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Report No.: HK2203291299-2E

# FCC TEST REPORT

Test report On Behalf of TeVii Technology Co.,Ltd. For Wireless HDMI Extender Model No.: G230RX, Extend+Expand

FCC ID: 2ALU5G230RX

Prepared For: TeVii Technology Co.,Ltd. 10F, No. 125, Sec. 2, Datong Rd. 22183 Xizhi District, New Taipei City, Taiwan

**Prepared By:** 

Shenzhen HUAK Testing Technology Co., Ltd.

1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

 Date of Test:
 Mar. 29, 2022 ~ May. 17, 2022

 Date of Report:
 May. 17, 2022

 Report Number:
 HK2203291299-2E

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Test

## **TEST RESULT CERTIFICATION**

Applicant's name	TeVii Technology Co.,Ltd.
Address	10F, No. 125, Sec. 2, Datong Rd. 22183 Xizhi District, New Taipei City, Taiwan
Manufacture's Name	TeVii Technology Co.,Ltd.
Address	10F, No. 125, Sec. 2, Datong Rd. 22183 Xizhi District, New Taipei City, Taiwan
Product description	
Trade Mark:	TEVII/ClearClick
Product name:	Wireless HDMI Extender
Model and/or type reference .:	G230RX, Extend+Expand
Standards	FCC Rules and Regulations Part 15 Subpart E Section 15.407 ANSI C63.10: 2013

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Date (s) of performance of tests	Mar. 29, 2022 ~ May. 17, 2022
Date of Issue	May. 17, 2022
Test Result	Pass

Prepared by:

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Project Engineer

Reviewed by:

Approved by:

**Project Supervisor** 

lasin Unou

**Technical Director** 

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## \*\* Modified History \*\*

Revision	Description	Issued Data	Remark	
Revision 1.0	Initial Test Report Release	May. 17, 2022	Jason Zhou	
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# 1. TEST RESULT SUMMARY

## **1.1. TEST PROCEDURES AND RESULTS**

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Maximum Conducted Output Power	§15.407(a)	PASS
6dB Emission Bandwidth	§15.407(e)	N/A
26dB Emission Bandwidth & 99% Occupied Bandwidth	§15.407(a)	PASS
Power Spectral Density	§15.407(a)	PASS
Band edge	§15.407(b)/15.209/15.205	PASS
Radiated Emission	§15.407(b)/15.209/15.205	PASS
Frequency Stability	§15.407(g)	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

# **1.2. INFORMATION OF THE TEST LABORATORY**

Shenzhen HUAK Testing Technology Co., Ltd. Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01. FCC Designation Number is CN1229. Canada IC CAB identifier is CN0045. CNAS Registration Number is L9589.

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FICATION

## **1.3. MEASUREMENT UNCERTAINTY**

**HUAK TESTING** 

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	±2.71dB
o <sup>∞</sup> 2	RF power, conducted	±0.37dB
3	Spurious emissions, conducted	±0.11dB
4	All emissions, radiated(<1G)	±3.90dB
5	All emissions, radiated(>1G)	±4.28dB
6	Temperature	±0.1°C
7	Humidity	±1.0%

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# 2. EUT DESCRIPTION

# 2.1. GENERAL DESCRIPTION OF EUT

Equipment	Wireless HDMI Extender		
Model Name	G230RX	C HUAKTES	O HUAN
Series Model	Extend+Expand	NY TESTING	
Trade Mark	TEVII/ClearClick	O HO.	HUAK TESTA
Model Difference	same, only with a product color, ap	pearance and mo	
FCC ID	2ALU5G230RX	O HUAN	O HON
Operation Frequency			i National American
Modulation Technology	IEEE 802.11a/n/ac	0,	O m
Modulation Type	OFDM	HUAKTESTING	resting
Antenna Type	External Antenna		O HUAK .
Antenna Gain	Antenna 1:2.85dBi Antenna 2:2.85dBi MIMO: 5.86dBi	HIAKTESTAN	INVG
Power Source	DC 12V from adapter		0
Model NameG230RXSeries ModelExtend+ExpandTrade MarkTEVII/ClearClickModel DifferenceAll model's the function, software and electric circuit are the same, only with a product color, appearance and model named different. Test sample model: G230RX.FCC ID2ALU5G230RXOperation FrequencyIEEE 802.11a/n/ac(HT20) 5.180GHz-5.240GHz IEEE 802.11a/n/ac(HT40) 5.190GHz-5.230GHz IEEE 802.11ac(HT80) 5.210GHzModulation TechnologyIEEE 802.11a/n/acModulation TypeOFDMAntenna TypeExternal AntennaAntenna GainAntenna 1:2.85dBi Antenna 2:2.85dBi MIMO: 5.86dBi			

#### Note:

The EUT incorporates a MIMO function. Physically, it provides two completed transmitters a nd receivers(2T2R), two transmit signals are completely correlated, then, Direction gain= GANT + Array Gain(Array Gain=10 log(2) dB for power spectral density; Array Gain=0 for power measurement).

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# 2.2. OPERATION FREQUENCY EACH OF CHANNEL

802.11a/802.11n(HT20) 802.11ac(HT20)		802.11n(HT40)/ 802.11ac(HT40)		802.11ac(HT80)		
8	Channel	Frequency	Channel	Frequency	Channel	Frequency
ſ	36	5180	38	5190	42	5210
5	40	5200	46	5230	AKTESTIN	aliG
ľ	44	5220		WIAK TESTIN	O.m.	I LAK TESTIN
	48	5240	G		-asis	0.

#### Note:

In section 15.31(*m*), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

## 2.3. OPERATION OF EUT DURING TESTING

For 802.11a/n (HT20)/ac (HT20)

Band I (5150 - 5250 MHz)					
Channel Number	Channel	Frequency (MHz)			
36	Low	5180			
40	Mid	5200			
48	High	5240			
6	HOM				

### For 802.11n (HT40)/ac (HT40)

Band I (5150 - 5250 MHz)					
Channel Number Channel Frequency (MHz)					
38	Low	5190			
46	High	5230			
MISGI MISGI					

#### For 802.11ac (HT80)

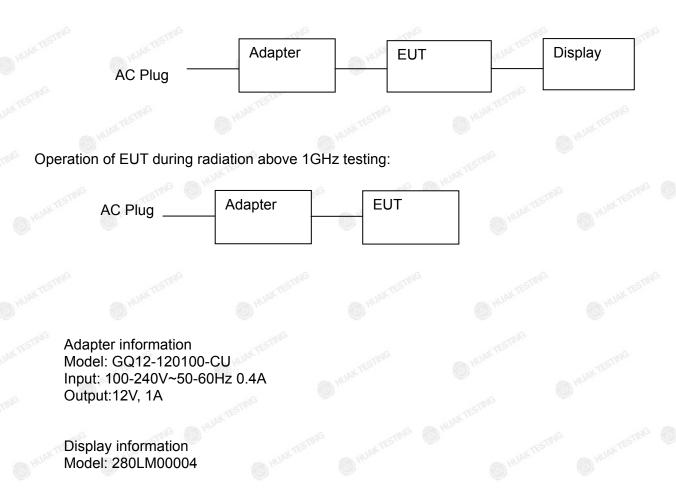
Band I (5150 - 5250 MHz)			
Channel Number	Frequency (MHz)		
42	5210		

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## 2.4. DESCRIPTION OF TEST SETUP

Operation of EUT during conducted testing and radiation below 1GHz testing:



The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.

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# 3. GENERA INFORMATION

# 3.1. TEST ENVIRONMENT AND MODE

perating Environment:			
Temperature:	25.0 °C	HUNKTES	HUAKTES
Humidity:	56 % RH	-mig	
Atmospheric Pressure:	1010 mbar	HUAKTEST	TESTING

### Test Mode:

	Keep the EUT in continuous transmitting
Engineering mode:	by select channel and modulations(The value of duty cycle is 100%)

The sample was placed 0.8m/1.5m for blow/above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

TESTING	Mode	K TESTING	Data rate	KTESTIN
<u>-</u>	802.11a	O HUM	6 Mbps	O POINT
N <sup>G</sup>	802.11n(HT20)	Ð	MCS0	alG
<b>a</b> 1	802.11n(HT40)	HUAKTESTA	MCS0	HUAKTESTIC
802.11	ac(HT20)/ac(HT40)/ac(HT80)	Ð	MCS0	
Final Te	st Mode:			
Operatio	n mode:	Keep the EUT in continuous transmitting with modulation		

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## **3.2. DESCRIPTION OF SUPPORT UNITS**

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name	
1	G / MANTESTO	10 1 55000	HUAK TESTING	/	

#### Note:

**HUAK TESTING** 

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
- 3. For conducted measurements (Output Power, Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

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# 4. TEST RESULTS AND MEASUREMENT DATA

# 4.1. CONDUCTED EMISSION

## 4.1.1. Test Specification

STING STING	STING	NG	NG			
Test Requirement:	FCC Part15 C Section	15.207	HUANTE			
Test Method:	ANSI C63.10:2013					
Frequency Range:	150 kHz to 30 MHz	O HUAK .	WAX TESTING			
Receiver setup:	RBW=9 kHz, VBW=30	kHz, Sweep time	=auto			
	Frequency range	Limit (d	dBuV)			
	(MHz)	Quasi-peak	Average			
Limits:	0.15-0.5	66 to 56*	56 to 46*			
	0.5-5	56	46			
	5-30	60	50			
		00 M	100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100			
	WARTES - WARTES					
	Referen	ce Plane				
	10					
	40cm	80cm				
		Filter –	– AC power 🤌			
	E.U.T AC pow		•			
Test Setup:	€G.	EMI				
	Test table/Insulation plan	e				
	Remark					
	E.U.T: Equipment Under Test					
	LISN: Line Impedence Stabilization   Test table height=0.8m	Network				
Test Mode:	Tx Mode	ING TEST	ING TEST			
	1. The E.U.T and simu	latora ara conno	atad ta tha main			
	power through a line					
	(L.I.S.N.). This pro	ovides a 50ohm	/50uH coupling			
	1 S S S S S S S S S S S S S S S S S S S	impedance for the measuring equipment.				
	2. The peripheral devic	es are also conne	ected to the main			
	power through a LI	SN that provides	a 50ohm/50uH			
	coupling impedance					
Test Procedure:						
	refer to the block	diagram of the	test setup and			
	photographs).					
	3. Both sides of A.C.	line are checke	d for maximum			
	conducted interferer					
	emission, the relative	e positions of equ	ipment and all of			
	the interface cables					
	ANSI C63.10: 2013					
	AINSI C03.10: 2013	on conducted mea	asurement.			
Test Result:	PASS					
	TEST	CESTI-				

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1640 V (1833)		Sec. 1	10.000	Contraction of the second seco				
Conducted Emission Shielding Room Test Site (843)								
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due			
Receiver	R&S	ESCI 7	HKE-010	Feb. 18, 2022	Feb. 17, 2023			
LISN	R&S	ENV216	HKE-002	Feb. 18, 2022	Feb. 17, 2023			
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Feb. 18, 2022	Feb. 17, 2023			
Conducted test software	Tonscend	TS+ Rev 2.5.0.0	HKE-081	N/A	N/A			

## 4.1.2. Test Instruments

**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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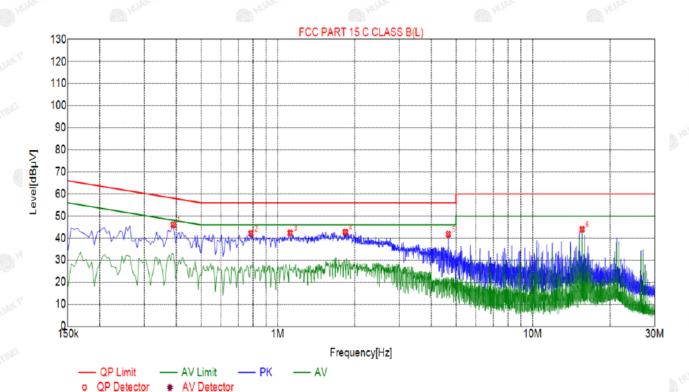
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## 4.1.3. Test data

#### All the test modes completed for test. only the worst result was reported as below: Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



# Suspected List

- 4									
	NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµ∨]	Margin [dB]	Reading [dBµV]	Detector	Туре
	1	0.3885	46.03	20.04	58.10	12.07	25.99	PK	L
3	2	0.7845	42.10	20.05	56.00	13.90	22.05	PK	L
	3	1.1175	42.30	20.08	56.00	13.70	22.22	PK	L
	4	1.8420	42.69	20.14	56.00	13.31	22.55	PK	L
	5	4.6725	41.79	20.26	56.00	14.21	21.53	PK	L
	6	15.5535	43.94	19.97	60.00	16.06	23.97	PK	L

Remark: Margin = Limit – Level Correction factor = Cable lose + LISN insertion loss Level=Test receiver reading + correction factor

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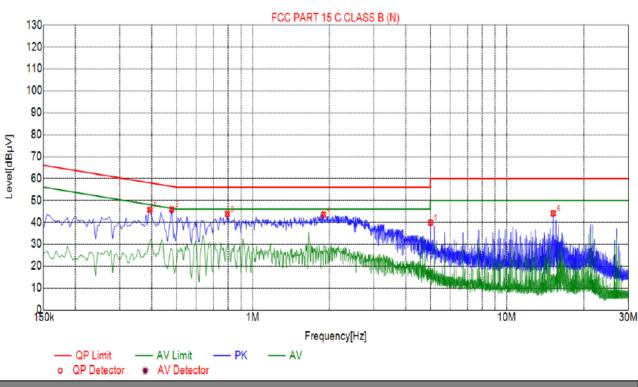
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#### Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



	Suspected List									
Canada -	NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Туре	
	1	0.3930	45.69	20.04	58.00	12.31	25.65	PK	N	
ŝ	2	0.4785	45.87	20.04	56.37	10.50	25.83	PK	Ν	
	3	0.7935	<b>4</b> 3.78	20.05	56.00	12.22	23.73	PK	N	
đ	4	1.9005	43.46	20.14	56.00	12.54	23.32	PK	N	
	5	5.0145	39.83	20.26	60.00	20.17	19.57	PK	Ν	
	6	15.1665	44.06	19.96	60.00	15.94	24.10	PK	Ν	

Remark: Margin = Limit – Level Correction factor = Cable lose + LISN insertion loss Level=Test receiver reading + correction factor

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# 4.2. MAXIMUM CONDUCTED OUTPUT POWER

## 4.2.1. Test Specification

Test Requirement:	FCC Part15 E Section 1	FCC Part15 E Section 15.407(a)				
Test Method:	KDB789033 D02 Genera Rules v02.r01 Section E	al UNII Test Procedures New				
Limit:	Frequency Band (MHz)	nit numerican				
	5150-5250 1W	for indoor access points device				
Test Setup:	Power meter					
Test Mode:	Transmitting mode with r	modulation				
Test Procedure:	KDB789033 D02 Ger Rules v02r01 Section 2. The RF output of EUT meter by RF cable ar compensated to the r 3. Set to the maximum p transmit continuously	<ol> <li>The testing follows the Measurement Procedure of KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E, 3, a.</li> <li>The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Measure the conducted output power and record the</li> </ol>				
Test Result:	PASS	O HUNKTER				
Remark:	+10log(1/x) X is duty cyc	Conducted output power= measurement power +10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power				

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RF Test Room							
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due		
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 18, 2022	Feb. 17, 2023		
Power meter	Agilent	E4419B	HKE-085	Feb. 18, 2022	Feb. 17, 2023		
Power Sensor	Agilent	E9300A	HKE-086	Feb. 18, 2022	Feb. 17, 2023		
RF cable	Times	1-40G	HKE-034	Feb. 18, 2022	Feb. 17, 2023		
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 18, 2022	Feb. 17, 2023		

## 4.2.2. Test Instruments

**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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## 4.2.3. Test Data

	C	onfiguration	Band I (5150 -	5250 MHz)		
Mode	Test channel		ximum Conduct tput Power (dBr	FCC Limit	Result	
	onannor	Antenna 1	Antenna 1 Antenna 2 MIMO		(dBm)	
11a 👘	CH36	13.57	11.44	P	30	PASS
11a	CH40	11.80	11.79	I TESTING	30	PASS
11a	CH48	11.42	14.02	O HOT	30	PASS
11n(HT20)	CH36	9.97	10.28	13.14	MM 30 0 M	PASS
11n(HT20)	CH40	10.65	10.26	13.47	30	PASS
11n(HT20)	CH48	11.88	12.53	<sub>o</sub> 15.23	30	PASS
11n(HT40)	CH38	10.95	11.76	14.38	30	PASS
11n(HT40)	CH46	11.65	10.27	14.02	30	PASS
11ac(HT20)	CH36	10.36	11.22	13.82	30	PASS
11ac(HT20)	CH40	12.59	9.52	14.33	30	PASS
11ac(HT20)	CH48	11.27	12.85	15.14	30	PASS
11ac(HT40)	CH38	9.91	9.70	12.82	30	PASS
11ac(HT40)	CH46	11.16	10.23	13.73	30	PASS
11ac(HT80)	CH42	10.27	9.03	12.70	30	PASS

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## 4.3. 6DB EMISSION BANDWIDTH

## 4.3.1. Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407(e)				
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C				
Limit:	>500kHz				
Test Setup:	Spectrum Analyzer				
Test Mode:	Transmitting mode with modulation				
Test Procedure:	<ol> <li>KDB789033 D02 General UNII Test Procedures New Rules v01r04 Section C.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz.</li> <li>Measure and record the results in the test report.</li> </ol>				
Test Result:	PASS				

## 4.3.2. Test Instruments

RF Test Room								
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due			
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 18, 2022	Feb. 17, 2023			
RF cable	Times	1-40G	HKE-034	Feb. 18, 2022	Feb. 17, 2023			
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 18, 2022	Feb. 17, 2023			

**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

## 4.3.3. Test data

N/A

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HUAK TESTING

# 4.4. 26DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

## 4.4.1. Test Specification

Test Requirement:	47 CFR Part 15C Section 15.407 (a)					
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C					
Limit:	No restriction limits					
Test Setup:	Spectrum Analyzer EUT					
Test Mode:	Transmitting mode with modulation					
Test Procedure:	<ol> <li>KDB789033 D02 General UNII Test Procedures N Rules v02r01 Section C.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Make the measurement with the spectrum analyze resolution bandwidth RBW = 1% EBW, VBW≥3RE In order to make an accurate measurement.</li> <li>Measure and record the results in the test report.</li> </ol>					
Test Result:	PASS					

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### 4.4.2. Test Instruments

RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 18, 2022	Feb. 17, 2023	
RF cable	Times	<sup>°</sup> 1-40G	HKE-034	Feb. 18, 2022	Feb. 17, 2023	
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 18, 2022	Feb. 17, 2023	

**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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## 4.4.3. Test data

Band I ANT 1

Mode	Test channel	Frequency (MHz)	26 dB Bandwidth (MHz)	Verdict
11a	CH36	5180	20.24	PASS
11a	CH40	5200	20.64	PASS
11a 🗤	CH48	5240	20.56	PASS
11n(HT20)	CH36	5180	20.56	PASS
11n(HT20)	CH40	5200	20.64	PASS
11n(HT20)	CH48	5240	20.56	PASS
11n(HT40)	CH38	5190	43.20	PASS
11n(HT40)	CH46	5230	43.20	PASS
11ac(HT20)	CH36	5180	20.68	PASS
11ac(HT20)	CH40	5200	20.84	PASS
11ac(HT20)	CH48	5240	21.20	PASS
11ac(HT40)	CH38	5190	42.56	PASS
11ac(HT40)	CH46	5230	42.88	PASS
11ac(HT80)	CH42	5210	82.56	PASS

Test plots as follows:

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#### Band I (5150 - 5250 MHz)



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ANT 2		IAKTEST - WAKTER	JAK TES	- WAKTE
Mode Test channel		Frequency (MHz)	26 dB Bandwidth (MHz)	Verdict
11a	CH36	5180	20.64	PASS
11a 🌒	CH40	5200	20.20	PASS
11a	CH48	o 5240	20.24	PASS
11n(HT20)	CH36	5180	20.84	PASS
11n(HT20)	CH40	5200	20.76	PASS
11n(HT20)	CH48	5240	20.76	PASS
11n(HT40)	CH38	5190	42.80	PASS
11n(HT40)	CH46	5230	43.36	PASS
11ac(HT20)	CH36	5180	20.92	PASS
11ac(HT20)	CH40	5200	20.92	PASS
11ac(HT20)	CH48	5240	20.72	PASS
11ac(HT40)	CH38	5190	43.20	PASS
11ac(HT40)	CH46	5230	42.72	PASS
11ac(HT80)	CH42	5210	82.72	PASS

Test plots as follows:

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#### Band I (5150 - 5250 MHz)



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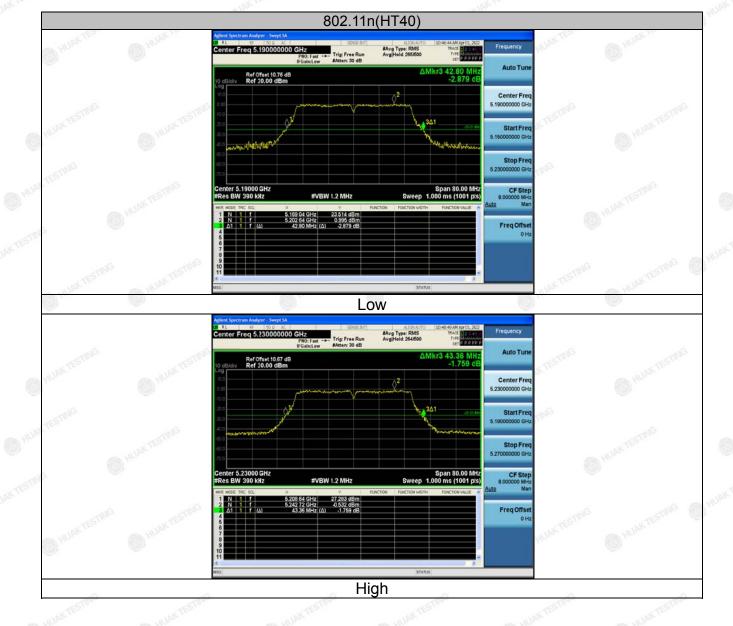
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## 4.5. POWER SPECTRAL DENSITY

## 4.5.1. Test Specification

Task Damissing					
Test Requirement:	FCC Part15 E Section 15.407 (a)				
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section F				
Limit:	≤11.00dBm/MHz for Band I 5150MHz-5250MHz ≤17dBm/MHz for indoor access device				
Test Setup:	Spectrum Analyzer				
Test Mode:	Transmitting mode with modulation				
Test Procedure:	<ol> <li>Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.</li> <li>Set RBW = 1MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS.</li> <li>Allow the sweeps to continue until the trace stabilizes.</li> <li>Use the peak marker function to determine the maximum amplitude level.</li> <li>The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.</li> </ol>				
Test Result:	PASS				

## 4.5.2. Test Instruments

RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 18, 2022	Feb. 17, 2023	
RF cable	Times	1-40G	HKE-034	Feb. 18, 2022	Feb. 17, 2023	
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 18, 2022	Feb. 17, 2023	

**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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## 4.5.3. Test data

## ANT 1

## Configuration Band I (5150 - 5250 MHz )

Mode	Test channel	Level [dBm/MHz]	Limit (dBm/MHz)	Result
11a	CH36	6.6	17 JUNE 1	PASS
11a	CH40	6.05	17	PASS
11a	CH48	5.91	17 restruc	PASS
11n(HT20)	CH36	4.22	9 17	PASS
11n(HT20)	CH40	5.23	17	PASS
11n(HT20)	CH48	6.9	17	PASS
11n(HT40)	CH38	3.18	17	PASS
11n(HT40)	CH46	3.37	17	PASS
11ac(HT20)	CH36	4.58	17	PASS
11ac(HT20)	CH40	5.34	17 HUM T	PASS
11ac(HT20)	CH48	5.54	17	PASS
11ac(HT40)	CH38	1.13	17,55,000	PASS
11ac(HT40)	CH46	2.75	17	PASS
11ac(HT80)	CH42	-0.2	17	PASS

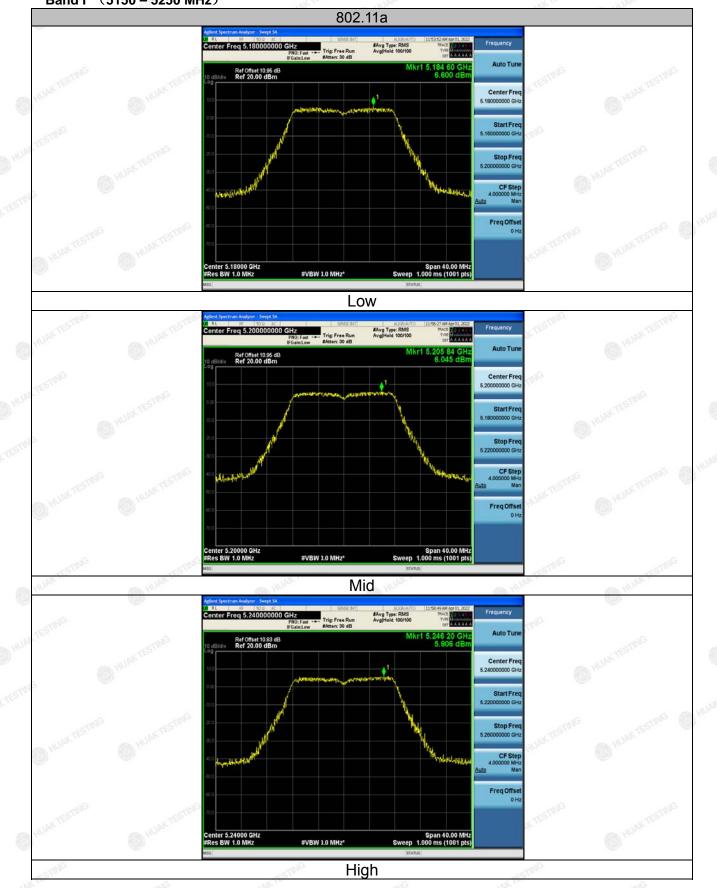
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#### Test plots as follows: Band I (5150 – 5250 MHz)



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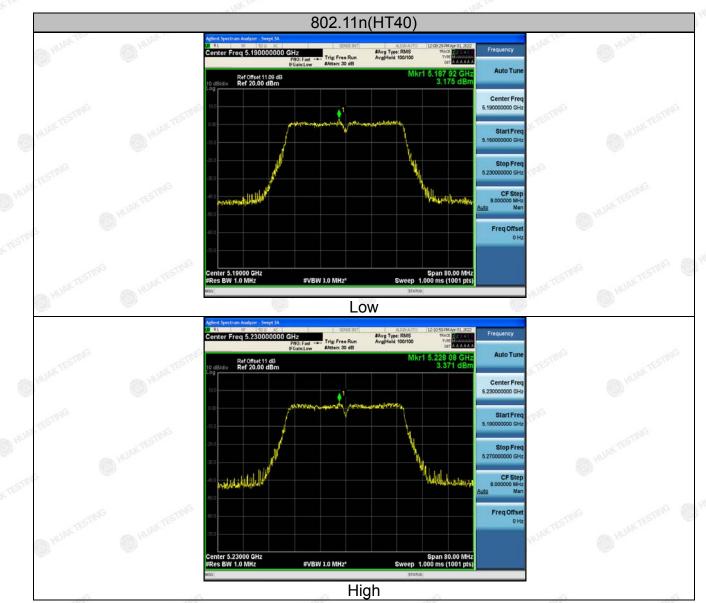
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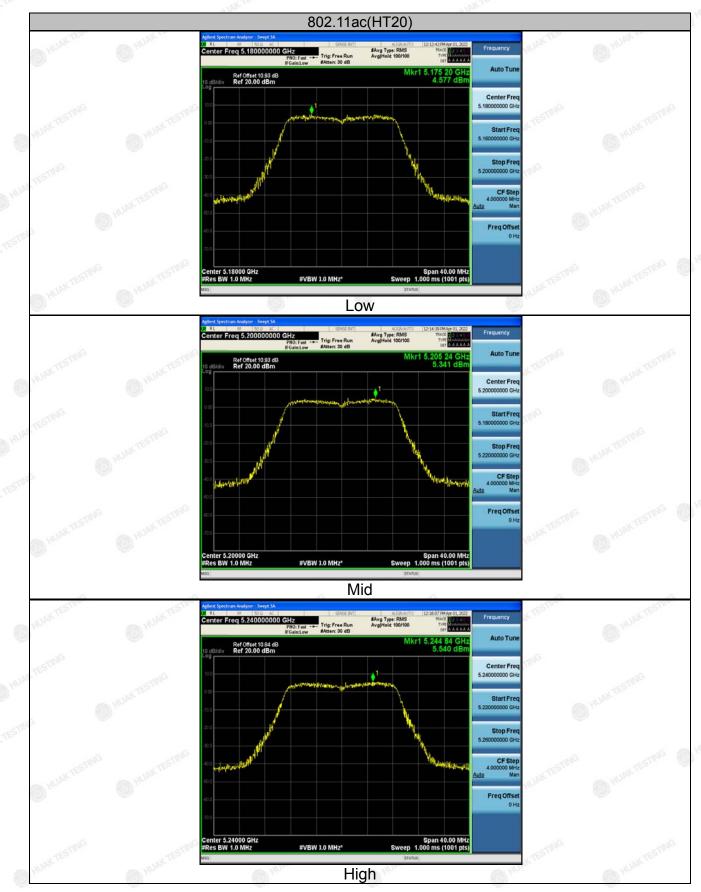
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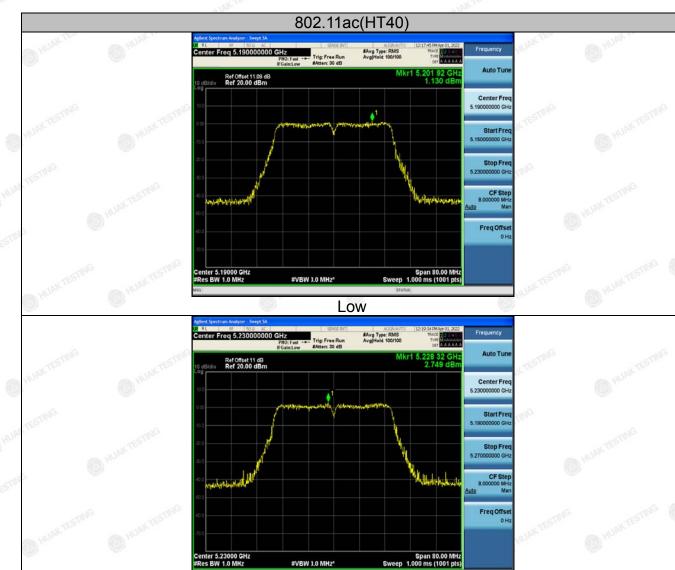


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High

802.11ac(HT80) #Avg Type: RMS Avg|Hold 100/100 a 5.210 Trig: Free Run 199 60 0 -0.195 d Ref Offset 11.3 dB Ref 20.00 dBm Center Fr **↓**<sup>1</sup> Start F top F CFS Freq Offs enter 5.21000 GHz Res BW 1.0 MHz Span 160.0 M ep 1.000 ms (1001 p #VBW 3.0 MHz Low

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