

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

TEST REPORT

For

Smart Cordless Floor Washer

MODEL NUMBER: FW300800US

FCC ADDITIONAL MODEL NUMBER: FW30******

("*" = 0-9, A-Z or blank used to denote different countries, customers, colors or minor cosmetic changes, or for indicate factory identification)

IC MODEL NUMBER: FW300800US

PROJECT NUMBER: 4791165260

REPORT NUMBER: 4791165260-2

FCC ID: 2AV7A-FS30

IC: 26039-FS30

ISSUE DATE: Feb. 06, 2024

Prepared for

Tineco Intelligent Technology Co., Ltd.

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	02/06/2024	Initial Issue	



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1. APPLICANT INFORMATION

Applicant Information

Company Name: Tineco Intelligent Technology Co., Ltd.

Address: No. 108 Shihu Road West, Wuzhong Zone Suzhou, Jiangsu,

China 215128

Manufacturer Information

Company Name: Tineco Intelligent Technology Co., Ltd.

Address: No. 108 Shihu Road West, Wuzhong Zone Suzhou, Jiangsu,

China 215128

EUT Description

Product Name: Smart Cordless Floor Washer

FCC Model Number: FW300800US FCC Additional No.: FW30******

("*" = 0-9, A-Z or blank used to denote different countries, customers, colors or minor cosmetic changes, or for indicate

factory identification)

IC Model Number FW300800US

IC Additional No.:

Model Difference: Their electrical circuit design, layout, components used and

internal wiring are identical, only the color and model name is different. The model FW300800US was selected as the

representative model for compliance test.

Sample Number: 6836080
Data of Receipt Sample: Jan. 07, 2024

Test Date: Jan. 07, 2024~ Jan. 30, 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



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Summary of Test Results					
Clause	Test Items FCC&ISED Rules Test Results				
1	6 dB Bandwidth and 99% Occupied Bandwidth RSS-247 Clause 5.2 (a) RSS-Gen Clause 6.7				
2	Conducted Power	FCC 15.247 (b) (3) RSS-247 Clause 5.4 (d) RSS-Gen Clause 6.12	PASS		
3	Power Spectral Density	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 FCC 15.207 Power Port RSS-GEN Clause 8.8		PASS		
7	Antenna Requirement FCC 15.203 PASS RSS-GEN Clause 6.8				

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 <Accuracy Method> decision rule is applied.

Prepared By:	Reviewed By:			
Tom Tang	Leun. Shen			
Tom Tang	Kevin Shen			
Authorized By:				
Leon Wu				
Leon Wu				



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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.
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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, 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.



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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)
Note: This uncertainty represents an expanded unc	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.



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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Product Name:	Smart Cordless Floor Washer			
Model No.:	FW300800US			
Operating Frequency:	IEEE 802.11B/G/N(HT20): 2412MHz to 2462MHz			
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): OFDM (64QAM, 16QAM, QPSK, BPSK)			
Channels Step:	Channels with 5MHz step			
Test software of EUT:	EspRFTestTool (manufacturer declare)			
Antenna Type:	PCB Antenna			
	3.75 dBi			
Antenna Gain:	Note: This data is provided by customer and our lab isn't responsible for this data.			



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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]	17.31
1	IEEE 802.11G	1-11[11]	15.16
1	IEEE 802.11N HT20	1-11[11]	12.99

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		



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5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel (MHz)
	LCH: CH01 2412
IEEE 802.11B	MCH: CH06 2437
	HCH: CH11 2462
	LCH: CH01 2412
IEEE 802.11G	MCH: CH06 2437
	HCH: CH11 2462
	LCH: CH01 2412
IEEE 802.11N HT20	MCH: CH06 2437
	HCH: CH11 2462

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band								
Test Softw	/are			EspRF	TestTool			
NA LLC	Transmit			Test C	Channel			
Modulation Mode	Antenna		NCB: 20MHz		NCB: 40MHz			
Wiode	Number	CH 1	CH 6	CH 11	CH 3	CH 6	CH 9	
802.11B	1	12	12	12				
802.11G	1	20	20	20	/			
802.11N HT20	1	20	20	20				



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5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	PCB Antenna	3.75

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.

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

5.8. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests				
Relative Humidity:	55	5 ~ 65%			
Atmospheric Pressure:	1025Pa				
Temperature:	TN	23 ~ 28°C			
	VL	N/A			
Voltage:	VN	AC 120V			
	VH	N/A			

Note: VL= Lower Extreme Test Voltage

VN= Nominal Voltage

VH= Upper Extreme Test Voltage

TN= Normal Temperature



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5.9. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	/
2	Alarm Light	N/A	N/A	Supplied by UL Lab
3	Electric-magnetic Lock	N/A	N/A	Supplied by UL Lab

I/O PORT

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

ACCESSORY

Ite	em	Accessory	Brand Name	Model Name	Description
	1	Drying & Charging Dock	Tineco	AA2337B	INPUT: 120V~ 60Hz 3.8A MAX OUTPUT: 26V 1A



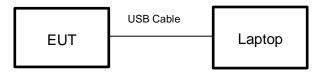
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TEST SETUP

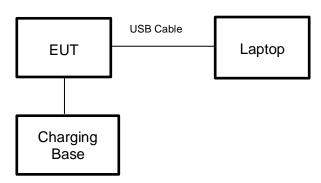
The EUT can work in an engineer mode with a software through a laptop.

SETUP DIAGRAM FOR TESTS

For Antenna Port test and Radiated Test:



For Conducted Emission Test:





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5.10. MEASURING INSTRUMENT AND SOFTWARE USED

	Conducted Emissions (Instrument)								
Used	Equipment	Manufacturer	Model	No.	Seri	al No.	Upper Last Cal.	Last Cal.	Next Cal.
$\overline{\checkmark}$	EMI Test Receiver	R&S	ESR	:3	120	6700	2022-11-26	2023-11-25	2024-11-24
$\overline{\checkmark}$	Two-Line V-Network	R&S	ENV2	16	120	3701	2022-11-26	2023-11-25	2024-11-24
\square	Artificial Mains Networks	R&S	ENY8	81	120	6712	2022-09-27	2023-09-26	2024-09-25
				Soft	ware				
Used	Des	scription		Ма	nufac	turer	Name	Version	
\checkmark	Test Software for 0	Conducted distur	bance		R&S		EMC32	Ver. 9.25	
		Ra	diated E	missi	ons (Instrum	ent)		
Used	Equipment	Manufacturer	Model			al No.	Upper Last Cal.	Last Cal.	Next Cal.
$\overline{\checkmark}$	EMI test receiver	R&S	ESR	7	22	2993	2022-05-20	2023-04-08	2024-04-07
$\overline{\checkmark}$	EMI test receiver	R&S	ESR2			6703	2022-11-26	202-11-25	2024-11-24
$\overline{\checkmark}$	Spectrum Analyzer	R&S	FSV30)44	22	2992	2022-05-20	2023-04-08	2024-04-07
\square	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB 1	1513	15	5456	2018-06-04	2021-06-03	2024-06-02
\square	Receiver Antenna (30MHz-1GHz)	SunAR RF Motion	JB1		17	7821	2019-01-28	2022-01-18	2025-01-17
	Receiver Antenna (1GHz-18GHz)	R&S	HF90	70	120	6705	2019-01-27	2022-02-28	2025-02-27
	Receiver Antenna (18GHz-26.5GHz)	Schwarzbeck	BBHA9	9170	120	6706	2019-02-29	2022-02-28	2025-02-27
	Pre-amplification (To 18GHz)	Tonscned	TAP0101	18050	22	4539	2022-10-11	2023-10-10	2024-10-09
\square	Pre-amplification (To 18GHz)	R&S	SCU-1	18D	134	4667	2022-11-26	2023-11-25	2024-11-24
\square	Pre-amplification (To 26.5GHz)	R&S	SCU-2		13	5391	2022-11-26	2023-11-25	2024-11-24
	Band Reject Filter	Wainwright	WRCG\ 2375-24 2485-25 40S	400- 510- S		1	2022-12-19	2023-12-18	2024-12-17
V	High Pass Filter	Wainwright	WHKX 5850-69 1800-40	500- 0SS		2	2022-12-19	2023-12-18	2024-12-17
				Soft	ware				
Used	Desci	ription	Manufac		turer		Name	Version	
$\overline{\checkmark}$	Test Software for R	adiated disturbar	nce Tonsce				TS+	Ver. 2.5	
			Oth	er ins	trume	ents			
Used	Equipment	Manufacturer	Model No.		Seri	al No.	Upper Last Cal.	Last Cal.	Next Cal.
\square	Spectrum Analyzer	Keysight	N9010	0B	15	5368	2022-05-20	2023-04-08	2024-04-07
	Power Meter	MWT	MW100-F	RFCB	22	1694	2022-05-23	2023-04-08	2024-04-07
	Attenuator	PASTERNACK	PE708	37-6	10	624	2022-05-23	2023-04-08	2024-04-07



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6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB 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 (Method AVGPM)
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4 (Method PKPSD)
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



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7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

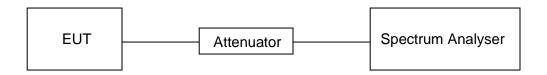
LIMITS

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

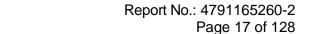
Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (kHz)	Final VBW (kHz)
11B	100	100	1	100%	0	/	0.01
11G	5.48	5.51	0.9946	99.46%	0.02	/	0.01
802.11N HT20	5.08	5.11	0.9941	99.41%	0.03	/	0.01

Note: 1) Duty Cycle Correction Factor= $10\log(1/x)$.

2) Where: x is Duty Cycle (Linear)

3) Where: T is On Time (transmit duration)

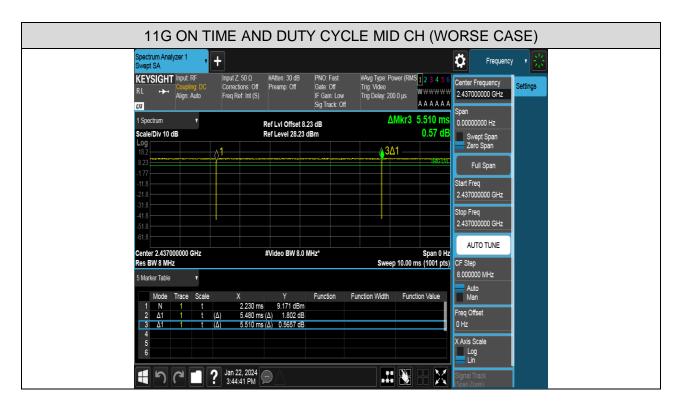
4) If the duty cycle is above 98%, the Final VBW is 10Hz.

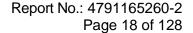




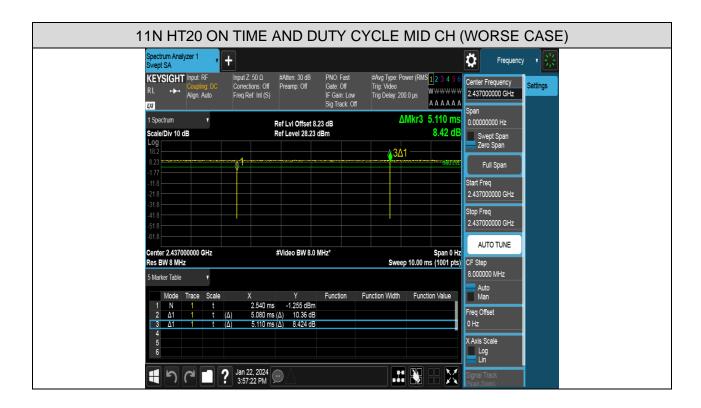
TEST GRAPHS













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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:

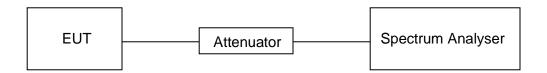
Connect the Lor to the spectrum analyser and use the following settings.			
Center Frequency	The centre frequency of the channel under test		
Detector	Peak		
RBW	For 6 dB Bandwidth: 100 kHz For 99% Occupied Bandwidth: 1% to 5% of the occupied bandwidth		
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99% Occupied 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.



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TEST SETUP



TEST ENVIRONMENT

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

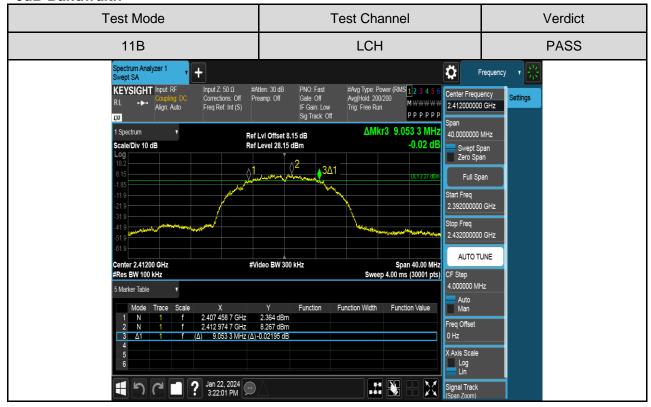
TEST RESULTS TABLE

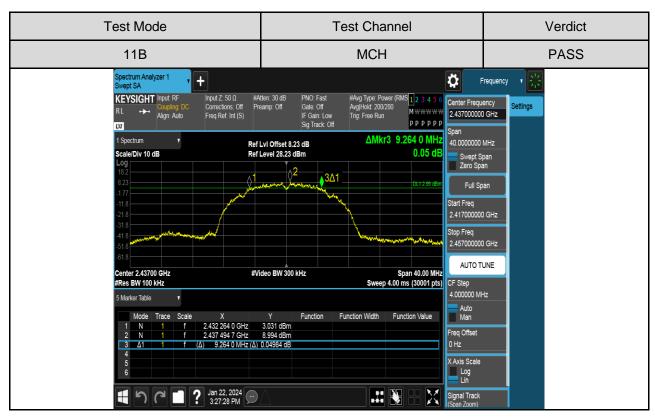
Test Mode	Test Channel	6dB bandwidth (MHz)	99% bandwidth (MHz)	Result
	LCH	9.0533	12.863	Pass
11B	MCH	9.2640	12.826	Pass
	HCH	9.7240	12.813	Pass
	LCH	16.3573	16.454	Pass
11G	MCH	16.3160	16.435	Pass
	HCH	16.0453	16.450	Pass
	LCH	16.5467	17.369	Pass
11N HT20	MCH	15.8320	17.339	Pass
	HCH	16.5013	17.364	Pass

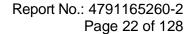


TEST GRAPHS

6dB Bandwdith

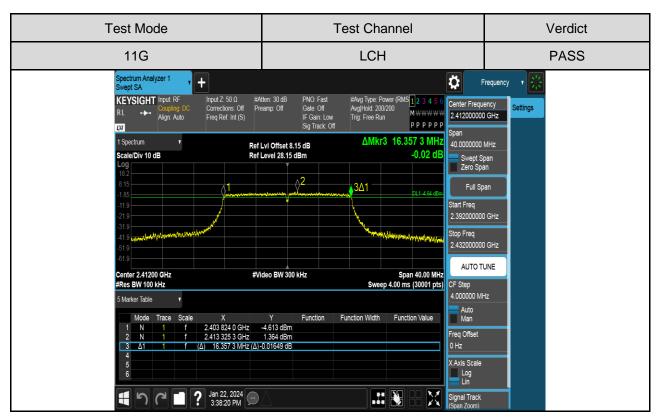


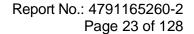




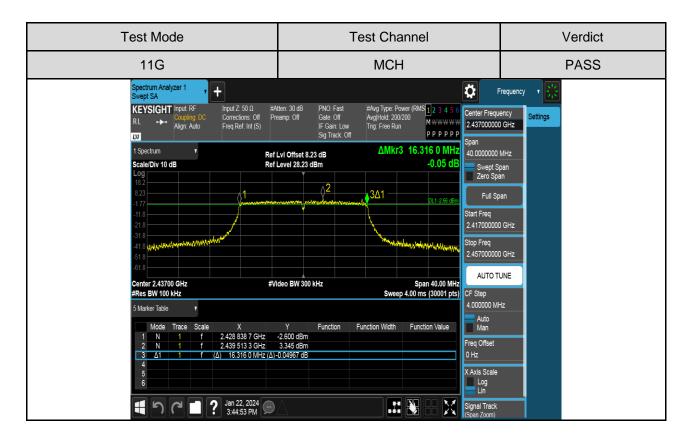


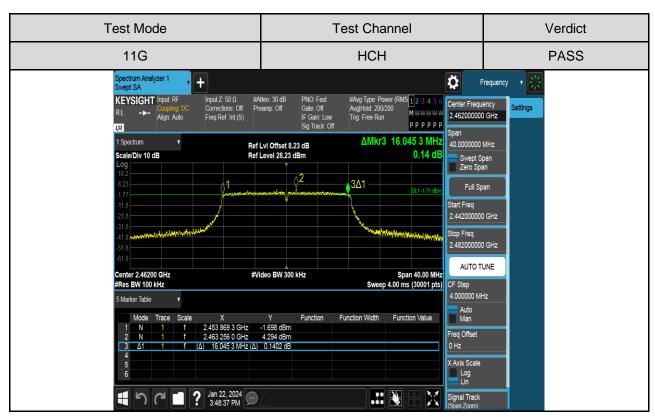


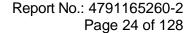




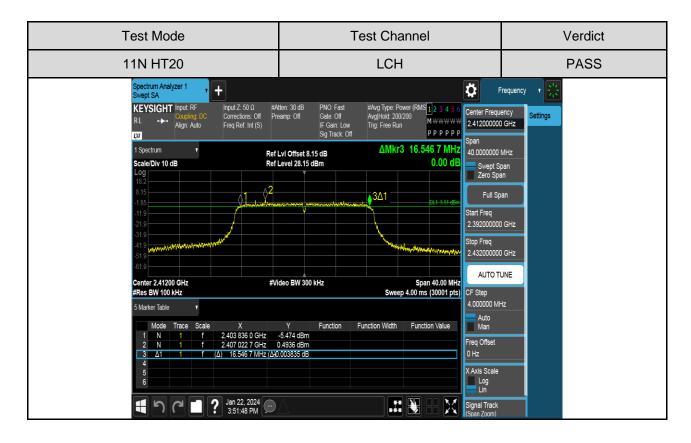


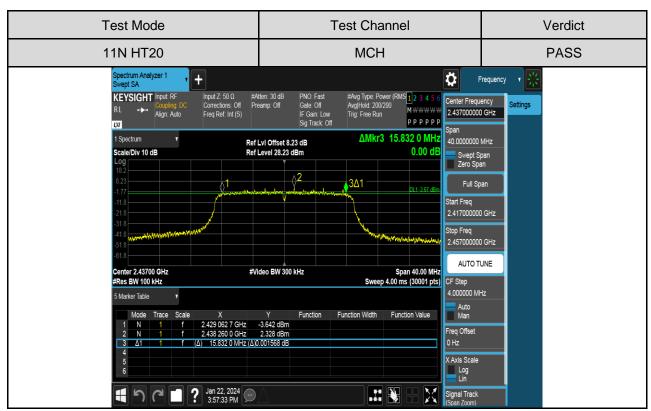


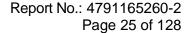






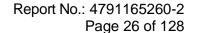






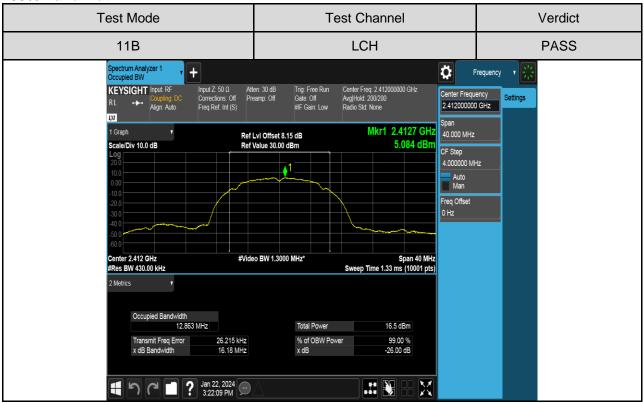


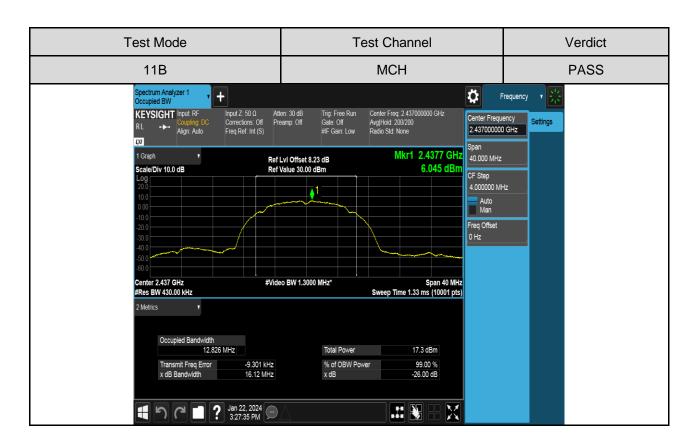
Test Mode **Test Channel** Verdict 11N HT20 **HCH PASS** Spectrum Analyzer 1 Swept SA Ö + Frequency Input Z: 50 Ω #Atten: 30 dB Preamp: Off #Avg Type: Power (RMS 1 2 3 4 5 Avg|Hold: 200/200 Trig: Free Run KEYSIGHT Input RF Center Frequency Gate: Off IF Gain: Low Sig Track: Off Corrections: Off Freq Ref: Int (S) Align: Auto M₩₩₩₩ 2.462000000 GHz PPPPPP ĻXI ΔMkr3 16.501 3 MHz 1 Spectrum Ref Lvl Offset 8.23 dB Ref Level 28.23 dBm 40.0000000 MHz Scale/Div 10 dB 0.06 dE Swept Span Zero Span Full Span 2.442000000 GHz Stop Freq 2.482000000 GHz AUTO TUNE Span 40.00 MHz Sweep 4.00 ms (30001 pts) #Video BW 300 kHz CF Step 4.000000 MHz #Res BW 100 kHz Auto Man Function Width Function Value Function req Offset X Axis Scale Log Lin X 4761 Signal Track (Span Zoom)

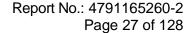




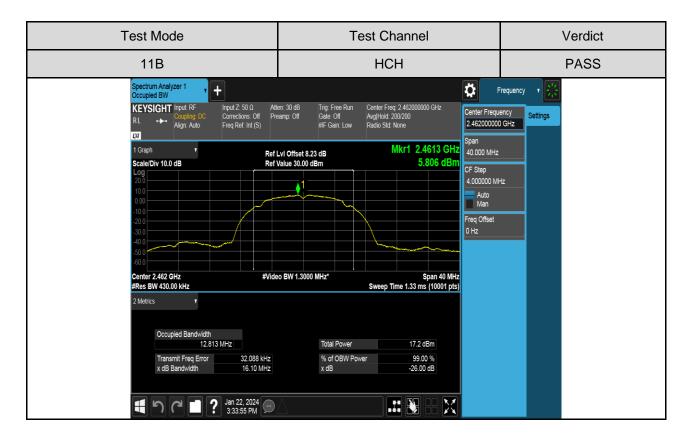
99% Bandwidth

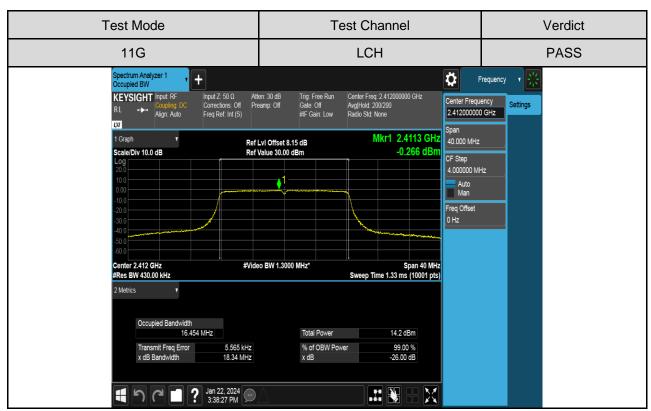


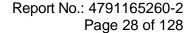




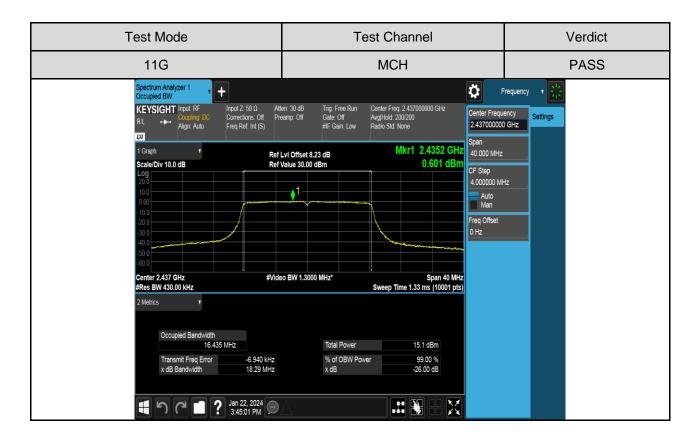


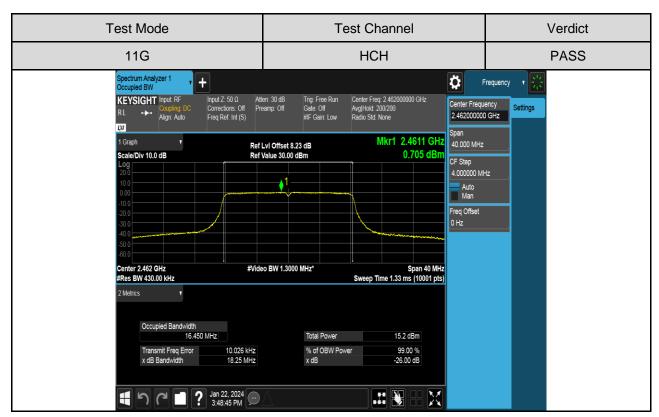


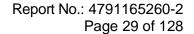




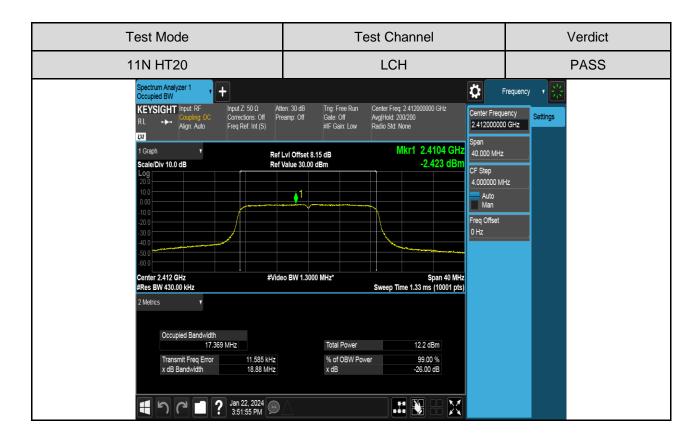


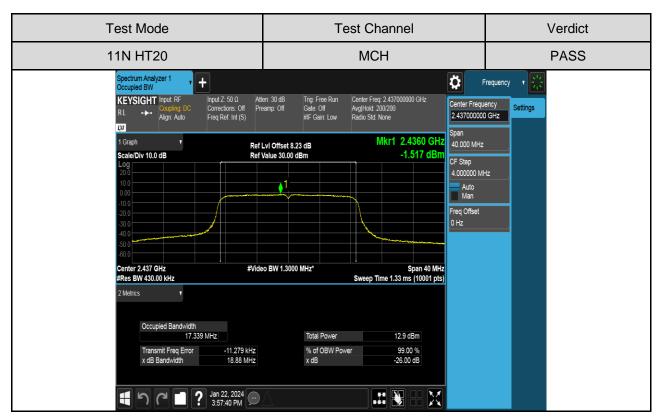


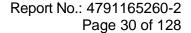














Test Mode Test Channel Verdict **PASS** 11N HT20 **HCH** Spectrum Analyzer 1 Occupied BW Ö + Frequency Atten: 30 dB Preamp: Off Trig: Free Run Gate: Off #IF Gain: Low Center Freq: 2.462000000 GHz Avg|Hold: 200/200 Radio Std: None Input Z: 50 Ω KEYSIGHT Input RF Center Frequency Settings Corrections: Off Freq Ref: Int (S) Align: Auto 2.462000000 GHz ĻXI Mkr1 2.4613 GHz 1 Graph Ref Lvl Offset 8.23 dB Ref Value 30.00 dBm 40.000 MHz Scale/Div 10.0 dB -1.726 dBn CF Step 4.000000 MHz Auto Man Freq Offset Span 40 MHz Sweep Time 1.33 ms (10001 pts) Center 2.462 GHz #Video BW 1.3000 MHz* #Res BW 430.00 kHz 2 Metrics Occupied Bandwidth 17.364 MHz Total Power 12.8 dBm 9.341 kHz 18.87 MHz 99.00 % -26.00 dB Transmit Freq Error x dB Bandwidth % of OBW Power x dB ? Jan 22, 2024 .:00:26 PM X 1961



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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

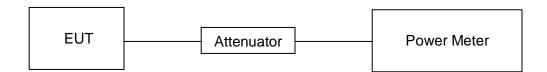
Place the EUT on the table and set it in the transmitting mode.

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





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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
	LCH	16.53	0	16.53	30
11B	MCH	17.31	0	17.31	30
	HCH	17.12	0	17.12	30
	LCH	14.24	0.02	14.26	30
11G	MCH	15.11	0.02	15.13	30
	HCH	15.14	0.02	15.16	30
	LCH	12.22	0.03	12.25	30
11N HT20	MCH	12.96	0.03	12.99	30
	HCH	12.78	0.03	12.81	30



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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

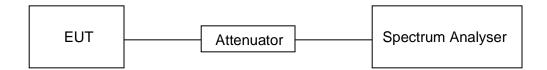
Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

oottingo.	
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





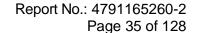
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TEST ENVIRONMENT

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

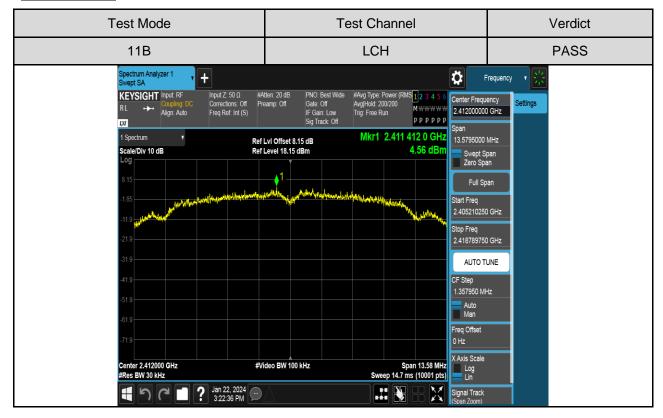
TEST RESULTS TABLE

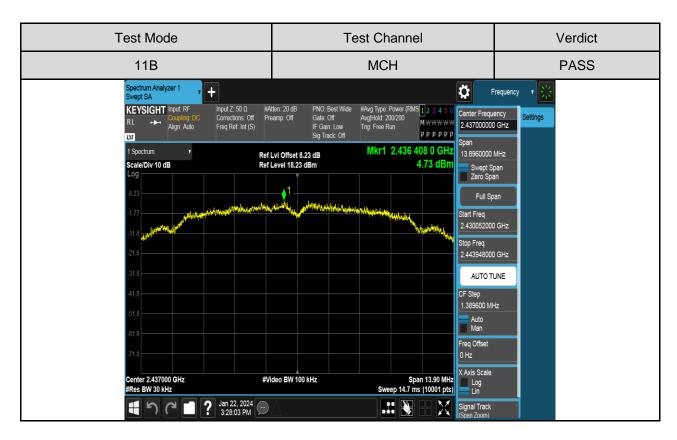
Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
	LCH	4.56	Pass
11B	MCH	4.73	Pass
	HCH	4.27	Pass
	LCH	-1.58	Pass
11G	MCH	-0.52	Pass
	HCH	-0.77	Pass
	LCH	-3.86	Pass
11N HT20	MCH	-3.18	Pass
	HCH	-3.06	Pass

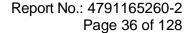




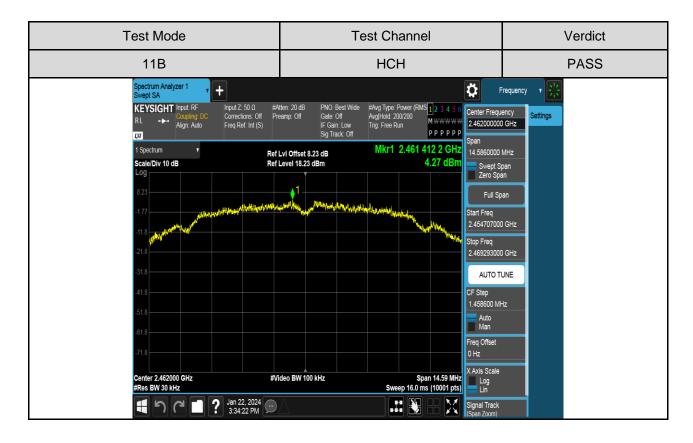
TEST GRAPHS

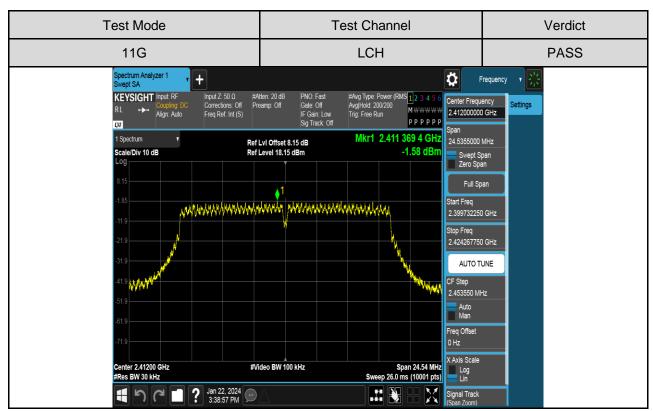


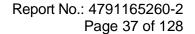




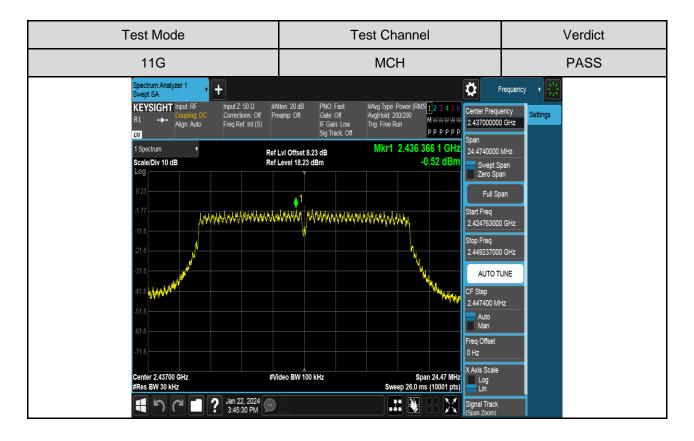


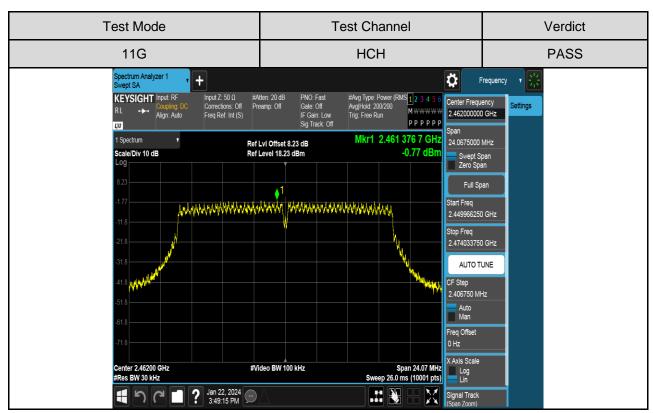


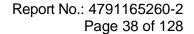




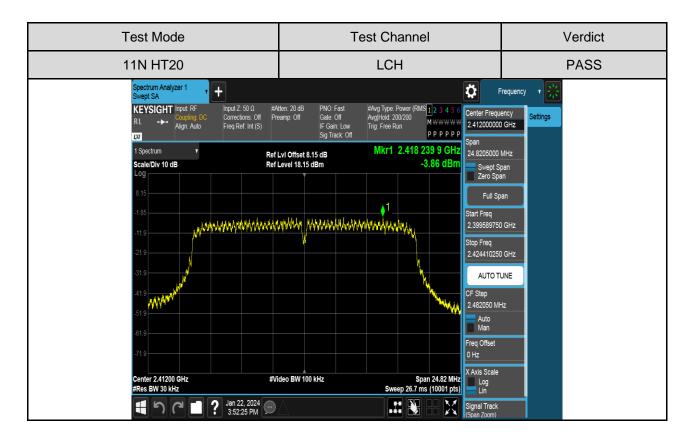


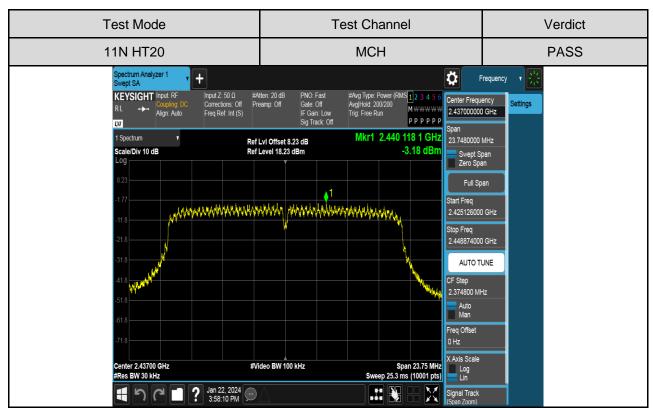


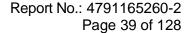














Test Mode **Test Channel** Verdict 11N HT20 **HCH PASS** Spectrum Analyzer 1 Swept SA Ö + Frequency #Avg Type: Power (RMS 1 2 3 4 5 0 Avg|Hold: 200/200 Trig: Free Run PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Input Z: 50 Ω #Atten: 20 dB Preamp: Off KEYSIGHT Input RF Center Frequency Corrections: Off Freq Ref: Int (S) Align: Auto M₩₩₩₩ 2.462000000 GHz PPPPPP ĻXI Mkr1 2.468 244 8 GHz 1 Spectrum Ref Lvl Offset 8.23 dB Ref Level 18.23 dBm 24.7515000 MHz -3.06 dBn Scale/Div 10 dB Swept Span Zero Span Full Span Start Freq 2.449624250 GHz Stop Freq 2.474375750 GHz AUTO TUNE 2.475150 MHz Auto Man Freq Offset 0 Hz X Axis Scale Span 24.75 MHz Sweep 26.7 ms (10001 pts) Center 2.46200 GHz #Video BW 100 kHz #Res BW 30 kHz X 4761 Signal Track (Span Zoom)



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7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	
FCC §15.247 (d) RSS-247 Clause 5.5	Conducted Bandedge and	30 dB below that in the 100 kHz bandwidth within the band that contains the highest	
RSS-GEN Clause 6.13	Spurious Emissions	level of the desired power	

TEST PROCEDURE

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

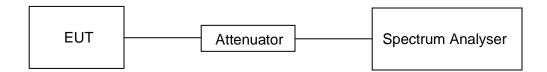
Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100K
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

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	≥3 x RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

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

TEST SETUP





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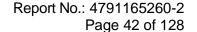
TEST ENVIRONMENT

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

PART 1: REFERENCE LEVEL MEASUREMENT

TEST RESULTS TABLE

Test Mode	Test Channel	Result[dBm]	
	LCH	8.79	
11B	MCH	8.68	
	HCH	8.58	
11G	LCH	2.18	
	MCH	2.98	
	HCH	3.55	
11N HT20	LCH	1.29	
	MCH	1.54	
	HCH	1.58	

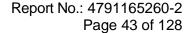




TEST GRAPHS

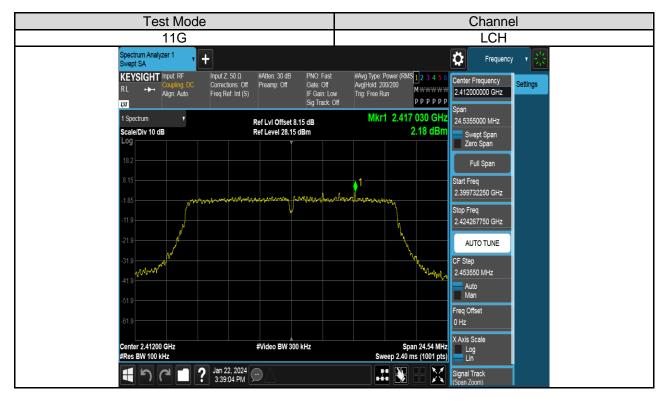


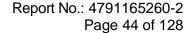




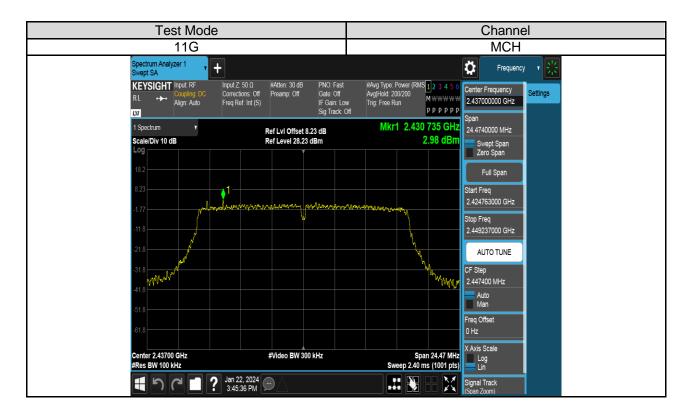


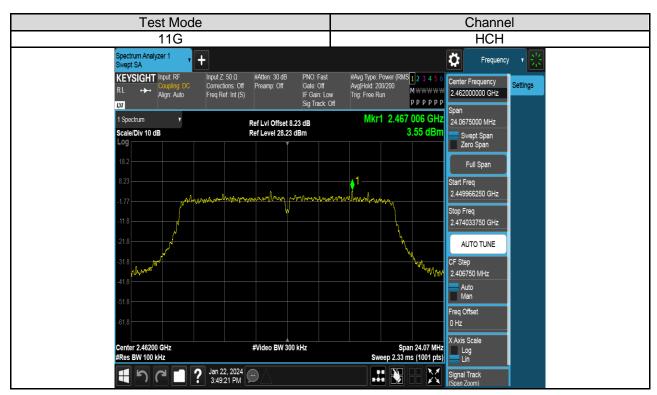


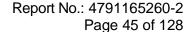




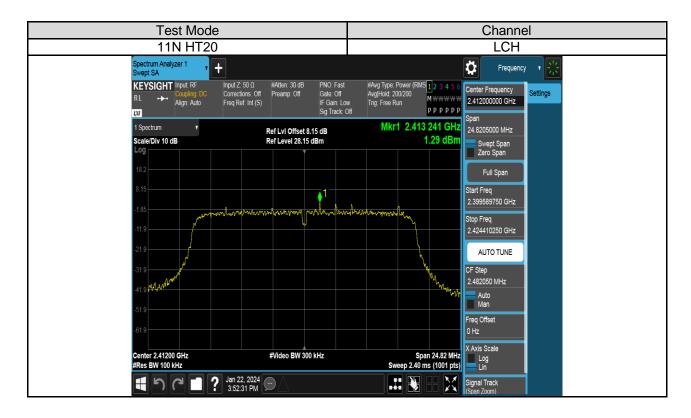




















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PART 2: CONDUCTED BANDEDGE

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





TEST GRAPHS



