

FCC Test Report

Product Name : Consumer Home Router
Trade Name : Verizon
Model No. : CR1000A
FCC ID : NKR-LVSK-R2

Applicant : Wistron NeWeb Corporation

Address : 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan

Date of Receipt : Oct. 21, 2020

Issued Date : May 19, 2021

Report No. : 20A0549R-E3032110126

Report Version : V2.0



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 : May 19, 2021

Report No. : 20A0549R-E3032110126



Product Name : Consumer Home Router
 Applicant : Wistron NeWeb Corporation
 Address : 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan
 Manufacturer : Wistron NeWeb Corporation
 Address : 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan
 Trade Name : Verizon
 Model No. : CR1000A
 FCC ID : NKR-LVSK-R2
 EUT Rated Voltage : AC 100-120V, 50-60Hz
 Test Voltage : AC 120V/60Hz
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2019
 ANSI C63.10: 2013
 Laboratory Name : Hsin Chu Laboratory
 Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu
 County 310, Taiwan, R.O.C.
 TEL: +886-3-582-8001 / FAX: +886-3-582-8958
 Test Result : Complied

Documented By :



(Carol Tsai / Senior Engineering Adm. Specialist)

Tested By :



(Elwin Lin / Engineer)

Approved By :



(Louis Hsu / Deputy Manager)

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Mar. 19, 2021
V2.0	Update Model No.	May 19, 2021

TABLE OF CONTENTS

Description	Page
1. General Information	6
1.1. EUT Description.....	6
1.2. Test Mode.....	9
1.3. Tested System Details.....	10
1.4. Configuration of tested System.....	10
1.5. EUT Exercise Software.....	11
1.6. Comments and Remarks	11
1.7. Test Facility.....	12
1.8. List of Test Equipment.....	13
1.9. Duty Cycle	16
1.10. Uncertainty.....	25
2. Conducted Emission.....	26
2.1. Test Setup	26
2.2. Limits	26
2.3. Test Procedure	27
2.4. Test Specification	27
2.5. Test Result.....	28
3. 26dB & 99% & DTS Bandwidth	30
3.1. Test Setup	30
3.2. Limits	30
3.3. Test Procedure	30
3.4. Test Result.....	31
4. Maximum conducted output power.....	111
4.1. Test Setup	111
4.2. Limits	111
4.3. Test Procedure	112
4.4. Test Result.....	113
5. Maximum power spectral density	126
5.1. Test Setup	126
5.2. Limits	126
5.3. Test Procedure	127

5.4. Test Result.....	128
6. Radiated Emission.....	173
6.1. Test Setup	173
6.2. Limits	174
6.3. Test Procedure	175
6.4. Test Result.....	176
7. Band Edge	240
7.1. Test Setup	240
7.2. Limits	240
7.3. Test Procedure	242
7.4. Test Result.....	243
Attachment 1	369
Test Setup Photograph.....	369
Attachment 2.....	372
EUT External Photograph.....	372
Attachment 3.....	377
EUT Internal Photograph	377

1. General Information

1.1. EUT Description

Product Name	Consumer Home Router	
Trade Name	Verizon	
Model No.	CR1000A	
Frequency Range/ Channel Number	IEEE 802.11a/n/ac/ax (20MHz)	5180~5240MHz / 4 Channels 5745~5825MHz / 5 Channels
	IEEE 802.11n/ac/ax (40MHz)	5190~5230MHz / 2 Channels 5755~5795MHz / 2 Channels
	IEEE 802.11ac/ax (80MHz)	5210~5210MHz / 1 Channel 5775~5775MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac/ax	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11a	6, 9, 18, 24, 36, 48, 54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 32 and bandwidth defined in 802.11n
	IEEE 802.11ac	Support a subset of the combination of GI, MCS 0~MCS 9 and bandwidth defined in 802.11ac Proprietary MCS 10-MCS 11 (1024QAM)
	IEEE 802.11ax	Support a subset of the combination of GI, MCS 0~MCS 11 and bandwidth defined in 802.11ax

Accessories Information	
LAN Cable	Non-Shielded, 3m
Power Adapter	MFR: LUCENT TRANS; M/N: 1A98-1250 I/P: 100-120V~1.6A, 50-60Hz, O/P: DC 12.0V ==5.0A, 60W Cable Out: Non-Shielded, 1.8m

Ant. No.	Manufacturer	PN	Ant. Type	Directional Gain
0	WNC	Dual Ant1	Dipole Antenna	4.94 dBi for 5150~5250 MHz 5.05 dBi for 5725~5850 MHz
1		Dual Ant2		
2		Dual Ant3		
3		Dual Ant4		

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX			RX		
	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz
IEEE802.11a	✓	 	 	✓	 	
IEEE802.11n	✓	✓	 	✓	✓	
IEEE802.11ac/ax	✓	✓	✓	✓	✓	✓

IEEE 802.11a & IEEE 802.11n (20MHz) & IEEE 802.11ac/ax (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						

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

IEEE 802.11ac/ax (80MHz)

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775 MHz

Note:

1. This device is a Consumer Home Router including 2.4GHz b/g/n/ax and 5GHz a/n/ac/ax and BLE transmitting and receiving functions.
2. 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.
3. The EUT description is from the customer declaration.

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: Transmit CDD Mode Mode 2: Transmit RU Mode Mode 3: Transmit Beamforming Mode
-----------	--

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

Note 1: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

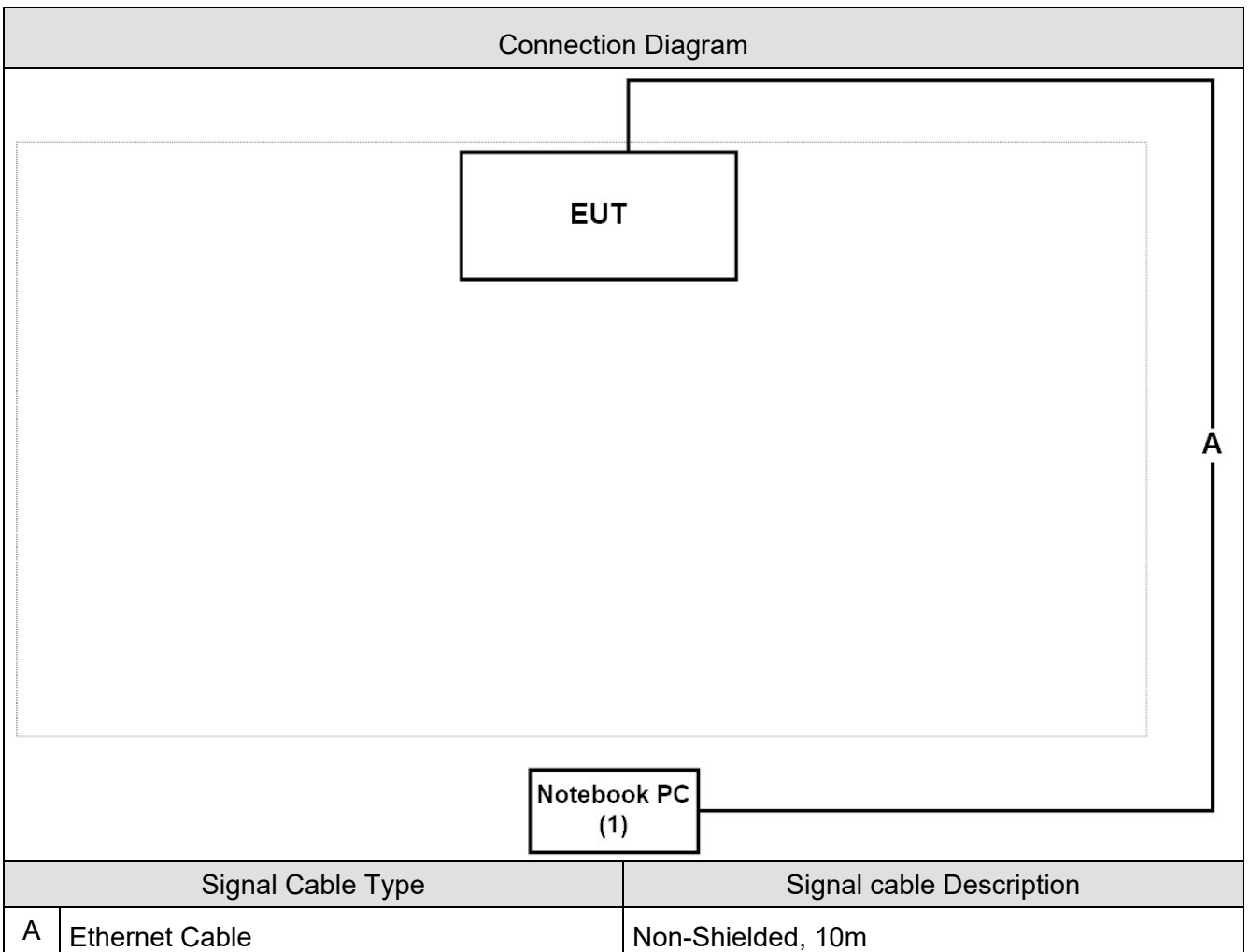
Note 2: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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	Dell	Latitude E6320	8611271467	DoC	Non-Shielded, 1.8m

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Set the EUT as shown in Section 1.4.
2	Open the control software QSPR.
3	Configure test mode, test channel and data rate.
4	Let the EUT start transmitting signal continuously.
5	Verify that device is working properly.

1.6. Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required	Test Site
Temperature (°C)	FCC PART 15E 15.407	15 - 35	2
Humidity (%RH)	Conducted Emission	25 - 75	
Temperature (°C)	FCC PART 15E 15.407	15 - 35	1
Humidity (%RH)	26dB & 99% & DTS Bandwidth	25 - 75	
Temperature (°C)	FCC PART 15E 15.407	15 - 35	1
Humidity (%RH)	Maximum conducted output power	25 - 75	
Temperature (°C)	FCC PART 15E 15.407	15 - 35	1
Humidity (%RH)	Maximum power spectral density	25 - 75	
Temperature (°C)	FCC PART 15E 15.407	15 - 35	1
Humidity (%RH)	Radiated Emission	25 - 75	
Temperature (°C)	FCC PART 15E 15.407	15 - 35	1
Humidity (%RH)	Band Edge	25 - 75	

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

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

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
Email address	info.tw@dekra.com
Website	http://www.dekra.com.tw

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	2020/01/08	2021/01/07
Test Receiver	R&S	ESCS 30	836858/022	2020/02/25	2021/02/24
LISN	R&S	ENV216	100092	2020/06/22	2021/06/21

Occupied Bandwidth / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29

Maximum conducted output power / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2019/12/02	2020/12/01
Pulse Power Sensor	Anritsu	MA2411B	1531043	2019/12/02	2020/12/01
Pulse Power Sensor	Anritsu	MA2411B	1531044	2019/12/02	2020/12/01
Power Meter	Keysight	8990B	MY51000248	2020/05/20	2021/05/19
Power Sensor	Keysight	N1923A	MY57240005	2020/05/20	2021/05/19

Maximum power spectral density / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29

Radiated Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
Signal Analyzer	R&S	FSV40	101435	2020/06/24	2021/06/23
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Bilog Antenna	Teseq	CBL6112D	23191	2020/06/12	2021/06/11
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2020/06/04	2021/06/03
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2020/10/14	2021/10/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2019/12/27	2020/12/26
Horn Antenna	Schwarzbeck	BBHA 9170	203	2020/03/09	2021/03/08
Pre-Amplifier	DEKRA	AP-025C	12183122	2020/09/03	2021/09/02
Pre-Amplifier	EMCI	EMC11830I	980366	2019/12/03 2020/11/30	2020/12/02 2021/11/29
Pre-Amplifier	DEKRA	AP-400C	201801231	2019/12/03 2020/11/16	2020/12/02 2021/11/15
Band Reject Filter	Micro-Tronics	BRM50716	G089	2020/03/18	2021/03/17
Band Reject Filter	Micro-Tronics	BRM50716	G068	2020/03/09	2021/03/08
Coaxial Cable(10m)	Suhner	SF102_SF104	CB4-H	2020/04/25	2021/04/24
DEKRA Testing System	DEKRA	Version 1.2	CB4-H	NA	NA

Band Edge / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
Signal Analyzer	R&S	FSV40	101435	2020/06/24	2021/06/23
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Bilog Antenna	Teseq	CBL6112D	23191	2020/06/12	2021/06/11
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2020/06/04	2021/06/03
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2020/10/14	2021/10/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2019/12/27	2020/12/26
Horn Antenna	Schwarzbeck	BBHA 9170	203	2020/03/09	2021/03/08
Pre-Amplifier	DEKRA	AP-025C	12183122	2020/09/03	2021/09/02
Pre-Amplifier	EMCI	EMC11830I	980366	2019/12/03	2020/12/02
Pre-Amplifier	DEKRA	AP-400C	201801231	2019/12/03	2020/12/02
Band Reject Filter	Micro-Tronics	BRM50716	G089	2020/03/18	2021/03/17
Band Reject Filter	Micro-Tronics	BRM50716	G068	2020/03/09	2021/03/08
Coaxial Cable(10m)	Suhner	SF102_SF104	CB4-H	2020/04/25	2021/04/24
DEKRA Testing System	DEKRA	Version 1.2	CB4-H	NA	NA

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

1.9. Duty Cycle

Mode		On Time(ms)	On+Off Time(ms)	Duty Cycle (%)	Duty Factor(dB) linear voltage	Duty Factor(dB) Power	1/T Minimum VBW (kHz)
CDD	a	0.199	0.379	52.53%	5.591580	2.80	5.020
	X HE20	5.360	6.000	89.33%	0.979729	0.49	0.187
	X HE40	5.355	6.158	86.97%	1.212899	0.61	0.187
	X HE80	4.529	5.495	82.42%	1.679476	0.84	0.221
RU	AX HE20_edge	3.139	3.931	79.85%	1.954513	0.98	0.319
	AX HE40_edge	3.308	3.947	83.81%	1.534245	0.77	0.302
	AX HE80_edge	0.482	0.932	51.77%	5.718308	2.86	2.073
	AX HE20_Full	4.956	5.837	84.91%	1.420424	0.71	0.202
	AX HE40_Full	4.491	5.483	81.92%	1.732712	0.87	0.223
	AX HE80_Full	0.702	0.909	77.29%	2.237957	1.12	1.424
BF	X HE20	1.198	1.334	89.81%	0.933108	0.47	0.835
	X HE40	1.739	1.897	91.68%	0.754522	0.38	0.575
	X HE80	1.931	2.124	90.93%	0.826259	0.41	0.518

Note:

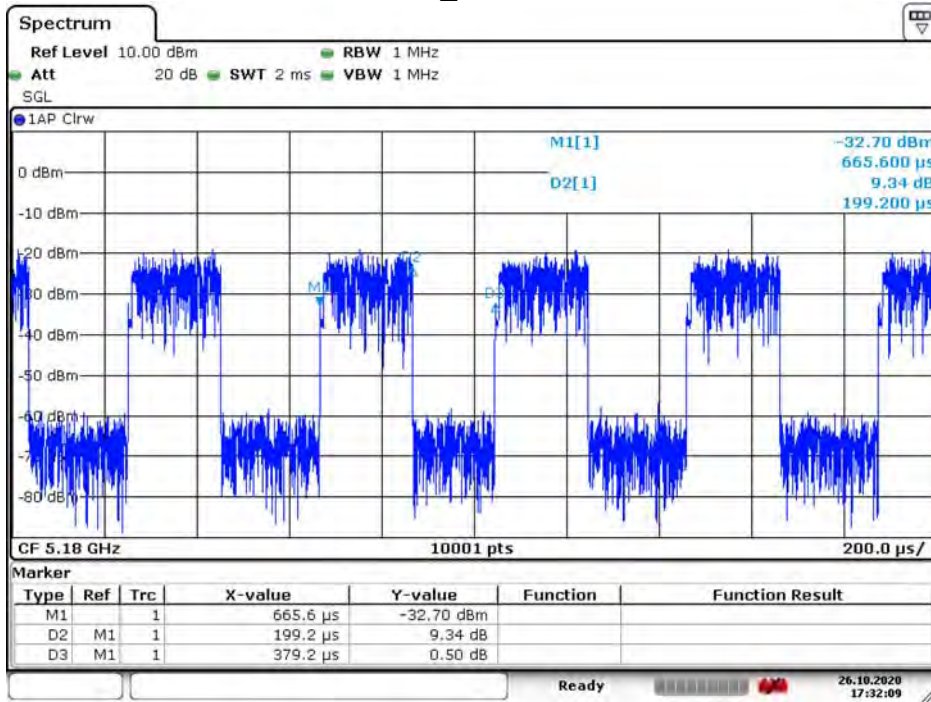
Offset = $20 \log(1/\text{duty cycle})$

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.

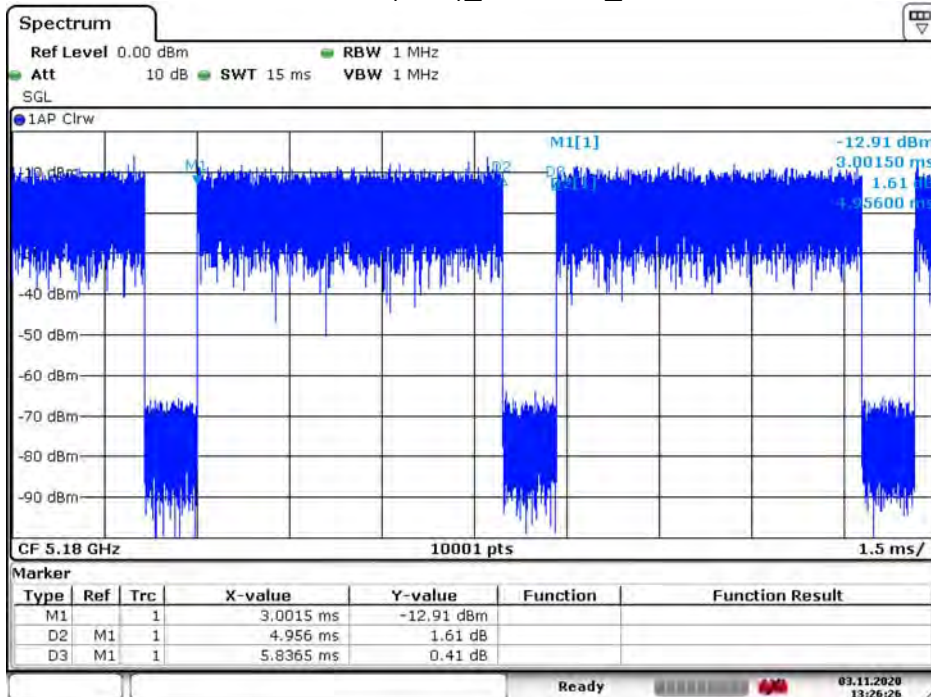
If linear voltage averaging mode was used in step (iv) above, the correction factor is $20 \log(1/x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB must be added to the measured emission levels.

802.11a_CDD Mode



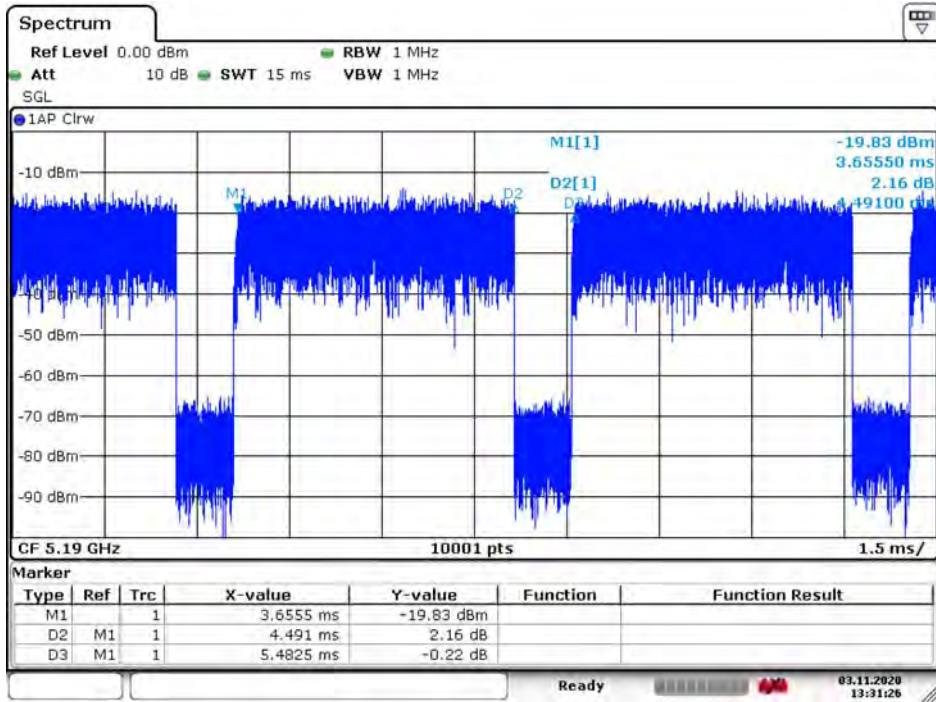
Date: 28.OCT.2020 17:32:09

802.11ax(20M)_RU Mode_Full



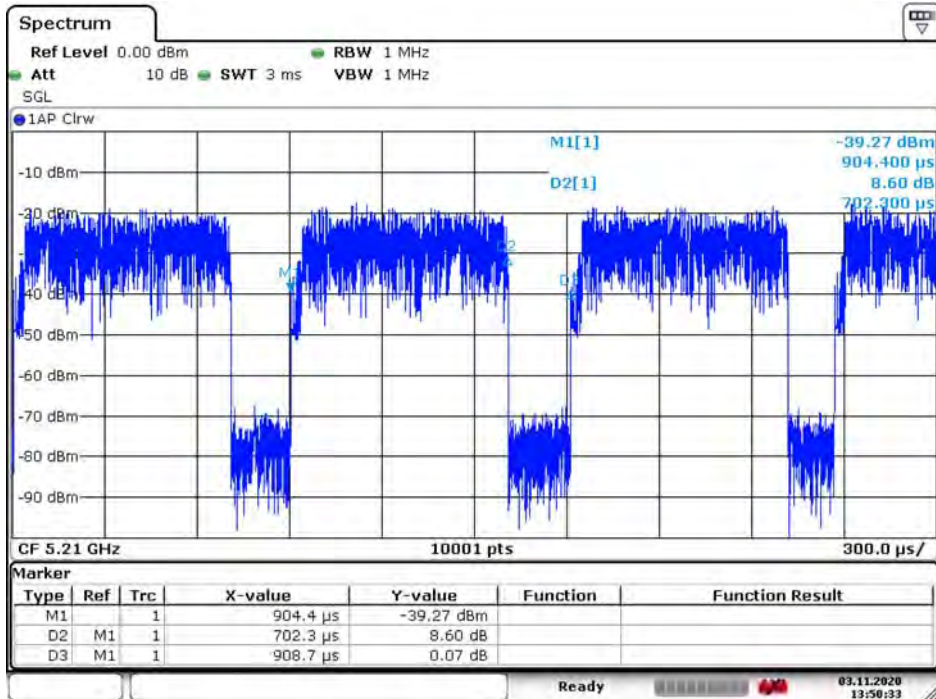
Date: 3.NOV.2020 13:26:26

802.11ax(40M)_RU Mode_Full



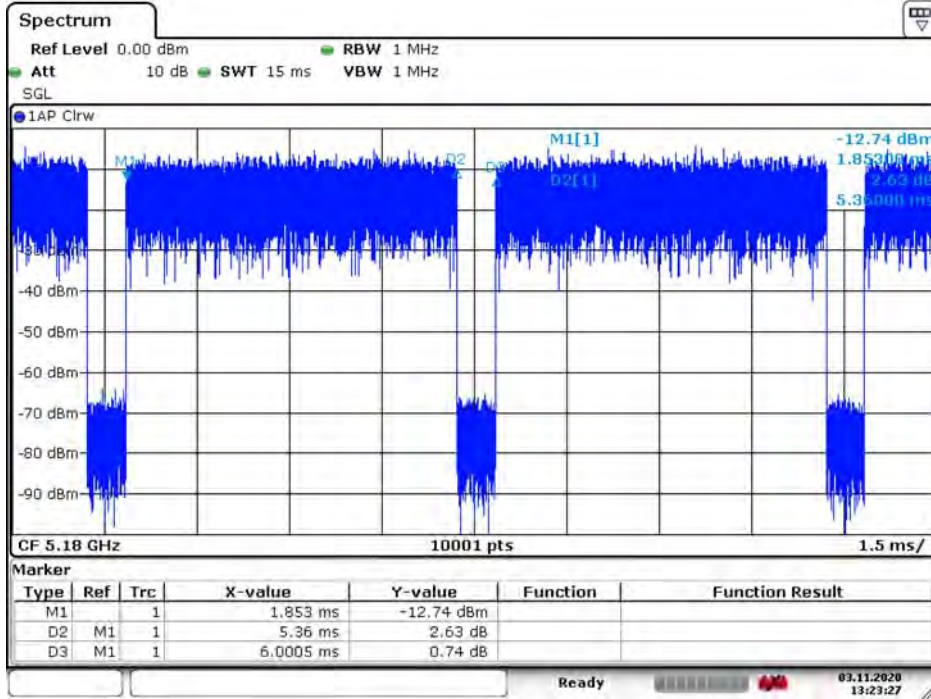
Date: 3 NOV 2020 13:31:27

802.11ax(80M)_RU Mode_Full



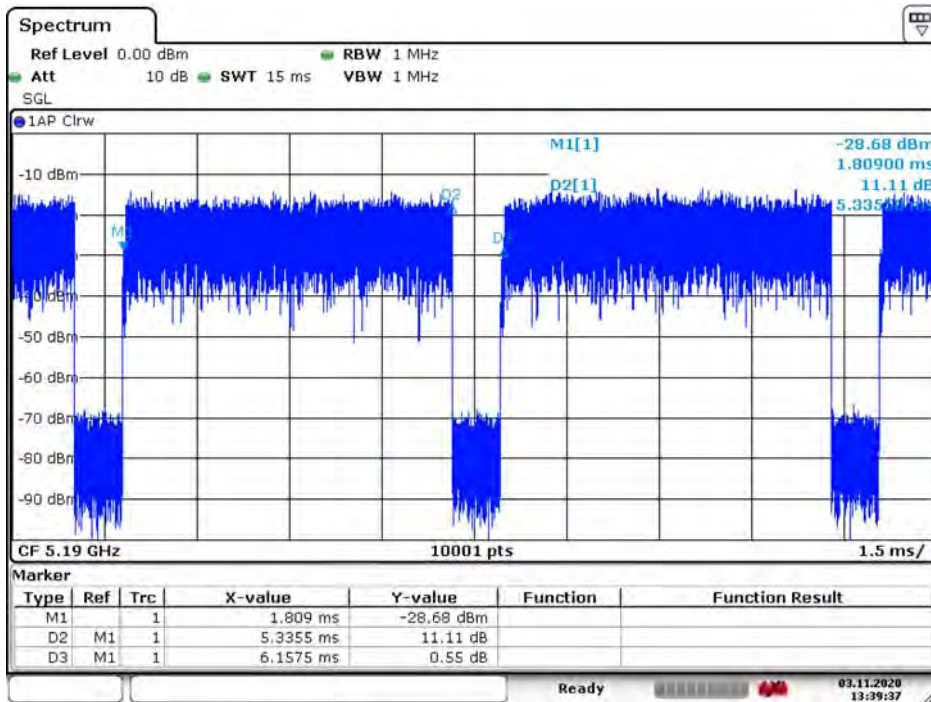
Date: 3 NOV 2020 13:50:33

802.11ax(20M)_RU Mode_Center



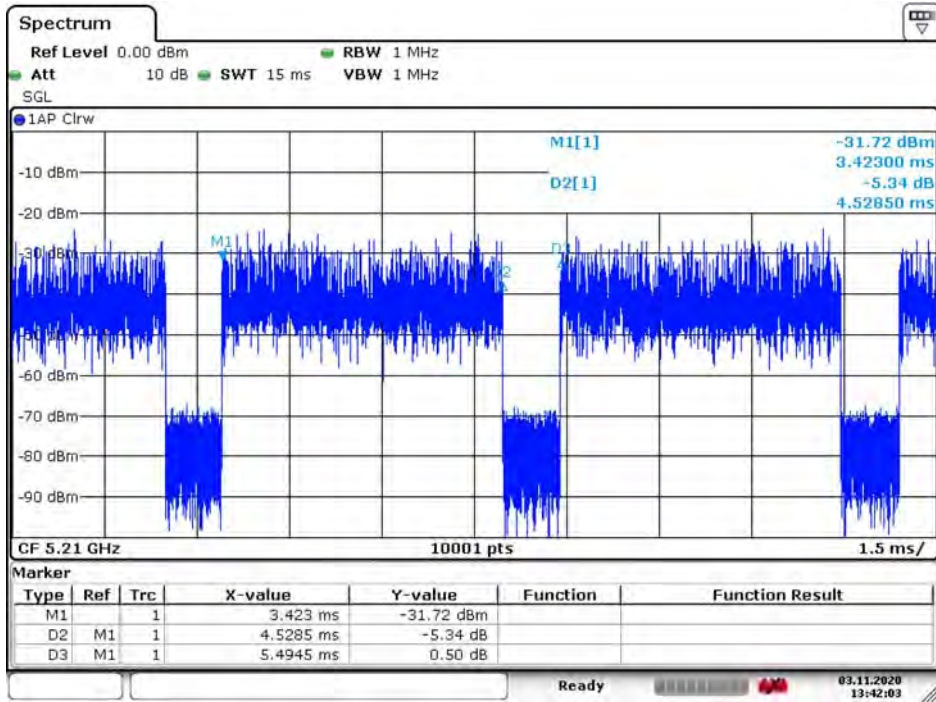
Date: 3 NOV 2020 13:23:27

802.11ax(40M)_RU Mode_Center



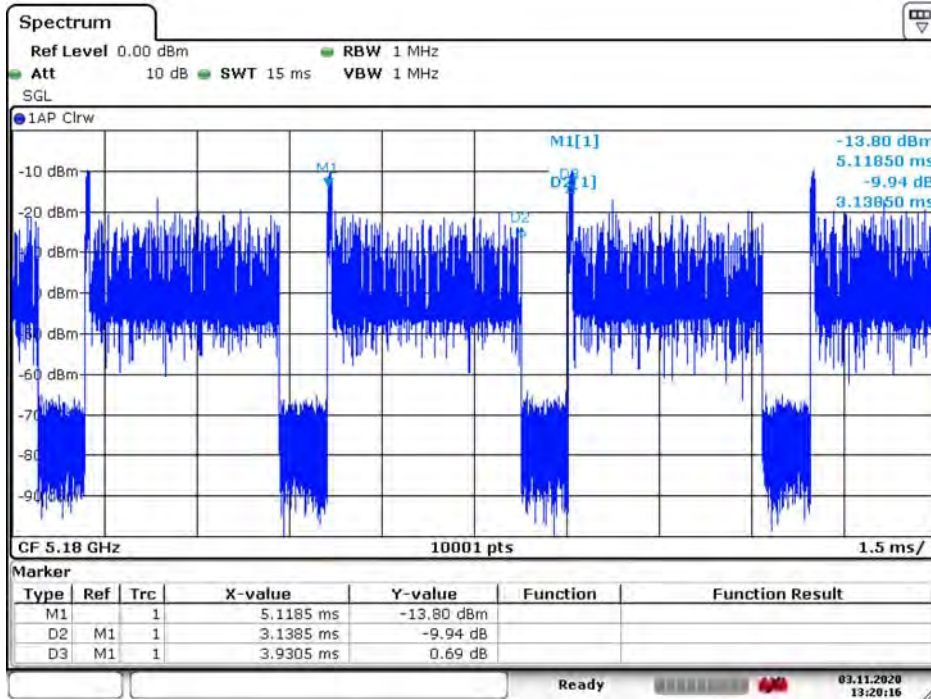
Date: 3 NOV 2020 13:39:37

802.11ax(80M)_RU Mode_Center



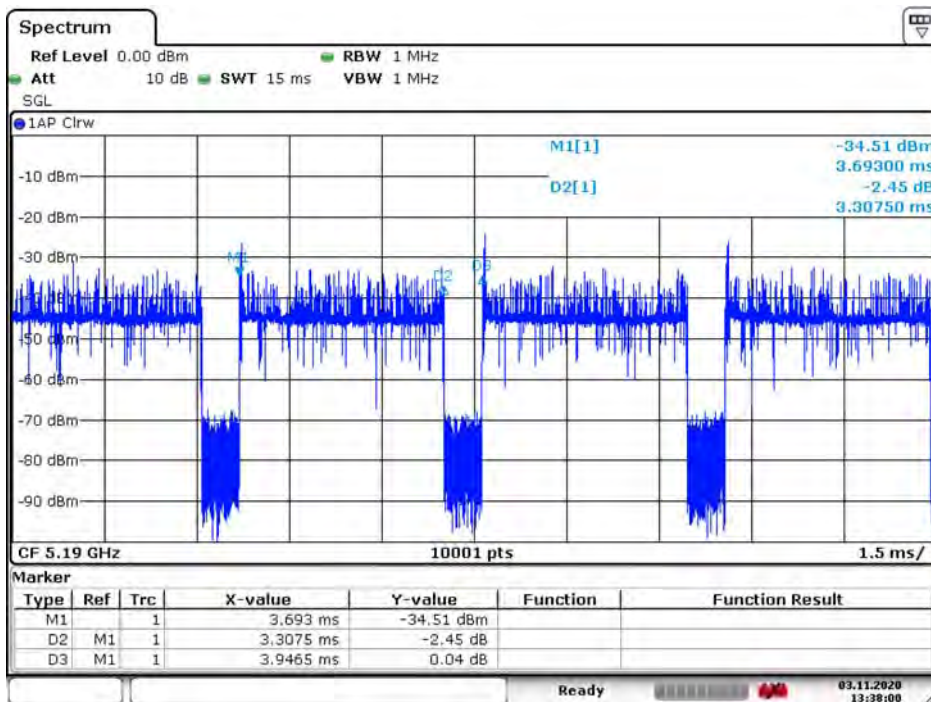
Date: 3 NOV 2020 13:42:03

802.11ax(20M)_RU Mode_Edge



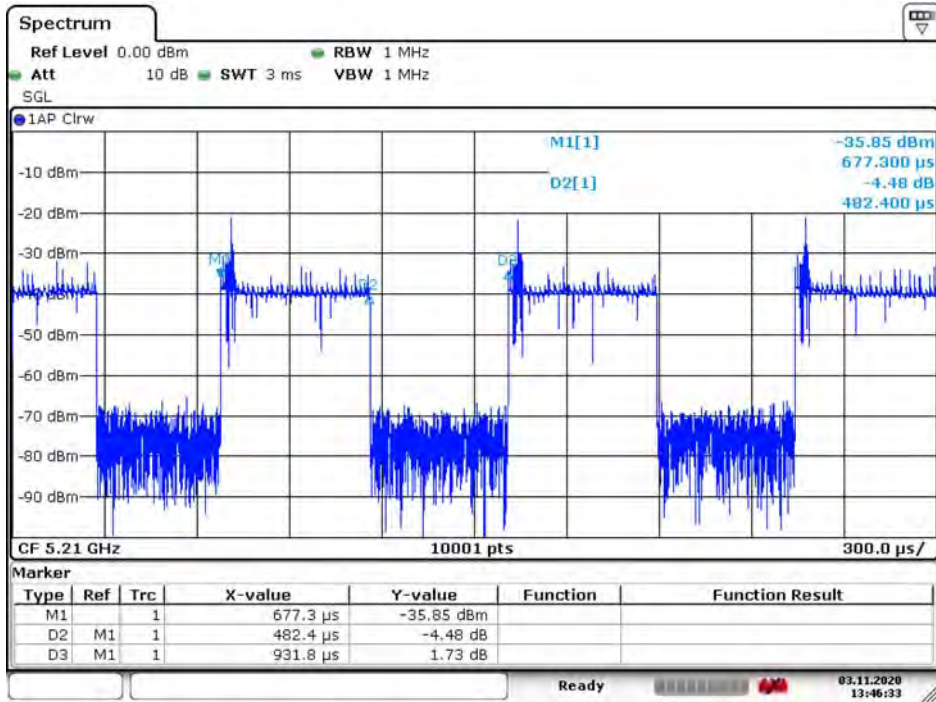
Date: 3 NOV 2020 13:20:16

802.11ax(40M)_RU Mode_Edge



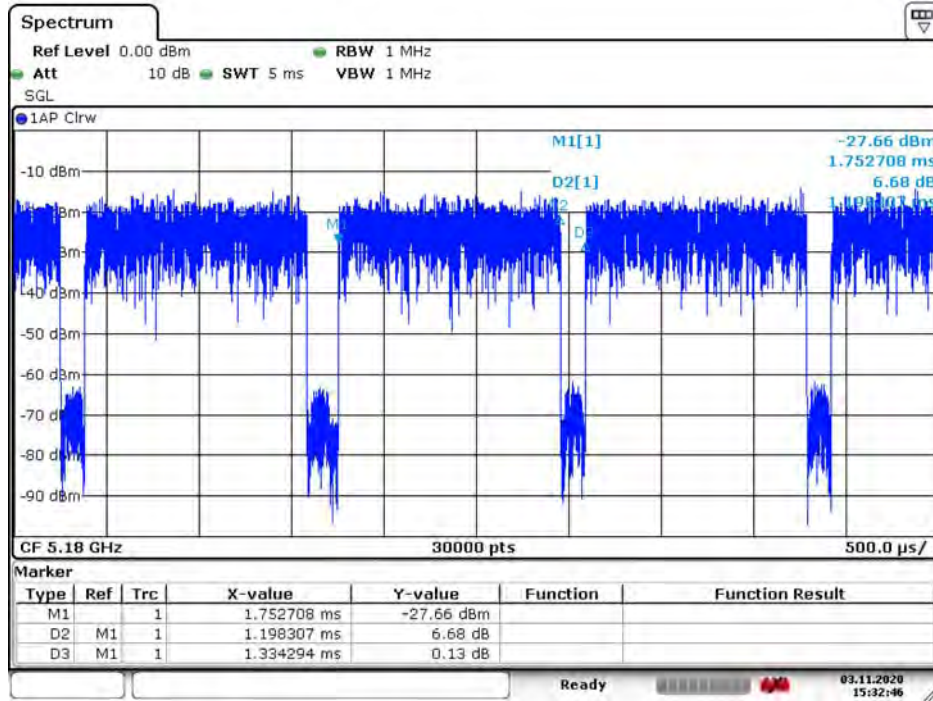
Date: 3 NOV 2020 13:38:00

802.11ax(80M)_RU Mode_Edge



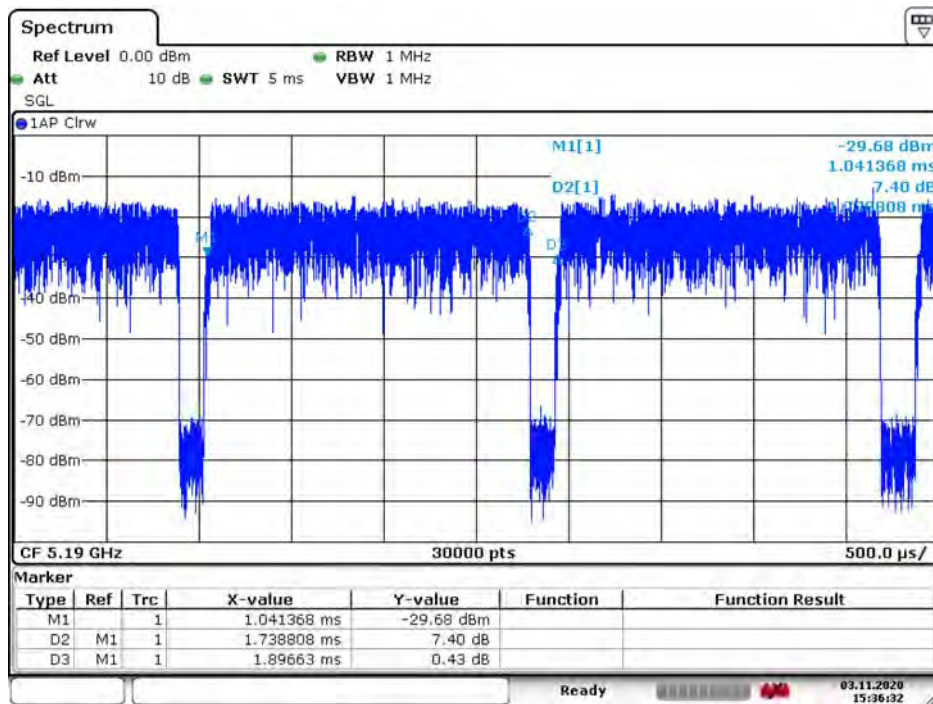
Date: 3 NOV 2020 13:46:33

802.11ax(20M)_Beamforming Mode



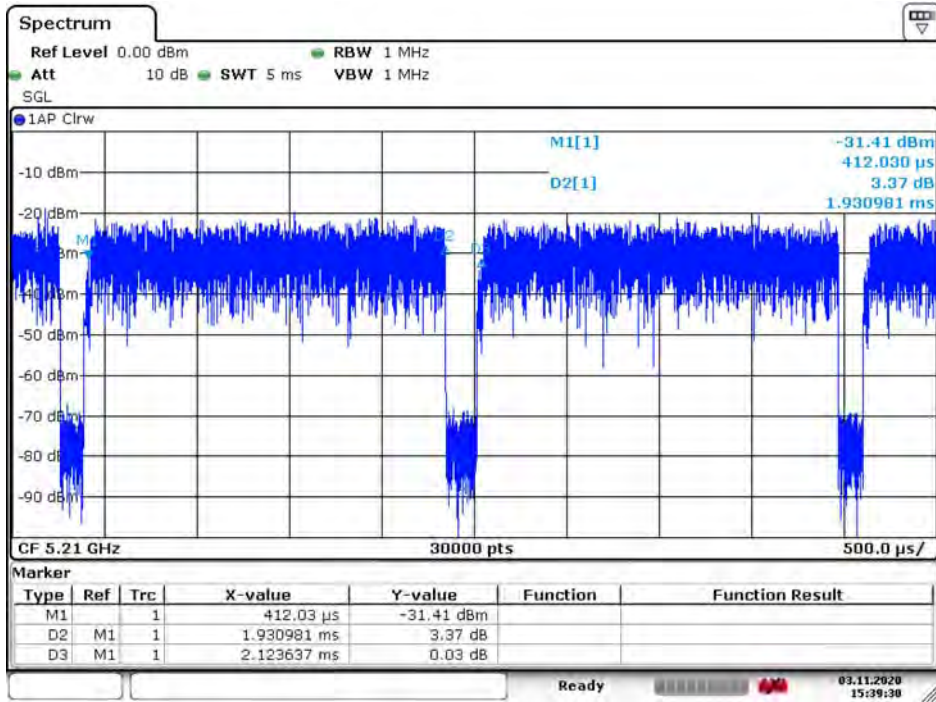
Date: 3 NOV 2020 15:32:47

802.11ax(40M)_Beamforming Mode



Date: 3 NOV 2020 15:36:33

802.11ax(80M)_Beamforming Mode



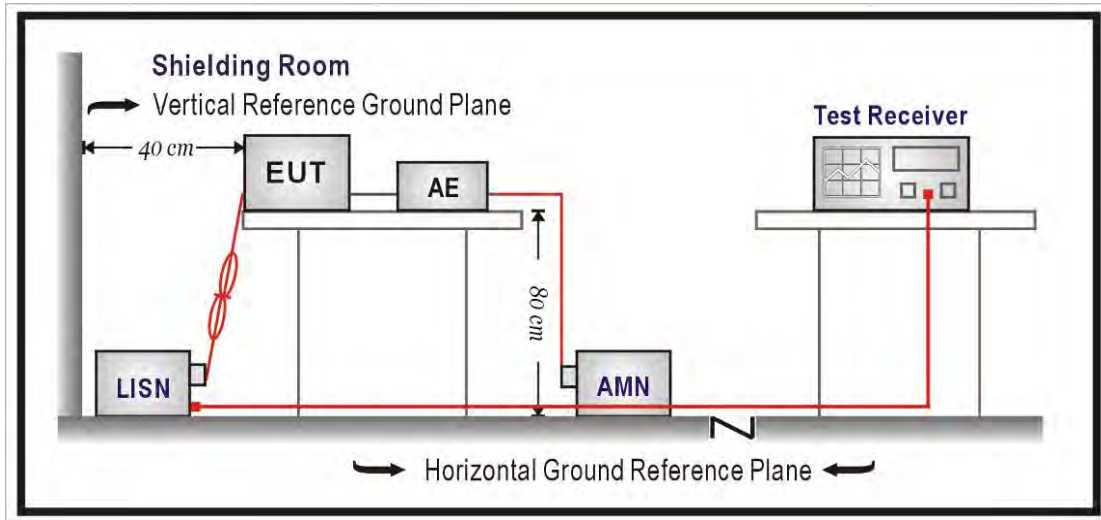
Date: 3 NOV 2020 15:39:31

1.10. Uncertainty

Test item	Uncertainty
Conducted Emission	± 2.26 dB
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.

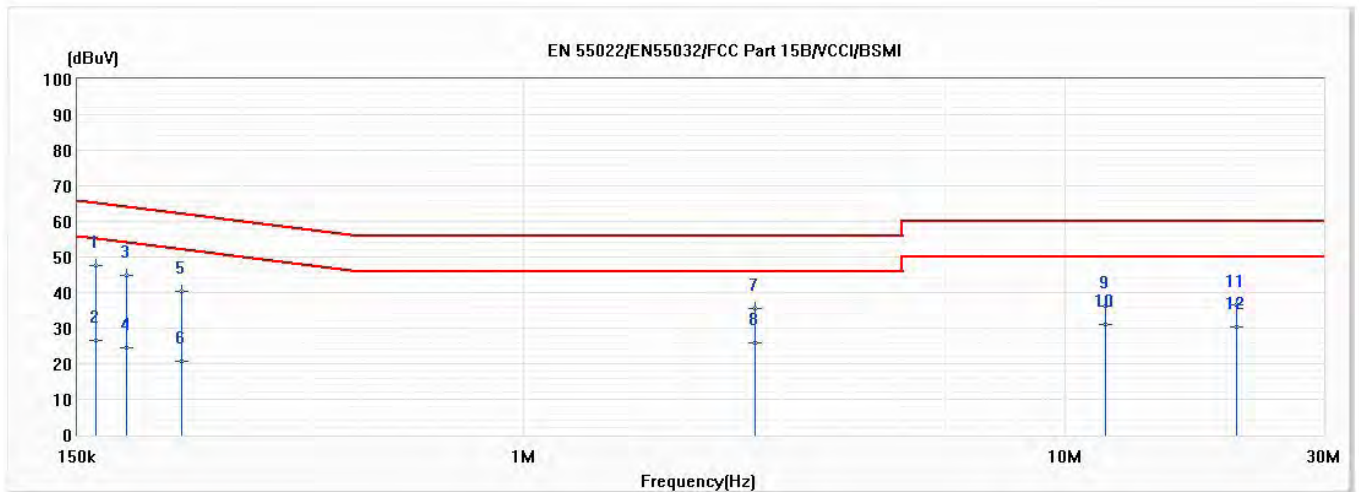
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.407: 2019.

2.5. Test Result

Model No	CR1000A	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/12/18
Test Mode	Mode 1: Transmit CDD Mode	Engineer	Lion Wang
Phase	L	Temperature (°C)	20.1
Test Condition	802.11ac,Ch 42,5.21G,BW80M	Humidity (%RH)	54.2

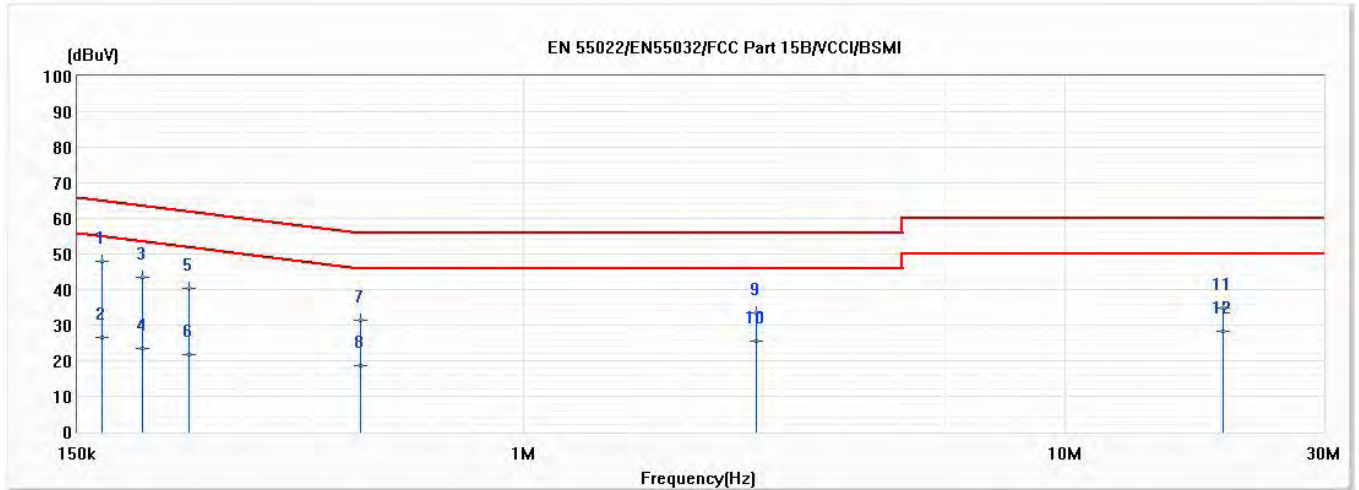


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.162	47.44	65.37	-17.92	37.79	9.65	QP
2	0.162	26.54	55.37	-28.82	16.89	9.65	AV
3	0.185	44.68	64.25	-19.57	35.03	9.64	QP
4	0.185	24.45	54.25	-29.80	14.80	9.64	AV
5	0.234	40.43	62.31	-21.87	30.78	9.65	QP
6	0.234	20.71	52.31	-31.60	11.06	9.65	AV
7	2.681	35.41	56.00	-20.59	25.59	9.83	QP
8	2.681	25.98	46.00	-20.02	16.16	9.83	AV
9	11.842	36.19	60.00	-23.81	26.02	10.17	QP
10	11.842	31.06	50.00	-18.94	20.89	10.17	AV
11	20.687	36.55	60.00	-23.45	26.16	10.39	QP
12	20.687	30.37	50.00	-19.63	19.98	10.39	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Model No	CR1000A	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/12/18
Test Mode	Mode 1: Transmit CDD Mode	Engineer	Lion Wang
Phase	N	Temperature (°C)	20.1
Test Condition	802.11ac,Ch 42,5.21G,BW80M	Humidity (%RH)	54.2



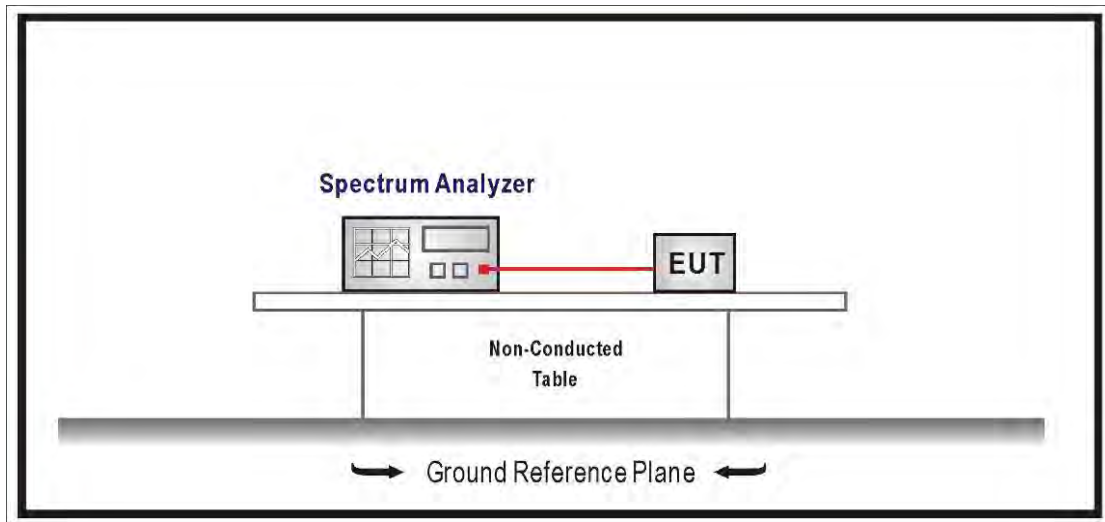
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.166	47.87	65.15	-17.28	38.23	9.64	QP
2	0.166	26.44	55.15	-28.70	16.81	9.64	AV
3	0.198	43.62	63.71	-20.09	33.98	9.64	QP
4	0.198	23.46	53.71	-30.25	13.82	9.64	AV
5	0.241	40.21	62.06	-21.85	30.57	9.64	QP
6	0.241	21.58	52.06	-30.48	11.93	9.64	AV
7	0.500	31.32	56.00	-24.68	21.64	9.68	QP
8	0.500	18.59	46.00	-27.41	8.91	9.68	AV
9	2.687	33.62	56.00	-22.38	23.81	9.82	QP
10	2.687	25.43	46.00	-20.57	15.61	9.82	AV
11	19.593	34.87	60.00	-25.13	24.35	10.51	QP
12	19.593	28.37	50.00	-21.63	17.85	10.51	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

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 D02 v02r01
Set RBW 1% of the emission bandwidth, VBW equal to 3 times the RBW.

DTS Bandwidth :

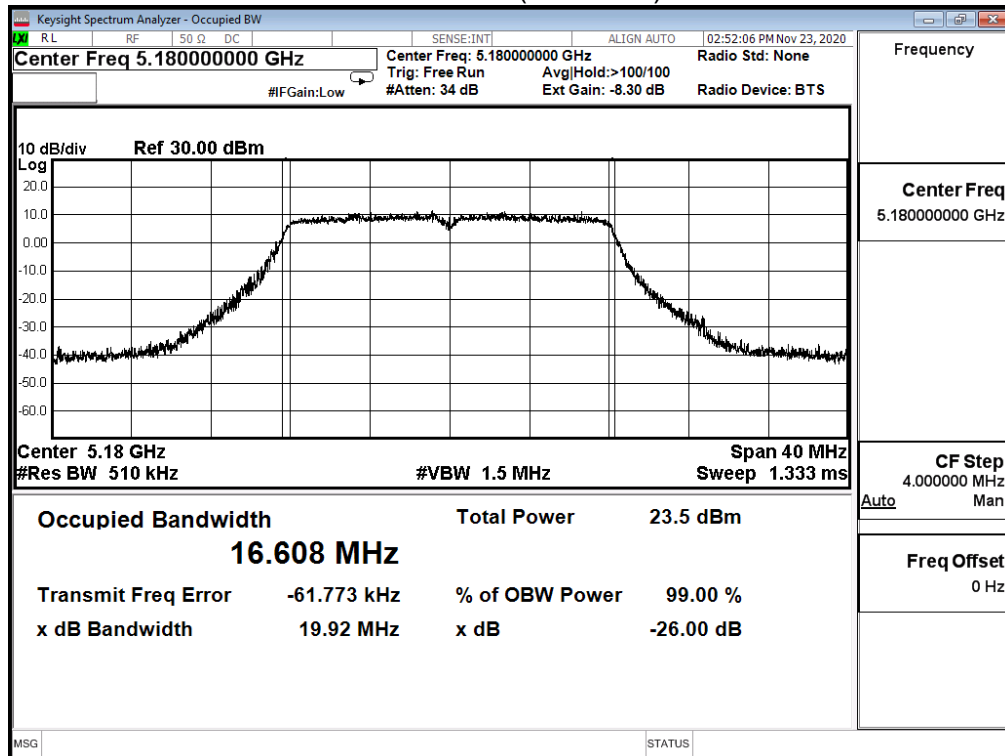
Set RBW = 100KHz, VBW \geq 3xRBW, Sweep time=Auto, Set Peak detector.

3.4. Test Result

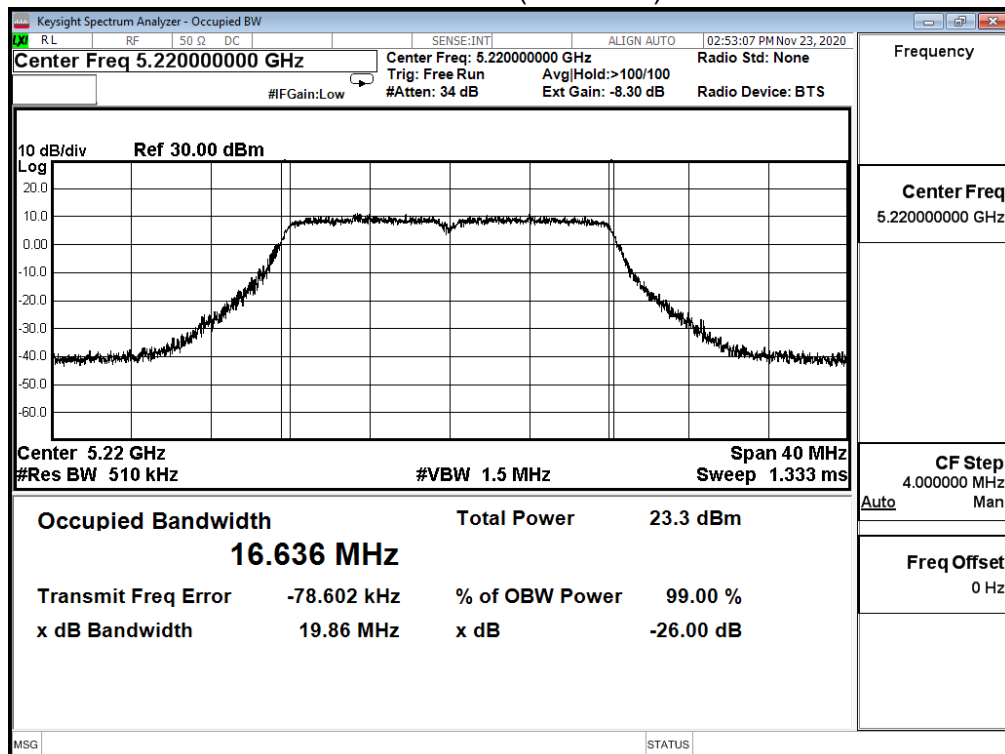
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11a (ANT 0)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	16.608	19.920	--	Pass
44	5220	16.636	19.860	--	Pass
48	5240	16.640	20.260	--	Pass
149	5745	16.634	N/A	--	Pass
157	5785	16.662		--	Pass
165	5825	16.559		--	Pass

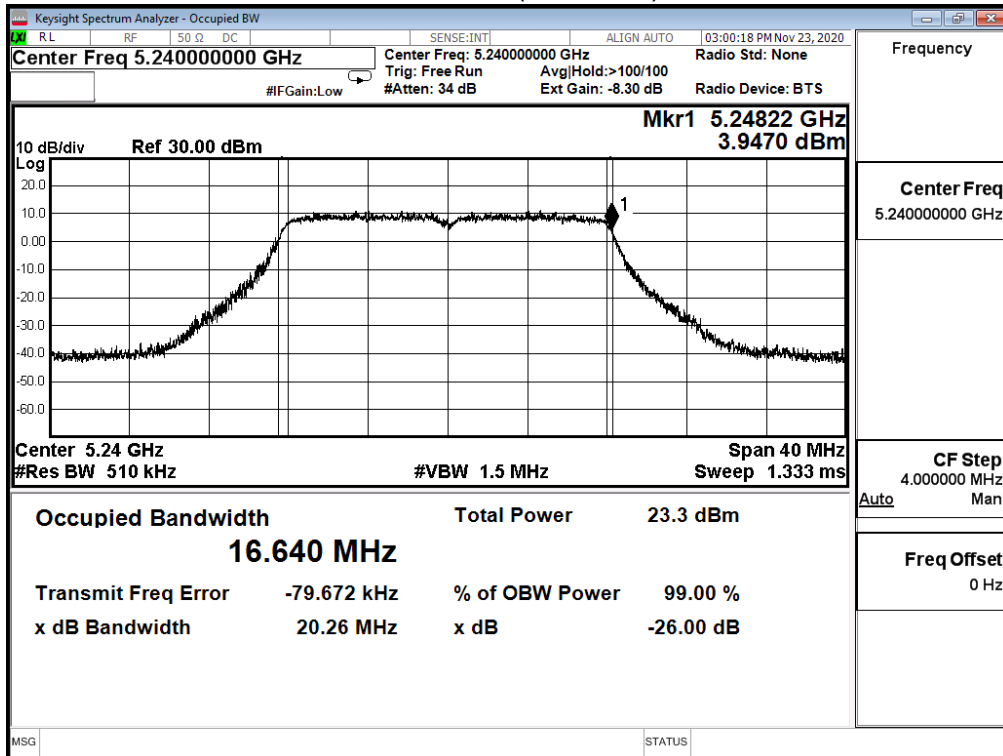
Channel 36 (5180MHz)



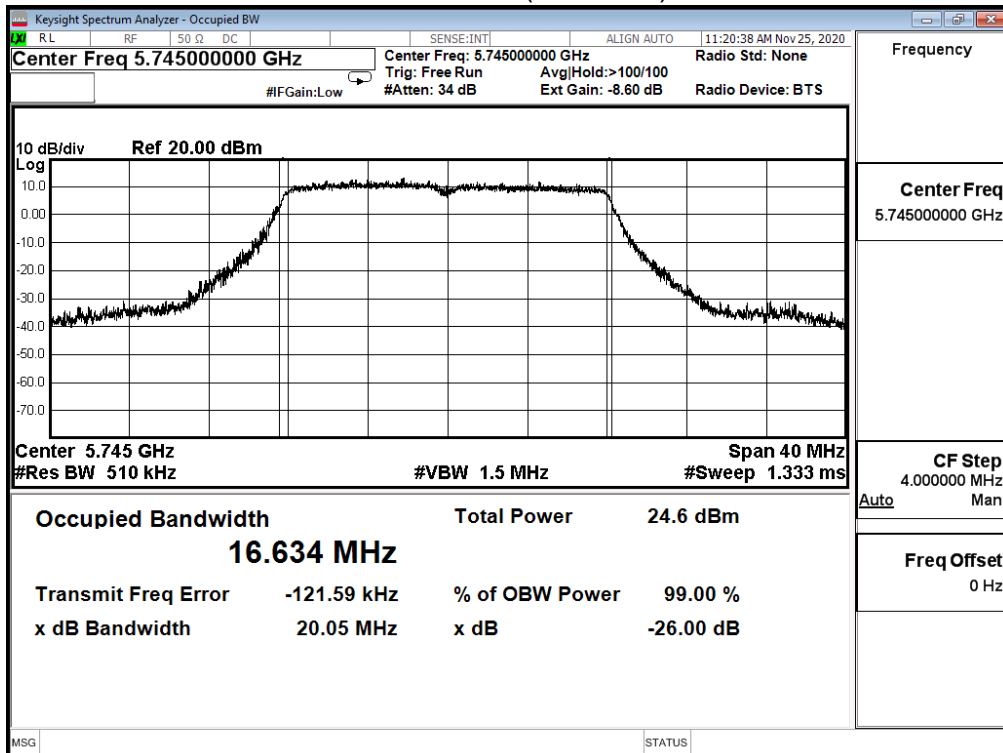
Channel 44 (5220MHz)



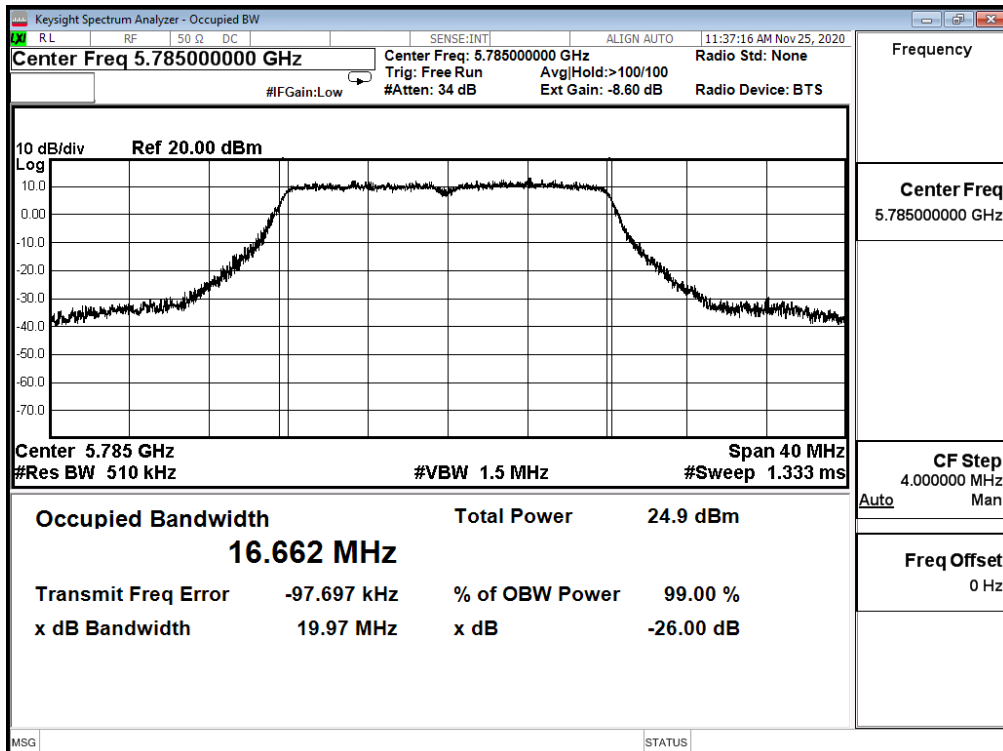
Channel 48 (5240MHz)



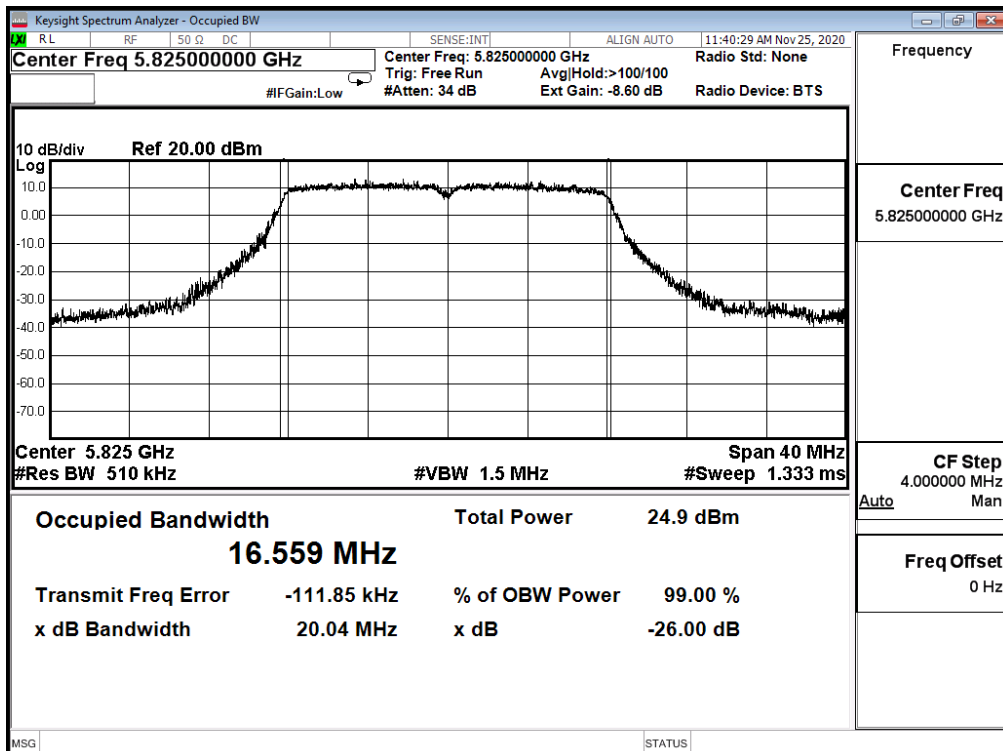
Channel 149 (5745MHz)



Channel 157 (5785MHz)



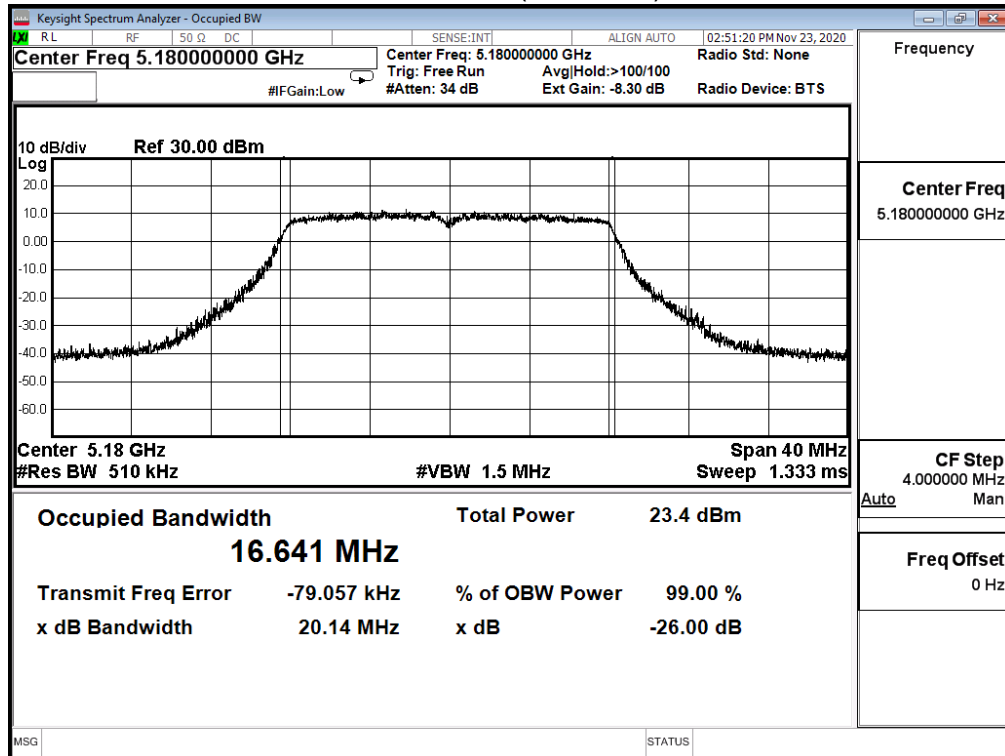
Channel 165 (5825MHz)



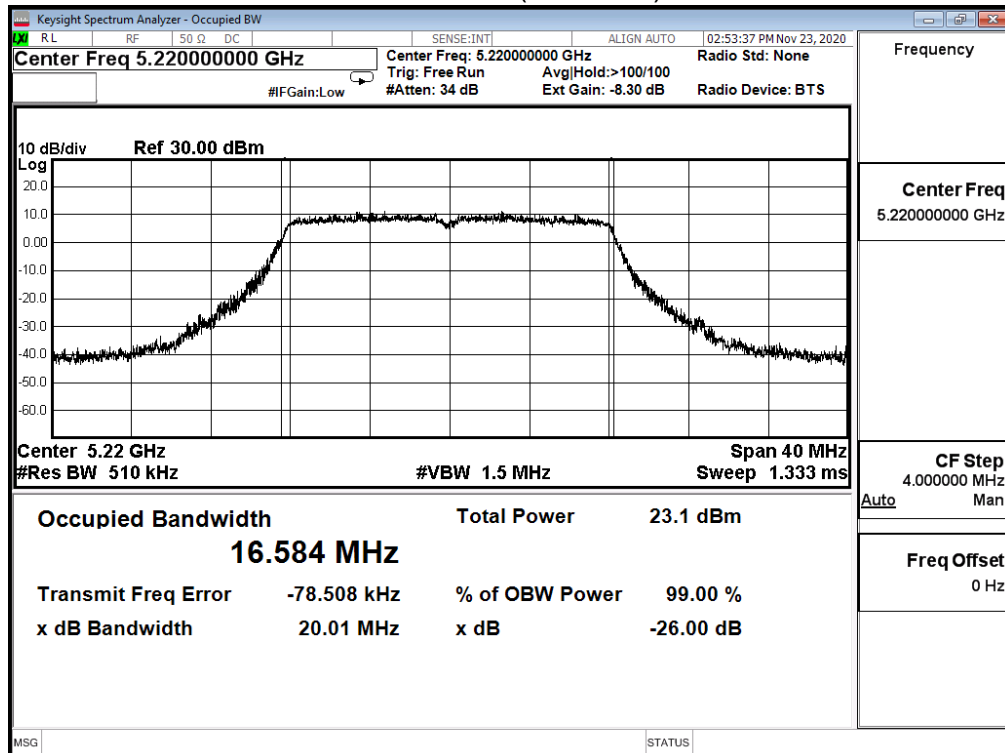
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11a (ANT 1)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	16.641	20.140	--	Pass
44	5220	16.584	20.010	--	Pass
48	5240	16.630	19.990	--	Pass
149	5745	16.657	N/A	--	Pass
157	5785	16.596		--	Pass
165	5825	16.661		--	Pass

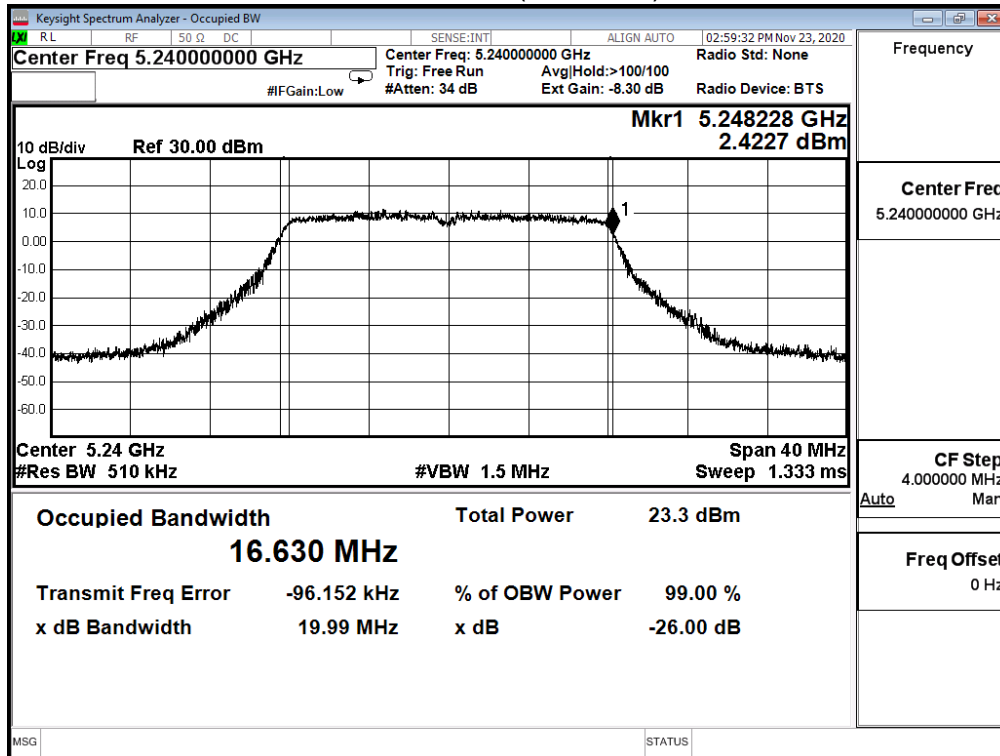
Channel 36 (5180MHz)



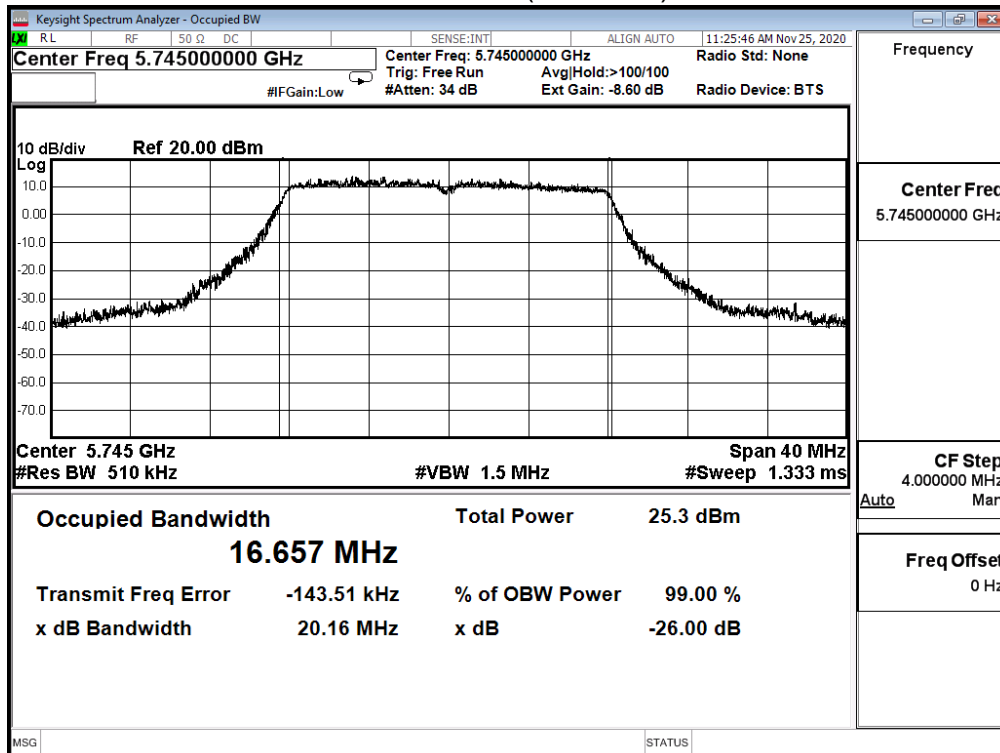
Channel 44 (5220MHz)



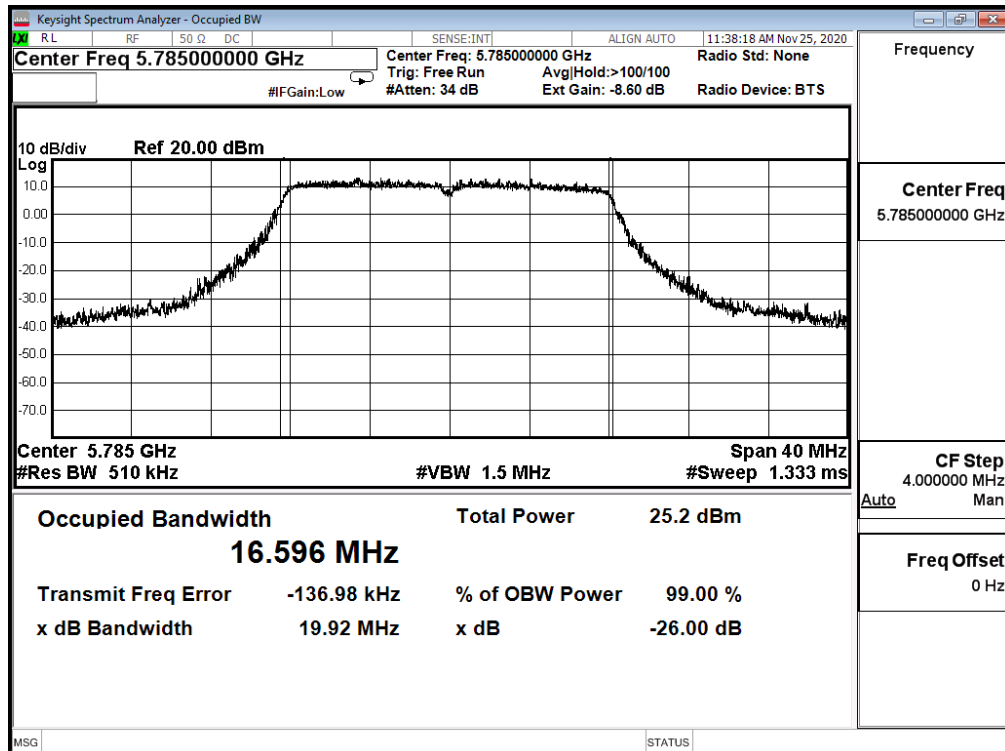
Channel 48 (5240MHz)



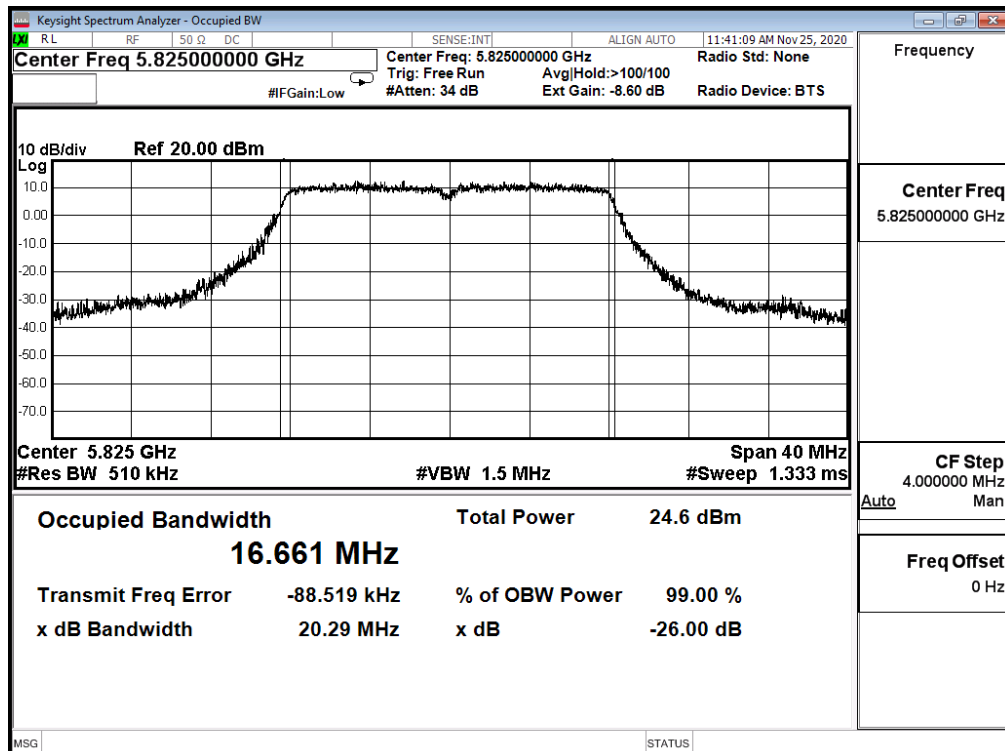
Channel 149 (5745MHz)



Channel 157 (5785MHz)



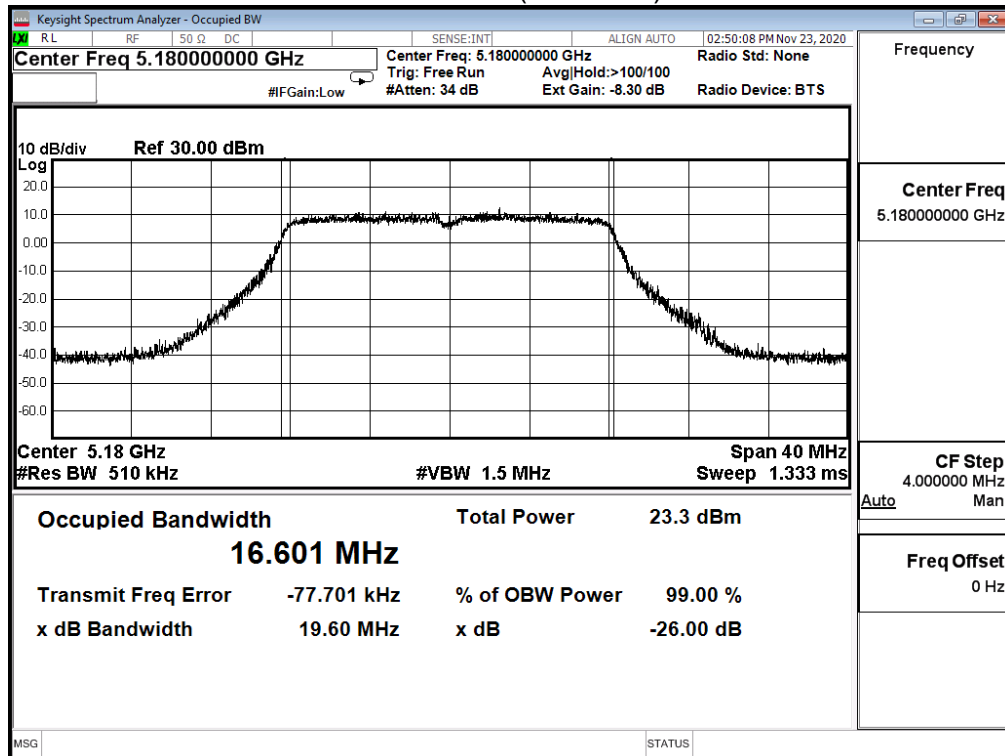
Channel 165 (5825MHz)



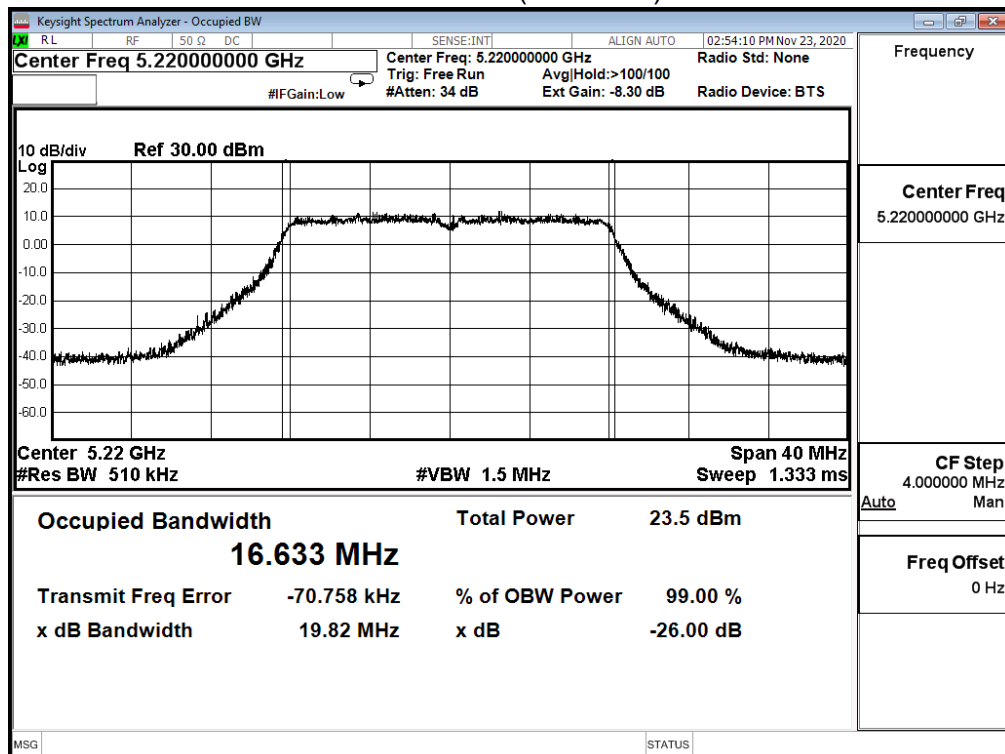
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11a (ANT 2)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	16.601	19.600	--	Pass
44	5220	16.633	19.820	--	Pass
48	5240	16.627	19.800	--	Pass
149	5745	16.647	N/A	--	Pass
157	5785	16.729		--	Pass
165	5825	16.600		--	Pass

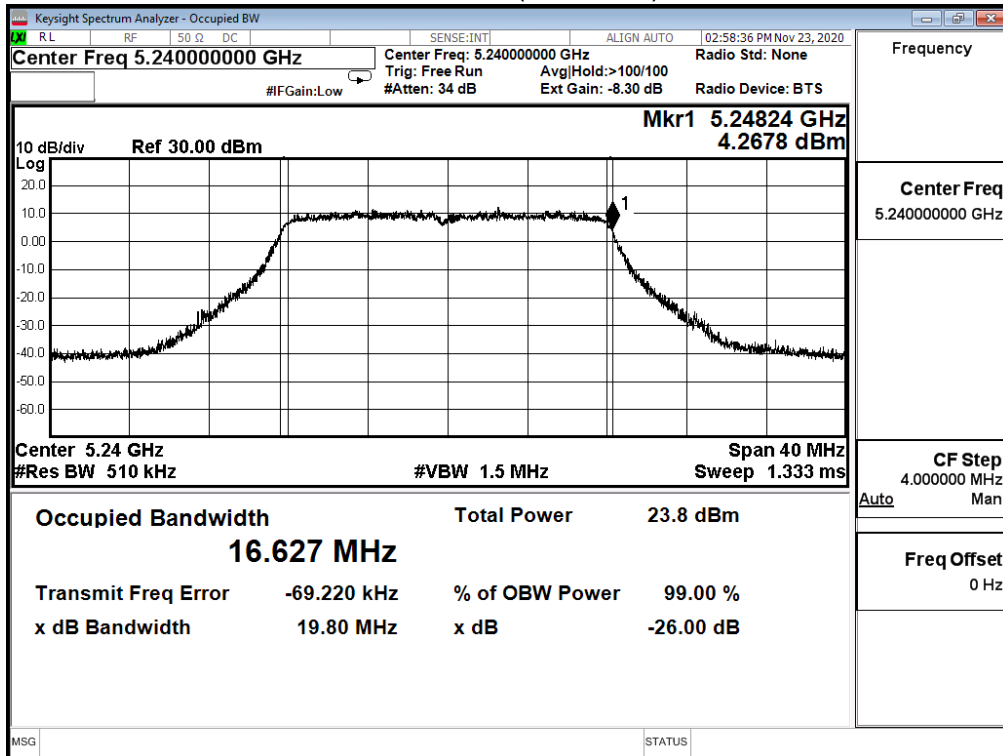
Channel 36 (5180MHz)



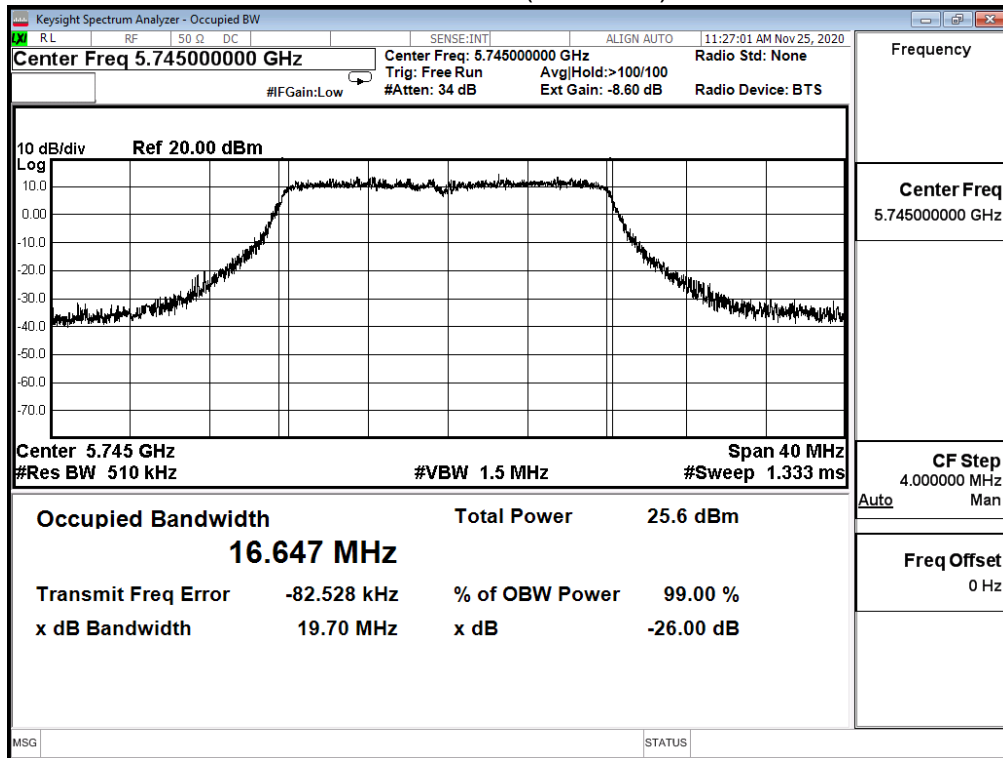
Channel 44 (5220MHz)



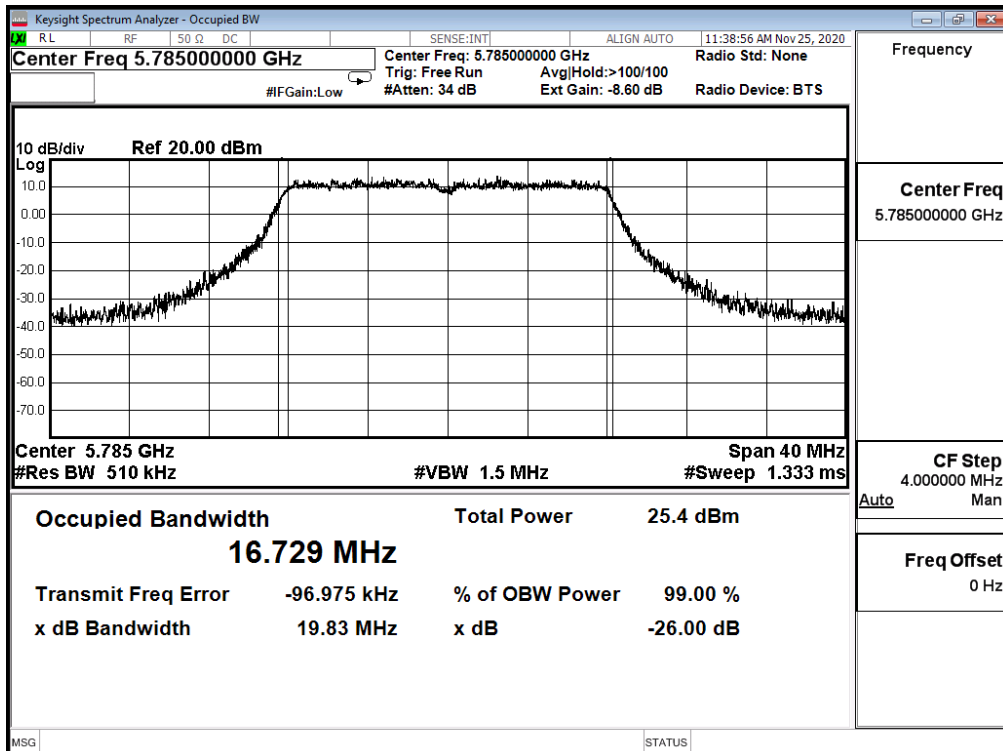
Channel 48 (5240MHz)



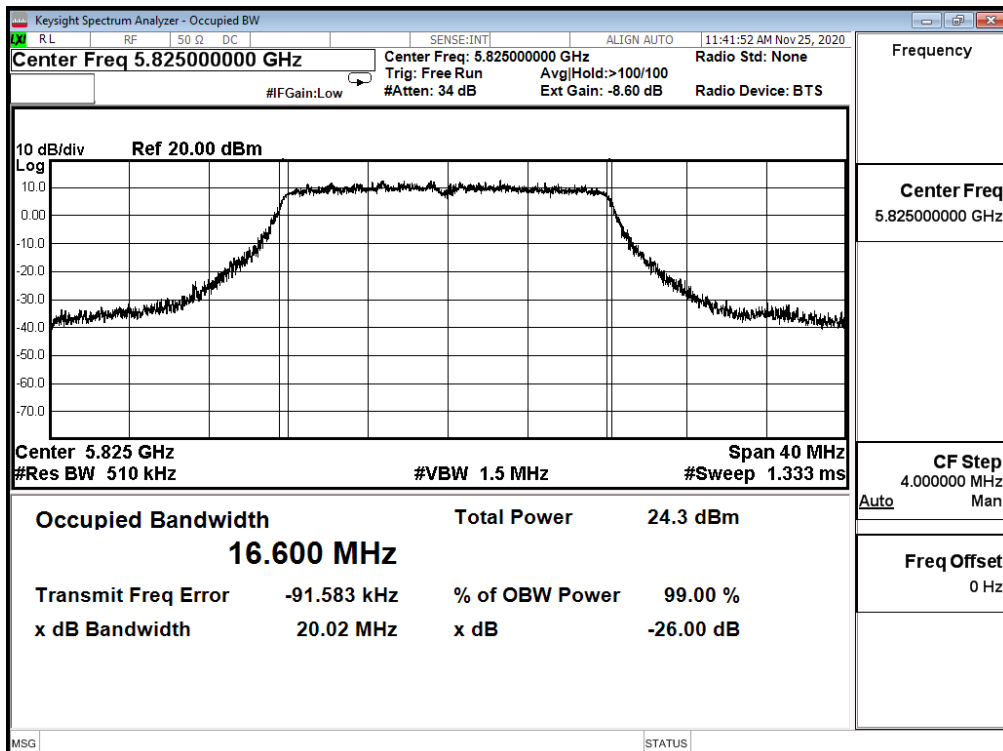
Channel 149 (5745MHz)



Channel 157 (5785MHz)



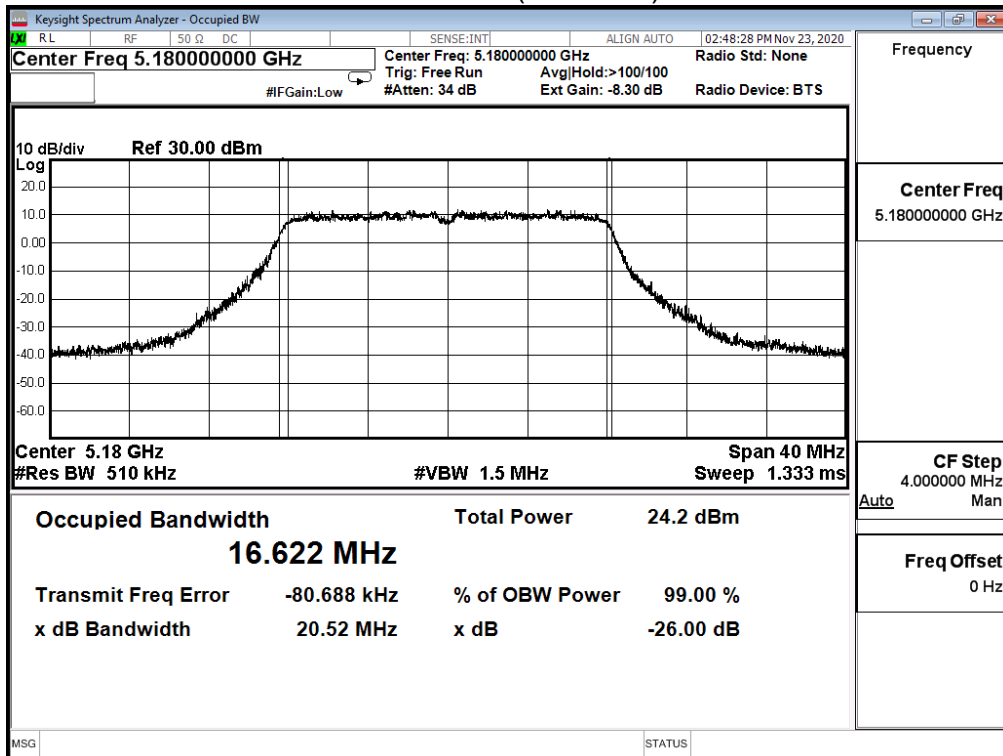
Channel 165 (5825MHz)



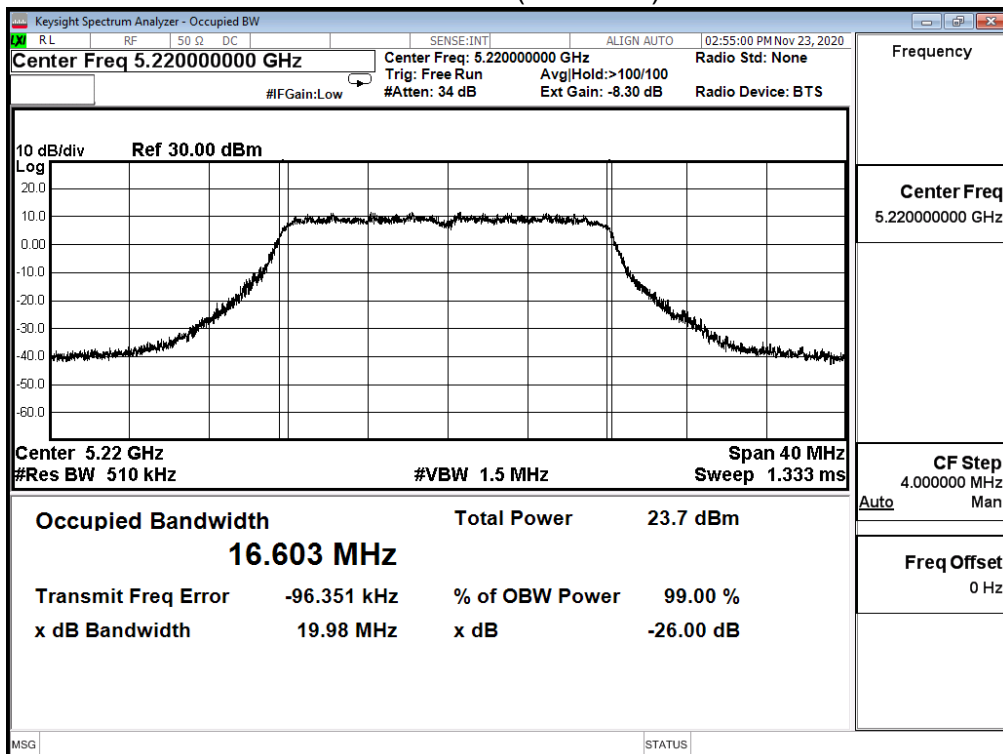
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11a (ANT 3)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	16.622	20.520	--	Pass
44	5220	16.603	19.980	--	Pass
48	5240	16.603	19.860	--	Pass
149	5745	16.563	N/A	--	Pass
157	5785	16.621		--	Pass
165	5825	16.586		--	Pass

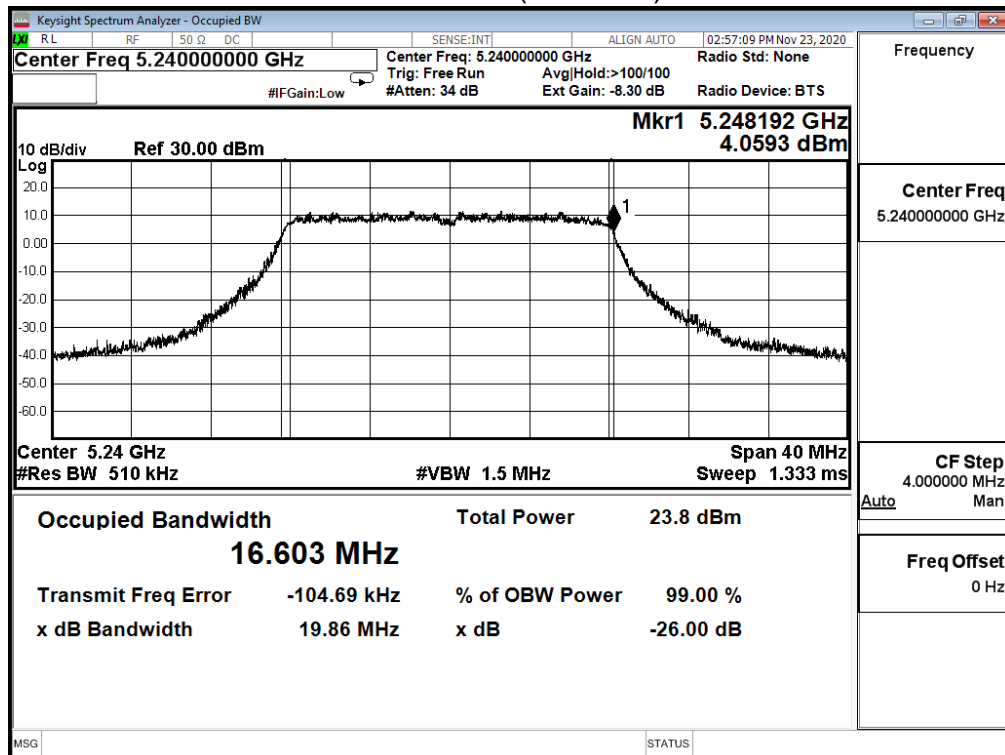
Channel 36 (5180MHz)



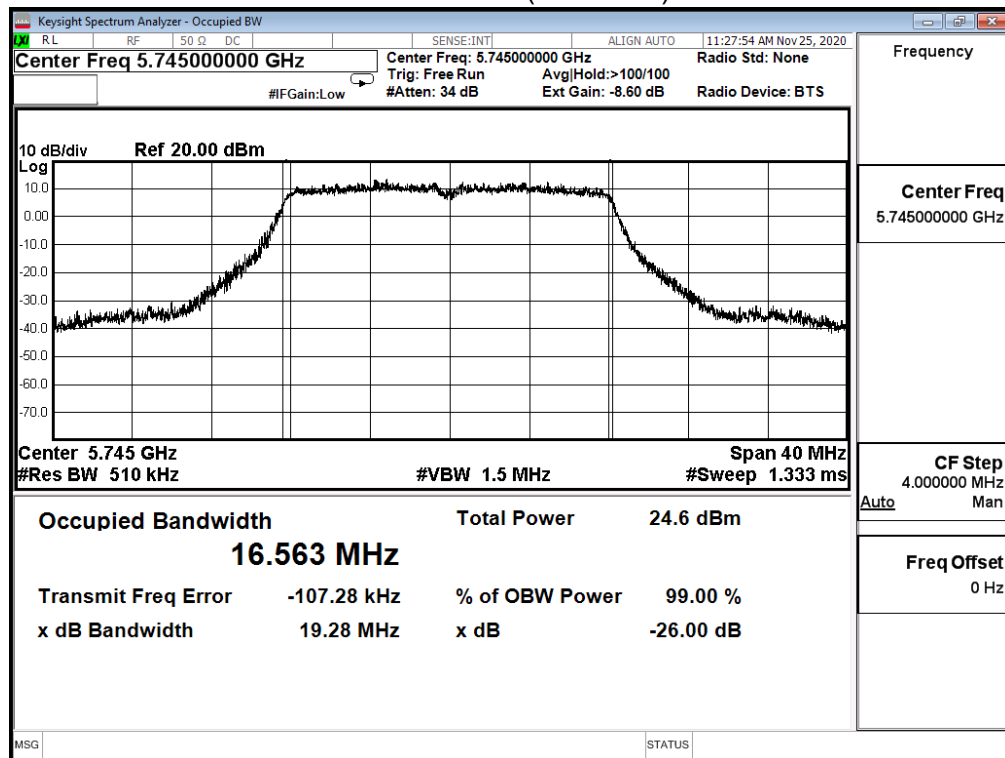
Channel 44 (5220MHz)



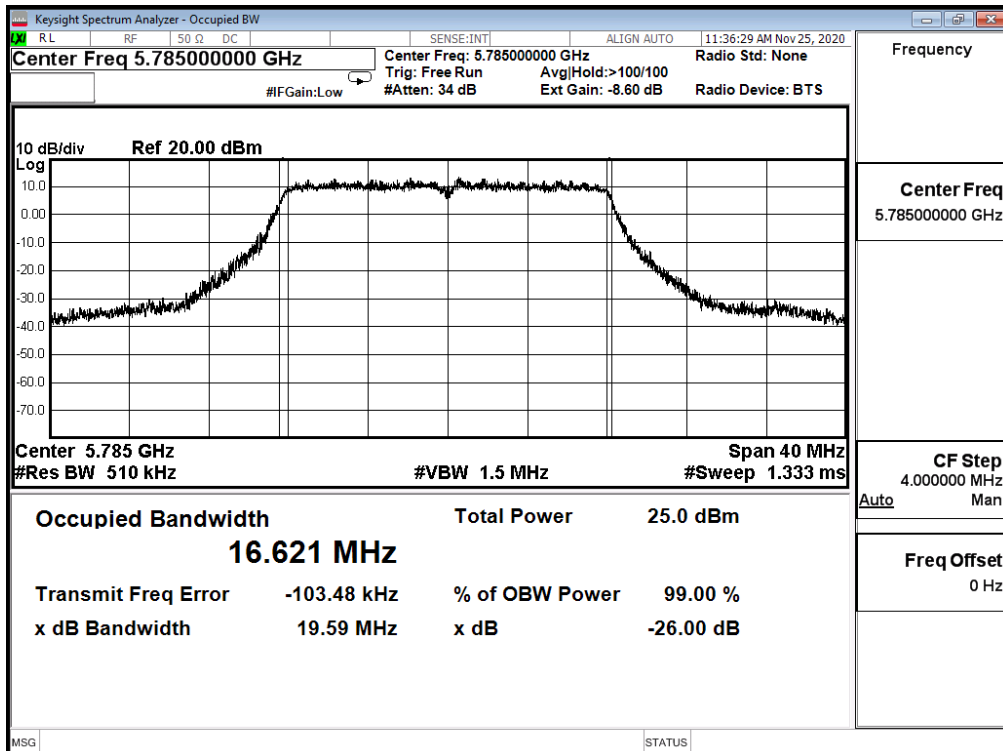
Channel 48 (5240MHz)



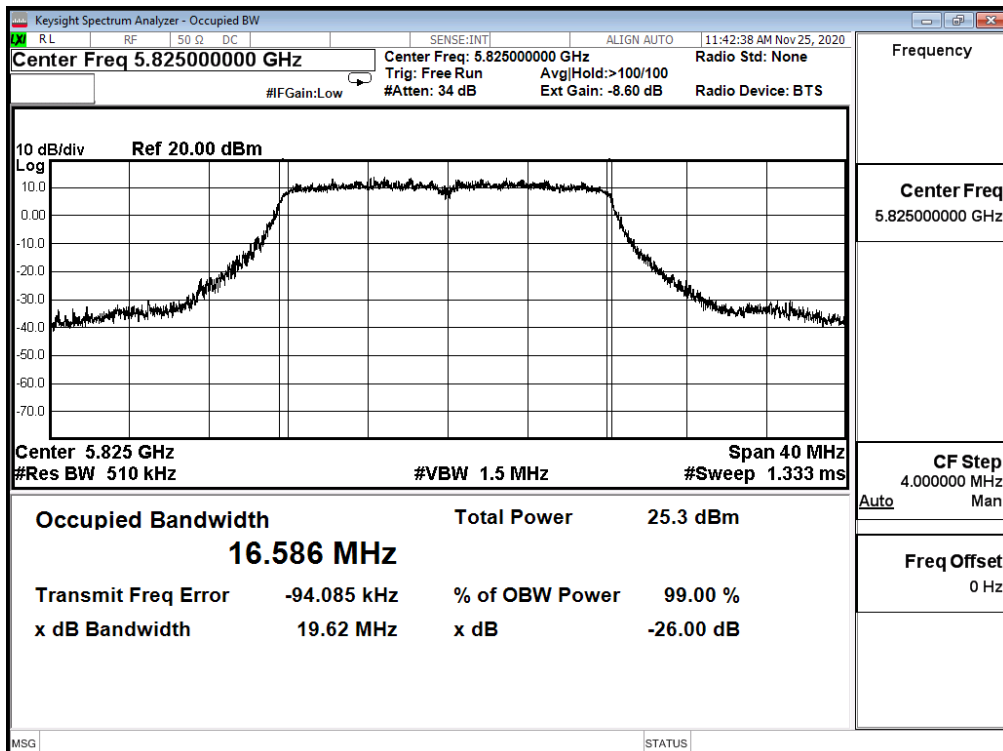
Channel 149 (5745MHz)



Channel 157 (5785MHz)



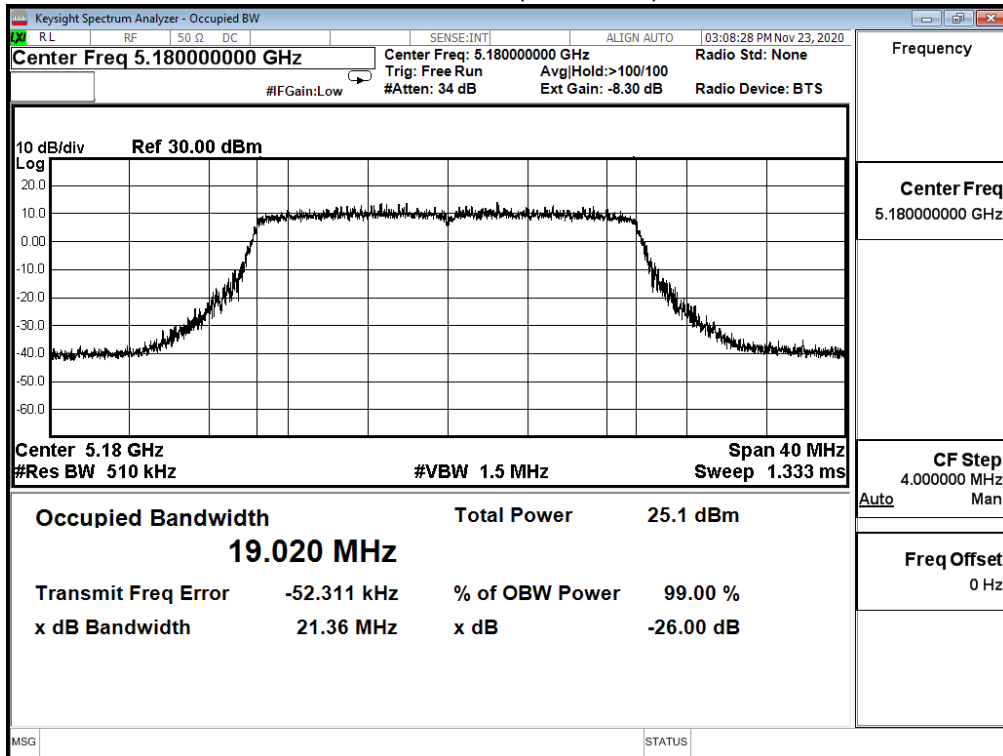
Channel 165 (5825MHz)



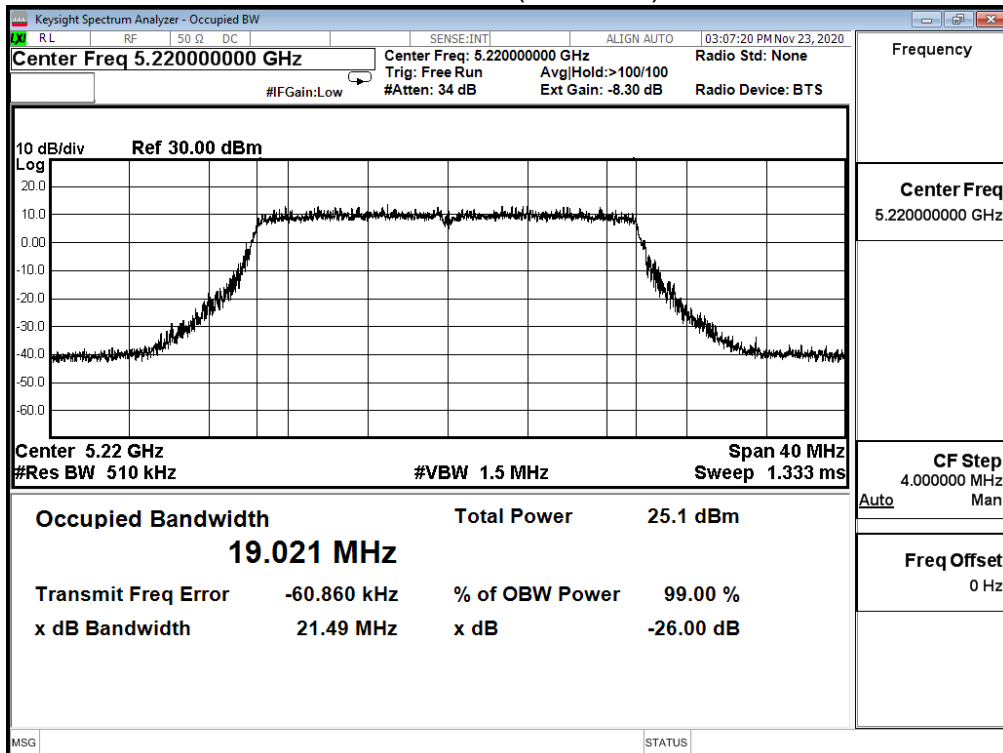
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_20M(ANT 0)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	19.020	21.360	--	Pass
44	5220	19.021	21.490	--	Pass
48	5240	19.035	21.830	--	Pass
149	5745	19.075	N/A	--	Pass
157	5785	19.133		--	Pass
165	5825	19.175		--	Pass

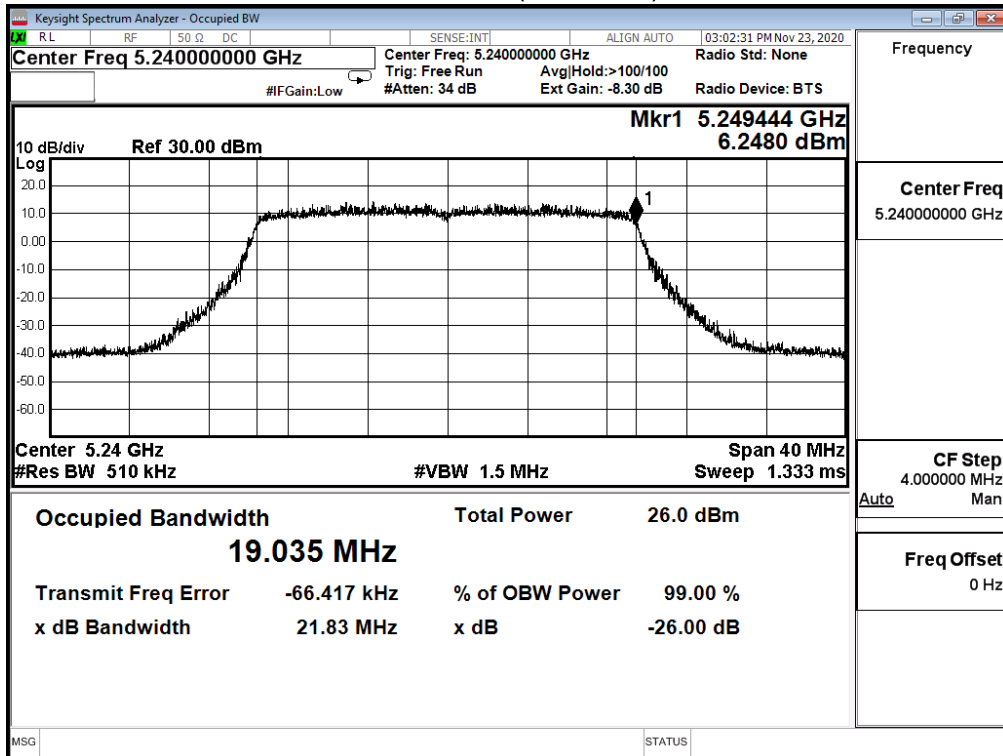
Channel 36 (5180MHz)



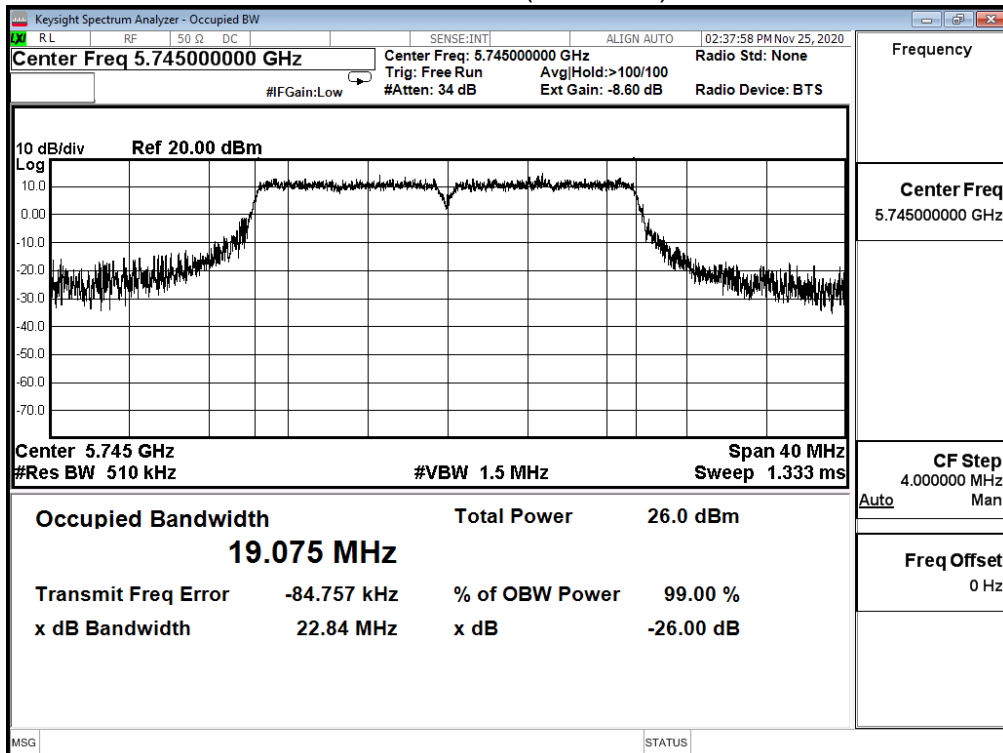
Channel 44 (5220MHz)



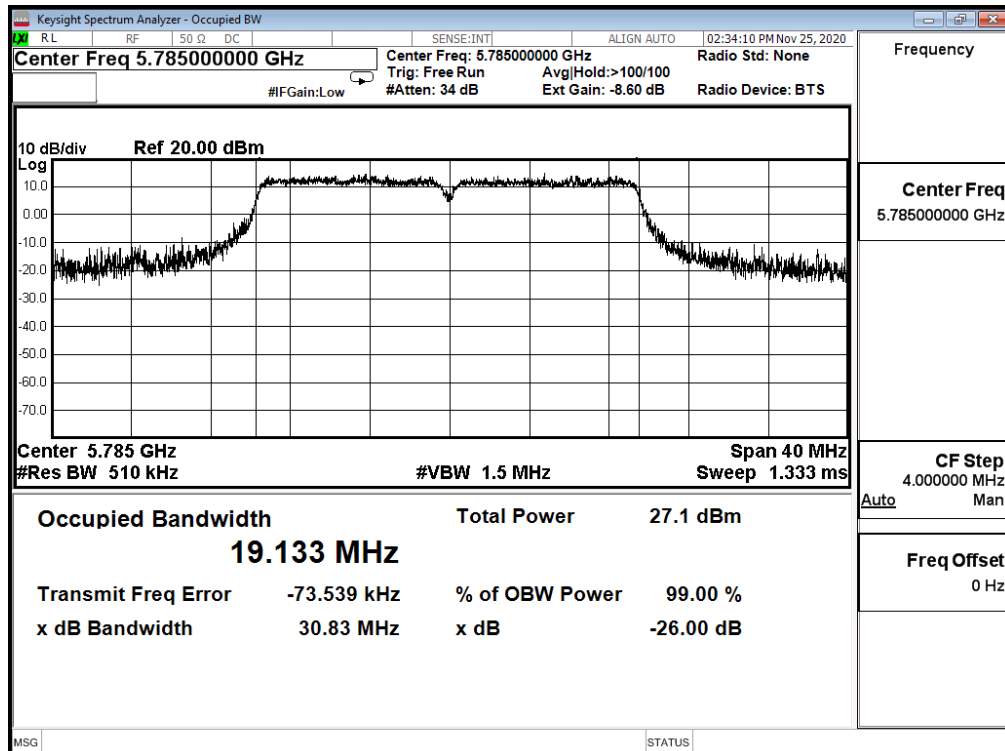
Channel 48 (5240MHz)



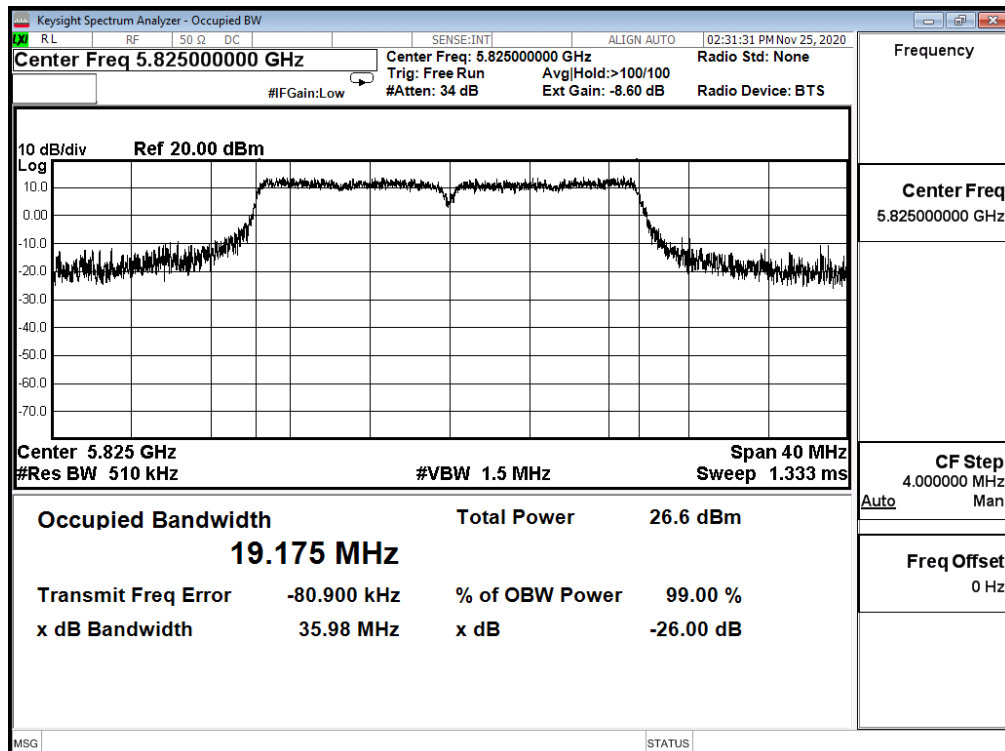
Channel 149 (5745MHz)



Channel 157 (5785MHz)



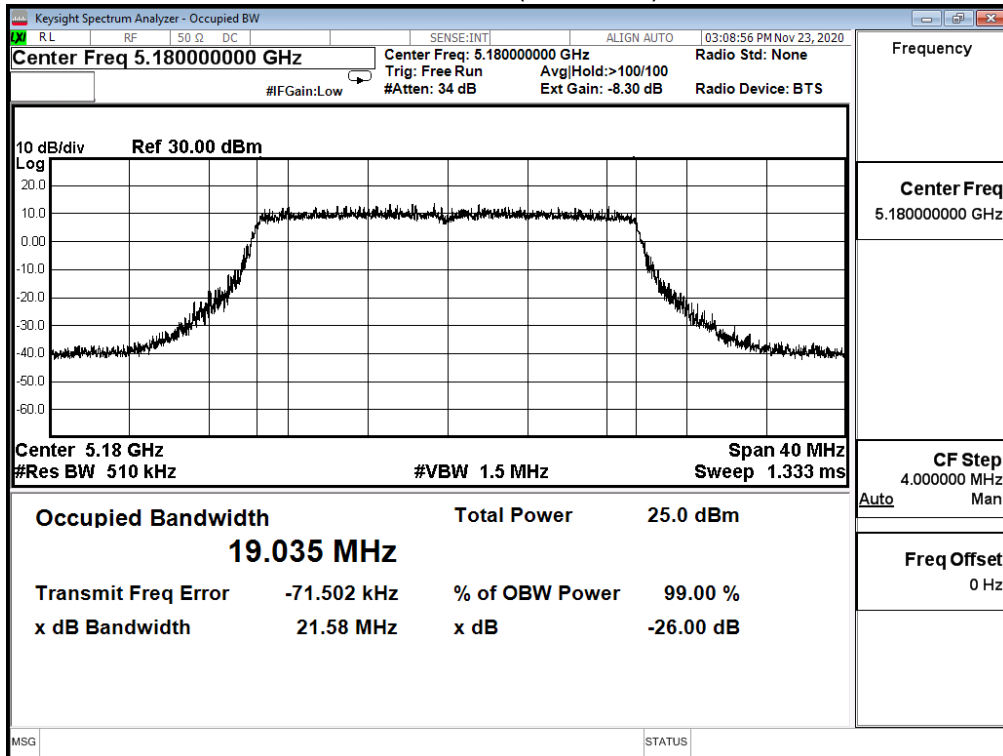
Channel 165 (5825MHz)



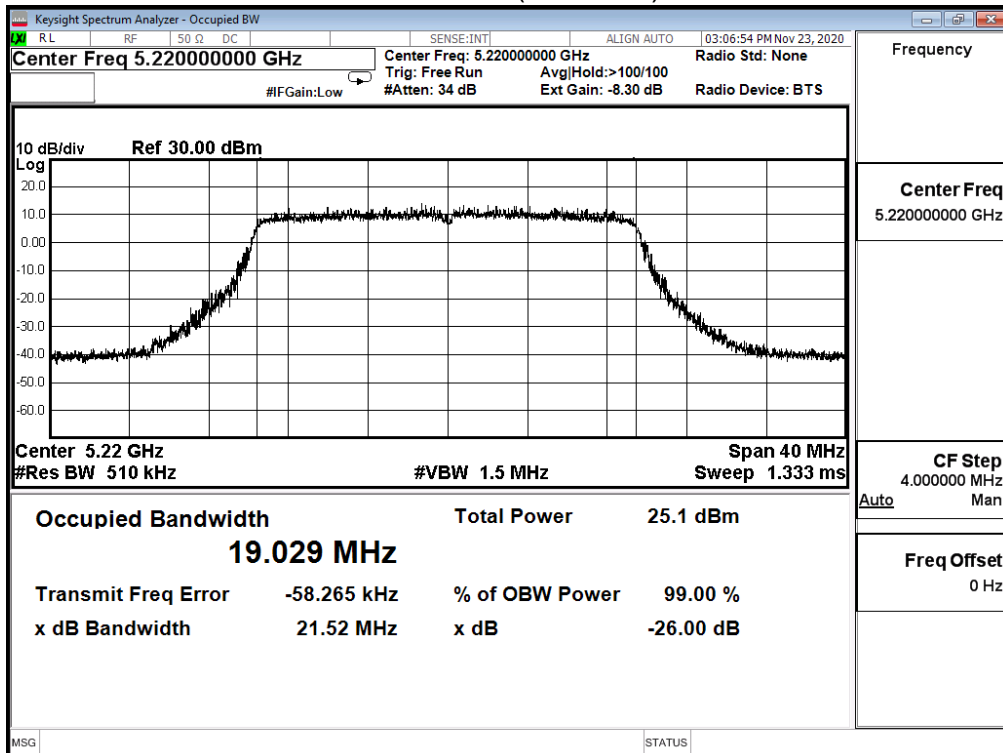
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_20M(ANT 1)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	19.035	21.580	--	Pass
44	5220	19.029	21.520	--	Pass
48	5240	19.048	21.960	--	Pass
149	5745	19.118	N/A	--	Pass
157	5785	19.144		--	Pass
165	5825	19.205		--	Pass

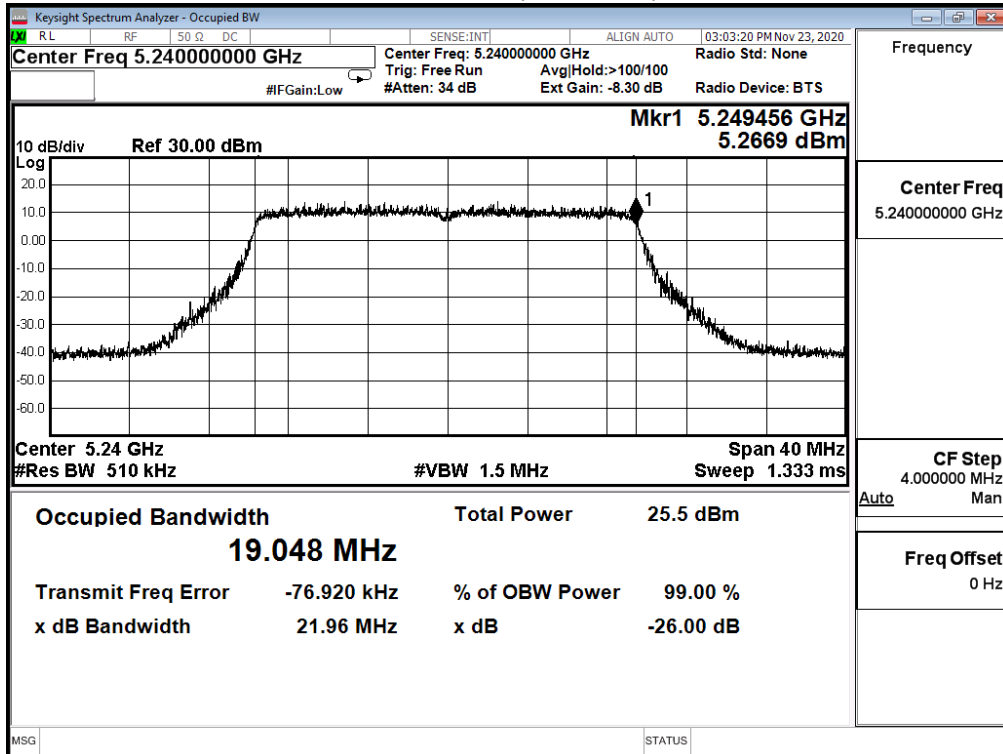
Channel 36 (5180MHz)



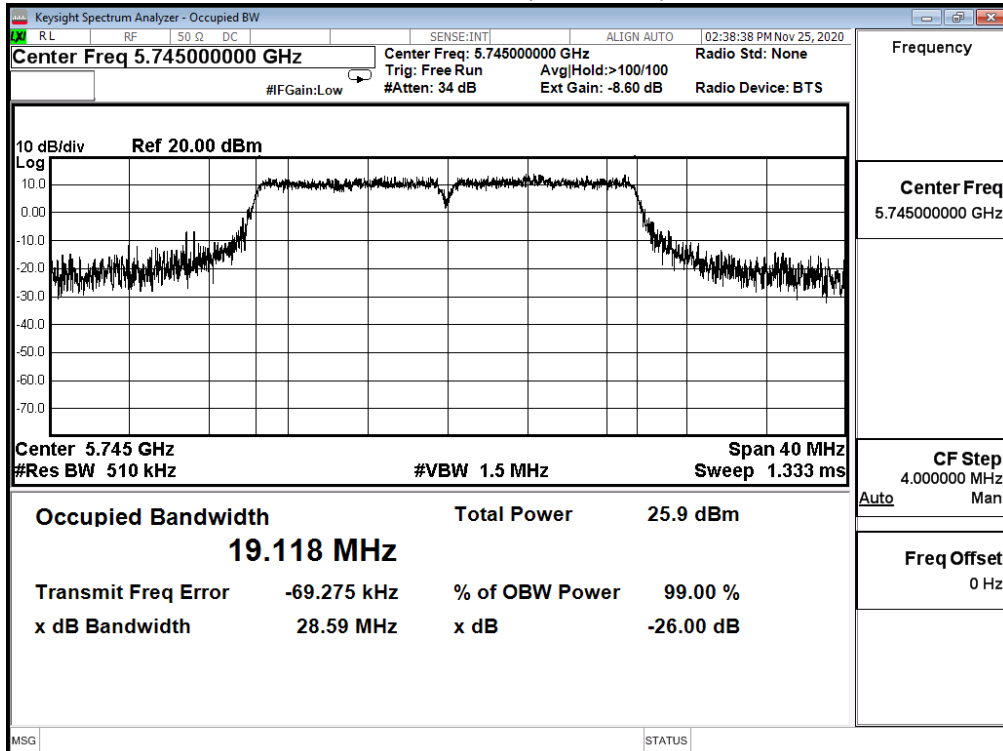
Channel 44 (5220MHz)



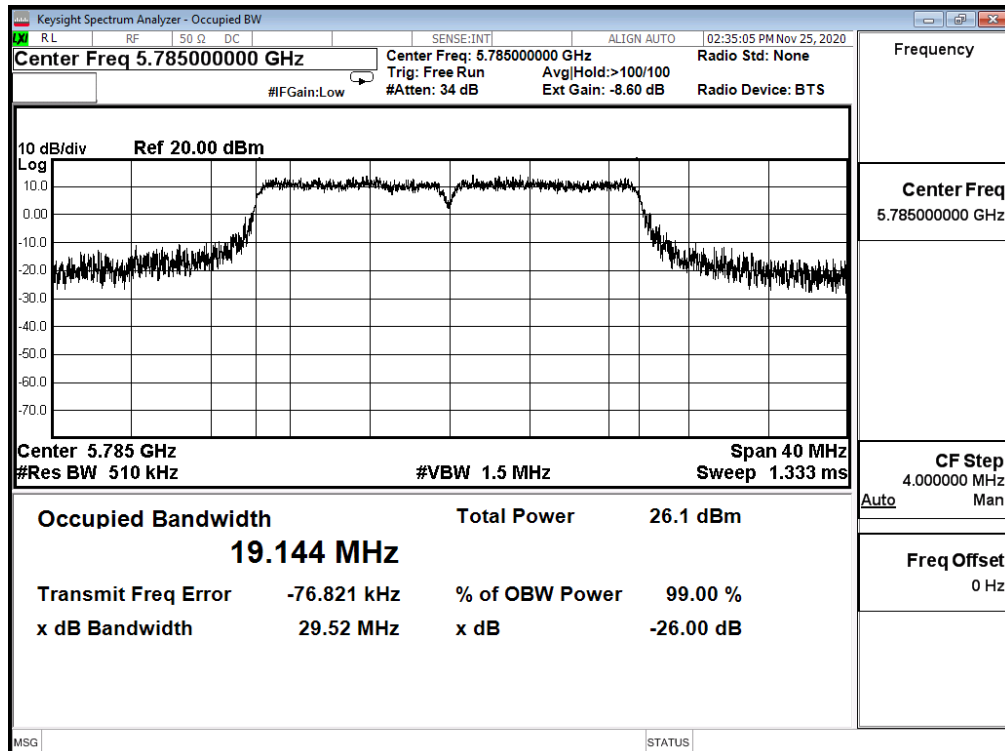
Channel 48 (5240MHz)



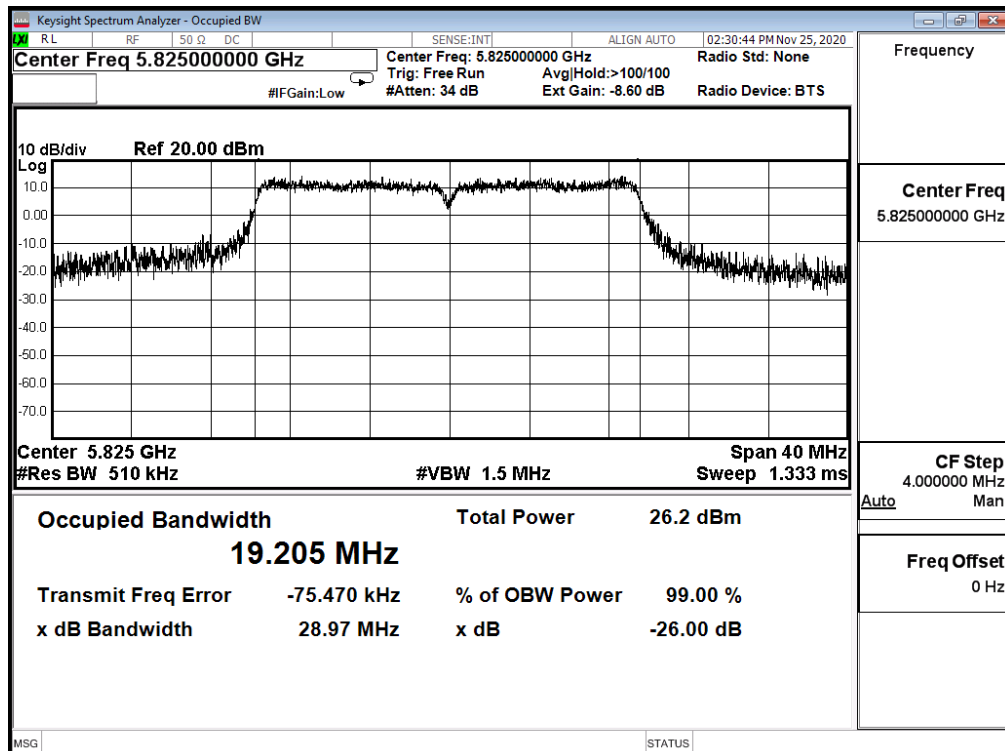
Channel 149 (5745MHz)



Channel 157 (5785MHz)



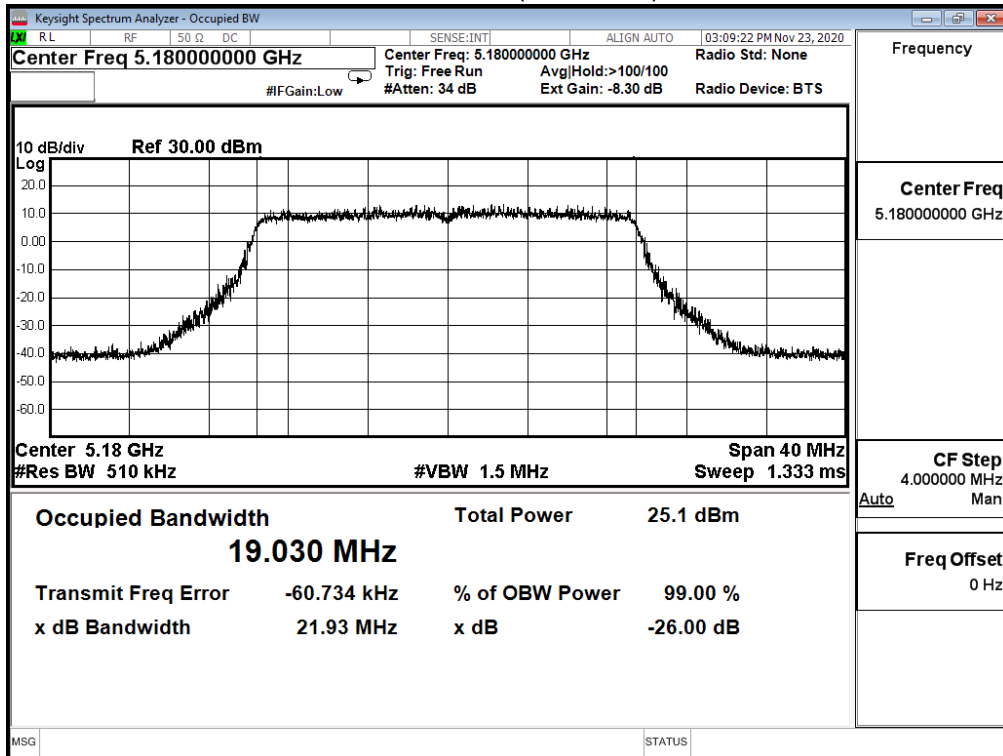
Channel 165 (5825MHz)



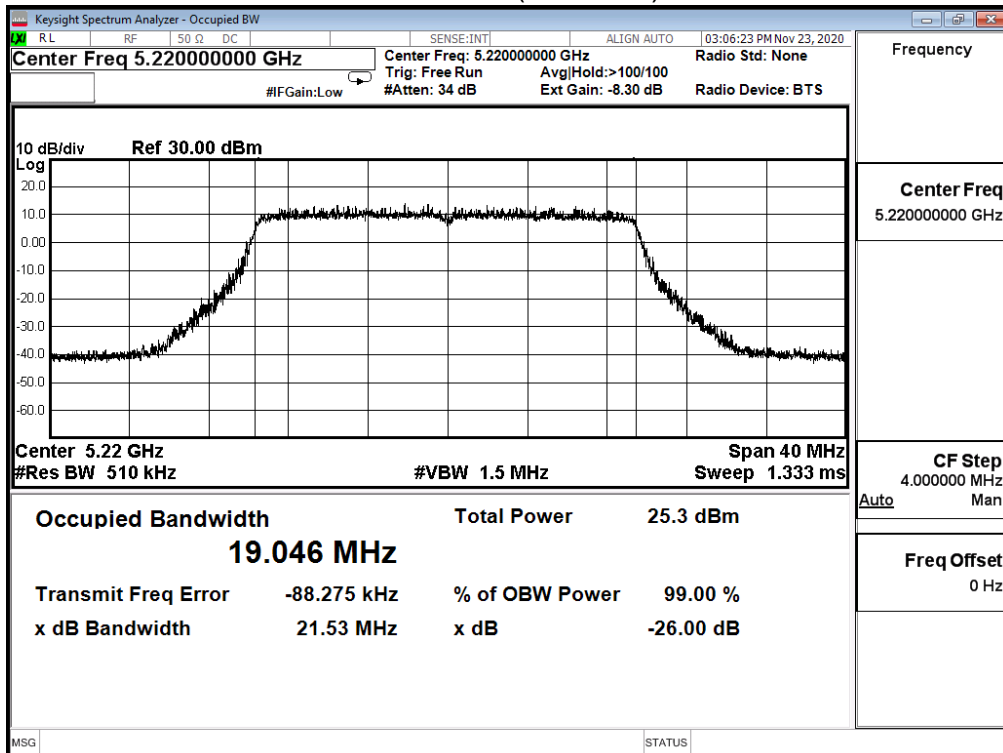
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_20M(ANT 2)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	19.030	21.930	--	Pass
44	5220	19.046	21.530	--	Pass
48	5240	19.042	21.590	--	Pass
149	5745	19.118	N/A	--	Pass
157	5785	19.121		--	Pass
165	5825	19.196		--	Pass

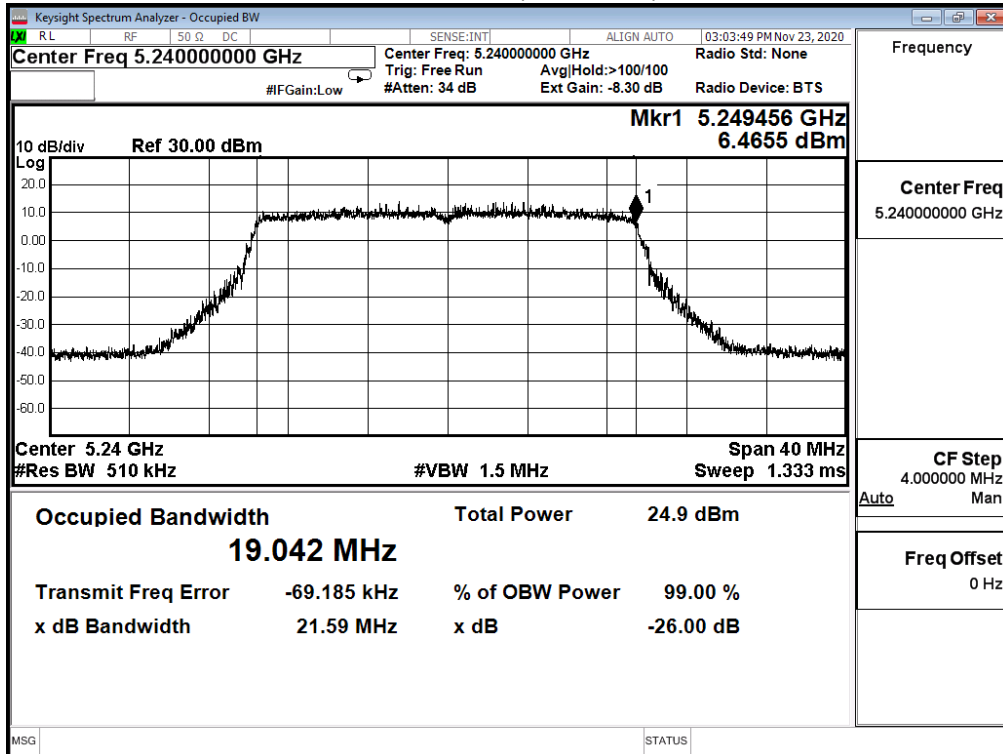
Channel 36 (5180MHz)



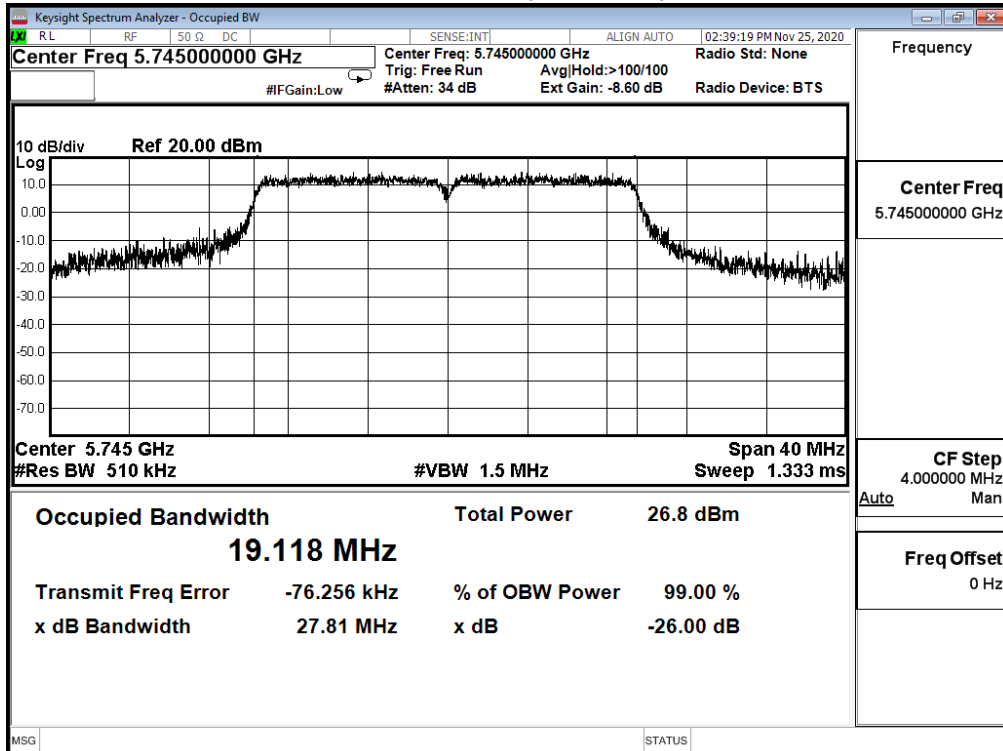
Channel 44 (5220MHz)



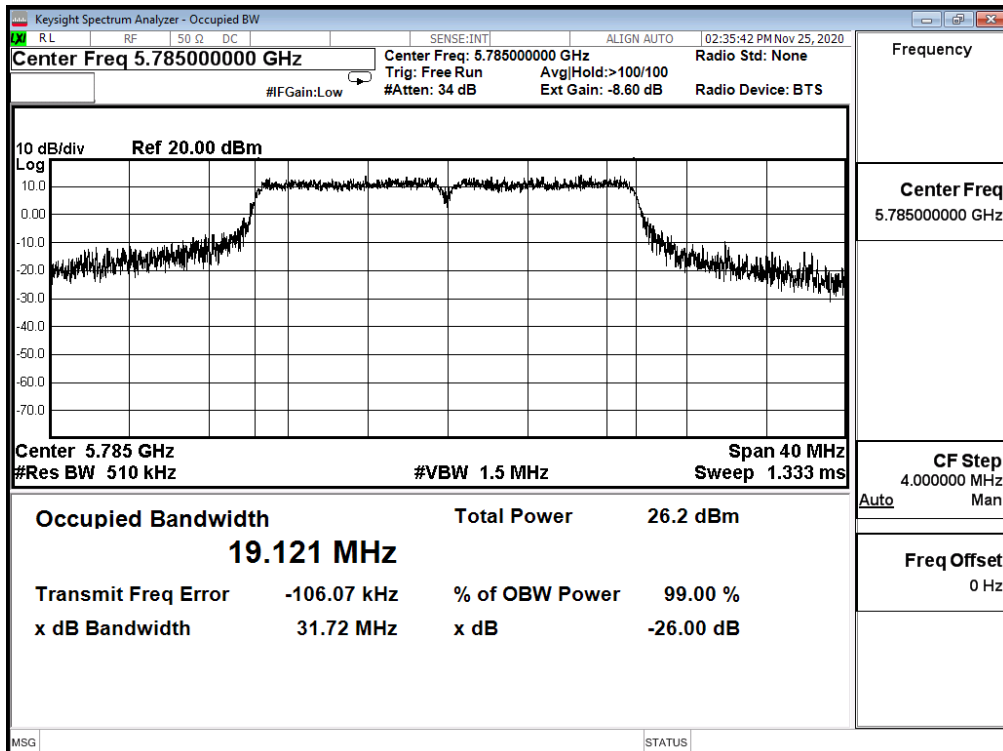
Channel 48 (5240MHz)



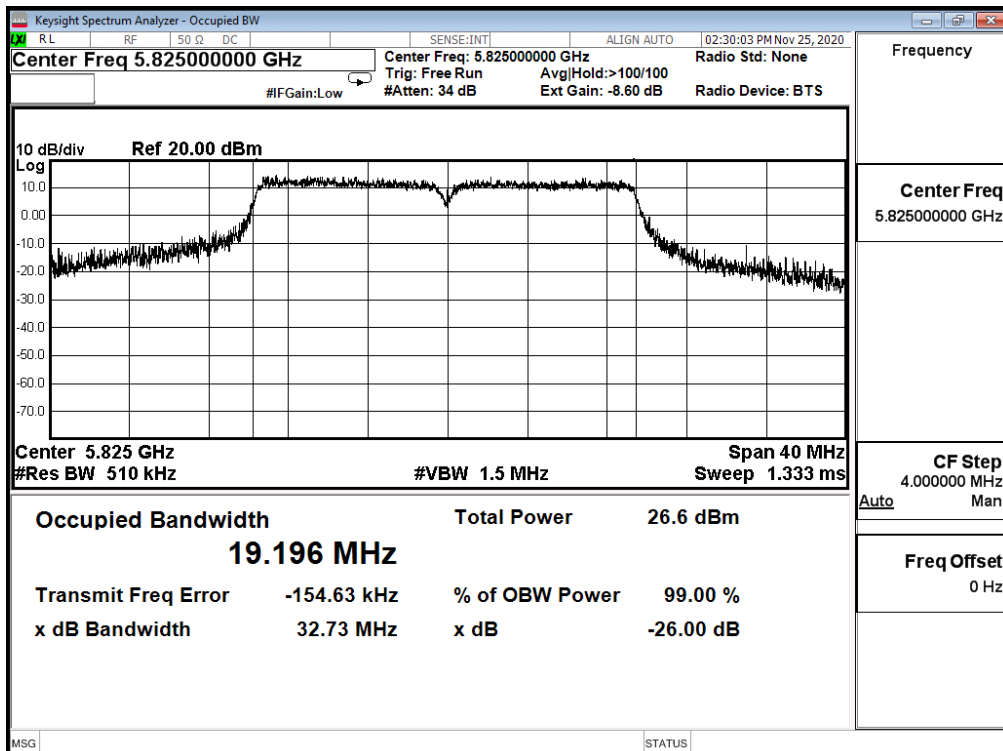
Channel 149 (5745MHz)



Channel 157 (5785MHz)



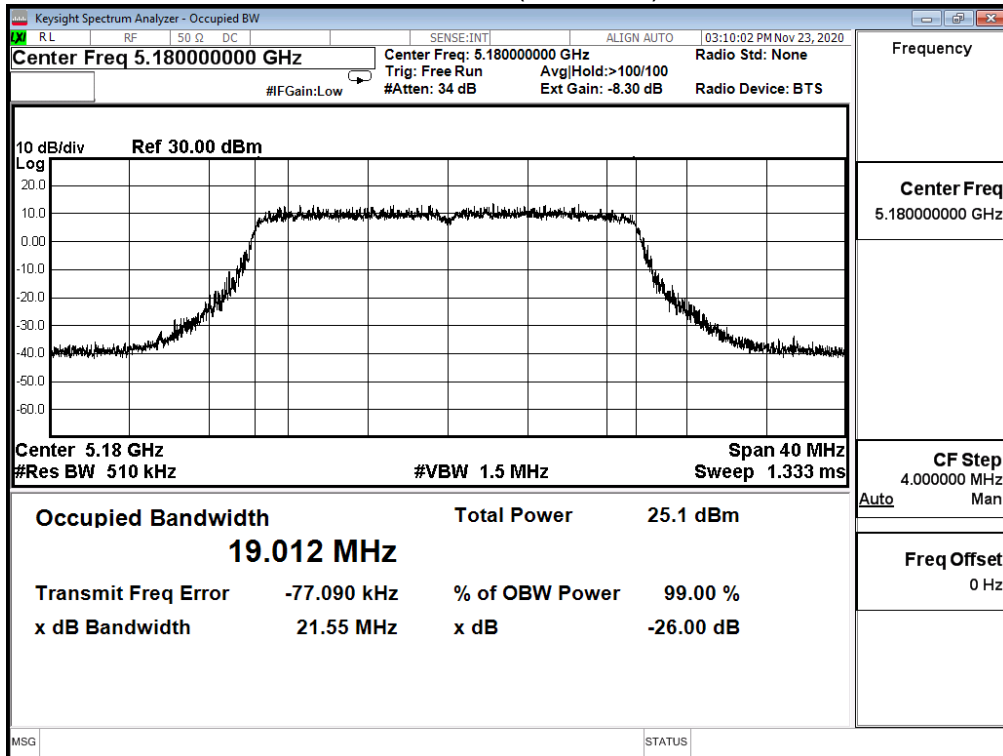
Channel165 (5825MHz)



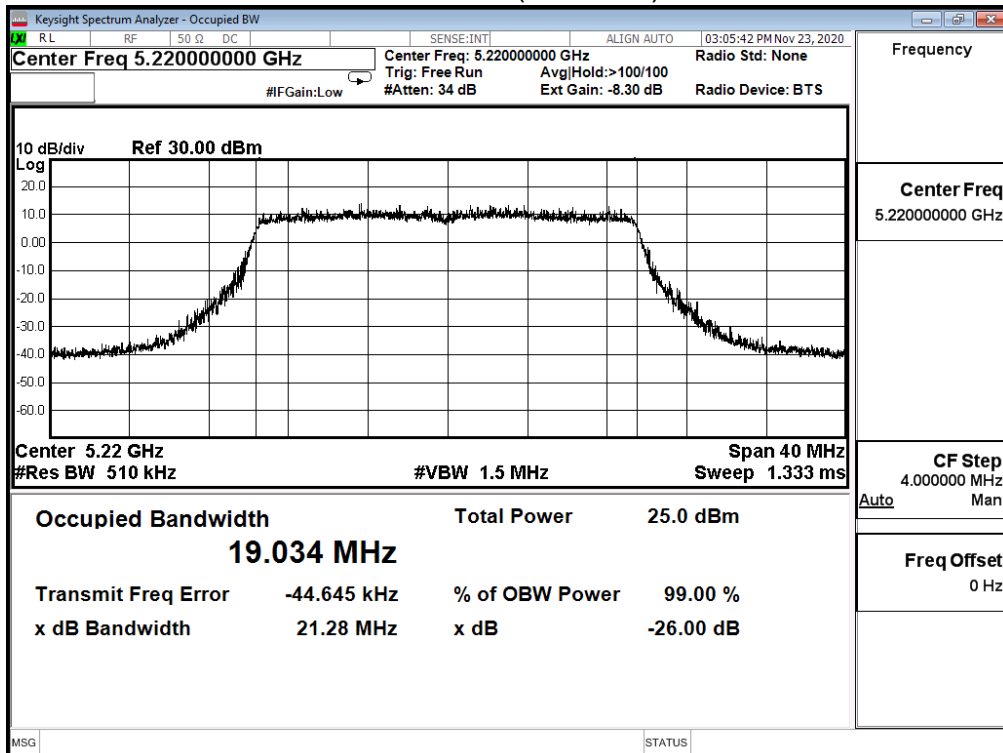
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_20M(ANT 3)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
36	5180	19.012	21.550	--	Pass
44	5220	19.034	21.280	--	Pass
48	5240	19.035	21.300	--	Pass
149	5745	19.121	N/A	--	Pass
157	5785	19.146		--	Pass
165	5825	19.150		--	Pass

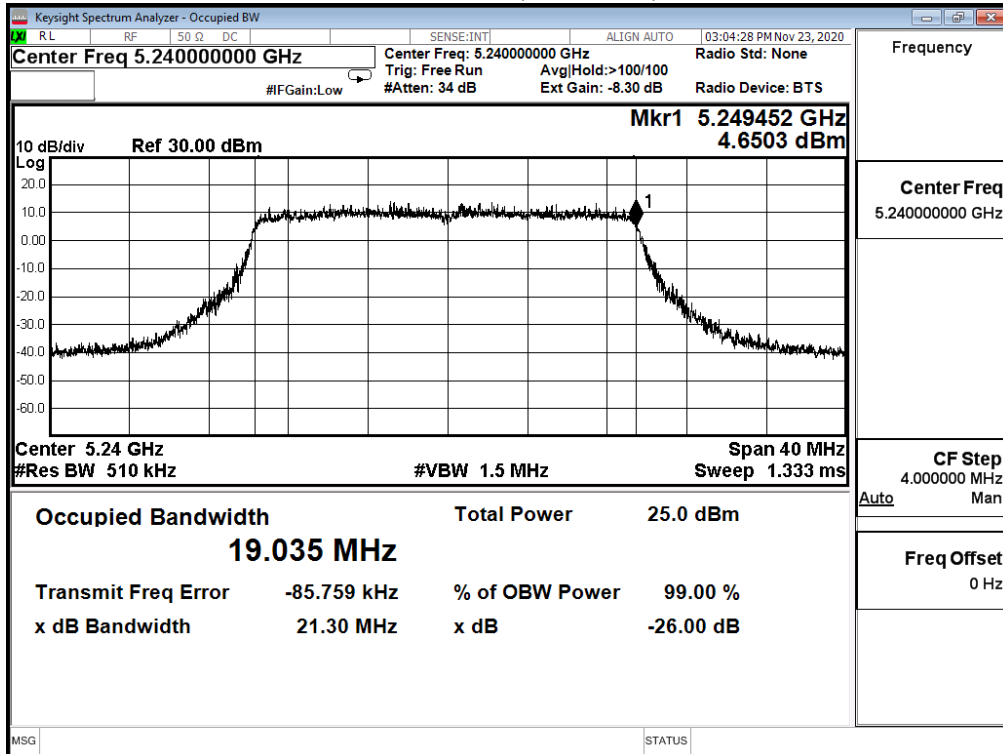
Channel 36 (5180MHz)



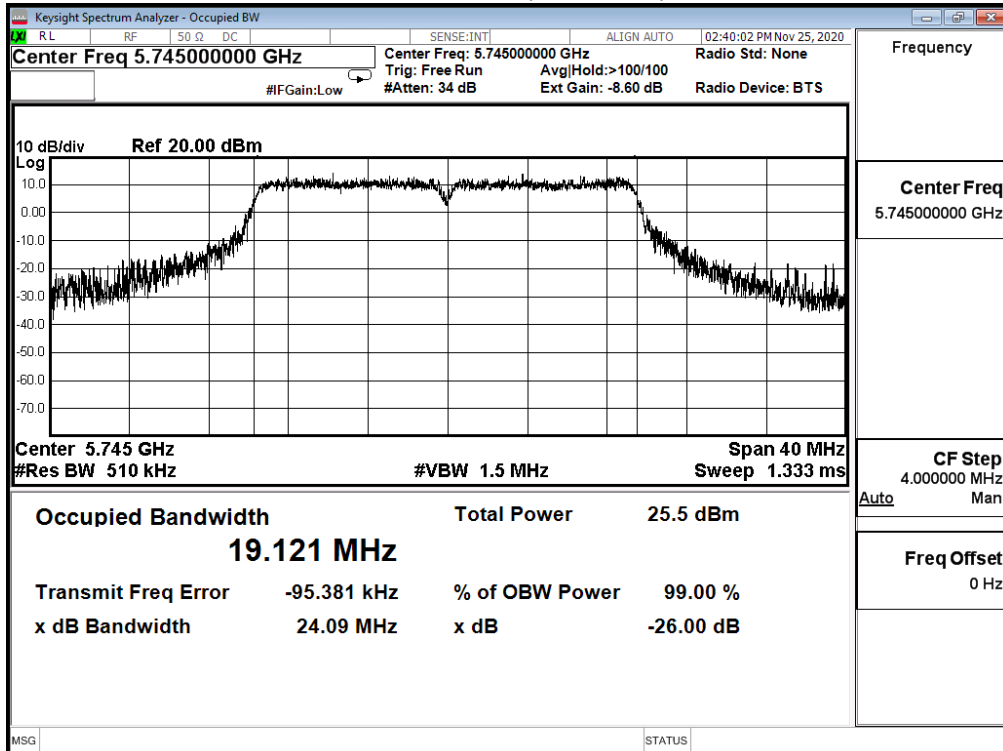
Channel 44 (5220MHz)



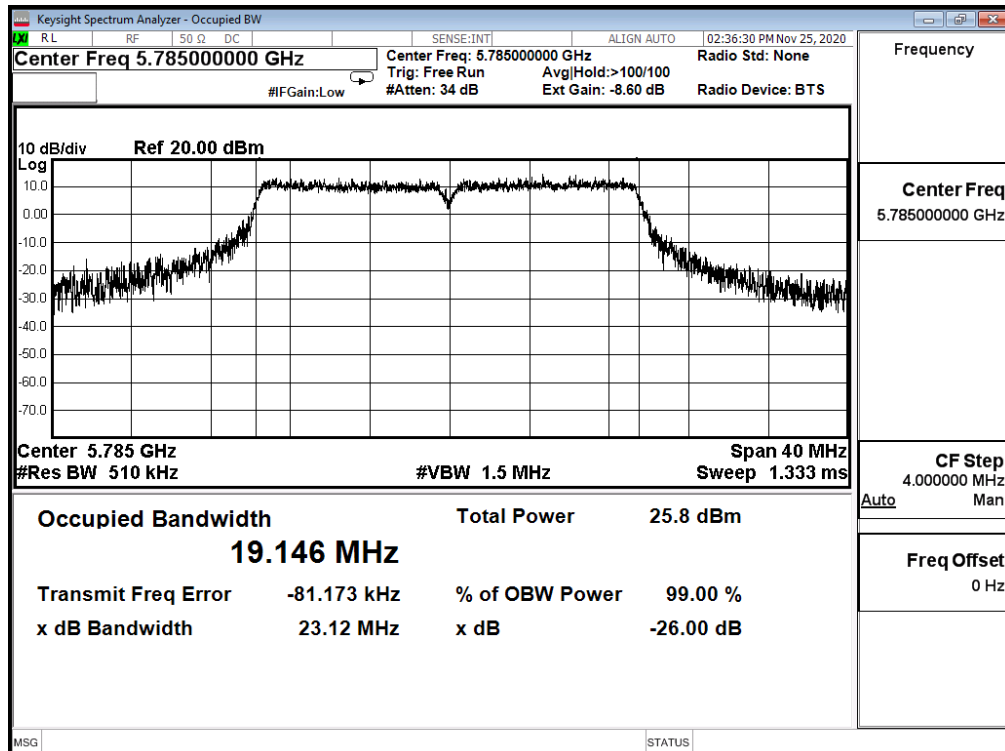
Channel 48 (5240MHz)



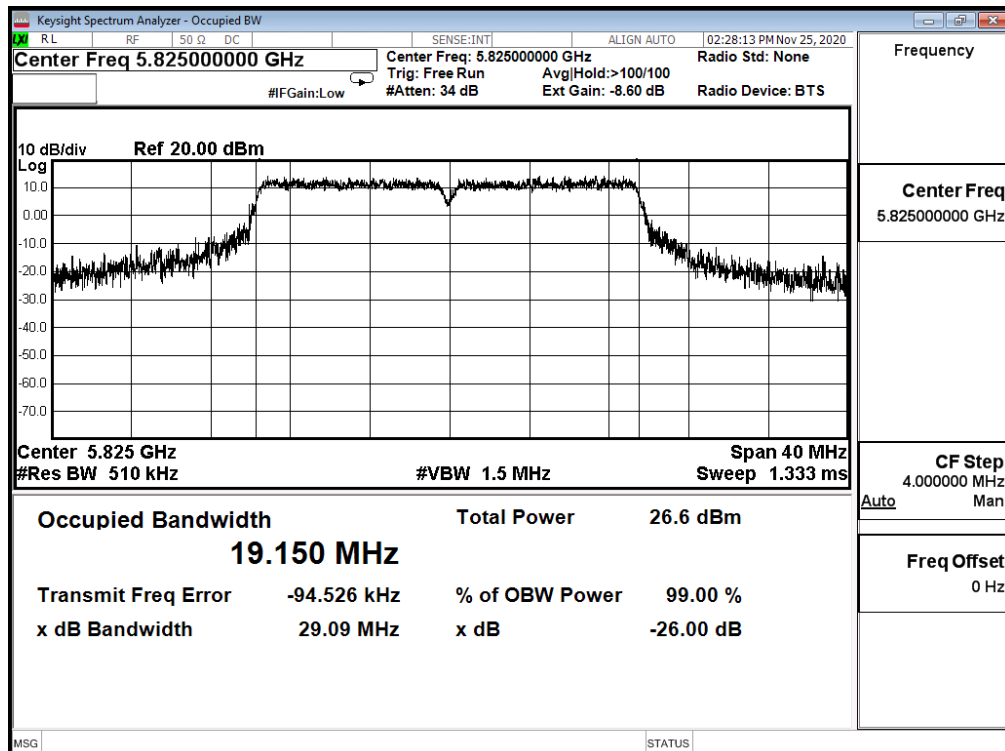
Channel 149 (5745MHz)



Channel 157 (5785MHz)



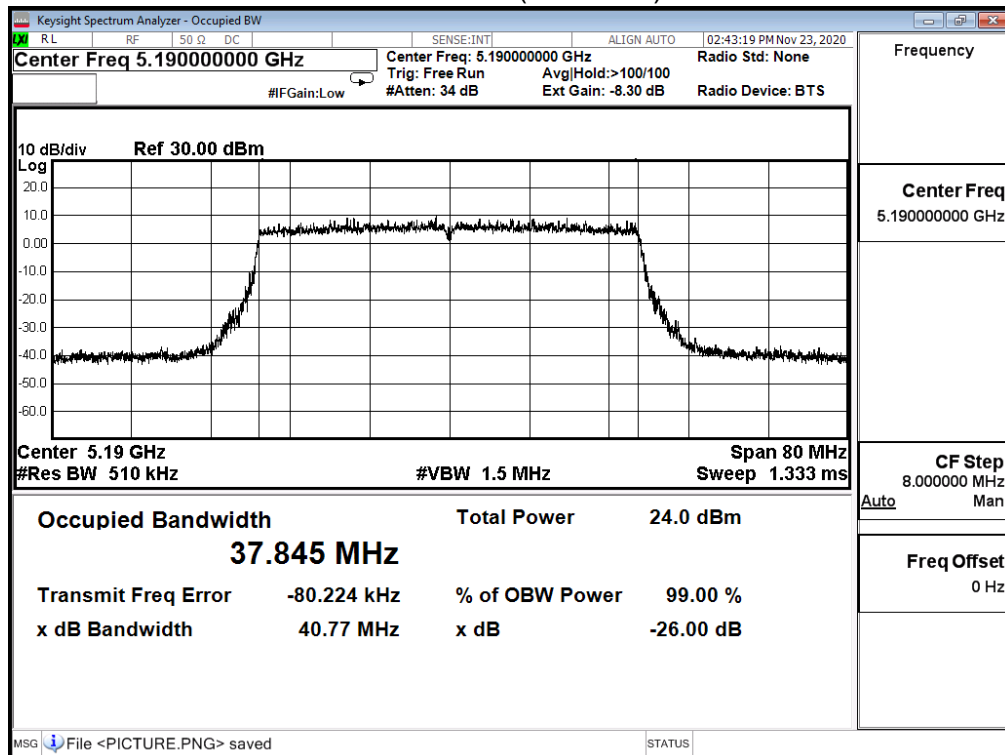
Channel 165 (5825MHz)



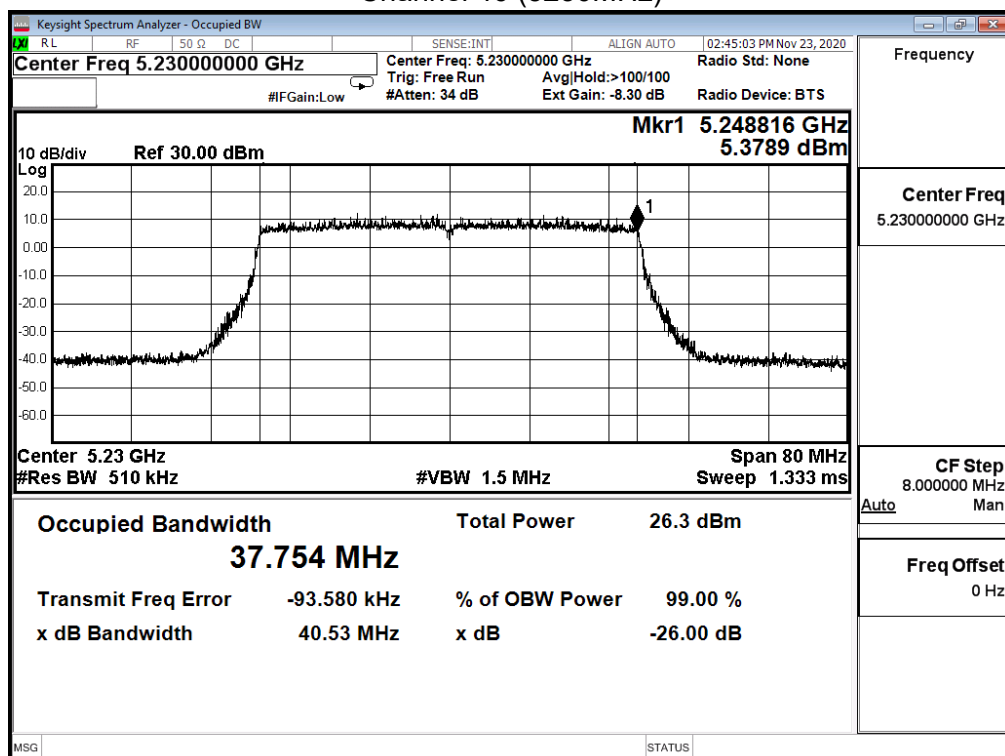
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_40M(ANT 0)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
38	5190	37.845	40.770	--	Pass
46	5230	37.754	40.530	--	Pass
151	5755	37.860	N/A	--	Pass
159	5795	37.825		--	Pass

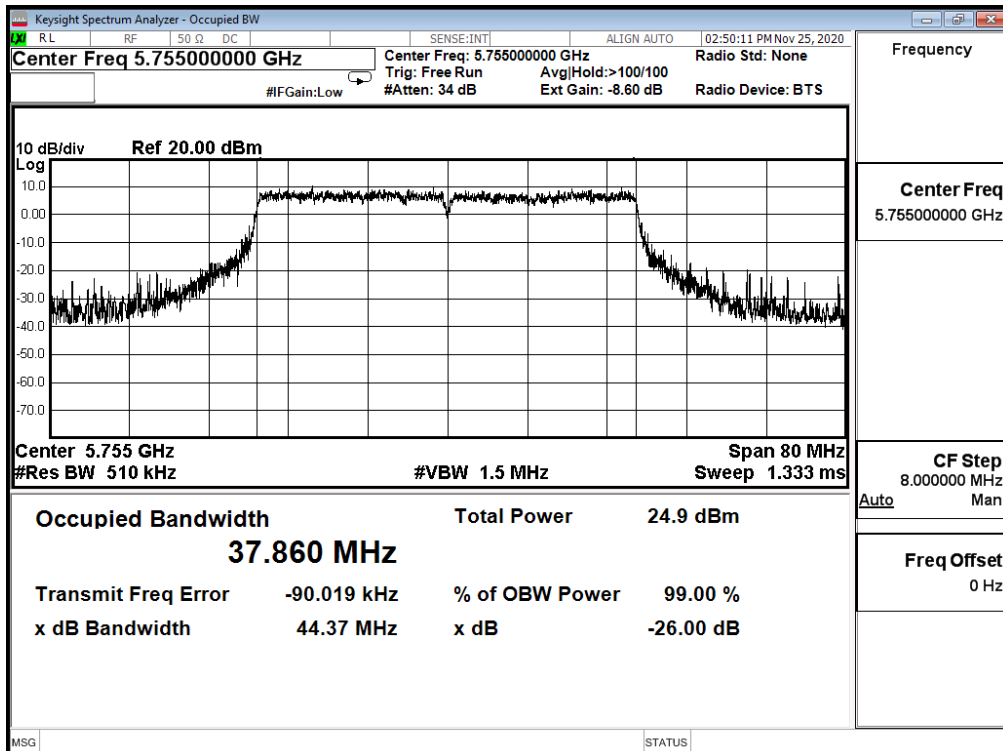
Channel 38 (5190MHz)



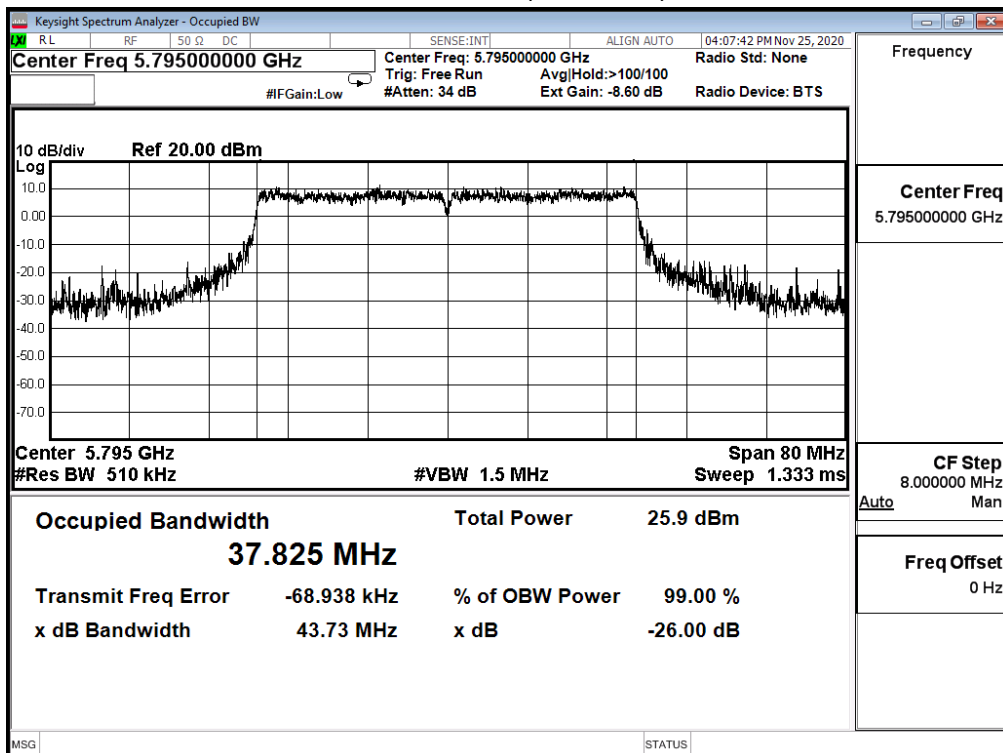
Channel 46 (5230MHz)



Channel 151 (5755MHz)



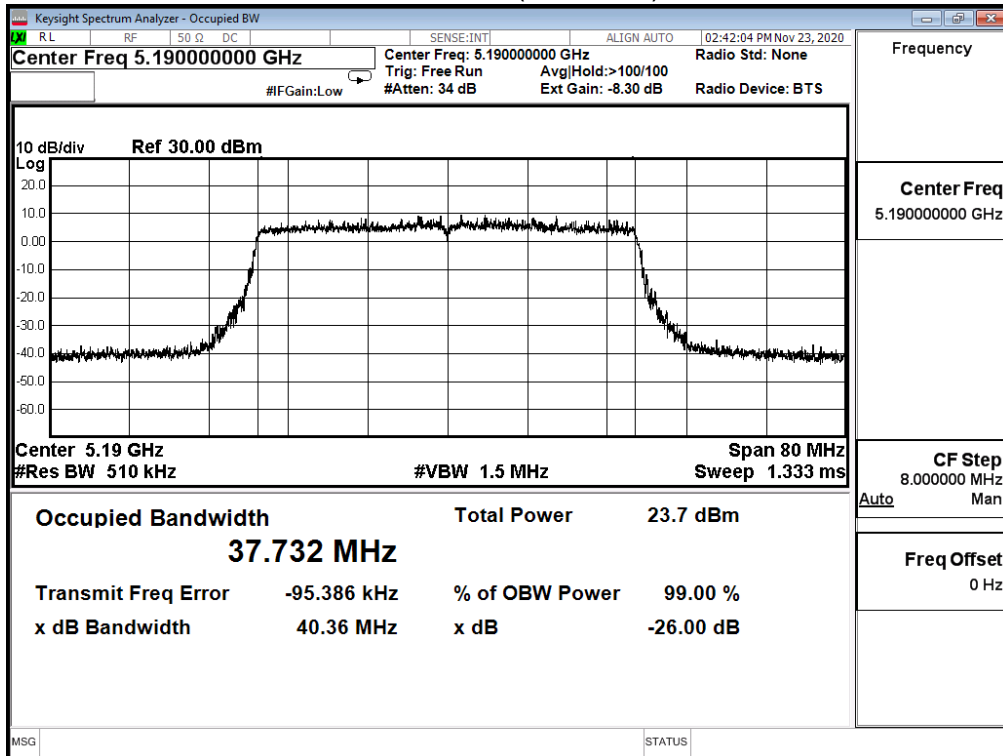
Channel 159 (5795MHz)



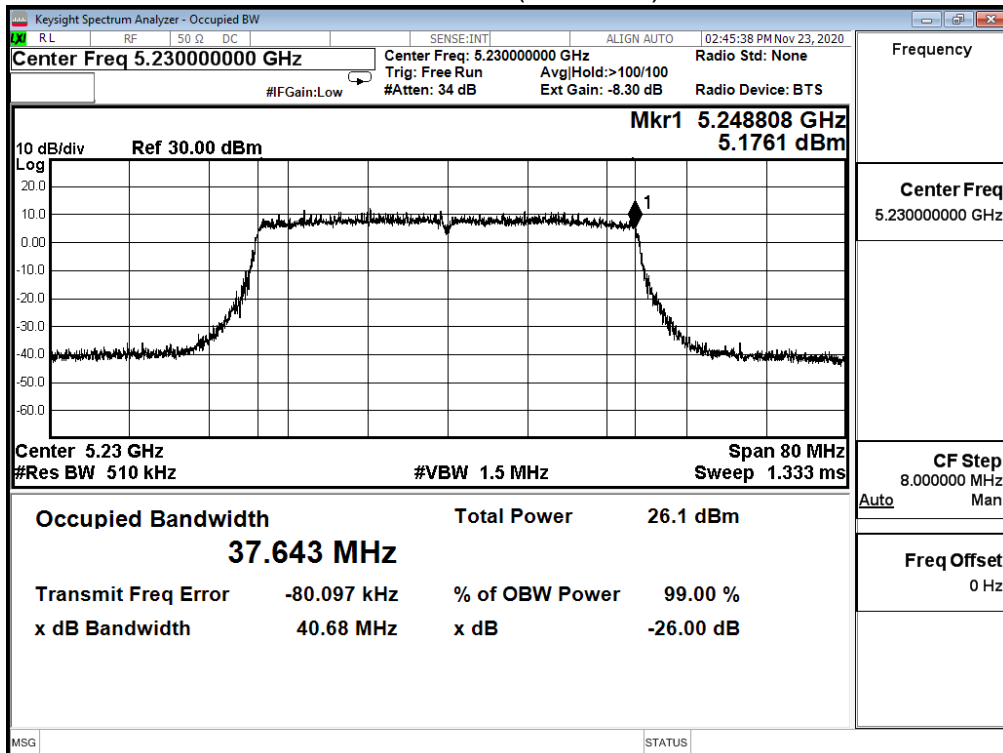
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_40M(ANT 1)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
38	5190	37.732	40.360	--	Pass
46	5230	37.643	40.680	--	Pass
151	5755	37.797	N/A	--	Pass
159	5795	37.835		--	Pass

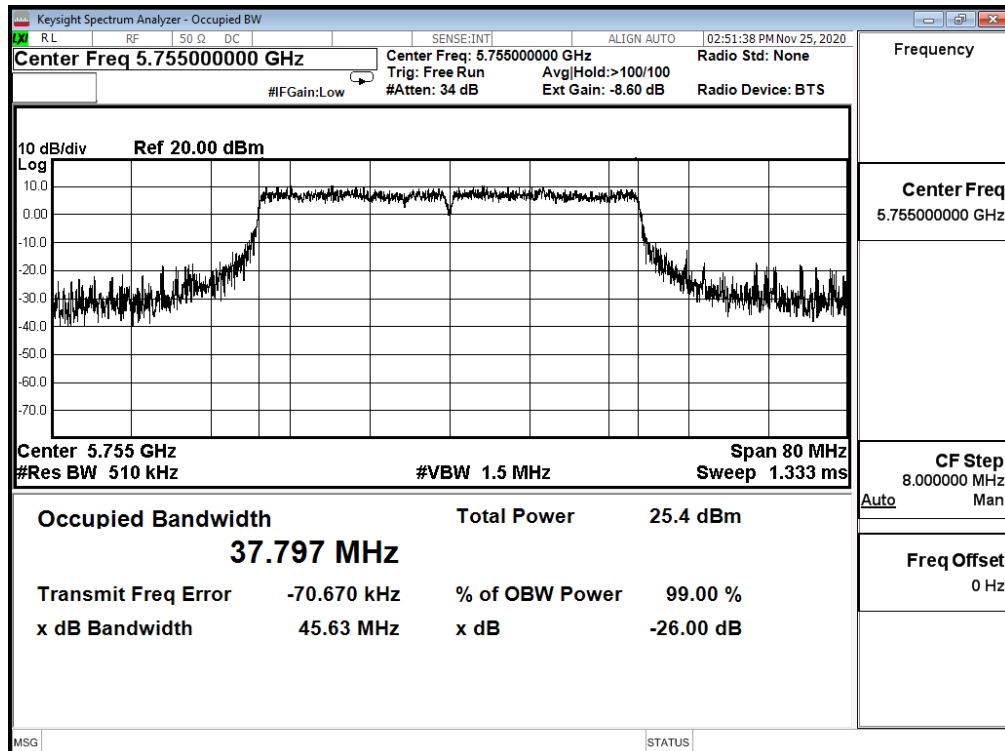
Channel 38 (5190MHz)



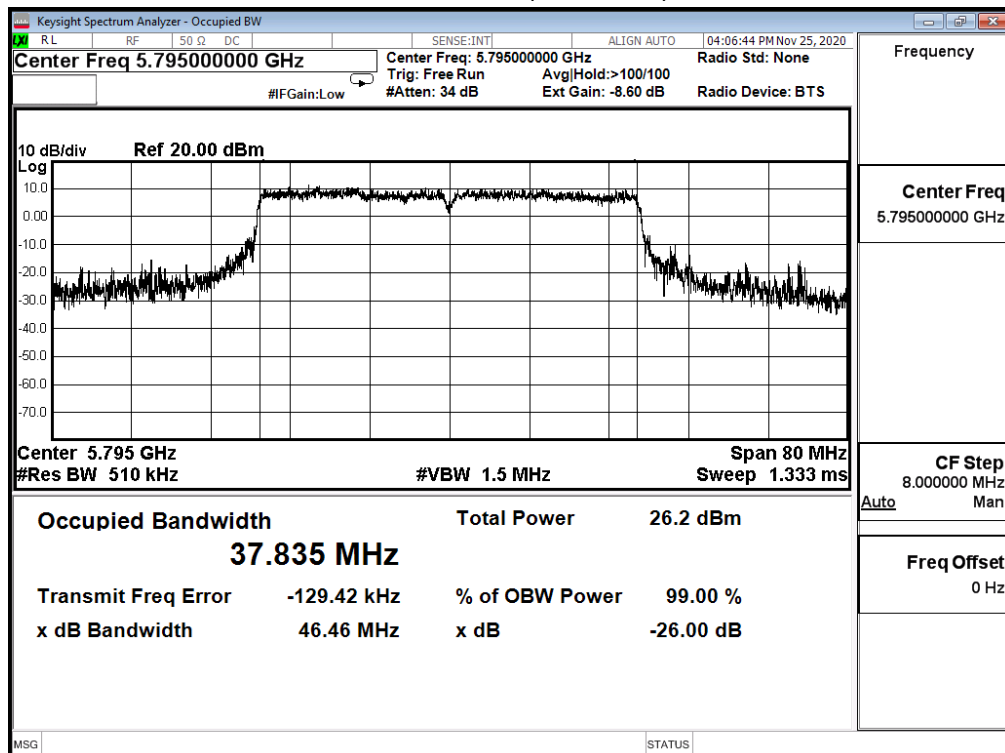
Channel 46 (5230MHz)



Channel 151 (5755MHz)



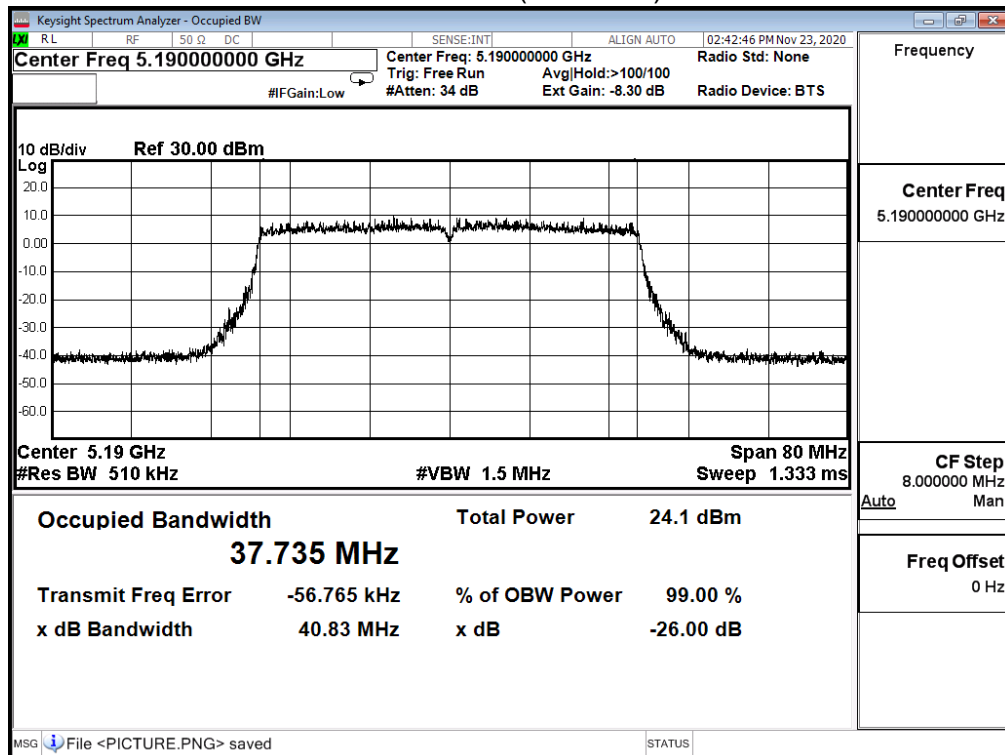
Channel 159 (5795MHz)



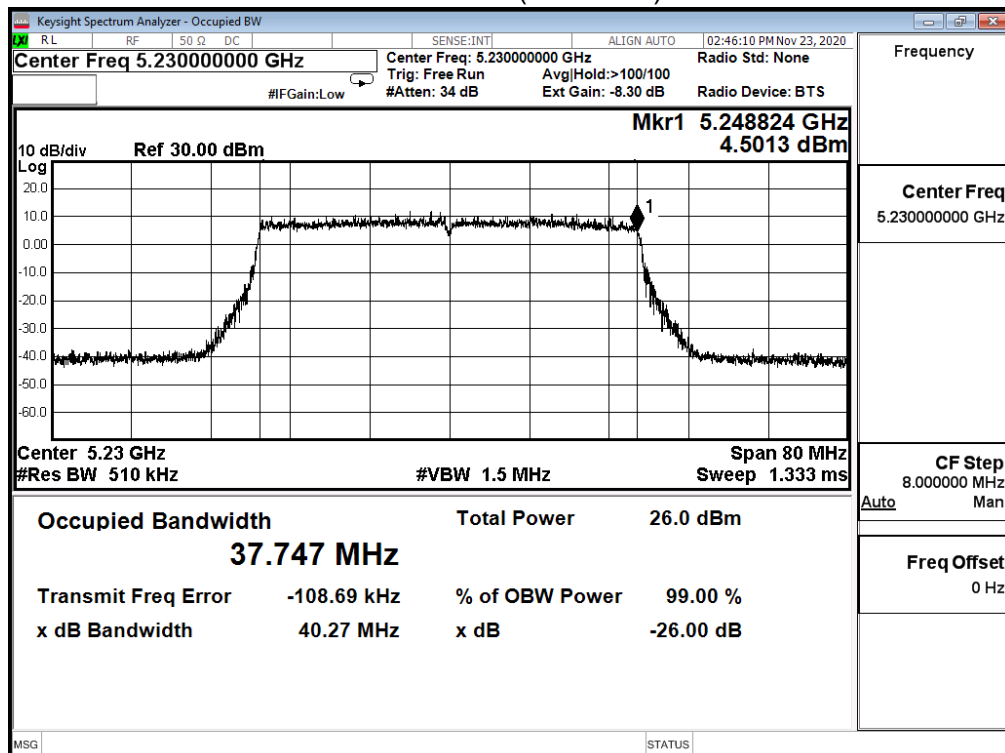
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_40M(ANT 2)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
38	5190	37.735	40.830	--	Pass
46	5230	37.747	40.270	--	Pass
151	5755	37.816	N/A	--	Pass
159	5795	37.849		--	Pass

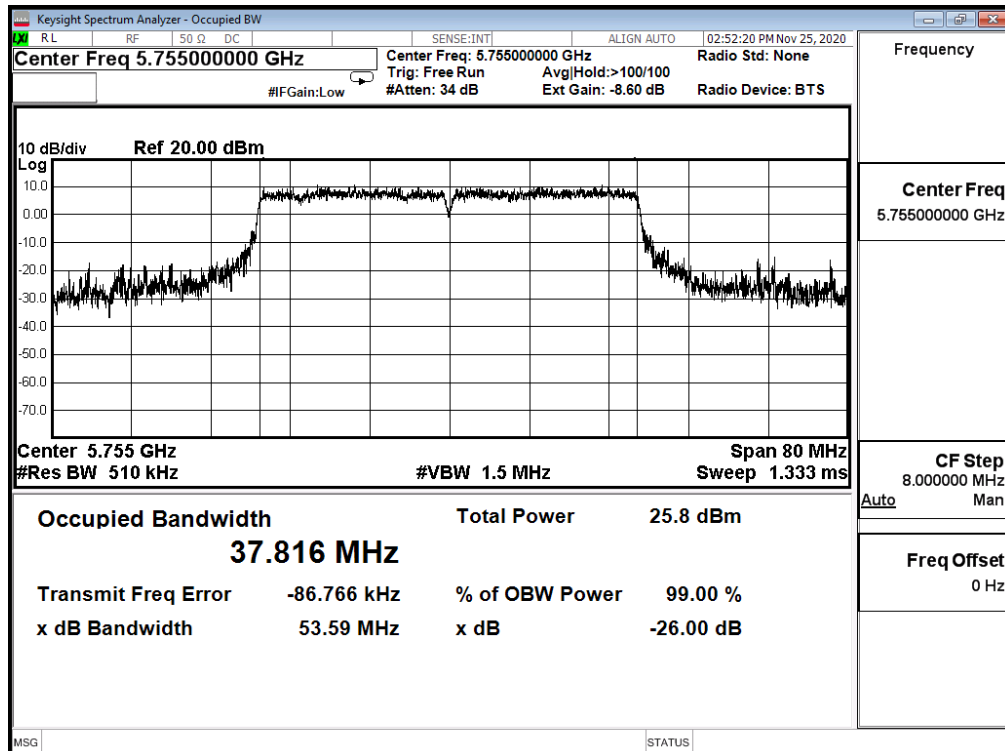
Channel 38 (5190MHz)



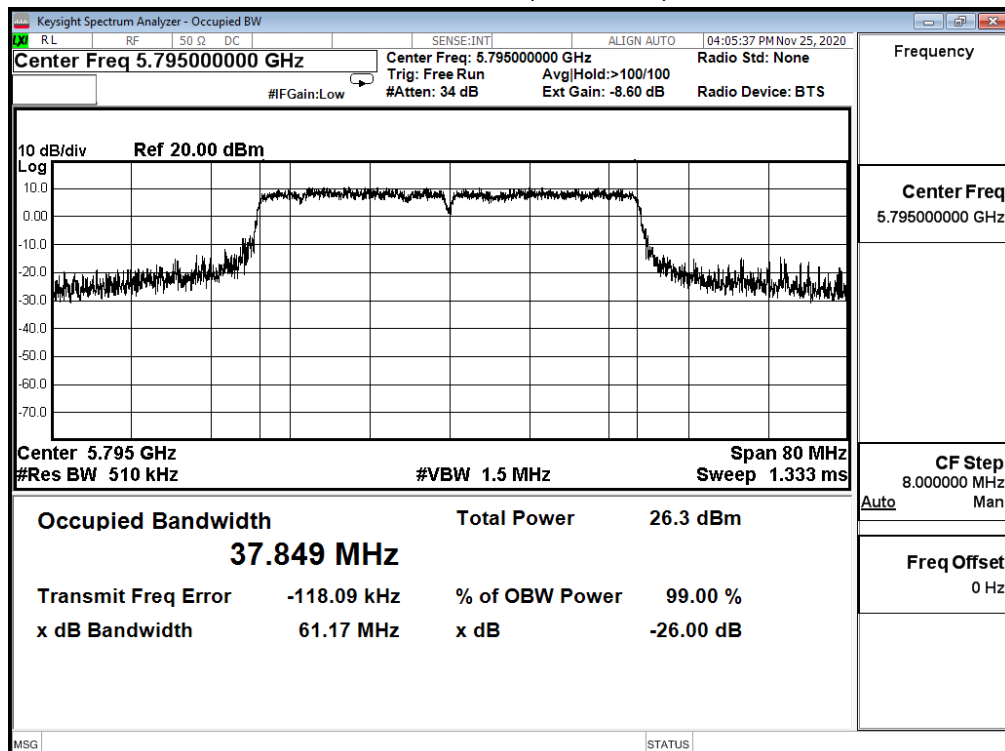
Channel 46 (5230MHz)



Channel 151 (5755MHz)



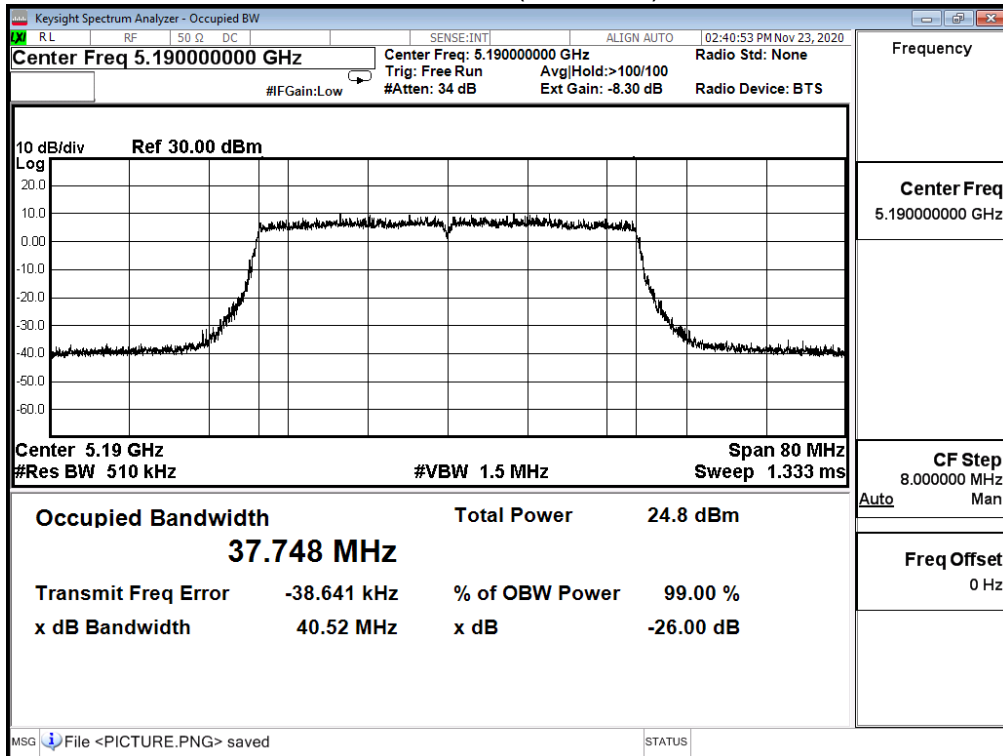
Channel 159 (5795MHz)



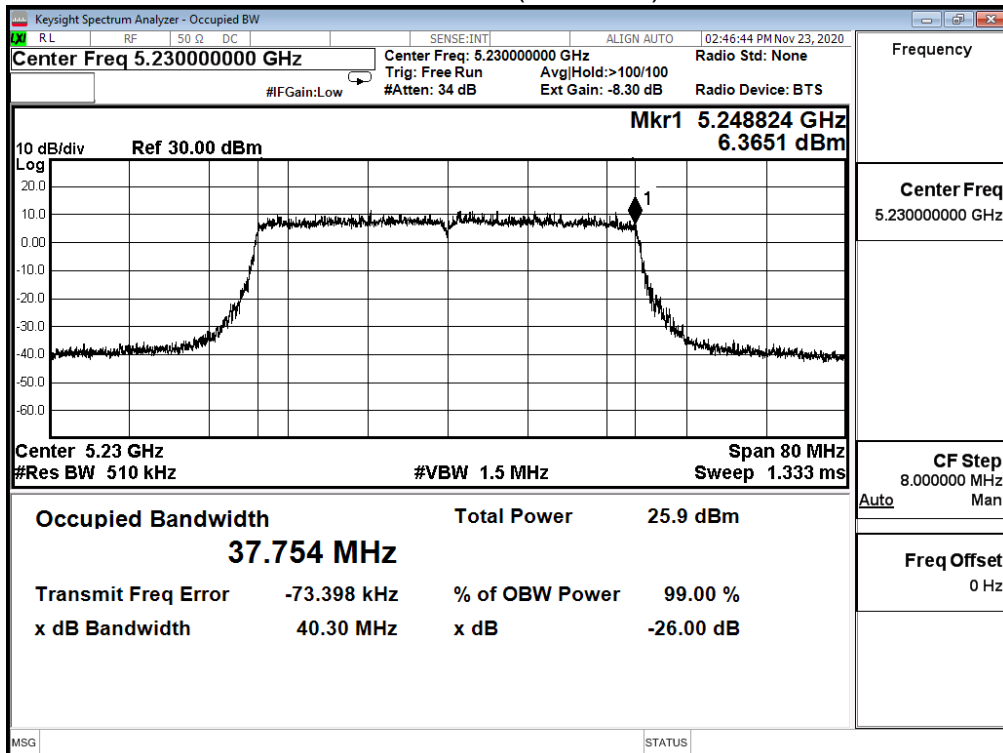
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/23~2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_40M(ANT 3)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
38	5190	37.748	40.520	--	Pass
46	5230	37.754	40.300	--	Pass
151	5755	37.826	N/A	--	Pass
159	5795	37.855		--	Pass

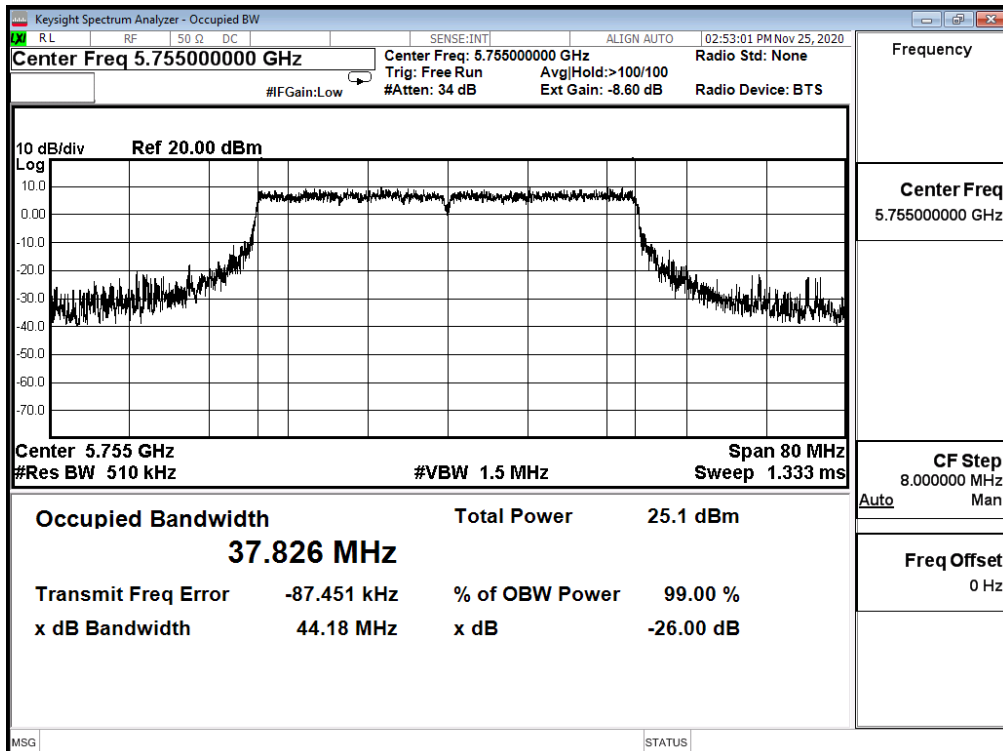
Channel 38 (5190MHz)



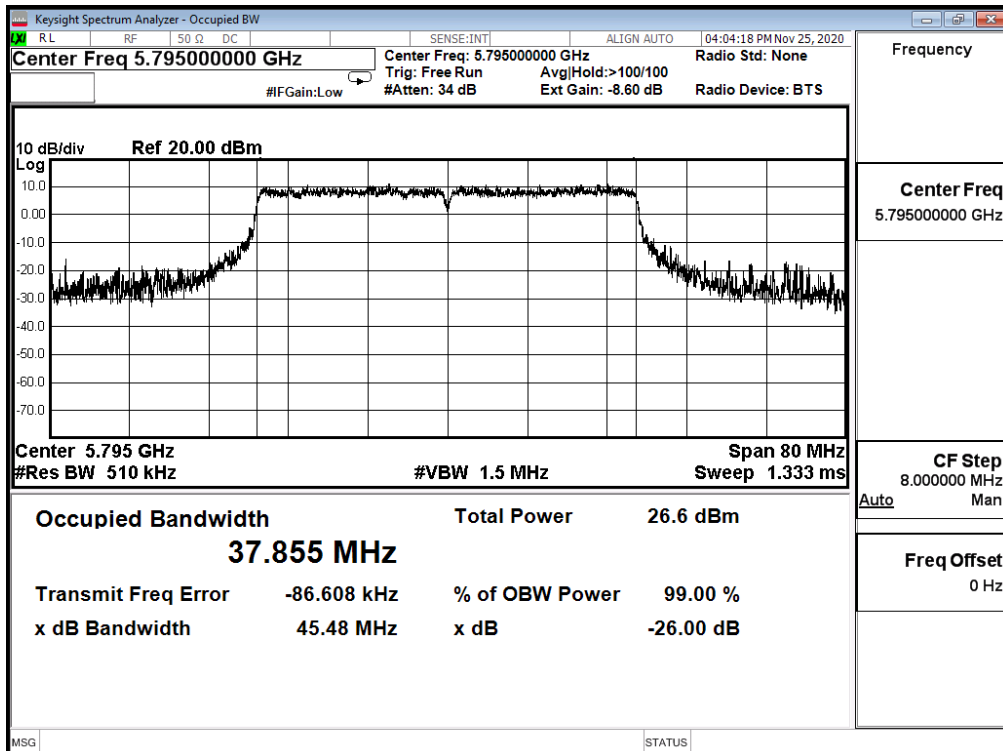
Channel 46 (5230MHz)



Channel 151 (5755MHz)



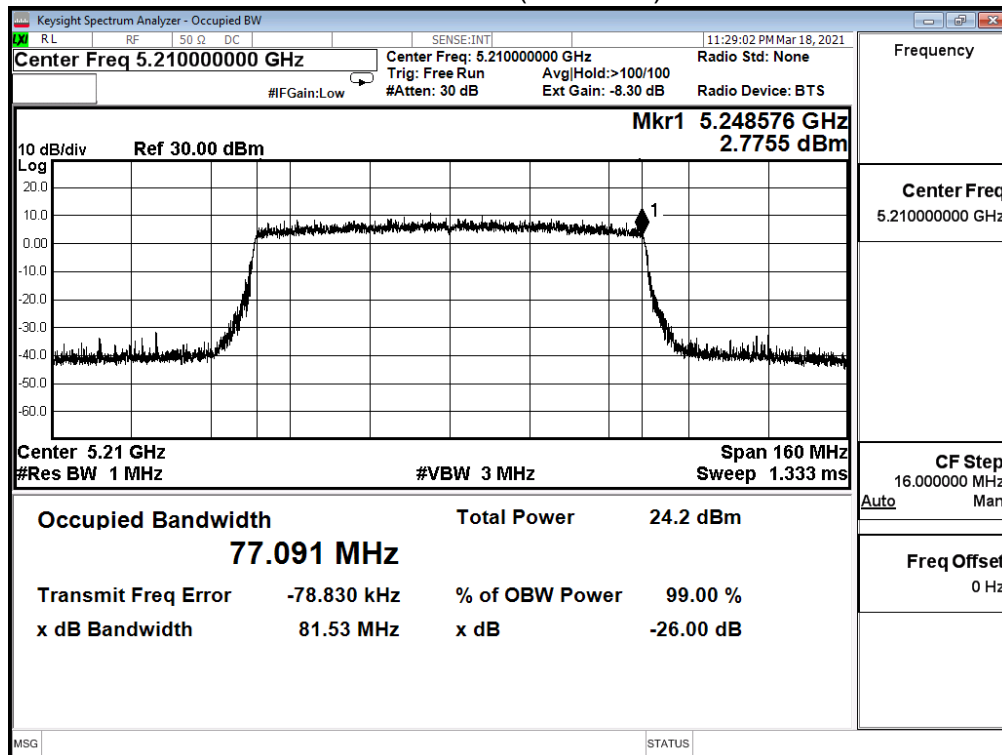
Channel 159 (5795MHz)



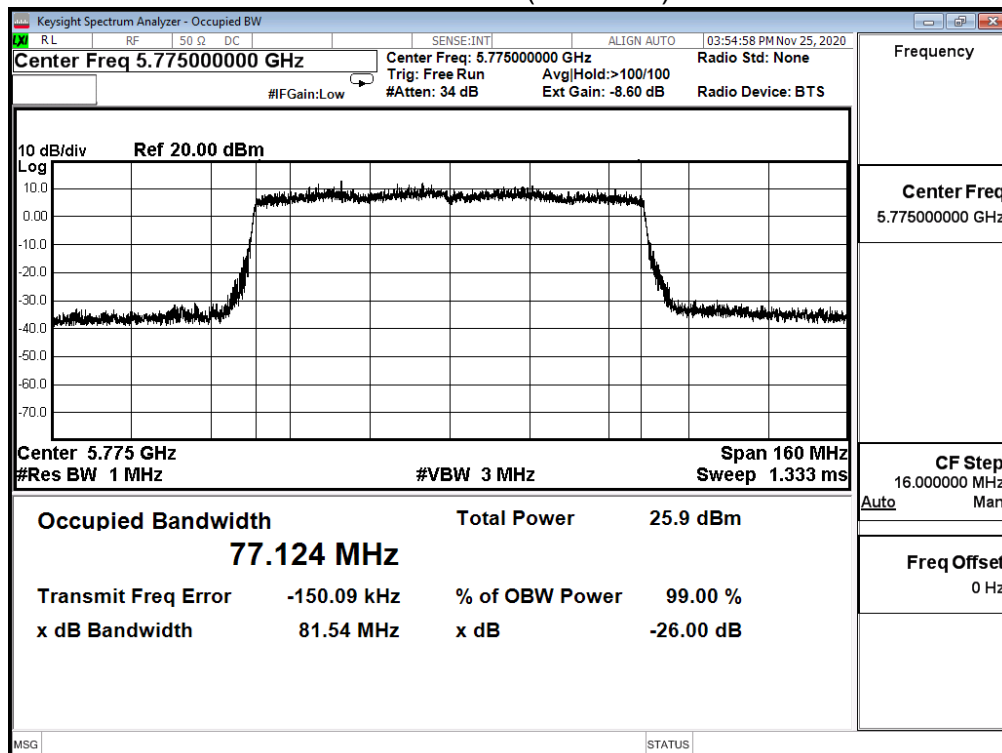
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25~2021/03/18	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_80M(ANT 0)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	77.091	81.530	--	Pass
155	5775	77.124	N/A	--	Pass

Channel 42 (5210MHz)



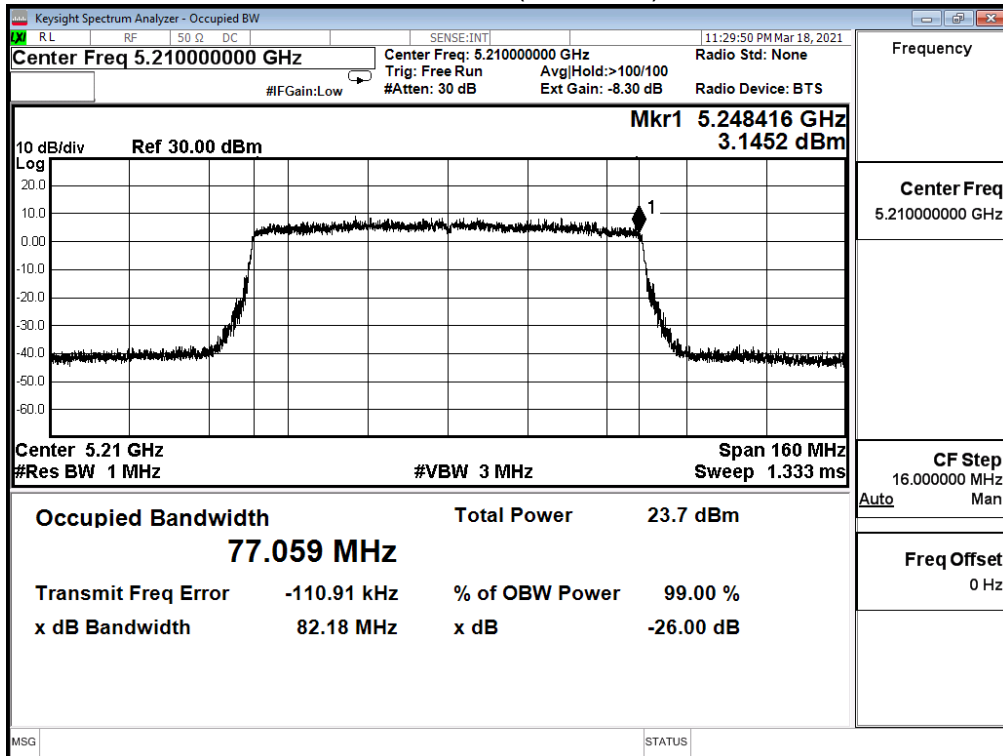
Channel 155 (5775MHz)



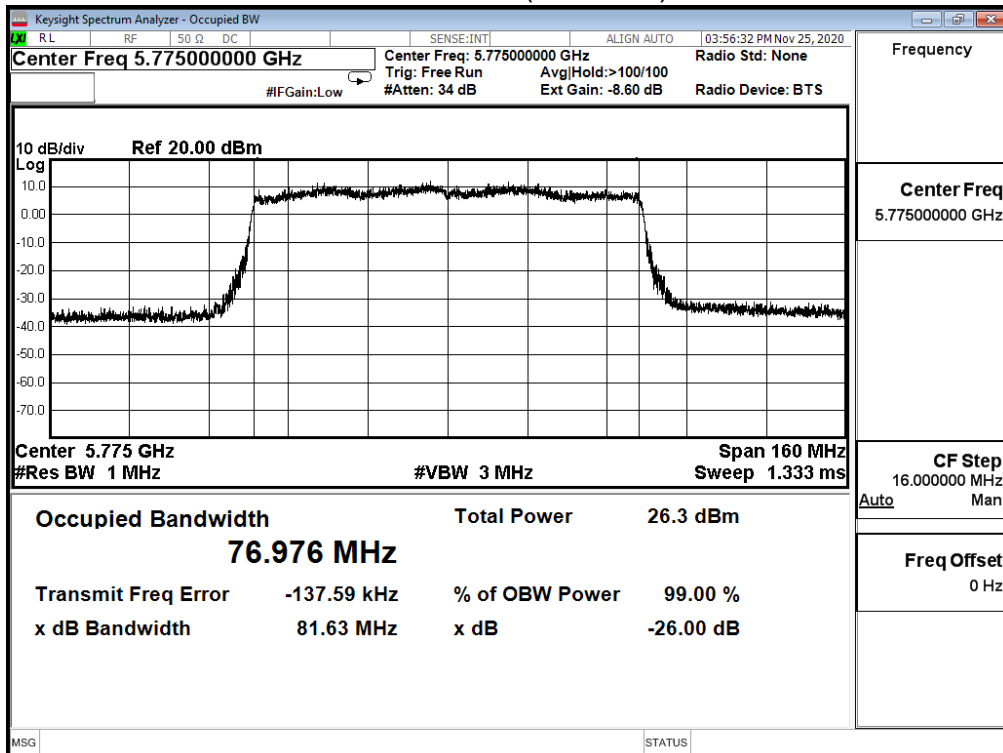
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25~2021/03/18	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_80M(ANT 1)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	77.059	82.180	--	Pass
155	5775	76.976	N/A	--	Pass

Channel 42 (5210MHz)



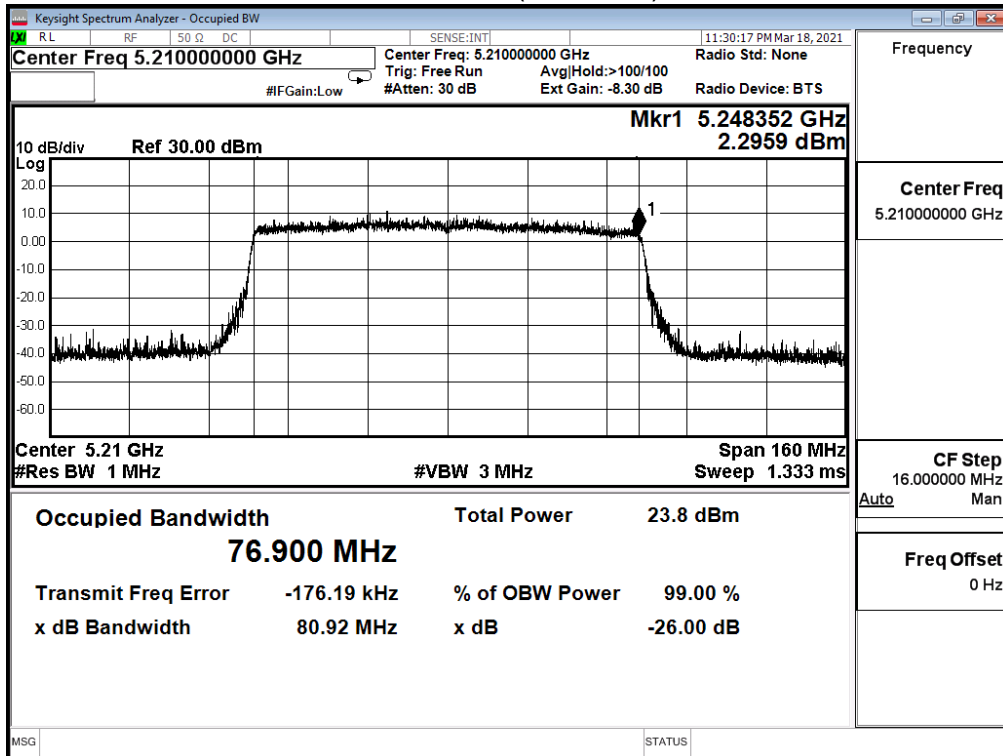
Channel 155 (5775MHz)



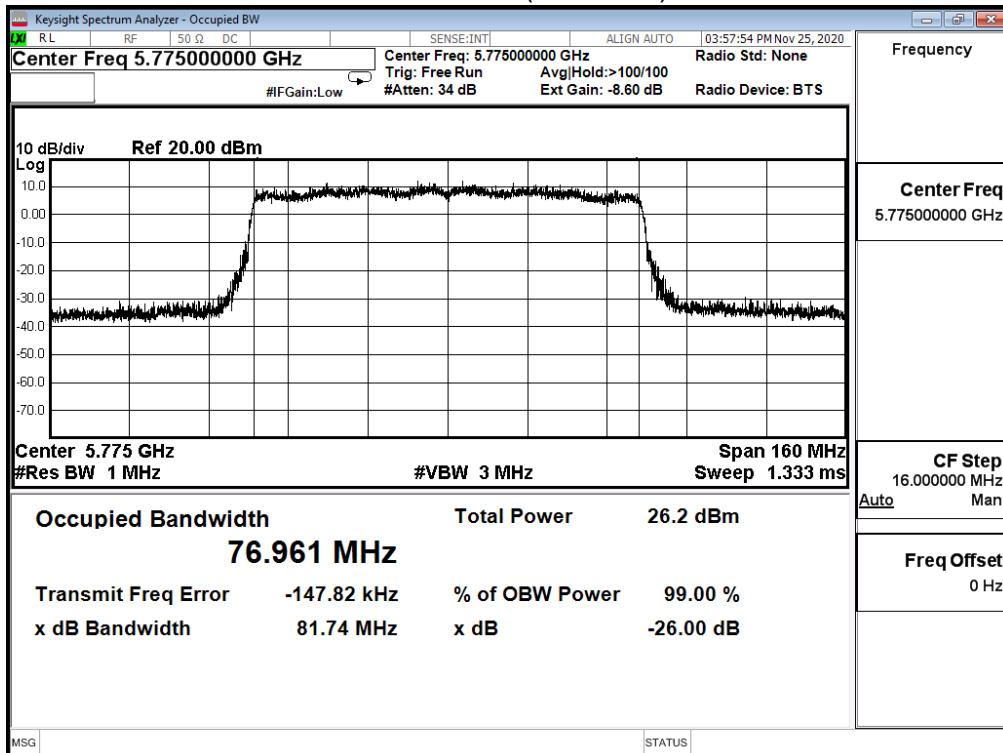
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25~2021/03/18	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_80M(ANT 2)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	76.900	80.920	--	Pass
155	5775	76.961	N/A	--	Pass

Channel 42 (5210MHz)



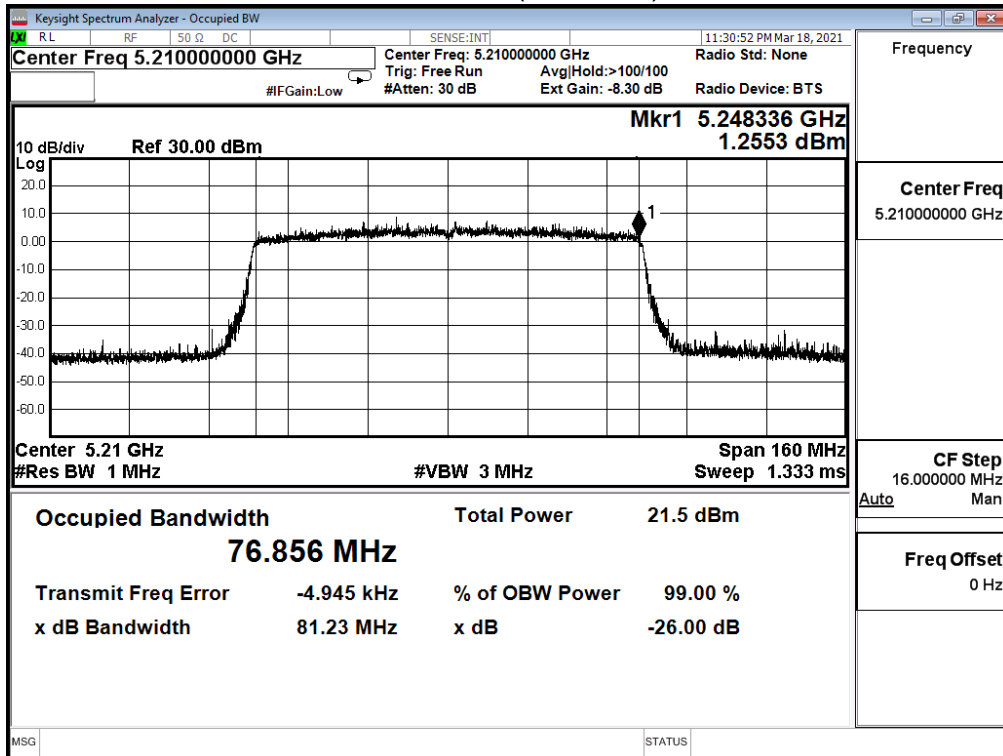
Channel 155 (5775MHz)



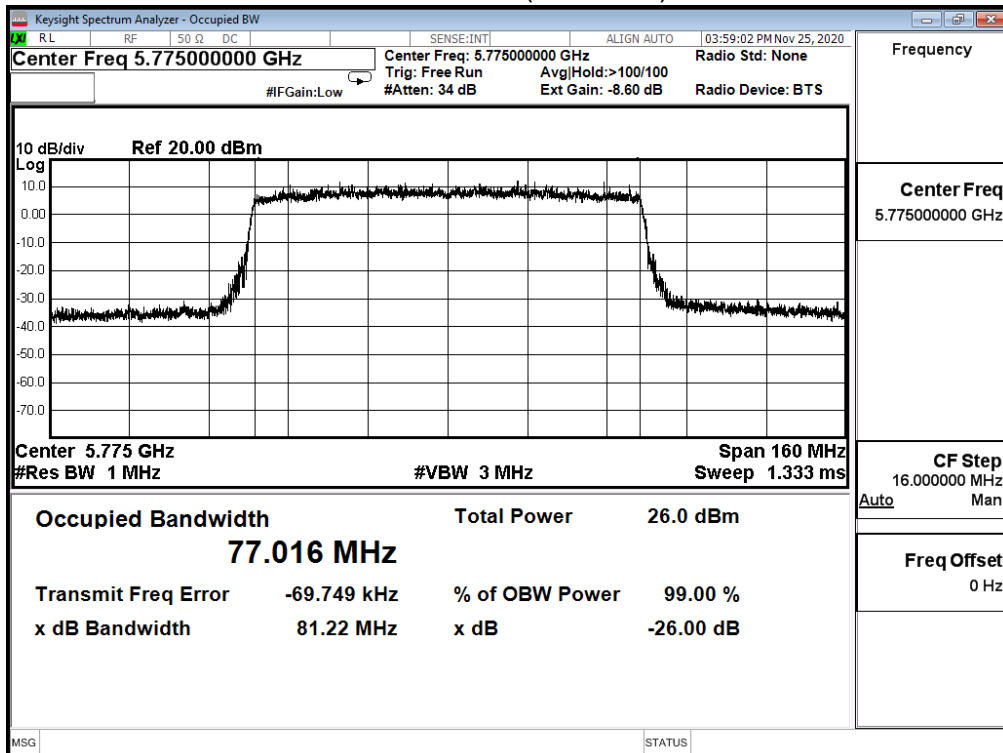
Product	Consumer Home Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25~2021/03/18	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	62.0%

IEEE 802.11ax_80M(ANT 3)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	76.856	81.230	--	Pass
155	5775	77.016	N/A	--	Pass

Channel 42 (5210MHz)



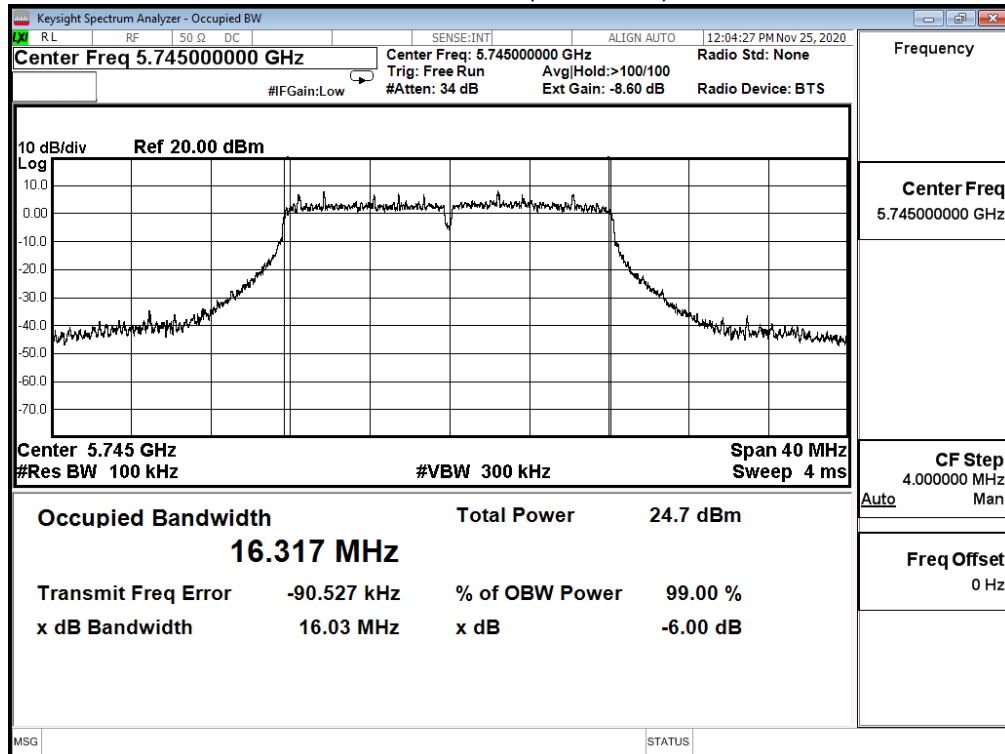
Channel 155 (5775MHz)



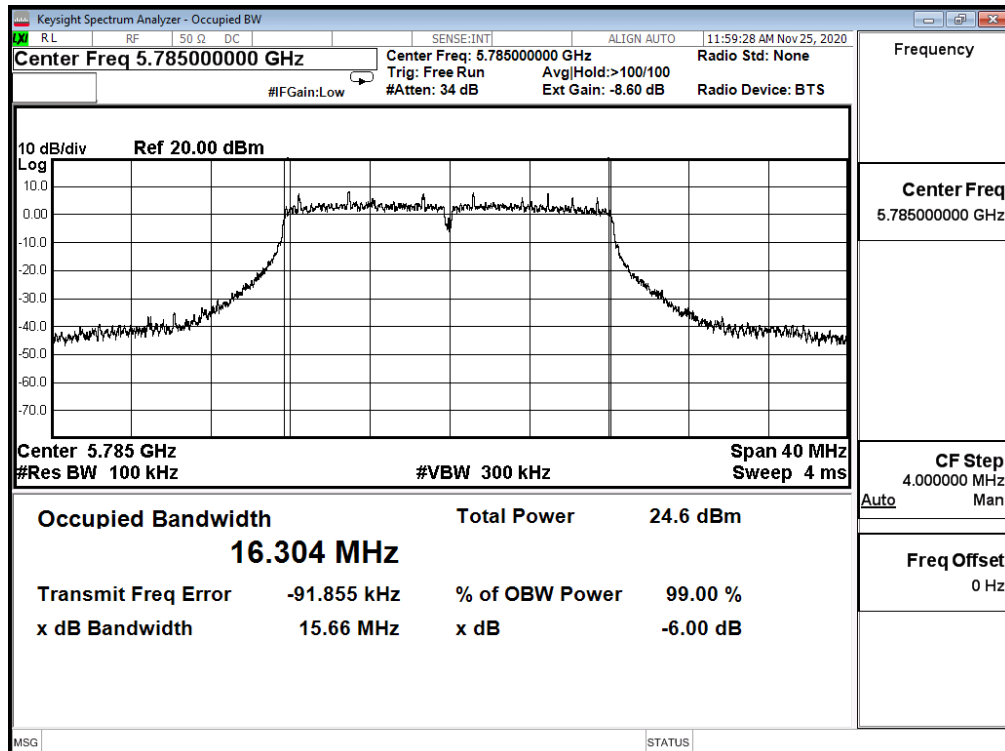
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11a (ANT 0)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	16.030	>0.5	Pass
157	5785	15.660	>0.5	Pass
165	5825	15.360	>0.5	Pass

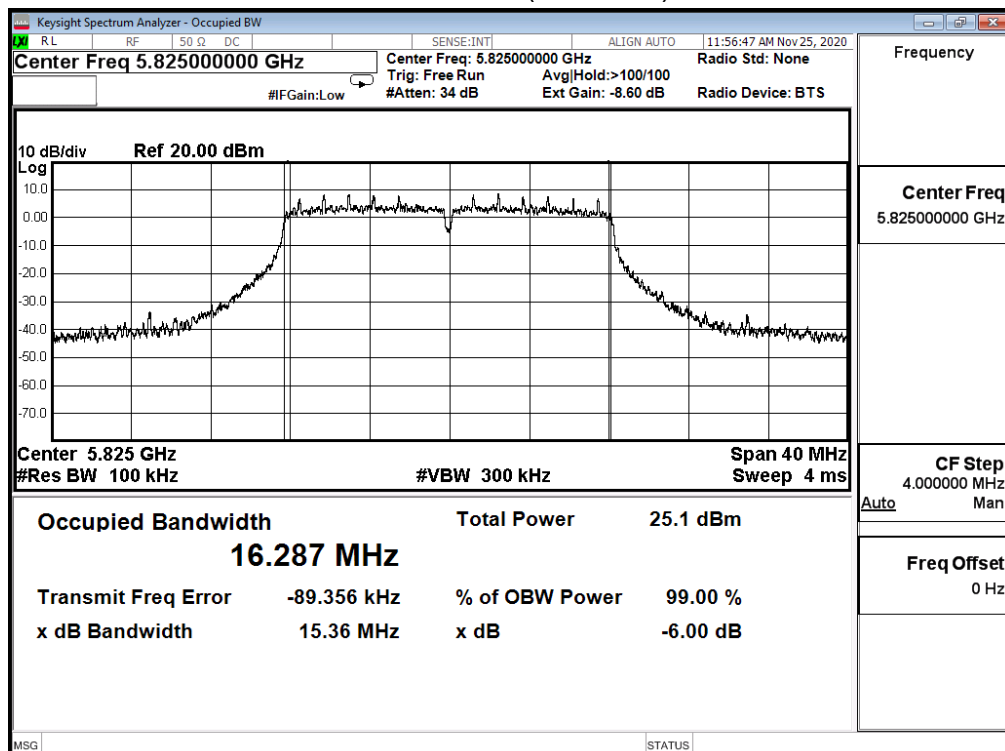
Channel 149 (5745MHz)



Channel 157 (5785MHz)



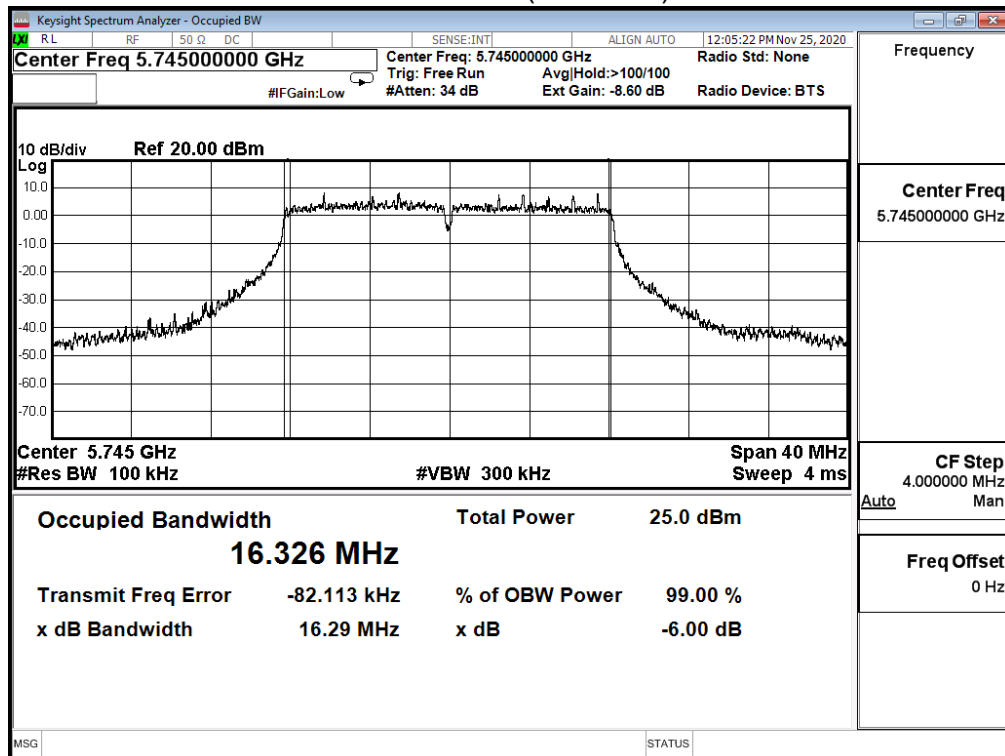
Channel 165 (5825MHz)



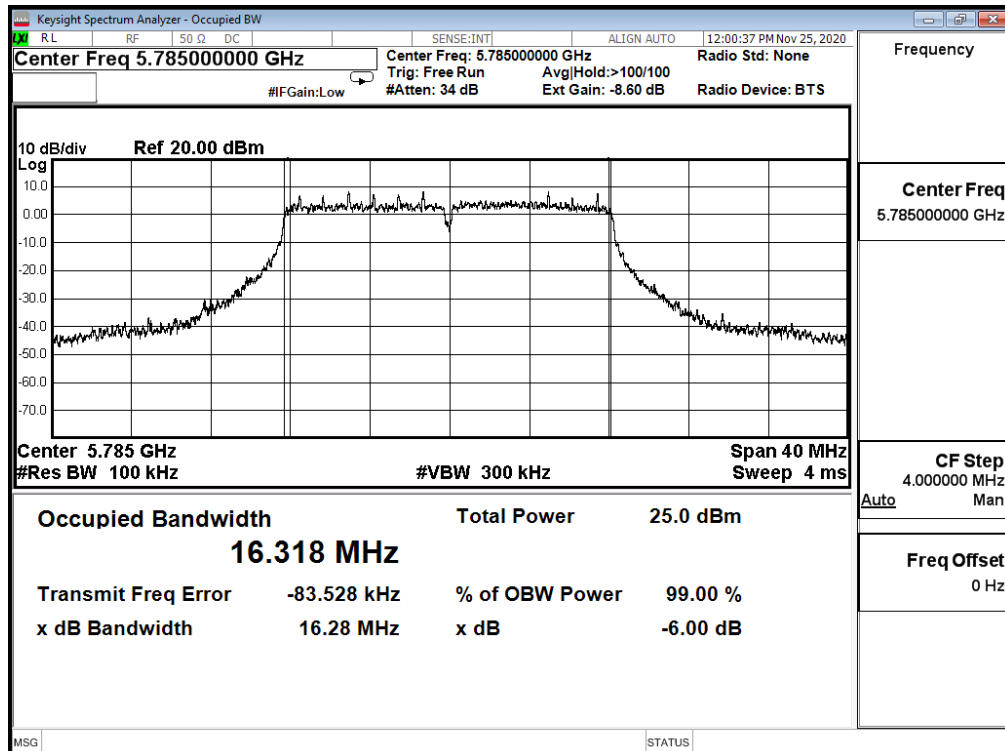
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11a (ANT 1)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	16.290	>0.5	Pass
157	5785	16.280	>0.5	Pass
165	5825	16.290	>0.5	Pass

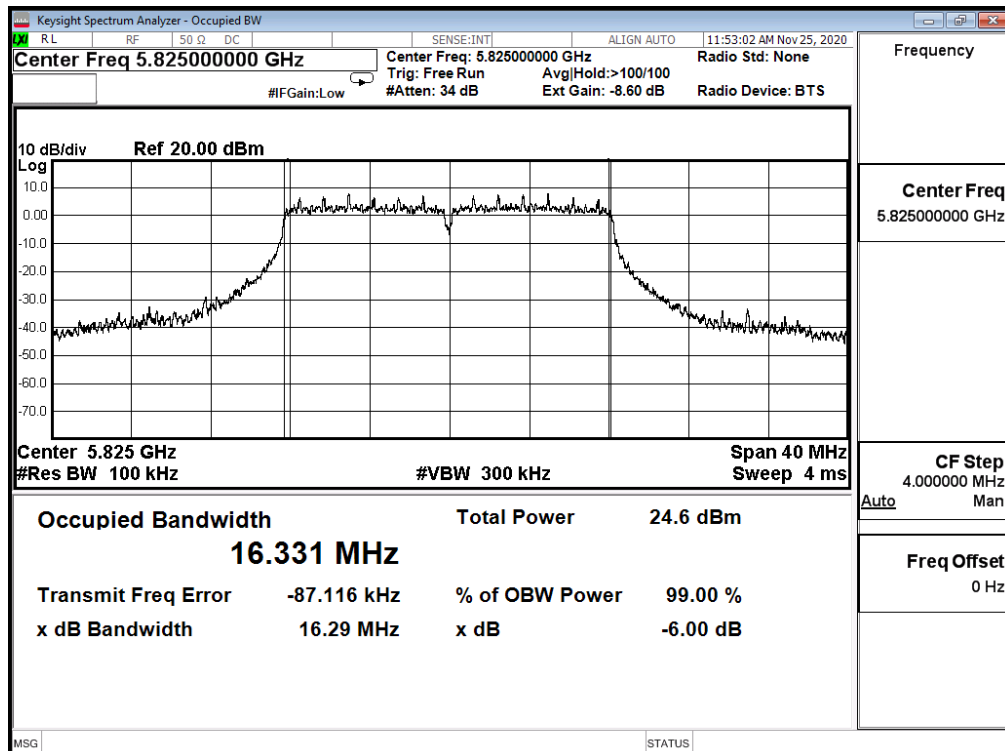
Channel 149 (5745MHz)



Channel 157 (5785MHz)



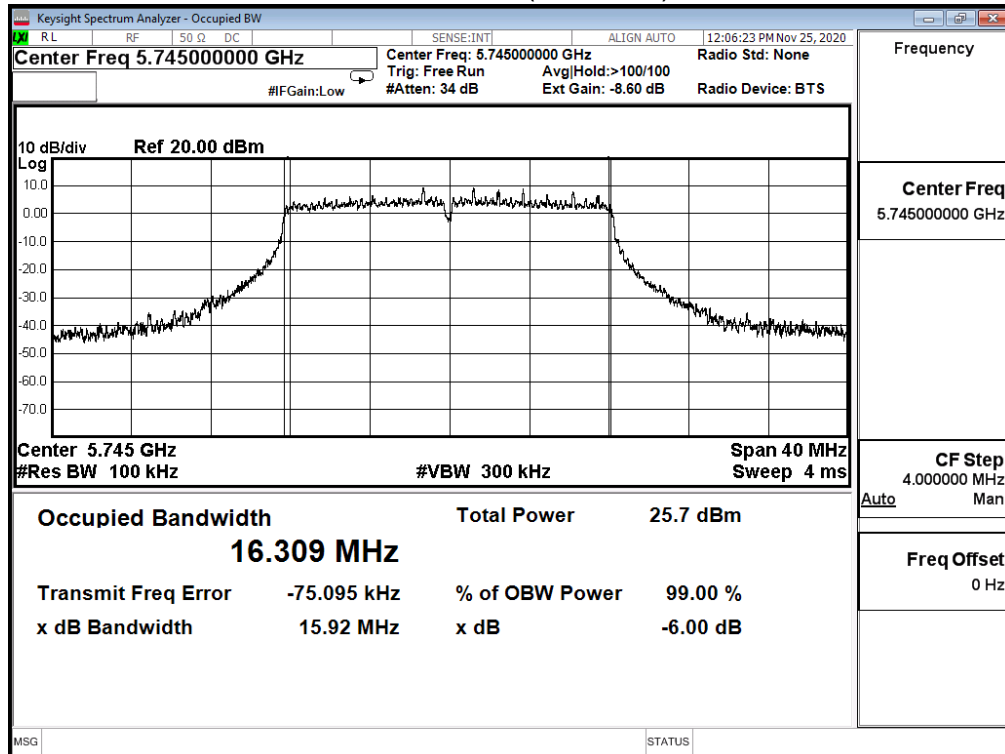
Channel 165 (5825MHz)



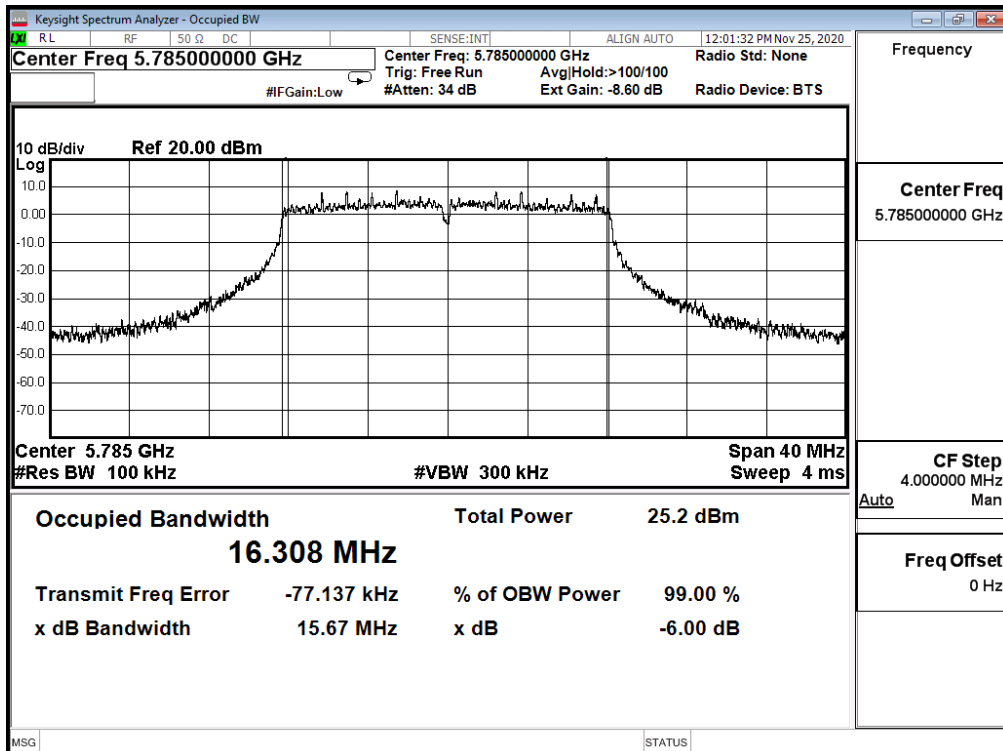
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11a (ANT 2)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	15.920	>0.5	Pass
157	5785	15.670	>0.5	Pass
165	5825	16.000	>0.5	Pass

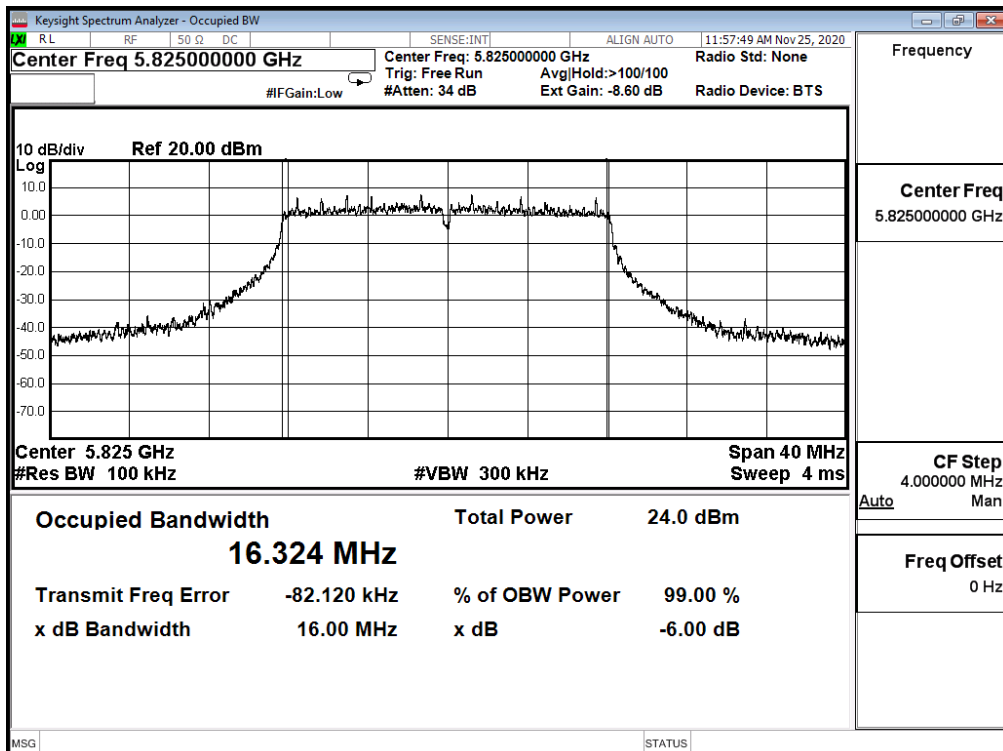
Channel 149 (5745MHz)



Channel 157 (5785MHz)



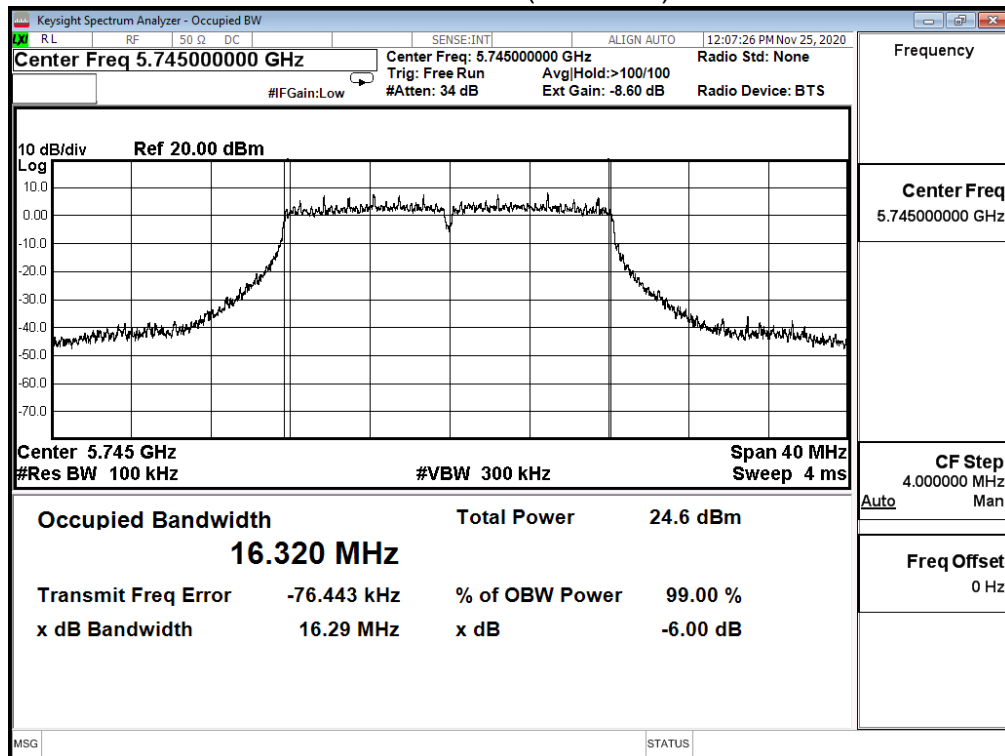
Channel 165 (5825MHz)



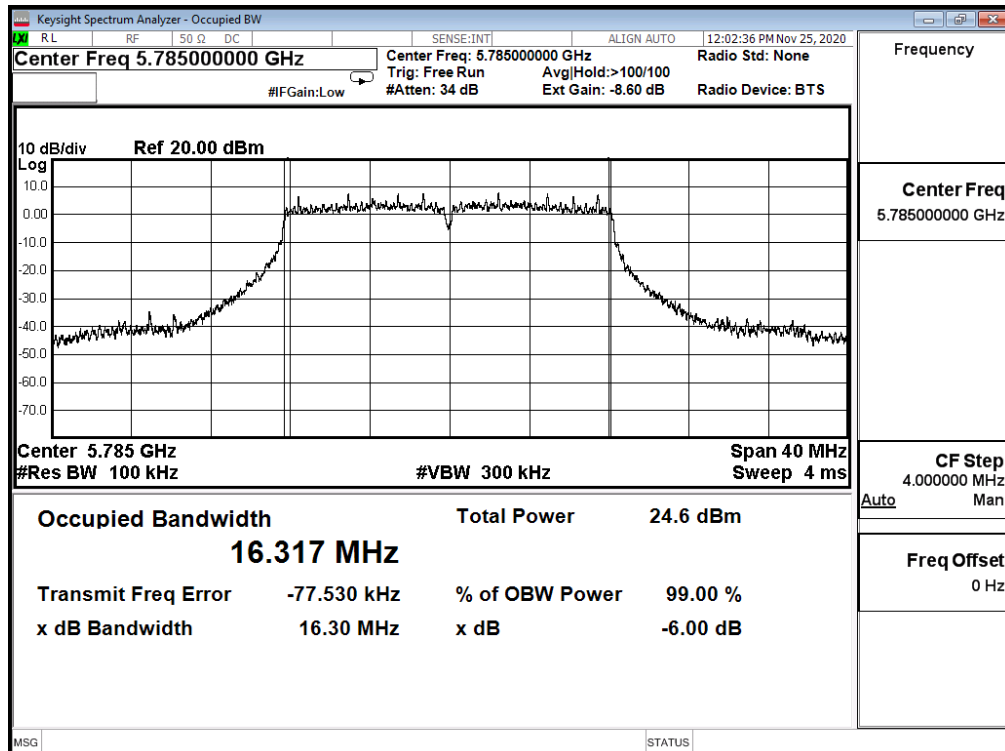
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11a (ANT 3)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	16.290	>0.5	Pass
157	5785	16.300	>0.5	Pass
165	5825	16.290	>0.5	Pass

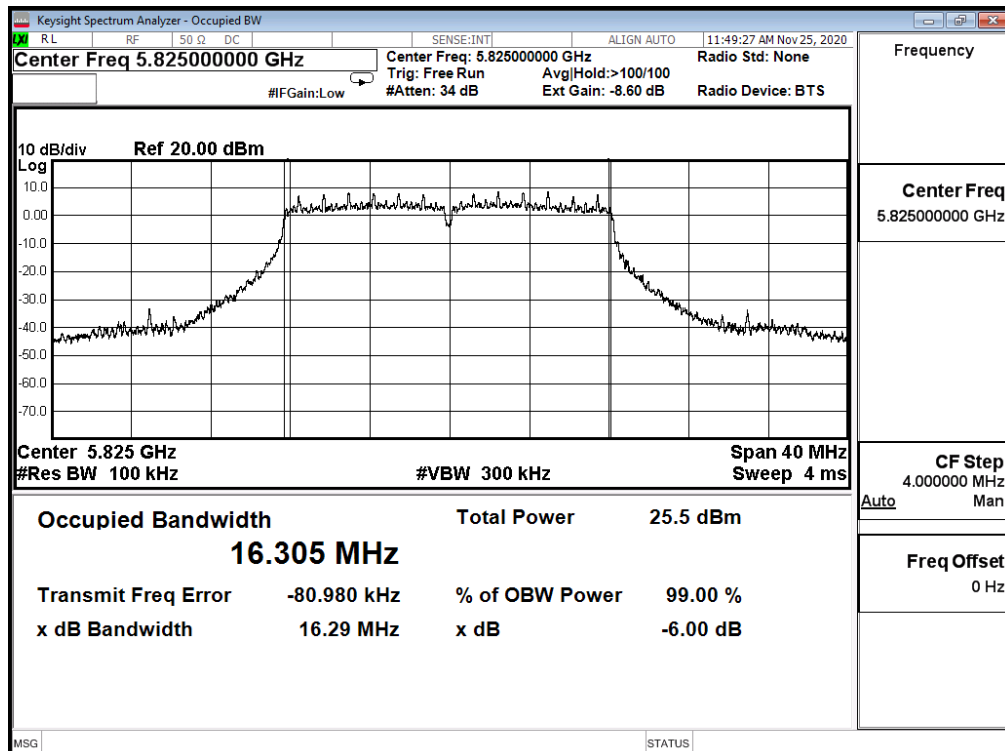
Channel 149 (5745MHz)



Channel 157 (5785MHz)



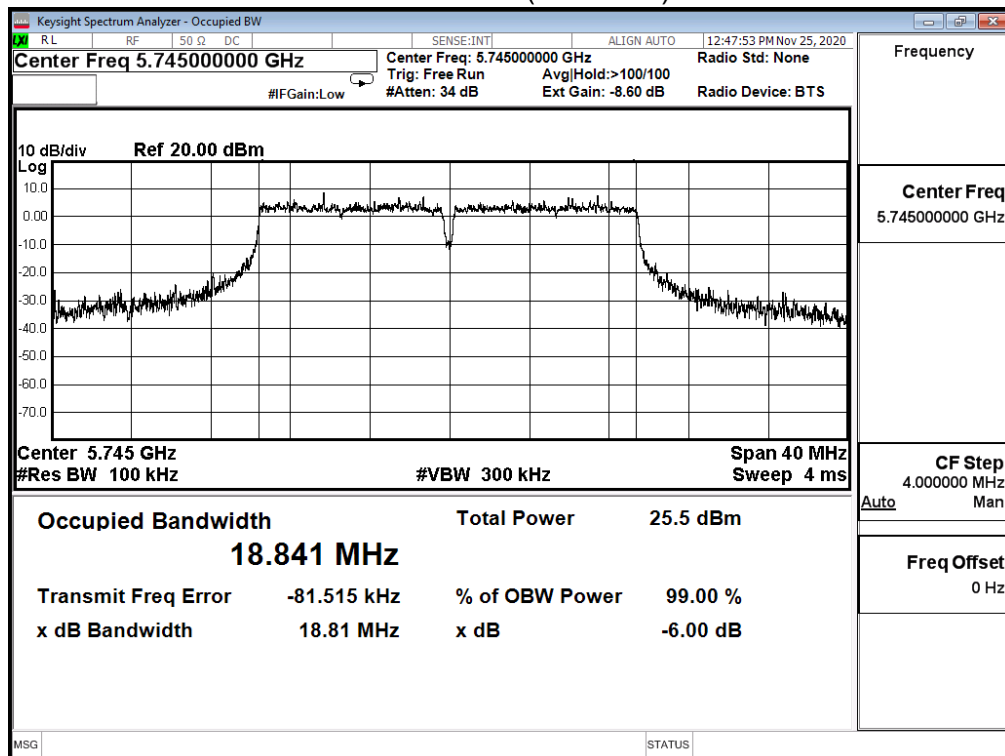
Channel 165 (5825MHz)



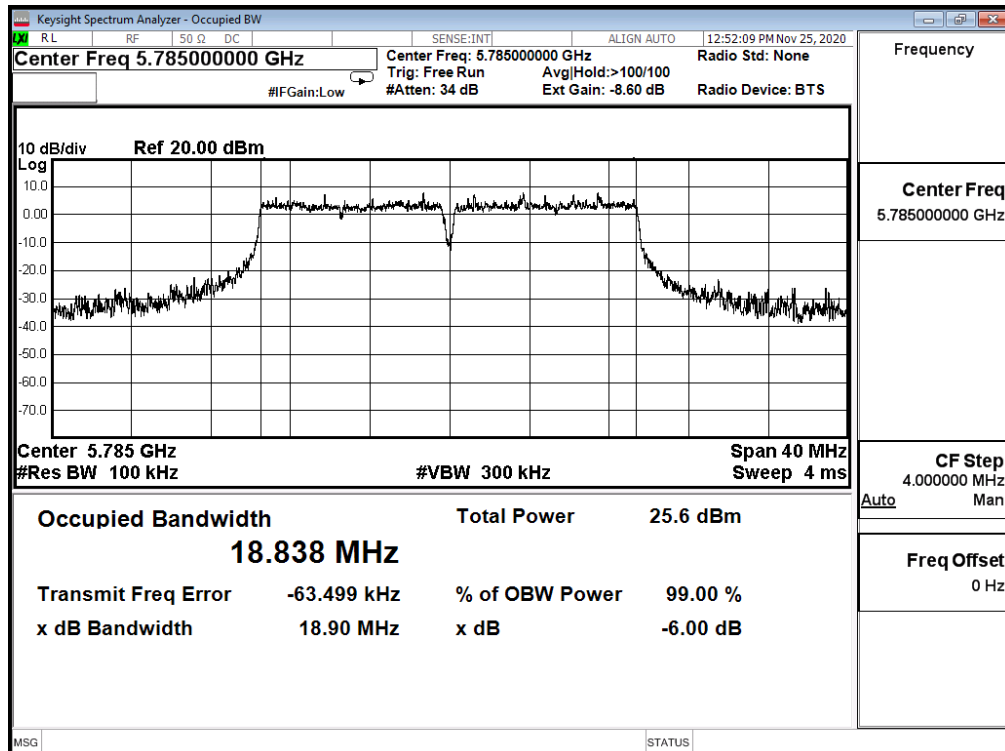
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_20M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	18.810	>0.5	Pass
157	5785	18.900	>0.5	Pass
165	5825	18.820	>0.5	Pass

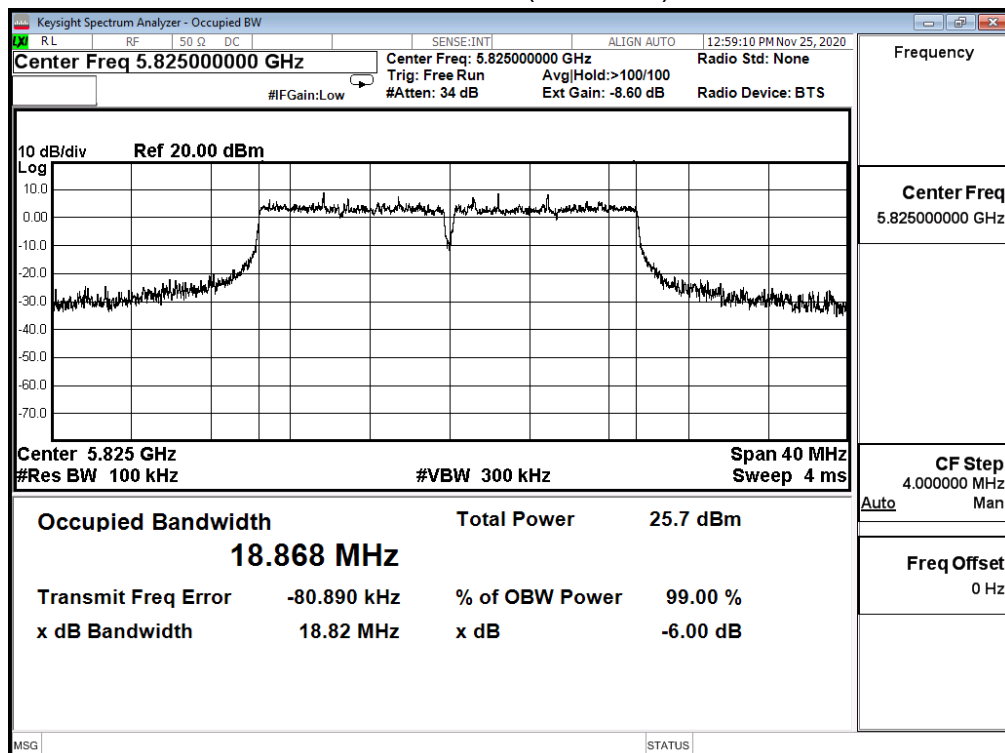
Channel 149 (5745MHz)



Channel 157 (5785MHz)



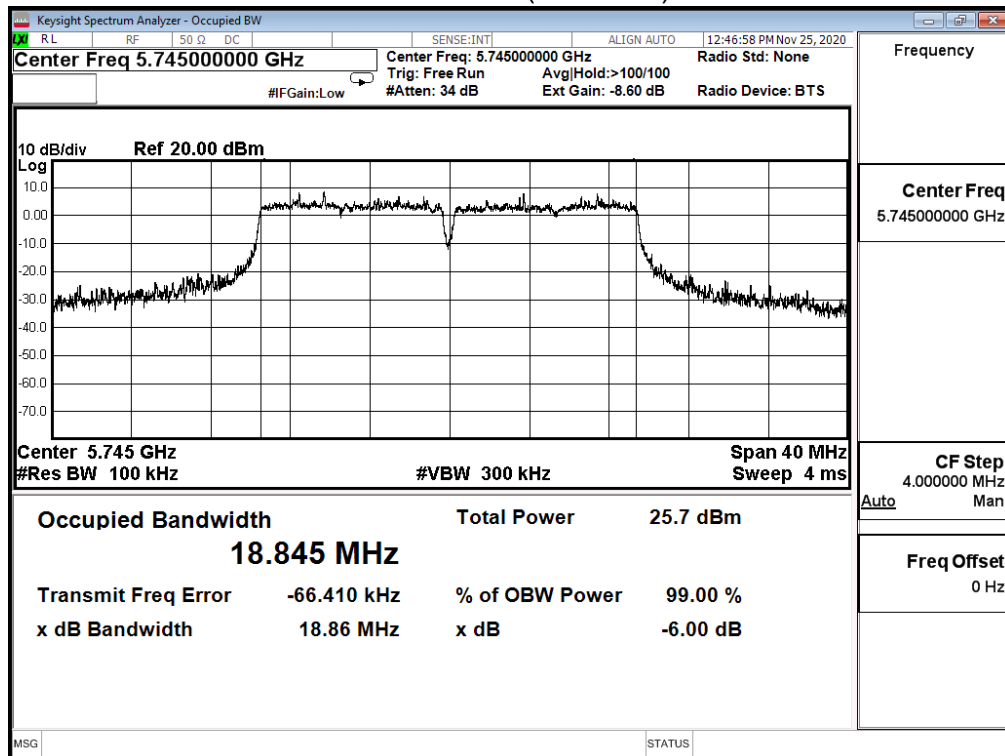
Channel 165 (5825MHz)



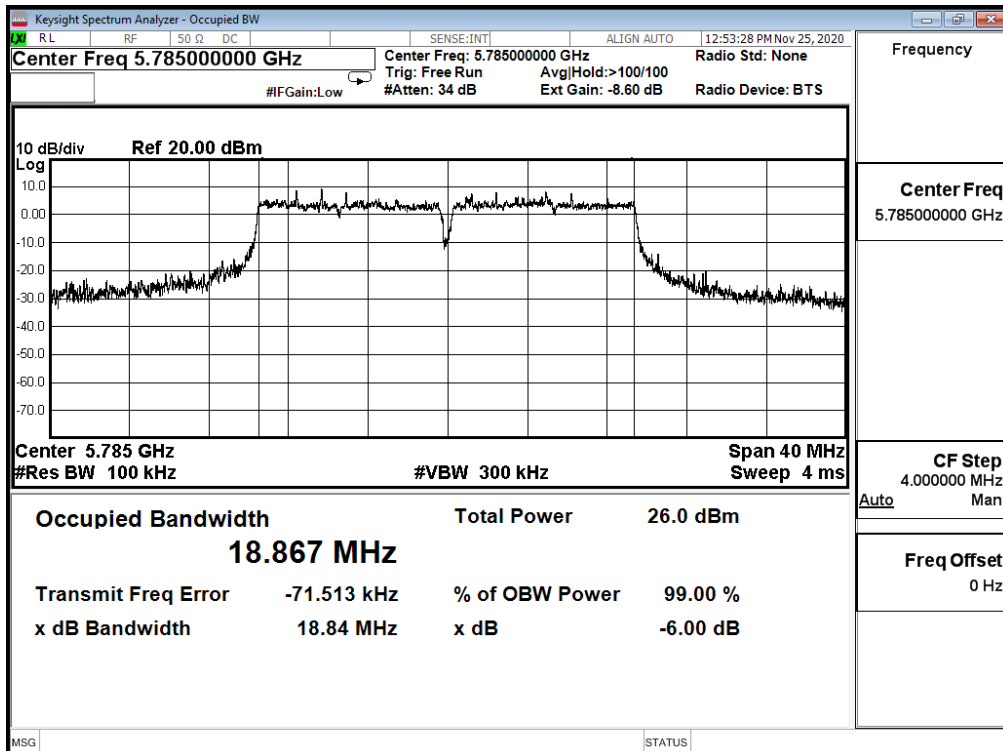
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_20M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	18.860	>0.5	Pass
157	5785	18.840	>0.5	Pass
165	5825	18.740	>0.5	Pass

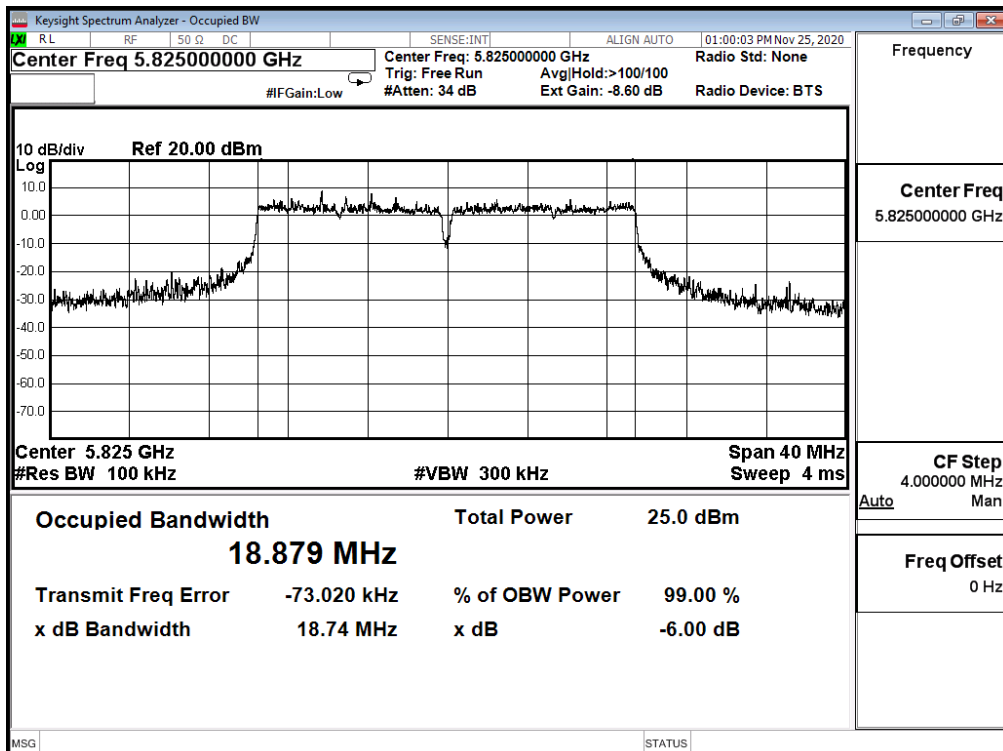
Channel 149 (5745MHz)



Channel 157 (5785MHz)



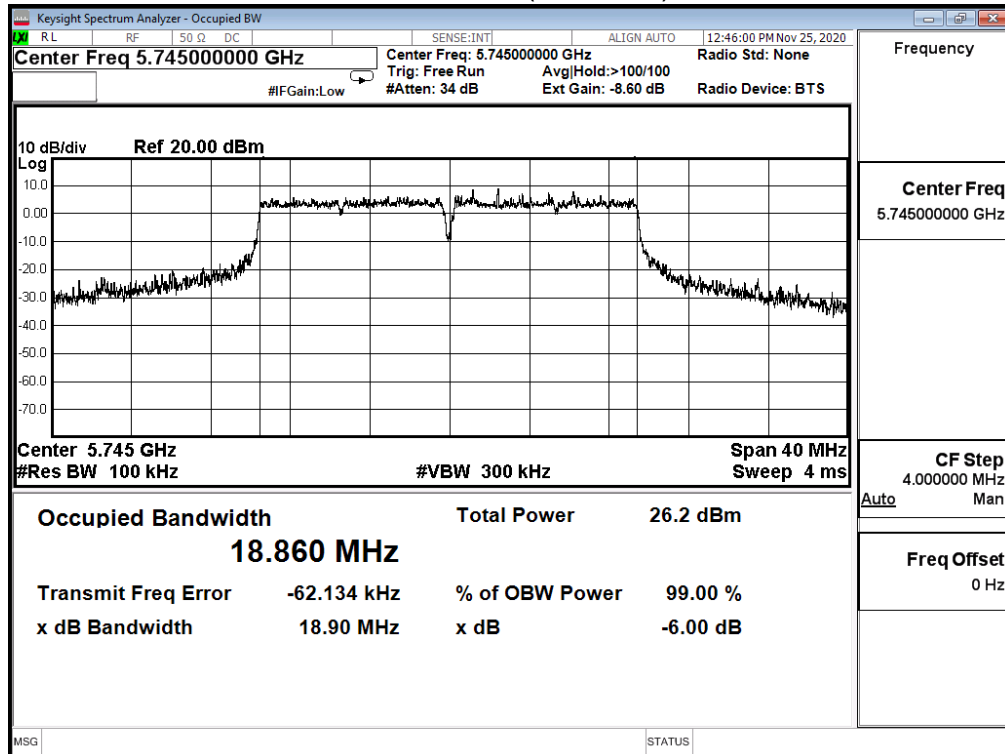
Channel 165 (5825MHz)



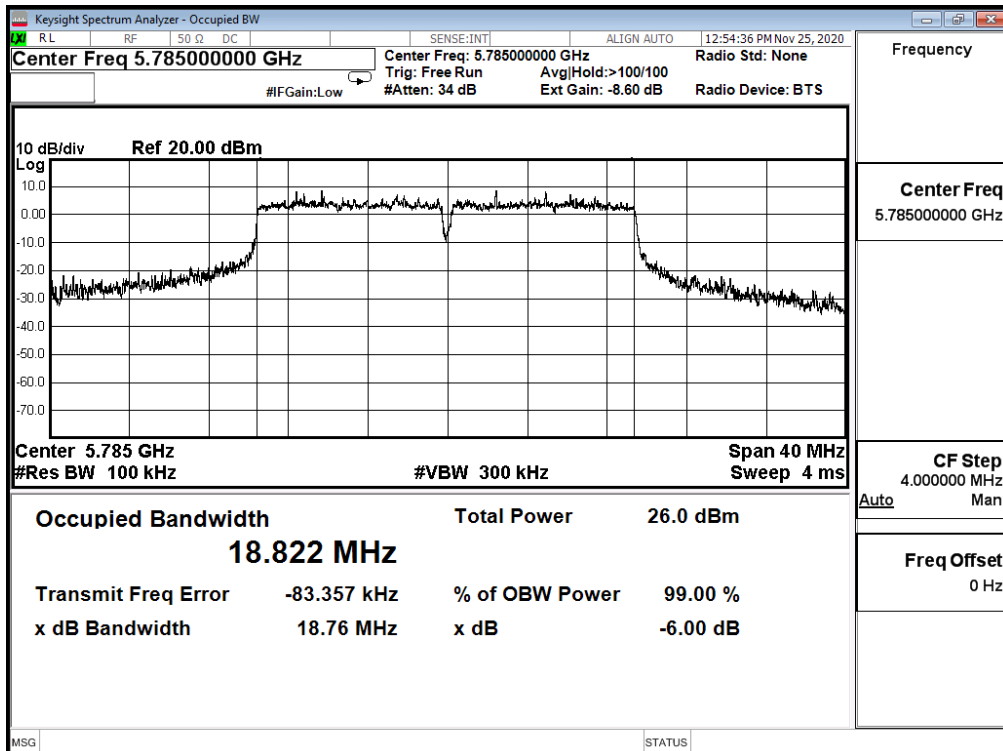
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_20M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	18.900	>0.5	Pass
157	5785	18.760	>0.5	Pass
165	5825	18.840	>0.5	Pass

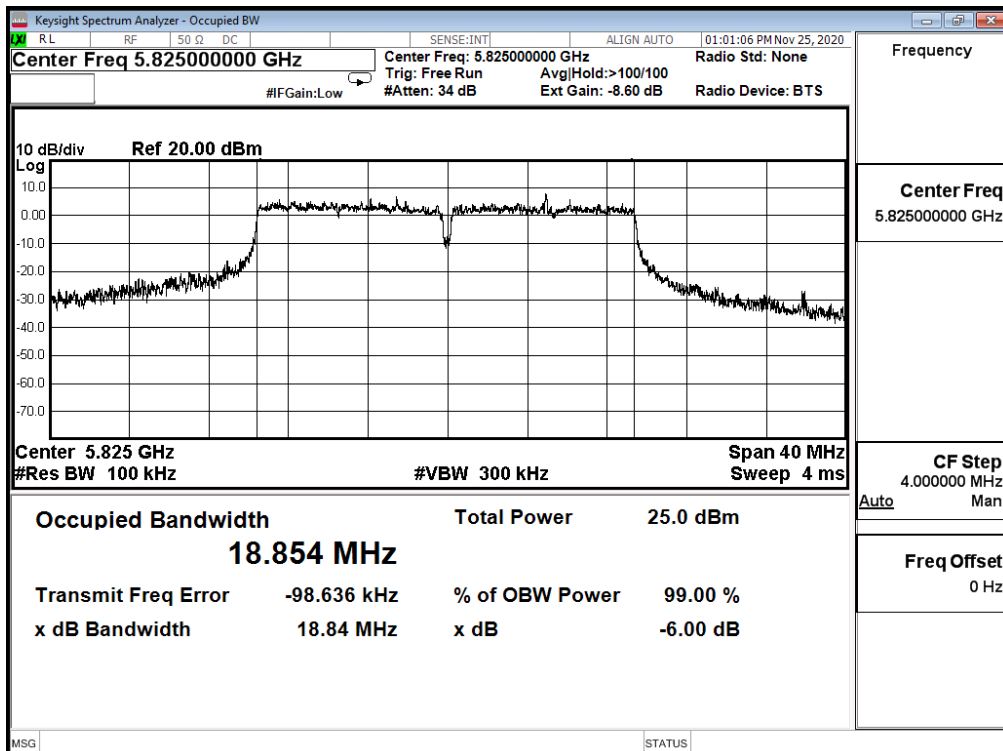
Channel 149 (5745MHz)



Channel 157 (5785MHz)



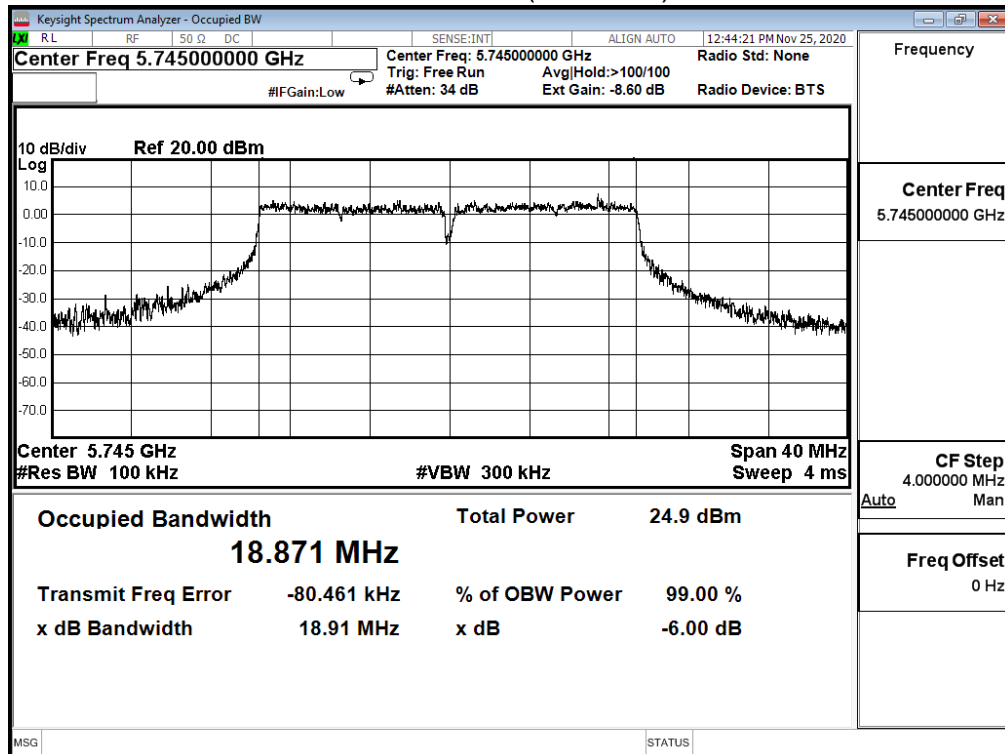
Channel 165 (5825MHz)



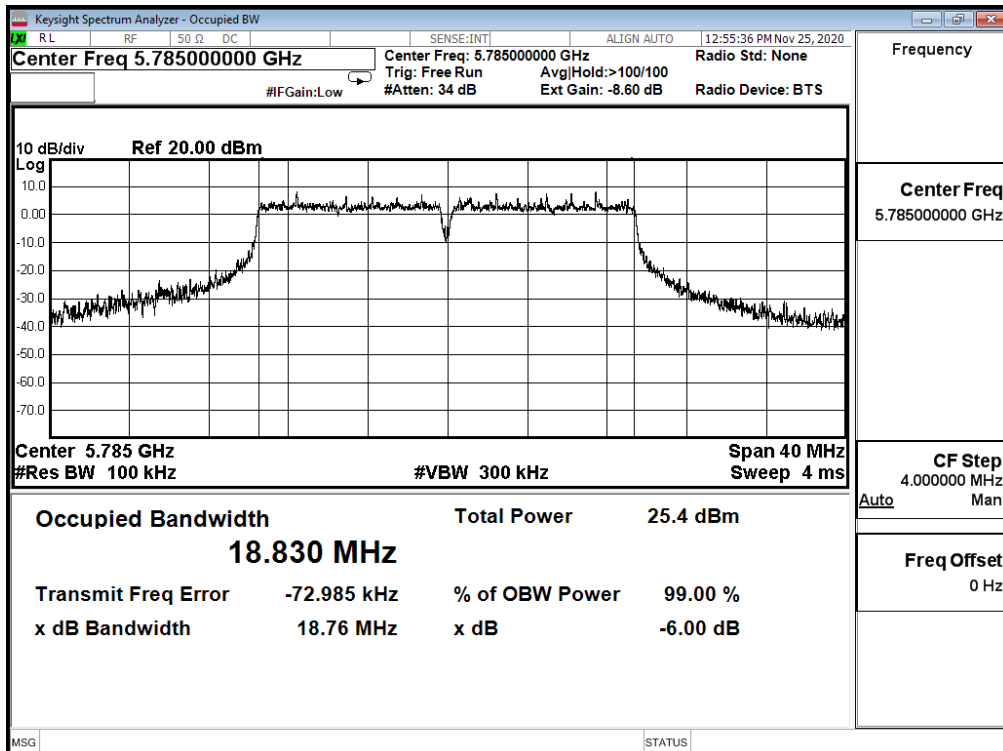
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_20M(ANT 3)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
149	5745	18.910	>0.5	Pass
157	5785	18.760	>0.5	Pass
165	5825	18.890	>0.5	Pass

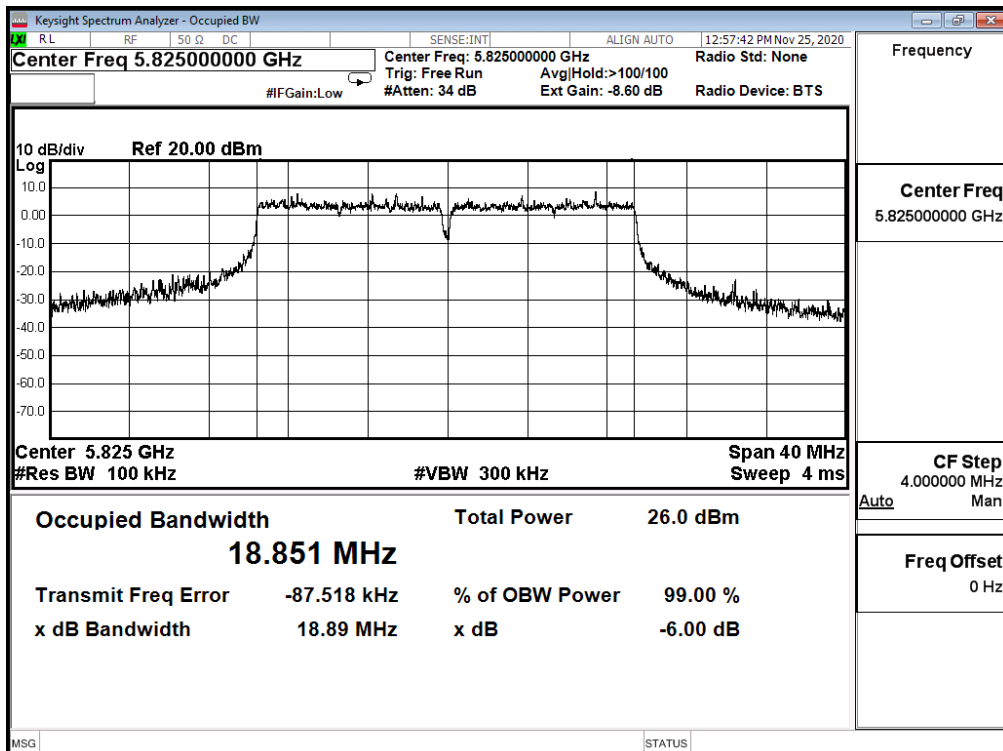
Channel 149 (5745MHz)



Channel 157 (5785MHz)



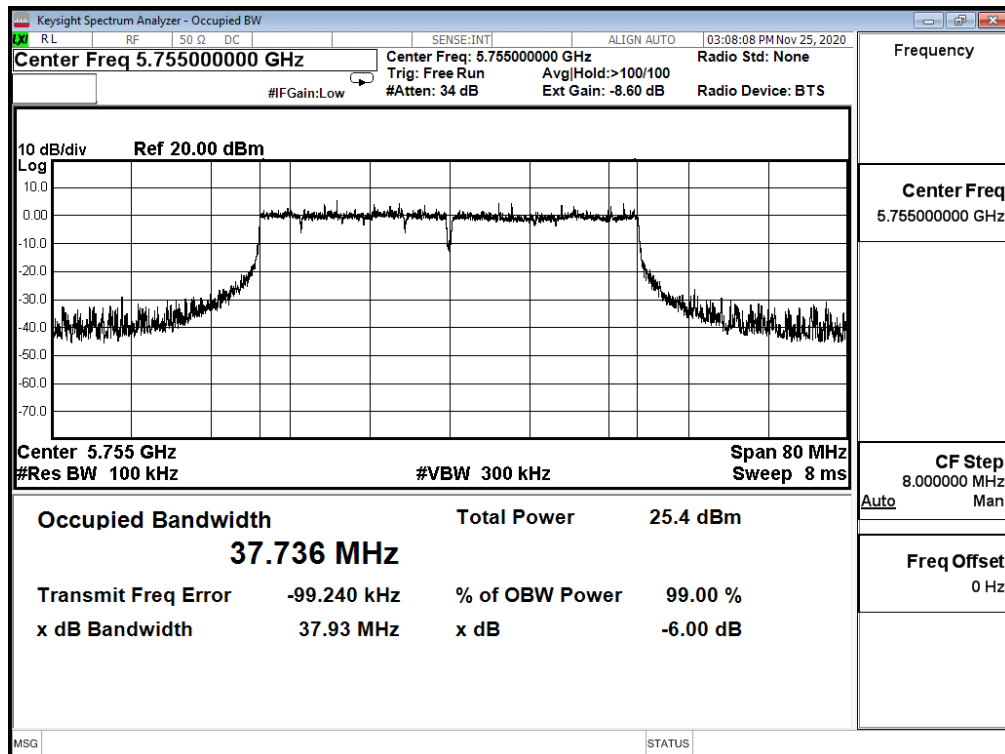
Channel 165 (5825MHz)



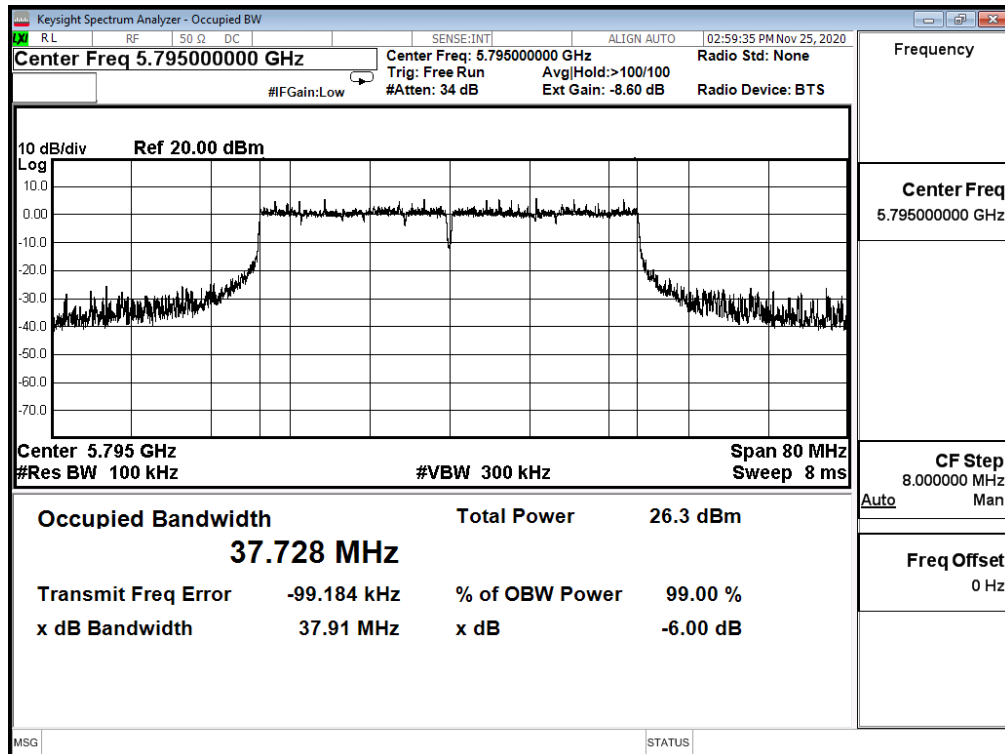
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_40M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
151	5755	37.930	>0.5	Pass
159	5795	37.910	>0.5	Pass

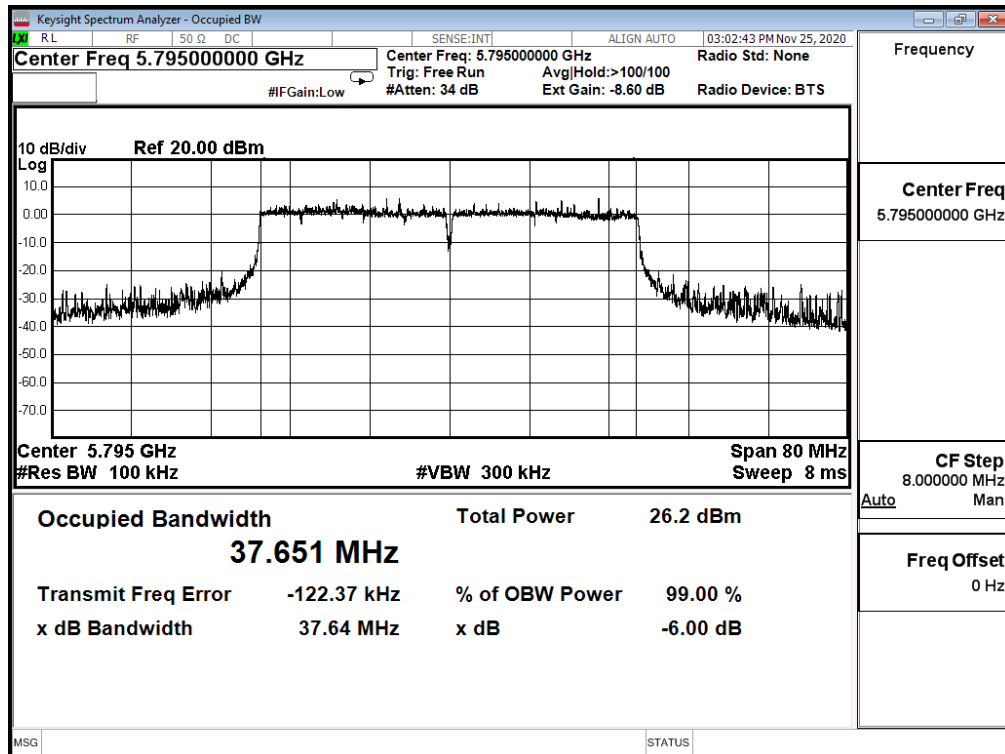
Channel 151 (5755MHz)



Channel 159 (5795MHz)



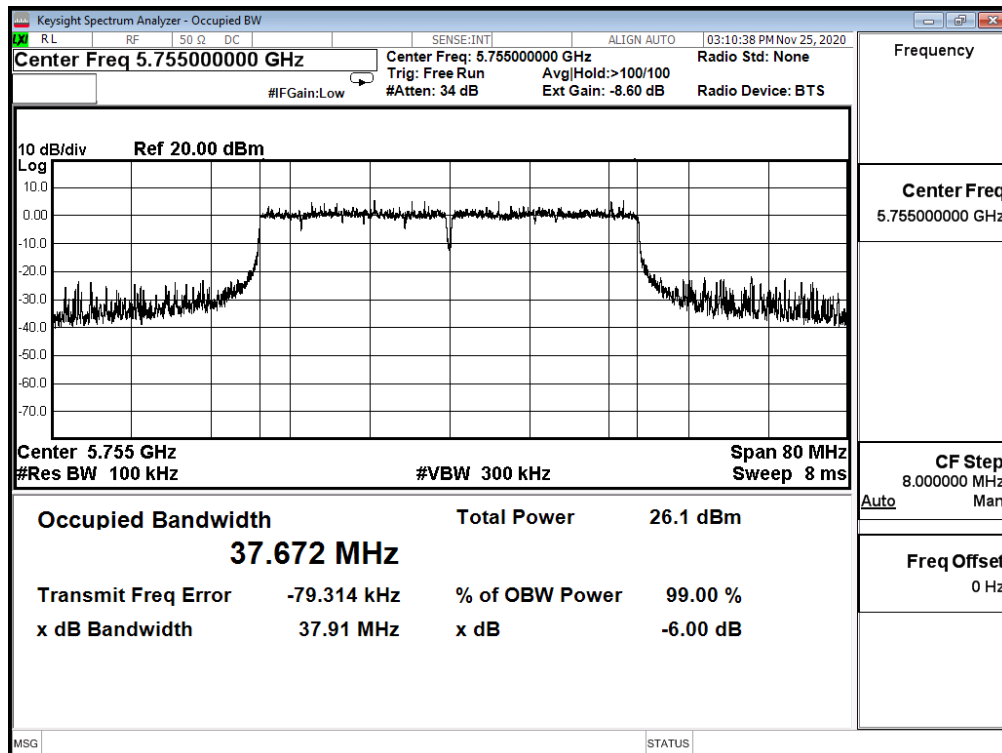
Channel 159 (5795MHz)



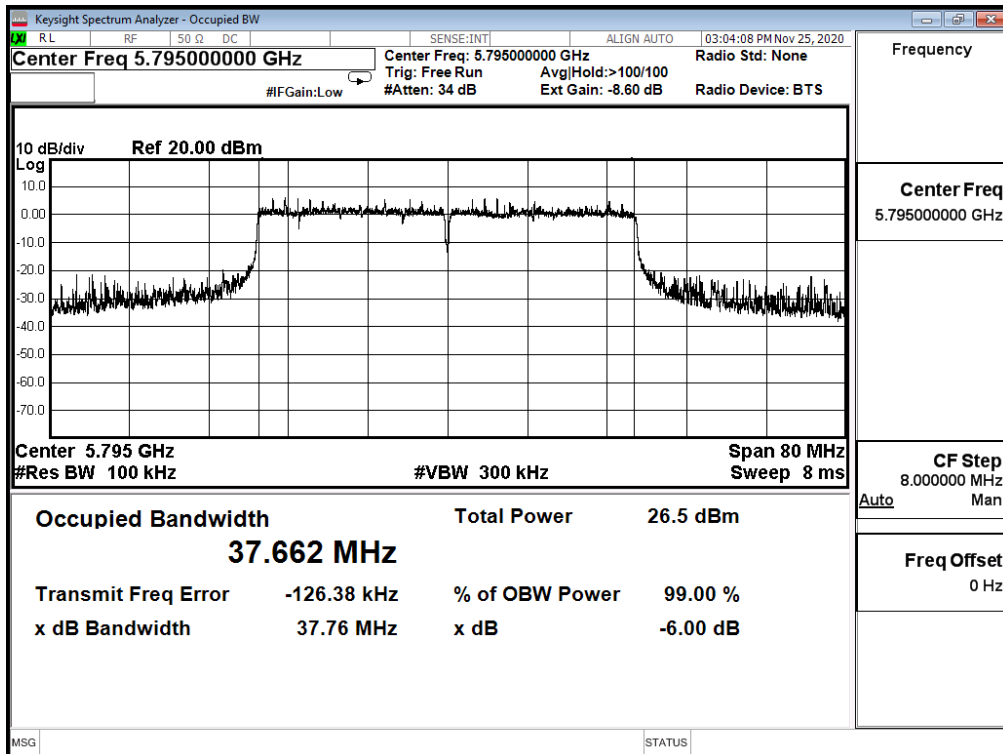
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_40M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
151	5755	37.910	>0.5	Pass
159	5795	37.760	>0.5	Pass

Channel 151 (5755MHz)



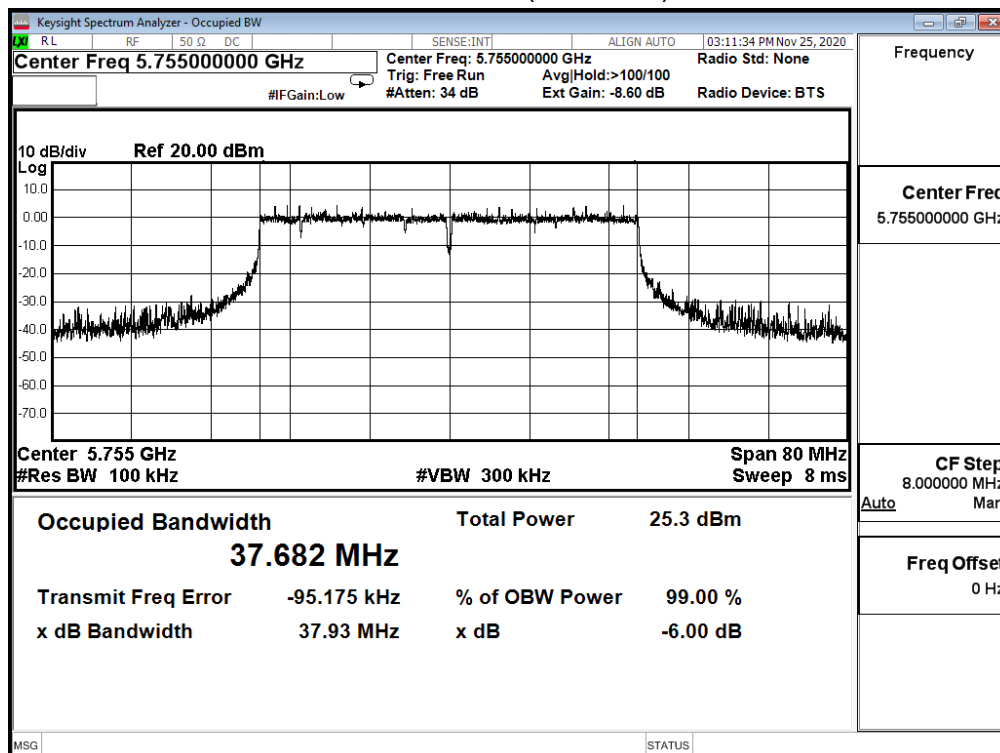
Channel 159 (5795MHz)



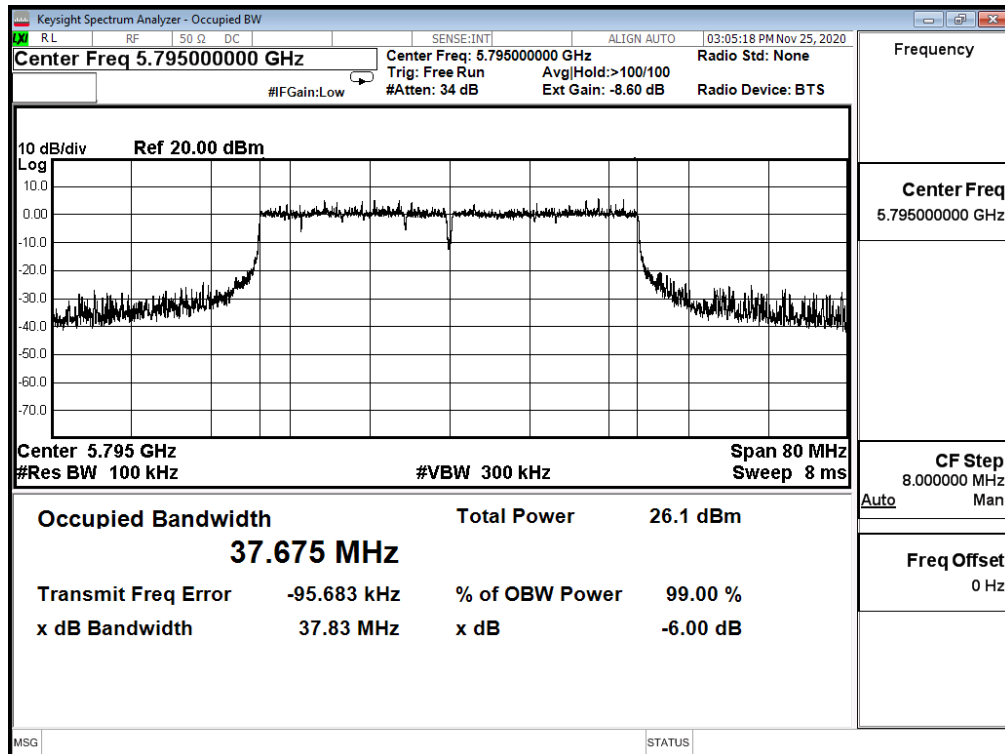
Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_40M(ANT 3)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
151	5755	37.930	>0.5	Pass
159	5795	37.830	>0.5	Pass

Channel 151 (5755MHz)



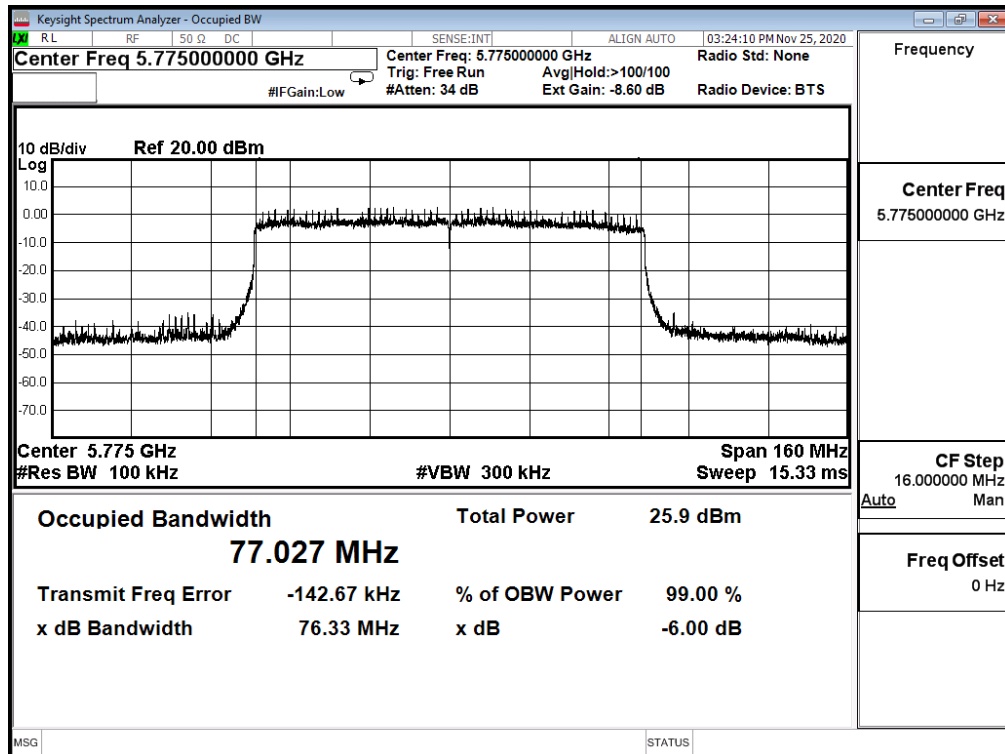
Channel 159 (5795MHz)



Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_80M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
155	5775	76.330	>0.5	Pass

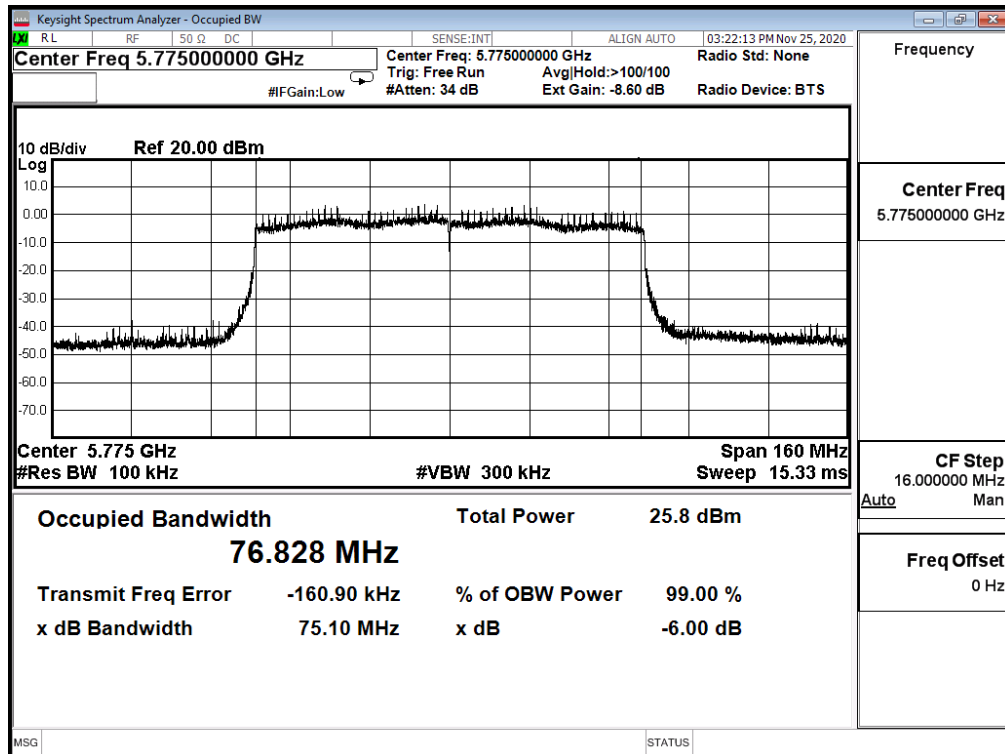
Channel 155 (5775MHz)



Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_80M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
155	5775	75.100	>0.5	Pass

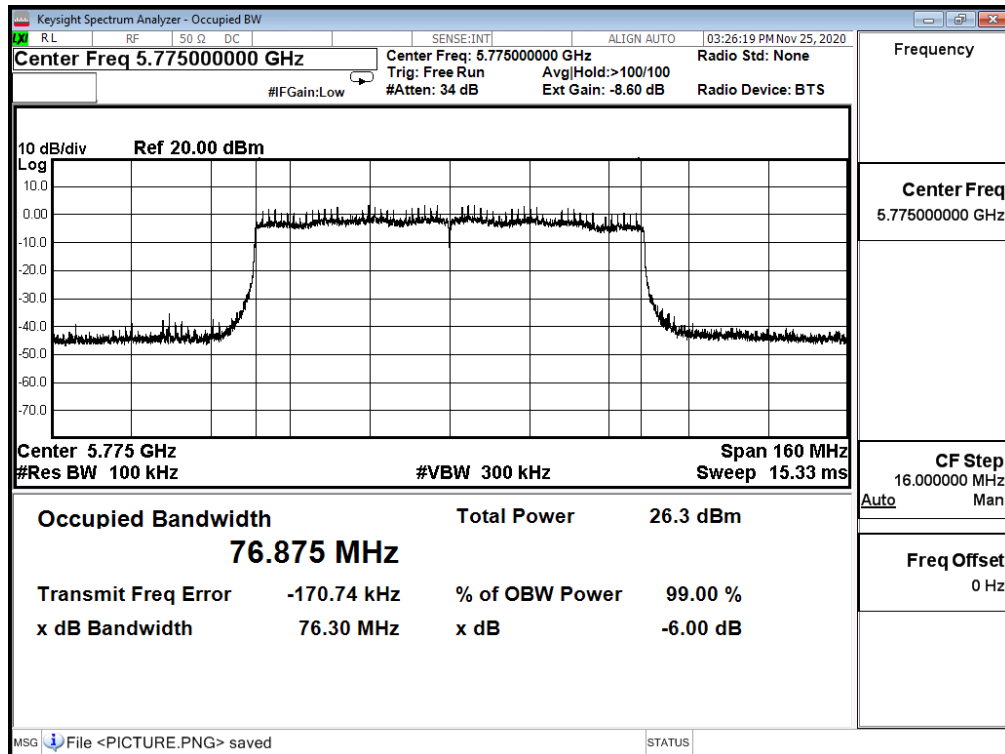
Channel 155 (5775MHz)



Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

IEEE 802.11ax_80M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
155	5775	76.300	>0.5	Pass

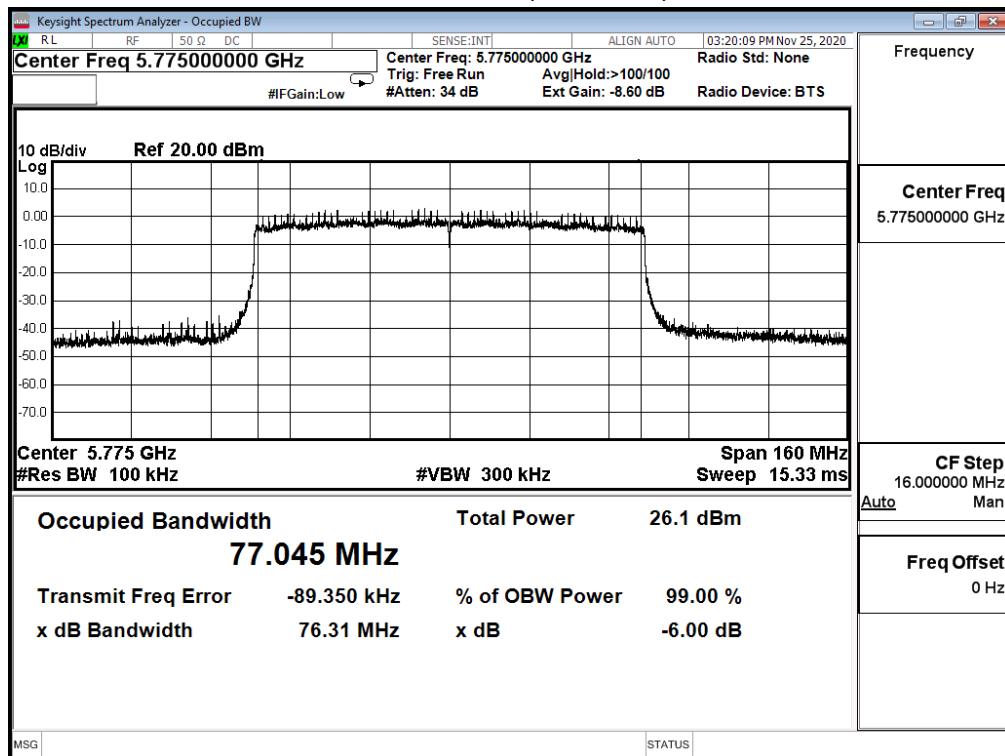
Channel 155 (5775MHz)



Product	Consumer Home Router		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/25	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	63.0%

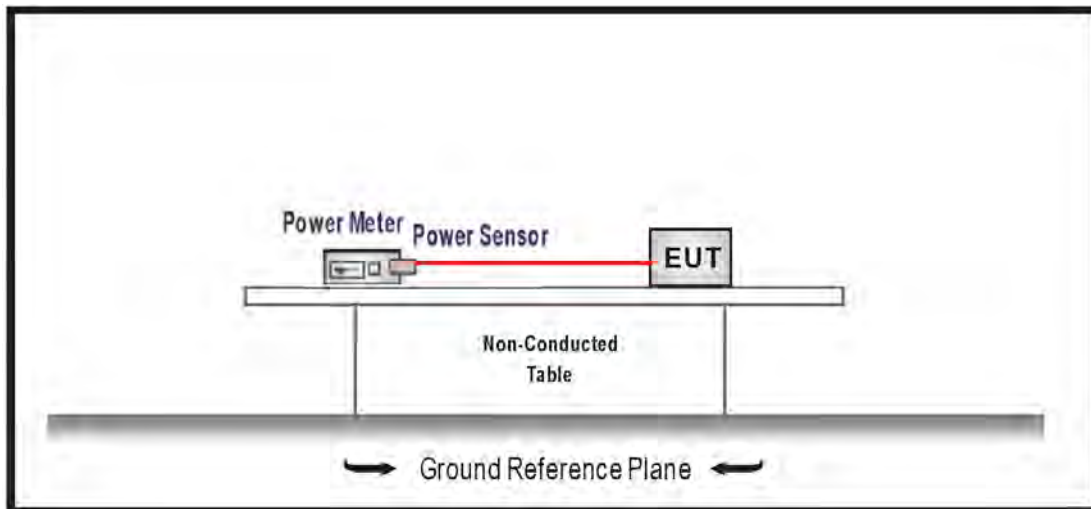
IEEE 802.11ax_80M(ANT 3)				
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)	Result
155	5775	76.310	>0.5	Pass

Channel 155 (5775MHz)



4. Maximum conducted output power

4.1. Test Setup



4.2. Limits

1. For the band 5.15-5.25 GHz, the Maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1W. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. The maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.25-5.35 GHz, the Maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
4. For the band 5.725-5.850 GHz, the Maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1W. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

4.3. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to U-NII test procedure of KDB 789033 D02 v02r01 for compliance to FCC 47CFR Subpart E requirements. The Method PM-G of the Maximum conducted output power was used.

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

4.4. Test Result

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11a

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
36	5180	22.080	21.720	21.960	22.010	27.965	≤30.000
44	5220	23.230	22.970	23.040	22.820	29.038	≤30.000
48	5240	23.250	22.980	23.040	22.760	29.032	≤30.000

The worst emission of data rate is 6 Mbps.

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
149	5745	22.400	21.800	22.150	22.410	28.218	≤30.000
157	5785	23.950	23.930	24.060	23.800	29.957	≤30.000
165	5825	23.510	23.140	22.910	23.900	29.402	≤30.000

The worst emission of data rate is 6 Mbps.

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (20MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
36	5180	20.260	19.930	19.970	20.020	26.068	≤30.000
44	5220	23.960	23.660	23.780	23.360	29.716	≤30.000
48	5240	23.930	23.700	23.810	23.380	29.730	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
149	5745	23.530	23.200	23.310	23.370	29.375	≤30.000
157	5785	22.160	22.640	22.710	22.880	28.626	≤30.000
165	5825	21.290	21.180	20.990	22.220	27.467	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (40MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
38	5190	17.150	16.800	16.950	17.050	23.010	≤30.000
46	5230	23.090	22.780	22.840	22.640	28.861	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
151	5755	18.820	19.180	19.510	18.920	25.136	≤30.000
159	5795	21.870	22.190	22.450	22.020	28.158	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Full		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (80MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
42	5210	18.430	18.010	18.350	17.900	24.199	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
155	5775	20.350	20.460	20.640	20.330	26.467	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Center		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (20MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
36	5180	17.850	17.400	17.680	17.670	23.674	≤30.000
44	5220	23.010	22.860	22.880	22.620	28.865	≤30.000
48	5240	23.030	22.800	22.780	22.590	28.823	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
149	5745	23.140	23.200	22.970	23.020	29.104	≤30.000
157	5785	22.260	22.710	22.310	22.550	28.482	≤30.000
165	5825	21.030	21.100	20.830	22.340	27.388	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Center		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (40MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
38	5190	17.040	16.880	16.890	17.050	22.986	≤30.000
46	5230	21.140	21.000	21.040	20.780	27.013	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
151	5755	18.260	18.670	19.380	18.580	24.763	≤30.000
159	5795	20.920	20.750	21.130	20.800	26.923	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Center		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (80MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
42	5210	15.560	15.480	15.670	15.340	21.535	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
155	5775	15.130	15.260	15.360	14.700	21.140	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Edge		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (20MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
36	5180	17.950	17.680	17.700	17.910	23.832	≤30.000
44	5220	23.020	22.880	22.850	22.650	28.873	≤30.000
48	5240	22.930	22.890	22.760	22.490	28.791	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
149	5745	23.430	23.700	23.770	23.700	29.673	≤30.000
157	5785	23.060	23.130	23.090	23.080	29.111	≤30.000
165	5825	23.210	23.610	23.480	23.430	29.455	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Edge		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (40MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
38	5190	17.080	16.920	16.930	17.020	23.009	≤30.000
46	5230	21.150	20.950	21.030	20.750	26.993	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
151	5755	18.630	18.950	19.410	18.700	24.954	≤30.000
159	5795	20.920	21.010	20.960	20.750	26.932	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 2: Transmit RU Mode_Edge		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (80MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
42	5210	15.630	15.590	15.560	15.320	21.547	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
155	5775	15.470	15.580	15.540	15.370	21.511	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 3: Transmit Beamforming Mode		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (20MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
36	5180	22.590	22.210	22.350	22.290	28.383	≤30.000
44	5220	23.900	23.460	23.520	23.400	29.595	≤30.000
48	5240	23.640	23.530	23.470	23.440	29.541	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
149	5745	22.440	21.860	22.360	22.340	28.276	≤30.000
157	5785	22.580	22.810	22.760	22.220	28.619	≤30.000
165	5825	22.310	21.280	20.550	22.420	27.727	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 3: Transmit Beamforming Mode		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (40MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
38	5190	19.920	19.620	19.830	19.580	25.760	≤30.000
46	5230	23.570	23.380	23.470	23.120	29.409	≤30.000

The worst emission of data rate is MCS0

5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
151	5755	17.970	18.350	18.900	18.100	24.365	≤30.000
159	5795	23.000	23.020	23.340	23.030	29.120	≤30.000

The worst emission of data rate is MCS0

Product	Consumer Home Router		
Test Item	Maximum conducted output power		
Test Mode	Mode 3: Transmit Beamforming Mode		
Date of Test	2020/11/26	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	64.0%

IEEE 802.11ax (80MHz)

5GHz UNII 1:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
42	5210	18.930	18.610	18.810	18.540	24.746	≤30.000

The worst emission of data rate is MCS0

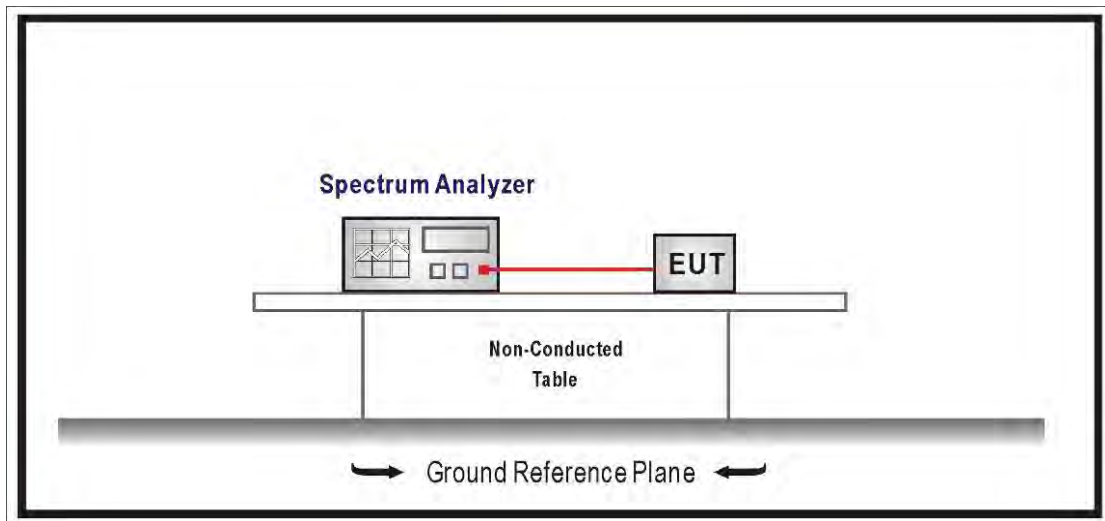
5GHz UNII 3:

Channel No.	Frequency (MHz)	Max. Conducted Output Power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
155	5775	19.300	19.360	19.570	19.270	25.397	≤30.000

The worst emission of data rate is MCS0

5. Maximum power spectral density

5.1. Test Setup



5.2. Limits

1. For the band 5.15-5.25 GHz, the Maximum power spectral density shall not exceed 17 dBm in any 1MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi
3. For the band 5.25-5.35 GHz, the Maximum power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
4. For the band 5.725-5.850 GHz, the Maximum power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi..

5.3. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to U-NII test procedure of KDB 789033 D02 v02r01 for compliance to FCC 47CFR Subpart E requirements.

For Band1 : Set RBW=1MHz, VBW=3MHz with RMS detector. The PPSD is the highest level found across the emission in any 1-MHz band after 100 sweeps of averaging.

For Band4 : Set RBW=500KHz, VBW=1.5MHz with RMS detector. The PPSD is the highest level found across the emission in any 500KHz band after 100 sweeps of averaging.

5.4. Test Result

Product	Consumer Home Router		
Test Item	Maximum power spectral density		
Test Mode	Mode 1: Transmit CDD Mode		
Date of Test	2020/11/23~2020/12/09	Test Site	SR12-H
Test Temperature	23.0°C	Test Humidity	61.0%

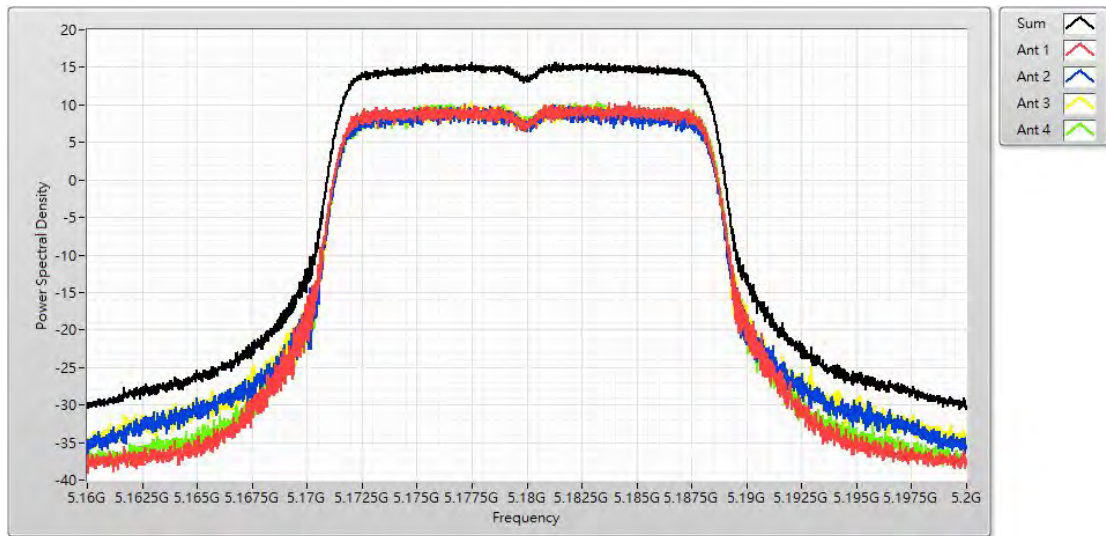
5GHz UNII 1:

IEEE 802.11a (ANT 0+1+2+3)				
Channel No.	Frequency (MHz)	Measure Value (dBm)	Limit (dBm)	Result
36	5180	15.650	≤17	Pass
44	5220	16.660	≤17	Pass
48	5240	16.650	≤17	Pass

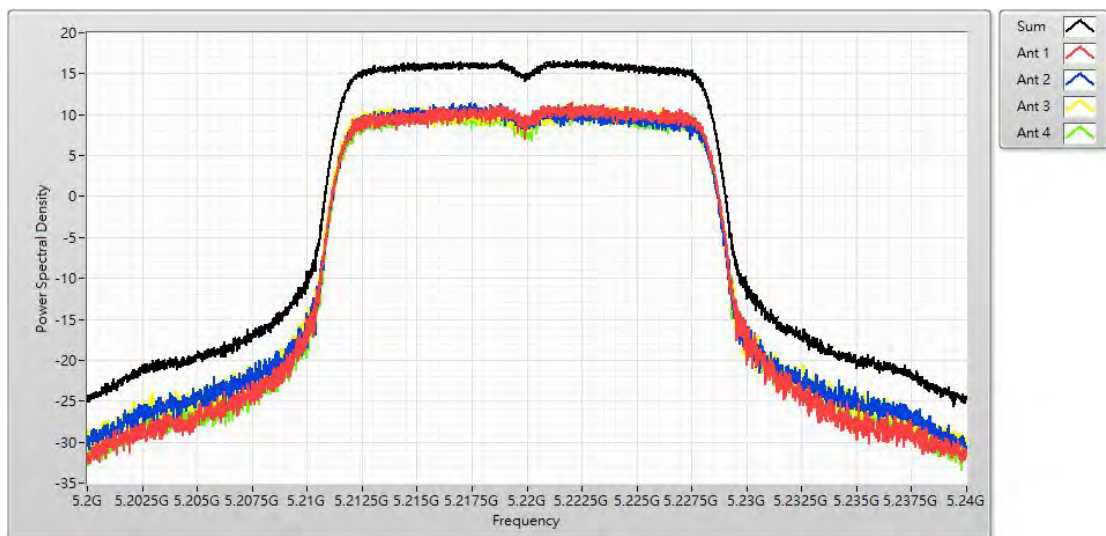
5GHz UNII 3:

IEEE 802.11a (ANT 0+1+2+3)				
Channel No.	Frequency (MHz)	Measure Value (dBm)	Limit (dBm)	Result
149	5745	12.850	≤30	Pass
157	5785	14.550	≤30	Pass
165	5825	13.800	≤30	Pass

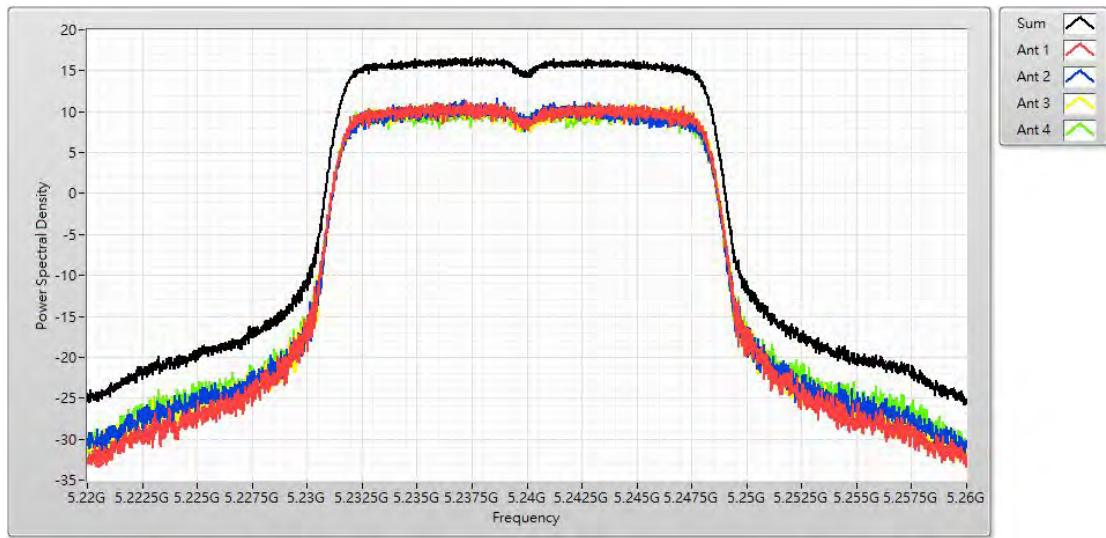
Channel 36 (5180MHz)



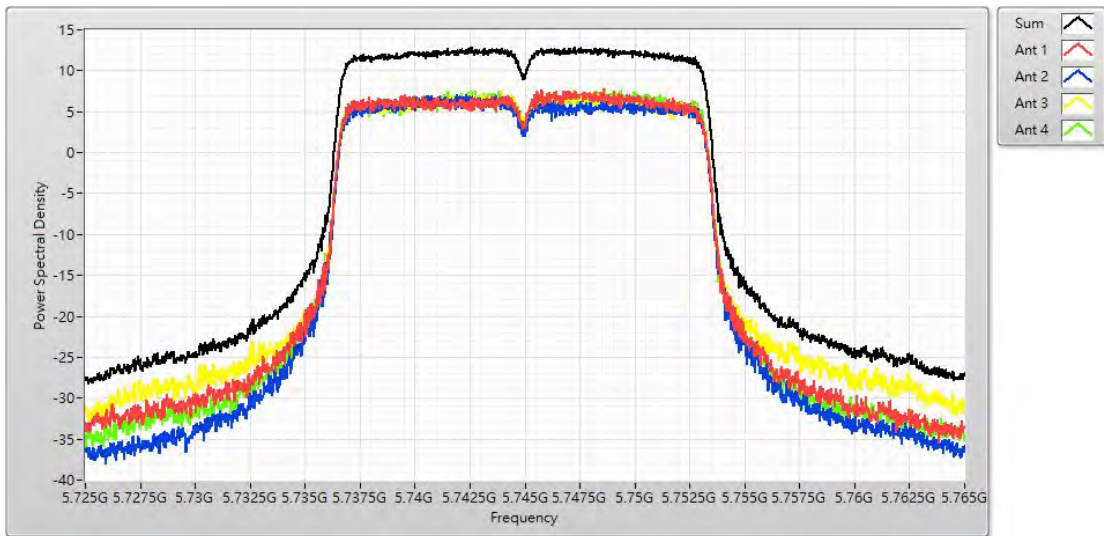
Channel 44 (5220MHz)



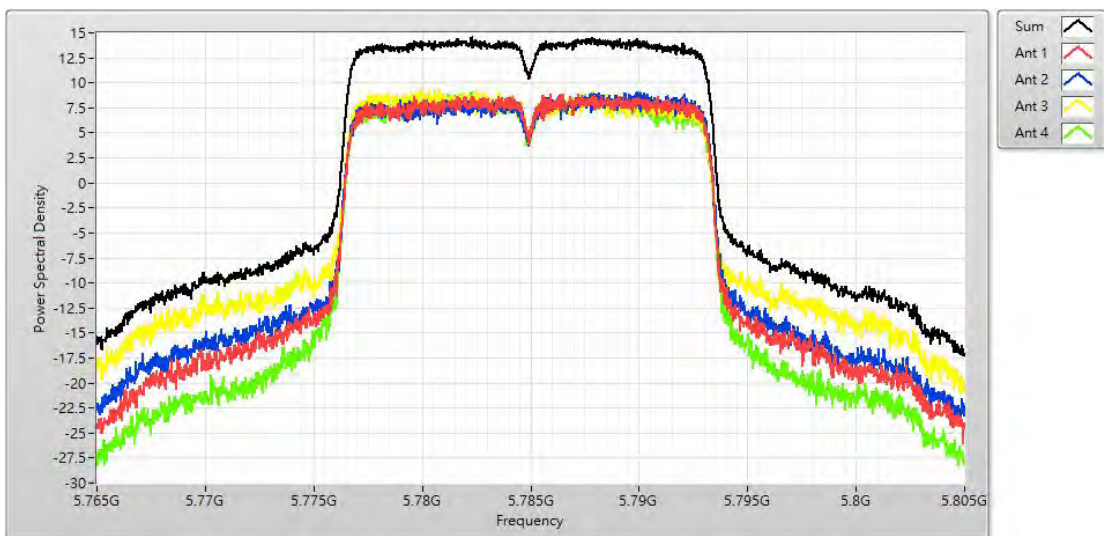
Channel 48 (5240MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

