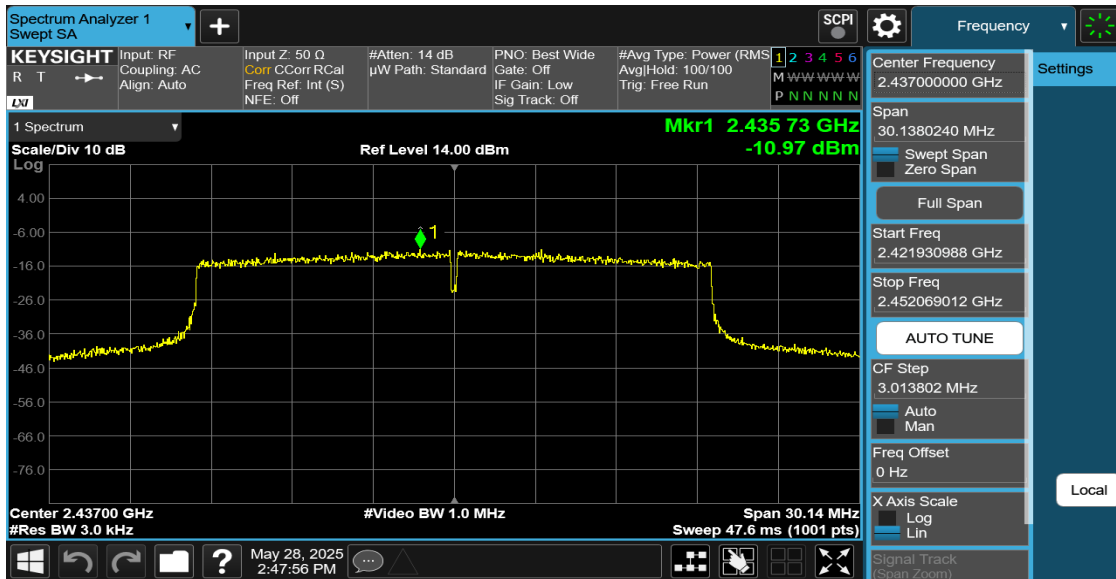
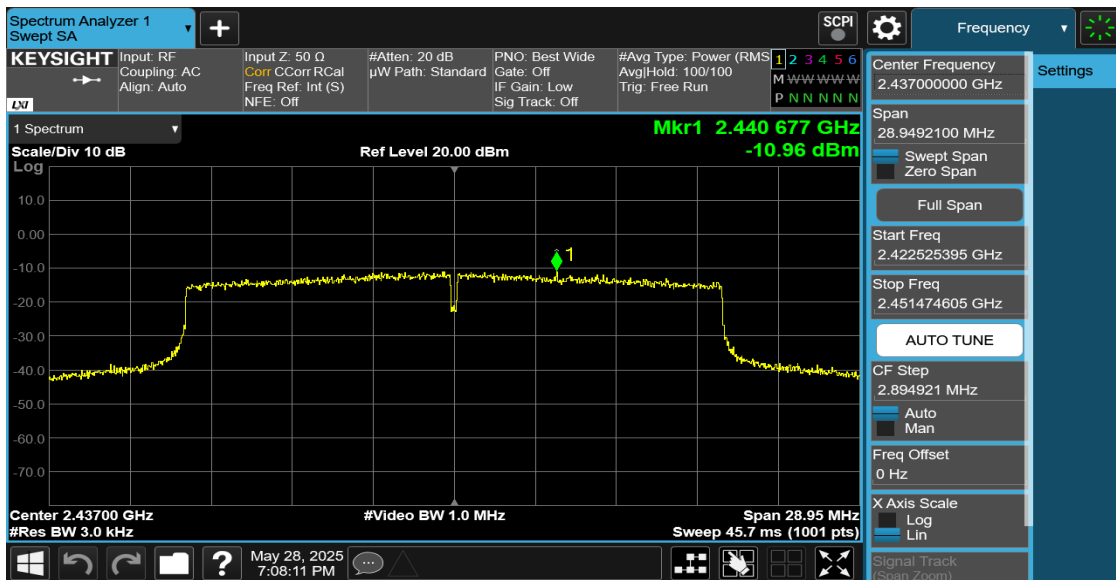




Plot 7-51. Power Spectral Density Plot CDD Common Primary Antenna 0 Common (802.11ax (SU) – Ch. 6)



Plot 7-52. Power Spectral Density Plot CDD Common Primary Antenna 1 Common (802.11ax (SU) – Ch. 6)

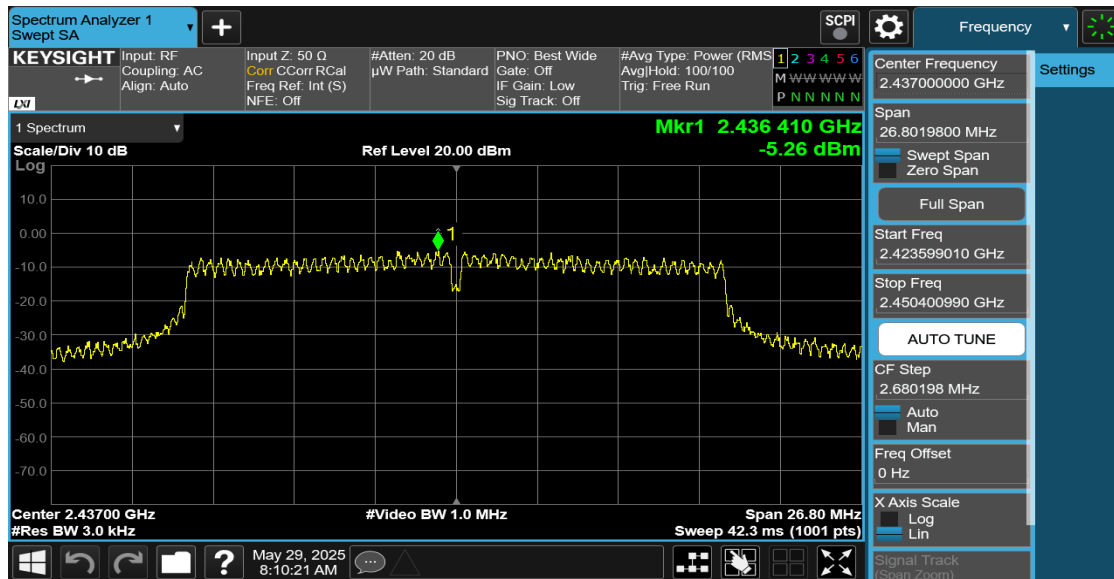
FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 83 of 246

7.5.6 CDD Dedicated Power Spectral Density Measurements

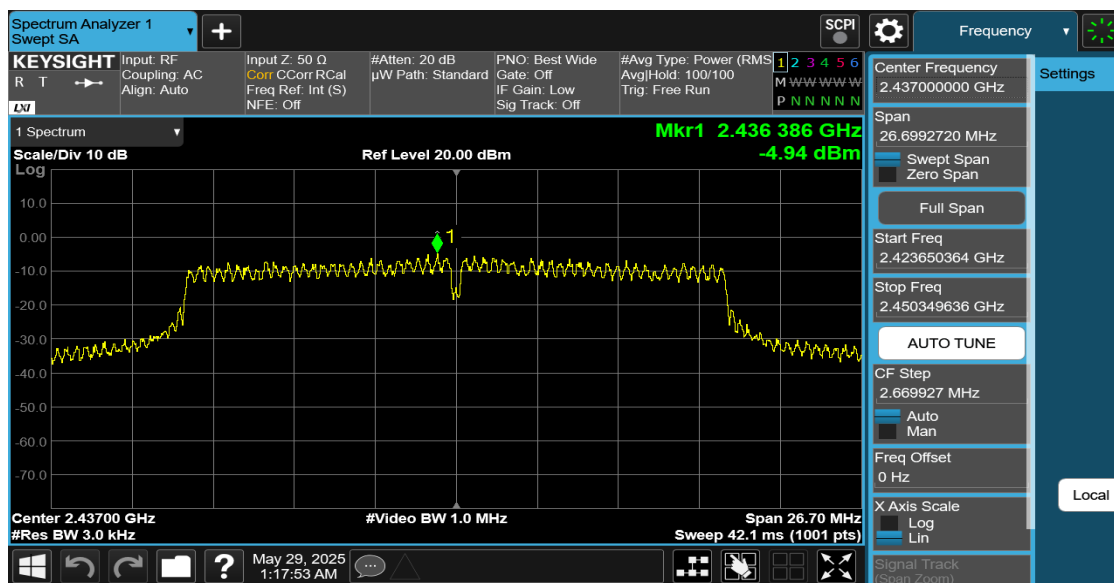
Frequency [MHz]	Channel No.	802.11 MODE	Mode	Data Rate [Mbps]	Antenna 0 Power Density [dBm/MHz]	Antenna 1 Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Max Power Density [dBm/MHz]	Margin [dB]	Pass/Fail
2412	1	n	CDD	39/43.3 (MCS10)	-9.77	-10.36	-7.04	8.00	-15.04	Pass
2437	6	n	CDD	39/43.3 (MCS10)	-5.26	-4.94	-2.09	8.00	-10.09	Pass
2462	11	n	CDD	39/43.3 (MCS10)	-9.83	-9.55	-6.68	8.00	-14.68	Pass
2412	1	ax (SU)	CDD	48/51.6 (MCS2)	-11.72	-11.81	-8.75	8.00	-16.75	Pass
2437	6	ax (SU)	CDD	48/51.6 (MCS2)	-5.93	-7.33	-3.56	8.00	-11.56	Pass
2462	11	ax (SU)	CDD	48/51.6 (MCS2)	-11.02	-11.68	-8.32	8.00	-16.32	Pass

Table 7-55.CDD Dedicated Conducted Power Density Measurements

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 246

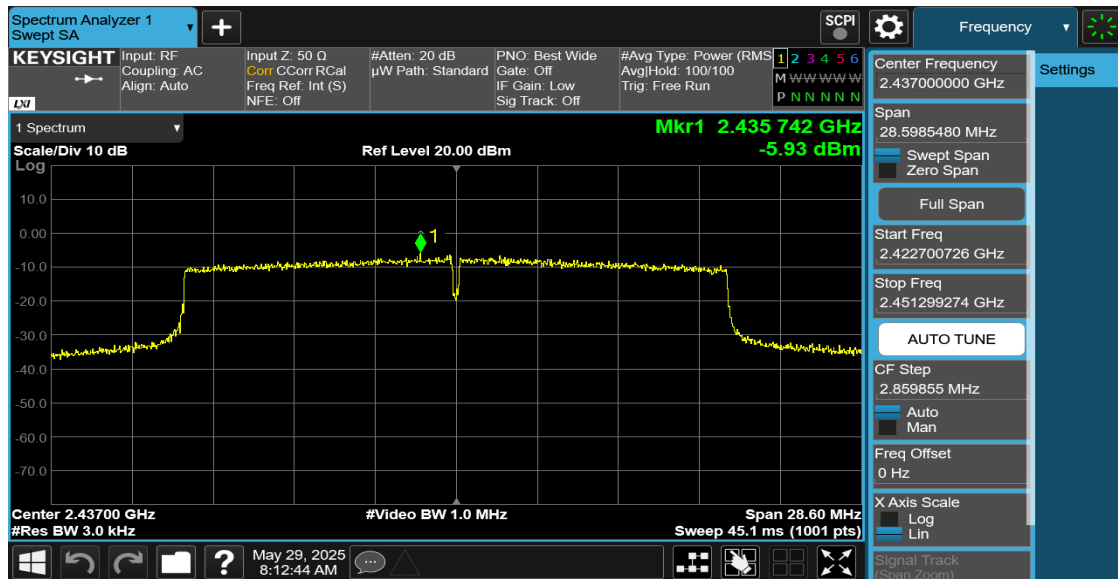


Plot 7-53. Power Spectral Density Plot CDD Common Primary Antenna 0 Dedicated (802.11n – Ch. 6)

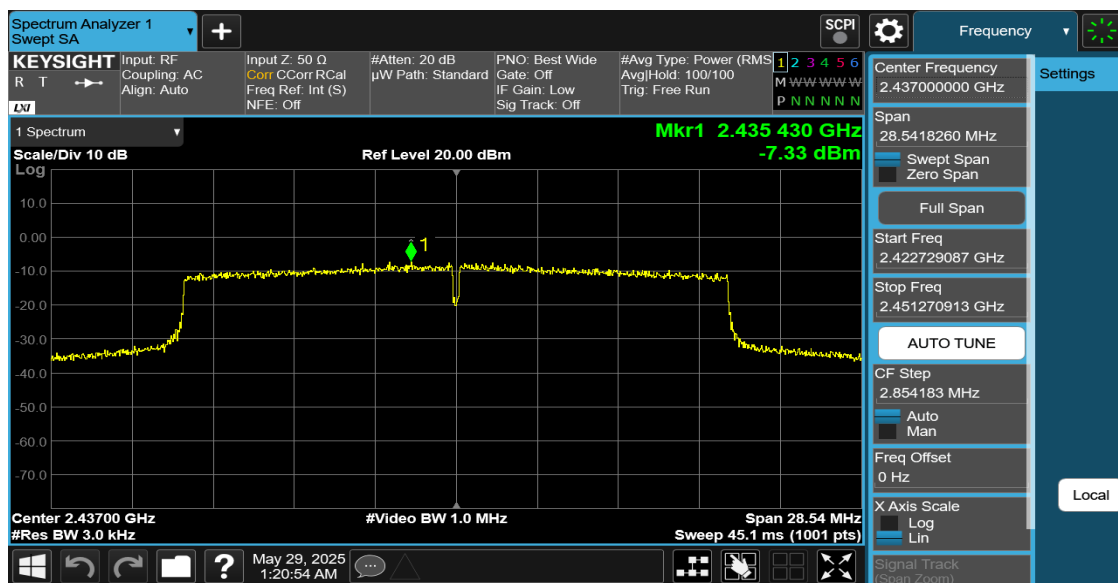


Plot 7-54. Power Spectral Density Plot CDD Common Primary Antenna 1 Dedicated (802.11n – Ch. 6)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 85 of 246



Plot 7-55. Power Spectral Density Plot CDD Common Primary Antenna 0 Dedicated (802.11ax (SU) – Ch. 6)



Plot 7-56. Power Spectral Density Plot CDD Common Primary Antenna 1 Dedicated (802.11ax (SU) – Ch. 6)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 86 of 246

Note:

Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 Subclause 14.6.3, the directional gain is calculated using the following formula, where G_N is the gain of the n th antenna and N_{ANT} , the total number of antennas used. Per ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 Section 14.5.2.2 and KDB 662911 D01 v02r01 Section E)2), the power spectral density at Antenna 0 and Antenna 1 were first measured separately as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

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

Sample CDD Dedicated Calculation:

At 2412MHz the average conducted power spectral density was measured to be -9.77 dBm for Antenna 0 Dedicated and -10.36 dBm for Antenna 1 Dedicated.

$$\text{Antenna 0} + \text{Antenna 1} = \text{CDD Dedicated}$$

$$((-9.77 \text{ dBm}) + (-10.36 \text{ dBm})) = (0.105 \text{ mW} + 0.092 \text{ mW}) = 0.197 \text{ mW} = -7.06 \text{ dBm}$$

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 87 of 246

7.6 Conducted Authorized Band Edge

Test Overview and Limit

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. For the following out of band conducted spurious emissions plots at the band edge, the EUT was set at a data rate of 11Mbps for “b” mode, 12 Mbps for “g” mode, MCS2 for “n” mode, and MCS2 for “ax-SU” mode as these settings produced the worst-case emissions for 11b/g/n/ax modes.

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the PSD procedure (Section 7.5).

Test Procedure Used

ANSI C63.10:2020 + Cor. 1:2023 + C63.10a:2024 + Errata to C63.10a:2024 – Subclause 11.11.3
KDB 558074 D01 v05r02 – Section 8.7.2

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW = 100kHz
4. VBW $\geq 3 \times$ RBW
5. Detector = Peak
6. Number of sweep points $\geq 2 \times$ Span/RBW
7. Trace mode = max hold
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

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



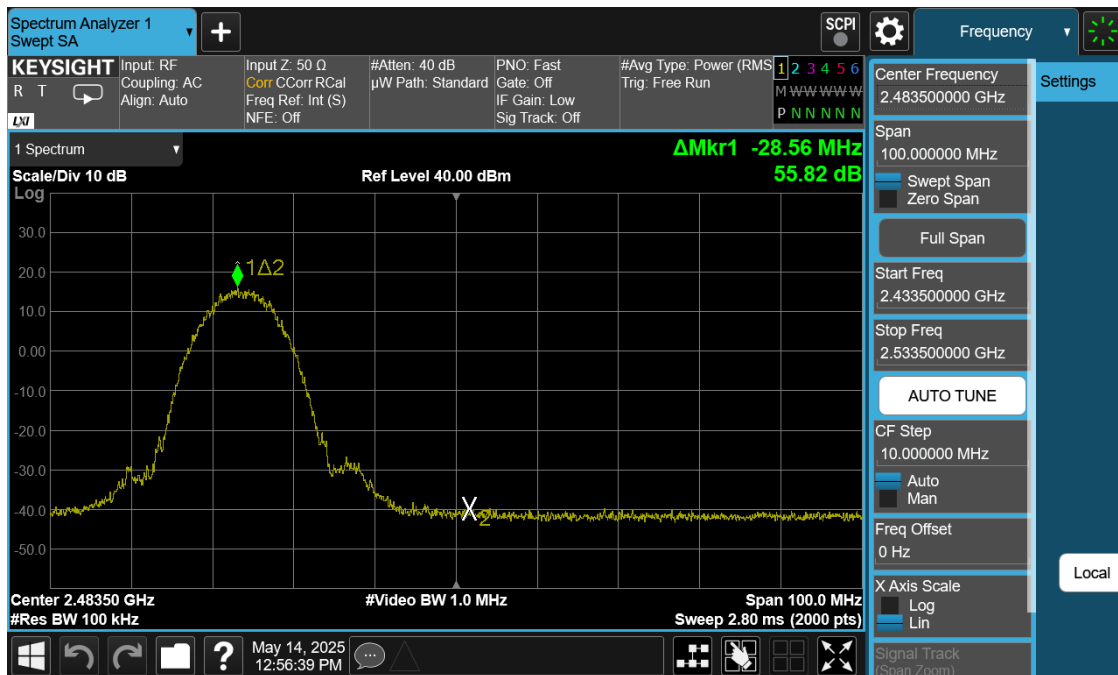
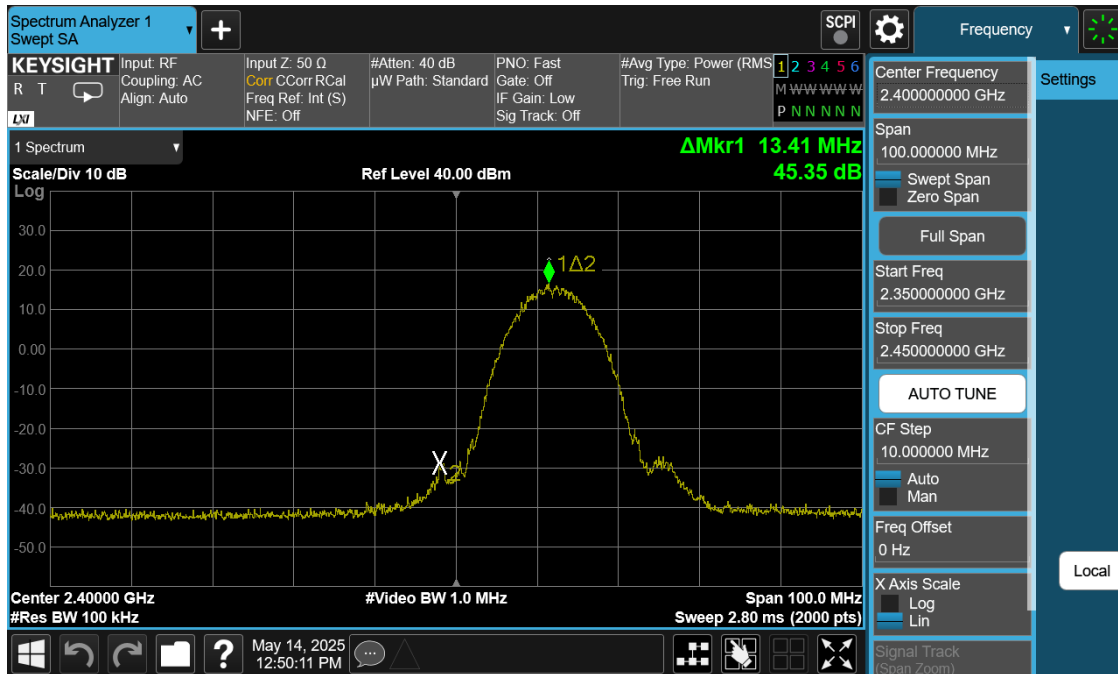
Figure 7-5. Test Instrument & Measurement Setup

Test Notes

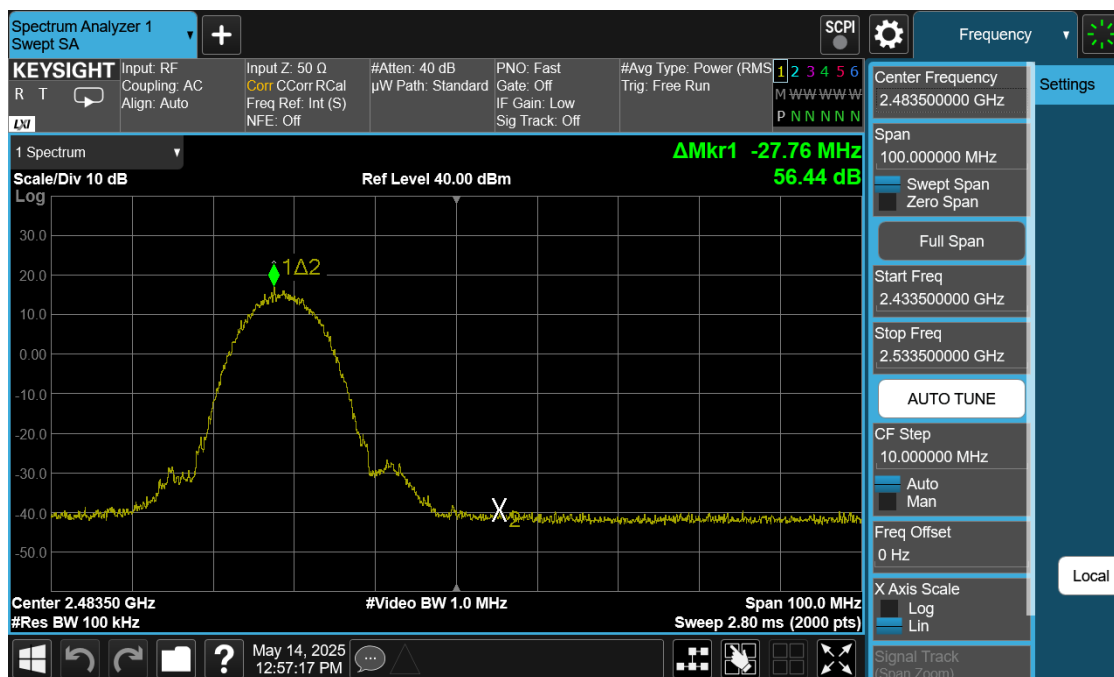
1. All antenna configurations were investigated and only the worst case is reported.
2. All data rates have been investigated and only the worst case data rate is reported.

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 88 of 246

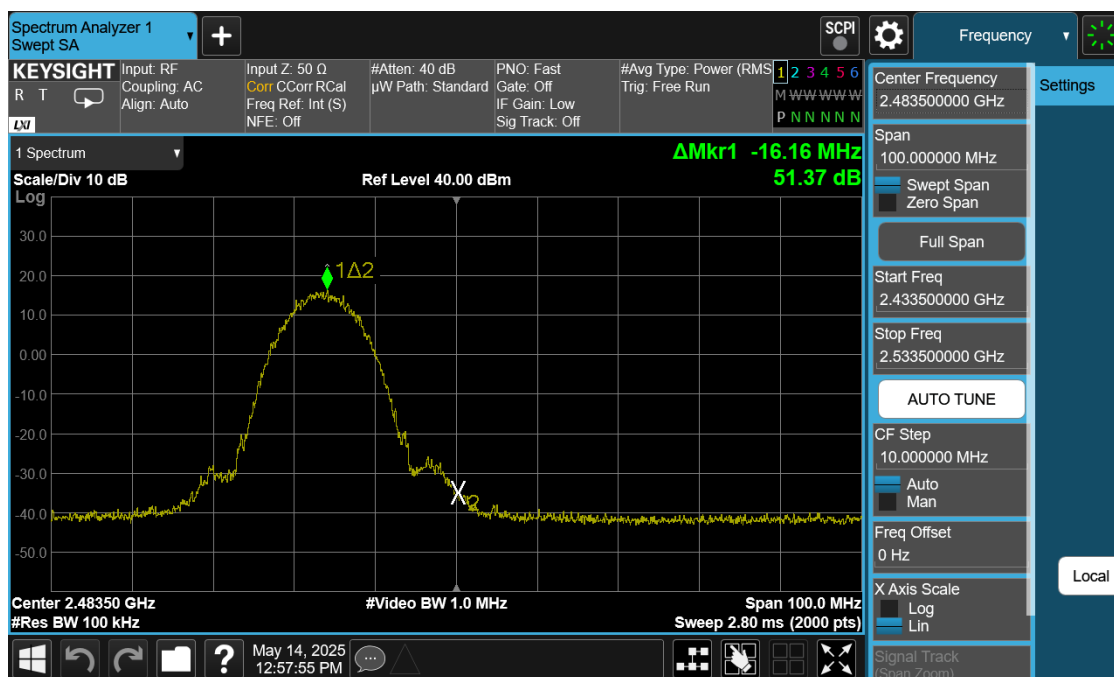
7.6.1 Antenna 0 Dedicated Conducted Emissions at the Band Edge



FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 89 of 246

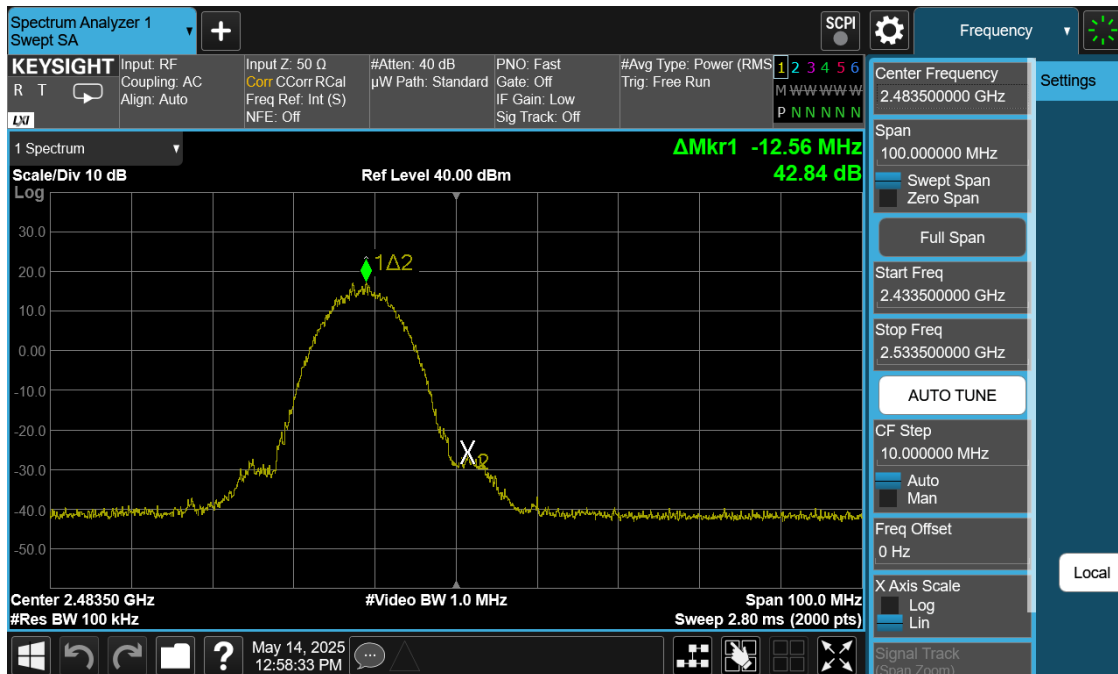


Plot 7-59. Band Edge Plot Antenna 0 Dedicated (802.11b – Ch. 11)

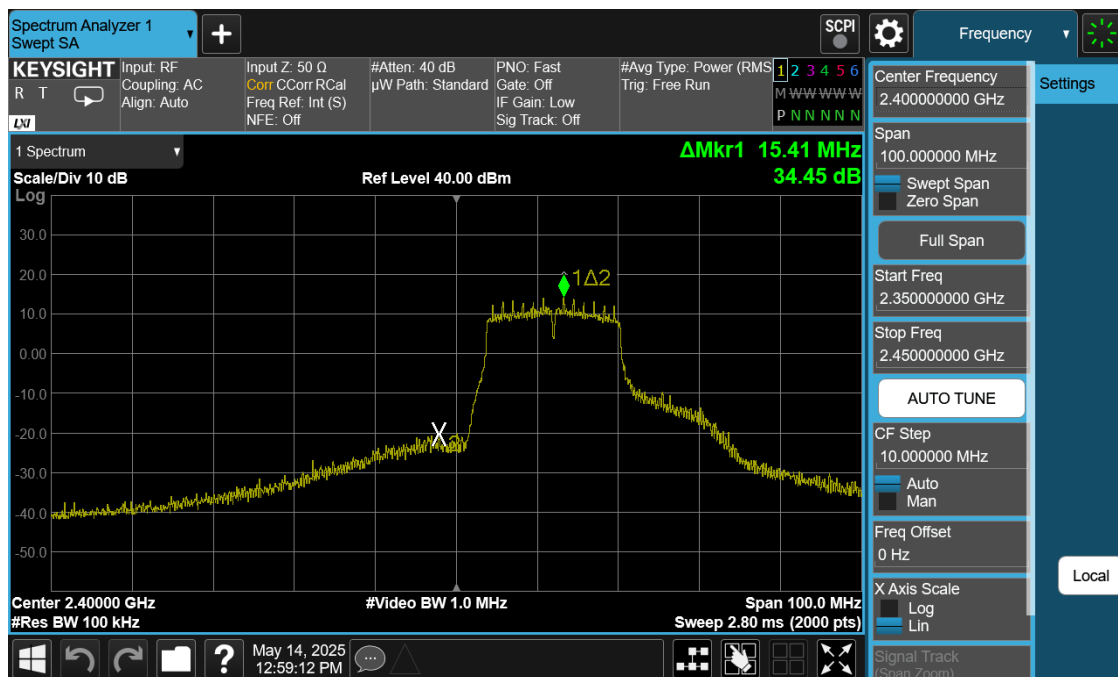


Plot 7-60. Band Edge Plot Antenna 0 Dedicated (802.11b – Ch. 12)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 90 of 246

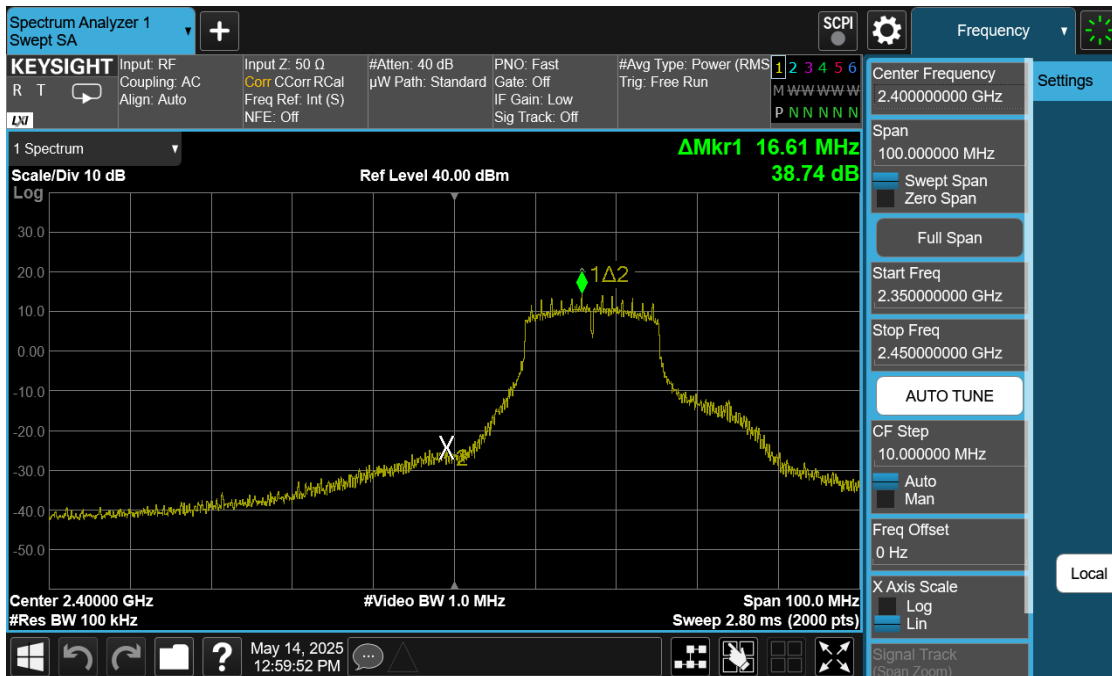


Plot 7-61. Band Edge Plot Antenna 0 Dedicated (802.11b – Ch. 13)

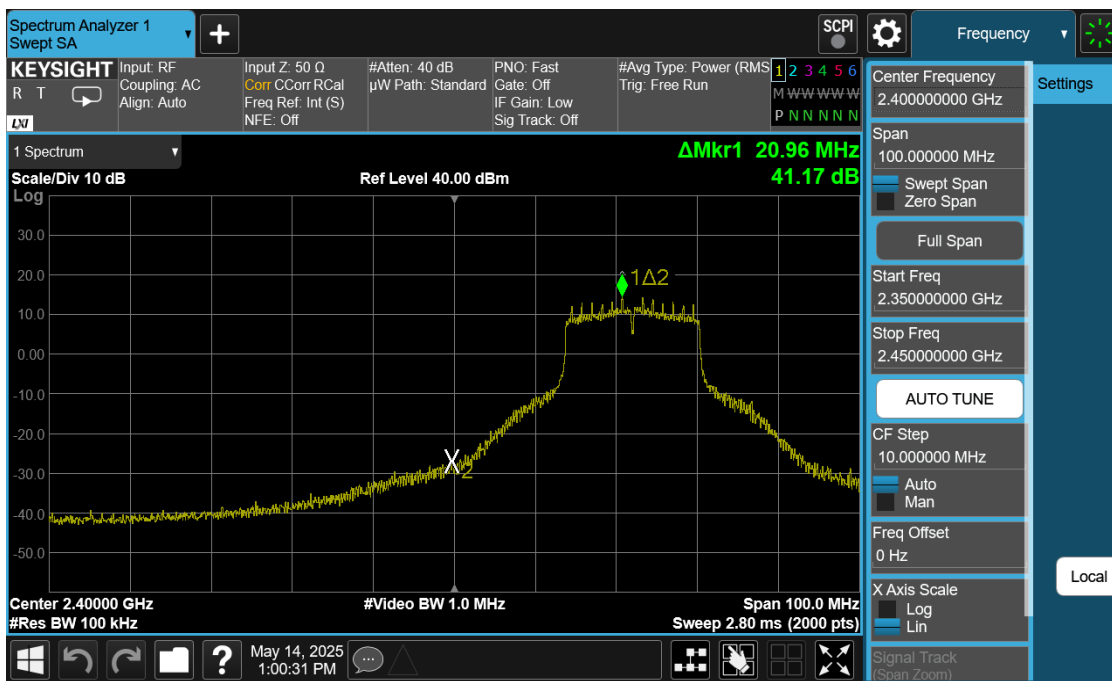


Plot 7-62. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 1)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 91 of 246

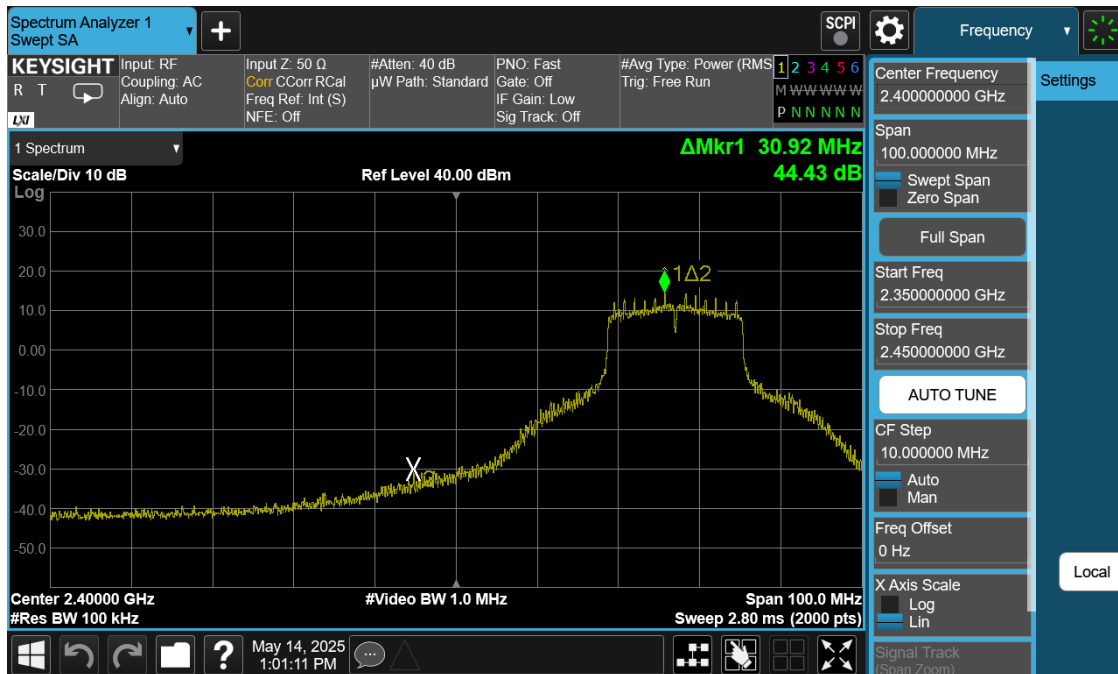


Plot 7-63. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 2)

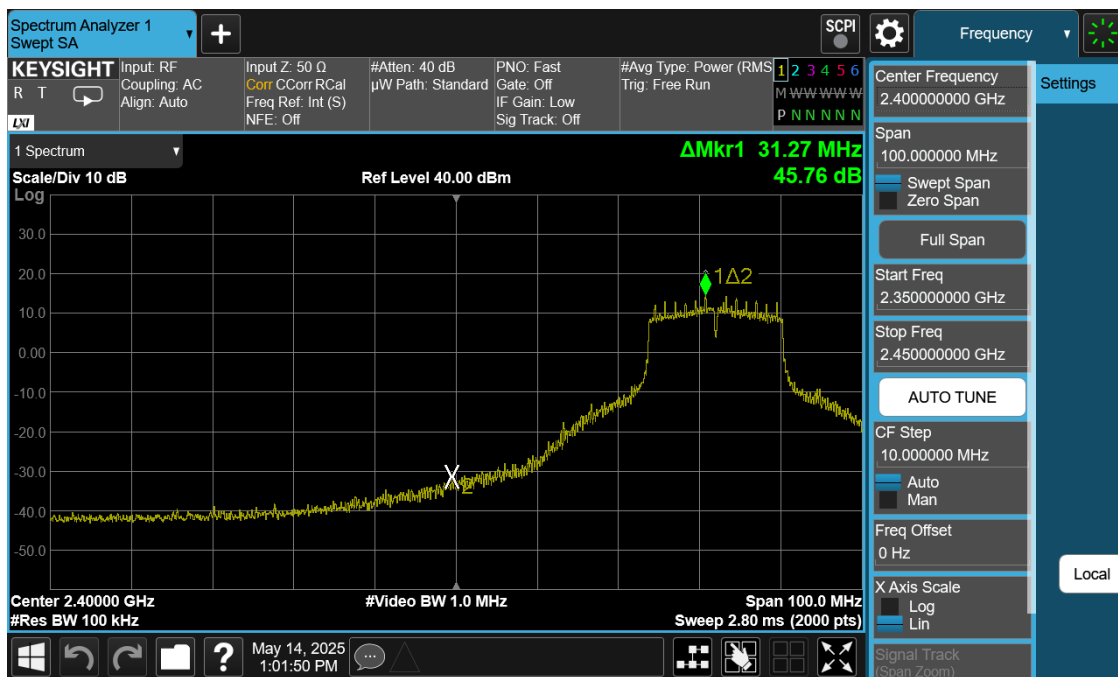


Plot 7-64. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 3)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 92 of 246

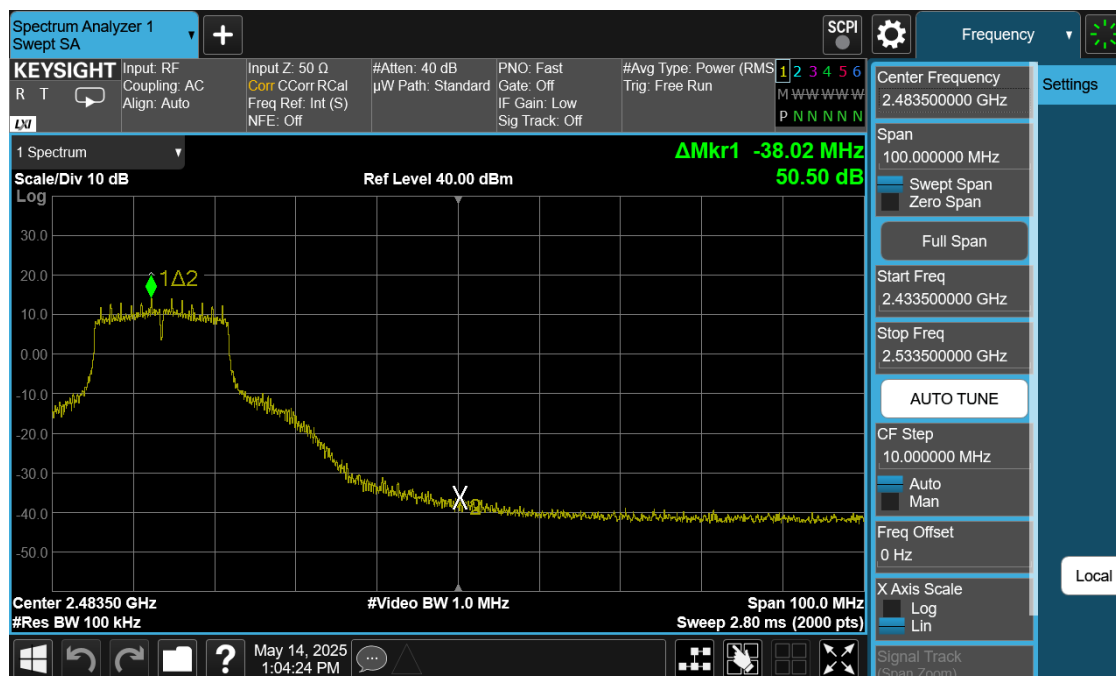


Plot 7-65. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 4)

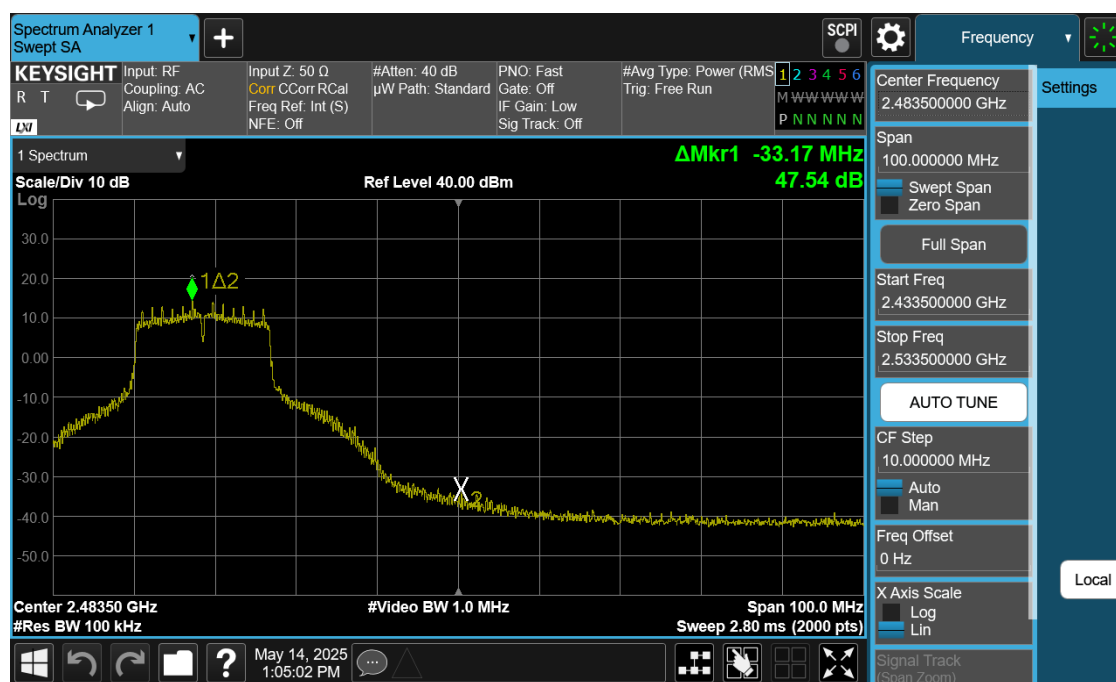


Plot 7-66. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 5)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 93 of 246

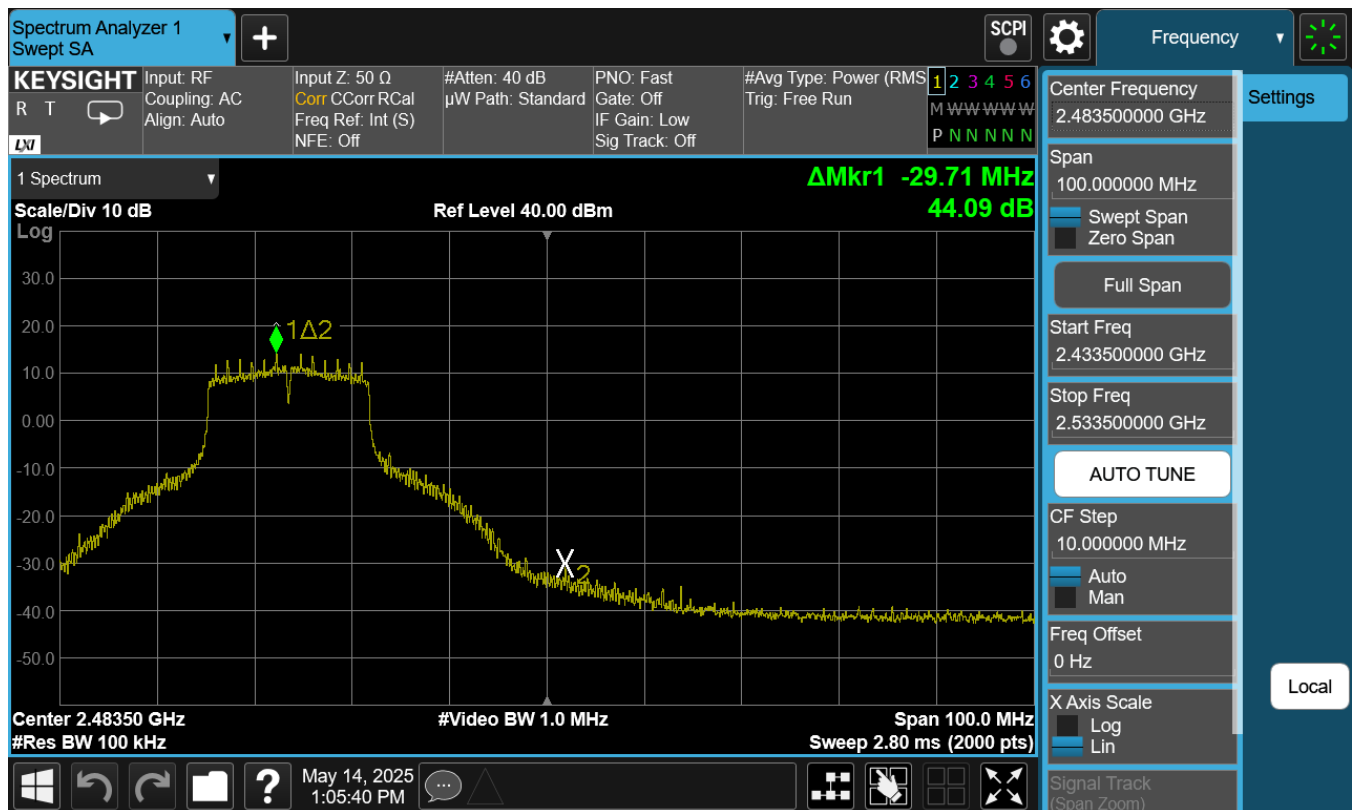


Plot 7-67. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 8)

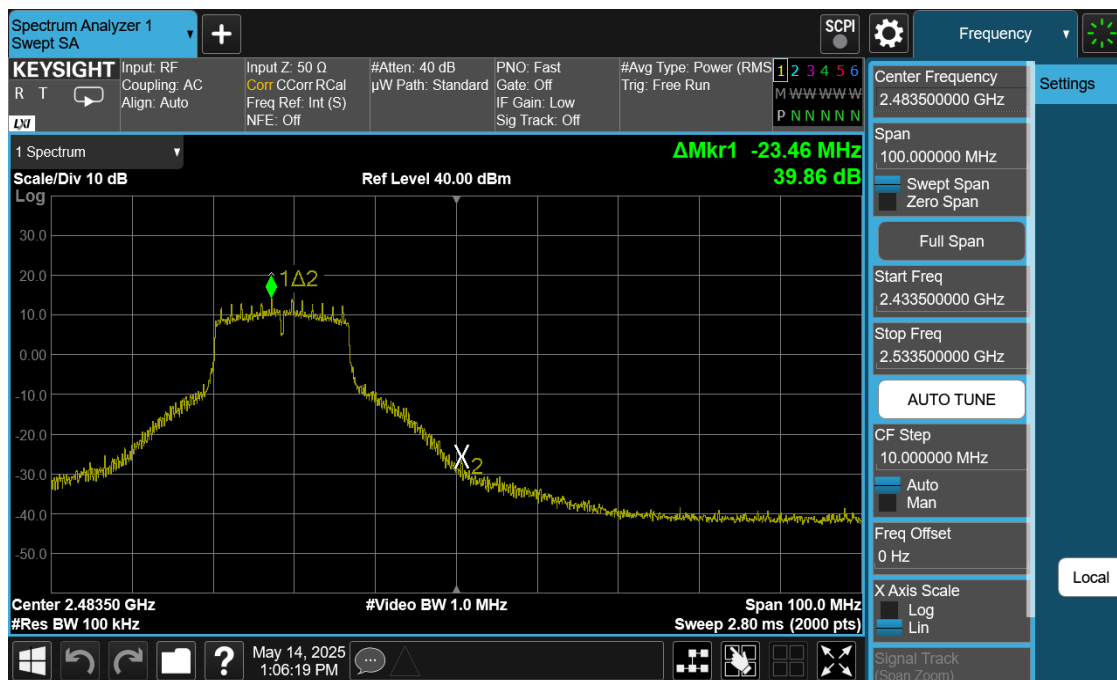


Plot 7-68. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 9)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 94 of 246

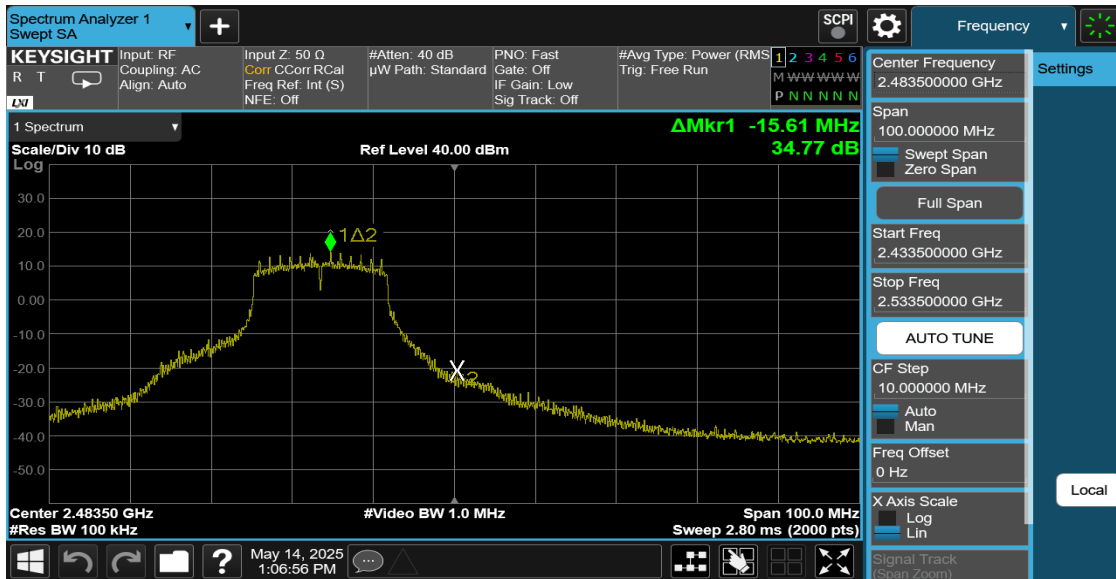


Plot 7-69. Band Edge Plot Antenna 0 Dedicated (802.11g - Ch. 10)

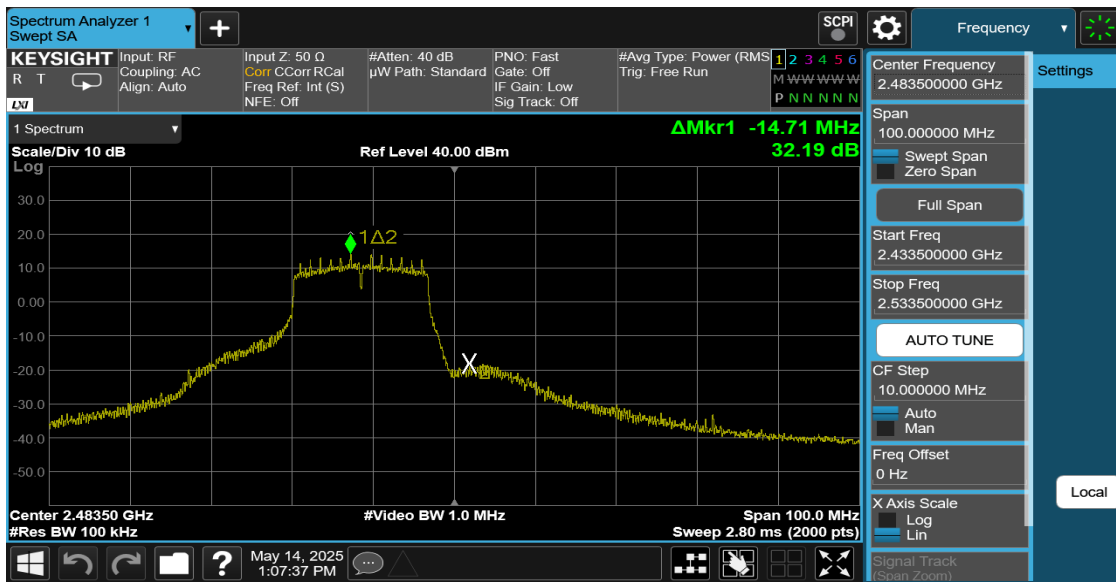


Plot 7-70. Band Edge Plot Antenna 0 Dedicated (802.11g - Ch. 11)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 95 of 246

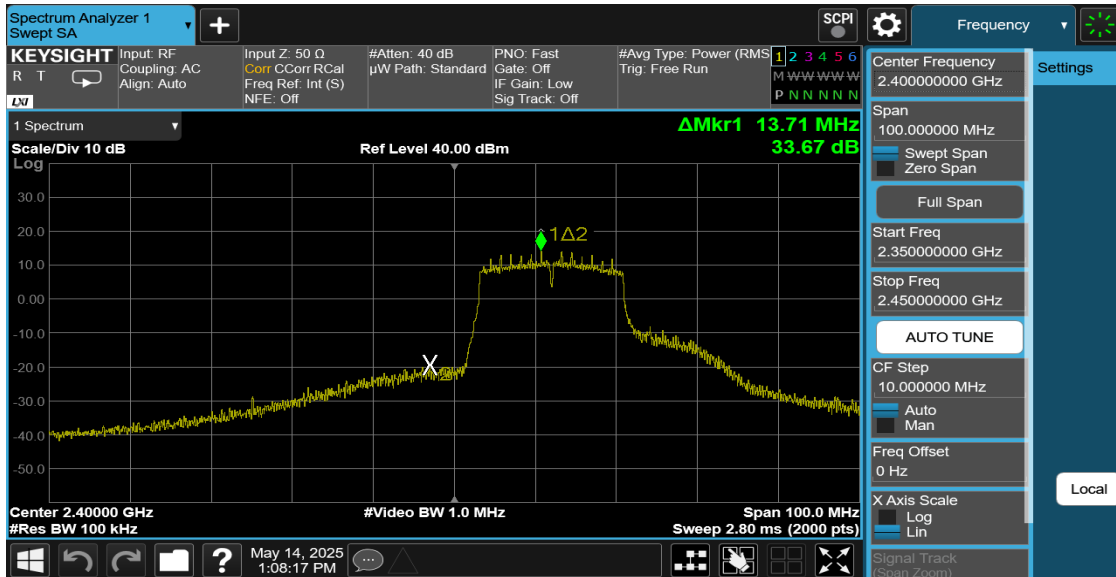


Plot 7-71. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 12)



Plot 7-72. Band Edge Plot Antenna 0 Dedicated (802.11g – Ch. 13)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 96 of 246

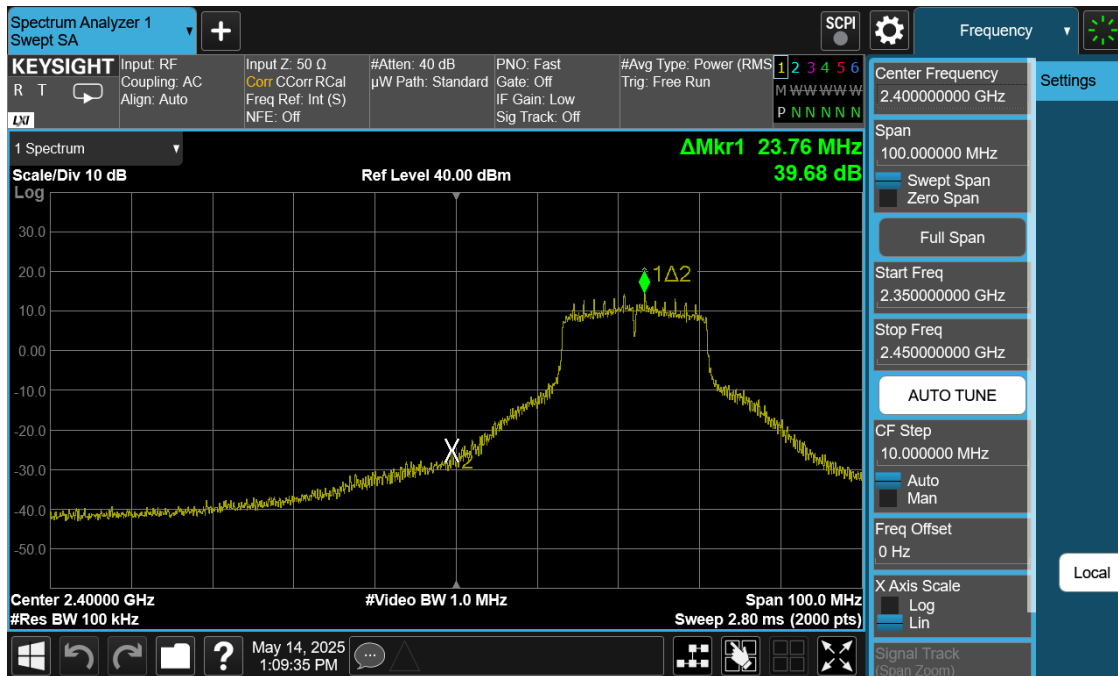


Plot 7-73. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 1)

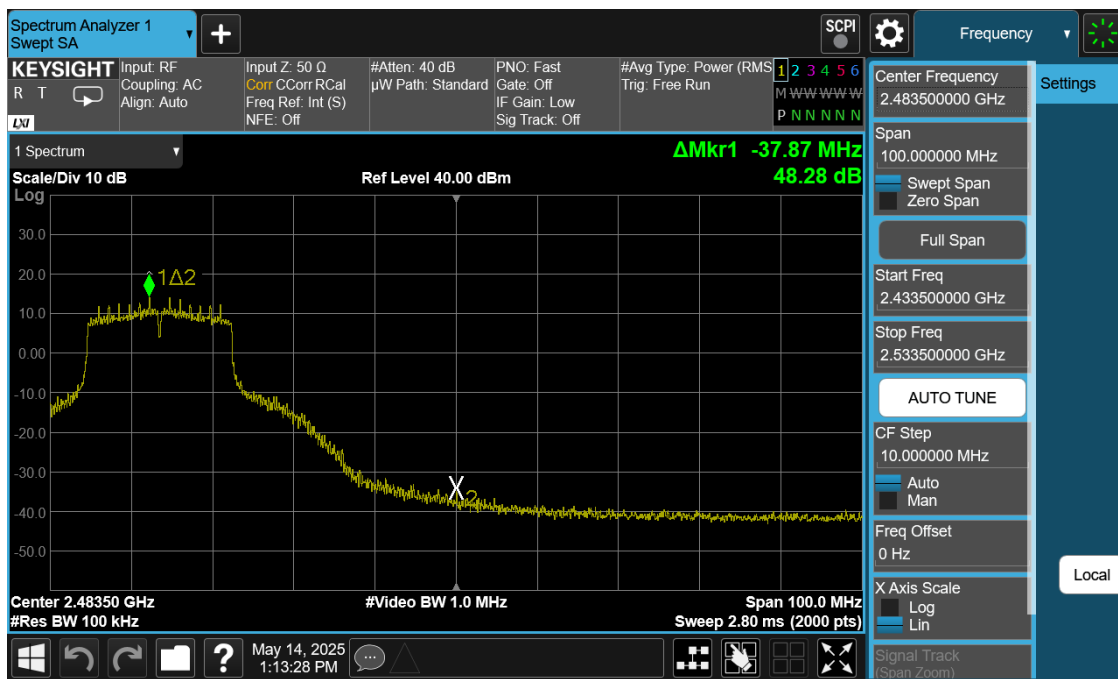


Plot 7-74. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 2)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 97 of 246	

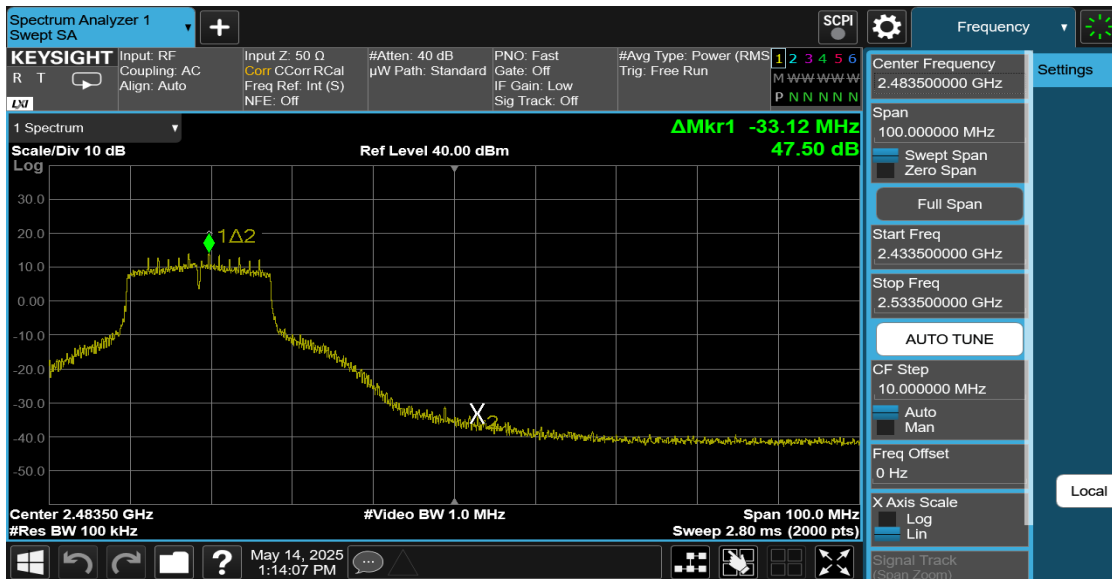


Plot 7-75. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 3)

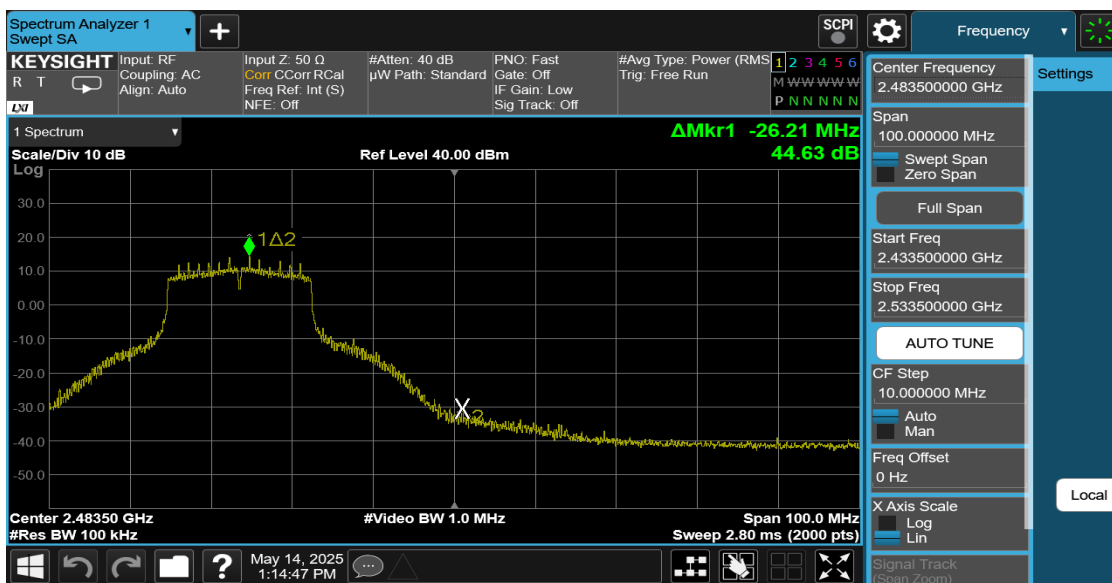


Plot 7-76. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 8)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 98 of 246

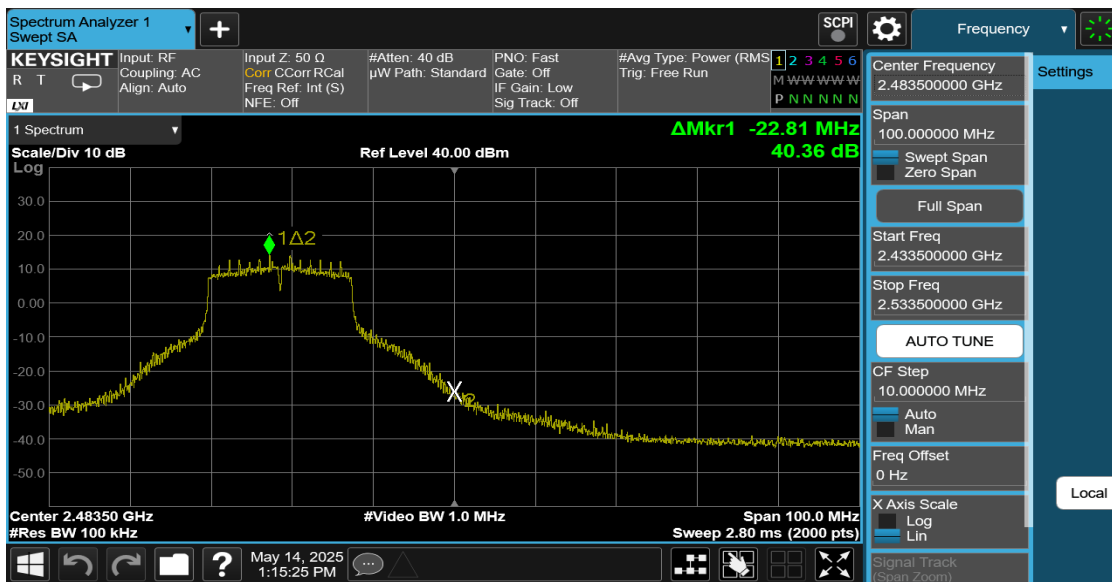


Plot 7-77. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 9)



Plot 7-78. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 10)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 99 of 246

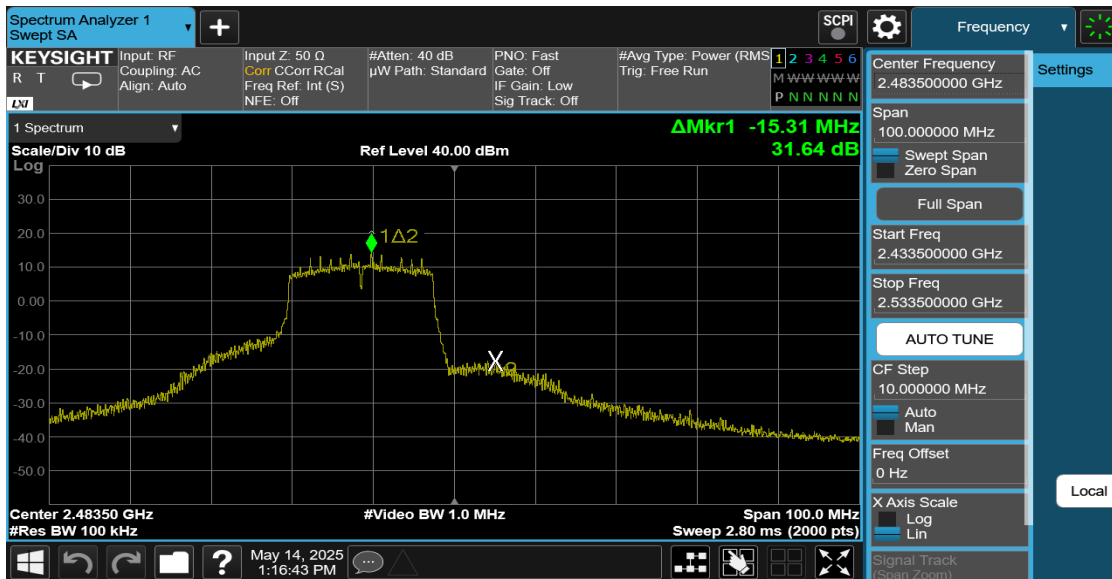


Plot 7-79. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 11)



Plot 7-80. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 12)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 100 of 246

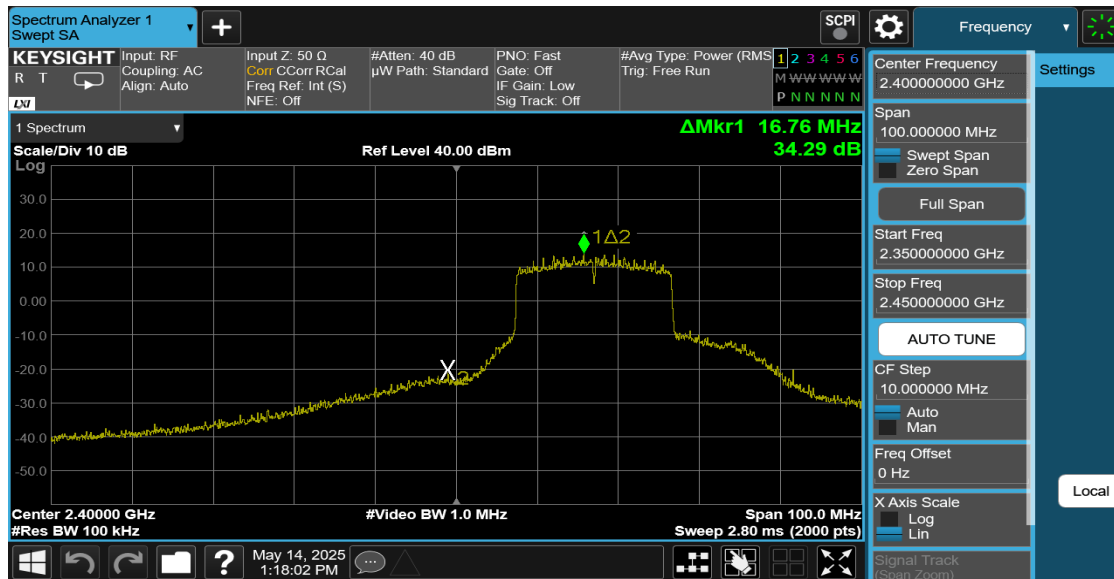


Plot 7-81. Band Edge Plot Antenna 0 Dedicated (802.11n (2.4GHz) – Ch. 13)

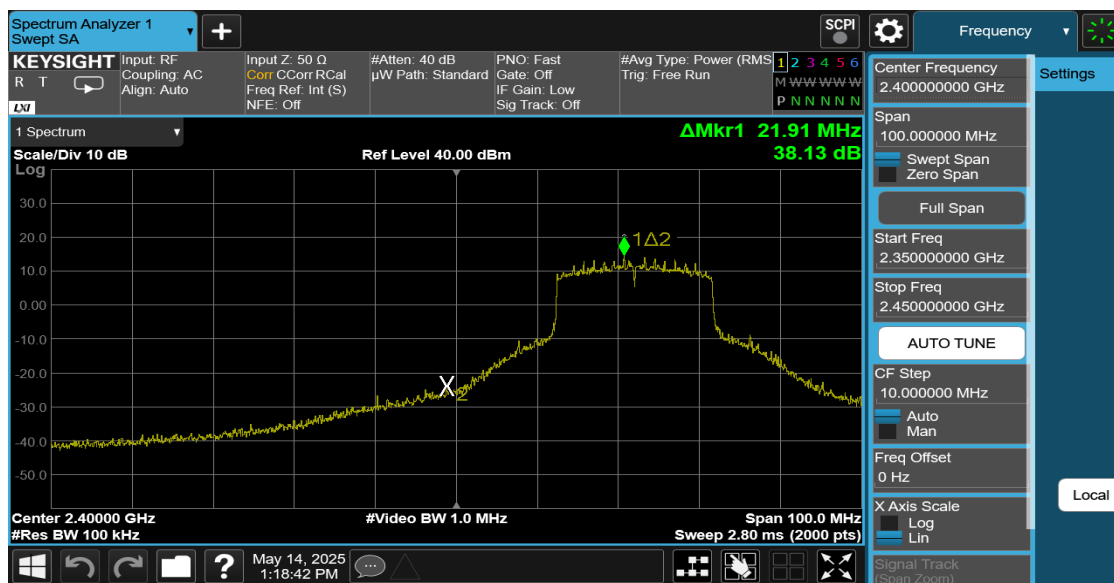


Plot 7-82. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 1)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 101 of 246

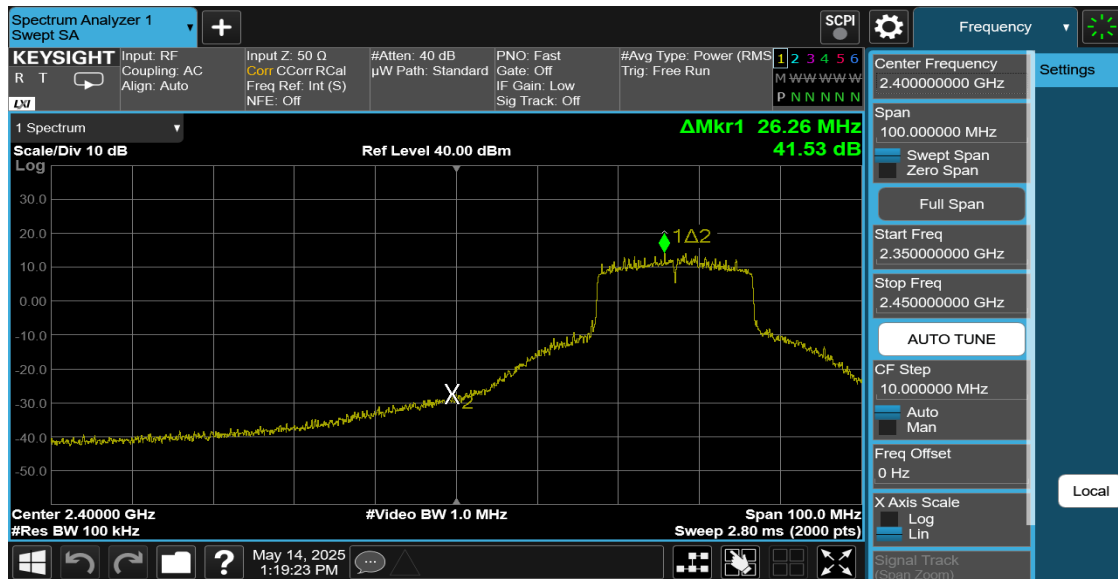


Plot 7-83. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 2)

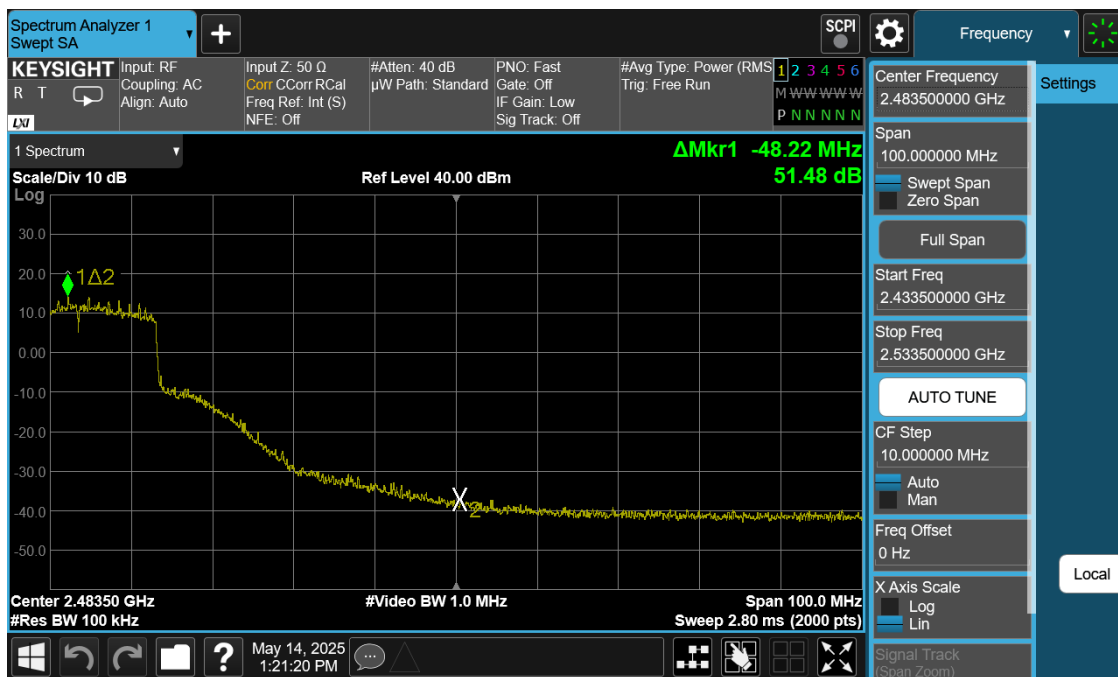


Plot 7-84. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 3)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 102 of 246

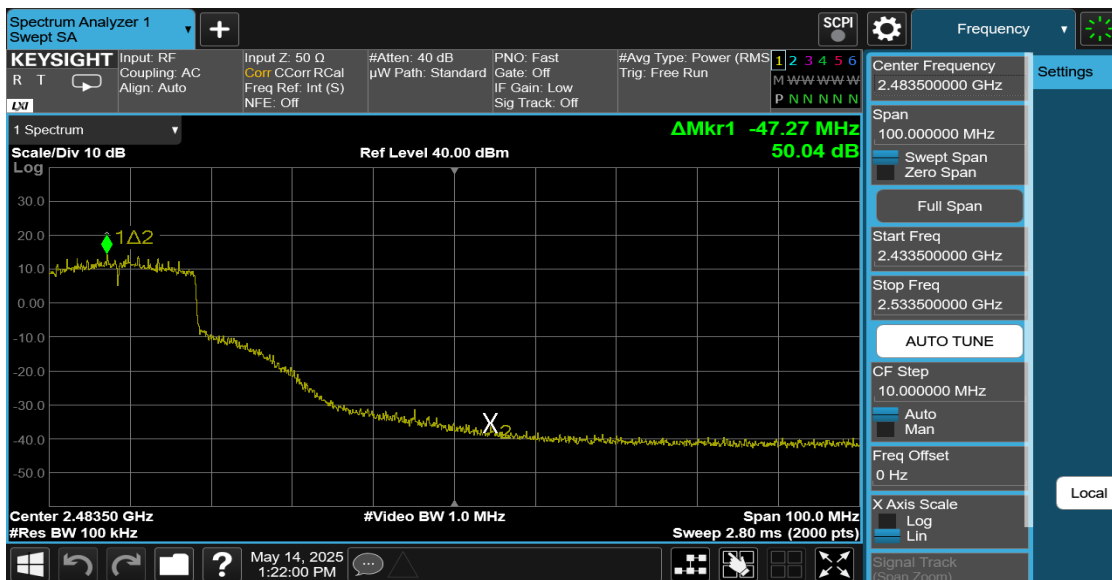


Plot 7-85. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 4)

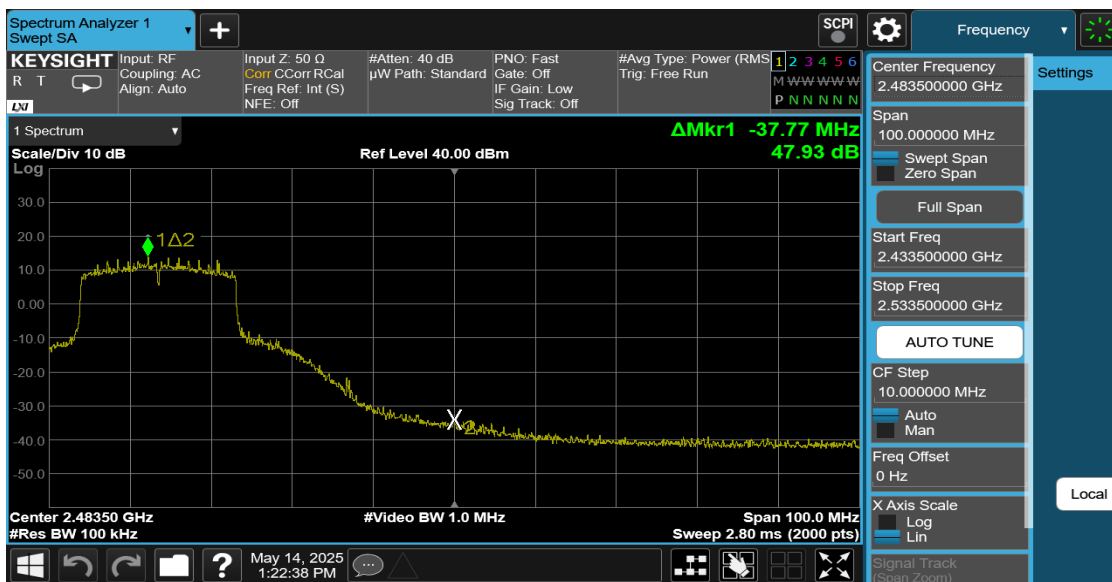


Plot 7-86. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 6)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 103 of 246

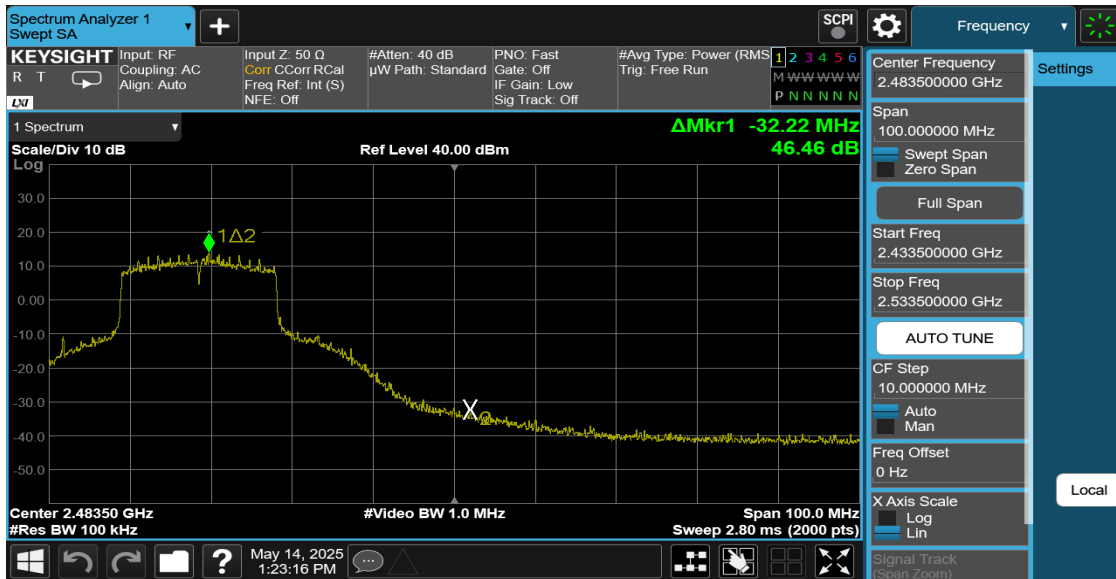


Plot 7-87. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 7)

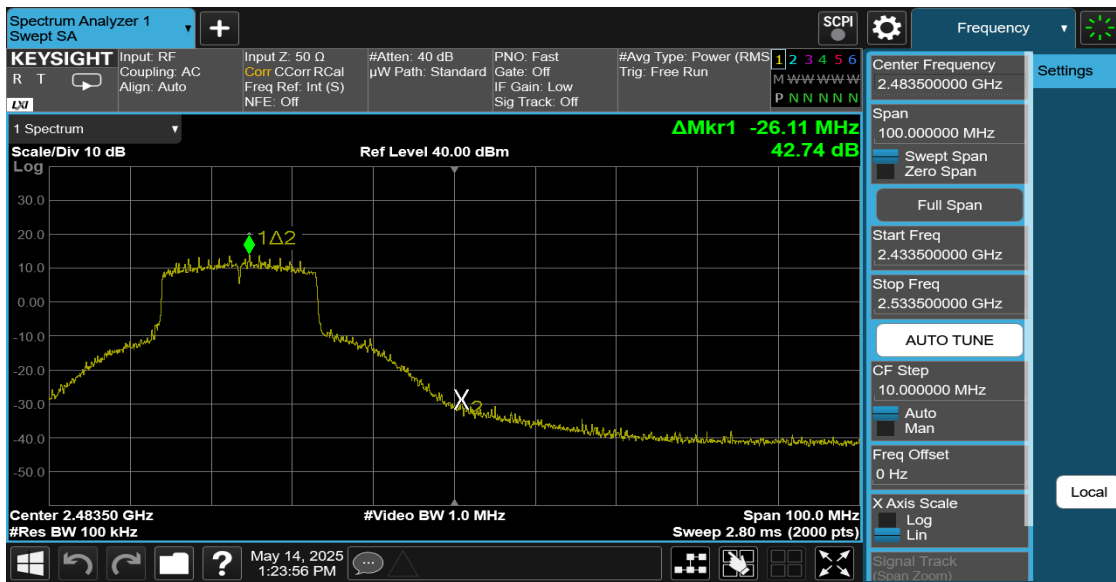


Plot 7-88. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 8)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 104 of 246	

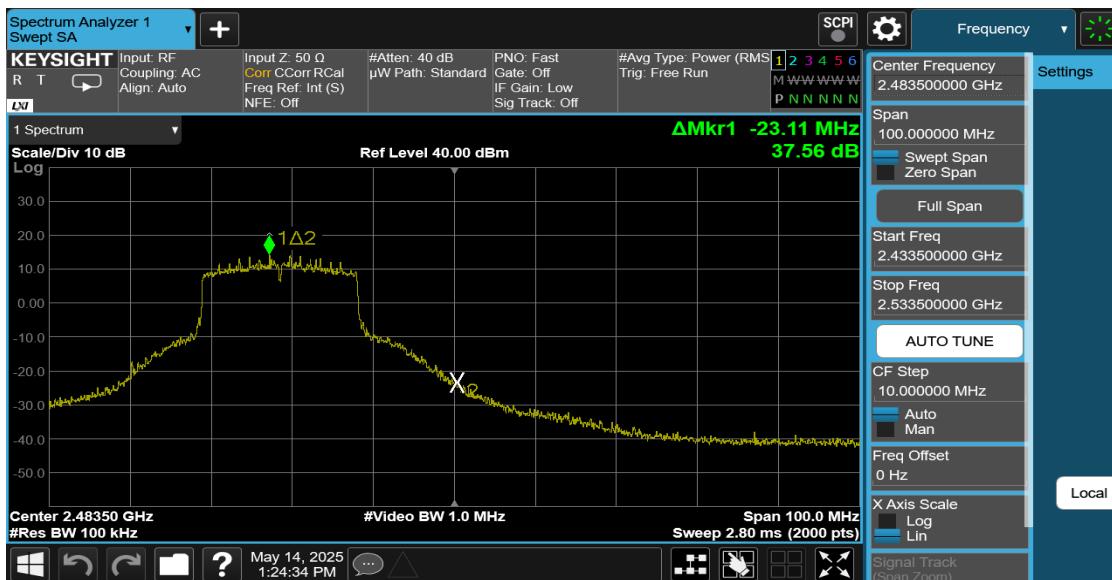


Plot 7-89. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 9)

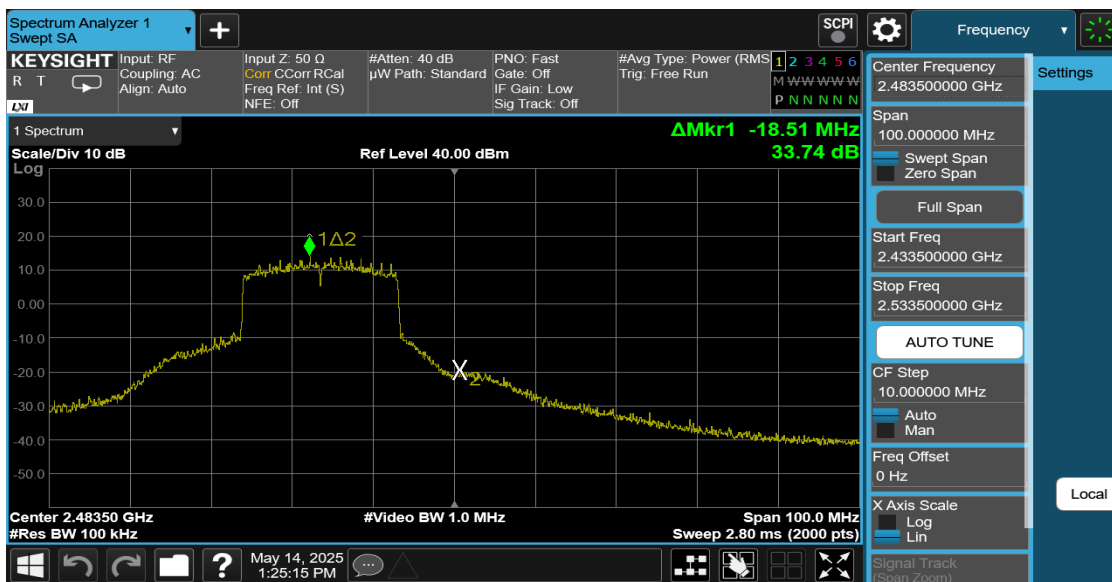


Plot 7-90. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 10)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 105 of 246



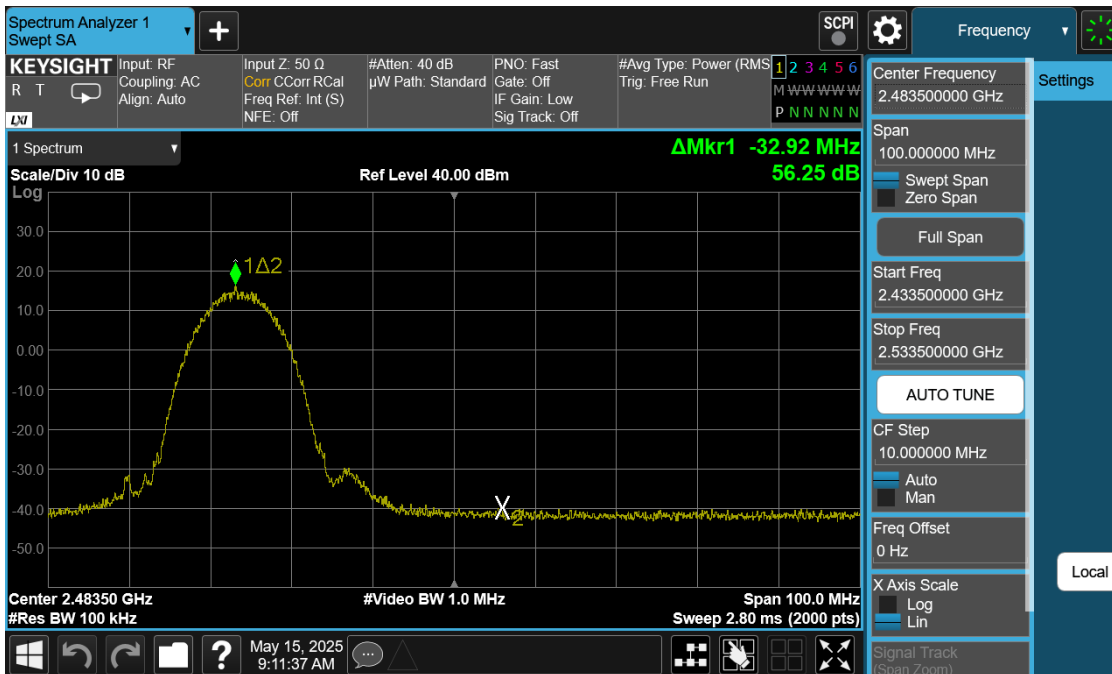
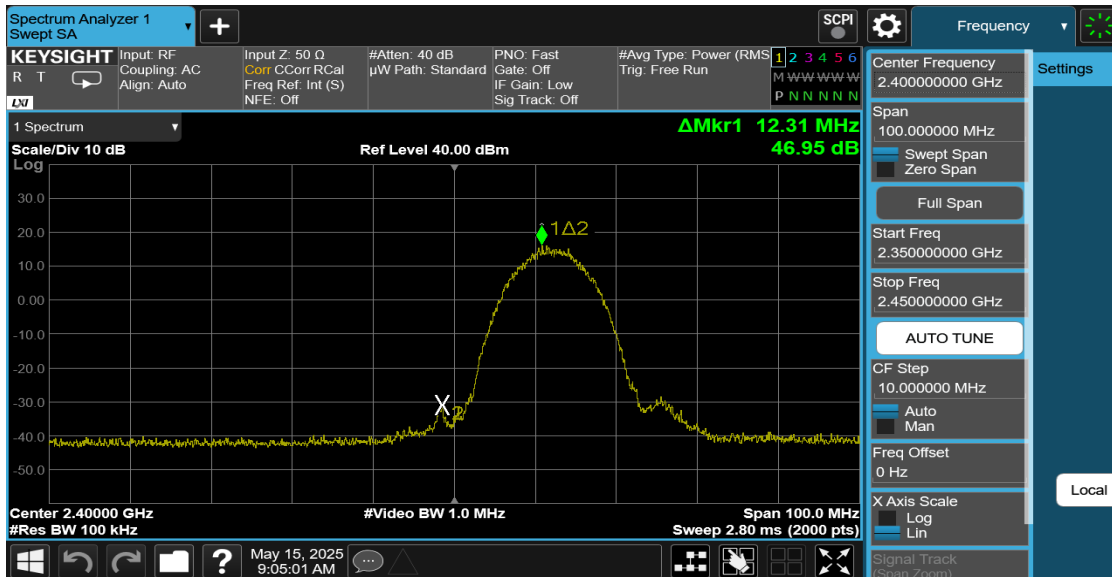
Plot 7-91. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 11)



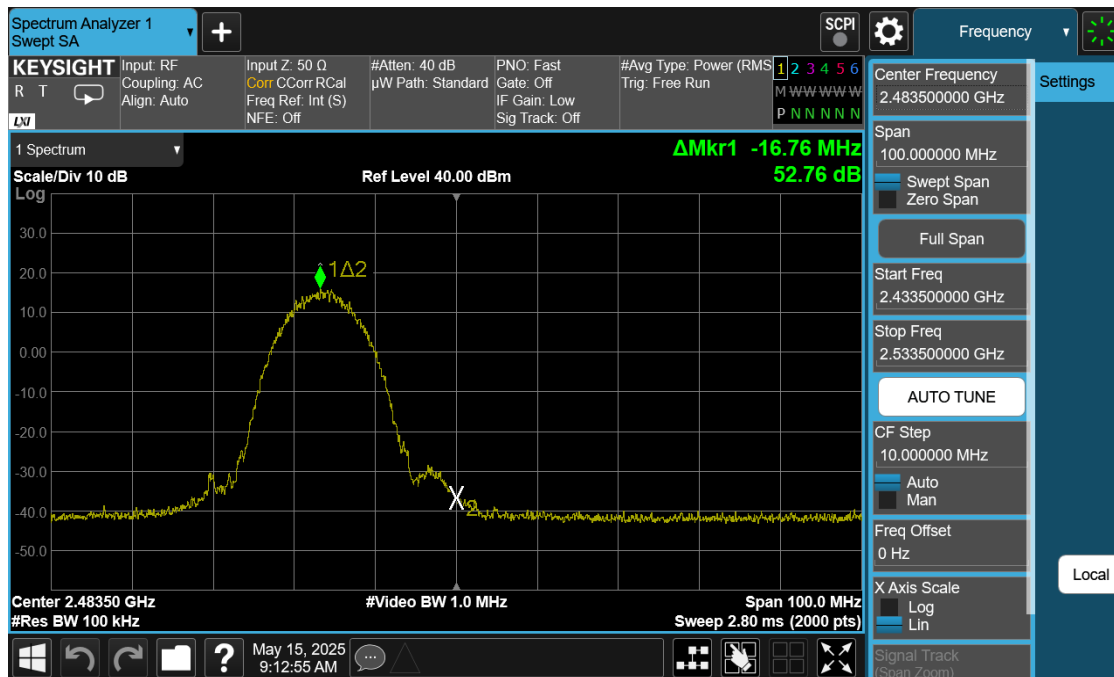
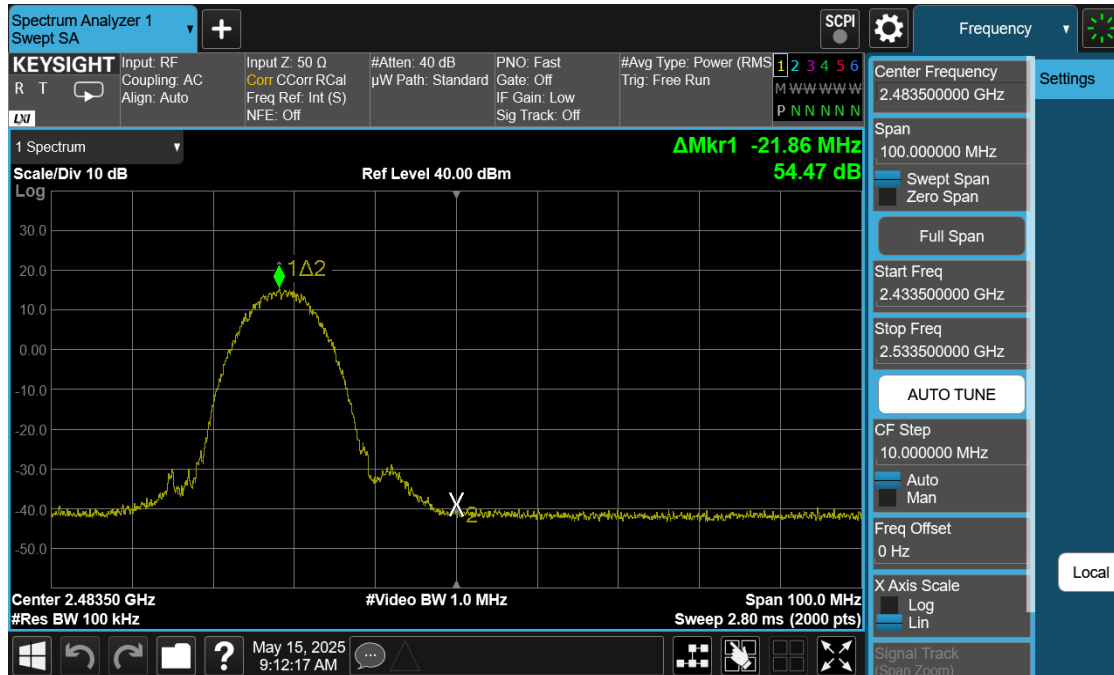
Plot 7-92. Band Edge Plot Antenna 0 Dedicated (802.11ax (SU - 2.4GHz) – Ch. 12)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 106 of 246

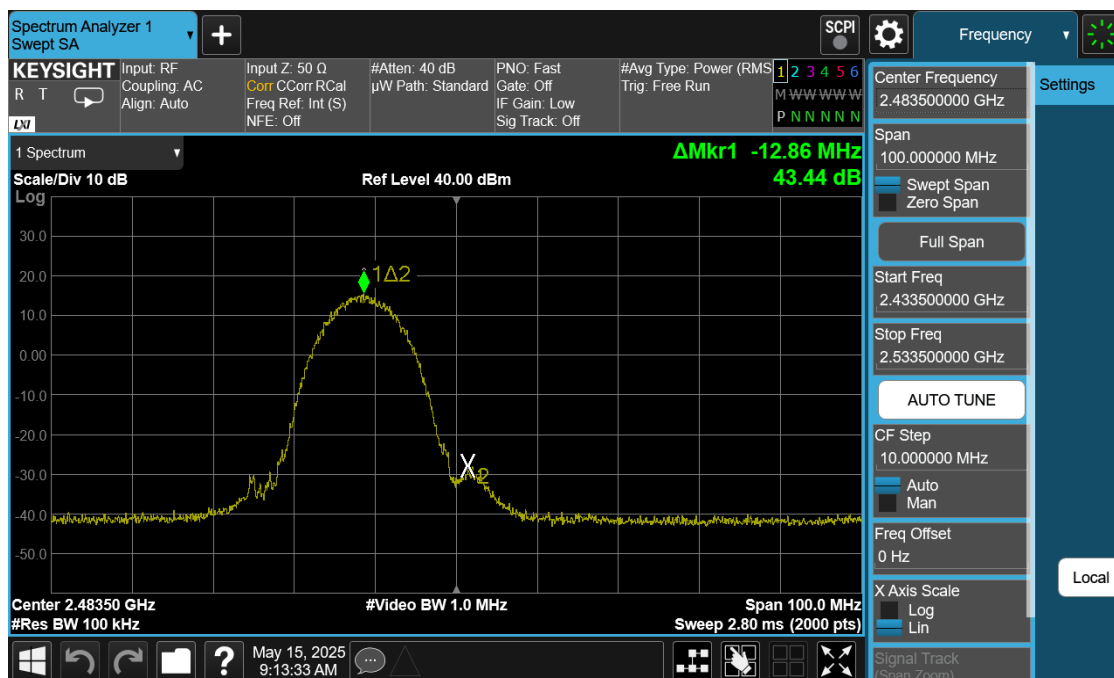
7.6.2 Antenna 1 Dedicated Conducted Emissions at the Band Edge



FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 107 of 246	

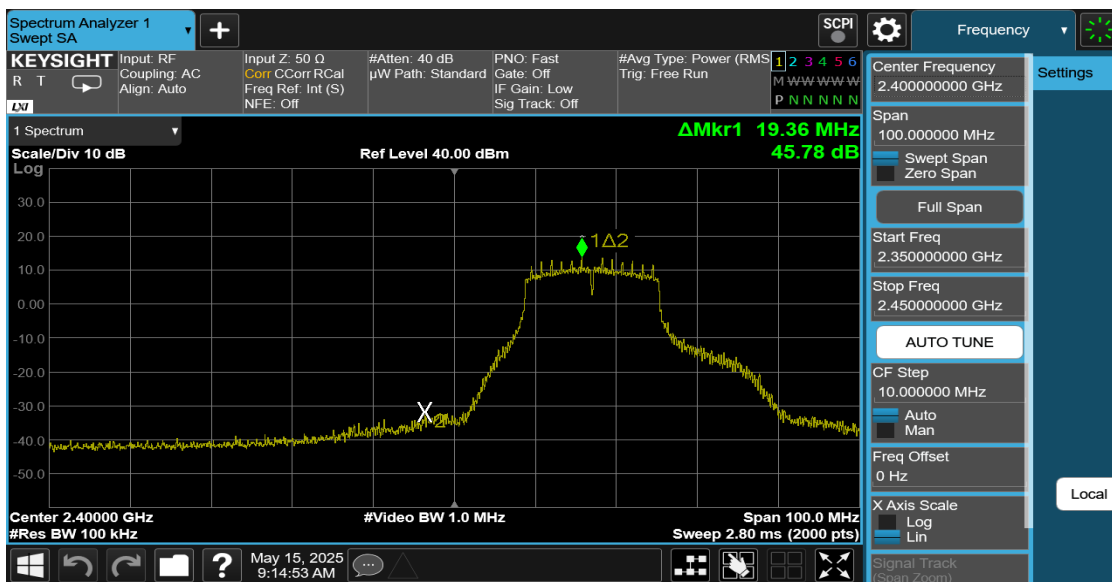
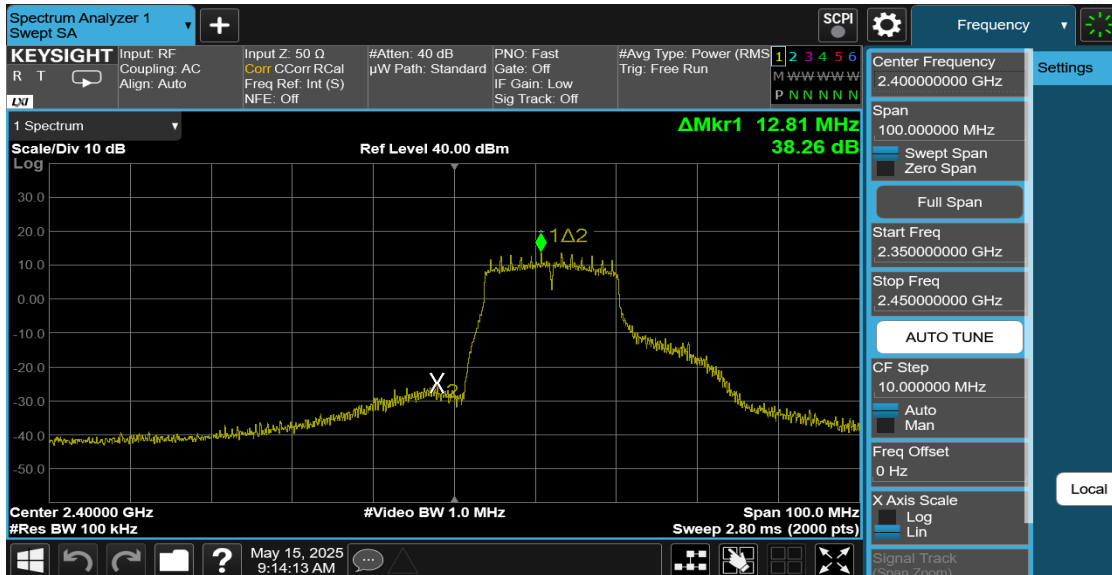


FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 108 of 246

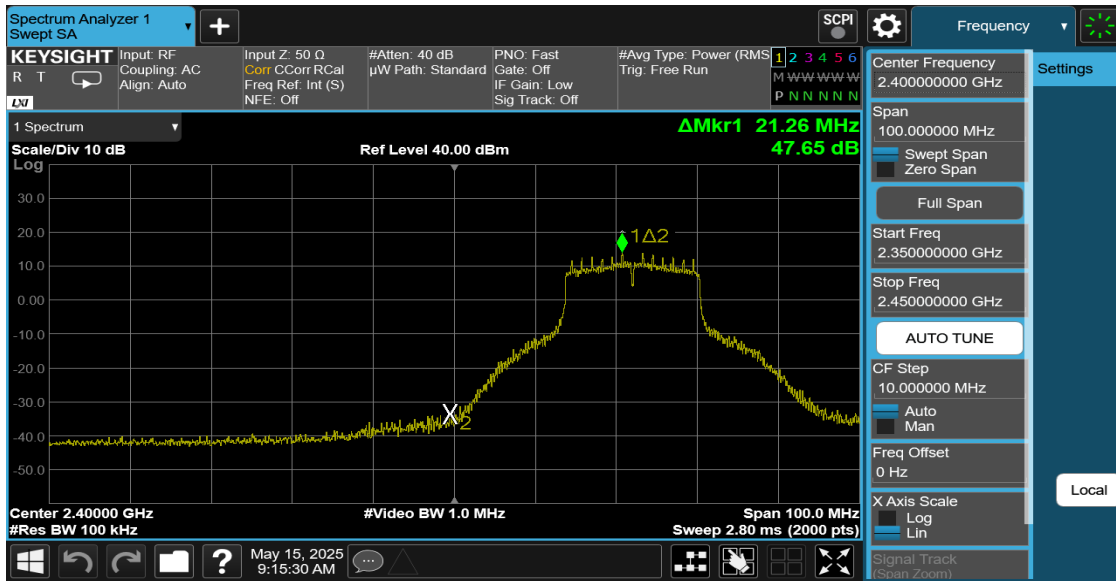


Plot 7-97. Band Edge Plot Antenna 1 Dedicated (802.11b – Ch. 13)

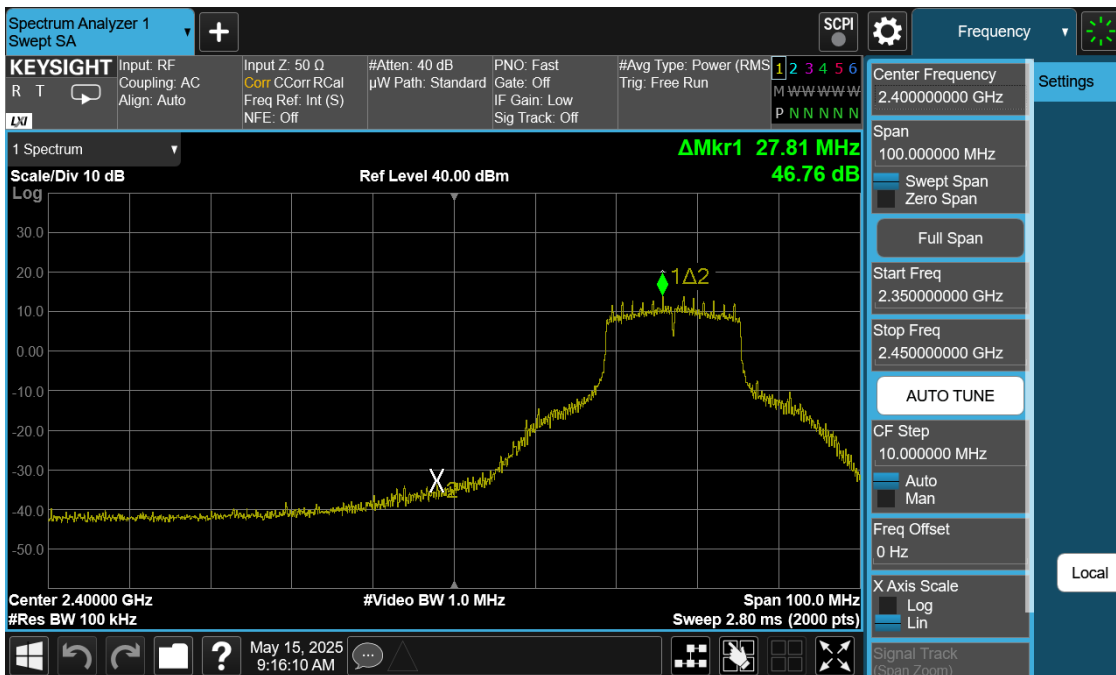
FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.BCG		This report is Blockchain Verified. To verify the report authenticity, please visit https://www.blockchain-verified.com or by clicking on the Blockchain logo.		Page 109 of 246



FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 110 of 246

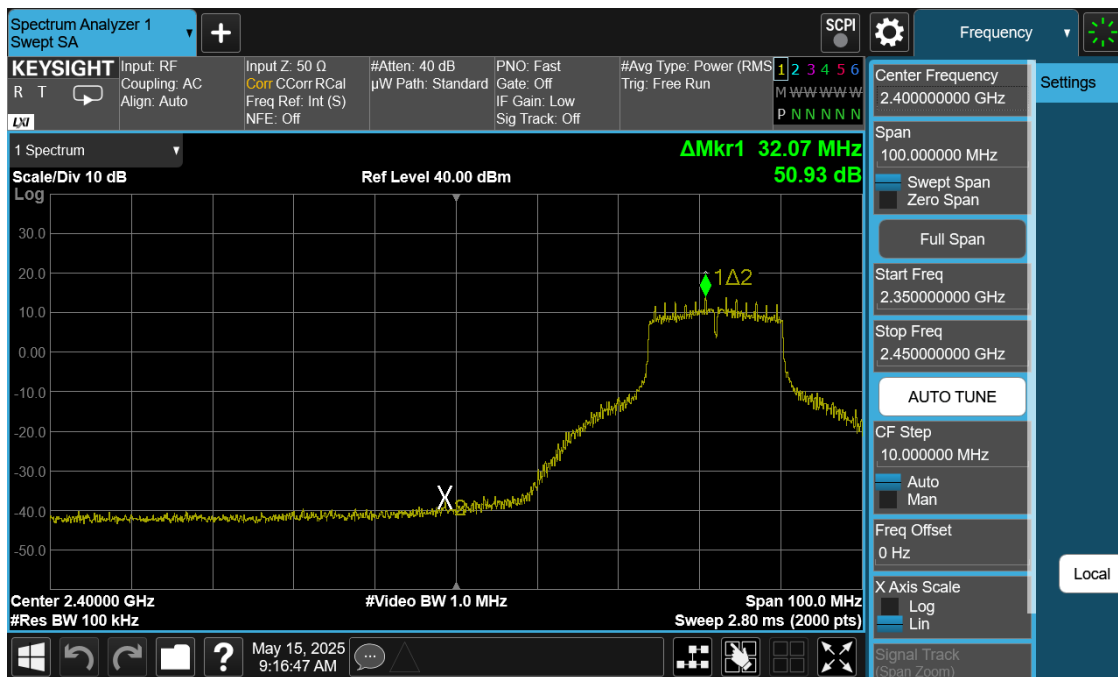


Plot 7-100. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 3)

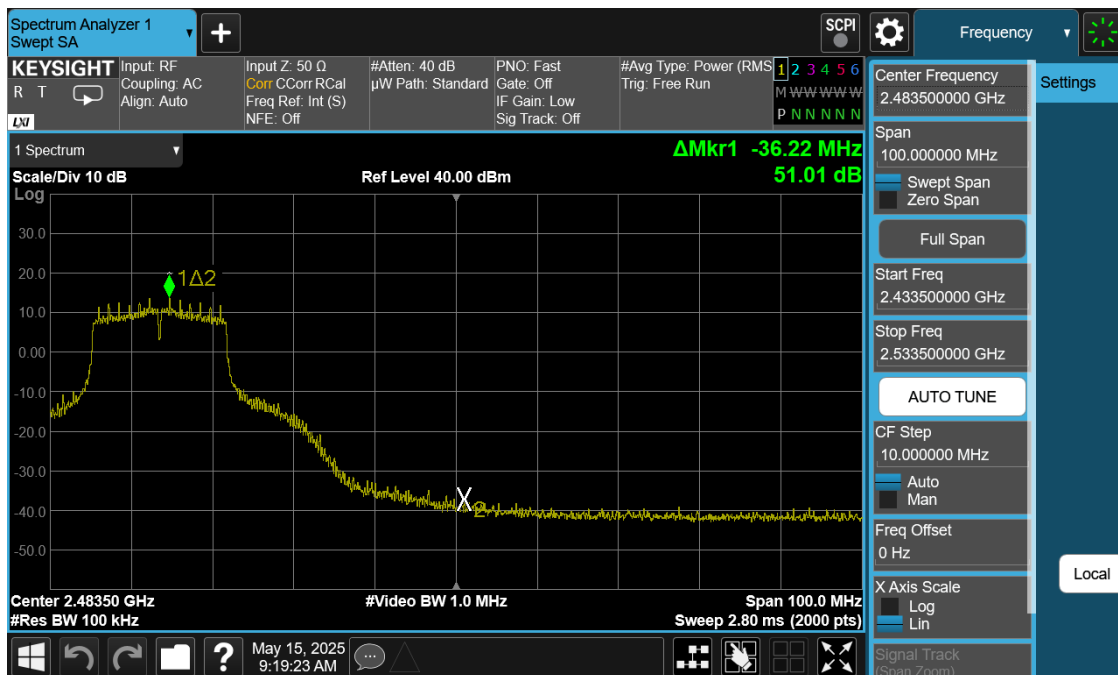


Plot 7-101. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 4)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 111 of 246

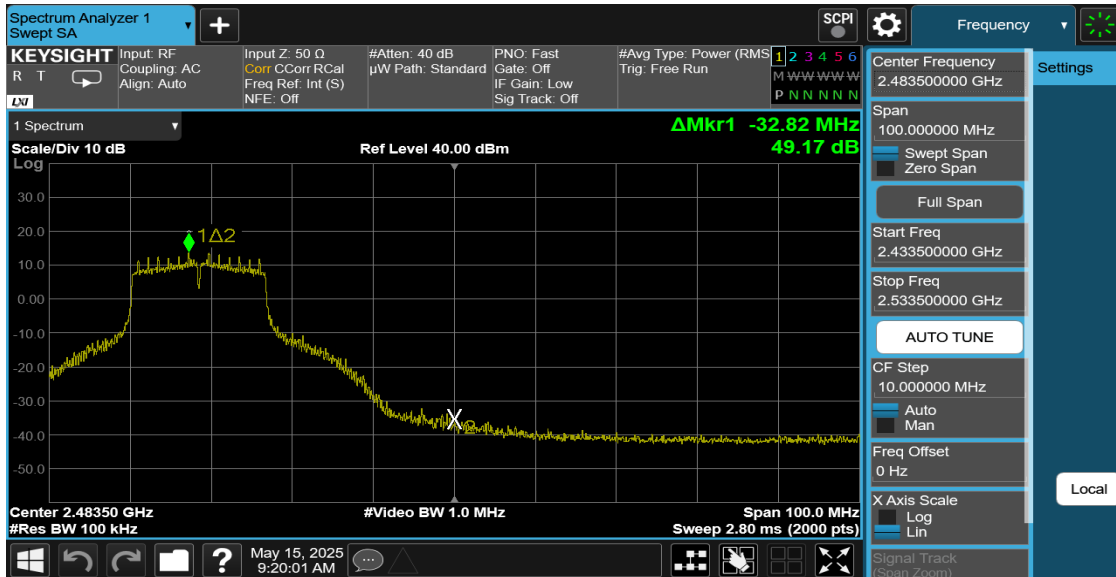


Plot 7-102. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 5)

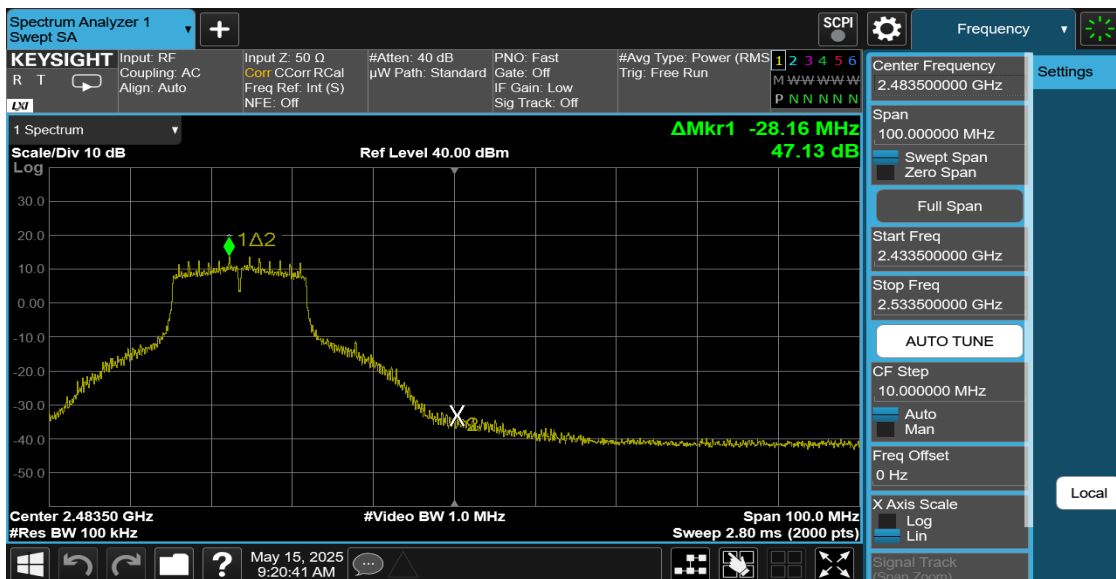


Plot 7-103. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 8)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 112 of 246

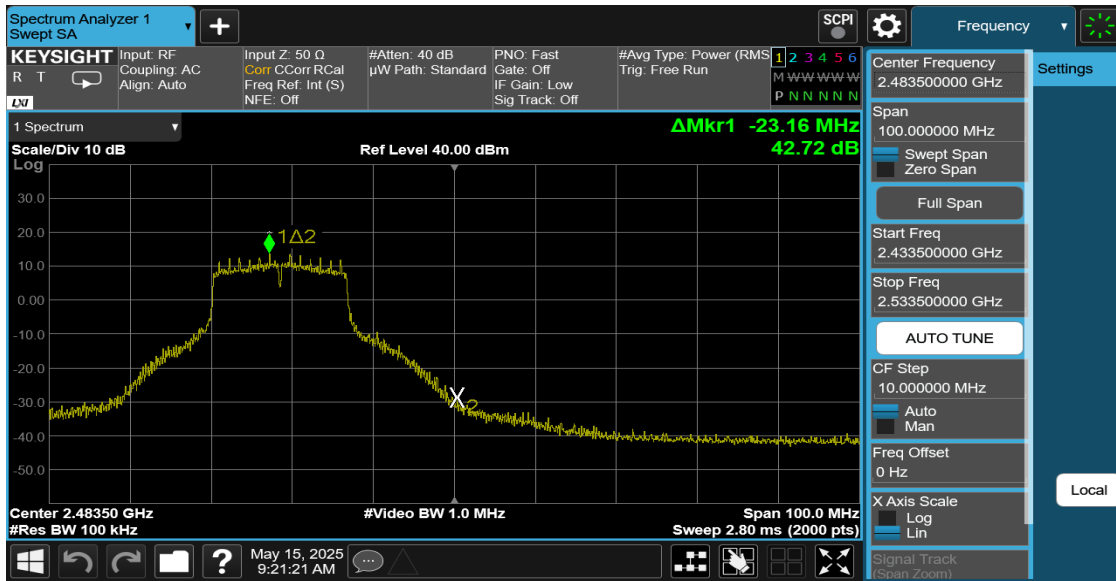


Plot 7-104. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 9)

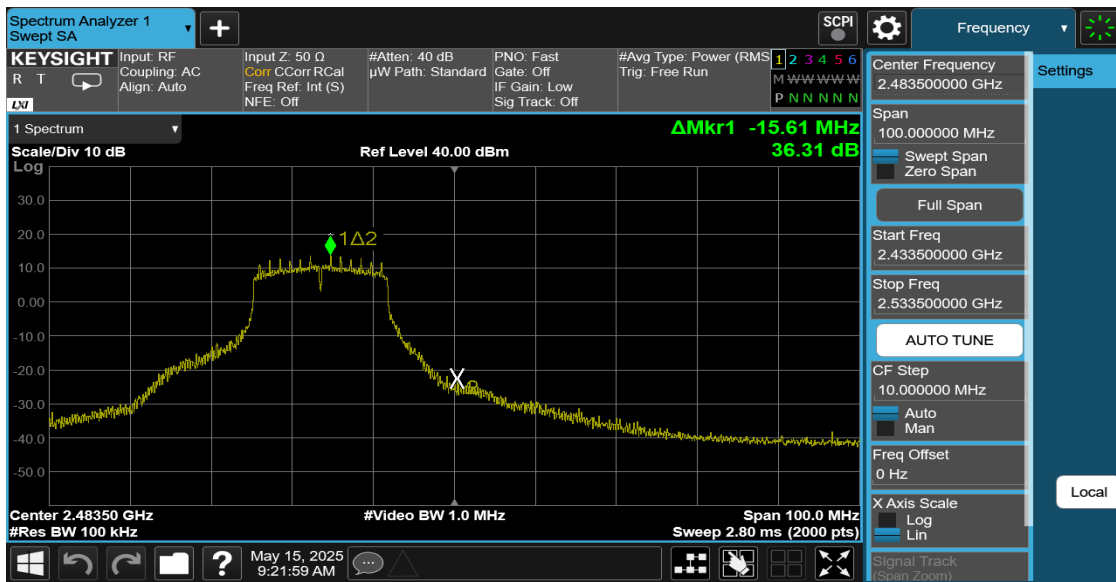


Plot 7-105. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 10)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 113 of 246



Plot 7-106. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 11)



Plot 7-107. Band Edge Plot Antenna 1 Dedicated (802.11g – Ch. 12)

FCC ID: BCGA3300 IC: 579C-A3300		Test Dates: 3/24/2025 - 11/26/2025	EUT Type: Smart Speaker with Display	Approved by: Technical Manager
Test Report S/N: 1C2503170028-04-R4.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 114 of 246