

MEASUREMENT REPORT**FCC PART 15.407 / ISCED RSS-248 UNII 802.11a/ax OFDM****Applicant Name:**

Apple Inc.
One Apple Park Way
Cupertino, CA 95014
United States

Date of Testing:

3/24/2025 - 6/20/2025

Test Report Issue Date:

10/5/2026

Test Site/Location:

Element Materials Technology, Morgan Hill, CA, USA

Test Report Serial No.:

1C2503170028-09-R1.BCG

FCC ID:

BCGA3300

IC:

579C-A3300

APPLICANT:

Apple Inc.

Application Type:

Certification

Model/HVIN:

A3300

EUT Type:

Smart Speaker with Display

Frequency Range:

5955 – 7115MHz

Modulation Type:

OFDM

FCC Classification:

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

FCC Rule Part(s):

Part 15 Subpart E (15.407)

ISCED Specification:

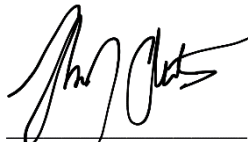
RSS-248 Issue 3

Test Procedure(s):

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to
C63.10a:2024
KDB 662911 D01 v02r01, KDB 987594 D02 v03
KDB 987594 D03 v03r04, KDB 987594 D04 v03
KDB 987594 D01 v03r01

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 C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to and KDB 789033 D02 v02r01. 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 Ortancz
Executive Vice President



FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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Revision Summary

Revision	Date	Comments	Revised By
-	3/10/2026	Initial Released	WKR007077
R1	9/22/2026	Addressed comment in section 7.5 and 7.6	WKR0000010305

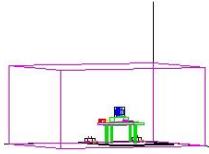
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V 12.0 03/03/2026

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MEASUREMENT REPORT



UNII Band	Channel Bandwidth (MHz)	Mode	Tx Frequency (MHz)	SISO				SDM	
				Antenna 0		Antenna 1		Summed	
				Max e.i.r.p. (mW)	Max e.i.r.p. (dBm)	Max e.i.r.p. (mW)	Max e.i.r.p. (dBm)	Max e.i.r.p. (mW)	Max e.i.r.p. (dBm)
5	20	802.11a/ax	5955 - 6415	8.670	9.38	7.211	8.58	8.375	9.23
6		802.11a/ax	6435 - 6515	6.368	8.04	5.012	7.00	6.339	8.02
7		802.11a/ax	6535 - 6875	6.266	7.97	5.781	7.62	5.728	7.58
8		802.11a/ax	6895 - 7115	5.420	7.34	6.124	7.87	6.281	7.98
5	40	802.11ax	5965 - 6405	15.922	12.02	14.388	11.58	14.689	11.67
6		802.11ax	6445 - 6525	11.350	10.55	9.311	9.69	11.272	10.52
7		802.11ax	6565 - 6845	10.186	10.08	11.066	10.44	10.209	10.09
8		802.11ax	6885 - 7085	9.247	9.66	11.066	10.44	11.482	10.60
5	80	802.11ax	5985 - 6385	32.285	15.09	27.102	14.33	30.761	14.88
6		802.11ax	6465	20.845	13.19	15.922	12.02	23.335	13.68
7		802.11ax	6545 - 6865	19.143	12.82	21.979	13.42	22.284	13.48
8		802.11ax	6945 - 7025	18.239	12.61	19.770	12.96	21.528	13.33
5	160	802.11ax	6025 - 6345	60.814	17.84	49.774	16.97	48.865	16.89
6		802.11ax	6505	39.902	16.01	33.343	15.23	37.670	15.76
7		802.11ax	6665 - 6825	21.135	13.25	21.928	13.41	36.813	15.66
8		802.11ax	6985	21.038	13.23	22.080	13.44	41.687	16.20

EUT Overview Low Power Indoor

UNII Band	Channel Bandwidth (MHz)	Mode	Tx Frequency (MHz)	SISO				CDD	
				Antenna 0		Antenna 1		Summed	
				Max e.i.r.p. (mW)	Max e.i.r.p. (dBm)	Max e.i.r.p. (mW)	Max e.i.r.p. (dBm)	Max e.i.r.p. (mW)	Max e.i.r.p. (dBm)
5	20	802.11a/ax	5955 - 6415	116.413	20.66	97.949	19.91	187.499	22.73
6		802.11a/ax	6435 - 6515	92.897	19.68	72.946	18.63	142.561	21.54
7		802.11a/ax	6535 - 6875	43.551	16.39	44.771	16.51	69.502	18.42
5	40	802.11ax	5965 - 6405	88.920	19.49	81.846	19.13	185.353	22.68
6		802.11ax	6445 - 6525	72.611	18.61	57.943	17.63	140.281	21.47
7		802.11ax	6565 - 6845	34.995	15.44	35.810	15.54	70.795	18.50
5	80	802.11ax	5985 - 6385	92.897	19.68	78.343	18.94	187.068	22.72
6		802.11ax	6465	61.944	17.92	54.828	17.39	133.045	21.24
7		802.11ax	6545 - 6865	34.435	15.37	36.308	15.60	69.663	18.43
5	160	802.11ax	6025 - 6345	75.162	18.76	61.944	17.92	148.594	21.72
6		802.11ax	6505	57.412	17.59	45.186	16.55	112.202	20.50
7		802.11ax	6665 - 6825	23.496	13.71	23.121	13.64	49.431	16.94

EUT Overview Standard Power

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1.0 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 Materials Technology Test Location

These measurement tests were conducted at the Element Materials Technology facility located at 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

1.3 Test Facility / Accreditations

Measurements were performed at Element Materials Technology located in Morgan Hill, CA 95037, U.S.A.

- Element Materials Technology 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 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 Materials Technology facility is a registered test laboratory with the site description on file with ISED (Wireless Test Lab number 22831) and FCC (Designation Number US1163).
- 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).

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Smart Speaker with Display FCC ID: BCGA3300 and IC: 579C-A3300**. 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.

Test Device Serial No.: FPQR7MJ2N1, HP34WHV7XM, FQYJTXNHYW, YGYD3JMXM, F0THEP000410000NGQ, HV6HEQ0001R0000NGQ

2.2 Device Capabilities

This device contains the following capabilities:

802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII (5GHz and 6GHz), 802.15.4, Bluetooth (1x, EDR, LE1M, LE2M)

The device supports channel bandwidth reduction and does not support channel puncturing.

Standard Power (SP) mode is supported in U-NII Bands 5 and 7 for FCC and U-NII Bands 5, 6 and 7 for ISSED. Lower Power Indoor (LPI) mode is supported in U-NII Bands 5 to 8. Throughout report, data of Standard Power mode is denoted as SP while data of Lower Power Indoor mode is denoted as LPI.

Band 5		Band 6		Band 7		Band 8	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
1	5955	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. 802.11a / 802.11ax (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 (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 (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 (160MHz BW) Frequency / Channel Operations

Notes:

- 6GHz NII operation is possible in 20MHz, 40MHz, 80MHz, and 160MHz 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) KDB 789033 D02 v02r01 and ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to . 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:

802.11 Mode / Band		Antenna 0		Antenna 1		CDD/SDM	
		Duty Cycle [%]	DCCF [dB]	Duty Cycle [%]	DCCF [dB]	Duty Cycle [%]	DCCF [dB]
6GHz	11a (20MHz)	95.06	0.22	94.84	0.23	-	-
	11a (20MHz) (Mid Rate)	90.57	0.43	91.16	0.40	-	-
	11a (20MHz) (High Rate)	83.31	0.79	82.93	0.81	-	-
	11ax(SU) (20MHz)	100	0.00	100	0.00	100	0.00
	11ax(SU) (20MHz) (Mid Rate)	100	0.00	100	0.00	100	0.00
	11ax(SU) (20MHz) (High Rate)	100	0.00	100	0.00	100	0.00
	11ax(SU) (40MHz)	100	0.00	100	0.00	100	0.00
	11ax(SU) (40MHz) (Mid Rate)	100	0.00	100	0.00	100	0.00
	11ax(SU) (40MHz) (High Rate)	96.61	0.15	96.38	0.16	96.61	0.15
	11ax(SU) (80MHz)	100	0.00	100	0.00	100	0.00
	11ax(SU) (80MHz) (Mid Rate)	97.27	0.12	97.27	0.12	97.72	0.10
	11ax(SU) (80MHz) (High Rate)	94.19	0.26	93.33	0.30	92.68	0.33
	11ax(SU) (160MHz)	97.27	0.12	97.27	0.12	97.27	0.12
	11ax(SU) (160MHz) (Mid Rate)	95.28	0.21	94.84	0.23	95.72	0.19
	11ax(SU) (160MHz) (High Rate)	87.5	0.58	87.5	0.58	87.5	0.58

Table 2-5. Measured Duty Cycles

CDD/SDM = Antenna 0 + Antenna 1

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

WiFi Configurations		SISO		CDD		SDM	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
6GHz	11a	✓	✓	✗	✗	✗	✗
	11ax(SU) (20MHz)	✓	✓	✓	✓	✓	✓
	11ax(SU) (40MHz)	✓	✓	✓	✓	✓	✓
	11ax(SU) (80MHz)	✓	✓	✓	✓	✓	✓
	11ax(SU) (160MHz)	✓	✓	✓	✓	✓	✓

Table 2-6. WIFI Configurations

✓ = 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):

802.11a	MCS Index		Spatial Stream	OFDM (802.11ax)												
				20MHz		40MHz			80MHz			160MHz				
	20MHz	HE		VHT	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	
6	0	0	1	8.1	7.3	17.2	16.3	14.6	36	34	30.6	72.1	68.1	61.3	Low rate	
9	1	1	1	16.3	14.6	34.4	32.5	29.3	72.1	68.1	61.3	144.1	136.1	122.5		
12	2	2	1	24.4	21.9	51.6	48.8	43.9	108.1	102.1	91.9	216.2	204.2	183.8		
18	3	3	1	32.5	29.3	68.8	65	58.5	144.1	136.1	122.5	288.2	272.2	245	Mid rate	
24	4	4	1	48.8	43.9	103.2	97.5	87.8	216.2	204.2	183.8	432.4	408.3	367.5		
36	5	5	1	65	58.5	137.6	130	117	288.2	272.2	245	576.5	544.4	490		
48	6	6	1	73.1	65.8	154.9	146.3	131.6	324.3	306.3	275.6	648.5	612.5	551.3	High Rate	
54	7	7	1	81.3	73.1	172.1	162.5	146.3	360.3	340.3	306.3	720.6	680.6	612.5		
-	8	8	1	97.5	87.8	206.5	195	175.5	432.4	408.3	367.5	864.7	816.7	735		
-	9	9	1	108.3	97.5	229.4	216.7	195	480.4	453.7	408.3	960.8	907.4	816.7		
-	10	10	1	121.9	109.7	258.1	243.8	219.4	540.4	510.4	459.4	1080.9	1020.8	918.8		
-	11	11	1	135.4	121.9	286.8	270.8	243.8	600.5	567.1	510.4	1201	1134.3	1020.8	Low rate	
-	0	0	2	16.3	14.6	34.4	32.5	29.3	72.1	68.1	61.3	144.1	136.1	122.5		
-	1	1	2	32.5	29.3	68.8	65	58.5	144.1	136.1	122.5	288.2	272.2	245		
-	2	2	2	48.8	43.9	103.2	97.5	87.8	216.2	204.2	183.8	432.4	408.3	367.5		
-	3	3	2	65	58.5	137.6	130	117	288.2	272.2	245	576.5	544.4	490		
-	4	4	2	97.5	87.8	206.5	195	175.5	432.4	408.3	367.5	864.7	816.7	735	Mid rate	
-	5	5	2	130	117	275.3	260	234	576.5	544.4	490	1152.9	1088.9	980		
-	6	6	2	146.3	131.6	309.7	292.5	263.3	648.5	612.5	551.3	1297.1	1225	1102.5		
-	7	7	2	162.5	146.3	344.1	325	292.5	720.6	680.6	612.5	1441.2	1361.1	1225	High Rate	
-	8	8	2	195	175.5	412.9	390	351	864.7	816.7	735	1729.4	1633.3	1470		
-	9	9	2	216.7	195	458.8	433.3	390	960.8	907.4	816.7	1921.6	1814.8	1633.3		
-	10	10	2	243.8	219.4	516.2	487.5	438.8	1080.9	1020.8	918.8	2161.8	2041.7	1837.5		
-	11	11	2	270.8	243.8	573.5	541.7	487.5	1201	1134.3	1020.8	2402	2268.5	2041.7		

Table 2-7. Supported Data Rates

4. This device supports simultaneous transmission operations, which allows multiple transmitters to transmit simultaneously on the same antenna. The table below shows all configurations possible.

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Antenna	Simultaneous Tx Config	Bluetooth 2.4GHz	Thread	WLAN	WIFI 5GHz	WIFI 6GHz
		BDR, EDR, LE1/2M	802.15.4	802.11 b/g/ac/ax	802.11 a/n/ac/ax	802.11 a/ax
Antenna 0	Config 1	✓	✗	✗	✓	✗
Antenna 1	Config 2	✗	✓	✗	✓	✗
Antenna 0	Config 3	✓	✗	✗	✗	✓
Antenna 1	Config 4	✗	✓	✗	✗	✓

Table 2-8. Simultaneous Transmission Configurations

✓ = Support; ✗ = Not Support

Note:

All the above simultaneous transmission configurations have been tested and the worst-case configuration was found to be Config 2 and reported in RF Thread and RF UNII 5GHz OFDM test reports.

2.3 Antenna Description

Following antennas gains provided by manufacturer were used for testing. The validity of the calculated results is based on the accuracy of the information provided.

UNII Band	Tx Frequency (MHz)	Highest Antenna Gain (dBi)		Lowest Antenna Gain (dBi)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1
5	5955-6415	2.85	2.14	1.38	1.46
6	6435-6515	1.73	0.74	1.73	0.74
7	6535-6855	-1.02	-0.88	-2.77	-2.73
8	6895-7115	-0.26	0.18	-2.20	-0.99

Table 2-9. Antenna Gains

2.4 Test Support Equipment

1	Apple MacBook Pro	Model:	A2141	S/N:	C02YVA2VLVDD
	w/AC/DC Adapter	Model:	A2166	S/N:	C4H042705ZNP MOWA6
2	Apple USB-C Cable	Model:	Banana Split	S/N:	200605
3	USB-C Cable	Model:	A2905	S/N:	FTLH3N00N3S000002J
	w/ AC Adapter	Model:	A3228	S/N:	C4HHAU000PD0000EWW

Table 2-10. Test Support Equipment List

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2.5 Test Configuration

The EUT was tested per the guidance of ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to , KDB 789033 D02 v02r01 and KDB 987594 D02 v03. ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing. See Sections 3.3 for AC line conducted emissions test setups, 3.3 for radiated emissions test setups, and 7.2, 7.3, 7.4, and 7.5 for antenna port conducted emissions test setups.

For emissions from 1GHz – 18GHz, low, mid, and high channels were tested with highest power and worst case configuration. The emissions below 1GHz and above 18GHz were tested with the highest transmitting power and the worst case channel.

The EUT was placed in one orthogonal plane of Z-orientation (portrait) during the testing. Only the worst case emissions were reported in this test report.

For AC line conducted and radiated test below 1GHz, following configuration were investigated and EUT powered by AC/DC was the worst case.

- EUT powered by an AC/DC Adapter via USB-C cable

802.11ax HE20/40/80/160 2TX SDM mode test data provided in this report covers 802.11ax HE20/40/80/160 2TX STBC mode.

The data rates have been categorized into three groups: low, middle, and high data rates (see Table 2-7). All three groups have been investigated, and only the worst-case data rate has been reported.

For 802.11ax-RU test results, see separate UNII 6E OFDMA report, 1C2503170028-10-R2.BCG.

2.6 Software and Firmware

The test was conducted with firmware version 22w173 installed on the EUT.

2.7 EMI Suppression Device(s)/Modifications

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

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3.0 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 C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to) and the guidance provided in KDB 789033 D02 v02r01 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 7m x 3.66m x 2.7m shielded enclosure. The shielded enclosure is manufactured by AP Americas. The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-6. 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 EPCOS 2X60A Power Line Filter (100dB Attenuation, 14kHz-18GHz) and the two EPCOs 2X48A filters (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 ground plane. 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.

Line conducted emissions test results are shown in Section 7.9. Automated test software was used to perform the AC line conducted emissions testing. Automated measurement software utilized is Rohde & Schwarz EMC32, Version 10.50.40.

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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.

Per KDB 414788, radiated emission test sites other than open-field test sites (e.g., shielded anechoic chambers), may be employed for emission measurements below 30MHz if characterized so that the measurements correspond to those obtained at an open-field test site. To determine test site equivalency, a reference sample transmitting at 149kHz was measured on an open field test site (asphalt with no ground plane) and then measured in the 3m semi-anechoic chamber. A calibrated 60cm loop antenna was used while the reference device was rotated through the X, Y and Z axis in order to capture the worst case level. A maximum deviation of 2.77dB at 149kHz was measured when comparing the 3 meter semi-anechoic chamber to the open field site.

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.

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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4.0 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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5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.23-2012. 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)
Conducted Bench Top Measurements	2.07
Line Conducted Disturbance	1.91
Radiated Disturbance (<30MHz)	4.12
Radiated Disturbance (30MHz - 1GHz)	4.85
Radiated Disturbance (1 - 18GHz)	5.08
Radiated Disturbance (>18GHz)	5.22

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6.0 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 with the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent Technologies	N9030A	3Hz-26.5GHz PXA Signal Analyzer	10/31/2024	Annual	10/31/2025	MY55330128
Anritsu	ML2495A	Power Meter	7/8/2024	Annual	7/8/2025	1039008
Anritsu	MA2411B	Pulse Power Sensor	9/5/2024	Annual	9/5/2025	1726262
Anritsu	MA2411B	Pulse Power Sensor	10/21/2024	Annual	10/21/2025	1027293
ATM	180-442-KF	20dB Nominal Gain Horn Antenna	3/24/2025	Annual	3/24/2026	T058601-2
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	4/16/2025	Annual	4/16/2026	00218555
Keysight Technology	N9040B	UXA Signal Analyzer	6/9/2025	Annual	6/9/2026	MY57212015
Mini-Circuits	FLC-1.5FT-SMSM+	30MHz-27GHz Conducted Cable *	6/17/2025	Annual	6/17/2026	16113316
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/14/2024	Annual	8/14/2025	101648
Rohde & Schwarz	FSV40	Signal Analyzer (10Hz-40GHz)	5/20/2025	Annual	5/20/2026	101619
Rohde & Schwarz	ESW44	EMI Test Receiver	5/13/2025	Annual	5/13/2026	101867
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	11/15/2024	Annual	11/15/2025	102326
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/3/2025	Annual	6/3/2026	100052
Rohde & Schwarz	HFH2-ZZ	Loop Antenna	5/12/2025	Annual	5/12/2026	100546
Rohde & Schwarz	ENV216	Two-Line V-Network	4/25/2025	Annual	4/25/2026	101364
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	5/7/2025	Annual	5/7/2026	00304
Rhode & Schwartz	SMW200A	Vector Signal Generator	3/10/2025	Annual	3/10/2026	110589

Table 6-1. Test Equipment List

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.
- * denotes passive equipment that have been internally verified/calibrated.

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7.0 TEST RESULTS

7.1 Summary

Company Name: Apple Inc.
 FCC ID: BCGA3300
 IC: 579C-A3300
 FCC Classification: 15E 6GHz Low Power Dual Client (6CD)

FCC Part Section(s) / KDB Reference	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049, 15.407(a)(11)	RSS Gen [5.1], RSS-248 [4.4]	Occupied Bandwidth/ 26dB Bandwidth	99% of the occupied bandwidth of any channel must be contained within each of its respective U-NII sub bands < 320MHz (5.925 - 7.125GHz)	CONDUCTED	PASS	Section 7.2
15.407(a)(8)	RSS-248 [4.5.3]	Maximum Power Spectral Density	< -1dBm/MHz e.i.r.p.for Low Power Indoor		PASS	Section 7.4
15.407(a)(7)	RSS-248 [4.5.5]		< 17dBm/MHz e.i.r.p. for Standard Power		PASS	
15.407(a)(8)	RSS-248 [4.5.3]	Maximum EIRP	< 24dBm over the frequency band of operation		PASS	Section 7.3
15.407(a)(7)	RSS-248 [4.5.5]		< 30dBm over the frequency band of operation		PASS	
15.407(b)(7)	RSS-248 [4.6.2]	In-Band Emissions	EUT must meet the limits detailed in 15.407(b)(7) and RSS-248 [4.6.2] b)		PASS	Section 7.5
15.407(d)(6)	RSS-248 [4.7]	Contention Based Protocol	EUT must detect AWGN signal with 90% (or better) certainty		PASS	Section 7.7
15.407(a)(7)	RSS-248 [4.5.5]	Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point	EUT maintains its power level at least 6 dB lower than that of the standard-power access point		PASS	See UNII 6E OFDMA Report 1C25031700 28-10-R2.BCG
987594 D02 v03	987594 D02 v03	Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP	EUT maximum power level shall not exceed 30dBm EIRP when connected to Standard Power AP, and 24dBm EIRP when connected to Low Power Indoor AP		PASS	
15.407(b)(6)	RSS-248 [4.6.2]	Undesirable Emissions	< -27dBm/MHz e.i.r.p. outside of the 5.925 – 7.125GHz band	RADIATED	PASS	Section 7.8
15.205, 15.209	RSS-248 [4.6.2] RSS-Gen [7.4.3]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209 (RSS-Gen [7.4.3])		PASS	Section 7.7, 7.9
15.407(b)(9)	RSS-Gen [7.4.2]	AC Conducted Emissions (150kHz – 30MHz)	< FCC 15.207 (RSS-Gen [7.4.2]) limits	LINE CONDUCTED	PASS	Section 7.9

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 "Conducted Automation," Version 1.4.0.
- 5) For radiated testing, 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 3.4.2.
- 6) All radiated measurements were tested at the highest supported power setting per band.

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7.2 26dB & 99% 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 C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to and KDB 789033 D02 v02r01, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

Test Procedure Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to – Section 12.5.2
KDB 789033 D02 v02r01 – Section C

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 = in the range of 1% to 5% 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

Test Notes

1. All data rates and antenna configurations were investigated, and tabular data has been reported. Only worst case plots per bandwidth have been reported.

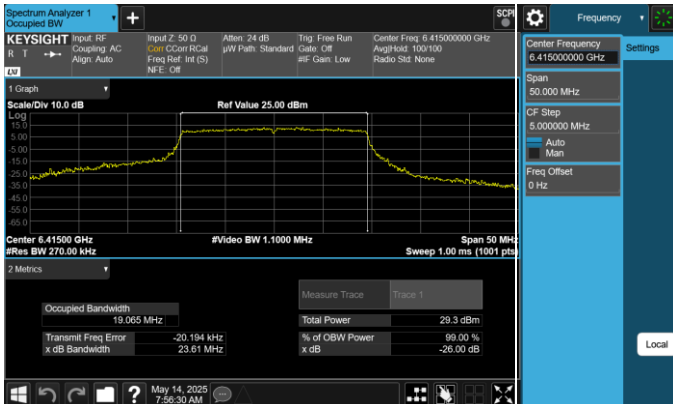
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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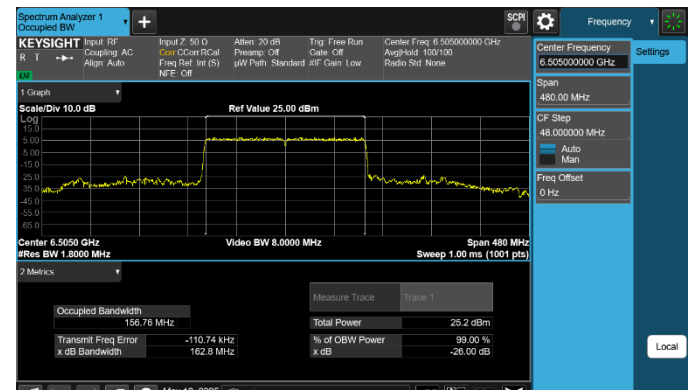
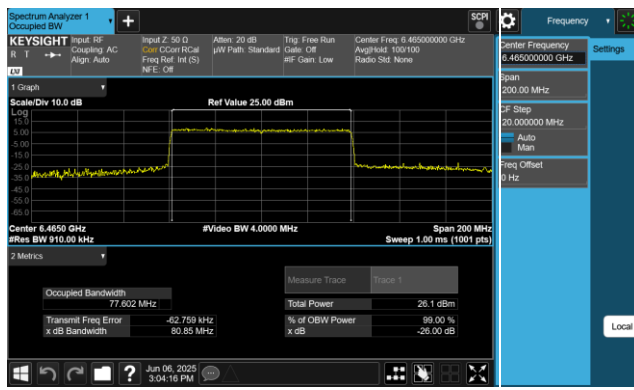
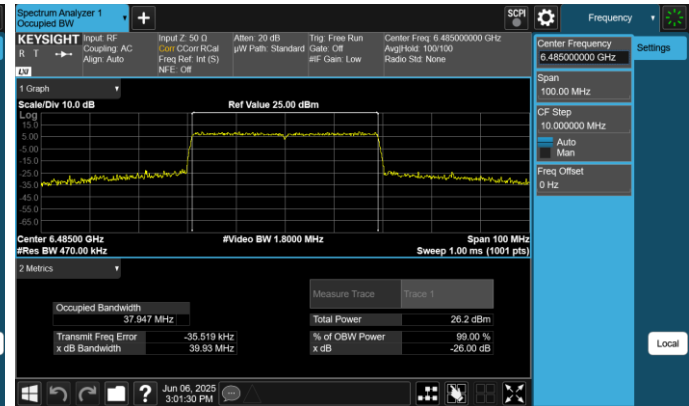
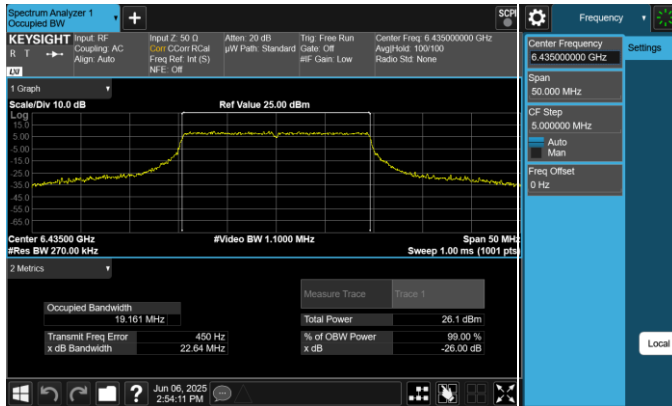
7.2.1 Antenna 0 26dB & 99% Bandwidth Measurements – SP

	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 99% Occupied Bandwidth [MHz]	Measured 26dB Bandwidth [MHz]	Maximum Bandwidth Limit [MHz]	Pass / Fail
Band 5	5935.00	1	a	12.00	16.57	21.03	320	Pass
	6175.00	45	a	12.00	16.56	21.01	320	Pass
	6415.00	93	a	12.00	16.57	21.53	320	Pass
	5935.00	1	ax (20MHz)	49/51.6 (MCS4)	19.01	22.61	320	Pass
	6175.00	45	ax (20MHz)	135/143.4 (MCS11)	19.12	22.35	320	Pass
	6415.00	93	ax (20MHz)	49/51.6 (MCS4)	19.06	23.61	320	Pass
	5965.00	3	ax (40MHz)	98/103.2 (MCS4)	37.65	42.20	320	Pass
	6165.00	43	ax (40MHz)	271/286.8 (MCS11)	37.93	39.84	320	Pass
	6405.00	91	ax (40MHz)	98/103.2 (MCS4)	37.68	44.91	320	Pass
	5985.00	7	ax (80MHz)	567/600.5 (MCS11)	77.53	80.84	320	Pass
	6145.00	39	ax (80MHz)	567/600.5 (MCS11)	77.49	80.70	320	Pass
	6385.00	87	ax (80MHz)	567/600.5 (MCS11)	77.53	80.80	320	Pass
	6025.00	15	ax (160MHz)	1020.8/1201 (MCS11)	156.76	162.41	320	Pass
	6185.00	47	ax (160MHz)	1020.8/1201 (MCS11)	156.73	162.34	320	Pass
	6345.00	79	ax (160MHz)	1020.8/1201 (MCS11)	156.82	162.44	320	Pass
Band 6	6435.00	97	a	54.00	16.59	21.37	320	Pass
	6475.00	105	a	24.00	16.63	20.89	320	Pass
	6515.00	113	a	12.00	16.58	21.05	320	Pass
	6435.00	97	ax (20MHz)	135/143.4 (MCS11)	19.16	22.64	320	Pass
	6475.00	105	ax (20MHz)	135/143.4 (MCS11)	19.11	22.52	320	Pass
	6515.00	113	ax (20MHz)	135/143.4 (MCS11)	19.15	22.58	320	Pass
	6445.00	99	ax (40MHz)	271/286.8 (MCS11)	37.90	39.89	320	Pass
	6485.00	107	ax (40MHz)	271/286.8 (MCS11)	37.95	39.93	320	Pass
	6465.00	103	ax (80MHz)	567/600.5 (MCS11)	77.60	80.85	320	Pass
	6505.00	111	ax (160MHz)	1020.8/1201 (MCS11)	156.76	162.79	320	Pass
Band 7	6535.00	117	a	12.00	16.55	20.69	320	Pass
	6695.00	149	a	12.00	16.55	20.66	320	Pass
	6875.00	181	a	24.00	16.56	20.39	320	Pass
	6535.00	117	ax (20MHz)	24/25.8 (MCS2)	19.03	22.66	320	Pass
	6695.00	149	ax (20MHz)	135/143.4 (MCS11)	19.11	22.45	320	Pass
	6875.00	181	ax (20MHz)	135/143.4 (MCS11)	19.11	22.43	320	Pass
	6565.00	123	ax (40MHz)	271/286.8 (MCS11)	37.95	39.86	320	Pass
	6725.00	155	ax (40MHz)	271/286.8 (MCS11)	37.95	39.84	320	Pass
	6885.00	179	ax (40MHz)	271/286.8 (MCS11)	37.94	39.97	320	Pass
	6545.00	135	ax (80MHz)	567/600.5 (MCS11)	77.56	80.74	320	Pass
	6705.00	151	ax (80MHz)	567/600.5 (MCS11)	77.57	80.70	320	Pass
	6865.00	167	ax (80MHz)	567/600.5 (MCS11)	77.56	80.73	320	Pass
	6665.00	143	ax (160MHz)	1020.8/1201 (MCS11)	156.82	162.95	320	Pass

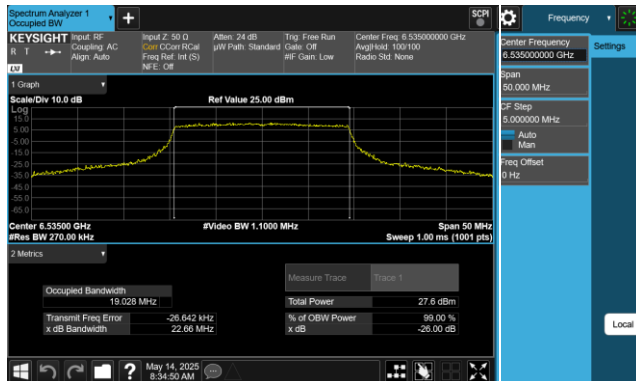
Table 7-2. Conducted Bandwidth Measurements Antenna 0

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 19 of 171

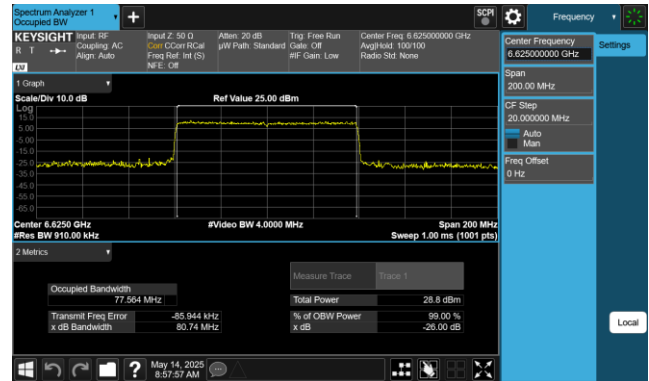




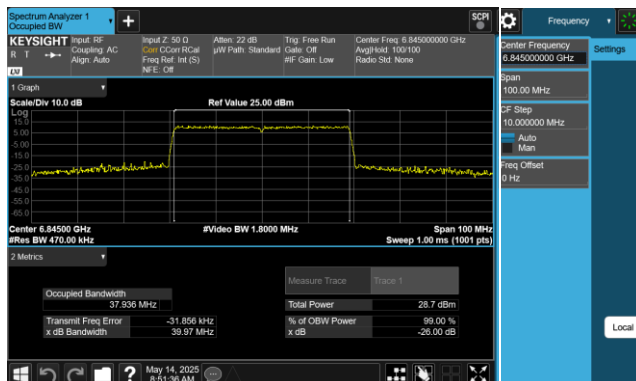
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 21 of 171



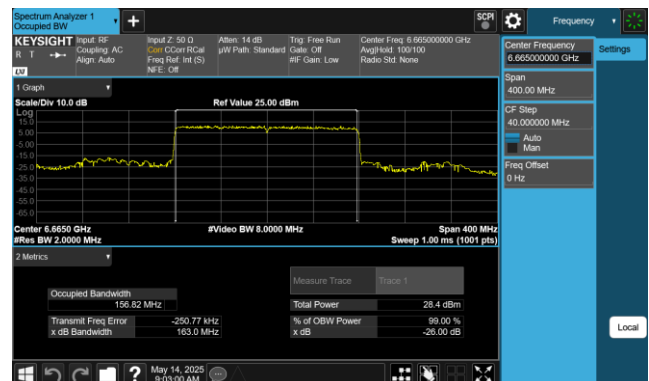
Plot 7-9. 26dB & 99% Bandwidth Plot Antenna 0 (20MHz 802.11ax (UNII Band 7) – Ch. 117)



Plot 7-11. 26dB & 99% Bandwidth Plot Antenna 0 (80MHz 802.11ax (UNII Band 7) – Ch. 135)



Plot 7-10. 26dB & 99% Bandwidth Plot Antenna 0 (40MHz 802.11ax (UNII Band 7) – Ch. 179)



Plot 7-12. 26dB & 99% Bandwidth Plot Antenna 0 (160MHz 802.11ax (UNII Band 7) – Ch. 143)

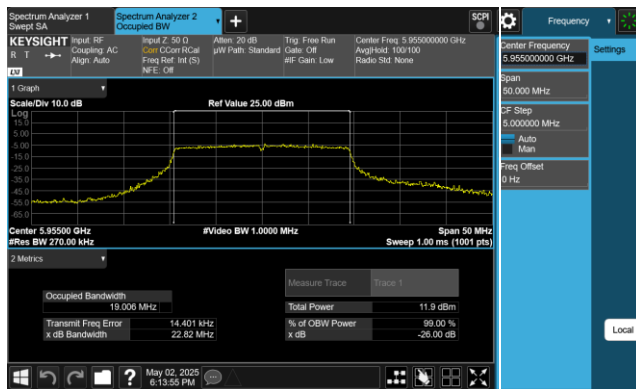
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 22 of 171

7.2.2 Antenna 0 26dB & 99% Bandwidth Measurements – LPI

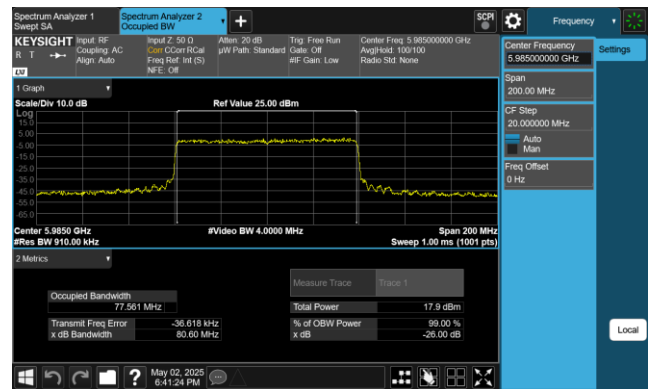
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 99% Occupied Bandwidth [MHz]	Measured 26dB Bandwidth [MHz]	Maximum Bandwidth Limit [MHz]	Pass / Fail
Band 5	5935.00	1	a	12.00	16.59	21.24	320	Pass
	6175.00	45	a	12.00	16.54	20.64	320	Pass
	6415.00	93	a	24.00	16.59	21.52	320	Pass
	5935.00	1	ax (20MHz)	24/25.8 (MCS2)	19.01	22.82	320	Pass
	6175.00	45	ax (20MHz)	135/143.4 (MCS11)	19.10	22.59	320	Pass
	6415.00	93	ax (20MHz)	24/25.8 (MCS2)	19.03	22.68	320	Pass
	5965.00	3	ax (40MHz)	98/103.2 (MCS4)	37.66	39.96	320	Pass
	6165.00	43	ax (40MHz)	271/286.8 (MCS11)	37.93	39.78	320	Pass
	6405.00	91	ax (40MHz)	98/103.2 (MCS4)	37.63	40.13	320	Pass
	5985.00	7	ax (80MHz)	567/600.5 (MCS11)	77.56	80.60	320	Pass
	6145.00	39	ax (80MHz)	567/600.5 (MCS11)	77.65	80.51	320	Pass
	6385.00	87	ax (80MHz)	102/108.1 (MCS2)	76.83	80.53	320	Pass
	6025.00	15	ax (160MHz)	367.5/432.4 (MCS4)	155.66	175.93	320	Pass
	6185.00	47	ax (160MHz)	1020.8/1201 (MCS11)	156.26	162.27	320	Pass
Band 6	6345.00	79	ax (160MHz)	367.5/432.4 (MCS4)	155.00	162.40	320	Pass
	6435.00	97	a	12.00	16.53	20.43	320	Pass
	6475.00	105	a	54.00	16.55	20.35	320	Pass
	6515.00	113	a	12.00	16.53	20.82	320	Pass
	6435.00	97	ax (20MHz)	49/51.6 (MCS4)	19.03	22.04	320	Pass
	6475.00	105	ax (20MHz)	49/51.6 (MCS4)	19.03	22.93	320	Pass
	6515.00	113	ax (20MHz)	135/143.4 (MCS11)	19.13	22.28	320	Pass
	6445.00	99	ax (40MHz)	271/286.8 (MCS11)	37.85	39.78	320	Pass
	6485.00	107	ax (40MHz)	271/286.8 (MCS11)	37.88	39.80	320	Pass
	6465.00	103	ax (80MHz)	567/600.5 (MCS11)	77.47	80.37	320	Pass
Band 7	6505.00	111	ax (160MHz)	1020.8/1201 (MCS11)	156.55	162.27	320	Pass
	6535.00	117	a	12.00	16.53	20.52	320	Pass
	6695.00	149	a	24.00	16.53	20.76	320	Pass
	6875.00	185	a	24.00	16.56	20.55	320	Pass
	6535.00	117	ax (20MHz)	135/143.4 (MCS11)	19.08	22.47	320	Pass
	6695.00	149	ax (20MHz)	135/143.4 (MCS11)	19.07	22.65	320	Pass
	6875.00	185	ax (20MHz)	135/143.4 (MCS11)	19.08	22.02	320	Pass
	6565.00	123	ax (40MHz)	98/103.2 (MCS4)	37.57	39.71	320	Pass
	6725.00	155	ax (40MHz)	49/51.6 (MCS2)	37.60	39.71	320	Pass
	6885.00	179	ax (40MHz)	271/286.8 (MCS11)	37.90	39.71	320	Pass
	6545.00	119	ax (80MHz)	567/600.5 (MCS11)	77.34	80.50	320	Pass
	6705.00	151	ax (80MHz)	567/600.5 (MCS11)	77.52	80.65	320	Pass
	6865.00	183	ax (80MHz)	567/600.5 (MCS11)	77.59	80.44	320	Pass
	6665.00	143	ax (160MHz)	1020.8/1201 (MCS11)	156.45	162.22	320	Pass
Band 8	6825.00	175	ax (160MHz)	1020.8/1201 (MCS11)	156.32	162.28	320	Pass
	6895.00	189	a	12.00	16.53	20.08	320	Pass
	6995.00	209	a	12.00	16.55	20.91	320	Pass
	7115.00	233	a	54.00	16.56	20.67	320	Pass
	6895.00	189	ax (20MHz)	135/143.4 (MCS11)	19.12	22.52	320	Pass
	6995.00	209	ax (20MHz)	135/143.4 (MCS11)	19.11	22.70	320	Pass
	7115.00	233	ax (20MHz)	49/51.6 (MCS4)	19.01	22.02	320	Pass
	6885.00	187	ax (40MHz)	271/286.8 (MCS11)	37.88	39.83	320	Pass
	7005.00	211	ax (40MHz)	271/286.8 (MCS11)	37.88	39.76	320	Pass
	7085.00	227	ax (40MHz)	98/103.2 (MCS4)	37.74	40.77	320	Pass
	6945.00	199	ax (80MHz)	567/600.5 (MCS11)	77.35	80.51	320	Pass
	7025.00	215	ax (80MHz)	567/600.5 (MCS11)	77.50	80.57	320	Pass
	6985.00	207	ax (160MHz)	1020.8/1201 (MCS11)	156.40	162.43	320	Pass

Table 7-3. Conducted Bandwidth Measurements Antenna 0

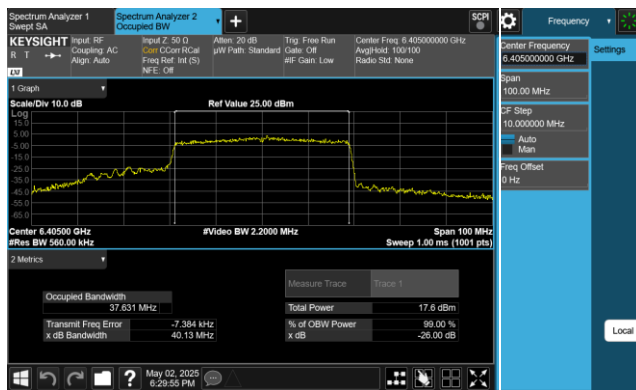
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 23 of 171



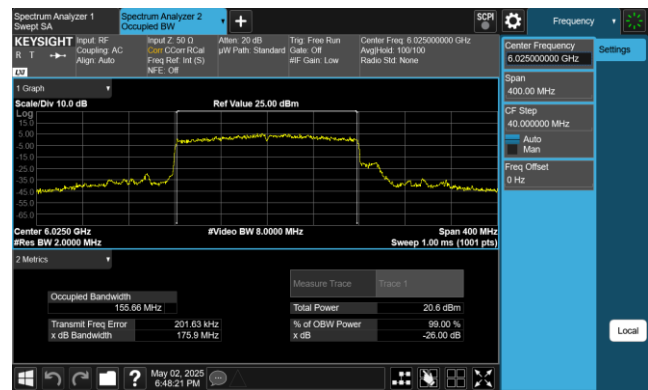
Plot 7-13. 26dB & 99% Bandwidth Plot Antenna 0 (20MHz 802.11ax (UNII Band 5) – Ch. 1)



Plot 7-15. 26dB & 99% Bandwidth Plot Antenna 0 (80MHz 802.11ax (UNII Band 5) – Ch. 7)

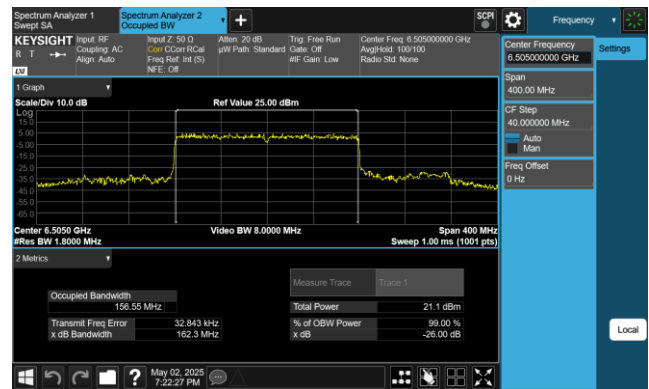
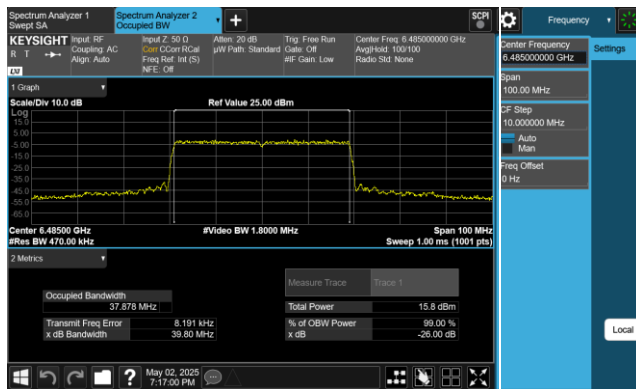
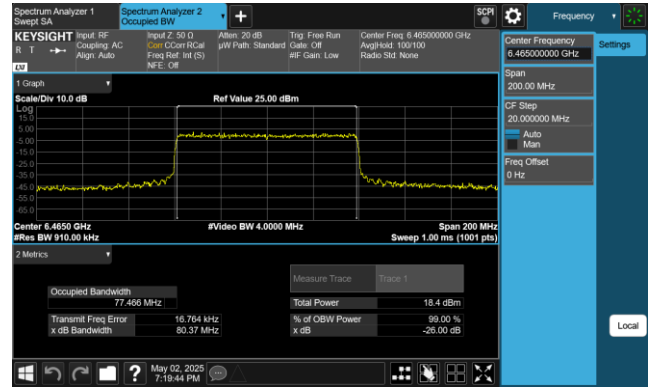
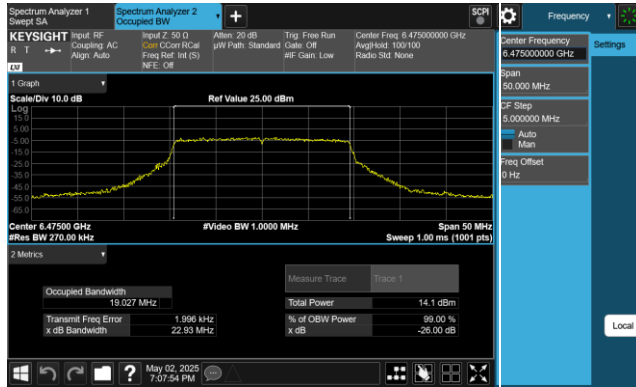


Plot 7-14. 26dB & 99% Bandwidth Plot Antenna 0 (40MHz 802.11ax (UNII Band 5) – Ch. 91)

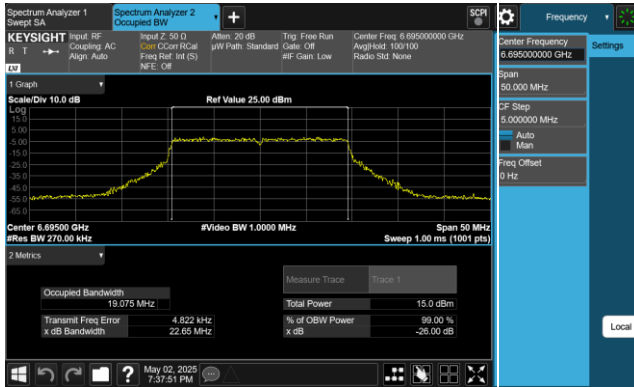


Plot 7-16. 26dB & 99% Bandwidth Plot Antenna 0 (160MHz 802.11ax (UNII Band 5) – Ch. 15)

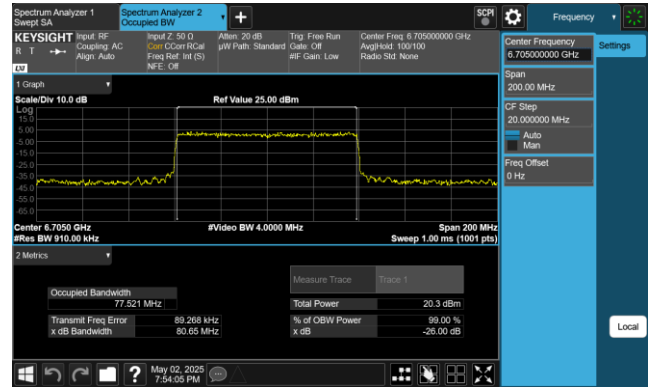
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 24 of 171



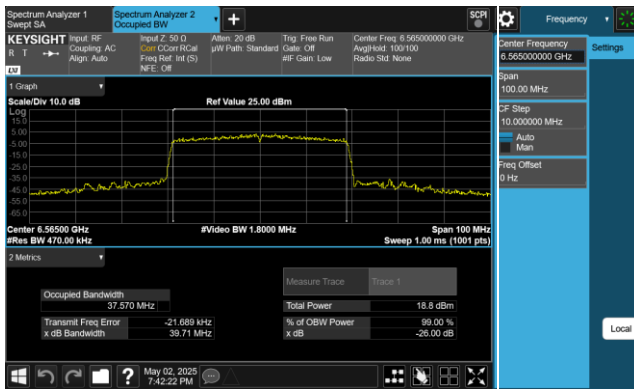
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 25 of 171



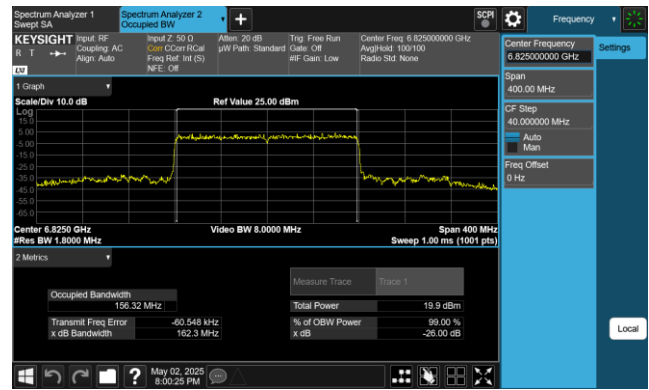
Plot 7-21. 26dB & 99% Bandwidth Plot Antenna 0 (20MHz 802.11ax (UNII Band 7) – Ch. 149)



Plot 7-23. 26dB & 99% Bandwidth Plot Antenna 0 (80MHz 802.11ax (UNII Band 7) – Ch. 151)

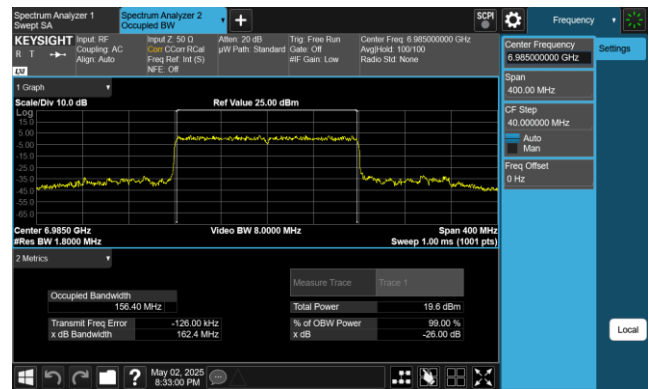
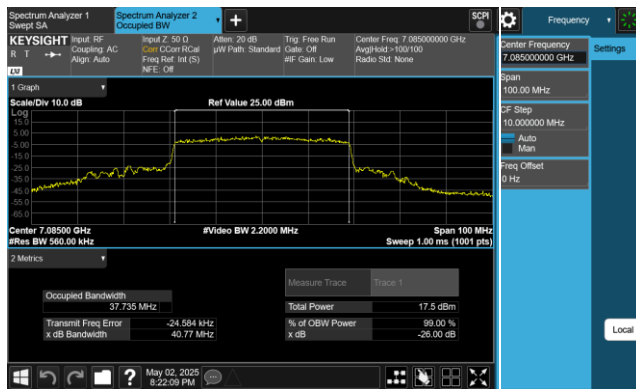
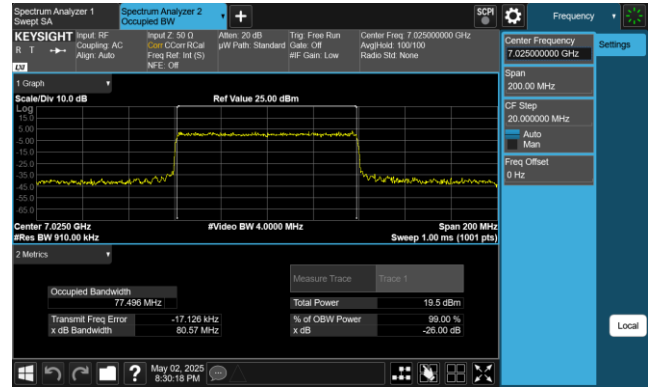
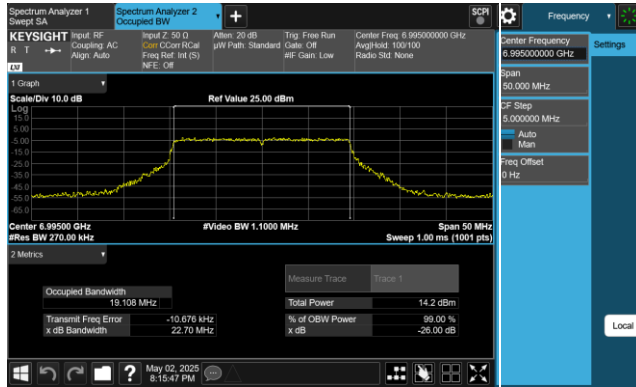


Plot 7-22. 26dB & 99% Bandwidth Plot Antenna 0 (40MHz 802.11ax (UNII Band 7) – Ch. 123)



Plot 7-24. 26dB & 99% Bandwidth Plot Antenna 0 (160MHz 802.11ax (UNII Band 7) – Ch. 175)

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 26 of 171



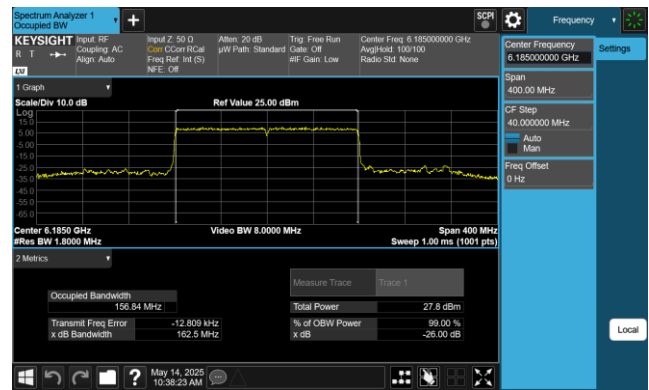
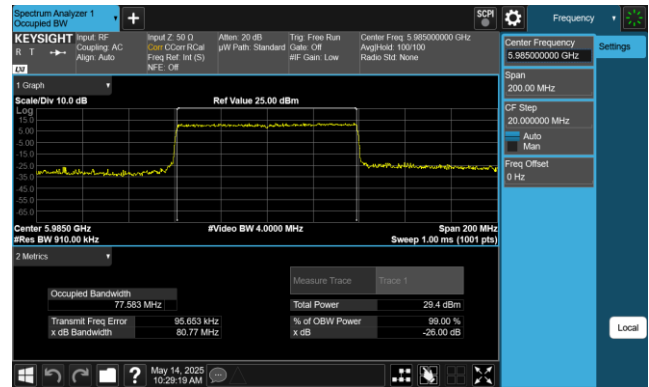
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 27 of 171

7.2.3 Antenna 1 26dB & 99% Bandwidth Measurements – SP

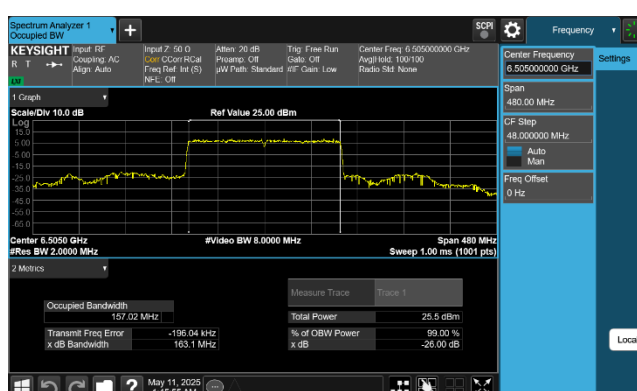
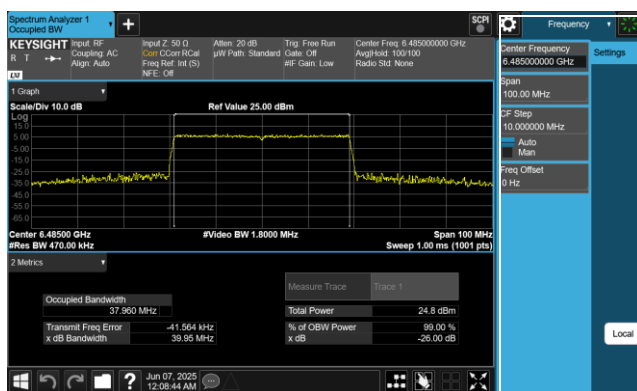
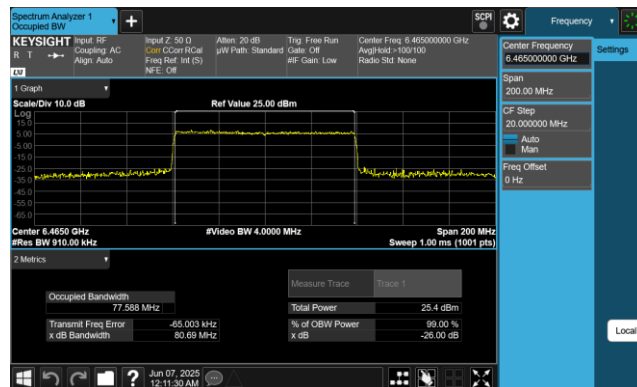
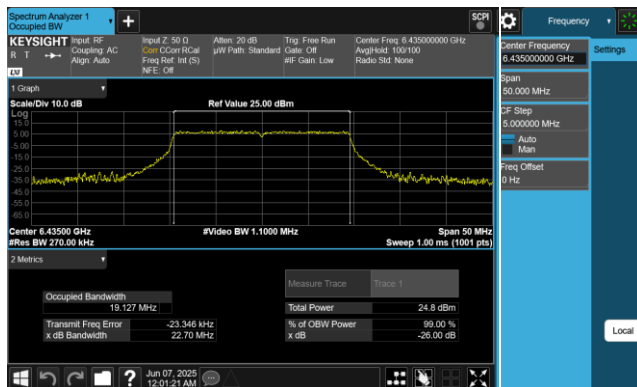
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 99% Occupied Bandwidth [MHz]	Measured 26dB Bandwidth [MHz]	Maximum Bandwidth Limit [MHz]	Pass / Fail
Band 5	5935.00	1	a	24.00	16.63	20.99	320	Pass
	6175.00	45	a	12.00	16.58	20.97	320	Pass
	6415.00	93	a	24.00	16.62	21.06	320	Pass
	5935.00	1	ax (20MHz)	135/143.4 (MCS11)	19.11	22.59	320	Pass
	6175.00	45	ax (20MHz)	24/25.8 (MCS2)	19.03	22.32	320	Pass
	6415.00	93	ax (20MHz)	49/51.6 (MCS4)	19.03	23.09	320	Pass
	5965.00	3	ax (40MHz)	98/103.2 (MCS4)	37.61	42.38	320	Pass
	6165.00	43	ax (40MHz)	271/286.8 (MCS11)	37.98	39.95	320	Pass
	6405.00	91	ax (40MHz)	271/286.8 (MCS11)	37.89	39.92	320	Pass
	5985.00	7	ax (80MHz)	567/600.5 (MCS11)	77.58	80.77	320	Pass
	6145.00	39	ax (80MHz)	567/600.5 (MCS11)	77.65	80.72	320	Pass
	6385.00	87	ax (80MHz)	567/600.5 (MCS11)	77.55	80.69	320	Pass
	6025.00	15	ax (160MHz)	1020.8/1201 (MCS11)	156.74	162.40	320	Pass
	6185.00	47	ax (160MHz)	1020.8/1201 (MCS11)	156.84	162.46	320	Pass
	6345.00	79	ax (160MHz)	1020.8/1201 (MCS11)	156.70	162.37	320	Pass
Band 6	6435.00	97	a	12.00	16.55	20.89	320	Pass
	6475.00	105	a	12.00	16.55	20.62	320	Pass
	6515.00	113	a	12.00	16.60	21.00	320	Pass
	6435.00	97	ax (20MHz)	135/143.4 (MCS11)	19.13	22.70	320	Pass
	6475.00	105	ax (20MHz)	135/143.4 (MCS11)	19.12	22.41	320	Pass
	6515.00	113	ax (20MHz)	135/143.4 (MCS11)	19.12	22.45	320	Pass
	6445.00	99	ax (40MHz)	271/286.8 (MCS11)	37.92	39.94	320	Pass
	6485.00	107	ax (40MHz)	271/286.8 (MCS11)	37.96	39.95	320	Pass
	6465.00	103	ax (80MHz)	567/600.5 (MCS11)	77.59	80.69	320	Pass
	6505.00	111	ax (160MHz)	1020.8/1201 (MCS11)	157.02	163.08	320	Pass
Band 7	6535.00	117	a	24.00	16.58	20.83	320	Pass
	6695.00	149	a	12.00	16.53	20.47	320	Pass
	6875.00	181	a	12.00	16.57	20.80	320	Pass
	6535.00	117	ax (20MHz)	135/143.4 (MCS11)	19.11	22.66	320	Pass
	6695.00	149	ax (20MHz)	135/143.4 (MCS11)	19.13	22.43	320	Pass
	6875.00	181	ax (20MHz)	24/25.8 (MCS2)	19.02	22.33	320	Pass
	6565.00	123	ax (40MHz)	271/286.8 (MCS11)	37.92	39.96	320	Pass
	6725.00	155	ax (40MHz)	49/51.6 (MCS2)	37.55	39.80	320	Pass
	6885.00	179	ax (40MHz)	271/286.8 (MCS11)	37.91	39.92	320	Pass
	6545.00	135	ax (80MHz)	567/600.5 (MCS11)	77.48	80.73	320	Pass
	6705.00	151	ax (80MHz)	567/600.5 (MCS11)	77.51	80.74	320	Pass
	6865.00	167	ax (80MHz)	567/600.5 (MCS11)	77.50	80.72	320	Pass
	6665.00	143	ax (160MHz)	1020.8/1201 (MCS11)	157.01	162.38	320	Pass

Table 7-4. Conducted Bandwidth Measurements Antenna 1

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 28 of 171



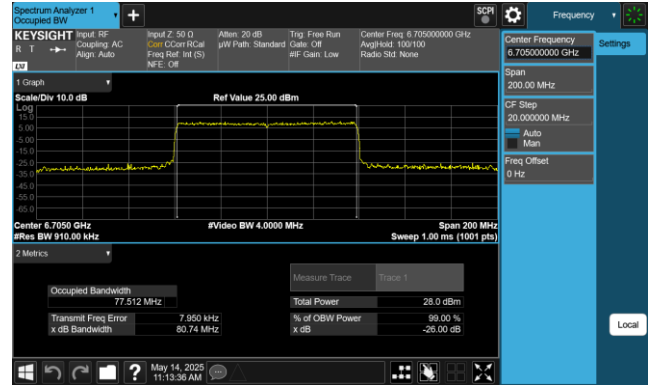
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 29 of 171



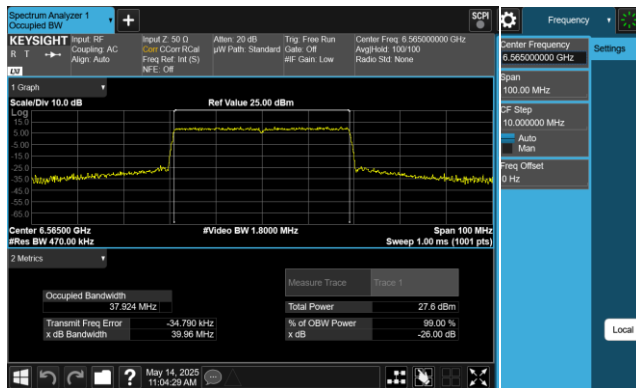
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 30 of 171



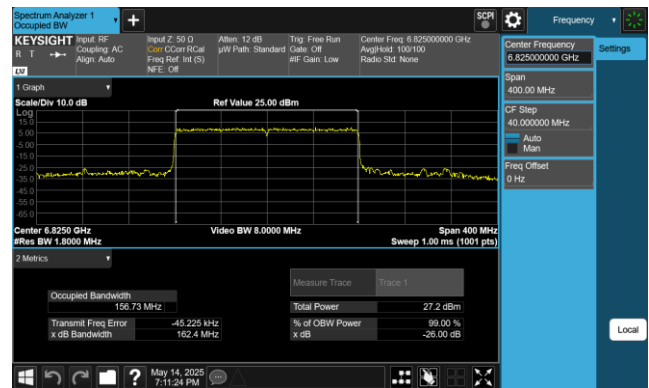
Plot 7-37. 26dB & 99% Bandwidth Plot Antenna 1 (20MHz 802.11ax (UNII Band 7) – Ch. 117)



Plot 7-39. 26dB & 99% Bandwidth Plot Antenna 1 (80MHz 802.11ax (UNII Band 7) – Ch. 151)



Plot 7-38. 26dB & 99% Bandwidth Plot Antenna 1 (40MHz 802.11ax (UNII Band 7) – Ch. 123)



Plot 7-40. 26dB & 99% Bandwidth Plot Antenna 1 (160MHz 802.11ax (UNII Band 7) – Ch. 175)

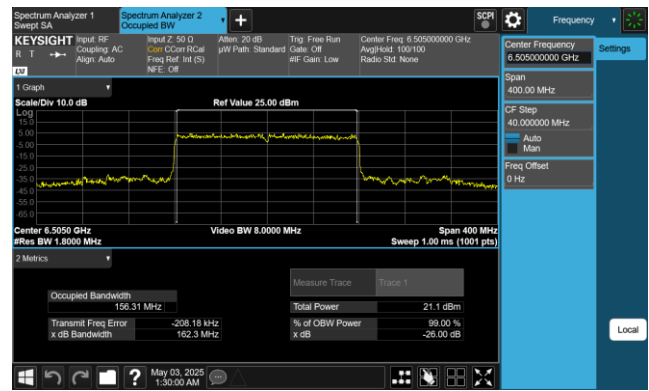
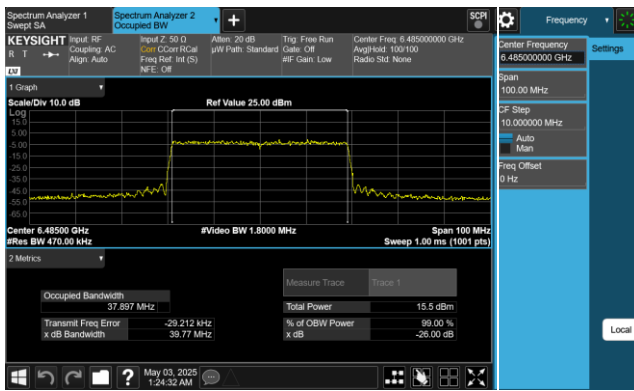
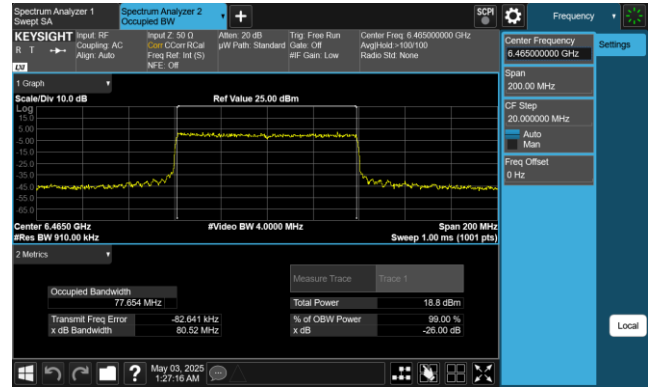
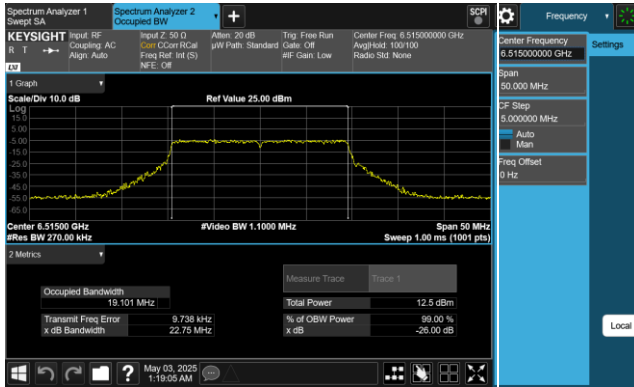
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 31 of 171

7.2.4 Antenna 1 26dB & 99% Bandwidth Measurements – LPI

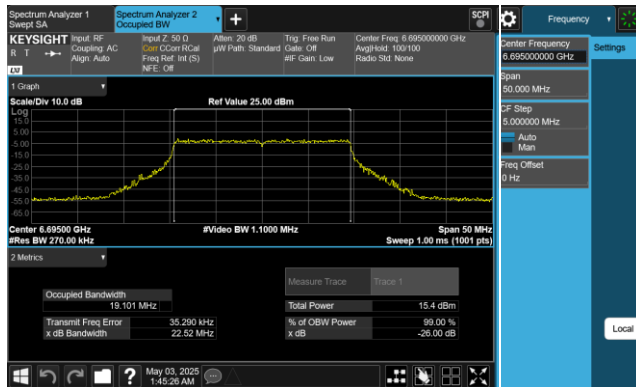
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 99% Occupied Bandwidth [MHz]	Measured 26dB Bandwidth [MHz]	Maximum Bandwidth Limit [MHz]	Pass / Fail
Band 5	5935.00	1	a	12.00	16.57	21.11	320	Pass
	6175.00	45	a	24.00	16.54	20.31	320	Pass
	6415.00	93	a	24.00	16.59	21.36	320	Pass
	5935.00	1	ax (20MHz)	135/143.4 (MCS11)	19.07	22.50	320	Pass
	6175.00	45	ax (20MHz)	24/25.8 (MCS2)	18.99	22.43	320	Pass
	6415.00	93	ax (20MHz)	49/51.6 (MCS4)	19.00	23.61	320	Pass
	5965.00	3	ax (40MHz)	98/103.2 (MCS4)	37.77	40.71	320	Pass
	6165.00	43	ax (40MHz)	271/286.8 (MCS11)	37.93	39.73	320	Pass
	6405.00	91	ax (40MHz)	98/103.2 (MCS4)	37.67	40.63	320	Pass
	5985.00	7	ax (80MHz)	204/216.2 (MCS4)	77.07	81.04	320	Pass
	6145.00	39	ax (80MHz)	567/600.5 (MCS11)	77.50	80.44	320	Pass
	6385.00	87	ax (80MHz)	102/108.1 (MCS2)	76.98	80.44	320	Pass
	6025.00	15	ax (160MHz)	1020.8/1201 (MCS11)	156.60	162.33	320	Pass
	6185.00	47	ax (160MHz)	1020.8/1201 (MCS11)	156.76	162.36	320	Pass
Band 6	6345.00	79	ax (160MHz)	1020.8/1201 (MCS11)	156.23	162.30	320	Pass
	6435.00	97	a	12.00	16.55	20.72	320	Pass
	6475.00	105	a	12.00	16.54	20.46	320	Pass
	6515.00	113	a	12.00	16.52	20.44	320	Pass
	6345.00	97	ax (20MHz)	24/25.8 (MCS2)	19.02	22.26	320	Pass
	6475.00	105	ax (20MHz)	49/51.6 (MCS4)	19.03	22.17	320	Pass
	6515.00	113	ax (20MHz)	135/143.4 (MCS11)	19.10	22.75	320	Pass
	6445.00	99	ax (40MHz)	271/286.8 (MCS11)	37.84	39.68	320	Pass
	6485.00	107	ax (40MHz)	271/286.8 (MCS11)	37.90	39.77	320	Pass
	6465.00	103	ax (80MHz)	567/600.5 (MCS11)	77.65	80.52	320	Pass
Band 7	6505.00	111	ax (160MHz)	1020.8/1201 (MCS11)	156.31	162.26	320	Pass
	6535.00	117	a	12.00	16.51	20.57	320	Pass
	6695.00	149	a	12.00	16.53	20.13	320	Pass
	6875.00	185	a	12.00	16.54	20.45	320	Pass
	6535.00	117	ax (20MHz)	49/51.6 (MCS4)	19.01	22.49	320	Pass
	6695.00	149	ax (20MHz)	135/143.4 (MCS11)	19.10	22.52	320	Pass
	6875.00	185	ax (20MHz)	135/143.4 (MCS11)	19.10	22.49	320	Pass
	6565.00	123	ax (40MHz)	271/286.8 (MCS11)	37.85	39.77	320	Pass
	6725.00	155	ax (40MHz)	271/286.8 (MCS11)	37.92	39.77	320	Pass
	6885.00	179	ax (40MHz)	271/286.8 (MCS11)	37.91	39.86	320	Pass
	6545.00	119	ax (80MHz)	567/600.5 (MCS11)	77.61	80.52	320	Pass
	6705.00	151	ax (80MHz)	567/600.5 (MCS11)	77.38	80.56	320	Pass
	6865.00	183	ax (80MHz)	567/600.5 (MCS11)	77.49	80.54	320	Pass
	6665.00	143	ax (160MHz)	1020.8/1201 (MCS11)	156.65	162.21	320	Pass
Band 8	6825.00	175	ax (160MHz)	1020.8/1201 (MCS11)	156.62	162.25	320	Pass
	6895.00	189	a	12.00	16.55	20.37	320	Pass
	6995.00	209	a	12.00	16.53	20.68	320	Pass
	7115.00	233	a	12.00	16.56	20.53	320	Pass
	6895.00	189	ax (20MHz)	24/25.8 (MCS2)	19.01	22.54	320	Pass
	6995.00	209	ax (20MHz)	135/143.4 (MCS11)	19.08	22.30	320	Pass
	7115.00	233	ax (20MHz)	24/25.8 (MCS2)	19.03	22.46	320	Pass
	6925.00	187	ax (40MHz)	49/51.6 (MCS2)	37.51	39.74	320	Pass
	7005.00	211	ax (40MHz)	271/286.8 (MCS11)	37.92	39.66	320	Pass
	7085.00	227	ax (40MHz)	98/103.2 (MCS4)	37.69	40.70	320	Pass
	6945.00	199	ax (80MHz)	102/108.1 (MCS2)	76.74	80.54	320	Pass
	7025.00	215	ax (80MHz)	204/216.2 (MCS4)	76.89	80.45	320	Pass
	6985.00	207	ax (160MHz)	1020.8/1201 (MCS11)	156.94	162.16	320	Pass

Table 7-5. Conducted Bandwidth Measurements Antenna 1

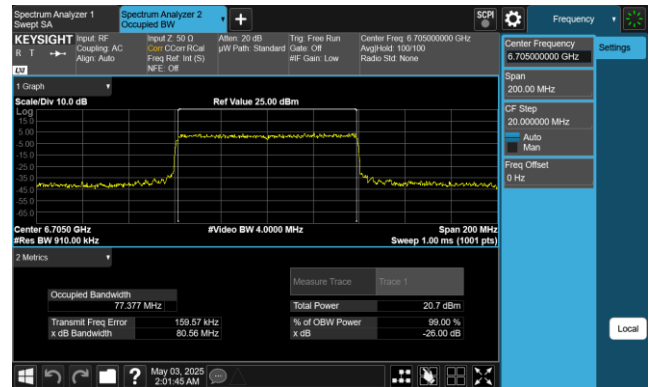
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 32 of 171



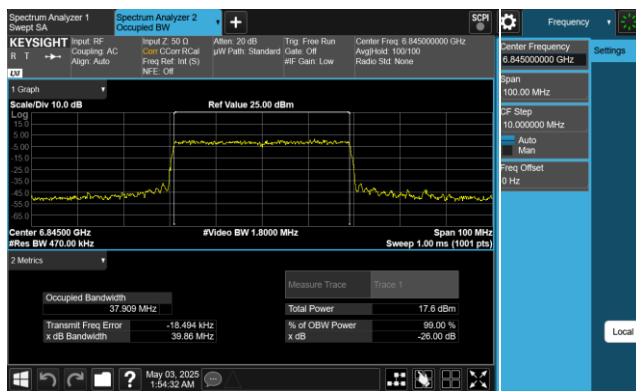
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 34 of 171



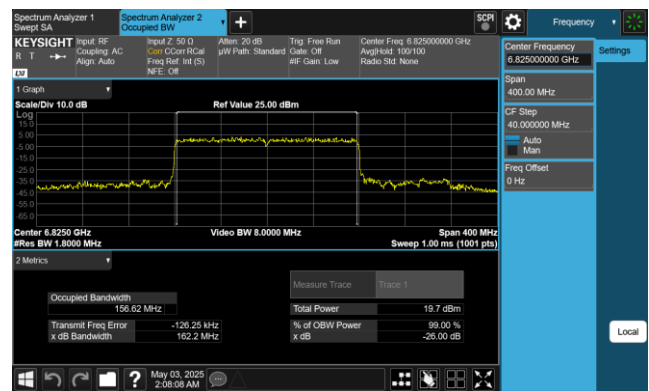
Plot 7-49. 26dB & 99% Bandwidth Plot Antenna 1 (20MHz 802.11ax (UNII Band 7) – Ch. 149)



Plot 7-51. 26dB & 99% Bandwidth Plot Antenna 1 (80MHz 802.11ax (UNII Band 7) – Ch. 151)

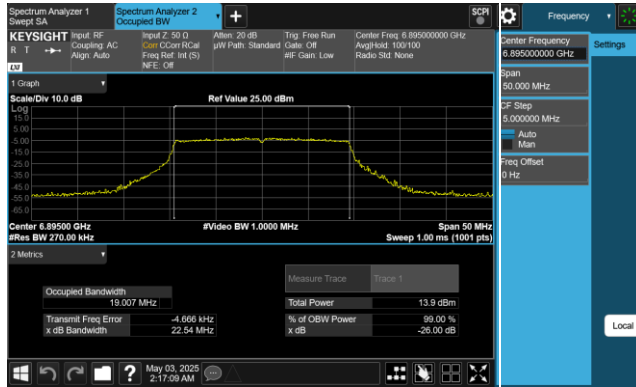


Plot 7-50. 26dB & 99% Bandwidth Plot Antenna 1 (40MHz 802.11ax (UNII Band 7) – Ch. 179)

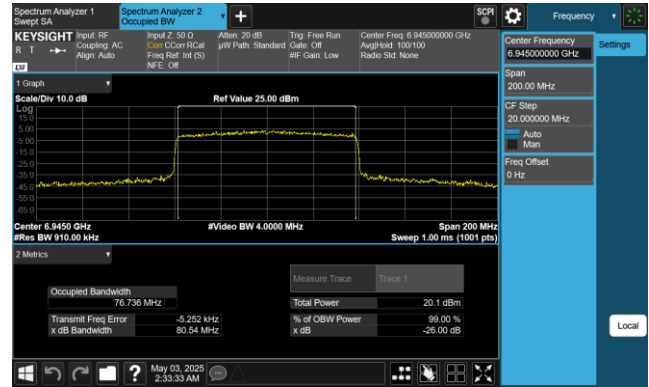


Plot 7-52. 26dB & 99% Bandwidth Plot Antenna 1 (160MHz 802.11ax (UNII Band 7) – Ch. 175)

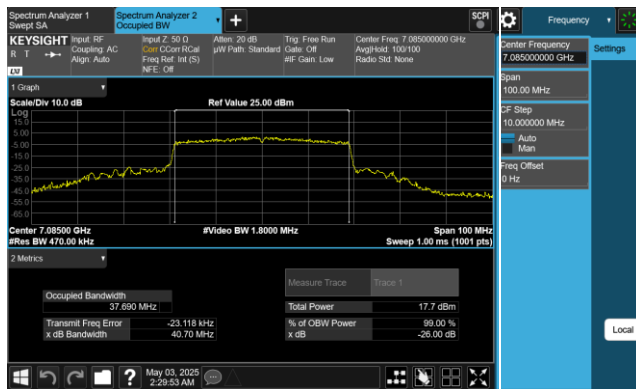
FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 35 of 171



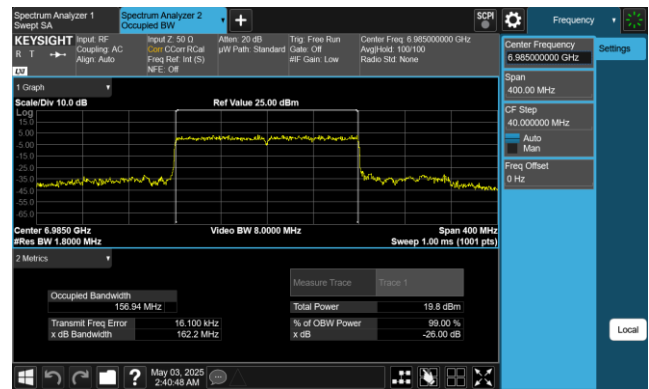
Plot 7-53. 26dB & 99% Bandwidth Plot Antenna 1 (20MHz 802.11ax (UNII Band 8) – Ch. 189)



Plot 7-55. 26dB & 99% Bandwidth Plot Antenna 1 (80MHz 802.11ax (UNII Band 8) – Ch. 199)



Plot 7-54. 26dB & 99% Bandwidth Plot Antenna 1 (40MHz 802.11ax (UNII Band 8) – Ch. 227)



Plot 7-56. 26dB & 99% Bandwidth Plot Antenna 1 (160MHz 802.11ax (UNII Band 8) – Ch. 207)

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 36 of 171

7.3 Conducted Output Power and Max EIRP 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 C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to and KDB 789033 D02 v02r01, and at the appropriate frequencies.

In the 5.925 – 7.125GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm for Standard Power mode (SP), and 24dBm for Low Power Indoor mode (LPI).

Test Procedure Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to – Section 12.4.3.2 Method PM-G

KDB 789033 D02 v02r01 – Section E3)b) Method PM-G

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to – Section 14.4 Measure-and-Sum Technique

KDB 662911 v02r01 – Section E)1) 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

None

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 37 of 171

7.3.1 Antenna 0 Conducted Output Power Measurements – SP

6GHz (20MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]		Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11a	802.11ax				
	5955	1	AVG	17.79	16.91	2.85	20.64	30.00	-9.36
	6175	45	AVG	17.74	16.86	2.85	20.59	30.00	-9.42
	6415	93	AVG	17.81	16.97	2.85	20.66	30.00	-9.34
	6435	97	AVG	17.74	16.74	1.73	19.47	30.00	-10.53
	6475	105	AVG	17.95	17.00	1.73	19.68	30.00	-10.32
	6515	113	AVG	17.39	16.48	1.73	19.12	30.00	-10.88
	6535	117	AVG	17.38	16.10	-1.02	16.36	30.00	-13.64
	6695	149	AVG	17.21	16.36	-1.02	16.19	30.00	-13.81
	6855	181	AVG	17.41	16.47	-1.02	16.39	30.00	-13.61

Table 7-6. Antenna 0 20MHz BW 802.11a/ax(SU) (UNII) Maximum Conducted Output Power

6GHz (40MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5965	3	AVG	16.49	2.85	19.34	30.00	-10.67
	6165	43	AVG	16.50	2.85	19.35	30.00	-10.65
	6405	91	AVG	16.64	2.85	19.49	30.00	-10.51
	6445	99	AVG	16.64	1.73	18.37	30.00	-11.63
	6485	107	AVG	16.88	1.73	18.61	30.00	-11.39
	6565	123	AVG	16.46	-1.02	15.44	30.00	-14.56
	6725	155	AVG	16.40	-1.02	15.38	30.00	-14.62
	6845	179	AVG	16.07	-1.02	15.05	30.00	-14.95

Table 7-7. Antenna 0 40MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (80MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5985	7	AVG	16.83	2.85	19.68	30.00	-10.32
	6145	39	AVG	16.77	2.85	19.62	30.00	-10.38
	6385	87	AVG	16.73	2.85	19.58	30.00	-10.42
	6465	103	AVG	16.19	1.73	17.92	30.00	-12.08
	6625	135	AVG	16.29	-1.02	15.27	30.00	-14.73
	6705	151	AVG	16.36	-1.02	15.34	30.00	-14.66
	6785	167	AVG	16.39	-1.02	15.37	30.00	-14.63

Table 7-8. Antenna 0 80MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 38 of 171

6GHz (160MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	6025	15	AVG	15.91	2.85	18.76	30.00	-11.24
	6185	47	AVG	15.03	2.85	17.88	30.00	-12.12
	6345	79	AVG	15.49	2.85	18.34	30.00	-11.66
	6505	111	AVG	15.86	1.73	17.59	30.00	-12.41
	6665	143	AVG	14.73	-1.02	13.71	30.00	-16.29

Table 7-9. Antenna 0 160MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 39 of 171

7.3.2 Antenna 0 Conducted Output Power Measurements – LPI

6GHz (20MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]		Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11a	802.11ax				
	5955	1	AVG	4.95	5.25	2.85	8.10	24.00	-15.90
	6175	45	AVG	4.79	5.59	2.85	8.44	24.00	-15.56
	6415	93	AVG	6.04	6.53	2.85	9.38	24.00	-14.62
	6435	97	AVG	5.61	6.31	1.73	8.04	24.00	-15.96
	6475	105	AVG	5.51	6.25	1.73	7.98	24.00	-16.02
	6515	113	AVG	5.53	6.01	1.73	7.74	24.00	-16.27
	6535	117	AVG	8.46	8.99	-1.02	7.97	24.00	-16.03
	6695	149	AVG	7.79	8.74	-1.02	7.72	24.00	-16.28
	6875	185	AVG	7.29	7.63	-1.02	6.61	24.00	-17.39
	6895	189	AVG	7.28	7.60	-0.26	7.34	24.00	-16.66
	6995	209	AVG	7.17	7.27	-0.26	7.01	24.00	-17.00
	7095	229	AVG	5.91	5.51	-0.26	5.65	24.00	-18.35

Table 7-10. Antenna 0 20MHz BW 802.11a/ax(SU) (UNII) Maximum Conducted Output Power

6GHz (40MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5965	3	AVG	7.90	2.85	10.75	24.00	-13.25
	6165	43	AVG	7.79	2.85	10.64	24.00	-13.36
	6405	91	AVG	9.17	2.85	12.02	24.00	-11.98
	6445	99	AVG	8.65	1.73	10.38	24.00	-13.62
	6485	107	AVG	8.82	1.73	10.55	24.00	-13.45
	6565	123	AVG	11.10	-1.02	10.08	24.00	-13.92
	6725	155	AVG	10.91	-1.02	9.89	24.00	-14.12
	6845	179	AVG	10.71	-1.02	9.69	24.00	-14.31
	6885	187	AVG	9.92	-0.26	9.66	24.00	-14.34
	7085	227	AVG	9.64	-0.26	9.38	24.00	-14.62

Table 7-11. Antenna 0 40MHz 802.11ax(SU) BW (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 40 of 171

6GHz (80MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5985	7	AVG	10.21	2.85	13.06	24.00	-10.94
	6145	39	AVG	10.76	2.85	13.61	24.00	-10.39
	6385	87	AVG	12.24	2.85	15.09	24.00	-8.91
	6465	103	AVG	11.46	1.73	13.19	24.00	-10.81
	6545	119	AVG	11.21	-1.02	10.19	24.00	-13.81
	6705	151	AVG	13.84	-1.02	12.82	24.00	-11.18
	6865	183	AVG	12.94	-1.02	11.92	24.00	-12.08
	6945	199	AVG	12.75	-0.26	12.49	24.00	-11.51
	7025	215	AVG	12.87	-0.26	12.61	24.00	-11.40

Table 7-12. Antenna 0 80MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (160MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	6025	15	AVG	13.31	2.85	16.16	24.00	-7.84
	6185	47	AVG	13.85	2.85	16.70	24.00	-7.31
	6345	79	AVG	14.99	2.85	17.84	24.00	-6.16
	6505	111	AVG	14.28	1.73	16.01	24.00	-7.99
	6665	143	AVG	14.27	-1.02	13.25	24.00	-10.75
	6825	175	AVG	13.25	-1.02	12.23	24.00	-11.77
	6985	207	AVG	13.49	-0.26	13.23	24.00	-10.77

Table 7-13. Antenna 0 160MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-09-R1.BCG	 This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.			Page 41 of 171

7.3.3 Antenna 1 Conducted Output Power Measurements – SP

6GHz (20MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]		Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11a	802.11ax				
	5955	1	AVG	17.77	16.83	2.14	19.91	30.00	-10.09
	6175	45	AVG	17.75	16.81	2.14	19.89	30.00	-10.11
	6415	93	AVG	17.69	16.83	2.14	19.83	30.00	-10.18
	6435	97	AVG	17.85	16.82	0.74	18.59	30.00	-11.41
	6475	105	AVG	17.65	16.52	0.74	18.39	30.00	-11.61
	6515	113	AVG	17.89	16.54	0.74	18.63	30.00	-11.37
	6535	117	AVG	17.39	16.11	-0.88	16.51	30.00	-13.49
	6695	149	AVG	17.21	16.03	-0.88	16.33	30.00	-13.67
	6855	181	AVG	17.17	16.28	-0.88	16.29	30.00	-13.72

Table 7-14. Antenna 1 20MHz BW 802.11a/ax(SU) (UNII) Maximum Conducted Output Power

6GHz (40MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5965	3	AVG	16.99	2.14	19.13	30.00	-10.88
	6165	43	AVG	16.91	2.14	19.05	30.00	-10.95
	6405	91	AVG	16.79	2.14	18.93	30.00	-11.07
	6445	99	AVG	16.89	0.74	17.63	30.00	-12.37
	6485	107	AVG	16.68	0.74	17.42	30.00	-12.58
	6565	123	AVG	16.24	-0.88	15.36	30.00	-14.64
	6725	155	AVG	16.42	-0.88	15.54	30.00	-14.46
	6845	179	AVG	16.01	-0.88	15.13	30.00	-14.88

Table 7-15. Antenna 1 40MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (80MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5985	7	AVG	16.76	2.14	18.90	30.00	-11.10
	6145	39	AVG	16.69	2.14	18.83	30.00	-11.17
	6385	87	AVG	16.80	2.14	18.94	30.00	-11.06
	6465	103	AVG	16.65	0.74	17.39	30.00	-12.61
	6625	135	AVG	16.13	-0.88	15.25	30.00	-14.75
	6705	151	AVG	16.48	-0.88	15.60	30.00	-14.40
	6785	167	AVG	16.36	-0.88	15.48	30.00	-14.53

Table 7-16. Antenna 1 80MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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6GHz (160MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	6025	15	AVG	15.55	2.14	17.69	30.00	-12.31
	6185	47	AVG	15.27	2.14	17.41	30.00	-12.59
	6345	79	AVG	15.78	2.14	17.92	30.00	-12.09
	6505	111	AVG	15.81	0.74	16.55	30.00	-13.45
	6665	143	AVG	14.52	-0.88	13.64	30.00	-16.36

Table 7-17. Antenna 1 160MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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7.3.4 Antenna 1 Conducted Output Power Measurements – LPI

6GHz (20MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]		Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11a	802.11ax				
	5955	1	AVG	4.62	5.16	2.14	7.30	24.00	-16.71
	6175	45	AVG	5.16	5.33	2.14	7.47	24.00	-16.53
	6415	93	AVG	6.44	6.26	2.14	8.58	24.00	-15.42
	6435	97	AVG	5.79	6.01	0.74	6.75	24.00	-17.25
	6475	105	AVG	5.79	6.26	0.74	7.00	24.00	-17.01
	6515	113	AVG	5.60	5.74	0.74	6.48	24.00	-17.52
	6535	117	AVG	8.36	8.50	-0.88	7.62	24.00	-16.38
	6695	149	AVG	7.58	8.28	-0.88	7.40	24.00	-16.60
	6875	185	AVG	7.28	7.76	-0.88	6.88	24.00	-17.12
	6895	189	AVG	7.12	7.69	0.18	7.87	24.00	-16.13
	6995	209	AVG	7.18	7.52	0.18	7.70	24.00	-16.31
	7095	229	AVG	5.58	5.50	0.18	5.76	24.00	-18.24

Table 7-18. Antenna 1 20MHz BW 802.11a/ax(SU) (UNII) Maximum Conducted Output Power

6GHz (40MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5965	3	AVG	7.96	2.14	10.10	24.00	-13.90
	6165	43	AVG	7.77	2.14	9.91	24.00	-14.09
	6405	91	AVG	9.44	2.14	11.58	24.00	-12.42
	6445	99	AVG	8.71	0.74	9.45	24.00	-14.55
	6485	107	AVG	8.95	0.74	9.69	24.00	-14.31
	6565	123	AVG	11.25	-0.88	10.37	24.00	-13.63
	6725	155	AVG	11.32	-0.88	10.44	24.00	-13.56
	6845	179	AVG	11.05	-0.88	10.17	24.00	-13.83
	6885	187	AVG	9.78	0.18	9.96	24.00	-14.04
	7085	227	AVG	10.26	0.18	10.44	24.00	-13.56

Table 7-19. Antenna 1 40MHz 802.11ax(SU) BW (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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6GHz (80MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5985	7	AVG	10.27	2.14	12.41	24.00	-11.59
	6145	39	AVG	11.11	2.14	13.25	24.00	-10.75
	6385	87	AVG	12.19	2.14	14.33	24.00	-9.67
	6465	103	AVG	11.28	0.74	12.02	24.00	-11.98
	6545	119	AVG	11.27	-0.88	10.39	24.00	-13.61
	6705	151	AVG	14.30	-0.88	13.42	24.00	-10.58
	6865	183	AVG	12.75	-0.88	11.87	24.00	-12.13
	6945	199	AVG	12.78	0.18	12.96	24.00	-11.04
	7025	215	AVG	12.75	0.18	12.93	24.00	-11.07

Table 7-20. Antenna 1 80MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (160MHz Bandwidth)	Frequency [MHz]	Channel	Detector	Conducted Power [dBm]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	6025	15	AVG	13.13	2.14	15.27	24.00	-8.73
	6185	47	AVG	13.99	2.14	16.13	24.00	-7.87
	6345	79	AVG	14.83	2.14	16.97	24.00	-7.03
	6505	111	AVG	14.49	0.74	15.23	24.00	-8.77
	6665	143	AVG	14.29	-0.88	13.41	24.00	-10.59
	6825	175	AVG	13.17	-0.88	12.29	24.00	-11.71
	6985	207	AVG	13.26	0.18	13.44	24.00	-10.56

Table 7-21. Antenna 1 160MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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7.3.5 CDD Conducted Output Power Measurements – SP

6GHz (20MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	5955	1	CDD	AVG	16.84	16.89	19.88	2.85	22.73	30.00	-7.27
	6175	45	CDD	AVG	16.90	16.84	19.88	2.85	22.73	30.00	-7.27
	6415	93	CDD	AVG	16.50	16.63	19.58	2.85	22.43	30.00	-7.57
	6435	97	CDD	AVG	16.77	16.82	19.81	1.73	21.54	30.00	-8.46
	6475	105	CDD	AVG	16.54	16.59	19.57	1.73	21.30	30.00	-8.70
	6515	113	CDD	AVG	16.28	16.55	19.42	1.73	21.15	30.00	-8.85
	6535	117	CDD	AVG	16.08	16.49	19.30	-0.88	18.42	30.00	-11.58
	6695	149	CDD	AVG	16.18	16.07	19.14	-0.88	18.26	30.00	-11.74
	6855	181	CDD	AVG	15.98	16.27	19.14	-0.88	18.26	30.00	-11.74

Table 7-22. CDD 20MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (40MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	5965	3	CDD	AVG	16.73	16.51	19.63	2.85	22.48	30.00	-7.52
	6165	43	CDD	AVG	16.53	16.96	19.76	2.85	22.61	30.00	-7.39
	6405	91	CDD	AVG	16.81	16.84	19.83	2.85	22.68	30.00	-7.32
	6445	99	CDD	AVG	16.50	16.95	19.74	1.73	21.47	30.00	-8.53
	6485	107	CDD	AVG	16.76	16.64	19.71	1.73	21.44	30.00	-8.56
	6565	123	CDD	AVG	16.00	16.30	19.16	-0.88	18.28	30.00	-11.72
	6725	155	CDD	AVG	16.36	16.38	19.38	-0.88	18.50	30.00	-11.50
	6845	179	CDD	AVG	16.13	15.99	19.07	-0.88	18.19	30.00	-11.81

Table 7-23. CDD 40MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (80MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	5985	7	CDD	AVG	16.89	16.83	19.87	2.85	22.72	30.00	-7.28
	6145	39	CDD	AVG	16.86	16.76	19.82	2.85	22.67	30.00	-7.33
	6385	87	CDD	AVG	16.77	16.82	19.81	2.85	22.66	30.00	-7.34
	6465	103	CDD	AVG	16.30	16.69	19.51	1.73	21.24	30.00	-8.76
	6625	135	CDD	AVG	16.34	16.27	19.31	-0.88	18.43	30.00	-11.57
	6705	151	CDD	AVG	16.42	15.98	19.21	-0.88	18.33	30.00	-11.67
	6785	167	CDD	AVG	15.95	16.42	19.20	-0.88	18.32	30.00	-11.68

Table 7-24. CDD 80MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (160MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	6025	15	CDD	AVG	15.98	15.74	18.87	2.85	21.72	30.00	-8.28
	6185	47	CDD	AVG	15.13	15.35	18.25	2.85	21.10	30.00	-8.90
	6345	79	CDD	AVG	15.71	15.92	18.83	2.85	21.68	30.00	-8.32
	6505	111	CDD	AVG	15.93	15.58	18.77	1.73	20.50	30.00	-9.50
	6665	143	CDD	AVG	14.84	14.78	17.82	-0.88	16.94	30.00	-13.06

Table 7-25. CDD 160MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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7.3.6 SDM Conducted Output Power Measurements – LPI

6GHz (20MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	5955	1	SDM	AVG	2.28	2.35	5.33	2.51	7.84	24.00	-16.16
	6175	45	SDM	AVG	2.25	2.34	5.31	2.51	7.82	24.00	-16.18
	6415	93	SDM	AVG	3.57	3.84	6.72	2.51	9.23	24.00	-14.77
	6435	97	SDM	AVG	3.83	3.53	6.69	1.26	7.95	24.00	-16.05
	6475	105	SDM	AVG	3.75	3.75	6.76	1.26	8.02	24.00	-15.98
	6515	113	SDM	AVG	3.63	3.84	6.75	1.26	8.01	24.00	-15.99
	6535	117	SDM	AVG	5.65	5.33	8.50	-0.95	7.55	24.00	-16.45
	6695	149	SDM	AVG	5.83	5.18	8.53	-0.95	7.58	24.00	-16.42
	6875	185	SDM	AVG	4.98	5.10	8.05	-0.95	7.10	24.00	-16.90
	6895	189	SDM	AVG	4.92	5.08	8.01	-0.03	7.98	24.00	-16.02
	6995	209	SDM	AVG	4.77	4.86	7.83	-0.03	7.80	24.00	-16.20
	7115	233	SDM	AVG	4.93	4.99	7.97	-0.03	7.94	24.00	-16.06

Table 7-26. SDM 20MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (40MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	5965	3	SDM	AVG	4.76	4.68	7.73	2.51	10.24	24.00	-13.76
	6165	43	SDM	AVG	5.14	4.85	8.01	2.51	10.52	24.00	-13.48
	6405	91	SDM	AVG	6.04	6.27	9.16	2.51	11.67	24.00	-12.33
	6445	99	SDM	AVG	6.29	6.10	9.21	1.26	10.47	24.00	-13.53
	6485	107	SDM	AVG	6.27	6.23	9.26	1.26	10.52	24.00	-13.48
	6565	123	SDM	AVG	8.14	7.91	11.04	-0.95	10.09	24.00	-13.91
	6725	155	SDM	AVG	8.00	7.97	11.00	-0.95	10.05	24.00	-13.95
	6845	179	SDM	AVG	7.75	8.01	10.89	-0.95	9.94	24.00	-14.06
	6885	187	SDM	AVG	7.52	7.73	10.63	-0.03	10.60	24.00	-13.40
	7085	227	SDM	AVG	7.19	7.79	10.51	-0.03	10.48	24.00	-13.52

Table 7-27. SDM 40MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

6GHz (80MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	5985	7	SDM	AVG	7.89	7.77	10.84	2.51	13.35	24.00	-10.65
	6145	39	SDM	AVG	8.13	7.51	10.84	2.51	13.35	24.00	-10.65
	6385	87	SDM	AVG	9.38	9.34	12.37	2.51	14.88	24.00	-9.12
	6465	103	SDM	AVG	9.36	9.45	12.42	1.26	13.68	24.00	-10.32
	6545	119	SDM	AVG	9.12	9.33	12.24	-0.95	11.29	24.00	-12.71
	6705	151	SDM	AVG	11.39	11.44	14.43	-0.95	13.48	24.00	-10.52
	6865	183	SDM	AVG	10.94	10.21	13.60	-0.95	12.65	24.00	-11.35
	6945	199	SDM	AVG	10.28	10.03	13.17	-0.03	13.14	24.00	-10.86
	7025	215	SDM	AVG	10.35	10.34	13.36	-0.03	13.33	24.00	-10.67

Table 7-28. SDM 80MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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6GHz (160MHz Bandwidth)	Frequency [MHz]	Channel	Mode	Detector	Conducted Power [dBm]			Directional Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					Antenna 0	Antenna 1	Summed				
	6025	15	SDM	AVG	10.39	10.27	13.34	2.51	15.85	24.00	-8.15
	6185	47	SDM	AVG	10.37	10.09	13.24	2.51	15.75	24.00	-8.25
	6345	79	SDM	AVG	11.38	11.36	14.38	2.51	16.89	24.00	-7.11
	6505	111	SDM	AVG	11.28	11.69	14.50	1.26	15.76	24.00	-8.24
	6665	143	SDM	AVG	13.78	13.42	16.61	-0.95	15.66	24.00	-8.34
	6825	175	SDM	AVG	13.35	13.09	16.23	-0.95	15.28	24.00	-8.72
	6985	207	SDM	AVG	13.30	13.15	16.23	-0.03	16.20	24.00	-7.80

Table 7-29. SDM 160MHz BW 802.11ax(SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3300 IC: 579C-A3300	MEASUREMENT REPORT (CERTIFICATION)	Test Dates: 3/24/2025 - 6/20/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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Note:

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to and KDB 662911 v02r01 Section E)1), the conducted powers at Antenna 0 and Antenna 1 were first measured separately during MIMO transmission as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to Subclause 14.6.3, the correlated directional gain is calculated using the following formula, where G_N is the gain of the nth antenna and N_{ANT} , the total number of antennas used.

$$\text{Directional gain} = G_{ANT} + \text{Array Gain dBi}$$

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to Subclause 14.6.3, the uncorrelated directional gain is calculated using the following formula, where G_N is the gain of the nth antenna and N_{ANT} , the total number of antennas used.

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

Sample MIMO Calculation:

At 5955MHz in 802.11ax (20MHz BW) mode, the average conducted output power was measured to be 16.84 dBm for Antenna-0 and 16.89 dBm for Antenna-1.

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

$$(16.84 \text{ dBm} + 16.89 \text{ dBm}) = (48.31 \text{ mW} + 48.87 \text{ mW}) = 97.18 \text{ mW} = 19.88 \text{ dBm}$$

Sample e.i.r.p. Calculation:

At 5955MHz in 802.11ax (20MHz BW, SDM) mode, the average MIMO conducted power was calculated to be 19.88 dBm with directional gain of 2.85 dBi.

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

$$19.88 \text{ dBm} + 2.85 \text{ dBi} = 22.73 \text{ dBm}$$

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7.4 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 C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to and KDB 789033 D02 v02r01, and at the appropriate frequencies. Method SA-1, as defined in ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to and KDB 789033 D02 v02r01, was used to measure the power spectral density.

In the 5.925 – 7.125GHz band, the maximum permissible power spectral density must not exceed -1dBm e.i.r.p. in any 1-megahertz band for Low Power Indoor operating modes.

In the 5.925 – 6.875GHz bands, the maximum permissible power spectral density must not exceed 17dBm e.i.r.p. in any 1-megahertz band for Standard Power operating modes.

Test Procedure Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to – Section 12.4.2.2

KDB 789033 D02 v02r01 – Section F

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to – Section 14.5.2.2 Measure-and-Sum Technique

KDB 662911 v02r01 – Section E)2) Measure-and-Sum Technique

Test Settings

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Set span to encompass the entire 99% OBW 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

1. All data rates and channels were investigated, and tabular data has been reported. Only the worst-case plot was reported.
2. The duty cycle correction factor (DCCF) has been applied as an amplitude offset in the spectrum analyzer to ensure the required correction is accurately reflected in the measured Power Spectral Density (PSD). The offset value is indicated on each PSD plot.

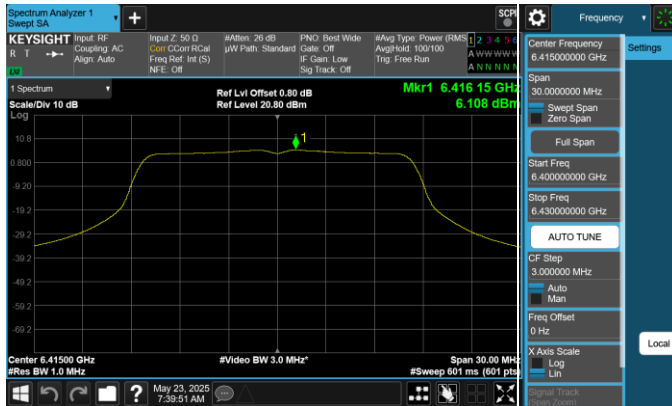
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7.4.1 Antenna 0 Power Spectral Density Measurements – SP

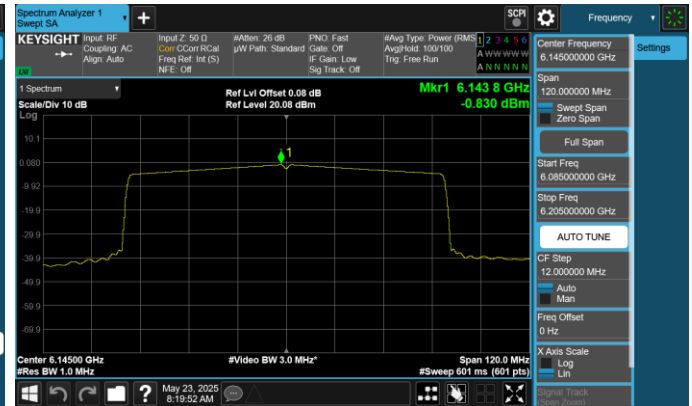
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm/MHz]	Antenna Gain [dBi]	e.i.r.p Density [dBm/MHz]	Max EIRP Density [dBm/MHz]	Margin [dB]
Band 5	5955	1	a	12	5.78	2.85	8.63	17	-8.37
	6175	45	a	54	5.76	2.85	8.61	17	-8.39
	6415	93	a	54	6.11	2.85	8.96	17	-8.04
	5955	1	ax (20MHz)	49/51.6 (MCS4)	4.13	2.85	6.98	17	-10.02
	6175	45	ax (20MHz)	24/25.8 (MCS2)	4.12	2.85	6.97	17	-10.03
	6415	93	ax (20MHz)	24/25.8 (MCS2)	4.55	2.85	7.40	17	-9.60
	5965	3	ax (40MHz)	98/103.2 (MCS4)	1.87	2.85	4.72	17	-12.28
	6165	43	ax (40MHz)	49/51.6 (MCS2)	1.97	2.85	4.82	17	-12.18
	6405	91	ax (40MHz)	49/51.6 (MCS2)	2.22	2.85	5.07	17	-11.93
	5985	7	ax (80MHz)	102/108.1 (MCS2)	-1.31	2.85	1.54	17	-15.46
	6145	39	ax (80MHz)	102/108.1 (MCS2)	-0.83	2.85	2.02	17	-14.98
	6385	87	ax (80MHz)	102/108.1 (MCS2)	-1.10	2.85	1.75	17	-15.25
	6025	15	ax (160MHz)	367.5/432.4 (MCS4)	-4.72	2.85	-1.87	17	-18.87
	6185	47	ax (160MHz)	367.5/432.4 (MCS4)	-5.54	2.85	-2.69	17	-19.69
Band 6	6345	79	ax (160MHz)	367.5/432.4 (MCS4)	-4.43	2.85	-1.58	17	-18.58
	6435	97	a	54	7.38	1.73	9.11	17	-7.89
	6475	105	a	54	7.44	1.73	9.17	17	-7.83
	6515	113	a	54	6.83	1.73	8.56	17	-8.44
	6435	97	ax (20MHz)	49/51.6 (MCS4)	5.77	1.73	7.50	17	-9.50
	6475	105	ax (20MHz)	49/51.6 (MCS4)	5.84	1.73	7.57	17	-9.43
	6515	113	ax (20MHz)	49/51.6 (MCS4)	5.17	1.73	6.90	17	-10.10
	6445	99	ax (40MHz)	98/103.2 (MCS4)	3.54	1.73	5.27	17	-11.73
	6485	107	ax (40MHz)	98/103.2 (MCS4)	3.68	1.73	5.41	17	-11.59
	6465	103	ax (80MHz)	102/108.1 (MCS2)	0.24	1.73	1.97	17	-15.04
	6505	111	ax (160MHz)	367.5/432.4 (MCS4)	-3.91	1.73	-2.18	17	-19.18
Band 7	6535	117	a	54	4.94	-1.02	3.92	17	-13.08
	6695	149	a	12	4.90	-1.02	3.88	17	-13.12
	6855	181	a	24	5.22	-1.02	4.20	17	-12.80
	6535	117	ax (20MHz)	24/25.8 (MCS2)	3.15	-1.02	2.13	17	-14.87
	6695	149	ax (20MHz)	24/25.8 (MCS2)	3.02	-1.02	2.00	17	-15.00
	6855	181	ax (20MHz)	49/51.6 (MCS4)	3.38	-1.02	2.36	17	-14.64
	6565	123	ax (40MHz)	49/51.6 (MCS2)	0.82	-1.02	-0.20	17	-17.20
	6725	155	ax (40MHz)	98/103.2 (MCS4)	0.81	-1.02	-0.21	17	-17.21
	6845	179	ax (40MHz)	98/103.2 (MCS4)	0.87	-1.02	-0.15	17	-17.15
	6625	135	ax (80MHz)	102/108.1 (MCS2)	-2.40	-1.02	-3.42	17	-20.42
	6705	151	ax (80MHz)	102/108.1 (MCS2)	-2.40	-1.02	-3.42	17	-20.42
	6785	167	ax (80MHz)	102/108.1 (MCS2)	-1.93	-1.02	-2.95	17	-19.95
	6665	143	ax (160MHz)	367.5/432.4 (MCS4)	-6.71	-1.02	-7.73	17	-24.73

Table 7-30. Power Spectral Density Measurements Antenna 0

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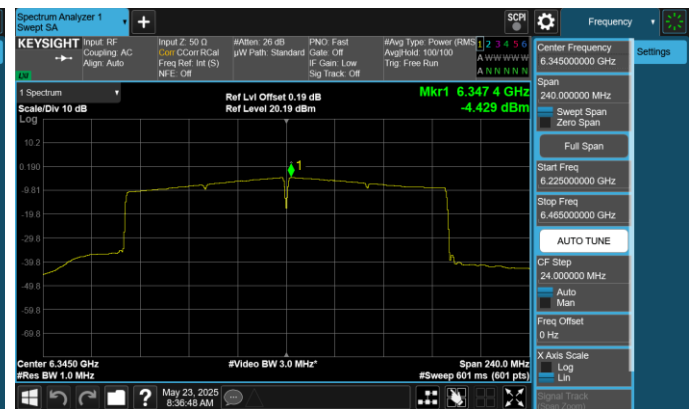
Plot 7-57. Power Spectral Density Plot Antenna 0 (20MHz 802.11a (UNII Band 5) – Ch. 93)



Plot 7-59. Power Spectral Density Plot Antenna 0 (80MHz 802.11ax (UNII Band 5) – Ch. 39)



Plot 7-58. Power Spectral Density Plot Antenna 0 (40MHz 802.11ax (UNII Band 5) – Ch. 91)



Plot 7-60. Power Spectral Density Plot Antenna 0 (160MHz 802.11ax (UNII Band 5) – Ch. 79)

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