

FCC Test Report

Report No.: AGC12776221101FE06

FCC ID : 2A82D-AIO23I

APPLICATION PURPOSE : Original Equipment

PRODUCT DESIGNATION : 23.8inch All In One

BRAND NAME : THOMSON

MODEL NAME : WWAIO23-I38BK256, WWAIO23-I58BK256,
WWAIO23-I38SL256, WWAIO23-I38GR256,
WWAIO23-I38T256, WWAIO23-I58SL256,
WWAIO23-I58GR256, WWAIO23-I58T256,
WWAIO23-I38BK512, WWAIO23-I58BK512

APPLICANT : Metavisio SA

DATE OF ISSUE : Jan. 06, 2022

STANDARD(S) : FCC Part 15.407

TEST PROCEDURE(S) : KDB 789033 D02 v02r01

REPORT VERSION : V1.0



Attestation of Global Compliance (Shenzhen) Co., Ltd

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Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>



REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jan. 06, 2022	Valid	Initial Release

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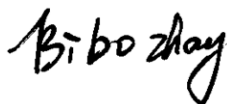
1. VERIFICATION OF CONFORMITY

Applicant	Metavisio SA
Address	80/84 ROUTE DE LA LIBERATION 77340 PONTAULT COMBAULT France
Manufacturer	Shenzhen Weihejia Electronic Technology Co., LTD
Address	Block 102, Building 9 , Xihu Industrial park, Xikeng community, Yuanshan street, Longgang district, Shenzhen
Factory	Shenzhen Weihejia Electronic Technology Co., LTD
Address	Block 102, Building 9 , Xihu Industrial park, Xikeng community, Yuanshan street, Longgang district, Shenzhen
Product Designation	23.8inch All In One
Brand Name	THOMSON
Test Model	WWAIO23-I38BK256
Series Model	WWAIO23-I58BK256, WWAIO23-I38SL256, WWAIO23-I38GR256, WWAIO23-I38T256, WWAIO23-I58SL256, WWAIO23-I58GR256, WWAIO23-I58T256, WWAIO23-I38BK512, WWAIO23-I58BK512
Declaration of Difference	Please see the page 7.
Date of receipt of test item	Nov. 18, 2022
Date of Test	Nov. 18, 2022 to Jan. 06, 2022
Deviation	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-BGN/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Prepared By



Bibo Zhang
(Project Engineer) Jan. 06, 2022

Reviewed By



Calvin Liu
(Reviewer) Jan. 06, 2022

Approved By



Max Zhang
(Authorized Officer) Jan. 06, 2022

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2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as “23.8inch All In One”. It is designed by way of utilizing the OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Equipment Type	<input type="checkbox"/> Outdoor access points <input type="checkbox"/> Indoor access points <input type="checkbox"/> Fixed P2P access points <input checked="" type="checkbox"/> Client devices
Operation Frequency	<input checked="" type="checkbox"/> U-NII 1:5150MHz~5250MHz <input checked="" type="checkbox"/> U-NII 2A: 5250MHz~5350MHz <input checked="" type="checkbox"/> U-NII 2C:5470MHz~5725MHz <input checked="" type="checkbox"/> U-NII 3: 5725MHz~5850MHz
DFS Design Type	<input type="checkbox"/> Master <input type="checkbox"/> Slave with radar detection <input checked="" type="checkbox"/> Slave without radar detection
TPC Function	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Test Frequency Range:	For 802.11a/n/ac-HT20-VHT20: 5180~5240MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz For 802.11n/ac-HT40: 5190~5230MHz, 5270~5310MHz, 5510~5670MHz, 5755~5795MHz For 802.11ac-HT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5775MHz
Output Power	IEEE 802.11a:12.33dBm; IEEE 802.11n-HT20:11.61dBm; IEEE 802.11n-HT40:11.35dBm; IEEE 802.11ac-VHT20:10.35dBm; IEEE 802.11ac-VHT40:10.84dBm; IEEE 802.11ac-VHT80:9.78dBm
Modulation	802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM, 128QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM)
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ac: up to 400Mbps
Number of channels	7 channels of U-NII-1 Band 7 channels of U-NII-2A Band 21 channels of U-NII-2C Band 8 channels of U-NII-3 Band
Hardware Version	IP3_CA215_MB_V12_20210511A
Software Version	win11home 22H2
Antenna Designation	FPC antenna (Comply with requirements of the FCC part 15.203)
Antenna Gain	4.37dBi
Power Supply	DC 19V

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Different Description:

Model	Storage capacity
WWAIO23-I58BK256	256GB
WWAIO23-I38BK256	256GB
WWAIO23-I38SL256	256GB
WWAIO23-I38GR256	256GB
WWAIO23-I38T256	256GB
WWAIO23-I58SL256	256GB
WWAIO23-I58GR256	256GB
WWAIO23-I58T256	256GB
WWAIO23-I38BK512	512GB
WWAIO23-I58BK512	512GB

Note: All the same except for the model name and storage capacity

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2.2. TABLE OF CARRIER FREQUENCIES

For 5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	--	--

For 5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
58	5290 MHz	--	--

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For 5500~5720MHz:

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channel is provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz
138	5690 MHz	--	--

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For 5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz	--	--

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
155	5775 MHz	--	--

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2.3. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2A82D-AIO23I** filing to comply with the FCC Part 15 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013).

Radiated testing was performed at an antenna to EUT distance 3 meters.

Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.407 rules KDB 789033 D02

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 3.1 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 4.0 \text{ dB}$
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.8 \text{ dB}$
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of spurious emissions, conducted	$U_c = \pm 2.7 \%$
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2 \%$

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4. DESCRIPTION OF TEST MODES

Mode	Available channel	Tested channel	Modulation	Date rate(Mbps)
802.11a/n/ac20	36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165	36, 40, 48, 52, 60, 64, 100, 120, 140, 149, 157, 165	OFDM	6Mbps/MCS0
802.11n/ac40	38, 46, 54, 62, 102, 110, 118, 126, 134, 151, 159;	38, 46, 54, 62, 102, 118, 134, 151, 159	OFDM	MCS0
802.11ac80	42, 58, 106, 122, 155	42, 58, 106, 122, 155	OFDM	MCS0

Note:

1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%.
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

Software Setting

TRANSMITTER SETTINGS			
Cont. Tx TX99	TX Mode	0	# of Packets (0 for Cont. TX)
1 (2412)	Channel (MHz)	Enable	ANI Algorithm
		On	Scrambler
TxPowerForce_SCPC	TX Power Control	1	AIFSN
13	TX Power (dBm)	1500	Packet Size
No HT	HT Mode	0	Antenna
RATE_6Mbps	Data Rate	TxChain0	TX Chain
ZEROS	TX Pattern	9	Gain Index
Don't Use	Short Guard	0	Dac Gain
1	Aggregate	0	PA CFG
-1	IFS	Unicast	broadcast/Unicast
STOP TX		SET TX ON	
Flags Setting <input type="checkbox"/> LDPC <input type="checkbox"/> STBC <input type="checkbox"/> DPDmode <input type="checkbox"/> HeavyClip		Select Reg Domain UNRESTRICTED	
Tx report			
Good Packets	0	RSSI	0
Temp Chain1	0		0
Temp Chain2	0		0
Throughput	0		0
Gain Table Sweep Load Gain Table Sweep			
GainTableIndex	1	Gain Table Sweep Set	

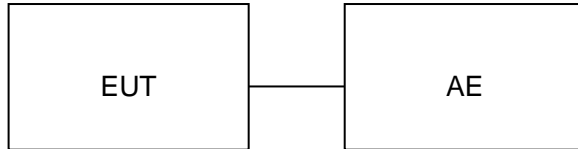
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5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure 1:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	23.8inch All In One	WWAIO23-I38BK256	2A82D-AIO23I	EUT
2	Xiaomi router	R4A	support 2.4G WIFI, 5G WIFI	AE
3	Bluetooth speaker	SRS-XB01	DC5V/0.5A,AUX in,micro B	AE
4	Adapter	JHD-AD065B-190342BA-A	Input: 100-240V, 50-60Hz, 1.5A Output: 19.0V, 3.42A	AE

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.407	6dB Bandwidth	Compliant
§15.407	Emission Bandwidth	Compliant
§15.407	Maximum conducted output power	Compliant
§15.407	Conducted Spurious Emission	Compliant
§15.407	Maximum Conducted Output Power Density	Compliant
§15.209	Radiated Emission	Compliant
§15.407	Band Edges	Compliant
§15.207	Line Conduction Emission	Compliant

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6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	Mar. 28, 2022	Mar. 27, 2023
LISN	R&S	ESH2-Z5	100086	Jun. 08, 2022	Jun. 07, 2023
Test software	R&S	ES-K1	Ver.V1.71	N/A	N/A

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Mar. 28, 2022	Mar. 27, 2023
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Aug. 04, 2022	Aug. 03, 2023
EXA Signal Analyzer	KEYSIGHT	N9020B	MY56101792	Aug. 04, 2022	Aug. 03, 2023
Power sensor	Aglient	U2021XA	MY54110007	Mar. 04, 2022	Mar. 03, 2023
5GHz Fliter	EM Electronics	5150-5880MHz	N/A	N/A	N/A
Attenuator	ZHINAN	E-002	N/A	Aug. 04, 2022	Aug. 03, 2024
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Oct. 31, 2021	Oct. 30, 2023
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Mar. 12, 2022	Mar. 21, 2024
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2021	Apr. 22, 2023
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Aug. 04, 2022	Aug. 03, 2024
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 08, 2020	Jan. 07, 2023
Test software	FARA	EZ-EMC	Ver RA-03A	N/A	N/A

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7. MAXIMUM CONDUCTED OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

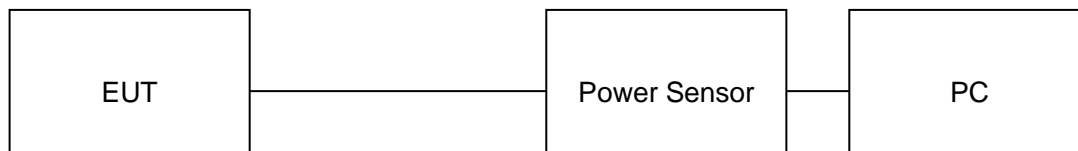
For average power test:

1. Connect EUT RF output port to power sensor through an RF attenuator.
2. Connect the power sensor to the PC.
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Record the maximum power from the software.

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

7.2. TEST SET-UP

AVERAGE POWER SETUP



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7.3. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power for band 5.15-5.25 GHz				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5180	12.33	24	Pass
	5200	12.05	24	Pass
	5240	12.27	24	Pass
802.11n20	5180	11.24	24	Pass
	5200	10.85	24	Pass
	5240	11.47	24	Pass
802.11n40	5190	10.60	24	Pass
	5230	11.35	24	Pass
802.11ac20	5180	10.38	24	Pass
	5200	9.88	24	Pass
	5240	10.55	24	Pass
802.11ac40	5190	9.72	24	Pass
	5230	10.01	24	Pass
802.11ac80	5210	9.78	24	Pass

Test Data of Conducted Output Power for band 5.25-5.35 GHz				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5260	11.95	24	Pass
	5300	11.86	24	Pass
	5320	12.13	24	Pass
802.11n20	5260	10.83	24	Pass
	5300	10.83	24	Pass
	5320	10.96	24	Pass
802.11n40	5270	10.15	24	Pass
	5310	10.40	24	Pass
802.11ac20	5260	9.82	24	Pass
	5300	9.90	24	Pass
	5320	9.97	24	Pass
802.11ac40	5270	9.28	24	Pass
	5310	10.03	24	Pass
802.11ac80	5290	9.36	24	Pass

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Test Data of Conducted Output Power for band 5.47-5.725 GHz				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5500	11.90	24	Pass
	5600	11.14	24	Pass
	5700	9.85	24	Pass
802.11n20	5500	11.61	24	Pass
	5600	10.06	24	Pass
	5700	9.09	24	Pass
802.11n40	5510	10.89	24	Pass
	5590	10.25	24	Pass
	5670	9.76	24	Pass
802.11ac20	5500	10.88	24	Pass
	5600	9.76	24	Pass
	5700	8.58	24	Pass
802.11ac40	5510	10.84	24	Pass
	5590	9.87	24	Pass
	5670	9.39	24	Pass
802.11ac80	5530	9.65	24	Pass
	5610	8.63	24	Pass

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Test Data of Conducted Output Power for band 5.725-5.85 GHz				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5745	11.67	30	Pass
	5785	10.78	30	Pass
	5825	9.83	30	Pass
802.11n20	5745	10.59	30	Pass
	5785	10.08	30	Pass
	5825	9.20	30	Pass
802.11n40	5755	9.59	30	Pass
	5795	8.97	30	Pass
802.11ac20	5745	10.50	30	Pass
	5785	9.50	30	Pass
	5825	8.67	30	Pass
802.11ac40	5755	9.27	30	Pass
	5795	8.66	30	Pass
802.11ac80	5775	8.43	30	Pass

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8. BANDWIDTH

8.1. MEASUREMENT PROCEDURE

-6dB bandwidth (DTS bandwidth):

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

99% occupied bandwidth:

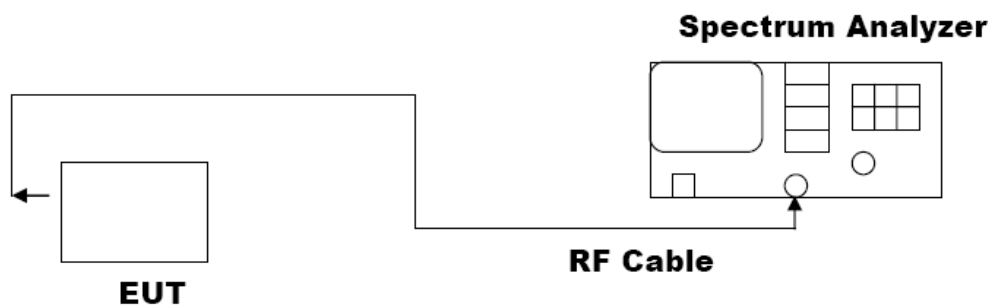
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

-26dB Bandwidth:

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

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

8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



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8.3. LIMITS AND MEASUREMENT RESULTS

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5180	16.343	22.65	N/A	Pass
	5200	16.306	21.30	N/A	Pass
	5240	16.342	21.47	N/A	Pass
802.11n20	5180	17.390	20.33	N/A	Pass
	5200	17.389	20.05	N/A	Pass
	5240	17.390	20.59	N/A	Pass
802.11n40	5190	35.807	40.18	N/A	Pass
	5230	35.797	40.95	N/A	Pass
802.11ac20	5180	17.354	19.69	N/A	Pass
	5200	17.337	19.70	N/A	Pass
	5240	17.363	19.61	N/A	Pass
802.11ac40	5190	35.722	39.71	N/A	Pass
	5230	35.736	39.74	N/A	Pass
802.11ac80	5210	75.115	82.64	N/A	Pass

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.25-5.35 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5260	16.294	21.33	N/A	Pass
	5300	16.281	20.71	N/A	Pass
	5320	16.288	21.20	N/A	Pass
802.11n20	5260	17.400	20.42	N/A	Pass
	5300	17.391	20.07	N/A	Pass
	5320	17.378	20.15	N/A	Pass
802.11n40	5270	35.791	39.99	N/A	Pass
	5310	35.763	40.54	N/A	Pass
802.11ac20	5260	17.359	19.57	N/A	Pass
	5300	17.374	19.68	N/A	Pass
	5320	17.359	19.71	N/A	Pass
802.11ac40	5270	35.757	42.92	N/A	Pass
	5310	35.737	40.48	N/A	Pass
802.11ac80	5290	75.163	80.61	N/A	Pass

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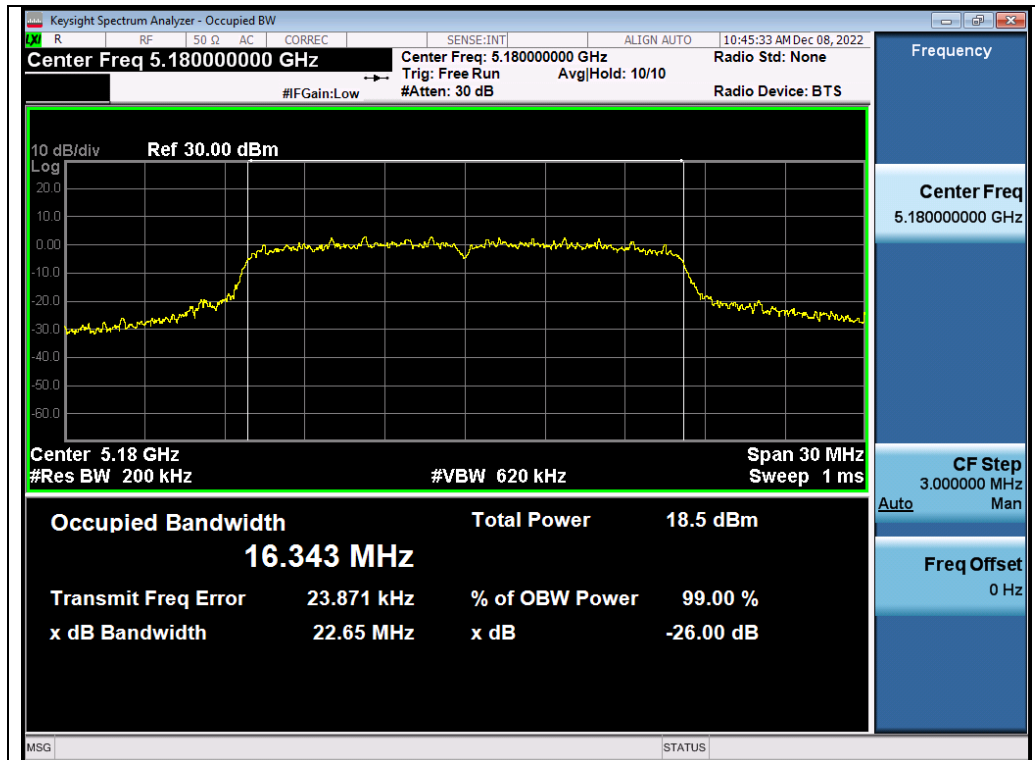
Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.47-5.725 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5500	16.280	20.05	N/A	Pass
	5600	16.244	18.93	N/A	Pass
	5700	16.223	19.08	N/A	Pass
802.11n20	5500	17.415	20.51	N/A	Pass
	5600	17.357	19.56	N/A	Pass
	5700	17.364	20.20	N/A	Pass
802.11n40	5510	35.835	47.85	N/A	Pass
	5590	35.797	40.24	N/A	Pass
	5670	35.810	40.12	N/A	Pass
802.11ac20	5500	17.398	20.14	N/A	Pass
	5600	17.375	20.11	N/A	Pass
	5700	17.355	19.94	N/A	Pass
802.11ac40	5510	35.816	48.27	N/A	Pass
	5590	35.721	40.40	N/A	Pass
	5670	35.735	41.08	N/A	Pass
802.11ac80	5530	75.074	82.46	N/A	Pass
	5610	75.150	81.28	N/A	Pass

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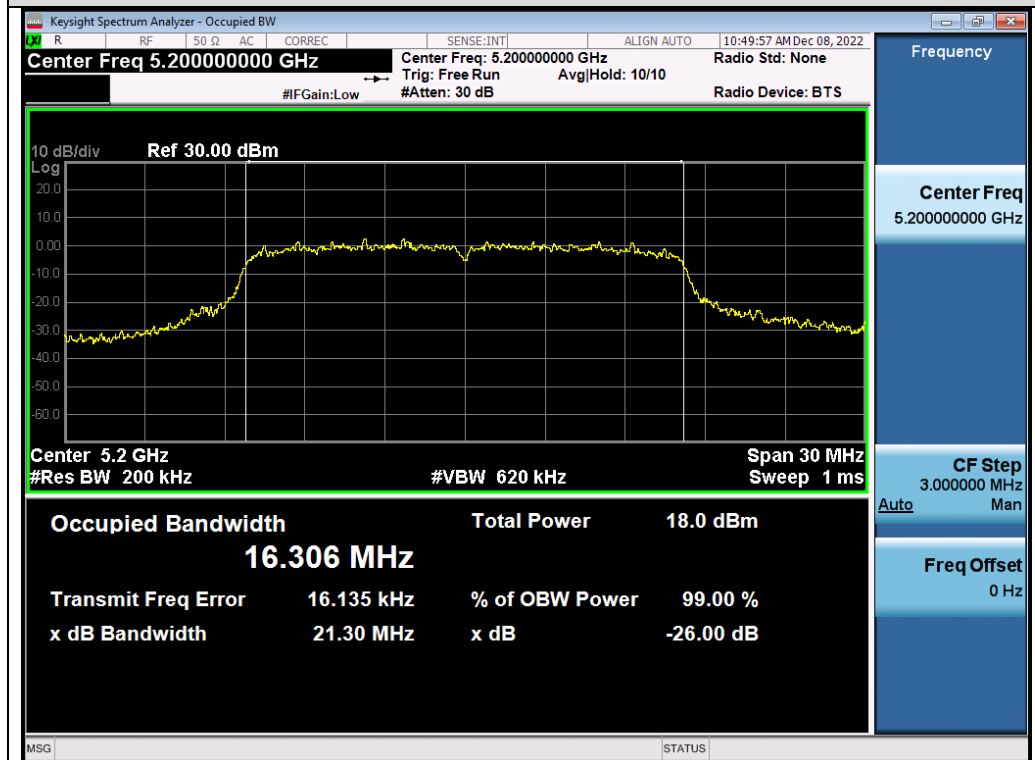
Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5745	16.351	15.10	0.5	Pass
	5785	16.253	14.41	0.5	Pass
	5825	16.238	15.34	0.5	Pass
802.11n20	5745	17.382	15.03	0.5	Pass
	5785	17.349	15.13	0.5	Pass
	5825	17.366	15.45	0.5	Pass
802.11n40	5755	35.779	35.09	0.5	Pass
	5795	35.761	35.10	0.5	Pass
802.11ac20	5745	17.358	15.06	0.5	Pass
	5785	17.345	15.08	0.5	Pass
	5825	17.352	15.13	0.5	Pass
802.11ac40	5755	35.758	35.07	0.5	Pass
	5795	35.702	34.04	0.5	Pass
802.11ac80	5775	75.037	75.05	0.5	Pass

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Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz

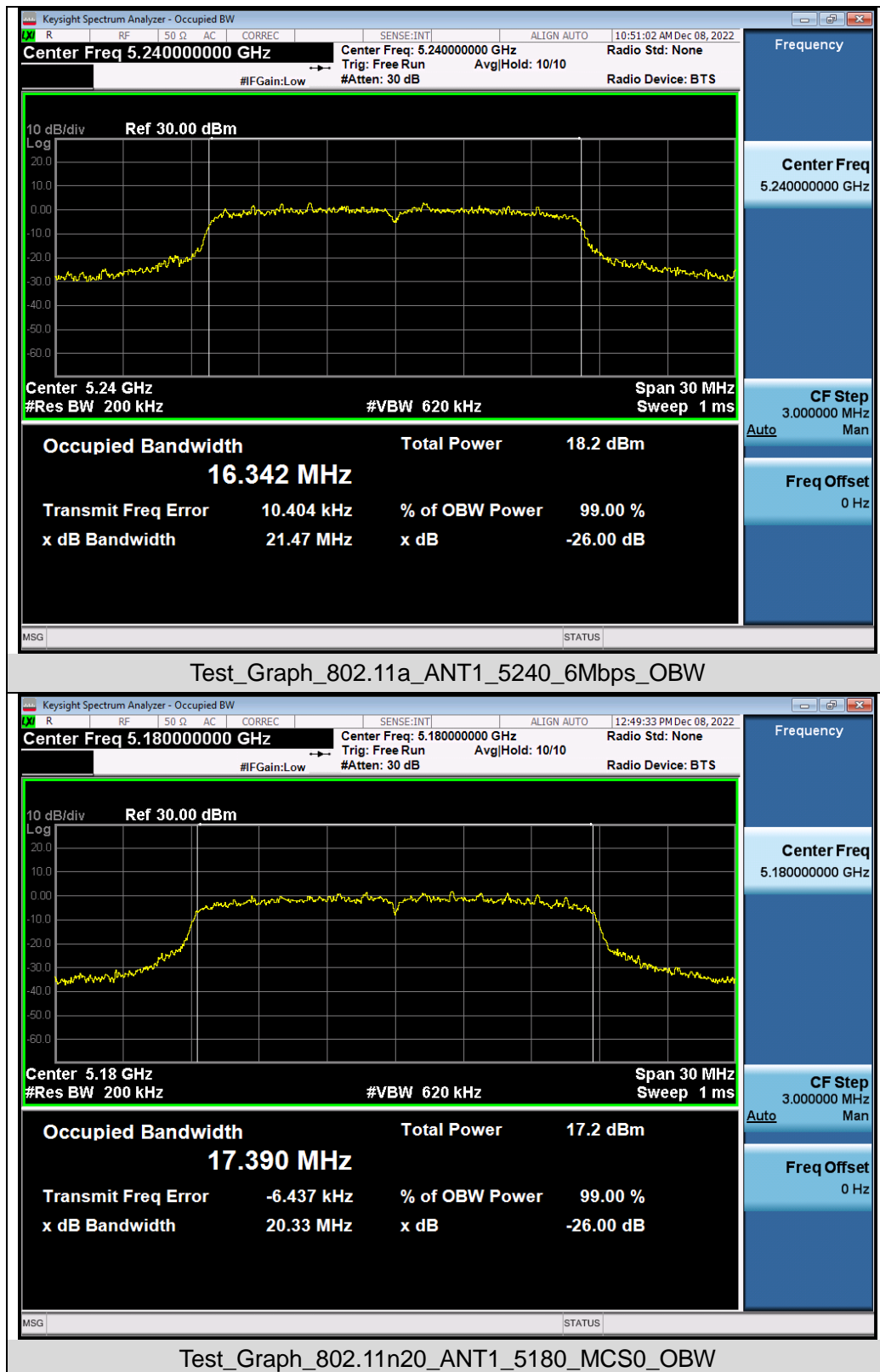


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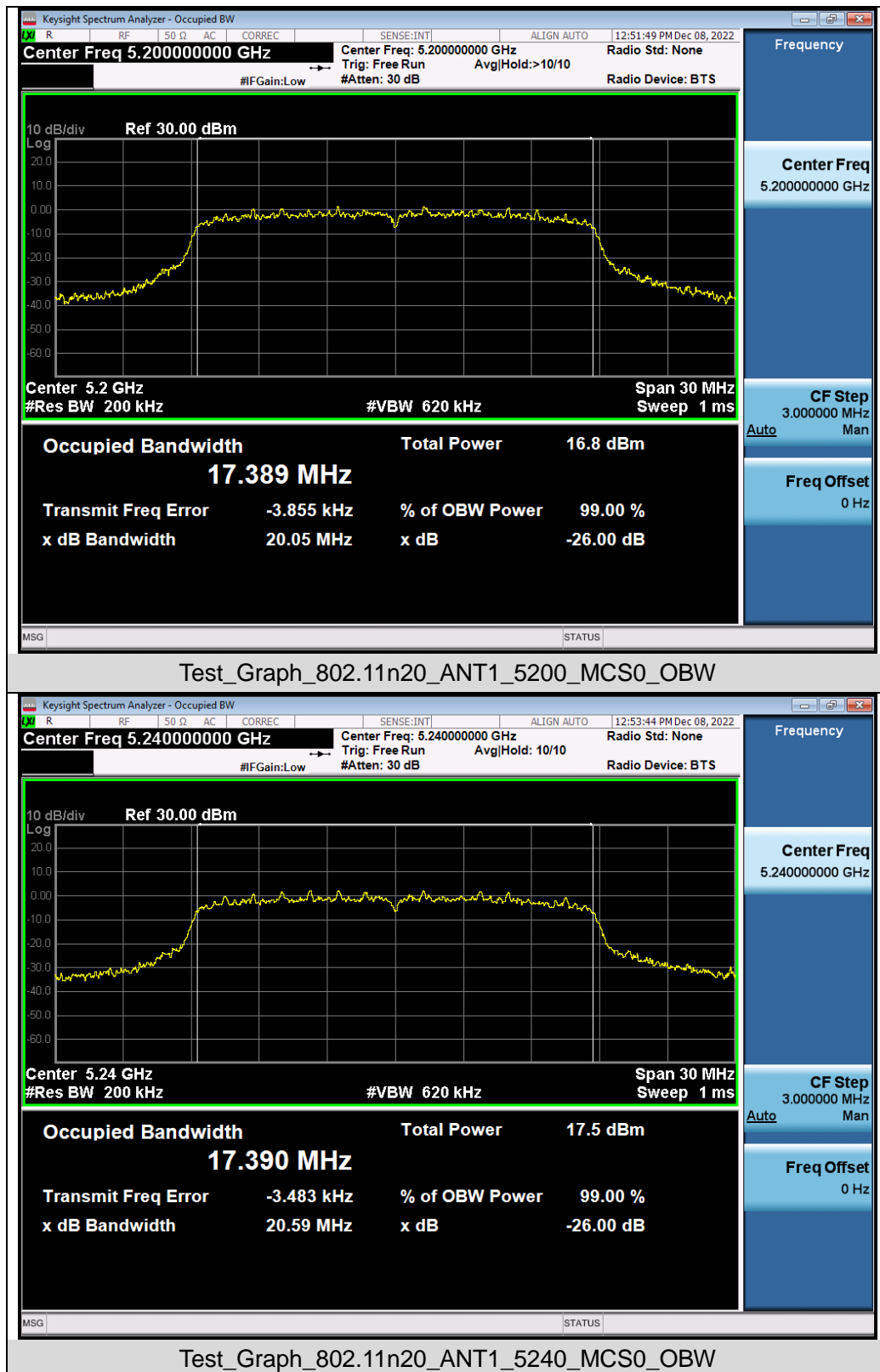


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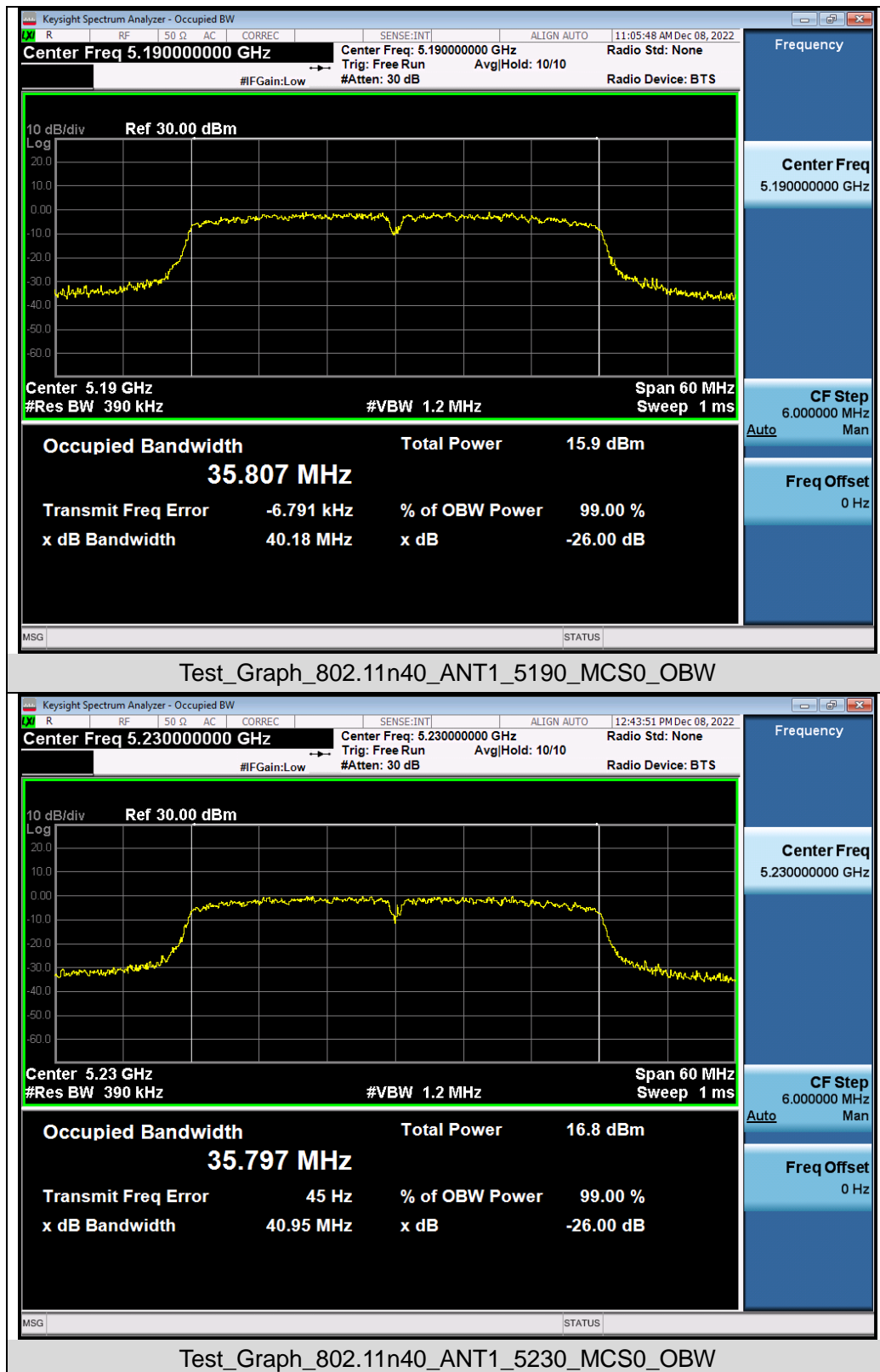
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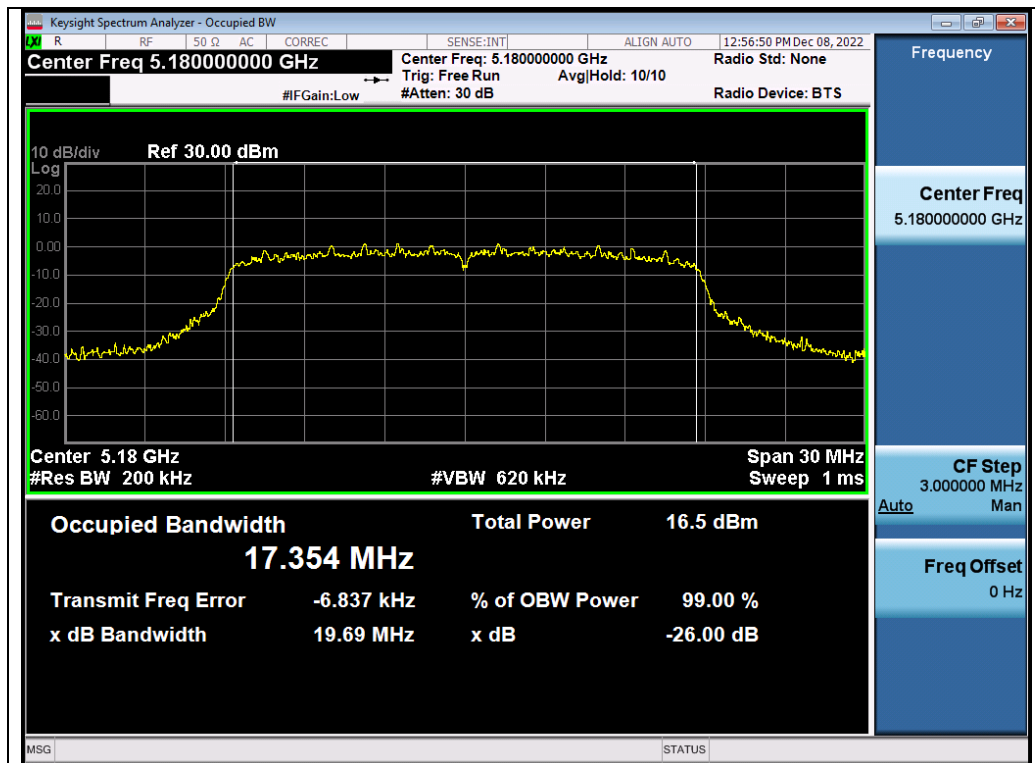
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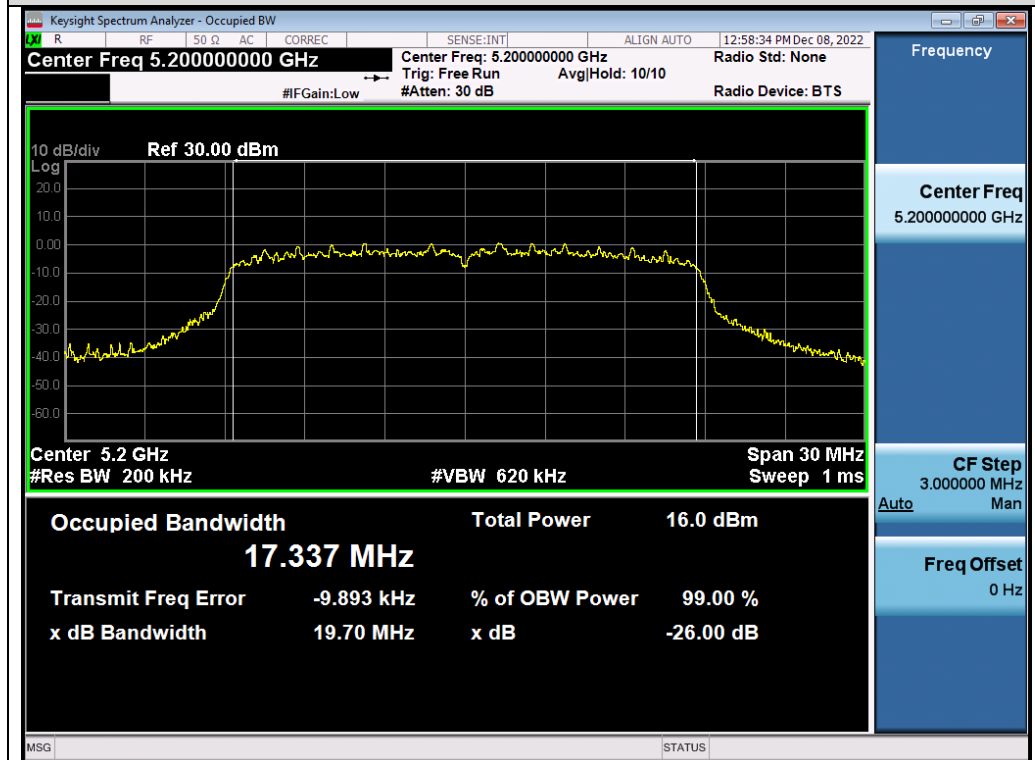
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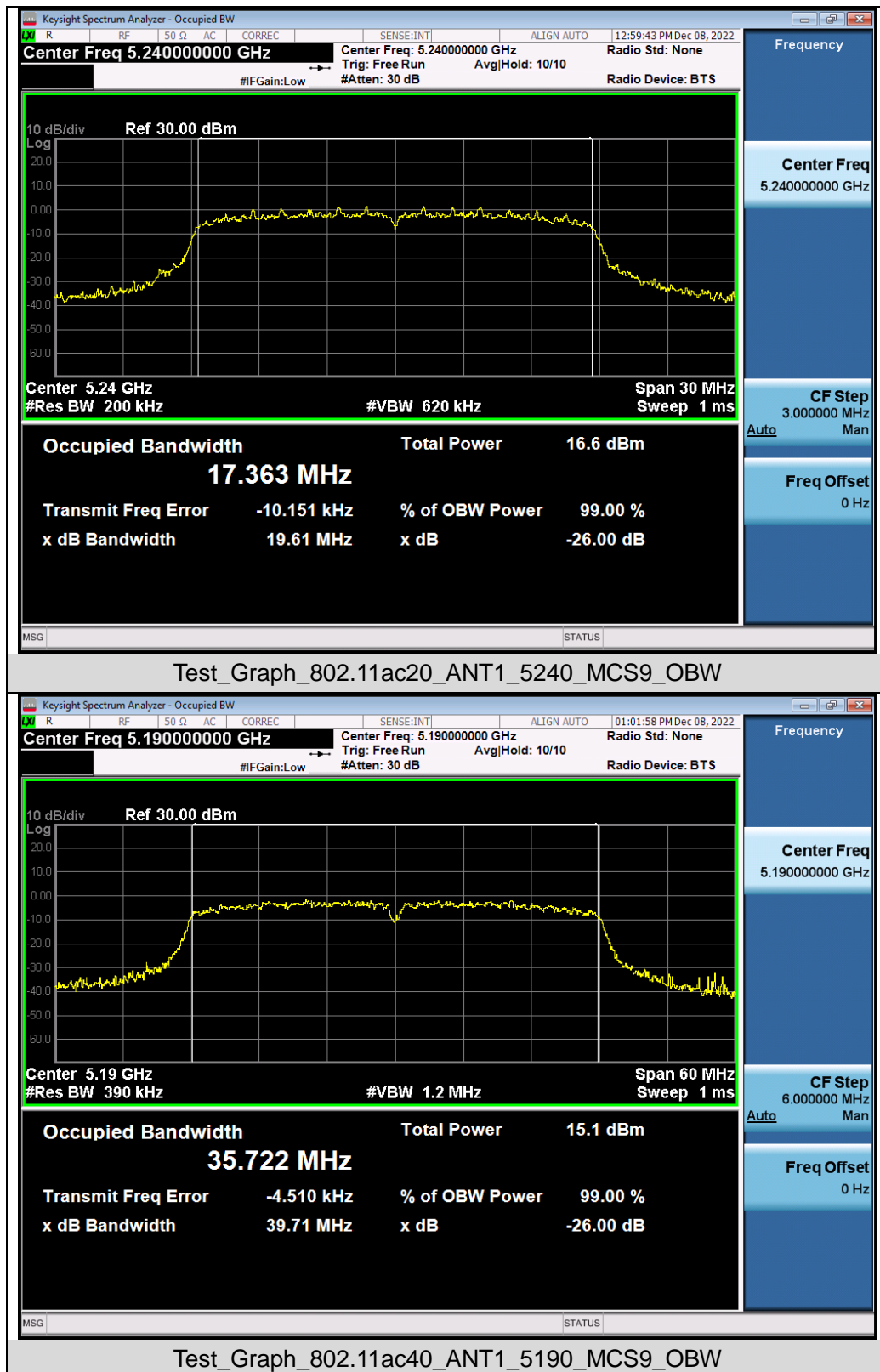


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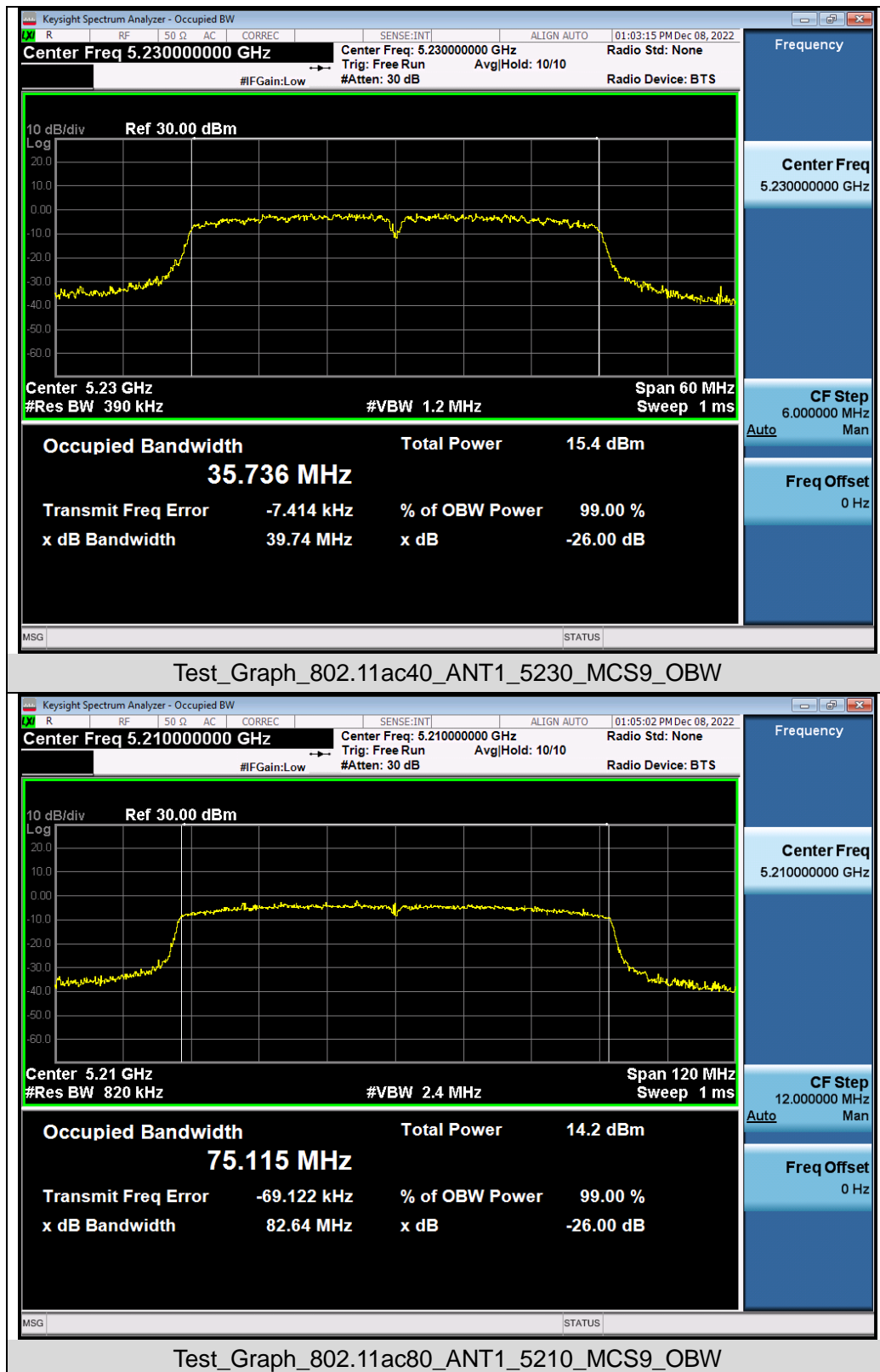


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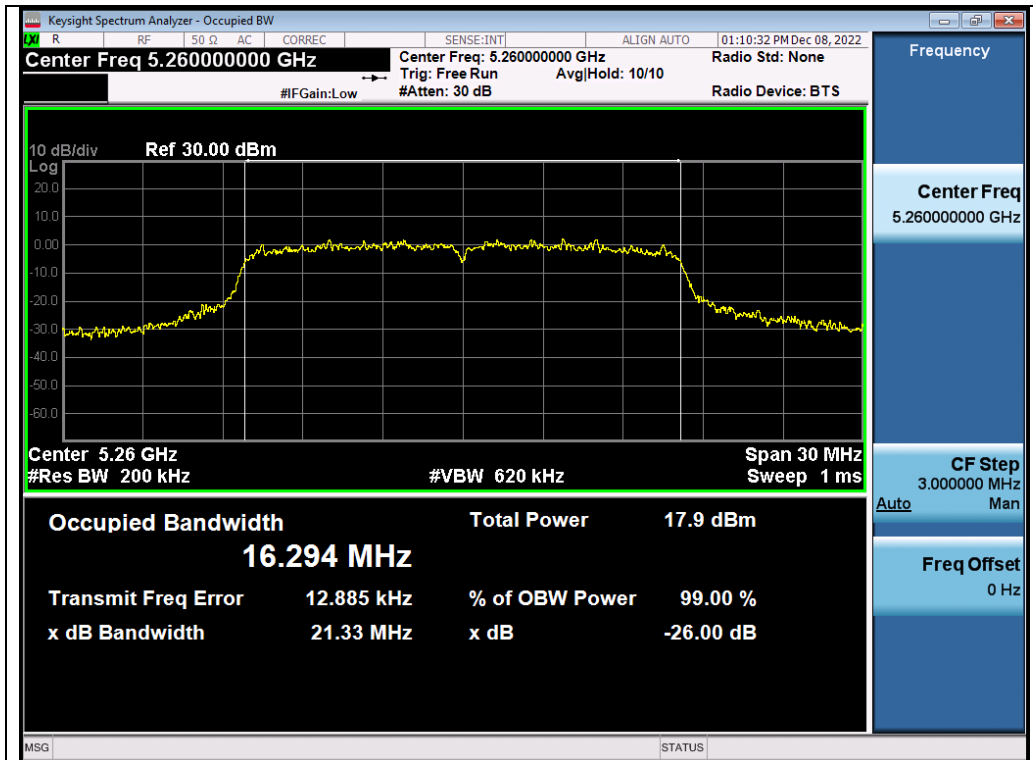


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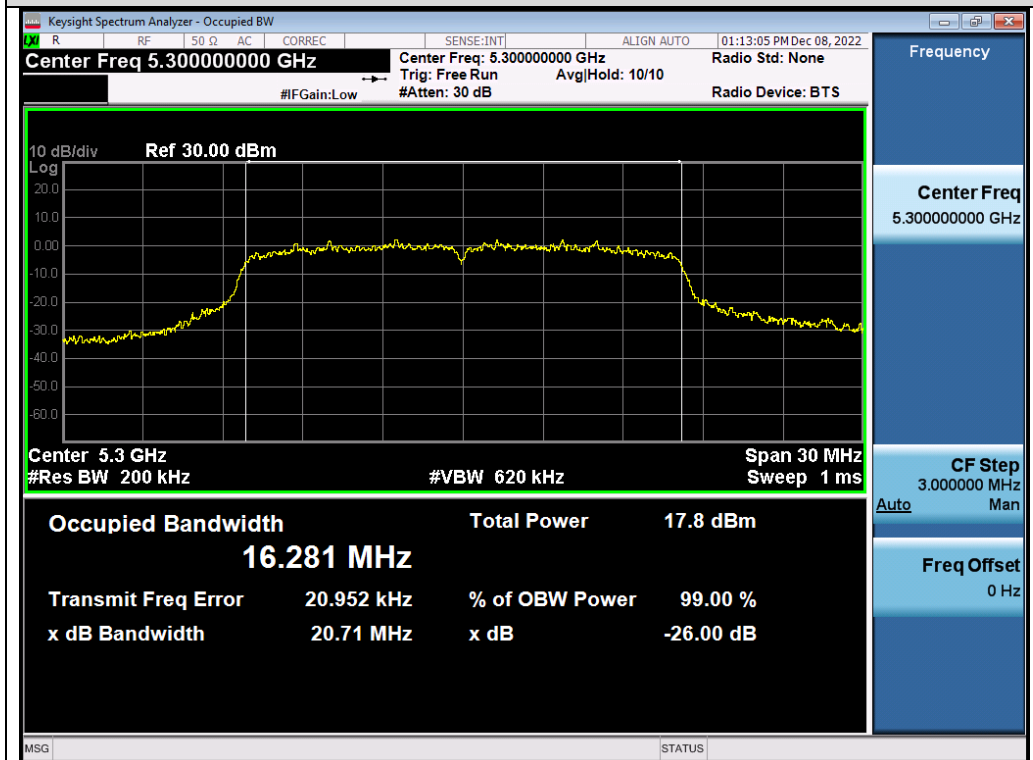


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Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.25-5.35 GHz

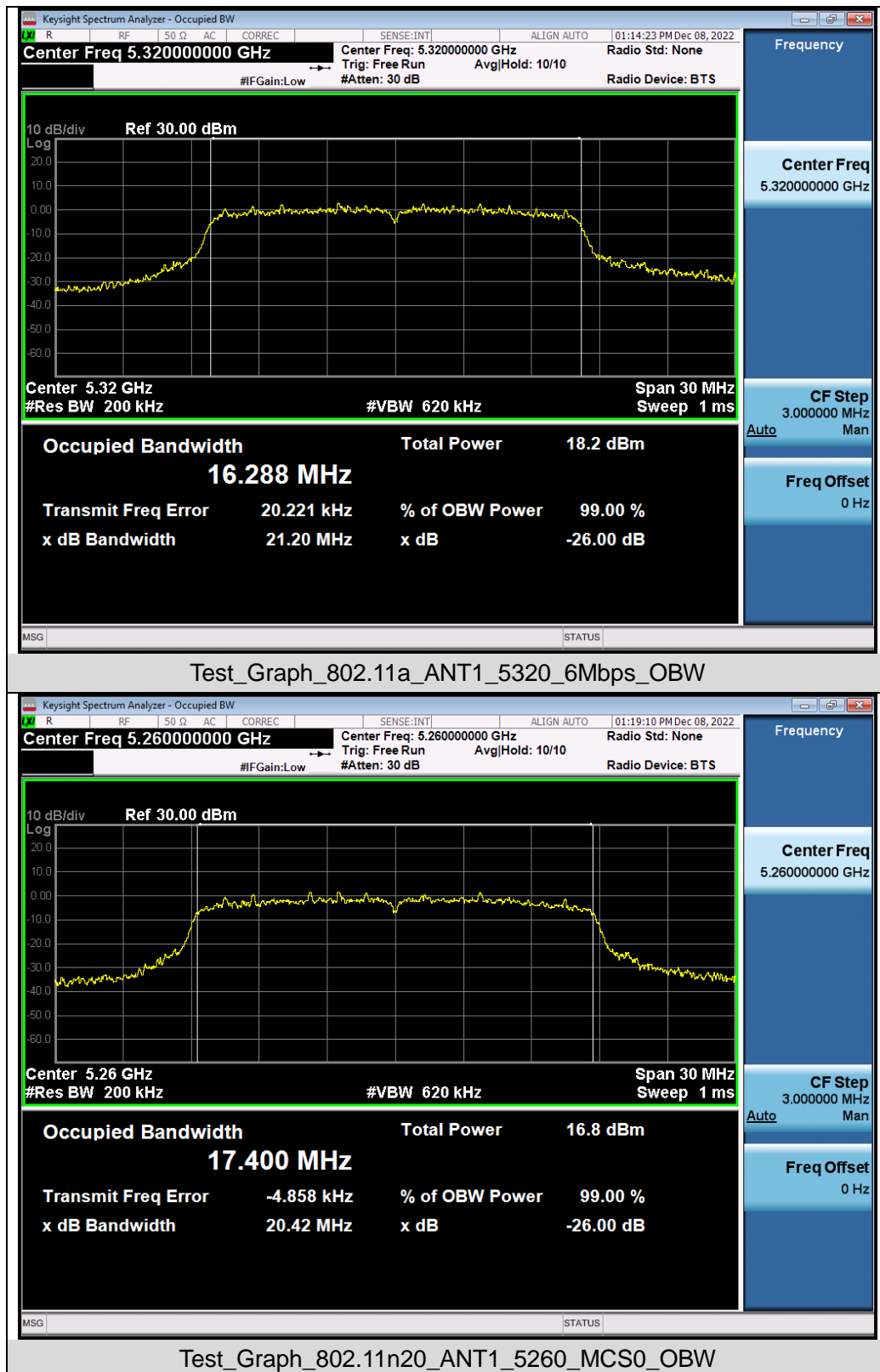


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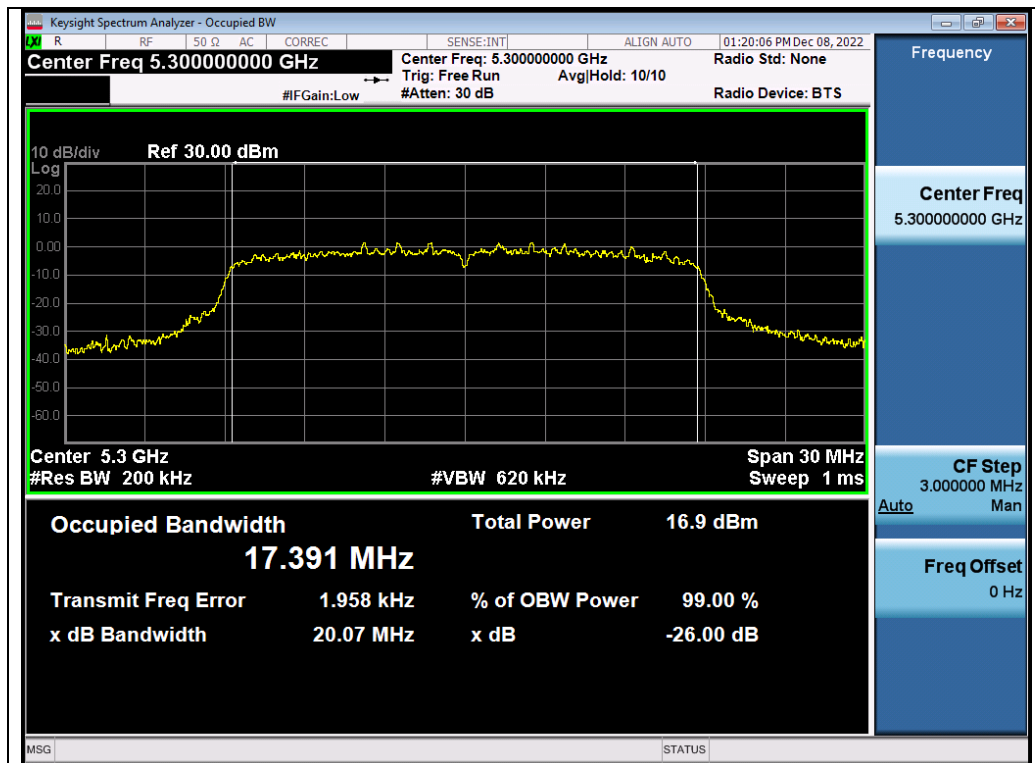
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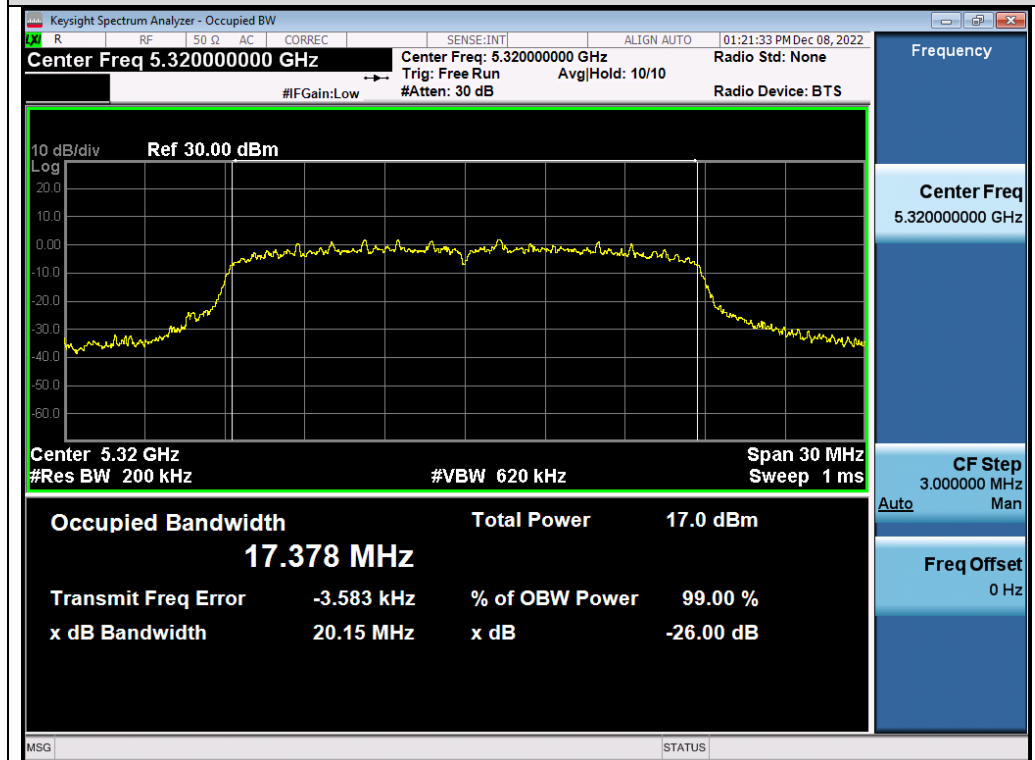


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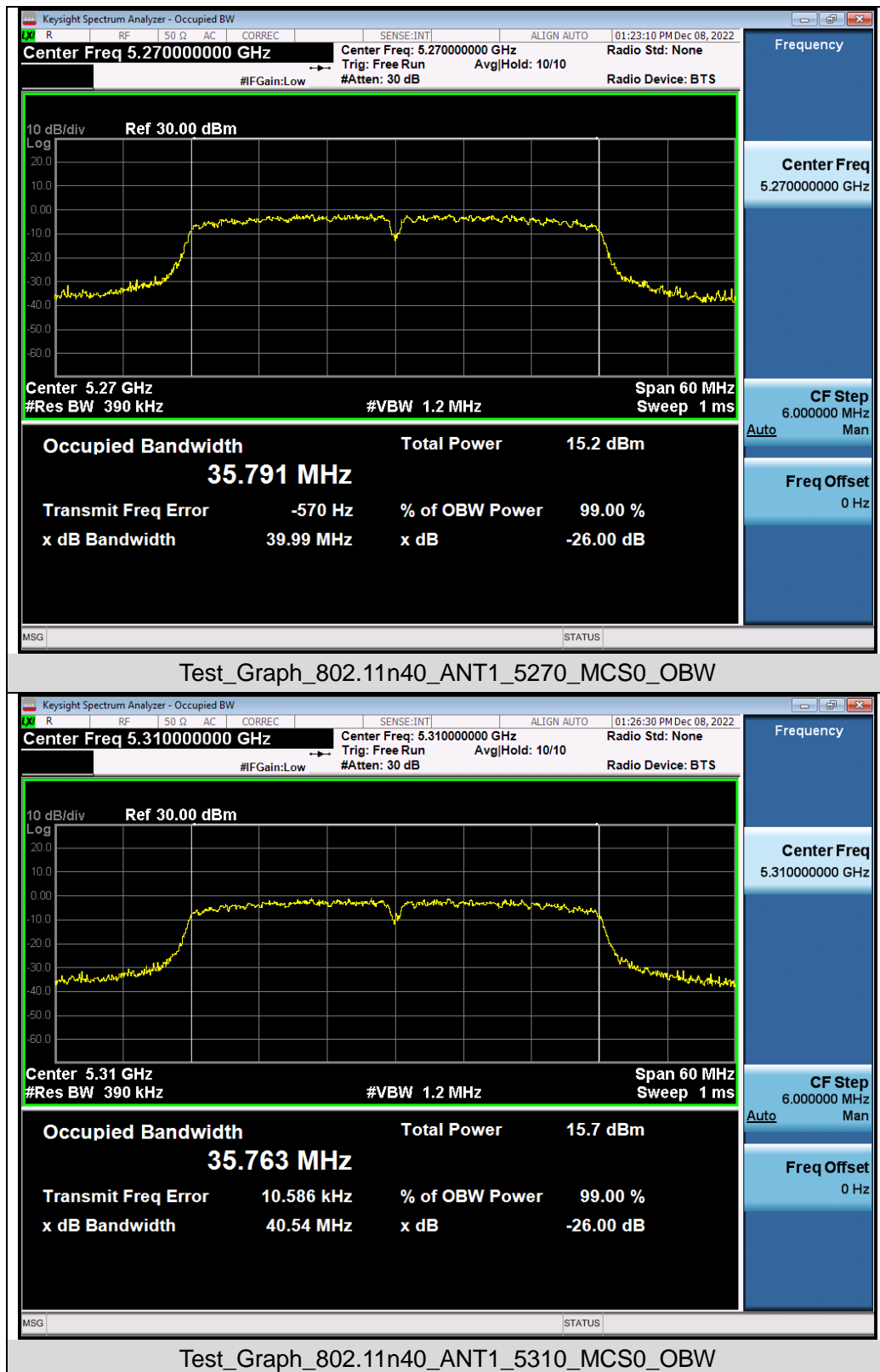


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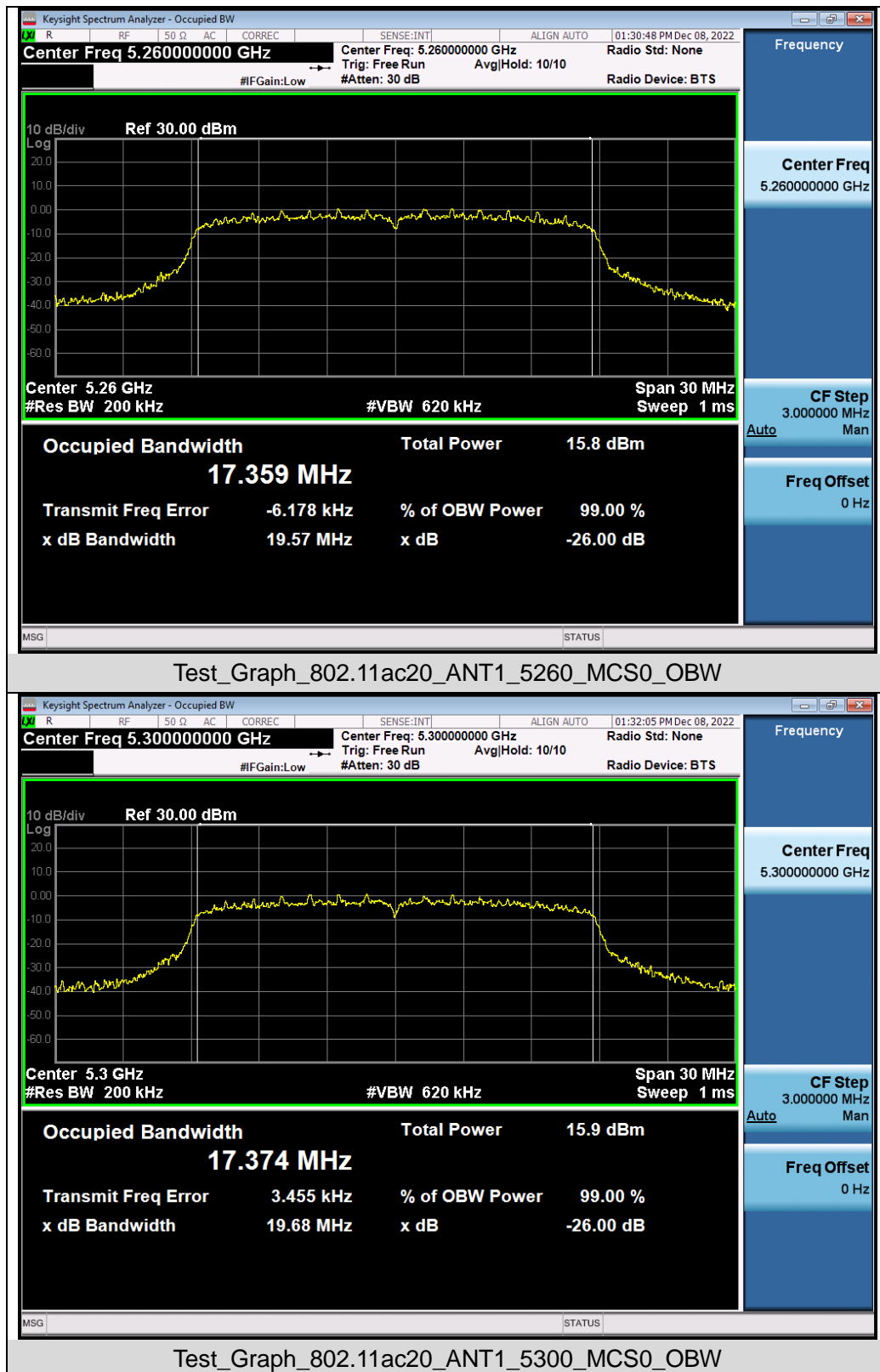


Test_Graph_802.11n20_ANT1_5320_MCS0_OBW

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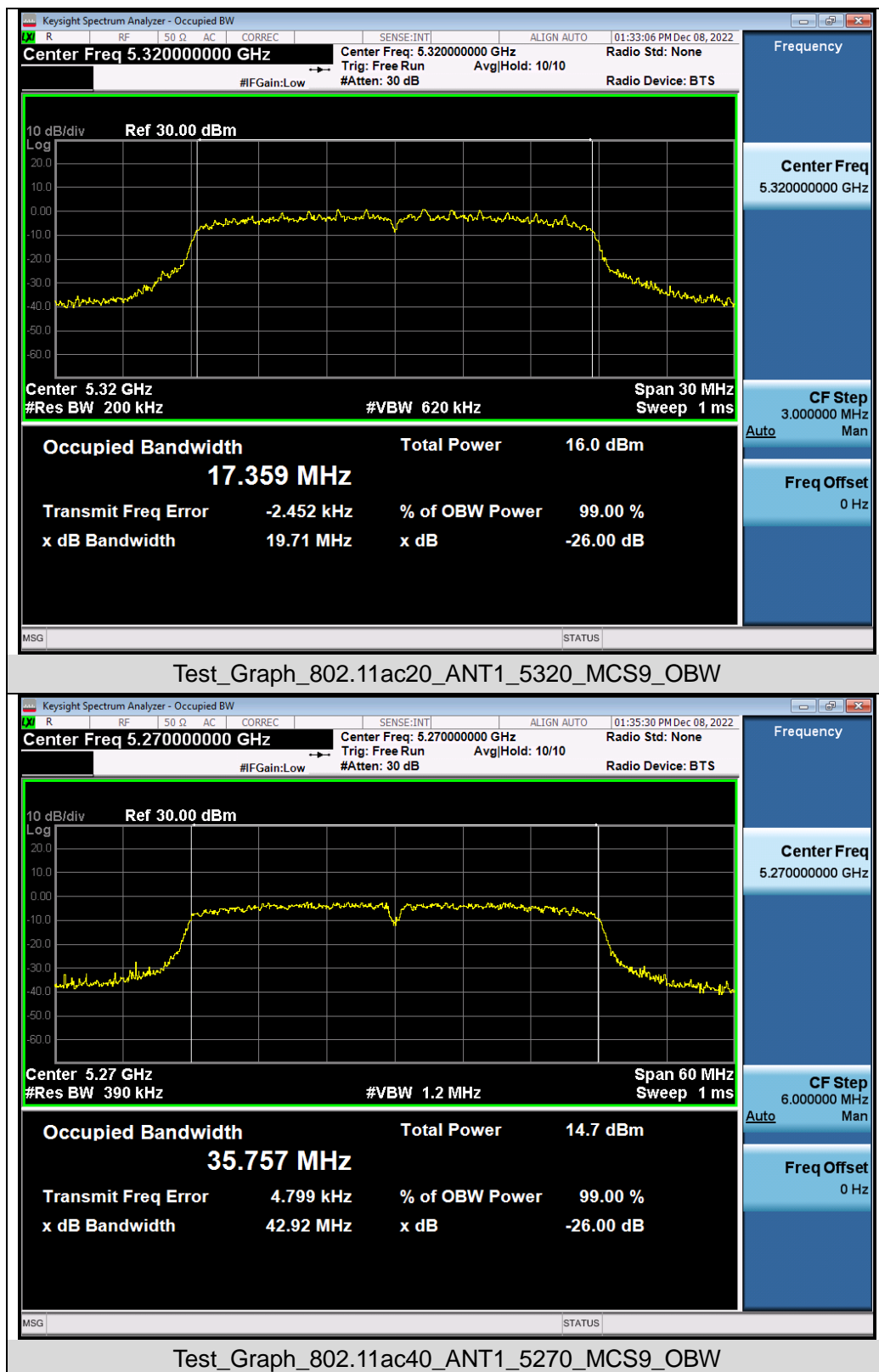


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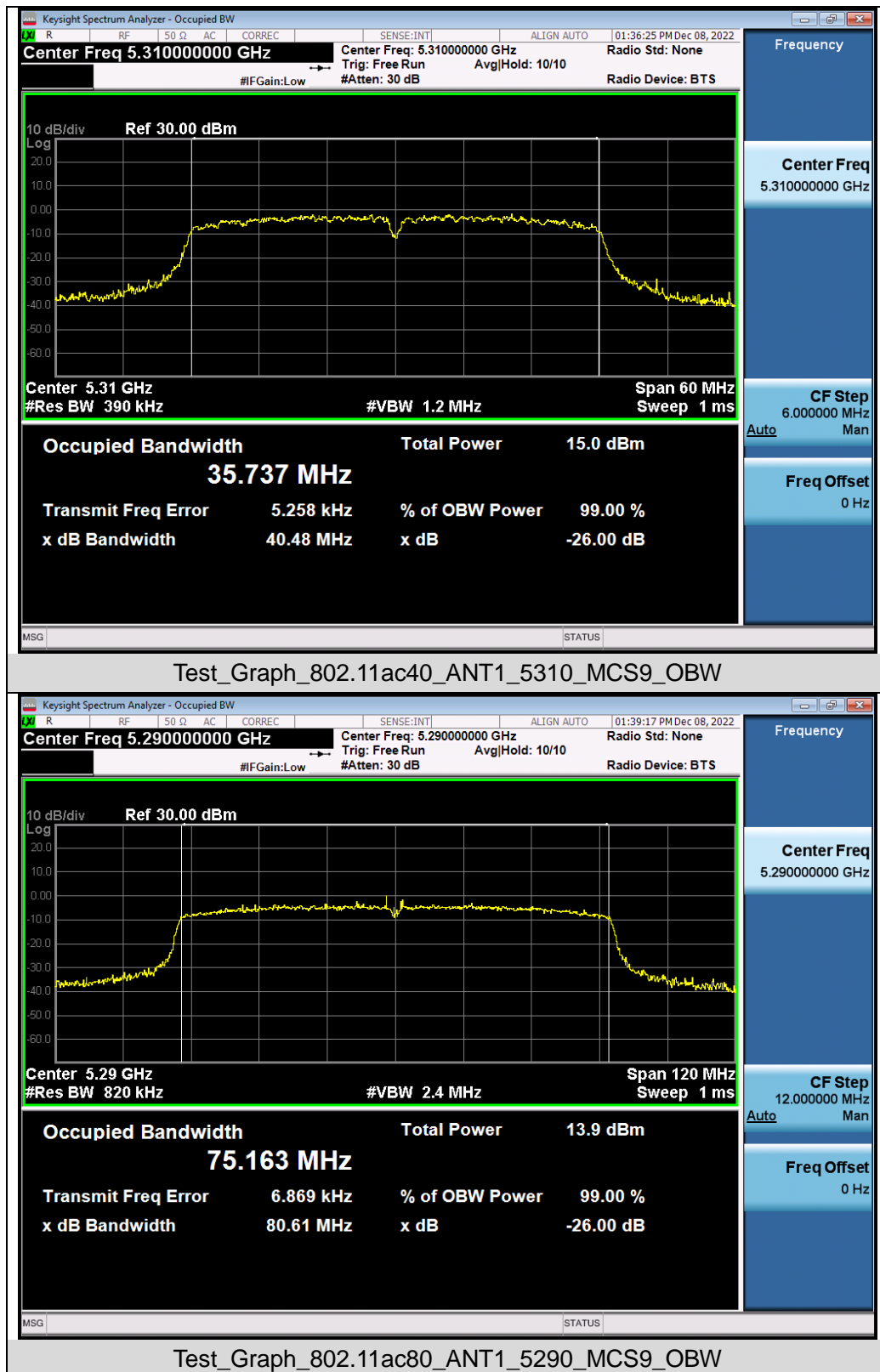
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Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

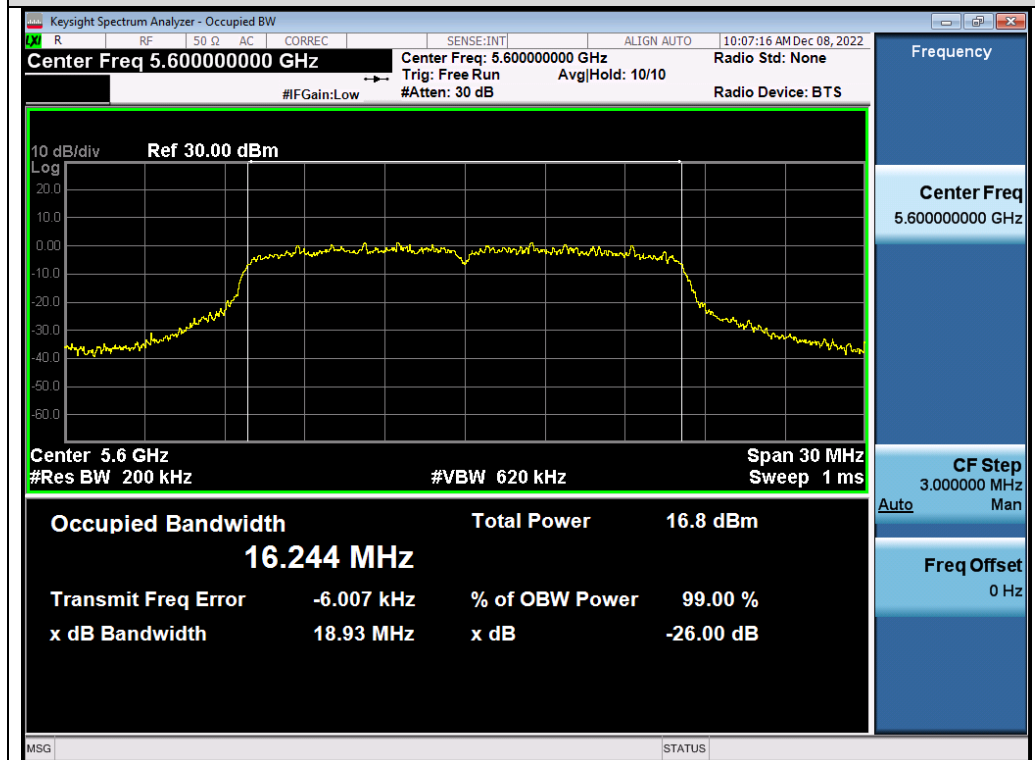


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Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.47-5.725 GHz

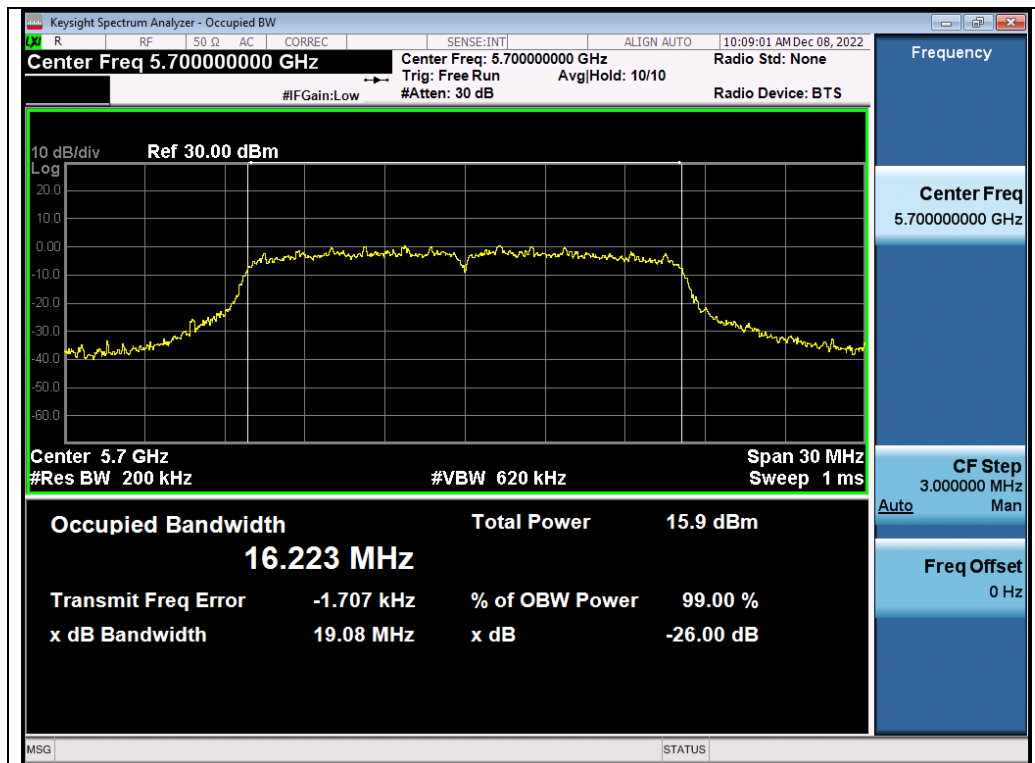


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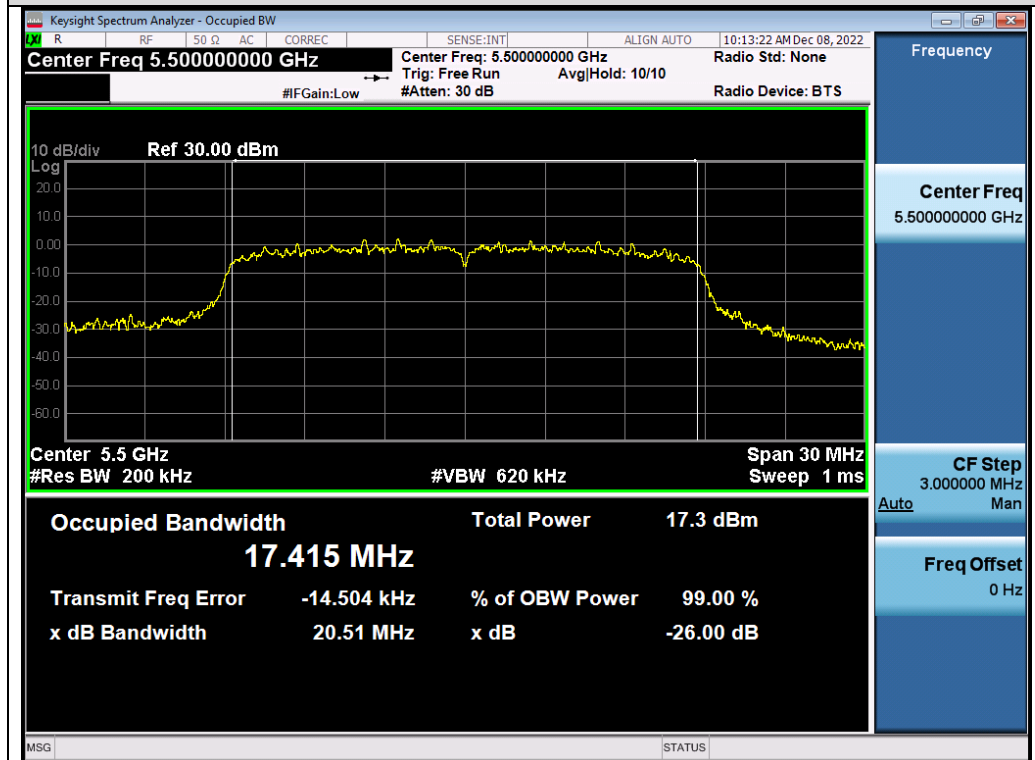


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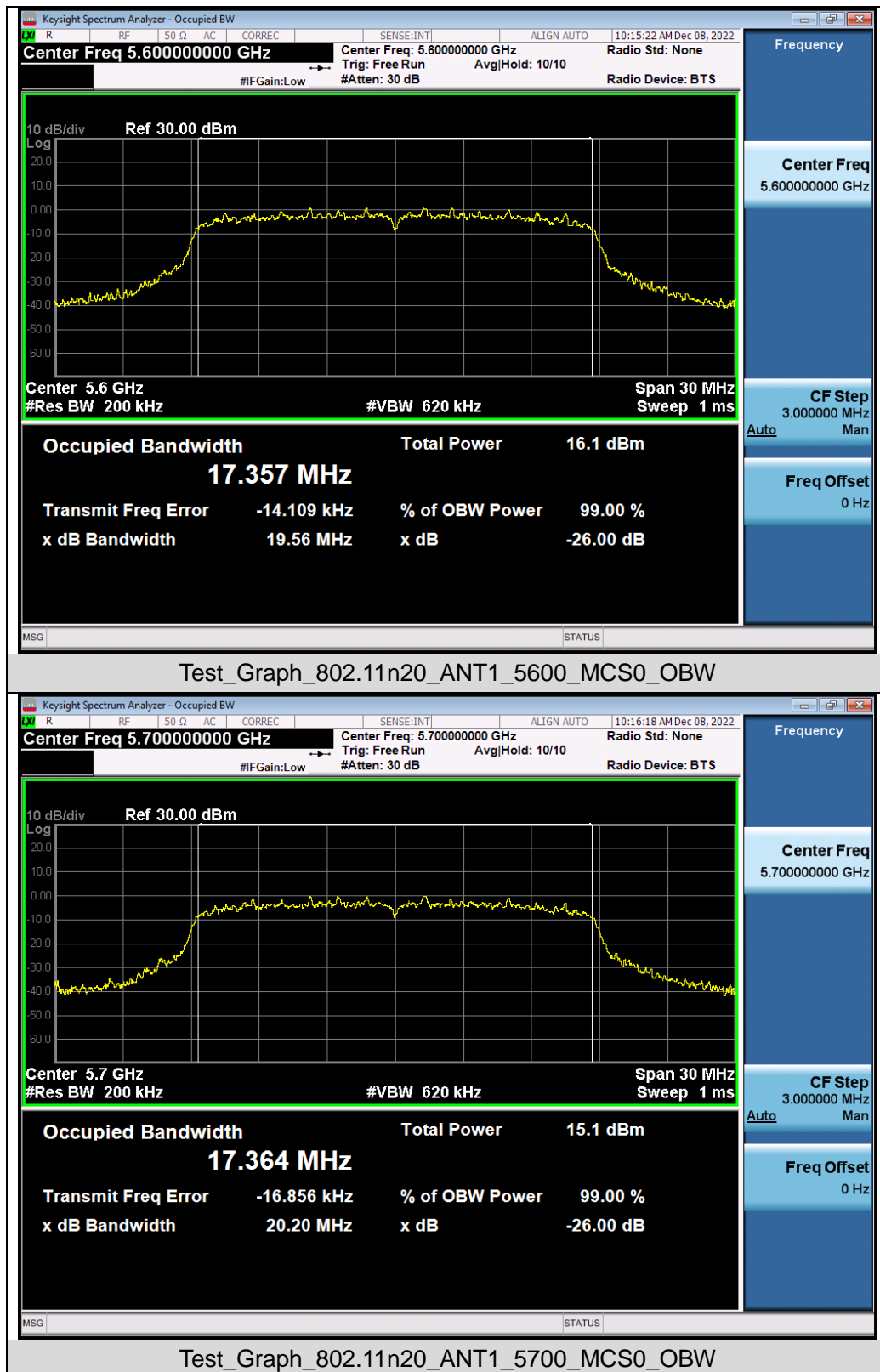


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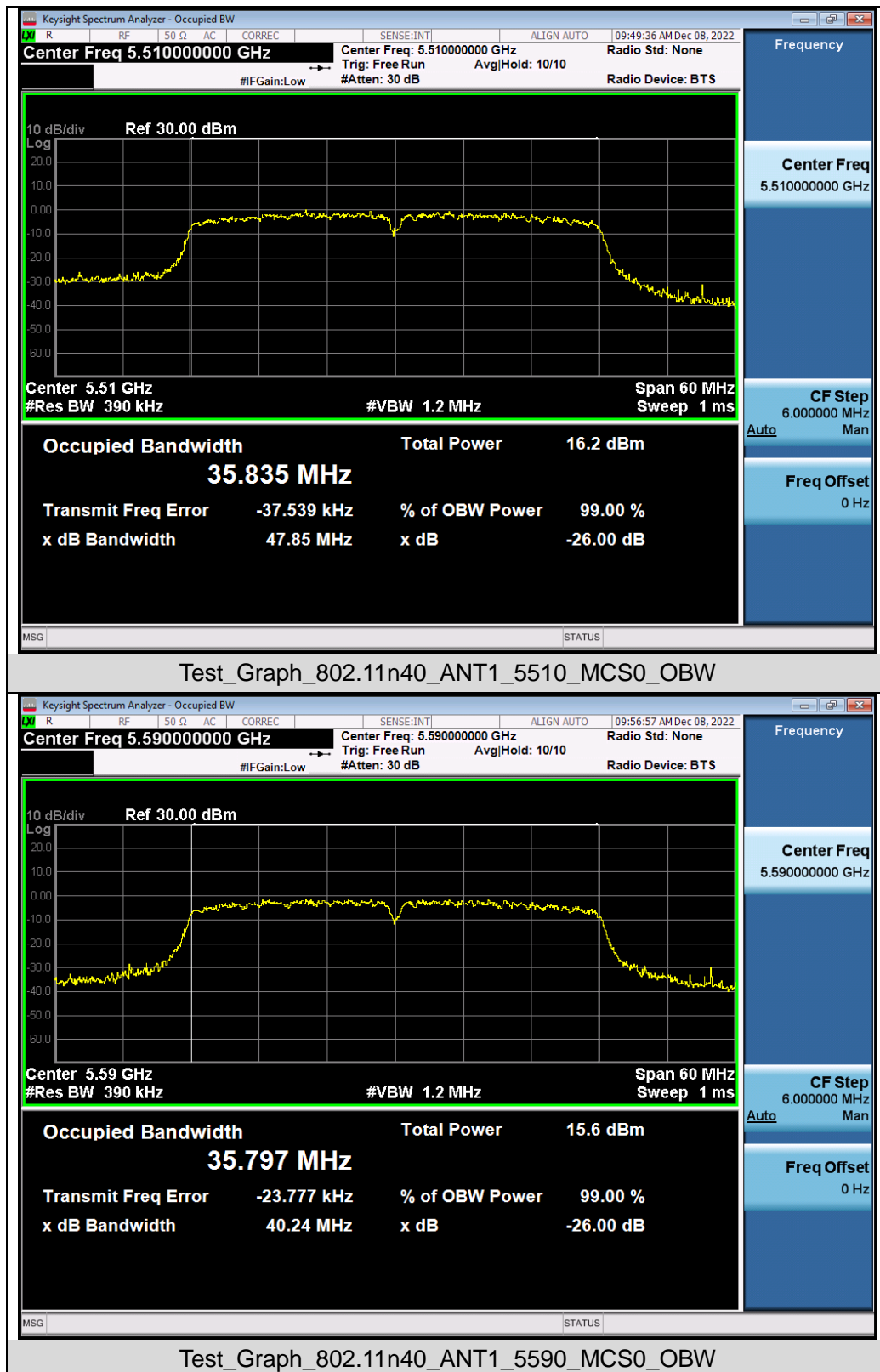


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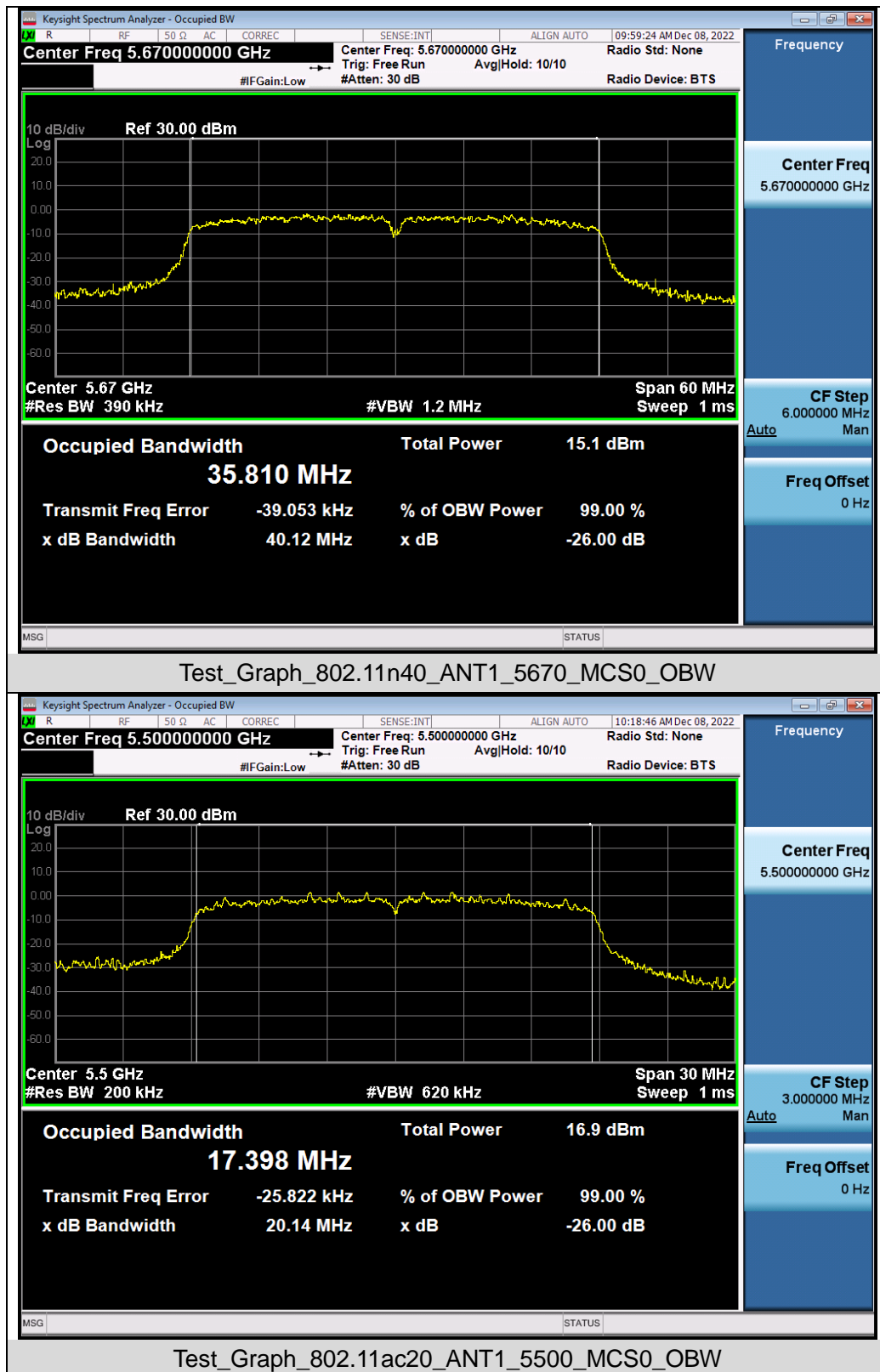
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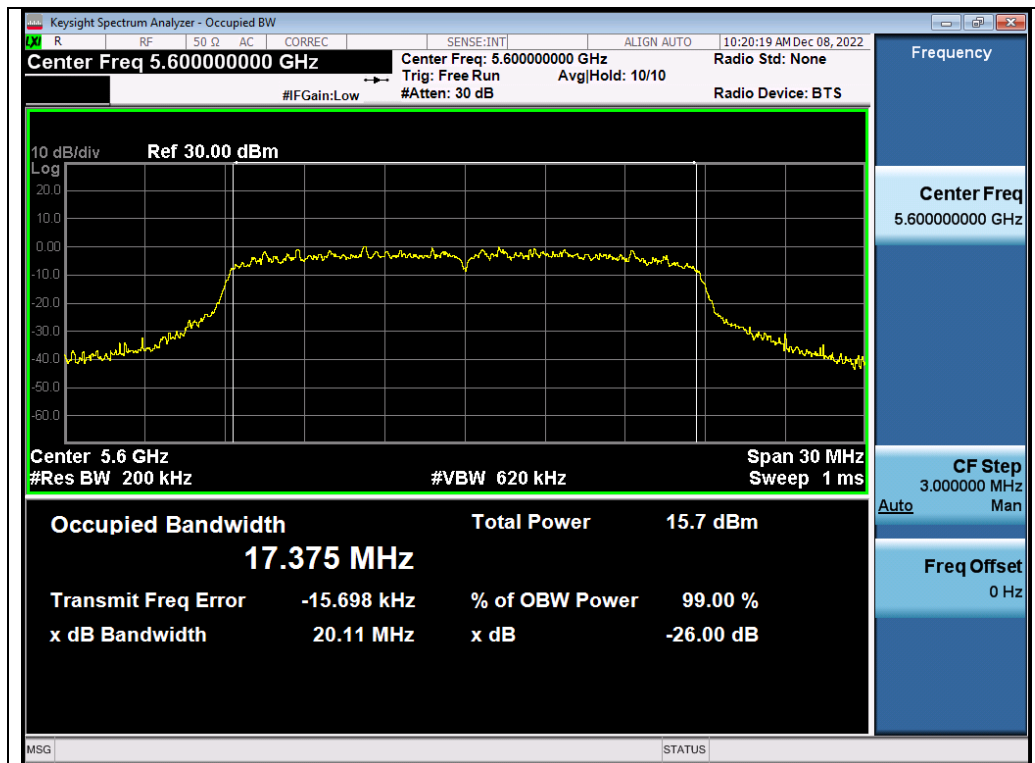
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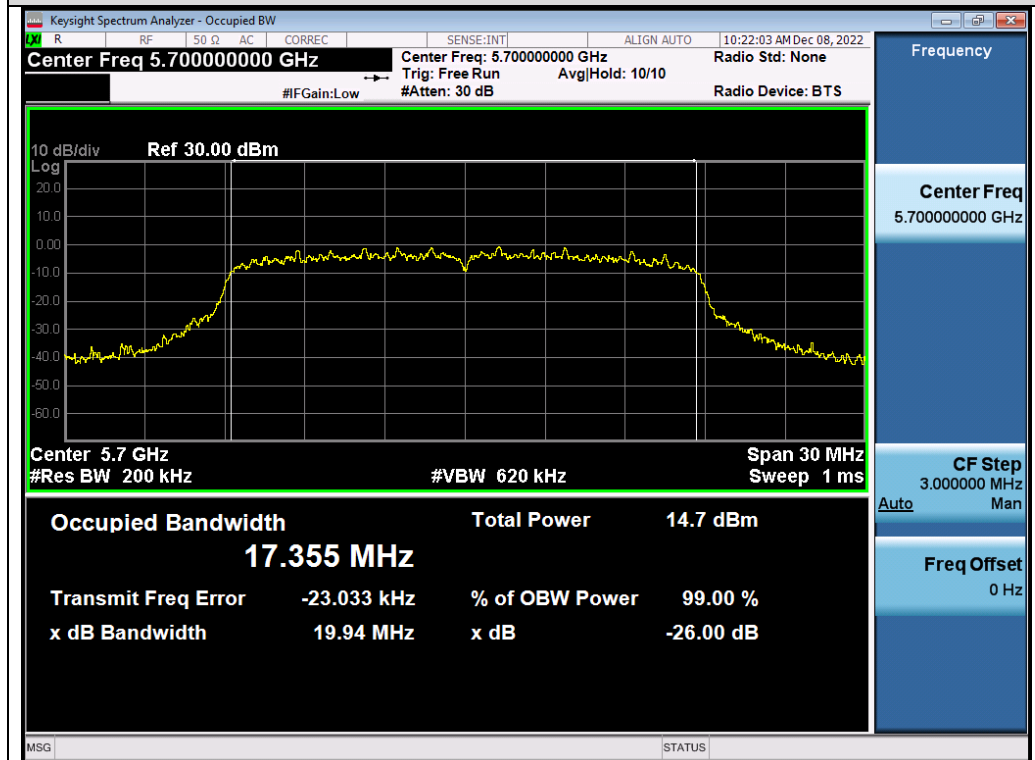
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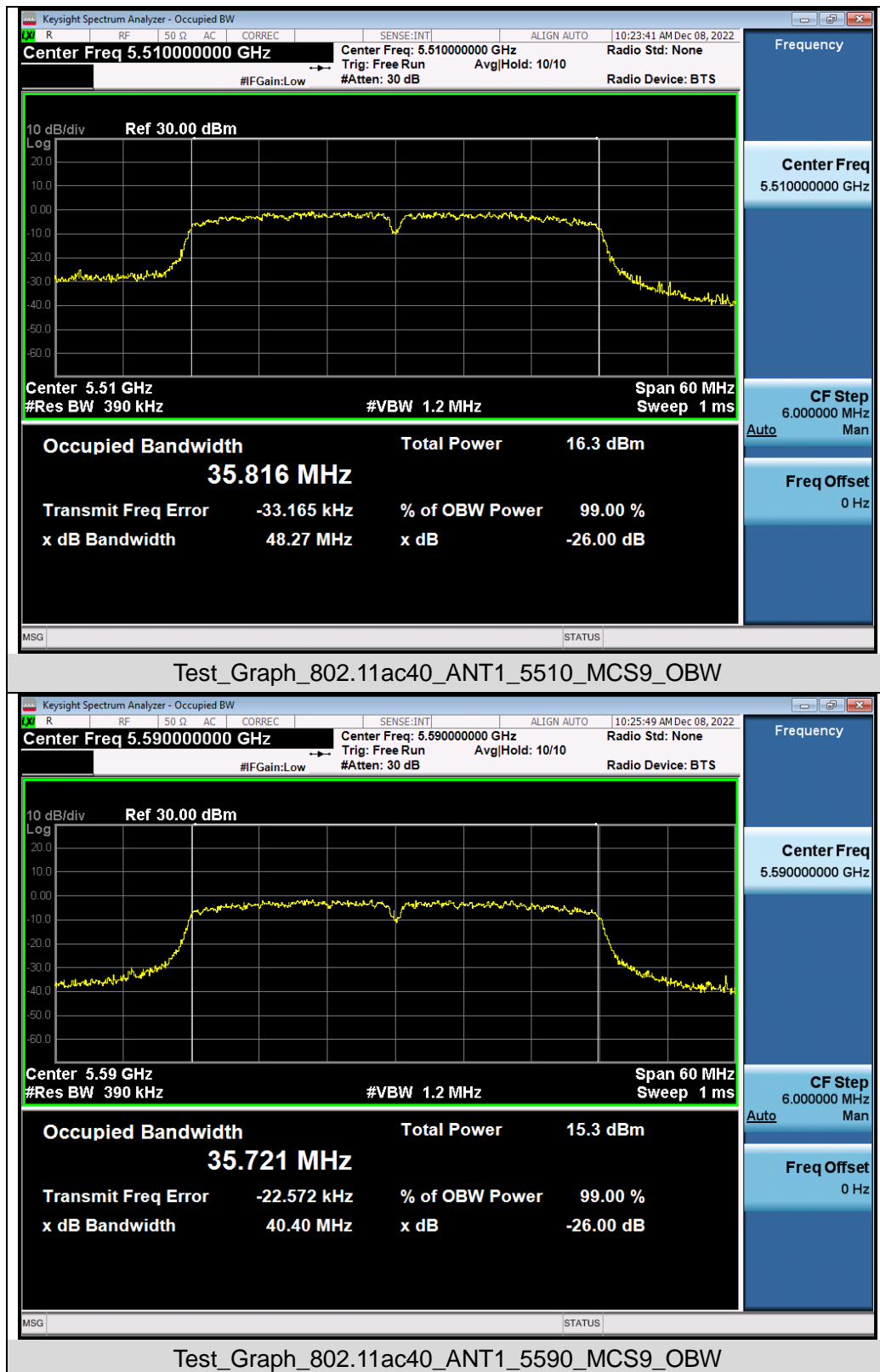


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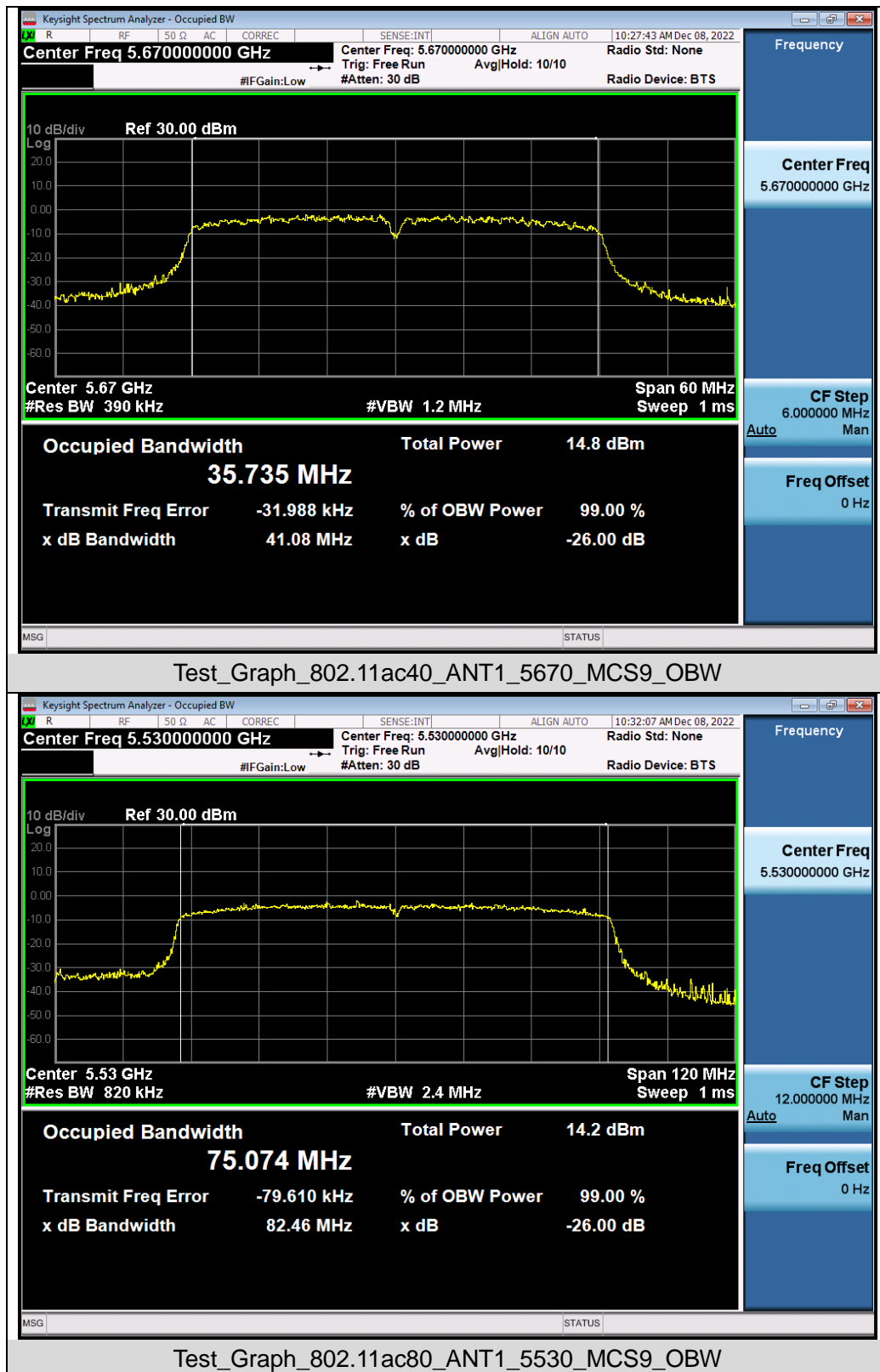


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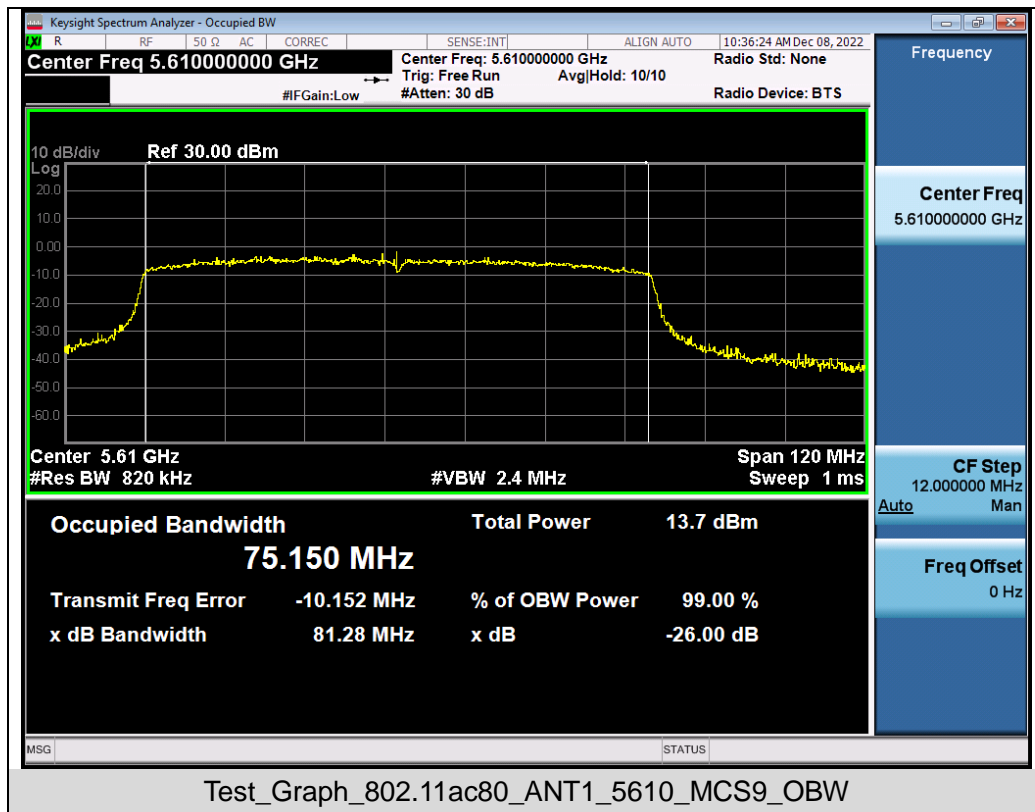


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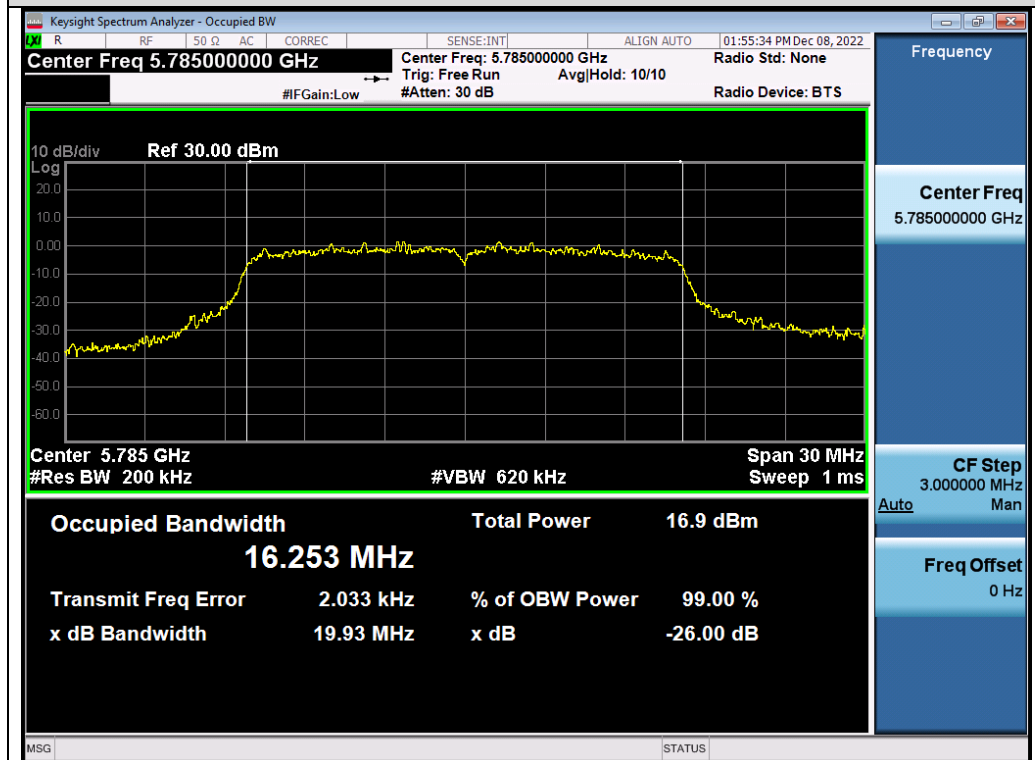
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Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz

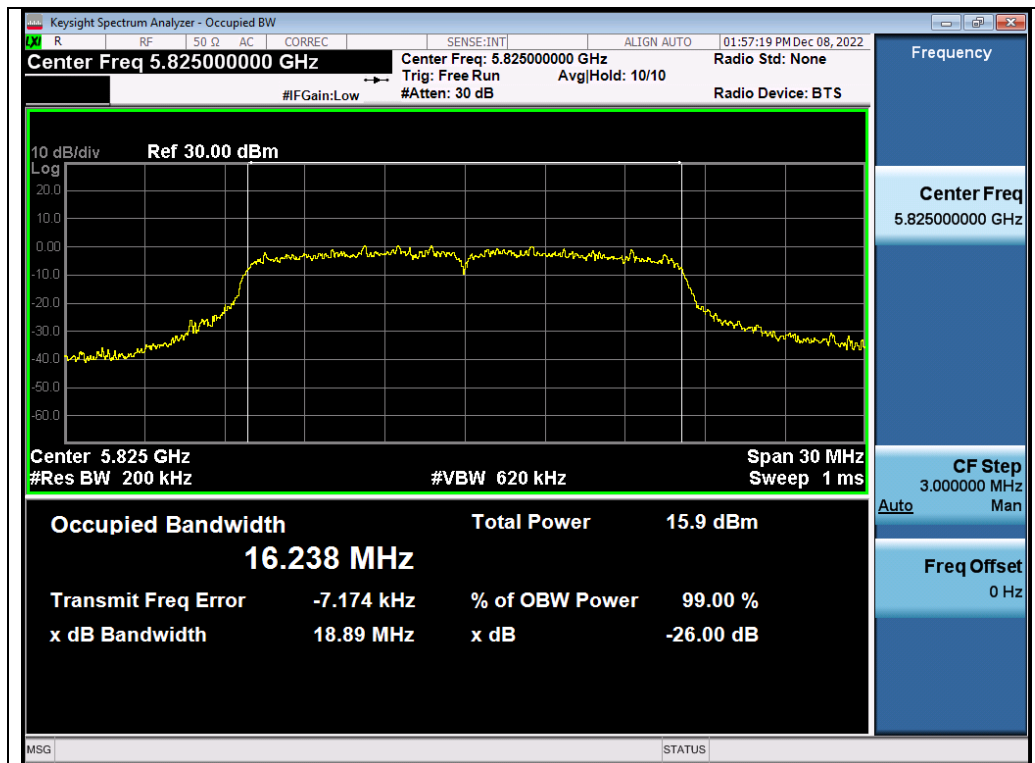


Test_Graph_802.11a_ANT1_5745_6Mbps_OBW

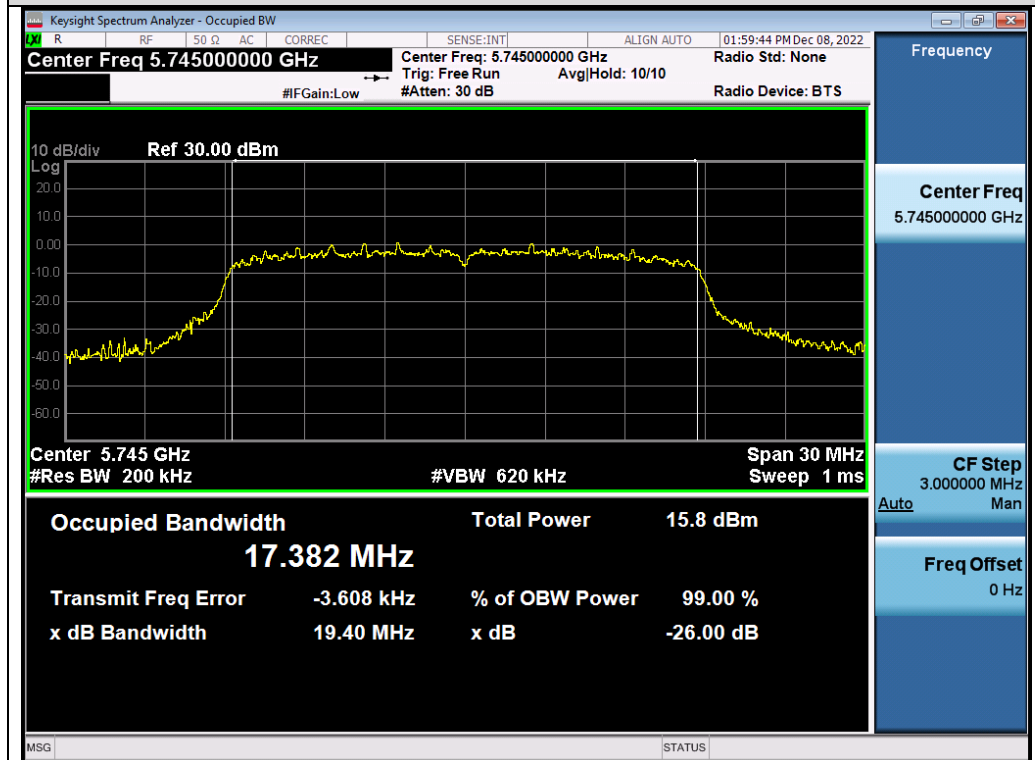


Test_Graph_802.11a_ANT1_5785_6Mbps_OBW

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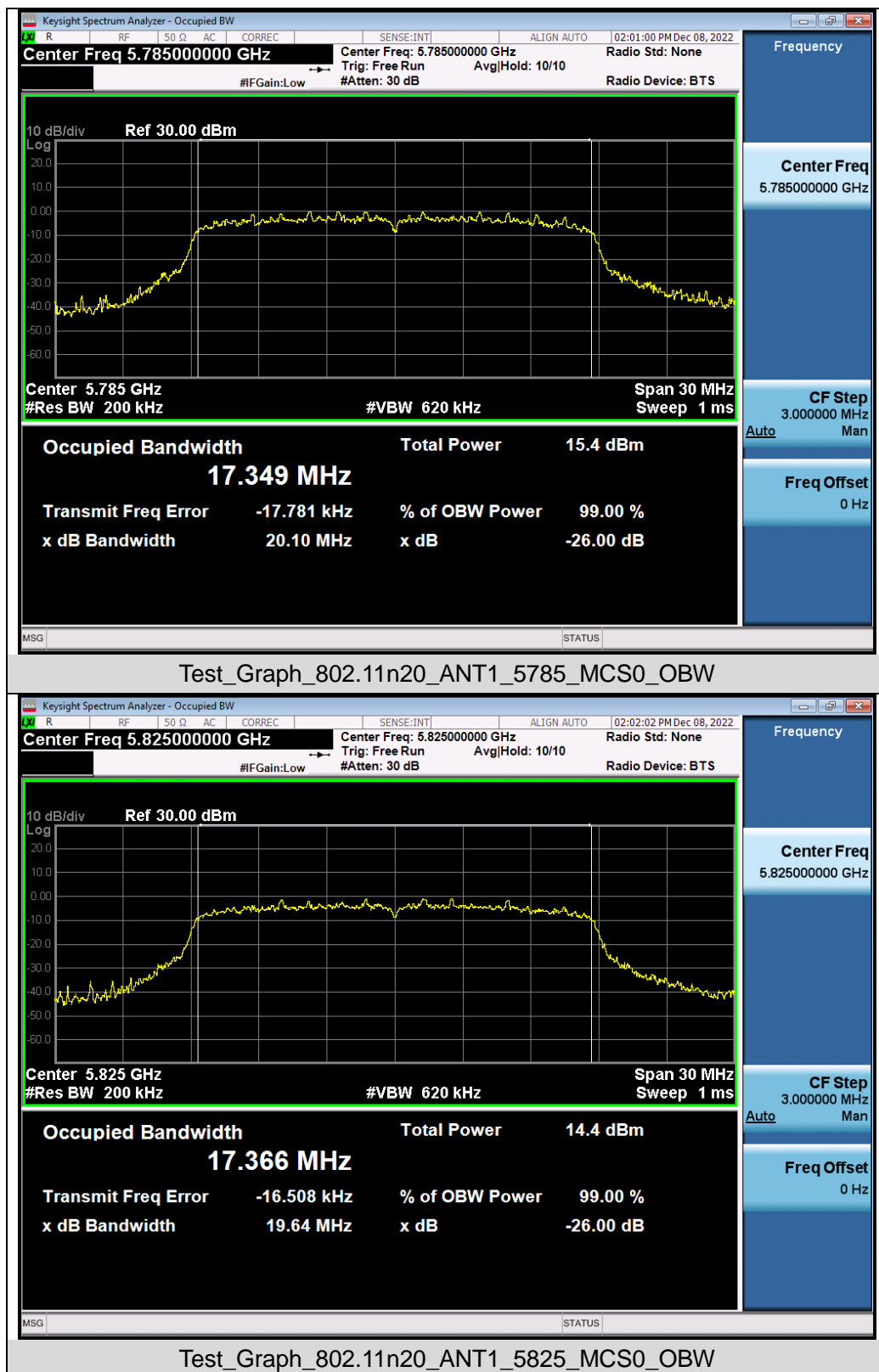


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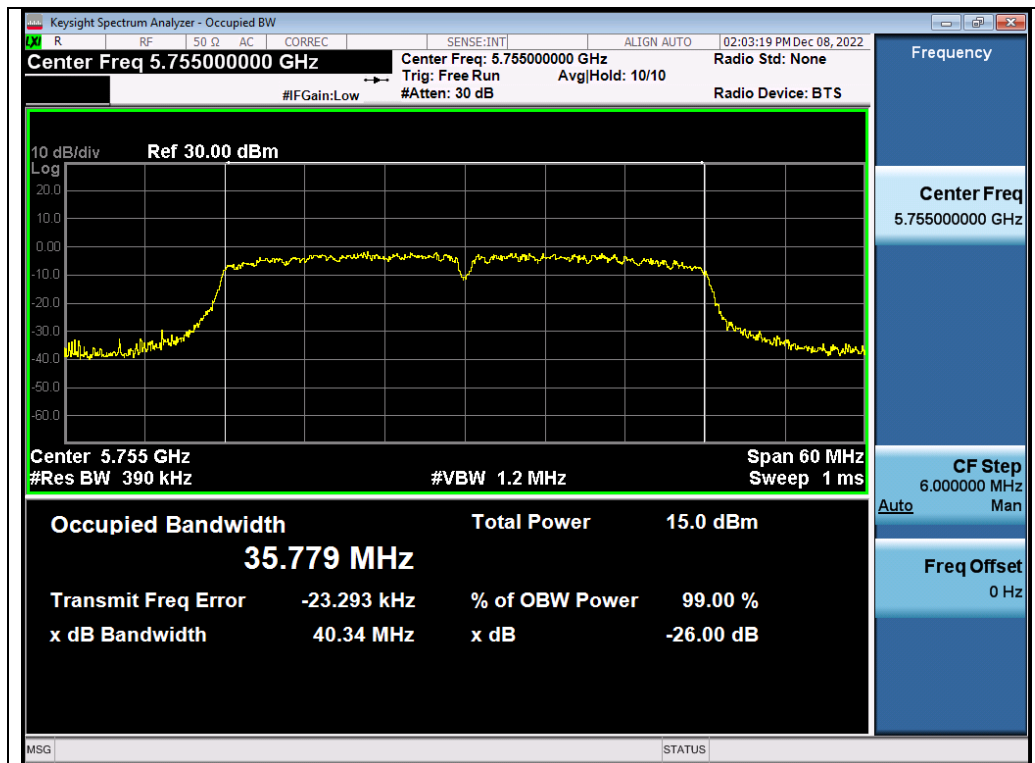
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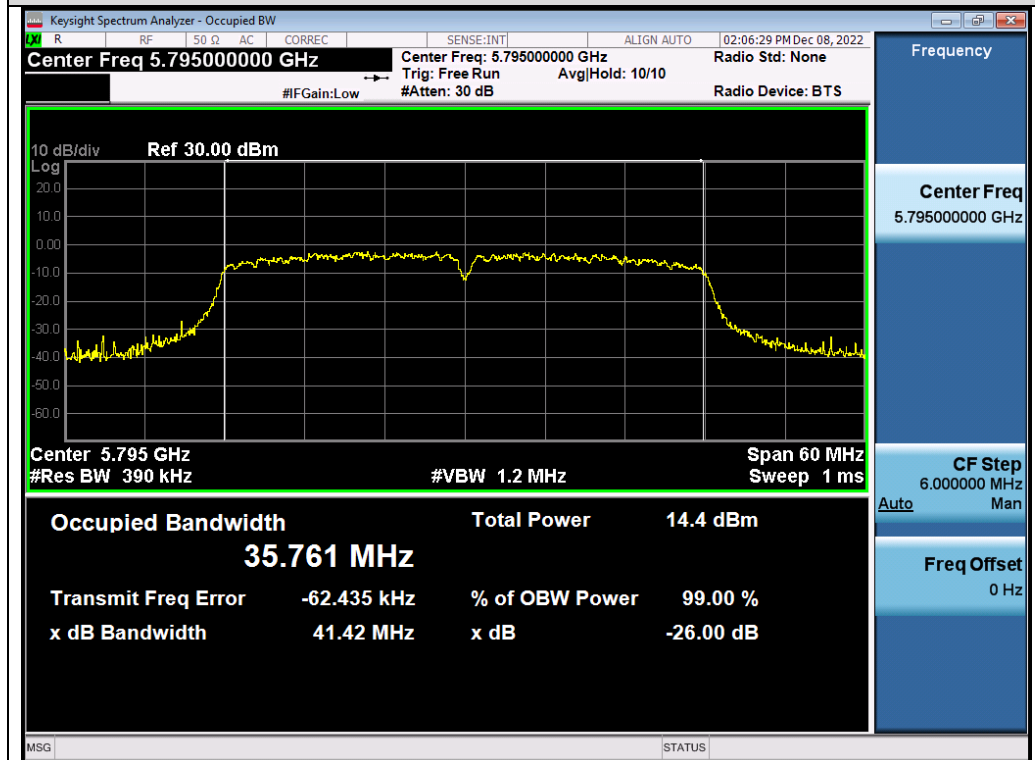


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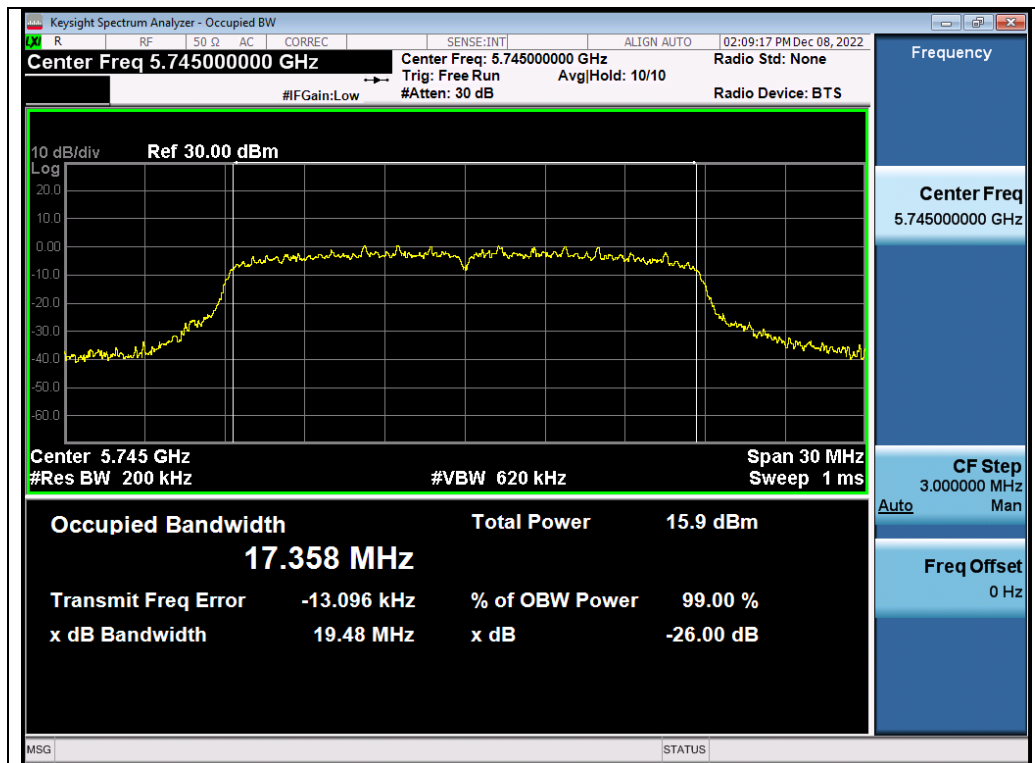


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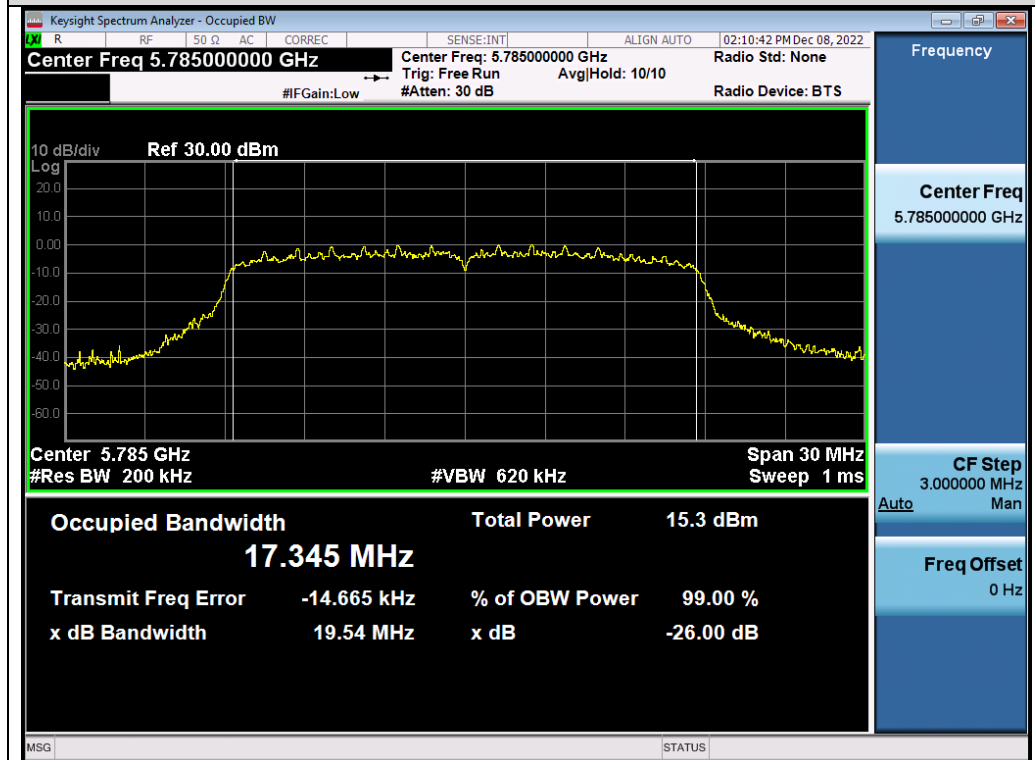


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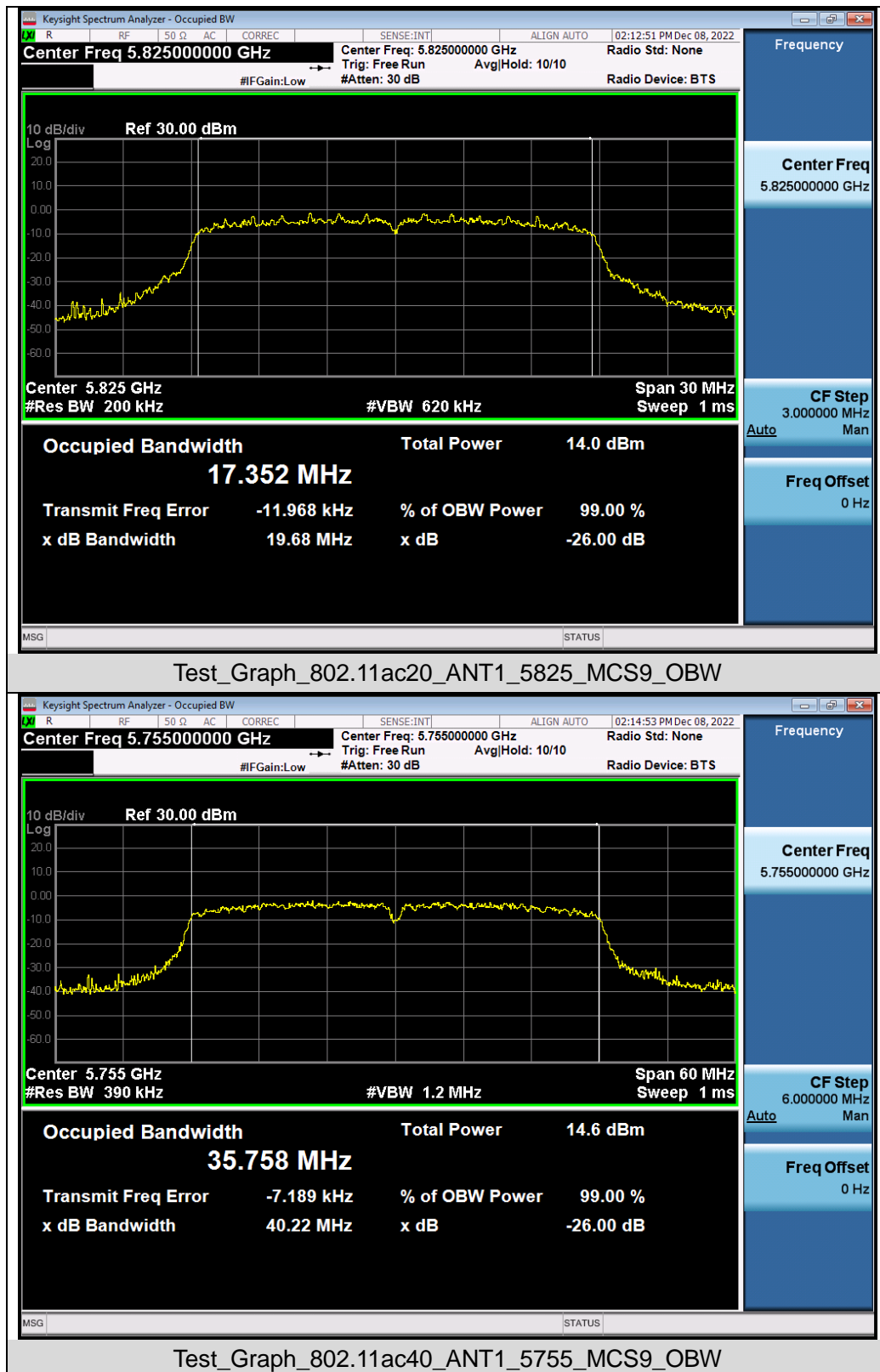


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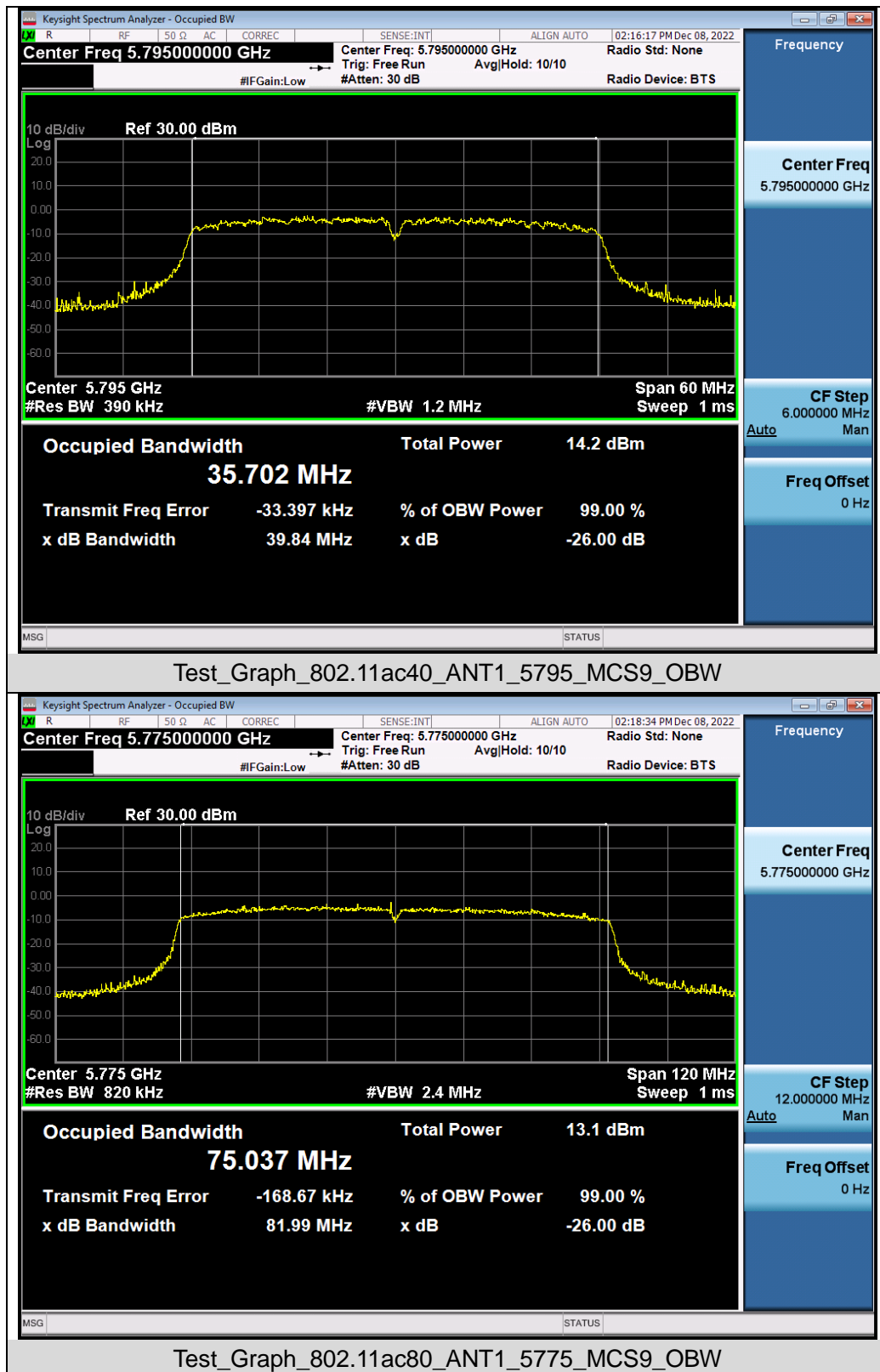
Test_Graph_802.11ac20_ANT1_5785_MCS0_OBW

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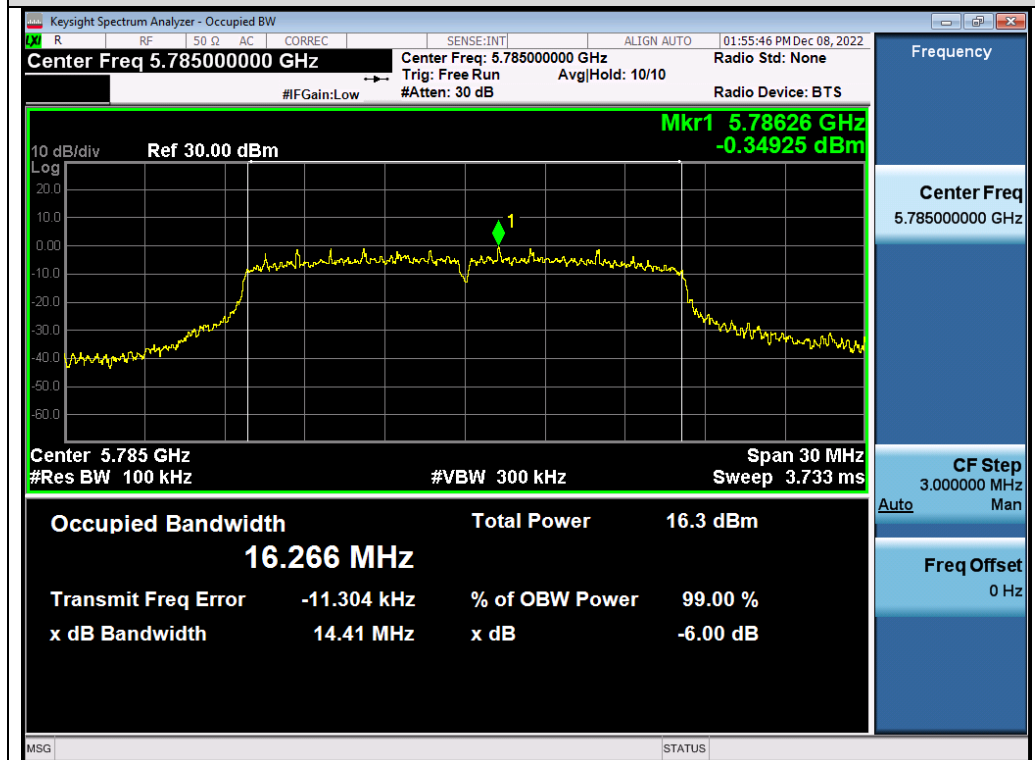
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Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz

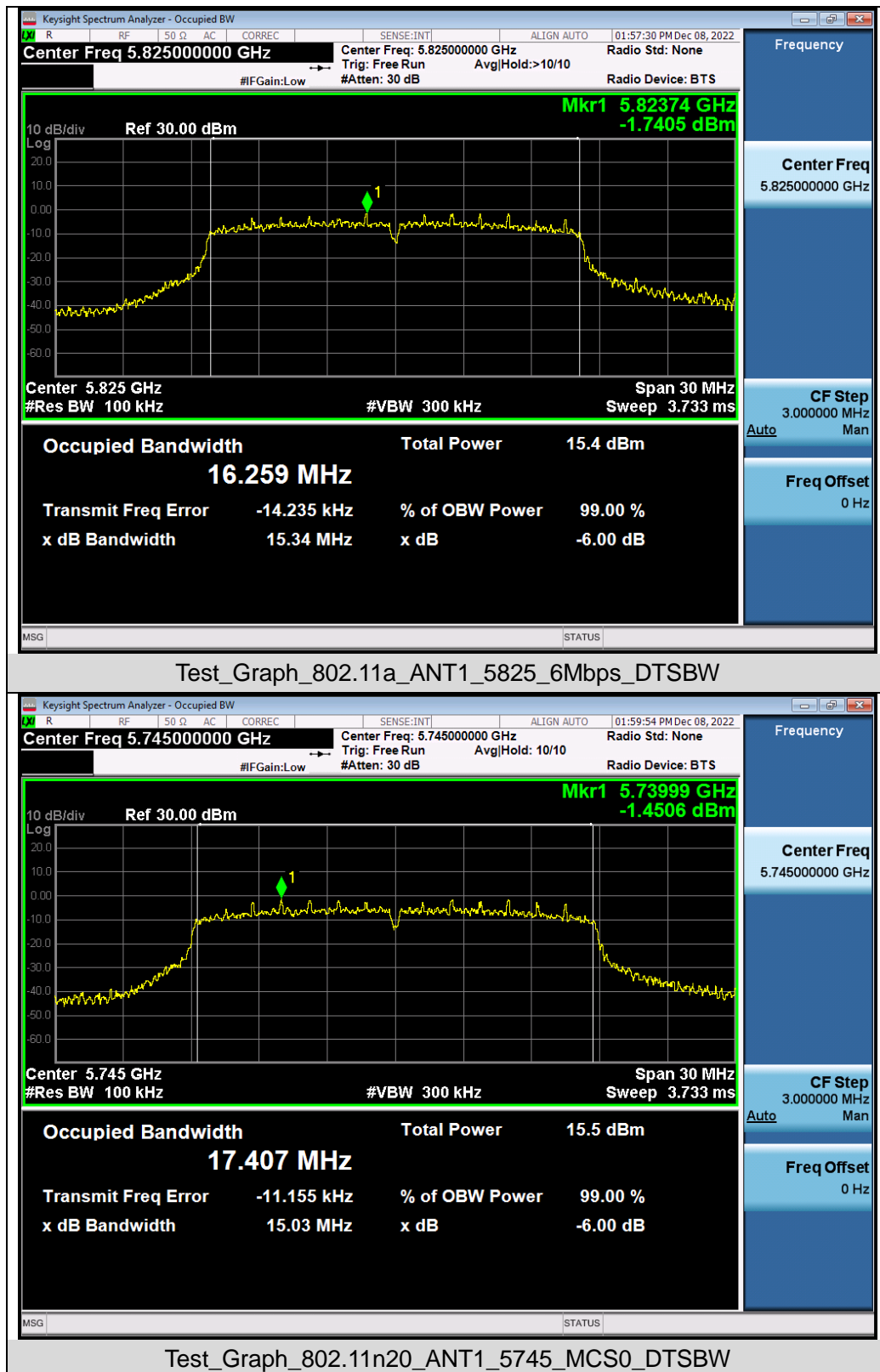


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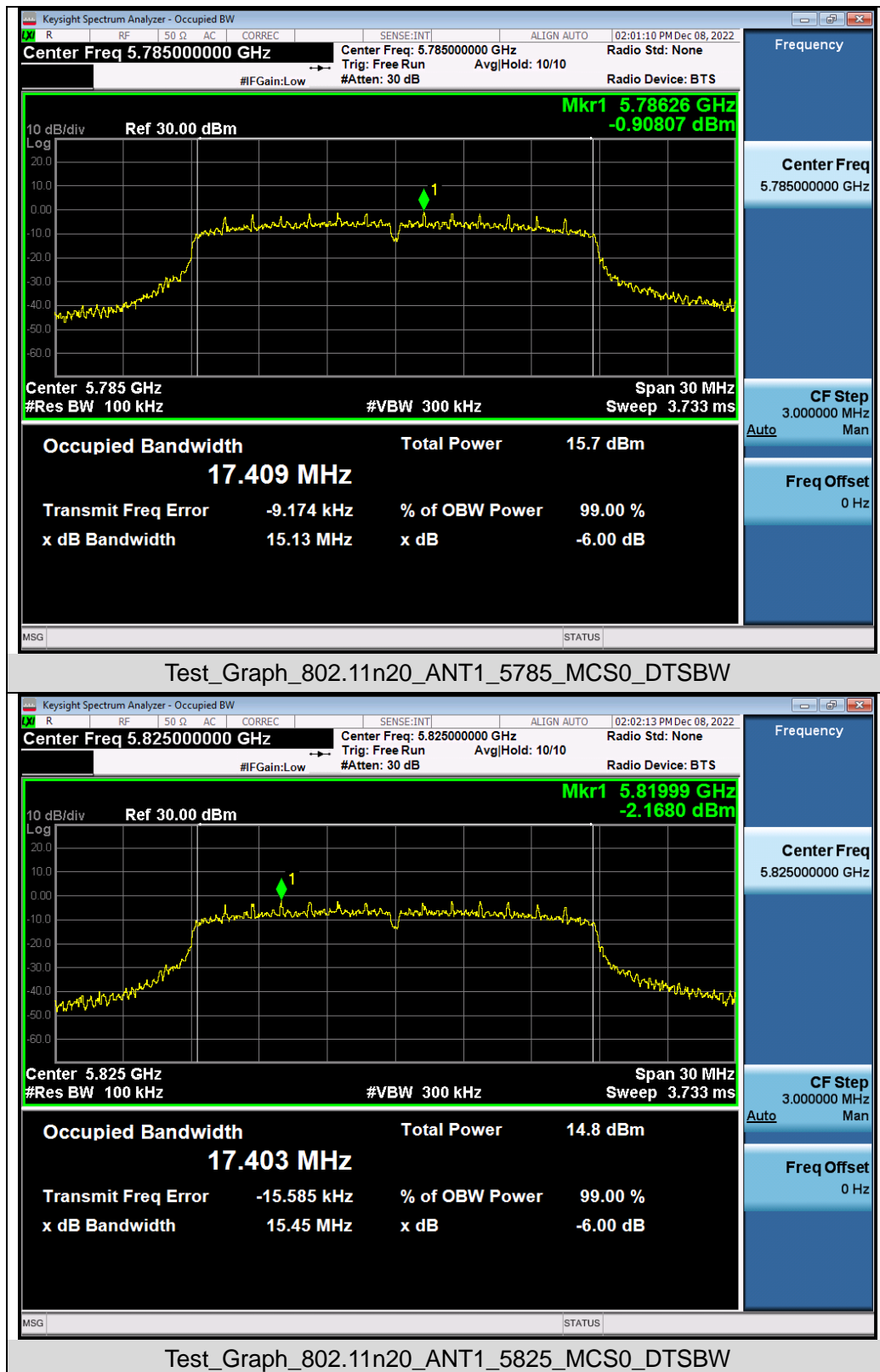
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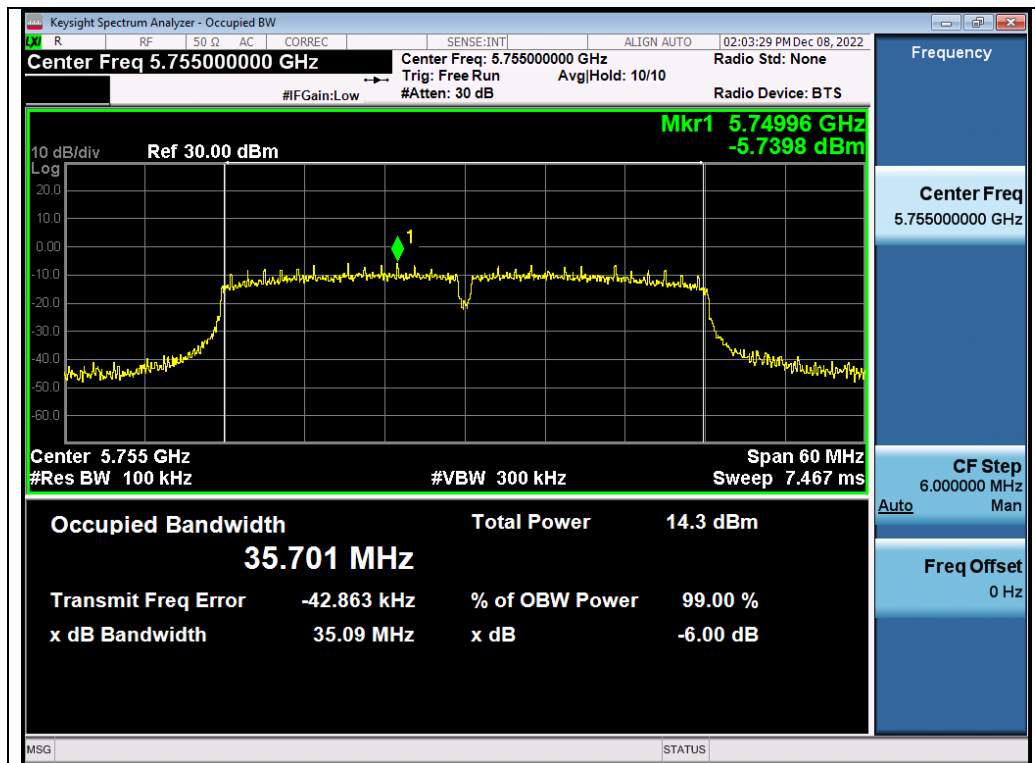


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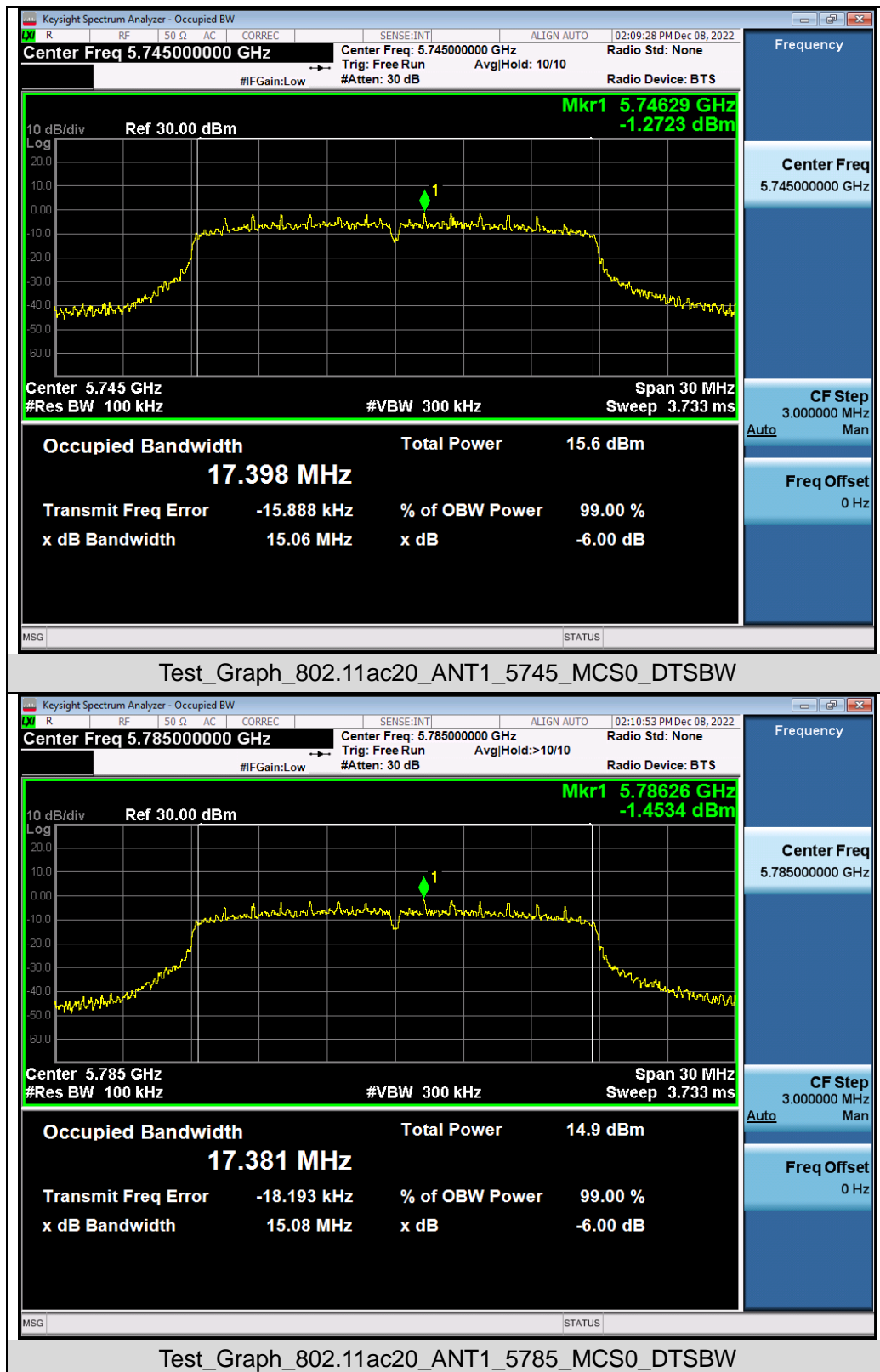
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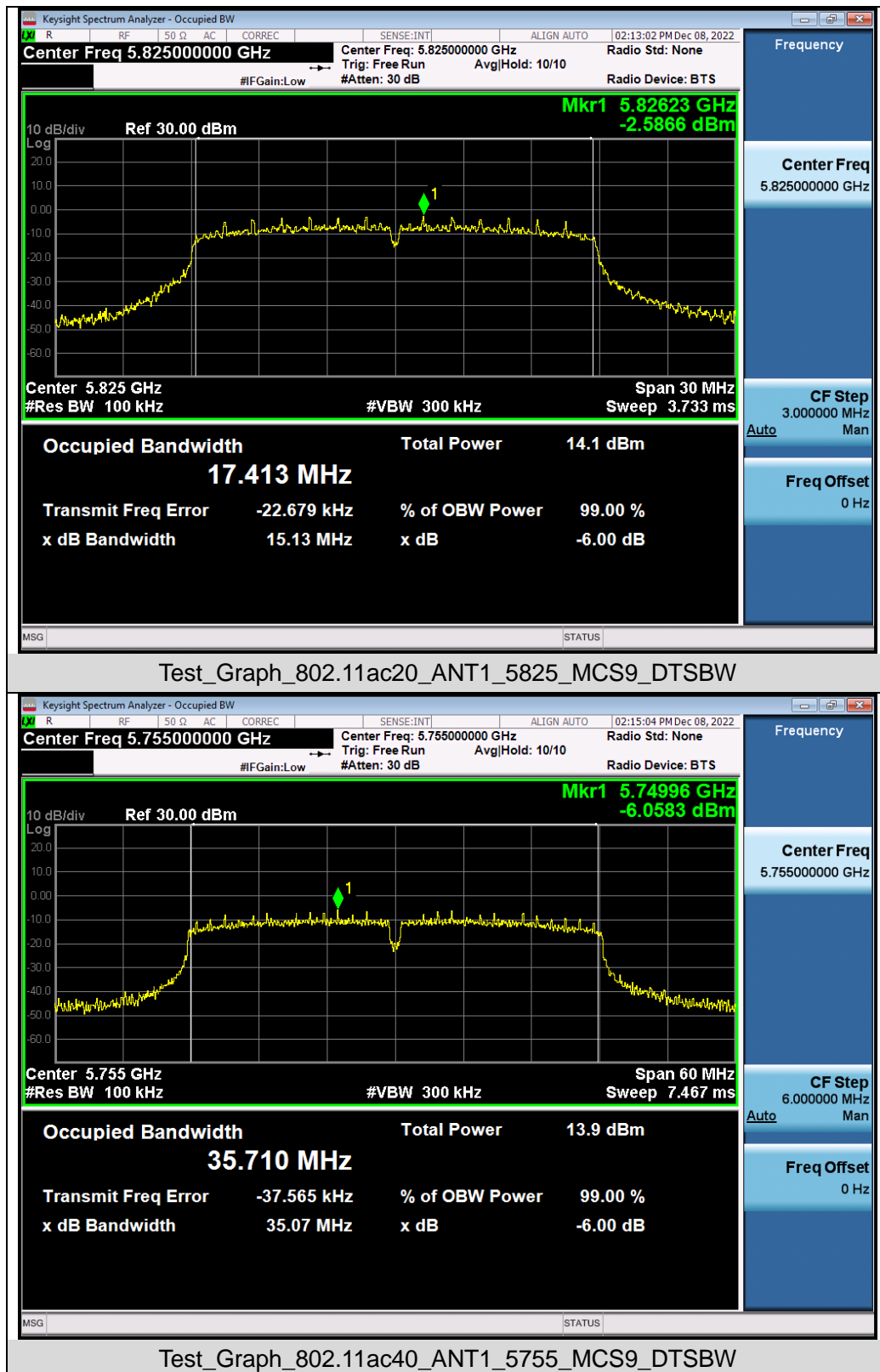
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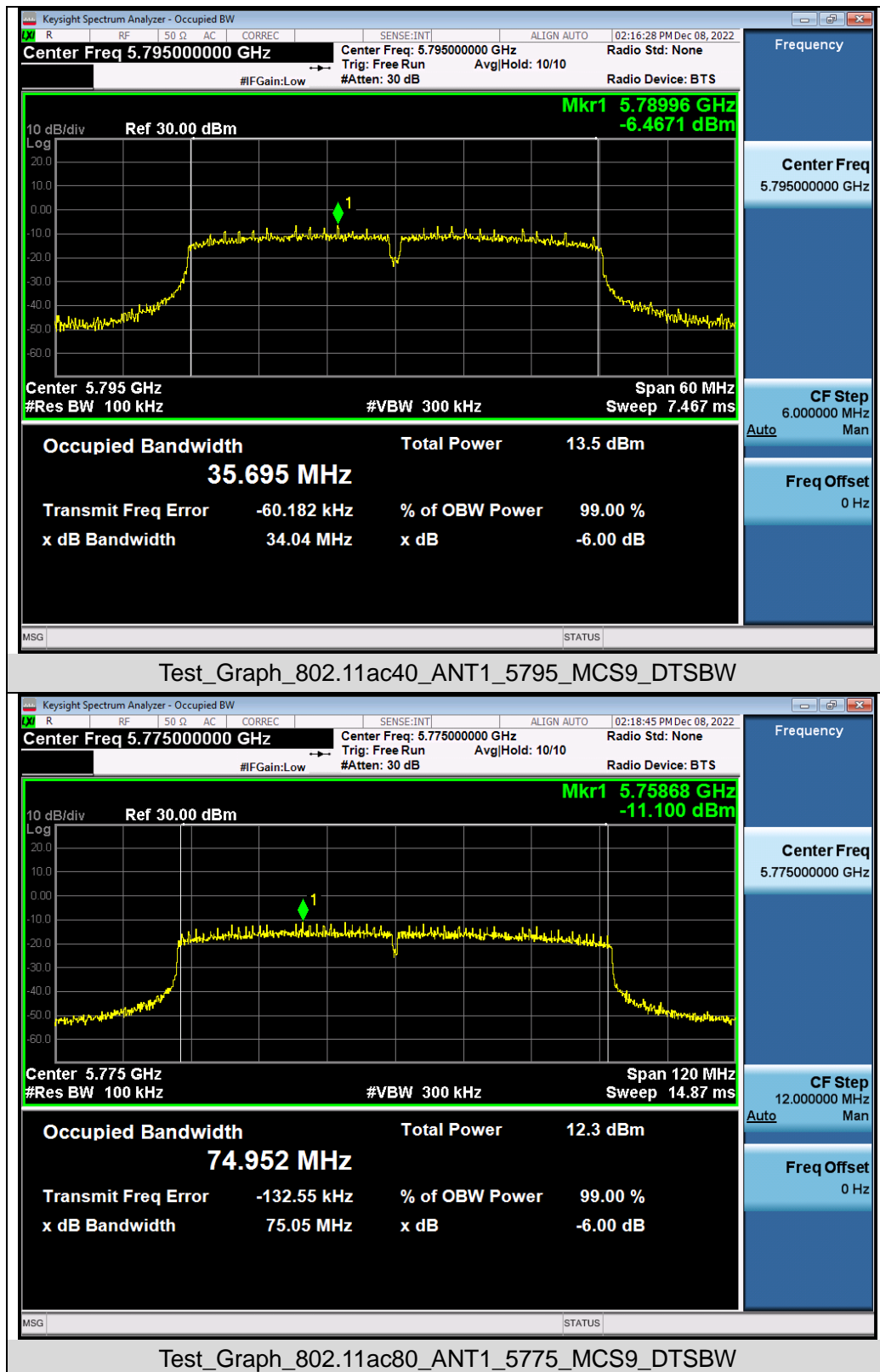
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9. MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

9.1. MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer to Section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

Refer to Section 6.

9.4. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	1.685	11	Pass
	5200	1.379	11	Pass
	5240	1.618	11	Pass
802.11n20	5180	0.367	11	Pass
	5200	0.004	11	Pass
	5240	0.593	11	Pass
802.11n40	5190	-3.424	11	Pass
	5230	-2.627	11	Pass
802.11ac20	5180	-0.641	11	Pass
	5200	-0.880	11	Pass
	5240	-0.190	11	Pass
802.11ac40	5190	-4.212	11	Pass
	5230	-3.968	11	Pass
802.11ac80	5210	-7.131	11	Pass

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Test Data of Conducted Output Power Density for band 5.2-5.35 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5260	1.324	11	Pass
	5300	1.167	11	Pass
	5320	1.577	11	Pass
802.11n20	5260	0.032	11	Pass
	5300	-0.026	11	Pass
	5320	0.005	11	Pass
802.11n40	5270	-3.925	11	Pass
	5310	-3.680	11	Pass
802.11ac20	5260	-0.913	11	Pass
	5300	-0.838	11	Pass
	5320	-1.014	11	Pass
802.11ac40	5270	-4.368	11	Pass
	5310	-4.035	11	Pass
802.11ac80	5290	-7.821	11	Pass

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Test Data of Conducted Output Power Density for band 5.47-5.725 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5500	1.139	11	Pass
	5600	0.473	11	Pass
	5700	-0.404	11	Pass
802.11n20	5500	0.689	11	Pass
	5600	-0.671	11	Pass
	5700	-1.729	11	Pass
802.11n40	5510	-2.964	11	Pass
	5590	-3.582	11	Pass
	5670	-4.234	11	Pass
802.11ac20	5500	0.319	11	Pass
	5600	-1.119	11	Pass
	5700	-2.119	11	Pass
802.11ac40	5510	-2.983	11	Pass
	5590	-4.015	11	Pass
	5670	-4.631	11	Pass
802.11ac80	5530	-7.442	11	Pass
	5610	-7.871	11	Pass

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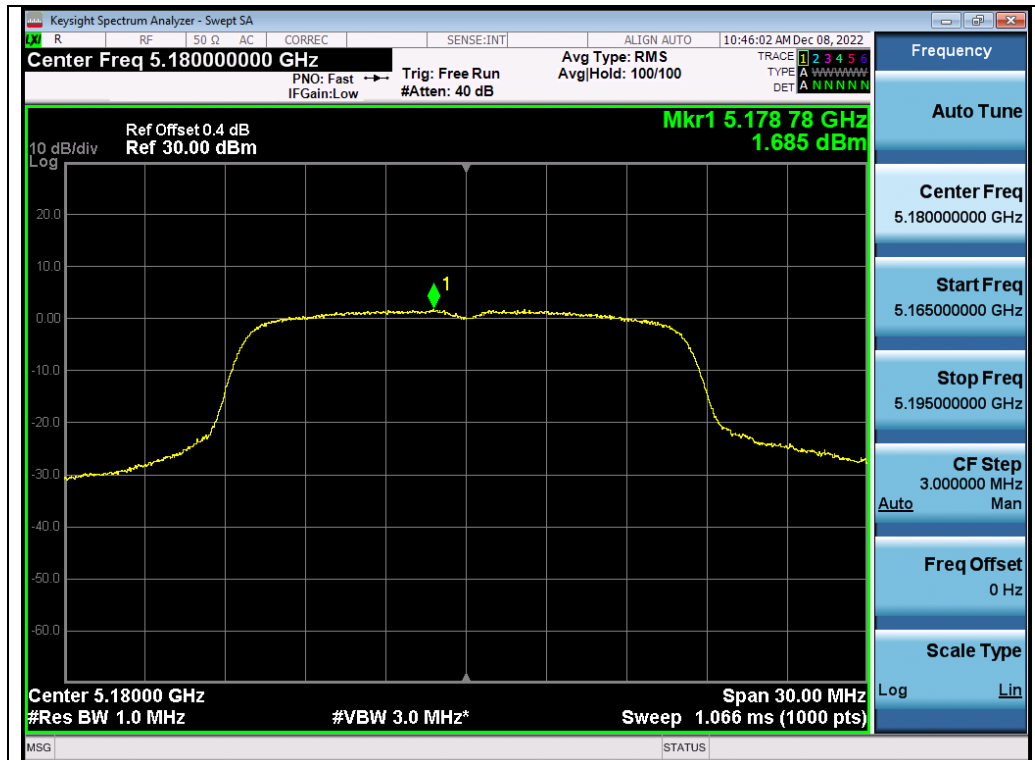
Test Data of Conducted Output Power Density for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-8.108	-1.118	30	Pass
	5785	-8.804	-1.814	30	Pass
	5825	-9.700	-2.710	30	Pass
802.11n20	5745	-8.936	-1.946	30	Pass
	5785	-9.495	-2.505	30	Pass
	5825	-10.756	-3.796	30	Pass
802.11n40	5755	-13.533	-6.543	30	Pass
	5795	-14.070	-7.080	30	Pass
802.11ac20	5745	-9.343	-2.353	30	Pass
	5785	-10.049	-3.059	30	Pass
	5825	-11.134	-4.144	30	Pass
802.11ac40	5755	-13.601	-6.611	30	Pass
	5795	-14.330	-7.340	30	Pass
802.11ac80	5775	-17.434	-10.444	30	Pass

Note: Power density(dBm/500kHz) = Power density(dBm/100kHz) +10*log(500/100).

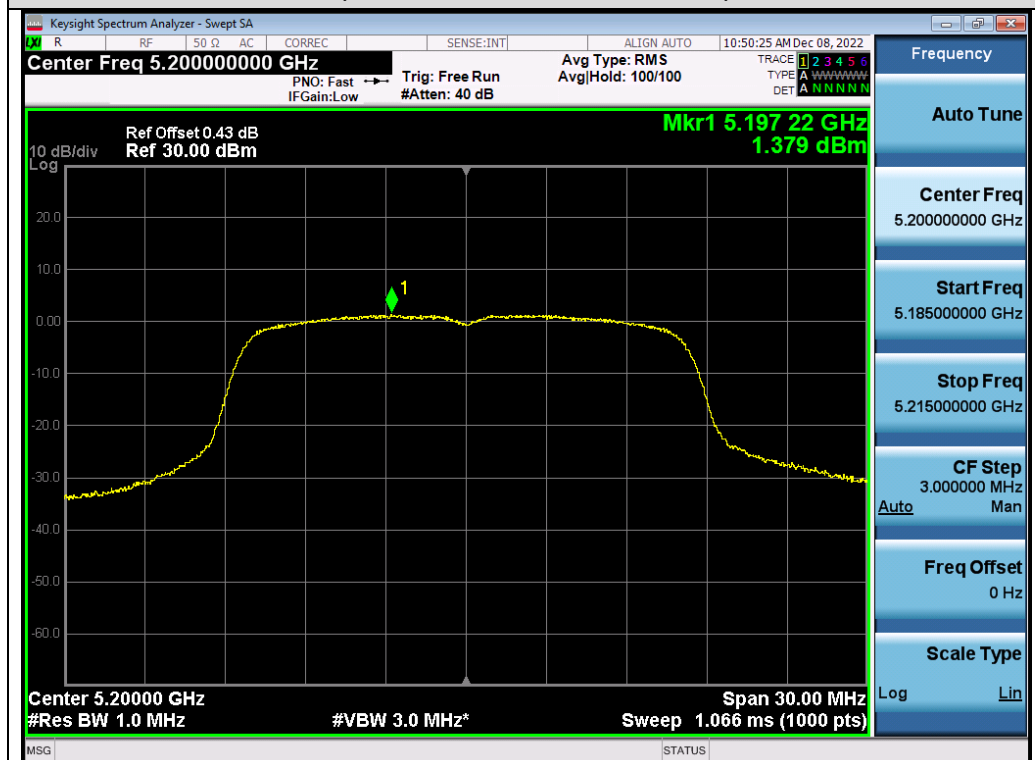
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Attestation of Global Compliance(Shenzhen)Co., Ltd
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz



Test_Graph_802.11a_ANT1_5180_6Mbps_PSD



Test_Graph_802.11a_ANT1_5200_6Mbps_PSD

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