

RF TEST REPORT

Applicant	Play For Dream (Shanghai) Technologies Co., Ltd.
FCC ID	2BMM9-MRD3A0
Product	PLAY FOR DREAM MR
Brand	PLAY FOR DREAM
Model	PFDM D3
Report No.	R2411A1737-R5
Issue Date	January 15, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2023)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Xu Ying

Approved by: Xu Kai

Eurofins TA Technology (Shanghai) Co., Ltd.

Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

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Summary of Measurement Results

Number	Test Case	Clause in FCC rules	Verdict
1	Antenna Requirement	15.203	PASS
2	99% OBW & Emission Bandwidth	15.407(a) C63.10 12.4	PASS
3	Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)	15.407(a)	PASS
4	Maximum Power Spectral Density (E.I.R.P.)	15.407(a)	PASS
5	Frequency Stability	15.407(g)	PASS
6	In-Band Emission (Mask)	15.407(b)(7)	PASS
7	Contention-Based Protocol	15.407(d)(6)	PASS
8	Unwanted Emissions	15.407(b)	PASS
9	Conducted Emissions	15.207	PASS
10	Operational restrictions for 6 GHz U-NII devices	15.407(d)	PASS
Date of Testing: November 25, 2024 ~ December 27, 2024			
Date of Sample Received: November 19, 2024			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1. Test Laboratory

1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.
Address: Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <https://www.eurofins.com/electrical-and-electronics>
E-mail: Kain.Xu@cpt.eurofinscn.com

2. General Description of Equipment Under Test

2.1. Applicant and Manufacturer Information

Applicant	Play For Dream (Shanghai) Technologies Co., Ltd.
Applicant address	Room 501, Building No 3, Caosong Road No.1, Xinqiao Town, Songjiang District, Shanghai City, China
Manufacturer	Play For Dream (Shanghai) Technologies Co., Ltd.
Manufacturer address	Room 501, Building No 3, Caosong Road No.1, Xinqiao Town, Songjiang District, Shanghai City, China

2.2. General Information

EUT Description			
Model	PFDM D3		
Lab internal SN	R2411A1737/S01		
Hardware Version	4.0		
Software Version	D3_DEV_3.0.1.290		
Power Supply	Battery / AC adapter		
Antenna Type	Internal Antenna		
Antenna Connector	A permanently attached antenna (meet with the standard FCC Part 15.203 requirement)		
Antenna Gain	Band	Antenna 1 (dBi)	Antenna 2 (dBi)
	U-NII-5	2.86	2.52
	U-NII-6	2.53	2.66
	U-NII-7	2.79	2.66
	U-NII-8	2.70	2.81
Directional Gain	Band	For Power (dBi)	For PSD (dBi)
	U-NII-5	2.86	5.87
	U-NII-6	2.66	5.67
	U-NII-7	2.79	5.80
	U-NII-8	2.81	5.82
Operating Frequency Range(s)	U-NII-5 (5925MHz-6425MHz) U-NII-6 (6425MHz-6525MHz) U-NII-7 (6525MHz-6875MHz) U-NII-8 (6875MHz-7125MHz)		
Modulation Type	802.11ax (HE20/ HE40/ HE80/ HE160): OFDMA 802.11be (EHT20/ EHT40/ EHT80/ EHT160/EHT320): OFDMA		
Max. Conducted Power	20.35 dBm		
Operating temperature range	-10 ° C to 45° C		
Operating voltage range	7.4 V to 8.9 V		

Testing temperature range	-30 ° C to 50° C
Testing voltage range	7.4 V - 8 V - 8.9 V
State DC voltage	8V
EUT Accessory	
Adapter	Manufacturer: Shenzhen Kosun Industrial Co., Ltd. Model:623005
Data Cable	Manufacturer: Shenzhen Zhishang Technology Co., LTD 1200±20mm, Shielded
Note:1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.	

3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15E (2023) Unlicensed National Information Infrastructure Devices

ANSI C63.10-2013

Reference standard:

KDB 987594 D01 U-NII 6GHz General Requirements v03

KDB 987594 D02 U-NII 6GHz EMC Measurement v03

KDB 987594 D04 UN6GHZ Pre-Approval Guidance checklist v03

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
802.11ax HE20	MCS0	MCS0	MCS0
802.11ax HE40	MCS0	MCS0	MCS0
802.11ax HE80	MCS0	MCS0	MCS0
802.11ax HE160	MCS0	MCS0	MCS0
802.11be EHT20	MCS0	MCS0	MCS0
802.11be EHT40	MCS0	MCS0	MCS0
802.11be EHT80	MCS0	MCS0	MCS0
802.11be EHT160	MCS0	MCS0	MCS0
802.11be EHT320	MCS0	MCS0	MCS0

The worst case Antenna mode for each of the following tests for Wi-Fi:

Test Cases	ANT 1	ANT 2	MIMO
Emission Bandwidth	O	--	--
Maximum Equivalent Isotopically Radiated Power (E.I.R.P.)	O	O	O
Maximum Power Spectral Density (PSD)	O	O	O
Frequency Stability	O	--	--
In-Band Emission (Mask)	O	--	--
Contention-Based Protocol	--	--	O
Unwanted Emissions	--	--	O
Conducted Emissions	--	--	O

TB /MRU Mode

Test Cases	MIMO
Emission Bandwidth	--
Maximum Equivalent Isotopically Radiated Power (E.I.R.P.)	O
Maximum Power Spectral Density (PSD)	O
Frequency Stability	--
In-Band Emission (Mask)	O
Contention-Based Protocol	--
Unwanted Emissions	O
Conducted Emissions	--

Wireless Technology and Frequency Range

Wireless Technology		Channel/Frequency (MHz)							
		Bandwidth 20 MHz	Bandwidth 40 MHz	Bandwidth 80 MHz	Bandwidth 160 MHz	Bandwidth 320 MHz			
Wi-Fi	U-NII-5	1/5955	3/5965	7/5985	15/6025	31/6105	--	--	
		5/5975							
		9/5995	11/6005						
		13/6015							
		17/6035	19/6045	23/6065					
		21/6055							
		25/6075	27/6085						
		29/6095							
		33/6115	35/6125	39/6145	47/6185				
		37/6135							
		41/6155	43/6165						
		45/6175							
		49/6195	51/6205	55/6225					
		53/6215							
		57/6235	59/6245						
		61/6255							
		65/6275	67/6285	71/6305	79/6345				
		69/6295							
		73/6315	75/6325						
		77/6335							
		81/6355	83/6365	87/6385					
		85/6375							
		89/6395	91/6405						
		93/6415							
	U-NII-6	97/6435	99/6445	103/6465	111/6505	95/6425	63/6265		
		101/6455							
		105/6475	107/6485						
		109/6495							
		113/6515	115/6525	119/6545					
		U-NII-7							117/6535
			121/6555						123/6565
			125/6575						
			129/6595	131/6605	135/6625	135/6665	159/674 5		
			133/6615						
			137/6635	139/6645					
			141/6655						

		145/6675	147/6685	151/6705								
		149/6695										
		153/6715	155/6725						167/6785	175/6825	191/6905	--
		157/6735										
		161/6755	163/6765	183/6865	--	--	--					
		165/6775										
		169/6795	171/6805					199/6945	207/6985	--	--	
		173/6815										
		177/6835	179/6845	215/7025	--	--	--					
		181/6855										
		185/6875	187/6885					--	--	--	--	
		189/6895										
	193/6915	195/6925	227/7085	--	--	--						
	197/6935											
	201/6955	203/6965					--	--	--	--		
	205/6975											
	209/6995	211/7005	--	--	--	--						
	213/7015											
	217/7035	219/7045					--	--	--	--		
	221/7055											
	225/7075	227/7085	--	--	--	--						
	229/7095											
	233/7115	--					--	--	--	--		

5. Test Case Results

5.1. 99% OBW & Emission Bandwidth

Ambient Condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

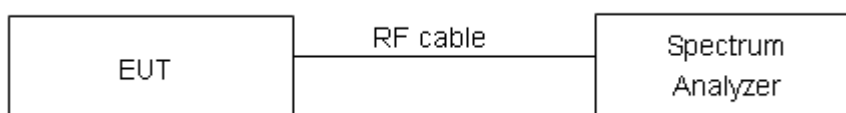
FOR 99% OCCUPIED BANDWIDTH

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

FOR 26dB BANDWIDTH

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the peak 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%.

Test Setup



Limits

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320MHz.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

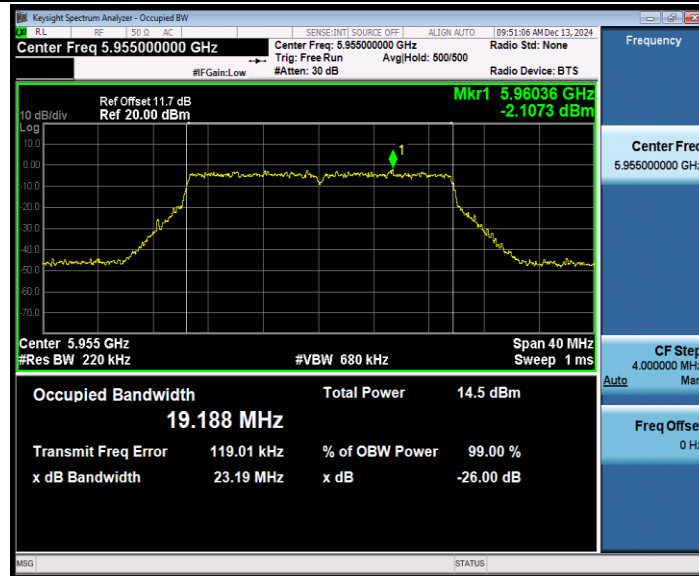
Test Results:

Mode	Carrier frequency (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11ax HE 20 SISO	5955	23.19	PASS
	6175	23.05	PASS
	6415	23.14	PASS
	6435	23.28	PASS
	6475	22.95	PASS
	6515	23.62	PASS
	6535	22.93	PASS
	6695	23.36	PASS
	6855	23.44	PASS
	6875	23.52	PASS
	6895	23.31	PASS
	6995	23.92	PASS
	7115	23.01	PASS
802.11ax HE40 SISO	5965	44.78	PASS
	6165	43.68	PASS
	6405	44.53	PASS
	6445	44.30	PASS
	6485	44.28	PASS
	6525	43.82	PASS
	6565	44.72	PASS
	6685	44.02	PASS
	6845	43.68	PASS
	6885	44.58	PASS
	6925	43.73	PASS
	6965	44.42	PASS
	7085	43.40	PASS
802.11ax HE80 SISO	5985	88.11	PASS
	6145	88.60	PASS
	6385	87.20	PASS
	6465	87.35	PASS
	6545	87.77	PASS
	6625	87.51	PASS
	6705	89.15	PASS
	6785	87.40	PASS
	6865	89.72	PASS
	6945	87.71	PASS
	7025	89.41	PASS
802.11ax HE160 SISO	6025	171.90	PASS
	6185	171.80	PASS

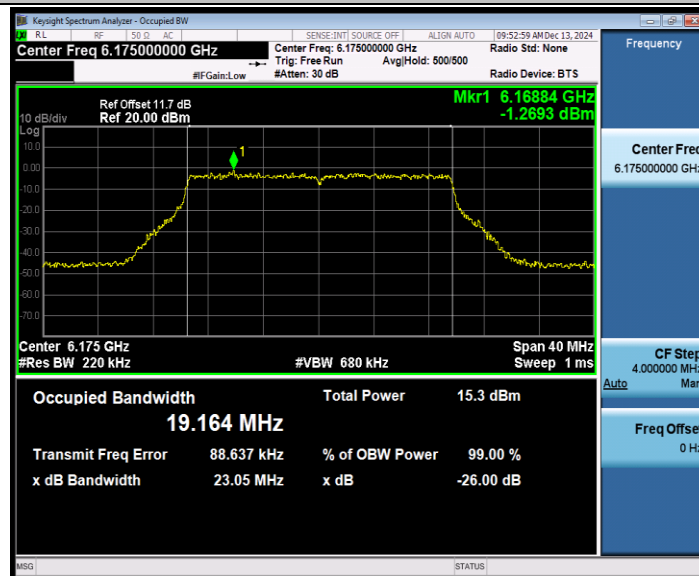
	6345	172.10	PASS
	6505	169.10	PASS
	6665	171.80	PASS
	6825	170.90	PASS
	6985	172.20	PASS
802.11be EHT 20 SISO	5955	23.13	PASS
	6175	23.43	PASS
	6415	23.09	PASS
	6435	23.09	PASS
	6475	22.77	PASS
	6515	23.07	PASS
	6535	23.26	PASS
	6695	23.18	PASS
	6855	23.03	PASS
	6875	22.76	PASS
	6895	22.89	PASS
	6995	22.72	PASS
	7115	23.26	PASS
802.11be EHT 40 SISO	5965	44.11	PASS
	6165	44.08	PASS
	6405	44.08	PASS
	6445	44.27	PASS
	6485	44.60	PASS
	6525	44.43	PASS
	6565	44.41	PASS
	6685	43.93	PASS
	6845	44.47	PASS
	6885	44.57	PASS
	6925	44.27	PASS
	6965	44.12	PASS
	7085	44.79	PASS
802.11be EHT 80 SISO	5985	87.11	PASS
	6145	87.85	PASS
	6385	87.64	PASS
	6465	88.20	PASS
	6545	87.60	PASS
	6625	88.04	PASS
	6705	86.84	PASS
	6785	87.47	PASS
	6865	87.35	PASS
	6945	88.05	PASS
	7025	87.83	PASS
802.11be EHT 160	6025	173.90	PASS

SISO	6185	174.00	PASS
	6345	172.00	PASS
	6505	176.70	PASS
	6665	173.50	PASS
	6825	171.40	PASS
	6985	172.40	PASS
802.11be EHT 320 SISO	6105	334.70	PASS
	6265	334.50	PASS
	6585	336.80	PASS
	6745	334.50	PASS
	6905	335.80	PASS

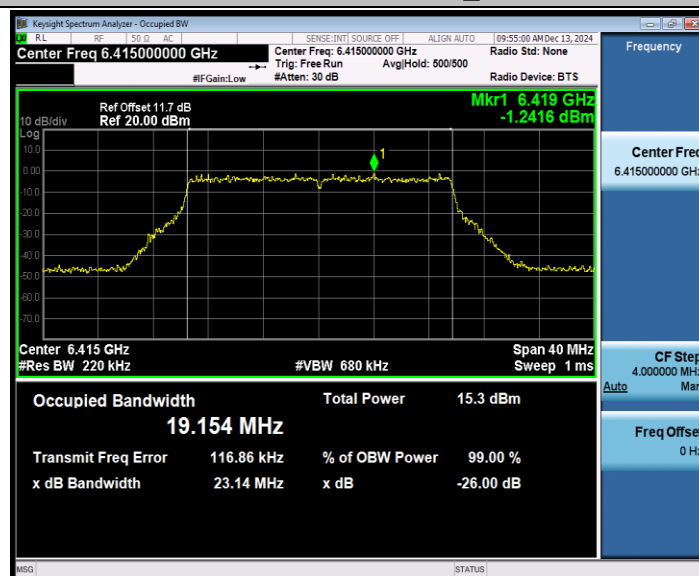
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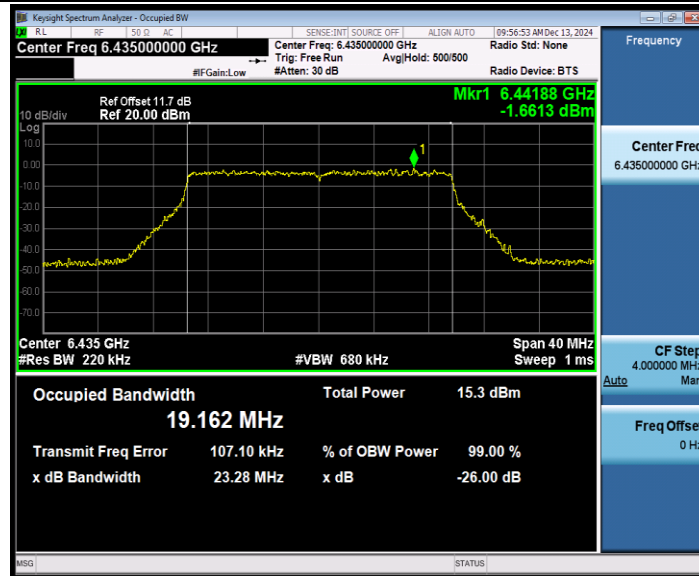
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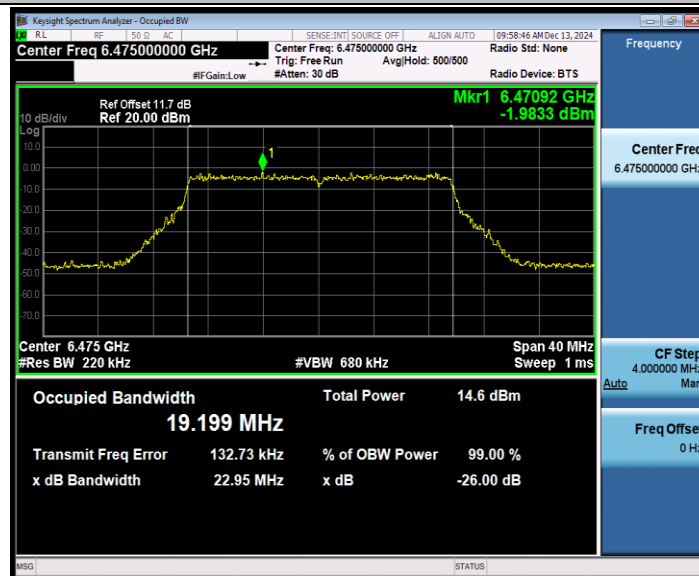
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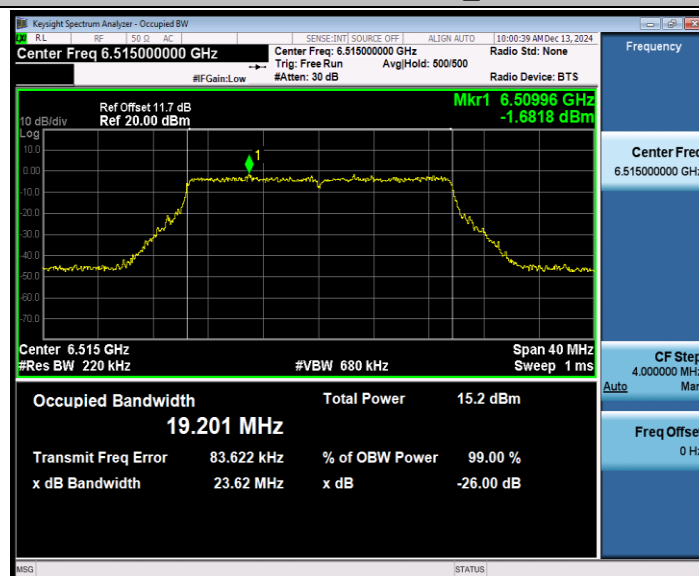
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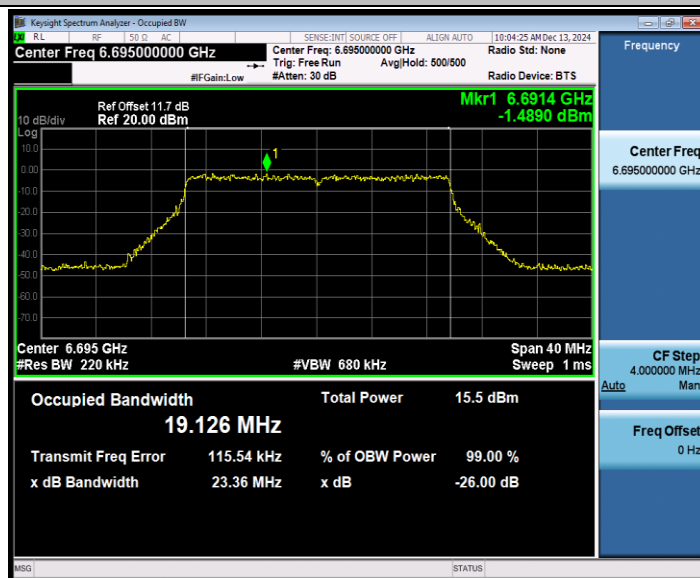
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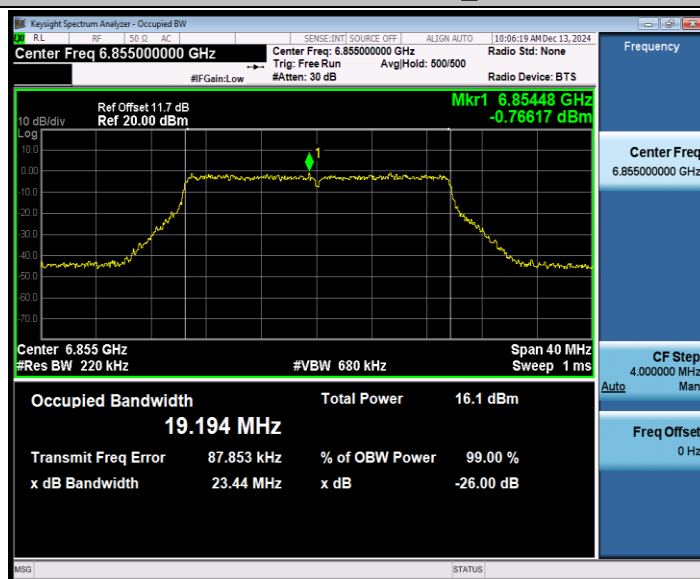
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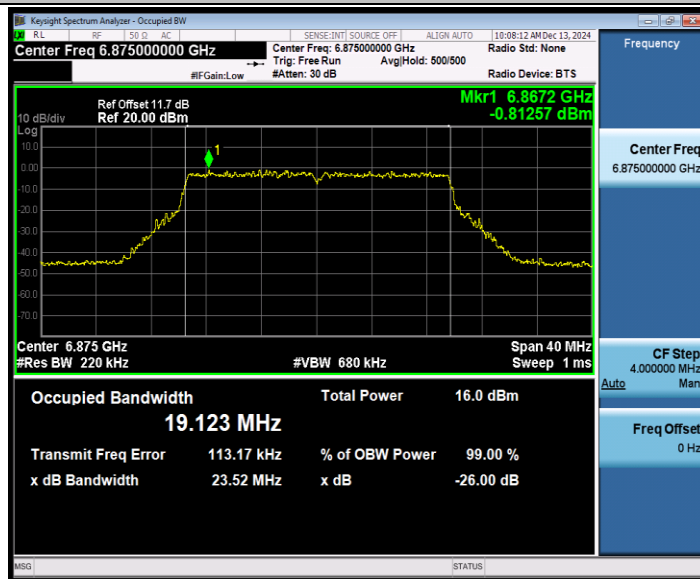
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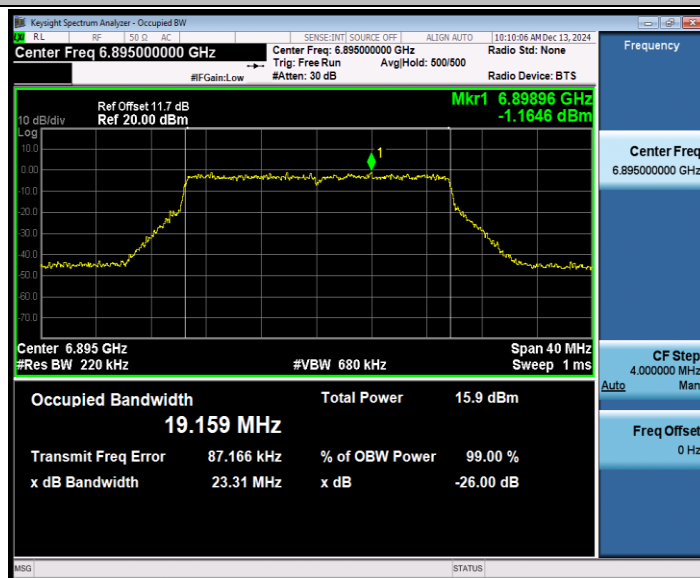
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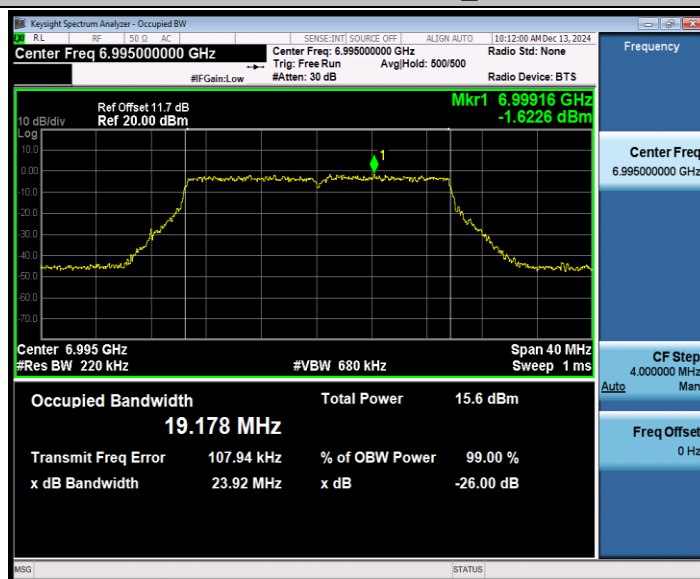
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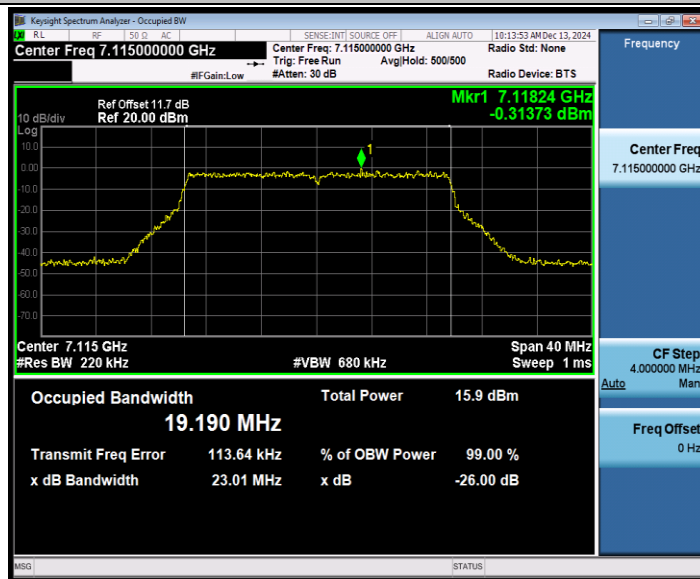
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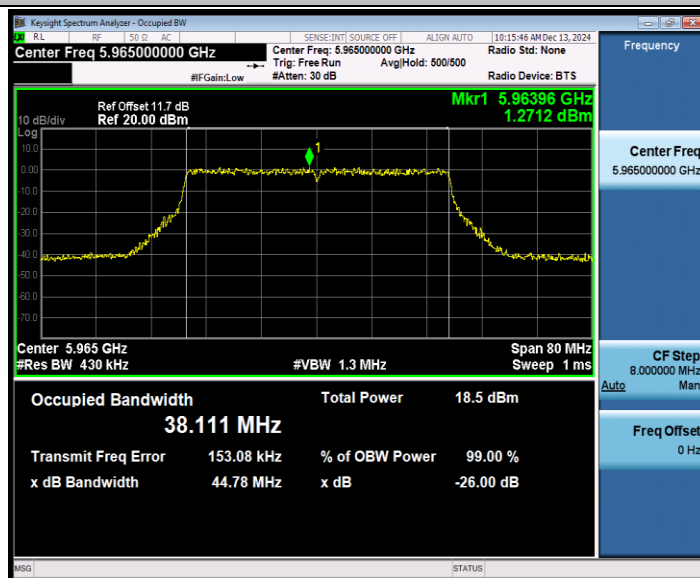
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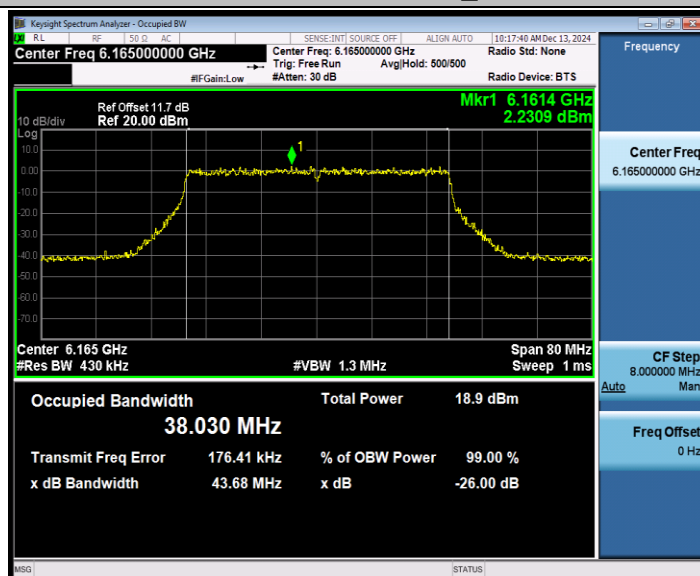
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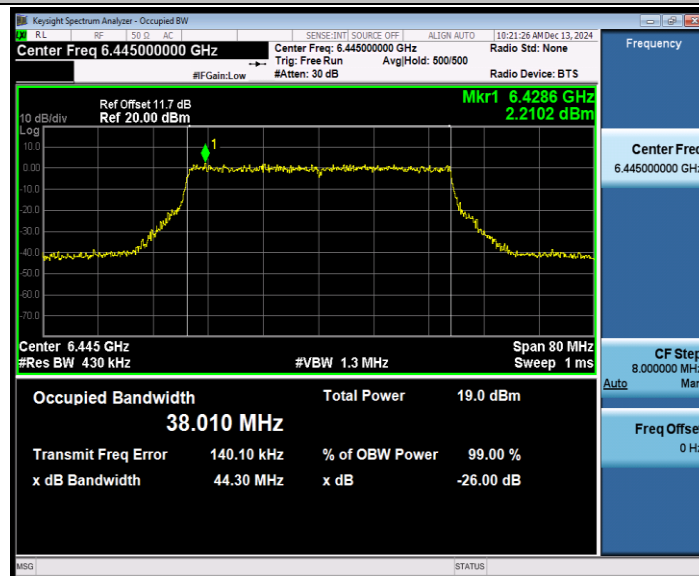
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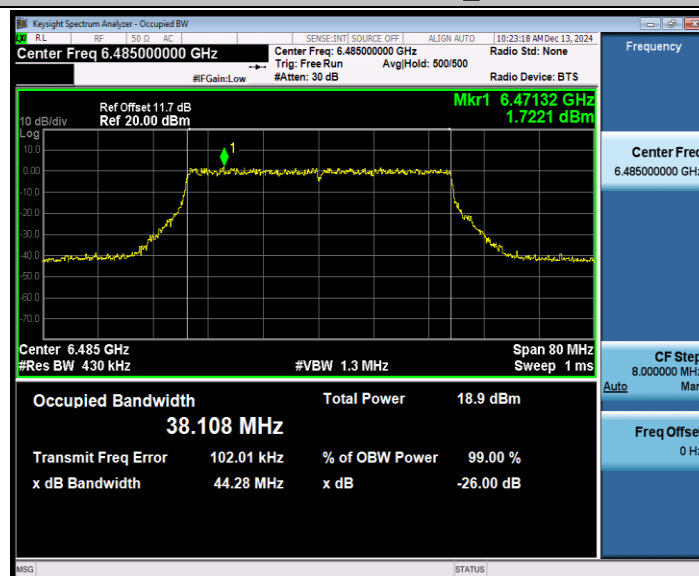
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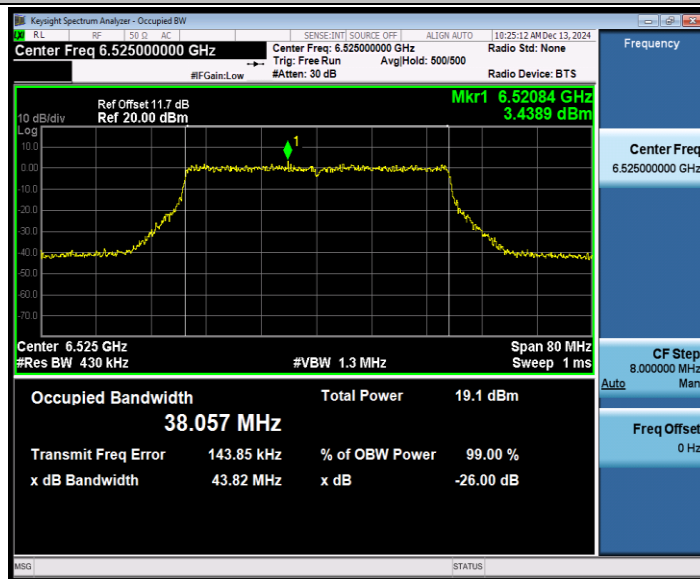
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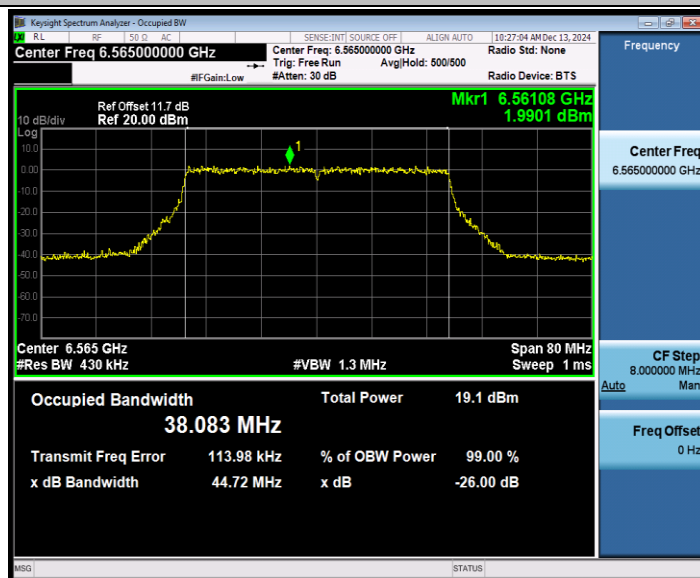
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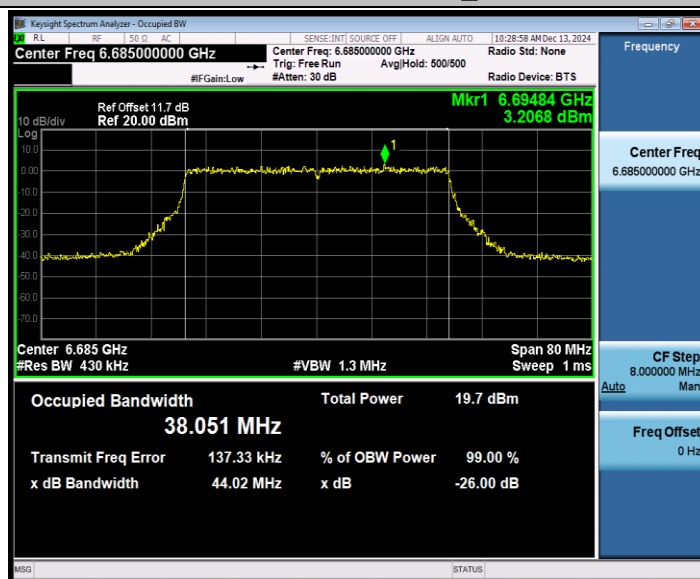
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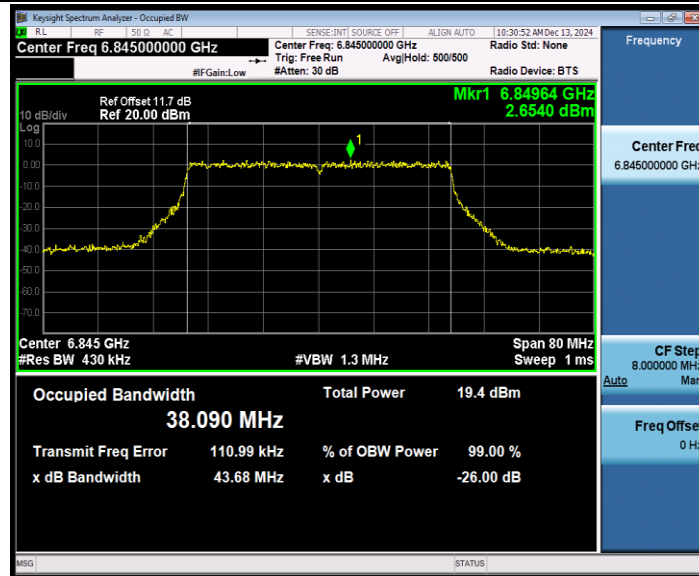
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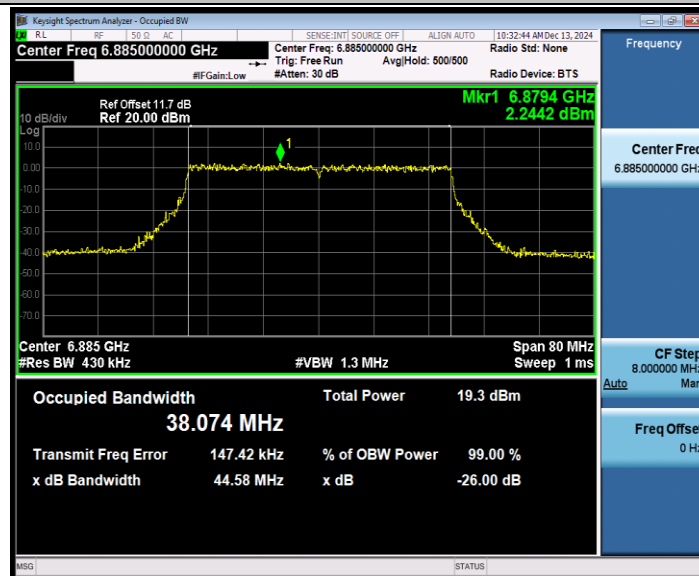
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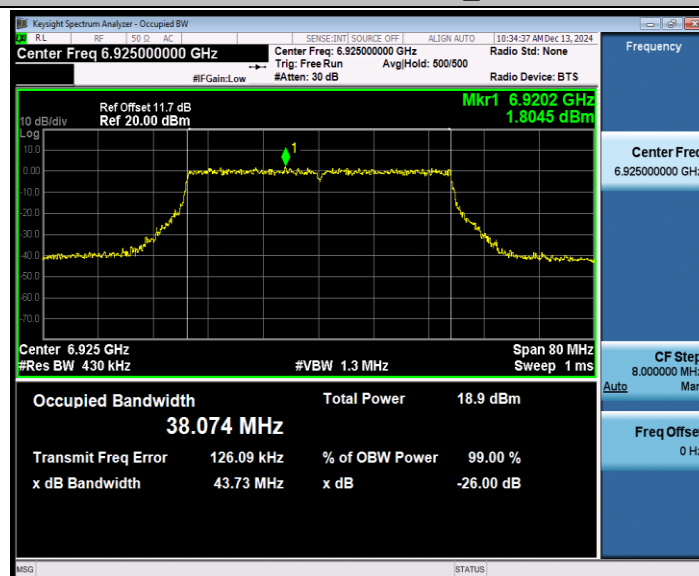
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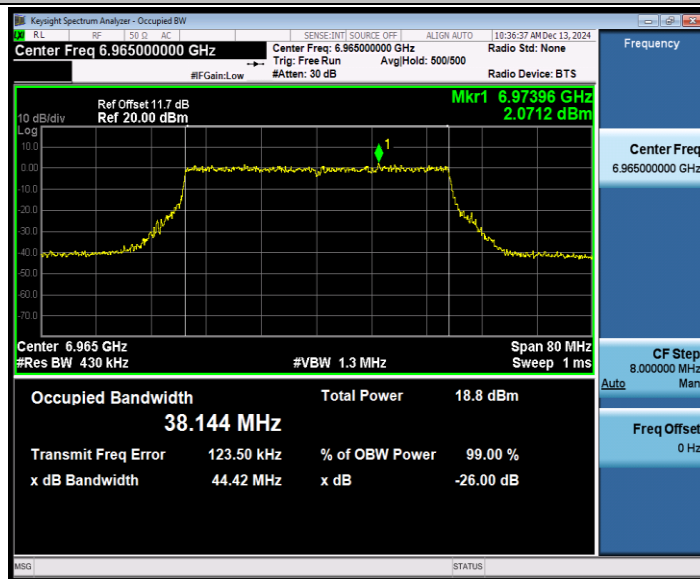
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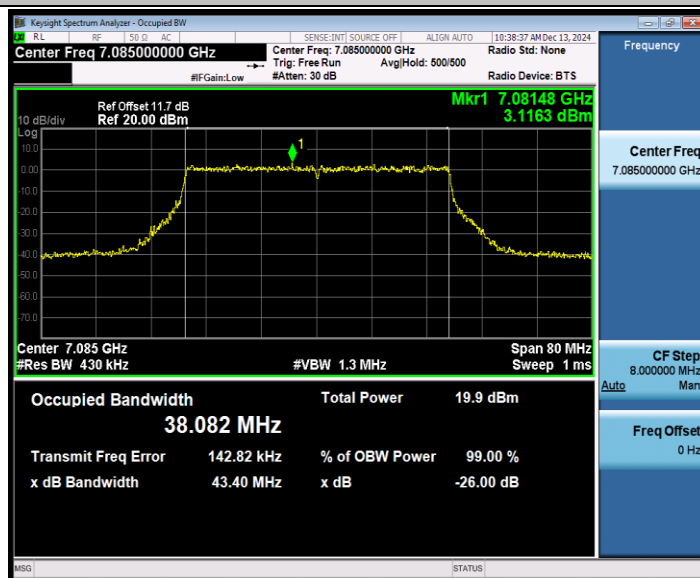
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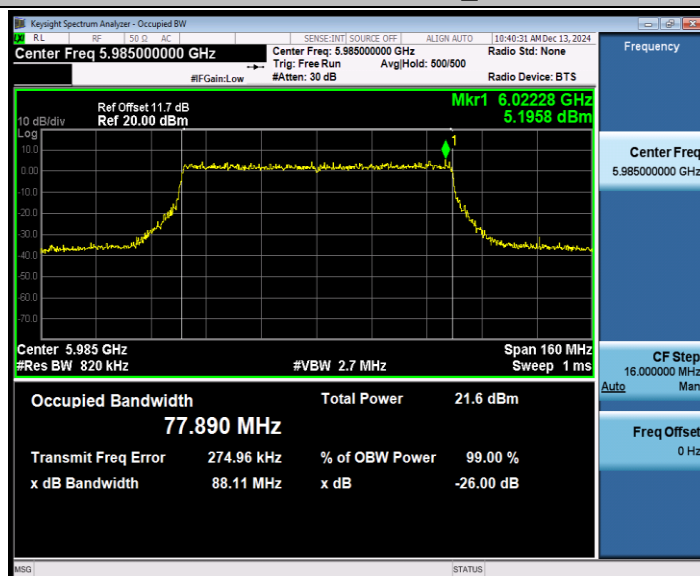
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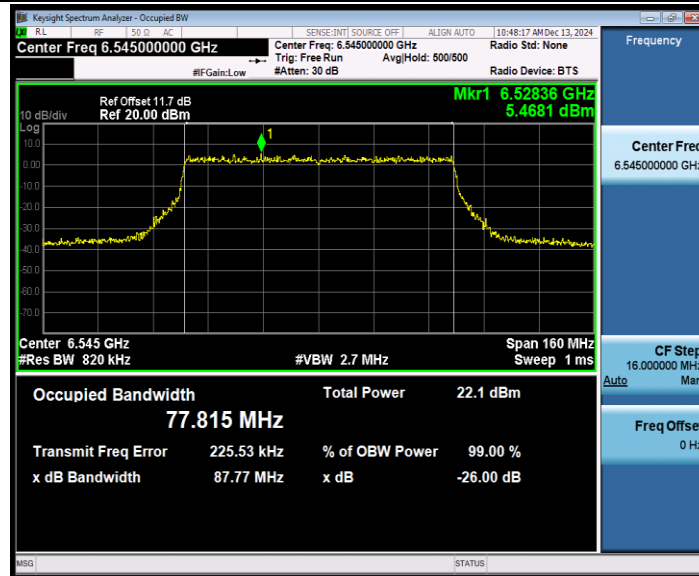
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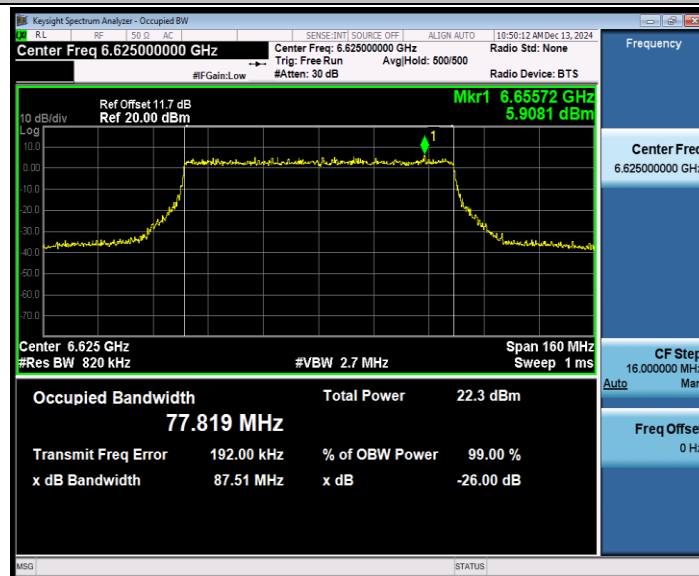
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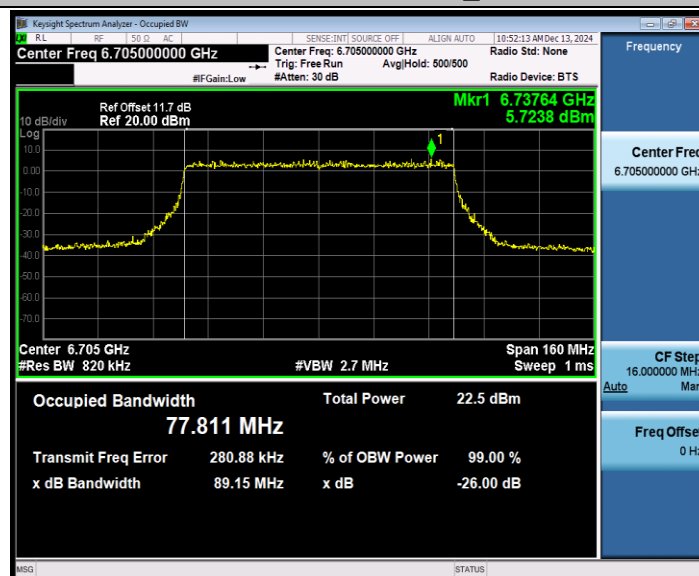
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802.11ax EHT80 SISO_6625



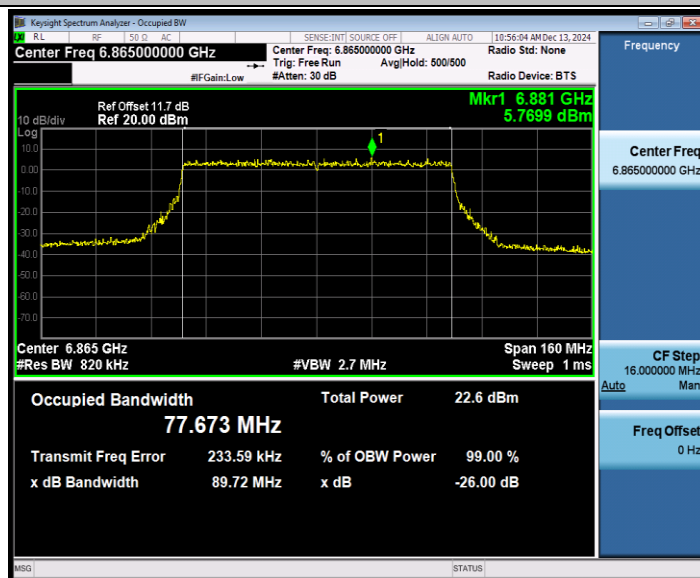
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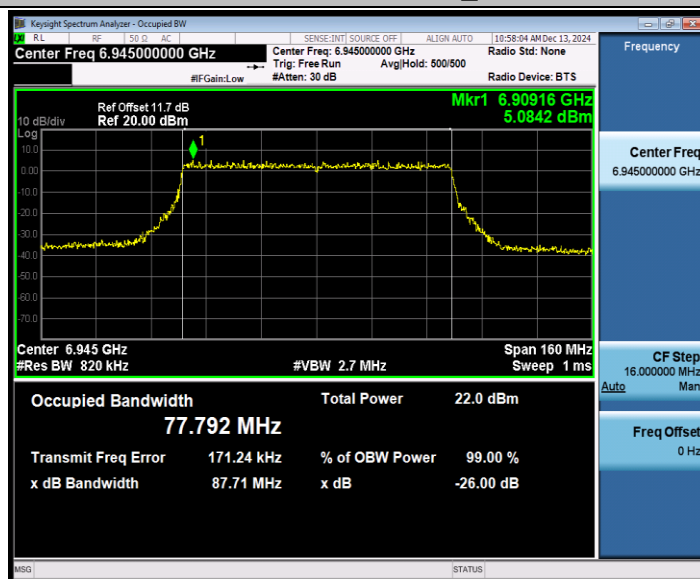
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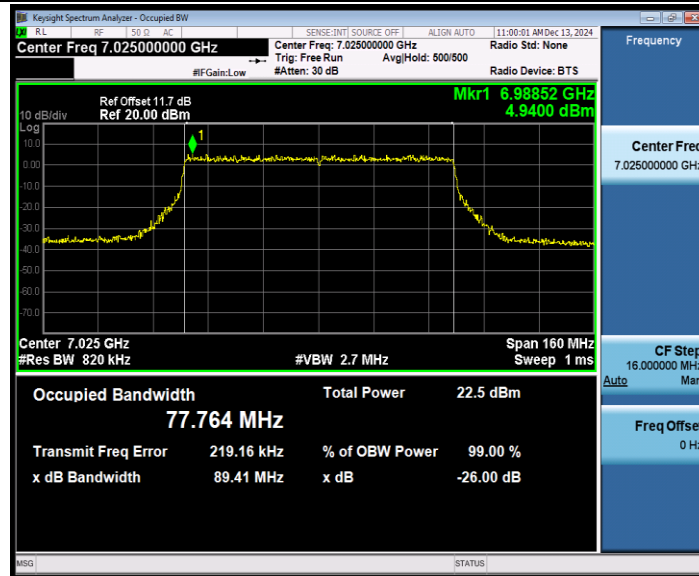
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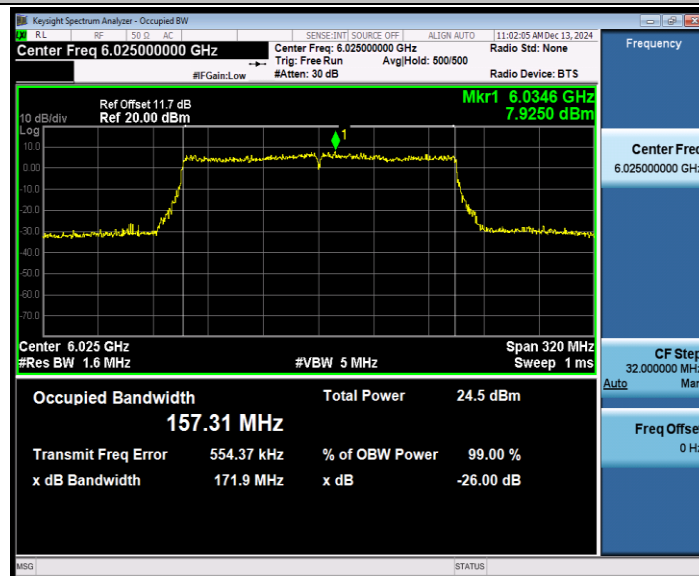
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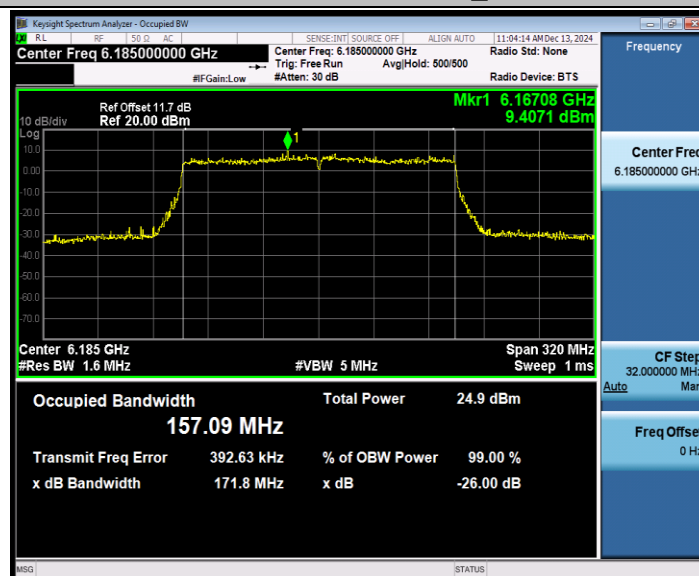
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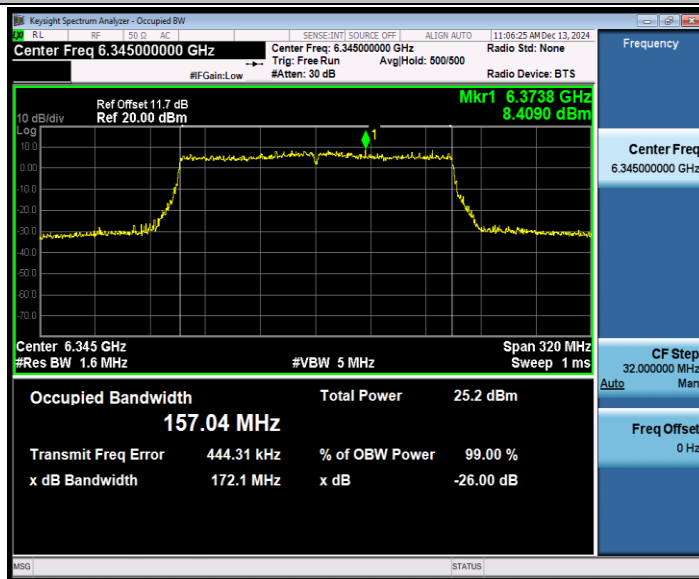
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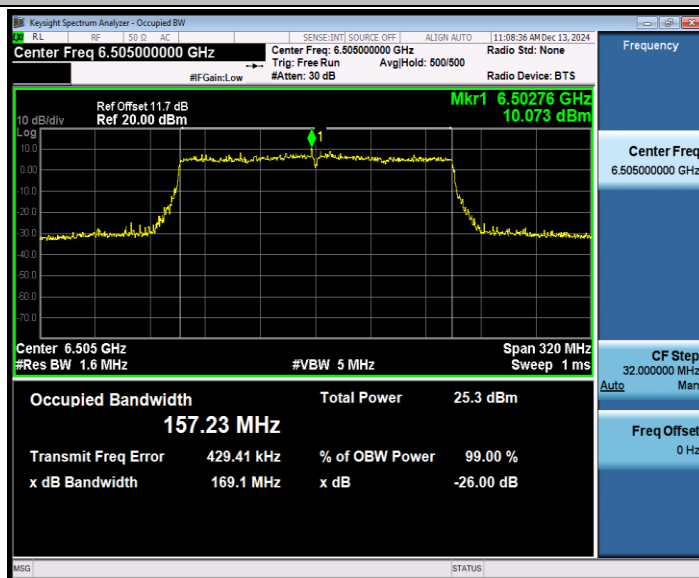
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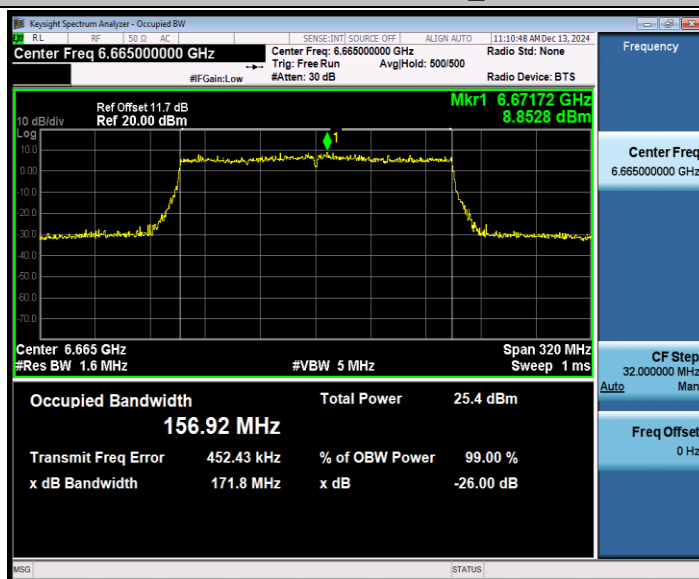
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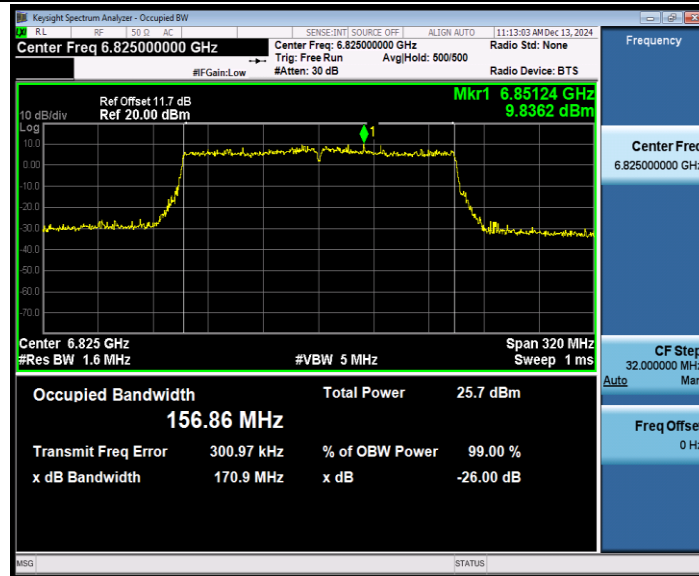
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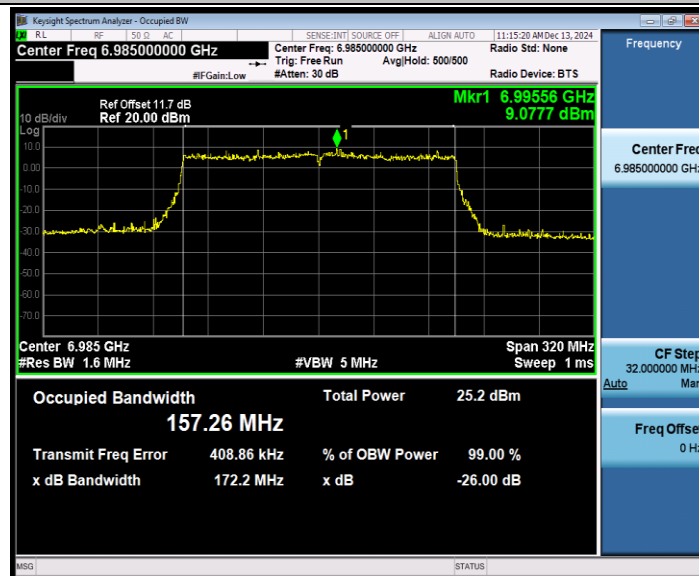
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802.11ax EHT160 SISO_6825



802.11ax EHT160 SISO_6985



802.11be EHT20 SISO_5955

