

TEST REPORT

Report Number: R15927071-E8

Applicant : Garmin International Inc.
1200 East 151st Street
Olathe, KS 66062-3426, USA

Model : A04946, B04946, C04946

FCC ID : IPH-04946

IC : 1792A-04946

EUT Description : Digital Transceiver

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E
ISED RSS-247 ISSUE 4
ISED RSS-GEN ISSUE 5 + A1 + A2

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Garmin International Inc.
1200 East 151st Street
Olathe, KS 66062-3426, USA

EUT DESCRIPTION: Digital Transceiver

MODEL: A04946, B04946, C04946

SERIAL NUMBER: 3516172328 / 913000032

SAMPLE RECEIPT DATE: 2025-07-23 to 2025-09-05

DATE TESTED: 2025-08-12 to 2025-10-27

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	Refer to Section 2
ISED RSS-247 Issue 4	Refer to Section 2
ISED RSS-GEN Issue 5 + A1	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 tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure 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.

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2. TEST RESULT SUMMARY

This report contains data/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 (see section 6.3)
- 2) Worst-case data rates (see section 6.5)

FCC Clause	ISED Clause	Requirement	Result	Comment
See 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	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	RSS-247 7.3.4.2	6 dB BW	Compliant	None
15.407 (a) (1-3), (h) (1)	RSS-247 7.3.1.2, 7.3.2.2, 7.3.3.2, 7.3.4.3	Output Power		
15.407 (a) (1-3)	RSS-247 7.3.1.2, 7.3.2.2, 7.3.3.2, 7.3.4.3	PSD		
15.209, 15.205, 15.407 (b)	RSS-GEN 8.9, 8.10, RSS-247 7.3.1.3, 7.3.2.3, 7.3.3.3, 7.3.4.4	Radiated Emissions		
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	NA	Installed in a vehicle

3. TEST METHODOLOGY

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

- FCC 47 CFR Part 2
- FCC 47 CFR Part 15
- FCC KDB 662911 D01 v02r01
- FCC KDB 789033 D02 v02r01
- FCC 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 4

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 Durham, NC 27713, 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	U _{Lab}
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	1.22%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	6.01 dB
Mains Conducted Emissions (0.150-30MHz) - LISN	3.40 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%

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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is Digital Transceiver that utilizes BLE, BT Classic, ANT, 2.4 WLAN, and 5 WLAN radios as well as a GNSS receiver.

There are three model variations that are identical apart from screen size: 10-inch, 13-inch, and 17-inch. This report covers the 5GHz radio.

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, 1Tx			
5180-5240	802.11a	14.40	27.54
5180-5240	802.11n HT20	14.97	31.41
5190-5230	802.11n HT40	14.22	26.42
5210	802.11ac VHT80	14.77	29.99
5.3GHz Band, 1Tx			
5260-5320	802.11a	14.61	28.91
5260-5320	802.11n HT20	14.85	30.55
5270-5310	802.11n HT40	14.90	30.90
5290	802.11ac VHT80	11.48	14.06
5.6GHz Band, 1Tx			
5500-5720	802.11a	16.32	42.85
5500-5720	802.11n HT20	16.57	45.39
5510-5710	802.11n HT40	17.19	52.36
5530-5690	802.11ac VHT80	16.26	42.27
5.8GHz Band, 1Tx			
5745-5825	802.11a	20.00	100.00
5745-5825	802.11n HT20	19.98	99.54
5755-5795	802.11n HT40	16.21	41.78
5775	802.11ac VHT80	13.21	20.94

Antenna 2

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2GHz Band, 1Tx			
5180-5240	802.11a	14.92	31.05
5180-5240	802.11n HT20	14.97	31.41
5190-5230	802.11n HT40	14.98	31.48
5210	802.11ac VHT80	14.77	29.99
5.3GHz Band, 1Tx			
5260-5320	802.11a	14.61	28.91
5260-5320	802.11n HT20	14.85	30.55
5270-5310	802.11n HT40	14.90	30.90
5290	802.11ac VHT80	11.85	15.31
5.6GHz Band, 1Tx			
5500-5720	802.11a	17.77	59.84
5500-5720	802.11n HT20	17.97	62.66
5510-5710	802.11n HT40	18.76	75.16
5530-5690	802.11ac VHT80	17.01	50.23
5.8GHz Band, 1Tx			
5745-5825	802.11a	20.00	100.00
5745-5825	802.11n HT20	21.29	134.59
5755-5795	802.11n HT40	17.80	60.26
5775	802.11ac VHT80	15.06	32.06

MIMO

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2GHz Band, 2Tx			
5180-5240	802.11a	15.14	32.66
5180-5240	802.11n HT20	15.02	31.77
5190-5230	802.11n HT40	14.69	29.44
5210	802.11ac VHT80	12.80	19.05
5.3GHz Band, 2Tx			
5260-5320	802.11a	14.92	31.05
5260-5320	802.11n HT20	15.06	32.06
5270-5310	802.11n HT40	15.07	32.14
5290	802.11ac VHT80	11.02	12.65
5.6GHz Band, 2Tx			
5500-5720	802.11a	16.94	49.43
5500-5720	802.11n HT20	17.10	51.29
5510-5710	802.11n HT40	17.41	55.08
5530-5690	802.11ac VHT80	17.15	51.88
5.8GHz Band, 2Tx			
5745-5825	802.11a	15.47	35.24
5745-5825	802.11n HT20	14.73	29.72
5755-5795	802.11n HT40	16.08	40.55
5775	802.11ac VHT80	15.95	39.36

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna's gain and type, as provided by the manufacturer' are as follows:

The radio utilizes a dual band dipole antenna, with the maximum gains shown below:

Frequency Band (GHz)	Antenna 1 Gain (dBi)	Antenna 2 Gain (dBi)	Declared Uncorrelated Gain (dBi)	Declared Correlated Antenna Gain (dBi)
UNII-1	6.65	5.07	8.14	10.94
UNII-2a	5.83	5.07	7.66	10.56
UNII-2c	6.14	4.90	8.25	11.20
UNII-3	5.70	5.14	7.99	10.96

6.4. SOFTWARE AND FIRMWARE

Software Version: 41.52

6.5. WORST-CASE CONFIGURATION AND MODE

Through radiated pretesting, it was found that the 13-inch model is the worst-case for SISO transmission testing and the 17-inch model was the worst-case for MIMO transmission testing; therefore, all radiated transmit testing was performed on the 13-inch model for SISO and 17-inch for MIMO.

Radiated emissions below 1GHz and above 18GHz were performed with the EUT set to transmit at the channel with highest output PSD as the worst-case scenario.

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

The EUT is meant to be installed in one orientation; therefore, all final testing was performed with the EUT in this orientation.

For SISO, antenna 1 and antenna 2 were investigated and it was determined that antenna 1 is the worst-case antenna for SISO operation; therefore, all final radiated SISO testing was performed on antenna 1. Full testing was also performed using the MIMO operation.

Worst-case data rates:

802.11a mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0
802.11ac VHT80 mode: MCS0

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Sonar	Garmin	010-13073-00	NA	NA
HDMI Termination	NA	NA	NA	NA
USB Card Reader	Garmin	010-02251-10	NA	NA
Switch	Garmin	BlueNet 20 Switch	86P004096	NA
Marine Transducer	Garmin	GT17M 20 Deg	8E9000041	NA
Temp Sensor	Garmin	GTEMP10-TH	4QM001566	NA

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	9-Pin Network	2	9-Pin	Shielded	<3m	NA
2	HDMI	2	HDMI	Shielded	<3m	Used an HDMI terminator
3	CVBS	1	Video	Shielded	<3m	Terminated
4	Audio	1	9-Pin	Shielded	<3m	Terminated
5	Power	1	DC		<3m	NA
6	USB DRD	1	USB-C	Shielded	<3m	Goes to USB Card Reader
7	12-Pin XDCR	1	12-Pin	Shielded	>3m	Sonar
8	NMEA 200 and J1939 5-Pin	2	5-Pin	Shielded	>3m	Temp Sensor

TEST SETUP

The EUT's touchscreen is used to configure the device to transmit at the desired channels and modes.

SETUP DIAGRAM

Please refer to R15927071-EP1 for setup diagrams

7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2020 Section 12.2

6 dB Emission BW: ANSI C63.10-2020 Section 12.5.1

26 dB Emission BW: ANSI C63.10-2020 Section 12.5.2

99% Occupied Bandwidth: ANSI C63.10-2020 Section 6.9

Conducted Output Power: ANSI C63.10-2020 Section 12.4.3.2 (Method PM-G)

Power Spectral Density: ANSI C63.10-2020 Section 12.6

Unwanted emissions in restricted bands: ANSI C63.10-2020 Sections 12.7.2, 12.7.4, 12.7.5, 12.7.6, 12.7.7

Unwanted emissions in non-restricted bands: ANSI C63.10-2020 Sections 12.7.3, 12.7.4, 12.7.5, 12.7.6.

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

Radiated Spurious Emissions: ANSI C63.10-2020 Section 6.3 to 6.6

8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment were 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.
Conducted Room 2					
90410	Spectrum Analyzer	Keysight Technologies	N9030A	2025-07-10	2026-07-10
76023	Temp/Humid Chamber	Cincinnati Sub-Zero	ZPH-8-3.5-SCT/AC	2025-01-15	2026-01-15
248881	Environmental Meter	Control Company	06-662-4	2024-04-10	2026-04-10
76021	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	NA	NA
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA
Additional Equipment used					
259603	Conducted Switch Box	UL	CSB	2025-03-12	2026-03-12
91212	True RMS Multimeter	Agilent	U1232A	2025-07-30	2026-07-30
211055	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5008	2025-07-30	2026-07-30
246811	SMA Coaxial 10dB SMA Attenuator	CentricRF	NA	2025-03-19	2026-03-19
259680	SMA Coaxial 10dB Attenuator	CentricRF	C27S-10	2025-08-11	2026-08-11

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
1-18 GHz					
88761	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-10-05	2025-10-31
Gain-Loss Chains					
91977	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-07-29	2026-07-29
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
239540	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-31
30-1000 MHz					
90629	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-30	2026-01-30
1-18 GHz					
135143	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-02-07	2026-02-07
18-40 GHz					
91186	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2024-05-16	2026-05-16
91187	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2024-05-17	2026-05-17
Gain-Loss Chains					
91974	Gain-loss string: 0.009-30MHz	Various	Various	2025-05-31	2026-05-31
91976	Gain-loss string: 25-1000MHz	Various	Various	2025-05-31	2026-05-31
91979	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
135999	Gain-loss string: 18-40GHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-05-12	2026-05-12
90416	Spectrum Analyzer	Keysight	N9030A	2025-07-31	2026-07-31
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241205	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
1-18 GHz					
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-04-09	2026-04-09
Gain-Loss Chains					
207640	Gain-loss string: 1-18GHz	Various	Various	2025-06-13	2026-06-13
Receiver & Software					
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-04-21	2026-04-21
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241204	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

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 Corr. Factor RMS (dB)	Duty Cycle Corr. Factor Voltage (dB)	1/B Minimum VBW (kHz)
5GHz Band							
802.11a	1.428	1.460	0.978	97.81	0.10	0.19	0.700
802.11n HT20	1.335	1.377	0.969	96.95	0.13	0.27	0.749
802.11n HT40	0.6635	0.6955	0.954	95.40	0.20	0.41	1.507
802.11ac VHT80	0.3315	0.3633	0.912	91.25	0.40	0.80	3.017

DUTY CYCLE PLOTS



9.2. 26 dB BANDWIDTH

LIMITS

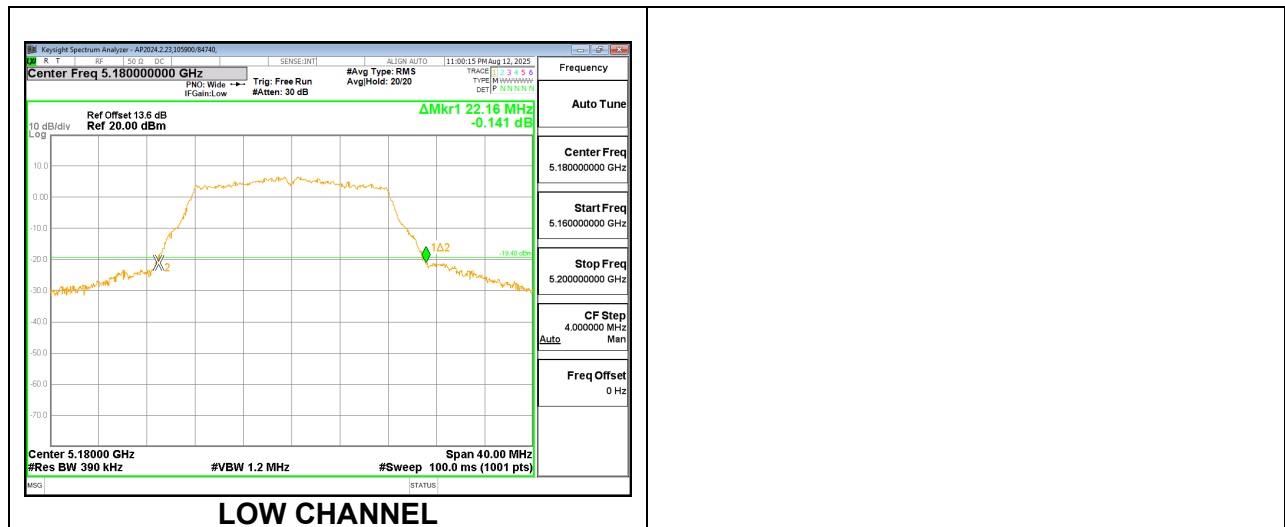
None; for reporting purposes only.

RESULTS

9.2.1. 802.11a MODE IN THE 5.2 GHz BAND

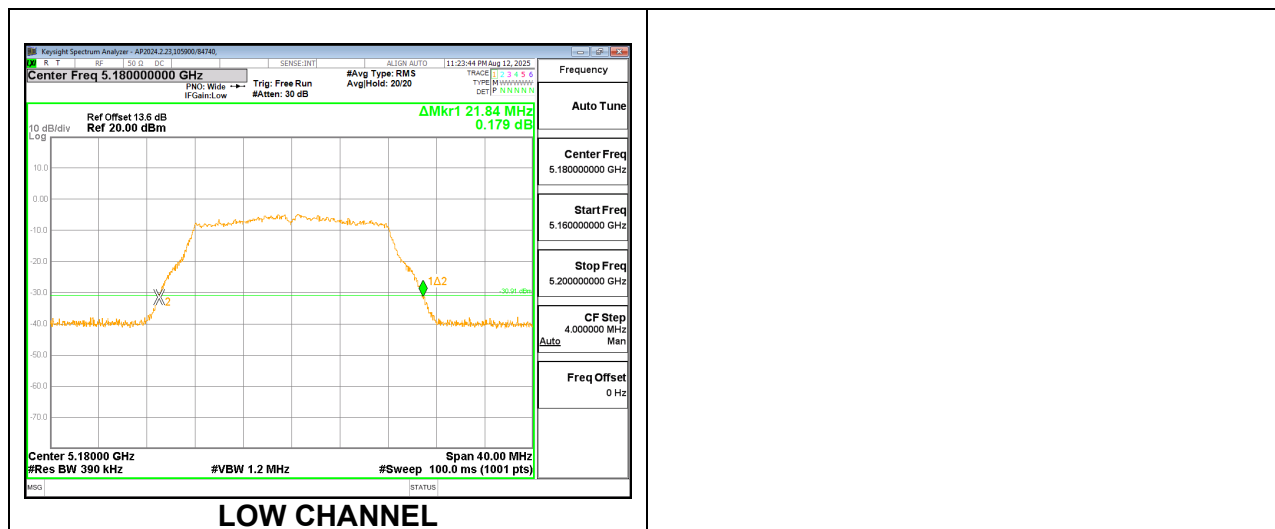
1TX Antenna 1 MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5180	22.16
Mid	5200	21.84
High	5240	21.84



1TX Antenna 2 MODE

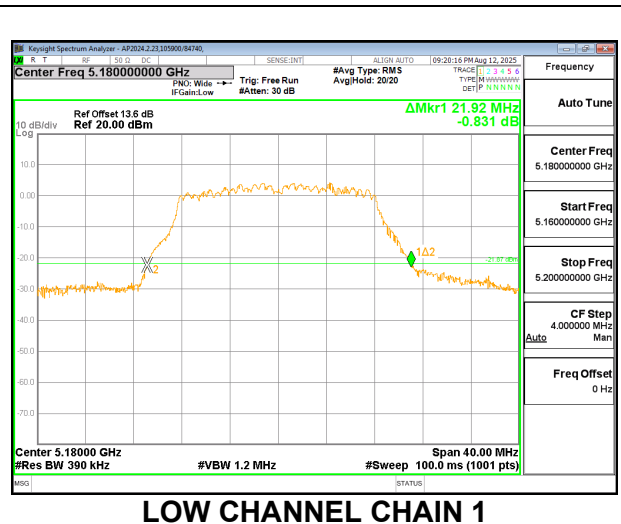
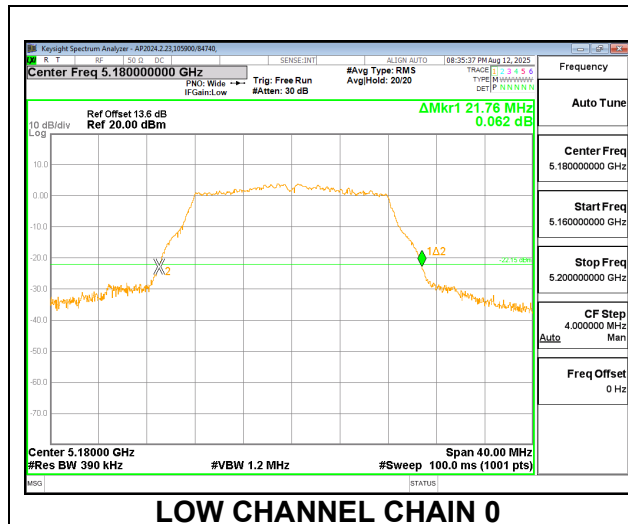
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5180	21.84
Mid	5200	21.92
High	5240	21.84



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	21.76	21.92
Mid	5200	22.12	22.84
High	5240	21.88	21.88

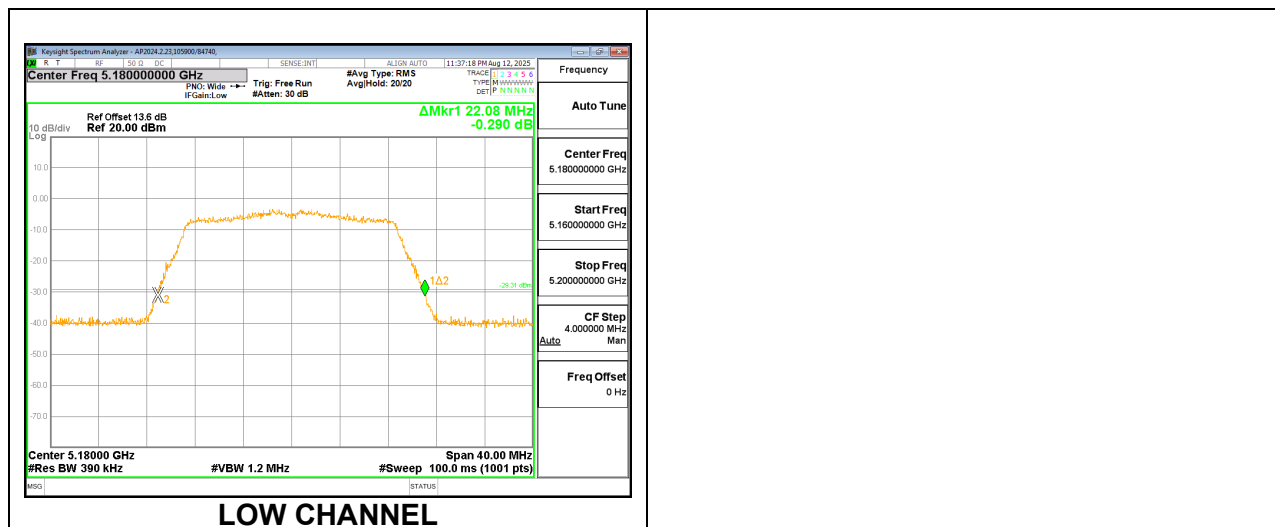
LOW CHANNEL



9.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

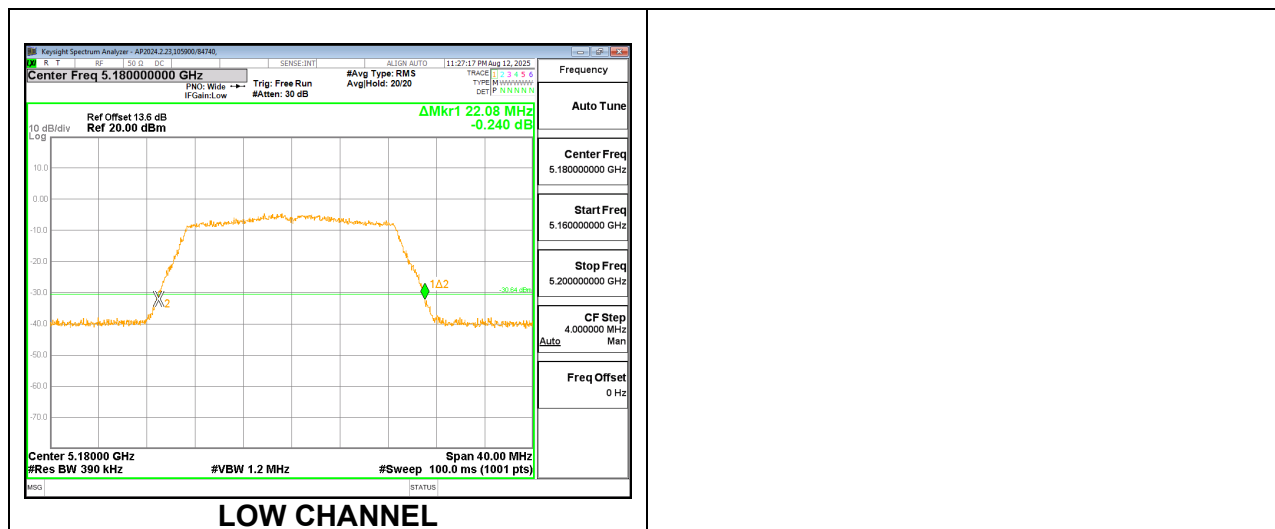
1TX Antenna 1 MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5180	22.08
Mid	5200	22.00
High	5240	21.76



1TX Antenna 2 MODE

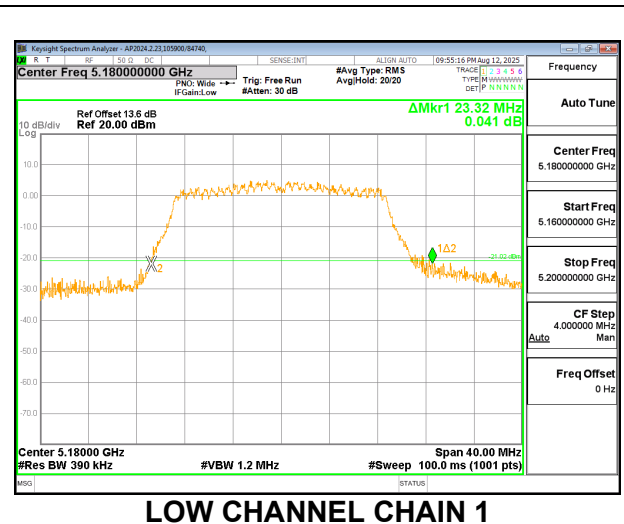
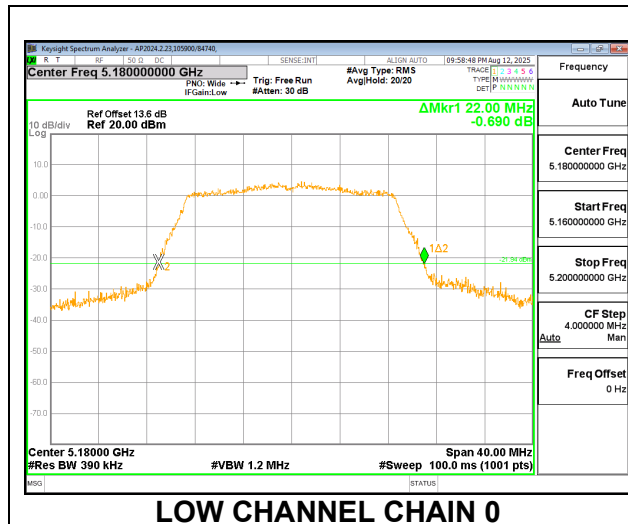
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5180	22.08
Mid	5200	22.00
High	5240	21.96



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	22.00	23.32
Mid	5200	21.96	24.92
High	5240	22.04	24.12

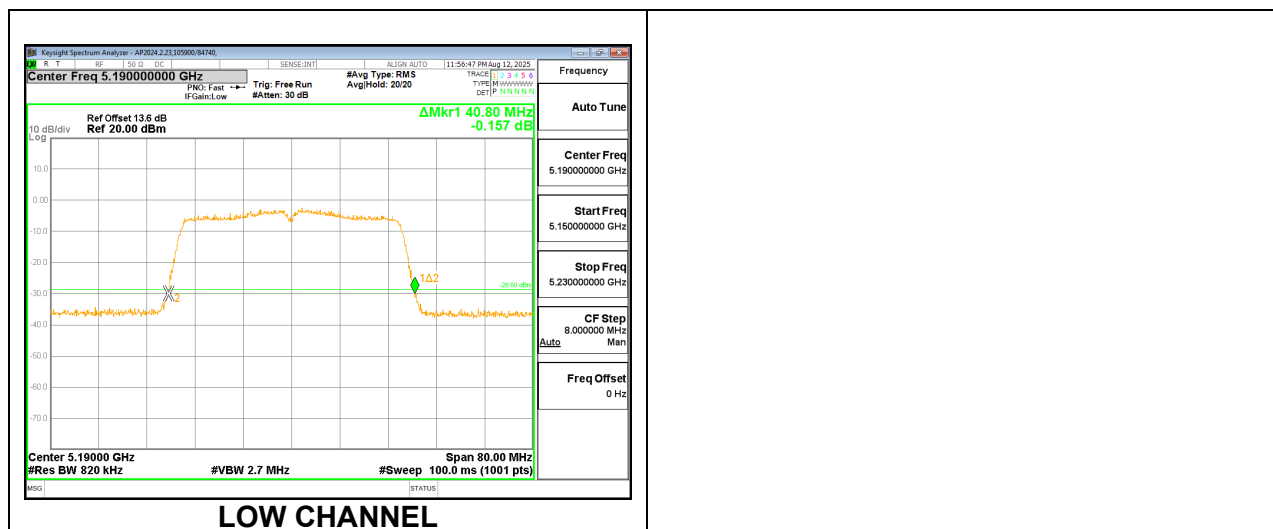
LOW CHANNEL



9.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

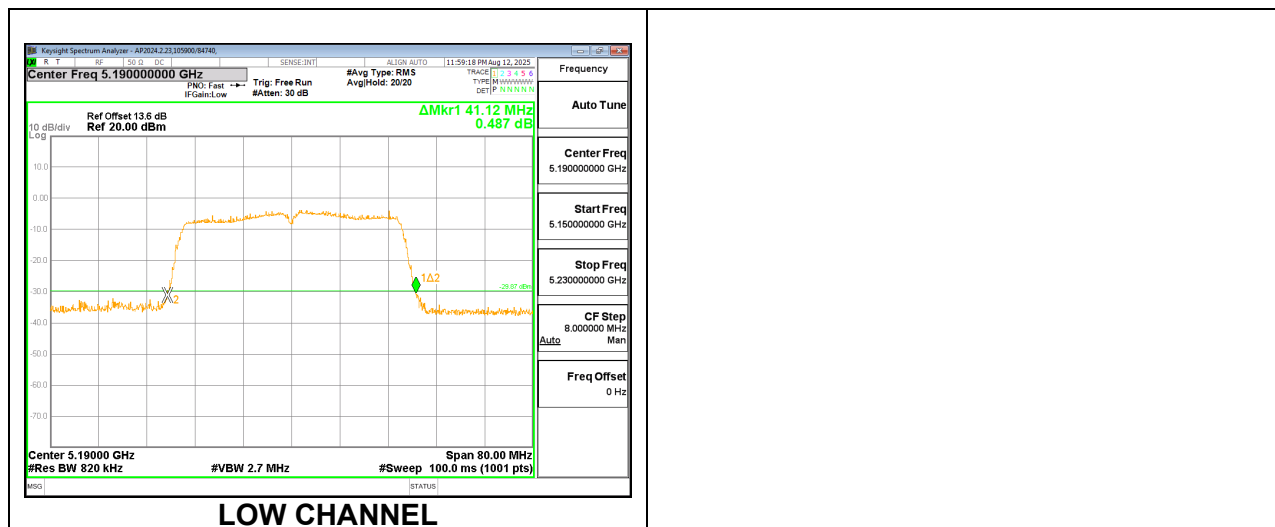
1TX Antenna 1 MODE

Channel	Frequency	26dB Bandwidth
	(MHz)	(MHz)
Low	5190	40.80
High	5230	40.80



1TX Antenna 2 MODE

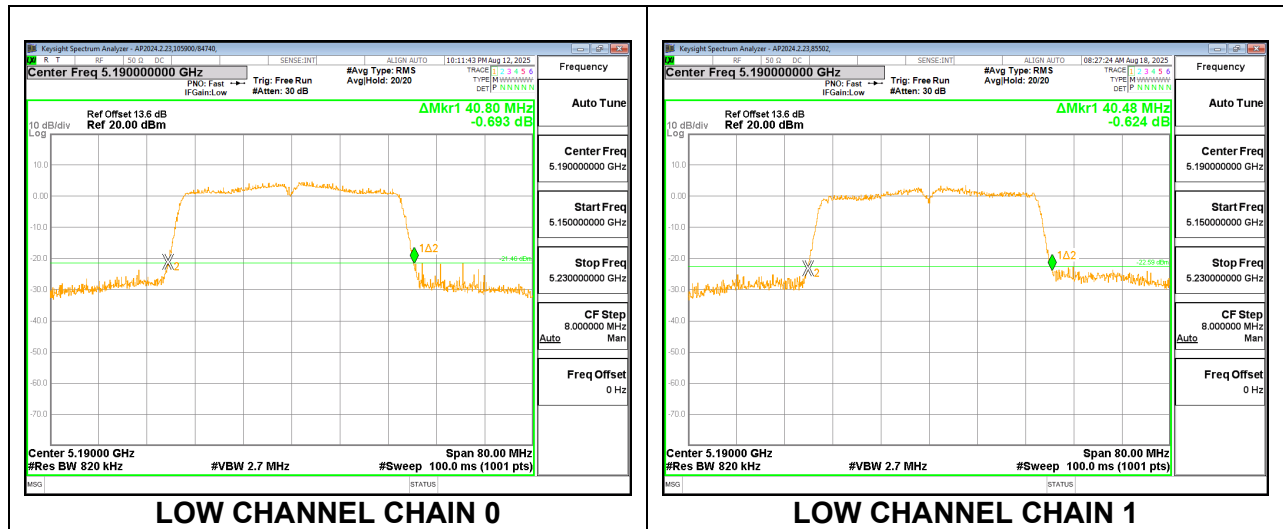
Channel	Frequency	26dB Bandwidth
	(MHz)	(MHz)
Low	5190	41.12
High	5230	40.72



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5190	40.80	40.48
High	5230	42.88	40.64

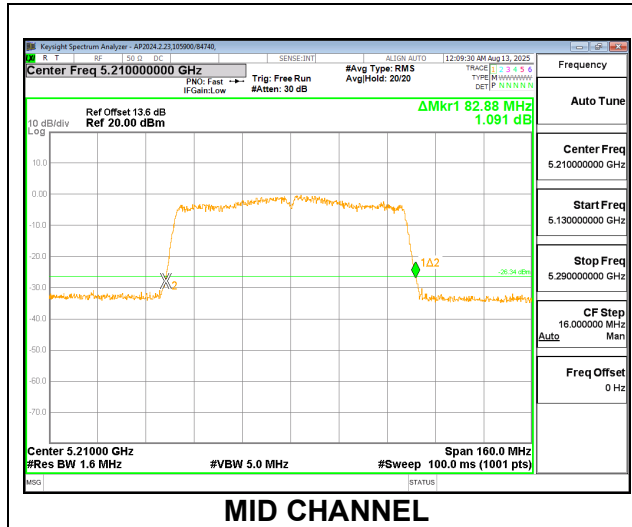
LOW CHANNEL



9.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

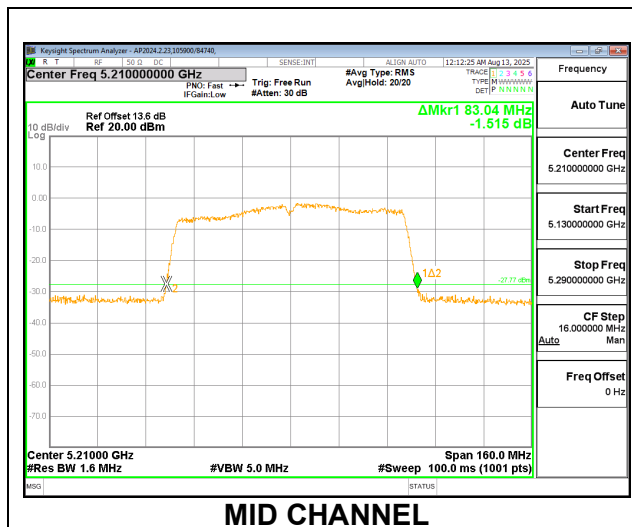
1TX Antenna 1 MODE

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5210	82.88



1TX Antenna 2 MODE

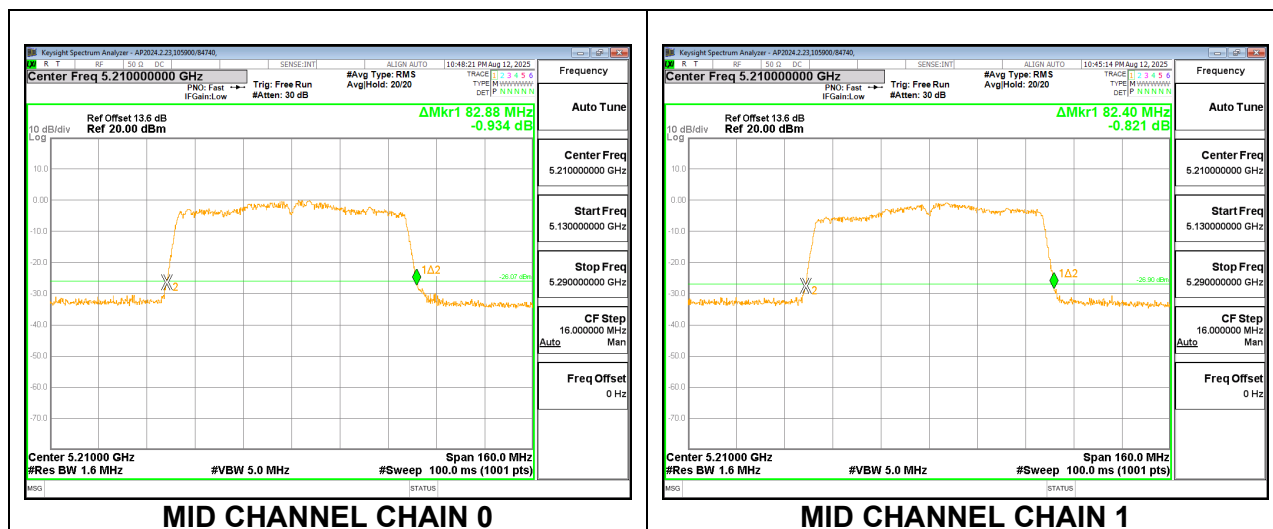
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5210	83.04



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5210	82.88	82.40

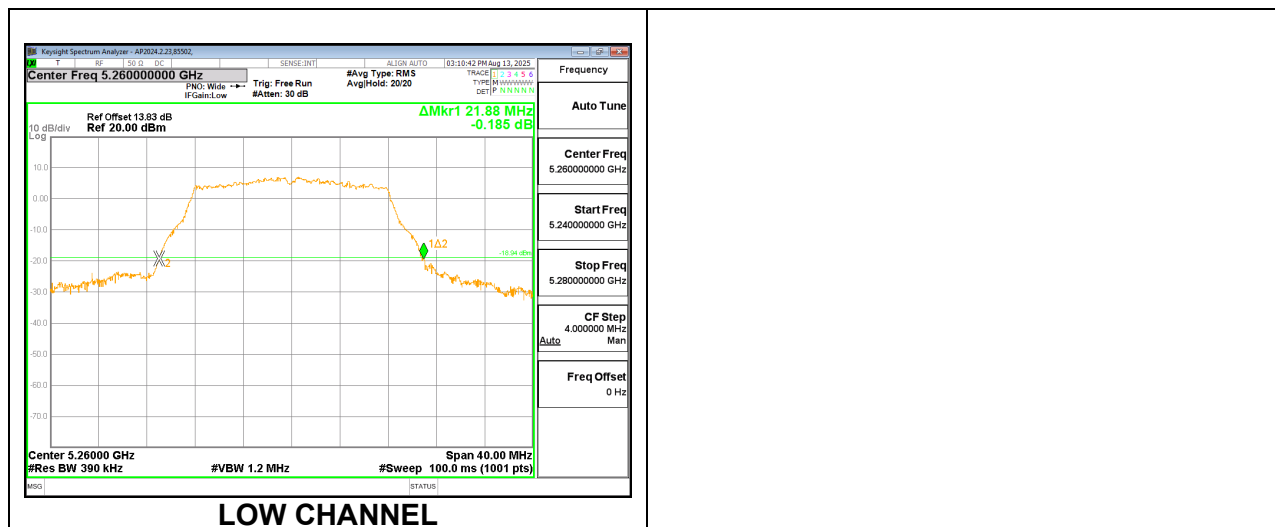
MID CHANNEL



9.2.5. 802.11a MODE IN THE 5.3 GHz BAND

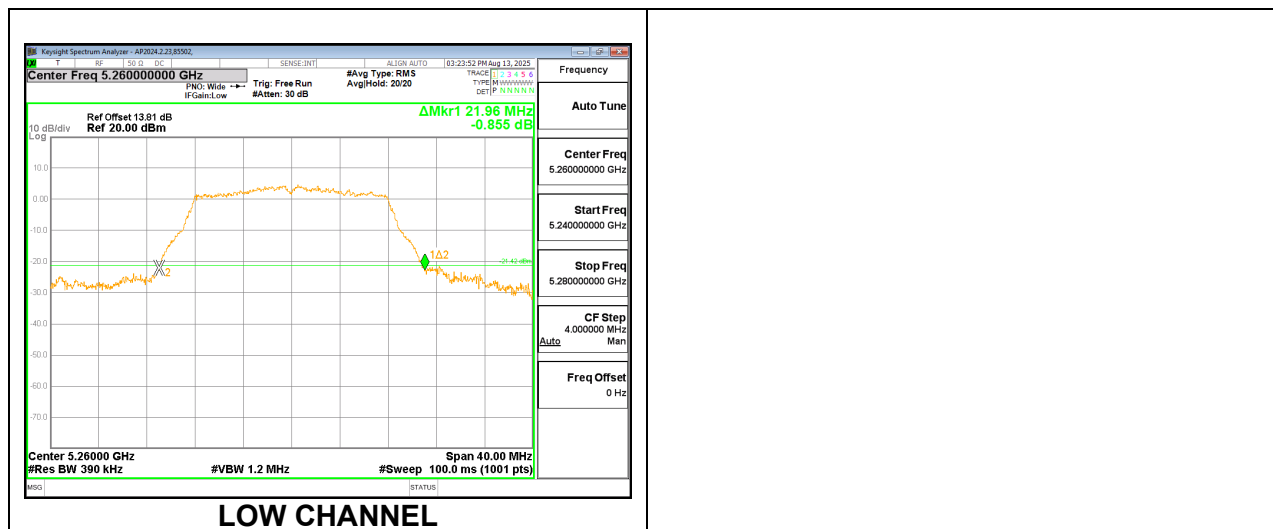
1TX Antenna 1 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.88
Mid	5300	22.08
High	5320	21.84



1TX Antenna 2 MODE

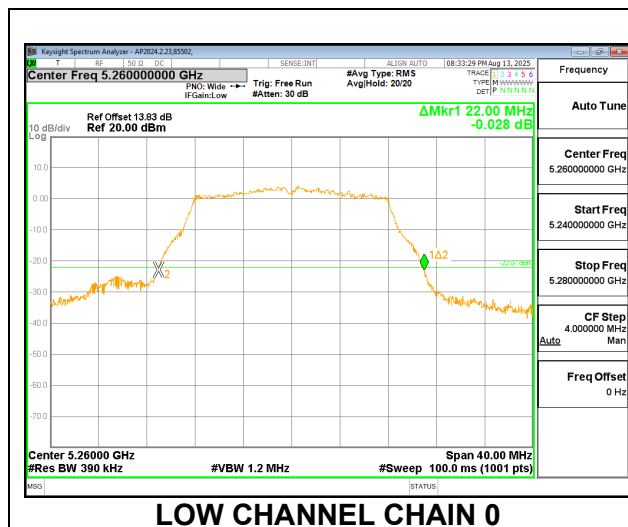
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.96
Mid	5300	22.64
High	5320	21.76



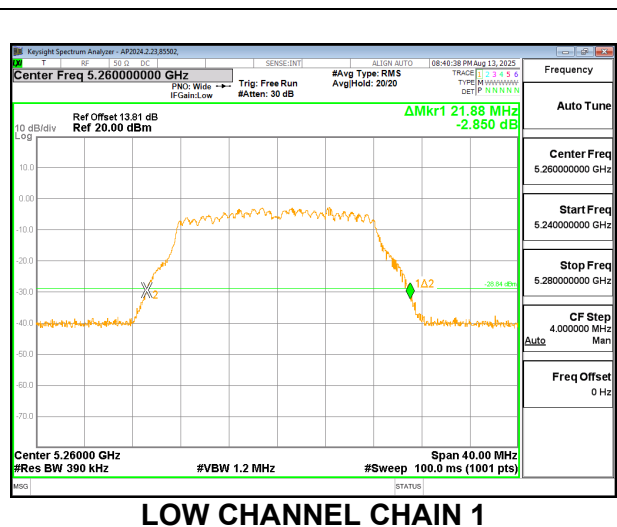
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	22.00	21.88
Mid	5300	21.92	21.64
High	5320	21.96	21.80

LOW CHANNEL



LOW CHANNEL CHAIN 0

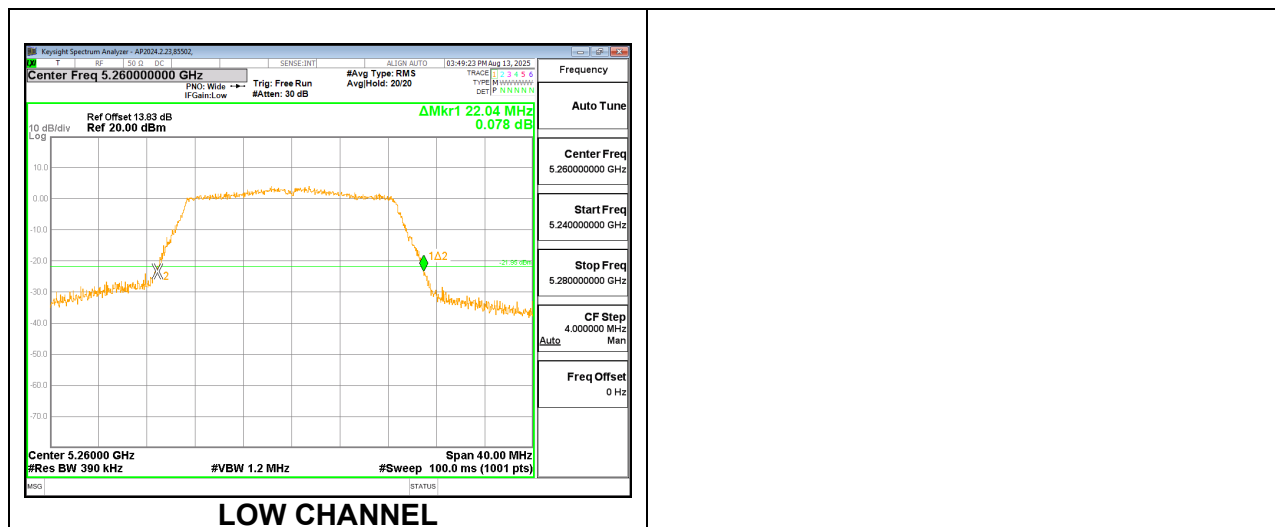


LOW CHANNEL CHAIN 1

9.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

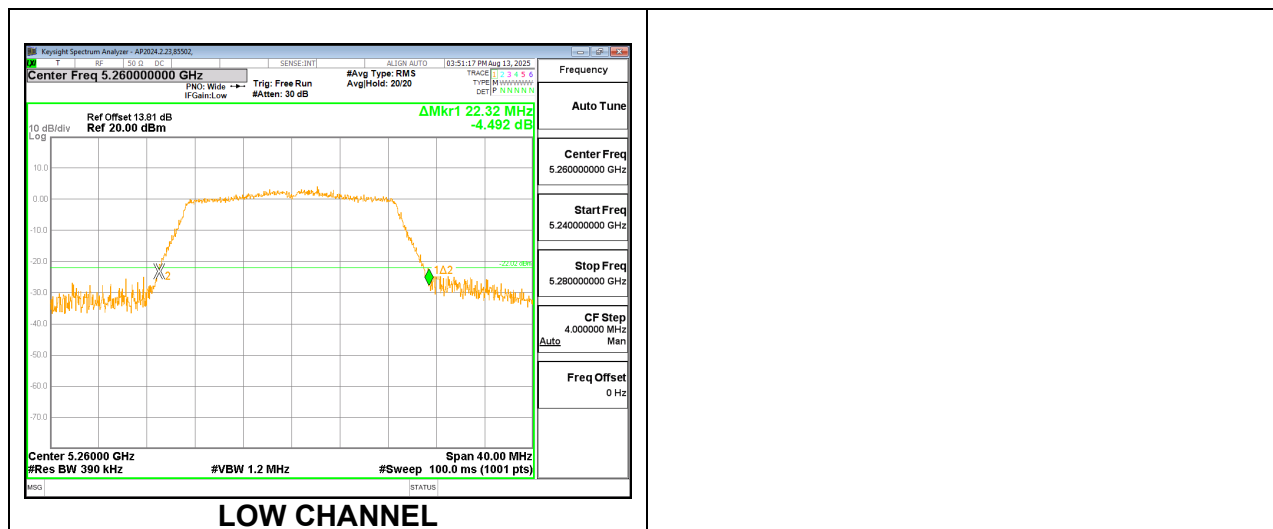
1TX Antenna 1 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.04
Mid	5300	22.00
High	5320	22.12



1TX Antenna 2 MODE

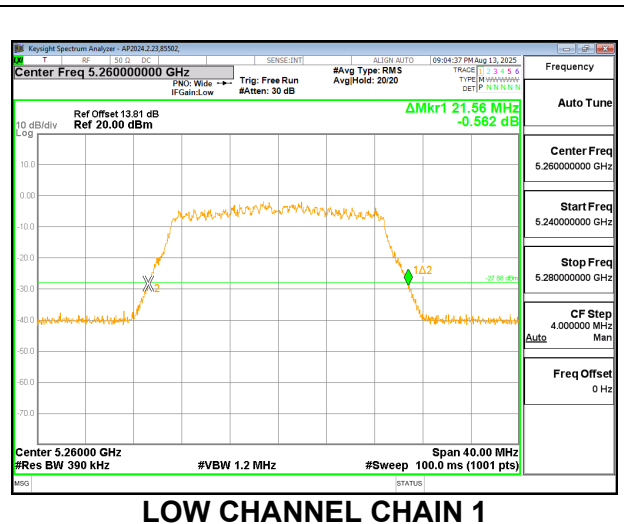
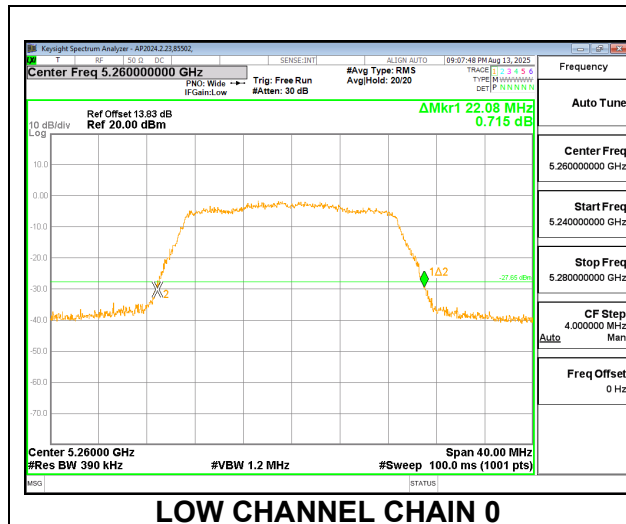
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.32
Mid	5300	22.00
High	5320	21.96



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	22.08	21.56
Mid	5300	22.04	21.60
High	5320	21.88	21.56

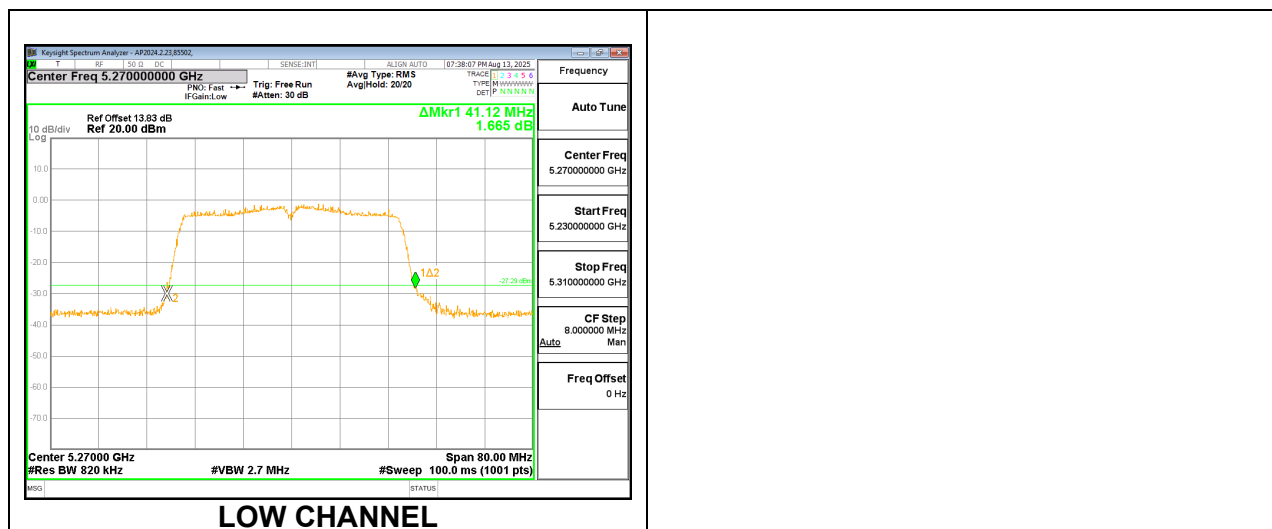
LOW CHANNEL



9.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

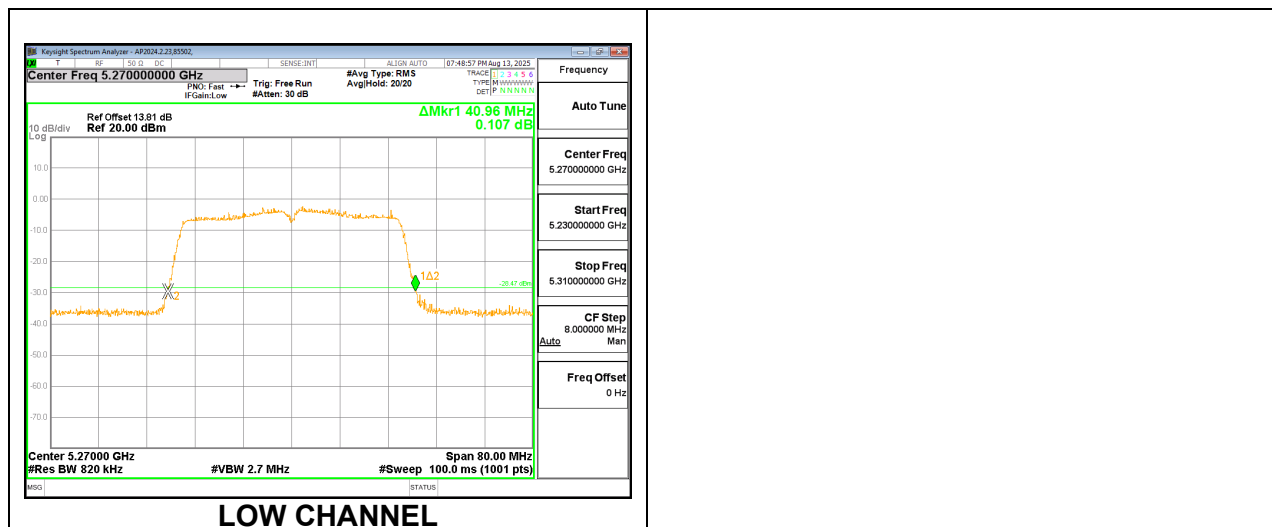
1TX Antenna 1 MODE

Channel	Frequency	26dB Bandwidth
	(MHz)	(MHz)
Low	5270	41.12
High	5310	41.04



1TX Antenna 2 MODE

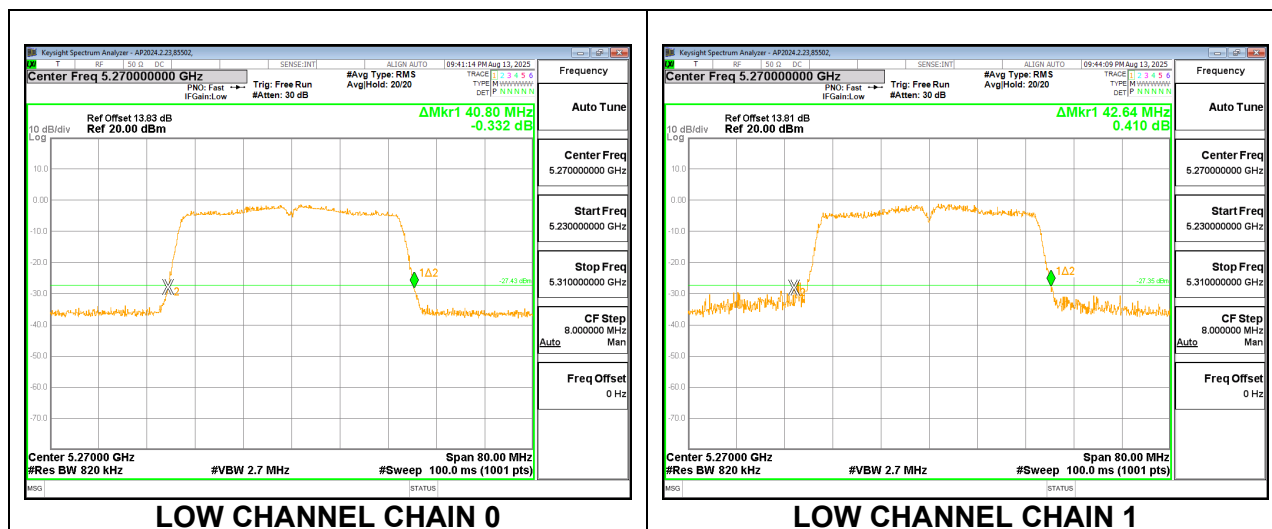
Channel	Frequency	26dB Bandwidth
	(MHz)	(MHz)
Low	5270	40.96
High	5310	41.04



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5270	40.80	42.64
High	5310	40.80	40.40

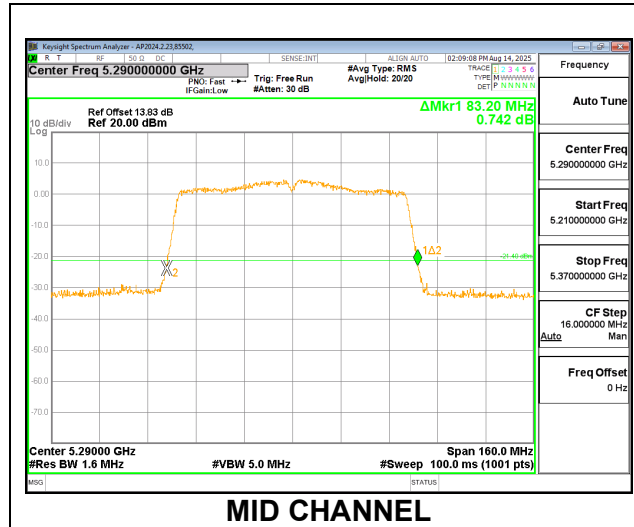
LOW CHANNEL



9.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

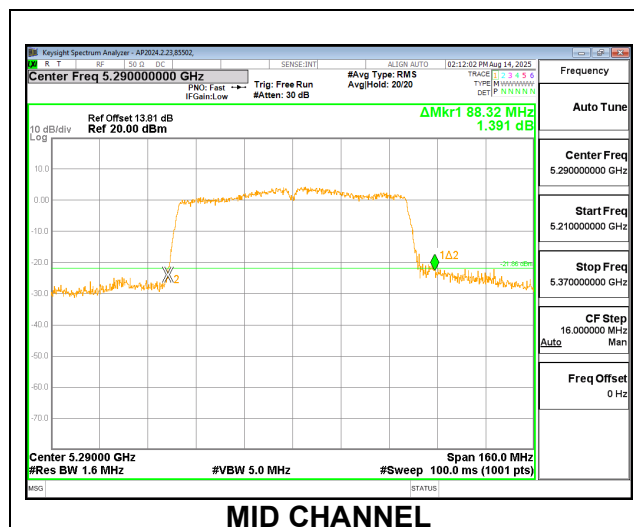
1TX Antenna 1 MODE

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5290	83.20



1TX Antenna 2 MODE

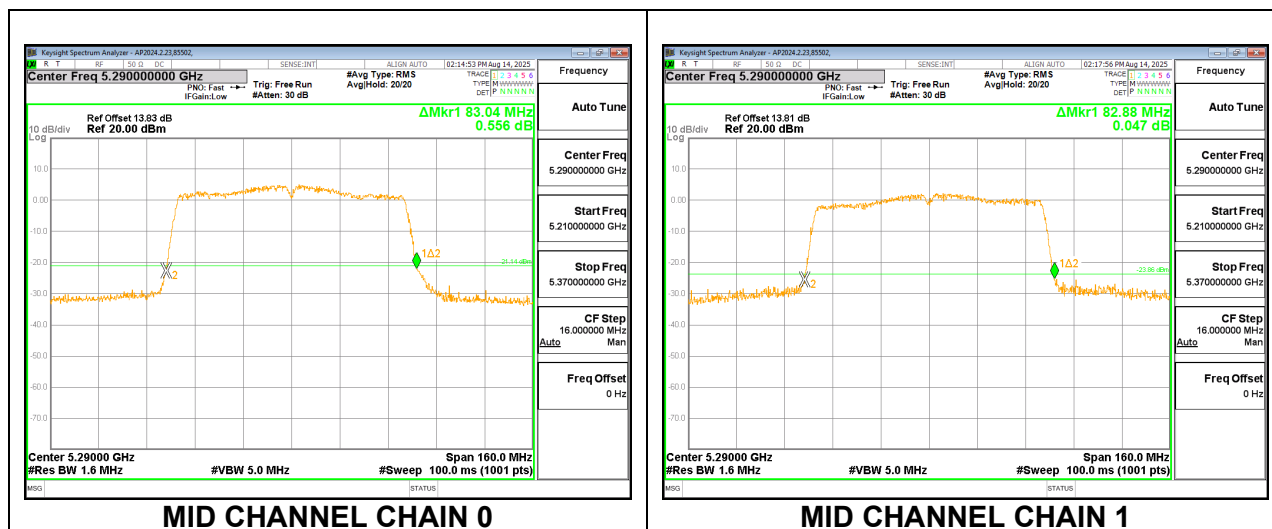
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5290	88.32



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5290	83.04	82.88

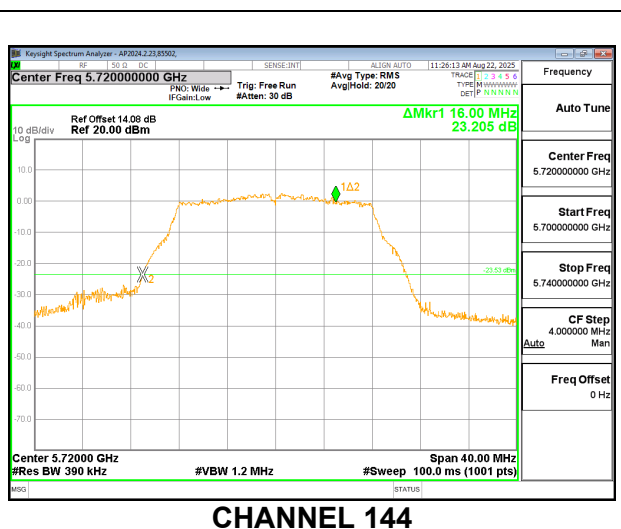
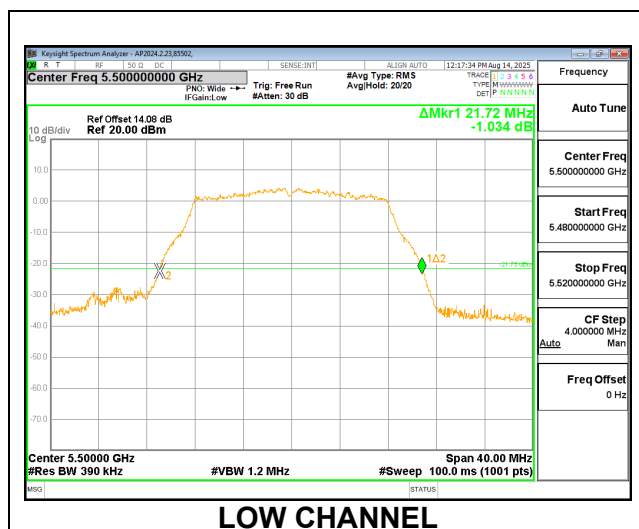
MID CHANNEL



9.2.9. 802.11a MODE IN THE 5.6 GHz BAND

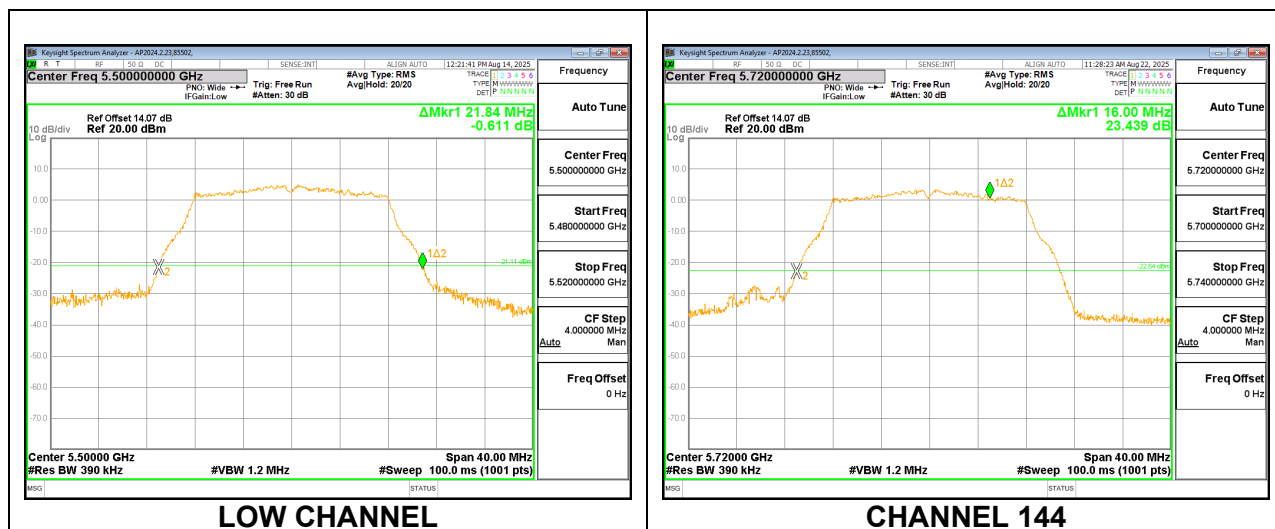
1TX Antenna 1 MODE

Frequency	26 dB Bandwidth
(MHz)	(MHz)
5500	21.72
5600	21.88
5700	21.88
5720	16.00



1TX Antenna 2 MODE

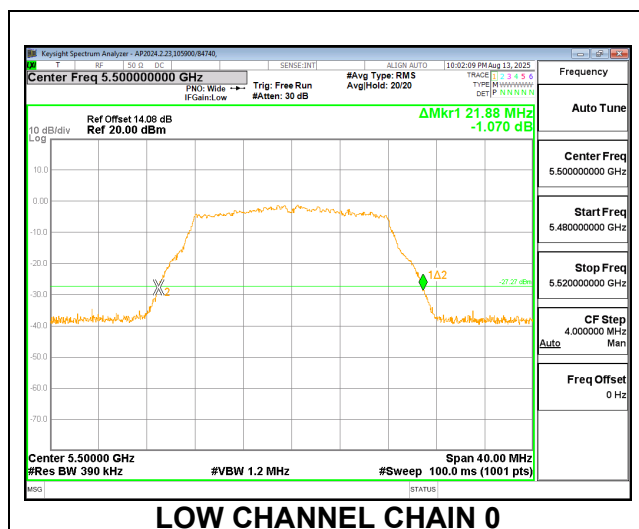
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5500	21.84
Mid	5600	21.88
High	5700	21.84
144	5720	16.00



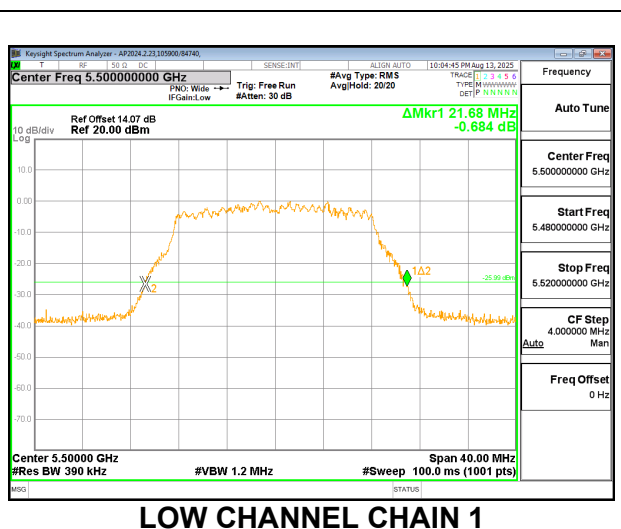
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	21.88	21.68
Mid	5600	21.80	21.96
High	5700	21.88	21.84
144	5720	15.96	16.00

LOW CHANNEL

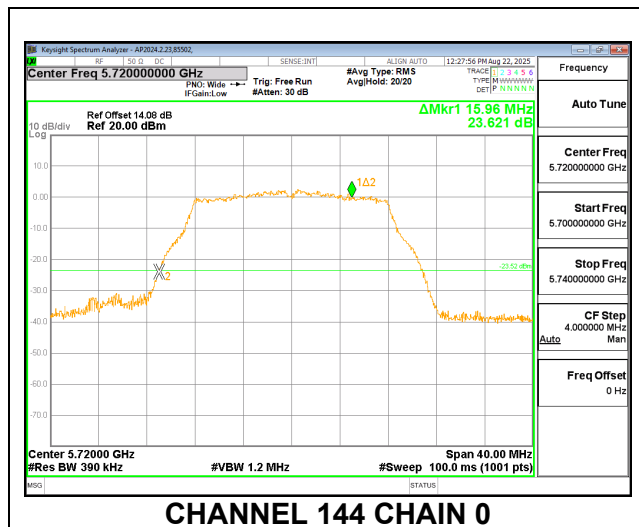


LOW CHANNEL CHAIN 0

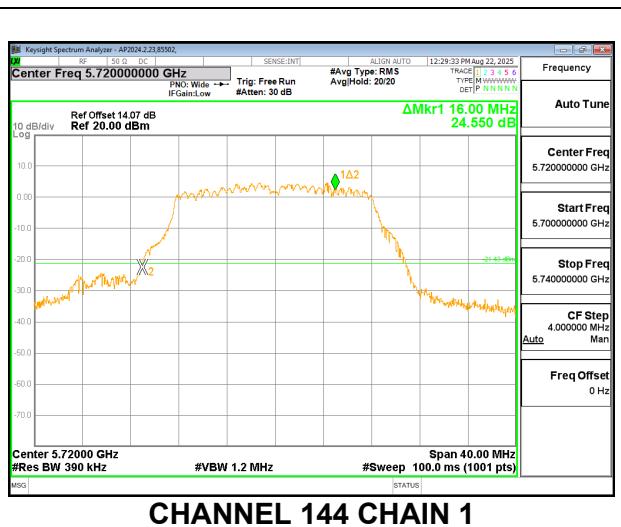


LOW CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0

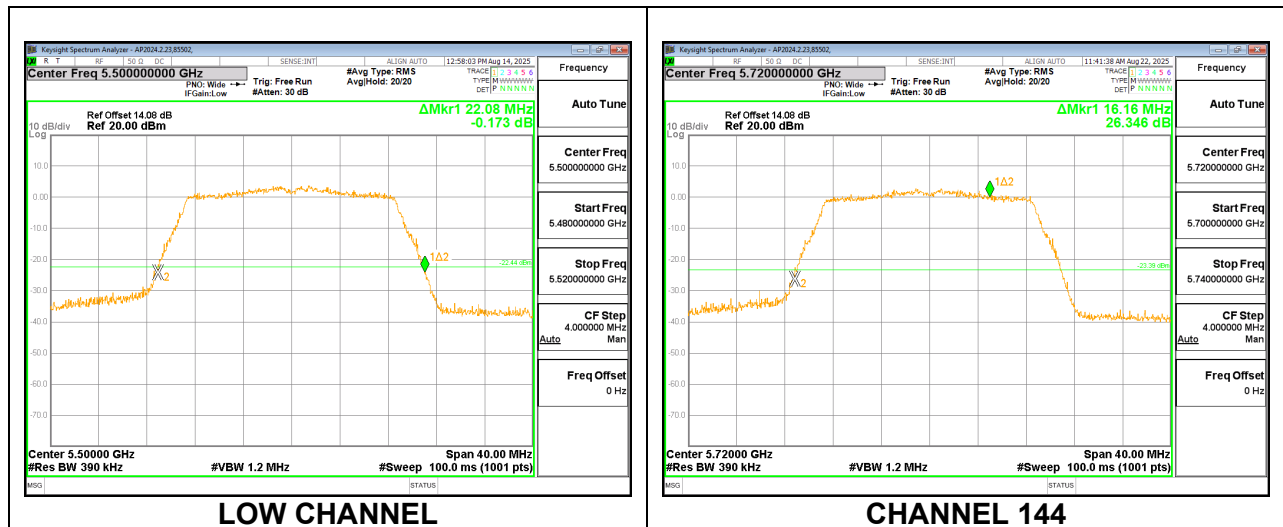


CHANNEL 144 CHAIN 1

9.2.10. 802.11n HT20 MODE IN THE 5.6 GHz BAND

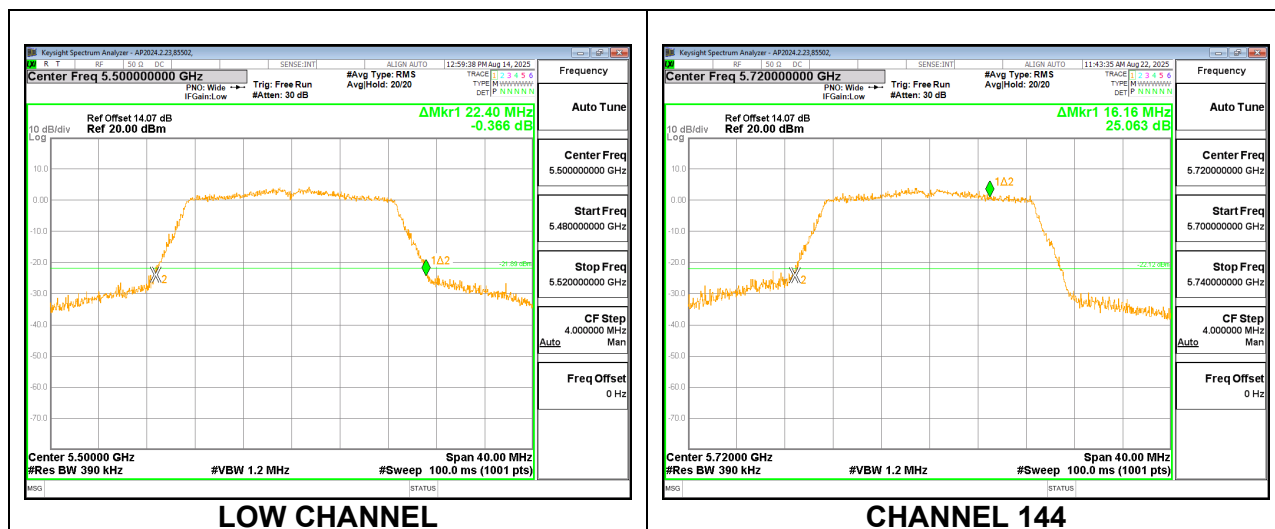
1TX Antenna 1 MODE

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5500	22.08
Mid	5600	22.20
High	5700	23.44
144	5720	16.16



1TX Antenna 2 MODE

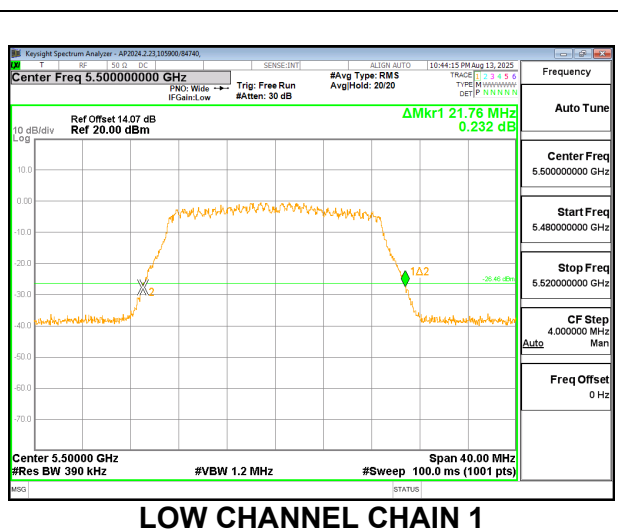
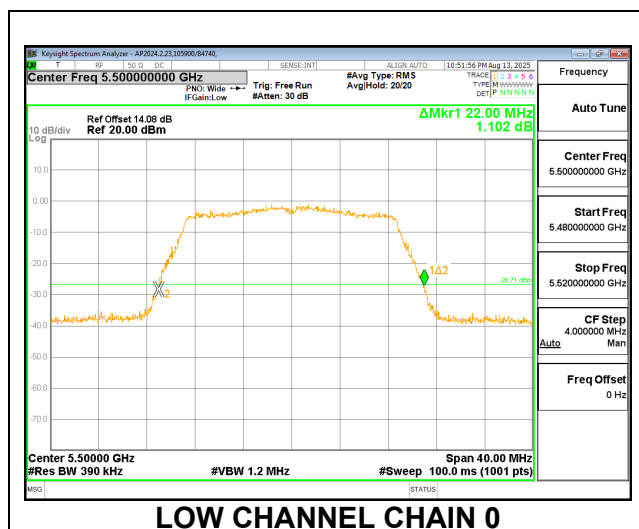
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5500	22.40
Mid	5600	22.04
High	5700	22.12
144	5720	16.16



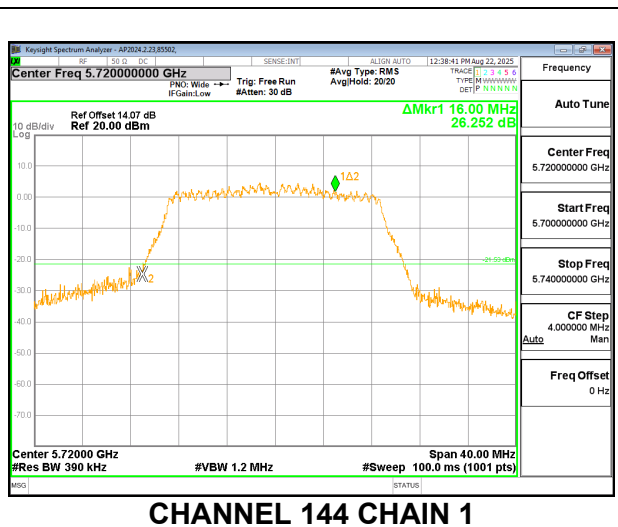
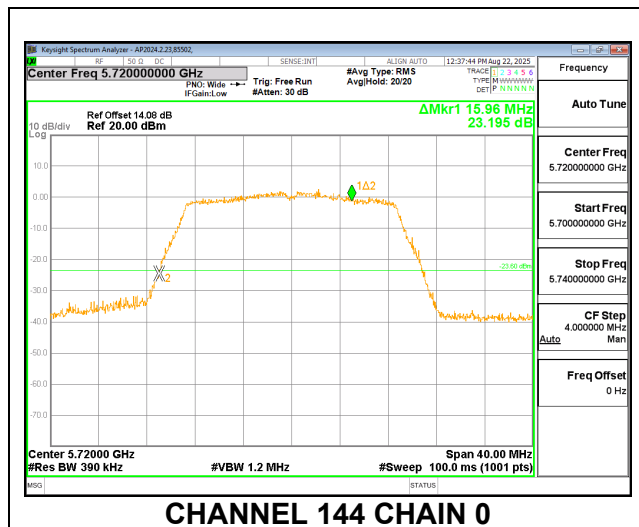
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	22.00	21.76
Mid	5600	21.96	21.76
High	5700	21.92	21.52
144	5720	15.96	16.00

LOW CHANNEL



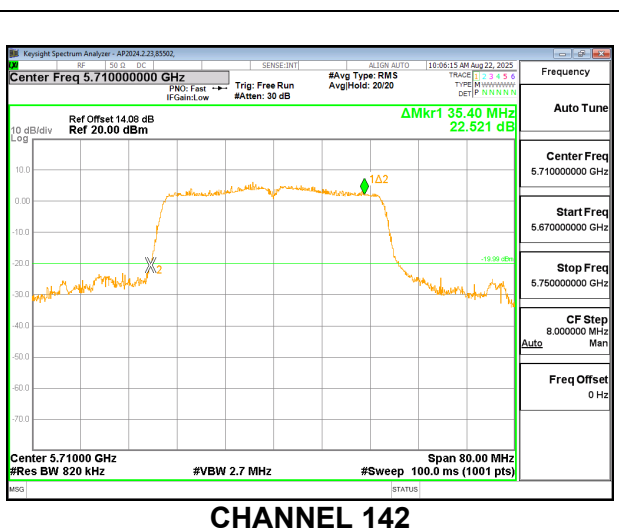
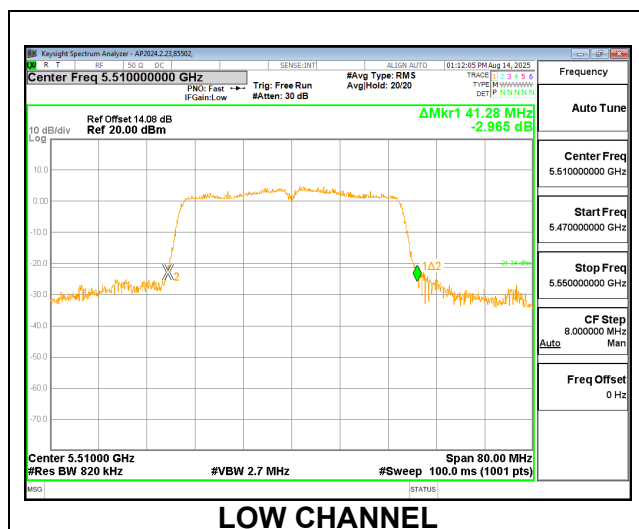
CHANNEL 144



9.2.11. 802.11n HT40 MODE IN THE 5.6 GHz BAND

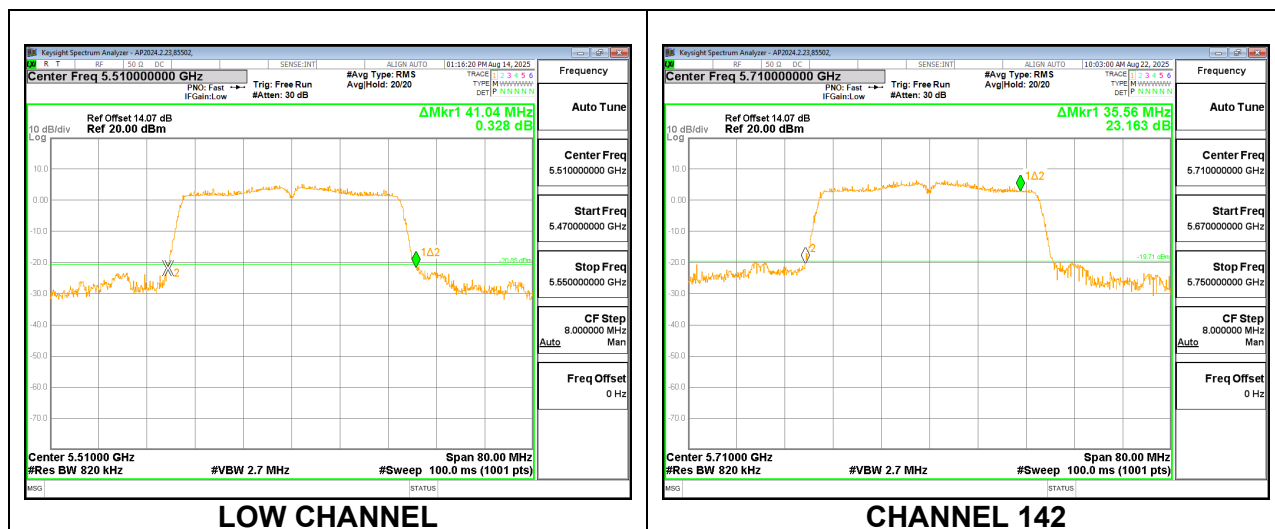
1TX Antenna 1 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	41.28
Mid	5590	41.60
High	5670	41.52
142	5710	35.40



1TX Antenna 2 MODE

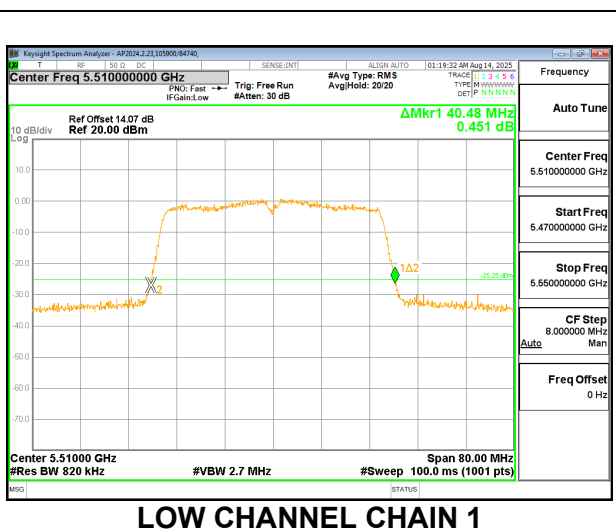
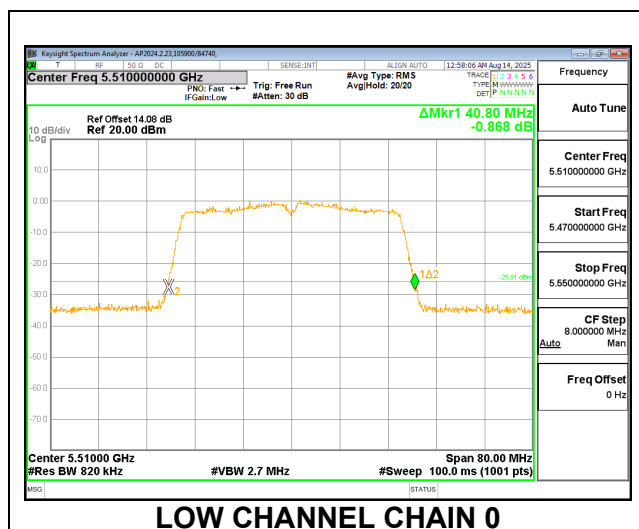
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5510	41.04
Mid	5590	41.36
High	5670	41.12
142	5710	35.56



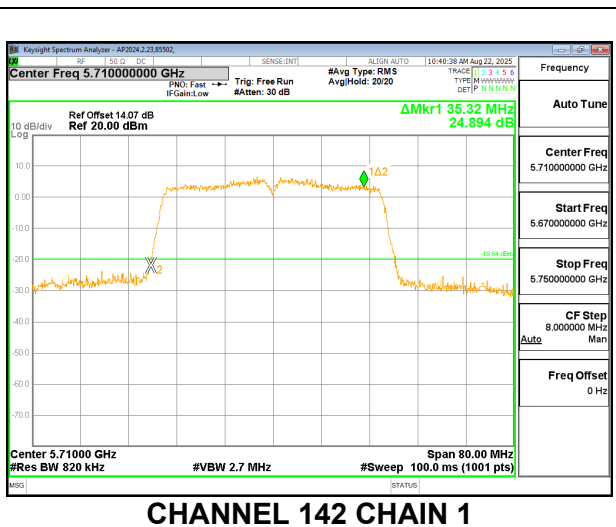
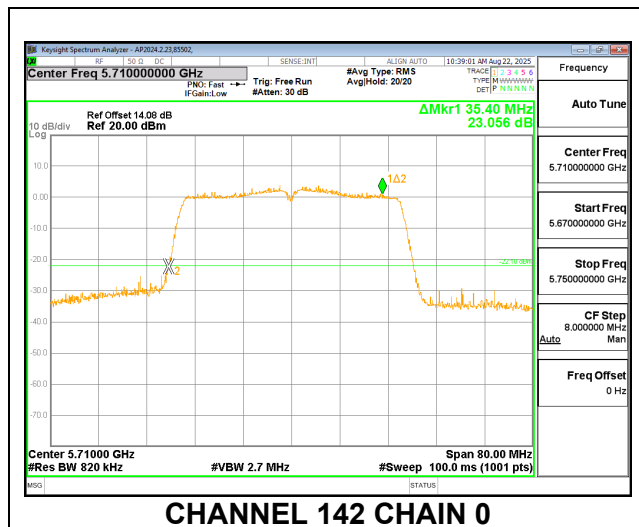
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5510	40.80	40.48
Mid	5590	40.80	40.80
High	5670	40.80	40.56
142	5710	35.40	35.32

LOW CHANNEL



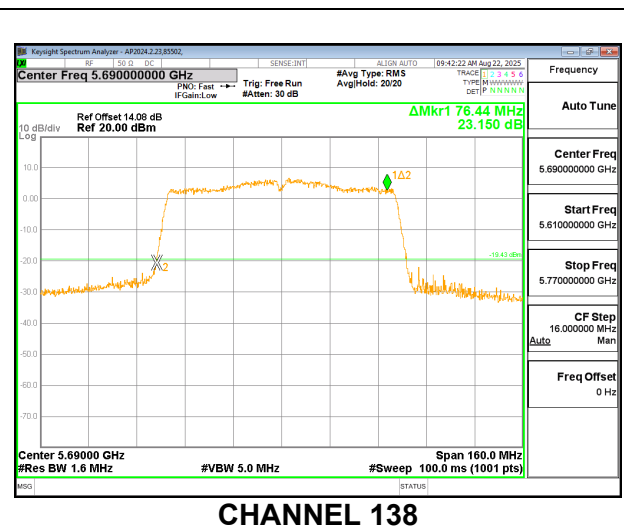
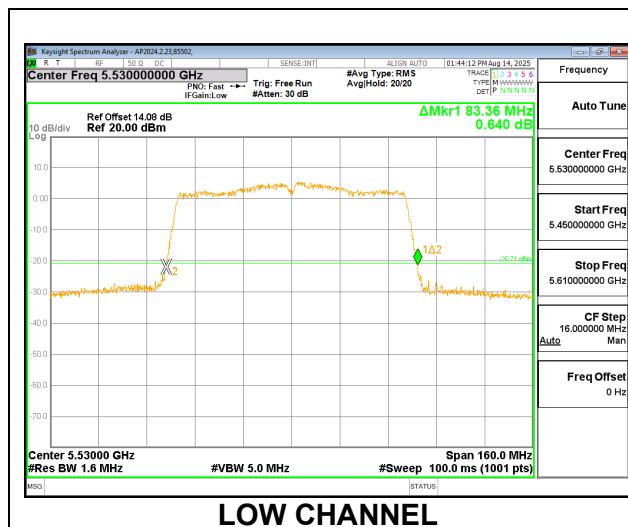
CHANNEL 142



9.2.12. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

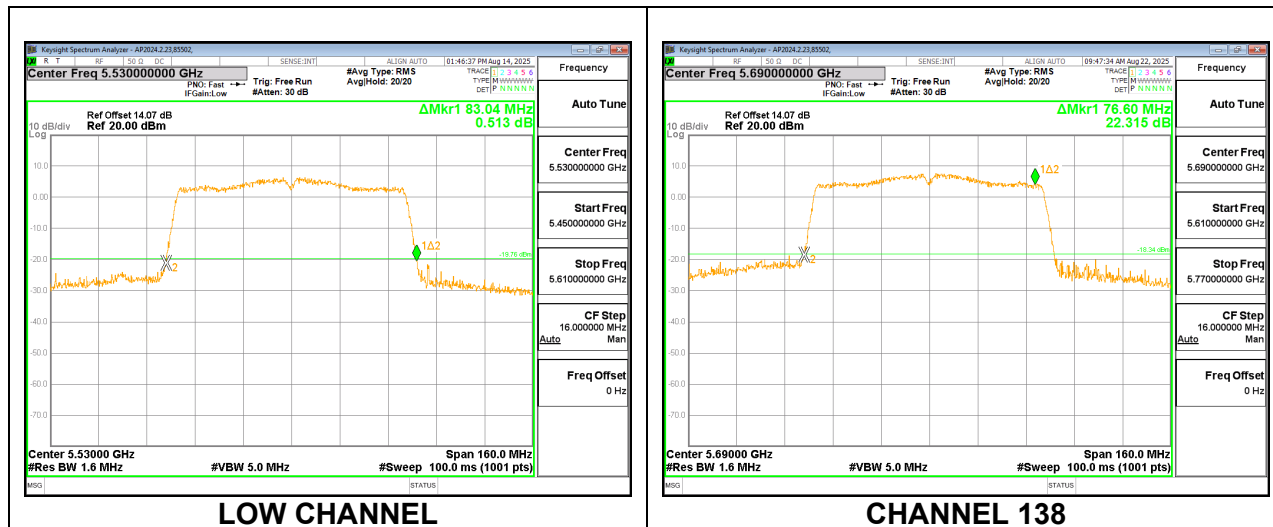
1TX Antenna 1 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	83.36
High	5610	83.20
138	5690	76.44



1TX Antenna 2 MODE

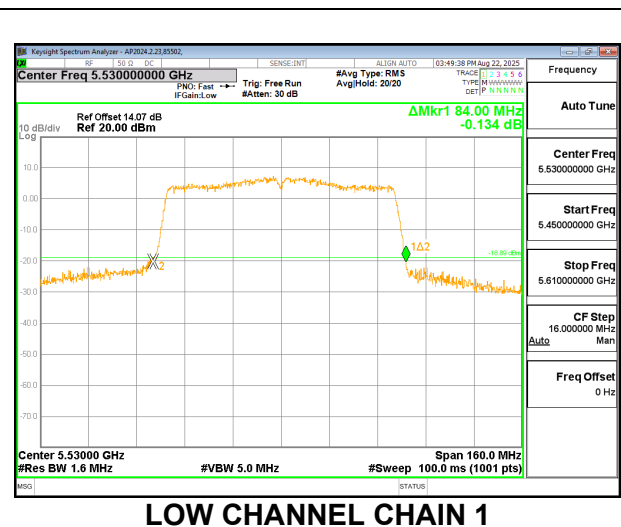
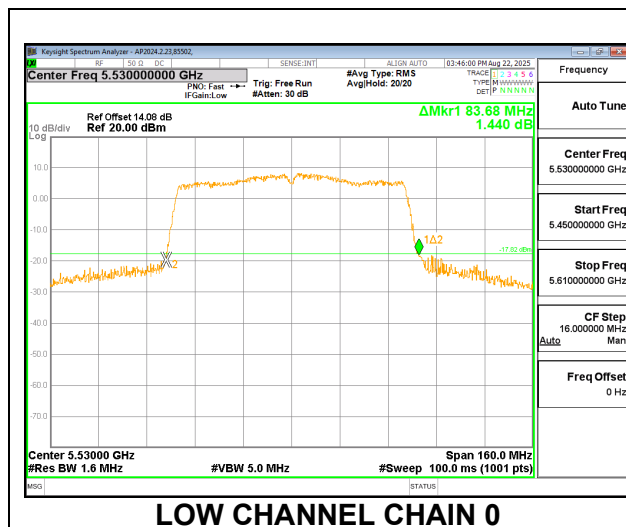
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	83.04
High	5610	83.20
138	5690	76.60



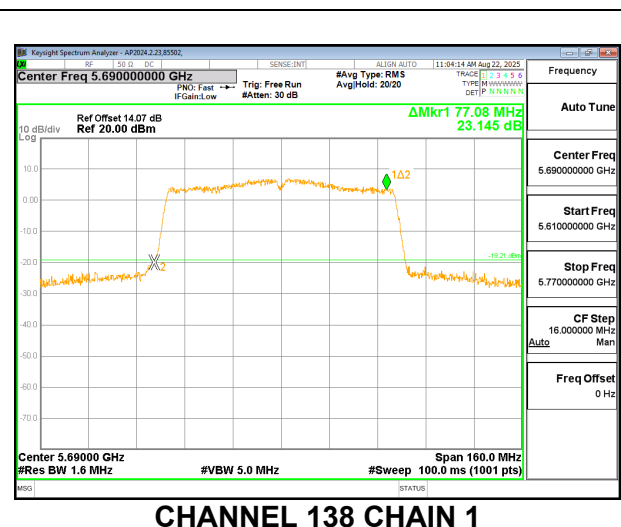
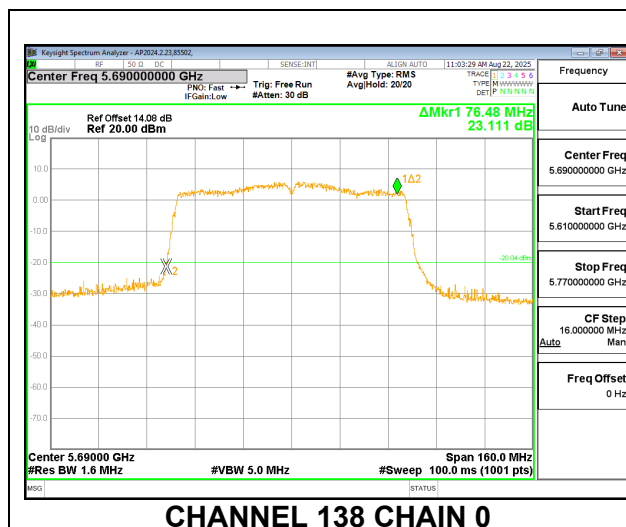
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5530	83.68	84.00
High	5610	83.52	84.16
138	5690	76.48	77.08

LOW CHANNEL



CHANNEL 138



9.3. 99% BANDWIDTH

LIMITS

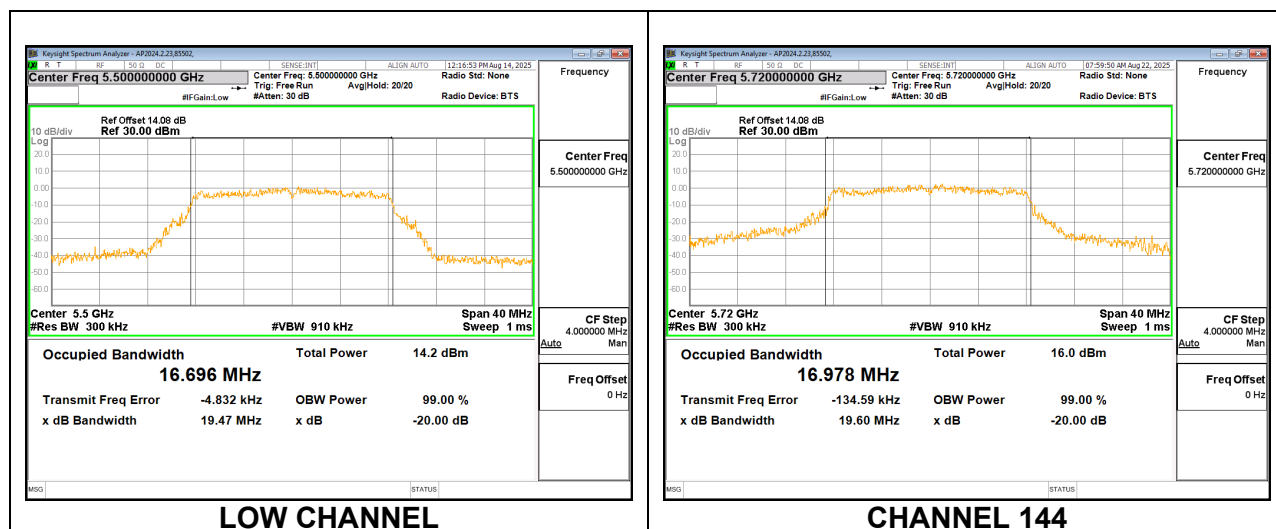
None; for reporting purposes only.

RESULTS

9.3.1. 802.11a MODE IN THE 5.6 GHz BAND

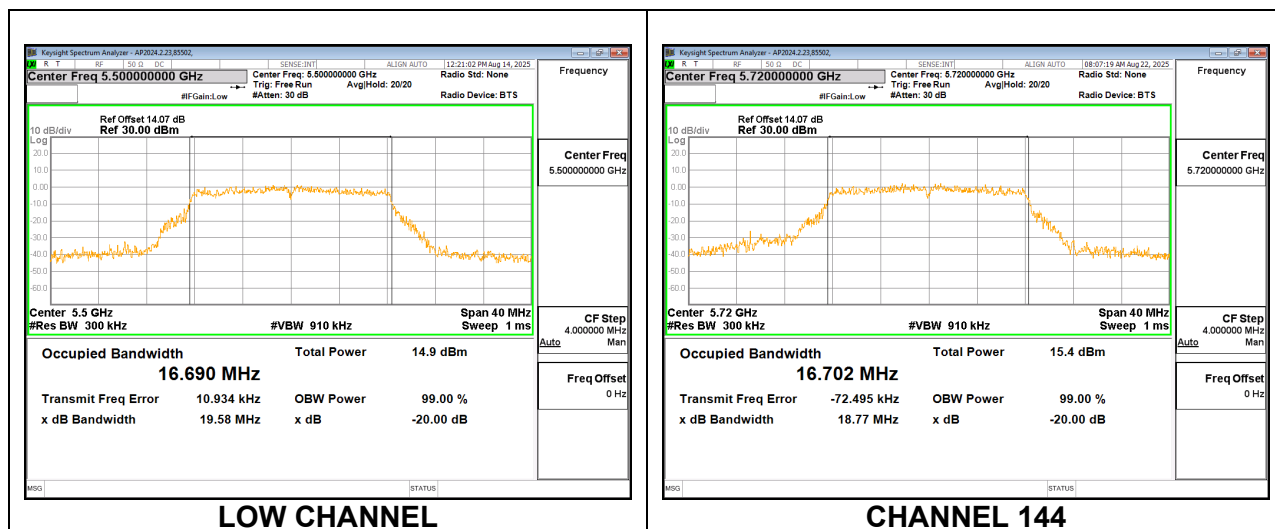
1TX Antenna 1 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.6960
Mid	5600	16.7480
High	5700	16.6930
144	5720	16.9780



1TX Antenna 2 MODE

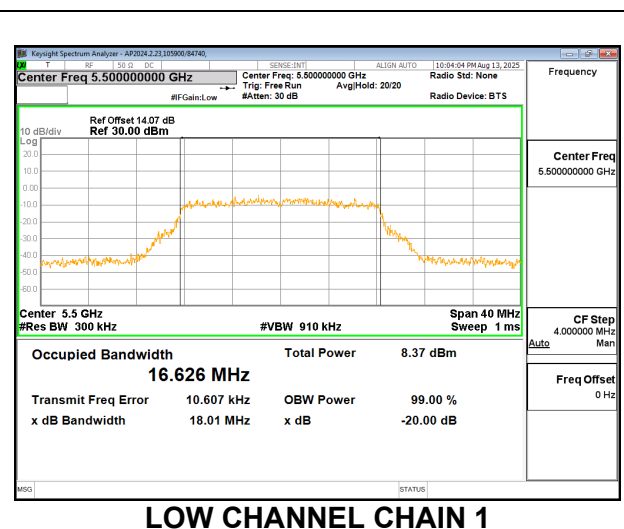
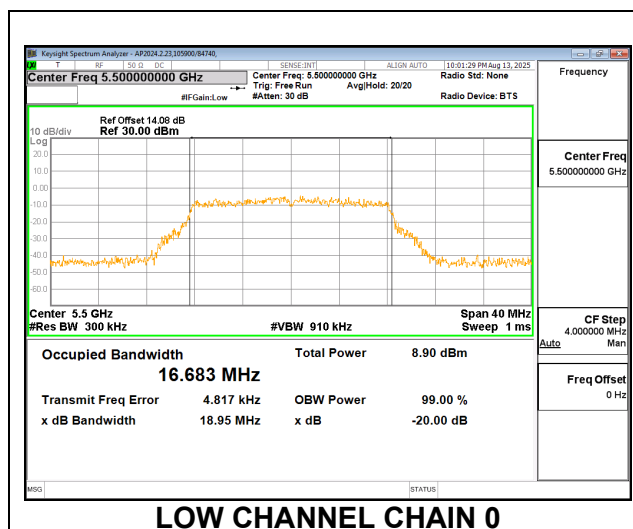
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5500	16.6900
Mid	5600	16.7260
High	5700	16.7250
144	5720	16.7020



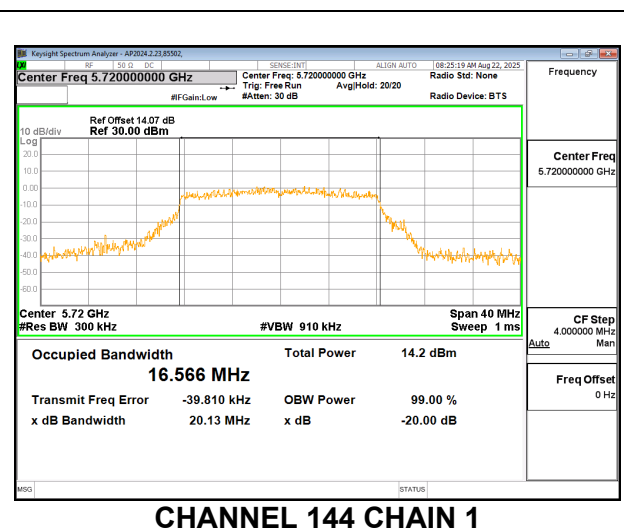
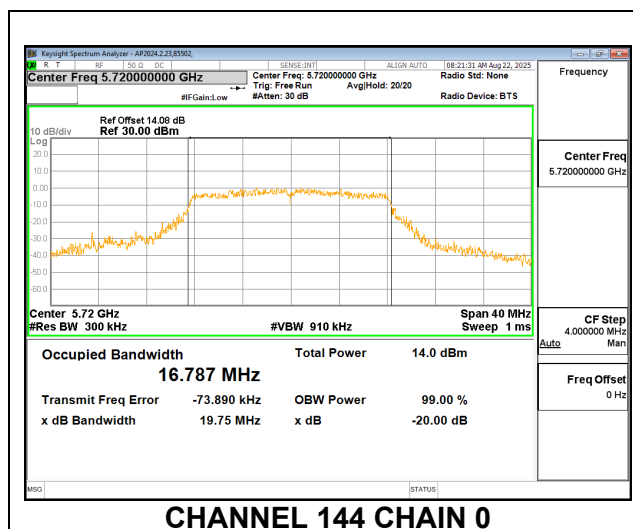
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5500	16.6830	16.6260
Mid	5600	16.6280	16.6640
High	5700	16.7120	16.6280
144	5720	16.7870	16.5660

LOW CHANNEL



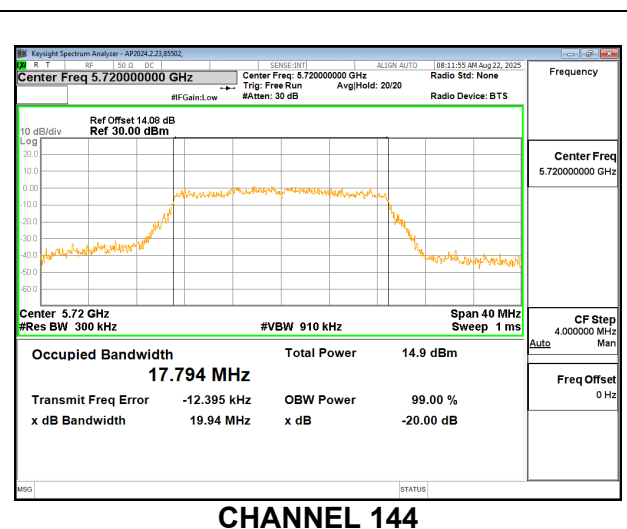
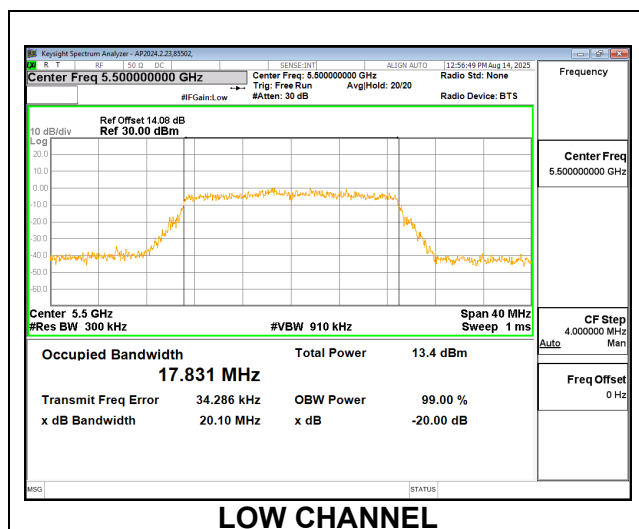
CHANNEL 144



9.3.2. 802.11n HT20 MODE IN THE 5.6 GHz BAND

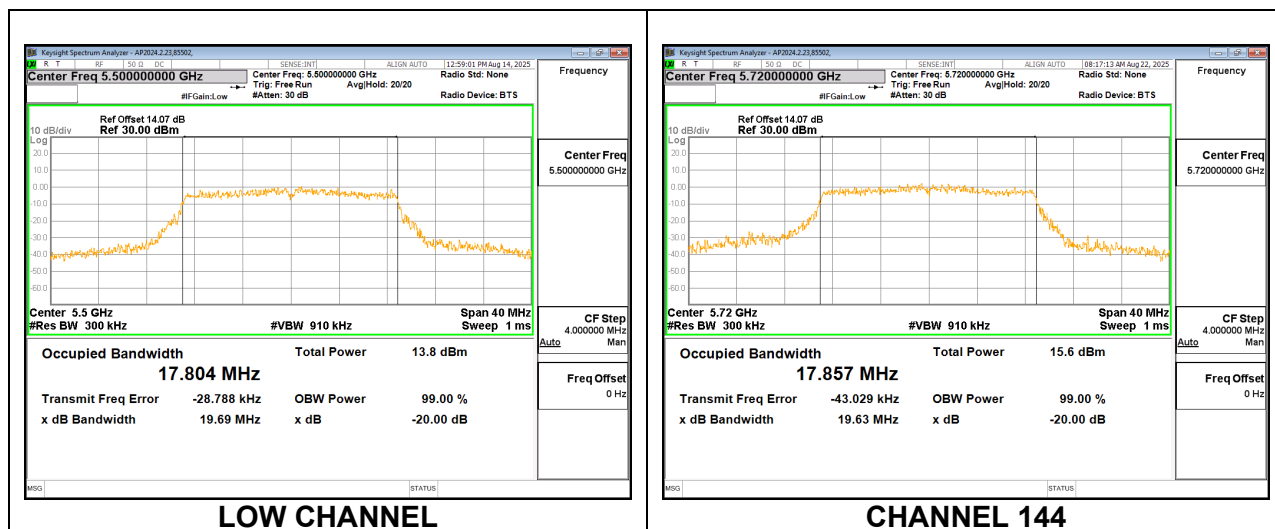
1TX Antenna 1 MODE

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5500	17.8310
Mid	5600	17.7410
High	5700	17.7760
144	5720	17.7940



1TX Antenna 2 MODE

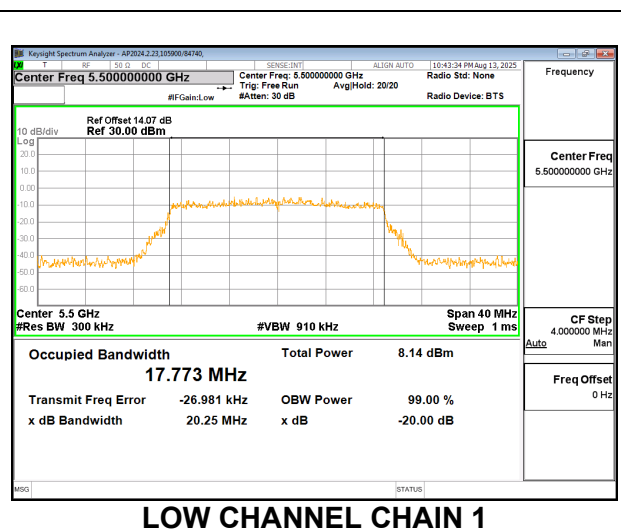
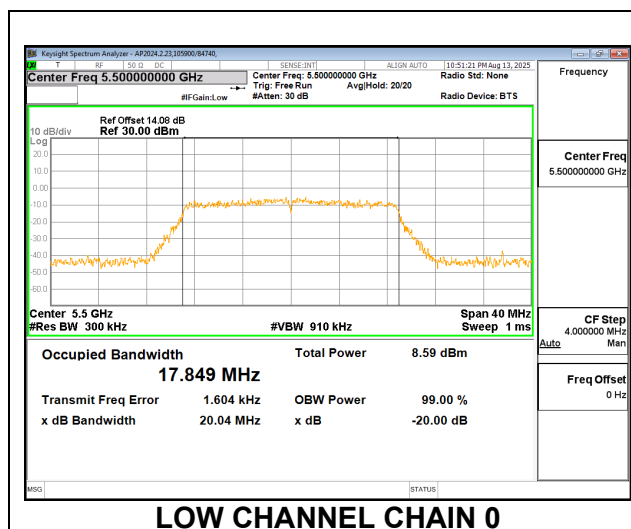
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5500	17.8040
Mid	5600	17.7820
High	5700	17.8010
144	5720	17.8570



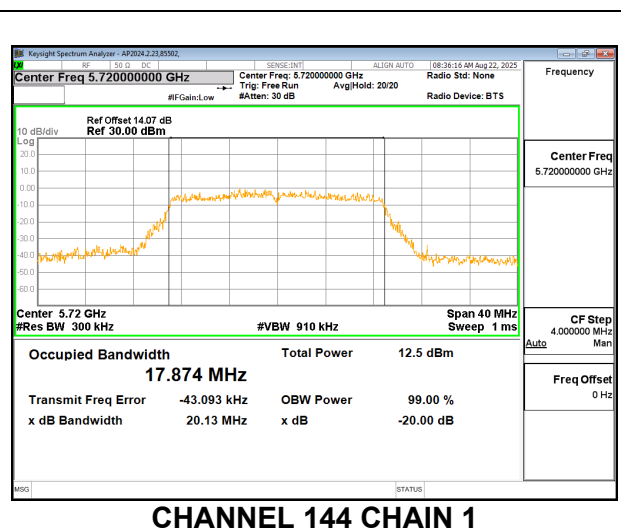
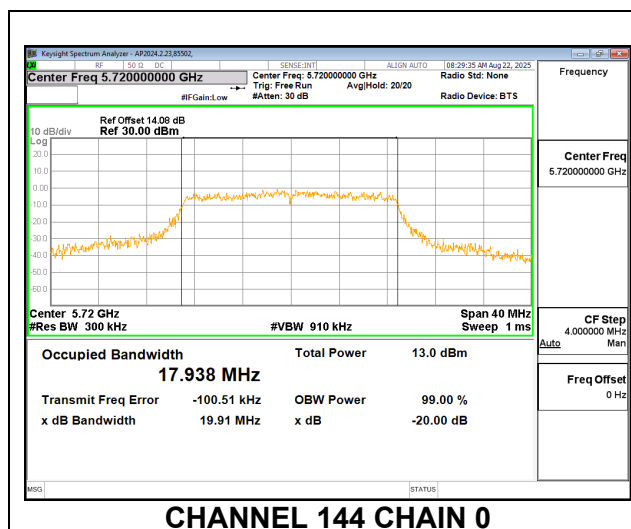
2TX Antenna 1 + Antenna 2 CDD MODE

	Chain 0 (MHz)	Chain 1 (MHz)
5500	17.8490	17.7730
5600	17.8160	17.8320
5700	17.8220	17.7750
5720	17.9380	17.8740

LOW CHANNEL



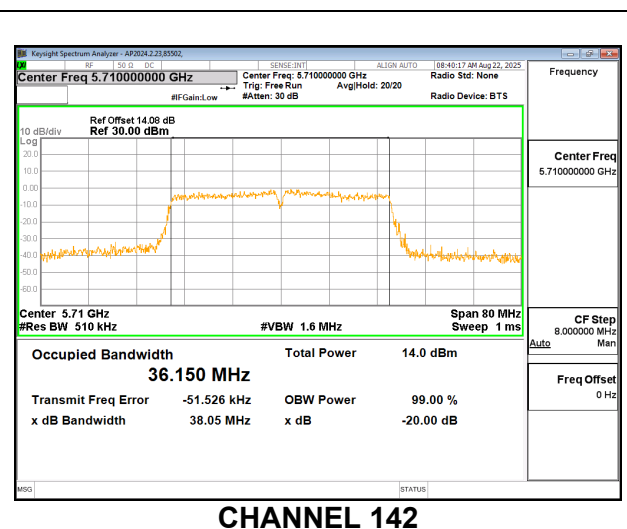
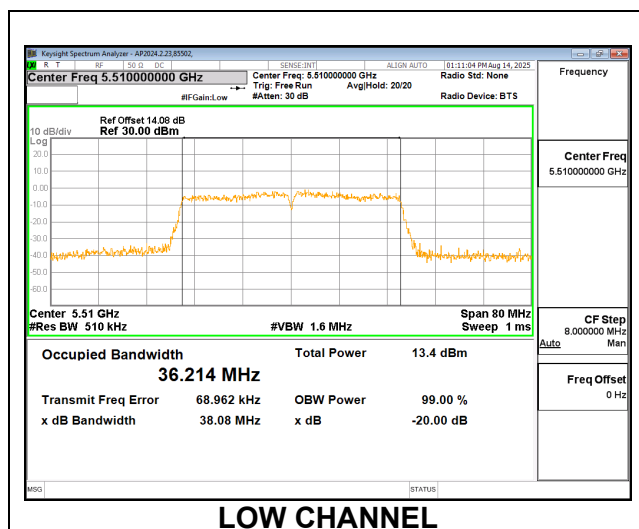
CHANNEL 144



9.3.3. 802.11n HT40 MODE IN THE 5.6 GHz BAND

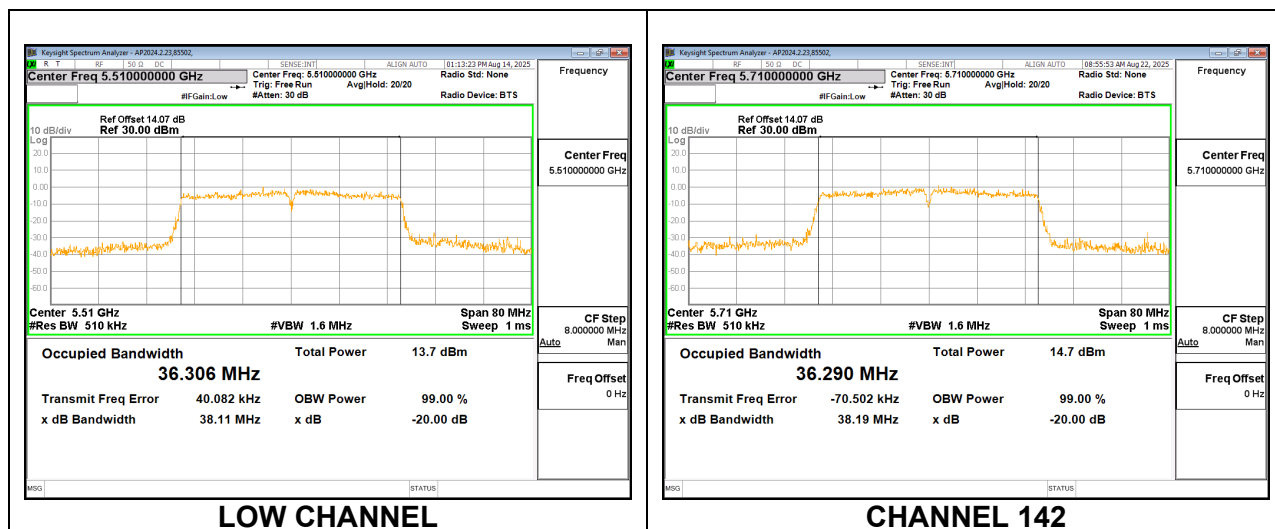
1TX Antenna 1 MODE

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5510	36.2140
Mid	5590	36.1900
High	5670	36.1760
142	5710	36.1500



1TX Antenna 2 MODE

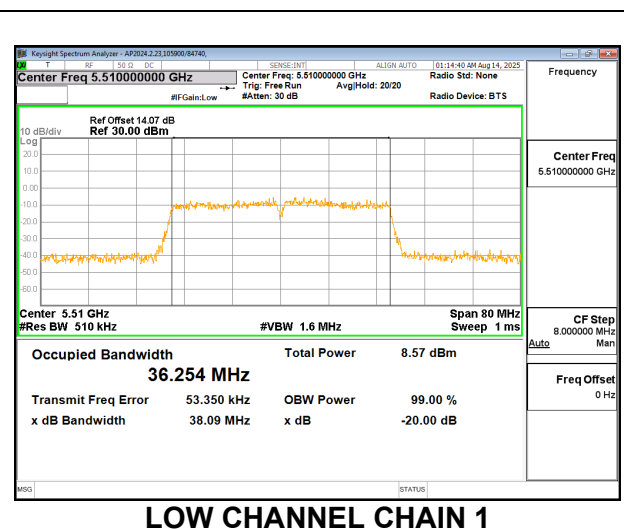
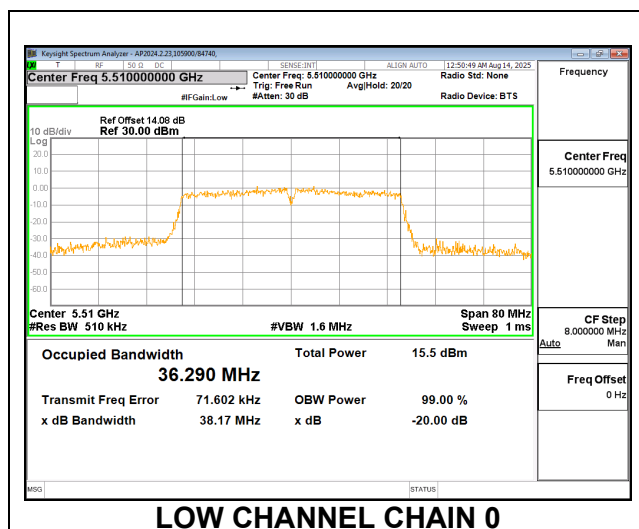
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5510	36.3060
Mid	5590	36.1390
High	5670	36.2370
142	5710	36.2900



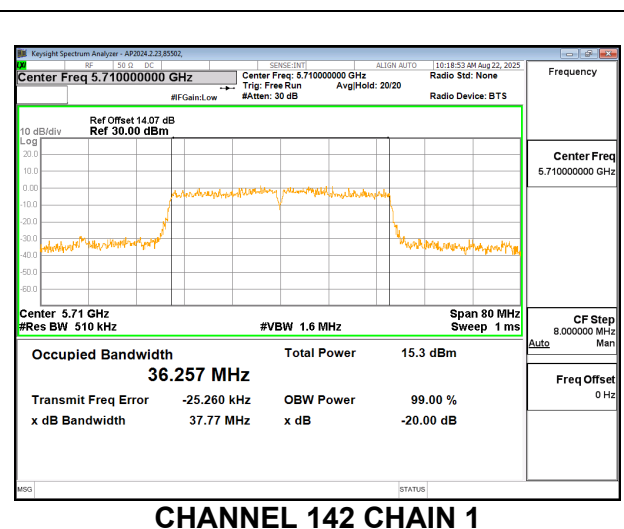
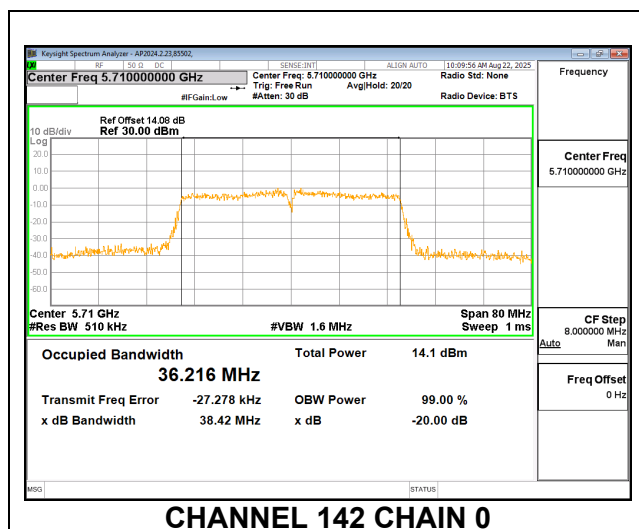
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5510	36.2900	36.2540
Mid	5590	36.1760	36.1880
High	5670	36.2060	36.1770
142	5710	36.2160	36.2570

LOW CHANNEL



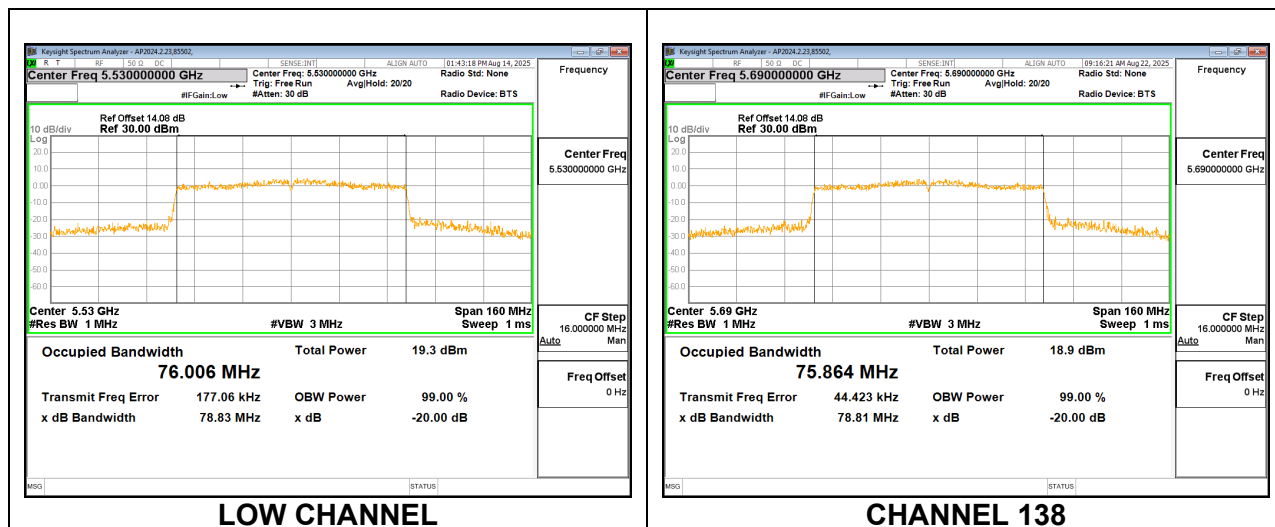
CHANNEL 142



9.3.4. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

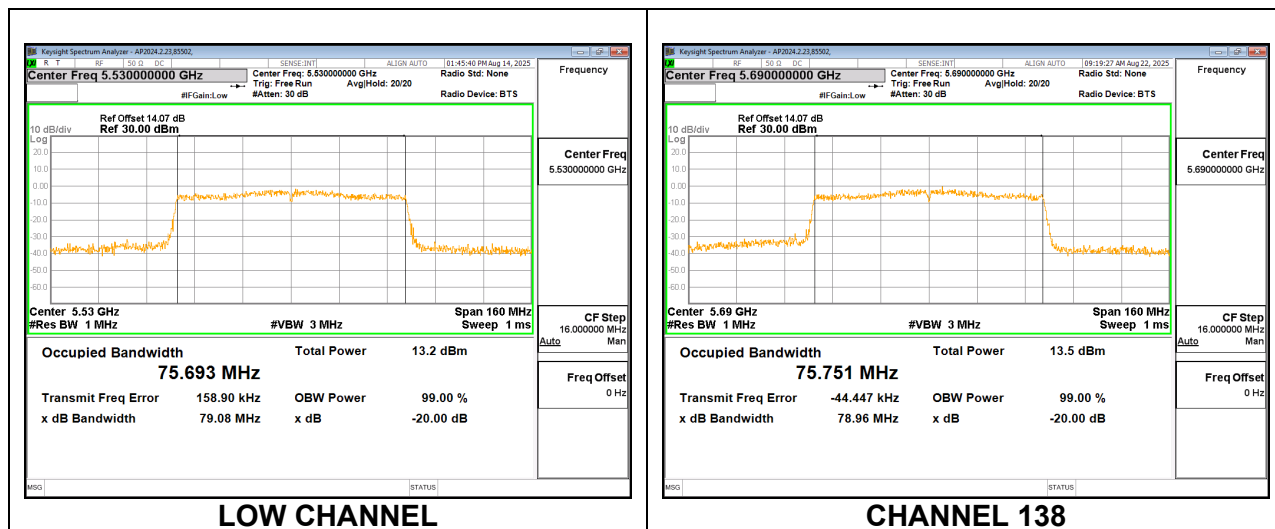
1TX Antenna 1 MODE

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5530	76.0060
High	5610	75.7820
138	5690	75.8640



1TX Antenna 2 MODE

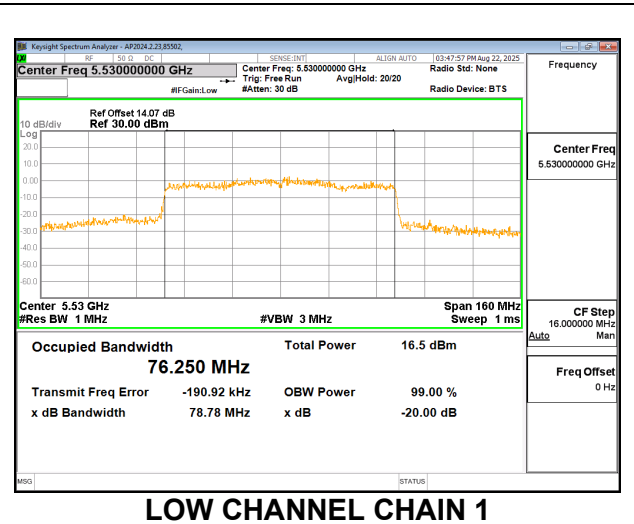
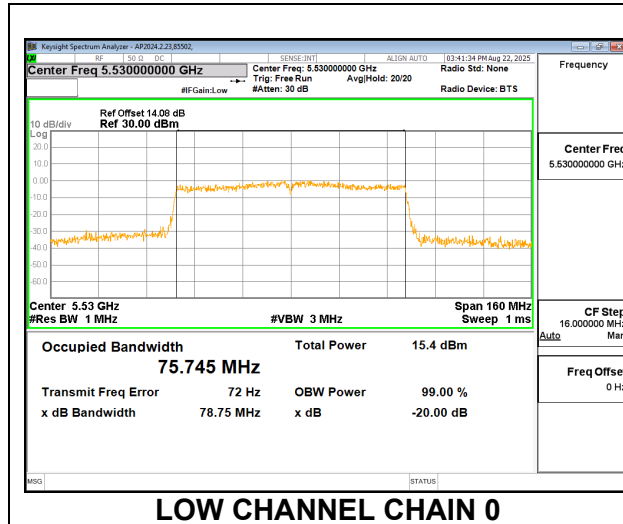
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5530	75.6930
High	5610	75.8820
138	5690	75.7510



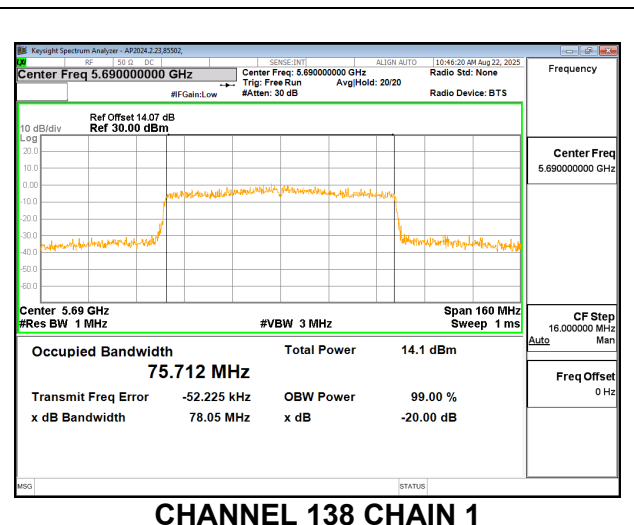
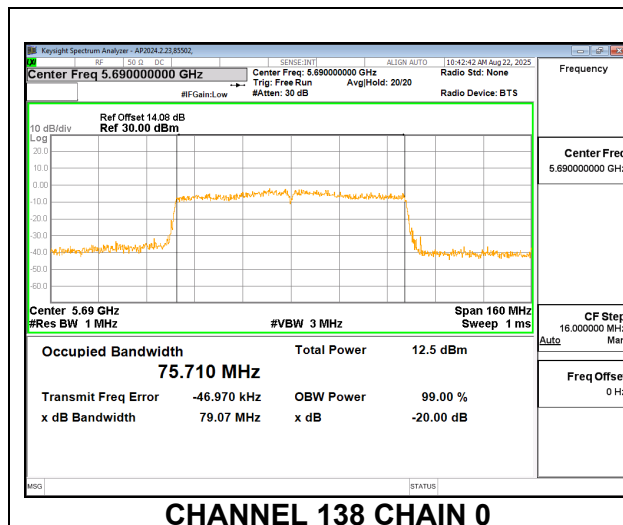
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5530	75.7450	76.2500
High	5610	75.7380	75.7890
138	5690	75.7100	75.7120

LOW CHANNEL



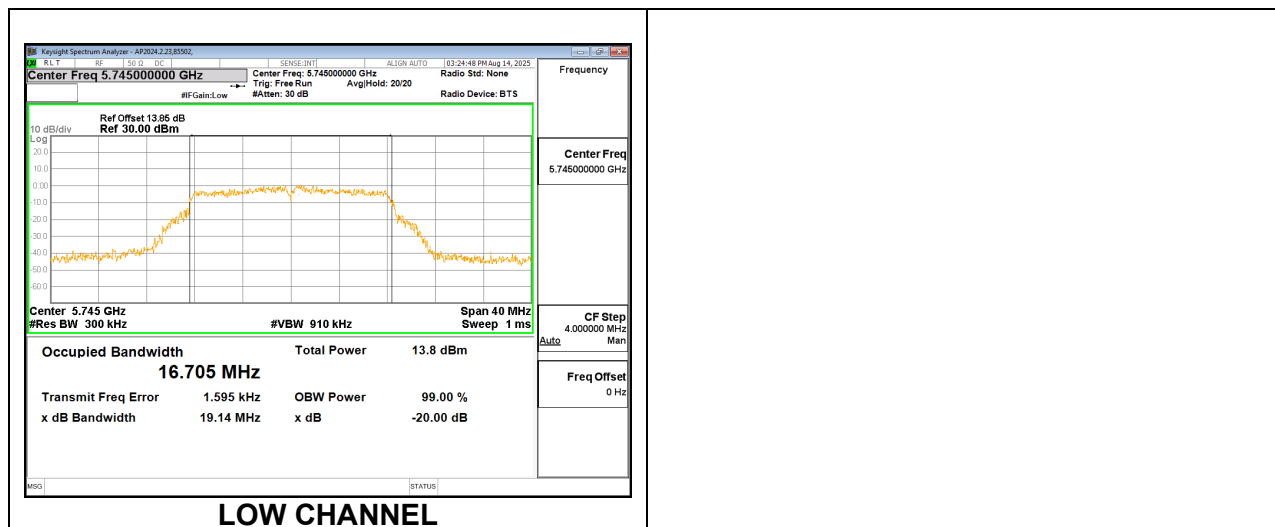
CHANNEL 138



9.3.5. 802.11a MODE IN THE 5.8 GHz BAND

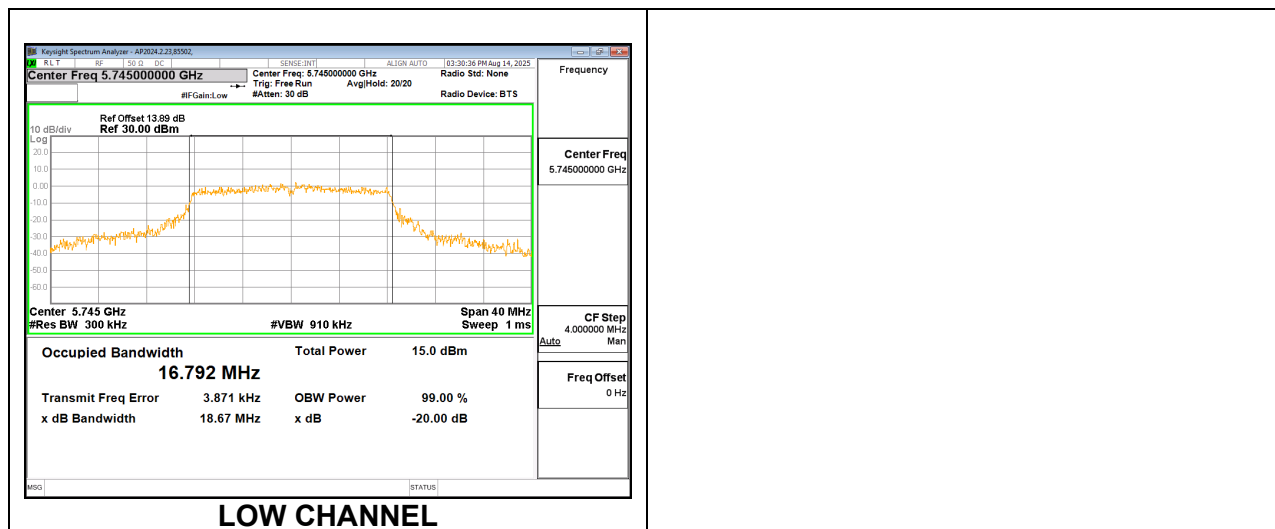
1TX Antenna 1 MODE

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5745	16.7050
Mid	5785	16.7520
High	5825	16.6990



1TX Antenna 2 MODE

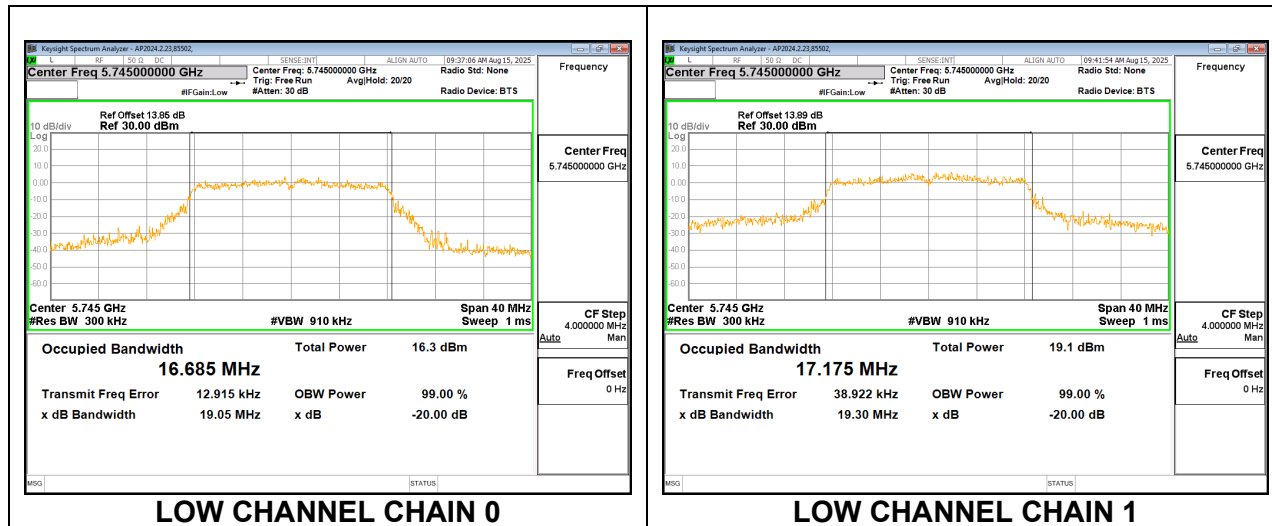
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5745	16.7920
Mid	5785	16.6960
High	5825	16.8510



2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5745	16.6850	17.1750
Mid	5785	16.7090	16.6670
High	5825	16.7000	16.9400

LOW CHANNEL



9.3.6. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5745	17.7770
Mid	5785	17.8220
High	5825	17.8290

