

MEASUREMENT REPORT**FCC Part 15.407 802.11ax/be WiFi 6E (OFDMA)****Applicant Name:**

Samsung Electronics Co., Ltd.
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Gyeonggi-do, 16677, Korea

Date of Testing:

09/03/2024 - 10/25/2024

Test Report Issue Date:

10/30/2024

Test Site/Location:

Element lab., Columbia, MD, USA
Element Lab., Morgan Hill, CA, USA

Test Report Serial No.:

1M2408260069-20.A3L

FCC ID:

A3LSMS938B

APPLICANT:

Samsung Electronics Co., Ltd.

Application Type:

Certification

Model:

SM-S938B/DS

Additional Model:

SM-S938B

EUT Type:

Portable Handset

Frequency Range:

5935 – 7115MHz

Modulation Type:

OFDMA

FCC Classification:

15E 6GHz Low Power Dual Client (6CD)

FCC Rule Part(s):

Part 15 Subpart E (15.407)

Test Procedure(s):

ANSI C63.10-2013, KDB 987594 D02 v03,
KDB 648474 D03 v01r04,

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.



RJ Ortanez
Executive Vice President



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Channel Bandwidth [MHz]	UNII Band	Tx Frequency [MHz]	Antenna-1		Antenna-2		MIMO	
			Max. Power [mW]	Max. Power [dBm]	Max. Power [mW]	Max. Power [dBm]	Max. Power [mW]	Max. Power [dBm]
20	5	5935 - 6415	10.86	10.36	14.00	11.46	49.32	16.93
	6	6435 - 6515	2.43	3.86	2.60	4.15	9.82	9.92
	7	6535 - 6875	10.45	10.19	10.47	10.20	41.30	16.16
	8	6895 - 7115	2.23	3.48	2.48	3.95	9.18	9.63
40	5	5965 - 6405	10.42	10.18	14.03	11.47	48.19	16.83
	6	6445 - 6525	4.75	6.77	4.99	6.98	14.95	11.75
	7	6565 - 6845	10.76	10.32	11.40	10.57	44.06	16.44
	8	6885 - 7085	4.31	6.34	4.97	6.96	14.96	11.75
80	5	5985 - 6385	9.62	9.83	11.30	10.53	37.67	15.76
	6	6465	9.93	9.97	10.35	10.15	36.40	15.61
	7	6545 - 6865	8.81	9.45	9.35	9.71	33.81	15.29
	8	6945 - 7025	8.79	9.44	9.46	9.76	36.72	15.65
160	5	6025 - 6345	8.00	9.03	8.95	9.52	30.20	14.80
	6	6505	7.55	8.78	8.22	9.15	28.21	14.50
	7	6665 - 6825	6.37	8.04	7.11	8.52	26.99	14.31
	8	6985	6.61	8.20	7.82	8.93	28.01	14.47
320	5	6105 - 6265	6.52	8.14	7.66	8.84	29.49	14.70
	6	6425	6.79	8.32	6.85	8.36	28.60	14.56
	7	6585 - 6745	5.69	7.55	6.50	8.13	24.59	13.91
	8	6905	5.89	7.70	7.10	8.51	24.83	13.95

EUT Overview - EIRP

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1 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 Element Test Location

These measurement tests were conducted at the Element laboratory located at 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

1.3 Test Facility / Accreditations

Measurements were performed at Element lab located in Columbia, MD 21046, U.S.A.

- Element Washington DC LLC is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- Element Washington DC LLC facility is a registered (2451B) test laboratory with the site description on file with ISED.
- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Recognition Agreements (MRAs).

Measurements were performed at Element located in Morgan Hill, CA 95037, U.S.A. ("CA")

- Element is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- Element facility is a registered (22831) test laboratory with the site description on file with ISED

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2 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Electronics Co., Ltd. Portable Handset FCC: A3LSMS938B**. The test data contained in this report pertains only to the emissions due to the EUT's UNII transmitter while operating in the 6GHz band in dual-client (LPI+SP) mode.

Test Device Serial No.: 2054M, 2284M, 1150M, 1292M, 1182M, 1250M, 2066M, 1295M, 1259M, 1258M

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR (FR1 and FR2), 802.11b/g/n/ax/be WLAN, 802.11a/n/ac/ax/be UNII (5GHz and 6GHz), Bluetooth (1x, EDR, LE), NFC, Wireless Power Transfer, UWB

Band 5		Band 6		Band 7		Band 8	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
2	5935	97	6435	117	6535	189	6895
:	:	:	:	:	:	:	:
45	6175	105	6475	149	6695	209	6995
:	:	:	:	:	:	:	:
93	6415	113	6515	185	6875	233	7115

Table 2-1. 802.11ax/be (20MHz) Frequency / Channel Operations

Band 5		Band 6		Band 7		Band 8	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
3	5965	99	6445	123	6565	187	6885
:	:	:	:	:	:	:	:
43	6165	107	6485	155	6725	211	7005
:	:	:	:	:	:	:	:
91	6405	115	6525	179	6845	227	7085

Table 2-2. 802.11ax/be (40MHz BW) Frequency / Channel Operations

Band 5		Band 6		Band 7		Band 8	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
7	5985	103	6465	119	6545	199	6945
:	:			:	:	:	:
39	6145			151	6705	215	7025
:	:			:	:		
87	6385			183	6865		

Table 2-3. 802.11ax/be (80MHz BW) Frequency / Channel Operations

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Band 5		Band 6		Band 7		Band 8	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
15	6025	111	6505	143	6665	207	6985
:	:			:	:		
47	6185			175	6825		
:	:						
79	6345						

Table 2-4. 802.11ax/be (160MHz BW) Frequency / Channel Operations

Band 5		Band 6		Band 7		Band 8	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
31	6105	95	6425	127	6585	191	6905
63	6265			159	6745		

Table 2-5. 802.11be (320MHz BW) Frequency / Channel Operations

Notes:

- 6GHz NII operation is possible in 20MHz, 40MHz, 80MHz, 160MHz, and 320MHz 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 per the guidance of Section B)2)b) of ANSI C63.10-2013. 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:

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Target Maximum Average Conducted Powers / Maximum Achievable Duty Cycles															
Band	Bandwidth	Tone Type	Tone Size	ANT1				ANT2				MIMO (1+2)			
				Duty Cycle [%]	Pulse Width	Period	Radiated DCCF [dB]	Duty Cycle [%]	Pulse Width	Period	Radiated DCCF [dB]	Duty Cycle [%]	Pulse Width	Period	Radiated DCCF [dB]
6GHz	20MHz	RU	26T	98.05	5.030	5.130	N/A	99.54	4.578	4.599	N/A	99.15	2.344	2.364	N/A
			52T	99.54	4.565	4.586	N/A	99.54	4.563	4.584	N/A	99.19	2.341	2.360	N/A
			106T	99.08	2.484	2.507	N/A	99.20	2.488	2.508	N/A	98.56	1.300	1.319	N/A
			242T	98.07	1.118	1.140	N/A	98.33	1.121	1.140	N/A	97.07	0.617	0.635	0.13
		MRU	52+26T	99.40	3.499	3.520	N/A	99.43	3.500	3.520	N/A	98.96	1.808	1.827	N/A
			106+26T	98.97	2.027	2.048	N/A	99.02	2.027	2.047	N/A	98.35	1.070	1.088	N/A
	40MHz	RU	26T	99.43	4.572	4.598	N/A	99.56	4.575	4.595	N/A	99.24	2.345	2.363	N/A
			52T	99.52	4.562	4.584	N/A	99.52	4.563	4.585	N/A	99.24	2.341	2.359	N/A
			106T	99.12	2.473	2.495	N/A	99.20	2.488	2.508	N/A	98.63	1.300	1.318	N/A
			242T	98.25	1.120	1.140	N/A	98.33	1.120	1.139	N/A	97.21	0.617	0.635	0.12
		MRU	484T	99.15	2.105	2.123	N/A	98.12	1.095	1.116	N/A	97.15	0.606	0.624	0.13
			52+26T	99.29	3.495	3.520	N/A	99.46	3.500	3.519	N/A	99.01	1.808	1.826	N/A
			106+26T	99.12	2.027	2.045	N/A	99.07	2.027	2.046	N/A	98.44	1.070	1.087	N/A
	80MHz	RU	26T	99.50	4.572	4.595	N/A	99.54	4.574	4.595	N/A	99.24	2.345	2.363	N/A
			52T	99.45	4.560	4.585	N/A	99.59	4.566	4.585	N/A	99.24	2.342	2.360	N/A
			106T	98.96	2.481	2.507	N/A	99.20	2.479	2.499	N/A	98.63	1.299	1.317	N/A
			242T	98.07	1.119	1.141	N/A	98.33	1.120	1.139	N/A	97.19	0.616	0.634	0.12
			484T	99.06	2.102	2.122	N/A	99.06	2.102	2.122	N/A	95.26	0.357	0.375	0.21
			996T	99.06	2.003	2.022	N/A	98.11	1.037	1.057	N/A	95.26	0.357	0.375	0.21
		MRU	52+26T	99.40	3.498	3.519	N/A	99.43	3.499	3.519	N/A	99.01	1.808	1.826	N/A
			106+26T	98.97	2.024	2.045	N/A	99.02	2.027	2.047	N/A	98.44	1.070	1.087	N/A
			484+242T	98.54	1.420	1.441	N/A	98.54	1.420	1.441	N/A	96.35	0.462	0.480	0.16
	160MHz	RU	26T	99.41	4.561	4.588	N/A	99.46	4.572	4.597	N/A	99.24	2.345	2.363	N/A
			52T	99.50	4.563	4.586	N/A	99.48	4.565	4.589	N/A	99.24	2.341	2.359	N/A
			106T	99.04	2.485	2.509	N/A	99.12	2.487	2.509	N/A	98.63	1.300	1.318	N/A
			242T	98.24	1.119	1.139	N/A	98.24	1.119	1.139	N/A	97.20	0.617	0.635	0.12
			484T	99.10	2.102	2.121	N/A	99.06	2.103	2.123	N/A	95.23	0.358	0.375	0.21
			996T	98.11	1.037	1.057	N/A	98.11	1.038	1.058	N/A	95.18	0.358	0.376	0.21
		MRU	2x996T	98.10	1.033	1.053	N/A	98.20	1.034	1.053	N/A	95.13	0.353	0.372	0.22
			52+26T	99.56	4.550	4.570	N/A	99.46	3.500	3.519	N/A	99.01	1.808	1.826	N/A
			106+26T	99.54	4.551	4.572	N/A	99.07	2.027	2.046	N/A	98.35	1.070	1.088	N/A
			484+242T	97.50	809.600	830.400	0.11	98.54	1.421	1.442	N/A	96.23	0.462	0.481	0.17
			996+484T	98.61	1.422	1.442	N/A	98.49	1.373	1.394	N/A	96.16	0.448	0.466	0.17
			966+484+242T	99.58	5.448	5.471	N/A	99.65	5.452	5.471	N/A	99.65	5.446	5.465	N/A
	320MHz	RU	26T	99.56	4.571	4.591	N/A	99.24	4.574	4.609	N/A	99.24	2.345	2.363	N/A
			52T	99.48	4.562	4.586	N/A	99.43	4.560	4.586	N/A	99.24	2.341	2.359	N/A
			106T	99.04	2.485	2.509	N/A	99.28	2.489	2.507	N/A	98.63	1.300	1.318	N/A
			242T	98.07	1.116	1.138	N/A	100.36	1.118	1.114	N/A	97.18	0.617	0.634	0.12
			484T	99.01	2.101	2.122	N/A	99.06	2.102	2.122	N/A	95.26	0.358	0.376	0.21
			996T	98.02	1.037	1.058	N/A	98.20	1.038	1.057	N/A	95.23	0.358	0.376	0.21
		MRU	2x996T	98.00	1.030	1.051	N/A	97.00	595.200	613.600	0.13	95.02	0.353	0.372	0.22
			4x996T	98.18	1.027	1.046	N/A	98.28	1.028	1.046	N/A	96.90	0.569	0.588	0.14
			52+26T	99.29	3.499	3.524	N/A	99.29	3.496	3.521	N/A	98.96	1.808	1.827	N/A
			106+26T	99.46	3.500	3.519	N/A	99.07	2.026	2.045	N/A	98.34	1.069	1.087	N/A
			484+242T	99.85	812.000	813.200	N/A	98.68	1.423	1.442	N/A	96.25	0.462	0.480	0.17
			996+484T	97.71	784.000	802.400	0.10	99.22	2.670	2.691	N/A	96.05	0.447	0.466	0.18
			966+484+242T	99.54	5.449	5.474	N/A	99.63	5.455	5.475	N/A	99.67	5.451	5.469	N/A
			2x996+484T	97.95	846.300	864.000	0.09	98.60	1.618	1.641	N/A	96.30	0.479	0.497	0.16
			3x996T	97.48	712.000	730.400	0.11	98.46	1.345	1.366	N/A	95.67	0.411	0.429	0.19
			3x996+484T	98.40	1.170	1.189	N/A	99.13	2.272	2.292	N/A	97.18	0.641	0.660	0.12

Table 2-6. Measured Duty Cycles

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2. The device employs MIMO technology. Below are the possible configurations.

WiFi Configurations		SISO		CDD		SDM	
		ANT1	ANT2	ANT1	ANT2	ANT1	ANT2
6 GHz	11ax	✓	✓	✓	✓	✓	✓
	11be	✓	✓	✓	✓	✓	✓

Table 2-7. Frequency / Channel Operations

✓ = Support; ✕ = NOT Support

SISO = Single Input Single Output

SDM = Spatial Diversity Multiplexing – MIMO function

CDD = Cyclic Delay Diversity - 2Tx Function

3. The device supports the following data rates (shown in Mbps):

MCS Index	Spatial Stream	OFDMA (802.11ax)																							
		26T			52T			106T			242T			484T			996T			2x996T					
		0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI	0.8μs GI	1.6μs GI	3.2μs GI
0	1	0.9	0.8	0.8	1.8	1.7	1.5	3.8	3.5	3.2	8.6	8.1	7.3	17.2	16.3	14.6	36	34	30.6	72.1	68.1	61.3	144.1	136.1	122.5
1	1	1.8	1.7	1.5	3.5	3.3	3	7.5	7.1	6.4	17.2	16.3	14.6	34.4	32.5	29.3	72.1	68.1	61.3	144.1	136.1	122.5	288.2	272.2	245
2	1	2.6	2.5	2.3	5.3	5	4.5	11.3	10.6	9.6	25.8	24.4	21.9	51.6	48.8	43.9	108.1	102.1	91.9	216.2	204.2	183.8	432.4	408.3	367.5
3	1	3.5	3.3	3	7.1	6.7	6	15	14.2	12.8	34.4	32.5	29.3	68.8	65	58.5	144.1	136.1	122.5	288.2	272.2	245	576.5	544.4	490
4	1	5.3	5	4.5	10.6	10	9	22.5	21.3	19.1	51.6	48.8	43.9	103.2	97.5	87.8	216.2	204.2	183.8	432.4	408.3	367.5	864.7	816.7	735
5	1	7.1	6.7	6	14.1	13.3	12	30	28.3	25.5	68.8	65	58.5	137.6	130	117	288.2	272.2	245	576.5	544.4	490	1152.9	1088.9	980
6	1	7.9	7.5	6.8	15.9	15	13.5	33.8	31.9	28.7	77.4	73.1	65.8	154.9	146.3	131.6	324.3	306.3	275.6	648.5	612.5	551.3	1297.1	1225	1102.5
7	1	8.8	8.3	7.5	17.6	16.7	15	37.5	35.4	31.9	86	81.3	73.1	172.1	162.5	146.3	360.3	340.3	306.3	720.6	680.6	612.5	1441.2	1361.1	1225
8	1	10.6	10	9	21.2	20	18	45	42.5	38.3	103.2	97.5	87.8	206.5	195	175.5	432.4	408.3	367.5	864.7	816.7	735	1729.4	1633.3	1470
9	1	11.8	11.1	10	23.5	22.2	20	50	47.2	42.5	114.7	108.3	97.5	229.4	216.7	195	480.4	453.7	408.3	960.8	907.4	816.7	2161.8	2041.7	1837.5
10	1	13.2	12.5	11.3	26.5	25	22.5	56.3	53.1	47.8	129	121.9	109.7	258.1	243.8	219.4	540.4	510.4	459.4	1080.9	1020.8	918.8	2402	2268.5	2041.7
11	1	14.7	13.9	12.5	29.4	27.8	25	62.5	59	53.1	143.4	135.4	121.9	286.8	270.8	243.8	600.5	567.1	510.4	1201	1134.3	1020.8	2802	2668.5	2401.7
0	2	1.8	1.7	1.5	3.5	3.3	3	7.5	7.1	6.4	17.2	16.3	14.6	34.4	32.5	29.3	72.1	68.1	61.3	144.1	136.1	122.5	288.2	272.2	245
1	2	3.5	3.3	3	7.1	6.7	6	15	14.2	12.8	34.4	32.5	29.3	68.8	65	58.5	144.1	136.1	122.5	288.2	272.2	245	576.5	544.4	490
2	2	5.3	5	4.5	10.6	10	9	22.5	21.3	19.1	51.6	48.8	43.9	103.2	97.5	87.8	216.2	204.2	183.8	432.4	408.3	367.5	864.7	816.7	735
3	2	7.1	6.7	6	14.1	13.3	12	30	28.3	25.5	68.8	65	58.5	137.6	130	117	288.2	272.2	245	576.5	544.4	490	1152.9	1088.9	980
4	2	10.6	10	9	21.2	20	18	45	42.5	38.3	103.2	97.5	87.8	206.5	195	175.5	432.4	408.3	367.5	864.7	816.7	735	1729.4	1633.3	1470
5	2	14.1	13.3	12	28.2	26.7	24	60	56.7	51	137.6	130	117	275.3	260	234	576.5	544.4	490	1152.9	1088.9	980	2305.8	2181.8	1980
6	2	15.9	15	13.5	31.8	30	27	67.5	63.8	57.4	154.9	146.3	131.6	309.7	292.5	263.3	648.5	612.5	551.3	1297.1	1225	1102.5	2802	2668.5	2401.7
7	2	17.6	16.7	15	35.3	33.3	30	75	70.8	63.8	172.1	162.5	146.3	344.1	325	292.5	720.6	680.6	612.5	1441.2	1361.1	1225	3402.2	3222.2	2940
8	2	21.2	20	18	42.4	40	36	90	85	76.5	206.5	195	175.5	412.9	390	351	864.7	816.7	735	1729.4	1633.3	1470	4324.4	4083.3	3675
9	2	23.5	22.2	20	47.1	44.4	40	100	94.4	85	229.4	216.7	195	458.8	433.3	390	960.8	907.4	816.7	1921.6	1814.8	1633.3	4602.2	4368.5	3960
10	2	26.5	25	22.5	52.9	50	45	112.5	106.3	95.6	258.1	243.8	219.4	516.2	487.5	438.8	1080.9	1020.8	918.8	2161.8	2041.7	1837.5	5402.2	5168.5	4601.7
11	2	29.4	27.8	25	58.8	55.6	50	125	118.1	106.3	286.8	270.8	243.8	573.5	541.7	487.5	1201	1134.3	1020.8	2402	2268.5	2041.7	5702.2	5468.5	4901.7

Table 2-8. Supported Data Rates

4. The device supports either Standard Power (SP) or Low Power Indoor (LPI) operation in the following UNII bands:

UNII Band	Standard Power (SP)	Low Power Indoor (LPI)	Very Low Power (VLP)
UNII 5	✓	✓	✓
UNII 6	✕	✓	✕
UNII 7	✓	✓	✓
UNII 8	✕	✓	✕

Table 2-9. Power Operation

✓ = Support; ✕ = NOT Support

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2.3 Antenna Description

The following antenna gains were used for the testing.

Frequency	Ant1 Peak Gain [dBi]	Ant2 Peak Gain [dBi]	Directional Gain [dBi]
5925 MHz	-6.12	-5.30	-2.69
6025 MHz	-6.49	-5.01	-2.71
6125 MHz	-6.22	-5.37	-2.77
6225 MHz	-6.31	-6.15	-3.22
6325 MHz	-5.91	-5.38	-2.63
6425 MHz	-5.88	-5.84	-2.85
6525 MHz	-6.52	-6.25	-3.37
6625MHz	-6.69	-6.56	-3.61
6725MHz	-6.97	-6.80	-3.87
6825MHz	-6.85	-6.82	-3.82
6925MHz	-6.97	-6.41	-2.09
7025MHz	-6.50	-6.03	-3.44
7125MHz	-6.49	-6.84	-3.65

Table 2-10 Antenna Peak Gain per Frequency

	Ant1 Peak Gain [dBi]	Ant2 Peak Gain [dBi]	Directional Gain [dBi]
5925 – 6425 MHz	-5.91	-5.38	-2.63
6425 – 6525 MHz	-5.88	-5.84	-2.85
6525 – 6875 MHz	-6.52	-6.25	-3.37
6875 – 7125 MHz	-6.50	-6.03	-3.25

Table 2-11. Antenna Peak Gain

2.4 Test Configuration

ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing. See Sections 3.2 for AC line conducted emissions test setups, 3.3 for radiated emissions test setups, and 7.3, 7.3, 7.4, 7.5 and 7.6 for antenna port conducted emissions test setups.

This device operates in the 5.925-7.125 GHz band when under control of an indoor access point. Additionally, the device may operate in the 5.925-6.425 GHz and 6.525-6.875 GHz bands when under control of a standard power access point. Power for the EUT may vary depending on whether the device is connected to a standard access point (SP Operation) or a low-power indoor access point (LPI Operation). In cases where these targets differ two data sets have been provided to demonstrate compliance. The worst-case emissions data is shown in this report.

This device supports wireless charging capability and, thus, is subject to the test requirements of KDB 648474 D03 v01r04. Additional radiated spurious emission measurements were performed with the EUT lying flat on an authorized wireless charging pad (WCP) Model: NQ-WC-06 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

2.5 Software and Firmware

The test was conducted with firmware version S938USQUOAXJ3 installed on the EUT.

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2.6 EMI Suppression Device(s) / Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

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3 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013) and the guidance provided in KDB 987594 D02 v01r01 were used in the measurement of the EUT.

Deviation from measurement procedure.....None

3.2 AC Line Conducted Emissions

The line-conducted facility is located inside a 10'x16'x9' shielded enclosure. The shielded enclosure is manufactured by ETS Lindgren RF Enclosures. The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-5. A 1m x 1.5m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50μH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. The external power line filter is an ETS Lindgren Model LPRX-4X30 (100dB Attenuation, 14kHz-18GHz) and the two EMI/RFI filters are ETS Lindgren Model LRW-2030-S1 (100dB Minimum Insertion Loss, 14kHz – 10GHz). These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1-meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference groundplane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The spectrum was scanned from 150kHz to 30MHz with a spectrum analyzer. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 10kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Once the worst-case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions is used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

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3.3 Radiated Emissions

The radiated test facilities consisted of an indoor 3-meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. An 80cm tall test table made of Styrodur is placed on top of the turn table. For measurements above 1GHz, an additional Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33 depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, mode of operation, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions.

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 414788 D01 v01r01.

3.4 Environmental Conditions

The temperature is controlled within range of 15°C to 35°C. The relative humidity is controlled within range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

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4 ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antennas of the EUT are **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The EUT complies with the requirement of §15.203.

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5 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty ($\pm$ dB)
Contention Based Protocol Conducted Measurements	0.86
Conducted Bench Top Measurements	1.13
Line Conducted Disturbance	3.09
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

Table 5-1. Measurement Uncertainty Budget – MD

Contribution	Expanded Uncertainty ($\pm$ dB)
Conducted Bench Top Measurements	1.65
Line Conducted Disturbance	2.71
Radiated Disturbance (<30MHz)	4.06
Radiated Disturbance (30MHz - 1GHz)	4.30
Radiated Disturbance (1 - 18GHz)	4.78
Radiated Disturbance (>18GHz)	4.79

Table 5-2. Measurement Uncertainty Budget – CA

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6 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	WL25-1	Conducted Cable Set (25GHz)	4/2/2024	Annual	4/2/2025	WL25-1
-	WL25-2	Conducted Cable Set (25GHz)	4/2/2024	Annual	4/2/2025	WL25-2
-	WL40-1	Conducted Cable Set (40GHz)	4/2/2024	Annual	4/2/2025	WL40-1
-	AP1-002	EMC Cable and Switch System	4/2/2024	Annual	4/2/2025	AP1-002
-	ETS-001	EMC Cable and Switch System	4/2/2024	Annual	4/2/2025	ETS-001
-	ETS-002	EMC Cable and Switch System	4/2/2024	Annual	4/2/2025	ETS-002
-	MD 1M 18-40	EMC Cable and Switch System	4/2/2024	Annual	4/2/2025	MD 1M 18-40
Anritsu	MA24408A	Microwave Peak Power Sensor	5/21/2024	Annual	5/21/2025	11675
Anritsu	MA24408A	Microwave Peak Power Sensor	4/10/2024	Annual	4/10/2025	12798
ETS-Lindgren	3116C	Horn Antenna (18-40GHz)	2/27/2023	Biennial	2/27/2025	218893
Rohde & Schwarz	TC-TA 18	Vivaldi Antenna	2/23/2023	Biennial	2/23/2025	26040036
Rohde & Schwarz	FSW26	Signal and Spectrum Analyzer (26.5GHz)	3/8/2024	Annual	3/8/2025	103187
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	9/25/2023	Annual	9/25/2024	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	9/11/2023	Annual	9/11/2024	100348
Rohde & Schwarz	ESW44	EMI Test Receiver (44GHz)	4/5/2024	Annual	4/5/2025	101716
Pasternak	NMLC-2	EMI Test Receiver (2Hz to 44GHz)	4/2/2024	Annual	4/2/2025	NMLC-2
Rohde & Schwarz	ENV216	Two-Line V-Network	1/31/2023	Biennial	1/31/2025	101379
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	4/9/2024	Annual	4/9/2025	MY52350166
Keysight Technologies	N9020A	MXA Signal Analyzer	4/11/2024	Annual	4/11/2025	MY54500644
Keysight Technologies	N9030A	PXA Signal Analyzer	2/29/2024	Annual	3/1/2025	MY55410501
Keysight Technologies	N9030B	PXA Signal Analyzer, Multi-touch	9/19/2024	Annual	9/19/2025	MY57141001
Sunol	JB6	JB6 Antenna	3/2/2023	Biennial	3/2/2025	A082816
Sunol	JB5	Bi-Log Antenna (20M-5GHz)	9/11/2024	Biennial	9/11/2026	A051107
Rohde & Schwarz	SMW200A	Vector Signal Generator	4/4/2024	Annual	4/4/2025	109456

Table 6-1. Annual Test Equipment Calibration Schedule – MD

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	4/9/2024	Annual	4/9/2025	00218555
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	5/29/2024	Annual	11/29/2024	102132
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/14/2024	Annual	8/15/2025	101648
Rohde & Schwarz	FSV40	Signal Analyzer (10Hz-40GHz)	5/29/2024	Annual	5/29/2025	101619
Rohde & Schwarz	ESW44	EMI Test Receiver	5/1/2024	Annual	5/1/2025	101867
Rohde & Schwarz	FSW67	Signal and Spectrum Analyzer (2Hz-67GHz)	7/5/2024	Annual	7/5/2025	101366
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	7/3/2024	Annual	7/3/2025	102356
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	4/29/2024	Annual	4/29/2025	00304

Table 6-2. Annual Test Equipment Calibration Schedule – CA

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Note:

For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

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7 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.
FCC ID: A3LSMS938B
FCC Classification: 15E 6GHz Low Power Dual Client (6CD)

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference	Test Lab Location
2.1046, 15.407(a)(11)	Maximum Conducted Output Power	N/A	CONDUCTED	PASS	Section 7.4	MD
15.407(a)(8), 15.407(a)(7)	Maximum Radiated Output Power	< 24dBm over the frequency band of operation <30dBm over the frequency band of operation when connecting to a standard power access point		PASS	Section 7.4	MD
2.1049, 15.407(a)(11)	Occupied Bandwidth/ 26dB Bandwidth	99% of the occupied bandwidth of any channel must be contained within each of its respective U-NII sub bands The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.		PASS	Section 7.3	MD
15.407(a)(8), 15.407(a)(7)	Maximum Power Spectral Density	< -1dBm/MHz e.i.r.p. <17dBm/MHz when operating with a standard power access point		PASS	Section 7.5	MD
15.407(b)(7)	In-Band Emissions	EUT must meet the limits detailed in 15.407(b)(6)		PASS	Section 7.6	MD
15.407(d)(6)	Contention Based Protocol	EUT must detect AWGN signal with 90% (or better) certainty	RADIATED	PASS	Section 7.7	MD
15.407(b)(6)	Undesirable Emissions	< -27dBm/MHz e.i.r.p. outside of the 5.925 – 7.125GHz band		PASS	Section 7.8	CA
15.205, 15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209		PASS	Section 7.8	CA
15.407	AC Conducted Emissions 150kHz – 30MHz	<FCC 15.207 limits	LINE CONDUCTED	PASS	Please see UNII 6E OFDM report	MD

Table 7-1. Summary of Test Results

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Notes:

- 1) All channels, modes, and modulations/data rates were investigated among all UNII bands. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.
- 4) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is Element "UNII Automation," Version 4.7.
- 5) For radiated band edge, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is Element "Chamber Automation," Version 1.3.1.
- 6) Per 15.407(a)(7), a device operating under the control of a standard power access point in 5.925-6.425 GHz and 6.525-6.875 GHz bands must not have the maximum power spectral density exceed 17 dBm/MHz e.i.r.p., must limit the maximum e.i.r.p. over the frequency band of operation not exceed 30 dBm, and must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.
- 7) 802.11ax OFDMA testing was performed for all signal tone configurations as specified by the 802.11ax standard. Worst case results are determined and reported per the guidance provided at the October 2018 TCB Workshop.
- 8) Only one RU index could be selected at a time, so no contiguous or non-contiguous RUs were considered for testing.
- 9) Data was leveraged from model SM-S938U for the certification of SM-S938B/DS. See Table 7-2 for spot-check results.

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7.2 Data Reference Spot Check Results

Overview

The spot-check data presented in this section was measured on the variant model following the guidance of the FCC's Data Referencing guidance in KDB 484596. Each spot-check test on the EUT was performed using the same procedure and setting that were used to perform the test on the corresponding reference device. For the worst-case RSE data, the measurement is determined by an actual emission and not by noise floor.

All test cases were performed to verify the variant EUT is still in compliance with the spot-checked results to the reference device and was performed using the guidance of ANSI C63.10-2013.

Results

FCC Rules	Test Item	Test Case	Wifi Mode	Units	Limit	Reference Model: SM-S938U	Variant Model: SM-S938B	Deviation (dB)	Max Deviation (dB)	Pass/Fail
2.1046, 15.407(a)(8)	Conducted Output Power	Mid Channel Each UNII Band - 802.11be 40MHz 484T	LPI	dBm	24	11.75	11.56	-0.19	1	PASS
15.407(d)(6)	Contention Based Protocol	Ch.31 - 320 MHz	LPI	dBm	-62	-67.79	-66.28	1.51	2	PASS
15.209	Radiated Spurious Emissions	802.11be MIMO Ch.2 - Average - 17805 MHz	SP	dBµV/m	53.98	48.10	48.71	0.61	3	PASS
15.209	Radiated Band Edge Emissions	802.11be MIMO Ch.2 242T - Average	SP	dBµV/m	68.2	65.98	66.13	0.15	3	PASS

Table 7-2. Summary of Spot-checks

Conducted Output Power Spot-Check

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					65						
					ANT1	ANT2	MIMO				
	5	6165	43	484T	11.12	11.45	14.30	-2.63	11.67	24.0	-12.33
6	6485	107	484T	11.23	11.57	14.41	-2.85	11.56	24.0	-12.44	
7	6725	155	484T	11.56	11.38	14.48	-3.37	11.11	24.0	-12.89	
8	7005	211	484T	11.96	11.63	14.81	-3.25	11.56	24.0	-12.44	

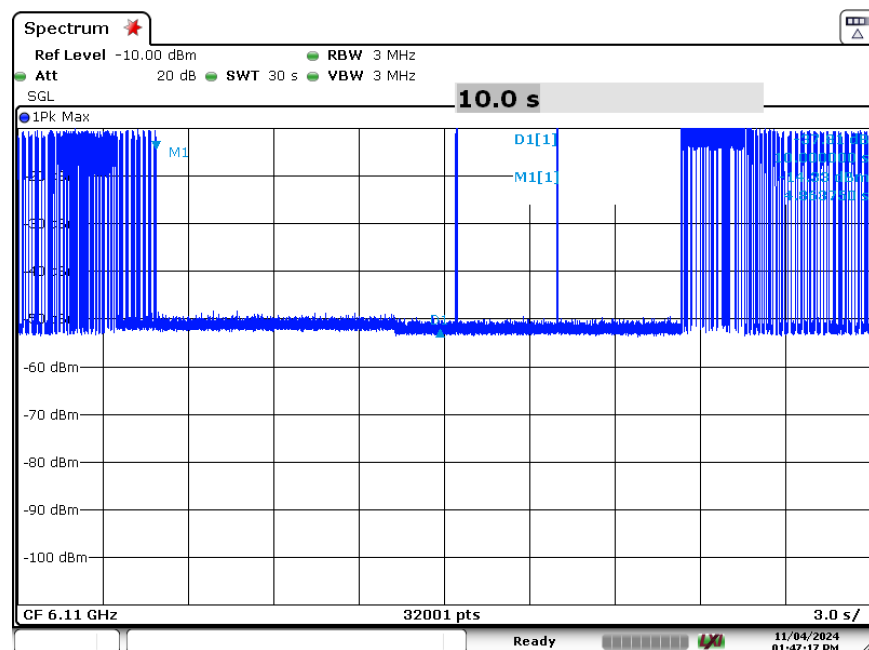
Table 7-3. Conducted Output Power Measurements – Spot-check (SM-S938B/DS)

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Contention Based Protocol Detection – Spot-check (SM-S938B/DS)

Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	Incumbent Freq [MHz]	Injected (AWGN) [dBm]	Antenna Gain [dBi]	Path Loss (dB)	Adjusted Power Level [dBm]	Detection Limit [dBm]	Margin [dB]
UNII Band 5	31	6265	320	6110	-72.97	-6.49	1.03	-66.45	-62.0	-4.45
				6265	-72.81	-6.49	1.03	-66.29	-62.0	-4.29
				6420	-72.80	-6.49	1.03	-66.28	-62.0	-4.28

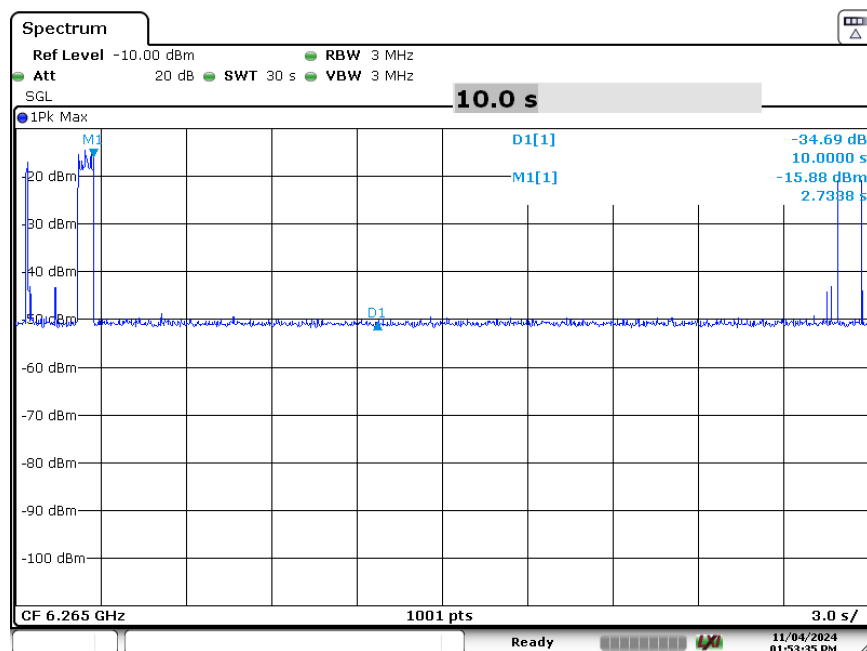
Table 7-4. Contention Based Protocol – Incumbent Detection (Spot-Check SM-S938B/DS)



Date: 4.NOV.2024 13:47:17

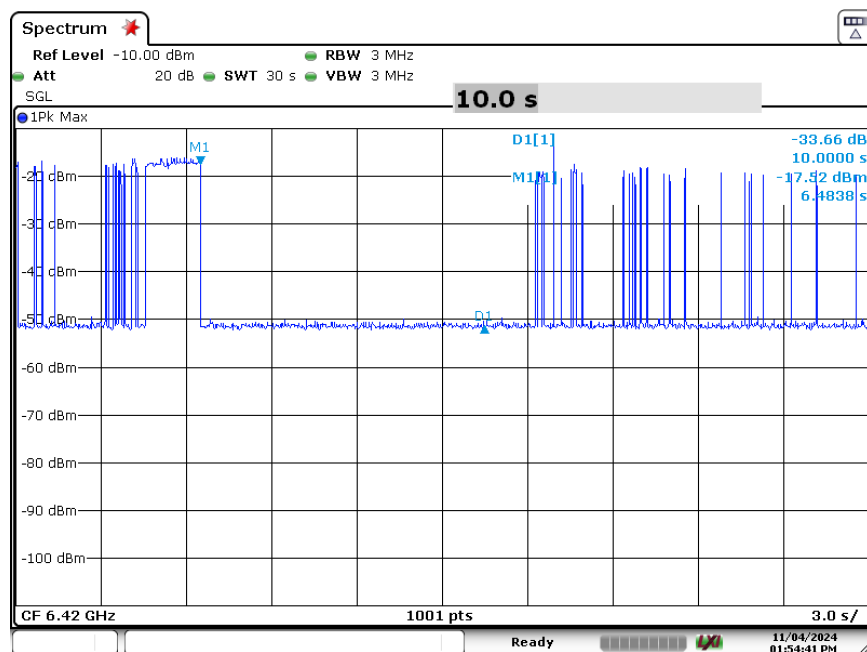
Plot 7-1. Contention Based Protocol Timing Plot (320MHz (UNII Band 5) – Ch. 31 Low)

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Date: 4.NOV.2024 13:53:35

Plot 7-2. Contention Based Protocol Timing Plot (320MHz (UNII Band 5) – Ch. 31 Mid)



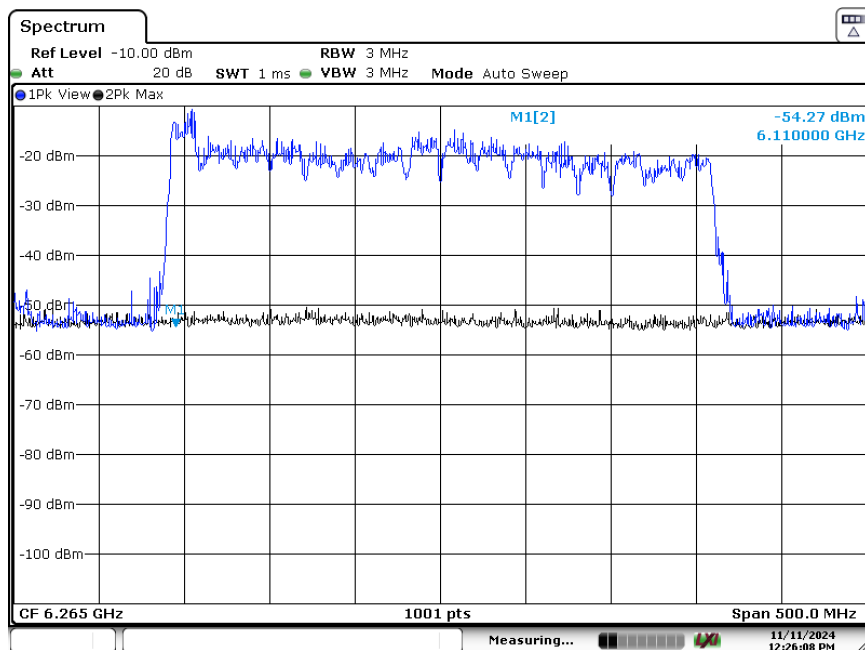
Date: 4.NOV.2024 13:54:42

Plot 7-3. Contention Based Protocol Timing Plot (320MHz (UNII Band 5) – Ch. 31 High)

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Contention Based Protocol Incumbent Avoidance Spot-Check – SM-S938B/DS

- When a 10 MHz AWGN signal centered at 6110 MHz (lower edge of channel) is injected, the channel completely stops transmitting.
- When a 10 MHz AWGN signal centered at 6265 MHz (middle of channel) is injected, the channel completely stops transmitting.
- When a 10 MHz AWGN signal centered at 6420 MHz (upper edge of channel) is injected, the channel completely stops transmitting.



Date: 11.NOV.2024 12:26:08

Plot 7-4. CBP 320MHz Channel - Injection Lower Edge – [6110 MHz]

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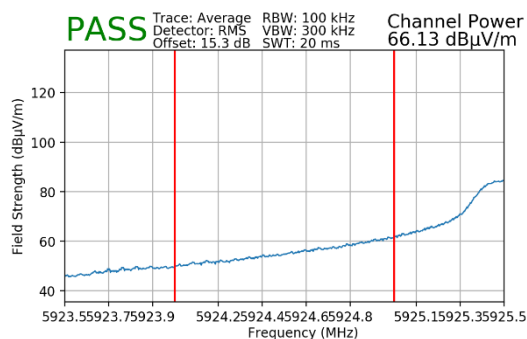
Radiated Spurious Emission Spot-Check

Mode	Antenna	UNII Band	Channel	Test Channel Freq. [MHz]	RU Index	Restricted	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
802.11be RU 26T	MIMO	5	2	5935	4	*	17805.00	Average	H	205	349	-82.44	24.15	0.00	48.71	53.98	-5.27

Table 7-5. Radiated Measurements MIMO (Spot-check)

Radiated Band Edge Spot-Check (20MHz – 242 Tones)

Worst Case Mode: 802.11be
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5935MHz
 Channel: 2
 RU Index: 61



Plot 7-7. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

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7.3 26dB Bandwidth Measurement

Test Overview and Limit

The bandwidth at 26dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

Test Procedure Used

ANSI C63.10-2013 – Section 12.4

Test Settings

1. The signal analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 26$. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = max hold

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-1. Test Instrument & Measurement Setup

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Test Notes

1. All cases were investigated; a subset of the taken plots were included to represent relevant settings and measurements.
2. In this section, the bandwidth data tables includes mainly the 26dB bandwidth measurements. In case of 320MHz operation, an occupied bandwidth measurement was included in the table to demonstrate compliance. Thus, all measurements in the tables are 26dB bandwidth measurements except for the 320MHz bandwidth cases which are occupied bandwidth measurements.
3. SP 80/160/320MHz BW share same target as LPI 80/160/320MHz BW, and only the emissions from worst case have been reported

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	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 26dB Bandwidth [MHz]	Antenna-2 26dB Bandwidth [MHz]
Band 5	5935	2	be (20MHz)	20.11	20.04
	6175	45	be (20MHz)	19.92	19.96
	6415	93	be (20MHz)	19.83	20.05
	5965	3	be (40MHz)	24.49	24.93
	6165	43	be (40MHz)	23.62	23.91
	6405	91	be (40MHz)	24.02	23.85
	5985	7	be (80MHz)	28.63	27.54
	6145	39	be (80MHz)	29.96	29.15
	6385	87	be (80MHz)	32.32	33.80
	6025	15	be (160MHz)	36.48	38.24
	6185	47	be (160MHz)	38.37	37.24
	6345	79	be (160MHz)	38.50	37.62
	6105	31	be (320MHz)	40.02	48.62
	6265	63	be (320MHz)	44.16	46.31
Band 6	6435	97	be (20MHz)	20.23	20.06
	6475	105	be (20MHz)	20.41	19.99
	6515	113	be (20MHz)	19.85	19.81
	6445	99	be (40MHz)	24.08	24.39
	6485	107	be (40MHz)	24.39	24.51
	6525	115	be (40MHz)	23.61	24.28
	6465	103	be (80MHz)	29.87	27.24
	6505	111	be (160MHz)	37.68	36.12
Band 5/6/7	6425	95	be (320MHz)	37.67	37.61
Band 7	6695	117	be (20MHz)	20.06	19.94
	6695	149	be (20MHz)	20.12	20.15
	6875	185	be (20MHz)	20.05	19.98
	6565	123	be (40MHz)	23.89	24.39
	6685	155	be (40MHz)	24.52	23.65
	6845	179	be (40MHz)	23.80	24.54
	6545	119	be (80MHz)	28.49	27.08
	6705	151	be (80MHz)	28.93	27.26
	6865	183	be (80MHz)	27.91	28.14
	6665	143	be (160MHz)	34.16	37.21
	6825	175	be (160MHz)	36.42	36.01
	6585	127	be (320MHz)	45.18	48.59
Band 6/7	6585	127	be (320MHz)	45.18	48.59
Band 7/8	6745	159	be (320MHz)	43.53	47.50
Band 8	7115	189	be (20MHz)	20.18	20.11
	6995	209	be (20MHz)	19.93	19.97
	7115	233	be (20MHz)	19.70	19.98
	6885	187	be (40MHz)	23.56	24.18
	6965	211	be (40MHz)	24.16	24.74
	7085	227	be (40MHz)	24.33	24.76
	6945	199	be (80MHz)	28.16	28.23
	7025	215	be (80MHz)	29.35	27.96
	6985	207	be (160MHz)	36.87	37.18
	6905	191	be (320MHz)	46.45	48.70
Band 7/8	6905	191	be (320MHz)	46.45	48.70

Table 7-6. 26dB Bandwidth Results – 26 Tones – LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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	Frequency [MHz]	Channel	802.11 MODE	MRU Configuration	Antenna-1 26dB Bandwidth [MHz]	Antenna-2 26dB Bandwidth [MHz]	Antenna-1 Occupied Bandwidth [MHz]	Antenna-2 Occupied Bandwidth [MHz]
Band 5	6145	45	be (80MHz)	52+26T	19.18	18.67	-	-
	6175	45	be (20MHz)	106+26T	20.40	20.60	-	-
	6145	39	be (80MHz)	484+242T	90.04	90.35	-	-
	6185	47	be (160MHz)	996+484T	177.15	176.24	-	-
	6105	31	be (320MHz)	2x996+484T	-	-	239.84	238.93
	6105	31	be (320MHz)	3x996T	-	-	316.14	316.23
Band 6	6105	31	be (320MHz)	3x996+484T	-	-	315.17	315.52
	6475	105	be (20MHz)	52+26T	19.04	19.08	-	-
	6475	105	be (20MHz)	106+26T	20.53	20.68	-	-
	6465	103	be (80MHz)	484+242T	89.65	91.76	-	-
Band 5/6/7	6505	111	be (160MHz)	996+484T	173.88	175.64	-	-
	6425	95	be (320MHz)	2x996+484T	-	-	238.96	240.12
	6425	95	be (320MHz)	3x996T	-	-	316.41	316.37
Band 7	6425	95	be (320MHz)	3x996+484T	-	-	315.95	316.48
	6695	149	be (20MHz)	52+26T	19.11	19.07	-	-
	6695	149	be (20MHz)	106+26T	20.12	20.62	-	-
	6705	151	be (80MHz)	484+242T	90.08	91.85	-	-
Band 7/8	6665	143	be (160MHz)	996+484T	176.50	175.42	-	-
	6745	159	be (320MHz)	2x996+484T	-	-	239.00	242.33
	6745	159	be (320MHz)	3x996T	-	-	315.92	316.38
Band 8	6745	159	be (320MHz)	3x996+484T	-	-	315.04	316.05
	6995	209	be (20MHz)	52+26T	19.25	18.87	-	-
	6995	209	be (20MHz)	106+26T	20.34	20.68	-	-
	6945	199	be (80MHz)	484+242T	90.34	90.63	-	-
Band 7/8	6985	207	be (160MHz)	996+484T	177.73	176.39	-	-
	6905	191	be (320MHz)	2x996+484T	-	-	238.88	242.63
	6905	191	be (320MHz)	3x996T	-	-	315.69	317.46
	6905	191	be (320MHz)	3x996+484T	-	-	315.28	316.59

Table 7-7. 26dB Bandwidth Results – MRU – LPI

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	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 26dB Bandwidth [MHz]	Antenna-2 26dB Bandwidth [MHz]	Antenna-3 6dB Bandwidth [MHz]	Antenna-4 6dB Bandwidth [MHz]
Band 5	5935	2	be (20MHz)	21.44	21.52	-	-
	6175	45	be (20MHz)	21.46	21.46	-	-
	6415	93	be (20MHz)	21.46	21.46	-	-
	5965	3	be (40MHz)	42.90	42.88	-	-
	6165	43	be (40MHz)	43.43	42.84	-	-
	6405	91	be (40MHz)	43.03	42.97	-	-
	5985	7	be (80MHz)	90.96	90.69	-	-
	6145	39	be (80MHz)	90.97	90.35	-	-
	6385	87	be (80MHz)	90.33	90.48	-	-
	6025	15	be (160MHz)	174.98	175.31	-	-
	6185	47	be (160MHz)	173.55	174.95	-	-
	6345	79	be (160MHz)	176.01	177.24	-	-
	6105	31	be (320MHz)	-	-	314.97	314.90
	6265	63	be (320MHz)	-	-	314.93	315.77
Band 6	6435	97	be (20MHz)	21.65	21.84	-	-
	6475	105	be (20MHz)	21.67	21.52	-	-
	6515	113	be (20MHz)	21.72	21.42	-	-
	6445	99	be (40MHz)	42.98	42.86	-	-
	6485	107	be (40MHz)	43.37	42.86	-	-
	6525	115	be (40MHz)	43.14	42.79	-	-
	6465	103	be (80MHz)	91.76	91.96	-	-
	6505	111	be (160MHz)	178.21	174.49	-	-
Band 5/6/7	6425	95	be (320MHz)	-	-	315.05	315.21
Band 7	6695	117	be (20MHz)	21.67	21.46	-	-
	6695	149	be (20MHz)	21.55	21.51	-	-
	6875	185	be (20MHz)	21.40	21.47	-	-
	6565	123	be (40MHz)	42.91	42.76	-	-
	6685	155	be (40MHz)	43.03	42.89	-	-
	6845	179	be (40MHz)	43.20	43.11	-	-
	6545	119	be (80MHz)	90.35	90.26	-	-
	6705	151	be (80MHz)	92.10	89.94	-	-
	6865	183	be (80MHz)	90.51	91.84	-	-
	6665	143	be (160MHz)	177.39	175.09	-	-
	6825	175	be (160MHz)	176.19	174.59	-	-
Band 6/7	6585	127	be (320MHz)	-	-	314.67	316.25
Band 7/8	6745	159	be (320MHz)	-	-	314.31	315.61
Band 8	7115	189	be (20MHz)	21.71	21.77	-	-
	6995	209	be (20MHz)	21.52	21.43	-	-
	7115	233	be (20MHz)	21.47	21.45	-	-
	6885	187	be (40MHz)	43.53	42.94	-	-
	6965	211	be (40MHz)	43.28	42.78	-	-
	7085	227	be (40MHz)	42.73	42.85	-	-
	6945	199	be (80MHz)	90.69	92.40	-	-
	7025	215	be (80MHz)	90.70	90.22	-	-
	6985	207	be (160MHz)	173.74	172.30	-	-
Band 7/8	6905	191	be (320MHz)	-	-	314.47	315.96

Table 7-8. 26dB Bandwidth Results – Full Tones – LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 26dB Bandwidth [MHz]	Antenna-2 26dB Bandwidth [MHz]
Band 5	5935	2	be (20MHz)	18.76	18.61
	6175	45	be (20MHz)	18.68	18.61
	6415	93	be (20MHz)	18.69	18.62
	5965	3	be (40MHz)	24.30	24.78
	6165	43	be (40MHz)	24.17	24.53
	6405	91	be (40MHz)	24.18	24.52
	5985	7	be (80MHz)	32.90	33.43
	6145	39	be (80MHz)	33.22	33.55
	6385	87	be (80MHz)	32.99	33.66
	6025	15	be (160MHz)	37.92	40.56
	6185	47	be (160MHz)	39.77	40.25
	6345	79	be (160MHz)	37.46	40.19
	6105	31	be (320MHz)	46.78	47.98
	6265	63	be (320MHz)	49.28	46.54
Band 7	6695	117	be (20MHz)	18.76	18.63
	6695	149	be (20MHz)	18.71	18.49
	6875	185	be (20MHz)	18.70	18.51
	6565	123	be (40MHz)	24.24	24.44
	6685	155	be (40MHz)	25.29	24.60
	6845	179	be (40MHz)	24.98	24.84
	6545	119	be (80MHz)	33.06	33.11
	6705	151	be (80MHz)	35.27	34.45
	6865	183	be (80MHz)	32.91	33.67
	6665	143	be (160MHz)	39.02	38.21
	6825	175	be (160MHz)	36.42	36.01
Band 6/7	6585	127	be (320MHz)	48.98	47.10
Band 7/8	6745	159	be (320MHz)	48.78	47.50

Table 7-9. 26dB Bandwidth Results – 26 Tones – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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	Frequency [MHz]	Channel	802.11 MODE	MRU Configuration	Antenna-1 26dB Bandwidth [MHz]	Antenna-2 26dB Bandwidth [MHz]	Antenna-1 Occupied Bandwidth [MHz]	Antenna-2 Occupied Bandwidth [MHz]
Band 5	6145	45	be (20MHz)	52+26T	19.63	19.12	-	-
	6175	45	be (20MHz)	106+26T	20.22	20.64	-	-
	6145	39	be (80MHz)	484+242T	90.04	90.35	-	-
	6185	47	be (160MHz)	996+484T	177.15	176.24	-	-
	6105	31	be (320MHz)	2x996+484T	-	-	239.84	238.93
	6105	31	be (320MHz)	3x996T	-	-	316.14	316.23
	6105	31	be (320MHz)	3x996+484T	-	-	315.17	315.52
Band 7	6695	149	be (20MHz)	52+26T	19.64	19.15	-	-
	6695	149	be (20MHz)	106+26T	20.15	20.46	-	-
	6705	151	be (80MHz)	484+242T	90.08	91.85	-	-
	6665	143	be (160MHz)	996+484T	176.50	175.42	-	-
Band 7/8	6745	159	be (320MHz)	2x996+484T	-	-	239.00	242.33
	6745	159	be (320MHz)	3x996T	-	-	315.92	316.38
	6745	159	be (320MHz)	3x996+484T	-	-	315.04	316.05

Table 7-10. 26dB Bandwidth Results – MRU – SP

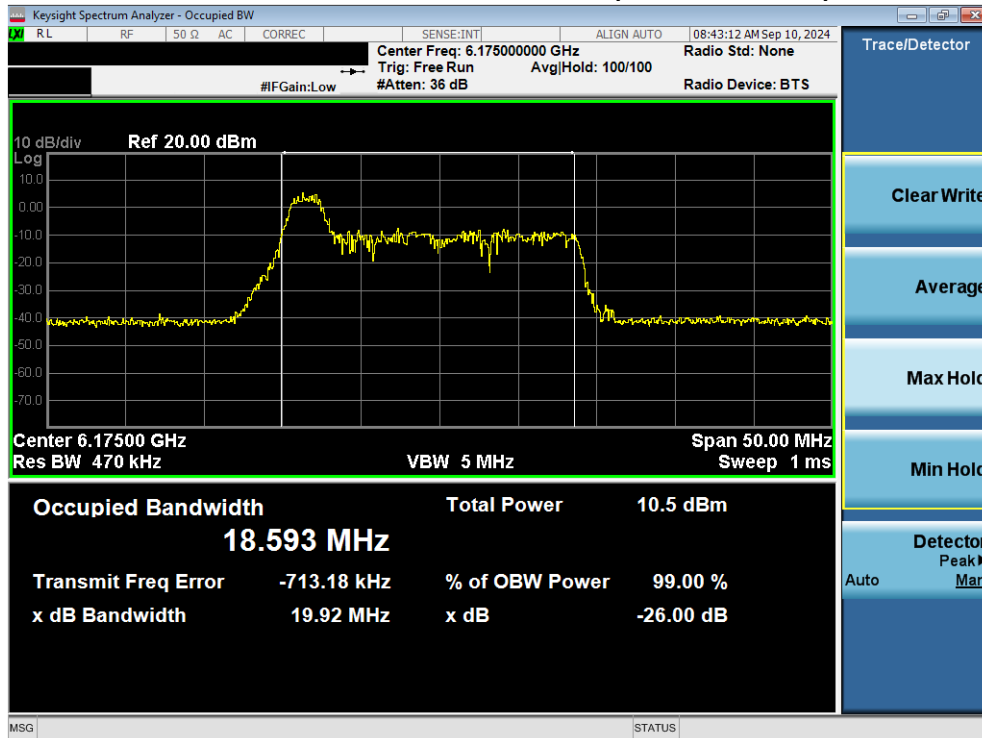
FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 32 of 184

	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 26dB Bandwidth [MHz]	Antenna-2 26dB Bandwidth [MHz]	Antenna-3 6dB Bandwidth [MHz]	Antenna-4 6dB Bandwidth [MHz]
Band 5	5935	2	be (20MHz)	21.74	25.26	-	-
	6175	45	be (20MHz)	21.85	21.96	-	-
	6415	93	be (20MHz)	21.76	22.02	-	-
	5965	3	be (40MHz)	43.00	43.99	-	-
	6165	43	be (40MHz)	43.51	43.77	-	-
	6405	91	be (40MHz)	43.02	44.36	-	-
	5985	7	be (80MHz)	90.96	90.69	-	-
	6145	39	be (80MHz)	90.97	90.35	-	-
	6385	87	be (80MHz)	90.33	90.48	-	-
	6025	15	be (160MHz)	174.98	175.31	-	-
	6185	47	be (160MHz)	173.55	174.95	-	-
	6345	79	be (160MHz)	176.01	177.24	-	-
	6105	31	be (320MHz)	-	-	314.97	314.90
	6265	63	be (320MHz)	-	-	314.93	315.77
Band 7	6695	117	be (20MHz)	21.73	25.18	-	-
	6695	149	be (20MHz)	22.82	21.77	-	-
	6875	185	be (20MHz)	21.52	21.55	-	-
	6565	123	be (40MHz)	43.04	44.12	-	-
	6685	155	be (40MHz)	43.12	44.15	-	-
	6845	179	be (40MHz)	42.96	43.00	-	-
	6545	119	be (80MHz)	90.35	90.26	-	-
	6705	151	be (80MHz)	92.10	89.94	-	-
	6865	183	be (80MHz)	90.51	91.84	-	-
	6665	143	be (160MHz)	177.39	175.09	-	-
	6825	175	be (160MHz)	176.19	174.59	-	-
Band 6/7	6585	127	be (320MHz)	-	-	314.67	316.25
Band 7/8	6745	159	be (320MHz)	-	-	314.31	315.61

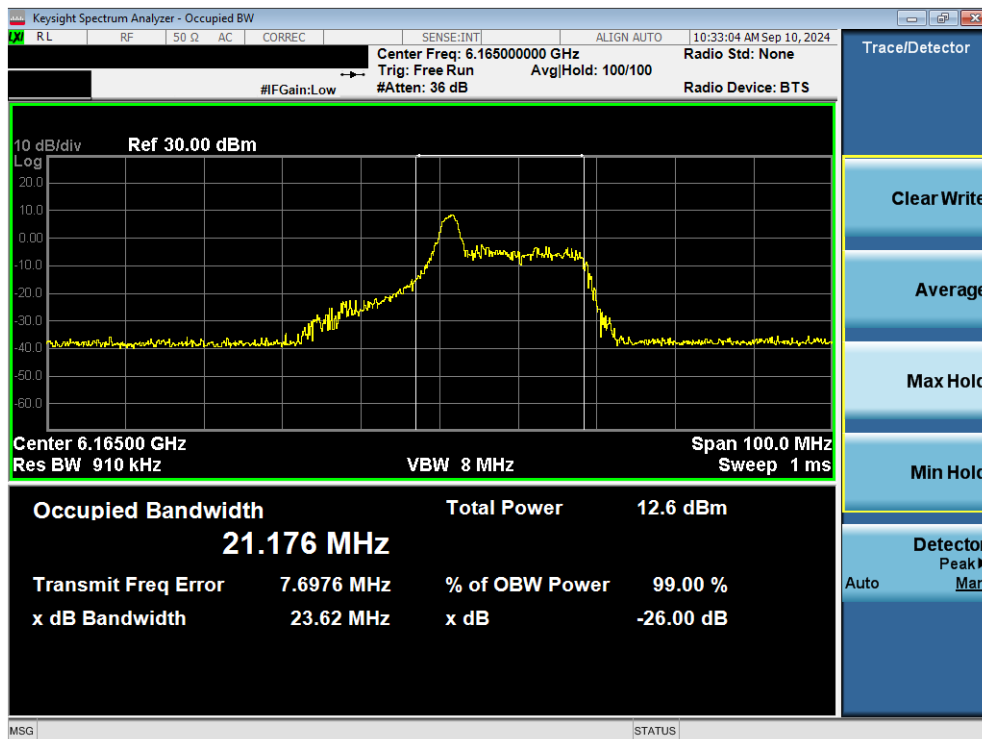
Table 7-11. 26dB Bandwidth Results – Full Tones – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 33 of 184

7.3.1 MIMO Antenna-1 Bandwidth Measurements - (Partial Tones)

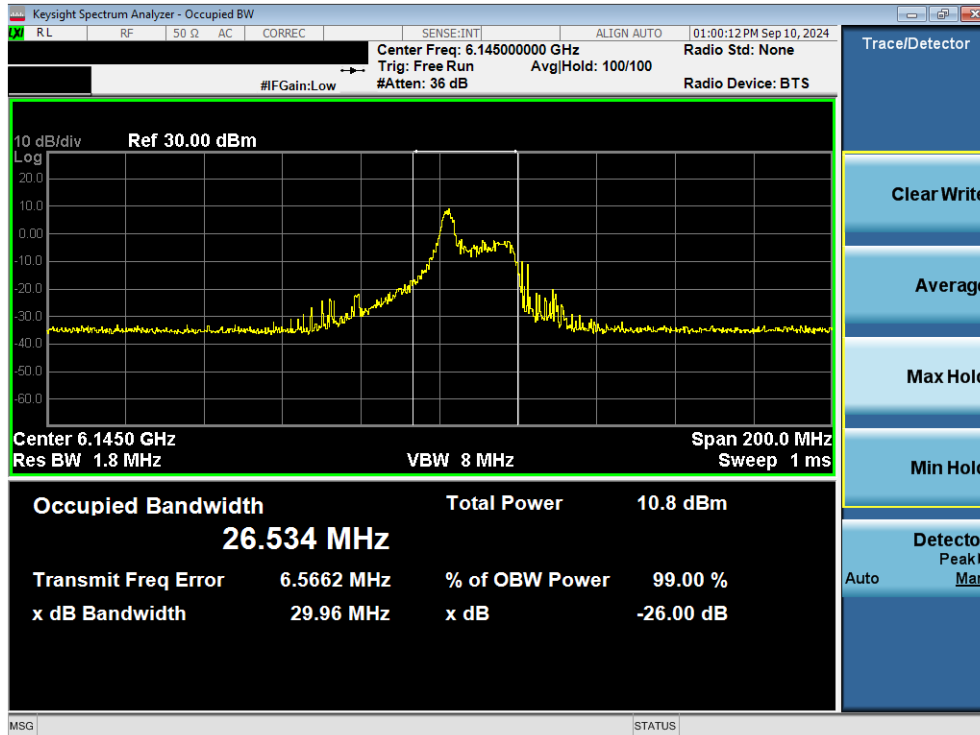


Plot 7-8. 26dB Bandwidth Plot MIMO ANT1 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) - LPI

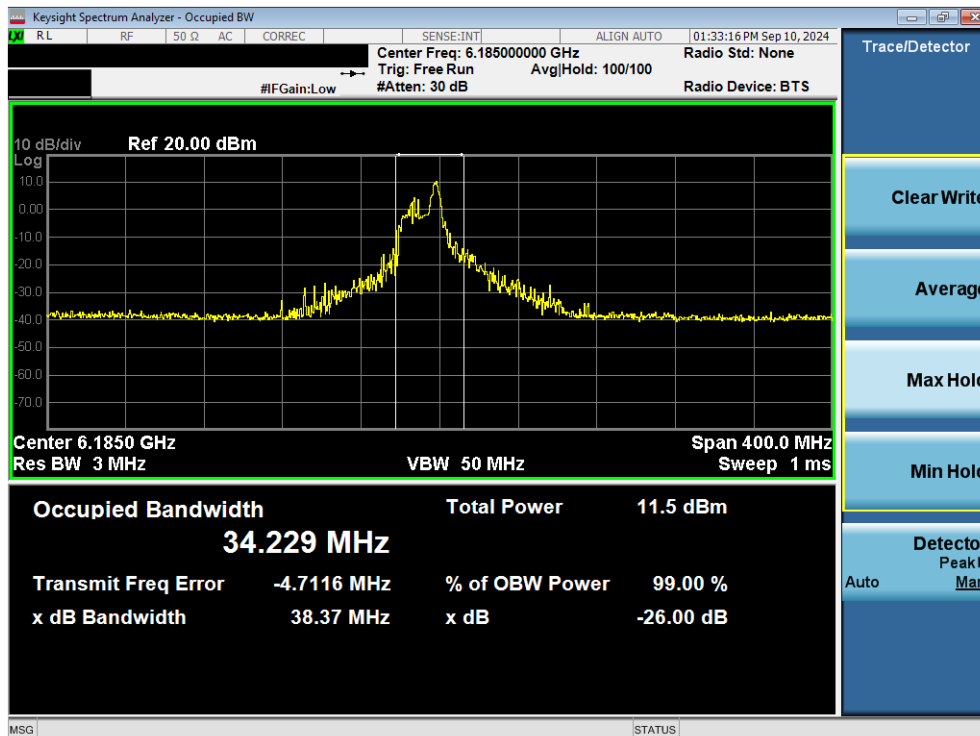


Plot 7-9. 26dB Bandwidth Plot MIMO ANT1 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 34 of 184

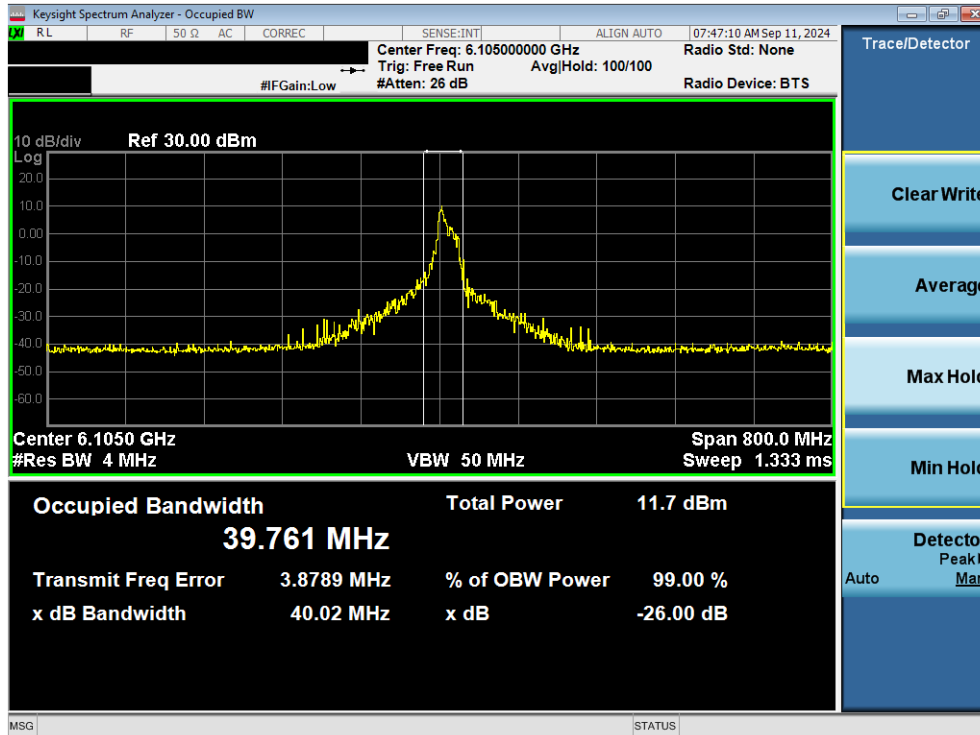


Plot 7-10. 26dB Bandwidth Plot MIMO ANT1 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - LPI

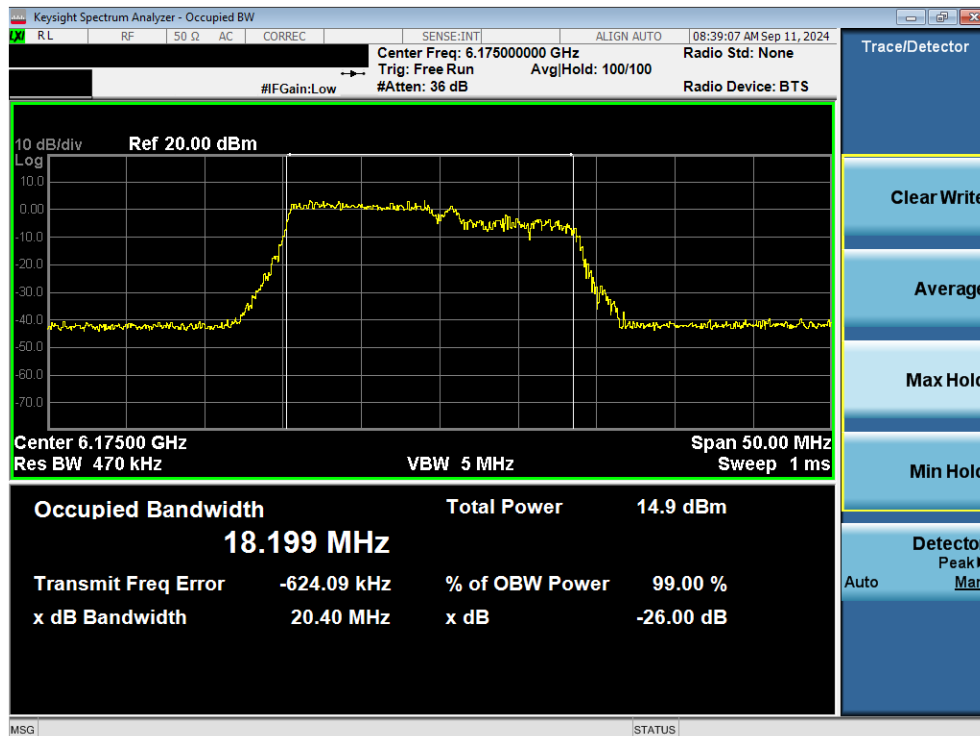


Plot 7-11. 26dB Bandwidth Plot MIMO ANT1 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 35 of 184

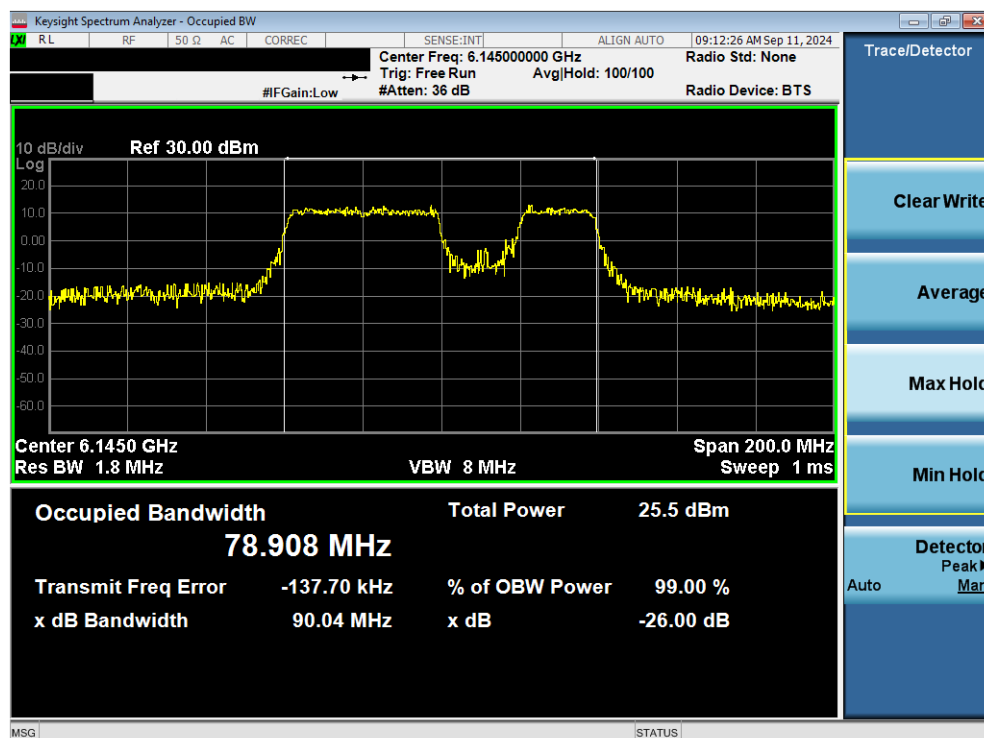


Plot 7-12. 26dB Bandwidth Plot MIMO ANT1 (320MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 31) - LPI

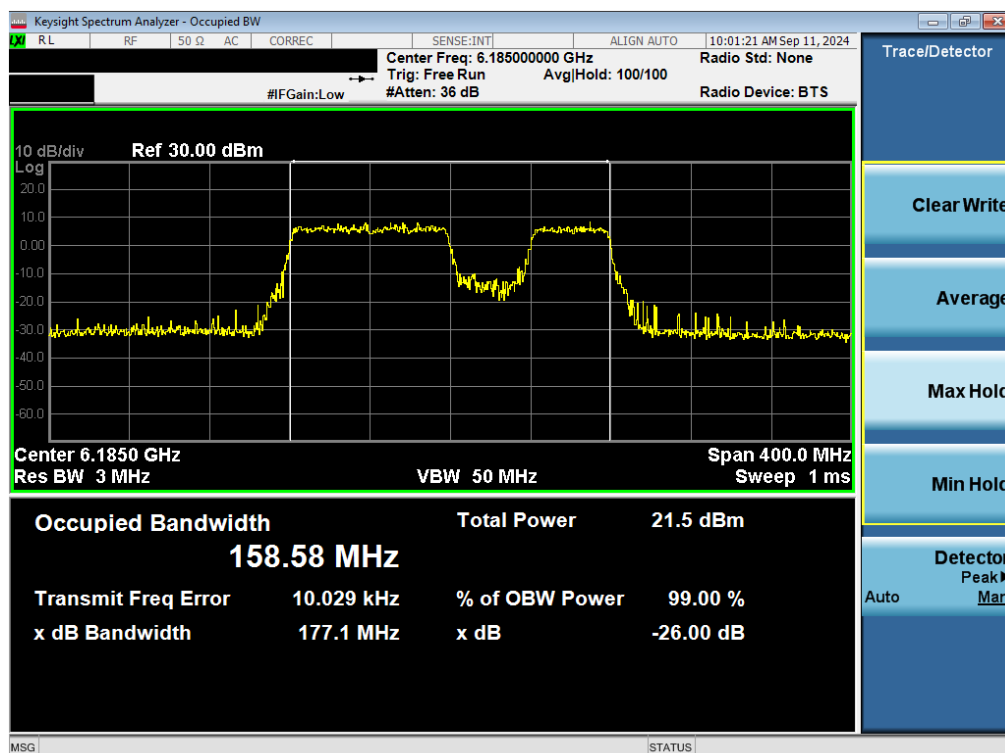


Plot 7-13. 26dB Bandwidth Plot MIMO ANT1 (20MHz 802.11be (106+26 Tones) (UNII Band 5) – Ch. 45) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 36 of 184

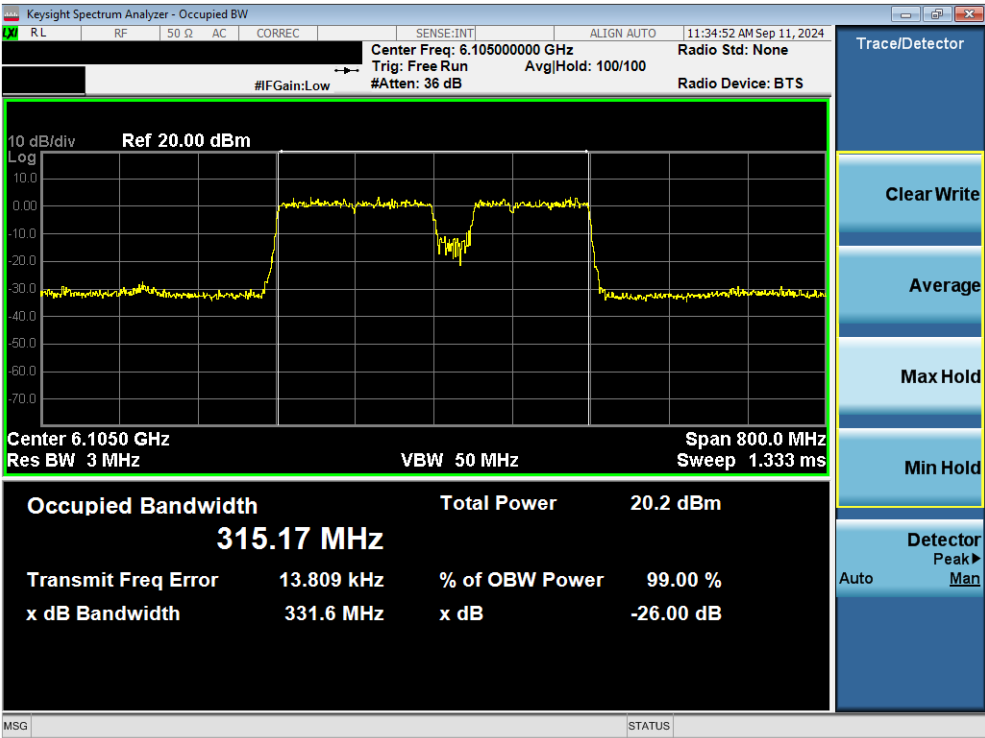


Plot 7-14. 26dB Bandwidth Plot MIMO ANT1 (80MHz 802.11be (484+242 Tones) (UNII Band 5) – Ch. 39) - LPI



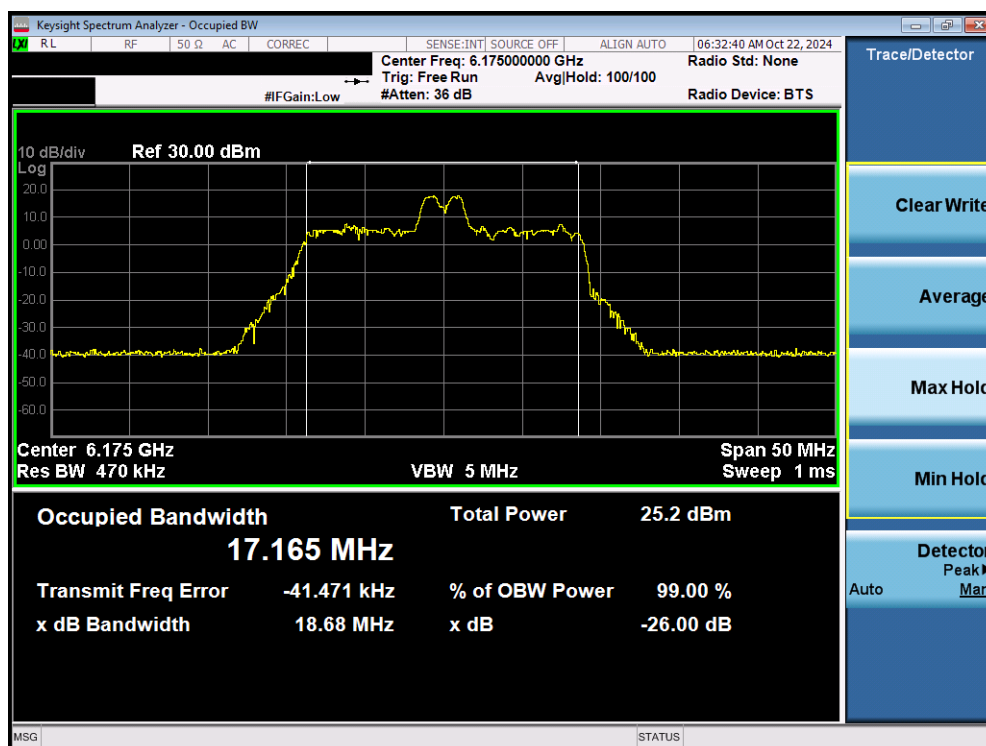
Plot 7-15. 26dB Bandwidth Plot MIMO ANT1 (160MHz 802.11be (996+484 Tones) (UNII Band 5) – Ch. 47) LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 37 of 184

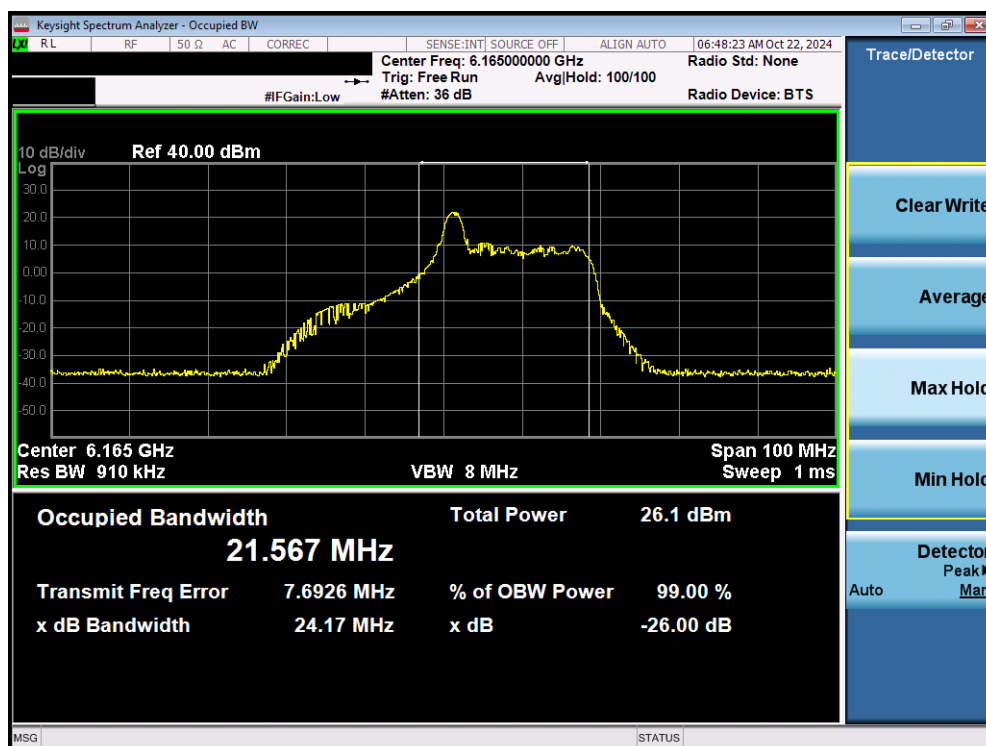


Plot 7-16. 26dB Bandwidth Plot MIMO ANT1 (320MHz 802.11be (3*996+484 Tones) (UNII Band 5) – Ch. 31) LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 38 of 184

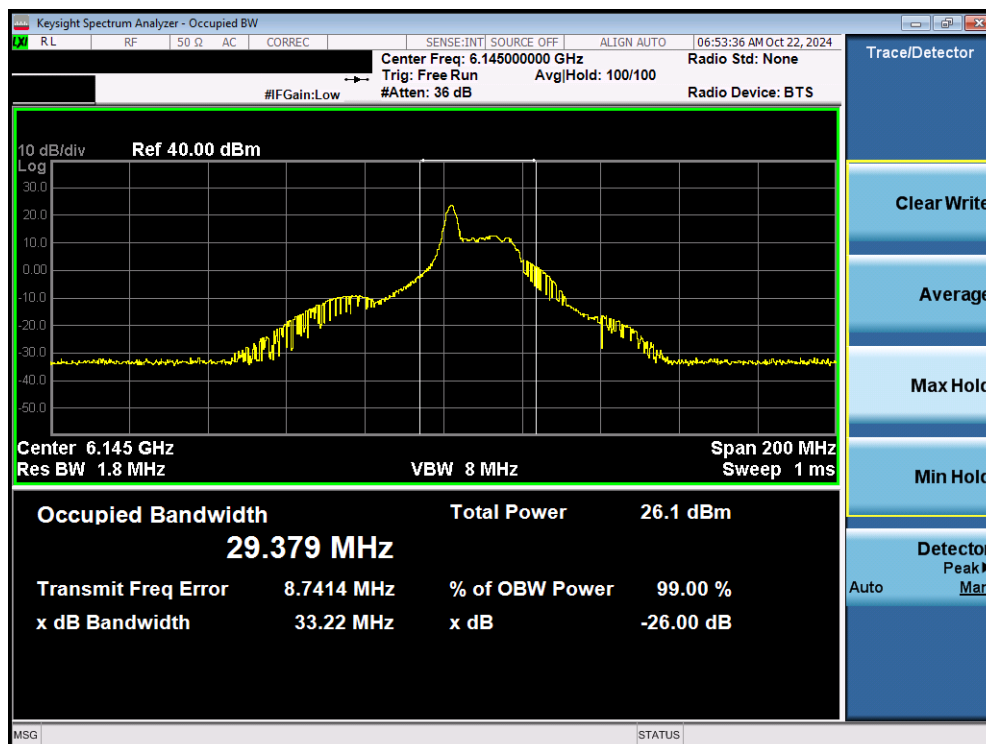


Plot 7-17. 26dB Bandwidth Plot MIMO ANT1 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) – SP

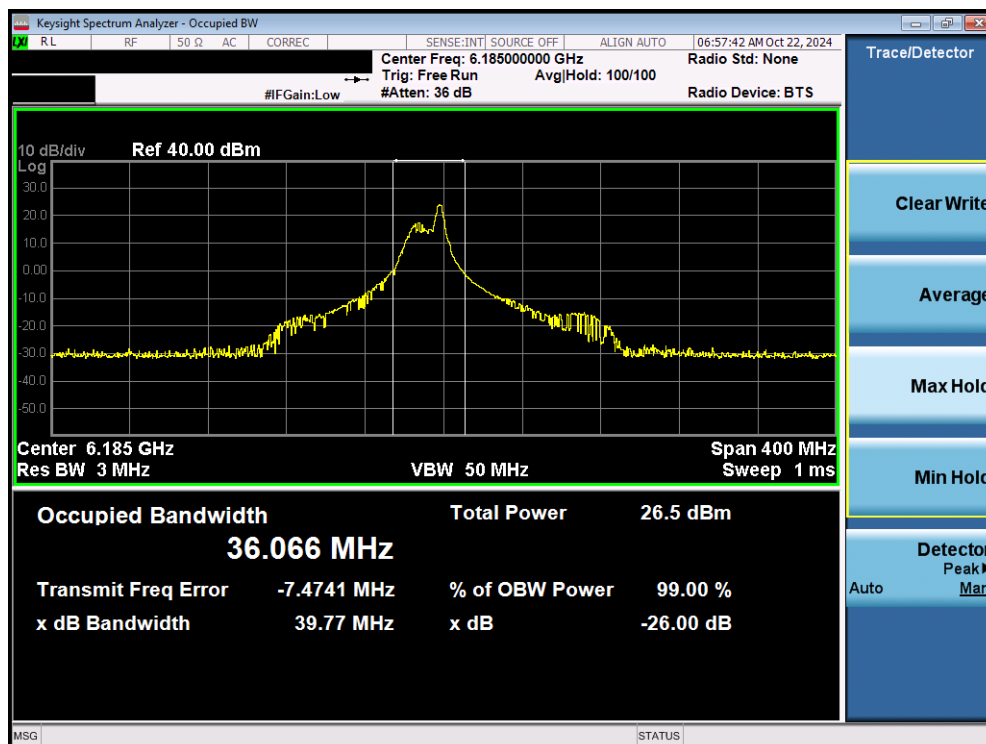


Plot 7-18. 26dB Bandwidth Plot MIMO ANT1 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 39 of 184

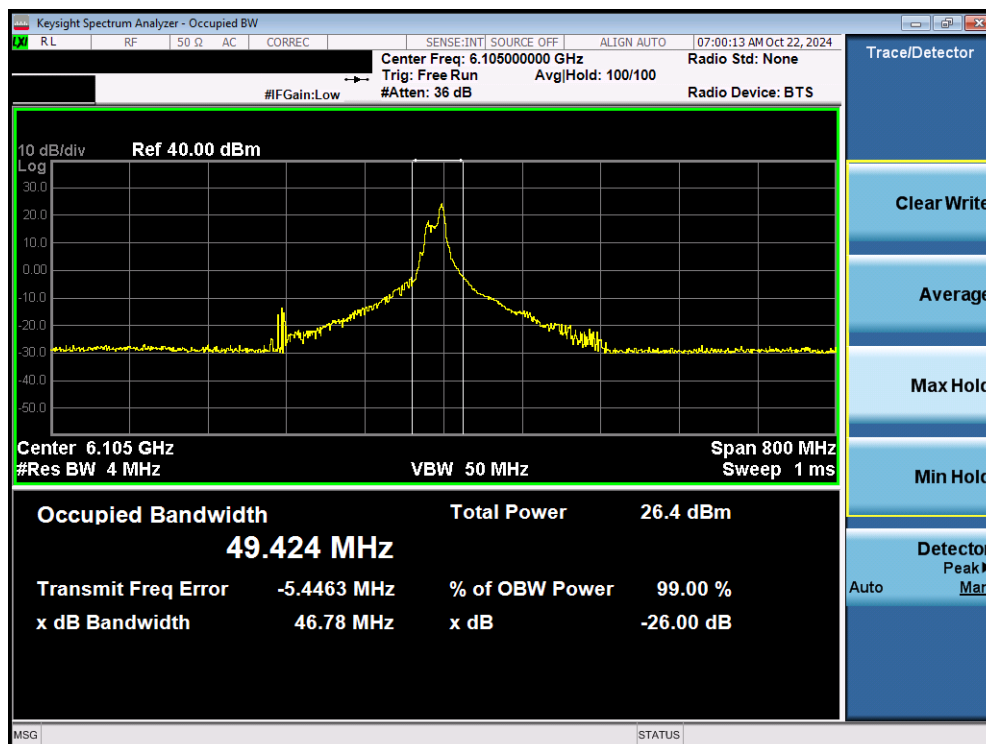


Plot 7-19. 26dB Bandwidth Plot MIMO ANT1 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - SP

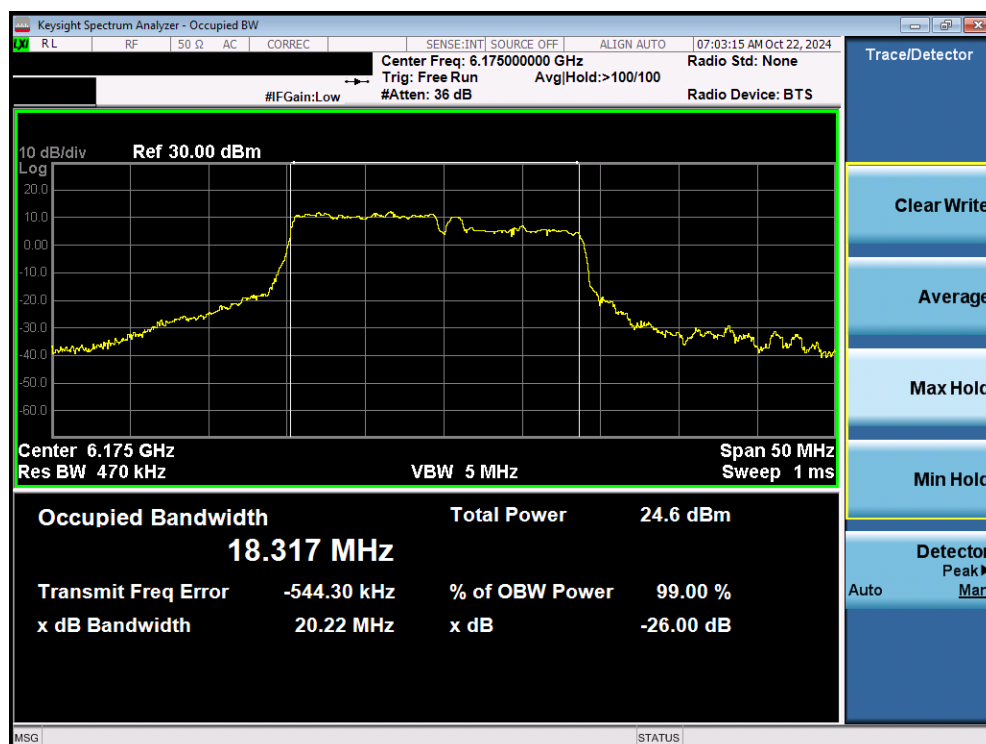


Plot 7-20. 26dB Bandwidth Plot MIMO ANT1 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 40 of 184



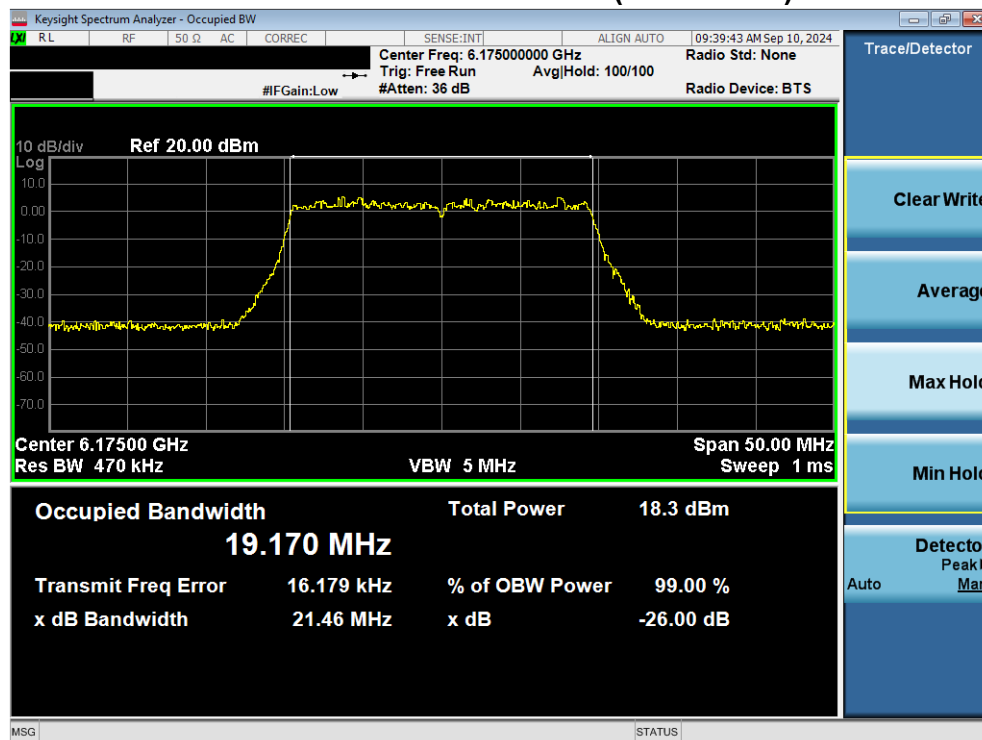
Plot 7-21. 26dB Bandwidth Plot MIMO ANT1 (320MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 31) - SP



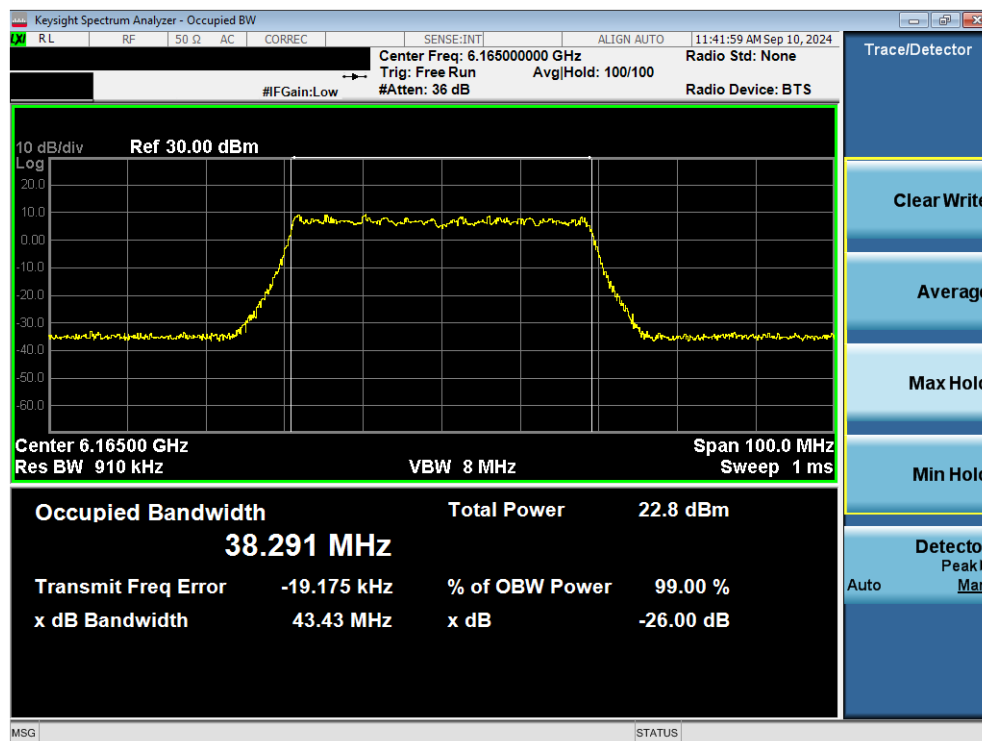
Plot 7-22. 26dB Bandwidth Plot MIMO ANT1 (20MHz 802.11be (106+26 Tones) (UNII Band 5) – Ch. 45) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 41 of 184

7.3.2 MIMO Antenna-1 Bandwidth Measurements - (Full Tones)

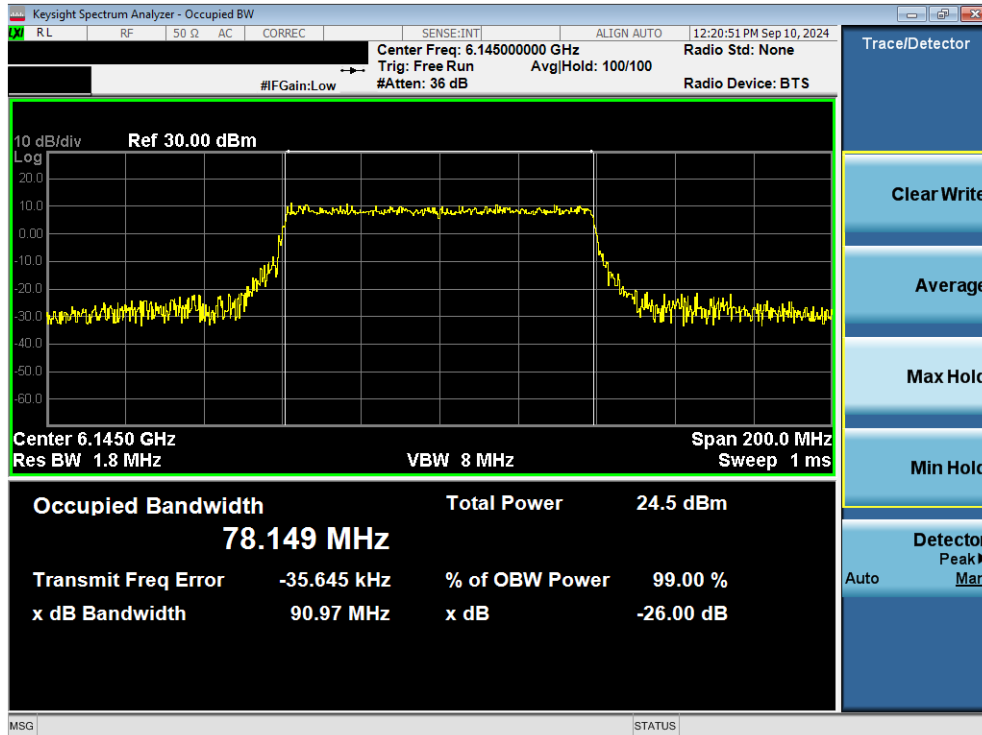


Plot 7-23. 26dB Bandwidth Plot MIMO ANT1 (20MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 45) – LPI

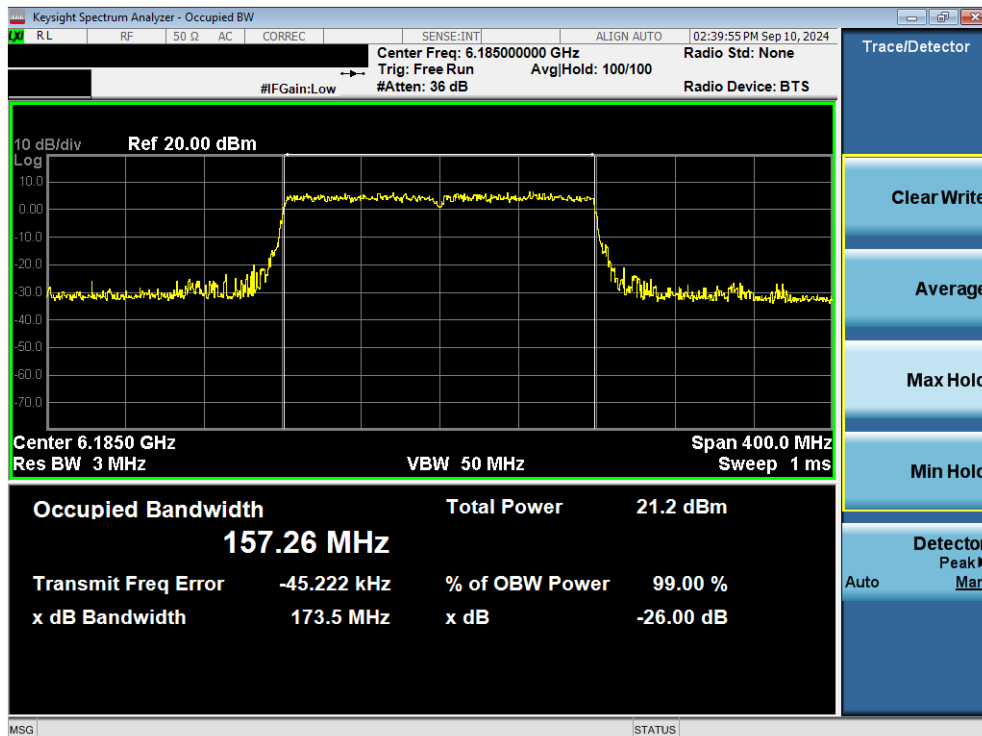


Plot 7-24. 26dB Bandwidth Plot MIMO ANT1 (40MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 43) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 42 of 184

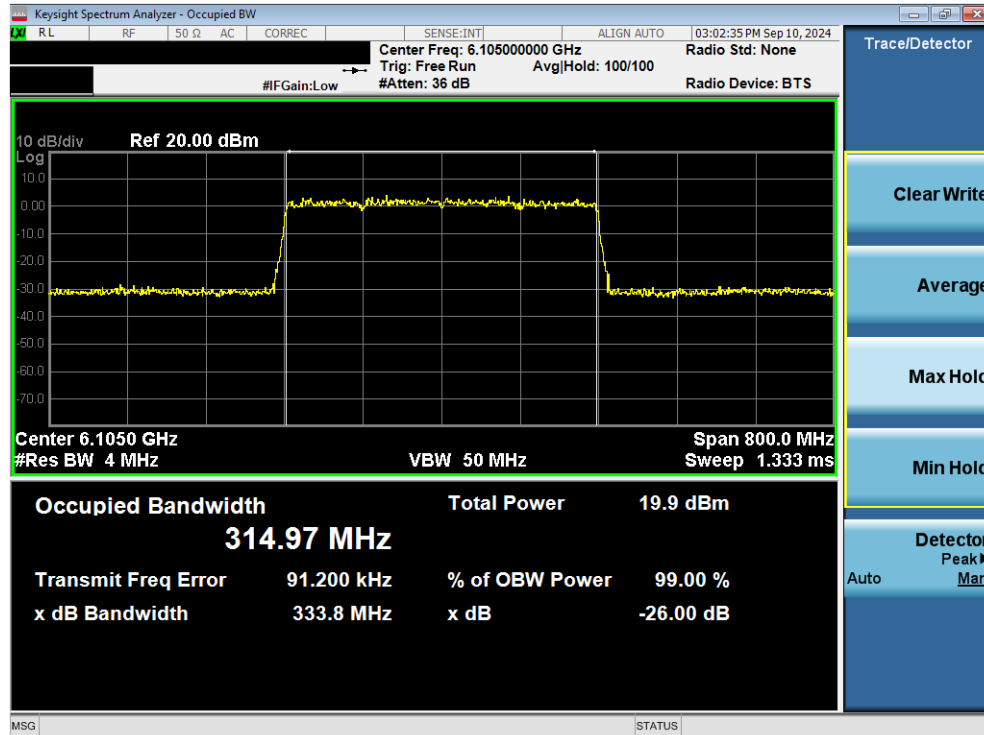


Plot 7-25. 26dB Bandwidth Plot MIMO ANT1 (80MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 39) - LPI/SP

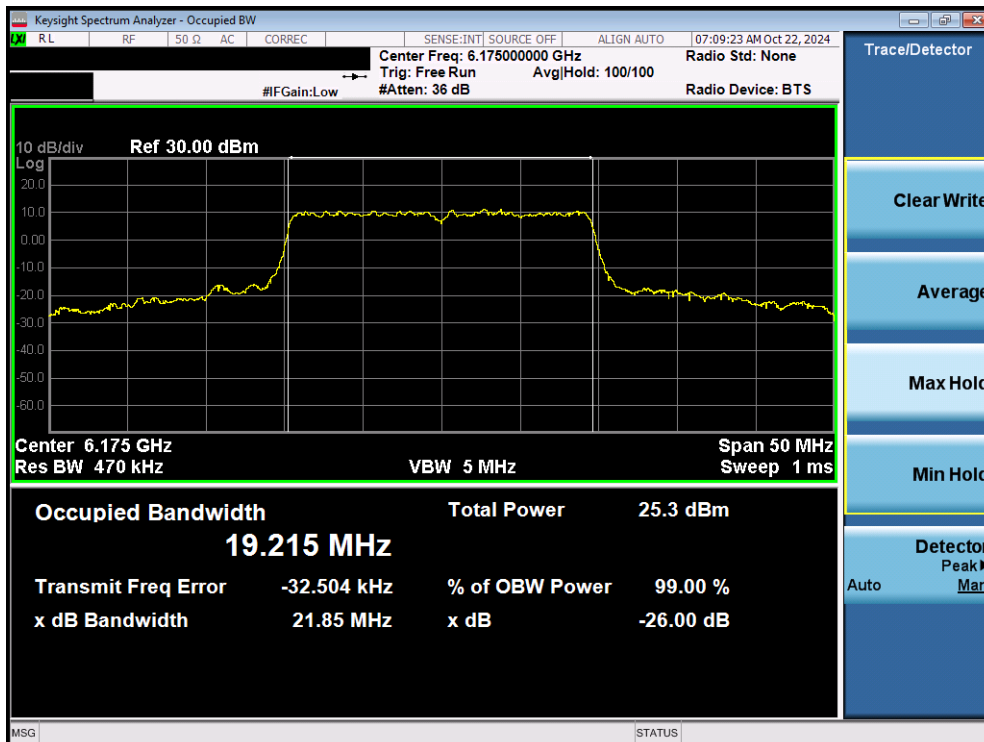


Plot 7-26. 26dB Bandwidth Plot MIMO ANT1 (160MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 47) - LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 43 of 184

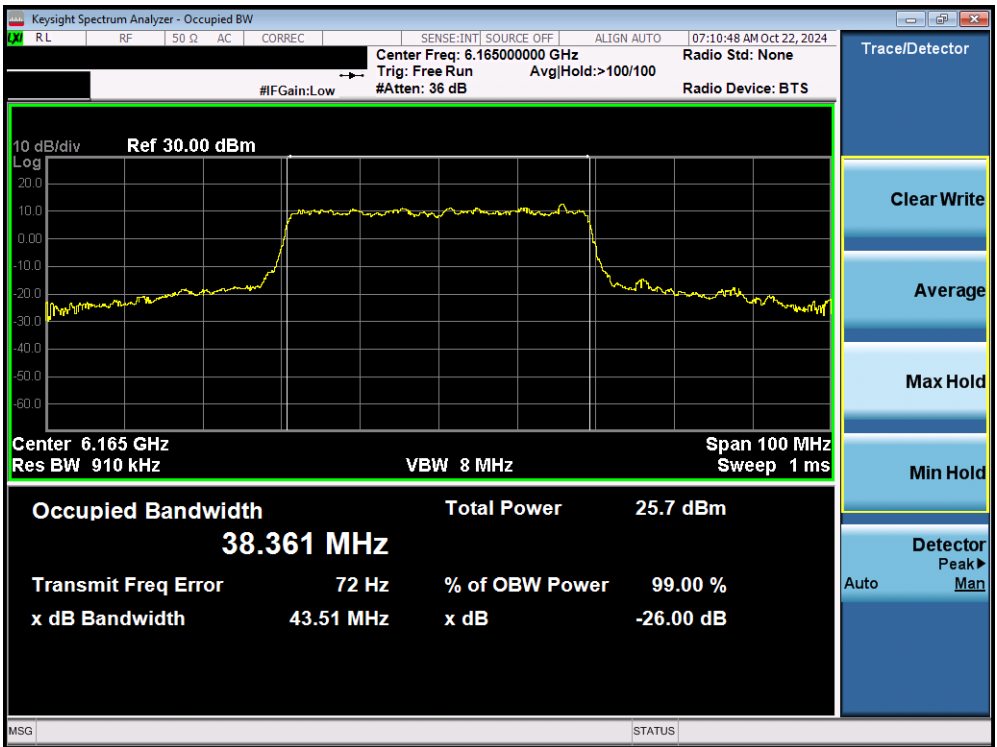


Plot 7-27. 26dB Bandwidth Plot MIMO ANT1 (320MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 31) - LPI/SP



Plot 7-28. 26dB Bandwidth Plot MIMO ANT1 (20MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 45) - SP

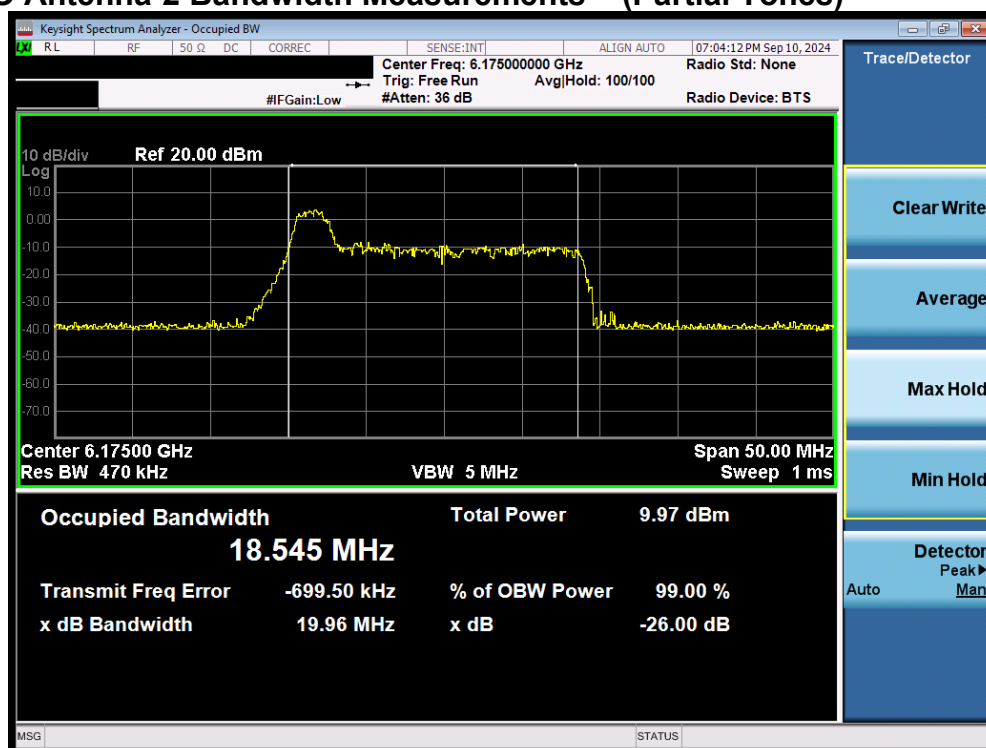
FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 44 of 184



Plot 7-29. 26dB Bandwidth Plot MIMO ANT1 (40MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 43) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 45 of 184

7.3.3 MIMO Antenna-2 Bandwidth Measurements – (Partial Tones)

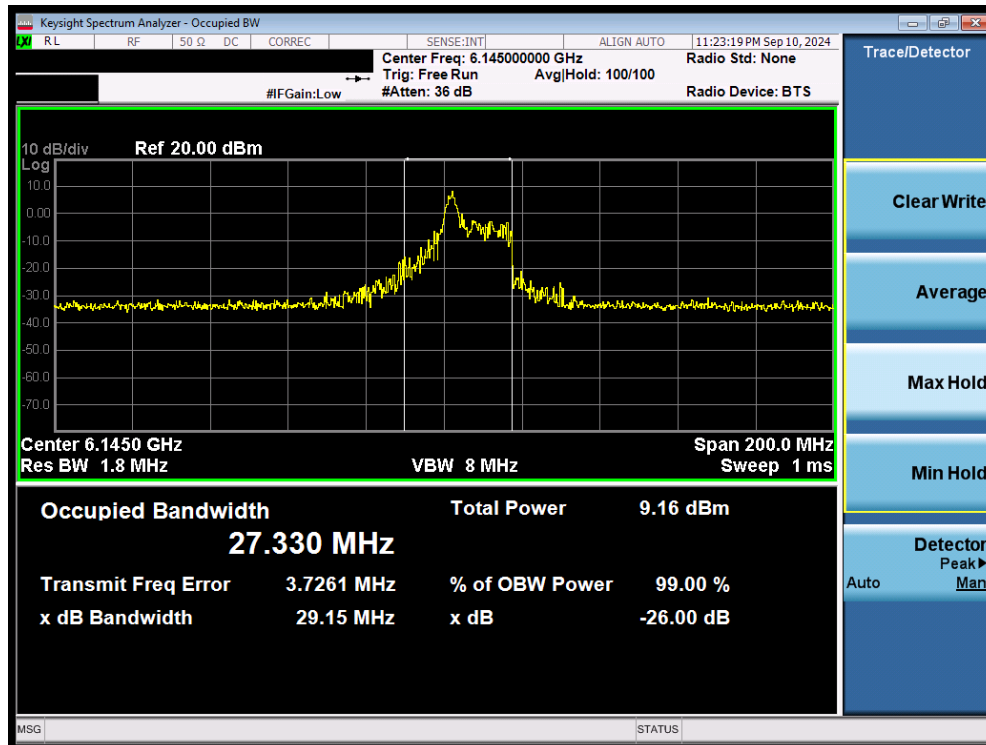


Plot 7-30. 26dB Bandwidth Plot MIMO ANT2 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) - LPI

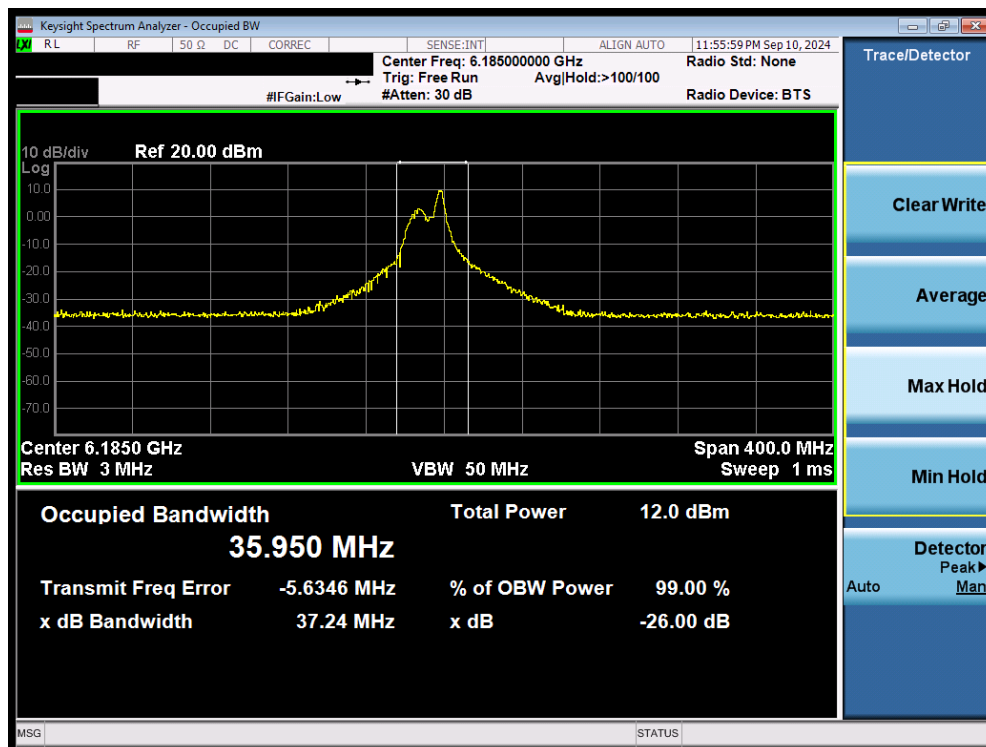


Plot 7-31. 26dB Bandwidth Plot MIMO ANT2 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 46 of 184

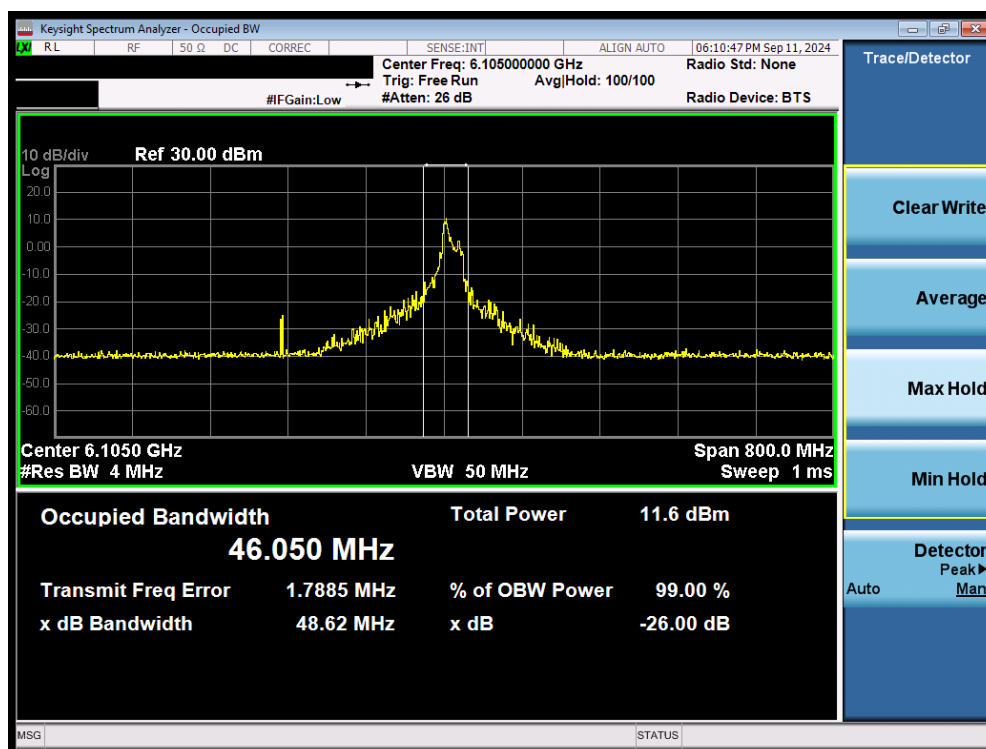


Plot 7-32. 26dB Bandwidth Plot MIMO ANT2 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - LPI

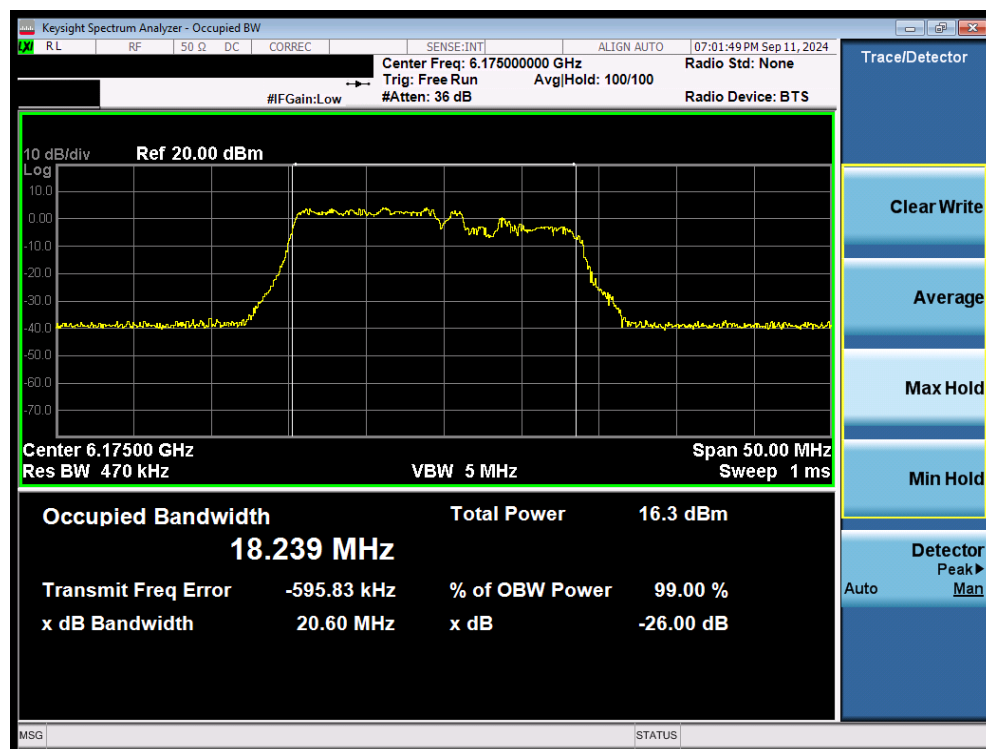


Plot 7-33. 26dB Bandwidth Plot MIMO ANT2 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 47 of 184

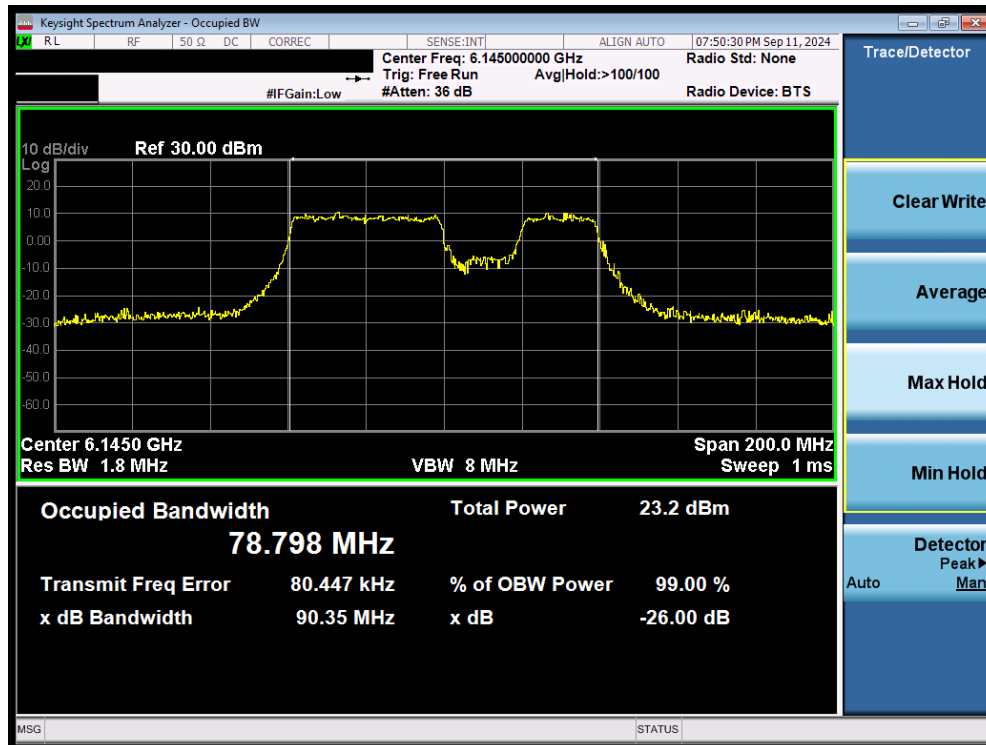


Plot 7-34. 26dB Bandwidth Plot MIMO ANT2 (320MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 31) - LPI

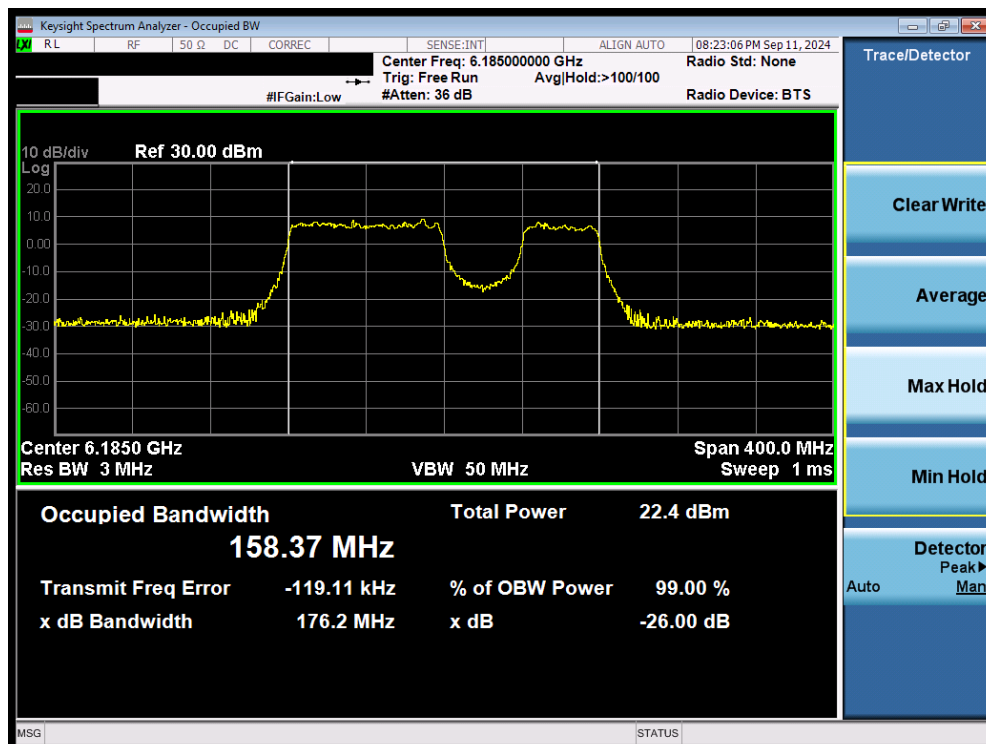


Plot 7-35. 26dB Bandwidth Plot MIMO ANT2 (20MHz 802.11be (106+26 Tones) (UNII Band 5) – Ch. 45) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 48 of 184

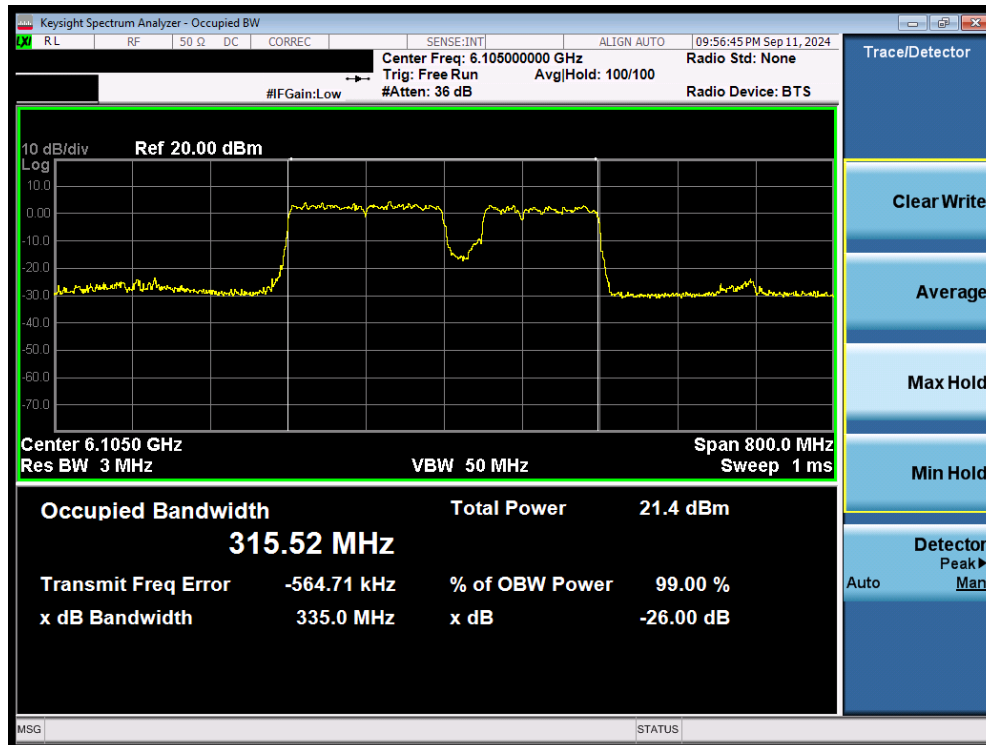


Plot 7-36. 26dB Bandwidth Plot MIMO ANT2 (80MHz 802.11be (484+242 Tones) (UNII Band 5) – Ch. 39) LPI/SP

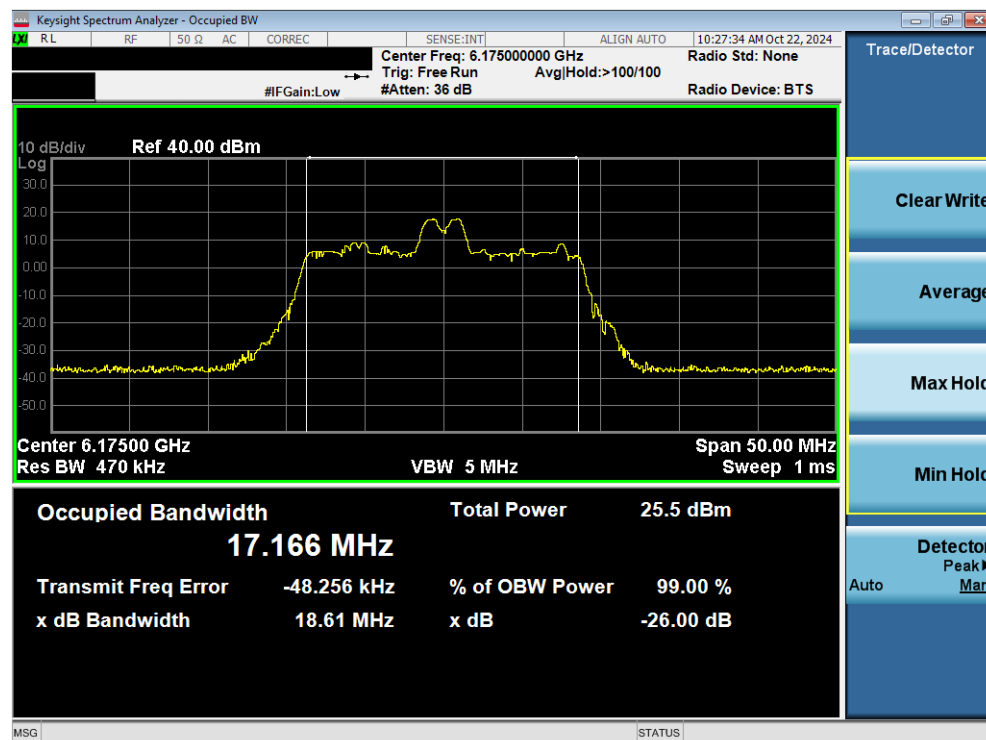


Plot 7-37. 26dB Bandwidth Plot MIMO ANT2 (160MHz 802.11be (996+484 Tones) (UNII Band 5) – Ch. 47) LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 49 of 184

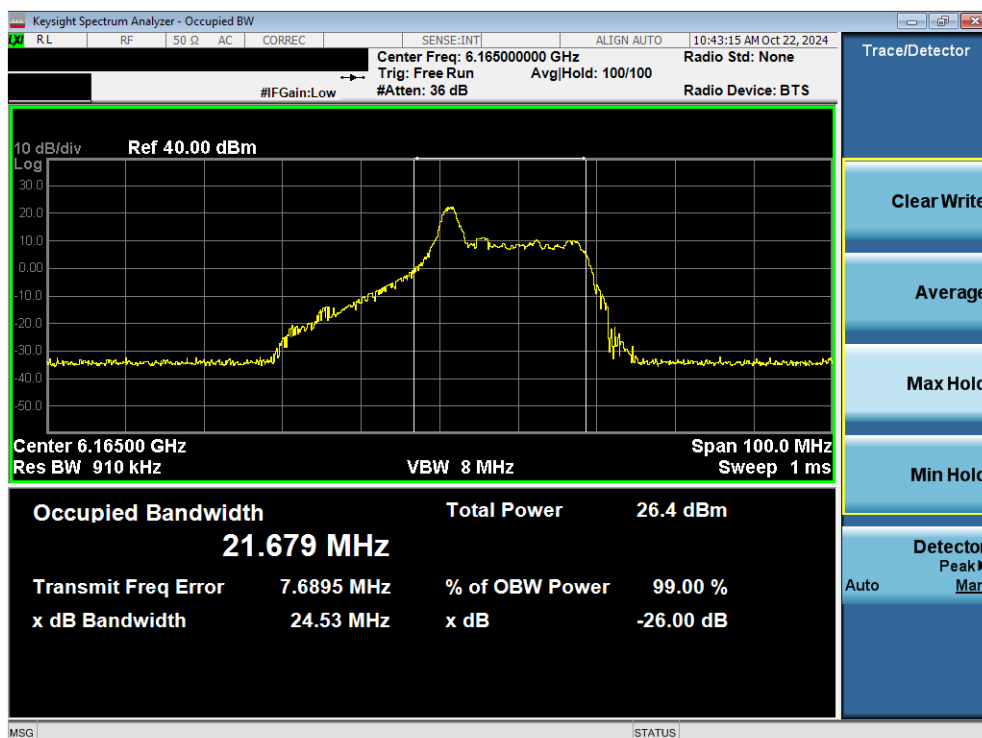


Plot 7-38. 26dB Bandwidth Plot MIMO ANT2 (320MHz 802.11be (3*996+484 Tones) (UNII Band 5) – Ch. 31) LPI/SP

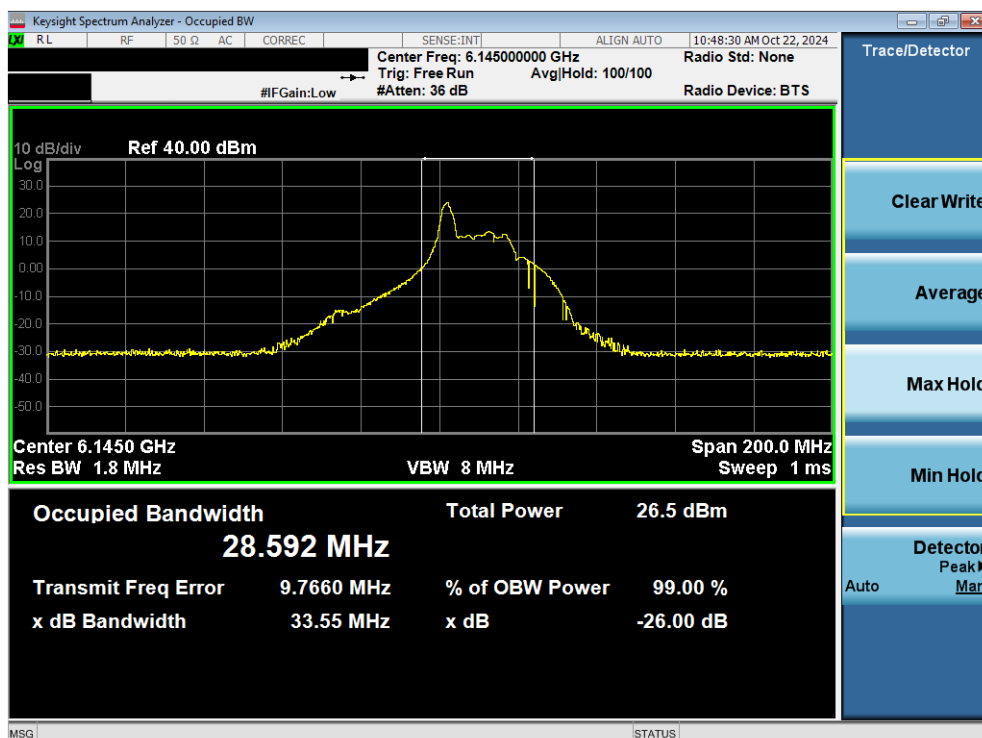


Plot 7-39. 26dB Bandwidth Plot MIMO ANT2 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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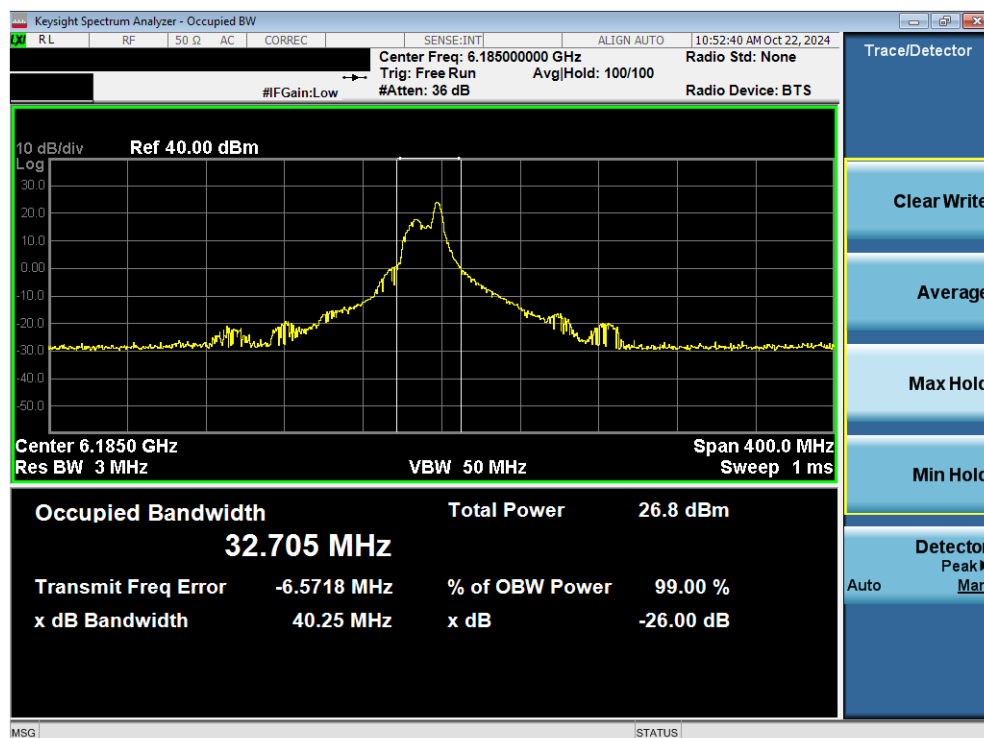


Plot 7-40. 26dB Bandwidth Plot MIMO ANT2 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - SP

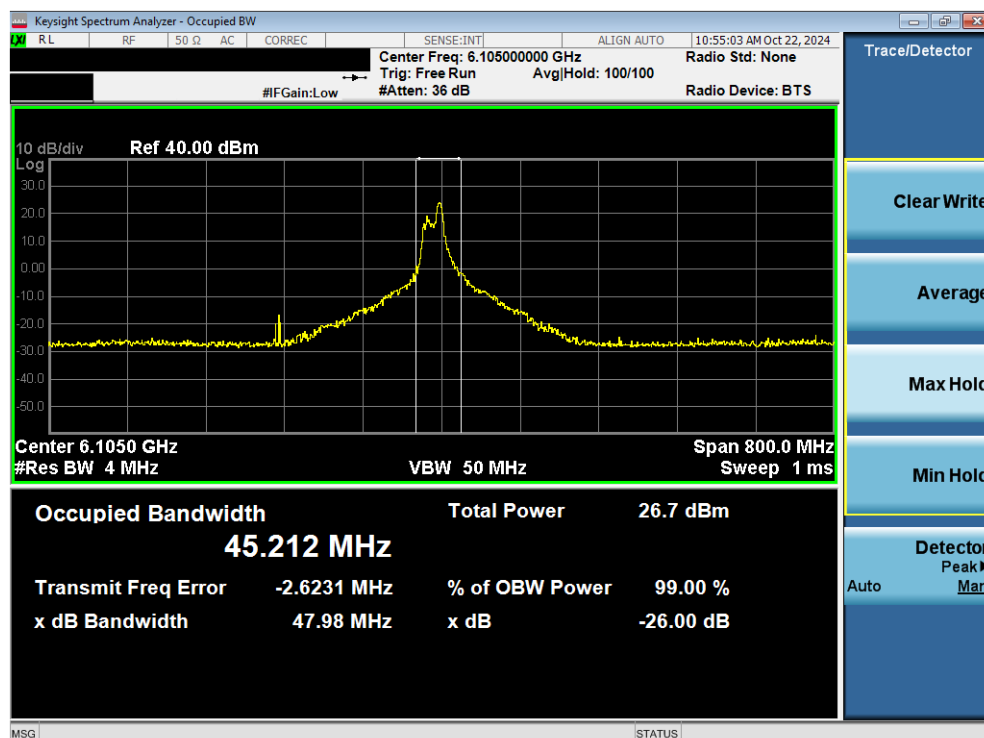


Plot 7-41. 26dB Bandwidth Plot MIMO ANT2 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 51 of 184

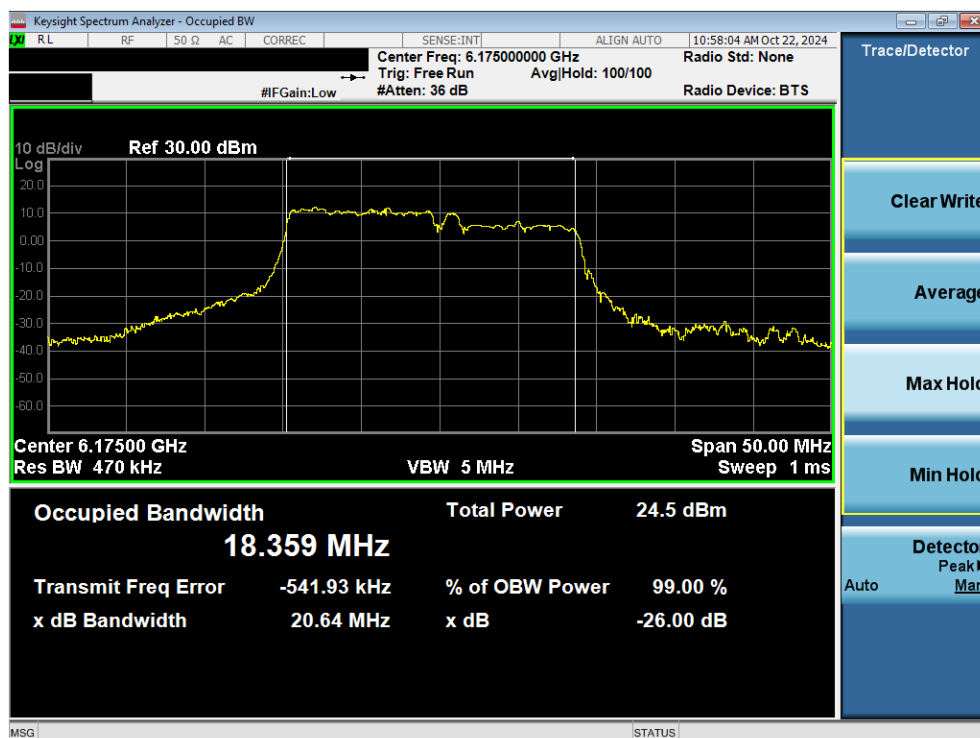


Plot 7-42. 26dB Bandwidth Plot MIMO ANT2 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - SP



Plot 7-43. 26dB Bandwidth Plot MIMO ANT2 (320MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 31) - SP

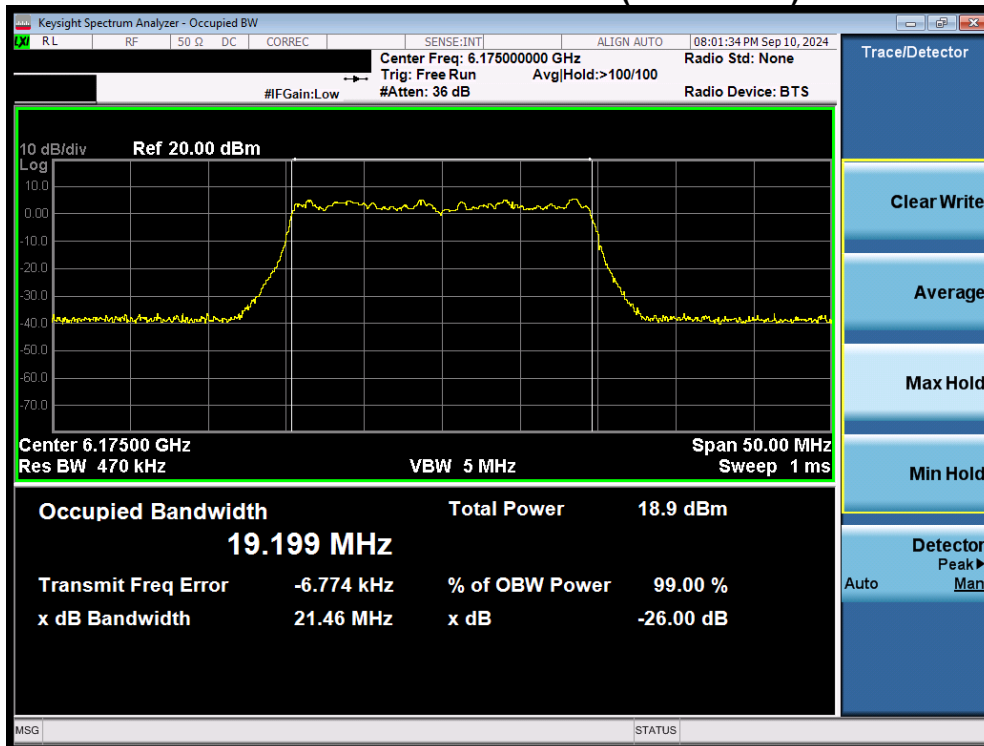
FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 52 of 184



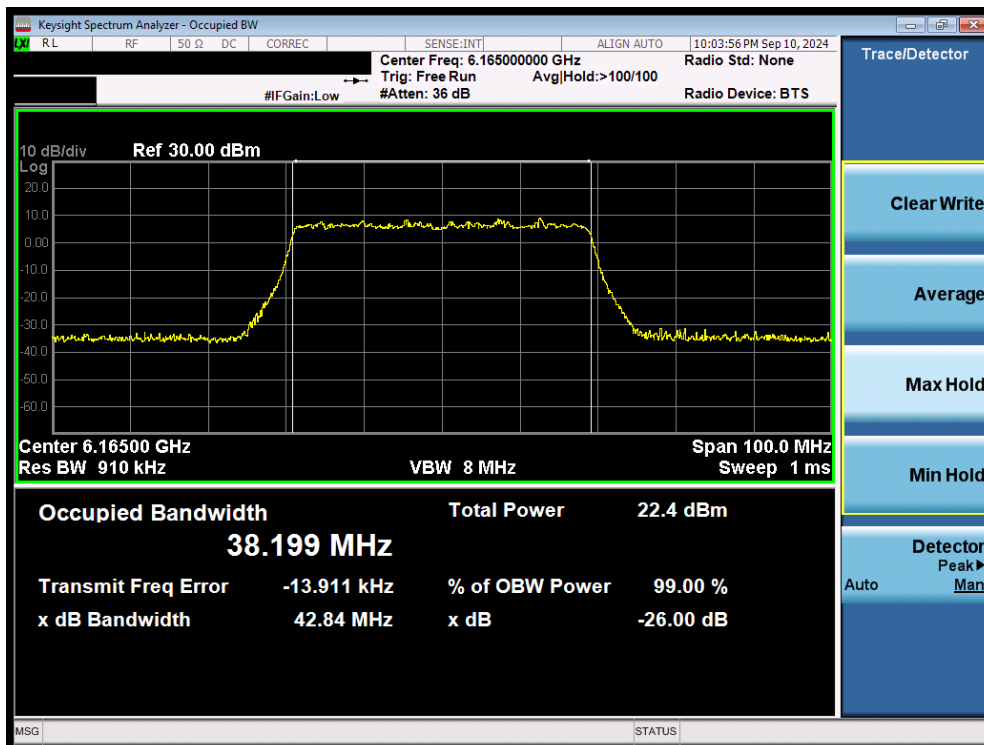
Plot 7-44. 26dB Bandwidth Plot MIMO ANT2 (20MHz 802.11be (106+26 Tones) (UNII Band 5) – Ch. 45) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 53 of 184

7.3.4 MIMO Antenna-2 Bandwidth Measurements – (Full Tones)

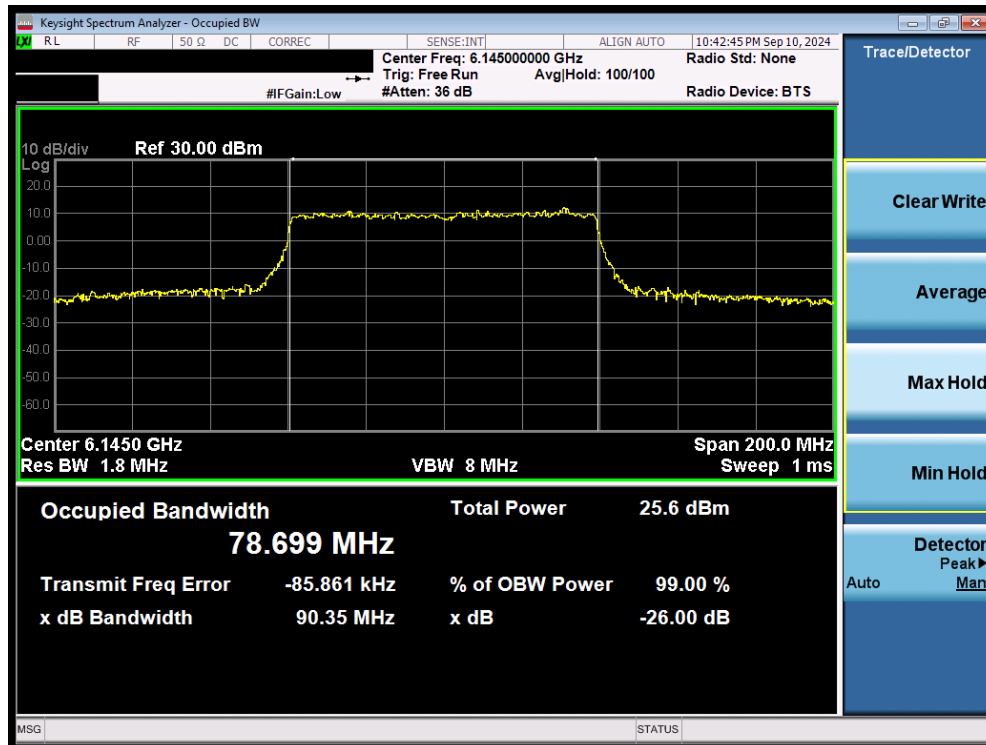


Plot 7-45. 26dB Bandwidth Plot MIMO ANT2 (20MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 45) - LPI

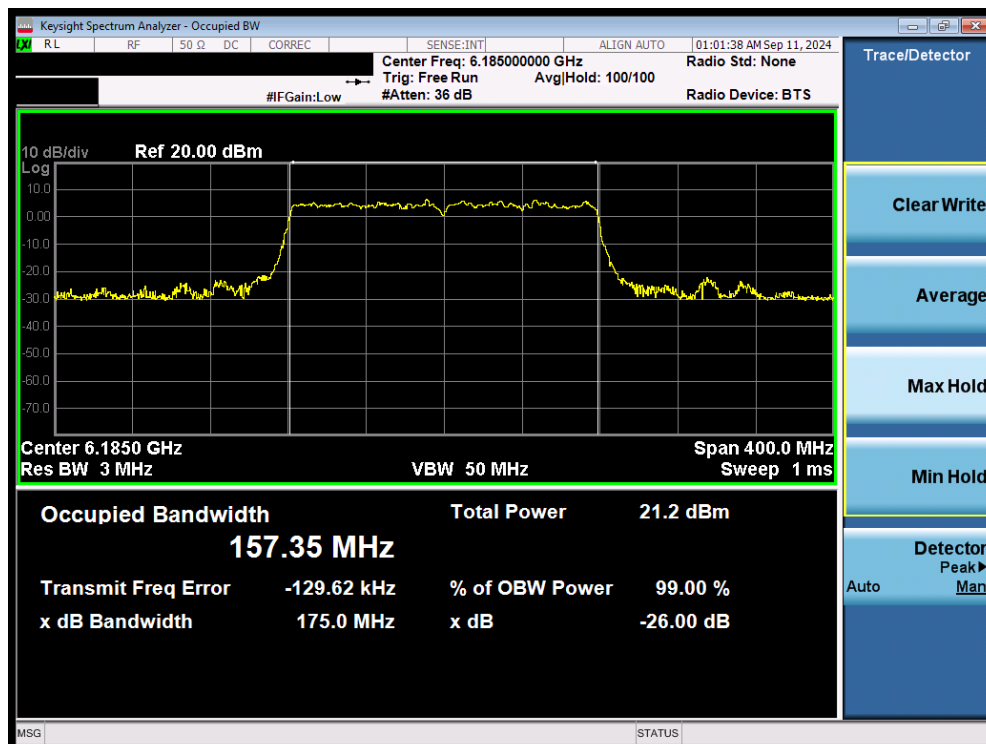


Plot 7-46. 26dB Bandwidth Plot MIMO ANT2 (40MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 43) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 54 of 184

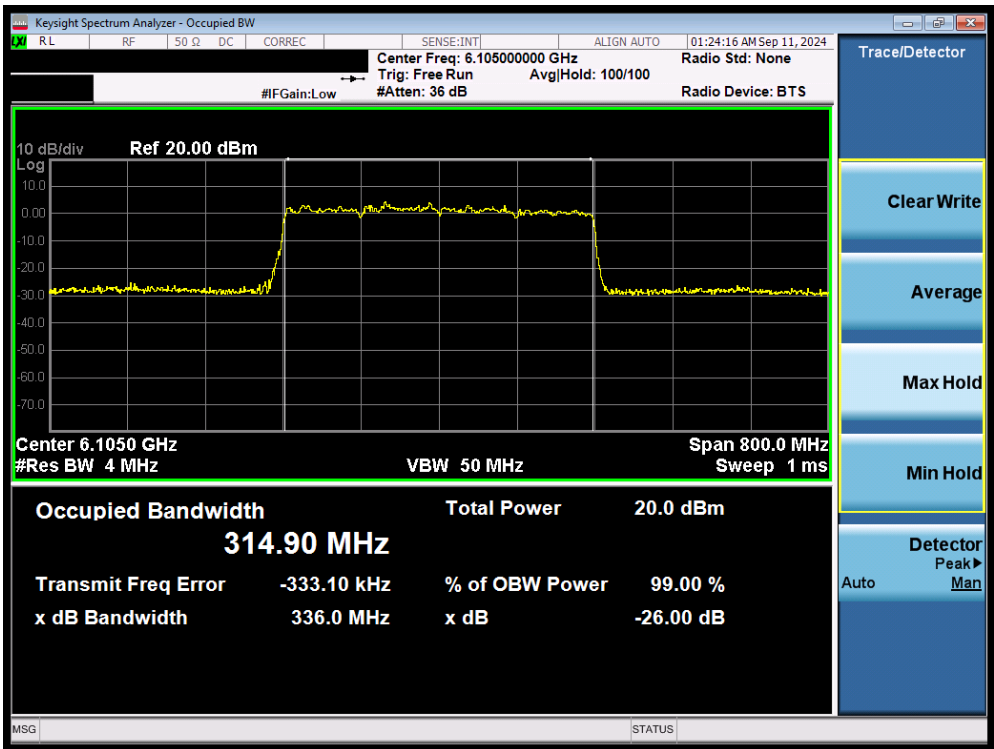


Plot 7-47. 26dB Bandwidth Plot MIMO ANT2 (80MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 39) - LPI/SP



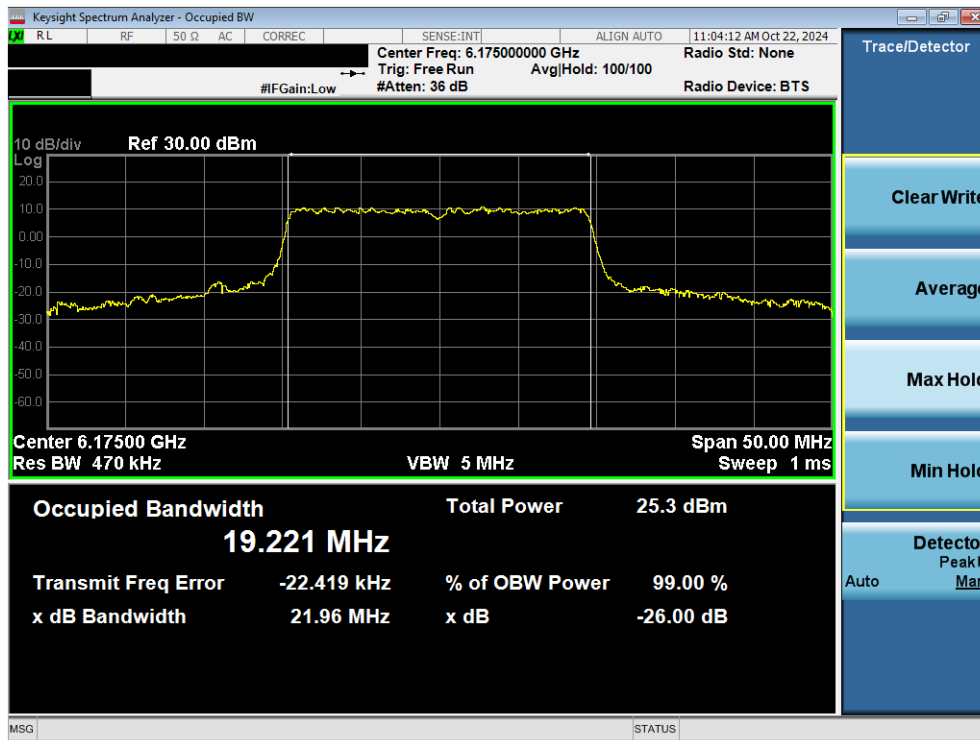
Plot 7-48. 26dB Bandwidth Plot MIMO ANT2 (160MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 47) - LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 55 of 184

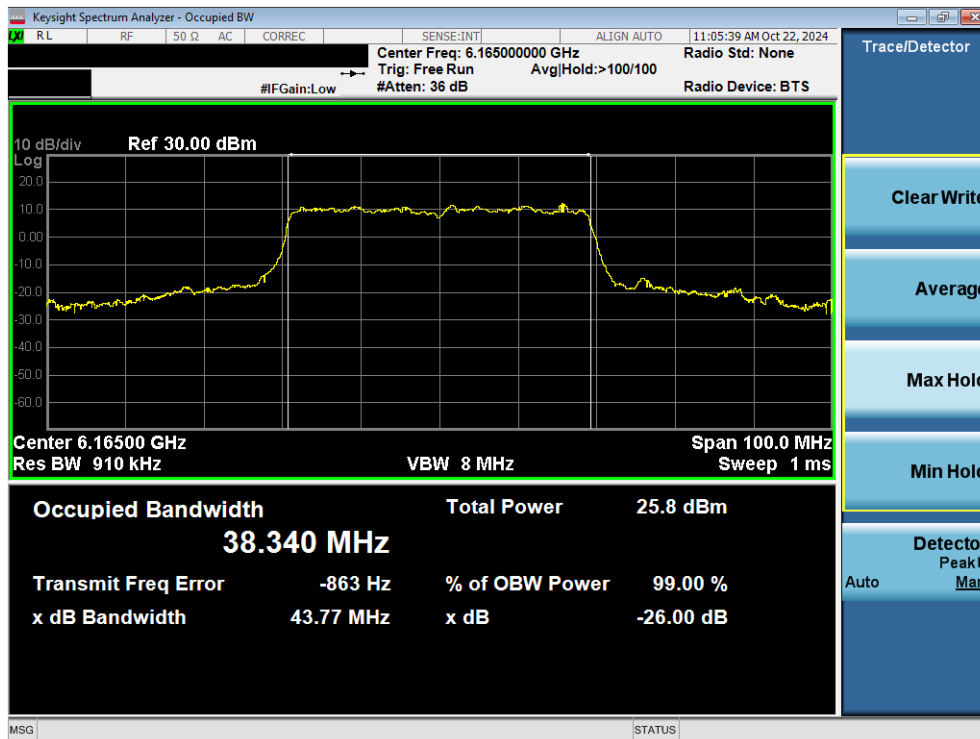


Plot 7-49. 26dB Bandwidth Plot MIMO ANT2 (320MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 31) - LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 56 of 184



Plot 7-50. 26dB Bandwidth Plot MIMO ANT2 (20MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 45) - SP



Plot 7-51. 26dB Bandwidth Plot MIMO ANT2 (40MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 43) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 57 of 184

7.4 UNII Output Power Measurement

Test Overview and Limits

A transmitter antenna terminal of the EUT is connected to the input of an RF pulse power sensor. Measurement is made using a broadband average power meter while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies.

For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm. For client devices operating under the control of a standard power access point, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

Test Procedure Used

ANSI C63.10-2013 – Section 12.3.3.2 Method PM-G

ANSI C63.10-2013 – Section 14.2 Measure-and-Sum Technique

Test Settings

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-2. Test Instrument & Measurement Setup

Test Notes

Compliance for this device while operating under the control of either an indoor low power access point or a standard power access point is demonstrated by applying the tighter low power indoor access point limit of 24dBm e.i.r.p. for both cases.

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SISO Maximum Conducted Output Power Measurements (26 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					0	4	8				
	5	5935	2	26T	-0.99	-0.01	-0.89	-5.9	-5.9	24.0	-29.92
		6175	45	26T	-0.10	-0.47	-0.02	-5.9	-5.9	24.0	-29.93
		6415	93	26T	-0.12	-0.45	-0.12	-5.9	-6.0	24.0	-30.03
	6	6435	97	26T	-0.05	-0.40	-0.10	-5.9	-5.9	24.0	-29.93
		6475	105	26T	-1.50	-0.25	-0.99	-5.9	-6.1	24.0	-30.13
		6515	113	26T	-1.47	-0.10	-0.97	-5.9	-6.0	24.0	-29.98
	7	6535	117	26T	-1.60	-0.12	-0.96	-6.5	-6.6	24.0	-30.64
		6695	149	26T	-0.12	-0.50	-0.20	-6.5	-6.6	24.0	-30.64
		6875	185	26T	-0.14	-0.50	-0.21	-6.5	-6.7	24.0	-30.66
	8	6895	189	26T	-0.20	-0.60	-0.23	-6.5	-6.7	24.0	-30.70
		6995	209	26T	-0.01	-0.32	-0.05	-6.5	-6.5	24.0	-30.51
		7115	233	26T	-0.10	-0.43	-0.14	-6.5	-6.6	24.0	-30.60

Table 7-12. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					0	4	8				
	5	5935	2	26T	-0.99	-0.18	-0.89	-5.4	-5.6	24.0	-29.56
6175		45	26T	-0.10	-0.13	-0.04	-5.4	-5.4	24.0	-29.42	
6415		93	26T	-0.04	-0.45	-0.08	-5.4	-5.4	24.0	-29.42	
6	6435	97	26T	-0.04	-0.40	-0.01	-5.8	-5.9	24.0	-29.85	
	6475	105	26T	-1.16	-0.42	-0.82	-5.8	-6.3	24.0	-30.26	
	6515	113	26T	-1.30	-0.05	-1.14	-5.8	-5.9	24.0	-29.89	
7	6535	117	26T	-1.43	-0.12	-1.13	-6.3	-6.4	24.0	-30.37	
	6695	149	26T	-0.29	-0.67	-0.03	-6.3	-6.3	24.0	-30.28	
	6875	185	26T	-0.06	-0.33	-0.21	-6.3	-6.3	24.0	-30.31	
8	6895	189	26T	-0.37	-0.77	-0.40	-6.0	-6.4	24.0	-30.40	
	6995	209	26T	-0.05	-0.15	-0.22	-6.0	-6.1	24.0	-30.08	
	7115	233	26T	-0.10	-0.26	-0.14	-6.0	-6.1	24.0	-30.13	

Table 7-13. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					0	4	8				
	5	5935	2	26T	-0.46	-1.43	-1.46	-5.9	-6.4	24.0	-30.37
6175		45	26T	13.15	13.06	13.26	-5.9	7.4	24.0	-16.65	
6415		93	26T	13.11	13.21	13.17	-5.9	7.3	24.0	-16.70	
7	6535	117	26T	13.94	13.27	13.80	-6.5	7.4	24.0	-16.58	
	6695	149	26T	13.66	13.60	13.80	-6.5	7.3	24.0	-16.72	

Table 7-14. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					0	4	8				
	5	5935	2	26T	-0.01	-0.39	-0.20	-5.4	-5.4	24.0	-29.39
		6175	45	26T	13.99	13.60	13.95	-5.4	8.6	24.0	-15.39
		6415	93	26T	13.98	13.77	13.97	-5.4	8.6	24.0	-15.40
	7	6535	117	26T	13.71	13.39	13.78	-6.3	7.5	24.0	-16.47
		6695	149	26T	13.44	13.56	13.54	-6.3	7.3	24.0	-16.69

Table 7-15. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

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SISO Maximum Conducted Output Power Measurements (52 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					37	38	40				
	5	5935	2	52T	2.90	2.68	2.79	-5.9	-3.0	24.0	-27.01
6175		45	52T	2.95	2.75	2.92	-5.9	-3.0	24.0	-26.96	
6415		93	52T	2.75	2.55	2.70	-5.9	-3.2	24.0	-27.16	
6	6435	97	52T	2.89	2.70	2.86	-5.9	-3.0	24.0	-26.99	
	6475	105	52T	2.99	2.85	2.99	-5.9	-2.9	24.0	-26.89	
	6515	113	52T	2.66	2.50	2.68	-5.9	-3.2	24.0	-27.20	
7	6535	117	52T	2.70	2.52	2.66	-6.5	-3.8	24.0	-27.82	
	6695	149	52T	2.94	2.79	2.90	-6.5	-3.6	24.0	-27.58	
	6875	185	52T	2.80	2.60	2.70	-6.5	-3.7	24.0	-27.72	
8	6895	189	52T	2.75	2.56	2.69	-6.5	-3.8	24.0	-27.75	
	6995	209	52T	2.85	2.69	2.77	-6.5	-3.7	24.0	-27.65	
	7115	233	52T	2.88	2.89	2.88	-6.5	-3.6	24.0	-27.61	

Table 7-16. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					37	38	40				
	5	5935	2	52T	2.99	2.51	2.98	-5.4	-2.4	24.0	-26.39
6175		45	52T	2.95	2.92	2.96	-5.4	-2.4	24.0	-26.42	
6415		93	52T	2.98	2.72	2.96	-5.4	-2.4	24.0	-26.40	
6	6435	97	52T	2.96	2.99	2.69	-5.8	-2.9	24.0	-26.85	
	6475	105	52T	2.99	2.85	2.69	-5.8	-2.9	24.0	-26.85	
	6515	113	52T	2.99	2.33	2.68	-5.8	-2.9	24.0	-26.85	
7	6535	117	52T	2.53	2.35	2.99	-6.3	-3.3	24.0	-27.26	
	6695	149	52T	2.87	2.62	2.97	-6.3	-3.3	24.0	-27.28	
	6875	185	52T	2.63	2.77	2.99	-6.3	-3.3	24.0	-27.26	
8	6895	189	52T	2.58	2.56	2.90	-6.0	-3.1	24.0	-27.13	
	6995	209	52T	2.68	2.69	2.94	-6.0	-3.1	24.0	-27.09	
	7115	233	52T	2.71	2.99	2.71	-6.0	-3.0	24.0	-27.04	

Table 7-17. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					37	38	40				
	5	5935	2	52T	2.52	2.04	2.04	-5.91	-3.39	24.0	-27.39
6175		45	52T	13.54	13.21	13.17	-5.91	7.63	24.0	-16.37	
6415		93	52T	13.63	13.16	13.22	-5.91	7.72	24.0	-16.28	
7	6535	117	52T	13.67	13.50	13.69	-6.52	7.17	24.0	-16.83	
	6695	149	52T	13.63	13.97	13.70	-6.52	7.45	24.0	-16.55	

Table 7-18. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					37	38	40				
					2.91	2.98	2.77				
5	5935	2	52T	13.57	13.83	13.98	-5.38	-2.40	24.0	-26.40	
	6175	45	52T	13.57	13.83	13.98	-5.38	8.60	24.0	-15.40	
	6415	93	52T	13.58	13.91	13.63	-5.38	8.53	24.0	-15.47	
	6535	117	52T	13.45	13.36	13.61	-6.25	7.36	24.0	-16.64	
	6695	149	52T	13.37	13.68	13.48	-6.25	7.43	24.0	-16.57	
	6895	189	52T	13.37	13.68	13.48	-6.25	7.43	24.0	-16.57	

Table 7-19. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

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SISO Maximum Conducted Output Power Measurements (106 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index					
					53	54				
	6	5935	2	106T	5.65	5.60	-5.9	-0.3	24.0	-24.26
6175		45	106T	5.90	5.89	-5.9	0.0	24.0	-24.01	
6415		93	106T	5.50	5.55	-5.9	-0.4	24.0	-24.36	
6435		97	106T	5.99	5.97	-5.9	0.1	24.0	-23.89	
6475		105	106T	5.50	5.52	-5.9	-0.4	24.0	-24.36	
6515		113	106T	5.56	5.52	-5.9	-0.3	24.0	-24.32	
6535		117	106T	5.52	5.56	-6.5	-1.0	24.0	-24.96	
6695		149	106T	5.96	5.82	-6.5	-0.6	24.0	-24.56	
6875		185	106T	5.96	5.88	-6.5	-0.6	24.0	-24.56	
6895		189	106T	5.90	5.87	-6.5	-0.6	24.0	-24.60	
6995		209	106T	5.70	5.65	-6.5	-0.8	24.0	-24.80	
7115		233	106T	5.58	5.56	-6.5	-0.9	24.0	-24.92	

Table 7-20. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index					
					53	54				
	6	5935	2	106T	5.99	5.77	-5.4	0.6	24.0	-23.39
6175		45	106T	5.99	5.89	-5.4	0.6	24.0	-23.39	
6415		93	106T	5.33	5.38	-5.4	0.0	24.0	-24.00	
6435		97	106T	5.99	5.96	-5.8	0.2	24.0	-23.85	
6475		105	106T	5.67	5.69	-5.8	-0.2	24.0	-24.15	
6515		113	106T	5.73	5.69	-5.8	-0.1	24.0	-24.11	
6535		117	106T	5.86	5.39	-6.3	-0.4	24.0	-24.39	
6695		149	106T	5.96	5.82	-6.3	-0.3	24.0	-24.29	
6875		185	106T	5.79	5.99	-6.3	-0.3	24.0	-24.26	
6895		189	106T	5.90	5.97	-6.0	-0.1	24.0	-24.06	
6995		209	106T	5.87	5.99	-6.0	0.0	24.0	-24.04	
7115		233	106T	5.41	5.56	-6.0	-0.5	24.0	-24.47	

Table 7-21. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index					
					53	54				
7		5935	2	106T	5.01	5.04	-5.91	-0.87	24.0	-24.87
		6175	45	106T	13.21	13.44	-5.91	7.53	24.0	-16.47
		6415	93	106T	13.22	13.06	-5.91	7.31	24.0	-16.69
		6535	117	106T	13.36	13.42	-6.52	6.90	24.0	-17.10
		6695	149	106T	13.60	13.59	-6.52	7.08	24.0	-16.92

Table 7-22. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index					
					53	54				
		5935	2	106T	5.87	5.74	-5.38	0.49	24.0	-23.51
		6175	45	106T	13.55	13.40	-5.38	8.17	24.0	-15.83
		6415	93	106T	13.58	13.44	-5.38	8.20	24.0	-15.80
	7	6535	117	106T	13.06	13.14	-6.25	6.89	24.0	-17.11
		6695	149	106T	13.30	13.36	-6.25	7.11	24.0	-16.89

Table 7-23. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

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SISO Maximum Conducted Output Power Measurements (242 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					61				
20MHz BW	5	5935	2	242T	9.99	-5.91	4.08	24.0	-19.92
		6175	45	242T	9.66	-5.91	3.75	24.0	-20.25
		6415	93	242T	9.95	-5.91	4.04	24.0	-19.96
	6	6435	97	242T	9.52	-5.88	3.64	24.0	-20.36
		6475	105	242T	9.74	-5.88	3.86	24.0	-20.14
		6515	113	242T	9.67	-5.88	3.79	24.0	-20.21
	7	6535	117	242T	9.65	-6.52	3.13	24.0	-20.87
		6695	149	242T	9.93	-6.52	3.41	24.0	-20.59
		6875	185	242T	9.80	-6.52	3.28	24.0	-20.72
	8	6895	189	242T	9.77	-6.50	3.27	24.0	-20.73
		6995	209	242T	9.98	-6.50	3.48	24.0	-20.52
		7115	233	242T	9.60	-6.50	3.10	24.0	-20.90

Table 7-24. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI/SP

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					61				
20MHz BW	5	5935	2	242T	9.82	-5.38	4.44	24.0	-19.56
		6175	45	242T	9.98	-5.38	4.60	24.0	-19.40
		6415	93	242T	9.97	-5.38	4.59	24.0	-19.41
	6	6435	97	242T	9.69	-5.84	3.85	24.0	-20.15
		6475	105	242T	9.99	-5.84	4.15	24.0	-19.85
		6515	113	242T	9.96	-5.84	4.12	24.0	-19.88
	7	6535	117	242T	9.99	-6.25	3.74	24.0	-20.26
		6695	149	242T	9.93	-6.25	3.68	24.0	-20.32
		6875	185	242T	9.80	-6.25	3.55	24.0	-20.45
	8	6895	189	242T	9.94	-6.03	3.91	24.0	-20.09
		6995	209	242T	9.98	-6.03	3.95	24.0	-20.05
		7115	233	242T	9.43	-6.03	3.40	24.0	-20.60

Table 7-25. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					61				
20MHz BW	5	5935	2	242T	6.01	-5.91	0.10	24.0	-23.90
		6175	45	242T	16.12	-5.91	10.21	24.0	-13.79
		6415	93	242T	16.27	-5.91	10.36	24.0	-13.64
	7	6535	117	242T	16.66	-6.52	10.14	24.0	-13.86
		6695	149	242T	16.71	-6.52	10.19	24.0	-13.81

Table 7-26. SISO ANT1 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – SP

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					61				
20MHz BW	5	5935	2	242T	6.76	-5.38	1.38	24.0	-22.62
		6175	45	242T	16.82	-5.38	11.44	24.0	-12.56
		6415	93	242T	16.84	-5.38	11.46	24.0	-12.54
	7	6535	117	242T	16.45	-6.25	10.20	24.0	-13.80
		6695	149	242T	16.13	-6.25	9.88	24.0	-14.12

Table 7-27. SISO ANT2 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 62 of 184

SISO Maximum Conducted Output Power Measurements (484 Tones)

40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					65				
40MHz BW	5	5965	3	484T	12.93	-5.91	7.02	24.0	-16.98
		6165	43	484T	12.93	-5.91	7.02	24.0	-16.98
		6405	91	484T	12.94	-5.91	7.03	24.0	-16.97
	6	6445	99	484T	12.47	-5.88	6.59	24.0	-17.41
		6485	107	484T	12.65	-5.88	6.77	24.0	-17.23
		6525	115	484T	12.50	-5.88	6.62	24.0	-17.38
	7	6565	123	484T	12.63	-6.52	6.11	24.0	-17.89
		6725	155	484T	12.16	-6.52	5.64	24.0	-18.36
		6845	179	484T	12.60	-6.52	6.08	24.0	-17.92
	8	6885	187	484T	12.66	-6.50	6.16	24.0	-17.84
		7005	211	484T	12.84	-6.50	6.34	24.0	-17.66
		7085	227	484T	12.80	-6.50	6.30	24.0	-17.70

Table 7-28. SISO ANT1 40MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					65				
40MHz BW	5	5965	3	484T	12.76	-5.38	7.38	24.0	-16.62
		6165	43	484T	12.76	-5.38	7.38	24.0	-16.62
		6405	91	484T	12.94	-5.38	7.56	24.0	-16.44
	6	6445	99	484T	12.64	-5.84	6.80	24.0	-17.20
		6485	107	484T	12.82	-5.84	6.98	24.0	-17.02
		6525	115	484T	12.33	-5.84	6.49	24.0	-17.51
	7	6565	123	484T	12.97	-6.25	6.72	24.0	-17.28
		6725	155	484T	12.16	-6.25	5.91	24.0	-18.09
		6845	179	484T	12.94	-6.25	6.69	24.0	-17.31
	8	6885	187	484T	12.49	-6.03	6.46	24.0	-17.54
		7005	211	484T	12.99	-6.03	6.96	24.0	-17.04
		7085	227	484T	12.97	-6.03	6.94	24.0	-17.06

Table 7-29. SISO ANT2 40MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI

40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					65				
40MHz BW	5	5965	3	484T	16.05	-5.91	10.14	24.0	-13.86
		6165	43	484T	16.06	-5.91	10.15	24.0	-13.85
		6405	91	484T	16.09	-5.91	10.18	24.0	-13.82
	7	6565	123	484T	16.65	-6.52	10.13	24.0	-13.87
		6725	155	484T	16.73	-6.52	10.21	24.0	-13.79
		6845	179	484T	16.84	-6.52	10.32	24.0	-13.68

Table 7-30. SISO ANT1 40MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					65				
40MHz BW	5	5965	3	484T	16.56	-5.38	11.18	24.0	-12.82
		6165	43	484T	16.60	-5.38	11.22	24.0	-12.78
		6405	91	484T	16.85	-5.38	11.47	24.0	-12.53
	7	6565	123	484T	16.51	-6.25	10.26	24.0	-13.74
		6725	155	484T	16.40	-6.25	10.15	24.0	-13.85
		6845	179	484T	16.82	-6.25	10.57	24.0	-13.43

Table 7-31. SISO ANT2 40MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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SISO Maximum Conducted Output Power Measurements (996 Tones)

80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					67				
80MHz BW	5	5985	7	996T	15.71	-5.91	9.80	24.0	-14.20
		6145	39	996T	15.74	-5.91	9.83	24.0	-14.17
		6385	87	996T	15.63	-5.91	9.72	24.0	-14.28
	6	6465	103	996T	15.85	-5.88	9.97	24.0	-14.03
		6545	119	996T	15.97	-6.52	9.45	24.0	-14.55
	7	6705	151	996T	15.54	-6.52	9.02	24.0	-14.98
		6865	183	996T	15.55	-6.52	9.03	24.0	-14.97
	8	6945	199	996T	15.94	-6.50	9.44	24.0	-14.56
		7025	215	996T	15.62	-6.50	9.12	24.0	-14.88

Table 7-32. SISO ANT1 80MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI/SP

80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					67				
80MHz BW	5	5985	7	996T	15.88	-5.38	10.50	24.0	-13.50
		6145	39	996T	15.91	-5.38	10.53	24.0	-13.47
		6385	87	996T	15.80	-5.38	10.42	24.0	-13.58
	6	6465	103	996T	15.99	-5.84	10.15	24.0	-13.85
		6545	119	996T	15.96	-6.25	9.71	24.0	-14.29
	7	6705	151	996T	15.88	-6.25	9.63	24.0	-14.37
		6865	183	996T	15.55	-6.25	9.30	24.0	-14.70
	8	6945	199	996T	15.77	-6.03	9.74	24.0	-14.26
		7025	215	996T	15.79	-6.03	9.76	24.0	-14.24

Table 7-33. SISO ANT2 80MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power - LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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SISO Maximum Conducted Output Power Measurements (2x996 Tones)

160MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					68				
	5	6025	15	2x996T	14.70	-5.91	8.79	24.0	-15.21
		6185	47	2x996T	14.94	-5.91	9.03	24.0	-14.97
		6345	79	2x996T	14.50	-5.91	8.59	24.0	-15.41
	6	6505	111	2x996T	14.66	-5.88	8.78	24.0	-15.22
		6665	143	2x996T	14.56	-6.52	8.04	24.0	-15.96
	7	6825	175	2x996T	14.43	-6.52	7.91	24.0	-16.09
	8	6985	207	2x996T	14.70	-6.50	8.20	24.0	-15.80

Table 7-34. SISO ANT1 160MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI/SP

160MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					68				
	5	6025	15	2x996T	14.70	-5.38	9.32	24.0	-14.68
		6185	47	2x996T	14.90	-5.38	9.52	24.0	-14.48
		6345	79	2x996T	14.33	-5.38	8.95	24.0	-15.05
	6	6505	111	2x996T	14.99	-5.84	9.15	24.0	-14.85
		6665	143	2x996T	14.73	-6.25	8.48	24.0	-15.52
	7	6825	175	2x996T	14.77	-6.25	8.52	24.0	-15.48
	8	6985	207	2x996T	14.96	-6.03	8.93	24.0	-15.07

Table 7-35. SISO ANT2 160MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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SISO Maximum Conducted Output Power Measurements (4x996 Tones)

320MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					69				
320MHz BW	5	6105	31	4x996T	14.05	-5.91	8.14	24.0	-15.86
		6265	63	4x996T	14.01	-5.91	8.10	24.0	-15.90
	6	6425	95	4x996T	14.20	-5.88	8.32	24.0	-15.68
		6585	127	4x996T	14.04	-6.52	7.52	24.0	-16.48
	7	6745	159	4x996T	14.07	-6.52	7.55	24.0	-16.45
		6905	191	4x996T	14.20	-6.50	7.70	24.0	-16.30

Table 7-36. SISO ANT1 320MHz BW 802.11be (UNII) Maximum Conducted Output Power – LPI/SP

320MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted	Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index				
					69				
320MHz BW	5	6105	31	4x996T	14.22	-5.38	8.84	24.0	-15.16
		6265	63	4x996T	14.01	-5.38	8.63	24.0	-15.37
	6	6425	95	4x996T	14.20	-5.84	8.36	24.0	-15.64
		6585	127	4x996T	14.38	-6.25	8.13	24.0	-15.87
	7	6745	159	4x996T	14.24	-6.25	7.99	24.0	-16.01
		6905	191	4x996T	14.54	-6.03	8.51	24.0	-15.49

Table 7-37. SISO ANT2 320MHz BW 802.11be (UNII) Maximum Conducted Output Power – LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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MIMO Maximum Conducted Output Power Measurements (26 Tones)

	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index												
					0			4			8						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
20MHz BW	5	5935	2	26T	-0.50	-0.02	2.76	-1.47	-0.42	2.10	-1.50	-0.19	2.21	-2.63	0.1	24.0	-23.87
		6175	45	26T	-0.89	-0.02	2.58	-1.21	-0.39	2.23	-0.78	-0.06	2.61	-2.63	0.0	24.0	-24.03
		6415	93	26T	-0.93	-0.01	2.56	-1.21	-0.24	2.31	-0.87	-0.01	2.59	-2.63	0.0	24.0	-24.04
	6	6435	97	26T	-0.65	-0.01	2.69	-1.05	-0.23	2.39	-0.74	-0.01	2.65	-2.85	-0.2	24.0	-24.16
		6475	105	26T	-0.31	-0.01	2.85	-0.71	-0.22	2.35	-0.84	-0.45	2.37	-2.85	0.0	24.0	-24.00
		6515	113	26T	-0.13	-0.09	2.90	-0.73	-0.65	2.32	-0.33	-0.22	2.74	-2.85	0.1	24.0	-23.95
	7	6535	117	26T	-0.10	-0.30	2.81	-0.77	-0.63	2.31	-0.24	-0.24	2.77	-3.37	-0.6	24.0	-24.56
		6695	149	26T	-0.38	-0.55	2.55	-0.44	-0.45	2.57	-0.24	-0.47	2.66	-3.37	-0.7	24.0	-24.72
		6875	185	26T	-0.02	-0.54	2.74	-0.01	-0.30	2.86	-0.16	-0.46	2.70	-3.37	-0.5	24.0	-24.52
	8	6995	189	26T	-0.11	-0.34	2.79	-0.09	-0.21	2.86	-0.16	-0.26	2.80	-3.25	0.4	24.0	-24.39
		6995	209	26T	-0.01	-0.17	2.92	-0.27	-0.34	2.71	-0.35	-0.88	2.65	-3.25	-0.3	24.0	-24.33
		7115	233	26T	-0.03	-0.13	2.93	-0.29	-0.30	2.72	-0.37	-0.34	2.66	-3.25	-0.3	24.0	-24.32

Table 7-38. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index												
					0			4			8						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5935	2	26T	-0.50	-0.02	2.76	-1.47	-0.42	2.10	-1.50	-0.19	2.21	-2.63	0.1	24.0	-23.87	
	6175	45	26T	13.11	13.98	16.58	12.79	13.61	16.23	13.22	13.94	16.61	-2.63	14.0	24.0	-10.03	
	6415	93	26T	13.07	13.99	16.56	12.79	13.76	16.31	13.13	13.99	16.59	-2.63	14.0	24.0	-10.04	
	7	6535	117	26T	13.90	13.70	16.81	13.23	13.37	16.31	13.76	13.76	16.77	-3.37	13.4	24.0	-10.56
		6695	149	26T	13.62	13.45	16.55	13.56	13.55	16.57	13.76	13.53	16.66	-3.37	13.3	24.0	-10.72

Table 7-39. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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MIMO Maximum Conducted Output Power Measurements (52 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)											Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index														
					37			38			40								
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO						
	5	5935	2	52T	1.43	2.88	5.23	1.83	2.99	5.46	1.43	2.76	5.16	-2.63	2.8	24.0	-21.17		
		6175	45	52T	1.50	2.57	5.08	1.83	2.83	5.37	2.13	2.99	5.59	-2.63	3.0	24.0	-21.04		
		6415	93	52T	1.57	2.57	5.11	1.85	2.91	5.42	1.59	2.60	5.13	-2.63	2.8	24.0	-21.21		
		6435	97	52T	1.73	2.71	5.26	2.12	2.94	5.56	1.73	2.74	5.27	-2.85	2.7	24.0	-21.29		
	6	6475	105	52T	2.01	2.73	5.40	2.35	2.88	5.63	1.93	2.58	5.28	-2.85	2.8	24.0	-21.22		
		6515	113	52T	2.44	2.72	5.59	2.18	2.36	5.28	2.35	2.63	5.50	-2.85	2.7	24.0	-21.26		
		6535	117	52T	2.63	2.45	5.55	2.46	2.37	5.43	2.65	2.60	5.64	-3.37	2.3	24.0	-21.74		
		6695	149	52T	2.59	2.37	5.49	2.93	2.69	5.82	2.66	2.48	5.58	-3.37	2.4	24.0	-21.55		
		6875	185	52T	2.72	2.41	5.58	2.95	2.78	5.88	2.67	2.50	5.60	-3.37	2.5	24.0	-21.50		
	8	6995	189	52T	2.51	2.76	5.65	2.36	2.50	5.44	2.56	2.74	5.66	-3.25	2.4	24.0	-21.99		
		6995	209	52T	2.62	2.45	5.55	2.81	2.81	5.82	2.57	2.55	5.57	-3.25	2.6	24.0	-21.43		
		7115	233	52T	2.60	2.05	5.34	2.79	2.41	5.61	2.55	2.15	5.36	-3.25	2.4	24.0	-21.64		

Table 7-40. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index												
					37			38			40						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5935	2	52T	1.43	2.88	5.23	1.83	2.99	5.46	1.43	2.76	5.16	-2.63	2.83	24.0	-21.17	
	6175	45	52T	12.50	13.57	16.08	12.83	13.83	16.37	13.13	13.99	16.59	-2.63	13.96	24.0	-10.04	
	6415	93	52T	12.57	13.57	16.11	12.85	13.91	16.42	12.59	13.60	16.13	-2.63	13.79	24.0	-10.21	
	7	6535	117	52T	13.63	13.45	16.55	13.46	13.37	16.43	13.65	13.60	16.64	-3.37	13.26	24.0	-10.74
		6695	149	52T	13.59	13.37	16.49	13.93	13.69	16.82	13.66	13.48	16.58	-3.37	13.45	24.0	-10.55

Table 7-41. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 68 of 184

MIMO Maximum Conducted Output Power Measurements (106 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index									
					53			54						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
		5935	2	106T	4.83	5.88	8.40	4.89	5.72	8.34	-2.63	5.8	24.0	-18.23
		6175	45	106T	4.43	5.52	8.02	4.59	5.38	8.01	-2.63	5.4	24.0	-18.61
		6415	93	106T	4.77	5.55	8.19	4.90	5.45	8.19	-2.63	5.6	24.0	-18.44
	6	6435	97	106T	4.95	5.60	8.30	5.01	5.59	8.32	-2.85	5.5	24.0	-18.53
		6475	105	106T	4.90	5.36	8.15	4.96	5.20	8.09	-2.85	5.3	24.0	-18.70
		6515	113	106T	4.98	5.07	8.04	5.00	5.01	8.02	-2.85	5.2	24.0	-18.81
		6535	117	106T	5.32	5.06	8.20	5.38	5.11	8.26	-3.37	4.9	24.0	-19.12
	7	6695	149	106T	5.56	5.30	8.44	5.55	5.36	8.47	-3.37	5.1	24.0	-18.91
		6875	185	106T	5.56	5.39	8.49	5.57	5.44	8.52	-3.37	5.1	24.0	-18.86
		6895	189	106T	5.69	5.73	8.72	5.72	5.72	8.73	-3.25	5.5	24.0	-18.52
	8	6995	209	106T	5.67	5.39	8.54	5.64	5.48	8.57	-3.25	5.3	24.0	-18.68
		7115	233	106T	5.60	5.44	8.53	5.56	5.40	8.49	-3.25	5.3	24.0	-18.72

Table 7-42. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index									
					53			54						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
	5	5935	2	106T	4.83	5.88	8.40	4.89	5.72	8.34	-2.63	5.77	24.0	-18.23
		6175	45	106T	12.43	13.52	16.02	12.59	13.38	16.01	-2.63	13.39	24.0	-10.61
		6415	93	106T	12.77	13.55	16.19	12.90	13.45	16.19	-2.63	13.56	24.0	-10.44
	7	6535	117	106T	13.32	13.06	16.20	13.38	13.11	16.26	-3.37	12.88	24.0	-11.12
		6695	149	106T	13.56	13.30	16.44	13.55	13.36	16.47	-3.37	13.09	24.0	-10.91

Table 7-43. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 69 of 184

MIMO Maximum Conducted Output Power Measurements (242 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					61						
					ANT1	ANT2	MIMO				
5		5935	2	242T	5.66	6.75	9.25	-2.63	6.62	24.0	-17.38
		6175	45	242T	9.08	9.80	12.47	-2.63	9.83	24.0	-14.17
		6415	93	242T	9.23	9.85	12.56	-2.63	9.93	24.0	-14.07
6		6435	97	242T	9.58	9.94	12.77	-2.85	9.92	24.0	-14.08
		6475	105	242T	9.48	9.85	12.68	-2.85	9.83	24.0	-14.17
		6515	113	242T	9.63	9.59	12.62	-2.85	9.77	24.0	-14.23
7		6535	117	242T	9.62	9.43	12.54	-3.37	9.16	24.0	-14.84
		6695	149	242T	9.67	9.10	12.40	-3.37	9.03	24.0	-14.97
		6875	185	242T	9.74	9.14	12.46	-3.37	9.09	24.0	-14.91
8		6895	189	242T	9.49	9.58	12.55	-3.25	9.29	24.0	-14.71
		6995	209	242T	9.44	9.32	12.39	-3.25	9.14	24.0	-14.86
		7115	233	242T	9.93	9.81	12.88	-3.25	9.63	24.0	-14.37

Table 7-44. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					61						
					ANT1	ANT2	MIMO				
5		5935	2	242T	5.66	6.75	9.25	-2.63	6.62	24.0	-17.38
		6175	45	242T	16.08	16.80	19.47	-2.63	16.83	24.0	-7.17
		6415	93	242T	16.23	16.85	19.56	-2.63	16.93	24.0	-7.07
7		6535	117	242T	16.62	16.43	19.54	-3.37	16.16	24.0	-7.84
		6695	149	242T	16.67	16.10	19.40	-3.37	16.03	24.0	-7.97

Table 7-45. MIMO 20MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 70 of 184

MIMO Maximum Conducted Output Power Measurements (484 Tones)

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					65						
					ANT1	ANT2	MIMO				
5		5965	3	484T	11.01	11.54	14.29	-2.63	11.66	24.0	-12.34
		6165	43	484T	11.02	11.59	14.32	-2.63	11.69	24.0	-12.31
		6405	91	484T	11.05	11.82	14.46	-2.63	11.83	24.0	-12.17
6		6445	99	484T	11.19	11.68	14.45	-2.85	11.60	24.0	-12.40
		6485	107	484T	11.37	11.79	14.60	-2.85	11.75	24.0	-12.25
		6525	115	484T	11.34	11.68	14.52	-2.85	11.67	24.0	-12.33
7		6565	123	484T	11.61	11.49	14.56	-3.37	11.19	24.0	-12.81
		6725	155	484T	11.69	11.41	14.56	-3.37	11.19	24.0	-12.81
		6845	179	484T	11.80	11.81	14.82	-3.37	11.44	24.0	-12.56
8		6885	187	484T	11.92	11.70	14.82	-3.25	11.57	24.0	-12.43
		7005	211	484T	12.13	11.77	14.96	-3.25	11.71	24.0	-12.29
		7085	227	484T	11.90	12.09	15.01	-3.25	11.75	24.0	-12.25

Table 7-46. MIMO 40MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					65						
					ANT1	ANT2	MIMO				
	5	5965	3	484T	16.01	16.54	19.29	-2.63	16.66	24.0	-7.34
6165		43	484T	16.02	16.59	19.32	-2.63	16.69	24.0	-7.31	
6405		91	484T	16.05	16.82	19.46	-2.63	16.83	24.0	-7.17	
7	6565	123	484T	16.61	16.49	19.56	-3.37	16.19	24.0	-7.81	
	6725	155	484T	16.69	16.41	19.56	-3.37	16.19	24.0	-7.81	
	6845	179	484T	16.80	16.81	19.82	-3.37	16.44	24.0	-7.56	

Table 7-47. MIMO 40MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 71 of 184

MIMO Maximum Conducted Output Power Measurements (996 Tones)

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					67						
					ANT1	ANT2	MIMO				
5	5985	7	996T	14.97	15.38	18.19	-2.63	15.56	24.0	-8.44	
	6145	39	996T	14.43	15.53	18.03	-2.63	15.39	24.0	-8.61	
	6385	87	996T	14.89	15.82	18.39	-2.63	15.76	24.0	-8.24	
6	6465	103	996T	15.22	15.67	18.46	-2.85	15.61	24.0	-8.39	
	6545	119	996T	15.28	15.47	18.39	-3.37	15.01	24.0	-8.99	
7	6705	151	996T	15.53	15.25	18.40	-3.37	15.03	24.0	-8.97	
	6865	183	996T	15.79	15.51	18.66	-3.37	15.29	24.0	-8.71	
	6945	199	996T	15.69	15.82	18.77	-3.25	15.51	24.0	-8.49	
8	7025	215	996T	15.93	15.85	18.90	-3.25	15.65	24.0	-8.35	

Table 7-48. MIMO 80MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 72 of 184

MIMO Maximum Conducted Output Power Measurements (2x996 Tones)

160MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					68						
					ANT1	ANT2	MIMO				
	5	6025	15	2x996T	14.21	14.62	17.43	-2.63	14.80	24.0	-9.20
6185		47	2x996T	13.56	14.66	17.16	-2.63	14.52	24.0	-9.48	
6345		79	2x996T	13.71	14.93	17.37	-2.63	14.74	24.0	-9.26	
6	6505	111	2x996T	14.17	14.51	17.35	-2.85	14.50	24.0	-9.50	
	6665	143	2x996T	14.94	14.34	17.66	-3.37	14.29	24.0	-9.71	
7	6825	175	2x996T	14.75	14.60	17.69	-3.37	14.31	24.0	-9.69	
	6985	207	2x996T	14.70	14.73	17.73	-3.25	14.47	24.0	-9.53	

Table 7-49. MIMO 160MHz BW 802.11ax/be (UNII) Maximum Conducted Output Power – LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 73 of 184

MIMO Maximum Conducted Output Power Measurements (4x996 Tones)

320MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					RU Index						
					69						
					ANT1	ANT2	MIMO				
5	6105	31	4x996T	14.01	14.46	17.25	-2.63	14.62	24.0	-9.38	
	6265	63	4x996T	14.06	14.56	17.33	-2.63	14.70	24.0	-9.30	
6	6425	95	4x996T	14.06	14.72	17.41	-2.85	14.56	24.0	-9.44	
7	6585	127	4x996T	14.21	14.22	17.23	-3.37	13.85	24.0	-10.15	
	6745	159	4x996T	14.22	14.32	17.28	-3.37	13.91	24.0	-10.09	
8	6905	191	4x996T	14.14	14.24	17.20	-3.25	13.95	24.0	-10.05	

Table 7-50. MIMO 320MHz BW 802.11be (UNII) Maximum Conducted Output Power – LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 74 of 184

MIMO Maximum Conducted Output Power Measurements (MRU)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dB]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index												
					70			71			72						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6175	45	52+26T	2.84	2.99	5.93	2.67	2.95	5.82	2.84	2.99	5.93	-2.63	3.30	24.00	-20.70	
6	6475	105	52+26T	2.85	1.32	5.16	2.70	1.17	5.01	2.78	1.28	5.10	-2.85	2.31	24.00	-21.69	
7	6695	149	52+26T	2.81	2.58	5.71	2.72	2.48	5.61	2.94	2.65	5.81	-3.37	2.43	24.00	-21.57	
8	6995	209	52+26T	2.72	1.23	5.05	2.99	1.57	5.35	2.71	1.13	5.00	-3.25	2.10	24.00	-21.90	

Table 7-51. MIMO 20MHz BW 802.11be (UNII) Maximum Conducted Output Power (52+26 Tones) – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index												
					70			71			72						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
					5	7											
	6175	45	S2+26T	13.76	13.99	16.89	13.66	13.90	16.79	13.68	13.91	16.81	-2.63	14.3	24.0	-9.74	
	6695	149	S2+26T	13.99	13.22	16.63	13.92	13.10	16.54	13.99	13.16	16.61	-3.37	13.3	24.0	-10.74	

Table 7-52. MIMO 20MHz BW 802.11be (UNII) Maximum Conducted Output Power (52+26 Tones) – SP

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index									
					82			83						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6175	45	106+26T	5.34	5.56	8.46	5.32	5.57	8.46	-2.63	5.83	24.00	-18.17	
6	6475	105	106+26T	5.87	4.38	8.20	5.82	4.34	8.15	-2.85	5.35	24.00	-18.65	
7	6695	149	106+26T	5.99	4.93	8.50	5.99	4.87	8.48	-3.37	5.13	24.00	-18.87	
8	6995	209	106+26T	5.99	3.76	8.03	5.96	3.67	7.97	-3.25	4.78	24.00	-19.22	

Table 7-53. MIMO 20MHz BW 802.11be (UNII) Maximum Conducted Output Power (106+26 Tones) – LPI

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index									
					82			83						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6175	45	106+26T		16.31	16.62	19.48	16.28	16.58	19.44	-2.63	16.8	24.0	-7.15
7	6695	149	106+26T		16.97	16.31	19.66	16.93	16.23	19.60	-3.37	16.3	24.0	-7.71

Table 7-54. MIMO 20MHz BW 802.11be (UNII) Maximum Conducted Output Power (106+26 Tones) – SP

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)												Dir. Ant. Gain [dB]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index															
					90			91			93									
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6145	39	242+484T	12.84	12.38	15.63	12.82	12.35	15.60	12.90	12.42	15.68	-2.63	13.05	24.00	-10.95				
6	6465	103	242+484T	12.99	11.28	15.23	12.99	11.30	15.24	12.99	11.33	15.25	-2.85	12.40	24.00	-11.60				
7	6705	151	242+484T	12.99	11.54	15.34	12.99	11.45	15.30	12.99	11.48	15.31	-3.37	11.96	24.00	-12.04				
8	7025	215	242+484T	12.95	11.02	15.10	12.90	12.72	15.82	12.99	11.04	15.13	-3.25	12.57	24.00	-11.43				

Table 7-55. MIMO 80MHz BW 802.11be (UNII) Maximum Conducted Output Power (484+242 Tones) – LPI

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dB]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index												
					90			91			93						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
	5	6145	39	242+484T	16.83	16.85	19.85	16.81	16.80	19.82	16.83	16.94	19.90	-2.63	17.3	24.0	-6.74
	7	6705	151	242+484T	16.96	15.87	19.46	16.99	15.82	19.45	16.98	15.98	19.92	-3.37	16.1	24.0	-7.85

Table 7-56. MIMO 80MHz BW 802.11be (UNII) Maximum Conducted Output Power (484+242 Tones) – SP

160MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index												
					94			95			1094						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6185	47	996+484T	15.92	15.99	18.97	15.94	15.98	18.97	15.42	15.65	18.55	-2.63	16.34	24.00	-7.66	
6	6505	111	996+484T	15.70	14.20	18.02	15.68	14.25	18.03	15.76	14.23	18.07	-2.85	15.22	24.00	-8.78	
7	6825	175	996+484T	15.93	14.35	18.22	15.94	14.23	18.18	15.92	14.28	18.19	-3.37	14.85	24.00	-9.15	
8	6985	207	996+484T	15.45	13.58	17.63	15.32	13.53	17.52	15.15	13.56	17.44	-3.25	14.37	24.00	-9.63	

Table 7-57. MIMO 160MHz BW 802.11be (UNII) Maximum Conducted Output Power (996+484 Tones) – LPI/SP

320MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)												Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index															
					100			101			11102									
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO							
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO							
5	6105	31	2x996+484T	14.77	14.25	17.53	14.81	14.28	17.56	14.70	14.28	17.51	-2.63	14.93	24.00	-9.07				
6	6425	95	2x996+484T	14.89	13.04	17.07	14.94	13.08	17.12	14.84	13.01	17.03	-2.85	14.27	24.00	-9.73				
7	6745	159	2x996+484T	14.49	12.75	16.72	14.48	12.78	16.72	14.49	12.71	16.70	-3.37	13.35	24.00	-10.65				
8	6905	191	2x996+484T	14.46	12.56	16.62	14.46	12.52	16.61	14.42	12.55	16.60	-3.25	13.37	24.00	-10.63				

Table 7-58. MIMO 320MHz BW 802.11be (UNII) Maximum Conducted Output Power (2*996+484 Tones) – LPI/SP

320MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Dir. Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					MRU Index												
					104			10104			11104						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6105	31	3x996T	14.99	14.57	17.80	14.63	14.04	17.36	14.60	14.03	17.33	-2.63	15.16	24.00	-8.84	
6	6425	95	3x996T	14.65	13.01	16.92	14.78	13.02	17.00	14.72	13.11	17.00	-2.85	14.15	24.00	-9.85	
7	6745	159	3x996T	14.32	13.45	16.92	14.42	12.56	16.60	14.37	12.58	16.58	-3.37	13.54	24.00	-10.46	
8	6905	191	3x996T	14.37	12.57	16.57	14.22	13.60	16.93	14.25	13.64	16.97	-3.25	13.71	24.00	-10.29	



Sample MIMO Calculation:

At 5935MHz in 802.11ax (20MHz BW – 26 Tones) mode, the average conducted output power was measured to be -0.50 dBm for Antenna-1 and -0.02 dBm for Antenna-2.

$$\text{Antenna 1} + \text{Antenna 2} = \text{MIMO}$$

$$(-0.50 \text{ dBm} + -0.02 \text{ dBm}) = (0.891 \text{ mW} + 0.995 \text{ mW}) = 1.886 \text{ mW} = 2.76 \text{ dBm}$$

Sample Directional Gain Calculation:

Per ANSI C63.10-2013 Section 14.4.3, the directional gain is calculated using the following formula, where GN is the gain of the nth antenna and NANT, the total number of antennas used.

$$\text{Directional gain} = 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{\text{ANT}}] \text{ dBi}$$

Sample e.i.r.p. Calculation:

At 5935MHz in 802.11ax (20MHz BW – 26 Tones) mode, the average MIMO conducted power was calculated to be 2.76 dBm with directional gain of -2.63 dBi.

$$\text{e.i.r.p. (dBm)} = \text{Conducted Power (dBm)} + \text{Ant gain (dBi)}$$

$$2.76 \text{ dBm} + -2.63 \text{ dBi} = 0.13 \text{ dBm}$$

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7.5 Maximum Power Spectral Density

Test Overview and Limit

The spectrum analyzer was connected to the antenna terminal while the EUT was operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies. Method SA-1, as defined in ANSI C63.10-2013, was used to measure the power spectral density.

In the 5.925-7.125 GHz bands, the maximum power spectral density must not exceed -1 dBm e.i.r.p. in any 1-megahertz band. For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm/MHz e.i.r.p.

Test Procedure Used

ANSI C63.10-2013 – Section 12.3.2.2

ANSI C63.10-2013 – Section 14.3.2.2 Measure-and-Sum Technique

Test Settings

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire emission bandwidth of the signal
3. RBW = 1MHz
4. VBW = 3MHz
5. Number of sweep points $\geq 2 \times (\text{span/RBW})$
6. Sweep time = auto
7. Detector = power averaging (RMS)
8. Trigger was set to free run for all modes
9. Trace was averaged over 100 sweeps
10. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-3. Test Instrument & Measurement Setup

Test Notes

SP 80/160/320MHz BW share same target as LPI 80/160/320MHz BW, and only the emissions from worst case have been reported

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MIMO Power Spectral Density Measurements

	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Antenna-1 Gain [dBi]	Antenna-2 Gain [dBi]	Summed MIMO Power Density [dBm]	Directional Gain [dBi]	EIRP [dBm]	Max EIRP [dBm]	Margin [dB]
Band 5	5935	2	be (20MHz)	-2.20	-2.13	-5.91	-5.38	0.84	-2.63	-1.79	-1	-0.79
	6175	45	be (20MHz)	-1.40	-2.72	-5.91	-5.38	1.00	-2.63	-1.63	-1	-0.63
	6415	93	be (20MHz)	-2.50	-2.20	-5.91	-5.38	0.66	-2.63	-1.97	-1	-0.97
	5965	3	be (40MHz)	-2.31	-2.14	-5.91	-5.38	0.79	-2.63	-1.84	-1	-0.84
	6165	43	be (40MHz)	-1.08	-2.65	-5.91	-5.38	1.21	-2.63	-1.42	-1	-0.42
	6405	91	be (40MHz)	-2.71	-2.10	-5.91	-5.38	0.61	-2.63	-2.02	-1	-1.02
	5985	7	be (80MHz)	-2.59	-2.57	-5.91	-5.38	0.43	-2.63	-2.20	-1	-1.20
	6145	39	be (80MHz)	-2.00	-2.86	-5.91	-5.38	0.60	-2.63	-2.03	-1	-1.03
	6385	87	be (80MHz)	-2.42	-2.61	-5.91	-5.38	0.50	-2.63	-2.13	-1	-1.13
	6025	15	be (160MHz)	-3.34	-3.08	-5.91	-5.38	-0.20	-2.63	-2.83	-1	-1.83
	6185	47	be (160MHz)	-1.50	-2.94	-5.91	-5.38	0.85	-2.63	-1.78	-1	-0.78
	6345	79	be (160MHz)	-1.70	-2.35	-5.91	-5.38	1.00	-2.63	-1.63	-1	-0.63
Band 6	6105	31	be (320MHz)	-1.69	-2.73	-5.91	-5.38	0.83	-2.63	-1.80	-1	-0.80
	6265	63	be (320MHz)	-1.27	-2.30	-5.91	-5.38	1.26	-2.63	-1.37	-1	-0.37
	6435	97	be (20MHz)	-2.13	-2.21	-5.88	-5.84	0.84	-2.85	-2.01	-1	-1.01
	6475	105	be (20MHz)	-2.50	-1.85	-5.88	-5.84	0.85	-2.85	-2.00	-1	-1.00
	6515	113	be (20MHz)	-2.45	-1.31	-5.88	-5.84	1.16	-2.85	-1.68	-1	-0.68
	6445	99	be (40MHz)	-1.99	-2.12	-5.88	-5.84	0.95	-2.85	-1.90	-1	-0.90
	6485	107	be (40MHz)	-2.48	-1.83	-5.88	-5.84	0.87	-2.85	-1.98	-1	-0.98
Band 7	6525	115	be (40MHz)	-2.13	-1.46	-5.88	-5.84	1.23	-2.85	-1.62	-1	-0.62
	6465	103	be (80MHz)	-1.86	-2.13	-5.88	-5.84	1.02	-2.85	-1.83	-1	-0.83
	6505	111	be (160MHz)	-2.93	-1.98	-5.88	-5.84	0.58	-2.85	-2.27	-1	-1.27
	6425	95	be (320MHz)	-2.67	-2.32	-5.88	-5.84	0.52	-2.85	-2.33	-1	-1.33
	6695	117	be (20MHz)	-2.56	-1.48	-6.52	-6.25	1.03	-3.37	-2.35	-1	-1.35
	6695	149	be (20MHz)	-2.10	-1.90	-6.52	-6.25	1.02	-3.37	-2.36	-1	-1.36
	6875	185	be (20MHz)	-2.18	-1.98	-6.52	-6.25	0.93	-3.37	-2.44	-1	-1.44
	6565	123	be (40MHz)	-2.48	-1.87	-6.52	-6.25	0.84	-3.37	-2.53	-1	-1.53
	6725	155	be (40MHz)	-1.90	-1.82	-6.52	-6.25	1.15	-3.37	-2.22	-1	-1.22
	6845	179	be (40MHz)	-1.82	-2.01	-6.52	-6.25	1.10	-3.37	-2.27	-1	-1.27
	6545	119	be (80MHz)	-2.71	-2.09	-6.52	-6.25	0.62	-3.37	-2.75	-1	-1.75
	6705	151	be (80MHz)	-1.56	-2.84	-6.52	-6.25	0.86	-3.37	-2.52	-1	-1.52
Band 8	6865	183	be (80MHz)	-1.94	-2.07	-6.52	-6.25	1.01	-3.37	-2.37	-1	-1.37
	6665	143	be (160MHz)	-2.42	-2.69	-6.52	-6.25	0.46	-3.37	-2.92	-1	-1.92
	6825	175	be (160MHz)	-1.94	-2.04	-6.52	-6.25	1.02	-3.37	-2.35	-1	-1.35
	6585	127	be (320MHz)	-2.61	-2.17	-6.52	-6.25	0.62	-3.37	-2.75	-1	-1.75
	6745	159	be (320MHz)	-2.20	-2.01	-6.52	-6.25	0.91	-3.37	-2.47	-1	-1.47
	6895	189	be (20MHz)	-1.94	-1.97	-6.50	-6.03	1.05	-3.25	-2.20	-1	-1.20
	6995	209	be (20MHz)	-2.46	-1.85	-6.50	-6.03	0.87	-3.25	-2.39	-1	-1.39
Band 7/8	7115	233	be (20MHz)	-1.67	-1.92	-6.50	-6.03	1.21	-3.25	-2.04	-1	-1.04
	6885	187	be (40MHz)	-1.79	-1.98	-6.50	-6.03	1.12	-3.25	-2.13	-1	-1.13
	6965	211	be (40MHz)	-2.02	-1.85	-6.50	-6.03	1.07	-3.25	-2.18	-1	-1.18
	7085	227	be (40MHz)	-1.82	-1.89	-6.50	-6.03	1.16	-3.25	-2.10	-1	-1.10
	6945	199	be (80MHz)	-1.92	-2.06	-6.50	-6.03	1.02	-3.25	-2.23	-1	-1.23
	7025	215	be (80MHz)	-2.31	-1.95	-6.50	-6.03	0.89	-3.25	-2.36	-1	-1.36
	6985	207	be (160MHz)	-2.75	-1.58	-6.50	-6.03	0.89	-3.25	-2.36	-1	-1.36
Band 7/8	6985	191	be (320MHz)	-2.06	-2.28	-6.50	-6.03	0.84	-3.25	-2.41	-1	-1.41

Table 7-61. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (26 Tones) – LPI

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	Frequency [MHz]	Channel	802.11 MODE	MRU Cases	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Antenna-1 Gain [dBi]	Antenna-2 Gain [dBi]	Summed MIMO Power Density [dBm]	Directional Gain [dBi]	DCCF [dB]	EIRP [dBm]	Max EIRP [dBm]	Margin [dB]
Band 5	6175	45	be (20MHz)	52+26T	-3.59	-3.67	-5.91	-5.38	-0.62	-2.63	0.00	-3.25	-1	-2.25
	6175	45	be (20MHz)	106+26T	-2.13	-2.35	-5.91	-5.38	0.77	-2.63	0.00	-1.86	-1	-0.86
	6145	39	be (80MHz)	484+242T	-2.82	-2.95	-5.91	-5.38	0.13	-2.63	0.16	-2.34	-1	-1.34
	6185	47	be (160MHz)	996+484T	-3.33	-3.41	-5.91	-5.38	-0.36	-2.63	0.17	-2.82	-1	-1.82
	6105	31	be (320MHz)	3x996+484T	-5.49	-4.95	-5.91	-5.38	-2.21	-2.63	0.12	-4.72	-1	-3.72
	6105	31	be (320MHz)	3x996T	-5.38	-4.96	-5.91	-5.38	-2.16	-2.63	0.19	-4.60	-1	-3.60
Band 6	6105	31	be (320MHz)	2x996+484T	-4.57	-4.41	-5.91	-5.38	-1.48	-2.63	0.16	-3.95	-1	-2.95
	6475	105	be (20MHz)	52+26T	-3.48	-3.14	-5.88	-5.84	-0.29	-2.85	0.00	-3.14	-1	-2.14
	6475	105	be (20MHz)	106+26T	-2.26	-2.08	-5.88	-5.84	0.84	-2.85	0.00	-2.01	-1	-1.01
Band 5/6/7	6465	103	be (80MHz)	484+242T	-3.42	-2.38	-5.88	-5.84	0.14	-2.85	0.16	-2.55	-1	-1.55
	6505	111	be (160MHz)	996+484T	-3.64	-3.01	-5.88	-5.84	-0.30	-2.85	0.17	-2.98	-1	-1.98
	6425	95	be (320MHz)	3x996+484T	-6.37	-5.31	-5.88	-5.84	-2.79	-2.85	0.12	-5.52	-1	-4.52
Band 7	6425	95	be (320MHz)	3x996T	-6.22	-4.87	-5.88	-5.84	-2.49	-2.85	0.19	-5.15	-1	-4.15
	6425	95	be (320MHz)	2x996+484T	-5.22	-4.28	-5.88	-5.84	-1.72	-2.85	0.16	-4.41	-1	-3.41
	6695	149	be (20MHz)	52+26T	-3.80	-3.49	-6.52	-6.25	-0.63	-3.37	0.00	-4.00	-1	-3.00
Band 7/8	6695	149	be (20MHz)	106+26T	-2.74	-2.21	-6.52	-6.25	0.54	-3.37	0.00	-2.83	-1	-1.83
	6705	151	be (80MHz)	484+242T	-3.46	-3.11	-6.52	-6.25	-0.27	-3.37	0.16	-3.48	-1	-2.48
	6665	143	be (160MHz)	996+484T	-3.80	-3.37	-6.52	-6.25	-0.57	-3.37	0.17	-3.78	-1	-2.78
Band 8	6745	159	be (320MHz)	3x996+484T	-6.39	-5.96	-6.52	-6.25	-3.16	-3.37	0.12	-6.41	-1	-5.41
	6745	159	be (320MHz)	3x996T	-6.39	-4.82	-6.52	-6.25	-2.52	-3.37	0.19	-5.71	-1	-4.71
	6745	159	be (320MHz)	2x996+484T	-5.21	-4.73	-6.52	-6.25	-1.95	-3.37	0.16	-5.16	-1	-4.16
Band 7/8	6995	209	be (20MHz)	52+26T	-3.85	-2.66	-6.50	-6.03	-0.21	-3.25	0.00	-3.46	-1	-2.46
	6995	209	be (20MHz)	106+26T	-2.59	-1.53	-6.50	-6.03	0.98	-3.25	0.00	-2.27	-1	-1.27
	6945	199	be (80MHz)	484+242T	-3.64	-2.33	-6.50	-6.03	0.08	-3.25	0.16	-3.01	-1	-2.01
Band 7/8	6985	207	be (160MHz)	996+484T	-4.35	-3.12	-6.50	-6.03	-0.68	-3.25	0.17	-3.76	-1	-2.76
	6905	191	be (320MHz)	3x996+484T	-6.76	-5.92	-6.50	-6.03	-3.31	-3.25	0.12	-6.44	-1	-5.44
	6905	191	be (320MHz)	3x996T	-5.57	-4.92	-6.50	-6.03	-2.22	-3.25	0.19	-5.28	-1	-4.28
	6905	191	be (320MHz)	2x996+484T	-4.83	-4.52	-6.50	-6.03	-1.66	-3.25	0.16	-4.75	-1	-3.75

Table 7-62. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (MRU Cases) – LPI

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	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Antenna-1 Gain [dBi]	Antenna-2 Gain [dBi]	Summed MIMO Power Density [dBm]	Directional Gain [dBi]	DCCF [dB]	EIRP [dBm]	Max EIRP [dBm]	Margin [dB]
Band 5	5935	2	be (20MHz)	-1.87	-1.92	-5.91	-5.38	1.12	-2.63	0.13	-1.39	-1	-0.39
	6175	45	be (20MHz)	-1.67	-1.45	-5.91	-5.38	1.45	-2.63	0.13	-1.05	-1	-0.05
	6415	93	be (20MHz)	-2.30	-1.32	-5.91	-5.38	1.23	-2.63	0.13	-1.27	-1	-0.27
	5965	3	be (40MHz)	-1.37	-1.76	-5.91	-5.38	1.45	-2.63	0.13	-1.05	-1	-0.05
	6165	43	be (40MHz)	-1.66	-1.93	-5.91	-5.38	1.22	-2.63	0.13	-1.28	-1	-0.28
	6405	91	be (40MHz)	-2.02	-1.35	-5.91	-5.38	1.34	-2.63	0.13	-1.17	-1	-0.17
	5985	7	be (80MHz)	-1.66	-1.98	-5.91	-5.38	1.19	-2.63	0.21	-1.23	-1	-0.23
	6145	39	be (80MHz)	-2.01	-1.62	-5.91	-5.38	1.20	-2.63	0.21	-1.22	-1	-0.22
	6385	87	be (80MHz)	-2.11	-1.60	-5.91	-5.38	1.17	-2.63	0.21	-1.25	-1	-0.25
	6025	15	be (160MHz)	-3.04	-3.70	-5.91	-5.38	-0.35	-2.63	0.22	-2.76	-1	-1.76
	6185	47	be (160MHz)	-2.65	-3.56	-5.91	-5.38	-0.07	-2.63	0.22	-2.48	-1	-1.48
	6345	79	be (160MHz)	-3.46	-3.76	-5.91	-5.38	-0.60	-2.63	0.22	-3.01	-1	-2.01
	6105	31	be (320MHz)	-6.21	-6.17	-5.91	-5.38	-3.18	-2.63	0.14	-5.67	-1	-4.67
	6265	63	be (320MHz)	-4.72	-6.18	-5.91	-5.38	-2.38	-2.63	0.14	-4.87	-1	-3.87
	6435	97	be (20MHz)	-2.24	-1.09	-5.88	-5.84	1.38	-2.85	0.13	-1.34	-1	-0.34
Band 6	6475	105	be (20MHz)	-1.73	-1.02	-5.88	-5.84	1.65	-2.85	0.13	-1.07	-1	-0.07
	6515	113	be (20MHz)	-1.74	-1.03	-5.88	-5.84	1.64	-2.85	0.13	-1.08	-1	-0.08
	6445	99	be (40MHz)	-2.33	-1.41	-5.88	-5.84	1.17	-2.85	0.13	-1.55	-1	-0.55
	6485	107	be (40MHz)	-1.83	-1.44	-5.88	-5.84	1.38	-2.85	0.13	-1.34	-1	-0.34
	6525	115	be (40MHz)	-2.06	-1.41	-5.88	-5.84	1.29	-2.85	0.13	-1.43	-1	-0.43
	6465	103	be (80MHz)	-2.48	-1.57	-5.88	-5.84	1.01	-2.85	0.21	-1.63	-1	-0.63
	6505	111	be (160MHz)	-2.93	-2.76	-5.88	-5.84	0.17	-2.85	0.22	-2.46	-1	-1.46
	6425	95	be (320MHz)	-6.01	-4.94	-5.88	-5.84	-2.43	-2.85	0.14	-5.14	-1	-4.14
	6695	117	be (20MHz)	-2.21	-1.21	-6.52	-6.25	1.33	-3.37	0.13	-1.91	-1	-0.91
	6695	149	be (20MHz)	-2.13	-1.44	-6.52	-6.25	1.24	-3.37	0.13	-2.01	-1	-1.01
Band 7	6875	185	be (20MHz)	-2.20	-0.98	-6.52	-6.25	1.46	-3.37	0.13	-1.78	-1	-0.78
	6565	123	be (40MHz)	-1.72	-1.38	-6.52	-6.25	1.47	-3.37	0.13	-1.78	-1	-0.78
	6725	155	be (40MHz)	-1.99	-1.25	-6.52	-6.25	1.41	-3.37	0.13	-1.84	-1	-0.84
	6845	179	be (40MHz)	-2.13	-1.02	-6.52	-6.25	1.47	-3.37	0.13	-1.77	-1	-0.77
	6545	119	be (80MHz)	-1.61	-1.14	-6.52	-6.25	1.64	-3.37	0.21	-1.52	-1	-0.52
	6705	151	be (80MHz)	-2.27	-1.41	-6.52	-6.25	1.19	-3.37	0.21	-1.97	-1	-0.97
	6865	183	be (80MHz)	-2.17	-1.13	-6.52	-6.25	1.39	-3.37	0.21	-1.77	-1	-0.77
	6665	143	be (160MHz)	-3.91	-3.28	-6.52	-6.25	-0.57	-3.37	0.22	-3.73	-1	-2.73
	6825	175	be (160MHz)	-4.32	-2.72	-6.52	-6.25	-0.43	-3.37	0.22	-3.59	-1	-2.59
	6585	127	be (320MHz)	-5.95	-5.17	-6.52	-6.25	-2.53	-3.37	0.14	-5.76	-1	-4.76
Band 6/7	6745	159	be (320MHz)	-6.30	-5.41	-6.52	-6.25	-2.82	-3.37	0.14	-6.06	-1	-5.06
Band 8	6895	189	be (20MHz)	-2.10	-1.06	-6.50	-6.03	1.47	-3.25	0.13	-1.66	-1	-0.66
	6995	209	be (20MHz)	-1.83	-0.95	-6.50	-6.03	1.64	-3.25	0.13	-1.48	-1	-0.48
	7115	233	be (20MHz)	-1.85	-1.20	-6.50	-6.03	1.50	-3.25	0.13	-1.63	-1	-0.63
	6885	187	be (40MHz)	-1.96	-0.92	-6.50	-6.03	1.60	-3.25	0.13	-1.52	-1	-0.52
	6965	211	be (40MHz)	-1.73	-0.83	-6.50	-6.03	1.75	-3.25	0.13	-1.37	-1	-0.37
	7085	227	be (40MHz)	-1.78	-0.84	-6.50	-6.03	1.72	-3.25	0.13	-1.40	-1	-0.40
	6945	199	be (80MHz)	-2.29	-1.30	-6.50	-6.03	1.24	-3.25	0.21	-1.80	-1	-0.80
	7025	215	be (80MHz)	-2.21	-1.33	-6.50	-6.03	1.26	-3.25	0.21	-1.78	-1	-0.78
	6985	207	be (160MHz)	-3.87	-3.29	-6.50	-6.03	-0.56	-3.25	0.22	-3.59	-1	-2.59
	6905	191	be (320MHz)	-6.09	-5.10	-6.50	-6.03	-2.56	-3.25	0.14	-5.67	-1	-4.67

Table 7-63. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (Full Tones) – LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 80 of 184

	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Antenna-1 Gain [dBi]	Antenna-2 Gain [dBi]	Summed MIMO Power Density [dBm]	Directional Gain [dBi]	EIRP [dBm]	Max EIRP [dBm]	Margin [dB]
Band 5	5935	2	be (20MHz)	11.71	11.96	-5.91	-5.38	14.85	-2.63	12.22	17	-4.78
	6175	45	be (20MHz)	12.08	11.83	-5.91	-5.38	14.97	-2.63	12.34	17	-4.66
	6415	93	be (20MHz)	10.67	11.69	-5.91	-5.38	14.22	-2.63	11.59	17	-5.41
	5965	3	be (40MHz)	11.69	11.54	-5.91	-5.38	14.63	-2.63	12.00	17	-5.00
	6165	43	be (40MHz)	11.86	12.07	-5.91	-5.38	14.98	-2.63	12.35	17	-4.65
	6405	91	be (40MHz)	10.93	12.06	-5.91	-5.38	14.54	-2.63	11.91	17	-5.09
	5985	7	be (80MHz)	11.46	11.48	-5.91	-5.38	14.48	-2.63	11.85	17	-5.15
	6145	39	be (80MHz)	11.50	11.97	-5.91	-5.38	14.75	-2.63	12.12	17	-4.88
	6385	87	be (80MHz)	10.69	11.37	-5.91	-5.38	14.05	-2.63	11.42	17	-5.58
	6025	15	be (160MHz)	11.02	11.53	-5.91	-5.38	14.29	-2.63	11.66	17	-5.34
	6185	47	be (160MHz)	11.39	11.68	-5.91	-5.38	14.55	-2.63	11.92	17	-5.08
	6345	79	be (160MHz)	10.80	11.44	-5.91	-5.38	14.14	-2.63	11.51	17	-5.49
Band 7	6105	31	be (320MHz)	10.94	11.61	-5.91	-5.38	14.30	-2.63	11.67	17	-5.33
	6265	63	be (320MHz)	11.38	11.26	-5.91	-5.38	14.33	-2.63	11.70	17	-5.30
	6695	117	be (20MHz)	11.47	11.87	-6.52	-6.25	14.68	-3.37	11.31	17	-5.69
	6695	149	be (20MHz)	11.61	11.38	-6.52	-6.25	14.51	-3.37	11.13	17	-5.87
	6875	185	be (20MHz)	11.03	11.98	-6.52	-6.25	14.54	-3.37	11.17	17	-5.83
	6565	123	be (40MHz)	11.45	12.15	-6.52	-6.25	14.82	-3.37	11.45	17	-5.55
	6725	155	be (40MHz)	10.96	12.37	-6.52	-6.25	14.73	-3.37	11.36	17	-5.64
	6845	179	be (40MHz)	10.64	12.33	-6.52	-6.25	14.58	-3.37	11.21	17	-5.79
	6545	119	be (80MHz)	11.12	11.52	-6.52	-6.25	14.33	-3.37	10.96	17	-6.04
	6705	151	be (80MHz)	11.13	11.57	-6.52	-6.25	14.36	-3.37	10.99	17	-6.01
	6865	183	be (80MHz)	11.29	11.96	-6.52	-6.25	14.65	-3.37	11.28	17	-5.72
	6665	143	be (160MHz)	10.68	11.56	-6.52	-6.25	14.15	-3.37	10.78	17	-6.22
Band 6/7	6585	127	be (320MHz)	10.28	11.37	-6.52	-6.25	13.87	-3.37	10.49	17	-6.51
Band 7/8	6745	159	be (320MHz)	9.74	11.19	-6.52	-6.25	13.54	-3.37	10.16	17	-6.84

Table 7-64. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (26 Tones) – SP

	Frequency [MHz]	Channel	802.11 MODE	MRU Cases	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Antenna-1 Gain [dBi]	Antenna-2 Gain [dBi]	Summed MIMO Power Density [dBm]	Directional Gain [dBi]	DCCF [dB]	EIRP [dBm]	Max EIRP [dBm]	Margin [dB]
Band 5	6175	45	be (20MHz)	52+26T	7.38	7.42	-5.91	-5.38	10.41	-2.63	0.00	7.78	17	-9.22
	6175	45	be (20MHz)	106+26T	5.24	5.21	-5.91	-5.38	8.24	-2.63	0.00	5.61	17	-11.39
	6145	39	be (80MHz)	484+242T	0.91	1.20	-5.91	-5.38	4.07	-2.63	0.16	1.60	17	-15.40
Band 7	6695	149	be (20MHz)	52+26T	6.82	7.39	-6.52	-6.25	10.12	-3.37	0.00	6.75	17	-10.25
	6695	149	be (20MHz)	106+26T	4.83	5.50	-6.52	-6.25	8.19	-3.37	0.00	4.82	17	-12.18
	6705	151	be (80MHz)	484+242T	0.01	0.99	-6.52	-6.25	3.53	-3.37	0.16	0.32	17	-16.68

Table 7-65. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (MRU Cases) – SP

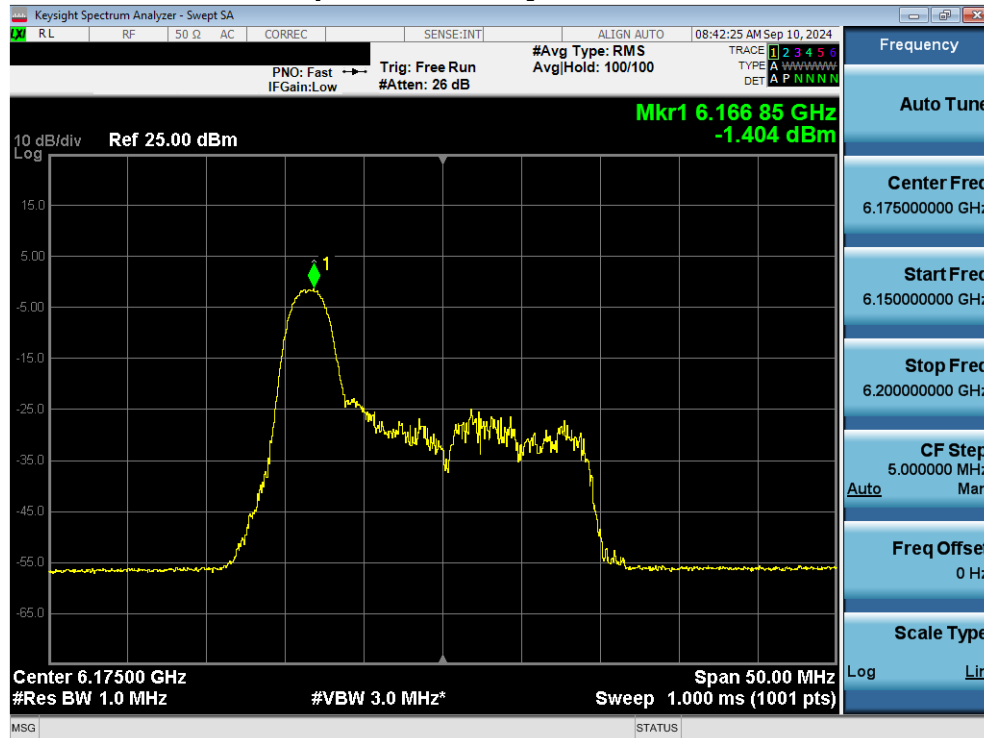
FCC ID: A3LSMS938B	MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset		Page 81 of 184

	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Antenna-1 Gain [dBi]	Antenna-2 Gain [dBi]	Summed MIMO Power Density [dBm]	Directional Gain [dBi]	DCCF [dB]	EIRP [dBm]	Max EIRP [dBm]	Margin [dB]
Band 5	5935	2	be (20MHz)	5.73	5.81	-5.91	-5.38	8.78	-2.63	0.13	6.28	17	-10.72
	6175	45	be (20MHz)	5.84	5.69	-5.91	-5.38	8.77	-2.63	0.13	6.27	17	-10.73
	6415	93	be (20MHz)	5.00	5.54	-5.91	-5.38	8.29	-2.63	0.13	5.79	17	-11.21
	5965	3	be (40MHz)	2.47	2.37	-5.91	-5.38	5.43	-2.63	0.13	2.93	17	-14.07
	6165	43	be (40MHz)	2.54	2.66	-5.91	-5.38	5.61	-2.63	0.13	3.11	17	-13.89
	6405	91	be (40MHz)	1.24	2.61	-5.91	-5.38	4.99	-2.63	0.13	2.49	17	-14.51
	5985	7	be (80MHz)	-0.10	-0.45	-5.91	-5.38	2.74	-2.63	0.21	0.32	17	-16.68
	6145	39	be (80MHz)	-0.42	-0.37	-5.91	-5.38	2.62	-2.63	0.21	0.20	17	-16.80
Band 7	6385	87	be (80MHz)	-1.14	-0.46	-5.91	-5.38	2.23	-2.63	0.21	-0.20	17	-17.20
	6695	117	be (20MHz)	5.32	5.67	-6.52	-6.25	8.51	-3.37	0.13	5.27	17	-11.73
	6695	149	be (20MHz)	5.34	5.36	-6.52	-6.25	8.36	-3.37	0.13	5.11	17	-11.89
	6875	185	be (20MHz)	4.92	6.08	-6.52	-6.25	8.55	-3.37	0.13	5.31	17	-11.69
	6565	123	be (40MHz)	1.65	2.42	-6.52	-6.25	5.06	-3.37	0.13	1.82	17	-15.18
	6725	155	be (40MHz)	1.41	2.66	-6.52	-6.25	5.09	-3.37	0.13	1.84	17	-15.16
	6845	179	be (40MHz)	1.43	2.35	-6.52	-6.25	4.93	-3.37	0.13	1.68	17	-15.32
	6545	119	be (80MHz)	-0.68	-0.20	-6.52	-6.25	2.58	-3.37	0.21	-0.59	17	-17.59
	6705	151	be (80MHz)	-1.05	-0.51	-6.52	-6.25	2.24	-3.37	0.21	-0.92	17	-17.92
	6865	183	be (80MHz)	-1.23	-0.15	-6.52	-6.25	2.35	-3.37	0.21	-0.81	17	-17.81

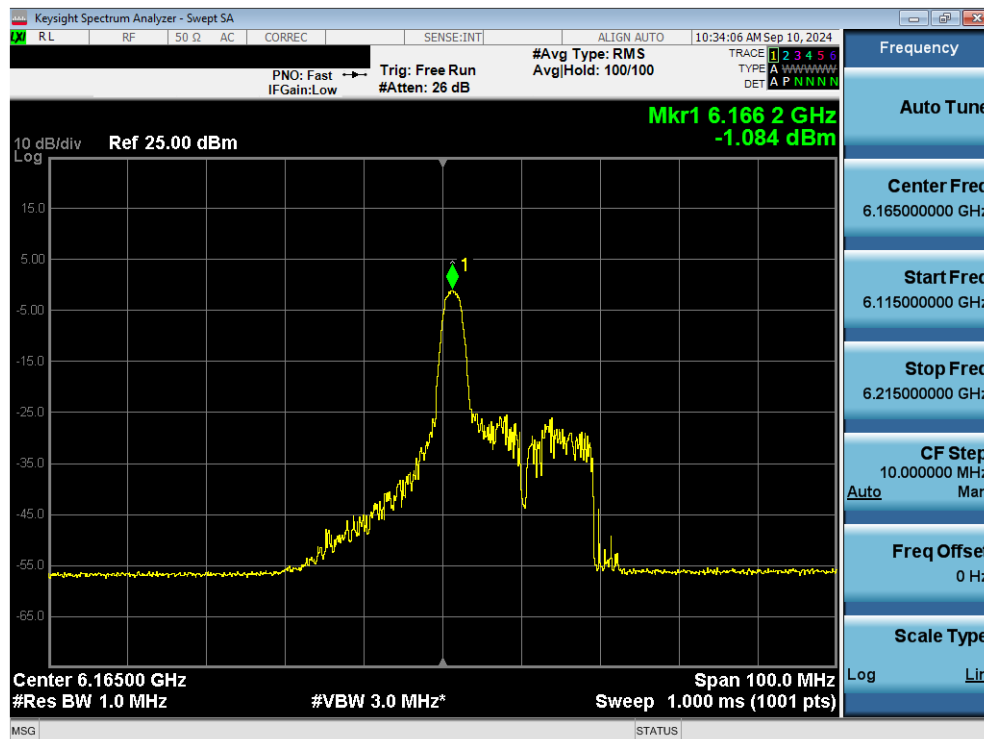
Table 7-66. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (Full Tones) – SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 82 of 184

7.5.1 MIMO Antenna-1 Power Spectral Density Measurements

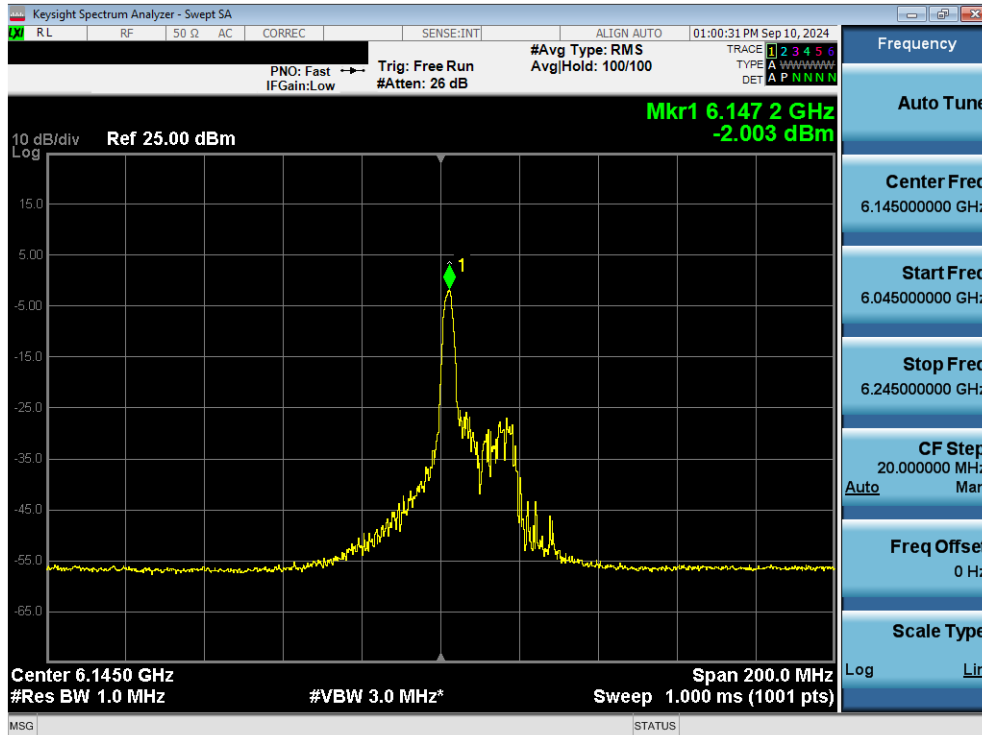


Plot 7-52. Power Spectral Density Plot MIMO ANT1 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) - LPI

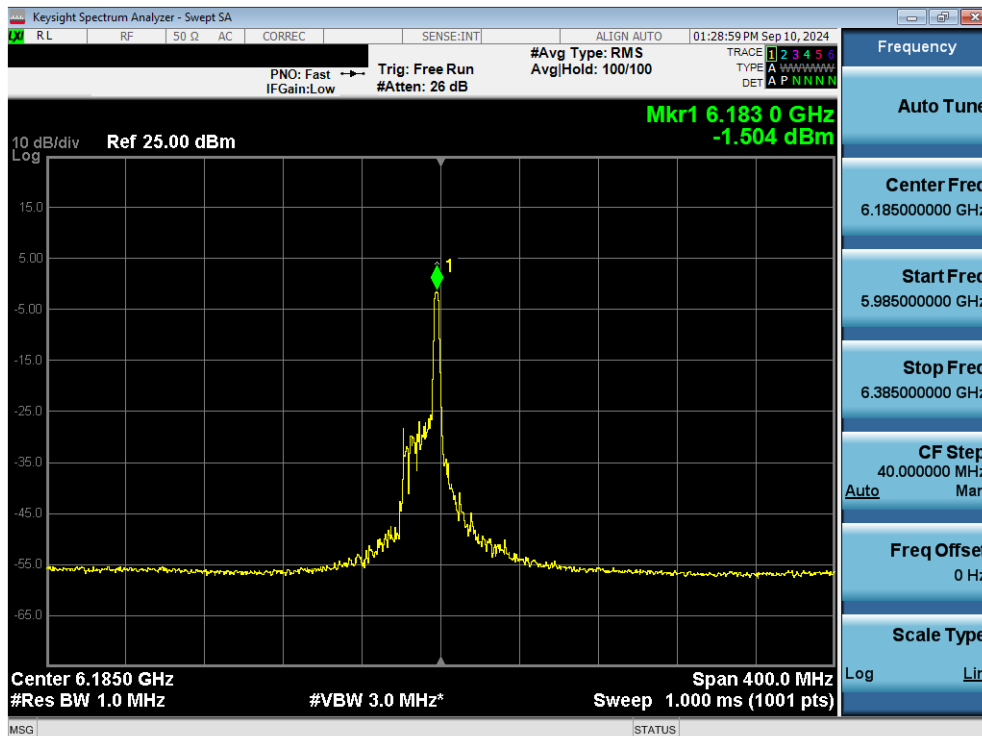


Plot 7-53. Power Spectral Density Plot MIMO ANT1 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 83 of 184

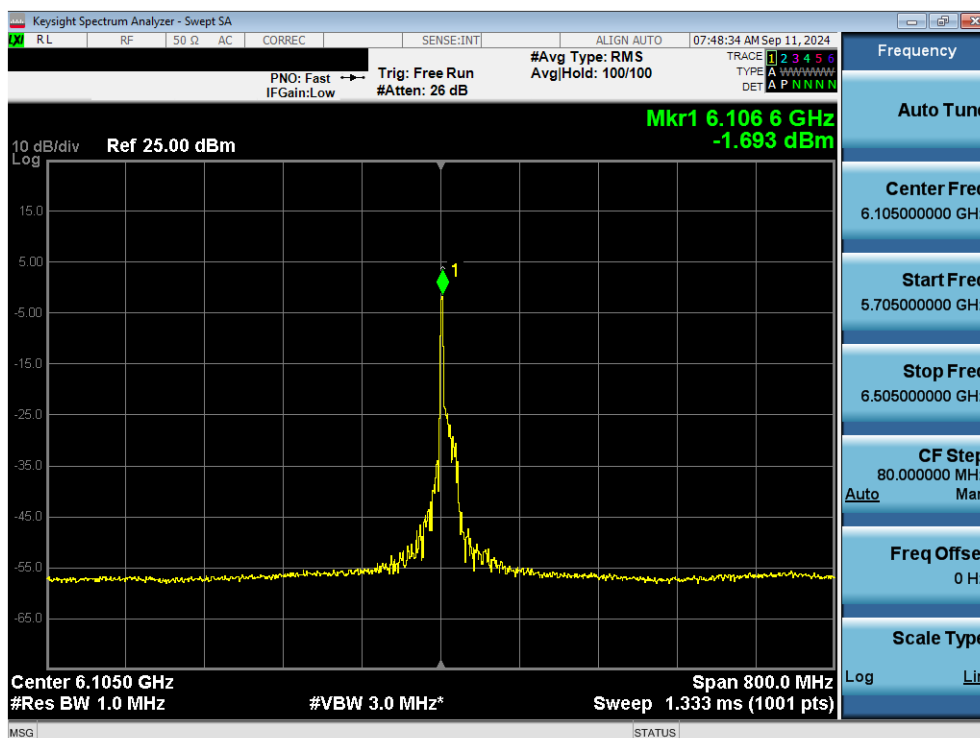


Plot 7-54. Power Spectral Density Plot MIMO ANT1 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - LPI

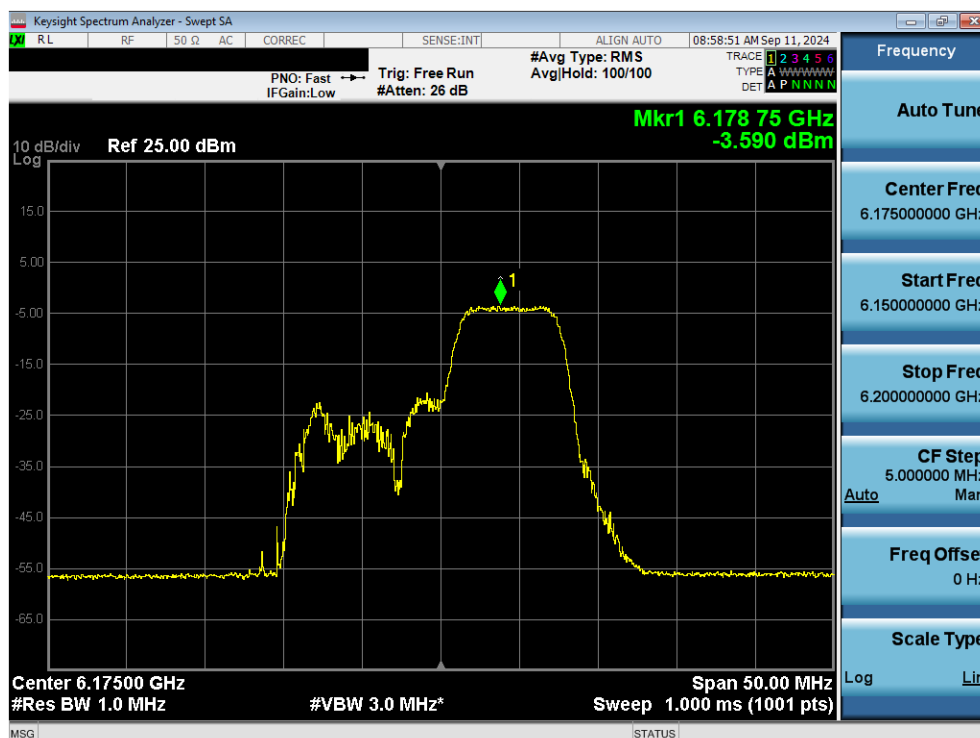


Plot 7-55. Power Spectral Density Plot MIMO ANT1 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 84 of 184

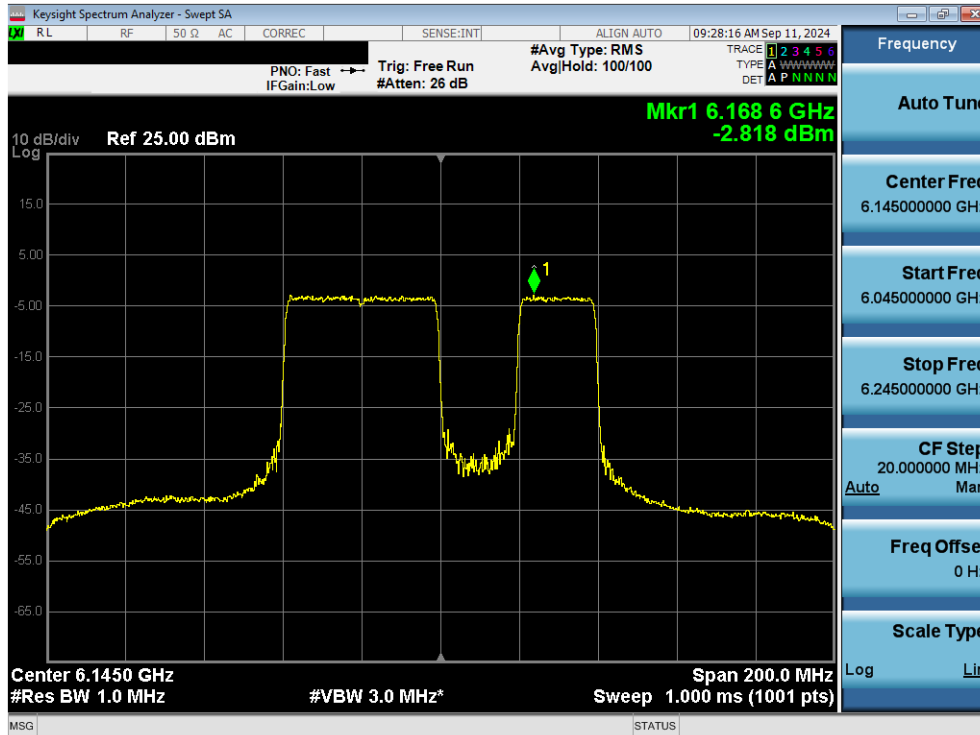


Plot 7-56. Power Spectral Density Plot MIMO ANT1 (320MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 31) - LPI

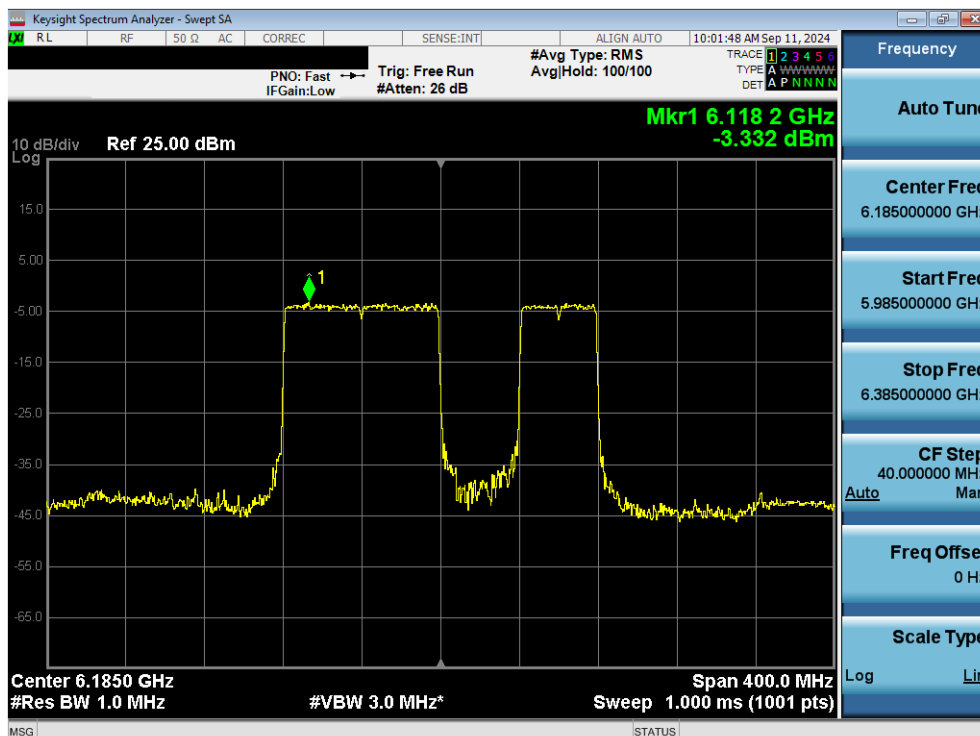


Plot 7-57. Power Spectral Density Plot MIMO ANT1 (20MHz 802.11be (52+26 Tones) (UNII Band 5) – Ch. 45) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 85 of 184



Plot 7-58. Power Spectral Density Plot MIMO ANT1 (80MHz 802.11be (484+242 Tones) (UNII Band 5) – Ch. 39) LPI



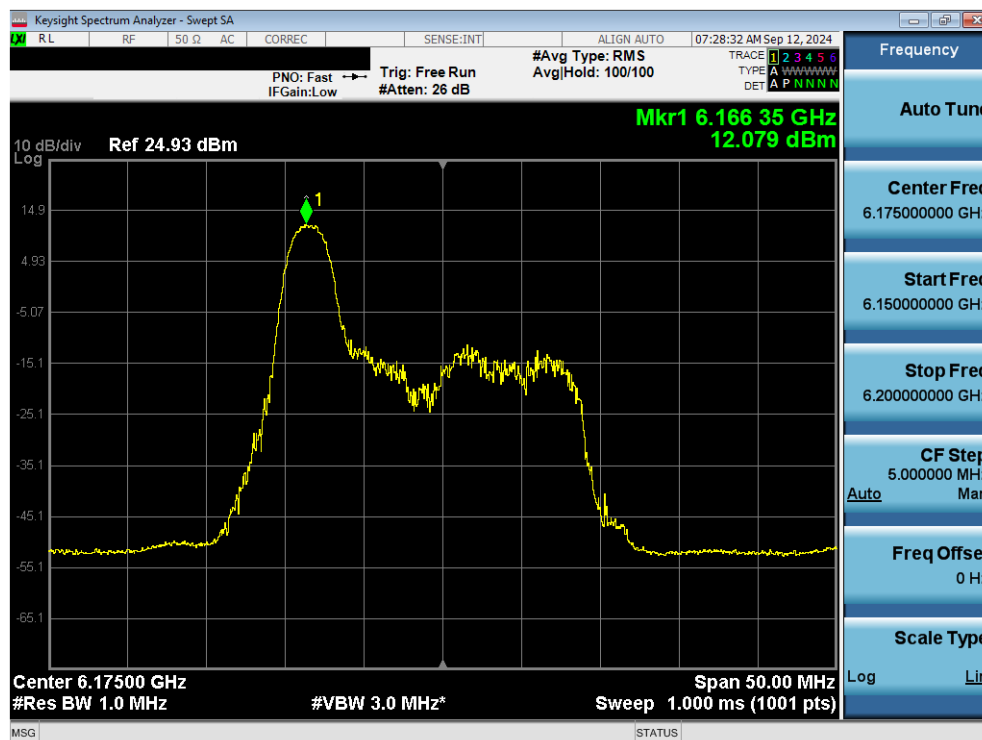
Plot 7-59. Power Spectral Density Plot MIMO ANT1 (160MHz 802.11be (996+484 Tones) (UNII Band 5) – Ch. 47) LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 86 of 184

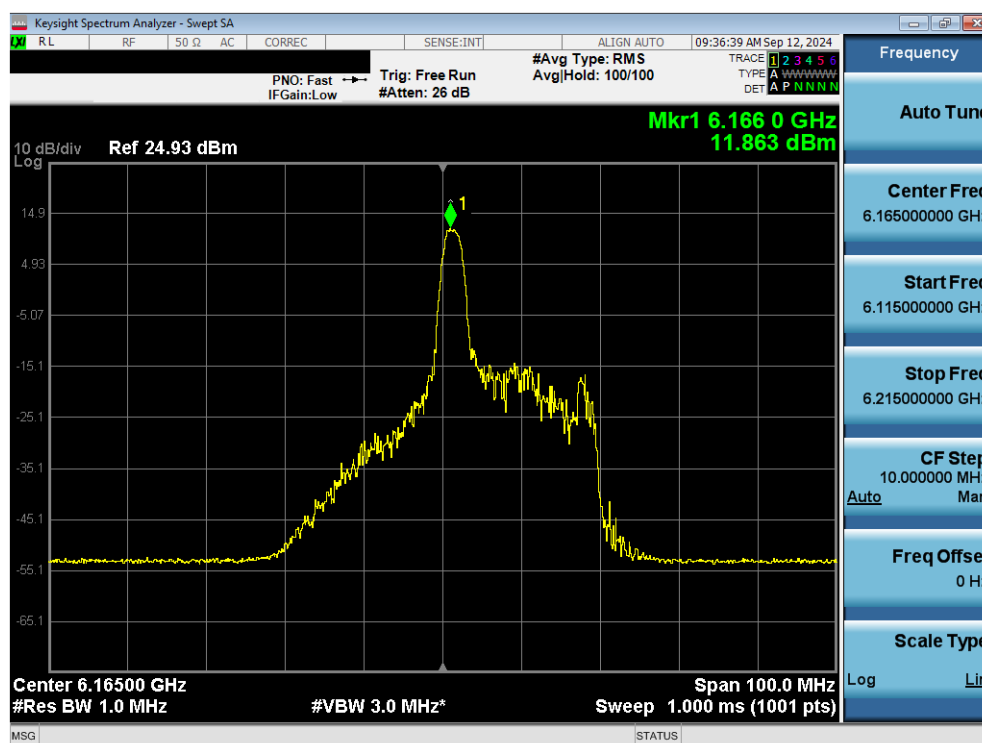


Plot 7-60. Power Spectral Density Plot MIMO ANT1 (320MHz 802.11be (UNII Band 5) – Ch. 31) LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 87 of 184

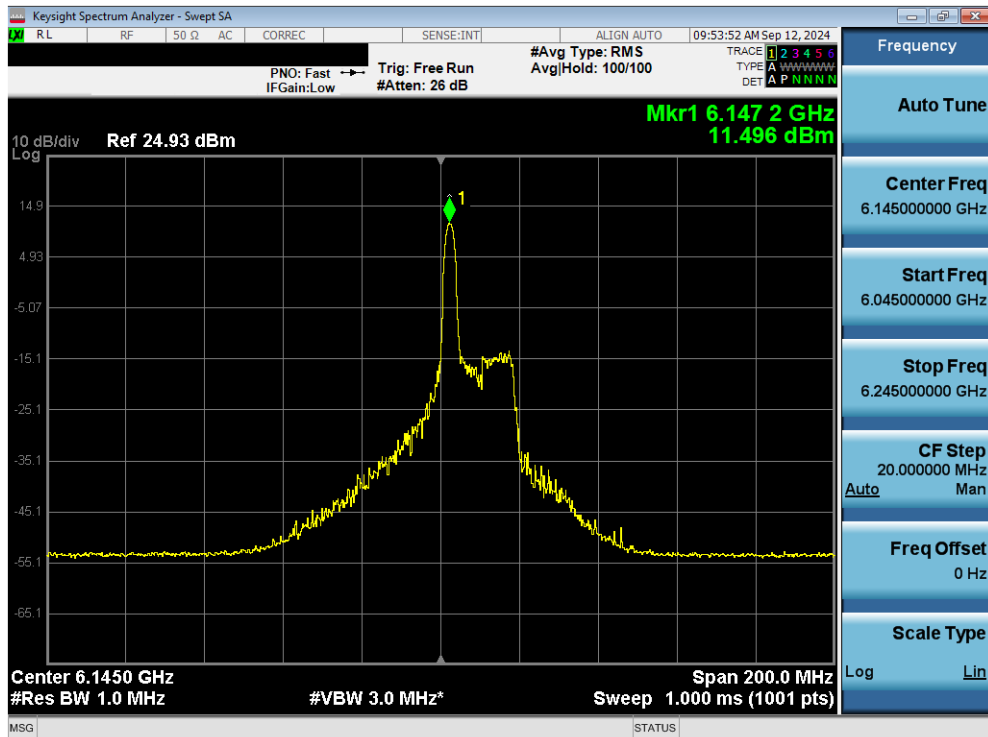


Plot 7-61. Power Spectral Density Plot MIMO ANT1 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) - SP

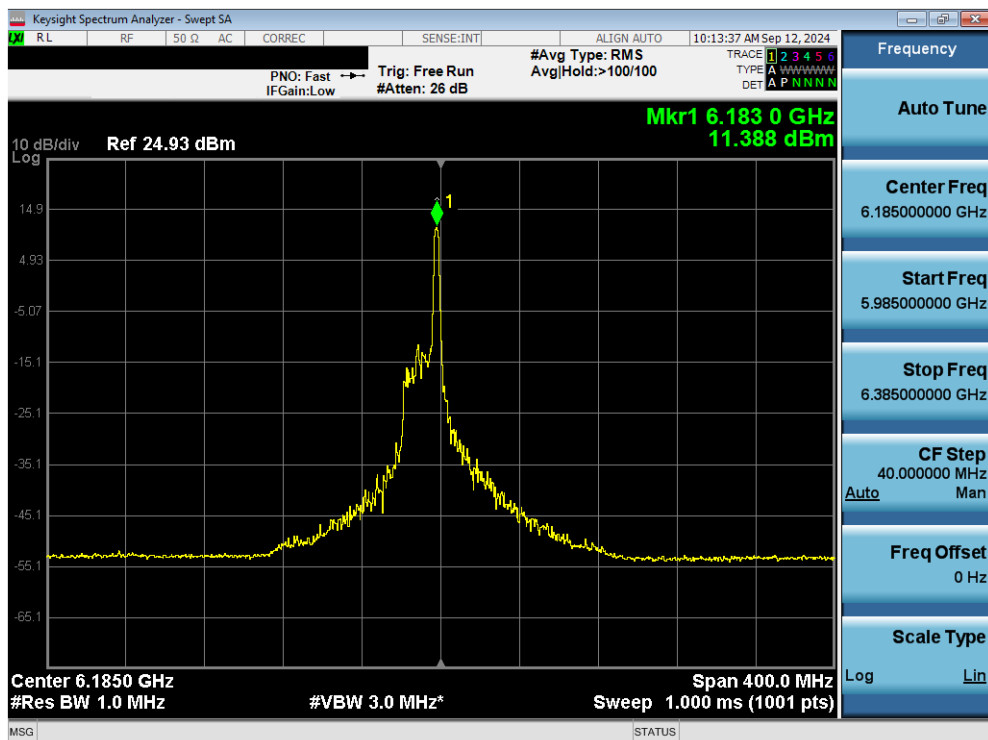


Plot 7-62. Power Spectral Density Plot MIMO ANT1 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 88 of 184

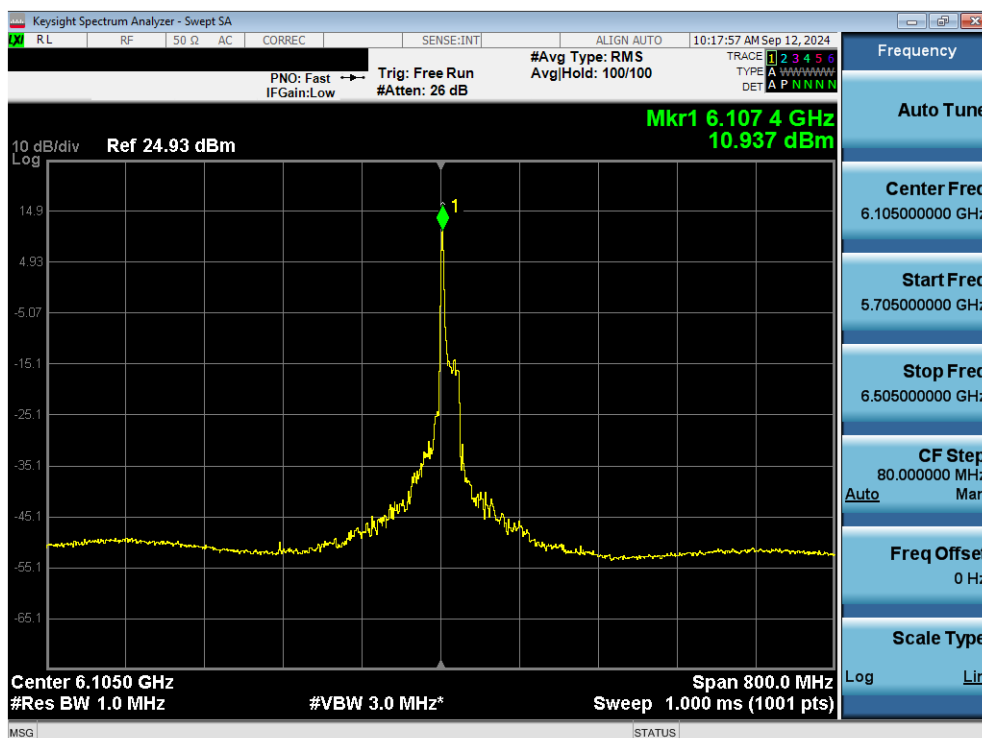


Plot 7-63. Power Spectral Density Plot MIMO ANT1 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - SP

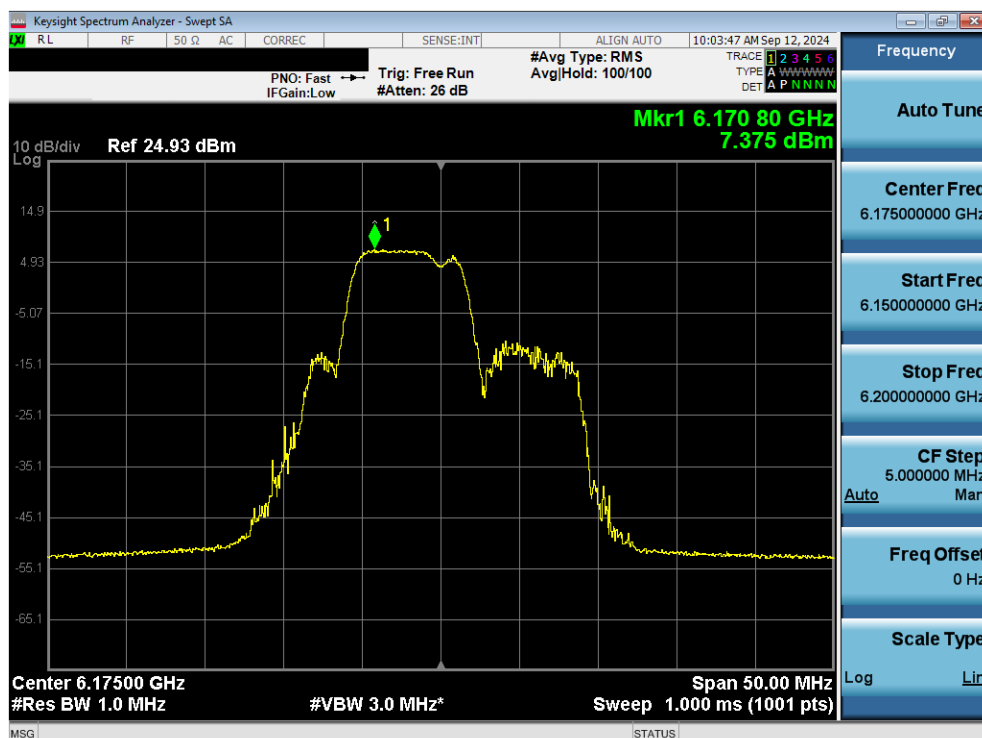


Plot 7-64. Power Spectral Density Plot MIMO ANT1 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 89 of 184

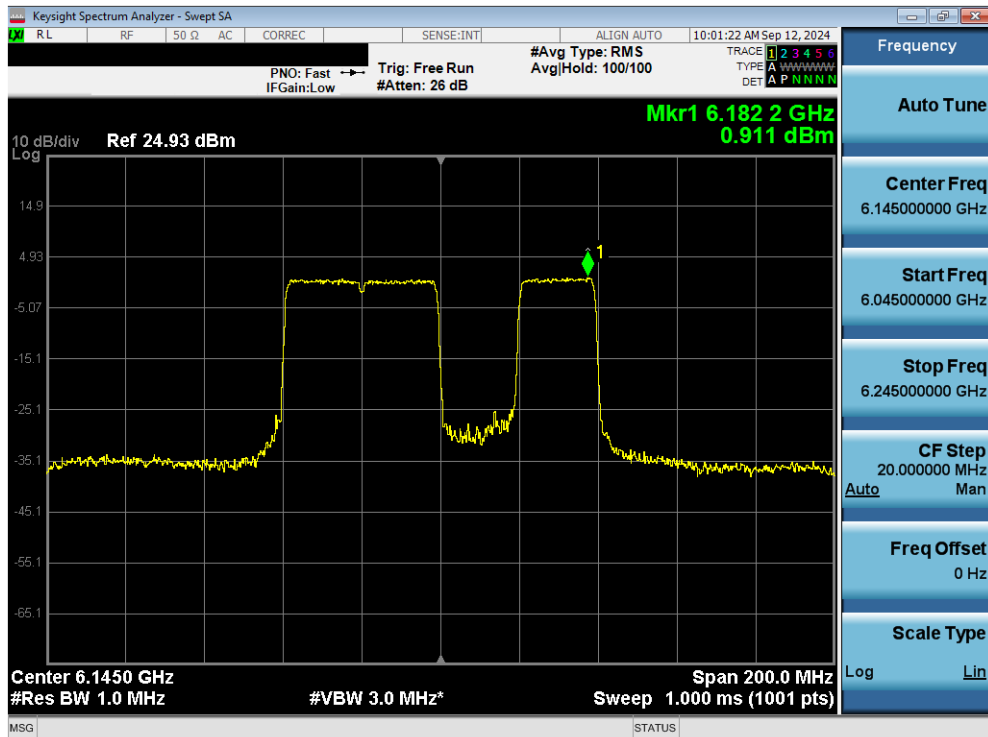


Plot 7-65. Power Spectral Density Plot MIMO ANT1 (320MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 31) - SP

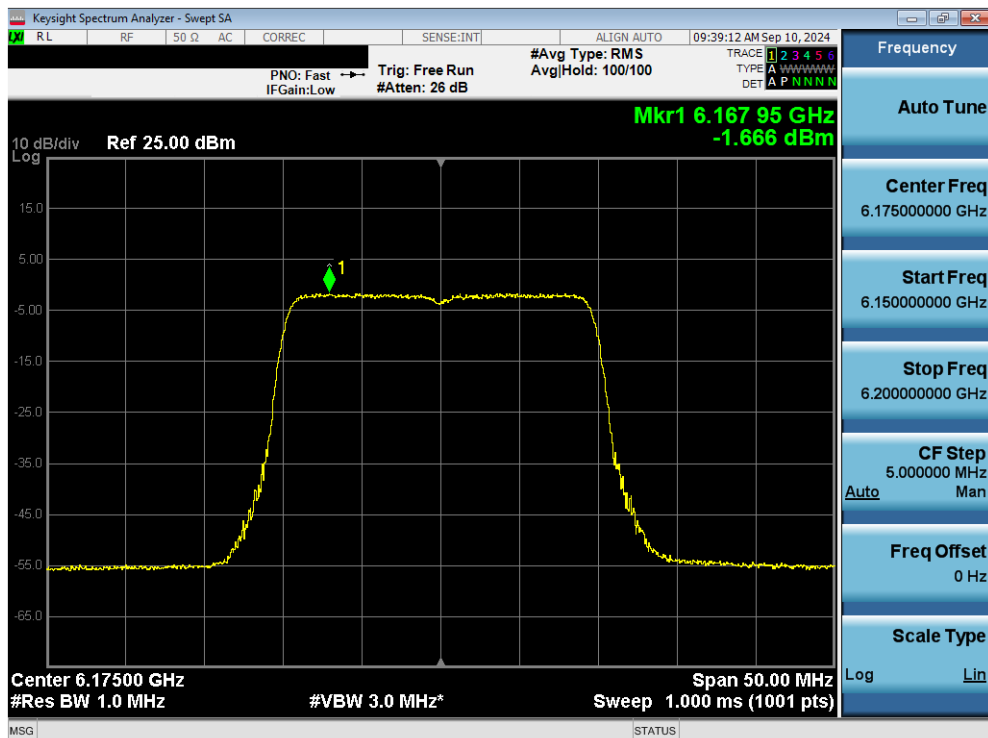


Plot 7-66. Power Spectral Density Plot MIMO ANT1 (20MHz 802.11be (52+26 Tones) (UNII Band 5) – Ch. 45) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 90 of 184

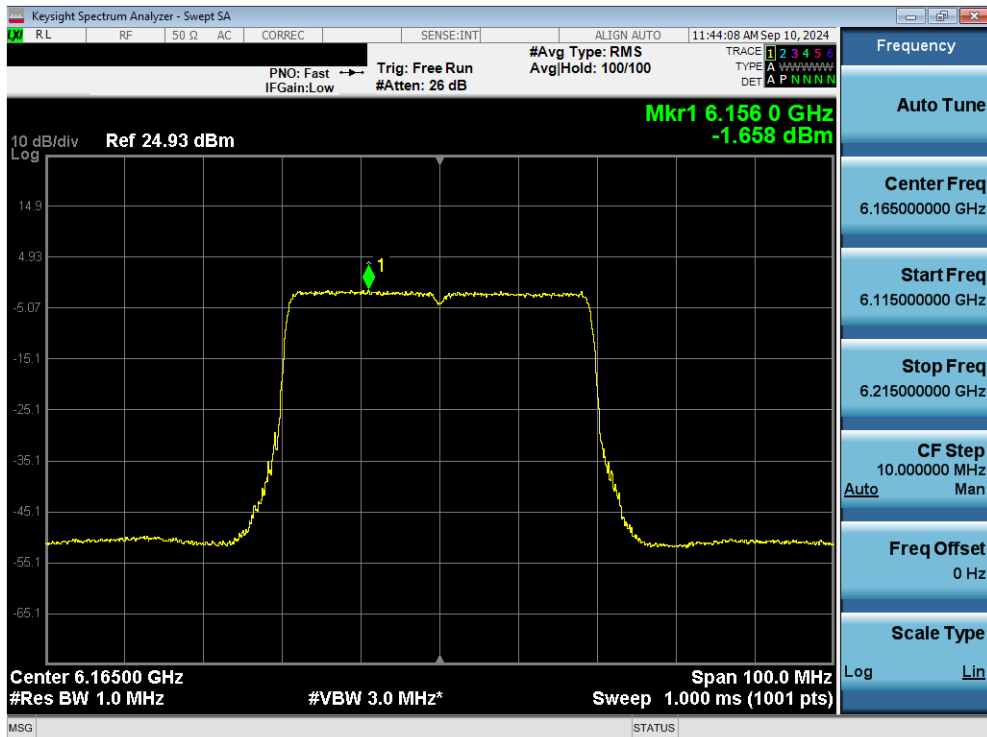


Plot 7-67. Power Spectral Density Plot MIMO ANT1 (80MHz 802.11be (484+242 Tones) (UNII Band 5) – Ch. 39) SP

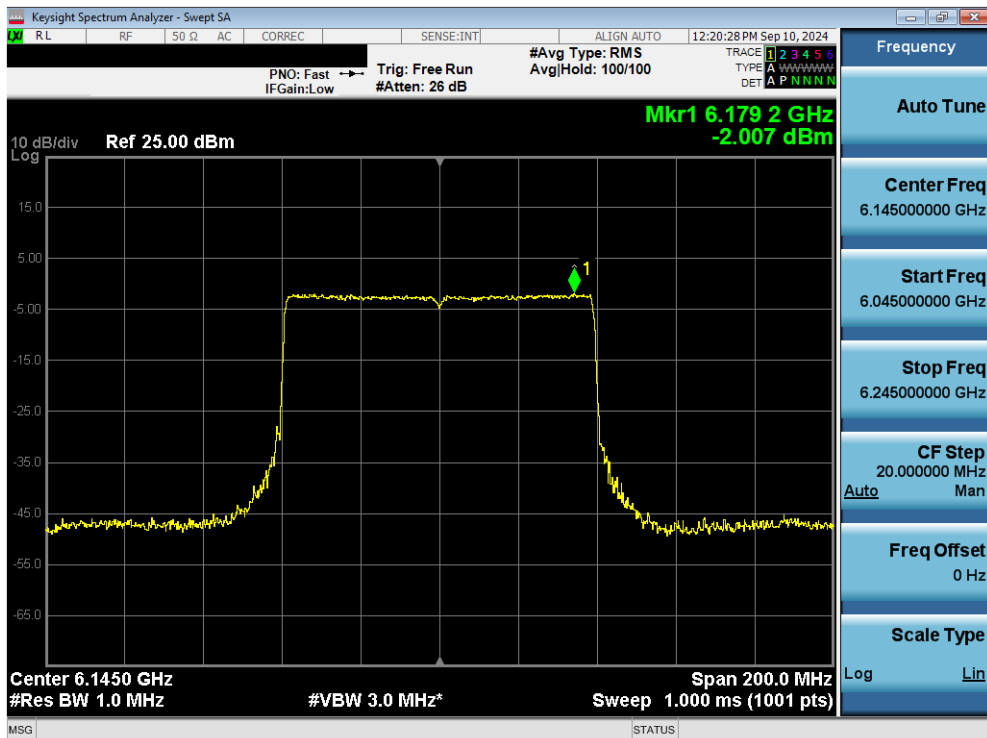


Plot 7-68. Power Spectral Density Plot MIMO ANT1 (20MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 45) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 91 of 184

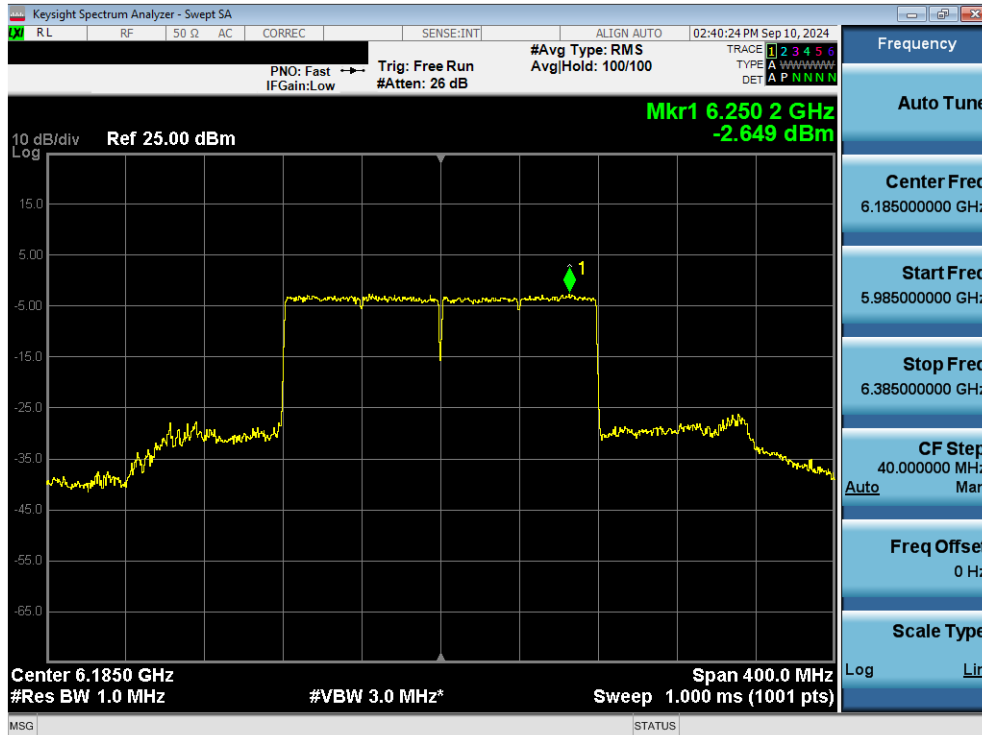


Plot 7-69. Power Spectral Density Plot MIMO ANT1 (40MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 43) - LPI

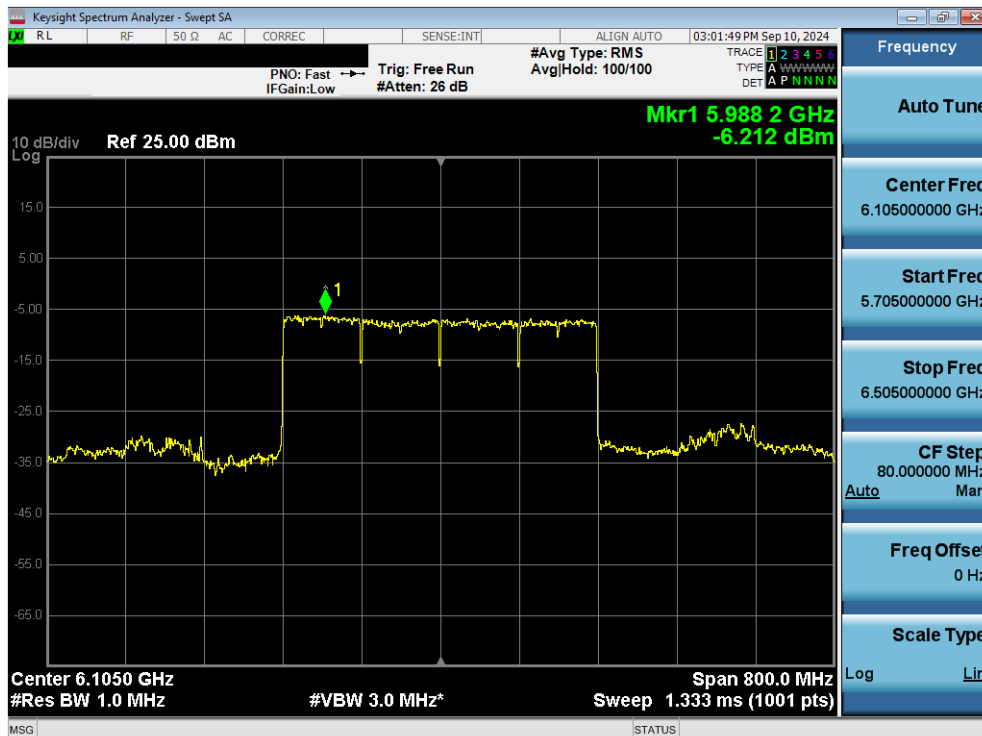


Plot 7-70. Power Spectral Density Plot MIMO ANT1 (80MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 39) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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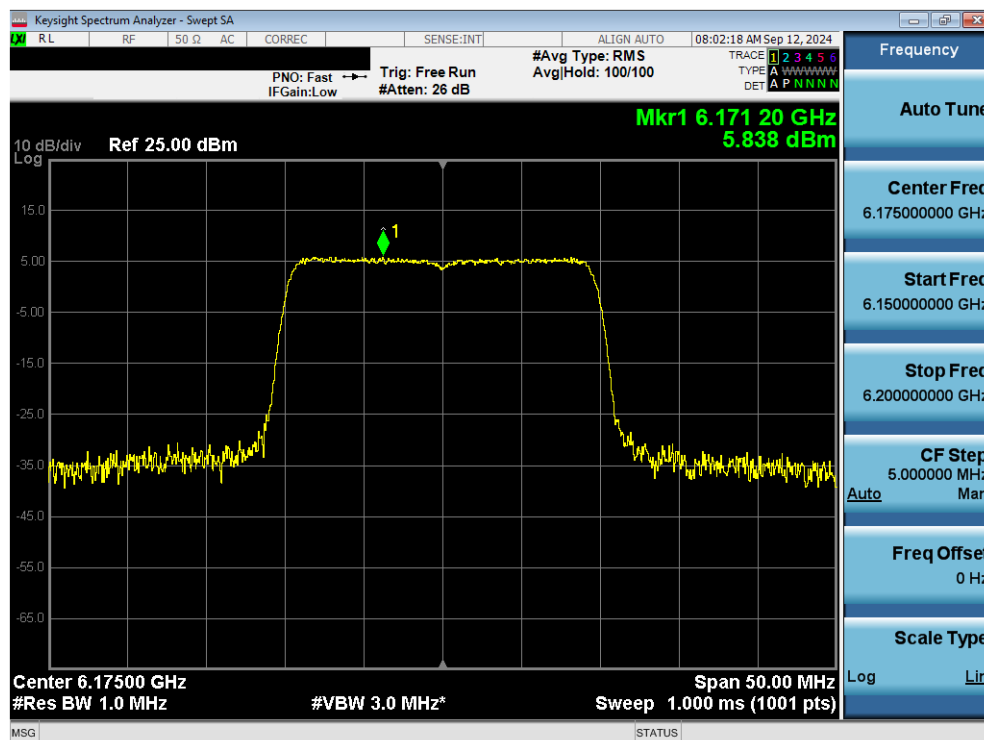


Plot 7-71. Power Spectral Density Plot MIMO ANT1 (160MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 47) - LPI/SP

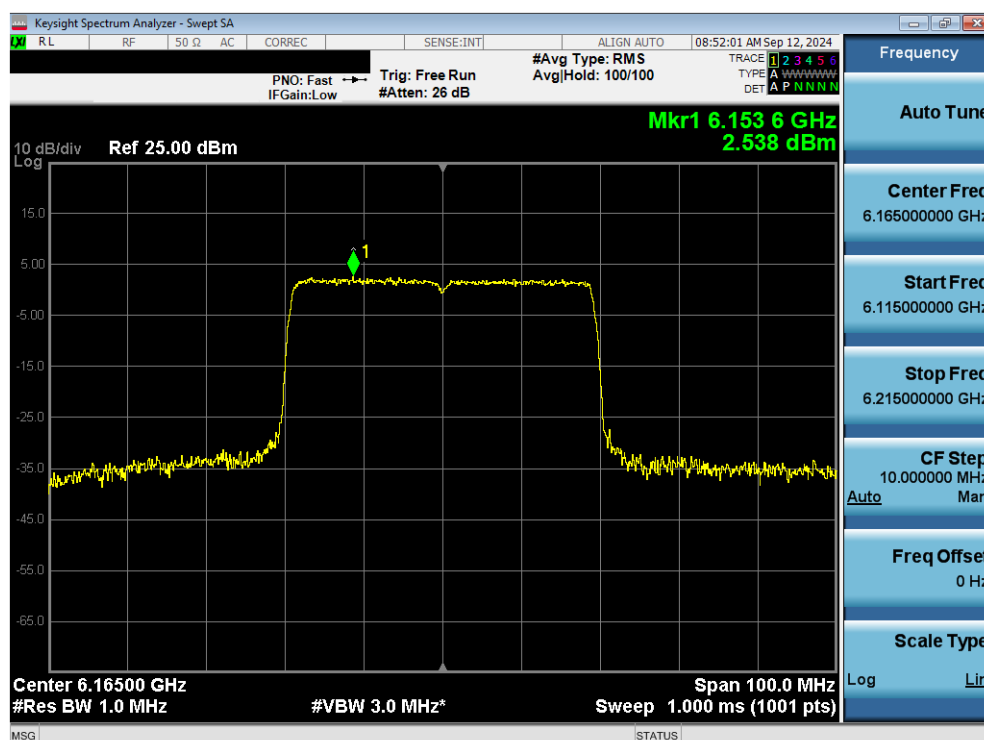


Plot 7-72. Power Spectral Density Plot MIMO ANT1 (320MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 31) - LPI/SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 93 of 184

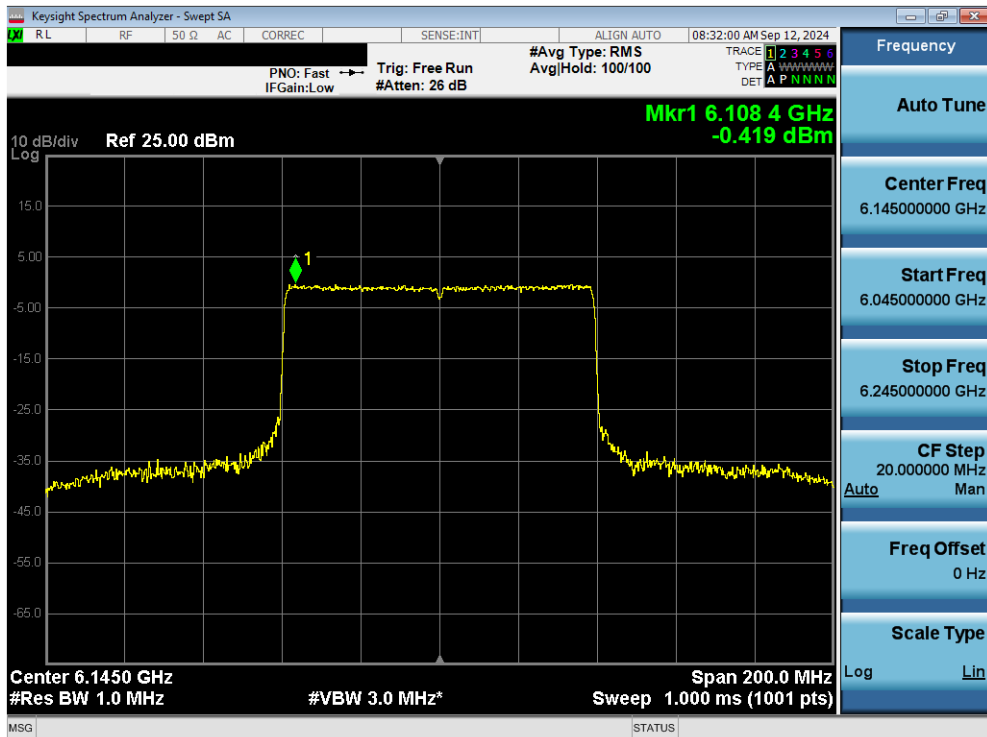


Plot 7-73. Power Spectral Density Plot MIMO ANT1 (20MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 45) - SP



Plot 7-74. Power Spectral Density Plot MIMO ANT1 (40MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 43) - SP

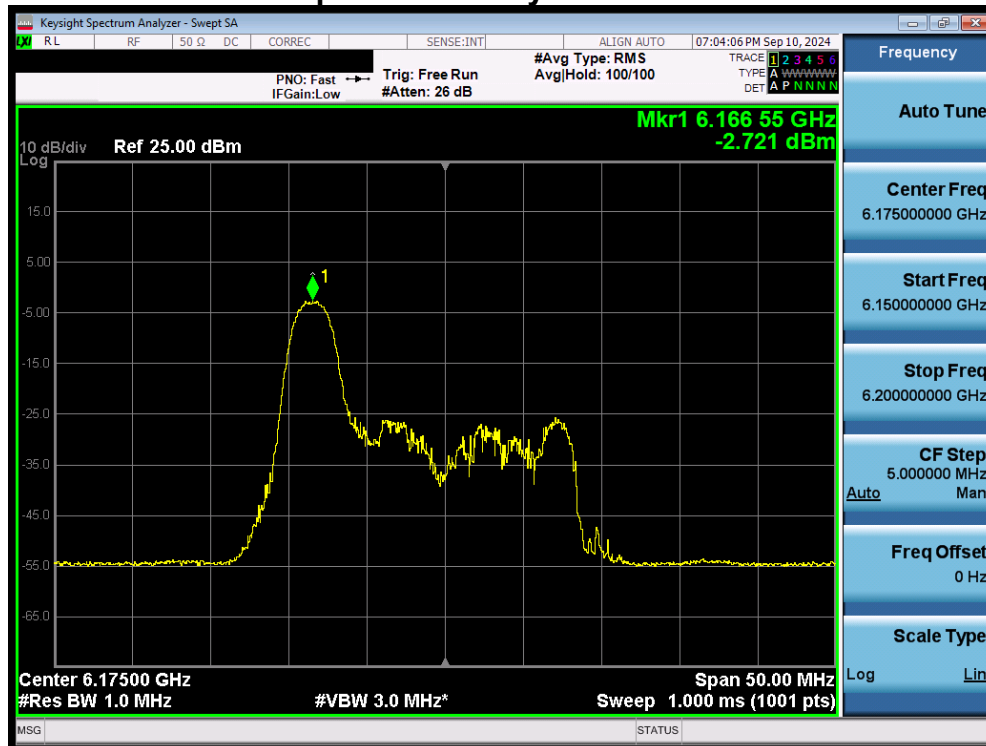
FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 94 of 184



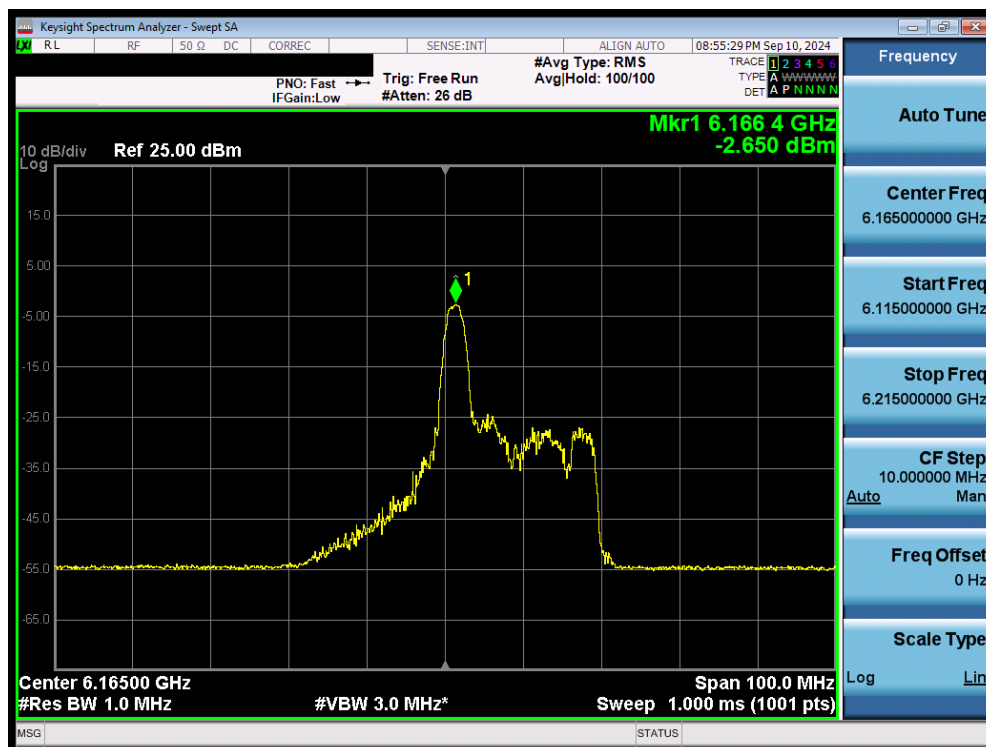
Plot 7-75. Power Spectral Density Plot MIMO ANT1 (80MHz 802.11ax/be (Full Tones) (UNII Band 5) – Ch. 39) - SP

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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7.5.2 MIMO Antenna-2 Power Spectral Density Measurements

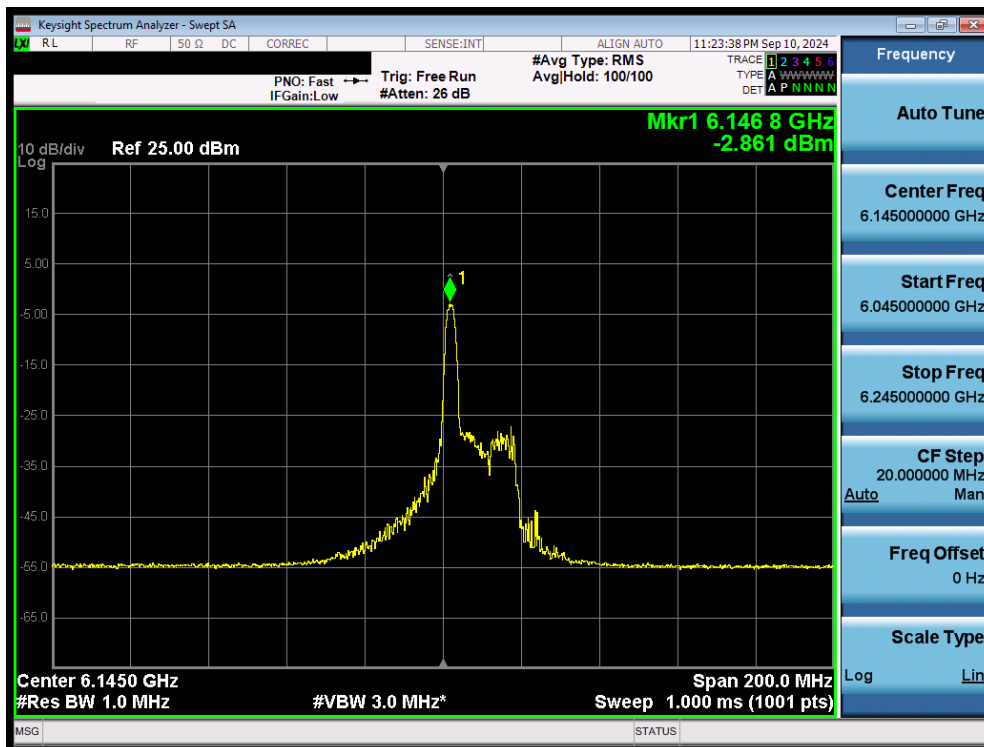


Plot 7-76. Power Spectral Density Plot MIMO ANT2 (20MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 45) - LPI

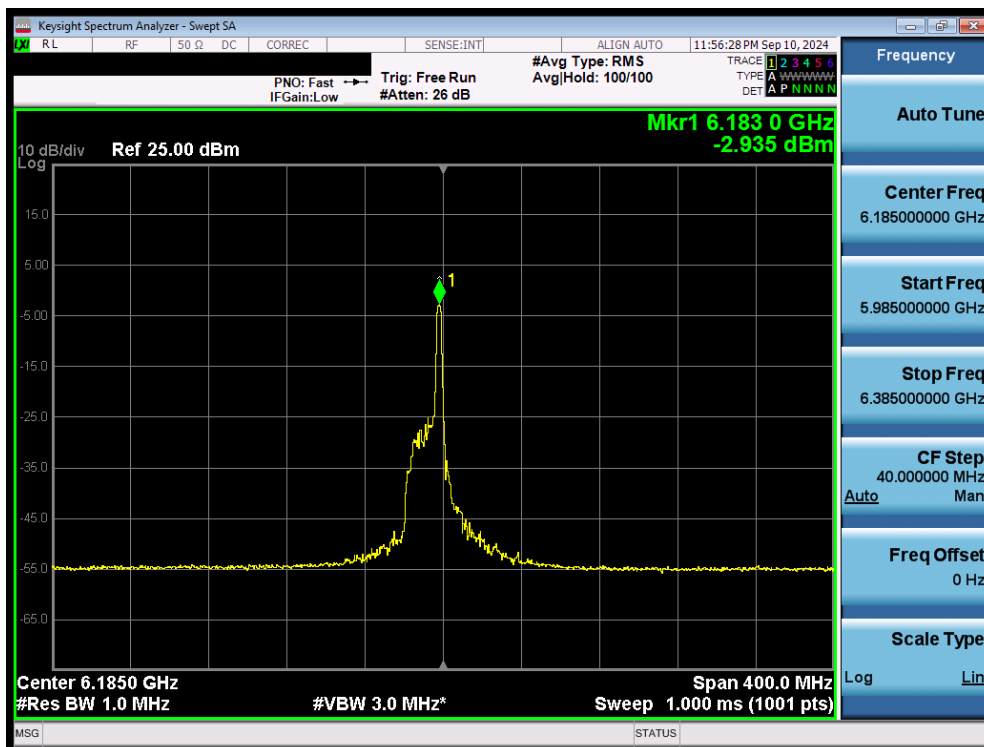


Plot 7-77. Power Spectral Density Plot MIMO ANT2 (40MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 43) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-78. Power Spectral Density Plot MIMO ANT2 (80MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 39) - LPI



Plot 7-79. Power Spectral Density Plot MIMO ANT2 (160MHz 802.11ax/be (26 Tones) (UNII Band 5) – Ch. 47) - LPI

FCC ID: A3LSMS938B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260069-20.A3L	Test Dates: 09/03/2024 - 10/25/2024	EUT Type: Portable Handset	Page 97 of 184