



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

IP CAMERA

MODEL NUMBER: DH-IPC-HFW1430DS-SAW

ADDITIONAL MODEL NUMBER:

**DH-IPC-HFW1230DS-SAW, DH-IPC-HFW1430DS-SAW, IPC-HFW1230DS-SAW,
IPC-HFW1430DS-SAW, N21BD42-W, N21BD43-W, N41BD42-W, N41BD43-W,
DH-IPC-HFW1230DS-SAW-0280B, IPC-HFW1230DS-SAW-0280B,
DH-IPC-HFW1230DS-SAW-0360B, IPC-HFW1230DS-SAW-0360B,
DH-IPC-HFW1430DS-SAW-0280B, IPC-HFW1430DS-SAW-0280B,
DH-IPC-HFW1430DS-SAW-0360B, IPC-HFW1430DS-SAW-0360B**

PROJECT NUMBER: 4790320707

REPORT NUMBER: 4790320707-1

FCC ID: SVNDH-IPC-HFW1X3

ISSUE DATE: Mar. 18, 2022

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	03/18/2022	Initial Issue	-



TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	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	12
5.9. DESCRIPTION OF TEST SETUP.....	12
5.10. MEASURING INSTRUMENT AND SOFTWARE USED	14
6. MEASUREMENT METHODS	14
7. ANTENNA PORT TEST RESULTS	16
7.1. ON TIME AND DUTY CYCLE.....	16
7.2. 6 dB BANDWIDTH.....	19
7.3. CONDUCTED OUTPUT POWER	27
7.4. POWER SPECTRAL DENSITY	29
7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS.....	37
7.6. RADIATED TEST RESULTS	63
7.6.1. LIMITS AND PROCEDURE	63
7.6.2. TEST ENVIRONMENT	69
7.6.3. RESTRICTED BANDEDGE	69
7.6.4. SPURIOUS EMISSIONS	86
8. AC POWER LINE CONDUCTED EMISSIONS	142
9. ANTENNA REQUIREMENTS	145



1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Zhejiang Dahua Vision Technology Co., Ltd.
Address: No.1199, Bin'an road, Binjiang District, Hangzhou,
P.R. China.

Manufacturer Information

Company Name: Zhejiang Dahua Vision Technology Co., Ltd.
Address: No.1199, Bin'an road, Binjiang District, Hangzhou,
P.R. China.

EUT Description

Product Name: IP CAMERA
Model Name: DH-IPC-HFW1430DS-SAW
Additional No.: DH-IPC-HFW1230DS-SAW, DH-IPC-HFW1430DS-SAW,
IPC-HFW1230DS-SAW, IPC-HFW1430DS-SAW,
N21BD42-W, N21BD43-W, N41BD42-W, N41BD43-W,
DH-IPC-HFW1230DS-SAW-0280B, IPC-HFW1230DS-SAW-0280B,
DH-IPC-HFW1230DS-SAW-0360B, IPC-HFW1230DS-SAW-0360B,
DH-IPC-HFW1430DS-SAW-0280B, IPC-HFW1430DS-SAW-0280B,
DH-IPC-HFW1430DS-SAW-0360B, IPC-HFW1430DS-SAW-0360B
Model Difference: These models are only different from silkscreen and logo.
Sample Number: 4725319
Data of Receipt Sample: Mar. 03, 2022
Test Date: Mar. 03, 2022 ~ Mar. 17, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	PASS



Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	6db DTS Bandwidth	FCC 15.247 (a) (2)	PASS
2	Conducted Power	FCC 15.247 (b) (3)	PASS
3	Power Spectral Density	FCC 15.247 (e)	PASS
4	Conducted Band edge And Spurious emission	FCC 15.247 (d)	PASS
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205	PASS
6	Conducted Emission Test for AC Power Port	FCC 15.207	PASS
7	Antenna Requirement	FCC 15.203	PASS
Remark: 1) The measurement result for the sample received is <Pass> according to < ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15C> when <Accuracy Method> decision rule is applied.			

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2. TEST METHODOLOGY

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

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.
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Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, People's Republic of 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	3.1dB
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 26.5GHz) (include Fundamental emission)	3.9dB (1GHz-18GHz)
	4.2dB (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:	IP CAMERA
Model No.:	DH-IPC-HFW1430DS-SAW
Operating Frequency:	IEEE 802.11B/G/N(HT20): 2412MHz to 2462MHz IEEE 802.11N(HT40): 2422MHz to 2452MHz
Type of Modulation:	IEEE for 802.11B: DSSS (CCK, DQPSK, DBPSK) IEEE for 802.11G: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11N(HT20 and HT40): OFDM (64QAM, 16QAM, QPSK, BPSK)
Channels Step:	Channels with 5MHz step
Sample Type:	Fixed production
Test power grade:	/
Test software of EUT:	Secure CRT (manufacturer declare)
Antenna Type:	Rod Antenna
Antenna Gain:	4.01 dBi
Test Voltage	AC 120V



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]	13.61
1	IEEE 802.11G	1-11[11]	10.05
1	IEEE 802.11N HT20	1-11[11]	9.94
1	IEEE 802.11N HT40	3-9[7]	7.45

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 (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

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	N/A	N/A	N/A	/		
802.11G	1	N/A	N/A	N/A			
802.11N HT20	1	N/A	N/A	N/A			
802.11N HT40	1	/			46	46	46



5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	Rod Antenna	4.01

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.

5.7. THE WORSE CASE CONFIGURATIONS

For WIFI module, the worst-case data rates as provided by the client were:

802.11B mode: 1 Mbps
802.11G mode: 6 Mbps
802.11N HT20 mode: MCS0
802.11N HT40 mode: MCS0



5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E550c	/
2	Power Adapter	MASS POWER	NBS05C12005 0VU	INPUT: 100-240V~50/60Hz, 0.15A 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

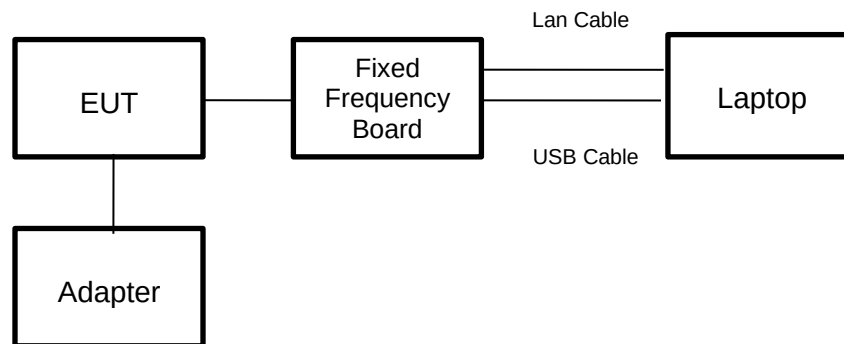
Item	Accessory	Brand Name	Model Name	Description
1	Micro SD Card	Western Digital	WD Purple QD101	32GB



TEST SETUP

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

SETUP DIAGRAM FOR TESTS





5.9. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions (Instrument)								
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
☒	EMI Test Receiver	R&S	ESR3	126700	2020-12-05	2021-12-04	2022-12-03	
☒	Two-Line V-Network	R&S	ENV216	126701	2020-12-05	2021-12-04	2022-12-03	
☒	Artificial Mains Networks	R&S	ENY81	126711	2020-10-13	2021-10-12	2022-10-11	
Software								
Used	Description		Manufacturer		Name	Version		
☒	Test Software for Conducted disturbance		R&S		EMC32	Ver. 9.25		
Radiated Emissions (Instrument)								
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
☒	Spectrum Analyzer	Keysight	N9010B	155727	2020-05-10	2021-05-09	2022-05-08	
☒	EMI test receiver	R&S	ESR26	126703	2020-12-05	2021-12-04	2022-12-03	
☒	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB 1513	155456	2018-06-15	2021-06-03	2024-06-02	
☒	Receiver Antenna (30MHz-1GHz)	SunAR RF Motion	JB1	177821	2019-01-19	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	2019-01-05	2022-01-04	2025-01-03	
☒	Pre-amplification (To 18GHz)	Compliance Direction System Inc.	PAP-1G18-50	178825	2021-03-26	2022-03-01	2023-02-28	
☒	Pre-amplification (To 26.5GHz)	R&S	SCU-26D	135391	2020-12-05	2021-12-04	2022-12-03	
☒	Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	1	2020-05-10	2021-05-09	2022-05-08	
☒	Highpass Filter	Wainwright	WHKX10-2700-3000-18000-40SS	2	2020-05-10	2021-05-09	2022-05-08	
Software								
Used	Description		Manufacturer		Name		Version	
☒	Test Software for Radiated disturbance		Tonscend		TS+		Ver. 2.5	
Other instruments								
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
☒	Spectrum Analyzer	Keysight	N9010B	155368	2020-05-10	2021-05-09	2022-05-08	
☒	Power Meter	Keysight	U2021XA	155370	2020-05-10	2021-05-09	2022-05-08	



6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.1.3/8.3.2.3
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4
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

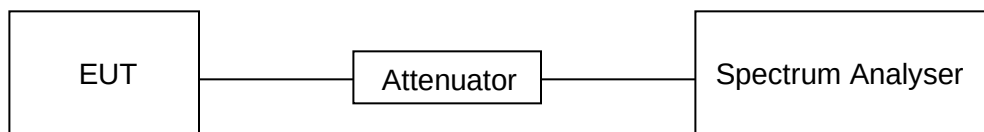
LIMITS

None; for reporting purposes only

PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



TEST ENVIRONMENT

Temperature	21.4°C	Relative Humidity	55.7%
Atmosphere Pressure	101.1kPa	Test Date	2022-03-10

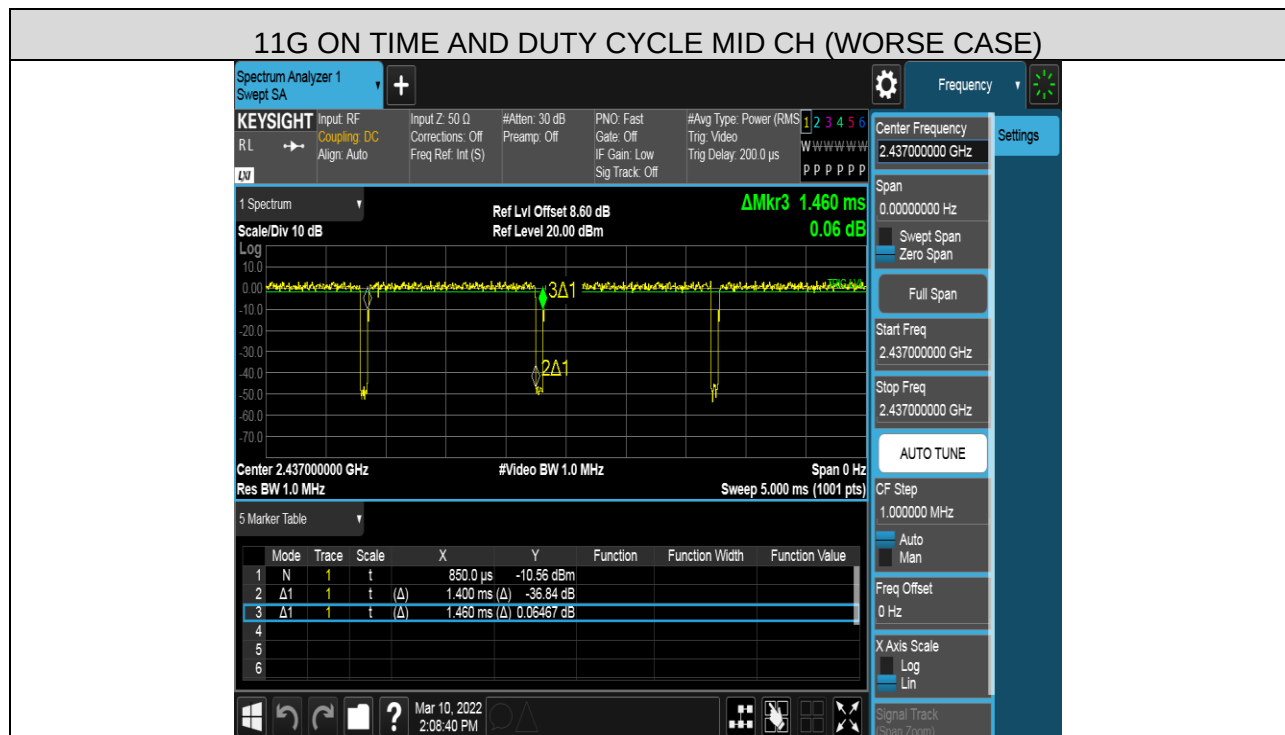
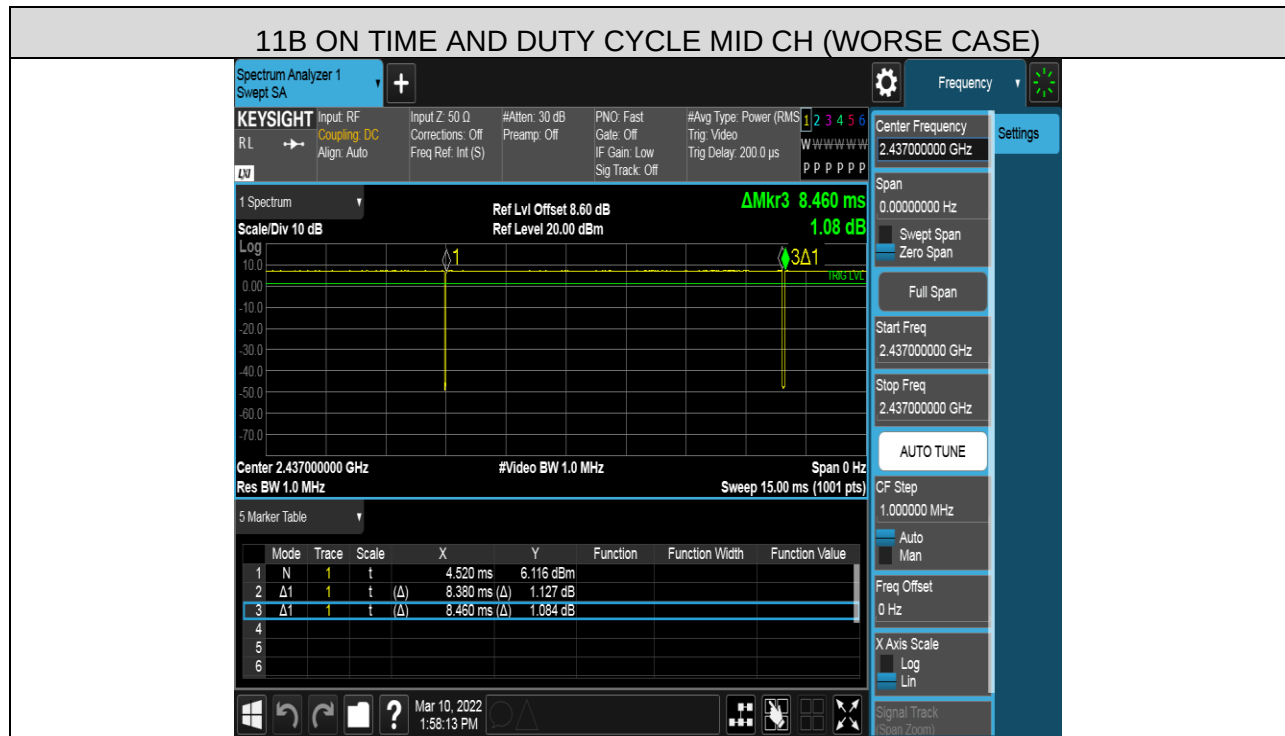
TEST RESULTS TABLE

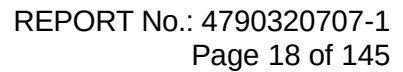
Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (kHz)	Final VBW (kHz)
11B	8.38	8.46	0.9905	99.05%	0.04	0.12	0.01
11G	1.4	1.46	0.9589	95.89%	0.18	0.71	1
802.11N HT20	5.08	5.15	0.9864	98.64%	0.06	0.20	0.01
802.11N HT40	2.47	2.53	0.9763	97.63%	0.10	0.40	1

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) The duty cycle is above 98%, so the Final VBW is 10Hz.



TEST GRAPHS





11N HT20 ON TIME AND DUTY CYCLE MID CH (WORSE CASE)

Keysight Spectrum Analyzer 1
Swept SA

Input: RF
RL: → **Coupling:** DC
Align: Auto

Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)

#Atten: 30 dB
Preamp: Off

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

#Avg Type: Power (RMS) 1 2 3 4 5 6
Trig Video: W W W W W W W W
Trig Delay: 200.0 μs P P P P P P

Center Frequency: 2.437000000 GHz
Span: 0.00000000 Hz
Sweep Span: [X]
Zero Span: [X]
Full Span: [X]

Start Freq: 2.437000000 GHz
Stop Freq: 2.437000000 GHz
AUTO TUNE

CF Step: 1.000000 MHz
Auto: [X]
Man: [X]

Freq Offset: 0 Hz

X Axis Scale: [X] Log [] Lin

Signal Track (Span Zoom): [X]

1 Spectrum
Scale/Div: 10 dB
Ref Lvl Offset: 8.60 dB
Ref Level: 20.00 dBm
ΔMrk3: 5.150 ms
-0.01 dB

Center: 2.437000000 GHz
#Video BW: 1.0 MHz
Span: 0 Hz
Res BW: 1.0 MHz
Sweep: 10.00 ms (1001 pts)

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	t	4.260 ms	-10.56 dBm			
2	Δ1	1	t (Δ)	5.080 ms (Δ)	11.69 dB			
3	Δ1	1	t (Δ)	5.150 ms (Δ)	0.007349 dB			
4								
5								
6								

Windows taskbar: Mar 10, 2022 2:19:13 PM

11N HT40 ON TIME AND DUTY CYCLE MID CH (WORSE CASE)

Spectrum Analyzer 1
Swept SA

KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 30 dB PNO: Fast #Avg Type: Power (RMS) 1 2 3 4 5 6
RL → Coupling: DC Corrections: Off Preamp: Off Gate: Off Trng: Video Trng Delay: 200.0 μs WWWWWW
Align: Auto Freq Ref: Int (S) IF Gain: Low Sig Track: Off P P P P P P

1 Spectrum Ref Lvl Offset 8.60 dB ΔMrk3 2.530 ms
Scale/Div 10 dB Ref Level 20.00 dBm 6.91 dB

Log
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

Center 2.437000000 GHz #Video BW 1.0 MHz Span 0 Hz
Res BW 1.0 MHz Sweep 5.000 ms (1001 pts)

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	t	330.0 μs	-27.09 dBm			
2	Δ1	1	t (Δ)	2.470 ms (Δ)	-21.50 dB			
3	Δ1	1	t (Δ)	2.530 ms (Δ)	6.914 dB			
4								
5								
6								

Center Frequency 2.437000000 GHz Settings
Span 0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq 2.437000000 GHz
Stop Freq 2.437000000 GHz
AUTO TUNE
CF Step 1.000000 MHz
Auto
Man
Freq Offset 0 Hz
X Axis Scale Log
Lin
Signal Track (Span Zoom)

7.2. 6 dB BANDWIDTH

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(a)(2)	6dB Bandwidth	$\geq 500\text{KHz}$	2400-2483.5

TEST PROCEDURE

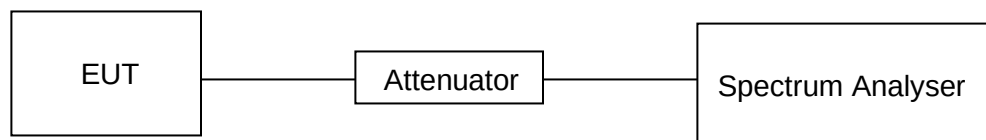
Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth.

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 :100K
VBW	For 6dB Bandwidth: $\geq 3 \times \text{RBW}$
Trace	Max hold
Sweep	Auto couple

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	21.4°C	Relative Humidity	55.7%
Atmosphere Pressure	101.1kPa	Test Date	2022-03-10

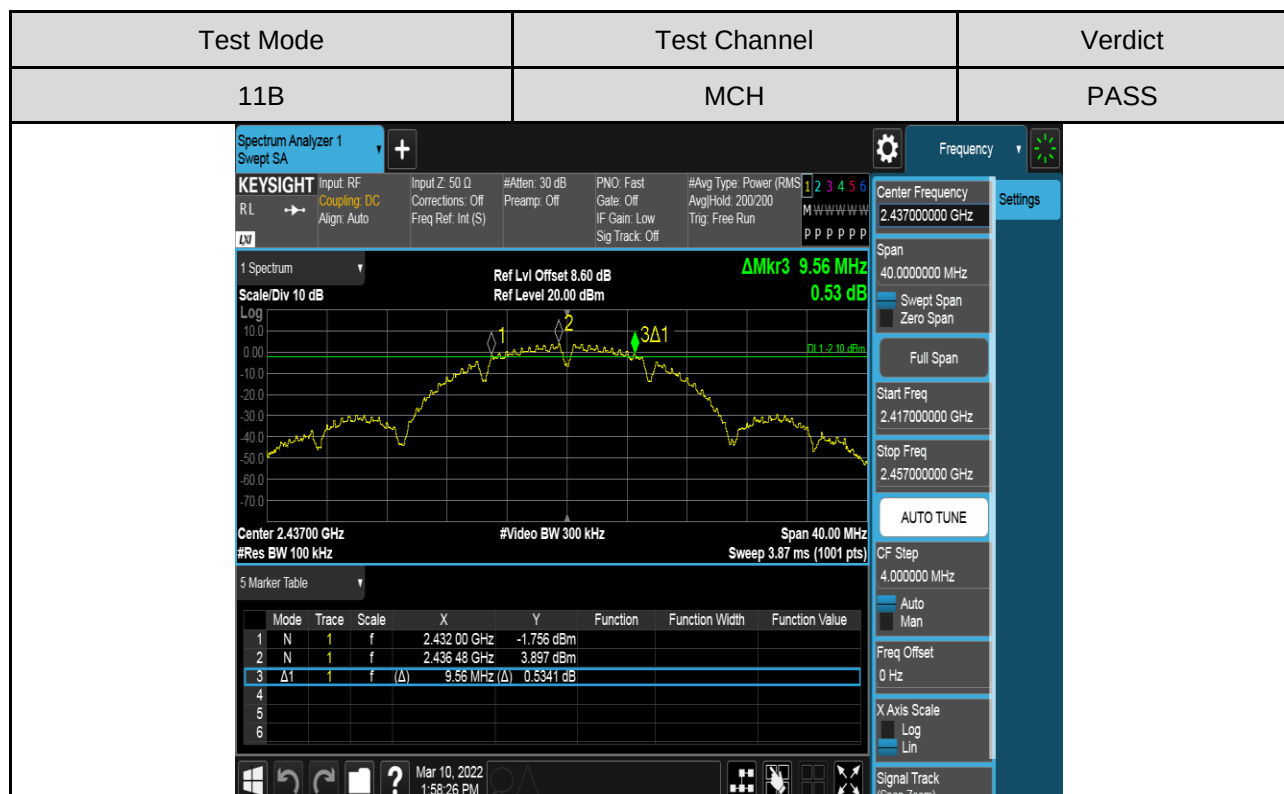
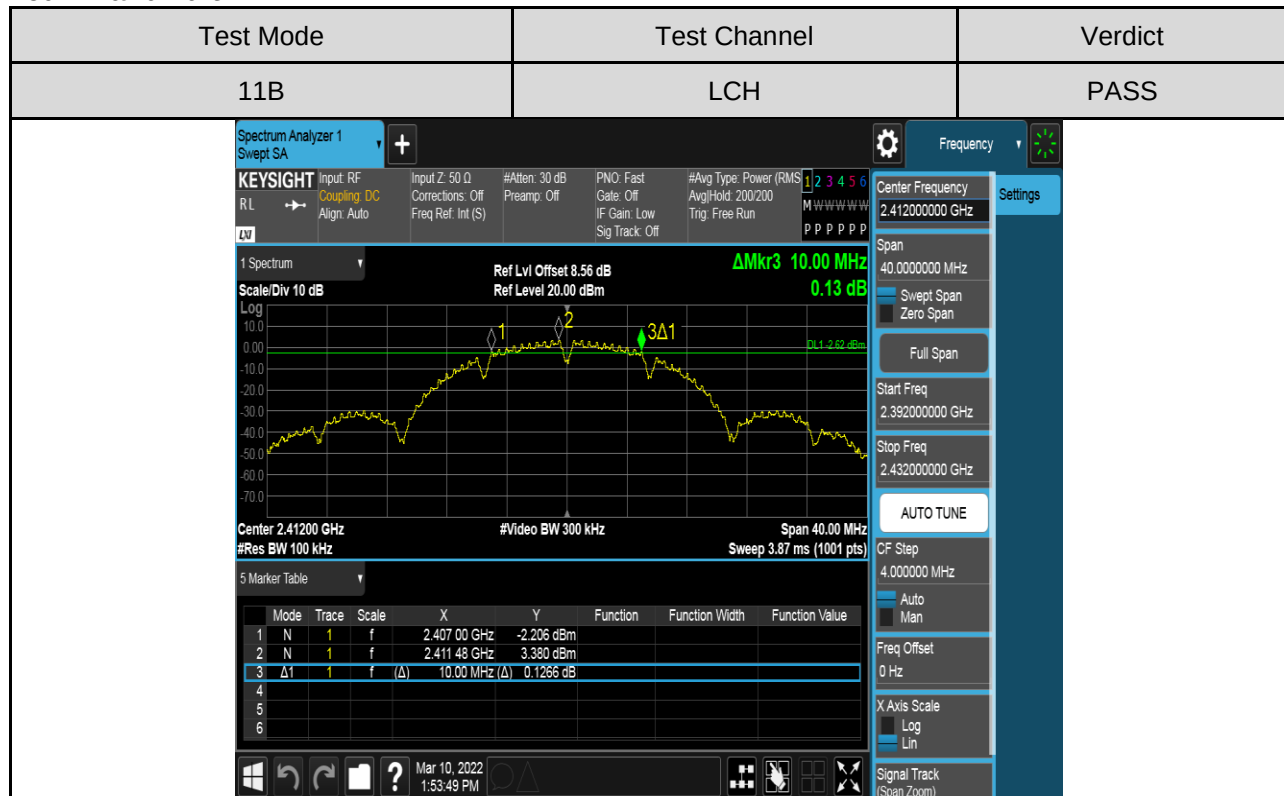
TEST RESULTS TABLE

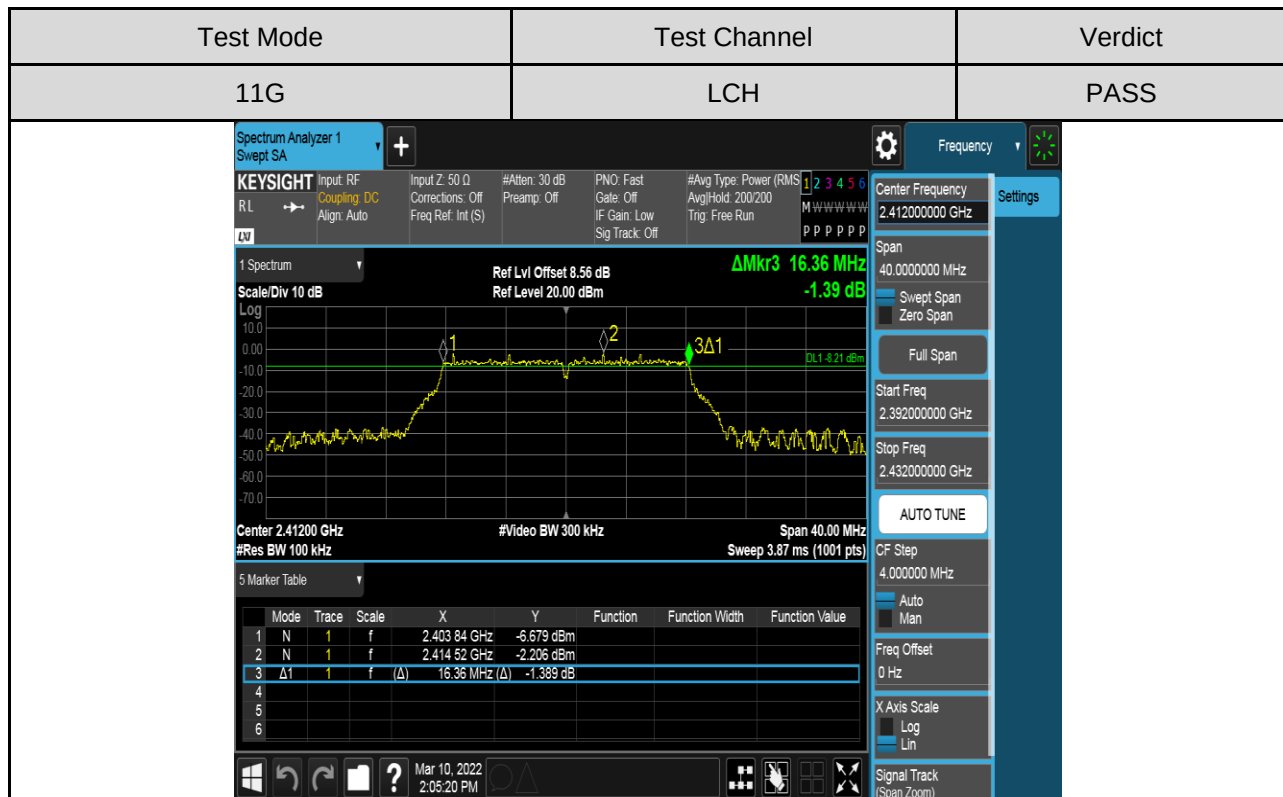
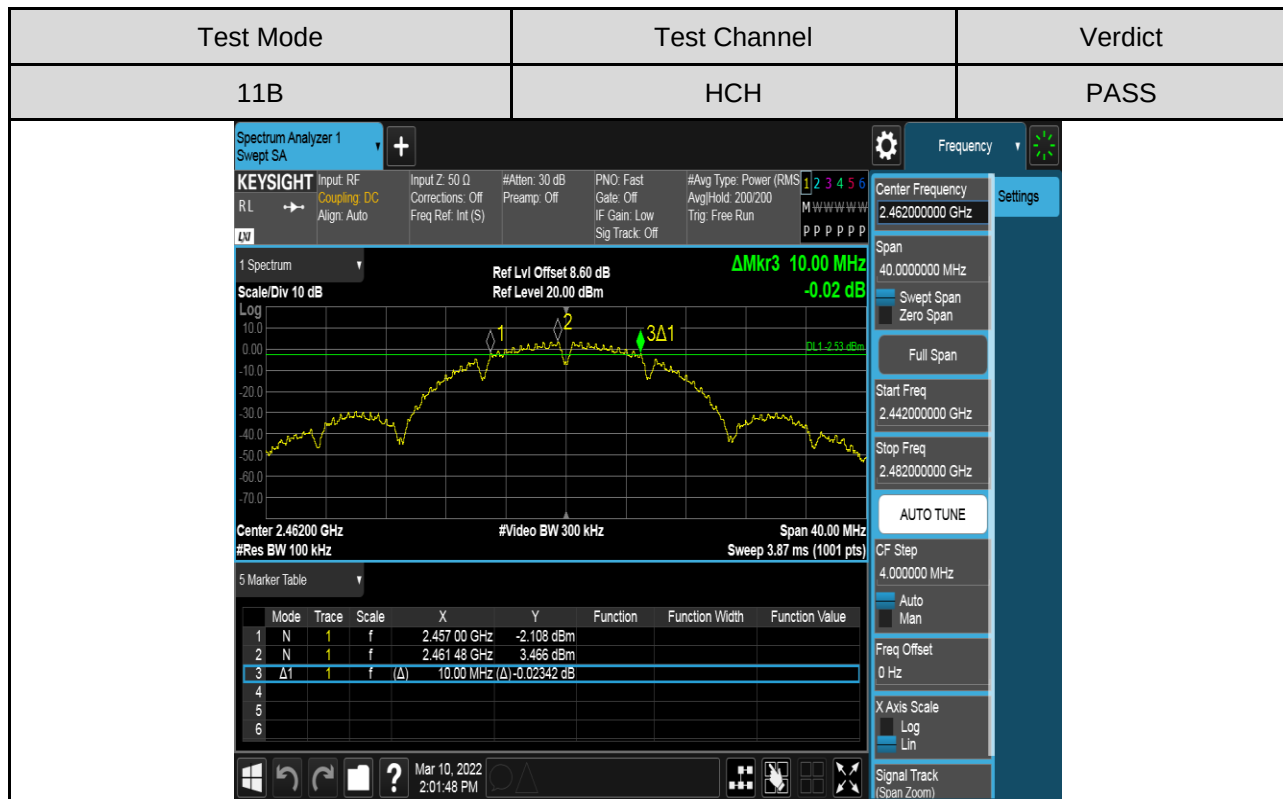
Test Mode	Test Channel	6dB bandwidth (MHz)	Result
11B	LCH	10.00	Pass
	MCH	9.56	Pass
	HCH	10.00	Pass
11G	LCH	16.36	Pass
	MCH	16.32	Pass
	HCH	16.32	Pass
11N HT20	LCH	17.60	Pass
	MCH	17.60	Pass
	HCH	17.60	Pass
11N HT40	LCH	36.00	Pass
	MCH	36.32	Pass
	HCH	36.32	Pass

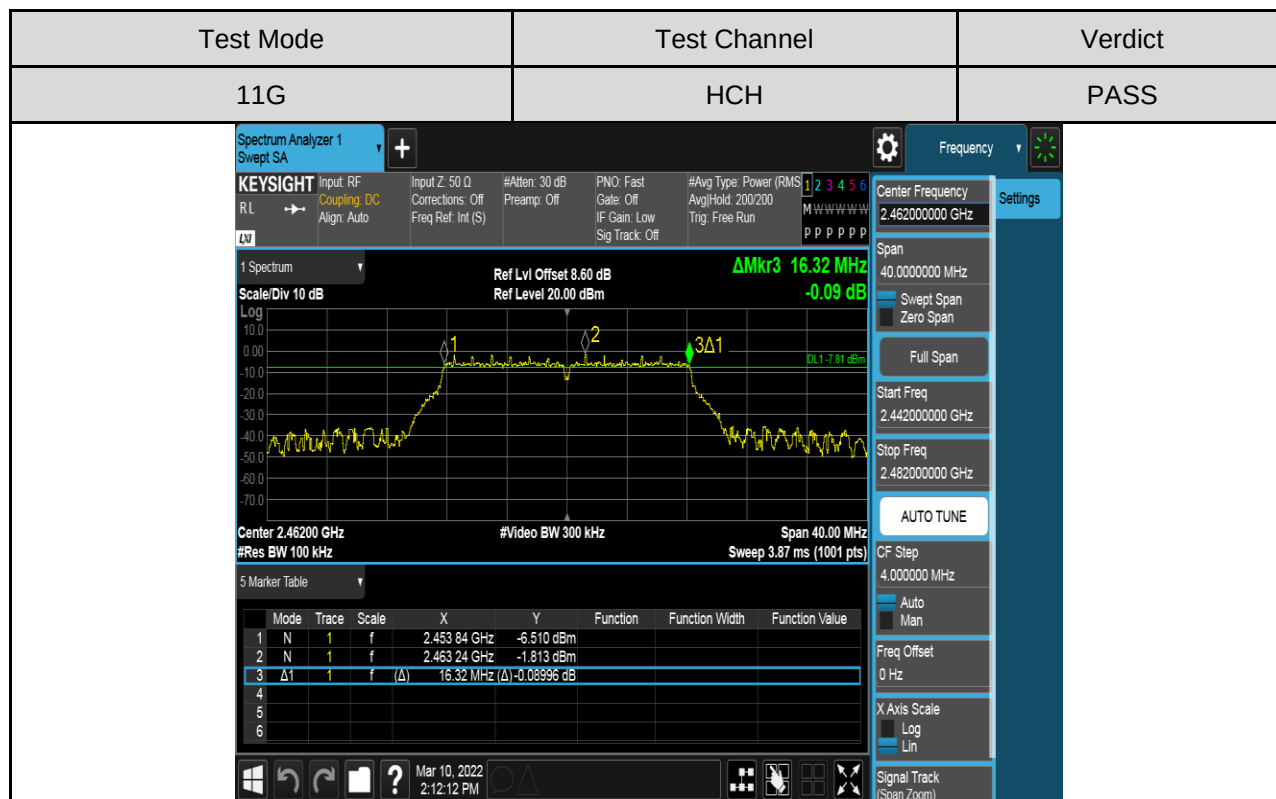
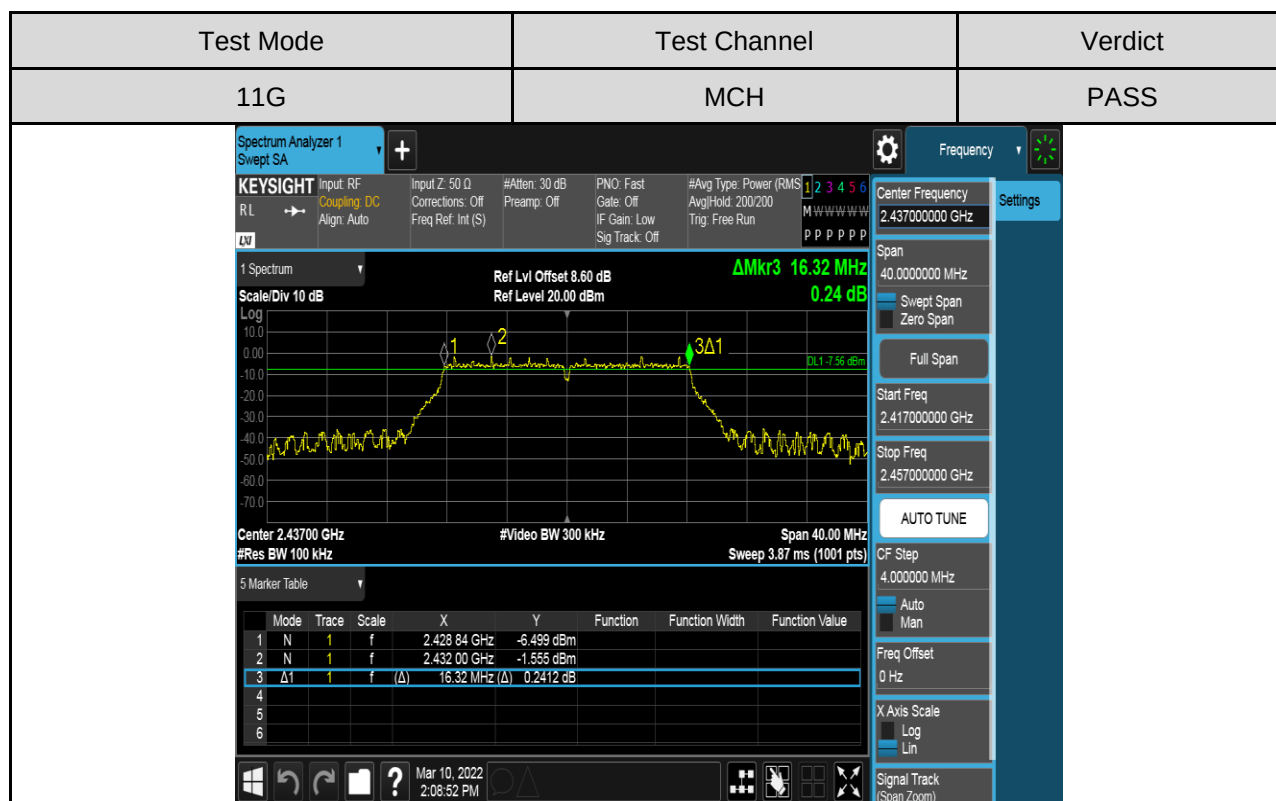
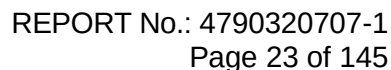


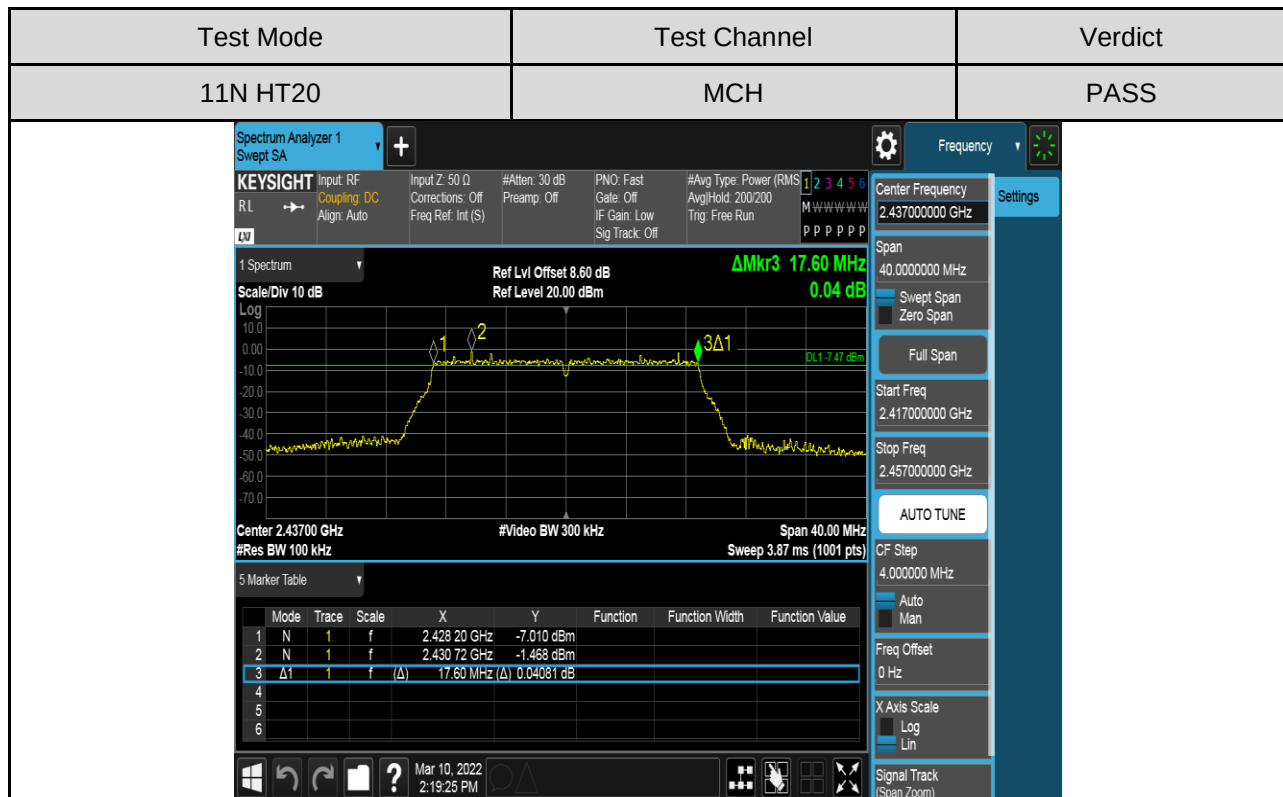
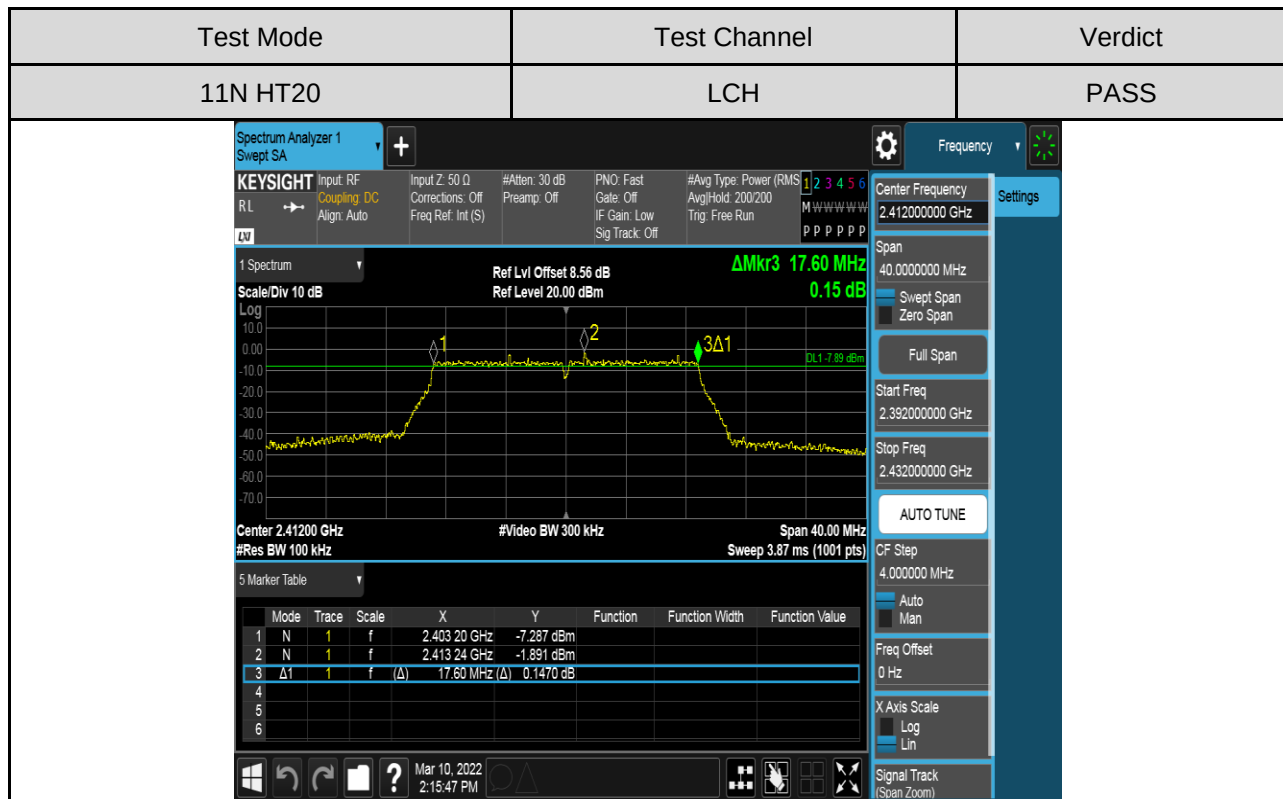
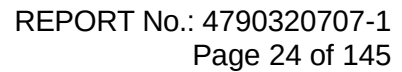
TEST GRAPHS

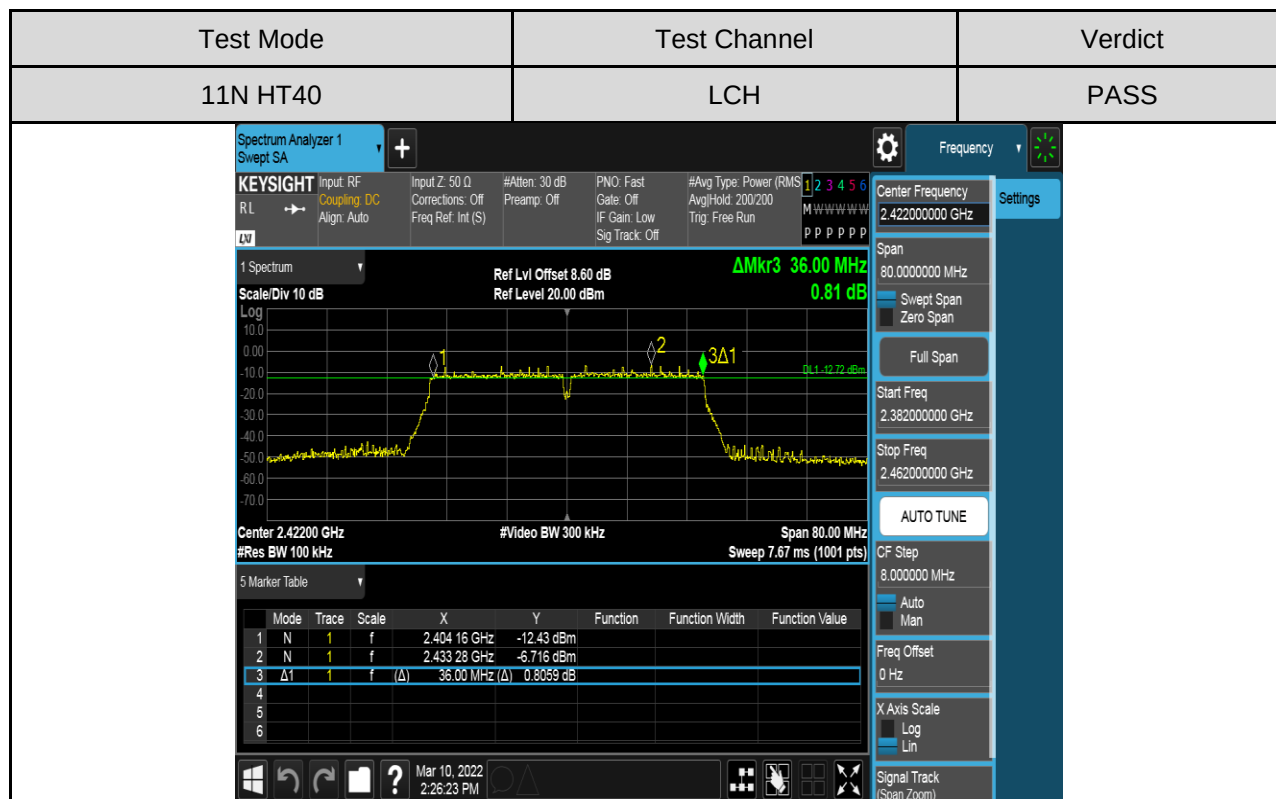
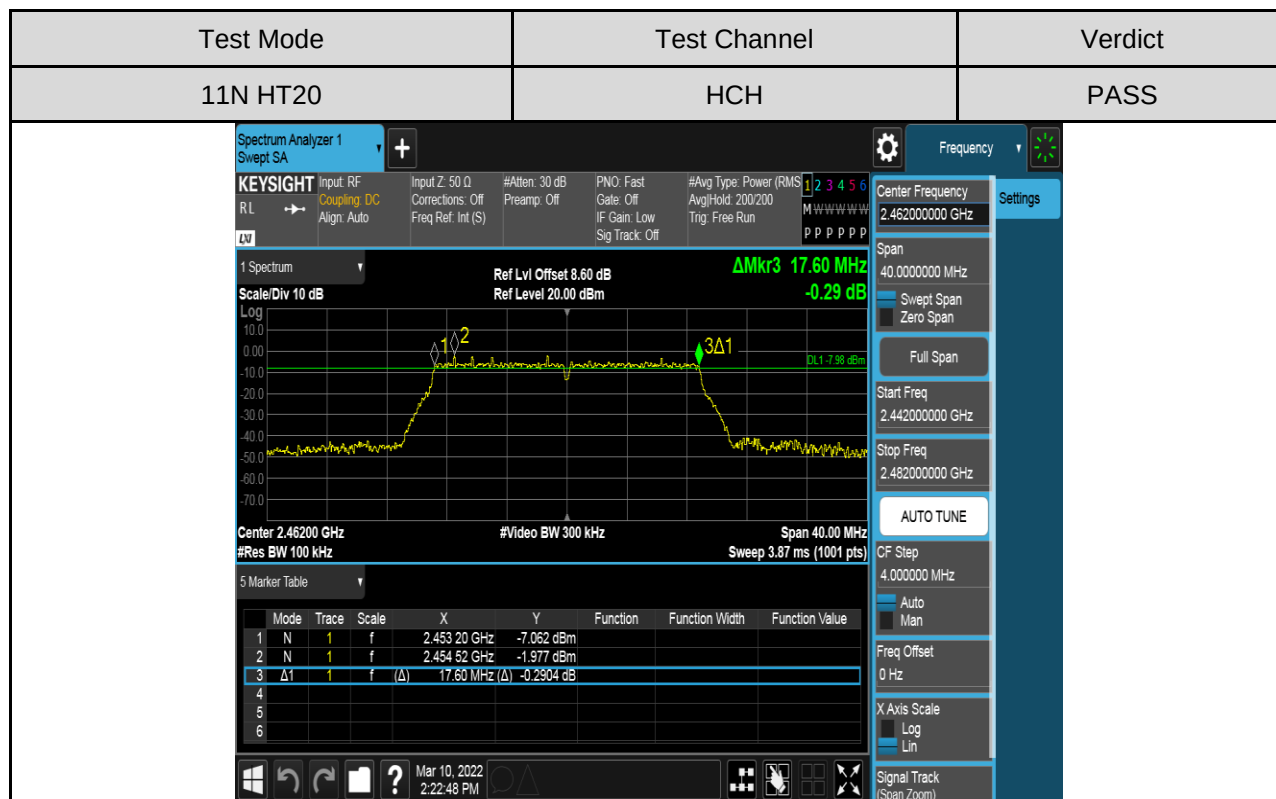
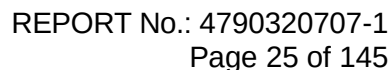
6dB Bandwidth

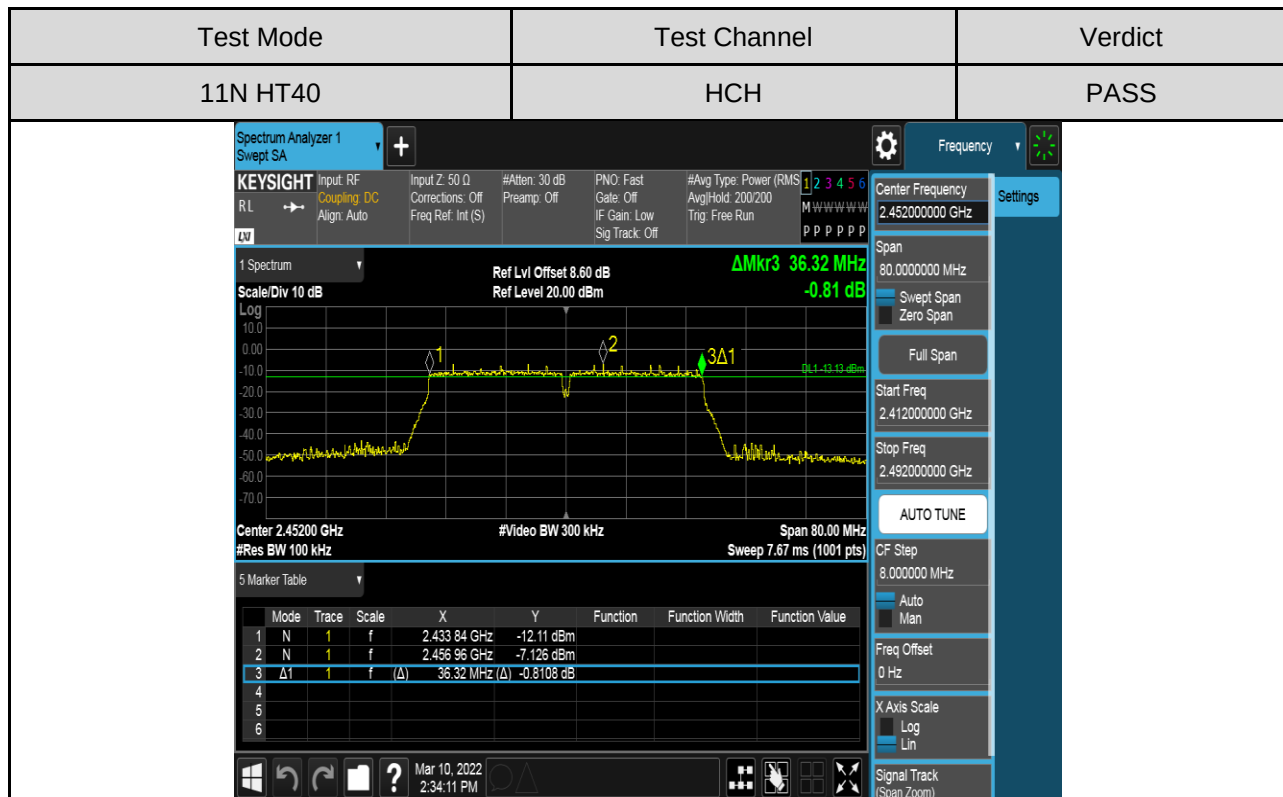
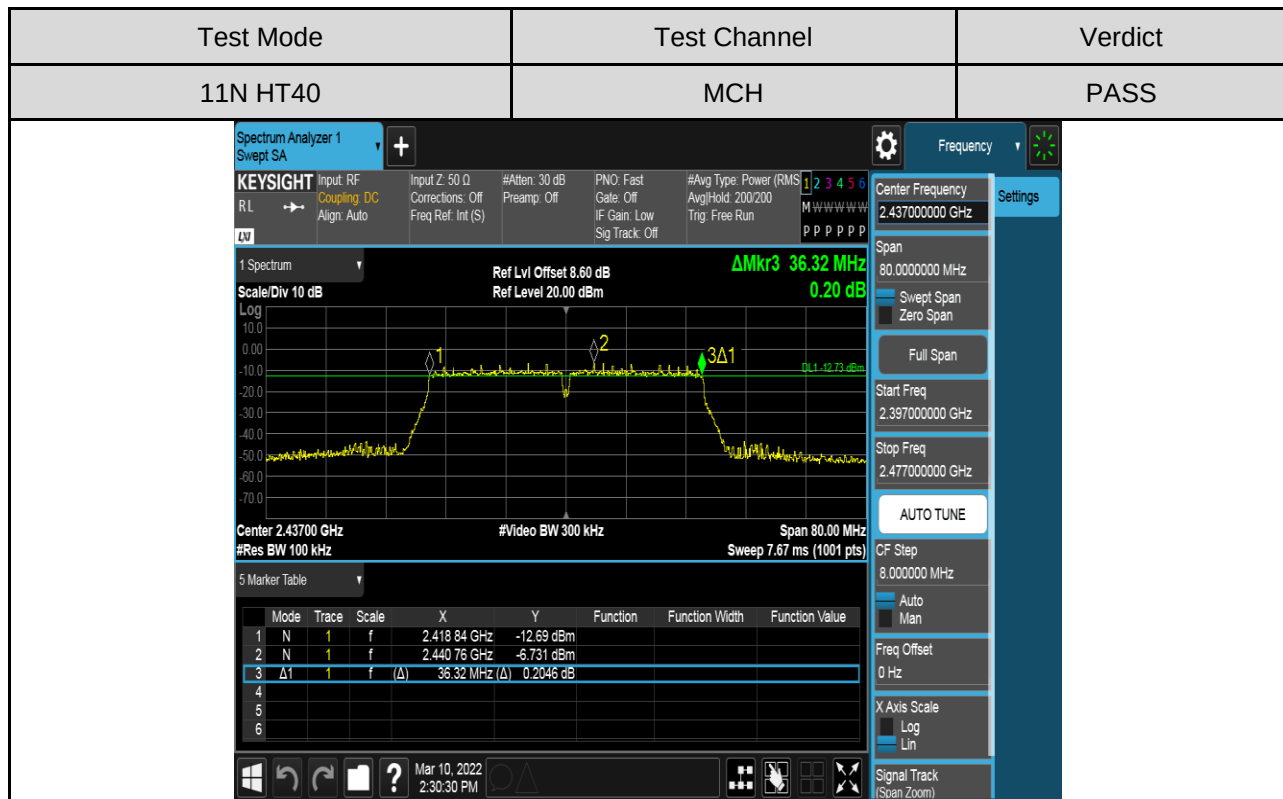














7.3. CONDUCTED OUTPUT POWER

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5

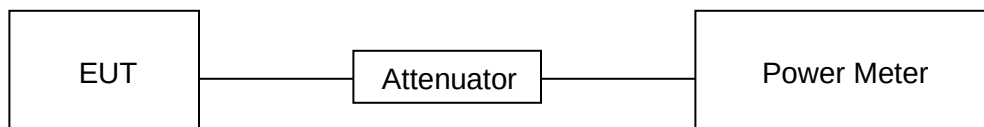
TEST PROCEDURE

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 ENVIRONMENT

Temperature	21.4°C	Relative Humidity	55.7%
Atmosphere Pressure	101.1kPa	Test Date	2022-03-10

TEST SETUP





TEST RESULTS TABLE

Test Mode	Test Channel	Measurement Output Power (AV)	10log(1/x) Factor	Maximum Average Conducted Output Power (dBm)	LIMIT
		dBm	dBm	dBm	dBm
11B	LCH	13.08	0.04	13.12	30
	MCH	13.57	0.04	13.61	30
	HCH	13.17	0.04	13.21	30
11G	LCH	9.42	0.18	9.60	30
	MCH	9.87	0.18	10.05	30
	HCH	9.52	0.18	9.70	30
11N HT20	LCH	9.44	0.06	9.50	30
	MCH	9.88	0.06	9.94	30
	HCH	9.48	0.06	9.54	30
11N HT40	LCH	7.28	0.10	7.38	30
	MCH	7.35	0.10	7.45	30
	HCH	7.23	0.10	7.33	30

7.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e)	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	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
VBW	$\geq 3 \times \text{RBW}$
Span	$1.5 \times \text{DTS bandwidth}$
Trace	Max hold
Sweep time	Auto couple.

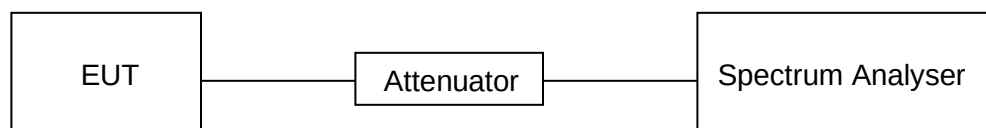
Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST ENVIRONMENT

Temperature	19.8°C	Relative Humidity	55.4%
Atmosphere Pressure	103.1kPa	Test Voltage	AC 120V

TEST SETUP



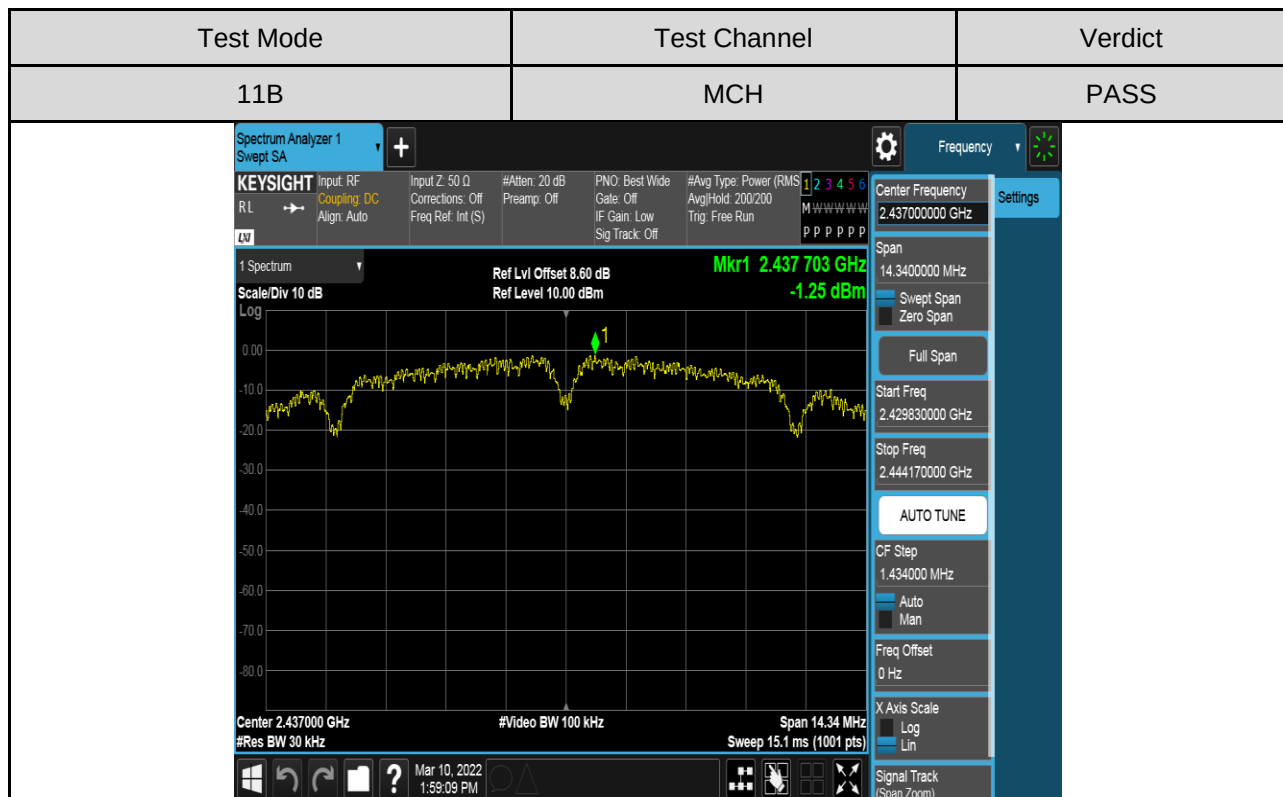
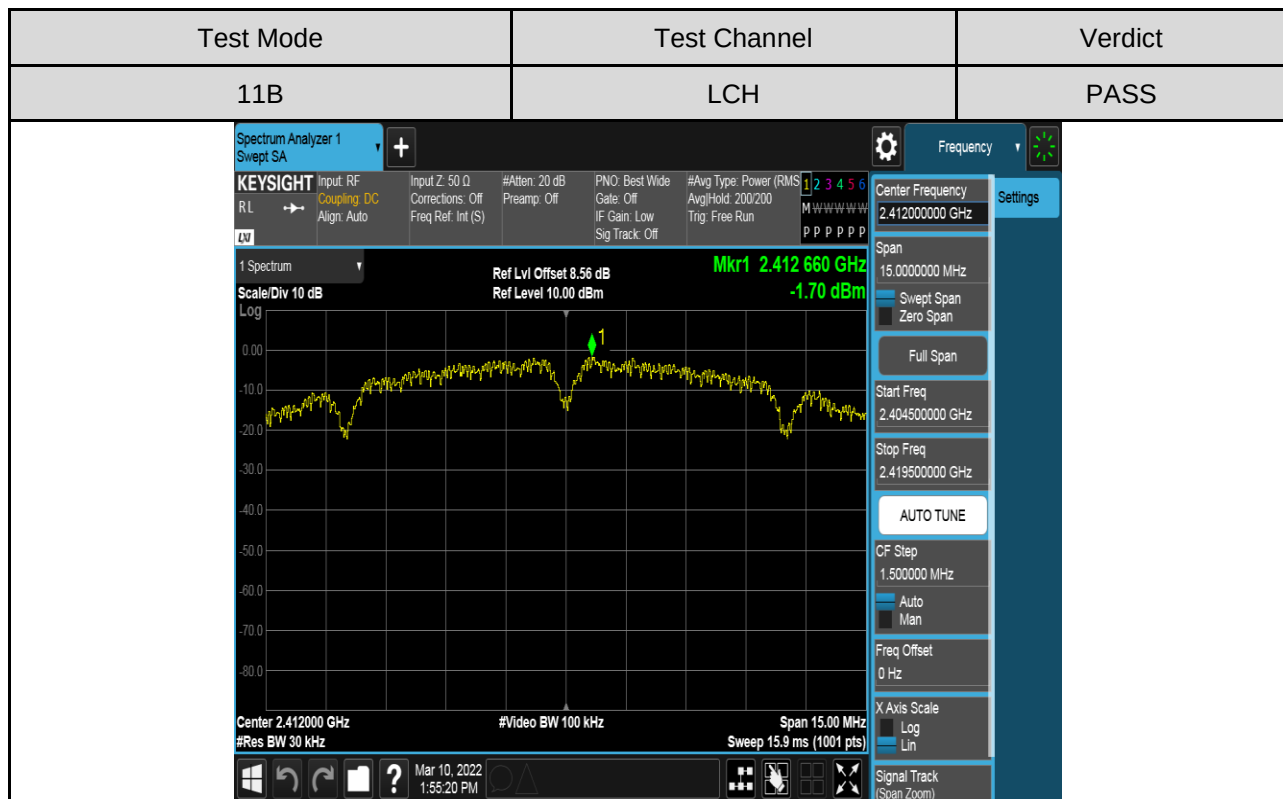


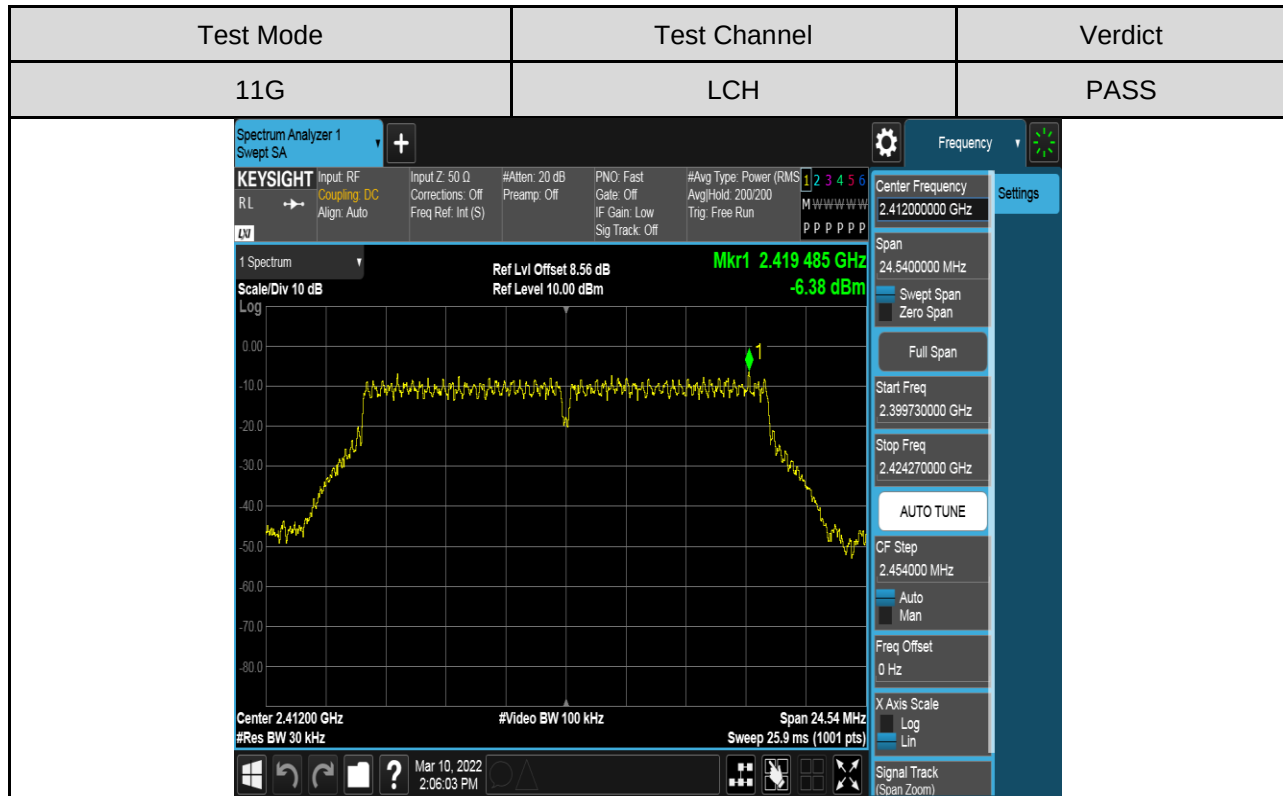
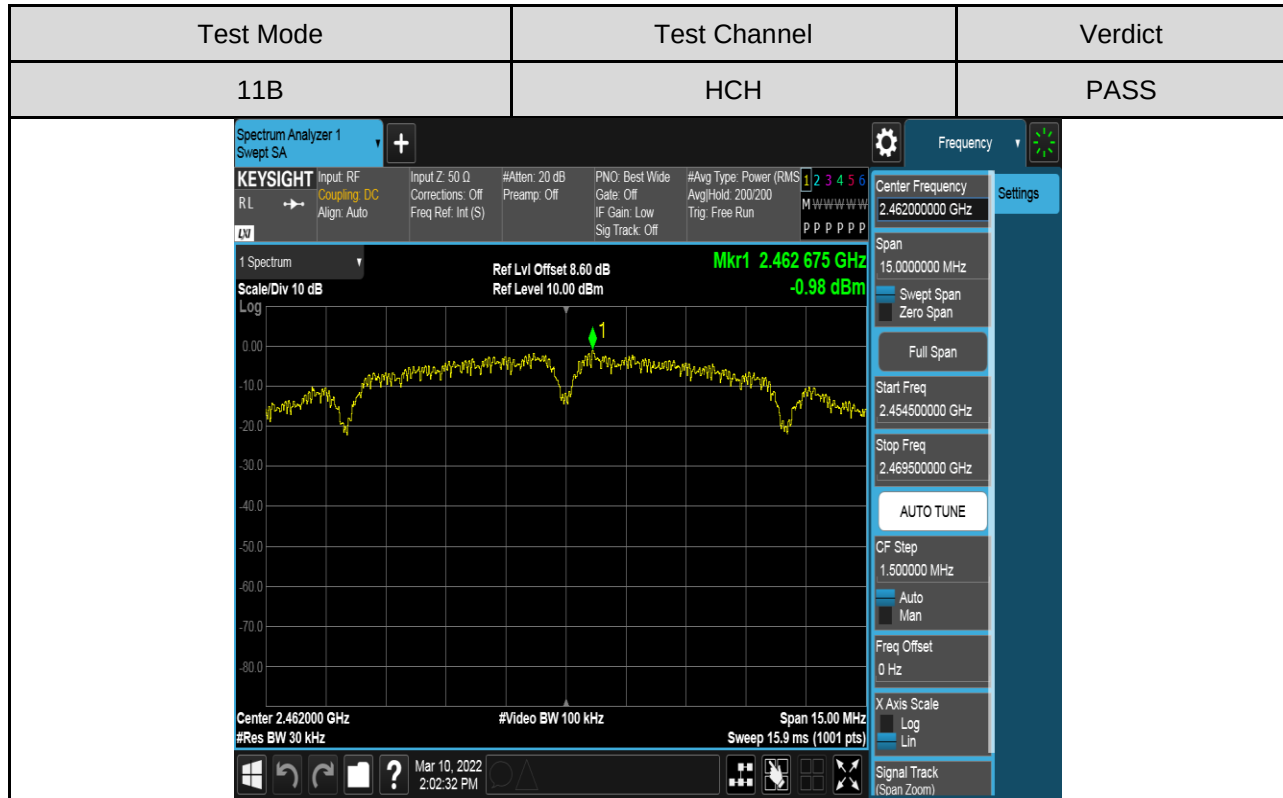
TEST RESULTS TABLE

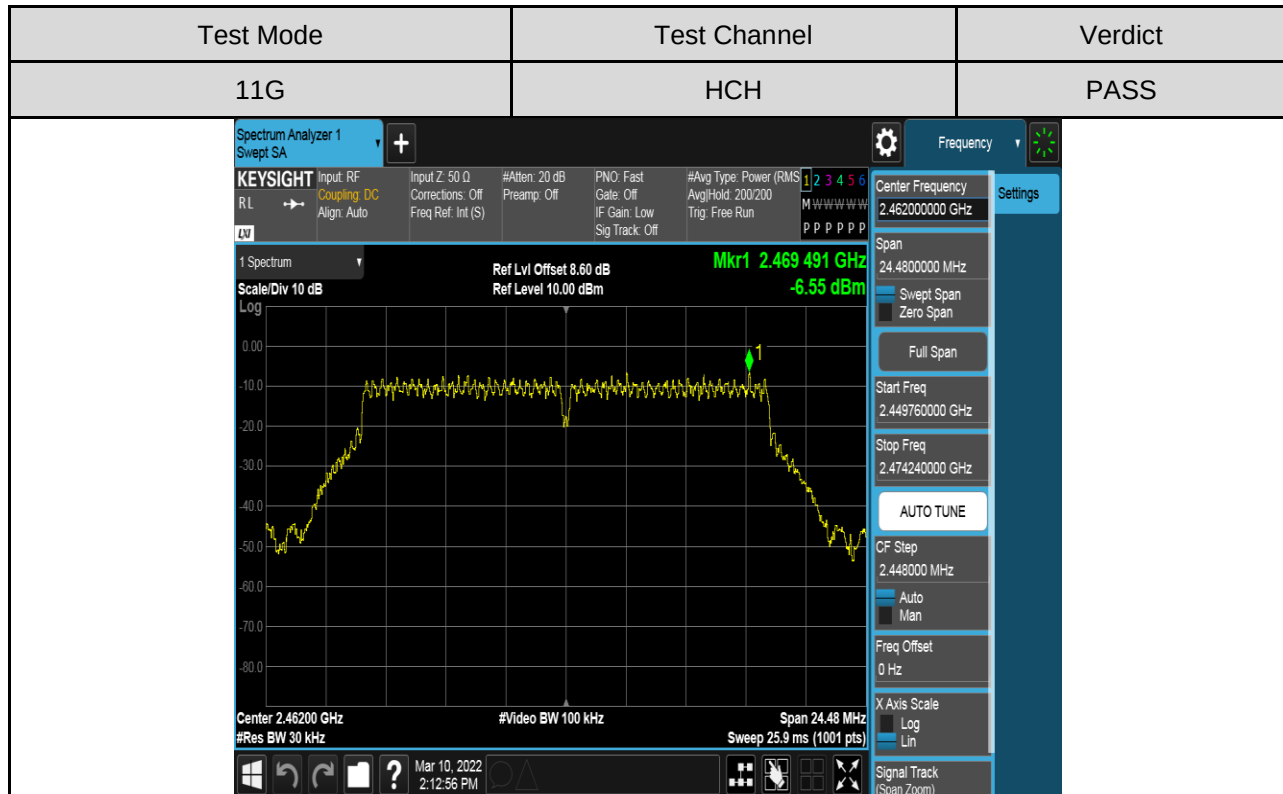
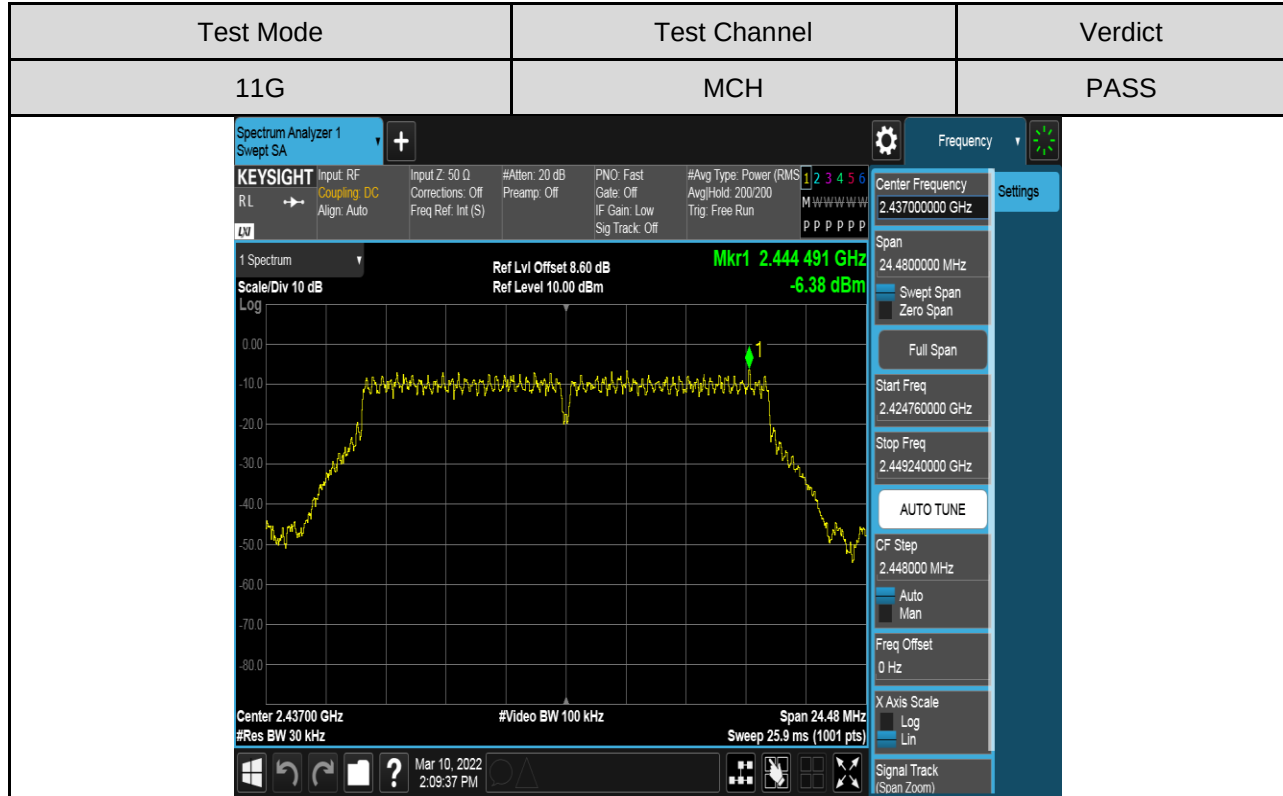
Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
11B	LCH	-1.70	Pass
	MCH	-1.25	Pass
	HCH	-0.98	Pass
11G	LCH	-6.38	Pass
	MCH	-6.38	Pass
	HCH	-6.55	Pass
11N HT20	LCH	-7.54	Pass
	MCH	-7.00	Pass
	HCH	-7.31	Pass
11N HT40	LCH	-11.24	Pass
	MCH	-12.39	Pass
	HCH	-12.42	Pass

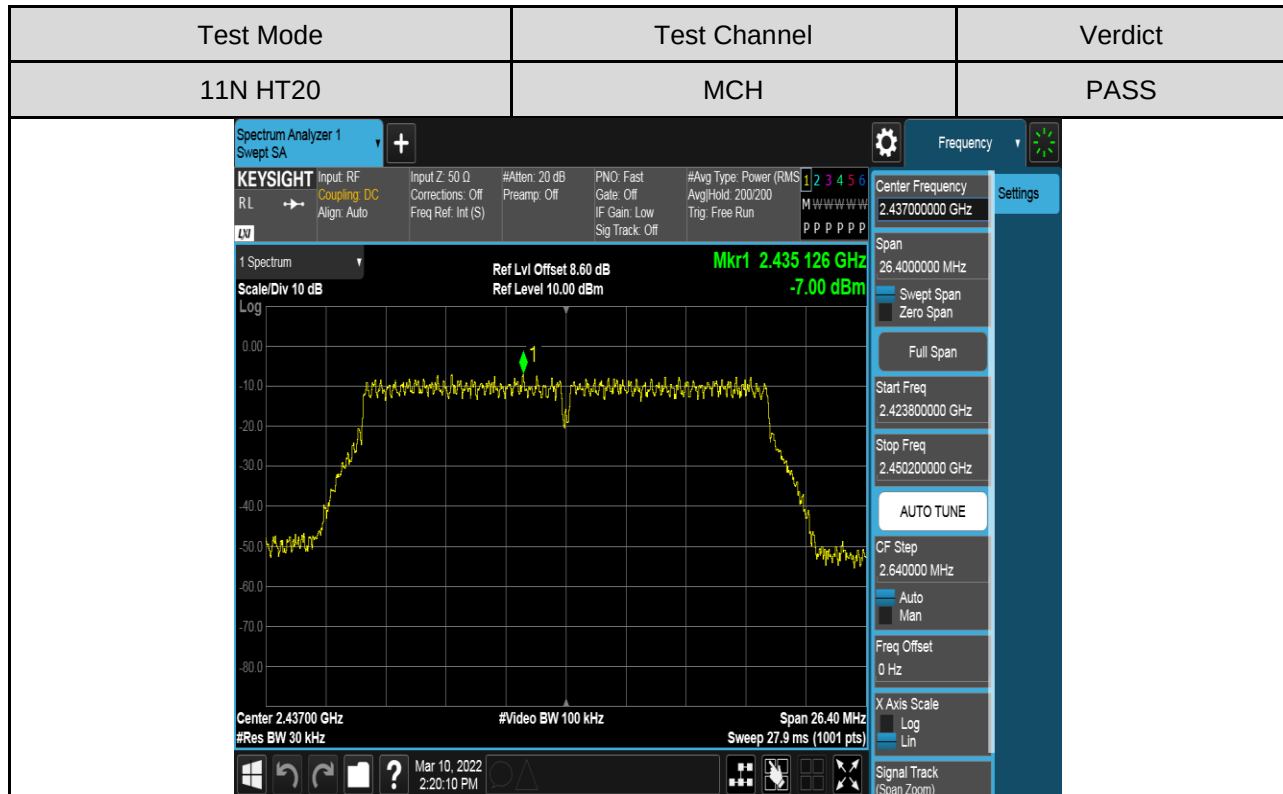
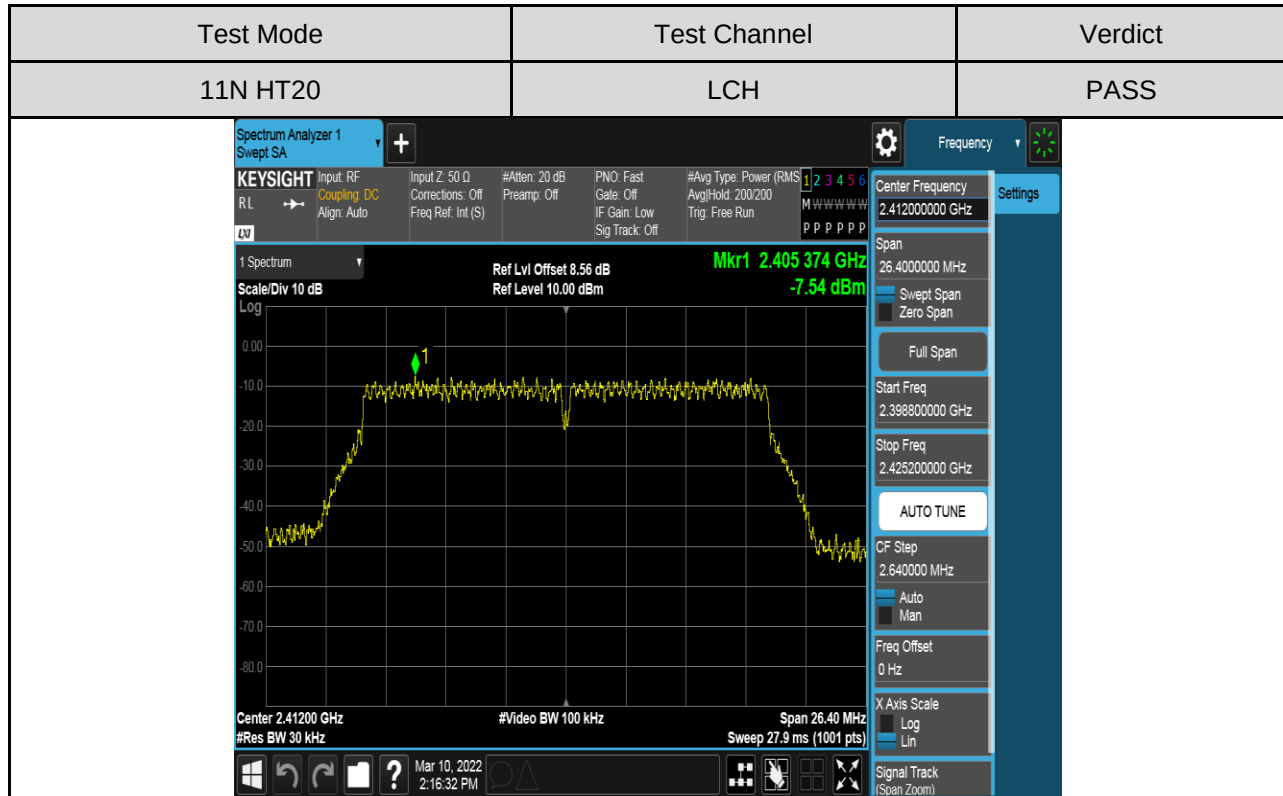


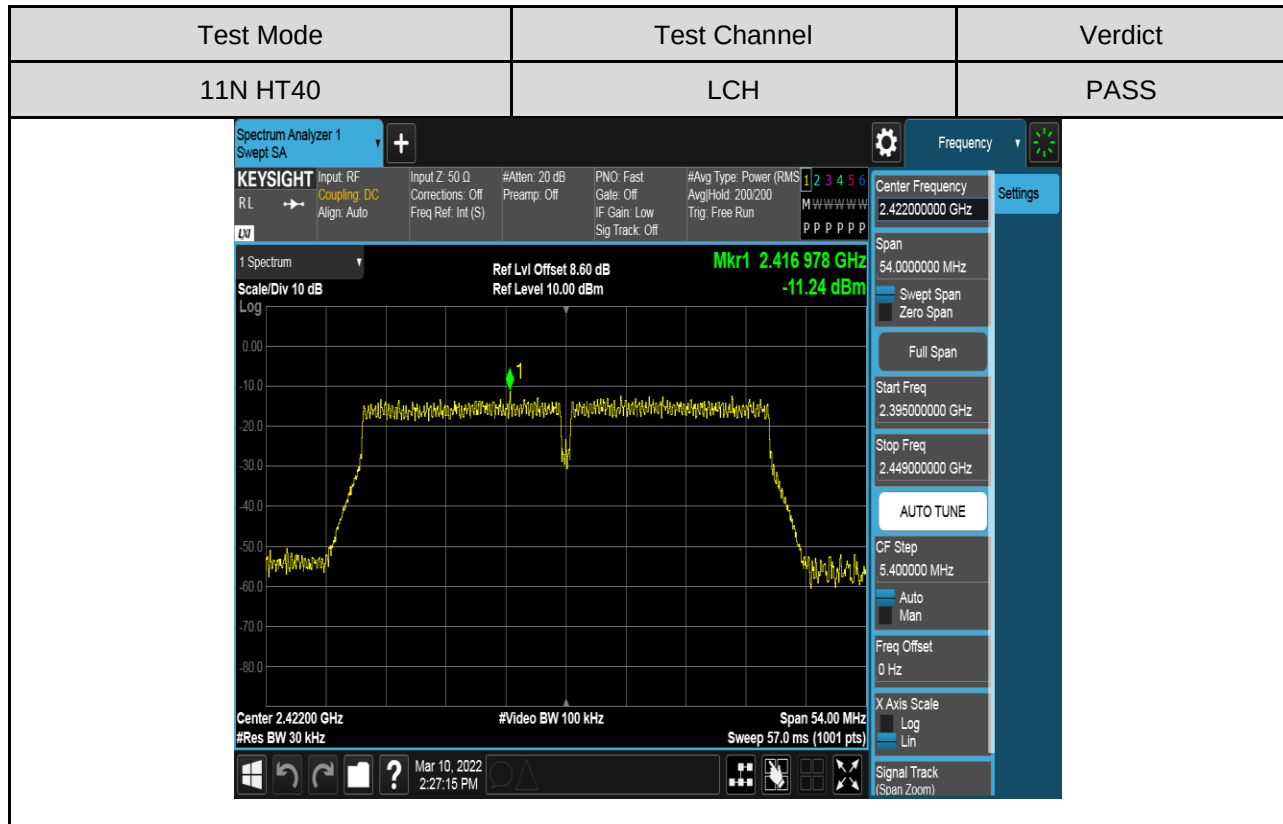
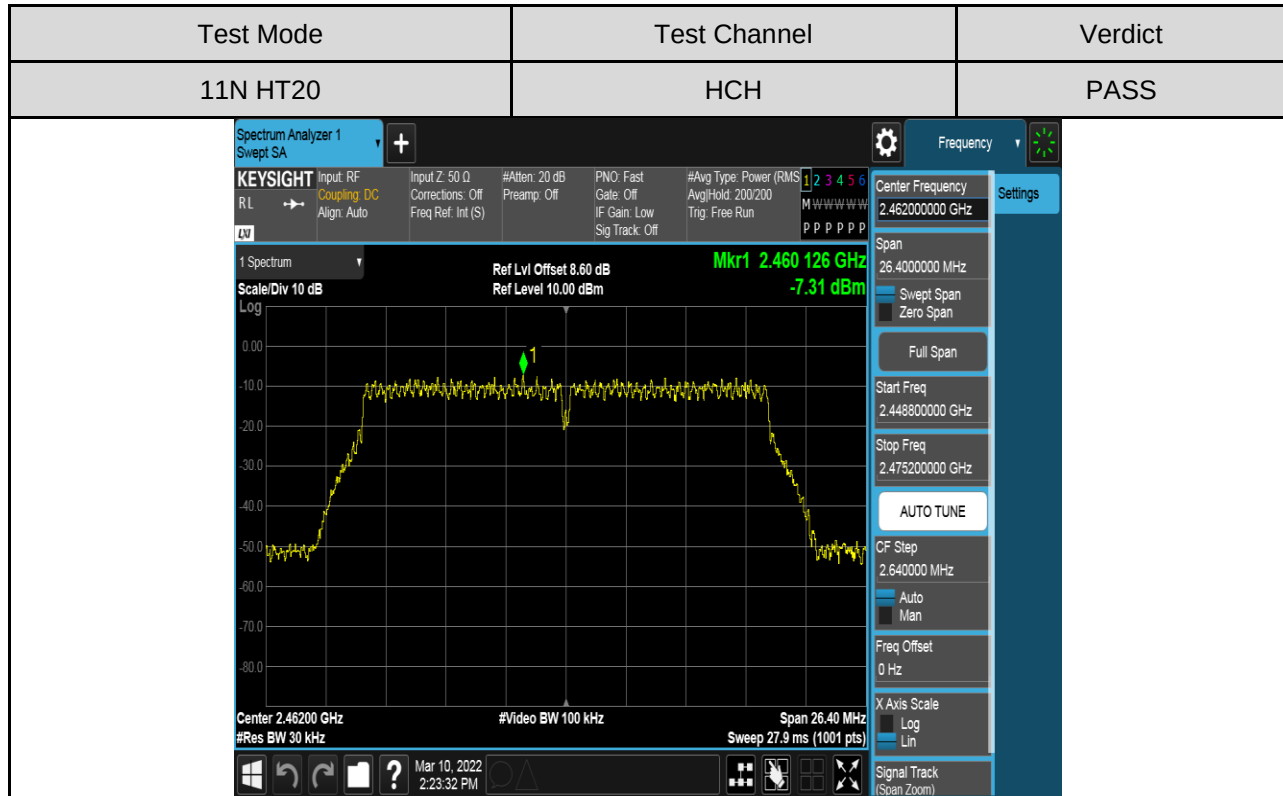
TEST GRAPHS

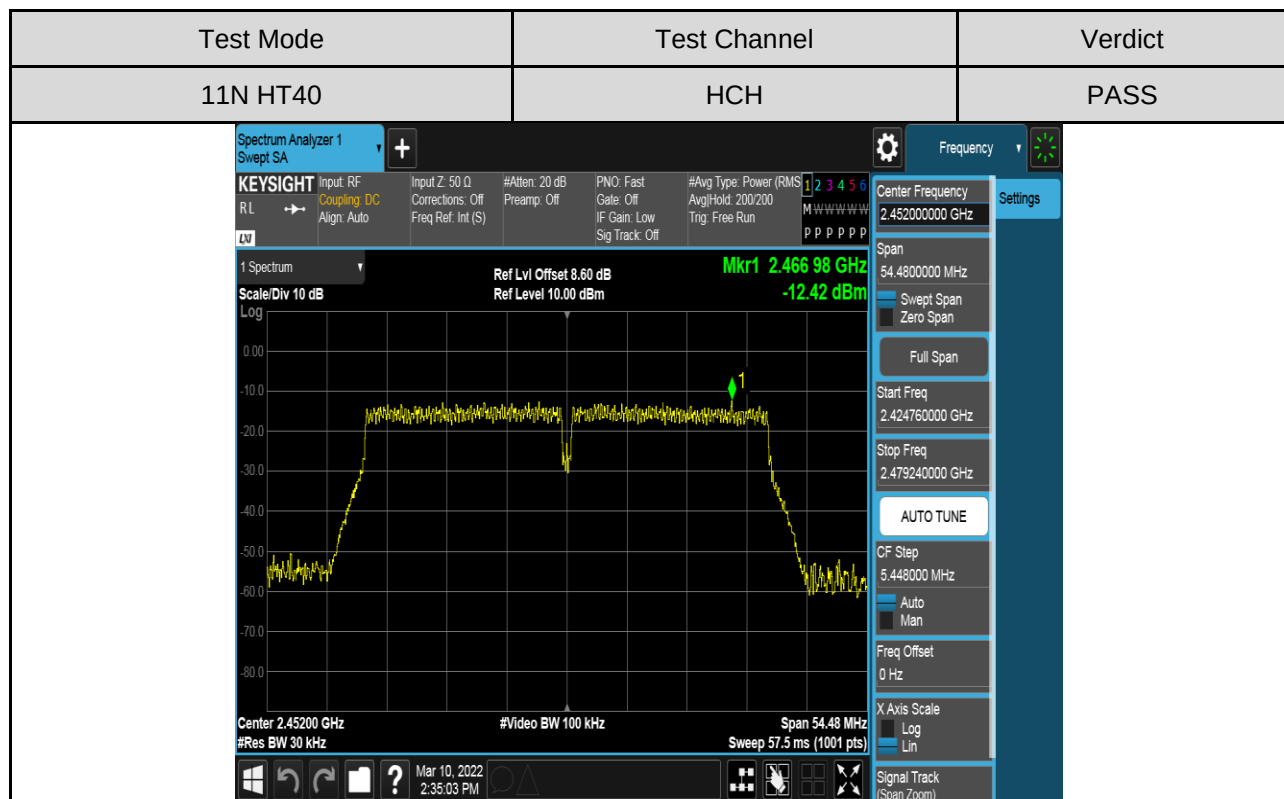
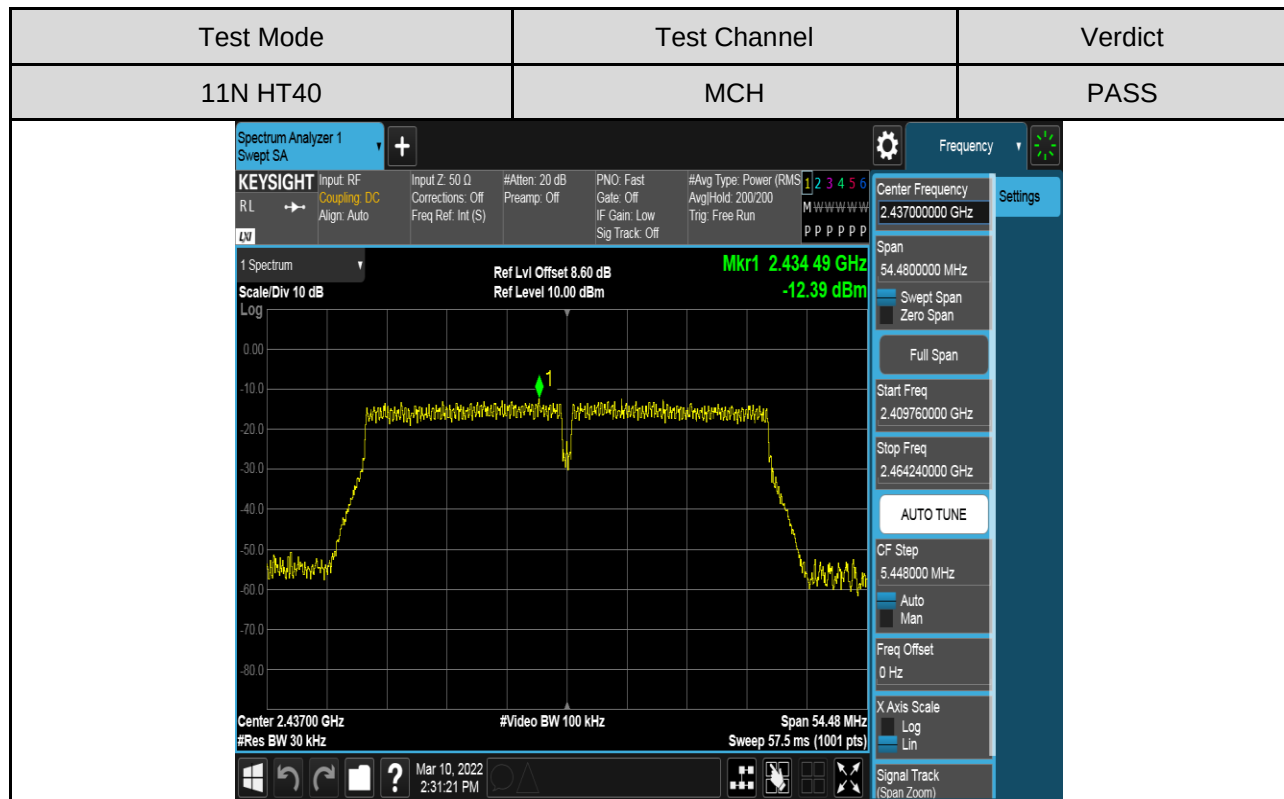














7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

FCC Part15 (15.247), Subpart C		
Section	Test Item	Limit
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyzer and use the following

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100K
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

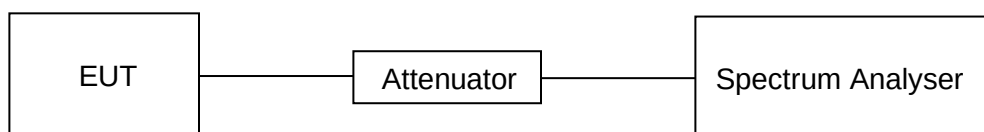
settings:

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	$\geq 3 \times \text{RBW}$
measurement points	$\geq \text{span}/\text{RBW}$
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

TEST SETUP





TEST ENVIRONMENT

Temperature	21.4°C	Relative Humidity	55.7%
Atmosphere Pressure	101.1kPa	Test Date	2022-03-10

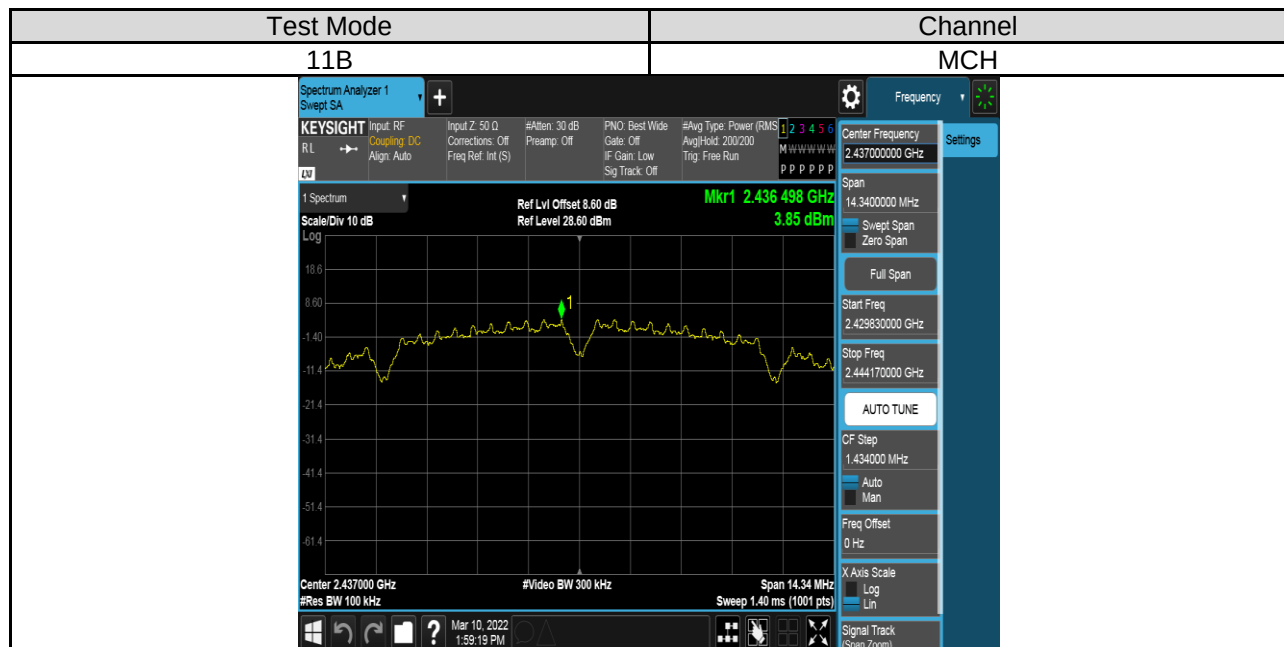
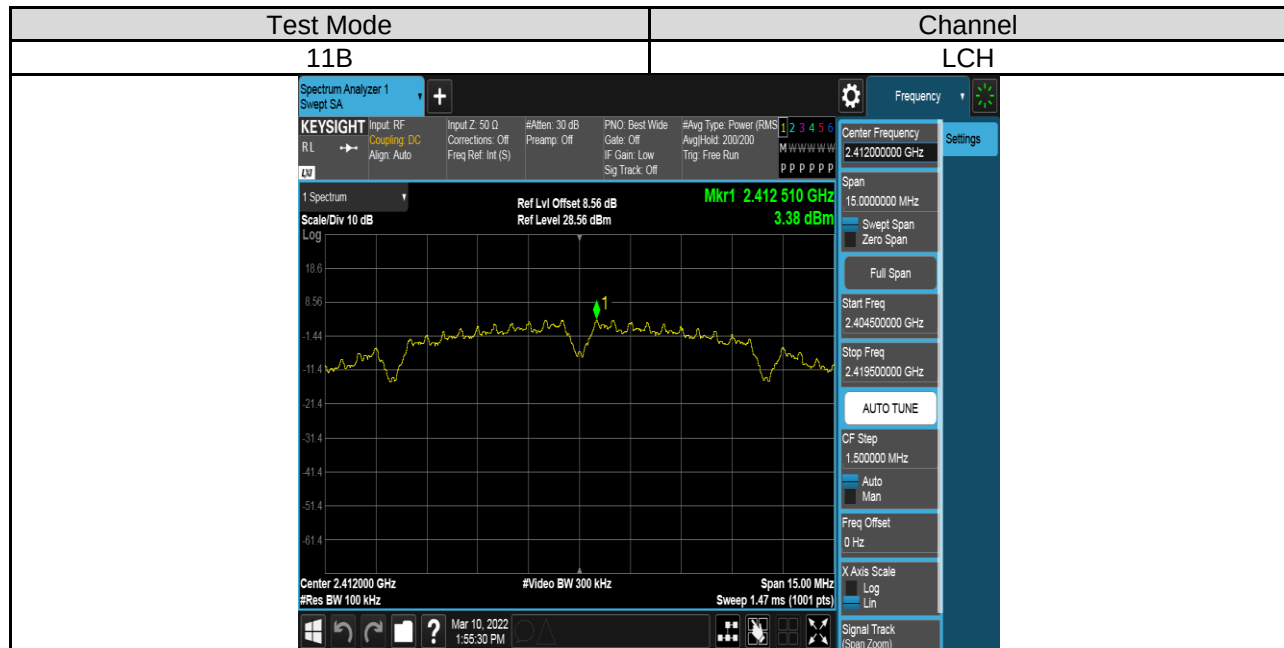
PART 1: REFERENCE LEVEL MEASUREMENT

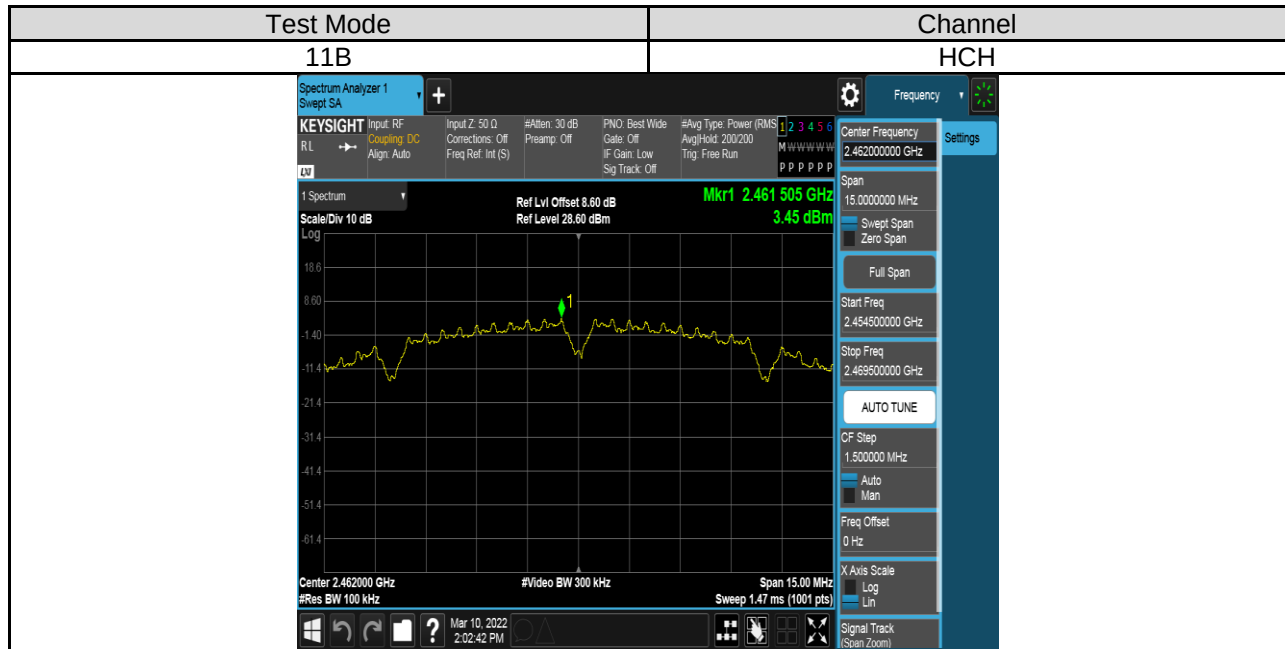
TEST RESULTS TABLE

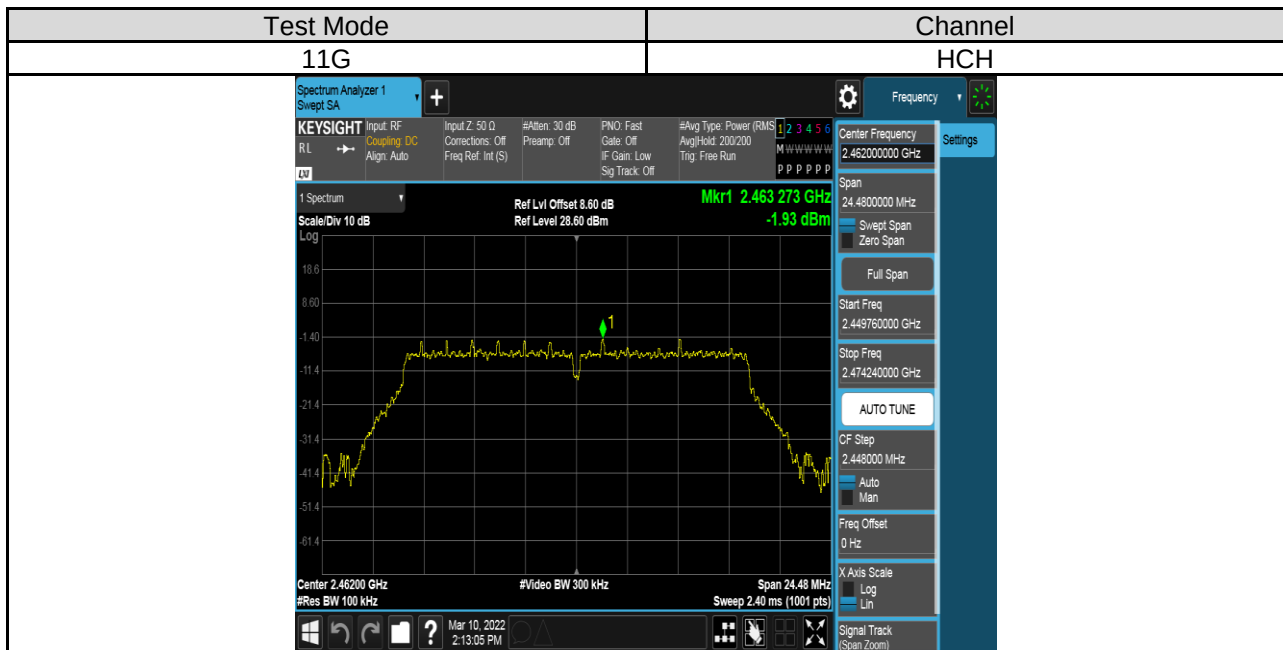
Test Mode	Test Channel	Result[dBm]
11B	LCH	3.38
	MCH	3.85
	HCH	3.45
11G	LCH	-2.04
	MCH	-1.59
	HCH	-1.93
11N HT20	LCH	-2.12
	MCH	-1.70
	HCH	-1.99
11N HT40	LCH	-6.89
	MCH	-6.68
	HCH	-6.83

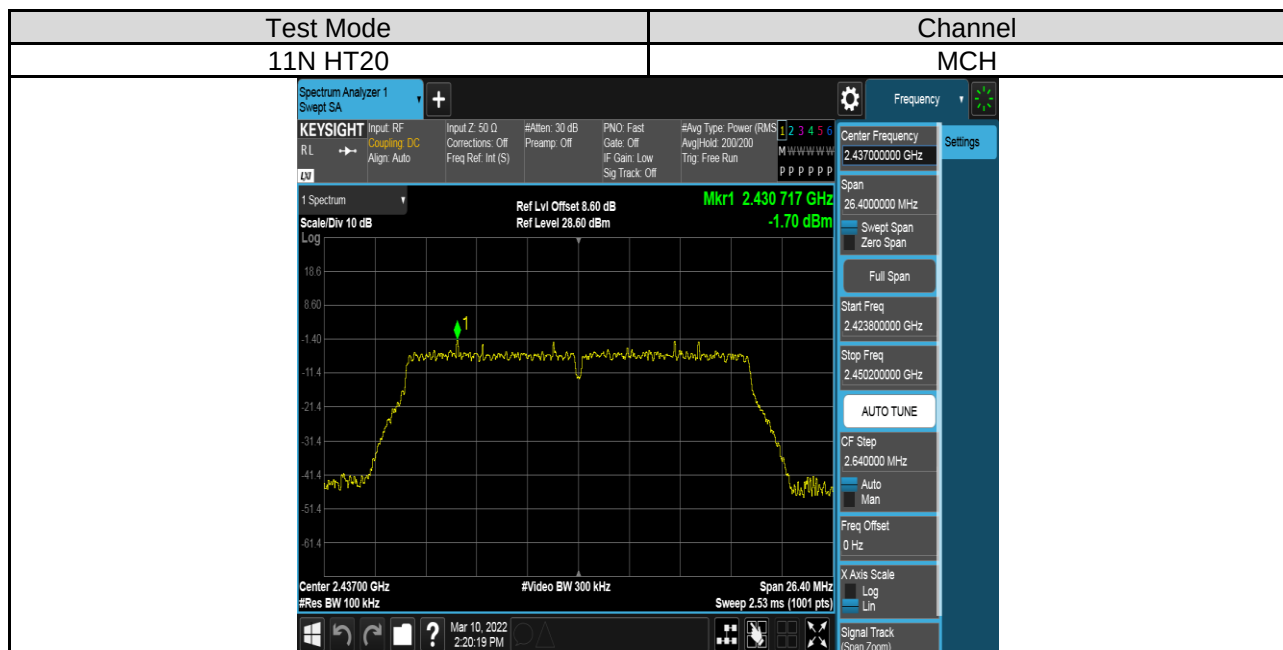
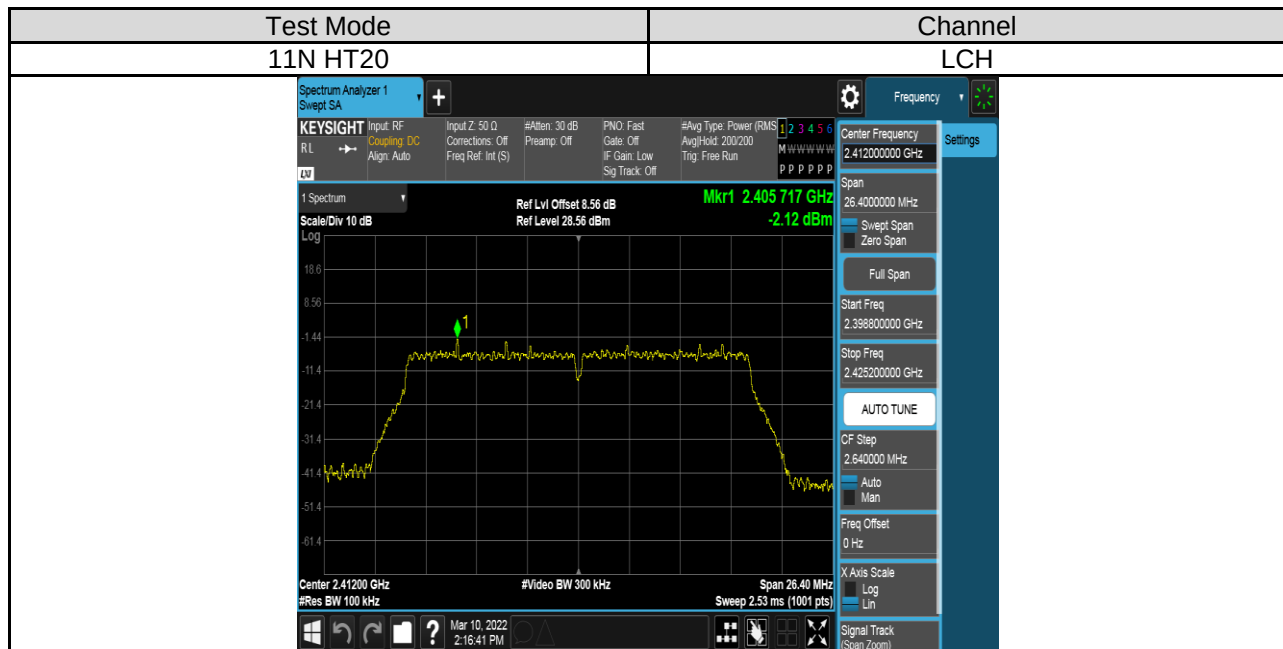


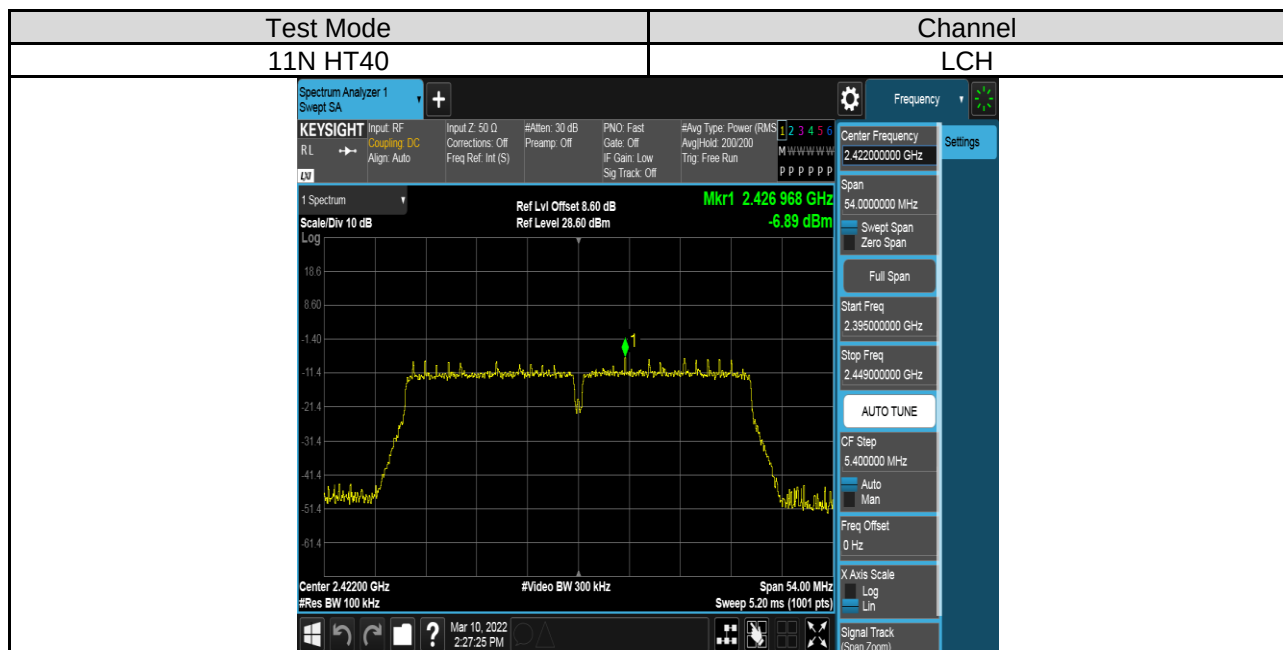
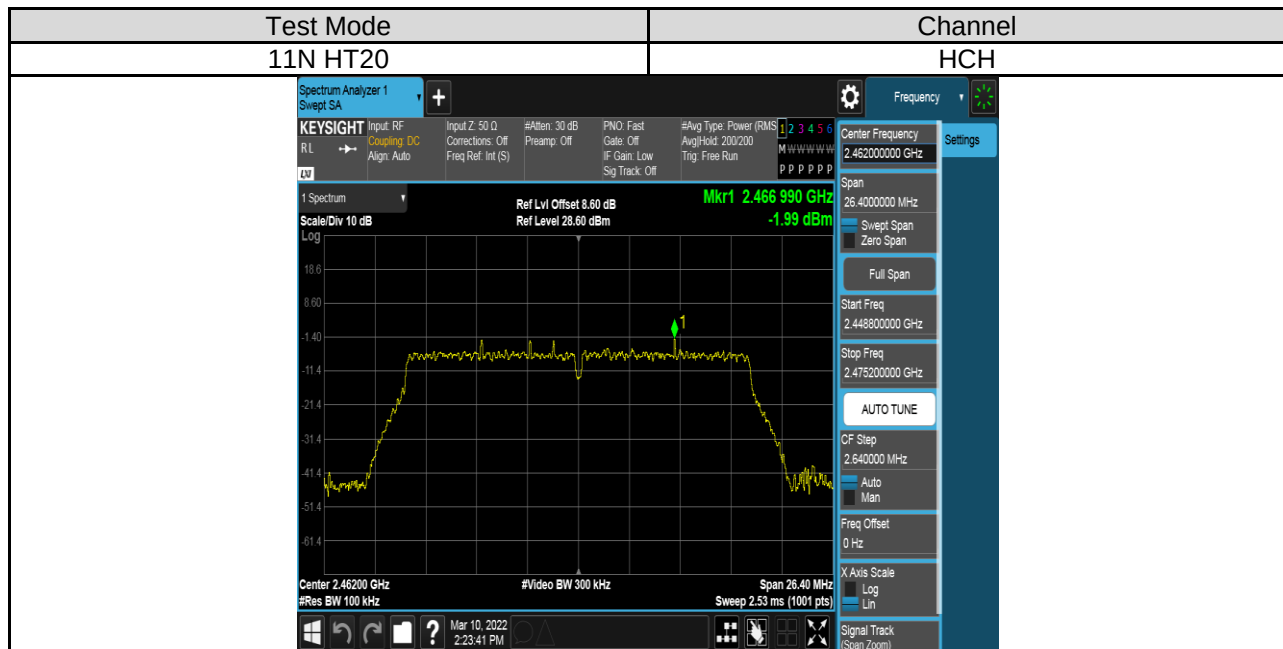
TEST GRAPHS

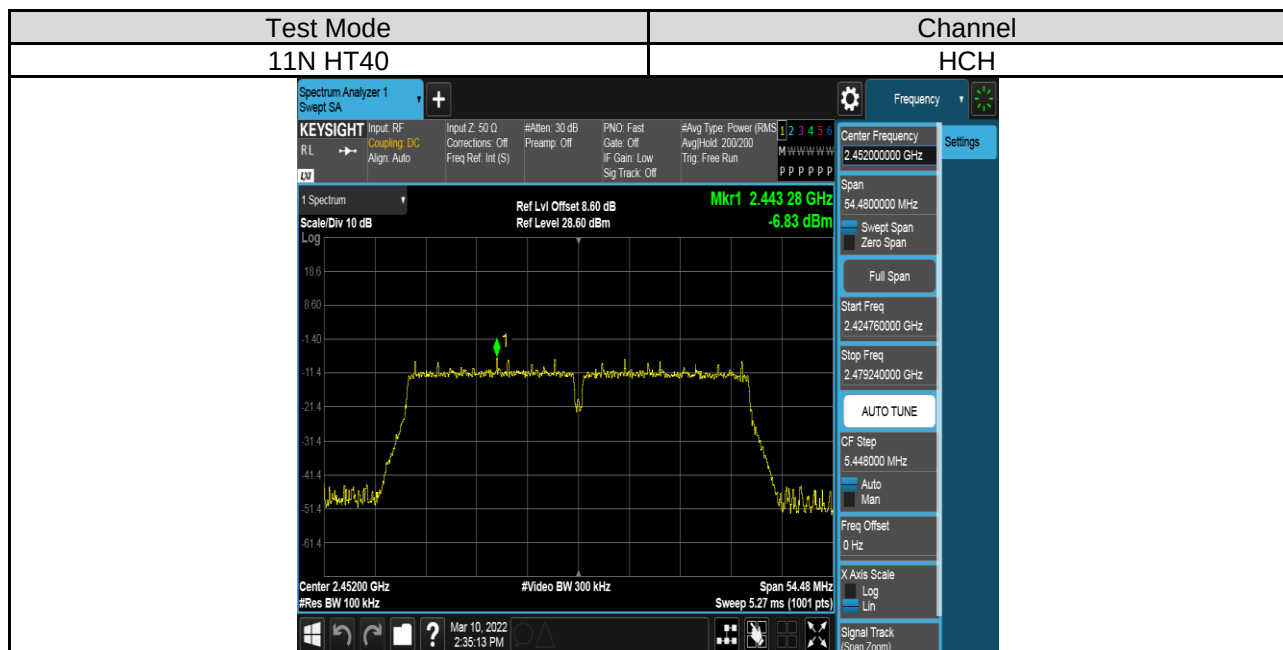
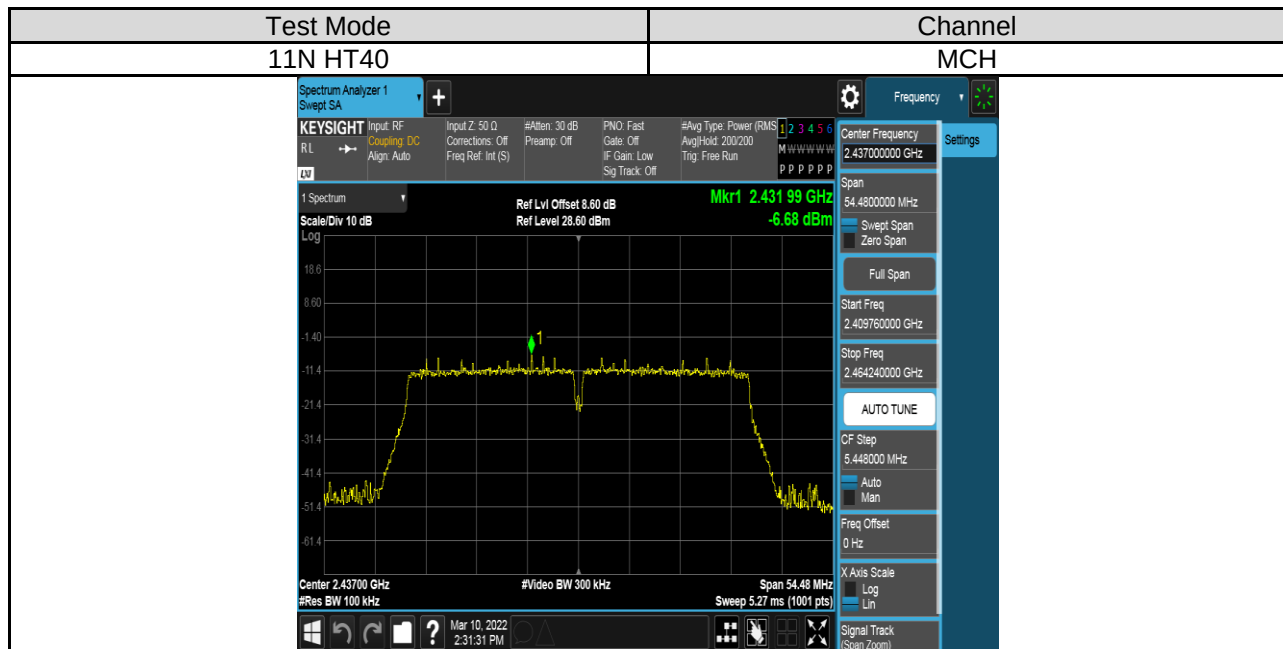














PART 2: CONDUCTED BANDEDGE

TEST RESULTS TABLE

Test Mode	Test Channel	Result	Verdict
11B	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
11G	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
11N HT20	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
11N HT40	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS



TEST GRAPHS

