RF MEASUREMENT REPORT

FCC ID:	2ALJ3AP57X
Applicant:	HAN Networks Co., Ltd.
Product:	HAN Access Point
Model No.:	AP571
Product Family Models:	AP571e
Brand Name:	HAN NETWORKS, HANNETWORKS
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Received Date:	2025-06-09
Test Date:	2025-07-17 ~ 2025-08-26

Reviewed By: Vincent Yu

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2020. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
R25S1073095-U201	V01	Initial Report	2025-12-01	Valid

Note: This report is a copy report based on MRT original report (Report No.: R25S1009065-U201). Only applicant & manufacturer information and product information (name, model and brand name) has changed in this report, others are identical. The test data are all copied from the original report.

CONTENTS

Description Page

1. General Information 5

1.1. Applicant 5
1.2. Manufacturer 5
1.3. Testing Facility 5
1.4. Product Information 6
1.5. Radio Specification under Test 7
1.6. Working Frequencies 7
1.7. Antenna Details 8
1.8. WLAN Configuration 9

2. Test Configuration 10

2.1. Test Mode 10
2.2. Test System Connection Diagram 10
2.3. Test Software 11
2.4. Applied Standards 11
2.5. Test Environment Condition 11

3. Antenna Requirements 12

4. Measuring Instrument 13

5. Decision Rules and Measurement Uncertainty 14

5.1. Decision Rules 14
5.2. Measurement Uncertainty 14

6. Test Result 15

6.1. Summary 15
6.2. 6 dB Bandwidth Measurement 16
6.2.1. Test Limit 16
6.2.2. Test Procedure 16
6.2.3. Test Setting 16
6.2.4. Test Setup 16
6.2.5. Test Result 16
6.3. Output Power Measurement 17
6.3.1. Test Limit 17
6.3.2. Test Procedure 17
6.3.3. Test Setting 17
6.3.4. Test Setup 17
6.3.5. Test Result 17
6.4. Power Spectral Density Measurement 18

6.4.1. Test Limit 18
6.4.2. Test Procedure 18
6.4.3. Test Setting 18
6.4.4. Test Setup 18
6.4.5. Test Result 19
6.5. Conducted Band Edge and Out-of-Band Emissions Measurement 20
6.5.1. Test Limit 20
6.5.2. Test Procedure 20
6.5.3. Test Setting 20
6.5.4. Test Setup 20
6.5.5. Test Result 21
6.6. Radiated Spurious Emission Measurement 22
6.6.1. Test Limit 22
6.6.2. Test Procedure 22
6.6.3. Test Setting 22
6.6.4. Test Setup 24
6.6.5. Test Result 25
6.7. Radiated Restricted Band Edge Measurement 26
6.7.1. Test Limit 26
6.7.2. Test Procedure 27
6.7.3. Test Setting 27
6.7.4. Test Setup 28
6.7.5. Test Result 28
6.8. AC Conducted Emissions Measurement 29
6.8.1. Test Limit 29
6.8.2. Test Setup 29
6.8.3. Test Result 29

Appendix A – Test Result 30

A.1 Duty Cycle Test Result 30
A.2 6 dB Bandwidth Test Result 32
A.3 Output Power Test Result 37
A.4 Power Spectral Density Test Result 39
A.5 Conducted Band Edge and Out-of-Band Emissions Test Result 57
A.6 Radiated Spurious Emission Test Result 90
A.7 Radiated Restricted Band Edge Test Result 110
A.8 AC Conducted Emissions Test Result 238

Appendix B – Test Setup Photograph 242

Appendix C – EUT Photograph 243

1. General Information

1.1. Applicant

HAN Networks Co., Ltd.

101, 3rd Floor, Building 3, No.9 Compound, Yongfeng Road, Haidian District, Beijing, P.R. China

1.2. Manufacturer

HAN Networks Co., Ltd.

101, 3rd Floor, Building 3, No.9 Compound, Yongfeng Road, Haidian District, Beijing, P.R. China

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China **Laboratory Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
☐	**Test Site – MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: 3261	
	FCC: 291082, TW3261	ISED: TW3261

1.4. Product Information

Product	HAN Access Point
Model No.	AP571
Product Family Models	AP571e
Brand Name	HAN NETWORKS, HANNETWORKS
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
Bluetooth Specification	Bluetooth-LE only
ZigBee Specification	802.15.4
Antenna Specification	Refer to clause 1.7
Operating Temp.	-40 ~ 70 °C
Power Supply	PoE Input
Accessories	
PoE Injector 1#	Model: POEO75U-1BT Input: 100-240 V ~ 2.0 A 50-60 Hz PoE Output 1: 56 V 0.8 A 45 W PIN3, 6+ PIN1, 2 Return PoE Output 2: 56 V 0.8 A 45 W PIN4, 5+ PIN7, 8 Return
PoE Injector 2#	Model: POE60U-1BT-X (ALE P/N: POE60U-1BT-X-R) Input: 100-240 V ~ 1.5 A, 50/60 Hz Output: 56.0 V, 0.535 A, 30 W PIN 3, 6+ PIN 1, 2 Return Output: 56.0 V, 0.535 A, 30 W PIN 4, 5+ PIN 7, 8 Return

Notes:

1. The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer.
2. PoE Injectors are not marketed in conjunction with the device.
3. The two models share the same schematic diagram and PCB mainboard, with generally identical structure and enclosure. The differences are as follows:
   Wi-Fi Antenna difference: AP571 features an internal omnidirectional antenna; AP571e features an external omnidirectional antenna. The BLE/ZigBee antennas are completely identical.
   Compared to AP571, the AP571e includes external antenna connectors as part of the structural components.

1.5. Radio Specification under Test

Frequency Range	2400 ~ 2483.5 MHz	
Channel Number	802.11b/g/n-HT20/ax-HE20/be-EHT20: 11 802.11n-HT40/ax-HE40/be-EHT40: 7	
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM 802.11ax/be: OFDMA	
Data Rate	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 300 Mbps 802.11ax: up to 573.6 Mbps 802.11be: up to 688 Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU

1.6. Working Frequencies

802.11b/g/n-HT20/ax-HE20/be-EHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

802.11n-HT40/ax-HE40/be-EHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	--	--	--	--

1.7. Antenna Details

AP571

Antenna Type	Frequency (MHz)	TX Paths	Max. Directional Gain (dBi)		Antenna Gain above 30 degrees from the horizon (dBi)
			Correlated	Uncorrelated	
Wi-Fi Antenna					
Dipole	2412 ~ 2462	2	7.69	4.68	--
Dipole & Monopole	5150 ~ 5250	2	5.61	5.61	-2.0
	5250 ~ 5350	2	5.37	5.37	--
	5470 ~ 5725	2	3.72/3.91 Note 6	3.72/3.91 Note 6	--
	5725 ~ 5850	2	3.72/3.91 Note 6	3.72/3.91 Note 6	--
Dipole & Monopole	5925 ~ 6425	2	4.13	4.13	-2.2
	6525 ~ 6875	2	4.54	4.54	0.0

Notes:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax/be, not include 802.11a/b/g.
3. For beamforming operation, the software automatically backs power down based on CDD power.
4. The detail calculation method of directional gain refers to antenna report provided by the applicant.
5. Uncorrelated Directional Gain is for EIRP calculation, and Correlated Directional Gain is for PSD calculation.
6. For WLAN Config 2，Correlated Gain and Uncorrelated Gain of Frequency 5470 ~ 5725 MHz is 3.91 dBi, Correlated Gain and Uncorrelated Gain of Frequency 5725 ~ 5850 MHz is 3.91 dBi.

AP571e

Antenna Type	Frequency (MHz)	TX Paths	Max. Antenna Gain (dBi)	Max. Directional Gain (dBi)		Antenna Gain above 30 degrees from the horizon (dBi)
				For Power	For PSD	
Wi-Fi Antenna						
Dipole	2412 ~ 2462	2	1.00	1.00	4.01	--
	5150 ~ 5250	2	1.40/0.50 Note 5	1.40/0.50 Note 5	4.41/3.51 Note 5	1.40
	5250 ~ 5350	2	1.40/0.50 Note 5	1.40/0.50 Note 5	4.41/3.51 Note 5	--
	5470 ~ 5725	2	1.40/0.50 Note 5	1.40/0.50 Note 5	4.41/3.51 Note 5	--
	5725 ~ 5850	2	1.40/0.50 Note 5	1.40/0.50 Note 5	4.41/3.51 Note 5	--
Dipole	5925 ~ 6425	2	-0.50	-0.50	2.51	-0.50
	6525 ~ 6875	2	-0.50	-0.50	2.51	-0.50

Notes:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax/be, not include 802.11a/b/g.
3. For beamforming operation, the software automatically backs power down based on CDD power.
4. The detail calculation method of directional gain refers to antenna report provided by the applicant.
5. For WLAN Config 2, Max. Directional Gain for Power of Frequency 5150 ~ 5850 MHz is 0.5 dBi, Max. Directional Gain for PSD of Frequency 5150 ~ 5850 MHz is 3.51 dBi.
6. Antenna Gain above 30 degrees from the horizon (dBi) uses Max. Antenna Gain (dBi).

1.8. WLAN Configuration

Model No.	WLAN Antenna Port	WLAN Config 1 - Supporting Band	WLAN Config 2 - Supporting Band
AP571/ AP571e	5GHz 2TX Port	5G Full Band: U-NII-1 (5150-5250 MHz) U-NII-2A (5250-5350 MHz) U-NII-2C (5470-5725 MHz) U-NII-3 (5725-5850 MHz)	5GL Band: U-NII-1 (5150-5250 MHz) U-NII-2A (5250-5350 MHz)
	2GHz 2TX Port	2412 to 2462 MHz	2412 to 2462 MHz
	6GHz 2TX Port	U-NII-5 (5925-6425 MHz) U-NII-7 (6525-6875 MHz)	5GH Band: U-NII-2C (5470-5725 MHz) U-NII-3 (5725-5850 MHz)
Note: WLAN Config 1 and WLAN Config 2 only differ in the software settings and there are no changes in the hardware.			

2. Test Configuration

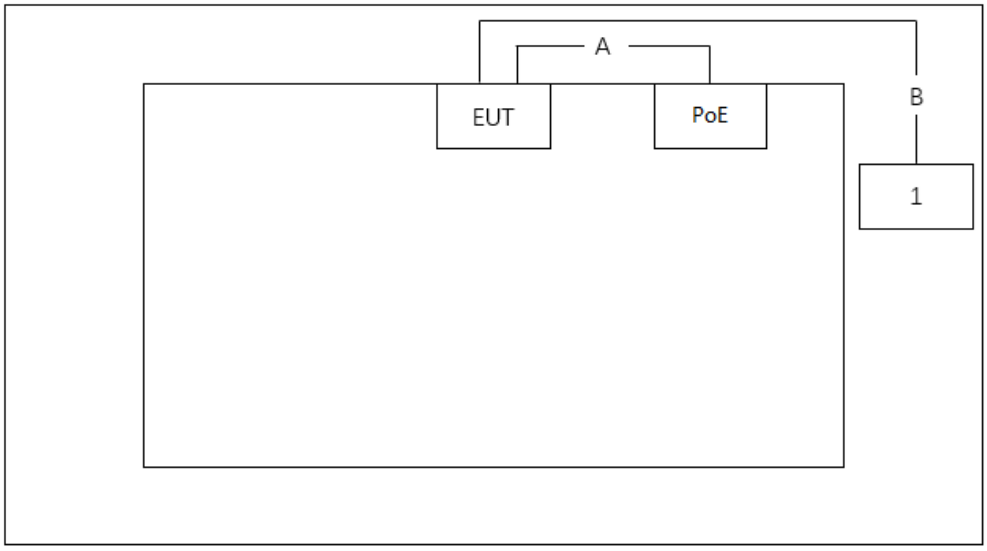
2.1. Test Mode

Mode 1: Transmit by 802.11b (1Mbps)
Mode 2: Transmit by 802.11g (6Mbps)
Mode 3: Transmit by 802.11n-HT20 (MCS0)
Mode 4: Transmit by 802.11n-HT40 (MCS0)
Mode 5: Transmit by 802.11ax-HE20 (MCS0)
Mode 6: Transmit by 802.11ax-HE40 (MCS0)
Mode 7: Transmit by 802.11be-EHT20 (MCS0)
Mode 8: Transmit by 802.11be-EHT40 (MCS0)
Note 1: All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate which power is the greatest. Note 2: For beamforming operation, the software automatically backs power down based on CDD power, and the EIRP is lower than in CDD mode. Therefore, only the CDD mode was evaluated in this report.

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2020 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.

Connection Diagram



Cable Type		Cable Description	Length
A	LAN Cable	Non-Shielded	1.5 m
B	LAN Cable	Non-Shielded	> 10 m
Product		**Manufacturer**	**Model No.**
1	Notebook	ThinkPad	E14 Gen5

2.3. Test Software

The test utility software used during testing was "QSPR" and the version was "5.0-00202".

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.247
- KDB 558074 D01 v05 r02
- KDB 662911 D01 v02 r01
- ANSI C63.10-2020

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2025-12-19	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06616	1 year	2025-10-16	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2026-06-26	SIP-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2025-12-05	SIP-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2025-10-08	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2025-10-13	SIP-AC3
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07075	1 year	2025-11-19	SIP-AC3
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2025-10-13	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2025-09-08	SIP-AC3
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2026-01-21	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2026-06-20	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2025-10-16	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2026-01-05	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2025-12-19	SIP-AC3
USB Power Sensor	Keysight	U2021XA	MRTSUE06596	1 year	2025-07-23 2026-07-14	SIP-TR1
Signal Analyzer	Keysight	N9010B	MRTSUE07036	1 year	2026-01-21	SIP-TR1
Thermohygrometer	testo	608-H1	MRTSUE11022	1 year	2025-10-16	SIP-TR1
Cable	HUBER+SUHNER	RG 233/U	MRTSUE06872	1 year	2025-12-23	SIP-SR2
Cable	HUBER+SUHNER	SF106	MRTSUE06873	1 year	2025-12-19	SIP-AC3
Attenuator	MVE	MVE2213	MRTSUE11103	1 year	2026-06-04	SIP-TR1
Attenuator	MVE	MVE2213	MRTSUE11111	1 year	2025-08-01 2026-07-31	SIP-TR1

Software	Version	Function
e3	230711	RE & CE
Controller_MF 7802BS	1.02	RE Antenna & Turntable
Agilent Power Analyzer/Agilent Power Panel	V R03.09.00	Power

5. Decision Rules and Measurement Uncertainty

5.1. 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.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9 kHz ~ 150 kHz: 3.58 dB 150 kHz ~ 30 MHz: 3.20 dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9 kHz ~ 30 MHz: 2.35 dB Coplanar: 9 kHz ~ 30 MHz: 2.37 dB Horizontal: 30 MHz ~ 200 MHz: 3.47 dB 200 MHz ~ 1 GHz: 4.17 dB 1 GHz ~ 40 GHz: 4.97 dB Vertical: 30 MHz ~ 200 MHz: 4.07 dB 200 MHz ~ 1 GHz: 5.28 dB 1 GHz ~ 40 GHz: 4.84 dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2 Uc(y)): 2.5 dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2 Uc(y)): 1.5 dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2 Uc(y)): 2.5 dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2 Uc(y)): 3.2%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6 dB Bandwidth	Conducted	Pass
15.247(b)(3)	Output Power		Pass
15.247(e)	Power Spectral Density		Pass
15.247(d)	Band Edge / Out-of-Band Emissions		Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150 kHz - 30 MHz	Line Conducted	Pass

Notes:

1. The analyzer plots shown in this section were captured using a correction table to account for cable and attenuator losses in the system connecting the EUT to the analyzer across relevant frequencies.
2. For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3. Model AP571 and AP571e have different Wi-Fi Antennas, others are identical. Therefore AP571 is selected for full test, while AP571e only undergoes testing for Output Power, Power Spectral Density, Radiated Spurious Emission and Radiated Restricted Band Edge after evaluation.

6.2. 6 dB Bandwidth Measurement

6.2.1. Test Limit

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

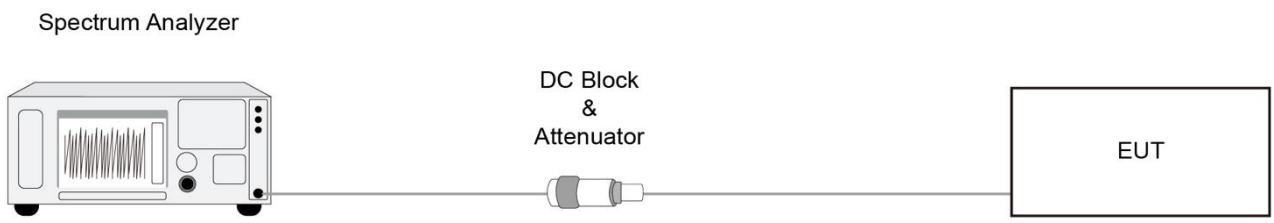
6.2.2. Test Procedure

ANSI C63.10 - 2020 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6 dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

The maximum output power shall be less 1 Watt (30 dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3.2. Test Procedure

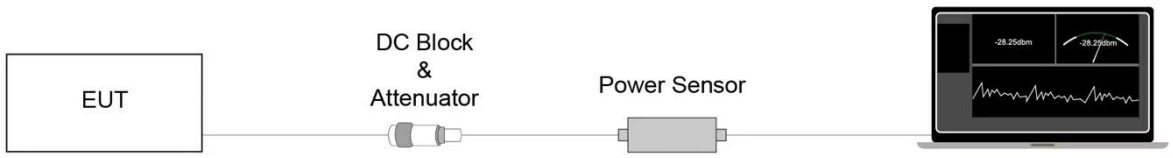
ANSI C63.10 - 2020 - Section 11.9.2.3.2

6.3.3. Test Setting

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8 dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

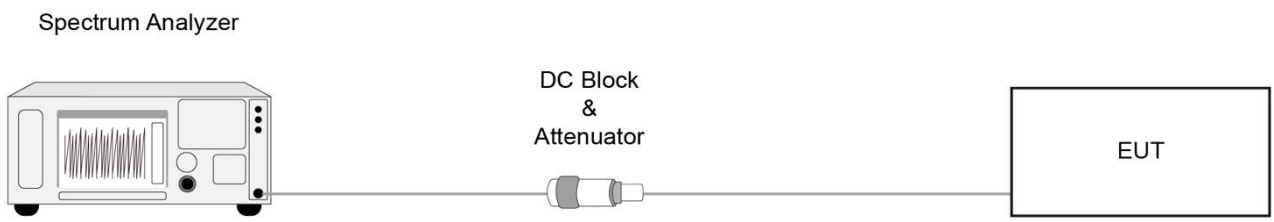
6.4.2. Test Procedure

ANSI C63.10 - 2020 - Section 11.10.5

6.4.3. Test Setting

1. Measure the duty cycle (x) of the transmitter output signal.
2. Set instrument center frequency to DTS channel center frequency.
3. Set span to at least 1.5 times the OBW.
4. RBW = 10 kHz.
5. VBW = 30 kHz.
6. Detector = RMS.
7. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
8. Sweep time = auto couple.
9. Don't use sweep triggering. Allow sweep to "free run".
10. Employ trace averaging (RMS) mode over a minimum of 100 traces.
11. Use the peak marker function to determine the maximum amplitude level.
12. Add 10 log (1/x), where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time. If measured value exceeds requirement specified by regulatory agency, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Conducted Band Edge and Out-of-Band Emissions Measurement

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 30 dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure

ANSI C63.10-2020 - Section 11.11

6.5.3. Test Setting

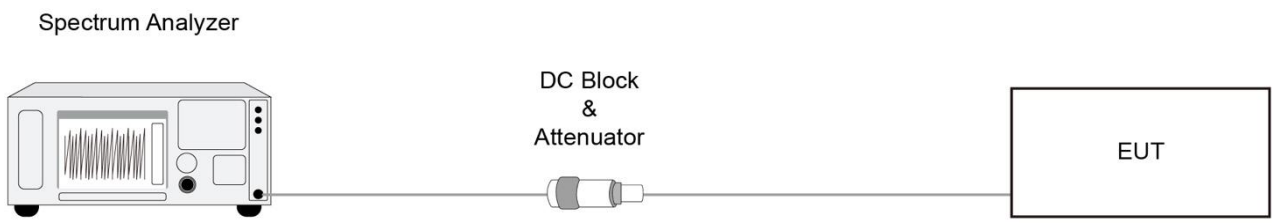
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW ≥ 3 x RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.6.2. Test Procedure

ANSI C63.10 - 2020 - Section 11.11 & 11.12

ANSI C63.10 - 2020 - Section 6.3 (General Requirements)

ANSI C63.10 - 2020 - Section 6.4 (Standard test method below 30 MHz)

ANSI C63.10 - 2020 - Section 6.5 (Standard test method above 30 MHz to 1 GHz)

ANSI C63.10 - 2020 - Section 6.6 (Standard test method above 1 GHz)

6.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Quasi-Peak Measurements below 1 GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1 MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1 GHz

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

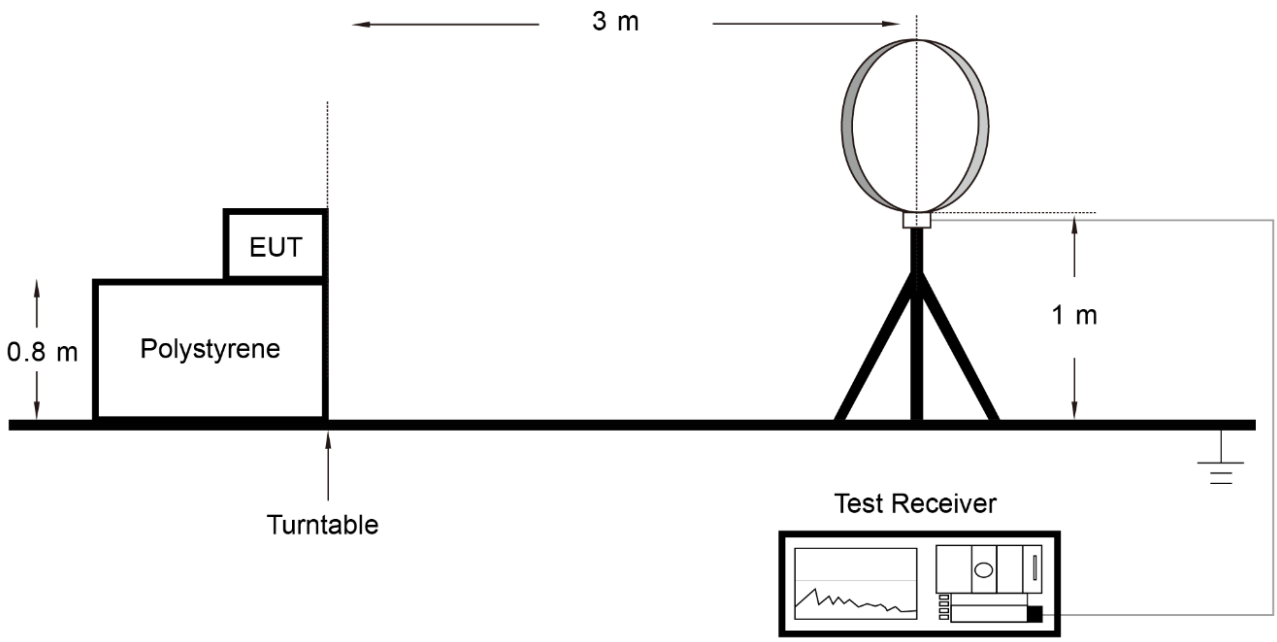
Average Measurements above 1 GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW; if the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz

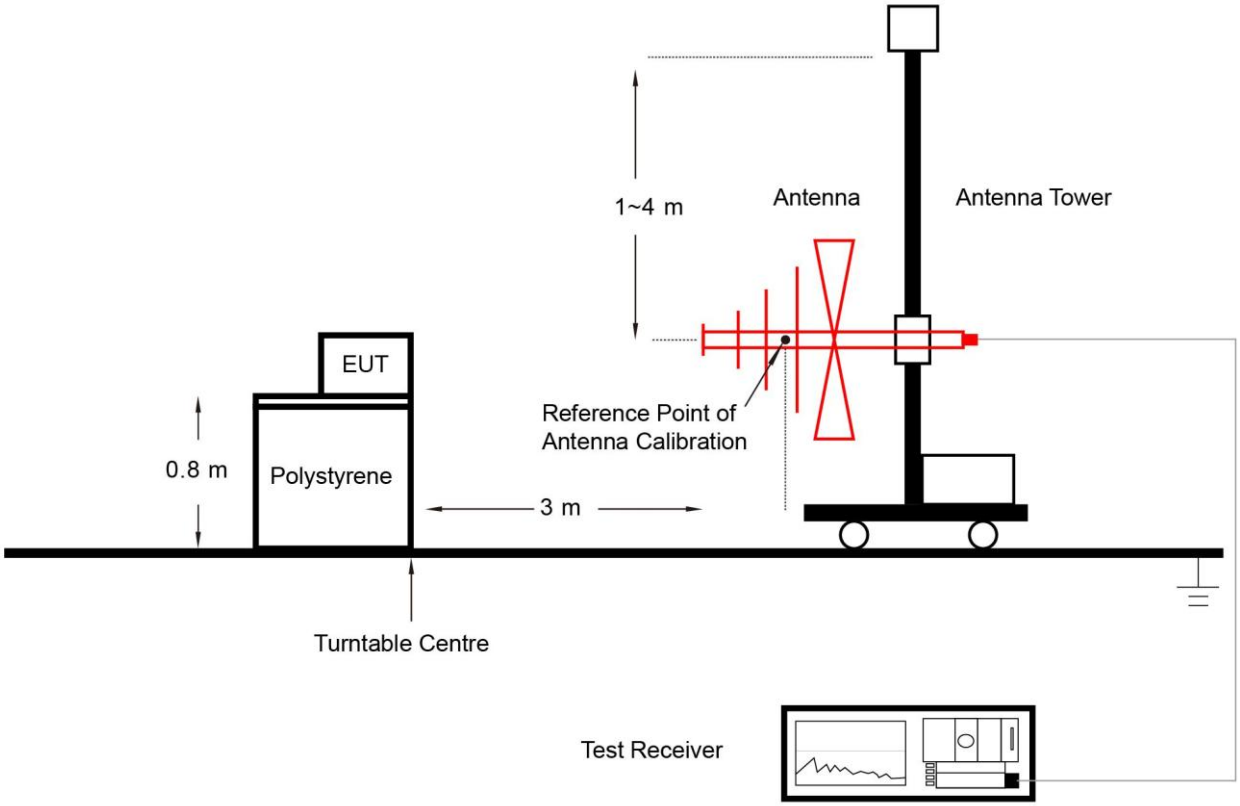
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.6.4. Test Setup

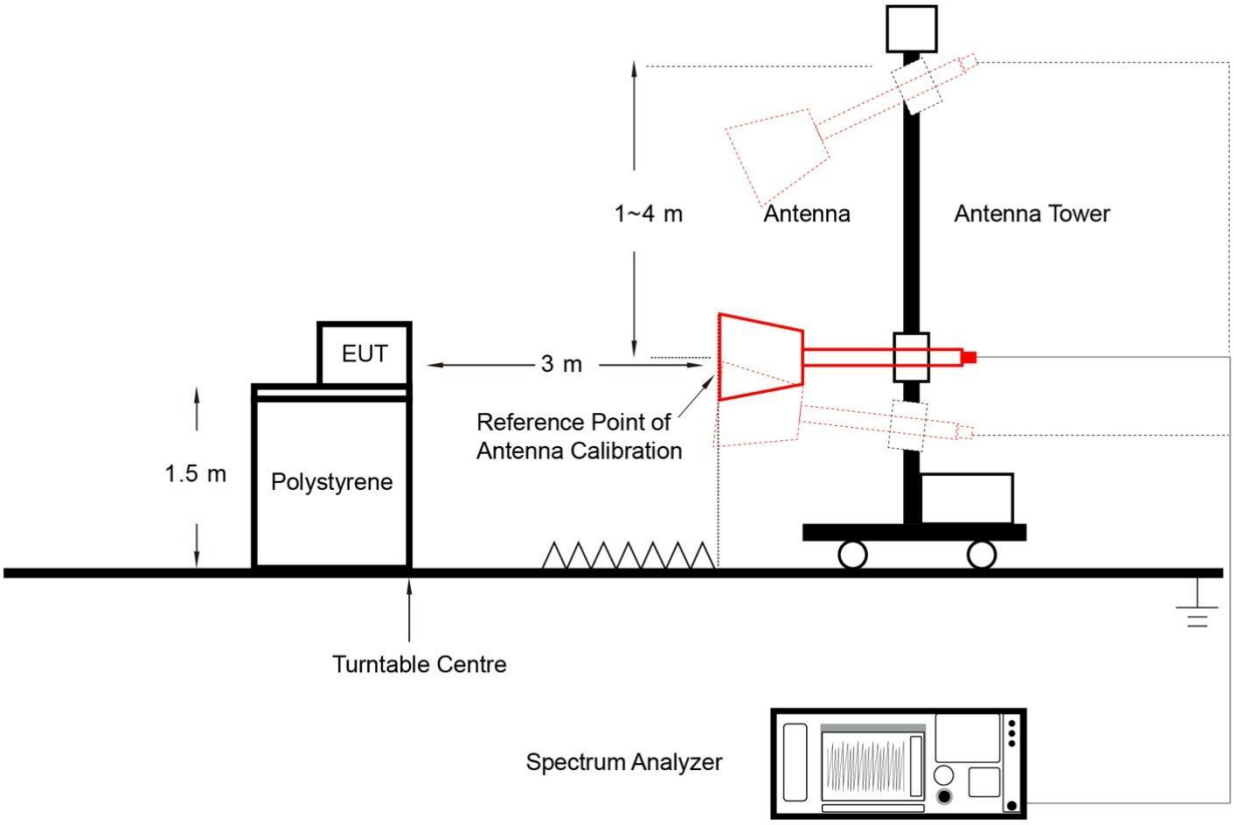
Below 30 MHz Test Setup:



Below 1 GHz Test Setup:



Above 1 GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.7.2. Test Procedure

ANSI C63.10-2020 Section 6.3 & 6.6 & 11.12

6.7.3. Test Setting

Peak Field Strength Measurements

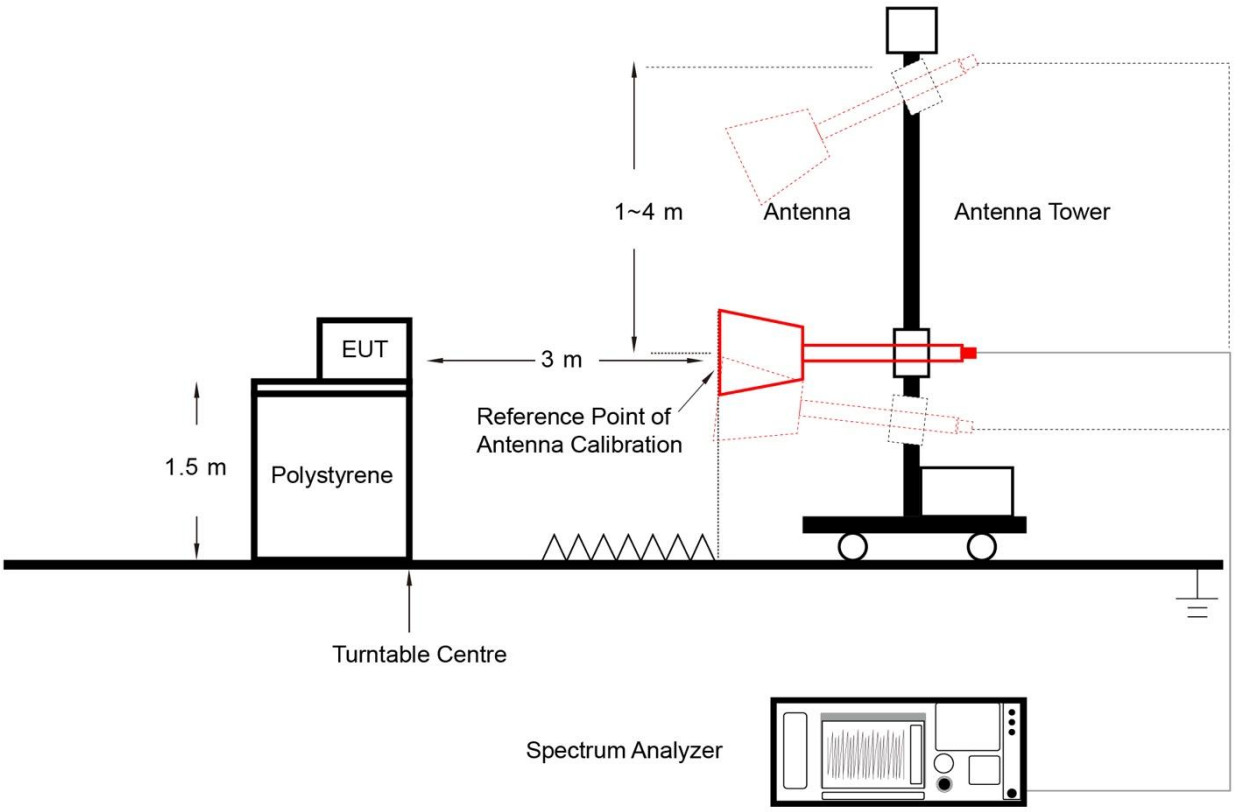
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW = 3 MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.

   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.7.4. Test Setup



6.7.5. Test Result

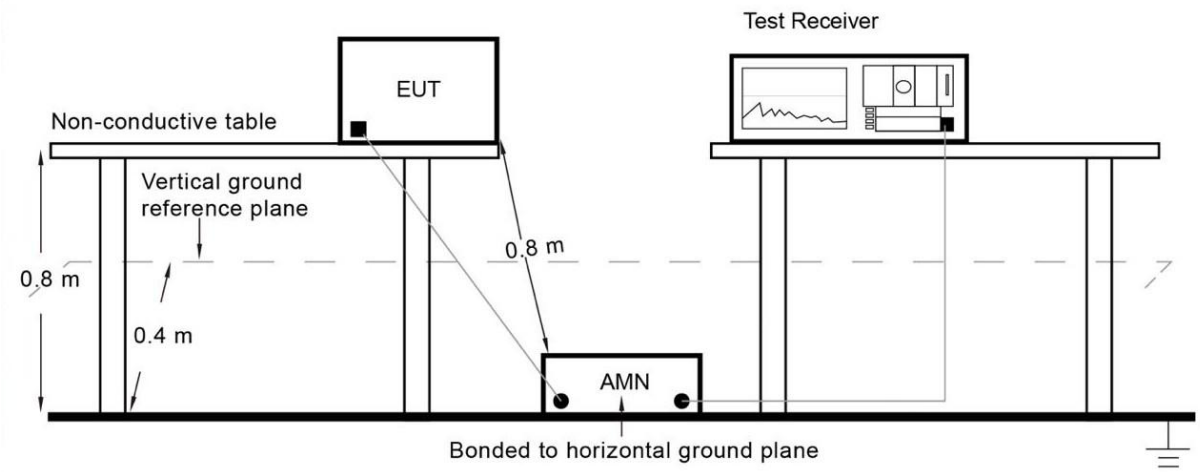
Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBμV)	AV (dBμV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

6.8.2. Test Setup



6.8.3. Test Result

Refer to Appendix A.8.

Appendix A – Test Result

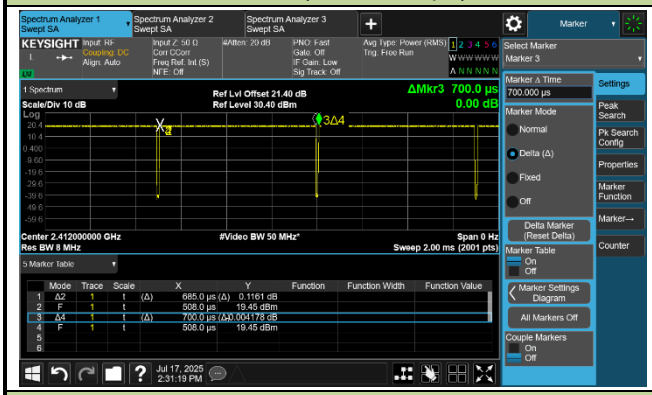
A.1 Duty Cycle Test Result

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-07-17~2025-07-18		

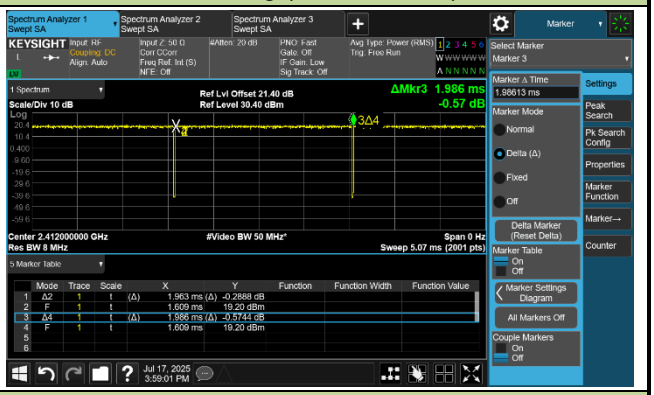
Test Mode	Duty Cycle
802.11b	97.86%
802.11g	98.84%
802.11n-HT20	98.01%
802.11n-HT40	99.26%
802.11ax-HE20	98.41%
802.11ax-HE40	98.35%
802.11be-EHT20	97.08%
802.11be-EHT40	99.03%

Duty Cycle (T = Transmission Duration)

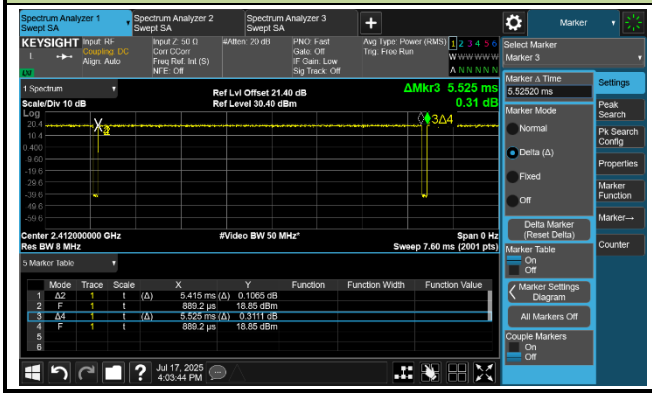
802.11b (T = 685.0 μs)



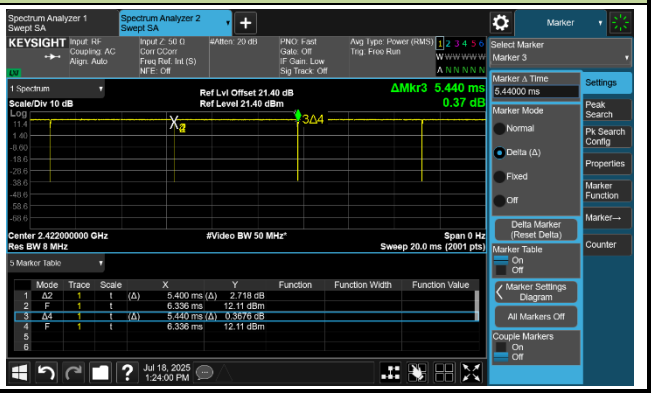
802.11g (T = 1.963 ms)

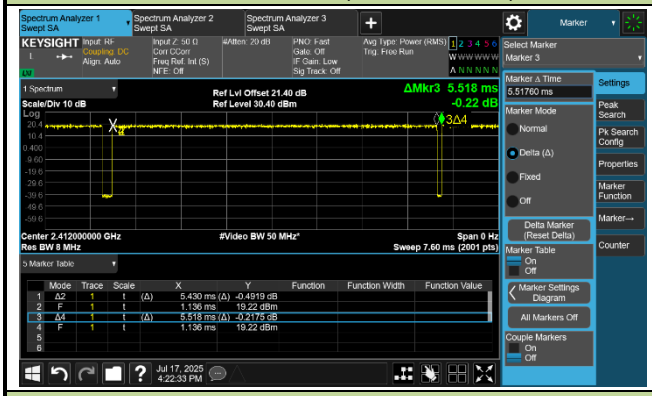
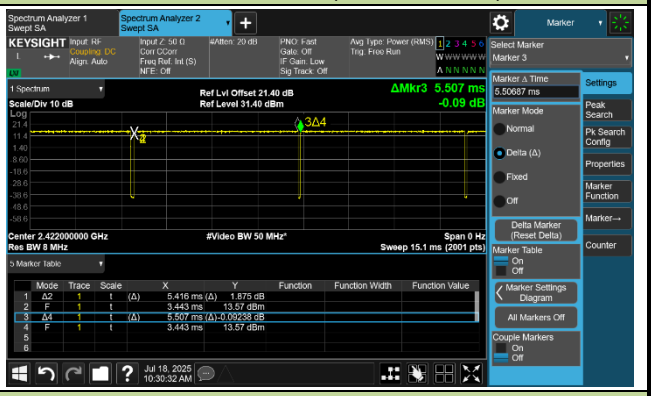
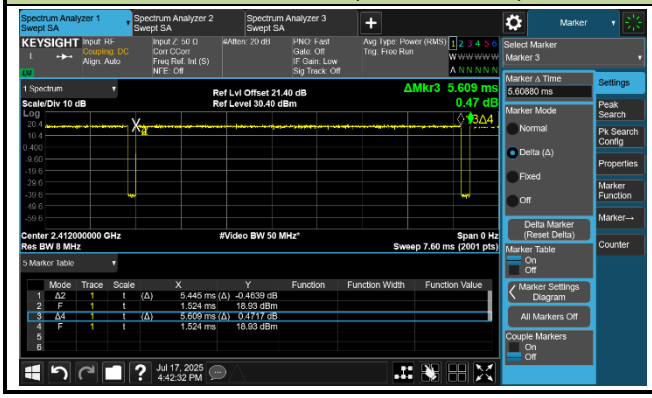
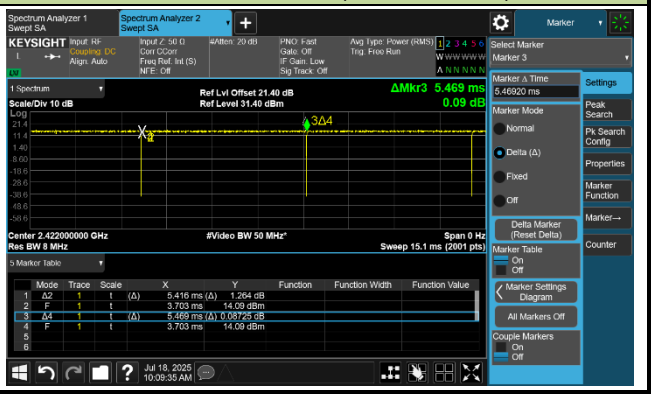


802.11n-HT20 (T = 5.415 ms)



802.11n-HT40 (T = 5.400 ms)



Duty Cycle (T = Transmission Duration)	
802.11ax-HE20 (T = 5.430 ms)	802.11ax-HE40 (T = 5.416 ms)
	
802.11be-EHT20 (T = 5.445 ms)	802.11be-EHT40 (T = 5.416 ms)
	

A.2 6 dB Bandwidth Test Result

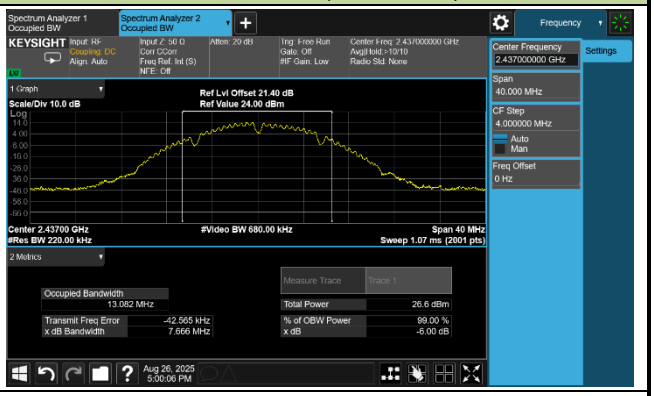
Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-08-26		

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)
11b	1 Mbps	01	2412	7.629	≥ 0.5
11b	1 Mbps	06	2437	7.666	≥ 0.5
11b	1 Mbps	11	2462	8.124	≥ 0.5
11g	6 Mbps	01	2412	16.38	≥ 0.5
11g	6 Mbps	06	2437	16.42	≥ 0.5
11g	6 Mbps	11	2462	16.48	≥ 0.5
11n-HT20	MCS0	01	2412	17.63	≥ 0.5
11n-HT20	MCS0	06	2437	17.63	≥ 0.5
11n-HT20	MCS0	11	2462	17.60	≥ 0.5
11n-HT40	MCS0	03	2422	36.33	≥ 0.5
11n-HT40	MCS0	06	2437	36.24	≥ 0.5
11n-HT40	MCS0	09	2452	36.25	≥ 0.5
11ax-HE20	MCS0	01	2412	19.09	≥ 0.5
11ax-HE20	MCS0	06	2437	19.10	≥ 0.5
11ax-HE20	MCS0	11	2462	19.10	≥ 0.5
11ax-HE40	MCS0	03	2422	38.13	≥ 0.5
11ax-HE40	MCS0	06	2437	38.08	≥ 0.5
11ax-HE40	MCS0	09	2452	38.15	≥ 0.5
11be-EHT20	MCS0	01	2412	19.07	≥ 0.5
11be-EHT20	MCS0	06	2437	19.18	≥ 0.5
11be-EHT20	MCS0	11	2462	19.01	≥ 0.5
11be-EHT40	MCS0	03	2422	38.14	≥ 0.5
11be-EHT40	MCS0	06	2437	38.04	≥ 0.5
11be-EHT40	MCS0	09	2452	37.94	≥ 0.5

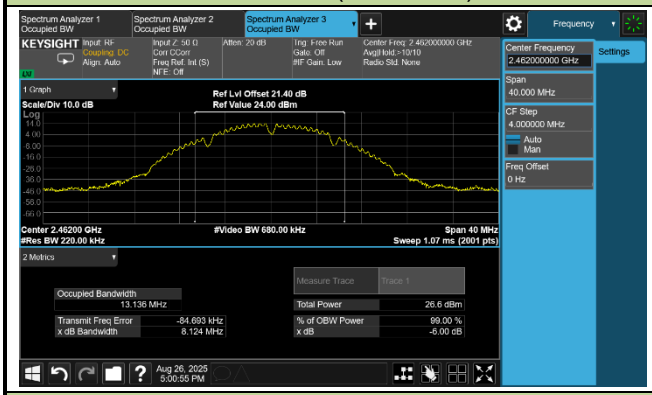
802.11b 6 dB Bandwidth

Channel 01 (2412 MHz)

Channel 06 (2437 MHz)

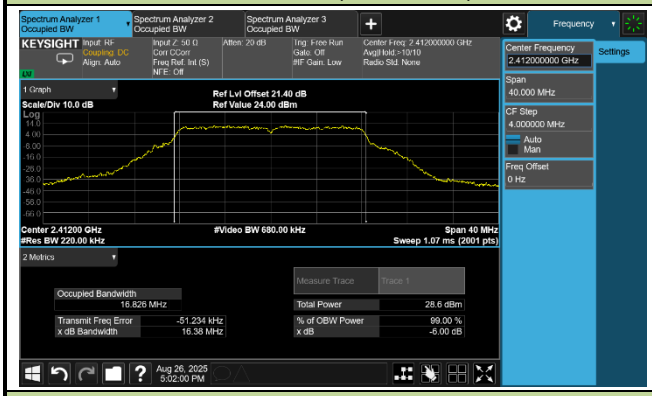


Channel 11 (2462 MHz)

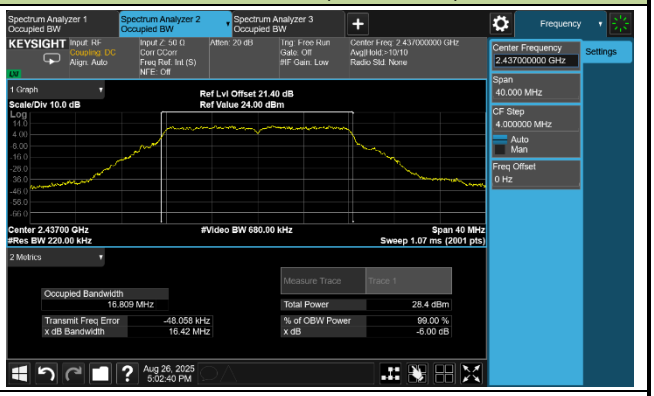


802.11g 6 dB Bandwidth

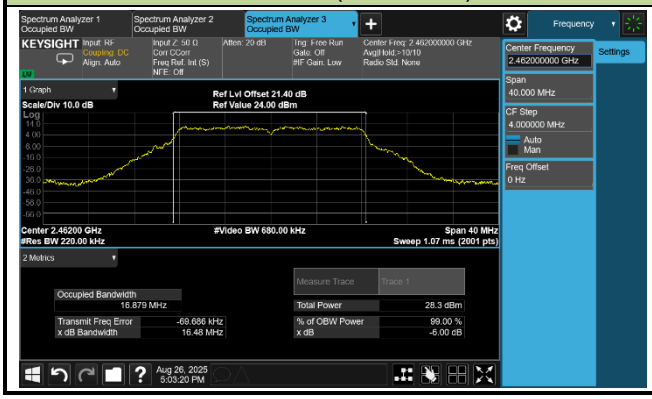
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

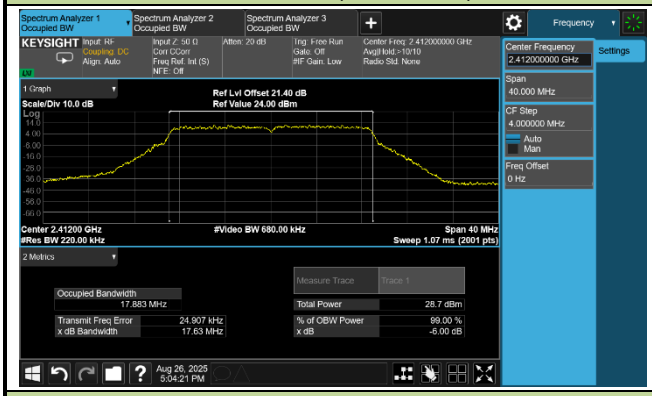


Channel 11 (2462 MHz)

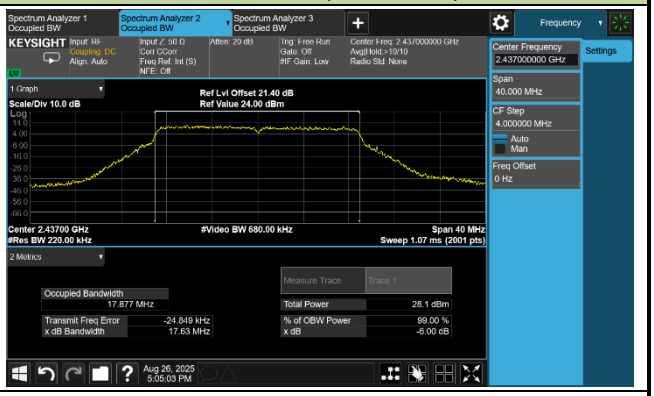


802.11n-HT20 6 dB Bandwidth

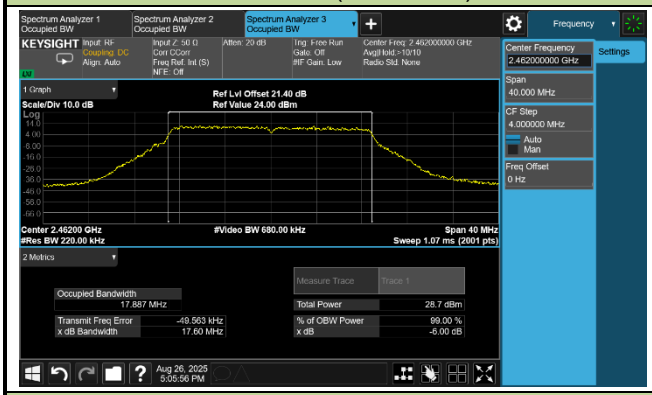
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

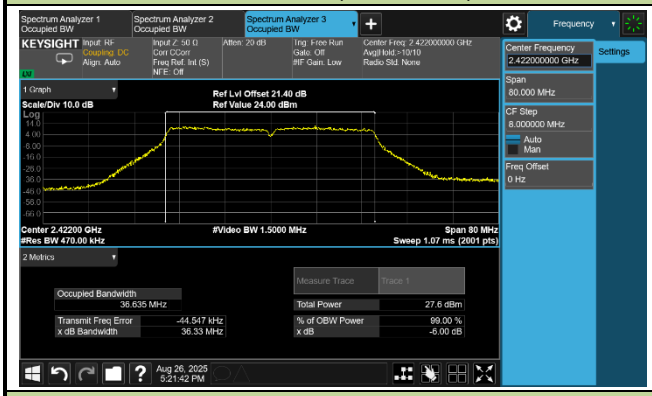


Channel 11 (2462 MHz)



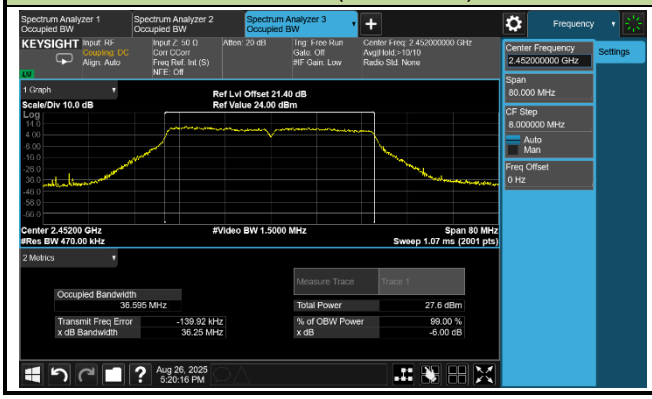
802.11n-HT40 6 dB Bandwidth

Channel 03 (2422 MHz)



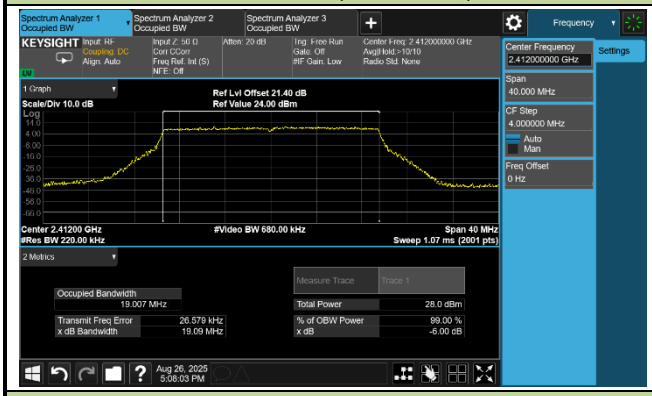
Channel 06 (2437 MHz)

Channel 09 (2452 MHz)

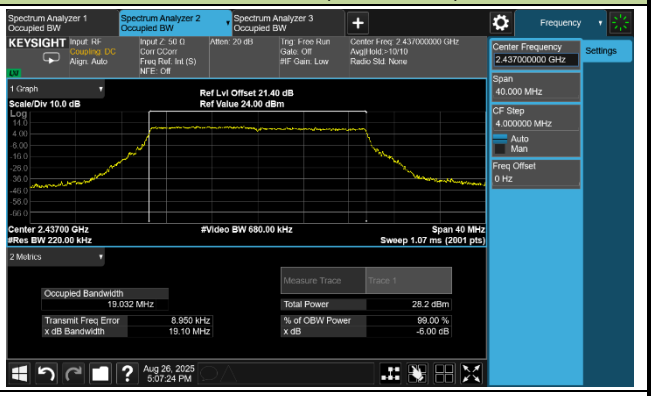


802.11ax-HE20 6 dB Bandwidth

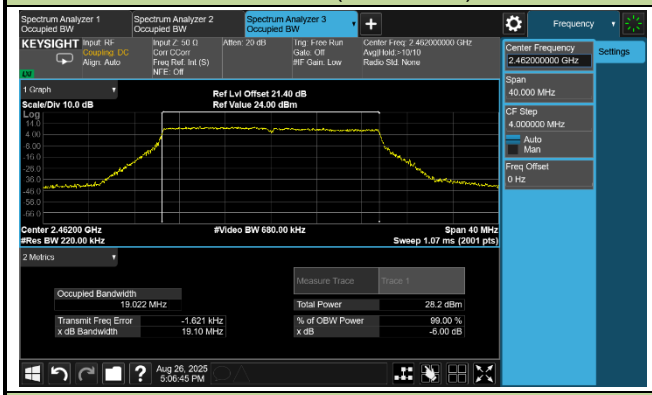
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

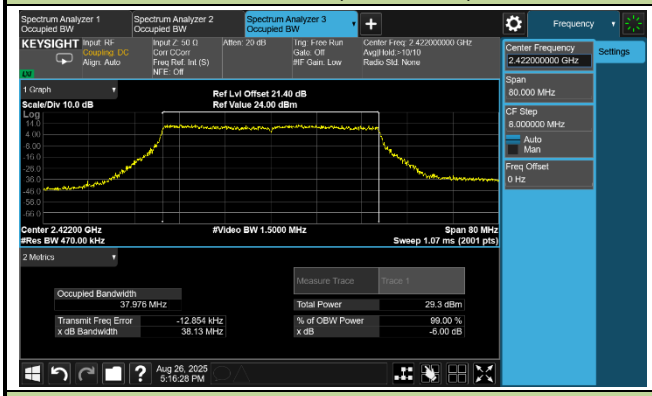


Channel 11 (2462 MHz)

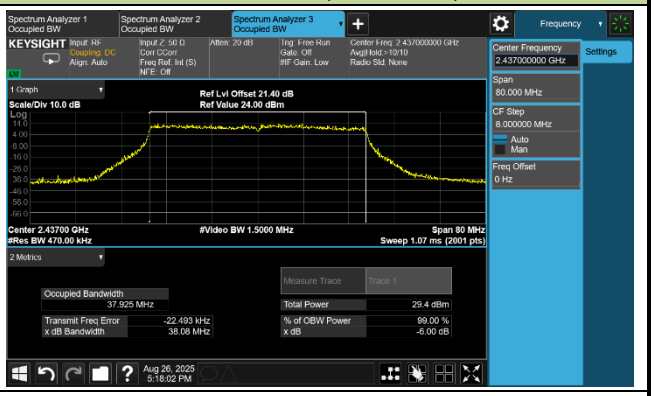


802.11ax-HE40 6 dB Bandwidth

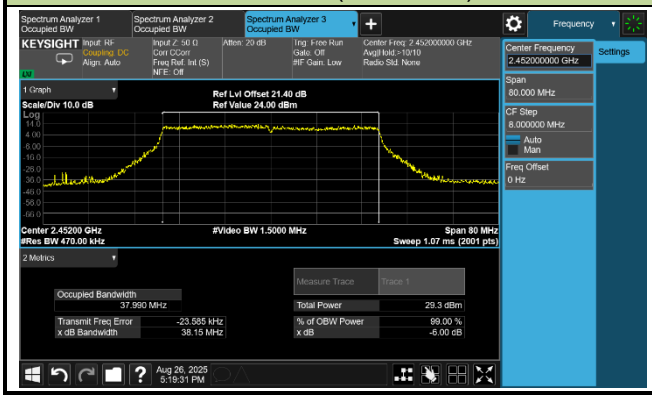
Channel 03 (2422 MHz)



Channel 06 (2437 MHz)

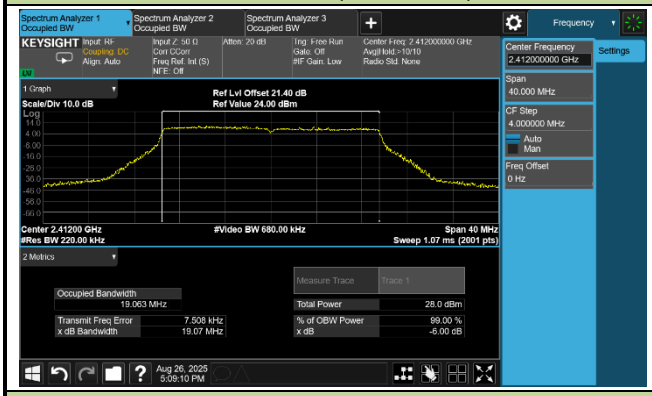


Channel 09 (2452 MHz)

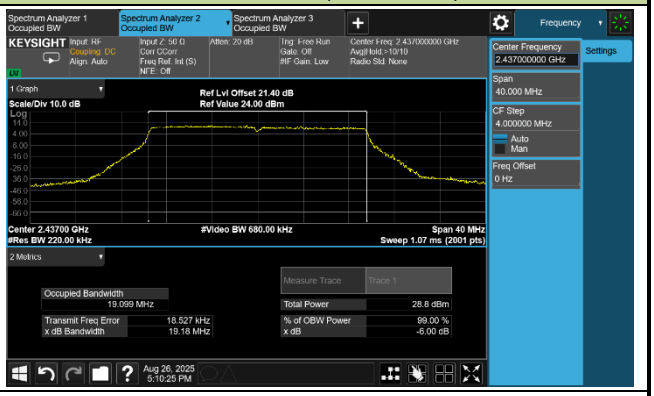


802.1be-EHT20 6 dB Bandwidth

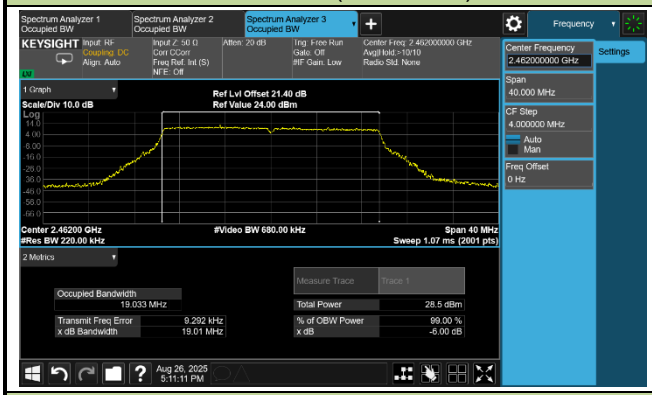
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

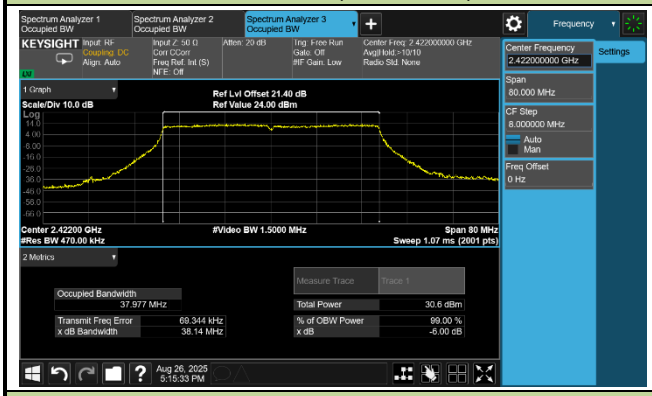


Channel 11 (2462 MHz)

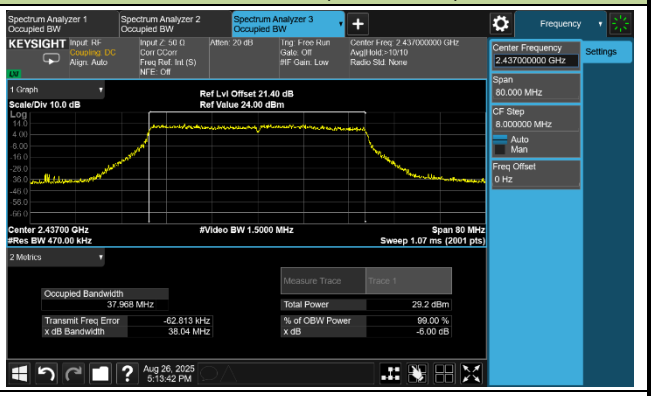


802.11be-EHT40 6 dB Bandwidth

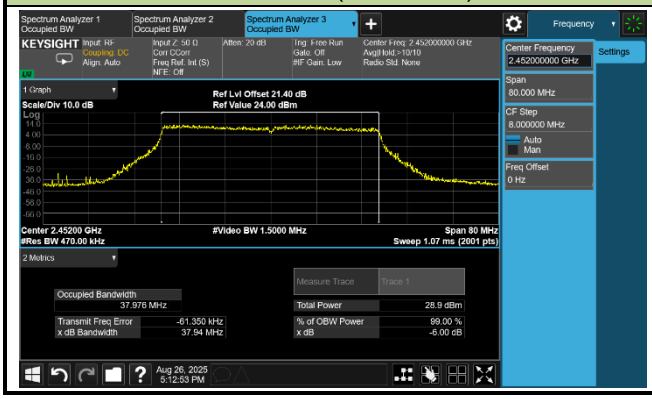
Channel 03 (2422 MHz)



Channel 06 (2437 MHz)



Channel 09 (2452 MHz)



A.3 Output Power Test Result

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-07-17~2025-07-31	Model No.	AP571

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Limit (dBm)
				Ant 0	Ant 1		
11b	1 Mbps	01	2412	22.21	21.96	25.10	≤ 30.00
11b	1 Mbps	06	2437	21.81	21.69	24.76	≤ 30.00
11b	1 Mbps	11	2462	22.23	21.56	24.92	≤ 30.00
11g	6 Mbps	01	2412	22.17	21.87	25.03	≤ 30.00
11g	6 Mbps	06	2437	21.95	21.52	24.75	≤ 30.00
11g	6 Mbps	11	2462	22.01	21.34	24.70	≤ 30.00
11n-HT20	MCS0	01	2412	22.26	21.52	24.92	≤ 30.00
11n-HT20	MCS0	06	2437	21.94	21.25	24.62	≤ 30.00
11n-HT20	MCS0	11	2462	22.05	21.67	24.87	≤ 30.00
11n-HT40	MCS0	03	2422	21.89	21.52	24.72	≤ 30.00
11n-HT40	MCS0	06	2437	22.09	21.81	24.96	≤ 30.00
11n-HT40	MCS0	09	2452	21.78	21.42	24.61	≤ 30.00
11ax-HE20	MCS0	01	2412	22.31	21.61	24.98	≤ 30.00
11ax-HE20	MCS0	06	2437	22.01	21.47	24.76	≤ 30.00
11ax-HE20	MCS0	11	2462	21.02	20.41	23.74	≤ 30.00
11ax-HE40	MCS0	03	2422	21.84	21.64	24.75	≤ 30.00
11ax-HE40	MCS0	06	2437	22.12	22.00	25.07	≤ 30.00
11ax-HE40	MCS0	09	2452	20.28	19.92	23.11	≤ 30.00
11be-EHT20	MCS0	01	2412	21.93	21.66	24.81	≤ 30.00
11be-EHT20	MCS0	06	2437	22.12	21.58	24.87	≤ 30.00
11be-EHT20	MCS0	11	2462	20.91	20.31	23.63	≤ 30.00
11be-EHT40	MCS0	03	2422	22.14	21.89	25.03	≤ 30.00
11be-EHT40	MCS0	06	2437	22.24	21.85	25.06	≤ 30.00
11be-EHT40	MCS0	09	2452	20.54	20.12	23.35	≤ 30.00

Note: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power}/10)} + 10^{(\text{Ant 1 Average Power}/10)}\}$ (dBm).

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-07-17~2025-08-13	Model No.	AP571e

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Limit (dBm)
				Ant 0	Ant 1		
11b	1 Mbps	01	2412	22.21	21.96	25.10	≤ 30.00
11b	1 Mbps	06	2437	21.81	21.69	24.76	≤ 30.00
11b	1 Mbps	11	2462	22.23	21.56	24.92	≤ 30.00
11g	6 Mbps	01	2412	22.17	21.87	25.03	≤ 30.00
11g	6 Mbps	06	2437	21.95	21.52	24.75	≤ 30.00
11g	6 Mbps	11	2462	22.01	21.34	24.70	≤ 30.00
11n-HT20	MCS0	01	2412	22.26	21.52	24.92	≤ 30.00
11n-HT20	MCS0	06	2437	21.94	21.25	24.62	≤ 30.00
11n-HT20	MCS0	11	2462	22.05	21.67	24.87	≤ 30.00
11n-HT40	MCS0	03	2422	21.89	21.52	24.72	≤ 30.00
11n-HT40	MCS0	06	2437	22.09	21.81	24.96	≤ 30.00
11n-HT40	MCS0	09	2452	21.74	21.43	24.60	≤ 30.00
11ax-HE20	MCS0	01	2412	21.31	21.76	24.55	≤ 30.00
11ax-HE20	MCS0	06	2437	22.01	21.47	24.76	≤ 30.00
11ax-HE20	MCS0	11	2462	22.03	21.34	24.71	≤ 30.00
11ax-HE40	MCS0	03	2422	21.37	21.06	24.23	≤ 30.00
11ax-HE40	MCS0	06	2437	22.12	22.00	25.07	≤ 30.00
11ax-HE40	MCS0	09	2452	20.46	20.14	23.31	≤ 30.00
11be-EHT20	MCS0	01	2412	21.24	20.89	24.08	≤ 30.00
11be-EHT20	MCS0	06	2437	22.12	21.58	24.87	≤ 30.00
11be-EHT20	MCS0	11	2462	22.13	21.56	24.86	≤ 30.00
11be-EHT40	MCS0	03	2422	21.17	20.85	24.02	≤ 30.00
11be-EHT40	MCS0	06	2437	22.24	21.85	25.06	≤ 30.00
11be-EHT40	MCS0	09	2452	20.26	19.94	23.11	≤ 30.00

Note 1: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power}/10)}+10^{(\text{Ant 1 Average Power}/10)}\}$ (dBm).

Note 2: Some specific channels need to be tested, while the data for other channels can refer to the results of model AP571, as the two models have the same target conducted power.

A.4 Power Spectral Density Test Result

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-07-17~2025-07-31	Model No.	AP571

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	PSD (dBm/ 10 kHz)		Duty Cycle (%)	10*log (1/x)	Total PSD (dBm/10 kHz)	Limit (dBm/3 kHz)
				Ant 0	Ant 1				
11b	1 Mbps	01	2412	-1.158	-2.151	97.86	0.09	1.478	≤ 6.31
11b	1 Mbps	06	2437	-2.864	-2.727	97.86	0.09	0.309	≤ 6.31
11b	1 Mbps	11	2462	-2.484	-2.701	97.86	0.09	0.513	≤ 6.31
11g	6 Mbps	01	2412	-6.276	-5.961	98.84	0.05	-3.105	≤ 6.31
11g	6 Mbps	06	2437	-6.964	-6.726	98.84	0.05	-3.833	≤ 6.31
11g	6 Mbps	11	2462	-7.030	-7.280	98.84	0.05	-4.143	≤ 6.31
11n-HT20	MCS0	01	2412	-6.898	-7.284	98.01	0.09	-4.076	≤ 6.31
11n-HT20	MCS0	06	2437	-6.741	-7.005	98.01	0.09	-3.861	≤ 6.31
11n-HT20	MCS0	11	2462	-6.797	-6.794	98.01	0.09	-3.785	≤ 6.31
11n-HT40	MCS0	03	2422	-9.591	-9.193	99.26	0.03	-6.377	≤ 6.31
11n-HT40	MCS0	06	2437	-8.839	-9.067	99.26	0.03	-5.941	≤ 6.31
11n-HT40	MCS0	09	2452	-8.643	-9.151	99.26	0.03	-5.879	≤ 6.31
11ax-HE20	MCS0	01	2412	-6.963	-7.450	98.41	0.07	-4.189	≤ 6.31
11ax-HE20	MCS0	06	2437	-7.439	-7.512	98.41	0.07	-4.465	≤ 6.31
11ax-HE20	MCS0	11	2462	-8.530	-8.699	98.41	0.07	-5.603	≤ 6.31
11ax-HE40	MCS0	03	2422	-10.409	-10.194	98.35	0.07	-7.290	≤ 6.31
11ax-HE40	MCS0	06	2437	-9.462	-10.228	98.35	0.07	-6.818	≤ 6.31
11ax-HE40	MCS0	09	2452	-11.659	-11.559	98.35	0.07	-8.598	≤ 6.31
11be-EHT20	MCS0	01	2412	-7.515	-8.137	97.08	0.13	-4.676	≤ 6.31
11be-EHT20	MCS0	06	2437	-7.736	-7.160	97.08	0.13	-4.299	≤ 6.31
11be-EHT20	MCS0	11	2462	-8.722	-9.058	97.08	0.13	-5.748	≤ 6.31
11be-EHT40	MCS0	03	2422	-10.822	-10.054	99.03	0.04	-7.411	≤ 6.31
11be-EHT40	MCS0	06	2437	-10.432	-9.997	99.03	0.04	-7.199	≤ 6.31
11be-EHT40	MCS0	09	2452	-11.627	-11.552	99.03	0.04	-8.579	≤ 6.31

Note 1:

When EUT duty cycle ≥ 98%, Total PSD (dBm / 10 kHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$} (dBm / 10 kHz).

When EUT duty cycle < 98%, Total PSD (dBm / 10 kHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$} (dBm / 10 kHz) + 10*log (1/Duty Cycle).

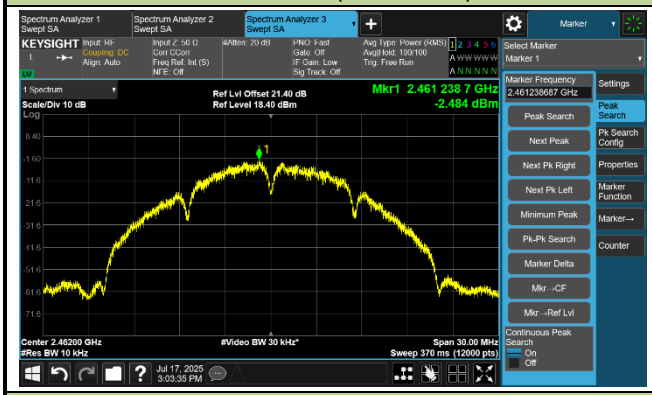
Note 2: Limit (dBm/3 kHz) = 8 – (7.69-6) = 6.31 dBm/3 kHz.

802.11b - AVGPSD - Ant 0

Channel 01 (2412 MHz)

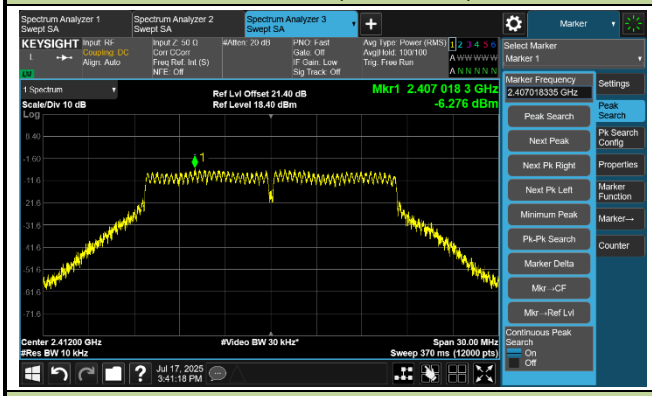
Channel 06 (2437 MHz)

Channel 11 (2462 MHz)

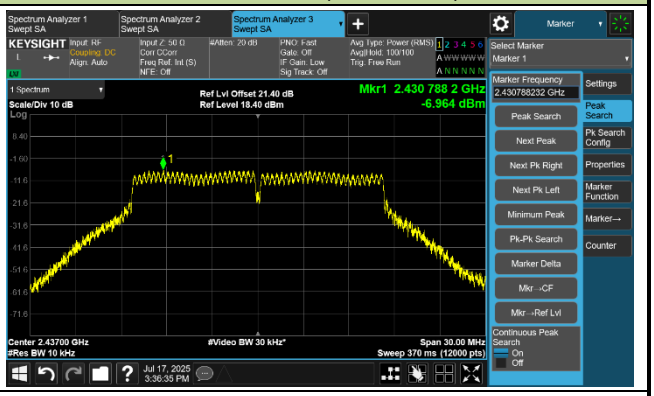


802.11g - AVGPSD - Ant 0

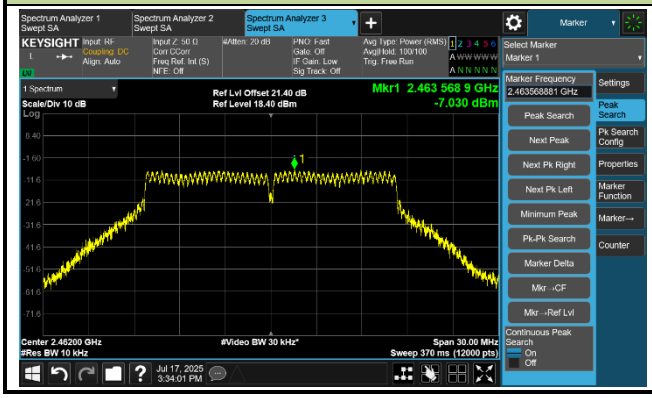
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

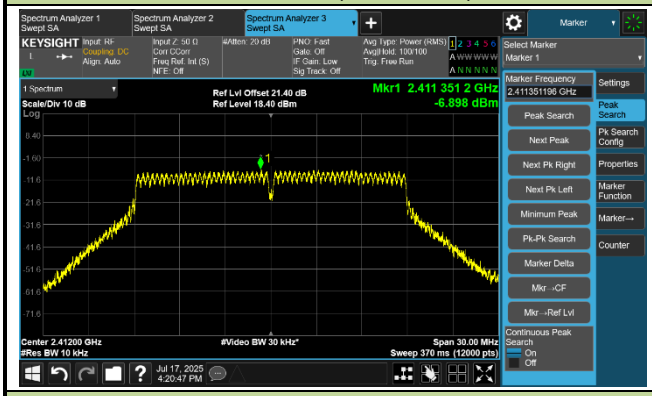


Channel 11 (2462 MHz)

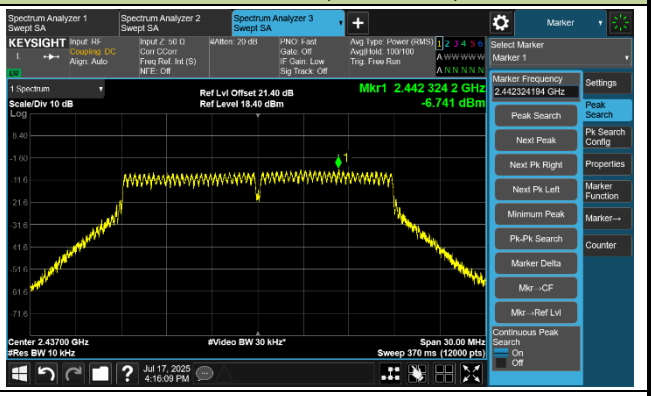


802.11n-HT20 - AVGPSD - Ant 0

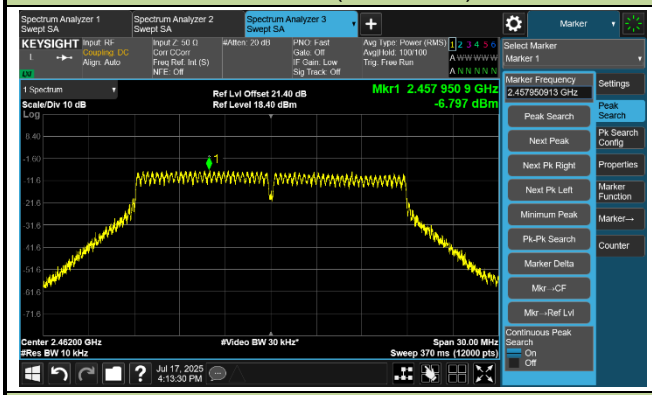
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

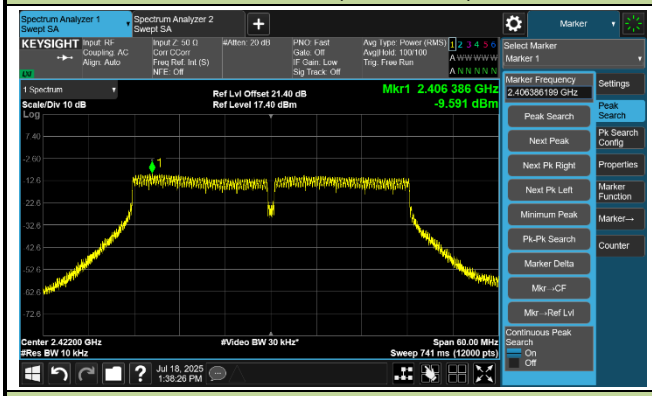


Channel 11 (2462 MHz)

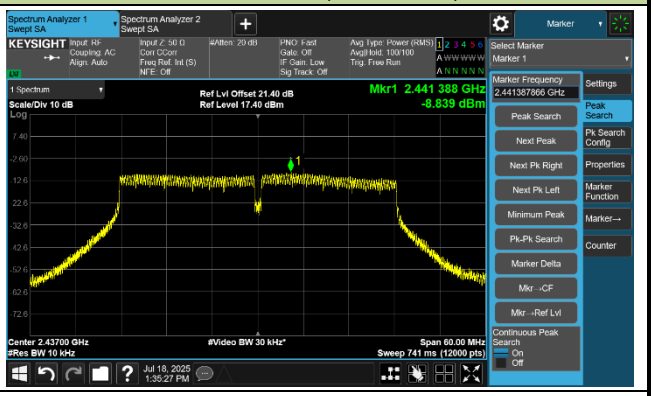


802.11n-HT40 - AVGPSD - Ant 0

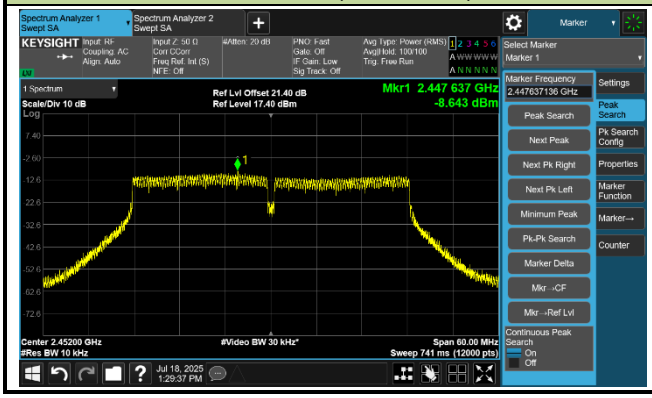
Channel 03 (2422 MHz)



Channel 06 (2437 MHz)

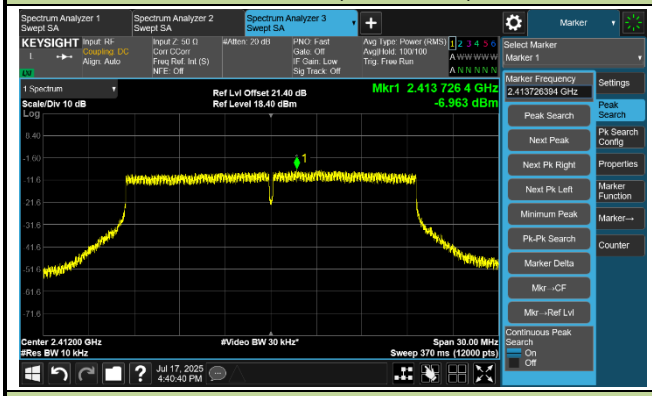


Channel 09 (2452 MHz)

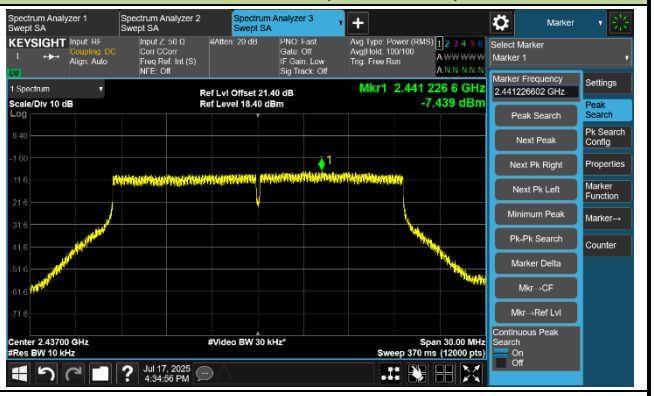


802.11ax-HE20 - AVGPSD - Ant 0

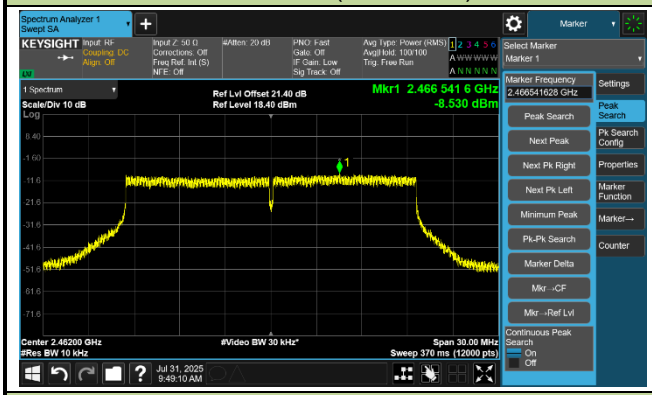
Channel 01 (2412 MHz)



Channel 06 (2437 MHz)

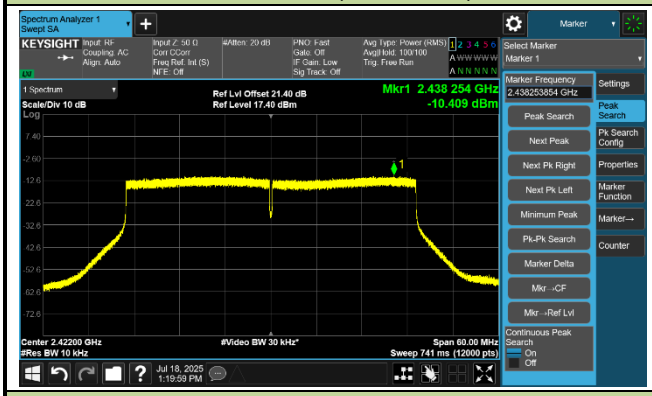


Channel 11 (2462 MHz)

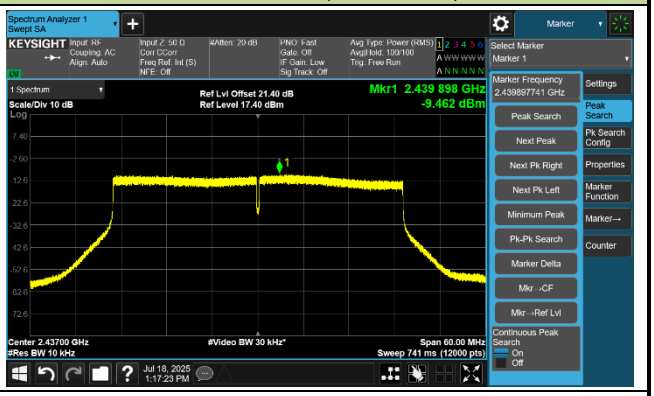


802.11ax-HE40 - AVGPSD - Ant 0

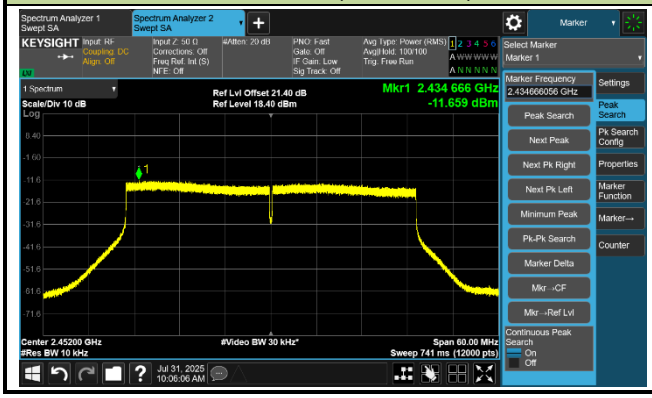
Channel 03 (2422 MHz)



Channel 06 (2437 MHz)



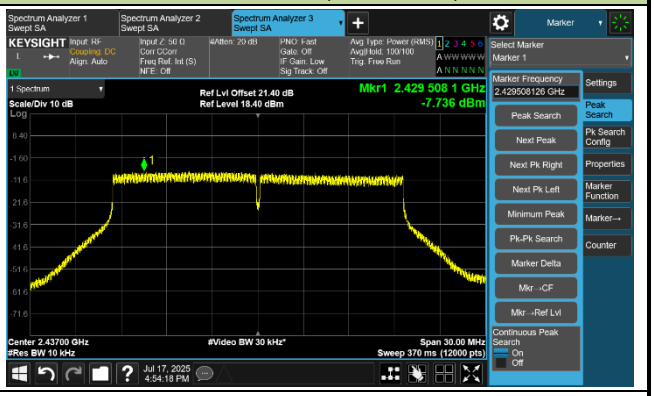
Channel 09 (2452 MHz)



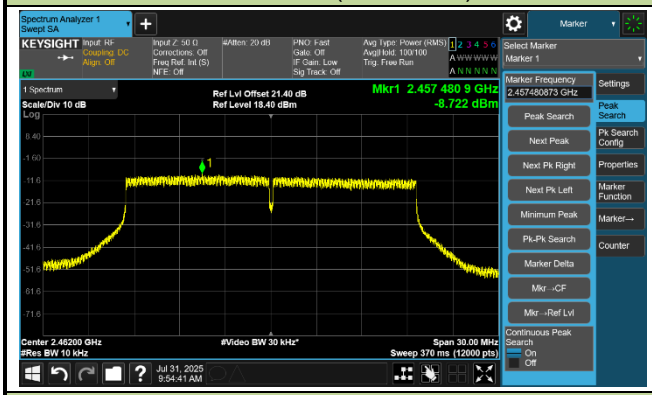
802.11be-EHT20 - AVGPSD - Ant 0

Channel 01 (2412 MHz)

Channel 06 (2437 MHz)

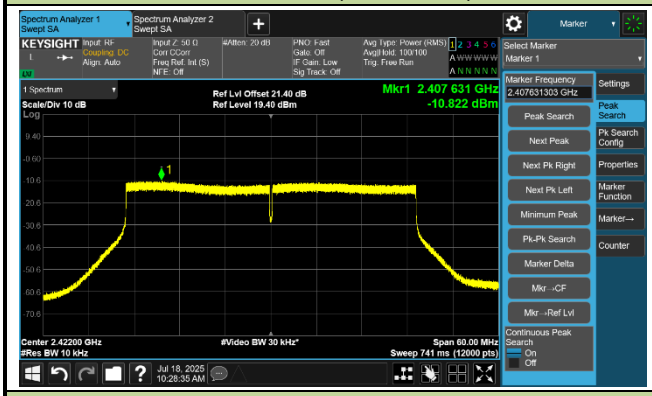


Channel 11 (2462 MHz)

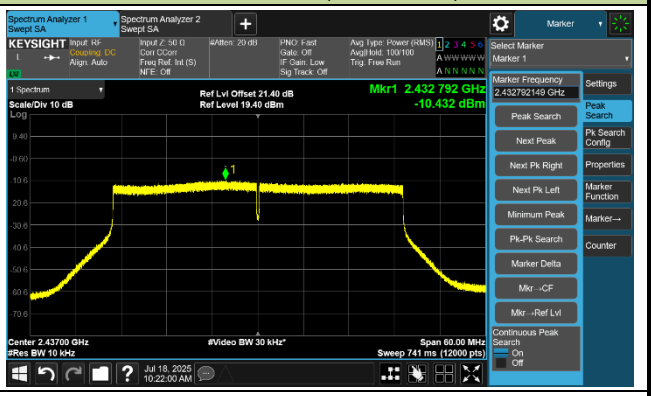


802.11be-EHT40 - AVGPSD - Ant 0

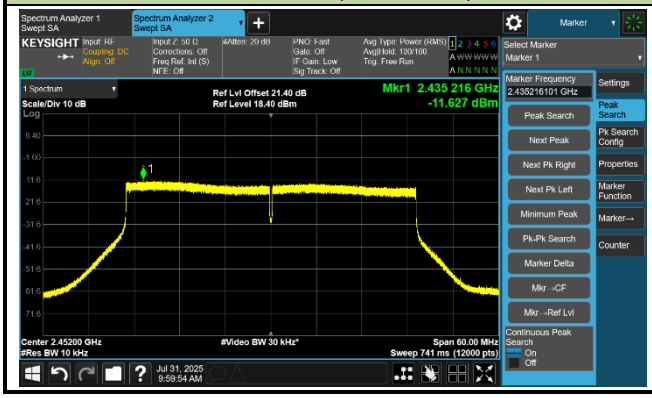
Channel 03 (2422 MHz)



Channel 06 (2437 MHz)



Channel 09 (2452 MHz)



802.11b - AVGPSD - Ant 1

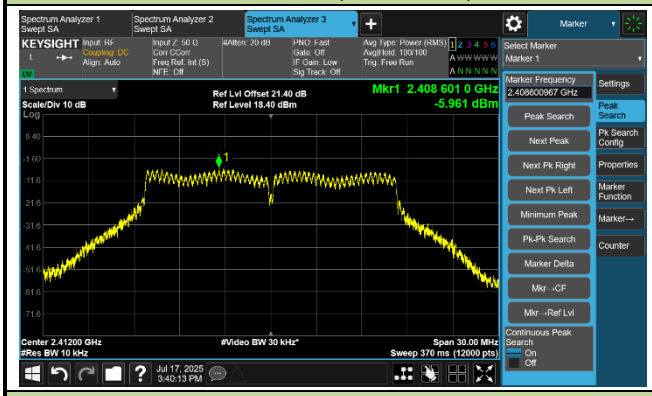
Channel 01 (2412 MHz)

Channel 06 (2437 MHz)

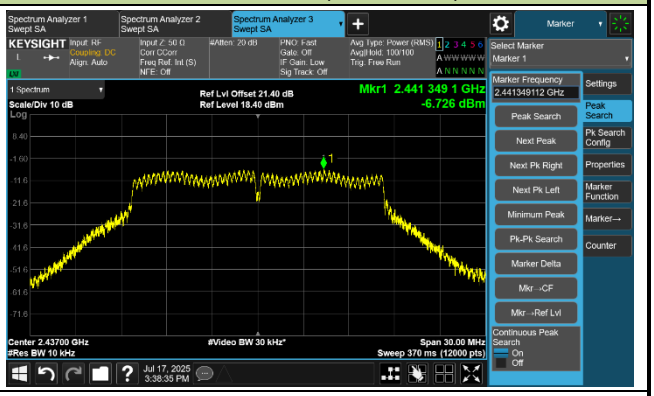
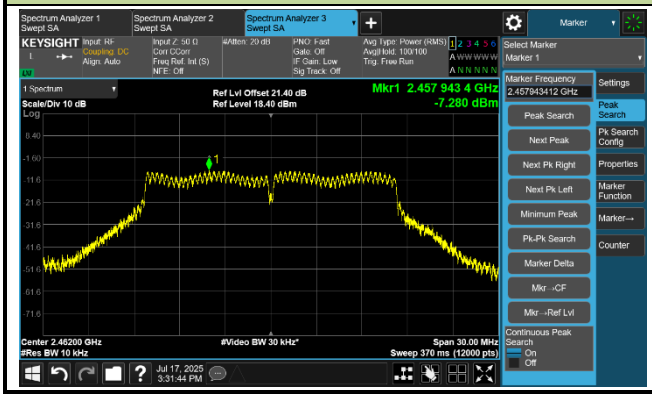
Channel 11 (2462 MHz)

802.11g - AVGPSD - Ant 1

Channel 01 (2412 MHz)



Channel 06 (2437 MHz)



Channel 11 (2462 MHz)