
FCC Test Report

Report No.: AGC13525230201FE05

FCC ID : 2AATLK265B-PR
APPLICATION PURPOSE : Original Equipment
PRODUCT DESIGNATION : WiFi/BT module
BRAND NAME : FN-LINK
MODEL NAME : K265B-PR
APPLICANT : FN-LINK TECHNOLOGY LIMITED
DATE OF ISSUE : Jul. 08, 2023
STANDARD(S) : FCC Part 15.247
TEST PROCEDURE(S)
REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 08, 2023	Valid	Initial Release

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1. VERIFICATION OF CONFORMITY

Applicant	FN-LINK TECHNOLOGY LIMITED
Address	No.8, Litong Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan, CHINA
manufacturer	FN-LINK TECHNOLOGY LIMITED
Address	No.8, Litong Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan, CHINA
Factory	FN-LINK TECHNOLOGY LIMITED
Address	No.8, Litong Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan, CHINA
Product Designation	WiFi/BT module
Brand Name	FN-LINK
Test Model	K265B-PR
Date of receipt of test item	Feb. 12, 2023
Date of Test	Feb. 12, 2023 to Jul. 08, 2023
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 radiated emission limits of FCC Rules Part 15.247.

Prepared By



Alan Duan
(Project Engineer)

Jul. 08, 20232

Reviewed By



Calvin Liu
(Reviewer)

Jul. 08, 20232

Approved By



Max Zhang
(Authorized Officer)

Jul. 08, 20232

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2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as “WiFi/BT module”. It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Equipment Type	WLAN 2.4G
Frequency Band	2400MHz ~ 2483.5MHz
Operation Frequency	2412MHz ~ 2462MHz
Output Power (Average) -SISO	IEEE 802.11b:11.29dBm; IEEE 802.11g:11.64dBm; IEEE 802.11n(HT20):11.65dBm; IEEE 802.11n(HT40):11.70dBm IEEE 802.11ax (HE20):11.58dBm; IEEE 802.11ax(HE40):11.75dBm
Output Power (Peak)-SISO	IEEE 802.11b:14.71dBm; IEEE 802.11g:19.82dBm; IEEE 802.11n(HT20):19.82dBm; IEEE 802.11n(HT40):20.75dBm IEEE 802.11ax (HE20):21.54dBm; IEEE 802.11ax(HE40):21.67dBm
Output Power (Average) - MIMO	IEEE 802.11n(HT20):14.52dBm; IEEE 802.11n(HT40):14.47dBm IEEE 802.11ax (HE20):14.46dBm; IEEE 802.11ax(HE40):14.27dBm
Output Power (Peak)-MIMO	IEEE 802.11n(HT20):22.71dBm; IEEE 802.11n(HT40):23.51dBm IEEE 802.11ax (HE20):24.33dBm; IEEE 802.11ax(HE40):24.21dBm
Modulation	802.11b:DSSS(DQPSK, DBPSK, CCK) 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK) 802.11ax:OFDMA(1024-QAM,256-QAM,64-QAM, 16-QAM, QPSK, BPSK)
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ax: up to 574Mbps
Number of channels	11
Hardware Version	1.0
Software Version	1.0
Antenna Designation	FPC Antenna (Comply with requirements of the FCC part 15.203)
Antenna Gain	Refer to Chapter 2.10 of the report.
Number of transmit chain	2(802.11b/g/n/ax all used two antennas, 802.11b/g support SISO, but the 802.11n/ax support SISO)
Power Supply	DC 12V by adapter

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2.2. TABLE OF CARRIER FREQUENCIES

Frequency Band	Channel Number	Frequency
2400~2483.5MHZ	1	2412 MHZ
	2	2417 MHZ
	3	2422 MHZ
	4	2427 MHZ
	5	2432 MHZ
	6	2437 MHZ
	7	2442 MHZ
	8	2447 MHZ
	9	2452 MHZ
	10	2457 MHZ
	11	2462 MHZ

Note: For 20MHZ bandwidth system use Channel 1 to Channel 11. For 40MHZ bandwidth system use Channel 3 to Channel 9

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2.3. IEEE 802.11N MODULATION SCHEME

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Data rate(Mbps)	
									800nsGI	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0
6	1	64-QAM	3/4	6	312	648	234	489	58.5	121.5
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	Guard interval

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2.4. IEEE 802.11AX MODULATION SCHEME

Table 27-79—HE-MCSs for 242-tone RU, $N_{SS} = 1$

HE-MCS Index	DCM	Modulation	R	N_{BPSCS}	N_{SD}	N_{CBPS}	N_{DBPS}	Data rate (Mb/s)		
								0.8 μ s GI	1.6 μ s GI	3.2 μ s GI
0	1	BPSK	1/2	1	117	117	58	4.3	4.0	3.6
	0		1/2		234	234	117	8.6	8.1	7.3
1	1	QPSK	1/2	2	117	234	117	8.6	8.1	7.3
	0		1/2		234	468	234	17.2	16.3	14.6
2	N/A		3/4		234	468	351	25.8	24.4	21.9
3	1	16-QAM	1/2	4	117	468	234	17.2	16.3	14.6
	0		1/2		234	936	468	34.4	32.5	29.3
4	1		3/4		117	468	351	25.8	24.4	21.9
	0		3/4		234	936	702	51.6	48.8	43.9
5	N/A	64-QAM	2/3	6	234	1 404	936	68.8	65.0	58.5
6			3/4				1 053	77.4	73.1	65.8
7			5/6				1 170	86.0	81.3	73.1
8		256-QAM	3/4	8		1 872	1 404	103.2	97.5	87.8
9			5/6				1 560	114.7	108.3	97.5
10		1024-QAM	3/4	10		2 340	1 755	129.0	121.9	109.7
11			5/6				1 950	143.4	135.4	121.9

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	Guard interval

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Table 27-87—HE-MCSs for 484-tone RU, $N_{SS} = 1$

HE-MCS Index	DCM	Modulation	R	N_{BPSCS}	N_{SD}	N_{CBPS}	N_{DBPS}	Data rate (Mb/s)		
								0.8 μ s GI	1.6 μ s GI	3.2 μ s GI
0	1	BPSK	1/2	1	234	234	117	8.6	8.1	7.3
	0		1/2		468	468	234	17.2	16.3	14.6
1	1	QPSK	1/2	2	234	468	234	17.2	16.3	14.6
	0		1/2		468	936	468	34.4	32.5	29.3
2	N/A		3/4		468	936	702	51.6	48.8	43.9
3	1	16-QAM	1/2	4	234	936	468	34.4	32.5	29.3
	0		1/2		468	1 872	936	68.8	65.0	58.5
4	1		3/4		234	936	702	51.6	48.8	43.9
	0		3/4		468	1 872	1 404	103.2	97.5	87.8
5	N/A	64-QAM	2/3	6	468	2 808	1 872	137.6	130.0	117.0
6			3/4				2 106	154.9	146.3	131.6
7			5/6				2 340	172.1	162.5	146.3
8		256-QAM	3/4	8		3 744	2 808	206.5	195.0	175.5
9			5/6				3 120	229.4	216.7	195.0
10		1024-QAM	3/4	10		4 680	3 510	258.1	243.8	219.4
11			5/6				3 900	286.8	270.8	243.8

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	Guard interval

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

This submittal(s) (test report) is intended for **FCC ID: 2AATLK265B-PR** filing to comply with the FCC Part 15 requirements.

2.6. TEST METHODOLOGY

KDB 558074 D01 15.247 Meas Guidance v05: Guidance for compliance measurements on Digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules

ANSI C63.10:2013: American National Standard for Testing Unlicensed Wireless Devices

2.7. SPECIAL ACCESSORIES

Refer to section 5.2.

2.8. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.9. 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.

2.10. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna Type	Frequency Band (MHz)	TX Paths	Bandwidth (MHz)	Max Peak Gain (dBi)		Max Directional Gain (dBi)
				Ant 1	Ant 2	
2.4GWIFI FPC Antenna List (2.4GHz 2*2 MIMO)						
FPC Antenna	2400~2483.5	2	20, 40	2	3.64	6.65

Note 1: The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11n/ax mode.

Note 2: The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

If all antennas have the same gain, G_{ANT} , Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on devices:

$$\text{Array Gain} = 10 \log (N_{ANT} / N_{SS}) \text{ dB} = 3.01;$$

- For power measurements on IEEE 802.11 devices:

$$\text{Array Gain} = 0 \text{ dB for } N_{ANT} \leq 4;$$

$$\text{Array Gain} = 0 \text{ dB (i.e., no array gain) for channel widths } \geq 40 \text{ MHz for any } N_{ANT};$$

$$\text{Array Gain} = 5 \log(N_{ANT}/N_{SS}) \text{ dB or } 3 \text{ dB, whichever is less, for } 20 \text{ MHz channel widths with } N_{ANT} \geq 5.$$

If antenna gains are not equal, Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain..

2.11. DUTY CYCLE

2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Peak. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

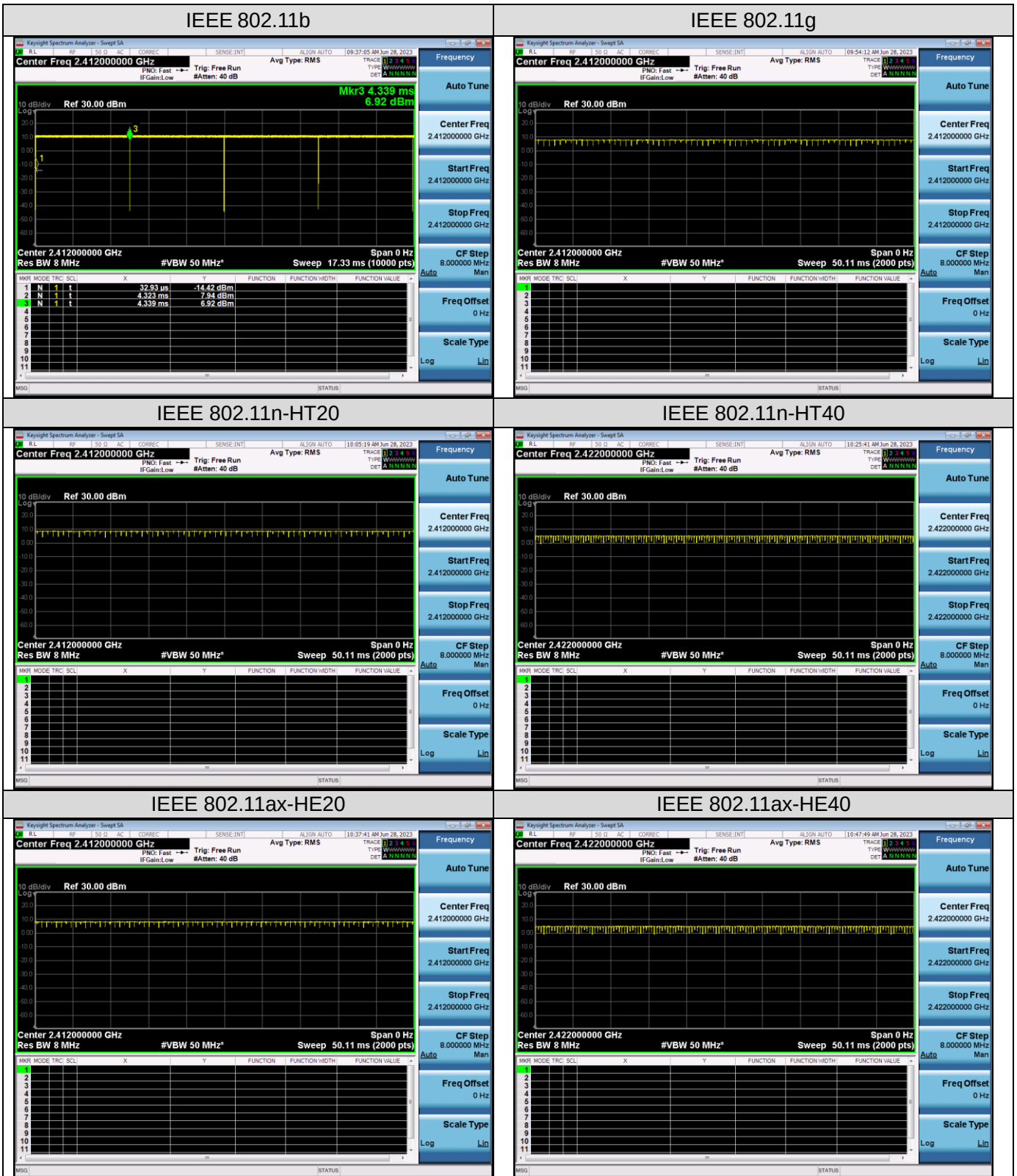
Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/ T Minimum VBW (kHz)	Average Factor (dB)
IEEE 802.11b	1	99.63	0.02	0.23	-0.03
IEEE 802.11g	6	100	-	-	-
IEEE 802.11n-HT20	MCS0	100	-	-	-
IEEE 802.11n-HT40	MCS0	100	-	-	-
IEEE 802.11n-HE20	MCS0	100	-	-	-
IEEE 802.11n-HE40	MCS0	100	-	-	-

Remark:

1. Duty Cycle factor = $10 * \log (1/ \text{Duty cycle})$ 2. Average factor = $20 \log_{10} \text{Duty Cycle}$

The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value

The test plots as follows:



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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	$U_c = \pm 2 \%$
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2 \%$

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4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel transmitting (TX)
2	Middle channel transmitting (TX)
3	High channel transmitting (TX)

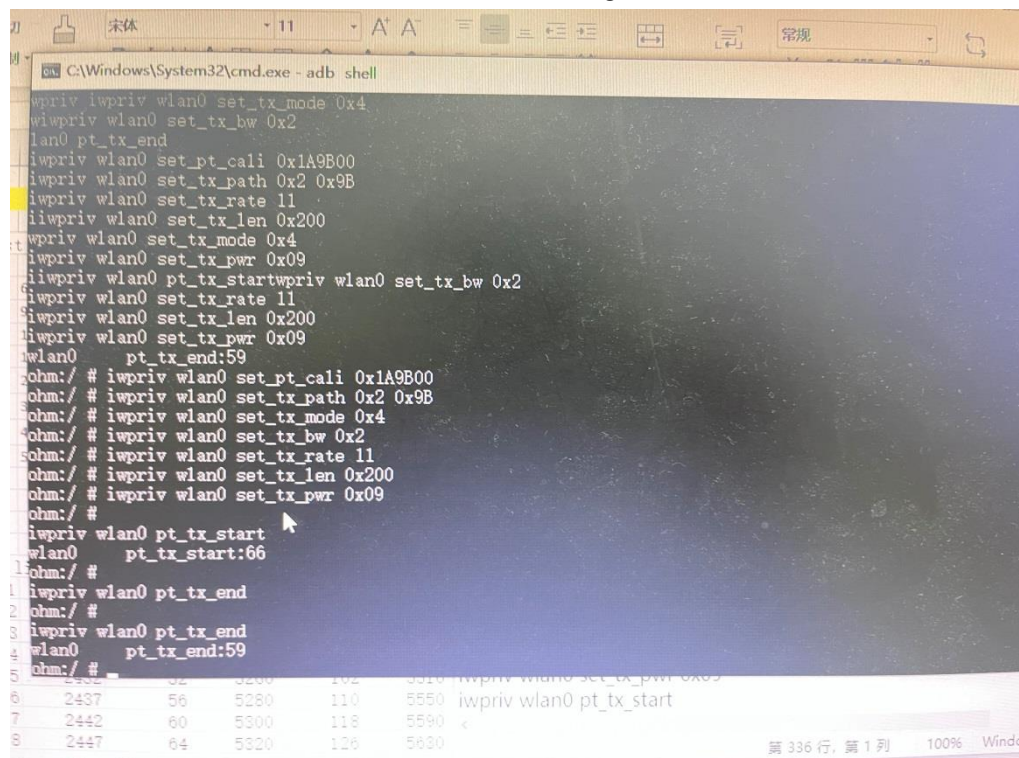
Note:

Transmit by 802.11b with Data rate (1/2/5.5/11)
Transmit by 802.11g with Data rate (6/9/12/18/24/36/48/54)
Transmit by 802.11n (20MHz) with Data rate (6.5/13/19.5/26/39/52/58.5/65)
Transmit by 802.11n (40MHz) with Data rate (13.5/27/40.5/54/81/108/121.5/135)
Transmit by 802.11ax(20MHz) with Data rate MCS0-MCS11
Transmit by 802.11ax(40MHz) with Data rate MCS0-MCS11
The test channel for 20MHZ bandwidth system is channel 1, 6 and 11.
The test channel for 40MHZ bandwidth system is channel 3, 6 and 9.

Note:

1. The EUT has been set to operate continuously on the lowest, middle and highest operation frequency 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



```

C:\Windows\System32\cmd.exe - adb shell
iwpriv wlan0 set_tx_mode 0x4
iwpriv wlan0 set_tx_bw 0x2
lan0 pt_tx_end
iwpriv wlan0 set_pt_cali 0x1A9B00
iwpriv wlan0 set_tx_path 0x2 0x9B
iwpriv wlan0 set_tx_rate 11
iwpriv wlan0 set_tx_len 0x200
iwpriv wlan0 set_tx_mode 0x4
iwpriv wlan0 set_tx_pwr 0x09
iwpriv wlan0 pt_tx_start
iwpriv wlan0 set_tx_bw 0x2
iwpriv wlan0 set_tx_rate 11
iwpriv wlan0 set_tx_len 0x200
iwpriv wlan0 set_tx_pwr 0x09
wlan0 pt_tx_end:59
ohm:/ # iwpriv wlan0 set_pt_cali 0x1A9B00
ohm:/ # iwpriv wlan0 set_tx_path 0x2 0x9B
ohm:/ # iwpriv wlan0 set_tx_mode 0x4
ohm:/ # iwpriv wlan0 set_tx_bw 0x2
ohm:/ # iwpriv wlan0 set_tx_rate 11
ohm:/ # iwpriv wlan0 set_tx_len 0x200
ohm:/ # iwpriv wlan0 set_tx_pwr 0x09
ohm:/ #
iwpriv wlan0 pt_tx_start
wlan0 pt_tx_start:66
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iwpriv wlan0 pt_tx_end
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iwpriv wlan0 pt_tx_end
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ohm:/ #

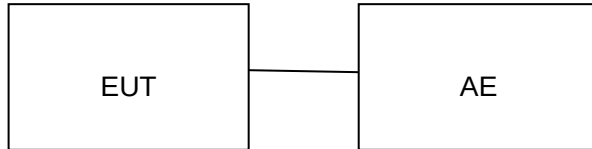
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5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	WiFi/BT module	K265B-PR	2AATLK265B-PR	EUT
2	Adapter	JF012WR-0900150UH	Input: AC100-240V,50-60Hz Output: DC12V2A	AE

5.3. SUMMARY OF TEST RESULTS

Item	FCC Rules	Description Of Test	Result
1	§15.203&15.247(b)(4)	Antenna Equipment	Pass
2	§15.247 (b)(1)	RF Output Power	Pass
3	§15.247 (a)(1)	6 dB Bandwidth	Pass
4	§15.247 (e)	Power Spectral Density	Pass
4	§15.247 (d)	Conducted Spurious Emission	Pass
5	§15.209	Radiated Emission& Band Edge	Pass
6	§15.207	AC Power Line Conducted Emission	Pass

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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	Aug. 04, 2022	Aug. 03, 2023
LISN	R&S	ESH2-Z5	100086	Jun. 03, 2023	Jun. 02, 2024
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	Feb. 18, 2023	Feb. 17, 2024
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Aug. 04, 2022	Aug. 03, 2023
2.4GHz Filter	EM Electronics	N/A	N/A	Mar. 18, 2022	Mar. 19, 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. 11, 2024
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2023	Apr. 22, 2024
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 01, 2022	Sep. 02, 2024
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 05, 2023	Jan. 04, 2025
Test software	Tonscend	JS32-RE	Ver.2.5	N/A	N/A

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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/>

7. RF OUTPUT POWER MEASUREMENT

7.1 MEASUREMENT LIMITS

According to Section (b)(3) of the FCC PART15.247 standard:

For DTSSs employing digital modulation techniques operating in the bands 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W.

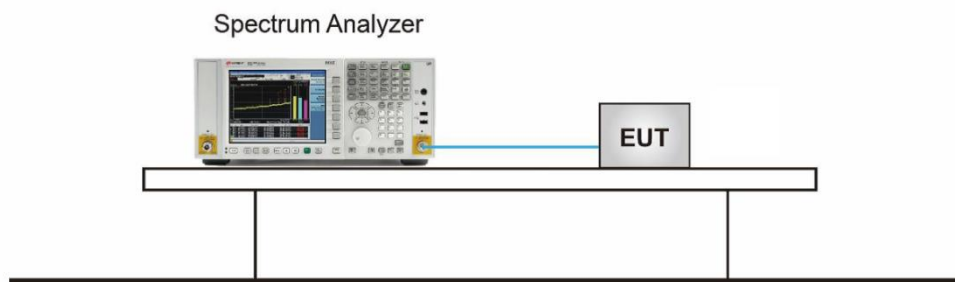
7.2 MEASUREMENT PROCEDURE

1. Connect EUT RF output port to power sensor.
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. Set the gated average detector for average power measurement and peak detector for peak power measurement.
5. Record the maximum power from the software.

Note :

The EUT was tested according to ANSI C63.10 (2013) for compliance to FCC 47CFR 15.247 requirements.

7.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



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7.4. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power-ANT 1					
Test Mode	Test Channel (MHz)	Average Power (dBm)	Peak Power (dBm)	Limits (dBm)	Pass or Fail
802.11b	2412	11.02	14.49	≤30	Pass
	2437	11.29	14.71	≤30	Pass
	2462	11.06	14.64	≤30	Pass
802.11g	2412	10.76	18.97	≤30	Pass
	2437	11.64	19.82	≤30	Pass
	2462	11.10	19.33	≤30	Pass
802.11n20	2412	11.65	19.82	≤30	Pass
	2437	11.56	19.76	≤30	Pass
	2462	11.17	19.42	≤30	Pass
802.11n40	2422	11.70	20.75	≤30	Pass
	2437	11.45	20.47	≤30	Pass
	2452	11.32	20.35	≤30	Pass
802.11ax20	2412	11.41	21.32	≤30	Pass
	2437	11.58	21.54	≤30	Pass
	2462	11.03	20.92	≤30	Pass
802.11ax40	2422	11.35	21.35	≤30	Pass
	2437	11.49	21.40	≤30	Pass
	2452	11.75	21.67	≤30	Pass

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Test Data of Conducted Output Power-ANT 2					
Test Mode	Test Channel (MHz)	Average Power (dBm)	Peak Power (dBm)	Limits (dBm)	Pass or Fail
802.11b	2412	11.26	14.59	≤30	Pass
	2437	10.45	13.96	≤30	Pass
	2462	10.47	13.88	≤30	Pass
802.11g	2412	11.08	19.27	≤30	Pass
	2437	10.90	19.06	≤30	Pass
	2462	10.93	19.09	≤30	Pass
802.11n20	2412	11.37	19.57	≤30	Pass
	2437	10.84	19.05	≤30	Pass
	2462	10.85	19.05	≤30	Pass
802.11n40	2422	11.21	20.24	≤30	Pass
	2437	10.64	19.67	≤30	Pass
	2452	10.79	19.84	≤30	Pass
802.11ax20	2412	11.49	21.32	≤30	Pass
	2437	10.80	20.64	≤30	Pass
	2462	10.79	20.61	≤30	Pass
802.11ax40	2422	10.92	20.96	≤30	Pass
	2437	10.70	20.70	≤30	Pass
	2452	10.70	20.68	≤30	Pass

Test Data of Conducted Output Power-MIMO					
Test Mode	Test Channel (MHz)	Average Power (dBm)	Peak Power (dBm)	Limits (dBm)	Pass or Fail
802.11n20	2412	14.52	22.71	≤30	Pass
	2437	14.23	22.43	≤30	Pass
	2462	14.02	22.25	≤30	Pass
802.11n40	2422	14.47	23.51	≤30	Pass
	2437	14.07	23.10	≤30	Pass
	2452	14.07	23.11	≤30	Pass
802.11ax20	2412	14.46	24.33	≤30	Pass
	2437	14.22	24.12	≤30	Pass
	2462	13.92	23.78	≤30	Pass
802.11ax40	2422	14.15	24.17	≤30	Pass
	2437	14.12	24.07	≤30	Pass
	2452	14.27	24.21	≤30	Pass

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8. 6DB BANDWIDTH MEASUREMENT

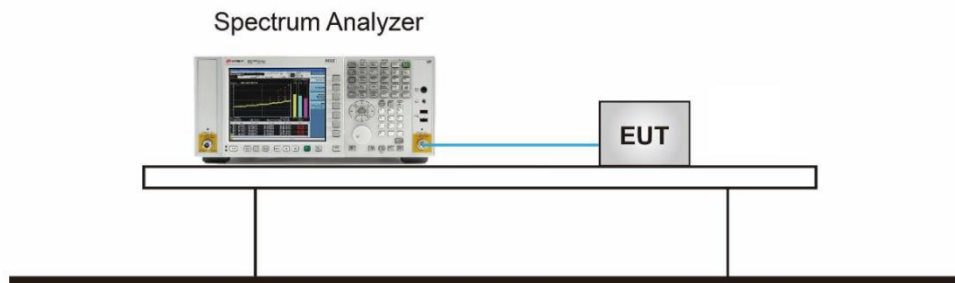
8.1 MEASUREMENT LIMITS

The minimum 6dB bandwidth shall be at least 500 kHz.

8.2 MEASUREMENT PROCEDURE

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. For 6dB Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * \text{RBW}$.
6. Detector = peak
7. Trace mode = max hold.
8. Sweep = auto couple.
9. Allow the trace to stabilize.
10. Measure and record the results in the test report.

8.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



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8.4. MEASUREMENT RESULTS

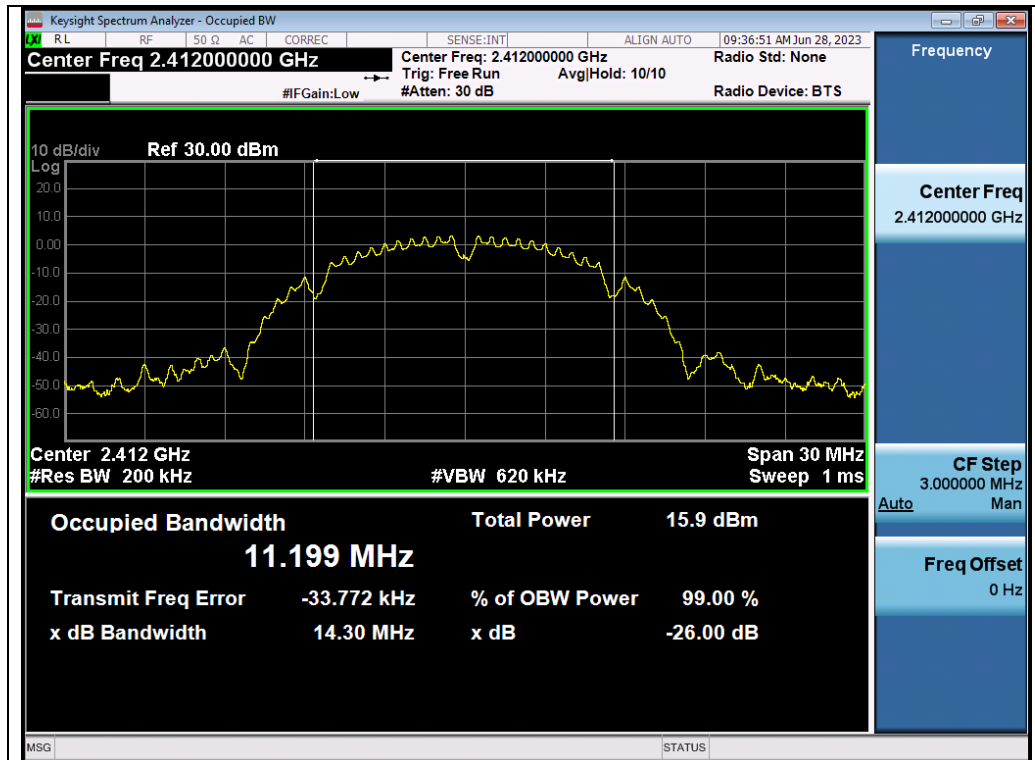
Test Data of Occupied Bandwidth and DTS Bandwidth-ANT 1					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-6dB Bandwidth (MHz)	-6dB Limits (MHz)	Pass or Fail
802.11b	2412	11.199	7.568	≥0.5	Pass
	2437	11.156	7.576	≥0.5	Pass
	2462	11.249	8.054	≥0.5	Pass
802.11g	2412	16.510	16.33	≥0.5	Pass
	2437	16.512	16.32	≥0.5	Pass
	2462	16.502	16.33	≥0.5	Pass
802.11n20	2412	17.626	17.29	≥0.5	Pass
	2437	17.621	17.27	≥0.5	Pass
	2462	17.617	17.30	≥0.5	Pass
802.11n40	2422	36.185	36.13	≥0.5	Pass
	2437	36.251	36.26	≥0.5	Pass
	2452	36.199	36.38	≥0.5	Pass
802.11ax20	2412	18.905	18.15	≥0.5	Pass
	2437	18.886	18.42	≥0.5	Pass
	2462	18.894	18.32	≥0.5	Pass
802.11ax40	2422	37.713	37.69	≥0.5	Pass
	2437	37.646	37.53	≥0.5	Pass
	2452	37.659	36.97	≥0.5	Pass

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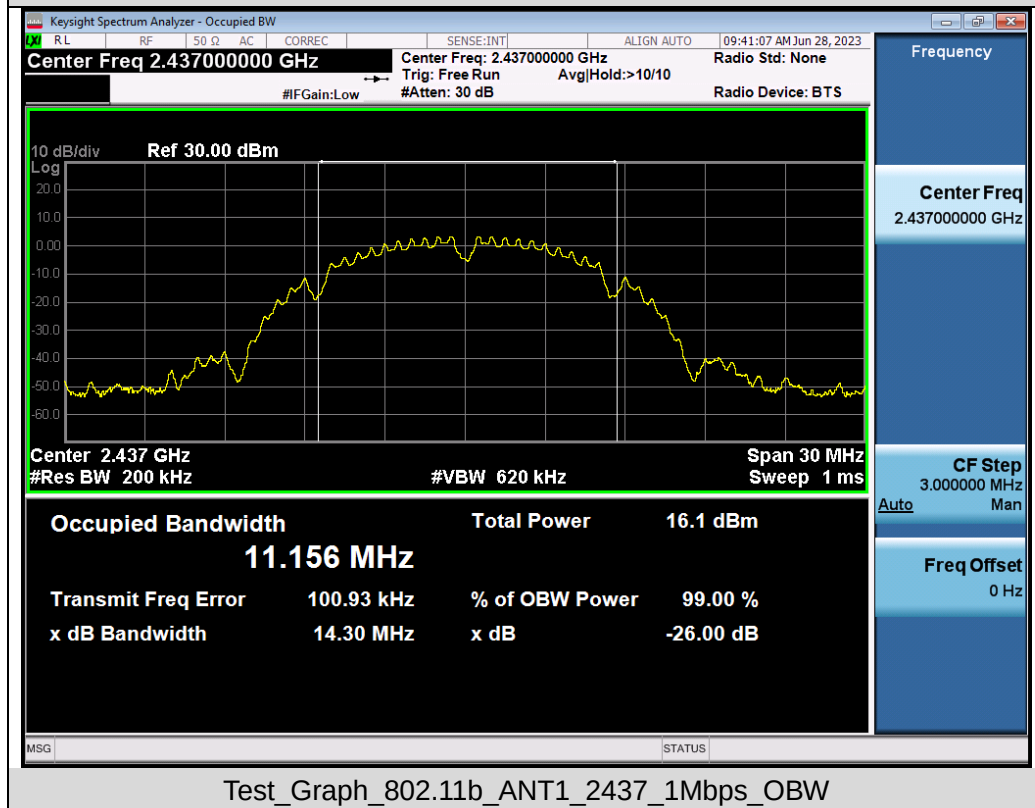
Test Data of Occupied Bandwidth and DTS Bandwidth-ANT 2					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-6dB Bandwidth (MHz)	-6dB Limits (MHz)	Pass or Fail
802.11b	2412	12.715	8.092	≥0.5	Pass
	2437	12.707	9.032	≥0.5	Pass
	2462	12.705	8.558	≥0.5	Pass
802.11g	2412	16.498	16.32	≥0.5	Pass
	2437	16.498	16.32	≥0.5	Pass
	2462	16.486	16.33	≥0.5	Pass
802.11n20	2412	17.613	17.27	≥0.5	Pass
	2437	17.616	17.28	≥0.5	Pass
	2462	17.624	17.28	≥0.5	Pass
802.11n40	2422	36.212	36.19	≥0.5	Pass
	2437	36.268	36.40	≥0.5	Pass
	2452	36.222	36.19	≥0.5	Pass
802.11ax20	2412	18.901	18.22	≥0.5	Pass
	2437	18.882	18.23	≥0.5	Pass
	2462	18.928	18.06	≥0.5	Pass
802.11ax40	2422	37.708	37.73	≥0.5	Pass
	2437	37.685	37.64	≥0.5	Pass
	2452	37.723	37.70	≥0.5	Pass

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Test Graphs of Occupied Bandwidth

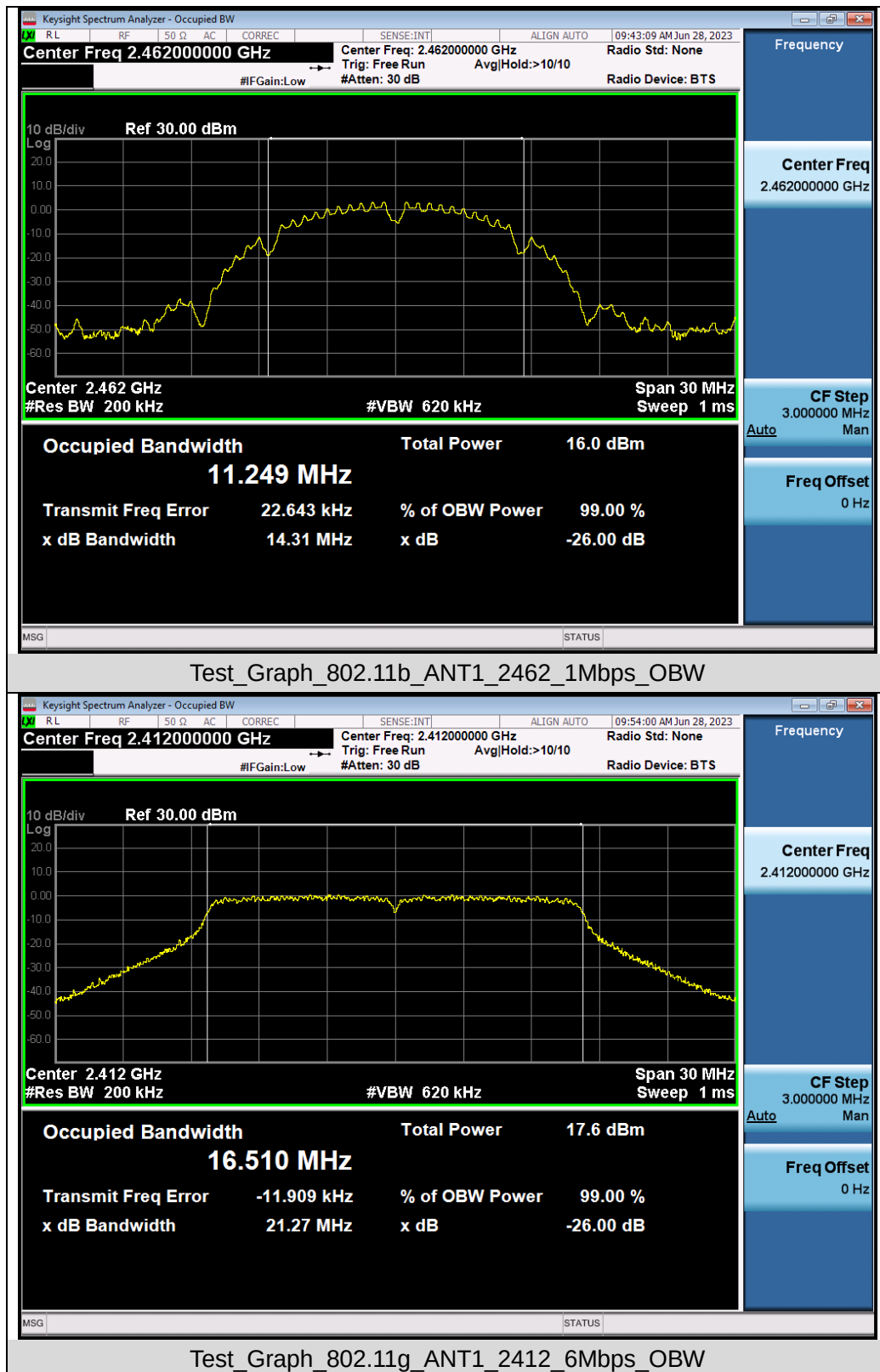


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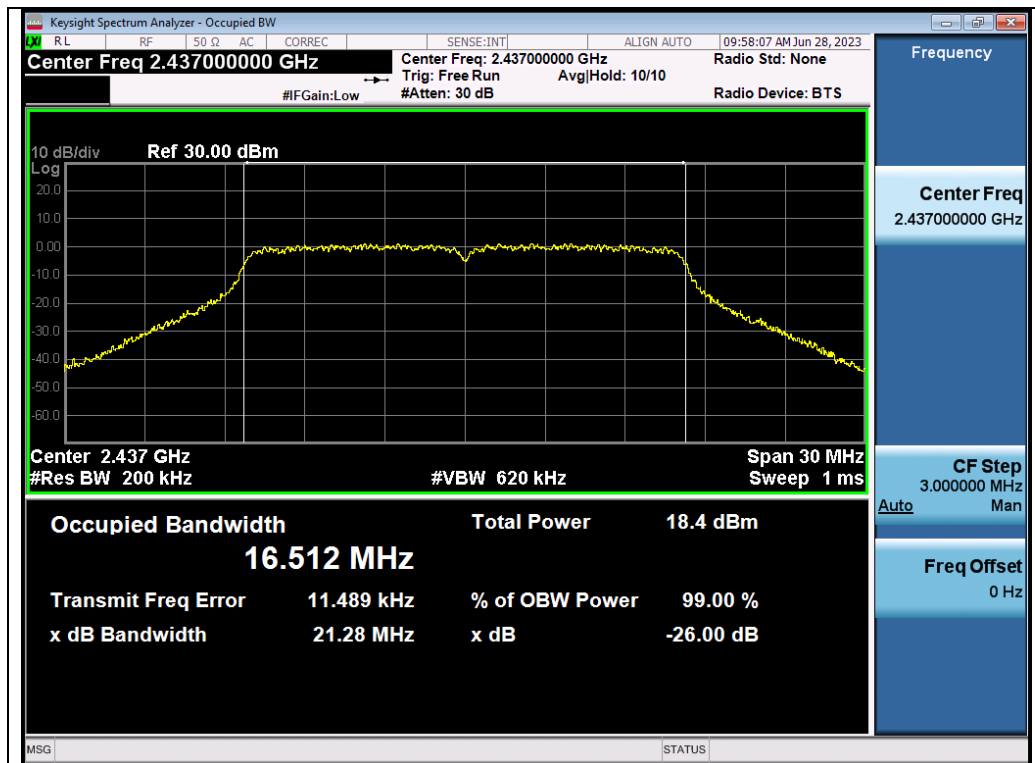


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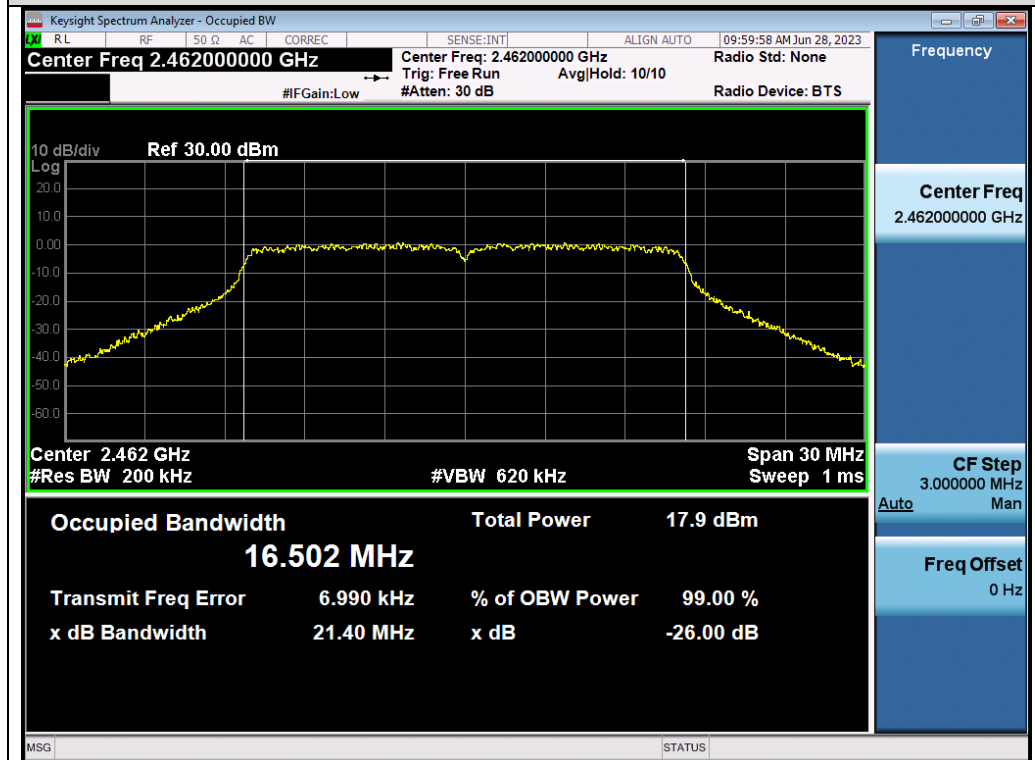
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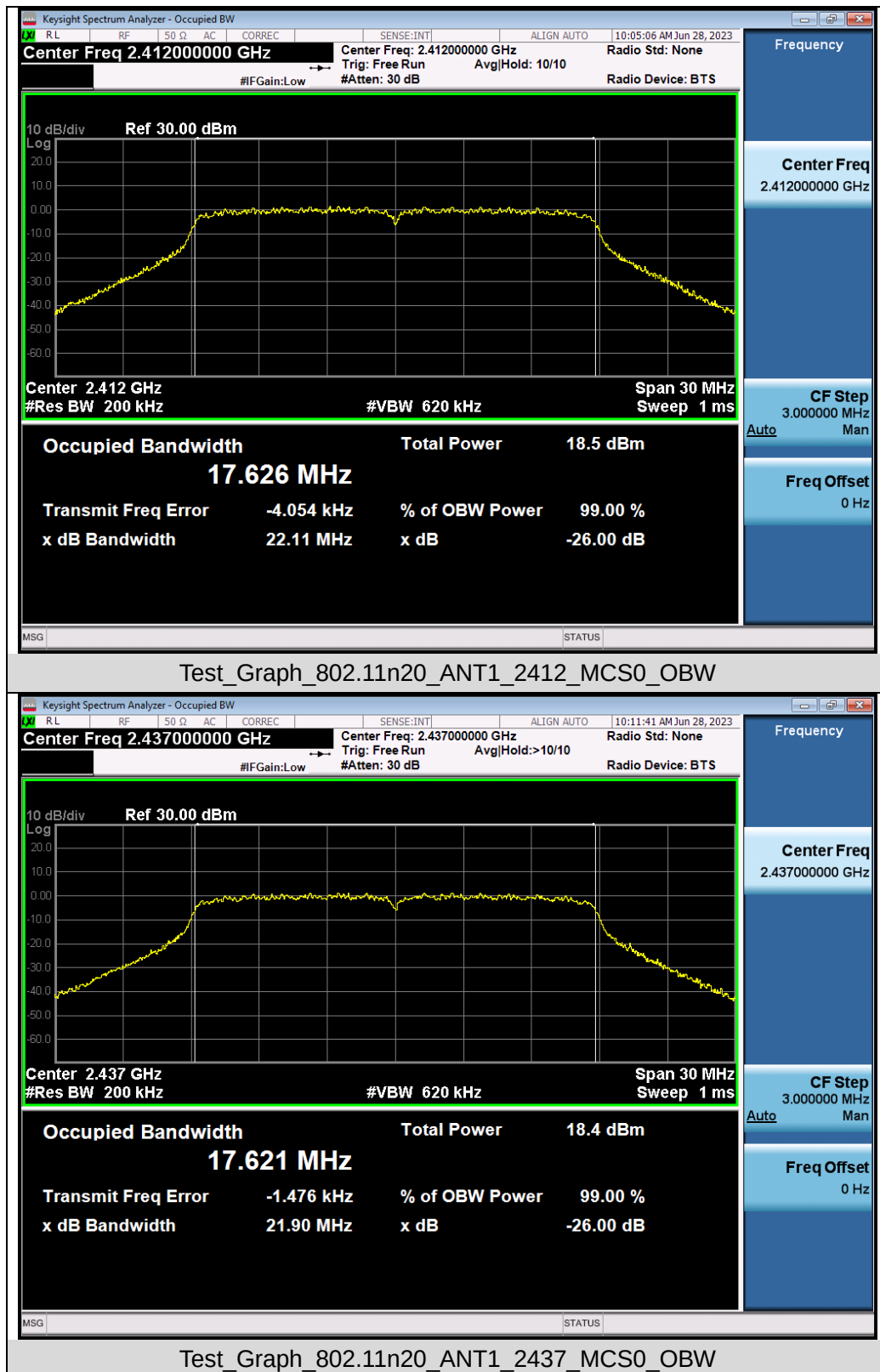


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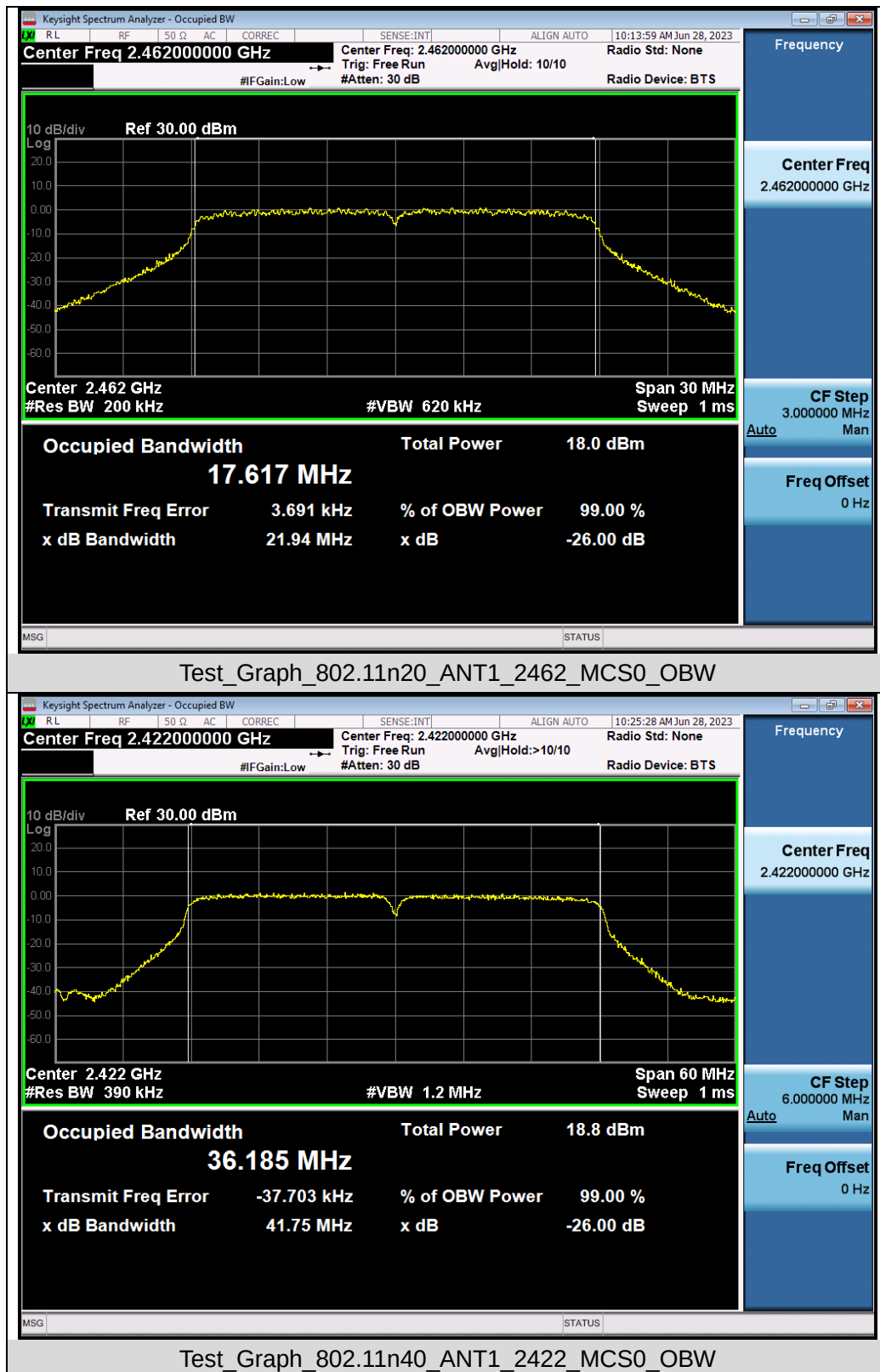


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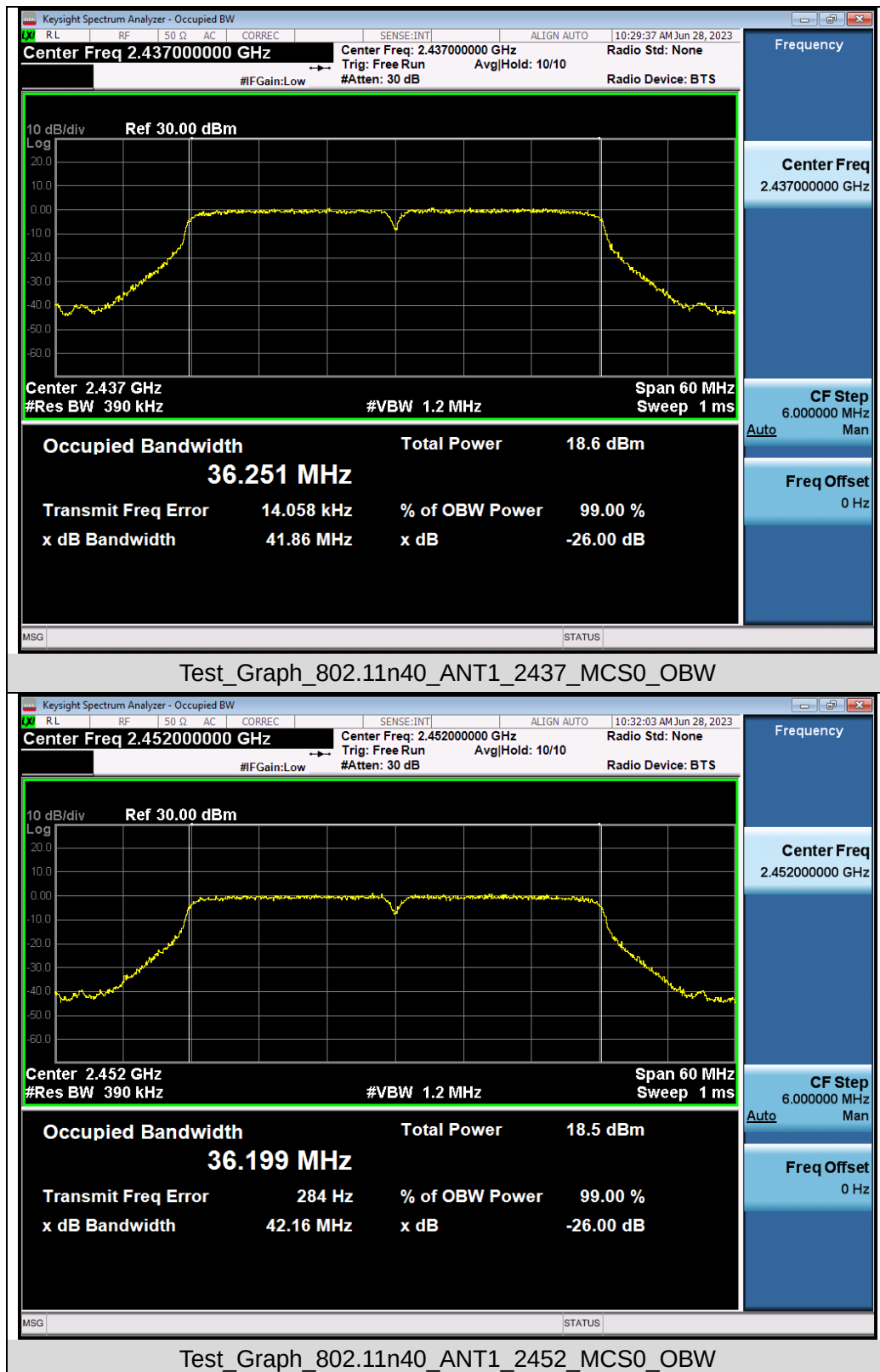
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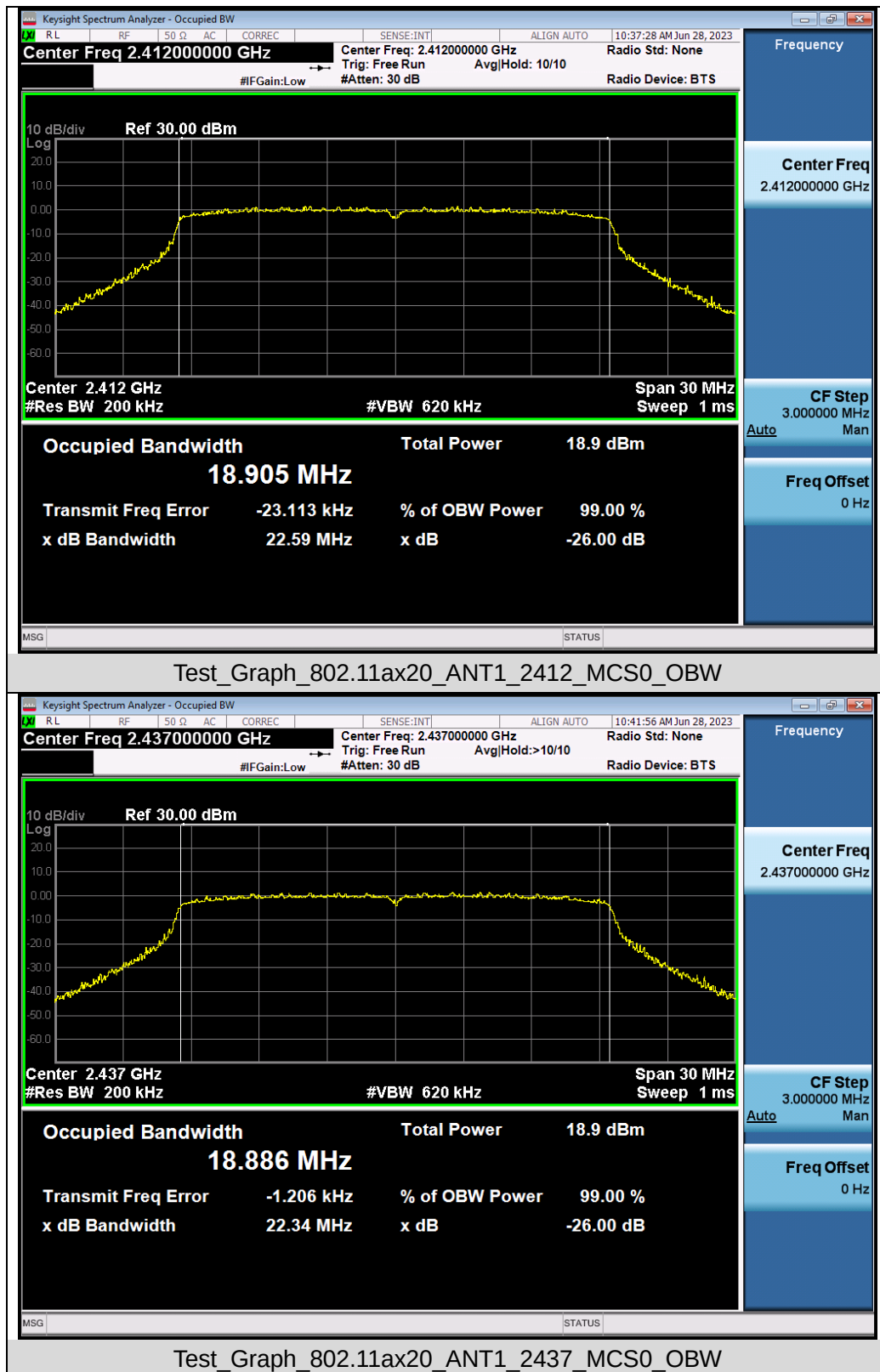
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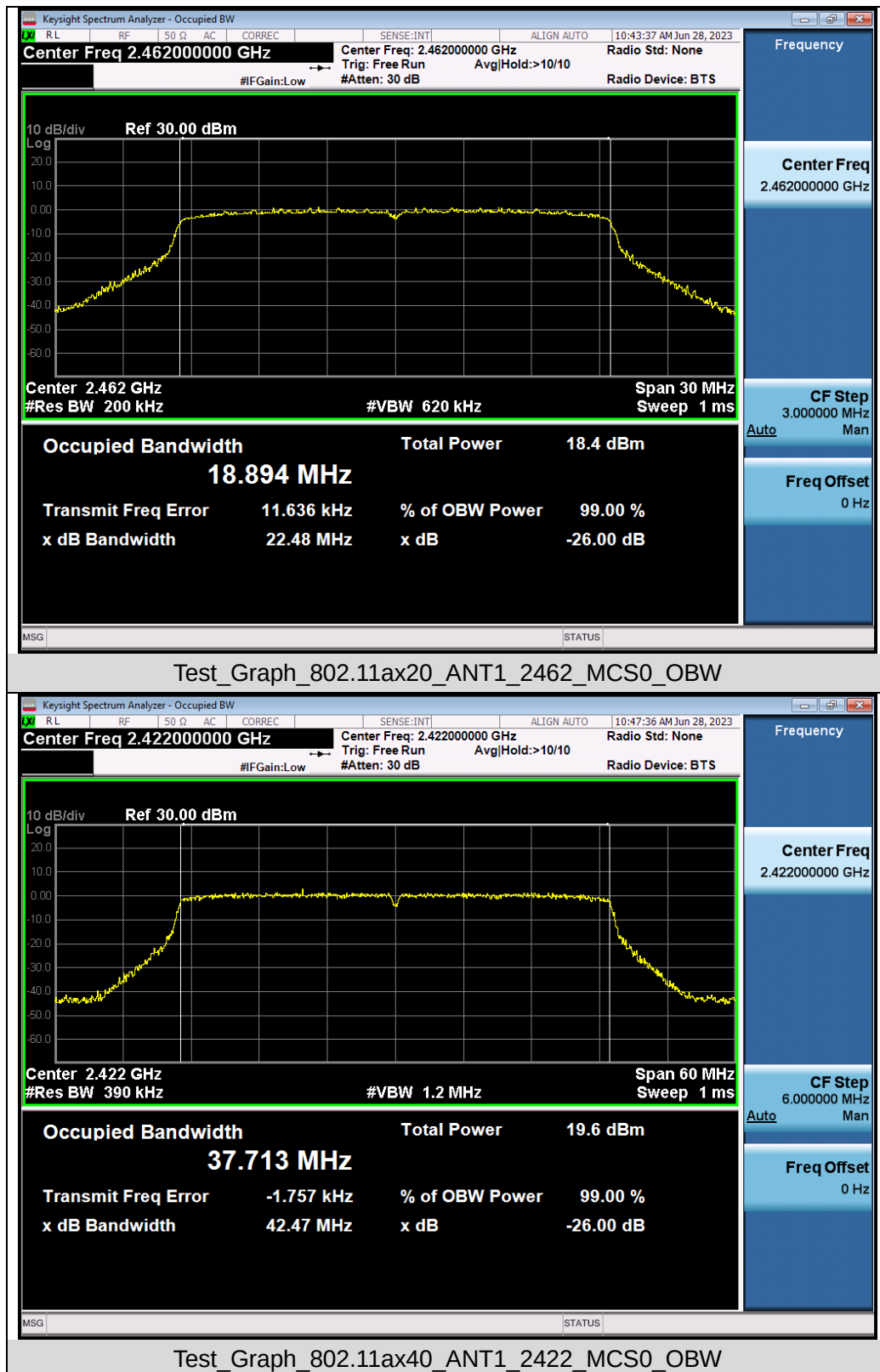
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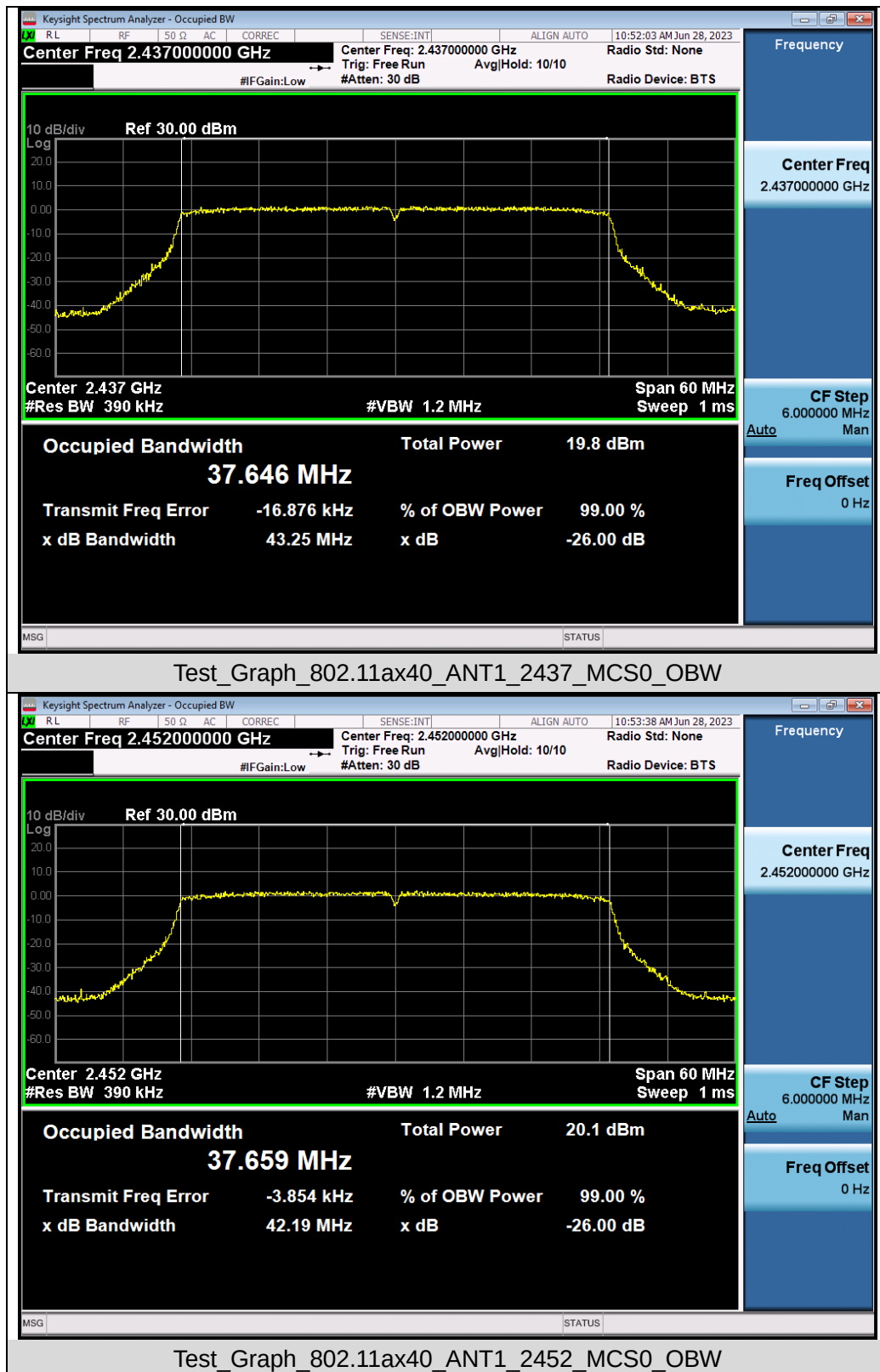
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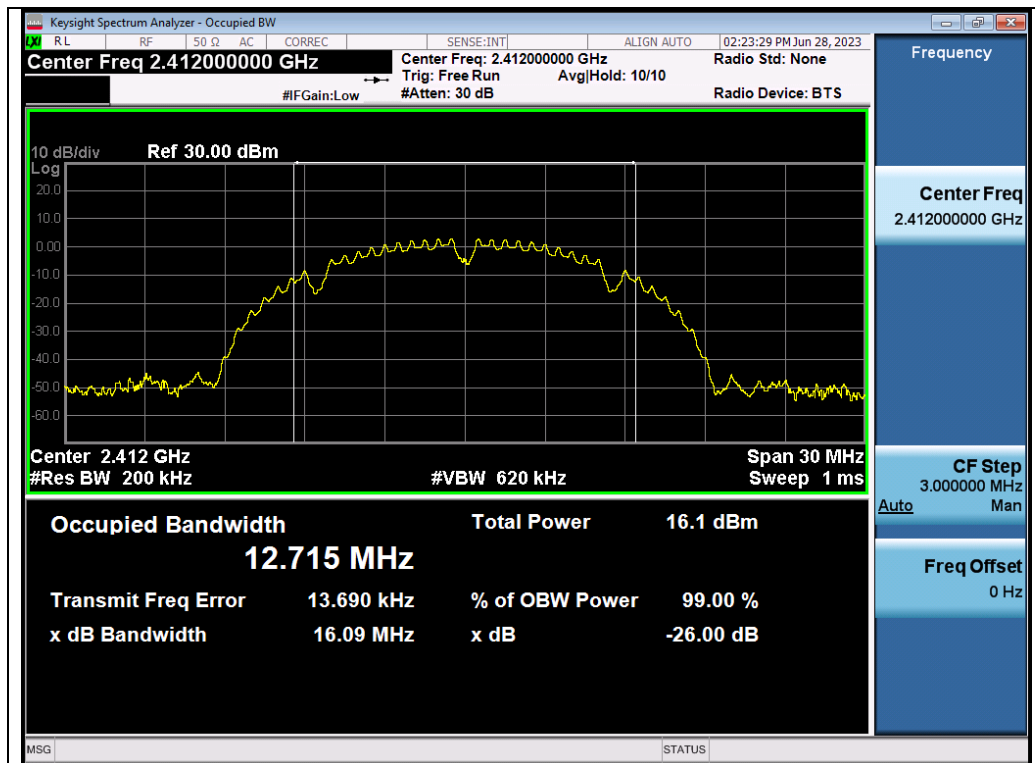
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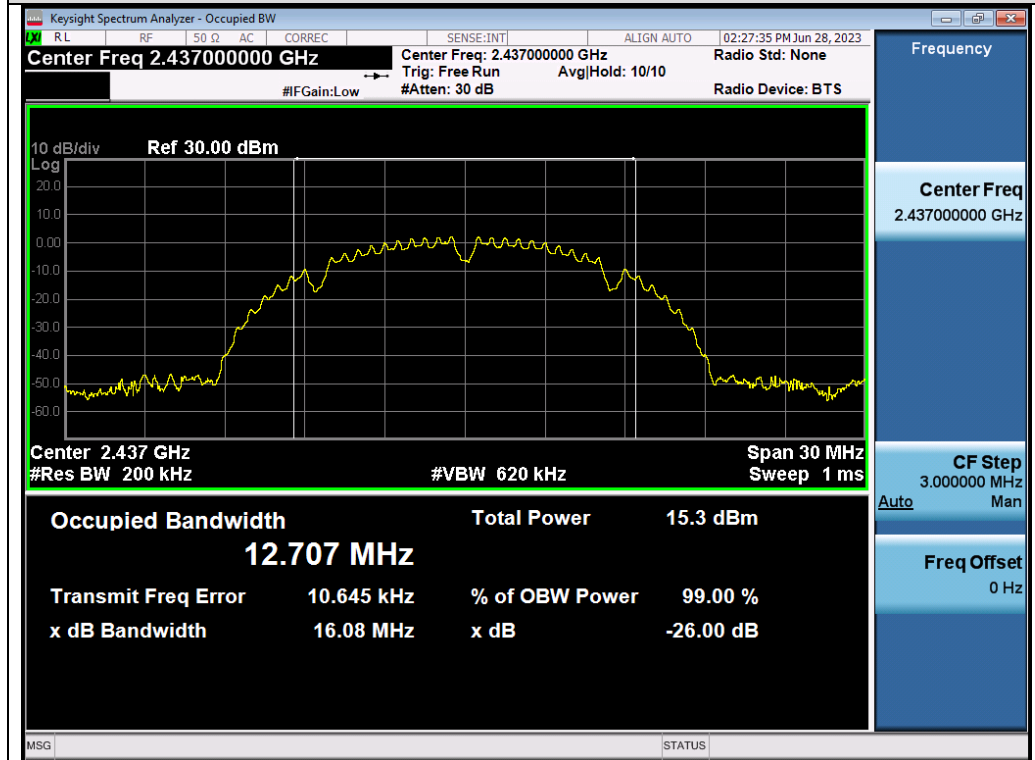
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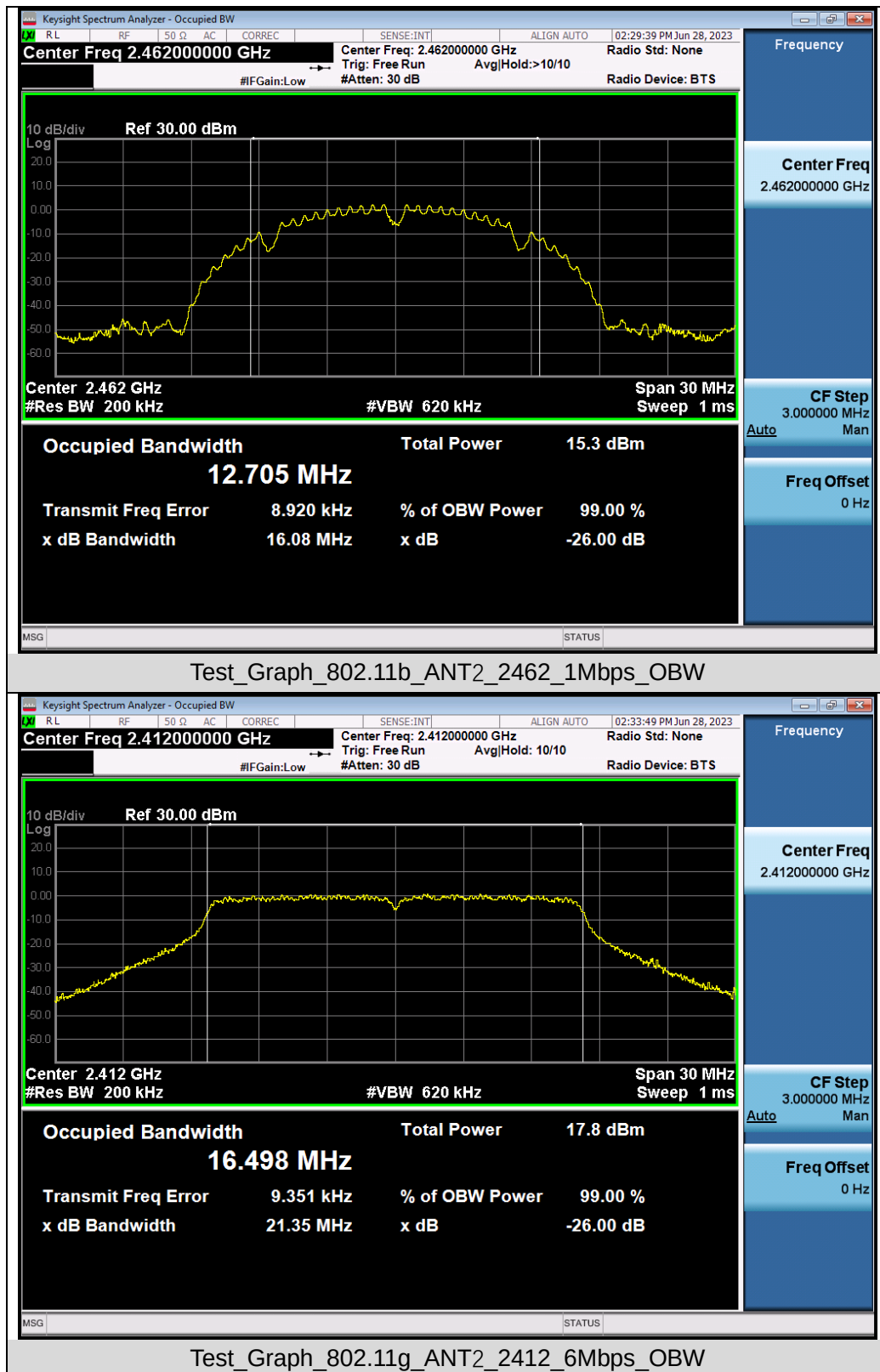


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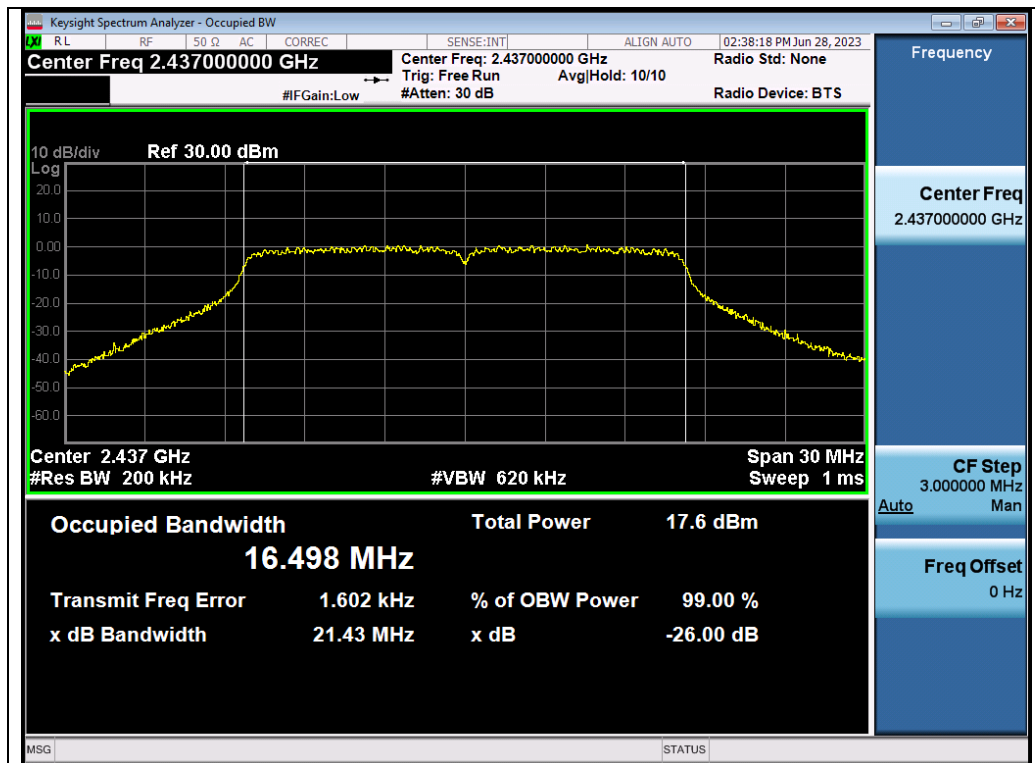


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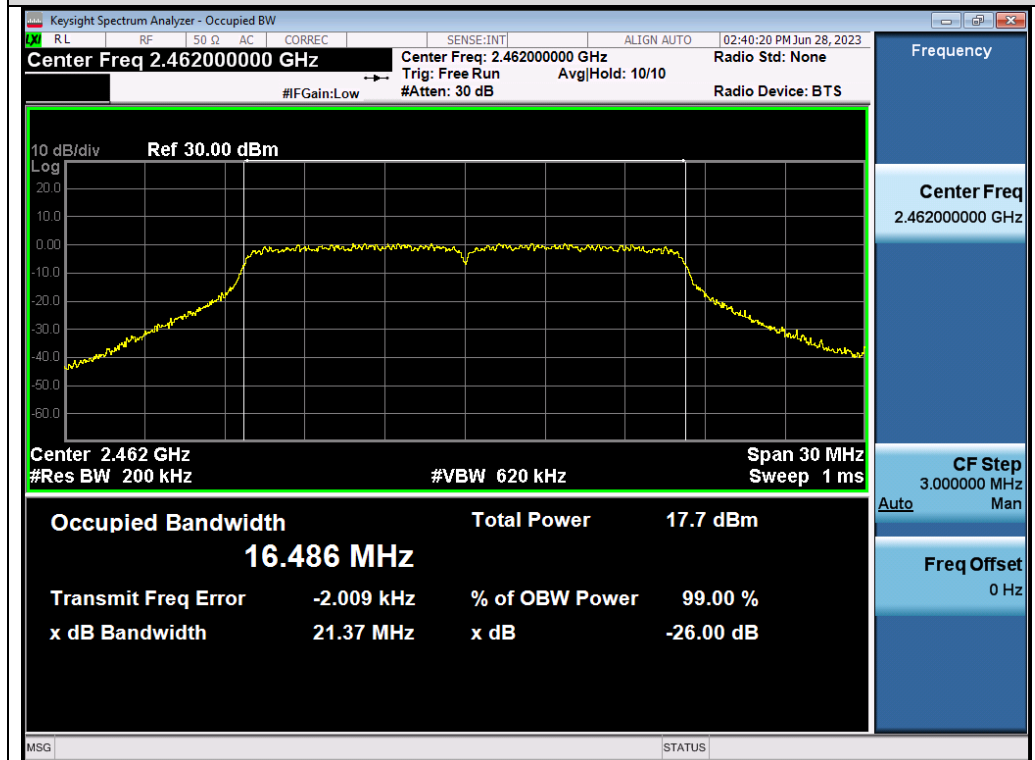
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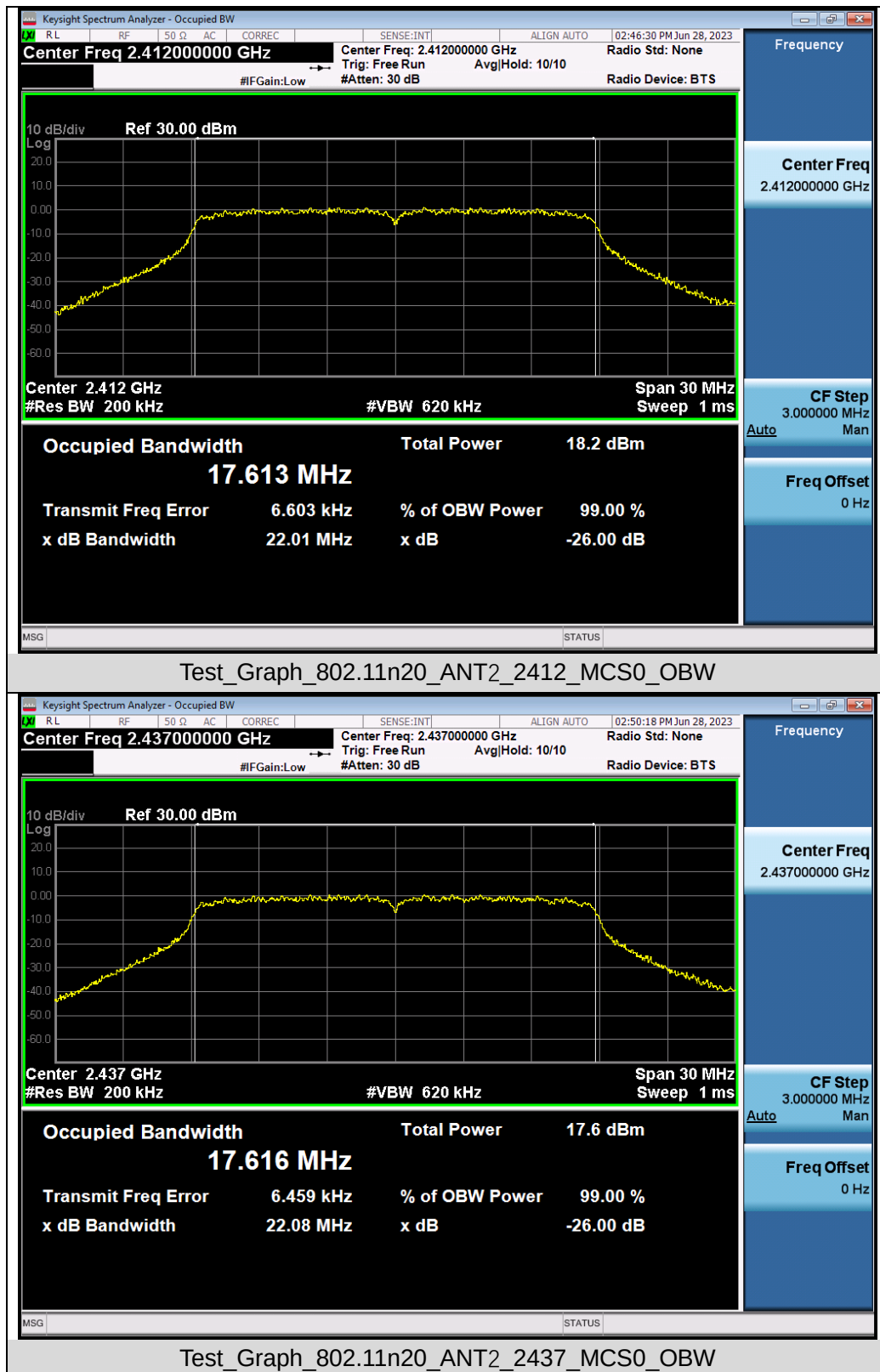


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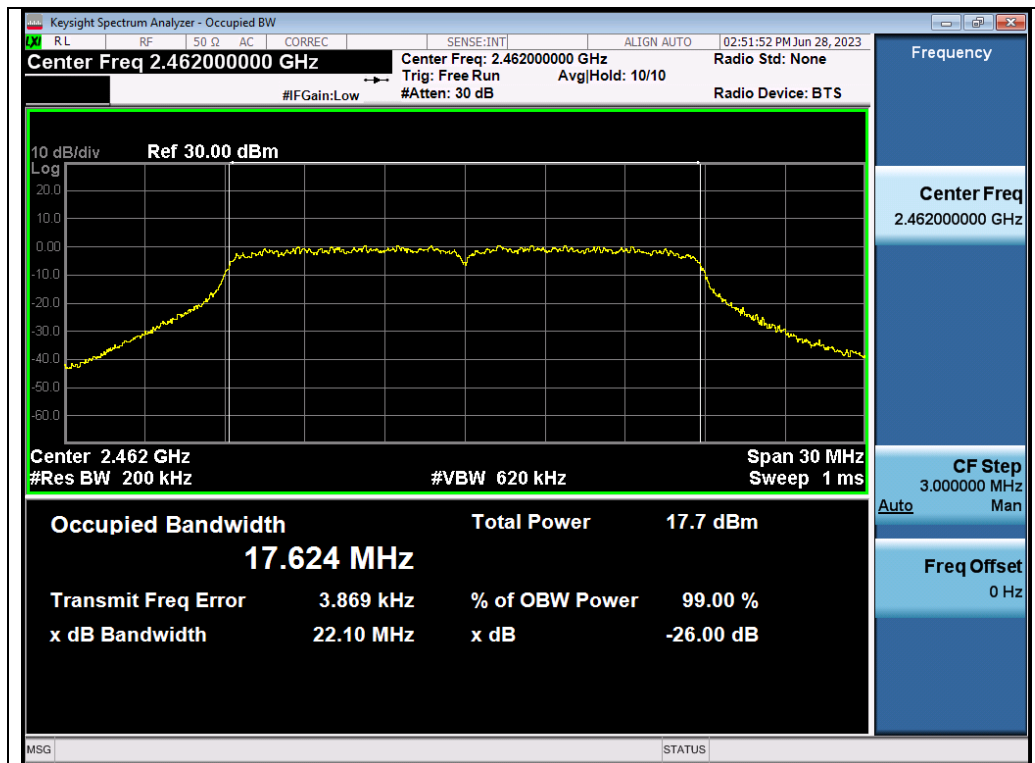


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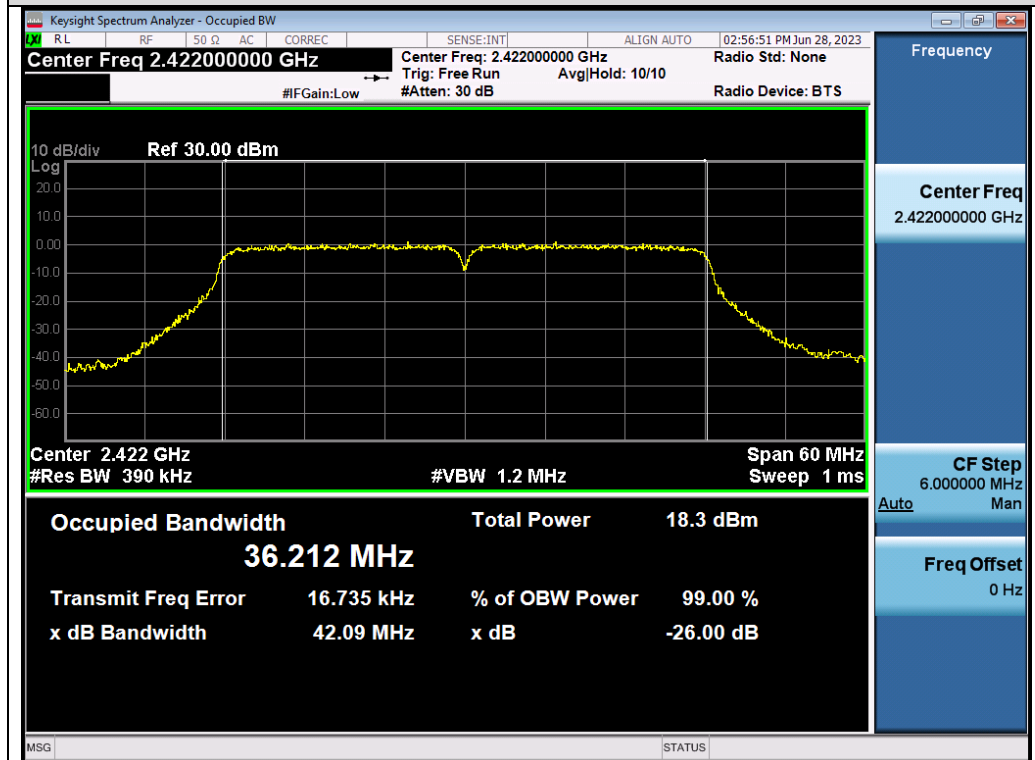
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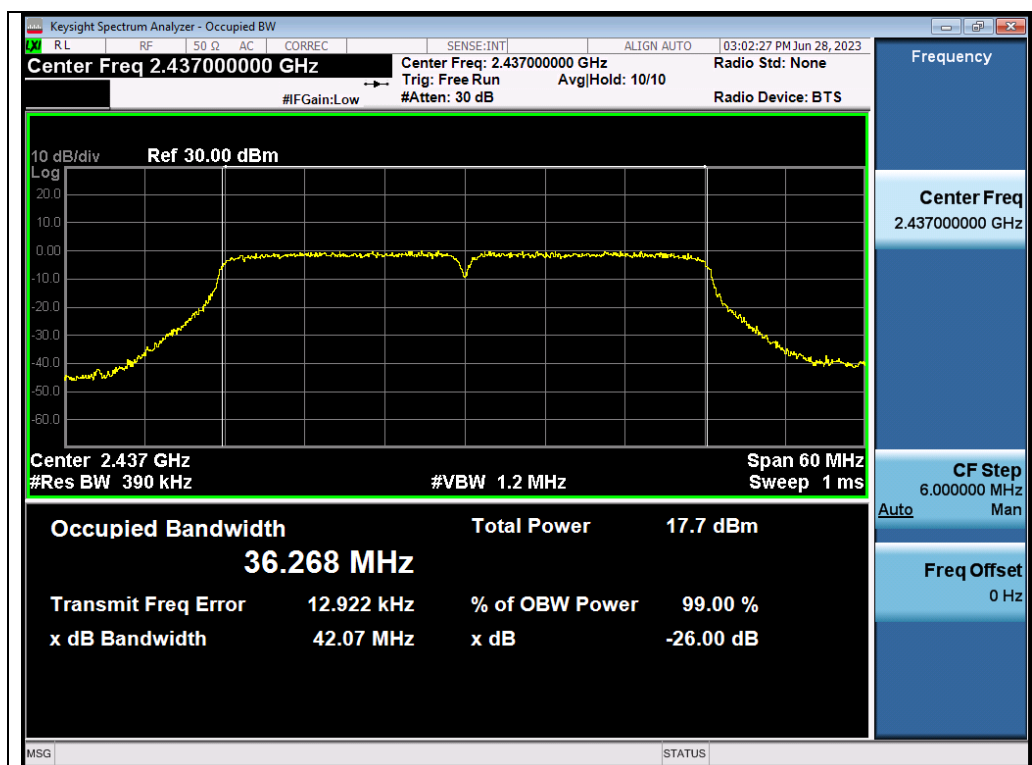


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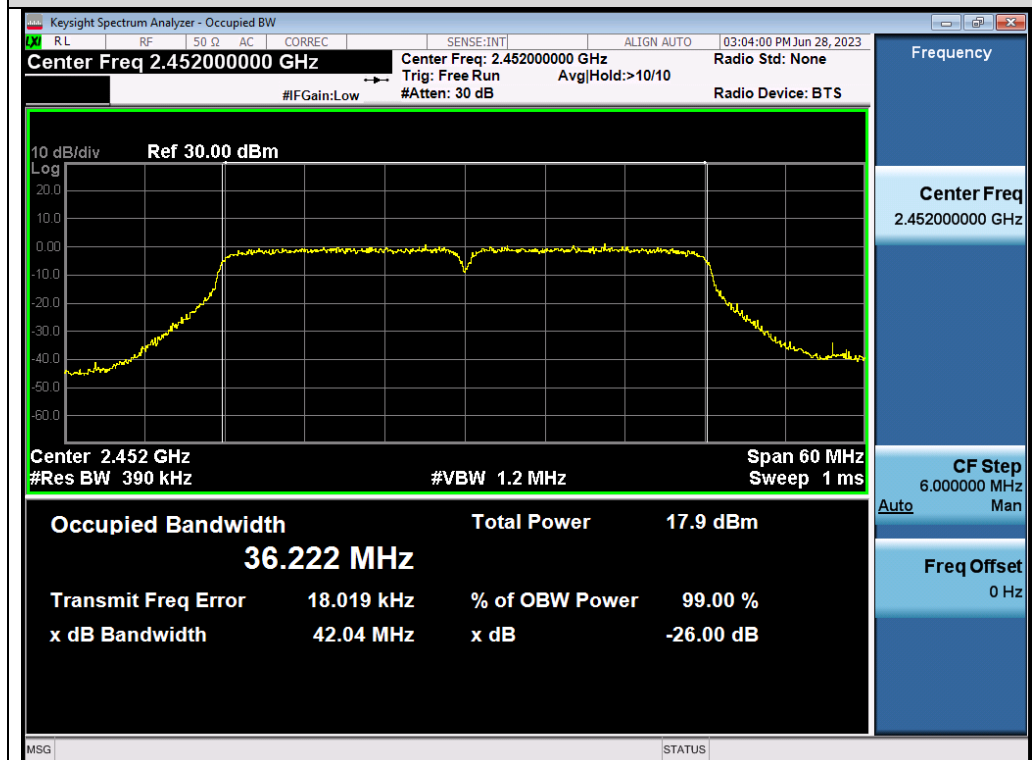


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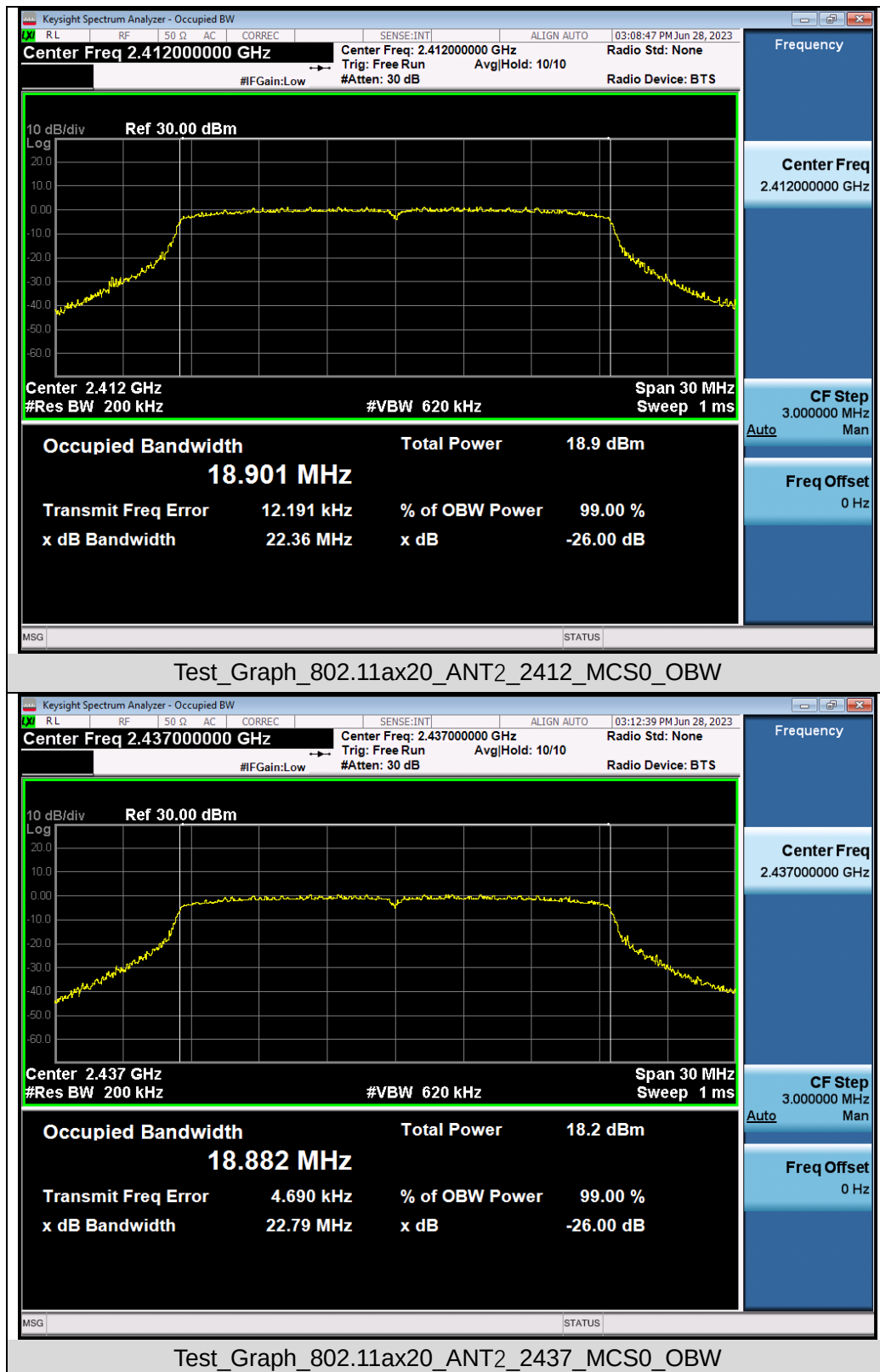


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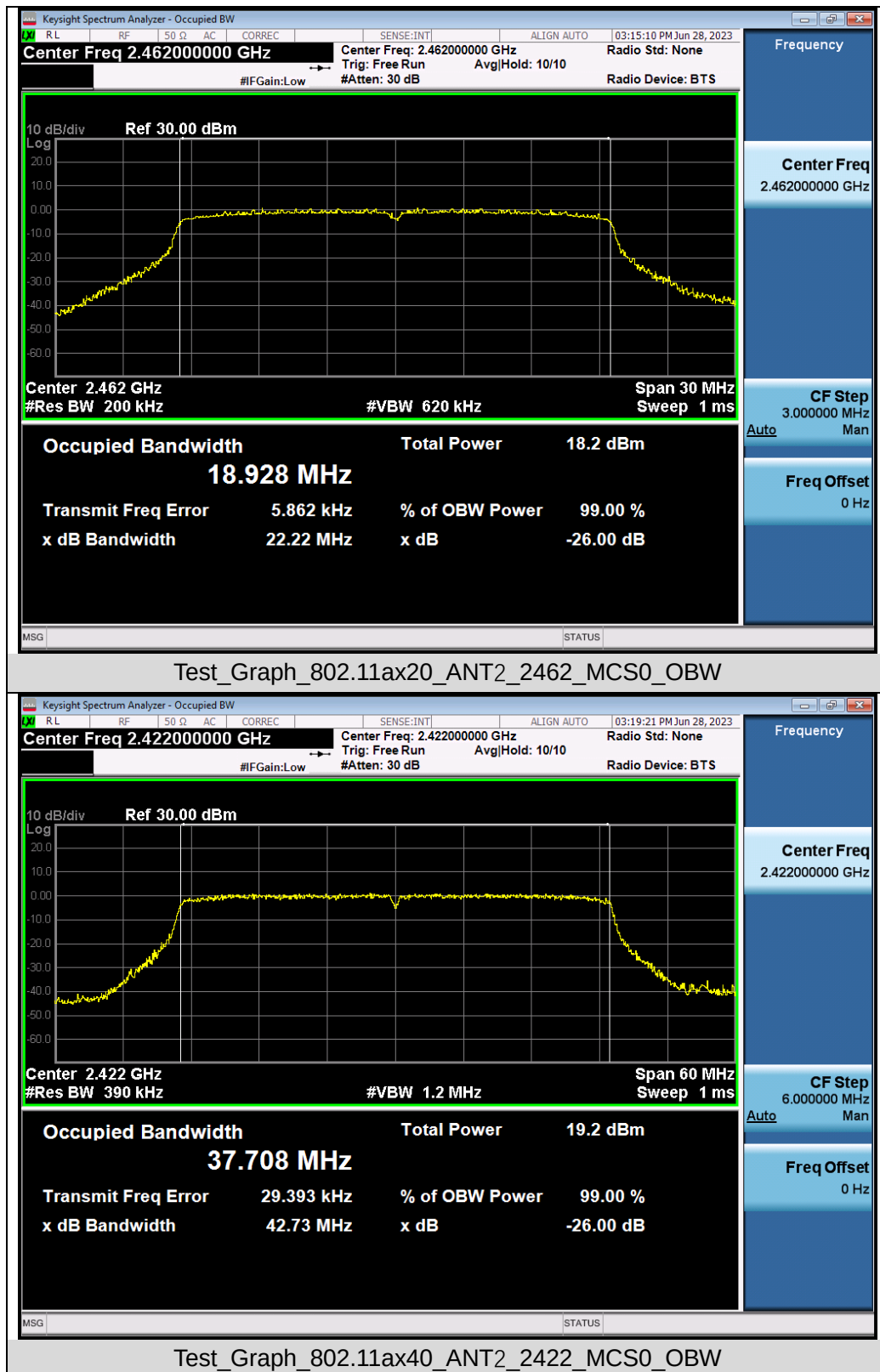


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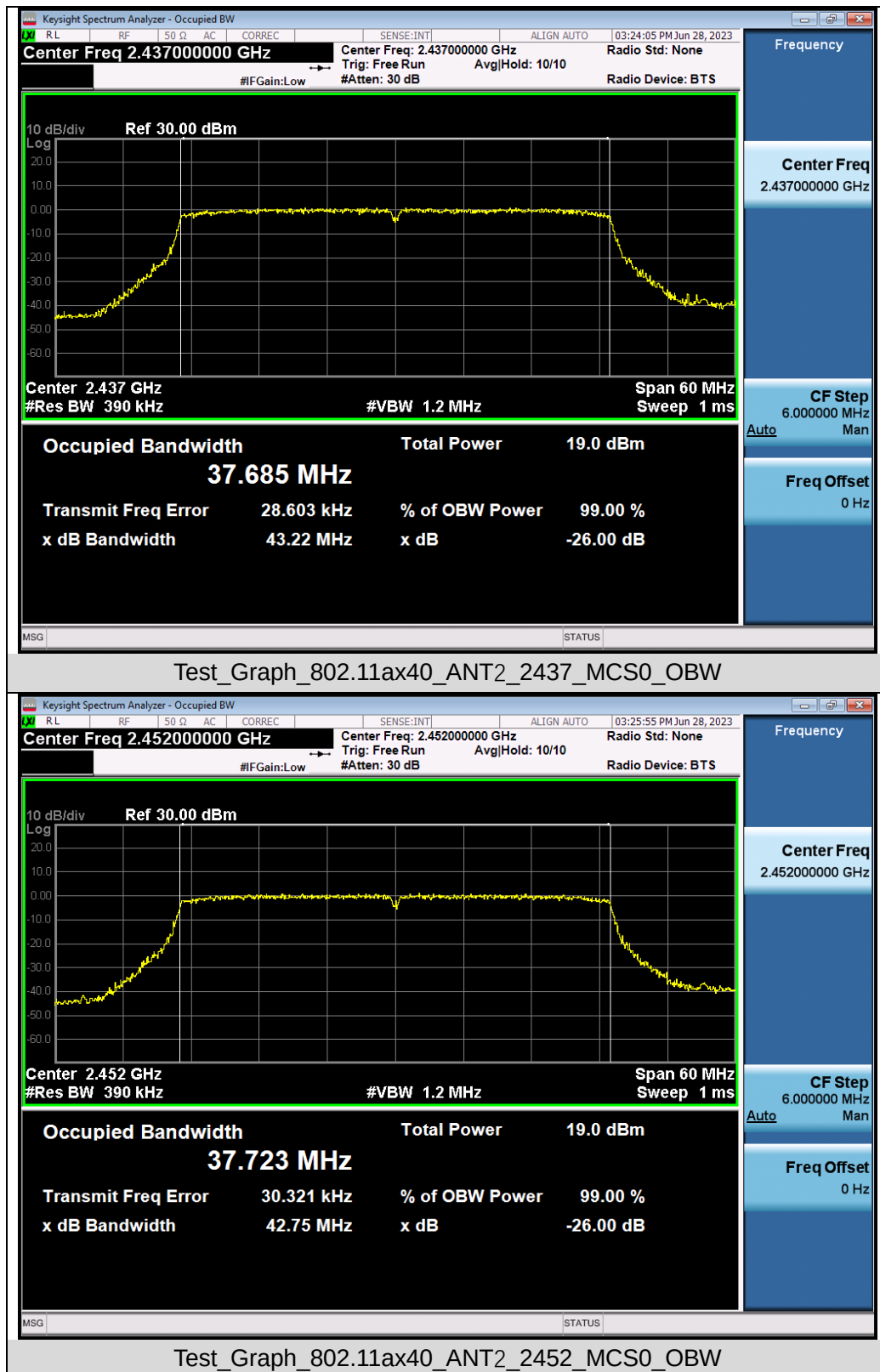
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Test Graphs of DTS Bandwidth

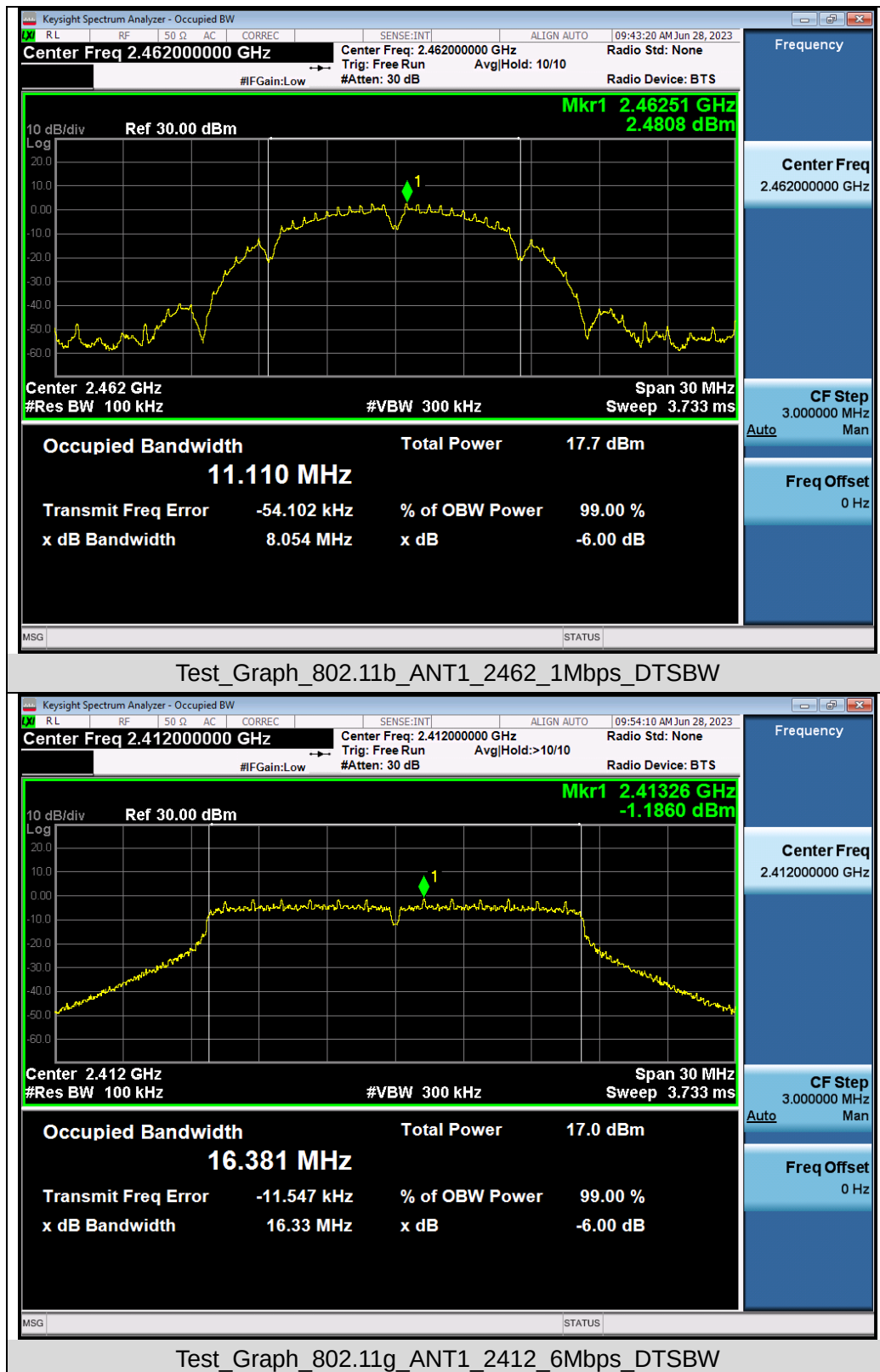


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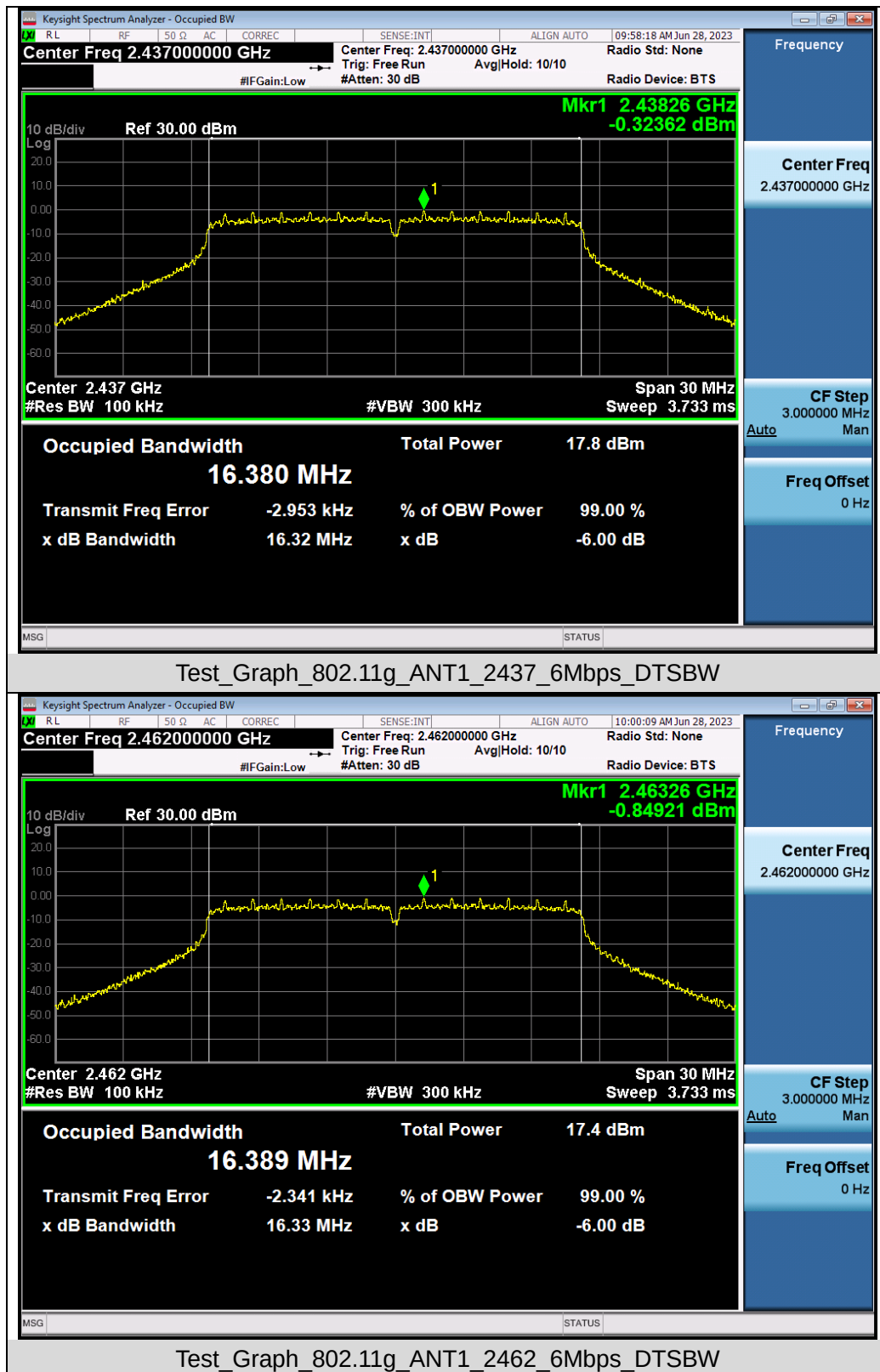


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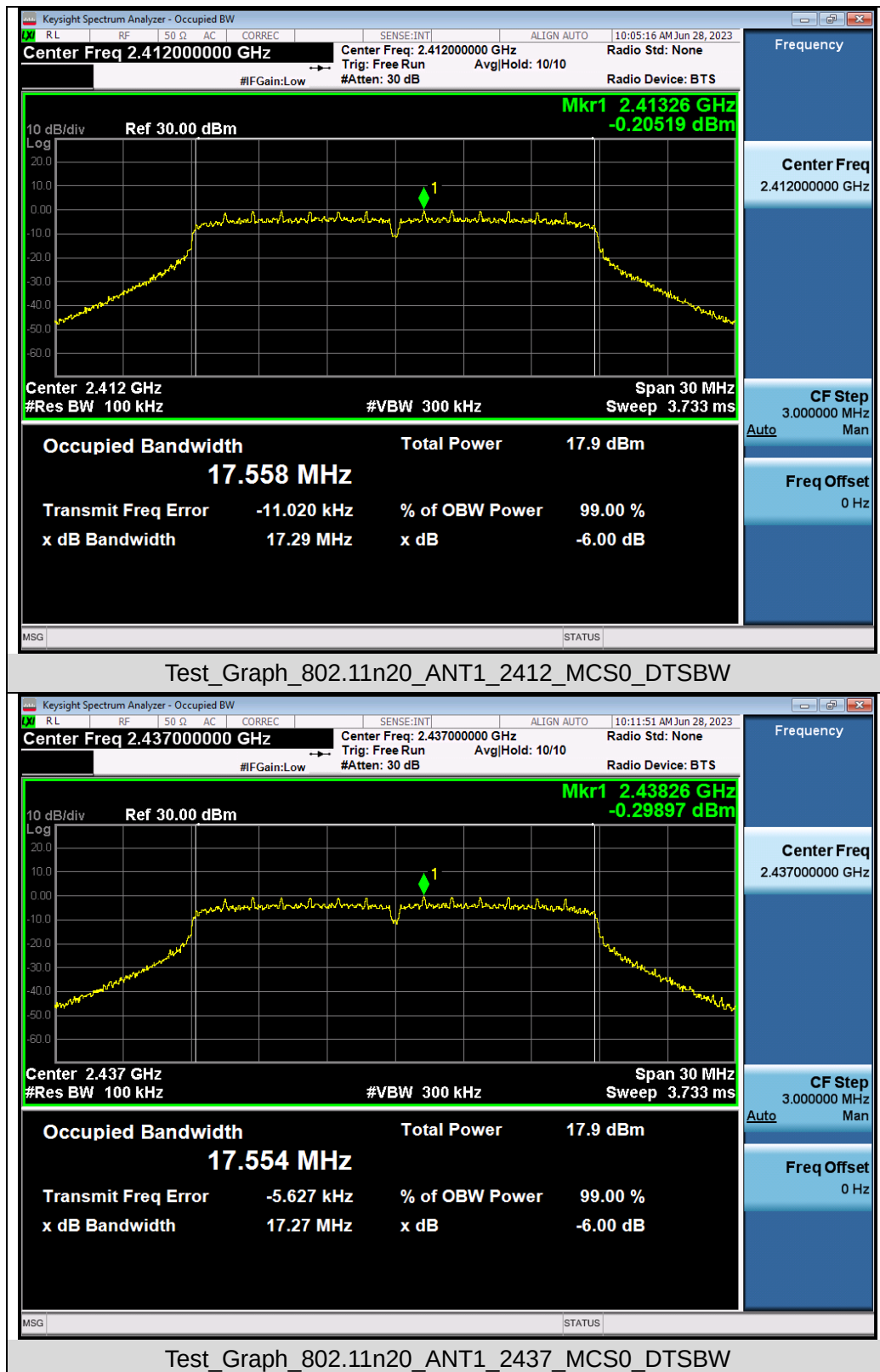
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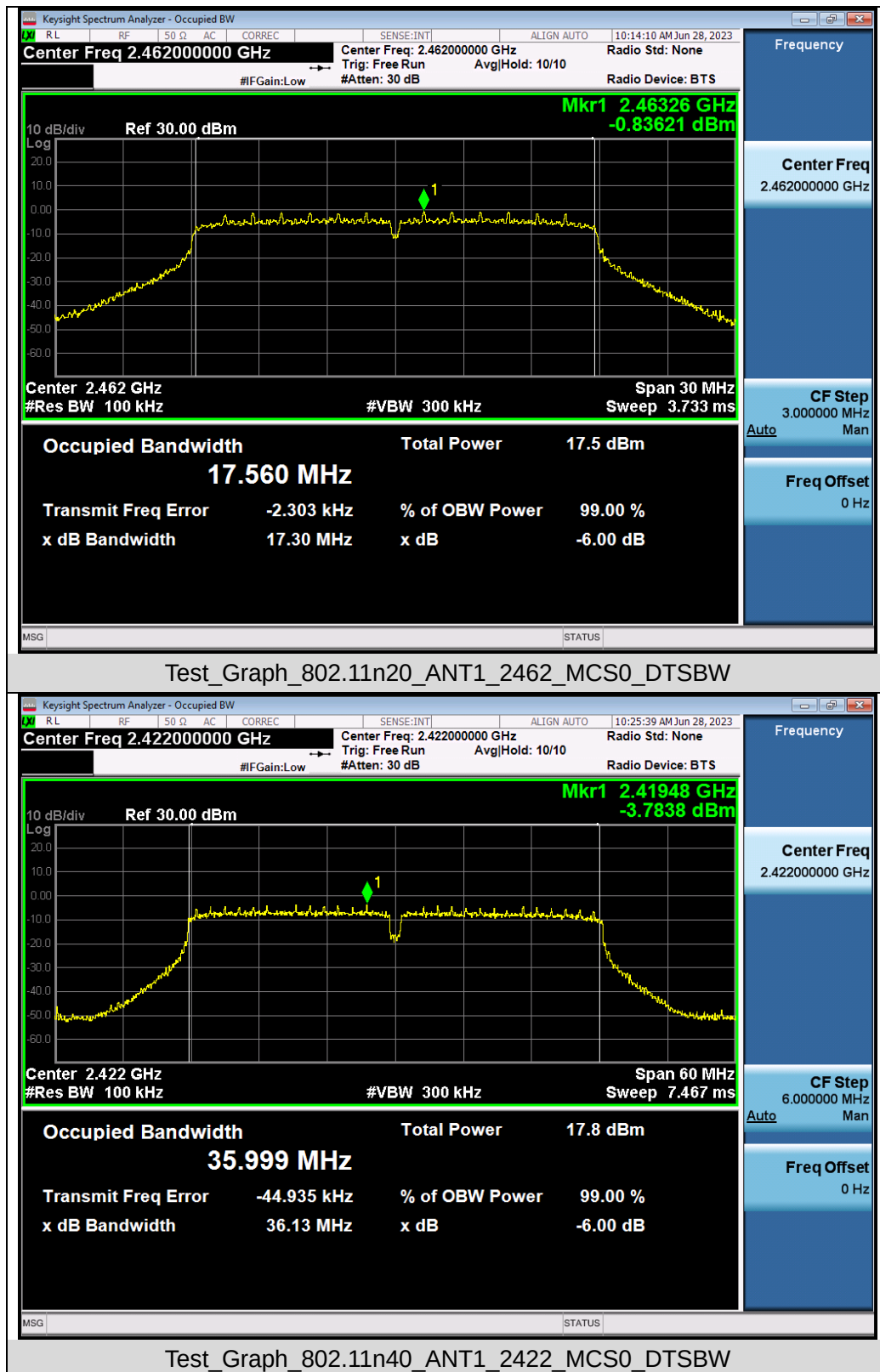
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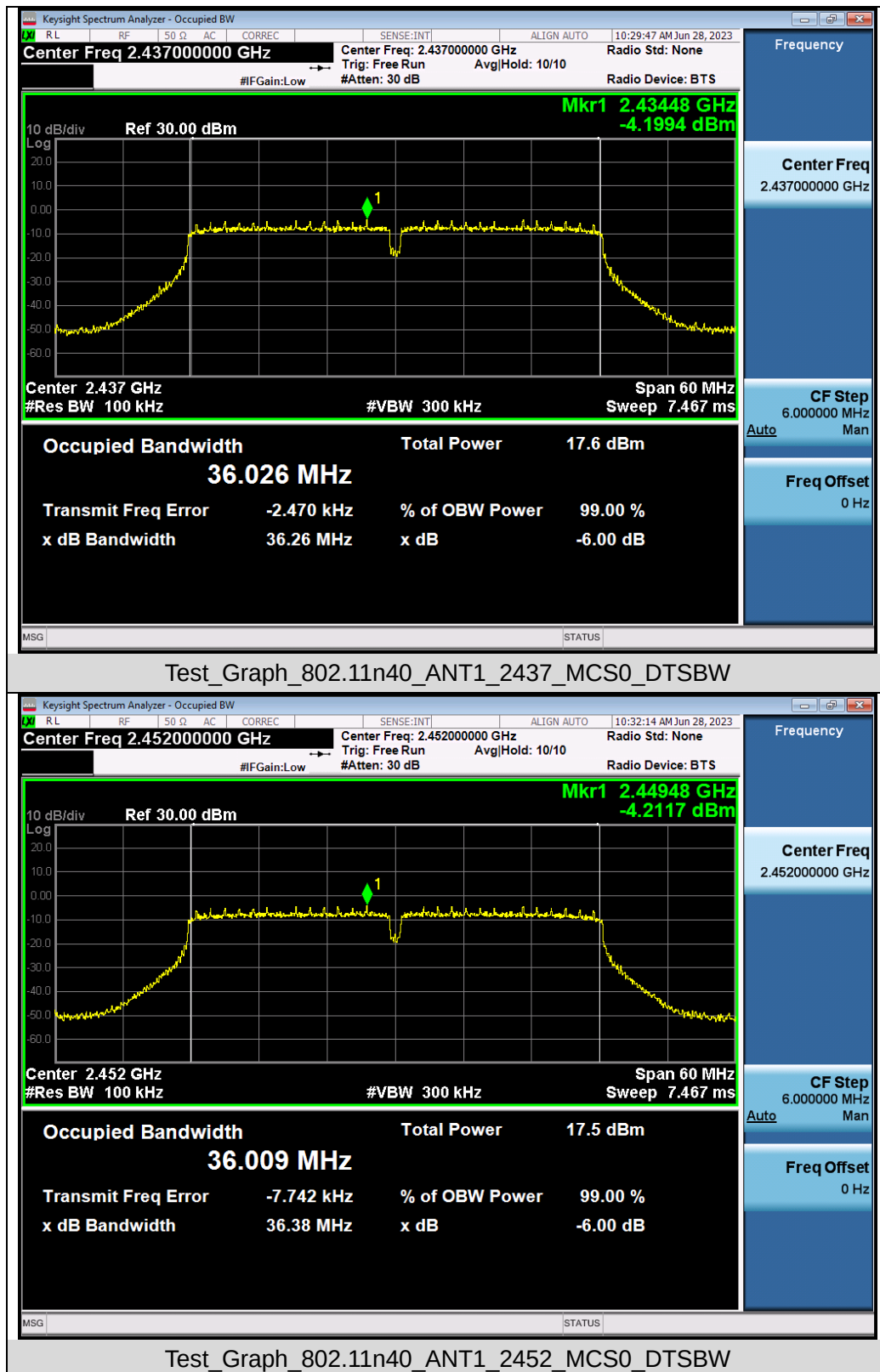
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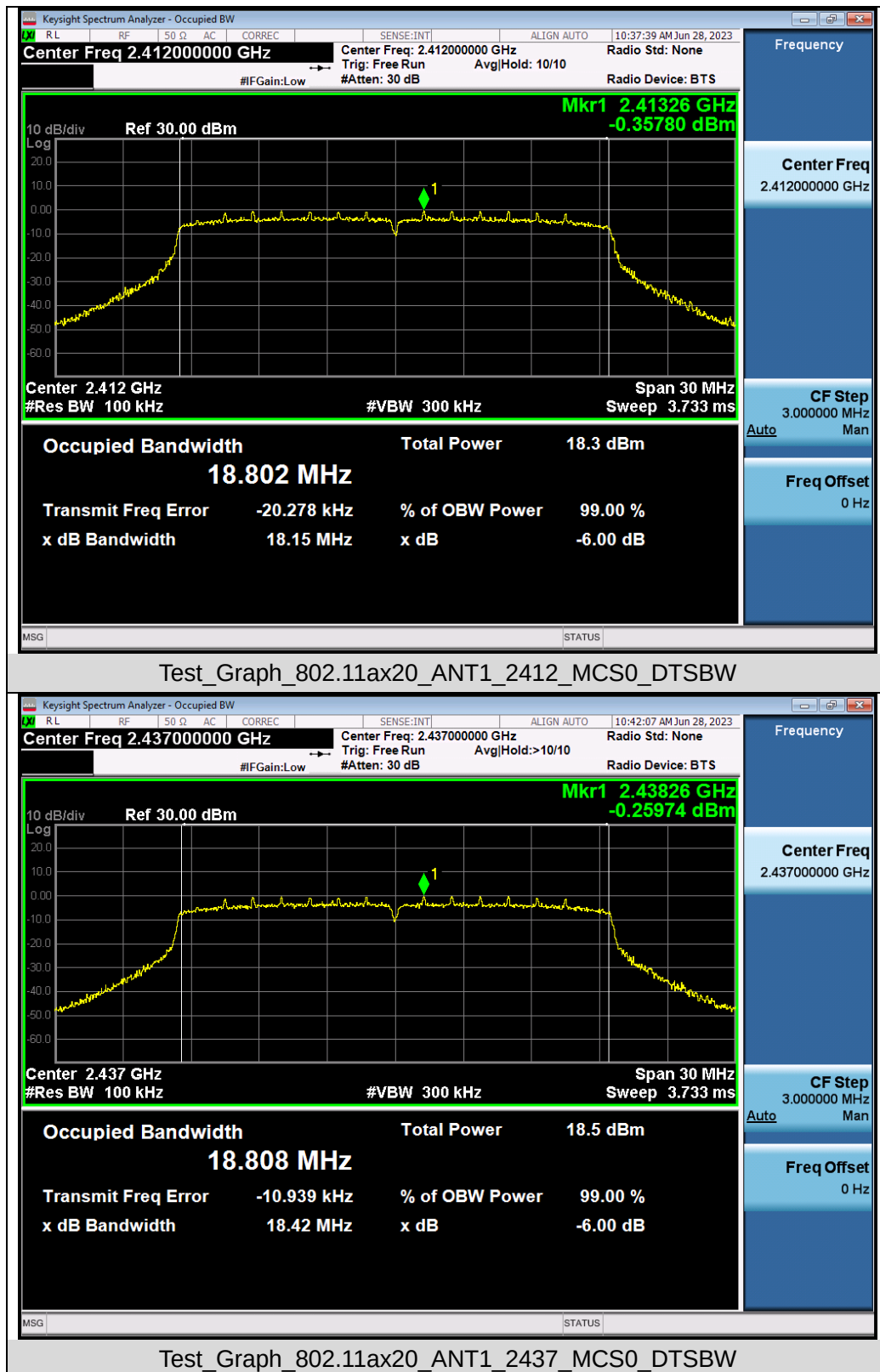
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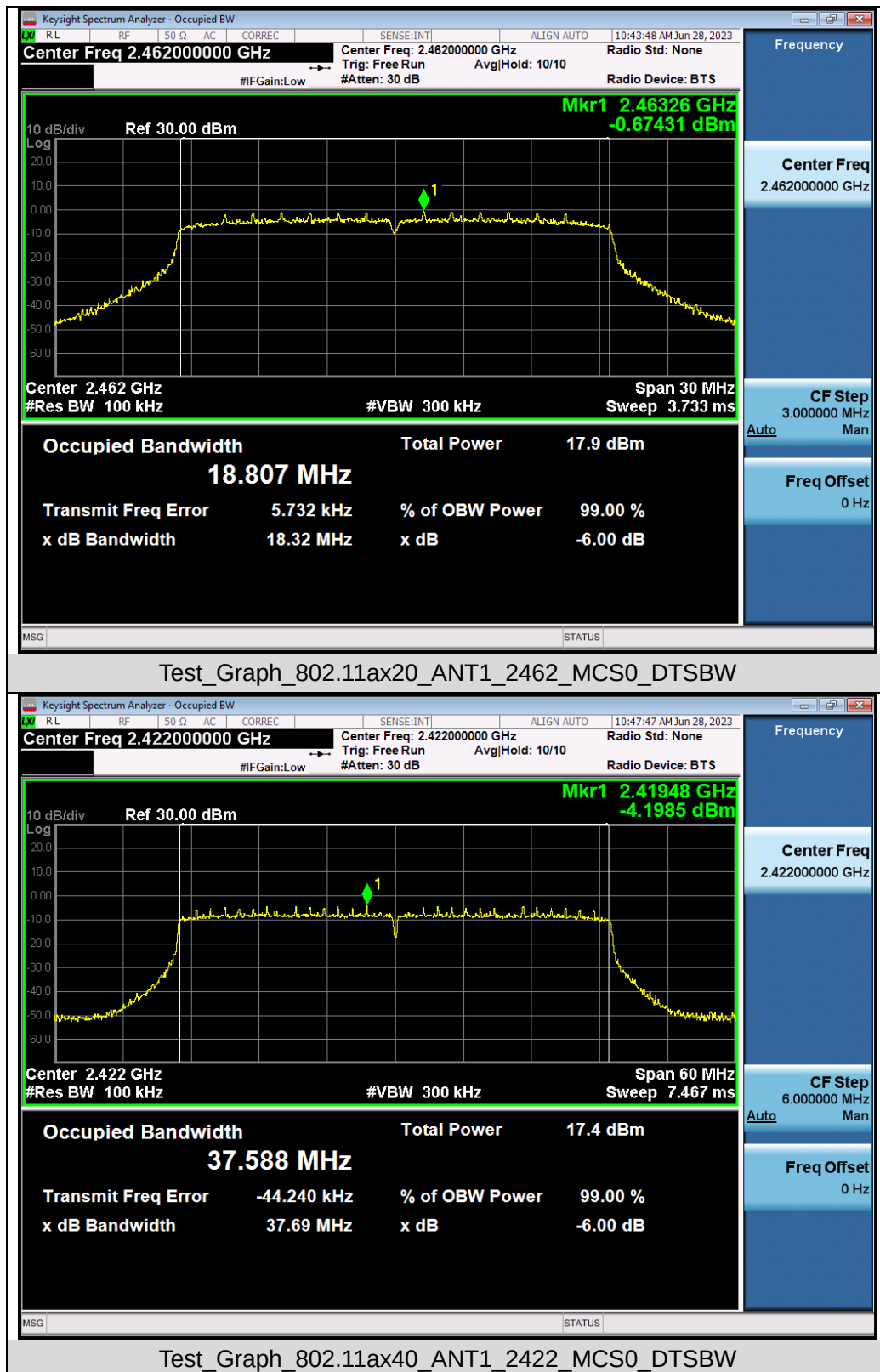
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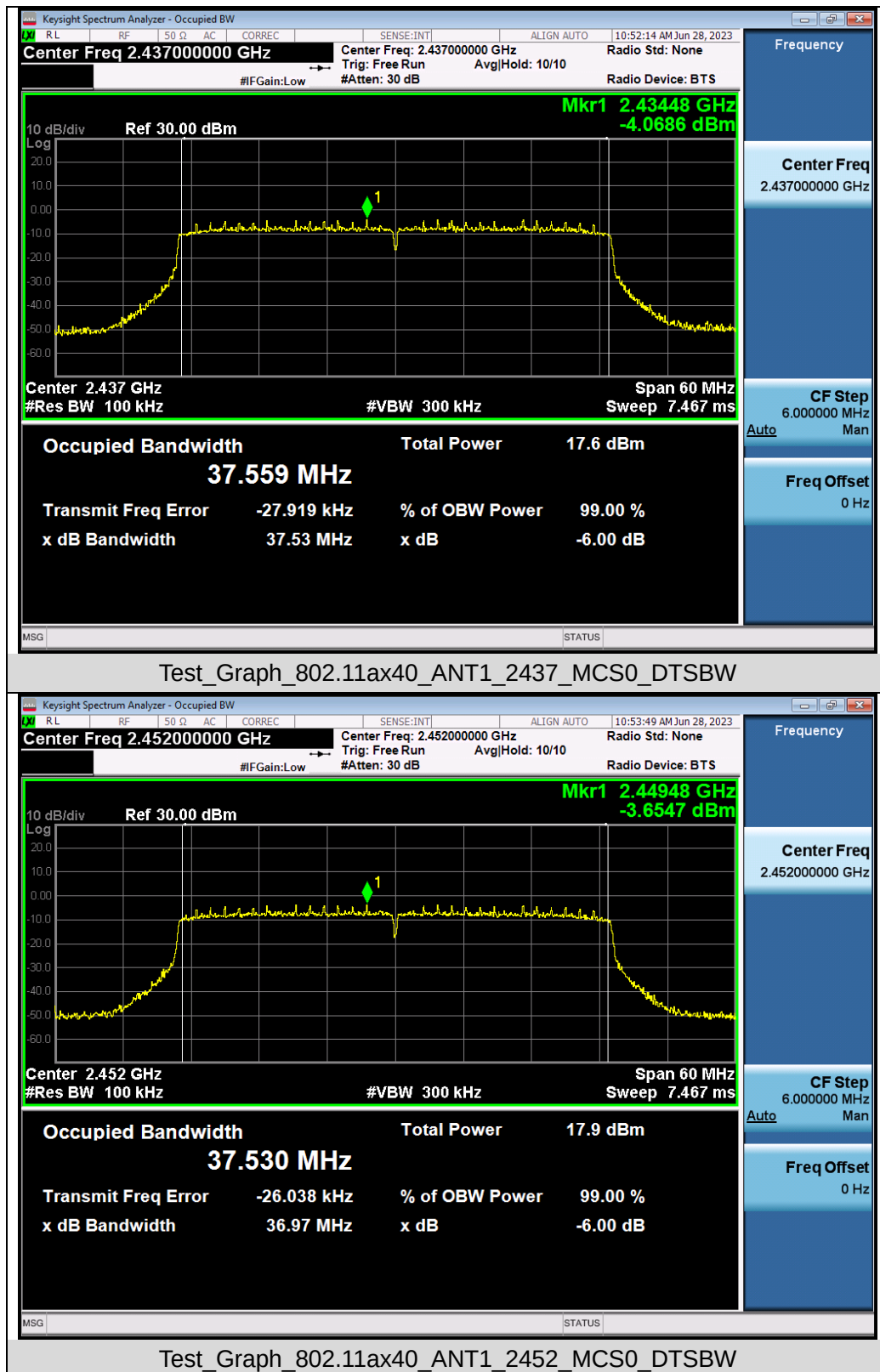
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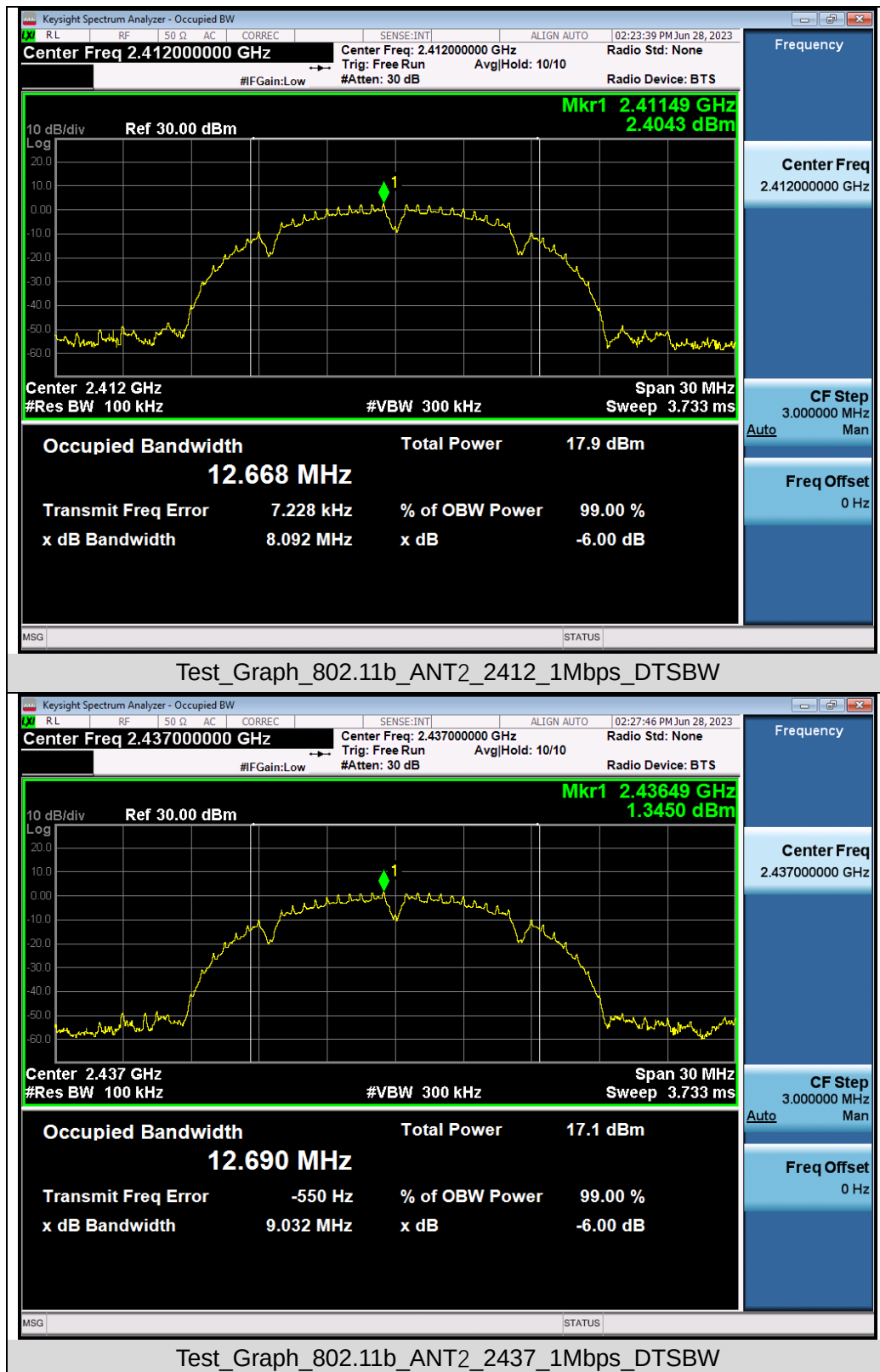
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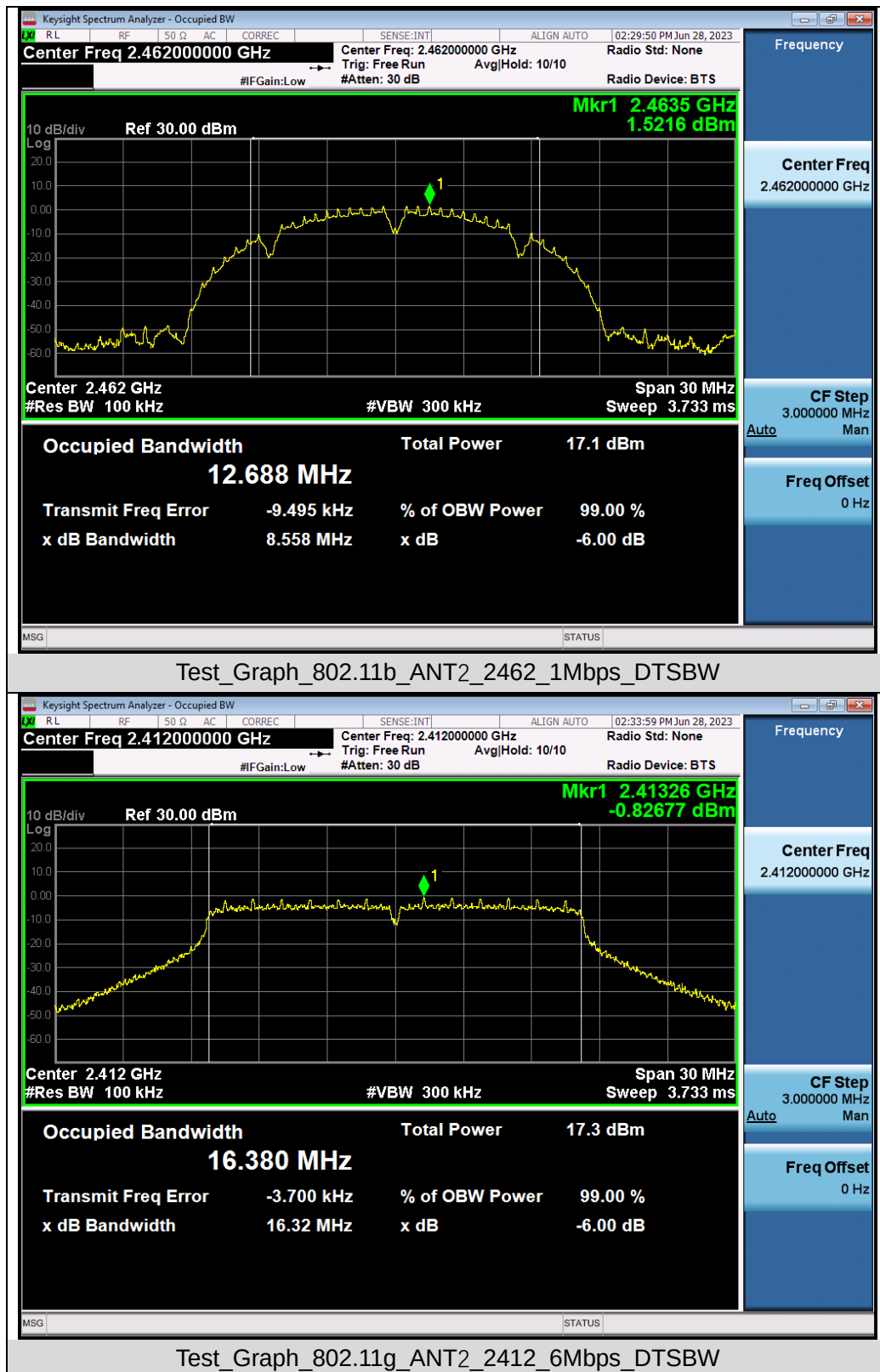


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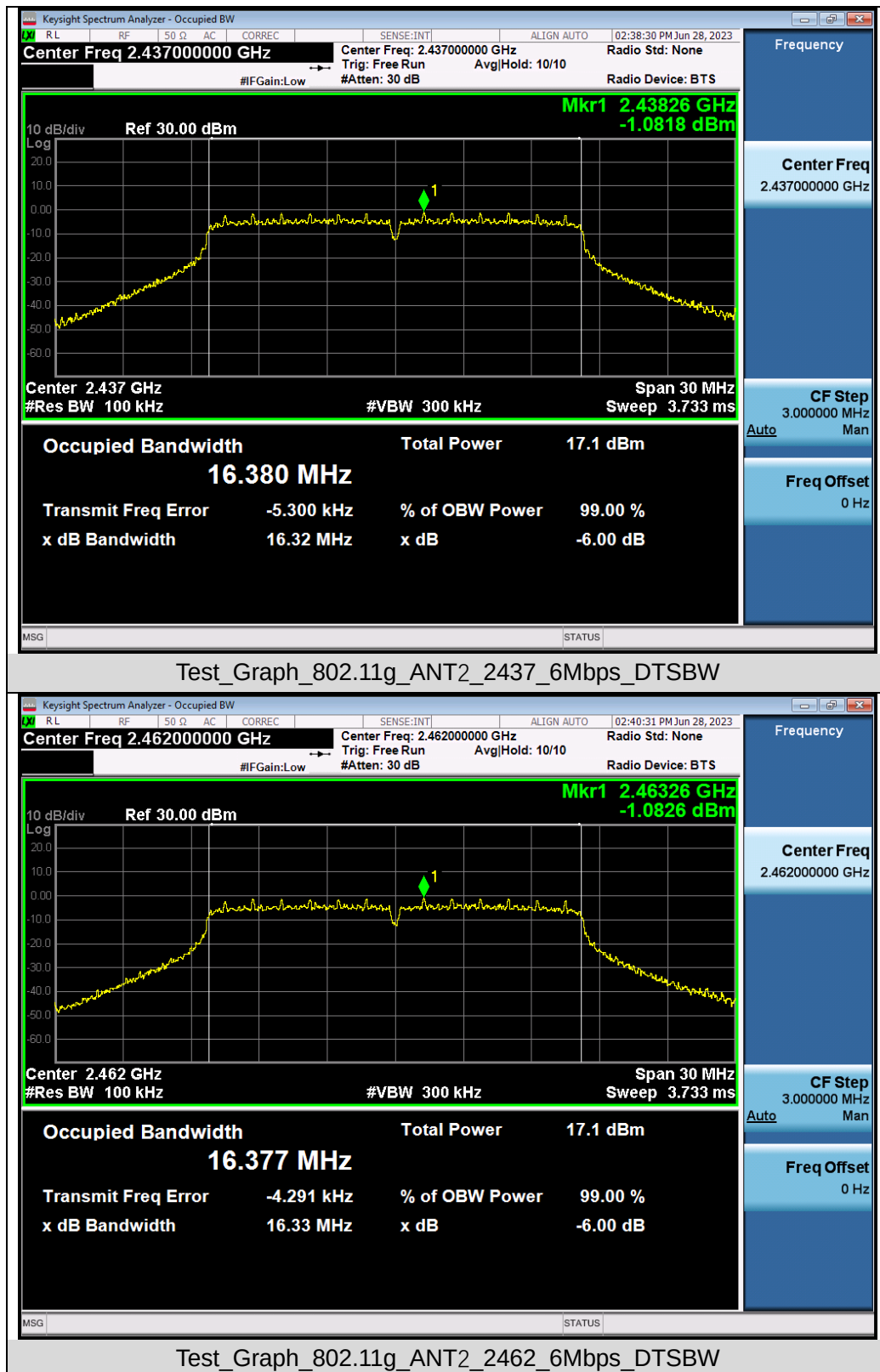
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Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

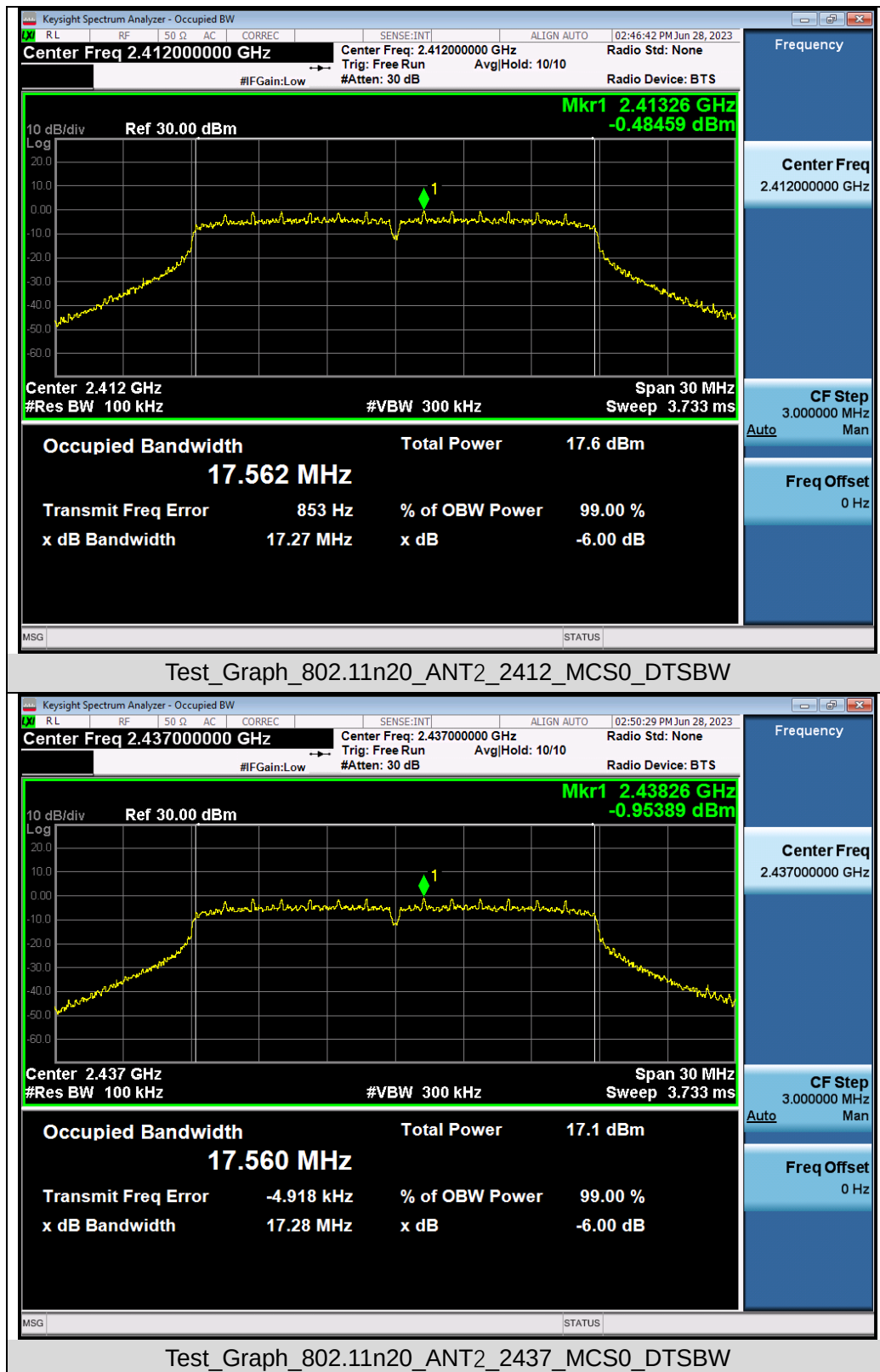


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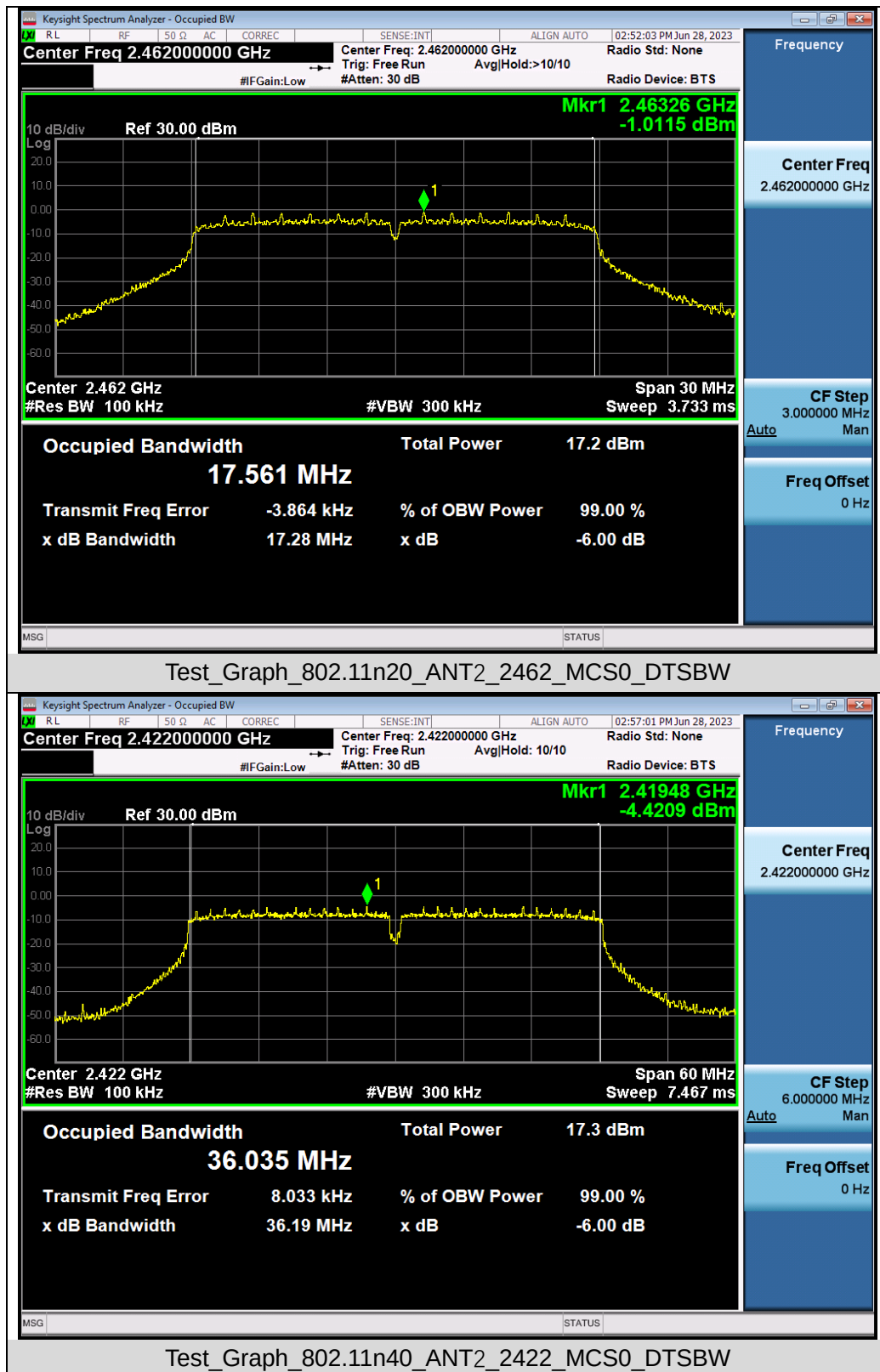
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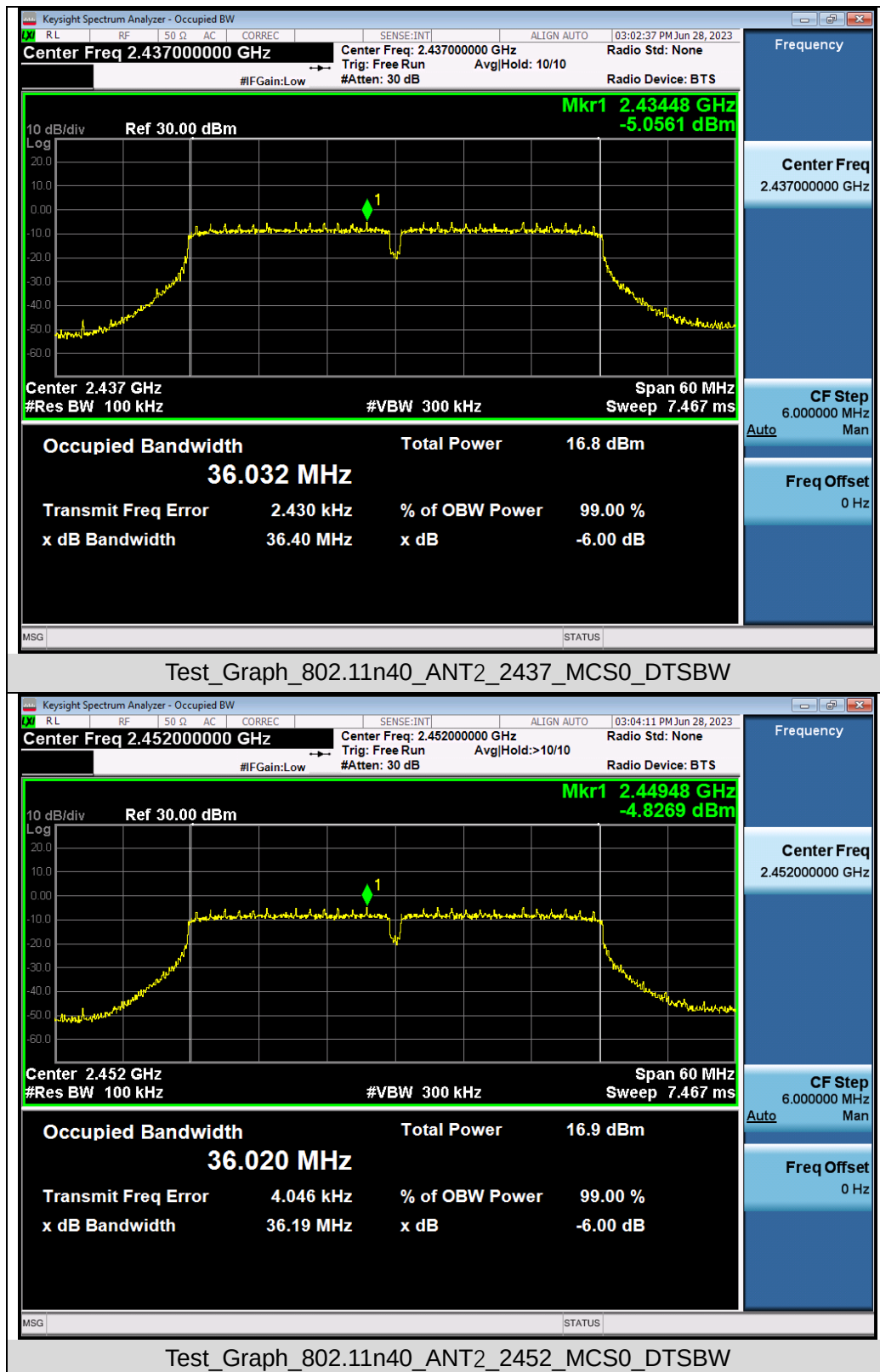
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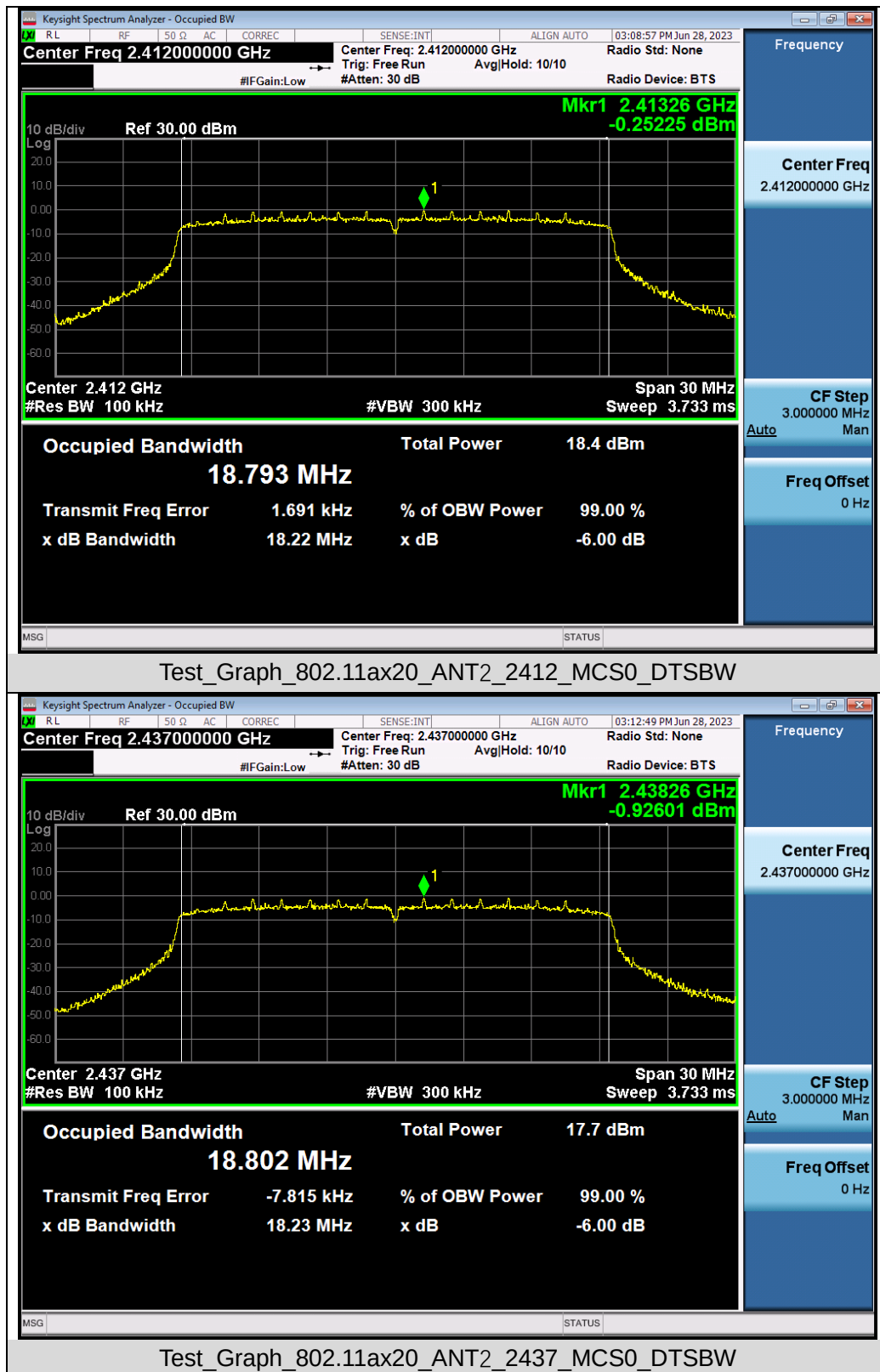
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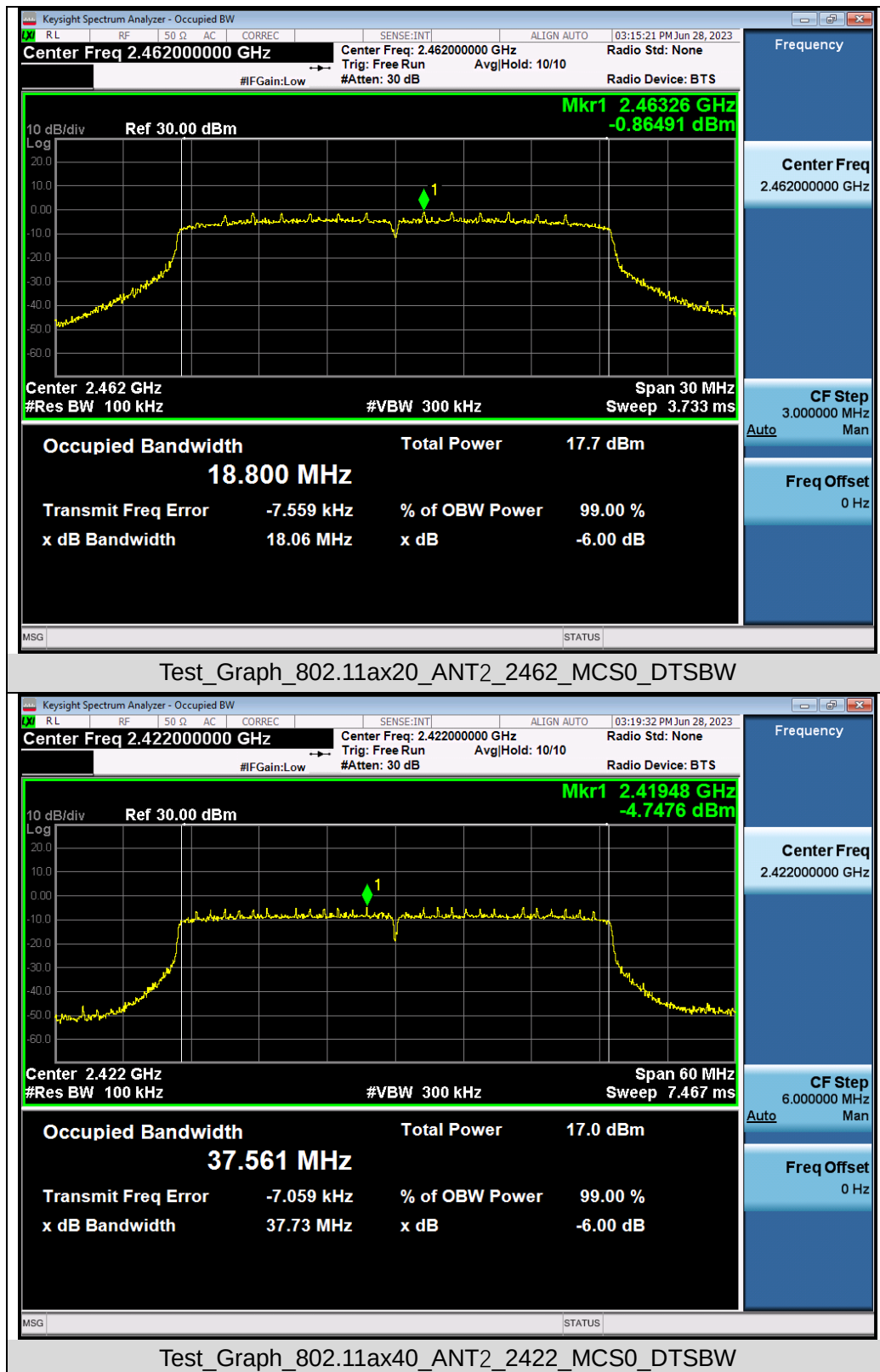
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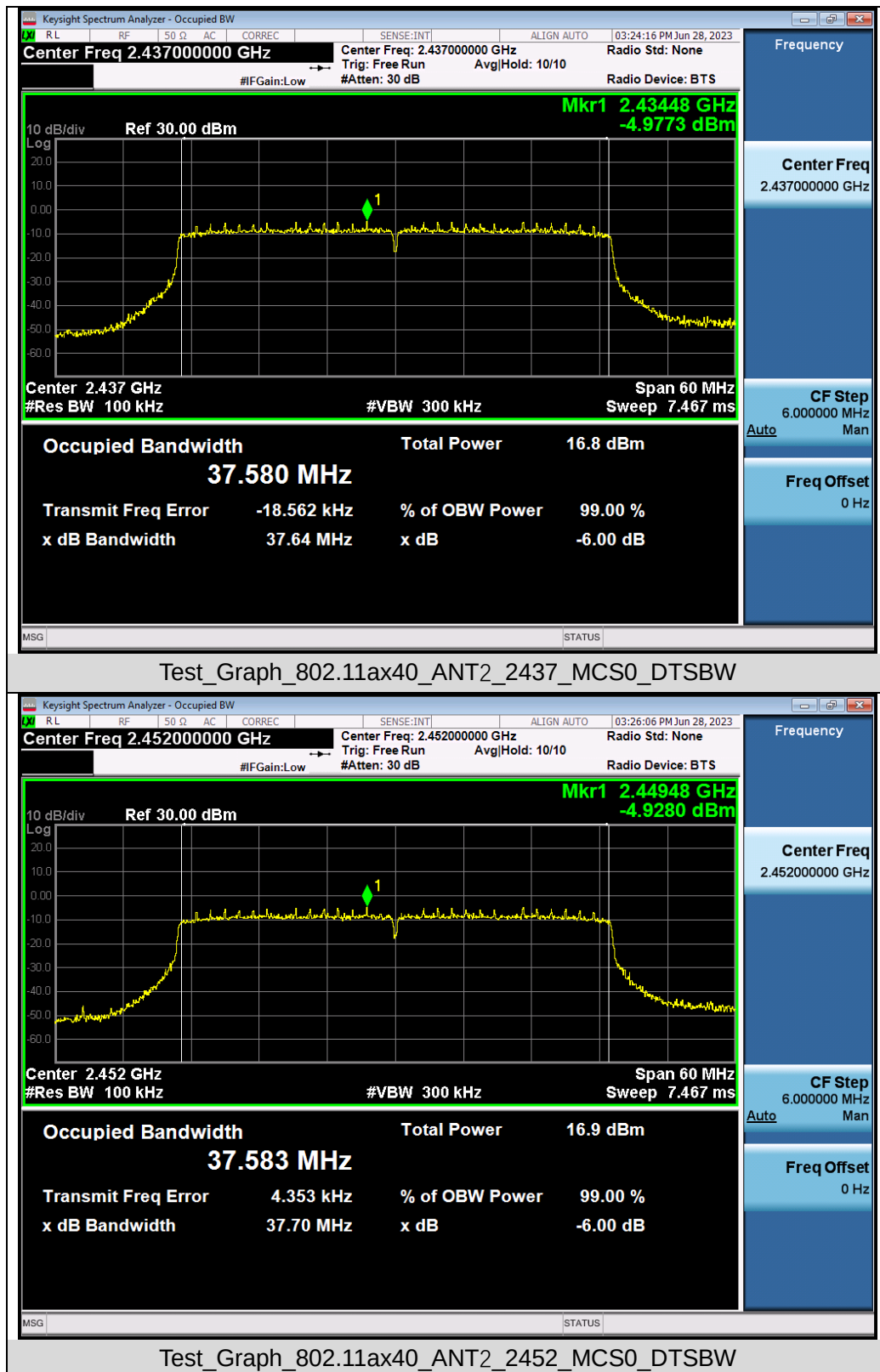
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9. CONDUCTED SPURIOUS EMISSION

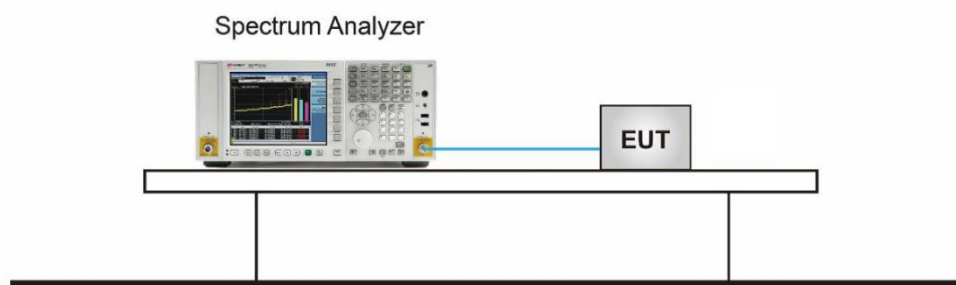
9.1 MEASUREMENT LIMIT

LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power. In addition, radiation emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in§15.209(a))	At least -20dBc than the limit Specified on the BOTTOM Channel	PASS
	At least -20dBc than the limit Specified on the TOP Channel	PASS

9.2 MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer
2. Set the EUT Work on the top, the Middle and the bottom operation frequency individually.
3. Set the Span = wide enough to capture the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic.
4. RBW = 100 kHz; VBW= 300 kHz; Sweep = auto; Detector function = peak.(Test frequency below 1GHz)
5. RBW = 100 kHz; VBW= 300 kHz; Sweep = auto; Detector function = peak.(Test frequency Above 1GHz)
6. Set SPA Trace 1 Max hold, then View.
7. Mark the maximum useless stray point and compare it with the limit value to record the result.

9.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



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