**MEASUREMENT REPORT****FCC PART 15.407 / ISED RSS-247 UNII 802.11a/n/ac/ax(SU)****Applicant Name:**

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

Date of Testing:

10/14/2024 - 1/15/2026

Test Report Issue Date:

9/24/2026

Test Site/Location:

Element Materials Technology, Morgan Hill, CA, USA

Test Report Serial No.:

1C2410280081-06-R3.BCG

FCC ID:

BCGA3218

IC:

579C-A3218

APPLICANT:

Apple Inc.

Application Type:

Certification

Model/HVIN:

A3218

EUT Type:

Smart Speaker with Display

Frequency Range:

5180 – 5825MHz

Modulation Type:

OFDM

FCC Classification:

Unlicensed National Information Infrastructure (UNII)

FCC Rule Part(s):

Part 15 Subpart E (15.407)

ISED Specification:

RSS-247 Issue 4

Test Procedure(s):

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to
C63.10a:2024, KDB 789033 D02 v02r01
KDB 662911 D01 v02r01

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 C63.10a:2024 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 Ortiz

Executive Vice President



FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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V 12.0 03/03/2026

Revision Summary

Revision	Date	Comments	Revised By
-	10/20/2025	Initial Release	WKR007077
R1	1/16/2026	Addressed comments in Section 2, and Section 7	WKR007077
R2	9/22/2026	Addressed comments in Section 7.4	WKR007077
R3	9/23/2026	Addressed comments in section 7.5	WKR0000007358

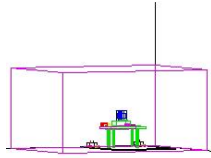
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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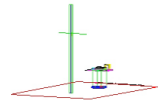
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MEASUREMENT REPORT



UNII Band	Channel Bandwidth (MHz)	Mode	Tx Frequency (MHz)	SISO				MIMO	
				Antenna 0		Antenna 1		Summed	
				Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)
1	20	802.11a/n	5180 - 5240	78.524	18.95	78.886	18.97	110.408	20.43
2A		802.11a/n	5260 - 5320	89.125	19.50	88.716	19.48	110.917	20.45
2C		802.11a/n	5500 - 5720	88.105	19.45	88.512	19.47	110.662	20.44
3		802.11a/n	5745 - 5825	88.920	19.49	88.716	19.48	139.316	21.44
1	40	802.11n	5190 - 5230	58.479	17.67	58.345	17.66	118.577	20.74
2A		802.11n	5270 - 5310	67.143	18.27	67.764	18.31	139.959	21.46
2C		802.11n	5510 - 5710	68.707	18.37	69.502	18.42	138.038	21.40
3		802.11n	5755 - 5795	67.298	18.28	67.453	18.29	132.434	21.22
1	80	802.11ac	5210	17.219	12.36	15.382	11.87	21.330	13.29
2A		802.11ac	5290	19.543	12.91	19.953	13.00	25.061	13.99
2C		802.11ac	5530 - 5690	65.163	18.14	66.222	18.21	136.144	21.34
3		802.11ac	5775	55.847	17.47	51.168	17.09	134.586	21.29
1	20	802.11ax (SU)	5180 - 5240	62.087	17.93	62.517	17.96	121.619	20.85
2A		802.11ax (SU)	5260 - 5320	70.632	18.49	68.234	18.34	125.603	20.99
2C		802.11ax (SU)	5500 - 5720	69.823	18.44	70.469	18.48	124.738	20.96
3		802.11ax (SU)	5745 - 5825	70.795	18.50	69.663	18.43	137.404	21.38
1	40	802.11ax (SU)	5190 - 5230	61.660	17.90	61.944	17.92	118.032	20.72
2A		802.11ax (SU)	5270 - 5310	62.806	17.98	56.234	17.50	121.060	20.83
2C		802.11ax (SU)	5510 - 5710	69.183	18.40	69.984	18.45	135.831	21.33
3		802.11ax (SU)	5755 - 5795	69.984	18.45	70.307	18.47	136.144	21.34
1	80	802.11ax (SU)	5210	14.488	11.61	16.181	12.09	26.607	14.25
2A		802.11ax (SU)	5290	15.171	11.81	15.382	11.87	29.309	14.67
2C		802.11ax (SU)	5530 - 5690	62.661	17.97	68.549	18.36	135.519	21.32
3		802.11ax (SU)	5775	44.875	16.52	45.186	16.55	136.458	21.35
1/2A	160	802.11ac	5250	15.524	11.91	14.894	11.73	27.861	14.45
2C		802.11ac	5570	17.701	12.48	17.100	12.33	28.119	14.49
1/2A	160	802.11ax (SU)	5250	16.255	12.11	17.539	12.44	29.309	14.67
2C		802.11ax (SU)	5570	14.859	11.72	14.421	11.59	29.107	14.64

FCC EUT Overview

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UNII Band	Channel Bandwidth (MHz)	Mode	Tx Frequency (MHz)	SISO				MIMO	
				Antenna 0		Antenna 1		Summed	
				Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)
1	20	802.11a/n	5180 - 5240	54.075	17.33	62.230	17.94	109.396	20.39
2A		802.11a/n	5260 - 5320	89.125	19.50	81.096	19.09	110.917	20.45
2C		802.11a/n	5500 - 5720	86.896	19.39	88.308	19.46	109.648	20.40
3		802.11a/n	5745 - 5825	88.920	19.49	87.297	19.41	136.773	21.36
1	40	802.11n	5190 - 5230	58.479	17.67	58.345	17.66	118.577	20.74
2A		802.11n	5270 - 5310	67.143	18.27	67.764	18.31	136.458	21.35
2C		802.11n	5510 - 5710	68.707	18.37	69.502	18.42	138.038	21.40
3		802.11n	5755 - 5795	67.298	18.28	67.453	18.29	116.681	20.67
1	80	802.11ac	5210	17.219	12.36	15.382	11.87	31.550	14.99
2A		802.11ac	5290	19.543	12.91	19.953	13.00	31.117	14.93
2C		802.11ac	5530 - 5690	65.163	18.14	66.222	18.21	134.586	21.29
3		802.11ac	5775	55.847	17.47	51.168	17.09	92.045	19.64
1	20	802.11ax (SU)	5180 - 5240	62.951	17.99	62.517	17.96	121.619	20.85
2A		802.11ax (SU)	5260 - 5320	69.663	18.43	66.069	18.20	122.744	20.89
2C		802.11ax (SU)	5500 - 5720	69.823	18.44	70.469	18.48	122.180	20.87
3		802.11ax (SU)	5745 - 5825	70.795	18.50	69.343	18.41	133.968	21.27
1	40	802.11ax (SU)	5190 - 5230	61.660	17.90	61.944	17.92	118.032	20.72
2A		802.11ax (SU)	5270 - 5310	62.806	17.98	56.234	17.50	121.060	20.83
2C		802.11ax (SU)	5510 - 5710	69.183	18.40	69.984	18.45	135.831	21.33
3		802.11ax (SU)	5755 - 5795	69.984	18.45	70.307	18.47	137.088	21.37
1	80	802.11ax (SU)	5210	14.488	11.61	16.181	12.09	26.607	14.25
2A		802.11ax (SU)	5290	15.171	11.81	15.382	11.87	23.174	13.65
2C		802.11ax (SU)	5530 - 5690	62.661	17.97	68.549	18.36	136.458	21.35
3		802.11ax (SU)	5775	44.875	16.52	45.186	16.55	83.368	19.21
2C	160	802.11ac	5570	17.701	12.48	17.100	12.33	27.164	14.34
2C	160	802.11ax (SU)	5570	14.859	11.72	14.421	11.59	24.266	13.85

ISED EUT Overview

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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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: BCGA3218 and IC: 579C-A3218**. The test data contained in this report pertains only to the emissions due to the EUT's UNII 802.11a/n/ac/ax(SU) transmitter.

Test Device Serial No.: XH6Q69KJ3V, K7WW2X44X0, GG30N0WMHW, WLW7K40V4P,FPQR7MJ2N1, F0THAV000LT000033B

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)

Channel puncturing function is not supported for this device.

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Band 1		Band 2A		Band 2C		Band 3	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
36	5180	52	5260	100	5500	149	5745
:	:	:	:	:	:	:	:
42	5210	56	5280	116	5580	157	5785
:	:	:	:	:	:	:	:
48	5240	64	5320	144	5720	165	5825

Table 2-1. 802.11a / 802.11n / 802.11ac / 802.11ax (20MHz) Frequency / Channel Operations

Band 1		Band 2A		Band 2C		Band 3	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
38	5190	54	5270	102	5510	151	5755
:	:	:	:	:	:	:	:
46	5230	62	5310	110	5550	159	5795
				:	:		
				142	5710		

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

Band 1		Band 2A		Band 2C		Band 3	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
42	5210	58	5290	106	5530	155	5775
				:	:		
				138	5690		

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

Band 1		Band 2A		Band 2C	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
50	5250	50	5250	114	5570

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

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Notes:

- 5GHz NII operation is possible in 20MHz, and 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 C63.10a:2024. 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:

Measured Duty Cycles							
802.11 Mode/Band		Antenna 0		Antenna 1		MIMO	
		Duty Cycle [%]	DCCF [dB]	Duty Cycle [%]	DCCF [dB]	Duty Cycle [%]	DCCF [dB]
5GHz	n (HT20) (Low Data Rate)	99.16	0.04	99.08	0.04	98.45	0.07
	n (HT20) (Mid Data Rate)	99.21	0.03	99.02	0.04	98.11	0.08
	n (HT20) (High Data Rate)	98.85	0.05	98.93	0.05	98.45	0.07
	ax(SU) (HE20) (Low Data Rate)	98.70	0.06	98.80	0.05	98.45	0.07
	ax(SU) (HE20) (Mid Data Rate)	98.80	0.05	98.71	0.06	98.57	0.06
	ax(SU) (HE20) (High Data Rate)	97.92	0.09	98.06	0.09	98.07	0.08
	n (HT40) (Low Data Rate)	99.00	0.04	98.89	0.05	98.13	0.08
	n (HT40) (Mid Data Rate)	99.00	0.04	98.81	0.05	98.10	0.08
	n (HT40) (High Data Rate)	98.35	0.07	98.20	0.08	96.91	0.14
	ax(SU) (HE40) (Low Data Rate)	98.58	0.06	98.71	0.06	98.71	0.06
	ax(SU) (HE40) (Mid Data Rate)	98.75	0.05	98.75	0.05	98.75	0.05
	ax(SU) (HE40) (High Data Rate)	96.29	0.16	97.02	0.13	96.78	0.14
	ac (VHT80) (Low Data Rate)	98.87	0.05	98.66	0.06	98.66	0.06
	ac (VHT80) (Mid Data Rate)	97.95	0.09	97.98	0.09	97.97	0.09
	ac (VHT80) (High Data Rate)	95.76	0.19	95.76	0.19	95.74	0.19
	ax(SU) (HE80) (Low Data Rate)	98.85	0.05	98.67	0.06	98.82	0.05
	ax(SU) (HE80) (Mid Data Rate)	97.71	0.10	97.52	0.11	97.52	0.11
	ax(SU) (HE80) (High Data Rate)	93.27	0.30	92.79	0.32	94.23	0.26
	ac (VHT160) (Low Data Rate)	97.80	0.10	97.60	0.11	98.00	0.09
	ac (VHT160) (Mid Data Rate)	95.80	0.19	96.00	0.18	96.00	0.18
	ac (VHT160) (High Data Rate)	93.20	0.31	92.10	0.36	91.60	0.38
	ax(SU) (HE160) (Low Data Rate)	97.52	0.11	97.14	0.13	97.78	0.10
	ax(SU) (HE160) (Mid Data Rate)	94.95	0.23	95.67	0.19	94.95	0.23
	ax(SU) (HE160) (High Data Rate)	88.24	0.54	89.92	0.46	88.24	0.54

Table 2-4. 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		SBTC	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
5GHz	11a	✓	✓	✗	✗	✗	✗	✗	✗
	11n (20MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11ax(SU) (20MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11n (40MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11ax(SU) (40MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11ac (80MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11ax(SU) (80MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11ac (160MHz)	✓	✓	✓	✓	✓	✓	✗	✗
	11ax(SU) (160MHz)	✓	✓	✓	✓	✓	✓	✗	✗

Table 2-5. WIFI Configurations

✓ = Support ; ✗ = NOT Support

SISO = Single Input Single Output

SDM = Spatial Diversity Multiplexing – MIMO function

CDD = Cyclic Delay Diversity - 2Tx Function

STBC = Space-Time Block Coding – 2Tx Function

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

802.11a	MCS Index				Spatial Stream	OFDM (802.12.11n/802.11ac)				OFDM (802.11ac)				OFDM (802.11ax)												
						20MHz		40MHz		80MHz		160MHz		20MHz			40MHz			80MHz			160MHz			
	HT	VHT	HE	0.8µs GI		0.4µs GI	0.8µs GI	0.4µs GI	0.8µs GI	0.4µs GI	0.8µs GI	0.4µs 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		
20MHz	6	0	0	1	6.5	7.2	13.5	15	29.3	32.5	58.5	65	8.6	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	13	14.4	27	30	58.5	65	117	130	17.2	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	2	19.5	21.7	40.5	45	87.8	97.5	175.5	195	25.8	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	3	26	28.9	54	60	117	130	234	260	34.4	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	4	39	43.3	81	90	175.5	195	351	390	51.6	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	5	52	57.8	108	120	234	260	468	520	68.8	65	58.5	137.6	130	117	288.2	272.2	245	576.5	544.4	490		
	48	6	6	6	58.5	65	121.5	135	263.3	292.5	526.5	585	77.4	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	7	65	72.2	135	150	292.5	325	585	650	86	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	-	-	162	180	351	390	702	780	103.2	97.5	87.8	206.5	195	175.5	432.4	408.3	367.5	864.7	816.7		735
	-	-	9	9	1	-	-	180	200	390	433.3	780	866.7	114.7	108.3	97.5	229.4	216.7	195	480.4	453.7	408.3	960.8	907.4	816.7	
	-	-	-	10	1	-	-	-	-	-	-	-	-	129	121.9	109.7	258.1	243.8	219.4	540.4	510.4	459.4	1080.9	1020.8	918.8	
	-	-	-	11	1	-	-	-	-	-	-	-	-	143.4	135.4	121.9	286.8	270.8	243.8	600.5	567.1	510.4	1201	1134.3	1020.8	
	6	8	0	0	2	13	14.4	27	30	58.5	65	117	130	17.2	16.3	14.6	34.4	32.5	29.3	72.1	68.1	61.3	144.1	136.1	122.5	Low rate
	9	9	1	1	2	26	28.9	54	60	117	130	234	260	34.4	32.5	29.3	68.8	65	58.5	144.1	136.1	122.5	288.2	272.2	245	
	12	10	2	2	2	39	43.3	81	90	175.5	195	351	390	51.6	48.8	43.9	103.2	97.5	87.8	216.2	204.2	183.8	432.4	408.3	367.5	
	18	11	3	3	2	52	57.8	108	120	234	260	468	520	68.8	65	58.5	137.6	130	117	288.2	272.2	245	576.5	544.4	490	Mid rate
	24	12	4	4	2	78	86.7	162	180	351	390	702	780	103.2	97.5	87.8	206.5	195	175.5	432.4	408.3	367.5	864.7	816.7	735	
	36	13	5	5	2	104	115.6	216	240	468	520	936	1040	137.6	130	117	275.3	260	234	576.5	544.4	490	1152.9	1088.9	980	
	48	14	6	6	2	117	130	243	270	526.5	585	1053	1170	154.9	146.3	131.6	309.7	292.5	263.3	648.5	612.5	551.3	1297.1	1225	1102.5	High Rate
	54	15	7	7	2	130	144.4	270	300	585	650	1170	1300	172.1	162.5	146.3	344.1	325	292.5	720.6	680.6	612.5	1441.2	1361.1	1225	
	-	-	8	8	2	156	173.3	324	360	702	780	1404	1560	206.5	195	175.5	412.9	390	351	864.7	816.7	735	1729.4	1633.3	1470	
	-	-	9	9	2	-	-	360	400	780	866.7	1560	1733.3	229.4	216.7	195	458.8	433.3	390	960.8	907.4	816.7	1921.6	1814.8	1633.3	
	-	-	-	10	2	-	-	-	-	-	-	-	-	258.1	243.8	219.4	516.2	487.5	438.8	1080.9	1020.8	918.8	2161.8	2041.7	1837.5	
	-	-	-	11	2	-	-	-	-	-	-	-	-	286.8	270.8	243.8	573.5	541.7	487.5	1201	1134.3	1020.8	2402	2268.5	2041.7	

Table 2-6. Supported Data Rates

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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.

Antenna	Simultaneous Tx Config	Bluetooth 2.4GHz	Thread	WLAN	WIFI 5GHz	WIFI 6GHz
		BDR, EDR, LE1/2M	802.15.4	802.11 b/g/n/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 2-7. 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 1.

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.

Frequency [GHz]	Antenna Gain (dBi)	
	Antenna 0	Antenna 1
5.150 – 5.250	0.61	1.78
5.250 – 5.350	1.91	1.41
5.470 – 5.725	2.29	3.49
5.725 – 5.850	2.71	2.01

Table 2-8. Highest Antenna Gain

2.4 Test Support Equipment

1	Apple MacBook Pro	Model:	A2141	S/N:	C02H604EQ05D
	w/AC/DC Adapter	Model:	A2166	S/N:	C4H042705ZNPM0WA6
2	Apple USB-C Cable	Model:	Banana Split	S/N:	200730
3	USB-C Cable	Model:	A246C	S/N:	DWH80115BK826GV19
	w/ AC Adapter	Model:	A2305	S/N:	C4H95160004PF4F4V

Table 2-9. 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 C63.10a:2024 and KDB 789033 D02 v02r01. ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 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 7.2, 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 manipulated through three tilt angles of 0°, 45°, and 60° of the screen. Additionally, the EUT was also manipulated to rest on its side. 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.

802.11ac VHT20 and VHT40 mode are different from 802.11n HT20 and HT40 only in control messages and have the same power settings.

The data rates have been categorized into three groups: low, middle, and high data rates (see Table 2-6). All three groups have been investigated, and only the worst-case data rate has been reported.

For 802.11ax (OFDMA) test result, see separate UNII 802.11ax (OFDMA) report, 1C2410280081-07-R3.BCG.

All possible simultaneous transmission configurations have been investigated and the worst case config has been reported.

Description	802.11ax 5GHz	802.15.4
Antenna	Antenna 1	Antenna 1
Channel	36	25
Operating Frequency (MHz)	5180	2475
Mode/Modulation	802.11ax(SU)	Thread/ePa

Table 2-10. Worst Case Simultaneous Transmission Configuration

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 C63.10a:2024) 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 7.8. 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
Anritsu	ML2495A	Power Meter	7/8/2024	Annual	7/8/2025	1039008
Anritsu	MA2411B	Pulse Power Sensor	7/1/2024	Annual	7/1/2025	1911105
Anritsu	MA2411B	Pulse Power Sensor	10/21/2024	Annual	10/21/2025	1027293
ATM	180-442A-KF	20dB Nominal Gain Horn Antenna	3/14/2024	Annual	3/14/2025	T058701-01
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	4/9/2024	Annual	4/9/2025	00218555
Fairview Microwave/MCL	FMCA1975-36/BW-K10-2W44+	30MHz-40GHz RF Cable/Attenuator *	6/10/2024	Annual	6/10/2025	-
Keysight Technology	N9040B	UXA Signal Analyzer	5/28/2024	Annual	5/28/2025	MY57212015
Keysight Technology	N9030A	PXA Signal Analyzer	7/11/2024	Annual	7/11/2025	MY49430244
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	3/1/2024	Annual	3/1/2025	102145
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/14/2024	Annual	8/14/2025	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	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	7/3/2024	Annual	7/3/2025	102356
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/10/2024	Annual	6/10/2025	100057
Rohde & Schwarz	HFH2-Z2	Loop Antenna	6/21/2024	Annual	6/21/2025	100519
Rohde & Schwarz	ENV216	Two-Line V-Network	4/24/2024	Annual	4/24/2025	101364
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	4/29/2024	Annual	4/29/2025	00304

Table 6-1. Test Equipment List (2024 to 2025)

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Anritsu	ML2496A	Power Meter	2/10/2025	Annual	2/10/2026	1306009
Anritsu	MA2411B	Pulse Power Sensor	2/10/2025	Annual	2/10/2026	1315051
Anritsu	MA2411B	Pulse Power Sensor	2/10/2025	Annual	2/10/2026	1339027
ATM	180-442-KF	20dB Nominal Gain Horn Antenna	3/24/2025	Annual	3/24/2026	T058601-02
ETS-Lindgren	3117	Double Ridged Guide Horn (1-18 GHz)	4/16/2025	Annual	4/16/2026	218555
Fairview Microwave/MCL	FMCA1975-36/BW-K10-2W44+	30MHz-40GHz RF Cable/Attenuator *	6/10/2025	Annual	6/10/2026	-
Keysight Technology	N9040B	UXA Signal Analyzer	9/8/2025	Annual	9/8/2026	MY61320121
Keysight Technology	N9030A	PXA Signal Analyzer	9/15/2025	Annual	9/15/2026	MY49430494
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/6/2025	Annual	8/6/2026	101639
Rohde & Schwarz	FSW43	Spectrum Analyzer 2Hz to 43GHz	11/21/2024	Annual	11/21/2025	104093
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	5/13/2025	Annual	5/13/2026	101867
Rohde & Schwarz	SMW200A	Vector Signal Generator	3/10/2025	Annual	3/10/2026	110589
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	10/14/2025	Annual	10/14/2026	102328
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/3/2025	Annual	6/3/2026	100052
Rohde & Schwarz	HFH2-Z2	Loop Antenna	5/12/2025	Annual	5/12/2026	100546
Rohde & Schwarz	ENV216	Two-Line V-Network	4/24/2025	Annual	4/24/2026	101364
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	10/8/2025	Annual	10/8/2026	00358

Table 6-2. Test Equipment List (2025 to 2026)

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: BCGA3218
IC: 579C-A3218
FCC Classification: Unlicensed National Information Infrastructure (UNII)

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407	RSS-Gen [5.1]	26dB Bandwidth	N/A	CONDUCTED	N/A	Section 7.2
15.407(e)	RSS-247 [7.3.4.2]	6dB Bandwidth	>500kHz(5725-5850MHz)		PASS	Section 7.3
2.1049	RSS-Gen [5.1]	Occupied Bandwidth	N/A		PASS	Section 7.2, Section 7.3
15.407 (a.1.iv), (a.2), (a.3)	RSS-247 [7.3.1.2], [7.3.2.2], [7.3.3.2], [7.3.4.3]	Maximum Conducted Output Power	Maximum conducted powers must meet the limits detailed in 15.407 (a) (RSS-247 [7.3])		PASS	Section 7.4
15.407 (a.1.iv), (a.2), (a.3)	RSS-247 [7.3.1.2], [7.3.2.2], [7.3.3.2], [7.3.4.3]	Maximum Power Spectral Density	Maximum power spectral density must meet the limits detailed in 15.407 (a) (RSS-247 [7.3])		PASS	Section 7.5
15.407(h)	RSS-247 [7.3.6]	Dynamic Frequency Selection	See DFS Test Report	RADIATED	PASS	See DFS Test Report (1C24102800 81-08.BCG)
15.407(b.1), (2), (3), (4)	RSS-247 [7.3.1.3], [7.3.2.3], [7.3.3.3], [7.3.4.4]	Undesirable Emissions	Undesirable emissions must meet the limits detailed in 15.407(b) (RSS-247 [7.3])		PASS	Section 7.6
15.205, 15.407(b.1), (2), (3), (4)	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 7.6, 7.7
15.207	RSS-Gen [7.4.2]	AC Conducted Emissions 150kHz – 30MHz	< FCC 15.207 (RSS-Gen [7.4.2]) limits	LINE CONDUCTED	PASS	Section 7.8

Table 7-1. Summary of Test Results

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 1.1.1.
- 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 3.1.0.

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 18 of 160

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 C63.10a:2024 and KDB 789033 D02 v02r01, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

The 26dB bandwidth is used to determine the conducted power limits, for ISED the 99% OBW is used.

Test Procedure Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 – 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 channels were investigated, and tabular data has been reported. Only the worst-case plot was reported.

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

7.2.1 Antenna 0 26dB & 99% Bandwidth Measurements

	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 99% Occupied Bandwidth [MHz]	Measured 26dB Bandwidth [MHz]
Band 1	5180	36	n (20MHz)	65/72.2 (MCS7)	17.81	21.30
	5200	40	n (20MHz)	65/72.2 (MCS7)	17.79	21.07
	5240	48	n (20MHz)	65/72.2 (MCS7)	17.77	21.32
	5180	36	ax (SU) (20MHz)	135/143.4 (MCS11)	19.15	22.49
	5200	40	ax (SU) (20MHz)	135/143.4 (MCS11)	19.12	22.34
	5240	48	ax (SU) (20MHz)	24/25.8 (MCS2)	19.06	22.23
	5190	38	n (40MHz)	135/150 (MCS7)	36.24	40.22
	5230	46	n (40MHz)	81/90 (MCS4)	36.17	40.45
	5190	38	ax (SU) (40MHz)	271/286 (MCS11)	37.96	39.92
	5230	46	ax (SU) (40MHz)	98/103.2 (MCS4)	37.62	39.70
	5210	42	ac (80MHz)	390/433.3 (MCS9)	75.93	80.34
	5210	42	ax (SU) (80MHz)	567/600.5 (MCS11)	77.51	80.59
Band 1/2	5250	50	ac (160MHz)	175.5/195 (MCS4)	153.73	173.17
	5250	50	ax (SU) (160MHz)	204/216.2 (MCS4)	155.12	162.76
Band 2A	5260	52	n (20MHz)	39/43.3 (MCS4)	17.81	21.36
	5300	60	n (20MHz)	65/72.2 (MCS7)	17.76	21.48
	5320	64	n (20MHz)	65/72.2 (MCS7)	17.81	21.43
	5260	52	ax (SU) (20MHz)	24/25.8 (MCS2)	19.05	22.23
	5300	60	ax (SU) (20MHz)	135/143.4 (MCS11)	19.17	22.23
	5320	64	ax (SU) (20MHz)	135/143.4 (MCS11)	19.15	22.50
	5270	54	n (40MHz)	81/90 (MCS4)	36.13	40.36
	5310	62	n (40MHz)	135/150 (MCS7)	36.20	40.35
	5270	54	ax (SU) (40MHz)	98/103.2 (MCS4)	37.65	39.74
	5310	62	ax (SU) (40MHz)	271/286 (MCS11)	37.94	39.97
	5290	58	ac (80MHz)	390/433.3 (MCS9)	76.00	80.18
	5290	58	ax (SU) (80MHz)	567/600.5 (MCS11)	77.59	80.78
Band 2C	5500	100	n (20MHz)	65/72.2 (MCS7)	17.81	21.33
	5580	116	n (20MHz)	39/43.3 (MCS4)	17.76	21.14
	5700	140	n (20MHz)	65/72.2 (MCS7)	17.84	21.66
	5720	144	n (20MHz)	39/43.3 (MCS4)	17.77	21.42
	5500	100	ax (SU) (20MHz)	135/143.4 (MCS11)	19.11	21.90
	5580	116	ax (SU) (20MHz)	49/51.6 (MCS4)	19.04	21.43
	5700	140	ax (SU) (20MHz)	135/143.4 (MCS11)	19.13	22.01
	5720	144	ax (SU) (20MHz)	49/51.6 (MCS4)	19.03	22.05
	5510	102	n (40MHz)	135/150 (MCS7)	36.22	40.34
	5550	110	n (40MHz)	81/90 (MCS4)	36.19	40.28
	5590	118	n (40MHz)	135/150 (MCS7)	36.13	39.88
	5670	134	n (40MHz)	135/150 (MCS7)	36.20	40.46
	5710	142	n (40MHz)	135/150 (MCS7)	36.25	40.39
	5510	102	ax (SU) (40MHz)	271/286 (MCS11)	37.95	39.94
	5550	110	ax (SU) (40MHz)	98/103.2 (MCS4)	37.63	39.68
	5590	118	ax (SU) (40MHz)	98/103.2 (MCS4)	37.61	39.72
	5670	134	ax (SU) (40MHz)	271/286 (MCS11)	37.95	39.91
	5710	142	ax (SU) (40MHz)	98/103.2 (MCS4)	37.65	39.71
	5530	106	ac (80MHz)	390/433.3 (MCS9)	76.01	80.20
	5610	122	ac (80MHz)	87.8/97.5 (MCS2)	75.16	79.65
	5690	138	ac (80MHz)	175.5/195 (MCS4)	75.35	79.94
	5530	106	ax (SU) (80MHz)	567/600.5 (MCS11)	77.77	80.78
	5610	122	ax (SU) (80MHz)	204/216.2 (MCS4)	77.03	80.38
	5690	138	ax (SU) (80MHz)	102/108.1 (MCS2)	76.92	80.50
	5570	114	ac (160MHz)	175.5/195 (MCS4)	153.84	173.15
	5570	114	ax (SU) (160MHz)	204/216.2 (MCS4)	155.64	162.26

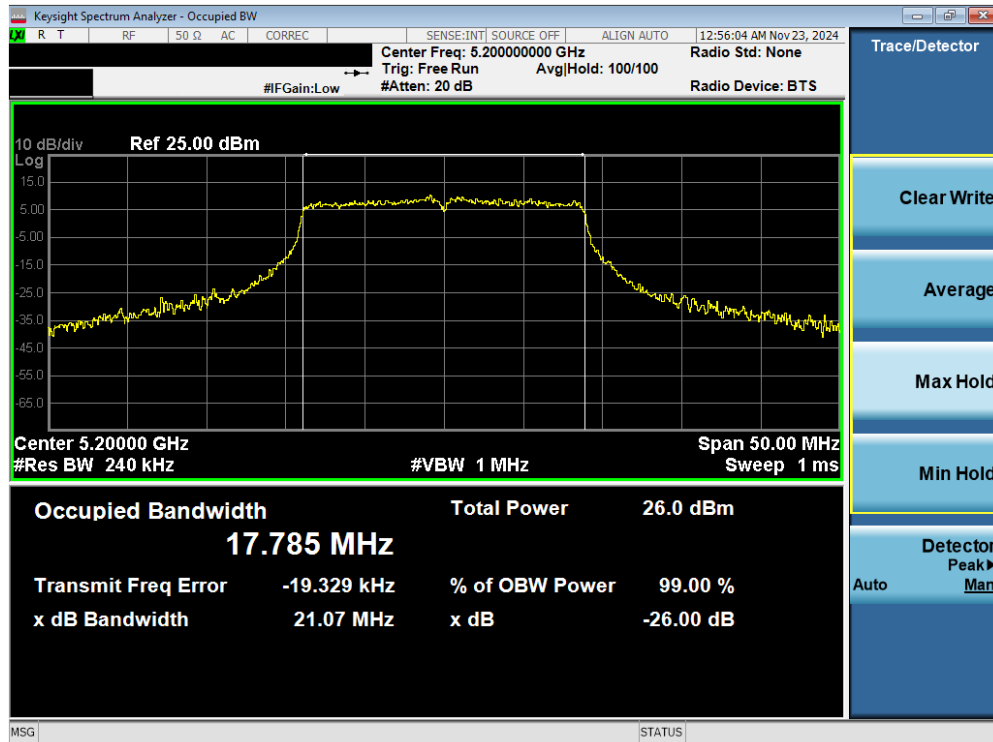
Table 7-2. Conducted Bandwidth Measurements Antenna 0

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 20 of 160

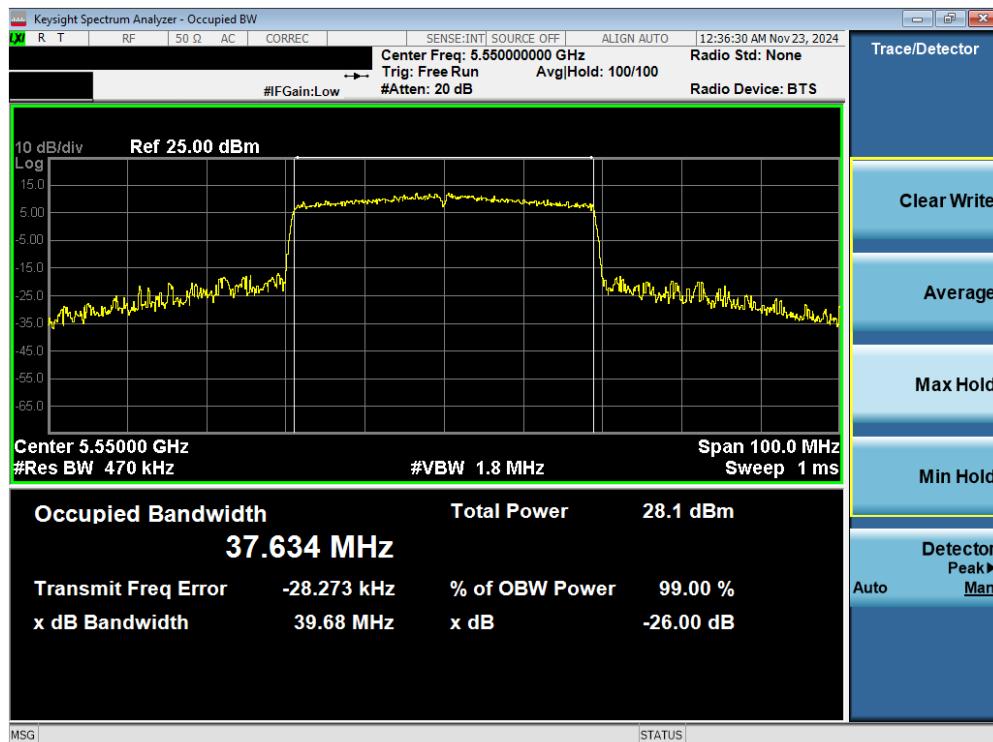
	Frequency [MHz]	Channel	802.11 MODE	Data Rate	Measured 99% Occupied Bandwidth [MHz]
Band 3	5745	149	n (20MHz)	MCS4	18.40
	5785	157	n (20MHz)	MCS2	18.38
	5825	165	n (20MHz)	MCS4	18.57
	5745	149	be (SU) (20MHz)	MCS4	19.44
	5785	157	be (SU) (20MHz)	MCS4	19.35
	5825	165	be (SU) (20MHz)	MCS2	19.49
	5755	151	n (40MHz)	MCS4	36.93
	5795	159	n (40MHz)	MCS4	36.95
	5755	151	be (SU) (40MHz)	MCS2	38.00
	5795	159	be (SU) (40MHz)	MCS2	37.96
	5775	155	ac (80MHz)	MCS2	76.22
	5775	155	be (SU) (80MHz)	MCS4	78.17

Table 7-3. Conducted Bandwidth Measurements UNII-3 Antenna 0

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

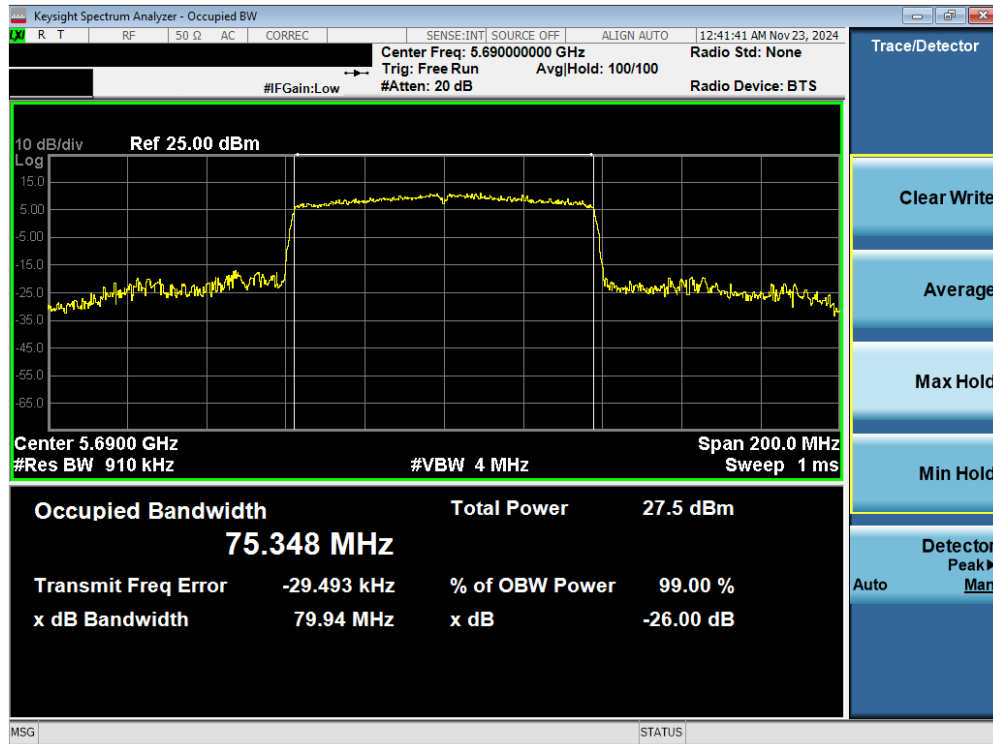


Plot 7-1. 26dB BW & 99% OBW Antenna 0 (20MHz BW 802.11n – Ch. 40)

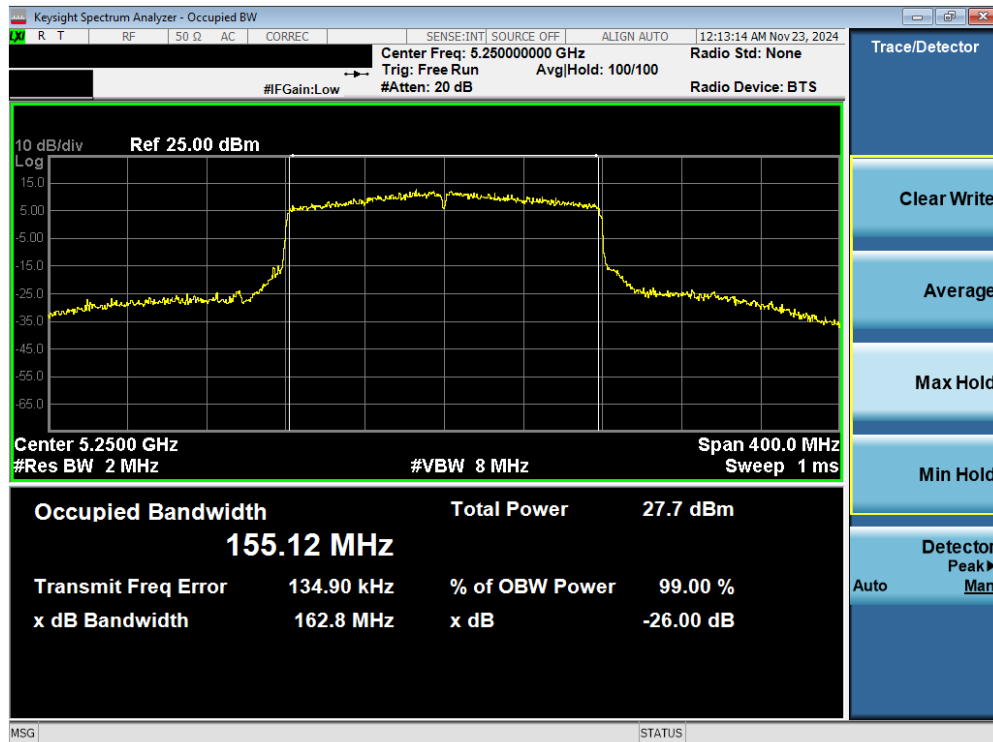


Plot 7-2. 26dB BW & 99% OBW Antenna 0 (40MHz BW 802.11n – Ch. 110)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160



Plot 7-3. 26dB BW & 99% OBW Antenna 0 (80MHz BW 802.11ac – Ch. 138)



Plot 7-4. 26dB BW & 99% OBW Antenna 0 (160MHz BW 802.11ax SU – Ch. 114)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

7.2.2 Antenna 1 26dB & 99% Bandwidth Measurements

	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 99% Occupied Bandwidth [MHz]	Measured 26dB Bandwidth [MHz]
Band 1	5180	36	n (20MHz)	65/72.2 (MCS7)	17.80	21.67
	5200	40	n (20MHz)	65/72.2 (MCS7)	17.77	21.63
	5240	48	n (20MHz)	65/72.2 (MCS7)	17.78	21.26
	5180	36	ax (SU) (20MHz)	135/143.4 (MCS11)	19.14	22.43
	5200	40	ax (SU) (20MHz)	135/143.4 (MCS11)	19.14	22.07
	5240	48	ax (SU) (20MHz)	49/51.6 (MCS4)	19.02	21.93
	5190	38	n (40MHz)	135/150 (MCS7)	36.17	40.25
	5230	46	n (40MHz)	135/150 (MCS7)	36.24	40.48
	5190	38	ax (SU) (40MHz)	271/286 (MCS11)	37.91	39.96
	5230	46	ax (SU) (40MHz)	49/51.6 (MCS2)	37.60	39.70
	5210	42	ac (80MHz)	390/433.3 (MCS9)	75.98	80.06
Band 1/2	5210	42	ax (SU) (80MHz)	567/600.5 (MCS11)	77.53	80.71
	5250	50	ac (160MHz)	175.5/195 (MCS4)	153.67	176.55
Band 2A	5250	50	ax (SU) (160MHz)	204/216.2 (MCS4)	155.08	163.62
	5260	52	n (20MHz)	65/72.2 (MCS7)	17.75	21.46
	5300	60	n (20MHz)	65/72.2 (MCS7)	17.80	21.33
	5320	64	n (20MHz)	65/72.2 (MCS7)	17.78	21.28
	5260	52	ax (SU) (20MHz)	49/51.6 (MCS4)	19.01	22.04
	5300	60	ax (SU) (20MHz)	135/143.4 (MCS11)	19.12	22.12
	5320	64	ax (SU) (20MHz)	135/143.4 (MCS11)	19.13	22.39
	5270	54	n (40MHz)	135/150 (MCS7)	36.09	40.34
	5310	62	n (40MHz)	135/150 (MCS7)	36.19	40.85
	5270	54	ax (SU) (40MHz)	49/51.6 (MCS2)	37.59	39.67
	5310	62	ax (SU) (40MHz)	271/286 (MCS11)	37.94	39.88
	5290	58	ac (80MHz)	390/433.3 (MCS9)	76.02	80.21
	5290	58	ax (SU) (80MHz)	567/600.5 (MCS11)	77.52	80.73
Band 2C	5500	100	n (20MHz)	65/72.2 (MCS7)	17.82	21.97
	5580	116	n (20MHz)	65/72.2 (MCS7)	17.78	21.25
	5720	144	n (20MHz)	39/43.3 (MCS4)	17.80	21.27
	5500	100	ax (SU) (20MHz)	135/143.4 (MCS11)	19.10	22.32
	5580	116	ax (SU) (20MHz)	24/25.8 (MCS2)	19.03	22.13
	5720	144	ax (SU) (20MHz)	49/51.6 (MCS4)	19.04	22.06
	5510	102	n (40MHz)	135/150 (MCS7)	36.19	40.44
	5550	110	n (40MHz)	81/90 (MCS4)	36.22	40.41
	5710	142	n (40MHz)	81/90 (MCS4)	36.19	40.13
	5510	102	ax (SU) (40MHz)	271/286 (MCS11)	37.92	39.92
	5590	118	ax (SU) (40MHz)	49/51.6 (MCS2)	37.58	39.69
	5710	142	ax (SU) (40MHz)	98/103.2 (MCS4)	37.61	39.67
	5530	106	ac (80MHz)	390/433.3 (MCS9)	76.02	80.01
	5610	122	ac (80MHz)	87.8/97.5 (MCS2)	75.29	79.95
	5690	138	ac (80MHz)	87.8/97.5 (MCS2)	75.35	79.75
	5530	106	ax (SU) (80MHz)	204/216.2 (MCS4)	76.97	80.71
	5610	122	ax (SU) (80MHz)	102/108.1 (MCS2)	76.99	80.42
	5690	138	ax (SU) (80MHz)	102/108.1 (MCS2)	76.92	80.37
	5570	114	ac (160MHz)	87.8/97.5 (MCS2)	153.99	176.91
	5570	114	ax (SU) (160MHz)	204/216.2 (MCS4)	155.70	162.34

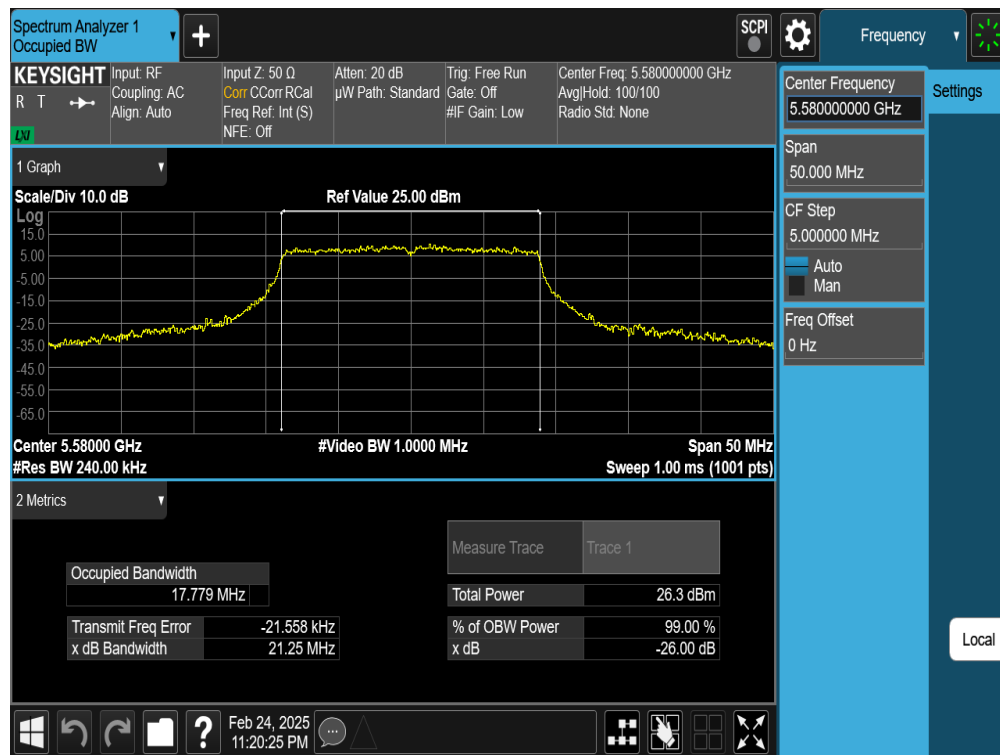
Table 7-4. Conducted Bandwidth Measurements Antenna 1

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

	Frequency [MHz]	Channel	802.11 MODE	Data Rate	Measured 99% Occupied Bandwidth [MHz]
Band 3	5745	149	n (20MHz)	MCS7	18.19
	5785	157	n (20MHz)	MCS2	18.19
	5825	165	n (20MHz)	MCS4	18.31
	5745	149	ax (SU) (20MHz)	MCS4	19.28
	5785	157	ax (SU) (20MHz)	MCS2	19.23
	5825	165	ax (SU) (20MHz)	MCS4	19.30
	5755	151	n (40MHz)	MCS7	36.60
	5795	159	n (40MHz)	MCS4	36.67
	5755	151	ax (SU) (40MHz)	MCS4	37.90
	5795	159	ax (SU) (40MHz)	MCS2	37.79
	5775	155	ac (80MHz)	MCS2	75.74
	5775	155	ax (SU) (80MHz)	MCS2	77.40

Table 7-5. Conducted Bandwidth Measurements UNII-3 Antenna 1

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

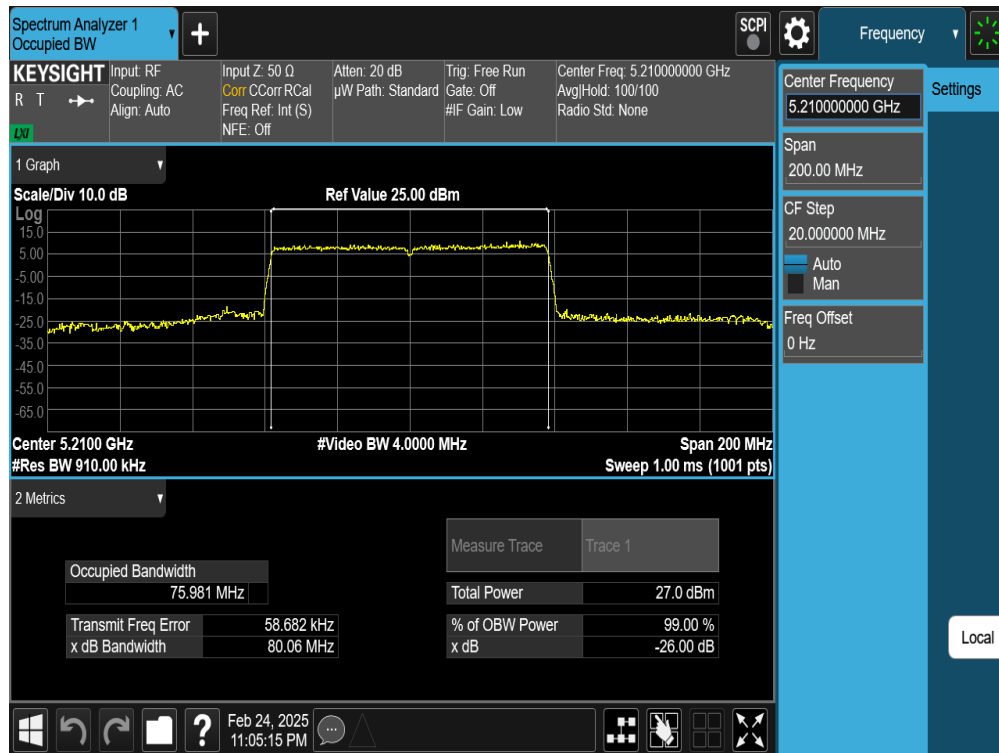


Plot 7-5. 26dB BW & 99% OBW Antenna 1 (20MHz BW 802.11n – Ch. 116)

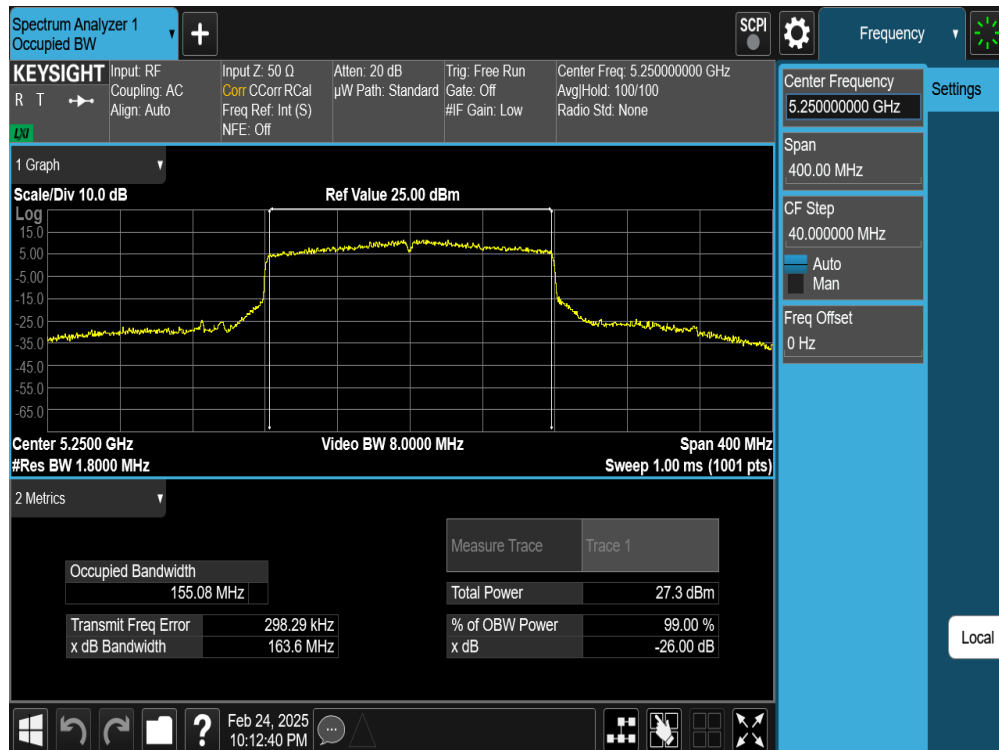


Plot 7-6. 26dB BW & 99% OBW Antenna 1 (40MHz BW 802.11ax SU – Ch. 142)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160



Plot 7-7. 26dB BW & 99% OBW Antenna 1 (80MHz BW 802.11ac – Ch. 42)



Plot 7-8. 26dB BW & 99% OBW Antenna 1 (160MHz BW 802.11ax (SU) – Ch. 50)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

7.3 6dB Bandwidth Measurement

Test Overview and Limit

The bandwidth at 6dB 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 C63.10a:2024 and KDB 789033 D02 v02r01, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 6dB bandwidth.

In the 5.725 – 5.850GHz band, the 6dB bandwidth must be ≥ 500 kHz.

Test Procedure Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 – Section 12.5.1
KDB 789033 D02 v02r01 – Section C

Test Settings

1. The signal analyzers' automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. 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 = 100 kHz
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple

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

1. All data rates and channels were investigated, and tabular data has been reported. Only the worst-case plot was reported.

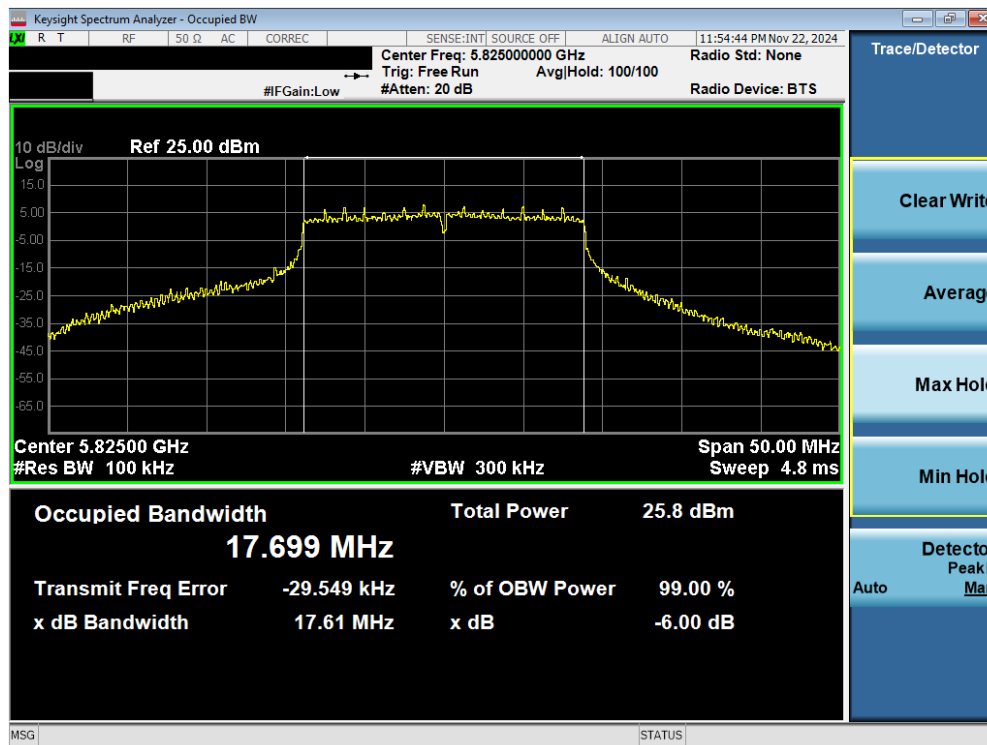
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 28 of 160

7.3.1 Antenna 0 6dB Bandwidth Measurements

	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]	Minimum 6dB Bandwidth [MHz]	Pass / Fail
Band 3	5745	149	n (20MHz)	19.5/21.7 (MCS2)	17.61	0.50	Pass
	5785	157	n (20MHz)	19.5/21.7 (MCS2)	17.66	0.50	Pass
	5825	165	n (20MHz)	19.5/21.7 (MCS2)	17.61	0.50	Pass
	5745	149	ax (SU) (20MHz)	24/25.8 (MCS2)	18.99	0.50	Pass
	5785	157	ax (SU) (20MHz)	24/25.8 (MCS2)	18.94	0.50	Pass
	5825	165	ax (SU) (20MHz)	24/25.8 (MCS2)	18.98	0.50	Pass
	5755	151	n (40MHz)	40/40.5 (MCS2)	35.20	0.50	Pass
	5795	159	n (40MHz)	40/40.5 (MCS2)	34.19	0.50	Pass
	5755	151	ax (SU) (40MHz)	49/51.6 (MCS2)	36.92	0.50	Pass
	5795	159	ax (SU) (40MHz)	49/51.6 (MCS2)	37.21	0.50	Pass
	5775	155	ac (80MHz)	87.8/97.5 (MCS2)	75.46	0.50	Pass
	5775	155	ax (SU) (80MHz)	204/216.2 (MCS4)	76.05	0.50	Pass

Table 7-6. Conducted Bandwidth Measurements Antenna 0

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160



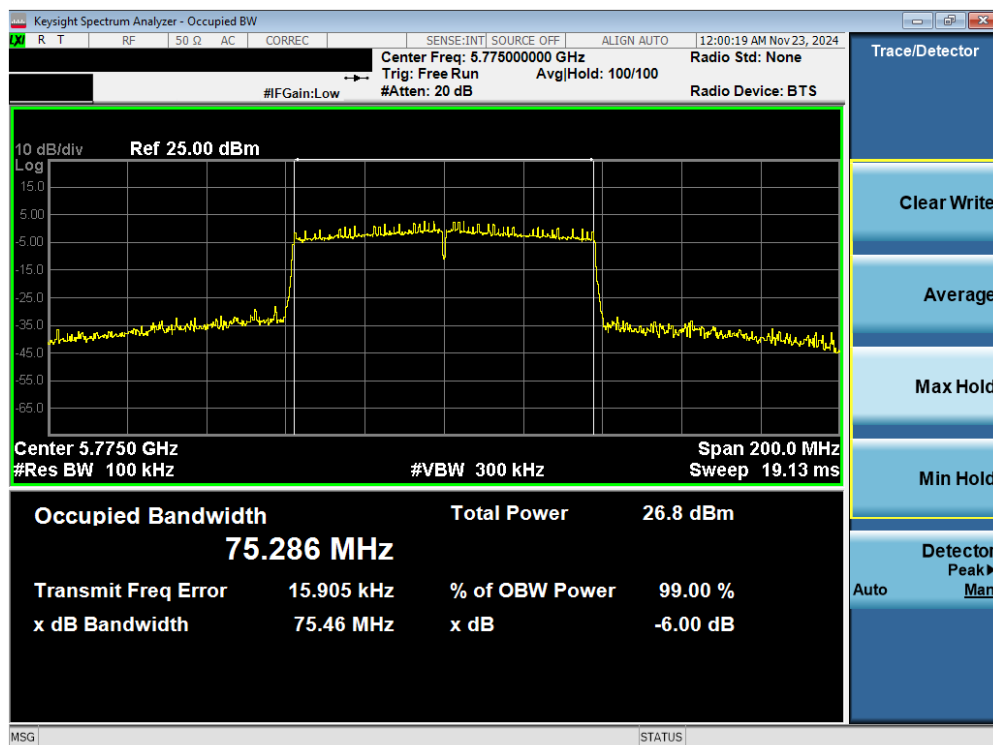
Plot 7-9. 6dB BW OBW Antenna 0 (20MHz BW 802.11n – Ch. 165)



Plot 7-10. 6dB BW OBW Antenna 0 (40MHz BW 802.11n – Ch. 159)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

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Plot 7-11. 6dB BW OBW Antenna 0 (80MHz BW 802.11ac – Ch. 155)

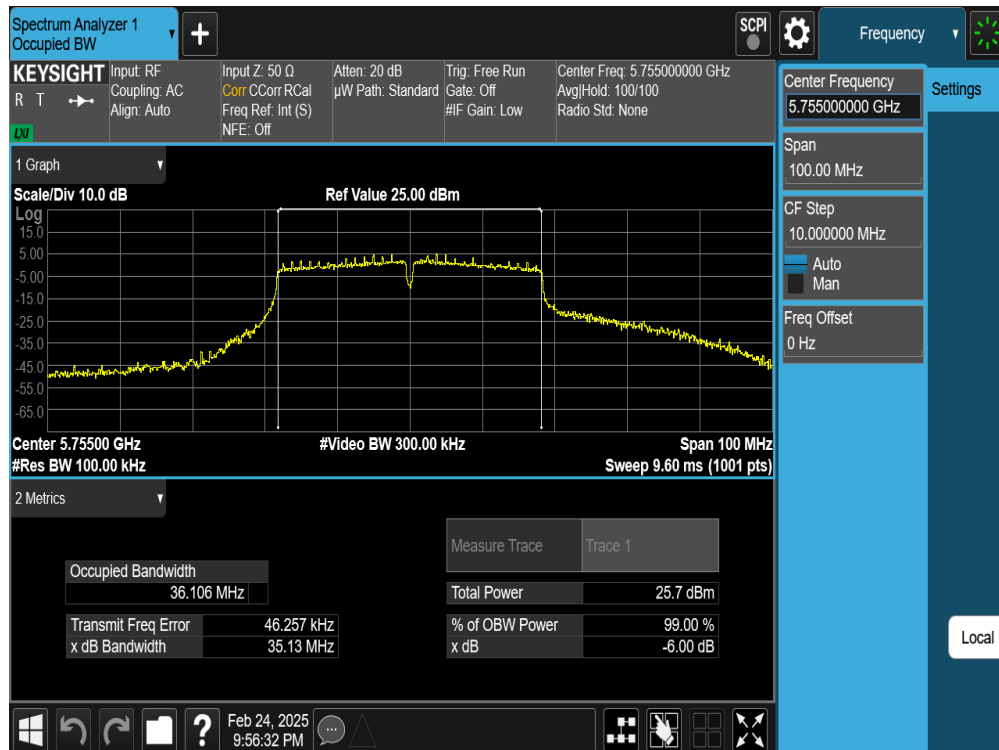
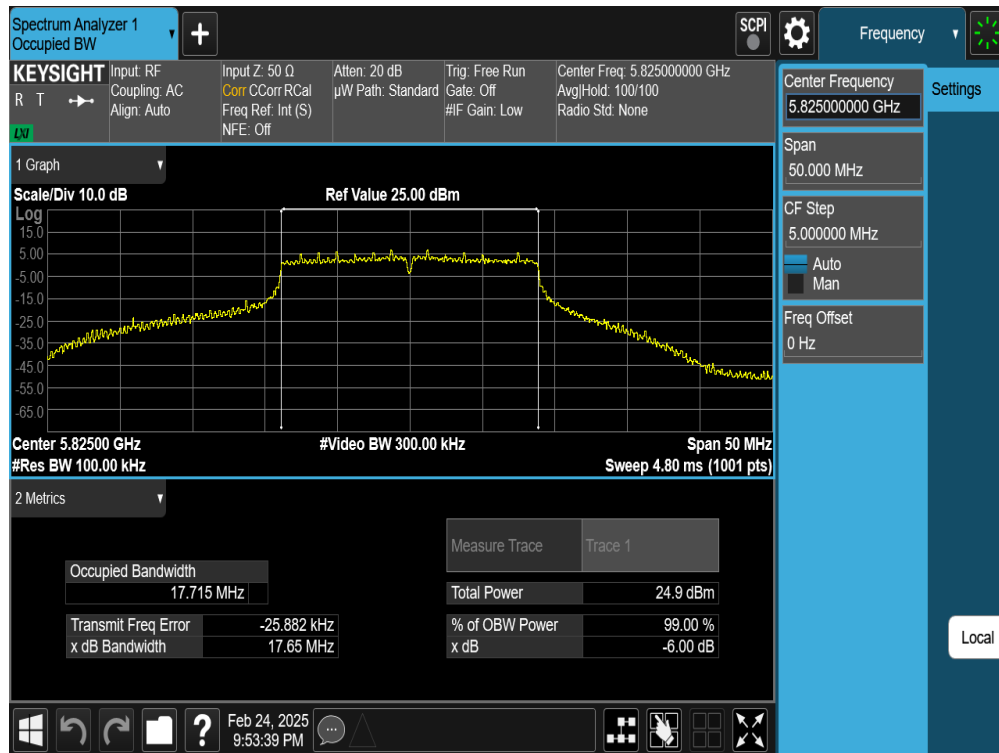
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 31 of 160

7.3.2 Antenna 1 6dB Bandwidth Measurements

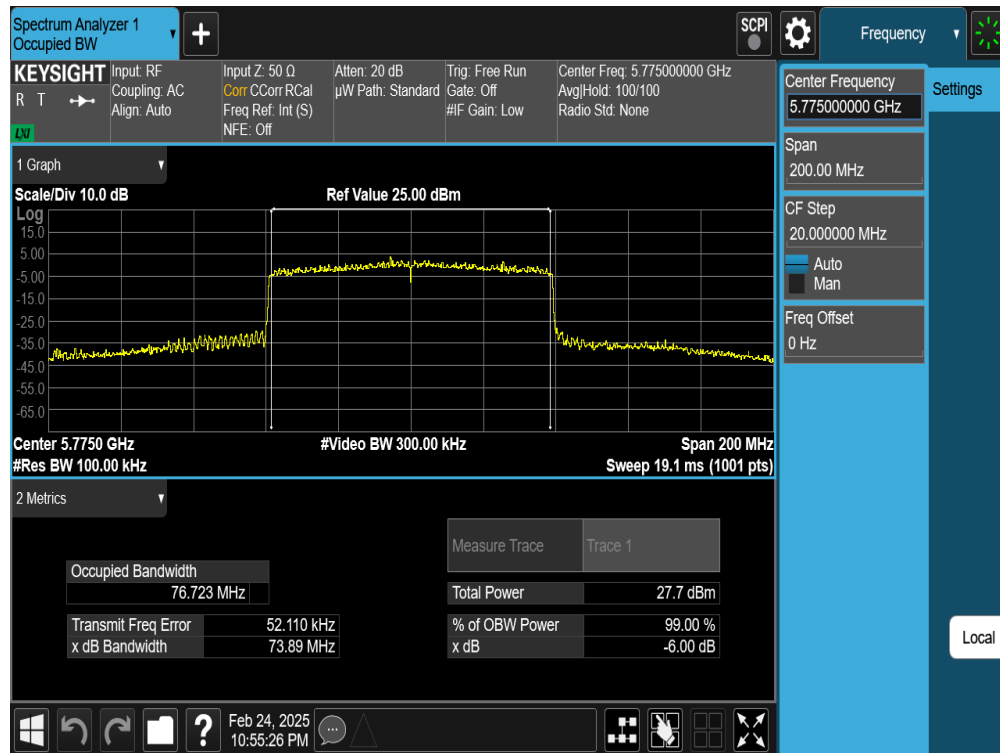
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]	Minimum 6dB Bandwidth [MHz]	Pass / Fail
Band 3	5745	149	n (20MHz)	19.5/21.7 (MCS2)	17.68	0.50	Pass
	5785	157	n (20MHz)	19.5/21.7 (MCS2)	17.65	0.50	Pass
	5825	165	n (20MHz)	19.5/21.7 (MCS2)	17.65	0.50	Pass
	5745	149	ax (SU) (20MHz)	24/25.8 (MCS2)	19.04	0.50	Pass
	5785	157	ax (SU) (20MHz)	24/25.8 (MCS2)	19.02	0.50	Pass
	5825	165	ax (SU) (20MHz)	24/25.8 (MCS2)	18.97	0.50	Pass
	5755	151	n (40MHz)	40/40.5 (MCS2)	35.13	0.50	Pass
	5795	159	n (40MHz)	40/40.5 (MCS2)	35.24	0.50	Pass
	5755	151	ax (SU) (40MHz)	49/51.6 (MCS2)	36.53	0.50	Pass
	5795	159	ax (SU) (40MHz)	49/51.6 (MCS2)	36.83	0.50	Pass
	5775	155	ac (80MHz)	87.8/97.5 (MCS2)	75.25	0.50	Pass
	5775	155	ax (SU) (80MHz)	204/216.2 (MCS4)	73.89	0.50	Pass

Table 7-7. Conducted Bandwidth Measurements Antenna 1

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 33 of 160



Plot 7-14. 6dB BW OBW Antenna 1 (80MHz BW 802.11ax SU – Ch. 155)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

7.4 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 C63.10a:2024 and KDB 789033 D02 v02r01, and at the appropriate frequencies. B is the 99% OBW per ISED RSS-247 and 26dB BW is per FCC 15.407.

In the 5.15 – 5.25GHz band, the maximum permissible conducted output power is 250mW (23.98dBm). The maximum e.i.r.p. shall not exceed the lesser of 200 mW or $10 + 10 \log_{10}B$, dBm.

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or $11 \text{ dBm} + 10\log_{10}(B) \text{ dBm}$. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or $17 + 10 \log_{10}B$, dBm.

In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or $11 \text{ dBm} + 10\log_{10}(B) \text{ dBm}$. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or $17 + 10 \log_{10}B$, dBm.

In the 5.725 – 5.850GHz band, the maximum permissible conducted output power is 1W (30dBm). The maximum e.i.r.p. is 36 dBm.

Test Procedure Used

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

KDB 789033 D02 v02r01 – Section E)3)b) Method PM-G

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 – 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 7-3. Test Instrument & Measurement Setup

Test Notes

1. This device operates under these frequencies only under the control of a certified master device and does not support active scanning on these channels. This device does not transmit any beacons or initiate any transmissions in UNII Bands 2A or 2C.

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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7.4.1 FCC Antenna 0 Conducted Output Power Measurements

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5180	36	12Mbps	17.72	23.98	-6.26
	5200	40	12Mbps	18.88	23.98	-5.10
	5240	48	54Mbps	18.95	23.98	-5.03
	5260	52	12Mbps	19.50	23.98	-4.48
	5300	60	24Mbps	19.37	23.98	-4.61
	5320	64	12Mbps	17.81	23.98	-6.17
	5500	100	24Mbps	17.49	23.98	-6.49
	5520	104	54Mbps	19.38	23.98	-4.60
	5540	108	24Mbps	19.45	23.98	-4.53
	5580	116	12Mbps	19.10	23.98	-4.88
	5660	132	12Mbps	19.26	23.98	-4.72
	5680	136	24Mbps	19.38	23.98	-4.60
	5700	140	12Mbps	14.89	23.98	-9.09
	5720	144	12Mbps	19.39	23.98	-4.59
	5745	149	24Mbps	19.49	30.00	-10.51
	5785	157	12Mbps	19.02	30.00	-10.98
	5825	165	12Mbps	19.49	30.00	-10.51

Table 7-8. FCC Antenna 0 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5180	36	MCS2	17.73	23.98	-6.25
	5200	40	MCS4	17.88	23.98	-6.10
	5240	48	MCS7	17.97	23.98	-6.01
	5260	52	MCS4	18.50	23.98	-5.48
	5300	60	MCS4	18.31	23.98	-5.67
	5320	64	MCS2	17.79	23.98	-6.19
	5500	100	MCS2	17.98	23.98	-6.00
	5520	104	MCS7	18.22	23.98	-5.76
	5540	108	MCS7	18.42	23.98	-5.56
	5580	116	MCS2	18.49	23.98	-5.49
	5660	132	MCS7	18.09	23.98	-5.89
	5680	136	MCS4	18.38	23.98	-5.60
	5700	140	MCS2	14.89	23.98	-9.09
	5720	144	MCS7	18.37	23.98	-5.61
	5745	149	MCS4	18.48	30.00	-11.52
	5785	157	MCS4	18.47	30.00	-11.53
	5825	165	MCS4	18.42	30.00	-11.58

Table 7-9. FCC Antenna 0 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5180	36	MCS4	16.94	23.98	-7.04
	5200	40	MCS2	17.93	23.98	-6.05
	5240	48	MCS11	17.57	23.98	-6.41
	5260	52	MCS11	18.35	23.98	-5.63
	5300	60	MCS4	18.49	23.98	-5.49
	5320	64	MCS4	17.48	23.98	-6.50
	5500	100	MCS2	16.03	23.98	-7.95
	5520	104	MCS2	17.81	23.98	-6.17
	5540	108	MCS11	18.34	23.98	-5.64
	5580	116	MCS11	18.42	23.98	-5.56
	5660	132	MCS2	18.33	23.98	-5.65
	5680	136	MCS2	18.44	23.98	-5.54
	5700	140	MCS4	14.10	23.98	-9.88
	5720	144	MCS11	18.26	23.98	-5.72
	5745	149	MCS4	18.12	30.00	-11.88
	5785	157	MCS11	18.39	30.00	-11.61
	5825	165	MCS2	18.50	30.00	-11.50

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

5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5190	38	MCS7	14.01	23.98	-9.97
	5230	46	MCS4	17.67	23.98	-6.31
	5270	54	MCS7	18.27	23.98	-5.71
	5310	62	MCS2	14.04	23.98	-9.94
	5510	102	MCS2	13.73	23.98	-10.25
	5550	110	MCS4	18.28	23.98	-5.70
	5590	118	MCS7	18.37	23.98	-5.61
	5630	126	MCS2	18.05	23.98	-5.93
	5670	134	MCS2	17.26	23.98	-6.72
	5710	142	MCS4	18.12	23.98	-5.86
	5755	151	MCS7	18.28	30.00	-11.72
	5795	159	MCS2	18.18	30.00	-11.82

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

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5190	38	MCS4	12.71	23.98	-11.27
	5230	46	MCS4	17.90	23.98	-6.08
	5270	54	MCS4	17.98	23.98	-6.00
	5310	62	MCS2	13.22	23.98	-10.76
	5510	102	MCS2	12.36	23.98	-11.62
	5550	110	MCS4	17.51	23.98	-6.47
	5590	118	MCS11	18.07	23.98	-5.91
	5630	126	MCS4	18.34	23.98	-5.64
	5670	134	MCS2	16.39	23.98	-7.59
	5710	142	MCS4	18.40	23.98	-5.58
	5755	151	MCS2	17.99	30.00	-12.01
	5795	159	MCS11	18.45	30.00	-11.55

Table 7-12. FCC Antenna 0 40MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5210	42	MCS4	12.36	23.98	-11.62
	5290	58	MCS2	12.91	23.98	-11.07
	5530	106	MCS2	12.45	23.98	-11.53
	5610	122	MCS4	17.56	23.98	-6.42
	5690	138	MCS4	18.14	23.98	-5.84
	5775	155	MCS2	17.47	30.00	-12.54

Table 7-13. FCC Antenna 0 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5210	42	MCS4	11.61	23.98	-12.37
	5290	58	MCS4	11.81	23.98	-12.17
	5530	106	MCS2	11.31	23.98	-12.67
	5610	122	MCS4	16.93	23.98	-7.05
	5690	138	MCS4	17.97	23.98	-6.01
	5775	155	MCS2	16.52	30.00	-13.48

Table 7-14. FCC Antenna 0 80MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5250	50	MCS4	11.91	23.98	-12.07
	5570	114	MCS4	12.48	23.98	-11.50

Table 7-15. FCC Antenna 0 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5250	50	MCS4	12.11	23.98	-11.87
	5570	114	MCS2	11.72	23.98	-12.26

Table 7-16. FCC Antenna 0 160MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 160

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7.4.2 FCC Antenna 1 Conducted Output Power Measurements

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5180	36	12Mbps	17.69	23.98	-6.29
	5200	40	24Mbps	18.85	23.98	-5.13
	5240	48	24Mbps	18.97	23.98	-5.01
	5260	52	24Mbps	19.48	23.98	-4.50
	5300	60	54Mbps	19.40	23.98	-4.58
	5320	64	12Mbps	17.69	23.98	-6.29
	5500	100	12Mbps	17.54	23.98	-6.44
	5520	104	54Mbps	19.42	23.98	-4.56
	5540	108	54Mbps	19.15	23.98	-4.83
	5580	116	54Mbps	19.47	23.98	-4.51
	5660	132	12Mbps	19.34	23.98	-4.64
	5680	136	24Mbps	19.10	23.98	-4.88
	5700	140	12Mbps	14.64	23.98	-9.34
	5720	144	54Mbps	19.12	23.98	-4.86
	5745	149	24Mbps	19.39	30.00	-10.61
	5785	157	54Mbps	19.18	30.00	-10.82
	5825	165	24Mbps	19.48	30.00	-10.52

Table 7-17. FCC Antenna 1 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5180	36	MCS2	17.63	23.98	-6.35
	5200	40	MCS4	17.87	23.98	-6.11
	5240	48	MCS7	17.94	23.98	-6.04
	5260	52	MCS4	18.49	23.98	-5.49
	5300	60	MCS7	18.36	23.98	-5.62
	5320	64	MCS2	17.63	23.98	-6.35
	5500	100	MCS2	17.57	23.98	-6.41
	5520	104	MCS4	18.29	23.98	-5.69
	5540	108	MCS4	18.05	23.98	-5.93
	5580	116	MCS2	18.39	23.98	-5.59
	5660	132	MCS7	18.22	23.98	-5.76
	5680	136	MCS2	18.37	23.98	-5.61
	5700	140	MCS2	14.58	23.98	-9.40
	5720	144	MCS2	18.49	23.98	-5.49
	5745	149	MCS4	18.38	30.00	-11.62
	5785	157	MCS7	18.12	30.00	-11.88
	5825	165	MCS4	18.46	30.00	-11.54

Table 7-18. FCC Antenna 1 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5180	36	MCS4	16.85	23.98	-7.13
	5200	40	MCS4	17.96	23.98	-6.02
	5240	48	MCS11	17.60	23.98	-6.38
	5260	52	MCS11	18.34	23.98	-5.64
	5300	60	MCS4	18.29	23.98	-5.69
	5320	64	MCS4	17.37	23.98	-6.61
	5500	100	MCS2	16.15	23.98	-7.83
	5520	104	MCS2	17.97	23.98	-6.01
	5540	108	MCS11	18.48	23.98	-5.50
	5580	116	MCS11	18.19	23.98	-5.79
	5660	132	MCS2	18.48	23.98	-5.50
	5680	136	MCS4	18.18	23.98	-5.80
	5700	140	MCS4	14.36	23.98	-9.62
	5720	144	MCS2	18.21	23.98	-5.77
	5745	149	MCS2	18.41	30.00	-11.59
	5785	157	MCS11	18.43	30.00	-11.57
	5825	165	MCS11	18.25	30.00	-11.75

Table 7-19. FCC Antenna 1 20MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5190	38	MCS7	13.13	23.98	-10.85
	5230	46	MCS7	17.66	23.98	-6.32
	5270	54	MCS7	18.39	23.98	-5.59
	5310	62	MCS2	18.31	23.98	-5.67
	5510	102	MCS2	14.37	23.98	-9.61
	5550	110	MCS4	18.42	23.98	-5.56
	5590	118	MCS2	18.42	23.98	-5.56
	5630	126	MCS7	18.49	23.98	-5.49
	5670	134	MCS2	17.97	23.98	-6.01
	5710	142	MCS7	18.34	23.98	-5.64
	5755	151	MCS7	18.47	30.00	-11.53
	5795	159	MCS7	18.45	30.00	-11.55

Table 7-20. FCC Antenna 1 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5190	38	MCS11	12.29	23.98	-11.69
	5230	46	MCS4	17.91	23.98	-6.07
	5270	54	MCS11	18.00	23.98	-5.98
	5310	62	MCS2	17.50	23.98	-6.48
	5510	102	MCS2	13.14	23.98	-10.84
	5550	110	MCS4	17.63	23.98	-6.35
	5590	118	MCS4	18.46	23.98	-5.52
	5630	126	MCS2	18.45	23.98	-5.53
	5670	134	MCS2	18.30	23.98	-5.68
	5710	142	MCS11	18.24	23.98	-5.74
	5755	151	MCS4	18.46	30.00	-11.54
	5795	159	MCS2	18.47	30.00	-11.53

Table 7-21. FCC Antenna 1 40MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5210	42	MCS4	11.38	23.98	-12.60
	5290	58	MCS2	12.48	23.98	-11.50
	5530	106	MCS2	13.00	23.98	-10.98
	5610	122	MCS4	16.52	23.98	-7.46
	5690	138	MCS4	18.44	23.98	-5.54
	5775	155	MCS2	18.36	30.00	-11.64

Table 7-22. FCC Antenna 1 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5210	42	MCS4	12.09	23.98	-11.89
	5290	58	MCS4	12.11	23.98	-11.87
	5530	106	MCS2	11.87	23.98	-12.11
	5610	122	MCS4	16.84	23.98	-7.14
	5690	138	MCS11	18.41	23.98	-5.57
	5775	155	MCS2	18.21	30.00	-11.79

Table 7-23. FCC Antenna 1 80MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5250	50	MCS4	11.73	23.98	-12.25
	5570	114	MCS2	12.42	23.98	-11.56

Table 7-24. FCC Antenna 1 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 42 of 160

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]
	5250	50	MCS4	12.44	23.98	-11.54
	5570	114	MCS2	11.71	23.98	-12.27

Table 7-25. FCC Antenna 1 160MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 43 of 160

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7.4.3 ISED Antenna 0 Conducted Output Power Measurements

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5180	36	24Mbps	16.71	-	-	0.61	17.32	23.01	-5.69
	5200	40	24Mbps	16.79	-	-	0.61	17.40	23.01	-5.61
	5240	48	12Mbps	16.86	-	-	0.61	17.47	23.01	-5.54
	5260	52	12Mbps	19.50	23.98	-4.48	1.91	21.41	30.00	-8.59
	5300	60	12Mbps	19.24	23.98	-4.74	1.91	21.15	30.00	-8.85
	5320	64	12Mbps	17.81	23.98	-6.17	1.91	19.72	30.00	-10.28
	5500	100	12Mbps	17.47	23.98	-6.51	2.29	19.76	30.00	-10.24
	5520	104	12Mbps	19.29	23.98	-4.69	2.29	21.58	30.00	-8.42
	5540	108	12Mbps	19.04	23.98	-4.94	2.29	21.33	30.00	-8.67
	5580	116	12Mbps	19.10	23.98	-4.88	2.29	21.39	30.00	-8.61
	5660	132	12Mbps	19.26	23.98	-4.72	2.29	21.55	30.00	-8.45
	5680	136	12Mbps	19.35	23.98	-4.63	2.29	21.64	30.00	-8.37
	5700	140	12Mbps	14.89	23.98	-9.09	2.29	17.18	30.00	-12.83
	5720	144	12Mbps	19.39	23.98	-4.59	2.29	21.68	30.00	-8.32
	5745	149	12Mbps	18.91	30.00	-11.09	2.71	21.62	-	-
	5785	157	12Mbps	19.02	30.00	-10.98	2.71	21.73	-	-
	5825	165	12Mbps	19.49	30.00	-10.51	2.71	22.20	-	-

Table 7-26. ISED Antenna 0 20MHz BW 802.11a (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5180	36	MCS4	17.27	-	-	0.61	17.88	23.01	-5.13
	5200	40	MCS4	17.33	-	-	0.61	17.94	23.01	-5.07
	5240	48	MCS2	17.32	-	-	0.61	17.93	23.01	-5.08
	5260	52	MCS2	18.48	23.98	-5.50	1.91	20.39	30.00	-9.61
	5300	60	MCS2	18.21	23.98	-5.77	1.91	20.12	30.00	-9.88
	5320	64	MCS2	17.79	23.98	-6.19	1.91	19.70	30.00	-10.30
	5500	100	MCS2	17.98	23.98	-6.00	2.29	20.27	30.00	-9.73
	5520	104	MCS2	18.14	23.98	-5.84	2.29	20.43	30.00	-9.57
	5540	108	MCS2	18.36	23.98	-5.62	2.29	20.65	30.00	-9.35
	5580	116	MCS2	18.49	23.98	-5.49	2.29	20.78	30.00	-9.22
	5660	132	MCS2	18.08	23.98	-5.90	2.29	20.37	30.00	-9.63
	5680	136	MCS2	18.25	23.98	-5.73	2.29	20.54	30.00	-9.46
	5700	140	MCS2	14.89	23.98	-9.09	2.29	17.18	30.00	-12.82
	5720	144	MCS2	18.35	23.98	-5.63	2.29	20.64	30.00	-9.36
	5745	149	MCS2	18.41	30.00	-11.59	2.71	21.12	-	-
	5785	157	MCS2	18.02	30.00	-11.98	2.71	20.73	-	-
	5825	165	MCS2	18.41	30.00	-11.59	2.71	21.12	-	-

Table 7-27. ISED Antenna 0 20MHz BW 802.11n (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5180	36	MCS4	16.98	-	-	0.61	17.59	23.01	-5.42
	5200	40	MCS2	17.98	-	-	0.61	18.59	23.01	-4.42
	5240	48	MCS4	17.99	-	-	0.61	18.60	23.01	-4.41
	5260	52	MCS2	18.04	23.98	-5.94	1.91	19.95	30.00	-10.06
	5300	60	MCS2	18.43	23.98	-5.55	1.91	20.34	30.00	-9.67
	5320	64	MCS2	17.36	23.98	-6.62	1.91	19.27	30.00	-10.73
	5500	100	MCS2	16.03	23.98	-7.95	2.29	18.32	30.00	-11.68
	5520	104	MCS2	17.81	23.98	-6.17	2.29	20.10	30.00	-9.90
	5540	108	MCS2	18.08	23.98	-5.90	2.29	20.37	30.00	-9.63
	5580	116	MCS2	18.16	23.98	-5.82	2.29	20.45	30.00	-9.55
	5660	132	MCS2	18.33	23.98	-5.65	2.29	20.62	30.00	-9.39
	5680	136	MCS2	18.44	23.98	-5.54	2.29	20.73	30.00	-9.28
	5700	140	MCS2	14.02	23.98	-9.96	2.29	16.31	30.00	-13.69
	5720	144	MCS2	18.00	23.98	-5.98	2.29	20.29	30.00	-9.71
	5745	149	MCS2	18.09	30.00	-11.91	2.71	20.80	-	-
	5785	157	MCS2	18.15	30.00	-11.85	2.71	20.86	-	-
	5825	165	MCS2	18.50	30.00	-11.50	2.71	21.21	-	-

Table 7-28. ISED Antenna 0 20MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power and Max EIRP

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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.		
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5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5190	38	MCS2	14.01	-	-	0.61	14.62	23.01	-8.39
	5230	46	MCS2	17.67	-	-	0.61	18.28	23.01	-4.73
	5270	54	MCS2	18.27	23.98	-5.71	1.91	20.18	30.00	-9.82
	5310	62	MCS2	14.04	23.98	-9.94	1.91	15.95	30.00	-14.06
	5510	102	MCS2	13.73	23.98	-10.25	2.29	16.02	30.00	-13.98
	5550	110	MCS2	18.28	23.98	-5.70	2.29	20.57	30.00	-9.44
	5590	118	MCS2	18.37	23.98	-5.61	2.29	20.66	-	-
	5630	126	MCS2	18.05	23.98	-5.93	2.29	20.34	-	-
	5670	134	MCS2	17.26	23.98	-6.72	2.29	19.55	30.00	-10.45
	5710	142	MCS2	18.12	23.98	-5.86	2.29	20.41	30.00	-9.59
	5755	151	MCS2	18.28	30.00	-11.72	2.71	20.99	-	-
	5795	159	MCS2	18.18	30.00	-11.82	2.71	20.89	-	-

Table 7-29. ISED Antenna 0 40MHz BW 802.11n (UNII) Conducted Output Power and Max EIRP

5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5190	38	MCS2	12.71	-	-	0.61	13.32	23.01	-9.70
	5230	46	MCS2	17.90	-	-	0.61	18.51	23.01	-4.50
	5270	54	MCS2	17.98	23.98	-6.00	1.91	19.89	30.00	-10.11
	5310	62	MCS2	13.22	23.98	-10.76	1.91	15.13	30.00	-14.87
	5510	102	MCS2	12.36	23.98	-11.62	2.29	14.65	30.00	-15.36
	5550	110	MCS2	17.51	23.98	-6.47	2.29	19.80	30.00	-10.20
	5590	118	MCS2	18.07	23.98	-5.91	2.29	20.36	30.00	-9.64
	5630	126	MCS2	18.34	23.98	-5.64	2.29	20.63	30.00	-9.37
	5670	134	MCS2	16.39	23.98	-7.59	2.29	18.68	30.00	-11.32
	5710	142	MCS2	18.40	23.98	-5.58	2.29	20.69	30.00	-9.31
	5755	151	MCS2	17.99	30.00	-12.01	2.71	20.70	-	-
	5795	159	MCS2	18.45	30.00	-11.55	2.71	21.16	-	-

Table 7-30. ISED Antenna 0 40MHz BW 802.11ax (SU) (UNII) Conducted Output Power and Max EIRP

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5210	42	MCS4	12.36	-	-	0.61	12.97	23.01	-10.04
	5290	58	MCS2	12.91	23.98	-11.07	1.91	14.82	30.00	-15.18
	5530	106	MCS2	12.45	23.98	-11.53	2.29	14.74	30.00	-15.26
	5610	122	MCS2	17.56	23.98	-6.42	2.29	19.85	30.00	-10.15
	5690	138	MCS2	18.14	23.98	-5.84	2.29	20.43	30.00	-9.57
	5775	155	MCS2	17.47	30.00	-12.54	2.71	20.18	-	-

Table 7-31. ISED Antenna 0 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5210	42	MCS2	11.61	-	-	0.61	12.22	23.01	-10.79
	5290	58	MCS2	11.81	23.98	-12.17	1.91	13.72	30.00	-16.28
	5530	106	MCS2	11.31	23.98	-12.67	2.29	13.60	30.00	-16.40
	5610	122	MCS2	16.93	23.98	-7.05	2.29	19.22	30.00	-10.79
	5690	138	MCS2	17.97	23.98	-6.01	2.29	20.26	30.00	-9.74
	5775	155	MCS2	16.52	30.00	-13.48	2.71	19.23	-	-

Table 7-32. ISED Antenna 0 80MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5570	114	MCS2	12.48	23.98	-11.50	2.29	14.77	29.98	-15.21

Table 7-33. ISED Antenna 0 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5570	114	MCS2	11.72	23.98	-12.26	2.29	14.01	29.98	-15.97

Table 7-34. ISED Antenna 0 160MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power and Max EIRP

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 45 of 160

7.4.4 ISED Antenna 1 Conducted Output Power Measurements

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5180	36	24Mbps	16.64	-	-	1.78	18.42	23.01	-4.59
	5200	40	54Mbps	16.96	-	-	1.78	18.74	23.01	-4.27
	5240	48	12Mbps	16.92	-	-	1.78	18.70	23.01	-4.31
	5260	52	12Mbps	19.09	23.98	-4.89	1.41	20.50	30.00	-9.51
	5300	60	12Mbps	19.09	23.98	-4.89	1.41	20.50	30.00	-9.50
	5320	64	12Mbps	17.69	23.98	-6.29	1.41	19.10	30.00	-10.90
	5500	100	12Mbps	17.54	23.98	-6.44	3.49	21.03	30.00	-8.97
	5520	104	12Mbps	19.38	23.98	-4.60	3.49	22.87	30.00	-7.13
	5540	108	12Mbps	19.13	23.98	-4.85	3.49	22.62	30.00	-7.38
	5580	116	12Mbps	19.46	23.98	-4.52	3.49	22.95	30.00	-7.05
	5660	132	12Mbps	19.34	23.98	-4.64	3.49	22.83	30.00	-7.17
	5680	136	12Mbps	18.98	23.98	-5.00	3.49	22.47	30.00	-7.53
	5700	140	12Mbps	14.64	23.98	-9.34	3.49	18.13	30.00	-11.87
	5720	144	12Mbps	19.06	23.98	-4.92	3.49	22.55	30.00	-7.45
	5745	149	12Mbps	19.35	30.00	-10.65	2.01	21.36	-	-
	5785	157	12Mbps	19.14	30.00	-10.86	2.01	21.15	-	-
	5825	165	12Mbps	19.41	30.00	-10.59	2.01	21.42	-	-

Table 7-35. ISED Antenna 1 20MHz BW 802.11a (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5180	36	MCS2	17.43	-	-	1.78	19.21	23.01	-3.80
	5200	40	MCS4	17.87	-	-	1.78	19.65	23.01	-3.36
	5240	48	MCS7	17.94	-	-	1.78	19.72	23.01	-3.29
	5260	52	MCS2	18.44	23.98	-5.54	1.41	19.85	30.00	-10.15
	5300	60	MCS2	18.04	23.98	-5.94	1.41	19.45	30.00	-10.56
	5320	64	MCS2	17.63	23.98	-6.35	1.41	19.04	30.00	-10.96
	5500	100	MCS2	17.57	23.98	-6.41	3.49	21.06	30.00	-8.94
	5520	104	MCS2	18.28	23.98	-5.70	3.49	21.77	30.00	-8.23
	5540	108	MCS2	18.01	23.98	-5.97	3.49	21.50	30.00	-8.50
	5580	116	MCS2	18.39	23.98	-5.59	3.49	21.88	30.00	-8.12
	5660	132	MCS2	18.20	23.98	-5.78	3.49	21.69	30.00	-8.31
	5680	136	MCS2	18.37	23.98	-5.61	3.49	21.86	30.00	-8.14
	5700	140	MCS2	14.58	23.98	-9.40	3.49	18.07	30.00	-11.93
	5720	144	MCS2	18.49	23.98	-5.49	3.49	21.98	30.00	-8.02
	5745	149	MCS2	18.28	30.00	-11.72	2.01	20.29	-	-
	5785	157	MCS2	18.07	30.00	-11.93	2.01	20.08	-	-
	5825	165	MCS2	18.41	30.00	-11.59	2.01	20.42	-	-

Table 7-36. ISED Antenna 1 20MHz BW 802.11n (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (20MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5180	36	MCS4	16.85	-	-	1.78	18.63	23.01	-4.38
	5200	40	MCS4	17.96	-	-	1.78	19.74	23.01	-3.27
	5240	48	MCS11	17.60	-	-	1.78	19.38	23.01	-3.63
	5260	52	MCS2	18.05	23.98	-5.93	1.41	19.46	30.00	-10.54
	5300	60	MCS2	18.20	23.98	-5.78	1.41	19.61	30.00	-10.39
	5320	64	MCS2	17.30	23.98	-6.68	1.41	18.71	30.00	-11.29
	5500	100	MCS2	16.15	23.98	-7.83	3.49	19.64	30.00	-10.36
	5520	104	MCS2	17.97	23.98	-6.01	3.49	21.46	30.00	-8.54
	5540	108	MCS2	18.25	23.98	-5.73	3.49	21.74	30.00	-8.26
	5580	116	MCS2	18.05	23.98	-5.93	3.49	21.54	30.00	-8.46
	5660	132	MCS2	18.48	23.98	-5.50	3.49	21.97	30.00	-8.03
	5680	136	MCS2	18.08	23.98	-5.90	3.49	21.57	30.00	-8.43
	5700	140	MCS2	14.22	23.98	-9.76	3.49	17.71	30.00	-12.29
	5720	144	MCS2	18.21	23.98	-5.77	3.49	21.70	30.00	-8.30
	5745	149	MCS2	18.41	30.00	-11.59	2.01	20.42	-	-
	5785	157	MCS2	18.24	30.00	-11.76	2.01	20.25	-	-
	5825	165	MCS2	18.01	30.00	-11.99	2.01	20.02	-	-

Table 7-37. ISED Antenna 1 20MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power and Max EIRP

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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.		
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5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5190	38	MCS2	14.44	-	-	1.78	16.22	23.01	-6.79
	5230	46	MCS2	17.66	-	-	1.78	19.44	23.01	-3.57
	5270	54	MCS2	18.31	23.98	-5.67	1.41	19.72	30.00	-10.29
	5310	62	MCS2	14.37	23.98	-9.61	1.41	15.78	30.00	-14.22
	5510	102	MCS2	13.88	23.98	-10.10	3.49	17.37	30.00	-12.64
	5550	110	MCS2	18.42	23.98	-5.56	3.49	21.91	30.00	-8.09
	5590	118	MCS2	18.24	23.98	-5.74	3.49	21.73	30.00	-8.27
	5630	126	MCS2	17.97	23.98	-6.01	3.49	21.46	30.00	-8.54
	5670	134	MCS2	17.38	23.98	-6.60	3.49	20.87	30.00	-9.13
	5710	142	MCS2	18.35	23.98	-5.63	3.49	21.84	30.00	-8.16
	5755	151	MCS2	18.29	30.00	-11.71	2.01	20.30	-	-
	5795	159	MCS2	18.36	30.00	-11.65	2.01	20.37	-	-

Table 7-38. ISED Antenna 1 40MHz BW 802.11n (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (40MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5190	38	MCS2	12.63	-	-	1.78	14.41	23.01	-8.60
	5230	46	MCS2	17.92	-	-	1.78	19.70	23.01	-3.31
	5270	54	MCS2	17.50	23.98	-6.48	1.41	18.91	30.00	-11.09
	5310	62	MCS2	13.14	23.98	-10.84	1.41	14.55	30.00	-15.46
	5510	102	MCS2	12.48	23.98	-11.50	3.49	15.97	30.00	-14.03
	5550	110	MCS2	17.66	23.98	-6.32	3.49	21.15	30.00	-8.85
	5590	118	MCS2	18.45	23.98	-5.53	3.49	21.94	30.00	-8.06
	5630	126	MCS2	18.30	23.98	-5.68	3.49	21.79	30.00	-8.21
	5670	134	MCS2	16.05	23.98	-7.93	3.49	19.54	30.00	-10.46
	5710	142	MCS2	18.10	23.98	-5.88	3.49	21.59	30.00	-8.41
	5755	151	MCS2	18.47	30.00	-11.53	2.01	20.48	-	-
	5795	159	MCS2	18.16	30.00	-11.85	2.01	20.17	-	-

Table 7-39. ISED Antenna 1 40MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (80MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5210	42	MCS2	11.87	-	-	1.78	13.65	23.01	-9.36
	5290	58	MCS2	13.00	23.98	-10.98	1.41	14.41	30.00	-15.59
	5530	106	MCS2	12.40	23.98	-11.58	3.49	15.89	30.00	-14.11
	5610	122	MCS2	16.83	23.98	-7.15	3.49	20.32	30.00	-9.68
	5690	138	MCS2	18.21	23.98	-5.77	3.49	21.70	30.00	-8.30
	5775	155	MCS2	17.09	30.00	-12.91	2.01	19.10	-	-

Table 7-40. ISED Antenna 1 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (80 MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5210	42	MCS4	12.09	-	-	1.78	13.87	23.01	-9.15
	5290	58	MCS2	11.87	23.98	-12.11	1.41	13.28	30.00	-16.72
	5530	106	MCS2	11.42	23.98	-12.56	3.49	14.91	30.00	-15.09
	5610	122	MCS2	16.84	23.98	-7.14	3.49	20.33	30.00	-9.67
	5690	138	MCS2	18.36	23.98	-5.62	3.49	21.85	30.00	-8.15
	5775	155	MCS2	16.55	30.00	-13.45	2.01	18.56	-	-

Table 7-41. ISED Antenna 1 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5570	114	MCS2	12.33	23.98	-11.65	3.49	15.82	29.98	-14.16

Table 7-42. ISED Antenna 1 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Data Rate	Conducted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
	5570	114	MCS2	11.59	23.98	-12.39	3.49	15.08	29.98	-14.90

Table 7-43. ISED Antenna 1 160MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power and Max EIRP

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 47 of 160

7.4.5 FCC CDD Maximum Conducted Output Power Measurements

5 GHz (20 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5180	36	CDD	MCS10	16.67	16.73	19.71	23.98	-4.27
	5200	40	CDD	MCS12	17.33	17.38	20.37	23.98	-3.61
	5240	48	CDD	MCS10	17.35	17.49	20.43	23.98	-3.55
	5260	52	CDD	MCS10	17.40	17.48	20.45	23.98	-3.53
	5300	60	CDD	MCS15	17.13	17.46	20.31	23.98	-3.67
	5320	64	CDD	MCS10	16.72	16.73	19.74	23.98	-4.24
	5500	100	CDD	MCS10	16.93	16.74	19.85	23.98	-4.13
	5520	104	CDD	MCS15	17.29	17.42	20.36	23.98	-3.62
	5540	108	CDD	MCS15	17.50	17.20	20.36	23.98	-3.62
	5580	116	CDD	MCS10	17.47	17.31	20.40	23.98	-3.58
	5660	132	CDD	MCS15	17.14	17.26	20.21	23.98	-3.77
	5680	136	CDD	MCS12	17.38	17.47	20.44	23.98	-3.54
	5700	140	CDD	MCS10	14.41	14.15	17.29	23.98	-6.69
	5720	144	CDD	MCS12	17.32	17.42	20.38	23.98	-3.60
	5745	149	CDD	MCS12	18.43	18.43	21.44	30.00	-8.56
	5785	157	CDD	MCS10	18.47	18.14	21.32	30.00	-8.68
	5825	165	CDD	MCS10	18.38	18.39	21.40	30.00	-8.60

Table 7-44. FCC CDD 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

5 GHz (20 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5180	36	CDD	MCS4	15.94	15.96	18.96	23.98	-5.02
	5200	40	CDD	MCS2	17.97	17.51	20.76	23.98	-3.22
	5240	48	CDD	MCS11	18.00	17.67	20.85	23.98	-3.13
	5260	52	CDD	MCS11	17.80	17.99	20.91	23.98	-3.07
	5300	60	CDD	MCS4	17.99	17.97	20.99	23.98	-2.99
	5320	64	CDD	MCS2	16.37	16.35	19.37	23.98	-4.61
	5500	100	CDD	MCS2	15.49	15.22	18.36	23.98	-5.62
	5520	104	CDD	MCS4	17.84	17.52	20.69	23.98	-3.29
	5540	108	CDD	MCS11	17.87	17.99	20.94	23.98	-3.04
	5580	116	CDD	MCS11	17.96	17.94	20.96	23.98	-3.02
	5660	132	CDD	MCS4	17.83	17.96	20.90	23.98	-3.08
	5680	136	CDD	MCS2	18.00	17.56	20.79	23.98	-3.19
	5700	140	CDD	MCS4	13.19	13.35	16.28	23.98	-7.70
	5720	144	CDD	MCS11	17.83	17.66	20.75	23.98	-3.23
	5745	149	CDD	MCS11	18.38	18.35	21.38	30.00	-8.62
	5785	157	CDD	MCS2	18.21	18.32	21.27	30.00	-8.73
	5825	165	CDD	MCS4	18.24	18.10	21.18	30.00	-8.82

Table 7-45. FCC CDD 20MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5 GHz (40 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5190	38	CDD	MCS12	13.07	13.10	16.10	23.98	-7.88
	5230	46	CDD	MCS15	17.65	17.80	20.74	23.98	-3.24
	5270	54	CDD	MCS12	18.50	18.41	21.46	23.98	-2.52
	5310	62	CDD	MCS10	18.24	18.43	21.35	23.98	-2.63
	5510	102	CDD	MCS10	13.49	13.93	16.72	23.98	-7.26
	5550	110	CDD	MCS12	17.75	17.94	20.85	23.98	-3.13
	5590	118	CDD	MCS15	18.38	18.31	21.35	23.98	-2.63
	5630	126	CDD	MCS10	18.30	18.29	21.31	23.98	-2.67
	5670	134	CDD	MCS10	18.30	18.48	21.40	23.98	-2.58
	5710	142	CDD	MCS15	18.44	18.34	21.40	23.98	-2.58
	5755	151	CDD	MCS15	17.99	18.43	21.22	30.00	-8.78
	5795	159	CDD	MCS10	18.44	18.28	21.37	30.00	-8.63

Table 7-46. FCC CDD 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 48 of 160

5 GHz (40 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5190	38	CDD	MCS4	11.83	11.88	14.86	23.98	-9.12
	5230	46	CDD	MCS4	17.91	17.51	20.72	23.98	-3.26
	5270	54	CDD	MCS2	17.91	17.56	20.75	23.98	-3.23
	5310	62	CDD	MCS2	17.98	17.66	20.83	23.98	-3.15
	5510	102	CDD	MCS2	12.77	12.71	15.75	23.98	-8.23
	5550	110	CDD	MCS4	16.54	16.64	19.60	23.98	-4.38
	5590	118	CDD	MCS4	18.09	18.48	21.30	23.98	-2.68
	5630	126	CDD	MCS2	18.08	18.50	21.30	23.98	-2.68
	5670	134	CDD	MCS2	18.36	18.28	21.33	23.98	-2.65
	5710	142	CDD	MCS11	18.32	18.32	21.33	23.98	-2.65
	5755	151	CDD	MCS2	18.42	18.09	21.27	30.00	-8.73
	5795	159	CDD	MCS4	18.50	18.15	21.34	30.00	-8.66

Table 7-47. FCC CDD 40MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5 GHz (80 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5210	42	CDD	MCS4	10.47	10.08	13.29	23.98	-10.69
	5290	58	CDD	MCS2	10.99	10.97	13.99	23.98	-9.99
	5530	106	CDD	MCS2	10.85	11.00	13.93	23.98	-10.05
	5610	122	CDD	MCS4	16.15	16.09	19.13	23.98	-4.85
	5690	138	CDD	MCS4	18.21	18.45	21.34	23.98	-2.64
	5775	155	CDD	MCS2	18.21	18.36	21.29	30.00	-8.71

Table 7-48. FCC CDD 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

5 GHz (80 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5210	42	CDD	MCS4	11.23	11.25	14.25	23.98	-9.73
	5290	58	CDD	MCS2	11.68	11.63	14.67	23.98	-9.31
	5530	106	CDD	MCS2	11.53	11.75	14.65	23.98	-9.33
	5610	122	CDD	MCS4	16.41	16.28	19.35	23.98	-4.63
	5690	138	CDD	MCS4	18.49	18.12	21.32	23.98	-2.66
	5775	155	CDD	MCS2	18.49	18.18	21.35	30.00	-8.65

Table 7-49. FCC CDD 80MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

5 GHz (160 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5250	50	CDD	MCS4	11.49	11.38	14.45	23.98	-9.53
	5570	114	CDD	MCS2	11.50	11.45	14.49	23.98	-9.49

Table 7-50. FCC CDD 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power

5 GHz (160 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]
					Antenna 0	Antenna 1	Summed		
	5250	50	CDD	MCS4	11.70	11.61	14.67	23.98	-9.31
	5570	114	CDD	MCS2	11.71	11.55	14.64	23.98	-9.34

Table 7-51. FCC CDD 160MHz BW 802.11ax (SU) (UNII) Maximum Conducted Output Power

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
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7.4.6 ISED CDD/SDM Maximum Conducted Output Power Measurements

5 GHz (20 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5180	36	SDM	MCS12	16.21	16.28	19.25	-	-	1.23	20.48	23.01	-2.53
	5200	40	SDM	MCS12	17.33	17.38	20.37	-	-	1.23	21.60	23.01	-1.41
	5240	48	SDM	MCS12	17.29	17.48	20.39	-	-	1.23	21.62	23.01	-1.39
	5260	52	CDD	MCS10	17.40	17.48	20.45	23.98	-3.53	1.67	22.12	30.00	-7.88
	5300	60	CDD	MCS10	17.19	17.09	20.15	23.98	-3.83	1.67	21.82	30.00	-8.18
	5320	64	CDD	MCS10	16.72	16.73	19.74	23.98	-4.24	1.67	21.41	30.00	-8.59
	5500	100	CDD	MCS10	16.93	16.74	19.85	23.98	-4.13	2.93	22.78	30.00	-7.22
	5520	104	CDD	MCS10	17.13	17.32	20.23	23.98	-3.75	2.93	23.16	30.00	-6.84
	5540	108	CDD	MCS10	17.32	17.08	20.21	23.98	-3.77	2.93	23.14	30.00	-6.86
	5580	116	CDD	MCS10	17.47	17.31	20.40	23.98	-3.58	2.93	23.33	30.00	-6.67
	5660	132	CDD	MCS10	17.10	17.14	20.13	23.98	-3.85	2.93	23.06	30.00	-6.94
	5680	136	CDD	MCS10	17.25	17.33	20.30	23.98	-3.68	2.93	23.23	30.00	-6.77
	5700	140	CDD	MCS10	14.41	14.15	17.29	23.98	-6.69	2.93	20.22	30.00	-9.78
	5720	144	CDD	MCS10	17.31	16.97	20.15	23.98	-3.83	2.93	23.08	30.00	-6.92
	5745	149	CDD	MCS10	18.46	18.25	21.36	30.00	-8.64	2.37	23.73	-	-
	5785	157	CDD	MCS10	18.47	18.14	21.32	30.00	-8.68	2.37	23.69	-	-
	5825	165	CDD	MCS10	18.38	18.39	21.40	30.00	-8.60	2.37	23.77	-	-

Table 7-52. ISED SDM 20MHz BW 802.11n (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (20 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5180	36	SDM	MCS4	15.94	15.96	18.96	-	-	1.23	20.19	23.01	-2.82
	5200	40	SDM	MCS11	17.71	17.79	20.76	-	-	1.23	21.99	23.01	-1.02
	5240	48	SDM	MCS11	18.00	17.67	20.85	-	-	1.23	22.08	23.01	-0.93
	5260	52	CDD	MCS2	17.60	17.72	20.67	23.98	-3.31	1.67	22.34	30.00	-7.66
	5300	60	CDD	MCS2	17.88	17.87	20.89	23.98	-3.09	1.67	22.56	30.00	-7.44
	5320	64	CDD	MCS2	16.37	16.35	19.37	23.98	-4.61	1.67	21.04	30.00	-8.96
	5500	100	CDD	MCS2	15.49	15.22	18.36	23.98	-5.62	2.93	21.29	30.00	-8.71
	5520	104	CDD	MCS2	17.82	17.48	20.66	23.98	-3.32	2.93	23.59	30.00	-6.41
	5540	108	CDD	MCS2	17.55	17.84	20.71	23.98	-3.27	2.93	23.64	30.00	-6.36
	5580	116	CDD	MCS2	17.70	17.59	20.66	23.98	-3.32	2.93	23.59	30.00	-6.41
	5660	132	CDD	MCS2	17.81	17.90	20.87	23.98	-3.11	2.93	23.80	30.00	-6.20
	5680	136	CDD	MCS2	18.00	17.56	20.79	23.98	-3.19	2.93	23.72	30.00	-6.28
	5700	140	CDD	MCS2	13.08	13.30	16.20	23.98	-7.78	2.93	19.13	30.00	-10.87
	5720	144	CDD	MCS2	17.54	17.67	20.62	23.98	-3.36	2.93	23.55	30.00	-6.45
	5745	149	CDD	MCS2	18.08	18.44	21.27	30.00	-8.73	2.37	23.64	-	-
	5785	157	CDD	MCS2	18.21	18.32	21.27	30.00	-8.73	2.37	23.64	-	-
	5825	165	CDD	MCS2	18.13	17.99	21.07	30.00	-8.93	2.37	23.44	-	-

Table 7-53. ISED SDM 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (40 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5190	38	CDD	MCS10	13.50	13.51	16.52	-	-	1.23	17.75	23.01	-5.26
	5230	46	SDM	MCS15	17.65	17.80	20.74	-	-	1.23	21.97	23.01	-1.04
	5270	54	CDD	MCS10	18.24	18.43	21.35	23.98	-2.63	1.67	23.02	30.00	-6.98
	5310	62	CDD	MCS10	13.49	13.93	16.72	23.98	-7.26	1.67	18.39	30.00	-11.61
	5510	102	CDD	MCS10	12.72	12.93	15.84	23.98	-8.14	2.93	18.77	30.00	-11.23
	5550	110	CDD	MCS10	17.74	17.95	20.86	23.98	-3.12	2.93	23.79	30.00	-6.21
	5590	118	CDD	MCS10	18.30	18.29	21.31	23.98	-2.67	2.93	24.24	30.00	-5.76
	5630	126	CDD	MCS10	18.30	18.48	21.40	23.98	-2.58	2.93	24.33	30.00	-5.67
	5670	134	CDD	MCS10	16.22	16.48	19.36	23.98	-4.62	2.93	22.29	30.00	-7.71
	5710	142	CDD	MCS10	18.06	18.33	21.21	23.98	-2.77	2.93	24.14	30.00	-5.86
	5755	151	CDD	MCS10	16.94	16.26	20.67	30.00	-9.33	2.37	23.04	-	-
	5795	159	CDD	MCS10	18.17	18.43	21.31	30.00	-8.69	2.37	23.68	-	-

Table 7-54. ISED SDM 40MHz BW 802.11n (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (40 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5190	38	CDD	MCS2	12.28	12.28	15.29	-	-	1.23	16.52	23.01	-6.49
	5230	46	SDM	MCS4	17.91	17.51	20.72	-	-	1.23	21.95	23.01	-1.06
	5270	54	CDD	MCS2	17.98	17.66	20.83	23.98	-3.15	1.67	22.50	30.00	-7.50
	5310	62	CDD	MCS2	12.77	12.71	15.75	23.98	-8.23	1.67	17.42	30.00	-12.58
	5510	102	CDD	MCS2	11.96	11.67	14.83	23.98	-9.15	2.93	17.76	30.00	-12.24
	5550	110	CDD	MCS2	17.55	17.69	20.63	23.98	-3.35	2.93	23.56	30.00	-6.44
	5590	118	CDD	MCS2	18.08	18.50	21.30	23.98	-2.68	2.93	24.23	30.00	-5.77
	5630	126	CDD	MCS2	18.36	18.28	21.33	23.98	-2.65	2.93	24.26	30.00	-5.74
	5670	134	CDD	MCS2	15.97	15.45	18.73	23.98	-5.25	2.93	21.66	30.00	-8.34
	5710	142	CDD	MCS2	18.42	18.09	21.27	23.98	-2.71	2.93	24.20	30.00	-5.80
	5755	151	CDD	MCS2	18.04	18.43	21.25	30.00	-8.75	2.37	23.62	-	-
	5795	159	CDD	MCS2	18.47	18.23	21.37	30.00	-8.63	2.37	23.74	-	-

Table 7-55. ISED SDM 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (80 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5210	42	CDD	MCS2	11.97	11.97	14.99	-	-	1.23	16.22	23.01	-6.79
	5290	58	CDD	MCS2	11.85	12.00	14.93	23.98	-9.05	1.67	16.60	30.00	-13.40
	5330	106	CDD	MCS2	10.62	10.70	13.67	23.98	-10.31	2.93	16.60	30.00	-13.40
	5610	122	CDD	MCS2	17.15	17.09	20.13	23.98	-3.85	2.93	23.06	30.00	-6.94
	5690	138	CDD	MCS2	18.21	18.36	21.29	23.98	-2.69	2.93	24.22	30.00	-5.78
	5775	155	CDD	MCS2	16.75	16.52	19.64	30.00	-10.36	2.37	22.01	-	-

Table 7-56. ISED SDM 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 50 of 160

5 GHz (80 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5210	42	CDD	MCS4	11.23	11.25	14.25	-	-	1.23	15.48	23.01	-7.53
	5290	58	CDD	MCS2	10.53	10.75	13.65	23.98	-10.33	1.67	15.32	30.00	-14.68
	5530	106	CDD	MCS2	10.33	10.03	13.19	23.98	-10.79	2.93	16.12	30.00	-13.88
	5610	122	CDD	MCS2	16.44	16.32	19.39	23.98	-4.59	2.93	22.32	30.00	-7.68
	5690	138	CDD	MCS2	18.49	18.18	21.35	23.98	-2.63	2.93	24.28	30.00	-5.72
	5775	155	CDD	MCS2	15.93	16.45	19.21	30.00	-10.79	2.37	21.58	-	-

Table 7-57. ISED SDM 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (160 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5570	114	CDD	MCS2	11.17	11.49	14.34	23.98	-9.64	2.93	17.27	30.00	-12.73

Table 7-58. ISED SDM 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power and Max EIRP

5 GHz (160 MHz Bandwidth)	Freq [MHz]	Channel	Mode	Data Rate	Conducted Power [dBm]			Conducted Power Limit [dBm]	Conducted Power Margin [dB]	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						
	5570	114	CDD	MCS2	10.90	10.77	13.85	23.98	-10.13	2.93	16.78	30.00	-13.22

Table 7-59. ISED SDM 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power and Max EIRP

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 51 of 160

Note:

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 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 C63.10a:2024 Section 14.6.3, the directional correlated 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 C63.10a:2024 Section 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 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 16.21 dBm for Antenna 0 and 16.28 dBm for Antenna 1.

$$\text{Antenna 0} + \text{Antenna 1} = \text{MIMO}$$

$$(16.21 \text{ dBm} + 16.28 \text{ dBm}) = (41.783 \text{ mW} + 42.462 \text{ mW}) = 84.245 \text{ mW} = 19.26 \text{ dBm}$$

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 19.26 dBm with directional gain of 1.23 dBi.

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

$$19.26 \text{ dBm} + 1.23 \text{ dBi} = 20.49 \text{ dBm}$$

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 52 of 160

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 C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 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 C63.10a:2024 and KDB 789033 D02 v02r01, was used to measure the power spectral density.

In the 5.15 – 5.25GHz, 5.25 – 5.35GHz, 5.47 – 5.725GHz bands, the maximum permissible power spectral density is 11dBm/MHz.

In the 5.15 – 5.25GHz band, the e.i.r.p. spectral density shall not exceed 10 dBm in any 1 MHz band.

In the 5.725 – 5.850GHz band, the maximum permissible power spectral density is 30dBm/500kHz.

Test Procedure Used

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

KDB 789033 D02 v02r01 – Section F

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 – 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 for U-NII 1, U-NII 2A, U-NII 2C; 500kHz for U-NII 3
4. VBW ≥ 3MHz for U-NII 1, U-NII 2A, U-NII 2C; ≥ 3 x RBW for U-NII 3
5. Number of sweep points ≥ 2 x (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 7-4. 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.

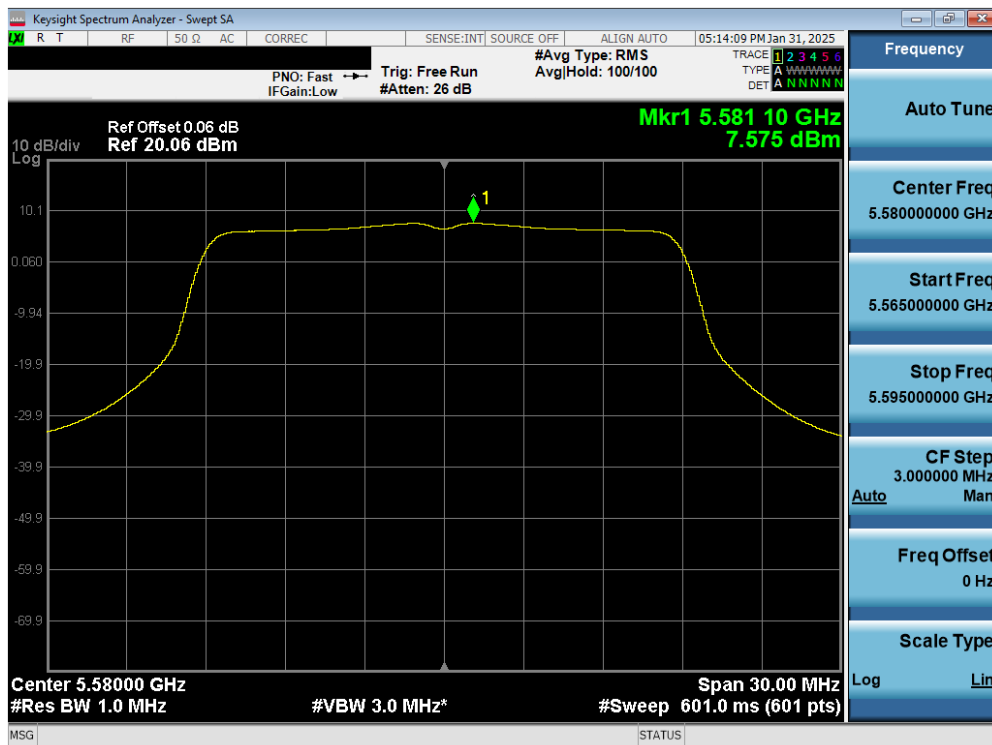
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 53 of 160

7.5.1 Antenna 0 Power Spectral Density Measurements

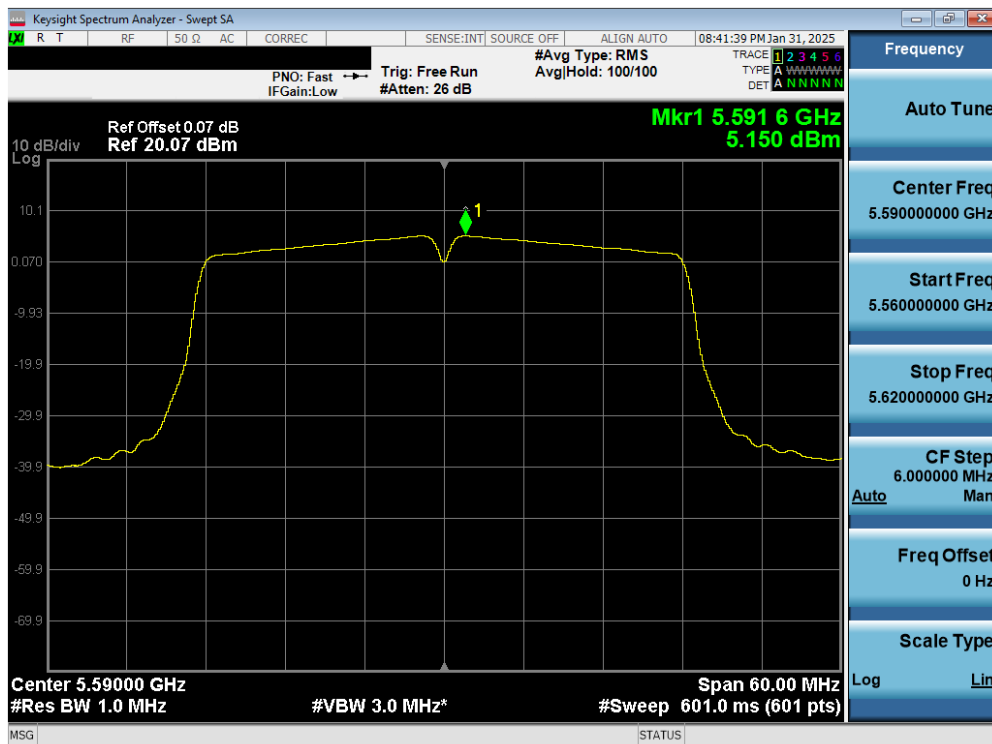
	Frequency [MHz]	Channel No.	802.11 MODE	Data Rate [Mbps]	Measured Power Density [dBm/MHz]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	19.5/21.7 (MCS2)	6.61	11.00	-4.40
	5200	40	n (20MHz)	39/43.3 (MCS4)	6.71	11.00	-4.29
	5240	48	n (20MHz)	65/72.2 (MCS7)	6.94	11.00	-4.06
	5180	36	ax (SU) (20MHz)	49/51.6 (MCS4)	5.52	11.00	-5.48
	5200	40	ax (SU) (20MHz)	24/25.8 (MCS2)	6.40	11.00	-4.60
	5240	48	ax (SU) (20MHz)	24/25.8 (MCS2)	6.17	11.00	-4.83
	5190	38	n (40MHz)	40/40.5 (MCS2)	1.10	11.00	-9.90
	5230	46	n (40MHz)	40/40.5 (MCS2)	4.32	11.00	-6.68
	5190	38	ax (SU) (40MHz)	49/51.6 (MCS2)	-0.84	11.00	-11.84
	5230	46	ax (SU) (40MHz)	49/51.6 (MCS2)	4.41	11.00	-6.59
	5210	42	ac (80MHz)	87.8/97.5 (MCS2)	-4.51	11.00	-15.51
	5210	42	ax (SU) (80MHz)	102/108.1 (MCS2)	-3.93	11.00	-14.93
Band 1/2	5250	50	ac (160MHz)	175.5/195 (MCS4)	-7.09	11.00	-18.09
	5250	50	ax (SU) (160MHz)	204/216.2 (MCS4)	-7.01	11.00	-18.01
Band 2A	5260	52	n (20MHz)	65/72.2 (MCS7)	7.43	11.00	-3.57
	5300	60	n (20MHz)	39/43.3 (MCS4)	7.19	11.00	-3.81
	5320	64	n (20MHz)	19.5/21.7 (MCS2)	6.50	11.00	-4.50
	5260	52	ax (SU) (20MHz)	49/51.6 (MCS4)	6.55	11.00	-4.45
	5300	60	ax (SU) (20MHz)	49/51.6 (MCS4)	7.03	11.00	-3.97
	5320	64	ax (SU) (20MHz)	49/51.6 (MCS4)	5.92	11.00	-5.08
	5270	54	n (40MHz)	40/40.5 (MCS2)	4.90	11.00	-6.10
	5310	62	n (40MHz)	40/40.5 (MCS2)	0.70	11.00	-10.30
	5270	54	ax (SU) (40MHz)	49/51.6 (MCS2)	4.42	11.00	-6.59
	5310	62	ax (SU) (40MHz)	49/51.6 (MCS2)	-0.29	11.00	-11.29
	5290	58	ac (80MHz)	87.8/97.5 (MCS2)	-4.68	11.00	-15.68
	5290	58	ax (SU) (80MHz)	102/108.1 (MCS2)	-3.54	11.00	-14.54
Band 2C	5500	100	n (20MHz)	19.5/21.7 (MCS2)	6.78	11.00	-4.22
	5580	116	n (20MHz)	19.5/21.7 (MCS2)	7.58	11.00	-3.43
	5720	144	n (20MHz)	65/72.2 (MCS7)	7.26	11.00	-3.74
	5500	100	ax (SU) (20MHz)	24/25.8 (MCS2)	4.47	11.00	-6.53
	5580	116	ax (SU) (20MHz)	49/51.6 (MCS4)	6.88	11.00	-4.13
	5720	144	ax (SU) (20MHz)	49/51.6 (MCS4)	6.42	11.00	-4.58
	5510	102	n (40MHz)	81/90 (MCS4)	0.22	11.00	-10.79
	5590	118	n (40MHz)	135/150 (MCS7)	5.15	11.00	-5.85
	5710	142	n (40MHz)	81/90 (MCS4)	4.63	11.00	-6.37
	5510	102	ax (SU) (40MHz)	49/51.6 (MCS2)	-1.23	11.00	-12.23
	5590	118	ax (SU) (40MHz)	98/103.2 (MCS4)	4.63	11.00	-6.37
	5710	142	ax (SU) (40MHz)	98/103.2 (MCS4)	4.78	11.00	-6.22
	5530	106	ac (80MHz)	87.8/97.5 (MCS2)	-3.95	11.00	-14.95
	5610	122	ac (80MHz)	87.8/97.5 (MCS2)	1.16	11.00	-9.84
	5690	138	ac (80MHz)	175.5/195 (MCS4)	1.54	11.00	-9.46
	5530	106	ax (SU) (80MHz)	102/108.1 (MCS2)	-5.15	11.00	-16.15
	5610	122	ax (SU) (80MHz)	102/108.1 (MCS2)	0.40	11.00	-10.60
	5690	138	ax (SU) (80MHz)	204/216.2 (MCS4)	1.75	11.00	-9.25
	5570	114	ac (160MHz)	87.8/97.5 (MCS2)	-6.44	11.00	-17.44
	5570	114	ax (SU) (160MHz)	102/108.1 (MCS2)	-7.39	11.00	-18.39

Table 7-60. Bands 1, 2A, 2C Power Spectral Density Measurements Antenna 0

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 54 of 160

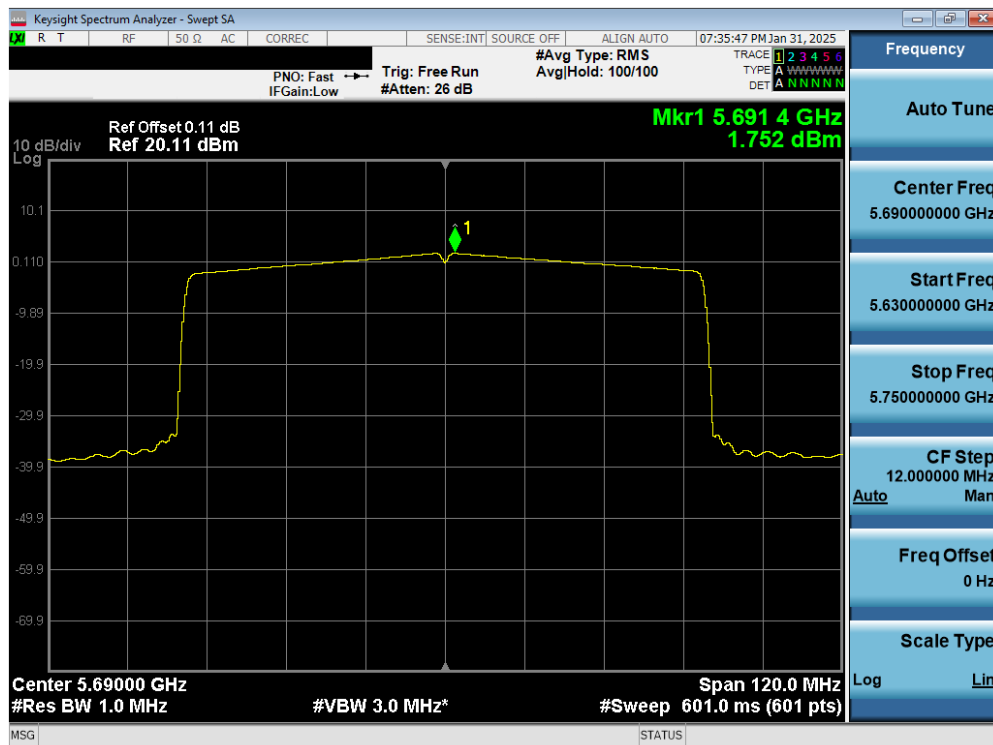


Plot 7-15. PSD Antenna 0 (20MHz BW 802.11n – Ch.116)

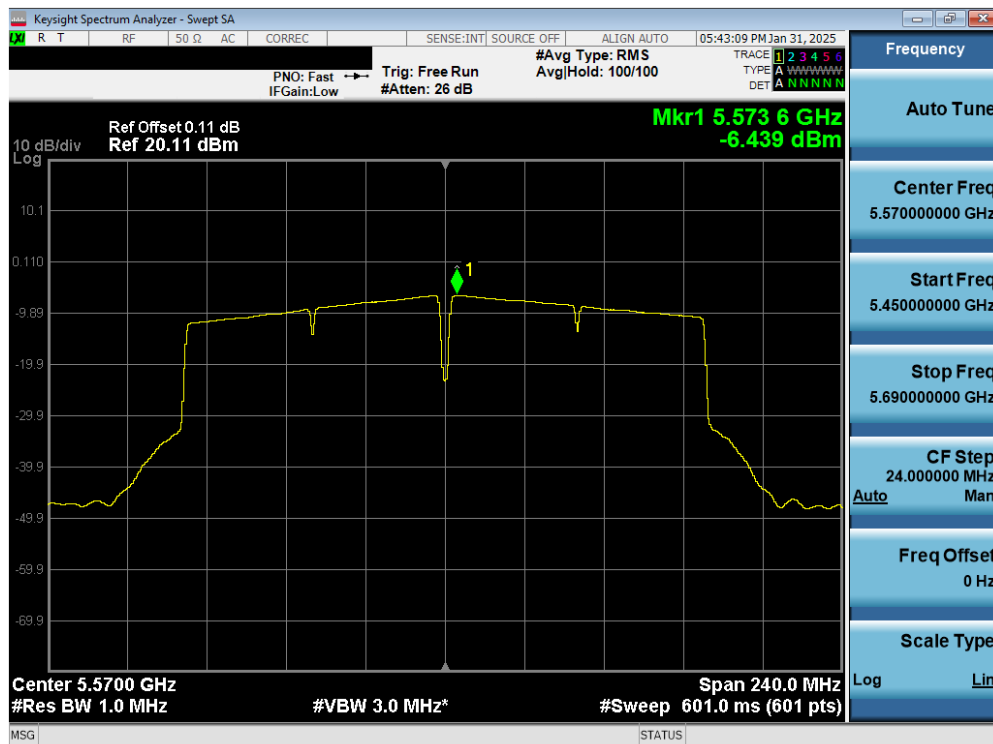


Plot 7-16. PSD Antenna 0 (40MHz BW 802.11n – Ch. 118)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 55 of 160



Plot 7-17. PSD Antenna 0 (80MHz BW 802.11ax SU – Ch. 138)



Plot 7-18. PSD Antenna 0 (160MHz BW 802.11ac – Ch. 114)

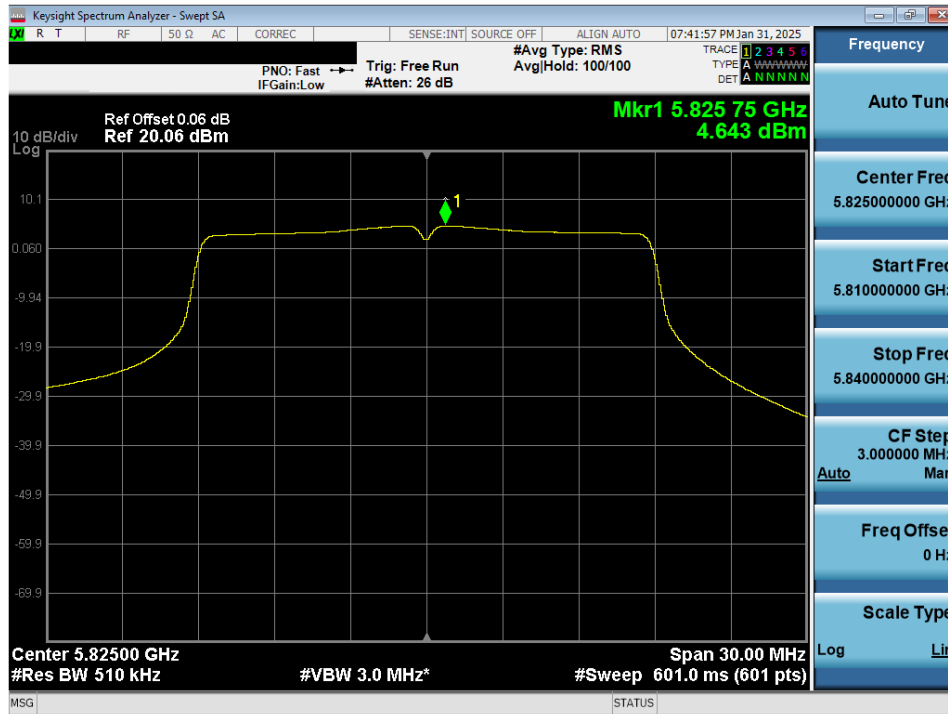
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 56 of 160

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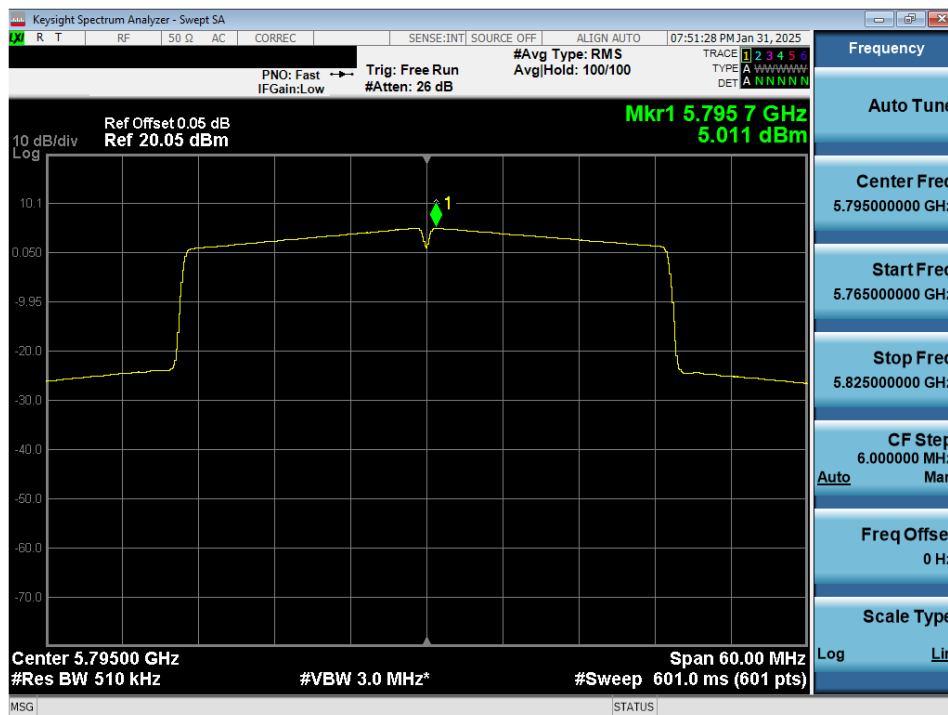
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	39/43.3 (MCS4)	4.54	30.0	-25.46
	5785	157	n (20MHz)	65/72.2 (MCS7)	4.60	30.0	-25.40
	5825	165	n (20MHz)	39/43.3 (MCS4)	4.64	30.0	-25.36
	5745	149	ax (SU) (20MHz)	49/51.6 (MCS4)	3.75	30.0	-26.25
	5785	157	ax (SU) (20MHz)	49/51.6 (MCS4)	3.79	30.0	-26.21
	5825	165	ax (SU) (20MHz)	24/25.8 (MCS2)	4.28	30.0	-25.72
	5755	151	n (40MHz)	40/40.5 (MCS2)	3.05	30.0	-26.96
	5795	159	n (40MHz)	40/40.5 (MCS2)	1.92	30.0	-28.08
	5755	151	ax (SU) (40MHz)	49/51.6 (MCS2)	1.70	30.0	-28.30
	5795	159	ax (SU) (40MHz)	98/103.2 (MCS4)	5.01	30.0	-24.99
	5775	155	ac (80MHz)	87.8/97.5 (MCS2)	-2.29	30.0	-32.29
	5775	155	ax (SU) (80MHz)	102/108.1 (MCS2)	-3.05	30.0	-33.05

Table 7-61. Band 3 Power Spectral Density Measurements Antenna 0

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 57 of 160



Plot 7-19. PSD Antenna 0 (20MHz BW 802.11n – Ch. 165)



Plot 7-20. PSD Antenna 0 (40MHz BW 802.11ax SU – Ch. 159)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 58 of 160



Plot 7-21. PSD Antenna 0 (80MHz BW 802.11ac – Ch. 155)

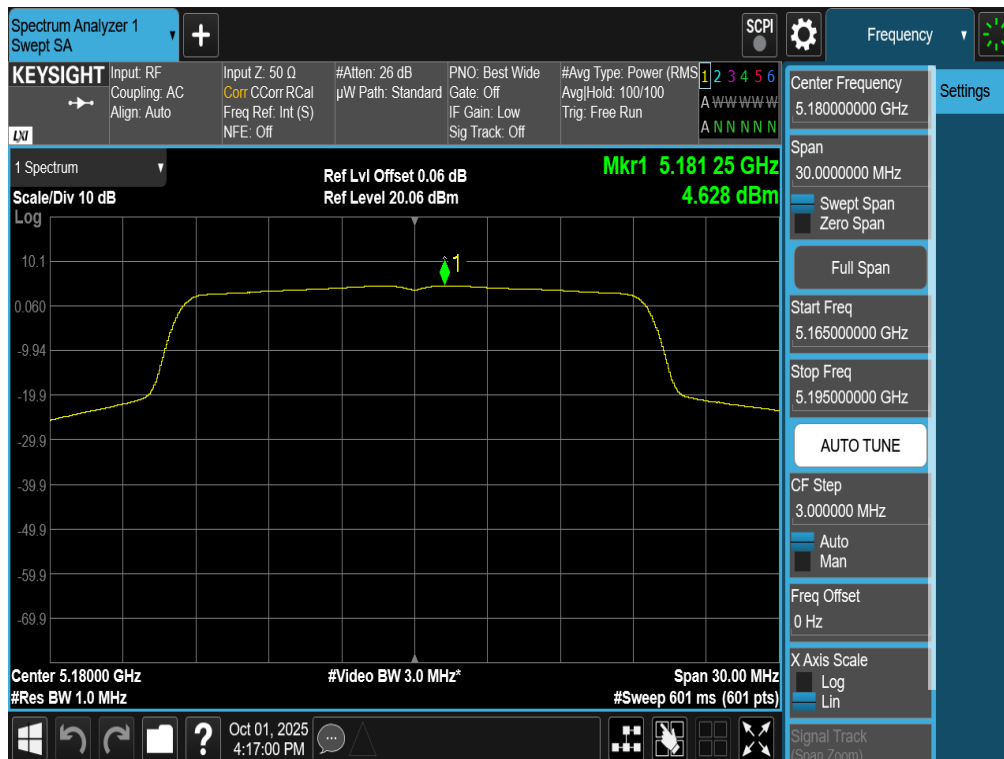
FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 59 of 160

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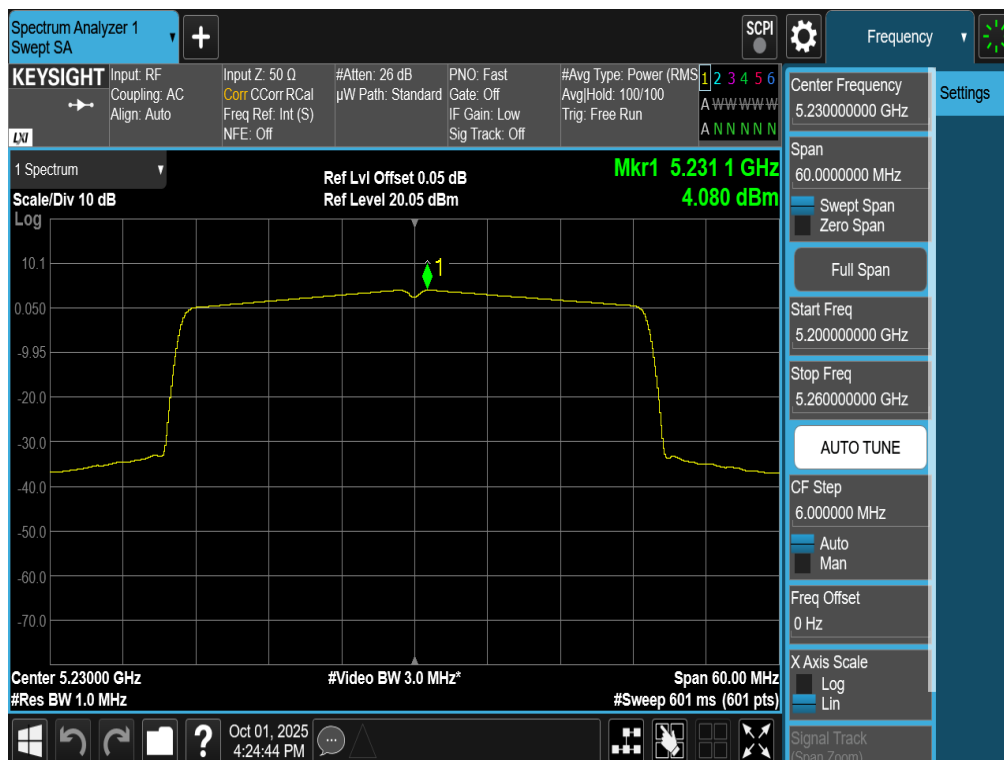
	Frequency [MHz]	Channel No.	802.11 MODE	Data Rate	Measured Power Density [dBm/MHz]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20 MHz)	MCS4	4.10	0.61	4.71	10.0	-5.29
	5200	40	n (20 MHz)	MCS4	4.04	0.61	4.65	10.0	-5.35
	5240	48	n (20 MHz)	MCS7	3.97	0.61	4.58	10.0	-5.42
	5180	36	ax (SU) (20 MHz)	MCS2	4.63	0.61	5.24	10.0	-4.76
	5200	40	ax (SU) (20 MHz)	MCS4	4.19	0.61	4.80	10.0	-5.20
	5240	48	ax (SU) (20 MHz)	MCS4	4.28	0.61	4.89	10.0	-5.11
	5190	38	n (40 MHz)	MCS2	1.95	0.61	2.56	10.0	-7.44
	5230	46	n (40 MHz)	MCS7	3.87	0.61	4.48	10.0	-5.52
	5190	38	ax (SU) (40 MHz)	MCS2	0.51	0.61	1.12	10.0	-8.88
	5230	46	ax (SU) (40 MHz)	MCS2	4.08	0.61	4.69	10.0	-5.31
	5210	42	ac (80 MHz)	MCS2	-2.80	0.61	-2.19	10.0	-12.19
	5210	42	ax (SU) (80 MHz)	MCS2	-3.26	0.61	-2.65	10.0	-12.65

Table 7-62. ISED Band 1 e.i.r.p. Power Spectral Density Measurements Antenna 0

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 60 of 160

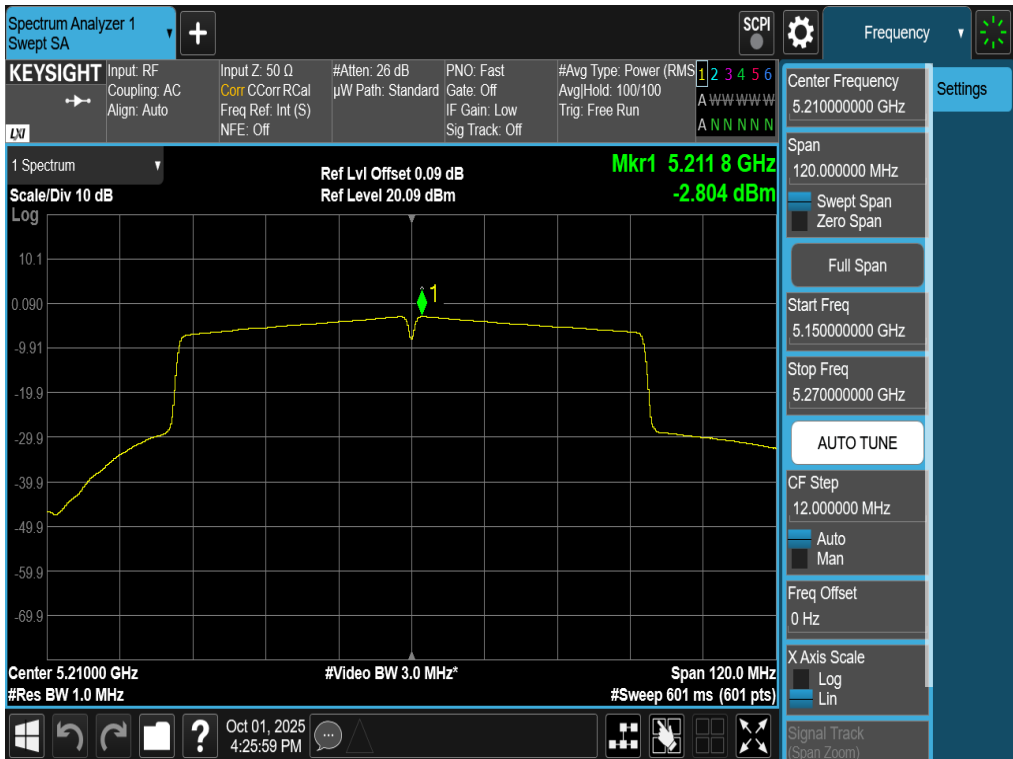


Plot 7-22. ISED PSD Antenna 0 (20MHz BW 11ax SU – Ch.36)



Plot 7-23. ISED PSD Antenna 0 (40MHz BW 11ax SU – Ch.46)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 61 of 160



Plot 7-24. ISED PSD Antenna 0 (80MHz BW 11ac – Ch.42)

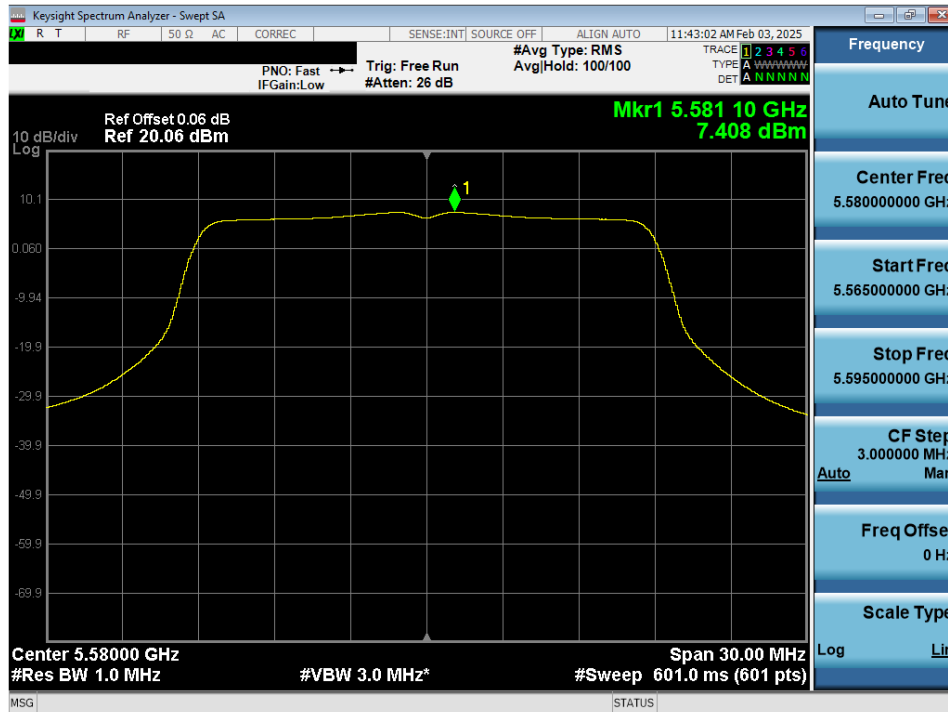
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 62 of 160

7.5.2 Antenna 1 Power Spectral Density Measurements

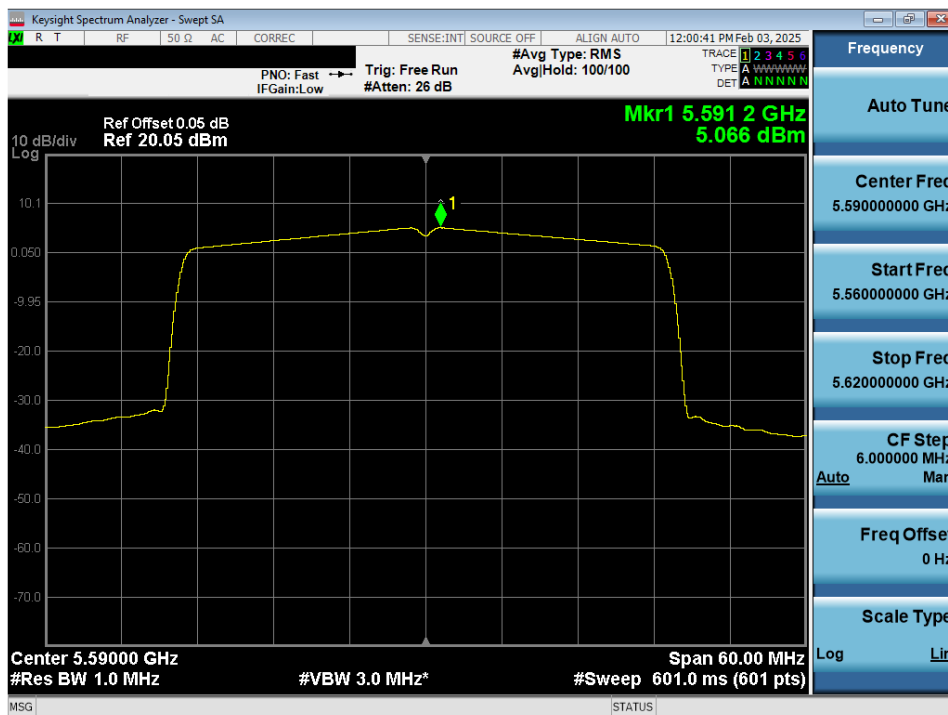
	Frequency [MHz]	Channel No.	802.11 MODE	Data Rate [Mbps]	Measured Power Density [dBm/MHz]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	19.5/21.7 (MCS2)	6.24	11.00	-4.76
	5200	40	n (20MHz)	39/43.3 (MCS4)	6.47	11.00	-4.53
	5240	48	n (20MHz)	65/72.2 (MCS7)	6.77	11.00	-4.23
	5180	36	ax (SU) (20MHz)	49/51.6 (MCS4)	5.09	11.00	-5.91
	5200	40	ax (SU) (20MHz)	49/51.6 (MCS4)	6.19	11.00	-4.81
	5240	48	ax (SU) (20MHz)	49/51.6 (MCS4)	6.02	11.00	-4.98
	5190	38	n (40MHz)	40/40.5 (MCS2)	0.73	11.00	-10.27
	5230	46	n (40MHz)	40/40.5 (MCS2)	4.13	11.00	-6.87
	5190	38	ax (SU) (40MHz)	49/51.6 (MCS2)	-1.26	11.00	-12.26
	5230	46	ax (SU) (40MHz)	49/51.6 (MCS2)	4.20	11.00	-6.80
	5210	42	ac (80MHz)	87.8/97.5 (MCS2)	-4.77	11.00	-15.77
	5210	42	ax (SU) (80MHz)	102/108.1 (MCS2)	-4.18	11.00	-15.18
Band 1/2	5250	50	ac (160MHz)	175.5/195 (MCS4)	-7.48	11.00	-18.48
	5250	50	ax (SU) (160MHz)	204/216.2 (MCS4)	-6.81	11.00	-17.81
Band 2A	5260	52	n (20MHz)	19.5/21.7 (MCS2)	7.23	11.00	-3.77
	5300	60	n (20MHz)	65/72.2 (MCS7)	7.11	11.00	-3.89
	5320	64	n (20MHz)	19.5/21.7 (MCS2)	6.38	11.00	-4.62
	5260	52	ax (SU) (20MHz)	49/51.6 (MCS4)	6.44	11.00	-4.56
	5300	60	ax (SU) (20MHz)	49/51.6 (MCS4)	6.66	11.00	-4.34
	5320	64	ax (SU) (20MHz)	49/51.6 (MCS4)	5.72	11.00	-5.28
	5270	54	n (40MHz)	40/40.5 (MCS2)	4.81	11.00	-6.19
	5310	62	n (40MHz)	40/40.5 (MCS2)	0.86	11.00	-10.14
	5270	54	ax (SU) (40MHz)	49/51.6 (MCS2)	3.77	11.00	-7.23
	5310	62	ax (SU) (40MHz)	49/51.6 (MCS2)	-0.52	11.00	-11.52
	5290	58	ac (80MHz)	87.8/97.5 (MCS2)	-4.83	11.00	-15.83
	5290	58	ax (SU) (80MHz)	102/108.1 (MCS2)	-3.68	11.00	-14.68
Band 2C	5500	100	n (20MHz)	19.5/21.7 (MCS2)	6.27	11.00	-4.73
	5580	116	n (20MHz)	19.5/21.7 (MCS2)	7.41	11.00	-3.59
	5720	144	n (20MHz)	19.5/21.7 (MCS2)	7.36	11.00	-3.64
	5500	100	ax (SU) (20MHz)	24/25.8 (MCS2)	4.36	11.00	-6.64
	5580	116	ax (SU) (20MHz)	24/25.8 (MCS2)	6.59	11.00	-4.41
	5720	144	ax (SU) (20MHz)	24/25.8 (MCS2)	6.66	11.00	-4.34
	5510	102	n (40MHz)	81/90 (MCS4)	0.22	11.00	-10.78
	5590	118	n (40MHz)	81/90 (MCS4)	4.97	11.00	-6.03
	5710	142	n (40MHz)	135/150 (MCS7)	4.88	11.00	-6.12
	5510	102	ax (SU) (40MHz)	49/51.6 (MCS2)	-1.26	11.00	-12.26
	5590	118	ax (SU) (40MHz)	49/51.6 (MCS2)	5.07	11.00	-5.93
	5710	142	ax (SU) (40MHz)	49/51.6 (MCS2)	4.41	11.00	-6.59
	5530	106	ac (80MHz)	175.5/195 (MCS4)	-4.39	11.00	-15.39
	5610	122	ac (80MHz)	87.8/97.5 (MCS2)	1.07	11.00	-9.93
	5690	138	ac (80MHz)	175.5/195 (MCS4)	1.67	11.00	-9.33
	5530	106	ax (SU) (80MHz)	102/108.1 (MCS2)	-5.17	11.00	-16.17
	5610	122	ax (SU) (80MHz)	102/108.1 (MCS2)	0.38	11.00	-10.62
	5690	138	ax (SU) (80MHz)	102/108.1 (MCS2)	1.45	11.00	-9.55
	5570	114	ac (160MHz)	87.8/97.5 (MCS2)	-6.57	11.00	-17.57
	5570	114	ax (SU) (160MHz)	102/108.1 (MCS2)	-7.55	11.00	-18.55

Table 7-63. Bands 1, 2A, 2C Power Spectral Density Measurements Antenna 1

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 63 of 160

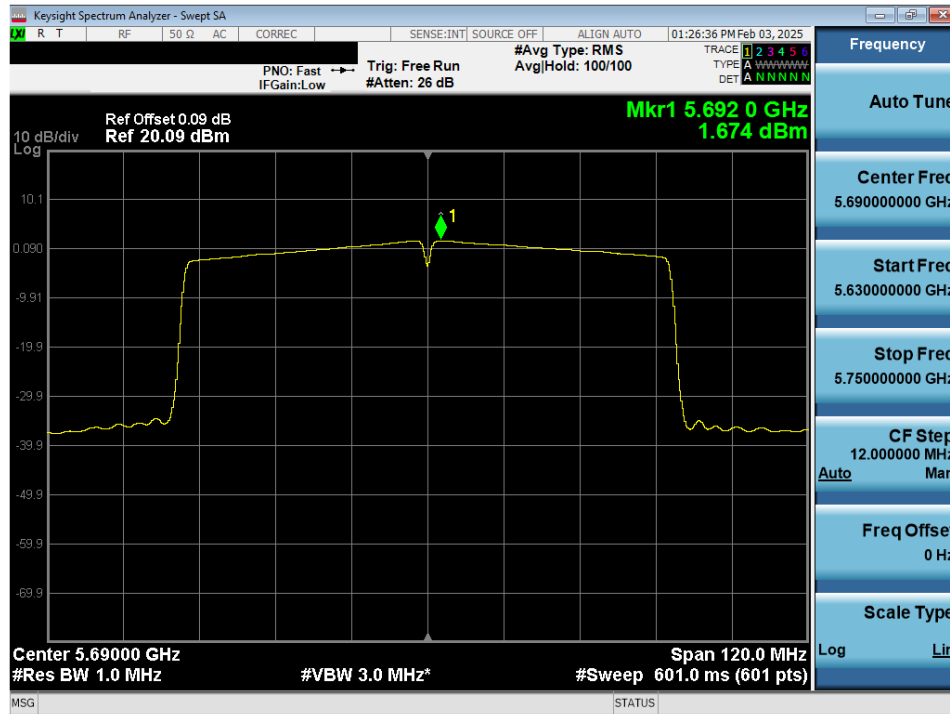


Plot 7-25. PSD Antenna 1 (20MHz BW 802.11n – Ch.116)



Plot 7-26. PSD Antenna 1 (40MHz BW 802.11ax SU – Ch. 118)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 64 of 160



Plot 7-27. PSD Antenna 1 (80MHz BW 802.11ac- Ch. 138)



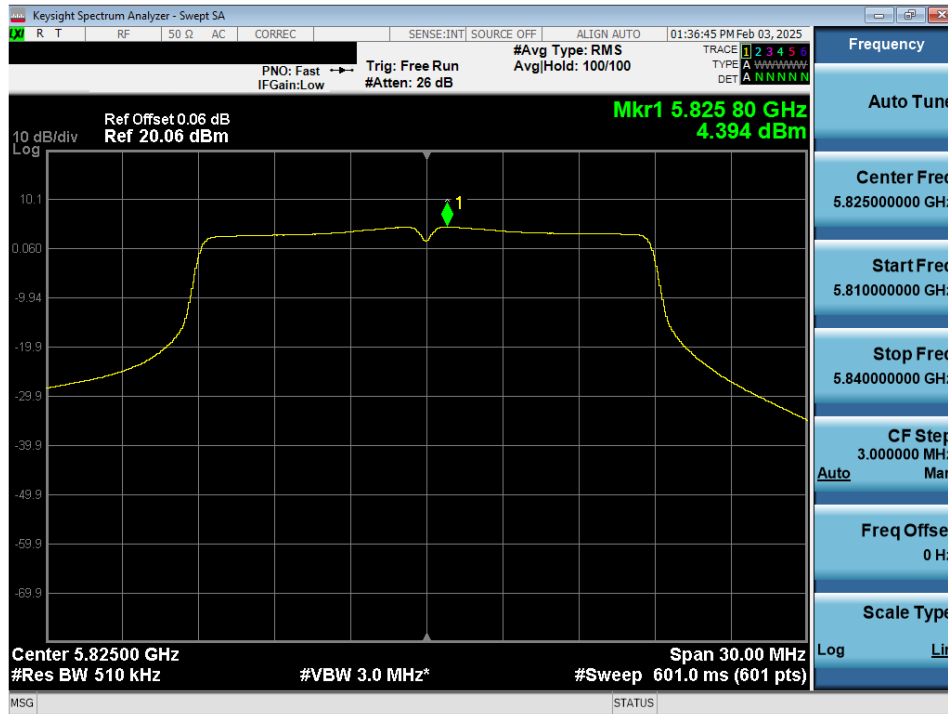
Plot 7-28. PSD Antenna 1 (160MHz BW 802.11ax SU - Ch. 50)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 65 of 160

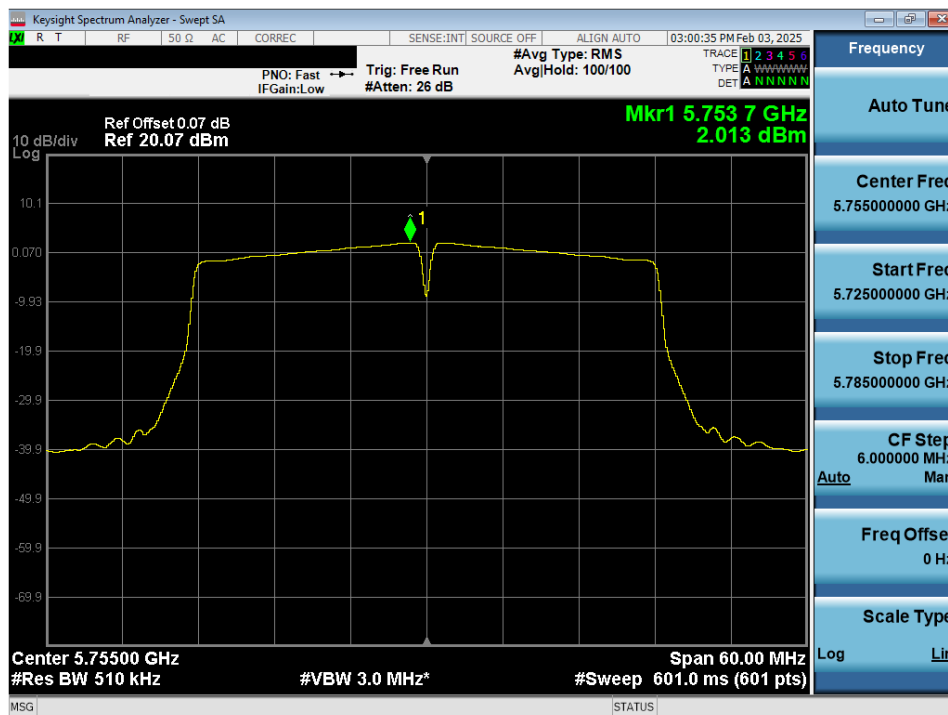
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Measured Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	39/43.3 (MCS4)	4.32	30.0	-25.68
	5785	157	n (20MHz)	19.5/21.7 (MCS2)	3.96	30.0	-26.04
	5825	165	n (20MHz)	39/43.3 (MCS4)	4.39	30.0	-25.61
	5745	149	ax (SU) (20MHz)	24/25.8 (MCS2)	3.96	30.0	-26.04
	5785	157	ax (SU) (20MHz)	24/25.8 (MCS2)	3.94	30.0	-26.07
	5825	165	ax (SU) (20MHz)	24/25.8 (MCS2)	3.67	30.0	-26.33
	5755	151	n (40MHz)	135/150 (MCS7)	2.01	30.0	-27.99
	5795	159	n (40MHz)	40/40.5 (MCS2)	1.92	30.0	-28.08
	5755	151	ax (SU) (40MHz)	98/103.2 (MCS4)	1.94	30.0	-28.06
	5795	159	ax (SU) (40MHz)	49/51.6 (MCS2)	1.55	30.0	-28.45
	5775	155	ac (80MHz)	87.8/97.5 (MCS2)	-2.53	30.0	-32.53
	5775	155	ax (SU) (80MHz)	102/108.1 (MCS2)	-2.71	30.0	-32.71

Table 7-64. Band 3 Power Spectral Density Measurements Antenna 1

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 66 of 160

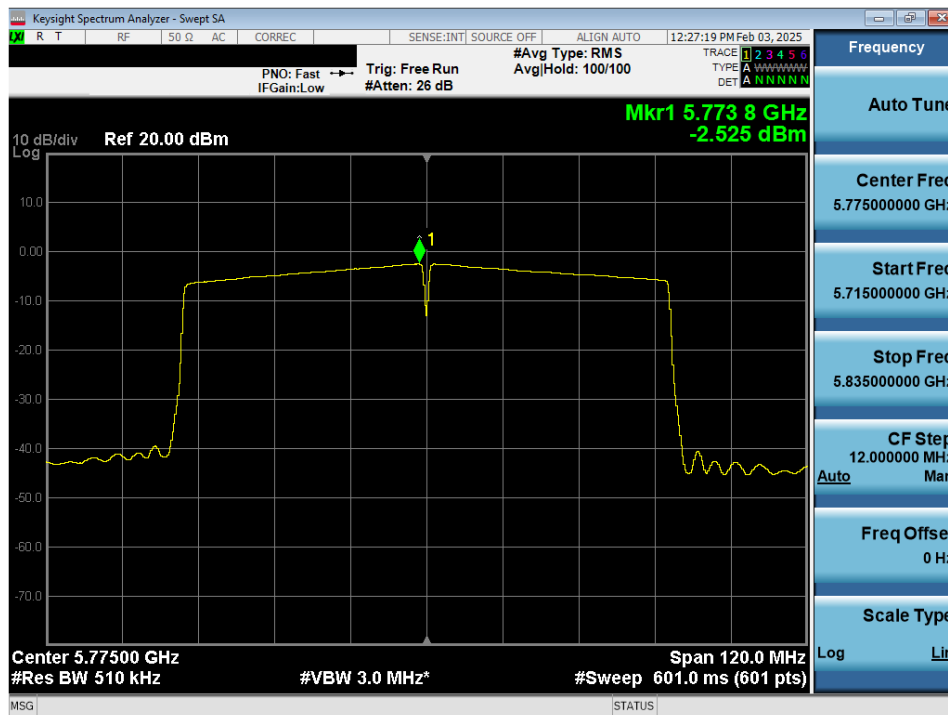


Plot 7-29. PSD Antenna 1 (20MHz BW 802.11n – Ch. 165)



Plot 7-30. PSD Antenna 1 (40MHz BW 802.11n – Ch. 151)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 67 of 160



Plot 7-31. PSD Antenna 1 (80MHz BW 802.11ac – Ch. 155)

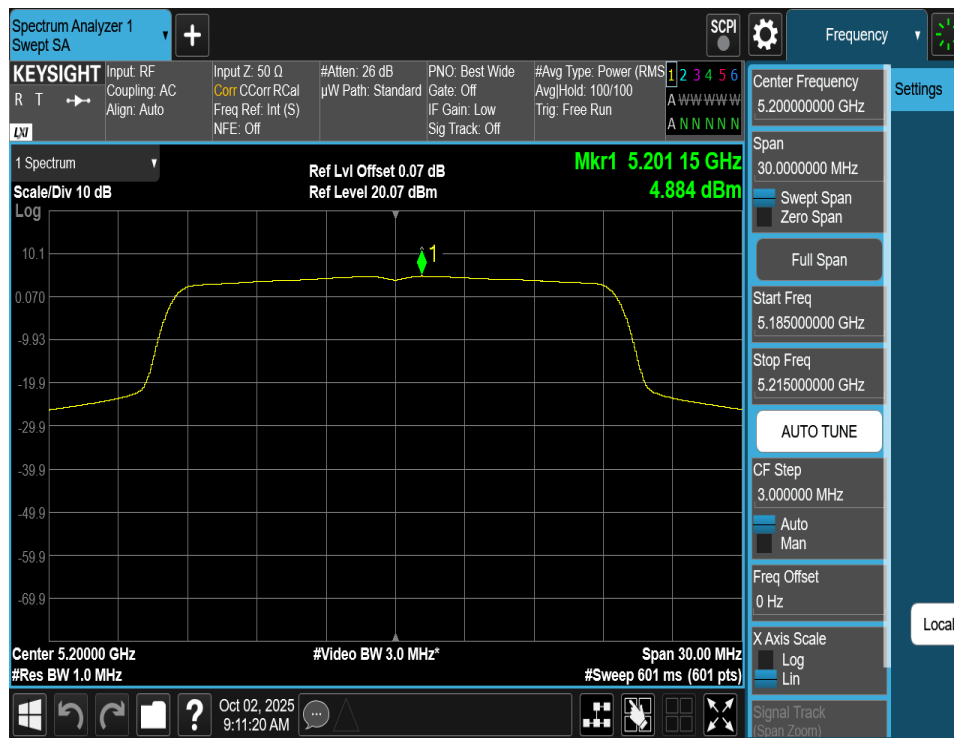
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 68 of 160

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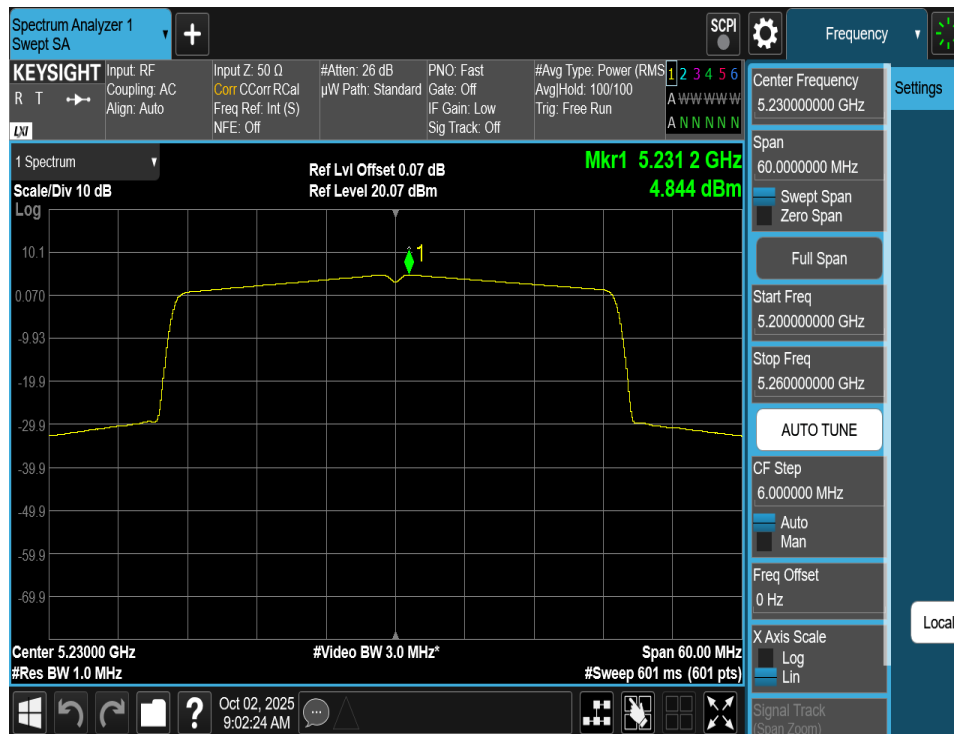
	Frequency [MHz]	Channel No.	802.11 MODE	Data Rate	Measured Power Density [dBm/MHz]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20 MHz)	MCS7	4.26	1.78	6.04	10.0	-3.96
	5200	40	n (20 MHz)	MCS7	4.44	1.78	6.22	10.0	-3.78
	5240	48	n (20 MHz)	MCS7	4.33	1.78	6.11	10.0	-3.89
	5180	36	ax (SU) (20 MHz)	MCS4	4.77	1.78	6.55	10.0	-3.45
	5200	40	ax (SU) (20 MHz)	MCS4	4.88	1.78	6.66	10.0	-3.34
	5240	48	ax (SU) (20 MHz)	MCS4	4.58	1.78	6.36	10.0	-3.64
	5190	38	n (40 MHz)	MCS2	2.05	1.78	3.83	10.0	-6.17
	5230	46	n (40 MHz)	MCS4	4.19	1.78	5.97	10.0	-4.03
	5190	38	ax (SU) (40 MHz)	MCS2	0.59	1.78	2.37	10.0	-7.63
	5230	46	ax (SU) (40 MHz)	MCS4	4.97	1.78	6.75	10.0	-3.25
	5210	42	ac (80 MHz)	MCS2	-2.67	1.78	-0.89	10.0	-10.89
	5210	42	ax (SU) (80 MHz)	MCS2	-2.99	1.78	-1.21	10.0	-11.21

Table 7-65. ISED Band 1 e.i.r.p. Power Spectral Density Measurements Antenna 1

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 69 of 160

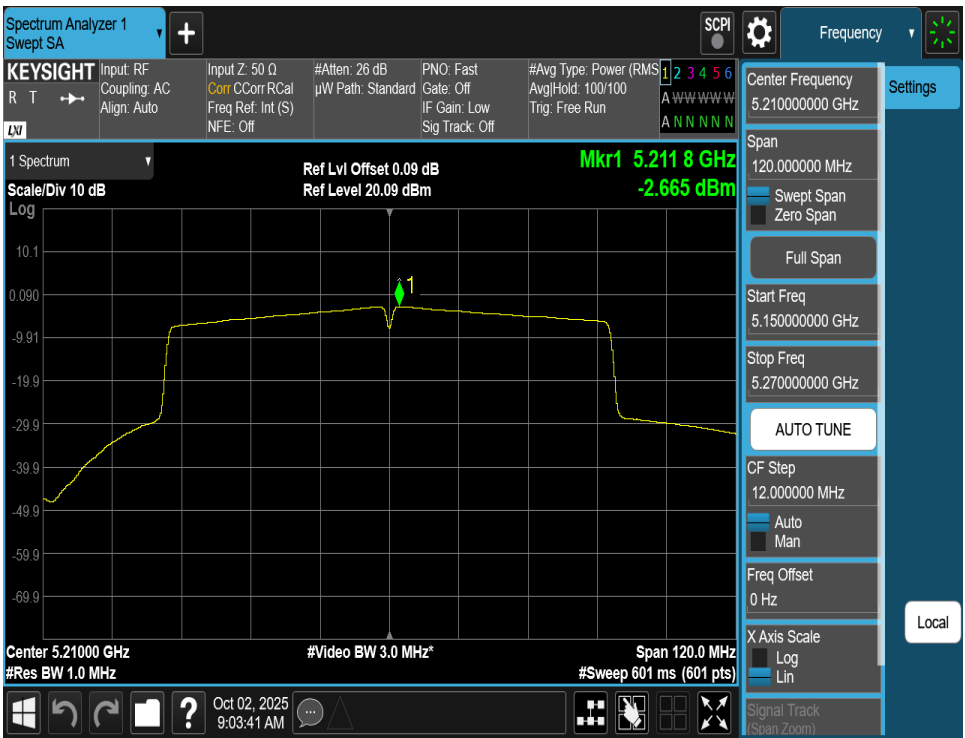


Plot 7-32. ISED PSD Antenna 1 (20MHz BW 11ax SU – Ch.40)



Plot 7-33. ISED PSD Antenna 1 (40MHz BW 11ax SU – Ch.46)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 70 of 160



Plot 7-34. ISED PSD Antenna 1 (80MHz BW 11ac – Ch.42)

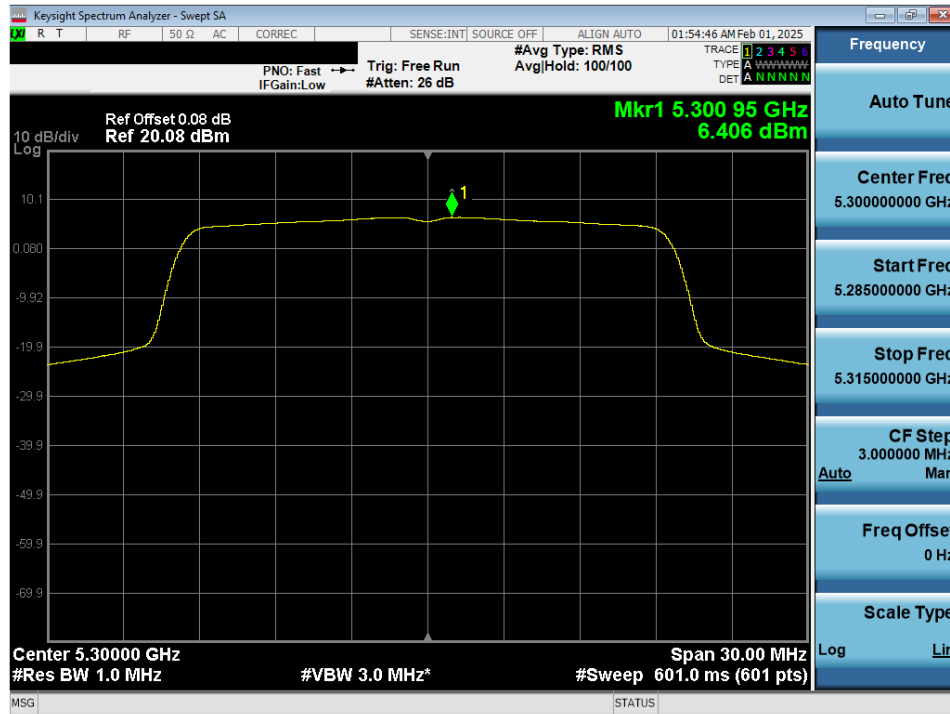
FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 71 of 160

7.5.3 Summed CDD Power Spectral Density Measurements

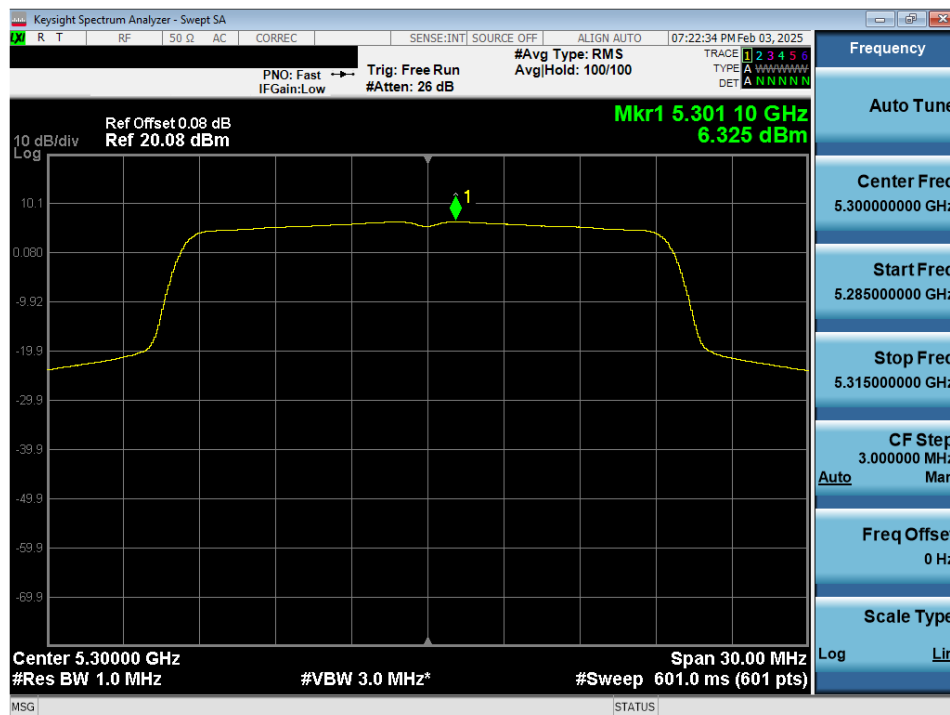
	Frequency [MHz]	Channel No.	802.11 MODE	Data Rate [Mbps]	Mode	Antenna 0 Power Density [dBm/MHz]	Antenna 1 Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	78/86.7 (MCS12)	CDD	5.04	4.84	7.95	11.00	-3.05
	5200	40	n (20MHz)	78/86.7 (MCS12)	CDD	6.11	5.93	9.03	11.00	-1.97
	5240	48	n (20MHz)	78/86.7 (MCS12)	CDD	6.18	6.20	9.20	11.00	-1.80
	5180	36	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	4.35	4.44	7.40	11.00	-3.60
	5200	40	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	6.43	5.70	9.09	11.00	-1.91
	5240	48	ax (SU) (20MHz)	98/103.2 (MCS4)	CDD	6.20	6.17	9.19	11.00	-1.81
	5190	38	n (40MHz)	81/60 (MCS10)	CDD	0.09	-0.15	2.98	11.00	-8.02
	5230	46	n (40MHz)	81/60 (MCS10)	CDD	4.33	4.28	7.32	11.00	-3.68
	5190	38	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	-1.36	-1.59	1.54	11.00	-9.46
	5230	46	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	4.40	4.02	7.22	11.00	-3.78
	5210	42	ac (80MHz)	175.5/195 (MCS2)	CDD	-5.50	-5.67	-2.57	11.00	-13.57
	5210	42	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	-4.88	-5.02	-1.94	11.00	-12.94
Band 1/2	5250	50	ac (160MHz)	351/390 (MCS4)	CDD	-7.61	-7.80	-4.70	11.00	-15.70
	5250	50	ax (SU) (160MHz)	408/432.4 (MCS4)	CDD	-7.47	-7.61	-4.53	11.00	-15.53
Band 2A	5260	52	n (20MHz)	130/144.4 (MCS15)	CDD	6.21	5.74	8.99	11.00	-2.01
	5300	60	n (20MHz)	78/86.7 (MCS12)	CDD	6.03	5.95	9.00	11.00	-2.00
	5320	64	n (20MHz)	78/86.7 (MCS12)	CDD	5.06	4.97	8.03	11.00	-2.97
	5260	52	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	6.03	6.40	9.23	11.00	-1.77
	5300	60	ax (SU) (20MHz)	98/103.2 (MCS4)	CDD	6.41	6.33	9.38	11.00	-1.62
	5320	64	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	4.83	4.71	7.78	11.00	-3.22
	5270	54	n (40MHz)	81/60 (MCS10)	CDD	4.88	4.94	7.92	11.00	-3.08
	5310	62	n (40MHz)	81/60 (MCS10)	CDD	0.15	0.54	3.36	11.00	-7.64
	5270	54	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	4.48	4.03	7.27	11.00	-3.73
	5310	62	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	-0.83	-1.04	2.08	11.00	-8.92
	5290	58	ac (80MHz)	175.5/195 (MCS2)	CDD	-5.74	-5.73	-2.72	11.00	-13.72
	5290	58	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	-5.08	-5.07	-2.07	11.00	-13.07
Band 2C	5500	100	n (20MHz)	78/86.7 (MCS12)	CDD	5.20	4.72	7.98	11.00	-3.02
	5580	116	n (20MHz)	78/86.7 (MCS12)	CDD	6.35	6.24	9.30	11.00	-1.70
	5720	144	n (20MHz)	78/86.7 (MCS12)	CDD	6.00	6.25	9.14	11.00	-1.86
	5500	100	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	3.95	3.55	6.77	11.00	-4.23
	5580	116	ax (SU) (20MHz)	98/103.2 (MCS4)	CDD	6.35	6.24	9.30	11.00	-1.70
	5720	144	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	6.01	6.15	9.09	11.00	-1.91
	5510	102	n (40MHz)	81/60 (MCS10)	CDD	-0.77	-0.69	2.28	11.00	-8.72
	5590	118	n (40MHz)	81/60 (MCS10)	CDD	5.07	5.01	8.05	11.00	-2.95
	5710	142	n (40MHz)	81/60 (MCS10)	CDD	4.60	4.87	7.75	11.00	-3.25
	5510	102	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	-1.70	-2.20	1.06	11.00	-9.94
	5590	118	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	4.68	5.11	7.91	11.00	-3.09
	5710	142	ax (SU) (40MHz)	196/206.5 (MCS4)	CDD	4.74	4.52	7.64	11.00	-3.36
	5530	106	ac (80MHz)	351/390 (MCS4)	CDD	-5.84	-5.82	-2.82	11.00	-13.82
	5610	122	ac (80MHz)	175.5/195 (MCS2)	CDD	0.74	0.61	3.68	11.00	-7.32
	5690	138	ac (80MHz)	351/390 (MCS4)	CDD	1.60	2.11	4.87	11.00	-6.13
	5530	106	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	-6.26	-6.68	-3.46	11.00	-14.46
	5610	122	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	-0.08	0.10	3.02	11.00	-7.98
	5690	138	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	1.77	1.54	4.67	11.00	-6.33
	5570	114	ac (160MHz)	175.5/195 (MCS2)	CDD	-7.97	-7.50	-4.72	11.00	-15.72
	5570	114	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	-8.32	-8.40	-5.35	11.00	-16.35

Table 7-66. Bands 1, 2A, 2C CDD Power Spectral Density Measurements

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 72 of 160

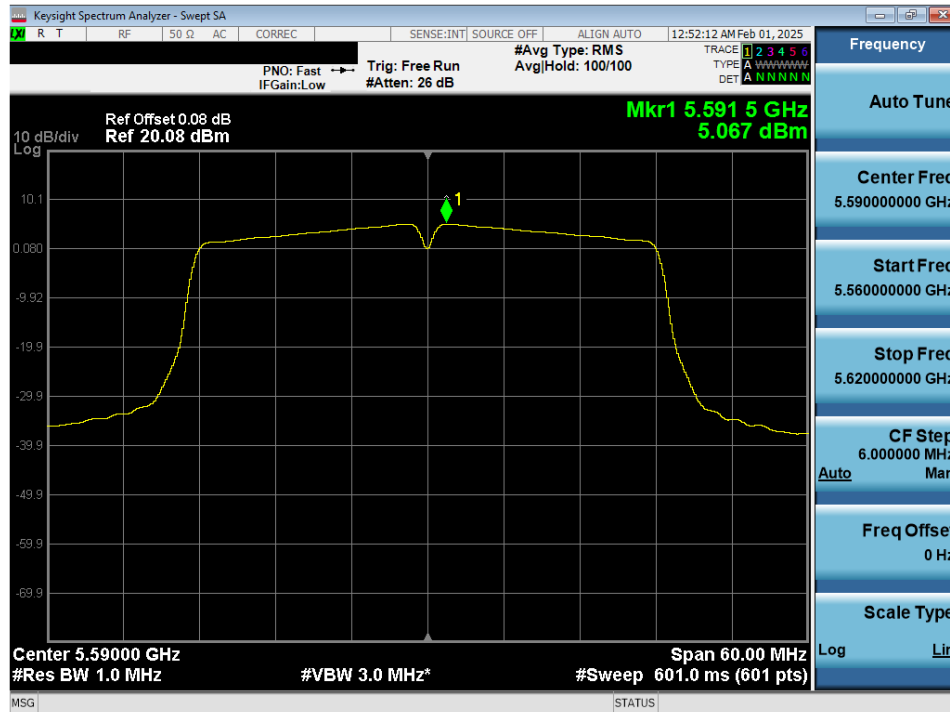


Plot 7-35. PSD CDD Antenna 0 (20MHz BW 802.11ax SU – Ch. 60)

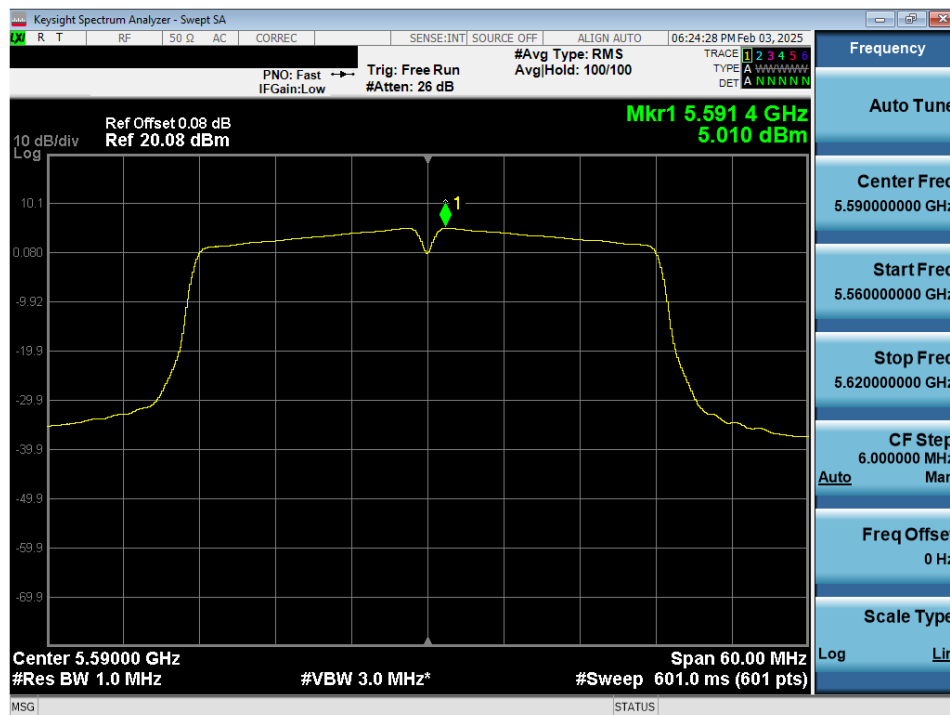


Plot 7-36. PSD CDD Antenna 1 (20MHz BW 802.11ax SU – Ch. 60)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 73 of 160

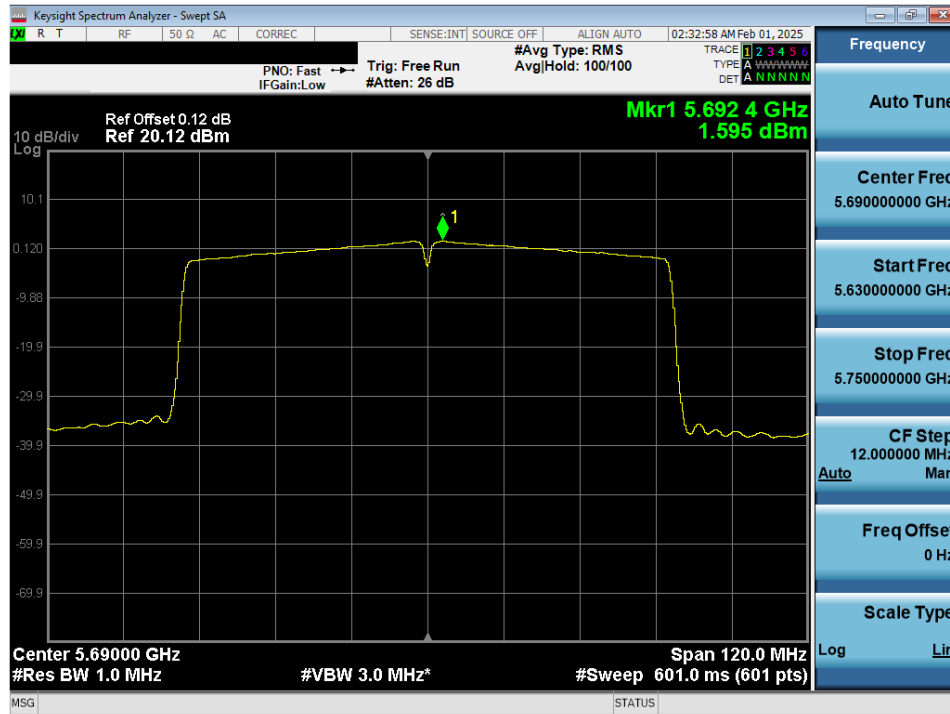


Plot 7-37. PSD CDD Antenna 0 (40MHz BW 802.11n – Ch. 118)

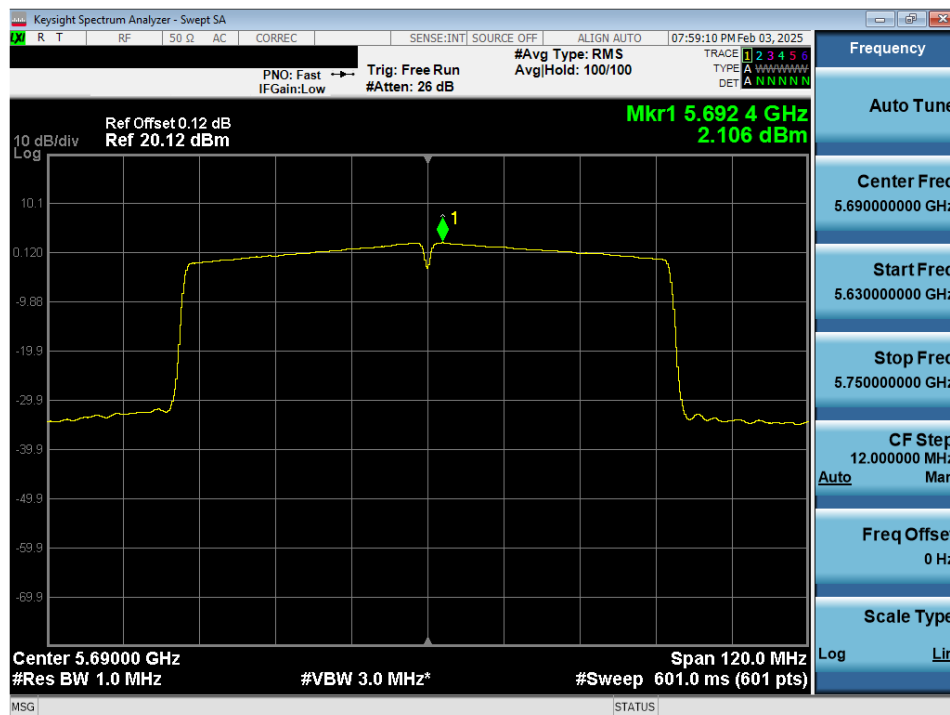


Plot 7-38. PSD CDD Antenna 1 (40MHz BW 802.11n – Ch. 118)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 74 of 160

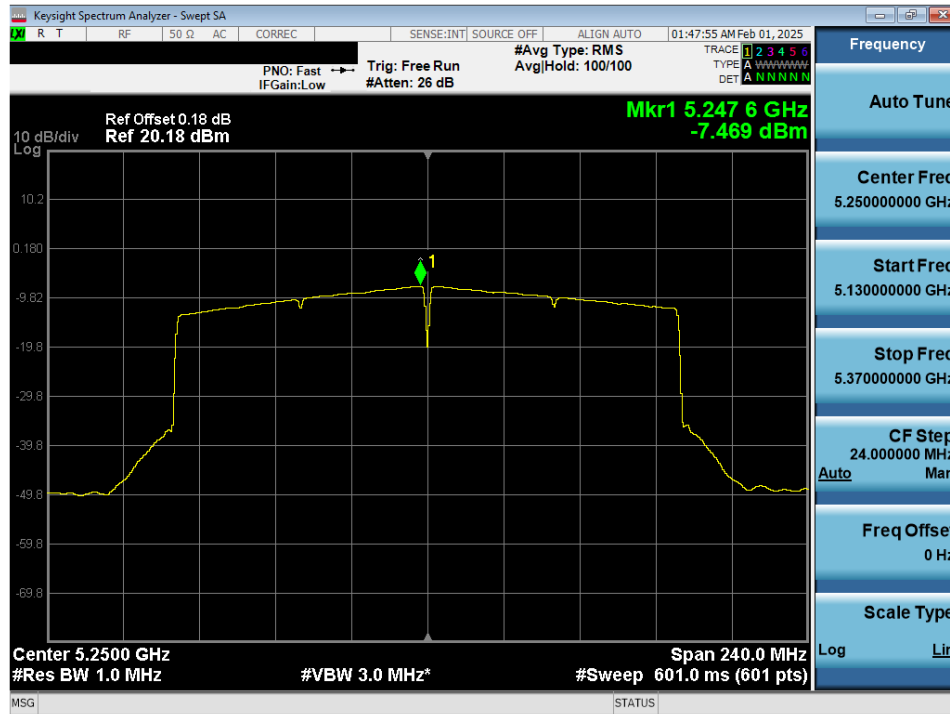


Plot 7-39. PSD CDD Antenna 0 (80MHz BW 802.11ac – Ch. 138)

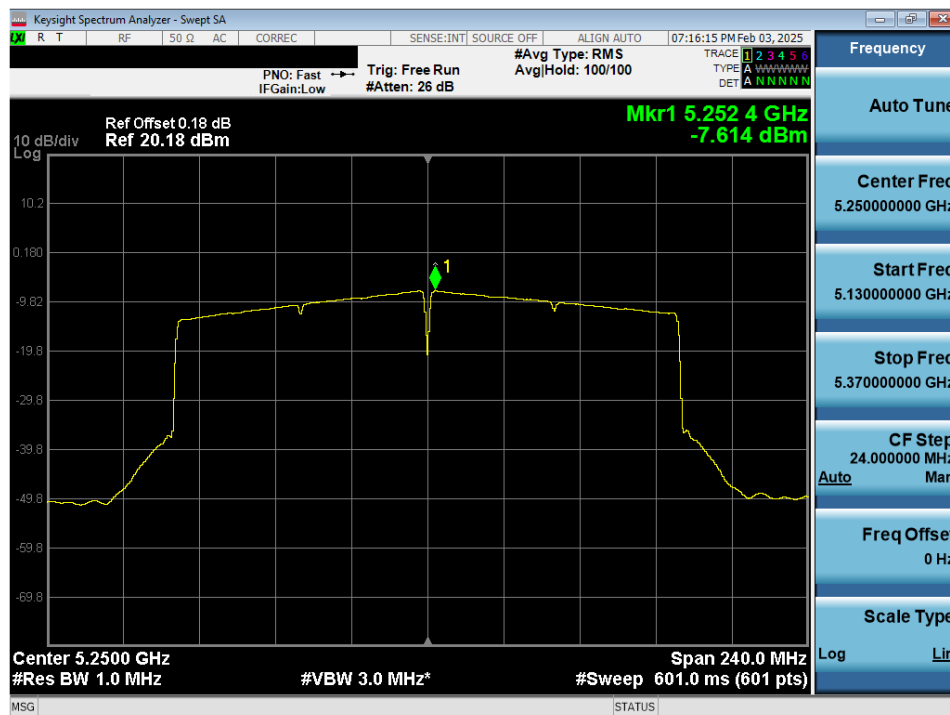


Plot 7-40. PSD CDD Antenna 1 (80MHz BW 802.11ac – Ch. 138)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 75 of 160



Plot 7-41. PSD CDD Antenna 0 (160MHz BW 802.11ax (SU) – Ch. 50)



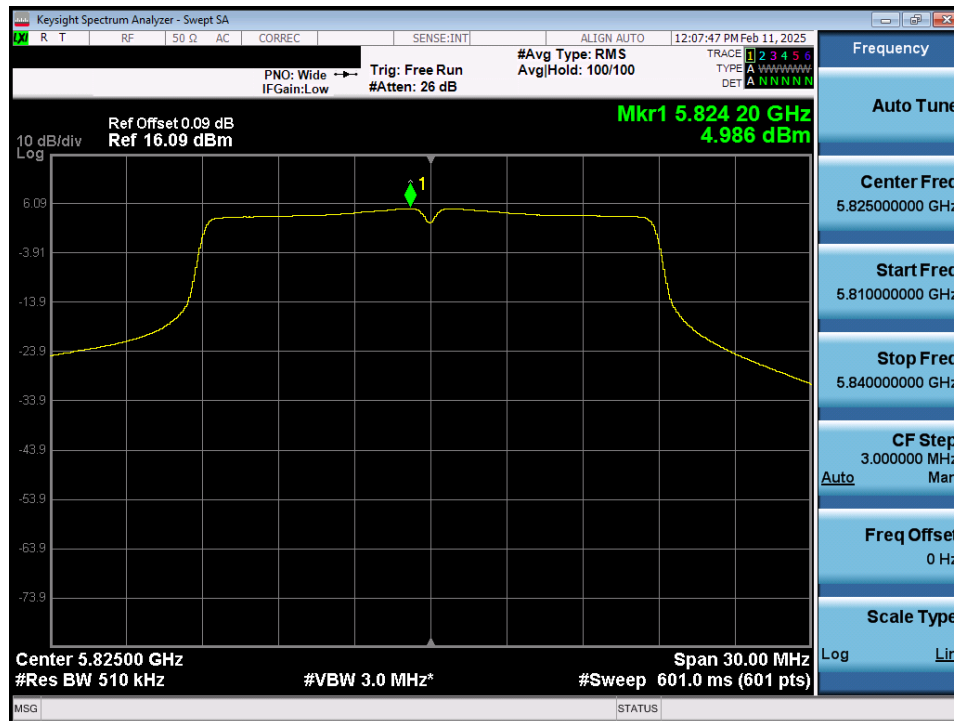
Plot 7-42. PSD CDD Antenna 1 (160MHz BW 802.11ac – Ch. 50)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 76 of 160

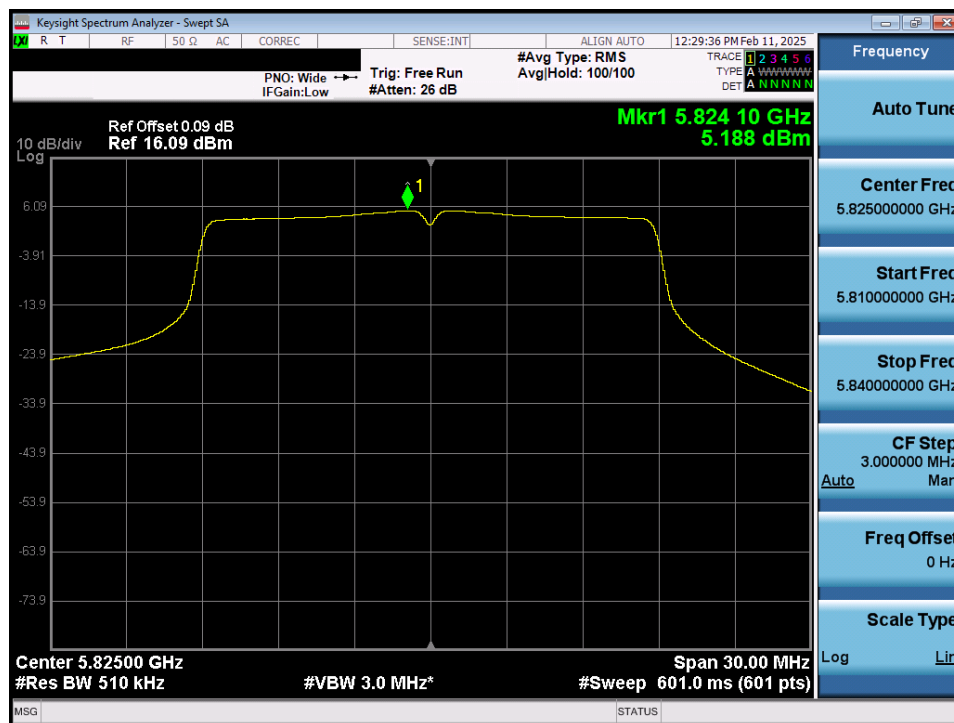
	Frequency [MHz]	Channel	802.11 MODE	Data Rate [Mbps]	Mode	Antenna 0 Power Density [dBm/500kHz]	Antenna 1 Power Density [dBm/500kHz]	Summed Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	39/43.3 (MCS10)	CDD	5.08	4.77	7.93	30.0	-22.07
	5785	157	n (20MHz)	78/86.7 (MCS12)	CDD	3.93	4.27	7.11	30.0	-22.89
	5825	165	n (20MHz)	78/86.7 (MCS12)	CDD	4.11	4.48	7.31	30.0	-22.69
	5745	149	ax (SU) (20MHz)	48/51.6 (MCS2)	CDD	3.67	4.14	6.92	30.0	-23.08
	5785	157	ax (SU) (20MHz)	98/103.2 (MCS4)	CDD	3.83	3.93	6.89	30.0	-23.11
	5825	165	ax (SU) (20MHz)	98/103.2 (MCS4)	CDD	3.94	3.65	6.81	30.0	-23.19
	5755	151	n (40MHz)	81/60 (MCS10)	CDD	2.06	1.87	4.97	30.0	-25.03
	5795	159	n (40MHz)	81/60 (MCS10)	CDD	1.83	1.97	4.91	30.0	-25.09
	5755	151	ax (SU) (40MHz)	98/103.2 (MCS2)	CDD	1.66	2.08	4.88	30.0	-25.12
	5795	159	ax (SU) (40MHz)	196/206.5 (MCS4)	CDD	2.05	1.70	4.89	30.0	-25.11
	5775	155	ac (80MHz)	175.5/195 (MCS2)	CDD	-2.77	-2.69	0.28	30.0	-29.72
	5775	155	ax (SU) (80MHz)	204/216.2 (MCS2)	CDD	-3.63	-3.23	-0.42	30.0	-30.42

Table 7-67. Band 3 Power Spectral Density Measurements CDD

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 77 of 160

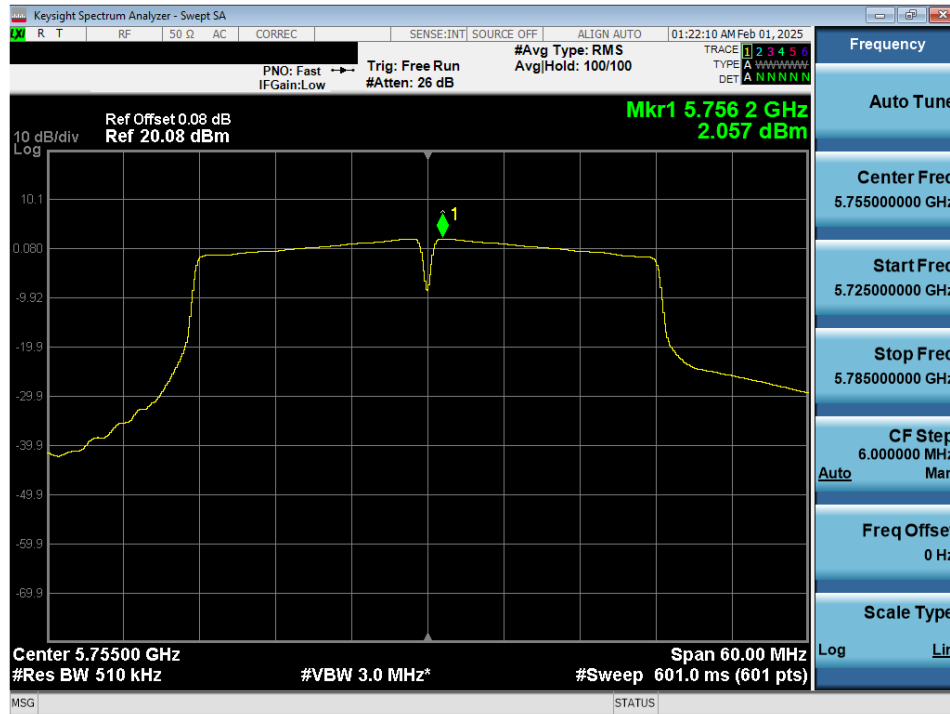


Plot 7-43. PSD CDD Antenna 0 (20MHz BW 802.11n – Ch. 165)

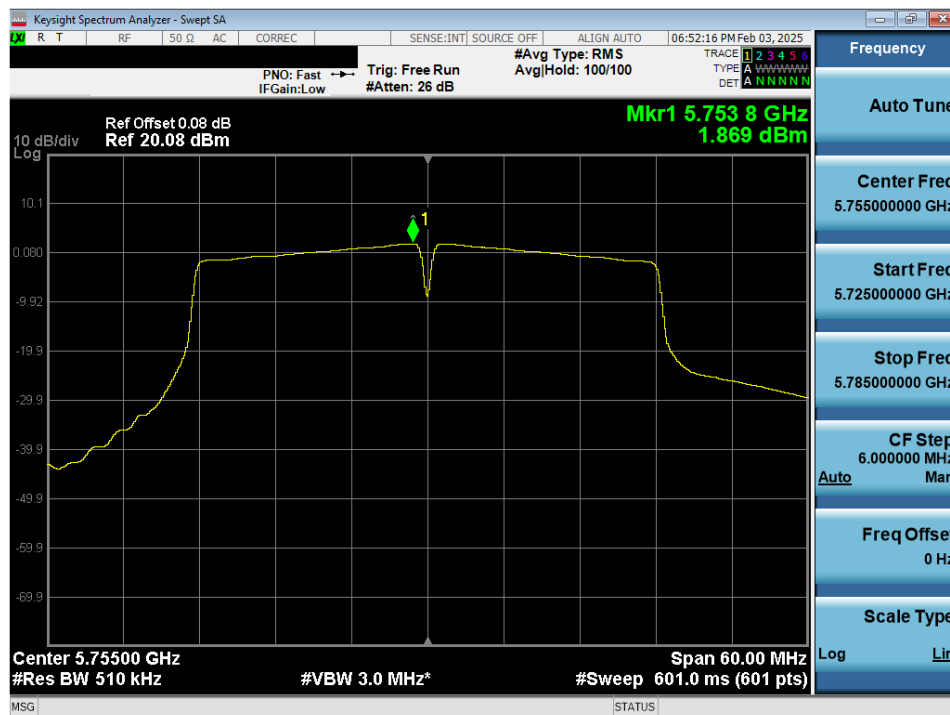


Plot 7-44. PSD CDD Antenna 1 (20MHz BW 802.11n – Ch. 165)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 78 of 160

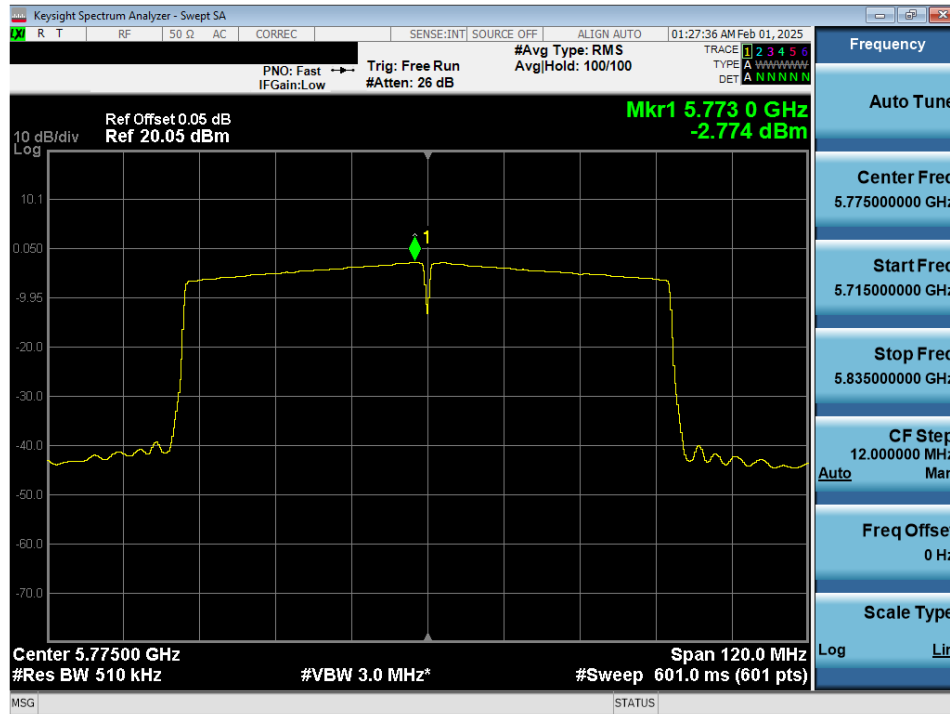


Plot 7-45. PSD CDD Antenna 0 (40MHz BW 802.11n – Ch. 151)

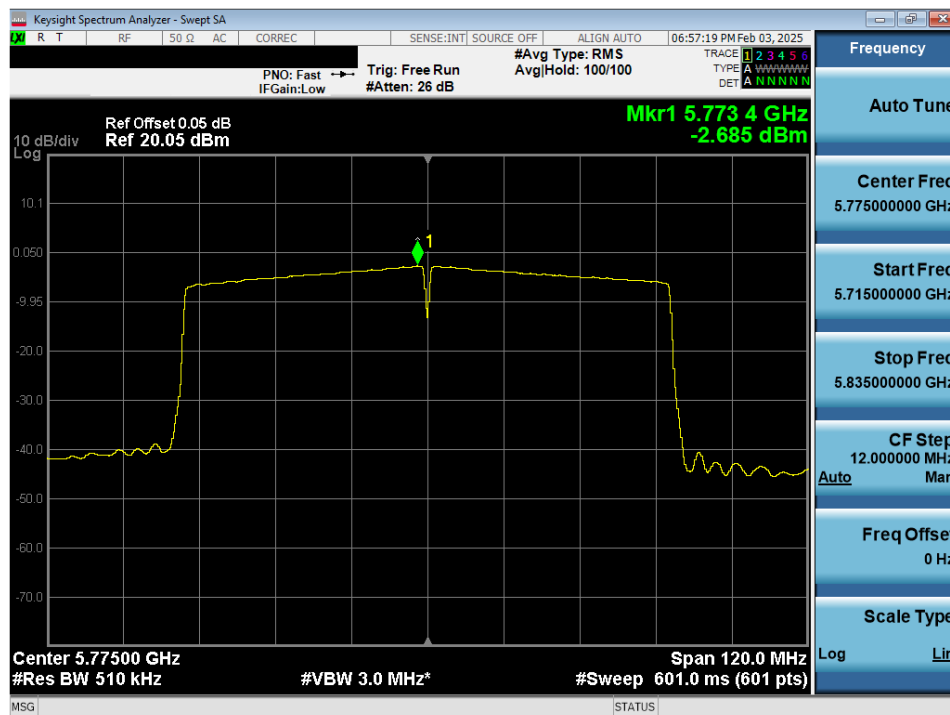


Plot 7-46. PSD CDD Antenna 1 (40MHz BW 802.11n – Ch. 151)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 79 of 160



Plot 7-47. PSD CDD Antenna 0 (80MHz BW 802.11ac – Ch. 155)



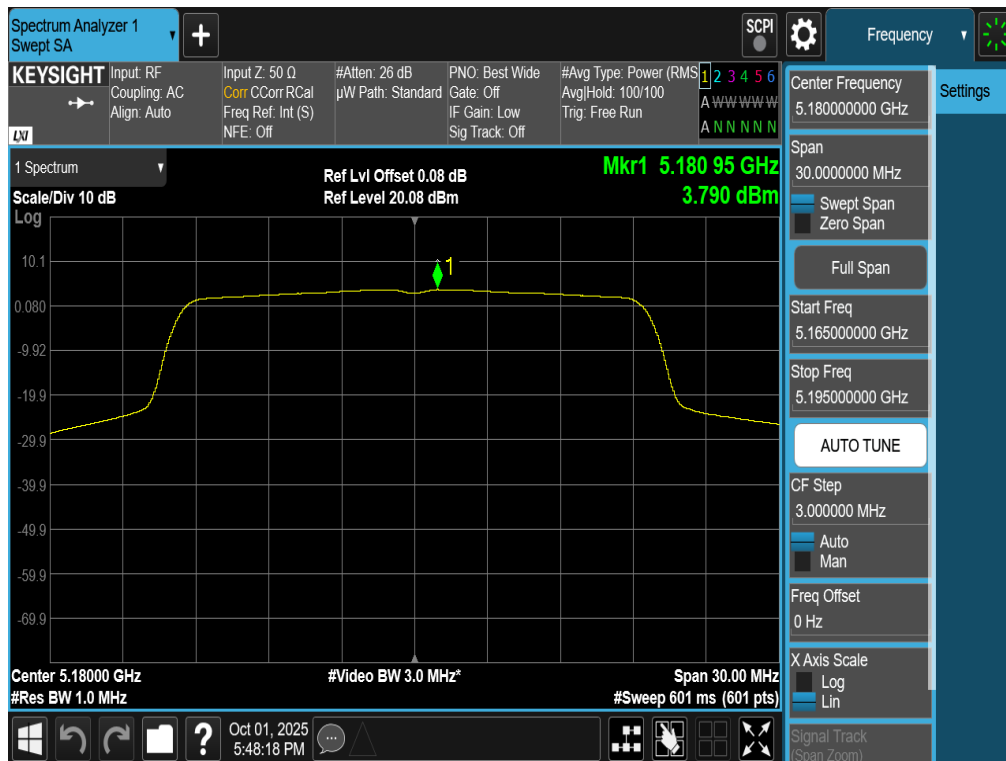
Plot 7-48. PSD CDD Antenna 1 (80MHz BW 802.11ac – Ch. 155)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 80 of 160

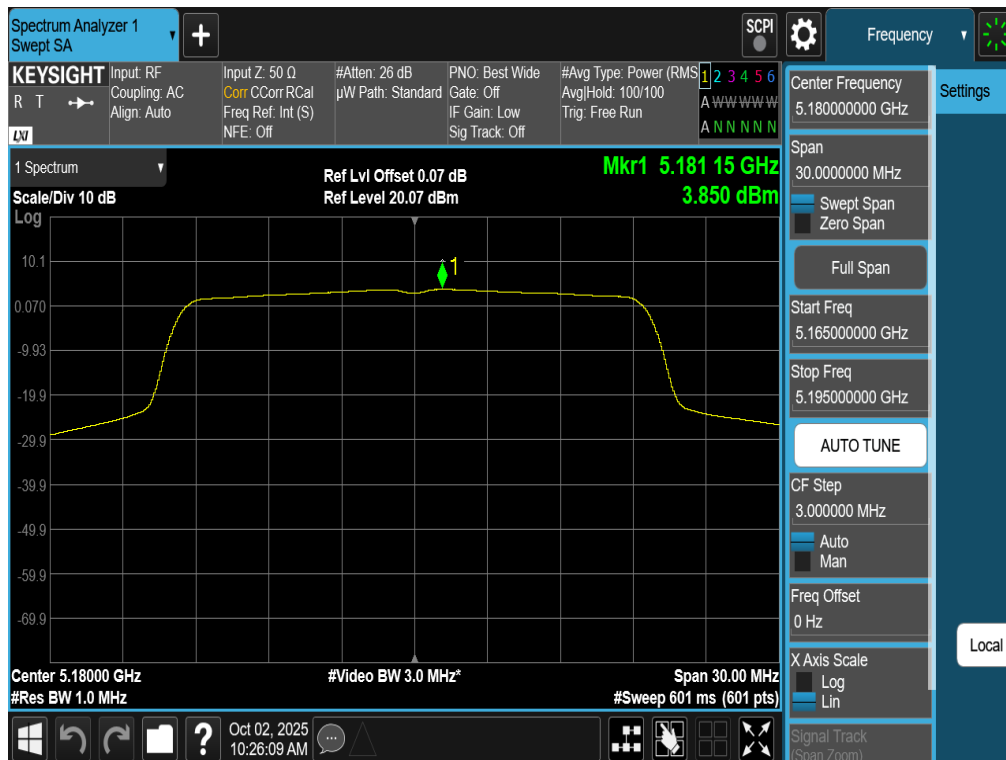
	Frequency [MHz]	Channel No.	802.11 MODE	Mode	Data Rate	Antenna 0 Measured Power Density [dBm/MHz]	Antenna 1 Measured Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directoinal Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20 MHz)	SDM	MCS12	3.43	3.62	6.53	1.23	7.77	10.0	-2.23
	5200	40	n (20 MHz)	SDM	MCS12	3.34	3.70	6.54	1.23	7.77	10.0	-2.23
	5240	48	n (20 MHz)	SDM	MCS12	3.43	3.88	6.67	1.23	7.90	10.0	-2.10
	5180	36	ax (SU) (20 MHz)	SDM	MCS4	3.79	3.85	6.83	1.23	8.06	10.0	-1.94
	5200	40	ax (SU) (20 MHz)	SDM	MCS2	3.62	3.83	6.74	1.23	7.97	10.0	-2.03
	5240	48	ax (SU) (20 MHz)	SDM	MCS2	3.50	3.62	6.57	1.23	7.80	10.0	-2.20
	5190	38	n (40 MHz)	CDD	MCS10	-0.19	-0.03	2.90	4.22	7.13	10.0	-2.87
	5230	46	n (40 MHz)	SDM	MCS15	3.26	3.64	6.47	1.23	7.70	10.0	-2.30
	5190	38	ax (SU) (40 MHz)	CDD	MCS2	-1.64	-1.43	1.48	4.22	5.70	10.0	-4.30
	5230	46	ax (SU) (40 MHz)	SDM	MCS2	3.38	3.96	6.69	1.23	7.92	10.0	-2.08
	5210	42	ac (80 MHz)	CDD	MCS2	-5.57	-5.20	-2.37	4.22	1.86	10.0	-8.14
	5210	42	ax (SU) (80 MHz)	CDD	MCS2	-5.84	-5.45	-2.63	4.22	1.59	10.0	-8.41

Table 7-68. ISED Band 1 e.i.r.p. Power Spectral Density Measurements CDD/SDM

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 81 of 160

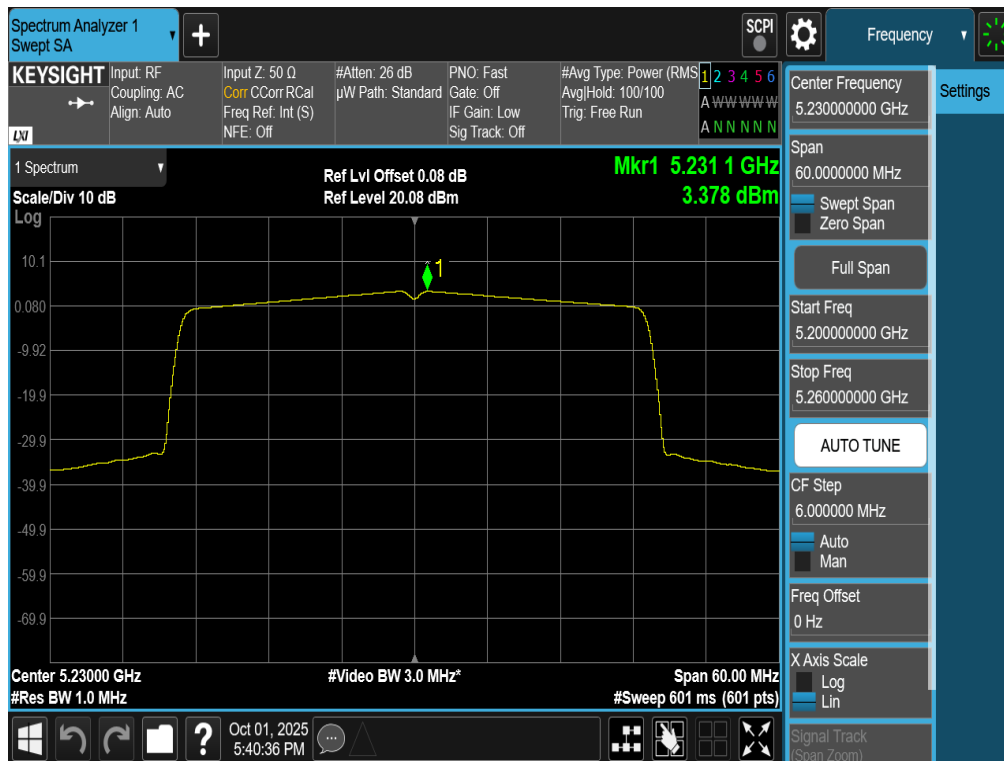


Plot 7-49. ISED PSD SDM Antenna 0 (20MHz BW 11ax SU – Ch.36)

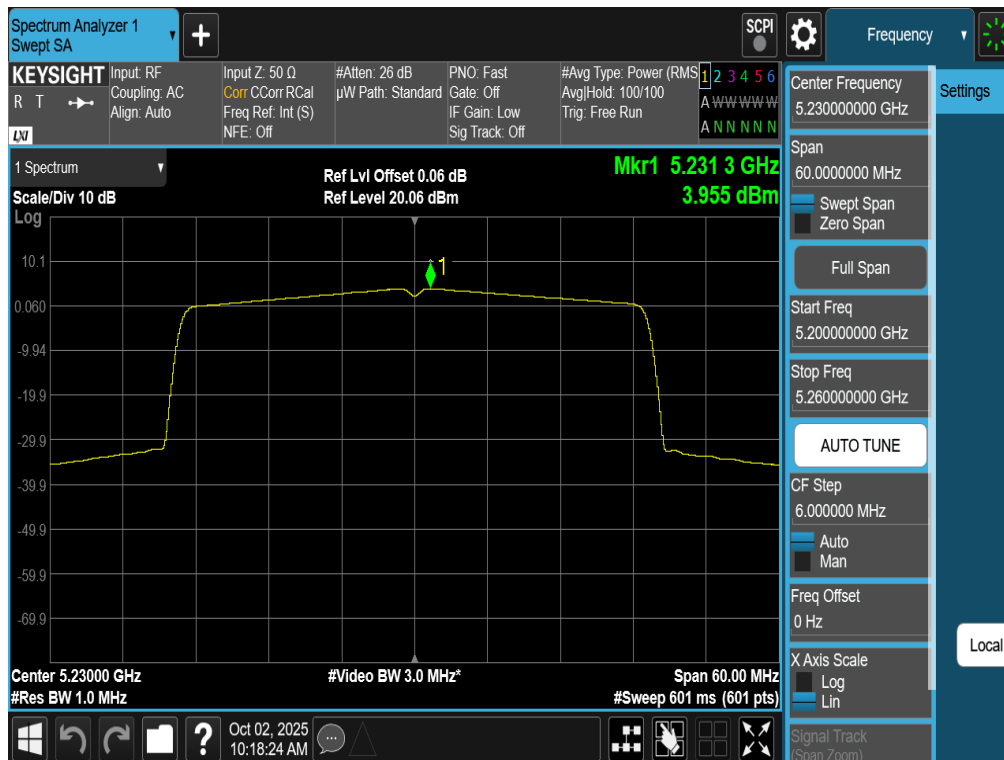


Plot 7-50. ISED PSD SDM Antenna 1 (20MHz BW 11ax SU – Ch.40)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 82 of 160

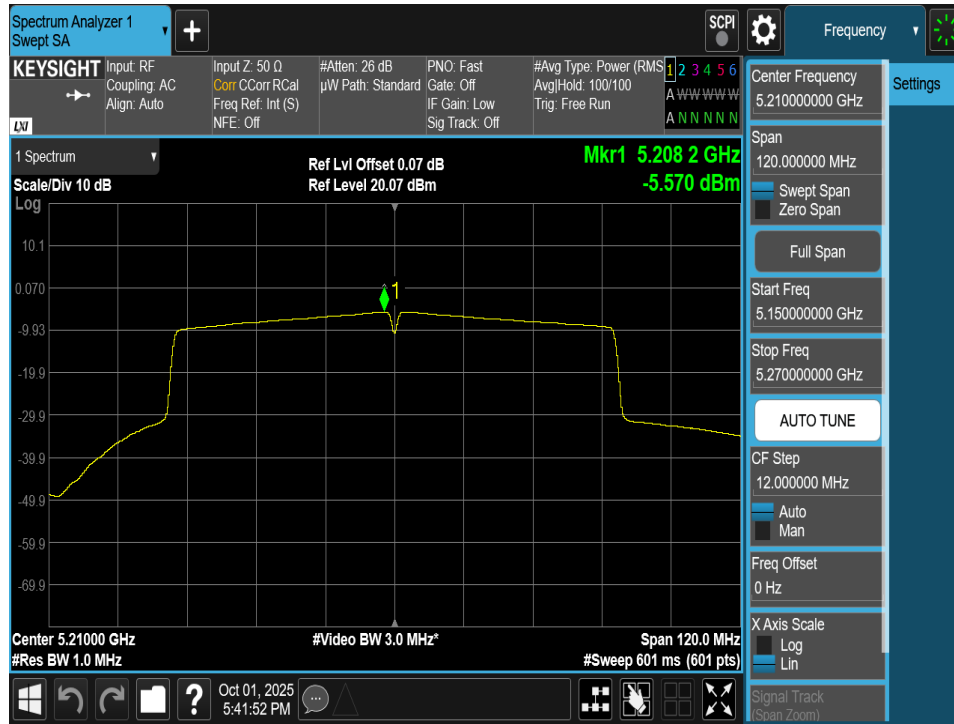


Plot 7-51. ISED PSD SDM Antenna 0 (40MHz BW 11n – Ch 46)

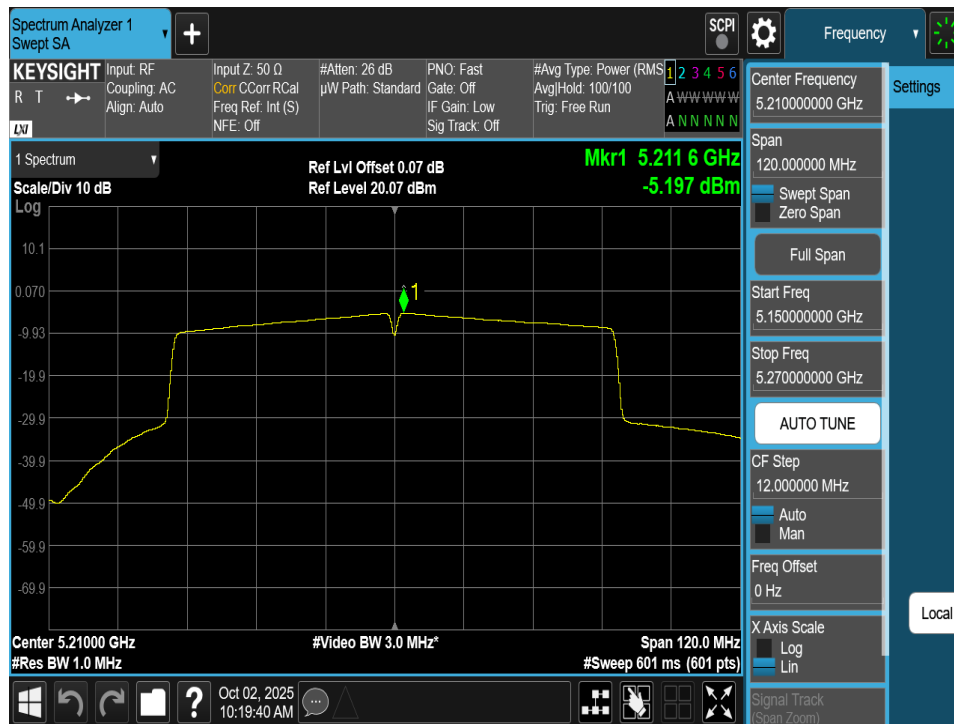


Plot 7-52. ISED PSD SDM Antenna 1 (40MHz BW 11n – Ch.46)

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 83 of 160



Plot 7-53. ISED PSD CDD Antenna 0 (80MHz BW 11ac – Ch 42)



Plot 7-54. ISED PSD CDD Antenna 1 (80MHz BW 11ac – Ch.42)

FCC ID: BCGA3218 IC: 579C-A3218	element	Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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 84 of 160

Note:

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 and KDB 662911 v02r01 Section E)1), the power spectral density 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 C63.10a:2024 Section 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.

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

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 Section 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 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 3.43 dBm for Antenna 1 and 3.62 dBm for Antenna 1.23.

$$\text{Antenna 0} + \text{Antenna 1} = \text{CDD/SDM}$$

$$(3.43 \text{ dBm} + 3.62 \text{ dBm}) = (2.20 \text{ mW} + 2.30 \text{ mW}) = 4.50 \text{ mW} = 6.53 \text{ dBm}$$

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 6.53 dBm with directional gain of 1.23 dBi.

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

$$6.53 \text{ dBm} + 1.23 \text{ dBi} = 7.77 \text{ dBm}$$

FCC ID: BCGA3218 IC: 579C-A3218		Test Dates: 10/14/2024 - 1/15/2026	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2410280081-06-R3.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.		

7.6 Radiated Spurious Emissions – Above 1GHz

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna 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 C63.10a:2024 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n, 802.11ax(SU) (20MHz BW), 802.11n, 802.11ax(SU) (40MHz BW), and 802.11ac, 802.11ax(SU) (80MHz), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (7.5) must not exceed the limits shown in Table 7-69 per Section 15.209 and RSS-Gen (7.4.3).

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-69. Radiated Limits

Test Procedures Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 – Sections 12.7.7, 12.7.6
KDB 789033 D02 v02r01 – Section G

Test Settings

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be $\geq 2 \times \text{span/RBW}$)
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

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Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Test Setup

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

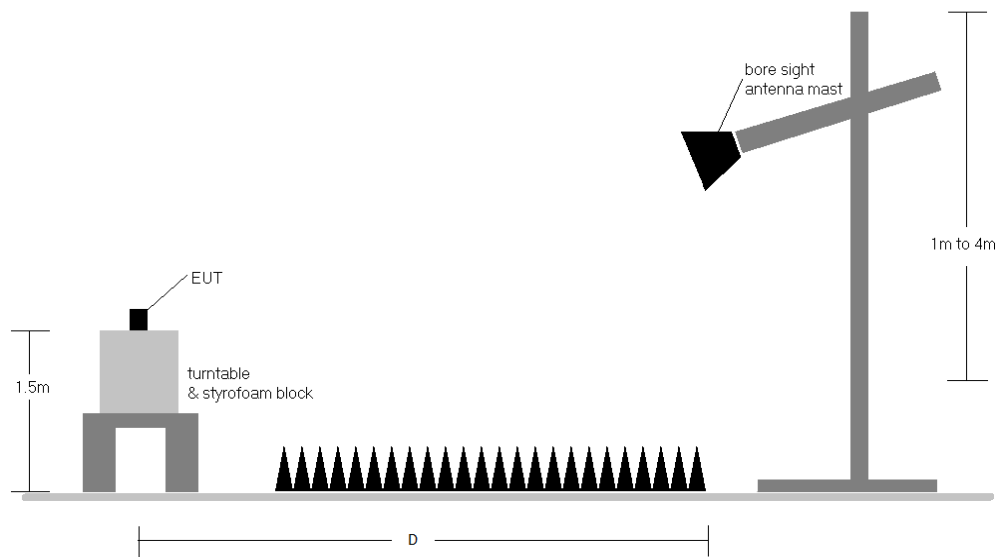


Figure 7-5. Test Instrument & Measurement Setup

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Test Notes

1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 and Section 7.5 of RSS-Gen are below the limit shown in Table 7-69.
2. All spurious emissions lying in restricted bands specified in §15.205 and Section 7.5 of RSS-Gen are below the limit shown in Table 7-69. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB μ V/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. EUT powered by an AC/DC Adapter via USB-C Cable.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas.
6. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
8. All data rates and antenna configurations were investigated and only the worst case is reported.
9. The unit was tested with all possible modes and only the highest emission is reported.
10. The unit was tested at its highest output power.
11. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

Sample Calculations

Determining Spurious Emissions Levels

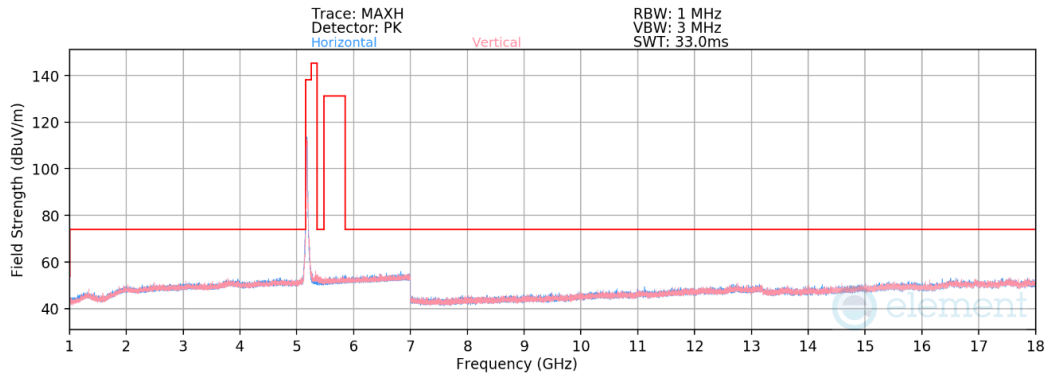
- Field Strength Level [dB μ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] – Preamplifier Gain [dB]
- Margin [dB] = Field Strength Level [dB μ V/m] – Limit [dB μ V/m]

Radiated Band Edge Measurement Offset

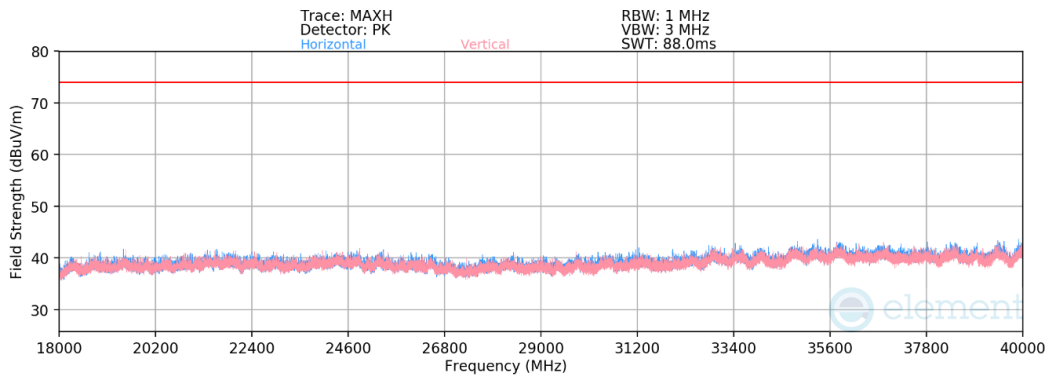
- The amplitude offset shown in the radiated restricted band edge plots in Section 7.6.3 to 7.6.14 was calculated using the formula:
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

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7.6.1 CDD Radiated Spurious Emission



Plot 7-55. Radiated Spurious Emissions above 1GHz CDD (802.11n – Ch. 36)



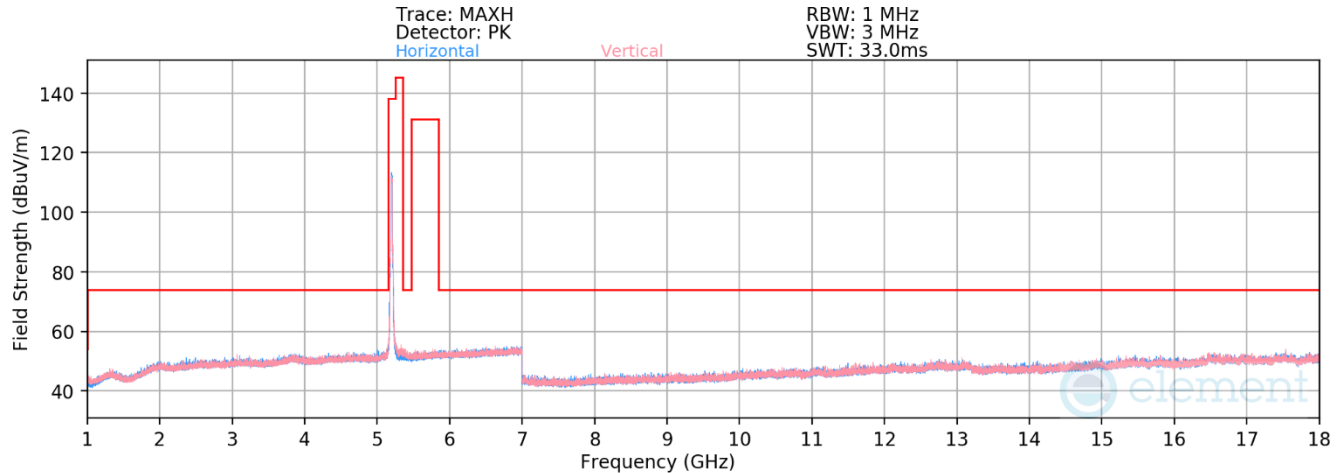
Plot 7-56. Radiated Spurious Emissions 18GHz - 40GHz CDD (802.11n – Ch.36)

Mode:	802.11n
Data Rate:	MCS2
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

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 [dBuV/m]	Limit [dBuV/m]	Margin [dB]
10360.00	Peak	H	-	-	-66.01	8.46	0.00	49.45	68.23	-18.78
* 15540.00	Average	V	-	-	-80.15	14.12	0.00	40.97	53.98	-13.01
* 15540.00	Peak	V	-	-	-69.38	13.95	0.00	51.57	73.98	-22.41
* 20720.00	Average	H	-	-	-62.15	-5.89	-9.54	29.42	53.98	-24.56
* 20720.00	Peak	H	-	-	-51.18	-5.89	-9.54	40.39	73.98	-33.59
25900.00	Peak	H	-	-	-51.73	-5.34	-9.54	40.39	68.23	-27.84
31080.00	Peak	V	-	-	-51.87	-3.97	-9.54	41.62	68.23	-26.61

Table 7-70. Radiated Measurements CDD

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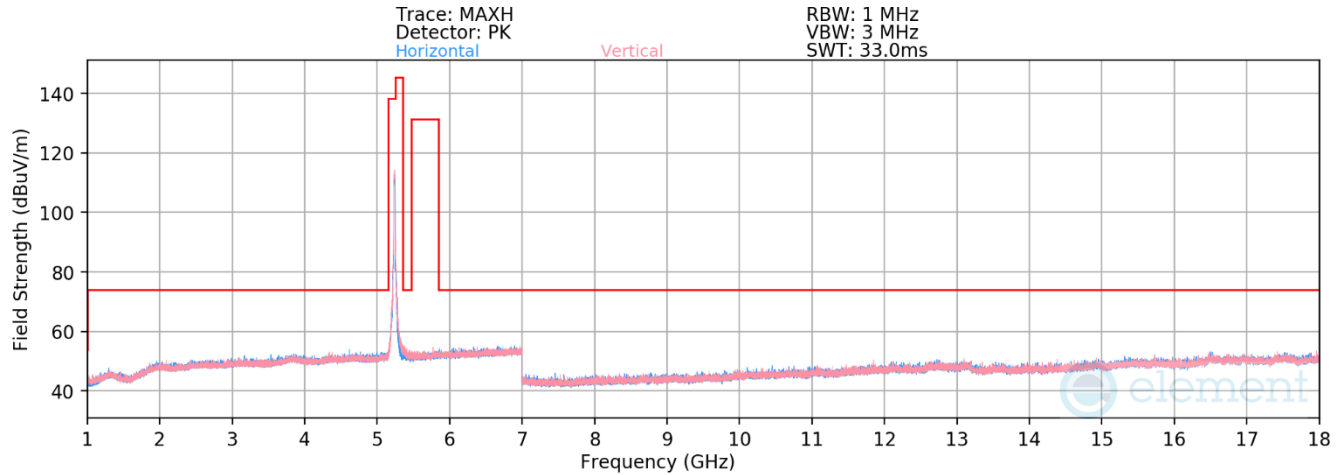
Plot 7-57. Radiated Spurious Emissions above 1GHz CDD (802.11n – Ch. 40)

Mode: 802.11n
Data Rate: MCS2
Distance of Measurements: 3 Meters
Operating Frequency: 5200MHz
Channel: 40

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
	10400.00	Peak	H	-	-	-66.25	8.49	49.25	68.23	-18.98
*	15600.00	Average	V	-	-	-80.48	14.07	40.59	53.98	-13.39
*	15600.00	Peak	V	-	-	-69.45	14.17	51.72	73.98	-22.26

Table 7-71. Radiated Measurements CDD

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Plot 7-58. Radiated Spurious Emissions above 1GHz CDD (802.11n – Ch. 48)

Mode: 802.11n
Data Rate: MCS2
Distance of Measurements: 3 Meters
Operating Frequency: 5240MHz
Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
10480.00	Peak	H	-	-	-68.09	8.82	47.73	68.23	-20.50
* 15720.00	Average	H	-	-	-79.33	13.52	41.19	53.98	-12.79
* 15720.00	Peak	H	-	-	-67.91	13.44	52.53	73.98	-21.45

Table 7-72. Radiated Measurements CDD

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