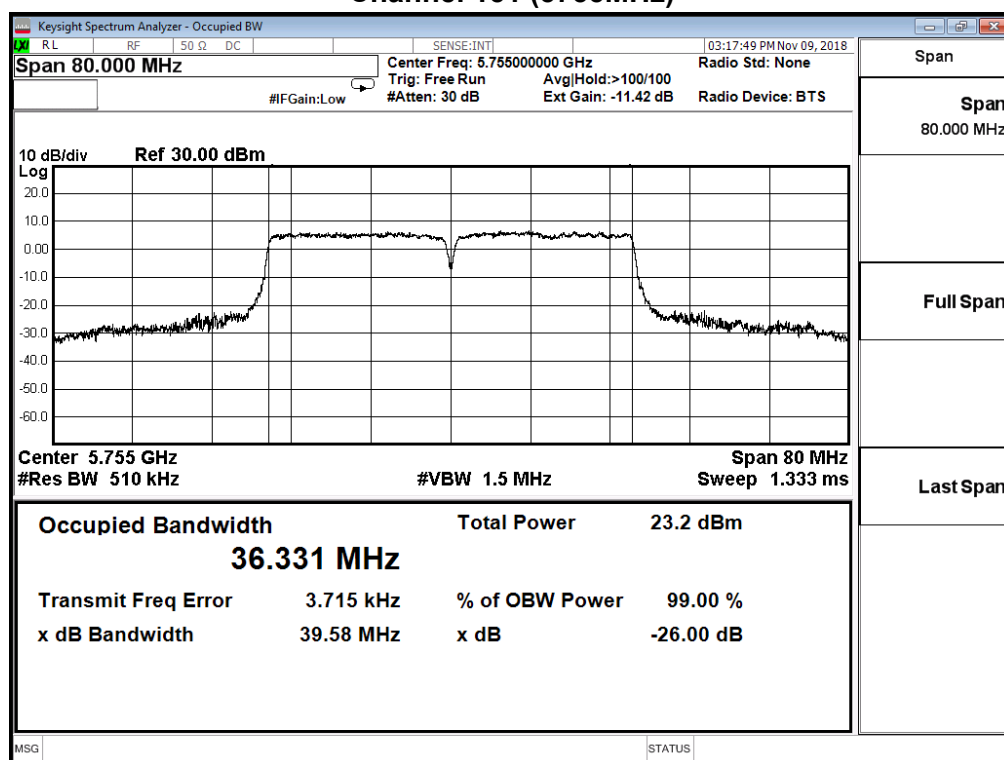


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

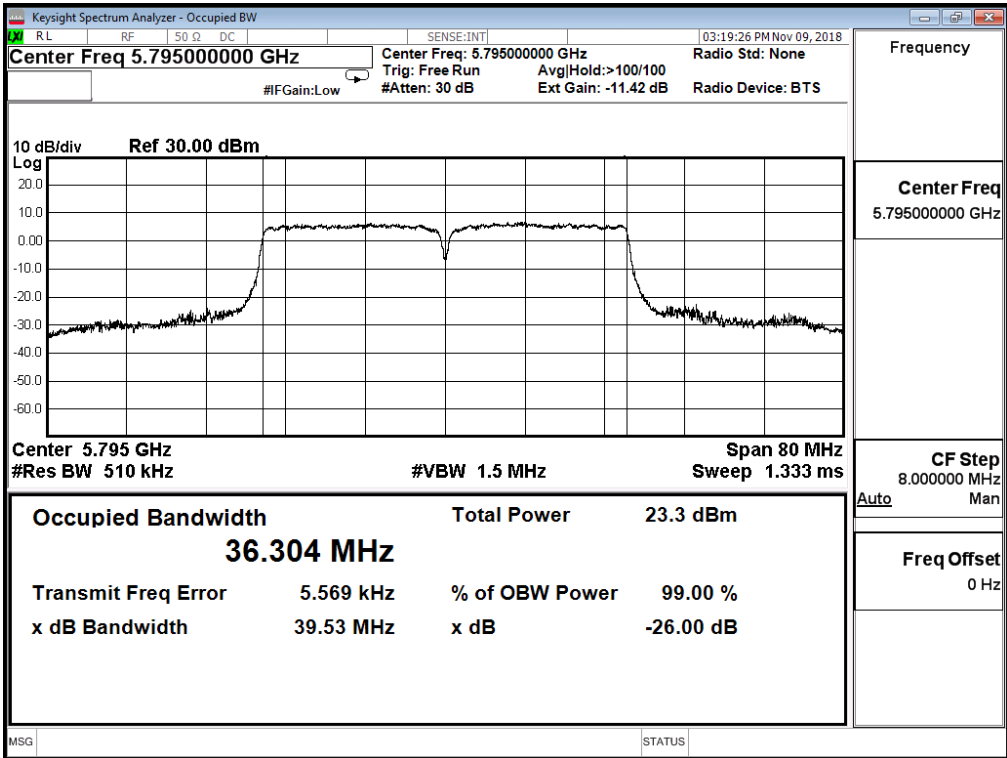
IEEE 802.11ac (VHT40) (ANT 0)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
151	5755	36.331	---
159	5795	36.304	---

Channel 151 (5755MHz)



Channel 159 (5795MHz)

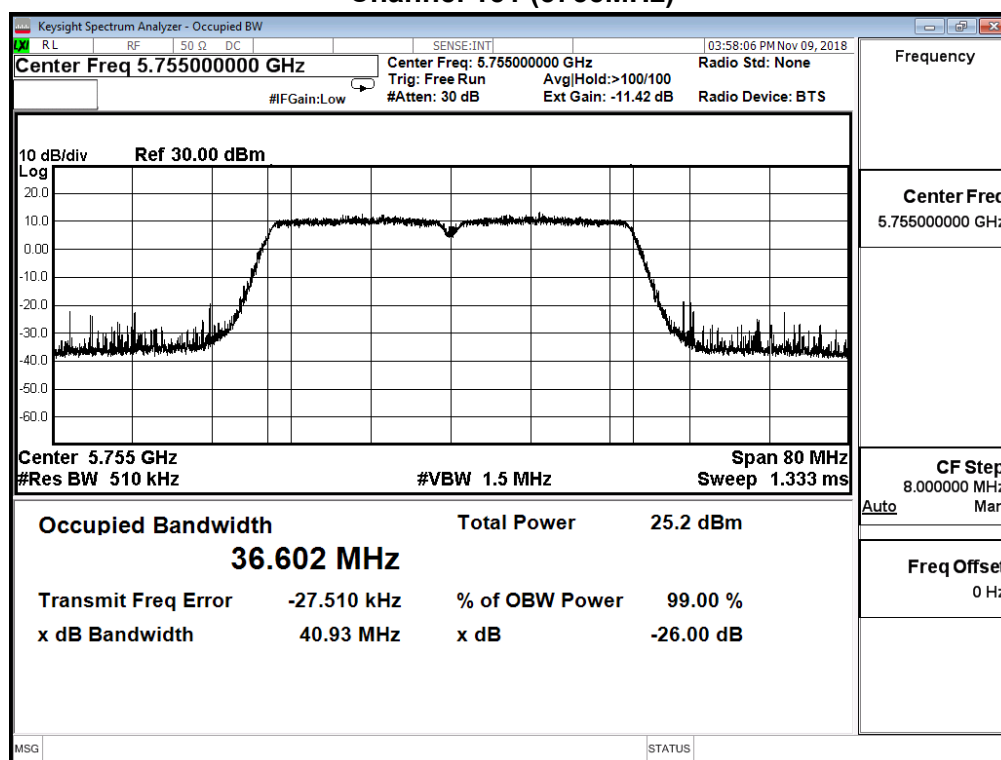


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

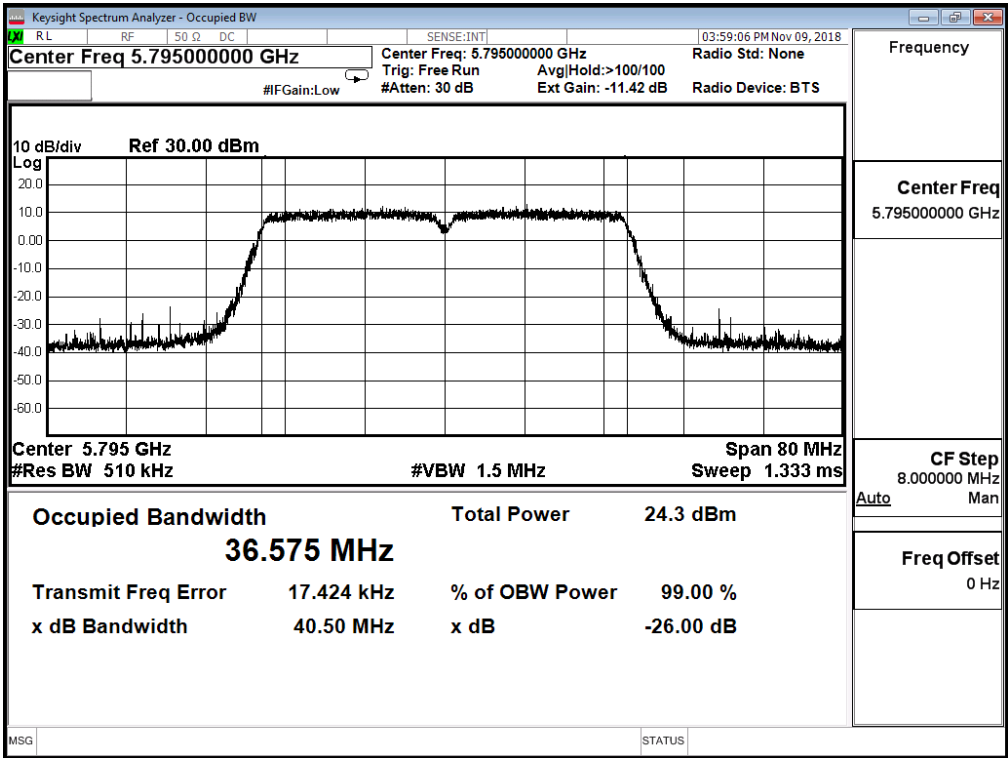
IEEE 802.11ac (VHT40) (ANT 1)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
151	5755	36.602	---
159	5795	36.575	---

Channel 151 (5755MHz)



Channel 159 (5795MHz)

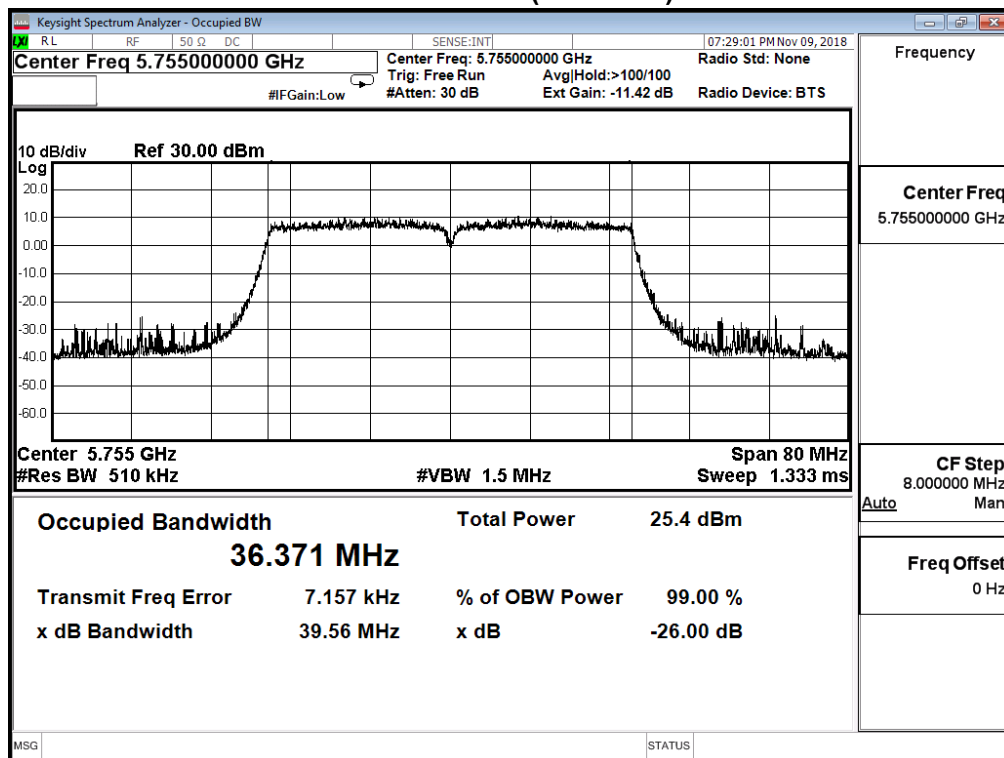


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

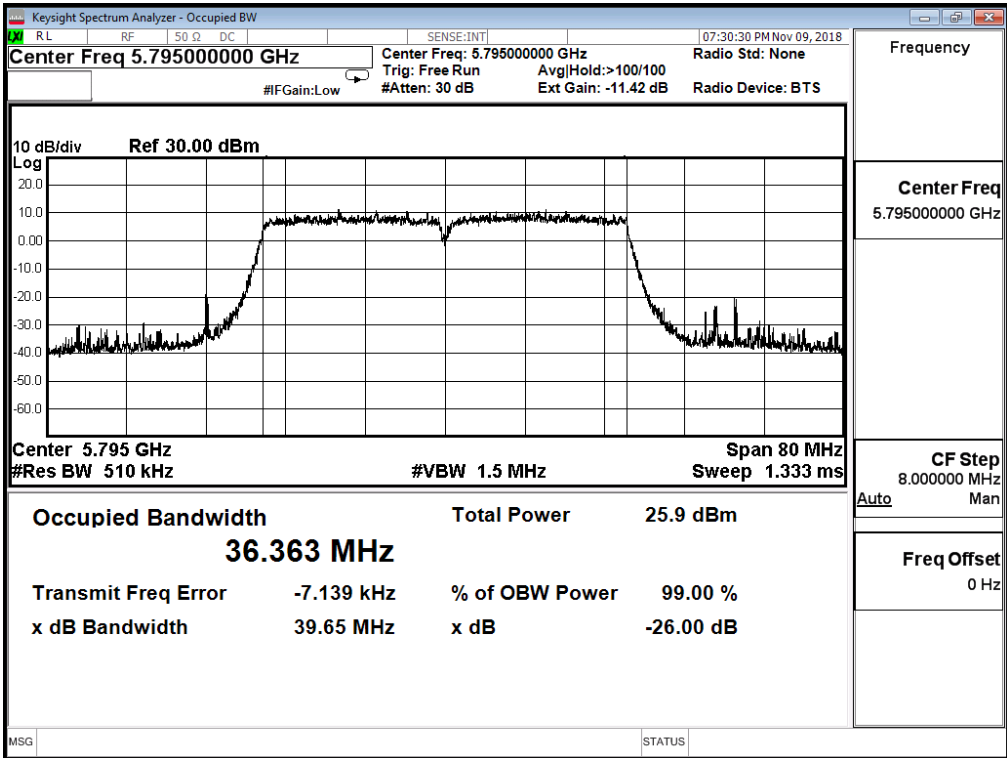
IEEE 802.11ac (VHT40) (ANT 2)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
151	5755	36.371	---
159	5795	36.363	---

Channel 151 (5755MHz)



Channel 159 (5795MHz)

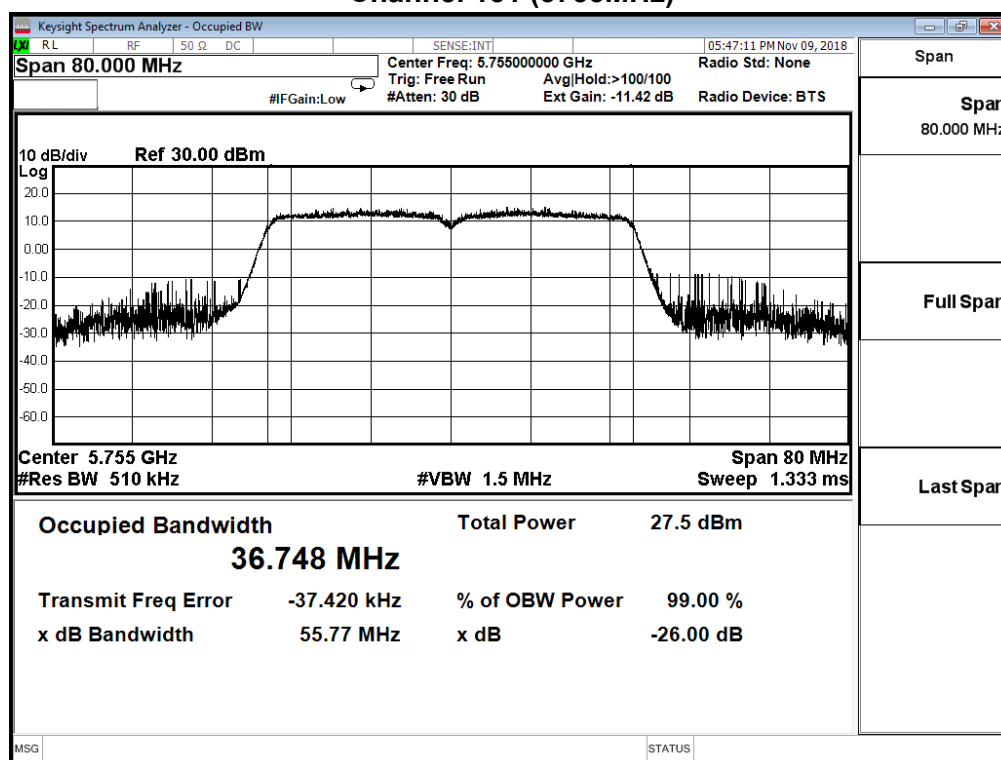


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

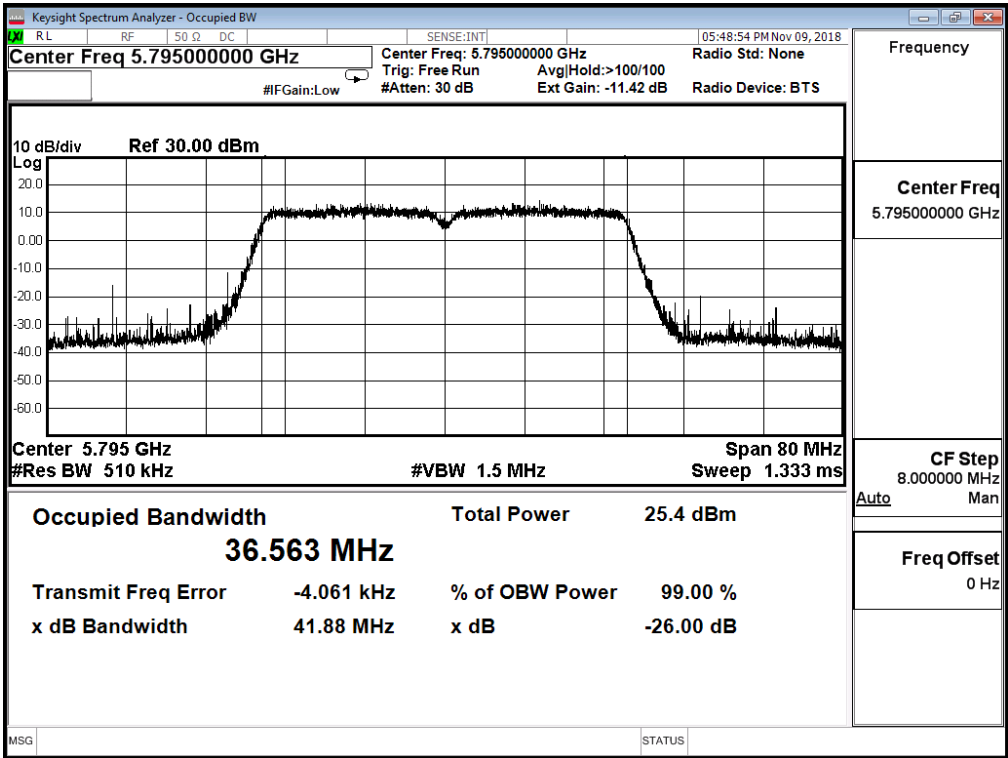
IEEE 802.11ac (VHT40) (ANT 3)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
151	5755	36.748	---
159	5795	36.563	---

Channel 151 (5755MHz)



Channel 159 (5795MHz)

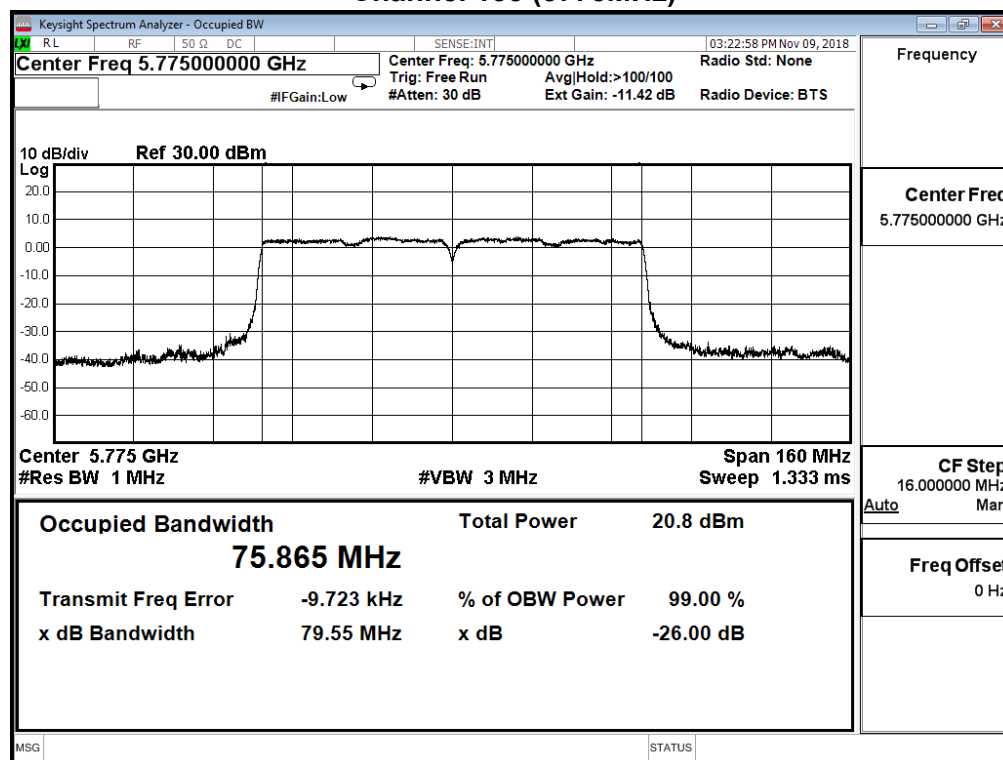


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

IEEE 802.11ac (VHT80) (ANT 0)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
155	5775	75.865	---

Channel 155 (5775MHz)

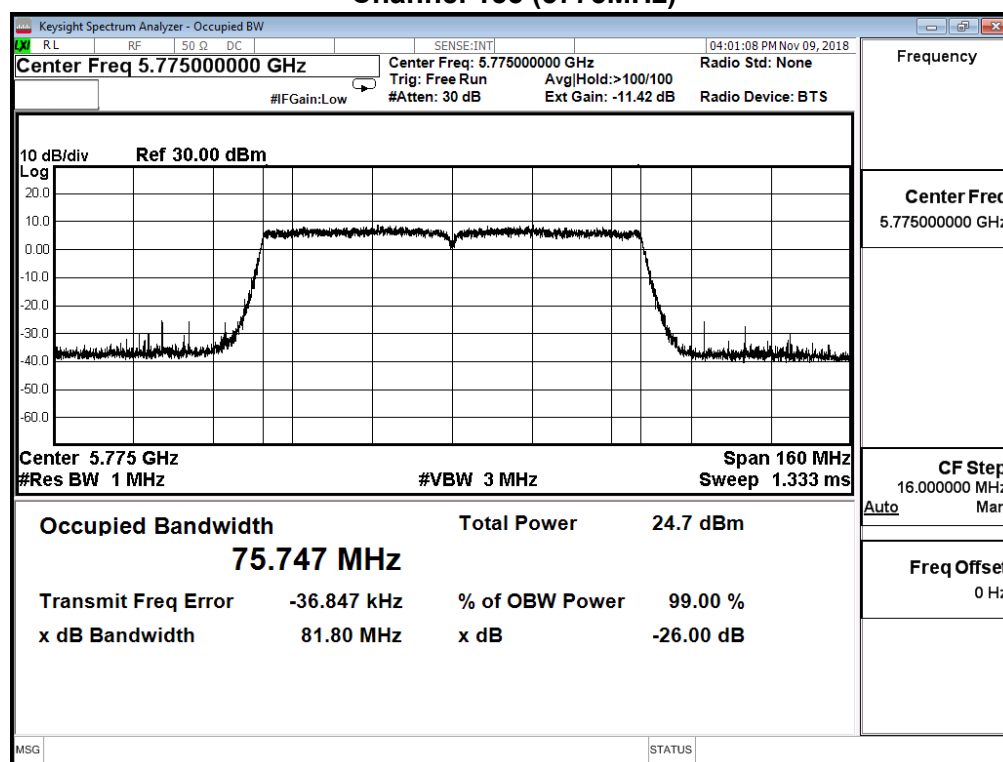


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

IEEE 802.11ac (VHT80) (ANT 1)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
155	5775	75.747	---

Channel 155 (5775MHz)

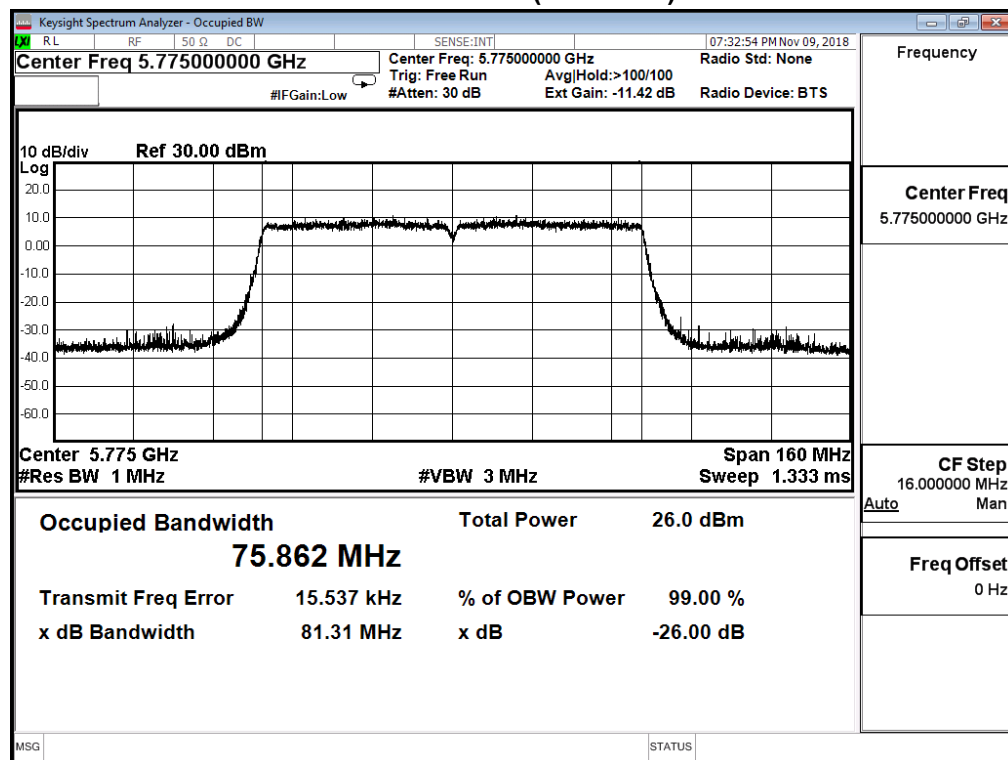


Product	Wireless-AC2900 Dual Band Gigabit Router ROG Rapture GT-AC2900 Dual-band Gaming Router		
Test Item	99% Bandwidth		
Test Mode	Mode 8: TX_ BF Mode_ NSS2		
Date of Test	2018/11/09	Test Site	SR10-H

IEEE 802.11ac (VHT80) (ANT 2)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
155	5775	75.862	---

Channel 155 (5775MHz)



IEEE 802.11ac (VHT80) (ANT 3)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
155	5775	75.813	---

Keysight Spectrum Analyzer - Occupied BW

Center Freq: 5.775000000 GHz
 Trig: Free Run
 #Gain: Low
 #Atten: 30 dB
 Avg/Hold: >100/100
 Ext Gain: -11.42 dB
 Radio Std: None
 Radio Device: BTS

Frequency

Center Freq: 5.775000000 GHz

CF Step: 16.000000 MHz
 Auto
 Man

Freq Offset: 0 Hz

10 dB/div Ref 30.00 dBm

Center 5.775 GHz Span 160 MHz
 #Res BW 1 MHz #VBW 3 MHz Sweep 1.333 ms

Occupied Bandwidth	Total Power
75.813 MHz	25.1 dBm

Transmit Freq Error	% of OBW Power
-35.380 kHz	99.00 %

x dB Bandwidth	x dB
81.26 MHz	-26.00 dB

MSG STATUS