



# FCC Test Report

**Test Report  
On Behalf of  
Shenzhen Qianhai Peppos Technology Co., Ltd.  
For  
PEPPOS Pet Feeder  
Model No.: F10, F20**

**FCC ID: 2BFTT-F10**

**Prepared For:** Shenzhen Qianhai Peppos Technology Co., Ltd.  
No. 1, Qianwan 1st Road, Qianhai Shenzhen-Hong Kong Cooperation Zone,  
Shenzhen, Guangdong, China

**Prepared By:** Shenzhen HUAK Testing Technology Co., Ltd.  
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Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

**Date of Test:** Oct. 30, 2023 ~ Mar. 12, 2024

**Date of Report:** Mar. 12, 2024

**Report Number:** HK2310174832-1E

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## Test Result Certification

**Applicant's Name**.....: Shenzhen Qianhai Peppos Technology Co., Ltd.

Address .....: No. 1, Qianwan 1st Road, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, Guangdong, China

**Manufacturer's Name** .....: DONGGUAN ICOSEN MOULD TECHNOLOGY CO.,LTD

Address .....: No. 3, 1st Road, Buxinji Industrial Zone, Guanjingtou Village, Fenggang Town, Dongguan City, China

### Product Description

Trade Mark .....: PEPPOS

Product Name.....: PEPPOS Pet Feeder

Model and/or Type Reference : F10, F20

Standards .....: 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. 30, 2023 ~ Mar. 12, 2024

Date of Issue .....: Mar. 12, 2024

Test Result.....: Pass

Testing Engineer

Len Liao

Technical Manager

Sliver Wan

Authorized  
Signatory

Jason Zhou



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

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Mar. 12, 2024	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/§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.



### 1.3. Measurement Uncertainty

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	$\pm 2.71\text{dB}$
2	RF power, conducted	$\pm 0.37\text{dB}$
3	Spurious emissions, conducted	$\pm 0.11\text{dB}$
4	All emissions, radiated(<1G)	$\pm 3.90\text{dB}$
5	All emissions, radiated(>1G)	$\pm 4.28\text{dB}$
6	Temperature	$\pm 0.1^\circ\text{C}$
7	Humidity	$\pm 1.0\%$



## 2. EUT Description

### 2.1. General Description of EUT

Equipment:	PEPPOS Pet Feeder
Model Name:	F10
Series Model:	F20
Model Difference:	All model's the function, software and electric circuit are the same, only with product model named different. Test sample model: F10.
FCC ID:	2BFTT-F10
Antenna Type:	PCB Antenna
Antenna Gain:	2.21dBi
Operation Frequency:	802.11b/g/n 20:2412~2462 MHz 802.11n 40: 2422~2452MHz
Number of Channels:	802.11b/g/n20: 11CH 802.11n 40: 7CH
Modulation Type:	CCK/OFDM/DBPSK/DAPS
Power Source:	DC5V from Type-C
Power Rating:	DC5V from Type-C

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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	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452	--	--

Channel List For 802.11n (HT40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
--	--	04	2427	07	2442	--	--
--	--	05	2432	08	2447	--	--
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

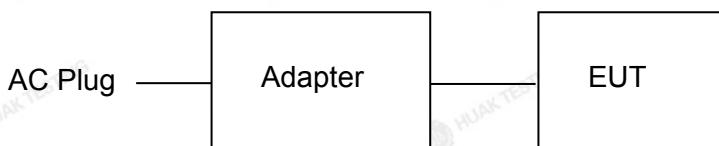
#### The mode is used: Transmitting mode for 802.11n (HT40)

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



## 2.4. Description of Test Setup

Operation of EUT during Conducted and Radiation 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.



### 3. General Information

#### 3.1. Test Environment and Mode

<b>Operating Environment:</b>	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
<b>Test Mode:</b>	
Engineering Mode:	Keep the EUT in continuous transmitting by select channel and modulations
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.	



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 with modulation
-----------------	---

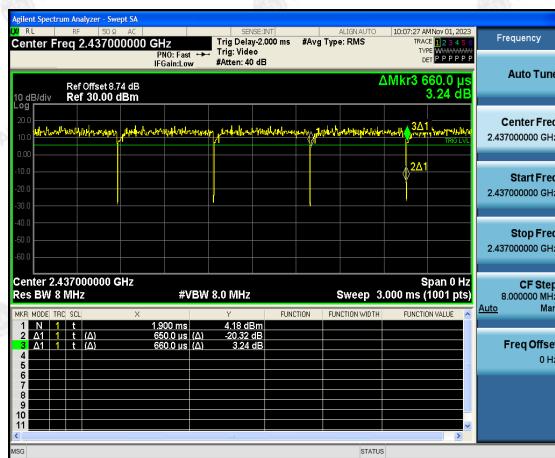
1. For WIFI function, the engineering test program was provided and enabled to make EUT continuous transmit/receive.

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	0.989	-0.046
802.11g	0.986	-0.062
802.11n(H20)	0.985	-0.066
802.11n(H40)	0.985	-0.066

Test plots as follows:

**802.11b****802.11g****802.11n(H20)****802.11n(H40)**

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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	Note
1	PEPPOS Pet Feeder	PEPPOSE	F10	N/A	EUT
2	Adapter	N/A	WH010A-0502100UVU	Input: AC100-240V, 50/60Hz, 0.35A Max Output: DC5V, 2100mA	Accessory
3	USB Cable 1	N/A	N/A	Color: white Length: 150cm	Accessory
4	USB Cable 2	N/A	N/A	Color: black Length: 25cm	Accessory

**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.



## 4. Test Results and Measurement Data

### 4.1. Conducted Emission

#### Test Specification

<b>Test Requirement:</b>	FCC Part15 C Section 15.207														
<b>Test Method:</b>	ANSI C63.10:2013														
<b>Frequency Range:</b>	150 kHz to 30 MHz														
<b>Receiver Setup:</b>	RBW=9 kHz, VBW=30 kHz, Sweep time=auto														
<b>Limits:</b>	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
<b>Test Setup:</b>	<p>Reference Plane</p> <p>40cm</p> <p>E.U.T — AC power — LISN — Filter — AC power</p> <p>Test table/Insulation plane</p> <p>Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>														
<b>Test Mode:</b>	Transmitting with modulation														
<b>Test Procedure:</b>	<ol style="list-style-type: none"> <li>1. 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.</li> <li>2. 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).</li> <li>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 of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.</li> </ol>														
<b>Test Result:</b>	PASS														

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**Test Instruments**

Conducted Emission Shielding Room Test Site (843)					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Receiver	R&S	ESR-7	HKE-005	Feb. 17, 2023	Feb. 16, 2024
LISN	R&S	ENV216	HKE-002	Feb. 17, 2023	Feb. 16, 2024
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Feb. 17, 2023	Feb. 16, 2024
10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 17, 2023	Feb. 16, 2024
Conducted test software	Tonscend	TS+ Rev 2.5.0.0	HKE-081	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).

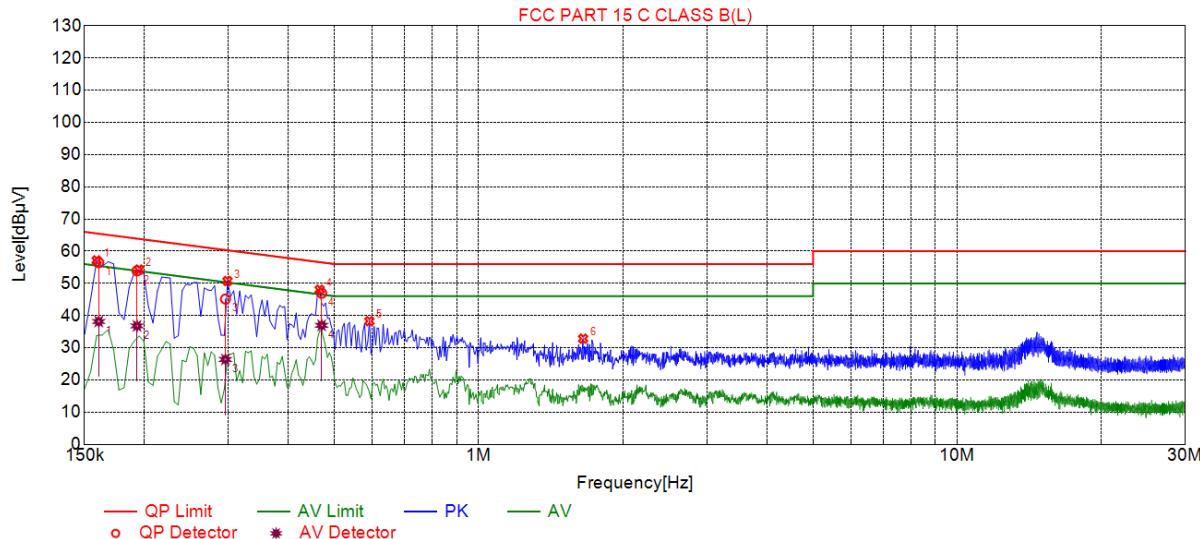
Conducted Emission Shielding Room Test Site (843)					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Receiver	R&S	ESR-7	HKE-005	Feb. 20, 2024	Feb. 19, 2025
LISN	R&S	ENV216	HKE-002	Feb. 20, 2024	Feb. 19, 2025
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Feb. 20, 2024	Feb. 19, 2025
10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 20, 2024	Feb. 19, 2025
Conducted test software	Tonscend	TS+ Rev 2.5.0.0	HKE-081	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).



## 4.2. Test Result

Test Specification: Line



### Suspected List

NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1590	57.14	20.01	65.52	8.38	37.13	PK	L
2	0.1950	54.29	20.03	63.82	9.53	34.26	PK	L
3	0.2985	50.74	20.04	60.28	9.54	30.70	PK	L
4	0.4650	48.06	20.04	56.60	8.54	28.02	PK	L
5	0.5910	38.27	20.05	56.00	17.73	18.22	PK	L
6	1.6530	32.83	20.12	56.00	23.17	12.71	PK	L

### Final Data List

NO.	Freq. [MHz]	Correction factor[dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	QP Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	AV Reading [dBμV]	Type
1	0.1606	20.00	56.43	65.43	9.00	36.43	38.16	55.43	17.27	18.16	L
2	0.1931	20.04	53.93	63.90	9.97	33.89	36.80	53.90	17.10	16.76	L
3	0.2955	20.03	45.15	60.37	15.22	25.12	26.36	50.37	24.01	6.33	L
4	0.4696	20.04	46.97	56.52	9.55	26.93	36.97	46.52	9.55	16.93	L

Remark: Margin = Limit – Level

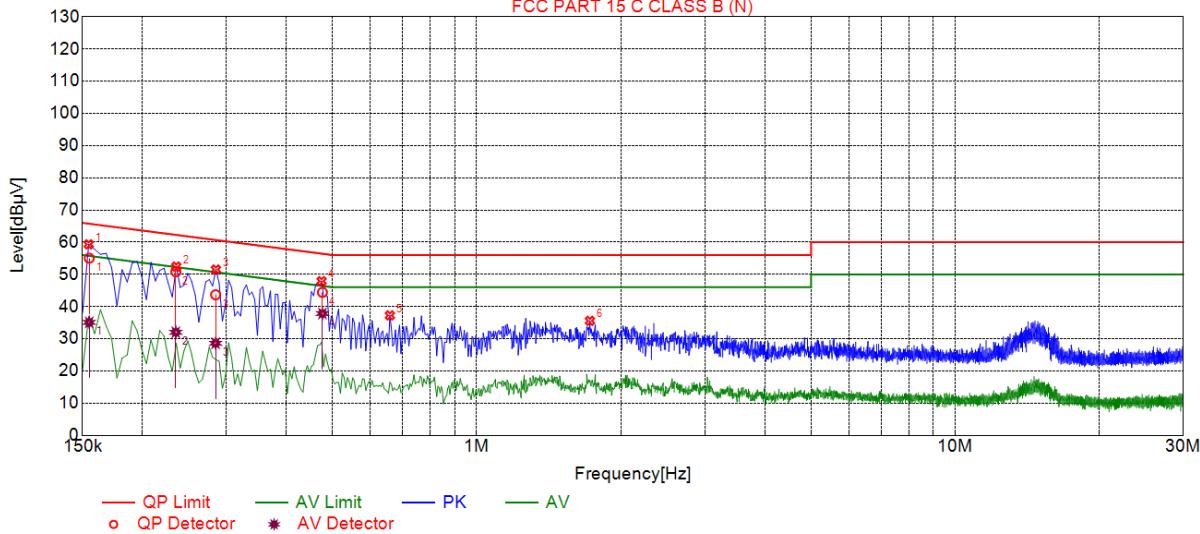
Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor



## Test Specification: Neutral

FCC PART 15 C CLASS B (N)



## Suspected List

NO.	Freq. [MHz]	Level [dB $\mu$ V]	Factor [dB]	Limit [dB $\mu$ V]	Margin [dB]	Reading [dB $\mu$ V]	Detector	Type
1	0.1545	59.33	20.03	65.75	6.42	39.30	PK	N
2	0.2355	52.43	20.03	62.25	9.82	32.40	PK	N
3	0.2850	51.50	20.04	60.67	9.17	31.46	PK	N
4	0.4740	47.90	20.04	56.44	8.54	27.86	PK	N
5	0.6585	37.25	20.05	56.00	18.75	17.20	PK	N
6	1.7250	35.57	20.13	56.00	20.43	15.44	PK	N

## Final Data List

NO.	Freq. [MHz]	Correction factor[dB]	QP Value [dB $\mu$ V]	QP Limit [dB $\mu$ V]	QP Margin [dB]	QP Reading [dB $\mu$ V]	AV Value [dB $\mu$ V]	AV Limit [dB $\mu$ V]	AV Margin [dB]	AV Reading [dB $\mu$ V]	Type
1	0.1549	20.01	55.03	65.73	10.70	35.03	35.10	55.73	20.63	15.10	N
2	0.2350	20.03	50.83	62.27	11.44	30.80	32.02	52.27	20.25	11.99	N
3	0.2846	20.04	43.67	60.68	17.01	23.63	28.60	50.68	22.08	8.56	N
4	0.4759	20.04	44.43	56.41	11.98	24.39	37.84	46.41	8.57	17.80	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

### 4.3. Maximum Conducted Output Power

# Test Specification

## Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 17, 2023	Feb. 16, 2024
Power meter	Agilent	E4419B	HKE-085	Feb. 17, 2023	Feb. 16, 2024
Power Sensor	Agilent	E9300A	HKE-086	Feb. 17, 2023	Feb. 16, 2024
RF cable	Times	1-40G	HKE-034	Feb. 17, 2023	Feb. 16, 2024
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 17, 2023	Feb. 16, 2024

**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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RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	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

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

**Test Data**

<b>TX 802.11b Mode</b>			
Test Channel	Frequency	Maximum Peak Conducted Output Power	LIMIT
	(MHz)	(dBm)	dBm
CH01	2412	15.39	30
CH06	2437	15.27	30
CH11	2462	14.86	30
<b>TX 802.11g Mode</b>			
CH01	2412	13.46	30
CH06	2437	13.44	30
CH11	2462	13.01	30
<b>TX 802.11n20 Mode</b>			
CH01	2412	13.61	30
CH06	2437	13.27	30
CH11	2462	13.00	30
<b>TX 802.11n40 Mode</b>			
CH03	2422	12.65	30
CH06	2437	12.50	30
CH09	2452	12.02	30

Note: The test results including the cable loss.



## 4.4. Emission Bandwidth

### Test Specification

<b>Test Requirement:</b>	FCC Part15 C Section 15.247 (a)(2)
<b>Test Method:</b>	KDB 558074 D01 15.247 Meas Guidance v05r02
<b>Limit:</b>	>500kHz
<b>Test Setup:</b>	<p><b>Spectrum Analyzer</b>                            <b>EUT</b></p>
<b>Test Mode:</b>	Transmitting mode with modulation
<b>Test Procedure:</b>	<ol style="list-style-type: none"> <li>1. The testing follows FCC KDB Publication 558074 D01 15.247 Meas Guidance v05r02.</li> <li>2. Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>3. 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>4. Measure and record the results in the test report.</li> </ol>
<b>Test Result:</b>	PASS

### Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 17, 2023	Feb. 16, 2024
RF cable	Times	1-40G	HKE-034	Feb. 17, 2023	Feb. 16, 2024
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 17, 2023	Feb. 16, 2024

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



RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	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

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

**Test data**

Test channel	6dB Emission Bandwidth (MHz)			
	802.11b	802.11g	802.11n(H20)	802.11n(H40)
Lowest	11.080	15.640	11.280	33.760
Middle	11.960	15.640	13.800	32.560
Highest	12.080	15.120	10.040	35.120
Limit:	>500kHz			
Test Result:	PASS			

**Test plots as follows:**



## 802.11b Modulation

## Lowest channel



## Middle channel



## Highest channel



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## 802.11g Modulation

## Lowest channel



## Middle channel



## Highest channel



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## 802.11n (HT20) Modulation

## Lowest channel



## Middle channel



## Highest channel



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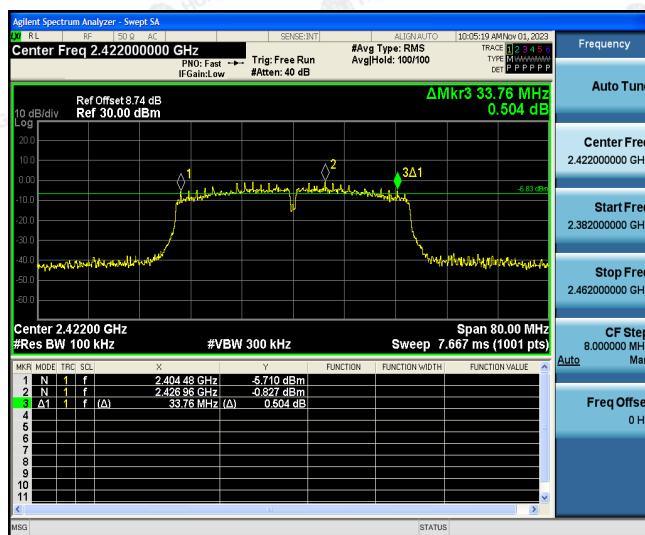
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## 802.11n (HT40) Modulation

## Lowest channel



## Middle channel



## Highest channel



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## 4.5. Power Spectral Density

### Test Specification

<b>Test Requirement:</b>	FCC Part15 C Section 15.247 (e)
<b>Test Method:</b>	KDB 558074 D01 15.247 Meas Guidance v05r02
<b>Limit:</b>	The average power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
<b>Test Setup:</b>	<p>The diagram shows a green rectangular box labeled 'Spectrum Analyzer' on the left. A horizontal line extends from its right side to a small white square labeled 'Attenuator'. From the right side of the attenuator, another horizontal line extends to a yellow rectangular box labeled 'EUT' on the right. The lines represent the RF cable connecting the two components.</p>
<b>Test Mode:</b>	Transmitting mode with modulation
<b>Test Procedure:</b>	<ol style="list-style-type: none"><li>1. The testing follows Measurement procedure 10.2 method PKPSD of FCC KDB Publication 558074 D01 15.247 Meas Guidance v05r02.</li><li>2. 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.</li><li>3. Set to the maximum power setting and enable the EUT transmit continuously.</li><li>4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): <math>3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}</math>. Video bandwidth VBW <math>\geq 3 \times \text{RBW}</math>. Set the span to at least 1.5 times the OBW.</li><li>5. Detector = Peak, Sweep time = auto couple.</li><li>6. Employ trace averaging (Peak) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level.</li><li>7. Measure and record the results in the test report.</li></ol>
<b>Test Result:</b>	PASS

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**Test Instruments**

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 17, 2023	Feb. 16, 2024
RF Cable (9KHz-26.5GHz)	Tonscend	170660	N/A	Feb. 17, 2023	Feb. 16, 2024
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 17, 2023	Feb. 16, 2024
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).

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	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**

EUT Set Mode	Channel	Result (dBm/30KHz)	Result (dBm/3kHz)
802.11b	Lowest	1.00	-9.00
	Middle	0.72	-9.28
	Highest	0.59	-9.41
802.11g	Lowest	-1.77	-11.77
	Middle	-1.60	-11.60
	Highest	-2.83	-12.83
802.11n(H20)	Lowest	-1.93	-11.93
	Middle	-2.74	-12.74
	Highest	-2.58	-12.58
802.11n(H40)	Lowest	-3.28	-13.28
	Middle	-3.60	-13.60
	Highest	-4.18	-14.18
PSD Test Result (dBm/3kHz)= PSD Test Result (dBm/30kHz)-10			
Limit: 8dBm/3kHz			
Test Result:	PASS		

**Test plots as follows:**

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## 802.11b Modulation

## Lowest channel



## Middle channel



## Highest channel



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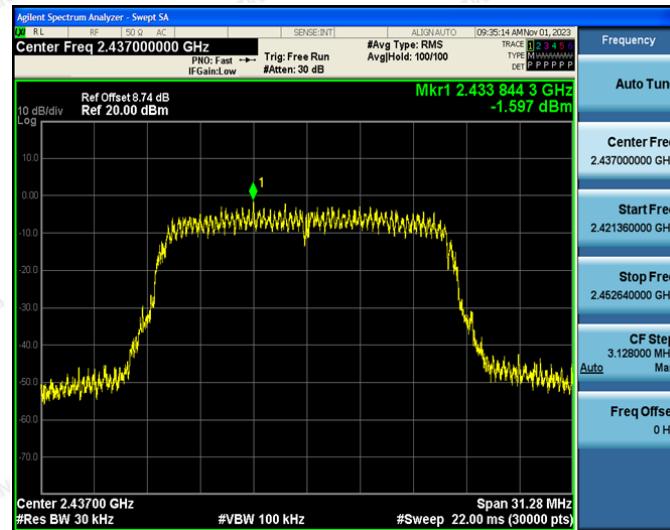


## 802.11g Modulation

## Lowest channel



## Middle channel



## Highest channel



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## 802.11n (HT20) Modulation

## Lowest channel



## Middle channel



## Highest channel

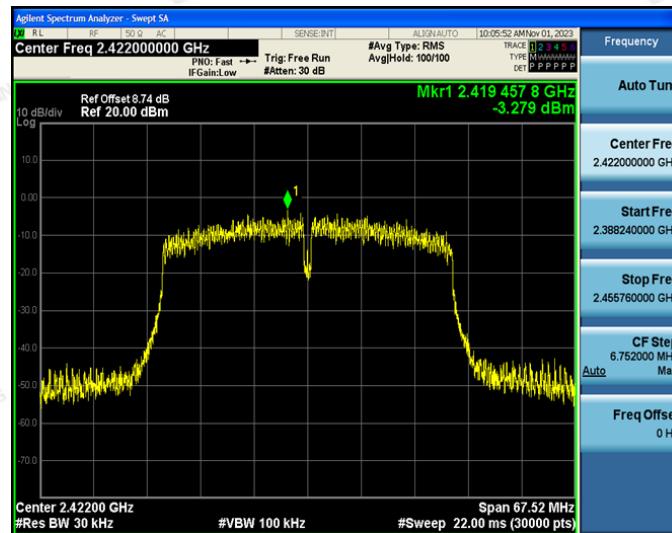


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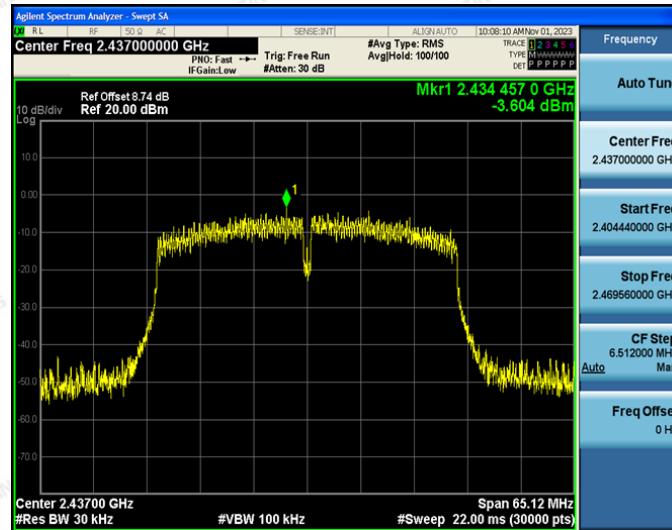


## 802.11n (HT40) Modulation

## Lowest channel



## Middle channel



## Highest channel



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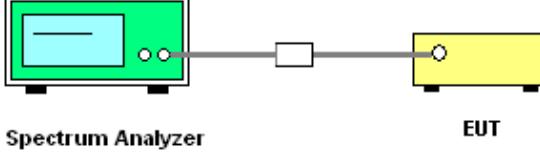
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## 4.6. Conducted Band Edge and Spurious Emission Measurement

### Test Specification

<b>Test Requirement:</b>	FCC Part15 C Section 15.247 (d)
<b>Test Method:</b>	KDB 558074 D01 15.247 Meas Guidance v05r02
<b>Limit:</b>	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).
<b>Test Setup:</b>	 <p>The diagram illustrates the test setup. A green 'Spectrum Analyzer' is connected to a yellow 'EUT' (Equipment Under Test) through a grey 'RF cable' and a small white 'attenuator' box. The analyzer has a digital display and two knobs.</p>
<b>Test Mode:</b>	Transmitting mode with modulation
<b>Test Procedure:</b>	<ol style="list-style-type: none"><li>1. The testing follows FCC KDB Publication 558074 D01 15.247 Meas Guidance v05r02.</li><li>2. 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.</li><li>3. Set to the maximum power setting and enable the EUT transmit continuously.</li><li>4. 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).</li><li>5. Measure and record the results in the test report.</li><li>6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.</li></ol>
<b>Test Result:</b>	PASS

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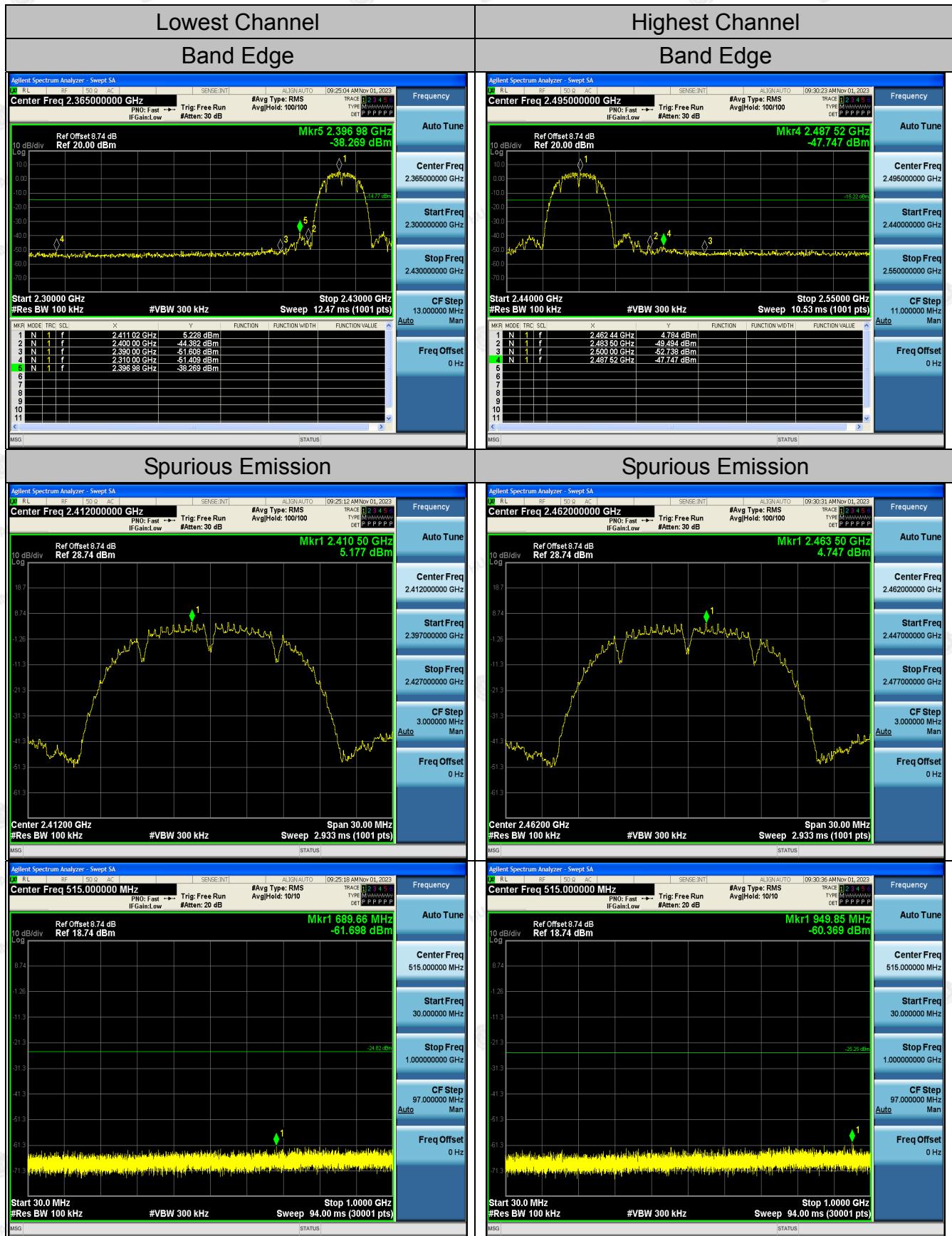
**Test Instruments**

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 17, 2023	Feb. 16, 2024
High pass filter unit	Tonscend	JS0806-F	HKE-055	Feb. 17, 2023	Feb. 16, 2024
RF Cable (9KHz-26.5GHz)	Tonscend	170660	N/A	Feb. 17, 2023	Feb. 16, 2024
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 17, 2023	Feb. 16, 2024
RF test software	Tonscend	JS1120-B Version 2.6	HKE-083	N/A	N/A

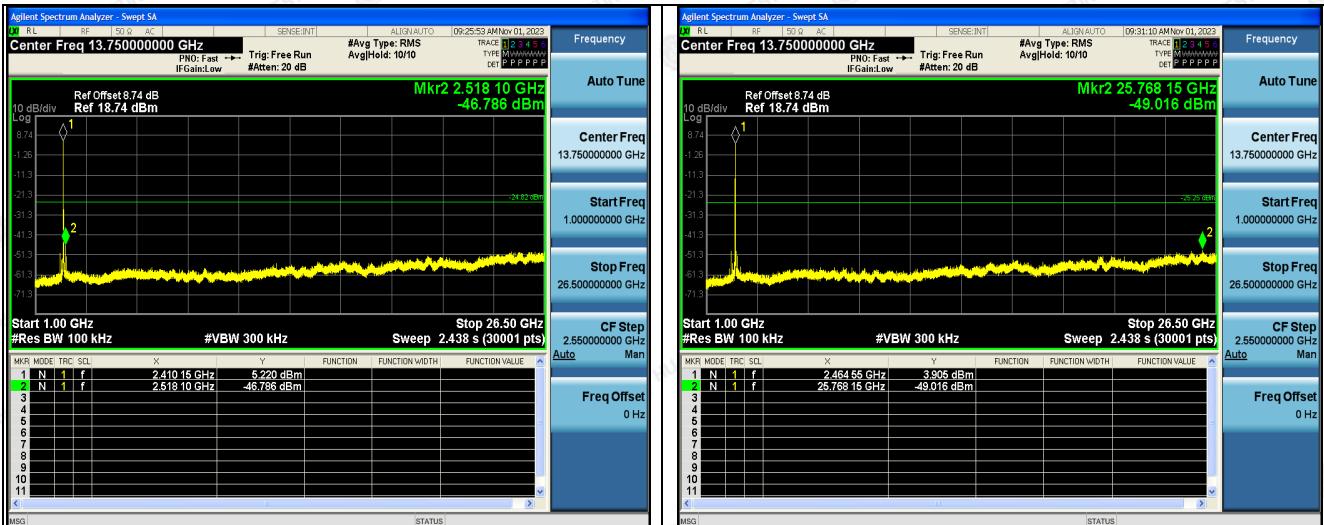
**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	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**

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## Middle Channel

## Spurious Emission



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