

FCC Test Report

Test Report
On Behalf of
Shenzhen Ningyuanda Technology Co., Ltd
For
WIFI CAMERA

Model No.: F2, F1, F3, F4, F5, F6, F7, F8, F9, N1, N2, N3, N4, N5, N6, N7, N8, N9, J1, J2, J3, J4, J5, J6, J7

FCC ID: 2BEXJ-F2

Prepared For: Shenzhen Ningyuanda Technology Co., Ltd

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Date of Test: Oct. 28, 2024 ~ Nov. 14, 2024

Date of Report: Nov. 14, 2024

Report Number: HK2410286324-1E



Test Result Certification

Applicant's Name:	Shenzhen Ningyuanda	Technology Co., Ltd
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Shenzhen, China

Manufacturer's Name Shenzhen Ningyuanda Technology Co., Ltd

Shenzhen, China

Product Description

Trade Mark N/A

Product Name...... WIFI CAMERA

Model and/or Type Reference : F2, F1, F3, F4, F5, F6, F7, F8, F9, N1, N2, N3, N4, N5, N6, N7,

N8, N9, J1, J2, J3, J4, J5, J6, J7

FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10: 2013

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Date of Test

Date (s) of Performance of Tests Oct. 28, 2024 ~ Nov. 14, 2024

Date of Issue...... Nov. 14, 2024

Test Result : Pass

Testing Engineer

m uon

Len Liao

Technical Manager

Or White

Sliver Wan

Authorized Signatory

Jason Muu

Jason Zhou



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** Modified History **

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Nov. 14, 2024	Jason Zhou
JAN HUAN		HUAN	
		9	

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1. Test Result Summary

1.1 Test Procedures and Results

-711	-711	_7111"	
Requirement	CFR 47 Section	Result	
Antenna requirement	§15.203/§15.247(b)(4)	PASS	
AC Power Line Conducted Emission	§15.207	PASS	
Conducted Peak Output Power	§15.247(b)(3)	PASS	
6dB Emission Bandwidth	§15.247(a)(2)	PASS	
Power Spectral Density	§15.247(e)	PASS	
Band Edge	§15.247(d)	PASS	
Spurious Emission	§15.205/§15.209	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.

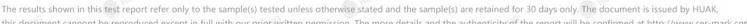
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1.3 Measurement Uncertainty

The reported uncertainty of measurement y ± 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
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%





2. EUT Description

2.1 General Description of EUT

Equipment:	WIFI CAMERA	-CTNG	TING
Model Name:	F2	HUAKTE	HUAKTE
Series Model:	F1, F3, F4, F5, F6, F7, F8, F9, N N8, N9, J1, J2, J3, J4, J5, J6, J7		5, N6, N7,
Model Difference:	All model's the function, software same, only with product model no model: F2.		
FCC ID:	2BEXJ-F2		
Antenna Type:	External Antenna	0	(
Antenna Gain:	2.91dBi	TING	-TING
Operation Frequency:	802.11b/g/n 20:2412~2462 MHz 802.11n 40: 2422~2452MHz	Munk is	MAN TE
Number of Channels:	802.11b/g/n20: 11CH 802.11n 40: 7CH	HUAKTESTING	TESTING
Modulation Type:	DSSS, OFDM	0	WAR.
Power Source:	DC5V from Type-C	ESTING	
Power Rating:	DC5V from Type-C	AKTESTING.	HAY TESTING

Note:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2. Antenna gain Refer to the antenna specifications.
- 3. The cable loss data is obtained from the supplier.
- 4. The test results in the report only apply to the tested sample.

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2.2 Carrier Frequency of Channels

	Channel List For 802.11b/802.11g/802.11n (HT20)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	^{AUP 10}	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452	-STING	

Channel List For 802.11n (HT40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
STINE	N. TESTIL	04	2427	07	2442	TESTIN	OKTE
@ H		05	2432	08	2447	M HODE	(1) HO
03	2422	06	2437	09	2452		

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

Operating Mode

The mode is used: Transmitting mode for 802.11b/802.11g/802.11n (HT20)

Low Channel: 2412MHz Middle Channel: 2437MHz High Channel: 2462MHz

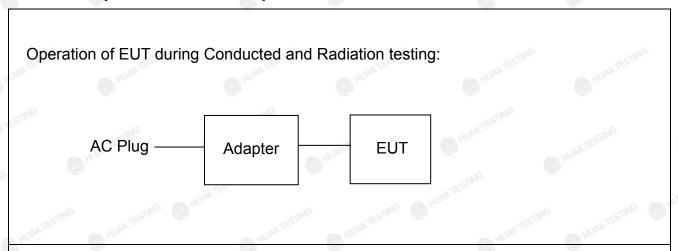
The mode is used: Transmitting mode for 802.11n (HT40)

Low Channel: 2422MHz Middle Channel: 2437MHz High Channel: 2452MHz

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2.4 Description of Test Setup



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. General Information

3.1 Test Environment and Mode

perating Environment:			
Temperature:	25.0 °C	HUAKTESII	HUAKT
Humidity:	56 % RH	(a)	9
Atmospheric Pressure:	1010 mbar	AKTESTING	
est Mode:		3.55	200-
Engineering Mode:	Keep the EUT by select chann		

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. For the full battery state and The output power to the maximum state.

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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.

Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(H20)	6.5Mbps
802.11n(H40)	13.5Mbps

Final Test Mode:

Operation mode:	Keep the EUT in continuous transmitting
Operation mode.	with modulation

- 1. For WIFI function, the engineering test program was provided and enabled to make EUT continuous transmit/receive.
- 2.According to ANSI C63.10 standards, the test results are both the "worst case" and "worst setup" 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n(H20), 13.5Mbps for 802.11n(H40).

3. Mode Test Duty Cycle

Mode	Duty Cycle	Duty Cycle Factor (dB)
802.11b	0.91	-0.41
802.11g	0.91	-0.41
802.11n(H20)	0.92	-0.36
802.11n(H40)	0.91	-0.41

Test plots as follows:

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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.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Remark
(TESTY)G	WIFI CAMERA	N/A	F2	N/A	EUT
2	Adapter	N/A	MDY-10-EH	Input: AC100-240V, 50/60Hz, 0.7A Output: DC5V/3A, 9V/3A, 12V/2.25A, 20V/1.35A	Peripheral
MAN .	€ HUA	HUAN	O HUM	O HUAN	MA
TESTIN	i TESTINE	TESTIN	i TESTING	TESTING	TESTING

Note:

- 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, 6dB 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

Test Specification

Ine impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the mover through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all	TING	Table Table Table				
Test Mode: 150 kHz to 30 MHz Receiver Setup: RBW=9 kHz, VBW=30 kHz, Sweep time=auto Frequency range	Test Requirement:	FCC Part15 C Section 15.207				
Receiver Setup: RBW=9 kHz, VBW=30 kHz, Sweep time=auto Frequency range Limit (dBuV) (MHz) Quasi-peak Average 0.15-0.5 66 to 56* 56 to 46* 0.5-5 56 46 5-30 60 50 Reference Plane LINT Ac power B0cm LISN	Test Method:	ANSI C63.10:2013				
Frequency range Limit (dBuV)	Frequency Range:	150 kHz to 30 MHz				
Test Mode: Test Mode: Test Procedure: (MHz) Quasi-peak Average 0.15-0.5 66 to 56* 56 to 46* 0.5-5 56 46 5-30 60 50 Reference Plane 40cm E.U.T Ac power Filter Ac power Test table finsulation plane Receiver E.U.T Equational Under Tast 1.50 Labe impedence Stabilization Network Test table height-0.8m Test Mode: Transmitting with modulation 1. The E.U.T is connected to the main power through line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the modulation power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all	Receiver Setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto				
Test Setup: LISN	Limits:	(MHz) Quasi-peak Average 0.15-0.5 66 to 56* 56 to 46* 0.5-5 56 46				
1. The E.U.T is connected to the main power through line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the mover through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all	Test Setup:	40cm E.U.T AC power 80cm Filter AC power Test table/Insulation plane Remark E.U.T: Equipment Under Test LISN Line Impedence Stabilization Network				
Iine impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the mover through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all	Test Mode:	Transmitting with modulation				
the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.	Test Procedure:	 The E.U.T is connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to 				
Test Result: PASS	Test Result:	PASS				



Test Instruments

Conducted Emission Shielding Room Test Site (843)					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Receiver	R&S	ESR	HKE-005	Feb. 20, 2024	Feb. 19, 2025
LISN	R&S	ENV216	HKE-002	Feb. 20, 2024	Feb. 19, 2025
LISN	R&S	ENV216	HKE-059	Feb. 20, 2024	Feb. 19, 2025
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Feb. 20, 2024	Feb. 19, 2025
EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	Feb. 20, 2024	Feb. 19, 2025
10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 20, 2024	Feb. 19, 2025

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

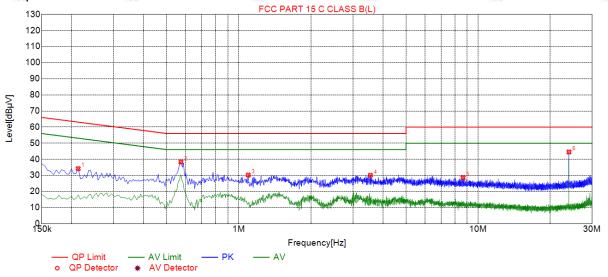
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4.2 Test Result

All modes have been tested, only the worst result was reported as below:





Sus	Suspected List							
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Туре
1	0.2130	34.18	19.85	63.09	28.91	14.33	PK	L
2	0.5730	38.28	19.86	56.00	17.72	18.42	PK	L
3	1.0950	30.21	19.88	56.00	25.79	10.33	PK	L
4	3.5475	30.06	20.09	56.00	25.94	9.97	PK	L
5	8.6550	28.53	20.01	60.00	31.47	8.52	PK	L
6	24.0000	44.53	20.10	60.00	15.47	24.43	PK	L

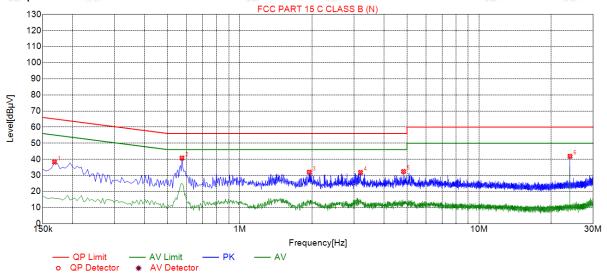
Remark: Margin = Limit - Level

Correction factor = Cable lose + ISN insertion loss

Level=Test receiver reading + correction factor

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Sus	Suspected List							
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Туре
1	0.1680	38.24	19.71	65.06	26.82	18.53	PK	N
2	0.5730	40.77	19.74	56.00	15.23	21.03	PK	N
3	1.9500	31.98	19.83	56.00	24.02	12.15	PK	N
4	3.1965	31.84	19.94	56.00	24.16	11.90	PK	N
5	4.8345	32.41	20.00	56.00	23.59	12.41	PK	N
6	24.0000	41.86	20.19	60.00	18.14	21.67	PK	N

Remark: Margin = Limit - Level

Correction factor = Cable lose + ISN insertion loss

Level=Test receiver reading + correction factor

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4.3 Maximum Conducted Output Power

Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)			
Test Method:	KDB 558074 D01 15.247 Meas Guidance v05r02			
Limit:	30dBm			
Test Setup:	RF automatic control unit EUT HUMAN TOSTING HUMA			
Test Mode:	Transmitting mode with modulation			
Test Procedure:	 The testing follows the Measurement Procedure of FCC KDB 558074 D01 15.247 Meas Guidance v05r02. The RF output of EUT was connected to the RF automatic control unit by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Measure the Peak output power and record the results in the test report. 			
Test Result:	PASS			

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Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
Power meter	Agilent	E4419B	HKE-085	Feb. 20, 2024	Feb. 19, 2025
Power Sensor	Agilent	E9300A	HKE-086	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.3.23	HKE-083	Feb. 20, 2024	Feb. 19, 2025

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



Test Data

		TX 802.11b Mode		
Test Channel	Frequency	Maximum Peak Conducted Output Power	er LIMIT	
rest Charmer	(MHz)	(dBm)	dBm	
CH01	2412	13.99	30	
CH06	2437	13.51	30	
CH11	2462	13.40	30	
HUAY TESTIN		TX 802.11g Mode	STING HUAKT	
CH01	2412	13.70	30	
CH06	2437	13.87	30	
CH11	2462	13.51	30	
		TX 802.11n20 Mode		
CH01	2412	13.77 MARKETE	30	
CH06	2437	14.17	30	
CH11	2462	12.99	30	
HUANTES		TX 802.11n40 Mode	HUAKT	
CH03	2422	13.64	30	
CH06	2437	13.51	30	
CH09	2452	13.67	30	

Note: The test results including the cable loss.



4.4 Emission Bandwidth

Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)					
Test Method:	KDB 558074 D01 15.247 Meas Guidance v05r02					
Limit:	>500kHz					
Test Setup:	Spectrum Analyzer EUT	TING				
Test Mode:	Transmitting mode with modulation					
Test Procedure:	 The testing follows FCC KDB Publication 558074 D01 15.247 Meas Guidance v05r02. Set to the maximum power setting and enable the EUT transmit continuously. 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. Measure and record the results in the test report. 					
Test Result:	PASS					

Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.3.23	HKE-083	N/A	N/A

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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Test Data

Test Channel		6dB Emission Bandwidth (MHz)					
rest Channel	802.11b	802.11g	802.11n(H20)	802.11n(H40)			
Lowest	7.080	15.280	17.560	33.200			
Middle	6.560	15.840	14.160	34.800			
Highest	6.520	15.040	17.560	34.080			
Limit:		>5(00kHz	(HUND			
Test Result:	- MAKTESTINE	Р	ASS				

Test plots as follows:

802.11b Modulation

Lowest channel



Middle channel



Highest channel



FICATION



802.11g Modulation

Lowest channel



Middle channel



Highest channel



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802.11n (HT20) Modulation

Lowest channel



Middle channel



Highest channel





802.11n (HT40) Modulation

Lowest channel

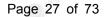


Middle channel



Highest channel







4.5 Power Spectral Density

Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)				
Test Method:	KDB 558074 D01 15.247 Meas Guidance v05r02				
Limit:	The average power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.				
Test Setup:	Spectrum Analyzer EUT				
Test Mode:	Transmitting mode with modulation				
Test Procedure:	 The testing follows Measurement procedure 10.2 method PKPSD of FCC KDB Publication 558074 D01 15.247 Meas Guidance v05r02. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): 3 kHz ≤ RBW ≤ 100 kHz. Video bandwidth VBW ≥ 3 x RBW. Set the span to at least 1.5 times the OBW. Detector = Peak, Sweep time = auto couple. Employ trace averaging (Peak) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level. Measure and record the results in the test report. 				
Test Result:	PASS				

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Test Instruments

RF Test Room							
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due		
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025		
RF cable	Times (1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025		
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025		
RF Test Software	Tonscend	JS1120-3 Version 3.3.23	HKE-083	N/A	N/A		

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



Test Data

EUT Set Mode	Channel	Result (dBm/30KHz)	Result (dBm/3kHz)		
802.11b	Lowest	2.58	-7.42		
	Middle	3.01	-6.99		
	Highest	3.01	-6.99		
802.11g	Lowest	-1.39	-11.39		
	Middle	-1.49	-11.49		
	Highest	-1.35	-11.35		
802.11n(H20)	Lowest	-1.12	-11.12		
	Middle	-1.43	-11.43		
	Highest	-0.12	-10.12		
802.11n(H40)	Lowest	-3.64	-13.64		
	Middle	-2.72	-12.72		
	Highest	-3.7	-13.7		
PSD Test Resul	t (dBm/3kHz)= PS	D Test Result (dBm/30kl	Hz)-10		
Limit: 8dBm/3kl	-lz				
Test Result:	PASS				
AID - CT	· 1347	74/4c 55/16 (1995)	AND COM		

Test plots as follows:

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802.11b Modulation

Lowest channel



Middle channel



Highest channel



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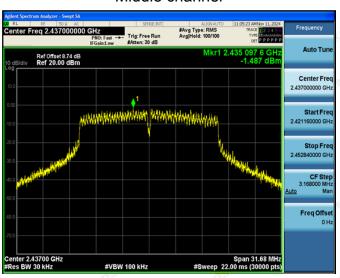


802.11g Modulation

Lowest channel



Middle channel



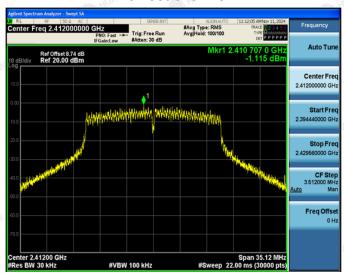
Highest channel



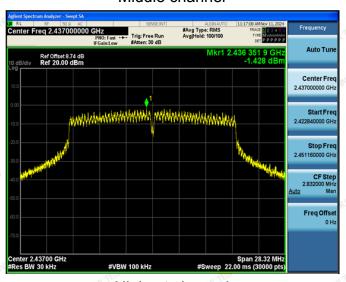


802.11n (HT20) Modulation

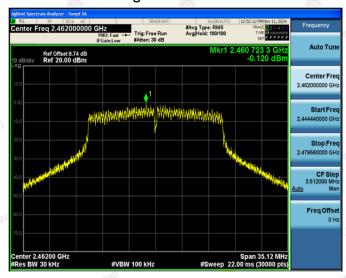
Lowest channel



Middle channel



Highest channel



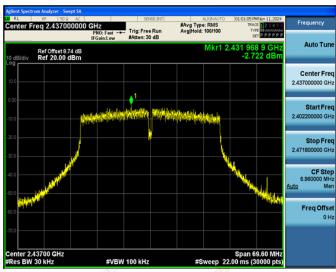


802.11n (HT40) Modulation

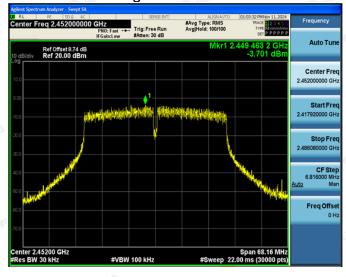
Lowest channel

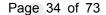


Middle channel



Highest channel







4.6 Conducted Band Edge and Spurious Emission Measurement

Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)				
Test Method:	KDB 558074 D01 15.247 Meas Guidance v05r02				
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).				
Test Setup:	Spectrum Analyzer EUT				
Test Mode:	Transmitting mode with modulation				
Test Procedure:	 Transmitting mode with modulation The testing follows FCC KDB Publication 558074 D01 15.247 Meas Guidance v05r02. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). Measure and record the results in the test report. The RF fundamental frequency should be excluded 				
Test Result:	PASS				



Test Instruments

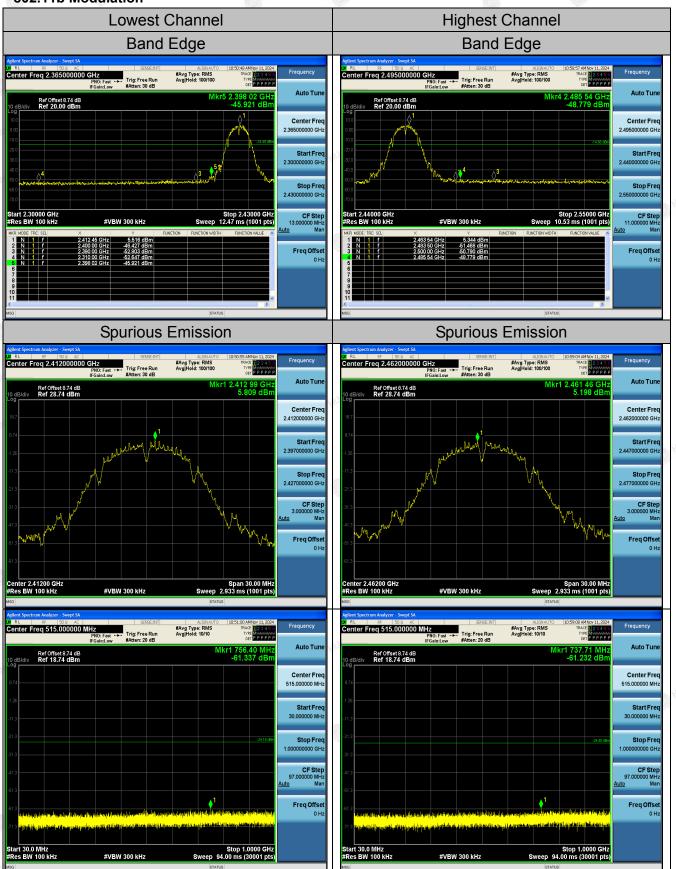
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RF Test Room							
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due		
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025		
High pass filter unit	Tonscend	JS0806-F	HKE-055	Feb. 20, 2024	Feb. 19, 2025		
RF Cable (9KHz-26.5GHz)	Tonscend	170660	N/A	Feb. 20, 2024	Feb. 19, 2025		
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025		
RF Test software	Tonscend	JS1120-B Version 2.6	HKE-083	N/A	N/A		

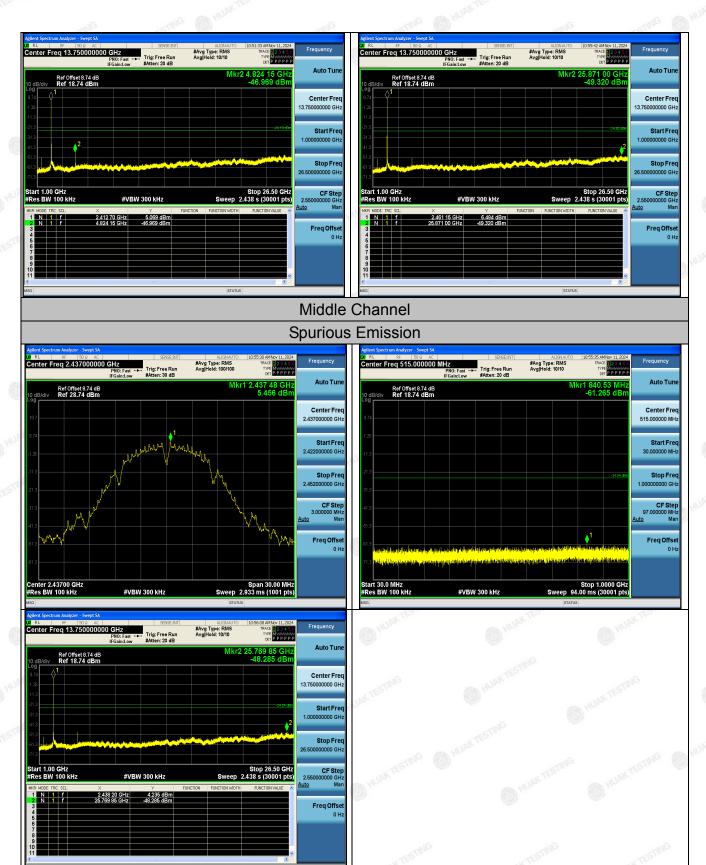
Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).



Test Data

802.11b Modulation





TSTING TSTING

802.11g Modulation



