FCC Test Report

Product Name	：	Mesh Wi-Fi Router
Trade Name	：	CastleNet
Model No.	：	EBM522U, EBM522
FCC ID	：	RK9-EBM522

Applicant	：	CastleNet Technology Inc.
Address	：	No. 14, Ln. 141, Sec. 3, Beishen Rd. Shenkeng Dist., New Taipei City, 22244 Taiwan

Date of Receipt	：	Apr. 19, 2021
Issued Date	：	Sep. 11, 2021
Report No.	：	2140542R-E3032110126
Report Version	：	V1.0

Test Report Certification

Issued Date : Sep. 11, 2021
Report No. : 2140542R-E3032110126

Product Name	:	Mesh Wi-Fi Router
Applicant	:	CastleNet Technology Inc.
Address	:	No. 14, Ln. 141, Sec. 3, Beishen Rd. Shenkeng Dist., New Taipei City, 22244 Taiwan
Manufacturer	:	CastleNet Technology Inc.
Address	:	No. 14, Ln. 141, Sec. 3, Beishen Rd. Shenkeng Dist., New Taipei City, 22244 Taiwan
Model No.	:	EBM522U, EBM522
Trade Name	:	CastleNet
FCC ID	:	RK9-EBM522
EUT Voltage	:	AC 100-240V, 50/60Hz
Testing Voltage	:	AC 120V/60Hz
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E Section 15.407: 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 :

(Demi Chang / Senior Engineering Adm. Specialist)

Tested By :

(Clemens Fang / Senior Engineer)

Approved By :

(Louis Hsu / Deputy Manager)

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Sep. 11, 2021

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1. General Information

1.1. EUT Description

Product Name	Mesh Wi-Fi Router	
Trade Name	CastleNet	
Model No.	EBM522U, EBM522	
Frequency Range/ Channel Number	IEEE 802.11a/n/ac/ax (20MHz)	5180~5240MHz / 4 Channels 5260~5320MHz / 4 Channels 5500~5700MHz / 11 Channels 5745~5825MHz / 5 Channels
	IEEE 802.11n/ac/ax (40MHz)	5190~5230MHz / 2 Channels 5270~5310MHz / 2 Channels 5510~5670MHz / 5 Channels 5755~5795MHz / 2 Channels
	IEEE 802.11ac/ax (80MHz)	5210~5210MHz / 1 Channel 5290MHz / 1 Channel 5530~5610MHz / 2 Channel 5775MHz / 1 Channel
	IEEE 802.11ax (160MHz)	5250MHz / 1 Channel 5570MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac	Orthogonal Frequency Division Multiplexing
	IEEE 802.11ax	Orthogonal Frequency Division Multiple Access
Data Speed HW Version	IEEE 802.11a	6, 9, 18, 24, 36, 48, 54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 31 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
	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	EKSON, PF01-C102 Non-Shielded, 1m
Power Adapter 1	MOSO, MSA-C1500CS12.0-18G-US I/P: 100-240V~50/60Hz 0.6A max. O/P: 12.0V⎓1.5A Cable Out: Non-Shielded, 1.5m
Power Adapter 2	MOSO, AE180AAE00 I/P: 100-240V~50/60Hz 0.6A max. O/P: 12.0V⎓1.5A 18W Cable Out: Non-Shielded, 1.5m

Ant. No.	Brand	Model No.	Antenna Type	Antenna Gain
0	Taiwan Anjie	AJDP1J-B0092	Dipole Antenna	2.5
1	Taiwan Anjie	AJDP1J-W0060	Dipole Antenna	2.5
2	Taiwan Anjie	AJWP1J-C002	Dipole Antenna	4.5
3	Taiwan Anjie	AJWP1J-R002	Dipole Antenna	4.5

ANT-TX / RX & Bandwidth

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

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

IEEE 802.11n/ac/ax (40MHz)

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

IEEE 802.11ac/ax (80MHz)

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

IEEE 802.11ax (160MHz)

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
50	5250 MHz	114	5570 MHz

Note:

1. This device including 2.4GHz b/g/n/ac/ax and 5GHz a/n/ac/ax 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 difference between these models is shown as below:

Model Number	USB Port
EBM522U	With
EBM522	Without

4. 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_Non-BF_EBM522U Mode 2: Transmit_Non-BF_EBM522 Mode 3: Transmit_BF

Note: BF = Beamforming

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	a	157	0+1+2+3	Complies
26dB & 99% & DTS Bandwidth	a	36/44/48/52/60/64/100/ 116/140/149/157/165	0/1/2/3	Complies
	11ax (20MHz)	36/44/48/52/60/64/100/ 116/140/149/157/165	0/1/2/3	Complies
	11ax (40MHz)	38/46/54/62/102/ 110/134/151/159	0/1/2/3	Complies
	11ax (80MHz)	42/58/106/122/155	0/1/2/3	Complies
	11ax (160MHz)	50/114	0/1/2/3	Complies
Maximum conducted output power	a	36/44/48/52/60/64/100/ 116/140/149/157/165	0+1+2+3	Complies
	11ax (20MHz)	36/44/48/52/60/64/100/ 116/140/149/157/165	0+1+2+3	Complies
	11ax (40MHz)	38/46/54/62/102/ 110/134/151/159	0+1+2+3	Complies
	11ax (80MHz)	42/58/106/122/155	0+1+2+3	Complies
	11ax (160MHz)	50	0+1+2+3	Complies
Maximum power spectral density	a	36/44/48/52/60/64/100/ 116/140/149/157/165	0+1+2+3	Complies
	11ax (20MHz)	36/44/48/52/60/64/100/ 116/140/149/157/165	0+1+2+3	Complies
	11ax (40MHz)	38/46/54/62/102/ 110/134/151/159	0+1+2+3	Complies
	11ax (80MHz)	42/58/106/122/155	0+1+2+3	Complies
	11ax (160MHz)	50/114	0+1+2+3	Complies
Radiated Emission	a	36/44/48/52/60/64/100/ 116/140/149/157/165	0+1+2+3	Complies
	11ax (20MHz)	36/44/48/52/60/64/100/ 116/140/149/157/165	0+1+2+3	Complies
	11ax (40MHz)	38/46/54/62/102/ 110/134/151/159	0+1+2+3	Complies
	11ax (80MHz)	42/58/106/122/155	0+1+2+3	Complies
	11ax (160MHz)	50/114	0+1+2+3	Complies
Band Edge	a	36/44/48/149/157/165	0+1+2+3	Complies
	11ax (20MHz)	36/44/48/149/157/165	0+1+2+3	Complies
	11ax (40MHz)	38/46/54/62/102/ 110/134/151/159	0+1+2+3	Complies
	11ax (80MHz)	42/58/106/122/155	0+1+2+3	Complies
	11ax (160MHz)	50/114	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.

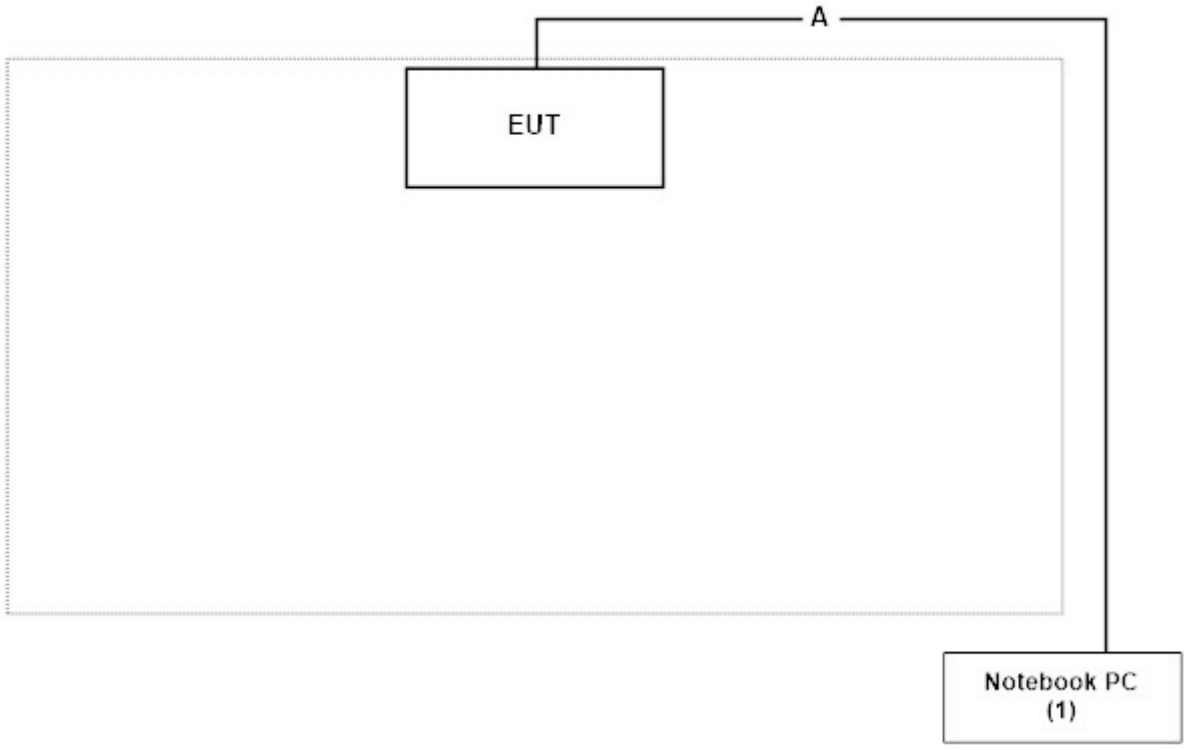
1.3. Tested System Details

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	Lenove	80SJ	MP16Z7TB	DoC	Non-Shielded, 1.8m

1.4. Configuration of tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	Ethernet Cable	Non-Shielded, 10m

1.5. EUT Exercise Software

1	Set the EUT as shown in Section 1.4.
2	Execute the Broadcom command from software CMD.exe
3	Configure test mode, test channel and data rate.
4	Let the EUT start transmitting or receiving signal continuously.
5	Verify that the EUT works 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	2020/12/24	2021/12/23
Test Receiver	R&S	ESCS 30	836858/022	2021/02/22	2022/02/21
LISN	R&S	ENV216	100092	2021/06/08	2022/06/07

Conducted / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2020/11/30	2021/11/29
Pulse Power Sensor	Anritsu	MA2411B	1531043	2020/11/30	2021/11/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Pulse Power Sensor	Anritsu	MA2411B	1531044	2020/11/30	2021/11/29
Power Meter	Keysight	8990B	MY51000248	2021/05/21	2022/05/20
Power Sensor	Keysight	N1923A	MY57240005	2021/05/21	2022/05/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2021/05/14	2022/05/13
Spectrum Analyzer	Keysight	N9010B	MY57110159	2021/03/29	2022/03/28
Wideband Radio Communication Tester	R&S	CMW500	106071	2021/01/27	2022/01/26
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Spectrum Analyzer	Agilent	N9010A	US47140172	2021/05/28	2022/05/27
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30

Radiated / 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	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSVA40	101435	2021/06/04	2022/06/03
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1209	2021/05/28	2022/05/27
Horn Antenna	Schwarzbeck	BBHA 9120D	01640	2020/09/17	2021/09/16
Horn Antenna	Schwarzbeck	BBHA 9170	203	2021/03/11	2022/03/10
Pre-Amplifier	EMCI	EMC01820I	980364	2020/09/14	2021/09/13
Pre-Amplifier	EMCI	EMC0031835	980233	2020/12/07	2021/12/06
Pre-Amplifier	DEKRA	AP-400C	201801231	2020/11/16	2021/11/15
Band Reject Filter	Micro-Tronics	BRM50702	G192	2021/03/04	2022/03/03
Band Reject Filter	Micro-Tronics	BRM50716	G089	2021/03/11	2022/03/10
Wideband Radio Communication Tester	R&S	CMW500	106071	2021/01/27	2022/01/26
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Coaxial Cable(10m)	Suhner	SF102_SF104	CB4-H	2021/04/25	2022/04/24
DEKRA Testing System	DEKRA	Version 2.0	CB4-H	NA	NA
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11

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

1.9. Uncertainty

Test item	Uncertainty
Conducted Emission	± 2.26 dB
26dB & 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

1.10. Duty Cycle

Mode 1: Transmit_Non-BF_EBM522U

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB) linear voltage	Duty Factor (dB) Power	1/T Minimum VBW (kHz)
11a	2.975	3.010	98.84%	0.101591	0.05	0.010
HE20	2.260	2.305	98.05%	0.171250	0.09	0.010
HE40	2.345	2.400	97.71%	0.201368	0.10	0.426
HE80	2.425	2.495	97.19%	0.247176	0.12	0.412
HE160	1.225	1.263	97.03%	0.261906	0.13	0.816

Note:

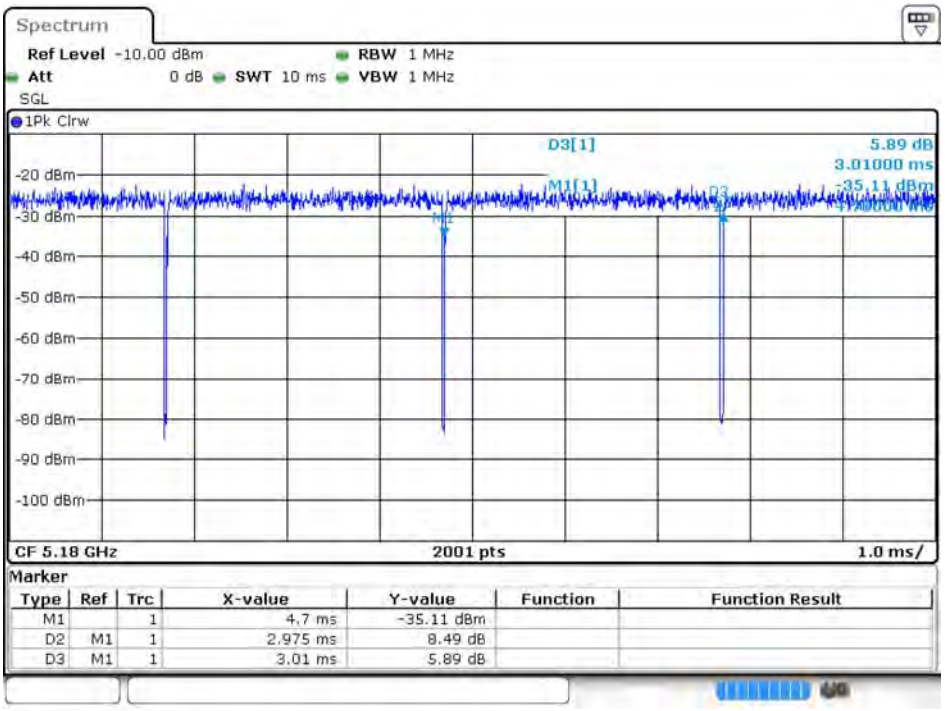
Offset = 20 log(1/duty cycle)

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



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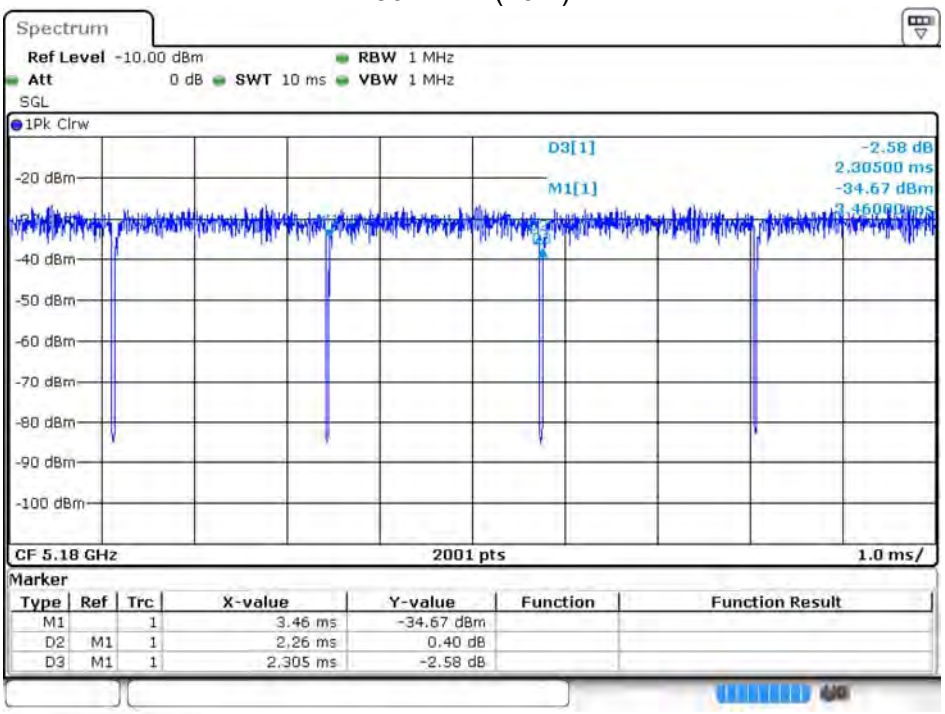
802.11ax(20M)



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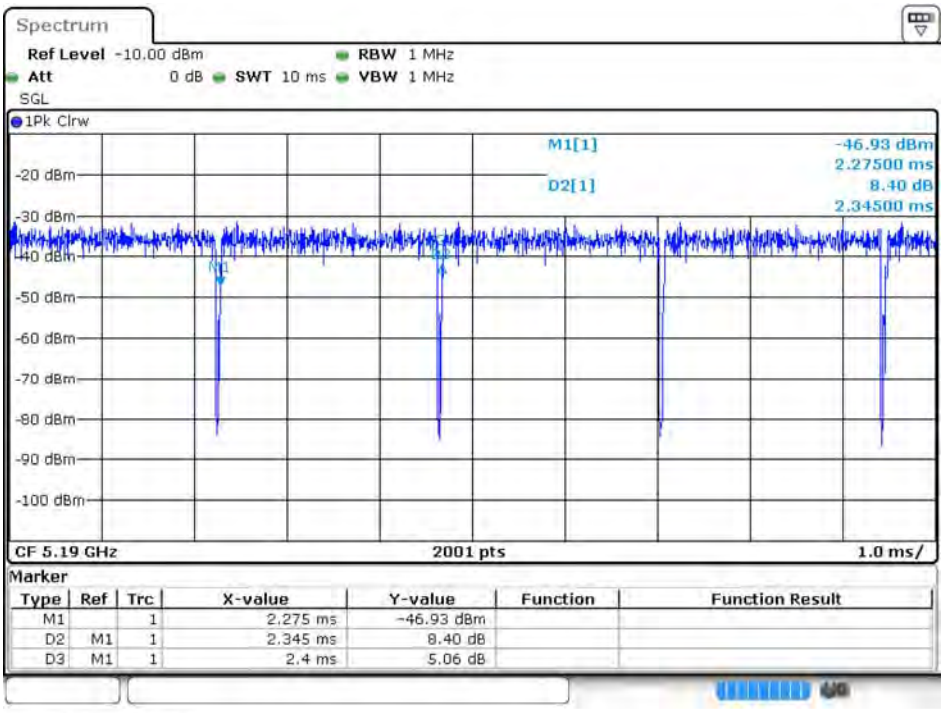

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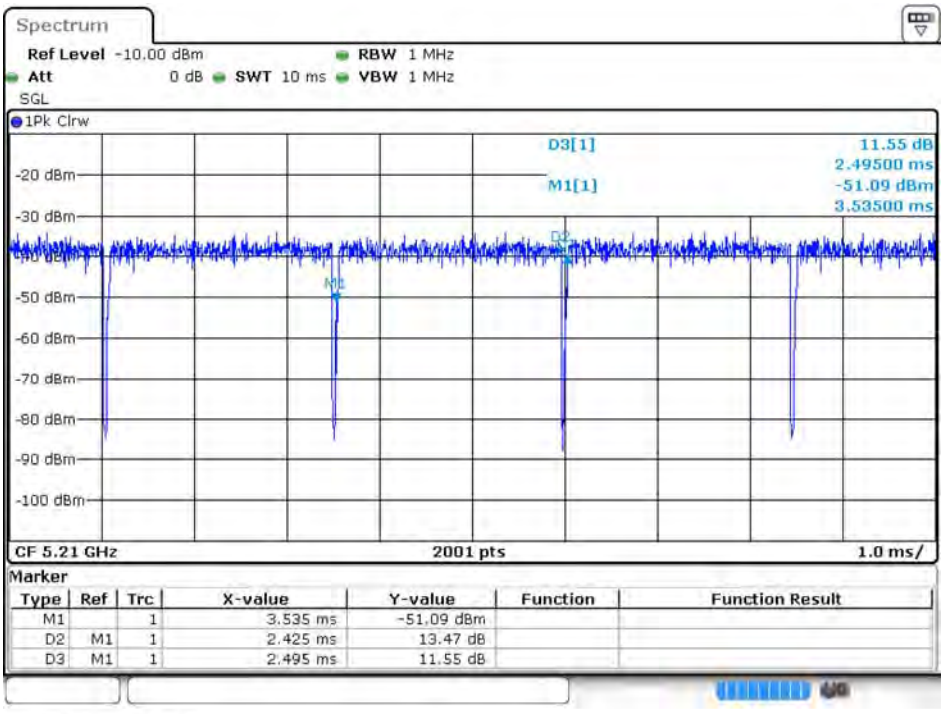

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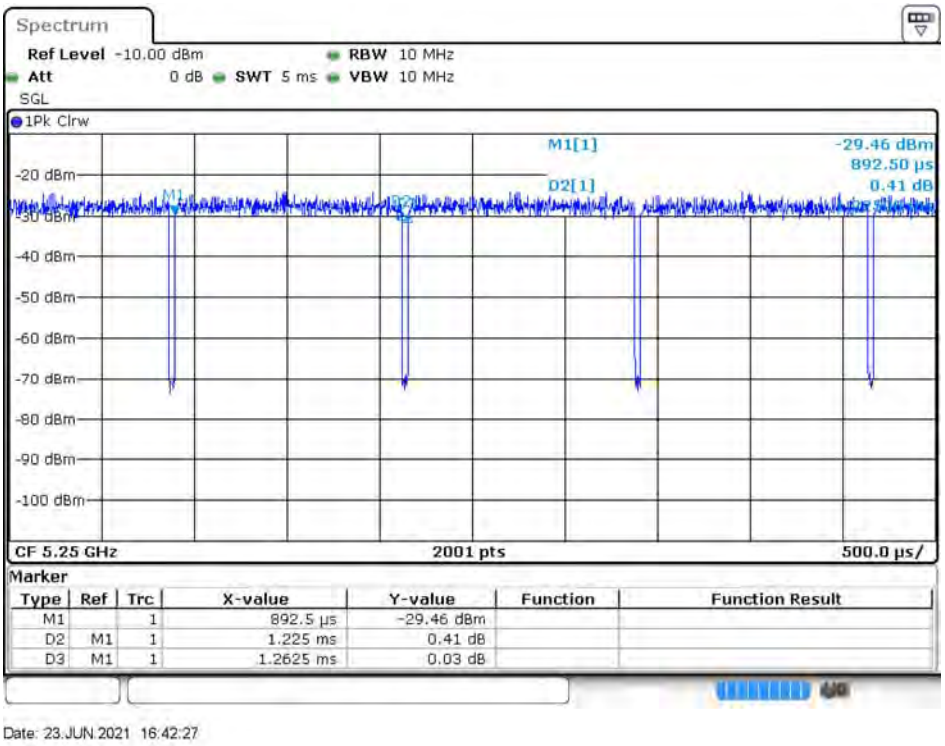

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Mode 3: Transmit_BF

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB) linear voltage	Duty Factor (dB) Power	1/T Minimum VBW (kHz)
HE20	2.283	2.318	98.49%	0.132150	0.07	0.010
HE40	1.159	1.228	94.38%	0.502299	0.25	0.863
HE80	0.792	0.857	92.42%	0.685113	0.34	1.263
HE160	5.150	5.525	93.21%	0.610501	0.31	0.194

Note:

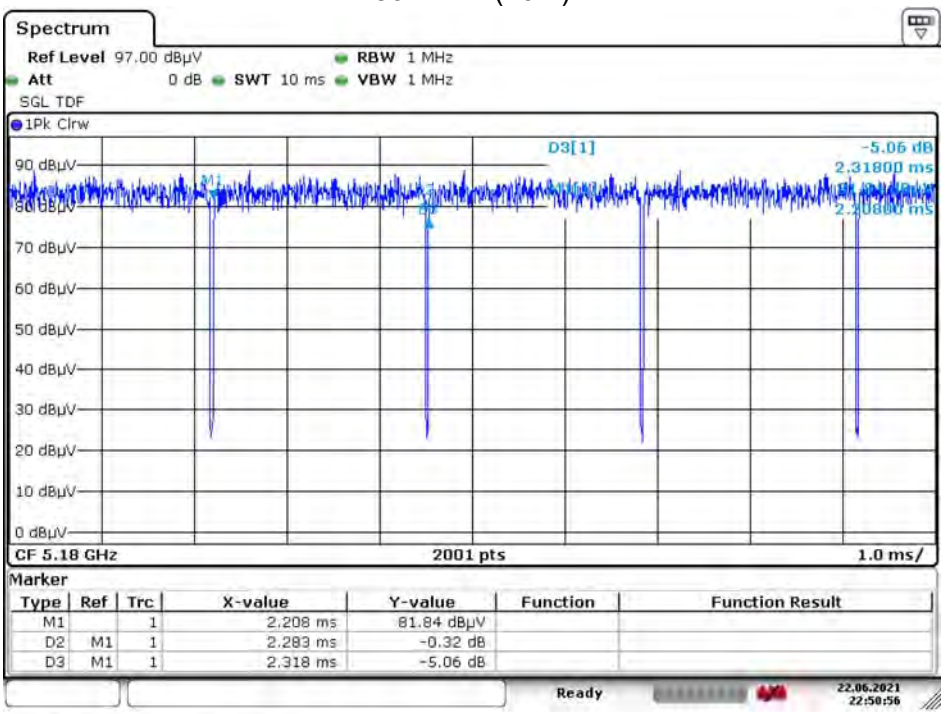
Offset = 20 log(1/duty cycle)

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.

802.11ax(20M)



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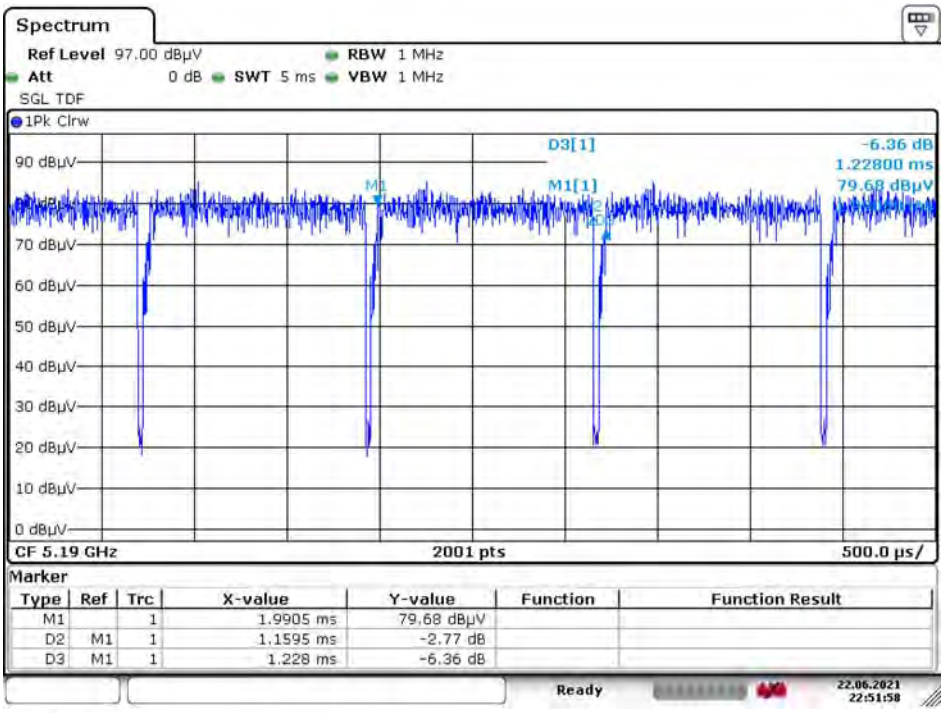

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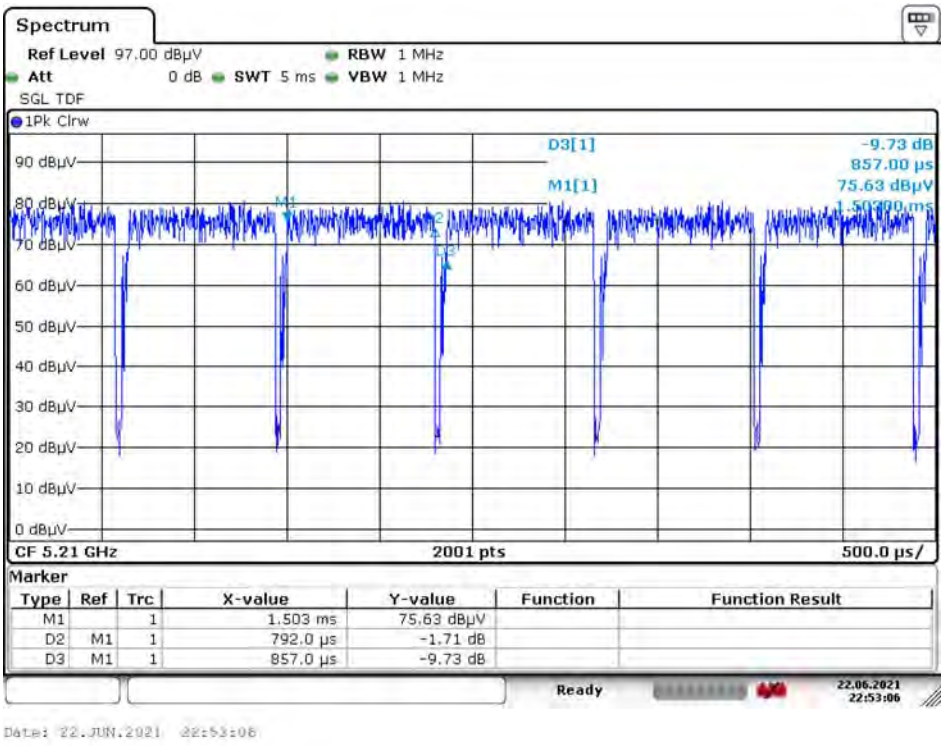

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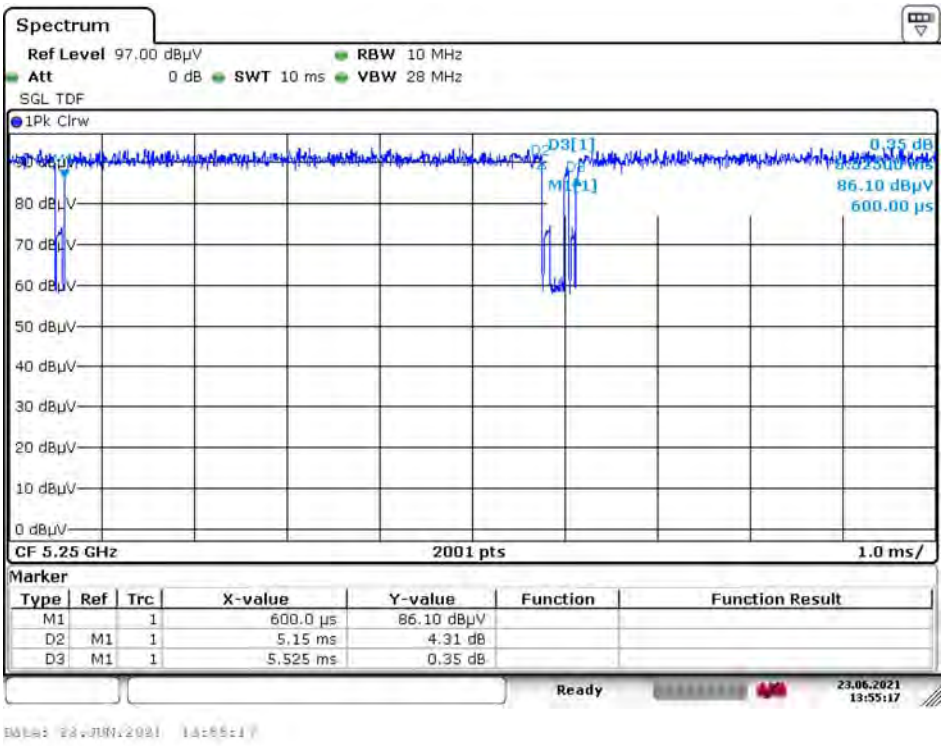
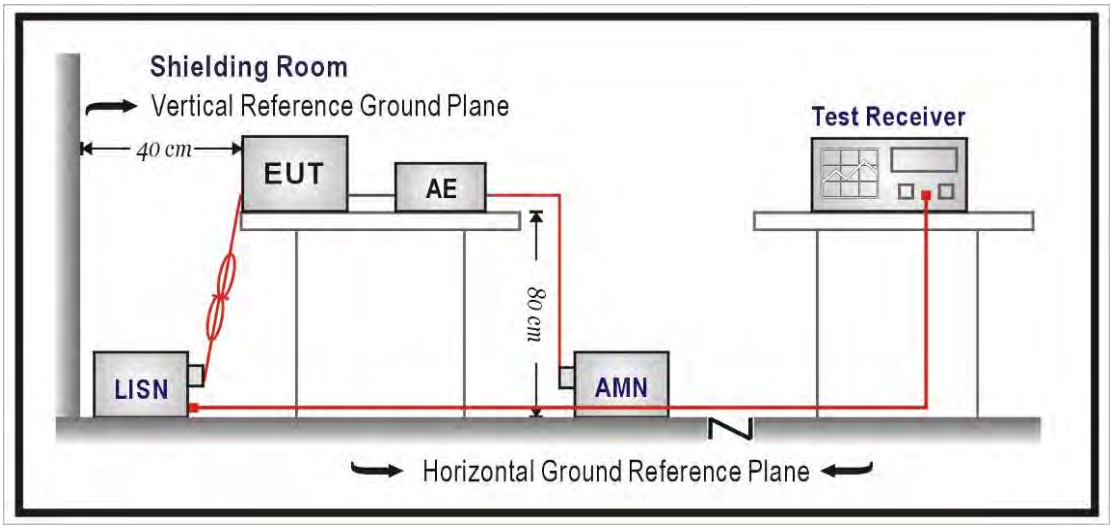


1.11. Conducted Emission

1.12. Test Setup



1.13. 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.

1.14. Test Procedure

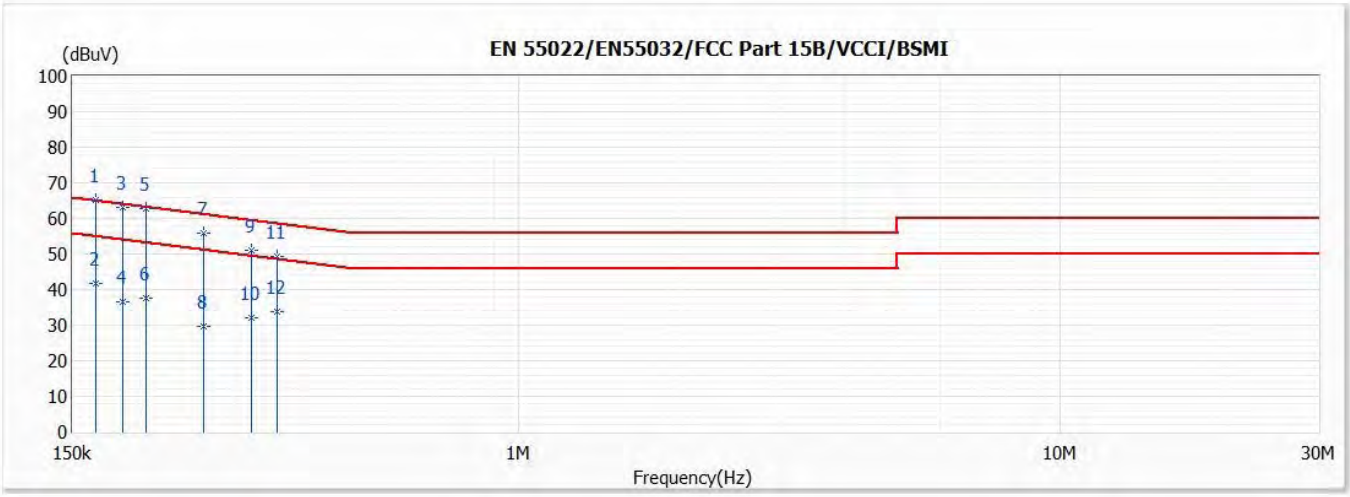
The EUT was setup according to ANSI C63.10: 2013. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded 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.

1.15. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.407: 2019

1.16. Test Result

Model No	EBM522U	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 1: Transmit_Non-BF_EBM522U (Adapter 1)	Engineer	Scott Lin
Phase	L	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(MSA-C1500CS12.0-18G-US)	Humidity (%RH)	58



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.166	65.11	65.17	-0.06	55.46	9.65	QP
2	0.166	41.57	55.17	-13.60	31.92	9.65	AV
3	0.186	63.08	64.21	-1.13	53.44	9.64	QP
4	0.186	36.69	54.21	-17.52	27.05	9.64	AV
5	0.205	62.70	63.39	-0.69	53.05	9.65	QP
6	0.205	37.45	53.39	-15.94	27.80	9.65	AV
7	0.263	55.76	61.35	-5.59	46.11	9.65	QP
8	0.263	29.58	51.35	-21.77	19.93	9.65	AV
9	0.322	51.16	59.66	-8.50	41.49	9.67	QP
10	0.322	32.10	49.66	-17.56	22.43	9.67	AV
11	0.358	49.37	58.77	-9.40	39.70	9.67	QP
12	0.358	33.83	48.77	-14.94	24.16	9.67	AV

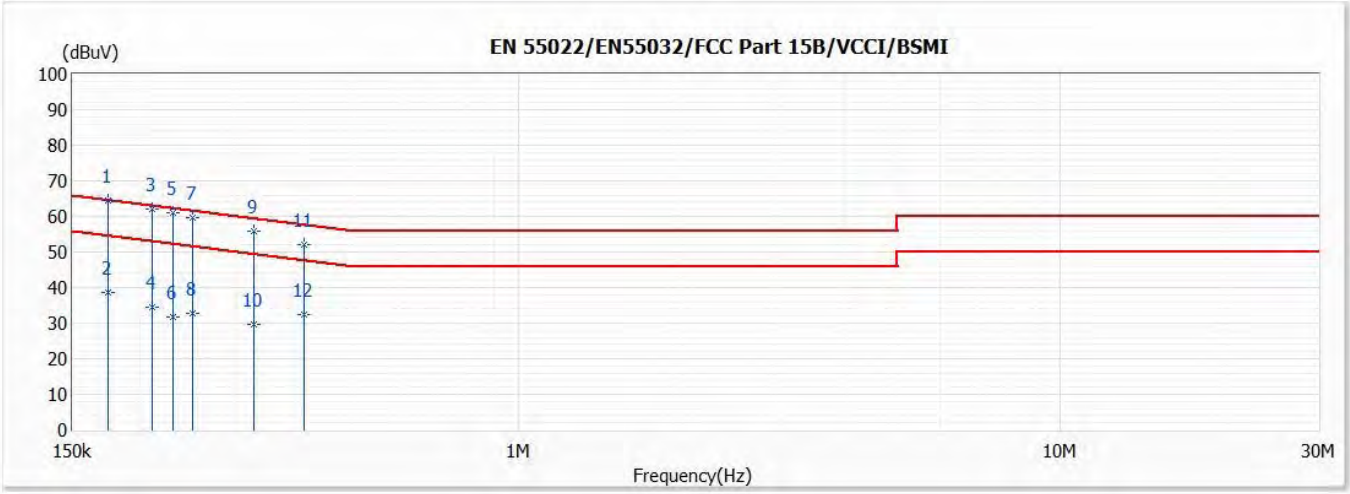
Remark:

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	EBM522U	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 1: Transmit_Non-BF_EBM522U (Adapter 1)	Engineer	Scott Lin
Phase	N	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(MSA-C1500CS12.0-18G-US)	Humidity (%RH)	58



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.174	64.36	64.76	-0.40	54.72	9.64	QP
2	0.174	38.72	54.76	-16.04	29.08	9.64	AV
3	0.211	62.17	63.17	-1.00	52.53	9.64	QP
4	0.211	34.51	53.17	-18.66	24.87	9.64	AV
5	0.229	61.03	62.47	-1.44	51.39	9.64	QP
6	0.229	31.62	52.47	-20.85	21.98	9.64	AV
7	0.250	59.66	61.77	-2.11	50.02	9.64	QP
8	0.250	32.91	51.77	-18.86	23.27	9.64	AV
9	0.325	55.90	59.57	-3.67	46.24	9.66	QP
10	0.325	29.75	49.57	-19.82	20.09	9.66	AV
11	0.402	52.04	57.82	-5.78	42.37	9.67	QP
12	0.402	32.29	47.82	-15.53	22.62	9.67	AV

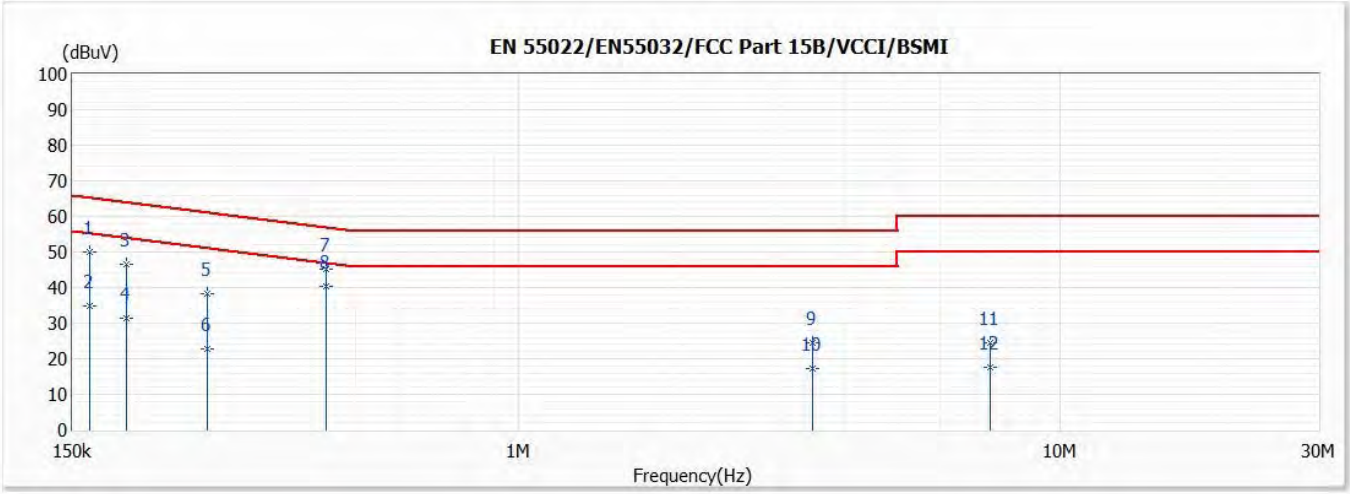
Remark:

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	EBM522U	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 1: Transmit_Non-BF_EBM522U (Adapter 2)	Engineer	Scott Lin
Phase	L	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(AE180AAE00)	Humidity (%RH)	58

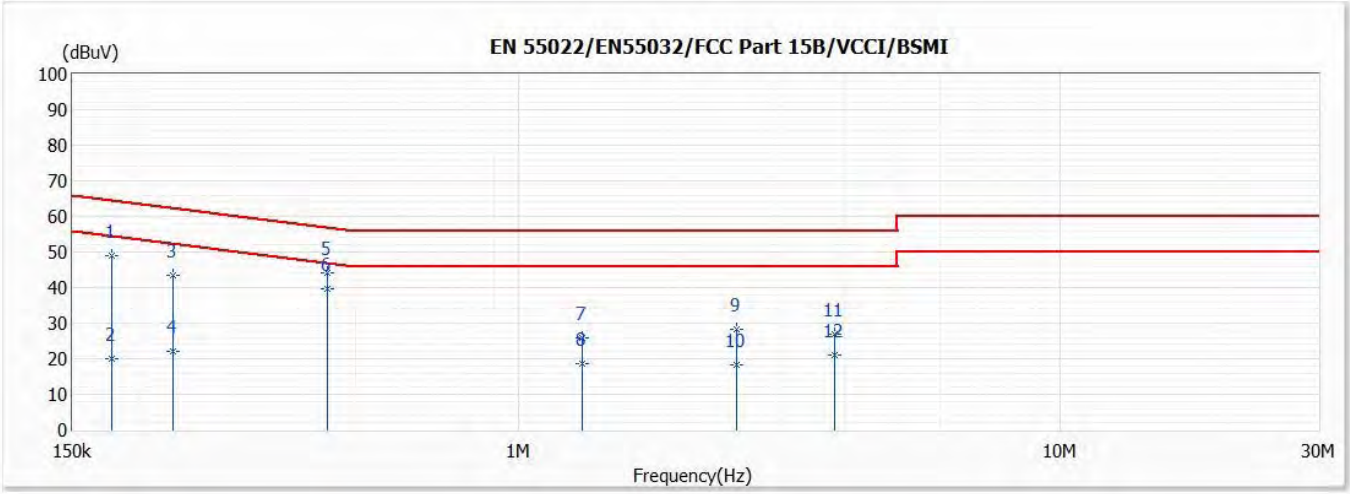


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.162	49.99	65.38	-15.39	40.34	9.65	QP
2	0.162	34.69	55.38	-20.69	25.04	9.65	AV
3	0.189	46.53	64.08	-17.55	36.89	9.64	QP
4	0.189	31.48	54.08	-22.60	21.84	9.64	AV
5	0.266	38.28	61.24	-22.96	28.63	9.65	QP
6	0.266	22.89	51.24	-28.35	13.24	9.65	AV
7	0.441	45.12	57.04	-11.92	35.44	9.68	QP
*8	0.441	40.50	47.04	-6.54	30.82	9.68	AV
9	3.483	24.58	56.00	-31.42	14.72	9.86	QP
10	3.483	17.28	46.00	-28.72	7.42	9.86	AV
11	7.424	24.42	60.00	-35.58	14.39	10.03	QP
12	7.424	17.67	50.00	-32.33	7.64	10.03	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	EBM522U	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 1: Transmit_Non-BF_EBM522U (Adapter 2)	Engineer	Scott Lin
Phase	N	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(AE180AAE00)	Humidity (%RH)	58

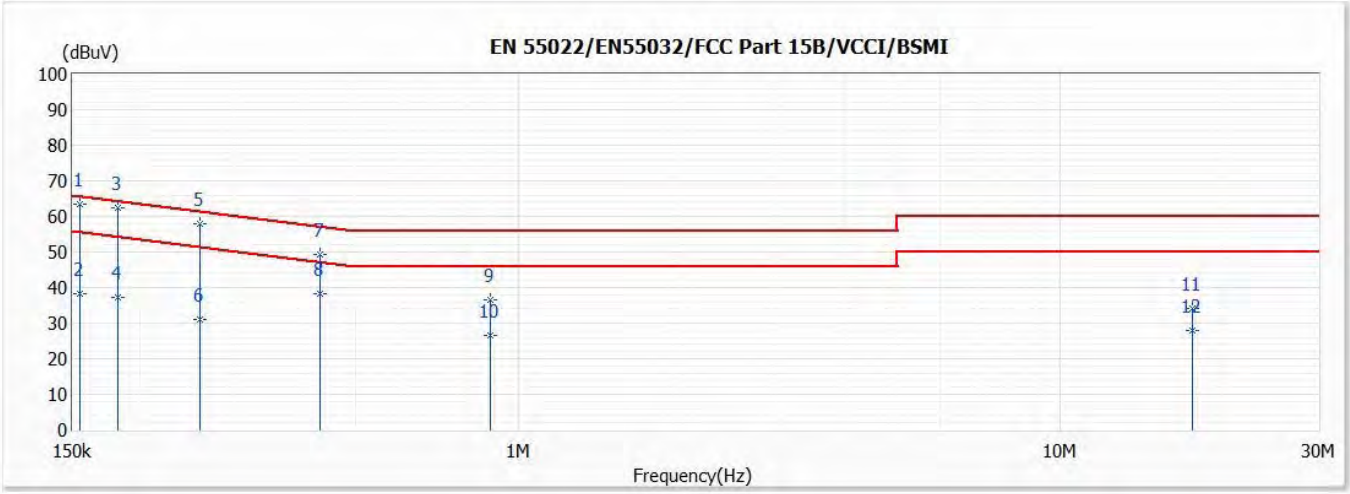


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.177	48.85	64.61	-15.76	39.22	9.63	QP
2	0.177	19.93	54.61	-34.68	10.30	9.63	AV
3	0.230	43.43	62.44	-19.01	33.79	9.64	QP
4	0.230	21.94	52.44	-30.50	12.30	9.64	AV
5	0.443	44.07	57.01	-12.94	34.40	9.67	QP
*6	0.443	39.60	47.01	-7.41	29.93	9.67	AV
7	1.311	25.82	56.00	-30.18	16.08	9.74	QP
8	1.311	18.60	46.00	-27.40	8.86	9.74	AV
9	2.524	28.35	56.00	-27.65	18.54	9.81	QP
10	2.524	18.20	46.00	-27.80	8.39	9.81	AV
11	3.836	26.94	56.00	-29.06	17.07	9.87	QP
12	3.836	21.11	46.00	-24.89	11.24	9.87	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	EBM522	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 2: Transmit_Non-BF_EBM522 (Adapter 1)	Engineer	Scott Lin
Phase	L	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(MSA-C1500CS12.0-18G-US)	Humidity (%RH)	58



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.155	63.57	65.74	-2.17	53.92	9.65	QP
2	0.155	38.44	55.74	-17.30	28.79	9.65	AV
*3	0.182	62.27	64.39	-2.12	52.63	9.64	QP
4	0.182	37.32	54.39	-17.07	27.68	9.64	AV
5	0.258	57.96	61.50	-3.54	48.31	9.65	QP
6	0.258	31.13	51.50	-20.37	21.48	9.65	AV
7	0.431	49.43	57.24	-7.81	39.75	9.68	QP
8	0.431	38.36	47.24	-8.88	28.68	9.68	AV
9	0.888	36.65	56.00	-19.35	26.92	9.73	QP
10	0.888	26.45	46.00	-19.55	16.72	9.73	AV
11	17.569	34.25	60.00	-25.75	23.93	10.32	QP
12	17.569	27.86	50.00	-22.14	17.54	10.32	AV

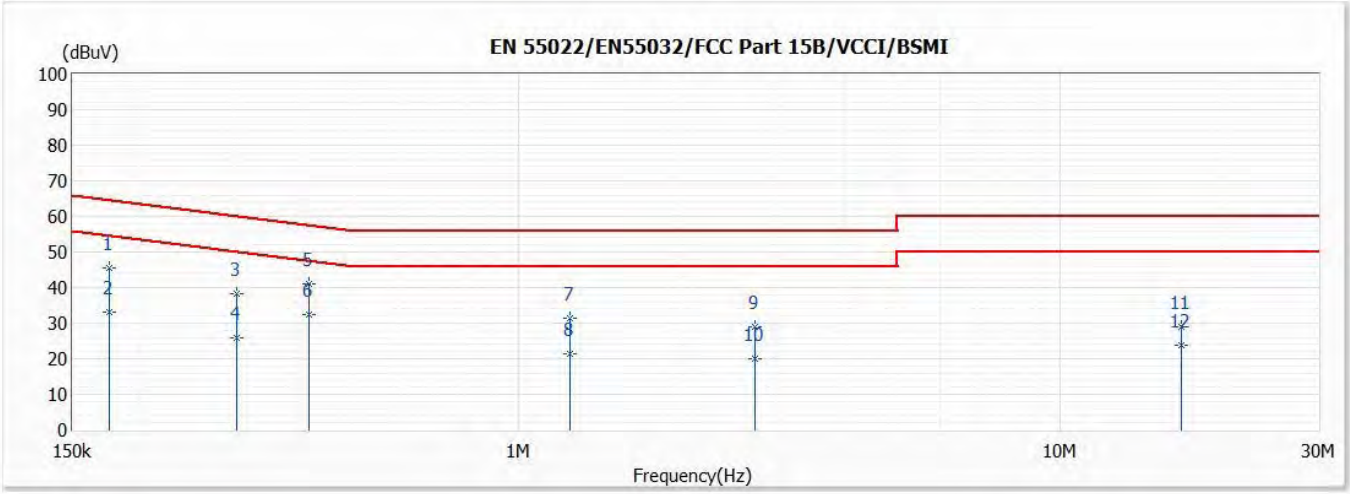
Remark:

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	EBM522	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 2: Transmit_Non-BF_EBM522 (Adapter 1)	Engineer	Scott Lin
Phase	N	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(MSA-C1500CS12.0-18G-US)	Humidity (%RH)	58



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.175	45.41	64.72	-19.31	35.77	9.64	QP
2	0.175	32.99	54.72	-21.73	23.35	9.64	AV
3	0.301	38.32	60.21	-21.89	28.66	9.66	QP
4	0.301	25.69	50.21	-24.52	16.03	9.66	AV
5	0.410	40.94	57.65	-16.71	31.27	9.67	QP
*6	0.410	32.48	47.65	-15.17	22.81	9.67	AV
7	1.244	31.31	56.00	-24.69	21.58	9.73	QP
8	1.244	21.48	46.00	-24.52	11.75	9.73	AV
9	2.728	29.04	56.00	-26.96	19.22	9.82	QP
10	2.728	20.11	46.00	-25.89	10.29	9.82	AV
11	16.708	29.05	60.00	-30.95	18.64	10.41	QP
12	16.708	23.66	50.00	-26.34	13.25	10.41	AV

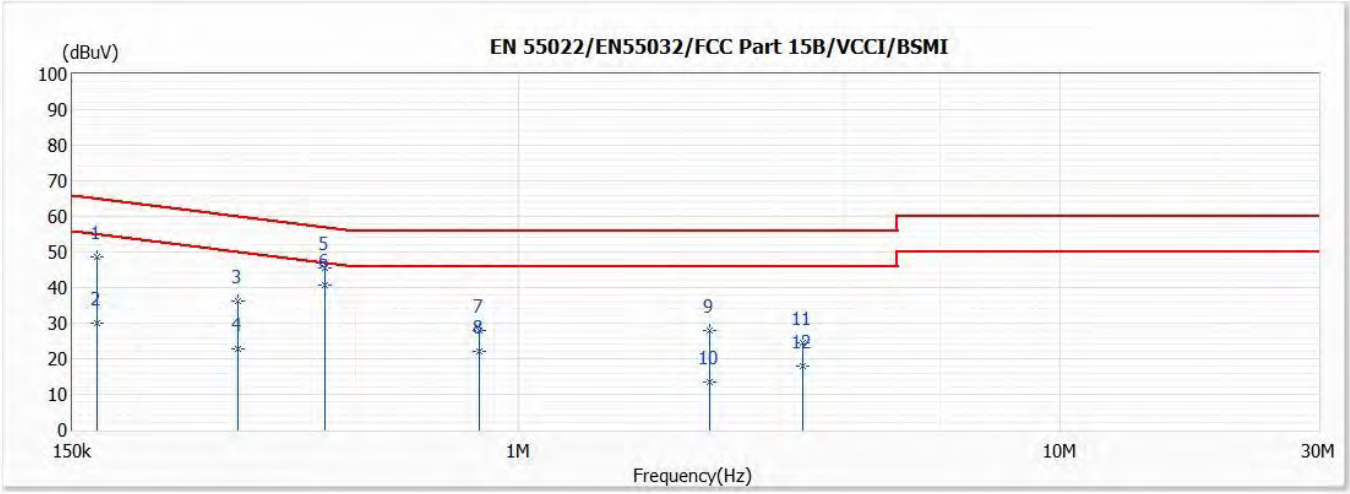
Remark:

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 - Limi

Model No	EBM522	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 2: Transmit_Non-BF_EBM522 (Adapter 2)	Engineer	Scott Lin
Phase	L	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(AE180AAE00)	Humidity (%RH)	58

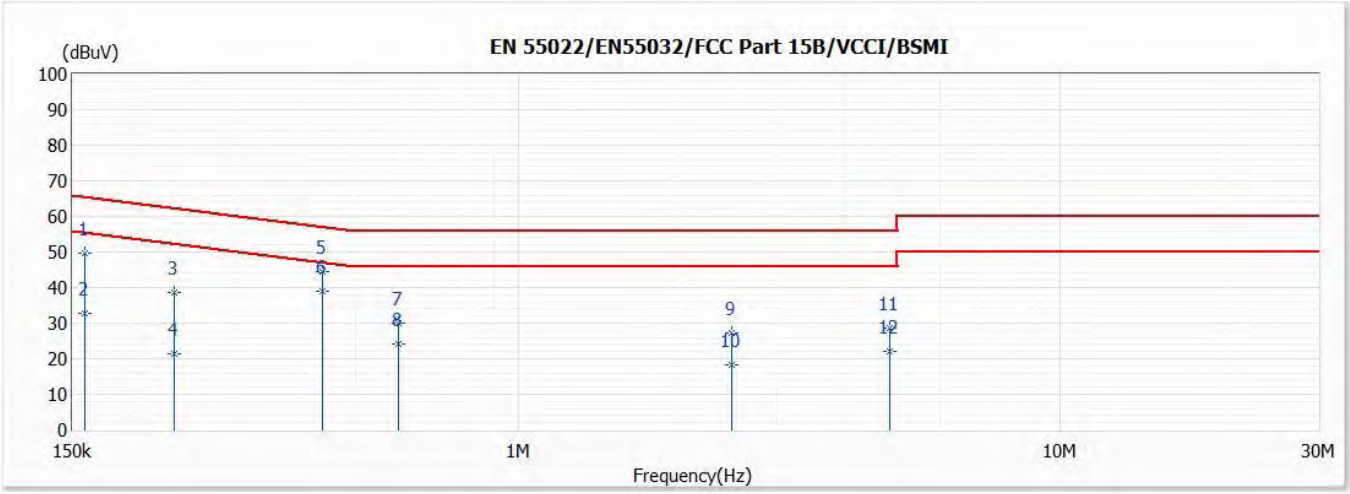


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.166	48.61	65.14	-16.53	38.96	9.65	QP
2	0.166	30.06	55.14	-25.08	20.41	9.65	AV
3	0.303	36.34	60.16	-23.82	26.67	9.67	QP
4	0.303	22.72	50.16	-27.44	13.05	9.67	AV
5	0.438	45.64	57.10	-11.46	35.96	9.68	QP
*6	0.438	40.81	47.10	-6.29	31.13	9.68	AV
7	0.847	27.79	56.00	-28.21	18.06	9.73	QP
8	0.847	21.90	46.00	-24.10	12.17	9.73	AV
9	2.257	27.81	56.00	-28.19	18.01	9.80	QP
10	2.257	13.32	46.00	-32.68	3.52	9.80	AV
11	3.345	24.40	56.00	-31.60	14.55	9.85	QP
12	3.345	17.94	46.00	-28.06	8.09	9.85	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	EBM522	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2021/5/19
Test Mode	Mode 2: Transmit_Non-BF_EBM522 (Adapter 2)	Engineer	Scott Lin
Phase	N	Temperature (℃)	25.5
Test Condition	802.11a_5785MHz_CE-TX(AE180AAE00)	Humidity (%RH)	58



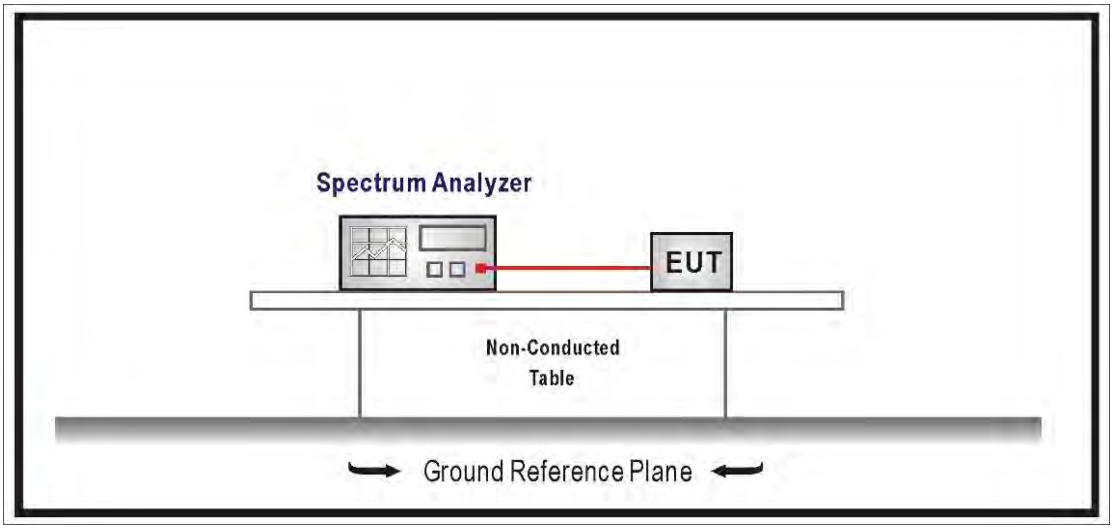
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.158	49.59	65.56	-15.97	39.95	9.64	QP
2	0.158	32.81	55.56	-22.75	23.17	9.64	AV
3	0.231	38.70	62.43	-23.73	29.06	9.64	QP
4	0.231	21.26	52.43	-31.17	11.62	9.64	AV
5	0.434	44.58	57.18	-12.60	34.91	9.67	QP
*6	0.434	39.08	47.18	-8.10	29.41	9.67	AV
7	0.600	30.06	56.00	-25.94	20.37	9.69	QP
8	0.600	24.00	46.00	-22.00	14.31	9.69	AV
9	2.473	27.28	56.00	-28.72	17.48	9.80	QP
10	2.473	18.37	46.00	-27.63	8.57	9.80	AV
11	4.848	28.73	56.00	-27.27	18.81	9.92	QP
12	4.848	22.10	46.00	-23.90	12.18	9.92	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.

2. 26dB & 99% & DTS Bandwidth

2.1. Test Setup



2.2. Limits

99% & 26dB Bandwidth : No Required

6dB Bandwidth ≧ 500KHz

2.3. 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≧3xRBW, Sweep time=Auto, Set Peak detector.

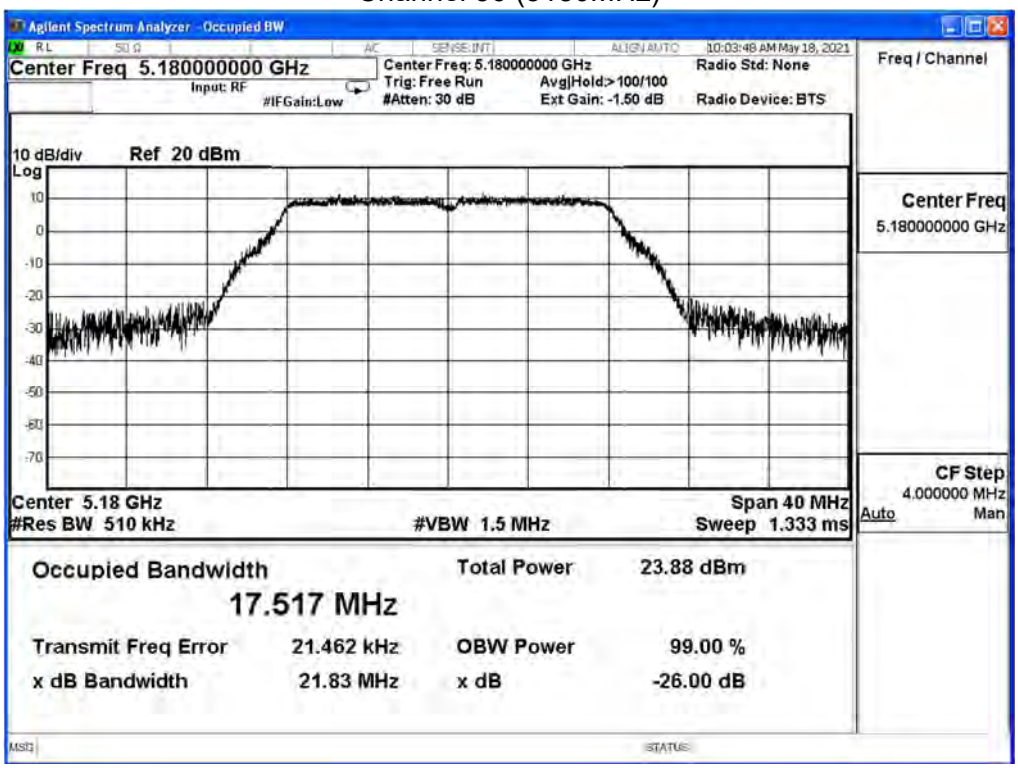
2.4. Test Result

Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

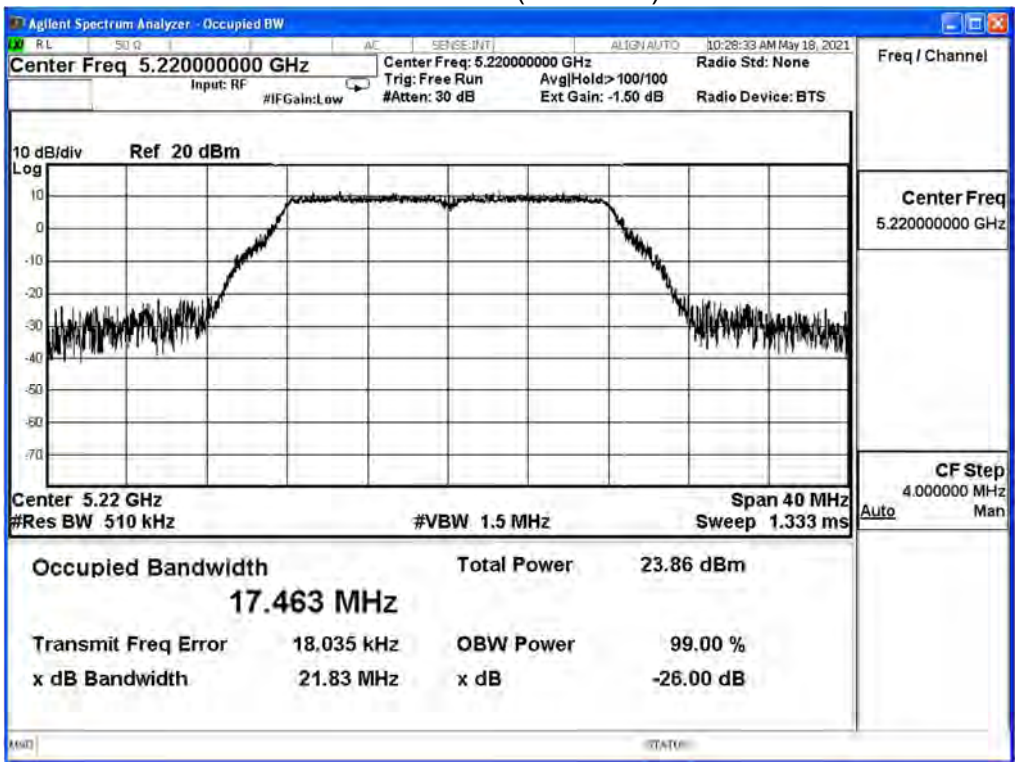
IEEE 802.11a (ANT 0)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	17.517	21.830	--
44	5220	17.463	21.830	--
48	5240	17.452	21.850	--
52	5260	17.457	21.980	--
60	5300	17.513	22.090	--
64	5320	17.511	22.000	--
100	5500	17.532	22.040	--
116	5580	17.580	21.880	--
140	5700	17.537	21.730	--
149	5745	17.512	N/A	--
157	5785	17.543		--
165	5825	17.562		--

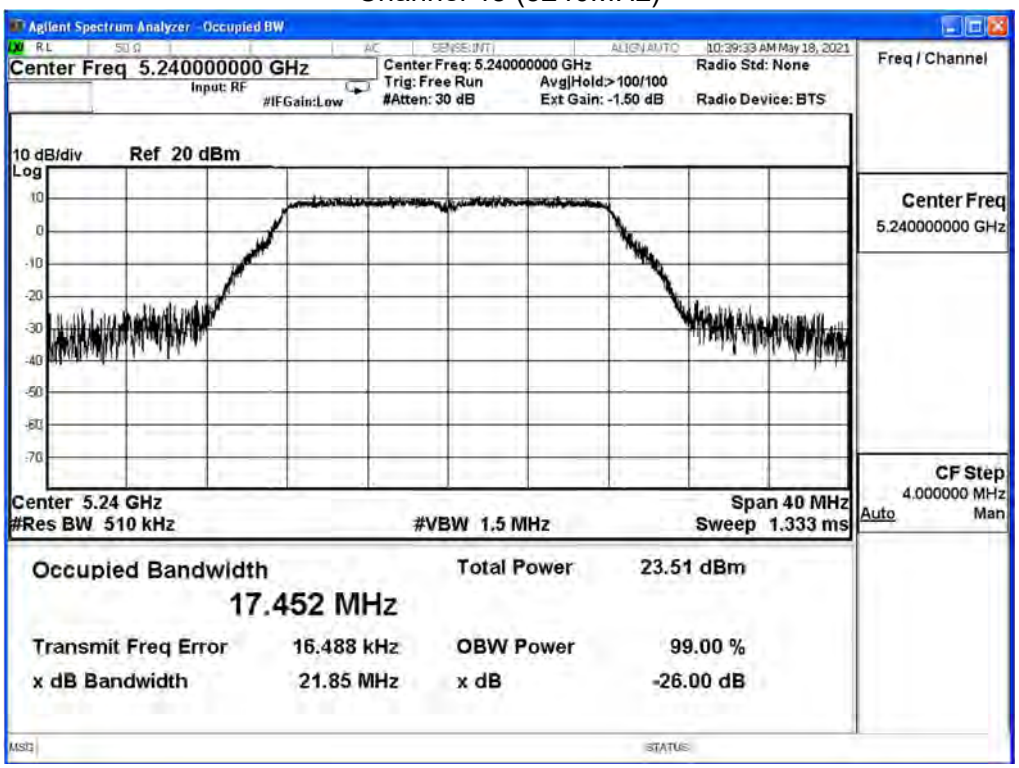
Channel 36 (5180MHz)



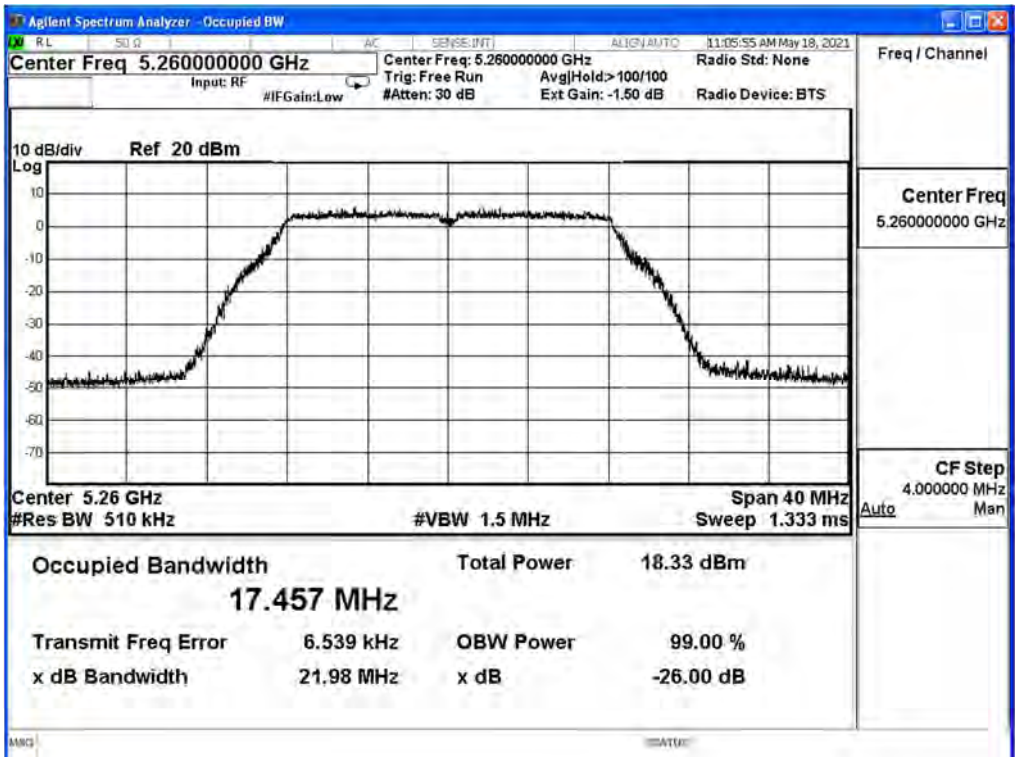
Channel 44 (5220MHz)



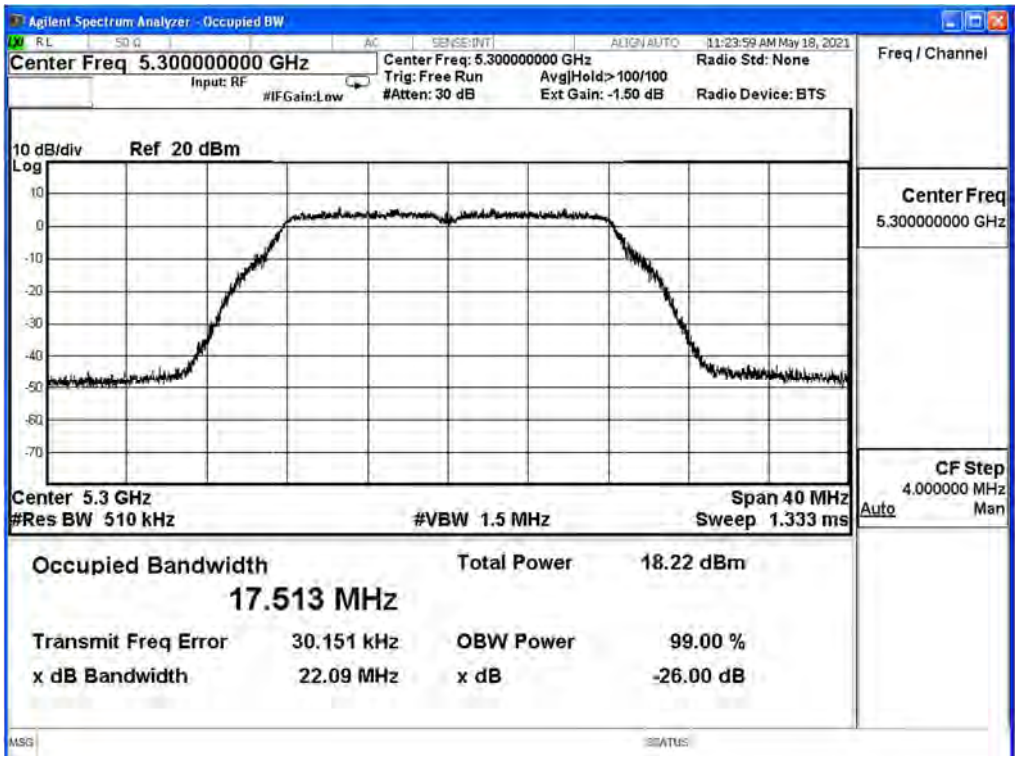
Channel 48 (5240MHz)



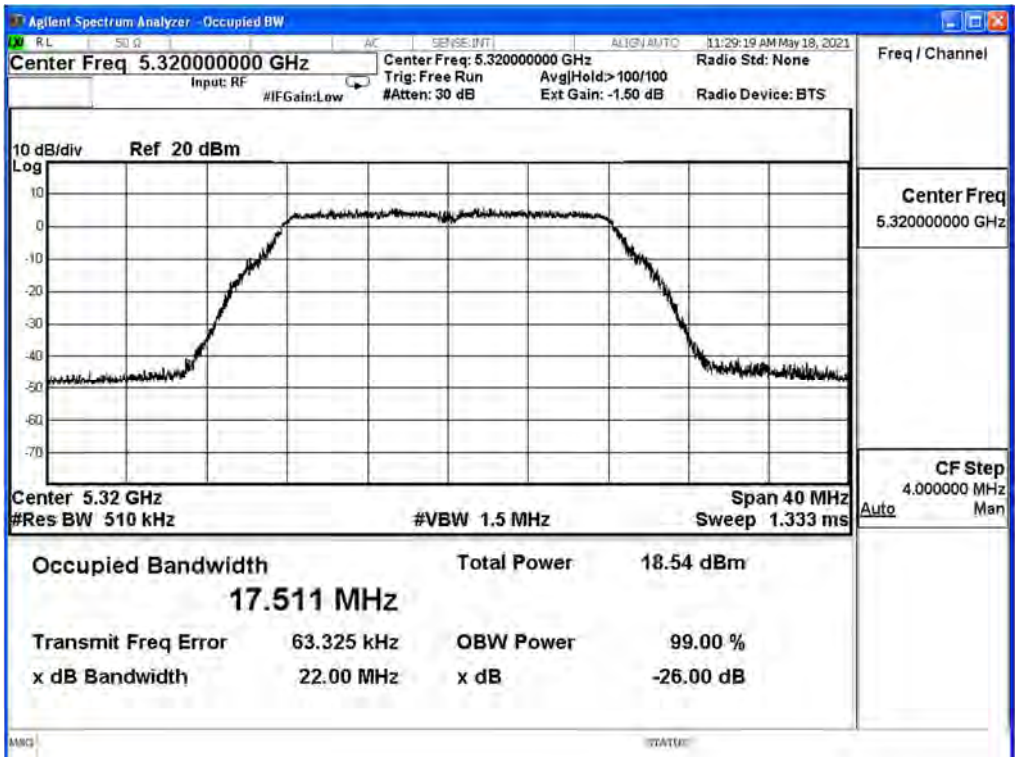
Channel 52 (5260MHz)



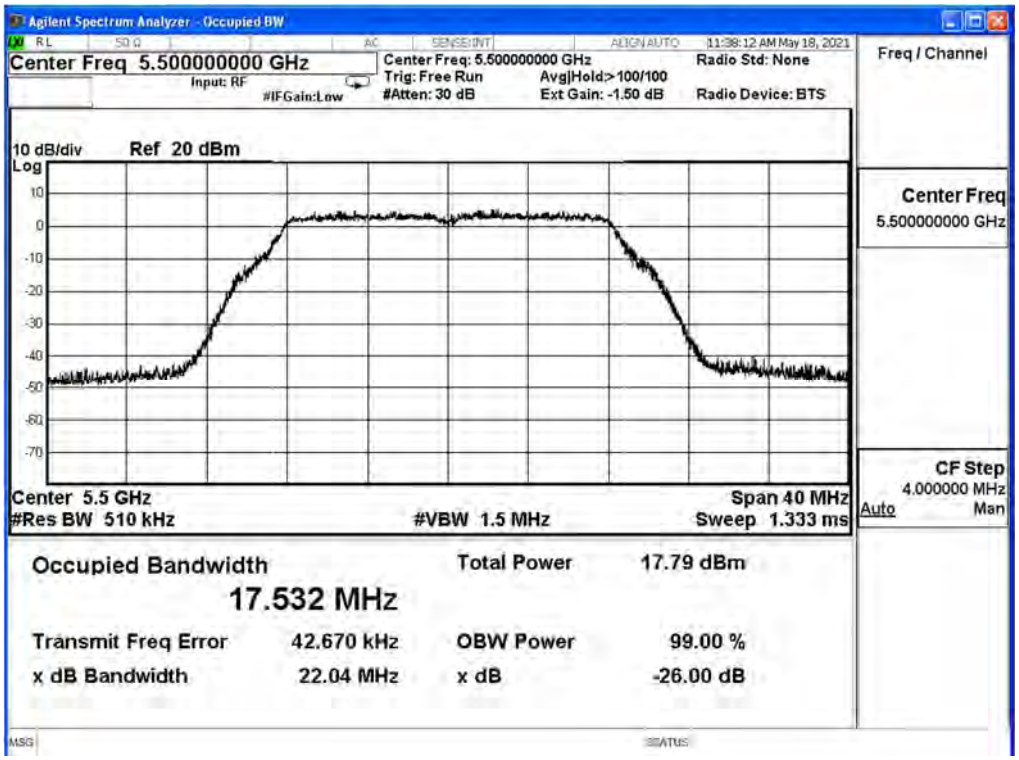
Channel 60 (5300MHz)



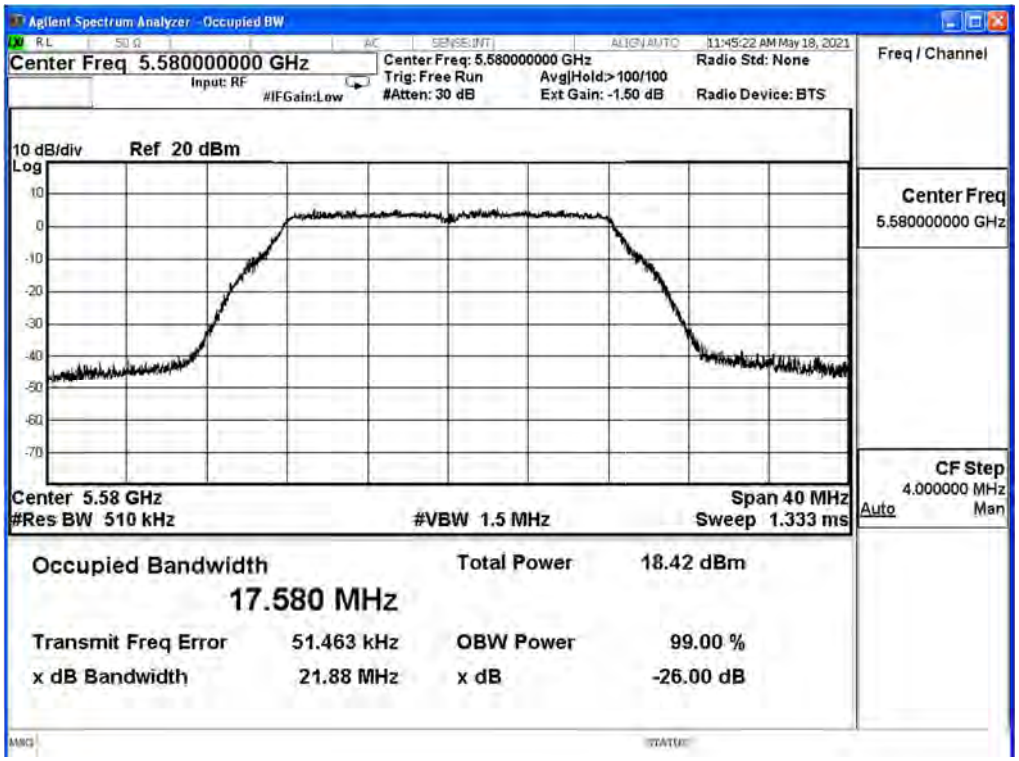
Channel 64 (5320MHz)



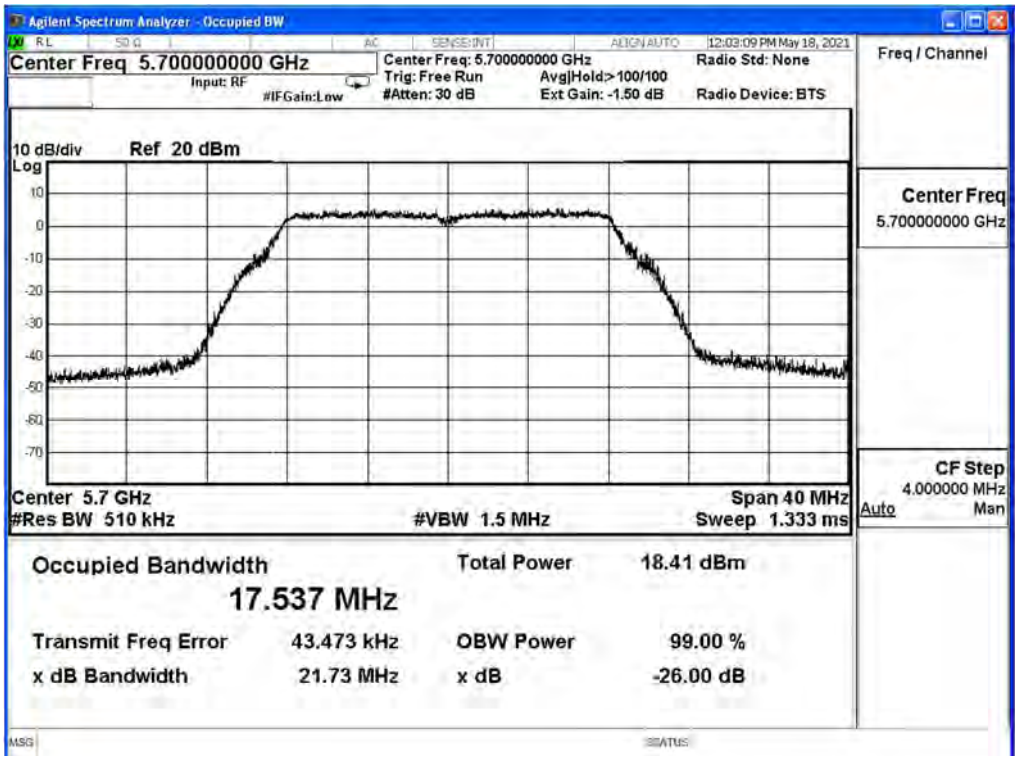
Channel 100 (5500MHz)



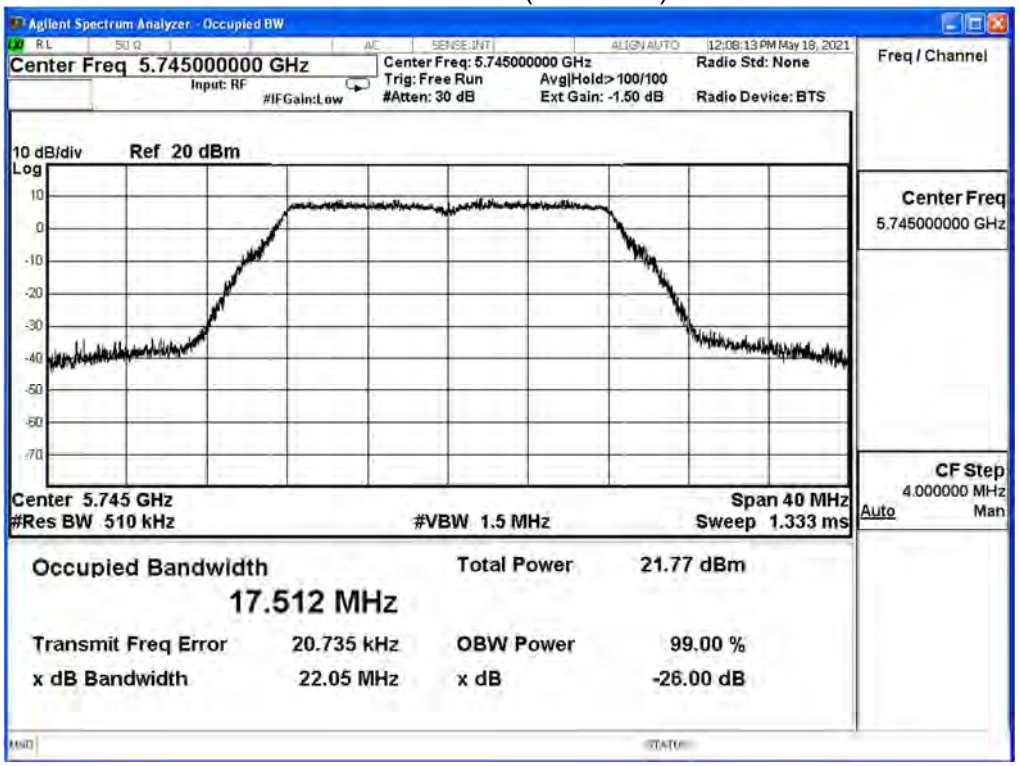
Channel 116 (5580MHz)



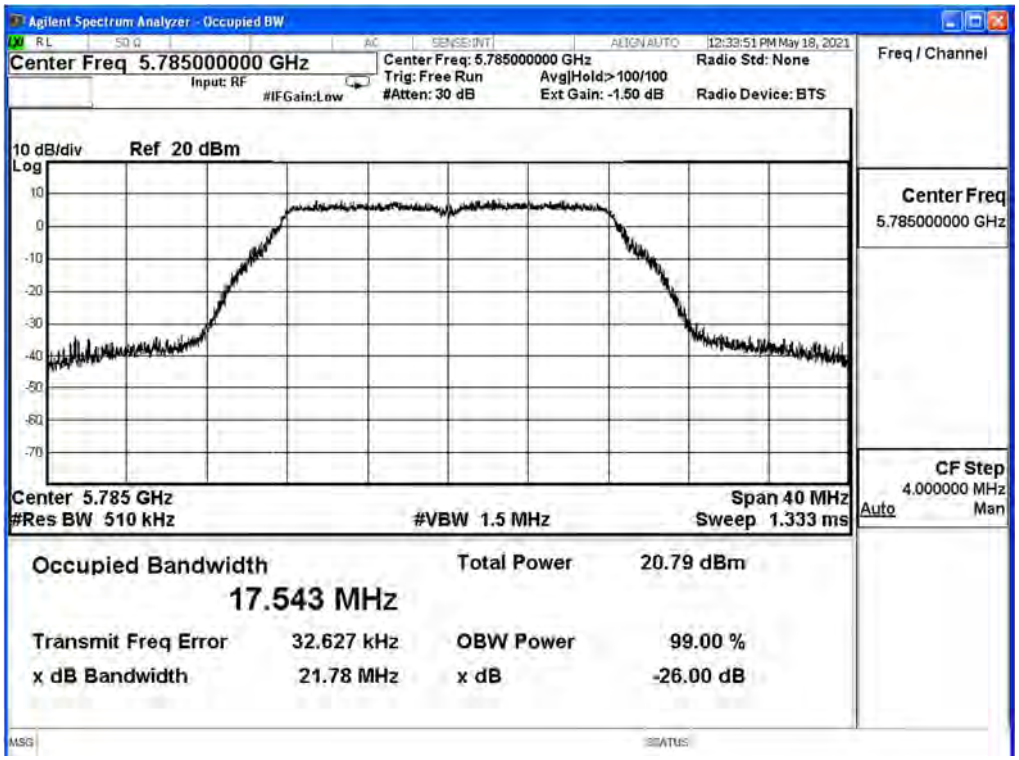
Channel 140 (5700MHz)



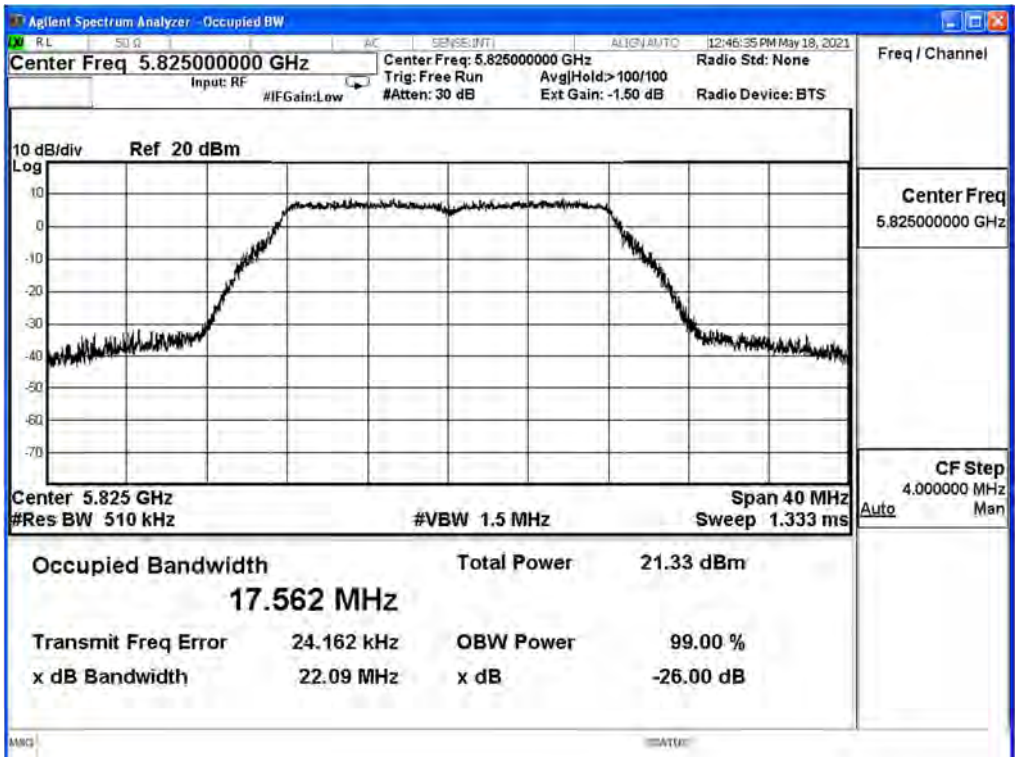
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

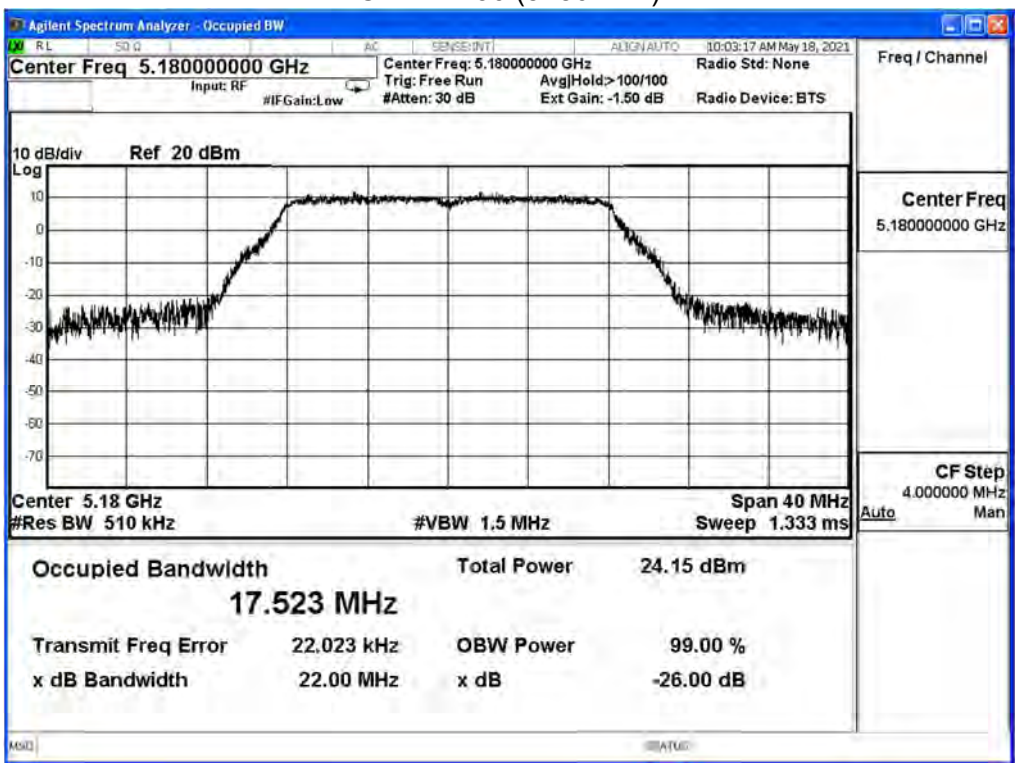


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

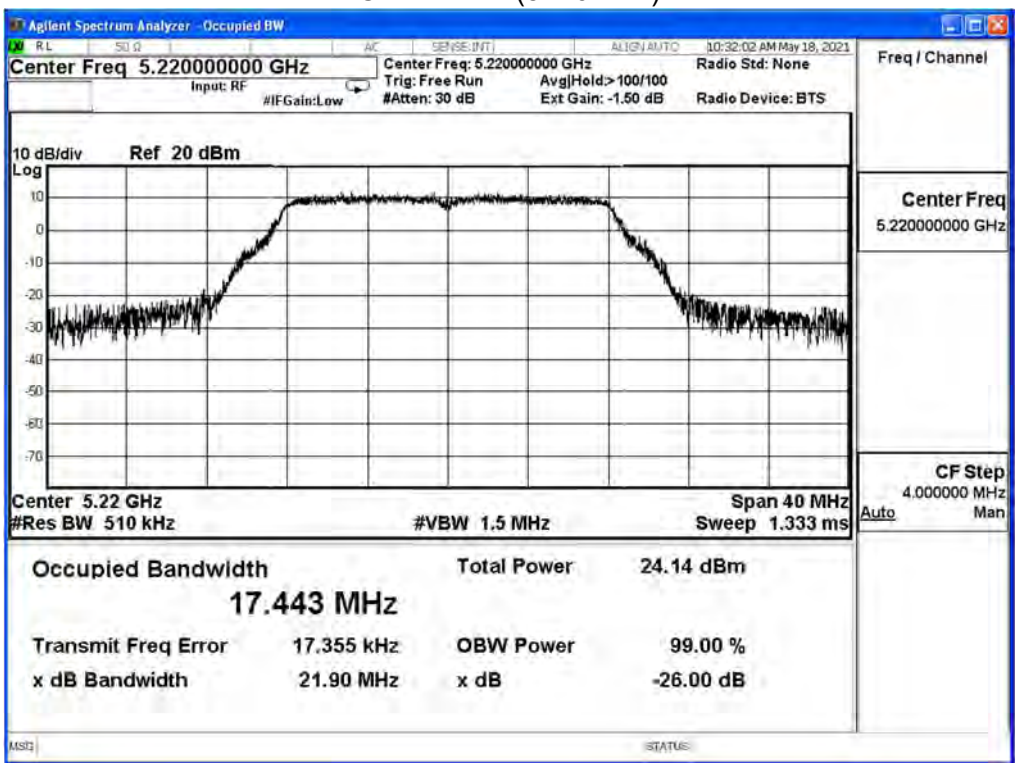
IEEE 802.11a (ANT 1)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	17.523	22.000	--
44	5220	17.443	21.900	--
48	5240	17.423	21.820	--
52	5260	17.445	22.070	--
60	5300	17.363	21.500	--
64	5320	17.435	21.750	--
100	5500	17.489	21.820	--
116	5580	17.404	21.640	--
140	5700	17.340	21.730	--
149	5745	17.524	N/A	--
157	5785	17.440		--
165	5825	17.378		--

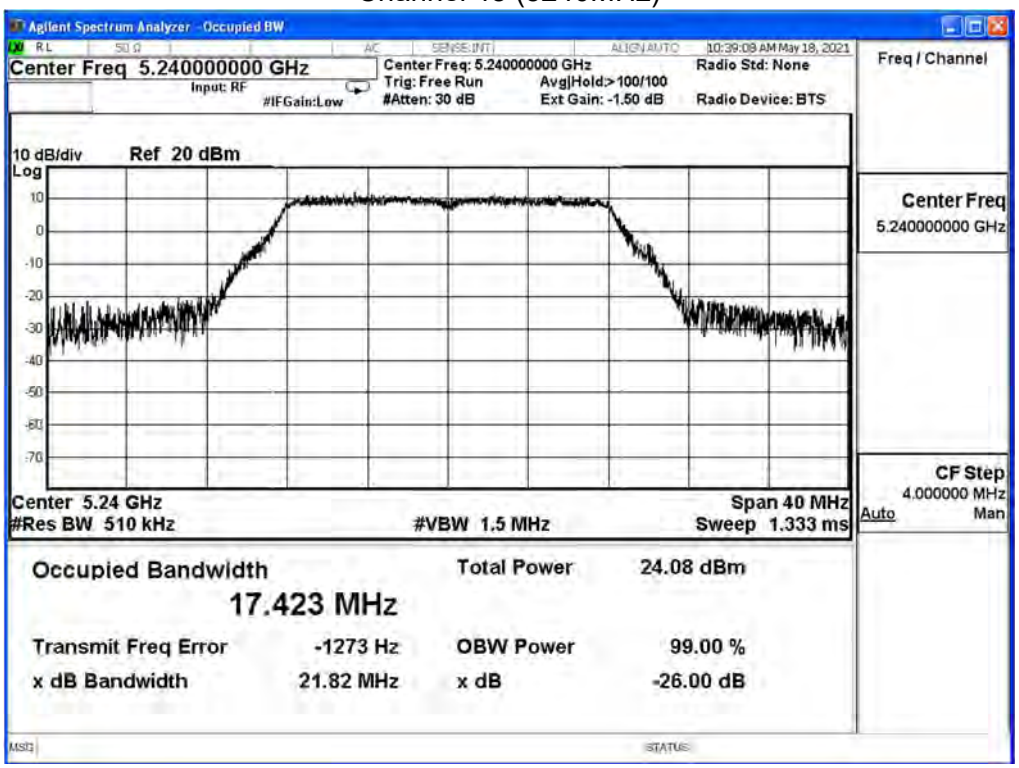
Channel 36 (5180MHz)



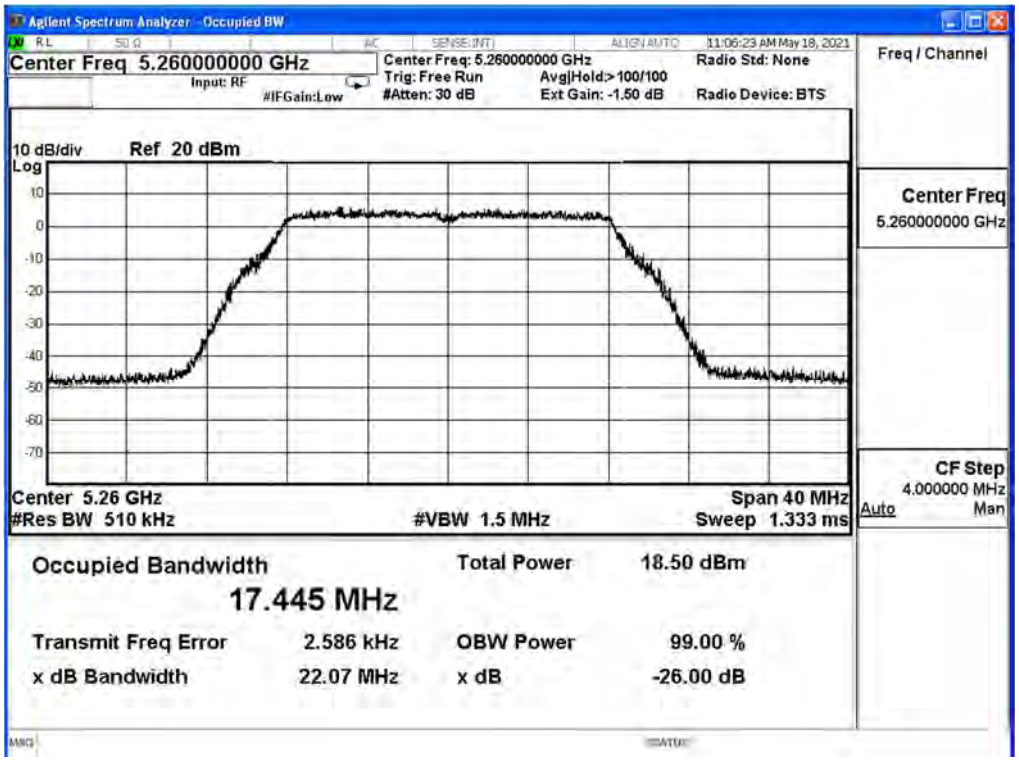
Channel 44 (5220MHz)



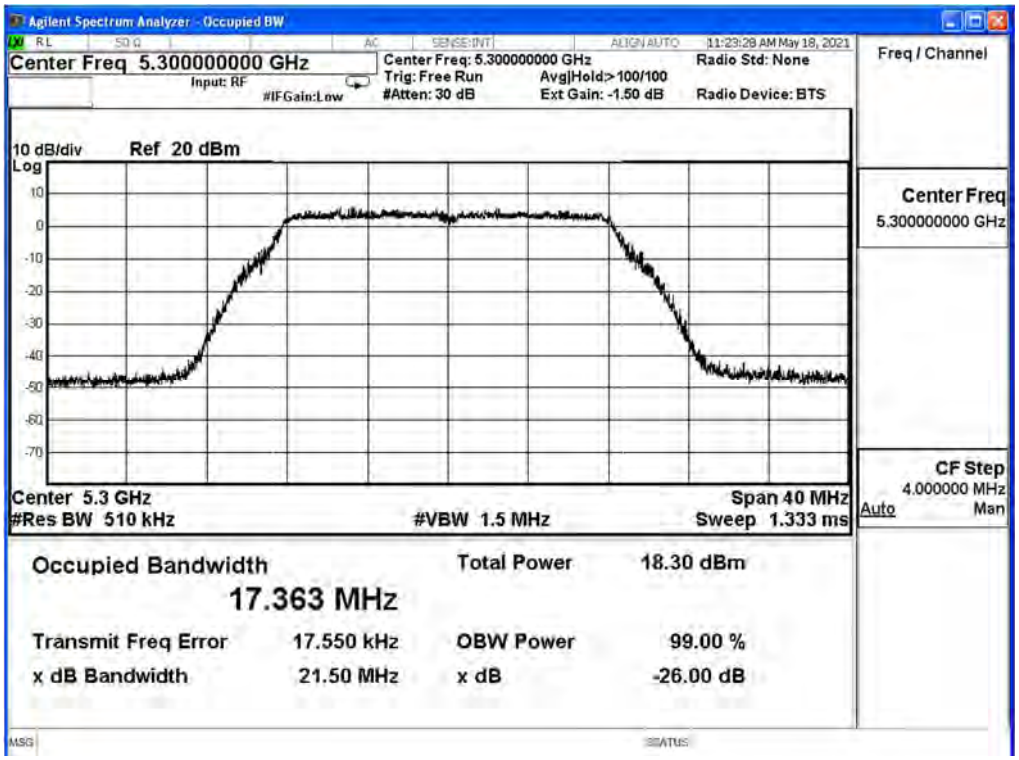
Channel 48 (5240MHz)



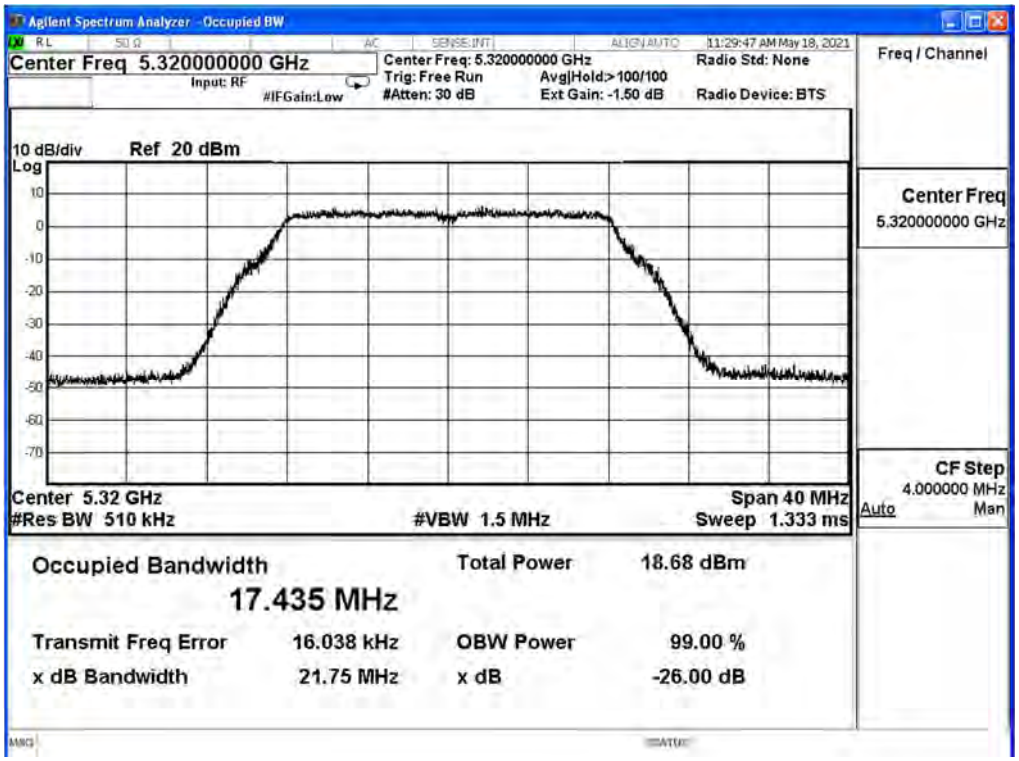
Channel 52 (5260MHz)



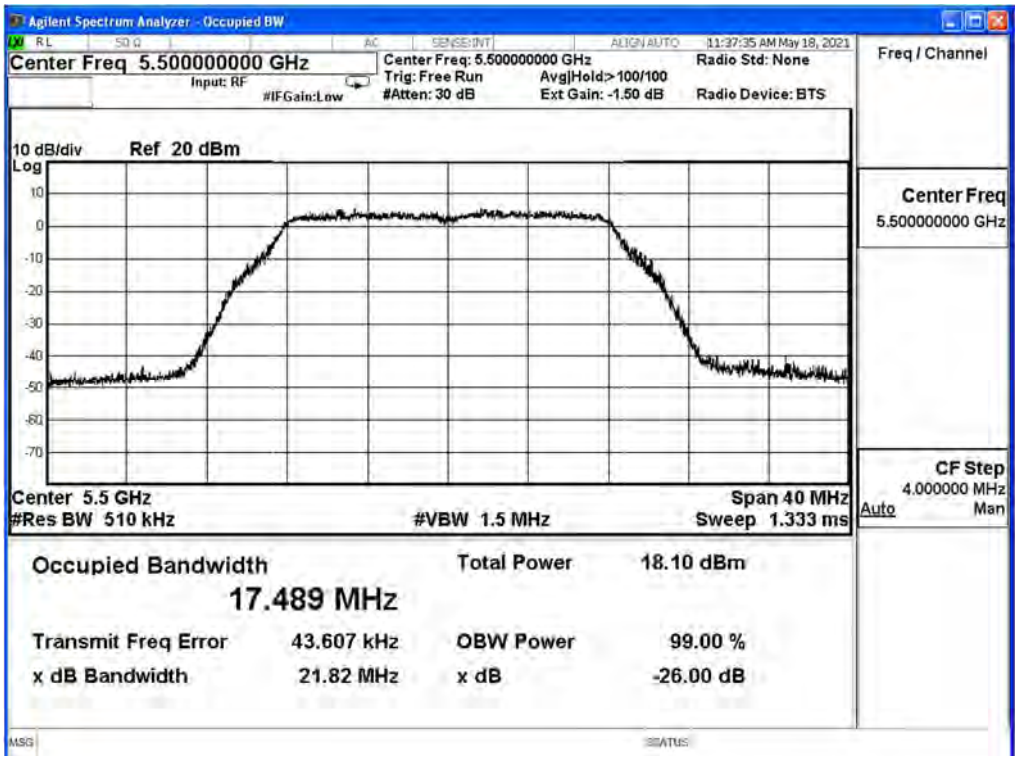
Channel 60 (5300MHz)



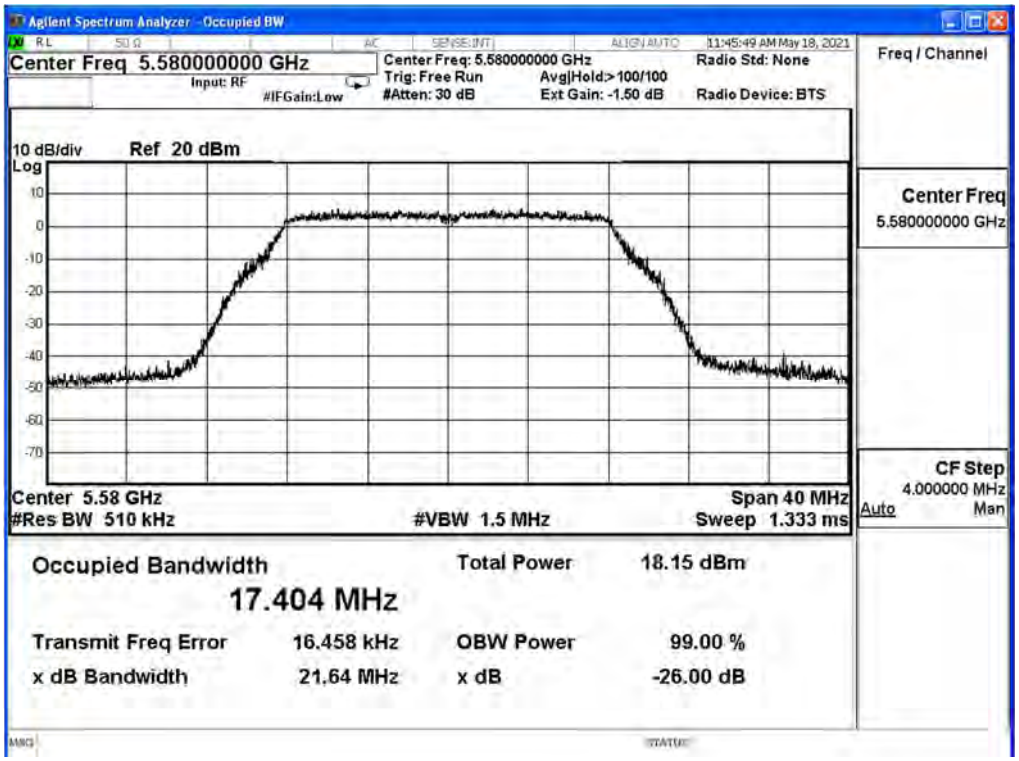
Channel 64 (5320MHz)



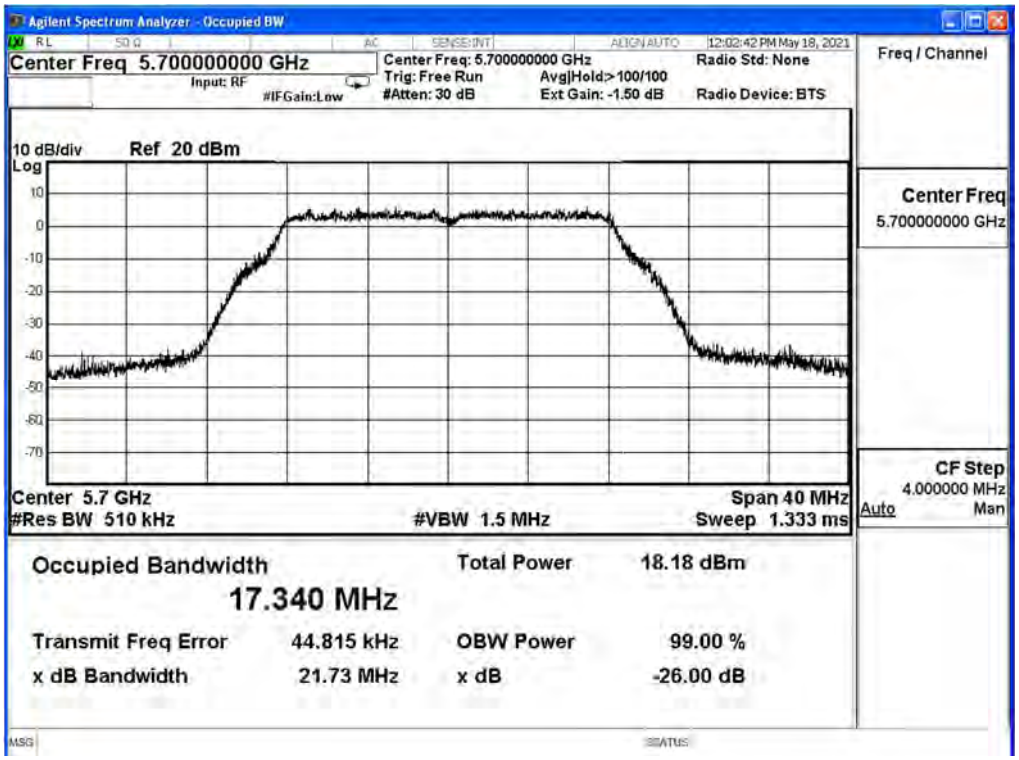
Channel 100 (5500MHz)



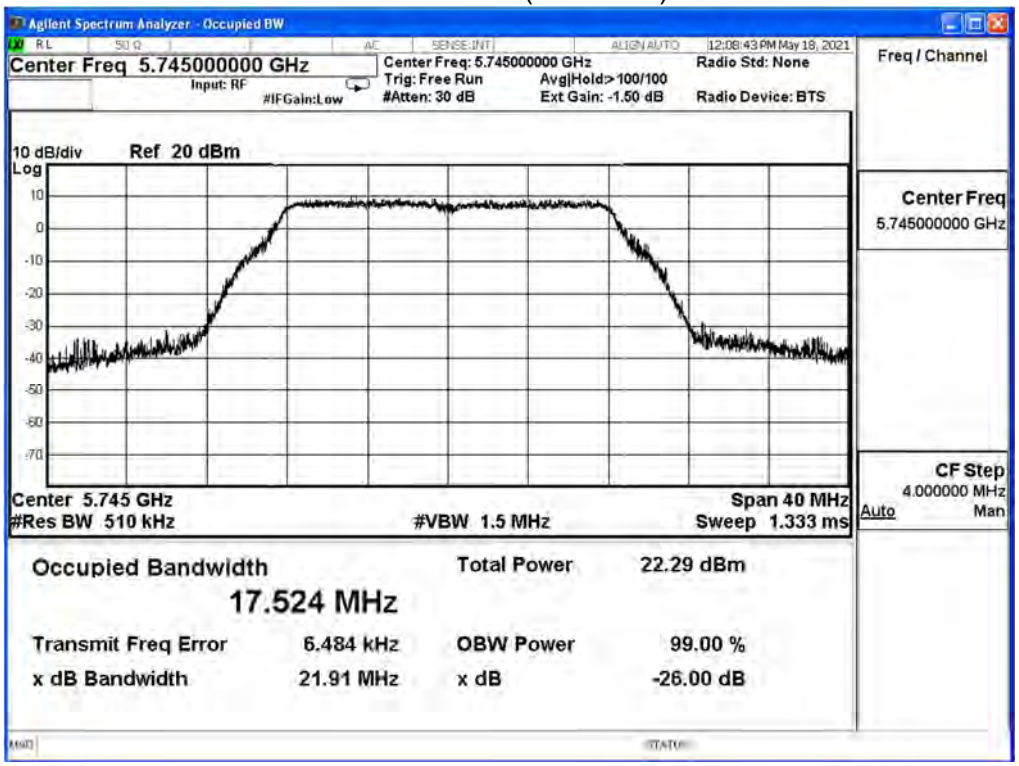
Channel 116 (5580MHz)



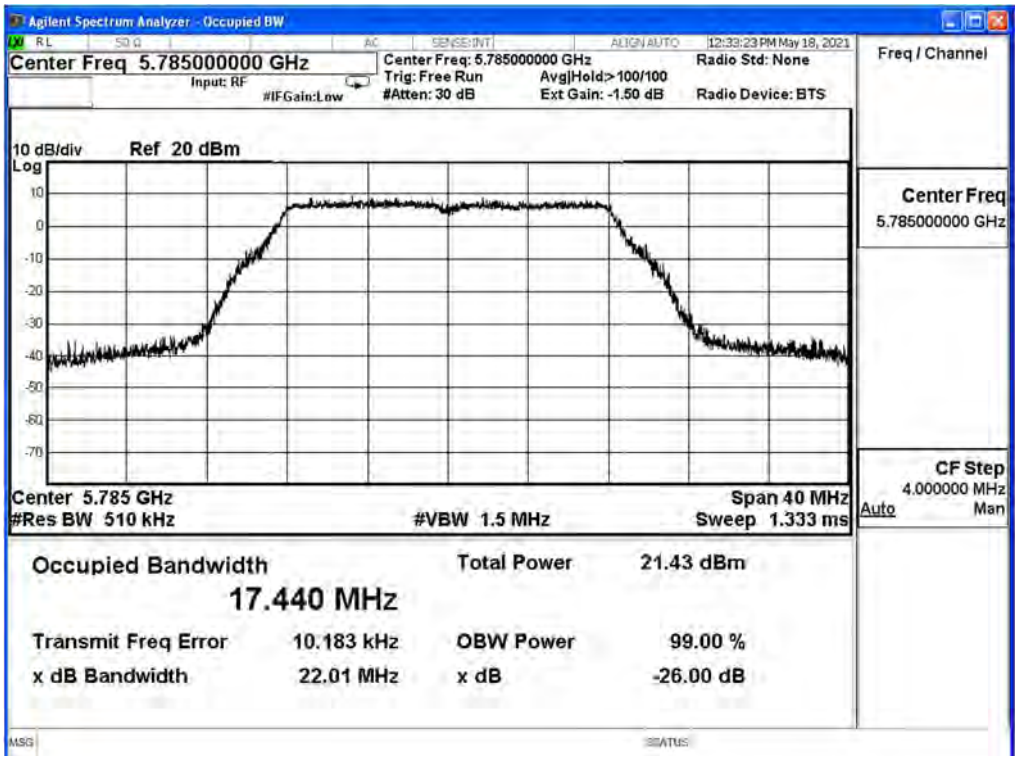
Channel 140 (5700MHz)



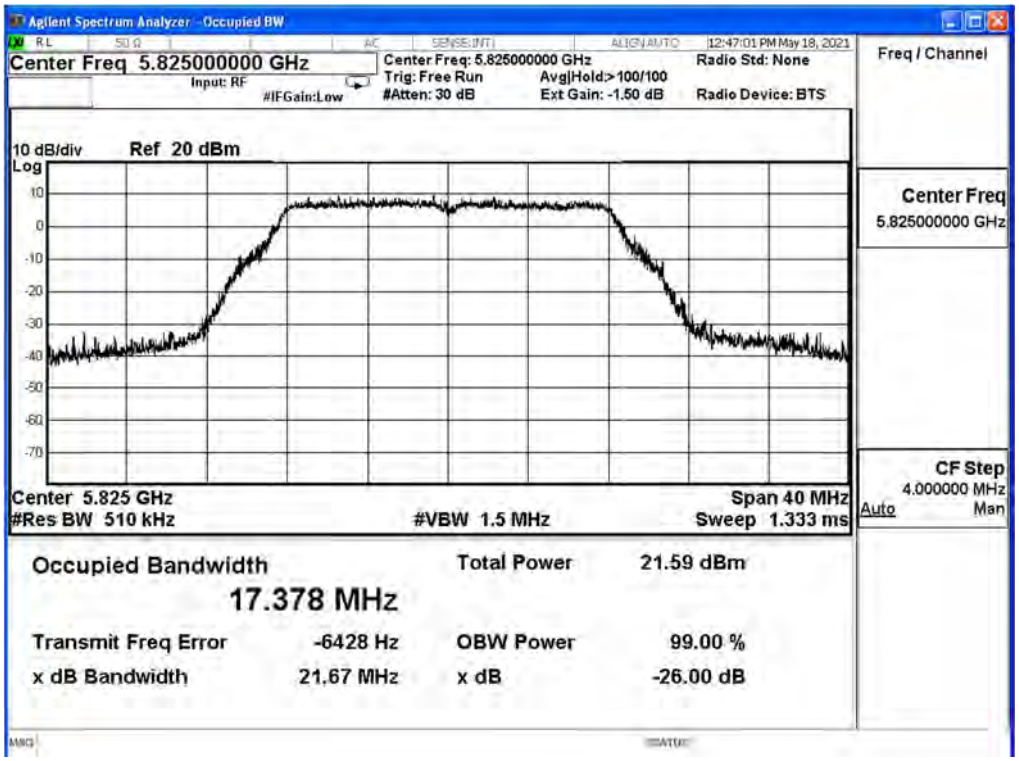
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

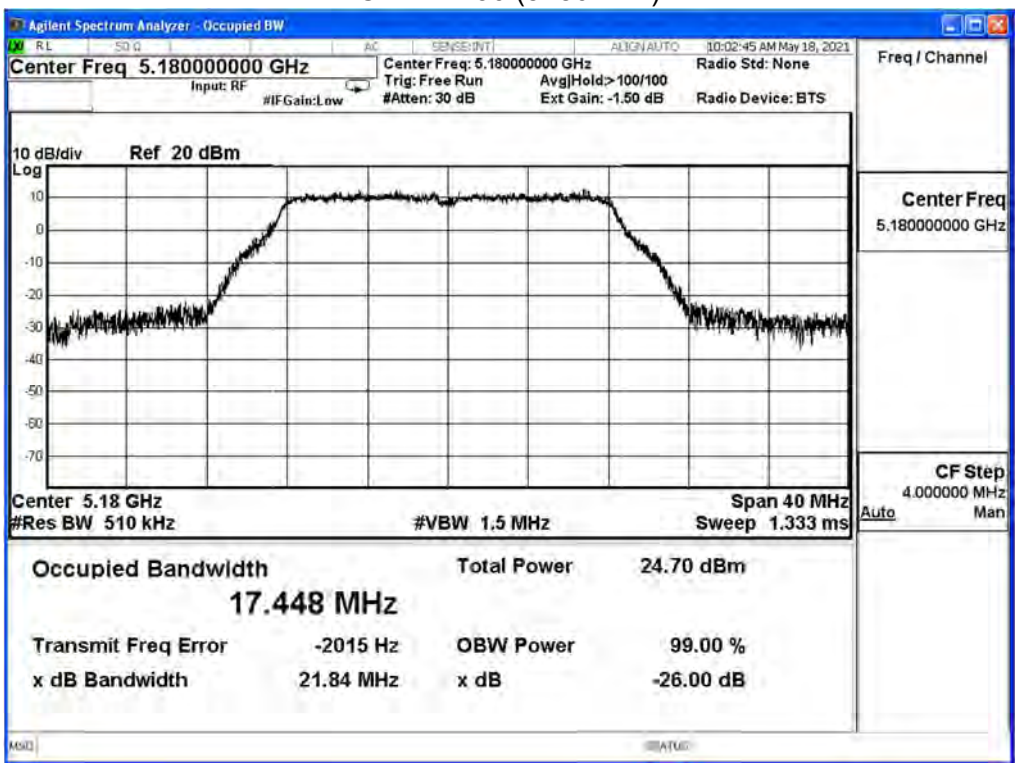


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

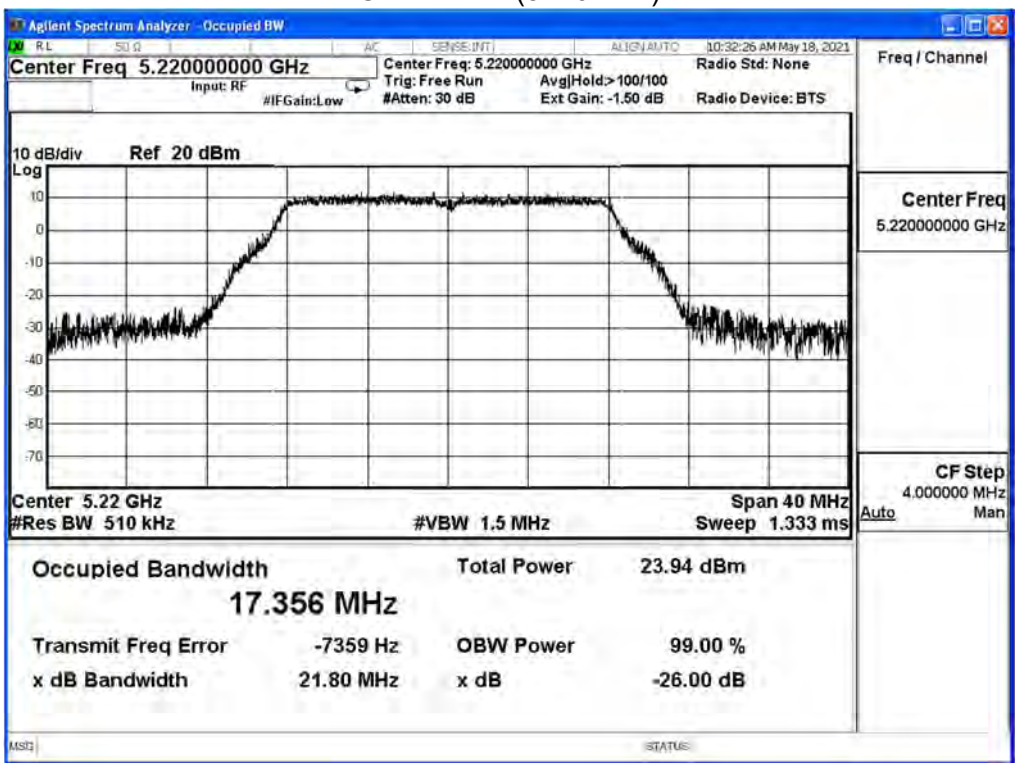
IEEE 802.11a (ANT 2)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	17.448	21.840	--
44	5220	17.356	21.800	--
48	5240	17.370	21.660	--
52	5260	17.378	21.750	--
60	5300	17.440	21.790	--
64	5320	17.462	21.840	--
100	5500	17.460	21.890	--
116	5580	17.432	21.880	--
140	5700	17.295	21.640	--
149	5745	17.337	N/A	--
157	5785	17.291		--
165	5825	17.277		--

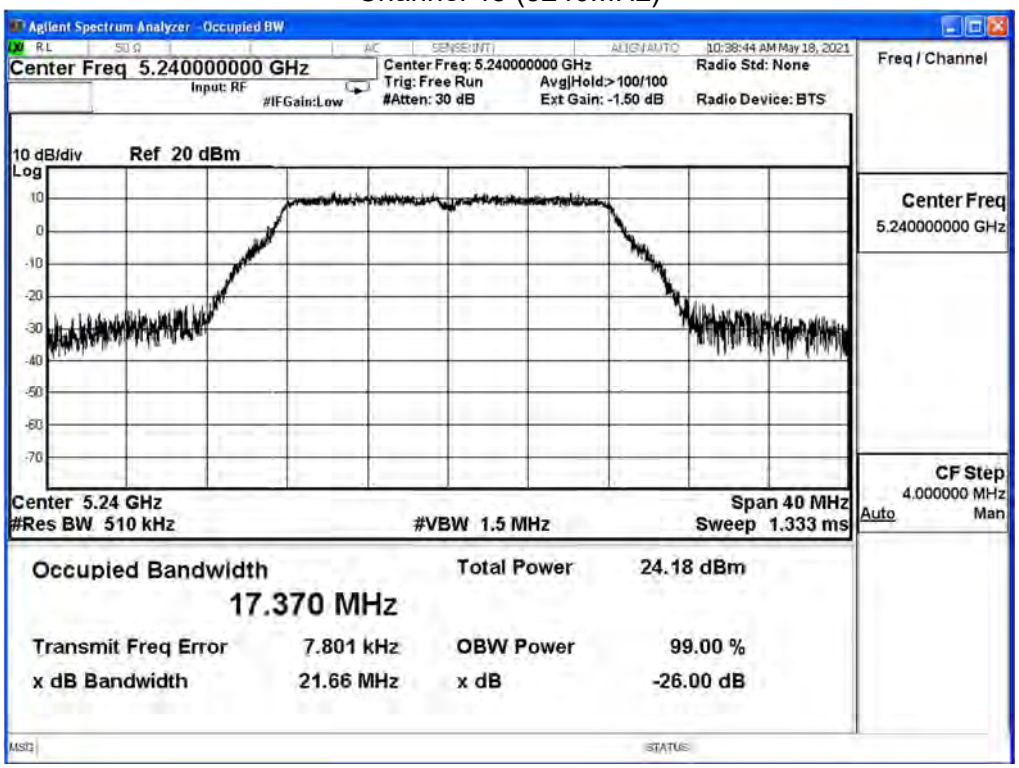
Channel 36 (5180MHz)



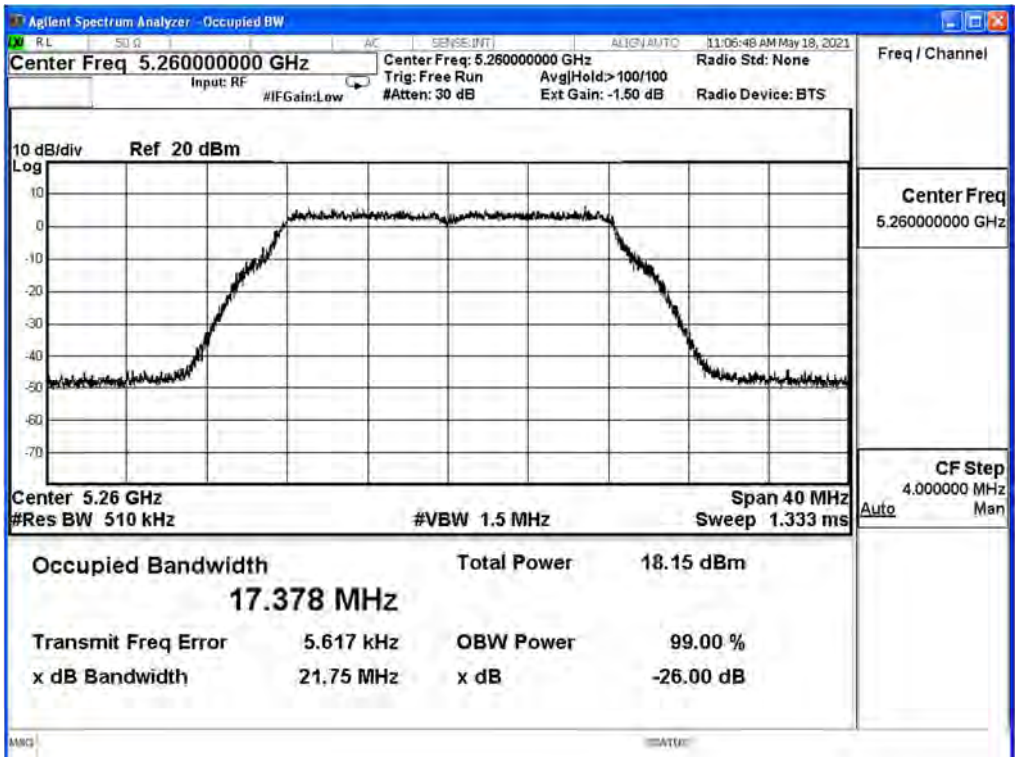
Channel 44 (5220MHz)



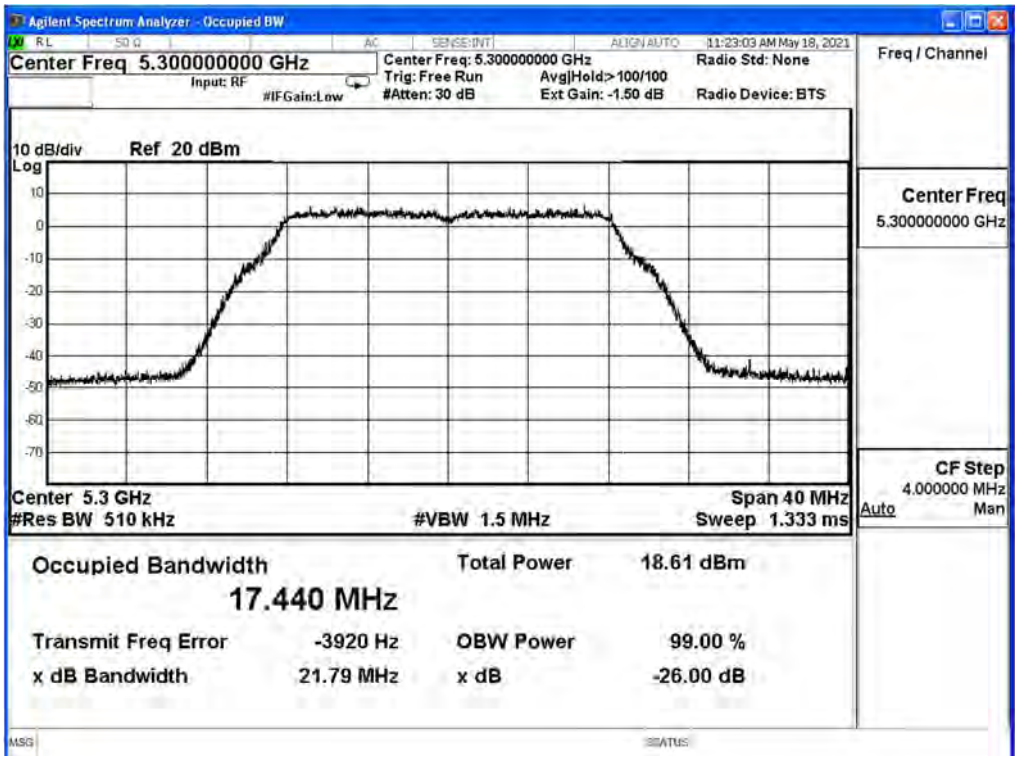
Channel 48 (5240MHz)



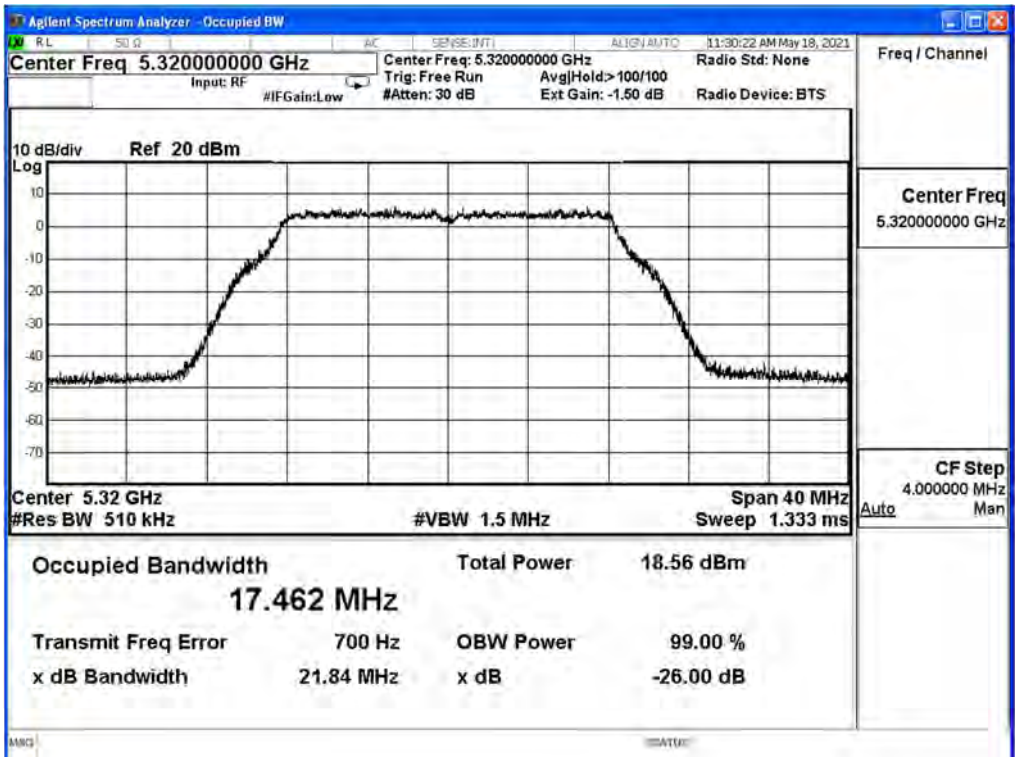
Channel 52 (5260MHz)



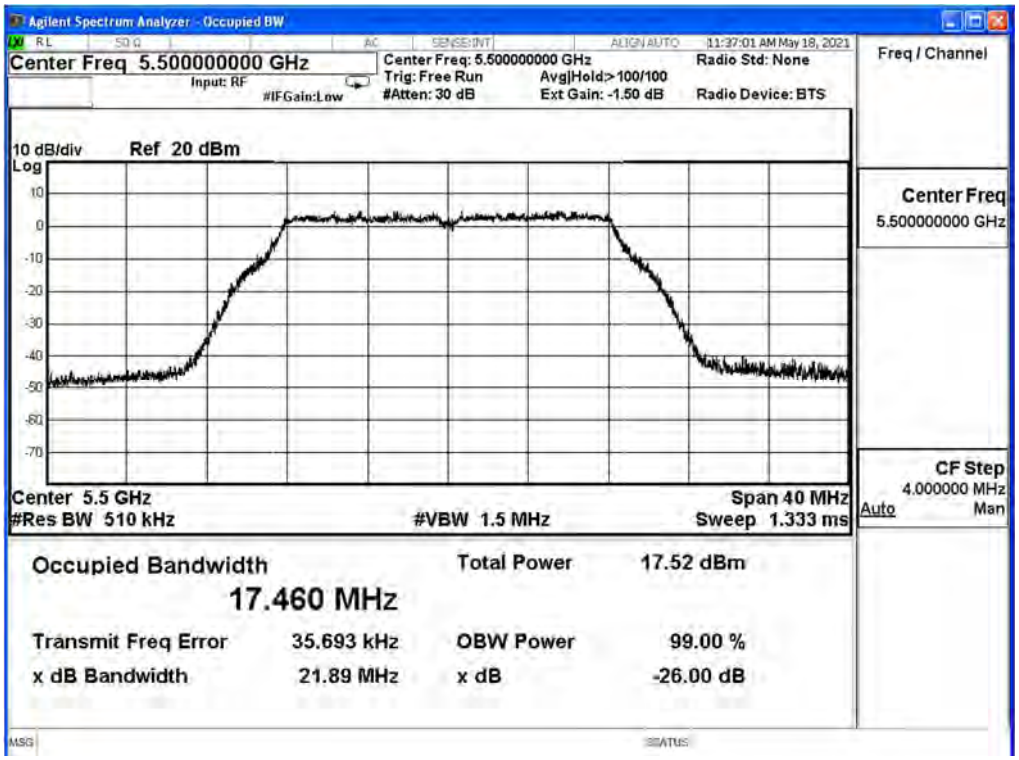
Channel 60 (5300MHz)



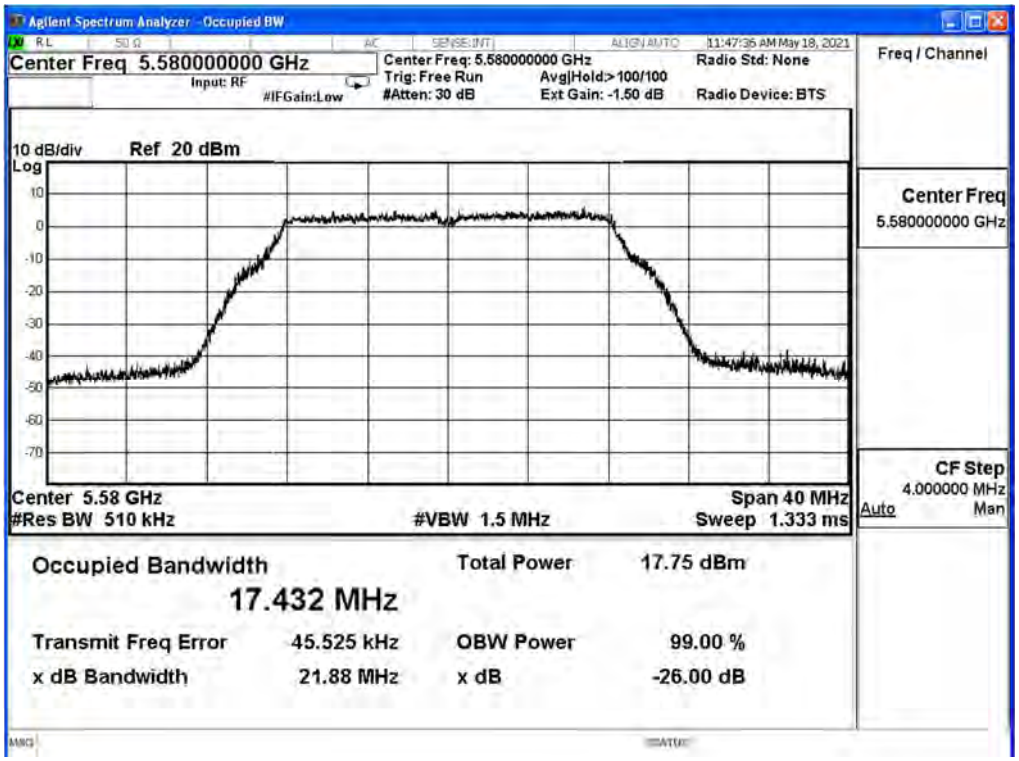
Channel 64 (5320MHz)



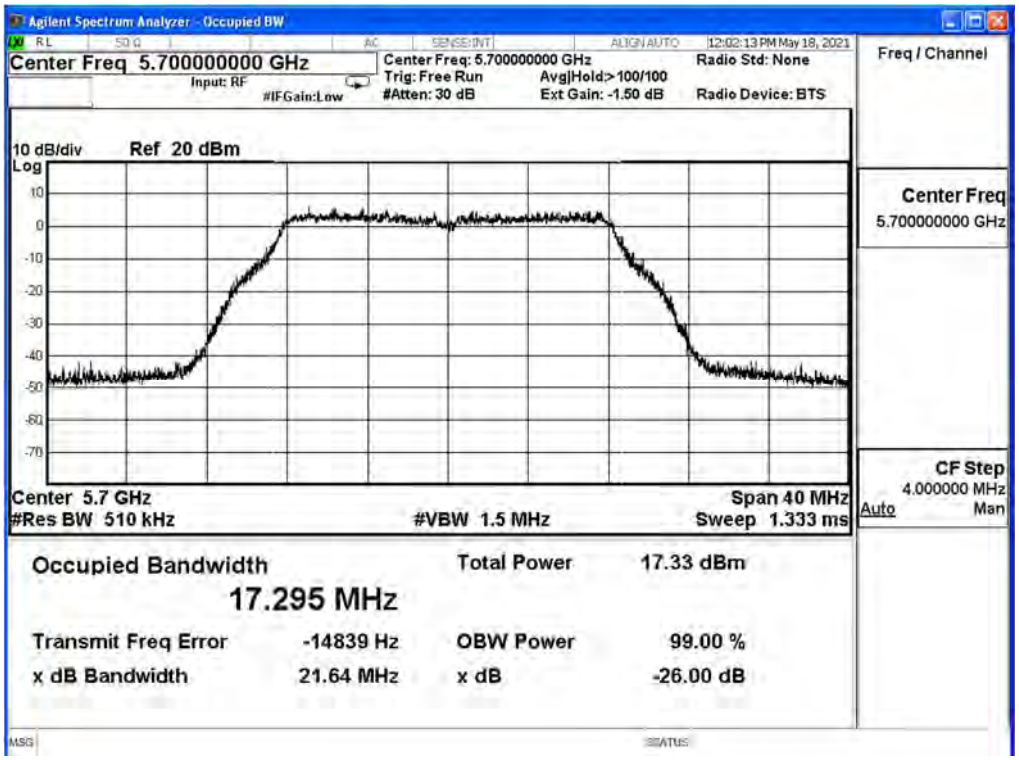
Channel 100 (5500MHz)



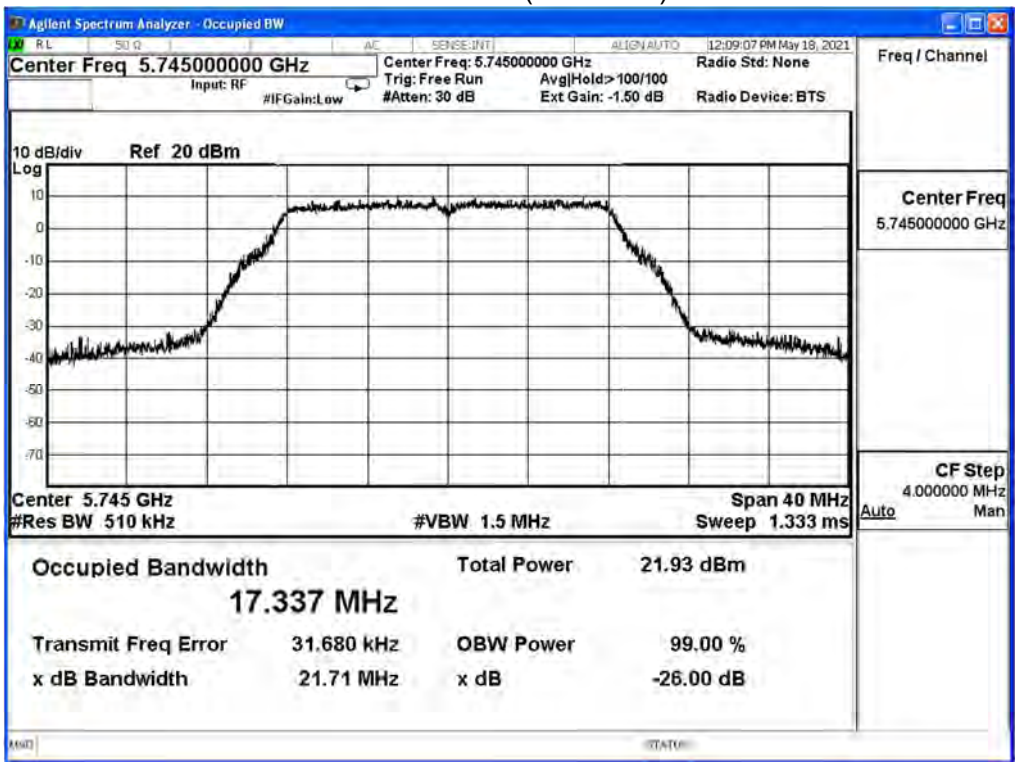
Channel 116 (5580MHz)



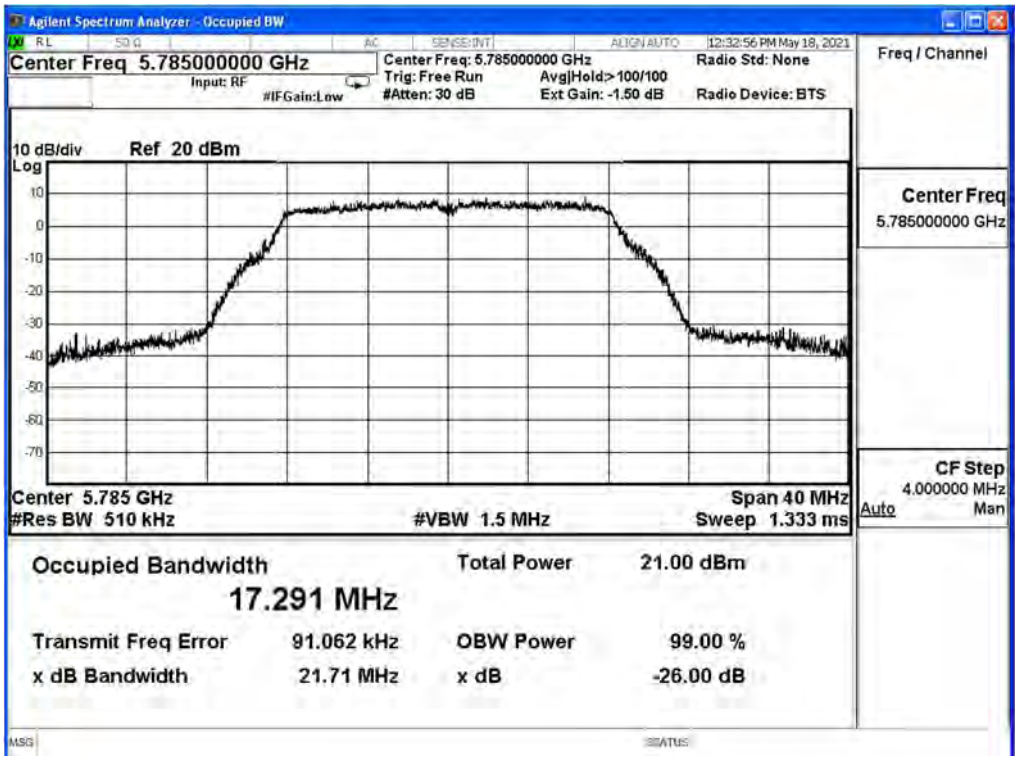
Channel 140 (5700MHz)



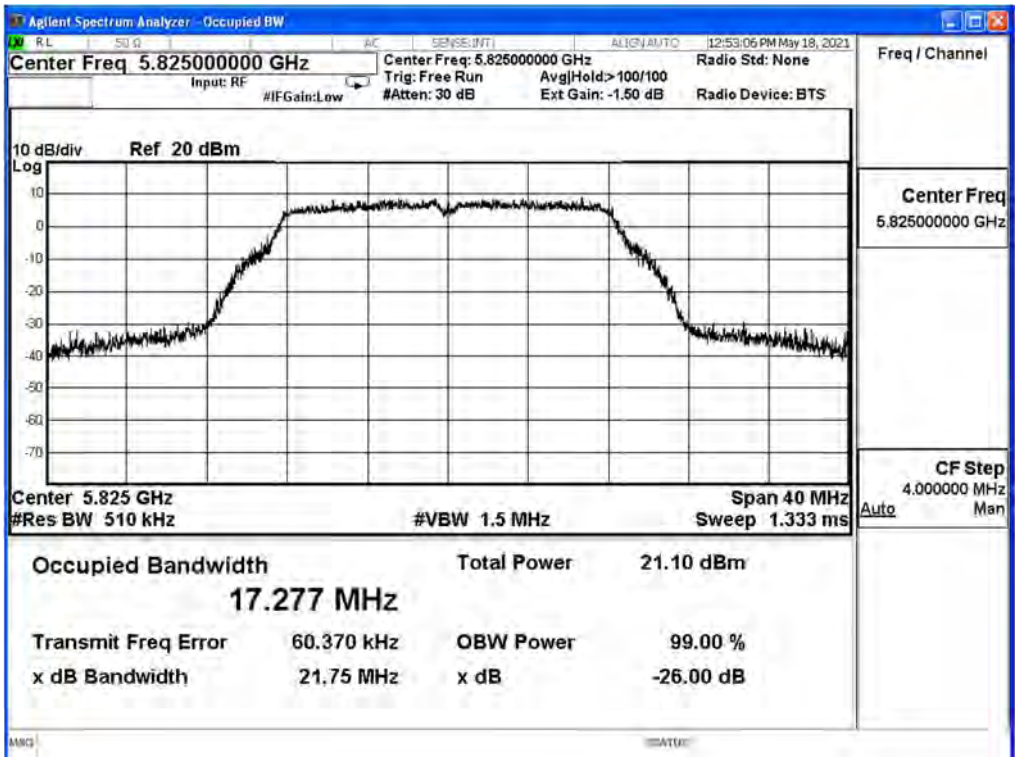
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

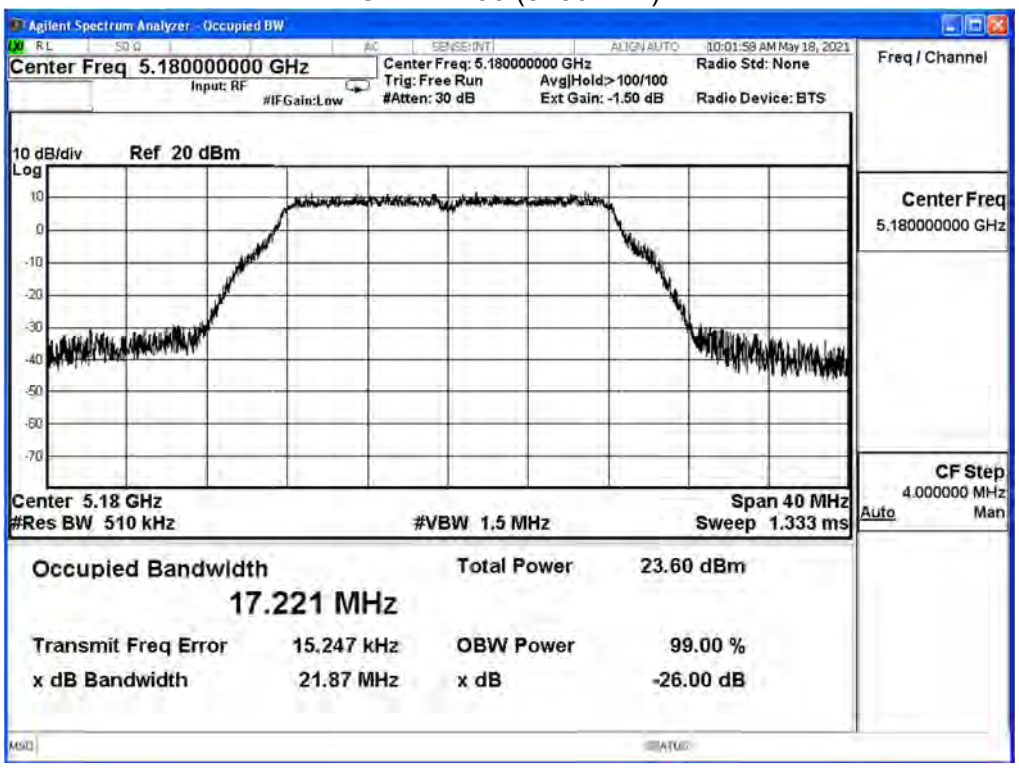


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

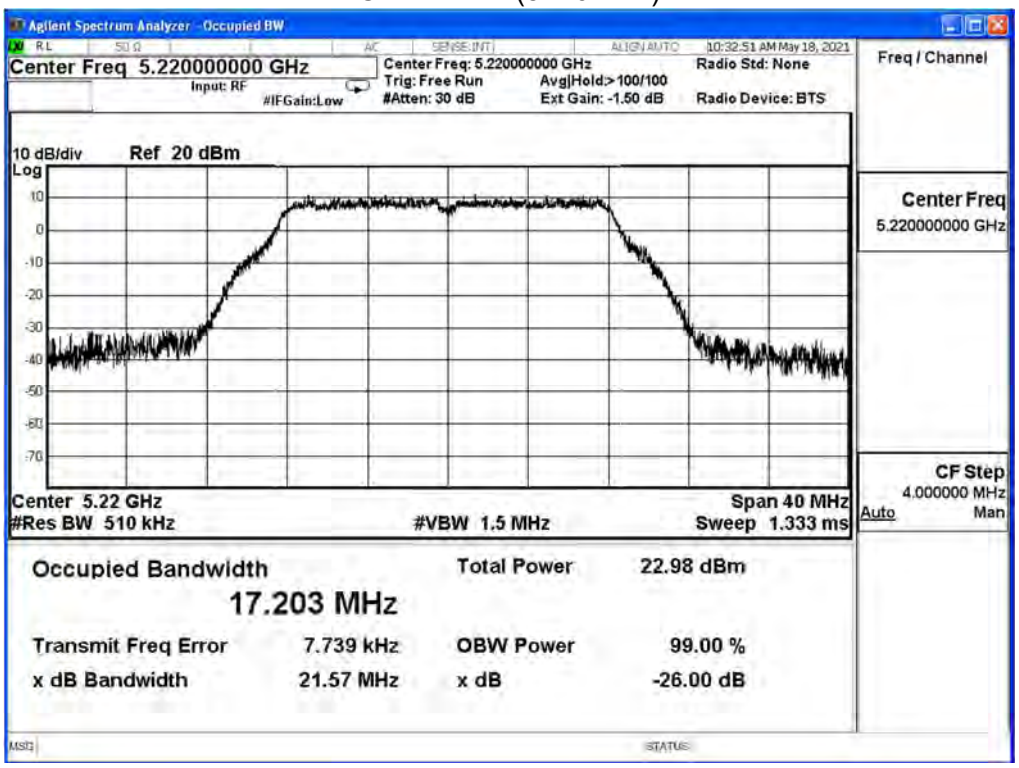
IEEE 802.11a (ANT 3)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	17.221	21.870	--
44	5220	17.203	21.570	--
48	5240	17.225	21.580	--
52	5260	17.255	21.710	--
60	5300	17.181	21.650	--
64	5320	17.285	21.880	--
100	5500	17.251	21.700	--
116	5580	17.229	21.900	--
140	5700	17.547	22.020	--
149	5745	17.393	N/A	--
157	5785	17.280		--
165	5825	17.317		--

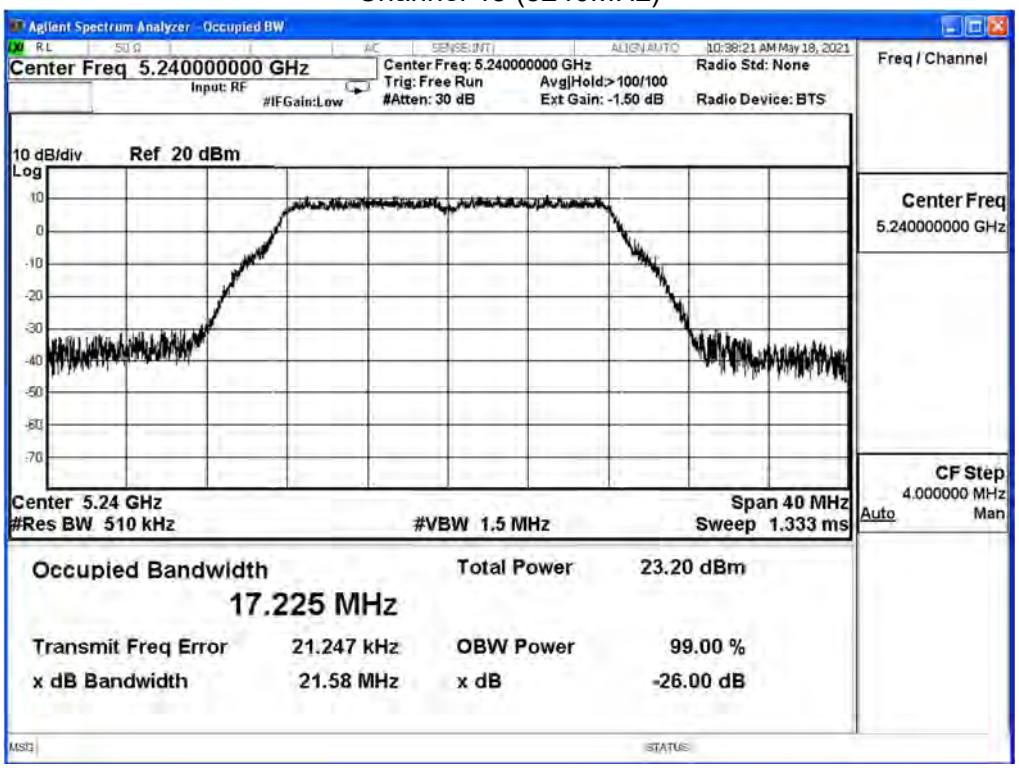
Channel 36 (5180MHz)



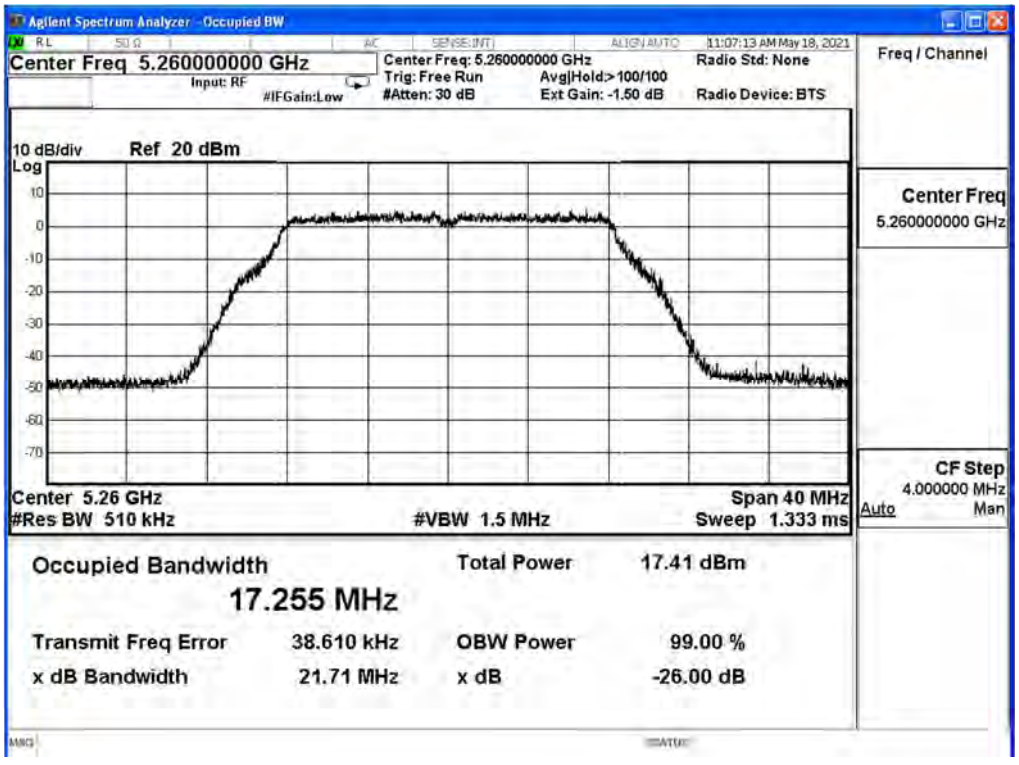
Channel 44 (5220MHz)



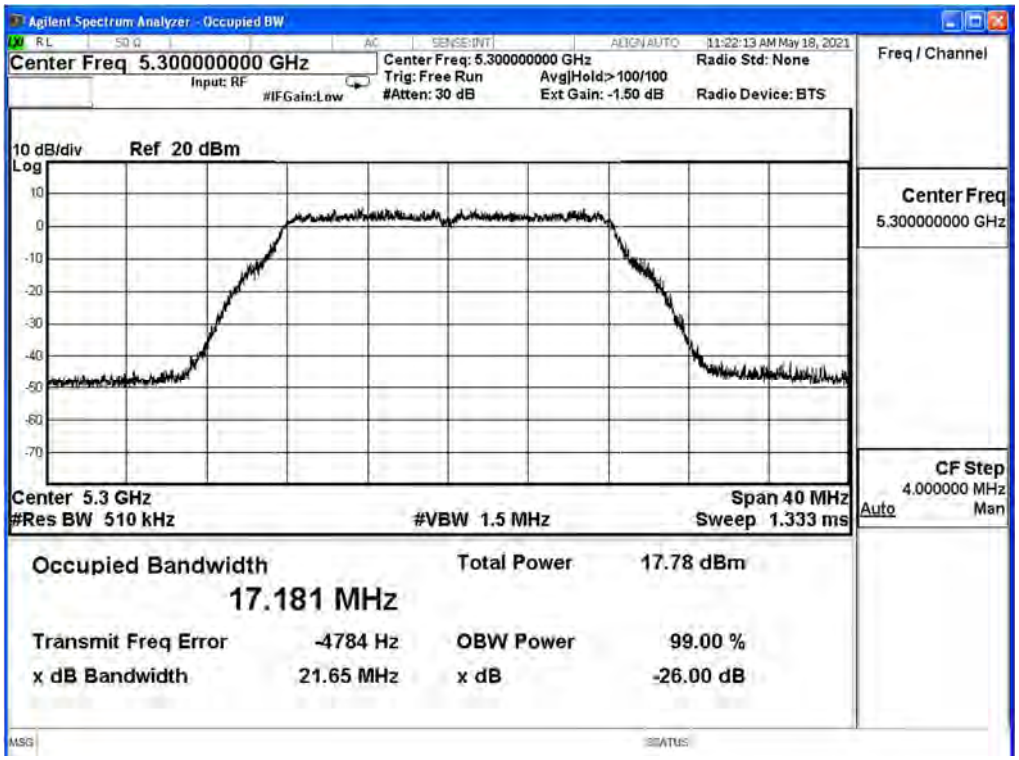
Channel 48 (5240MHz)



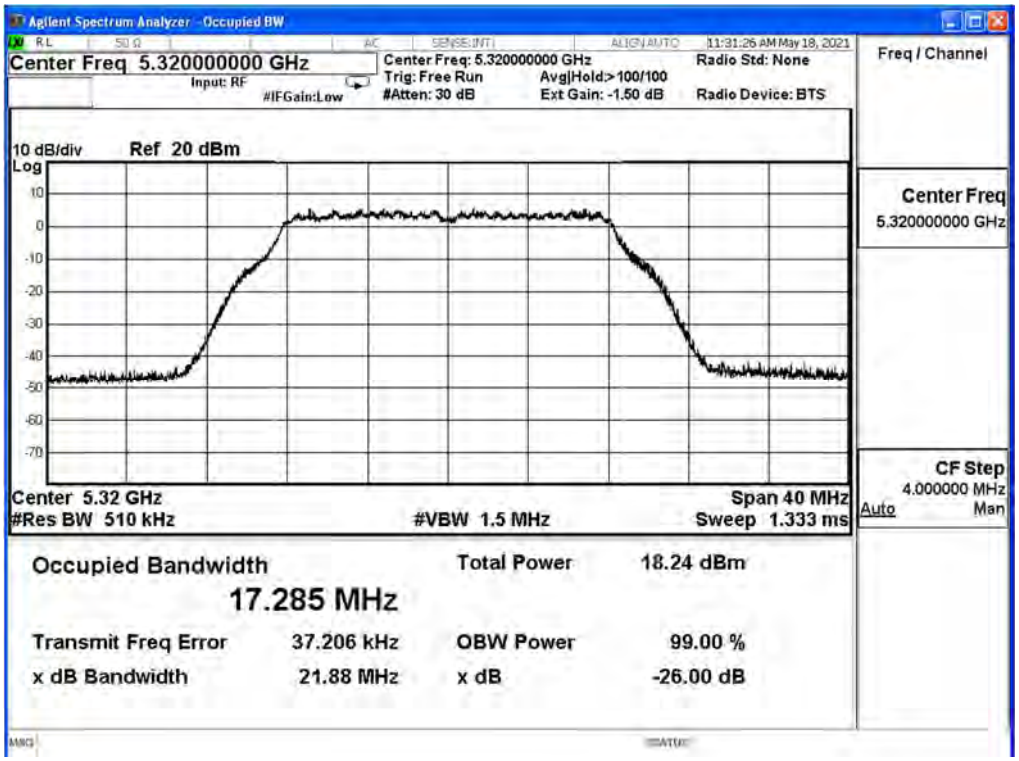
Channel 52 (5260MHz)



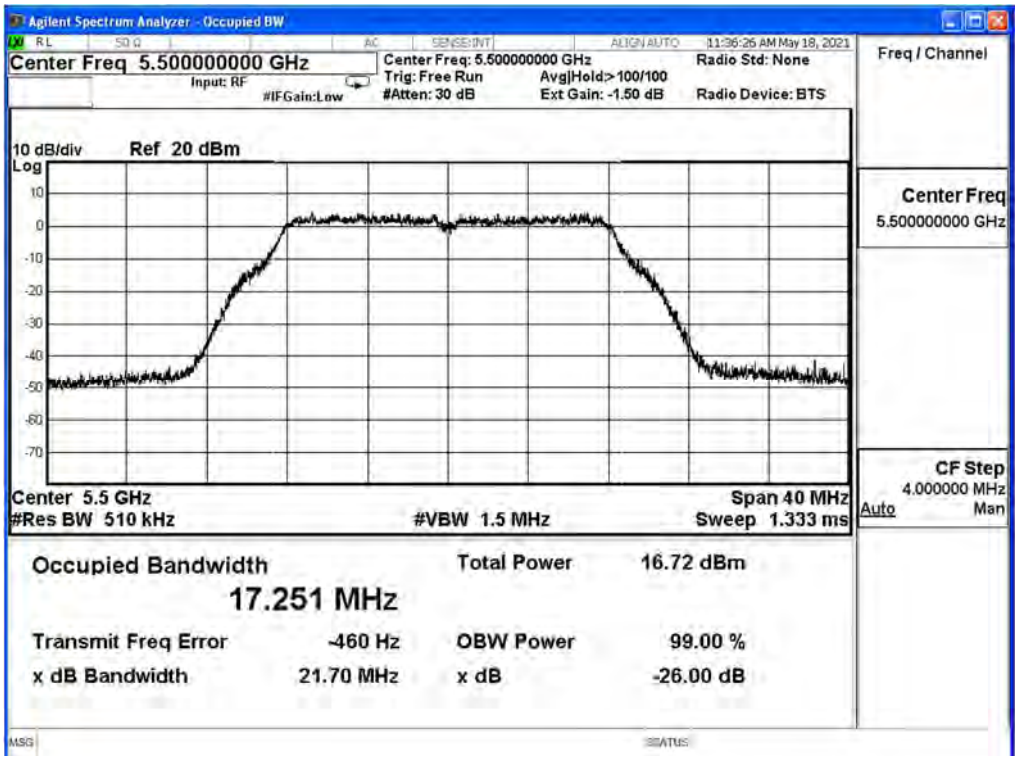
Channel 60 (5300MHz)



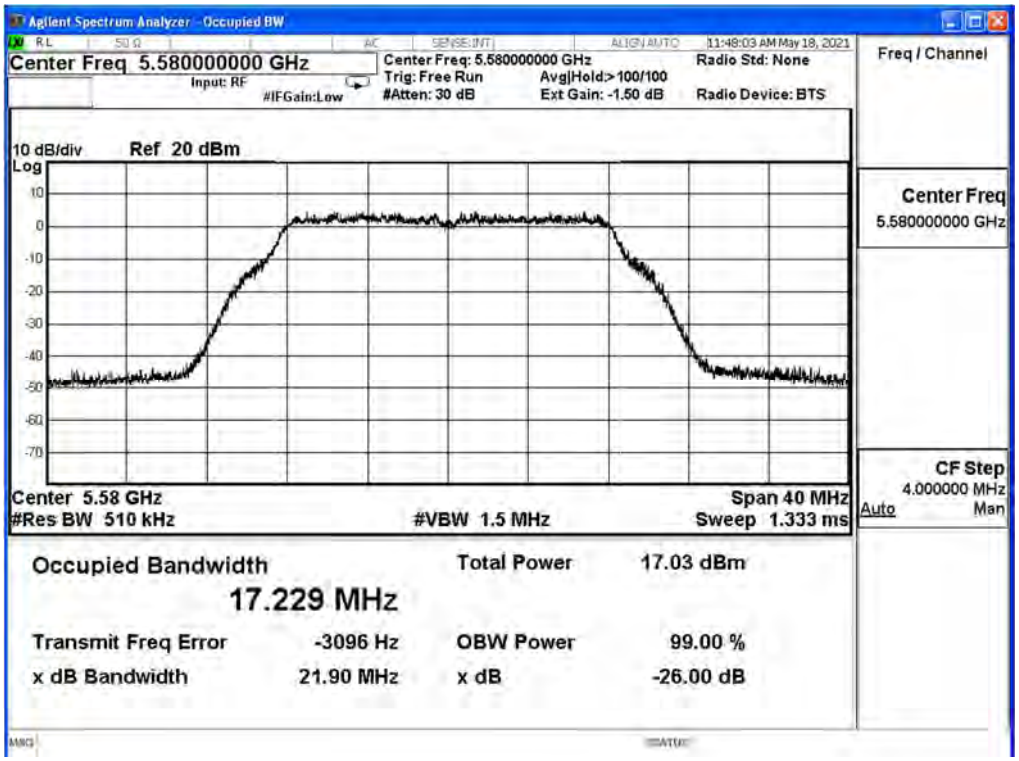
Channel 64 (5320MHz)



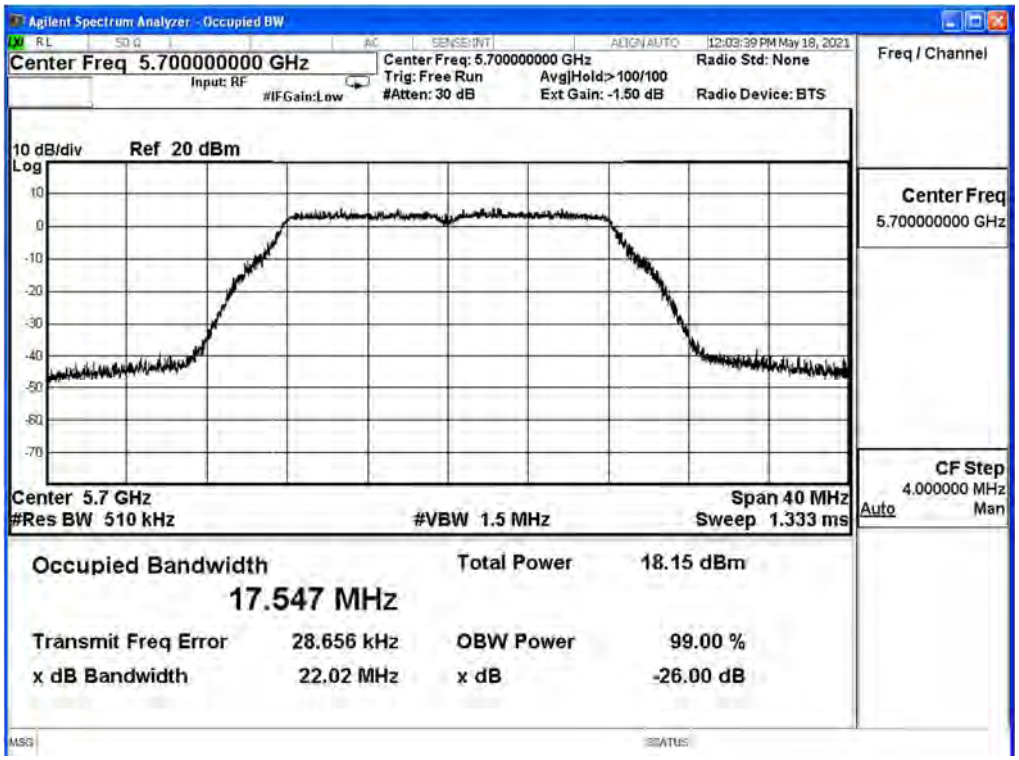
Channel 100 (5500MHz)



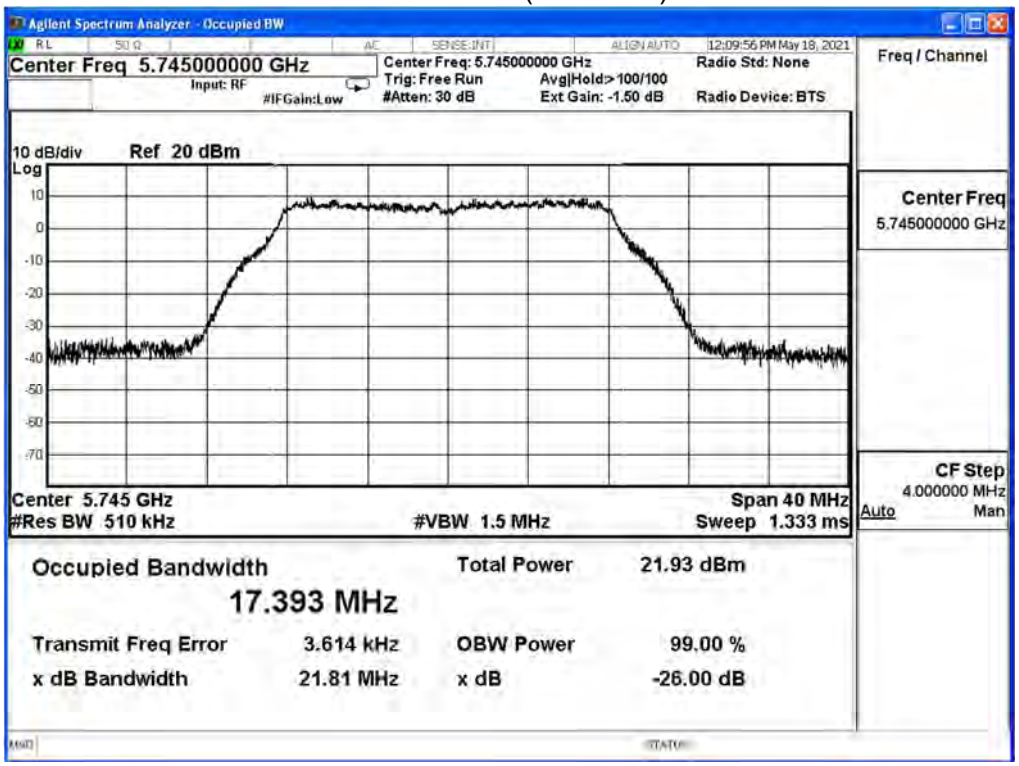
Channel 116 (5580MHz)



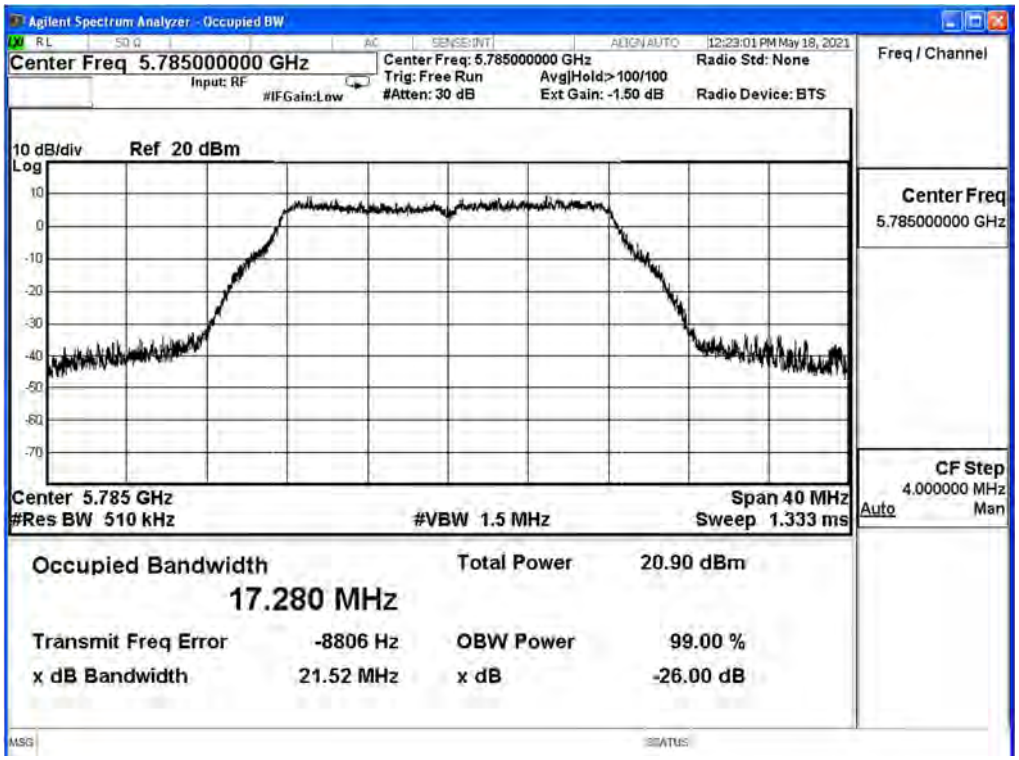
Channel 140 (5700MHz)



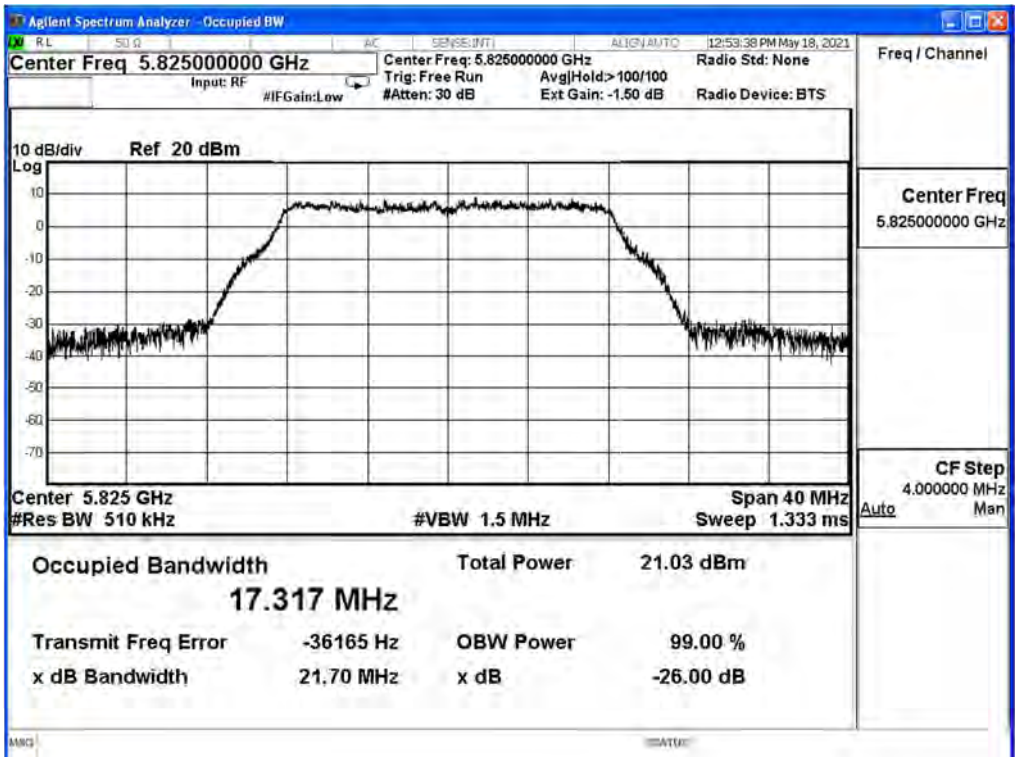
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

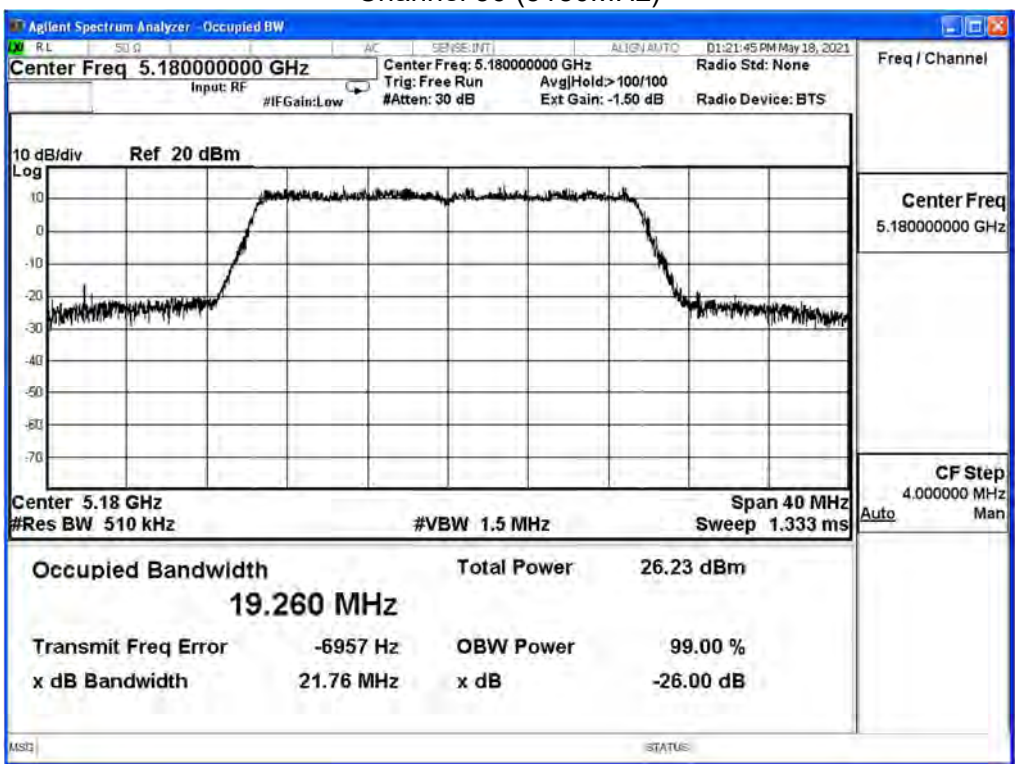


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18~2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

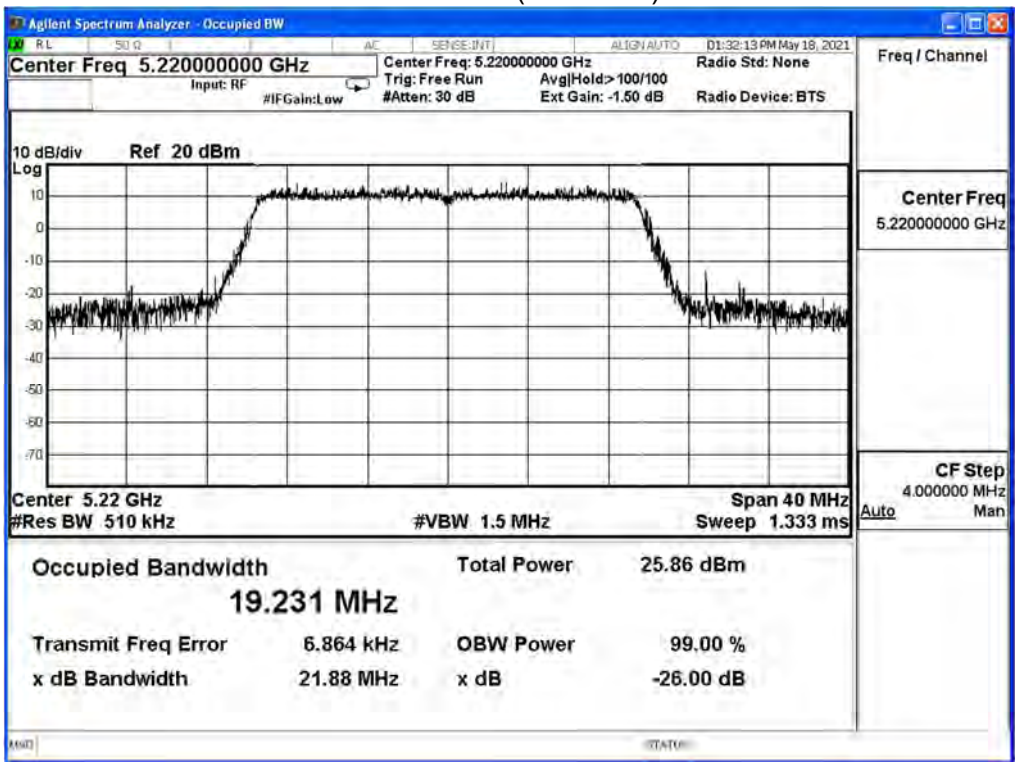
IEEE 802.11ax_20M(ANT 0)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	19.260	21.760	--
44	5220	19.231	21.880	--
48	5240	19.299	21.950	--
52	5260	19.174	21.670	--
60	5300	19.226	21.910	--
64	5320	18.468	22.060	--
100	5500	19.232	21.950	--
116	5580	19.106	21.700	--
140	5700	19.196	21.840	--
149	5745	19.116	N/A	--
157	5785	19.263		--
165	5825	19.185		--

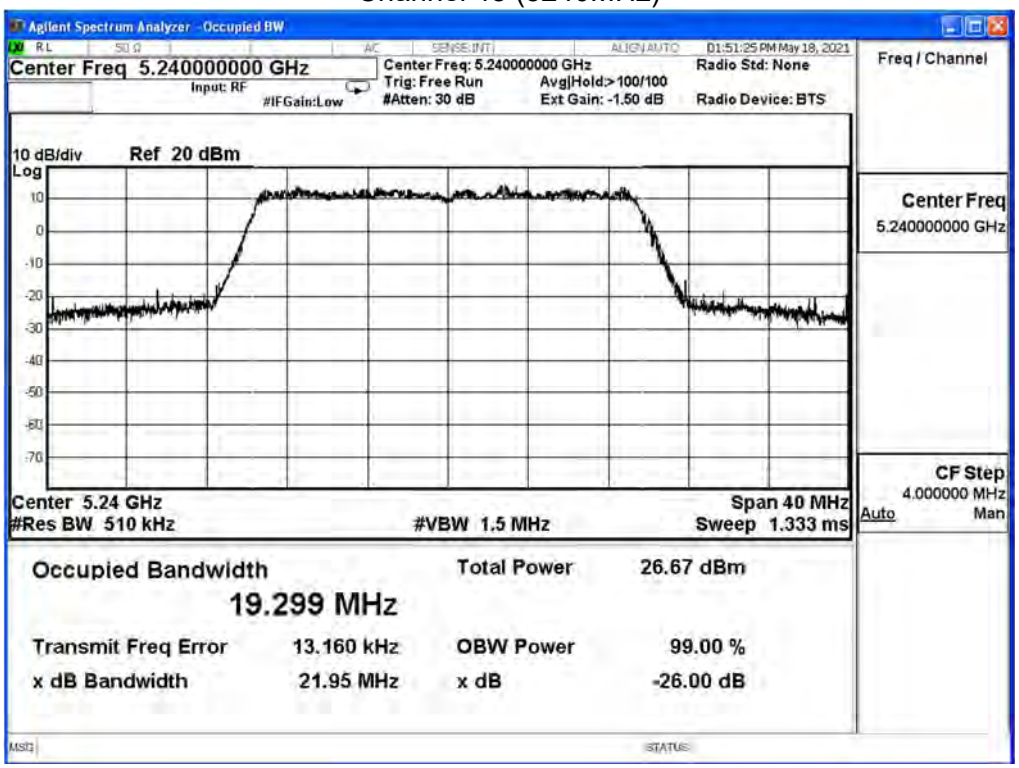
Channel 36 (5180MHz)



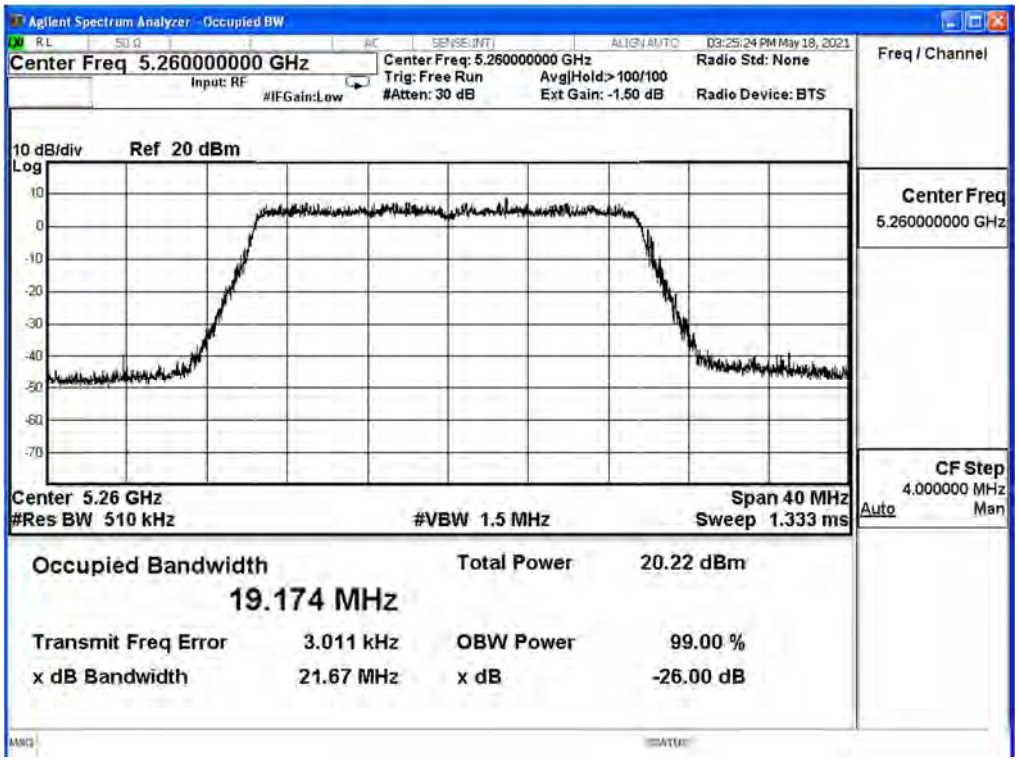
Channel 44 (5220MHz)



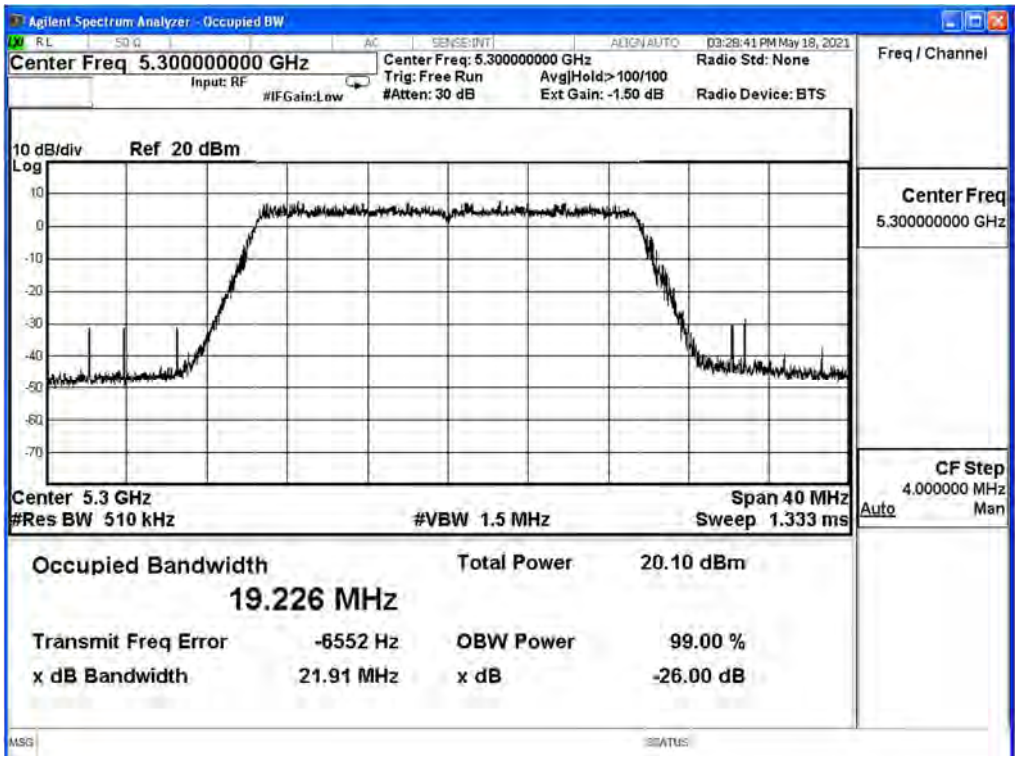
Channel 48 (5240MHz)



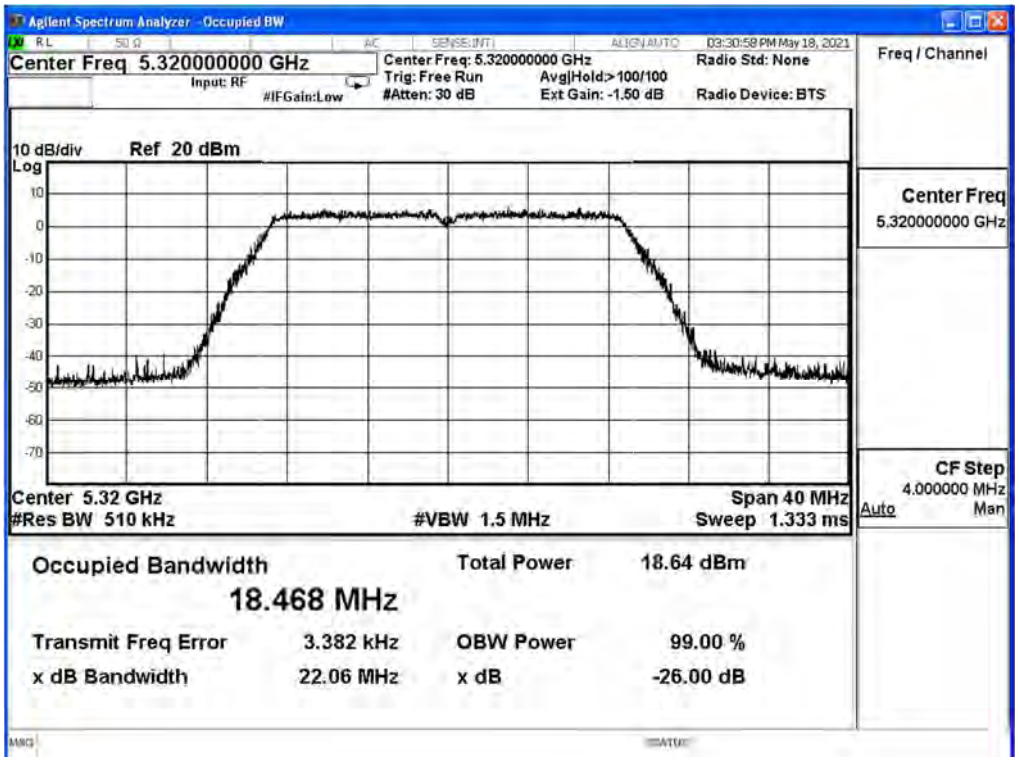
Channel 52 (5260MHz)



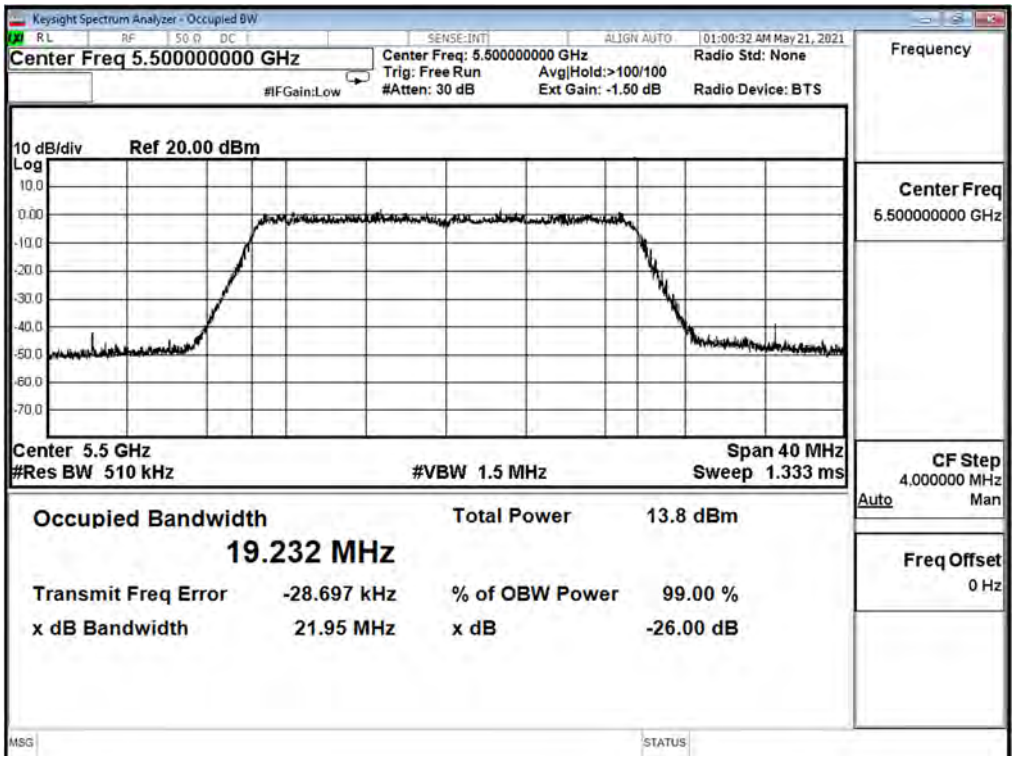
Channel 60 (5300MHz)



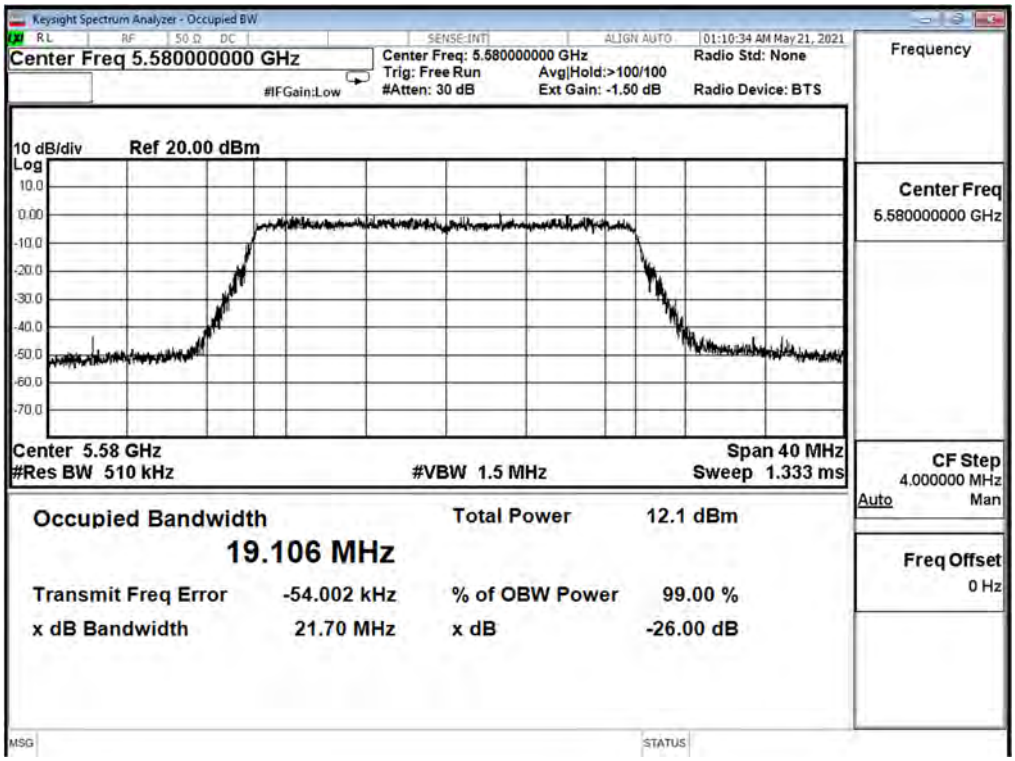
Channel 64 (5320MHz)



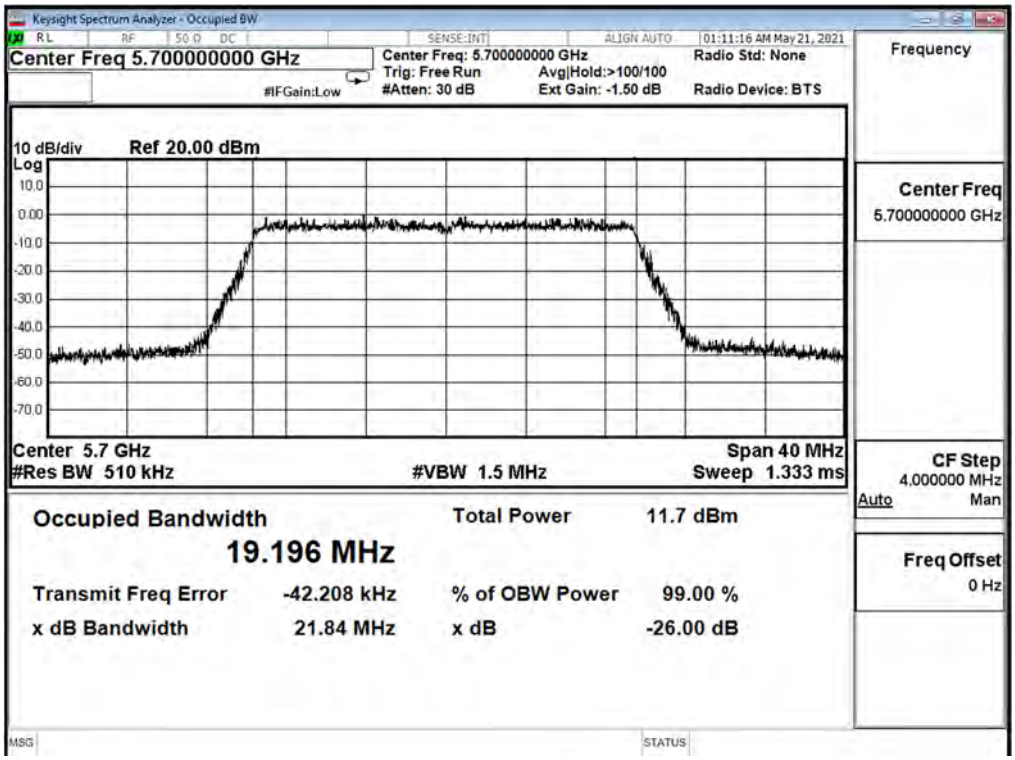
Channel 100 (5500MHz)



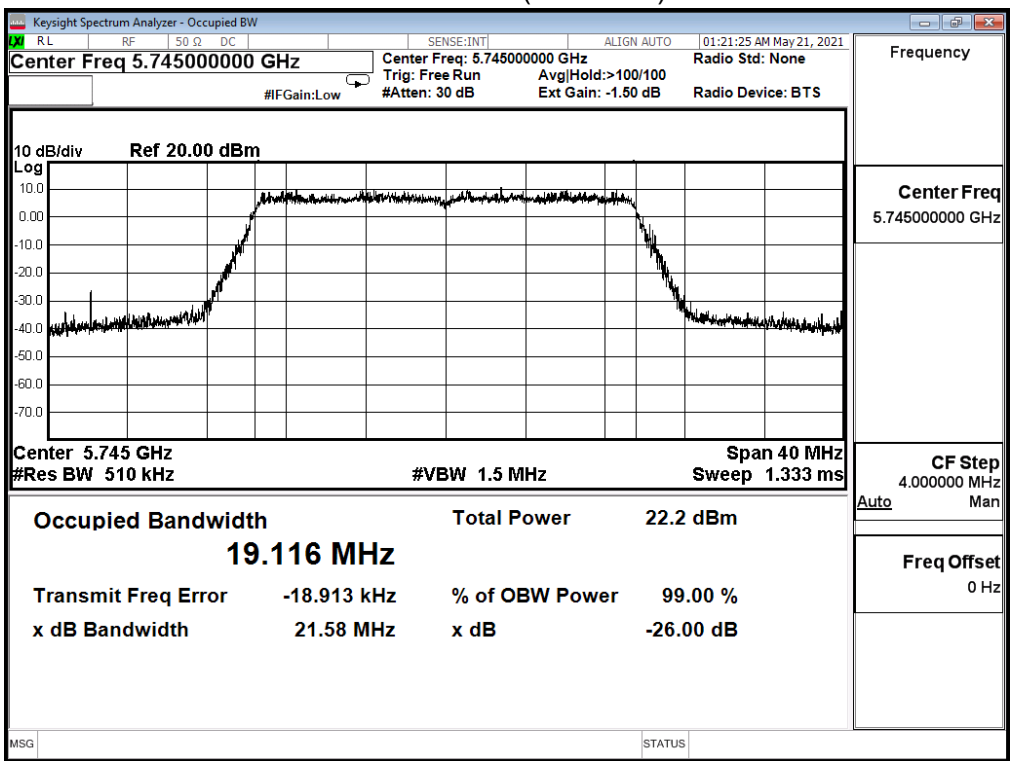
Channel 116 (5580MHz)



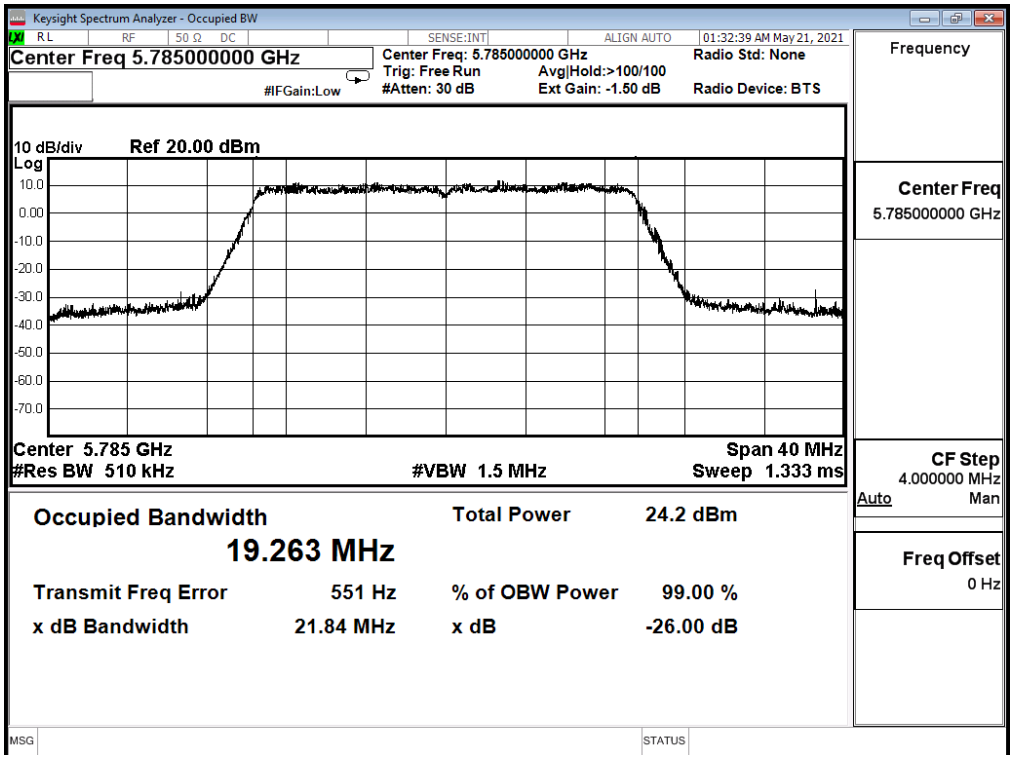
Channel 140 (5700MHz)



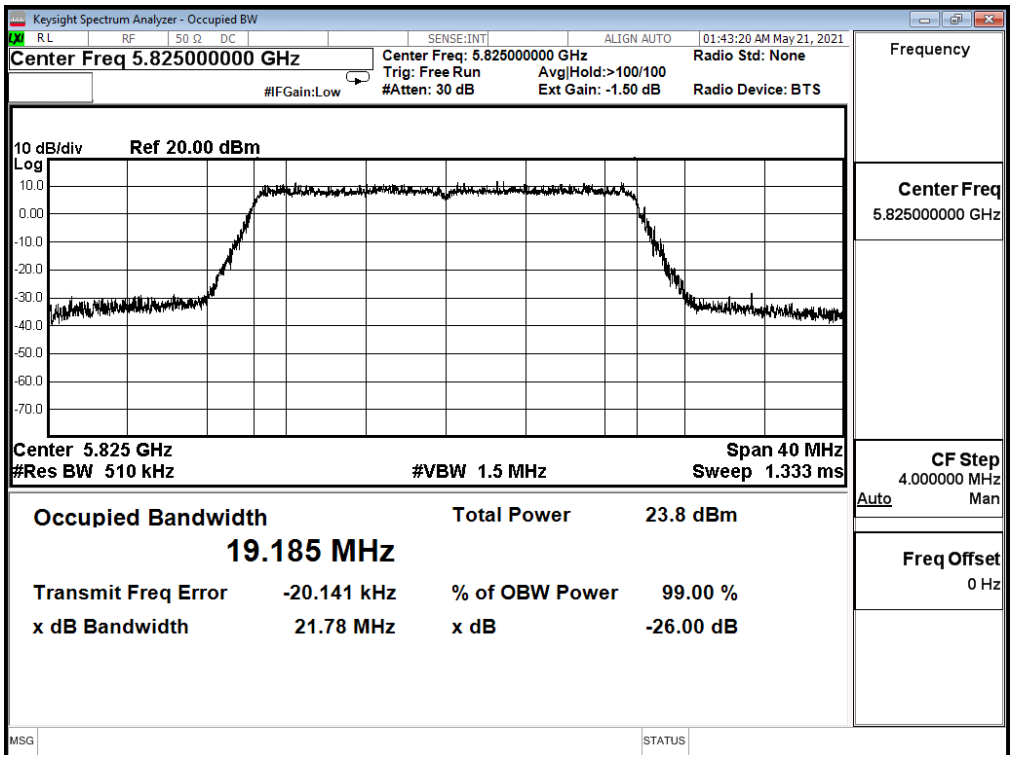
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

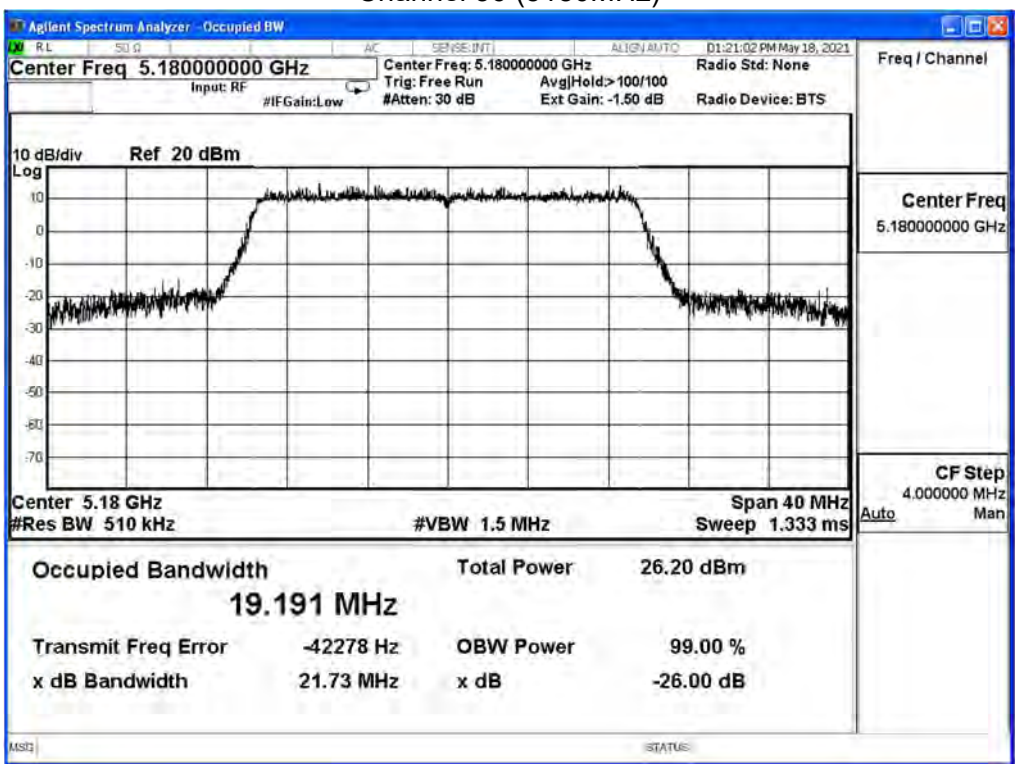


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18~2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

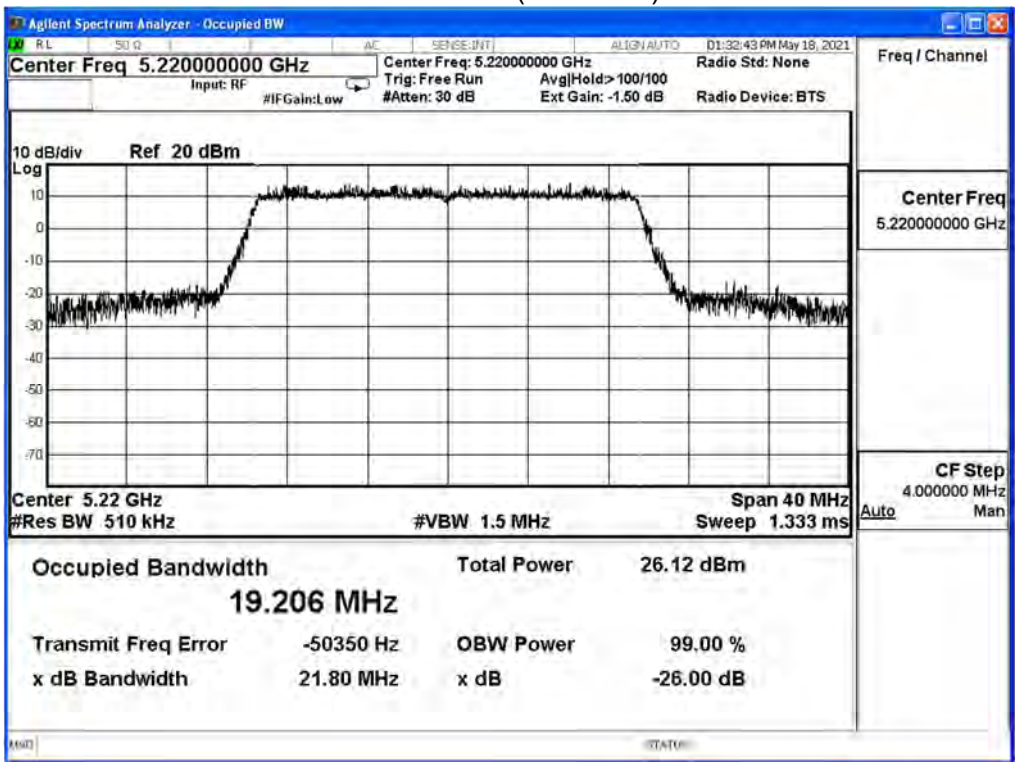
IEEE 802.11ax_20M(ANT 1)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	19.191	21.730	--
44	5220	19.206	21.800	--
48	5240	19.164	21.850	--
52	5260	19.135	21.650	--
60	5300	19.169	21.860	--
64	5320	18.216	21.670	--
100	5500	19.194	21.920	--
116	5580	19.151	21.760	--
140	5700	19.170	21.690	--
149	5745	19.126	N/A	--
157	5785	19.121		--
165	5825	19.176		--

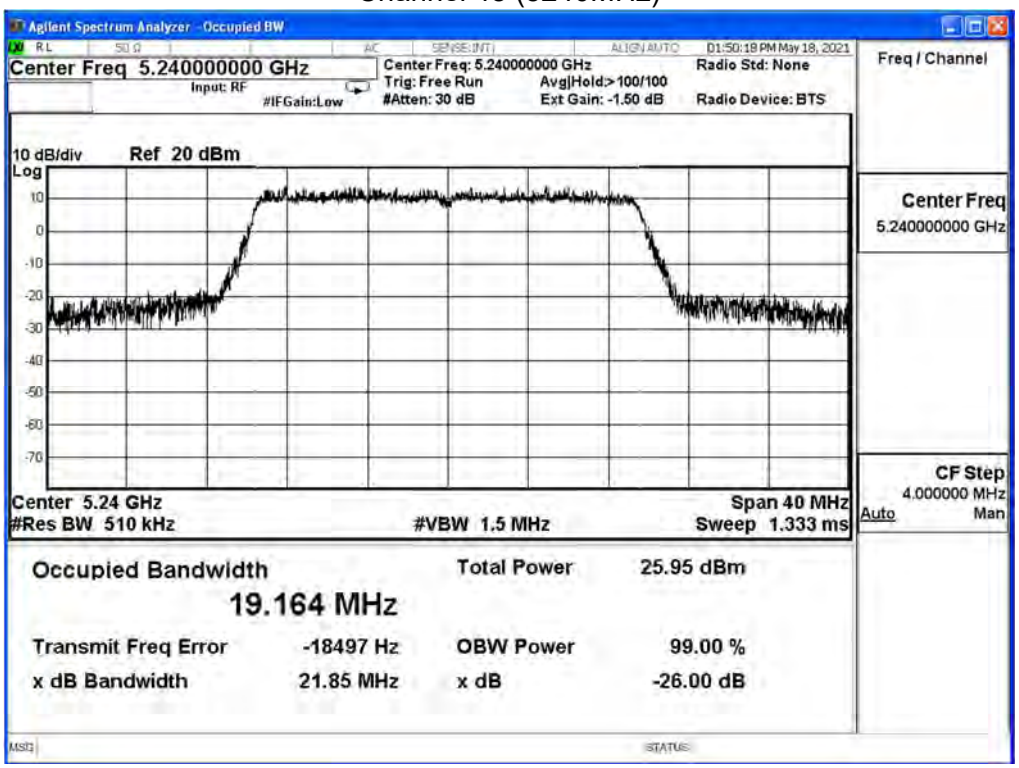
Channel 36 (5180MHz)



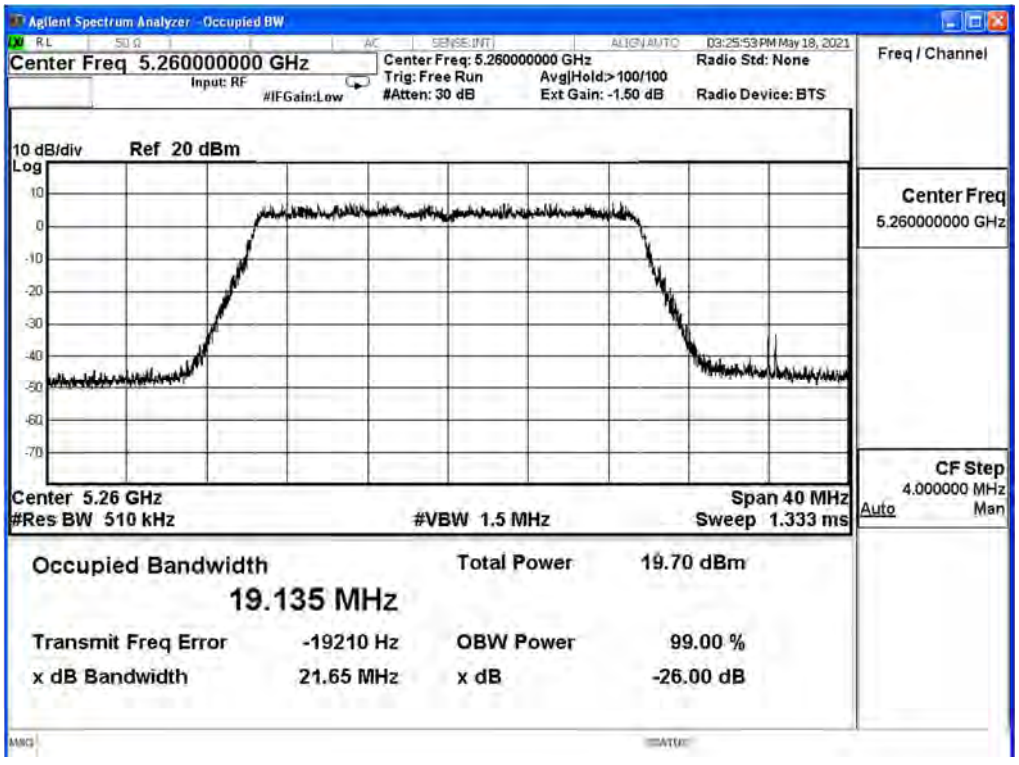
Channel 44 (5220MHz)



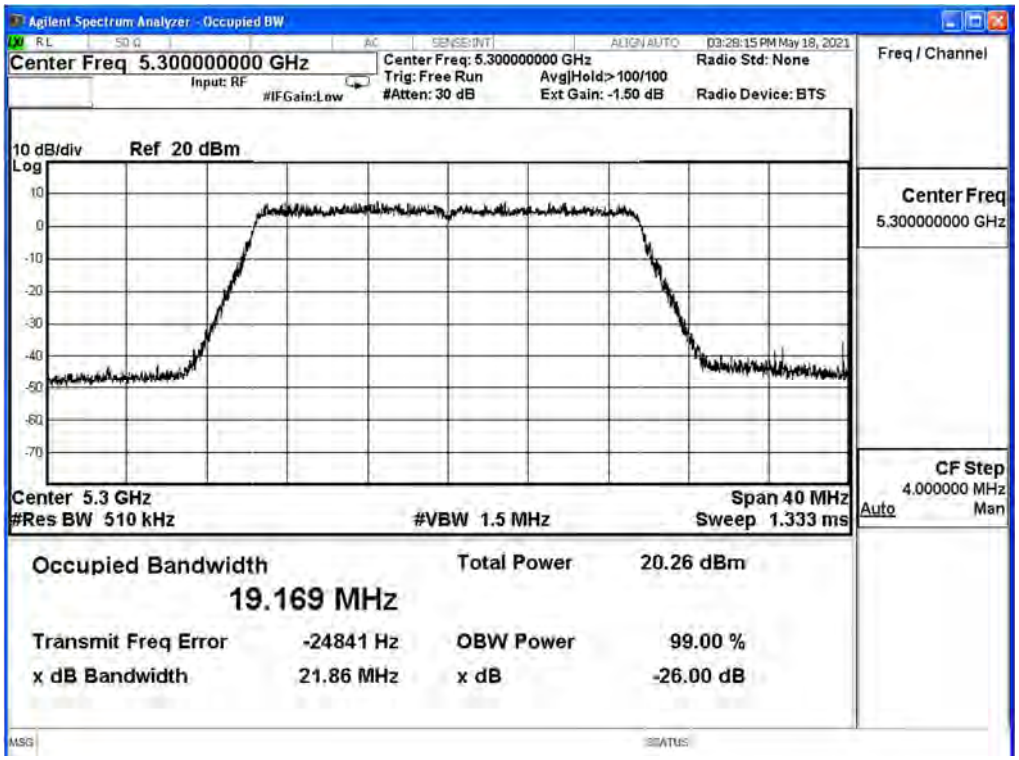
Channel 48 (5240MHz)



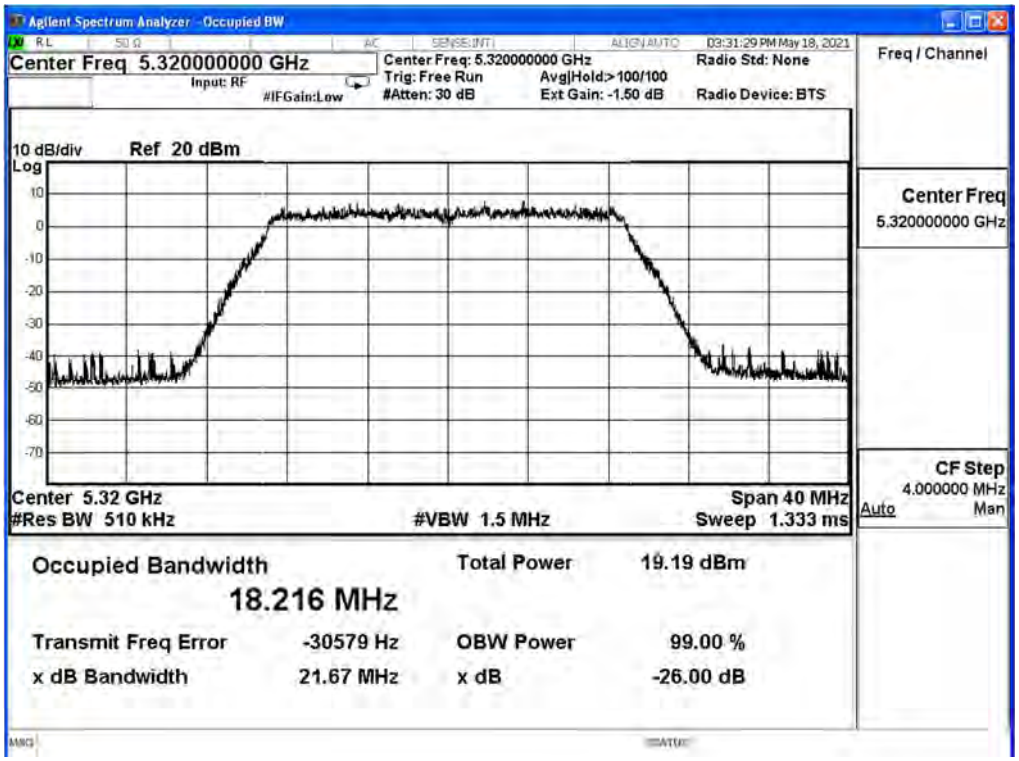
Channel 52 (5260MHz)



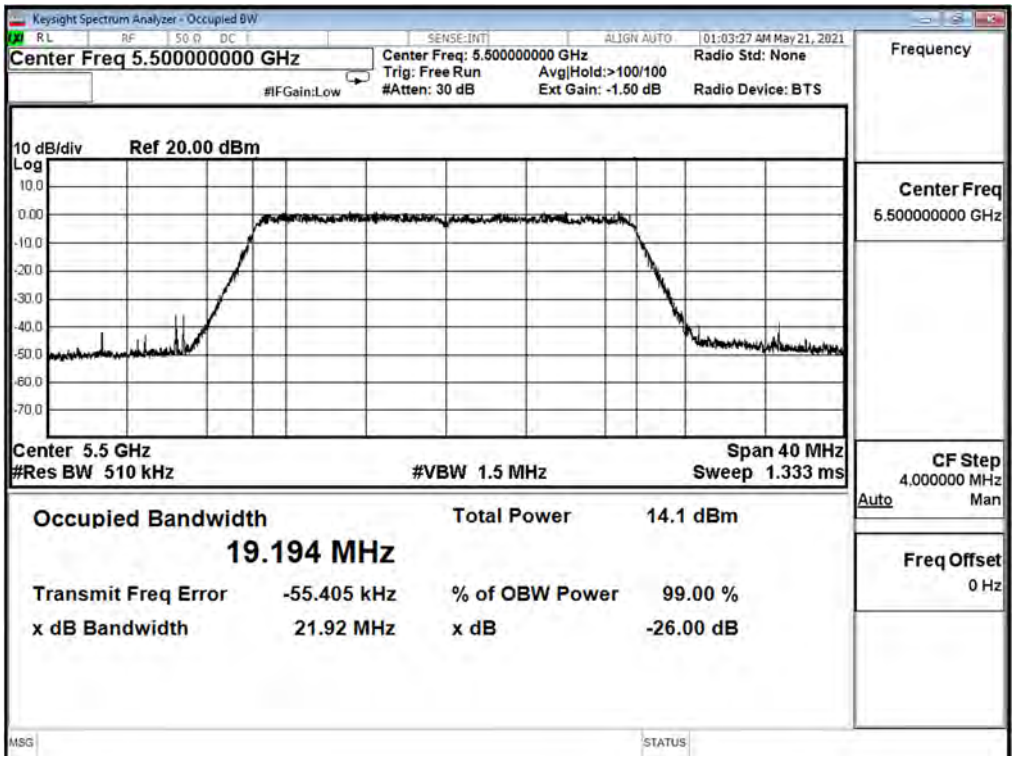
Channel 60 (5300MHz)



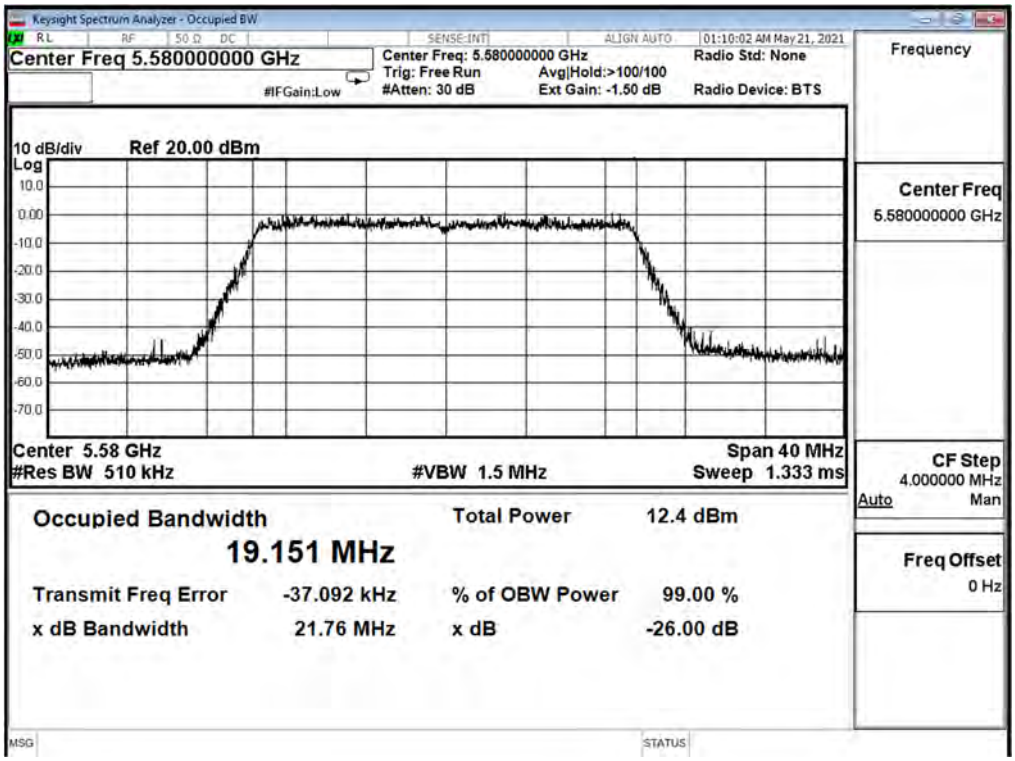
Channel 64 (5320MHz)



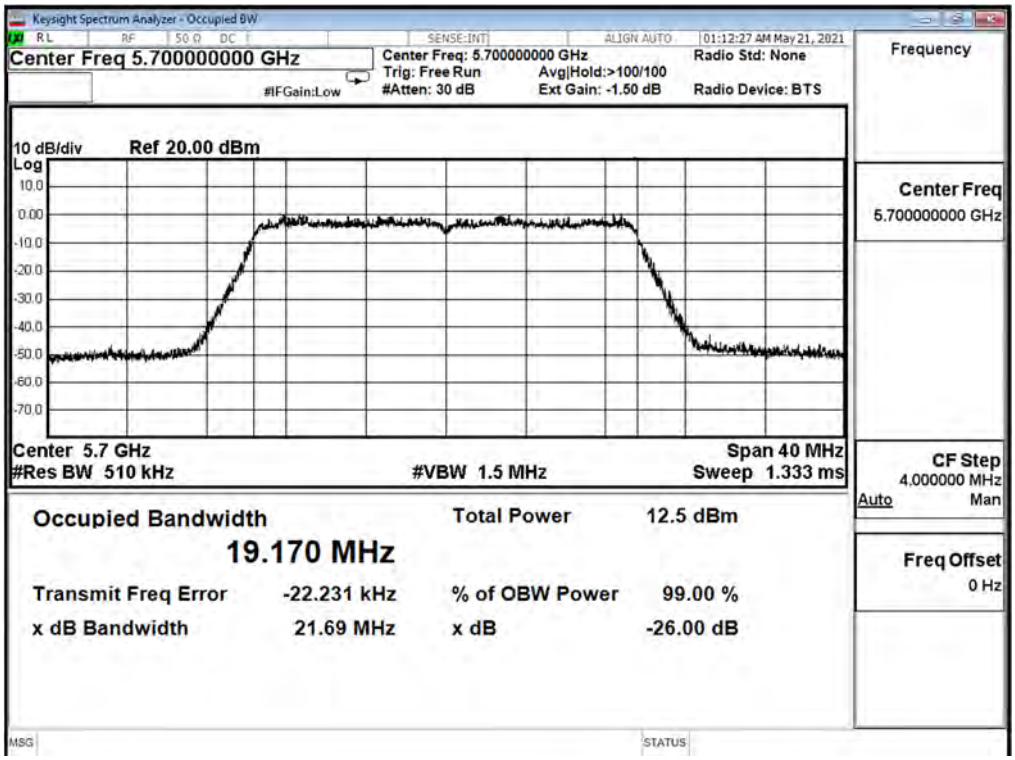
Channel 100 (5500MHz)



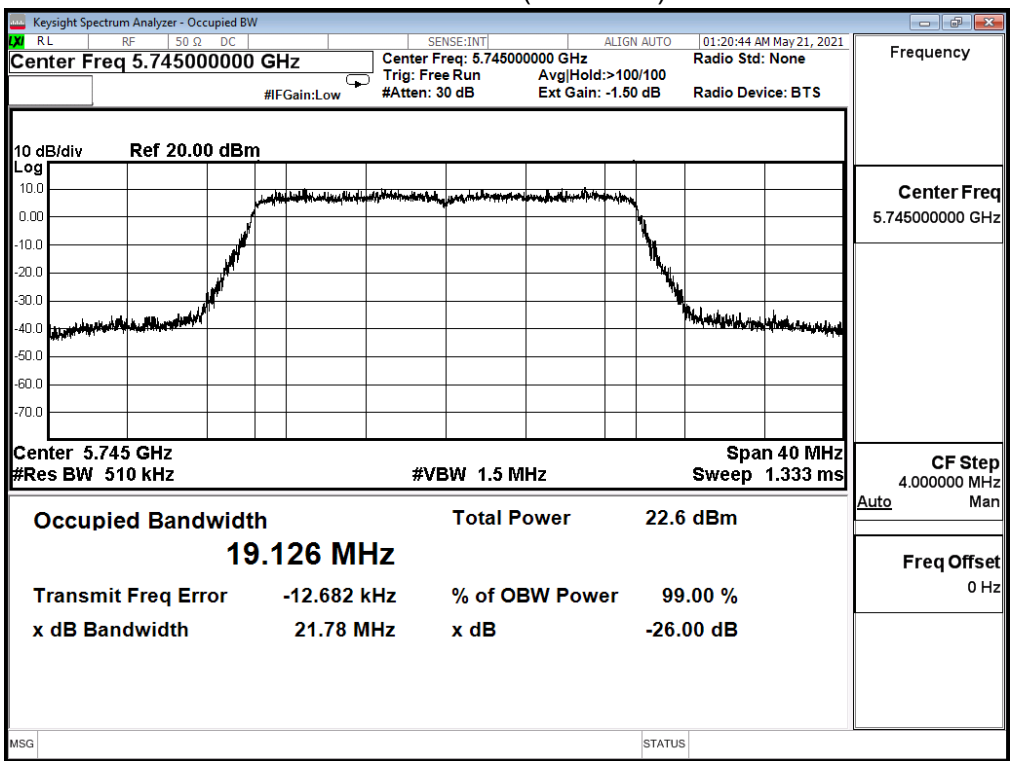
Channel 116 (5580MHz)



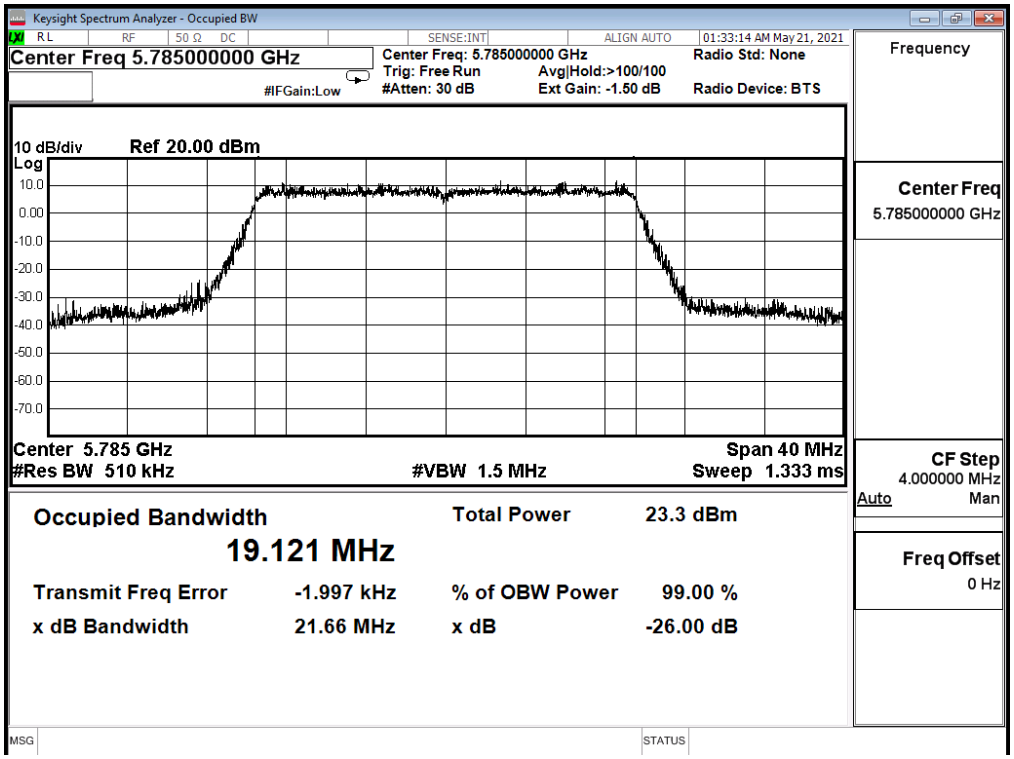
Channel 140 (5700MHz)



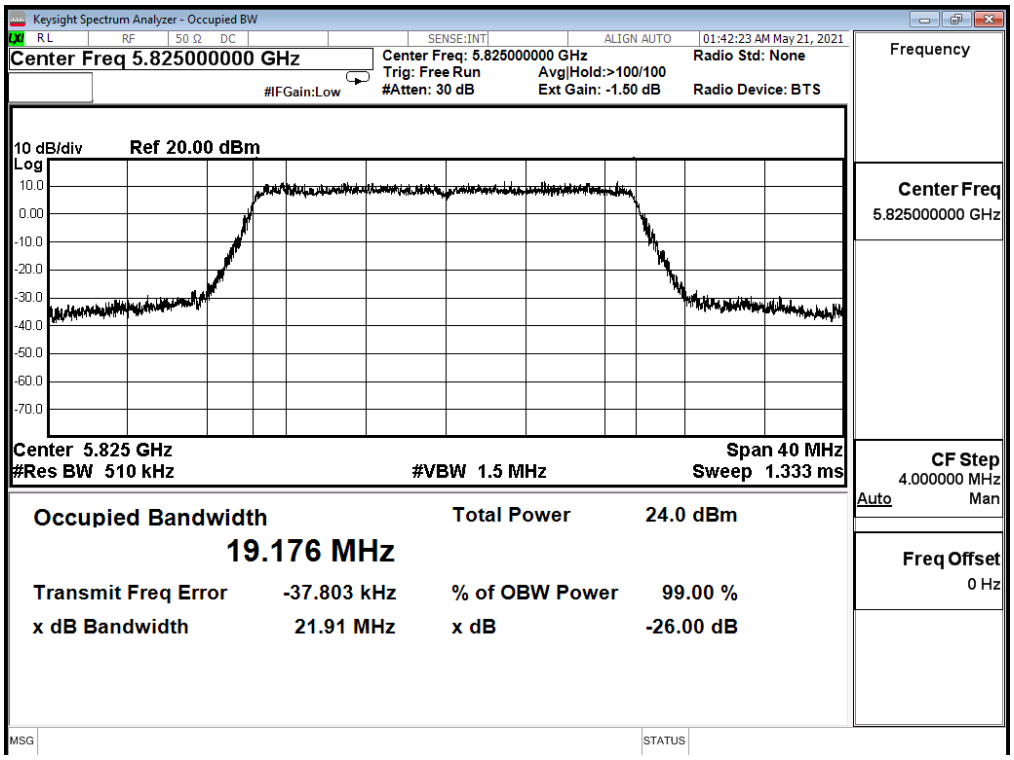
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

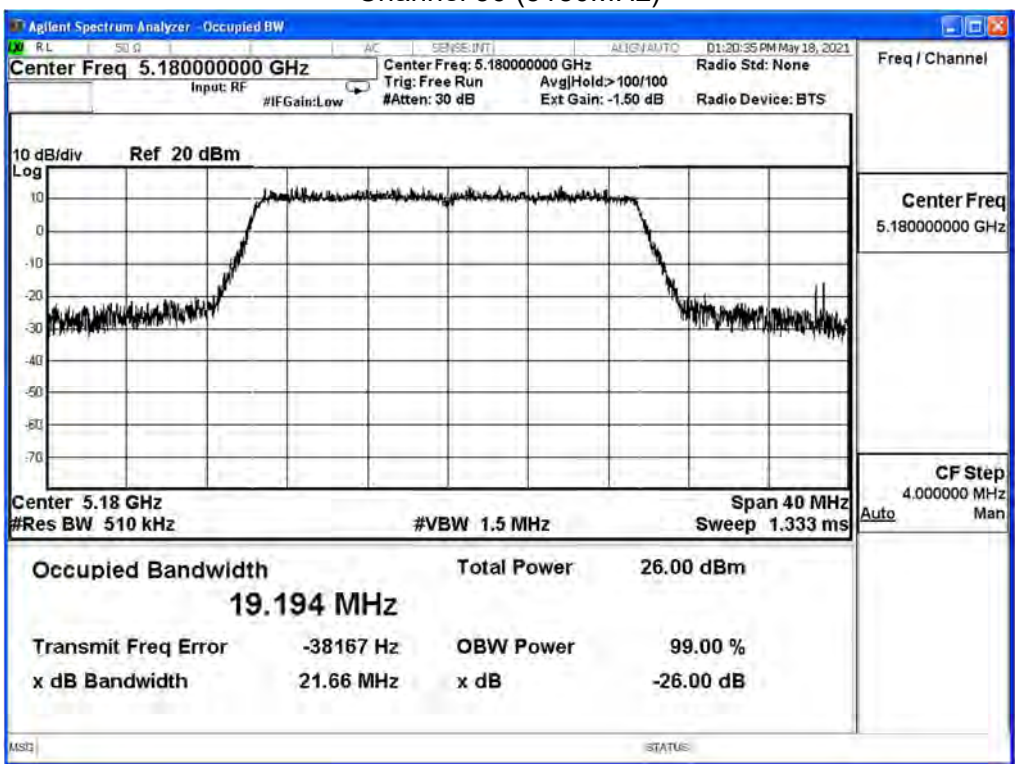


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18~2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

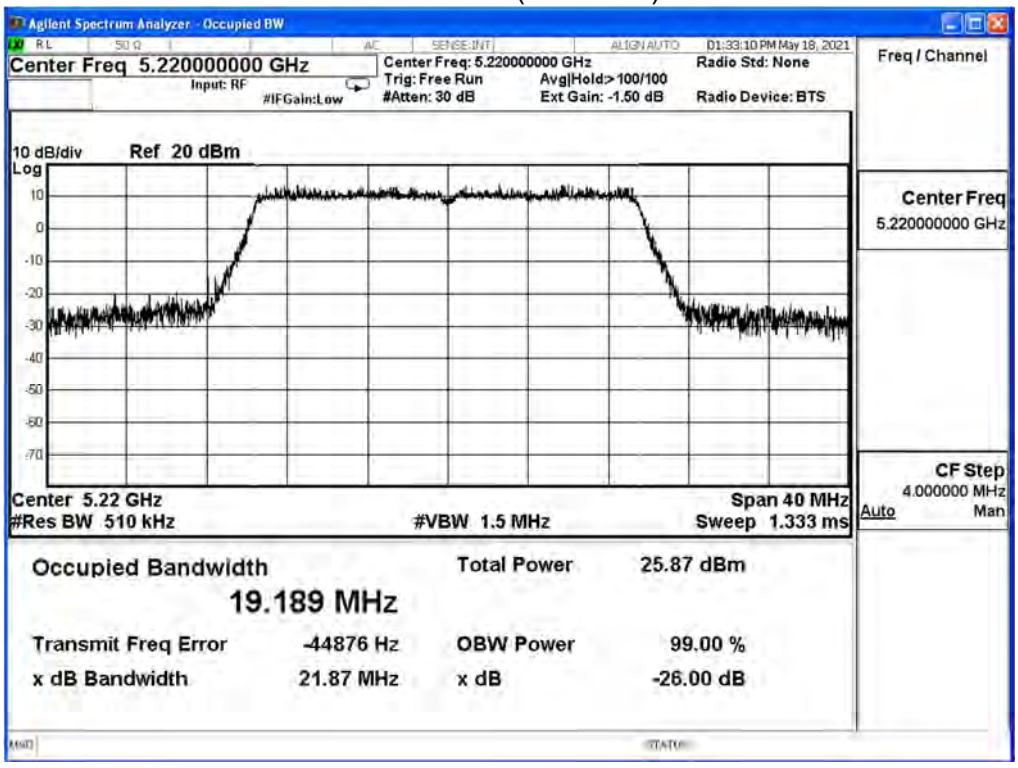
IEEE 802.11ax_20M(ANT 2)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	19.194	21.660	--
44	5220	19.189	21.870	--
48	5240	19.152	21.740	--
52	5260	19.147	21.790	--
60	5300	19.183	21.720	--
64	5320	18.253	21.750	--
100	5500	19.175	21.810	--
116	5580	19.191	21.900	--
140	5700	19.151	21.600	--
149	5745	19.185	N/A	--
157	5785	19.180		--
165	5825	19.205		--

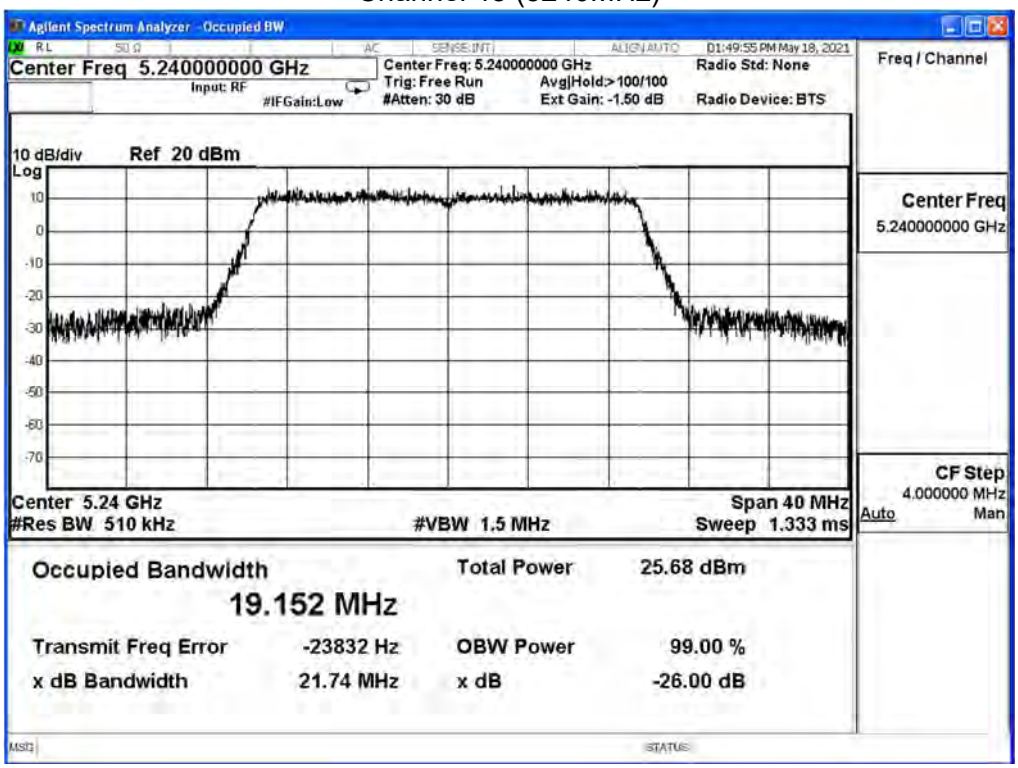
Channel 36 (5180MHz)



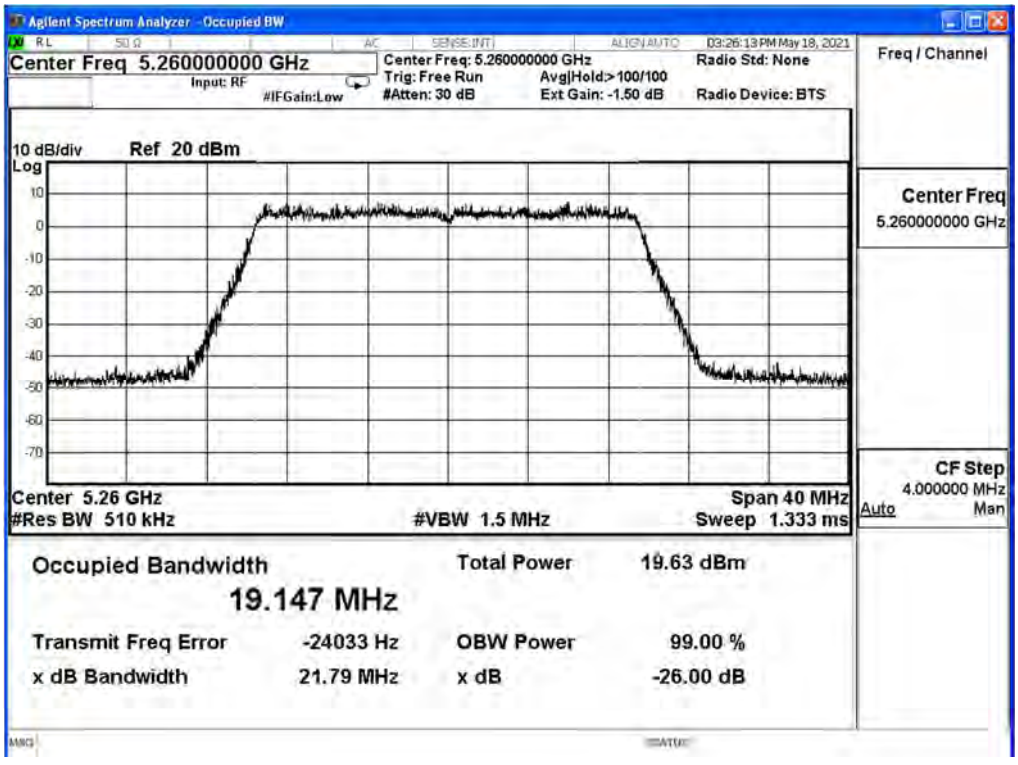
Channel 44 (5220MHz)



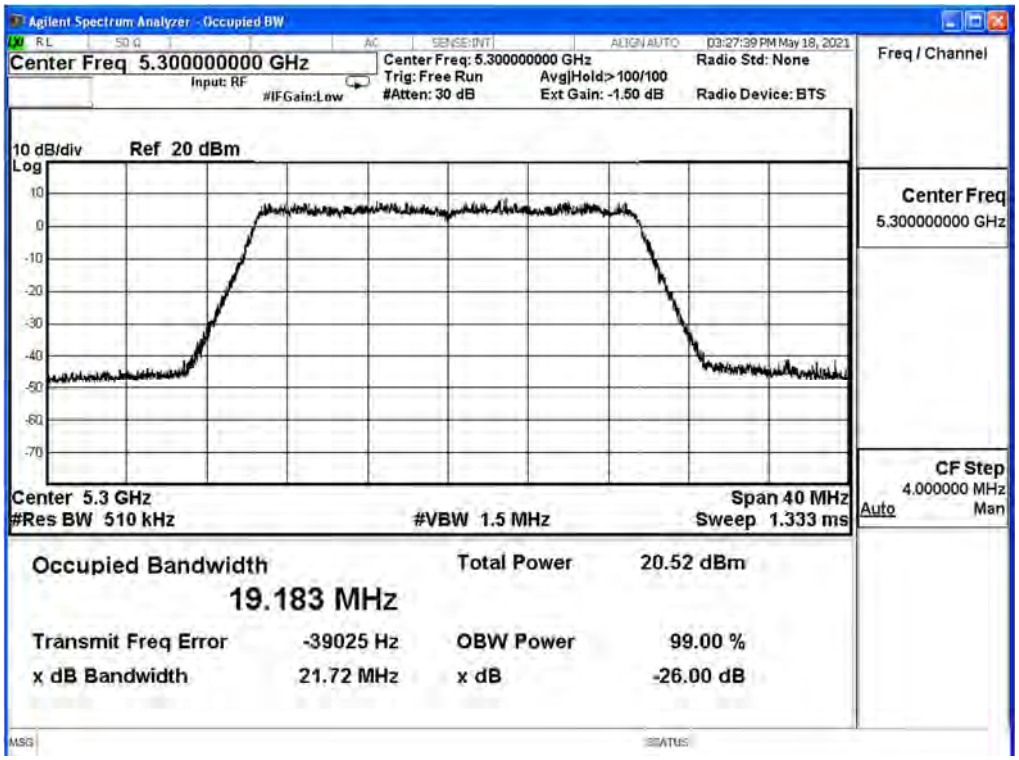
Channel 48 (5240MHz)



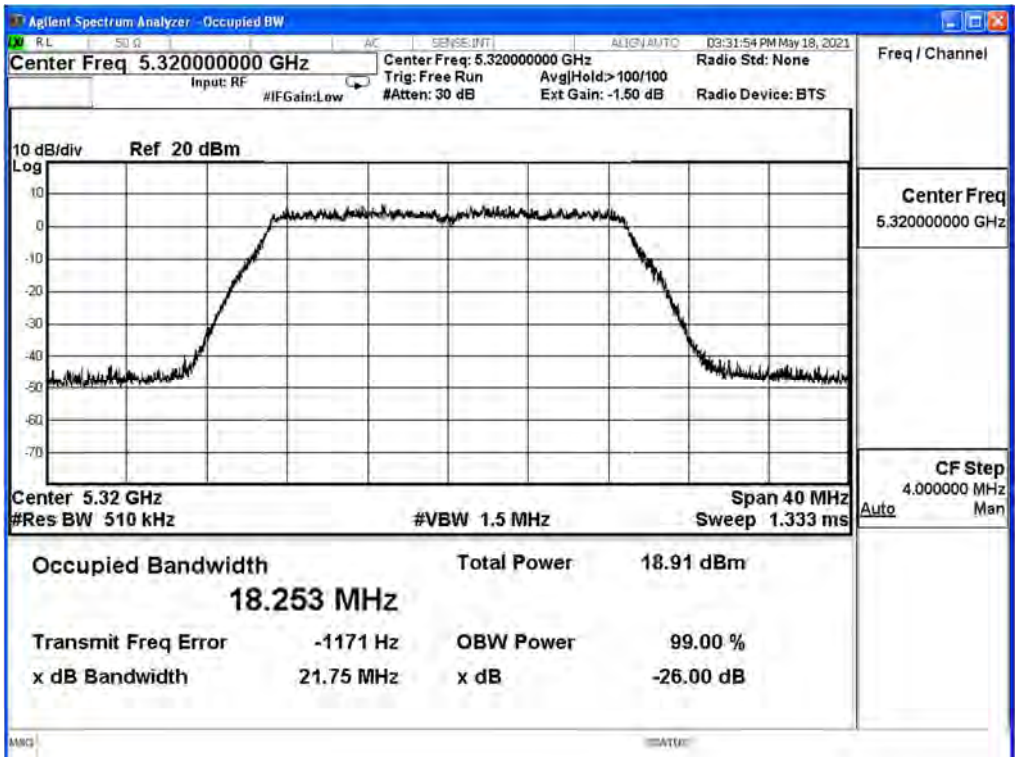
Channel 52 (5260MHz)



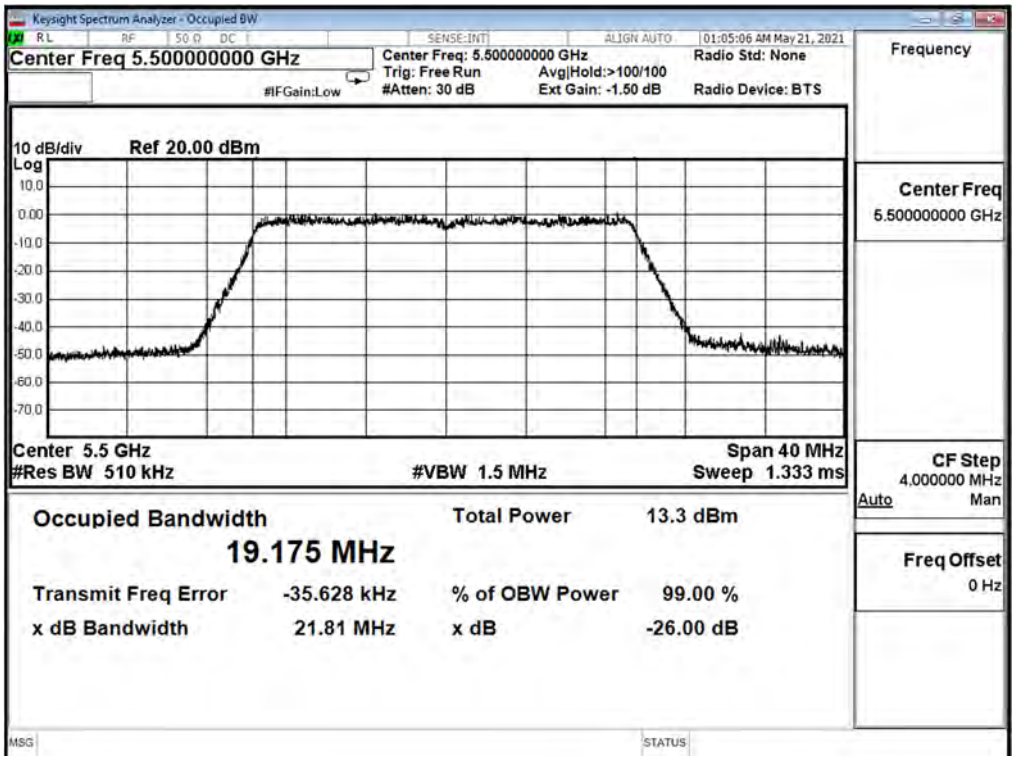
Channel 60 (5300MHz)



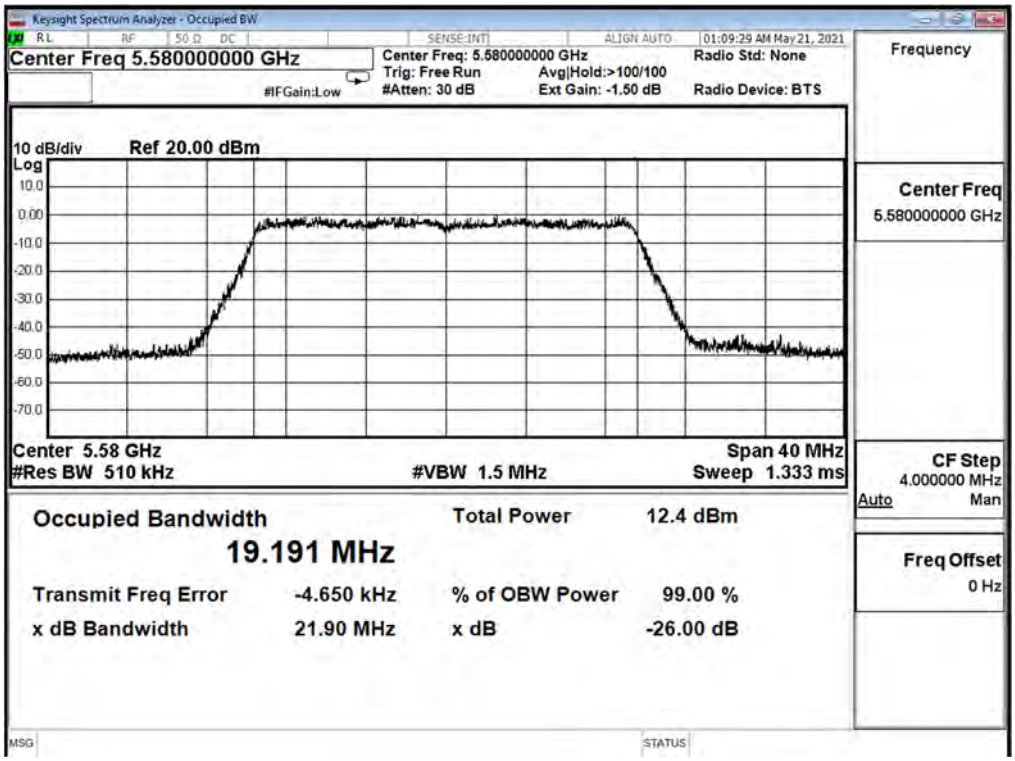
Channel 64 (5320MHz)



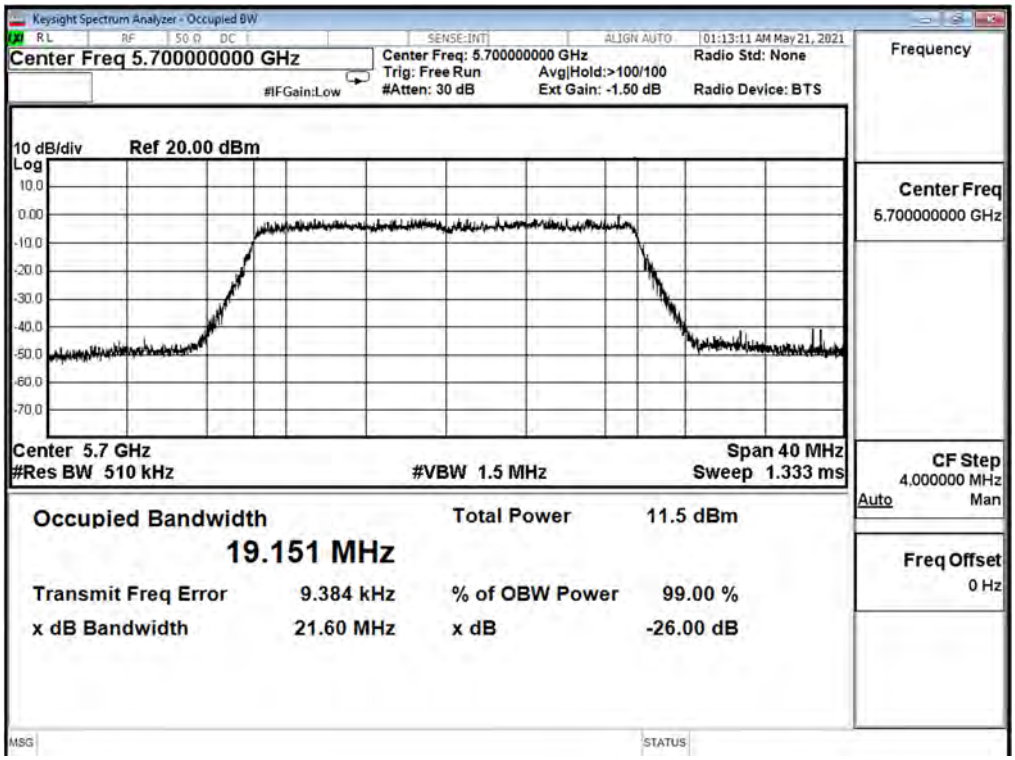
Channel 100 (5500MHz)



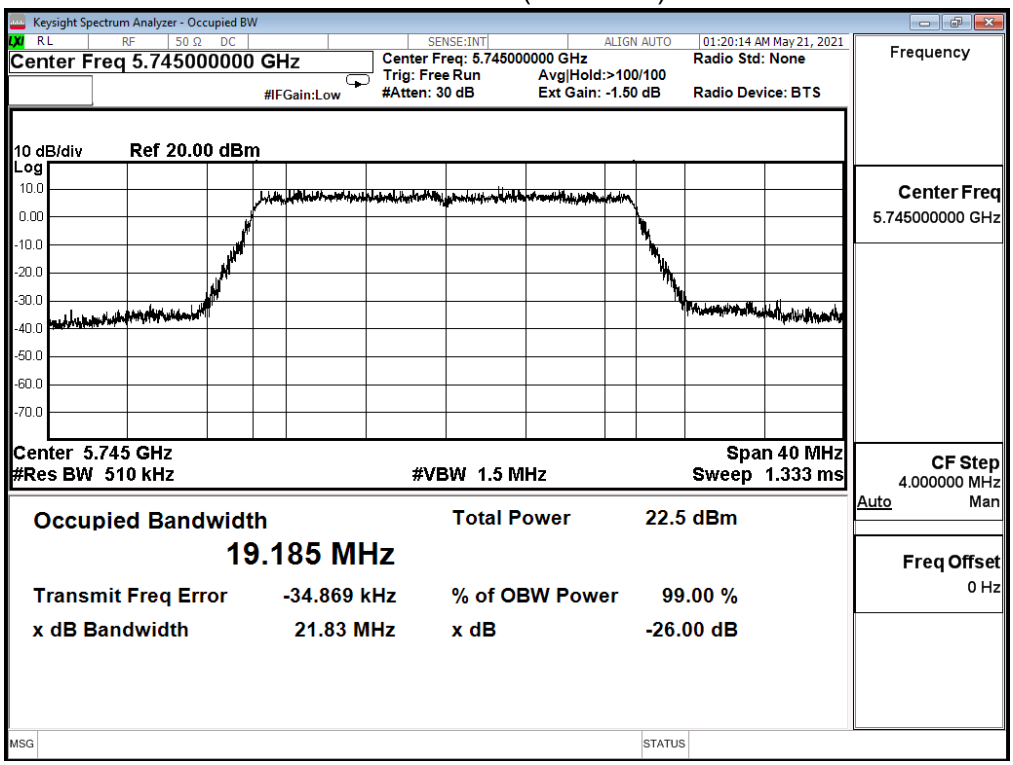
Channel 116 (5580MHz)



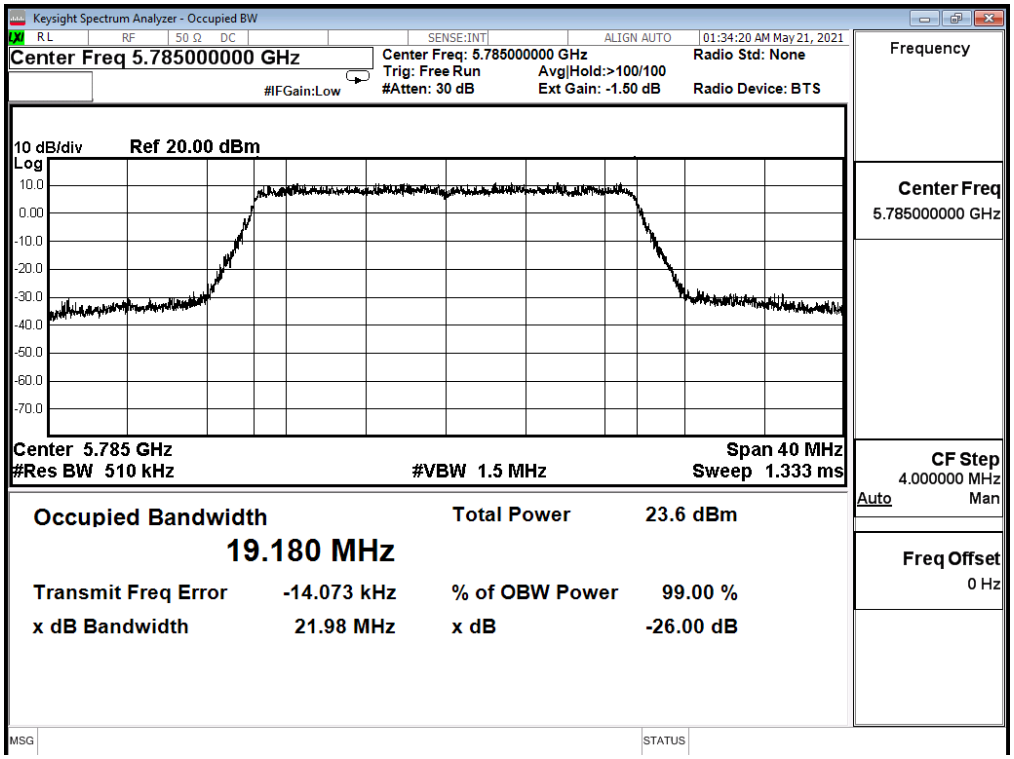
Channel 140 (5700MHz)



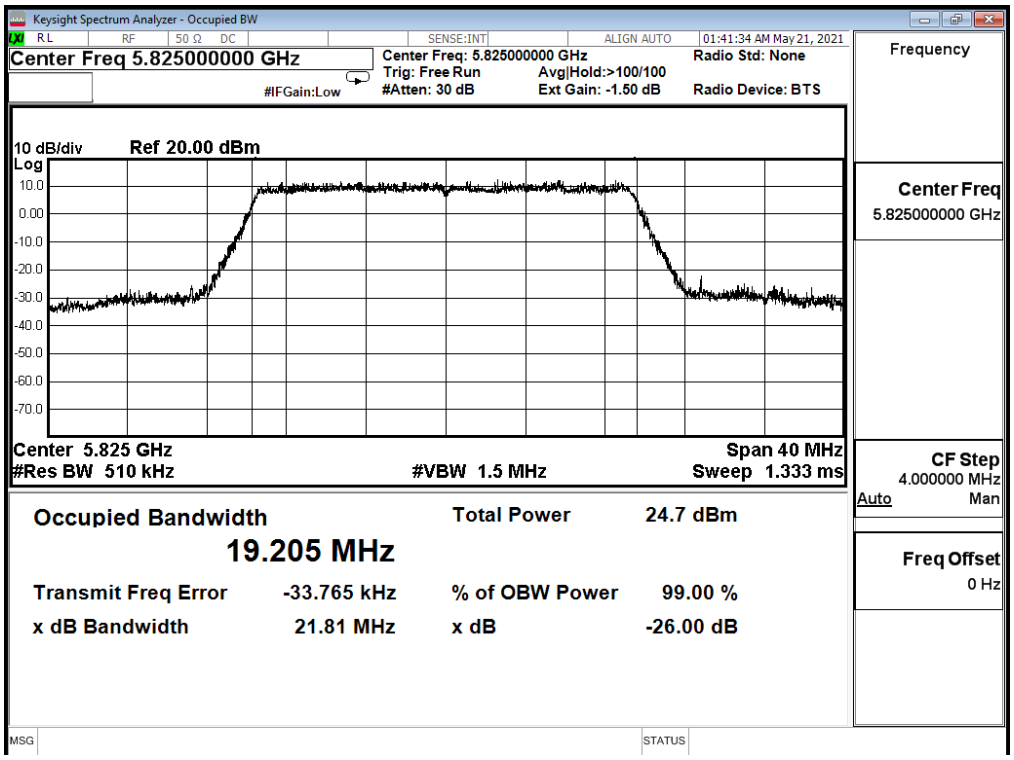
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

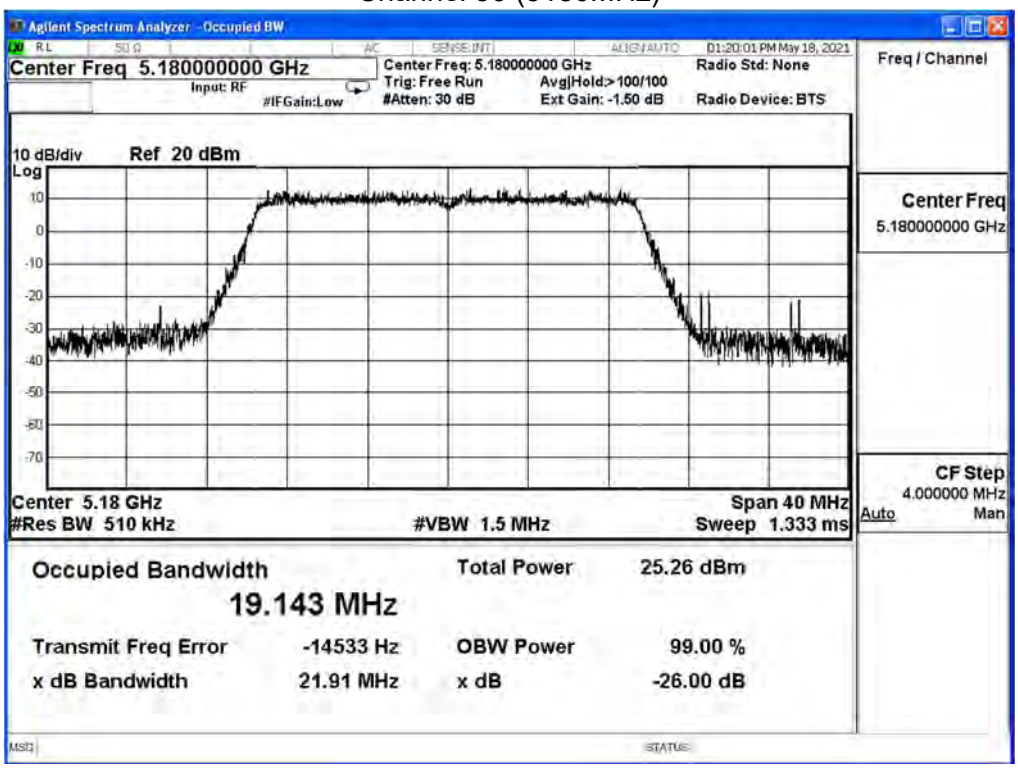


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18~2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

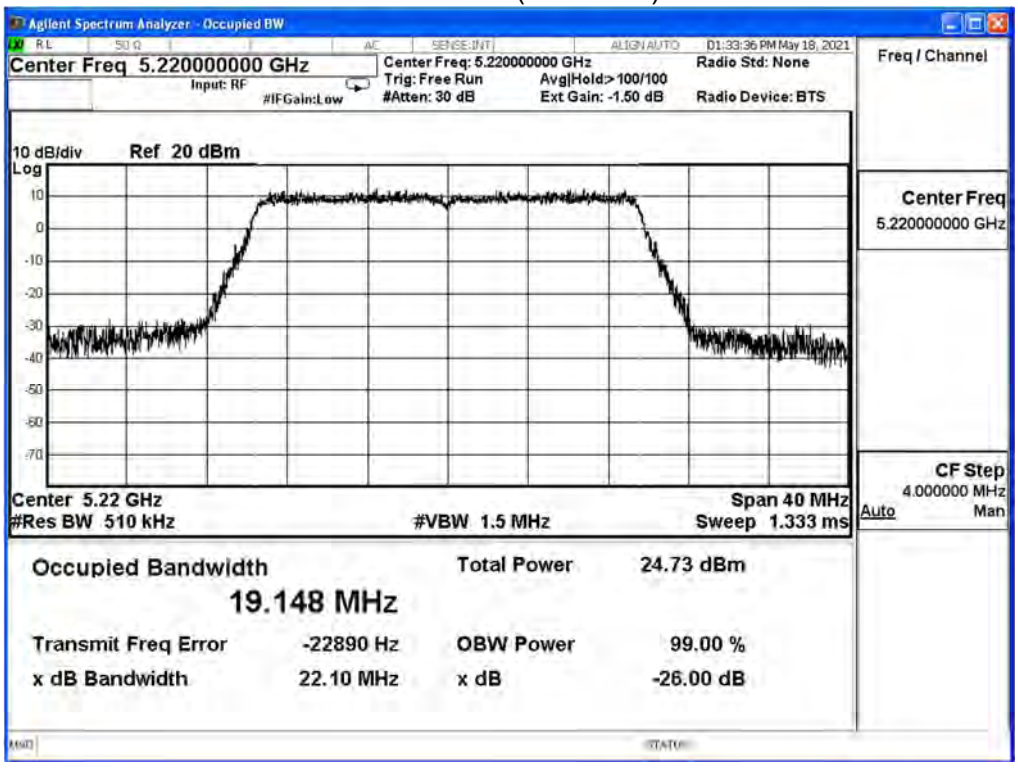
IEEE 802.11ax_20M(ANT 3)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
36	5180	19.143	21.910	--
44	5220	19.148	22.100	--
48	5240	19.137	21.820	--
52	5260	19.147	21.830	--
60	5300	19.180	21.820	--
64	5320	18.237	21.990	--
100	5500	19.188	22.120	--
116	5580	19.235	22.100	--
140	5700	19.165	22.040	--
149	5745	19.191	N/A	--
157	5785	19.188		--
165	5825	19.181		--

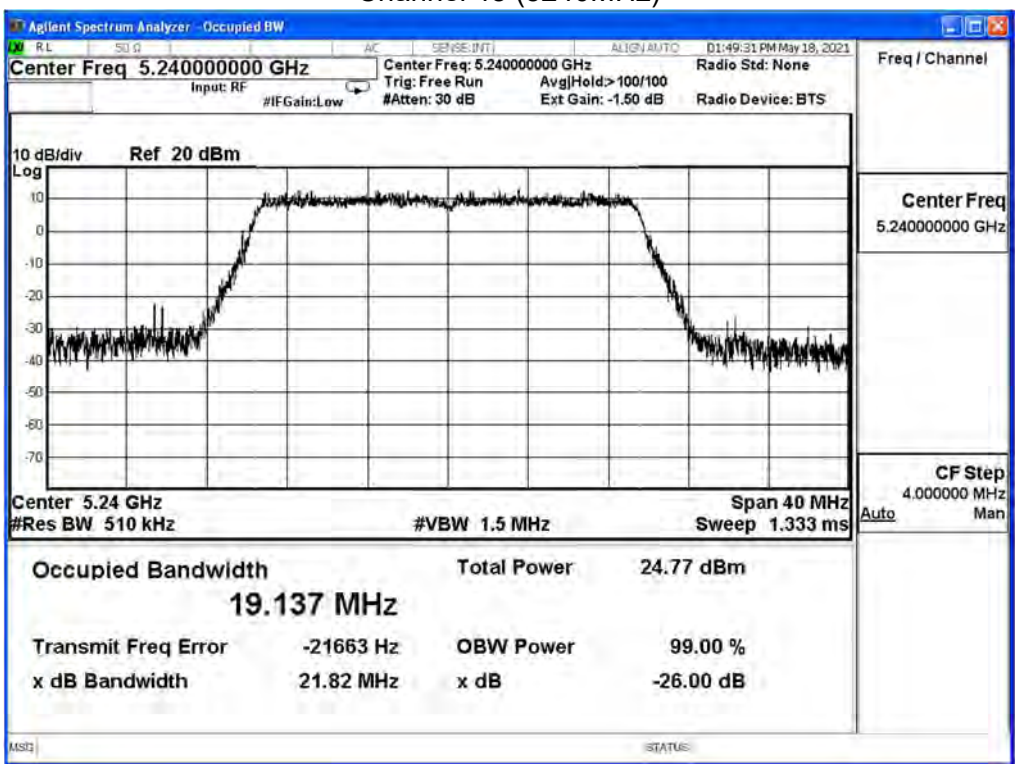
Channel 36 (5180MHz)



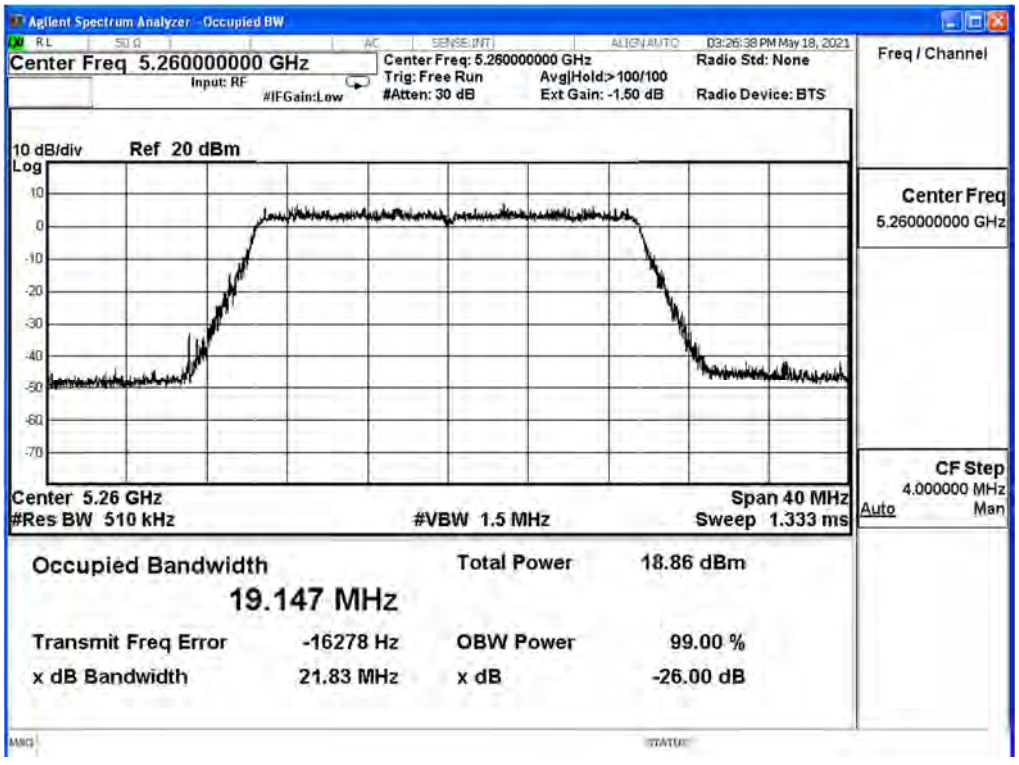
Channel 44 (5220MHz)



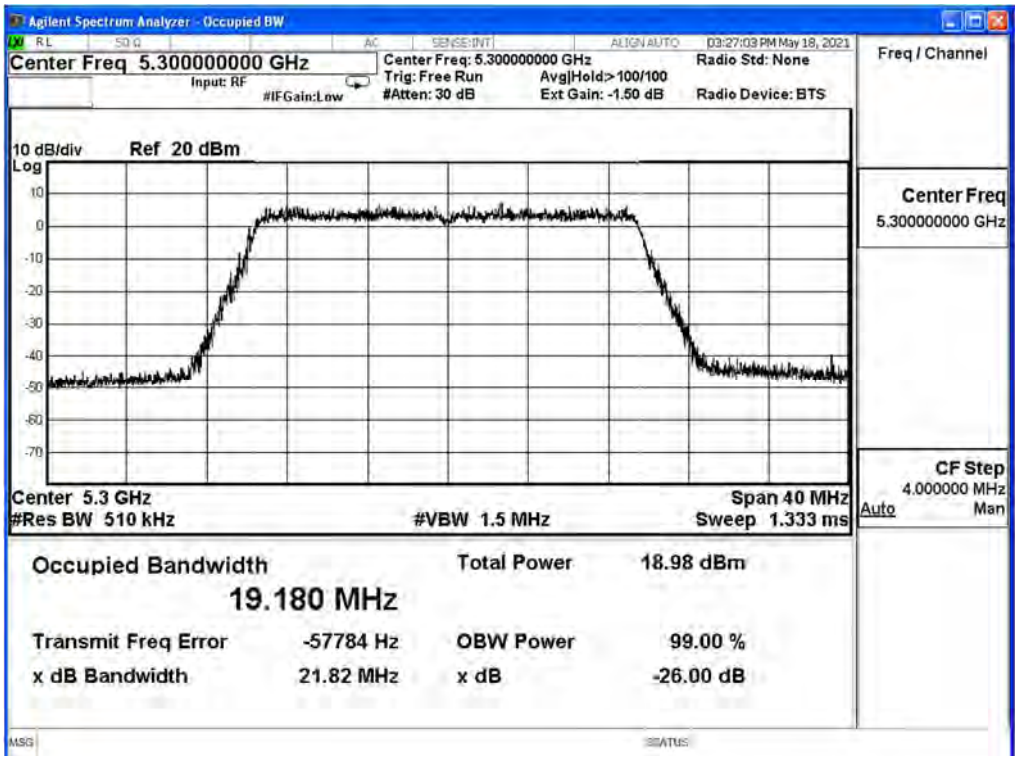
Channel 48 (5240MHz)



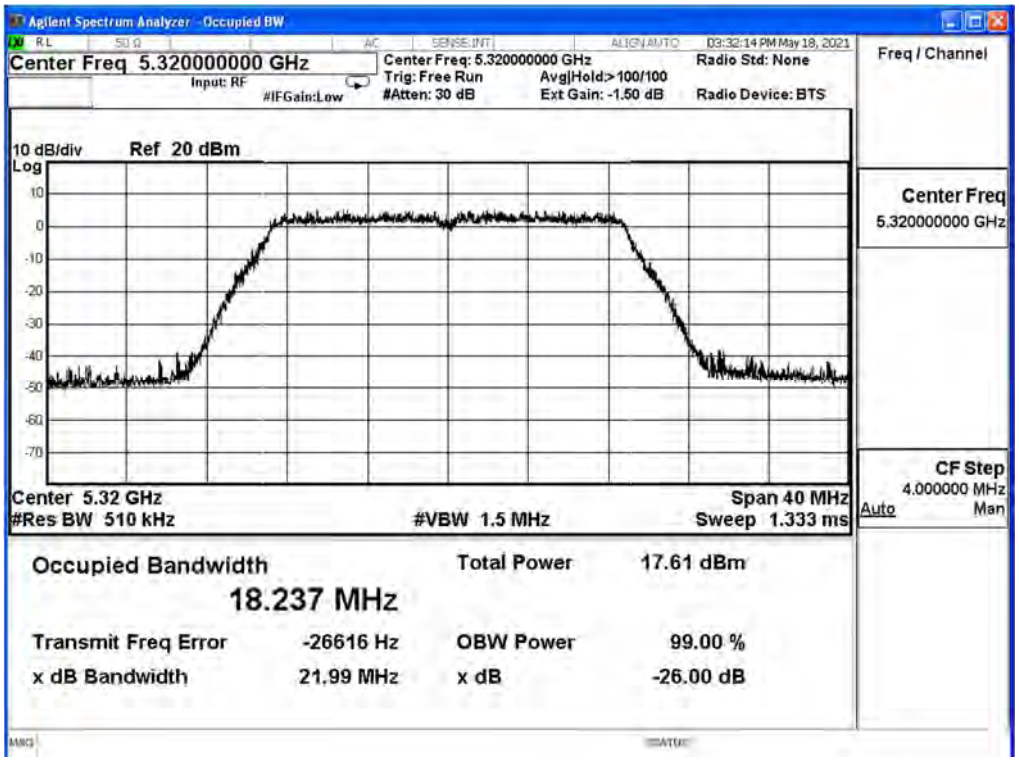
Channel 52 (5260MHz)



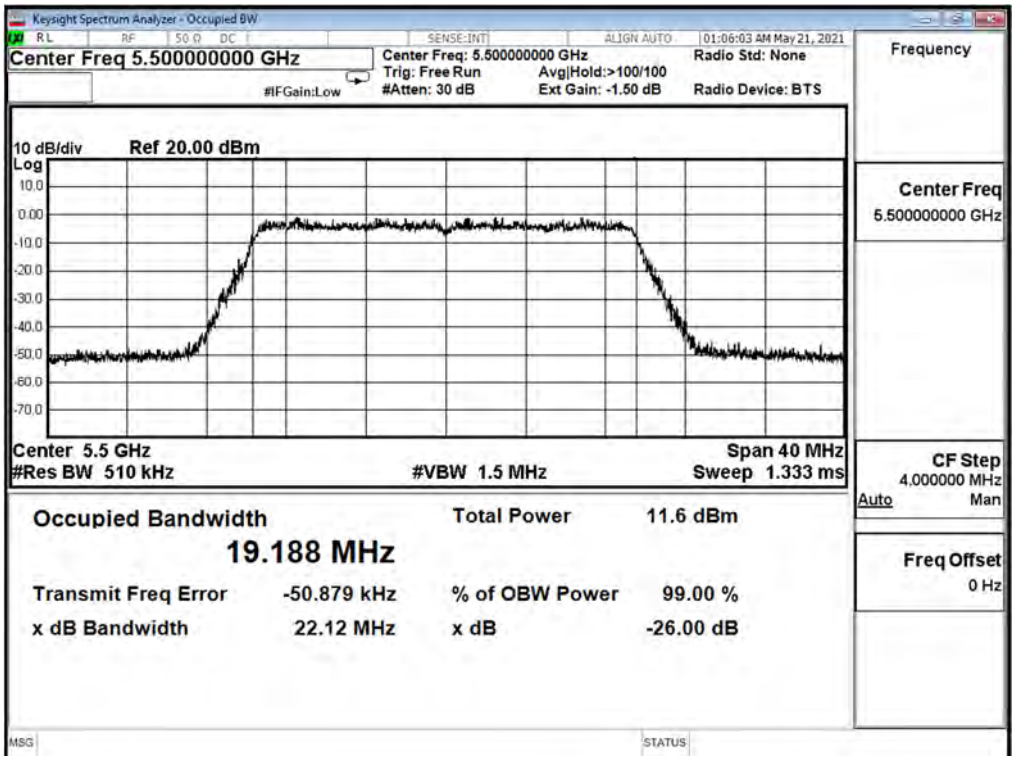
Channel 60 (5300MHz)



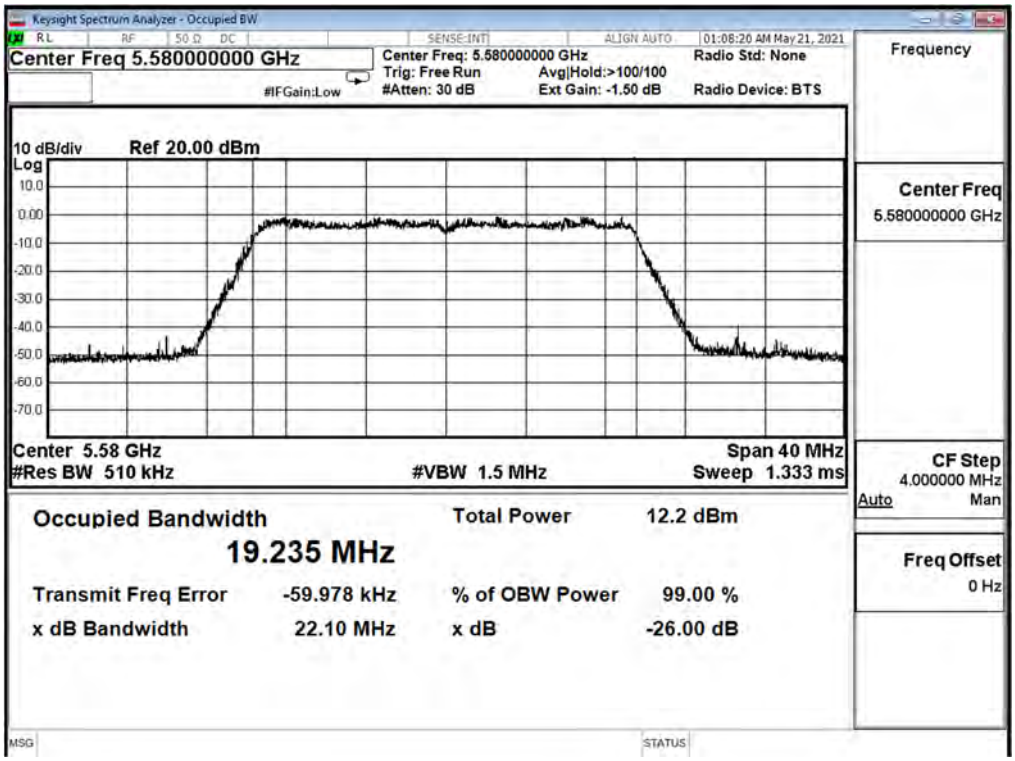
Channel 64 (5320MHz)



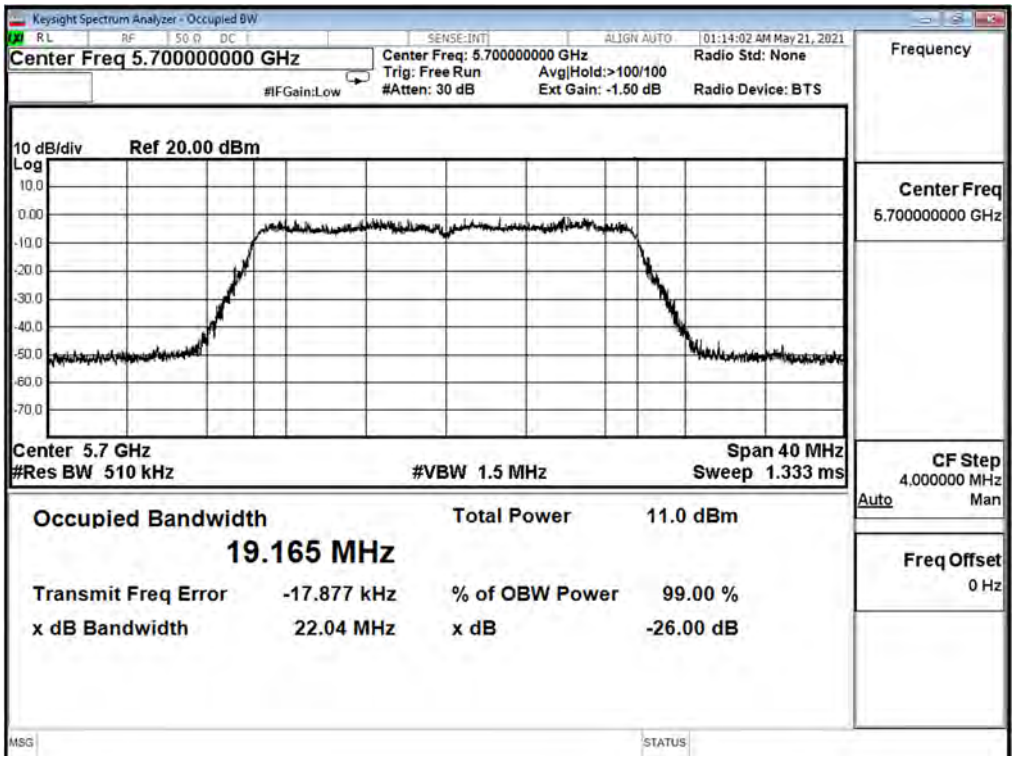
Channel 100 (5500MHz)



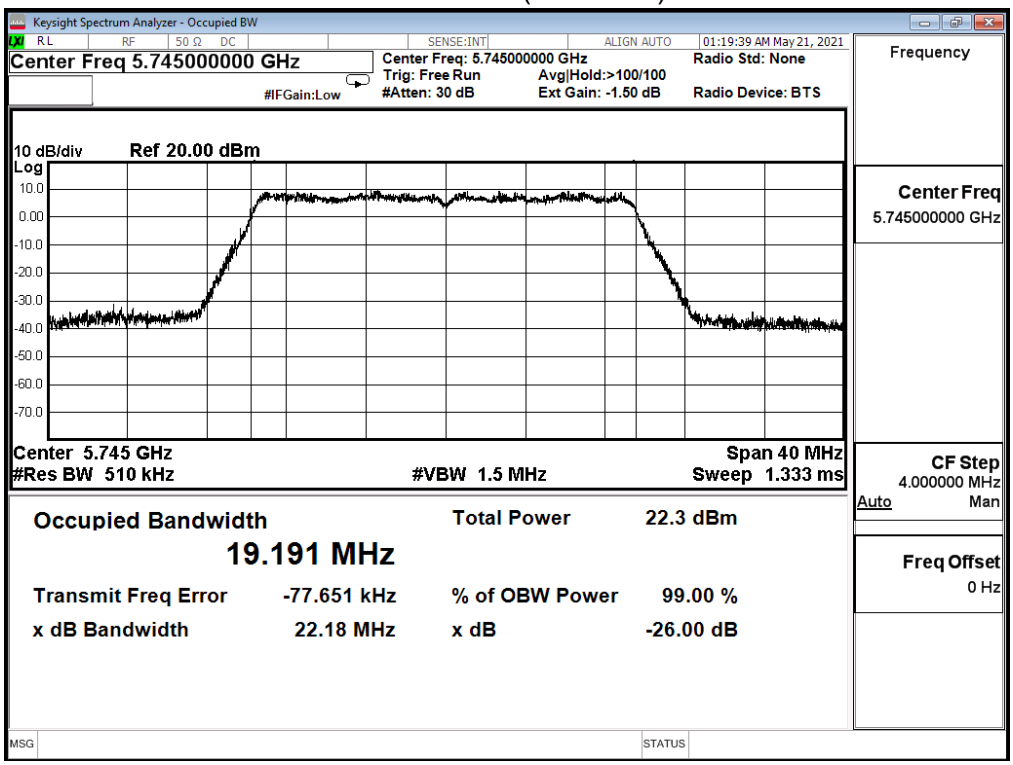
Channel 116 (5580MHz)



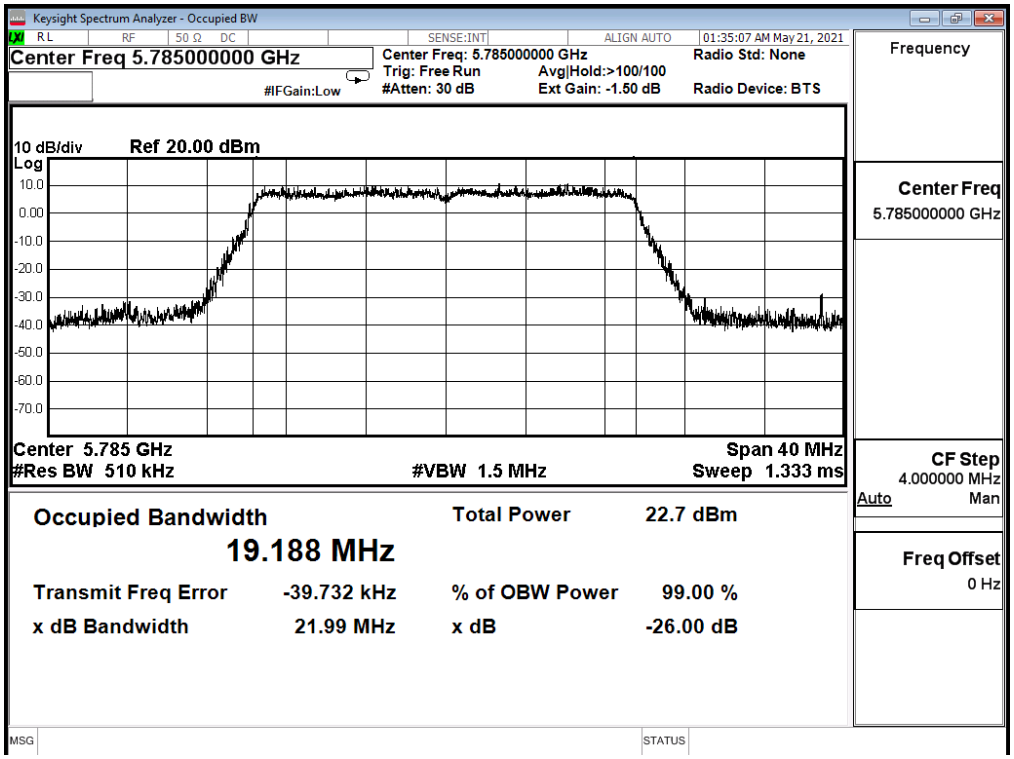
Channel 140 (5700MHz)



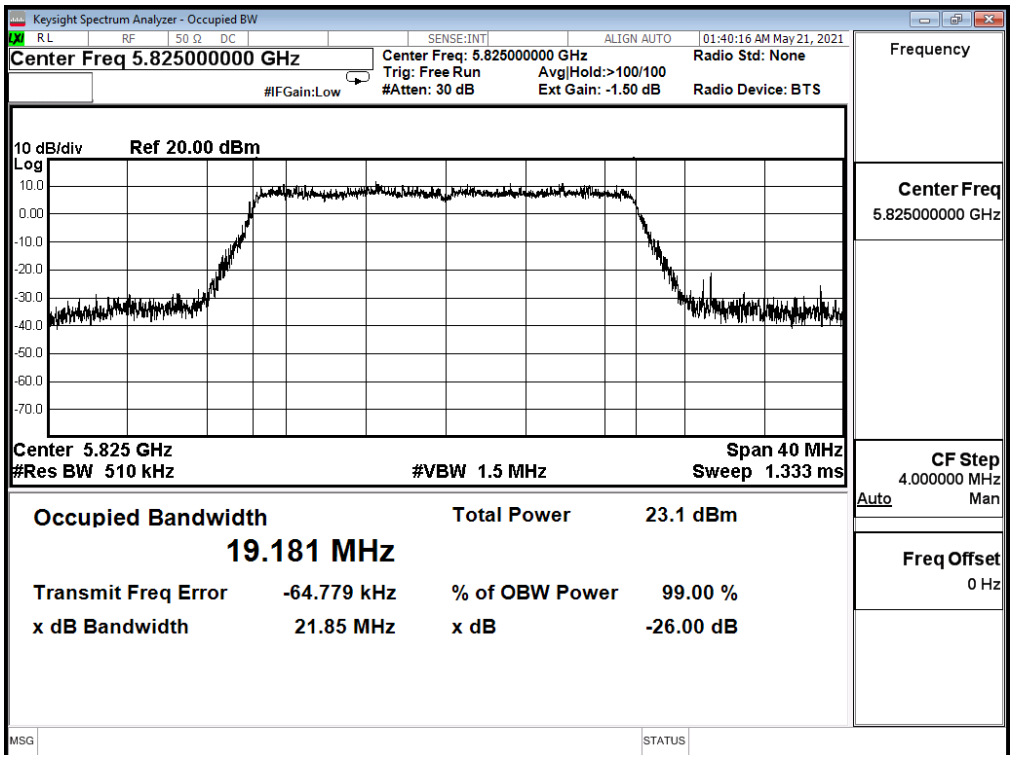
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

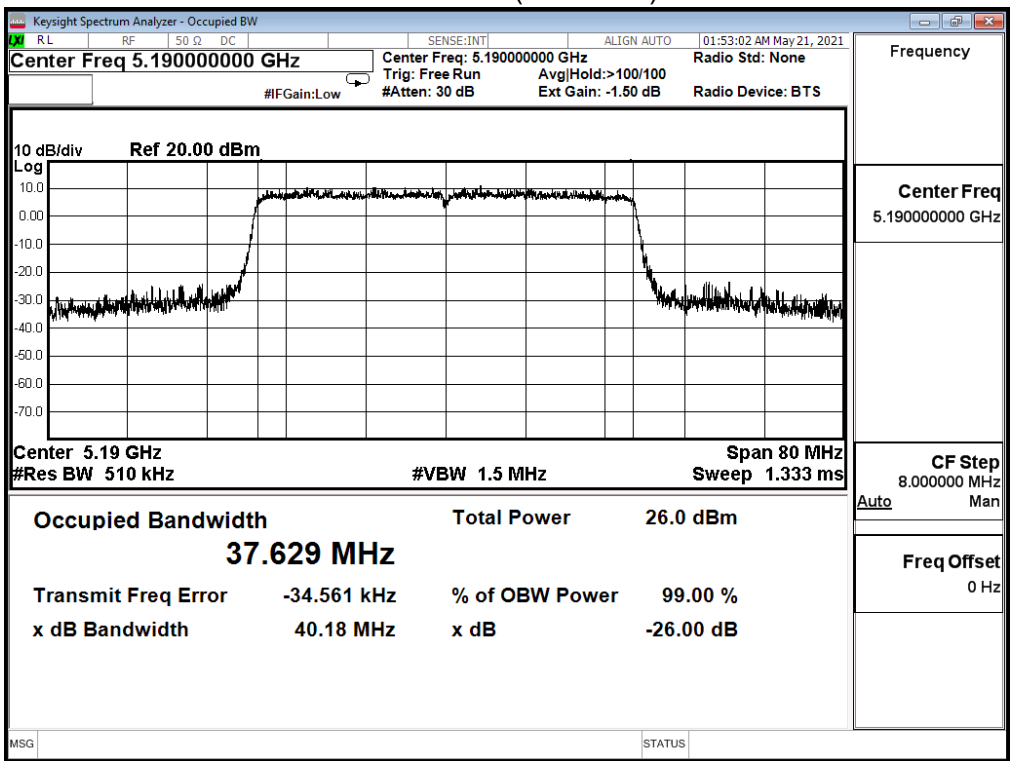


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	66.0

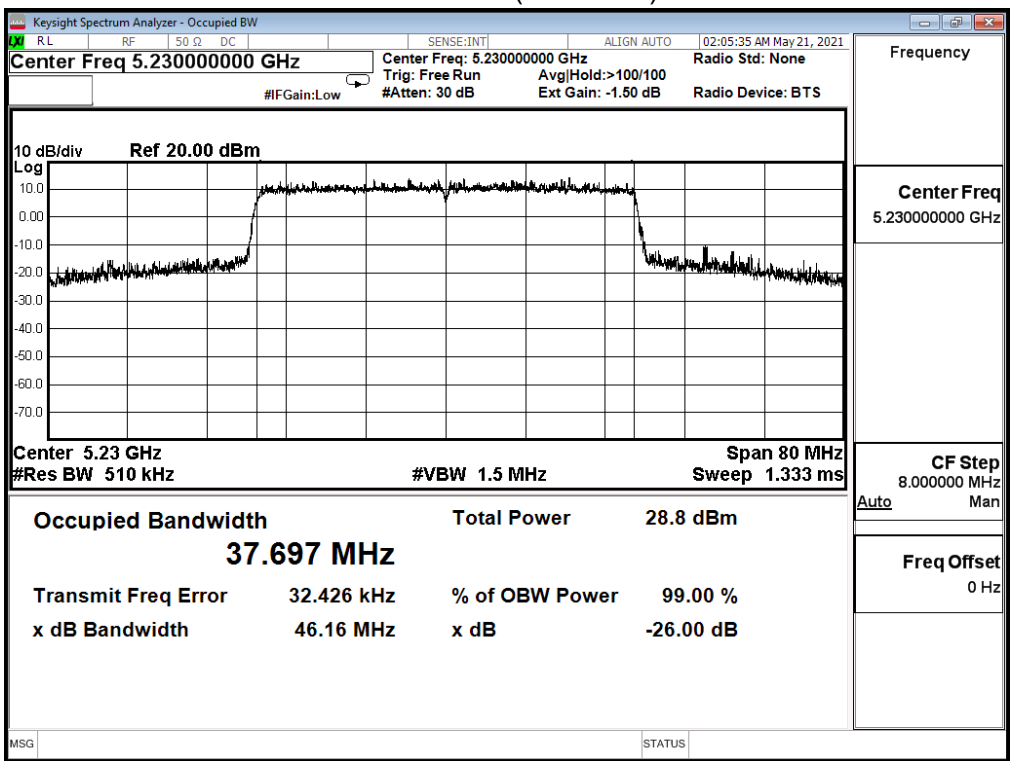
IEEE 802.11ax_40M(ANT 0)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
38	5190	37.629	40.180	--
46	5230	37.697	46.160	--
54	5270	37.607	40.170	--
62	5310	37.614	40.070	--
102	5510	37.606	39.810	--
110	5550	37.609	40.180	--
134	5670	37.646	40.290	--
151	5755	37.600	N/A	--
159	5795	37.580		--

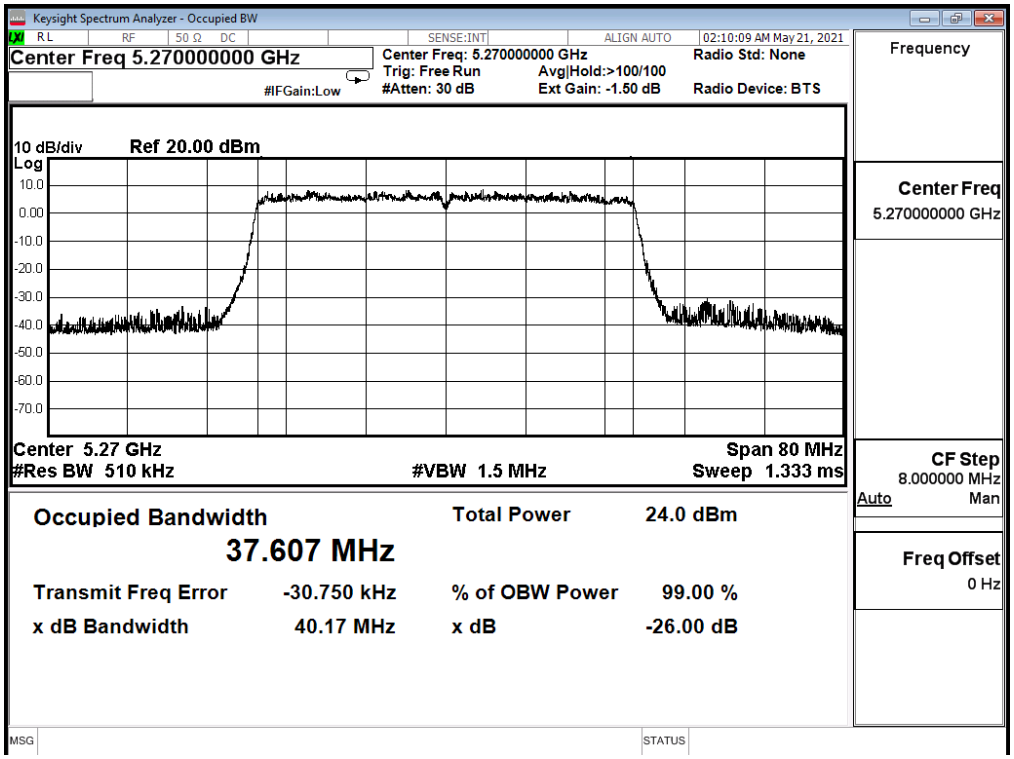
Channel 38 (5190MHz)



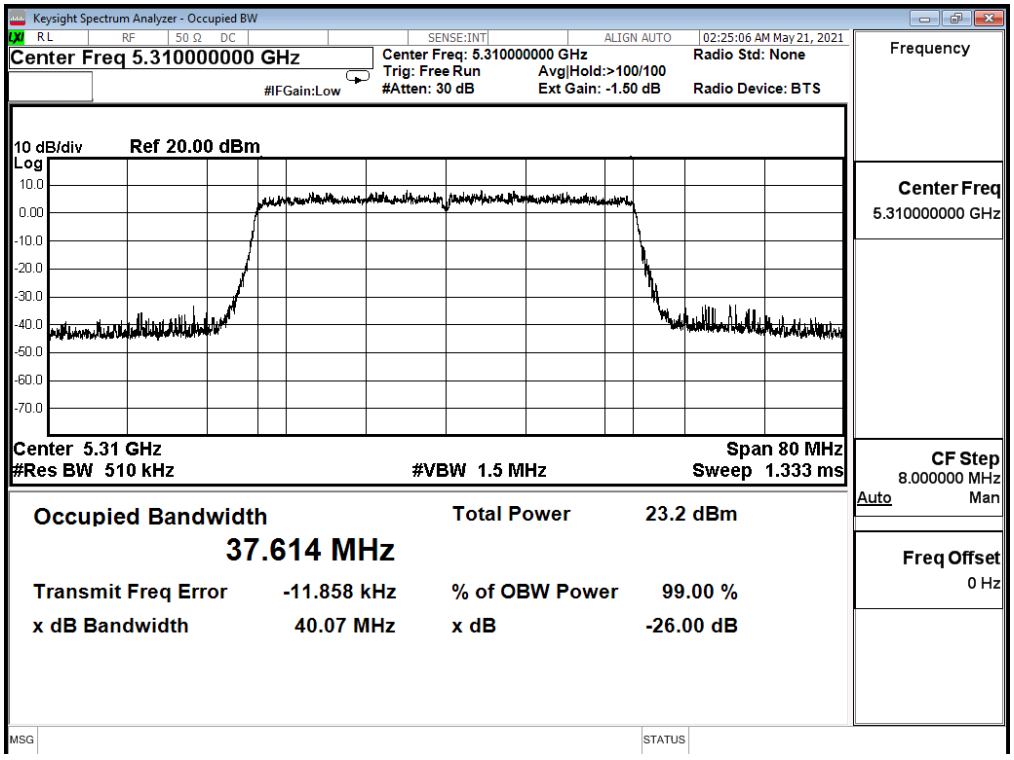
Channel 46 (5230MHz)



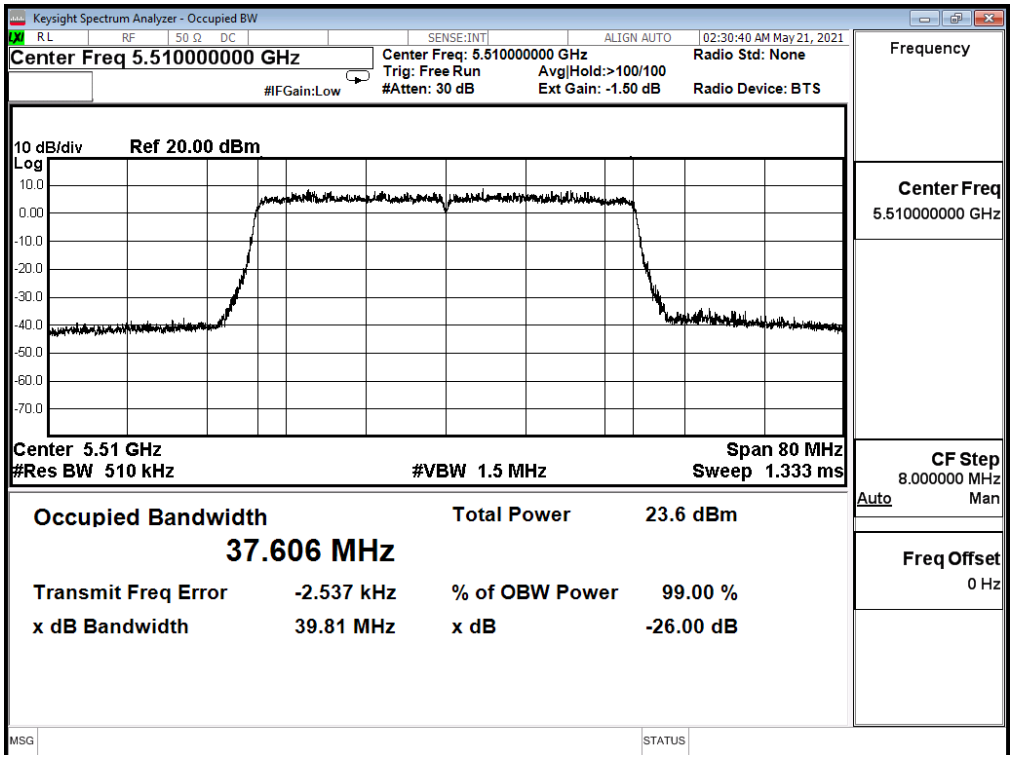
Channel 54 (5270MHz)



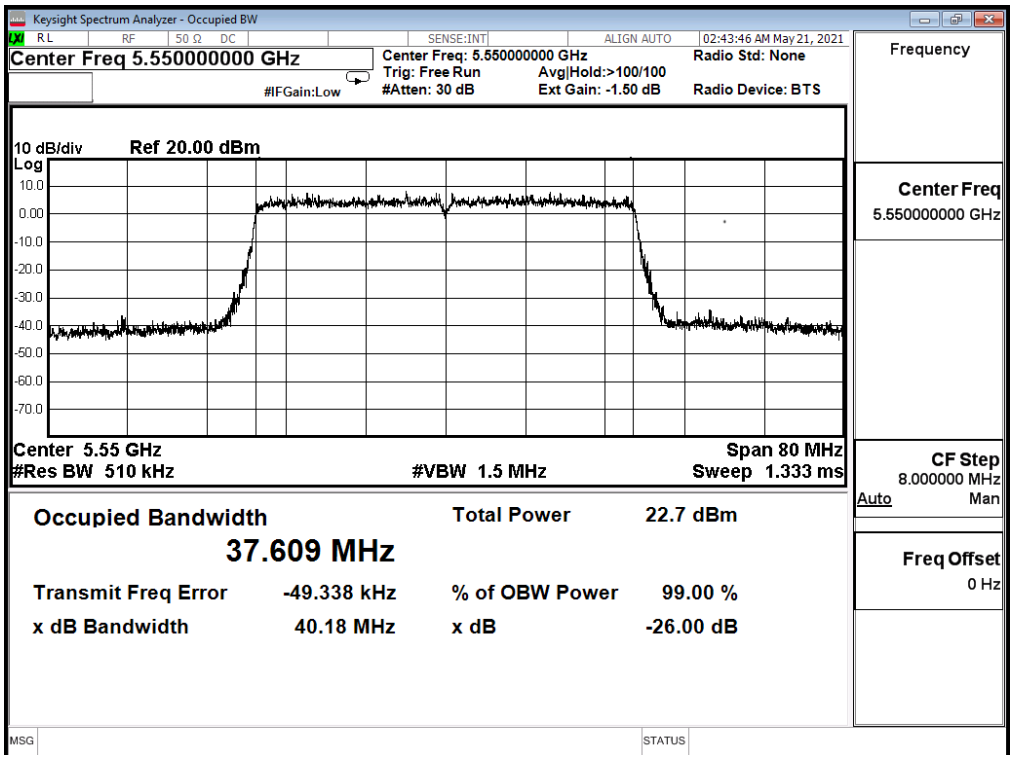
Channel 62 (5310MHz)



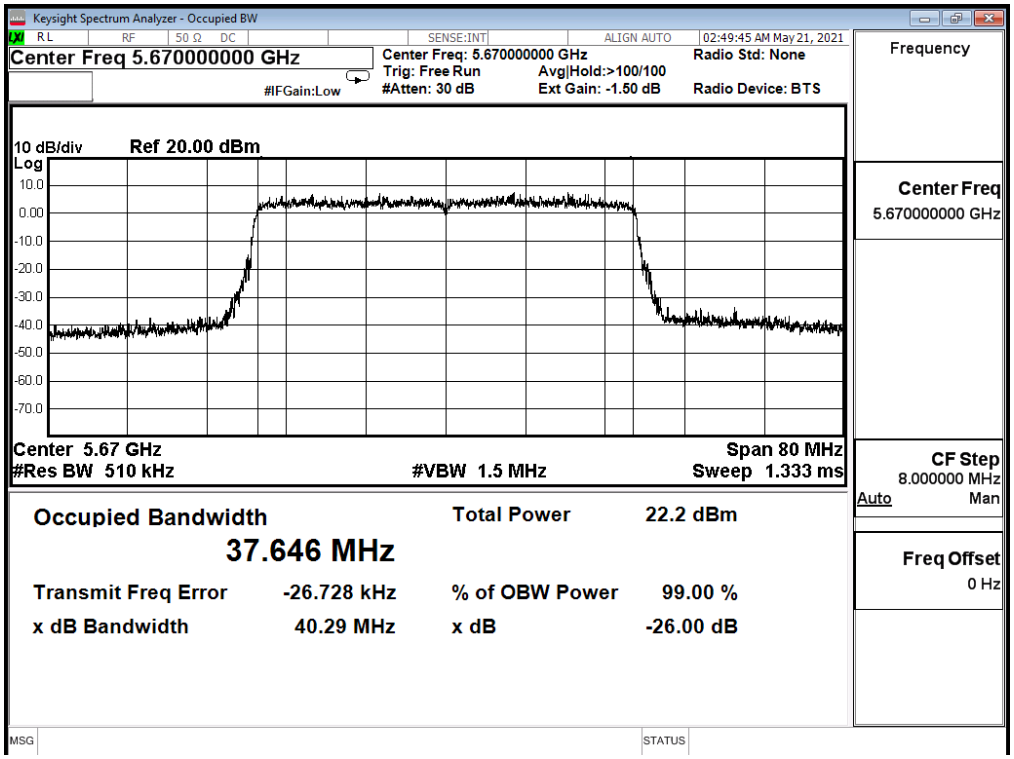
Channel 102 (5510MHz)



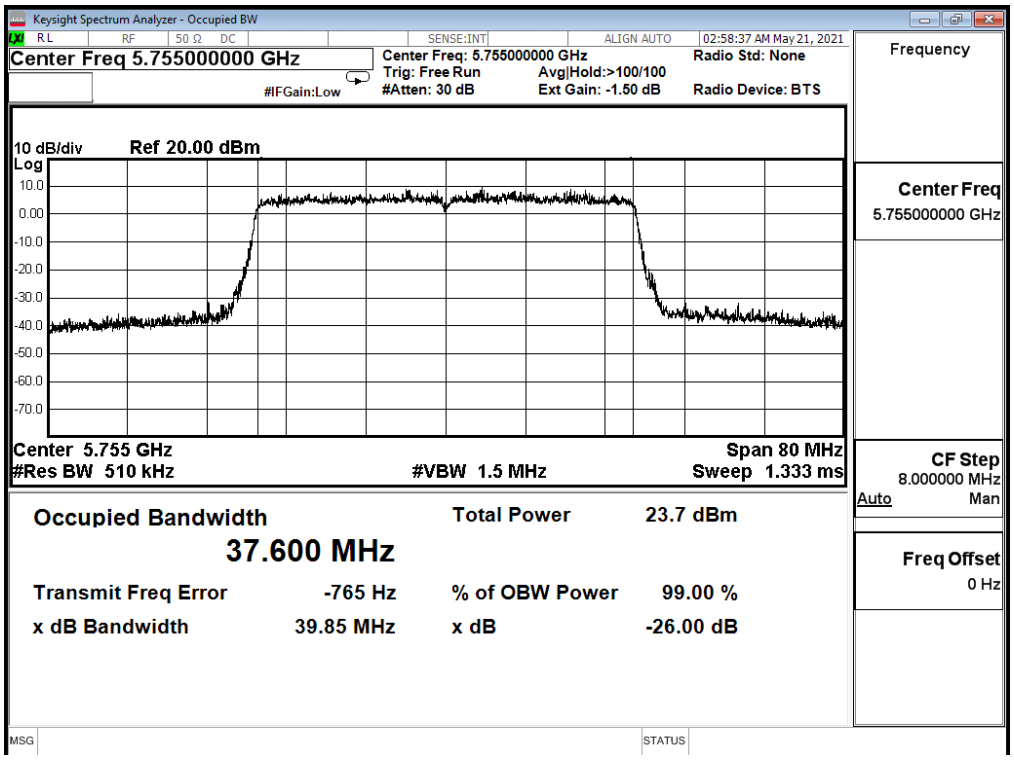
Channel 110 (5550MHz)



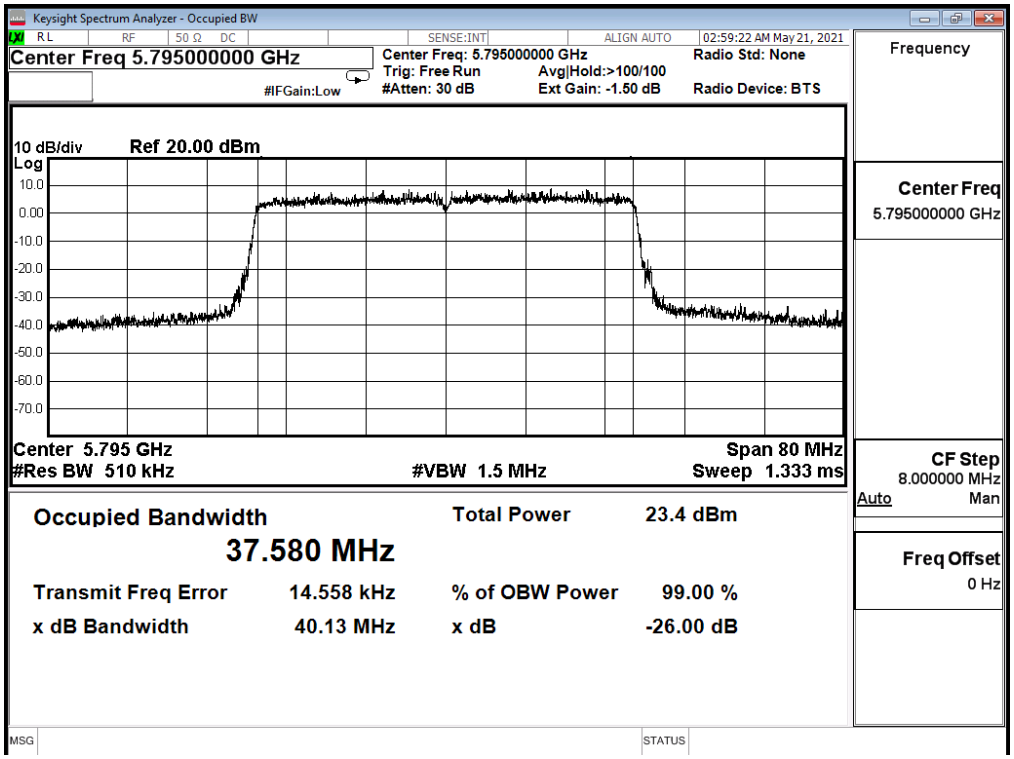
Channel 134 (5670MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)

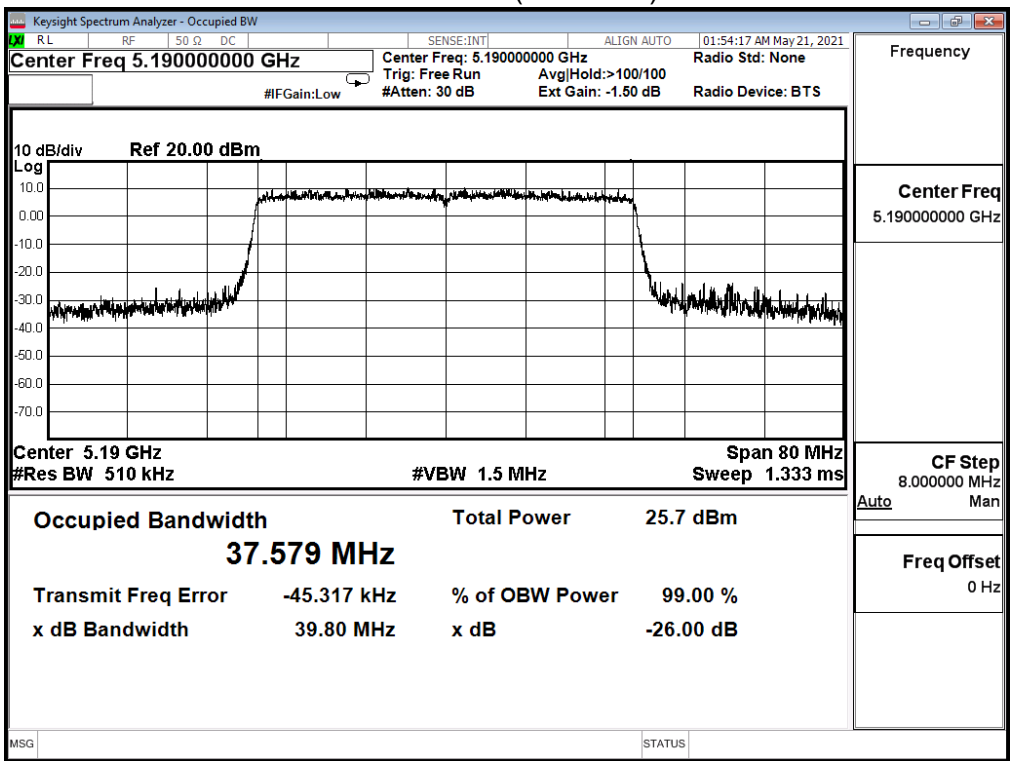


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	66.0

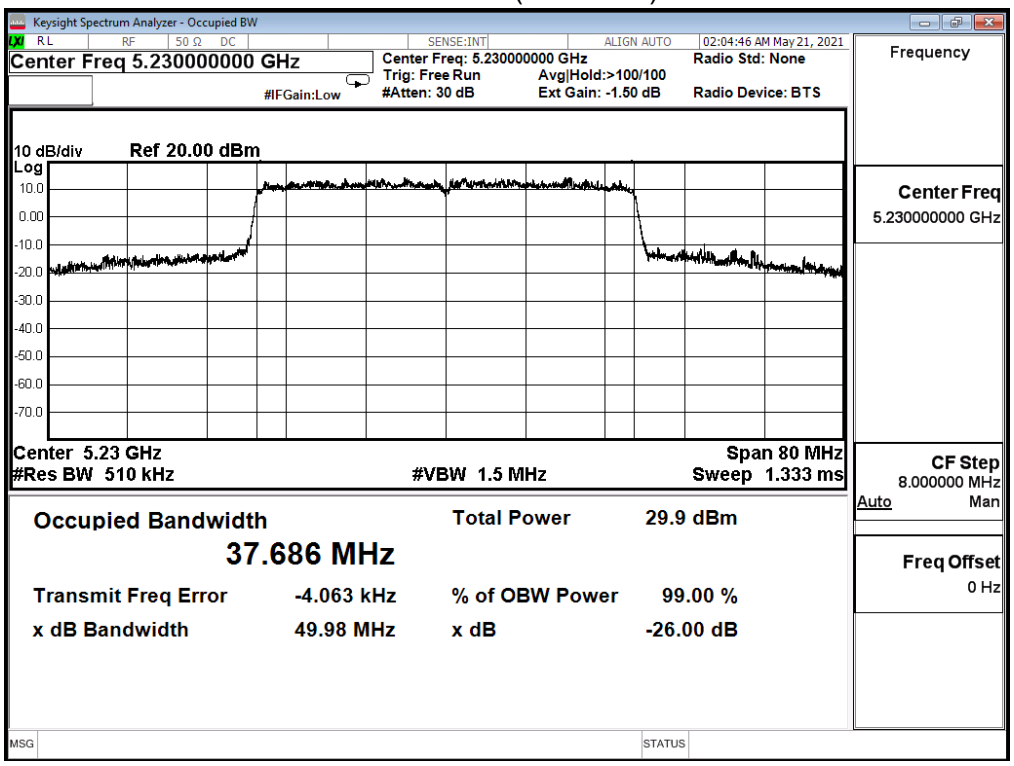
IEEE 802.11ax_40M(ANT 1)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
38	5190	37.579	39.800	--
46	5230	37.686	49.980	--
54	5270	37.565	39.830	--
62	5310	37.550	39.870	--
102	5510	37.610	39.860	--
110	5550	37.649	39.920	--
134	5670	37.568	39.900	--
151	5755	37.485	N/A	--
159	5795	37.632		--

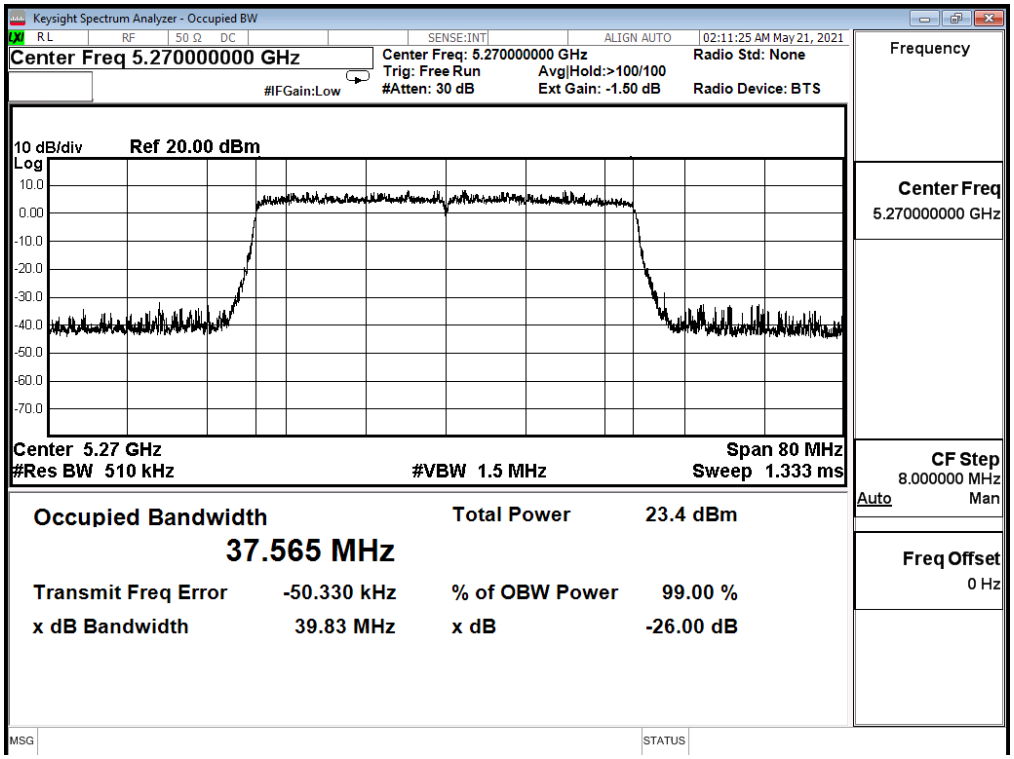
Channel 38 (5190MHz)



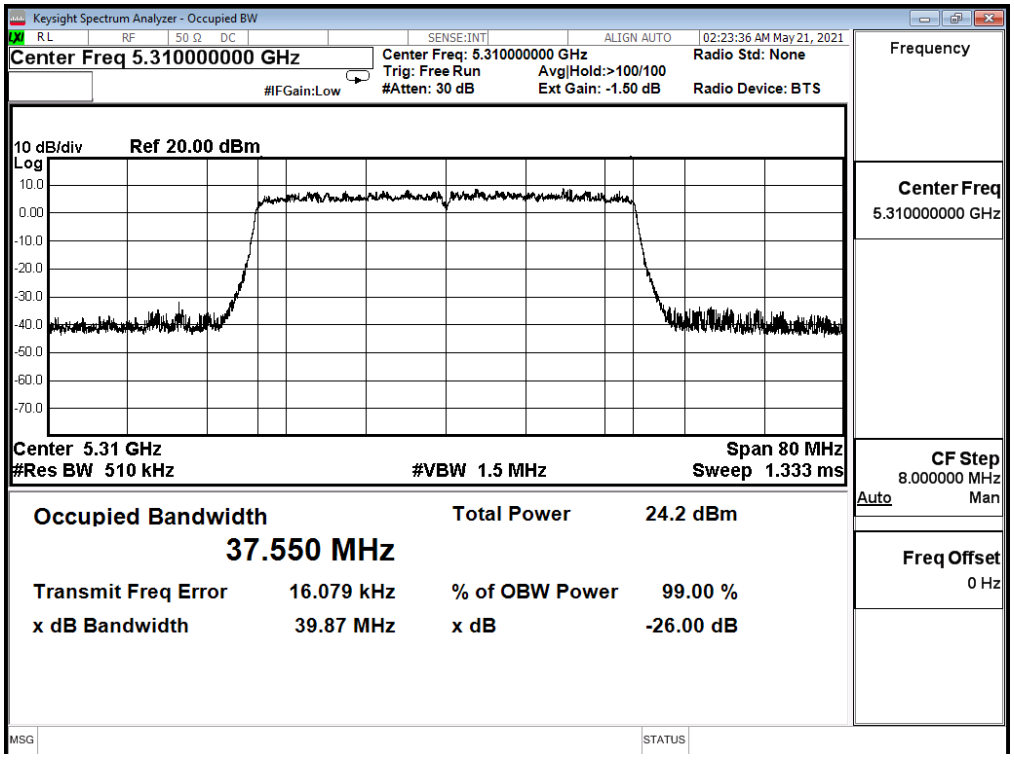
Channel 46 (5230MHz)



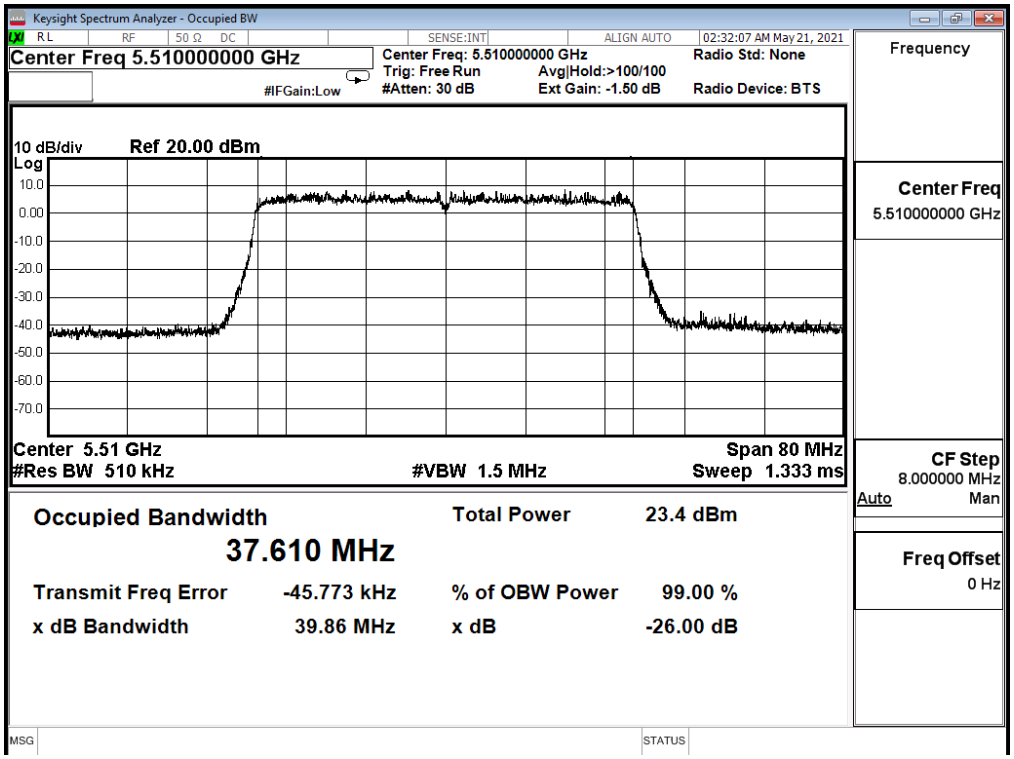
Channel 54 (5270MHz)



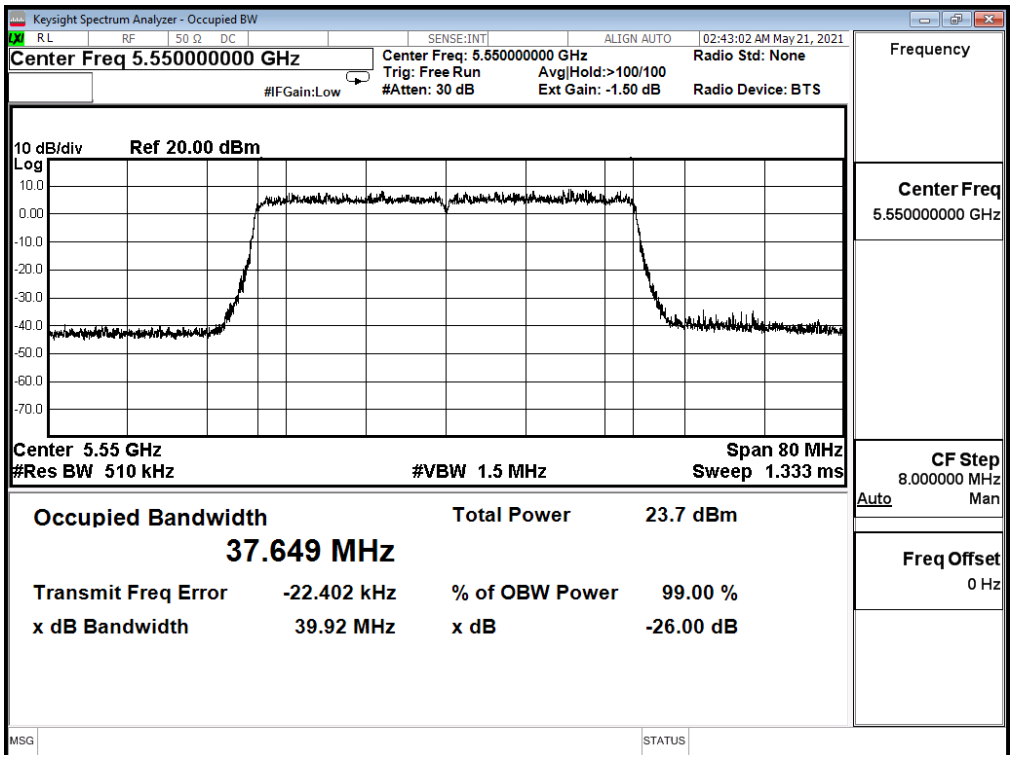
Channel 62 (5310MHz)



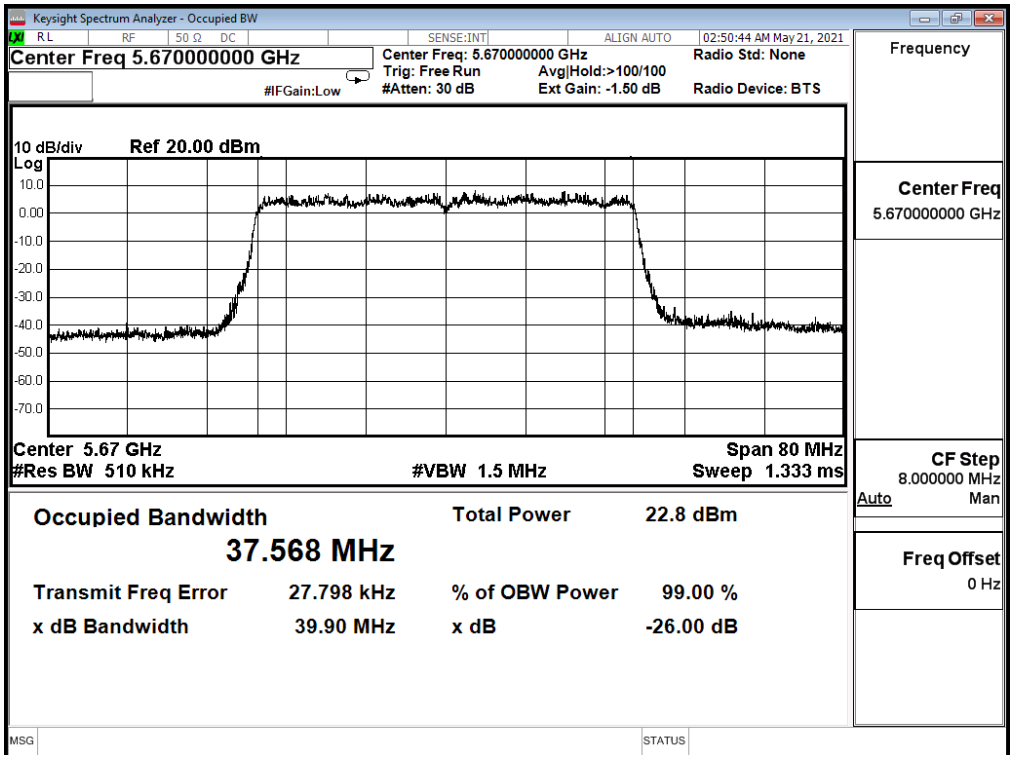
Channel 102 (5510MHz)



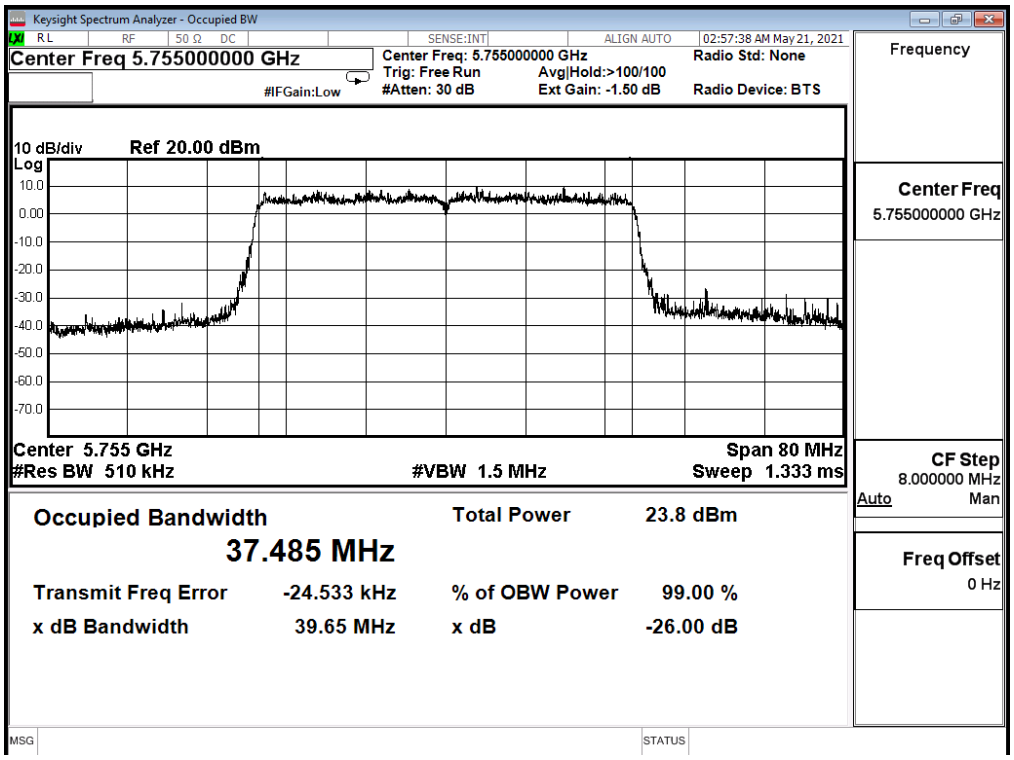
Channel 110 (5550MHz)



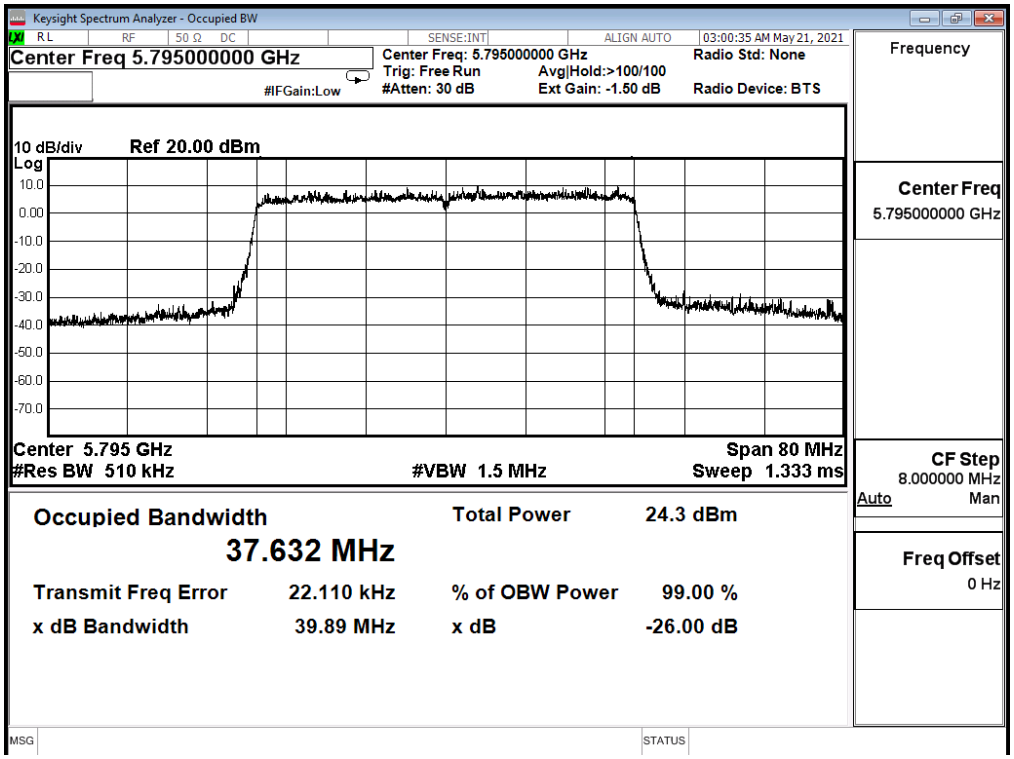
Channel 134 (5670MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)

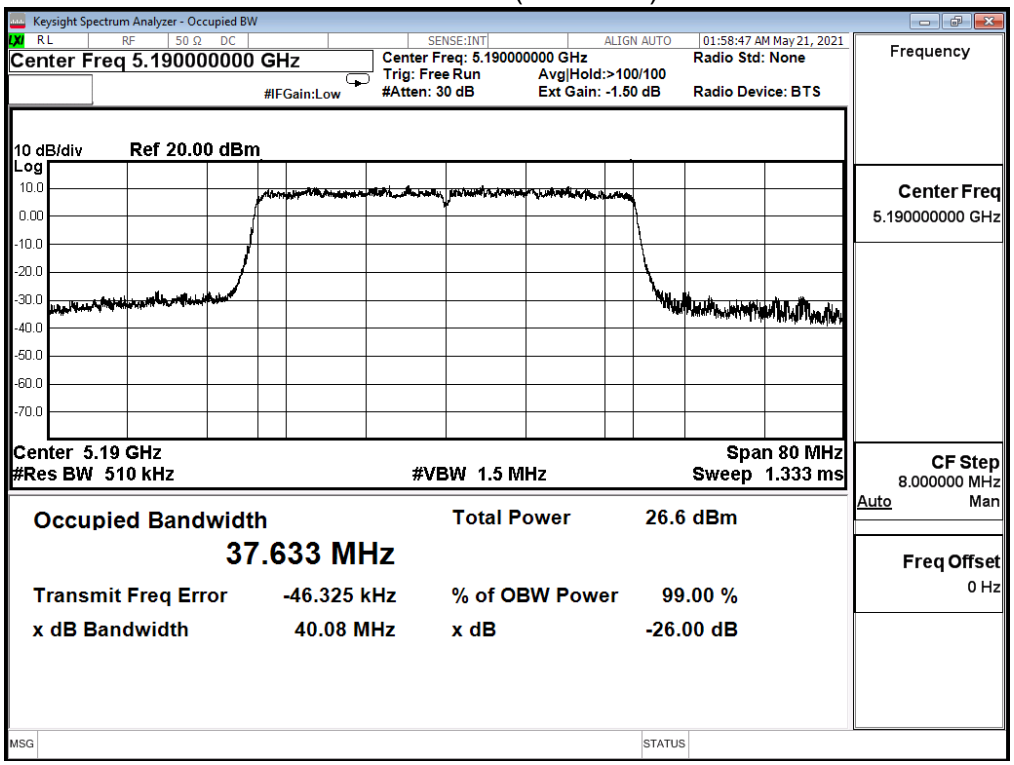


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	66.0

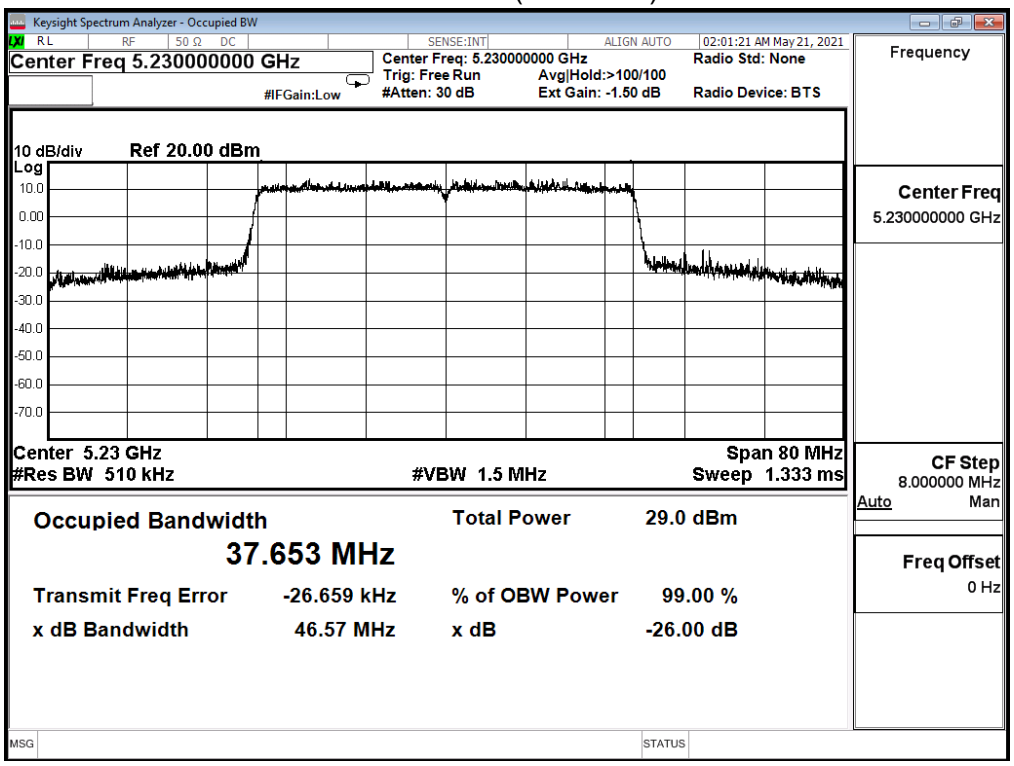
IEEE 802.11ax_40M(ANT 2)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
38	5190	37.633	40.080	--
46	5230	37.653	46.570	--
54	5270	37.626	39.920	--
62	5310	37.552	40.100	--
102	5510	37.572	39.850	--
110	5550	37.577	40.140	--
134	5670	37.606	40.280	--
151	5755	37.724	N/A	--
159	5795	37.545		--

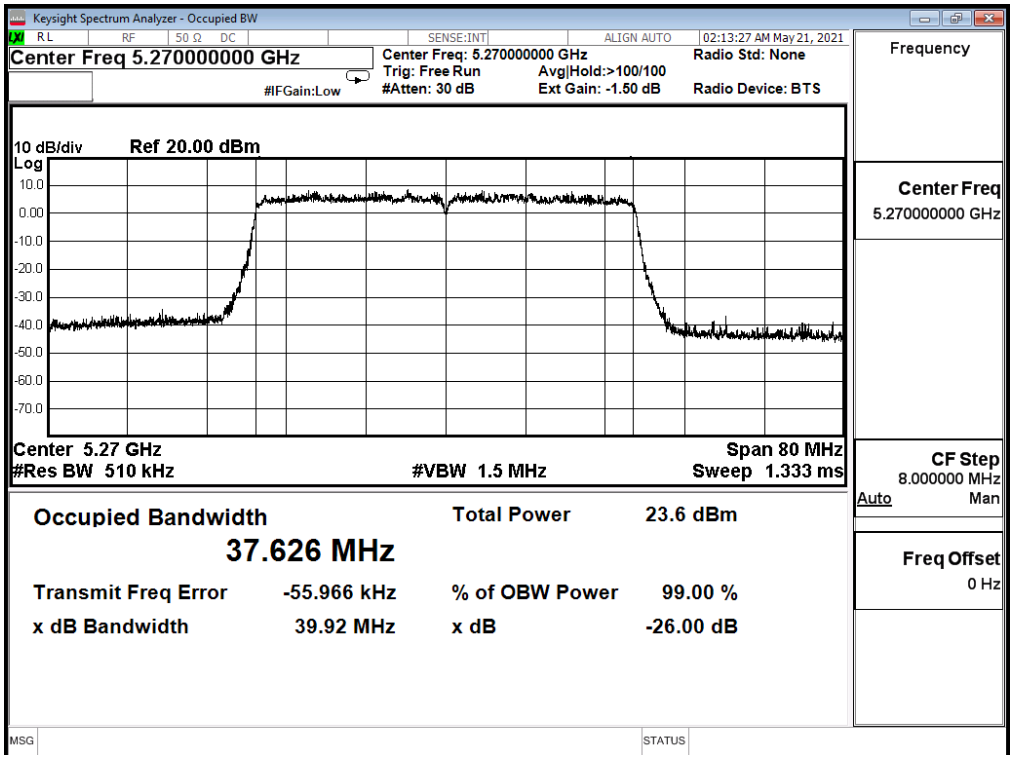
Channel 38 (5190MHz)



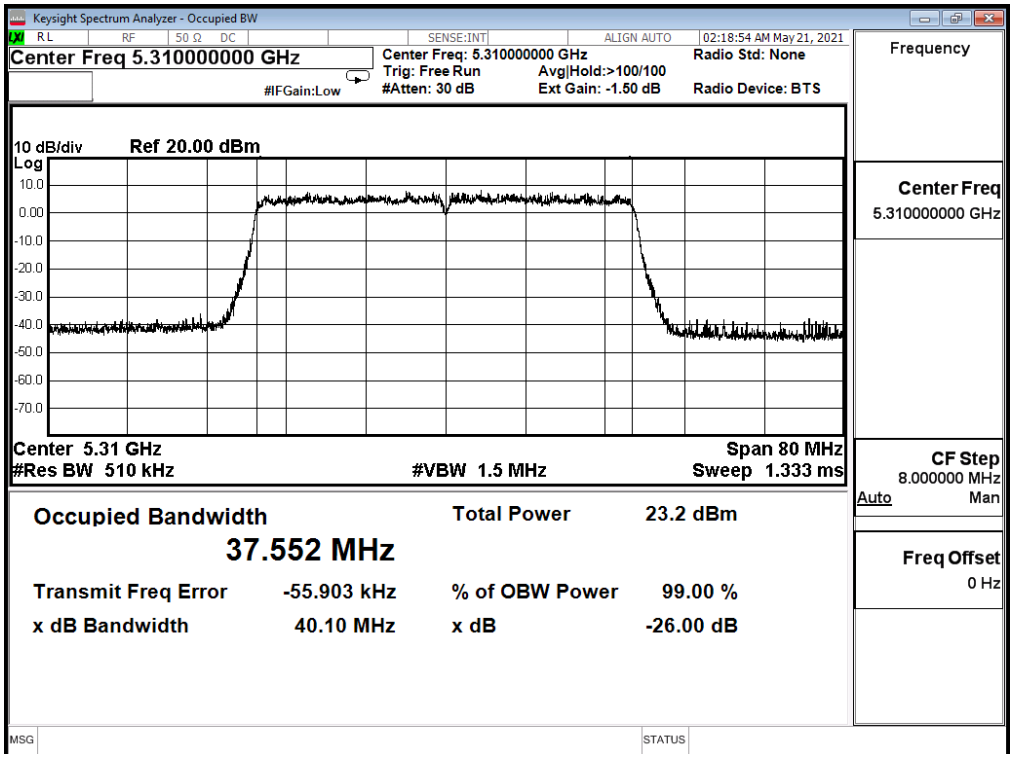
Channel 46 (5230MHz)



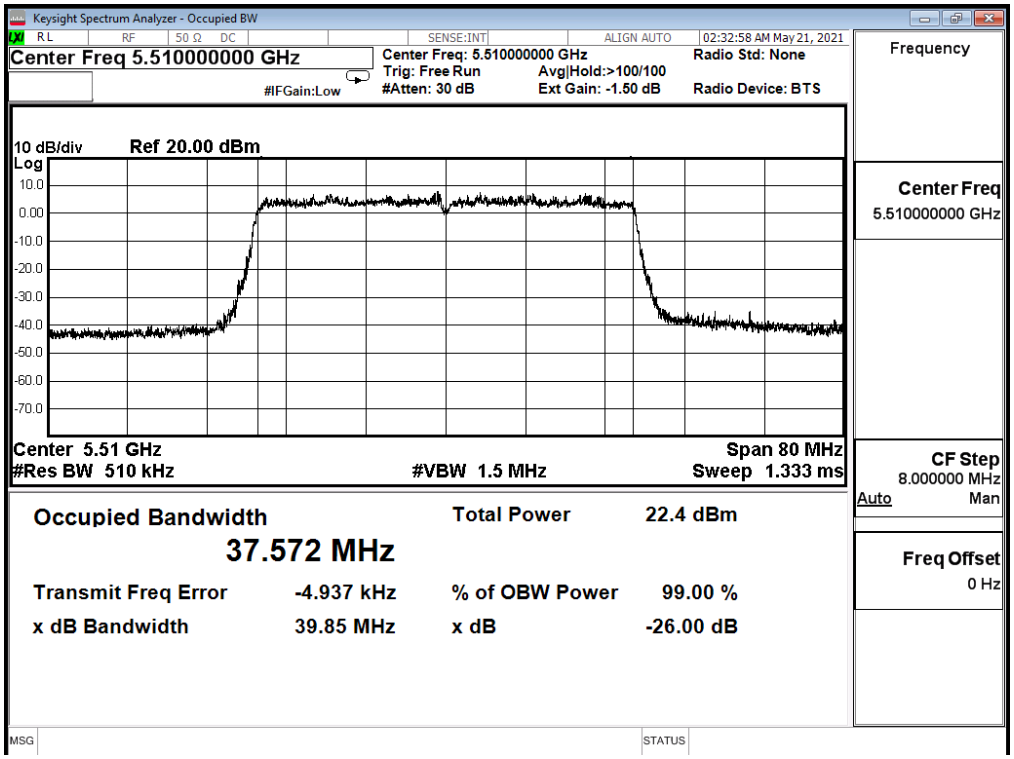
Channel 54 (5270MHz)



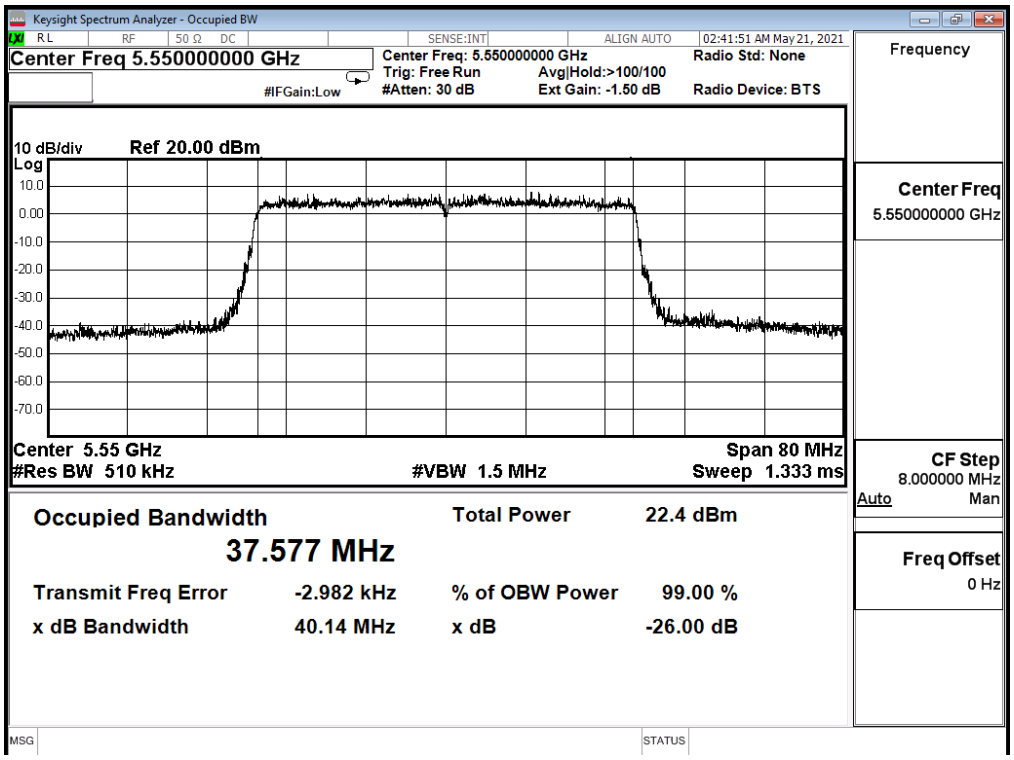
Channel 62 (5310MHz)



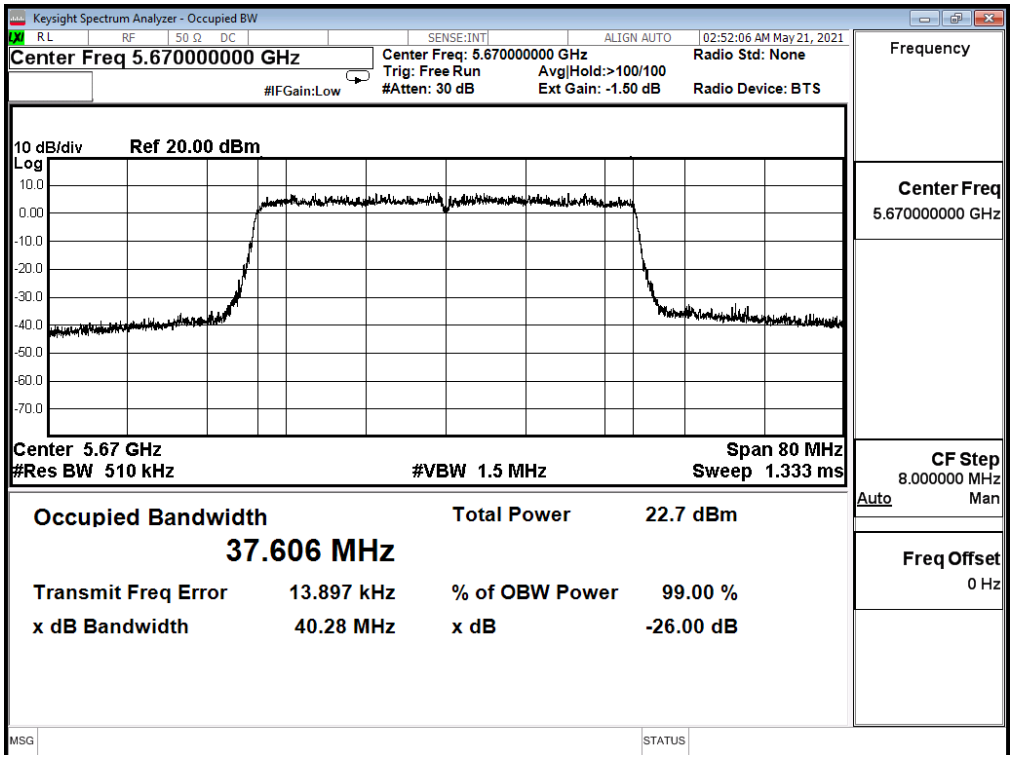
Channel 102 (5510MHz)



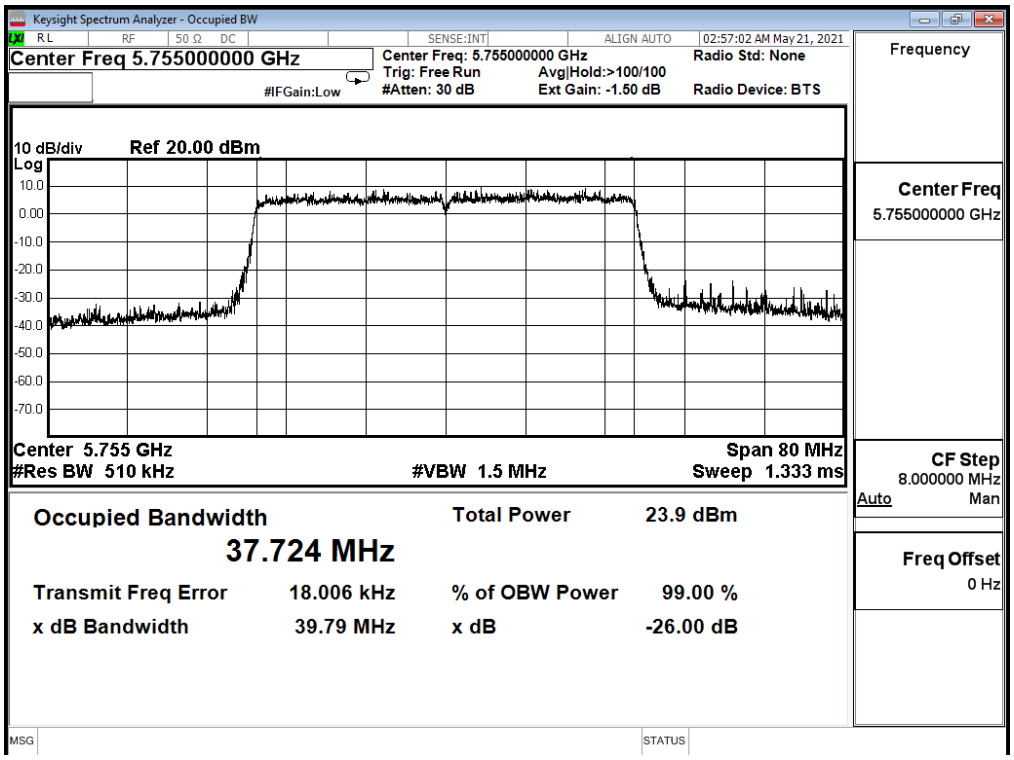
Channel 110 (5550MHz)



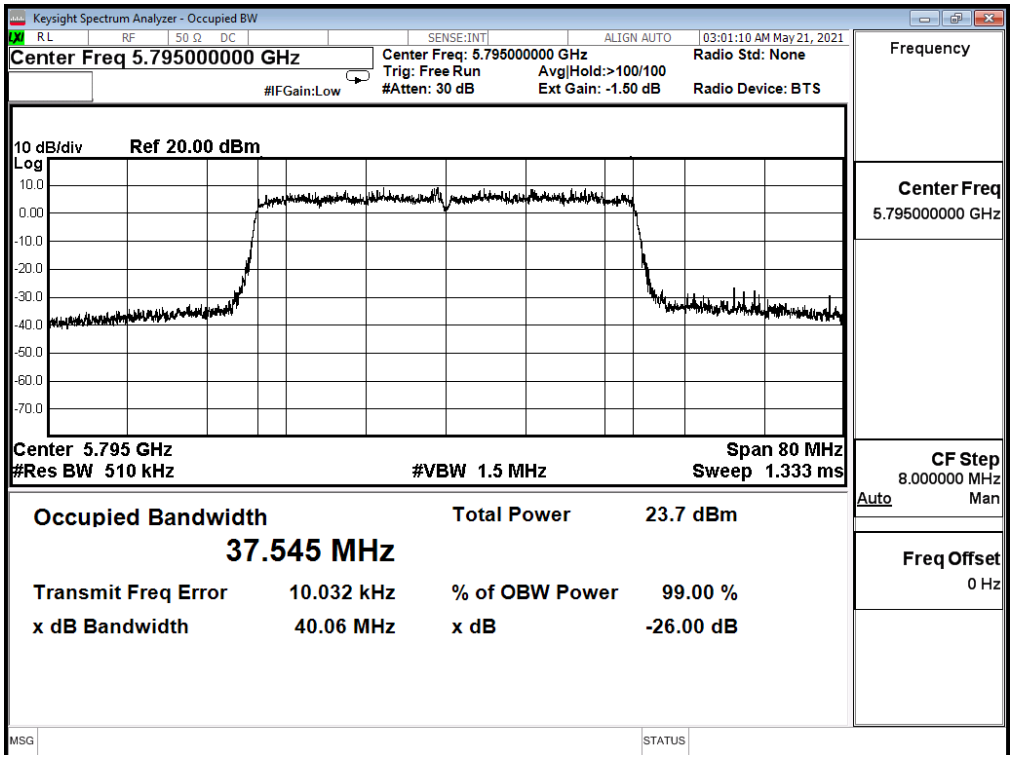
Channel 134 (5670MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)

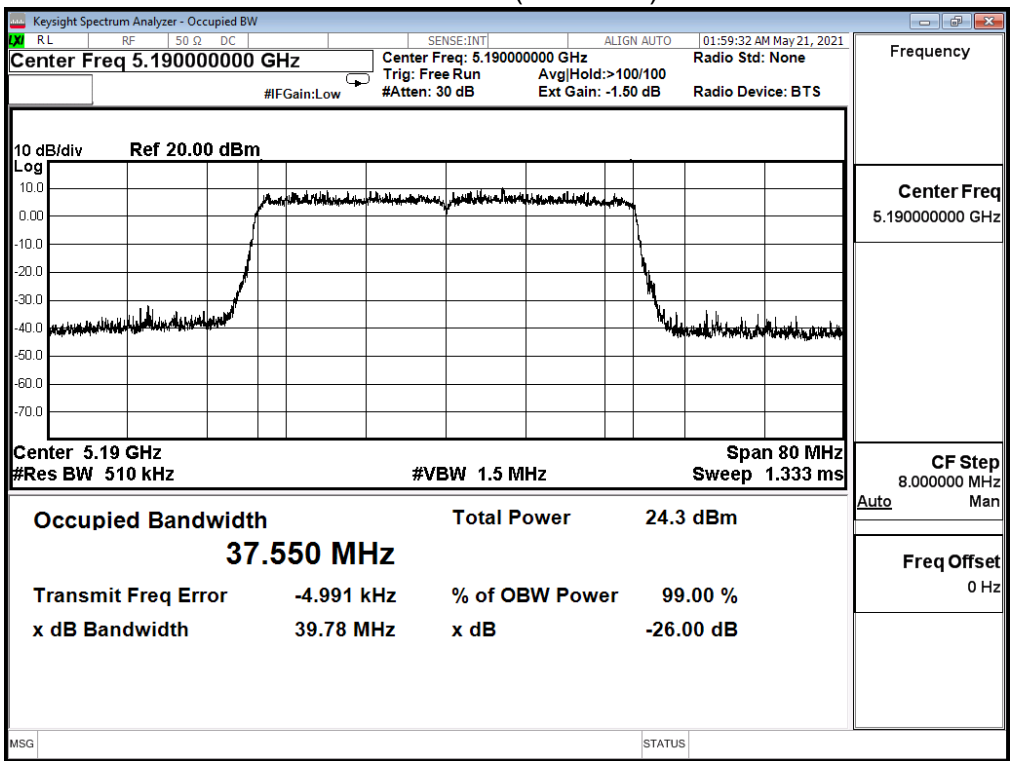


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/21	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	66.0

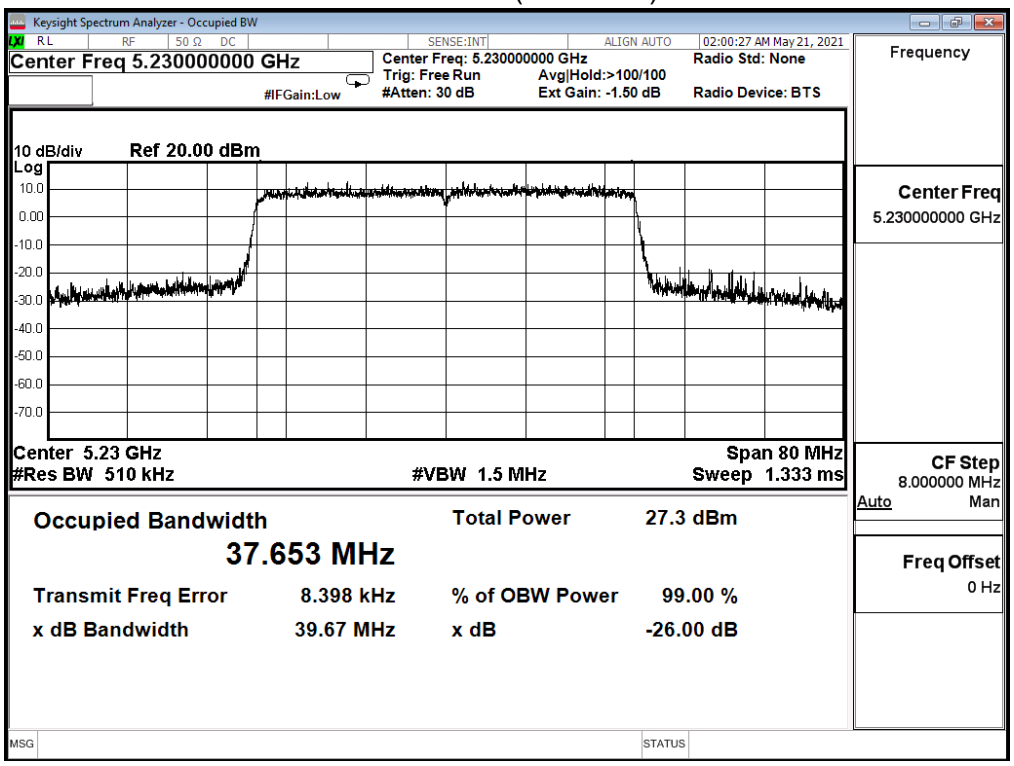
IEEE 802.11ax_40M(ANT 3)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	
38	5190	37.550	39.780	--
46	5230	37.653	39.670	--
54	5270	37.545	39.860	--
62	5310	37.576	39.740	--
102	5510	37.552	39.920	--
110	5550	37.607	39.930	--
134	5670	37.600	39.880	--
151	5755	37.648	N/A	--
159	5795	37.636		--

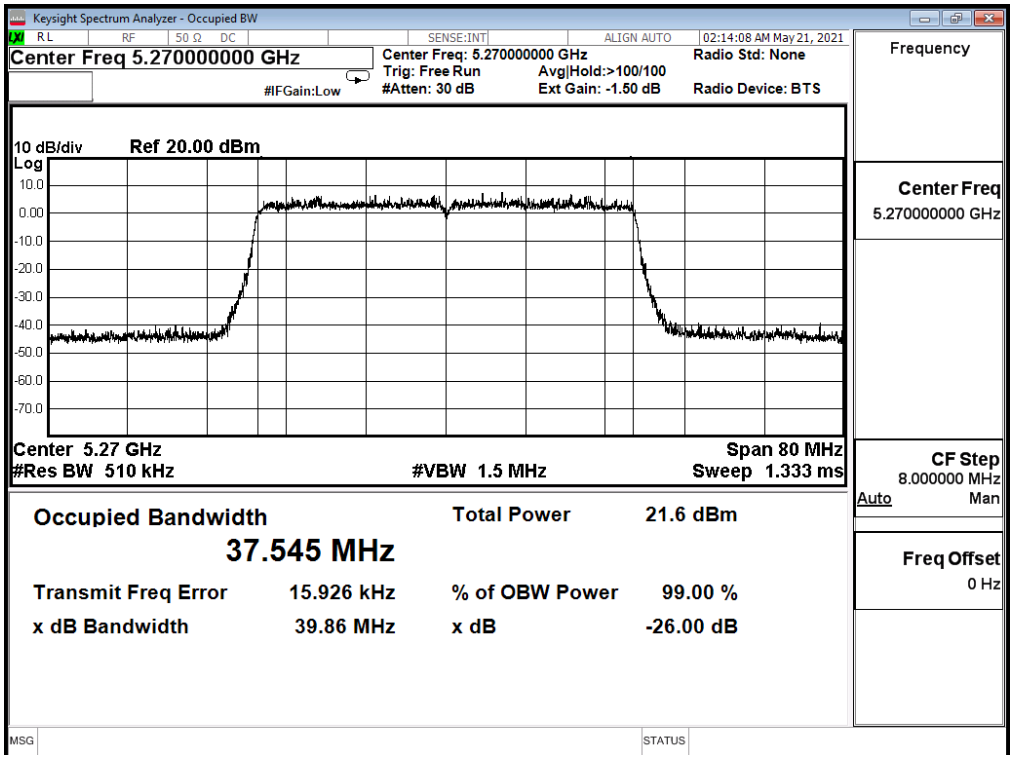
Channel 38 (5190MHz)



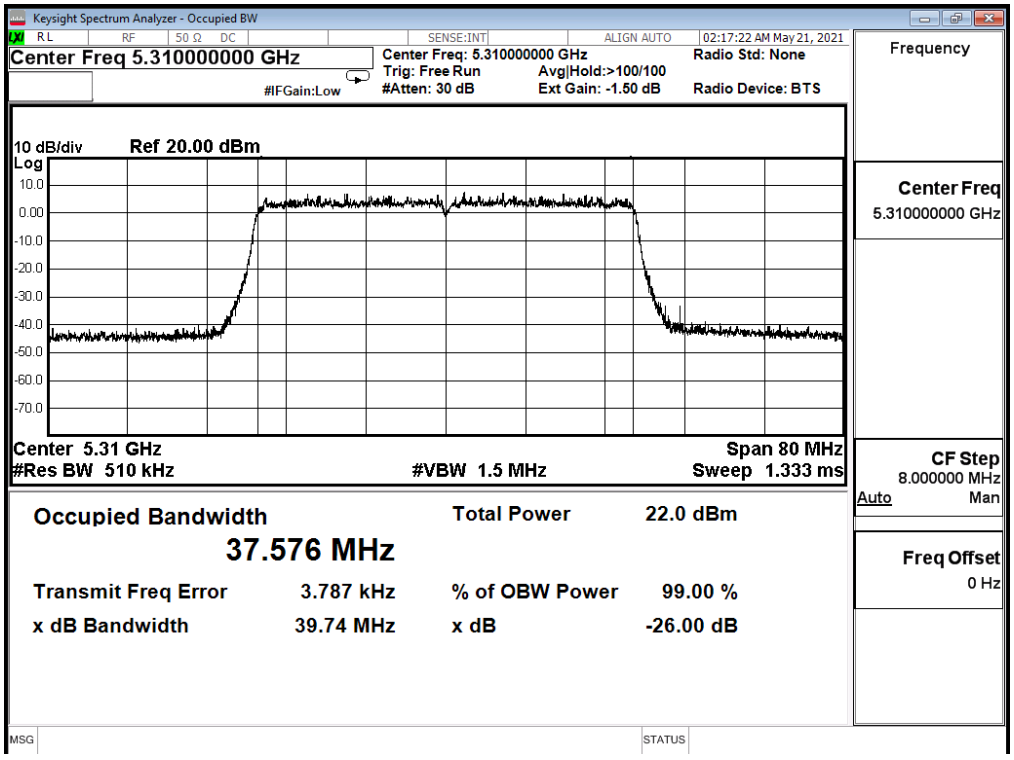
Channel 46 (5230MHz)



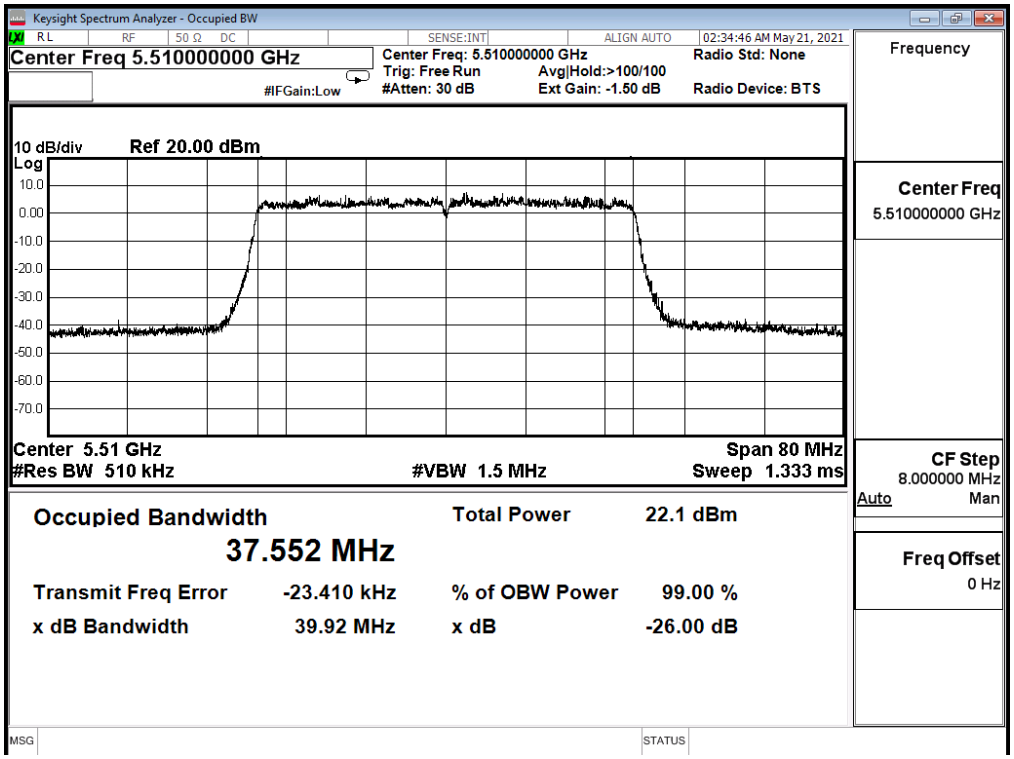
Channel 54 (5270MHz)



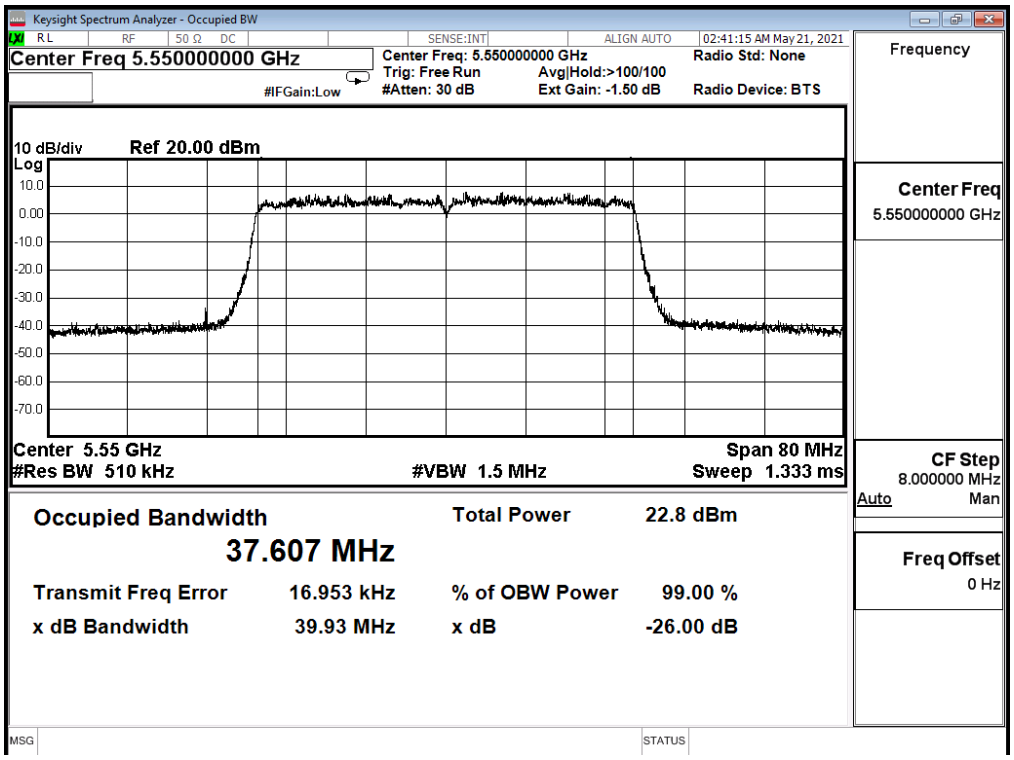
Channel 62 (5310MHz)



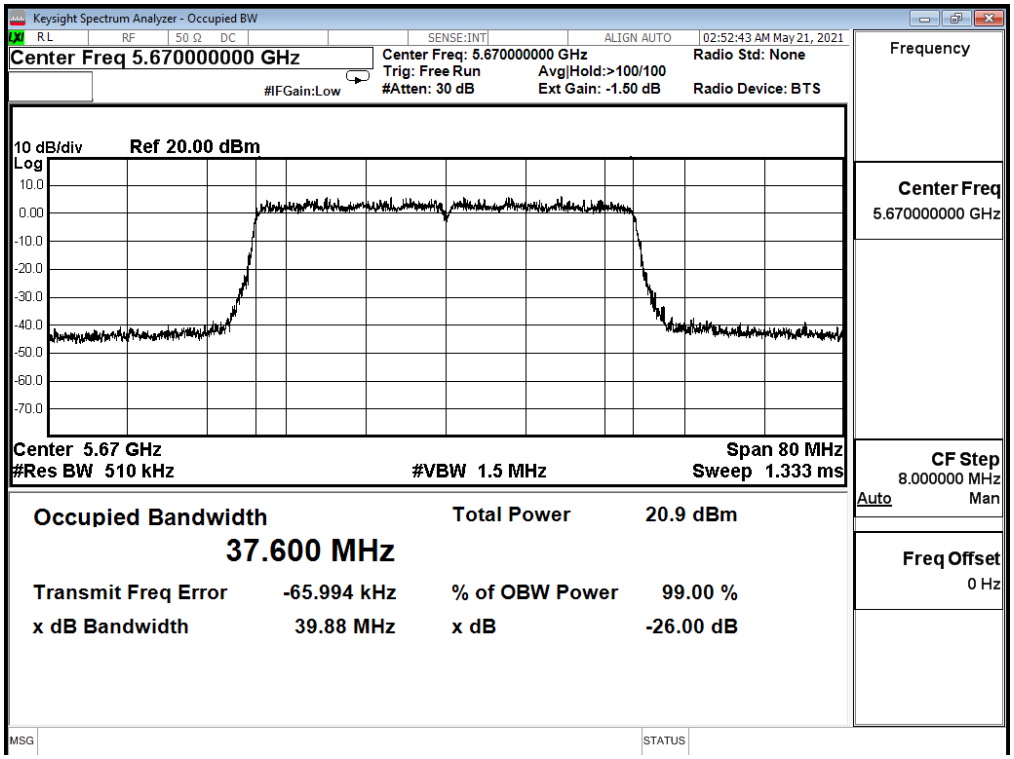
Channel 102 (5510MHz)



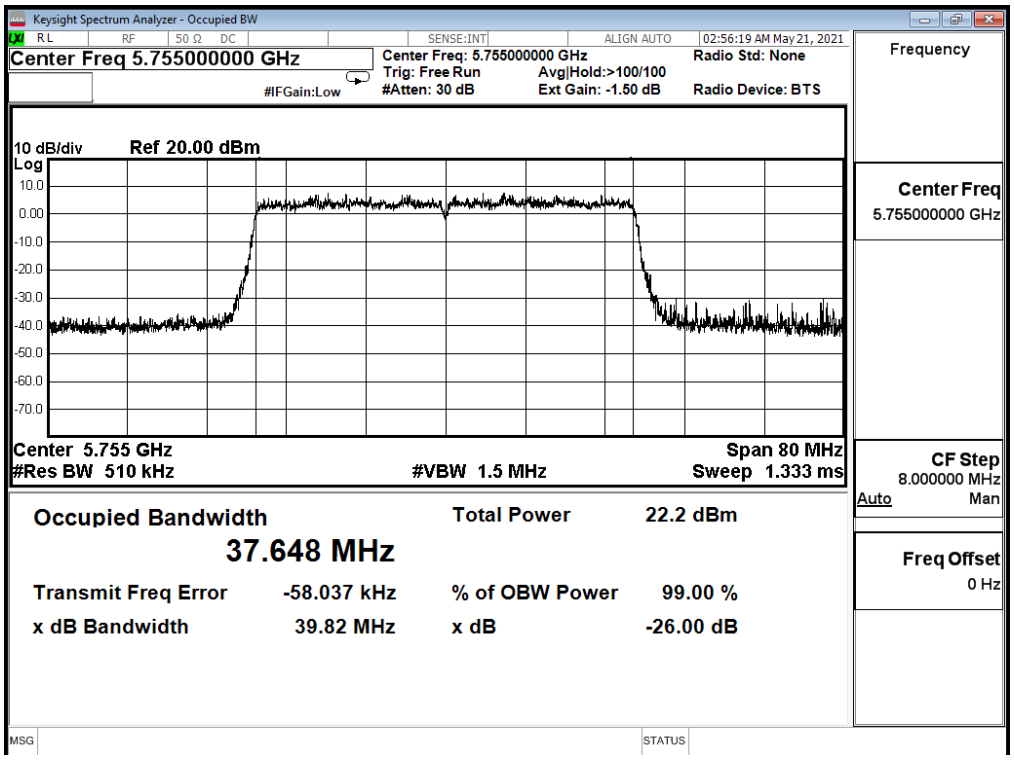
Channel 110 (5550MHz)



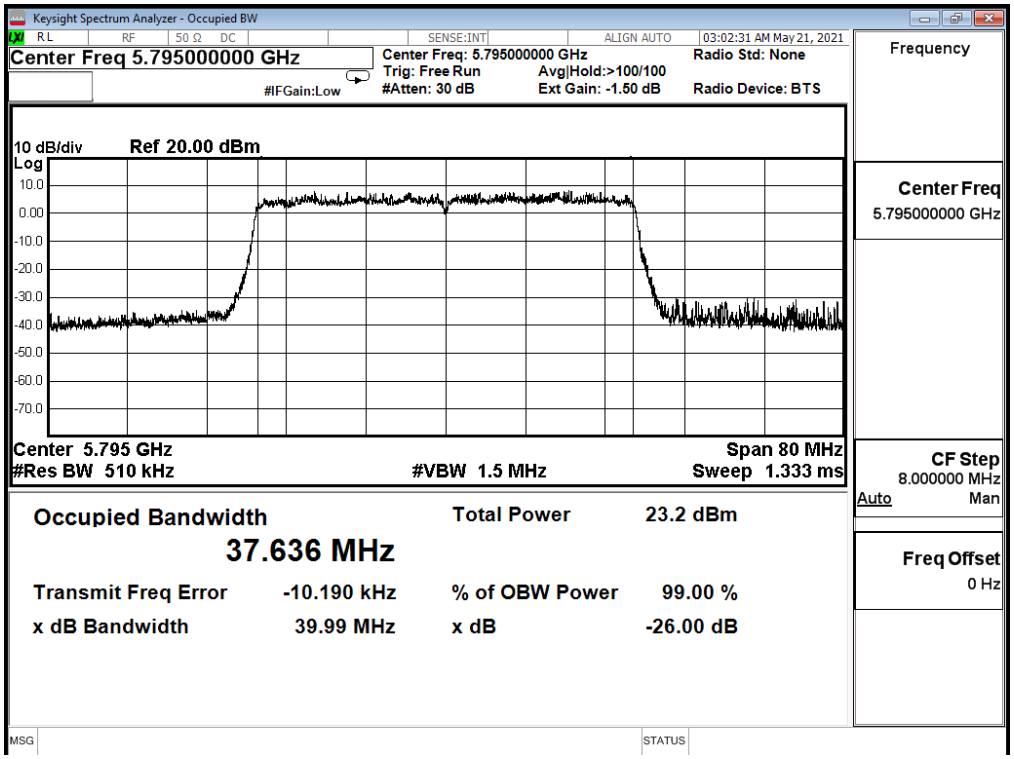
Channel 134 (5670MHz)



Channel 151 (5755MHz)



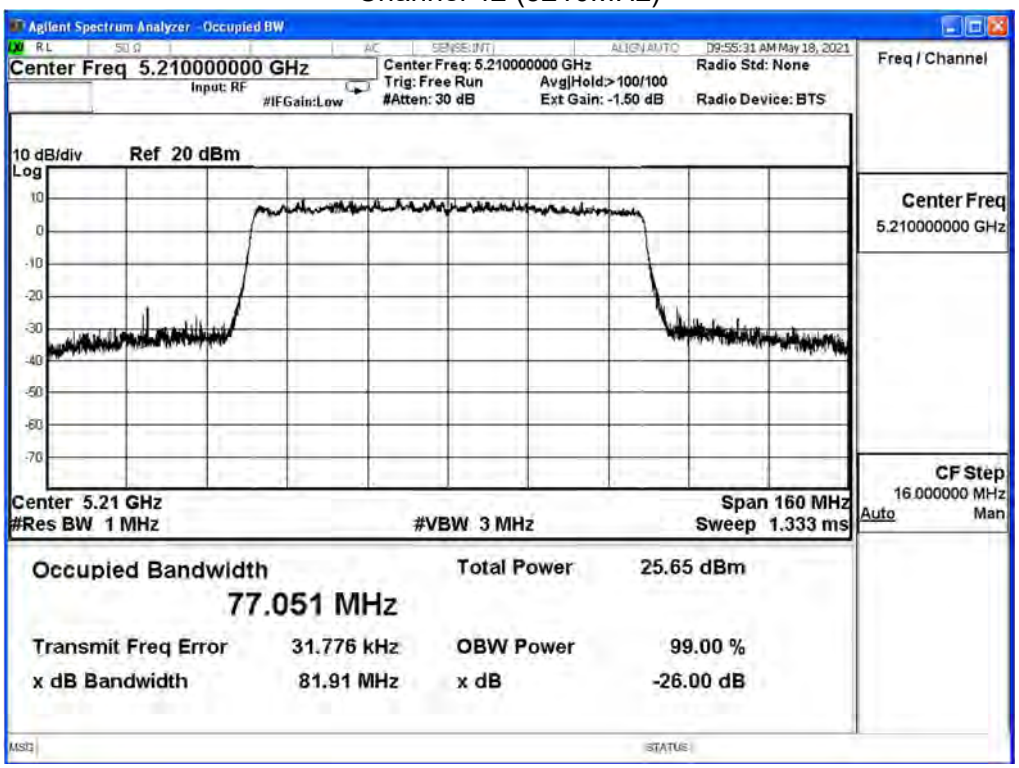
Channel 159 (5795MHz)



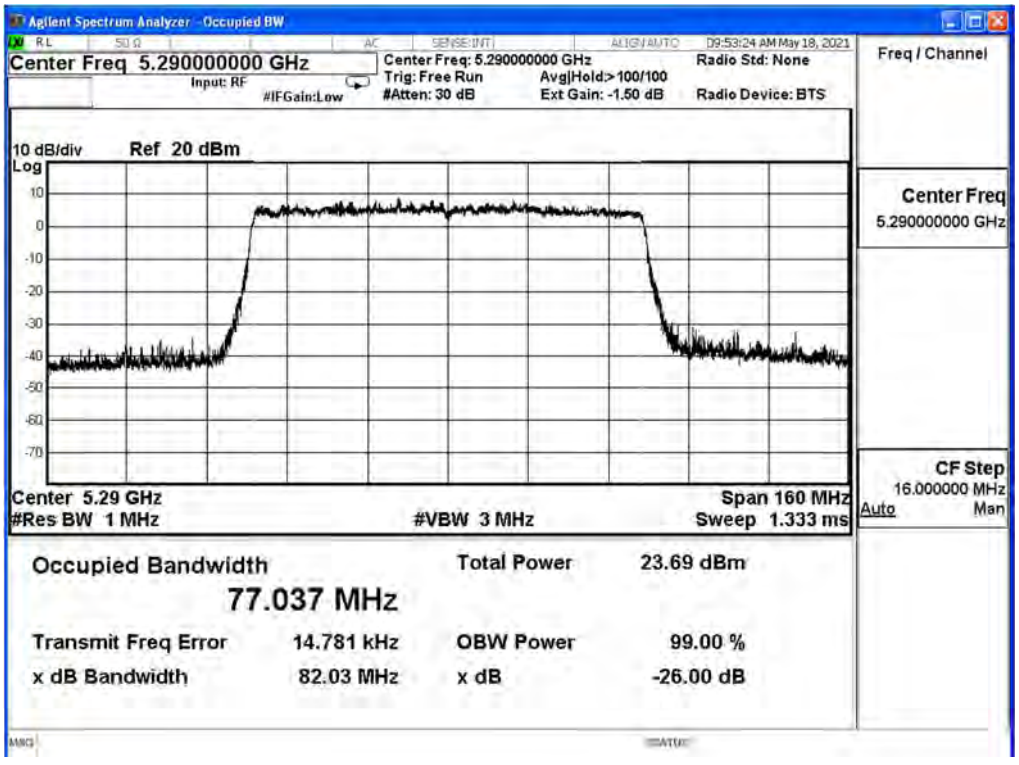
Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

IEEE 802.11ax_80M(ANT 0)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	77.051	81.910	--	Pass
58	5290	77.037	82.030	--	Pass
106	5530	77.026	81.590	--	Pass
122	5610	77.118	81.970	--	Pass
155	5775	77.131	N/A	--	Pass

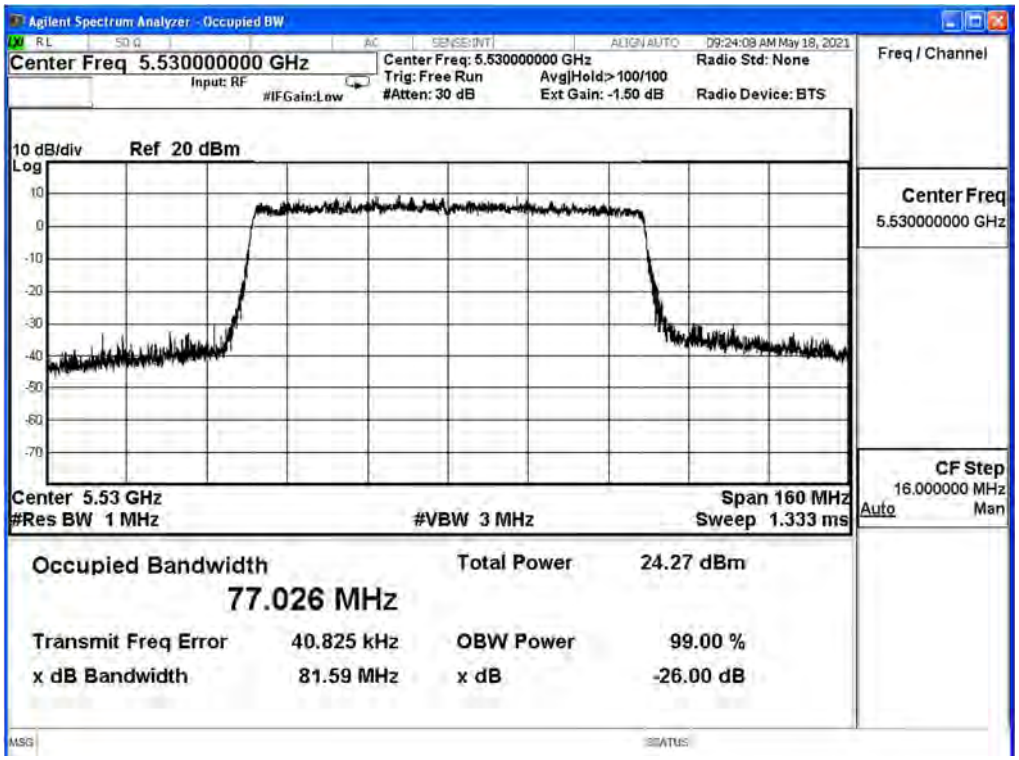
Channel 42 (5210MHz)



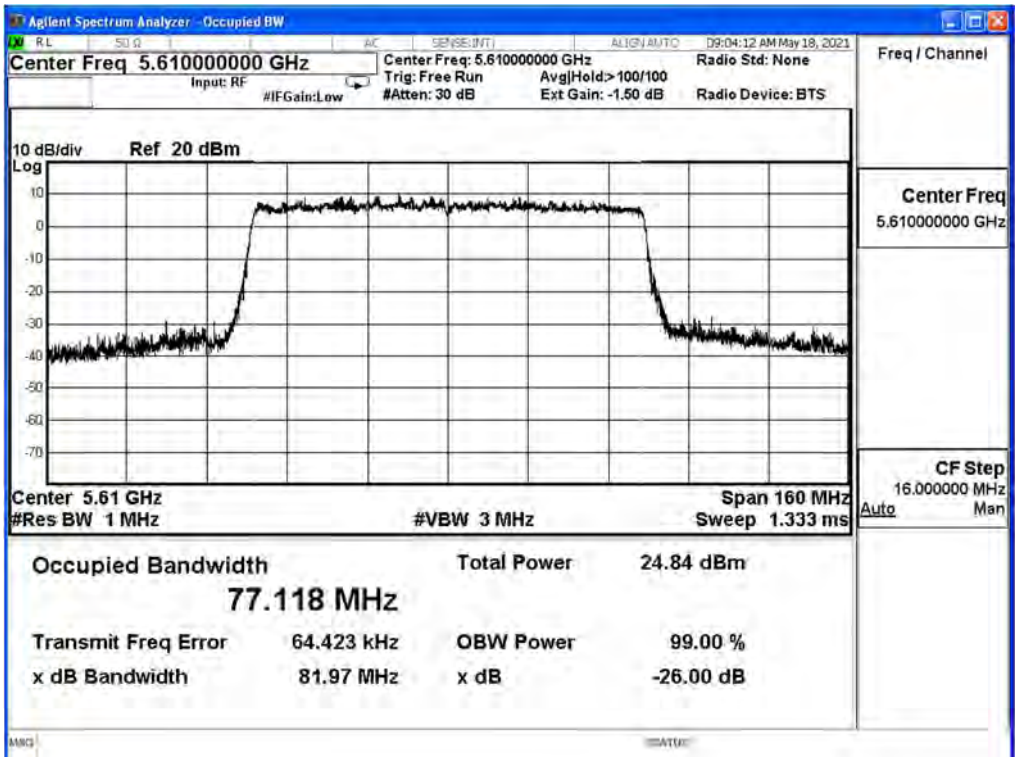
Channel 58 (5290MHz)



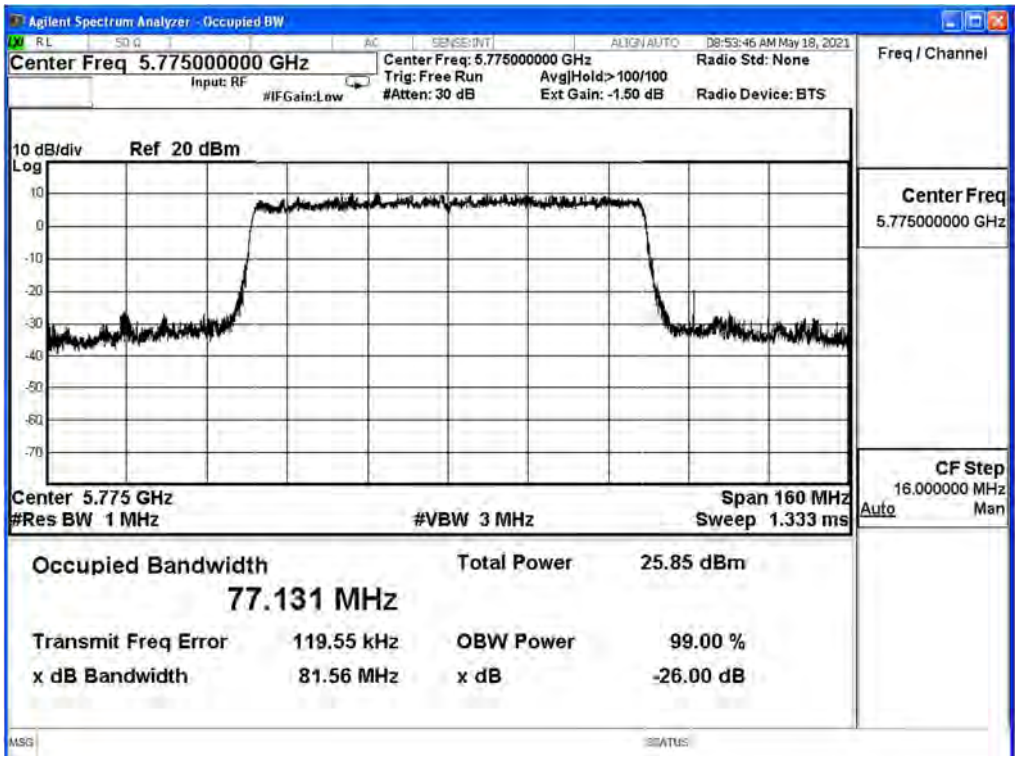
Channel 106 (5530MHz)



Channel 122 (5610MHz)



Channel 155 (5775MHz)

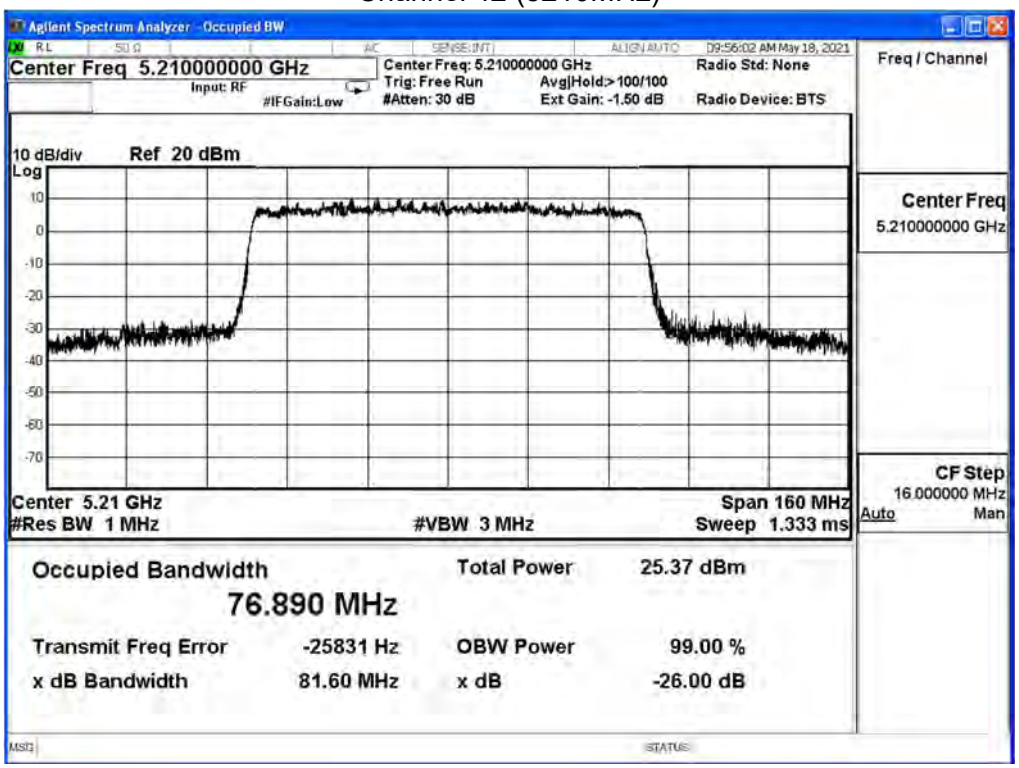


Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

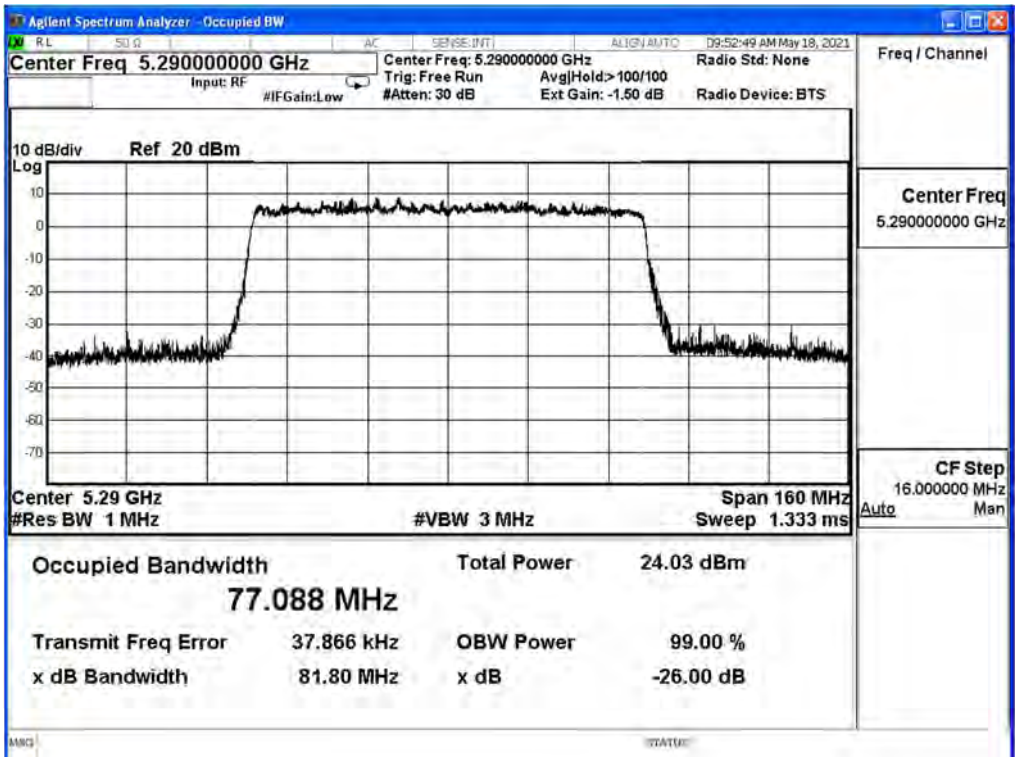
IEEE 802.11ax_80M(ANT 1)

Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	76.890	81.600	--	Pass
58	5290	77.088	81.800	--	Pass
106	5530	76.962	81.890	--	Pass
122	5610	77.055	81.860	--	Pass
155	5775	77.122	N/A	--	Pass

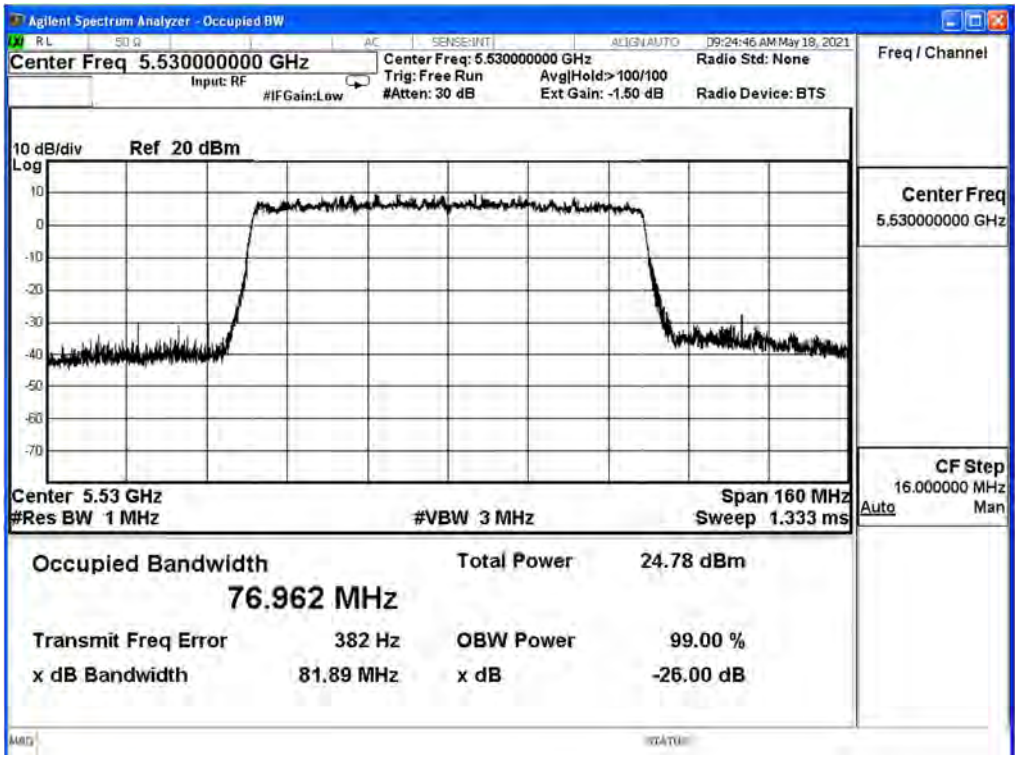
Channel 42 (5210MHz)



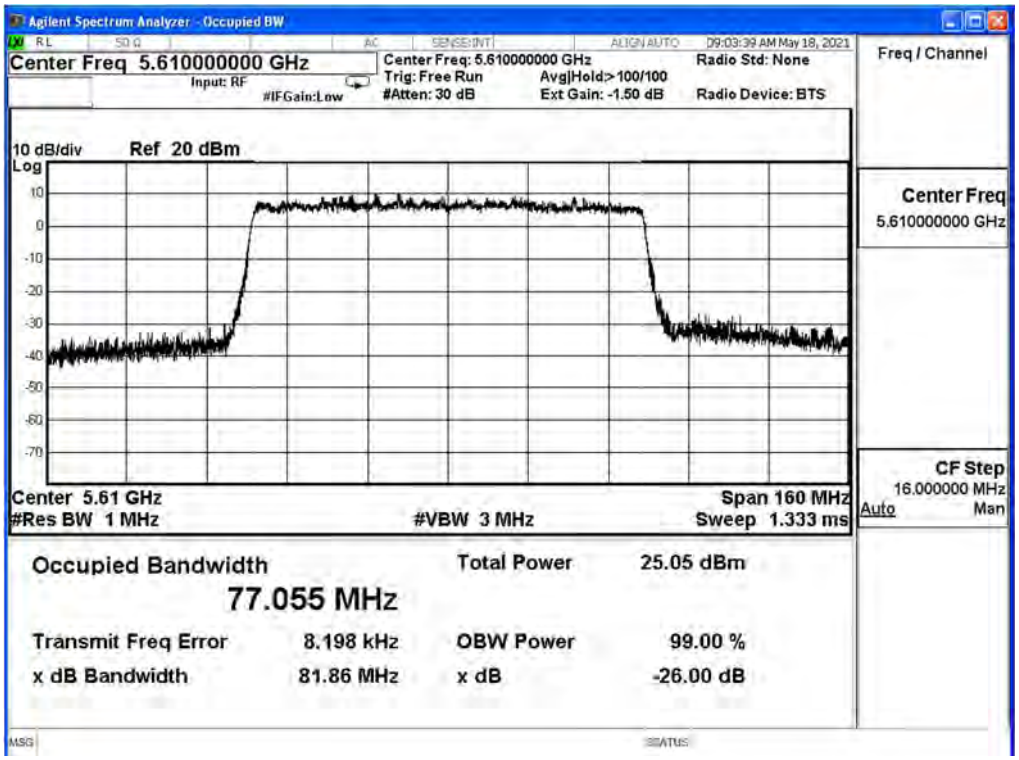
Channel 58 (5290MHz)



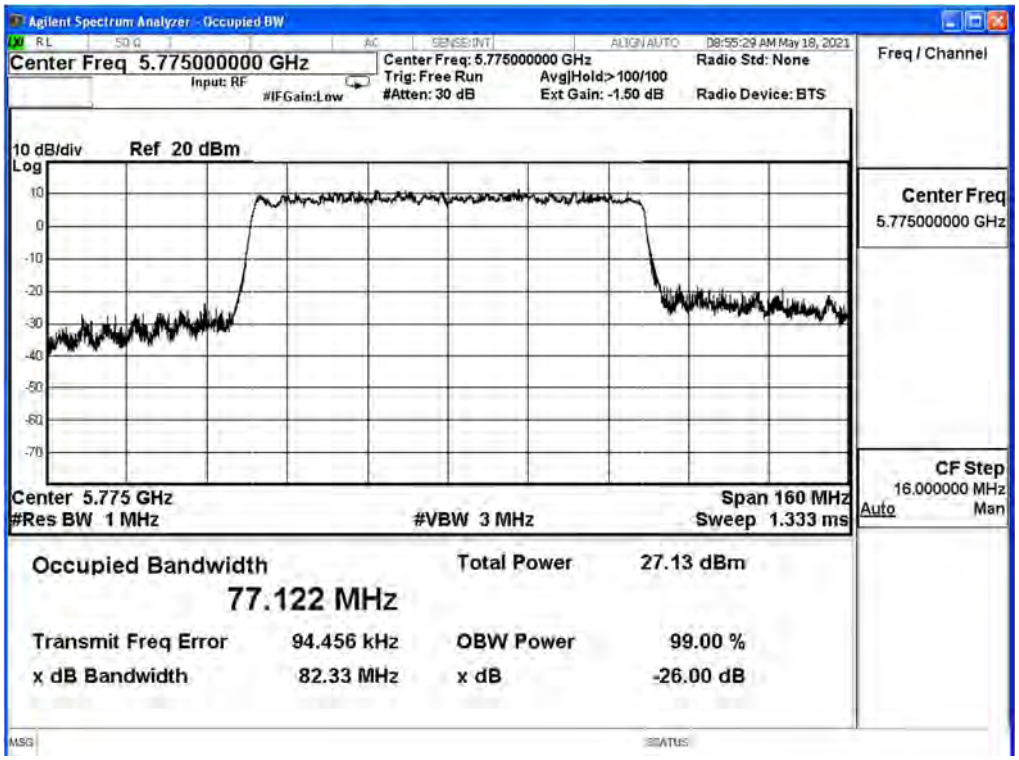
Channel 106 (5530MHz)



Channel 122 (5610MHz)



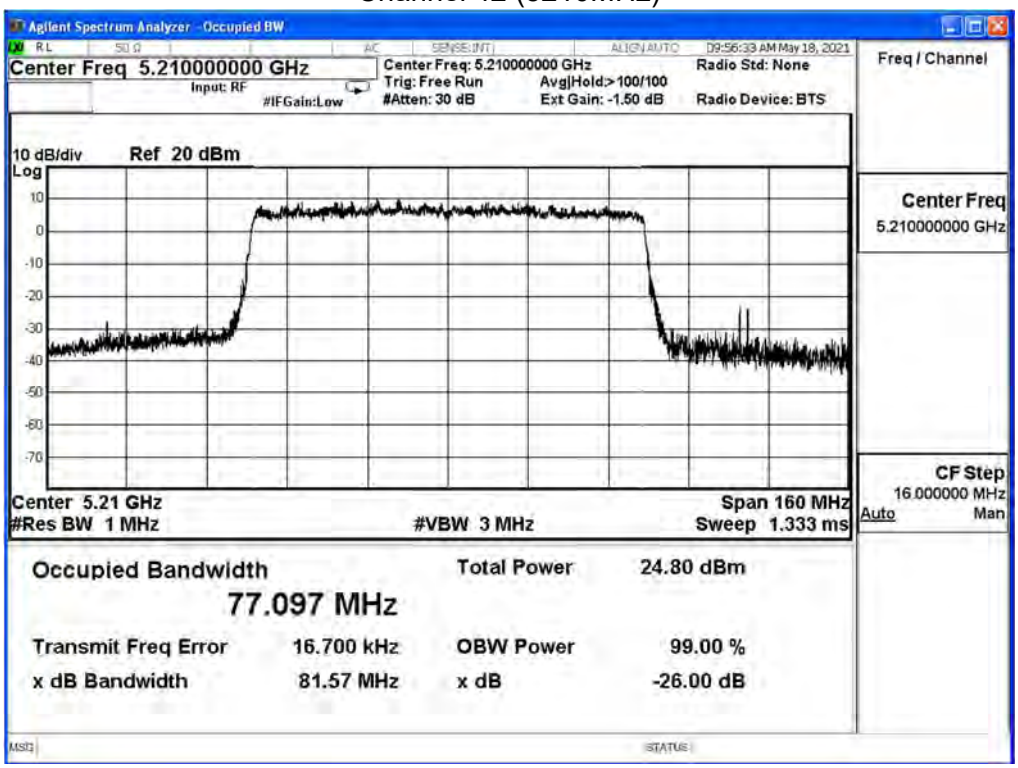
Channel 155 (5775MHz)



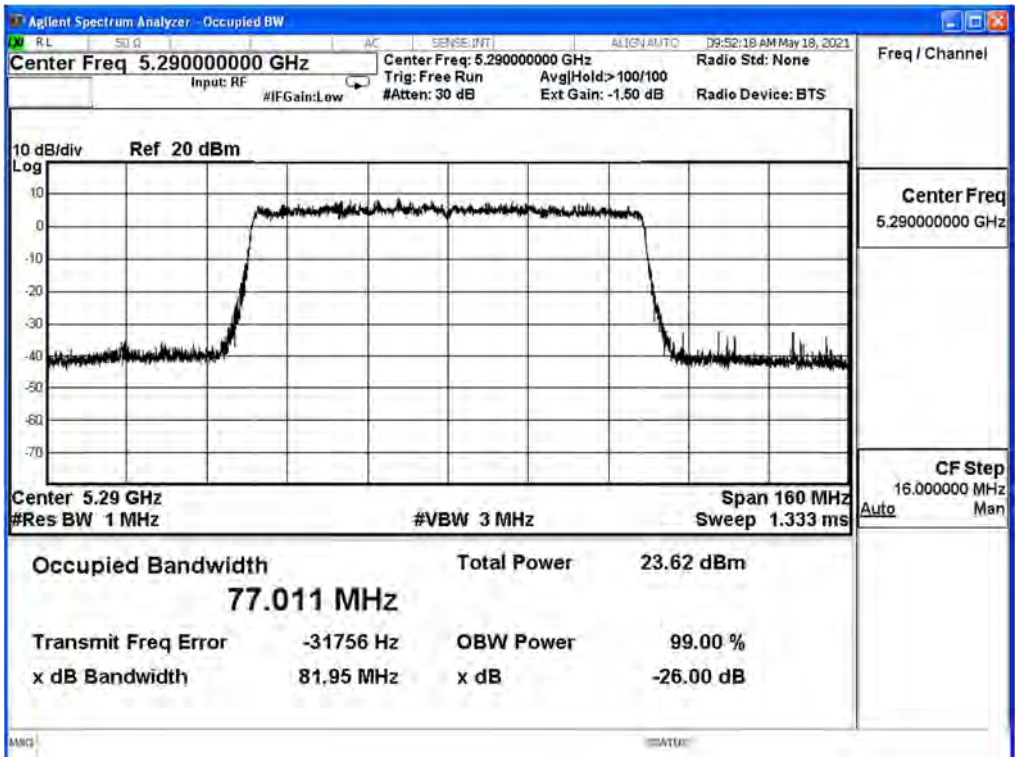
Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

IEEE 802.11ax_80M(ANT 2)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	77.097	81.570	--	Pass
58	5290	77.011	81.950	--	Pass
106	5530	77.058	81.900	--	Pass
122	5610	77.124	81.940	--	Pass
155	5775	77.063	N/A	--	Pass

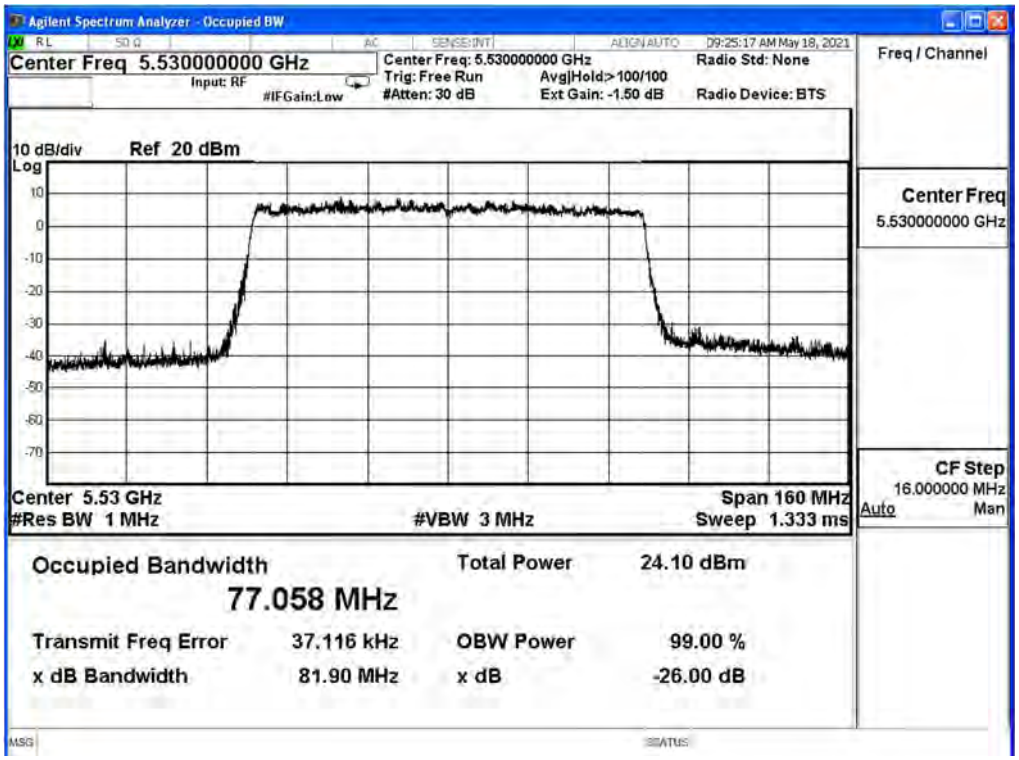
Channel 42 (5210MHz)



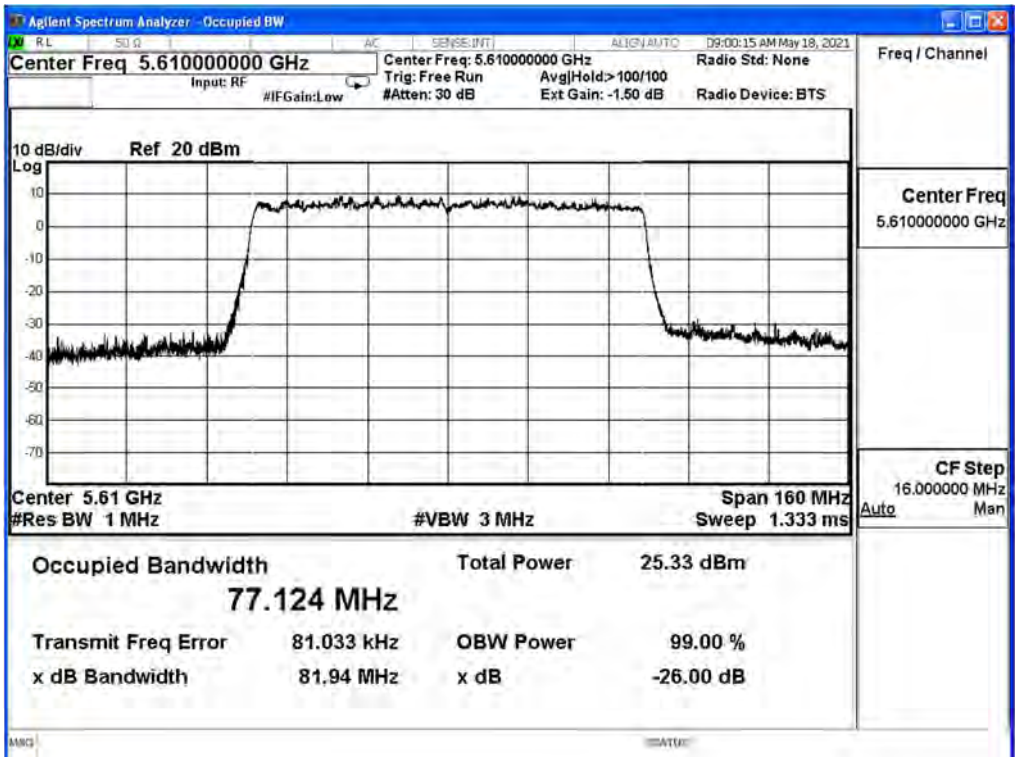
Channel 58 (5290MHz)



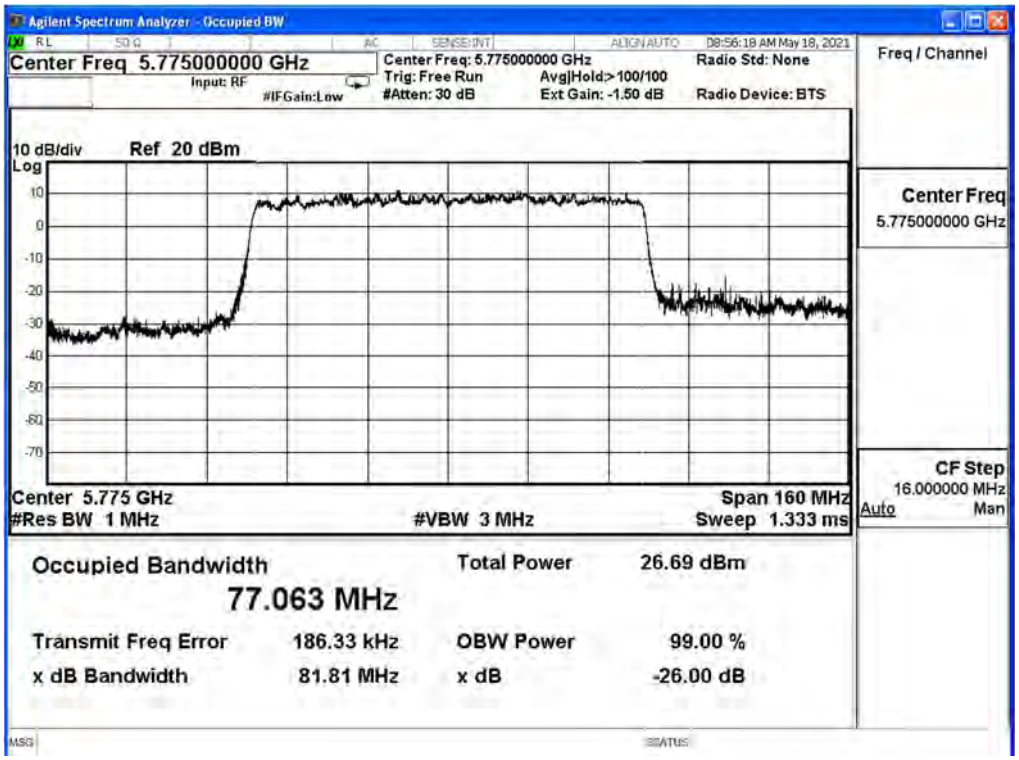
Channel 106 (5530MHz)



Channel 122 (5610MHz)



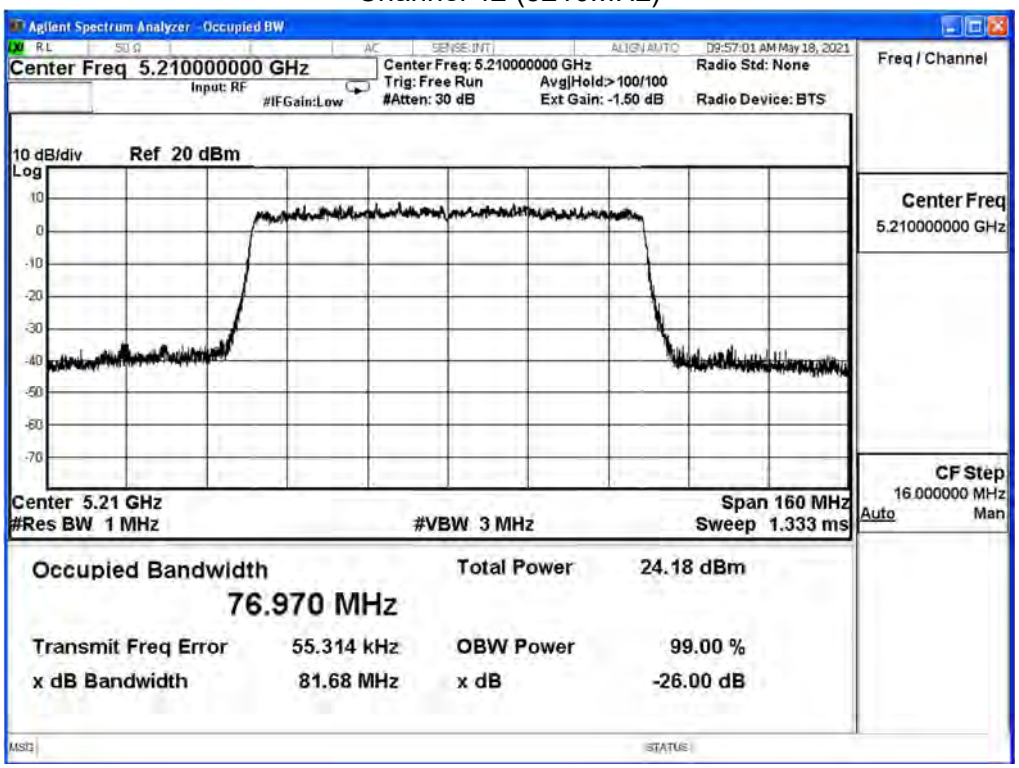
Channel 155 (5775MHz)



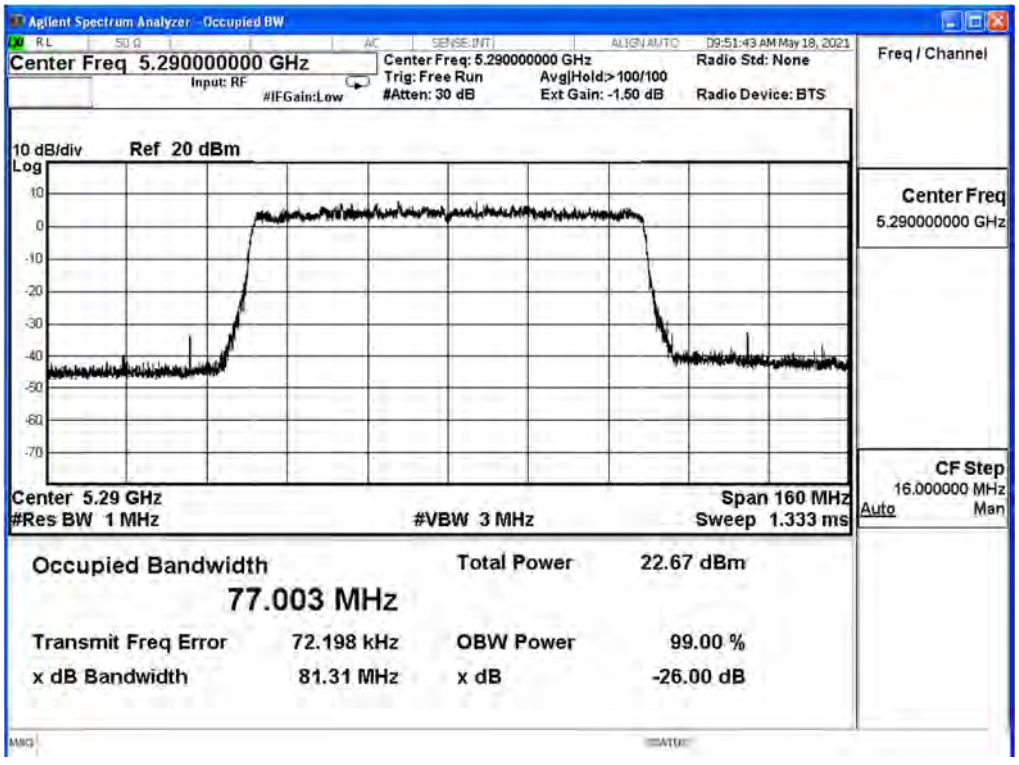
Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/05/18	Test Site	SR12-H
Temperature (°C)	24.0	Humidity (%RH)	71.0

IEEE 802.11ax_80M(ANT 3)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
42	5210	76.970	81.680	--	Pass
58	5290	77.003	81.310	--	Pass
106	5530	77.071	81.520	--	Pass
122	5610	77.050	81.590	--	Pass
155	5775	77.142	N/A	--	Pass

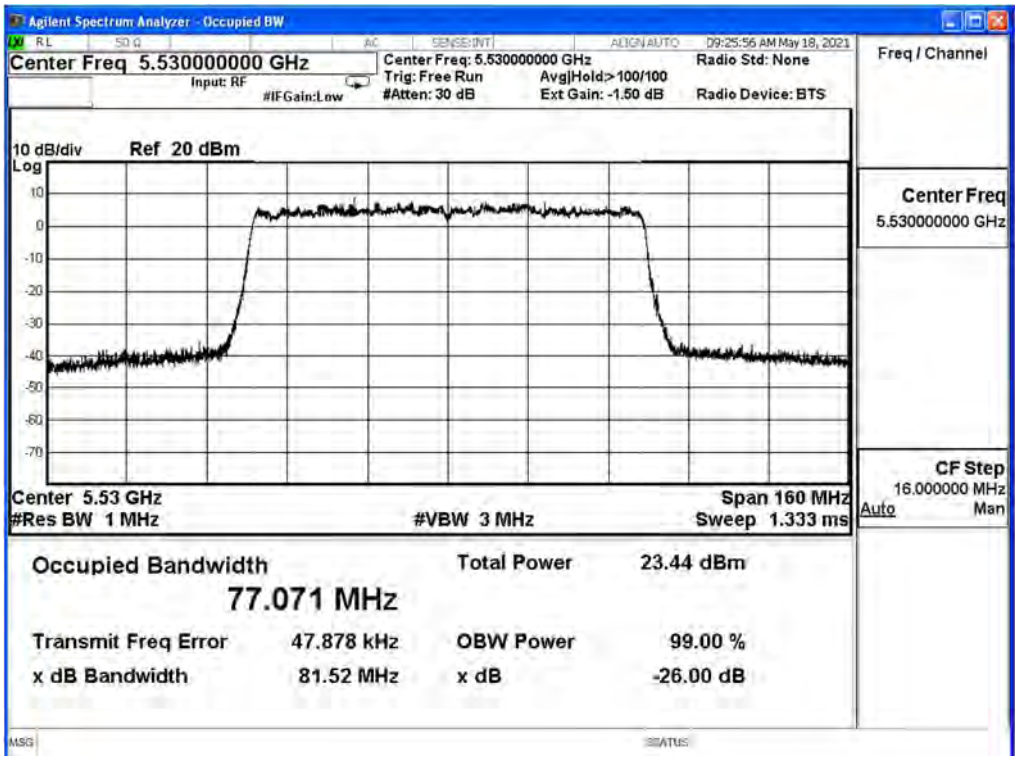
Channel 42 (5210MHz)



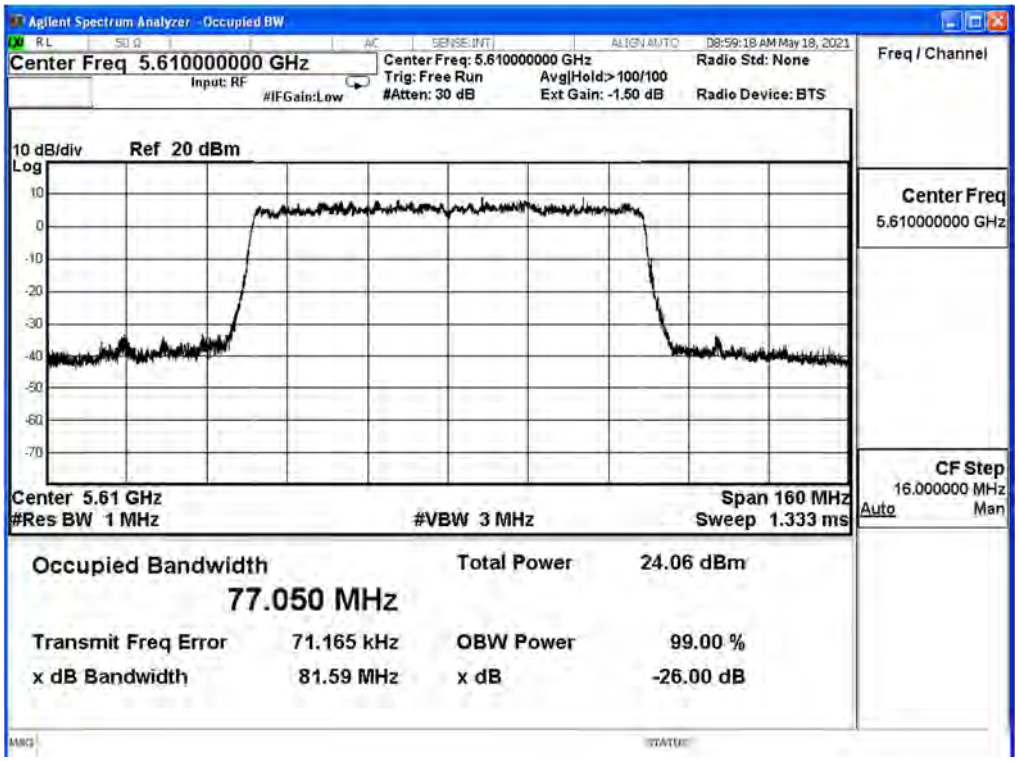
Channel 58 (5290MHz)



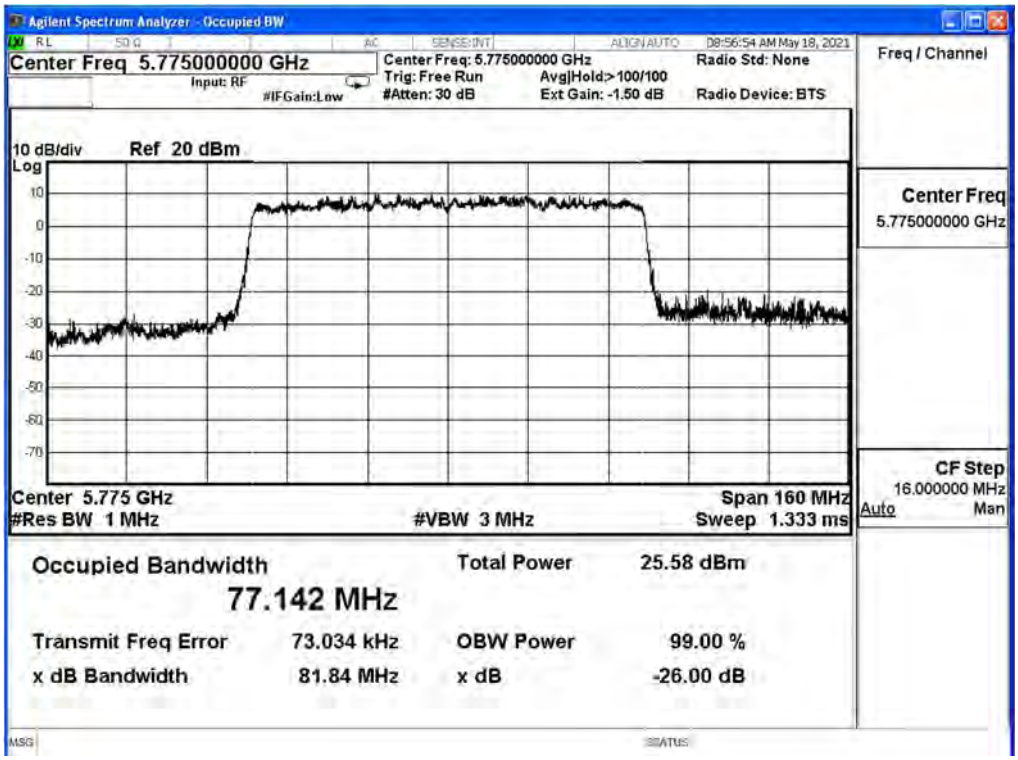
Channel 106 (5530MHz)



Channel 122 (5610MHz)



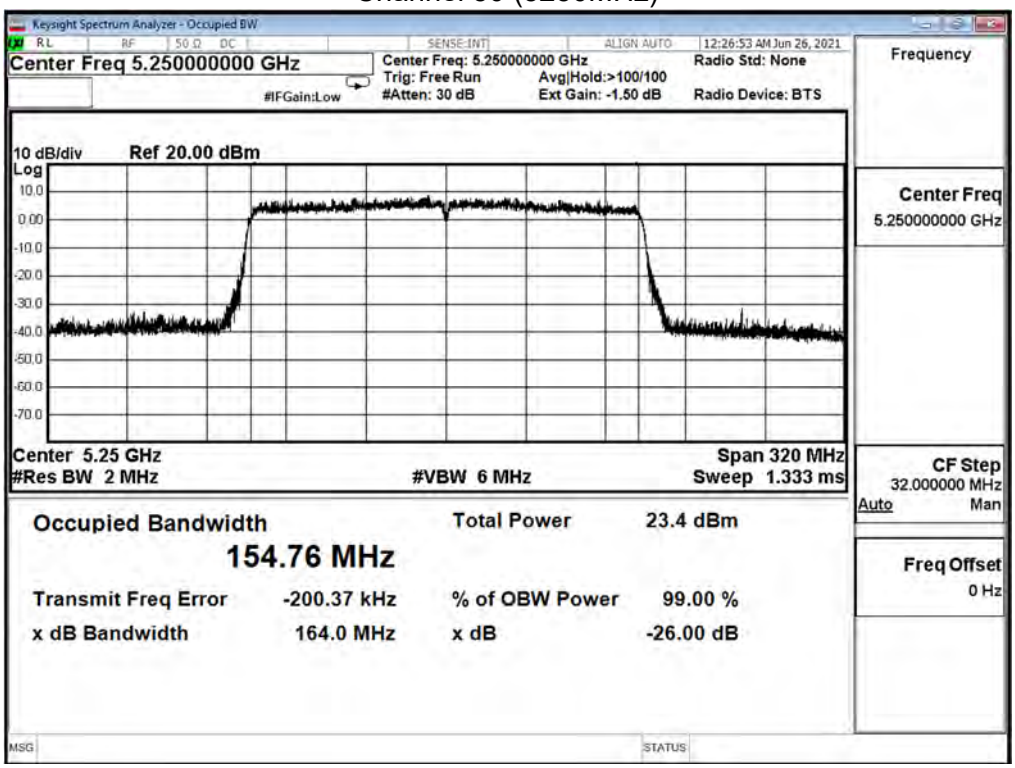
Channel 155 (5775MHz)



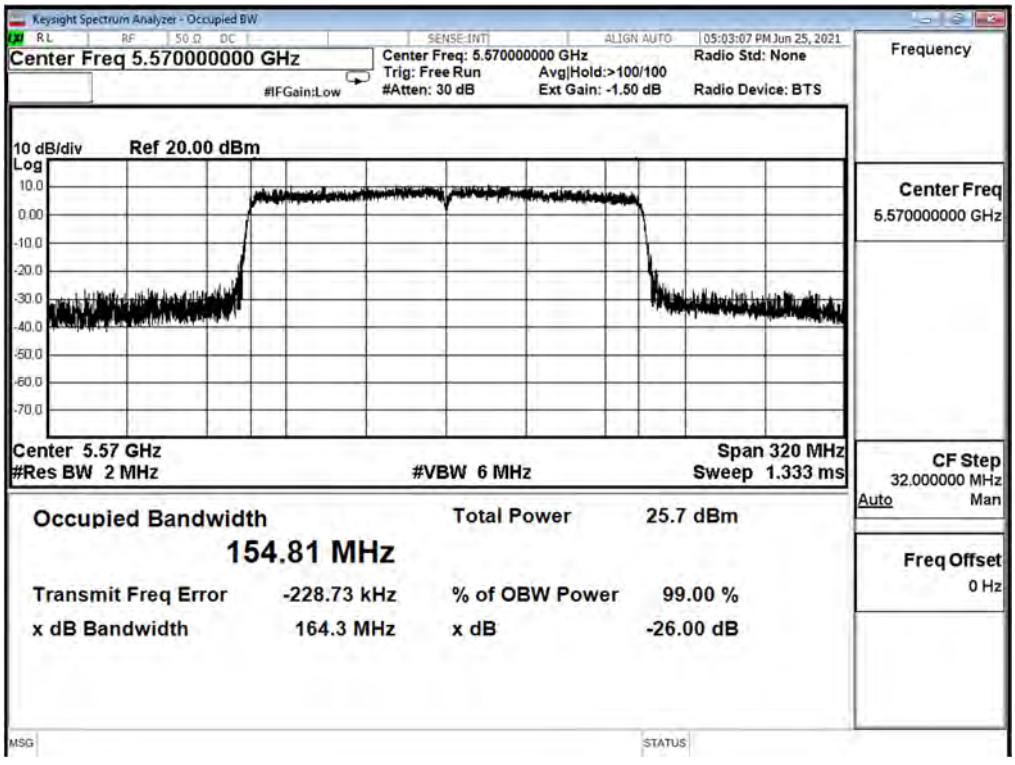
Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/06/25~2021/06/26	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	66

IEEE 802.11ax_160M(ANT 0)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
50	5250 (Band 1)	77.380	82.000	--	Pass
	5250 (Band 2)	77.380	82.000	--	Pass
114	5570	154.810	164.300	--	Pass

Channel 50 (5250MHz)



Channel 114 (5570MHz)



Product	Mesh Wi-Fi Router		
Test Item	26dB & 99% Bandwidth		
Test Mode	Mode 1: Transmit_Non-BF_EBM522U		
Date of Test	2021/06/25~2021/06/26	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	66

IEEE 802.11ax_160M(ANT 1)					
Channel No.	Frequency (MHz)	Measure Value		Limit (MHz)	Result
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
50	5250 (Band 1)	77.470	81.800	--	Pass
	5250 (Band 2)	77.470	81.800	--	Pass
114	5570	155.180	163.700	--	Pass