FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 3

TEST REPORT

For

ISEFY

MODEL NUMBER: SC663W

PROJECT NUMBER: 4791415732

REPORT NUMBER: 4791415732-3

FCC ID: 2BF8I-SC663W

IC: 32415-SC663W

ISSUE DATE: Oct. 10, 2024

Prepared for

ISEFY TECHNOLOGY

Prepared by

UL-CCIC COMPANY LIMITED
No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, China
Tel: +86 512-6808 6400
Fax: +86 512-6808 4099
Website: www.ul.com

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	10/10/2024	Initial Issue	

TABLE OF CONTENTS

1. APPLICANT INFORMATION 4

2. TEST METHODOLOGY 6

3. FACILITIES AND ACCREDITATION 6

4. CALIBRATION AND UNCERTAINTY 7

4.1. MEASURING INSTRUMENT CALIBRATION 7

4.2. MEASUREMENT UNCERTAINTY 7

5. EQUIPMENT UNDER TEST 8

5.1. DESCRIPTION OF EUT 8

5.2. MAXIMUM OUTPUT POWER 9

5.3. CHANNEL LIST 9

5.4. TEST CHANNEL CONFIGURATION 10

5.5. THE WORSE CASE POWER SETTING PARAMETER 10

5.6. DESCRIPTION OF AVAILABLE ANTENNAS 11

5.7. THE WORSE CASE CONFIGURATIONS 11

5.8. TEST ENVIRONMENT 11

5.9. DESCRIPTION OF TEST SETUP 12

5.10. MEASURING INSTRUMENT AND SOFTWARE USED 14

6. MEASUREMENT METHODS 15

7. ANTENNA PORT TEST RESULTS 16

7.1. ON TIME AND DUTY CYCLE 16

7.2. 6 dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH 20

7.3. CONDUCTED OUTPUT POWER 40

7.4. POWER SPECTRAL DENSITY 42

7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS 53

8. RADIATED TEST RESULTS 90

8.1. LIMITS AND PROCEDURE 90

8.2. TEST ENVIRONMENT 97

8.3. RESTRICTED BANDEDGE 97

8.4. SPURIOUS EMISSIONS 122

9. AC POWER LINE CONDUCTED EMISSIONS 202

10. ANTENNA REQUIREMENTS 205

1. APPLICANT INFORMATION

Applicant Information

Company Name:	ISEFY TECHNOLOGY
Address:	26 Pine Street. Toronto, ON, Canada M9N 2Y8

Manufacturer Information

Company Name:	ISEFY TECHNOLOGY
Address:	26 Pine Street. Toronto, ON, Canada M9N 2Y8

EUT Description

Product Name:	ISEFY
Model Name:	SC663W
Series Model:	/
Model Difference:	/
Sample Number:	7453272-S001
Data of Receipt Sample:	Jul. 30, 2024
Test Date:	Jul. 30, 2024~ Sep. 24, 2024

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC 47 CFR Part 15 Subpart C	PASS
ISED RSS-247 Issue 3	PASS
ISED RSS-GEN Issue 5	PASS

Summary of Test Results			
Clause	Test Items	FCC&ISED Rules	Test Results
1	6 dB Bandwidth and 99% Occupied Bandwidth	FCC 15.247 (a) (2) RSS-247 Clause 5.2 (a) RSS-Gen Clause 6.7	PASS
2	Conducted Power	FCC 15.247 (b) (3) RSS-247 Clause 5.4 (d) RSS-Gen Clause 6.12	PASS
3	Power Spectral Density	FCC 15.247 (e) RSS-247 Clause 5.2 (b)	PASS
4	Conducted Band edge And Spurious emission	FCC 15.247 (d) RSS-247 Clause 5.5 RSS-GEN Clause 6.13	PASS
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 6.13 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	PASS
6	Conducted Emission Test for AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	PASS
7	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	PASS
Note: The measurement result for the sample received is <Pass> according to < ANSI C63.10-2013, FCC 47 CFR Part 2, FCC 47 CFR Part 15C, ISED RSS-247, ISED RSS-Gen > when < Simple Acceptance > decision rule is applied.			

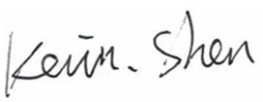
Prepared By:

Tom Tang

Reviewed By:

Emily Wang

Authorized By:



Kevin Shen

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, 414788 D01 Radiated Test Site v01r01, FCC 47 CFR Part 2, FCC 47 CFR Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 3 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4829.01)** **UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA.** **FCC (FCC Designation No.: CN1247)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.** **IC (IC Designation No.: 25056; CAB No.: CN0073)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.**

Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, China.

Note 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS.

Note 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Uncertainty
Conduction emission	3.1 dB
DTS Bandwidth	1.9 %
Maximum Conducted Output Power	1.3 dB
Maximum Power Spectral Density Level	1.5 dB
Band-edge Compliance	1.9%
Unwanted Emissions in Non-restricted Freq Bands	9kHz-30MHz: ±0.90dB 30MHz-1GHz: ±1.5 dB 1GHz-12.75GHz: ±1.9dB 12.75GHz-26.5GHz: ±2.1dB
Radiation Emission test (include Fundamental emission) (9kHz-30MHz)	3.4dB
Radiation Emission test (include Fundamental emission) (30MHz-1GHz)	3.4dB
Radiation Emission test (1GHz to 26GHz) (include Fundamental emission)	3.5dB (1GHz-18GHz)
	3.9dB (18GHz-26.5GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Product Name:	ISEFY
Model No.:	SC663W
Operating Frequency:	IEEE 802.11B/G/N(HT20)/AX(HE20): 2412MHz to 2462MHz IEEE 802.11N(HT40)/AX(HE40): 2422MHz to 2452MHz
Type of Modulation:	IEEE 802.11B: DSSS (DBPSK, DQPSK, CCK) IEEE 802.11G: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11N (HT20 and HT40): OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11AX (HE20 and HE40): OFDMA (1024-QAM, 256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Channels Step:	Channels with 5MHz step
Antenna Type:	Rod Antenna
Antenna Gain:	1.79 dBi
	Note: This data is provided by customer and our lab isn't responsible for this data.

5.2. MAXIMUM OUTPUT POWER

Number of Transmit Chains (NTX)	IEE Std. 802.11	Channel Number	Max AVG Conducted Power (dBm)
1	IEEE 802.11B	1-11[11]	13.42
1	IEEE 802.11G	1-11[11]	10.34
1	IEEE 802.11N HT20	1-11[11]	12.01
1	IEEE 802.11N HT40	3-9[7]	9.42
1	IEEE 802.11N HE20	1-11[11]	12.14
1	IEEE 802.11N HE40	3-9[7]	9.44

5.3. CHANNEL LIST

Channel List for 802.11B/G/N(20 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	4	2427	7	2442	10	2457
2	2417	5	2432	8	2447	11	2462
3	2422	6	2437	9	2452		

Channel List for 802.11N/AX (40 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	5	2432	7	2442	9	2452
4	2427	6	2437	8	2447		

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel (MHz)
IEEE 802.11B	LCH: CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11G	LCH: CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11N HT20	LCH: CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11N HT40	LCH: CH03 2422
	MCH: CH06 2437
	HCH: CH09 2452
IEEE 802.11N AX20	LCH: CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11N AX40	LCH: CH03 2422
	MCH: CH06 2437
	HCH: CH09 2452

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		SecureCRT					
Modulation Mode	Transmit Antenna Number	Test Channel					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11B	1	default	default	default	/		
802.11G	1	default	default	default			
802.11N HT20	1	default	default	default			
802.11N HT40	1	/			default	default	default
802.11AX HE20	1	default	default	default	/		
802.11AX HE40	1	/			default	default	default

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	Rod Antenna	1.79

Note: This data is provided by customer and our lab isn't responsible for this data.

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11B	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11G	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11N HT20	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11N HT40	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11AX HE20	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11AX HE40	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.

5.7. THE WORSE CASE CONFIGURATIONS

For WIFI module, all the modes and data rates have been test, the worst-case data rates for every mode was recorded as below:
802.11B mode: 1 Mbps
802.11G mode: 6 Mbps
802.11N HT20 mode: MCS0
802.11N HT40 mode: MCS0
802.11AX HE mode: MCS0
802.11AX HE mode: MCS0

5.8. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity:	55 ~ 65%	
Atmospheric Pressure:	1025Pa	
Temperature:	TN	23 ~ 28°C
Voltage:	VL	N/A
	VN	AC 120V
	VH	N/A

Note: VL= Lower Extreme Test Voltage
VN= Nominal Voltage
VH= Upper Extreme Test Voltage
TN= Normal Temperature

5.9. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	/
2	Power Adapter	Jian Aohai	A318-120050W-US5	Input: 100-240V~ 50/60Hz, 0.2A Output: 12.0V⎓0.5A

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB to TTL	USB to TTL	100cm Length	/
2	LAN	LAN	Lan Cable	100cm Length	

ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	Micro SD Card	Western Digital	WD Purple QD101	32GB

TEST SETUP

The EUT can work in an engineer mode with a software through a laptop.

SETUP DIAGRAM FOR TESTS

5.10. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions Test (Instrument)							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	126700	2022-11-26	2023-11-25	2024-11-24
☑	Two-Line V-Network	R&S	ENV216	126701	2022-11-26	2023-11-25	2024-11-24
☑	Artificial Mains Networks	R&S	ENY81	126712	2022-09-27	2023-09-26	2024-09-25

Conducted Emissions Test (Software)					
Used	Description	Manufacturer	Name	Version	
☑	Software for Conducted Emissions Test	R&S	EMC32	9.25.00	

Radiated Emissions Test (Instrument)							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	EMI test receiver	R&S	ESR7	222993	2023-04-08	2024-03-23	2025-03-22
☑	EMI test receiver	R&S	ESR26	126703	2022-11-26	2023-11-25	2024-11-24
☑	Spectrum Analyzer	R&S	FSV3044	222992	2023-04-08	2024-03-23	2025-03-22
☑	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB 1513	155456	2021-06-03	2024-05-27	2027-05-26
☑	Receiver Antenna (30MHz-1GHz)	Schwarzbeck	VULB 9163	126704	2019-01-28	2022-01-18	2025-01-17
☑	Receiver Antenna (1GHz-18GHz)	R&S	HF907	126705	2019-01-27	2022-02-28	2025-02-27
☑	Receiver Antenna (18GHz-26.5GHz)	Schwarzbeck	BBHA9170	126706	2019-02-29	2022-02-28	2025-02-27
☑	Pre-amplification (To 18GHz)	Tonscned	TAP01018050	224539	2022-10-11	2023-10-10	2024-10-09
☑	Pre-amplification (To 18GHz)	R&S	SCU-18D	134667	2022-11-26	2023-11-25	2024-11-24
☑	Pre-amplification (To 26.5GHz)	R&S	SCU-26D	135391	2022-11-26	2023-11-25	2024-11-24
☑	Band Reject Filter	Wainwright	WRCGV12-2375-2400-2485-2510-40SS	1	2022-12-19	2023-12-18	2024-12-17
☑	High Pass Filter	COM-MW	ZBF13-3-18G-01	2	2022-12-19	2023-12-18	2024-12-17

Radiated Emissions Test (Software)					
Used	Description	Manufacturer	Name	Version	
☑	Software for Radiated Emissions Test	Tonscend	JS32-RE	5.0.0.2	

Antenna Port Test (Instrument)							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9010B	155368	2023-04-08	2024-03-23	2025-03-22
☑	Power Meter	MWT	MW100-RFCB	221694	2023-04-08	2024-03-23	2025-03-22
☑	Attenuator	PASTERNACK	PE7087-6	1624	2023-04-08	2024-03-23	2025-03-22

Antenna Port Test (Software)					
Used	Description	Manufacturer	Name	Version	
☑	Software for Antenna Port Test	Tonscend	JS1120-3 Test System	V3.2.22	

6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6 dB Bandwidth and 99% Occupied Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.2.3 (11.9.2.3.1 Method AVGPM of ANSI C63.10)
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4 (11.10.2 Method PKPSD of ANSI C63.10)
4	Out-of-band emissions in non-restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.5
5	Out-of-band emissions in restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.6
6	Band-edge	KDB 558074 D01 15.247 Meas Guidance v05r02	8.7
7	Conducted Emission Test for AC Power Port	ANSI C63.10-2013	6.2

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

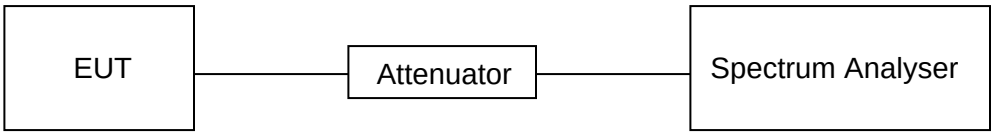
LIMITS

None; for reporting purposes only

PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



TEST ENVIRONMENT

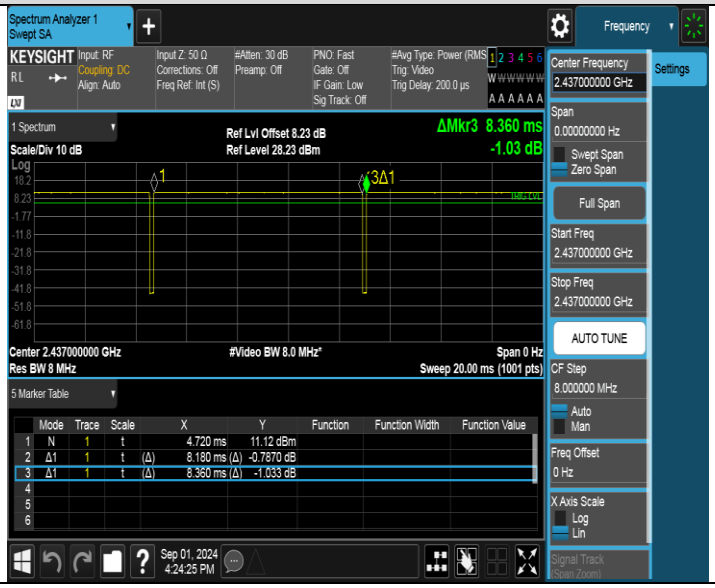
Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

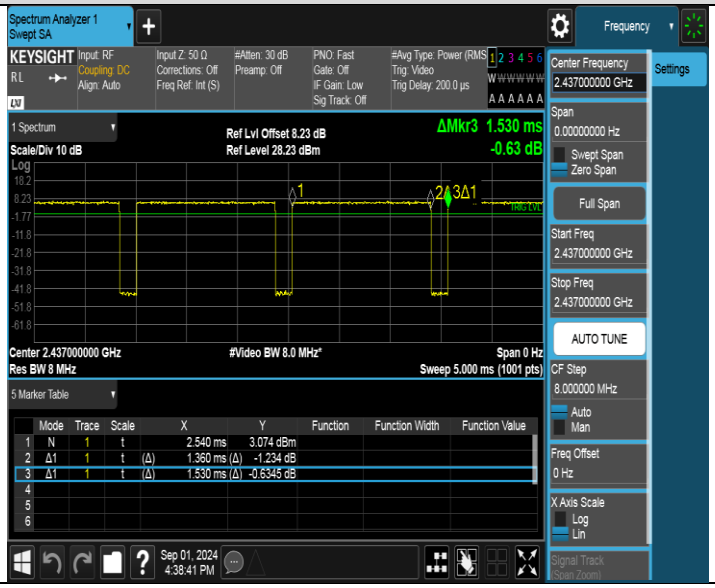
TEST RESULTS TABLE

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (kHz)	Final VBW (kHz)
11B	8.19	8.36	0.9797	97.97%	0.09	0.12	0.20
11G	1.36	1.53	0.8889	88.89%	0.51	0.74	0.80
802.11N HT20	5.08	5.25	0.9676	96.76%	0.14	0.20	0.20
802.11N HT40	2.47	2.64	0.9356	93.56%	0.29	0.40	0.50
802.11AX HE20	4.55	4.72	0.9640	96.40%	0.16	0.22	0.30
802.11AX HE40	2.31	2.48	0.9315	93.15%	0.31	0.43	0.50

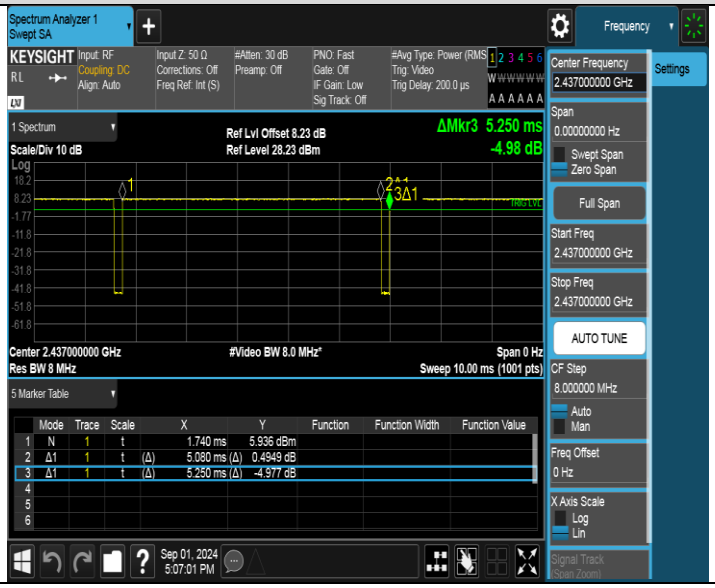
Note: 1) Duty Cycle Correction Factor=10log(1/x).
2) Where: x is Duty Cycle (Linear)
3) Where: T is On Time (transmit duration)
4) If the duty cycle is above 98%, the Final VBW is 10Hz.

TEST GRAPHS

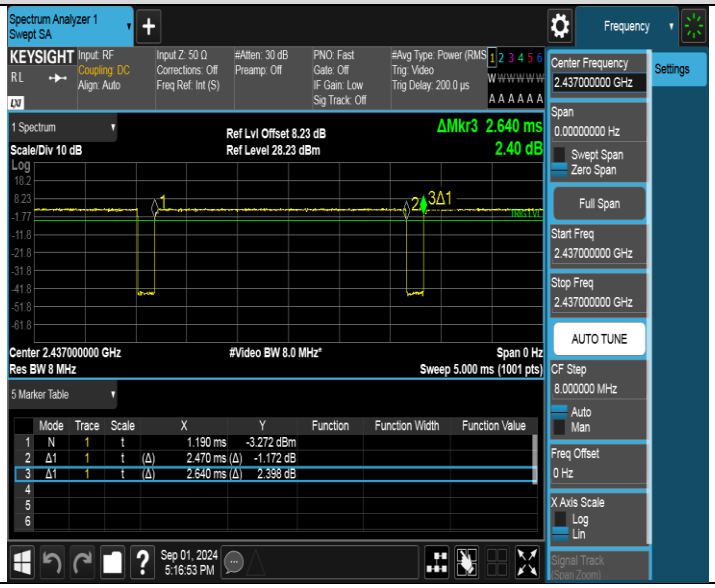
11B ON TIME AND DUTY CYCLE MID CHANNEL


11G ON TIME AND DUTY CYCLE MID CHANNEL


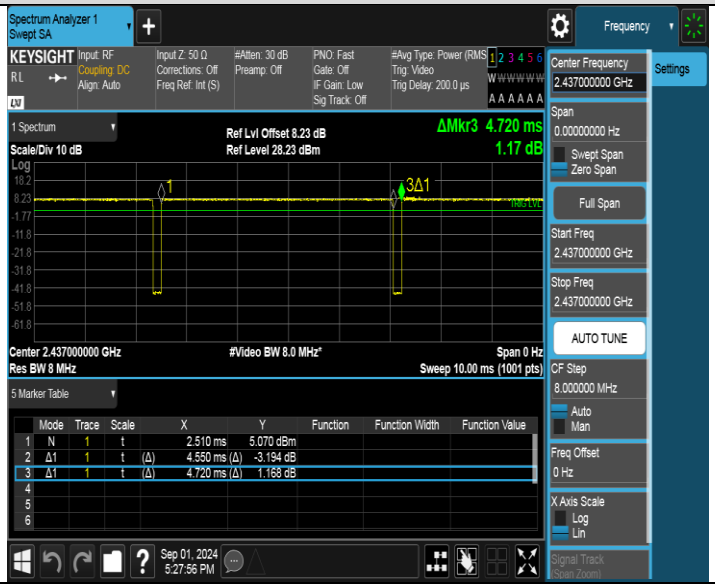
11N HT20 ON TIME AND DUTY CYCLE MID CHANNEL



11N HT40 ON TIME AND DUTY CYCLE MID CHANNEL



11AX HE20 ON TIME AND DUTY CYCLE MID CHANNEL



11AX HE40 ON TIME AND DUTY CYCLE MID CHANNEL

7.2. 6 dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 47 CFR 15.247(a)(2) ISED RSS-247 5.2 (a)	6dB Bandwidth	>= 500kHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99% Occupied Bandwidth	For reporting purposes only	2400-2483.5

TEST PROCEDURE

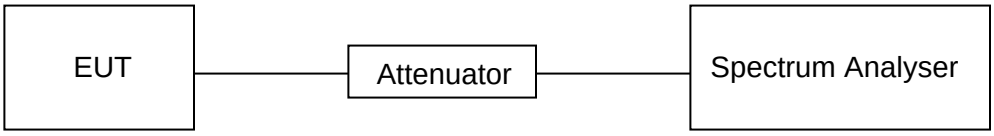
Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: 100 kHz For 99% Occupied Bandwidth: 1% to 5% of the occupied bandwidth
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99% Occupied Bandwidth: ≥3 × RBW
Trace	Max hold
Sweep	Auto couple

a) Use the 99% power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP



TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

TEST RESULTS TABLE

Test Mode	Test Channel	6dB bandwidth (MHz)	99% bandwidth (MHz)	Result
11B	LCH	10.0547	15.080	Pass
	MCH	10.0387	15.050	Pass
	HCH	9.5520	15.071	Pass
11G	LCH	16.3667	16.652	Pass
	MCH	16.3547	16.640	Pass
	HCH	16.3800	16.646	Pass
11N HT20	LCH	17.6093	17.857	Pass
	MCH	17.6173	17.858	Pass
	HCH	17.5973	17.851	Pass
11N HT40	LCH	36.0560	36.293	Pass
	MCH	35.0880	36.257	Pass
	HCH	35.6613	36.306	Pass
11AX HE20	LCH	18.9453	19.067	Pass
	MCH	18.9480	19.069	Pass
	HCH	19.0760	19.056	Pass
11AX HE40	LCH	37.3947	37.790	Pass
	MCH	37.6773	37.761	Pass
	HCH	37.7200	37.794	Pass

TEST GRAPHS

6dB Bandwdith

Test Mode	Test Channel	Verdict
11B	LCH	PASS

Test Mode	Test Channel	Verdict
11B	MCH	PASS

Test Mode	Test Channel	Verdict
11B	HCH	PASS

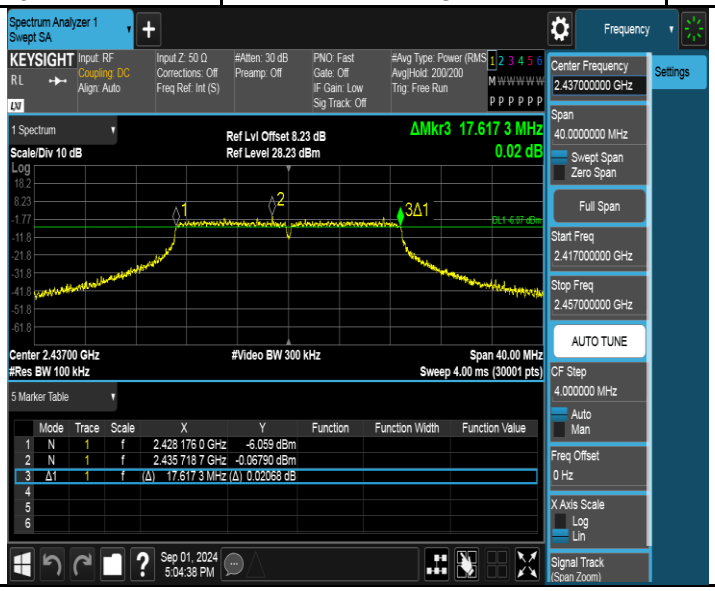
Test Mode	Test Channel	Verdict
11G	LCH	PASS

Test Mode	Test Channel	Verdict
11G	MCH	PASS

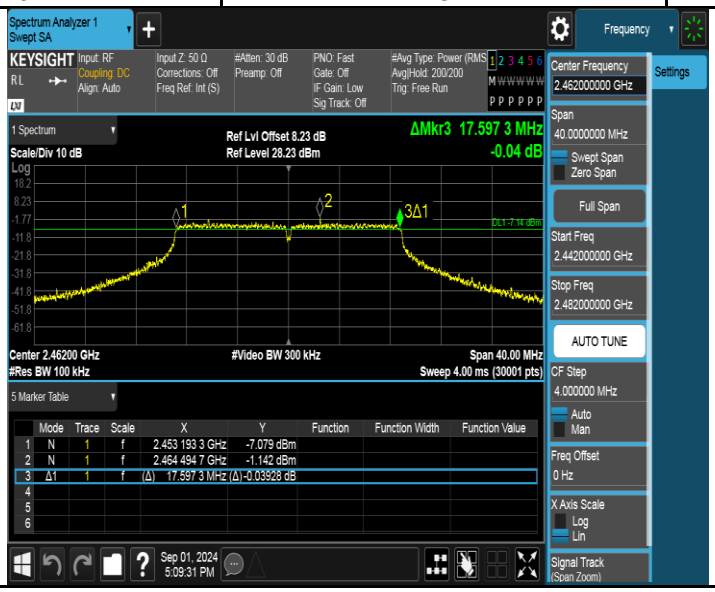
Test Mode	Test Channel	Verdict
11G	HCH	PASS

Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS

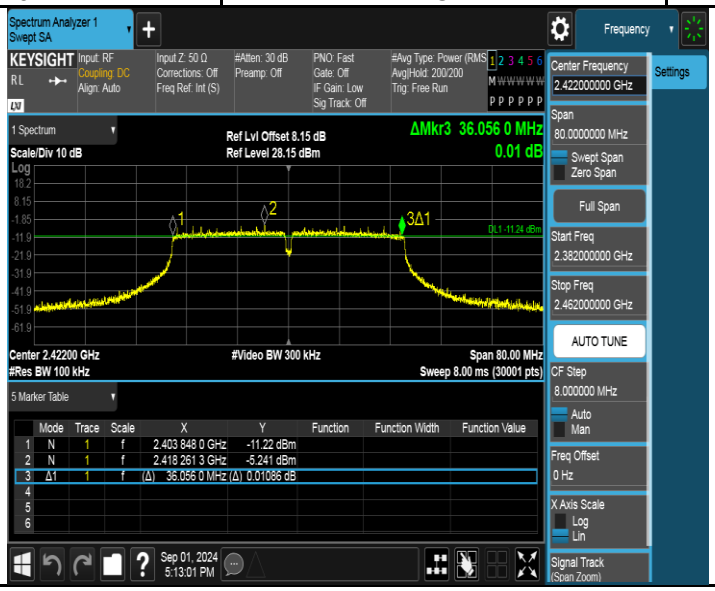
Test Mode	Test Channel	Verdict
11N HT20	MCH	PASS



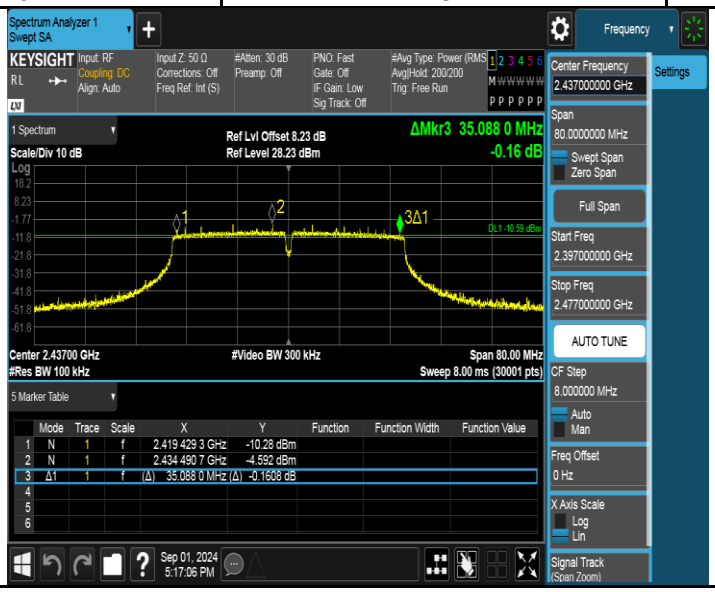
Test Mode	Test Channel	Verdict
11N HT20	HCH	PASS



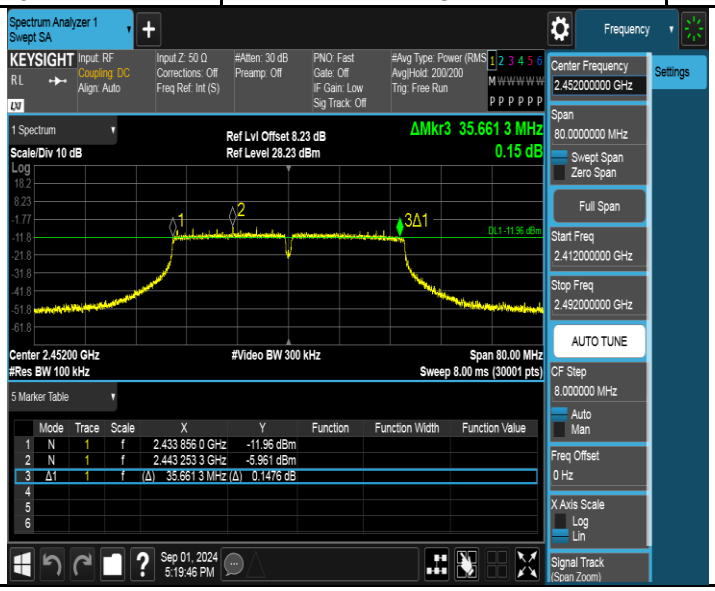
Test Mode	Test Channel	Verdict
11N HT40	LCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	MCH	PASS

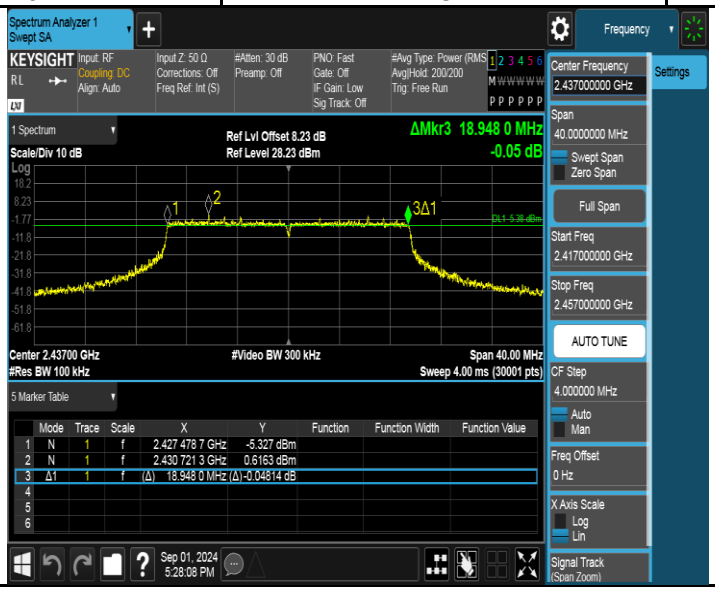


Test Mode	Test Channel	Verdict
11N HT40	HCH	PASS

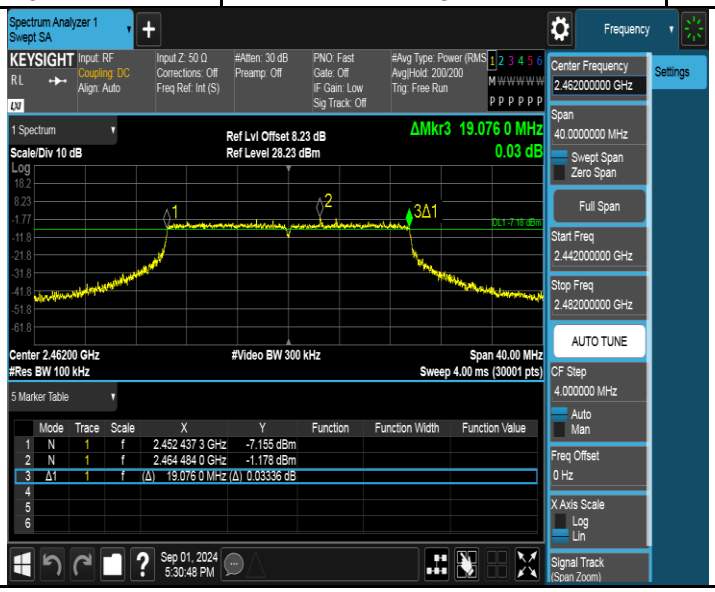


Test Mode	Test Channel	Verdict
11AX HE20	LCH	PASS

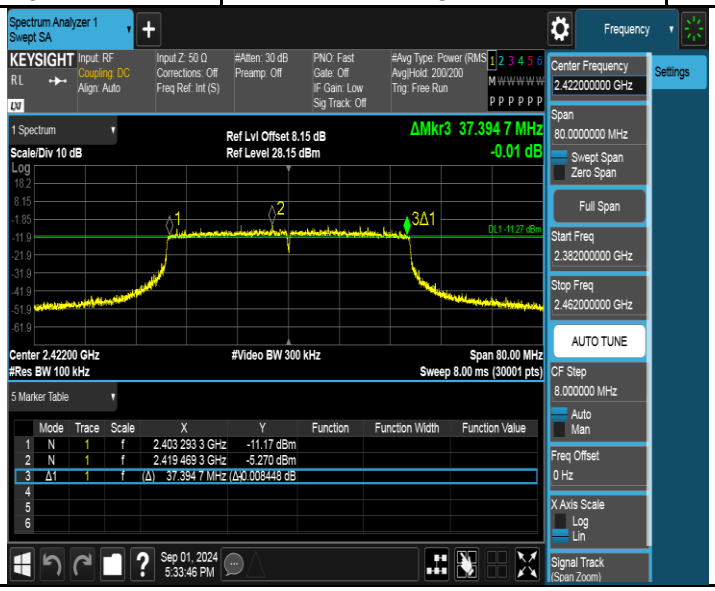
Test Mode	Test Channel	Verdict
11AX HE20	MCH	PASS



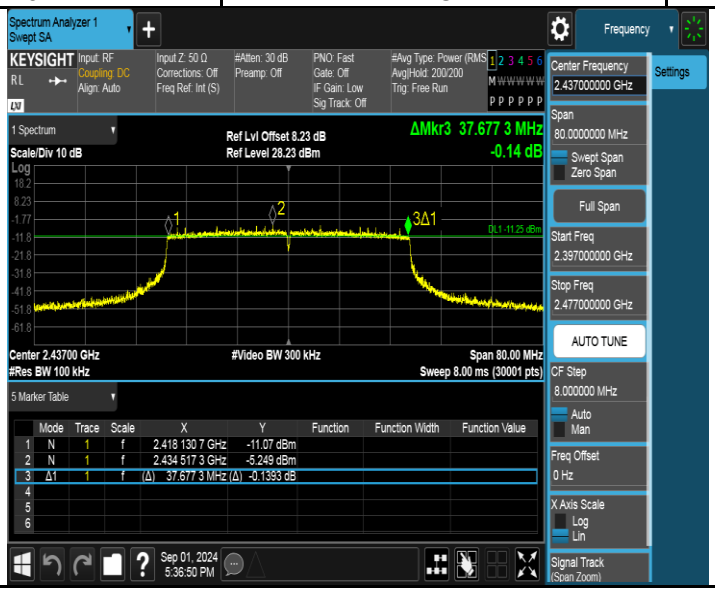
Test Mode	Test Channel	Verdict
11AX HE20	HCH	PASS



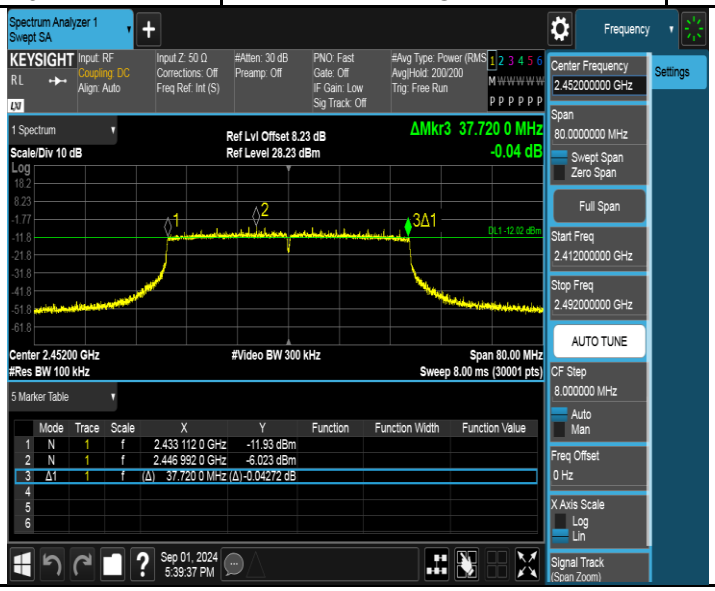
Test Mode	Test Channel	Verdict
11AX HE40	LCH	PASS



Test Mode	Test Channel	Verdict
11AX HE40	MCH	PASS

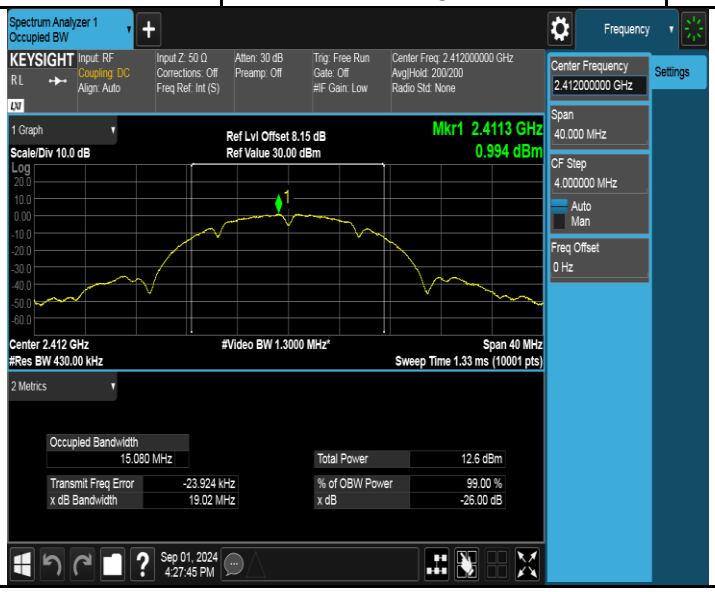


Test Mode	Test Channel	Verdict
11AX HE40	HCH	PASS



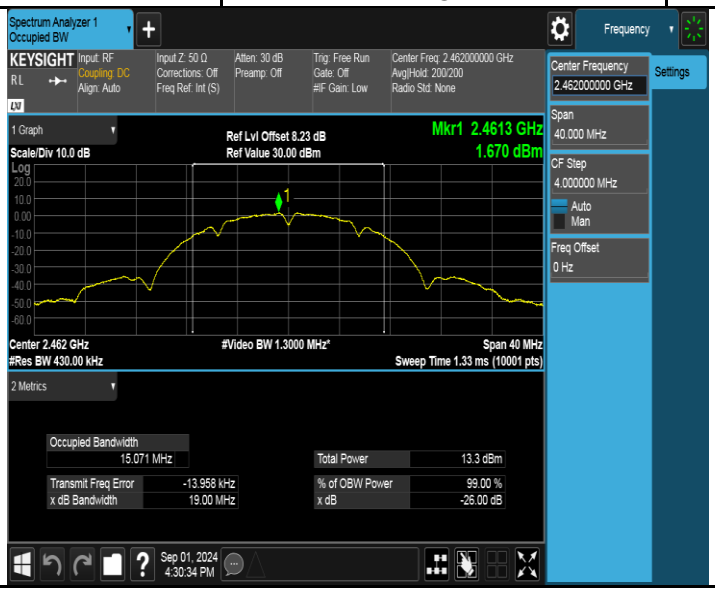
99% Bandwidth

Test Mode	Test Channel	Verdict
11B	LCH	PASS

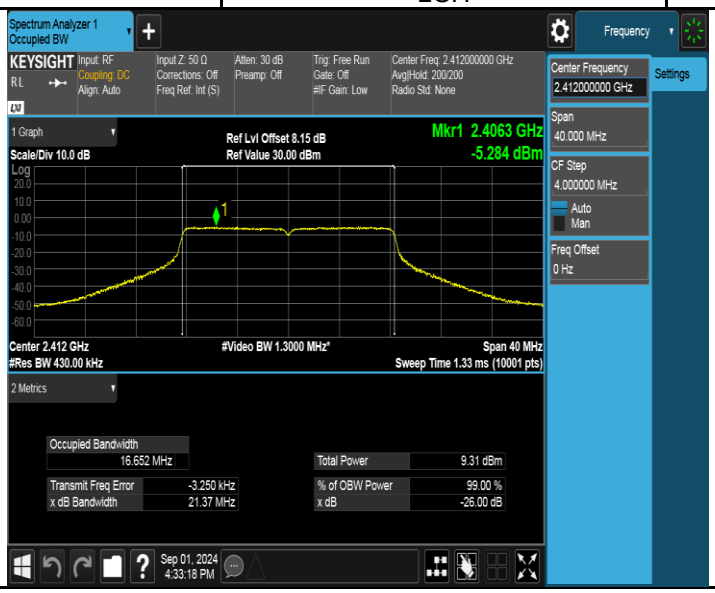


Test Mode	Test Channel	Verdict
11B	MCH	PASS

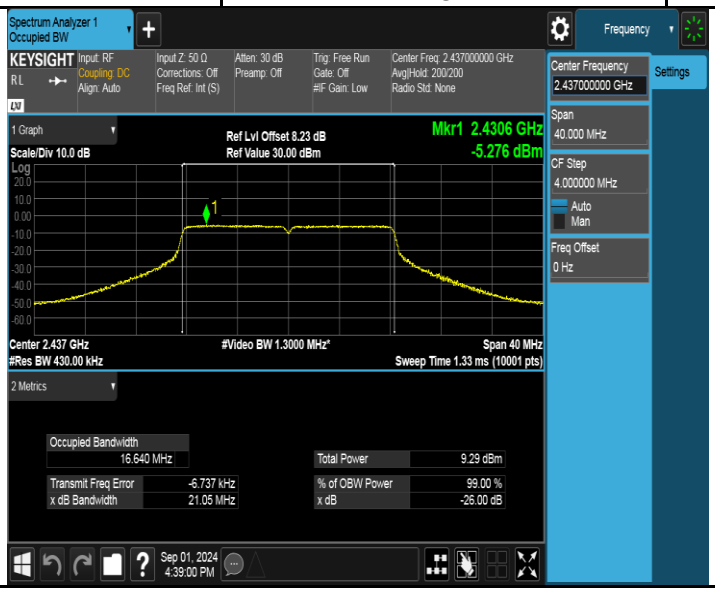
Test Mode	Test Channel	Verdict
11B	HCH	PASS



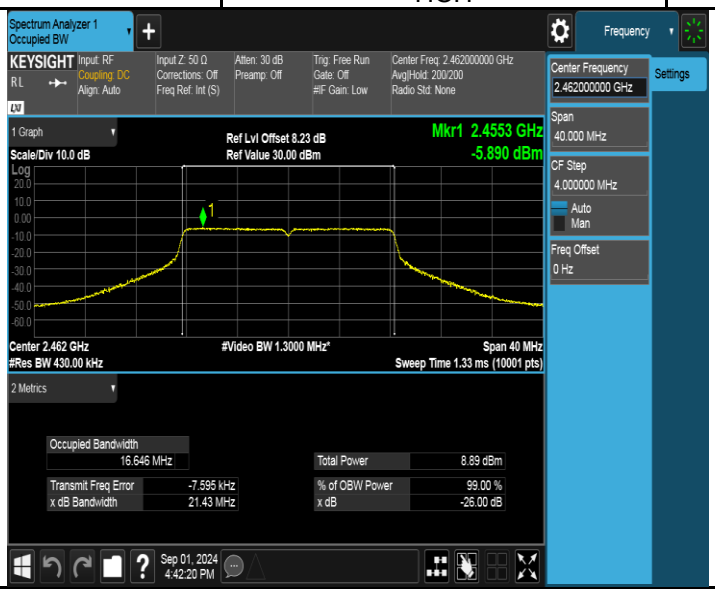
Test Mode	Test Channel	Verdict
11G	LCH	PASS



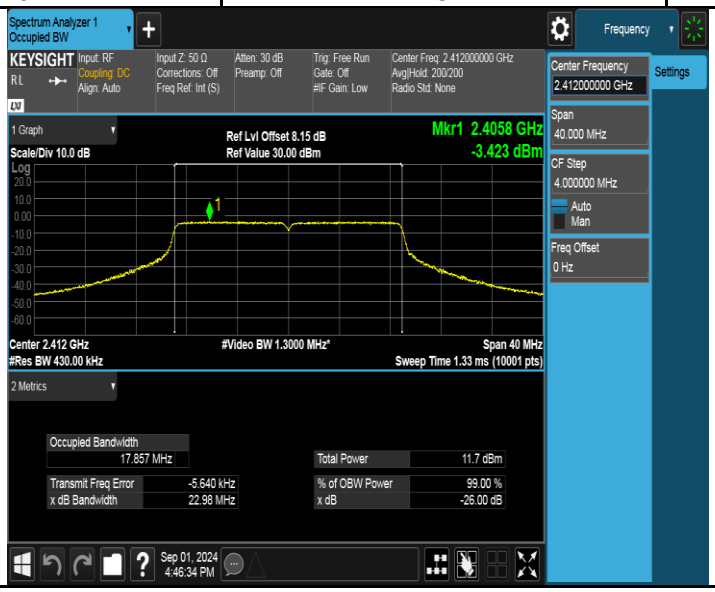
Test Mode	Test Channel	Verdict
11G	MCH	PASS



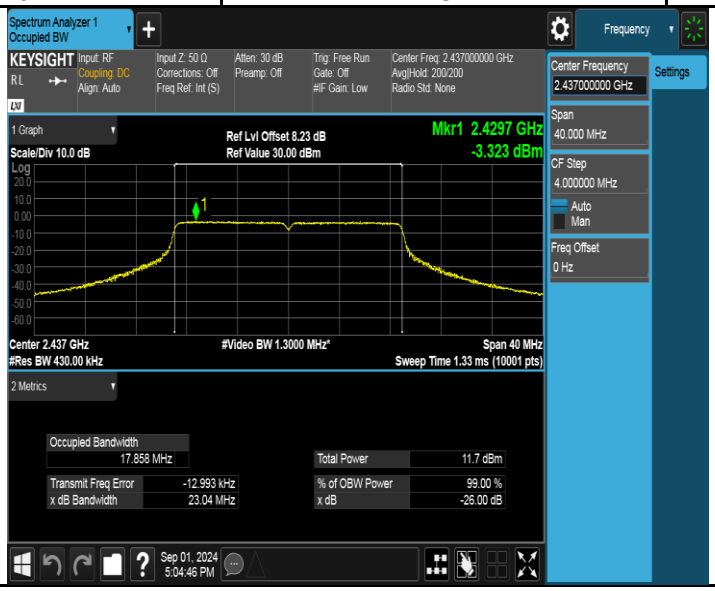
Test Mode	Test Channel	Verdict
11G	HCH	PASS



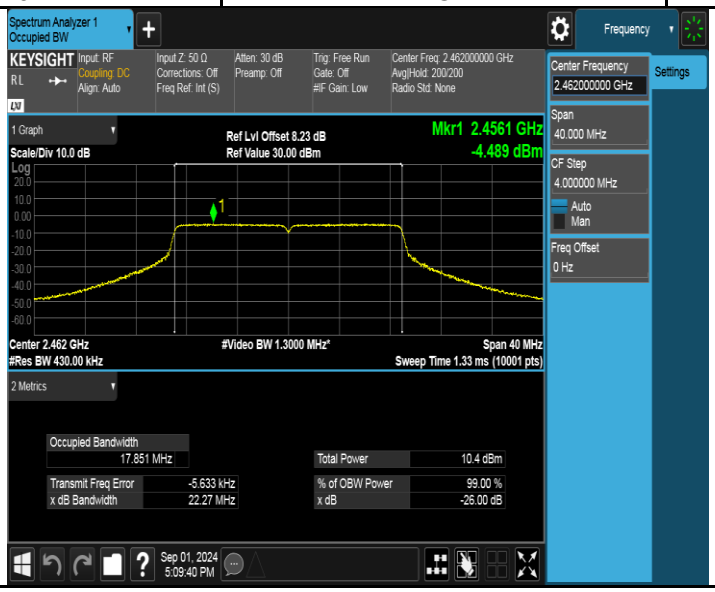
Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS



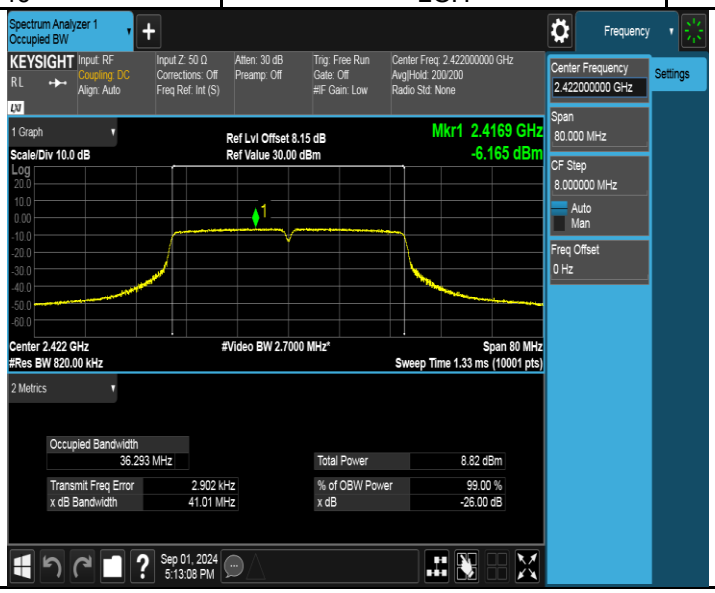
Test Mode	Test Channel	Verdict
11N HT20	MCH	PASS



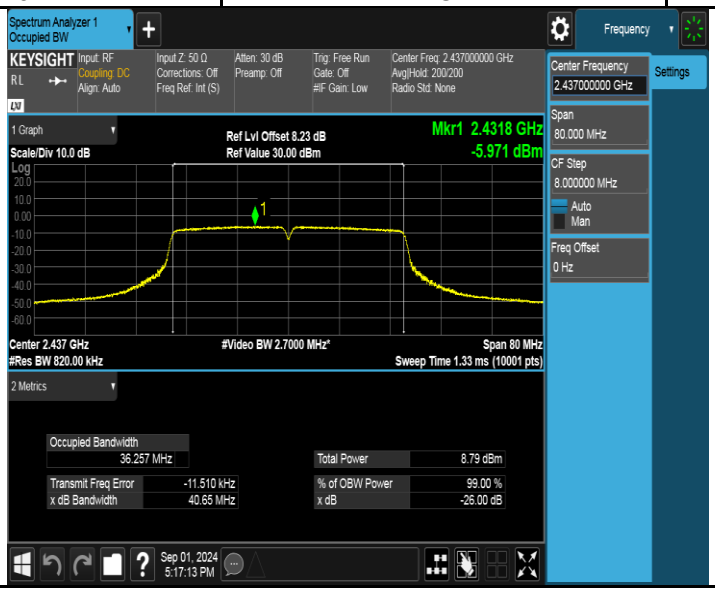
Test Mode	Test Channel	Verdict
11N HT20	HCH	PASS



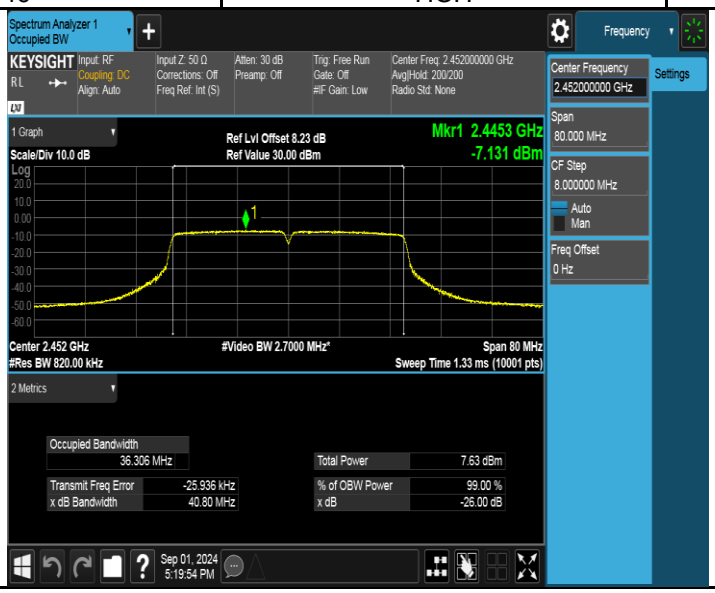
Test Mode	Test Channel	Verdict
11N HT40	LCH	PASS



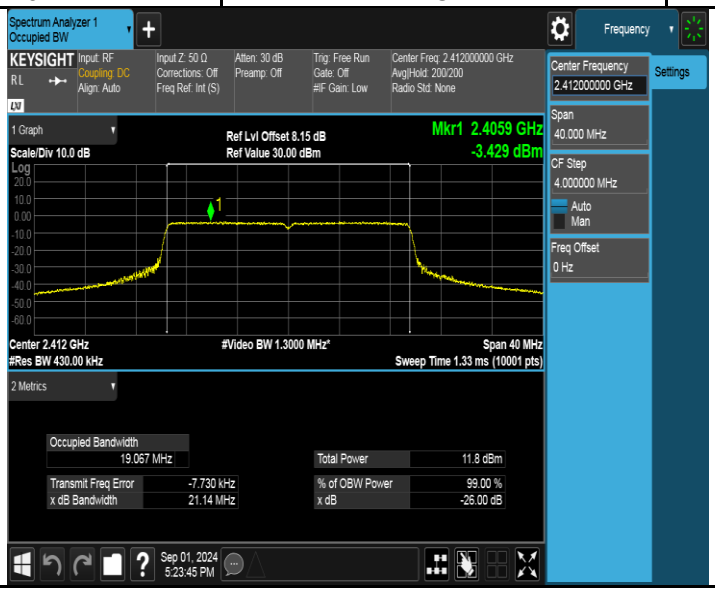
Test Mode	Test Channel	Verdict
11N HT40	MCH	PASS



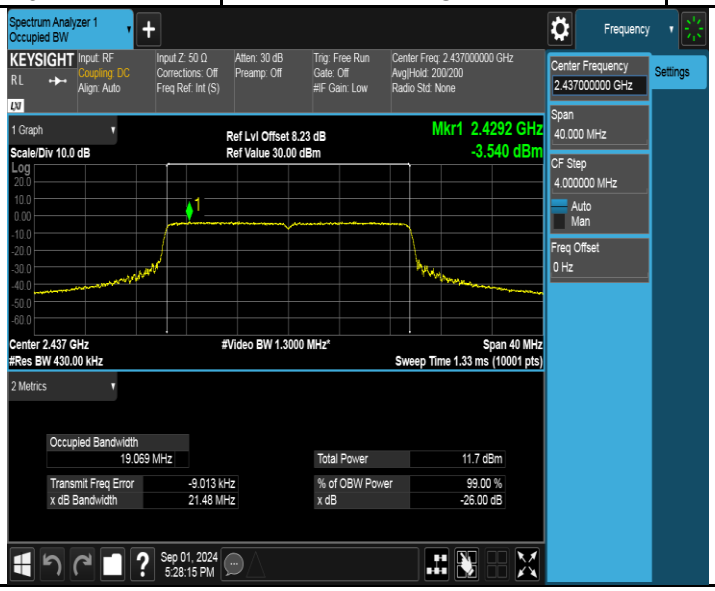
Test Mode	Test Channel	Verdict
11N HT40	HCH	PASS



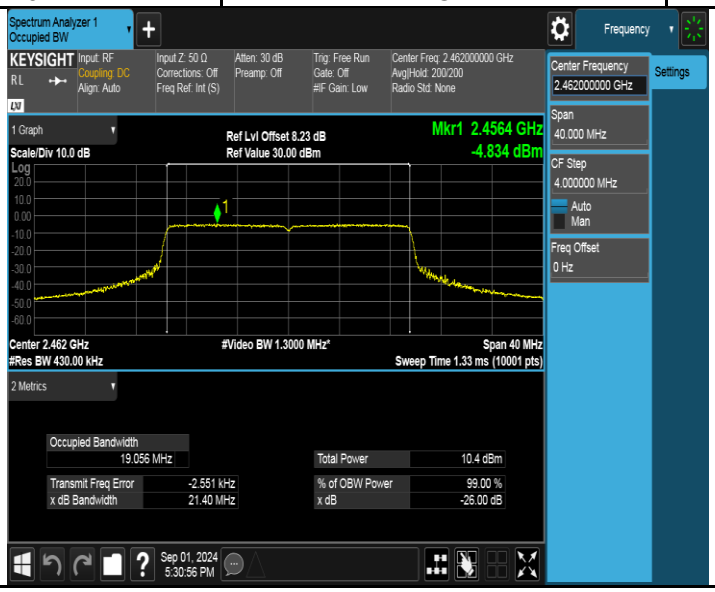
Test Mode	Test Channel	Verdict
11AX HE20	LCH	PASS



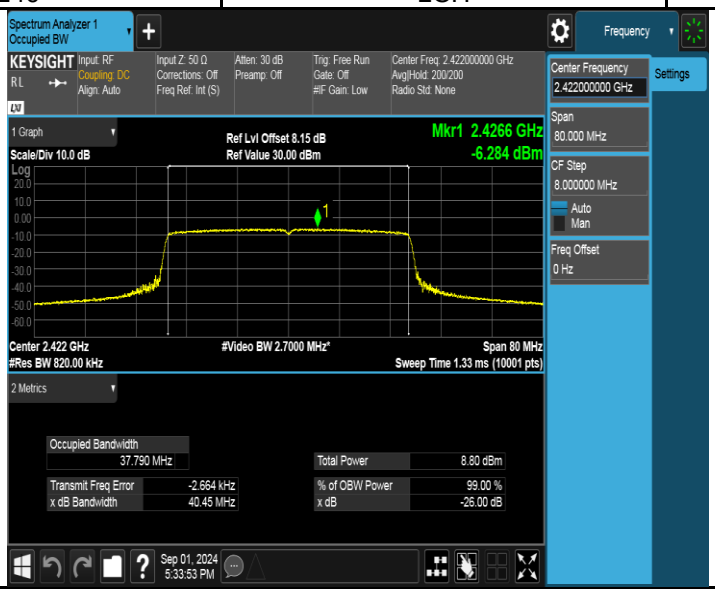
Test Mode	Test Channel	Verdict
11AX HE20	MCH	PASS



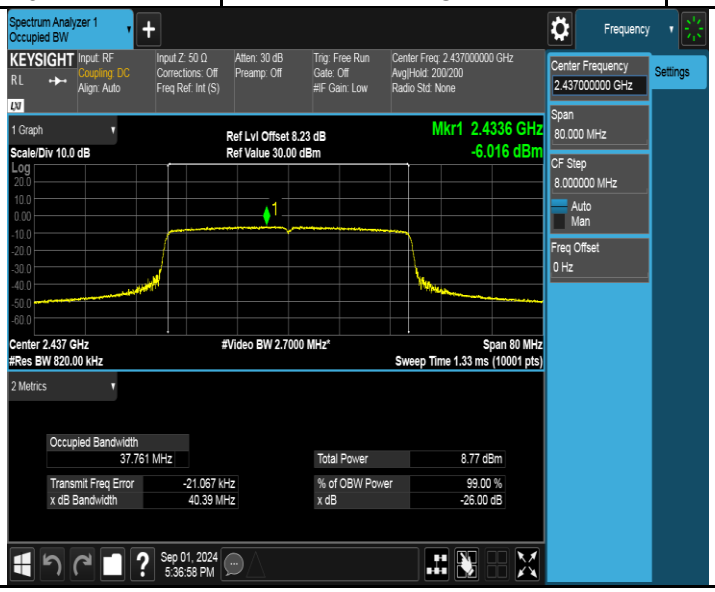
Test Mode	Test Channel	Verdict
11AX HE20	HCH	PASS



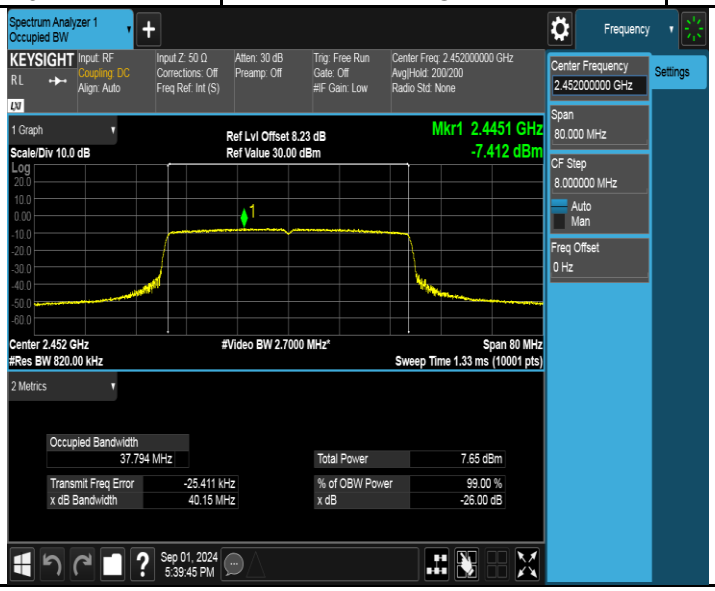
Test Mode	Test Channel	Verdict
11AX HE40	LCH	PASS



Test Mode	Test Channel	Verdict
11AX HE40	MCH	PASS



Test Mode	Test Channel	Verdict
11AX HE40	HCH	PASS



7.3. CONDUCTED OUTPUT POWER

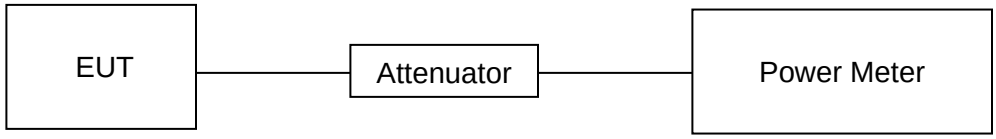
LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(b)(3) ISED RSS-247 5.4 (d) RSS-Gen Clause 6.12	Output Power	1 watt or 30dBm	2400-2483.5

TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.
Measure the power of each channel.
AVG Detector used for AVG result.

TEST SETUP



TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

TEST RESULTS TABLE

Test Mode	Test Channel	Measurement Output Power (AV)	10log(1/x) Factor	Maximum Conducted Output Power (AV)	LIMIT
		dBm	dBm	dBm	dBm
11B	LCH	12.74	0.09	12.83	30
	MCH	12.92	0.09	13.01	30
	HCH	13.33	0.09	13.42	30
11G	LCH	9.83	0.51	10.34	30
	MCH	9.80	0.51	10.31	30
	HCH	9.34	0.51	9.85	30
11N HT20	LCH	11.83	0.14	11.97	30
	MCH	11.87	0.14	12.01	30
	HCH	10.59	0.14	10.73	30
11N HT40	LCH	9.13	0.29	9.42	30
	MCH	9.07	0.29	9.36	30
	HCH	7.98	0.29	8.27	30
11AX HE20	LCH	11.98	0.16	12.14	30
	MCH	11.86	0.16	12.02	30
	HCH	10.61	0.16	10.77	30
11AX HE40	LCH	9.13	0.31	9.44	30
	MCH	9.05	0.31	9.36	30
	HCH	7.97	0.31	8.28	30

7.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e) ISED RSS-247 5.2 (b)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5

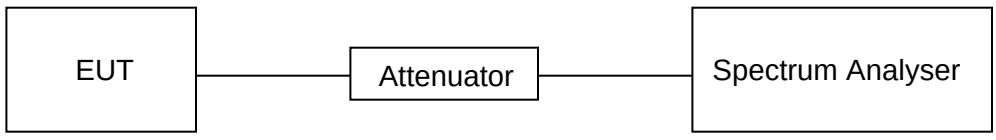
TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	3 kHz ≤ RBW ≤100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP



TEST ENVIRONMENT

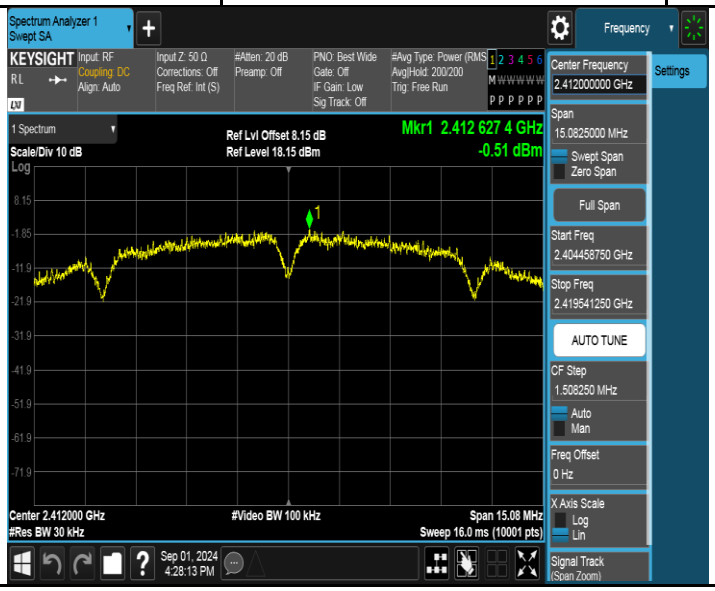
Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

TEST RESULTS TABLE

Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
11B	LCH	-0.51	Pass
	MCH	-0.58	Pass
	HCH	0.12	Pass
11G	LCH	-6.16	Pass
	MCH	-6.53	Pass
	HCH	-5.82	Pass
11N HT20	LCH	-3.96	Pass
	MCH	-3.93	Pass
	HCH	-5.22	Pass
11N HT40	LCH	-9.20	Pass
	MCH	-9.23	Pass
	HCH	-10.37	Pass
11AX HE20	LCH	-4.23	Pass
	MCH	-4.17	Pass
	HCH	-5.50	Pass
11AX HE40	LCH	-9.91	Pass
	MCH	-8.86	Pass
	HCH	-10.11	Pass

TEST GRAPHS

Test Mode	Test Channel	Verdict
11B	LCH	PASS



Test Mode	Test Channel	Verdict
11B	MCH	PASS