TEST REPORT

Report Number: R15799203-E1

Applicant	:	Resideo 2 Corporate Center Drive Melville, NY, 11747
Model	:	THX1200W5
FCC ID	:	HS9-THX1200WF01
IC	:	573R-THX1200WF01
EUT Description	:	Wireless Thermostat
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E ISED RSS-247 ISSUE 3 ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2025-06-30

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 U.S.A.
TEL: (919) 549-1400

CERT #0751.06

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
1	2025-06-13	Initial Issue	B. Kiewra
2	2025-06-18	Revised antenna gain in Section 6.3 Corrected some OBW plots in sections 9.2 and 9.3 Revised duty cycle corrections throughout section 10. Added note re: BLE duty cycle to section 11.	B. Kiewra
3	2025-06-25	Misc. editorial update	M. Antola
4	2025-06-30	Misc. editorial update	M. Antola

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Resideo
2 Corporate Center Drive
Melville, NY, 11747

EUT DESCRIPTION: Wireless Thermostat

MODEL: THX1200W5

SERIAL NUMBER: 52591160000146, 52591080000119

SAMPLE RECEIPT DATE: 2025-04-28

DATE TESTED: 2025-05-14 to 2025-06-18

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E ISED RSS-247 Issue 3 ISED RSS-GEN Issue 5 + A1 + A2	Refer to Section 2

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the sample tested, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released
For UL LLC By:

Michael Antola
Senior Staff Engineer
Consumer, Medical and IT Segment
UL LLC

Prepared By:

Brian Kiewra
Project Engineer
Consumer, Medical and IT Segment
UL LLC

2. TEST RESULT SUMMARY

This report contains info provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer. Below is a list of the data/info provided by the customer:

1. Antenna Gain and Type (section 6.3)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	RSS-GEN 6.7	26dB BW/99% OBW	Compliant	None.
15.407 (e)	RSS-247 6.2.4.1	6 dB BW		
15.407 (a) (1-4), (h) (1)	RSS-247 6.2	Output Power		
15.407 (a) (1-3, 5)	RSS-247 6.2	PSD		
15.209, 15.205, 15.407 (b)	RSS-GEN 8.9, 8.10, RSS-247 6.2	Radiated Emissions		
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions		

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with;

- FCC CFR 47 Part 2
- FCC CFR 47 Part 15E
- FCC KDB 789033 D02 v02r01,
- KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024
- RSS-GEN Issue 5 + A1 + A2
- RSS-247 Issue 3
- FCC KDB 291074 D02 v01

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	ULab
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Power Spectral Density	2.47 dB
RF Power Measurement Direct Method Using Power Meter	1.3 dB (PK) / 0.45 dB (AV)
Unwanted Emissions, Conducted	1.94 dB
Worst Case Radiated Disturbance, 9kHz to 40 GHz	6.01 dB
Time Domain Measurements	3.39%
Temperature	0.57˚C
Humidity	3.39%
DC Supply Voltages	0.57%

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a Wireless Thermostat. This report covers the full testing of the 5GHz.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Antenna 1:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2GHz Band			
5180-5240	802.11a	17.22	52.72
5180-5240	802.11n HT20	16.32	42.85
5190-5230	802.11n HT40	18.72	74.47
5210	802.11ac VHT80	14.20	26.30
5180-5240	802.11ax HE20	15.35	34.28
5190-5230	802.11ax HE40	15.43	34.91
5210	802.11ax HE80	12.22	16.67
5.3GHz Band			
5260-5320	802.11a	17.28	53.46
5260-5320	802.11n HT20	16.33	42.95
5270-5310	802.11n HT40	18.19	65.92
5290	802.11ac VHT80	12.50	17.78
5260-5320	802.11ax HE20	14.58	28.71
5270-5310	802.11ax HE40	14.30	26.92
5290	802.11ax HE80	12.32	17.06
5.6GHz Band			
5500-5720	802.11a	16.17	41.40
5500-5720	802.11ac VHT20	15.62	36.48
5510-5710	802.11n HT40	17.81	60.39
5530-5690	802.11ac VHT80	14.47	27.99
5500-5720	802.11ax HE20	15.42	34.83
5510-5710	802.11ax HE40	15.56	35.97
5530-5690	802.11ax HE80	14.24	26.55

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8GHz Band			
5745-5825	802.11a	13.81	24.04
5745-5825	802.11ac VHT20	14.60	28.84
5755-5795	802.11n HT40	15.13	32.58
5775	802.11ac VHT80	14.43	27.73
5745-5825	802.11ax HE20	15.42	34.83
5755-5795	802.11ax HE40	14.85	30.55
5775	802.11ax HE80	11.98	15.78
5.9GHz Band			
5845-5885	802.11a	13.03	20.09
5845-5885	802.11ac VHT20	14.08	25.59
5835-5875	802.11n HT40	14.95	31.26
5855	802.11ac VHT80	14.74	29.79
5845-5885	802.11ax HE20	11.96	15.70
5835-5875	802.11ax HE40	12.08	16.14
5855	802.11ax HE80	9.53	8.97

Antenna 2:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2GHz Band			
5180-5240	802.11a	16.17	41.40
5180-5240	802.11n HT20	15.21	33.19
5190-5230	802.11n HT40	17.72	59.16
5210	802.11ac VHT80	13.44	22.08
5180-5240	802.11ax HE20	14.85	30.55
5190-5230	802.11ax HE40	14.61	28.91
5210	802.11ax HE80	11.30	13.49
5.3GHz Band			
5260-5320	802.11a	16.58	45.50
5260-5320	802.11n HT20	15.71	37.24
5270-5310	802.11n HT40	16.80	47.86
5290	802.11ac VHT80	11.41	13.84
5260-5320	802.11ax HE20	13.41	21.93
5270-5310	802.11ax HE40	13.63	23.07
5290	802.11ax HE80	11.39	13.77

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6GHz Band			
5500-5720	802.11a	15.21	33.19
5500-5720	802.11ac VHT20	14.35	27.23
5510-5710	802.11n HT40	16.92	49.20
5530-5690	802.11ac VHT80	13.58	22.80
5500-5720	802.11ax HE20	14.73	29.72
5510-5710	802.11ax HE40	15.16	32.81
5530-5690	802.11ax HE80	13.59	22.86
5.8GHz Band			
5745-5825	802.11a	13.35	21.63
5745-5825	802.11ac VHT20	13.96	24.89
5755-5795	802.11n HT40	14.93	31.12
5775	802.11ac VHT80	14.35	27.23
5745-5825	802.11ax HE20	14.73	29.72
5755-5795	802.11ax HE40	14.09	25.64
5775	802.11ax HE80	11.28	13.43
5.9GHz Band			
5845-5885	802.11a	11.56	14.32
5845-5885	802.11ac VHT20	13.31	21.43
5835-5875	802.11n HT40	14.02	25.23
5855	802.11ac VHT80	13.78	23.88
5845-5885	802.11ax HE20	11.10	12.88
5835-5875	802.11ax HE40	11.40	13.80
5855	802.11ax HE80	8.42	6.95

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6.3. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency Range (MHz)	Maximum 3D Gain (dBi)
1	5180-5240 MHz	3.8
	5260-5320 MHz	3.2
	5500-5720 MHz	4.1
	5745-5825 MHz	2.5
	5845-5885 MHz	2.5
2	5180-5240 MHz	2.4
	5260-5320 MHz	1.7
	5500-5720 MHz	3.2
	5745-5825 MHz	1.3
	5845-5885 MHz	0.7

6.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 01.3024.0.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emissions were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. All antennas were tested, with the worst-case scenario per mode being reported.

Band edge and radiated spurious emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle(spurious only) and high channels.

The EUT is intended to operate in only one orientation. Therefore, all radiated testing was performed with the EUT in its intended orientation of operation.

For all bands 802.11n modes are covering ac modes. With the exception of UNII bands 5.6, 5.8, and 5.9. These bands 802.11ac VHT20 covers 802.11n HT20 as power is higher.

The worst-case data-rates are as follows:
802.11a mode: 6 Mbps
802.11n HT20/802.11ac VHT20 mode: MCS0
802.11n HT40 mode: MCS0
802.11ac VHT80 mode: MCS0
802.11ax HE20 (26T-242T) mode: MCS0
802.11ax HE20 (SU) mode: MCS8
802.11ax HE40 (484T) mode: MCS0
802.11ax HE40 (SU) mode: MCS8
802.11ax HE80 (996T) mode: MCS0

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802.11ax HE80 (SU) mode: MCS8

PSD performed on the modes with the highest power and narrowest bandwidth only to cover all other modes. PSD performed at highest power setting of all channels.

The worst-case potential of simultaneous transmissions were additional investigated and were found to not add any additional emissions. Data is included within this test report.

Operation in the 5850-5925MHz range is not permitted in Canada. As such, channels 102, 124, and 128 are disabled by firmware when the EUT is used in this region per the manufacturer.

To reduce the size of the report only the worst-case plots are included to represent all plots for each test.

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6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adaptor	Triad	WAU24-1000	N/A	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	4 Pin PWR	1	DC In	Unshielded	<3m	Connects EUT to AC Adaptor

TEST SETUP

The EUT was set to transmit continuously throughout the test.

SETUP DIAGRAM

Please refer to R15799203-EP1 for setup diagrams

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
90416	Spectrum Analyzer	Keysight Technologies	N9030A	2024-09-23	2025-09-23
226561	SMA Coaxial 10dB Attenuator	CentricRF	C18S2-10	2025-04-01	2026-04-01
CBL091	Micro-Coax UTiFLEX Cable Assembly, Low Loss,40Ghz	Carlisle Interconnect Technologies	UFA147A-2-0360-200200	2025-03-07	2026-03-07
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
ETSI Power Software	EMPower ETSI Burst Measurement System	ETS-Lindgren	Version 1.0.3.18	NA	NA
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
70374	EMI Test Receiver	ROHDE & SCHWARZ	ESCI7	2024-07-30	2025-07-30
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2025-04-17	2026-04-17
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
80391	LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50/250-25-2-01	2024-08-01	2025-08-01
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2025-04-17	2026-04-17
236852	CW-AC Power Source	Ametek	CW2501	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)

Equipment ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-02
30-1000 MHz					
90628	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-02	2026-01-02
1-18 GHz					
89509	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-05-23	2025-05-23
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-04-09	2026-04-09
18-40 GHz					
91186	Horn Antenna, 18-26.5GHz	Antenna Research Associates	MWH-1826/B	2024-05-16	2025-05-16
204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2023-07-20	2025-07-20
Gain-Loss Chains					
207638	Gain-loss string: 0.009-30MHz	Various	Various	2024-05-22	2025-06-06
207639	Gain-loss string: 25-1000MHz	Various	Various	2024-05-22	2025-06-06
207640	Gain-loss string: 1-18GHz	Various	Various	2024-05-22	2025-06-06
225795	Gain-loss string: 18-40GHz	Various	Various	2024-05-22	2025-06-06
Receiver & Software					
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-04-21	2026-04-21
81018	Spectrum Analyzer	Agilent	E4446A	2024-07-31	2025-07-31
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241204	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

8. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 789033 D02 v02r01, Section B.

6 dB Emission BW: KDB 789033 D02 v02r01, Section C.2

26 dB Emission BW: KDB 789033 D02 v02r01, Section C.1

99% Occupied BW: KDB 789033 D02 v02r01, Section D.

Conducted Output Power: KDB 789033 D02 v02r01, Section E.3.b (Method PM-G) and KDB 789033 D02 v02r01, Section E.2.b (Method SA-1)

Power Spectral Density: KDB 789033 D02 v02r01, Section F

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, and G.5.

AC Power Line Conducted Emissions: ANSI C63.10-2020, Section 6.2.

Radiated emissions in restricted frequency bands: ANSI C63.10 Subclause -11.12.1, 6.3 thru 6.6

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9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

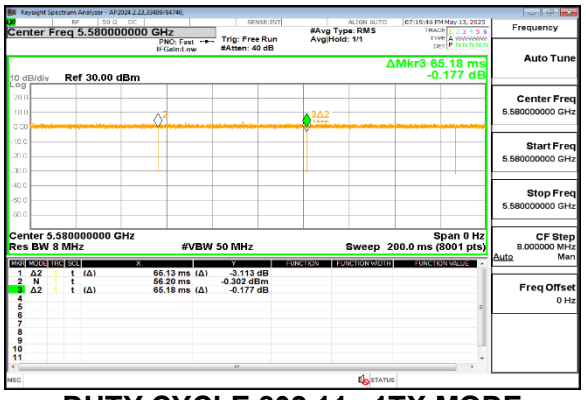
None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Cor Factor (20log) (dB)	Duty Cycle Cor Factor (10log) (dB)	1/B Minimum VBW (kHz)
802.11a	65.130	65.18	0.999	99.92	0.00	0.00	0.010
802.11n HT20	65.050	65.13	0.999	99.88	0.00	0.00	0.010
802.11n HT40	65.880	65.95	0.999	99.89	0.00	0.00	0.010
802.11ac VHT80	65.450	65.53	0.999	99.88	0.00	0.00	0.010
802.11ax HE20 26T	1.346	1.38	0.977	97.68	0.20	0.10	0.743
802.11ax HE20 52T	1.358	1.37	0.988	98.84	0.00	0.00	0.010
802.11ax HE20 106T	1.368	1.37	0.996	99.56	0.00	0.00	0.010
802.11ax HE20 242T	1.359	1.374	0.989	98.91	0.00	0.00	0.010
802.11ax HE20 SU	0.139	0.155	0.897	89.66	0.95	0.47	7.207
802.11ax HE40 484T	1.354	1.397	0.969	96.92	0.27	0.14	0.739
802.11ax HE40 SU	0.551	0.567	0.972	97.18	0.25	0.12	1.817
802.11ax HE80 996T	1.358	1.375	0.988	98.76	0.00	0.00	0.010
802.11ax HE80 SU	0.293	0.309	0.946	94.57	0.49	0.24	3.419



DUTY CYCLE 802.11a 1TX MODE

DUTY CYCLE 802.11nHT20 1TX MODE

DUTY CYCLE 802.11nHT40 1TX MODE

DUTY CYCLE 802.11ac VHT80 1TX MODE

DUTY CYCLE 802.11ax HE20 26T 1TX MODE

DUTY CYCLE 802.11ax HE20 52T 1TX MODE

DUTY CYCLE 802.11ax HE20 106T 1TX MODE

DUTY CYCLE 802.11ax HE20 242T 1TX MODE

DUTY CYCLE 802.11ax HE20 SU 1TX MODE

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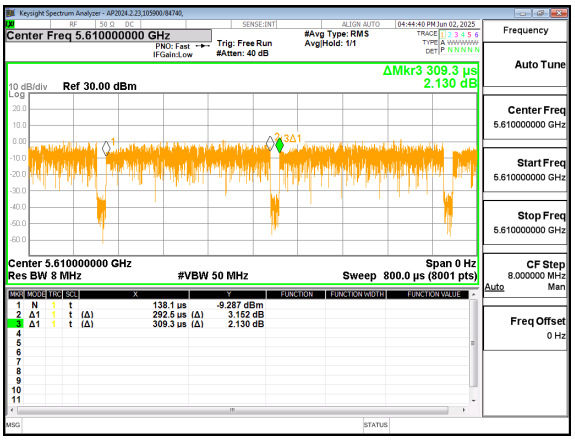
DUTY CYCLE 802.11ax HE40 SU 1TX MODE

DUTY CYCLE 802.11ax HE80 996T 1TX MODE



DUTY CYCLE 802.11ax HE80 SU 1TX MODE

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9.2. 26 dB BANDWIDTH

LIMITS

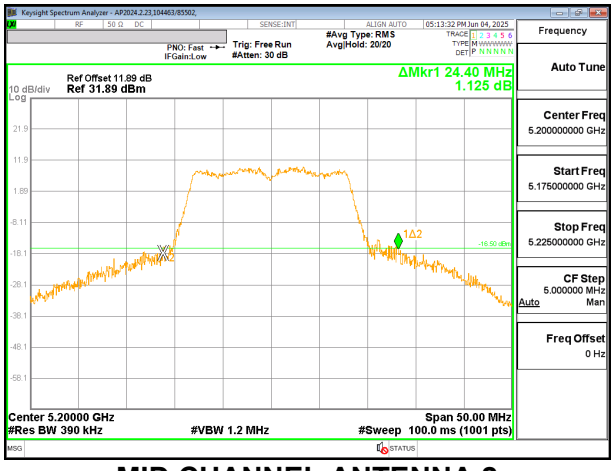
None; for reporting purposes only.

RESULTS

9.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	20.76	23.15
Mid	5200	24.76	24.40
High	5240	20.15	24.21

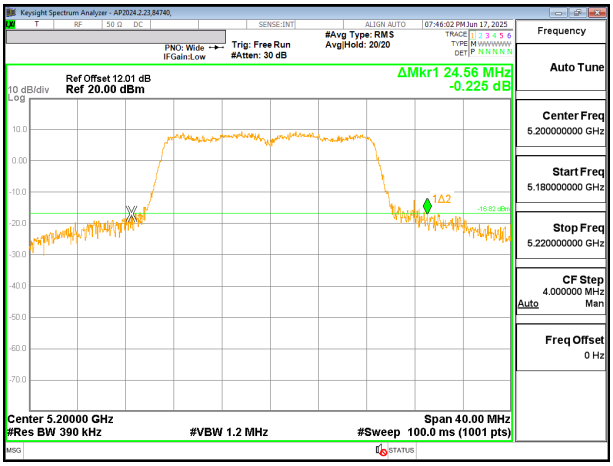
MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

9.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	20.92	21.80
Mid	5200	24.56	23.44
High	5240	20.84	23.52

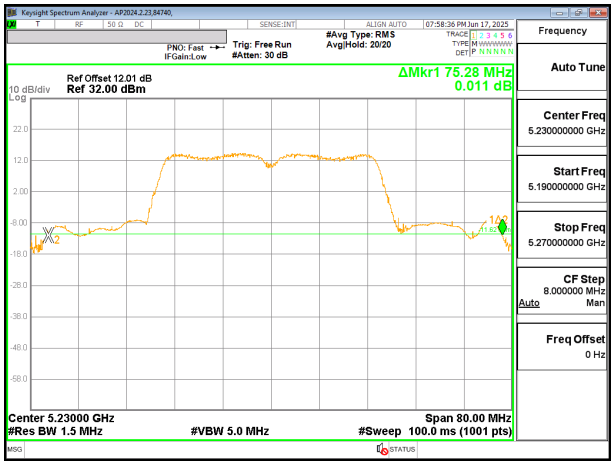


HIGH CHANNEL ANTENNA 1

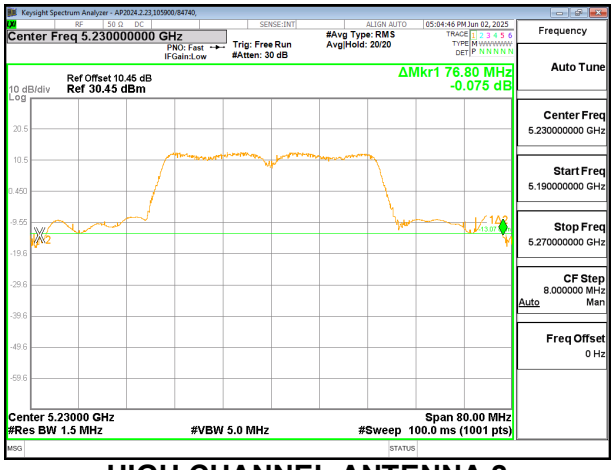
HIGH CHANNEL ANTENNA 2

9.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5190	41.84	41.44
High	5230	75.28	76.80



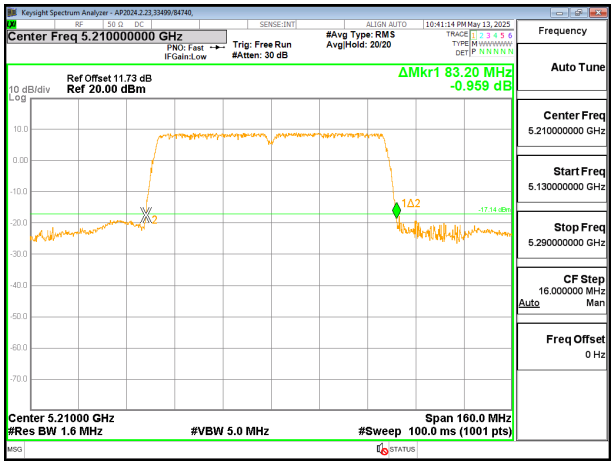
HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

9.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5210	83.20	83.00

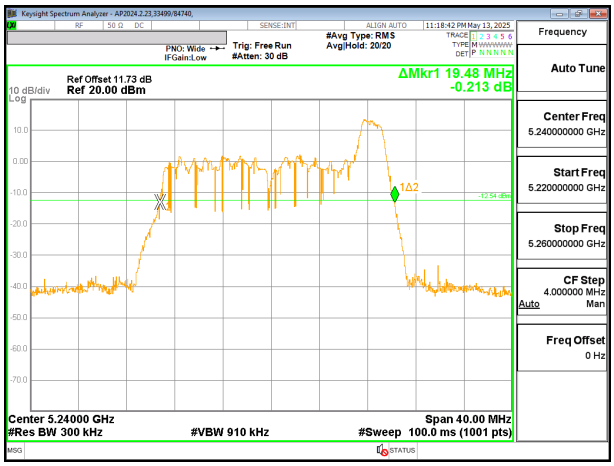


MID CHANNEL ANTENNA 1

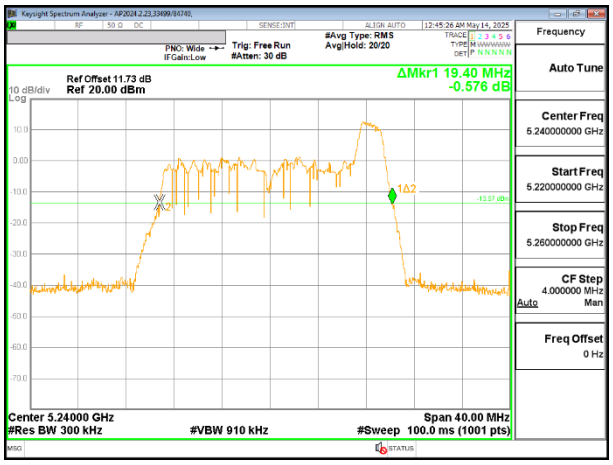
MID CHANNEL ANTENNA 2

9.2.5. 802.11ax HE20 26T MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	19.32	19.24
Mid	5200	18.16	18.20
High	5240	19.48	19.40



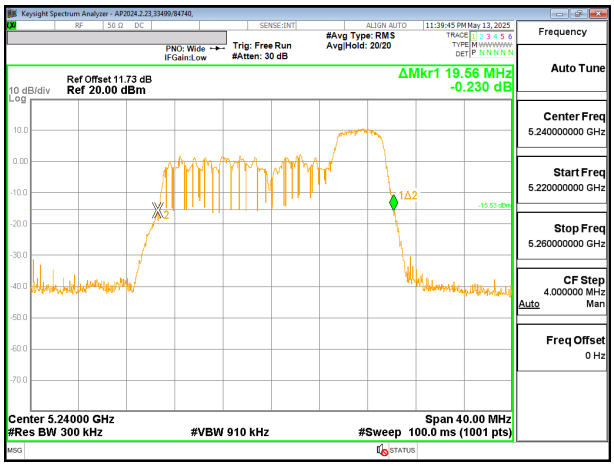
HIGH CHANNEL ANTENNA 1



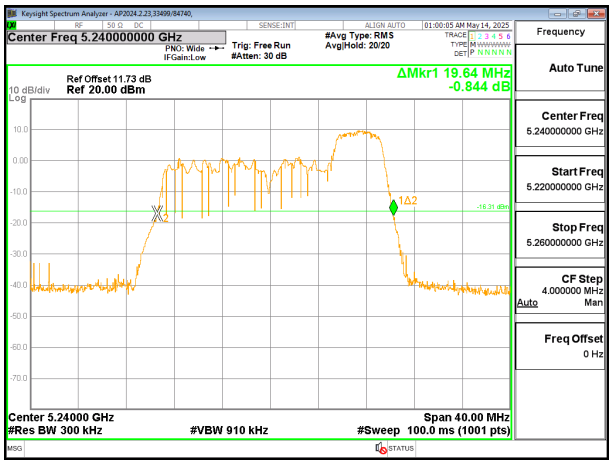
HIGH CHANNEL ANTENNA 2

9.2.6. 802.11ax HE20 52T MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	19.40	19.40
Mid	5200	18.48	18.56
High	5240	19.56	19.64



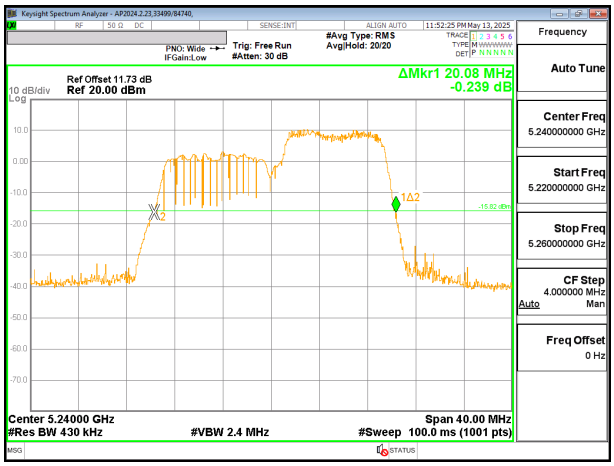
HIGH CHANNEL ANTENNA 1



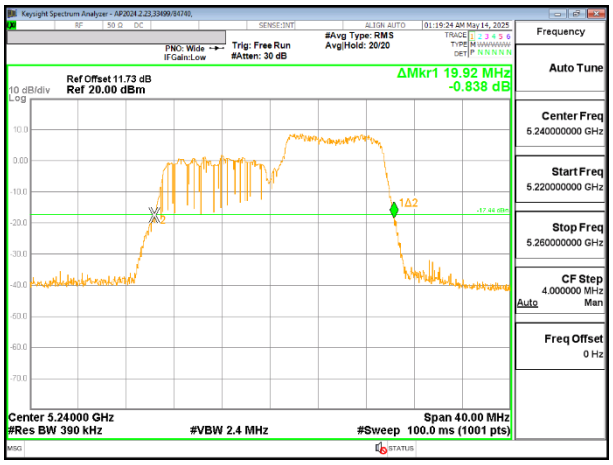
HIGH CHANNEL ANTENNA 2

9.2.7. 802.11ax HE20 106T MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	19.64	19.64
Mid	5200	19.68	19.68
High	5240	20.08	19.92



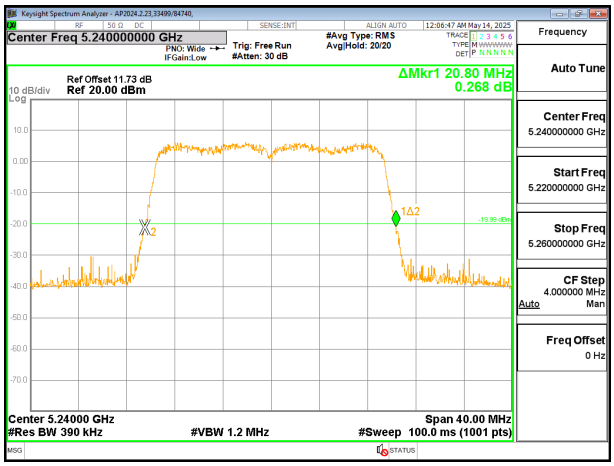
HIGH CHANNEL ANTENNA 1



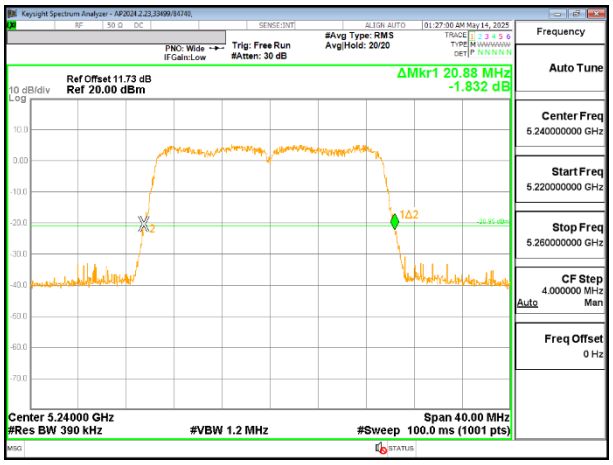
HIGH CHANNEL ANTENNA 2

9.2.8. 802.11ax HE20 242T MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	20.80	20.68
Mid	5200	20.80	20.84
High	5240	20.80	20.88



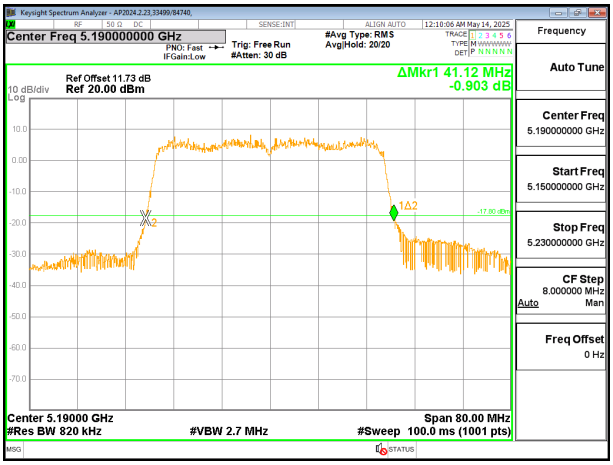
HIGH CHANNEL ANTENNA 1



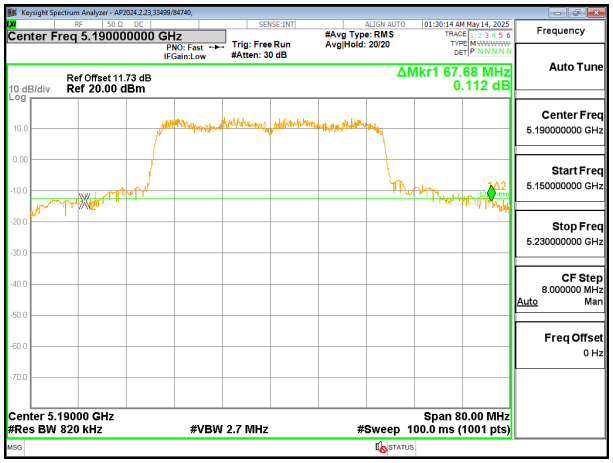
HIGH CHANNEL ANTENNA 2

9.2.9. 802.11ax HE40 484T MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5190	41.12	67.68
High	5230	41.36	41.36



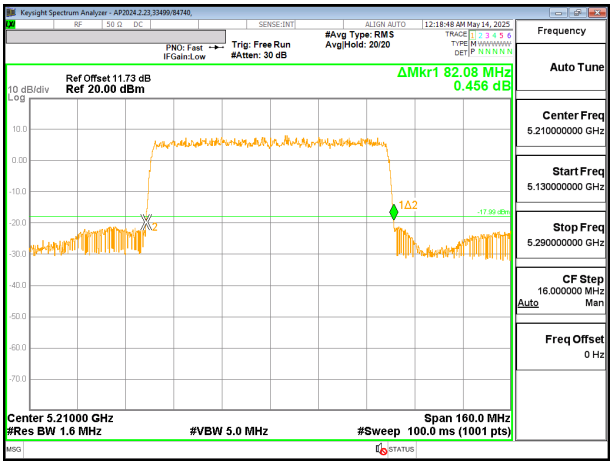
LOW CHANNEL ANTENNA 1



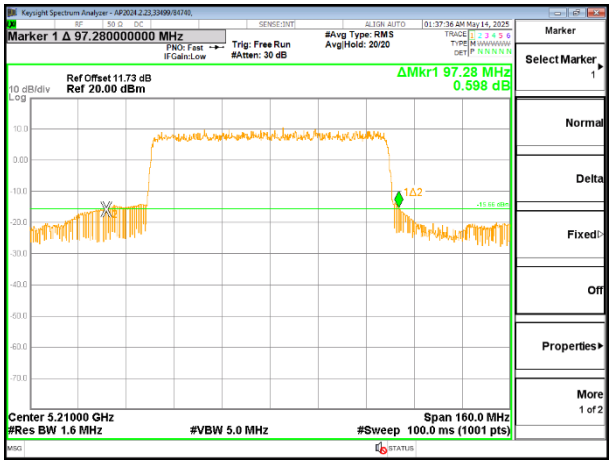
LOW CHANNEL ANTENNA 2

9.2.10. 802.11ax HE80 996T MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5210	82.08	97.28



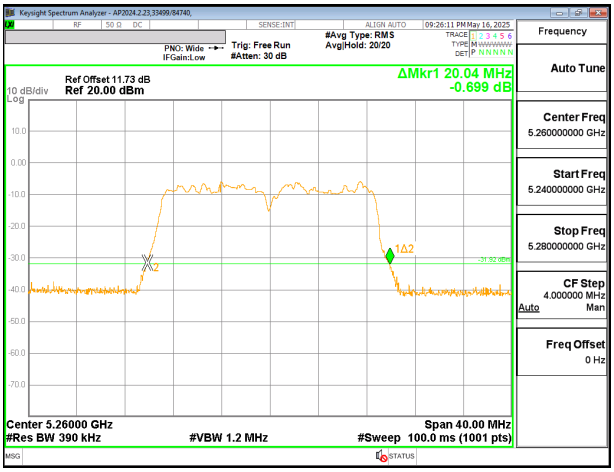
MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

9.2.11. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	20.04	24.72
Mid	5300	20.08	24.57
High	5320	20.15	24.58

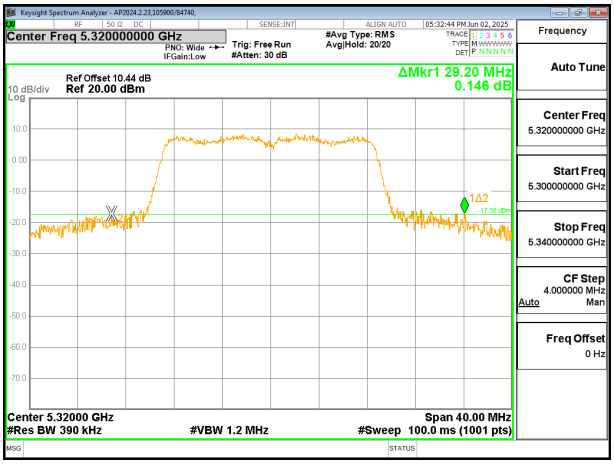


LOW CHANNEL ANTENNA 1

LOW CHANNEL ANTENNA 2

9.2.12. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	20.12	20.60
Mid	5300	20.00	21.12
High	5320	29.20	21.40

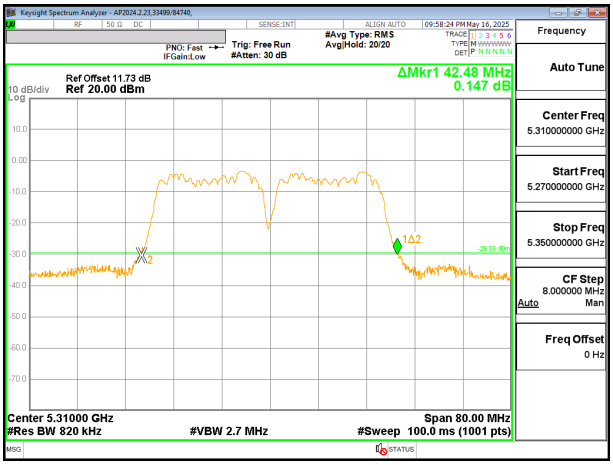


HIGH CHANNEL ANTENNA 1

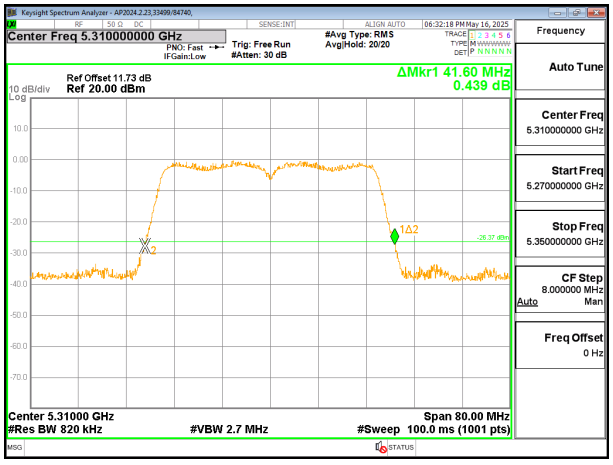
HIGH CHANNEL ANTENNA 2

9.2.13. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5270	42.48	41.52
High	5310	42.48	41.60



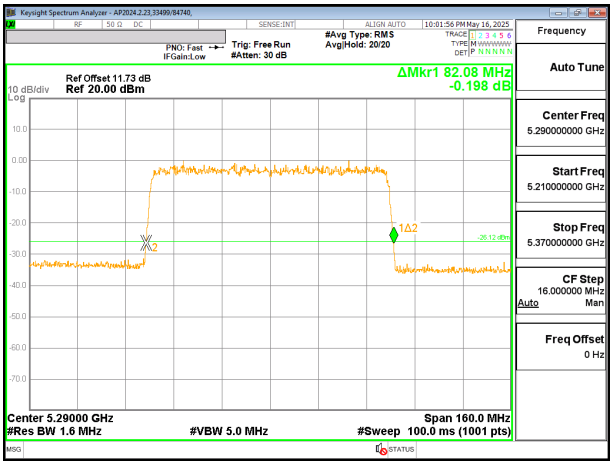
HIGH CHANNEL ANTENNA 1



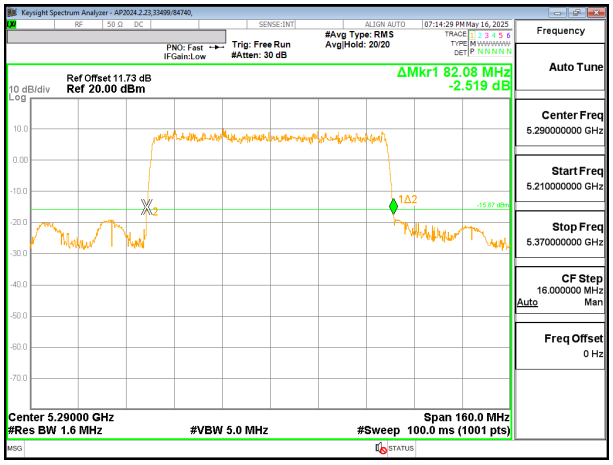
HIGH CHANNEL ANTENNA 2

9.2.14. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5290	82.08	82.08



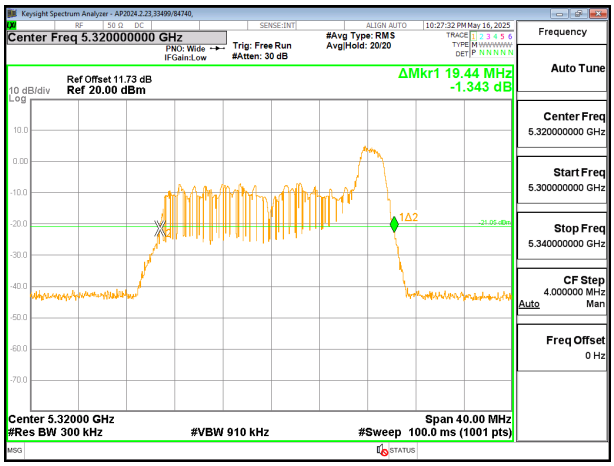
MID CHANNEL ANTENNA 1



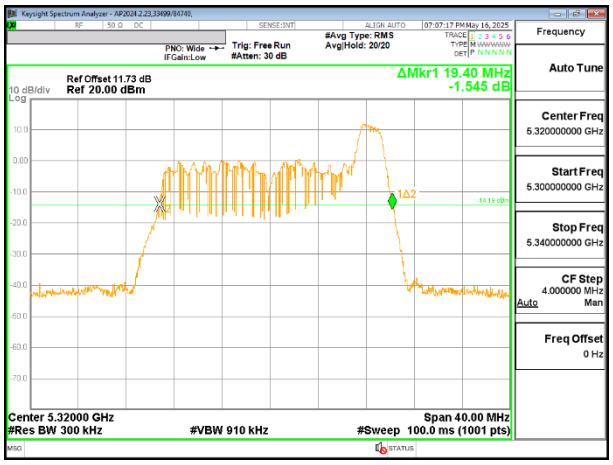
MID CHANNEL ANTENNA 2

9.2.15. 802.11ax HE20 26T MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	19.28	19.32
Mid	5300	18.28	18.24
High	5320	19.44	19.40



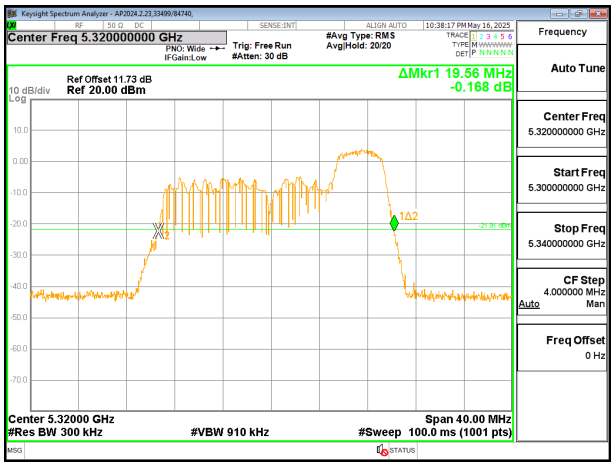
HIGH CHANNEL ANTENNA 1



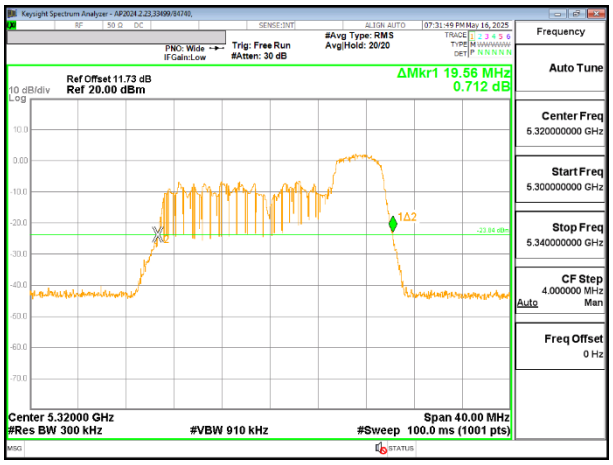
HIGH CHANNEL ANTENNA 2

9.2.16. 802.11ax HE20 52T MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	19.44	19.40
Mid	5300	18.36	18.40
High	5320	19.56	19.56



HIGH CHANNEL ANTENNA 1

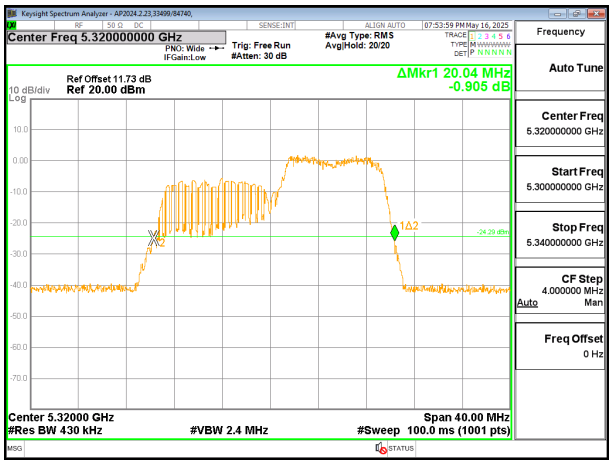


HIGH CHANNEL ANTENNA 2

9.2.17. 802.11ax HE20 106T MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	19.68	19.72
Mid	5300	19.60	19.72
High	5320	20.04	20.04

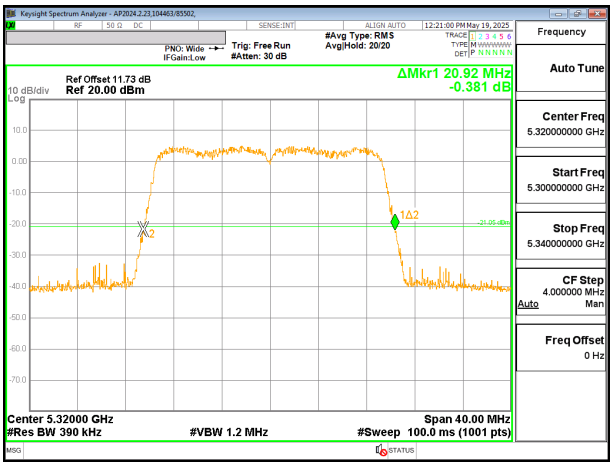
HIGH CHANNEL ANTENNA 1



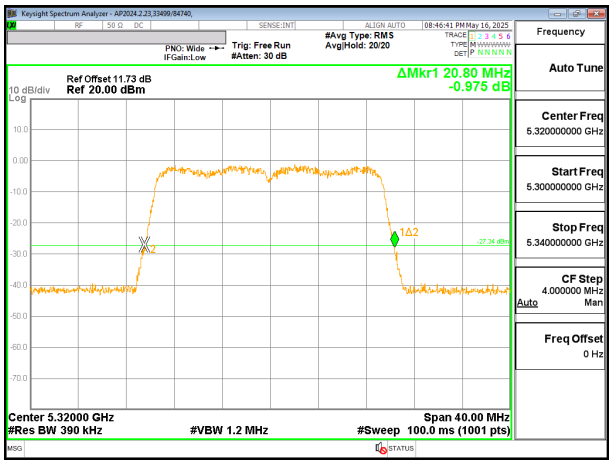
HIGH CHANNEL ANTENNA 2

9.2.18. 802.11ax HE20 242T MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	20.84	20.80
Mid	5300	20.88	20.80
High	5320	20.92	20.80



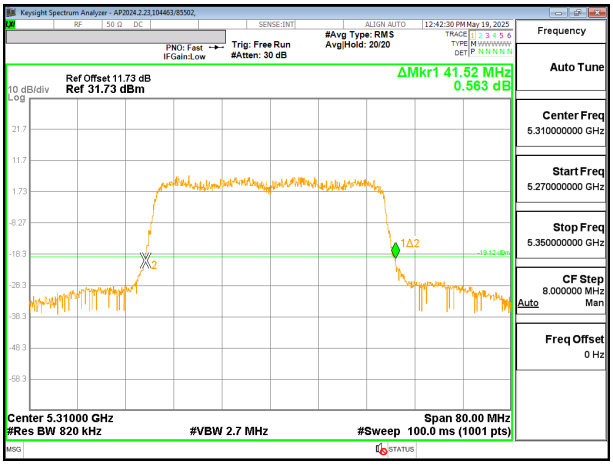
HIGH CHANNEL ANTENNA 1



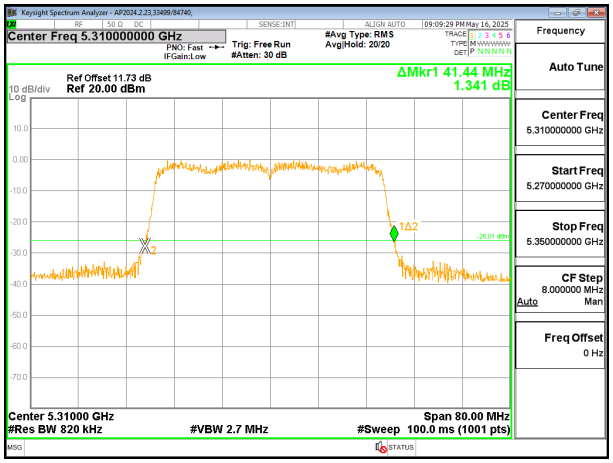
HIGH CHANNEL ANTENNA 2

9.2.19. 802.11ax VHT40 484T MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5270	41.40	41.12
High	5310	41.52	41.44



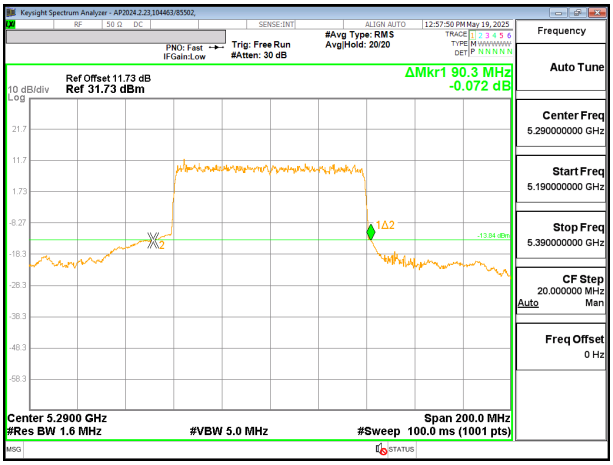
HIGH CHANNEL ANTENNA 1



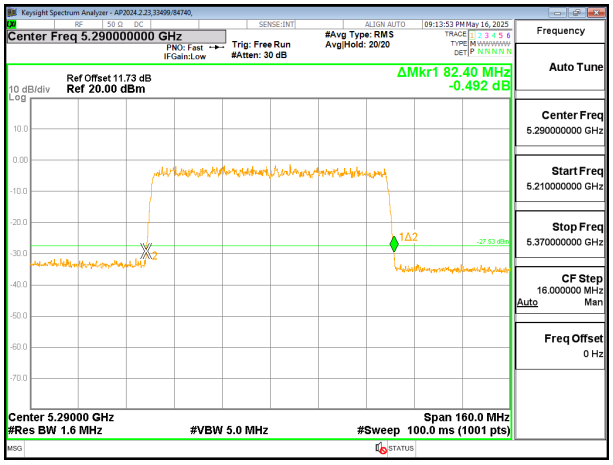
HIGH CHANNEL ANTENNA 2

9.2.20. 802.11ax HE80 996T MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5290	90.30	82.40



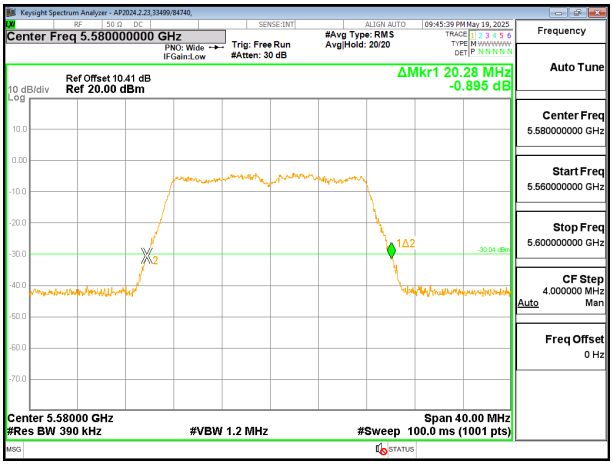
MID CHANNEL ANTENNA 1



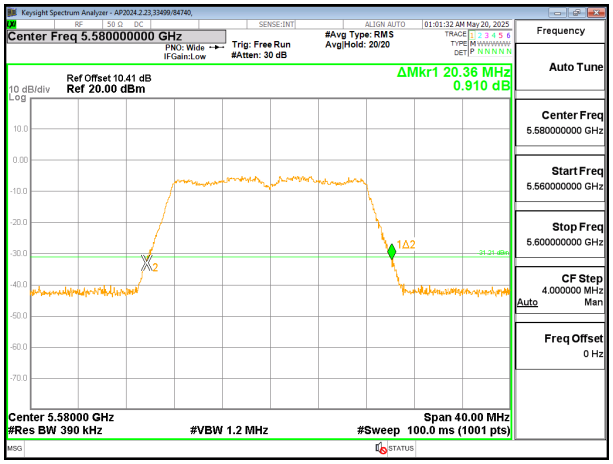
MID CHANNEL ANTENNA 2

9.2.21. 802.11a MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	20.24	20.28
Mid	5580	20.28	20.36
High	5700	20.24	20.28
144	5720	20.28	20.32



MID CHANNEL ANTENNA 1

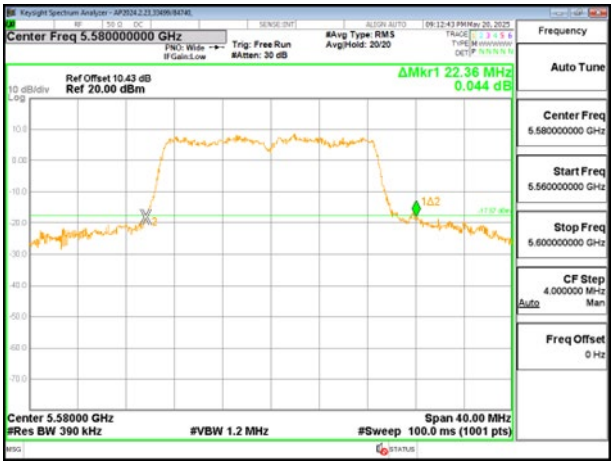


MID CHANNEL ANTENNA 2

9.2.22. 802.11ac VHT20 MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	20.24	20.52
Mid	5580	20.56	22.36
High	5700	20.56	20.44
144	5720	20.32	20.72

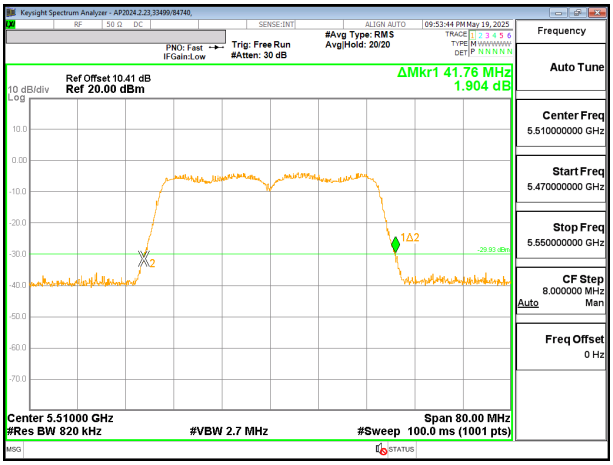
MID CHANNEL ANTENNA 1



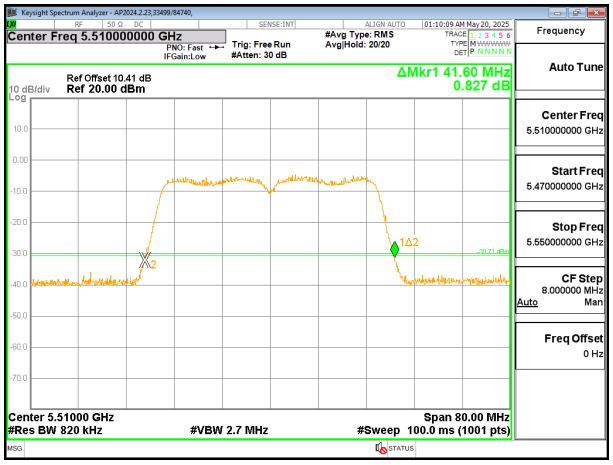
MID CHANNEL ANTENNA 2

9.2.23. 802.11n HT40 MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5510	41.76	41.60
Mid	5590	41.52	41.60
High	5670	41.60	41.44
142	5710	41.44	41.68



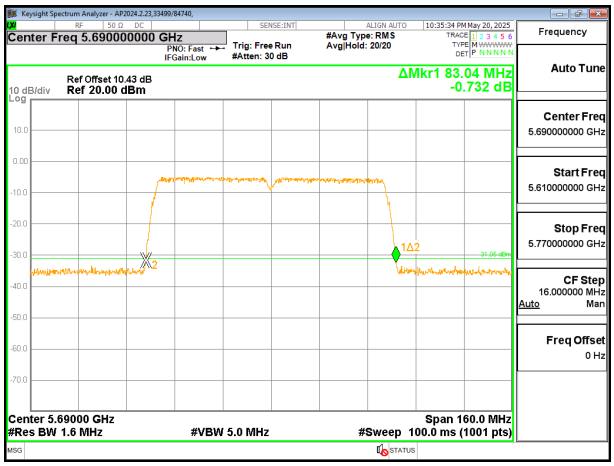
LOW CHANNEL ANTENNA 1



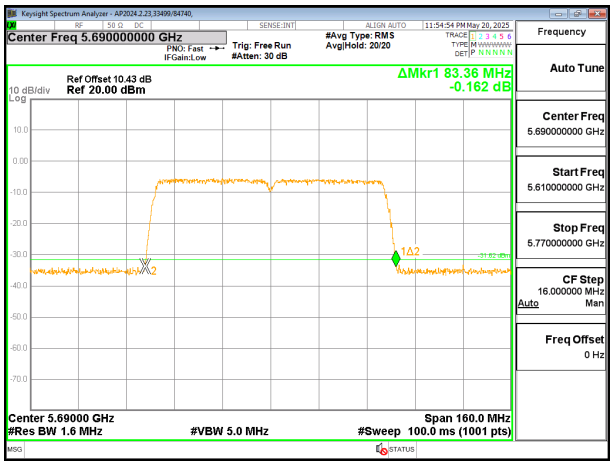
LOW CHANNEL ANTENNA 2

9.2.24. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5530	83.04	83.20
High	5610	83.04	83.04
138	5690	83.04	83.36



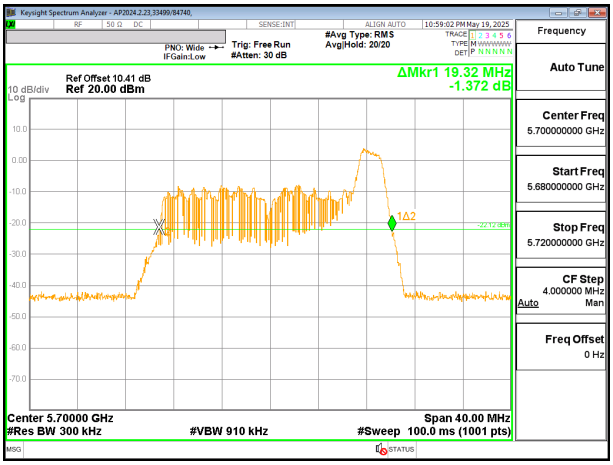
CHANNEL 138 ANTENNA 1



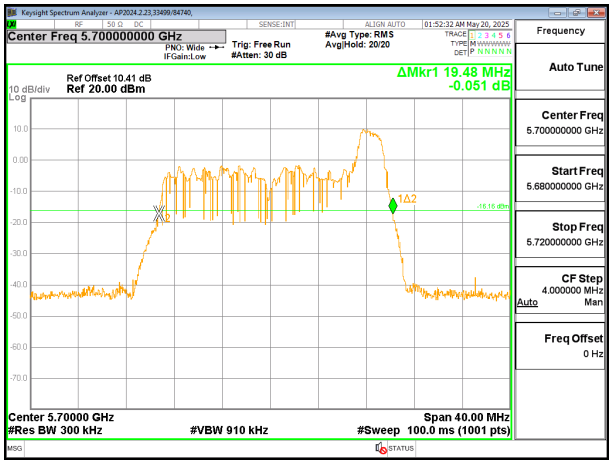
CHANNEL 138 ANTENNA 2

9.2.25. 802.11ax HE20 26T MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	19.24	19.36
Mid	5580	18.24	18.24
High	5700	19.32	19.48
144	5720	19.20	19.32



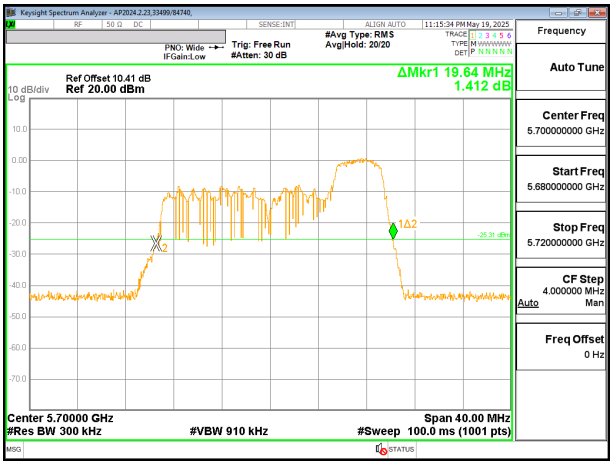
HIGH CHANNEL ANTENNA 1



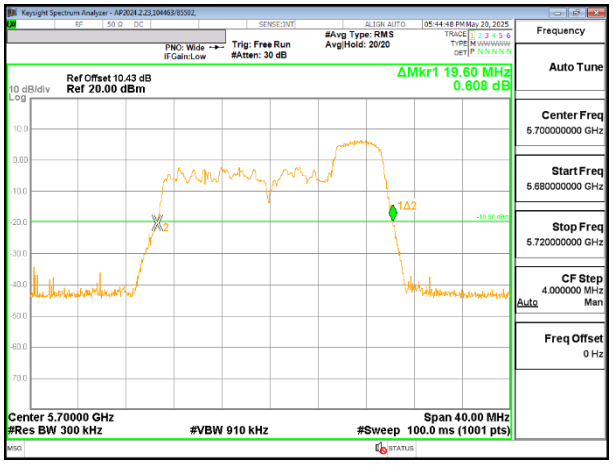
HIGH CHANNEL ANTENNA 2

9.2.26. 802.11ax HE20 52T MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	19.32	19.56
Mid	5580	18.44	18.40
High	5700	19.64	19.60
144	5720	19.36	19.48



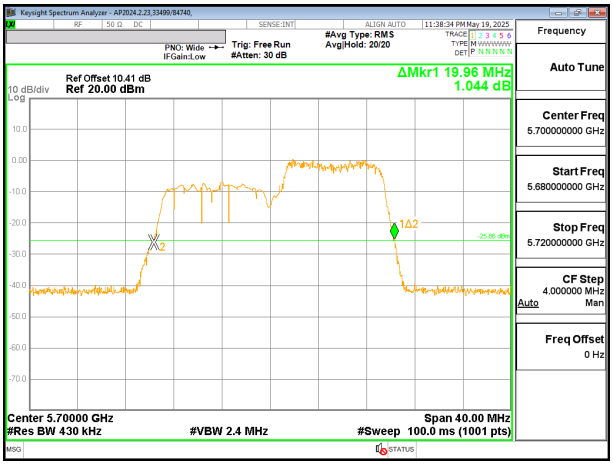
HIGH CHANNEL ANTENNA 1



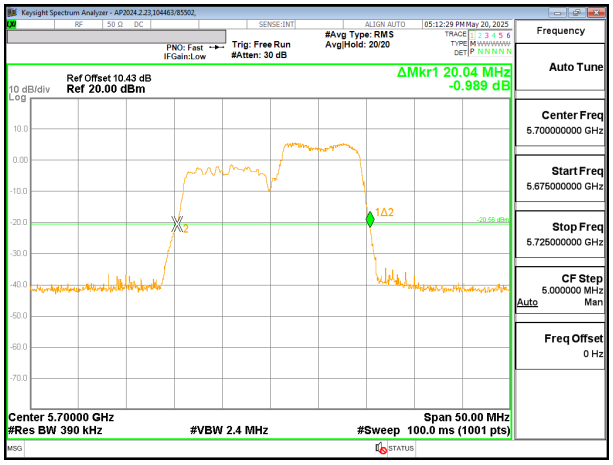
HIGH CHANNEL ANTENNA 2

9.2.27. 802.11ax HE20 106T MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	19.92	19.92
Mid	5580	19.64	20.04
High	5700	19.96	20.04
144	5720	19.64	19.60



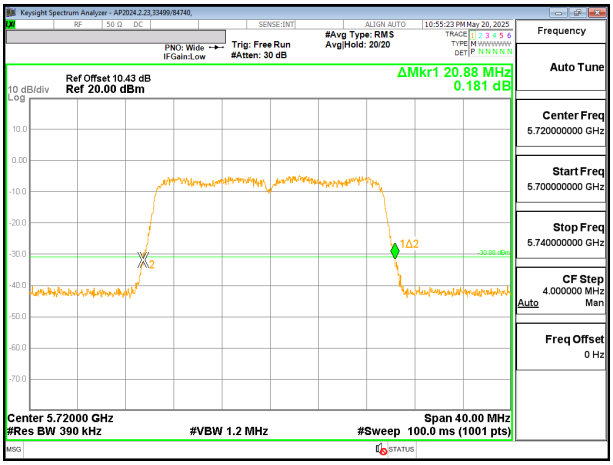
HIGH CHANNEL ANTENNA 1



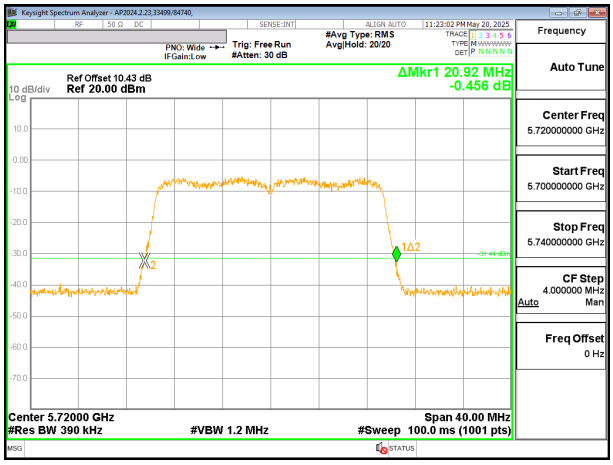
HIGH CHANNEL ANTENNA 2

9.2.28. 802.11ax HE20 242T MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	20.88	20.79
Mid	5580	20.84	20.84
High	5700	20.88	20.77
144	5720	20.88	20.92



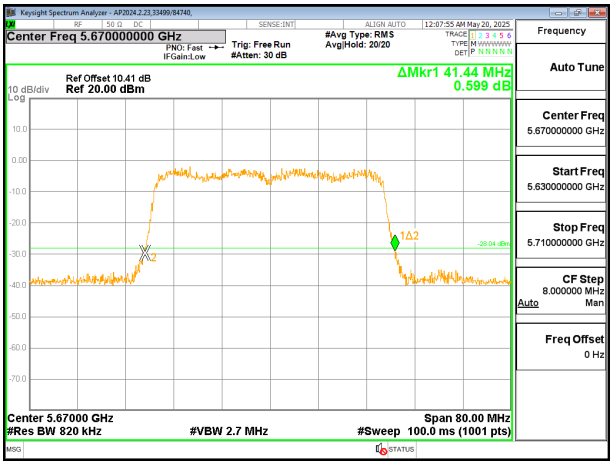
CHANNEL 144 ANTENNA 1



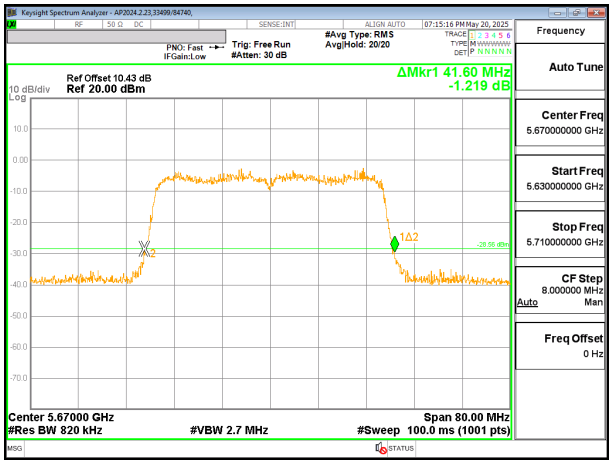
CHANNEL 144 ANTENNA 2

9.2.29. 802.11ax HE40 484T MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5510	41.52	41.28
Mid	5590	41.44	41.44
High	5670	41.44	41.60
142	5710	41.52	41.36



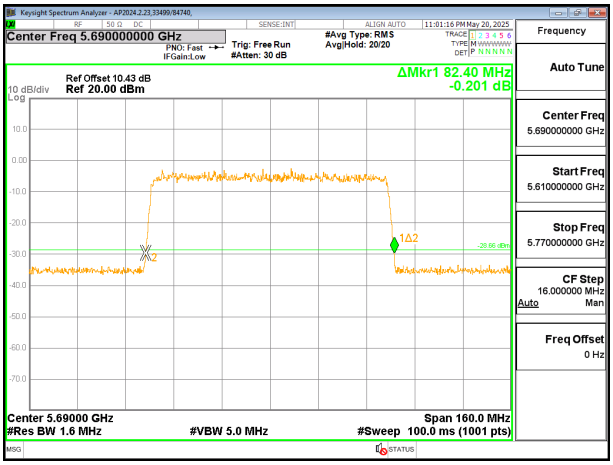
HIGH CHANNEL ANTENNA 1



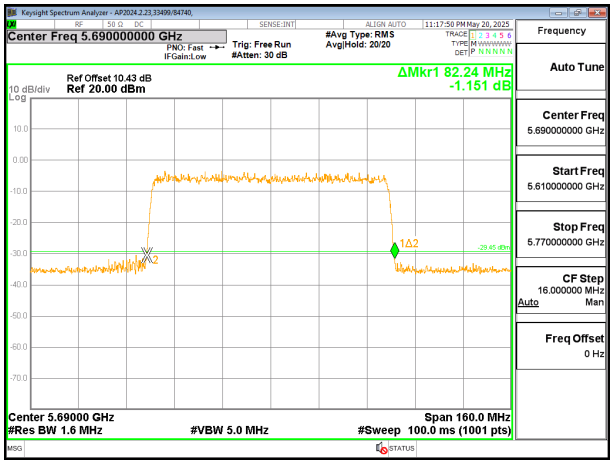
HIGH CHANNEL ANTENNA 2

9.2.30. 802.11ax HE80 996T MODE IN THE 5.6 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5530	82.08	82.08
High	5610	82.24	82.08
138	5690	82.40	82.24



CHANNEL 138 ANTENNA 1



CHANNEL 138 ANTENNA 2

9.3. 6 dB BANDWIDTH

LIMITS

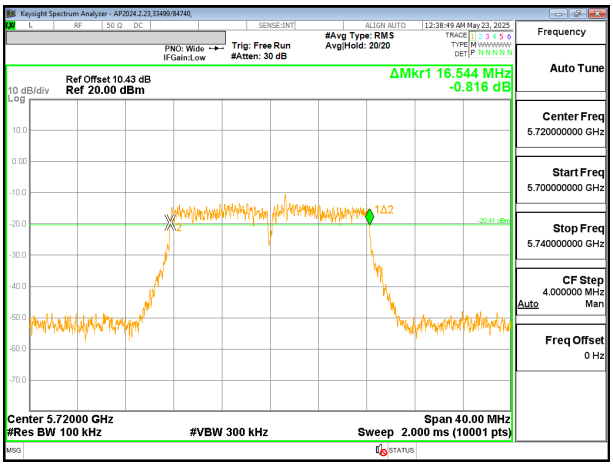
FCC §15.407 (e)
RSS-247 6.2.4.2, 6.2.5.2

The minimum 6 dB bandwidth shall be at least 500 kHz.

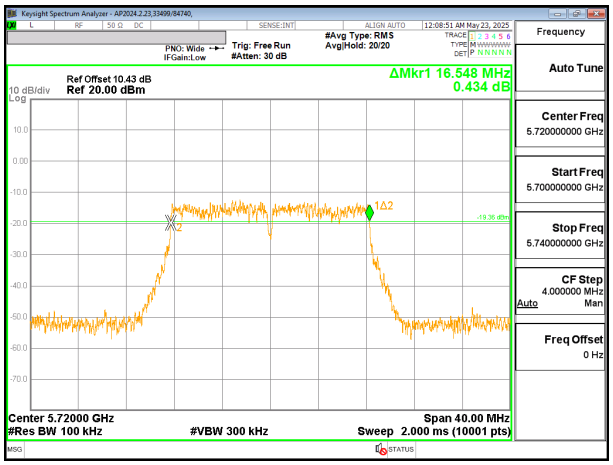
RESULTS

9.3.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5745	16.53	16.51	0.50
Mid	5785	16.33	16.36	0.50
High	5825	16.48	16.42	0.50
144	5720	16.54	16.55	0.50



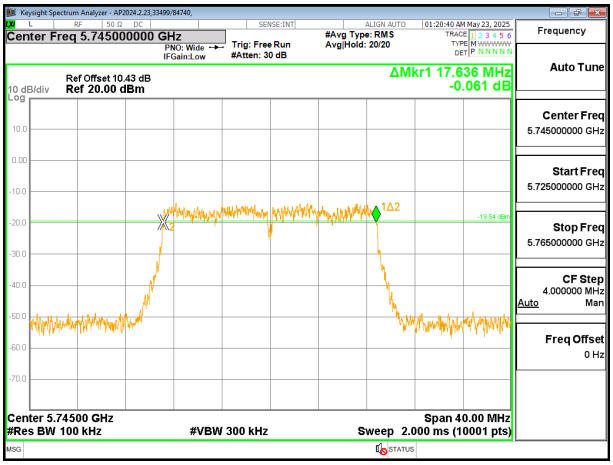
CHANNEL 144 ANTENNA 1



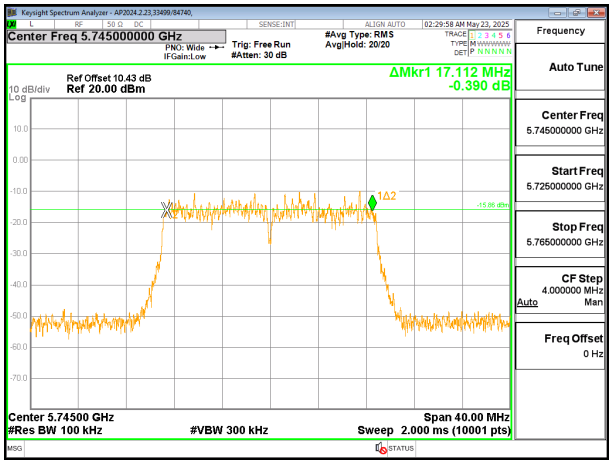
CHANNEL 144 ANTENNA 2

9.3.2. 802.11ac VHT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5745	17.64	17.11	0.50
Mid	5785	17.59	16.92	0.50
High	5825	17.00	17.30	0.50
144	5720	17.58	17.57	0.50



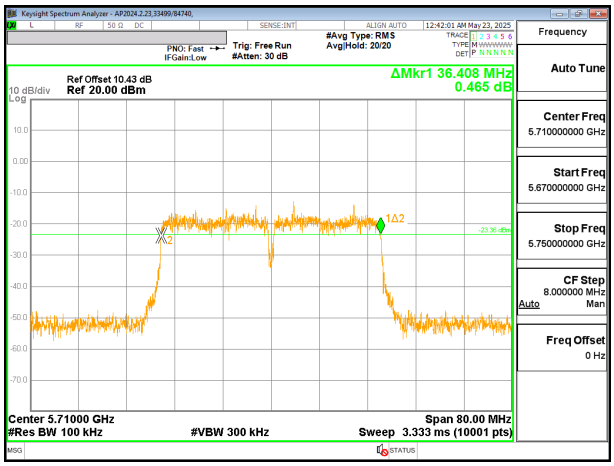
LOW CHANNEL ANTENNA 1



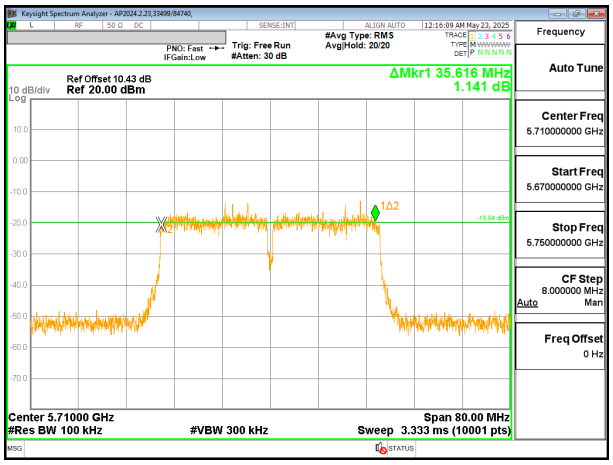
LOW CHANNEL ANTENNA 2

9.3.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5755	35.14	34.50	0.50
High	5795	35.30	35.03	0.50
142	5710	36.41	35.62	0.50



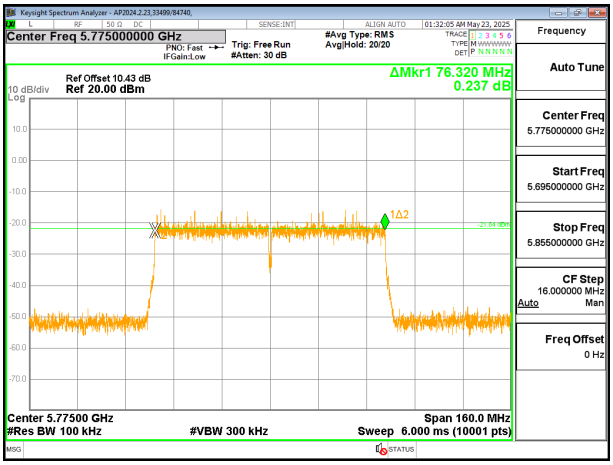
CHANNEL 142 ANTENNA 1



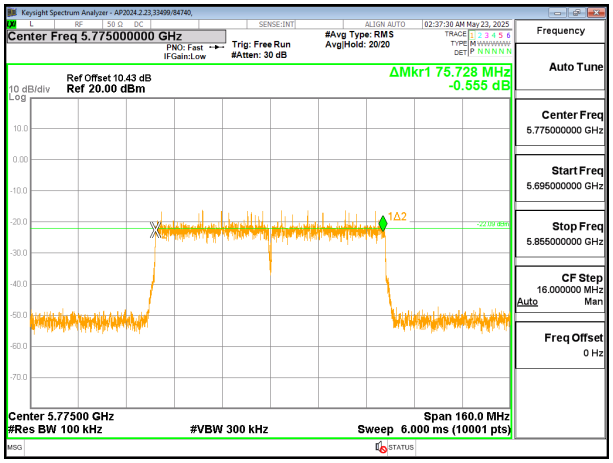
CHANNEL 142 ANTENNA 2

9.3.4. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Mid	5775	76.32	75.73	0.50
138	5690	76.14	76.25	0.50



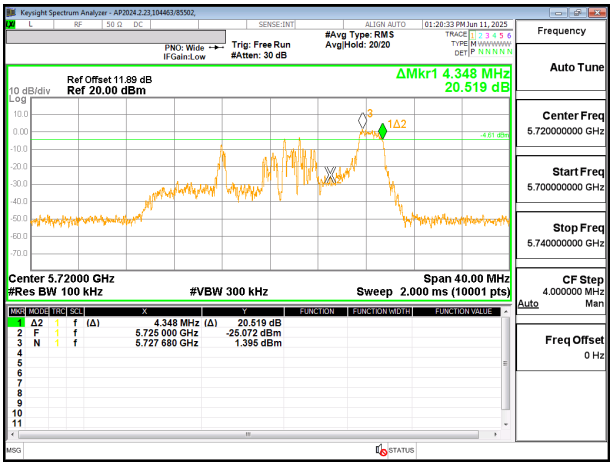
MID CHANNEL ANTENNA 1



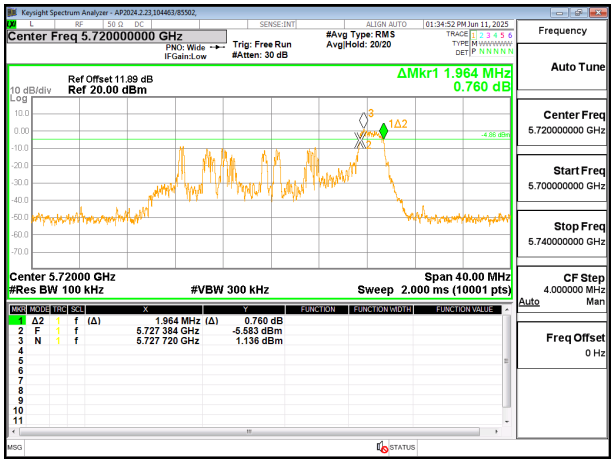
MID CHANNEL ANTENNA 2

9.3.5. 802.11ax HE20 26TMODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5745	1.97	1.71	0.50
Mid	5785	2.60	2.62	0.50
High	5825	1.60	1.93	0.50
144	5720	4.35	1.96	0.50



CHANNEL 144 ANTENNA 1

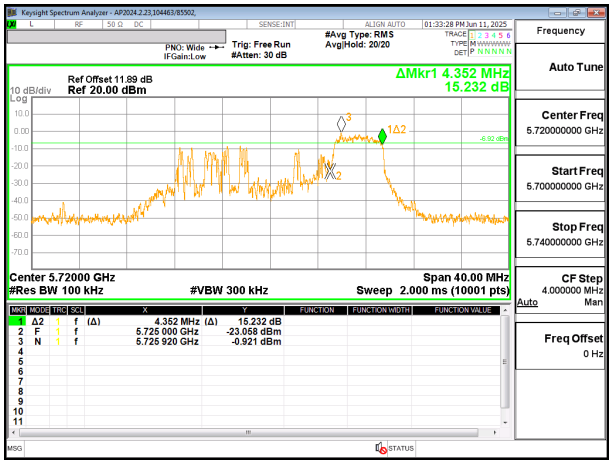


CHANNEL 144 ANTENNA 2

9.3.6. 802.11ax HE20 52TMODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5745	3.87	3.97	0.50
Mid	5785	4.04	3.91	0.50
High	5825	3.95	3.85	0.50
144	5720	4.31	4.35	0.50

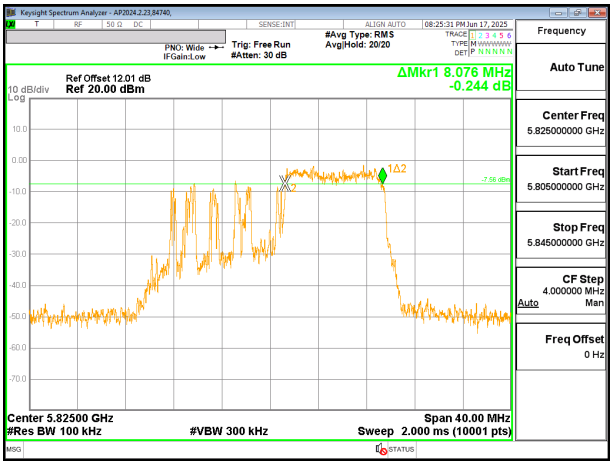
CHANNEL 144 ANTENNA 1



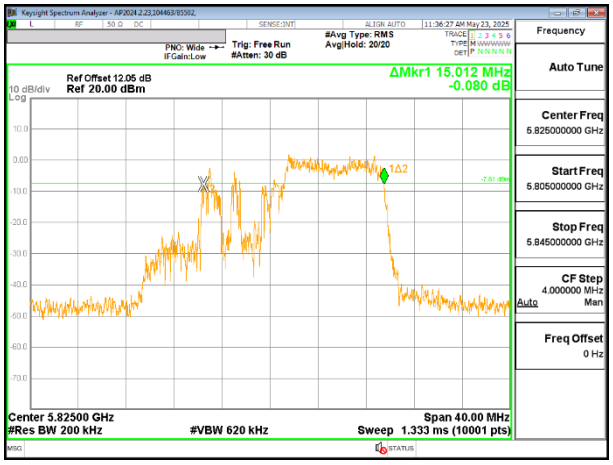
CHANNEL 144 ANTENNA 2

9.3.7. 802.11ax HE20 106TMODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5745	8.06	13.14	0.50
Mid	5785	7.89	8.02	0.50
High	5825	8.08	15.01	0.50
144	5720	4.19	4.43	0.50



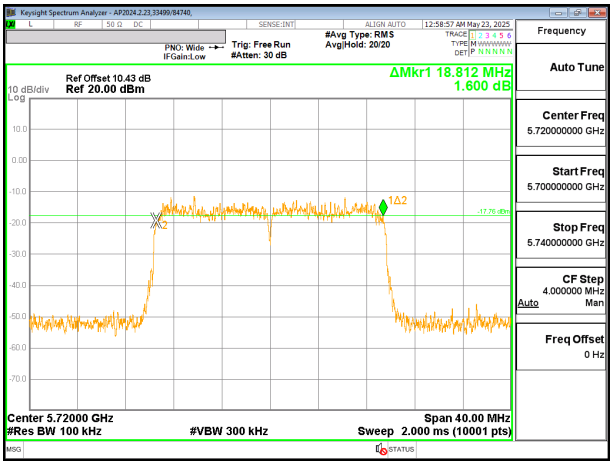
HIGH CHANNEL ANTENNA 1



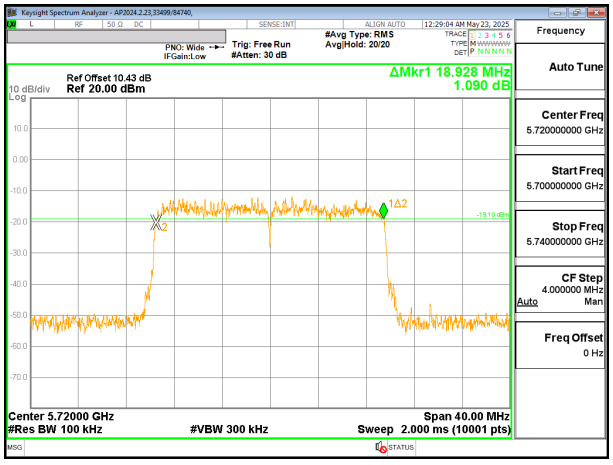
HIGH CHANNEL ANTENNA 2

9.3.8. 802.11ax HE20 242TMODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5745	17.43	18.68	0.50
Mid	5785	18.32	18.64	0.50
High	5825	18.82	18.62	0.50
144	5720	18.81	18.93	0.50



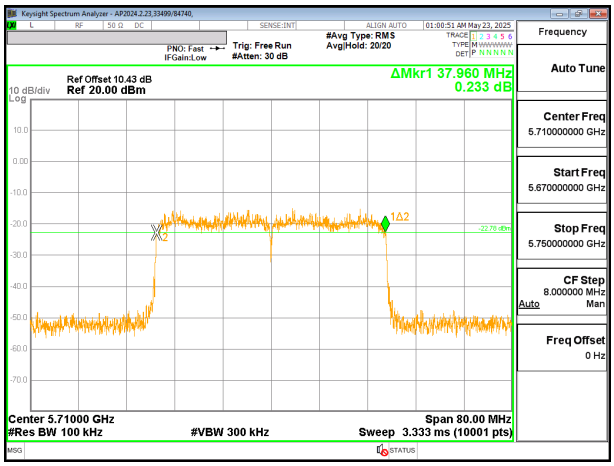
CHANNEL 144 ANTENNA 1



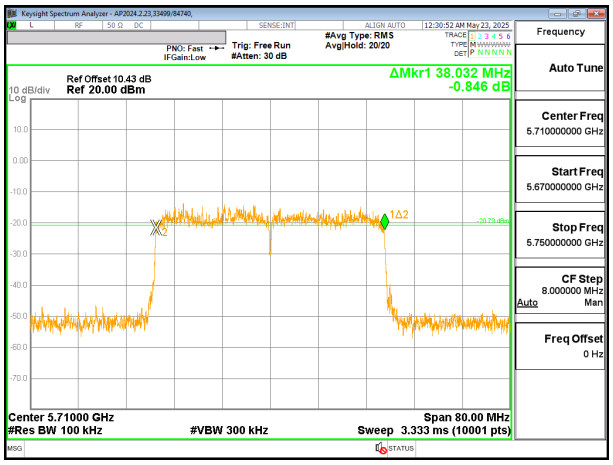
CHANNEL 144 ANTENNA 2

9.3.9. 802.11ax HE40 484T MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Low	5755	35.34	37.38	0.50
High	5795	35.09	36.24	0.50
142	5710	37.86	38.03	0.50



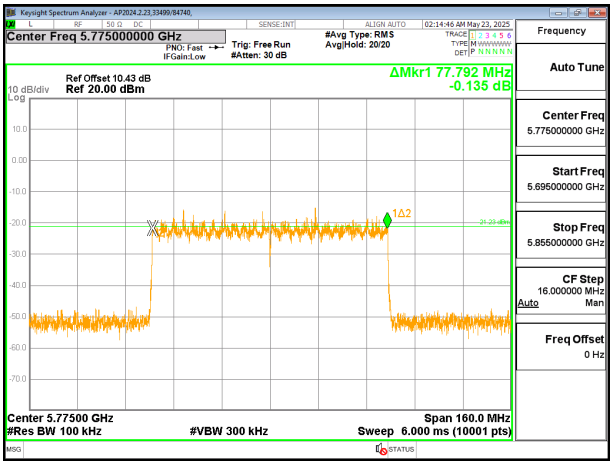
CHANNEL 142 ANTENNA 1



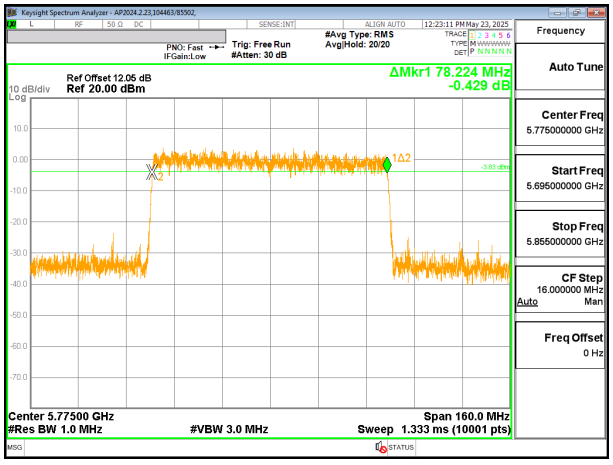
CHANNEL 142 ANTENNA 2

9.3.10. 802.11ax HE80 996T MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 1 (MHz)	6 dB Bandwidth Antenna 2 (MHz)	6 dB BW Min. Limit (MHz)
Mid	5775	77.79	78.22	0.50
138	5690	76.14	76.25	0.50



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2