

TEST REPORT

Report Number. : 14749497-E32V1

Applicant : eero LLC
660 3rd Street 4th Floor
San Francisco, CA 94107, U.S.A.

Model : V010001

Brand : eero

FCC ID : 2AEM4-711917312

IC : 20631-711917312

EUT Description : Wireless Access Point

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:
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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2023-09-19	Initial Issue	---

TABLE OF CONTENTS

REPORT REVISION HISTORY	2
TABLE OF CONTENTS	3
1. ATTESTATION OF TEST RESULTS	6
2. TEST RESULT SUMMARY	8
3. TEST METHODOLOGY	9
4. FACILITIES AND ACCREDITATION	9
5. DECISION RULES AND MEASUREMENT UNCERTAINTY	10
5.1. <i>METROLOGICAL TRACEABILITY</i>	10
5.2. <i>DECISION RULES</i>	10
5.3. <i>MEASUREMENT UNCERTAINTY</i>	10
5.4. <i>SAMPLE CALCULATION</i>	11
6. EQUIPMENT UNDER TEST	12
6.1. <i>EUT DESCRIPTION</i>	12
6.2. <i>CLASS II PERMISSIVE CHANGE DESCRIPTION</i>	12
6.3. <i>MAXIMUM OUTPUT POWER</i>	13
6.4. <i>DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS</i>	15
6.5. <i>SOFTWARE AND FIRMWARE</i>	15
6.6. <i>WORST-CASE CONFIGURATION AND MODE</i>	16
6.7. <i>DESCRIPTION OF TEST SETUP</i>	17
7. MEASUREMENT METHOD	20
8. TEST AND MEASUREMENT EQUIPMENT	21
9. ANTENNA PORT TEST RESULTS	22
9.1. <i>ON TIME AND DUTY CYCLE</i>	22
9.2. <i>26 dB BANDWIDTH</i>	23
9.2.1. <i>802.11a MODE IN THE 5.3 GHz BAND</i>	24
9.2.2. <i>802.11n HT20 MODE IN THE 5.3 GHz BAND</i>	27
9.2.3. <i>802.11n HT40 MODE IN THE 5.3 GHz BAND</i>	30
9.2.4. <i>802.11ac VHT80 MODE IN THE 5.3 GHz BAND</i>	33
9.2.5. <i>802.11ac VHT160 MODE IN THE 5.3 GHz BAND</i>	36
9.2.6. <i>802.11a MODE IN THE 5.6 GHz BAND</i>	39
9.2.7. <i>802.11n HT20 MODE IN THE 5.6 GHz BAND</i>	42
9.2.8. <i>802.11n HT40 MODE IN THE 5.6 GHz BAND</i>	45
9.2.9. <i>802.11ac VHT80 MODE IN THE 5.6 GHz BAND</i>	48

9.2.10.	802.11ac VHT160 MODE IN THE 5.6 GHz BAND.....	51
9.3.	99% BANDWIDTH.....	54
9.3.1.	802.11a MODE IN THE 5.3 GHz BAND.....	55
9.3.2.	802.11n HT20 MODE IN THE 5.3 GHz BAND.....	58
9.3.3.	802.11n HT40 MODE IN THE 5.3 GHz BAND.....	61
9.3.4.	802.11ac VHT80 MODE IN THE 5.3 GHz BAND.....	64
9.3.5.	802.11ac VHT160 MODE IN THE 5.3 GHz BAND.....	67
9.3.6.	802.11a MODE IN THE 5.6 GHz BAND.....	70
9.3.7.	802.11n HT20 MODE IN THE 5.6 GHz BAND.....	73
9.3.8.	802.11n HT40 MODE IN THE 5.6 GHz BAND.....	76
9.3.9.	802.11ac VHT80 MODE IN THE 5.6 GHz BAND.....	79
9.3.10.	802.11ac VHT160 MODE IN THE 5.6 GHz BAND.....	82
9.4.	6 dB BANDWIDTH.....	85
9.4.1.	802.11a MODE IN THE 5.6 GHz BAND.....	86
9.4.2.	802.11n HT20 MODE IN THE 5.6 GHz BAND.....	89
9.4.3.	802.11n HT40 MODE IN THE 5.6 GHz BAND.....	92
9.4.4.	802.11ac VHT80 MODE IN THE 5.6 GHz BAND.....	95
9.5.	OUTPUT POWER AND PSD.....	98
9.5.1.	802.11a MODE IN THE 5.3 GHz BAND.....	100
9.5.2.	802.11n HT20 MODE IN THE 5.3 GHz BAND.....	106
9.5.3.	802.11n HT40 MODE IN THE 5.3 GHz BAND.....	112
9.5.4.	802.11ac VHT80 MODE IN THE 5.3 GHz BAND.....	118
9.5.5.	802.11ac VHT160 MODE IN THE 5.3 GHz BAND.....	124
9.5.6.	802.11a MODE IN THE 5.6 GHz BAND.....	130
9.5.7.	802.11n HT20 MODE IN THE 5.6 GHz BAND.....	136
9.5.8.	802.11n HT40 MODE IN THE 5.6 GHz BAND.....	142
9.5.9.	802.11ac VHT80 MODE IN THE 5.6 GHz BAND.....	148
9.5.10.	802.11ac VHT160 MODE IN THE 5.6 GHz BAND.....	154
10.	RADIATED TEST RESULTS.....	160
10.1.	TRANSMITTER ABOVE 1 GHz.....	162
10.1.1.	TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND.....	162
10.1.2.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND.....	174
10.1.3.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND.....	186
10.1.4.	TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.3 GHz BAND.....	196
10.1.5.	TX ABOVE 1 GHz 802.11ac VHT160 MODE IN THE 5.3GHz BAND.....	204
10.1.6.	TX ABOVE 1 GHz 802.11a MODE IN THE 5.6 GHz BAND.....	218
10.1.7.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.6 GHz BAND.....	238
10.1.8.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.6 GHz BAND.....	258
10.1.9.	TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.6 GHz BAND.....	278
10.1.10.	TX ABOVE 1 GHz 802.11ac VHT160 MODE IN THE 5.6GHz BAND.....	296
10.2.	WORST CASE BELOW 30MHz.....	310
10.3.	WORST CASE BELOW 1 GHz (Foxlink PSU).....	311
10.4.	WORST CASE BELOW 1 GHz (Luxshare PSU).....	313
10.5.	WORST CASE 18-26 GHz.....	315
10.6.	WORST CASE 26-40 GHz.....	317

11. AC POWERLINE CONDUCTED EMISSIONS	319
11.1. AC POWER LINE (Foxlink PSU)	320
11.2. AC POWER LINE (Luxshare PSU).....	322
12. SETUP PHOTOS	324

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: eero LLC
660 3rd Street 4th Floor
San Francisco, CA 94107, U.S.A.

EUT DESCRIPTION: Wireless Access Point

MODEL: V010001

BRAND: eero

SERIAL NUMBER: Radiated: GGB2-1E06-3237-0089, GGB2-1E04-3062-004P,
GGB2-1E08-3287-0037
Conducted: GGB2-1E04-3057-00DA, GGB2-1E06-3237-OOBQ

SAMPLE RECEIPT DATE: 2023-04-05

DATE TESTED: 2023-05-01 to 2023-09-19

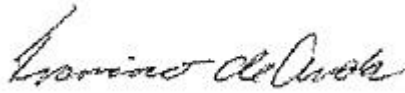
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR Part 15 Subpart E	Complies
ISED RSS-247 Issue 3	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

UL Verification Services Inc. 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 Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document.

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2. TEST RESULT SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. 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 provided by the customer:

- 1) Antenna gain and type (see section 6.4)
- 2) Cable Loss (see section 6.4)

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	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	RSS-247 6.2.4.1	6 dB BW	Compliant	None.
15.407 (a) (2), (h) (1)	RSS-247 6.2	Output Power	Compliant	None.
15.407 (a) (2)	RSS-247 6.2	PSD	Compliant	None.
15.209, 15.205, 15.407 (b)	RSS-GEN 8.9, 8.10, RSS-247 6.2	Radiated Emissions	Compliant	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Compliant	Refer to report 14749497-E6

3. TEST METHODOLOGY

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

- FCC CFR 47 Part 2
- FCC CFR 47 Part 15,
- FCC KDB 662911 D01,
- FCC KDB 905462 D02 /D03 /D06
- FCC KDB 789033 D02
- KDB 414788 D01 Radiated Test Site
- ANSI C63.10-2013
- RSS-GEN Issue 5 + A1 + A2
- RSS-247 Issue 3

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05, 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
<input checked="" type="checkbox"/>	Building 1: 47173 Benicia Street Fremont, CA 94538, U.S.A	US0104	2324A	550739
<input type="checkbox"/>	Building 2: 47266 Benicia Street Fremont, CA 94538, U.S.A			
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd Fremont, CA 94538, U.S.A			

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)	141.16 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 Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 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)

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

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 a low power indoor Access Point that supports 802.11 a/b/g/n/ac/ax/be Wifi, BLE 1Mbps/2Mbps and 802.15.4 technologies

This report covers non-ax 5GHz Wifi radio.

6.2. CLASS II PERMISSIVE CHANGE DESCRIPTION

This Class II Permissive Change is to add additional UNII bands 2A, 2C, 5, 6, 7, 8. No hardware changes were done. This change is done via software only.

6.3. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power.

5.3 GHz BAND (FCC/IC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.3 GHz band, 1TX			
5260 - 5320	802.11a	22.19	165.58
5260 - 5320	802.11n HT20	23.24	210.86
5270 - 5310	802.11n HT40	23.34	215.77
5290	802.11ac VHT80	17.58	57.28
5250	802.11ac VHT160	16.75	47.32
5.3 GHz band, 2TX			
5260 - 5320	802.11a CDD	22.53	179.06
5260 - 5320	802.11n HT20 CDD	22.71	186.64
5270 - 5310	802.11n HT40 CDD	23.81	240.44
5290	802.11ac VHT80 CDD	19.36	86.30
5250	802.11ac VHT160 CDD	19.11	81.47
5.3 GHz band, 4TX			
5260 - 5320	802.11a CDD	18.54	71.45
5260 - 5320	802.11n HT20 CDD	18.98	79.07
5270 - 5310	802.11n HT40 CDD	22.30	169.82
5290	802.11ac VHT80 CDD	22.09	161.81
5250	802.11ac VHT160 CDD	21.35	136.46

5.6 GHz BAND (FCC/IC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 1TX			
5500-5720	802.11a	22.88	194.09
5500-5720	802.11n HT20	22.83	191.87
5510-5710	802.11n HT40	23.88	244.34
5530-5690	802.11ac VHT80	23.72	235.50
5570	802.11ac VHT160	19.41	87.30
5.6 GHz band, 2TX			
5500-5720	802.11a CDD	22.97	198.15
5500-5720	802.11n HT20 CDD	23.05	201.84
5510-5710	802.11n HT40 CDD	23.80	239.88
5530-5690	802.11ac VHT80 CDD	23.69	233.88
5570	802.11ac VHT160 CDD	21.19	131.52
5.6 GHz band, 4TX			
5500-5720	802.11a CDD	19.28	84.72
5500-5720	802.11n HT20 CDD	19.43	87.70
5510-5710	802.11n HT40 CDD	22.18	165.20
5530-5690	802.11ac VHT80 CDD	23.82	240.99
5570	802.11ac VHT160 CDD	21.78	150.66

6.4. DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS

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

The radio utilizes Flex PCB antennas, with a maximum gain as below table. EUT support the following transmit configurations:

- 1x1 SISO, Antenna 6 only
- 2x2 MIMO, Antenna 6 and Antenna 4 only
- 4x4 MIMO, Antenna 6, Antenna 4, Antenna 9 and Antenna 1 only

Frequency Range (MHz)	Peak Antenna Gain (dBi)				Cable Loss (dB)
	Antenna 6	Antenna 4	Antenna 9	Antenna 1	
5250 – 5350	3.76	3.76	3.76	3.76	1.3
5500 – 5700	3.59	3.59	3.59	3.59	1.4

6.5. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing were ath1210csu1-ipq95xx and ath1210csu1-ipq95xx-20230912.

The test utility software used during testing was Qualcomm Radio Control Toolkit v4.1 Version 4.0.85.1

6.6. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, 1GHz and 18GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. Data is representative for worst case across all bands.

Investigation was performed on 1TX, 2TX and 4TX 802.11a/n/ac and determined that 4Tx 802.11 a/n/ac mode covers 1TX, 2TX, 4TX 802.11 a/n/ac mode radiated spurious emissions.

Band edge was performed with the EUT set to transmit at the highest power on low, middle, and high channels.

The EUT can only be setup in desktop orientation; therefore, all radiated testing was performed with the EUT in desktop orientation.

This EUT supports BLE/ 802.15.4/DTS + 5GHz + 6GHz simultaneous transmission, please refer to 14749497-E7 for data.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0
802.11ac VHT80 mode: MCS0
802.11ac VHT160 mode: MCS0

Note: 802.11ac VHT20 and VHT40 have the same power as 802.11n HT20 and 802.11n HT40, so 802.11n HT20 and 802.11n HT40 were test as worst case.

Plots included in the report are representative of the method and settings parameters used for the test.

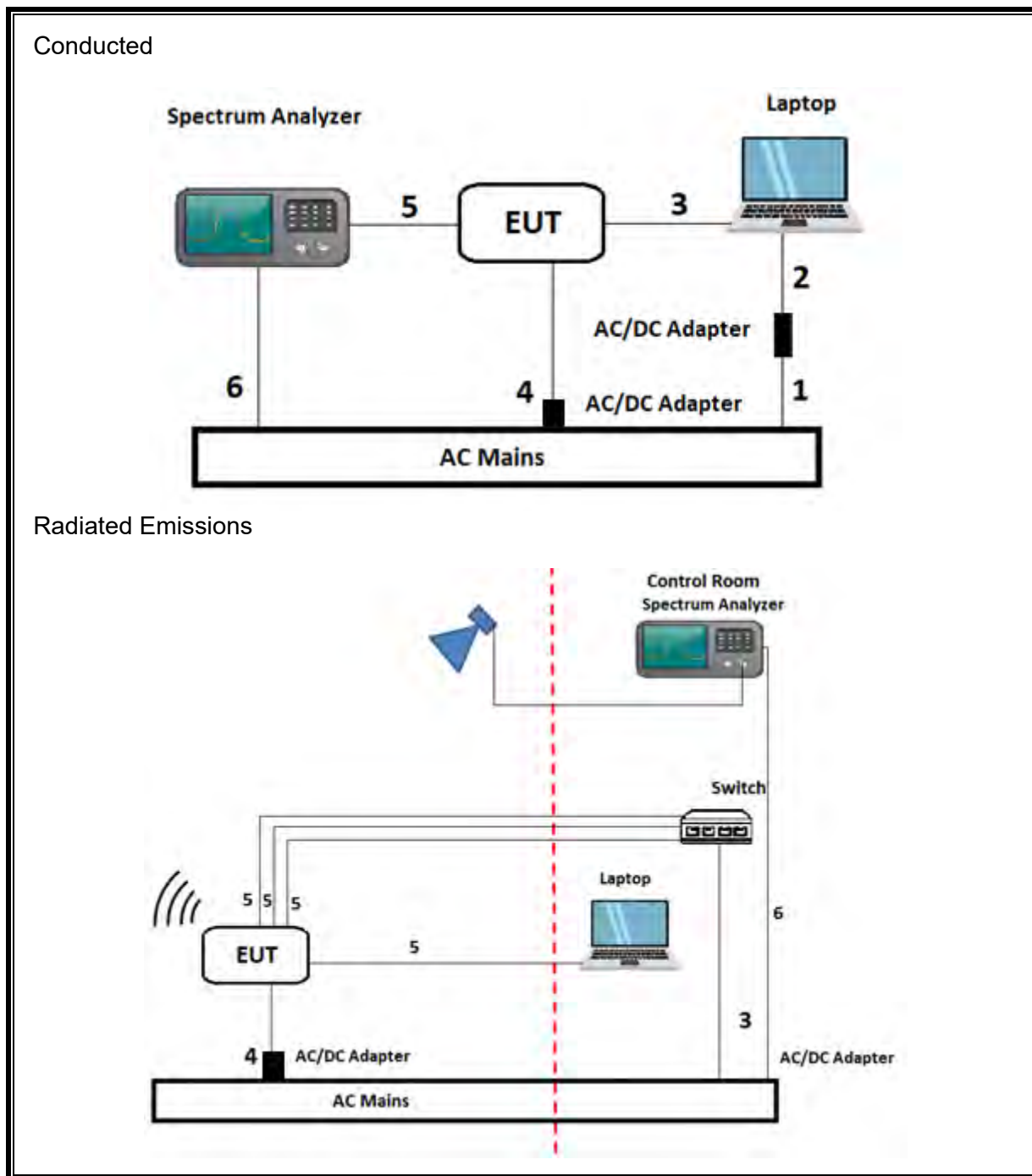
6.7. DESCRIPTION OF TEST SETUP

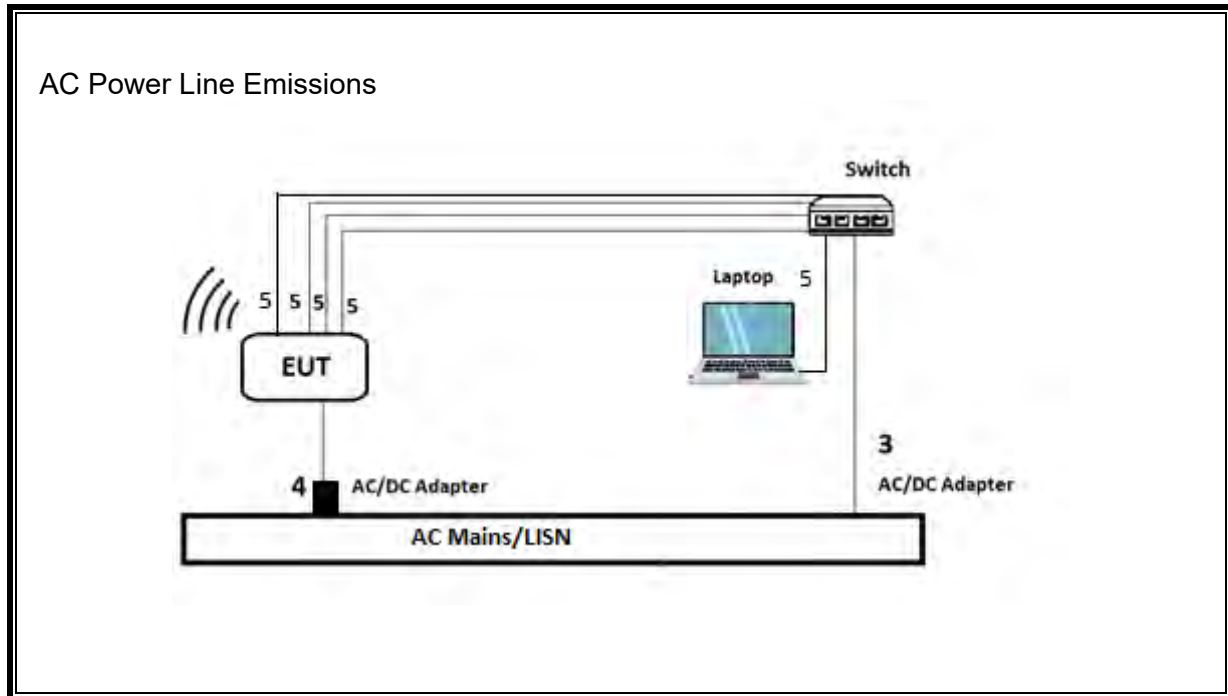
SUPPORT TEST EQUIPMENT						
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC		
EUT AC/DC Adapter (Luxshare)	eero	C310011	NA	DoC		
EUT AC/DC Adapter (Foxlink)	eero	C310011	NA	DoC		
Laptop	Lenovo	ThinkPad P15s Gen 2	PF-2YV2K6	DoC		
Laptop AC/DC Adapter	Lenovo	ADLX65Y	8SSA10R16875C1SG09PRSHT	DoC		
Laptop	Lenovo	ThinkPadT460	PC0JLLUT	DoC		
Laptop AC/DC Adapter	Lenovo	A-17-065N2A	8SSA10J20161C1SG8720X55 Rev:000	DoC		
Switch	Netgear	XS505M	6H11197M00054	DoC		
I/O CABLES (CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	2-Prong	Un-shielded	1	AC Mains to LT AC/DC Adapter
2	DC	1	Barrel	Un-shielded	1.5	AC/DC Adapter to Laptop
3	Ethernet	1	RJ45	Un-shielded	1	Laptop to EUT
4	DC	1	Barrel	Un-shielded	1.5	AC/DC Adapter to EUT
5	SMA	1	SMA	Un-shielded	0.1	EUT to Spectrum Analyzer
6	AC	1	3-Prong	Un-shielded	1.5	AC Mains to Spectrum Analyzer
I/O CABLES (RADIATED TEST EMISSIONS)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
3	AC	1	2-Prong	Un-shielded	2	AC Mains to Switch
4	DC	1	Barrel	Un-shielded	1.5	AC/DC Adapter to EUT
5	I/O	4	RJ45	Un-shielded	>3 meter	EUT to Switch /Laptop. One cable connected to switch is <3 meter for 30MHz to 1GHz test.
6	AC	1	3-Prong	Un-shielded	1.5	AC Mains to Spectrum Analyzer
I/O CABLES (AC POWER LINE EMISSIONS)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
3	AC	1	2-Prong	Un-shielded	2	AC Mains to Switch
4	DC	1	Barrel	Un-shielded	1.5	AC/DC Adapter to EUT
5	I/O	5	RJ45	Un-shielded	>3 meter	EUT to Switch, Laptop to Switch

TEST SETUP

The EUT is powered by AC/DC adapter and connected to support equipment, and the radio is exercised remotely by command prompt GUI test utility software via ethernet.

SETUP DIAGRAM





7. MEASUREMENT METHOD

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

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

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

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

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

Power Spectral Density: KDB 789033 D02, Section F

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

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

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2013 Section 6.4

8. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO METRICS	EM-6871	219908	2024-05-31	2023-05-31
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO METRICS	EM-6872	219910	2024-05-31	2023-05-31
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB1	80293	2024-04-30	2023-04-11
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	170647	2023-11-11	2022-11-11
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	222741	2024-08-31	2022-08-31
RF Filter Box, 1-18GHz	UL-FR1	n/a	171875	2023-11-10	2022-11-10
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230547	2024-02-29	2023-02-15
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	199659	2023-12-06	2022-12-06
Amplifier 18-26.5GHz, +5Vdc, -54dBm P1dB	AMPLICAL	AMP18G26.5-60	234683	2024-03-29	2023-03-18
Antenna, Horn 26.5 to 40GHz	ARA	MWH-2640/B	199661	2023-12-06	2022-12-06
Amplifier 26-40GHz +5Vdc, -62dBm P1dB	AMPLICAL	AMP26G40-60	234684	2024-03-29	2023-03-18
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	223083 (chamber k)	2023-10-25	2022-10-25
RF Filter Box, 1-18GHz, 8 Port	UL-FR1	SAC 8 port rf box 1	197920 (chamber k)	2024-05-31	2023-05-17
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	225688 (chamber k)	2024-02-29	2023-02-14
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	125178	2024-02-29	2023-02-06
10dB Fixed Attenuator, up to 26GHz	Pasternack Enterprises	PE7087-10	236189	Verified/characterized before use	
Power Meter, P-series single channel	Keysight Technologies Inc	N1921A	81319	2024-01-25	2023-01-25
Power Sensor, P-series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1911A	90718	2024-01-31	2023-01-31
AC Line Conducted					
LISN	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2-01-480V	175765	2024-01-31	2023-01-27
EMI TEST RECEIVER	Rohde & Schwarz	ESR	93091	2024-02-29	2023-02-20
Transient Limiter	TE	TBFL1	207996	2023-07-31	2022-07-15
UL TEST SOFTWARE LIST					
Radiated Software	UL	UL EMC	Ver 2023-01-18, 2023-03-03, 2023-05-01		
Antenna Port Software	UL	UL RF	Ver 2022-08-16		
AC Line Conducted Software	UL	UL EMC	Rev 9.5, 2022-02-17		

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

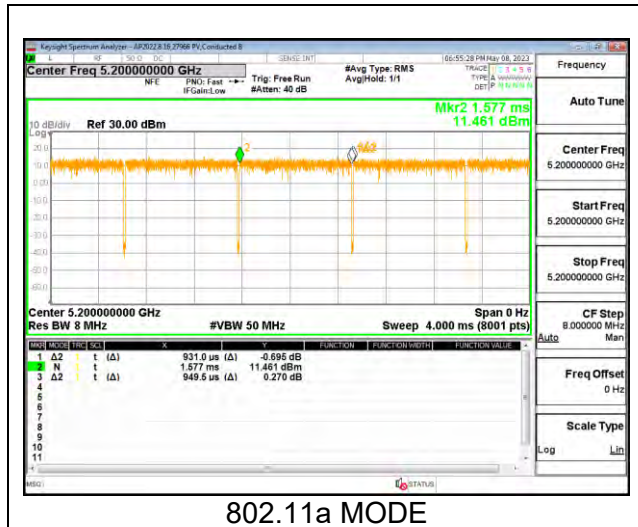
KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a	0.931	0.950	0.981	98.05	0.00	0.010
802.11n HT20	4.431	4.450	0.996	99.57	0.00	0.010
802.11n HT40	2.151	2.170	0.991	99.12	0.00	0.010
802.11ac VHT80	1.984	2.009	0.988	98.76	0.00	0.010

Note: Testing was performed for 1Tx, 2Tx and 4Tx. The above results are representative for 2Tx and 4Tx.

DUTY CYCLE SAMPLE PLOT



9.2. 26 dB BANDWIDTH

LIMITS

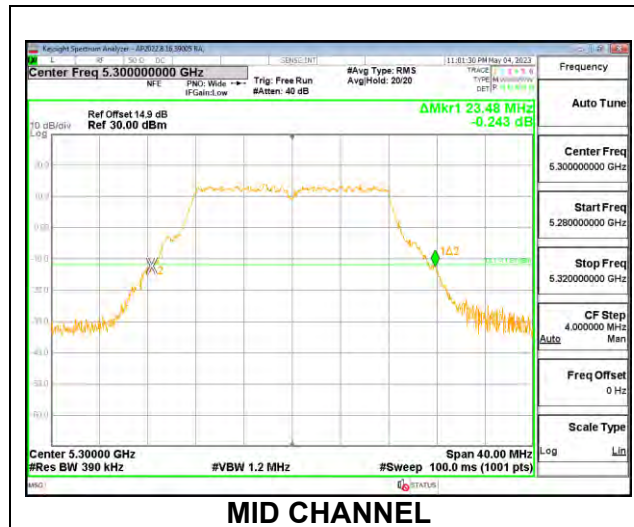
None; for reporting purposes only.

RESULTS

9.2.1. 802.11a MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

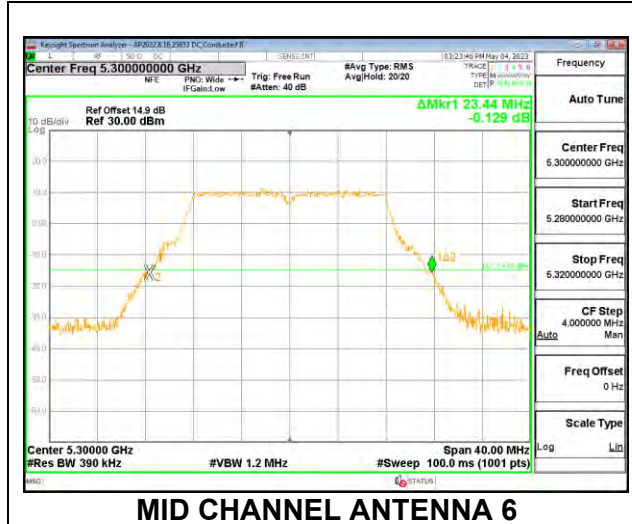
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	23.08
Mid	5300	23.48
High	5320	23.00



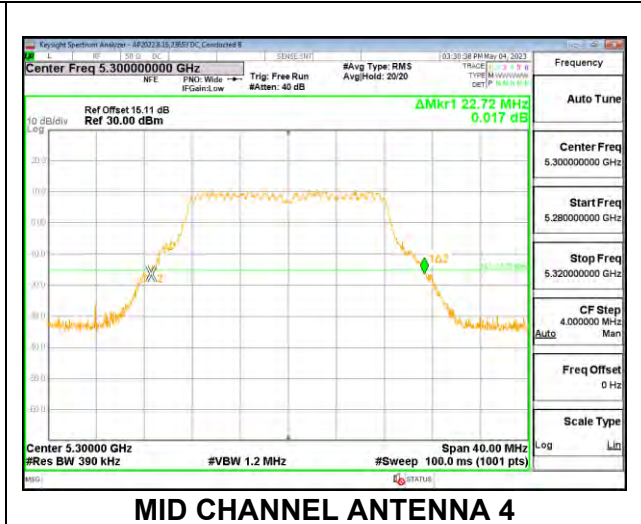
2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Low	5260	23.32	22.60
Mid	5300	23.44	22.72
High	5320	22.96	22.76

MID CHANNEL



MID CHANNEL ANTENNA 6

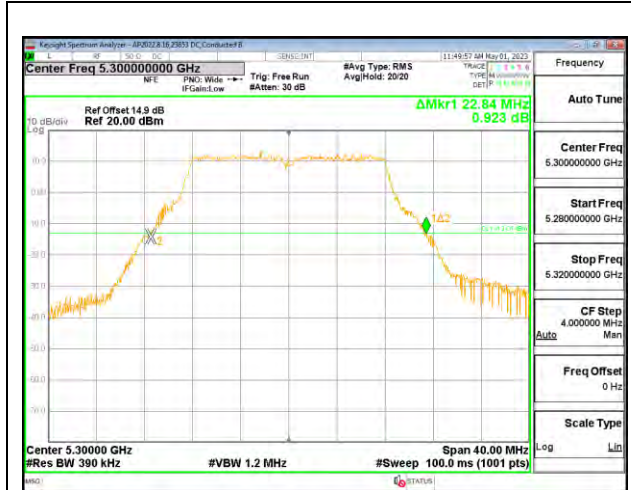


MID CHANNEL ANTENNA 4

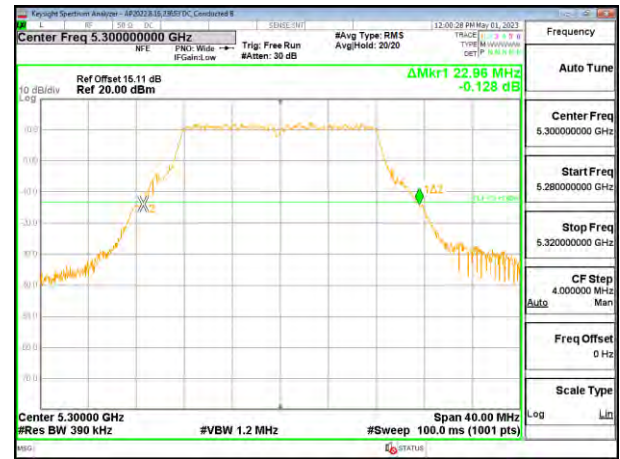
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5260	23.08	23.04	23.08	22.88
Mid	5300	22.84	22.96	22.84	22.56
High	5320	22.76	22.76	23.00	22.76

MID CHANNEL



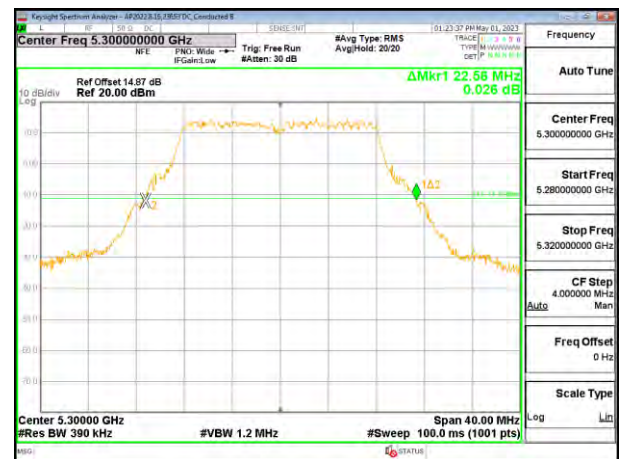
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

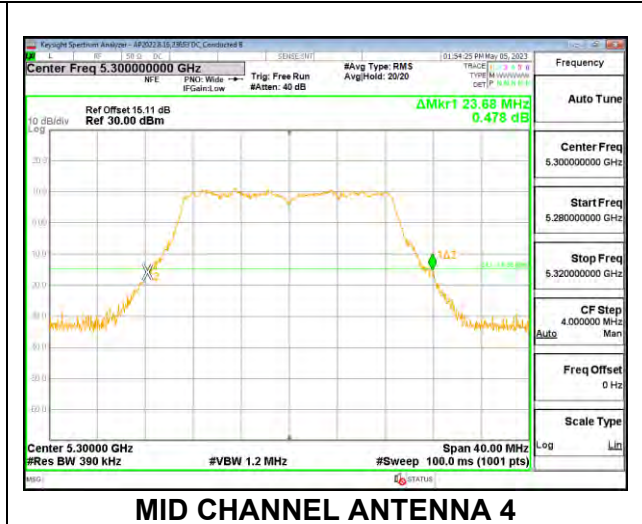
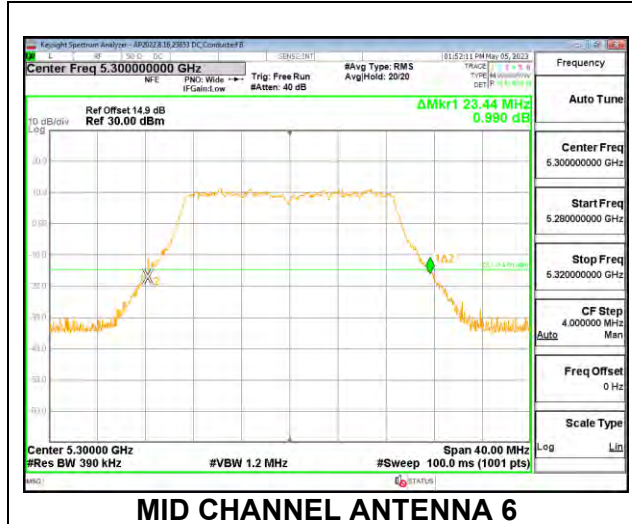


MID CHANNEL ANTENNA 1

2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Low	5260	23.44	23.44
Mid	5300	23.44	23.68
High	5320	23.24	23.36

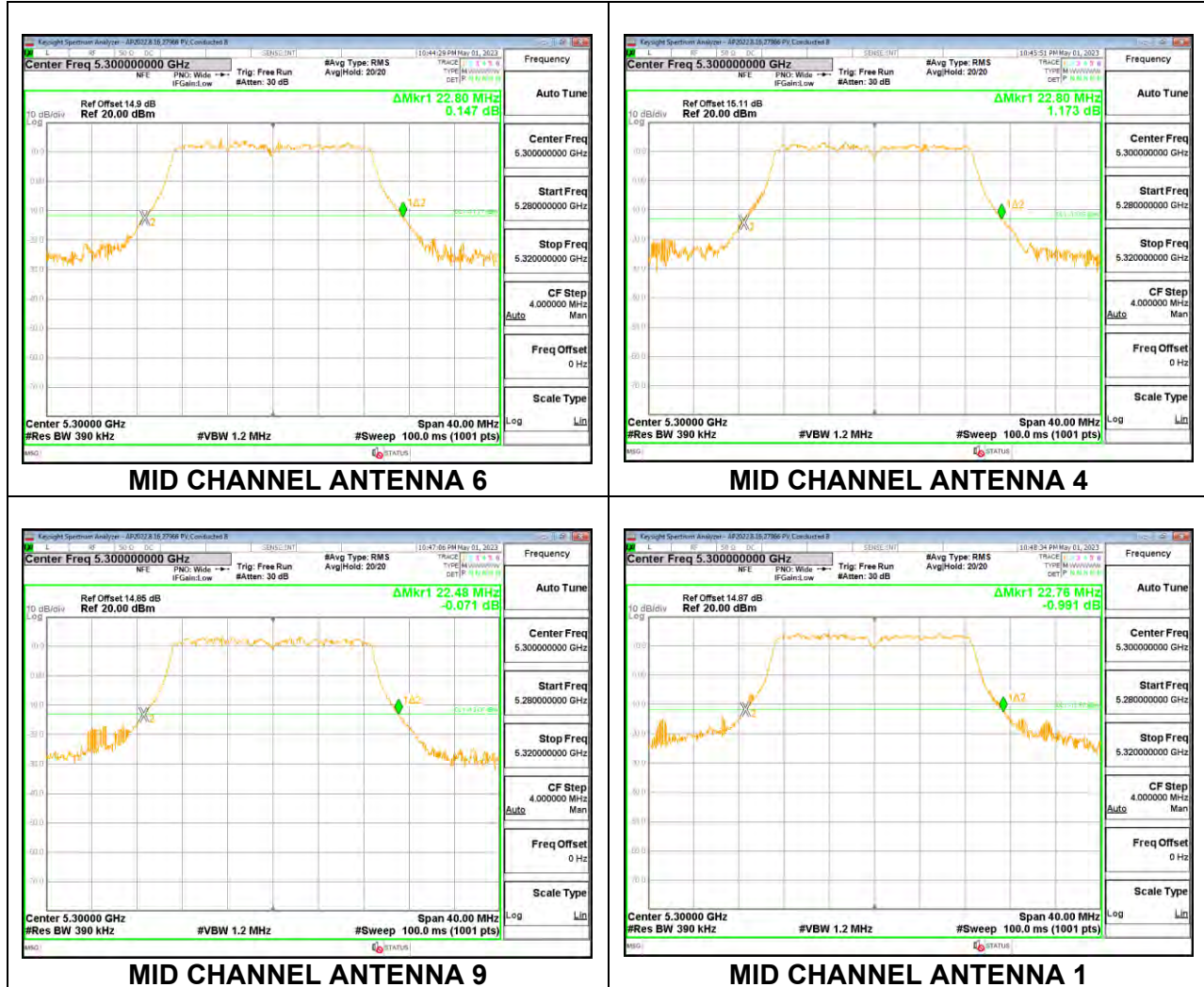
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5260	23.12	23.12	22.32	22.60
Mid	5300	22.80	22.80	22.48	22.76
High	5320	22.80	22.76	22.48	22.68

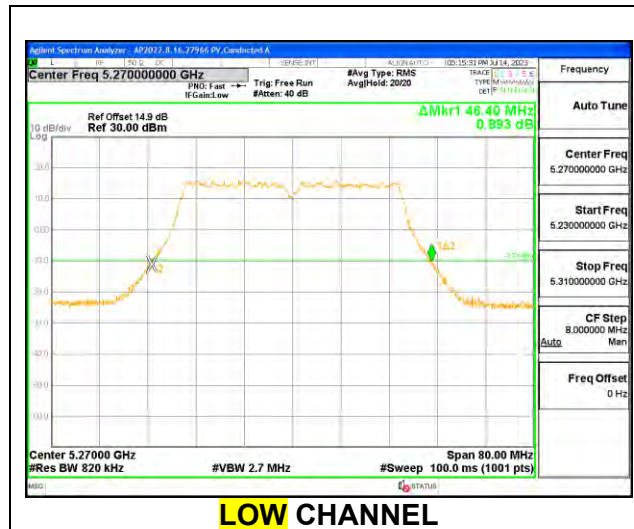
MID CHANNEL



9.2.3. 802.11n HT40 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

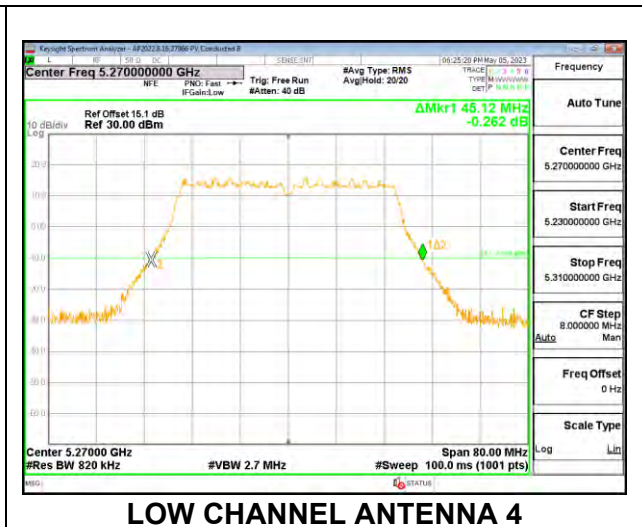
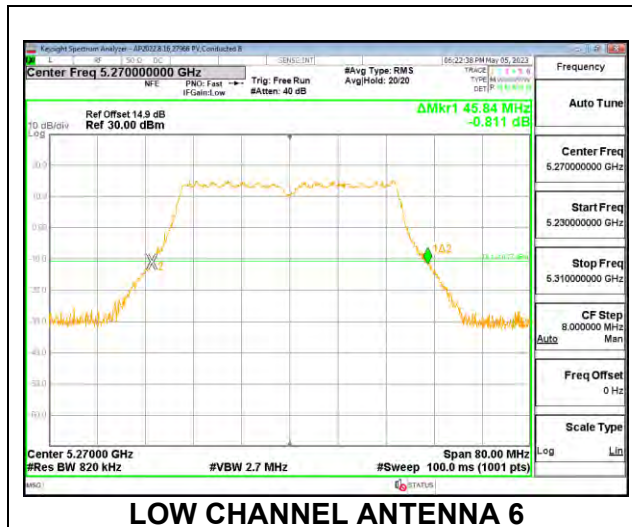
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5270	46.40
High	5310	46.24



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Low	5270	45.84	45.12
High	5310	45.76	45.20

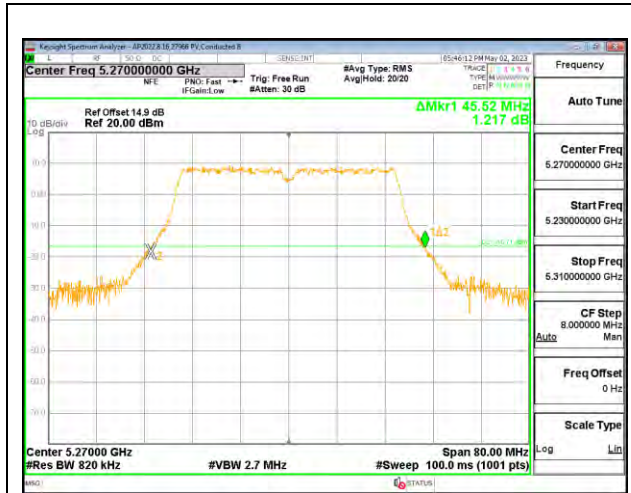
LOW CHANNEL



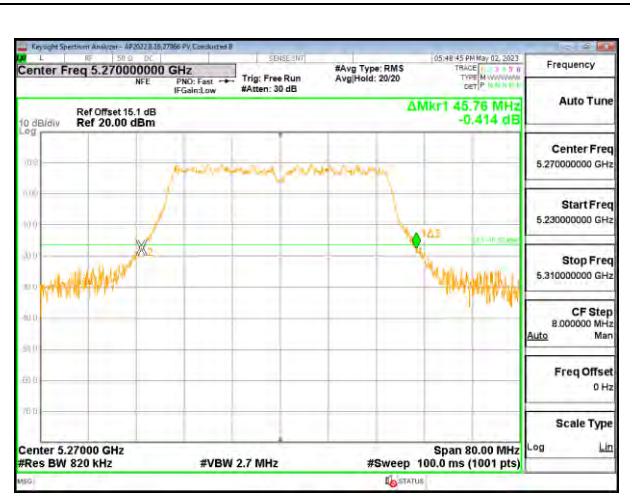
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5270	45.52	45.76	45.28	45.68
High	5310	46.00	46.16	46.00	46.24

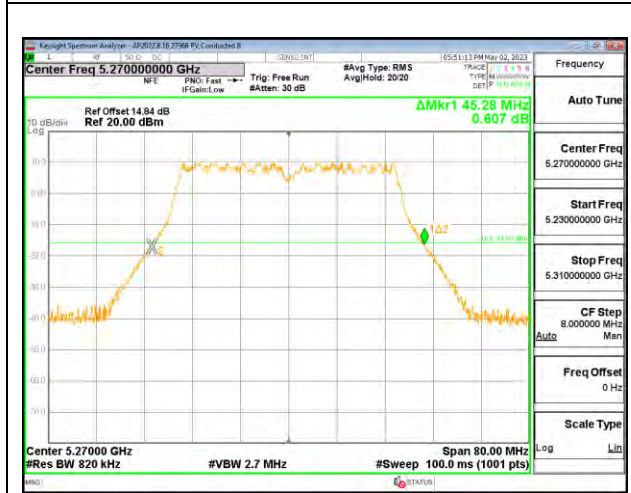
LOW CHANNEL



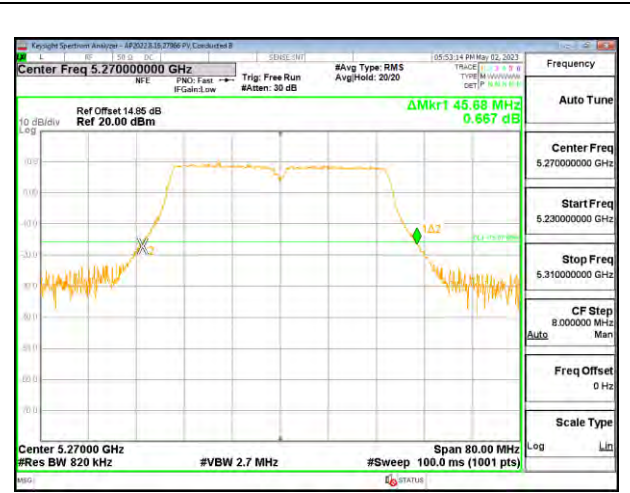
LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 4



LOW CHANNEL ANTENNA 9

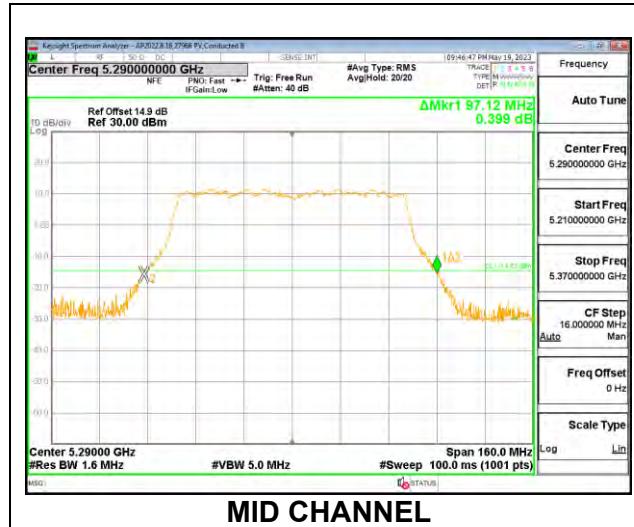


LOW CHANNEL ANTENNA 1

9.2.4. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

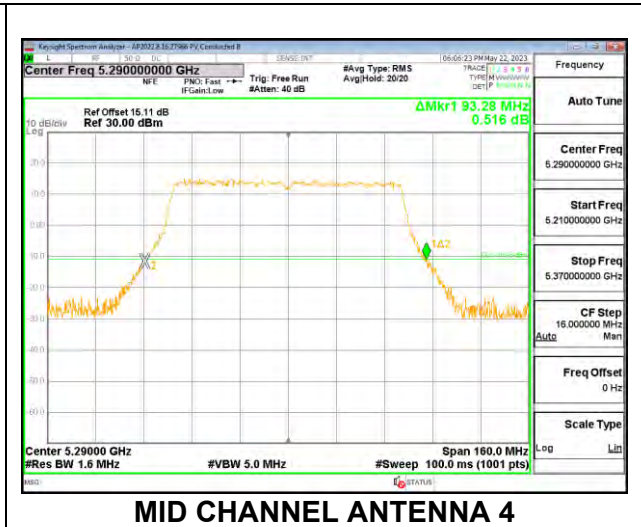
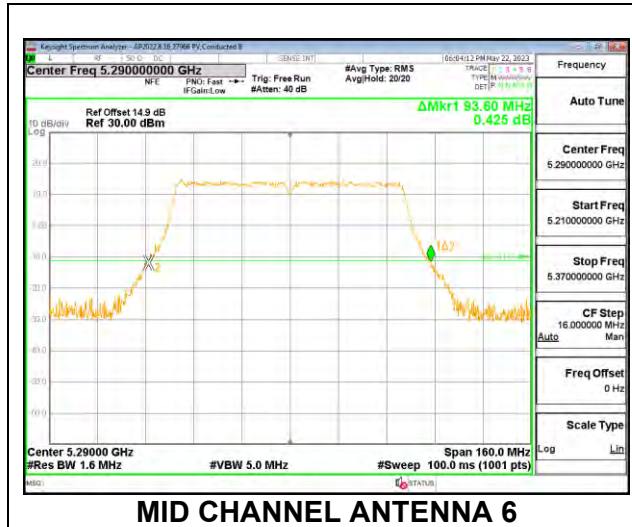
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5290	97.12



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Mid	5290	93.60	93.28

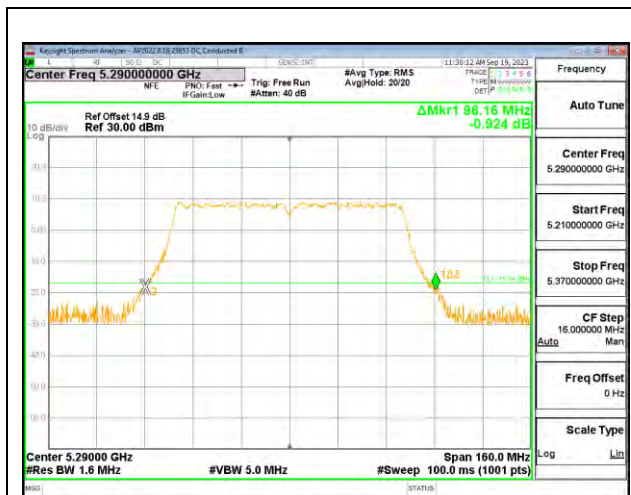
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Mid	5290	96.16	95.04	93.12	94.40

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

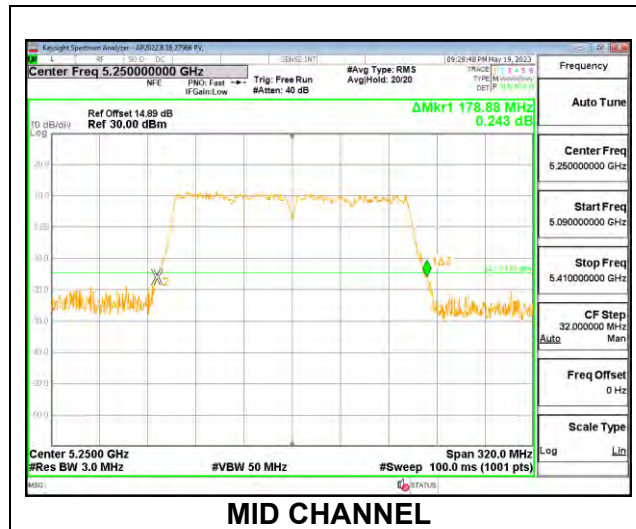


MID CHANNEL ANTENNA 1

9.2.5. 802.11ac VHT160 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

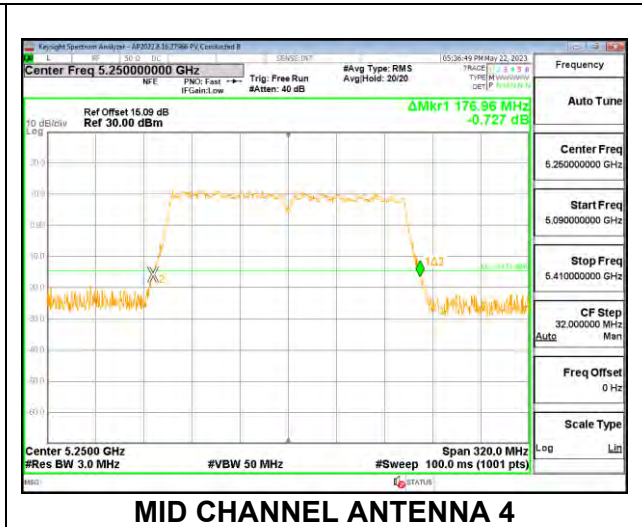
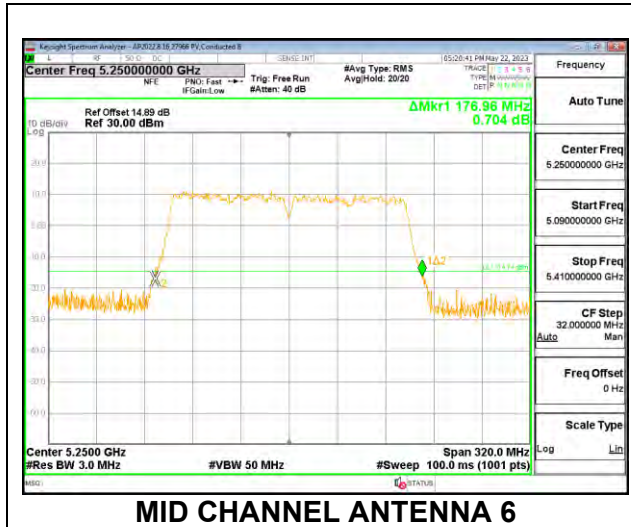
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5250	178.88



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Mid	5250	176.96	176.96

MID CHANNEL



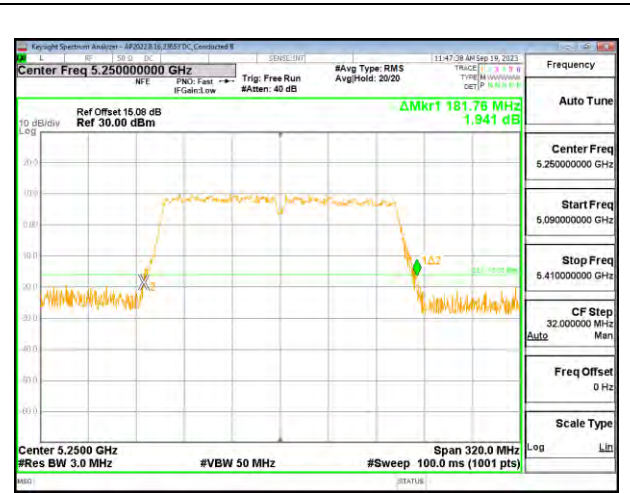
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Mid	5250	179.52	181.76	177.92	175.04

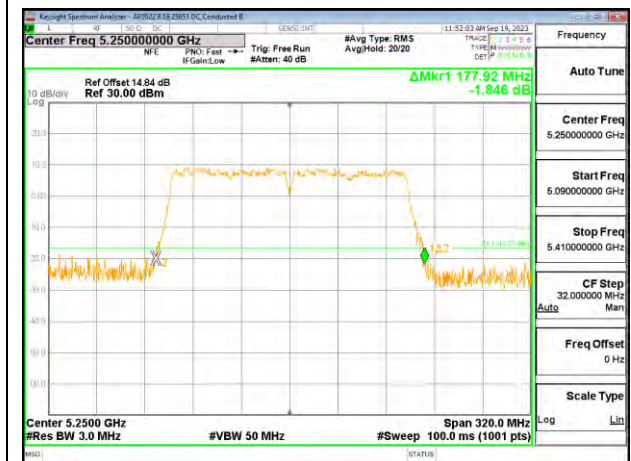
MID CHANNEL



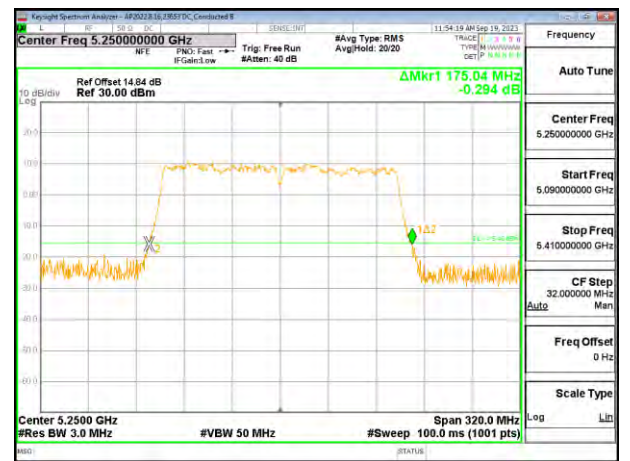
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

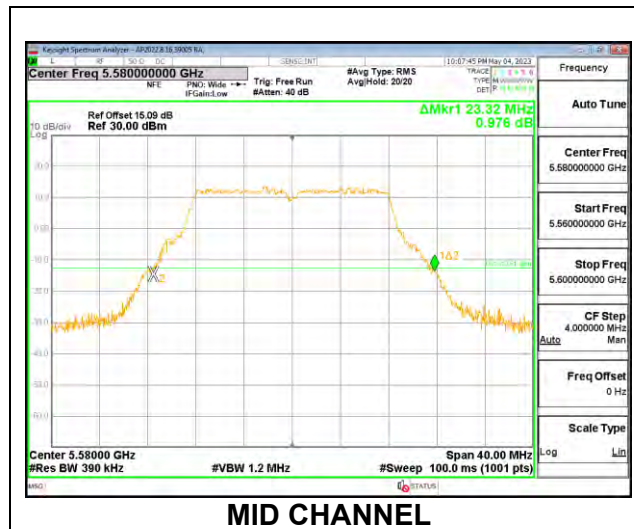


MID CHANNEL ANTENNA 1

9.2.6. 802.11a MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

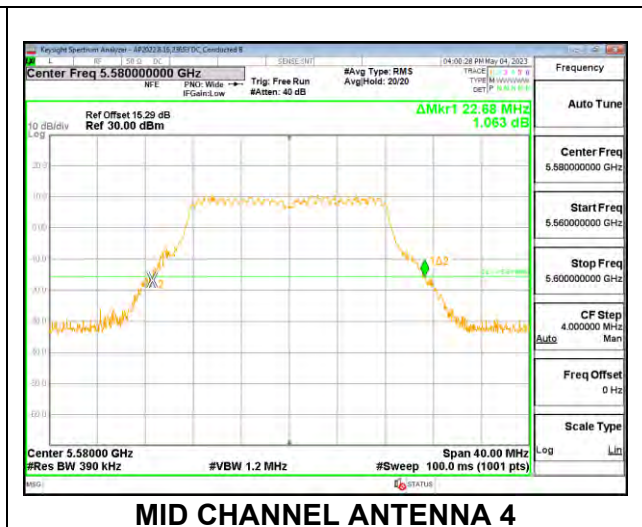
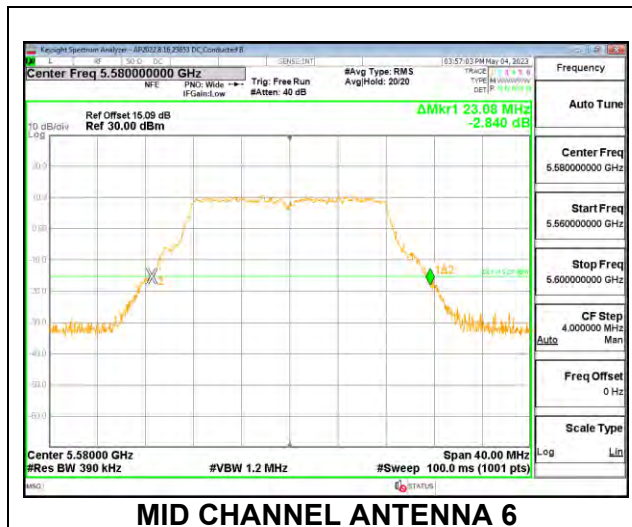
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	23.52
Mid	5580	23.32
High	5700	23.32
144	5720	23.32



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Low	5500	23.52	22.84
Mid	5580	23.08	22.68
High	5700	23.24	23.08
144	5720	23.32	22.48

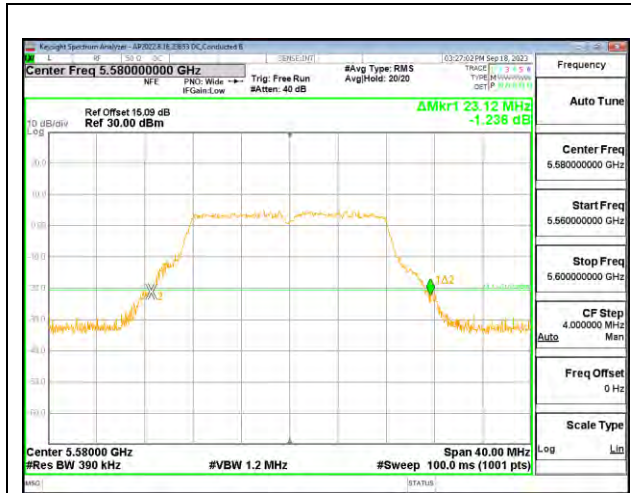
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5500	23.20	23.92	22.84	22.72
Mid	5580	23.12	23.44	23.28	23.24
High	5700	23.00	23.96	23.20	22.88
144	5720	22.76	23.44	23.96	23.16

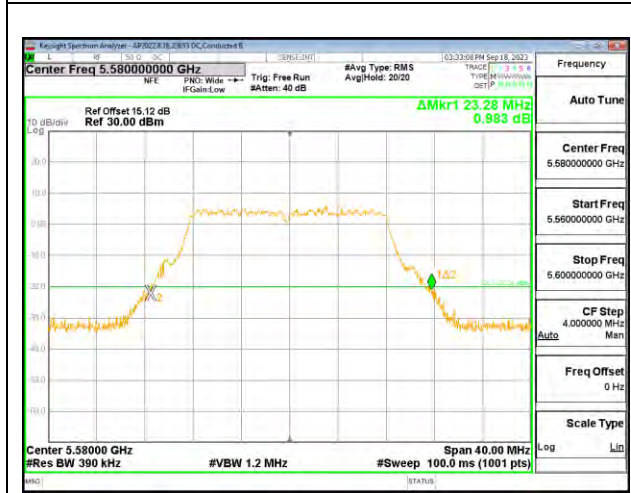
MID CHANNEL



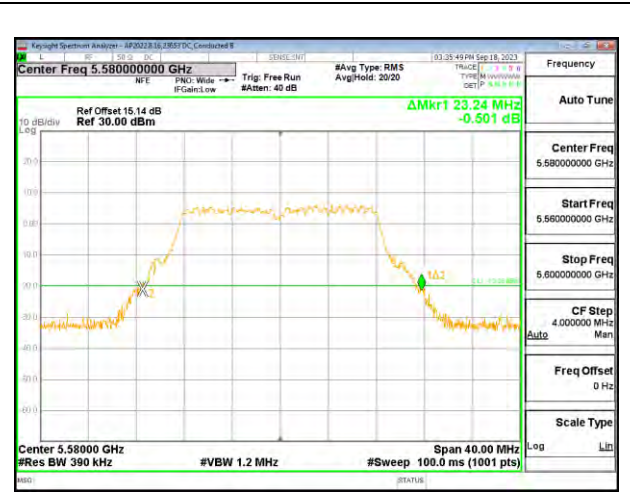
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

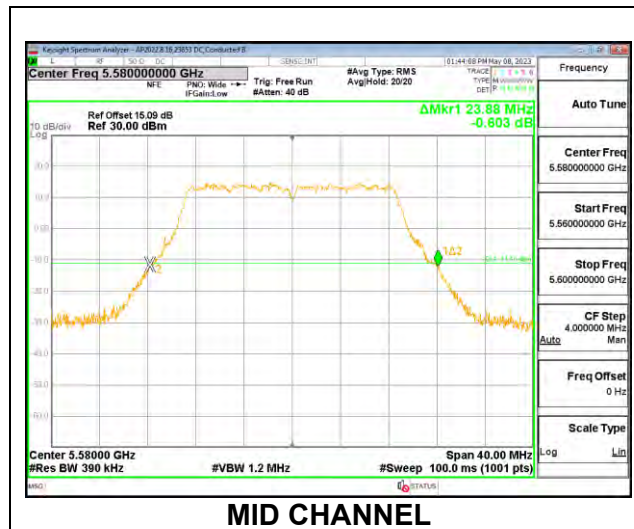


MID CHANNEL ANTENNA 1

9.2.7. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

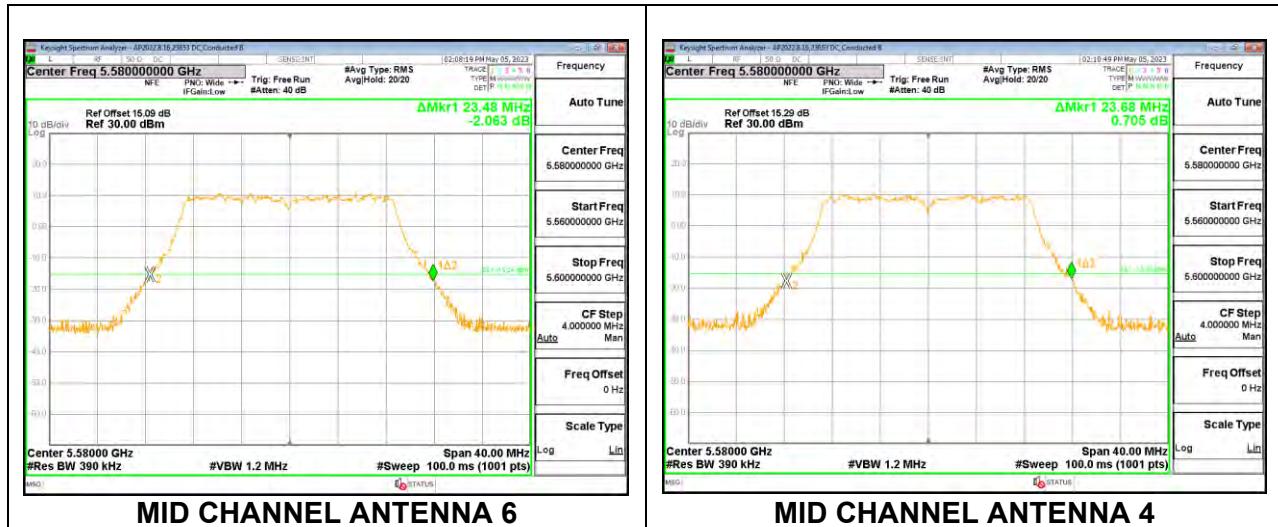
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	23.76
Mid	5580	23.88
High	5700	23.88
144	5720	23.80



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenn 4 (MHz)
Low	5500	23.24	23.32
Mid	5580	23.48	23.68
High	5700	23.32	23.24
144	5720	23.28	23.68

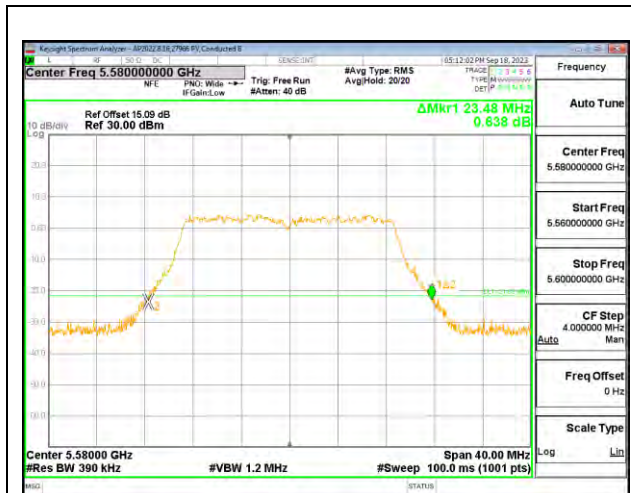
MID CHANNEL



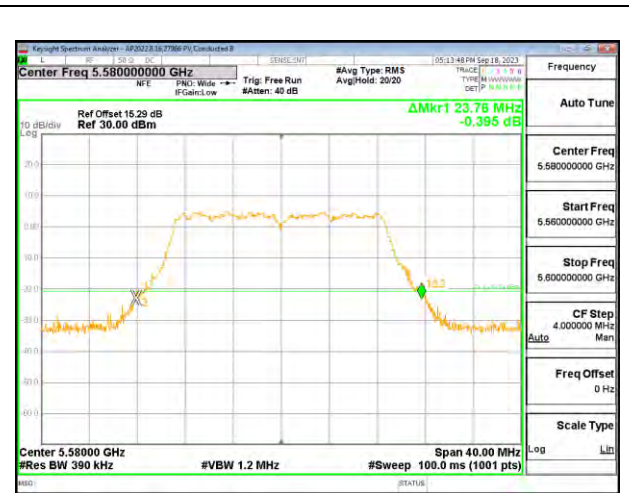
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5500	23.52	23.96	23.24	23.52
Mid	5580	23.48	23.76	22.76	23.48
High	5700	23.20	23.56	23.32	23.36
144	5720	23.20	23.72	23.12	23.48

MID CHANNEL



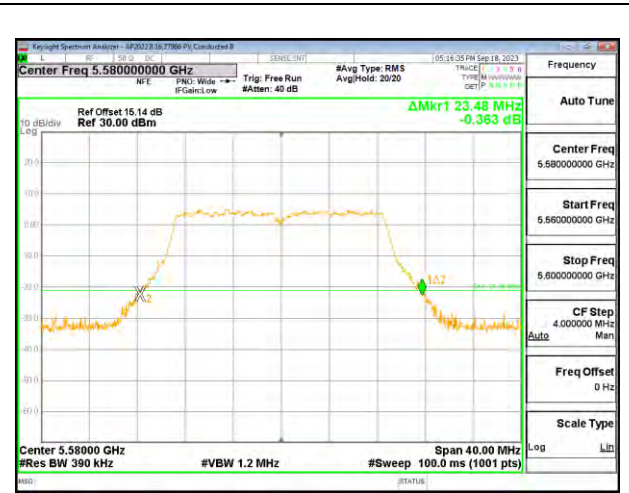
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

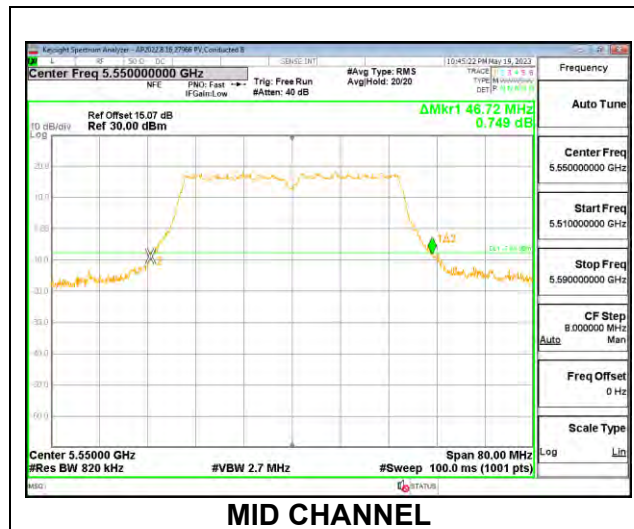


MID CHANNEL ANTENNA 1

9.2.8. 802.11n HT40 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	46.00
Mid	5550	46.72
High	5670	46.08
142	5710	48.24

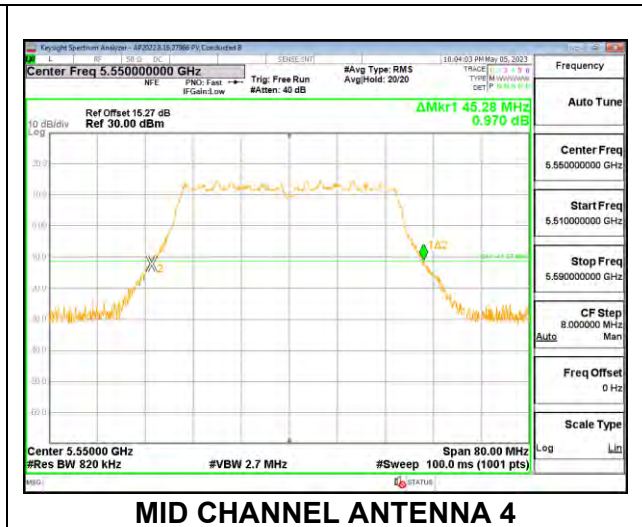
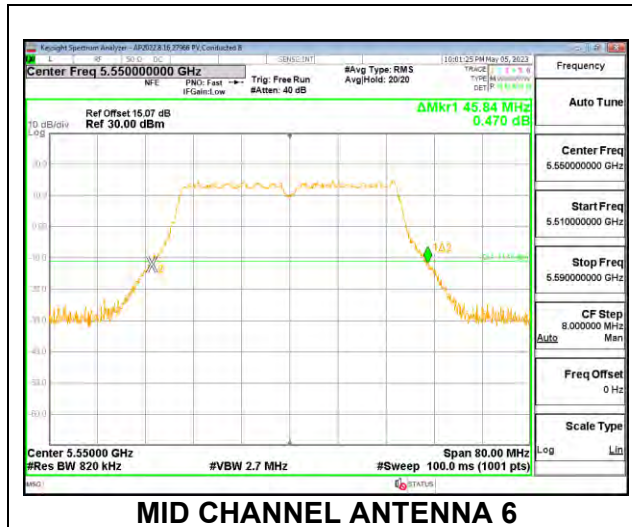


MID CHANNEL

2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Low	5510	45.92	45.28
Mid	5550	45.84	45.28
High	5670	45.76	45.44
142	5710	45.36	45.36

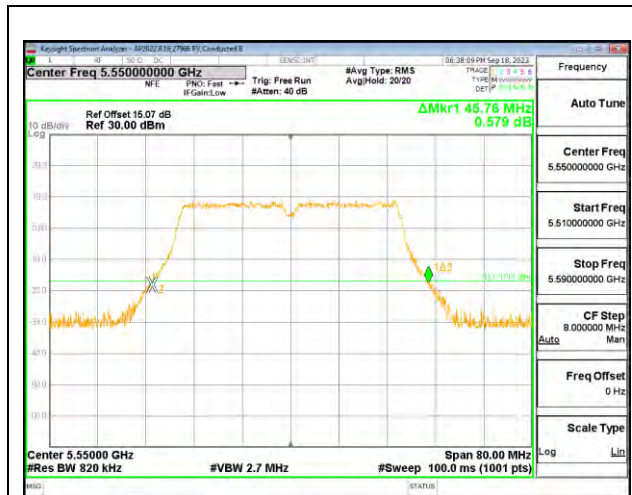
MID CHANNEL



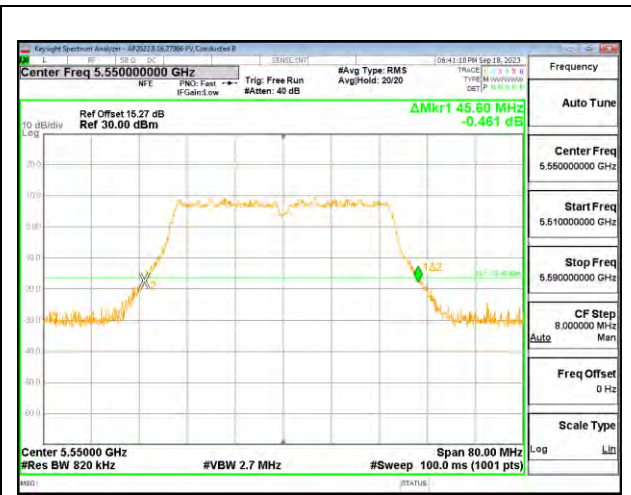
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5510	45.44	45.84	45.28	46.88
Mid	5550	45.76	45.60	45.52	46.56
High	5670	45.68	46.40	45.28	46.64
142	5710	45.68	45.84	45.52	46.08

MID CHANNEL



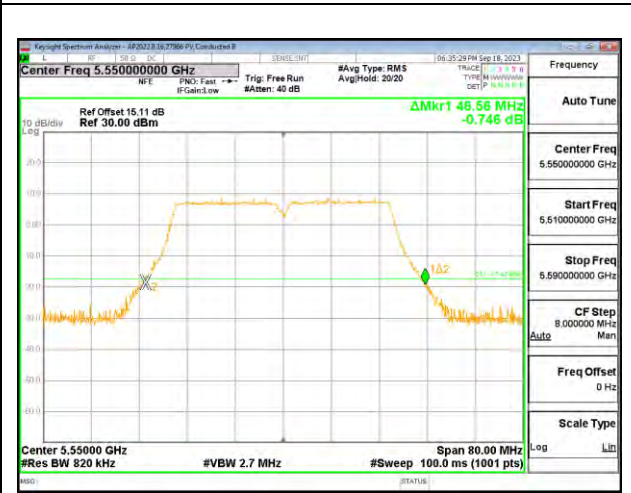
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

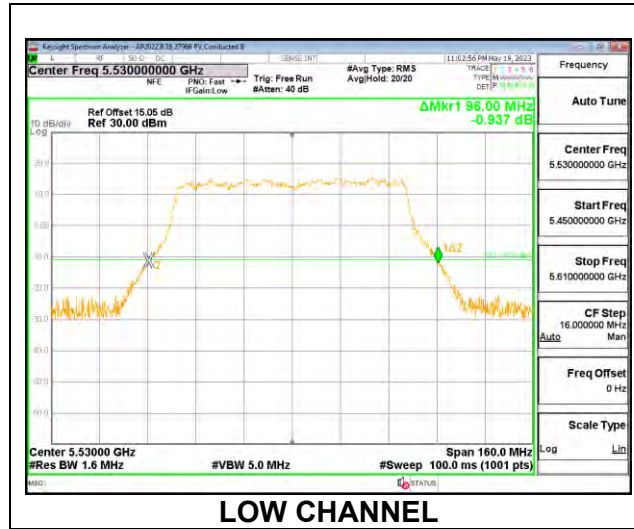


MID CHANNEL ANTENNA 1

9.2.9. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

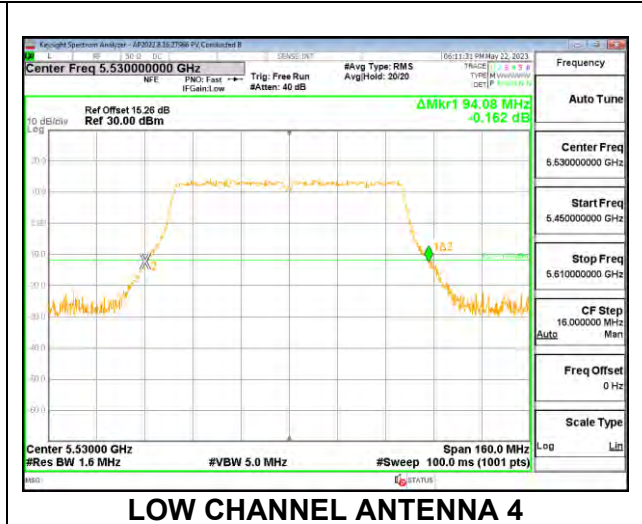
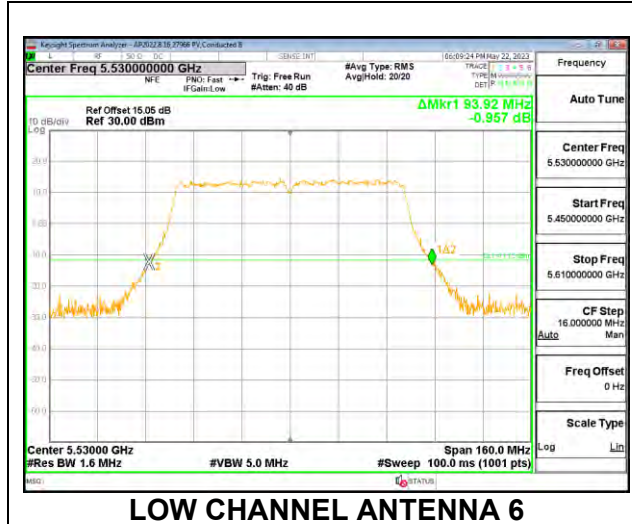
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	96.00
High	5610	96.32
138	5690	121.92



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Low	5530	93.92	94.08
High	5610	93.60	93.76
138	5690	96.32	95.84

LOW CHANNEL



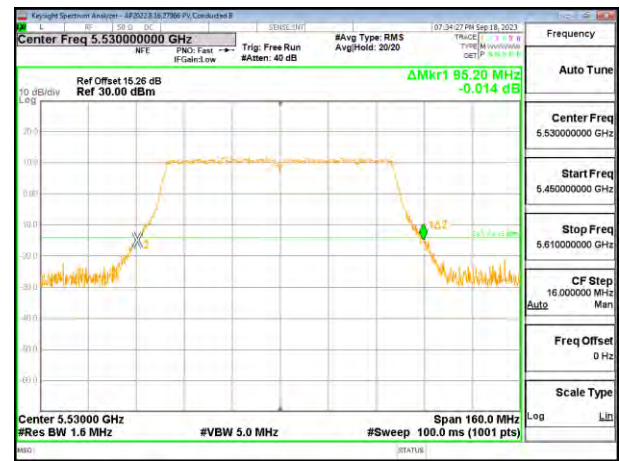
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Low	5530	92.48	95.20	93.28	94.40
High	5610	94.08	95.20	92.00	93.60
138	5690	92.96	96.16	94.40	94.40

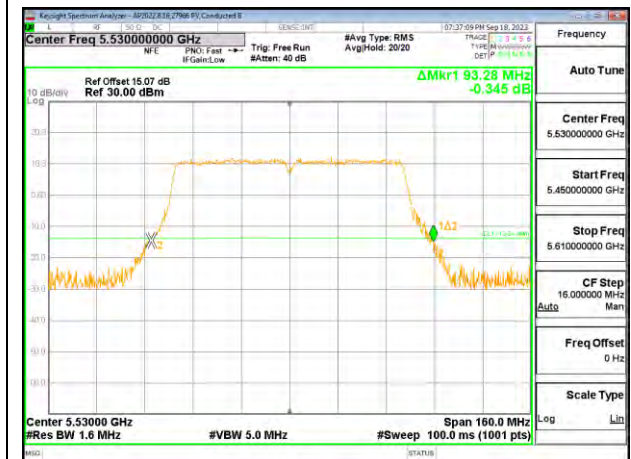
LOW CHANNEL



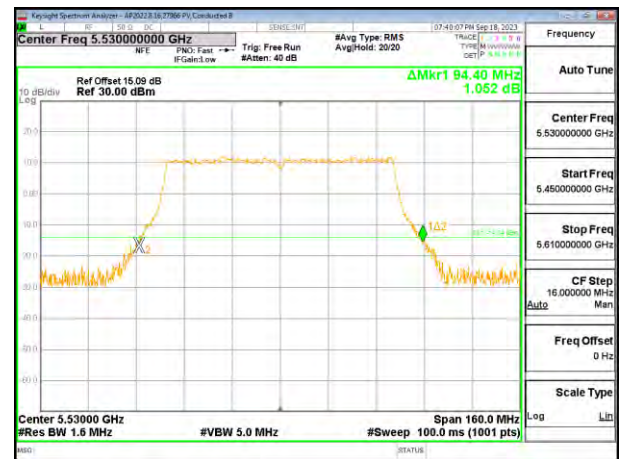
LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 4



LOW CHANNEL ANTENNA 9

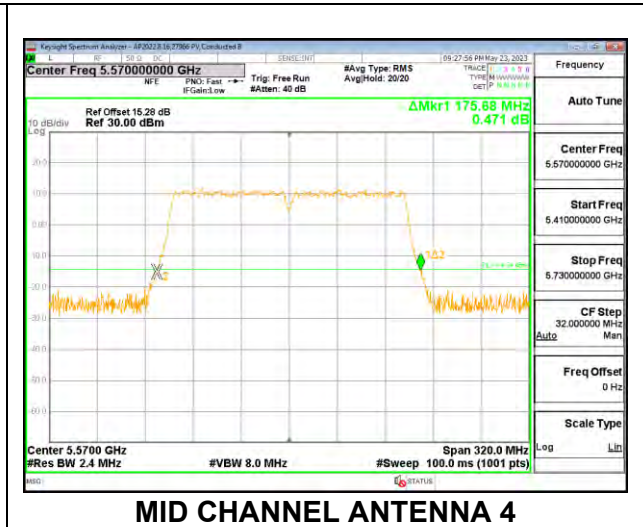
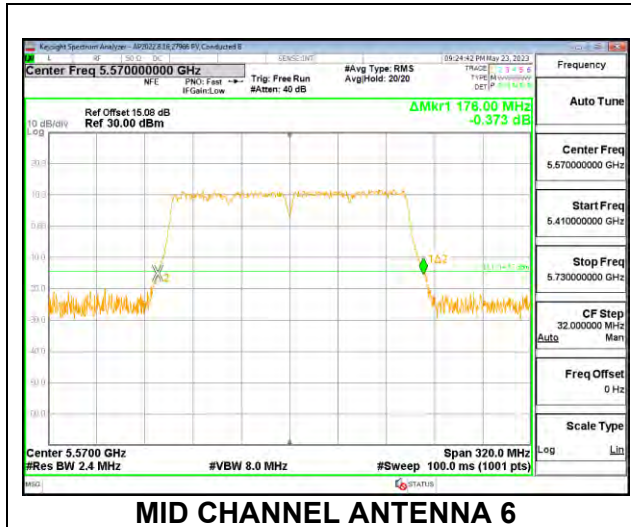


LOW CHANNEL ANTENNA 1

2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)
Mid	5570	176.00	175.68

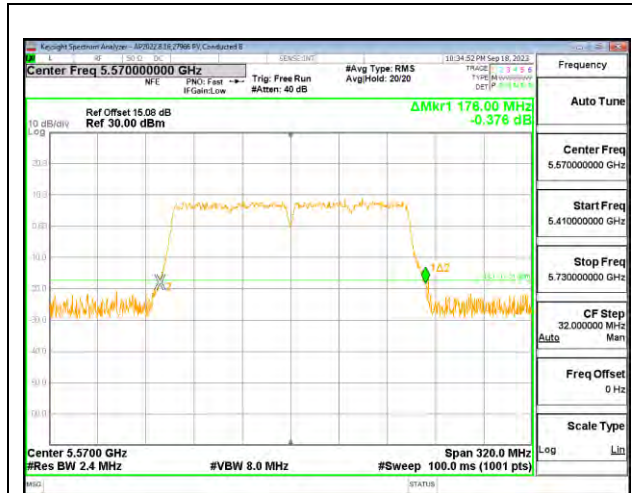
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 4 (MHz)	26 dB Bandwidth Antenna 9 (MHz)	26 dB Bandwidth Antenna 1 (MHz)
Mid	5570	176.00	176.96	175.68	175.04

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.3. 99% BANDWIDTH

LIMITS

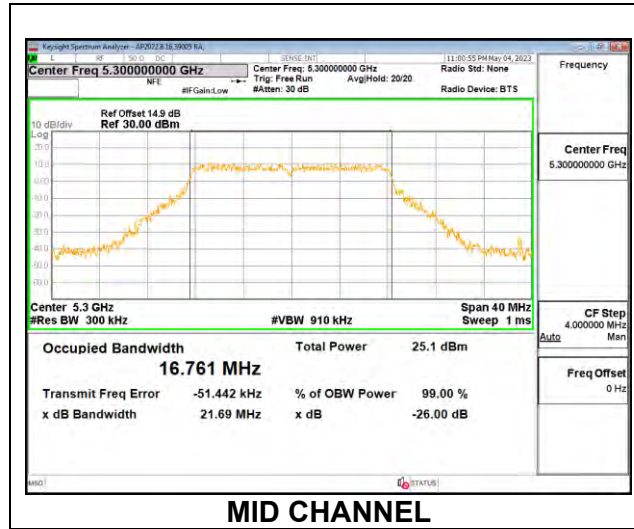
None; for reporting purposes only.

RESULTS

9.3.1. 802.11a MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

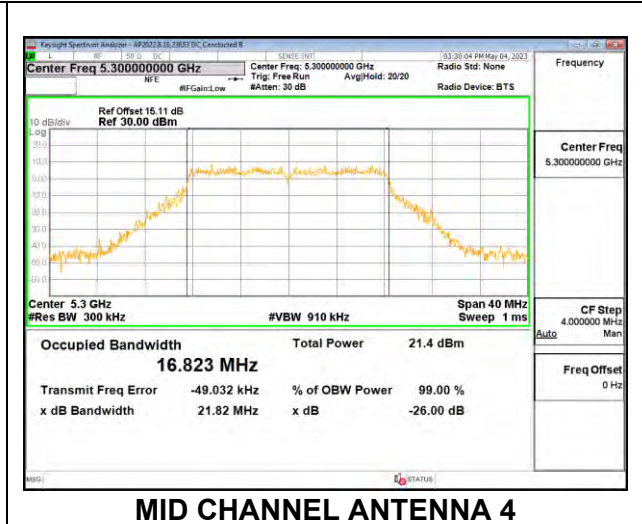
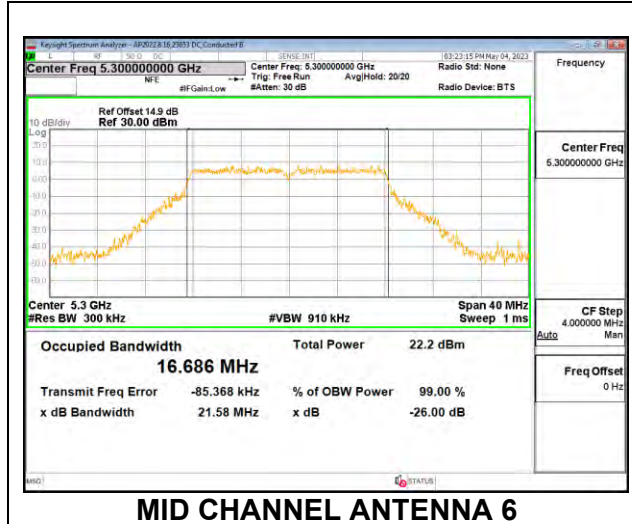
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.892
Mid	5300	16.761
High	5320	16.787



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5260	16.798	16.794
Mid	5300	16.686	16.823
High	5320	16.783	16.844

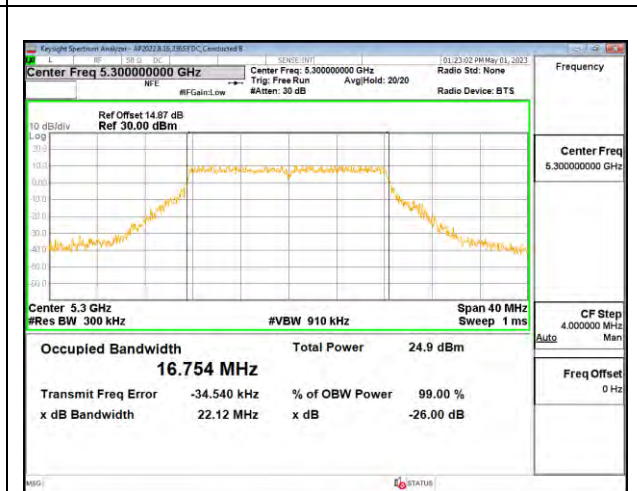
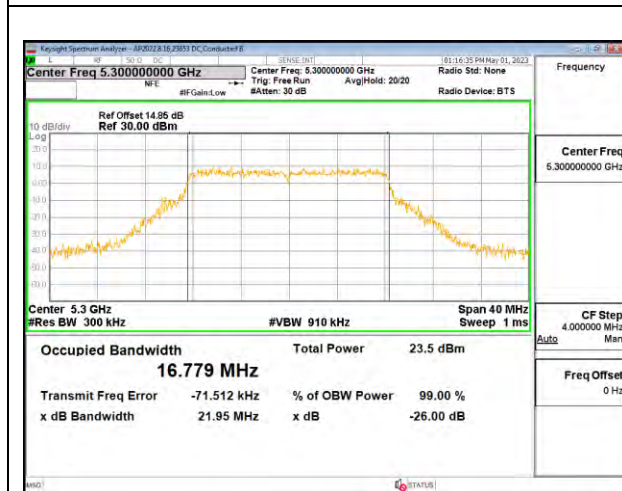
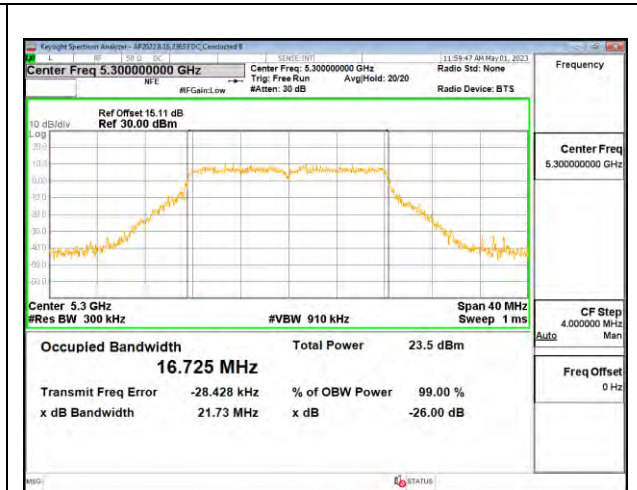
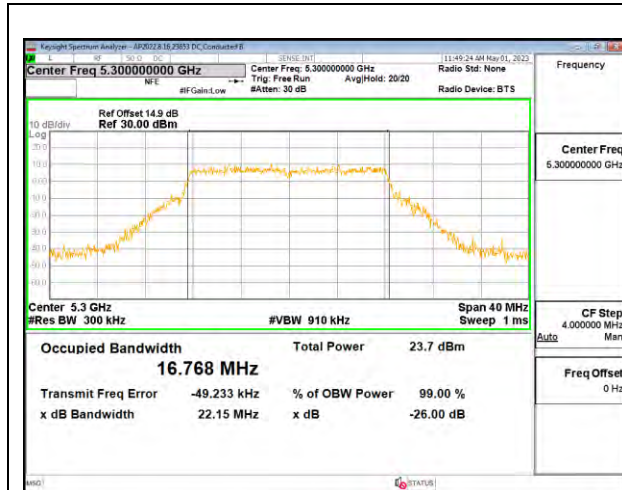
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5260	16.731	16.716	16.771	16.753
Mid	5300	16.768	16.725	16.779	16.754
High	5320	16.701	16.708	16.761	16.744

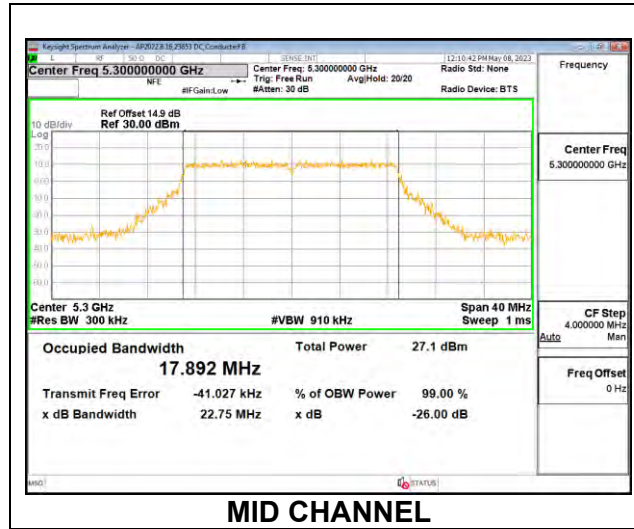
MID CHANNEL



9.3.2. 802.11n HT20 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

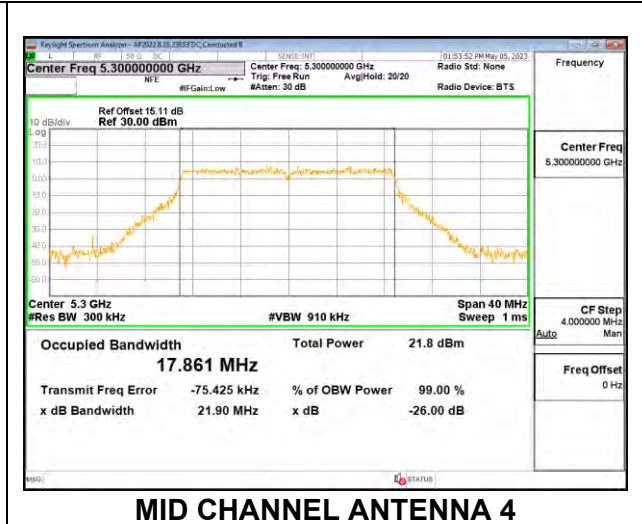
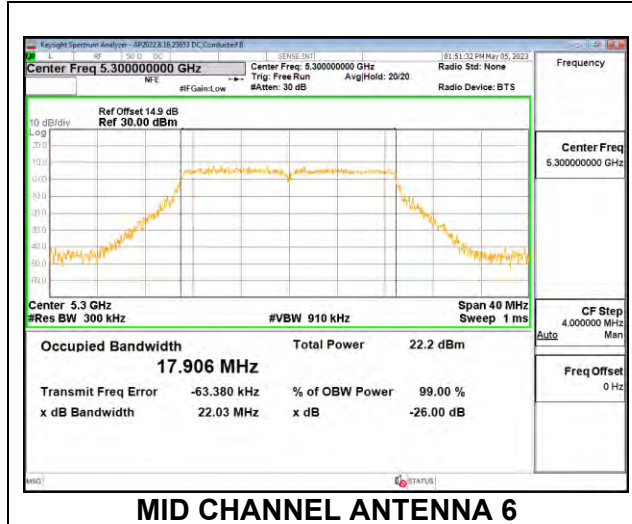
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.962
Mid	5300	17.892
High	5320	17.935



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5260	17.954	17.909
Mid	5300	17.906	17.861
High	5320	17.934	17.864

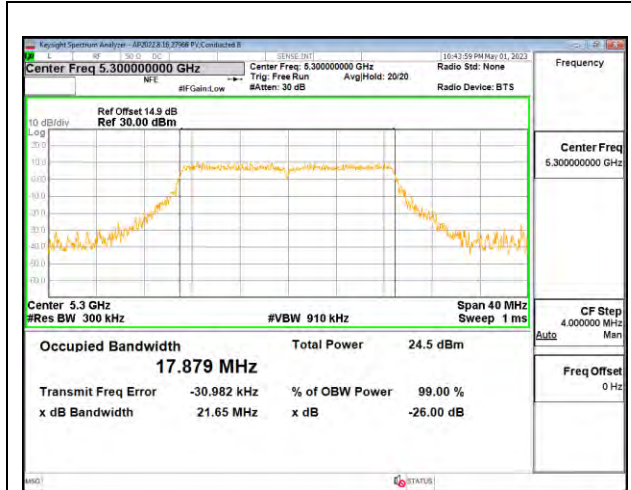
MID CHANNEL



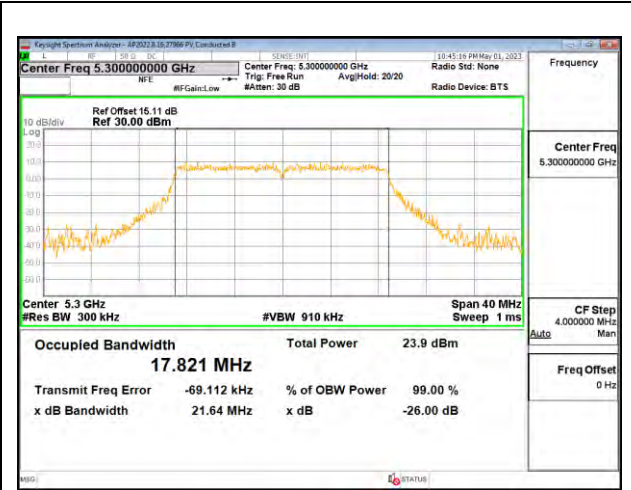
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5260	17.881	17.864	17.829	17.842
Mid	5300	17.879	17.821	17.947	17.878
High	5320	17.914	17.832	17.921	17.862

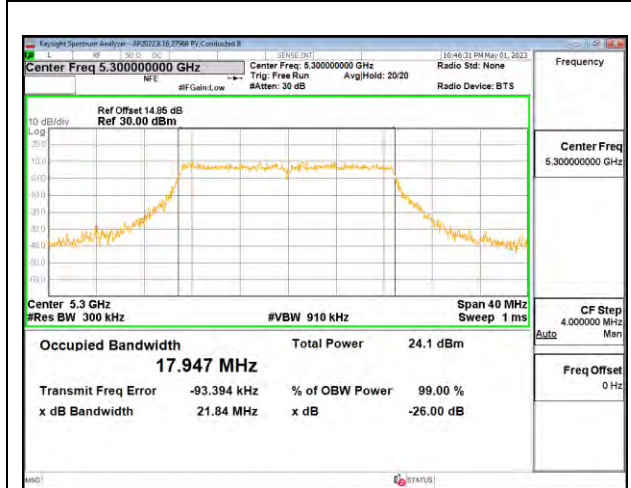
MID CHANNEL



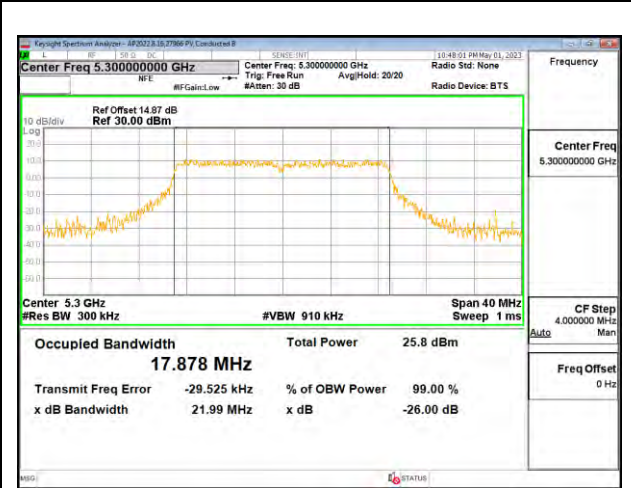
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

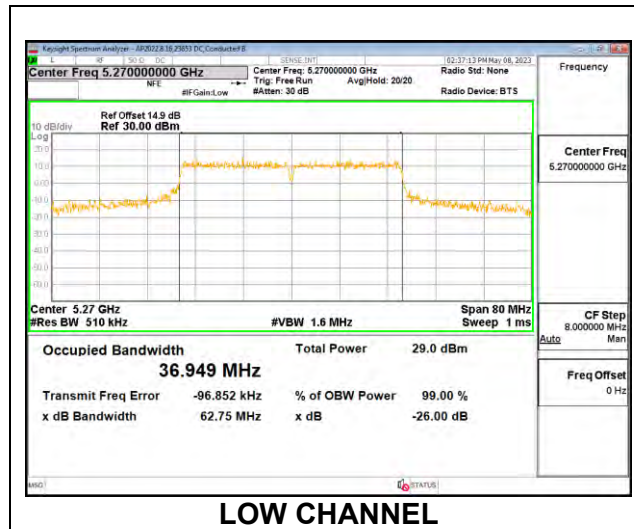


MID CHANNEL ANTENNA 1

9.3.3. 802.11n HT40 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

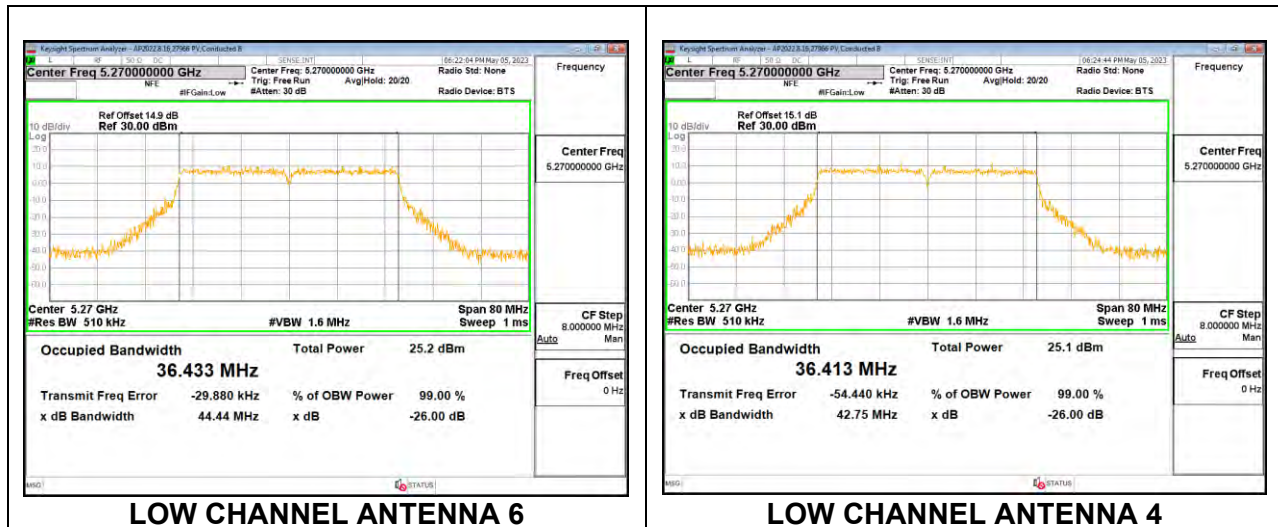
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.949
High	5310	36.682



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5270	36.433	36.413
High	5310	36.341	36.476

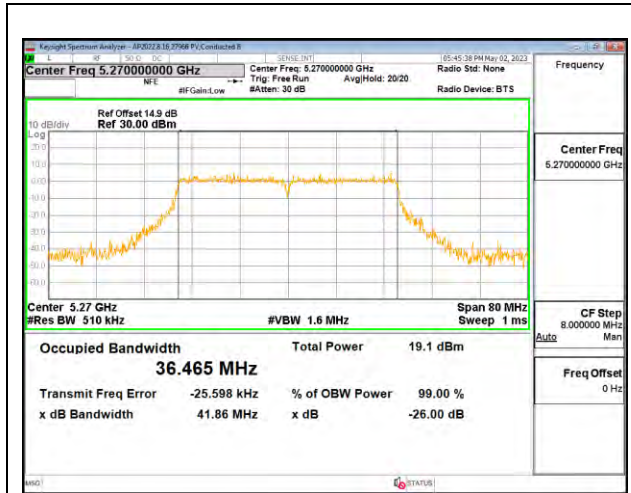
LOW CHANNEL



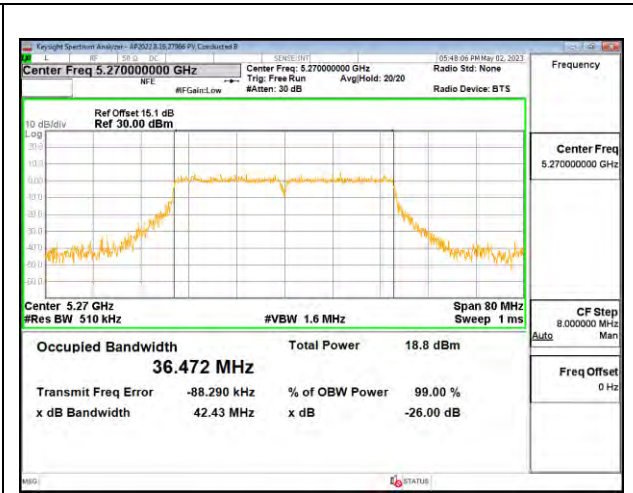
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5270	36.465	36.472	36.497	36.424
High	5310	36.436	36.537	36.473	36.527

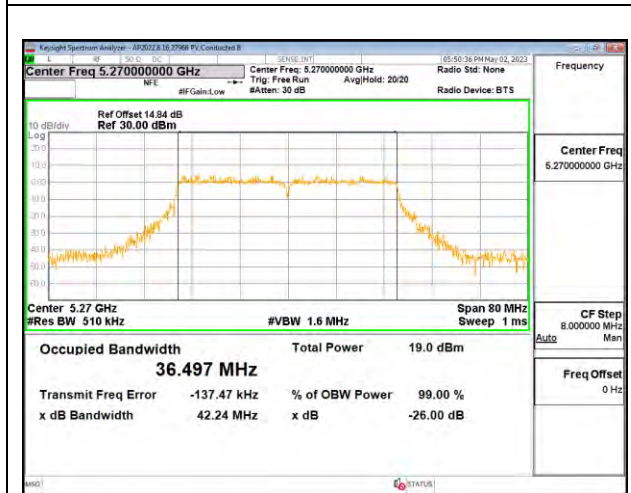
LOW CHANNEL



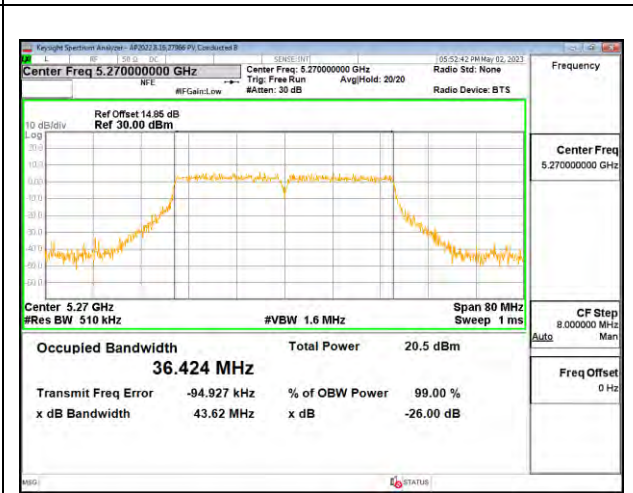
LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 4



LOW CHANNEL ANTENNA 9

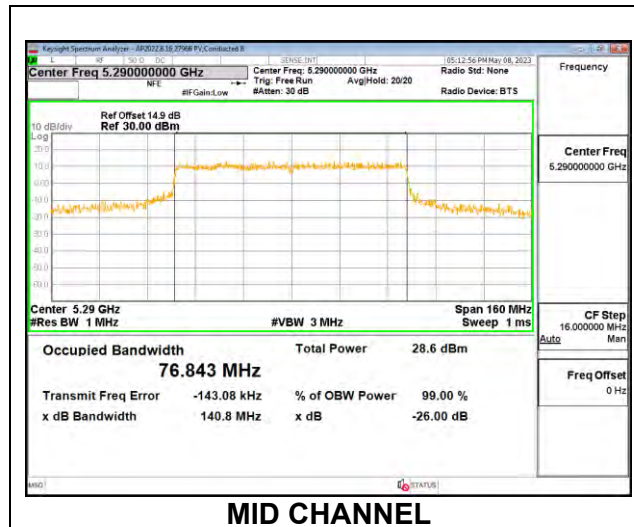


LOW CHANNEL ANTENNA 1

9.3.4. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

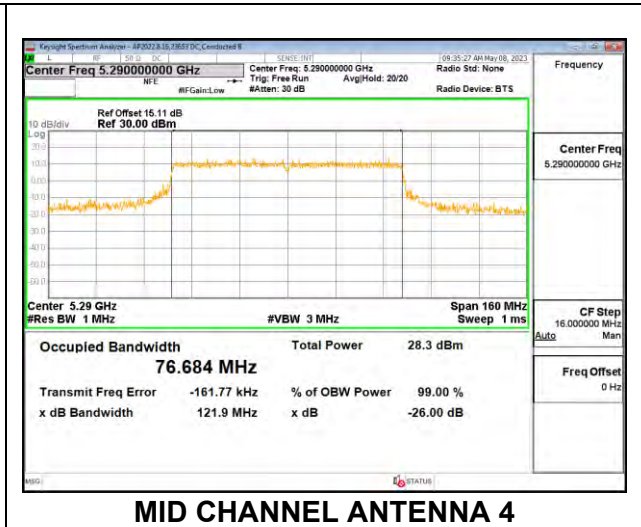
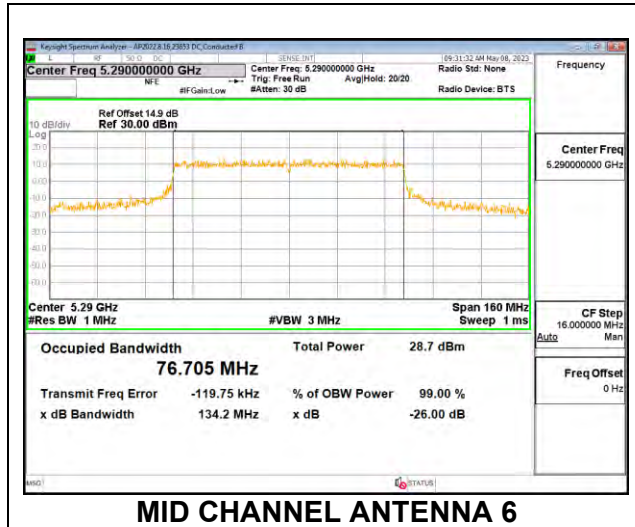
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5290	76.843



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5290	76.705	76.684

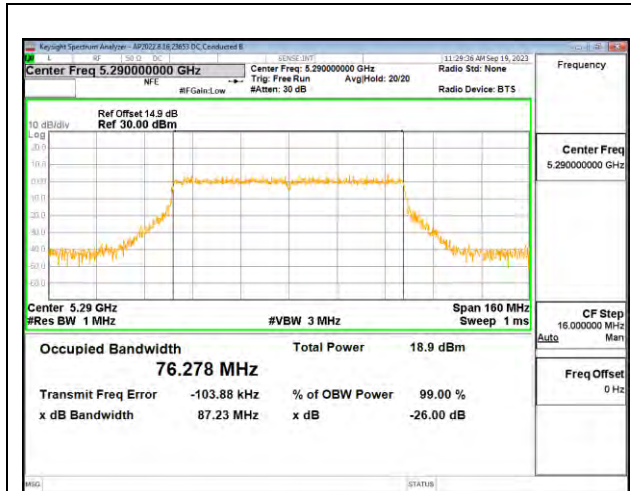
MID CHANNEL



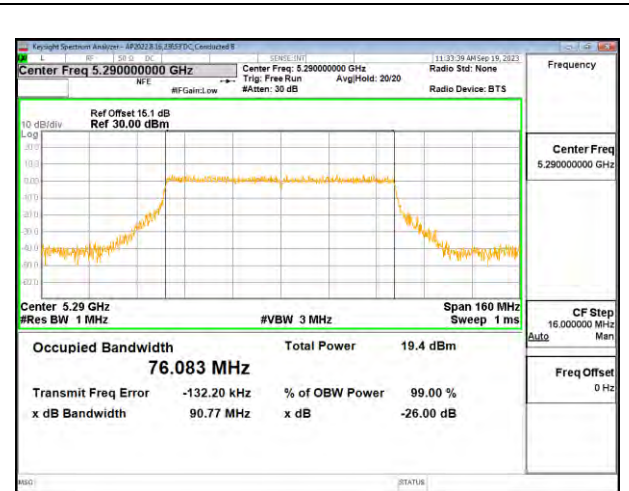
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Mid	5290	76.278	76.083	76.014	76.032

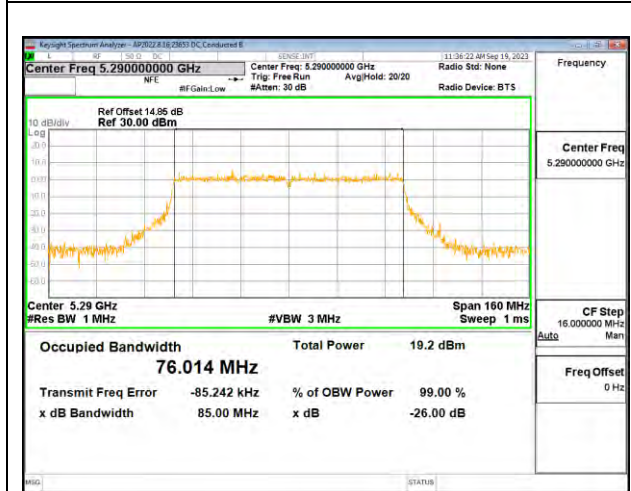
MID CHANNEL



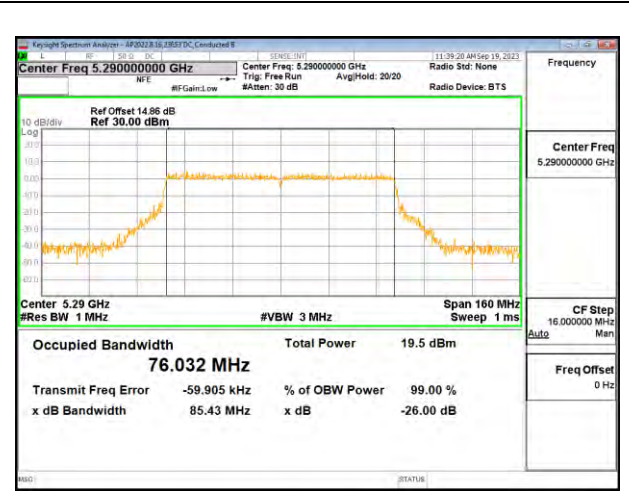
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

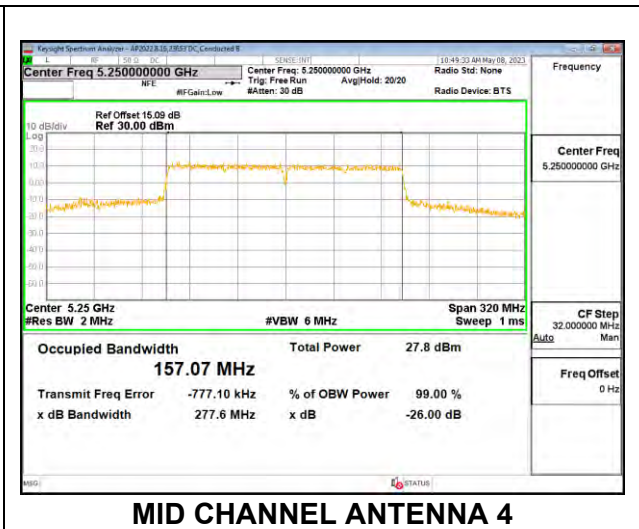
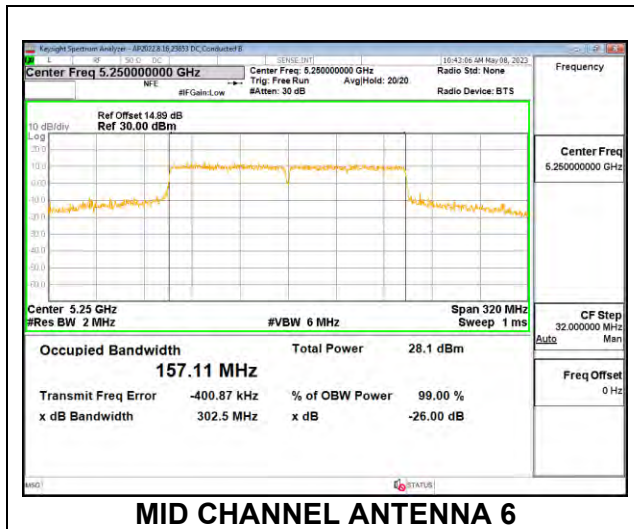


MID CHANNEL ANTENNA 1

2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5250	157.11	157.07

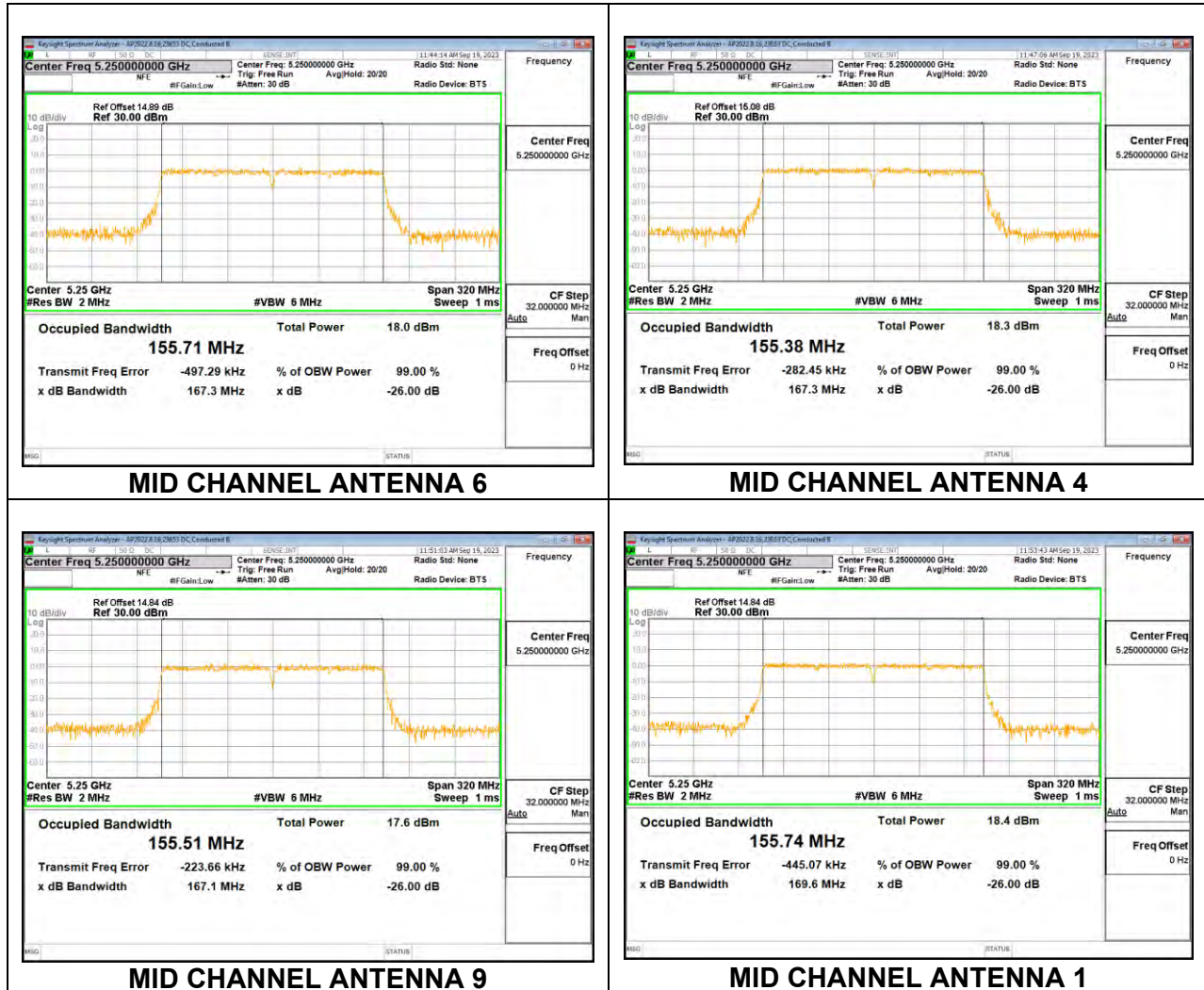
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Mid	5250	155.71	155.38	155.51	155.74

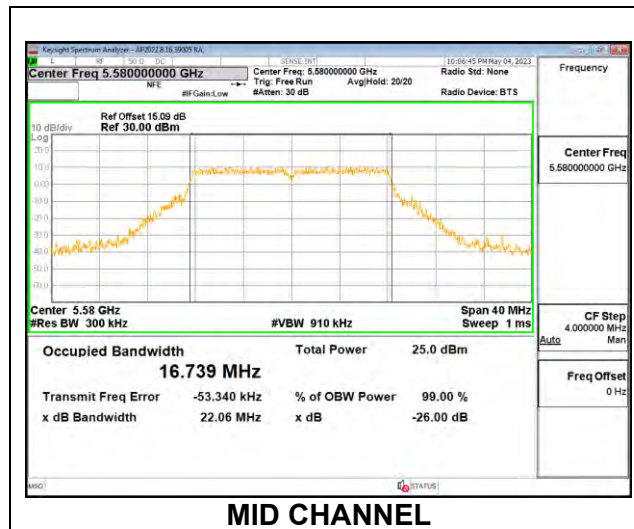
MID CHANNEL



9.3.6. 802.11a MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

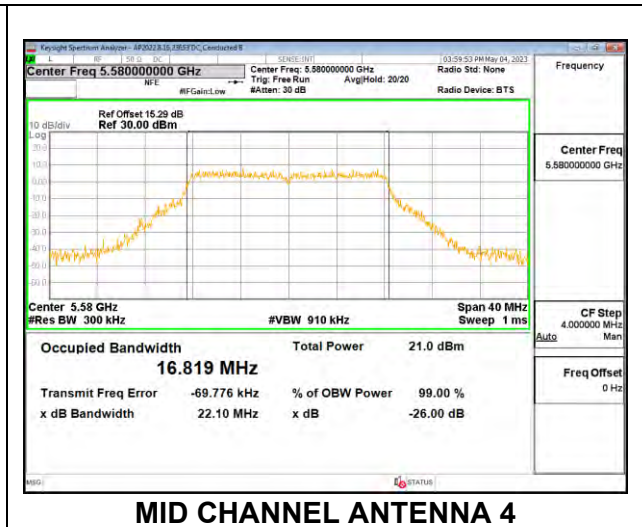
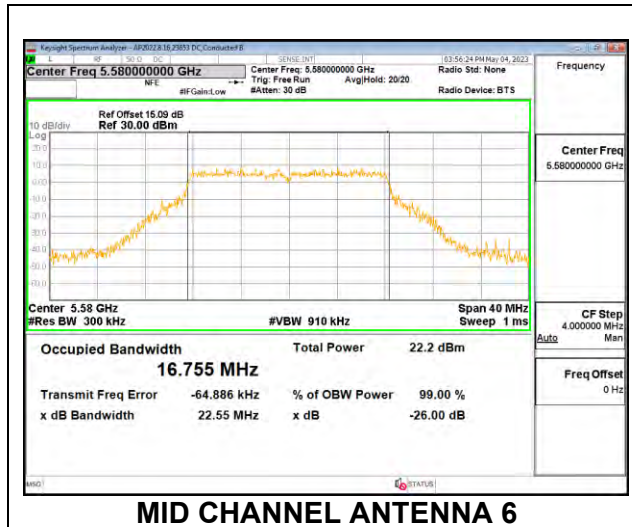
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.747
Mid	5580	16.739
High	5700	16.730
144	5720	16.814



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5500	16.752	16.848
Mid	5580	16.755	16.819
High	5700	16.725	16.816
144	5720	16.780	16.829

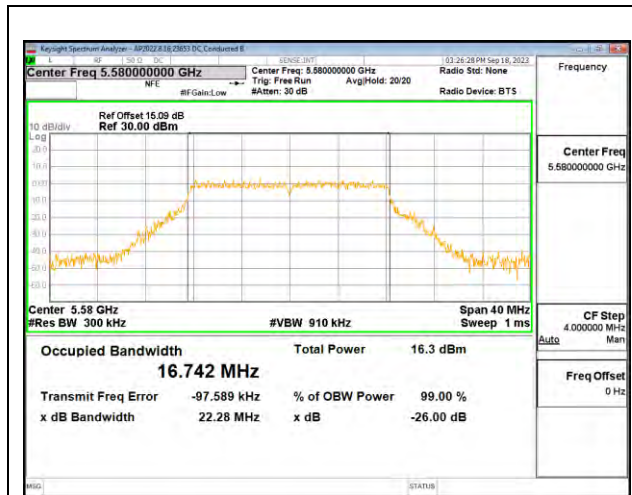
MID CHANNEL



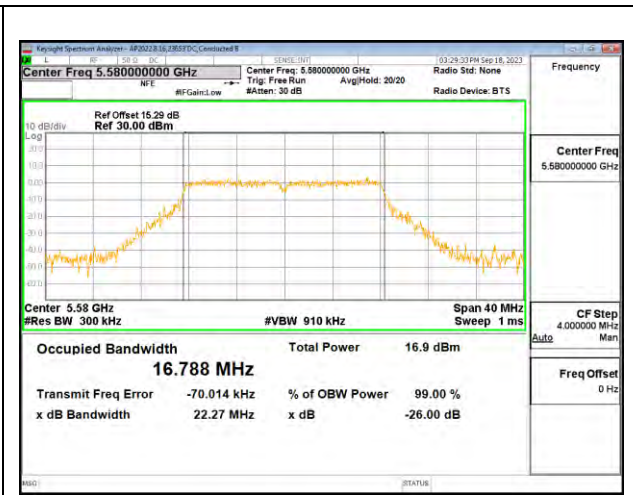
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5500	16.785	16.741	16.766	16.765
Mid	5580	16.742	16.788	16.842	16.762
High	5700	16.705	16.783	16.754	16.724
144	5720	16.749	16.765	16.695	16.786

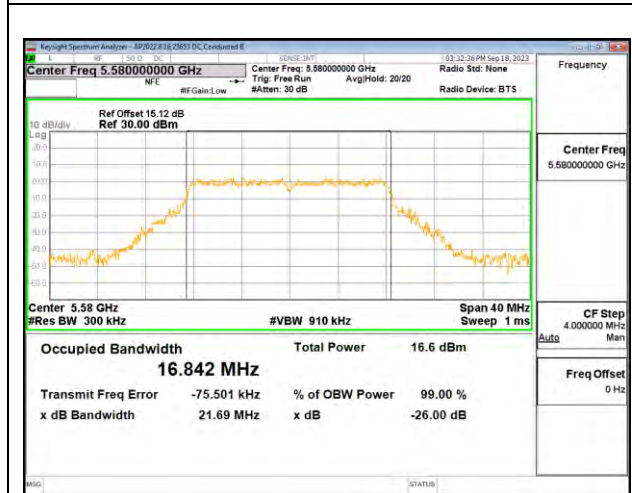
MID CHANNEL



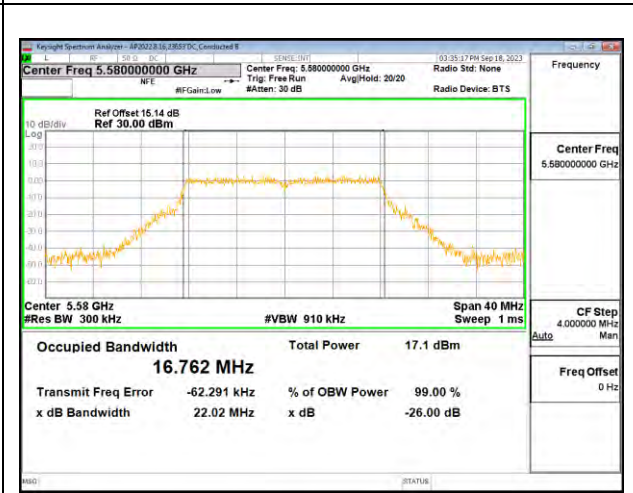
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

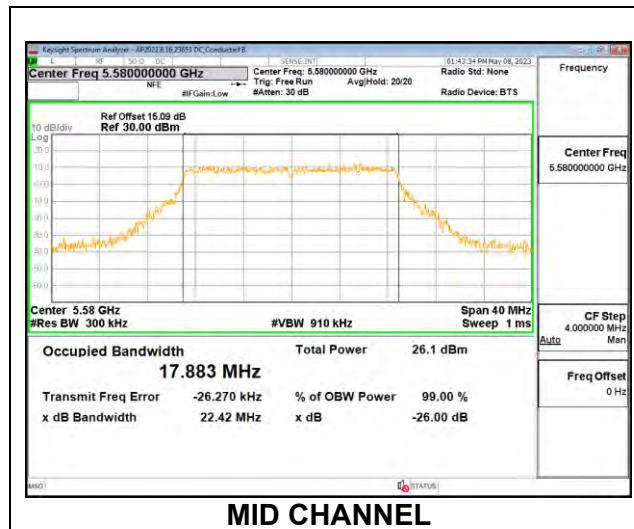


MID CHANNEL ANTENNA 1

9.3.7. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

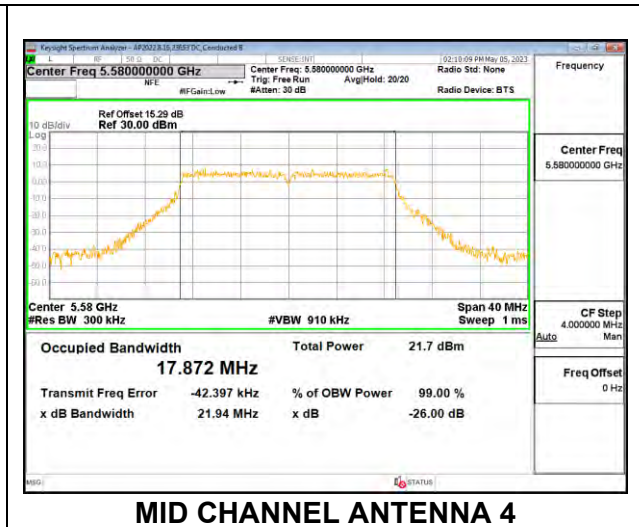
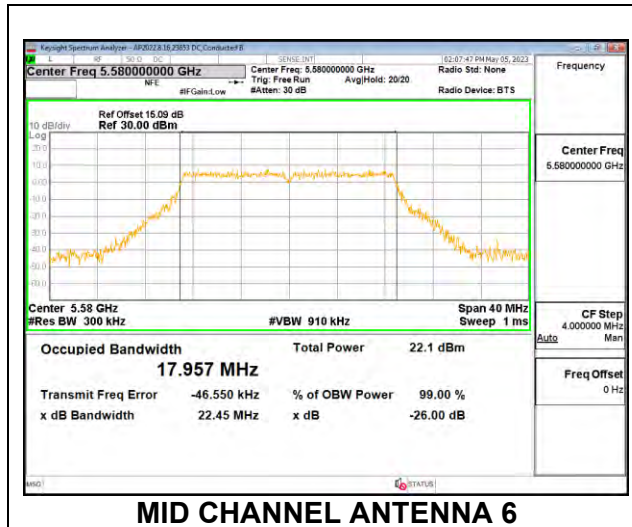
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.972
Mid	5580	17.883
High	5700	17.955
144	5720	17.990



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5500	17.924	17.861
Mid	5580	17.957	17.872
High	5700	17.935	17.840
144	5720	17.868	17.887

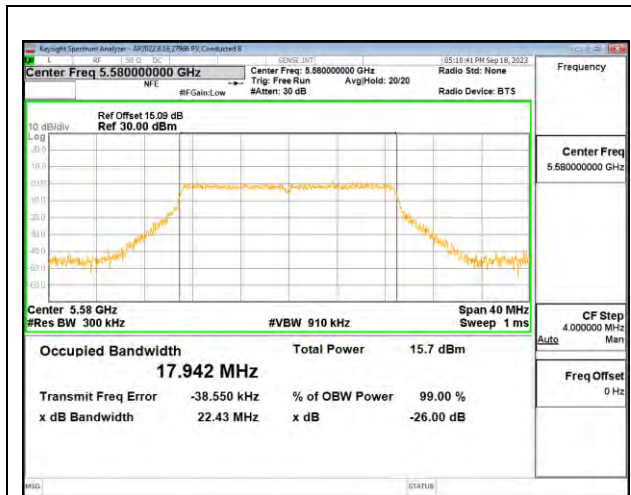
MID CHANNEL



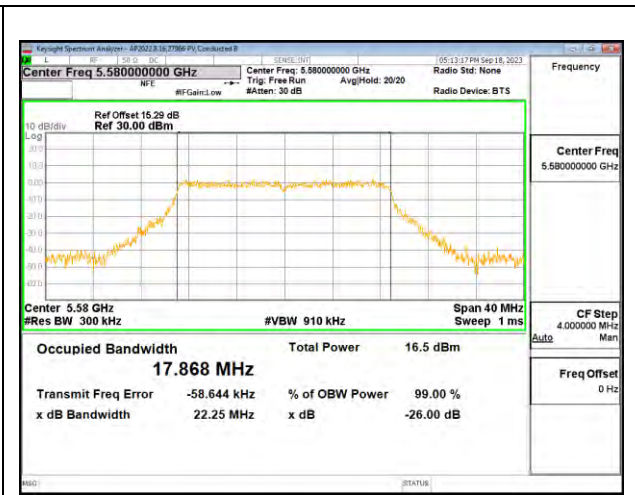
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5500	17.907	17.895	17.897	17.882
Mid	5580	17.942	17.868	17.884	17.890
High	5700	17.896	17.871	16.721	17.895
144	5720	17.913	17.858	17.931	17.891

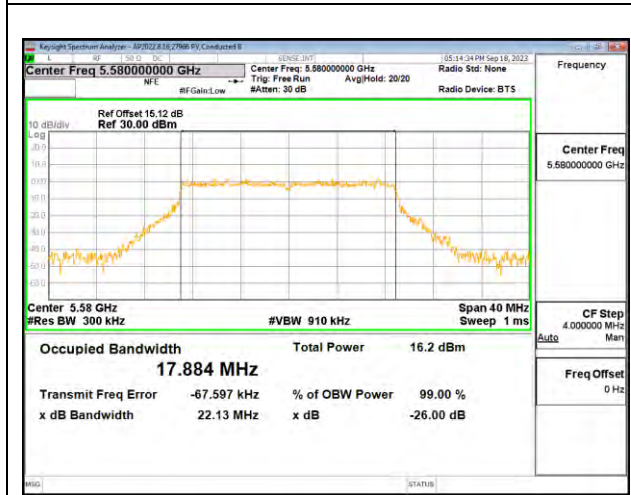
MID CHANNEL



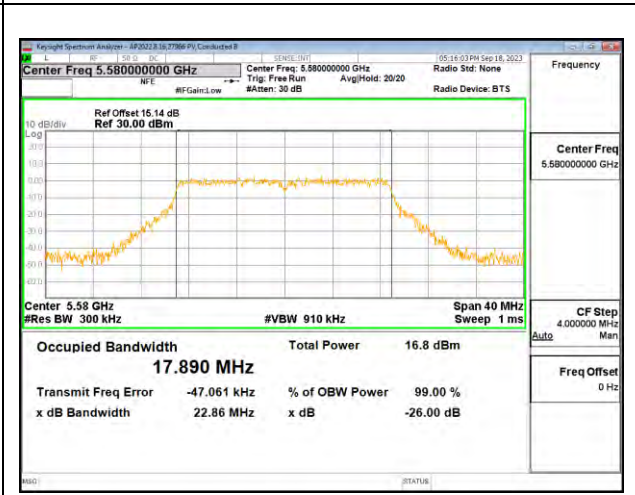
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

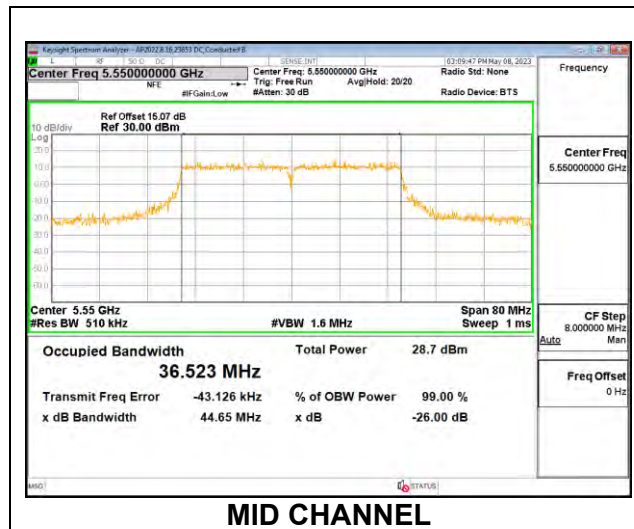


MID CHANNEL ANTENNA 1

9.3.8. 802.11n HT40 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

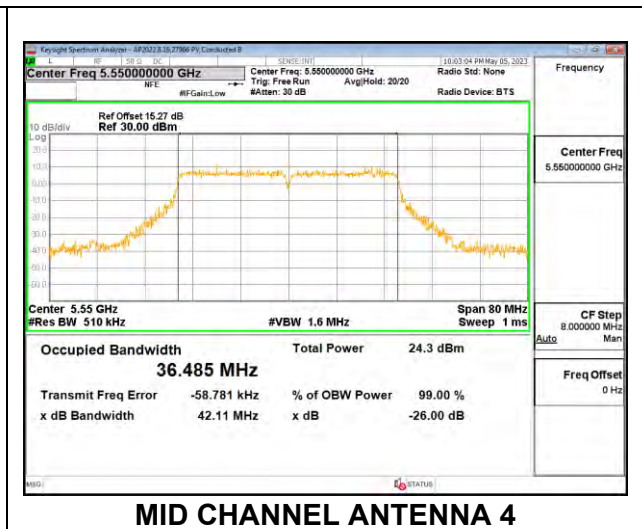
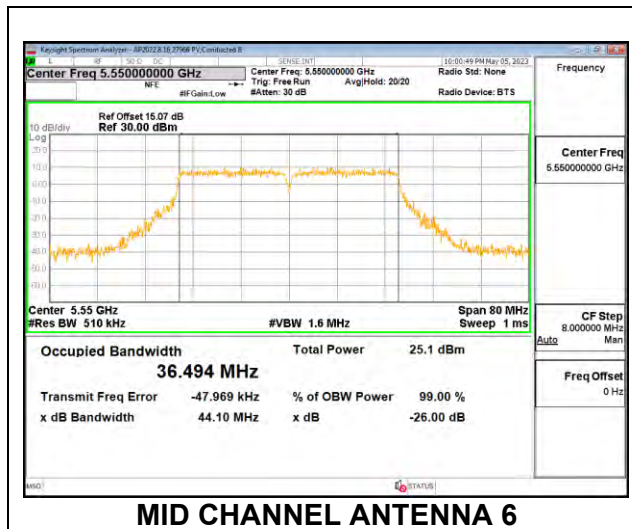
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.698
Mid	5550	36.523
High	5670	36.792
142	5710	36.881



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5510	36.447	36.462
Mid	5550	36.494	36.485
High	5670	36.427	36.540
142	5710	36.463	36.436

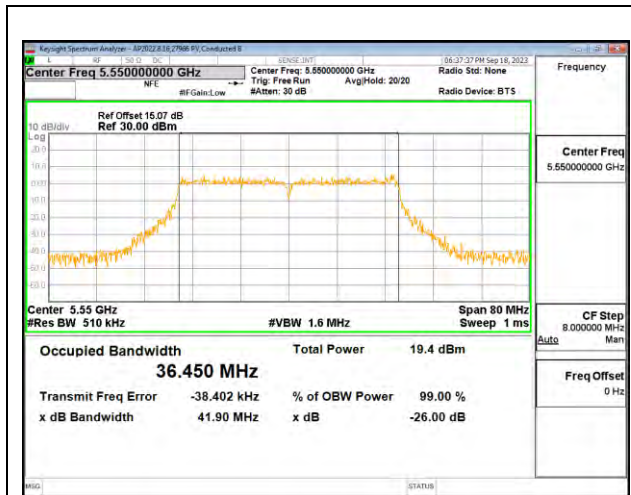
MID CHANNEL



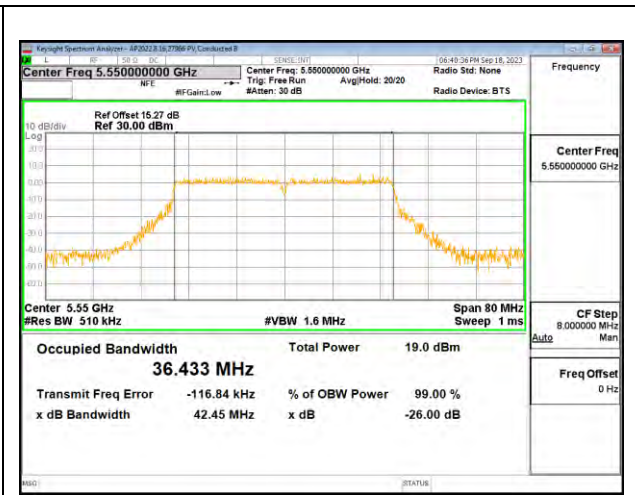
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5510	36.396	36.545	36.651	36.548
Mid	5550	36.450	36.433	36.584	36.508
High	5670	36.385	36.484	36.505	36.441
142	5710	36.433	36.457	36.553	36.396

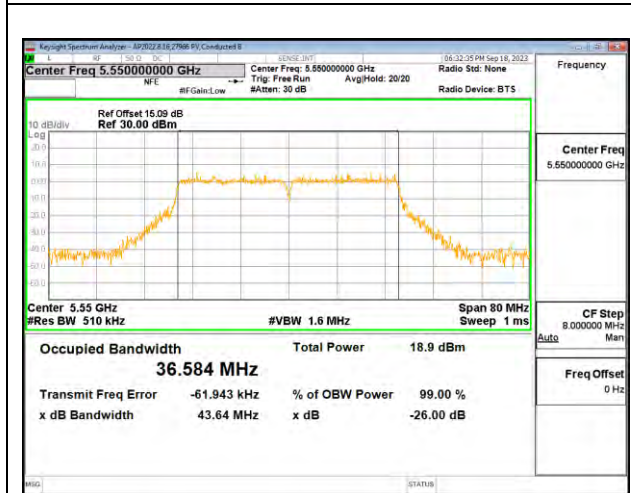
MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9

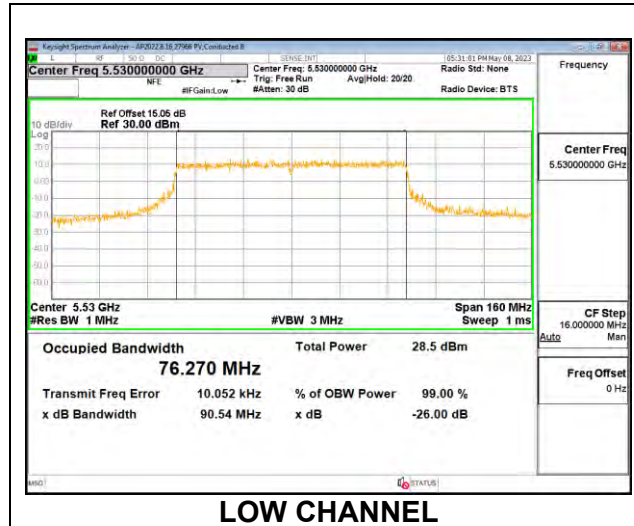


MID CHANNEL ANTENNA 1

9.3.9. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

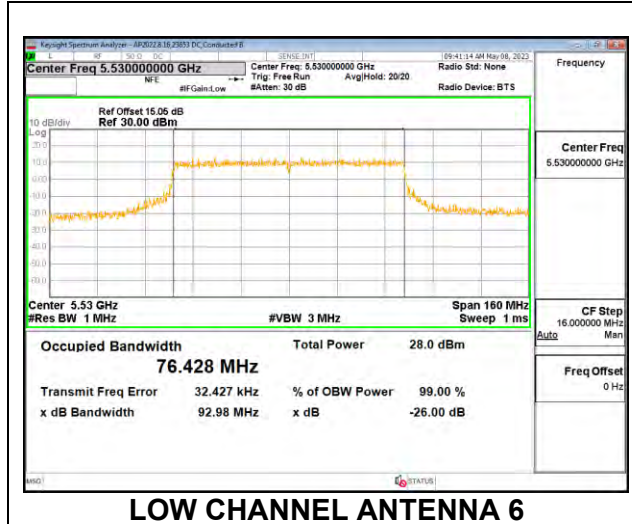
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5530	76.270
High	5610	76.241
138	5690	76.952



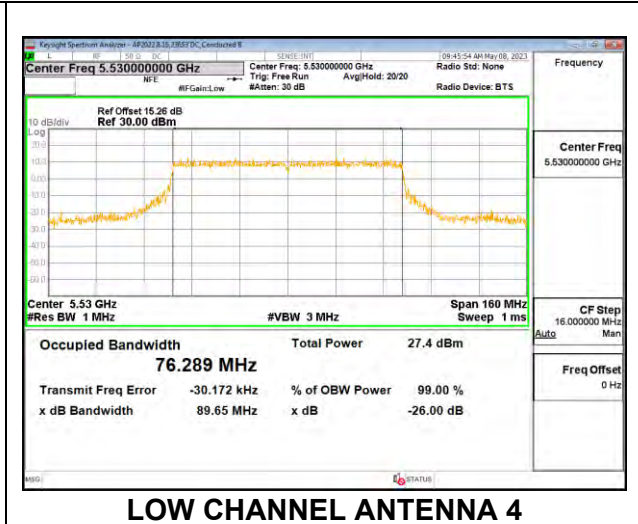
2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5530	76.428	76.289
High	5610	76.310	76.345
138	5690	76.508	76.548

LOW CHANNEL



LOW CHANNEL ANTENNA 6

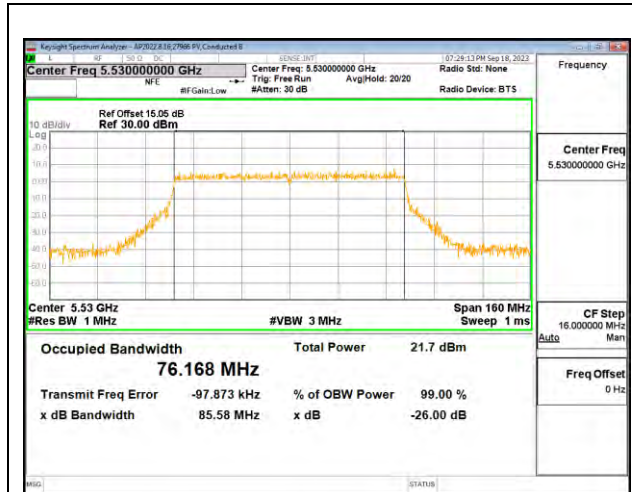


LOW CHANNEL ANTENNA 4

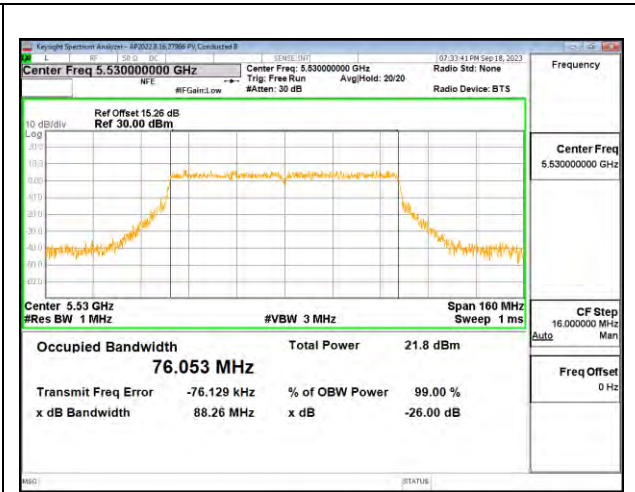
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Low	5530	76.168	76.053	76.036	76.139
High	5610	76.164	76.181	76.010	76.095
138	5690	76.230	76.206	76.053	76.149

LOW CHANNEL



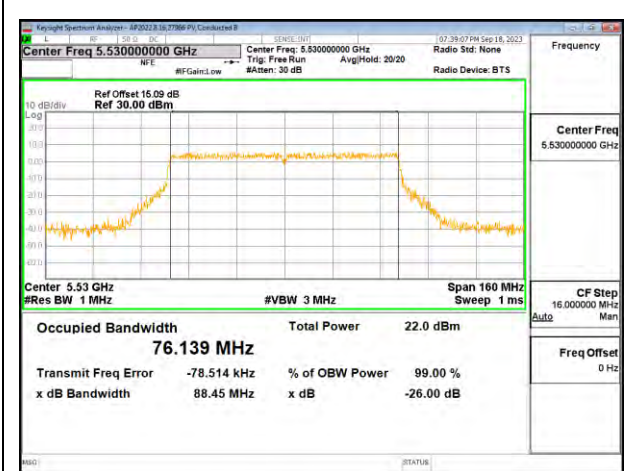
LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 4



LOW CHANNEL ANTENNA 9

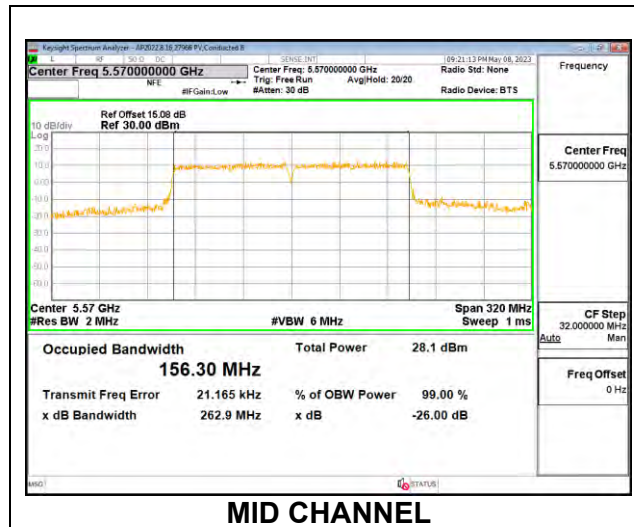


LOW CHANNEL ANTENNA 1

9.3.10. 802.11ac VHT160 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

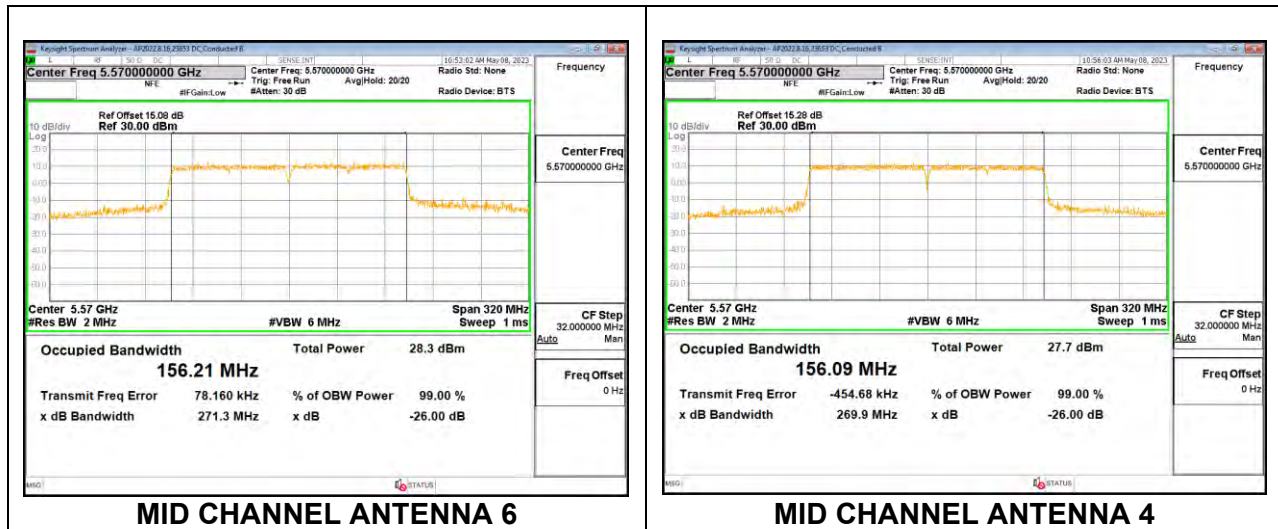
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5570	156.30



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5270	156.21	156.09

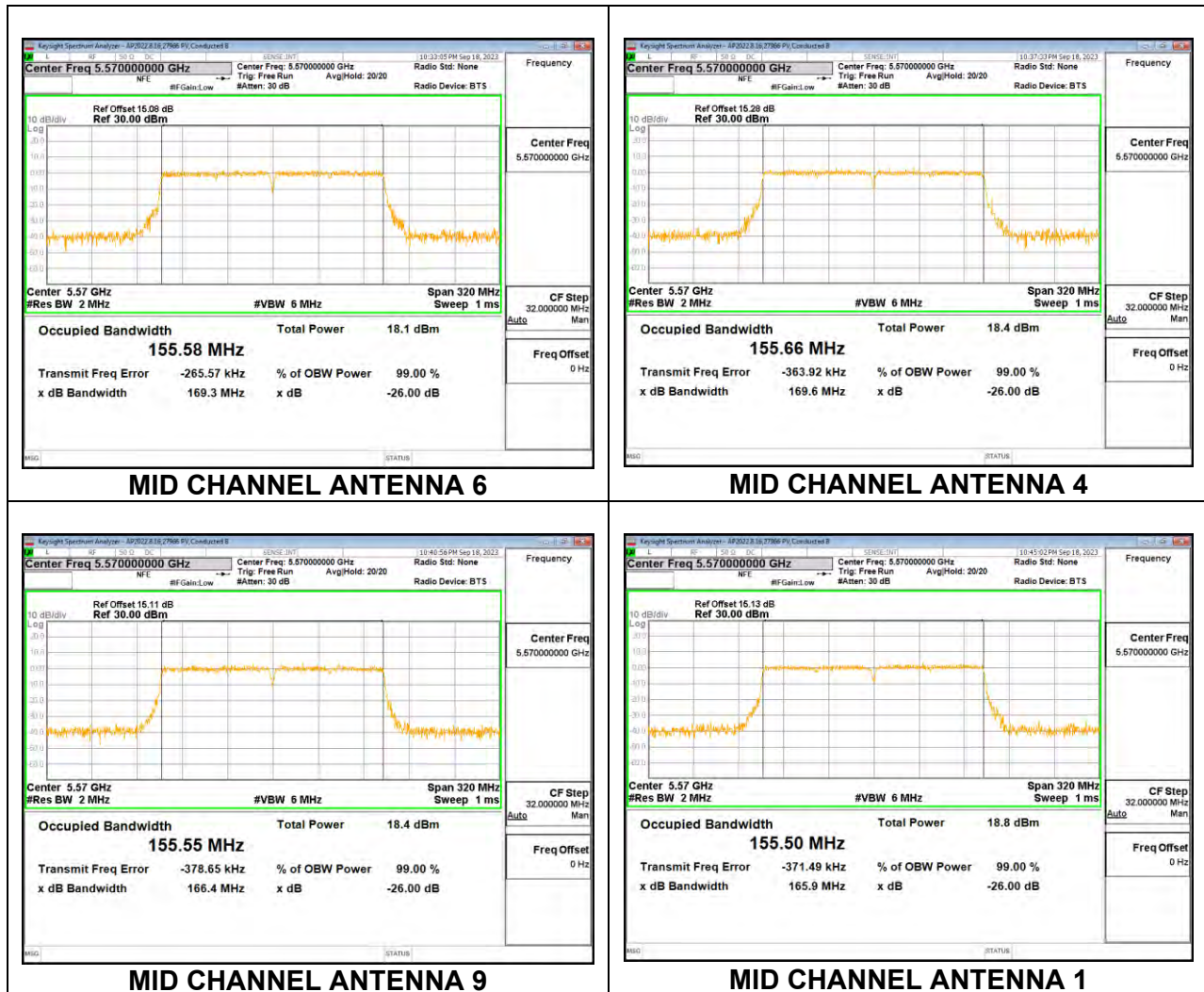
MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 4 (MHz)	99% Bandwidth Antenna 9 (MHz)	99% Bandwidth Antenna 1 (MHz)
Mid	5570	155.58	155.66	155.55	155.50

MID CHANNEL



9.4. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

RSS-247 6.2.4.1

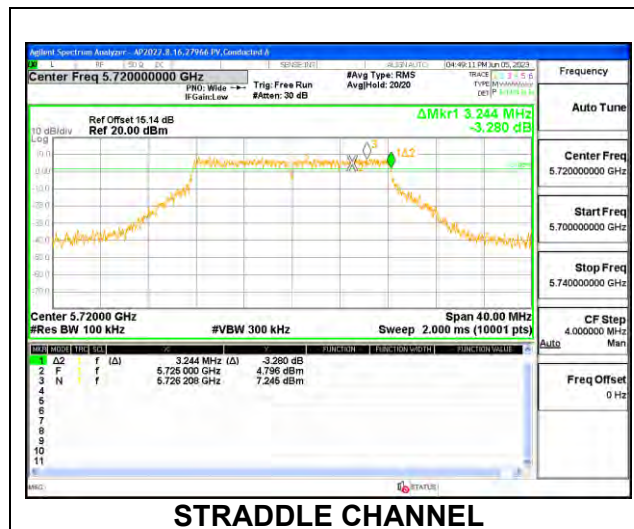
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

9.4.1. 802.11a MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

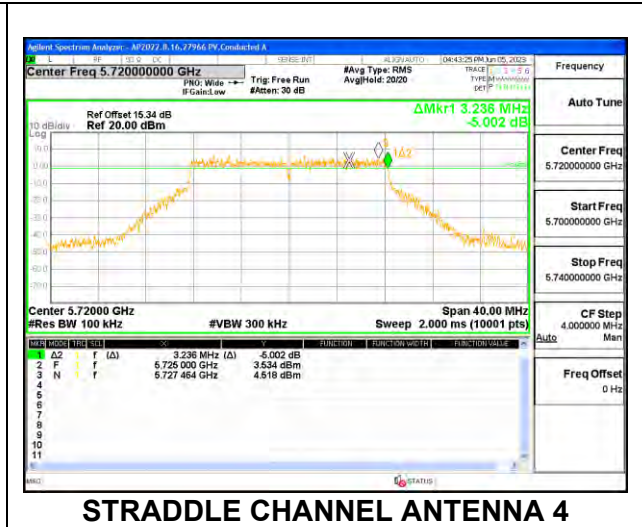
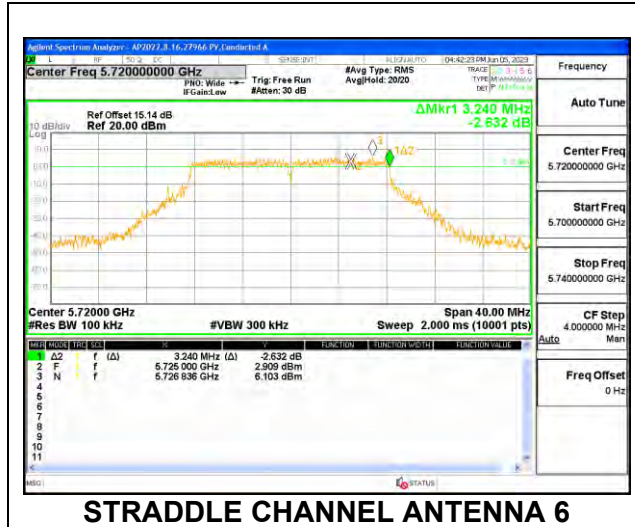
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
144	5720	3.244	0.5



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
144	5720	3.240	3.236	0.5

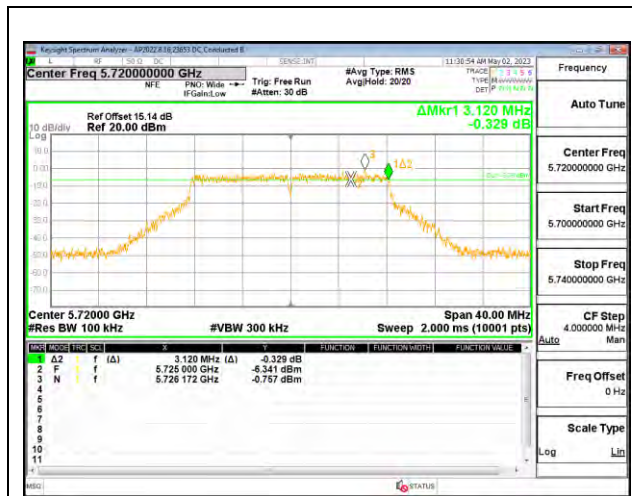
STRADDLE CHANNEL



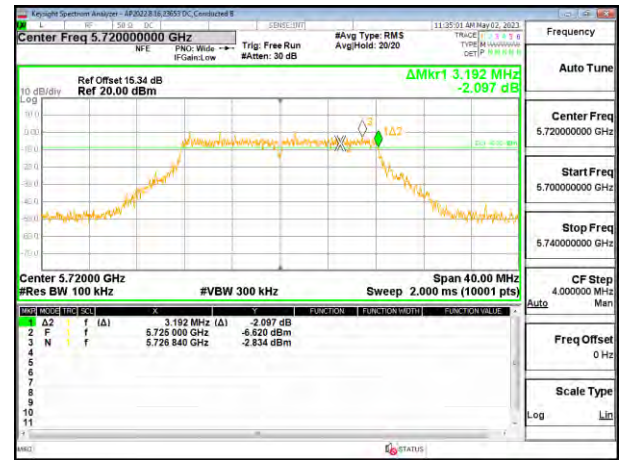
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	6 dB BW Antenna 9 (MHz)	6 dB BW Antenna 1 (MHz)	Minimum Limit (MHz)
144	5720	3.120	3.192	3.108	3.220	0.5

STRADDLE CHANNEL



STRADDLE CHANNEL ANTENNA 6



STRADDLE CHANNEL ANTENNA 4



STRADDLE CHANNEL ANTENNA 9

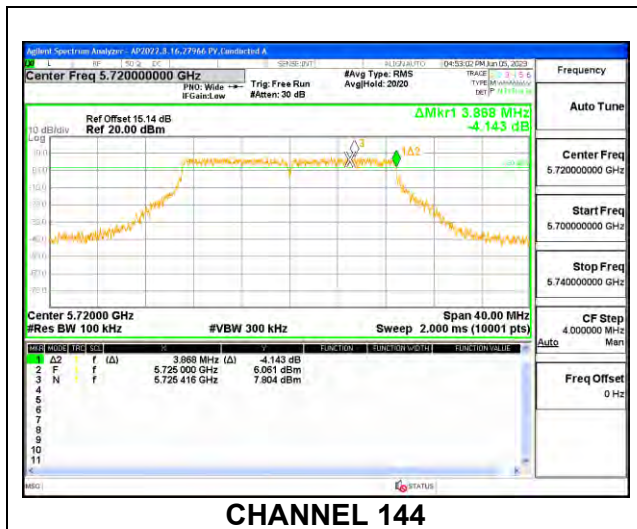


STRADDLE CHANNEL ANTENNA 1

9.4.2. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

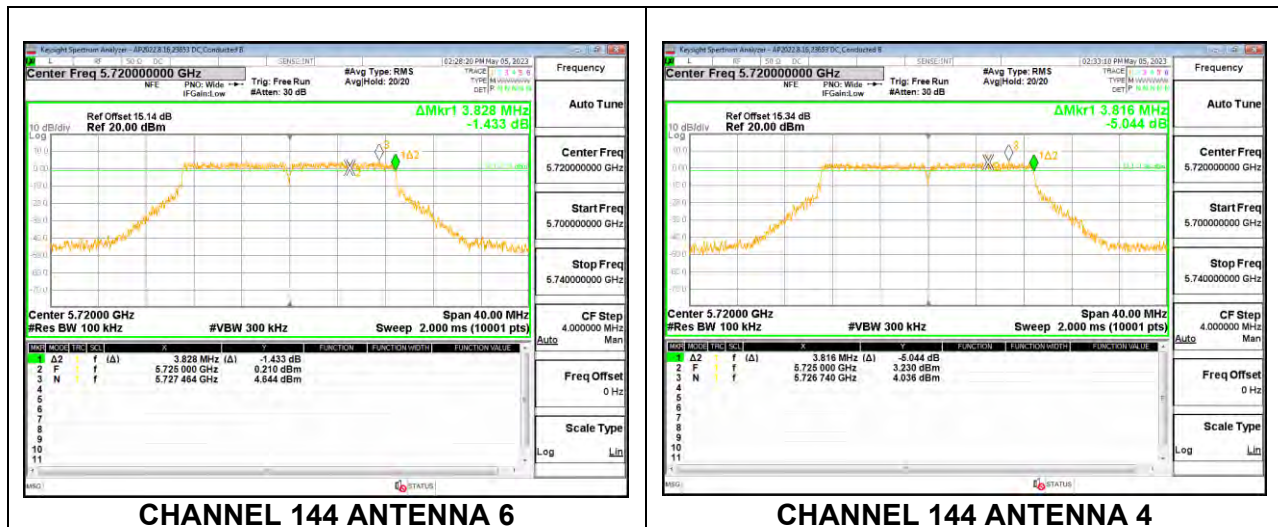
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
144	5720	3.868	0.5



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
144	5720	3.828	3.816	0.5

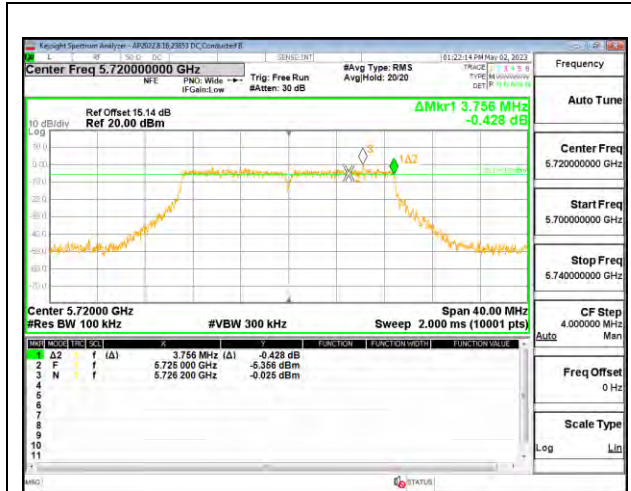
CHANNEL 144



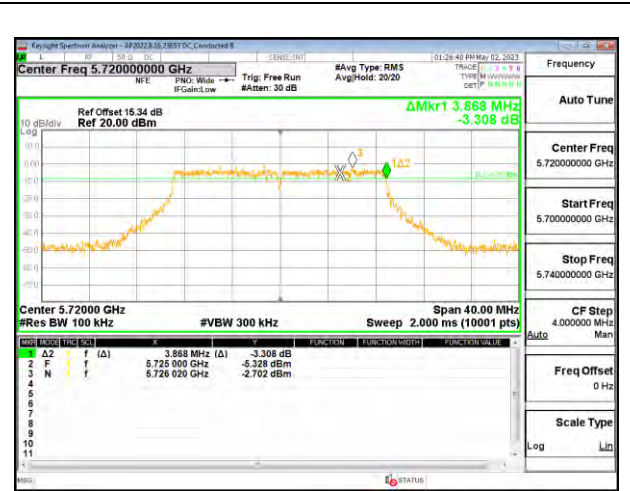
4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	6 dB BW Antenna 9 (MHz)	6 dB BW Antenna 1 (MHz)	Minimum Limit (MHz)
144	5720	3.756	3.868	3.796	3.844	0.5

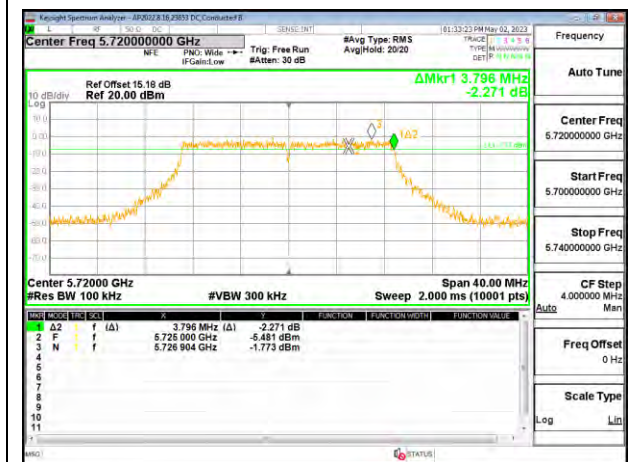
CHANNEL 144



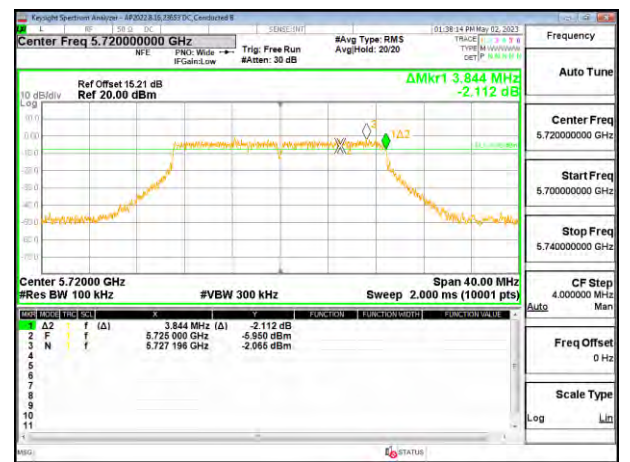
CHANNEL 144 ANTENNA 6



CHANNEL 144 ANTENNA 4



CHANNEL 144 ANTENNA 9

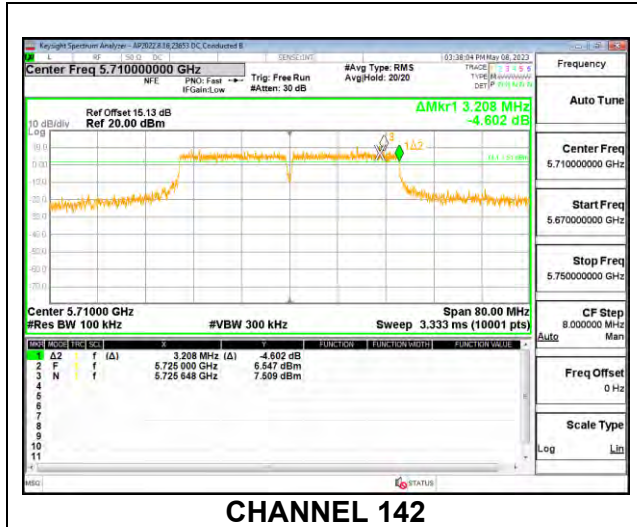


CHANNEL 144 ANTENNA 1

9.4.3. 802.11n HT40 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

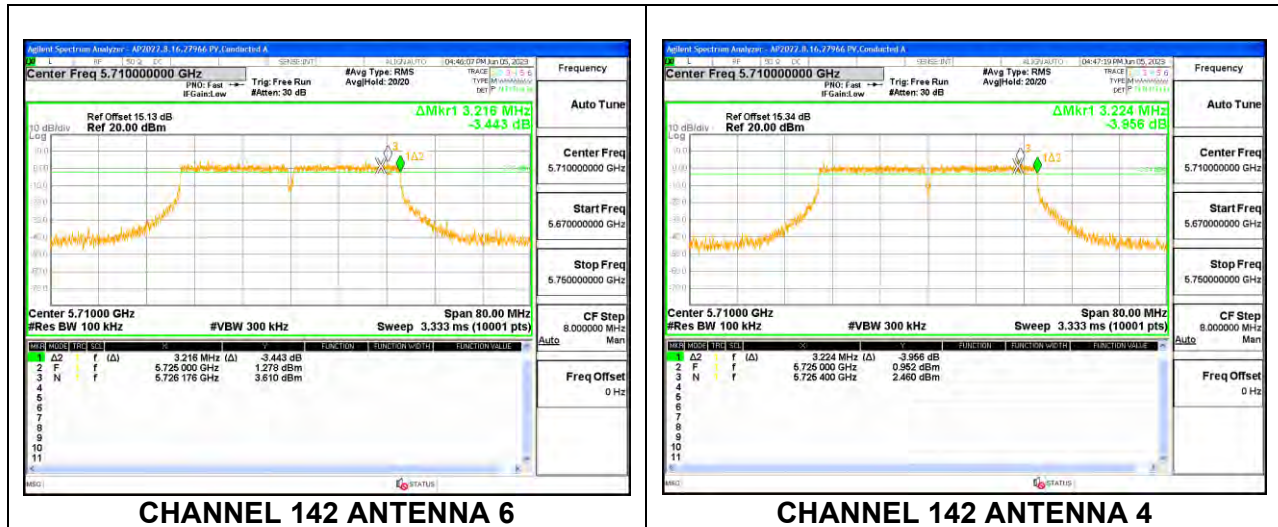
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
142	5710	3.208	0.5



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
142	5710	3.216	3.224	0.5

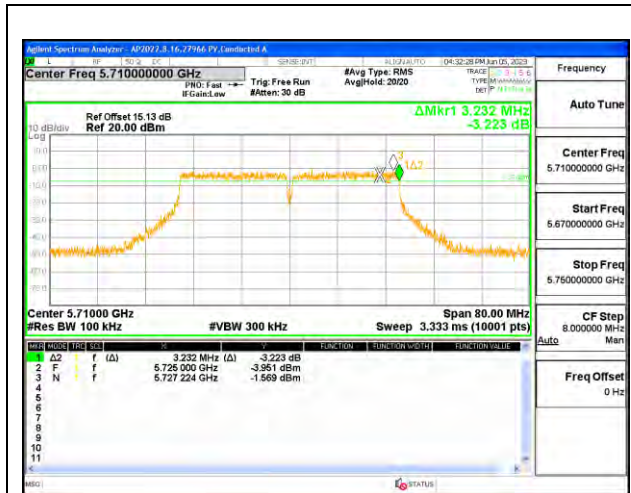
CHANNEL 142



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	6 dB BW Antenna 9 (MHz)	6 dB BW Antenna 1 (MHz)	Minimum Limit (MHz)
142	5710	3.232	3.232	3.216	3.240	0.5

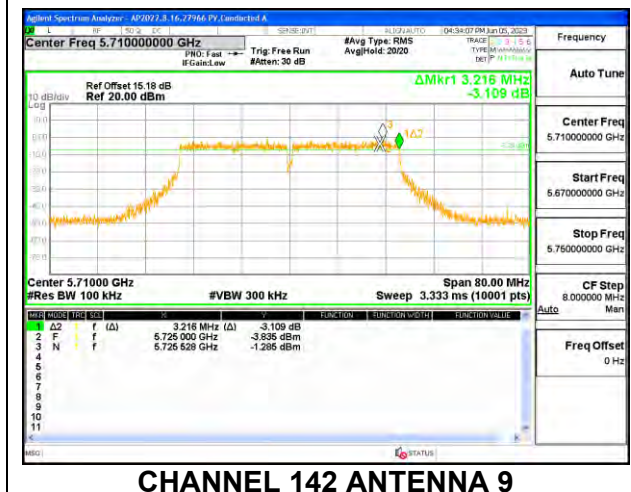
CHANNEL 142



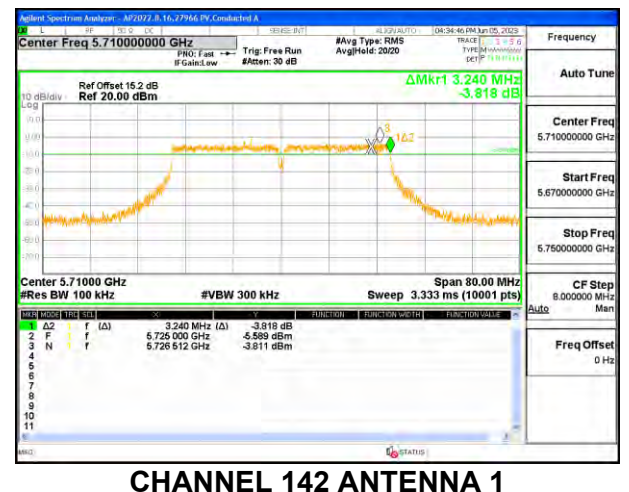
CHANNEL 142 ANTENNA 6



CHANNEL 142 ANTENNA 4



CHANNEL 142 ANTENNA 9

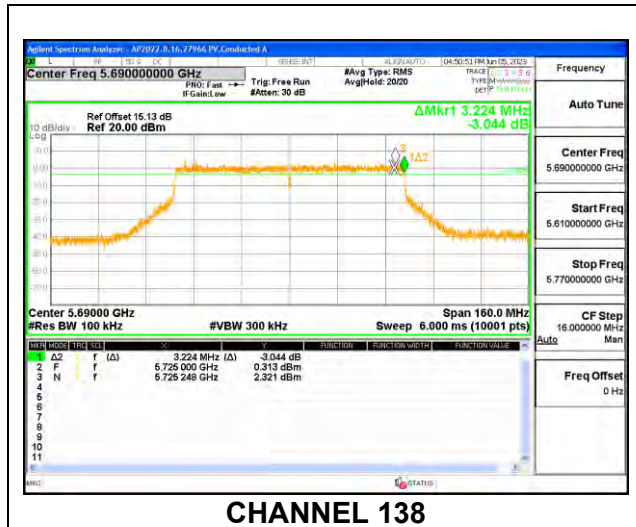


CHANNEL 142 ANTENNA 1

9.4.4. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

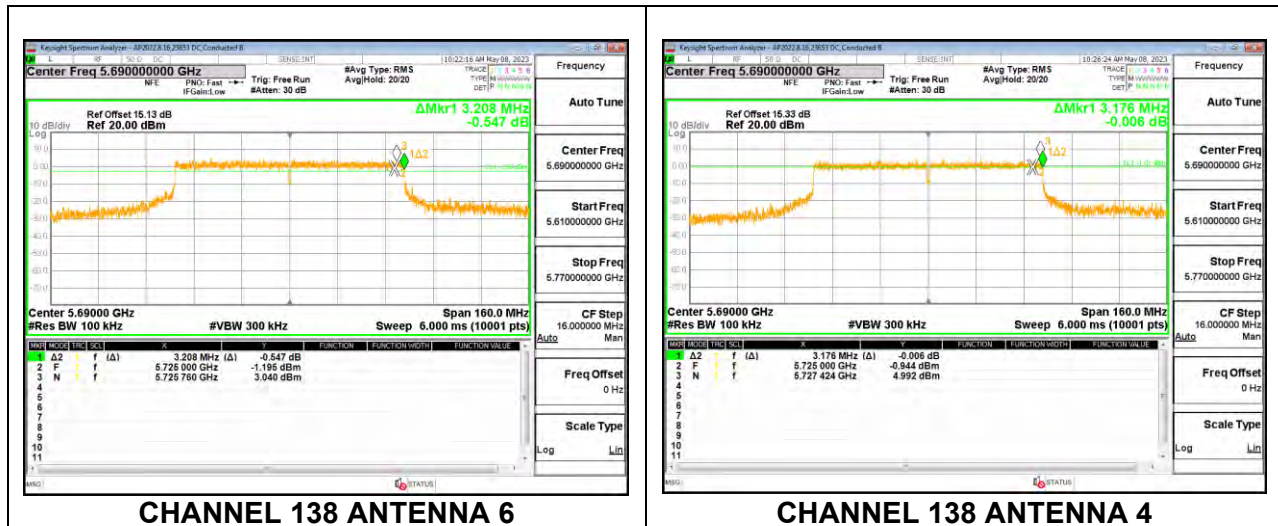
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
138	5690	3.224	0.5



2TX Antenna 6 + Antenna 4 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
138	5690	3.208	3.176	0.5

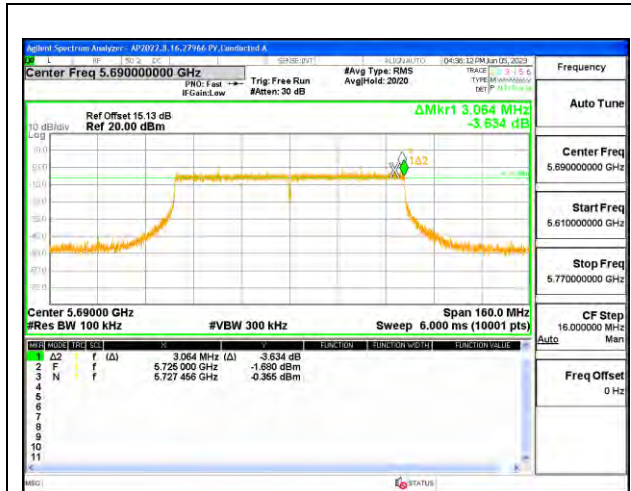
CHANNEL 138



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE

Channel	Frequency	6 dB BW	6 dB BW	6 dB BW	6 dB BW	Minimum
		Antenna 6	Antenna 4	Antenna 9	Antenna 1	Limit
	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)
138	5690	3.064	3.240	3.224	3.224	0.5

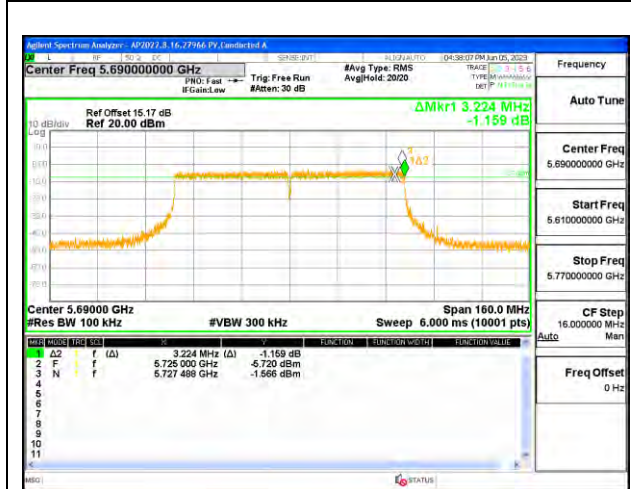
CHANNEL 138



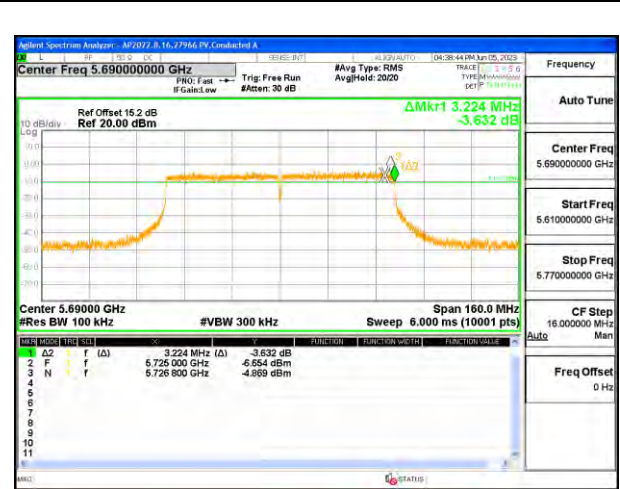
CHANNEL 138 ANTENNA 6



CHANNEL 138 ANTENNA 4



CHANNEL 138 ANTENNA 9



CHANNEL 138 ANTENNA 1

9.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Bands 5.25-5.35 GHz and 5.47-5.725 GHz

The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RSS-247

Band 5.25-5.35 GHz

The maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Bands 5.47-5.6 GHz and 5.65-5.725 GHz

The maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02, Section E.3.b (Method PM-G) and for straddles channels KDB 789033 D02, Section E.2.b (Method SA-1) was used.

The measurement method used for power spectral density is KDB 789033 D02, Section F

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband power sensor. Gated average output power was read directly from power meter.

DIRECTIONAL ANTENNA GAIN

For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Antenna 6 Antenna Gain (dBi)	Antenna 4 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.3	3.76	3.76	3.76	6.77
5.6	3.59	3.59	3.59	6.60

For 4 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Antenn 6 Antenna Gain (dBi)	Antenna Antenna Gain (dBi)	Antenna Antenna Gain (dBi)	Antenna 1 Antenna Gain (dBi)	Uncorrelated Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.3	3.76	3.76	3.76	3.76	3.76	9.78
5.6	3.59	3.59	3.59	3.59	3.59	9.61

DIRECTIONAL GAIN CALCULATION

ANSI C63.10-2013 section 14.4.3

In the commonly occurring case of N_{ANT} transmit antennas, each with the same directional gain G_{ANT} dBi, being driven by N_{ANT} transmitter outputs of equal power, directional gain shall be computed as follows:

- a) If any transmit signals are correlated with each other:
 Directional gain = $G_{ANT} + 10 \log (N_{ANT})$ dBi
- b) If all transmit signals are completely uncorrelated with each other:
 Directional gain = G_{ANT}

Sample Calculation:

Ant1=3.76, Ant2=3.76, Ant3=3.76, Ant4=3.76

2Tx: Correlated Antenna gain=3.89 + 10log (2) = 6.77 dBi

4Tx: Correlated Antenna gain=3.89 + 10log (4) = 9.78 dBi

RESULTS

9.5.1. 802.11a MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	RA 39005
Test Date:	2023-05-04

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	23.08	16.892	3.76	3.76
Mid	5300	23.48	16.761	3.76	3.76
High	5320	23.00	16.787	3.76	3.76

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.28	29.28	23.28	11.00	11.00	11.00
Mid	5300	24.00	23.24	29.24	23.24	11.00	11.00	11.00
High	5320	24.00	23.25	29.25	23.25	11.00	11.00	11.00

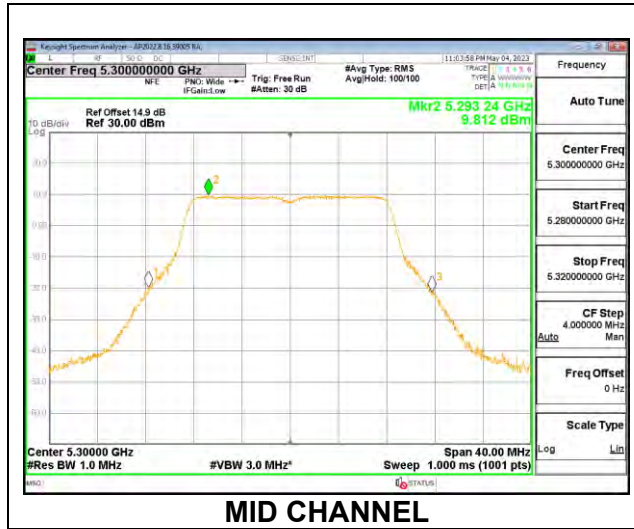
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	22.19	22.19	23.28	-1.09
Mid	5300	21.73	21.73	23.24	-1.51
High	5320	21.63	21.63	23.25	-1.62

PPSD Results

Channel	Frequency (MHz)	Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5260	10.389	10.39	11.00	-0.61
Mid	5300	9.812	9.81	11.00	-1.19
High	5320	9.747	9.75	11.00	-1.25



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	DC 23653
Test Date:	2023-05-04

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	22.60	16.794	3.76	6.77
Mid	5300	22.72	16.686	3.76	6.77
High	5320	22.76	16.783	3.76	6.77

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.25	29.25	23.25	10.23	11.00	10.23
Mid	5300	24.00	23.22	29.22	23.22	10.23	11.00	10.23
High	5320	24.00	23.25	29.25	23.25	10.23	11.00	10.23

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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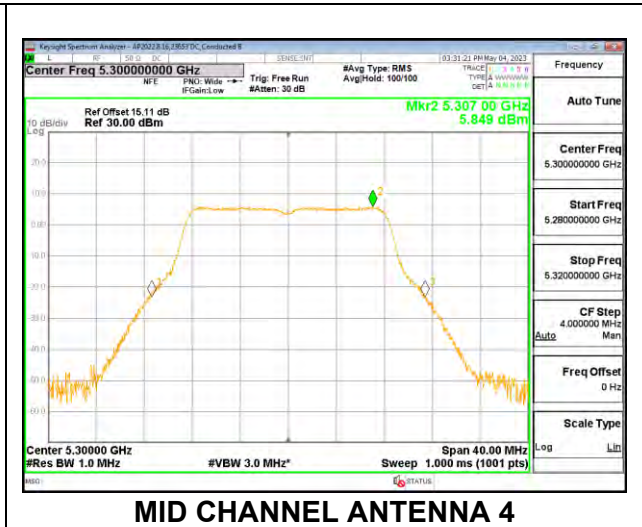
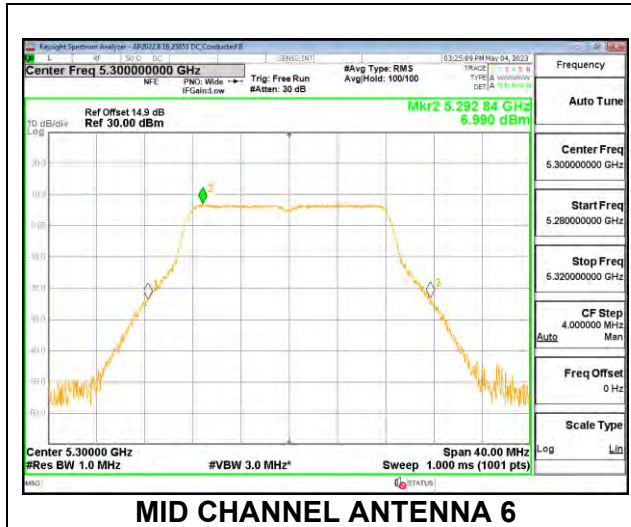
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	19.56	19.48	22.53	23.25	-0.72
Mid	5300	19.04	19.37	22.22	23.22	-1.01
High	5320	19.03	19.31	22.18	23.25	-1.07

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5260	7.385	6.076	9.79	10.23	-0.44
Mid	5300	6.990	5.849	9.47	10.23	-0.76
High	5320	7.041	5.908	9.52	10.23	-0.71

MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	22.88	16.716	3.76	9.78
Mid	5300	22.56	16.725	3.76	9.78
High	5320	22.76	16.701	3.76	9.78

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.23	29.23	23.23	7.22	11.00	7.22
Mid	5300	24.00	23.23	29.23	23.23	7.22	11.00	7.22
High	5320	24.00	23.23	29.23	23.23	7.22	11.00	7.22

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.60	12.56	11.95	12.91	18.54	23.23	-4.69
Mid	5300	11.96	12.03	11.91	12.41	18.10	23.23	-5.13
High	5320	12.12	12.02	12.09	13.05	18.36	23.23	-4.87

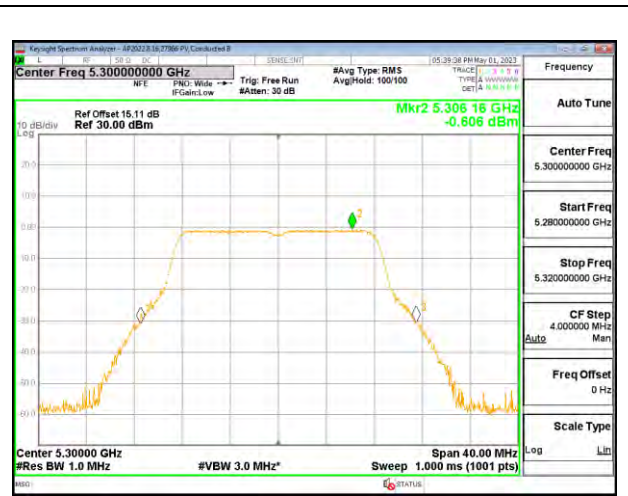
PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Antenna 9 Meas PPSD (dBm/ 1MHz)	Antenna 1 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5260	0.549	-0.024	0.077	1.654	6.64	7.22	-0.58
Mid	5300	-0.117	-0.606	0.261	1.134	6.24	7.22	-0.98
High	5320	0.247	-0.680	0.140	1.728	6.47	7.22	-0.75

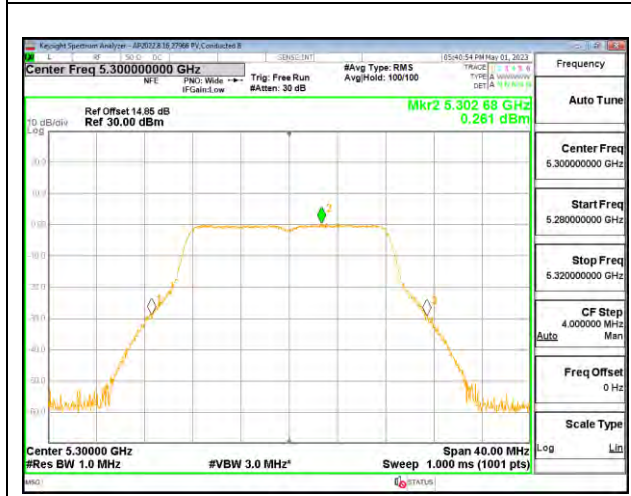
MID CHANNEL



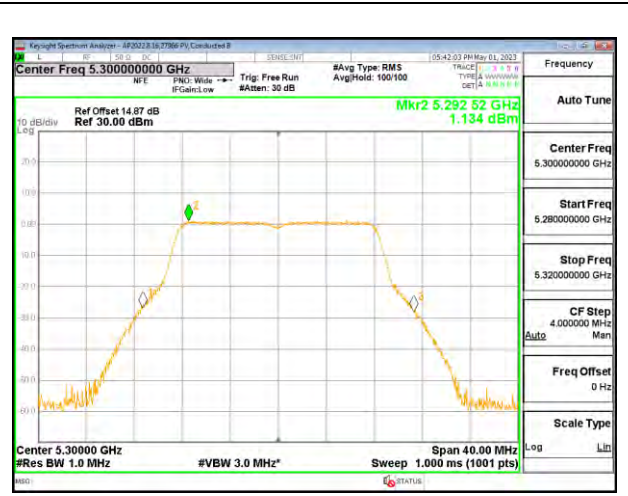
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.5.2. 802.11n HT20 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	DC 23653 and PV 27966
Test Date:	2023-05-08 to 2023-06-08

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	23.88	17.962	3.76	3.76
Mid	5300	23.96	17.892	3.76	3.76
High	5320	23.60	17.935	3.76	3.76

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.54	29.54	23.54	11.00	11.00	11.00
Mid	5300	24.00	23.53	29.53	23.53	11.00	11.00	11.00
High	5320	24.00	23.54	29.54	23.54	11.00	11.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	22.20	22.20	23.54	-1.34
Mid	5300	23.24	23.24	23.53	-0.29
High	5320	20.55	20.55	23.54	-2.99

PPSD Results

Channel	Frequency (MHz)	Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5260	10.234	10.23	11.00	-0.77
Mid	5300	10.476	10.48	11.00	-0.52
High	5320	7.838	7.84	11.00	-3.16



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	DC 23653
Test Date:	2023-05-05

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	23.44	17.909	3.76	6.77
Mid	5300	23.44	17.861	3.76	6.77
High	5320	23.24	17.864	3.76	6.77

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.53	29.53	23.53	10.23	11.00	10.23
Mid	5300	24.00	23.52	29.52	23.52	10.23	11.00	10.23
High	5320	24.00	23.52	29.52	23.52	10.23	11.00	10.23

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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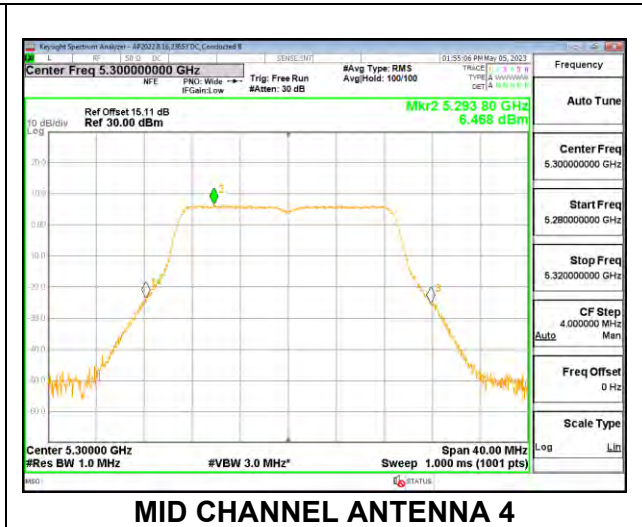
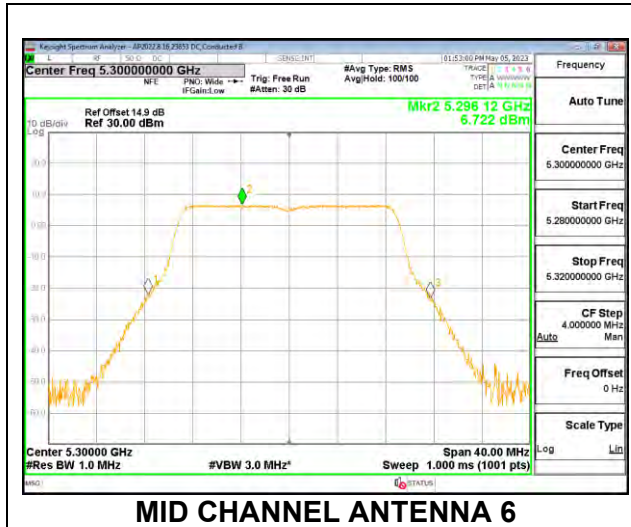
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	19.75	19.64	22.71	23.53	-0.83
Mid	5300	19.24	19.56	22.41	23.52	-1.11
High	5320	19.16	19.39	22.29	23.52	-1.23

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5260	7.510	6.430	10.01	10.23	-0.22
Mid	5300	6.722	6.468	9.61	10.23	-0.62
High	5320	6.873	6.186	9.55	10.23	-0.68

MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	22.32	17.829	3.76	9.78
Mid	5300	22.48	17.821	3.76	9.78
High	5320	22.48	17.832	3.76	9.78

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.51	29.51	23.51	7.22	11.00	7.22
Mid	5300	24.00	23.51	29.51	23.51	7.22	11.00	7.22
High	5320	24.00	23.51	29.51	23.51	7.22	11.00	7.22

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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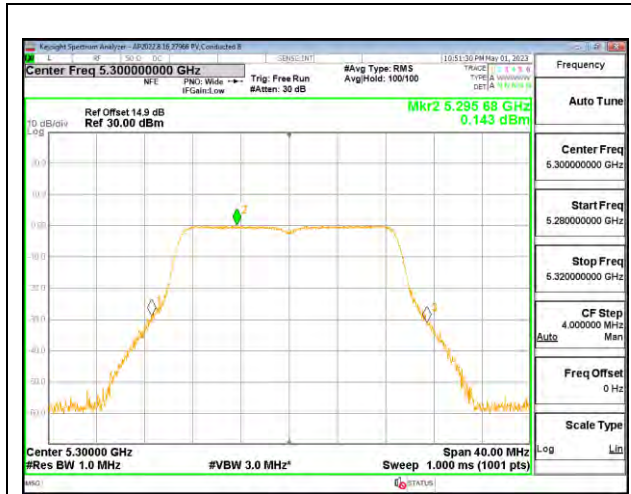
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.95	12.98	12.40	13.44	18.98	23.51	-4.53
Mid	5300	12.40	12.31	12.53	13.07	18.61	23.51	-4.90
High	5320	12.50	12.45	12.61	13.61	18.84	23.51	-4.67

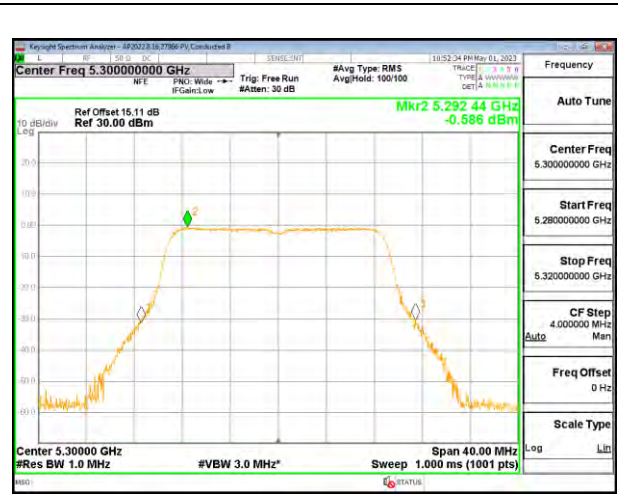
PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Antenna 9 Meas PPSD (dBm/ 1MHz)	Antenna 1 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5260	0.904	-0.307	0.214	1.866	6.77	7.22	-0.45
Mid	5300	0.143	-0.586	0.358	1.056	6.30	7.22	-0.92
High	5320	0.285	-0.612	0.662	1.561	6.56	7.22	-0.66

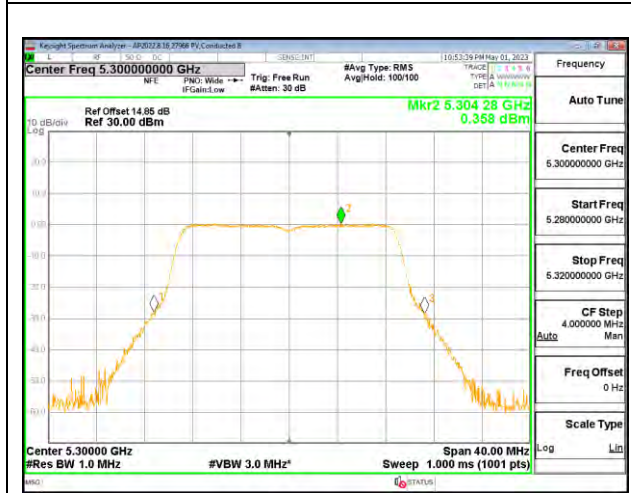
MID CHANNEL



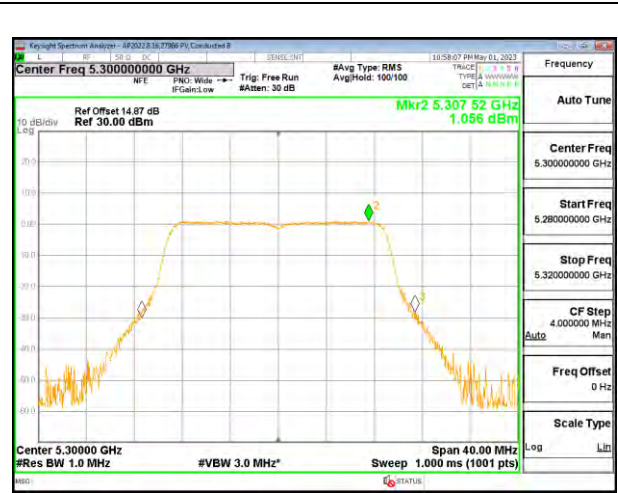
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.5.3. 802.11n HT40 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-19 to 2023-06-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5270	61.28	36.949	3.76	3.76
High	5310	46.24	36.682	3.76	3.76

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5310	24.00	24.00	30.00	24.00	11.00	11.00	11.00

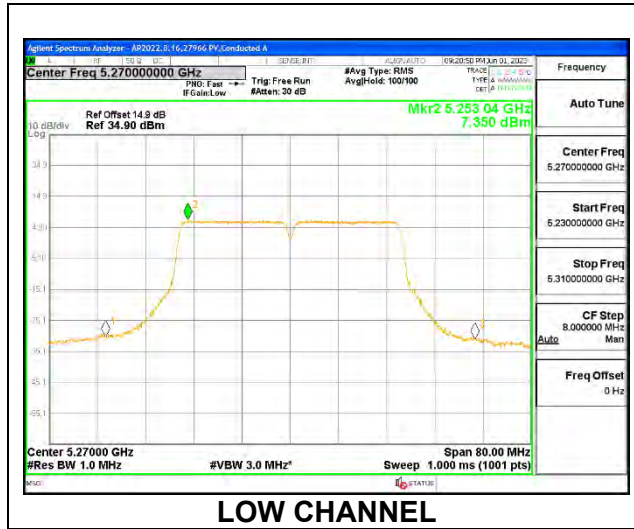
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	23.34	23.34	24.00	-0.66
High	5310	19.44	19.44	24.00	-4.56

PPSD Results

Channel	Frequency (MHz)	Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5270	7.350	7.35	11.00	-3.65
High	5310	4.565	4.57	11.00	-6.44



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-06-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5270	45.12	36.413	3.76	6.77
High	5310	45.12	36.341	3.76	6.77

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	24.00	24.00	30.00	24.00	10.23	11.00	10.23
High	5310	24.00	24.00	30.00	24.00	10.23	11.00	10.23

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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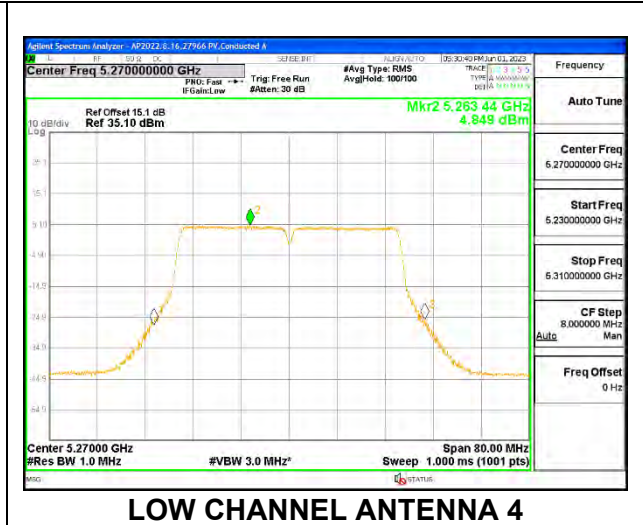
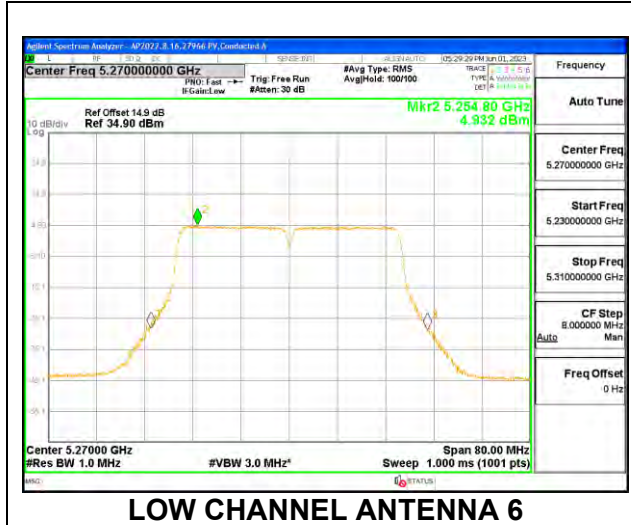
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	20.86	20.74	23.81	24.00	-0.19
High	5310	20.53	20.3	23.43	24.00	-0.57

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5270	4.932	4.849	7.90	10.23	-2.33
High	5310	3.977	4.136	7.07	10.23	-3.16

LOW CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	PV 27966, DC 23653
Test Date:	2023-05-02, 2023-09-18

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5270	45.28	36.424	3.76	9.78
High	5310	46.00	36.436	3.76	9.78

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	24.00	24.00	30.00	24.00	7.22	11.00	7.22
High	5310	24.00	24.00	30.00	24.00	7.22	11.00	7.22

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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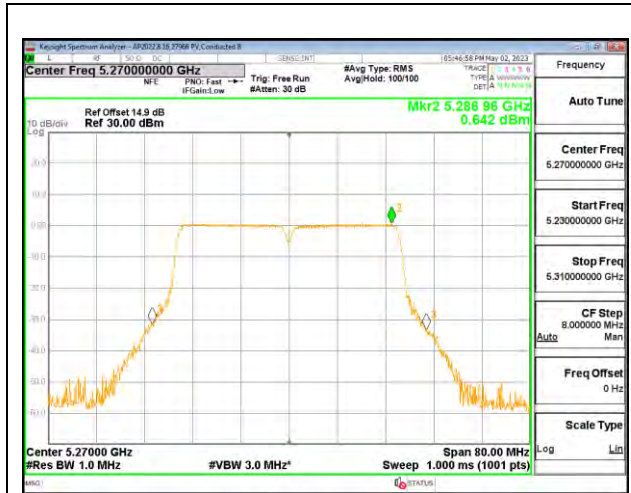
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	16.01	16.37	15.73	16.90	22.30	24.00	-1.70
High	5310	15.45	15.92	15.82	15.98	21.82	24.00	-2.18

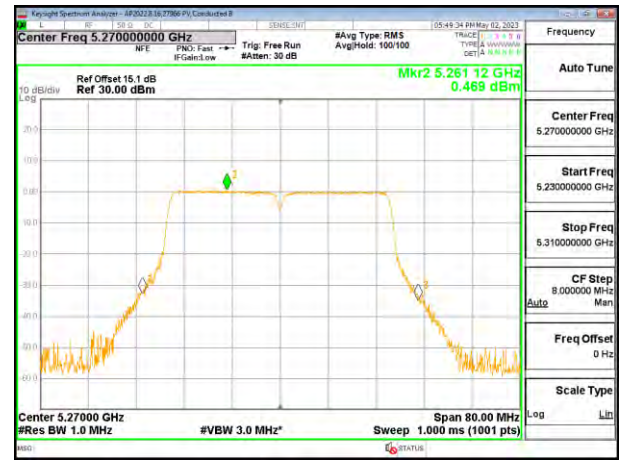
PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Antenna 9 Meas PPSD (dBm/ 1MHz)	Antenna 1 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Low	5270	0.642	0.469	0.778	2.250	7.12	7.22	-0.10
High	5310	0.274	0.666	0.697	0.746	6.62	7.22	-0.60

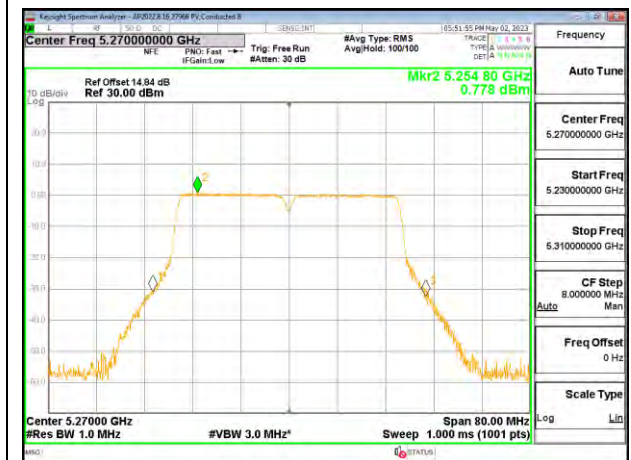
LOW CHANNEL



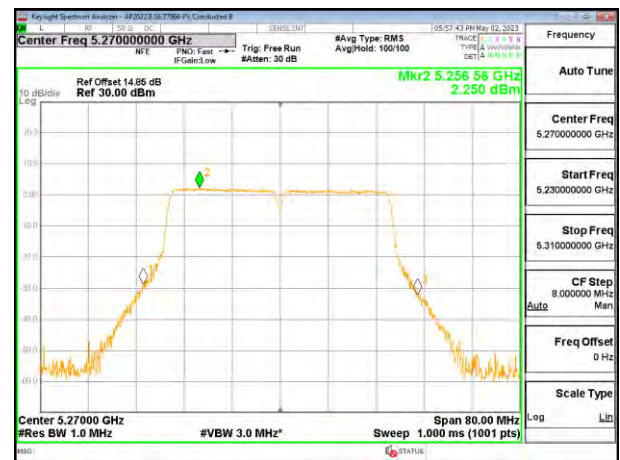
LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 4



LOW CHANNEL ANTENNA 9



LOW CHANNEL ANTENNA 1

9.5.4. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-19

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Mid	5290	97.12	76.843	3.76	3.76

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5290	24.00	24.00	30.00	24.00	11.00	11.00	11.00

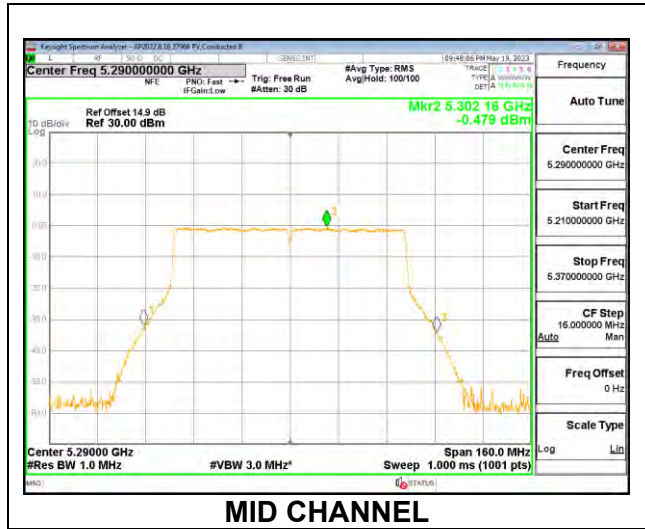
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	17.58	17.58	24.00	-6.42

PPSD Results

Channel	Frequency (MHz)	Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Mid	5290	-0.479	-0.48	11.00	-11.48



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-06-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Mid	5290	93.28	76.684	3.76	6.77

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5290	24.00	24.00	30.00	24.00	10.23	11.00	10.23

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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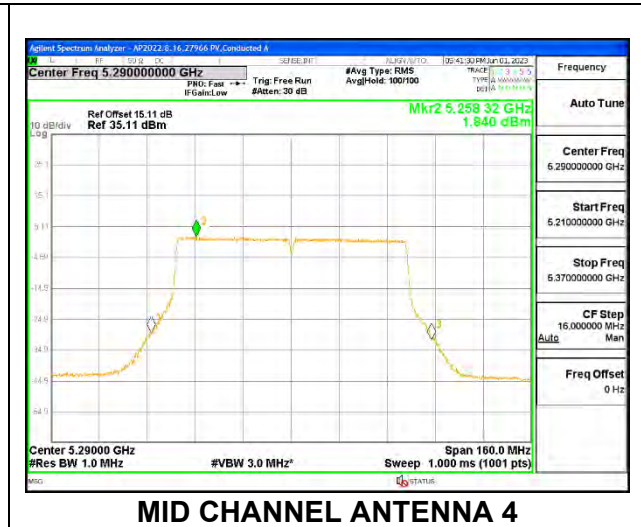
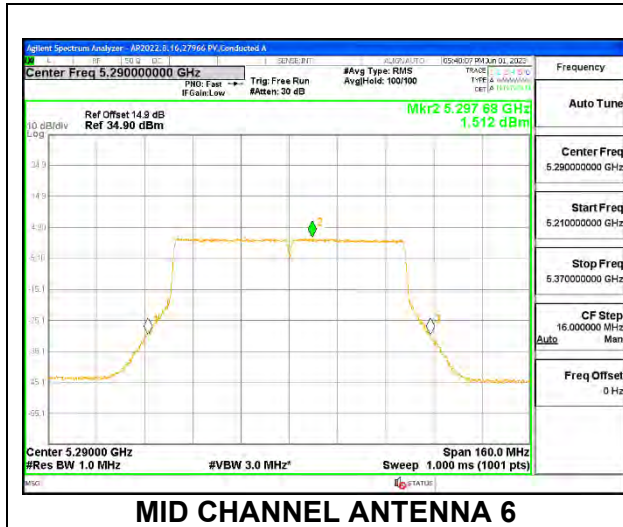
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margi n (dB)
Mid	5290	16.28	16.41	19.36	24.00	-4.64

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margi n (dB)
Mid	5290	1.512	1.840	4.69	10.23	-5.54

MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	DC 23653
Test Date:	2023-09-19

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Mid	5290	93.12	76.014	3.76	9.78

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5290	24.00	24.00	30.00	24.00	7.22	11.00	7.22

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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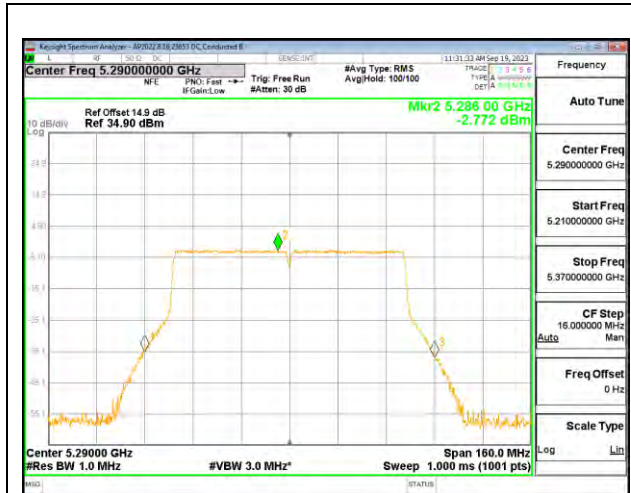
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	15.73	16.12	16.11	16.29	22.09	24.00	-1.91

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Antenna 9 Meas PPSD (dBm/ 1MHz)	Antenna 1 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Mid	5290	-2.772	-1.891	-2.107	-1.879	3.87	7.22	-3.35

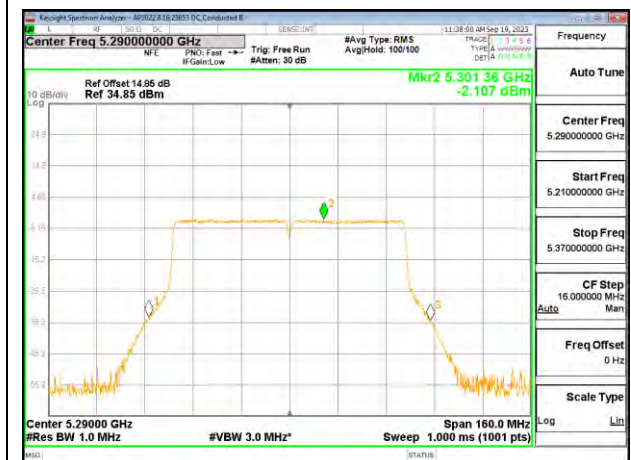
MID CHANNEL



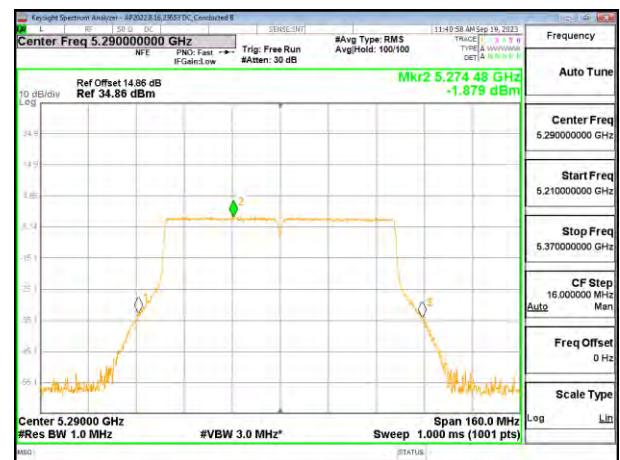
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.5.5. 802.11ac VHT160 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-23

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Mid	5250	178.88	158.630	3.76	3.76

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5250	24.00	24.00	30.00	24.00	11.00	11.00	11.00

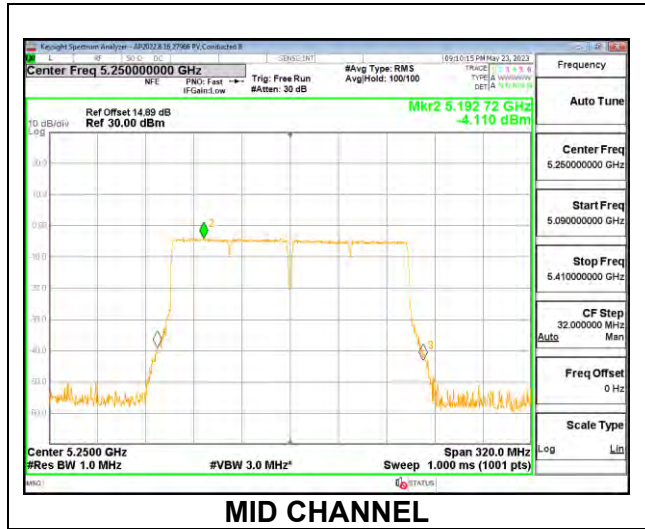
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5250	16.75	16.75	24.00	-7.25

PPSD Results

Channel	Frequency (MHz)	Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Mid	5250	-4.110	-4.11	11.00	-15.11



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-23

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Mid	5250	176.96	157.070	3.76	6.77

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5250	24.00	24.00	30.00	24.00	10.23	11.00	10.23

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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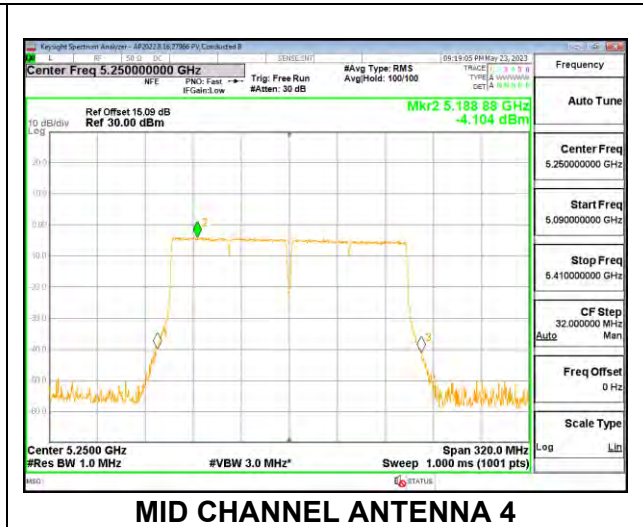
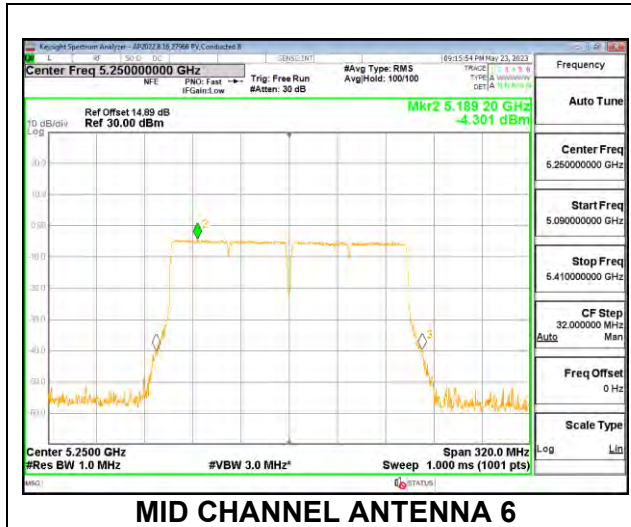
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5250	16.01	16.18	19.11	24.00	-4.89

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Mid	5250	-4.301	-4.104	-1.19	10.23	-11.42

MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	DC 23653
Test Date:	2023-09-19

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Mid	5250	175.04	155.380	3.76	9.78

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5250	24.00	24.00	30.00	24.00	7.22	11.00	7.22

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PPSD
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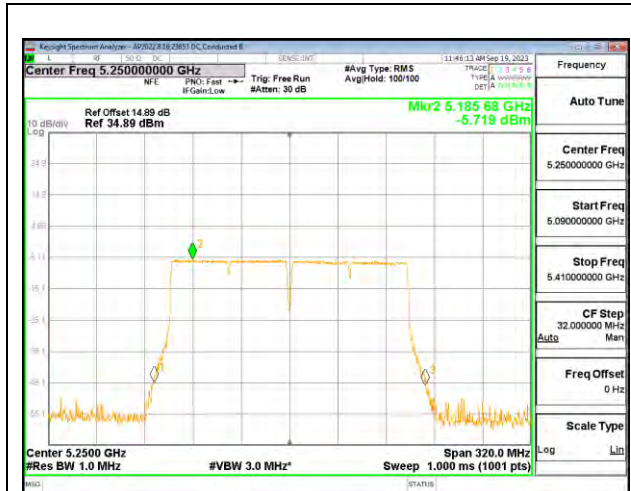
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5250	15.21	15.39	15.01	15.67	21.35	24.00	-2.65

PPSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PPSD (dBm/ 1MHz)	Antenna 4 Meas PPSD (dBm/ 1MHz)	Antenna 9 Meas PPSD (dBm/ 1MHz)	Antenna 1 Meas PPSD (dBm/ 1MHz)	Total Corr'd PPSD (dBm/ 1MHz)	PPSD Limit (dBm/ 1MHz)	PPSD Margin (dB)
Mid	5250	-5.719	-5.486	-6.231	-5.033	0.42	7.22	-6.80

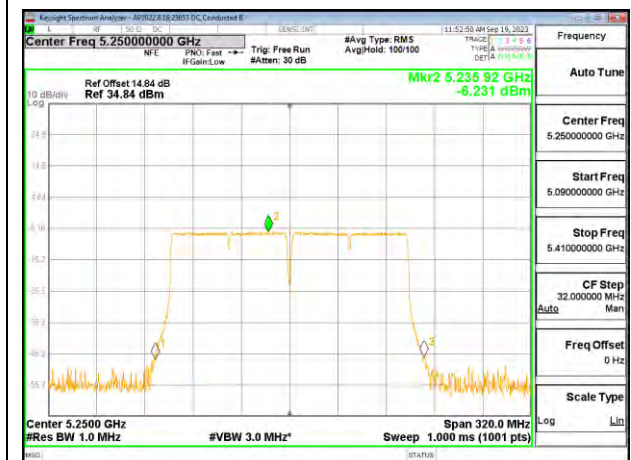
MID CHANNEL



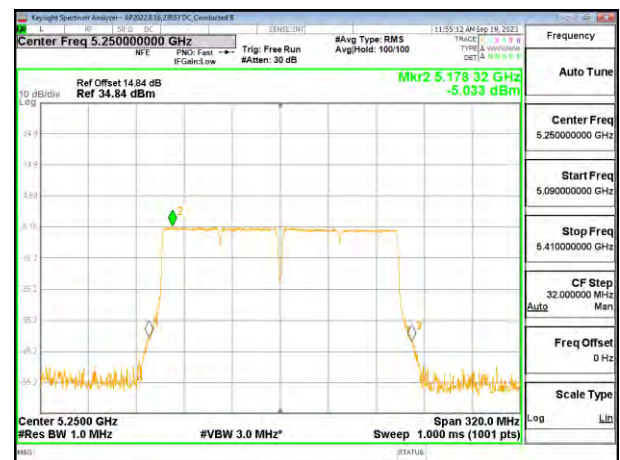
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.5.6. 802.11a MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	RA 39005 and PV 27966
Test Date:	2023-05-04 to 2023-06-09

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	23.52	16.747	3.59
Mid	5580	23.32	16.739	3.59
High	5700	23.32	16.730	3.59
144	5720	32.32	16.814	3.59

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/1MHz)	ISED PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low	5500	24.00	23.24	29.24	23.24	11.00	11.00	11.00
Mid	5580	24.00	23.24	29.24	23.24	11.00	11.00	11.00
High	5700	24.00	23.23	29.23	23.23	11.00	11.00	11.00
144	5720	24.00	23.26	29.26	23.26	11.00	11.00	11.00

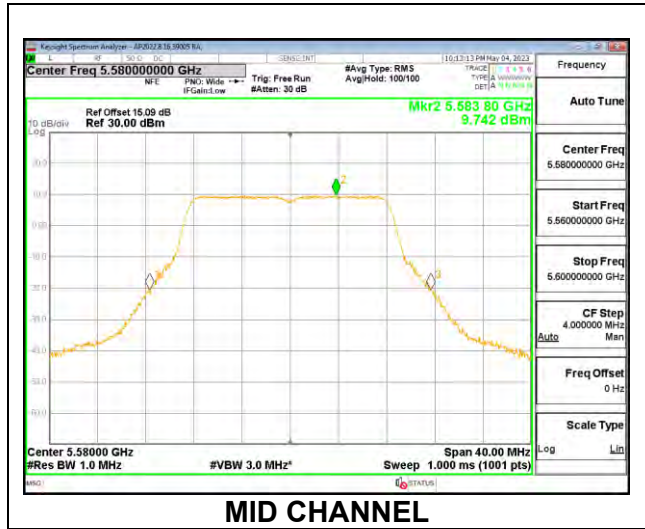
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	21.88	21.88	23.24	-1.36
Mid	5580	21.62	21.62	23.24	-1.62
High	5700	20.13	20.13	23.23	-3.10
144	5720	22.88	22.88	23.26	-0.38

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	10.198	10.198	11.00	-0.80
Mid	5580	9.742	9.742	11.00	-1.26
High	5700	7.905	7.905	11.00	-3.10
144	5720	10.838	10.838	11.00	-0.16



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	DC 23653 and PV 27966
Test Date:	2023-05-04 to 2023-06-08

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5500	22.84	16.752	3.59	6.60
Mid	5580	22.68	16.755	3.59	6.60
High	5700	23.08	16.725	3.59	6.60
144	5720	22.48	16.780	3.59	6.60

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/1MHz)	ISED PSD Limit (dBm/1MHz)
Low	5500	24.00	23.24	29.24	23.24	10.40	11.00
Mid	5580	24.00	23.24	29.24	23.24	10.40	11.00
High	5700	24.00	23.23	29.23	23.23	10.40	11.00
144	5720	24.00	23.25	29.25	23.25	10.40	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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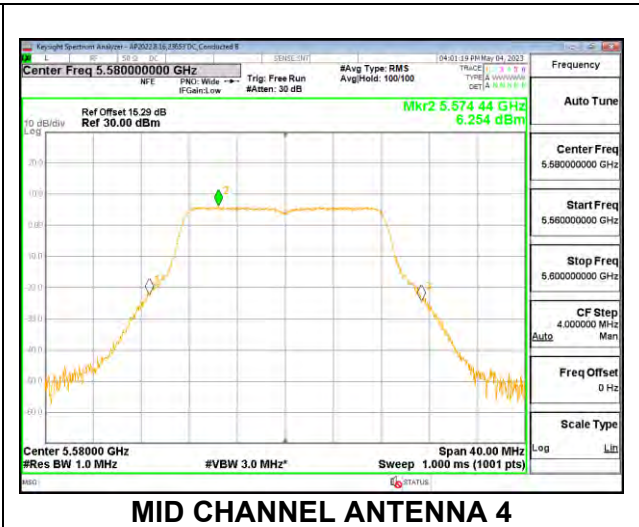
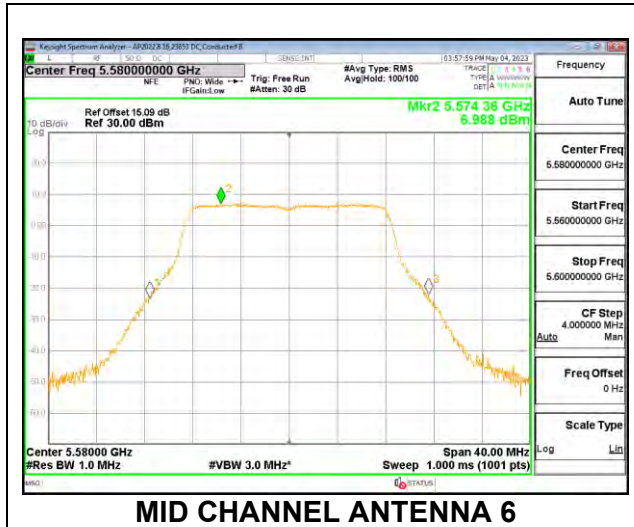
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	19.39	19.48	22.45	23.24	-0.80
Mid	5580	19.05	19.02	22.05	23.24	-1.20
High	5700	20.24	19.65	22.97	23.23	-0.27
144	5720	18.91	18.22	21.59	23.25	-1.66

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/ 1MHz)	Antenna 4 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	7.464	6.031	9.817	10.40	-0.58
Mid	5580	6.988	6.254	9.647	10.40	-0.75
High	5700	7.827	6.615	10.273	10.40	-0.13
144	5720	7.631	6.746	10.221	10.40	-0.18

MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	PV 29766, DC 23653
Test Date:	2023-09-18

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5500	22.72	16.741	3.59	9.61
Mid	5580	23.12	16.742	3.59	9.61
High	5700	22.88	16.705	3.59	9.61
144	5720	22.76	16.695	3.59	9.61

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/1MHz)	ISED PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low	5500	24.00	23.24	29.24	23.24	7.39	11.00	7.39
Mid	5580	24.00	23.24	29.24	23.24	7.39	11.00	7.39
High	5700	24.00	23.23	29.23	23.23	7.39	11.00	7.39
144	5720	24.00	23.23	29.23	23.23	7.39	11.00	7.39

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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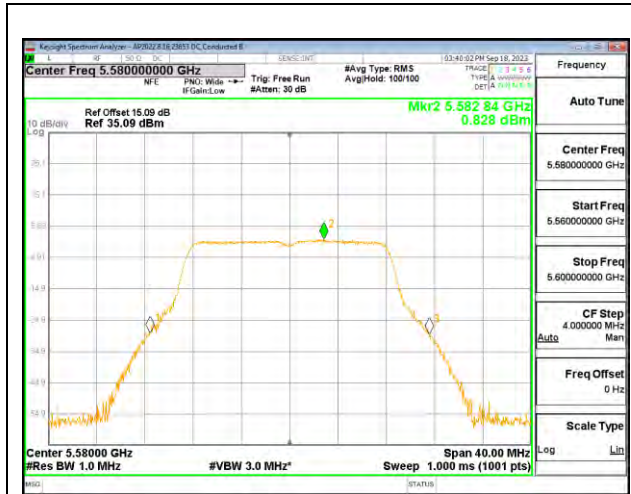
Output Power Results

Channel	Frequency (MHz)	Antenna Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	13.39	13.21	12.71	13.67	19.28	23.24	-3.96
Mid	5580	12.32	12.87	12.69	12.93	18.73	23.24	-4.51
High	5700	12.99	12.95	12.51	12.91	18.86	23.23	-4.36
144	5720	13.07	13.09	12.48	12.84	18.90	23.23	-4.33

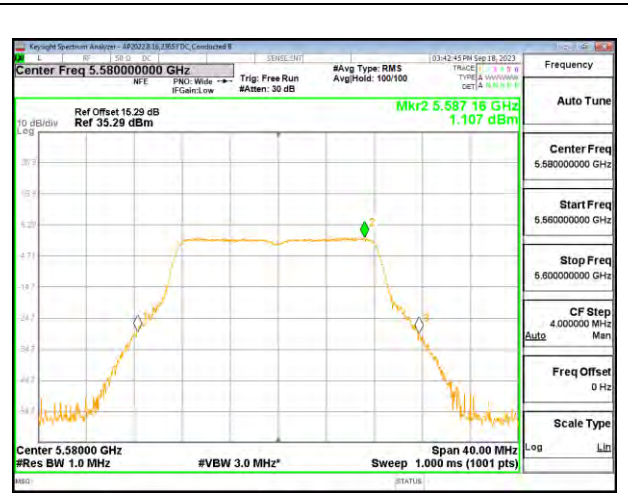
PSD Results

Channel	Frequency (MHz)	Antenna Meas PSD (dBm/ 1MHz)	Antenna 4 Meas PSD (dBm/ 1MHz)	Antenna 9 Meas PSD (dBm/ 1MHz)	Antenna 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	1.351	1.315	0.760	1.866	7.361	7.39	-0.03
Mid	5580	0.828	1.107	0.832	1.386	7.065	7.39	-0.32
High	5700	1.416	1.370	0.863	0.937	7.174	7.39	-0.22
144	5720	1.443	1.271	0.783	1.127	7.183	7.39	-0.21

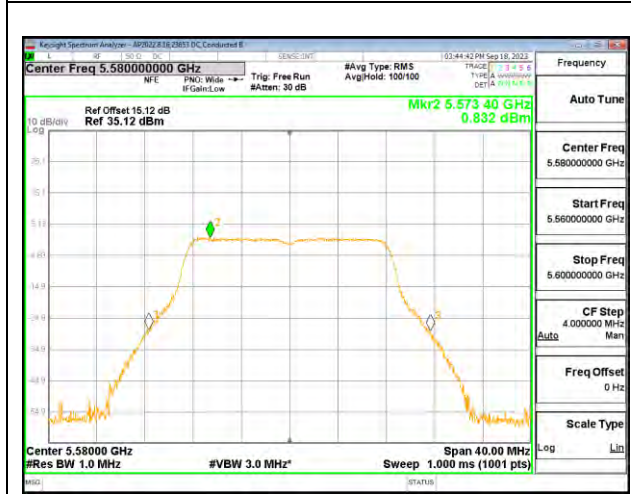
MID CHANNEL



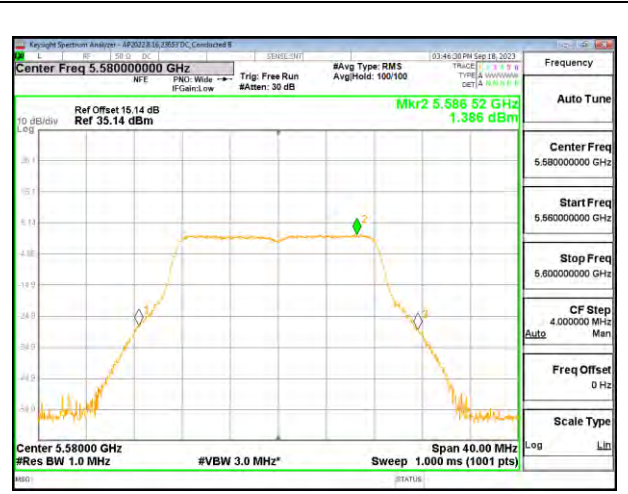
MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.5.7. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	DC 23653 and PV 27966
Test Date:	2023-05-08 to 2023-06-09

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	23.76	17.972	3.59
Mid	5580	23.88	17.883	3.59
High	5700	23.88	17.955	3.59
144	5720	23.80	17.990	3.59

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/1MHz)	ISED PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low	5500	24.00	23.55	29.55	23.55	11.00	11.00	11.00
Mid	5580	24.00	23.52	29.52	23.52	11.00	11.00	11.00
High	5700	24.00	23.54	29.54	23.54	11.00	11.00	11.00
144	5720	24.00	23.55	29.55	23.55	11.00	11.00	11.00

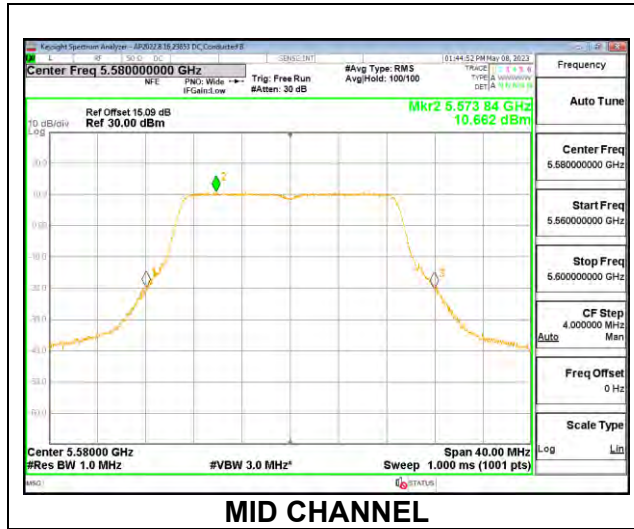
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	21.92	21.92	23.55	-1.63
Mid	5580	22.53	22.53	23.52	-0.99
High	5700	21.74	21.74	23.54	-1.80
144	5720	22.83	22.83	23.55	-0.72

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	8.276	8.276	11.00	-2.72
Mid	5580	10.662	10.662	11.00	-0.34
High	5700	9.459	9.459	11.00	-1.54
144	5720	10.778	10.778	11.00	-0.22



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	DC 23653 and PV 27966
Test Date:	2023-05-05 to 2023-06-09

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5500	23.24	17.861	3.59	6.60
Mid	5580	23.48	17.872	3.59	6.60
High	5700	23.08	17.840	3.59	6.60
144	5720	23.28	17.868	3.59	6.60

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5500	24.00	23.52	29.52	23.52	10.40	11.00	10.40
Mid	5580	24.00	23.52	29.52	23.52	10.40	11.00	10.40
High	5700	24.00	23.51	29.51	23.51	10.40	11.00	10.40
144	5720	24.00	23.52	29.52	23.52	10.40	11.00	10.40

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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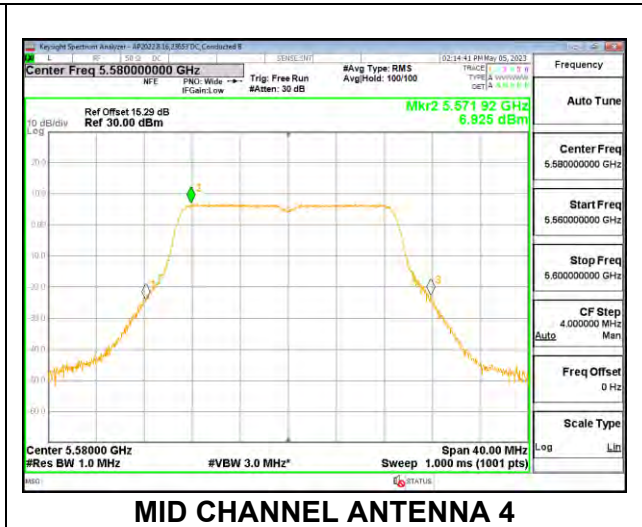
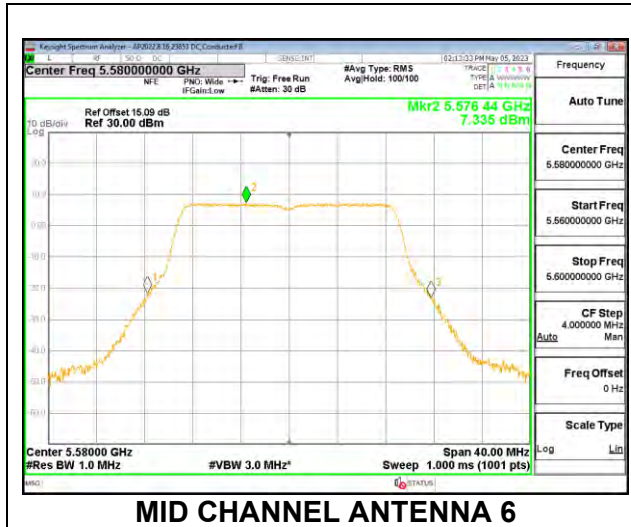
Output Power Results

Channel	Frequency (MHz)	Antenna Meas Power (dBm)	Antenna Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	19.52	19.41	22.48	23.52	-1.04
Mid	5580	19.16	19.10	22.14	23.52	-1.38
High	5700	20.32	19.73	23.05	23.51	-0.47
144	5720	19.31	18.80	22.07	23.52	-1.45

PSD Results

Channel	Frequency (MHz)	Antenna Meas PSD (dBm/ 1MHz)	Antenna Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	7.257	6.415	9.867	10.40	-0.53
Mid	5580	7.335	6.925	10.145	10.40	-0.25
High	5700	7.622	6.630	10.165	10.40	-0.24
144	5720	7.336	6.758	10.067	10.40	-0.33

MID CHANNEL



4TX Antenna 6 + Antenna 4 + Antenna 9 + Antenna 1 CDD MODE (FCC+IC)

Test Engineer:	PV 27966, DC 23653
Test Date:	2023-09-18

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5500	23.24	17.882	3.59	9.61
Mid	5580	22.76	17.868	3.59	9.61
High	5700	23.20	16.721	3.59	9.61
144	5720	23.12	17.858	3.59	9.61

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5500	24.00	23.52	29.52	23.52	7.39	11.00	7.39
Mid	5580	24.00	23.52	29.52	23.52	7.39	11.00	7.39
High	5700	24.00	23.23	29.23	23.23	7.39	11.00	7.39
144	5720	24.00	23.52	29.52	23.52	7.39	11.00	7.39

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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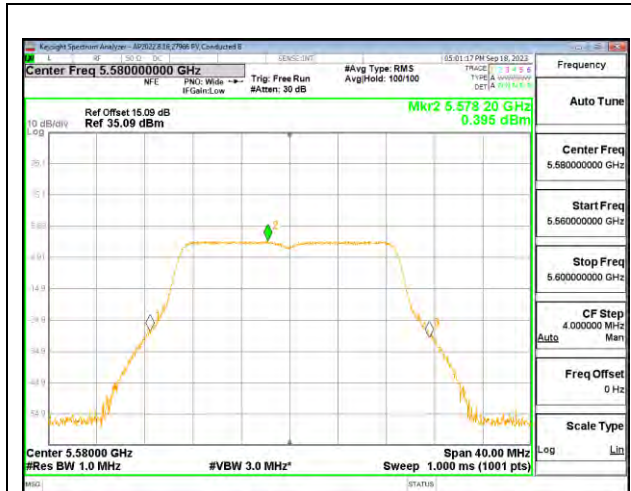
Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Antenna 9 Meas Power (dBm)	Antenna 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	13.42	13.34	12.83	13.73	19.36	23.52	-4.16
Mid	5580	12.47	12.87	12.69	12.93	18.76	23.52	-4.76
High	5700	13.56	13.61	13.11	13.35	19.43	23.23	-3.80
144	5720	12.97	13.18	12.39	12.91	18.89	23.52	-4.63

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/ 1MHz)	Antenna 4 Meas PSD (dBm/ 1MHz)	Antenna 9 Meas PSD (dBm/ 1MHz)	Antenna 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	1.324	1.136	0.635	1.531	7.190	7.39	-0.20
Mid	5580	0.395	0.883	0.915	1.038	6.835	7.39	-0.55
High	5700	1.183	1.311	0.633	1.160	7.100	7.39	-0.29
144	5720	0.747	0.990	0.215	0.788	6.715	7.39	-0.68

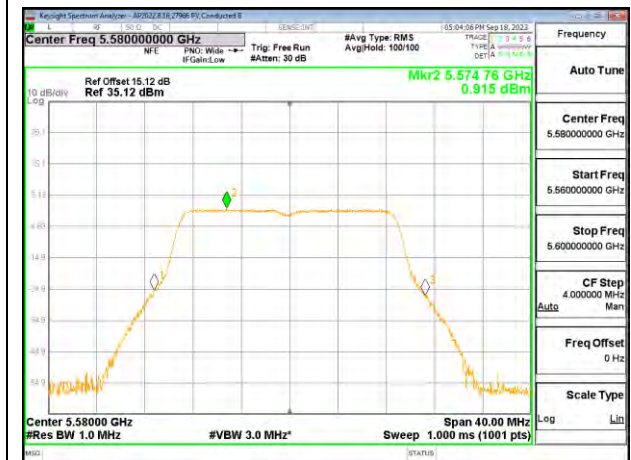
MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 4



MID CHANNEL ANTENNA 9



MID CHANNEL ANTENNA 1

9.5.8. 802.11n HT40 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-19 to 2023-06-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	46.00	36.698	3.59
Mid	5550	46.73	36.523	3.59
High	5670	46.08	36.792	3.59
142	5710	48.24	36.882	3.59

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00
142	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

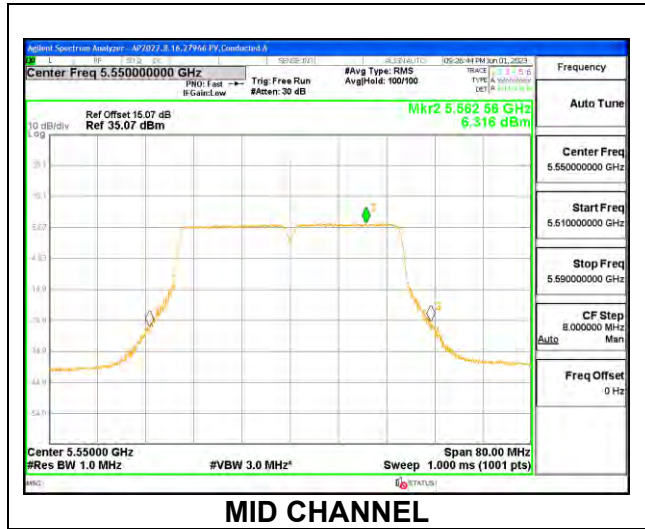
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	21.36	21.36	24.00	-2.64
Mid	5550	23.30	23.30	24.00	-0.70
High	5670	23.68	23.68	24.00	-0.32
142	5710	23.88	23.88	24.00	-0.12

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	6.756	6.76	11.00	-4.24
Mid	5550	6.316	6.32	11.00	-4.68
High	5670	7.715	7.72	11.00	-3.29
142	5710	8.253	8.25	11.00	-2.75



2TX Antenna 6 + Antenna 4 CDD MODE (FCC+IC)

Test Engineer:	PV 27966
Test Date:	2023-05-05 to 2023-06-01

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5510	45.28	36.447	3.59	6.60
Mid	5550	45.28	36.485	3.59	6.60
High	5670	45.44	36.427	3.59	6.60
142	5710	45.36	36.436	3.59	6.60

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5510	24.00	24.00	30.00	24.00	10.40	11.00	10.40
Mid	5550	24.00	24.00	30.00	24.00	10.40	11.00	10.40
High	5670	24.00	24.00	30.00	24.00	10.40	11.00	10.40
142	5710	24.00	24.00	30.00	24.00	10.40	11.00	10.40

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	20.83	20.54	23.70	24.00	-0.30
Mid	5550	20.93	20.64	23.80	24.00	-0.20
High	5670	20.71	20.50	23.62	24.00	-0.38
142	5710	20.82	20.27	23.56	24.00	-0.44

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/ 1MHz)	Antenna 4 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	3.641	2.658	6.19	10.40	-4.21
Mid	5550	7.515	6.638	10.11	10.40	-0.29
High	5670	4.206	3.985	7.11	10.40	-3.29
142	5710	4.721	3.955	7.37	10.40	-3.03