

FCC Test Report

Product Name : Consumer Home Router
Trade Name : Verizon
Model No. : Verizon Router
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 : Mar. 19, 2021

Report No. : 20A0549R-E3032110126

Report Version : V1.0



The test results relate only to the samples tested.

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Test Report Certification


Issued Date : Mar. 19, 2021

Report No. : 20A0549R-E3032110126



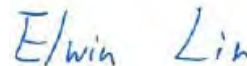
Product Name : Consumer Home Router
Applicant : Wistron NeWeb Corporation
Address : 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan
Manufacturer : Wistron NeWeb Corporation
Address : 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan
Trade Name : Verizon
Model No. : Verizon Router
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 |
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1. General Information

1.1. EUT Description

| | | |
|------------------------------------|---------------------------------|---|
| Product Name | Consumer Home Router | |
| Trade Name | Verizon | |
| Model No. | Verizon Router | |
| 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 Verizon 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).

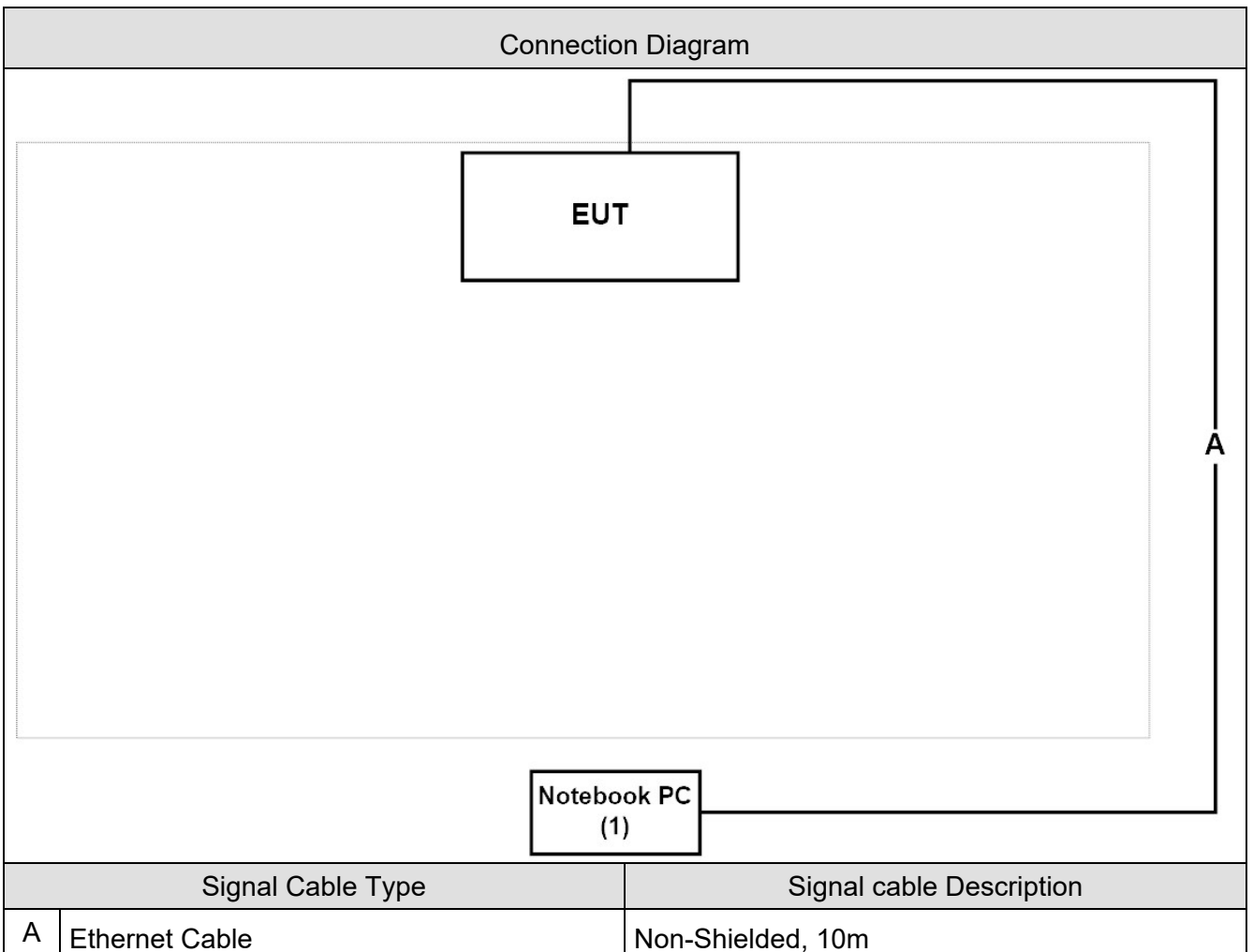
Note 2: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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:

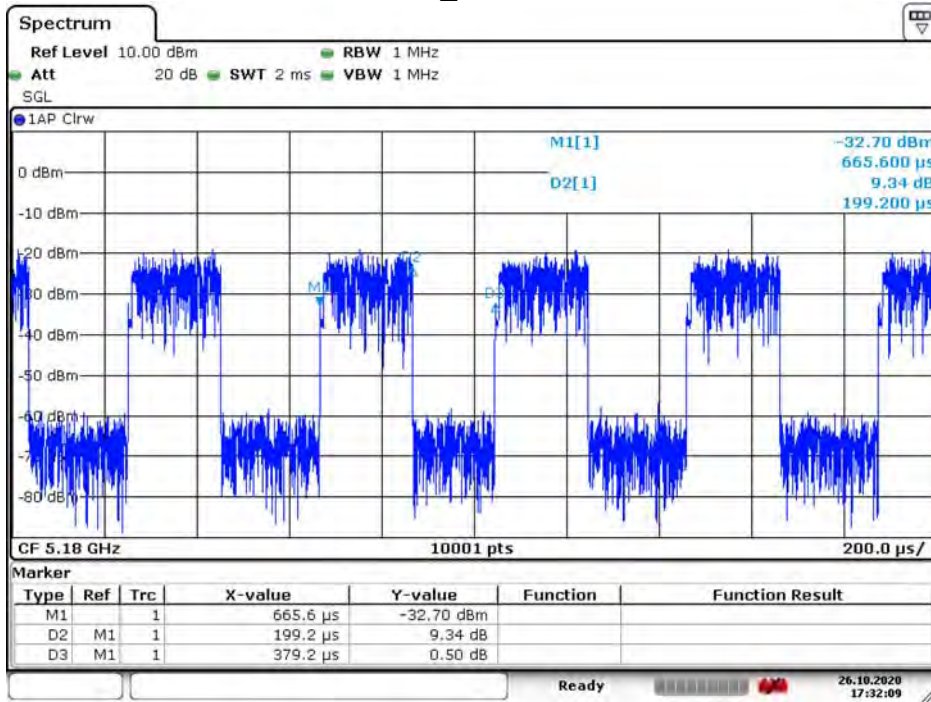
Offset = $20 \log(1/\text{duty cycle})$

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.

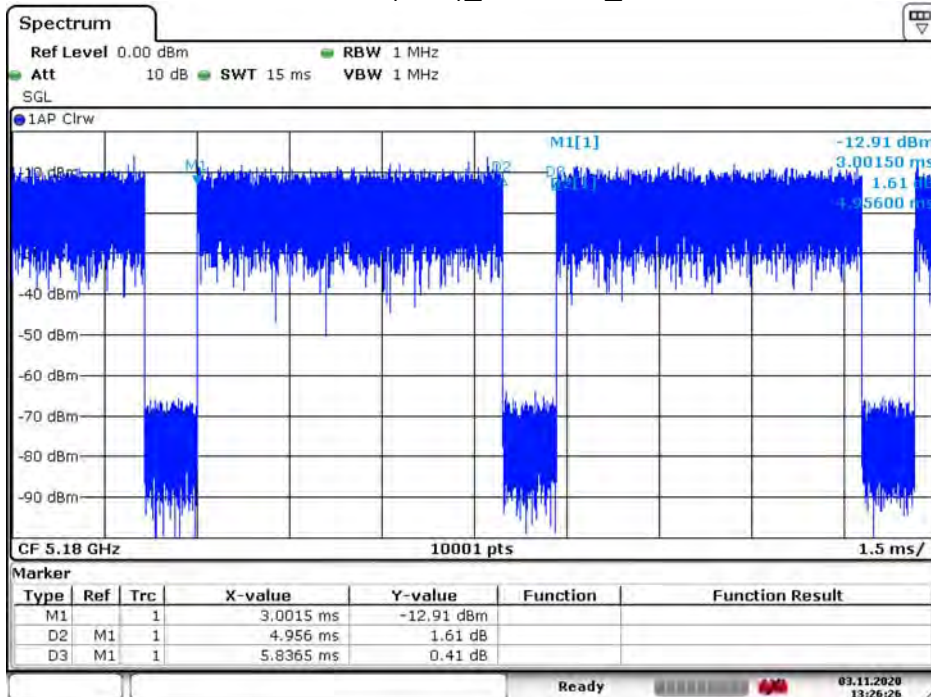
If linear voltage averaging mode was used in step (iv) above, the correction factor is $20 \log(1/x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB must be added to the measured emission levels.

802.11a_CDD Mode



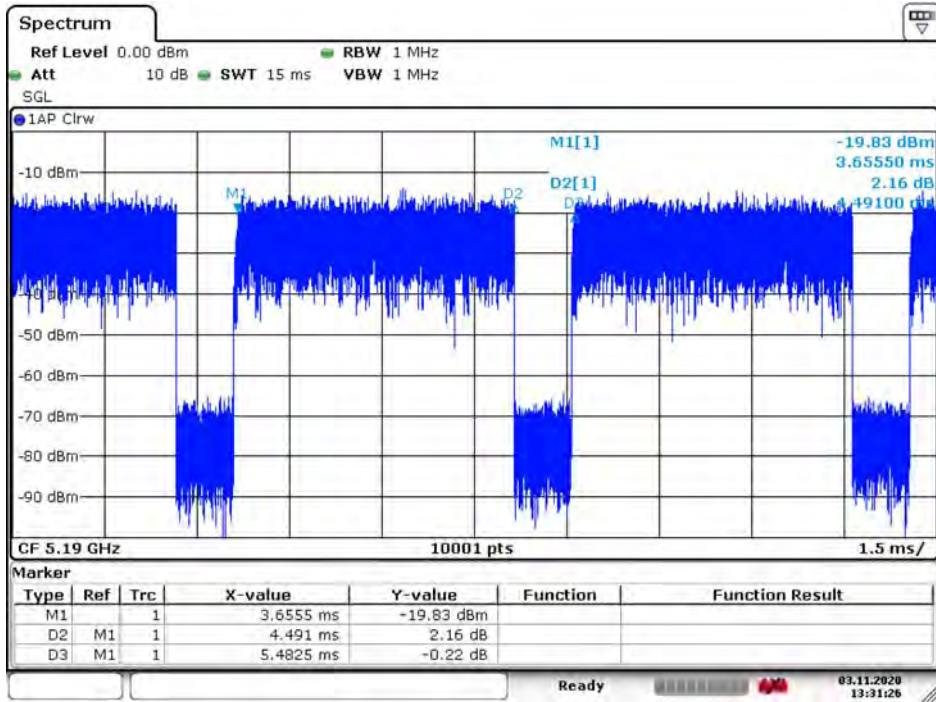
Date: 26.OCT.2020 17:32:09

802.11ax(20M)_RU Mode_Full



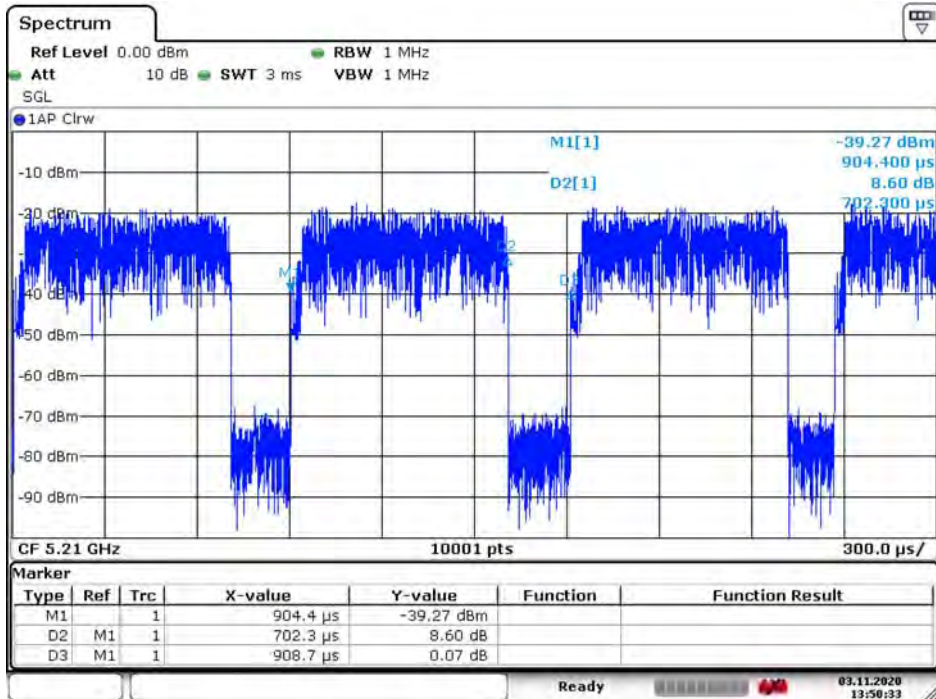
Date: 3.NOV.2020 13:26:26

802.11ax(40M)_RU Mode_Full



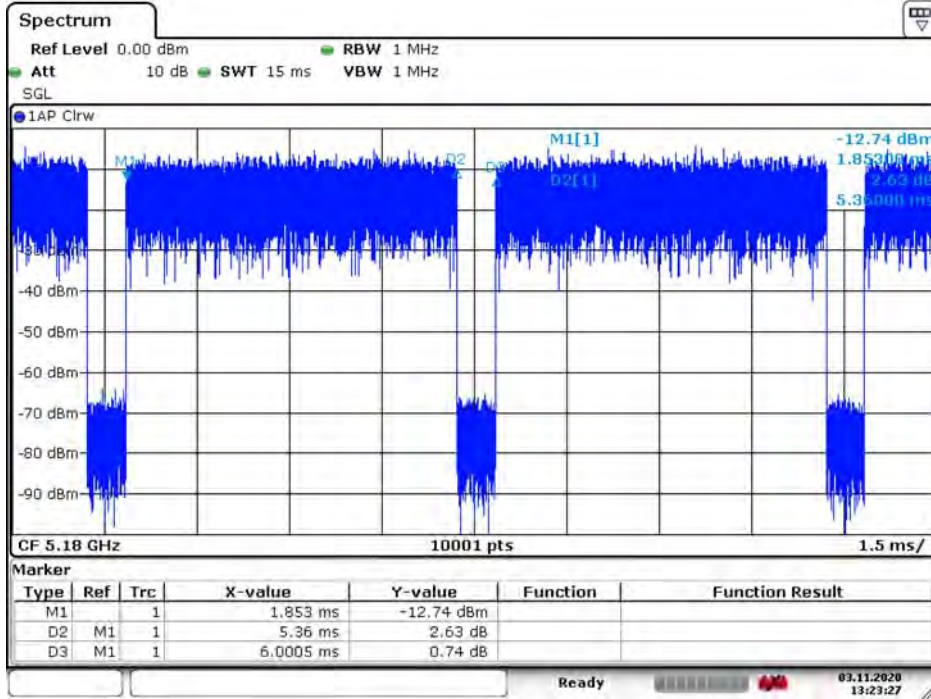
Date: 3 NOV 2020 13:31:27

802.11ax(80M)_RU Mode_Full



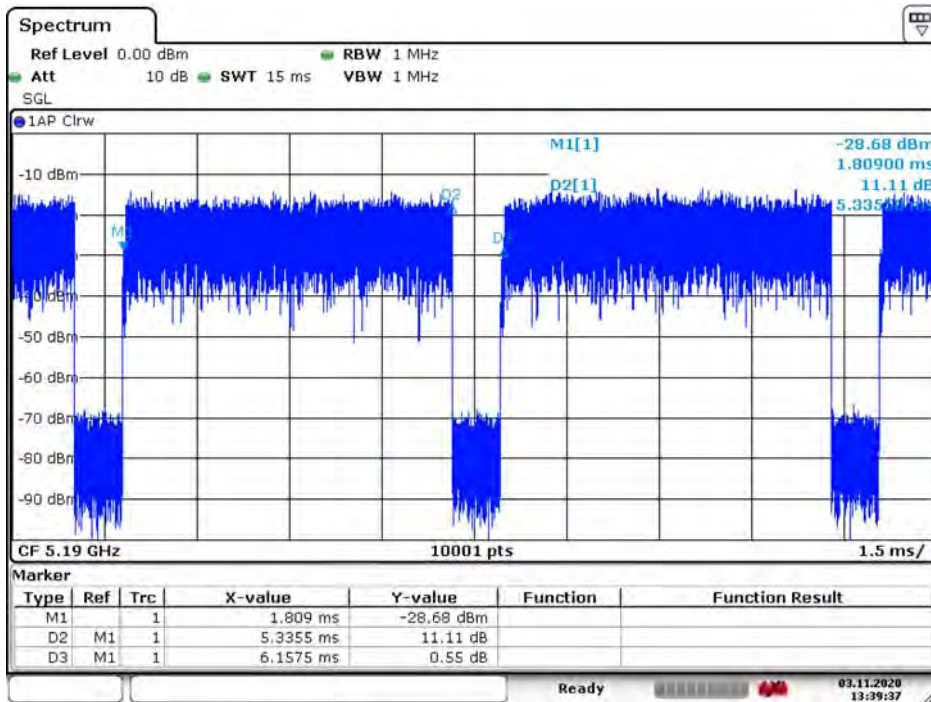
Date: 3 NOV 2020 13:50:33

802.11ax(20M)_RU Mode_Center



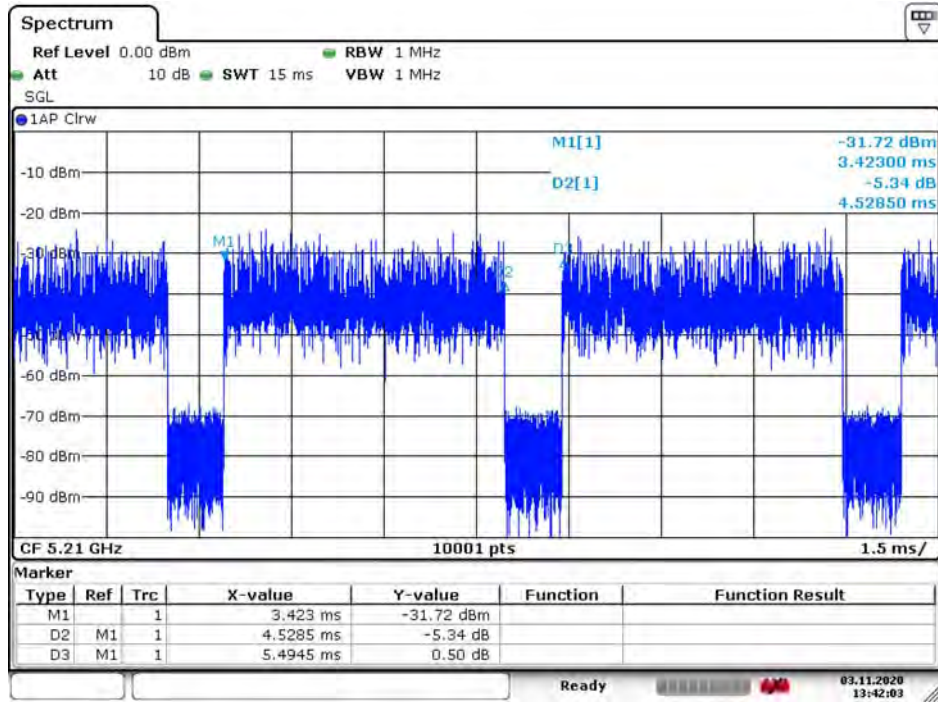
Date: 3 NOV 2020 13:23:27

802.11ax(40M)_RU Mode_Center



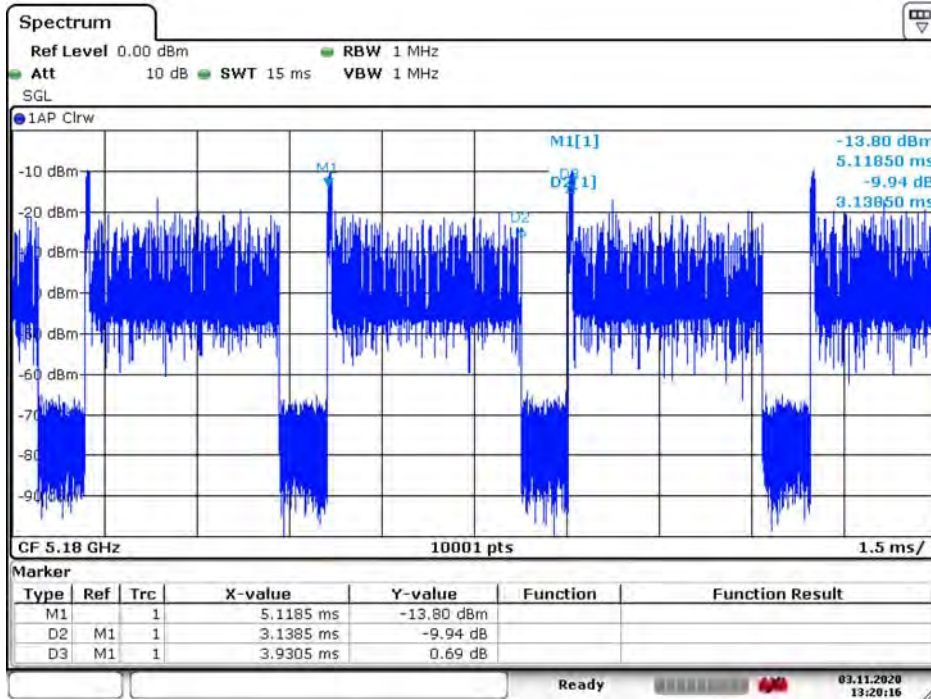
Date: 3 NOV 2020 13:39:37

802.11ax(80M)_RU Mode_Center



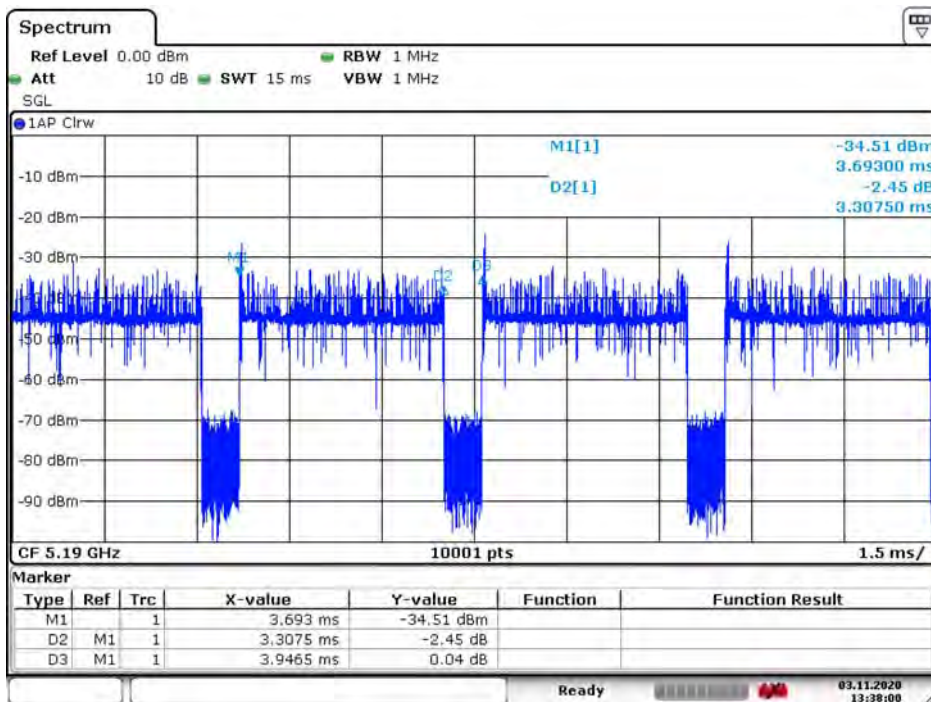
Date: 3 NOV 2020 13:42:03

802.11ax(20M)_RU Mode_Edge



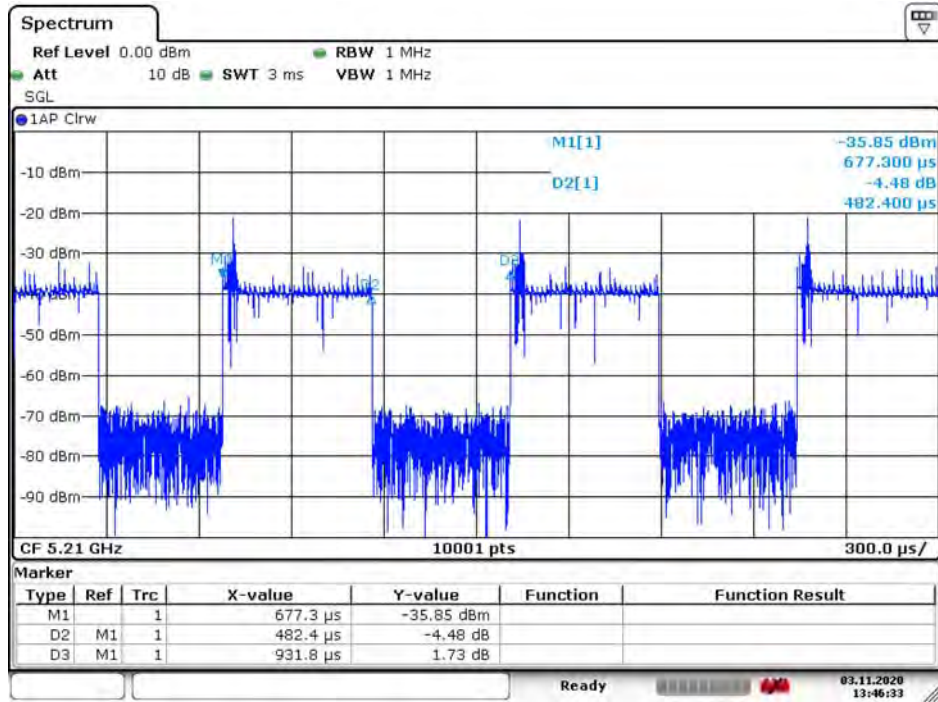
Date: 3 NOV 2020 13:20:16

802.11ax(40M)_RU Mode_Edge



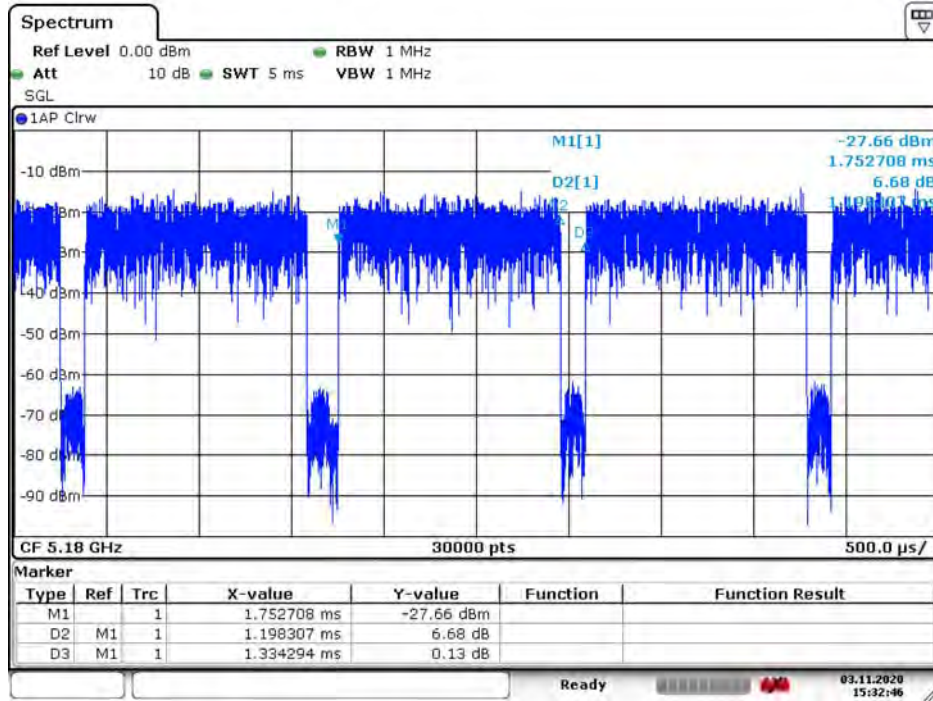
Date: 3 NOV 2020 13:38:00

802.11ax(80M)_RU Mode_Edge



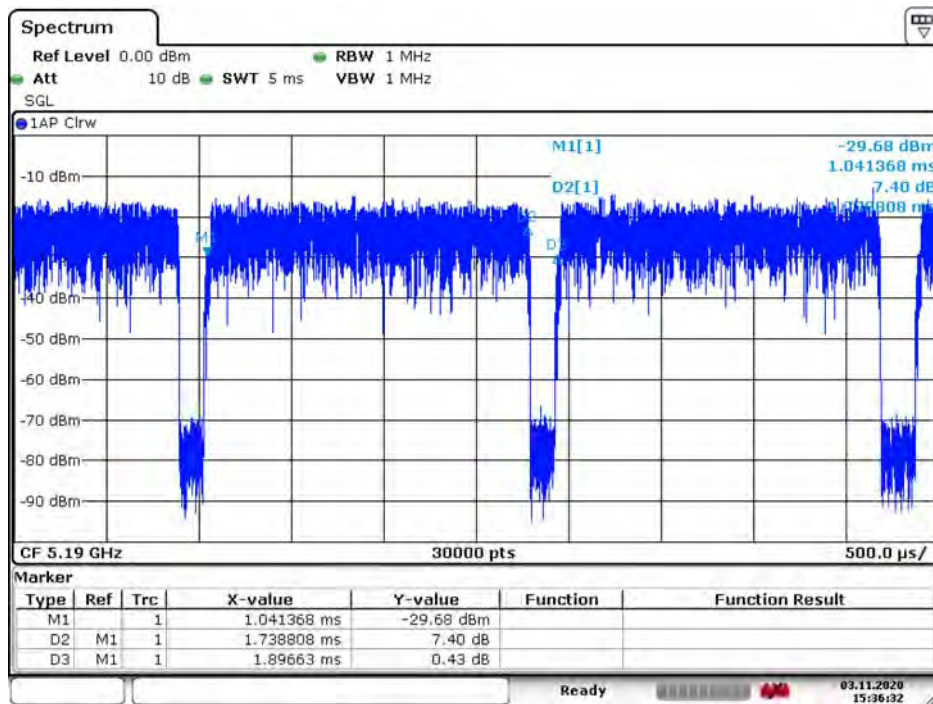
Date: 3 NOV 2020 13:46:33

802.11ax(20M)_Beamforming Mode



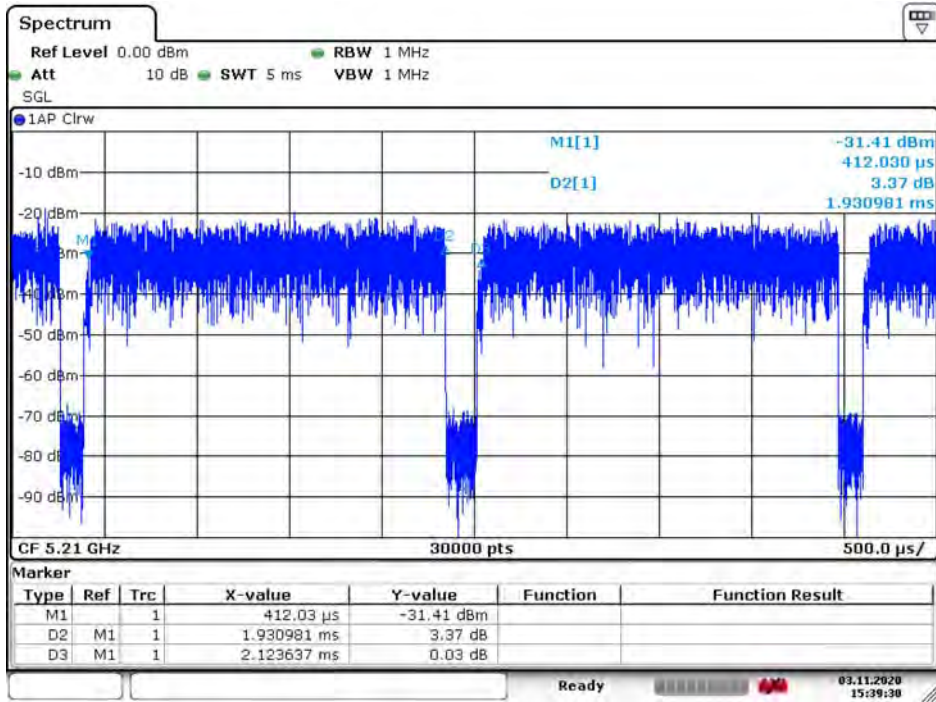
Date: 3 NOV 2020 15:32:47

802.11ax(40M)_Beamforming Mode



Date: 3 NOV 2020 15:36:33

802.11ax(80M)_Beamforming Mode



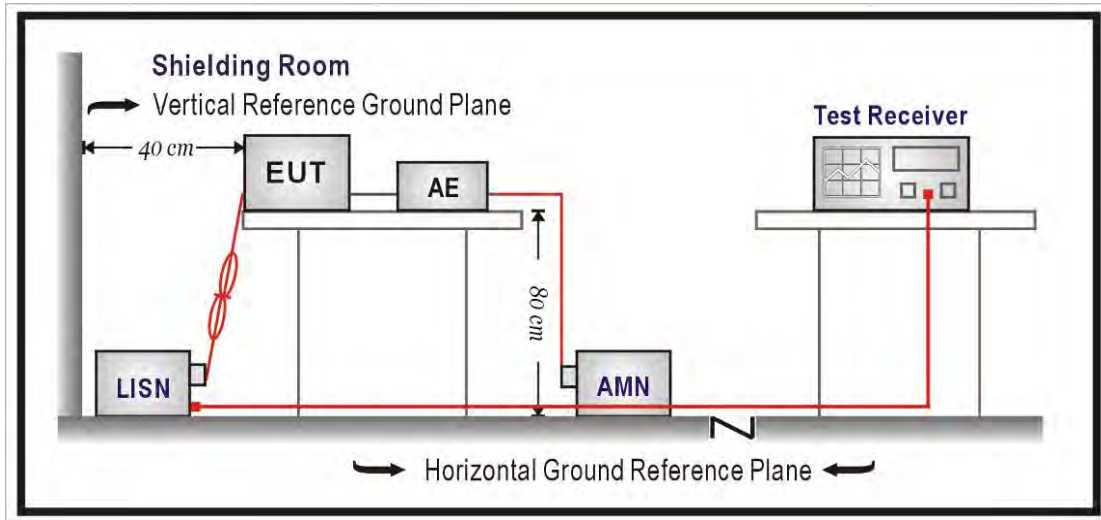
Date: 3 NOV 2020 15:39:31

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.

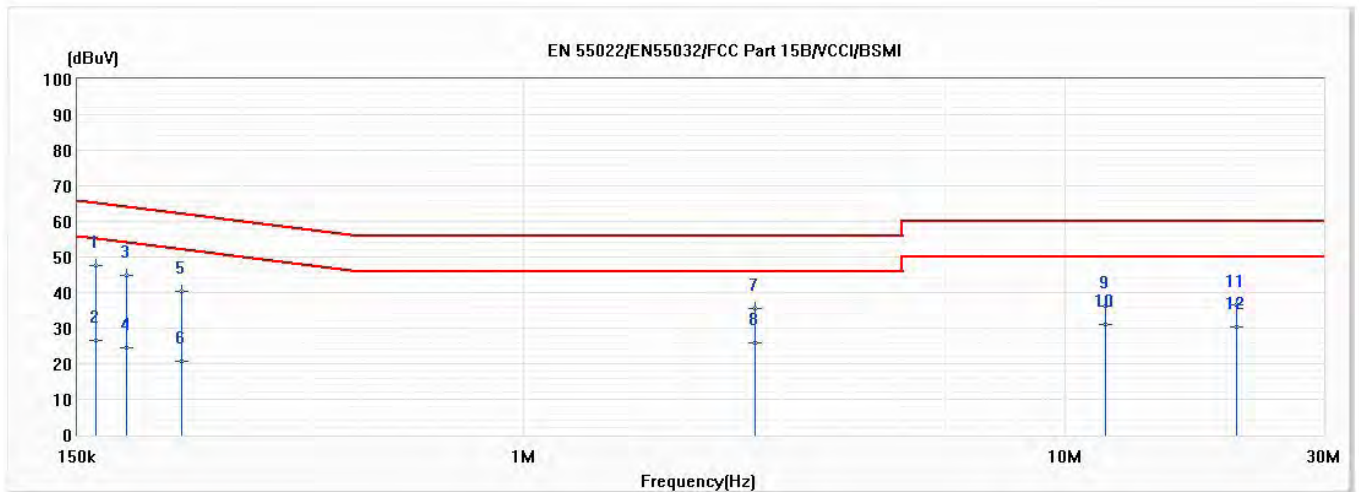
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.4. Test Specification

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

2.5. Test Result

| | | | |
|----------------|----------------------------|------------------|------------|
| Model No | Verizon Router | 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 |

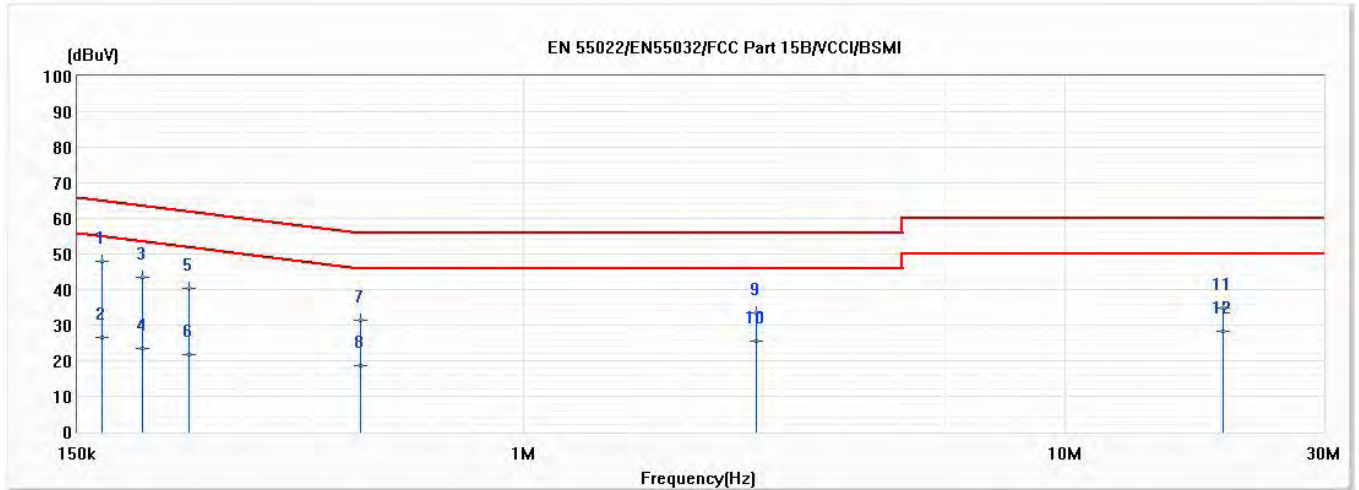


| No | Frequency (MHz) | Emission Level (dBuV) | Limit (dBuV) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| *1 | 0.162 | 47.44 | 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 | Verizon Router | 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 |



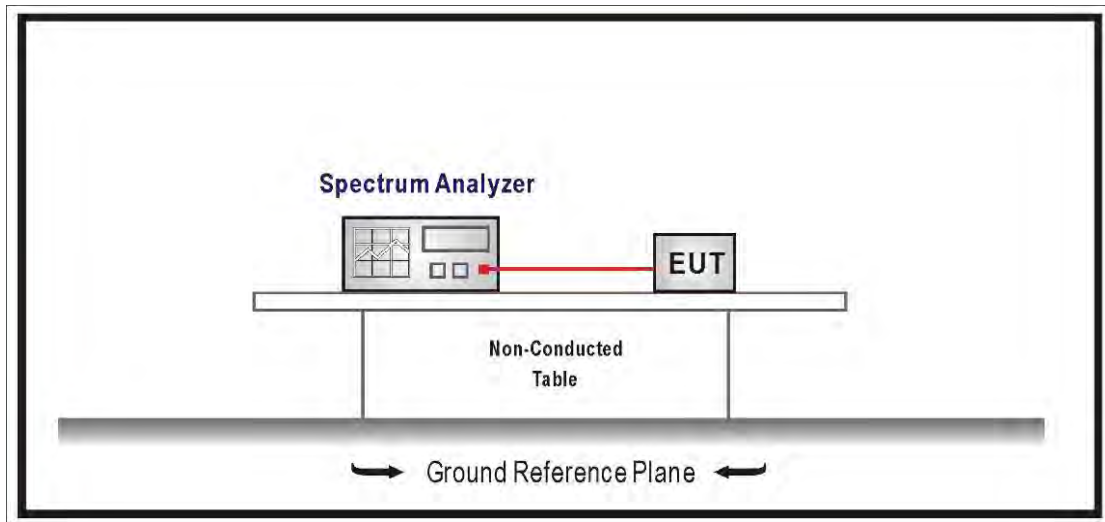
| No | Frequency (MHz) | Emission Level (dBuV) | Limit (dBuV) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| *1 | 0.166 | 47.87 | 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 :

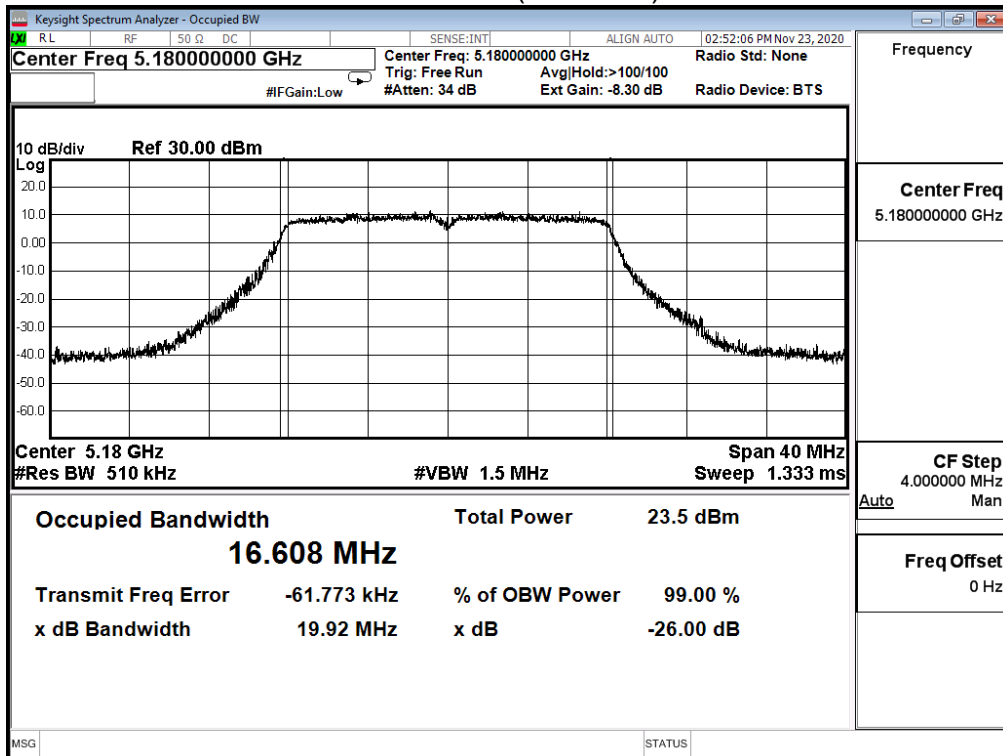
Set RBW = 100KHz, VBW \geq 3xRBW, Sweep time=Auto, Set Peak detector.

3.4. Test Result

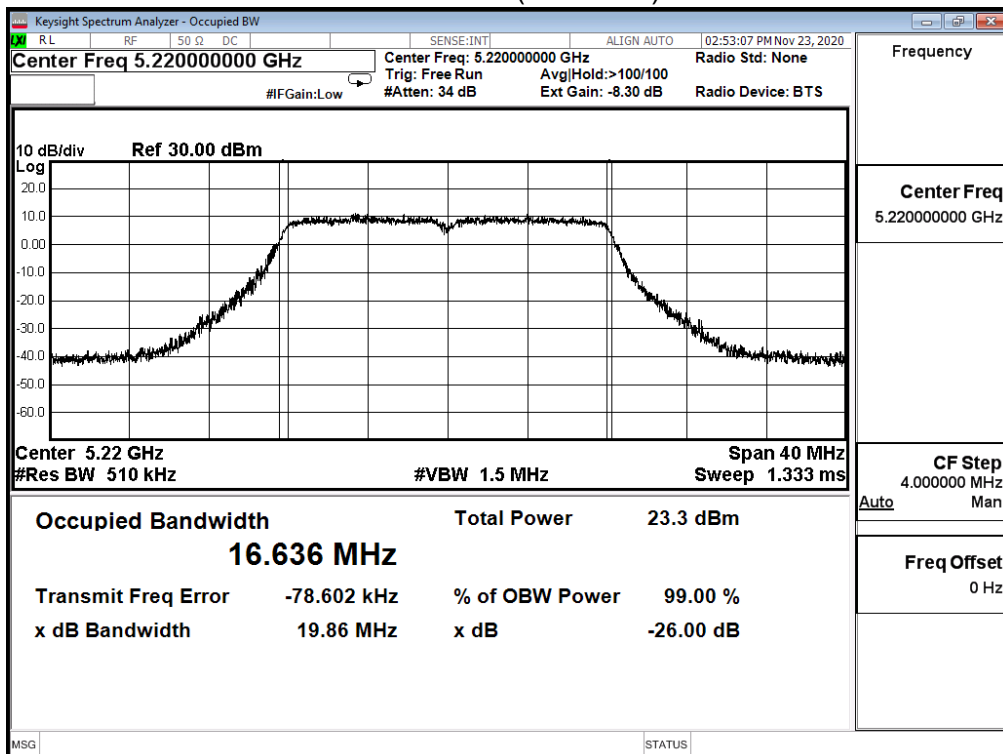
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C |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

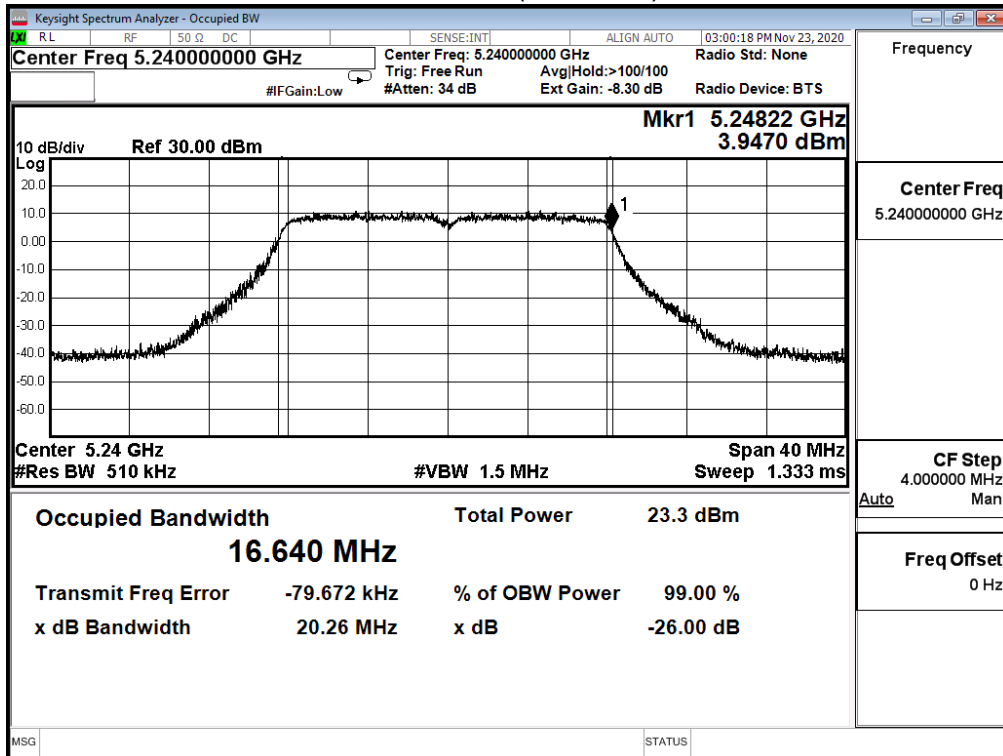
Channel 36 (5180MHz)



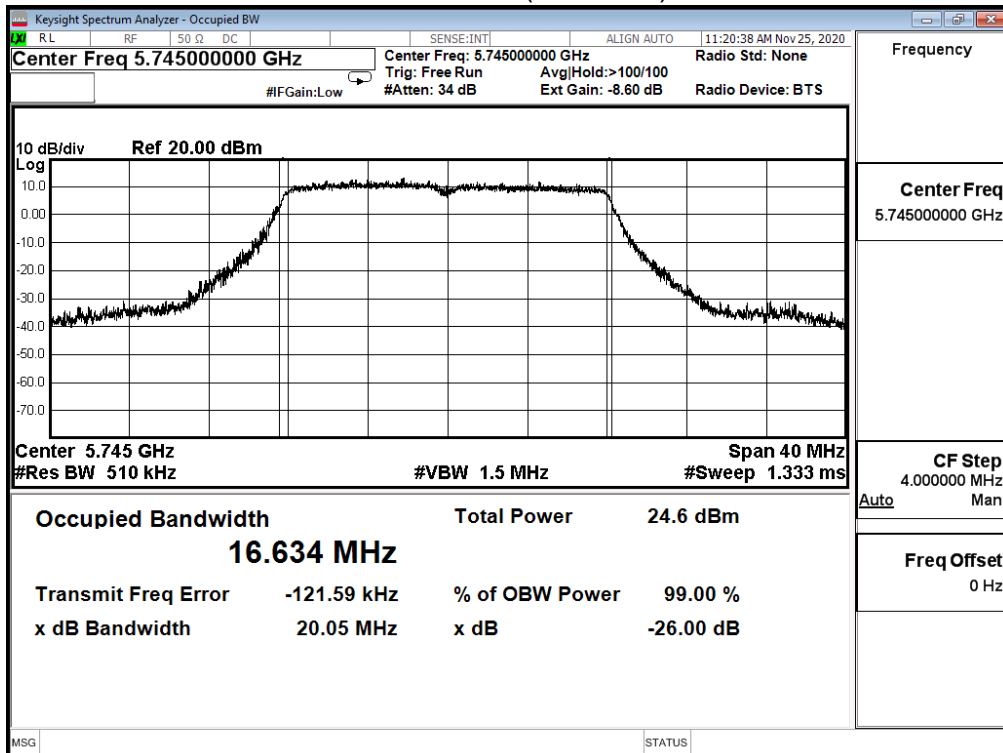
Channel 44 (5220MHz)



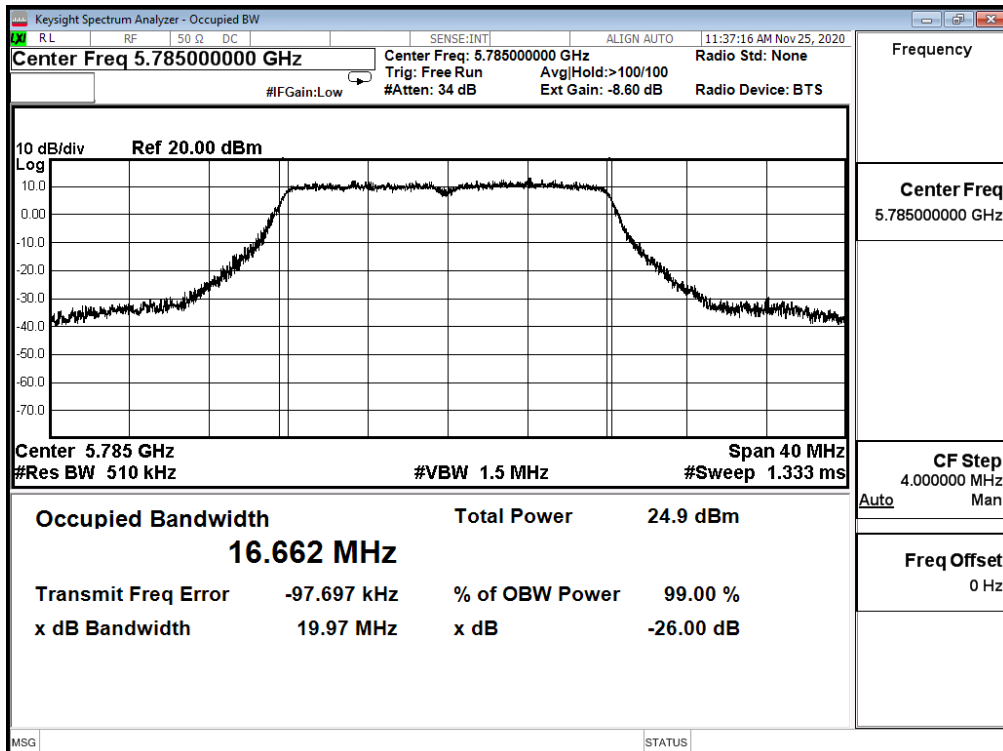
Channel 48 (5240MHz)



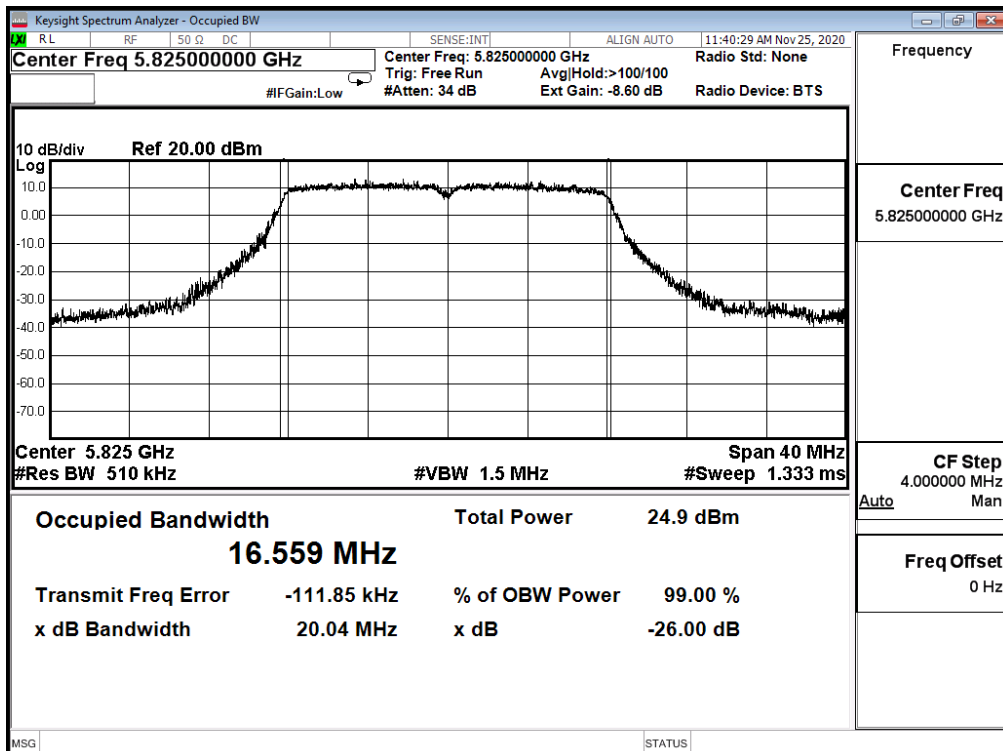
Channel 149 (5745MHz)



Channel 157 (5785MHz)



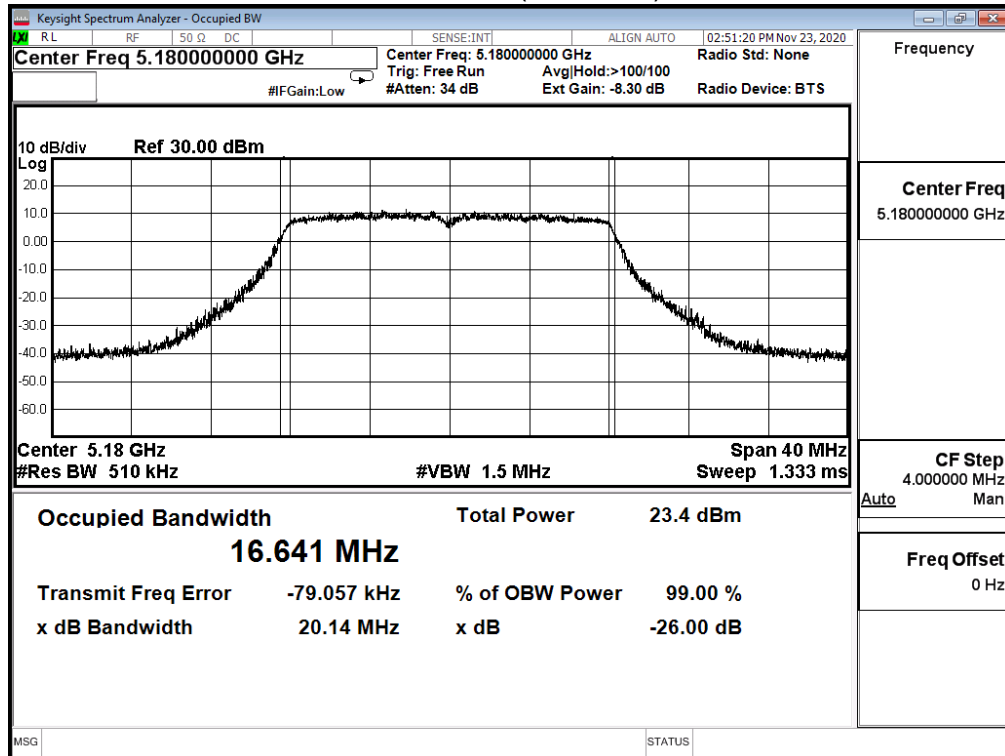
Channel 165 (5825MHz)



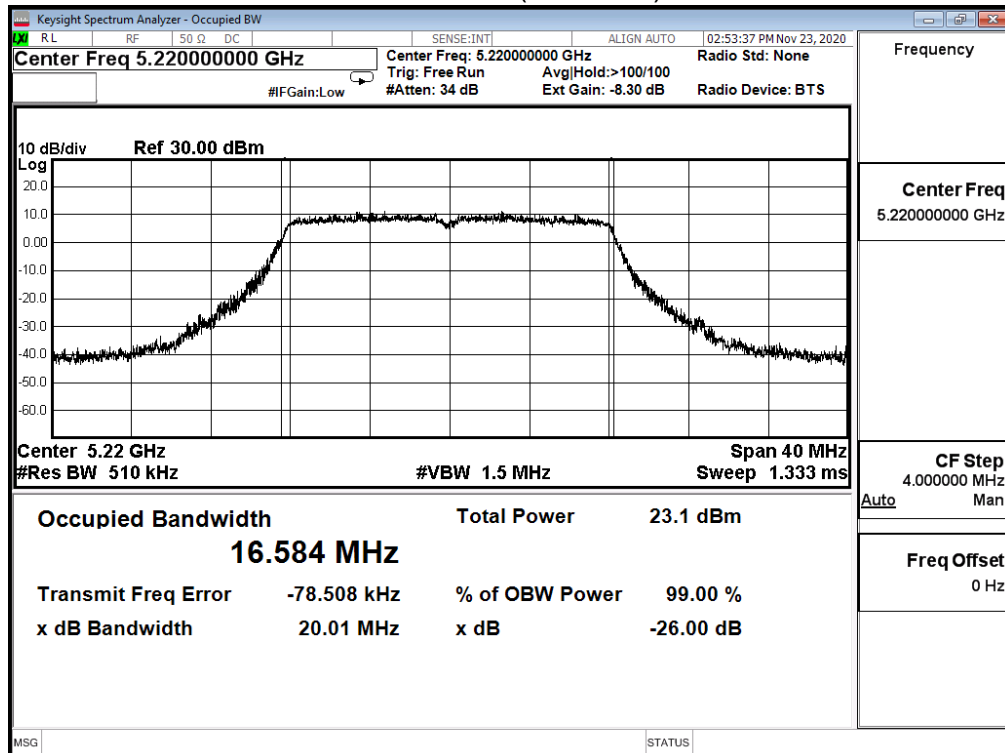
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C |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

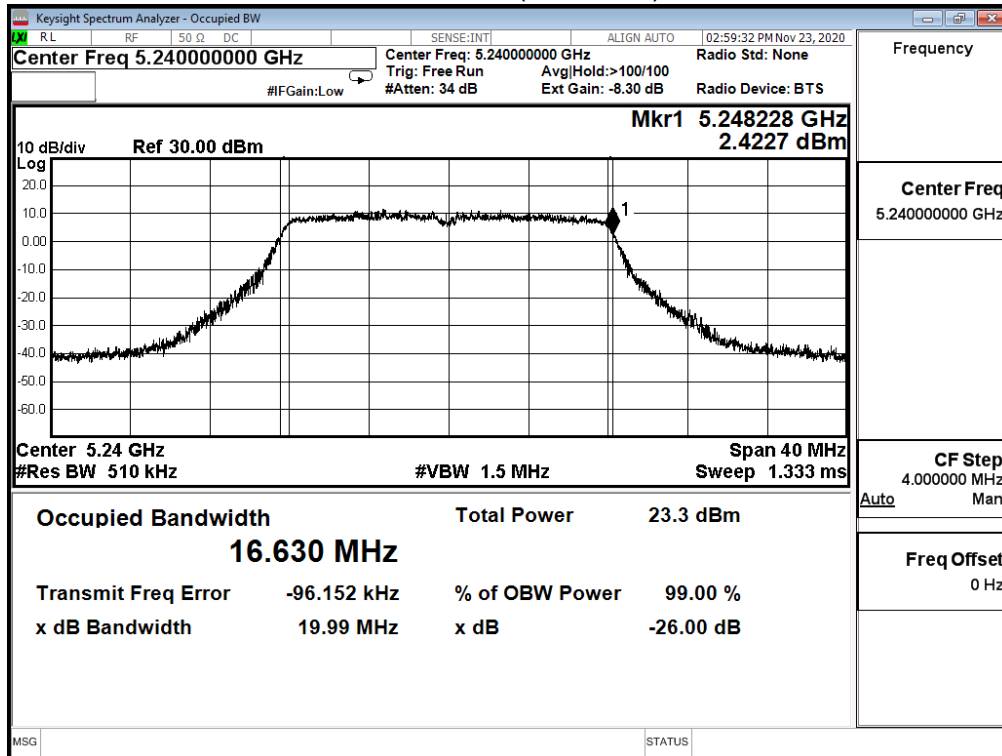
Channel 36 (5180MHz)



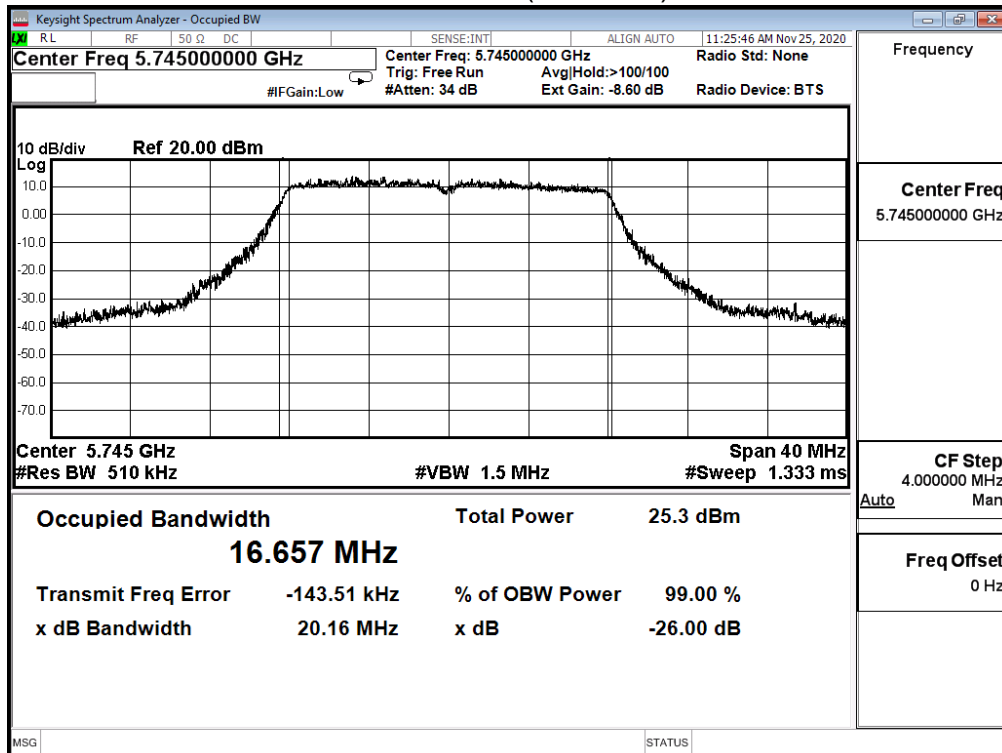
Channel 44 (5220MHz)



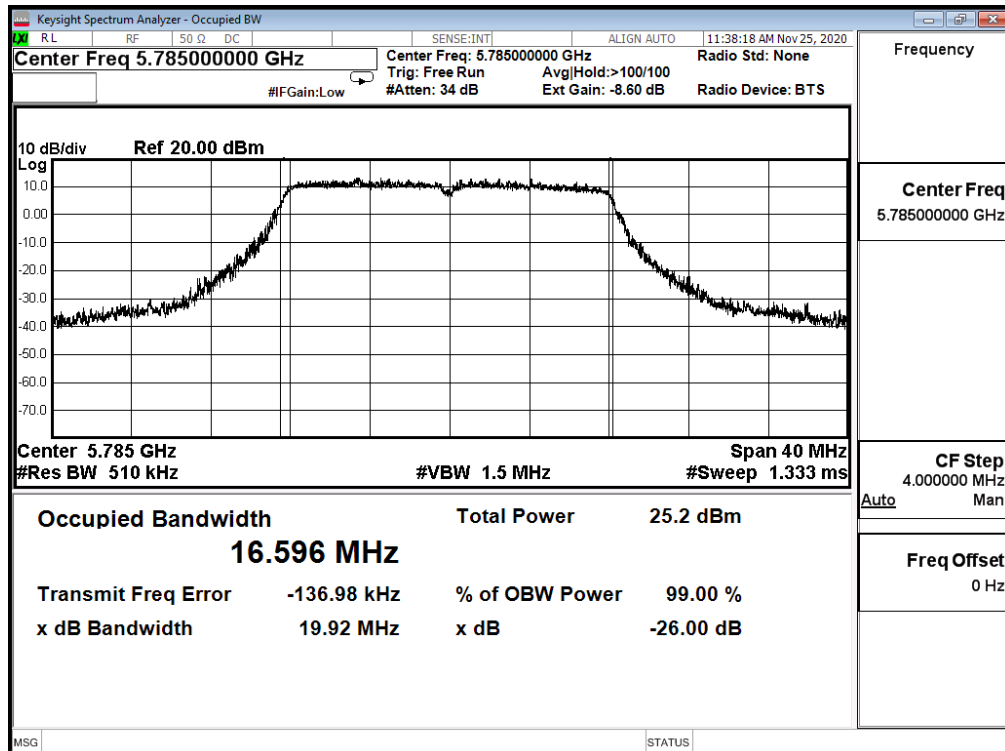
Channel 48 (5240MHz)



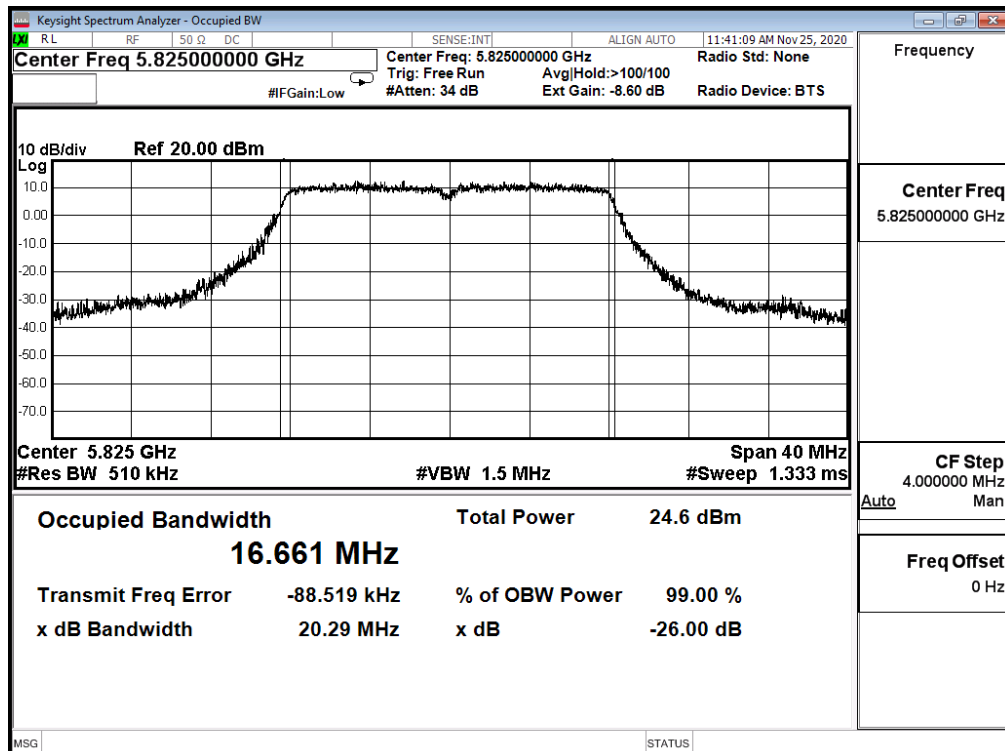
Channel 149 (5745MHz)



Channel 157 (5785MHz)



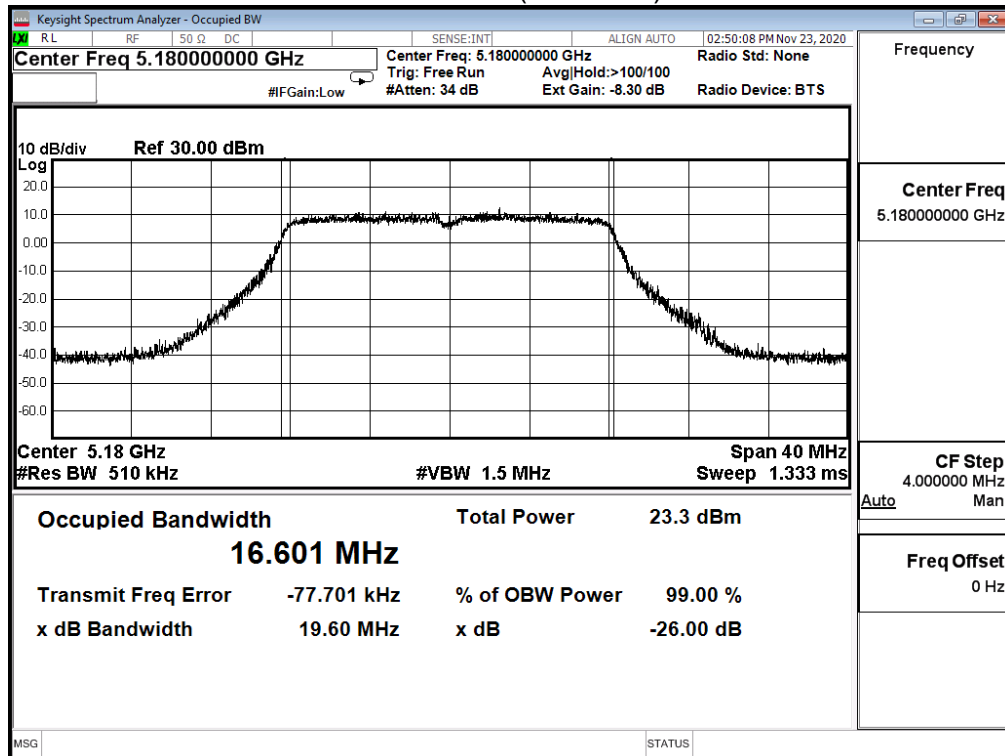
Channel 165 (5825MHz)



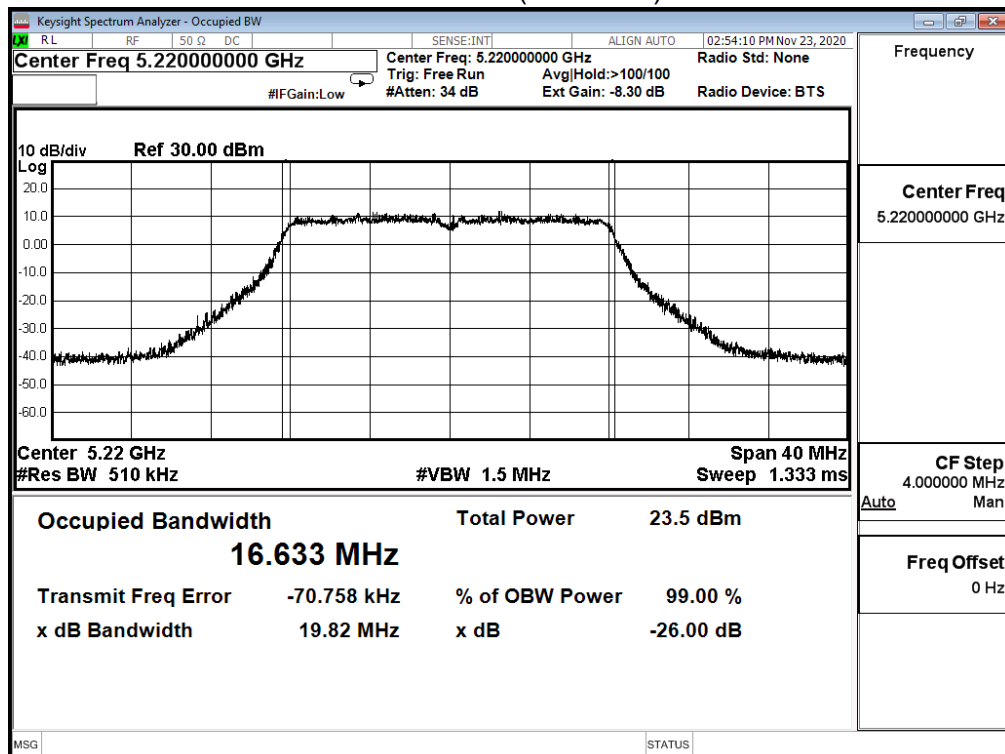
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C |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

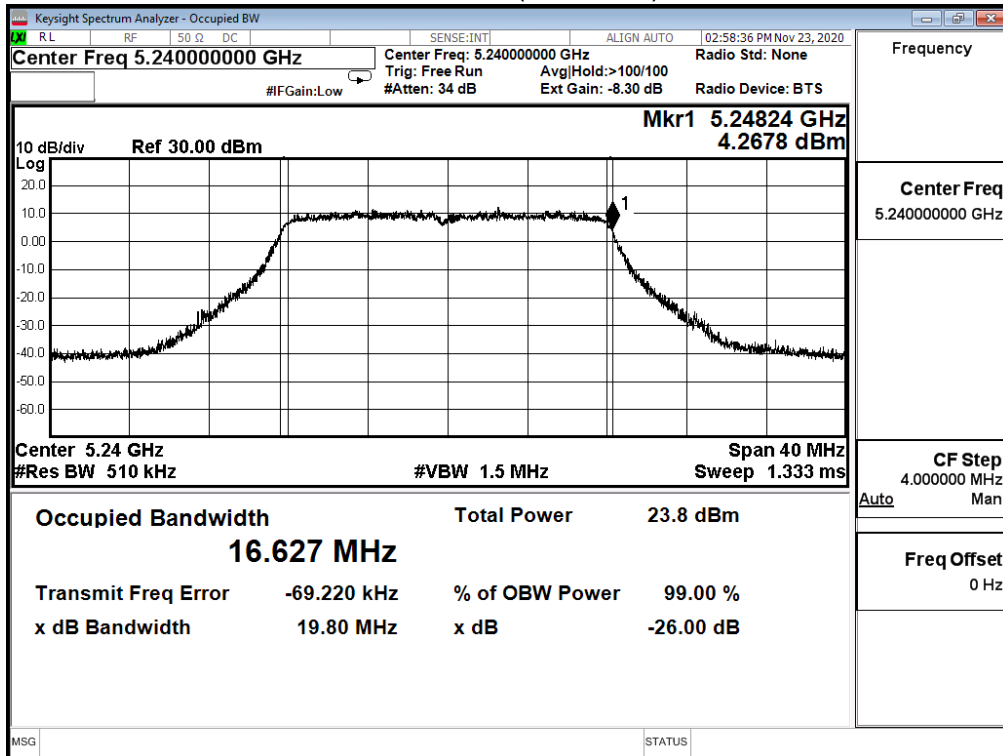
Channel 36 (5180MHz)



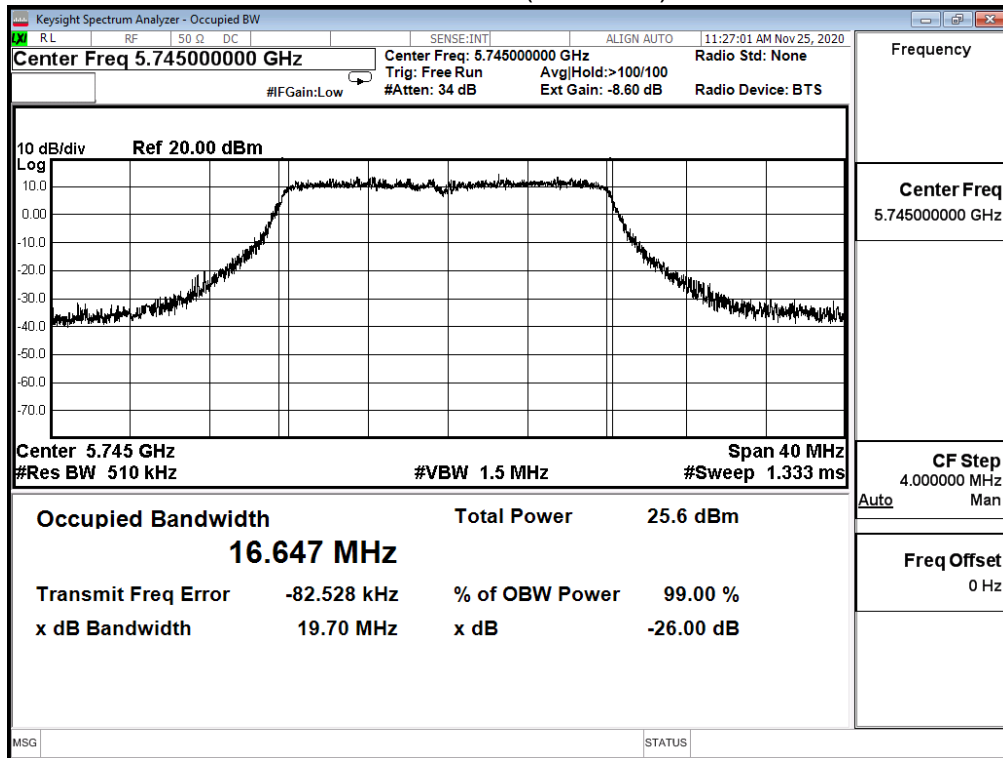
Channel 44 (5220MHz)



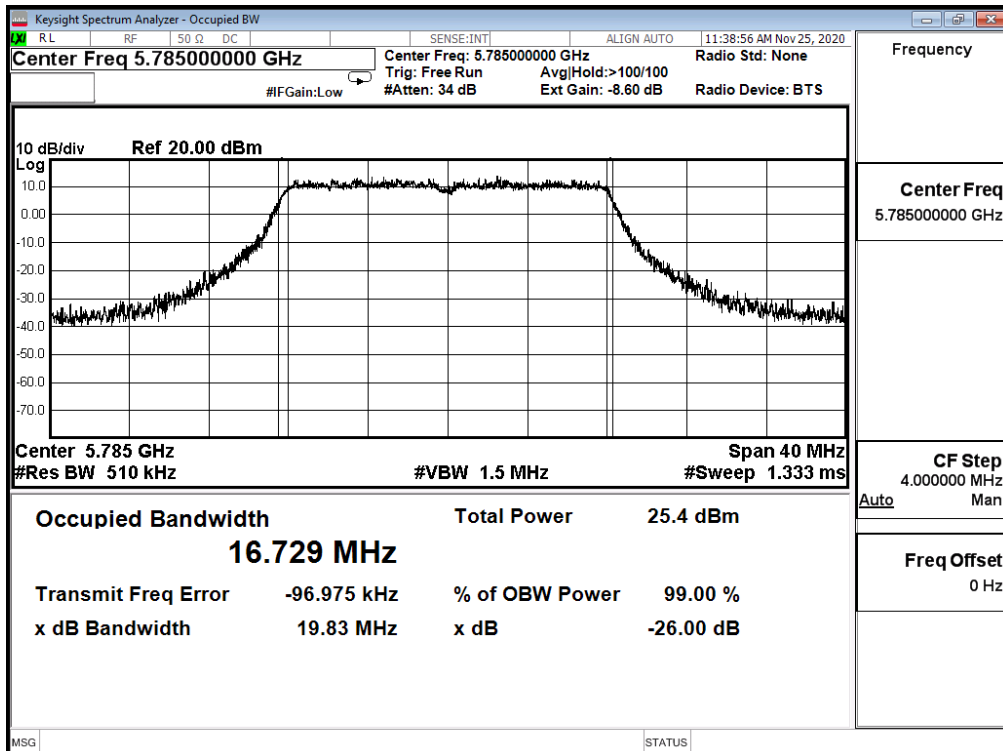
Channel 48 (5240MHz)



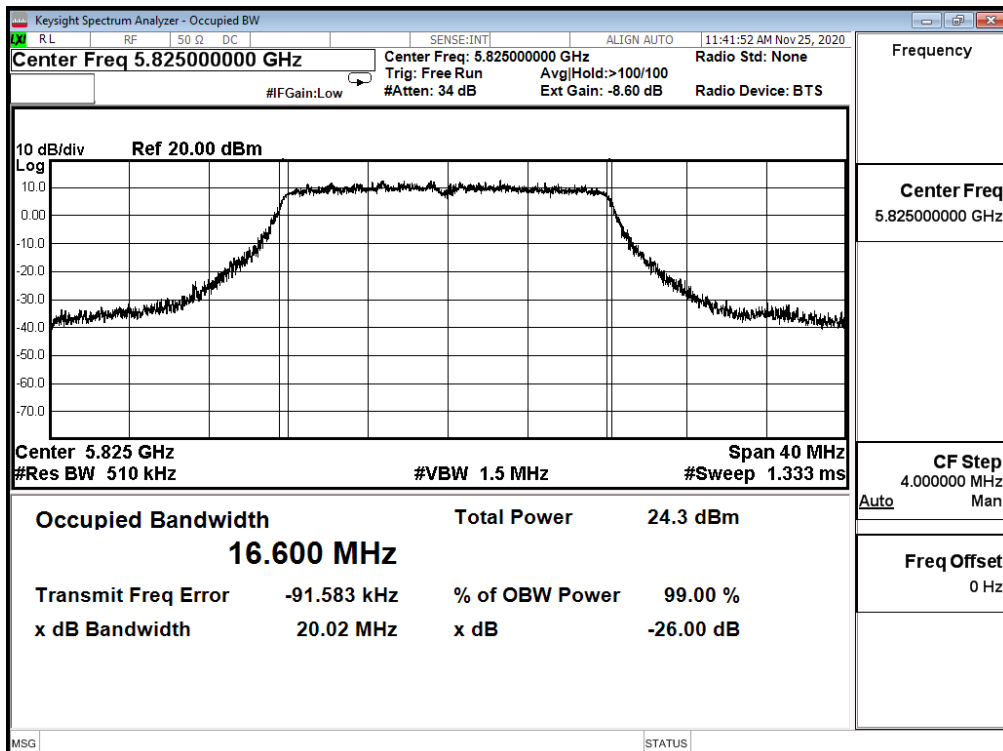
Channel 149 (5745MHz)



Channel 157 (5785MHz)



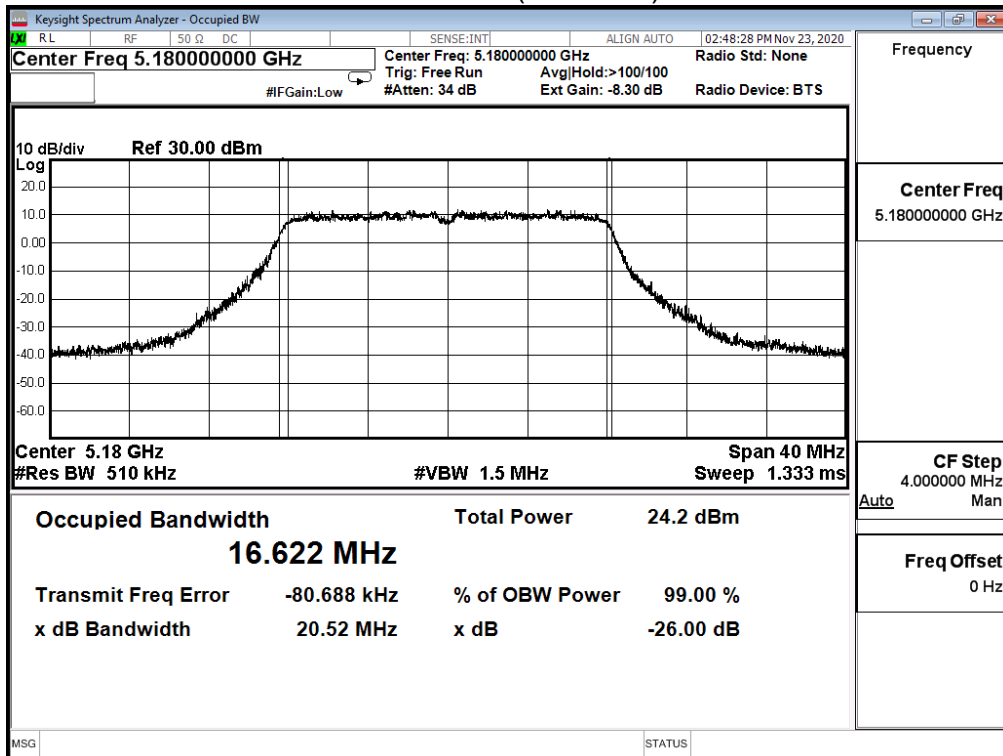
Channel 165 (5825MHz)



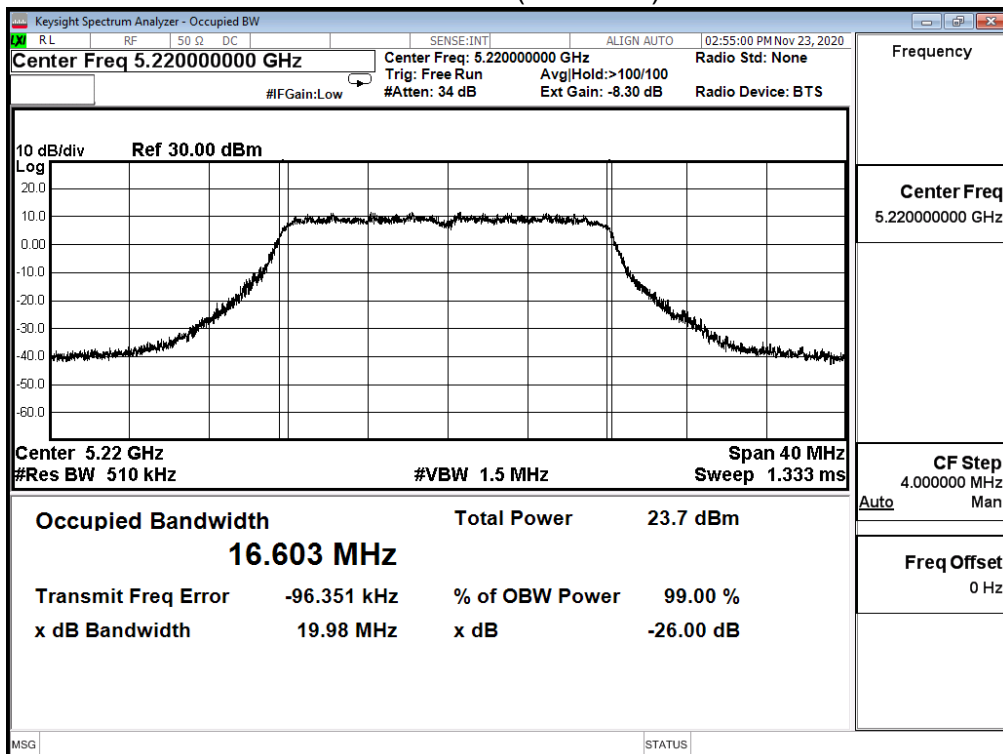
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C |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

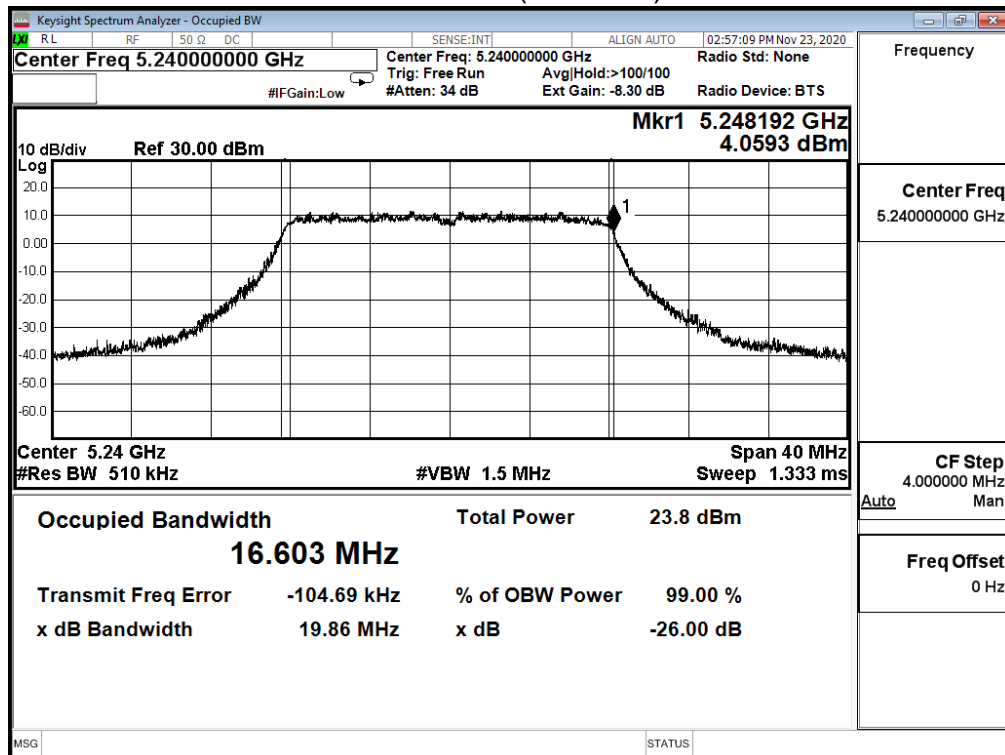
Channel 36 (5180MHz)



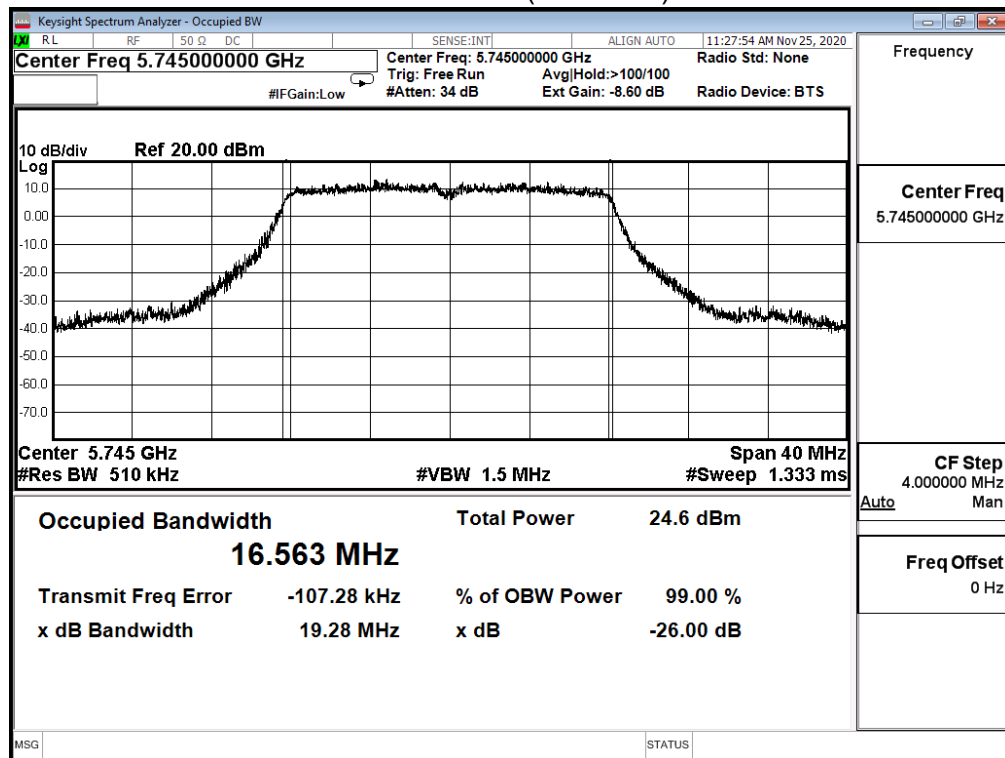
Channel 44 (5220MHz)



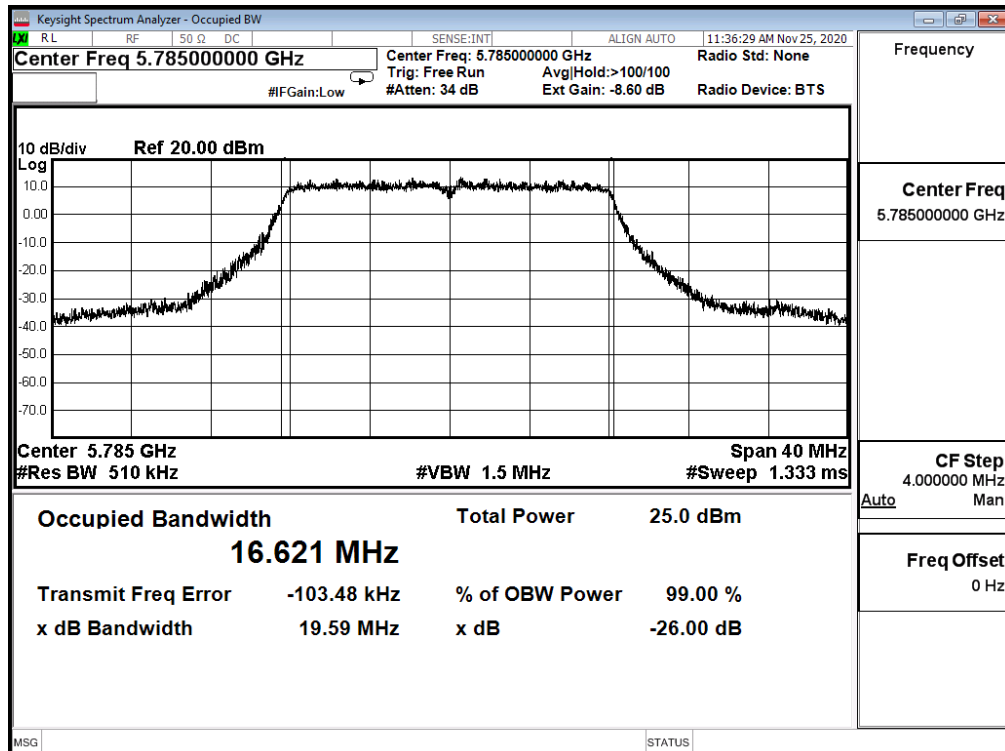
Channel 48 (5240MHz)



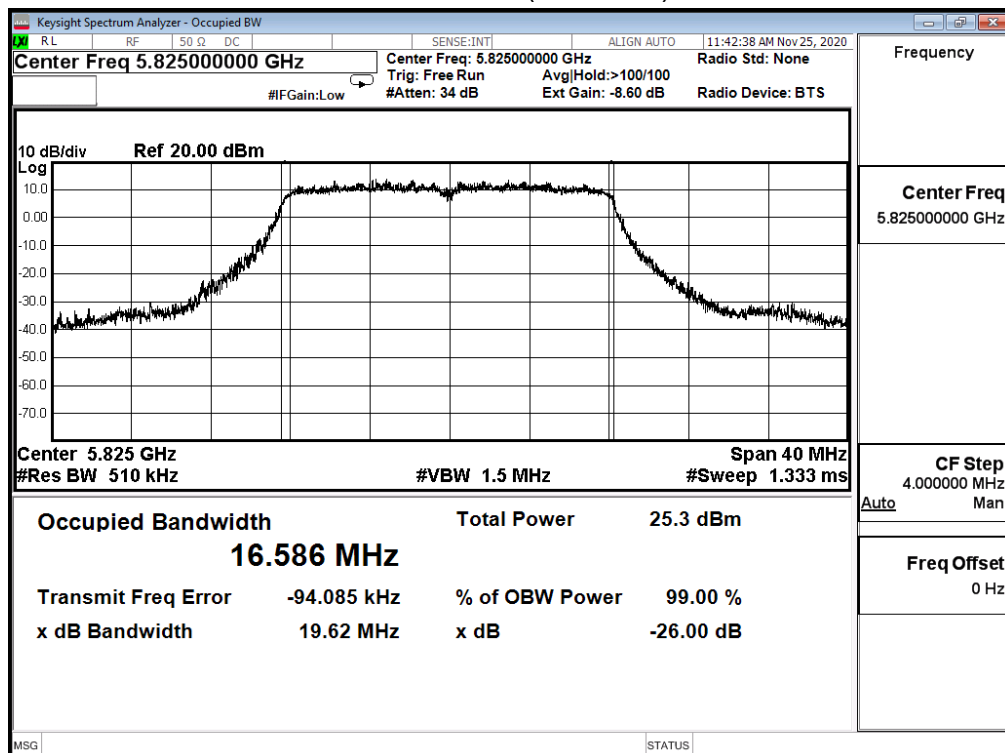
Channel 149 (5745MHz)



Channel 157 (5785MHz)



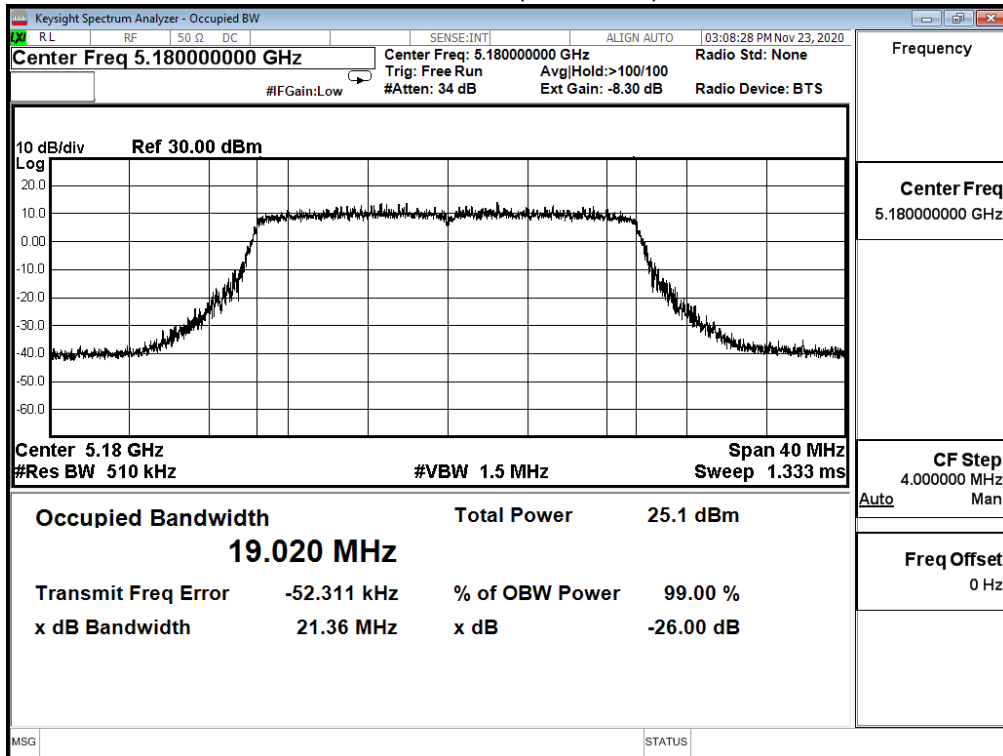
Channel 165 (5825MHz)



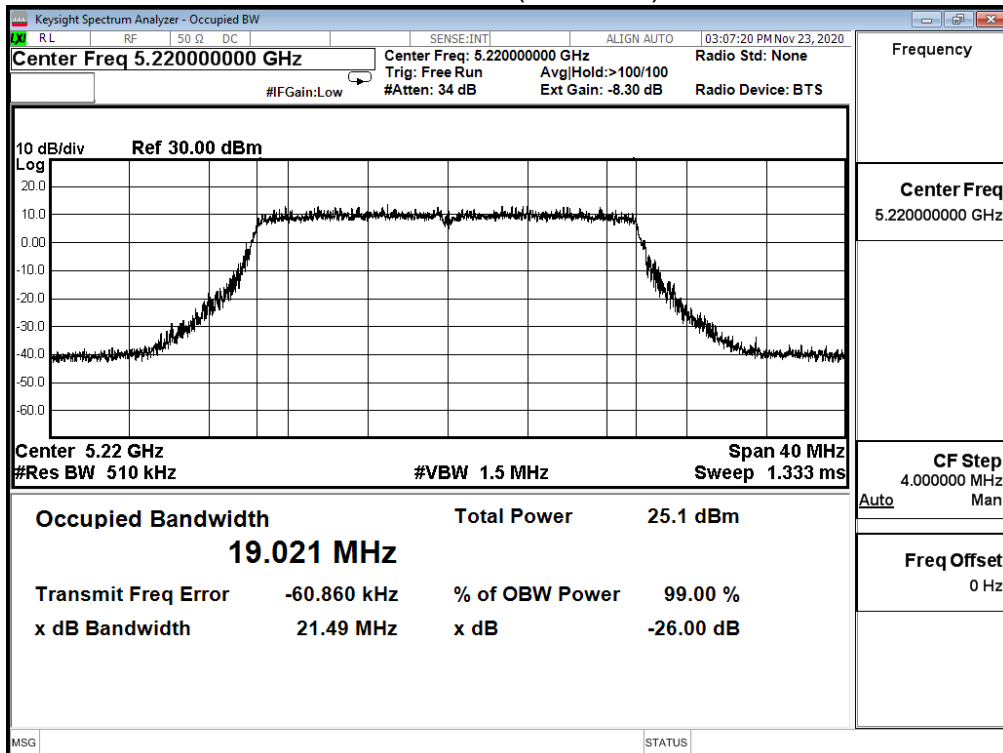
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

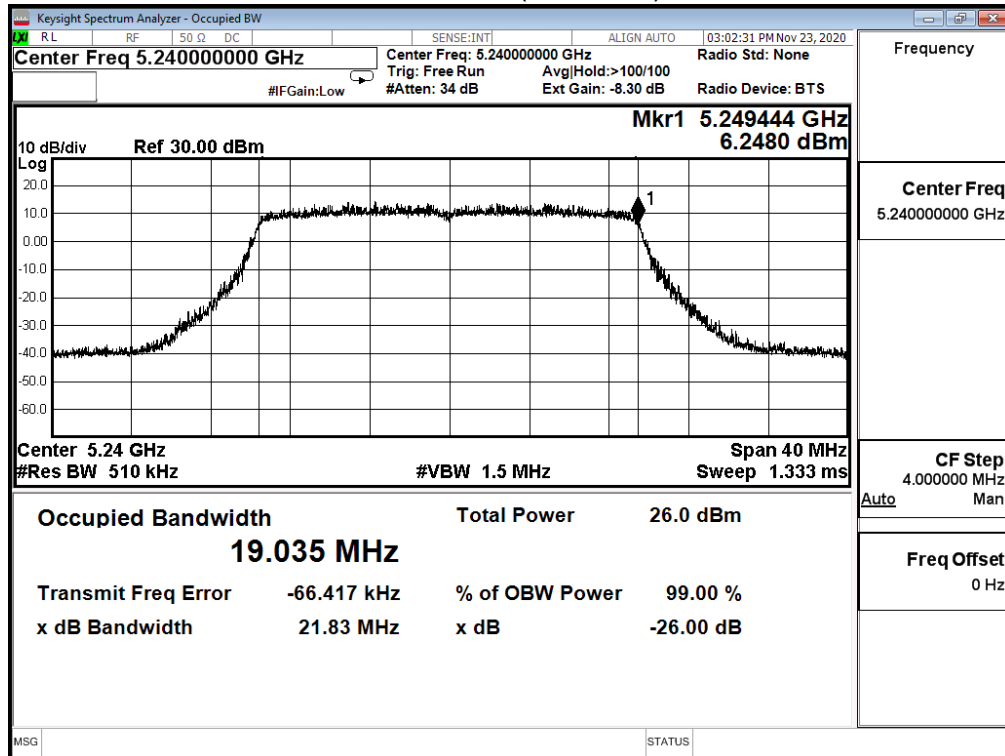
Channel 36 (5180MHz)



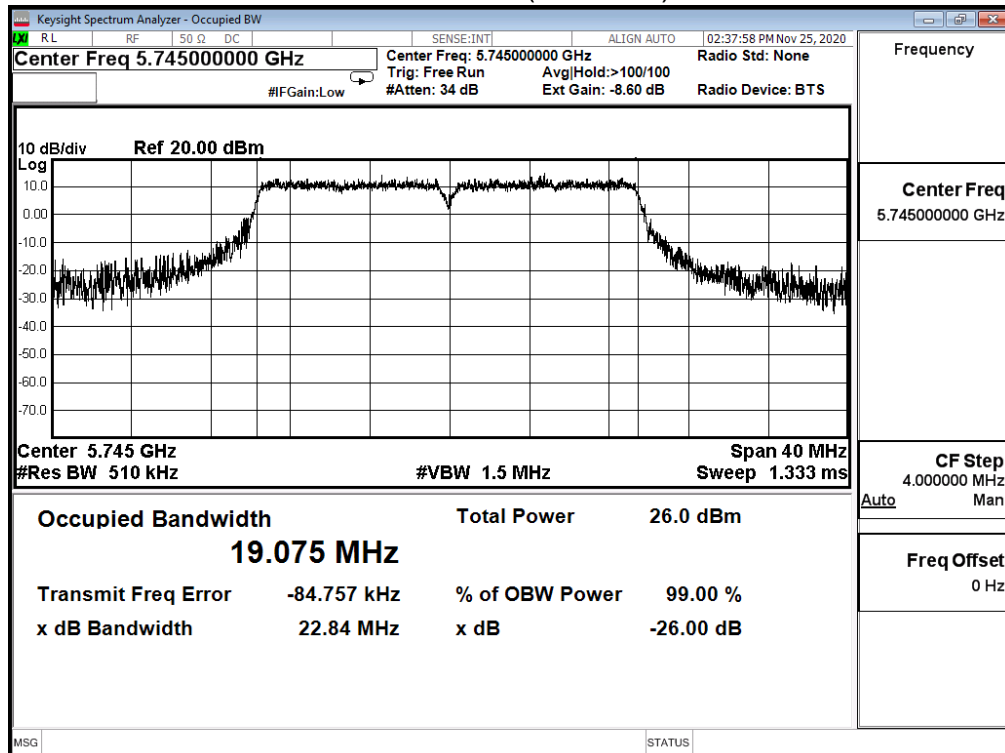
Channel 44 (5220MHz)



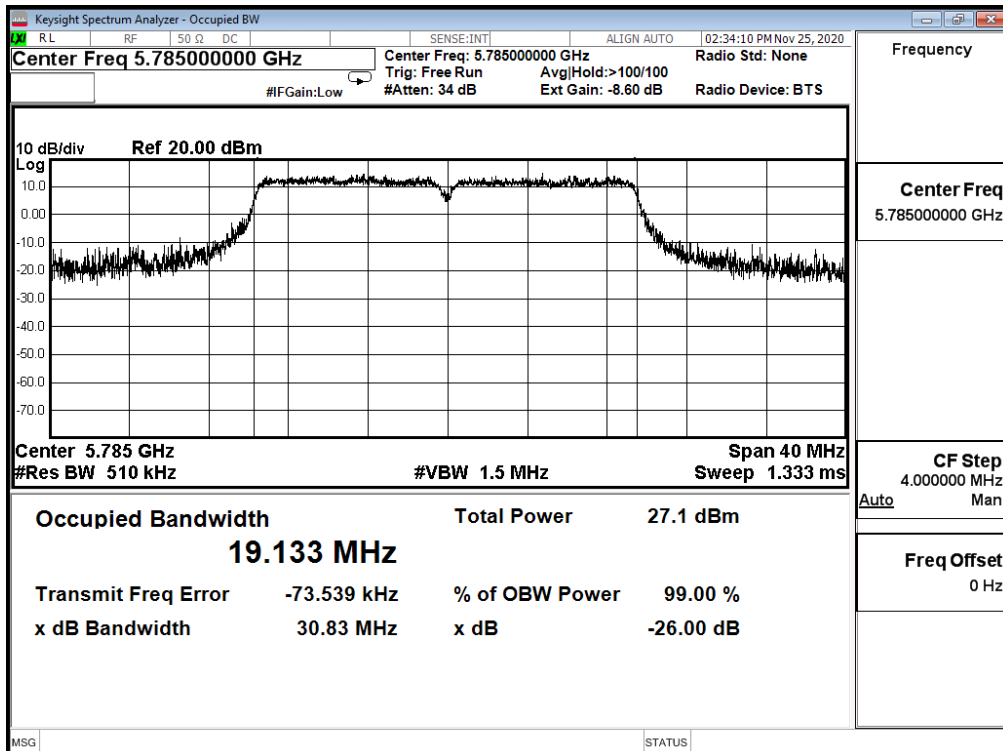
Channel 48 (5240MHz)



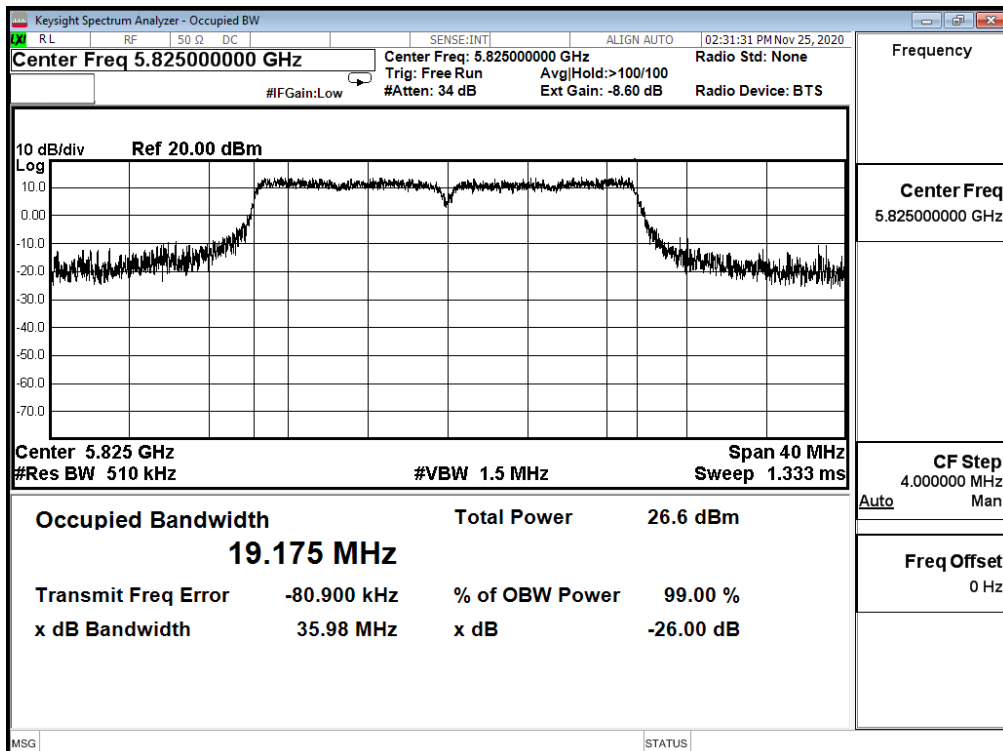
Channel 149 (5745MHz)



Channel 157 (5785MHz)



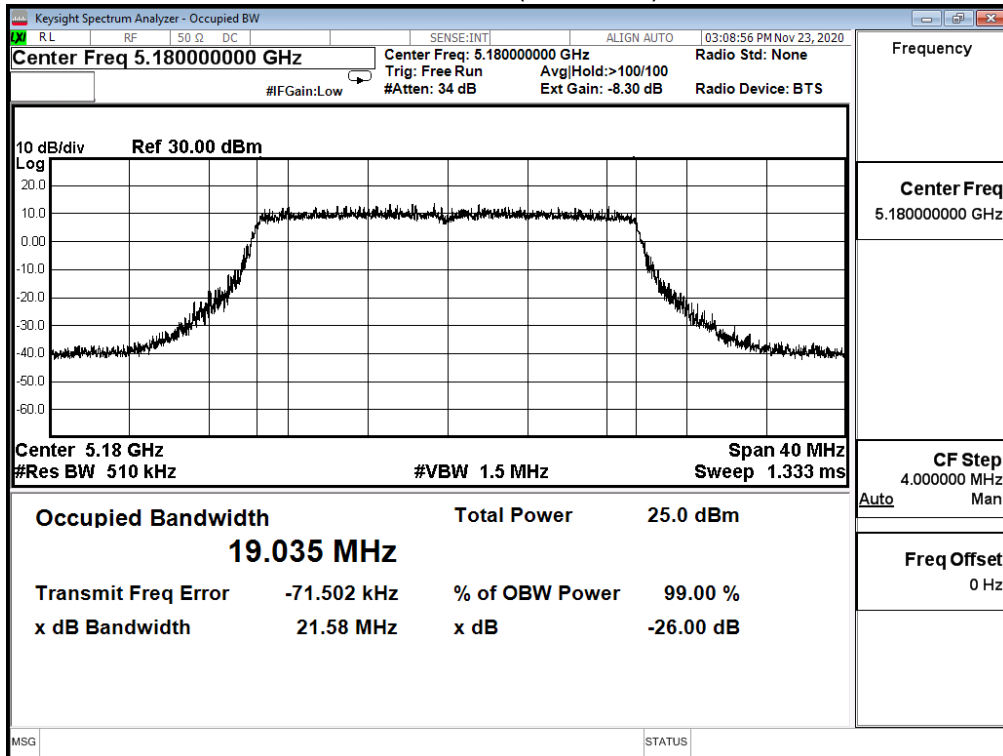
Channel 165 (5825MHz)



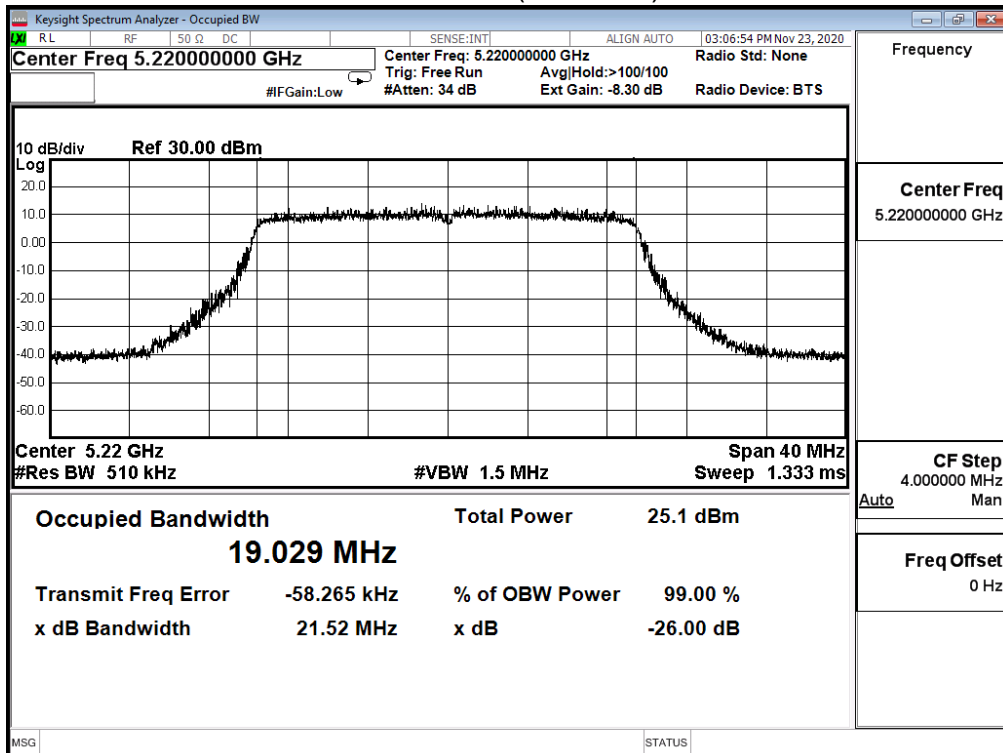
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

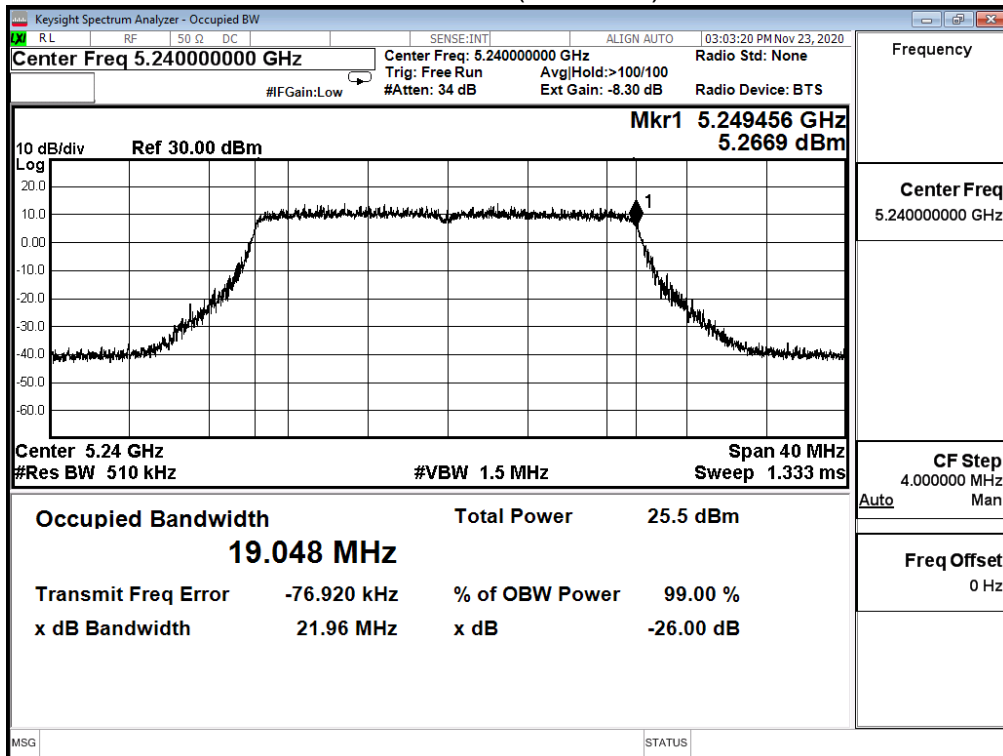
Channel 36 (5180MHz)



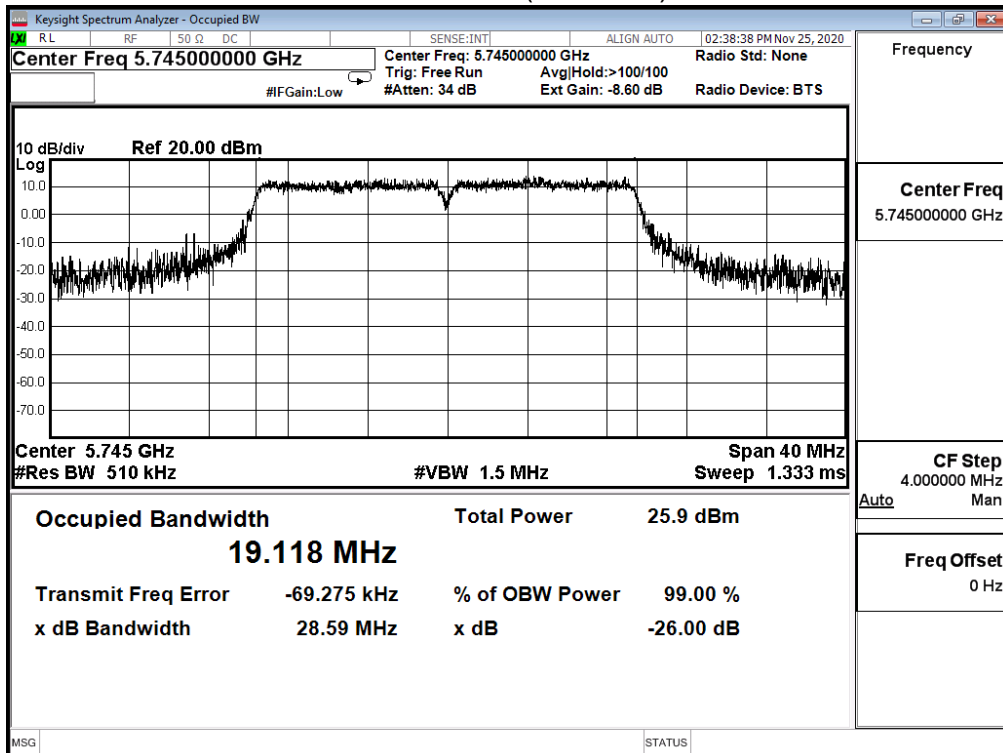
Channel 44 (5220MHz)



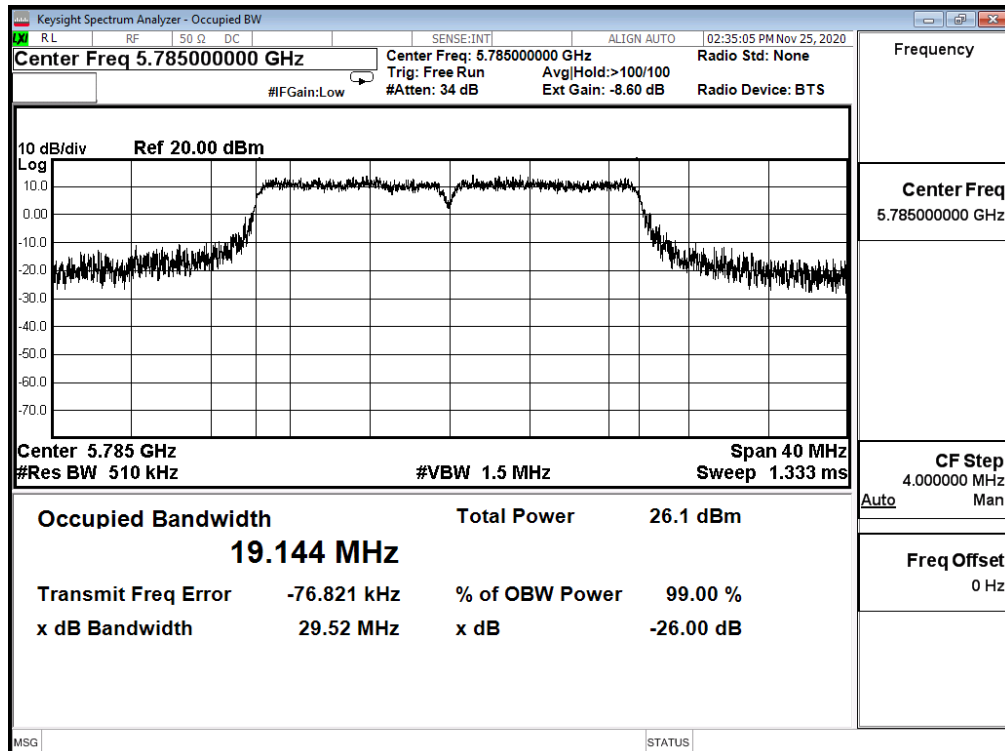
Channel 48 (5240MHz)



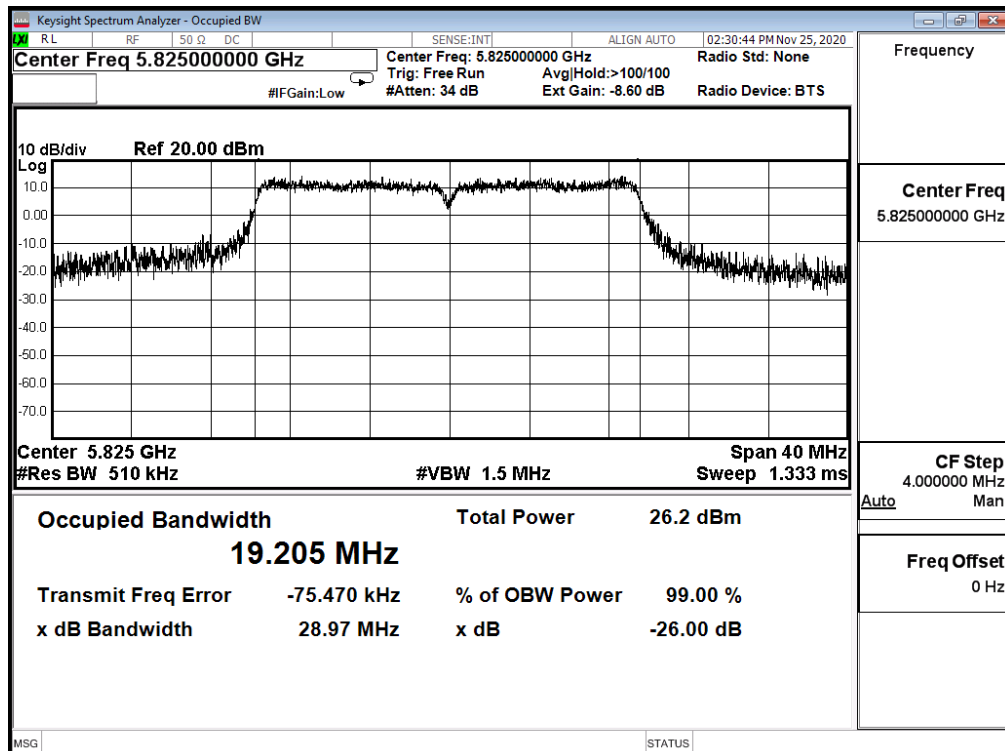
Channel 149 (5745MHz)



Channel 157 (5785MHz)



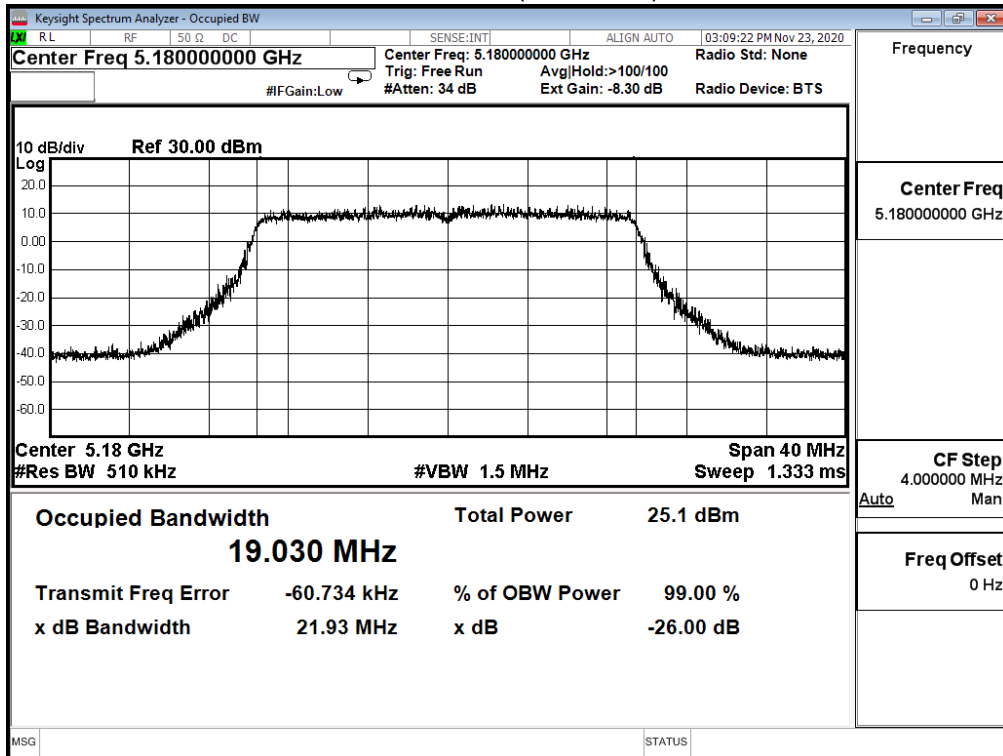
Channel 165 (5825MHz)



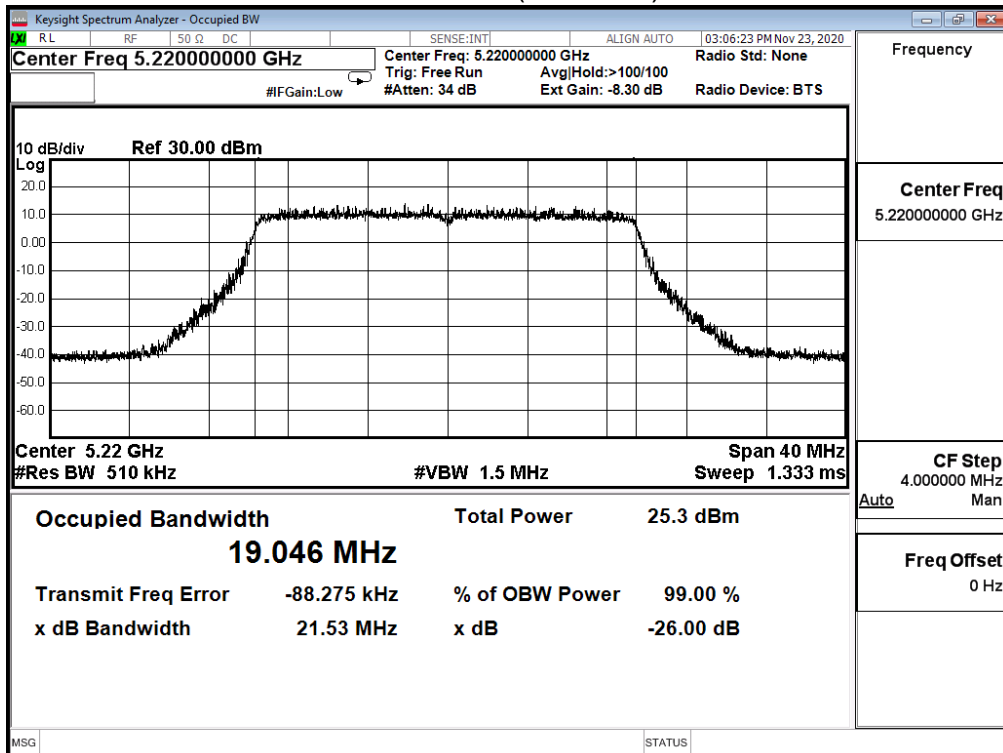
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

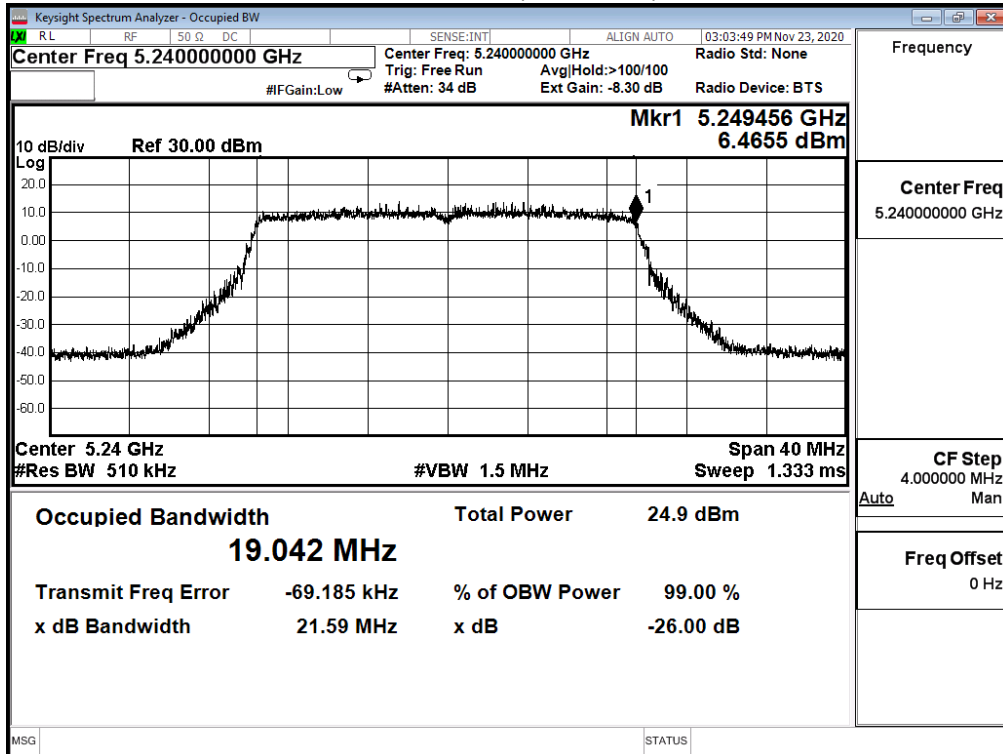
Channel 36 (5180MHz)



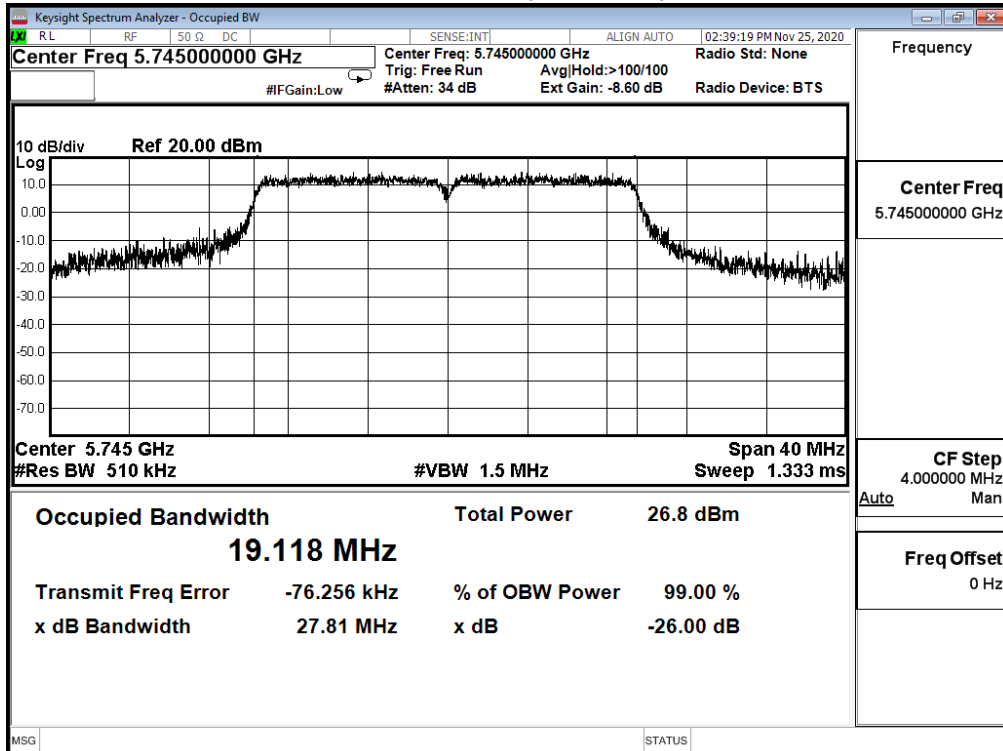
Channel 44 (5220MHz)



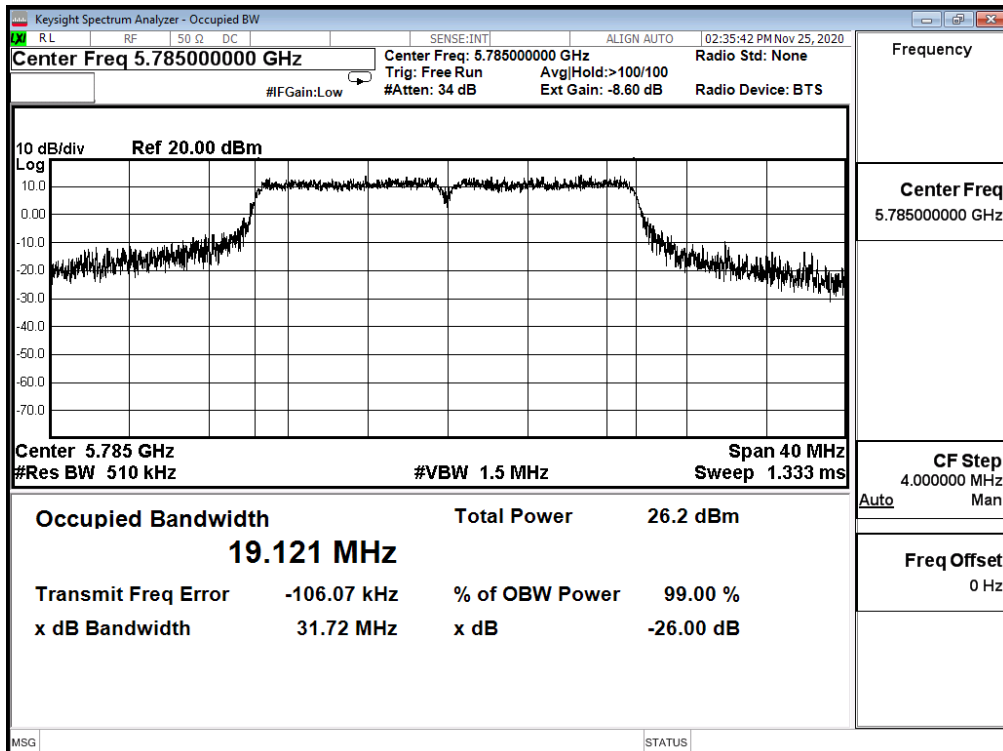
Channel 48 (5240MHz)



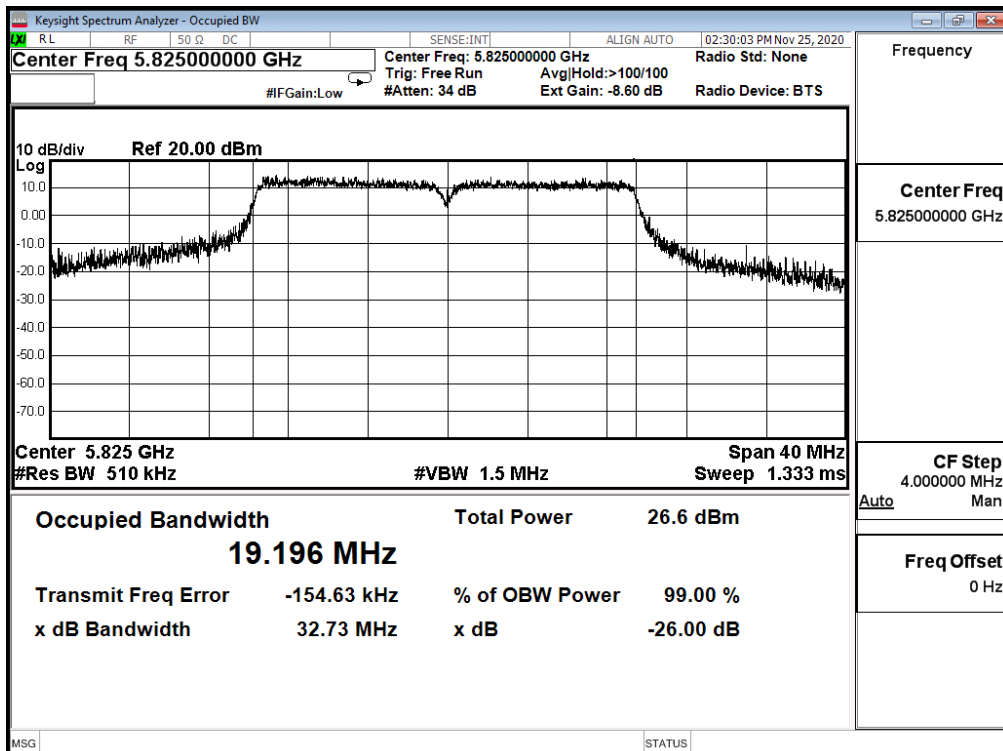
Channel 149 (5745MHz)



Channel 157 (5785MHz)



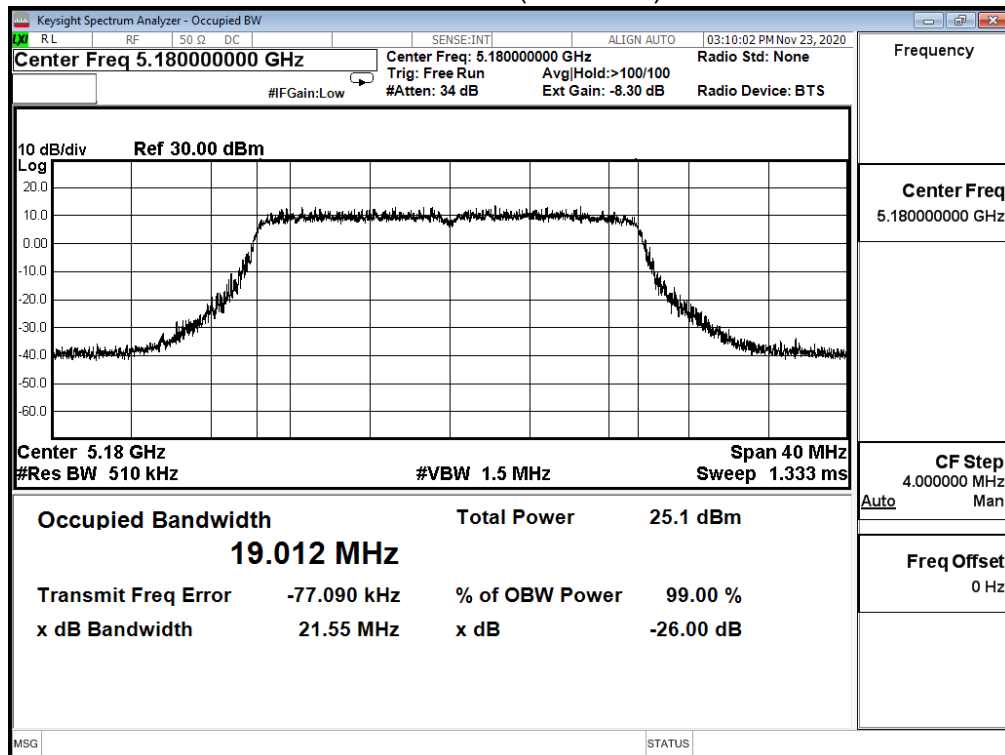
Channel165 (5825MHz)



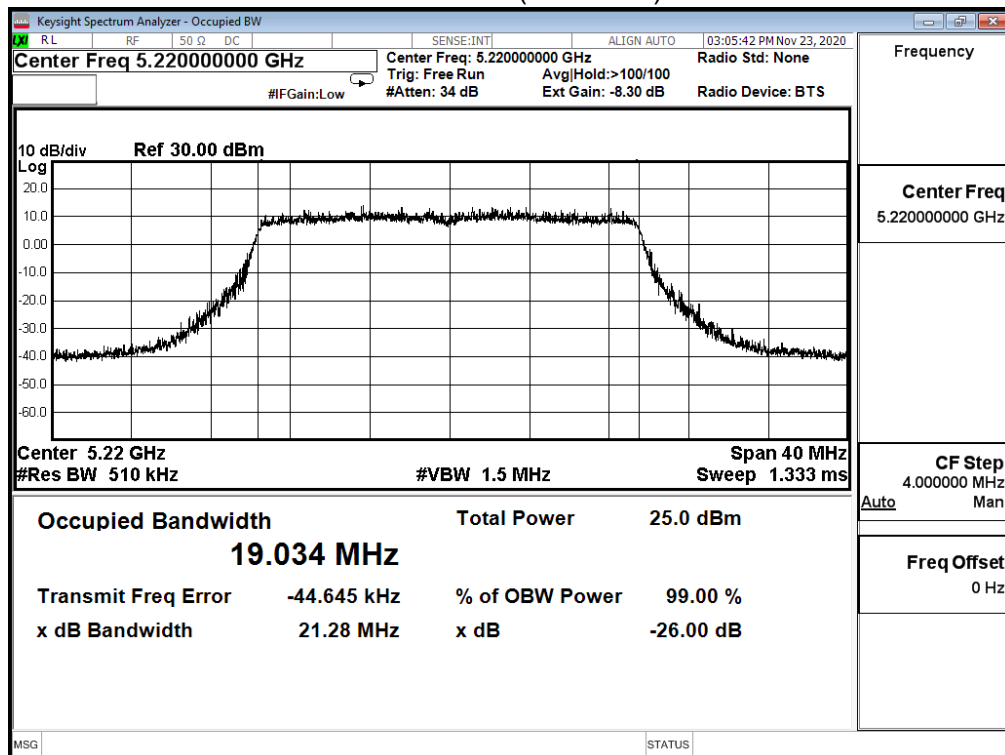
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

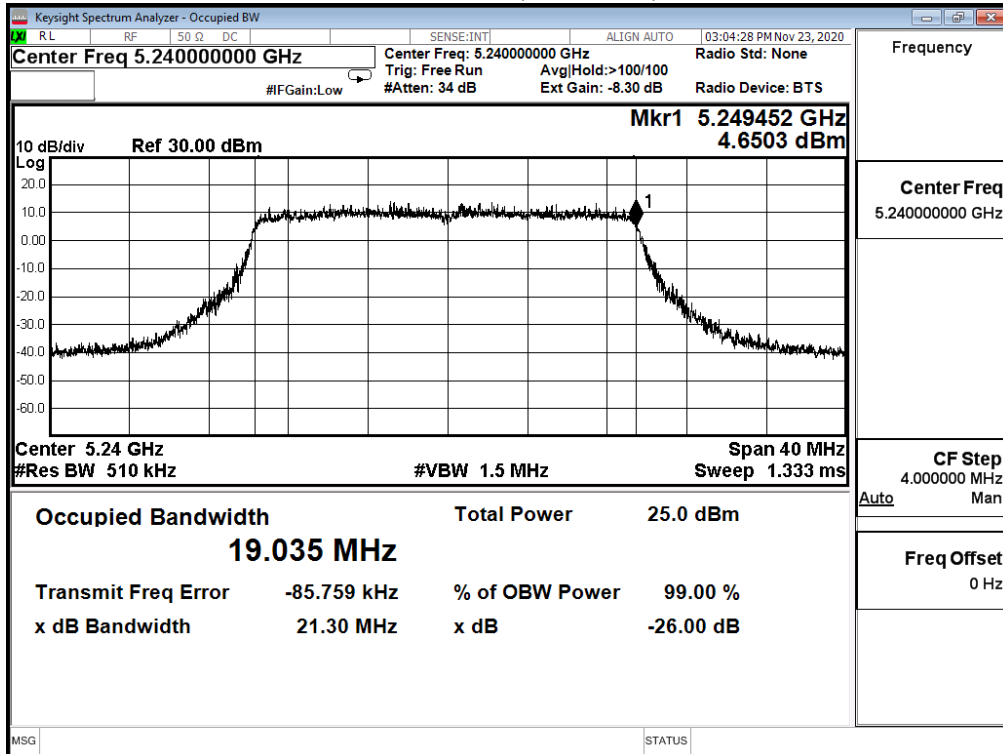
Channel 36 (5180MHz)



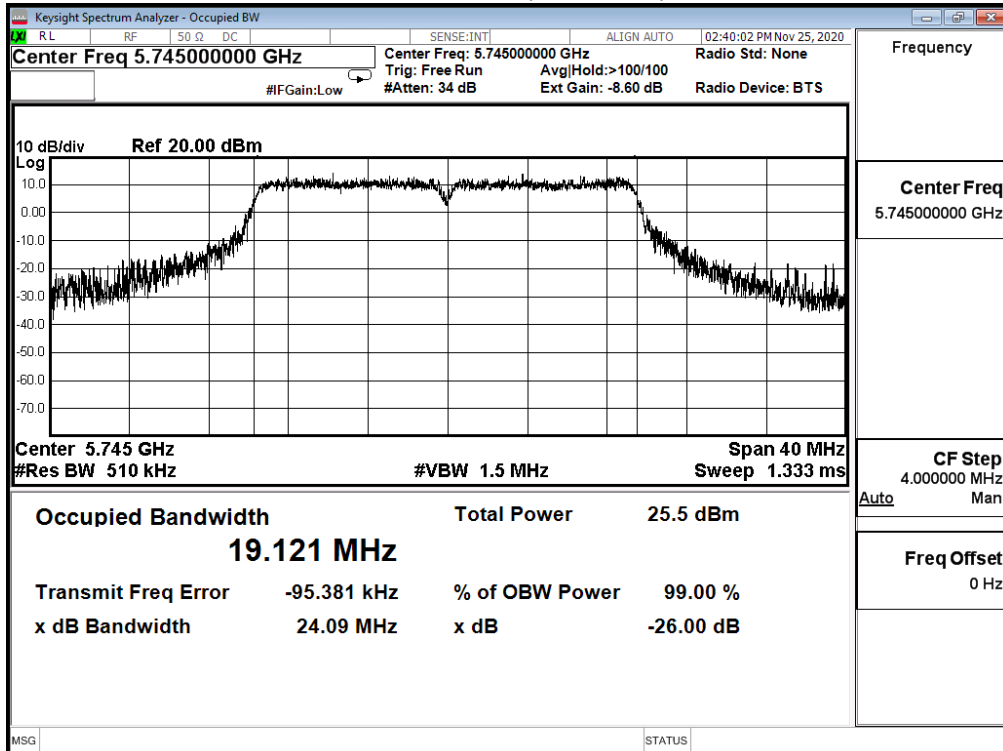
Channel 44 (5220MHz)



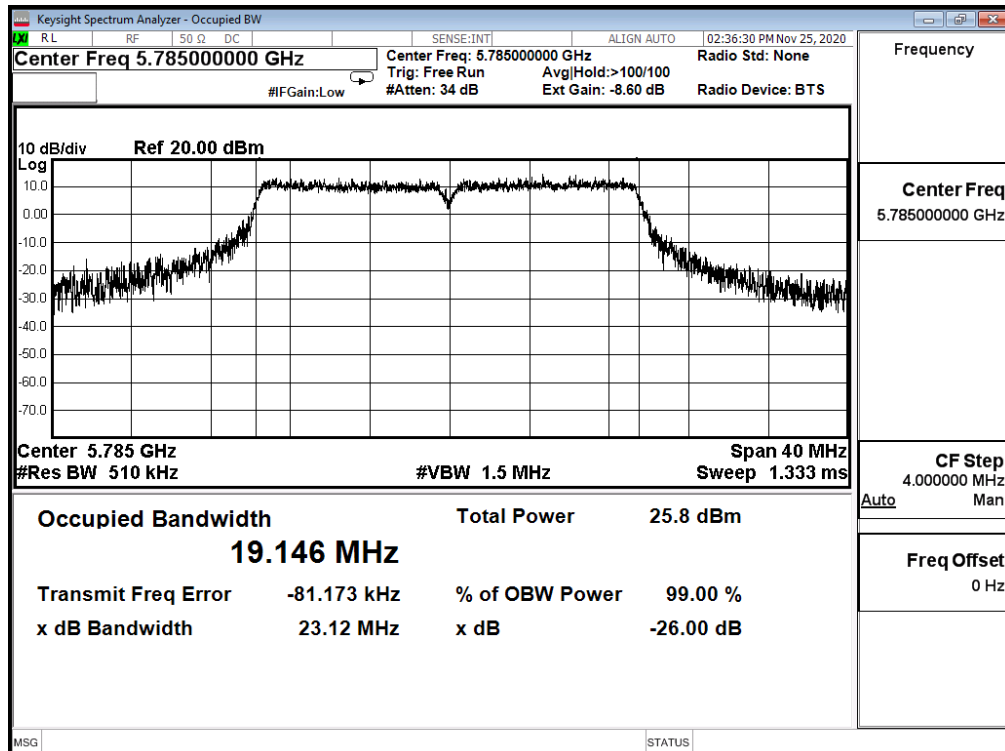
Channel 48 (5240MHz)



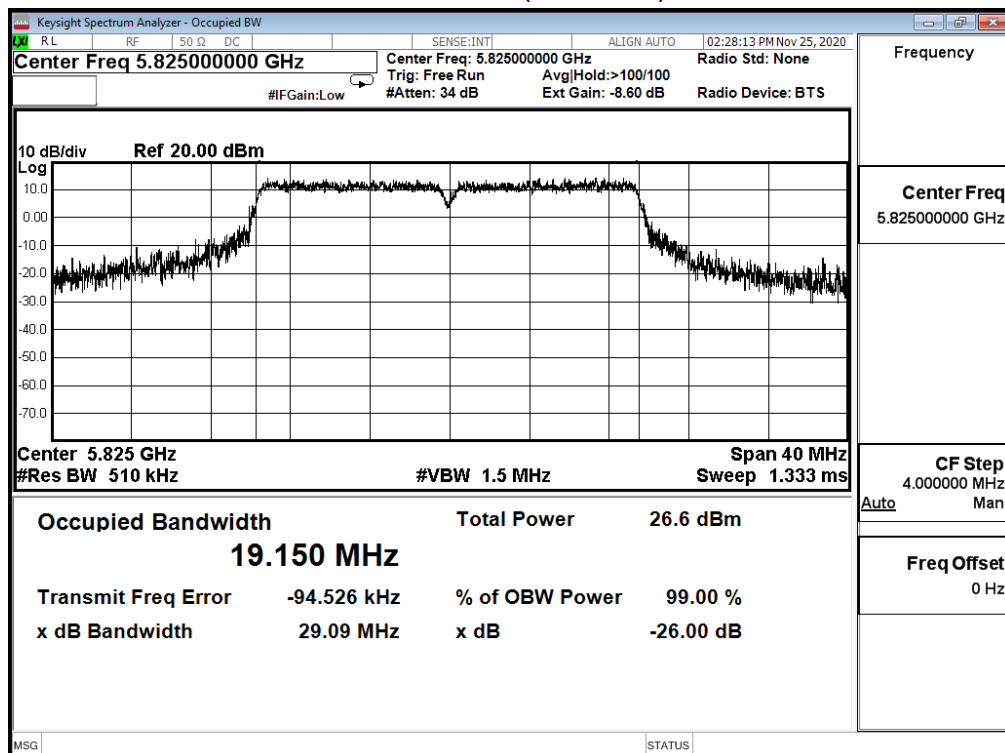
Channel 149 (5745MHz)



Channel 157 (5785MHz)



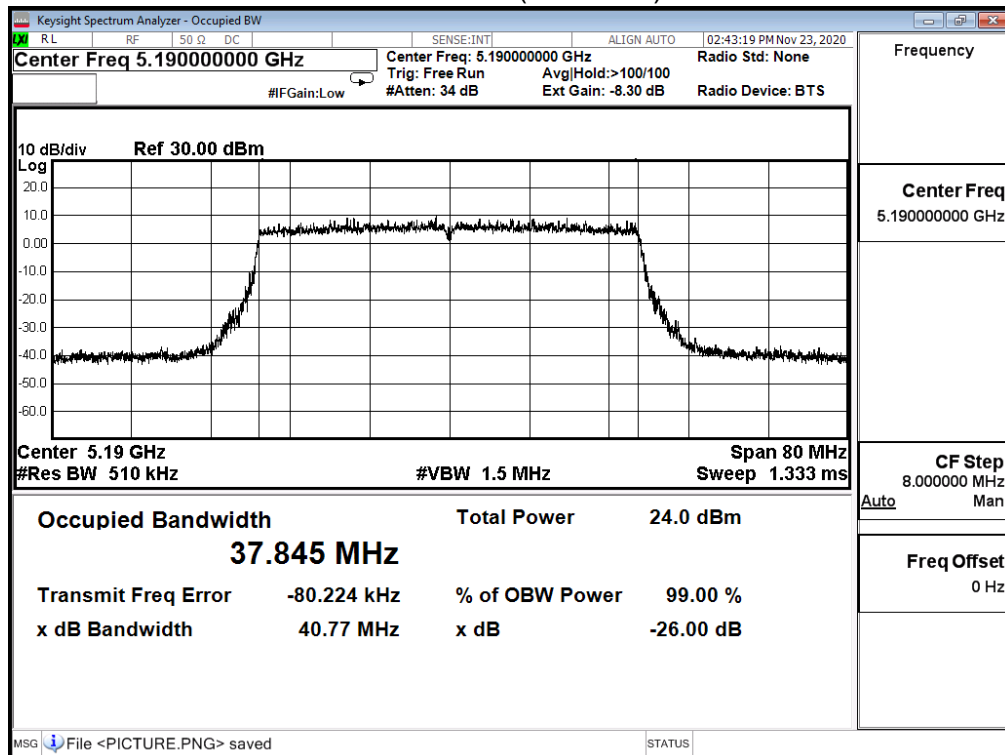
Channel165 (5825MHz)



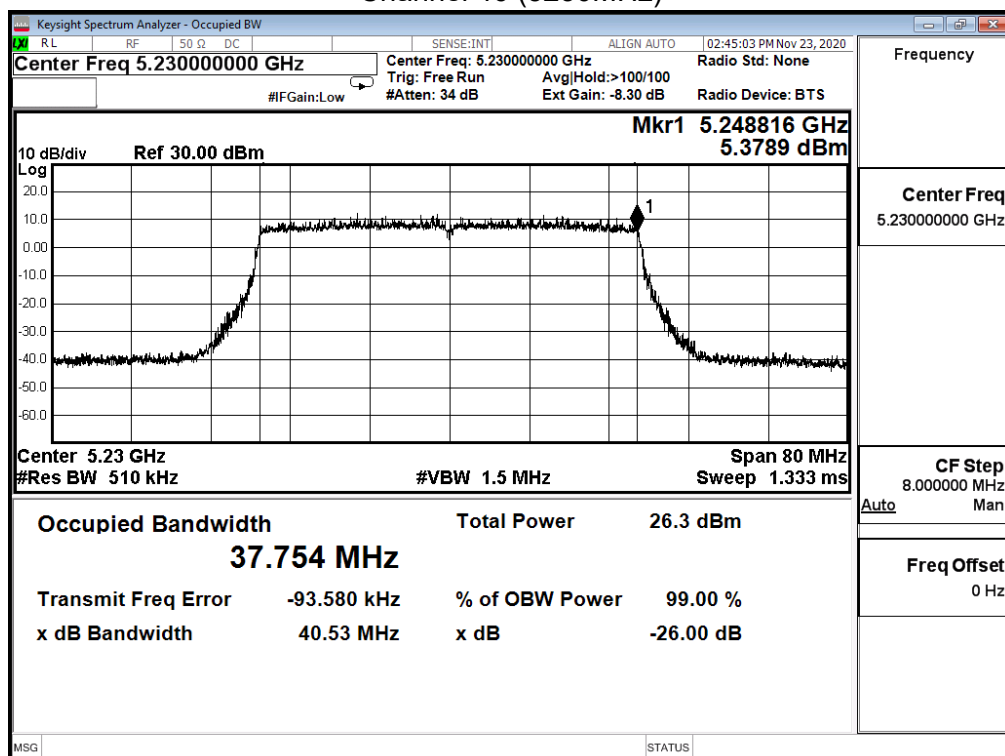
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

| IEEE 802.11ax_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 |

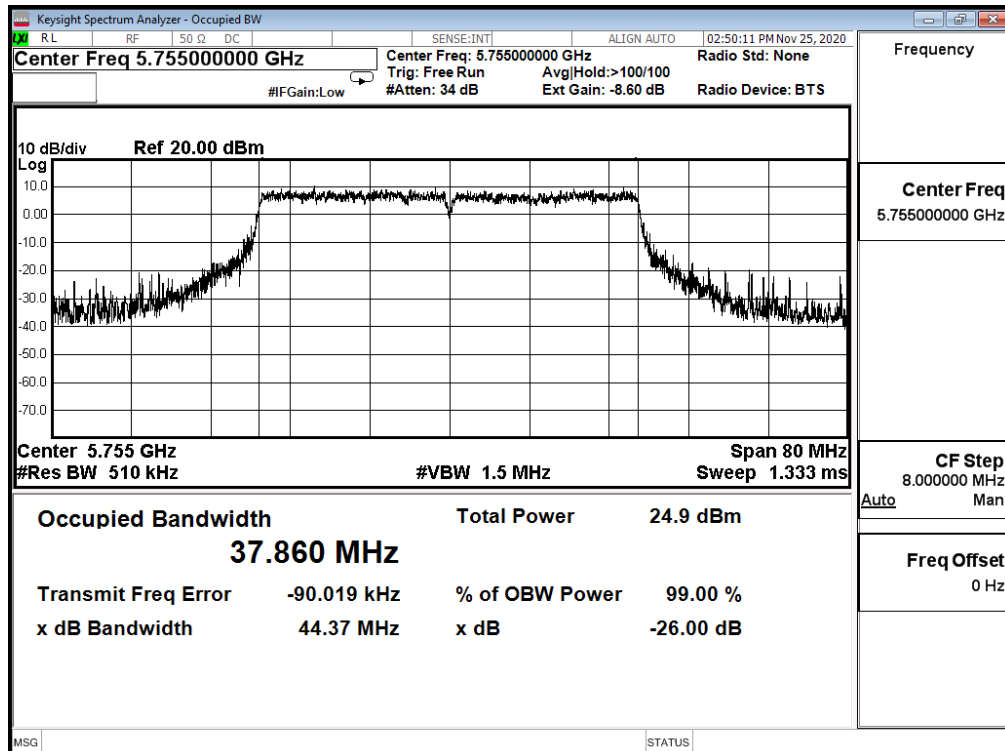
Channel 38 (5190MHz)



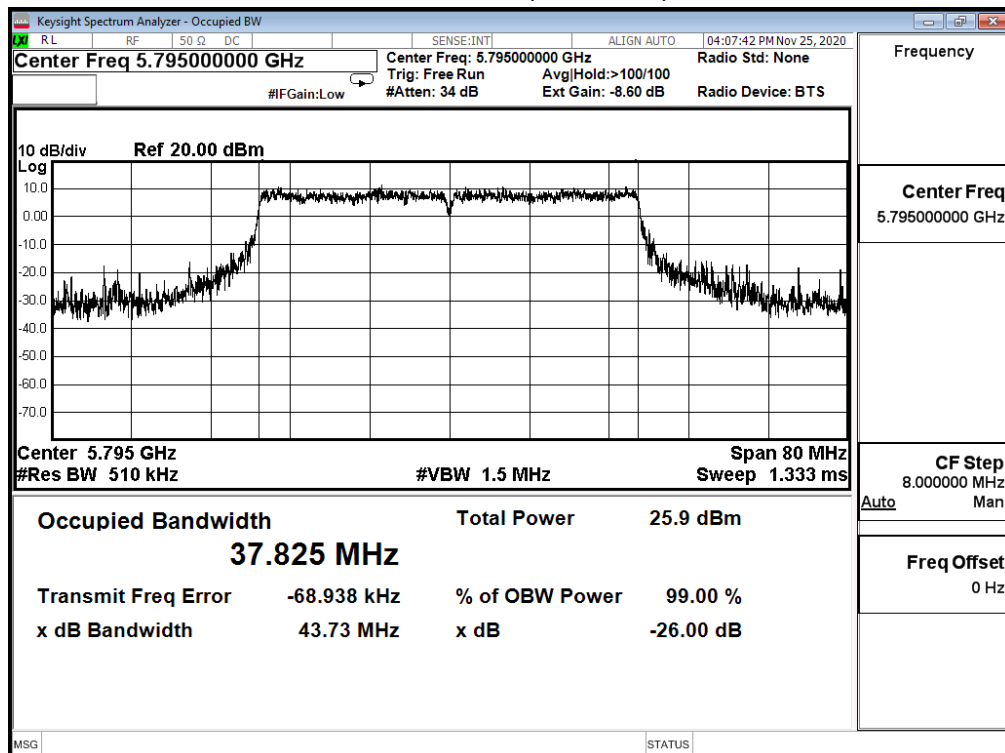
Channel 46 (5230MHz)



Channel 151 (5755MHz)



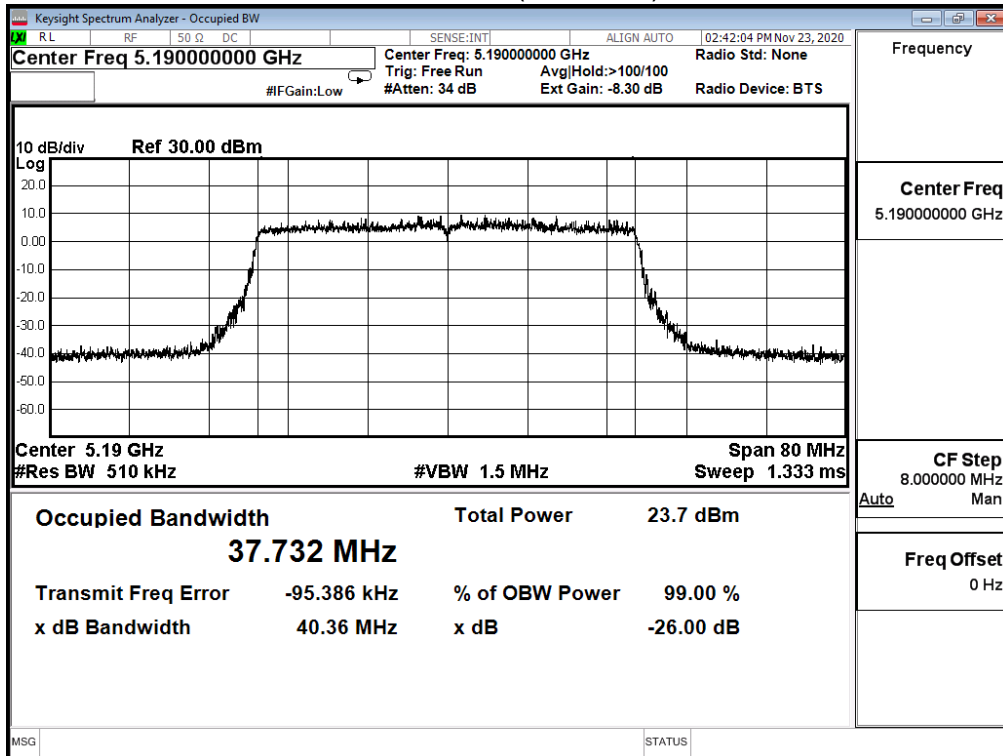
Channel 159 (5795MHz)



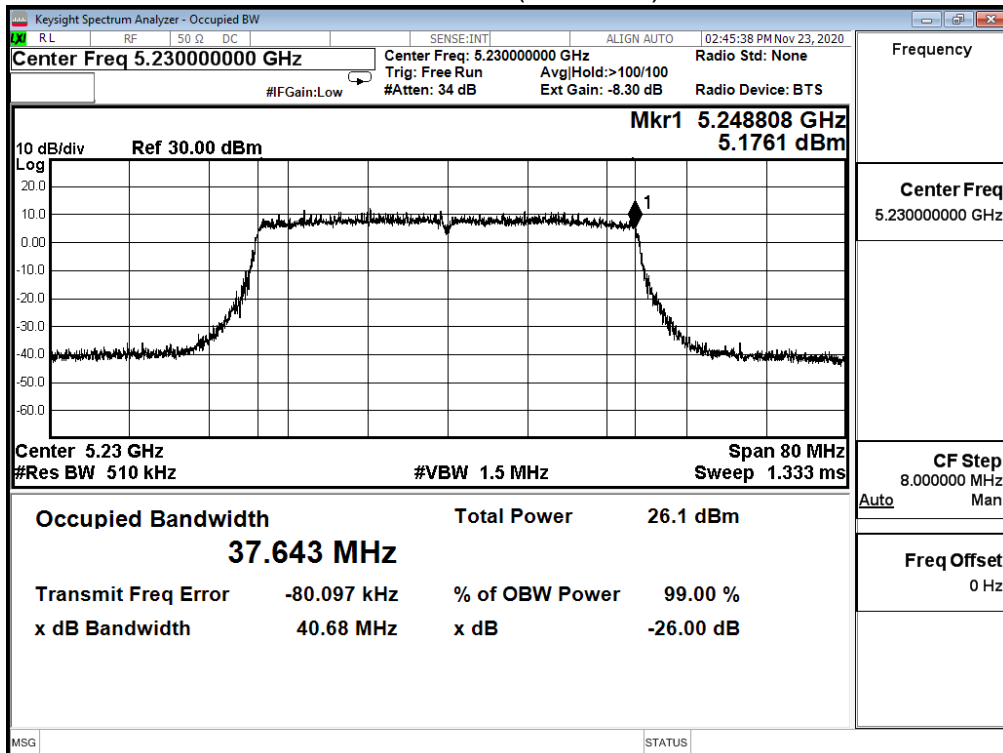
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

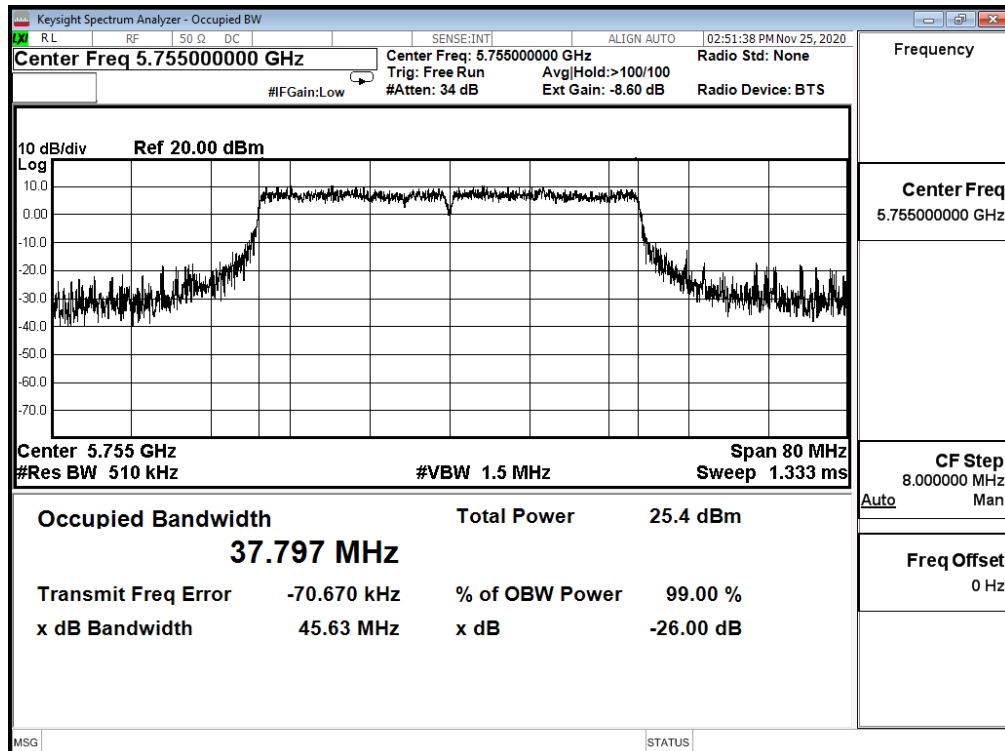
Channel 38 (5190MHz)



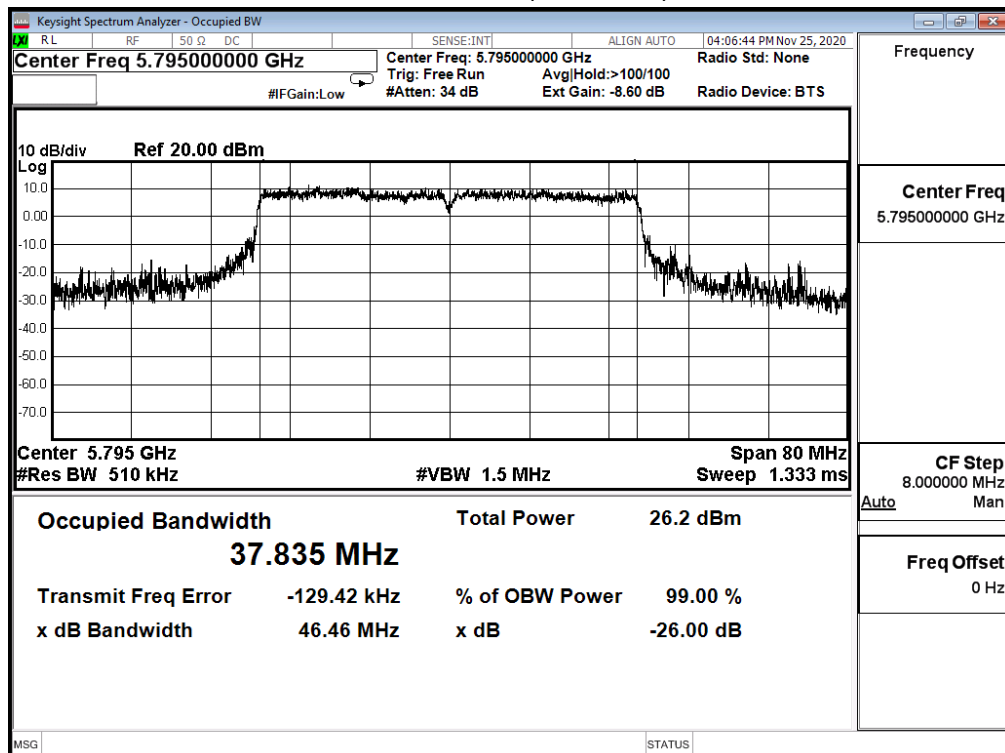
Channel 46 (5230MHz)



Channel 151 (5755MHz)



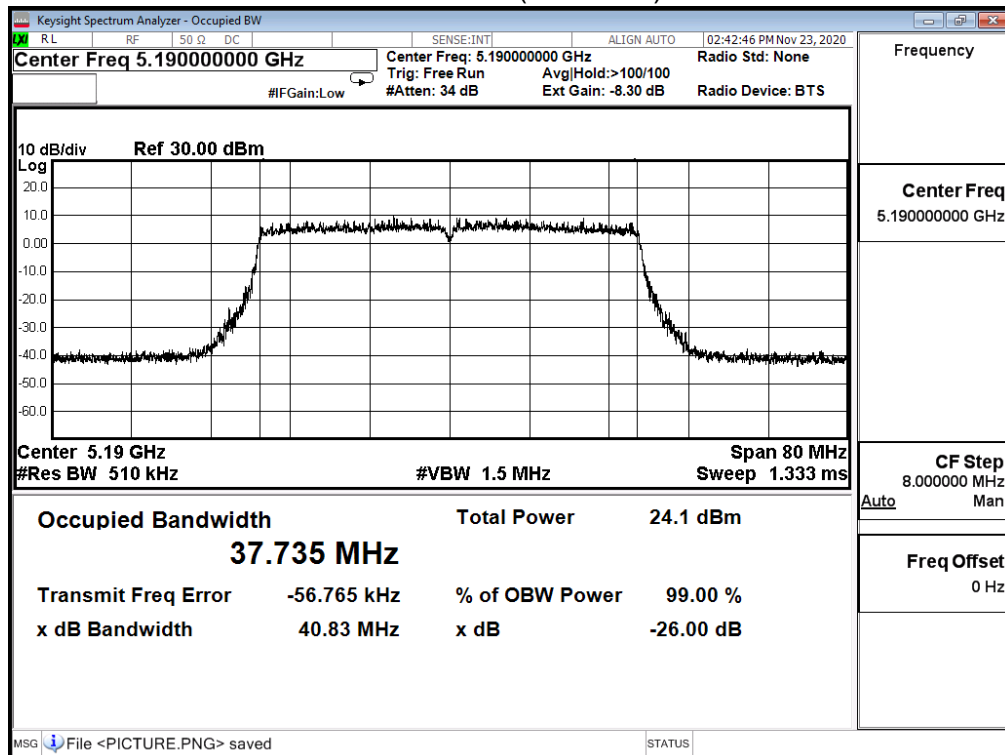
Channel 159 (5795MHz)



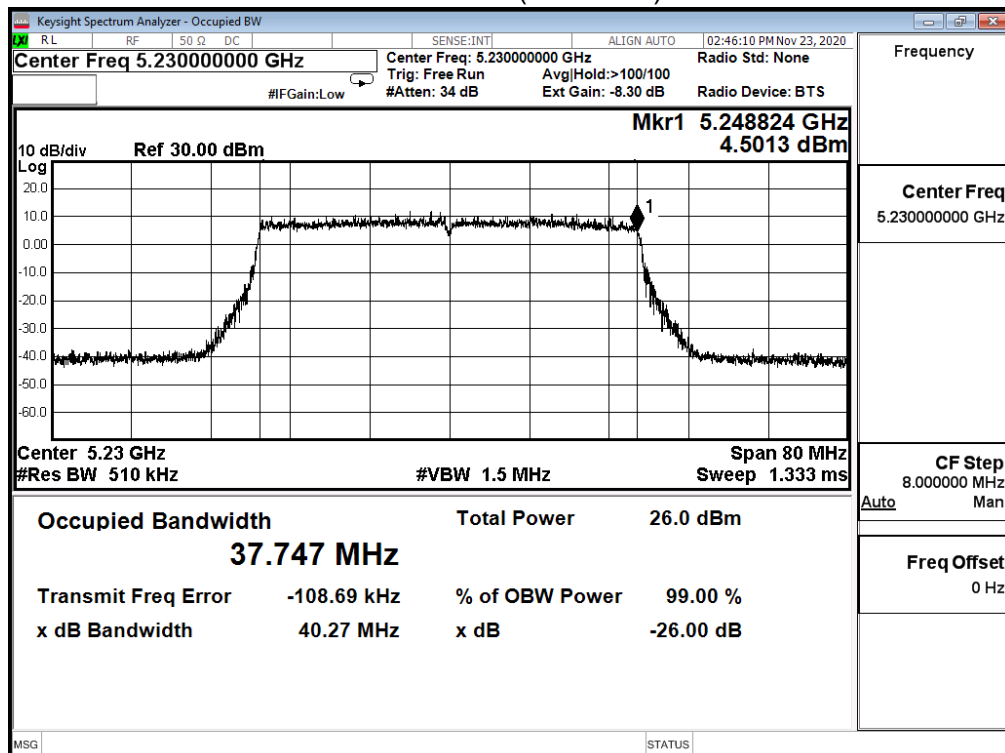
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

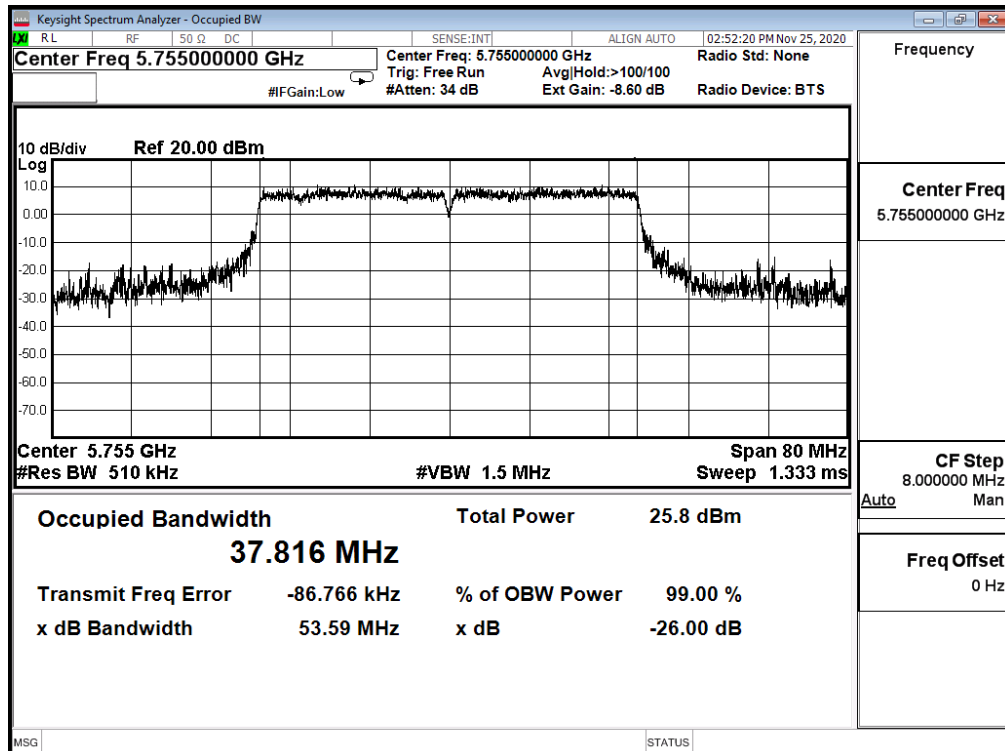
Channel 38 (5190MHz)



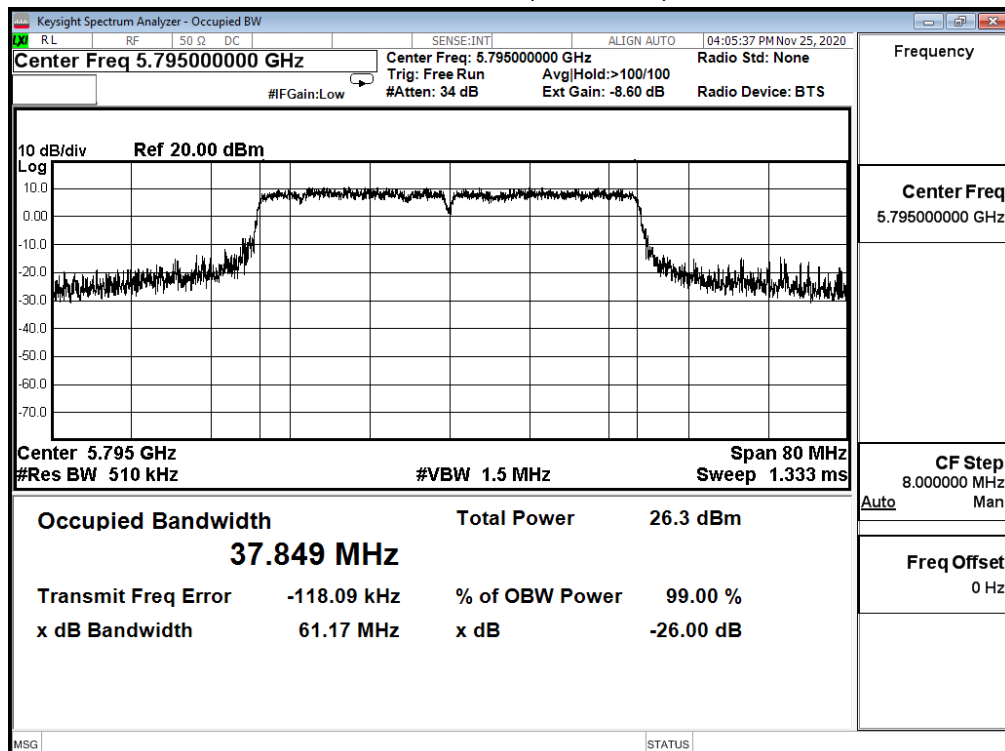
Channel 46 (5230MHz)



Channel 151 (5755MHz)



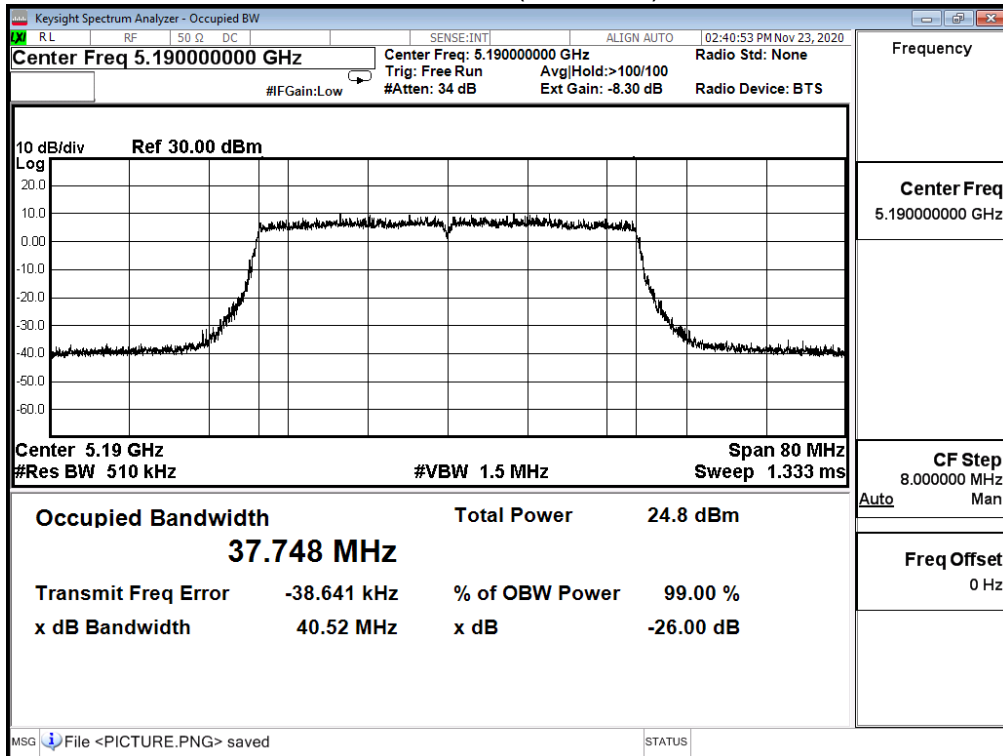
Channel 159 (5795MHz)



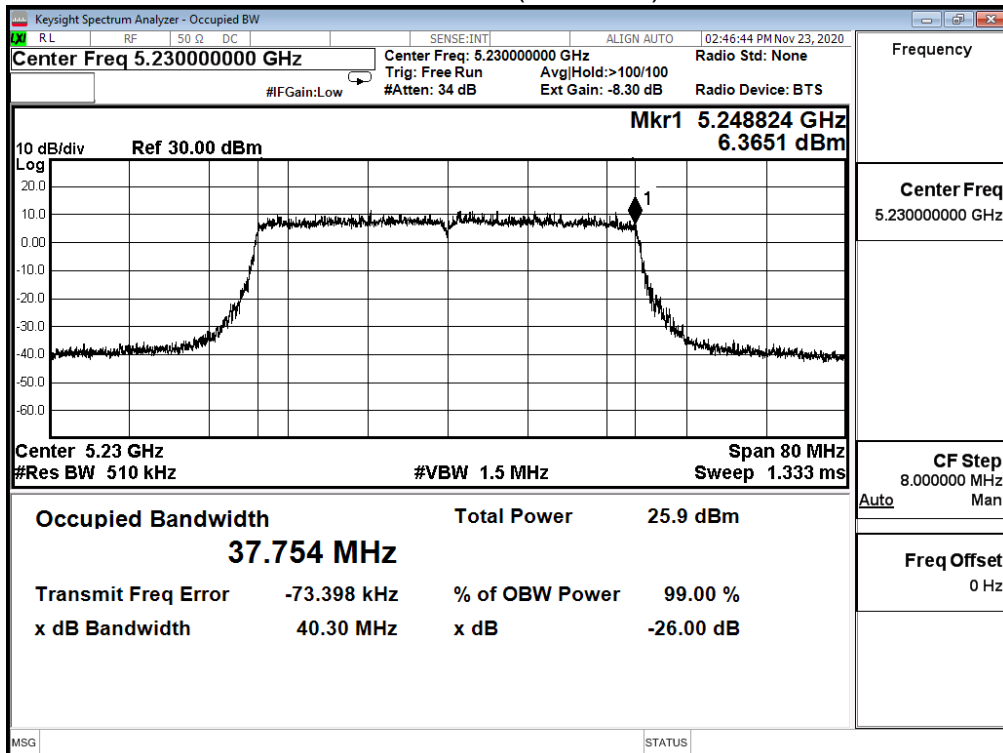
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/23~2020/11/25 | Test Site | SR12-H |
| Test Temperature |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

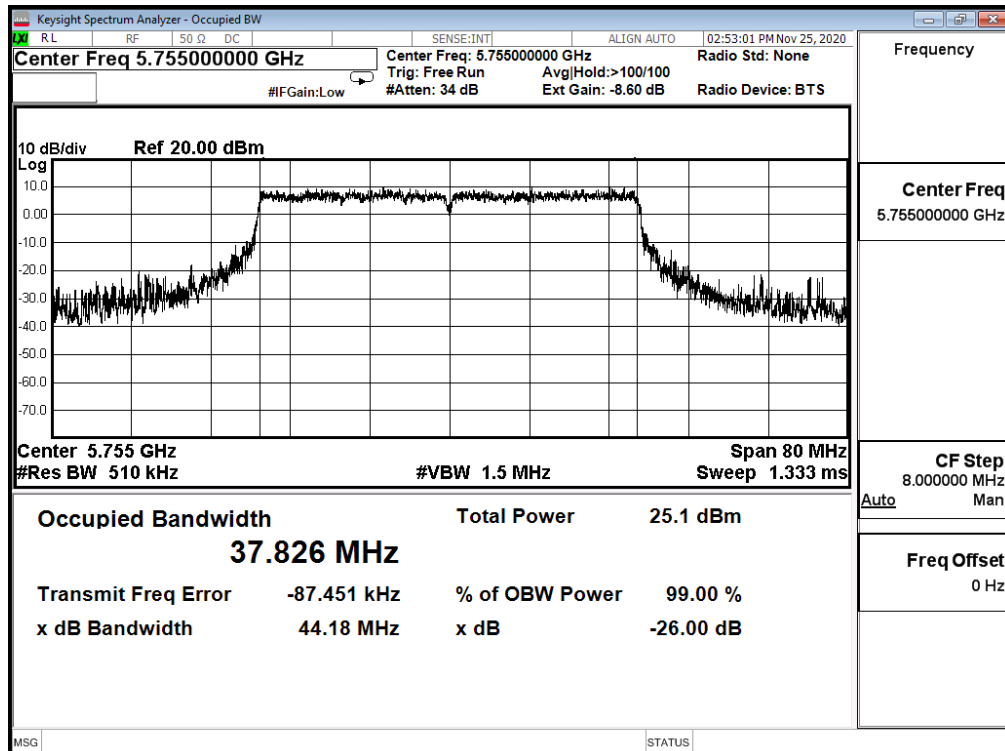
Channel 38 (5190MHz)



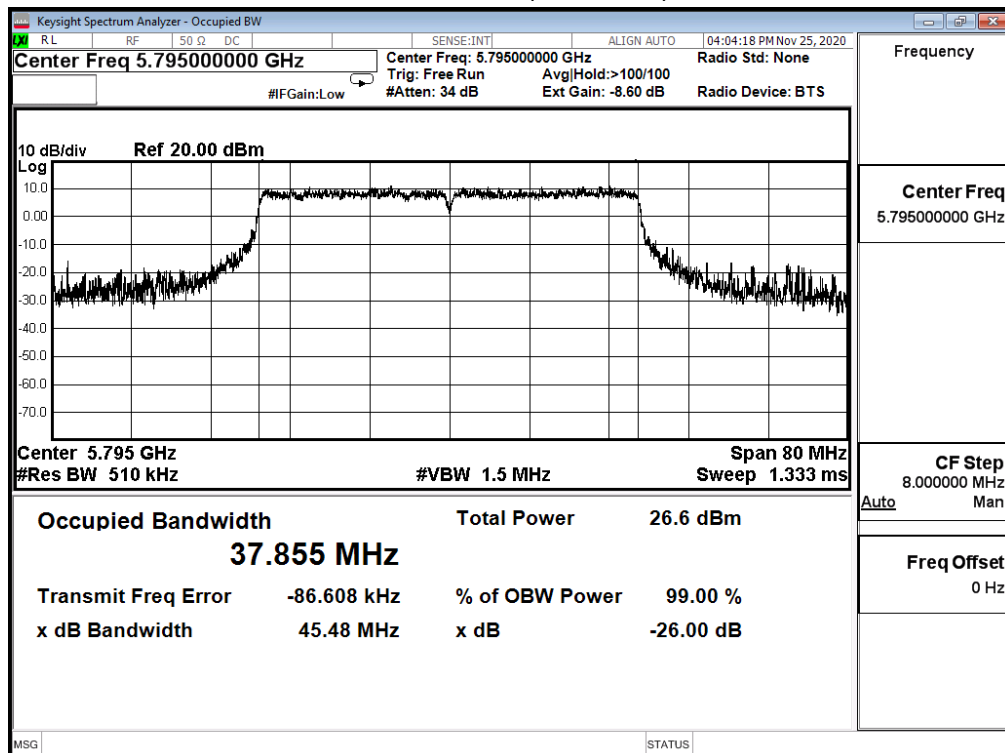
Channel 46 (5230MHz)



Channel 151 (5755MHz)



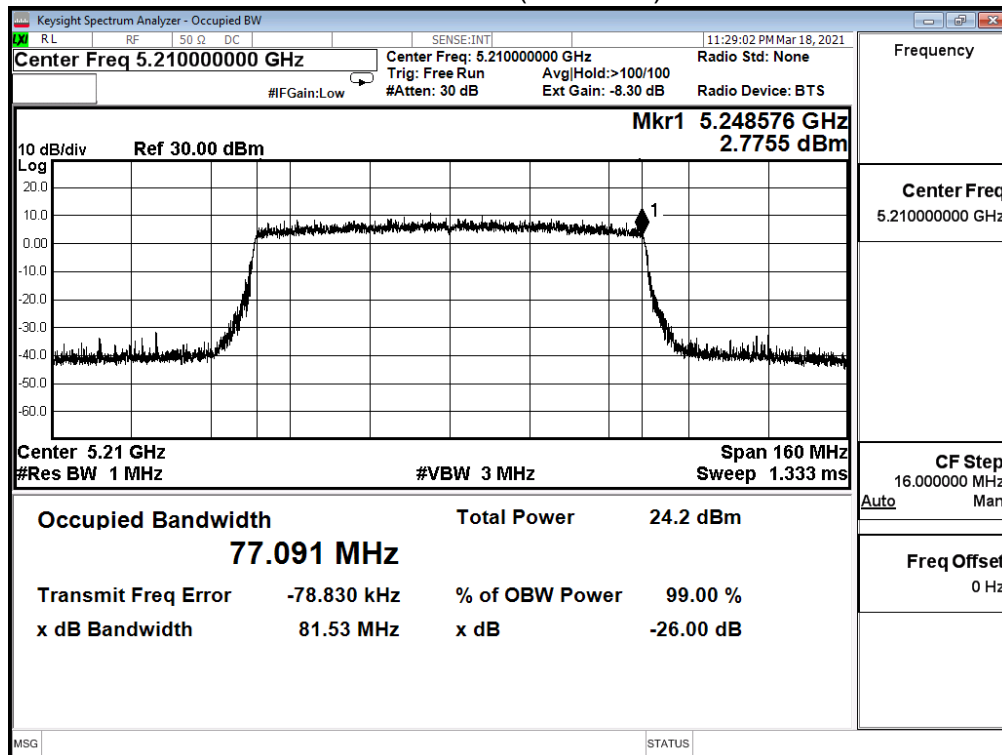
Channel 159 (5795MHz)



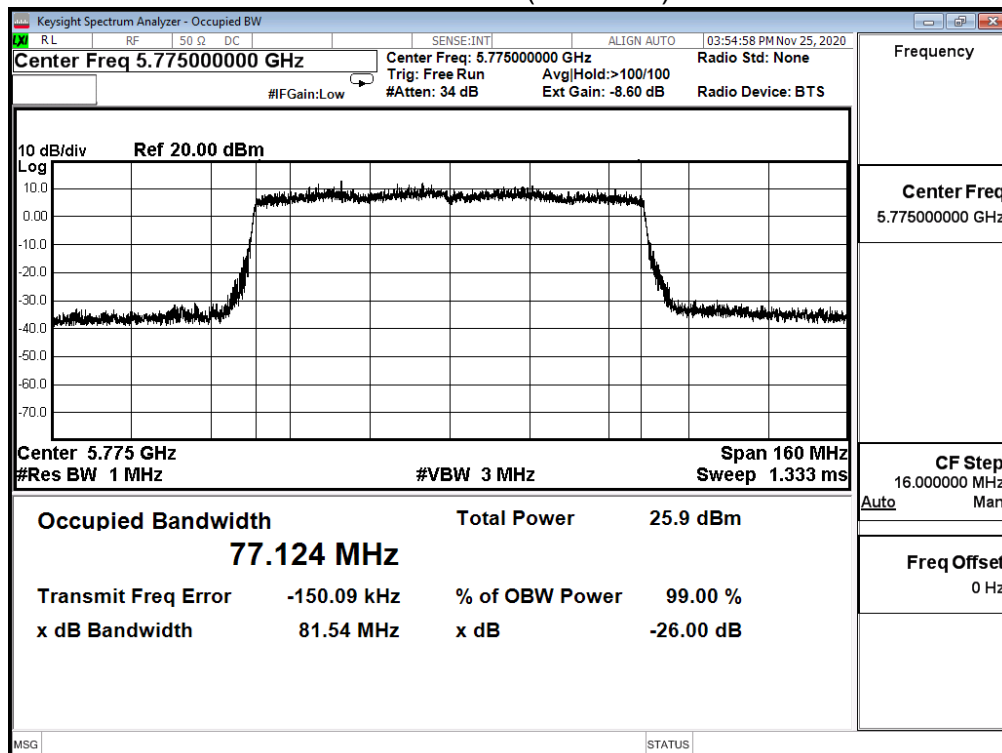
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25~2021/03/18 | Test Site | SR12-H |
| Test Temperature |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



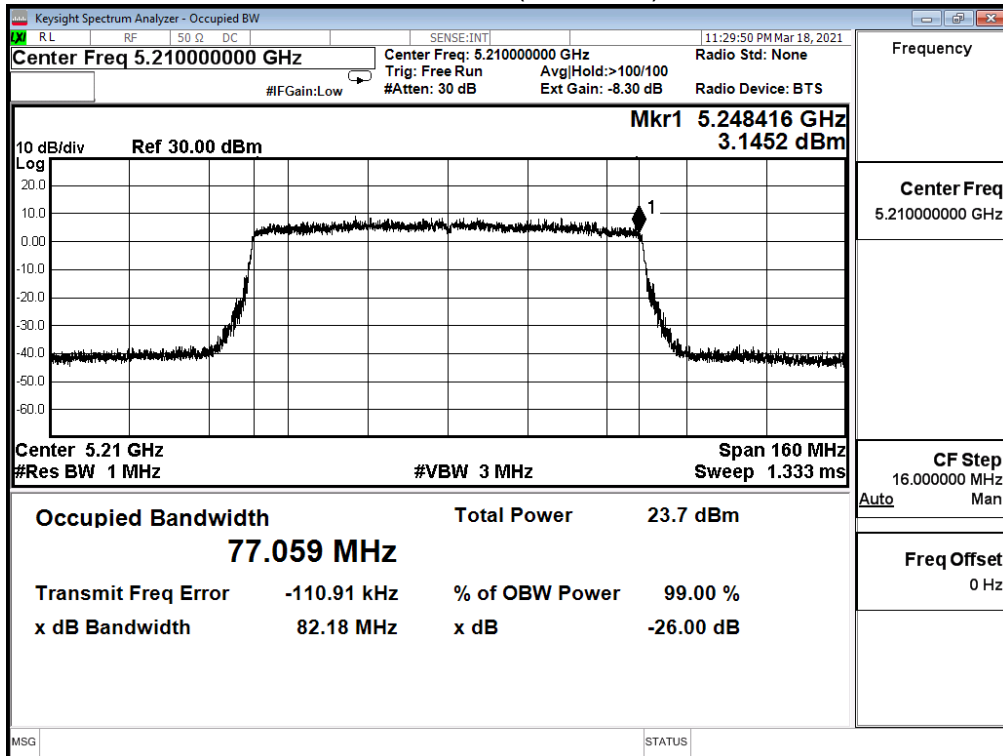
Channel 155 (5775MHz)



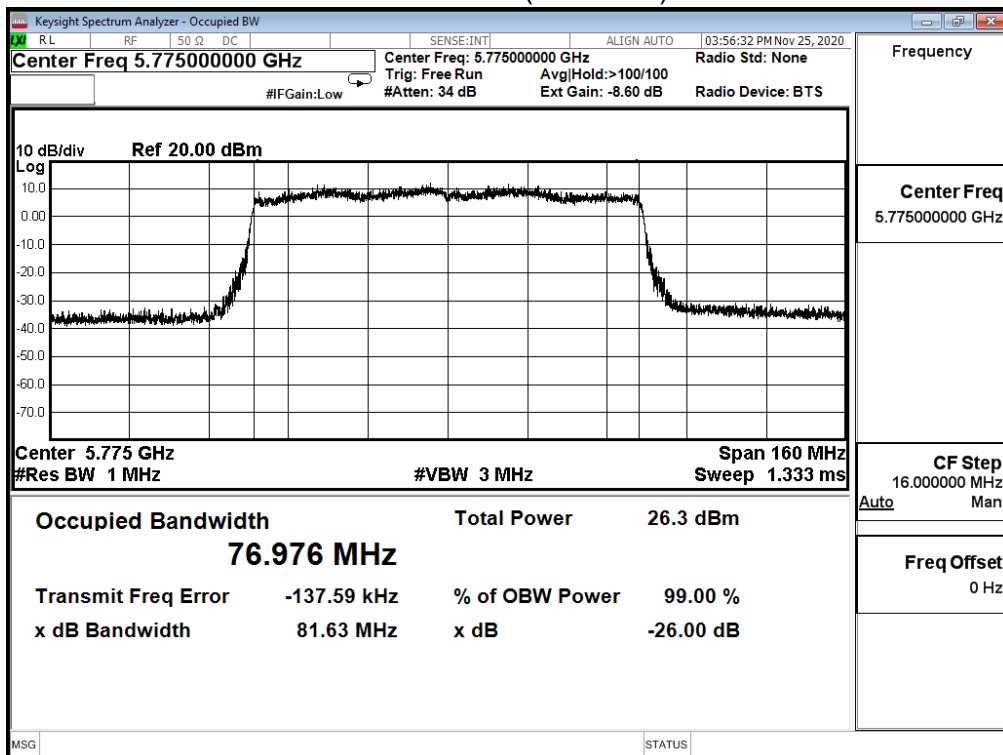
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25~2021/03/18 | Test Site | SR12-H |
| Test Temperature |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



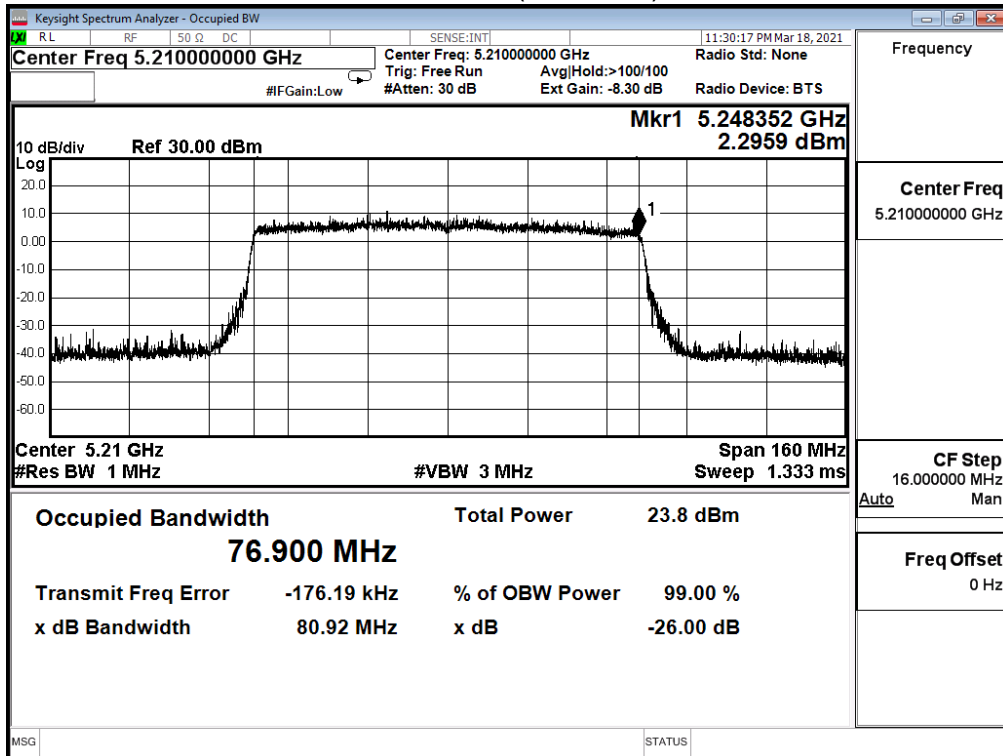
Channel 155 (5775MHz)



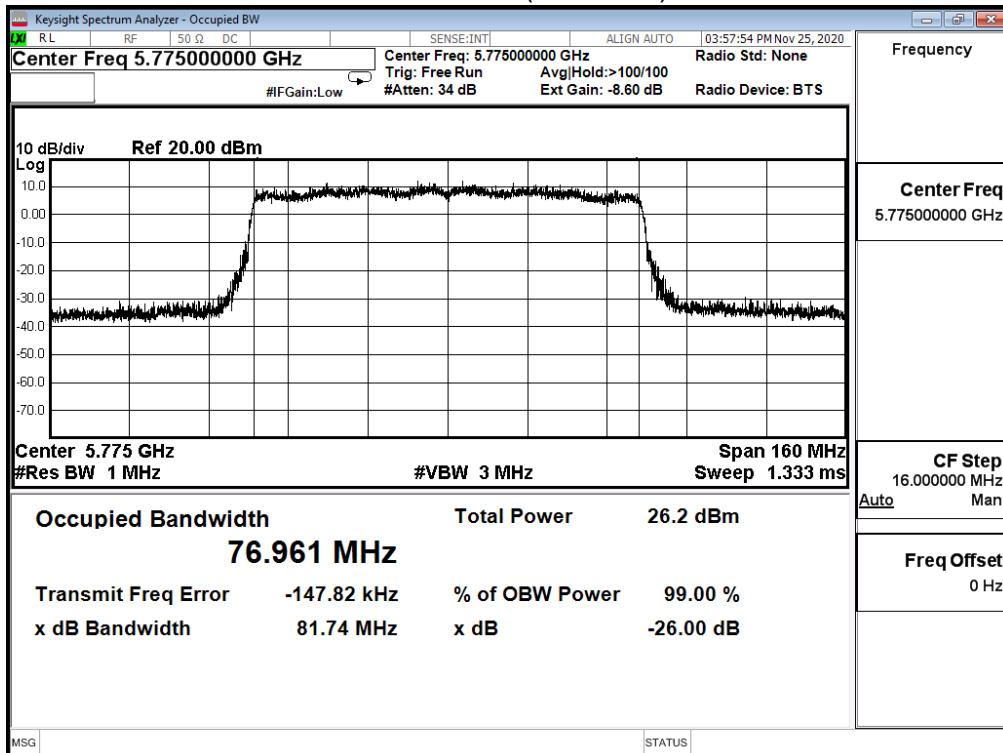
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25~2021/03/18 | Test Site | SR12-H |
| Test Temperature |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



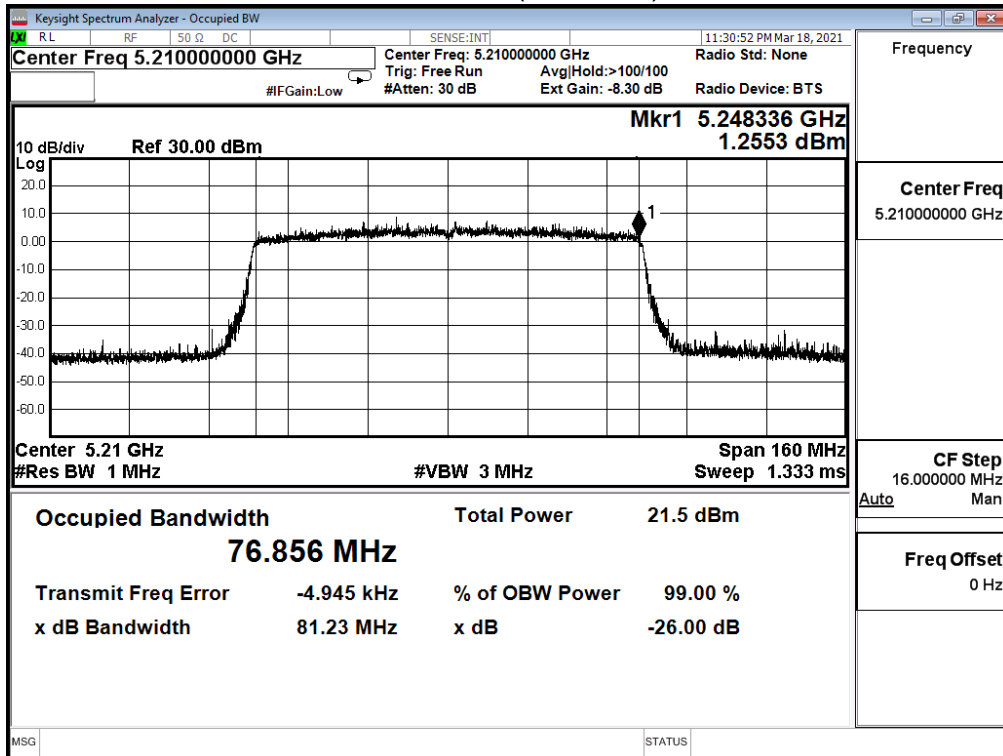
Channel 155 (5775MHz)



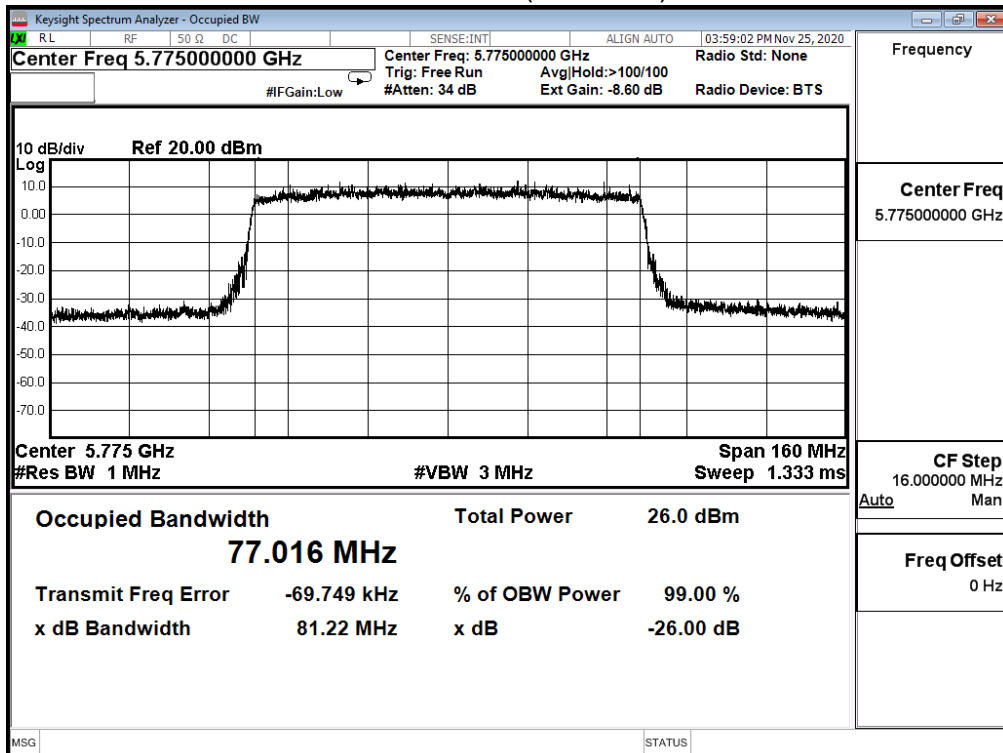
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | 26dB & 99% Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25~2021/03/18 | Test Site | SR12-H |
| Test Temperature |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



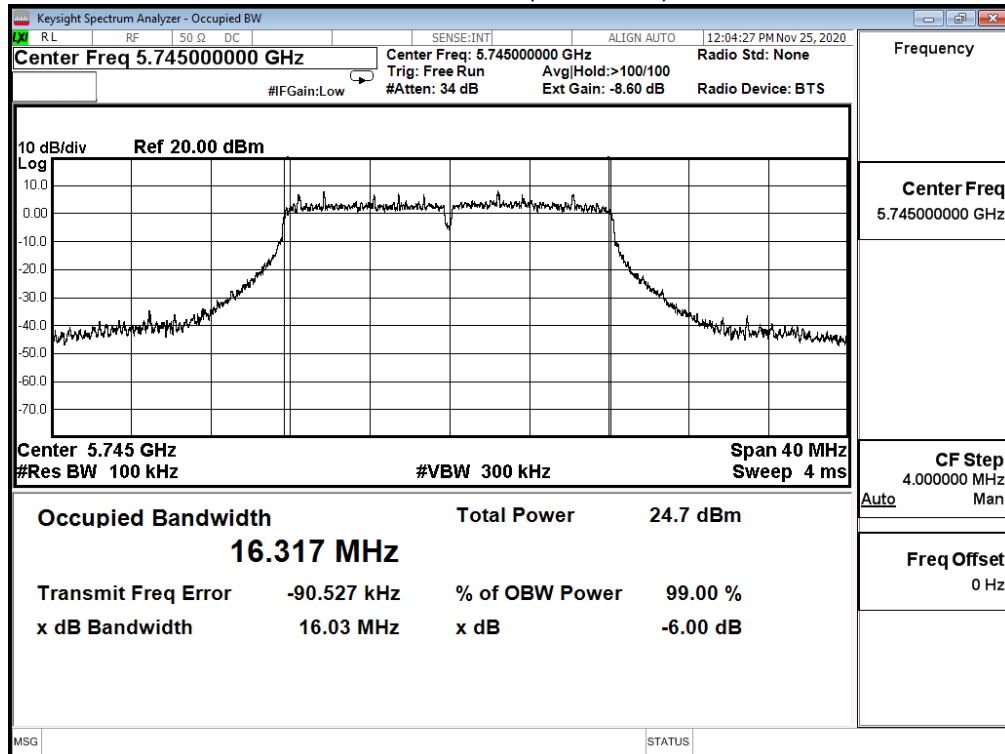
Channel 155 (5775MHz)



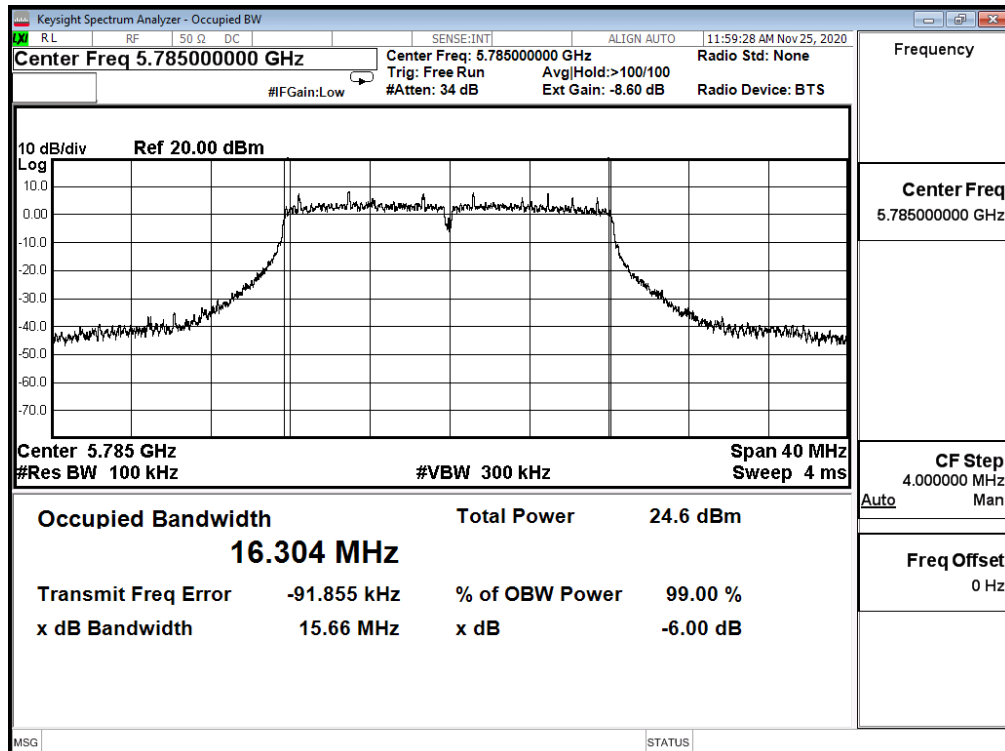
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity | 63.0%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

| 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 |

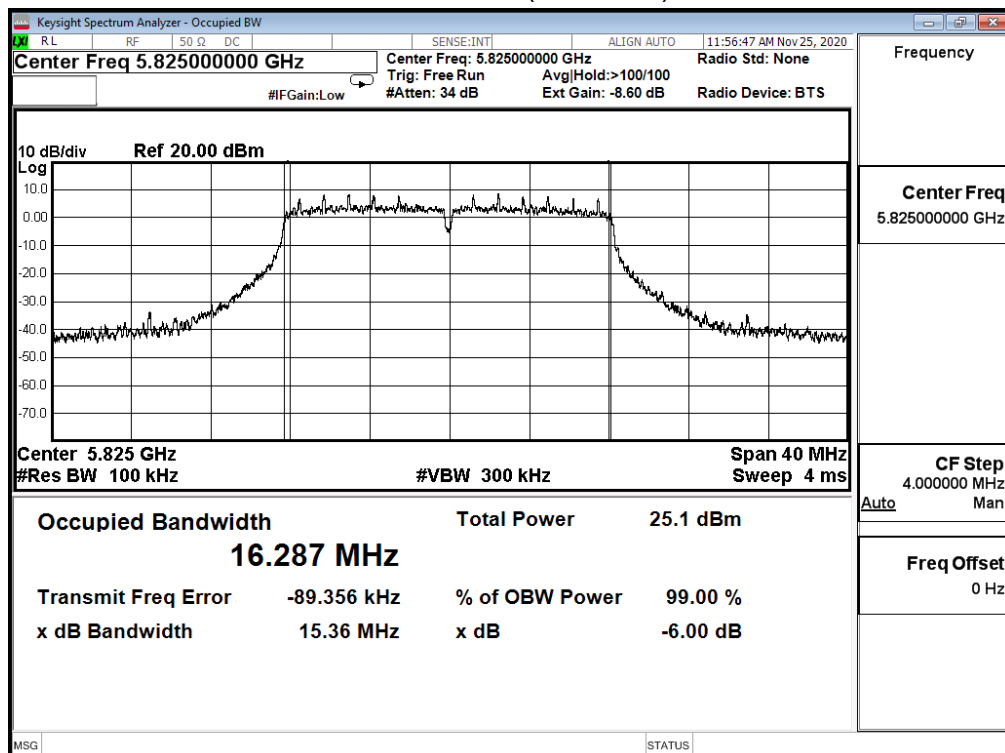
Channel 149 (5745MHz)



Channel 157 (5785MHz)



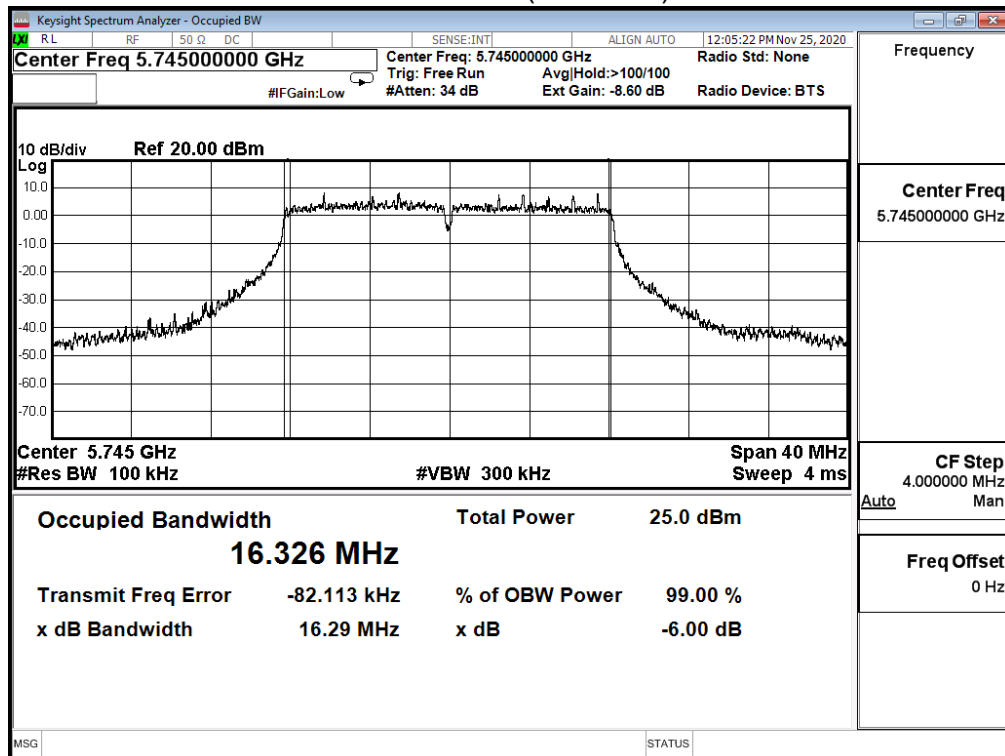
Channel 165 (5825MHz)



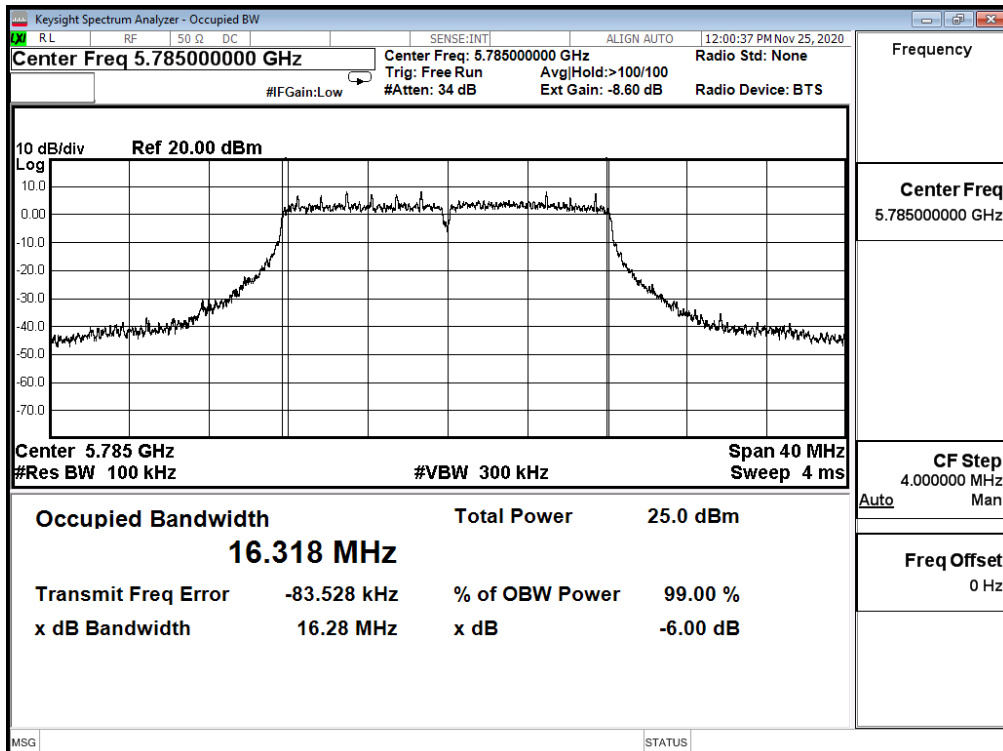
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity | 63.0%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

| 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 |

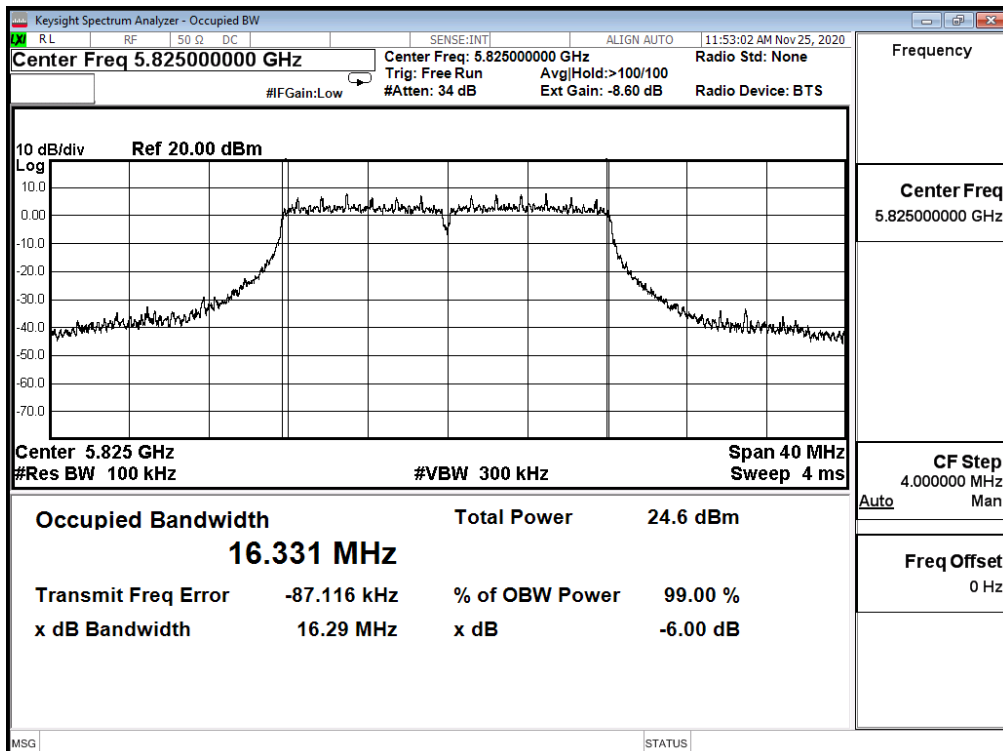
Channel 149 (5745MHz)



Channel 157 (5785MHz)



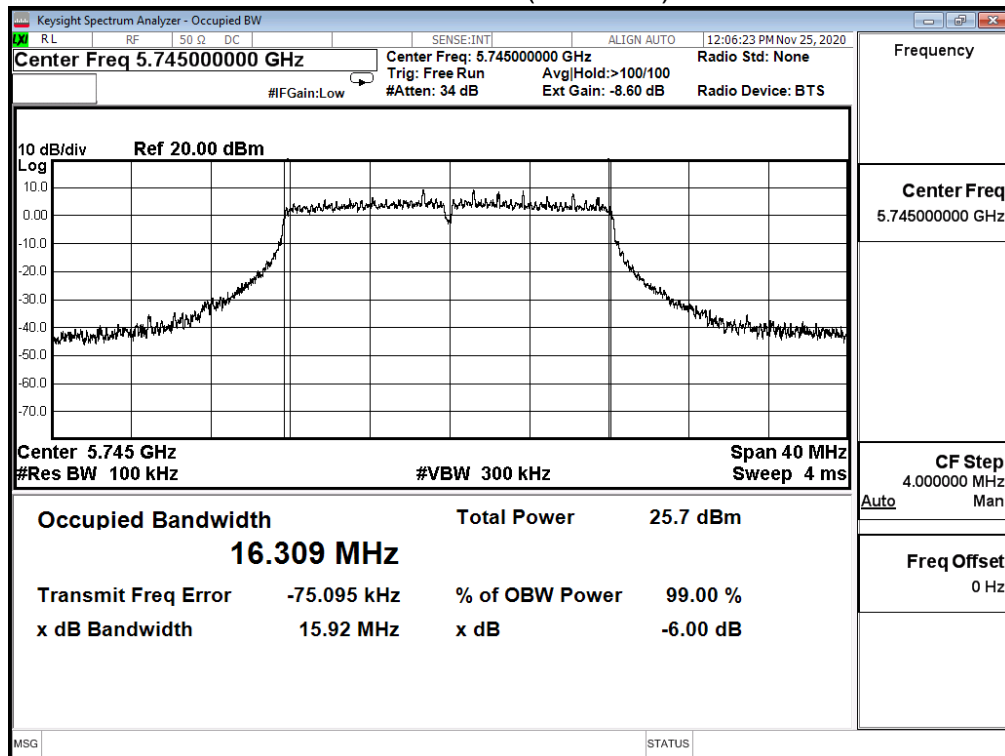
Channel 165 (5825MHz)



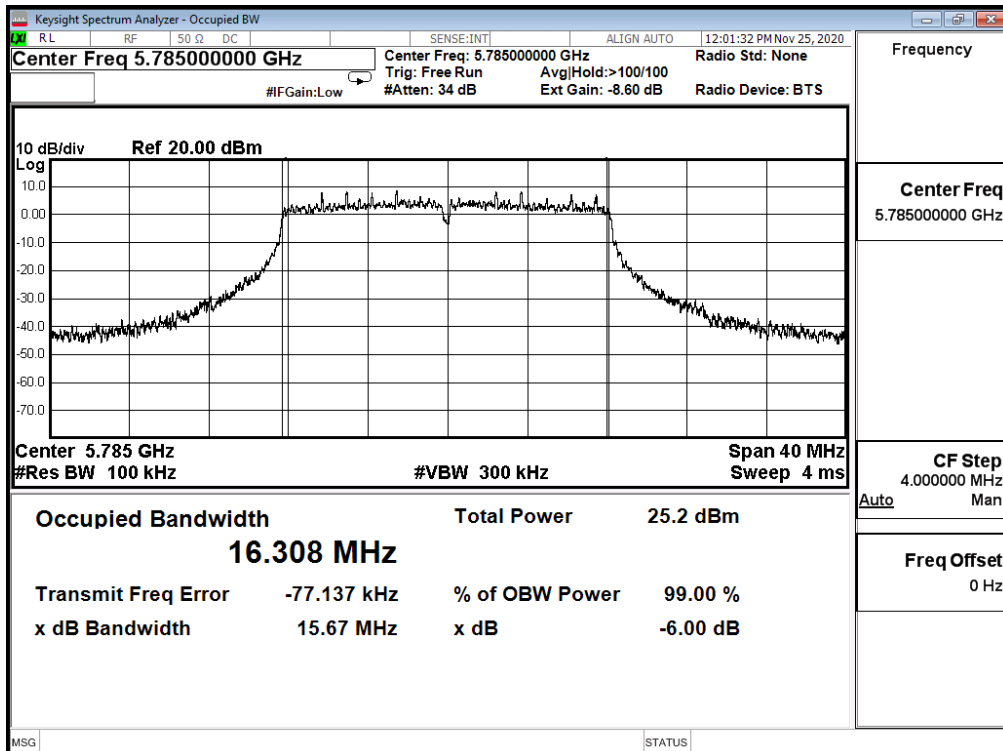
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity | 63.0%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

| 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 |

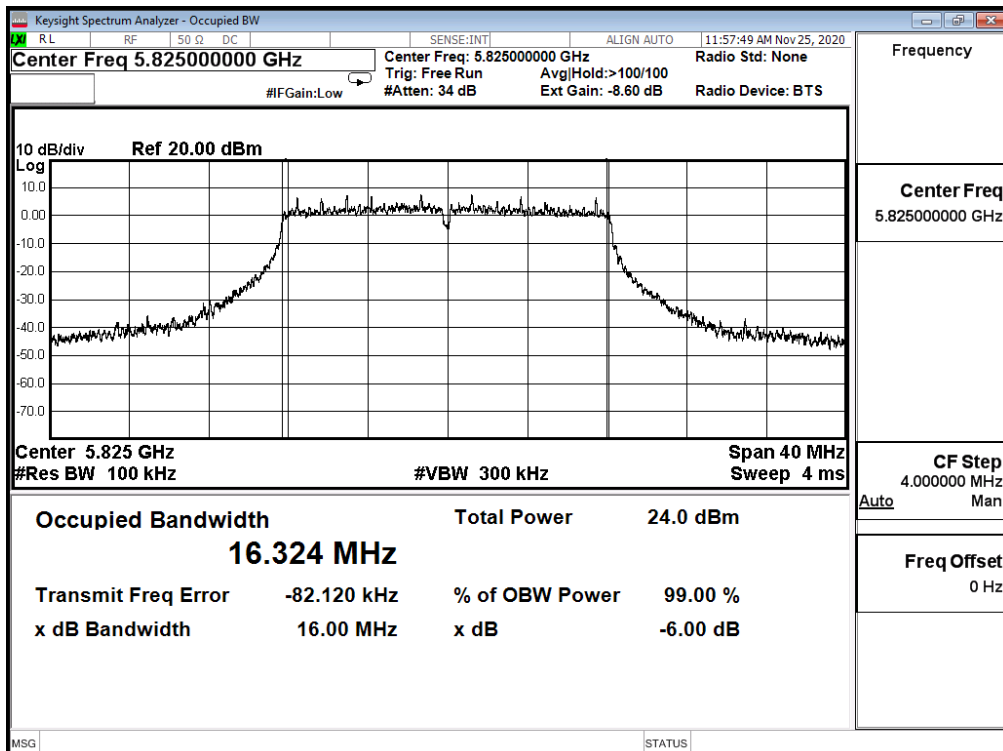
Channel 149 (5745MHz)



Channel 157 (5785MHz)



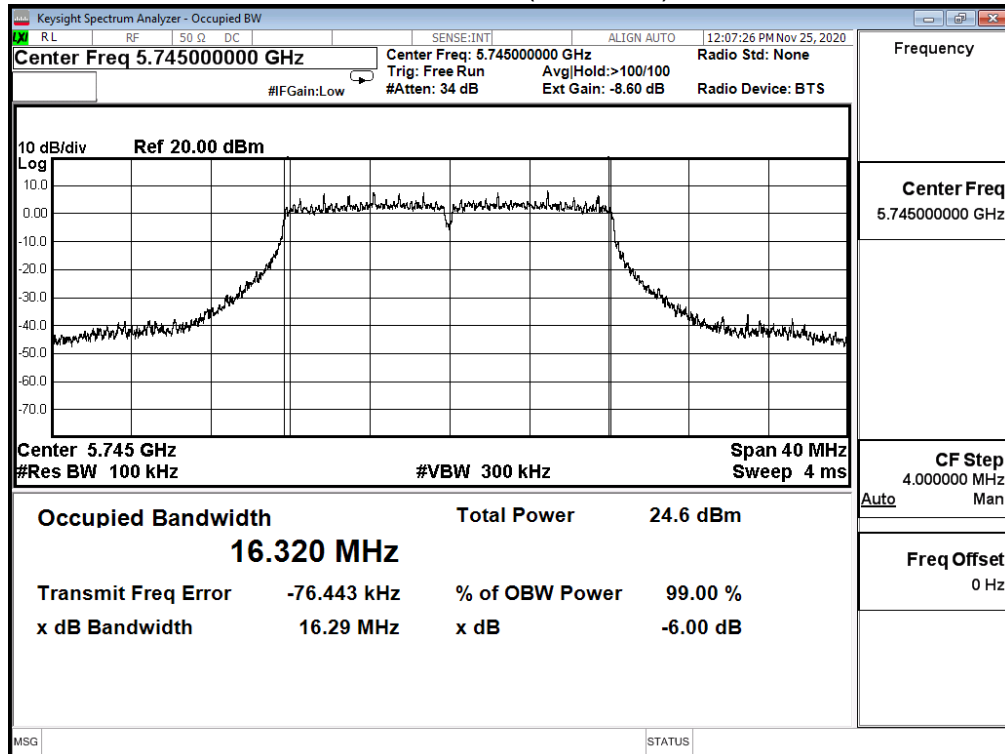
Channel 165 (5825MHz)



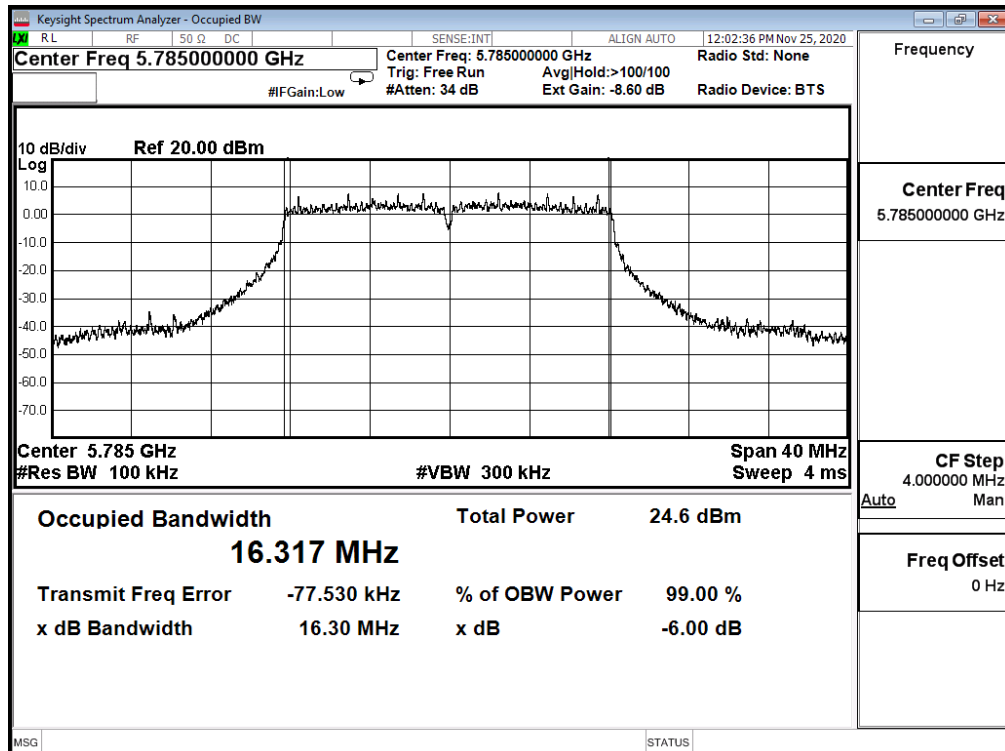
| | | | |
|------------------|---------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 1: Transmit CDD Mode | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity | 63.0%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

| 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 |

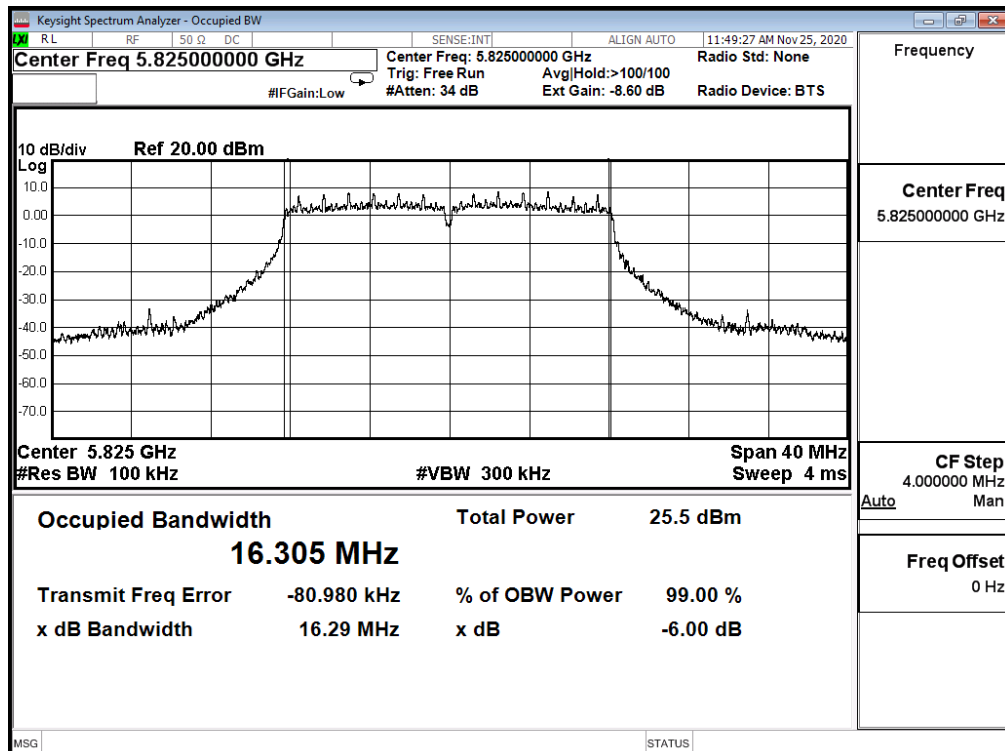
Channel 149 (5745MHz)



Channel 157 (5785MHz)



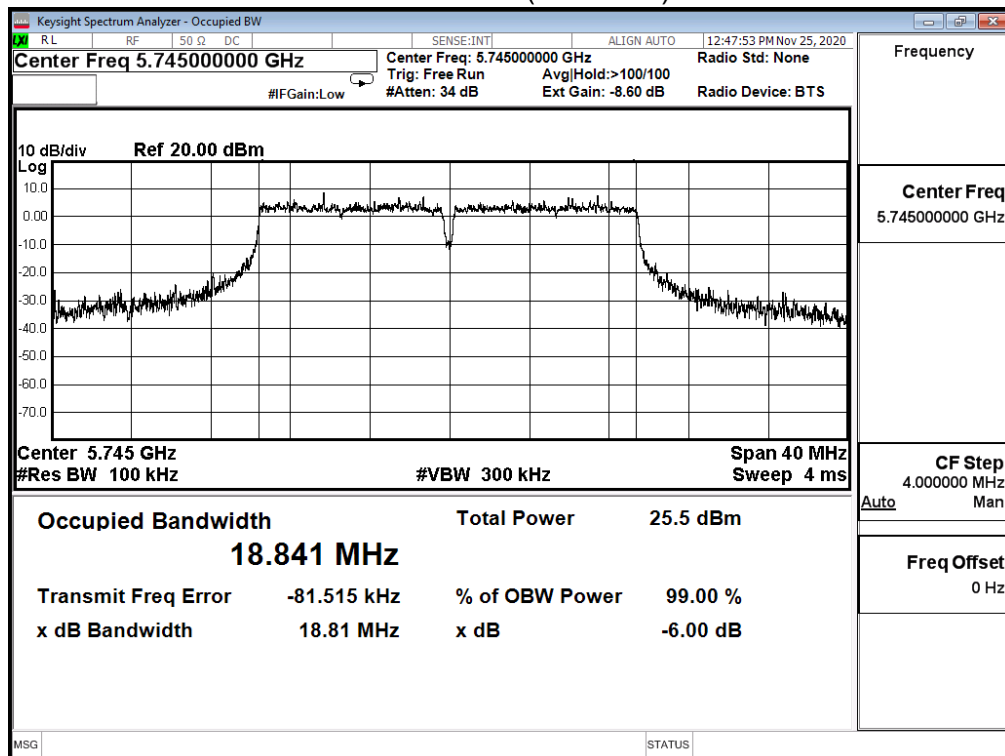
Channel 165 (5825MHz)



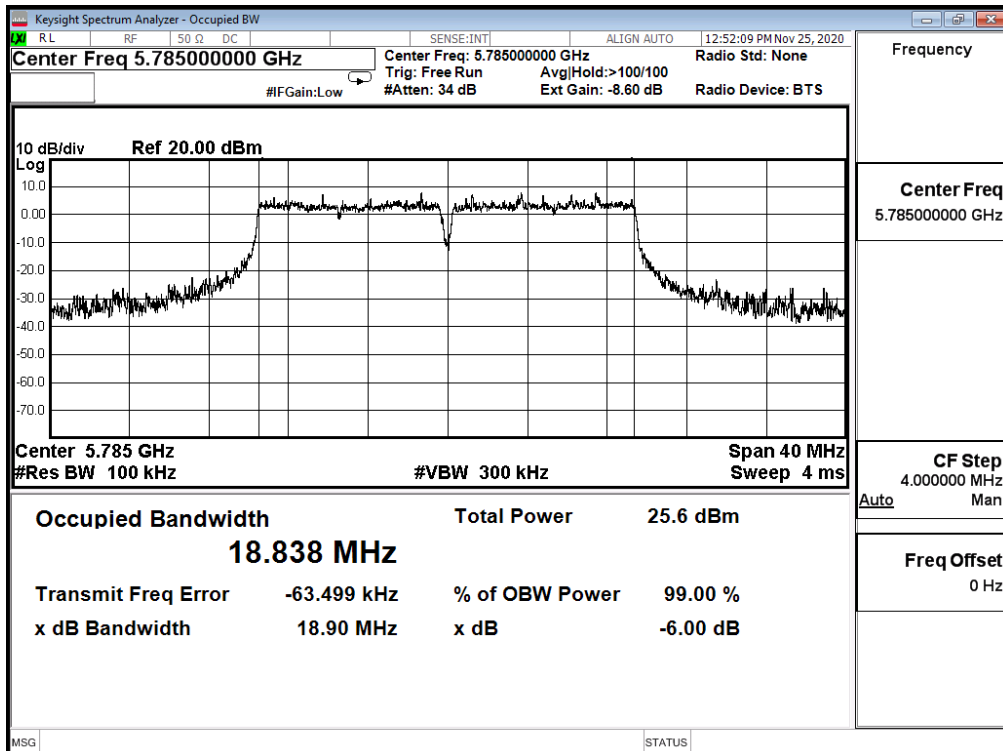
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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

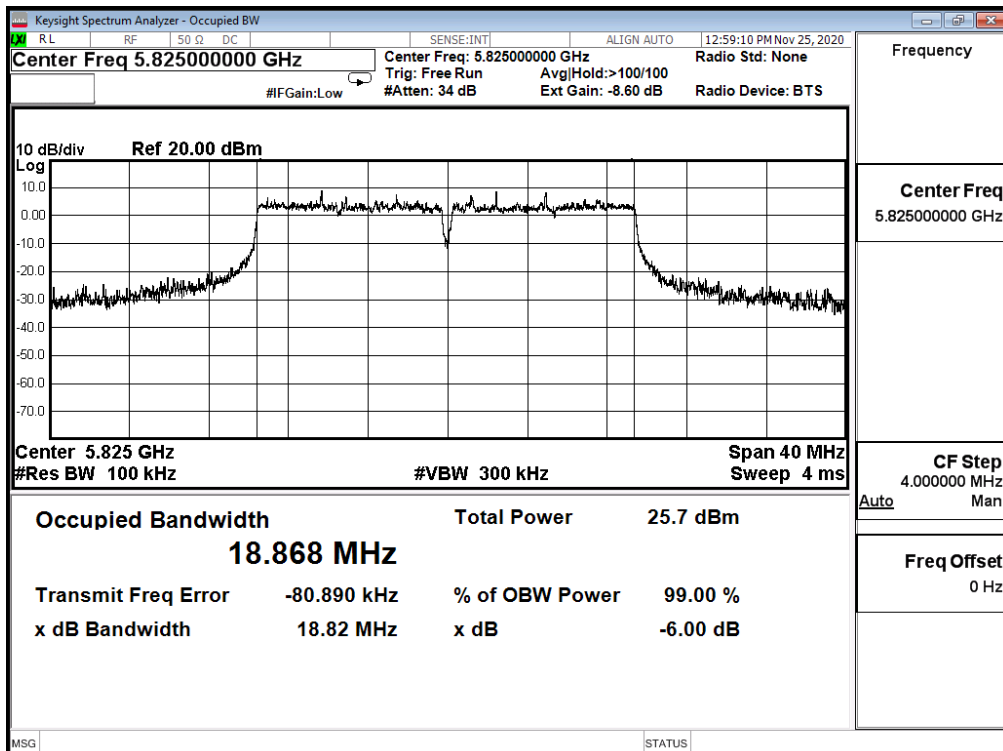
Channel 149 (5745MHz)



Channel 157 (5785MHz)



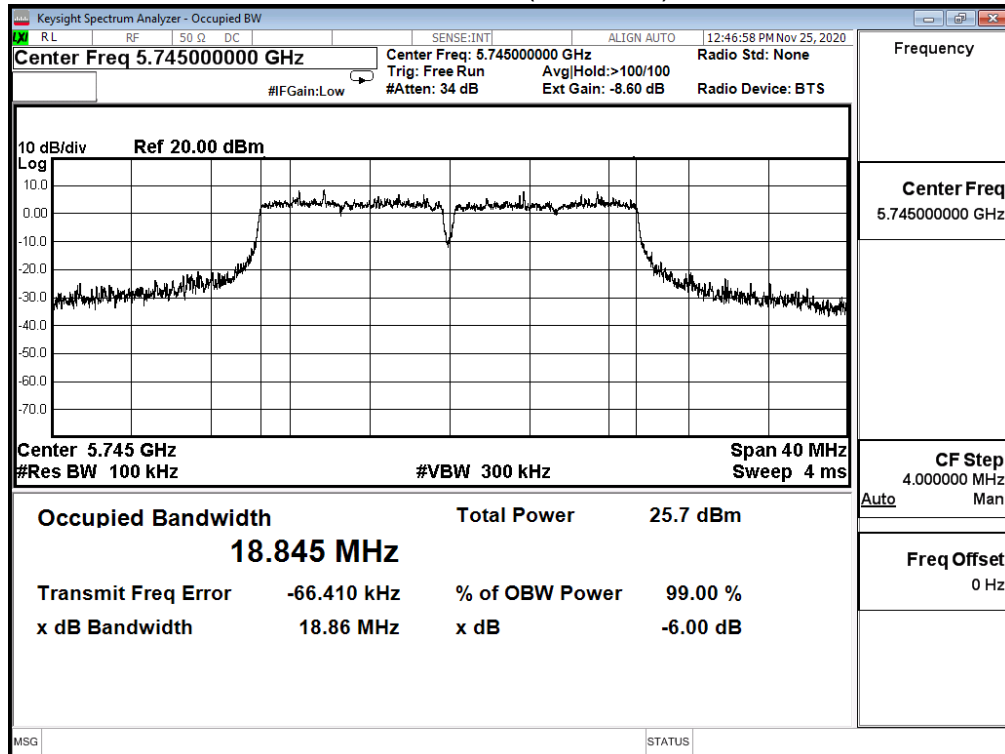
Channel 165 (5825MHz)



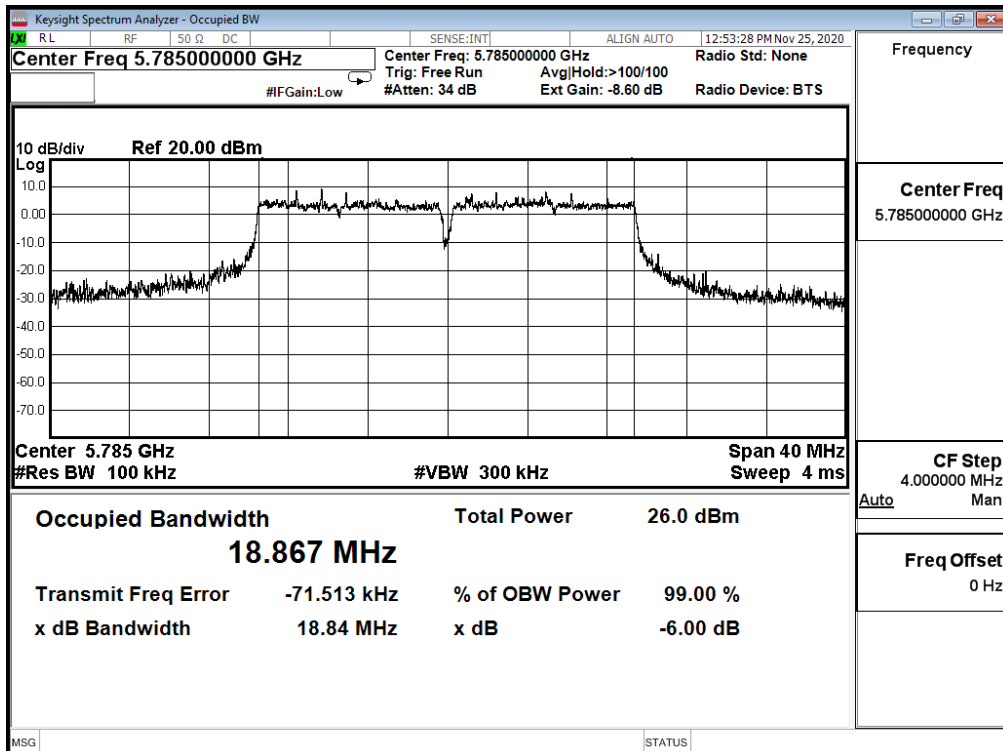
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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

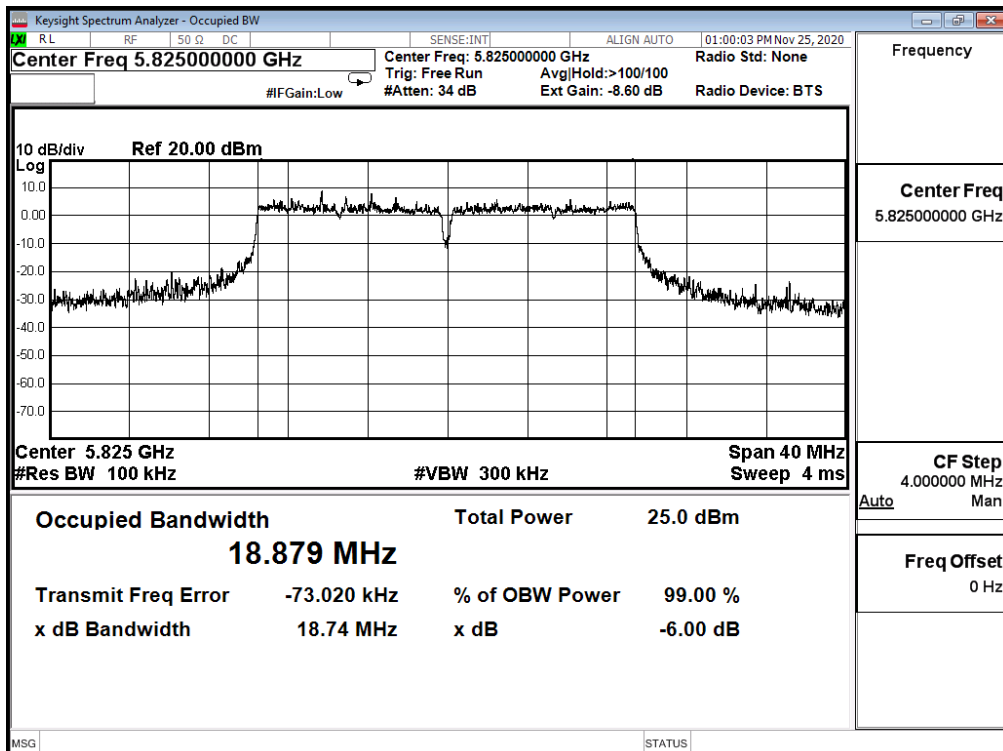
Channel 149 (5745MHz)



Channel 157 (5785MHz)



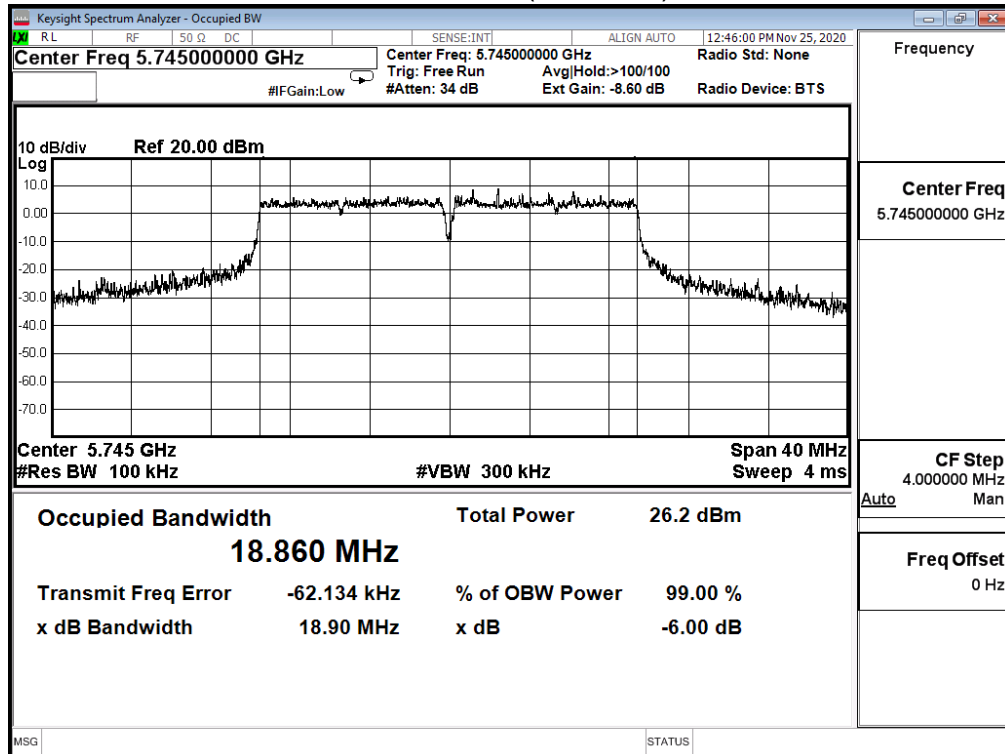
Channel 165 (5825MHz)



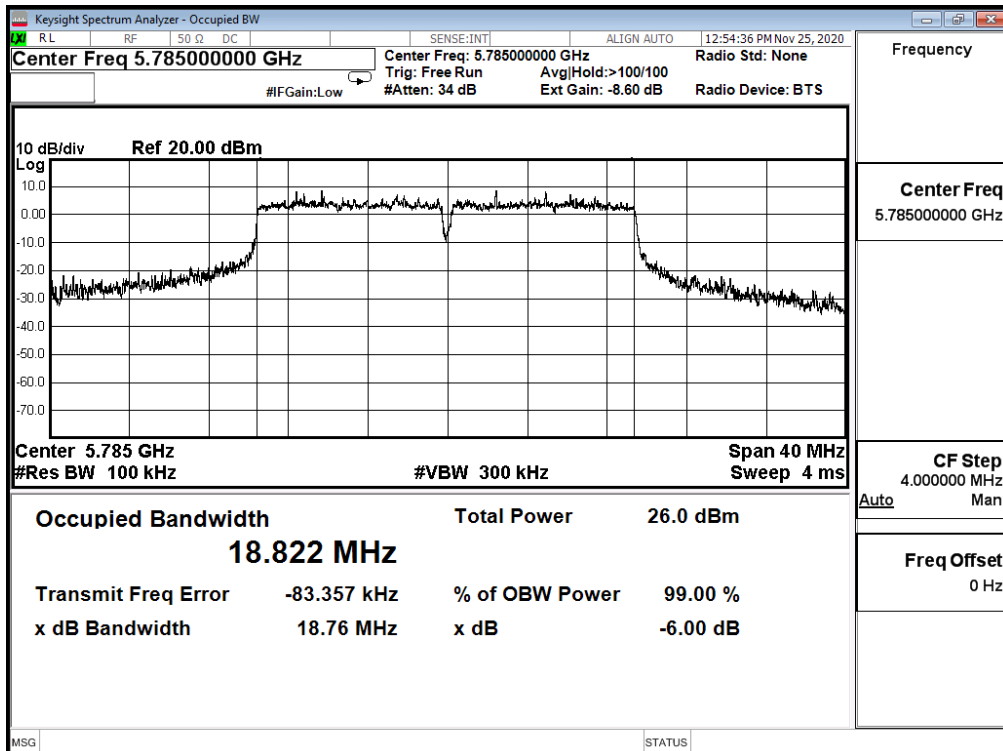
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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

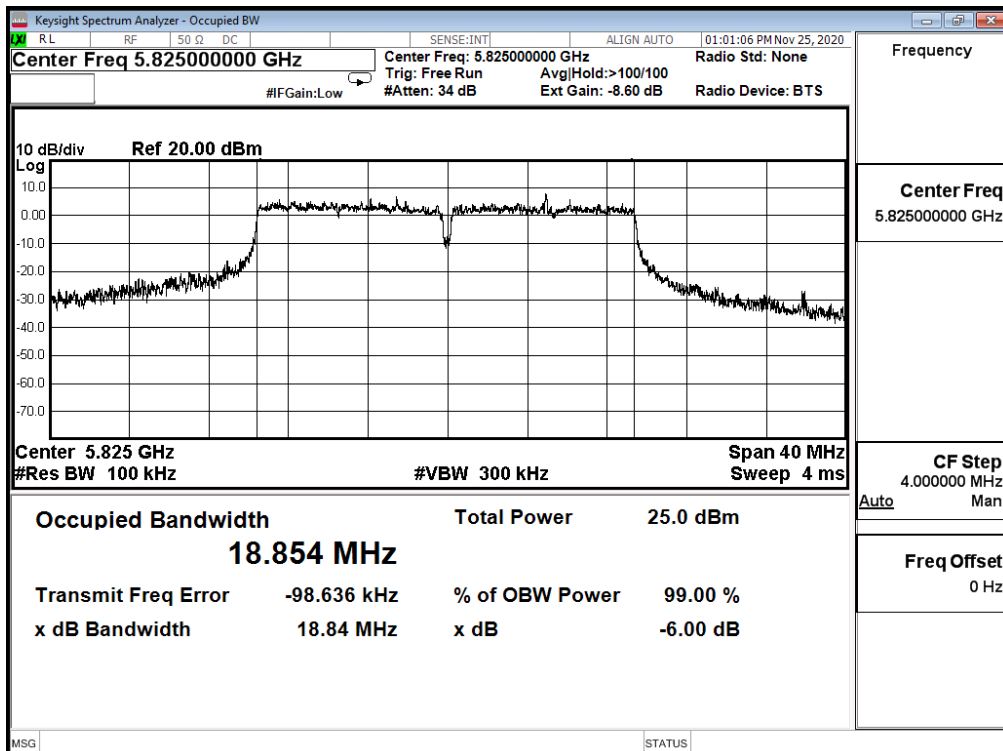
Channel 149 (5745MHz)



Channel 157 (5785MHz)



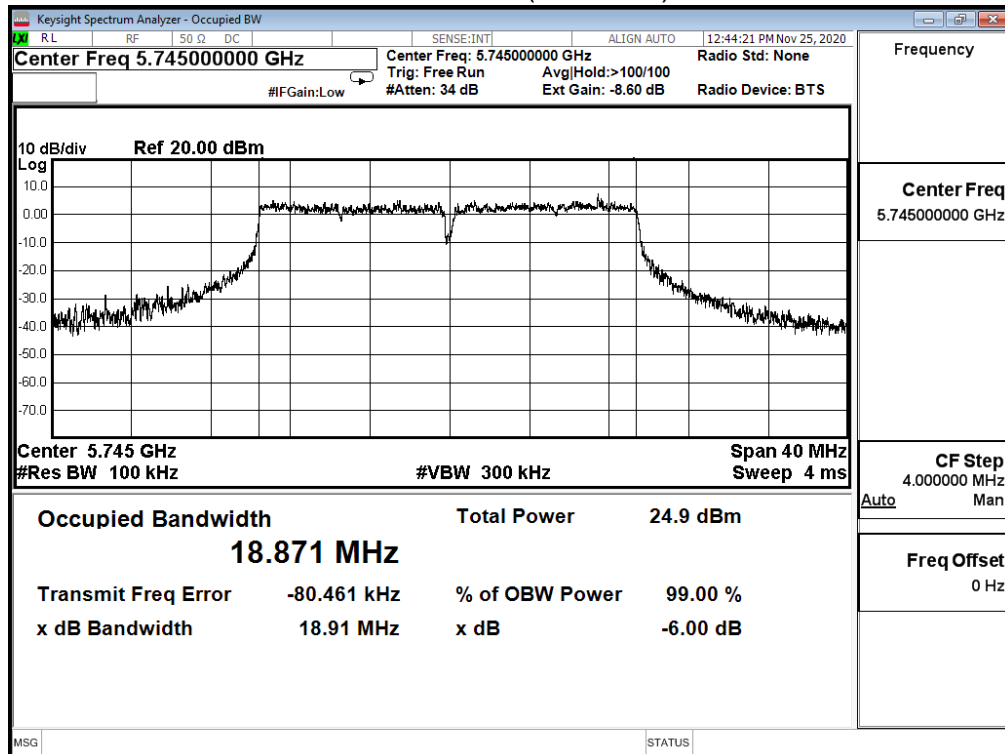
Channel 165 (5825MHz)



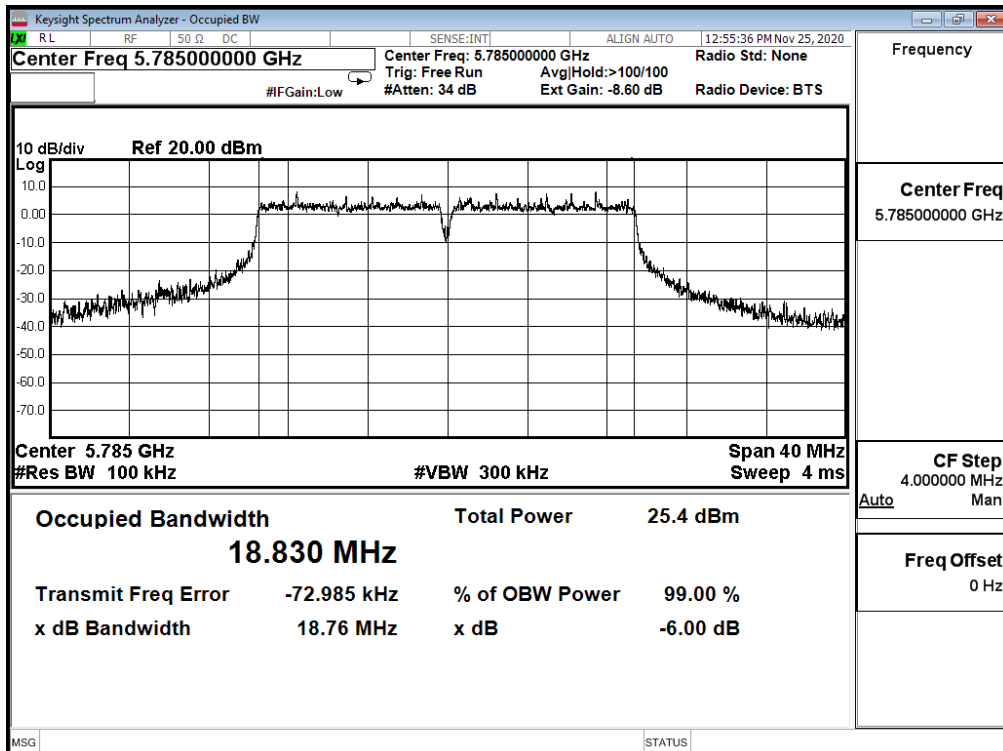
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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

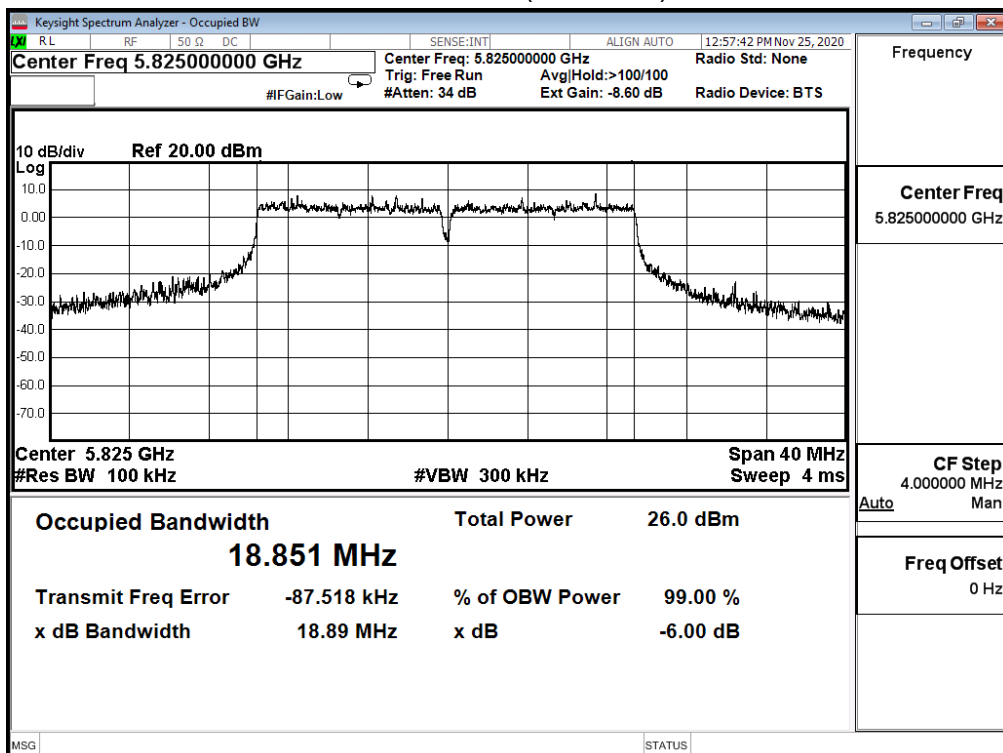
Channel 149 (5745MHz)



Channel 157 (5785MHz)



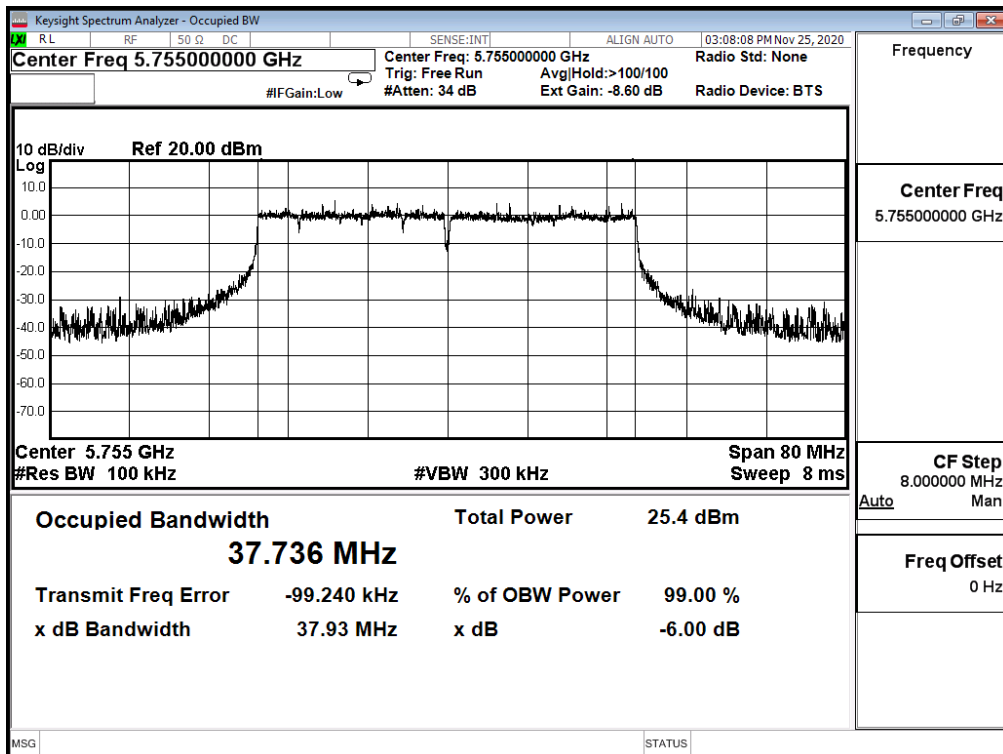
Channel 165 (5825MHz)



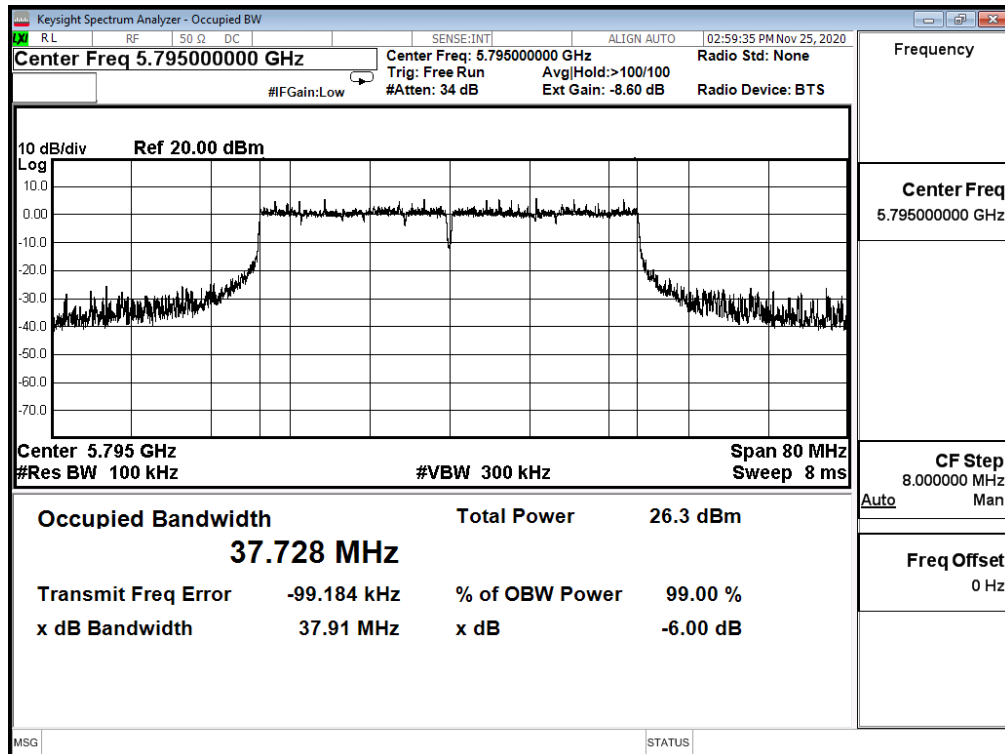
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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



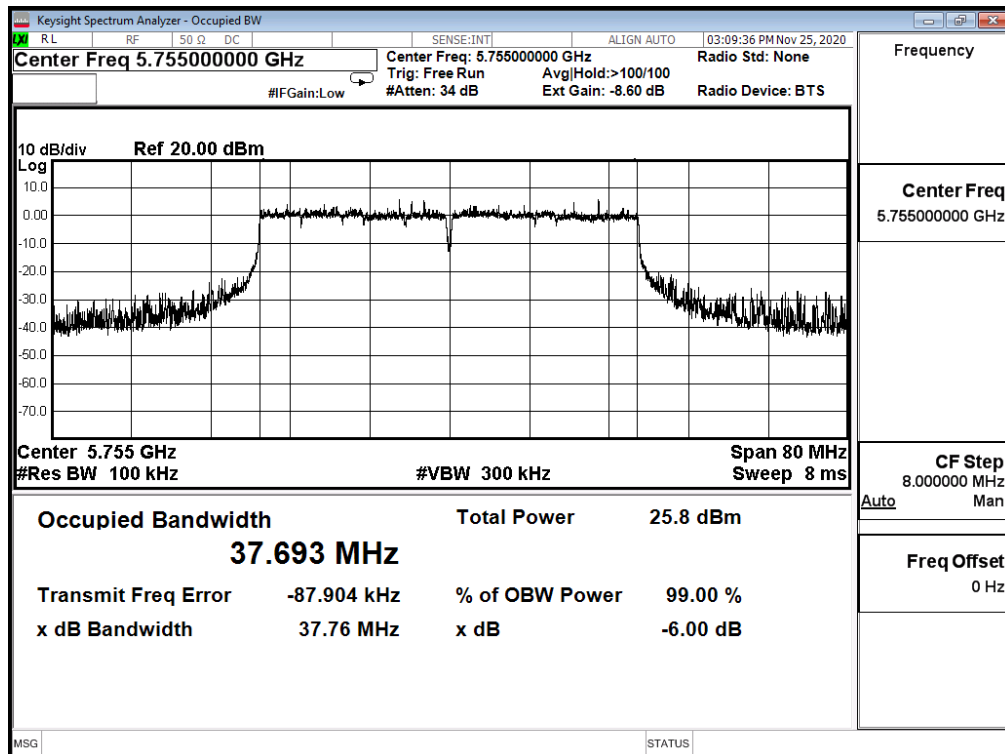
Channel 159 (5795MHz)



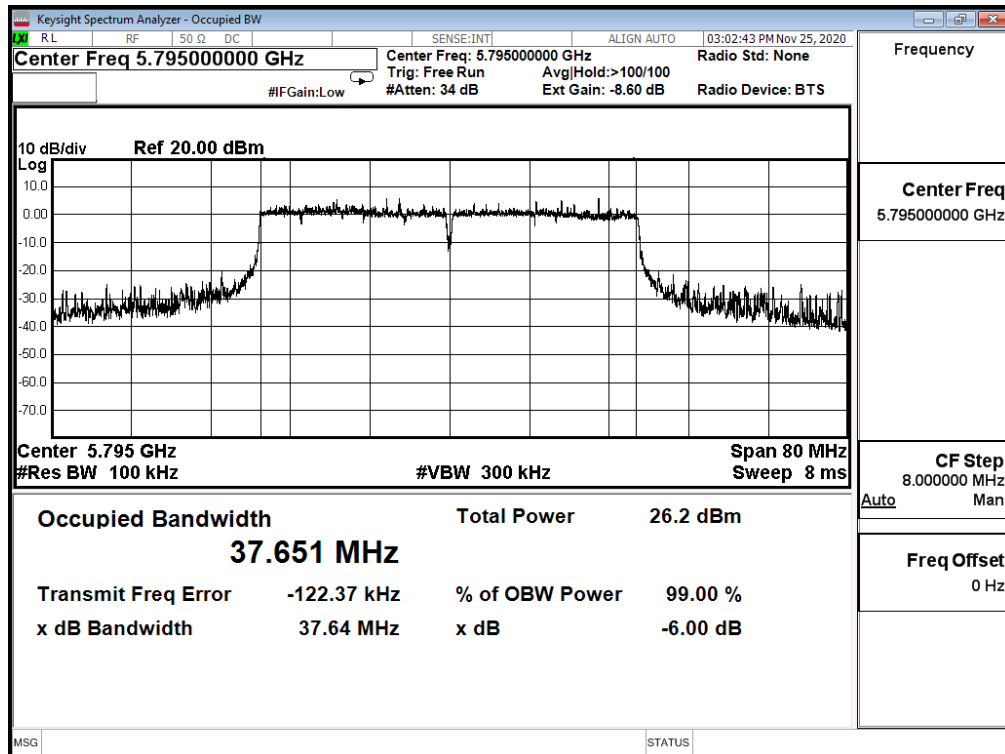
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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

| IEEE 802.11ax_40M(ANT 1) | | | | |
|--------------------------|-----------------|---------------------|-------------|--------|
| Channel No. | Frequency (MHz) | Measure Value (MHz) | Limit (MHz) | Result |
| 151 | 5755 | 37.760 | >0.5 | Pass |
| 159 | 5795 | 37.640 | >0.5 | Pass |

Channel 151 (5755MHz)



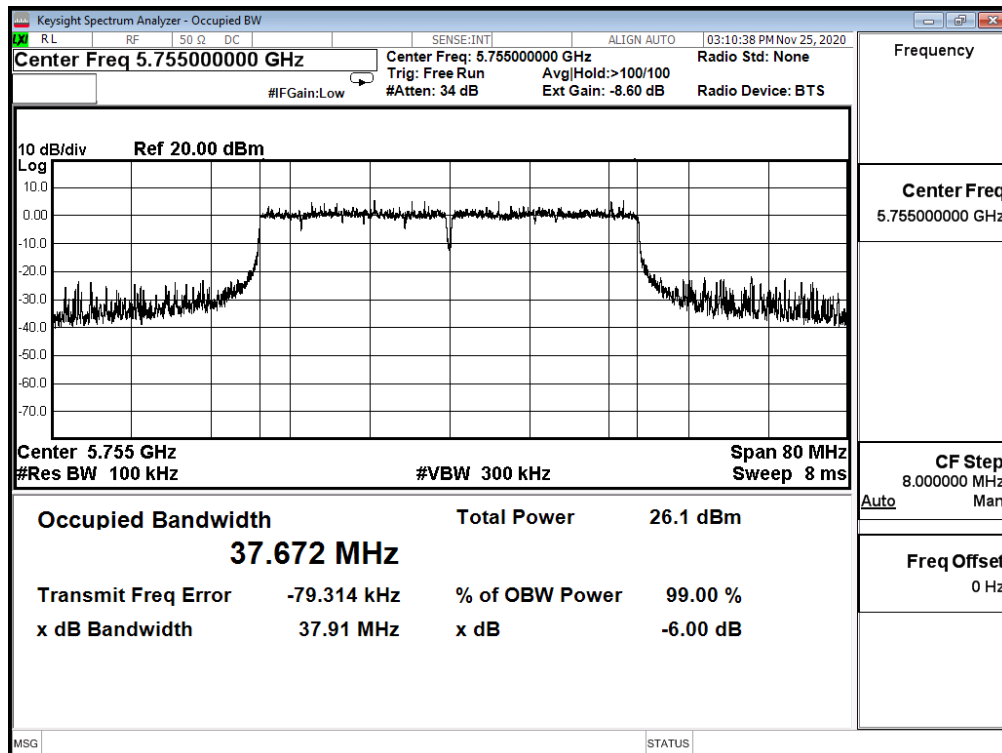
Channel 159 (5795MHz)



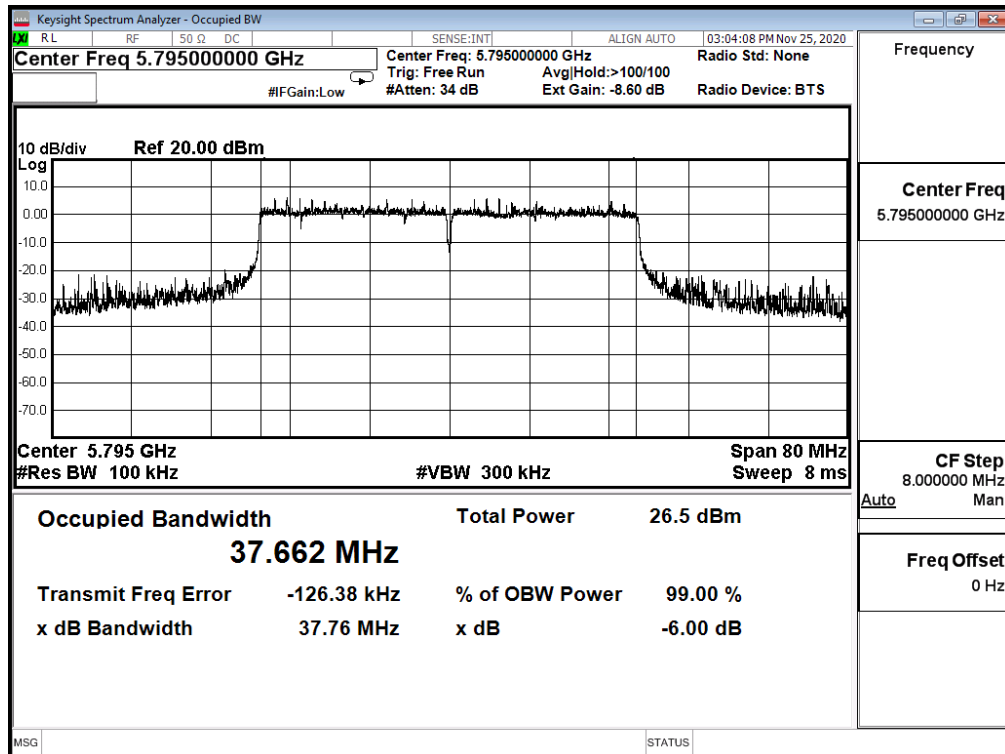
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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

| IEEE 802.11ax_40M(ANT 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)



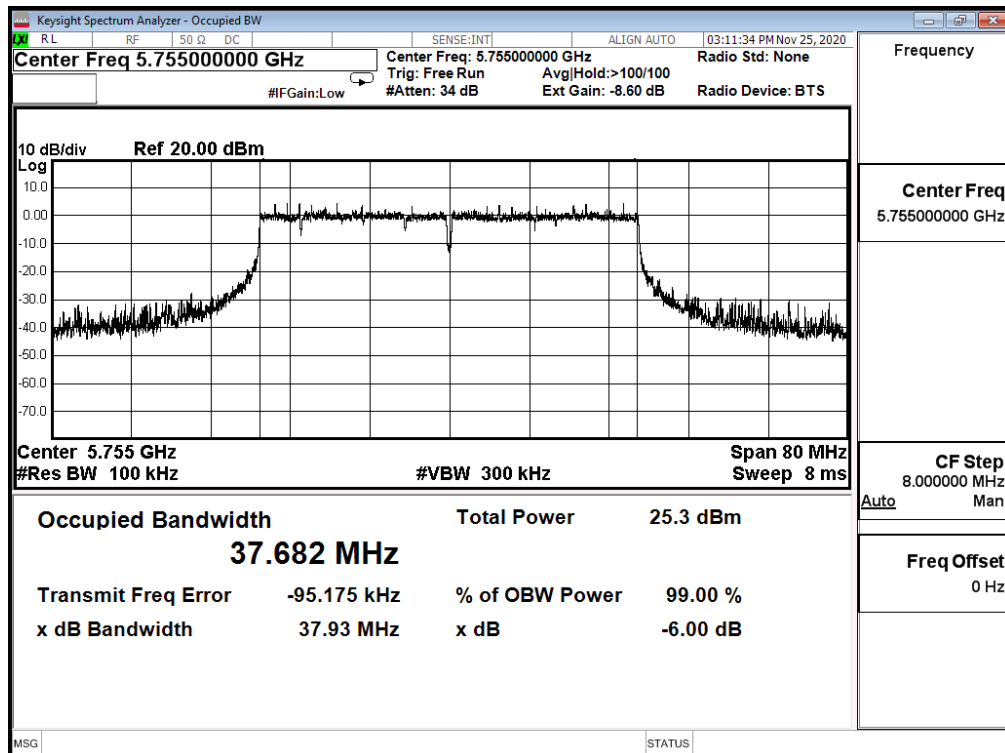
Channel 159 (5795MHz)



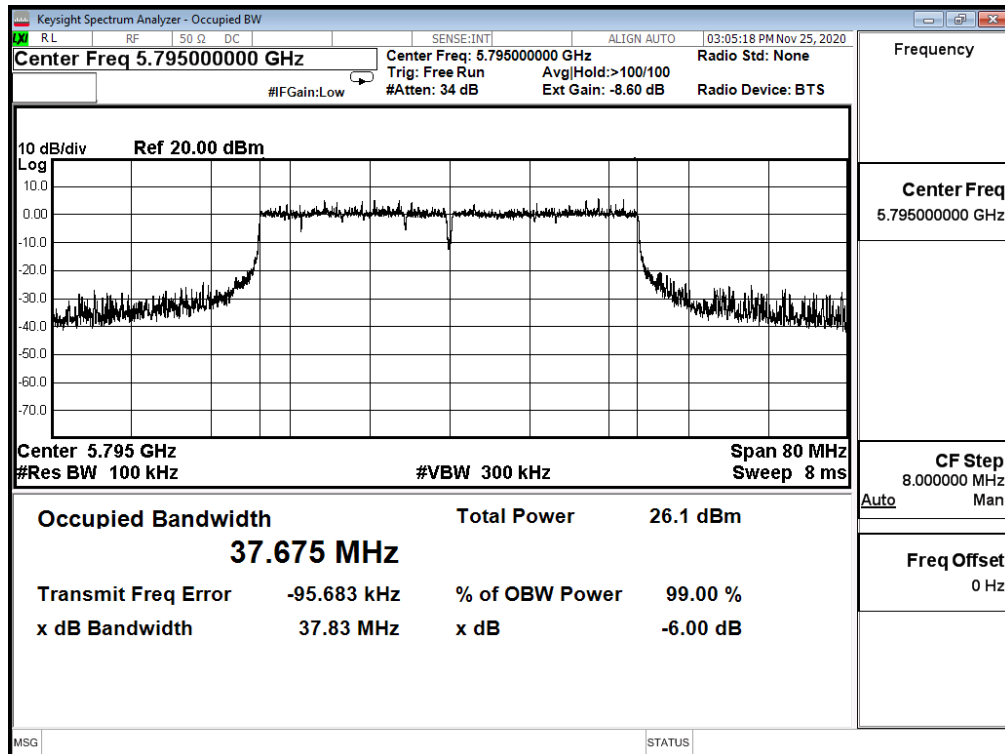
| | | | |
|------------------|-------------------------------|---------------|--------|
| Product | Consumer Home Router | | |
| Test Item | DTS Bandwidth | | |
| Test Mode | Mode 2: Transmit RU Mode_Full | | |
| Date of Test | 2020/11/25 | Test Site | SR12-H |
| Test Temperature | 23.0°C | Test Humidity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



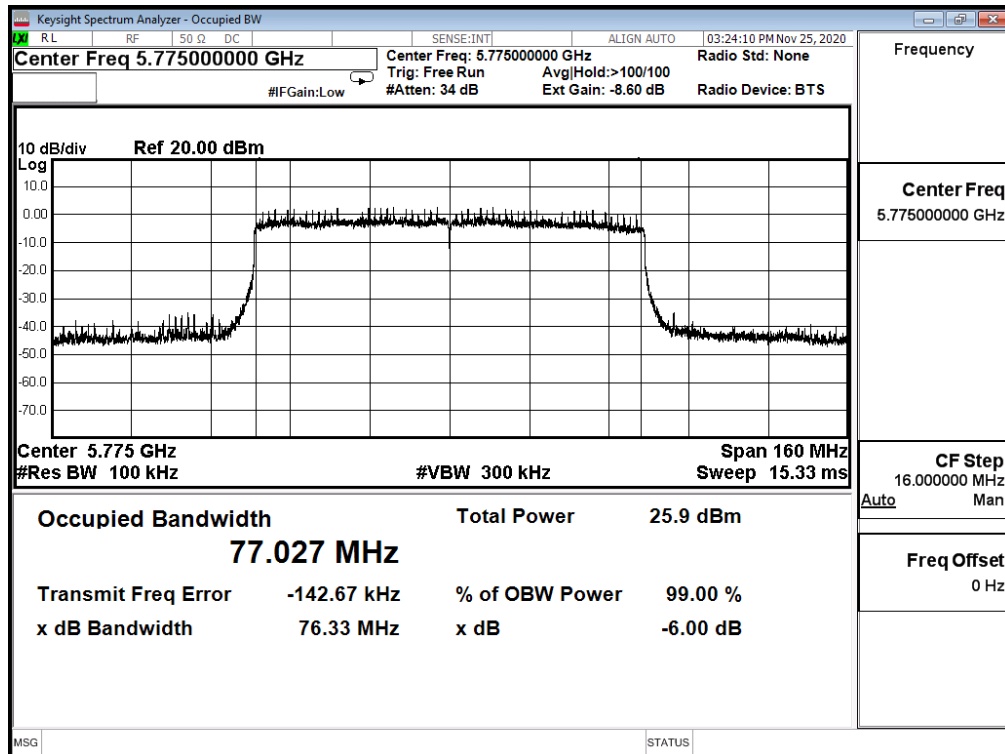
Channel 159 (5795MHz)



| | | | |
|------------------|-------------------------------|---------------|--------|
| 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 |

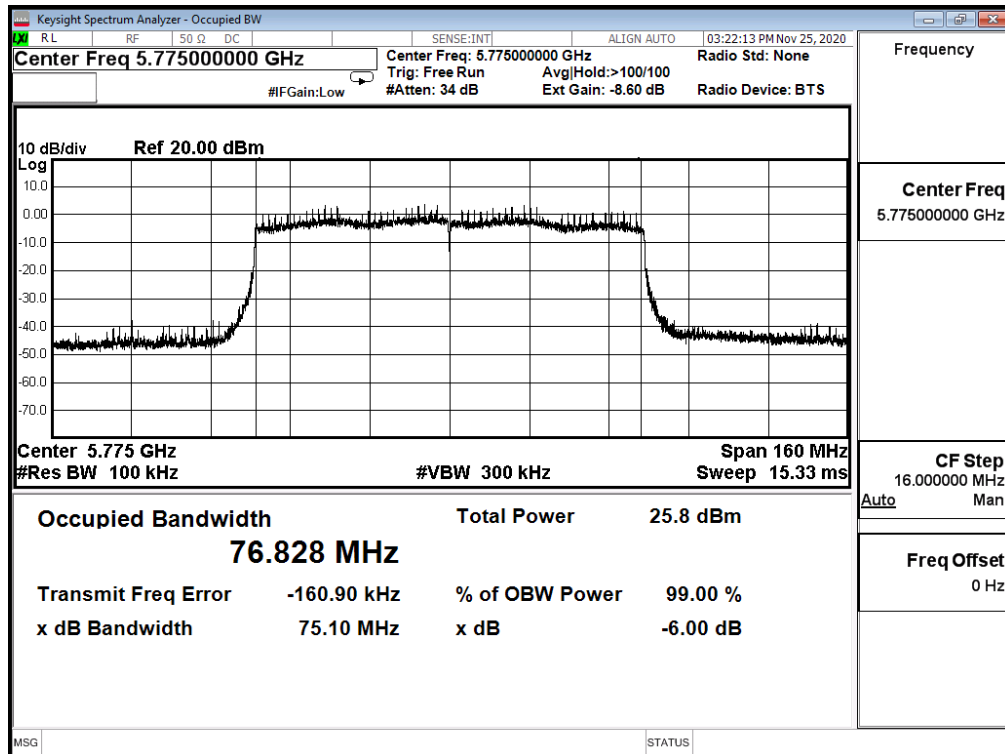
Channel 155 (5775MHz)



| | | | |
|------------------|-------------------------------|---------------|--------|
| 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 |

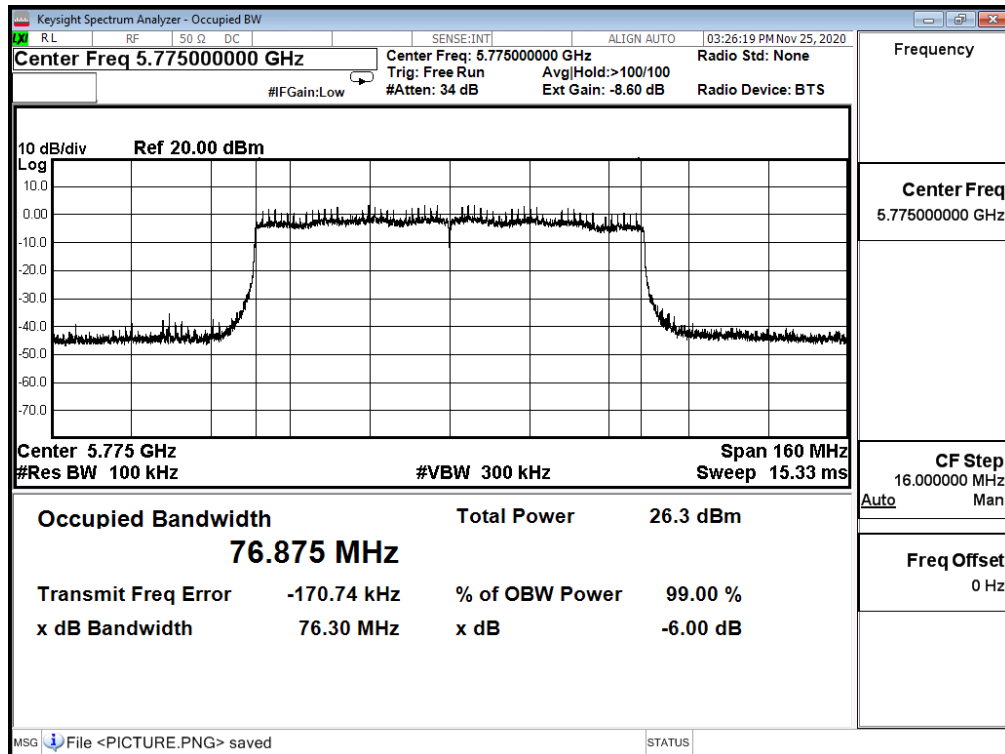
Channel 155 (5775MHz)



| | | | |
|------------------|-------------------------------|---------------|--------|
| 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 |

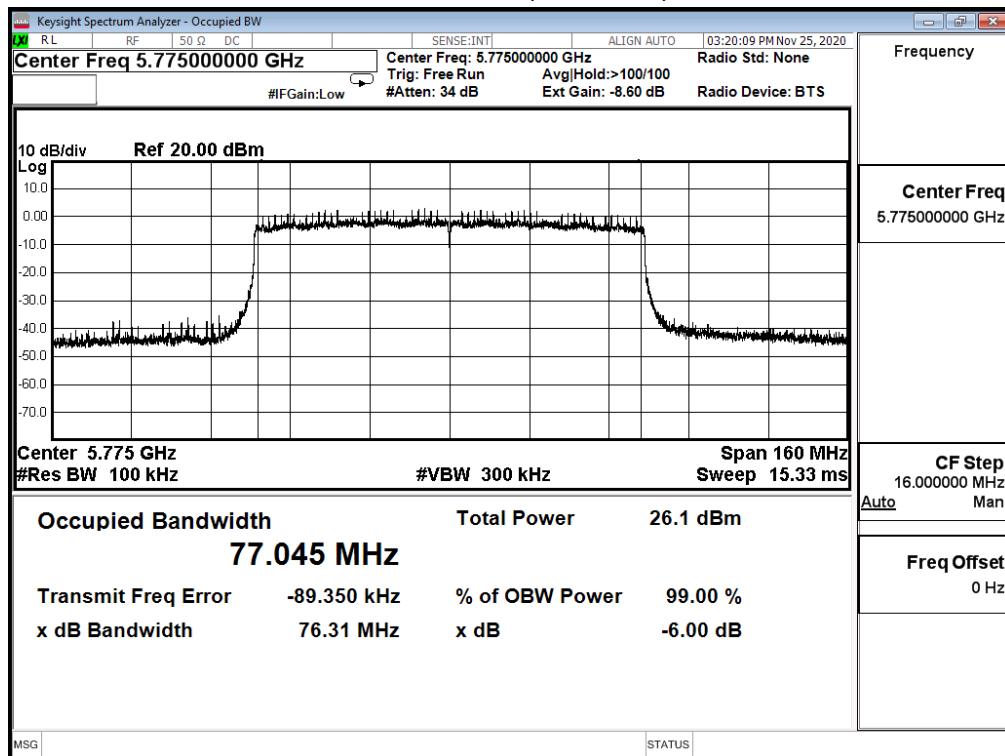
Channel 155 (5775MHz)



| | | | |
|------------------|-------------------------------|---------------|--------|
| 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% |

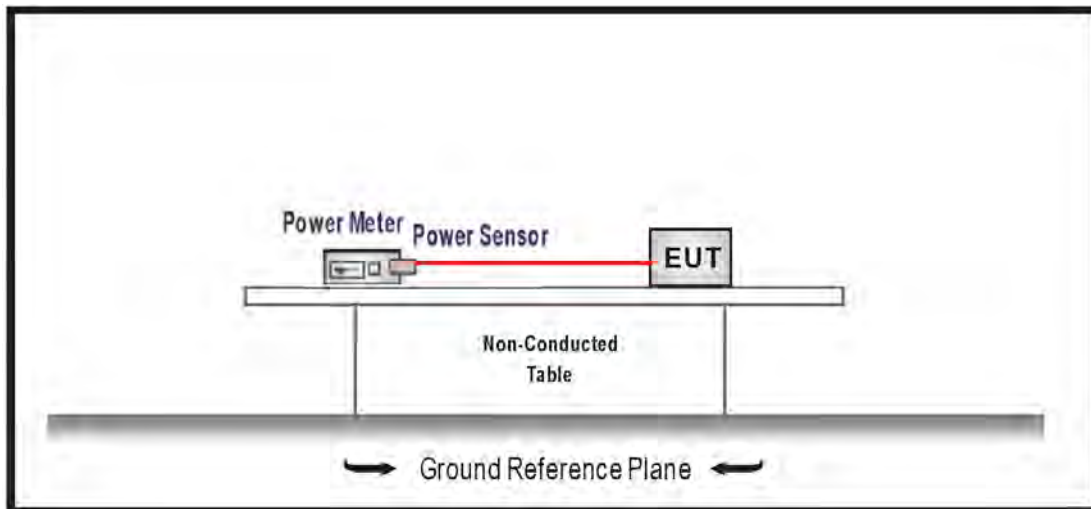
| IEEE 802.11ax_80M(ANT 3) | | | | |
|--------------------------|-----------------|---------------------|-------------|--------|
| Channel No. | Frequency (MHz) | Measure Value (MHz) | Limit (MHz) | Result |
| 155 | 5775 | 76.310 | >0.5 | Pass |

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

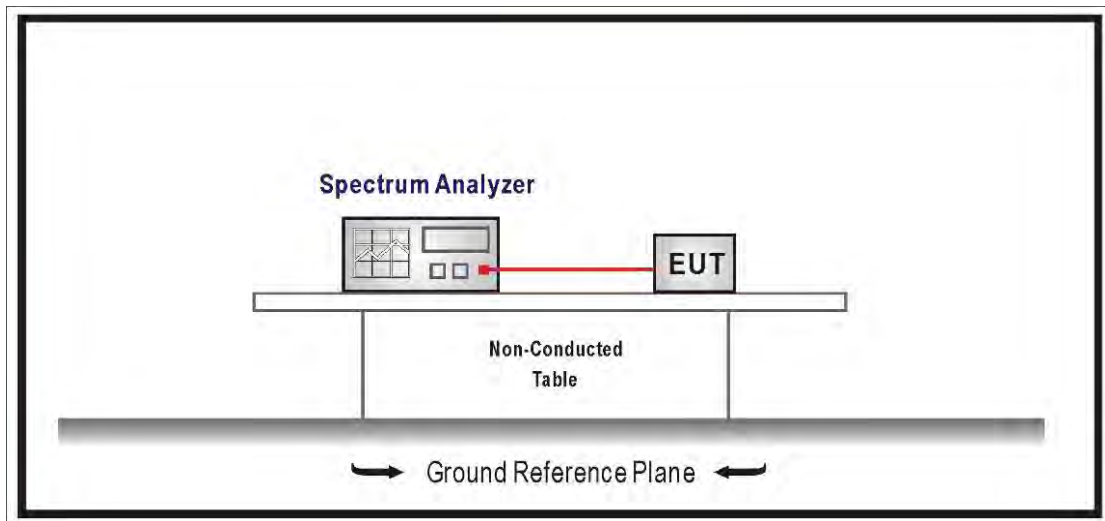
5GHz UNII 3:

| 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% |

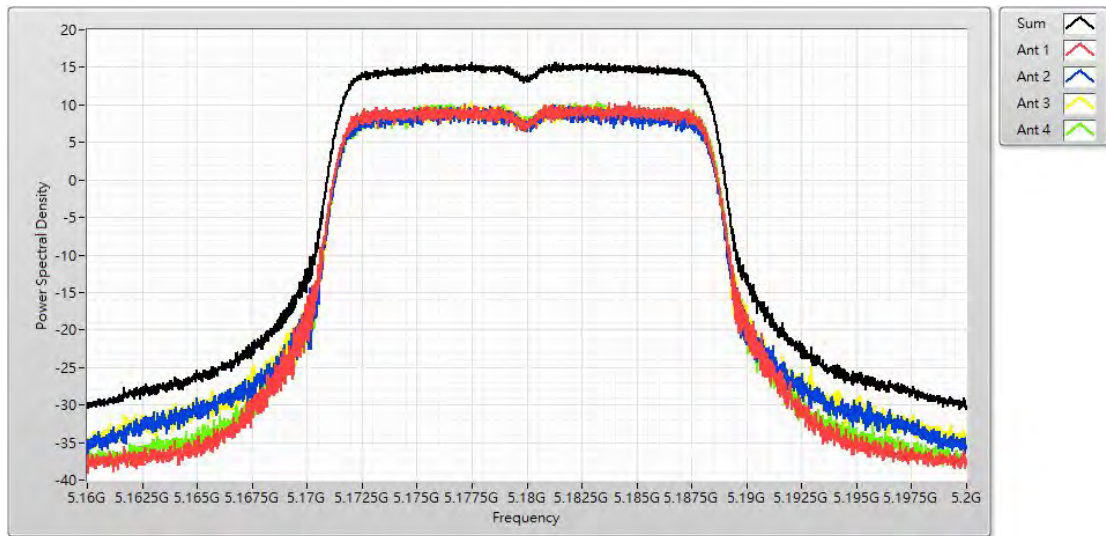
5GHz UNII 1:

| 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 |

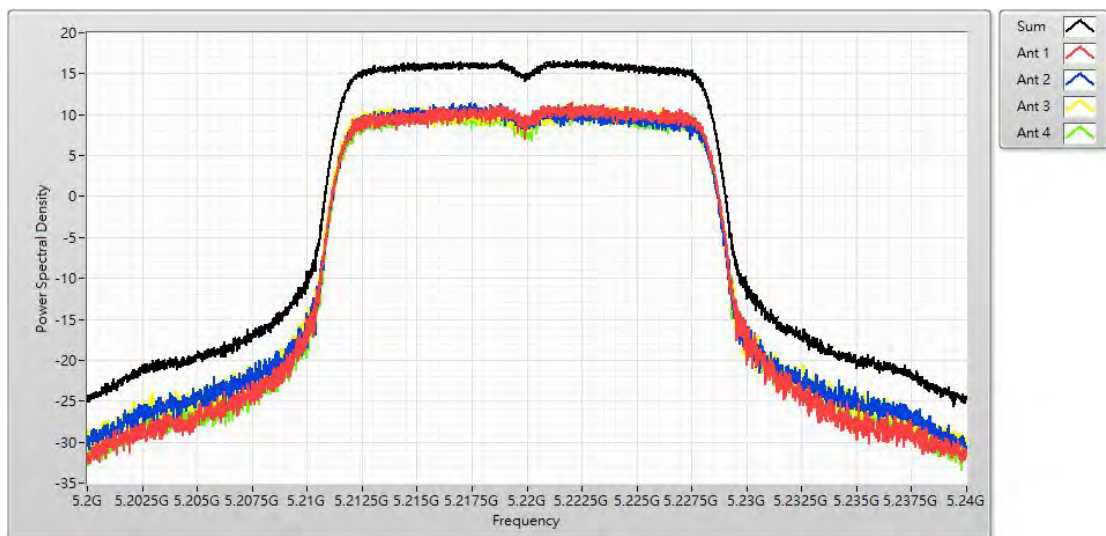
5GHz UNII 3:

| 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 |

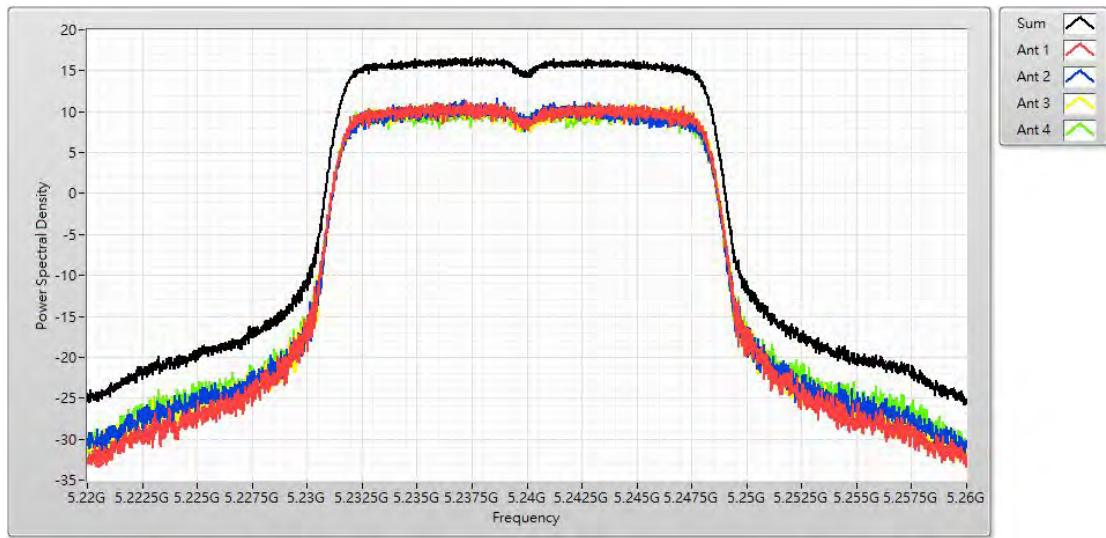
Channel 36 (5180MHz)



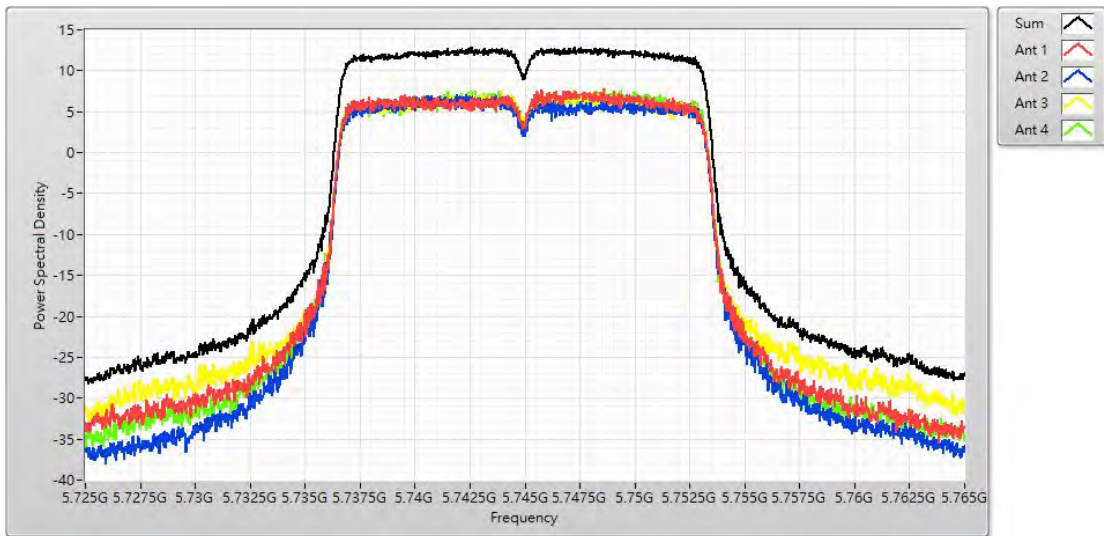
Channel 44 (5220MHz)



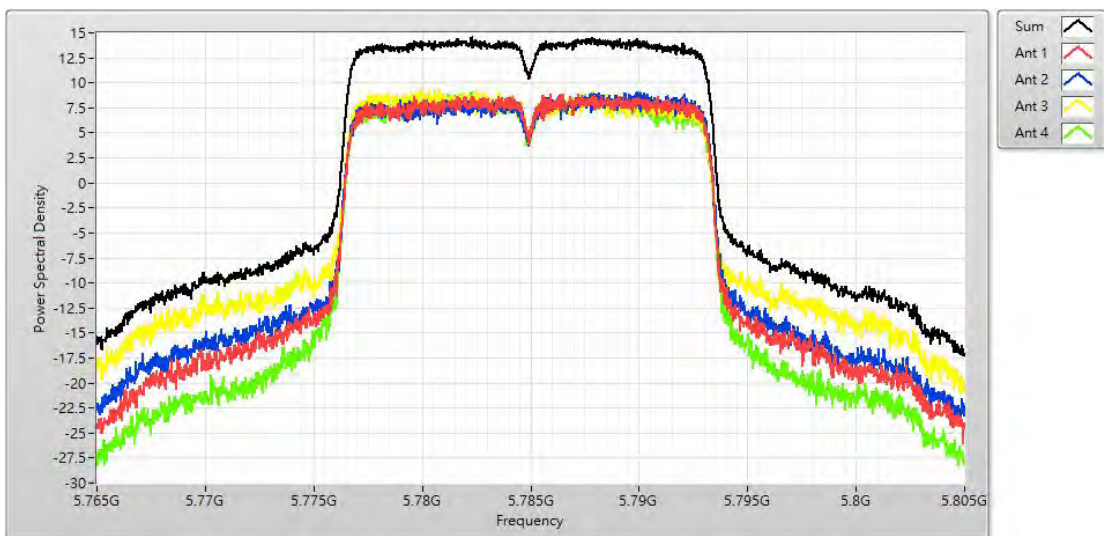
Channel 48 (5240MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

